GUIDE TO PORT ENTRY

ALBANIA
to
KUWAIT

SHIPPING GUIDES LIMITED

GUIDE TO PORT ENTRY

1997 – 98

VOLUME 1

ALBANIA
to
KUWAIT

GUIDE TO
PORT ENTRY

Originally Devised by

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WARNING

Every effort has been made to ensure that the information contained in this *Guide* is correct. However, it will be clearly understood that this publication is intended as a *GUIDE ONLY*, that the information cannot be *Guaranteed* correct and that the final responsibility must (as always) rest with the Shipmaster.

At certain ports, items of navigational routeings and aids have been included as a means of general guidance only. Shipmasters should have in mind that full and due reference MUST ALWAYS be made to corrected charts of the area, to the appropriate Notices to Mariners, and all or any other navigational notices, warnings or amendments issued by proper Authorities and/or Navigational Aid Services.

The sketch maps are for general assistance and must not be used for navigational purposes. In particular, the shapes of buoys should be disregarded since these are indicated by varying symbols which may be consequent upon local usage and without resemblance to internationally applied symbols.

PLANS

All plans, unless otherwise stated, are reproduced by kind permission of the Port Authority.

IMPORTANT NOTICE

Users of previous editions of the guide are advised that some older Shipmaster's Reports and navigational information mentioned in other publications and pilots has been withdrawn from this edition of the guide. They may therefore wish to retain copies of previous editions for future reference.

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FOREWORD

Shipmasters, Shipowners or Managers, Port Authorities, Administrators and Agents, are earnestly requested to assist our work in up-dating the Guide *by providing written comment, information, amendments or corrections and additional details of any ports or terminals, to the following address:*

SHIPPING GUIDES LIMITED,
SHIPPING GUIDES HOUSE,
75 BELL STREET,
REIGATE,
SURREY,
RH2 7AN,
ENGLAND

All communications will be acknowledged and will be most useful, since it is only by this means that the *Guide* will remain of great value to the user and will be up to date and thoroughly professional in content.

For assistance and guidance in the submission of information, a reprint of the items presently covered by the *Guide* is placed hereunder. Additional items will also be most welcome.

N.B. PLANS, DIAGRAMS, DRAWINGS AND SKETCHES: As you will note, this 1997/98 edition of "Guide to Port Entry" contains over three thousand seven hundred plans and mooring diagrams that have been reproduced from plans and drawings very kindly sent to us by numerous Port Authorities, Agents and shipboard personnel. We hope that the special plan section will prove interesting and useful.

Presently however, the special plan section is to an extent incomplete, since there are many ports and mooring facilities for which we have not yet received the necessary plans for reproduction purposes. We are anxious to secure plans, diagrams, drawings or sketches of ports and facilities not presently shown in our special plan section, and therefore request that Port Authorities and/or Agents at the places concerned be kind enough to pass us this data together with the necessary permission for reproduction. We would also be very grateful if ship's officers calling at ports not already covered in our special plan section, could find it possible to provide us with diagrams or sketches of the facilities which would be suitable for reproduction in our later editions and/or which might be re-drawn as required by our own art department prior to reproduction.

PORT INFORMATION KINDLY REQUESTED

PORT LIMITS: The seaward boundaries of the port within which a vessel is considered to be an "arrived ship" and (subject to Charter-Party Terms) laytime will commence.

DOCUMENTS: The matter of documentation is one of the most important items to be included in the *Guide*, and we would like to be sure that ALL requirements are included in order that Masters will be in a position to prepare all necessary documentation before arrival and thus ensure speedy clearance. (E.g. Number of Crew Lists, Passenger Lists, Customs Documents, Health Documents, Manifests, Bills of Lading, Ship's Papers, Ship's Certificates, etc.).

PILOTAGE: Manner in which vessel approaching the port applies for a Pilot. That is, telegraphic address, telephone number, facsimile number or telex number of Pilot Station, amount of advance notice of ETA required, and VHF channel or frequency to be used when contacting Pilot Boat or Pilot Station. If possible, a description of Pilot Boat; particular light or sound signals to be made by vessels requiring a Pilot; the *exact* area where the Pilot Boat is located or where the Pilot has to be taken on board and also any alternative area in the event of bad weather and when Pilot Boat not on usual station; details of any specific requirements on the part of Pilots with respect to boarding and safety measures; location of anchorage for vessel awaiting a Pilot.

ANCHORAGES: Boundaries, areas and depths of safe anchorages.

RESTRICTIONS: Details of any restrictions imposed upon entry, for example at night time, or in accordance with state of tide and draft restriction.

MAX. SIZE: Maximum permissible length, breadth, and draft for any vessel entering the port or for oil-carriers proceeding to installations outside the main port area, also state of tide governing these dimensions.

HEALTH: Pratique procedure and action necessary to obtain Pratique. Also action necessary in the event of any suspected disease or fever on board. Also when Pratique is automatic, for example vessels entering after calling at another port in the same country.

RADIO: Name and call sign of radio station through which it is best for a vessel to route ETA cables to Agent, Receivers, etc. Availability of telex communication with vessels equipped with telex.

VHF: Fullest possible data concerning VHF Radio communication facilities in operation at the port including advices required from vessels approaching the port, arriving at the port, when manoeuvring within the port area, and when sailing. Details of standard communication procedures and numbers of Channels used in calling, further communication and safety, as may be applicable with respect to Pilotage, Tugs, Port Authority, Quarantine or other craft or shore-stations.

RADAR: Details of existing Port Radar Service, also if the Master may contact the Radar Service by means of ship's radio or by VHF, and the frequency or Channel number to be used. Details of Vessel Traffic Management Service (V.T.S.).

TUGS: Number and capacity of tugs available. Minimum number of tugs required for berthing and unberthing. Position where tugs normally join the vessel. Also whether usual for ship's lines or tug's lines to be used, and if optional, the usual charge for use of tug's lines.

BERTHING: Details of available berths, including length of quay, depth alongside, maximum permissible ship-draft at Low Water (indicating whether Salt or Fresh Water), whether load/discharge is by shore equipment or by ship's own gear, and other relevant data, together with advice of cargoes handled at respective berths.

CRANES: Fullest possible information concerning type, safe working loads and numbers of shore cranes available at respective berths for cargo handling. Details of heavy-lift cranes ashore or afloat, with lifting capacities. It is also helpful to know at which ports, or berths within a port, that cranes are not available and a vessel is required to use her own gear.

BULK CARGO FACILITIES: Details of berths and cargoes handled, length of quay, depth alongside, maximum permissible draft (indicating Salt or Fresh) at Low Water, berth equipment, maximum height of discharging gear above High Water Level, and maximum Loading/Discharge rates. Cargoes intended to be covered by this heading are Grain, Ores, Coal, Fertilisers, Sulphurs, Copra, etc.

SPECIALISED CARGO-HANDLING FACILITIES: Details of berths, specially equipped for handling containers or Roll-on/Roll-off traffic; berths handling liquid chemicals or LPG carriers. Please note that it is also useful to know if the port does not have any of these facilities.

BRIDGES: Details of any particular arrival times required in order to pass through particular bridges, and maximum clearances, that is height of bridge to waterline.

STEVEDORES: Any particular ETA advices required in order to arrange gangs. Details of main commodities and average load or discharge rates. Normal working hours for general and bulk cargoes, also hours that overtime is possible.

MEDICAL: Whether necessary for Agents to receive advance notice of required medical attention and the amount of notice required; also if hospital and dental facilities are available; also any other relevant medical information such as particular inoculations required, vaccination/fever certificates, etc., and if inoculations and vaccinations can be carried out.

TANKERS: Diameter of load/discharge lines in order that Masters may know whether or not it is necessary to fit reducing pieces before arrival; slop (residue) discharge facilities, capacities, and maximum receiving rate; S.G., A.P.I. and temperatures of local types of oil (loading ports only). Number of tanker berths, depth alongside and maximum permitted drafts at these berths, average load/discharge rates. Prevailing wind on berth. If special moorings required. Are shore gangways available? Are facilities available to combat oil spills, if so, what equipment available? Availability of shore steam. Ship-to-ship transfer facilities.

DENSITY: (SALINITY):Average salinity of water in the port.

FRESH WATER: Availability, method of delivery, rate of delivery and approximate cost per ton.

FUEL: Grades (viscosities) available, amount of advance notice required, and method of delivery. If bunkers supplied by vessel/barge, minimum/maximum quantity to be ordered.

FIRE PRECAUTIONS: Any specific precautions particularly respecting tankers (that is, other than usual non-smoking precautions, etc.).

CONSULS: Names of countries having Consuls at the port.

REPAIRS: Whether all types of deck and engine repairs are possible, and if not, then what types of repairs are able to be carried out.

DRY DOCKS: Dimensions of largest dry dock and also the number of smaller docks.

SURVEYORS:

(1) Availability of Cargo Inspectors, such as Saybolt, Caleb Brett, Superintendents, etc.

(2) Availability of Surveyors, such as Lloyd's Register, American Bureau, Bureau Veritas, etc., also Salvage Association or U.S. Salvage.

GANGWAY/DECK WATCHMEN: Whether service of watchmen is necessary or to be recommended and if so, the cost of watchmen.

HATCHES: Whether opening/closing is normally carried out by crew or stevedores.

CUSTOMS ALLOWANCES: (Tobacco/Wine, Spirits). Quantity permitted for each crew member to be held out of Bond.

CARGO GEAR: Whether load/discharge effected by shore gear or by ship's gear, and details of any special cargo equipment, e.g. heavy lift cranes, etc.

REPATRIATION: If facilities exist for effecting crew changes and arranging any necessary repatriation.

AIRPORT: Distance from airport and whether airport is served by regular airlines; otherwise number of flights per day or week and destinations.

TIME: Local time in relation to GMT and dates/details of any alterations made to clocks during the year (Summertime).

HOLIDAYS: Dates and details of official and local holidays and advice whether or not cargo work can be arranged on those days.

POLICE/AMBULANCE/FIRE: Telephone numbers of these three services, that is, the nearest departments.

EMERGENCY CO-ORDINATION CENTRE: Nearest Emergency Co-ordination Centre and details of telephone and telex numbers (e.g. U.S. Coast Guard, U.K. Coast Guard, S.A.R. etc.). This information is necessary because local Port Agents may not be suited to emergency matters and may not be contactable.

TELEPHONES: Whether arrangements exist for placing telephones on board and if so the approximate cost for this connection.

SERVICES: Details of any special services available, e.g. tank-cleaning equipment, facilities for discharge of tank-washings, compass adjusting, radio and radar repairs, supply of charts, nautical publications, sounding paper, course recorder paper, availability of Notice to Mariners, availability of safety equipment, possibility of extension of certificates.

BANKS: Name, address, telephone, fax and telex numbers of any banks in the area.

STORING:

(1) Can vessel be stored by barge or truck?
(2) Regulations concerning barge storing, such as, can vessel store from barges during loading or discharging? If not, what are the regulations concerning storing?
(3) Can trucks proceed alongside at the berth? If not, what is the approximate distance the truck is to remain from the ship?
(4) Can fork lift trucks be used on the jetty to handle stores?
(5) Customs Regulations in force regarding storing.
(6) Can local Riggers be employed to assist with storing?

SHIP SUPPLY SERVICE: Name, address, telephone, fax and telex numbers, etc., of ship supply service operators who are able to supply craft or helicopters for transfer of stores, crew and sick personnel. Also range, capacity and rendezvous points of supply craft and helicopters.

SHORE LEAVE: Whether crew members are allowed ashore or not.

IDENTIFICATION CARDS: Whether shore passes issued or whether Seaman's Book is sufficient.

GARBAGE DISPOSAL: Please advise if a collection service is available and if drums or skips are provided on board or alongside, telephone number of garbage services, charges and collection time.

WASTE OIL DISPOSAL: Please advise if a collection service is available and capacity of shore tanks, barges and tanker trucks, location of any special berth for this service, Name, address, telephone, fax and telex numbers of companies operating this service, charges and any other relevant information.

CURRENCY: Name of currency of the country and approximate exchange rate in relation to the U.S. Dollar. Also if there are any currency restrictions placed on seafarers.

SEAMAN'S CLUBS: Names of Seaman's Clubs operating at the port, address and telephone number. Facilities available, e.g. shop, international telephone service for seafarers, church services, football matches arranged, dances, mini-bus collection, postage facilities, games available at the Clubs and any other service available. The Seaman's Club brochure/leaflet would be of great assistance.

REGULATIONS: Any particular or unusual regulations for the port.

DELAYS: What delays in berthing, loading, discharging or bunkering can normally be expected.

DEVELOPMENTS: Details of expected draft increases, new installations, berths, etc., expected in the foreseeable future together with expected dates of completion.

SHIPMASTER'S/SHIP'S OFFICERS REPORTS: Information is earnestly sought from Shipmasters and other serving officers giving corrections, amendments and additions to existing information, together with their professional advices or comment upon recommended or required procedures for entering or sailing port, including advice of their experience of the port, either generally or specifically. Useful items of experience and suggestions of other Shipmasters are of great value, and will be printed under a special heading.

GENERAL: Any other information that you feel may be of value to the Shipmaster that is not already covered by the previous questions.

AUTHORITY: Name, address, telephone, fax and telex numbers, and other details of local Port Authority.

AGENT: At the foot of many of the ports in this *Guide* we have an additional heading entitled "Agent". The purpose of including this item has been to provide Shipowners, Managers, and Operators with prompt access to the Name, address, telephone, fax and telex numbers, etc., of an experienced Agent at the port concerned.

Of course, it will be understood that the Agents named in the *Guide* are not necessarily the only Agent at that port; however, demands on available space preclude the inclusion of other reputable Agency companies and we trust that other such companies will understand and appreciate the position. We have been obliged therefore to include details of one Agency company only, but by so doing we hope to have provided a further service to the user of the *Guide*.

FEARGAL HOGAN
Director, Information Systems.

EDITOR'S NOTE

GUIDE TO PORT ENTRY– 1997/98 EDITION

The year 1997 sees the 30th anniversary of the formation of Shipping Guides Ltd by the late Colin Pielow and publication of this, the 14th Edition of the "Guide".

When first produced in 1971 the "Guide" contained less than 600 pages. It now extends to 2,650 pages of port information and over 1,900 pages of plans (over 3,700 plans). This has been achieved with the assistance of Port Authorities, Shipowners, Ship Operators, Shipmasters and many others in the marine industry We thank all of them for their contribution in making Shipping Guides Ltd the recognised market leader in supplying port information.

This new edition of the "Guide" contains over 100 new or additional ports and terminals and has been comprehensively updated by checking and double-checking with the Port Authorities.

Long time supporters will note that we have reverted to a hard-back cover which we last used in 1975. The reason for this change is that we wish to remain in two volumes, thereby lowering our costs, and of course, minimising the increase in the price of the "Guide". We believe the "Guide" to be "value-for-money" as there is very little duplication and no block advertisements — Guide to Port Entry contains only relevant information.

Finally, I would like to thank all the staff at Shipping Guides Ltd for their support, hard work and dedication to their various duties over the last year, which has enabled us to bring the "Guide" out yet again on schedule.

GUIDE ON CD: The Spring of 1997 will see Shipping Guides respond to customers' requests and enter the world of electronic publishing. Initially this will be with the launch of our "Guide on CD". Subscribers to the fourteenth edition of Guide to Port Entry will receive very generous discounts on this exciting new product.

THE SHIPS ATLAS: This publication continues to be in increasing demand throughout the world with the Sixth Edition being published in January 1996. Many companies have selected this Marine Atlas as a suitable presentation to publicise their activities, by purchasing in bulk numbers and having their company name gold-blocked upon the cover of the Atlas. Enquiries concerning this form of presentation should be addressed to ourselves.

THE SHIPPING WORLDS MAP: The Second Edition of our World Map was published in December 1996. Please contact us if you require copies or more information on this or any of our products.

ROBERT PEDLOW
Managing Director
Reigate 1997

POLICE/AMBULANCE/FIRE: Telephone numbers of these three services, that is, the nearest departments.

EMERGENCY CO-ORDINATION CENTRE: Nearest Emergency Co-ordination Centre and details of telephone and telex numbers (e.g. U.S. Coast Guard, U.K. Coast Guard, S.A.R. etc.). This information is necessary because local Port Agents may not be suited to emergency matters and may not be contactable.

TELEPHONES: Whether arrangements exist for placing telephones on board and [illegible] for this connection.

SERVICES: Details of any special services available, e.g. tank-cleaning equipment, facilities for discharge of tank washings, compass adjusting, radio and radar repairs, supply of charts, nautical publications, sounding paper, course recorder paper, availability of Notice to Mariners, availability of safety equipment, possibility of extension of certificates.

BANKS: Name, address, telephone, fax and telex numbers of any banks in the area.

STORING:
(1) Can vessel be stored by barge or truck?
(2) Regarding [illegible] loading or discharging? If not, what are the regulations [illegible]
(3) Can trucks proceed alongside at the berth? If not, what is the approximate distance the truck is to remain from the vessel?
(4) Can [illegible] on the jetty to handle [illegible]?
(5) Customs regulations [illegible] time [illegible]
(6) Can [illegible]

SHIP SUPPLY SERVICES: Name, address, telephone [illegible] of ship supply service operators who are [illegible] and rendezvous points of supply craft and helicopters.

SHORE LEAVE: Whether crew members are allowed ashore or not.

IDENTITY CARDS: Whether [illegible] sufficient.

GARBAGE DISPOSAL: Please advise if a garbage service is available and if drums or skips are provided on board or alongside, telephone number of garbage [illegible] and collection time.

WASTE DISPOSAL: [illegible] shore tanks, barges and tanker trucks [illegible] numbers of companies [illegible]

CURRENCY: [illegible] Also if there are any currency restrictions [illegible]

SEAMAN'S CLUBS: Names of Seamen's Clubs operating at the port, address and telephone number, facilities available, [illegible] dances, mini-bus [illegible] Seaman's Club brochure/leaflet would be of great assistance.

REGULATIONS: Any particular or unusual regulations for the port.

DELAYS: What delays in berthing, loading, discharging or bunkering can normally be expected.

DEVELOPMENTS: Details of expected draft increases, new installations, berths, etc. expected in the foreseeable future together with expected dates of completion.

SHIPMASTER'S [illegible] Shipmasters and other seagoing officers [illegible] or comment upon recommended or required [illegible] of the port, either generally or specifically. Useful items of experience and suggestions of other Shipmasters are of great value, and will be printed under a special heading.

GENERAL: Any other information that you feel may be of value [illegible] that is not already covered by the previous questions.

AUTHORITY: Name, address, telephone, fax and telex numbers, and other details of local Port Authority.

AGENT: At the foot of many of the ports in this Guide we have an [illegible] heading entitled [illegible]. The purpose of including this item has been to provide Shipowners, Managers, and Operators with prompt access to the Name, address, telephone, fax and telex numbers, etc., of an experienced Agent at the port concerned.

Of course, it will be understood that the Agents named in the Guide are not necessarily the only Agent at that port; however, demands on [illegible] such companies [illegible] Agency company only, but by so doing we hope to have provided a further service to the user of the Guide.

FEARGAL HOGAN
Director, Information Systems

Albania

DURRES: 41.19 N. 19.28 E.

DOCUMENTS: Completed on arrival.
PILOTAGE: Compulsory. Arriving vessels should anchor and await Pilot in position Lat. 41° 15' 08" N., Long. 19° 26' E. Pilot available in daylight hours only.
RESTRICTIONS: Vessels arriving from ports in Yugoslavia, Italy and Greece must give Notice of Arrival 48 hours in advance. Vessels arriving from ports in other countries must give Notice of Arrival 5 days in advance. Notice of Arrival is sent by radio to "Adetare Durres" with following information: Vessel's name and flag; name of last port; draft on arrival; cargo description and distribution; particulars of vessel's tonnage and length.

Entrance is through buoyed channel, depth 27 ft.
MAX. SIZE: Controlled by berth depth. Max. draft 28 ft. 6 in.

Also see "Shipmaster's Report".
HEALTH: Free Pratique given when Pilot boards provided vessel's Health Declaration is satisfactory.
RADIO: Vessels should maintain regular contact with Durres Radio up until time of entry into Albanian territorial waters, which extend 10 miles off shore.
TUGS: Port Authority supplies tugs for mooring and unmooring on Pilot's recommendations.
BERTHING: General cargo wharf No. 5, depth 26 ft. All other berths, depth 21 ft.
MEDICAL: Doctor and hospital facilities available.
TANKERS: One oil berth, at the East Mole, depth 23 ft. Tank cleaning facilities available.
FRESH WATER: Available ex-wharf at all berths.
FUEL: Limited quantity available for emergency only.
REPAIRS: State shipyard can effect limited hull and engine repairs.
SURVEYORS: Regjistri Detar Shqiptar, Durres. Tel: (052) 22797. Fax: (052) 22438. Telex: 4169 DRFLOT AB.
OPENING/CLOSING HATCHES: Carried out by stevedores.
AIRPORT: Rinas Airport, distance 35 km.
TIME: GMT plus 1 hour.
HOLIDAYS: New Year (January 1st and 2nd); Proclamation of the Republic (January 11th); Labour Day (May 1st); October Revolution (November 7th); Independence Day (November 28th); Liberation Day (November 29th). No work performed on Sundays and holidays.
SHORE LEAVE: Crew may use Seamen's Club in port area.
IDENTIFICATION CARDS: Shore passes issued by local police.

SHIPMASTER'S REPORT: 1979
Navigation: Incoming vessels are to anchor in position Lat. 41° 15' N., Long. 19° 27' E. (2.5 miles from breakwater) and await orders. The Danger Area shown on B.A. Chart No. 2701 is reportedly non-existent.
Communications: The local radio station call sign ZAD is to be contacted on anchoring. The radio transmitter is sealed on berthing. The Agents have a telex machine which works intermittently. Telephone calls to Northern Europe possible but subject to delay.
Pilot: Equipped with VHF Channel 16, boards at anchorage.
Tugs: Two medium size tugs available for docking. One salvage tug stationed in port.
Draft: Pilots advised 27 ft. 6 in. max. draft alongside and in approaches.
Cargo Facilities: Loaded 14,000 tonnes of cement in 50 kg. bags from rail and road trucks. 3 shift system. Used both shore cranes and ship's derricks. As cargo comes from cement factory in interior by rail, presentation is very intermittent, and vessel rarely informed of working prospects more than a few hours in advance. Sundays are normally holidays. Loading rate averaged 1,000 tons approx. per working day but ranged from 200 tons to 1,700 tons, depending on labour and cargo availability.
Formalities: ETA's required 5 days and 2 days in advance, also include length, tonnage, flag, state of health, etc.

Documents required: 6 Crew Lists, 2 Lists of Foreign Currency, 2 Personal Effects Lists, 1 Health Declaration, 3 Stores Lists. Bond is sealed but Customs will open on request.
Repair Facilities: Small shipyard for minor repairs available.
Surveys: Agents advise that Government Surveyor available for radio surveys, etc. No Classification Society Surveyor available.
Cash: Lek is currency – 1 Lek = approx. 14 US cents (7 Leks = $1). Foreign currency may be exchanged (approx. 5 days notice).
Provisions: Government ship chandler. Fresh vegetables good, fish available at moderate prices, meat not recommended.
Laundry: Available. Reasonable price, average standard.
Crew: Repatriation is reportedly possible, however it takes 3 days to get an exit visa.

Shore leave is permitted to Seaman's Club only until 2300 hrs. A special pass has to be obtained to visit the town (1500 hrs. to 1900 hrs. only). Tours to Tirana can be arranged by car, if one day's notice is given. Casual dress (jeans) also long hair prohibited outside dock gates.

Gangway guards in attendance throughout stay.

Considerable difficulty experienced in arranging tour for Chinese ratings.
Port Facilities: Berthing facilities for 10 ocean-going vessels. Sufficient 5 ton shore cranes available. Railway tracks to most quays. Main imports coal/coke. Exports, low grade chrome ore. Priority for Albanian vessels. One floating crane. Lack of mechanisation reduces work rate. No fork lifts or proper palletisation observed.
Agency: Adtare (Government Agency) in port area. The Agents visit vessel twice daily and speak adequate English and are reasonably helpful.
Fresh Water: Available from barge at $1.50 per ton approx.
Fuel Oil: Heavy oil and diesel oil delivered by road tankers (limited amounts).
Local Regulations: Permission to immobilise engines must be obtained. Garbage is collected daily (compulsorily) in plastic sacks. Permission required prior to de-ballasting.
Watchmen: Not required as gangway guards provided.

AUTHORITY: Drejtorija e Portit Durres.

SARANDE: 39.52 N. 20.02 E.

DOCUMENTS: See "Durres".
RESTRICTIONS: See "Durres".
PILOTAGE: Compulsory. On arrival vessels should anchor and wait for Pilot in position Lat. 39° 51' 50" N., Long. 20° 10' 10" E. Pilot available only during daylight hours.
HEALTH: Free Pratique given when Pilot boards provided vessel's Health Declaration is satisfactory.
RADIO: Durres Radio.
BERTHING: Larger vessels work cargo at anchor only. Ship's gear used.
FRESH WATER: Not available.
FUEL: Not available.
GENERAL: See "Durres" for General Information.
AUTHORITY: See "Durres".

SHENGJIN: 41.49 N. 19.35 E.

DOCUMENTS: See "Durres".
RESTRICTIONS: See "Durres".
PILOTAGE: Compulsory. On arrival vessels should anchor and await Pilot in position Lat. 41° 48' N., Long. 19° 35' E. Pilot available only during daylight hours.
MAX. SIZE: Draft 18 ft.
HEALTH: Free Pratique given when Pilot boards provided vessel's Health Declaration is satisfactory.
RADIO: Durres Radio.
TUGS: One small tug available.
BERTHING: Two piers in harbour, one of which is used for larger vessels.
FRESH WATER: Limited supply by barge.
FUEL: Not available.
GENERAL: See "Durres" for general information.
AUTHORITY: See "Durres".

Algeria

GENERAL:

DOCUMENTS: Report: September 1995.
Currency Declaration: The Master of a tanker calling at the port of Arzew forgot to declare official ship's funds of about U.S.$ 12,000 in the ship's safe. When asked if he had any funds, the Master readily admitted that as Master, he of course had official funds in his safe. Nevertheless, the omission resulted in confiscation of those funds, a fine of about U.S.$ 24,000, legal fees of about U.S.$ 1,200 and off-hire time amounting to about U.S.$ 33,000.

Operators are advised to remind their Masters to be aware of the necessity to be very careful with declarations in the ports of Algeria.

ALGIERS (El Djazair): 36.50 N. 03.00 E. (See Plan)

DOCUMENTS:
1 Cargo Manifest required for all cargo including that in transit for non-Algerian ports.
8 Crew Lists.
2 Crew and Passenger Personal Effects Lists.
1 Stores List, including Bonded Stores.
1 Currency Manifest.
2 Lists of arms, ammunitions or Military Stores (or "Nil" Declaration).
1 Private Bond and Beer List.
1 Declaration of Health.
1 Vaccination List.

Immigration officials may require to inspect all discharge books or passports. Customs regulations are strictly interpreted. Care should be taken to ensure that all ships' papers are perfectly in order. Vessels arriving with incomplete or inaccurate documentation have been subjected to severe delays and penalties.
PILOTAGE: Compulsory. Available day or night. Pilot boards vessel about 0.5 miles from end of Wattier Jetty. Pilot boat is black with insignia of 2 white anchors.
ANCHORAGE: Algiers Bay is crescent-shaped with Cape Caxine on the West and Cape Matifon on the East. Depth 25 m. – 30 m. Bottom is good holding ground, and vessels are sheltered from West and Northwest.
RESTRICTIONS: None if Port Authority is advised by Radio Algiers or by Agent.
MAX. SIZE: Vessels of 25,000 tons proceed normally. Length not restricted; maximum draft 38 ft.
HEALTH: Health Officer boards vessel on arrival.
RADIO: Algiers Radio, operates continuously.
VHF: Harbour Master on Channels 16 and 12.
TUGS: Three available of 600 to 800 h.p. and also one of 1,000 h.p. for towing in harbour; 2 larger available for open sea, 1,500 - 1,300 h.p.
BERTHING: 54 berths available, total length of 9,519 m. plus 2 berths of 250 m. each for tankers. All general cargo berths have cranes with lift of 3 tons - 6 tons.

Iron cargoes only handled at Berths No. 33/1, 2 and 3. Vessels handling general cargo will have to shift to one of these berths if they have iron amongst the general cargo.
STEVEDORES: Available.
MEDICAL: All assistance available.
TANKERS: Quay de Lorient: 2 berths, with depth alongside 11.50 m. Deballasting facilities available.

"LPG vessels" – See "Shipmaster's Report".
DENSITY: Salt water.
FRESH WATER: Delivered by pipe-line to quay, or by water barges.
FUEL: Deliveries by pipe-line on most quays or by barge. Large vessels are supplied by barge in the roads.
FIRE PRECAUTIONS: A special notice with instructions is delivered to tankers. Fire station established within port area.
CONSULS: All principal countries are represented in Algeria.
REPAIRS: All repairs available.
DRY DOCKS: Two: one of 136 m. long, 18.50 m. width, and 8 m. depth. The second of 74.30 m. long, 15.50 m. width and 5 m. depth.
SURVEYORS: M.Hamaid, c/o Expertises Maritimes, 10 Rue Duc Descars (Yo ghouta), P.O.Box 119, Algiers. Tel: (02) 615259. Fax: (02) 615590.
GANGWAY/DECK WATCHMEN: Service by three experienced companies arranged by Agent.
OPENING/CLOSING HATCHES: Normally opened by crew, or by port workers.
REPATRIATION: Frequent departures for Europe by ship or plane.
AIRPORT: Dar-el-Beida at a distance of 20 km. from Algiers; several flights daily.
TIME: GMT plus 1 hour.
HOLIDAYS: 1st January; 5th July; 1st November; Labour Day; Proclamation Day; plus religious holidays – Aid Seghir; Aid Kebir; New Year's Day (Egira); Achoura, and Mouloud. Friday is now considered as the weekly rest day in Algeria.
POLICE/AMBULANCE/FIRE: Police 63.01.61; Fire Service 63.71.22.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Not required.
DEVELOPMENTS: The port is to be extended to the East to provide 700 m. of container berths with a depth of 19 m.

SHIPMASTER'S REPORT: January 1981.
Approaches: B.A. Chart Nos. 855 and 2555.

Prominent land features clearly visible both visually and by radar. At night-time, anchored or underway, vessels are very difficult to identify due to background of shore lights.

No. 2 Buoy marking Western extremity of prohibited anchorage area (Lat. 36° 49.3′ N., Long. 03° 07.2′ E.) unlit at time of visit.
Anchorage: Anchorage prohibited East of line drawn from No. 2 Buoy to East of beacon on coastline at 03° 10′ E. Reasonable anchorage obtained two miles N.E. of Qk.Fl. light at end of Northern breakwater in approximately 40 fathoms. No separate tanker or small vessel anchorages although small vessels generally appeared to anchor either between main breakwaters immediately East of Jettee de L'Est or close offshore with little regard to Eastern harbour entrance. Anchorage completely exposed to prevailing winds from N.E. and swells that accompany wind.
Wind: Prevailing wind is from North to N.E. and is strongest during Winter months. Swell builds up quickly and causes harbour to be virtually untenable with many ships breaking loose from berths. Authorities close port and all ships leave berths generally when weather conditions have started to abate. Forecasts difficult to obtain.
VHF: Call "Algiers Harbourmaster" Channel 16, working on Channel 12. Range limited to about 6 miles. On arrival, vessel's information required and details of cargo to be loaded or discharged. French speaking is an advantage in which case call "Capitainerie du Port". Very little warning of berthing instructions given. Agents can, apparently, be contacted through Harbour Master.
Berthing: Berthing and unberthing only during the hours of daylight unless in extreme emergency.
Pilot: Upon receipt of berthing instructions, vessel proceeds to a position approximately half mile East of Southern breakwater entrance. Pilot boards by pilot ladder, side appropriate to weather conditions but generally on port side, from pilot launch. Pilot ladder about 1 m. above water.

Pilot also boards by launch when unberthing.
Tugs: Two used for berthing and 3 for unberthing (bad weather). Two good ship's ropes to each tug. For berthing, forward tug taken on port bow and aft tug on starboard quarter, similar arrangement for unberthing. These positions to enable vessel to swing short round to port immediately after entering breakwater.
Berth: Berth 37: Port side alongside "Brise lames Est" jetty in Area 9. Depth alongside 10.0 m. forward and 10.5 m. aft. Little or no tidal effect. Straight jetty with protruding dolphins of concrete construction and fendered by tyres mounted on timber and suspended from quayside by chains.

Berth affected by swell from North/N.E. and vessels can surge up and down the quayside alarmingly. It is essential to have out as many moorings as possible and in particular good stern lines and forward back-springs. On this visit, 5 moorings parted and eventually necessary to have mooring winches manned continuously to counteract vessel's surging. This vessel (31,296 cu.m.) was largest gas vessel to have entered Algiers.

Port gangway initially used but later replaced by "Board of Trade" gangway. It is advisable not to rig gangway before berthing due to quayside obstructions.
Density: Density alongside 1026.
Cargo: Butane discharge. Receiver's Sonatrach cannot accept cargo below +5°C, therefore heater required. Booster pump not required after initial problems resolved. Shore tank capacity is small and adjacent to gas-bottling/distribution plant. At first, Receivers were asking for maximum rate of discharge and then stopping cargo every two/three hours. After contacting Commercial Manager of Sonatrach, arrangement was made whereby shore plant emptied tanks before resumption of discharge and then discharge maintained at slow rate for several hours. Cargo discharged = 4,000 tonnes in 5 days.
Contacts: Sonatrach Manager LPG Operations, Marketing Division – Gas Exports, 46 Boulevard Mohamed V, Algiers. *Tel:* 61-12-24.

This person is responsible for all gas import/export contracts, works closely with Trammogas.

Sonatrach Commercial Manager, Commercial Division, 46 Boulevard Mohamed V, Algiers. *Tel:* 61-12-24.

Commercial Manager works closely with the Manager LPG Operations.
Authorities: Algerian requirements are now well established and particularly applicable to this port. All items contained within the Bond are carefully checked and counted and any single discrepancy can result in large fine. All money (all currencies) collected in, declared on Currency Declaration and locked in safe. Customs did not rummage on this visit because all paper-work exactly to their requirements.

No cargo documentation was in the vessel's possession for berthing. Customs satisfied with Master's Declaration that cargo papers were in transit between U.K. and Algeria.
Agent: Compagnie Nationale Algerienne de Navigation (C.N.A.N.). Cable Address: CNAN, Algiers. Tel: 62–64–00 and 62–88–00.
Chandler: Provided excellent quality fresh provisions at short notice and at reasonable price. Method of payment is by Cash Requisition through Agent.
Fresh Water: Good quality and available on quayside. Shore meter inoperative.
Bunkers: Available by barge.
General: Repatriation can be easily arranged through Agents. Airport about 10 km. away with 5 daily flights to Paris and one to London. Disembarking personnel hand in Discharge Book plus 2 photographs to Agent a few hours before disembarking to clear Immigration formalities.

Reasonable communication links with the U.K. and people most helpful.

Shore leave unrestricted – personnel to carry Identity Cards.

SHIPMASTER'S REPORT: September 1988.
Documents: Vaccination List only required if vessel arriving from an infected area.

All money must be declared, but need not be locked up.
Restrictions: Entry possible day and night.
Officials: As soon as vessel is anchored, Customs and Coast Guard board the vessel.

Beer and wine are not sealed.

Coast Guard inspects Load Line Certificate, Safety Construction Certificate, Safety Radio Certificate and Safety Equipment Certificate (including Liferaft Certificates).
Fresh Water: Fresh water available at anchorage at short notice by barge of 80 tonnes capacity.

SHIPMASTER'S REPORT: February 1989.

There are no buoys marking the Northern limits of the anchorages. Ships anchor as they please, regardless of size of vessel.

Pilotage is available around the clock.

The Unknown Soldier Monument is very conspicuous and is a good landmark for finding the head of the South Entrance Breakwater if, by any chance, it is impossible to distinguish it, due to congestion at the anchorage.

AUTHORITY: Direction Generale de Port d'Alger, B.P. 708, Algiers, Algeria. *Tel:* 579557. *Telex:* 61275. *Contact:* The Commercial Director.

ANNABA: 36.58 N. 07.47 E.

DOCUMENTS: Refer to "Algiers".
PILOTAGE: Compulsory when entering, leaving or shifting in harbour, vessels arriving during night and wishing to enter the basin must anchor at 2 nautical miles to East of Southern Lighthouse at main entrance (red occulting light) on steady sand bottom of 65 ft. to 100 ft. depth.
ANCHORAGE: Quite good anchorage well protected against West or North winds at about 3 nautical miles to North of harbour with depths of 40 ft. to 60 ft. on rocky and sandy steady bottom.
MAX. SIZE: Length 656 ft. draft 33 ft., breadth no restriction. Tankers Max. draft 39 ft.
RADIO: Cable Agents giving ETA or to Harbour Master by cable or radio telephone via Annaba Radio Station which is permanently watching on 2182 kHz.
VHF: Harbour Master's Office can be contacted on Channels 16 and 14.
TUGS: Two tugs available each of 700 h.p., both fitted with radio telephone and two fire appliances.
BERTHING: Harbour is open to merchant navigation every day from 0500 hrs. to 2200 hrs. In case of necessity vessel will be handled at any time.

21 general cargo berths with depths 6.2 m. to 10.0 m.
CRANES: 18 electric or diesel shore cranes with lifting capacities from 3 to 6 tons; 1 electric shore sheers of 110 tons and 1 diesel-electric sheers hulk of 80 tons.
BRIDGES: No bridges or power cables crossing port area.
STEVEDORES: Available. Working hours (whole days), normal hours: 0700 – 1020/1400 – 1720. Shifts: 0630 – 1230/1300 – 1900/2000 – 0200. Working night and holidays, overtime 50%.
TANKERS: Two tanker berths in outer port, entrance 43 ft. The first is at Lyon's Jetty consists of 2 dolphins 180 ft. apart, depth 33 ft. Second at South Jetty consists of 2 dolphins 180 ft. apart, depth 43 ft. Pipelines of 8 in. and 10 in. supply the oil installations.
FRESH WATER: Plentiful supply of water alongside wharves at a rate of 8 t.p.h. to 14 t.p.h. By barge at the tanker berths.
FUEL: Bunkers available.
REPAIRS: One graving dock fitted with 2 rolling cradles on slipways, lifting capacity 100 tons and 200 tons. Divers and frogmen available.
GANGWAY/DECK WATCHMEN: Performed by ship's crew.
OPENING/CLOSING HATCHES: Performed by stevedores.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Required.
GENERAL: Prevailing winds generally of N.W. and West. Storms from these directions are blocked by mountains which lie behind harbour. Harbour is only exposed to storms from East and N.E. which are very rare. There is practically no swell or surf into harbour. Tidal variation about 1 ft. and water level ranges about 31 in. dependent on season. Low waters from February to June and high waters from June to February.

SHIPMASTER'S REPORT: September 1982.
Position: 36° 54′ N., 07° 46′ E.
Name: Formally named Bone, in most of the charts is mentioned as Bone.
Radio: Annaba Radio keeps watch also on VHF Channel 16 and working Channels 24, 25, 26, 27.
Gangway/Deck Watchmen: Shore watchman is compulsory by Port Authorities.
Opening/Closing Hatches: Performed by crew.
Identification Cards: Shore passes are issued by Immigration Office and shore leave is allowed on presentation of the issued pass and Passport or Seaman's Book.
Restrictions at Port: As soon as vessel anchors in Annaba Roads, Coast Guard comes on board and collects all documents and seals all Bonded Stores. Attention is to be paid on the correct counting of Bonded Stores, such as cigarettes, spirits, etc. Beer is not sealed and crew allowed 200 cigarettes plus one bottle of spirits each.

(a) It is strictly forbidden for ships to use their whistles or sirens in the harbour, exceptions when vessel being under way for preventing collisions. Strictly forbidden to call Pilot by means of whistle between 2000 hrs. and 0600 hrs.

(b) All ships must keep on board sufficient crew in order to carry out all ship's handling, especially shiftings of vessel. Normally Master is informed by Port Authority and signs notice, but many times happened to inform vessel at any time to shift immediately.

(c) It is strictly forbidden to carry out deballasting operations in the harbour waters, except after a systematic control has been made by the Master, the Dock Master or a Surveyor appointed by them, to prove that ballast water is clean.

(d) Any repairs being made to the hull of the vessel, scraping, painting, painting of Load Line marks must be authorised by the Captaincy.

(e) Trials of the engines can only be done with an authorisation from Port Captain.

Maximum Draft Allowed: 31 ft. for the berth of minerals – "Iron and Coke".

AUTHORITY: Directeur du Port.

ARZEW (including Arzew El Djedid): 35.50 N. 00.08 W. (See Plan)

LOCATION: The Port of Arzew extends between Lat. 35° 50′ N. and 35° 52′ N. and Long. 0° 08′ W. and 0° 17′ W., at the N.W. end of the Gulf of Arzew.

The Port of Arzew El Djedid is located in position Lat. 35° 48′ 06″ N., Long. 00° 12′ 30″ W.
DOCUMENTS:
3 copies Manifest.
4 copies Crew List.
2 copies Vaccination List.
2 copies Arms & Ammunition List.
All Log Books, Certificates and Registers will be inspected.
Sailing: The Sailing Declaration must be made 2 hours at least prior to sailing time.
APPROACHES: *Landfall:* By day recognition of Arzew is made easy by the high ground of Cape Ferrat. On entering the Gulf the lighthouse of the Island of Arzew is seen and in clear weather it is possible to distinguish to the East, the town of Mostaganem. The Arzew Mountain (225 m.) dominates the Bay of Arzew and the port.

The storage tanks for hydrocarbons are visible from a long way offshore. At night, vessels see firstly the oil flares of the different units in the industrial zone. These flares are visible in good weather for a distance of 25 miles.

LNG Flare "4Z"	Lat. 35° 50′ 31″ N.	Long. 0° 18′ 42″ W.
Refinery Flare	Lat. 35° 49′ 40″ N.	Long. 0° 19′ 15″ W.
L.P.G. Flare	Lat. 35° 49′ 58″ N.	Long. 0° 18′ 12″ W.
LNG Flare "1Z"	Lat. 35° 49′ 07″ N.	Long. 0° 16′ 20″ W.
	Lat. 35° 49′ 04″ N.	Long. 0° 16′ 26″ W.
LNG Flare "2Z"	Lat. 35° 48′ 32″ N.	Long. 0° 15′ 23″ W.
	Lat. 35° 48′ 47″ N.	Long. 0° 15′ 21″ W.

Port Lights: Lighthouse on Arzew Island: Lat. 35° 52′ 34″ N., Long. 0° 17′ 20″ W.
Buoys: Junction Buoy (vertical red and white stripes), white light, position: Lat. 35° 50′ 29″ N., Long. 0° 16′ 03″ W.

Madrague Buoy, East cardinal mark ("A" System), white light, position: Lat. 35° 51′ 40″ N., Long. 0° 16′ 20″ W.

Sea Water Intake Buoy (CEAZ complex): North cardinal mark ("A" System), white light, position: Lat. 35° 50′ 06″ N., Long. 0° 16′ 55″ W.

Working Buoy on Offshore Jetty: Black (starboard characteristics) with fixed green light, position: Lat. 35° 50′ 51″ N., Long. 0° 17′ 16″ W.
Lights of the Port of Arzew: Breakwater: Green light, position: Lat. 35° 51′ 06″ N., Long. 0° 17′ 04″ W.

Head of Offshore Jetty: White light, position: Lat. 35° 50′ 27″ N., Long. 0° 17′ 22″ W.

Secondary Jetty: Red light, flash every 3 secs., position: Lat. 35° 50′ 59″ N., Long. 0° 17′ 45″ W.

South Jetty: Red light, position: Lat. 35° 51′ 17″ N., Long. 0° 17′ 55″ W.

Mole IV: Fixed green light (S.W.), position: Lat. 35° 51′ 28″ N., Long. 0° 17′ 44″ W.

Mole III: Fixed red light (S.E.), position: Lat. 35° 51′ 32″ N., Long. 0° 17′ 57″ W.
Lights of the Port of Arzew El Djedid:

West Jetty: Green light, position: Lat. 35° 49′ 26″ N., Long. 0° 15′ 22″ W.

East Jetty: Red light, position: Lat. 35° 49′ 05″ N., Long. 0° 14′ 32″ W.
PILOTAGE: Pilotage is compulsory. The limit of the pilotage zone out to sea is the parallel of the lighthouse on Arzew Island.

Pilots may ensure that anchoring is carried out in the roads for large vessels. The Pilot embarks in the waiting zone. The pilot ladder must be rigged on the lee side at a height of 1 m. above the water. For large vessels in ballast, the pilot ladder must give access to an accommodation ladder rigged at a height of 5 m. (approx.) above the water.

Communications from tankers will be via the international radio station at St. Lys, which is in telex communication with the Arzew Terminal. Contact with the Arzew Terminal can be made on VHF Channel 16. Vessel will then be informed by the control room of the frequency to use, either Channel 12 or 14 for mooring purposes.
ANCHORAGE: Vessels requiring to anchor on arrival normally use services of the Pilot. Anchorage fees are charged whether the Pilot is used or not. Sea bottom of rocks, sand and mud.

The operations in the roads and the safeguard of accesses have brought about the reserved zones, forbidden areas, waiting and anchoring zones.

The position of these zones is shown on the chart.

(a) The forbidden zone corresponds to the S.W. sector included between the parallel of Arzew Island (Lat. 35° 52' 28" N.) and a straight line running at 45° from the land and passing through the following geographical point: Lat. 35° 50' 27" N., Long. 0° 15' 55" W.

(b) The waiting zone corresponds to the N.E. sector included between the North of the breakwater of the New Port and a straight line running at 45° to the West from the land, passing through the above geographical point.

Vessels which have to anchor on arrival can request the services of a Pilot.

The bottom is firm, constituted by sand, pebbles, and muddy shale.

Use of Anchors for Manoeuvring: This is forbidden in the port except under conditions of force majeure. It is strictly prohibited in the passages and fairways, and in the vicinity of the pipelines.

RESTRICTIONS: Vessels may enter or sail by day or night, weather conditions permitting. Tankers berthing on the sea-line berths may be restricted by bad weather, heavy wind or swell.

Vessels sailing have priority over vessels entering.

Port Closure: In case of accident or unfavourable weather conditions the port may be closed for entry, for leaving or in both directions at the same time. Notice of closure is broadcast on VHF Channel 16.

In general, the Port of Arzew may be closed for entry if:
1. The swell is greater than 2 m.
2. Winds are Force 6 (Beaufort) or greater.

The Port of Arzew El Djedid may be closed for entry if:
1. The swell is greater than 2 m.
2. Winds are Force 5 (Beaufort) or greater.

State of Vessel: Prior to entry into port, Masters must sign a declaration in which they state that the navigability of their vessel is perfect and that they are in possession of all certificates and documents required.

Vessels which are required to operate at the sea-line must arrange their loading derricks prior to the manoeuvre. The strength of these loading derricks must be equal to or greater than 5 tonnes, their Safety Certificate is required on arrival.

MAX. SIZE: See "Berths".

HEALTH: Free Pratique is not granted by radio. For tankers berthing at the sea line, Pratique may be granted by a visiting sanitary officer or by the Pilot when he boards, providing the Health Declaration is satisfactory. For vessels berthing inside the harbour, the Health Officer will board on arrival.

Vessels calling at Arzew must advise their ETA 48 hours and 24 hours prior to arrival, naming the ports called within the last 10 days.

Crew must be vaccinated against cholera. Vaccination books must be valid and a check is made before Free Pratique is granted.

RADIO: Oran Radio and Algiers Radio both listen on international frequencies. Tankers normally use St. Lys Radio.

Notice of Arrival: Vessels destined for Arzew must send to the Port Captaincy a message at least 48 hours in advance through a coastal station stating, date and time in GMT of their arrival in the port roads.

The Notice of Arrival is to be confirmed 12 hours prior to arrival of the vessel in the port roads.

VHF: *Port Radio Service:*

Call-up Frequency:
156.8 MHz., Channel 16, listening-out frequency.

Working Frequencies:
156.7 MHz., Channel 14, Arzew Port Captaincy.
156.5 MHz., Channel 12, Arzew El Djedid Captaincy.
156.65 MHz., Channel 13, Pilotage Station.
156.6 MHz. Channel 10, Tug Station.
156.55 MHz., Channel 11, Sea-Line.
156.7 MHz., Channel 14, Tug Station.

Vessels arriving at Arzew, and waiting in the roads, must listen out continuously on Channel 16.

Vessels with their Pilot aboard must listen out on Channels 14 (Arzew), 12 (Arzew El Djedid), 11 (sea-line):
(a) From the time the Pilot comes on board until arrival at the quay.
(b) From the departure from the quay until the Pilot disembarks.
(c) During the whole time the vessel is at the sea-line.

TUGS: Tug service is compulsory for vessels of more than 1,500 g.r.t. 8 tugs are operational with power ranging from 2,000 h.p. to 3,500 h.p.

It is compulsory for tankers of up to or larger than 50,000 metric tonnes (d.w.t.) to use at least 3 tugs on entry.

The tow lines, supplied by the ship, must be in perfect condition and appropriate for the manoeuvre.

The route programme is drawn up by the Pilot, in agreement with the ship's Master.

BERTHS: Arzew:

Mole III: 258 m. long and 100 m. wide, with 5 berths for various cargoes with depths of water varying from 5 m. to 8 m.

Berth (Name/No.)	*Depth (m.)*	*Max. d.w.t.*	*Products Handled*	*Loading Arms (Diameter)*
Methane Terminal:				
North Berth	9.80	40,000 cu.m.	methane methanol	12 in. 8 in.
South Berth	9.80	40,000 cu.m.	methane	12 in.
Jetee Secondaire:				
"S1" (Inner West)	10.0	30,000 15,000 cu.m.	ammonia refined products LPG residue and deballasting facilities	3×10 in. 3×8 in. 3×12 in.
"S2" (Outer East)	11.0	60,000 25,000 cu.m.	refined products LPG bitumen deballasting facilities	3×12 in. 3×12 in. 3×12 in.
Jetty Large:				
P1 (Middle Berth)	13.50	50,000	crude, gas oil, fuel oil, condensate	12 in.
P2 (Seaward/ Outer Berth)	15.50	100,000	crude, gas oil, fuel oil,	12 in.
P0 (Inner Berth)	10.0	30,000	LPG, fuel oil, gas oil	8 in.
Sea-line	26.0	100,000	crude, condensate	28 in. hoses

Arzew El Djedid:

Berth	*Depth (m.)*	*Max. Size*	*Products Handled*
M1	13.5	125,000 to 200,000 cu.m.	LNG
M2, M3 (2 berths)	13.5	125,000 to 200,000 cu.m.	LNG
M4, M5 (2 berths)	13.5	125,000 cu.m.	LNG
M6	13.5	125,000 to 200,000 cu.m.	LNG
B1	23.5	25,000 to 100,000 cu.m.	crude, condensate
B2	23.5	50,000 to 150,000 tons	crude, condensate
B3	26.5	100,000 to 250,000 tons	crude, condensate
D1	13.0	35,000 to 70,000 cu.m.	LPG

(See "Shipmaster's Report" dated March 1984)

Berths M2/M3 and M4/M5 are operational, a hydraulic gangway with a crane (3 tonnes) is available on the service platform of these berths.

The berths are equipped with a battery of 5 loading arms for LNG of 16 in. × 66 in. of which one is for vapour return. Pumping rate is 2,500 cu.m.p.h. A bunker arm of 8 in. × 66 in. is provided.

Nitrogen: Supply of nitrogen on M2/M3 is by tanker lorry.

BERTHING:

Coming Alongside and Mooring: Except in exceptional cases, vessels must be berthed bow facing out to sea. Each vessel is moored with its own lines.

The number lines per vessel must in no event be less than 14, i.e. 7 forward and 7 aft: 3 head lines (stern lines), 2 breast lines, 2 springs.

Mooring lines of rope should be used preferably unless abnormal conditions prevail.

Lines of steel wire, if used, must not be secured on tanker working decks, except if they are on constant tension winches, and pass through roller leads.

It is recommended that mixed moorings be avoided. In particular, springs must be lines of the same material.

The moorings must be suitably tightened, be inspected constantly, and adjusted every time it is necessary.

Fire Wires: Towlines of steel wire, the so-called "fire wires" must be positioned on the seaward side on the forecastle and the poop, with the eye of the wires being maintained 1.50 m. above water level by a watchman. On each fire wire a length of wire of 10.0 m. must be arranged on deck between the bollards and the lead.

Gangways, Gangway Ladders, Pilot Ladders: The gangway or gangway ladder must be easily accessible under all circumstances and provided with a safety net, being well lit at night.

At the Port of Arzew El Djedid, at Berths M2/M3 and M4/M5, vessels are connected to shore by automatic gangways.

The positioning of the pilot ladder or the gangway ladder on the opposite side to the quay is forbidden.

Vessel's stay at Berth: Any stay at a berth outside that of commercial operations must be authorised by the Port Captain.

All vessels must only stay in port for the minimum time required.

In the event of commercial operations not commencing immediately, or are stopped for any reason, the Port Captaincy may decide to call for the vessel to go out to the roads.

Departure formalities may be required to be carried out in the roads. Masters must report any machinery damage which reduces their capability. Repair works of any kind are forbidden except where specially permitted by the Port Captain.

Sealine: Use of ship's anchors will not be permitted when manoeuvring into berth. Two tugs are available to assist in berthing. On arrival vessels should have ready 8 mooring lines, 4 forward and 4 aft and a tow rope at each end as it will be necessary to position the vessel with her own gear before securing to the heavy wires. Good rope messengers should be ready at each end of the vessel to pick up these wires.

There are 3 mooring buoys at the bow and 3 at the stern. All buoys are fitted with 5 in. wire ropes. Ships of moderate tonnage may be moored using 2 bow buoys and 2 quarter buoys only. Hoses will be lifted from both sides of the vessel using ship's gear and crew.

The port and starboard derricks must be ready for use before berthing. The safe working-load must be at least 5 tons. The Loading Master can refuse to berth a tanker whose lifting tackle is not correctly rigged or in good working condition.

Three 12 in. hoses are connected for loading, 2 on one side and 1 on the other. Loading rates up to 5,500 t.p.h.

STEVEDORES: Vessels must cable their ETA at least 24 hours before arrival and confirm before 1700 hrs. on day prior to arrival or before 1000 hrs. if vessel will arrive in the afternoon of the same day. Gangs are ordered before 0700 hrs. for mornings and at 1030 hrs. for afternoons. Shifts are from 0730 – 1050 hrs. and 1530 – 1650 hrs. Extra shifts from 0730 – 1330 hrs. and from 1330 – 1930 hrs.

MEDICAL: All treatment of ship's crew is arranged by private doctors through ship's Agent. No hospital facilities at Arzew. Seriously injured crew are taken to Oran, 45 km. away, for hospitalisation. Vessels arriving with sick crew on board should notify Agents well in advance to make arrangements for hospitalisation on arrival. No patient is to be disembarked without notification to the Health Officer for his agreement.

TANKERS: See "Berths" and "Berthing".

BALLAST: Pilots are empowered to refuse to berth a vessel if in their opinion the vessel has insufficient ballast, or her trim is such that it would prevent safe loading.

DENSITY: 1030.

FRESH WATER: Provided by fresh water hydrants on M2/M3 (El Djedid), Moles III and IV. Elsewhere fresh water can be supplied by a tug.

FUEL: Two barges of 2,000 tons each are available. They deliver at a rate of 350 cu.m.p.h. These barges are intended for bunkering vessels with fuel oil (1000 sec. Redwood, 0.924), Bunker "C" (3000 sec. Redwood, 0.960), gas oil and diesel oil (40 sec. Redwood, 0.810 to 0.840) and lubricants, both in the roads and at the quays.

CONSULS:

France (Consul-General), Tel: 33.10.13.
Italy (Vice-Consul), Tel: 35.51.96.
Russia (Consul).
Spain (Consul-General), Tel: 33.21.65.
U.S.A. (Consul), Tel: 35.26.65.
The Netherlands are also represented.

WATCHMEN: Shore watchmen are compulsory for vessels loading fertiliser or discharging LPG or refined crude in the harbour area. For tankers loading at the sea line berth, watchmen are at Master's discretion.

CUSTOMS ALLOWANCES: 200 cigarettes and an opened bottle of spirits per man.

AIRPORT: International Airport at Es-Senia (Oran), distance 50 km.

TIME: GMT plus 1 hour all year.

TELEPHONES: Available only at methane berths. At the sea line berths tankers may communicate using VHF Channel 16 to Arzew Terminal.

IDENTITY CARDS: On arrival, the Immigration Control inspect all passports or Seamen's Books. Shore passes are given at the harbour gate in exchange for passports, Seaman's Book, or in the case of French seamen, their identity cards.

SERVICES: *Launch Service:* Available for ship's crew for transportation to the roads.

GENERAL: *Measures to be taken in the event of deterioration in weather conditions:* In the event of a warning of high winds and bad weather, the Master must be prepared to stop loading and to make arrangements for suitable *ballasting*.

In the event of high wind or the threat of it, particularly from the North to the East, the following measures should be considered:

Reinforcement of moorings.
Ballasting.
Taking a Pilot on board.
Requesting aid of tugs.
Stop loading – disconnection of arms.
Sailing of the vessel.

Light and Flag Signals: From their arrival in the Roads until they leave, all tankers not degassed or vessels carrying hazardous goods must exhibit the following signals:

By day: A red flag.

By night: A fixed red light visible all around the horizon, apart from regulation navigation lights.

Wind: In Winter winds predominantly from the West.

In Summer the main winds are those from the East to North sectors.

Seasonal variations define two periods: the one of a windy Winter (October to April) and the other, the Summer, more calm (May to September). The average frequency of winds in excess of 10 m./sec. from the N.E. quadrant varies from 3.5% during the Winter to 2% during Summer, whilst that of winds from the S.W. quadrant varies from 5.1% to 1.3% between the same periods.

Tide: The variation in water level arise from the superimposition of a half-daily lunar tide of low amplitude (15 cm. – 30 cm.), fluctuations in general level during the year and long period oscillations (tidal waves).

Swell: Swell from North to East direction is preponderant, whilst that from other directions is negligible.

79% of the time the amplitude is less than 1 m.

3% of the time the amplitude is greater than 3 m.

The bad weather period is from December to April, with the maximum risk in December.

Currents: General Currents: Centre of current from East to West, −0.25%.

Surface Currents: With N.E. wind between 30 km./h. and 35 km./h. currents in the same direction (0.8 km./h.) as far as the Madrague area where they turn to the South and even S.E. (0.3 km./h.). With S.W. wind at 25 km./h., the currents have the same direction as the wind and can reach speeds of the order of 1.2 km./h.

Bottom Currents: There is a bottom current coming from Mostaganem (0.35 km./h.) which follows the coast.

Accident on Board or in Port – Principal Steps to be Taken:

In the event of accident, all fire-fighting means installed permanently on the moles, quays and in the port area are immediately placed at the disposal of Masters.

If there is fire on board the vessel, the Master must, as soon as the source of the fire has been established, take every measure to extinguish it.

If the Master considers that he cannot achieve this, he draws the attention of the port services by making a series of long blasts on his vessel's whistle, and requests that all possible available means be put at his disposal. At the same time he must:

(1) Stop commercial operations.
(2) Disconnect loading arms and hoses.
(3) Close all openings leading to the tanks, pump room, bunkers, etc.
(4) Place his vessel immediately in a position to sail so as to get away from the berth should the Port Authorities so request.

Other vessels, as soon as they hear the siren of the vessel in trouble, must:

(1) Stop commercial operations.
(2) Disconnect loading arms and hoses.
(3) Close all openings leading to the tanks, pump room, bunkers, etc.
(4) Place the vessel immediately in a position to sail.
(5) Prepare all means for fire-fighting.

Fire-fighting means:

These comprise:

First strike means (foam, powder) installed at the loading points
Fire-fighting network.
A pump vessel equipped for fighting hydrocarbon fires.
Tugs fitted for fighting fires of all kinds.

SHIPMASTER'S REPORT: March 1984.

Arzew el Jadid – Bethioua: LPG Berth No. D1.

Berthing: Two tugs make fast close to East Entrance to the port – at the time of berthing the wind was from the N.N.E. at 20 knots gusting to 25 knots and the tugs were secured with great difficulty with the vessel positioned virtually in the entrance.

Whilst berthing a third tug pushes amidships to hold the ship on the berth.

Two tugs are used for unberthing.

Tugs are secured using two lines (ship's lines).

Manoeuvring area inside the breakwater is tight and I would not recommend berthing or unberthing operations in wind speeds exceeding 15 knots.

The max. length of vessel permitted on Berth D1 is 220 m. and the max. permitted draft is 12 m., – understand the first ship to use the jetty touched the bottom during berthing (35,000 tonnes shipment) no record of draft available.

Moorings: Three head/stern lines, two breast lines and two back springs.

Gangway: No shore gangway.

Chicksans: 3×12 in. liquid loading arms, 1×12 in. vapour return line, 1×8 in. bunker loading arm. Quick release clamps are fitted on Chicksan arms. Disposition from West to East is; Bunker loading arm; Liquid loading arm; Liquid loading arm; Vapour return arm; Liquid loading arm.

There is a facility for purging loading arms with nitrogen prior to disconnecting which was unproven during our call due to low nitrogen pressure.

Cargo Pumps: 1×500 cu.m. circulating pump. 3×1,650 cu.m. loading pumps.

Vapour Return: Capacity unknown.

SHIPMASTER'S REPORT: November 1986.

Note: Forms below are for the Port of Arzew. There may be different requirements at other Algerian ports, but this should serve as a guide.

Agent:

Inwards Declaration. } Both filled out at the same time,
Outwards Declaration } Agent supplies forms.
1 Narcotics List.
1 Declaration of Arms and Ammunition or 'Nil'.
2 Crew Lists.

Immigration:

2 Crew Lists.
1 Narcotics List.
1 Ship's Particulars (Form supplied).

Port Health:

1 Crew List.
1 Health Declaration. (IMO Form).

Customs:

1 List of Crew Effects. (Crew Manifest).
1 Bonded Stores List.
1 Slop Chest/Shop Store List.
1 List of Ship's Currency.
1 List of Currency held by crew.
1 Declaration of Arms and Ammunition or 'Nil'.
1 Narcotics List.

N.B.: Customs are very strict, make sure everything well in order for all their forms. (I was informed by Agent that a Shipmaster had recently been fined U.S.$9,000.00 due to the fact that he forgot to declare U.S.$ 2,500 of the Chief Engineer's money, which he had been holding in the ship's safe).

AUTHORITY: Entreprise Portuaire D'Arzew, 45 Rue Aissat Idir, B.P. 46, Arzew, Algeria. *Tel:* 377527, 377491, 377970. *Telex:* 12819, 12990, 12982.

BEJAIA (Bougie): 36.45 N. 05.05 E. (See Plan)

DOCUMENTS: Refer to Algiers.

PILOTAGE: Compulsory within pilotage zone between Cap Carbon to the West and Ras Attia to the East. Contact Pilot Station by VHF Channel 16 or Telex 83940. Tel. 92.35.03 (night). International code signals used to call Pilot who boards at the limit of pilotage zone. Pilot ladder should always be placed on port side.

ANCHORAGE: Suitable anchorage in all weathers will be indicated by the Pilot.

RESTRICTIONS: No night movements for tankers with LPG or refined petroleum cargoes.

MAX. SIZE: Tankers: Length 260 m. Draft up to 13 m. Waiting zone for vessels in ballast; depth 10 m.

Commercial Port: Draft between 7 m. to 9 m.

HEALTH: Free Pratique given by Brigade Maritime on arrival, unless suspected disease on board when Port Doctor will visit the ship. Pratique is automatic after calling at another Algerian Port.

RADIO: Alger Radio.

TUGS: Available under direction of Pilot by VHF contact. Ship's lines always used. 2 tugs required for berthing and unberthing.

BERTHING: 23 berths with depths 5.5 m. to 10.0 m.

TANKERS: *Sonatrach Oil Terminal:* 3 loading piers for crude oil.
Pier No. 1 for vessels up to 11.50 m. draft. 4×10 in. hoses.
Pier No. 2 for vessels up to 12.50 m. draft. 4×12 in. hoses.
Pier No. 3 for vessels up to 13.00 m. draft. 4×12 in. hoses.
Maximum pressure allowed 3 kgs.
Loading rates up to 4,000 t.p.h.

BALLAST: All dirty ballast to be discharged ashore; 2 hoses available at each berth, can receive ballast up to 2,000 t.p.h.

Vessels berthed at Piers No. 2 and 3 cannot discharge ballast simultaneously.

Clean ballast may be discharged to sea, only if vessel is in gas-free condition.

Thick slop residues may only be accepted subject to terminal operator's approval, but only in quantities of less than 100 tons.

DENSITY: 1025.

FRESH WATER: Available at Berths No. 2 and 3 only, subject to 24 hours' notice. Loading rate about 15 t.p.h.

FUEL: Available at all Sonatrach berths, subject prior arrangements. No barges.

FIRE PRECAUTIONS: Anchors must be hove-up while vessel is moored in berth. A fire wire must be provided fore and aft for tug's use if necessary.

Tanker's fire-fighting equipment must be ready for use on fore and main deck.

3 tugs are equipped with fire-fighting apparatus.

CONSULS: France.

REPAIRS: Very limited facilities. No dry docks. No possibility for radio/radar repairs.

No repairs may be carried out on board a tanker without first obtaining the Harbour Master's permission.

WATCHMEN: Not compulsory but recommended. The Port Commandant may impose a guard on vessels carrying certain cargoes.

CUSTOMS ALLOWANCES: 3 packets cigarettes and 1 bottle of wine or alcohol per man per day.

REPATRIATIONS: Can be arranged via Algiers.

AIRPORT: Dar-el-Beida International Airport at Algiers, 240 km. from Bejaia.

POLICE/FIRE/AMBULANCE: Police, tel. 92.04.22. Ambulance/Fire, tel. 92.00.02 or 14.

TELEPHONES: None on board, but telephone exists at each tanker berth.

SHORE LEAVE: Allowed, provided seamen carry identity cards or shore passes.

DEVELOPMENTS: Port to be expanded to accept vessels of 30,000 d.w.t.

SHIPMASTER'S REPORT: January 1987.

While anchored at Bejaia waiting to berth, the vessel was boarded by the Algerian Coast Guard.

All ship's papers were correctly presented.
All trading certificates were valid.
No discrepancy between contents of bonded store and Stores List.
No discrepancy between contents of general stores and Stores List.
No discrepancy on Crew Declaration Form.

The vessel was considered to have violated the Algerian port regulations by failing to dip the ensign as a courtesy to the Algerian Coast Guard cutter. This was the vessel's first visit to the port and not having a copy of Algerian Port Regulations was not accepted as an excuse.

In order to avoid a "stiff" penalty (U.S.$ 1,000.00) and delay to the vessel, a large quantity of stores were removed by the Coast Guard. They consisted of 12 bottles whisky, 12 cartons cigarettes, 4 bottles rum, 2 cases beer, tins of sardines, luncheon meat, corned beef, herrings and mandarine oranges, jars of mixed fruit jam, jars of marmalade, tins of mixed fruit, butter, biscuits, apples and 3 legs of mutton.

A signed statement "for the use of Bejaia Customs" was written on the reverse side of the Stores List stating that 9.5 litres spirits and 10,600 cigarettes and various souvenirs had been removed from the vessel.

All crew accommodation was searched and all soap in excess of one tablet per cabin was confiscated.

SHIPMASTER'S REPORT: February 1989.
Vessel: 90,000 d.w.t.
Anchoring: Vessel anchored without a Pilot after contacting Port Control.
VHF: Pilot on Channel 8.
Tugs: For berthing vessel used one tug on the starboard bow with 2 ship's lines and one tug on the starboard quarter with 2 ship's lines. A third tug was used for pushing alongside.
Moorings: Vessel berthed port side alongside with 3 head lines, 2 breast lines and 2 springs, forward and aft. The head lines and stern lines are the first lines sent to the shore.
Shore Passes: Immigration issue shore passes in exchange for passports which are taken ashore.

SHIPMASTER'S REPORT: September 1989.
Fresh Water: When berthed at the oil jetty, fresh water is available between 0400 hrs. and 1100 hrs.
Officials: The following personnel boarded the vessel on arrival: The Agent, Shipper, Loading Master, Surveyor, 3 Customs Officers, 3 Immigration Officers, Doctor and 2 Port Control Officers.
Cargo Documents: The Cargo Documents are delivered on board after completion of loading. This can be from 10 minutes after completion to as long as 3 hours after completion.
Shore Passes: On our last visit to the port, shore passes were in short supply so we made extra copies. On this visit we used some of the copies we made and the Immigration officials asked us to hand over any blank copies we still had remaining.

SHIPMASTER'S REPORT: March 1994.
Vessel: 96,000 d.w.t. combination carrier operating in tanker mode.

Tugs available are of very low power and there is a very small Turning Basin inside the breakwater and close to the berth (S.W. of Berth No. 3 and S.E. of Berth No. 2). Due to above reasons, berthing in adverse conditions of wind and swell is very difficult and risky (All vessels have to be swung 180° in the Basin as, on Berth No. 3 always port side alongside and on Berth No. 2 always starboard side alongside).

Large ships always berth on Berth No. 3.

Cargo operations can be suspended and vessel can be shifted to roads with wind force going up to Force 4 or 5.

Any stores, charts, etc., sent to Bejaia can take as long as 7 days to clear Customs.

Shore leave not advisable at time of our visit.

AUTHORITY: Office National des Ports, Mole Casbah, B.P.94, Bejaia. *Tel:* 92.18.04/05, 92.35.03. *Telex:* 83055, 83940.

DELLYS: 36.55 N. 03.55 E. (See Plan)

DOCUMENTS: Documents which the Master of the vessel must prepare prior to arrival for necessary port formalities.

(a) for the Agent of Societe Nationale des Transports Maritimes or Compagnie Nationale Algerienne de Navigation (The two Algerian National Shipping companies):
  2 Crew Lists.
  2 Stores Lists, including bonded material.
  2 Foreign Currency Lists.
  5 Cargo Manifests.
  2 Stowage Plans.
  4 Notices of Readiness.
  2 Original Bills of Lading.
  2 Crew and Passenger Personal Effects Lists.
(b) *For Customs:*
  1 Cargo Manifest.
  1 Crew List.
  1 Foreign Currency List.
  1 Stores List.
(c) *For the Police (Immigration):*
  1 Crew List.
  1 Cargo Manifest.
  1 Narcotics List.
  1 List of Arms and Ammunition.

PILOTAGE: Compulsory when entering and leaving and for all movements (shifting). Pilotage operations only take place during the daytime. To request the Pilot, call the Port Captaincy by VHF Channel 16, or by using signals laid down in the International Signalling Code.

The Pilot boards the vessel within the confines of the anchorage zone. The pilot ladder must be positioned on the starboard side.

ANCHORAGE: The Bay of Dellys, being open from the North to the East, offers a very good anchorage against winds from the West of N.W.

The anchorage zone is within an area defined by a line joining the points of Dellys and Garrouba.

Depths vary between 13 m. and 24 m., and the bottom is rocky.

RESTRICTIONS: Movements of vessels (entering and sailing) are not permitted at night.

MAX. SIZE: The maximum authorised draft is 18 ft.

Overall length is limited to 100 m. for conventional vessels, and to 105 m. for Ro/Ro vessels.

HEALTH: No procedure is stipulated in order to obtain Free Pratique. Nevertheless, and in the event of illness or infection being suspected on board, advise the Port Captaincy by VHF Channel 16 or by telex prior to arrival in the roads.

RADIO: Algiers Radio is operative 24 hours a day, receiving on 500 kHz and 2182 kHz and transmitting on 1792 kHz.

VHF: The Port Captaincy operates on Channel 16.

TUGS: None available.

BERTHING: The port has 2 quays (Quay No. 1 and No. 4), which are used by commercial vessels. Berthing at these berths is subject to the dimensions of the vessel.

STEVEDORES: The stevedoring service operates from 0700 hrs. – 1900 hrs. in 2 shifts, viz. 0700 hrs. – 1300 hrs. and 1300 hrs. – 1900 hrs.

The gangs are ordered through the Port Captaincy by the SNTM/CNAN Agent for general cargo, and by the receiver where bulk cargo is involved. The vessel must notify its ETA to the SNTM/CNAN Agent at least 24 hours in advance of arrival.

As the port has no cranes, operations are effected by ship's equipment (cranes, derricks, etc.).

The average rates of discharge are in the order of 23 t.p.h. per gang for bulk cargo and 40 t.p.h. per gang for general cargo.

MEDICAL: There is a hospital at Dellys for all medical treatment required.

The SNTM/CNAN Agent must be advised prior to the arrival of the vessel so that they may make the necessary arrangements.

DENSITY: 1025.

FRESH WATER: Drinking water only available at Quay No. 4.

FUEL: Not available. Vessels can bunker at Algiers port (55 miles) or at Bejaia (approx. 65 miles).

CONSULS: None.

REPAIRS: Not possible.

GANGWAY/DECK WATCHMEN: Not compulsory, but recommended. The SNTM/CNAN Agent is instructed to provide vessels with watchmen.

OPENING/CLOSING HATCHES: These operations are to be carried out by the ship's crew.

CUSTOMS ALLOWANCES: 200 cigarettes and 1 bottle of spirits per crew member per week.

REPATRIATION: This can be carried out via Algiers with frequent departures to Europe by air and by car ferry.
AIRPORT: "Houari Boumediene" International Airport at Algiers, 80 km. from Dellys.
TIME: GMT plus 1 hour.
POLICE/AMBULANCE/FIRE: Police: Tel: 42.95.27. Fire Brigade/ Ambulance: Tel: 42.90.50. These services are located within the port area.
SHORE LEAVE: Crew members must carry a passport or Seamen's Book, and report to the Port Police where a shore pass will be issued.
GENERAL: The predominant winds in the Port of Dellys are from the West and N.W.

Ro/Ro vessels destinated for the Port of Dellys must be equipped with bow thrusters.
AUTHORITY: Direction du Port de Dellys, Entreprise Portuaire d'Alger, Dellys, Algeria. *Contact:* Mr. N. Hasseni, Port Director. *Tel:* 42.98.48/ 42.93.77. *Telex:* 76089 Porde Dz; Mr. A. Chaouadi, Port Officer. Tel: 42.91.79.

DJEN-DJEN: 36.50 N. 05.54 E. **(See Plan)**

DOCUMENTS: See "Algiers".
PILOTAGE: Compulsory. On arrival, call Pilot on VHF Channel 16. Pilots communicate with vessel on VHF Channel 12 on boarding.
ANCHORAGES: Anchorage bounded by 4 points:
(a) Lat. 36° 49′ N., Long. 05° 47′ 06″ E.
(b) Lat. 36° 50′ N., Long. 05° 47′ 06″ E.
(c) Lat. 36° 50′ N., Long. 05° 51′ 02″ E.
(d) Lat. 36° 49′ N., Long. 05° 51′ 02″ E.
RESTRICTIONS: No night navigation service.

Access channel and turning circle have a depth of 23 m.
MAX. SIZE: Vessels up to LOA 189 m. and draft 32 ft. have used the general cargo berth.
HEALTH: Declaration to be completed on arrival, if no suspected disease or fever on board.
RADIO: Call "Bejaia Radio" on VHF Channel 16.
VHF: Harbour Master's Office on Channels 16 and 12.

Also see "General".
TUGS: 1×1,700 h.p. tug available. 2 additional tugs are under construction and are expected to be ready in 1997.
BERTHING: General Cargo Quay: Length 750 m., depth 11.0 m. Bulk carriers (grain) discharge at the quay.
Container Quay: Length 250 m., width 300 m. and depth 11.0 m. Paved surface area 7.5 ha.
CRANES: No fixed shore cranes available. 1×90 ton mobile crane.
BULK CARGO FACILITIES: Steel Quay: Length 1,060 m., width 300 m. and depth 10.5 m. – 18.2 m. The quay can handle 4,200,000 tons (mainly discharging ore) annually, but quay not yet in operation.
SPECIALISED CARGO HANDLING FACILITIES: Ro-Ro: 3 berths, depth 11.0 m. Berths handle approximately 360,000 tons annually. Paved surface area 9 ha.
BRIDGES: None.
STEVEDORES: 2 shifts: 0700 hrs. – 1300 hrs. and 1300 hrs. – 1900 hrs. Fridays and holidays not worked.
MEDICAL: Taher Hospital 4 km. and Jijel Hospital 10 km.
TANKERS: No facilities.
DENSITY: 1025.
FRESH WATER: Available at berths, arranged by Agent.
FUEL: Supplied by truck.
CONSULS: In Algiers.
REPAIRS: No facilities.
DRY DOCKS: None.
SURVEYORS: Only cargo inspectors available.
HATCHES: Normally opened and closed by crew.
CUSTOMS ALLOWANCES: 200 cigarettes and 1 bottle of spirits.
REPATRIATION: Arranged by Agent.
AIRPORT: Nearest airport 2 km., domestic flights only.
TIME: GMT plus 1 hour.
HOLIDAYS: January 1st; May 1st; June 19th; July 5th (Independence); November 1st (Revolution) and all Muslim holidays.
TELEPHONES: Connection possible.
BANKS: Only national banks.
STORING: See "Prelims".
(1) Vessel can be stored by truck.
(2) –
(3) Yes.
(4) –
(5) –
(6) No.
SHORE LEAVE: Crew members not allowed ashore.
GARBAGE DISPOSAL: Collection arranged by ship's Agent.
WASTE OIL DISPOSAL: Not available.
SEAMAN'S CLUBS: None.
CURRENCY: Algerian Dinar (DA). U.S.$1.00 = 53 DA.
GENERAL: *Notice:* Issued by Djen-Djen Port Authority.

Special Rules relative to the Navigation
in the Port of Djen-Djen

Masters are kindly requested to comply with the provisions of the general rules relative to navigation.

Sea-going ships of 100 g.r.t. or over shall inform the Harbour Master's Office of any movement they are about to commence, such as entering, shifting, sailing, etc.

VHF is the normal way of communication, calling on Channel 16, working on Channels 12 or 14.

All other means can be used.

Messages shall be restricted to the ship's movements and expressed in the most concise form.

Harbour Master's Office keeps a continuous watch, and gives to mariners, on their request, information in relation to the movements into the harbour area. Such communications are effected according to the process stated here above.

The present rules aim at improving security and efficiency.

Any vessel not complying with them takes the risk of being delayed and besides, her Master becomes liable to prosecution, according to the regulations in force.

Safety Regulations

In case of emergency, any Master, Officer on duty or watchman should give the alarm:

If he has a telephone on board, dial 14 for Fireman (fire, flooding, injured persons).

Dial 17 to get the assistance of the Police (disturbance).

Or call the Central Watch Tower by VHF Channel 16.

Or draw attention by repeated siren or whistle calls, the burning of a red flare, or any other authorised distress signal.

Sufficient crew must always be on board to carry out shifting orders without delay.
DEVELOPMENTS: Planned infrastructures: Grain Terminal: Length 800 m., depth 11 m. – 16 m. Silo capacity 80,000 tons.
Tanker Berth: For vessels up to 23,000 d.w.t.
AUTHORITY: Enterprise Portuaire de Djen-Djen, B.P. 87, Jijel 18000, Algeria. *Tel:* (05) 459463. *Telex:* 84060, 84091. *FAX:* (05) 459072. *Contact:* M. Atmane, General Manager. S. Grine, Harbour Master.

GHAZAOUET (Nemours): 35.06 N. 01.52 W. **(See Plan)**

APPROACHES: From seaward and during daytime the best landfalls for the roads is Tadjera mountain (861 m.) or the square mountain of Trara 18 km. to the East of Ghazaouet and the summit of the mountain chain of Djebel Fillaouc e visible at over a distance of more than 20 miles offshore in clear weather.

The outer channel is 225 m. wide and 12 m. – 20 m. deep and the inner channel 166 m. wide and 11 m. – 12 m. deep. There are 5 lights; 1 at the Two Brothers' Rock (Les Deux Freres), one at the end of the West jetty, one at the head of the old West jetty, one at the West end of the North jetty and one on the pier of the North jetty.
PILOTAGE: Pilotage is compulsory and is provided day and night, unless the port is closed. Whilst awaiting the Pilot the vessel must keep watch on Channel 12 or 16 VHF.
Pilotage Area: To the East: meridian passing through the Touent Coastguard Station. To the West: the meridian passing through the village of El Amadra.
ANCHORAGE: Limit of the anchorage area: To the East meridian 01° 51′ 00″ Long. West as far as its intersection with parallel 35° 07′ 22″ Lat. North.

To the North: Parallel 35° 07′ 22″ between its intersections with meridians 01° 51′ 00″ and 01° 52′ 42″.

To the West: Meridian 01° 52′ 42″ of Long. West to half a mile to the West of the head of the North Jetty as far as its intersection with parallel 35° 08′ 22″.

The Port of Ghazaouet offers roads with good holding ground, but by virtue of its position, vessels are exposed to all weather.
MAX. SIZE: Max. length 180 m. Max. draft 28 ft.
RADIO/VHF: A port radio station, call sign "Ghazaouet Radio", has been installed near the lighthouse. The VHF operating channels are 16, 24, 25, 26, 27 and 28.
TUGS: One tug of 1,700 h.p. available and compulsory.
BERTHING:

Quay No.	*Basin*	*Berth* No.	*Length* (m.)	*Depth* (m.)
1	Skikda	1–2–3	300	7.0
2	Skikda	4–5	160	7.2
3	Skikda	6	123	7.0
4	Skikda	7	94	7.0
5	D'Oran	8	108	7.2
6	D'Oran	9	125	7.0
7	D'Oran	10	103	7.0
8	D'Oran	11–12–13	300	7.3
9	Machrek	14	120	8.5
10	Machrek	15–16–17	289	8.5

SPECIAL CARGO HANDLING FACILITIES: Quay No. 1 is used for discharging oil and tallow by pipeline (max. LOA 120 m., max. draft 6.5 m.). Quay No. 9 is used for handling acid if the length of the vessel is less than 100 m. If vessel over 100 m., loading of acid takes place at Quay No. 10 (Berth No. 15).

There is a grain silo at Mole Tlemcen (Quay No. 10; Berths No. 16 and 17). Capacity of silo 30,000 tonnes. Rate 700 t.p.h.
PORT EQUIPMENT:

Quay Cranes:
2 × 10 tonnes (Stothert)
Mobile Cranes:
1 × 40 tonnes (Kato)
1 × 27 tonnes (Petitbone)
1 × 2 tonnes (Rapier)
4 × 20 tonnes (Kato)

Forklifts:
12 × 3 tonnes (Steimbok)
5 × 3 tonnes (Komatsu)
6 × 5 tonnes (Toyota)
1 × 5 tonnes (Manitou)
5 × 8 tonnes (Toyota)
3 × 10 tonnes (Toyota)
1 × 28 tonnes (Hyster)
10 × 6 tonnes (Komatsu)
2 × 18 tonnes (Kalmar)
1 × 25 tonnes (Kalmar)

Other Equipment:
1 tractor (Sisu) for Ro–Ro traffic
2 grain suctors (DK100)
1 grain suctor (Vigan)

STEVEDORES: Carried out by Port Monopoly – EPG. Work carried out in two shifts and from time to time a night gang is available. Working hours from 0700–1900. Port Director can extend working hours beyond 1900 hrs. for vessels to complete operations and sail. 160 stevedores available.

TANKERS: See "Special Cargo Handling Facilities".

FRESH WATER: Available from hydrants at quays and by tug.

FUEL: This is not provided on a regular basis, however, small quantities are sometimes supplied by road tankers.

POLICE/AMBULANCE/FIRE: Police tel. 32.10.26, Fire Brigade tel. 32.10.14. Ambulance tel. 32.11.24.

SERVICES: No deballasting facilities available. Stores available through General Maritime (GE.ME).

BANKS: B.E.A., Bd. Du 1er Novembre, Ghazaouet. Tel: 32.11.68, 32.13.50.

C.P.A., Rue de la Republique, Ghazaouet. Tel: 32.10.51.

B.N.A., Rue de la Republique, Ghazaouet. Tel: 32.12.80, 32.12.68.

GARBAGE DISPOSAL: Collection service available. Contact Port Authority for supply and collection of drums.

WASTE OIL DISPOSAL: Service not available.

SEAMAN'S CLUBS: None.

WEATHER: The strongest and most frequent winds are from the N.W. and with the entrance channel aligned East-West passage is dangerous since the currents generally follow the direction of the winds.

GENERAL: *Lights:*

Ghazaouet Lighthouse: Lat. 35° 05′ 09″ N., Long. 01° 52′ 03″ W.

Passage Lights: Light on the Two Brothers (02), light on end of the West jetty, light on the West Jetty head, light at the West end of the North jetty and a light on the mole of the North jetty.

Max. Tide: 40 cm.

Dominant Winds: Northeasterly and Northwesterly.

Visibility: Excellent.

DEVELOPMENTS: The following works are planned: the moles are to be re-surfaced and the fendering to be improved, a Ro/Ro ramp is to be built at Quay No. 6. Dredging work to take place.

A maritime station for passenger vessels is to be constructed.

Two cargo sheds have been built. First shed is at Mole Constantine (1,160 sq.m.) and the second at Mole Djanet (2,320 sq.m.).

SHIPMASTER'S REPORT: 1982 (Updated 1994).

Name: Ghazaouet (ex-Nemours), Lat. 35° 06′ N., Long. 01° 52′ 21″ W.

Port Limits: As anchorage, a suitable one is within 1 mile of the port. The limits are observed around that area.

Documents: Same as for Algiers. Also every vessel must have copies of Manifest and Bills of Lading, minimum 3 copies of each.

Pilotage: Pilotage is compulsory for all vessels except those who comply with Article 178 of Maritime Code. Agents arrange for Pilot, who can be contacted on VHF Channels 16 and 14. On calling Channel 16 call "Ghazaouet Port Control". Pilot boards in fair weather at anchorage or 2 to 3 cables from the entrance. Pilot boat has a black hull. Pilot station is located at Quay "D".

Anchorages: No anchorage boundaries described. However anchorage in fair weather can be obtained in 15 to 20 fathoms of water which is about 3 to 5 cables North of Northern breakwater. Bottom is sand. Anchorage is not protected, it is mostly open and dangerous to winds from Northern semi-circle.

Restrictions: Vessels can berth or sail any time of day or night.

Max. Size: It was not stated clearly. This vessel's LOA is 147.5 m., and max. breadth of 21.5 m. Berthing and unberthing was quite safe. Max. permissible draft as stated by Port Control is 10 m., but alongside this ship depth in places was 32 ft. Max. length stated which is possible for berthing is 180 m. and max. draft 28 ft.

Health: Pratique is granted after berthing. Two crew vaccination lists are to be submitted along with Maritime Declaration of Health (Algerian Form).

Radio: Ghazaouet Radio, call sign "7TE", VHF Channel 16.

VHF: At Port Control VHF watch is kept 24 hours. Calling Channel 16, working Channel 12.

Radar: No radar facilities available.

Tugs: There is 1 tug at present. Ship's lines are used. Tug joins the vessel outside the breakwater during fair weather.

Berthing: There are 5 moles in Ghazaouet, details as follows:

Mole Alger (A) – Quay No. 1. Depth alongside 7.5 m. to 8 m.
Mole De Batna (B) – Quay Nos. 2 and 3. Depth alongside 7 m. to 8 m.
Mole Constantine (C) – Quay Nos. 4, 5, 6 and 7. Depth alongside 8 m. to 9 m.
Mole Djanet (D) – Quay No. 8. Depth alongside 8 m. to 9 m.
Mole Tlemcen (E) – Quay Nos. 9 and 10. Depth alongside 9 m. to 10 m.

Specialities:

Quay No. 1 – Dangerous Cargo, Oil and Tallow.
Quay No. 8 – Cereals.
Quay No. 9 – Loading Acids.
Quay No. 10 – Minerals and Cereals (Silo capacity 30,000 tons).

Cranes: As per available data. There are 2 cranes of SWL 10 tonnes, 1 of 12 tonnes and 1 of 14 tonnes. Also there are 4 mobile cranes available, capacities are 2×2.5 tonnes, 1×5 tonnes and 1×24 tonnes.

Bulk Cargo Facilities: The vessel carried corn in bulk. The cargo was discharged either into rail wagons or into trucks. Rate of discharge variable. If sufficient trucks or wagons available rate can reach up to 600 tonnes per shift (approx).

Stevedores: Stevedores are arranged either by Agents or Receivers. No separate notice necessary by vessel.

Medical: Doctors and hospital available at Ghazaouet. Agents to be informed in writing prior to anybody seeing the doctor.

Density: Density was observed to be 1028.

Fuel: None available. Gas oil may be supplied in barrels if sufficient notice given.

Fresh Water: Available alongside each pier. Rate of delivery about 7 to 10 tonnes per hour. Also available by tug.

Consuls: None.

Surveyors: None.

Gangway/Deck Watchmen: Agents arrange for same. As long as vessel is in port she must have shore watchman. Usual recommendation given in port is to lift gangway at night, if vessel not working cargo, at about 2300 hrs.

Customs Allowances: 200 cigarettes per man per week, 1 bottle of alcohol per man per week.

Time: GMT plus 1 hour.

Telephone: Telephones are not available on board.

Agents: Compagnie Nationale Algerienne de Navigation (CNAN).

Telephone Numbers: The following important telephone numbers were obtained:

Fire Brigade 32.10.14, Police 32.10.26, Pilots 32.13.45, Port Director 32.12.20.

AUTHORITY: Entreprise Portuaire de Ghazaouet, B.P.217, 13400 Ghazaouet, Algeria. *Tel:* 32.12.20, 32.12.55, 32.13.45. *Telex:* 18086, 18937, 18836. *FAX:* (07) 32.12.55. *Contact:* Med Maharar, Port Director/General Manager.

Harbour Office: Mole de Constantine. *Tel:* 32.14.05, 32.12.32 and 32.13.45. *Telex:* 18937, 18836. *FAX:* 32.12.55. *Contact:* K. Mehabi, Harbour Master/Port Captain.

JIJEL: 36.50 N. 05.47 E.

DOCUMENTS: Same as "Algiers".

PILOTAGE: Pilot boards vessel off the breakwaters. Pilot working daytime only. Call Pilot on VHF Channel 16.

ANCHORAGE: Off the breakwaters at a distance of 0.5 miles – 1 mile, depths from 12 fathoms to 20 fathoms. Anchorage not sheltered.

TUGS: One tug available.

BERTHS: There are six berths, one of which is a Ro-Ro berth. The South Quay 200 m. long and the North Quay 400 m. long. Max. draft 10 m.

CRANES: At the North Quay two cranes are available. All other equipment available.

STEVEDORES: Work in two shifts from 0700 hrs. to 1300 hrs. and 1300 hrs. to 1900 hrs. Fridays and holidays not worked.

FRESH WATER: Available at Quays No. 1, 2, 4, 5 and 6.

SHORE WATCHMEN: At Master's discretion.

CUSTOMS ALLOWANCES: 200 cigarettes and an opened bottle of spirits. Customs are very strict.

CARGO GEAR: Stevedores use ship's cargo gear.

REPATRIATION: Can be arranged via Agent.

TIME: GMT plus 1 hour.

IDENTIFICATION CARDS: On arrival Immigration Control inspect all passports and Seamen's Books. Shore passes are given at the harbour gate in exchange for Passports, Seamen's Books.

AUTHORITY: Enterprise Portuaire de Jijel, Quai Sud, B.P. No. 87, Jijel 18.000, Algeria. *Tel:* (05) 465334. *Contact:* A. Mohamed, Chairman and General Manager. Captain B. Ahmed, Harbour Master.

MOSTAGANEM (Mestaghanem): 35.56 N. 00.04 E.

(See Plan)

DOCUMENTS:

7 Crew Lists.
1 Passenger List.
1 Health Declaration.
2 Store Lists, including Bonded Stores.
2 Crew Personal Effects Lists.
Lists of Arms and Ammunitions.
1 List of Currencies.

Coastguards & Customs: Visit by the Coastguards in the Roads.

Visit by the Customs Officials at the quay. Manifests must be accurate.

PILOTAGE: Compulsory. There are 3 Algerian Pilots; 24 hour service. Pilot boat is black with a white stripe. Vessels arriving after sunset, if no cargo work at night, will remain in the Roads until 0600 hrs. next morning. Vessels sail at any time during the night.

ANCHORAGE: Vessels anchor about 0.5 miles from the Sea Jetty, recognisable by a lighthouse with a white light at its top (3 flashes, 1 pause, 3 flashes, 1 pause).

MAX. SIZE: Max. LOA 180 m. Max. depth of water 27 ft.

HEALTH: Free Pratique is granted upon berthing and producing Health Declaration and Vaccination List. If any Vaccination Certificates have expired, Free Pratique will be granted and Health Authorities will arrange the vaccinations on request.

RADIO: Alger Radio, receiving on 2182 kHz., and working on 1792 kHz., on 24 hours basis. Also Oran Radio, listening on 2182 kHz., and working on 1735 kHz., on 24 hours service. Advisable to use the latter.

VHF: At the Harbour Master's Office, working on Channel 16, officially 24 hour service, English, French and Arabic spoken.

TUGS: One tug available, request to be made to Pilot. 24 hour service. If necessary, the port will request a second tug from Arzew Port Control.

BERTHING: Eight berths available. Total length of quays, 1,100 m.

Berth No.	Length (m.)	Depth (ft.)
NP1,NP2,NP3	217	13.3-22.6
0	115	23
1	140	25
2	140	25
3	132	25
4	135	25
5	135	25
6	140	23
7	140	27
X, Y	Service Quays	

CRANES: 2×6 tons and 3×15 tons. Also 5 additional cranes.
STEVEDORES: Supplied by Port Authority. 3 shifts of 6 hours each from 0700 hrs. – 0100 hrs. Ship's gear to be used if cranes not available.
MEDICAL: All facilities available.
DENSITY: 1025.
FRESH WATER: Available at certain quays, otherwise by tug.
FUEL: No facilities. Vessels must proceed to Oran or Arzew for bunkering.
CONSULS: None.
REPAIRS: Only minor repairs can be carried out by workshop. Repairs on board with Port Captain's permission.
GANGWAY/DECK WATCHMEN: Not compulsory, but strongly recommended by Port Authorities and Agent.
OPENING/CLOSING HATCHES: Can be performed by ship's crew or by stevedores.
CERTIFICATES: All certificates are required in the case of an inspection from the Maritime Authorities or in the case of arrest.
CUSTOMS ALLOWANCES: 1 bottle of spirits and 1 carton of cigarettes are allowed for every Crew member. Anything in excess of this amount will be sealed.
REPATRIATION: It is possible and easily arranged by Agent.
AIRPORT: At Oran, La Senia Airport, 80 km. distance, with 3 daily domestic flights to Algiers.
TIME: GMT plus 1 hour.
HOLIDAYS: See "Algiers".
SHORE LEAVE: No restrictions, except for some nationals.
IDENTIFICATION CARDS: On leaving the vessel, Crew members to carry their passports, which will be kept at the harbour gate, whilst ashore.
PORT REGULATIONS: No repairs to main engine, no lifeboat practices, no work on hull and anchors without prior permission from Port Captain. Offenders will be heavily fined.
DEVELOPMENTS: A Ro/Ro berth and a general cargo berth under construction. Depth of water 30 ft.
AUTHORITY: Entreprise Portuaire de Mostaganem, P.O.Box 131, Quai du Maghreb, Mostaganem, Algeria. *Tel:* (06) 21.76.27, 21.14.11. *Telex:* 14086, 14097. *FAX:* (06) 21.78.05. *Contact:* M. Lakehal, Director General (Tel: 21.14.11). M.Bouabida, Harbour Master (Tel: 21.38.81). M. Cherif, Director-Stevedores (Tel: 21.69.43).

ORAN (Wahran): 35.43 N. 00.39 W.

DOCUMENTS:

Inward Declaration to be completed and handed to the pilot.
Crew List.
Manifest of Arms on board.
Cargo Manifest.
Stowage Plan.
Passenger Manifest.
Seamen's Books.
Health Declaration.
Crew Declaration for Customs.
Ship's Stores Declaration.

APPROACHES: The approaches to the port are indicated by:

The lighthouse 11.5 miles to the East, with the addition of a radio beacon, in position Lat. 35° 51′ 40″ N., Long. 00° 29′ 19″ W.

Cap Falcon Lighthouse 9.5 miles to the West, in position Lat. 35° 46′ 08″ N., Long. 00° 47′ 09″ W.

Access to the port: An access channel 150 m. wide and 24 m. deep is indicated by a rotating white light in position Lat. 35° 43′ N., Long. 00° 37′ W.

Vessels entering or leaving the port must obligatorily use the navigation channels defined below:

West Channel:

A separation zone one mile wide is established, the axis of which connects the following geographical points:

1. Lat. 35° 52′ 12″ N. Long. 01° 12′ 06″ W.
2. Lat. 35° 48′ 36″ N. Long. 00° 39′ 30″ W.

The external W.S.W. limit of the channel is fixed by the line joining the following geographical points:

1. Lat. 35° 52′ 12″ N. Long. 00° 12′ 06″ W.
2. Lat. 35° 48′ 36″ N. Long. 00° 39′ 30″ W.

On both sides of this separation zone, a safety zone is instituted which is 1.5 miles wide.

The main traffic lane is orientated 090° – 270°.

East Channel:

A separation zone one mile wide is established, the axis of which joins the following geographical points:

1. Lat. 35° 02′ 30″ N. Long. 00° 26′ 44″ W.
2. Lat. 35° 52′ 00″ N. Long. 00° 34′ 44″ W.

The external Eastern limit of the channel is fixed by the line joining the following geographical points:

1. Lat. 36° 01′ 24″ N. Long. 00° 24′ 24″ W.
2. Lat. 35° 51′ 00″ N. Long. 00° 32′ 24″ W.

On both sides of this separation zone, a safety zone is established which is 1.5 miles wide.

The principal traffic lane is orientated 032° – 212°.

PILOTAGE: Compulsory. Arranged by Agents' basis vessels ETA. International Code signals used. Pilot boards at port entrance.
ANCHORAGE: Anchorage is along the meridian of 00° 39′ West and the latitude of the 612 m. mark of Djebel-Khar.

Large vessels anchor with the assistance of a port pilot.

RESTRICTIONS: The port is open to navigation throughout 24 hours.
MAX. SIZE: Length 800 ft. Draft 38 ft.
HEALTH: Free Pratique is granted by the Maritime Health Brigade on arrival, provided no anomalies or illness have been discovered on board.

Pratique is automatic for vessels coming from other Algerian ports.

RADIO: Oran Radio, Arzew Radio and Boufarik Radio.
TUGS: 1 × 1,200 h.p., 1 × 1,500 h.p and 1 × 1,700 h.p.
BERTHING: Mole 1: Tankers, depth alongside 39 ft. Mole 2: Tankers, depth alongside 33 ft. Cargo vessels: Twenty berths at quays with depths from 20 ft. to 33 ft. alongside.
MEDICAL: Doctors and ambulances are available to give help to sick seamen. Visits are arranged by the ship's agent.
FRESH WATER: Available on the quay. Employees of the Port Undertaking attend to connection and disconnection of hoses.
FUEL: Bunkers can be delivered by barge belonging to NAFTAL, at a rate of 50 cu.m.p.h. – 150 cu.m.p.h.

Lubricants are supplied by NAFTAL, by arrangement through the ship's agent.

REPAIRS: Only minor repairs can be effected.
WATCHMEN: Not compulsory but recommended. The Port Commandant may impose a guard on vessels carrying certain categories of hazardous cargoes.

The accommodation ladder is to be raised at night.

CUSTOMS ALLOWANCES: Three packets cigarettes and one bottle of wine or alcohol per man per day.
AIRPORT: La Senia, 7 km. away.
HOLIDAYS: 1st January, 1st May, 19th June, 5th July, 1st November. First Mouharem (Hegira Year), Aid-el-Fitr, Aid-el-Adha.
AUTHORITY: Entreprise Portuaire d'Oran, Direction Generale, 6 Avenue Mimouni Lahcene, B.P. 106, Oran, Algeria. *Tel:* 39.56.10, 39.57.82, 39.37.82. *Telex:* 22422. *Contact:* The Director General.

Capitainerie du Port, Mole Ibn-Batouta, Oran. *Tel:* 39.43.63, 39.23.37. *Telex:* 22308. *Contact:* Port Captain.

SKIKDA: 36.53 N. 6.54 E. (See Plan)

PORT LIMITS: South of a line joining Ras Filfila and Sirigina Island (096°-276°). Charter Party laytime starts at this line.
DOCUMENTS:

Harbour Master's Office:

Ballast Declaration (for tankers).
Certificate of Registry.
Safety Construction Certificate.
Safety Equipment Certificate.
Load Line Certificate.
Radio Telephony and Telegraphy Certificates.
Fire Extinguisher Certificate.
Cargo Gear Certificate.
IOPP Certificate.

Quarantine:

Completed Declaration of Health.
Valid Derat Certificate.
International Vaccination Certificates.

Customs:

2 Crew Declarations.
1 Ship's Stores Declaration.
1 Crew Effects Declaration.
1 Currency List.
1 Narcotics List.
1 Arms Declaration.

Immigration Office:

2 Crew Lists.
1 Arms Declaration.
Complete 4 Declarations given by the Immigration Agent.

Agency:

2 Crew Lists.
Clearance from last port.
1 Ship's Stores Declaration.
1 Crew Effects Declaration.
1 Currency Declaration.
1 Narcotics Declaration.

PILOTAGE: Compulsory for vessels of 500 g.r.t. and over. Pilotage arranged by calling Harbour Office on VHF Channel 16, working on Channel 14.

There are 7 Pilots available at the port.

ANCHORAGE: Safe anchorage in the authorised areas in the Roads. See chart for location.
RESTRICTIONS: No berthing at night for tankers, LNG and LPG vessels. Unberthing possible day and night.
Old Port Turning Basin: Diameter 360 m. Depth 11.0 m.
New Port Turning Basin: Diameter 550 m. Depth 14.0 m.
Wind Limits in Port: Old Port: Force 7-8 (Beaufort Scale).

New Port: Force 5-6 (Beaufort Scale).

MAX. SIZE: *New Port:* Berth No. 3: Max. LOA 260 m. Depth 16.0 m. Max. draft 14.80 m.
RADIO/VHF: Skikda Radio and Annaba Radio on VHF Channel 16. Boufarik Radio on 2182 kHz. Also see "Pilotage".
ETA: 24 hours Notice of Arrival required by telex or radio through a coastal radio station. ETA to include: LOA, draft, nature of cargo and tonnage.
TUGS: 6 tugs, 1,500 h.p.–3,400 h.p. Tugs compulsory for vessels over 1,500 g.r.t.
BERTHING:
Old Port:

Quay	*Berth*	*No. of Berths*	*LOA (m.)*	*Max. Draft (m.)*	*Remarks*
1	P4	1	150	8.00	Bitumen 10,000 tons
2	12	1	155	8.53	General cargo
3	11	1	145	6.50	General cargo
4	10	1	140	6.40	Silo
	9	2	130	6.00	20,000 ton
5	8	3	140	6.00	General cargo
	7		135	6.00	General cargo
	6		125	6.00	Ro/Ro berth
6	5	1	150	6.40	Ro/Ro berth
7	4	2	160	9.00	General cargo
	3		80	6.00	General cargo
8	2	2	140	8.50	General cargo
	1		140	8.50	General cargo
Marinele	East West	2	290	10.50	General cargo
Tanker Berths	P1	3	190	11.00	Refinery products
	P2		220	12.00	
	P3		230	13.00	

New Port:

Quay/Berth	*No. of Berths*	*LOA (m.)*	*Max. Draft (m.)*	*Remarks*
General Quay	1	240	10.00	
P1	1	230	12.80	Tankers – Berth from 50,000 tons to 100,000 tons
P2	1	230	12.80	
P3	1	260	14.80	
M1	1	260	11.50	LNG Berth from 45,000 cu.m. to 90,000 cu.m.
M2	1	220	11.00	
P5	1	180	10.50	LPG – Berth 40,000 cu.m.
A1	1	140	10.50	Ethylene Aromatique 30,000 cu.m.

CRANES: 3×15 ton mobile quay cranes; 3×40 ton and 1×120 ton mobile cranes; 7×5 ton and 5×6-10 ton electric cranes and 1×60 ton floating crane.
STEVEDORES: First shift: 0600 hrs. to 1220 hrs.
Second shift: 1300 hrs. to 1900 hrs.
Third shift: 2000 hrs. to 0200 hrs.
Stevedores can be contacted by Tel: (08) 75-61-44 or by VHF Channel 8.
MEDICAL: Hospital and medical services are available.
TANKERS: Loading and unloading operations by FMC Arms of 12 in., 14 in. and 16 in. Also see "Berthing".
DENSITY: 1023.
FRESH WATER: Limited supply available at piers.
FUEL: Available by barge, arranged by Agent.
CONSULS: None.
REPAIRS: Arranged by Agent. Permission of Harbour Master's Office required before any maintenance or repairs undertaken.
DRY DOCKS: None.
SURVEYORS: None.
GANGWAY/DECK WATCHMEN: Usually ship's crew and ship's gangway.
OPENING/CLOSING HATCHES: By ship's crew.
CUSTOMS ALLOWANCES: 200 cigarettes per man per week.
REPATRIATION: Possible. A Declaration is to be made to the Immigration Office 24 hours in advance of any crew departures.
AIRPORT: Constantine (Ain el-Bey) 100 km. from Skikda, Annaba (Saline) 130 km. from Skikda.
TIME: GMT plus 1 hour.
EMERGENCY COORDINATION CENTRE: Contact Port Captaincy, on VHF Channels 16 and 14. Tel: (08) 75.51.48/75.25.53. Fax: (08) 75.29.70.
SHORE LEAVE: No restrictions.
IDENTIFICATION CARDS: Shore passes supplied by Immigration Office.
GENERAL: *Supplies:* Agent requires 48 hours notice.
Regulations: All tankers are inspected by a Port Officer and Check List is completed before start of loading.

SHIPMASTER'S REPORT: May 1984 (Updated 1994).
New Port, Berth No. 3.
Pilotage: 7 Pilots available and 3 Pilots are on duty at any time (one Pilot for old port, one Pilot for new port and one Pilot on stand-by).
Documents:
5 Crew Lists (indicate Nationality and Seaman's Book Number).
1 Health Declaration.
4 Stores Lists.
3 Personnel Effects Declarations.
3 Arms and Ammunition Lists.
3 Narcotics Lists.
3 Foreign Currency Lists (including Crew's personal currency).

Restrictions: Vessels are able to berth between 0600 hrs. and 2100 hrs. and unberth up until midnight.

Vessels to have propeller immersed and be trimmed less than 3.0 m. by the stern.

Entrance Channel: 1 Green buoy at the entrance, with plenty water on both sides. Channel dredged to 18 m. There is a sandbank on the port side of the inner entrance with less than 8 m. depth. Care is needed when leaving berth without Pilot (which seems normal practice here in Winter time.).
Tugs: 4 tugs from 2,500 h.p. – 3,500 h.p. (2 tugs forward and 2 tugs aft). Ship's ropes used.
Berthing: Vessel berthed at No. 3 "Jetee du Large", port side to. Depth of water 16.0 m. 4×16 in. loading arms, but only one available, rate 2,200 cu.m.p.h. 1×12 in. arm for bunkers.

The use of wire ropes for mooring is very difficult, some Pilots require rope moorings.
VHF: Channels 16 and 14.
Time: UTC plus 1 hour. From June 15th until end of December, UTC plus 2 hours.

SHIPMASTER'S REPORT: June 1987.
Documents:
8 copies Crew List.
3 copies Crew Declaration.
3 copies Manifest (Ship's Stores, Currency (including Safes, etc.).
1 copy Health Declaration.
2 copies Currency List.
6 copies Cargo Manifest.

The Authorities are very strict, especially over currency (including Master's safe) and alcohol. A Ship's Fixture List is required which is to include radios, computers, photocopiers, etc.
Pilotage: Pilot boarded at entrance to breakwater. Pilot may be contacted on VHF Channel 14.
Anchorage: In depth of 20.0 m. with breakwater light bearing 108° T at a distance of 0.8 miles.
Restrictions: Berthing times are flexible. The following are approximate times only.

Summer Berthing	0600 hrs. – 2000 hrs.
Winter Berthing	0900 hrs. – 1800 hrs.
Summer Unberthing	0900 hrs. – 2000 hrs.
Winter unberthing	0900 hrs. – 1800 hrs.

VHF: Port Control operate 24 hours on Channels 16 and 12.
Berthing: Vessel berthed at Berth No. A1 in Port Methanier to load ethylene.

Vessel berthed starboard side to, inner berth on the inner breakwater. The port anchor is to be kept ready. A tug from the general cargo port pushes vessels alongside. A launch runs the moorings, 2 lines and 2 springs forward and aft. The fendering is good. Ship's gangway used.
Loading: Ethylene loaded at 200 tonnes p.h. Liquid and vapour arms are 8 in. 150 ASA.
Vapour return to flare by way of shore compressor.
The surveyors were helpful and documentation carried out quickly.
Vessel stays alongside to cool to –100° C.
Loading temperature – 99° C.
Medical: Doctor and dentist available. Only emergencies handled on Tuesdays and Fridays.
Fresh Water: Not available at berth or from barge. Limited quantities available by tug.
Fuel: All grades available in harbour by barge. Also available at anchorage in good weather.
Repatriation: There are direct flights to Paris and Marseilles from Constantine 100 km. away.

Outward flights from Algiers, it takes 3 days to arrange clearance, tickets, etc.
Holidays: Moslem holidays are Tuesday and Friday.
Stores: Choice is limited and prices are high. Agent requires prior notice of vessel's requirements.
Approximate costs (per kilo): Frozen Meat U.S.$ 32.0, Potatoes U.S.$ 2.0, Tomatoes U.S.$ 3.0, Apples (eating) U.S.$ 7.0
Developments: In the near future the deep channel between the 20 m. contour and Berth No. P2 is to be dredged to 18.0 m. C.D.

Buoy No. 6 has been moved to a new position of Lat. 36° 53.45′ N., Long. 06° 56.9′ E. No. 1 Buoy has been withdrawn.

There is a new outfall for the chemical works just East of the inner breakwater, adjacent to Berth No. A1.

AGENCY: *General cargo ships:* CATM, Port of Skikda. Tel: (08) 95.57.51/52. Telex: 87.815/87.948/87.077.
Tankers: SNTM/HYPROC, Port of Skikda. Tel: (08) 95.65.68/95.92.73. Telex: 87091 and 87973.

AUTHORITY: Entreprise Portuaire de Skikda, B.P. 65, Avenue Reski Rahal, Skikda, Algeria. *Tel:* (08) 95.98.29. *Telex:* 87840 Epski.
Contact: Harbour Master. Tel: (08) 95.51.42. Telex: 87907 Caski.

American Samoa

PAGO PAGO: 14.17 S. 170.41 W.

DOCUMENTS:
4 copies Manifest.
4 copies Freight List.
4 copies Crew List.
4 copies Passenger List.
4 copies Stores List.
Clearance from Last Port.

APPROACHES: Depth at entrance 55 m. to 73 m.; fine basin with 55 m. to 73 m. but very exposed to heavy swell, making outer part of harbour unsuitable as anchorage. Harbour is small with numerous banks in its approach. Around the harbour is a fringe of coral reef 91.43 m. to 457.18 m. offshore, and beyond this reef there is deep water where the largest vessels can lie. Good anchorage anywhere in inner harbour with depth 11 m. to 45.8 m. Best anchorage for large vessels in 36.6 m. off Fagatogo village, West of former Naval Station. Anchorage also in outer harbour in good weather.

PILOTAGE: Not compulsory. Two pilots available. Vessels must make arrangements 72 hours prior to ETA and communicate by VHF Channel 16 on arrival.

Requesting Pilot: Request for pilot may only be made by the Agent or the owner's representatives at the Harbour Master's Office.

Pilot Station: Pilot will board vessels at Pilot Station (Buoy No. 2) or Whale Rock Buoy, and off Tower Rock in extreme calm weather conditions.

ANCHORAGE: See "Approaches".

RESTRICTIONS: Entering and berthing up to 2200 hrs., weather permitting.

MAX. SIZE: *Largest vessel:* 43,000 tons. Max. draft 11.4 m.

TUGS: 3 Tugs. 1 × 1,750 h.p., 1 × 1,530 h.p. and 1 × 300 h.p.

BERTHING: The average depth of harbour is about 45.8 m., at Main Wharf 9.97 m. Station Main Dock, for handling general cargo is 123.42 m. long, 18.29 m. wide and 9.74 m. depth alongside. Fuel Dock, for fuelling only, is 123.91 m. long, 13.71 m. wide and 10.08 m. depth alongside. Customs Dock, for handling general cargo, is 121.91 m. long, 6.10 m. wide and 2.74 m. depth alongside. Between the Station Main Dock and the Fuel Dock is a new extension to the Main Dock of 352.23 m. long, 20.73 m. wide where vessels with drafts up to 6.3 m. are allowed to berth alongside. Plans for dredging depth alongside up to 10.15 m. are underway, also for completion of the new dock.

Private Wharves: Two cannery wharves on North side of harbour, each extending to 121.91 m. with 7.01 m. alongside at L.W. Another wharf belonging to Southwest Marine Co. at North side of harbour is 152.44 m. long, 15.24 m. wide and 7.01 m. depth alongside. This wharf is parallel with cannery docks.

CRANES: 1 Mobile crane of 90 tons capacity and 1 mobile crane of 60 tons capacity. Two floating cranes, one with a capacity of 25 tons and another with a capacity of 65 tons. Cranes of 2.5 tons to 35 tons capacity available.

SPECIALISED CARGO HANDLING FACILITIES: *Containers and Ro/Ro:* Container ships up to 249.93 m. LOA with a maximum draft of 9.97 m. berth at the Main Dock. Six mobile container forklifts available for 6.19 m. containers.

STEVEDORES: *Working Hours:* 0730 hrs. – 1600 hrs., Monday to Friday. Rate for general cargo 32 tons – 40 tons per hour.

MEDICAL: Government owned Lyndon B. Johnson Tropical Medical Center at Faga'alu, Pago Pago, American Samoa 96799.

TANKERS: Facilities for vessels up to 195.06 m. length and 10.1 m. maximum draft. Tanker discharge facilities include 1 × 12 in. pipeline for fuel oil, 1 × 6 in. pipeline for diesel oil, 1 × 6 in. pipeline for gasoline and 1 × 4 in. pipeline for kerosene. Rate of discharge unlimited.

FRESH WATER: Available in unlimited quantities except during the three months commencing June 15th.

FUEL: Diesel, gasoline and lube oil available.

REPAIRS: Available through Southwest Marine of Samoa Inc. in Pago Pago. Tel: 644-4123, 633-2883. Telex: 525 SWM SB.

AIRPORT: Tafuna International Airport is 11.2 km. from the port.

HOLIDAYS: *Local Holidays:* New Year, President's Day, Good Friday, April 17th, Memorial Day, July 4th, Labour Day, Veteran's Day, Columbus Day, Thanksgiving Day, Christmas Day.

POLICE/AMBULANCE/FIRE: Tel: 911, 633-1111, 633-1222.

GENERAL: *Floating Equipment:* 240 ton barge and several other small craft. Stevedoring handled by 2 local stevedoring companies.
Kneubuhl Maritime Services Corporation. Telex: 705.
G.H.C. Reid Shipping & Stevedoring Co. Telex: 782514.

Provisions: Fresh provisions and fruits, tinned foods in large quantities and meat available. Pork and poultry also available. Ice is available.

Offshore Facilities: Four mooring buoys in inner harbour.

Tides: Average rise and fall 1.2 m.

DEVELOPMENTS: Enlargement of existing container yard.

AUTHORITY: Department of Port Administration, Government of American Samoa, Pago Pago, American Samoa 96799. *Tel:* 633-4251, 633-4449. *FAX:* (684) 633-5281. *Contact:* Mr. Leroy Ledoux, Port Director (Tel: (684) 633-4251). Silila F.Patane, Harbour Master (Tel: (684) 633-4251).

NOTES

Please also advise Shipping Guides Ltd.

Angola

CABINDA: 05.32 S. 12.11 E. (See Plan)

DOCUMENTS:

7 Manifests for each port of origin of cargo for Cabinda, plus 1 copy of each Bill of Lading.
8 Passenger Lists (Disembarking/in transit) even if "nil".
7 Crew Lists.
8 Lists of ports previously visited.
2 Lists of Crew vaccinations.
3 Lists of Ships Stores.
3 Personal Effects Lists.
5 Firearms and Ammunition Lists (even if "nil").
5 Lists of Animals and Birds.

Other forms intended for Customs, Health, etc., can be filled in on arrival.

PILOTAGE: Government Pilots' service is obligatory. Radiograms giving ETA to be sent to Agents via Luanda Radio (or by telegram from previous port), and anchorage to be used which is the closest to Cabinda, provided locations permit. The vessel is visited by port authorities, and, if necessary, the vessel may shift to another anchorage.

When the cargo is for the account of Cabinda Gulf Oil Limited, the vessel must be moved closer to Malongo where the oil companies have their own berth for discharge of various cargo into barges.

Tankers: The Mooring Master boards the vessel at the anchorage area.

All manoeuvring of vessels within the Cabinda Terminals mooring areas is to be done only in accordance with the advice of the CABGOC Mooring Master, subject to the understanding that in all cases and circumstances the Master of the vessel being manoeuvered shall remain solely responsible on behalf of his vessel and the vessel's Owners for the safety and proper manoeuvring of the vessel.

CABGOC Mooring Master will remain on board throughout the export vessel's stay on the berth to coordinate transfer operations. Therefore, suitable officer standard accommodation shall be provided for him on board the export vessel.

The service of a Mooring Master is provided upon the express understanding and condition that when a Mooring Master furnished by CABGOC goes aboard an export vessel for the purpose of assisting such vessel, he becomes for such purpose the servant of the Owners of the export vessel, and CABGOC shall not be liable for any damage, loss or injury which may result from the advice or assistance given or made by such Mooring Master while aboard or in the vicinity of such vessel.

ANCHORAGE/APPROACHES: *Approach to the Anchorage/Pilot Boarding Area:* Normally all communications will be with the Malongo Shore Terminal. When within VHF communication range, the Master of the export tanker should ascertain berthing prospects from Malongo Shore Terminal for the oil vessel and LPG terminals. Should it be necessary to anchor, then the vessel should proceed to the recommended tanker anchorage, which is Lat. 05° 28.5′ S., Long. 11° 59.0′ E.

Anchorage for any vessel in any other area within the terminal limit is prohibited unless special clearance is received from Malongo Terminal.

Arrival at Pilot Station/Anchorage Area: Means of access to vessel by the CABGOC Mooring Master shall be provided in accordance with the requirements of SOLAS, and early advice will be given by CABGOC Mooring Master regarding the side of the vessel where access should be provided. At night, the access area shall be adequately illuminated to provide for the approach and boarding of the Mooring Master, Government Officials and for CABGOC representatives.

The Conditions of Entry into and Use of Cabinda Terminal and Agreement for Hiring of Tugs will be presented to the Master of the export vessel and shall be signed by him on behalf of himself, the vessel and her Owners prior to the departure from the Pilot Station and commencement of berthing operation.

The Notice of Readiness will be accepted on arrival for the Malongo SPM Oil Terminals, but only between the hours of 0600 and 1800 and between 0600 and 1600 for Malongo LPG Terminal, provided that the CABGOC representative is satisfied that the export vessel is apparently in all respects ready to moor and load. In the case of LPG vessels, such N.O.R. shall include adequate cool-down of and no contamination on cargo tanks and connection and appropriate purging of cargo vapour hoses.

Notice of Readiness will not be accepted during a period when berthing is suspended on account of adverse weather, or when an export vessel arrives prior to the date upon which it is nominated to load.

The foregoing paragraph notwithstanding, in no event shall a Notice of Readiness, whether previously accepted or not, be valid or binding on the Terminal, unless and until such time as the export vessel, her tanks and equipment, are in fact in every respect in the proper condition and operation to receive the cargo.

MAX. SIZE: Cargo vessels, in the anchorage, with 32 ft. draft, may work at will. Vessels with greater draft can be accommodated further seaward but there is always the risk of swell hampering operations.

Also see "Single Buoy Moorings".

CLEARANCE: Official authorities will board the vessel for clearance, normally after berthing/anchoring.

In the event of arrival during the night, clearance will not be made before 0600 hrs.

RADIO/VHF: Vessels bound for the Cabinda Terminals are required to advise their ETA:

(a) Via telex or radiogram to the office of the vessel's Agent in Cabinda, who will pass the information to Cabinda Gulf Oil Company (CABGOC) at Malongo.
(b) Export vessels can also communicate via the "Berge Troll" by satellite 871/581 1312131/LAGO.

All Vessels: ETA messages are to be sent 72 hours, 48 hours and 24 hours for oil tankers and 7 days, 48 hours and 24 hours for LPG vessels before arrival at the Terminal, and should contain the following information:

(a) Name of vessel.
(b) ETA in GMT (Angola time is GMT plus 1 hour).
(c) Name of Master.
(d) Estimated arrival draft, fore and aft, and displacement.
(e) Time for discharging clean ballast, if any, also quantity of segregated ballast on board.
(f) If vessel proceeding to any port(s) prior to Malongo, and if so, any delays anticipated.
(g) Quantity of cargo required and any special requirements.

Export vessels with telex facilities can contact:

Telex No. 3160 Malongo AN or No. 3948 Malongo AN, or communicate via "Berge Troll" by satellite 761/581 1312131/LAGO.

Additional for LPG Vessels:

(a) Quantity of cargo to be loaded and bulk loading rate requested without use of vapour return line.
(b) Number and size of vapour and liquid manifold connections.
(c) Temperature and pressure of each tank and set point of safety relief valves on arrival.
(d) Any defects in vessel or equipment affecting cargo, performance or manoeuverability.
(e) Details of previous 3 cargoes carried.

VHF and SSB Facilities: For short range communications, a VHF system is available covering Channels 1 to 78. Channels 16 (156.8 MHz) and 12 (156.6 MHz) are monitored continuously. The VHF radio call sign is "Malongo Terminal".

A high frequency (SSB) radiotelephone system is installed at the Malongo Terminal and uses the call sign "Malongo Terminal". 24 hour watch is maintained on the International Calling and Distress frequency of 2,182 kHz. After making the initial contact on 2,182 kHz, agreement must be reached between the vessel and Malongo to move to any of the following frequencies: 2,738, 2,638, 2,056, 2,049 kHz. This facility is for medium range communications and should reach, under normal conditions, 600 miles by day and about double this distance at night.

Export Vessel/LPG Storage Vessel/Shore Terminal Communications: When the export vessel is at the anchorage, communication between the export vessel and the LPG storage vessel or Malongo Shore Temrinal will be established on VHF Channel 16, and then transferred to a mutually agreed VHF channel.

For vessel moored at the Cabinda Terminals, communication with the shore terminal or "Berge Troll" will be maintained by VHF radio equipment provided by Mooring Master.

SINGLE BUOY MOORINGS:

Malonga Oil Terminal – Export Berth No. 1:

Location: Malongo Oil Terminal Export Berth No. 1 is a crude oil export facility operated by Cabinda Gulf Oil Company. Crude oil from the Malongo Field onshore tank farm is transferred to export vessels via the Malongo SPM. The SPM is located in 75 ft. of water in position Lat. 05° 26.2′ S., Long. 12° 04.7′ E.

Capacity:

Max. draft 55 ft. even keel.

Vessel Terminal Factor (VTF): 290,000 cu.m.

Vessel must have the ability to maintain minimum 30% of the Summer deadweight at all times either loading cargo and deballasting simultaneously, or loading part cargo first, discharge ballast and load balance of cargo.

SPM chain stoppers as per OCIMF recommendations are required.

Vessel of over 140,000 tons scantling deadweight will only be berthed in good weather. Any delay due to unfavourable weather conditions will be for the account of the party nominating such vessel.

Vessel Terminal Factor is obtained by using the following formula:

Vessel LBP × Beam × Depth, all expressed in meters.

Navigation: The buoy is fitted with a navigation light flashing morse code "B" every 20 seconds with a range of 5 miles and also a foghorn sounding one long blast every 30 seconds.

There are numerous oil well platforms in the vicinity of this Terminal in the following positions:

Platform	*Latitude*	*Longitude*	*Light*
83-4	5° 25.7′ S.	11° 59.6′ E.	White
83-6	5° 25.1′ S.	11° 59.2′ E.	White
84-8	5° 26.1′ S.	12° 03.2′ E.	Red strobe
84-12	5° 29.2′ S.	12° 04.0′ E.	White
84-16	5° 28.4′ S.	12° 03.5′ E.	Green strobe
84-22	5° 26.6′ S.	12° 00.1′ E.	Red strobe
95-3	5° 33.8′ S.	12° 59.1′ E.	White
96-1	5° 30.3′ S.	12° 03.8′ E.	White
84-31	5° 28.3′ S.	12° 00.1′ E.	Green strobe

These navigational aids flash morse code "U" every 15 seconds in the colour indicated. The above platforms are each fitted with fog signals sounding one blast every 20 seconds with a range of 1.5 miles.

Gathering Station GSJ (Juliet) is located in position Lat. 05° 24.8′ S., Long. 11° 59.5′ E., and is fitted with a navigation light with characteristics of Gp.Fl (3) every 30 seconds.

A Racon beacon is also installed on this platform. The characteristics of this beacon are morse code "G" on a 360° azimuth, range 22 miles.

Malongo Oil Terminal – Export Berth No. 2:

Location: Malongo Export Berth No. 2 is a crude oil export facility operated by Cabinda Gulf Oil Company (CABGOC). The SPM Export Buoy is located in 105 ft. of water in position Lat. 05° 27.6′ S., Long. 12° 01.8′ E.

Capacity: Export vessels up to 325,000 d.w.t. and max. LOA 1,150 ft. are accepted.

Vessel must have the ability to maintain minimum 30% of the Summer deadweight at all times, either loading cargo and deballasting simultaneously, or loading part cargo first, discharge ballast and load balance of cargo.

SPM chain stoppers as per OCIMF recommendations are required.

Navigation Aids: The buoy is fitted with a navigation light flashing morse code "G" every 20 seconds with a range of 5 miles and a foghorn sounding morse code "U" every 20 seconds.

Malongo LPG Terminal:

Location: Malongo LPG Terminal is an LPG export facility operated by Cabinda Gulf Oil Company. LPG is stored in the storage tanker "Berge Troll' (maximum capacity 71,300 cu.m./42,920 metric tons) and is transferred to the export vessel in a ship-to-ship alongside operation. The SPM is located in about 100 ft. of water in position Lat. 05° 24.9 ' S., Long. 12° 01.3' E.

Capacity: Export vessels up to 40,000 metric tonnes.

Navigational Aids: The "Berge Troll" SPM is fitted with a navigation light flashing morse code letter "C" every 20 seconds, range 5 miles.

MOORING/UNMOORING: *Malongo SPM Operation:*

(a) Mooring operation will normally be undertaken during daylight hours (0600 – 1800) under normal weather conditions and with the CABGOC Mooring Master's agreement. Unmooring operations will usually be undertaken at any time.

(b) Before arrival at the boarding area, it will be necessary to ensure that the following minimum moorings are ready for use on the forecastle of the export vessel on arrival at the SPM berth:

Four mooring ropes, minimum length 220 m. and size 10 in. circumference. These lines should be buoyant and in good condition.

(c) When the vessel is within reasonable distance of the buoy, the 2 ship's lines will be picked-up by the mooring launch and made fast to the floating SPM pick-up lines. The ship's lines, used as messengers, will then be used to heave the pick-up lines on board the export vessel. As the pick-up lines come clear of the water, they will be followed by the chafing chains which are attached to them. These chafing chains must then be secured to the chain stoppers in such a manner that the 2 nylon hawsers are outside and clear of the ship's fairleads. The chains will then absorb any chafing in the mooring system. The buoy hawsers are each 180 ft. long and 15 in. circumference at Berth No. 1, and 220 ft. long and 18 in. circumference at Berth No. 2.

(d) Power is required to be available at all times on all deck winches and windlass while the export vessel is in the berth.

(e) Two mooring lines shall be available aft, secured to the bitts and of sufficient length to enable a tug to pick-up the eyes and tow on it to realign the vessel if necessary. Buoyant lines are requested.

Malongo LPG Operation: The export vessel will be moored during daylight hours only, according to a mooring plan to be agreed between the CABGOC Mooring Master, the Master of export vessel and the Master of the "Berge Toll".

At Malongo LPG Terminal, fendering between the two vessels for the alongside operation consists of 4 large fenders, 10 in. diameter × 16 ft. length at waterline level, and 5 secondary fenders strategically positioned close to the tank deck level.

HOSES: *Malongo Oil Terminals:* After the vessel has been securely moored, 2×16 in. floating hoses will be connected to the export vessel's port side manifold. The floating cargo hoses are fitted with Camlock type couplings to fit 150 ASA for 16 in. flanges. A hose gang will remain on board to attend to all hose operations, but the export vessel's crew shall provide assistance as and when necessary on the advice of the CABGOC Mooring Master. At such times, an export vessel's deck officer shall be in attendance.

The export vessel will be required to have ready a hose handling derrick at the port manifold with a SWL of not less than 15 tons for the lifting and connection of the hoses. Where possible, it is requested that the derrick runner is on one winch and the topping lift on another, as this will make the hose handling and launch operation much smoother and faster.

The export vessel's crew will be responsible for handling the hoses and required to operate winch or winches.

Every care should be taken during the hose handling operations to avoid serious damage to the hose, the plastic floats and buoys by contact with plate edge, rails, etc.

Special equipment, e.g. quick release fittings, etc., will be supplied from the line-boat when the CABGOC Mooring Master boards.

To avoid undue delays, a rope messenger shall be ready for use at the boarding position. Before hose handling operations begin, manifold oil containment facilities shall be ready for use and adequate quantities of absorbants available for rapid deployment in the event of spillage.

Export LPG: The "Berge Troll" will present 2×8 in. hoses to the manifold of the exporting vessel for loading of LPG. It will be the responsibility of the export vessel to cooperate with CABGOC personnel in making the connection of the 2 hoses to the manifold. The vessel should present 8 in. (150 ASA) flanges at her manifolds.

The "Berge Troll" is equipped on her starboard side with 2 hydraulic telescopic hose handling cranes.

Each hose will have a maximum flow rate of 800 tonnes/hr.

The export vessel shall be responsible for the safe handling of vapours generated during loading. Controlled venting to atmosphere is only to take place in agreement with CABGOC, and only for preventing cargo tanks safety valves to open/release to riser.

Luanda LPG Export: Product will be transferred via 1×6 in. flexible hose. A total length of 3×25 ft. hoses will be used, permitting 20 ft. of the transferring hose to rest on the export tanker to absorb all abnormal movement between the vessels. A ball valve will be arranged on the export vessel end of the hose to allow liquid to boil-off. Blowing/purging will therefore not be necessary. Vapour return is not available.

Cargo will be delivered at requested temperature by using a cargo heater on the "Berge Troll". Rate is normally expected to be around 200 tonnes/hr. Export tanker should be able to meet a 6 in. hose (150 or 300 ASA).

A 1 ton crane is located 130 ft. aft of the manifold for the purpose of transferring personnel between the ships and hose handling.

Small "Luanda LPG" tankers will berth on the "Berge Troll's" port side, always using their starboard side alongside. Five primary fenders 6 ft. × 12 ft. size are positioned on the "Berge Troll's" port side.

Larger "Luanda LPG" tankers with sufficient freeboard, and able to use the primary fenders on "Berge Troll's" starboard side, may berth on this side. All procedures will in such cases be similar to those in force for export LPG.

LOADING/DEBALLASTING: *Deballasting Operations – Oil Terminals:* Export vessels are required to arrive with sufficient ballast or cargo and adequately trimmed for safe manoeuvring, with the propeller submerged and in no case less than 30% S.d.w.t.

Cabinda Terminals have no ballast reception or slop disposal facilities, and therefore, export vessels are required to arrive with sufficient clean ballast suitable for pumping directly to the sea. Export vessels arriving with ballast unsuitable for pumping to the sea may be rejected for loading, or will be required to keep that portion of their contaminated ballast on board.

CABGOC will not accept any claims for vessels unable to meet such requirement.

It is strictly against the law to pollute the water of the People's Republic of Angola. Any Master, his vessel and Owners, may be subject to prosecution by the Angolan Authorities, if such pollution does occur.

Transfer Operations – Oil Terminal: The CABGOC Mooring Master will remain on the export tanker throughout the transfer operation, and will coordinate all activities on board the export tanker with the shore terminal.

The maximum loading rate available for the transfer operation will be 40,000 barrels per hour, but in no circumstances will the export vessel be requested to load at a rate faster than that required by her Master.

At all times during the transfer operation a responsible deck officer shall be in charge of operations. A deck watch in contact with the control room is required to continuously patrol the cargo deck and monitor the export vessel manifold area and the mooring hawsers.

When the responsible officer has declared the export vessel ready to load with all necessary valves open, the CABGOC Mooring Master will give instructions to commence the transfer at a slow rate. As soon as flow is confirmed and the integrity of the transfer hose connection is established, the export vessel may request an increase to the previously agreed loading rate. At any time during the transfer operation, the rate can be reduced as requested by the Master or responsible officer of the export vessel. At no time should vessel shut down against the flow. At least 2 cargo tank valves should be open at all times.

The CABGOC Mooring Master should be given advance notice by the Master or responsible officer of the export vessel when a reduction of loading rate is required.

After completion of loading, various documents, including Bill of Lading, Cargo Manifest, Ullage Report, Certificate of Quality, Certificate of Quantity, Certificate of Origin and Port Time Log, will be completed, and all such documents will be signed by the Master of the export vessel prior to departure. If required or requested by the Master, the Agent for the export vessel may sign the cargo documents on behalf of the export vessel's Master.

The official quality and quantity of the crude oil delivered to the export vessel shall be determined by her Owners and/or Charterers.

Simultaneous Deballasting and Loading of Cargo Tanks – Oil Terminals: This practice is required at Cabinda Terminals. Vessels must have the ability to load and deballast simultaneously or load cargo, stop operation of loading and deballast, and then finish loading cargo to maintain 30% of Summer deadweight.

These operations shall be done at the sole responsibility of the export vessel, its Master and Owners. The most stringent care and attention shall be taken by the export vessel throughout, whose Owners shall remain fully responsible for, and indemnify and hold CABGOC, its parent companies, subsidiaries and affiliates for any cost fine, and expenses, of every kind whatsoever, arising out of, on account of, or in any way connected with the simultaneous deballasting and loading of the export vessel.

Those vessels with only segregated ballast will be permitted to commence deballasting during loading at a stage of the operation convenient to both the Master and the CABGOC Mooring Master.

Loading Procedures – Export LPG Tankers: Notice of Readiness will normally be accepted at time of arrival when cargo hoses are connected and purged and when the vessel is declared, in all respects, ready to load.

The Master of the export vessel is required to have the blank flanges removed from the vessel's port side loading manifold before mooring, in order to expedite the connection of hoses.

Notice of Readiness will not be accepted during a period when berthing is suspended on account of adverse weather, or when an export tanker arrives prior to the date upon which it is nominated to load.

The foregoing paragraph notwithstanding, in no event shall a N.O.R., whether previously accepted or not, be valid or binding on the Terminal unless and until such time as the export vessel, her tanks and equipment, are in fact, in every respect in the proper condition and operation to receive the cargo.

Contract conditions for export of LPG may change from year to year, and demurrage/dispatch will be settled based on information on time sheet mutually agreed.

While the vessel is being cleared, the CABGOC representatives will give the Master of the export vessel written specifications concerning the anticipated loading conditions, i.e. gravity, temperature, loading rates, etc. The discharge of ballast and cargo transfer program will be fully agreed between CABGOC, Master of "Berge Troll' and the Master of the export tanker before any operation is allowed to commence.

There are no facilities available to discharge excess cargo, should the vessel overload. It is, therefore, imperative that the export vessel's Master declares the tonnage he requires prior to loading.

Cargo loading is by "Berge Troll" deep well pumps at a rate of approximately 12,000 bbls. (1,000 metric tons) per hour for Export LPG, and approximately 2,400 bbls. (200 metric tons) per hour for Luanda LPG.

Spotlights should be rigged on both wings of the bridge and on the forecastle of the export tanker to supplement the "Berge Troll's" deck lighting during transfer operations.

About 30 minutes before the cargo loading is expected to be completed, the CABGOC representative should be advised in order to coordinate the shut-down between the vessel and the "Berge Troll".

When the export vessel has completed loading the cargo, the discharging line valves on the "Berge Troll" will be closed. The 2 liquid hoses and the vessel's loading piping system in use will be cleared of liquid by blowing with warm vapour at an approximate pressure of 4 kg./sq.cm. from the "Berge Troll". This operation is carried out and supervised by CABGOC personnel. *Only when the CABGOC representative has advised that the line clearing operation is completed, may the export vessel's manifold be closed.* (In an emergency however, the export vessel may shut down against flow with immediate notification to "Berge Troll").

After completion of loading operations, various documents, including Bill of Lading, Cargo Manifest, Ullage Report, Certificate of Quantity, Certificate of Quality, Certificate of Origin and Port Time Log, will be completed, and all such documents shall be signed by the Master of the export vessel prior to that vessel's departure. The official quantity and quality of the LPG delivered to the export vessel shall be determined by independent surveyor on the basis of meters and equipment on the "Berge Troll", and shall be final and binding on the export vessel and Owners and Charterers.

The number and size of LPG samples taken will be determined by CABGOC.

Conditions of Acceptance: Cabgoc as operator accepts vessels on the understanding that transfer operations will be conducted safely and expeditiously, and that the berth will be vacated as soon as practicable after loading operations are completed.

CABGOC reserves the right to refuse to accept a vessel which fails to arrive with tanks cooled to the temperature appropriate to the grade of LPG to be loaded and with cargo free of any contamination.

Furthermore, CABGOC reserves the right to suspend operations and require the removal of any vessel from the berth for, but not limited to, the following:

(a) Flagrant or continuous disregard of the Cabinda Terminals Safety Regulations and Procedures.
(b) Defects in vessel, equipment, manning or operations, which in the reasonable opinion of CABGOC presents a hazard to the Terminal, personnel or the environment.
(c) Operational performance that fails to utilise satisfactorily the available Terminal facilities, and thereby in the reasonable opinion CABGOC constitutes an unacceptable constraint on transfer operations.

CABGOC shall not be liable for any costs incurred by a vessel, its Owners, Charterers, or Agents as a result of a refusal to load all or part of a nominated shipment, delay to or suspension of loading, or a requirement to vacate the berth arising from this regulation or from the safety regulations.

LPG Vessels Safety Inspection: As soon as possible after arrival, a CABGOC/"Berge Troll" representative will board the vessel in order to carry out a Safety Check and draw liquid samples from all cargo tanks.

Analysis results will be available after approximately 2.5 hours.

A further Safety Check will be carried out on completion of berthing, prior to commencement of loading.

Inert Gas System:

(a) All crude tankers scheduled to load at Malongo Terminals are required to have the I.G.S. plant fully operative and the tanks inerted throughout the lifting.

The oxygen content of all cargo tanks should be maintained below 8% by volume. The CABGOC Mooring Master will check random tanks upon boarding.

Failure to comply with this requirement will result in the vessel being delayed or rejected.

Should the I.G.S. break down during loading, *all cargo operations will be stopped, and the vessel may be ordered to vacate the berth.* The cost of any such delays will be for the vessel's account.

(b) Tanks Inspection, Gauging, Sampling, Water Dips and Temperature: Should it be necessary for tanks to be inspected, then it should only be done on a tank-by-tank basis. The system shall be maintained at about 200 mm. water gauge, except for the individual tank to be opened which, if possible, is to be isolated from the system and the sighting port opened with care. On completion of inspection, the tank shall be secured and re-pressurised. The next tank is not to be isolated and opened until the preceeding tank is secured and open to the I.G. system.

All gauging, sampling, water dips and temperatures will be taken either through special fittings provided or, if it is necessary, to open up tanks for this purpose, then this will be done one tank at a time as described above.

CARGO INFORMATION: *Malongo Crude:* Oil loaded at the Malongo Terminals will have varying API gravities in the range 26.3 to 34.6, depending on receivers requirements. Cargoes loaded at Malongo Oil Terminals may contain quantities of hydrogen sulphide.

Cabinda LPG: Cabinda LPG will have varying specific gravities ranging from 0.505 to 0.595, and be transferred at −35°C to −37°C. Advice on gravities and loading temperature will be provided to export vessels prior to the commencement of loading. Furthermore, in the case of LPG vessels, the final and official gravity will be available as soon as practicable, and usually 2 to 3 hours prior to anticipated completion of loading.

MEDICAL: In an emergency only. There are hospital facilities. Serious cases are sent to Luanda. Crew must have certificates of inoculation against yellow fever and cholera.

DENSITY: 1025. Influence of the current of the River Zaire varies according to the time of the year.

FRESH WATER: Not available.

FUEL: Not available.

CONSULS: None.

REPAIRS: Repairs will not be permitted when the export vessel is in the loading berth. Repair facilities are not readily available.

WATCHMEN: Not necessary. The authorities place a port policeman on board.

OPENING/CLOSING HATCHES: By the crew or stevedores.

CERTIFICATES: Ship's Register, certificates of deratting (valid) and certificate of life saving equipment.

CUSTOMS ALLOWANCES: Customs normally place no restrictions on the consumption of alcoholic drinks on board, but under no circumstances may alcohol be taken ashore.

REPATRIATION: Crew changes are only permitted in emergency situations, and then only when personnel involved hold all necessary valid certificates and documents.

AIRPORT: Small airport about 4 miles from the town served by the internal airline with only 1 flight per day to and from Luanda.

TIME: GMT plus 1 hour.

HOLIDAYS: 1st January, 4th February, 27th March, 1st May, 2nd November, 11th November, 10th December, 25th December.

Oil terminal works throughout.

POLICE/AMBULANCE/FIRE: Police Tel. 22456; Ambulance Tel. 22405; Fire Tel. Port Captain 22160/22159.

SERVICES: None available.

SHORE LEAVE: No shore leave for tanker personnel.

IDENTIFICATION CARDS: Supplied by the Agents and stamped by the Immigration police before any person comes ashore.

GARBAGE DISPOSAL: No service available.

WASTE OIL DISPOSAL: No service available.

SEAMAN'S CLUBS: None. No shore leave.

CURRENCY: Kwanza.

DELAYS: Tankers are not normally delayed, but dry cargo vessels may be delayed if two or more vessels arrive simultaneously, due to a lack of sufficient barges. Also, delay in loading and unloading may be caused by rough seas.

The ship's Agent is responsible for making any arrangements and providing any information concerning the above.

GENERAL: Vessels loading at the Cabinda Terminals must comply with the latest SOLAS and MARPOL Conventions and Protocols. Vessels which are found to be seriously deficient in any way will be refused permission to berth or load.

All vessels are warned to approach the Cabinda Terminals with extreme caution, as drilling and survey work are proceeding on a continuous basis.

The national flag of the People's Republic of Angola shall be permanently displayed by vessels at the Cabinda Terminals, both by day and night.

Environmental Conditions: The rainy season begins in the middle of October and extends to the end of April. During this season and particularly between December and April, local thunderstorms can be experienced, accompanied by heavy rain for periods of 3 to 4 hours. Sudden squalls with wind gusts of 75 knots can be experienced. Waves of 10 ft. – 15 ft. can be expected during these periods. Wind speeds are generally not significant (less than 20 knots). Strongest winds can be expected from the S.W. quadrant.

During the dry season (locally called "Cacimbo"), generally May to September, a Southwesterly swell affects the area. The long swell sometimes exceeds 10 ft. – 15 ft. in height.

The prevailing current sets N.W. to N.N.W., and at times exceeds 3 knots. Current in the Cabinda area is affected by Zaire River tidal flow, as well as heavy rain over the surrounding land area. Thus, particularly during the dry season, current setting to the S.S.W. can be experienced.

In view of the foregoing, Masters of vessels calling at the Cabinda Terminals are advised that, under no circumstances, are engine repairs or the immobilisation of main engines permitted within the limits of the Terminals.

Agency: CABGOC does not perform any vessel agency functions. Vessels calling at the Cabinda Terminals are required to arrange their own agency representation from an agency operator in Cabinda.

Ship Requirements: All requirements of an export vessel will be handled by the vessel's Agent. No stores of any kind are available.

AUTHORITY: Inspector of Operations for Northern Ports, Cabinda.

Cabinda Gulf Oil Company, C.P. 40, Cabinda, People's Republic of Angola. *Tel:* Cabinda 391141, 391191. Malonga 22256/7/8/9. *Cables:* CABGOC, Cabinda. *Telex:* 3160 Malonga, An. *Contact:* R.K. Connon, Director General. Captain C. Fraboni/Captain S. Redivo, Marine Operations Superintendents.

Luanda Office: C.P. 2950, Luanda, People's Republic of Angola. *Tel:* 91141, 91191, 91241, 91291, 91341, 91391. *Cables:* CABGOC, Luanda. *Telex:* 31060/3498.

Capitania do Porto de Cabinda. *Tel:* 22160.

ESSUNGO: 06.20 S. 12.10 E.

LOCATION: Essungo Terminal, part of the Lombo Terminal Complex to which please refer, is situated some 35 miles North of Lombo Terminal and 15 miles South of the entrance to the Zaire (Congo) River.

The loading point is situated in about 120 ft. of water, in position Lat. 06° 20′ 18″ S., Long. 12° 09′ 18″ E.

The IMODCO type Single Point Mooring is equipped with 2 mooring hawsers and is capable of accepting tankers up to 200,000 tonnes d.w.t.

A 16 in. sea line connects Essungo and Lombo Production Platforms and a 16 in. spur line is taken from this main line to the SPM buoy.

A floating 16 in. hose, with a 16 in. Camlock connection, connects the SPM buoy to the export tanker.

An old and disused mooring tower (R.M.D. Tower) is situated some 4 miles almost due East of the SPM.

The SPM buoy is equipped with a navigation light. Light: Flash "A" 15 sec., 5 nautical miles.

This Terminal is only used in the event of an emergency or failure of the Lombo Terminal loading facility.

VESSEL ACCEPTANCE: See "Lombo".

DOCUMENTS: See "Lombo".

APPROACHES: Facilities in Essungo Field are clearly marked on B.A. Charts, and all vessels calling at Essungo Terminal shall have on board B.A. Charts No. 3206 and 604.

Masters are advised that extensive drilling activities are underway in the Bagre Field, some 13 miles to the South (July 1996), and vessels should navigate with particular caution, as new uncharted platforms and drilling rigs may be encountered in the area.

Good radar targets are Essungo Platform and Bagre Platform, both of which flare continuously.

PILOTAGE: Pilotage is compulsory. The pilotage boarding area is 3 miles N.W. of the SPM buoy. The Pilot will give the arriving vessel any berthing instructions and/or confirm the anchorage position.

All other requirements/instructions as per Lombo Terminal.

ANCHORAGES: Vessels waiting to berth are requested to anchor 3 miles N.W. of the SPM buoy, contacting Essungo Platform on VHF Channel 6 upon arrival. The Pilot will then be advised and will call on VHF Channel 11. Vessels should listen throughout on VHF Channel 11.

Due to the proximity of many sub-sea pipelines, great care should be taken when anchoring. The sea bottom area is mainly sand and mud.

RESTRICTIONS: See "Lombo".

MAX. SIZE: Maximum displacement 250,000 tonnes.

Fitted with two AKD, OCIMF tongue type bow chain stoppers, SWL 200 tons.

For other instructions/requirements, see "Lombo".

RADIO: See "Lombo".

VHF:

Essungo Platform: Channels 6 and 72.
Lombo Pilot: Channel 11.
Lombo Marine: Channel 11.

MOORING: All mooring and unmooring operations are done by the ship's crew as instructed by the Pilot.

Upon arrival at pilot station, vessel shall have the port crane/derrick rigged and ready for use. The SWL shall be not less than 15 tons.

A line boat and a crew boat will assist the vessel to moor and unmoor.

The Pilot/Loading Master will normally only accept the Notice of Readiness between 0600 hrs. and 1700 hrs., providing the vessel is in all respects ready to receive cargo.

The time of N.O.R. accepted will always be the time of hose connection.

All mooring equipment, i.e. Panama leads, chain stoppers, etc., shall comply with relevant OCIMF recommendations. Smit Brackets are no longer accepted.

The Terminal line boat will bring the mooring equipment box alongside, which is picked up using the ship's port crane/derrick.

One messenger line of at least 400 ft. length and 2 good heaving lines shall be ready for use, both on the forecastle and on the poop deck aft. There should also be a large hammer and a large crow bar available on the forecastle head during mooring.

The line boat brings in a 10 in. circumference pick-up line alongside the bow when the vessel is within a reasonable distance of the SPM. The messenger line is passed by ship's heaving line, to the line boat and connected to the pick-up line. The pick-up line is retrieved until the chafe chain passes through the fairlead and is secured to the chain stopper. The whole process is repeated for the second hawser.

Once the vessel is safely moored, the Terminal tug is secured aft using ship's lines. The tug will remain secured to the stern of the loading tanker throughout its stay. The ship should have ready aft, shackled together, two full length (i.e. each 200 m. long) polypropylene mooring ropes of minimum diameter 80 mm. (10 in. circumference).

Once the tug is fast, the single 16 in. hose with Camlock connections is brought on board and connected by ship's crew.

The bow to manifold distance shall not exceed 150 m. and the manifold to ship's rail distance should not be less than 4.6 m.

A pressure recorder will be installed at the ship's manifold.

MEDICAL: Available only in emergency.

BALLAST: Vessel shall arrive with clean ballast only. No dirty ballast facilities available.

LOADING: The loading rate is approximately 100,000 barrels per day.

Soyo Blend Crude Oil has an API of approximately 40.0. The temperature ranges between 80°F to 90°F.

The loading is direct from the production platforms, with no storage facilities being available.

Particular attention is drawn to the need to operate cargo system valves with care, in order not to cause a shut-down of the production system.

FRESH WATER: Not available.

FUEL: Not available.

REPATRIATION: Crew changes can be arranged through shipping agencies on emergency basis, although not recommended.

TIME: GMT plus 1 hour.

SERVICES: The following services are not available: Stores, fresh provisions, cash, laundry, national flags, repairs, etc.

British Admiralty Charts are not available. Vessels shall have on board B.A. Charts No. 3206 and 604.

Mail: Mail sent to or from Europe usually takes 3 weeks.

SHORE LEAVE: Not possible.

GARBAGE DISPOSAL: No garbage disposal available.

WASTE OIL DISPOSAL: Not waste oil disposal available.

WEATHER: See "Lombo".

NOTICES: *Safety of the Vessel:* The Master is responsible for the safety of the vessel while moored to the loading point. He must, therefore, strictly adhere to all safety requirements generally requested by the Company and the Port Authorities and accepted by the oil tanker industry.

Port Authorities can, at any time, prescribe special safety measures to be complied with by the vessel.

Only approved safety material may be used (radios, flashlights, etc.).

The Pilot/Loading Master will hand to the ship's Master a Safety Check List when boarding the vessel.

The Pilot/Loading Master will remain onboard during the whole period of loading, and in case of any infringement of the safety regulations, will take any measure he deems appropriate, including stopping or not starting the loading operations. The time so lost will be debited to the vessel.

The following Safety Precautions must be taken by all vessels loading at the Terminal:

Repairs to main engine and steering gear are prohibited.
Vessel's anchors must be secured by stoppers before manoeuvring near pipelines and structures.
Continuous deck and cargo watches must be kept by a responsible Senior Deck Officer.
Power must remain on deck machinery at all times.
Main deck and forecastle areas must be adequately illuminated.
Pilot/Loading Master must be informed of any electrical storms or squalls that may approach vessel during loading.
The Ship/Shore Safety Check List and Prior to Berth Check List must be strictly observed by all vessels loading at the Terminal.

Hydrogen Sulphide: The cargo to be loaded contains high concentrations of Hydrogen Sulphide (H_2S).

Special precautions should be taken, as H_2S gas, when vented to atmosphere during loading, or when ballasting after discharge of cargo, is extremely dangerous to personnel. Because of this extreme danger, each and every person working in an area where H_2S gas may be present, should be aware of the potential dangers, and know how to protect themselves from the toxic effects of H_2S gas.

Closed loading of this cargo is compulsory. A Safety Team will board the vessel with the Pilot/Loading Master, and remain on board throughout the loading. The Safety Team will strictly control the safety measures necessary for the handling of this cargo, i.e. instructions to shipboard personnel, monitoring and measurement of gas levels, management and control of H_2S gas in the cargo tanks, on the decks, in the living quarters, and when vented to the atmosphere.

The Safety Team will provide emergency equipment, such as breathing apparatus, H_2S and combustible gas monitoring and measuring equipment.

During cargo tank venting, only crew members authorised by the Safety Team will be allowed on the open deck areas. All accommodation access doors must be closed and sealed during loading except one, and all shipboard personnel will be instructed to use only that assigned access, except in an emergency. Ship's air-conditioning plant must be on internal recirculation. Fire line and pumps must be capable of sustaining a sea water pressure of at least 150 psi. at one or more deck monitors. Gas reading values will be recorded every 2 hours, together with the vessel heading, wind direction and speed, the latter being plotted on forms provided by the Safety Team.

Recommendations and Regulations as per IMO "Dangerous Hydrocarbon Cargo Handling" and ISGOTT "International Safety Guide for Oil Tankers and Terminals" must be followed at all times.

Pollution: The Master is responsible for ensuring that no petroleum is discharged or spilled from his ship into the water of the Terminal. Drip pans shall be in place at all times under all manifolds and all overside scuppers, pipes, or openings on the loading and/or transfer decks shall be securely closed and oil tight.

In the event of any spillage of petroleum, petroleum waste, contaminated water or residue on the deck of the ship, the same shall be cleaned up immediately, and under no circumstances shall be permitted to be swept or washed overboard. Adequate supplies of sawdust or other material, approved by Company, shall be available on the ship for immediate use. Any vessel causing pollution of the water of the Terminal or sighting such pollution, shall immediately inform the Pilot/Loading Master. In the event that any ship should discharge or spill any dirty ballast, petroleum contaminated water, bilge water or petroleum waste into the water at or in the vicinity of the Terminal, the Company shall have the right (but without prejudice to any other rights it may have) to take any action which, in its opinion, is necessary to clean up or remove any contamination or pollution resulting from such discharge or spill (whether contamination or pollution of the sea, the shore or any structure or property).

The Company shall have the further right (but not obligation) to settle any claims of third parties arising from such contamination or pollution.

All payments, costs, and expenses properly made or incurred by the Company in cleaning up or removing any such contamination or pollution, and in settling any claims of third parties shall be the liability of the vessel, its Owners and its managers, and the Company shall be entitled to claim reimbursement accordingly.

The above refers mainly to petroleum pollution, but we would draw your attention to the fact that all pollution is covered by above, e.g. carbon deposits from the boilers.

The Company will take every precaution to prevent pollution occurring but, should it occur, speed is essential to control it, and the Company will, if necessary, "clean up first and discuss liability afterwards", rather than lose valuable time.

The vessel, if at fault, will be charged for use of boats, detergents, dispersants, labour (including overtime), transporation, use of equipment, etc., as well as the more obvious charge for the lost time whilst cargo operations are stopped.

Vessels carrying detergent are requested to have it available (not necessarily on deck) with a means of applying it, should the Company request such an action.

Special requirements: During the whole period that the vessel will be moored at the Terminal, a forecastle watchman will be required. He must be in continuous contact with the Duty Officer and Pilot/Loading Master.

He shall keep the Duty Officer and the Pilot/Loading Master informed about the vessel position and distance from SPM.

The vessel will be held responsible for all damages to the installations.

Vessels are requested to provide food and accommodation for the Loading Master and two Safety Inspectors throughout the loading operations. The accommodation should be equivalent to the minimum standard required for a Senior Officer. Accommodation may be required for visiting Port Authorities/Officers.

Ship's crew are required for mooring/unmooring operations and connection/disconnection of the hose. A 24 hour radio watch is required on VHF Channel 11.

Conditions of Use of the Terminal Facilities: All services and assistance provided by or on behalf of the Company (Texaco Panama Inc., Angola), at or in connection with the Terminal, are subject to any applicable Bye-Laws and Harbour Regulations, Safety Regulations and Towage Conditions for the time being in force and to the following further conditions.

Neither the Company nor its servants, Agents or contractors (in whatever capacity they may be acting) shall be responsible for any loss, damage or delay from whatsoever cause arising in consequence of any assistance, advice or instruction whatsoever given or tendered in respect to any vessel, whether by way of tugs, pilotage, or berthing services, the provisions of navigational facilities, including buoys or other channel markings or otherwise whosoever.

In all circumstances, the Master of any vessel shall remain solely responsible on behalf of his Owners for the safety and proper navigation of his vessel.

Although the Company exercises due diligence to ensure that the berths, premises, facilities, property, gear, craft and equipment are safe and suitable for vessels permitted or invited to use them, no guarantee of such safety or suitability is given, and the Company, its servants, Agents or contractors shall not be responsible for any loss, damage or delay of any sort that may be sustained by, or occur to any vessel, her Owners, her cargo or any part thereof (whether such cargo is onboard or in course of loading or discharging) by whomsoever and by whatsoever cause such loss, damage or delay is occasioned.

The Company will not be responsible for any loss, damage, or delay directly or indirectly caused by or arising from strikes, lock-outs or labour disputes or disputes or disturbance whether the Company or its servants are parties thereto or not.

If the use by any vessel of any berth, premises, any gear or equipment, any craft, or other facility or property, of any sort whatsoever, whether belonging to or provided by or on behalf of the Company, result in any damage to any such berths, premises, gear and equipment, craft or other facility or property, from whatsoever cause such damage may arise, and irrespective of whether or not such damage has been contributed to by the negligence of the Company or of its Agents, servants, or contractors and irrespective of whether there has been any neglect or default on the part of the vessel or Owners, in any such event the vessel and the Owner shall pay for or hold the Company harmless from and indemnified, all such damage and against all loss sustained by the Company consequent thereon.

Further, the vessel and her Owners shall hold the Company harmless and indemnified against all and any claims, costs and expenses arising out of any loss, damage or delay caused to any third party by the vessel or by its Master or crew, or by any other servant or Agent of the Owners.

OPERATOR: Texaco Panama Inc., P.O.Box 5897, Luanda, Angola. *Tel:* 244-2-322606. *Telex:* 2619 Texpan An. *FAX:* 244-2-321703. *Contact:* Marine Superintendent (Tel: 871-1515147. Fax: 871-1515150).

FUTILA: 05.27 S. 12.11 E. (See Plan)

LOCATION: Futila Terminal is a products import/export facility, owned by Sociedade Nacional de Combustiveis de Angola (SONANGOL). Products are transferred via the Futila Conventional Berth Mooring (CBM), located in 22 ft. of water in position Lat. 05° 27.0′ S., Long. 12° 11.0′ E.

APPROACHES: The Futila CBM area is delineated by 4 light buoys in following locations:

(1) Green Buoy: Lat. 05° 30′ 09.6″ S., Long. 12° 10′ 08.9″ E.
Green light, flashing 1 every 5 seconds, range 6 nautical miles.
(2) Red Buoy: Lat. 05° 29′ 24.1″ S., Long. 12° 09′ 58.5″ E.
Red light, flashing 1 every 5 seconds, range 6 nautical miles.
(3) Yellow Buoy: Lat. 05° 27′ 52.4″ S., Long. 12° 09′ 47.4″ E.
Yellow light, flashing 2 every 10 seconds, range 6 nautical miles.
(4) Yellow Buoy: Lat. 05° 26′ 55.2″ S., Long. 12° 10′ 13.9″ E.
Yellow light, flashing 4 every 20 seconds, range 6 nautical miles.

Vessels will enter the area from West passing between green and red buoys. The West (yellow) buoy marks the limit of a reef area and the North (yellow) buoy the Kokongo pipeline. A red can buoy, intended as stand-by buoy for the mooring launch, and fitted with a white quick flash light, is located in Lat. 05° 27′ 20.0″ S., Long. 12° 10′ 48.5″ E.

There are numerous oil well platforms in the vicinity of this Terminal, and each one is fitted with navigational aids flashing morse code "U" and fog signals sounding one blast every 20 seconds with a range of 1.5 miles.

Gathering Station GSJ (Juliet) is located in position Lat. 05° 24.8′ S., Long. 11° 59.5′ E., and is fitted with a navigational light with characteristics of Gp.Fl.(3) every 30 seconds. A Racon beacon is also installed on this platform. The characteristics of this beacon are morse code "G" with a 360° azimuth, range 22 miles.

PILOTAGE: The Mooring Master will board the vessel at the anchorage area.

All manoeuvring of vessels within the Futila Terminal mooring area is to be done only in accordance with the advice of the Company Mooring Master, subject to the understanding that in all cases and circumstances the Master of the vessel being manoeuvred shall remain solely responsible on behalf of his vessel and the vessel's Owners for the safety and proper manoeuvring of the vessel.

The Company Mooring Master will remain on board throughout the vessel's stay in the berth to coordinate transfer operations, therefore suitable accommodation shall be provided for him on board the vessel.

ANCHORAGE: *Arrival at Pilot Station/Anchorage Area:* Means of access to vessel by the Mooring Master shall be provided in accordance with the requirements of SOLAS, and early advice will be given by Mooring Master regarding the side of the vessel where access should be provided. At night, the access area shall be adequately illuminated to provide for the approach and boarding of the Mooring Master, Government Officials and Terminal representatives.

The Notice of Readiness will be accepted only between the hours of 0600 and 1600, provided that the Terminal representative is satisfied that the vessel is apparently in all respects ready to moor and load/discharge. Notice of Readiness will not be accepted during a period when berthing is suspended on account of adverse weather, or when a vessel arrives prior to the date upon which it is nominated to load/discharge.

The foregoing paragraph notwithstanding, in no event shall a Notice of Readiness, whether previously accepted or not, be valid or binding on the Terminal unless and until such time as the vessel, her tanks and equipment, are in fact in every respect in the proper condition and operation to receive the cargo.

MAX. SIZE: Maximum draft is 15 ft. even-keel. Maximum size 6,400 d.w.t. Vessel must have the ability to discharge/load cargo and ballast/deballast simultaneously and maintain 30% of Summer deadweight or discharge cargo, stop and load ballast, then discharge balance of cargo to maintain 30% of Summer deadweight at all times. Vessel to maintain 2 valve segregation between cargo and ballast.

RADIO/VHF: *Communications:* Vessels bound for the Futila Terminal are required to advise their ETA via telex or cable to the office of the vessel's Agent in Cabinda, who will pass the information to the Company.

ETA messages are to be sent 72 hours, 48 hours and 24 hours before arrival at the Terminal and should contain the following information:

(a) Name of the vessel.
(b) ETA in GMT (Angola time is GMT plus 1 hour).
(c) Name of the Master.
(d) Arrival draft and intended departure draft (fore and aft).
(e) Time for discharge clean ballast, if any, also quantity of segregated ballast on board.
(f) Quantity of cargo required or to be discharged and any special requirement.

For short range communications, a VHF system is available covering Channels No. 1 to No. 78. Channels 16 and 12 are monitored continuously. The VHF Radio call sign is "Futila Terminal".

Approach to the Anchorage/Pilot Boarding Area: Normally all communications will be with the Futila Shore Terminal. When within VHF communication range, the Master of the vessel should ascertain berthing prospects from Futila Shore Terminal. Should it be necessary to anchor, then the vessel should proceed to the recommended Malongo Freighter Anchorage, which is Lat. 05° 31′ S., Long. 12° 08′ E.

Anchorage for any vessel in any other area within the Terminal limit is prohibited unless special clearance is received from Futila Terminal.

TUGS: *Mooring Launches:* Company mooring launch will deliver the Mooring Master and necessary equipment. In addition, the mooring launch brings the buoy's mooring lines to the vessel as directed by the Mooring Master. Similarly, the mooring launch remains in the area the entire time the vessel is in the moorings.

BERTHING: *Berthing Procedures:* See "Plan". The detailed procedures are modified to fit conditions of wind, current, sea state, vessel size, limitations of the vessel's mooring gear, and the technique of the Mooring Master. In general, the following is a typical procedure for berthing tankers at the berth:

(a) Vessel approaches the mooring on a 160° heading, passing approximately 100 m. off the mooring launch stand-by buoy.
(b) Starboard anchor is let go at Point A and about 5 shackles of chain are payed out on the run, starboard chain is then held.
(c) When starboard chain fetches up leading aft, port anchor is dropped at Point B, 1 shackle on deck, and stern is worked into berth as starboard chain is held, and the port chain is payed out to approximately 5 shackles as the vessel backs into the berth and launch brings the mooring lines from the mooring buoys. Then both chains are adjusted as necessary to position the vessel properly in the berth.
(d) The Mooring Master will decide which mooring lines launch will bring first, depending on wind and current conditions.

Mooring Operation: Mooring operation will normally be undertaken during daylight hours (0600/1600) under normal weather conditions and the Company Mooring Master's agreement.

Before arrival at the boarding area, it will be necessary to ensure that the following minimum moorings are ready for use on arrival at berth.

(a) Mooring gear shall include both bow anchors. The anchor windlass must be capable of operating at its rated speed, and adequate power shall be available to run the windlass at rated speed at all times while in the moorings. Each anchor shall be equipped with no less than 9 shackles of chain.
(b) The Futila CBM berth is a 3-point mooring. Each mooring consists of a cylindrical buoy fitted with a shackle. The two after buoys are fitted with a polypropylene mooring rope, 9 in. diameter and 300 ft. long. The forward port buoy is fitted with a polypropylene mooring

rope, 9 in. diameter and 200 ft. long. However, vessels should be equipped with sufficient synthetic lines to run to each of the buoys, plus additional synthetic lines for doubling up. Wires are permitted but must be fitted with synthetic pendants equipped with mandel shackles, and the strength of the pendant is 125% of the rated strength of the wire. Pendants are not acceptable on synthetic lines. Extra lines are required at each location in order to double up on lines to the buoys when wind or current conditions dictate.

(c) The mooring stations should be equipped with properly located and functioning winches, fairleads, bitts and chocks. Each synthetic line requires separate bitts, unless mounted on the winch drum.

The Mooring Master shall determine the suitability of the vessel's mooring equipment. Should the Mooring Master consider that the mooring gear is not adequate, the vessel shall not be brought into the moorings until deficiencies have been corrected.

LOADING: *Lifting and Connecting Hoses:* After the vessel is securely moored in the berth, the Mooring Master will supervise the lifting and connecting of the cargo hose, following the general procedure set forth below.

(a) Berth requires a minimum lifting capacity of 2.5 tons.
(b) Mooring launch crew makes vessel's runner fast to hose pick-up chain.
(c) Cargo boom lifts submarine hose to its correct height.
(d) Ship's crew hangs-off submarine hose at the rail with the chain attached to the hose. The hose is connected directly to the vessel's manifold with the end of the hose lowered in a smooth curve.
(e) Ship's crew remove the blind flange from the Camlock coupling at the end of the hose string. The hose is lifted to the vessel's manifold after the flange is removed. Top of the roll bar must be higher than the bottom of the manifold.

Start/Stop Notice to Shore Personnel: At least 10 minutes notice shall be given to shore personnel before starting or stopping cargo operations. The vessel shall notify shore personnel of any anticipated changes affecting pumping rates, such as stripping operations or swtiching pumps.

Procedure for Discharging: Cargo is discharged to the facility using the ship's pumps to transfer the product ashore. Booster pumps, at the pumping station located on the beach, then assist in pumping product uphill to the tank farm, once flow has been established. All shipboard cargo transfer action is undertaken by the ship's crew on the advice of the Mooring Master. The sequence of operations for each transfer is controlled by facility personnel in the pumping station control room ashore.

The shore will give the vessel a 10 minute notice, whenever possible, before starting, stopping or changing any cargo operations, including tank switches, line changes and booster pump operations.

It is important that the vessel maintains pressure at the ship's rail as indicated. It is essential that the discharging sequence be carefully planned, so that stripping and/or collecting of tank bottoms is going on during the discharge ashore, thus avoiding prolonged stripping ashore towards the end of cargo discharge.

The vessel will give the shore at least 10 minutes notice before starting and stopping of booster pumps, starting and stopping of discharge operations and any other operation which would have an impact on the cargo transfer (i.e. stripping, etc.).

Procedure for Loading: Loading of vessels consists of transferring the product from the shore tank farm, by gravity only, under the control of facility personnel in the control room. In each step of the loading operation, the vessel will be told by the shore facility precisely how many barrels of product to take aboard. The ship's crew, through the Mooring Master, shall advise the shore station when that quantity is reached. Facility personnel in the control room will close valves as appropriate to stop loading.

Important: Do not under any circumstances close ship's valves or submarine hose or tanker rail hose valve against flow.

The shore will give the vessel at least 10 minutes notice before starting or stopping any cargo operations.

The particular sequence of operations for each transfer is controlled by the facility personnel in the control room ashore.

Product Transfer Rates: Though the hoses are rated up to 225 psi, the Mooring Master will not allow the hose pressure to exceed 145 psi.

Emergency Shut-Down: Specific procedures have been developed by the Terminal for avoiding pollution of the sea, and the action to be taken to minimise pollution, should leakage occur. The procedures include loading and discharging operations, as well as leakage occurring when no vessel is in the berth. These emergency procedures call for shutting down vessel or facility transfer pumps and closing system valves.

In the event of fire or similar emergency on board a vessel, the vessel will cease cargo operations and direct all efforts to the emergency. The vessel should try to follow hose disconnection procedures when personnel safety is ensured.

Unmooring Operation: Unmooring will normally be undertaken on a 24 hours basis. Possibility exist that, due to weather conditions, vessel will have to anchor outside the Terminal awaiting daylight.

Departure from Berth: The procedure for leaving the berth includes the following steps:

(a) Hose is disconnected, blanked-off and held on the ship's side. Mooring lines are slacked until cargo hose starts stretching, and at this point hose is released and lowered to the bottom.
(b) Mooring lines to the buoys are released by the vessel's crew, then the mooring launch pull them away.
(c) Anchors are either heaved in simultaneously or the port anchor is heaved in first, while the starboard line (green mooring buoy) is sometimes held until the vessel's stern is well clear of the hose buoys.
(d) Mooring Master leaves the vessel after it is clear of the red and green buoys located at the Futila Terminal approach area entrance.

FRESH WATER: Not available.

FUEL: Not available.

GENERAL: Vessels calling at the Futila Terminal must comply with the latest SOLAS and MARPOL Conventions and Protocols. Vessels which are found to be seriously deficient in any way will be refused permission to berth or load/discharge.

All vessels are warned to approach the Futila Terminal with extreme caution, as drilling and survey work are proceeding on a continuous basis.

The national flag of the People's Republic of Angola shall be permanently displayed by vessels at the Futila Terminal, both by day and night.

Repair Work: A vessel, when in berth, shall be maintained in a state of readiness for vacating the berth under full engine power at short notice. Therefore, no repairs will be permitted. The testing of any electrical equipment, including radar, radio and domestic electrical equipment, is prohibited, unless permission of the Company Mooring Master has been granted. Tank cleaning and gas-freeing shall not be carried out while in the berth.

Chipping and scraping on deck or hull will not be permitted.

Display of Code Flag "B" and Anchor Signals: During all discharging, loading, ballasting or deballasting operations, the international code flag "B" and a black ball shall be displayed during daylight hours, and proper anchor lights shall be displayed during darkness.

Power Availability and Machinery: Any vessel in the moorings or in the vicinity of the moorings shall keep its engine plant on stand-by with full power immediately available to the main engine, steering gear, anchor windlass, all deck winches and the ship's whistle. No repairs to the engine plant are permitted in the mooring, if such repairs impair or limit the ship's power availability in any way. When fast in the mooring, the ship's propeller shall not be turned except by use of turning gear.

Ship Requirements: All requirements of a vessel will be handled by the vessel's Agent. No stores of any kind are available. Limited medical facilities are available only in emergency. Repairs will not be permitted when the vessel is in the berth. Repair facilities are not readily available. Masters are advised that shore leave is not permitted. Crew changes are only permitted in emergency situations, and then only when personnel involved hold all necessary valid certificates and documents.

Agency: The Company does not perform any vessel agency functions. Vessels calling at the Futila Terminal are required to arrange their own agency representation from an agency operator in Cabinda.

AUTHORITY: See "Cabinda".

KIABO MARINE TERMINAL: 07.20 S. 12.35 E.

(See Plan)

LOCATION: *Terminal Description:* The FPSO "Ocean Producer" is a Floating Production, Storage and Offloading vessel, located in territorial waters off the Coast of Angola, West Africa. The FPSO is a converted 78,061 d.w.t. export tanker, registered under the Liberian flag and has an overall length of 789 ft. The loaded draft is 44 ft. The total crude oil storage capacity is 514,000 barrels. The water depth at the location is 250 ft. with no significant change in depth within the operating area.

With a bow heading of 022.5° from true North, the FPSO has permanent moorings port and starboard to buoys off the bow and stern quarters (See "Plans" – Figures 1 and 2).

Two sub-sea production wellheads are 552 ft. astern of the FPSO (See "Plans" – Figures 1 and 2).

There is a laboratory onboard, capable of carrying out a limited number of tests on the crude oil stock.

There are no facilities to receive dirty ballast.

FPSO "Ocean Producer" Radio Call Sign: "5 LBJ".
Inmarsat "A" I.D. No. (871) 124-1412.

Operating Location:

FPSO Stern Co-ordinates: Lat. 07° 20′ 30″ S., Long. 12° 35′ 24″ E.
Angolan Shoreline: 17 nautical miles.
Water Depth: 250 ft.

Note: A maritime Exclusion Zone has been established around the Terminal. Vessels are not permitted to enter this area without authorisation from the Company.

The Exclusion Zone is bounded by the following co-ordinates:

Lat. 07° 19′ 30″ S., Long. 12° 35′ 00″ E.
Lat. 07° 19′ 30″ S., Long. 12° 38′ 00″ E.
Lat. 07° 21′ 30″ S., Long. 12° 35′ 00″ E.
Lat. 07° 21′ 30″ S., Long. 12° 38′ 00″ E.

PILOTAGE: Pilotage is compulsory within a 1.5 miles radius of the Marine Terminal.

Use of Mooring Master by Export Tanker: Mooring Master will meet the vessel before it proceeds to the Kiabo Field Marine Terminal. Mooring Master will advise the Export Tanker's Master on approaches to the FPSO, mooring and unmooring, connecting and disconnecting hoses, and in all other operations within the Marine Terminal area. All manoeuvring of ships within the Terminal area shall be done with the advice of Mooring Master, subject to the understanding that in all cases and circumstances the Master of the vessel being manoeuvred shall remain solely responsible, on behalf of this vessel's Owner for the safety and proper manoeuvring of the vessel. The Export Tanker's Master or qualified Deck Officer must be on the bridge at all times while the ship is manoeuvring.

Visiting Export Tankers may not commence final approach to the Marine Terminal until the Mooring Master from the FPSO is aboard, has completed all required safety checks and has authorised the Export Tanker's Master to proceed with final approach to the mooring.

Boarding Procedure: From FPSO to Export Tanker:

Prior to commencing final approach and after completion of all preparatory radio signals with the FPSO, the Export Tanker shall advise the FPSO of its speed and heading, as well as the location and status of the gangway for boarding by the Mooring Master. The Export Tanker's Master shall ensure Export Tanker's crew availability and readiness to facilitate safe alongside boarding by the Mooring Master. Export tankers are requested to have a pilot ladder safely and securely rigged, ready for immediate use, and long enough to reach the Mooring Master's boat. A life-ring with a heaving line should be provided near the pilot ladder for immediate use. If at night, adequate lighting must be rigged overside for the Mooring Master's ladder. Vessels will provide a lee for Mooring Master, both when boarding and leaving. If a pilot ladder is not suitable for use, then it is the responsibility of the Export Tankers' Master to change it. Vessels with a freeboard greater than 30 ft. are requested to provide a combination pilot and accommodation ladder.

Exchange of Arrival Documentation:

When the Mooring Master is safely aboard the Export Tanker, all required and designated documentation shall be exchanged between the Export Tanker's Master and the Mooring Master. When the exchange is completed, the Mooring Master shall so notify the FPSO Master.

Validation of Safety Condition/Measures:

Prior to authorising final approach to mooring, the Mooring Master shall satisfy himself that all requirements relative to safety conditions and measures aboard the visiting Export Tanker are in place and/or in a state of readiness according to the parameters of the OCIMF/ICS "Ship to Ship Transfer Guide".

Concurrence of Emergency Procedure: (ESD/Fire/others):

Prior to authorising loading and connection of transfer hose to the Export Tanker, the Mooring Master shall determine from the Export Tanker's Master that the Export Tanker's crew is in a state of readiness and is proficient in emergency safety, fire and other related procedures to ensure maximum safety during ship-to-ship cargo transfer operations.

APPROACHES: *Approach to Marine Terminal:*

1. Anchorage Area:
   The anchorage area for vessels awaiting the loading berth at the Kiabo Field Marine Terminal is at the Master's discretion, but in any event shall not be within the Exclusion Zone.
2. Mooring Master Pick-Up Zone:
   The Mooring Master Pick-Up Zone is an area between 2.5 – 3.0 miles N.W. of the FPSO location. Vessels should take a suitable heading to allow safe access for the Mooring Master. Following receipt of instructions from the Company or the Mooring Master, an Export Tanker should proceed from the anchorage area to the Mooring Master pick-up zone, where the vessel will be boarded by the Mooring Master.
3. Marine Terminal Safety Zone:
   Export tankers are prohibited from navigating within the safety zone at Kiabo Field Marine Terminal at any time unless the Mooring Master is on board. The safety zone is within 1.5 miles radius of the FPSO.

ANCHORAGE: No vessel may anchor within the Exclusion Zone. For Export Tankers requested to anchor, the recommended anchorage area is located East of location in 165 ft. of water. Anchoring within the FPSO's mooring legs is strictly prohibited. Prior to arrival, the Master of Export Tanker should contact the FPSO for information concerning anchorage positions. B.A. Chart No. 604 describes the area.

If an Export Tanker is not scheduled to moor on arrival, or the Terminal is closed due to adverse weather conditions, etc., the Export Tanker's Master will be advised by VHF radio and requested to anchor.

FPSO ACCEPTANCE CRITERIA FOR EXPORT TANKER:

Displacement/Cargo Capacity: FPSO capacity is 514,000 bbls. Export tankers should have a minimum arrival displacement not less than 25% Summer deadweight. Prior notice must be given of any Export Tanker not able to comply, and an agreement must be reached with the Master of the FPSO.

RESTRICTIONS: Mean sea water depth at the FPSO is 250 ft., no draft restriction. Mooring and unmooring during daylight hours only (See "Berthing").

MAX. SIZE: 150,000 d.w.t. Also see "Berthing".

RADIO: *Arrival Time:* The Export Tanker shall send an initial estimated time of arrival (ETA) message to Sonangol P&P upon departure from the previous port. The message should be updated 72 hours, 48 hours and 24 hours before arrival at the FPSO location.

Initial ETA: It is important that all in-coming Export Tankers advise Sonangol P&P at least 72 hours before the estimated time of arrival, giving best estimate of the ship's arrival time at the Marine Terminal via the operator.

Time to be used for ETA is the local time zone of GMT +1 hour throughout the year.

The first message should include the following information:

(a) Name of Export Tanker and radio call sign.
(b) Inmarsat "A" I.D. number for voice, fax and telex, if so fitted.
(c) Cargo requirements.
(d) Maximum loading rate.
(e) Arrival draft, fore and aft.
(f) Last port of call.
(g) Confirm that vessel has clean Bill of Health.
(h) If there is any sickness onboard, give all available information as to the possible type of sickness.
(i) Distance in feet from the bow to the loading manifold on the Export Tanker.
(j) Total length overall (LOA).
(k) If the ship's hose connections are different from a 16 in. flange.
(l) Name and full style of local Agent.

Subsequent ETA's: Further ETA messages should be sent to Sonangol P&P when the Export Tanker is 48 hours and 24 hours from the Terminal, and additional notification shall be given if the vessel's ETA will vary from the original notification by 6 hours or more. Notwithstanding the foregoing, in case the sea passage from the vessel's last port is less than 72 hours from the Kiabo Field Marine Terminal, the first notice shall be given immediately after leaving such port of call, and subsequent notices shall be given at regular time intervals.

Should the ETA change by one hour or more following the 24 hours notice, the vessel shall promptly notify Sonangol P&P of the new ETA.

Export Tanker Pre-Arrival Questionnaire: All Export Tankers will be required to complete the Export Tanker Pre-Arrival Questionnaire prior to arrival at the Terminal.

1. Vessel's name and call sign:
   Previous name(s):
2. Flag:
3. Year built and class:
4. Owners/Managers (including address and telex number):
5. Nationality of Master: Officers: Crew:
6. Last port of call / date:
7. Date of last dry dock / special survey:
8. Summer deadweight and draft:
9. Arrival draft and displacement:
10. Vessel dimensions (metres): LOA: Beam:
    Moulded depth:
11. Terminal factor (LOA × Beam × M.Depth):
12. Distance between bow and manifold:
13. Manifold size/crossovers onboard (the Export Tanker will be expected to provide all crossovers, etc., for connection to the FPSO 16 in. floating hose assembly):
14. Hose boom S.W.L.:
15. Length of anchor chains: Port: Starboard:
    Are there cleats and/or bitts in manifold area for securing overside hose?
17. Quantity and quality of slops onboard / L.O.T. intended?
18. Quantity of ballast onboard / are tanks segregated:
19. Vessel should not be less than 25% d.w.t. on arrival. Can vessel load and deballast simultaneously with 2 valve segregation to maintain 25% d.w.t. minimum?
20. If answer to (19) is NO, state deballast time required before loading:
21. State maximum loading rate (single 16 in. hose):
22. Is an Inert Gas System fitted? Are tanks under Inert Gas?
23. Is a crude oil washing system fitted?
24. Advise the number, size and locations of bow Panama leads (or equivalent):
    Note: Bow fairlead should be at least 23.6 in. × 17.7 in.
25. Is vessel fitted with Smit Brackets or patent chain stoppers in bow area? If so, state number, type and S.W.L.:
26. How many sets of bitts are located in the bow area:
27. What are the distances of these bitts from the bow fairleads:

Owner warrants vessel able to discharge ballast and load back cargo simultaneously (with two valve segregation) whilst maintaining a minimum 25% d.w.t. Any relaxation due to non-compliance with this clause is for Owner's account.

In any case of the vessel's deficiency in mooring design or hose handling capability, the Terminal will reserve the right to accept the vessel and will not, in any case, be responsible for any delay or costs arising from such deficiency.

VHF: *Radio Communication:* VHF/FM Channel 16 (156.8 MHz).

The FPSO maintains a continuous watch on VHF/FM Channel 16 and Export Tankers' Masters are recommended to use this channel when they are within range of the Kiabo Field Marine Terminal. Particularly when approaching the Marine Terminal, attention to VHF/FM communications will minimise the risk of delays in mooring.

During mooring operations, the Export Tanker's radio will be under sole control of the Master. Masters are reminded that if their vessel is requested to anchor to await mooring, it is their responsibility to maintain a constant listening watch on VHF Channel 16 to receive Marine Terminal instructions. Any delay due to failure to maintain a constant listening watch on Channel 16 will be for the Export Tanker's account and will not be included in a subsequent laytime calculation.

The communication equipment onboard the FPSO is capable of switching to all VHF marine frequencies.

Communications After Mooring Master has Boarded: For subsequent intership communications between the Export Tanker and the FPSO, portable VHF/UHF radio-telephone units will be utilised by the Mooring Master. These sets will be intrinsically safe.

General:

(1) Any telephone, portable VHF/UHF and radio-telephone systems utilised shall comply with applicable safety requirements.
(2) At a minimum, continual voice communication shall be maintained between the FPSO and the Export Tanker, Mooring Master and the Export Tanker's Chief Officer.
(3) The selected communication channels to be used shall be assigned prior to the final approach of the Export Tanker and shall be recorded on the appropriate forms, as per applicable regulations.
(4) All communications shall be in the English language.

Pre-Arrival/Arrival Exchanges:

(1) Prior to initiating final approach to mooring, the Export Tanker shall notify the FPSO of:
    (a) Course (heading).
    (b) Speed.
    (c) Location.
(2) The FPSO shall then advise the Export Tanker of the ETA of Mooring Master and his transportation type (utility boat, etc.).
(3) The Export Tanker shall advise the FPSO of the following:
    (a) Tanker draft and trim.
    (b) Available tank capacity for loading.
    (c) Disposition, composition and quantities of ballast plus time required for discharge and maximum light freeboard.
    (d) Quality of Inert Gas.
    (e) Any other information that may be deemed relevant.

Emergency Procedure:
(1) Prior to the commencement of any operational phase, a secondary, stand-by procedure for the communication of emergency signals shall be established, agreed upon and understood.
Signals should include, as a minimum:
(a) Radio Communication Inoperative.
(b) Stand-by.
(c) Start Loading or Start Discharging.
(d) Slow Down.
(e) Stop Loading or Stop Discharging.
(f) Emergency Stop.
(g) Emergency Disconnect.
(2) When primary radio communication fails, all mooring and/or cargo transfer operations should be suspended pending restoration of the service.
(3) Immediately when the need for emergency signalling procedure becomes evident, action should be taken to determine and correct the problem.

TUGS: *Use of Boat Services by Export Tanker:* Export tankers shall not undertake final approach to the designated mooring without the assistance of a tug.

On Arrival – Lines and Hoses: Preparation for mooring will be advised by the Marine Terminal through VHF radio communication prior to the Export Eanker's arrival or by the Mooring Master before the mooring operation commences. The Export Tanker will moor with her bow to the Marine Terminal FPSO. Prior to mooring, Export Tankers are required to have ready on the starboard side, a derrick at least 10 tons SWL, rigged and ready for connecting and disconnecting the cargo transfer hose.

Similarly, the Export Tanker shall be rigged and ready to heave up the mooring hawser from the FPSO as well as the towing wire from the hold back tug.
(1) While the tug is assisting the Export Tanker to the designated mooring location, a workboat shall deliver the FPSO bow hawser pick-up line to the Export Tanker.
(2) When the Export Tanker is secured, a workboat shall deliver the cargo transfer hose to the Export Tanker.
(3) After all mooring services are completed, the tug shall maintain sufficient thrust astern, so as to keep the bow hawser between the Export Tanker and the FPSO in constant tension. The workboat shall stand-by and be prepared to render any assistance required during cargo transfer operations.

On Departure:
(1) When summoned, the workboat shall approach the Export Tanker to assist in disconnection and retrieval of the cargo transfer hose.
(2) The workboat shall then assist in retrieval of the bow hawser.
(3) The tug shall then assist the Export Tanker in preliminary manoeuvring in preparation for departure.

Safety Precautions Aboard Export Tanker:
(1) All cargo tanks on the Export Tanker are to be gas free, all cargo tank lids, ballast tank lids and ullage ports shall be closed before the tug(s) comes alongside the Export Tanker.
(2) No tugs or any other vessels shall be permitted alongside until the Master of the Export Tanker has determined that it is safe.

BERTHING:
Operating Layout:
(a) FPSO Length: 789 ft.
(b) FPSO Bow Heading: 022.5°
(c) Permanent Moorings and Marker Buoys: 6
(d) Mooring Tie-In Locations, Quantities and Headings: (See "Plan")
Port Bow (1) 322.5° Starboard bow (2) 080° and 085°
Port Stern (1) 262.5° Starboard stern (2) 140° and 145°
(e) Wellheads: 495 ft. from FPSO, due astern on bearing 202.5°
(f) Export Tanker Berthed Heading: 172°
(g) Export Tanker Minimum Berthed Distance: 250 ft.
(h) Export Tanker Stern Mooring: Tug (Company supplied).
Export Tanker Bow Mooring: Bow Hawser (FPSO supplied).
(i) Offloading Hose: 970 ft. (BCM – 130 ft.)

Hours of Operation: The Kiabo Field Marine Terminal will generally operate 24 hours a day, 7 days a week. Ships are loaded at any hour, weather and other circumstances permitting, and at the full discretion of the Company. Vessels are moored and unmoored during daylight hours only. In order to assure all mooring activities occur during daylight hours, an arrival time of 1200 hrs. local time is recommended.

Notices of Readiness: Mooring Master will act on behalf of the Company to acknowledge receipt of the vessel's "Notice of Readiness", which should be tendered at time of arrival. Arrival time will be considered as the time the anchor is dropped at the anchorage area. "Notice of Readiness" will be accepted as the time that the Mooring Master boards the vessel, or the Export Tanker shall have dropped anchor within the recommended anchorage area and has advised the Marine Terminal of the time of anchoring. Exception to the above will be if the Export Tanker is in the anchorage area awaiting arrival of the Mooring Master and has been requested by the Marine Terminal not to anchor. In this case, "Notice of Readiness" will be accepted from the time the Marine Terminal requested the ship not to anchor.

Marine Terminal Closure: "Notice of Readiness" will not be accepted during periods when the Marine Terminal is closed. The Marine Terminal is closed when the weather is such that it is too rough for Export Tankers to moor or remain safely moored to the FPSO. Any decision regarding the opening and closing of the Marine Terminal will be made solely at the discretion of the Company. In such case, the Marine Terminal will provide the Export Tanker's Master with a written notice of the time during which the port was closed due to adverse weather. Vessels required to leave the Marine Terminal area on account of weather should keep in contact with the Marine Terminal via VHF radio, in order that they will be readily available when weather moderates. The Company reserves the right to decline to moor a specific Export Tanker, if in the Company's opinion existing conditions or facilities are considered unsafe for mooring or loading, even though the mooring may be open to other Export Tankers. Various combinations of wind, sea and tidal conditions, as well as the size, length, ballasted trim, and handling qualities of a vessel can affect the decision to berth a vessel at the Marine Terminal. All of these factors have to be evaluated before a final mooring decision is made. Should an Export Tanker be rejected for any of the aforesaid reasons, the Marine Terminal will supply the Export Tanker and the Owners/Charterers with written reasons for non-acceptance.

Departure Procedure for Export Tanker:
(1) Documentation:
After the disconnection of the cargo transfer hose and prior to preparing for departure of the Export Tanker, all necessary pre-departure documentation shall be completed.
(2) Export Tanker Departure:
(i) Mooring Master shall witness the Export Tanker's closure of the cargo transfer hose end butterfly valve, disconnection of the cargo transfer hose from the manifold, and fitting of the blind flange on the end of the cargo transfer hose.
(ii) Workboat shall approach Export Tanker to accept free end of hose when lowered by Export Tanker.
(iii) Workboat shall tow hose away from Export Tanker to the pre-assigned storage area.
(iv) Export tanker shall check and confirm that all manifolds are securely blanked, that ship is clear of obstructions, that winches and windlass are powered and operational, that crew are standing-by and ready to cast-off.
(v) Area shipping traffic to be checked and confirmed to be clear.
(vi) "Check List 4 – Before Unmooring" to be completed.

MOORING: A bow mooring hawser and hold back tug is provided for visiting Export Tankers up to 150,000 d.w.t., partially loaded or in ballast to a maximum displacement of 80,000 tonnes.

Forecastle: The Export Tanker bow mooring comprises an 18 in. circumference mooring hawser, 250 ft. long with 30 ft. of 3 in. diameter chafing chain attached to both ends. The hawser is equipped with 1,448 ft. of pick-up line and pick-up hardware.

Stern: An Anchor Handling Tug Supply (AHTS) vessel is provided to assist the Export Tanker in mooring to the FPSO, and will attach its towing wire to the stern of the Export tanker to hold it off the FPSO during cargo transfer operations.

Weather Conditions:
(1) Prior to commencing mooring and/or cargo transfer operations, all available weather forecasts for the FPSO location should be obtained.
(2) The operation should proceed and/or continue only if both Master and the Mooring Master are satisfied that the prevailing and anticipated conditions are within the limits considered safe for such an operation.
(3) The Master of either vessel and/or Mooring Master may, at his sole discretion, order cessation of mooring or transfer operations. In such event, the Master of the other vessel shall immediately enact required procedures to cease such operations.

Mooring Criteria: Figure 7 (See "Plan") estimates the allowable wind speed along with the allowable significant wave height for a range of Export Tanker sizes that may be connected at the Kiabo Field Marine Terminal.

HOSES: Sufficient crew must be available at all times to carry out, under the supevision of a responsible licensed officer, the instructions given by the Mooring Master. Raising, lowering, connecting and disconnecting of the cargo transfer hose, as well as other labours and duties on the Export Tanker connected with the loading of cargo or maintaining mooring lines in a correct manner, will be performed by the Export Tanker's crew directed by a responsible officer as required by the Mooring Master. Export tankers must also have an adequate supply of reducers, gaskets and wrenches to connect the cargo transfer hose.

Cargo Transfer Hose Connection Aboard Export Tanker: The cargo transfer hose is a 970 ft. long assembly of 16 in. hose terminating at the Export Tanker end with a 25 ft. long barbell type hose. The final termination components comprise a butterfly valve, a short spool Camlock, and a blind flange. When the hose is not in use, the butterfly valve shall be kept closed. At all times, when the hose is not connected, the blind flange shall be securely fastened in place.

Procedure:
(1) The barbell end of the cargo transfer hose will be delivered to the Export Tanker which shall hoist and correctly locate the hose ready for connection to the Export Tanker manifold.
(2) Ensure that the butterfly valve is closed.
(3) Remove blind flange and store in a safe place.
(4) Mooring Master will witness the connection of the cargo transfer hose to the Export Tanker manifold and shall inspect the hose for kinks or damage.
(5) Before transfer commences, all required pre-transfer checks shall be performed and completed.
(6) Prior to cargo transfer commencing, open the cargo transfer hose end butterfly valve.
(7) The FPSO shall inform the Export Tanker of the rate capable of being supplied, and shall provide such rate as mutually agreed between the Export Tanker's Chief Officer and the FPSO Master. The receiving Export Tanker shall set the maximum rate, regardless of the pumping capacity of the FPSO.
(8) When satisfied that the cargo transfer hose is correctly attached and the Export Tanker systems are ready for full rate transfer operations, the Export Tanker's Chief Officer shall indicate readiness to proceed with cargo transfer.
(9) Transfer shall commence at an agreed low rate, in order to check that the loading system is correctly aligned, that no leakage occurs, and that all valves, venting system, and other apparatus are correctly arranged to facilitate cargo transfer according to the applicable regulations.

FPSO Supplied Components and Spares:
(a) Butterfly valve handle for cargo transfer hose (Mooring Master).
(b) VHF/UHF portable radio (Mooring Master).

(c) Paperwork (Mooring Master).
(d) Spare O-ring seal for Camlock blind flange (Mooring Master).
(e) Handle for Camlock flange (Mooring Master).
(f) Spare export hose sections (FPSO).
(g) Spare bow line hawser and associated parts (FPSO).

LOADING: *Cargo Transfer Hose Handling Provisions:* Cargo transfer from the FPSO is through a 16 in. diameter hose. This hose is 970 ft. long and is terminated at the Export Tanker end by a barbell type hose with a butterfly valve and shaft spool Camlock. When not connected to the Export Tanker, a blind flange is fitted to the open end of the Camlock (See "Plans").

(1) (a) When not connected to an Export Tanker, the cargo transfer hose shall remain in the sea.
    (b) A marker buoy (unit) shall be permanently attached to the pick-up chain at the Export Tanker end of the transfer hose by a synthetic rope.
    (c) When not connected to an Export Tanker, the transfer hose shall be stored near the FPSO's No. 6 mooring leg with the hose marker buoy attached to a mooring buoy anchored near the No. 6 leg marker buoy.
(2) During handling operations prior to and following attachment to Export Tanker, care must be exercised to prevent kinking or other damage to the transfer hose. A minimum radius of 10 ft. for any bend in the hose is recommended.
(3) The Terminal will have a limited number of reducers available, but will accept no liability or obligation to provide them.

Inert Gas System: All Export Tankers must be fitted with an inert gas system and confirm that all tanks have an oxygen content of less than 8% by volume prior to loading.

(1) On request, the vessel will demonstrate the oxygen quality to the Mooring Master prior to commencement of transfer or at any time so requested during transfer.
(2) In the event of a failure of the inert gas system, immediate action shall be taken to prevent air from being drawn into the tanks. All tank operations shall be stopped and the deck isolating valve closed.

Fire/Pollution Control/Gas Detection Systems:

(1) Each Export Tanker must have its fire fighting system fully operational prior to commencing any mooring and/or transfer operations.
(2) All Export Tankers shall comply with all applicable regulations and requirements pertaining to the control of pollution of any type.
(3) All Export Tankers must be equipped with a fully operational inert gas monitoring system, which shall be in a monitoring mode (for oxygen content, pressure, etc.) prior to commencing any mooring and/or transfer operations.
(4) All Export Tankers shall conform with the International Maritime Organisation (IMO) regulations for the prevention of pollution by oil.

Loading Rate: The FPSO is capable of completing transfer of 500,000 bbls. within 36 hours, not including connection/disconnection time, providing the Export Tanker's facilities and operations permit.

Cargo/Ballast Tank Contents/Ullage:

(1) The maximum cargo oil storage capacity, both wet and dry, of the FPSO is approximately 514,000 bbls.
(2) The Export Tanker will load cargo and discharge ballast as previously arranged between the Export Tanker's Loading Master, Master and Chief Officer. This plan will be placed in written form and signed before operations commence.

Ballast Transfer:

(1) When the Export Tanker is loading, it may commence discharging clean ballast concurrently with loading only if the ballast system is completely separated from the cargo system.
(2) Export tankers having clean ballast in cleaned cargo tanks and lines are recommended to suspend loading when discharging ballast.
(3) Export tankers may only discharge ballast that is clean.
(4) The FPSO is *not* equipped to receive dirty ballast.

Loading/Ballast Operations: It is strongly emphasised that the undertaking and completion of a successful cargo transfer operation is dependent upon effective co-ordination and co-operation of all parties involved.

It is the Export Tanker's Master's responsibility to observe International Convention Laws and Angolan Government Regulations and to ensure that no crude oil, bunker C, diesel, bilges or dirty ballast is pumped or spilled overboard from his vessel whilst in the area of the Kiabo Field Marine Terminal. Drip pans should be used, especially when disconnecting hoses, in order to prevent any spillage.

Cargo/Ballast Transfer Plan: Prior to the commencement of a cargo transfer operation, the contents of each cargo and ballast tank shall be checked and recorded. The sequence of all operations during transfer of cargo to the Export Tanker shall be planned in detail with regard to personnel assignments, pumping/discharge rates, valve change over requirements, ballasting adjustments, and tank level measurements during operations, etc.

(1) Inspection of Cargo Tanks: The Export Tanker's cargo tanks are to be inspected by Sonangol P&P.
(2) Scuppers to be Plugged: Before loading commences, all overside scuppers shall be plugged and made oil-tight.
(3) Completion of Loading: Normally completion of loading is by Export Tanker's stop and any request for the Marine Terminal to stop the flow of oil at the pre-determined tonnage must be in writing. The request must include the statement by the Export Tanker's Master that the Company will not be held responsible for any error, and in the case of the vessel being overloaded, the Export Tanker's Master will be responsible for any oil spills caused by this request. Please note that under normal operations, excess cargo cannot be pumped back to the FPSO, only in an emergency will this be allowed, and all cost and delays will be to the account of the Export Tanker.
(4) Communication During Loading: All communications relative to the loading of the Export Tanker shall be routed through the Mooring Master who will remain in contact with the Marine Terminal continously via portable VHF radio communication.
(5) Failure of Communication: In the event of radio communications failure with the Marine Terminal, the Export Tanker should sound the emergency signal. Continuous blasts of the vessel's whistle will be sounded to notify the Marine Terminal of the radio communication failure. Upon hearing this signal from a loading Export Tanker, the FPSO will immediately cease loading to the Export Tanker until radio communications have been re-established.
(6) Leaking Oil from Export Tankers: If it is discovered that oil is leaking from an Export Tanker whether at anchor, deballasting or during loading, and so as to constitute a safety or pollution hazard, which is at the sole discretion of the FPSO's Master, the Export Tanker will cease operations and may be requested to leave the Marine Terminal limits. Completion of loading will only be undertaken when satisfactory evidence of repair, duly certified by the surveyors of ABS, Lloyds or DNV or another recognised classification society, is submitted.
(7) Valve Closure During Loading: *No Export Tanker valves, which stop or reduce the flow rate of oil from the pumps of the FPSO, are to be operated without prior authorisation of the Kiabo Field Marine Terminal.* It is extremely dangerous to close ship's valves against the incoming stream, such a procedure creates excessive pressure, which may damage hoses, piping or other Marine Terminal facilities. Vessels will be held responsible for damage resulting from failure to observe this precaution. The practice of throttling back on the Export Tanker's cargo manifold valves is to be avoided. If a lower loading rate is required, the Terminal is to be advised and the pumping rate will be reduced to the new agreed rate. A reduction in loading rate before topping-off a final tank or tanks may be arranged through the Mooring Master by the Export Tanker's officer-in-charge. On advice from the Export Tanker, a minimum of 3 minutes is required to stop the flow of crude oil from the FPSO.
(8) Crude Oil Overflow During Loading: Export tanker's Masters are warned that if at any time an overflow of crude oil occurs, cargo transfer operations will be suspended immediately. Loading will only be resumed when the oil is cleaned up and removed from the decks of the vessel and/or from the surface of the sea, any damage is repaired, and no further danger exists. All spillage of oil must be reported immediately to the FPSO Master. Subsequently, a detailed report, giving all relevant information, must be submitted in writing by the Master of the Export Tanker concerned to the FPSO Master. A joint survey of the Export Tanker by its Master and a Kiabo Field Marine Terminal Representative will be required.
(9) Cargo Transfer Plan:
    (1) A plan of operation shall be developed prior to each cargo transfer.
    (2) The plan of operation shall include, but not be limited to, the following details:
        (a) Date and time of arrival of visiting Export Tanker.
        (b) Weather and sea conditions anticipated at time of arrival and until Export Tanker departure.
        (c) Identity, size and Master of Export Tanker.
        (d) Mooring Master assigned.
        (e) Cargo officer assigned.
        (f) Crew/team assignments.
        (g) Cargo tanks contents start/finish.
        (h) Ballast tanks contents start/finish.
        (i) Mooring/cargo transfer hose connection timing.
        (j) Date/time for completion of pre-cargo transfer safety checks.
        (k) Date/time for commencing cargo transfer operations.
        (l) Detailed operational procedures.
        (m) Date/time for expected completion of cargo transfer operations.
        (n) Cargo transfer hose retrieval procedures – Date/time.
        (o) Date/time of Export Tanker departure.
        (p) Radio assignments – portable radios.
    (3) All relevant information from the plan shall be transmitted to the Export Tanker prior to its final approach to the Marine Terminal.
(10) Cargo Transfer Team Familiarisation:
    (1) FPSO Master shall ensure that the Mooring Master, Cargo Officer and designated Team Leaders are familiarised with and understand the requirements and details of the Cargo Transfer Plan.
    (2) Mooring Master, Cargo Officers and Team Leaders shall ensure that personnel, assigned to them for the cargo transfer operation, from arrival to departure of Export Tanker, are familiar and understand the Cargo Transfer Plan.
    (3) FPSO Master shall ensure that all personnel involved in cargo transfer operations have received satisfactory training in all functions for which they are, or may be, responsible.
    (4) FPSO Master shall ensure that all personnel are fully familiarised with emergency shut-down procedures, along with their corresponding assignements and responsibilities. Furthermore, he shall specifically impress the need for immediate action in raising the alarm in the event of an emergency situation, such as a fire on board.
    (5) No cargo transfer related operation may proceed until the Master of the FPSO is satisfied that the requirements of (1) through (4) of this section have been met.

(11) Equipment Deployment and Test:

- (1) All equipment required for interconnection to the visiting Export Tanker and for normal cargo transfer operations shall be checked for operability, availability and location prior to the arrival of the Export Tanker.
- (2) All FPSO equipment requiring operability, hydrostatic pressure and other tests shall be tested as specified in the Cargo Handling Manual. Specific examination, and if necessary, adjustment, repair or replacement of valve and pump glands, etc., shall be undertaken before commencing cargo transfer operations. All equipment static grounds shall be checked before commencing interconnection of the cargo transfer hose to the Export Tanker.
- (3) Inert Gas System shall be checked and in operation prior to and during all cargo transfer operations.
- (4) All fire fighting equipment shall be checked and fully operational before commencing any cargo transfer operations.

Dirty Ballast: FPSO "Ocean Producer" has no facilities for receiving dirty ballast. Export tankers are recommended to arrival with clean ballast.

Discharging Ballast at Night: In addition to the lights usually displayed, Export Tankers discharging ballast or loading cargo during darkness, will illuminate the area around the ship, to the satisfaction of Mooring Master, in order that any oil on the surface of the sea may be readily detected, and appropriate action taken. Export tankers unable to illuminate the sea satisfactorily, may not discharge ballast during darkness. Export tankers should provide suitable flood lights for working on deck during night operations. Export tankers equipped with separate tank system (SBT) will be allowed to discharge.

Ballast Required for Mooring: An Export Tanker must have sufficient ballast for safe manoeuvring. However, by a careful watch of the weather information, mooring, instructions and frequent exchange of information between the Export Tanker and the Marine Terminal, and by a knowledge of the behaviour of his own vessel, Export Tanker's Master may desire to come to the Marine Terminal with minimum safe ballast.

Load-on-Top or Discharge of Slops: Most responsible ship owners have adopted a system of tank cleaning using circulator methods of transfer of tank washings. The result is that no oil is discharged into the sea and the oil separated is collected to avoid pollution. With the written permission of the Export Tanker's Owners/Charterers, the Marine Terminal will load on top of such slops.

Penalties for Pollution of the Sea: The categories of pollution include crude oil, bunkers, bilges and dirty ballast or any other matter that may result in pollution of the sea. Any fines imposed for such pollution will be for the Export Tanker's account.

Concurrence on Loading Plan – Export Tanker/FPSO: Prior to commencing cargo transfer operations, the Master of the Export Tanker, the FPSO and/or the Mooring Master will confer and agree on a cargo transfer plan.

- (1) The Master of the FPSO shall inform the Master of the Export Tanker as follows:
  - (a) Cargo specifications.
  - (b) Quantity of cargo to be loaded.
  - (c) Tank venting requirements.
  - (d) Maximum loading rates.
  - (e) Maximum pressure available at the STS connection.
  - (f) Stand-by time for normal pump stopping.
  - (g) Communication system for cargo transfer control, including the signal for emergency stop.
- (2) The Master of the Export Tanker shall inform the Master of the FPSO as follows:
  - (a) Where the vessel has part cargoes on board, grade, volume and tank distribution.
  - (b) Maximum allowable loading rate and topping-off rates.
  - (c) Maximum allowable pressure at the cargo transfer hose connection during cargo transfer.
  - (d) Cargo quantities acceptable.
  - (e) Quantity, quality and disposition of ballast together with time required for discharge and maximum light freeboard.
  - (f) Quantity, quality and disposition of slops.
  - (g) Quality of inert gas.

Agreement on Delivery Rate/Rate of Exchange:

- (1) Prior to commencing cargo transfer operations and following the exchange of information as required in Section (1) (d) and (2) (b) above ("Concurrence on Loading Plan – Export Tanker/FPSO"), agreement between the Masters of the visiting Export Tanker and the FPSO shall be established regarding:
  - (a) Cargo transfer initiation rate.
  - (b) Cargo transfer normal rate.
  - (c) Cargo transfer topping-off rate.
  - (d) Stand-by time for normal pump stopping.
  - (e) Time required for rate changes, zero flow to maximum agreed rate (MAR), and from MAR to zero.
  - (f) Masters are reminded that, for safety reasons, it is advisable to have the Export Tanker loaded as quickly as possible.
- (2) Such agreement shall be confirmed in writing.

Manning Assignments/Stations Manned:

- (1) Cargo Officer: The Cargo Officer shall be an officer appointed by and responsible to the Master of the FPSO. The Cargo Officer shall be empowered to make and implement all decisions relating to the cargo handling and cargo transfer operations, having the necessary knowledge and experience for that purpose.
- (2) Pump Man: One or more crewmen as assigned by the Master of the FPSO to man the pumps and, when required, to operate the manifold valves. Pump men shall have the necessary knowledge and experience required for operation of pumps and valves to ensure maximum control capability, smooth operation and a minimum of pressure surge effect.
- (3) Deck Men: Ship's crew members assigned as required by the Master of the FPSO or the Cargo Officer. Care should be taken, when making assignments for normal cargo transfer operations, that there is no conflict relative to any crew member's assignment under any emergency planning.
- (4) Lead Man: Each group operating in the jurisdiction of the Cargo Officer shall have a lead man designated. Each such lead man shall be provided with a portable, two way radio for the purpose of relaying the Cargo Officer's commands and instructions to the respective groups. Each such lead man shall be competent in the use of a two way radio, shall be knowledgeable and experienced in the area of operations to which they are assigned, and shall be conversant with the established communications language to be utilised.
- (5) Others: As deemed appropriate for the safety and completeness of any cargo transfer operations, the Master of the FPSO and/or the Cargo Officer shall assign other personnel as is considered necessary.

Concurrence on Readiness to Proceed – Export Tanker/FPSO: Prior to commencing with any cargo transfer operation, the following requirements must be completed and reported to the Master of the FPSO. Cargo transfer operations may only commence after the report has been understood, acknowledged and the Masters of both the FPSO and the visiting Export Tanker concur on the readiness to proceed.

- (1) Export Tanker Personnel in Place:
  - (1) Prior to commencing cargo transfer operations, the Export Tanker crew shall be at their stations as normally assigned for cargo loading operations.
  - (2) All personnel assigned for radio duty, station and portable, shall have checked the serviceability/operation of their radio equipment, and shall have reported by radio as being in position and ready for the duty as assigned.
  - (3) All call signs assigned to Export Tanker crew and FPSO crew sections shall be advised to and recorded by the Masters of the FPSO, the Export Tanker, the tug, the workboat and the Mooring Master.
- (2) Tanks Vented: Export tanker and FPSO Masters shall confirm that the tanks are vented and that the agreed venting systems are operational and are being used.
- (3) Test Flows for Leakage/Correct Valve Positions:
  - (1) Prior to commencing cargo transfer operations, the Export Tanker's Master shall confirm that:
    - (a) All sea and overboard discharge valves are tightly closed and sealed.
    - (b) All unused connections on the manifold are closed and blanked.
    - (c) That the scuppers are effectively plugged and drip trays are in position under the manifold.
  - (2) During initial low flow cargo transfer, the Export Tanker's Master shall check and confirm that no leakage is apparent, and that all valves are correctly set for full cargo transfer rate operations.

Execution of Plan:

- (1) All personnel shall be at their designated stations when required.
- (2) All stations shall report status of equipment and personnel readiness.
- (3) Mooring Master and Cargo Officer shall concur on readiness to commence cargo transfer operations.
- (4) Cargo Officer shall order commencement of cargo transfer operations.
- (5) Cargo Officer shall supervise operation, ordering valve change-over when necessary to ensure correct withdrawal sequence from FPSO tanks according to the Cargo Transfer Plan.
- (6) When cargo transfer operations are 90%, 95%, 98% and 99% complete, Cargo Officer shall advise the Mooring Master accordingly.
- (7) When cargo transfer has been completed, the Cargo Officer shall so notify the Masters of the FPSO, the Export Tanker, the tug, the workboat and the Mooring Master. He shall then order the securing of all pumps and valves, informing the FPSO Master and Mooring Master when this has been completed.

Securing from Operations:

- (1) Mooring Master shall then order the closing of the butterfly valve at the Export Tanker end of the cargo transfer hose, the closing of the Export Tanker manifold valves and the disconnection of the cargo transfer hose. He will supervise the fitting of the blind flange to the cargo transfer hose prior to lowering the hose-off of the Export Tanker, the exchange of documentation and other requirements necessary to complete the operation.
- (2) Prior to departure of the Export Tanker, the Master of the FPSO and the Master of the Export Tanker shall reach agreement on the quantity of cargo that has been transferred, that all required documentation has been completed, and that all operations have been secured.
- (3) The Master of the FPSO shall, when satisfied that departure of the Export Tanker may proceed, provide clearance to the Master of the Export Tanker to initiate departure operations. He shall also advise the Mooring Master, the Tug Master and the Workboat Master, all of which shall acknowledge readiness to proceed with departure operations and responsibilities.

Close-Out Documentation:

Cargo Documentation: Crude oil loading documents, such as the Bill of Lading, Quality Certificate, Quantity Certificate, Dry Certificate, Ullage Report, Time Loading Report, Certificate of Origin, Cargo Manifest and Master's Receipt for Shipping Documents and Samples, are prepared at the Kiabo Field Marine Terminal.

Signing of these documents by the Master will take place at the same time as the final departure clearance formalities are being carried out.

Protest: Notes of Protest, if any, should be handed to the Mooring Master for onward delivery to the Company.

Masters are requested to pay particular attention to the fact that the Mooring Master will only acknowledge receipt of any "Note of Protest", and *is not authorised to accept* such letters.

GENERAL:

Agency: The Company does not perform any vessel agency functions. Export tankers calling at the Kiabo Field Marine Terminal must arrange for their own Agents.

Flag: Export tankers are required to fly the flag of Angola on the foremast during daylight hours while at the Terminal.

Government Officials: Government officials, such as the Customs Officer, Quarantine Officer, Immigration Officer, Captain of the Port and the Police, may be expected to visit the vessel. Should Customs guards be stationed onboard the Export Tanker while at the Terminal, it is expected that the Export Tanker will provide food for these guards and other governmental officials. Export tankers calling at the Terminal must provide an accommodation ladder for subject officials if required.

Quarantine Regulations: The rules governing the quarantine of Export Tankers are similar to those found in other parts of the world.

Roles/Responsibilities:

(1) Mooring Master shall assist with Export Tanker operations until the Export Tanker disengages from the mooring preparatory to leaving the Marine Terminal site.

(2) The Export Tanker's Master is responsible for the frequent monitoring and careful tending of the Export Tanker moorings to ensure that movement of the Export Tanker is minimised.

(3) While moored, the Export Tanker equipment and machinery essential for manoeuvring shall be maintained, ready to permit the ship movement from the mooring at short notice.

(4) Repairs or other work, which may prevent the rapid departure of the Export Tanker, should not be undertaken while the Export Tanker is moored to the FPSO.

(5) A watchman should be stationed aboard the Export Tanker to monitor the condition of the Export Tanker's mooring, to report any condition which may indicate imminent failure of the mooring, and also to report any leakage of oil.

(6) (a) In the absence of a third party cargo surveyor, the Mooring Master shall witness the ullage of all tanks onboard the Export Tanker prior to and following completion of the cargo transfer operations.
    (b) Each measurement record shall be delivered to and retained by the Master of the FPSO.

WEATHER/TIDE: *Operating Environment:*

(a) Weather conditions (20 years):
    Wind Speed: 29 knots – 41 knots.
    Wind Direction: 0° – 360°
    Significant Wave Height: 15.1 ft.
    Significant Wave Period: 13.7 seconds – 17.3 seconds
    Swell Height: 13 ft.
    Swell Period: 17.3 seconds
    Swell Direction: 180° – 225°
(b) Current Speed: 0 – 1.8 knots
    Current Direction: Primarily from 135°, can sometimes reverse.
(c) Sea Water Surface Temperature: 75°F – 85°F
(d) Mean Air Temperature: 72°F – 80°F

OPERATOR: Sonangol P&P.

Contact: Ranger Oil Ltd., c/o Atlantis Production Systems Ltd., B.P. 4430, Pointe Noire, Congo. *Tel:* (242) 945707. *Fax:* (242) 945708. *Tel/Fax:* Inmarsat +871-156-2136.

LOBITO: 12.20 S. 13.34 E. (See Plan)

LOCATION: Lobito is situated in Lobito Bay, midway between Luanda and Mocamedes.

The Port is formed by a 4.8 km. long sandpit, with an approach depth of 18.3 m.

The Port of Lobito is 1,410 miles from Cape Town, 7,537 miles from New York, 5,127 miles from Amsterdam, 5,050 miles from Southampton and 4,197 miles from Lisbon.

DOCUMENTS: Required on arrival:

Health Certificate.
2 Vaccination Certificates (cholera and yellow fever).
8 Crew Lists.
11 Passenger Lists (each for Landing and Transit).
4 Lists showing Ports of Call.
2 Lists of Articles held by Crew: cameras, binoculars, radio, spirits, cigarettes, etc.
3 Ship's Stores Lists.
6 Dangerous Cargo Lists.
8 Unfreighted Cargo Manifests.
1 Freighted Manifest.
3 Non-negotiable copies Bills of Lading.
3 Cargo Plans (preferably before ship's arrival).

Other necessary official forms prepared by Agent.

PILOTAGE: When Pilot required outside Harbour Entrance, vessel must request via Agent at least 12 hours before arrival. Otherwise Pilot boards inside Lobito Bay. Pilot boat: grey hull, white housing.

ANCHORAGE: Lobito Bay excellent holding ground, depths over 33 ft. and easily accessible day and night the year round.

RESTRICTIONS: Vessels may only enter harbour in daytime between 0730 hrs. and 2000 hrs. Special permission from the Port Authority is required to enter during darkness.

MAX. SIZE: Length 900 ft., draft 34 ft., max. depth 35 ft. – 37 ft. (normal tidal range: 3 ft. 3 in., maximum: 6 ft.).

HEALTH: Pratique never given by radio, but granted after Port Authorities (including Doctor) board vessel between 0700–1900 hrs. Pratique granted if no contagious illnesses aboard, otherwise quarantine restrictions imposed. Ships calling from other Angolan Ports – except coasters – subject same procedure.

RADIO: Because Lobito Radio (call sign CQZ) operating MW range 200/400 miles only, all ETA messages, etc., must be routed via Luanda Radio (call sign CQW). Agent uses same routeing.

TUGS: Tug (usually one only) joins vessel for berthing and sailing. Ships' lines used. Occasionally 2 tugs may be required.

BERTHING: Unless Masters indicate preference, Port decides which side alongside. No vessels usually allowed berth after sunset. Sailing after dark allowed at Port Authorities' discretion, up to 2400 hrs. No vessel permitted berth without Pilot. Before berthing, vessel must effectively cover water outlets, prepare accommodation ladder and have anchors "at the ready". (Authority fine any vessel ejecting water or waste on to quays.) Ships carrying explosives not permitted berth before Port Captain inspects cargo.

Passenger and Fruit vessels are given priority regarding berthing.

General Cargo and Bulk Berths:

Quay No. 1: Length 570 m., depth 10.36 m. at LW.
Quay No. 2: Length 552 m., depth 10.36 m. at LW.

Quay No. 1 is aligned N.E./S.W., with Quay No. 2 running at right angles to it at the S.W. corner.

CRANES: 26 cranes available with capacity 3 tons – 22 tons; 2 mobile cranes with capacity 16 tons – 150 tons and 1 floating crane of 100 tons capacity.

STEVEDORES: Important that vessel gives accurate ETA at least 24 hours in advance to enable Agent order necessary gangs. (Gangs ordered 0700 and 1500 hrs.) No work usually allowed at the weekend.

CARGO HANDLING FACILITIES: *Bulk Liquids:* The terminals for bulk discharge of liquids include:

(a) A terminal at the end of the South Quay for discharge of wine in bulk.

(b) Two terminals, situated on the final section of the South Quay; for discharge of petrol and oils for the Sonangol tanks existing within the port areas (See "Tankers"). These two terminals also provide oil fuelling facilities to ships.

(c) An off-shore terminal for discharge of petrol and oils for the Sonangol tanks existing in the port expansion area, near the base of the hills, on the bay side facing the sandpit expansion.

(d) A terminal at the start of the North Quay, for loading molasses through a small tank installed.

Silos: Silos with 25,000 tons capacity at Quay No. 2. Loading is by 2 elevators and chutes, each of 250 t.p.h. capacity.

Loading Plant: Bulk ore loading facilities at Quay No. 2 with loading rate 450 t.p.h.

Storage/Warehousing: 15 warehouses and sheds available, capable of storing over 100,000 tons of goods. Ten reefer chambers, each with capacity between 100 cu.m. and 120 cu.m., storage temperature +3°C to −18°C.

MEDICAL: Radio before arrival if medical assistance necessary on entry. Good hospital facilities available, but specialised treatment and surgery is not. Yellow Fever and Cholera Vaccination Certificates inspected on arrival.

TANKERS: No oil to be pumped overboard into Territorial waters. Heavy fines imposed for oil pollution, however slight. Three 8 in. diameter pipelines discharging into local storage tanks. No slop tanks available. Four berths available with depth 10.0 m. – 11.0 m. Berths operated by Sonangol.

DENSITY: 1024.

FRESH WATER: Normal requirements readily available and delivered by 3 in hose. Loading rate very slow as pressure usually low.

FUEL: Fuel Oil (Ordinary) available, viscosity up to 1500 sec. Redwood. 24 hours' notice bunker requirements essential. Gas oil also available.

CONSULS: Portuguese Consulate at Benguela, 30 km. from Lobito.

REPAIRS: Slipway accommodating vessels up to 1,200 tons available. Floating dock for vessels up to 2,000 tons displacement.

GANGWAY/DECK WATCHMEN: Compulsory, both day and night.

OPENING/CLOSING HATCHES: When closed or opened by Stevedores, cost per time per hatch. (Crew allowed to carry out this operation.)

CERTIFICATES: Registered Tonnage Certificate, Derat Certificate to be shown.

CUSTOMS ALLOWANCES: No restrictions. Customs Guard supervises opening and resealing of bond.

CARGO GEAR: Normal routine gear: wire and rope slings, nets, chain-slings, baskets, grabs, and shore-cranes (capacity 3–22 tons) available. Heavy lifts of over 10 tons must be discharged using ship's derricks. Two cranes 22 tons available, but not always accessible. 100 ton floating crane is available.

REPATRIATION: Possible via Luanda.

AIRPORT: Lobito Airport (Benguela) – 33 km. Lobito Airport (Catumbela) – 13 km.

TIME: GMT plus one hour.

HOLIDAYS: 1st January; 4th February; 1st May; 11th December.

SHORE LEAVE: Nationals from countries having friendly diplomatic relations with Angola usually granted shore leave, see "I.D. Cards". Shore leave during certain hours only.

IDENTIFICATION CARDS: On arrival, all crews' and passengers' passports must be handed to Immigration Police, who retain these and issue shore passes. Passes must be carried at all times when on shore. If lost, a fine is imposed.

SERVICES: Surveys, dirty ballast facilities, garbage collection facilities.

DELAYS: Congestion not unusual and berthing delays may vary from one to three days. Ships calling for bunkers have no priority but are sometimes berthed at sunset and fuel during night-shift. Discharging of bulk cargoes can be effected by shortage of suitable wagons.

WEATHER: March/May rain season. Heavy wind and rain can effect cargo work.

NOTICES: Supplied to Master by Agent.

For your information, the following Regulations are in force at Lobito. Failure to comply with these instructions will result in fines being imposed on the vessel under your command.

Over and above the Regulations listed hereunder, all international Regulations governing a ship's stay in port are also applicable.

1. It is essential that an Angolan Flag be flown during the time the vessel is in Port.
2. Maximum speed for vessels entering or leaving the harbour is set at 8 knots.
3. All sound signals are prohibited excepting regulation signals whilst manoeuvring or in cases of distress.
4. No boat may be lowered until permission for so doing has been received from the competent Authorities (Customs and Port Captain). Any boat thus lowered is allowed to make contact with land at one point only, i.e., the landing steps situated at the junction of the 2 quay walls.
5. No member of the crew may go ashore without a pass signed by the Master and visaed by the Immigration Police. If a member of the crew is found to be ashore without a pass, the ship will be fined £1,315.00 in every instance. All shore passes must be returned to the Immigration Police before vessel's departure.
6. Vessels are not allowed to make any communications by wireless during their stay in Port.
7. Water from ship's condenser outlets or other exhausts may not be ejected onto the quay. A Fine of £1,000 will be applied if this instruction is not complied with.
8. All lavatories on the side adjacent to the quay wall must remain locked and not used during the time the vessel remains alongside.
9. No vessel is permitted to take salt water ballast whilst alongside the wharf.
10. No vessel is permitted to test engines whilst alongside the wharf.
11. No games whatsoever are allowed in the Port area; if members of the crew disrespect this regulation, heavy fines are applied to the vessel.
12. No garbage, oily or petroleum substances, should be thrown in the Bay either at anchorage or alongside otherwise a fine will be imposed on the vessel by the Port Captain, Fine which ranges from £250.00 to £1,250.00
13. The engines may not be put out of use without the authorisation of the Port Captain.
14. No repairs whatsoever may be done on board without the Port Captain's authorisation.
15. The following procedure is to be adopted whenever cargo or vessel suffer damage by Stevedores or Port staff:
    (a) Master or Chief Officer should request the Port Officer in charge of commercial operations to examine the damage.
    (b) The Chief Tally Clerk of our Company should also be present when examination is carried out.
    (c) Written notice must be delivered to the Port Officer and a copy sent to the Agent at the same time.

Kindly take note of the foregoing Regulations and return 1 copy to us duly signed.

Thank you, Agence Maritime Internationale S.A.

GENERAL: Ships should not: Dispose of any wastes into harbour or on to quays. Change mooring lines or lower lifeboats or immobilise main engine or use ship's sirens or radio station without prior permission from Authorities. Vessels must use watchmen 24 hours per day on adequately illuminated gangway.

SHIPMASTER'S REPORT: June 1979 (Updated 1994).

Documents: Papers required for clearance:

If these are prepared before arrival Agent will pass to Persons concerned. i.e. Port Health, Customs & Immigration.

1 International Declaration of Health.

(Lobito have no forms, best to use some other Port form that can be altered).

1 List of Crews Vaccinations and date they expire.
10 Crew Lists.
10 Passenger Lists or "Nil" passengers.
4 Arms & Ammunition Lists or "Nil" if none.
2 Livestock Lists.
6 Ports of Call Lists.
Stores Lists. (Provisions, Deck & Engine) 2 lists.
Crew Custom Effects List (Own form or free form) 2 sets.
Narcotic Lists 2 sets or "Nil" Lists.
Small Package Lists to be landed or "Nil" statement 2 copies.
Manifests & Bills of Lading – 3 sets.

Observations:

The Main Lighthouse Light on the end of the Spit, and the 4 Channel Buoys are still lit. But on reduced candle power. Vessel is still required to enter the Bay and anchor without Pilot. Pilot only used when berthing. Caution is required at night as the buoys are difficult to pick up. Both by day and night it is better to only proceed about 1.5 miles into the Bay, as many trawlers are always anchored at the head of the Bay. The Berths consist of a right angled quay, with space for 4/5 ocean-going ships. (Depending on length.) The loading berth for ore cannot be used for general cargo, and as the loader is at present inoperative it is not used for loading ore.

Shore leave is allowed but only from 1800 hrs. to 2200 hrs. daily.

No cargo worked on Sundays.

Pilot will unberth vessels up to 2400 hrs.

The only VHF is located in the Agent's office, it is manned during office hours. Calling Channel 16 thence Channel 11.

Two Tugs are now used for berthing for vessels over 5,000 g.r.t.

Lobito Radio Station is not manned, all traffic sent through Luanda.

Continuous soundings give at least 26 m. from the entrance to the anchorage.

Discharging is at 8 tons per gang man hour.

Vessels swing at anchor twice daily to weak tide, rise about 1 m.

Pilot comes out to anchorage in launch using accommodation ladder for boarding, tug is used for swinging vessels if necessary, as Bay is narrow.

Provisions are available at any time.

AUTHORITY: Empresa Portuaria do Lobito, U.E.E., Caixa Postal No. 16, Lobito, Republica Popular de Angola. *Tel:* 22718. *Telex:* 2912. *FAX:* 22719. *Contact:* Jose Carlos Gomes, Director General.

LOMBO: 06.50 S. 12.22 E.

LOCATION: The Lombo Terminal is located 43 miles South of the Zaire River (Pta. da Moita Seca) and consists of one loading single mooring point.

The loading point is located in about 120 ft. of water in position Lat. 06° 49′ 35″ S., Long. 12° 21′ 49″ E.

Attached to the SPM loading point is a floating storage tanker (FSO) and the export tanker is moored in tandem to the stern of the FSO tanker.

A 12 in. sea line connects the SPM buoy with the Lombo East Production Platform, and a 20 in. floating hose connects the FSO to the SPM buoy.

The S.P.M. is equipped with a navigation light and foghorn.

Identification navigation light: Flash "U" 15 sec., 5 nautical miles.

Identification foghorn: "U" 5 sec. on, 30 sec. off. 0.5 nautical miles.

VESSEL ACCEPTANCE: Only vessels in Texpan Vessel Approved List will be accepted to load at Block 2 Terminal. Vessels intending to call at Lombo Terminal must send, before acceptance, the Texaco Charter Vessel Acceptance Questionnaire to:

Texaco Panama Inc. (Bloco 2), J.G.Santos Jr./R.H.Fritz, Luanda, Angola. Tel: 244-2-322606. Fax: 244-2-321703. Telex: 2619 Texpan An. or

Texaco Panama Inc. (Bloco 2), Offshore District, G.Donnarumma/ A.Leone. Tel: 871-1515147. Fax: 871-1515150.

TEXACO VESSEL ACCEPTANCE QUESTIONNAIRE:

1. Vessel IMO number.
2. Vessel name/previous names.
3. Vessel type.
4. Flag.
5. Port of Registry.
6. Date built/where built.
7. Date rebuilt.
8. Construction (Single hull/double hull/double sides/double bottom). If double hull, are all centre tanks sub-divided throughout by a centreline bulkhead to reduce free surface effect?
9. Is vessel fitted with C.O.W.?/Is it regularly used?
10. Is vessel fitted with I.G.S.?/Is I.G.S. in full working order?
11. Is vessel fitted with S.B.T.?/Quantity of segregated ballast?
12. Registered Owner.
    (a) Full style.
    (b) Address.
    (c) How long owned by present Owner?
13. Demise Charter Owner, or Time Charterer if any:
    (a) Full style.
    (b) Address.
14. Operating Company (responsible for daily management and expenditure on vessel):
    (a) Full style.
    (b) Address.
    (c) How long has vessel been with this Company?
    (d) Number of tankers operated by this Company.
15. Classification Society:
    (a) Name.
    (b) Address.
    (c) Number of years with this Society?
16. Do Owners/Operators adhere to the OCIMF guidelines?
17. Date of last Special Survey (Hull).
    Any outstandings?
18. When last in shipyard?
    Reason?
19. Date last dry docking?
20. Does vessel have a full complement of Certified Officers in accordance with Flag State.
21. License/Certificate of Origin of Master and Officers.
22. Nationality of Master and Officers.
23. Are Officers employed direct by Owner or via Manning Agency?
24. Nationality of ratings.
25. Are ratings employed direct by Owner or via Manning Agency? Name of Agency.
26. Are Officers able to communicate in English?
27. Are sufficient Officers certified to perform C.O.W. operations in accordance with MARPOL 73/78?
28. Date vessel last chartered to Texaco.
29. Date tanker from same company last chartered to Texaco (Include name of vessel).
30. Vessel last three Charterers and cargoes carried:
    (a) Last.
    (b) Next to last.
    (c) Second to last.
31. Expiry date of Certificate of Inspection or Annual General Survey for compliance with Flag State Regulations.

32. Does the vessel have the following Certificates on board which will be valid for the period of the expected voyage?
(a) Load Line Certificate Issued/Expire
(b) Safty Equipment Certificate Issued/Expire
(c) Safety Construction Certificate Issued/Expire
(d) Safety Radio Certificate Issued/Expire
(e) IOPP Certificate Issued/Expire
(f) CLC Certificate Issued/Expire
(g) TOVALOP Issued/Expire
(h) U.S.Coast Guard Regulations
 Compliance Certificate
 (T.V.E.L. or C.O.I.) Issued/Expire
(I) Certificate of Financial Responsibility
 in compliance with OPA90 (COFR) Issued/Expire
33. History of Groundings / Strandings / Collisions over previous 12 months:
(a) When.
(b) Where.
(c) Circumstances.
34. History of Pollution over previous 12 months:
(a) When.
(b) Where.
(c) Circumstances.
(d) Extent of cargo or bunker loss.
(e) Any Port prohibitions as a result of pollution incident?
35. Last U.S. Port visited:
Date.
36. Last U.S.C.G. Inspection:
(a) Date.
(b) Result.
37. Last Port State Inspection:
(a) Date.
(b) Result.
38. Name of P&I Club:
(a) What is P&I cover for pollution damage?
(b) What is P&I cover for general liability?
39. Does vessel have an Oil Pollution Contingency Plan approved by the U.S.C.G. as required by OPA90?
Qualified Individual:
Name, address, Telephone No.
40. Vessel Deadweight (m.tons).
Draft.
Cargo tank capacity, 98%.
41. Is cargo manifold of steel or cast iron?
42. TPI.
BCM.
KTM.
43. Hose boom capacity and safe working load.
44. Advise numbers, dimension and location of bow Panama Fairlead(s) or equivalent fairlead(s). Bow fairlead opening should be at least 40 cm. height and 60 cm. width.
45. Is vessel fitted with chain stopper in bow area.
If so, state number, type and S.W.L.
46. Does vessel have mooring bitts located not less than 3 m. and not more than 10 m. from Panama Fairlead which are clear of obstructions and capable of handling 50 mm. diameter wire?
47. If vessel does not have SBT (Question 11 above), can vessel deballast simultaneously with loading and maintain 30% or 40% of Summer deadweight at all times?
48. Confirm that vessel has 2 fire monitors, each having an output of 5,000 gallons per minute to dissipate the H_2S gas at the vent outlet.
49. Vessel has the following communication system on board: Inmarsat/VHF/SSB Radio/Telefax.
Please advise numbers and call sign.
50. Is the vessel equipped with hermetically sealed ullaging/sampling system?
52. Confirm vessel has a closed loading system.
53. Confirm vessel fitted with a recirculatory air-conditioning system.

Vessels not approved may be accepted for one voyage, provided they submit the Texaco Charter Vessel Acceptance Questionnaire to the above mentioned addresses 30 days in advance of scheduled arrival.

Inquire for inclusion in Texaco Vessel Approved List may be sent to:

Texaco Inc., Marine Department, Vessel Inspection Service, Port Arthur, Texas. Tel: 1-409-723-6783. Fax: 1-409-723-6666.

DOCUMENTS:
5 copies List of Passengers Disembarking or in Transit, even if nil.
5 copies Crew List.
5 copies List of previous Ports of Call.
5 copies List of Crew Vaccinations.
5 copies Stores List.
5 copies Personal Effects List.
5 copies Animal List, even if nil.
5 copies Arms and Ammunition List, even if nil.
Clearance from Last Port.

PILOTAGE: Pilotage is compulsory. The pilot boarding area is 3 miles N.W. of the FSO.

The Pilot will give, to the arriving vessel, the berthing instructions and/or confirm the anchoring position.

"Masters of vessels are reminded of their obligation to comply with statutory rules and are requested to comply with the following:
(1) The Officer responsible for the embarkation or disembarkation of the Pilot must be a Watchkeeping Officer.
(2) The pilot ladder must be properly secured (IMO rules).
(3) The pilot ladder and immediate areas must be adequately illuminated.
(4) Means must be provided to enable the Pilot to pass safely and conveniently from the head of the ladder into the ship and on to the deck.
(5) The ladder must be in good condition.
(6) The length of the ladder should not exceed 30 ft.
(7) Whenever the distance from sea level to the point of access is more than 30 ft., a combination accommodation ladder/pilot ladder should be used.
(8) Spreaders are to be positioned at intervals of not more than 10 ft.
(9) Two manropes, in good condition, should be ready but not lowered, unless so instructed by the Pilot.
(10) A lifebuoy with safety line must be available at the embarking area. The safety line must have a self-illuminating light.
(11) Suitable heaving lines ready to lift pilot's equipment and bags.
(12) The pilot ladder must be rigged on the Lee Side, clear from all discharges and water outlets.
(13) The pilot ladder must be rigged in such a manner that each step rests firmly on the ship's side.
(14) Nylon pilot ladders must not be used.
(15) The use of pilot hoists is not recommended.

If, in the opinion of the Pilot/Loading Master, the pilot ladder is not safe, the Pilot/Loading Master may refuse to board the vessel and thus cause delay to the ship. Such delay would be for ship's account.

All manoeuvring of ships within the Terminal Area is to be done with the benefit of the advice of the Pilot/Loading Master, although in all cases and circumstances, the Master of the vessel shall remain solely responsible on behalf of the vessel's Owners for the safety and proper manoeuvring of the vessel.

The Master or responsible qualified senior deck officer must be on the bridge at all times when the vessel is manoeuvring".

APPROACHES: The facilities in Lombo Field are all marked on the British Admiralty Charts, and all vessels bound for Lombo Terminal shall have on board the British Admiralty Charts No. 3206 and 604.

However, extensive drilling activities are underway in the area (July 1996) and therefore Masters should navigate with particular caution as new, uncharted platforms and drilling rigs may be encountered throughout the area.

Good radar targets are Lombo East Production Platform and Palanca Terminal, both of which flare continuously.

ANCHORAGE: Vessels waiting to berth are requested to anchor 3 miles N.W. of the FSO and contact Pilot upon arrival. At times, the Pilot may alter the anchorage location.

Due to the proximity of many sub-sea pipelines, great care must be taken when anchoring.

The sea bottom in the area is sand and mud.

Anchoring is prohibited within a distance of 1.5 nautical miles of any installations and navigation within 2 miles of the FSO is prohibited without a Pilot onboard.

RESTRICTIONS: In principle, mooring operations are not carried out at night, but unmooring operations are performed day or night. The Pilot/Loading Master *will in all cases* decide when mooring and unmooring operations shall be done.

MAX. SIZE: *Characteristics of Acceptable Vessels:*
Max. Displacement: 175,000 tons.
Max. Distance Bow to Manifold: 150 m.
Max. Stern Trim (Propeller immersed): 3.0 m.
Fitted with at least one AKD, OCIMF tongue type bow chain stopper, SWL 200 tons.
Derrick/crane minimum 15 tons SWL.
IGS fully operational.
Capable of loading/deballasting concurrently.
Capable of closed loading operation.
Operational recirculatory air-conditioning.
Hermetically sealed ullaging and sampling capability.
Cargo tanks fitments (i.e. valve spindles, tank lids, fixed automatic gauges, P.V. valves, etc.) must be gas tight.
Officers and crew must be familiar with dangers of H_2S.
Vessel must arrive at Terminal with clean ballast.
Fitted with at least one OCIMF standard Panama type fairlead on centreline of forecastle bulwark of minimum dimensions 60 cm. × 40 cm.
Vessel to be ready to load upon berthing, as soon as hose is connected.

HEALTH: Upon arrival, Government Officials and Agent board the vessel. The party comes by boat from the offshore district base.

RADIO:
Lombo Terminal SSB: 8,480.0 kHz.
Murjan SSB: 6,500 kHz.

Arrival Messages: Vessels nominated to load at Lombo Terminal, shall send to Texaco Panama Angola Inc., Offshore District, Marine Operations, Fax: 871-1515150, Tel: 871-1515147, ETA on receipt of orders, 7 days, 96 hours, 72 hours, 48 hours, 24 hours prior to arrival. The first message must contain the following information:
1. Vessel's name and previous name.
2. Flag and Port of Registry.
3. Call sign.
4. Satcom: Fax/Tel/Telex.
5. Name of Owners and Operators.
6. Name of Charterers.
7. Name of Consignee.
8. Name of Agents in Angola.
9. Name of Cargo Surveyor.
10. ETA at Lombo Terminal.
11. Name of Last Port.
12. Arrival Draft and Sailing Draft.
13. Loaded Displacement.
14. Gross and Net Tonnage.
15. Summer Deadweight.
16. LOA.
17. Distance Bow – Manifold.
18. Number and Type of Mooring Brackets Forward.
19. Cargo Requirements.
20. Amount of Clean Ballast on Arrival.

VHF:
Lombo Pilot: Channel 11.
Lombo Terminal: Channel 11.
Lombo East Platform: Channels 6, 72.
Murjan: Channels 6, 72.

MOORING: All mooring and unmooring operations are done by the ship's crew as indicated by the Pilot.

On arrival at Pilot Station, vessel shall have the port crane/derrick rigged and ready to be used. The SWL shall be not less than 15 tons.

A line boat and a crew boat will assist the vessel to moor and unmoor.

The Pilot/Loading Master will normally only accept the Notice of Readiness between 0600 hrs. and 1700 hrs., providing the vessel is in all respects ready to receive the cargo. Time of N.O.R. accepted will always be time of hose connected.

All mooring equipment, i.e. Panama leads, chain stoppers, etc., shall comply with relevant OCIMF recommendations. Smit Brackets are not longer accepted.

The Terminal line boat will bring the mooring box alongside, which is picked up using the ship's port crane/derrick.

One messenger line of at least 400 ft. length and two good heaving lines shall be ready for use, both on the forecastle and on the poop deck aft. There should also be a large hammer and a large crow bar available on the forecastle head during mooring.

The line boat brings in a 10 in. circumference pick-up line alongside the bow when the vessel is within a reasonable distance of the FSO. The messenger line is passed, by ship's heaving line, to the line boat and connected to the pick-up line. The pick-up line is retrieved until the chafe chain passes through the fairlead and is secured to the chain stopper.

Once the vessel is safely moored and the tug is made fast aft, the floating hose is brought alongside and connected to the manifold by the ship's crew. The single loading hose is equipped with a 16 in. Camlock connection.

The bow to manifold distance should not exceed 150 m. and the manifold to ship's rail distance should not be less than 4.6 m.

A pressure recorder will be installed in the ship's manifold.

During the whole period that the vessel is moored to the stern of the FSO, the Terminal tug will be made fast to the stern of the tanker. A messenger line will be passed from the tanker to the tug, using a ship's heaving line, and tug's tow wire retrieved and made fast onboard the tanker.

BALLAST: Vessel shall arrive with clean ballast only. No dirty ballast facilities available.

LOADING: The loading rate is approximately 30,000 barrels per hour, and Soyo Blend Crude Oil has an API of approximately 40.0. The temperature ranges between 80°F to 90°F.

Loading is direct from FSO and particular attention is required when operating cargo system valves to preclude causing a shut-down of the FSO tanker.

MEDICAL: Assistance only available in case of emergency.

FRESH WATER: Not available.

FUEL: Not available.

REPATRIATION: Crew changes can be arranged through shipping agencies on emergency basis, although not recommended.

TIME: GMT plus 1 hour.

SERVICES: The following services are not available: Stores, fresh provisions, cash, laundry, national flags, repairs, etc.

Charts are not available. B.A. Charts No. 604 and 3206 are pertinent and shall be on board when calling.

Mail sent from Europe usually takes 3 weeks.

SHORE LEAVE: Not possible.

WEATHER:

Winds: The general direction of the trade winds is E.S.E. to S.S.E. The direction is affected by onshore-offshore breezes.

The onshore breeze appears from the S.W. between 1000 hrs. and 1100 hrs. and falls at sunset. It is then replaced by a light breeze from the S.S.E. to E.S.E. which blows until 0800 hrs. or 0900 hrs.

From December until May, thunderly squalls from the N.E. occur. During the month of May, the trade winds often blow night and day.

From June to September (dry season), the winds are low, S.W. in the daytime and South to S.W. with calm periods at night. In mid-September, a stable S.W. breeze settles until the beginning of December, and then becomes more variable with calms at times.

Hygrometry: The relative humidity is above 80% for eleven months of the year, but in June falls to 50%.

Visibility: Fog appears more often during the dry season than during the rainy season. During the rainy season, visibility is reduced to heavy showers.

Tides and Currents: In general, the current flow at Lombo East is in a Northerly direction and has an average velocity of 0.8 knots. The current direction and velocity are governed by two significant sources, the Benguela Current flowing North and the outflow of the Zaire River.

At most times, the Benguela Current is the most influential, so the most common current direction is North. At times, however, especially during the rainy season (November to May), the effluent from the Zaire River may be so voluminous that it can over-rule the Benguela Current and reverse the direction of the current at Lombo. At the Terminal, we have witnessed a 180° change of direction in 10 minutes. When this happens during the daylight hours, it is possible to receive advance notice if the man on watch spots the muddy front from the Zaire River moving South. This notice allows the line handling tug crew to be in the best position to keep the tanker from contacting the S.P.M. When it happens at night however, the allowable reaction time is greatly reduced and any error or delay may allow contact of the tanker with the loading point. It is for such instances that the watches must be maintained and ready.

Independently of the Zaire River outflow, it has been observed that during the rainy season, a surface current may, at irregular intervals, run to the East. This can be seen clearly. It is manifested by stripes of agitated water, contrasting with stripes of smooth water.

Although, as stated previously, these phenomena are more likely to happen in the rainy season, they can and have happened in the dry season.

Tidal currents in this area are minimal. They have an average velocity of 0.5 knots and a maximum of 2 knots. The tidal range is about 1.5 m.

Swell: As far as swell is concerned, 93% of the waves come from the South (S.E. to S.W.).

The average height of the swell is 1.5 m. during the rainy season, and increases to 3.0 m. – 4.0 m. during the dry season.

GARBAGE DISPOSAL: No garbage disposal available.

WASTE OIL DISPOSAL: No waste oil disposal available.

NOTICE: *Safety of the Vessel:* The Master is responsible for the safety of the vessel while moored to the loading point. He must, therefore, strictly adhere to all safety requirements generally requested by the Company and the Port Authorities and accepted by the oil tanker industry.

Port Authorities can, at any time, prescribe special safety measures to be complied with by the vessel.

Only approved safety material may be used (radios, flashlights, etc.).

The Pilot/Loading Master will hand to the ship's Master a Safety Check List when boarding the vessel.

The Pilot/Loading Master will remain on board during the whole period of loading, and in case of any infringement of the safety regulations, will take any measure he deems appropriate, including stopping or not starting the loading operations. The time so lost will be debited to the vessel.

The following Safety Precautions must be taken by all vessels loading at Lombo Terminal.

Repairs to main engine and steering gear are prohibited.
Vessel's anchor *must* be secured by stoppers before manoeuvring near pipelines and structures.
Continuous deck and cargo watches must be kept by a responsible Senior Deck Officer.
Power must remain on deck machinery at all times.
Main deck and forecastle areas must be adequately illuminated.
Pilot/Loading Master *must* be informed of any electrical storms or squalls that may approach vessel during loading.

The Ship/Shore Safety Check List and Prior to Berth Check List must be strictly observed by all vessels loading at Lombo Terminal.

Hydrogen Sulphide: The cargo to be loaded contains high concentrations of hydrogen sulphide (H_2S).

Special precautions should be taken, as H_2S gas, when vented to atmosphere during loading, or when ballasting after discharge of cargo, is extremely dangerous to personnel. Because of this extreme danger, each and every person working in an area where H_2S gas may be present, should be aware of the potential dangers, and know how to protect themselves from the toxic effects of H_2S gas.

Closed loading of this cargo is *compulsory.* A Safety Team will board the vessel with the Pilot/Loading Master, and remain on board throughout the loading. The Safety Team will strictly control the safety measures necessary for the handling of this cargo, i.e. instructions to shipboard personnel, monitoring and measurement of gas levels, management and control of H_2S gas in the cargo tanks, on the decks, in the living quarters, and when vented to the atmosphere.

The Safety Team will provide emergency equipment, such as breathing apparatus, H_2S and combustible gas monitoring and measuring equipment.

During cargo tank venting, only crew members authorised by the Safety Team will be allowed on the open deck areas. All accommodation access doors must be closed and sealed during loading except one, and all shipboard personnel will be instructed to use *only* that assigned access, except in an emergency. Ship's air-conditioning plant must be on internal recirculation. Fire-line and pumps must be capable of sustaining a seawater pressure of at least 150 p.s.i. at one or more deck monitors. Gas reading values will be recorded every 2 hours, together with the vessel's heading, wind direction and speed, the latter being plotted on forms provided by the Safety Team.

Recommendations and Regulations as per IMO "Dangerous Hydrocarbon Cargo Handling" and ISGOTT "International Safety Guide for Oil Tankers & Terminals" must be followed at all times.

Pollution: The Master is responsible for ensuring that no petroleum is discharged or spilled from his ship into the water of the Terminal. Drip pans shall be in place at all times under all manifolds and all overside scuppers, pipes, or openings on the loading and/or transfer decks shall be securely closed and oil tight.

In the event of any spillage of petroleum, petroleum waste, contaminated water or residue on the deck of the ship, the same shall be cleaned up immediately, and under no circumstances shall be permitted to be swept or washed overboard. Adequate supplies of sawdust or other material, approved by the Company, shall be available on the ship for immediate use. Any vessel causing pollution of the water of the Terminal or sighting such pollution, shall immediately inform the Pilot/Loading Master. In the event that any ship should discharge or spill any dirty ballast, petroleum, contaminated water, bilge water or petroleum waste into the water at or in the vicinity of the Terminal, the Company shall have the right (but without prejudice to any other rights it may have) to take any action which, in its opinion, is necessary to clean up or remove any contamination or pollution resulting from such discharge or spills (whether contamination or pollution of the sea, the shore or any structure or property).

The Company shall have the further right (but not obligation) to settle any claims of third parties arising from such contamination or pollution.

All payments, costs, and expenses properly made or incurred by the Company in cleaning up or removing any such contamination or pollution, and in settling any claims of third parties, shall be the liability of the vessel, its Owners and its managers, and the Company shall be entitled to claim reimbursement accordingly.

The above refers mainly to petroleum pollution, but we would draw your attention to the fact that all pollution is covered by above, e.g. carbon deposits from the boilers.

The Company will take every precaution to prevent pollution occurring but, should it occur, speed is essential to control it, and the Company will, if necessary, "clean up first and discuss liability afterwards", rather than lose valuable time.

The vessel, if at fault, will be charged for use of boats, detergents, dispersants, labour (including overtime), transportation, use of equipment, etc., as well as the more obvious charge for the lost time whilst cargo operations are stopped.

Vessels carrying detergent are requested to have it available (not necessarily on deck) with a means of applying it, should the Company request such an action.

Special Requirements: During the whole period that the vessel will be moored at the Terminal, a forecastle watchman will be required. He must be in continuous contact with the duty officer and Pilot/Loading Master.

He shall keep the duty officer and the Pilot/Loading Master informed about the vessel's position and distance from SBM.

The vessel will be held responsible for all damages to the installations.

Vessels are requested to provide food and accommodation for the Loading Master and two Safety Inspectors throughout the loading operations. The accommodation should be equivalent to the minimum standard required for a senior officer. Accommodation may be required for visiting Port Authorities/Officers.

Ship's crew is required for mooring/unmooring operations and connection/disconnection of the hose. A 24 hour radio watch is required on VHF Channel 11.

Conditions of Use of the Terminal Facilities: All services and assistance provided by or on behalf of the Company (Texaco Panama Inc. – Angola), at or in connection with the Terminal, are subject to any applicable Bye-Laws and Harbour Regulations, Safety Regulations and Towage Conditions for the time being in force and to the following further conditions.

Neither the Company nor its servants, agents or contractors (in whatever capacity they may be acting) shall be responsible for any loss, damage or delay from whatsoever cause arising in consequence of any assistance, advice or instruction whatsoever given or tendered in respect to any vessel, whether by way of tugs, pilotage, or berthing services, the provisions of navigational facilities, including buoys or other channel markings or otherwise whosoever.

In all circumstances, the Master of any vessel shall remain solely responsible on behalf of his Owners for the safety and proper navigation of this vessel.

Although the Company exercises due diligence to ensure that the berths, premises, facilities, property, gear, craft and equipment, are safe and suitable for vessels permitted or invited to use them, no guarantee of such safety or suitability is given, and the Company, its servants, agents or contractors shall not be responsible for any loss, damage or delay of any sort that may be sustained by, or occur to any vessel, her Owners, her cargo or any part thereof (whether such cargo is onboard or in course of loading or discharging) by whomsoever and by whatsoever cause such loss, damage or delay is occasioned.

The Company will not be responsible for any loss, damage, or delay directly or indirectly caused by or arising from strikes, lock-outs or labour disputes or disputes or disturbance whether the Company or its servants are parties thereto or not.

If the use by any vessel of any berth, premises, any gear or equipment, any craft, or other facility or property, of any sort whatsoever, whether belonging to or provided by or on behalf of the Company, result in any damage to any such berth, premises, gear and equipment, craft or other facility or property, from whatsoever cause such damage may arise, and irrespective of whether or not such damage has been contributed to by the negligence of the Company or of its agents, servants, or contractors and irrespective of whether there has been any neglect or default on the part of the vessel or Owners, in any such event the vessel and the Owner shall pay for or hold the Company harmless from and indemnified, all such damage and against all loss sustained by the Company consequent thereon.

Further, the vessel and her Owners shall hold the Company harmless and indemnified against all and any claims, costs and expenses arising out of any loss, damage or delay caused to any third party by the vessel or by her Master or crew, or by any other servant or Agent of the Owners.

OPERATOR: Texaco Panama Inc., P.O.Box 5897, Luanda, Angola. *Tel:* 244-2-322606. *Telex:* 2619 Texpan An. *FAX:* 244-2-321703. *Contact:* Marine Superintendent (Tel: 871-1515147. Fax: 871-1515150).

LUANDA: 08.48 S. 13.15 E. (See Plan)

PORT LIMITS: A vessel to be considered an "arrived ship" should be anchored in the bay past a line drawn between the Ilha Light and across the bay to Fort S. Pedro.

DOCUMENTS:

8 Crew Lists.
8 Passenger Landing and Transit Lists.
2 Crew Lists, showing dates of Vaccinaion and Inoculation.
6 Lists of Ports of Call (with arrival and departure dates).
4 Stores Lists.
4 Personal Effects Lists.
6 Lists of Slop Chest Contents.
3 Photocopies of Bills of Lading.
6 Cargo Manifests.
6 Arms and Ammunitions Lists.
6 Lists of Birds and Animals.
6 Lists of Drugs.
6 Mail Lists.

Copies (if possible) of following Certificates will be taken ashore by Port Authorities:
Load Line Certificate.
Safety Construction Certificate.
Radio-Telegraphy Certificate.
Tonnage Certificate.
All Passports checked and stamped.

Shipmaster's Report: May 1989.

The following are to be prepared by the vessel:
1 copy Health Declaration (provided by Agent, to be filled in on arrival).
2 copies Vaccination List.
8 copies Crew List.
5 copies Passenger List.
8 copies Ports of Call List.
3 copies Crew Personal Effects List.
5 copies Birds and Animals List.
3 copies Narcotics List.
4 copies Ship's Stores List.
3 copies Arms and Ammunition List.
4 copies Dangerous Cargo List.
Bill of Lading.

PILOTAGE: 72 hours notice of arrival, addressed Agents via Luanda Radio, plus message of arrival at least 6 hours prior arrival received during working hours (0700 hrs. – 1700 hrs.). VHF available. Pilot launch comes out from port. Anchorage for Pilot in Luanda Bay. No draft restriction at anchorage. Pilot not required for anchoring in bay. Pilotage compulsory. No special berthing Pilot. Pilot launch white – flying Pilot Flag (H).

Pilot Boarding Station: Lat. 8° 44′ S., Long. 13° 16.5′ E.

ANCHORAGES: Luanda Bay offers safe, sheltered anchorage at all times of the year. Good holding ground – sand/mud. No draft restrictions.

RESTRICTIONS: Berthing in daylight only. Unberthing until midnight.

MAX. SIZE: Length 1,000 ft. (alongside); breadth, no restriction; draft, 34 ft. (alongside). Tankers, up to 55 ft. draft at the refinery buoys.

HEALTH: Pratique may be granted by radio through Radio Luanda, addressed Port Health or via Agents. Accommodation ladder must be rigged for doctor on arrival. Pratique must be granted at each Angolan port. Pratique is *not* automatic. If infectious disease on board inform Port Health/Agents by cable.

RADIO: Addressed "Luandaradio" for ETA, draft and requirements. Call sign CQW on 500 kHz, listening on "odd" hours only, throughout 24 hours. Listening between 0600 – 1800 hrs. Call sign CQW3 on 13,023 kHz on "even" hours only. Listening between 1800 hrs. – 0600 hrs. Call sign CQW on 8,565 kHz on "even" hours only.

Shipmaster's Report: May 1989.

It is not necessary to use Luanda Radio (D3E), vessel can send all information to Agent by telex and he will arrange requirements.

TUGS: Two available (1,500 h.p. and 480 h.p.) and compulsory for berthing and unberthing. Tugs join vessel off berths. Ship's lines used (if tug lines requested – extra charges).

BERTHING: Ships taken in strict rotation of arrival for berthing, except that passenger vessels have priority. There are 7 berths for import and export cargoes, all berths are available for oil bunkering.

The quays are divided into 5 zones with depths alongside of 32 ft. maximum.

Zone I.	1,380 ft. of which 900 ft. of quay length suitable for ocean-going vessels.
Zone II.	480 ft. quay length.
Zone III.	900 ft. quay length.
Zone IV.	540 ft. quay length.
Zone V.	574 ft. quay length.

Shoreside cranes of 3 tons and 5 tons, furthermore 2 cranes of 10 tons lifting capacity and also 1 mobile crane of 20 ton capacity for lifting heavy pieces only.

A self-propelled floating crane, capable of lifting 100 tons, was recently commissioned – maximum and minimum reach of 46 ft. 6 in. and 9 ft. respectively, lifting to about 78 ft. approximately.

BULK HANDLING FACILITIES: Ores in bulk are usually loaded at Zone III; no mechanical loading installation.

The ore is shovelled from railway trucks into buckets; daily loading average 4,000 tons per 24 hours.

Grain vessels will also be moored at Zone III alongside the grain shed. Discharging by means of tubes which are lowered into the holds and suck the grain out by an electrically propelled spiral fitted in the tube.

The rate of discharging is about 100 t.p.h. and the grain is loaded into railway wagons, each of 30 ton capacity, via the adjacent warehouse.

STEVEDORES: Gangs arranged by Agent/Shipmaster. Normal port working hours 0700 – 1200 hrs., 1400 – 1730 hrs. (overtime 1730 – 2330 hrs.), Saturday 0700 – 1230 hrs. Sunday/holidays – no work.

MEDICAL: For serious cases, as much advanced notice as possible should be given with all details available. Minor cases can be treated on arrival within half an hour without previous notice. Apart from Government Hospital, there are a number of private nursing homes with good facilities. Yellow Fever inoculations recommended.

TANKERS: Two tanker terminals, No. 2 Quay and off-shore terminal. Drafts – No. 2 Quay (Products Berth) 34 ft. Off-shore terminal (Refinery Berth) two sets mooring buoys, one for tankers with max. length 230 m. and max. draft 55 ft. and the other for tankers not exceeding 100 m. with draft 40 ft.

Shore Lines: Products Berth: 1×8 in. fuel oil pipe-line and 1×10 in. line for white products, 6 in. hoses for fuel oil and 10 in. hoses for White products.

Refinery Berth: 12 in. crude oil submarine lines and 8 in. for fuel; 8 in. LPG line and 6 in. hose; 8 in. G.O./Kero line and 8 in. hose; 12 in. G.O. line and 2×8 in. hoses.

Lub Oil: 1×10 in. sphere launching trap connected to ship's manifold, 100 ft. of 8 in. flexible hose between tap and floating pontoon, 0.5 miles of underwater 8 in. line from pontoon to shore tanks.

DENSITY: About 1024.
FRESH WATER: Fresh water available through quay pipe-lines, each hose delivering about 30 t.p.h.
FUEL: Limited number of grades can be obtained subject to nomination well in advance. No barges available.
FIRE PRECAUTIONS: For tankers loading/discharging alongside No. 2 Quay – no vehicles allowed within vicinity and other vessels cannot berth within 40 m. of tanker's stern or bow.
CONSULS:

Austria
Belgium
Brazil
Denmark
France
Germany
Great Britain
Italy
Netherlands
Norway
Spain
Sweden
Switzerland
U.S.A.

REPAIRS: Minor repairs and hull repairs above the water-line can be carried out.
DRY DOCKS: None.
GANGWAY/DECK WATCHMEN: *Piracy:* Vessels in the Inner Anchorage have been boarded by armed pirates. Cargo, radio and T.V. equipment and stores were stolen.
1989: Vessel attacked by a gang of men dressed in army clothes and wearing fire arms. Stevedores and fork lift drivers had been seriously threatened by these men with the effect that the workers refused to work night shifts. About 50% of the discharged containers were spoiled or stolen.
OPENING/CLOSING HATCHES: Can be carried out by crew or stevedores at vessel's option.
CERTIFICATES: Tonnage and Derat Certificates.
CUSTOMS ALLOWANCES: No restrictions, but sales ashore is a serious offence.
CARGO GEAR: No additional requirements provided valid test certificates aboard.
REPATRIATION: Repatriation will not present any difficulties.
AIRPORT: Distance from port 4.5 miles.
TIME: GMT plus 1 hour all year.
HOLIDAYS: Saints Day (1st January), Saints Day (15th August), Saints Day (1st November), Saints Day (8th December), Christmas Day (25th December). No cargo work on these holidays.
POLICE/AMBULANCE/FIRE: Police 7408; Ambulance 25275; Fire 22222.
TELEPHONES: Can be placed on board.
SERVICES: Tank cleaning possible but advance notice required. Radio, radar repairs possible, but spares rarely available.
SHORE LEAVE: Crew members allowed shore leave subject Immigration approval provided inoculation certificates are valid.
IDENTIFICATION CARDS: Provided by Agents for crew proceeding ashore.
REGULATIONS: Mailboats have berthing priority over all other vessels, foreign *passenger* vessels next in precedence.
DELAYS: Congestion rarely exceeds 36 hours.
WEATHER: March/May rain season. Heavy wind and rain can affect cargo work.
GENERAL: Ample water in bay for anchoring, and most vessels enter port without Pilot. Pilotage is compulsory for berthing/unberthing on quays, this service being available from 0700 hrs. to midnight. If Master elects to wait for Pilot outside port and another vessel proceeds direct to anchorage, the latter will be first on turn for berth.
DEVELOPMENTS: Plans for reclamation and new berths round to the Forte da S. Pedro da Barra. Container terminal nearing completion. 3×27 ton Hyster lift on order.

SHIPMASTER'S REPORT: May 1990.

Luanda is the capital of the People's Republic of Angola. As a port, it is one of the best natural ports in West Africa. But due to various reasons, the port is dirty, and has a low rate for handling cargo.

There are 13 berths for ocean-going vessels, with depths from 9.0 m. – 11.0 m. alongside at the Commercial Quay (See "Plan").

There are at least 40 shoreside cranes on the quay, including 3×10 tons, 1×22 tons × 20 m. and others of 3 tons – 5 tons lifting capacity. Some of them were broken and cannot be used.

4×27 tons × 25 m. modern PPM motor cranes and 4 mobile cranes with 20 tons to over 50 tons lifting capacity respectively are used for handling containers in the open stowage area or for lifting heavy cargo only. The biggest crane appears to be damaged. Containers are usually discharged at Berth No. 2D to Berth No. 3E by ship's gear. 1×22 tons × 20 m. shore crane is available for use at this location.

Fresh water is available West of Berth No. 1E through a quay pipe-line, but pressure is very low during daytime. During night-time the average rate is 10 t.p.h. – 15 t.p.h. This fresh water is not suitable for drinking. Price is U.S.$ 2.50. No fresh water is available on the quay East of Berth No. 1E.

Luanda has a population of about 2 million people and stores and provisions are very expensive.

Soldiers/Police are stationed in the harbour day and night and occasionally shots can be heard.

Shore leave is possible in the afternoon until midnight only. Visaed passport is exchanged at the gate for a shore pass.

Finding an anchorage in Luanda Bay by radar navigation is not difficult. The lighthouse, light beacon and light buoy were extinguished during the night.

There were a few ocean-going vessels waiting for berths and some fishing vessels anchored in the bay.

Pilot not required for anchoring in the bay, but compulsory for berthing or unberthing. A small tug of 700 h.p. assists when berthing.

No armed pirates were encountered at anchorage or at the berth, but general cargo, especially foodstuff, was frequently stolen during the night.

Entry inspection carried out at the anchorage during daylight hours by 6 officials representing Port Health, Customs, Immigration, Harbour Authority and Agency. The entry formalities were easy and the bonded store was sealed. The Immigration Officers checked and visaed all Seamen's Books and a crew muster was required. Another 8 Immigration guards inspected crew cabins.

Documents required are same as shown in "Guide to Port Entry". List of slop-chest contents was not required.

VHF communications: Pilot Station on Channel 8, Port Control on Channel 16, but normally no one answers.

Departure Inspection carried out at berth before sailing. The Immigration formalities are the same as entry inspection. Thereafter Immigration Clearance is issued. No other officials were onboard. Agent brought Port Clearance and Customs' Clearance and returned 4 copies of Ship's Certificates at the same time.

AUTHORITY: Servicos de Portos, Caminhos de Ferro, e Transportes.

NAMIBE (Mocamedes) (incl. Porto Saco): 15.11 S. 12.07 E. (See Plan)

DOCUMENTS:
Health Certificate.
2 Vaccination Lists (yellow fever).
8 Crew Lists.
11 Passenger Lists (for each landing and transit).
4 Lists showing Ports of Call.
2 Lists of Articles held by crew/passengers, i.e. cameras, binoculars, radios, tobacco, etc.
3 Ships' Stores Lists.
6 Dangerous Cargo Lists, i.e. all types of explosives.
All foregoing to be signed by Master. Other essential official forms prepared by Agent.

Shipmaster's Report: May 1989.
The following are to be prepared by the vessel:
1 copy Health Declaration (provided by Agent, to be filled in on arrival).
2 copies Vaccination List.
8 copies Crew List.
5 copies Passenger List.
8 copies Ports of Call List.
3 copies Crew Personal Effects List.
5 copies Birds and Animals List.
3 copies Narcotics List.
4 copies Ship's Stores List.
3 copies Arms and Ammunition List.
4 copies Dangerous Cargo List.
Bill of Lading.

PILOTAGE: Pilot boards in Bay – safe, natural bay with no reefs and easily accessible both day and night. Vessel *must* wait for Pilot and instructions before berthing.
ANCHORAGE: No currents in harbour area, but slight prevailing winds constant. Good holding ground with depths over 34 ft. Approaches up to 45 ft. depth. Tidal range about 5 ft.
RESTRICTIONS: Berthing not permitted during hours of darkness. Unberthing permitted up till midnight. Authorities visit between 0700 hrs. and 1900 hrs. (approx.) only.
Shipmaster's Report: March 1987: No night entrance permitted to Namibe Bay. We entered Saco Bay at 0315 hrs. for anchoring and when 1 mile off, 5 red warning shots were fired at the vessel.
MAX. SIZE: *Mocamedes:* Governed by berth depth 33 ft. alongside.
Porto Saco: Vessels up to 14 m. draft. Largest bulk carriers handled.
HEALTH: Pratique granted on arrival after "Health Guard" visit: boarding 0700 – 1900 hrs. Normal quarantine restrictions imposed if contagious diseases aboard. Ships calling from other Angolan ports (except coasters) are subject same procedure.
RADIO: Messages *must* be routed via Luanda Radio (call sign CQW). No ship/shore radio link.
Shipmaster's Report: May 1989.

It is not necessary to use Luanda Radio (D3E), vessel can send all information to Agent by telex and he will arrange requirements.
TUGS: Two tugs available of 2,200 h.p., fitted with VHF Channels 16 and 29. Join vessel for berthing. Ship's lines used. Vessel under 5,000 tons use 1 tug only.
BERTHING: Unless Masters indicate preference, port decides berthing-side. No vessels berthed after sunset (except passenger ships), but sailing during nightshift permitted so long as prior warning given before 1700 hrs. No vessel is allowed to berth without a Pilot. Before berthing, important that vessel covers all water outlets, prepares accommodation ladder and has forward anchors ready. Ships carrying explosives not permitted berth before Port Captain surveys cargo.
CARGO FACILITIES: *Mocamedes:* The accommodation consists of 1 concrete quay, length 1,350 ft. providing 3 berths. For the handling of general cargo, there are 4 cranes of 5 tons and 2 cranes of 3 tons, modern cargo handling devices. Also lightening possible. One 10 ton floating crane available, subject ample notice from Lobito. Dangerous cargo is discharged alongside or into lighters, at the Port Captain's discretion.
Porto Saco (Saco Bay): Ore is loaded at the pier in Porto Saco; length is 1,066 ft., width 59 ft. Depth alongside 54 ft. 6 in. at low tide, normal sea water, clear height from water level at ISHW up to unloader 73 ft. 10 in. One mechanical loader of conveyor belt type; capacity often exceeds 3,500 metric t.p.h. Reach 65 ft. 6 in. approx. from fenders. Connections for supply of bunkers and water.
STEVEDORES: Radio accurate ETA 24 hours in advance to enable Agent order required gangs. (Gangs ordered 0700 hrs. and 1500 hrs.) No Sunday work permitted for cargo vessels.

MEDICAL: If medical assistance required on arrival radio to Agent. Adequate hospital facilities available, but no specialised treatment or surgery. Yellow fever certificate inspected on arrival.
TANKERS: No oil or waste products to be pumped overboard. Heavy fines imposed for breach of this regulation. Tankers discharge at Porto Saco – about 10 km. North of general cargo berths, situated Northern end of Mocamedes Bay. Maximum draft 54 ft., length of quay 1,066 ft. No dirty ballast facilities.
Shore Lines: All 1 mile flight to installation.
Benzine: 8 in. line and 8 in. or 6 in. hoses.
Kerosine/Gas Oil: 8 in. line and 8 in. or 6 in. hoses.
Fuel Oil: 10 in. line and 8 in. hoses.
DENSITY: 1024.
FRESH WATER: Available ex-wharf, rate 15 t.p.h.
FUEL: Available from dockside pipe-line. At Porto Saco, rate 200 t.p.h. Bunkers may be taken during loading operations without delay.
FIRE PRECAUTIONS: No special precautions except ships carrying explosives. Fire Brigade standby charge.
CONSULS: None.
REPAIRS: Only very minor voyage repairs.
DRY DOCKS: None.
GANGWAY/DECK WATCHMEN: Compulsory, day and night.
OPENING/CLOSING HATCHES: When performed by stevedores, costs per hatch per time, but crew allowed to perform this task.
CERTIFICATES: Registered Tonnage Certificate, Derat. Certificate, examined by authorities on arrival.
CUSTOMS ALLOWANCES: No restrictions. Customs' guard supervises opening and resealing of ships' bonded lockers.
REPATRIATION: Air communication via Lobito and Luanda.
AIRPORT: Small airstrip which is unable to take heavy aircraft.
TIME: GMT plus 1 hour.
HOLIDAYS: See "Lobito".
SERVICES: None available.
SHORE LEAVE: All nationalities from countries having friendly diplomatic relations are permitted shore leave. See "I.D. Cards".
IDENTIFICATION CARDS: All crew/passenger passports handed Immigration Police who issue shore passes. Passes must be carried when on shore.
DELAYS: Berthing delays are unusual.
GENERAL: Ships must not dispose of wastes into harbour or on to quays, change mooring lines, lower lifeboats, immobilise main engine, use ship's siren, or ship's radio station without prior permission from authorities. Vessels must use watchmen for 24 hours per day on well-illuminated gangways and hoist Angola flag from 0800 to sunset.
DEVELOPMENTS: Porto Saco (Iron-ore/Tanker berth) anticipated to augment present ore-loading equipment to enable loading ore-carriers up to 10,000 t.p.h. Dredging to projected depth of 65 ft.

SHIPMASTER'S REPORT: March 1987.
Restrictions: No night entrance into Namibe Bay, entry only permitted in daylight.
When our vessel entered Saco Bay for anchoring and when 1 mile offshore, 5 red warning shots were fired at the vessel.

PALANCA: 06.58 S. 12.24 E. (See Plan)

LOCATION: The loading station is located 230 km. N.W. of Luanda and approximately 20 nautical miles from the nearest coast and loading terminal.
The Floating Storage and Loading Terminal "Palanca": Lat. 06° 58′ 07; S., Long. 12° 24′ 03″ E. Water depth: 44 m.
The Auxiliary Loading Buoy (CALM): Lat. 06° 56′ 57″ S., Long. 12° 23′ 43″ E. Water depth: 42 m.
DOCUMENTS:
Documents required by Immigration on Arrival:
Immigration (DEFA) will check passports against the Crew List. Following documents are required:
5 copies Crew List.
1 copy Ports of Call List.
5 copies Passenger List.
5 copies Animal List.
5 copies Arms List.
5 copies Narcotics List.
For further information Shipping Agent should be contacted.
PILOTAGE: Pilotage is carried out by a Pilot representing Elf Exploration Angola, who will remain on board during the entire duration of the call.
The signals for contacting the Pilot are those set out in the International Code; the Pilot may be contacted by VHF Channel 16.
Pilotage is obligatory.
The Pilot shall take control of the vessel approximately 2.2 nautical miles in the 330° direction (N.N.W.) of the Loading Station at: Lat. 06° 55.3′ S., Long. 12° 22.5′ E.
It should be recalled that "piloting consists of assistance given to Masters in steering vessels upon entry into and departure from the piloting zone".
It should be stressed that the Master remains at all times entirely responsible for any damage or accidents resulting, whether at night or day, from the steering or manoeuvering of his vessel.
ANCHORAGE: Vessels coming to load at Palanca, may anchor in 45 m. of water, 2.2 nautical miles N.N.W. from the Loading Station, at Lat. 06° 55.3′ S., Long. 12° 22.5′ E.
It is prohibited to anchor in the Prohibited Area within 1.5 miles of the line of pipes connecting PAL F2 to PAL P1, and from PAL P2 to the Storage Vessel and at least 1.0 nautical miles from the Loading Station.
The sea floor is sandy and of good consistency for anchoring. Certain outcroppings of flat rocks can delay engagement of the anchor.
RESTRICTIONS: There will be no mooring after 1500 hrs. local time.
If tanker arrives after 1500 hrs. local time, Pilot will board the following day at 0700 hrs. local time.
MAX. SIZE: The maximum allowable size at the Palanca Terminal is 150,000 d.w.t., when the vessel is moored bow-to-bow with the barge, 300,000 d.w.t. when the vessel is moored at the SBM. Depending on the sea and wind conditions, this maximum size may be reduced to 280,000 d.w.t.
Also see "Loading".
NAVIGATION AIDS: The production facilities of Elf Exploration Angola are protected by an area of prohibited navigation which extends 0.5 miles around all fixed installations.
Access to this area is authorised only to vessels working for or authorised by Elf Exploration Angola.
This prohibited area is marked at night by white lights, emitting the letter 'U' every 15 seconds, installed on the corners of the platforms and on the front of the storage tanker "Palanca".
Average height of the lights – 19 m.
Range – 5 miles.
In the event of reduced visibility (less than 1 mile) the floating storage vessel emits audible signals in accordance with the international collision regulation for warning of approaches at sea, consisting of the letter 'U' every 30 seconds.
Platforms are located as follows (1994):
Production Platform Palanca (PAL P1): Lat. 06° 58′ 23″ S., Long. 12° 22′ 33″ E.
Drilling Platform (PAL F2): Lat. 06° 56′ 43″ S., Long. 12° 22′ 35″E.
Flare Platform (PAL T1): Lat. 06° 58′ 13″ S., Long. 12° 22′ 30″ E.
Flare Platform (PAL T2): Lat. 06° 58′ 24″ S., Long. 12° 22′ 38″ E.
Production Platform (PAL P2): Lat. 06° 58′ 25″ S., Long. 12° 22′ 40″ E.
Production Platform (PAC F1): Lat. 07° 05′ 59″ S., Long. 12° 20′ 19″ E.
Flare Platform (PAC T1): Lat. 07° 05′ 47″ S., Long. 12° 20′ 13″ E.
Production Platform (BUF F1): Lat. 07° 07′ 05″ S., Long. 12° 22′ 10″ E.
Production Platform (PAC F2): Lat. 07° 07′ 42″ S., Long. 12° 20′ 55″ E.
Production Platform (IPS F1): Lat. 07° 03′ 56″ S., Long. 12° 24′ 50″ E.
Production Platform (PAC F3): Lat. 07° 04′ 20″ S., Long. 12° 19′ 55″ E.
Production Platform (IMP F1): Lat. 07° 00′ 34″ S., Long. 12° 22′ 43″ E.
Drilling Platform (PAC F4): Lat. 07° 09′ 26″ S., Long. 12° 20′ 45″ E.
Drilling Platform (COB F1): Lat. 07° 12′ 14″ S., Long. 12° 23′ 31″ E.
A sealine of 2,600 m. links the production platform (PAL P2) with the Floating Storage "Palanca".
A sealine of 3,600 m. links the Production Platform (PAL P2) with the Auxiliary Loading Buoy.
A sealine of 2,164 m. links the Floating Storage "Palanca" with the Auxiliary Loading Buoy.
Additional rigs may operate in the vicinity of these platforms at any time. Consequently vessels coming to load at Palanca must refer to radio messages received prior to arrival.
HEALTH: Health inspection is carried out by the chief doctor of the Border Health Police.
The Health Authority of the Port of Soyo may grant Free Pratique by radio.
In the event of a contagious illness on board, Health Authorities must be advised by radio before arrival.
RADIO: *Arrival Advice:* Vessels should advise their ETA by radio 72, 48 and 24 hours in advance to Elf Exploration Angola.
Thereafter, they should give notice of any significant changes in their expected hour of arrival.
Vessels shall address their ETA to:

Elf Exploration Angola
Rua Marechal Broz Tito, No. 13, CP 2610, Luanda.
Telephone: 390293, 390343, 390393
Telex: 4130-4132 ELFANG

Palanca: Floating Storage Vessel.
S.S.B. monitoring (voice) on 6,342 kHz from 0700 hrs. to 1700 hrs.
VHF monitoring on Channel 16 permanently.
Monitors satellite communications permanently:
Via Atlantic satellite (See "Notice of ETA").
Telephone No.: (871) 111.07.77.
Fax No.: (871) 111.11.76.
Telex No.: 111.07.77 FJBZ.
The following is part of a message sent to a vessel in August 1992. Quote
Notices of ETA:
Please report to Palanca Offshore loading facilities 72 hours in advance of ETA, and again 48 hours and 24 hours before arrival.
Please send telex to Palanca Terminal/FJBX.
Elf Exploration Angola, Attn. Mrs. E.Gabriel DPRO/DEV/CB.

(A) Ship using INMARSAT:
Dial: 005811110777+ (FJBZ)
009914130+, 009914132+ or 009913513+ (A/B ELFANG AN).

(B) Ship using Radiotelex:
Dial: 05811110777
09914130, 09914132 or 09913513.
In respect of the shore station procedure.

(C) Ship using Wireless Telegraphy:
1. Address all messages to "Bureau Porthisheadradio".
2. First two words of text: "TLX 09914130 ELFLUANDA", and: TLX 0581111077 Terminal Palanca/FJBZ.
3. Messages to be treated and abstracted on board at normal radio/land line rates to U.K.

Please advise (Terminal Palanca and Elf Exploration Angola):
Name of your Shipping Agent.
Name of Master.
Vessel's Flag and Call Sign.
Voyage Number when leaving Palanca after loading.
Destination and last Port of Call.
If loading can be initiated while deballasting. If not, advise required deballasting time.

Quantity of clean ballast and permanent ballast on arrival.
Confirm that your heating coils and tanks are sound and not leaking.
Your loading rate with 1×16 in. hose.
Revert with dimensions of your forward Panama Fairlead.
Confirm that cargo tanks will be under inert gas on arrival.
If you have received Owner's instructions regarding insertions or special mentions to be added on Bill of Lading. Please revert with your standard Carrier Alpha Code.
According to your instructions, when can loading be initiated (date and time).
Quantity of slops on board, and if "Load-on-Top Procedure" will be followed this voyage.
Revert with your vessel's experience factor calculated as follows:
Total of ship's figures for the last five voyages, divided by
Total of B/L quantities for the same voyages.
If any more information needed.
Unquote.

TUGS: Mooring is carried out by a work boat using personnel designated by Elf Exploration Angola.

This vessel is at the disposition of the tanker, under the instructions of the Pilot, during the duration of the tanker's manoeuvring and its stay at the loading terminal.

MOORING: Moorings at the loading terminal are furnished by Elf Exploration Angola. Consequently, the vessel should be prepared to take on board, the hawser as close as possible to the centre line of the vessel, the mooring line being composed essentially of 45 m. of doubled 16 in. circumference nylon and 7 m. of 3 in. chain. This chain is intended to hold fast the nip of the hawser at the fairlead; and furthermore, in order to facilitate its taking on board, the hawser is furnished with an "in haul" of 10 in. circumference polypropylene, of approximately 200 m. in length.

The "in haul" is passed to the vessel by means of a tender. The vessel must prepare the messenger line for taking on board the "in haul" by the bow.

Weather and sea permitting, mooring will be undertaken between 0600 hrs. and 1500 hrs. In exceptional conditions, mooring can take place at night.

Unmooring shall take place as soon as loading is completed, whether day or night.

The port derrick should be rigged before arrival and have a minimum lifting capacity of 10 tons.

The port side manifold should be prepared for connecting 2×16 in. hoses.

BALLAST: Vessels should arrive with sufficient ballast and correct trim in order to be able to manoeuvre with safety; such ballast may not be less than 30% of the deadweight of the vessel. Deballasting may be carried out only with the agreement of the Pilot.

The storage facility at Palanca is not equipped with an oil separator. The vessel should therefore present itself with clean ballast.

Any vessel presenting itself with dirty ballast may be obliged to depart the loading terminal and any resulting delay shall be entirely for its account; the acceptance of the Notice of Readiness shall be appropriately adjusted.

The Master shall be responsible for overflow or leakage from the tanks or any other situation which can bring about accidental discharge of hydrocarbons.

The scuppers shall be plugged during the duration of loading.

Elf Exploration Angola shall not be responsible for any violation of international regulations.

LOADING: The Palanca Loading Station of Elf Exploration Angola is a single point bow mooring type.

The vessel shall moor at the bow with the Storage Vessel (tandem mooring) or with the hawser of the buoy (SPM).

The Storage Vessel is connected to a Turret Buoy by a semi-rigid arm. This buoy is fixed to the sea floor by chains to 6 driven stakes. These anchoring chains extend to a radius of 490 m. around the buoy.

The Loading Buoy is a CALM buoy (Catenary Anchor Leg Mooring) fixed to the sea floor by 6×4.25 in. chains.

The depth of water at the Turret Buoy is 44 m. The Storage Tanker "Palanca" has a capacity of 274,000 metric tons, is 256.5 m. long, and 60 m. beam.

The water depth at the CALM loading buoy is 42 m.

The sealine (2,500 m. × 20 in. diameter) connects the "Palanca" Floating Storage to the production platform, the buoy is connected to the sealine by 1×20 in. hose line.

For loading, there are two possibilities:

(a) A 20 in. floating line ending in 2×16 in. lines connects the bow of the storage vessel to the intake manifold of the lifting vessel at a length of approximately 250 m. from the bow.
(b) Dispatching of the production from the storage barge to the second Loading Station is made through a 30 in. sealine. A floating 20 in., 300 m. long, flexible line (ending in 2×16 in. lines) connects the loading buoy to the lifting tankers manifold.

The choice of the loading point shall be made by Elf Exploration Angola. The normal conditions at the loading stations are as follows:
Tankers of 40,000 d.w.t. to 150,000 d.w.t.
Liftings of 40,000 tons to 150,000 tons.

Exceptionally, the terminal may receive:
Tankers of up to 300,000 d.w.t. unballasted or half cargo, exclusively from the SBM buoy and with 10 days notice.
Liftings of up to 200,000 tons (programmed in advance according to Block 3 Rules).

The Palanca Terminal has the right to refuse these exceptions.

Notice of Readiness: Notice of Readiness is to be addressed to Elf Exploration Angola.

Connections: The loading of vessels is carried out by means of 1×20 in. flexible floating line of 256 m. in length, terminating in 2×16 in. hoses, 27 m. long. Connection to the manifold on board is carried out by means of a 16 in. flange (150 ASA.).

The operations to connect and disconnect the hoses will be executed by the mooring crew. During the entire duration of the vessel's stay at the Loading Station, the Pilot shall assure that a safety watch is kept on board. The Pilot is also the Loading Master and the representative of Elf Exploration Angola.

The work vessel shall remain at the disposal of the Pilot, and shall hold fast at the stern of the tanker under tow. A tow should be furnished to the work vessel at the stern of the tanker, permitting a permanent traction of approximately 10 tons – 25 tons, during tandem loading operations, and also at the loading buoy.

Loading: Three loading configurations are possible:
Loading in tandem, maximum rate 8,000 cu.m.p.h.
Loading on the buoy, maximum rate 6,000 cu.m.p.h.
Loading simultaneously on 2 tankers tandem/buoy, maximum rate 12,000 cu.m.p.h. (7,200 cu.m.p.h. tandem plus 4,800 cu.m.p.h. from the buoy).

Inspection of the tanks after deballasting and measurement of ullage after loading shall be done in the presence of the Pilot, representing Elf Exploration Angola.

Elf Exploration Angola shall place on board the vessel, 2 sealed (2 litres) samples representative of the cargo.

20 minutes before the end of loading, the tanker shall make contact with the storage vessel by VHF, so as to be able to stop the pumps at the appropriate moment.

The Master shall be entirely responsible for the valve manifold operations and for on board loading safety.

Palanca Crude Characteristics: (February 1996).

API @ 60° F.	38.00
Density in Vacuum @ 15° C.	834.8 kg./cu.m.
Pour Point	0° C.
Reid Vapour Pressure @ 37.8° C.	67 K. Pa

MEDICAL: In Kwanda (Soyo), there is a doctor who can attend to needs of primary urgency. Urgent health evacuations to Luanda are carried out by Elf Exploration Angola at the expense of the vessel.

The Agent of the vessel shall take charge of the evacuee upon his arrival in Luanda.

FRESH WATER: Not available

FUEL: Not available.

REPAIRS: The repair shops at Luanda have limited facilities, information can be obtained from ship's Agents.

AIRPORT: The airport is located 4 km. from the city of Luanda, there is on average 1 flight per day to Europe, except weekends.

TIME: GMT plus 1 hour.

WEATHER: The rainy season predominates in February to April.

The dry season and cool season extends two to three months in June, July and August.

Temperature of the Air: In the rainy season, the temperature of the air varies from 23°C to 30°C with a relative humidity of approximately 91%.

In the dry season the temperature varies from 18°C to 22°C with a relative humidity of approximately 86%.

Temperature of the Sea: On the surface, the temperature of the sea varies from 30°C at the start of the year to 20°C in the month of July.

Salinity varies from 28 to 35 grams per litre.

Visibility: During the rainy season, particularly February, March, and April, the rain limits visibility to 0.5 miles.

Tides at Palanca: The tides are diurnal, maximum height at Springs is 1.9 m. The average level is 0.95 m.

Winds: The dominant winds are from the South, generally less than 15 knots on the average. Strong winds have a short duration and blow from the East or S.S.E. in association with gales (70 km./hr.).

Currents: In the Palanca region, currents can be extremely variable in force and direction but the general dominant current, flows toward the N.N.W., its speed on the surface can attain 1.8 knots.

Swell: The predominant direction of the swell is from the S.S.W., the average height varies from 1.5 m. to 2.5 m. with a period of 12 seconds, the surface waves generated by local winds rarely exceed 2 m.

The swell is strongest from May to October and at maximum 2 to 3 days before Spring tide.

GENERAL:

Publications & Charts:
French Chart No. 3357.
American Chart H.O. No. 2203.
French Pilot Book Volume C, West African Coast, Volume 2.
French Light & Fog Signals, Series C.
British Admiralty Africa Pilot Volume 2.
Portuguese Chart No. 305.

Pollution: It is forbidden to discharge cinders, flammable materials, objects and waste of any kind into the sea.

Any object falling into the sea should be reported to Elf Exploration Angola.

Elf Exploration Angola may attempt, at any time that it may consider appropriate, to fish such objects out of the sea. Such fishing out shall be undertaken at the expense, risk and peril of the party responsible.

Safety: The Master is solely responsible for safety on board his vessel.

During the entire stay at the loading station, the Master must: maintain on board sufficient personnel so as to be able to manoeuvre the vessel without risk and to put into action appropriate fire fighting equipment; maintain engines so as to be ready to manoeuvre; to attend to the hawser so as to assure good mooring without abnormal wear; to keep a watch over the floating hose so as not to subject it to any wear or chafing which might cause deterioration; to keep watch so that the vessel does not collide with the storage vessel, whether as a result of a reverse in current or a severe change in wind direction or for any other reason.

Territorial Waters: The sovereignty of the Republic of Angola extends to a distance of 20 nautical miles from the shore line at low tide along the coast.

The Angolan authorities exercise fiscal, customs, health, and immigration control on the high seas contiguous to the territorial waters up to a distance of 200 miles.

Currency: The legal currency is the kwanza.

Storing: It is not possible to provision at the terminal.

Transport: The means of transport of Elf Exploration Angola cannot be utilised by the crew of vessels coming to load at Palanca. There is no regular transport between Palanca and Luanda.

SHIPMASTER'S REPORT: March 1987.

Berthing will not be commenced after 1500 hrs. (local time).

Pilot ladder to be rigged to the water as Pilot boards from rubber dinghy. On boarding, Pilot will go forward to inspect mooring arrangements.

Shore gear lifted on board on the port side.

Loading vessel moors bow to bow with storage vessel.

Just before taking up mooring lines the tug makes fast aft. Vessel requires a heavy messenger to lift tug's wire. Once vessel starts heaving mooring lines, Pilot goes forward and communicates with bridge on VHF Channel 72.

AUTHORITY: Elf Exploration Angola, Rua Marechal Broz Tito No. 13, C.P. 2610, Luanda, Republique d'Angola. *Tel:* 390293, 390343, 390393. *Telex:* 4130, 4132 Elfang. *Contact:* M. Deschamps, Head of Developments.

QUINFUQUENA: 06.20 S. 12.14 E. (See Plan)

LOCATION: The Quinfuquena Terminal is located 15 miles South of the Zaire River entrance and consists of one loading point. The loading point is a single mooring point.

DOCUMENTS:

5 Lists of passengers disembarking or in transit, even if nil.
5 Crew Lists.
5 Lists giving previous Ports of Call.
5 Lists of Crew Vaccinations.
5 Stores Lists.
5 Personal Effects Lists.
5 No Animal Lists, even if nil.
5 Arms and ammunition Lists, even if nil.
Clearance from last port.

APPROACHES: It is essential to be in possession of BA. Chart 3206.

Good radar targets, visible on 24 mile range are;

Moanda Oil Terminal in position Lat. 05° 56' S., Long. 12° 10' E.

Essungo Platform in position Lat. 06° 14' S., Long. 12° 09.8' E. See B.A. Chart No. 3206.

The Quinfuquena Oil Terminal, when a ship is alongside, otherwise poor echo. During the night a flare in position Lat. 05° 58' S., Long. 12° 25' E. is seen at a distance of about 30 nautical miles.

A steel structure radio mast 48 m. high with total height of 76 m. (28 m. above sea level) painted red and white with a red flashing light 2.5 sec. located in position Lat. 06° 14' 30" S., Long. 12° 21' 31" E. at the tank farm, can be observed from a distance of at least 25 miles.

Aero Beacons out of order as well as the lights of Pta. da Moita Seca and Cabeca da Cobra.

PILOTAGE: Pilotage is compulsory. The pilot boarding area is inside the anchorage circle North of the loading points (See "Anchorage").

The Pilot will indicate to the arriving vessel the loading point at which it will be loaded. At this times the Pilot will also confirm the anchoring position.

Masters of vessels are reminded of their obligation to comply with statutory rules and are requested to comply with the following:

The Officer responsible for the embarkation or disembarkation of the Pilot must be a Watchkeeping Officer.

The pilot ladder must be properly secured.

The pilot ladder and immediate areas must be adequately illuminated.

Means must be provided to enable the Pilot to pass safely and conveniently from the head of the ladder into the ship and on to the deck.

The ladder must be in good condition.

The length of the ladder should not exceed 30 ft.

Whenever the distance from sea level to the point of access is more than 30 ft., a combination accommodation ladder/pilot ladder should be used.

Spreaders are to be positioned at intervals of not more than 10 ft.

Two manropes in good condition should be ready but not lowered unless so instructed by the Pilot.

A lifebuoy with safety line must be available at the embarking/disembarking area. The safety line must have a self-lighting light.

The pilot ladder must be rigged on the lee side, clear from all discharges and water outlets.

The ladder must be rigged in such a manner that each step rests firmly on the ship's side.

Nylon pilot ladders must no be used.

The use of pilot hoists is not recommended.

If, in the opinion of the Mooring Master the pilot ladder is not safe, the Mooring Master may refuse to board the vessel and thus cause delay to the ship. Such delay would be for ship's account.

The Master or responsible qualified Deck Officer must be on the bridge at all times when the vessel is manoeuvring.

Vessels are requested to provide food and accommodation for the Loading Master. This accommodation should be equivalent to the minimum standard required for a Senior Officer.

Ship's crew required for mooring operations and connecting/disconnecting of the hose.

ANCHORAGE: Vessels awaiting mooring are requested to anchor inside an imaginary circle of 2 nautical miles diameter centred on Point "A" (See "Plan") where:

SPM (Texaco Panama Inc.) bearing is 225°
RMD bearing is 135°
Essungo flare bearing is 327°

This will place all anchoring vessels at a minimum of 1.5 nautical miles from each of the surrounding sea lines.

At times the pilot may alter the anchorage location for one reason or another.

The pilot's requests will always overrule anything written therein.

The sea bottom in the area is sand and mud. Strict attention must be paid to all of the offshore installations in the area.

In addition to the loading points, these installations include the Essungo and Cuntala Platforms, the 18 in. oil sealine from Essungo to shore, the 20 in. oil sealine from shore to the R.M.D., the 30 in. oil sealine from the R.M.D. to the Texaco S.P.M., the 8 in. oil sealine from Cuntala to shore, the 16 in. oil sealine between the S.P.M. and Essungo Platform and the 16 in. sealine from the Southern Block Two Fields to the S.P.M.

These facilities are all marked on the British Admiralty Charts and all vessels bound for Quinfuquena Terminal must have on board the British Admiralty Charts No. 3206 and No. 638.

Anchoring is prohibited within a distance of 1.5 nautical miles from any of the offshore installations. All traffic is prohibited within a distance of 1 nautical mile of the loading points.

RESTRICTIONS: Mooring carried out daytime only. Unmooring may be carried out at night.

MAX. SIZE: See "Berthing".

Characteristics of Acceptable Vessels:

	R.M.D.
Deadweight tons – maximum.	150,000 tons
Distance – Bow to Manifold – maximum.	150 m.
Draft at Loaded Condition.	47 ft.
Segregated Ballast Tanks. (See "Ballast")	Required
Inert Gas System.	Required
Derricks – minimum SWL.	10 tons

HEALTH: Upon arrival, Government Officials and Agent board the vessel. The party comes by boat from the Kwanda Base near Soyo, which is situated about 20 nautical miles from the Terminal. The Agent is a local clerk, and speaks English. He boards the vessel on arrival and a few hours before departure.

RADIO: *Initial Message:* Companies intending to lift crude oil from Quinfuquena Terminal will have to notify Fina Petroleos de Angola – Operations by telex (Telex No. 3246 Petrol An), 7 days prior to the anticipated arrival date.

This notification shall contain the following information:

Name of tanker.
Flag.
Gross tonnage.
Nett tonnage.
Deadweight tons.
Distance – bow to manifold.
Anticipated draft at loaded condition.
Nominated cargo quantity.
Shippers.
Agent.
Consignee.
Destination.
ETA QQ Terminal.
Deballasting time, if required.

Subsequent Updated Messages: Vessels bound for Soyo Quinfuquena Terminal must give their ETA 72 hours, 48 hours and 24 hours before arrival, addressed to Fina Petroleos de Angola, Soyo.

ETA can be sent by telex to Fina Petroleos de Angola – Operations (Telex No. 3246 Petrol An).

The message should contain:

Vessel's name and Flag.
Master's name.
ETA at loading Terminal.
Arrival draft.
Last port of call.
Deballasting time, if any.

48 hours before arrival, radio contact can be made with Fina Petroleos de Angola Marine Office in Soyo on S.S.B. 8,291.1 kHz between 0900 hrs. and 0930 hrs. GMT.

A 24 hour radio watch is maintained on VHF Channel 11 at the Mooring Master's Office, call sign "Quinfuquena Pilot".

Ships are usually able to make VHF contact at a distance of 30 miles from the loading buoy.

VHF: See "Pilotage" and "Radio".

A 24 hour radio watch is required on VHF Channel 11.

TUGS: One tug, 3,300 h.p. available, also see "Current".

BERTHING: The new oil terminal, built for The FST Association, has been in operation since December 1979 and is situated 7.5 nautical miles offshore.

The loading point is of the RMD-type (Ready Made Dolphin). This is a rigid structure standing on the seabed.

The RMD is located in about 72 ft. of water in the following position:

Lat. 6° 19' 45" S., Long. 12° 14' 42" E.

On the RMD 2 limits have to be observed:

Max. draft 47 ft.
Max. cargo intake 104,500 tonnes

The RMD is equipped with a white navigation light and fog horn.

Identification navigation light: Flash "U" 30 secs. 8.5 nautical miles.

Identification fog horn: "U" 30 secs. 1 nautical mile.

A 20 in. cement coated sea line connects the RMD with the shore in a position:

Lat. 6° 14' 54" S., Long. 12° 20' 57" E.

MOORING: In principle mooring operations are not carried out at night but unmooring operations are performed day or night. At times, if sea, current and weather conditions permit, night mooring can be considered. The Mooring Master will in all cases decide when mooring and unmooring operations shall be done.

All mooring and unmooring operations are done by the ship's crew as indicated by the Mooring Master.

On arrival, vessels must have the port derrick rigged and ready to be used. The SWL of the derrick should be 10 tons.

A line-boat and a crewboat assist the vessels while mooring and unmooring.

Notice of Readiness accepted between 0600 hrs. and 1700 hrs.

The line-boat will bring the terminal mooring gear alongside, which has to be picked up with the ship's derrick. It consists of: 2×14 m.×56 mm. wire snotters; 2×100 ton SWL Crosby shackles; hose slings; 2 pelican hook chain stoppers; pressure gauges.

Two messenger lines of minimum 400 ft. length must be ready on the forecastle. The wire snotters must be installed on the bitts as indicated by the Loading Master.

The line-boat brings 2×10 in. pick up lines alongside the bow when the vessel is within a reasonable distance of the loading point. The messenger lines will be connected to the pick-up lines and taken on board until the chaffing chains pass through the fairleads. The chaffing chains are connected to the wire snotters by means of the 100 ton shackles.

The fairlead should be a single Panama lead mounted on the centre line of the vessel suitable for receiving 2×3 in. chaffing chains. The approximate minimum inside dimensions of the inside of the fairlead have to be 40 cm. high and 60 cm. wide.

Two sets of mooring bits should be situated at the forward end of the forecastle head.

The bitts are to be located not less than 3 m. and not more than 10 m. from the centre Panama Lead and capable of handling 56 mm. diameter wires.

Once the vessel is moored to the loading point, the floating hose is brought alongside and connected to the manifold by the ship's crew. The floating hose is equipped with a 16 in. Camlock connection. The floating hose at both the R.M.D. and the S.P.M. is 16 in. The bow to manifold distance should not exceed 150 m. for the R.M.D.

A pressure recorder will be installed on the ship's manifold. During the whole period that the vessel is moored to the loading point the line-boat will be made fast to the stern of the tanker. The vessel shall supply a good towline for this purpose and keep a second one on stand-by ready to be used. If available, buoyant lines are also preferred in this operation.

MEDICAL: Assistance only available in an emergency.

BALLAST: Report: August 1989.

On contacting Loading Master at QQ Terminal via our Soyo office we have been informed that tankers without segregated ballast tanks and tankers with clean ballast in clean cargo tanks are acceptable. For any further technical details please contact Fina Petroleos de Angola (telex 3246 Petrol An), attention Operations Manager.

LOADING: The loading rate is approx. 1,550 cu.m.p.h. Soyo crude oil approx. API 39.5. The temperature varies with the seasons. At the end of May, the loading temperature was 78° F.

During the whole loading operation, a crew member is stationed on the forecastle and one by the manifold. Forecastle must be in permanent contact with Duty Officer and Loading Master by radio if available.

As the oil to be loaded may contain hydrogen sulphide, it is recommended to keep breathing apparatus and resuscitators readily available during cargo operations.

Also see "Mooring".

FRESH WATER: Not available.

FUEL: Not available.

REPATRIATION: Repatriation is available if necessary but can only be arranged via Luanda.

SERVICES: Following are not available: Stores and provisions, cash, laundry service, dirty ballast facilities, national flags and ship supply service.

Charts are not available. Vessels must have B.A. Chart Nos. 638 and 3206 onboard when calling at the terminal.

MAIL: Mail sent from Europe, usually takes one week.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Nova Kwanza.

SHORE LEAVE: Not allowed.

WEATHER:

Winds: The general direction of the trade winds is E.S.E. to S.S.E. The direction is affected by onshore/offshore breezes.

The onshore breeze appears from the S.W. between 1000 hrs. and 1100 hrs. and falls at sunset. It is then replaced by a light breeze from the S.S.E. to E.S.E. which blows until 0800 hrs. or 0900 hrs.

From December till May thunder squalls from the N.E. occur. During the month of May the trade winds often blow night and day.

From June to September (dry season) the winds are low. S.W. in the daytime and S. to S.W. with calm periods at night. At mid-September a stable S.W. breeze settles until the beginning of December. It then becomes more variable with calms at times.

Hygrometry: The relative humidity is above 80% for 11 months of the year but in June falls to 50%.

Visibility: Fog appears more often during the dry season than during the rainy season. During the rainy season visibility is reduced by heavy showers.

Tides and Current: In general the current flow at Quinfuquena is in a Northerly direction and has an average velocity of 0.8 knots. The current direction and velocity are governed by two significant sources; the Benguela Current flowing North and the outflow of the Zaire River. At most times the Benguela Current is the most influential so the most common current direction is North. However, at times, especially during the rainy season (November to May) the effluent from the Zaire River may be so voluminous that it can over-rule the Benguela Current and reverse the direction of the current at Quinfuquena. At the RMD we have witnessed a 180° change of direction in 10 minutes.

When this happens during the daylight hours it is possible to receive advance notice if the man on watch spots the muddy front from the Zaire River moving South. This notice allows the line handling tug crew and tanker crew to be in the best position to keep the tanker from contacting the protection ring of the RMD. When it happens at night, however, the allowable reaction time is greatly reduced and any error or delay may allow contact of the tanker with the loading point. It is for such instances that the watches must be maintained and ready.

Although, as stated previously, this phenomenon is more likely to happen in the rainy season, it can, and has happened in the dry season.

Tidal currents in this area are minimal. They have an average velocity of 0.5 knots and a maximum of 2 knots. The tidal range is about 1.5 m.

Swell: As far as swell is concerned 93% of the waves come from South (S.E. to S.W.). The average height of the swell is 1.5 m. during the rainy season and increases to 3 m. or 4 m. during the dry season.

NOTICE: Notice to Masters

Subject: Forecastle Head Watchman.

Quinfuquena Terminal has certain peculiarities and your attention is drawn to the following.

1. The tower is a "Rigid Mooring Device" and is standing on the sea-bed as opposed to a "Single Mooring Buoy" which is anchored to the sea-bed and therefore has some lateral movement.

2. Normally your vessel will ride to the Benguela Current (S'ly), however the Congo River outfall will occasionally produce an adverse current, which will change heading of your vessel to a Northerly direction in a very short period of time.

Therefore a watchman must be placed on the forecastle head at all times, and at the slightest indication that the vessel is "Riding-up" to the tower, he must not hesitate to call the Mooring Master on board who will take the necessary action.

A line-boat, which has the capacity to tow your vessel astern, clear of the tower, will be tied up to your vessel's stern at all times.

Please ensure that a tow rope of a good quality is passed to the line-boat.

OPERATOR: Fina Petroleos de Angola S.A.R.L., C.P. 1320, Avenida Rainha Ginga 128, Luanda, Angola. *Tel:* 39.01.48/39.02.48/39.03.48 (Ext. 336). *Telex:* 3246 Petrol An. *FAX:* (010-2442) 39.10.31. *Cables:* Fina, Luanda. *Contact:* Captain R. Moeskops, Marine Superintendent. J.G. Campbell, Manager of Operations.

Capitania do Soyo, Capitania do Porto do Soyo, Soyo, Republica Angola.

Ministerio dos Transportes e Communicacoes.
Direccao National da Marina Mercante e Portos.

NOTES

Please also advise Shipping Guides Ltd.

Anguilla

BLOWING POINT: 18.10 N. 63.05 W.
ROAD BAY: 18.11 N. 63.01 W. (See Plan)

PORT LIMITS: Port limits are that of the coast and sea contiguous thereto from the mean of the highest and lowest tides to the seaward edge of the furthest reef or 1,000 yards seawards where no reef exists.

DOCUMENTS: The following documents are to be presented to Customs upon arrival:

1 Ship's Register.
1 Clearance from last Port.
2 copies Crew List.
2 copies Passenger List.
2 copies Cargo Manifest.
2 copies Stores Declaration.

PILOTAGE: At present there are no Pilots.

ANCHORAGE: Within 1,000 yards of the shoreline.

RESTRICTIONS: No berthing of vessels to a pier is allowed at night. The approach to the pier must be clear of anchored vessels at all times.

MAX. SIZE: Vessels of 4,000 tons and under or 15 ft. draft are accepted.

HEALTH: Customs accept Pratique documents on behalf of the Public Health Department. In the event of any suspected disease on board, the yellow flag must be flown. The Public Health and Medical Department will be immediately contacted. Until their arrival, no person will be allowed to disembark.

RADIO/VHF: Communications for ship movements are on VHF Channel 16. Both sea ports (Blowing Point and Road Bay) are equipped with VHF radio.

TUGS: No tugs in operation at present. Vessels are required to berth alongside pier using their own lines.

BERTHING: Blowing Point has 2 piers. One is used for off-loading cargo. The other is used for passengers.

The Cargo Pier accommodates vessels up to 30 tons.

The Ferry Pier accommodates ferries up to 25 tons at present.

The depth alongside the pier at Road Bay is 14 ft. on the North side and 16 ft. on the South side.

Loading and off-loading is done by ship's gear.

CRANES: None at present.

SPECIALISED CARGO HANDLING FACILITIES: The front end of the pier at Road Bay is used by barges for off-loading. Vessels with containers can apply to Haskins Ltd. to assist with off-loading of containers as the company is equipped with special trucks for handling containers.

BRIDGES: There are no bridges at any approaches to Anguilla Ports of Entry.

STEVEDORES: There is no organised stevedoring at present. However, arrangements can be made to hire workers to assist with loading/off-loading operations. Normal working hours are 0830 hrs. – 1200 hrs. and 1300 hrs. – 1600 hrs. Monday, Tuesday, Wednesday, Friday and Saturday, and Thursdays 0830 hrs. – 1200 hrs.

MEDICAL: Medical attention can be obtained at the Cottage Hospital in the Valley which is approximately 5 miles from Road Bay and 8 miles from Blowing Point. There is also a dental unit in the Valley. Inoculations and vaccinations can be done at the Hospital or at the Clinic in South Hill.

TANKERS: Coritot Bulk Station is the petroleum port. The deepest depth is 30 ft.

DENSITY: The water at all ports is salt.

FRESH WATER: Fresh water is supplied by the following private water trucks:

(a) National Trucking.
(b) Charlie Fleming's Water Delivery.
(c) Island Transport.
(d) Vanterpool's Water Delivery.

The average cost per 1,000 gallon is $135.00.

FUEL: Shell Bulk Station supplies 45 Centane Grade Diesel Oil and 93 Octane Gas Oil. This is delivered by truck.

REPAIRS: There is no equipment available at the port for repairing vessels.

DRY DOCKS: None.

SURVEYORS: None.

GANGWAY/DECK WATCHMEN: Not necessary at present.

HATCHES: Opened and closed by the crew.

CUSTOMS ALLOWANCES: 1 quart of spirits, 4 ozs. perfume and 0.5 lb. of tobacco products.

CARGO GEAR: Loading and off-loading is done by ship's gear.

REPATRIATION: Repatriation arrangements are made through the Immigration Department.

AIRPORT: Wallblake Airport is approximately 3 miles from Road Bay and 6 miles from Blowing Point.

TIME: Local time is G.M.T. minus 4 hours.

HOLIDAYS: New Year's Day; Good Friday; Easter Monday; Labour Day (1st May); Anguilla Day (30th May); Whit Monday; Queen's Birthday; August Monday (1st Monday in August); August Thursday; August Friday; Separation Day (19th December); Christmas Day and Boxing Day.

Overtime can be arranged on these days. Advance notice of 2 hours before the end of working day preceding the holiday is required.

POLICE/AMBULANCE/FIRE: Call 911 and ask for service required.

TELEPHONES: There are no facilities for placing telephones on board.

BANKS: No banks are situated at the port. However, the Bank of Nova Scotia is 3 miles away, and the Caribbean Commercial Bank, National Bank of Anguilla and Barclays Bank are 4 miles away.

SHIP SUPPLY SERVICE: None available.

IDENTIFICATION CARDS: Not compulsory.

DELAYS: Delays can be avoided if advance notice of ETA is given at least one week before scheduled arrival.

AUTHORITY: H.M. Customs Department, The Valley, Anguilla. *Tel:* (809) 497-2513, 497-5313. *FAX:* (809) 497-5483. *Contact:* Colonel Harrigan, Principle Customs Officer.

NOTES

Please also advise Shipping Guides Ltd.

Antigua and Barbuda

ST. JOHN'S, Antigua: 17.07 N. 61.52 W. (See Plan)

PORT LIMITS: All the waters enclosed by an imaginary straight line running due West from Weatherill's Point forming the Northern boundary by an imaginary straight line running due North from Shipstern Point forming the Western boundary and by the coast line running from Weatherill's Point to Shipstern Point forming the Eastern and Southern boundaries.

DOCUMENTS:
4 Crew Lists.
2 Stores Lists.
4 Passenger Lists.
1 Customs Declaration.
1 Declaration of Health.
4 Copies of Manifest.
Port Clearance from previous port.
3 Copies of B/L.
1 Copy Crew Personnel and Curio List.
Fumigation and Derat Exemption Certificate to be shown.

PILOTAGE: Compulsory. Messages should be received by Agents 48 hours in advance. Pilot boat may be identified by pilot flag.

Pilot boards at entrance of channel if vessel is proceeding to Deep Water Harbour. If vessel proceeding to Oil Berth, Pilot boards 2 miles North of Sandy Island.

ANCHORAGES: Area between Fairway Buoy, South Warrington Buoy and No. 1 Channel Buoy. Approximately 7 cables N.N.W. of Pillar Rock Light. Depths 40 ft. – 45 ft. Anchorage for vessels up to 54 ft., 2 miles N.E. of Sandy Island.

RESTRICTIONS: (a) No vessel is permitted to berth alongside before permission to do so is given by the Port Authority or unless such vessel is under the command of a Pilot.
(b) Tidal variation is negligible.
(c) Channel is 8,000 ft. long and 300 ft. wide.
(d) Draft restriction is 32 ft. at berth.

MAX. SIZE: Vessels of any size, but with a maximum draft of 45 ft. can anchor at the Outer Harbour. At berth max. draft is 32 ft.; length of dock 1,200 ft.; and turning circle 1,200 ft. diameter.

HEALTH: Pratique given at berth. Suspected infectious diseases must be notified to Port Health Inspectors in advance of vessel's arrival.

RADIO: Cable and Wireless (W.I.) Ltd. via Barbados Radio 8PO.

VHF: Port Authority maintains watch on Channel 16 during normal working hours. Watch is also maintained by Pilot and tugs on Channel 16 one hour before ETA of any vessel. Tugs and Oil Terminal Pilot use Channel 6 during berthing operations.

RADAR: Nil.

TUGS: Two harbour tugs, each with 1,500 h.p. engines. Tugs join vessel in Approach Channel. Tugs lines normally used. No charge.

BERTHING: Three berths on pier of length 1,200 ft.; maximum permissible shipdraft 32 ft. in salt water; loading or discharging can be done either by shore equipment or by ship's own gear.

Cruise Ship Berth: There is a new Cruise Ship Berth at Heritage Quay in St. John's. This berth consists of 1,500 ft. of berthing space with 2 mooring dolphins, electricity, telephones, water, banking and other facilities. The position of the berth is Lat. 17° 07.5′ N., Long. 61° 52.2′ W.

CRANES: Authority owns 1×150 ton P & H mobile crane and 1×10 ton Coles mobile crane.

2×75 ton cranes are available on dockside which are provided by a private contractor.

Lift Trucks: Authority owns 1 large truck with adjustable spreaders capable of lifting fully loaded 40 ft. and 20 ft. containers.
1×15 tons Container lift truck
2 Champion truck tractors
1 GMC truck tractor
6×20 ft. container chassis
2×40 ft. container chassis
1×40 ft. container lift frame
1×20 ft. container lift frame
9×2.5 tons forklift trucks

BULK CARGO FACILITIES: Presently the handling of grain, coal and fertilisers are being handled at a Ro/Ro dock at the main dock in St. John's.

SPECIALISED CARGO-HANDLING FACILITIES: There are berths where LPG carriers are docked and taken care of. This berth is situated outside of St. John's and handles only LPG. There is also a sea berth which handles all types of fuel, such as diesel oil, gasoline and bunker fuel. The port also accommodates Ro/Ro ships with containers, and also handles refrigerated cargoes to the freezer chill facility at the main port in St. John's.

BRIDGES: None.

STEVEDORES: 48 hours notice is required to arrange gangs. Average load or discharge rate is 10 t.p.h.

Working hours: 0700 – 1600 Monday to Friday and 0700 – 1100 on Saturday. Overtime possible weekdays and Sundays.

MEDICAL: Agents should have at least 24 hours notice should medical attention be required. Hospital facilities are available and can be arranged by either Ship's Agent or Port Authority.

TANKERS: *Sea Island:* A concrete platform 180 ft. long with 4 mooring dolphins, overall length 750 ft. The jetty platform is protected by 5 foam filled Yokohama type fenders. Depth alongside 35 ft. at MLW. Max. draft 32 ft. (deeper draft subject to Marine Terminal approval). Max. load displacement 22,000 tons. Berthing by tankers on South side only. Port side alongside with the assistance of 2 tugs.

Mooring arrangements: 2 head/stern lines, 2 breast lines, 2 springs. Distance to shore is 4,500 ft.

Pipelines: 1×16 in. crude line with 1×12 in. hose; 1×8 in. gasoline line and 1×8 in. distillate line each with 1×6 in.; 1×4 in. LPG line; 1×3 in. fresh water line. One grade at the time with max. throughput of 1,500 bbls.p.h. and max. back pressure of 120 p.s.i.

Sea Buoy: A CBM of 5 mooring buoys (3 head buoys and 2 stern buoys) in 50 ft. of water. Max. draft 43 ft. Distance to shore 7,800 ft. 1×16 in. crude line with 1×12 in. hose (both submarine). No slop residue discharge facilities available.

Hose Connections: Port side amidships on Sea Island and Sea Buoy.

All Bunker grades are available. The blender is on the jetty with meters. Lubricants are available. The bunker line is 10 in. with a 6 in. bunker hose.

There are no slops or dirty ballast facilities. Ships to load are to arrive with clean ballast.

There are always two jetty attendants who are to be provided with meals.

It is possible to arrange a boat service between ship and shore but the ship's motor lifeboat can be used as well for this purpose and can sail in Antiguan waters without restrictions, provided the ship is cleared by the Authorities.

DENSITY: 1025.

FRESH WATER: Available at Deep Water Harbour, 24 hours' notice required. Also at Oil Refinery Pier and by barge, but only in conjunction with bunker fuel deliveries.

FUEL: All grades of marine fuel available at the Marine Pier. Also available at the Sea Buoy and by barges at Deep Water Harbour.

FIRE PRECAUTIONS: (a) No open fires nor smoking are allowed near the open hatches or in the hold in which flammable or dangerous goods are stored, or at the place of discharge of shipment.

(b) No person may set off or ignite any flare, rocket, explosive device, firework or make any bonfire or barbecue in any port area other than for emergency life saving or ship safety purposes, unless permission has been granted by management.

CONSULS: American, Norwegian, Dutch, French, Danish, Swedish and Venezuelan.

REPAIRS: All types of deck, but only minor engine repairs are possible.

DRY DOCK: None.

SURVEYORS: Department of Merchant Marine, Lloyd's and ABS.

GANGWAY/DECK WATCHMEN: Services of watchman absolutely necessary.

HATCHES: Opening and closing normally carried out by ship's crew.

CUSTOMS ALLOWANCES: 1 carton of cigarettes, 1 bottle liquor.

CARGO GEAR: Loading and discharging effected both by shore and ship's gear, but mainly by shore gear.

REPATRIATION: Facilities exist for effecting crew changes and arranging for necessary repatriation.

AIRPORT: Airport is 4 miles from the Deep Water Harbour, and is served by such international airlines as Eastern, Pan Am, American Airlines, Air Canada, B.W.I.A., B.A., L.I.A.T., Prinair, Air Guadeloupe, etc.

TIME: Local time is GMT minus 4 hours. No adjustments made to clocks during the year.

HOLIDAYS: 1st January; Good Friday; Easter Monday; Labour Day (1st Monday in May); Whit Monday; 1st Monday and Tuesday in August (Carnival); State Day (1st November); Christmas Day; Boxing Day; Queen's Official Birthday which is either the 1st or 2nd Saturday in June.

POLICE/AMBULANCE/FIRE: Police Tel: 20125-6-7-8; Ambulance Tel: 20251-2-3; Fire Tel: 20044.

TELEPHONES: Arrangements exist for placing telephones on board.

SERVICES: No special services exist e.g. tank-cleaning equipment, discharge of tank washings, compass adjusting, etc. However, arrangements can be made to carry out these services.

SHORE LEAVE: Crew members are permitted to go ashore; there are abolutely no restrictions.

IDENTIFICATION CARDS: Not necessary to show identification cards. However, may be called upon to present seaman's book should the occasion warrant it.

GARBAGE DISPOSAL: Garbage collection available through agent. Charges are U.S.$100.00 per pick-up. Collection time may be arranged at ship's convenience.

WASTE OIL DISPOSAL: Waste oil service is available by truck. There is no shore tank.

SEAMAN'S CLUBS: No Seaman's Clubs available.

Shops, international telephones, postage services, churches available. Football matches can be arranged. Mini-bus service available.

CURRENCY: The Eastern Carribean Dollar is the local currency. The exchange rate against the U.S.Dollar is E.C.$ 2.70 = U.S.$1.00. There are no restrictions on seafarers. The $2.70 local currency is a fixed rate to the U.S.Dollar. No devaluations. The British Pound is also widely accepted. The rate for the Pound is E.C.$ 4.50 = £ 1.00.

REGULATIONS: Users of the Port should be acquainted with Port Authority Act and Port Regulations. Copies of these can be purchased at the Government printers.

DELAYS: Delays due to unavailability of berth are very infrequent. However, during the months of December to April, 24 hours delay can be expected.

AUTHORITY: Antigua and Barbuda Port Authority, P.O.Box 1052, St.John's, Antigua, West Indies. *Tel:* (809) 4620050, 4620053, 4621273, 4623439. *Telex:* 2179 Anport Ak. *FAX:* 809-462-2510. *Contact:* L. Adams, Port Manager. W.K.N. Gomes, Operations Manager.

Argentina

Information for ports of Argentina, including drawings of port areas as reproduced in our plan section, have been compiled not only with the assistance of Port Authorities but also with the very kind co-operation of Centro de Navegacion Transatlantica of Buenos Aires to whom we are very much indebted.

Shipowners and Masters wishing to be in possession of more detailed information concerning River Plate ports, Argentina South Atlantic ports and the Strait of Magellan, are advised to obtain a copy of the "C.N.T. Year Book" which is published by Centro de Navegacion Transatlantica, 25 de Mayo 489, Buenos Aires.

N.B. For practical purposes, we have sub-divided information for Argentina into three sections as follows:

I. *GENERAL.*
II. *RIVER PLATE PORTS.*
III. *SOUTH ATLANTIC PORTS.*

I. GENERAL

DOCUMENTS: *Required Prior to Arrival:*

(a) At least 24 hours prior to the anticipated arrival of the vessel, a request for berthing must be presented to the General Port Administration in triplicate. There is a special form for this request, indicating the specifications of the vessel and the freight to be handled, for the assignment of the berth.

Upon receipt of the allocation of the berth, the following authorities must be notified:

a. The Chief of the Office of Maritime Health, to whom a request must be made 24 hours in advance for a Health Pratique. This must be made in duplicate, on a special form, to which a copy to the radio request for a Health Pratique must be attached. This is necessary to obtain authorisation to dock in the assigned berth, without a prior boarding by the Health Officer;
b. The Naval Prefecture, to which the request for a Health Pratique must be presented indicating the date and time of arrival from the open seas at the Intersection (in Buenos Aires) and from the intersection at the assigned berth;
c. The Chief of the Office of Overseas and Coastwise Shipping of the Naval Prefecture, to whom a request for pilotage must be made in duplicate, indicating the date and time of arrival, and designation of berth for the vessel.

On Arrival:

Type of Document	Number and Distribution of Documents				
Basic Forms	Prefecture	Customs	Immigration	Health	Total
Additional Documents:					
1. General Declaration	1	–	2	1	4
2. Cargo Manifest	–	1	–	–	1
3. Crew List	2	–	2	–	4
4. Passenger List	2	–	2	–	4
5. Ship's Store List	–	2	–	–	2
6. Crew's Effects Declaration	–	2	–	–	2
7. Maritime Declaration of Health	–	–	–	1	1
8. Mail List (a)	–	–	–	–	1
9. Entrance Declaration	–	–	–	–	4
10. Standardised Manifest cover	–	2	–	–	2
11. Section request	–	2	–	–	2

(a) Delivered directly to Postal Service.

Prior to departure:

Type of Document	Number and Distribution of Documents				
Basic forms	Prefecture	Customs	Immigration	Health	Total
Additional Documents:					
1. General Declaration	2	–	2	–	4
2. Cargo Manifest	–	2	–	–	2
3. Crew List	2	–	2	–	4
4. Passenger List	2	–	2	–	4
5. Sailing Notice	–	–	3	–	3
6. Sailing Declaration	–	–	–	–	–

Request for Health Pratique:

At least 24 hours prior to sailing, a request for the Health Pratique must be presented to the Naval Prefecture (4 sets).

Other provisions:

A representative of the Naval Prefecture and a Migrations Inspector board the vessel prior to sailing.

(b) Masters should also have at hand for inspection as required all the various certificates such as Certificate of Registry, Postal Packet Permit, if pertinent, Freeboard, Measurement, Safety Equipment, Radio Installation, Bulk Cargo, Shifting Board Installations or equivalent, and Derat Certificate, or exemption.

None of these documents requires an Argentine Consular visa.

(c) Port Agents should also receive copies for their use and to facilitate any further contacts with the Authorities in case of need. In particular they require a large number of copies of Manifest, and from this they will prepare Spanish manifest, which must be presented to Customs within 48 hours of vessel's entry. A number of extra copies of Crew List are also needed, and 1 extra Store List.

(d) Every person figuring on the Crew List of a vessel entering an Argentine port must possess documents proving his identity, such as a Discharge Book, Passport or other documents in use in the country of origin, authorised by the competent Authorities.

(e) Vaccination Certificate: Members of crew must be provided with an International Vaccination Certificate, not more than 3 years old, which should be presented on arrival, together with the individual Identity Card. Failing this, the crew will be vaccinated by the boarding doctors.

(f) Identity Card On arrival at an Argentine port, Masters of foreign vessels must deliver Identity Cards complete with photographs and finger-prints of each member of the crew, together with 2 copies of Crew List. One set is retained by the Migrations Department, and the other document remains in possession of the individual so that once identified, the crew member may return to the country without the necessity of obtaining new documents. The Master is handed in exchange 1 copy of the Crew List, sealed and signed by the Immigration Officer to enable him to prove at other Argentine ports of call, that he has complied with the corresponding Regulation.

No member of the crew, except the Master, is allowed to land until the Immigration Authorities have checked the crew with the Identity Cards.

Masters may if necessary have the Identity Cards completed with photographs in the Argentine at the first port of arrival. In such cases it is advisable that Agents are advised in advance so that preparations may be made against vessel's arrival. The Authorities will not allow any members of the crew to be disembarked until they have presented their Identity Cards or have had their photographs taken. Agents must present these Identity Cards to the Authorities for stamping within 48 hours of arrival of the vessel. Immigration control is made at whatever hour the vessel arrives, forming part of the normal reception procedure.

(g) The Stores Lists should be completed with great care as a specially trained searchers' brigade has been visiting most ships as soon as Free Pratique is granted.

Particular care must be taken to declare all sizes and measures in the metric system. A plea of a regrettable mistake is not accepted and fines, if legally applicable, can be severe.

FREE PRATIQUE: Vessels take Pratique in port, and may enter and berth if they fulfil the following conditions:

(a) Clean port of sailing and ports of call.

(b) No persons with infectious or contagious diseases or with fever on board.

(c) No cases during the voyage of disease of international concern, or of infectious diseases of an epidemic nature.

To be able to obtain this privilege of taking Pratique in port, it is essential that Masters of all vessels arriving from abroad wireless their Agents, not more than 12 hours before arrival, that vessels under their command are in the sanitary conditions as required by Art. 45 of the regulations to enter port and go alongside.

On receipt of this message, Agents will present to the Health Authorities the request for a berth, accompanied by the telegram sent by the Master, not less than 6 hours (nor more than 12) in advance, detailing sailing port and ports of call, and indicating the approximate hour of arrival. If the wireless message is in code, Agents will give the necessary translation, and be held responsible for any error in such translated version.

The message may be sent either in English or Spanish, and we give specimen texts in both languages, which should be closely followed:

"Addressed to Agency in Buenos Aires (or other port) solicitamos pedir libre platica telegrafica buque ....(1), procedente de ....(2), con escalas en .... (3), con .....(4) ..... tripulantes, (5) ..pasajeros Buenos Aires, (6) ...pasajeros transito punto. declaro no tener abordo persones afectadas por ninguna enfermedad pestilencial punto estado sanatario bueno.

"captain (7)."

or in English:

"please request Free Pratique ms (or ss) ....(1), proceeding from ....(2), with calls at ....(3), with ....(4) .... crews, (5) .... passengers for Buenos Aires,(6) passengers in transit stop hereby declare that nobody on board affected by any pestilential disease stop sanitary condition good.

"master (7)."

In each case the gaps must be filled in as follows:

1. Port of vessel and flag.
2. Port of commencement of voyage.
3. Full details of all ports of call.
4. Number of crew.
5. Number of passengers for Buenos Aires (or whatever port first entered).
6. Number of passengers in transit.
7. Full name of Master, and also of doctor if there is one on board.

As there have been cases of insufficient information being received from vessels, and "added in" by Agents in the translation, the Authorities have established this standard form which Masters must follow in their messages, and which will accompany the request to the Health Authorities.

This facility now refers to all Argentine ports, the message requesting Free Pratique to be sent to the vessel's Agent at first port of call, after which Free Pratique is automatic in all subsequent Argentine ports. If, however, a non Argentine port is called at en route, Free Pratique must again be requested at what will then become the "first Argentine port".

Agents will confirm to the vessel, by radio, the date and hour of granting of Free Pratique, and with this information in hand, vessel can enter port and go alongside. The Port Authorities will board as soon as the gangway is placed for their routine inspection, and until they have boarded, no one else should be allowed on board.

Vessels which do not meet the sanitary requirements, or come from unclean ports, must fly the yellow flag on entering for the necessary inspection alongside.

River Ports: Vessels proceeding to river ports get Pratique at destination.

Vessels Lightening: Tankers and other ships lightening in River Plate waters, provided they comply with Art. 45, may later continue their voyage and go straight into berth at port of destination to take Free Pratique there.

Sick Crew Members: If there is a sick person aboard, the international sign "W" must be flown on entering, and for Free Pratique, the customary yellow flag.

Masters must report to the boarding Sanitary Authorities those members of the crew having venereal complaints.

Asian and African Ports: In accordance with WHO requests, all vessels proceeding from these ports will be subject to an inspection of all galleys and store rooms.

Infected Ports: Recent Cholera epidemics have caused the Health Authorities to tighten control. All persons on board vessels coming from ports in the countries named below must be in possession of the Anti-Cholera Inoculation Certificate, and from other zones as indicated as International Yellow Fever Vaccination Certificate.

Cholera: The international certificate is valid from the sixth day of inoculation, and for 6 months. The countries at present under control are:

Africa: Algeria, Burkia Faso (formerly Upper Volta), Benin, Cameroon, Chad, Ghana, Ivory Coast, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Somalia, Togo.

Asia: Myanmar (Burma), India, Indonesia, Malaysia (West), Muscat, Nepal, Pakistan, Philippines, Vietnam.

Epidemics are not officially admitted in the Arab Republic of Egypt and Sudan, but the certificate is advisable as a precautionary measure.

Other zones may be affected at short notice.

Cholera Prevention: Agent's advice to vessels calling at Argentine ports:

If your vessel has called at South American Pacific Coast ports within the last 6 months prior to arrival at Recalada Pilot Station or Brazilian ports since 15th February 1992 (or first Atlantic port if applicable), the following anti-cholera measures must be strictly abided by and for sanitary inspection on arrival at first Argentine port of call:

All ballast (and bilge water if any) must be chlorinated at the ratio of 15 grams of granulated hypochloride per ton of ballast, and all ballast and bilge discharge valves must be sealed prior to arrival at Recalada (or Atlantic port, whichever applicable).

For passing on to the sanitary authorities, please radio or telex us the following:

Confirmation that ballast tanks/bilges are empty, alternatively quantity of ballast on board per tank.

Quantity of fresh drinking water expected on board on arrival.

Short description of vessels sewage system.

Usual Free Pratique request, stating number of crew, that nobody affected by any of the six pestilential diseases, that sanitary conditions of the vessel are good, signed Master's name.

If chloride insufficient on board, will arrange delivery at Zona Comun (ex-Buenos Aires Roads) (or at first Atlantic port).

Provided ballast water has been chlorinated, we can obtain permission from the authorities to pump out ballast after inspection in port, if so required.

Liquid chlorination is also acceptable.

Yellow Fever: The vaccination certificate is valid for 10 years, as from the tenth day of inoculation. It is required for all persons coming from:

Africa: Angola, Ghana, Kinshasa, Nigeria, Sierra Leone, Sudan.

South America: Brazil (territories of Roraima and Boa Vista), Colombia (Bolivar, Simiti, Boyaco and Paz de Ariporo).

Inflammables: It should be borne in mind that vessels carrying over 25 tons and under 100 tons of inflammables, explosives, etc., must be inspected in the roads before entering whether they have asked for Free Pratique by radio or not, although this is still advisable as the one inspection is independent from the other.

CLASSIFICATION OF ARGENTINE PORTS: In accordance with Article 31 of the Pan American Sanitary Code, the National Health Department has classified the Argentine ports as follows:

Clean Ports Class A – Buenos Aires, Rosario, Santa Fe, La Plata and Bahia Blanca.

Clean Ports Class B – San Nicolas, San Lorenzo, San Martin, Villa Constitucion and Concepcion del Uruguay.

Clean Ports Under the Vigilance of the Health Department – Mar del Plata, Necochea and Diamante.

A clean port, in general, requires the absence of non-imported cases of cholera, yellow fever, pest, exanthematic typhus or any other contagious disease of a serious epidemic nature, that may be carried through international trade. The clean ports of Class A have competent staff and suitable sanitary equipment, also bacteriological laboratories, registers of disease and deaths, lazarettos, etc.

The clean ports of Class B are those that have not got all the equipment required for Class A.

FLAG: The flag of the Republic is three horizontal and equal bands of which the centre one is white, and the upper and lower, sky blue.

The official colours, flown by Naval vessels and all official entities are distinguished by a rising golden sun in the centre of the white.

All foreign merchant vessels must fly the Argentine flag from the highest mast while in territorial waters and ports, and fly their own national colours from the ensign staff.

PILOTAGE: A. *Ordering:* For Recalada Station, minimum 48 hours in advance, for all other services Agents of the vessels to be piloted must apply, in writing, to the Pilotage Section of the Prefectura at their domicile before 1700 hrs. on the day before the service is to be effected, or on Sundays/holidays, before 1100 hrs. Pilots are obliged to render service in strict turn, in accordance with the register in the zone.

Applications for Pilots presented outside the hours established will be accepted but they will be classed under the headings of "Extraordinary" or "Urgent" applications. Pilots should always be ordered by the Agency; only in exceptional cases may a Pilot be requested direct by a Master, when by reasons of force majeure, or change of destination arrival is unforeseen. Vessels which are unaware of their Agents name may also request a Pilot direct. In such cases the request should be made direct, by radio, to the Prefectura with full explanations of the circumstances.

B. *River Plate Zone:* There are 3 Pilot Stations in this Zone, namely; Port of Buenos Aires, Intersection and Recalada.

(i) Inwards from sea. Inward vessels for up river ports Buenos Aires or La Plata have to take a Pilot at Recalada, and must give 48 hours advance notice of arrival, both to Agents in Buenos Aires and direct to Recalada, call sign LSR 500 kHz (600 m.) Type A1, A2.

The operator is on duty from 0800 – 1000 hrs., 1200 – 1400 hrs., 1600 – 1800 hrs. and 2000 – to 2200 hrs. Communications can also be made on 462 kHz (649 m.).

The second Pilot Station is at Intersection Km. 37 measured out of Buenos Aires.

The Recalada Pilot takes all vessels to Intersection only, where another Pilot comes aboard, as follows:

– if bound for Buenos Aires, a Port Pilot.

– if bound for La Plata, a river Pilot to La Plata Roads where at La Plata Port Pilot takes over.

– if bound for upriver, a River Pilot.

(ii) Outwards to Montevideo. Vessels sailing from Argentine Plate ports to Montevideo must take an Argentine Pilot up to Montevideo Roads, not drop him at Recalada.

(iii) Inwards from Montevideo. Vessels arriving from Montevideo come in charge of a Uruguayan Pilot to Intersection, where the second Pilot takes over as above: Uruguayan Pilots, when in Argentine waters are subject to all Argentine laws and regulations.

(iv) Outwards to sea. Outward bound vessels (except for Montevideo) are obliged to disembark their Pilots at Recalada, except when prevented by weather, in which case the Pilot must land at first available port and his travelling expenses back to Buenos Aires are for vessel's account.

Notice: Issued by the River Plate Pilot Association.

Information for Masters

We, the River Plate Pilot Association, welcome Masters and crew members visiting our country and wish them a pleasant stay. We also feel that in order to improve the fluent traffic of all merchant ships, it is convenient to inform Masters about some regulations connected with Pilots as well as recommend them to follow such procedures as:

(1) *Pilot's Category:* Argentine Regulations state that Pilots have the same rights and category as Masters of merchant vessels and thus share the same prerogatives. Accordingly, the Pilot is entitled to the use of a cabin of his own during his stay on board. When vessels have a special cabin for the Pilot, no problem exists. But if this special cabin is not available, another cabin with appropriate facilities in adequate condition of hygiene and cleanliness should be supplied.

(2) *Arrangement for Embarking and Disembarking Pilots:* Strict observance of IMO Rules and Argentine Regulations should be kept regarding:

(a) distance from sea level to the point of access to the ship's deck.
(b) firm resting of accommodation ladder against ship's side.
(c) absolute clearance of all discharges.
(d) horizontal position of platforms.
(e) proper security and tightness of angle slope, stanchions, rigid handrails or handgrips.
(f) adequate lighting at night-time.
(g) the obligation of an officer to be always present to supervise all these procedures, maintaining radio contact with the bridge of the ship.

If any of these recommendations were not strictly followed, the Pilot may refuse to board the ship.

(3) *Duration of Pilotage:* Masters should be advised that according to present Argentine Regulations the duration of the pilotage for a Pilot who is working alone is 6 hours. If the latter evaluates he can finish his duty, from the moment he goes to the bridge till he reaches his destination, in a period of no more than 8 hours, he will remain on duty. Otherwise he may anchor the vessel and rest for 6 hours. If the speed of the ship is such that the total duration of the pilotage is more than 8 hours and the lost time at anchor for the Pilot's rest is desired to be avoided then *2 pilots should be engaged.*

(4) *Trim by the Stern:* Masters of loading ships should take into consideration that later, when the ship is underway from "Zona Comun" to "Recalada Pilot Vessel", it should be possible to trim the vessel no less than 0.45 m. (1 ft. 6 in.) by the stern or more in accordance with the Pilot's requirement. This will permit the ship to continue her journey with the convenient tide and avoid her staying at anchor for a very long period of time, given that with even keel it is imperative to wait for an extraordinary High Tide due, mostly, to strong Southerly winds.

C. *River Parana Zone:* Comprises the River Parana from the port of Parana (Km. 600 from Buenos Aires) down to its mouth, and that part of the River Plate limited to the East by its left bank to Punta Negra (Uruguay), thence to Intersection, to the South by the North bank of the access channel to Buenos Aires Port, to the West the right bank of the River Plate from the entrance to Buenos Aires port to Kilometre 0 of the River Uruguay.

On the River Parana, on distances exceeding 200 km. two special Pilots must be ordered, and therefore there will be 4 Pilots on board (2 special and the 2 on turn), and the vessel has to pay for each of them, i.e. 4 times the tariff.

For distances of less than 200 km., the same ruling applies when continuous navigation is requested, which necessitates the employment of 2 Pilots on turn. However, when only 1 Pilot is asked for, only 1 special Pilot is nominated, if specially asked for, and consequently the tariff is double.

(i) Northbound: Pilots for navigation through this zone go on board, Northbound, at Intersection, whatever the destination. If for Uruguayan ports in the River Uruguay, the Uruguayan Port Pilot comes on board off Parana Bravo.

(ii) From River Uruguay. Vessels from River Uruguayan Ports, either Argentine or Uruguayan, change their River Uruguay Pilot for River Parana Pilot at the mouth of the Parana Bravo. However, if proceeding from a Uruguayan port, it is preferable to send the Parana Pilot to the Uruguayan port, and drop the Uruguayan Pilot off Nueva Palmyra. In certain cases the Argentine Parana Pilot can also come aboard at Nueva Palmyra.

(iii) Inside Parana River. There are 2 stations for despatching Pilots in the River Parana Zone; one at Buenos Aires and the other at Rosario. From the port of Buenos Aires Pilots will be cleared to take vessels to the Northern limits of the Zone, as also for vessels anchored at ports or places South of San Pedro, for any destination.

From the Rosario station, Pilots will be despatched to vessels anchored within the Port of San Pedro, and all places to the North of the port, whatever their destination.

At some of the smaller ports in this zone the Prefecture will, to avoid delay to the vessel, authorise the River Pilot to berth the vessel. This request must be made when ordering the Pilot, but Agents at the river port must also apply for a Pilot, and see that he is employed if available.

Draft is ruled by the depth of water at Martin Garcia Bar, which is at present 24 ft. 6 in. at zero. This varies, and from time to time the Prefecture has authorized clearance of vessels up to 27 ft. Occasionally it happens, in spring, that there is less water in the river above Martin Garcia, but the Weekly Bulletin issued by the Authorities covers this and all determining depths on the river routes.

(iv) To Montevideo. Vessels proceeding down river to Montevideo, take a Pilot at Intersection to Montevideo Roads, where a port Pilot boards.

(v) To La Plata. Vessels from up river ports for La Plata drop their River Pilot at Intersection, take another River Pilot to La Plata Roads (optional) and then a Port Pilot there.

The following are extracts from telexes received by a Master from the vessel's Agent (September 1992).

1. Recalada Pilots do not charge overtime costs.
2. Depth between Km. 12 and Km. 42 of the Mitre Channel is 8.06 m. Navigation width at Km. 34.8 is 60 m.
3. The Master is the responsible party with regard to the decision as to where to anchor to await daylight. He should advise Pilot on this matter when Pilot boards. Pilot will then advise best location, so as not to obstruct navigation of other vessels.
4. Pilotage service is now privatised.
5. River Parana Ports: Pilots advise that max. sailing draft is 29 ft. 06 in. for vessels of 225 m. LOA, navigating downriver through Mitre Channel.

   NOTE: Agent recommends 28 ft. max. draft as vessels have gone aground and river is not being dredged.

D. *River Uruguay Zone:* Comprises the River Uruguay from Concepcion de Uruguay, Km. 188 to its mouth, and that part of the River Plate mentioned under the Parana River Zone. All Pilots for this Zone will be despatched through the Buenos Aires Station.

E. *Bahia Blanca Zone:* Comprises the Bay from a line joining the buoys at Punta Tejada and Punta Lobos, up to the ports. There is no pilot vessel on station. The ordering of Pilots for the Bahia Blanca Zone is effected by the Overseas and Coasting Office at that port. As the official tug for taking Sea Pilots to meet incoming vessels is sometimes out of commission, Masters are requested to advise their Agents of the ETA 48 hours in advance. The cost of a special tug is heavy, and on occasions a saving can be made sharing expenses if the tug can take out Pilots for other incoming vessels, and also embark those from vessels outward bound from Bahia Blanca.

F. *Southern Ports:* South of Bahia Blanca and as far as Rio Grande pilotage is obligatory in port, when a vessel requires a Pilot, application should be made to the Pilots' Office of the Naval Prefecture through vessel's Agents in Buenos Aires with at least 5 days advance notice. They go on board either at Buenos Aires, off Mar del Plata, or at other ports as required, and are authorised to operate in all of the Southern ports: San Antonio del Oeste, Madryn, Commodoro Rivadavia and the adjacent oil berths, Deseado, San Julian, Santa Cruz, Rio Gallegos, San Sebastian, Rio Grande and Ushuaia.

Their duties are to act as Port Pilots for entering, mooring, unmooring and leaving any of these ports.

Vessels from South Atlantic Argentine ports, for Montevideo should pick up an Argentine Pilot from Recalada to Montevideo Roads, but if such vessels pass further than 5 miles away from Recalada Lightship and pass direct to Montevideo Roads, there is no such obligation.

G. *Embarking/Disembarking:* Accommodation ladder. The gangway should be lowered to about 3 m. above the surface of the water, and adjusted in such a way that the Pilot only needs to climb the rope for this distance, in order to step on to the gangway. This rope ladder must have all the steps resting firmly against the side of the ship, in accordance with the requirements of the Safety of Life at Sea Convention. Similarly, the gangway must rest against or be secured to the side of the vessel, and Pilots may refuse to board if these conditions are not complied with.

RADIO: All times are given in GMT unless otherwise specified.

Storm Warning, Met. Situation, Weather Forecasts and Notices to Mariners: Are transmitted in clear (A1) in Spanish and then English, daily, from the following stations:

General Pacheco Buenos Aires	LSV	3220.5 kHz	0.5 kW 0130 hrs.	Storm warning Met. resume
	LSV 2	5907.5	0.5 kW	Forecast
	LSV 4	12100	1 kW	
	LSV 5	17520	1 kW	

and again at 1600

while LPD 5 transmits the same information on 512 kHz (5 kW) at 0148 and 1630 hrs.

The weather forecast covers the zone from Rio de Janeiro to Drake Strait and is valid until 1200 hrs. of the next day. The word "nil" is used if there is no information to report, as for example in storm warnings.

Vessels at sea can request a forecast and state of the weather at any time from Meteoro Baires, through Pacheco – LPD on 4177, 4187, 8354, 8374, 11531, 12561, 16708, 16748, 22220 and 22270 kHz.

Radio Trelew	LPZ	20	527 kHz	3 kW	at 1730
Radio Comodoro Rivadavia	LPX	2	474 kHz		at 0400 and 1800 as above.

Vessels at sea in this area can request a forecast from Meteoro Comodoro Rivadavia through LPX 2.

Notices to Mariners and Urgent River Notices: Are transmitted in Spanish and repeated in English by Radio Pacheco and Radio Comodoro Rivadavia.

Radio	LPD 5	512 kHz	5 kW	A2 at 0030 hrs. Plate Area
Pacheco	LPD 6	4268 kHz	0.25 kW	A1 at 1230
Comodoro	LPX 2	474 kHz	3 kW	A2 at 1330 2000
Rivadavia	LPX 27	4428.6 kHz	0.5 kW	A3 at 0400 0800 1200 2100

This station only reports on Lat. 42° S. to 52° S.

In both cases messages are repeated twice at intervals of 1 minute at the times indicated. Notices are repeated daily during 6 days from publication, preceded by the signal TTT, followed by the number of the notice, the letter R and then the text in this sequence:

Zone, sea, river, province, locality, etc.

Lat. and Long. if necessary.

News in question.

Sign off with SHN to indicate the authority (Servicio Hidrografia Naval).

If there is no notice to transmit, the stations will transmit "no hay avisos para navegantes", "no notices for mariners".

Notices to Mariners, and Other Items, in Spanish Only: Notices to Mariners and other special information are given in Spanish only as follows:

Rosario – LSQ 38, 477 kHz, A1, at 1305 hrs.:

Depth of water in the Parana River from Los Pajaros to Los Ratones and also the minimum depth between Santa Fe and Rosario.

Concepcion del Uruguay – LSQ 57, 477 kHz, A1, 0.5 kW at 1300 hrs.:

Information on the Uruguay River from San Javier to Gualeguaychu.

Buenos Aires South Dock (Darsena ur) – LSQ 9, 477 kHz, A1, 1.5 kW at 0400, 0500, 0600, 0700, 0800, 0900, 1000, 1100, 1200, 1300, 1400, 1500, and 1545 hrs. except on Sundays and holidays.

Depth of water on the gauge at Riachuelo.

Buenos Aires Central de Comunicaciones (Prefectura Naval Argentina) – LSQ 4, 524 kHz, A2, from 05 to 10 minutes each hour:

Depth of water indicated by the semaphores at Puerto La Plata and Riachuelo, and of the El Codillo Zone of the Punta Indio Channel referred to zero on the Oyarbide Tide Gauge which is between pairs of Buoys 24 and 25 in the Main Channel, and the new tide gauges referred to under "Buenos Aires", Tidal Signals.

Buenos Aires, Meteo (All A1) – LSV 3220.4; LSV 2, LSV 6, 5907.5; LSV 4, 12100; LSV 5, 17520 kHz at 1705 hrs.

Depth on the River Plate, River Parana, River Paraguay and River Uruguay zones. Buenos Aires, Radio Nacional LRA 870 kHz, A3, at 0100, 1100, 1500, 1800 and 2100 hrs.

Depths of water and met. forecast for River Plate Zone, this station also transmits tidal forecasts at 0100, 1000, 1315, 1600, 1900 and 2200 hrs.

Intersection River Plate – LOI, 524 kHz, A2:

Continuous information on local depths of water, on request.

Recalada – LSR, 524 kHz, A1:

Same as Intersection.

Buenos Aires, Central de Comunicaciones (Navy) – LOL 457.2, 2162.5, 4856, 8030, 13101, 17180, 22840 kHz, A1, at 0230, 0300, 1300, 1330, 1930 and 2030 hrs.

Urgent Notices to Mariners, and Notices to Mariners covering the Argentine Coast and river systems.

Santiago River (La Plata) – LOM, 524 kHz, A2,

from 05 to 10 minutes each hour:

Depth of water on the semaphore at La Plata.

From 10 to 15 minutes each hour:

State of tides in El Codillo Zone of Punta Indio Channel, referred to zero on the Oyarbide Tidal Gauge (between pairs of Buoys 24 and 25).

All Atlantic ports also transmit local Notices to Mariners and weather forecasts in Spanish, the call signs and frequencies are indicated under each individual port, but between the powerful stations at Pacheco (Buenos Aires) and Comodoro Rivadavia, the whole coast is covered by the regular nformation given in both Spanish and English.

Facsimile Reports: Buenos Aires also transmits facsimile reports, of which the following correspond to surface forecasts, valid for 24 hours, and weather on Mercator projection.

		0800/0815 and 2000/2015 hrs.
From station	LRO 69	5185 kHz
and	LRB	10720 kHz

both of F4, white and black with a variation in frequency of plus 400 minus 400 – 5 kW and referred to observations made 8 hours earlier.

From the Antarctic, the Argentine Met. Station at the South Orkney Islands transmits an analysis of the Atlantic area at 0300 and 1700 hrs. from LOK on 4250 kHz and 13051.5 kHz.

Traffic Control and Safety at Sea: The Prefectura Naval Argentina, in charge of shipping activities including safety at sea, maintains a control centre at Buenos Aires, and another at Mar del Plata (where several hundred fishing vessels operate).

Objectives are to prevent collisions at sea or groundings and to keep a safe, expedite and orderly flow of traffic, as well as to alert safety and salvage systems when vessels need assistance.

A – The Controlled Area, from Buenos Aires, covers from parallel 57° W passing through pair of Buoys No. 21 in the Main Entrance Channel to a line from San Isidro (Buenos Aires) to the mouth of the Parana Guazu River.

The Centre is on permanent duty in the following VHF-FM channels:

16 frequency	156.8 MHz	for calls, assistance, urgency and safety.
12	156.6	notices to mariners.
14	156.7	annex to Channel 12.
6 and 8	156.3/4	bridge to bridge use.

Information all vessels in the area, both foreign and national, must inform the Centre of the following:

1. On entering the systems.
2. On leaving the systems.
3. On crossing Km. 57 in the main channel.
4. On arriving at Intersection.
5. On crossing Km. 11 of the Access Channel to/or from Buenos Aires.
6. When anchoring, mooring or unmooring.

In each case, except 2 and 6, they will give the estimated hour of arrival at the next point en route.

Vessels will also report, on Channel 16, the following:

(a) Accident or fire on board.
(b) Sighting another vessel in apparent difficulties.
(c) Sighting any dangerous obstacle to navigation.
(d) Any serious reduction in visibility.

They will also advise, on Channel 12, as soon as possible, if any mark, light or navigational aid is damaged, missing, functioning badly or evidently out of position. Vessels must keep constant watch on Channel 16 from entering the zone to leaving it, and immediately after using any of the other channels will continue to listen on Channel 16. If, for any reason, this is not possible, they will report this to Control Office by Channel 12.

The Centre transmits as routine information urgent Notices to Mariners, ruling weather conditions every 4 hours from 0000 hrs. and depth of water at El Codillo, La Plata Port, Riachuela and Martin Garcia Bar 5 minutes after every hour.

Also tide and met. forecasts at 0900 and 1500 hrs. Storm warnings, visibility reports and obstructions in channels will be transmitted immediately on being reported, and then included in the next routine transmission.

Information can be requested from the Centre at any time.

The Administration procedure is that figuring in the International Union of Telecommunications and/or the Manual for the Use of Mobile services.

Time used in this service is local Argentine time, i.e. GMT minus 3 hours.

Language: Personnel on duty in the Control centre will use only Spanish.

If necessary recourse can be had to the Code groups in the International Signal Code in use, and the spelling and lettering tables therein, or to Code Q.

B – Mar del Plata Centre controls the area from 35° 30′ S. to 41° S. In this zone the system is voluntary for foreign flag vessels. The Centre operates on the following frequencies:

	Coastal Frequency (kHz)				*Ship Frequency (kHz)*			
One:	Type	A3	H	2182	LSO	20	2182	a
				2100	LSO	69	2100	d
				4409.4	LSO	70	4410.8	f
				8754.4	LSO	71	8220.4	g
				13189.5	LSO	72	12410.5	i
	A1	A2		500	LSO	20	500	
	A1			437	LSO	20	437	
				4325	LSO	21	4325	
				12728	LSO	57	12728	

Two: The Mar del Plata Centre maintains a continuous listening watch on:

A1	A2	500	kHz	LSO	20
A1		4325		LSO	21
A3	H	2182		LSO	20
		4110.8		LSO	70
		8220.4		LSO	71

and also listens from 00 to 05 minutes each hour on A1 12728 kHz and from 45 to 50 minutes every hour on A3 H on 2100 and 12410.5 kHz.

Vessels can use any of the frequencies listed under "one" after calling any of the frequencies in "two". In radiotelephony, except for frequencies 2100 kHz and 2182 kHz traffic will be routed in semi-duplex as per frequency pairs as indicated in "one" f, g and i.

In this are Notices to Mariners and Safety information will be transmitted as follows:

A3	H	2100	8754.4	0005 and 0505	Argentine time (GMT −3)
		4409.4	7854.4	0805	Argentine time (GMT −3)
		4409.4	13189.5	1205 and 1605	Argentine time
A1		437	4325	0100 and 0600	Argentine time
		4325	12728	1300 and 1900	Argentine time

Storm warnings or other urgent information will be transmitted in A3H and A1 on 500 kHz and 2182 kHz.

Information: Vessels on entering or leaving the zone will indicate:

1. Position, course, speed, whence proceeding, whither bound.
2. Sailing from or entering ports in the area.
3. Report geographical position every 12 hours counted from time of first advice, giving course and speed.
4. Any change in course or speed which alters the normal route and time at which it occurred.
5. Anchoring in or leaving the area.

Happenings: All vessels will immediately advise the centre of:

(a) Accident or damage to own or another vessel.
(b) Sighting any object dangerous to navigation.
(c) Any serious reduction in visibility, or unfavourable meteorological conditions.
(d) Having observed if any lighthouse, beacon, buoy, etc., is not working properly or is out of its correct position.

Language and Time: As in River Plate Centre.

Time Signals: Time signals are transmitted from LOL Buenos Aires as follows: frequency 475.5, 2162.5, 4856, 8030, 13101, 17180, 22840 kHz, A1. at 0100, 1300 and 2100 hrs. GMT, using the modified modern American system, with dots every second from 54.30 to 54.50, a dash of 8 seconds ending with 4 half-second dashes, every minute to the hour, ending with a dash.

LOL also transmits on 5, 10 and 15 MHz simultaneously in A1, A2, A3. Carrier waves are modulated in 1000 and 440 kHz alternately.

Signal consist of dots every second, omitting the 59th second, and with 1 second interval before the next period commences. Transmissions is from 0800 to 0900, 1100 to 1200, 1400 to 1500, 1700 to 1800, 2000 to 2100, and 2300 to 2400 hrs. Argentine time (GMT minus 3 hours daily), except Sundays and national holidays.

At the end of each period of transmission the call sign is given in morse, and before each period the words Observatorio Naval Argentino are followed by the hour and minute corresponding to the commencement of the next signal.

Modulation on 440 kHz corresponds to the note LA of the fifth octave in the musical scale.

D/F BEACONS: A number of radio beacons specially for shipping have been installed down the coast, in addition to the air beacons which can also be used, though with less accuracy.

There are 8 beacons, and 18 aerial beacons in use as follows:

Practicos Recalada – Lat. 35° 10′ 06″ S., Long. 56° 15′ 00″ W. range 150 miles (on the lightship) frequency 320 kHz, A2.

Signal PR once 9.7 secs., followed by silence 2.3 secs., a long dash 17 secs., silence 1 sec. dash 17 secs., silence 1 sec. PR repeat the cycle, PR again and final silence 14.3 secs., making a period of 120 secs. (2 mins.).

In good weather there are 2 transmissions every 2 minutes, from 02 to 08 and 32 to 38 minutes each hour.

In fog, one 2-minute transmission every 4 minutes from 02 minutes.

Punta Mogotes – Lat. 38° 05′ 32″ S., Long. 57° 32′ 28″ W. range 120 miles. (On the lighthouse) frequency 295 kHz, A2.

Signal PM once 9.8 secs., followed by silence 2.2 secs., dash 17 secs., silence 1 sec., dash 17 secs., silence 1 sec. PM and repeat cycle. PM again, final silence 14.2 secs., total period 2 mins. of the hour.

In good weather 2 transmissions as from 06 and 36 minutes of the hour.

In fog, continuous commencing on the hour.

Bahia Blanca – (On the Recalada Lighthouse) Lat. 38° 59′ 33″ S., Long. 61° 15′ 38″ W. range 350 miles frequency 310 kHz, A2, 0.2 kW.

Signal BB 9.8 secs., silence 2.2 secs., dash 17 secs., silence 1 sec., dash 17 secs., silence 1 sec. BB and repeat cycle, then BB and final silence 14.2 secs., total period 2 mins.

In good weather 2 transmissions 4 mins. apart from 04 and 34 minutes after the hour.

In fog, 1 transmission every 4 mins. from 04 each hour.

Bahia Blanca – (On the Light Buoy El Rincon) Lat. 39° 23′ 12″ S., Long. 62° 00′ 48″ W. range 200 miles, frequency 310 kHz, A1 and A2, 0.15 kW.

Signal RN once, 7 secs., silence 2 secs., 2 long dashes 41 secs., silence 2 secs. RN repeat cycle, but 1 sec. first silence after signal then as before repeat RN and final silence 250 secs., total 6 mins.

In good weather, 2 transmissions from 02 and another 2 from 32 minutes of each hour.

In fog continuously from 02 each hour.

Bahia Blanca – (On the Segunda Barranca Lighthouse) Lat. 40° 47′ S., Long. 62° 16′ W. approx. range 200 miles, 310 kHz, A2.

Signal SB 9.7 secs., silence 2.3 secs., dash 17 secs., silence 1 sec., dash 17 secs., silence 1 sec. SB and repeat cycle, repeat SB final silence 14.3 secs., total period 2 mins. In good weather, 2 transmissions every 30 mins., at 00/02 06/08 30/32 and 36/38 minutes on the hour, in fog, every 4 mins. 00/02, 06/08, etc.

Punta Delgada-Los – Lat. 42° 46′ 00″ S., Long. 63° 38′ 00″ W. range 200 miles, frequency 315 kHz, modulation 1000 kHz modulated A2 signal PD 9.7 secs., silence 2.3 secs., long dash 17 secs., silence 1 sec., long dash 17 secs., silence 1 sec. PD repeat cycle, PD final silence 14.3 secs. total period 2 mins., good weather 4 transmissions every hour at 04, 10, 34 and 40 minutes after the hour. In fog, 2 mins. transmission and 4 mins. silence from 04 of the hour.

San Gregorio – Lat. 45° 01′ 30″ S., Long. 65° 37′ 51″ W. range 200 miles, frequency 295 kHz, A2, 2 kW.

Signal IL 9 secs., silence 3 secs., long dash 17 secs., silence 1 sec., long dash 17 secs., silence 1 sec., IL repeat cycle. IL final silence 15 secs., 2 mins. period in good weather 4 times every hour, 2 mins. each from 00, 06, 30 and 36 after the hour.

In fog, one 2 minute transmission and 4 silence, from 00 in the hour, but fog transmission temporarily suspended.

Cabo Blanco-Loa – Lat. 47° 12′ 12″ S., Long. 65° 44′ 33″ W. range 200 miles (on the lighthouse) frequency 295 kHz, A1, A2, 0.15 kW signal CB 12 secs., 2 long dashes 37 secs., CB repeat cycle CB final silence 250 secs., total period 6 mins. Good weather, twice from 08 and twice from 38 minutes after the hour; fog, continuously from 02.

Temporarily out of service.

Medical Advice: Medical consultations can be made, without charge, from vessels at sea with urgent illness or accidents on board. Messages should be brief, but clear and concise, describing the symptoms of the illness with all possible details, including age and sex of patient and informing what first aid equipment is available on board.

For priority, messages should be preceded by the urgent signal XXX and be signed by the Master of the vessel.

The Medical section of the International Signals Code, 1931, Volume 2, can be used, as also clear language if it is necessary to amplify the message.

Messages should be radioed to "Consulta Radiomedica" followed by the name of the coastal station used.

All consultations are gratuitous, they must be composed in Spanish, and indicate in this order:

Sex; Age; clinical antecedents; symptoms leading to the consultation; probable cause of the illness or conditions in which accident occurred; any other data which could assist diagnosis and facilitate treatment, such as pulse rate, temperature (in Centigrade) character and appearance of the wound, etc., and informing what first-aid equipment is on board.

The following stations at Buenos Aires give continuous service for this purpose:

LPD	4	44.5	kHz	A1	A2
LPD	68	4268	kHz	A1	
LPD	86	8646	kHz	A1	
LPD	32	13002	kHz	A1	
LPD	46	17045.6	kHz	A1	
LPD	91	22419	kHz	A1	
LPD	44	4434.5	kHz	A3	
LPD	8	8811.5	kHz	A3	
LPD	9	13180	kHz	A3	

The Following Beacons, all on A2, may be of assistance

		Lat.	*Long.*	*Freq. (kHz)*	*Time*
Bs. Aires, Aeroparque	OP	34° 31′ 18″ S.	58° 29′ 00″ W.	260	continuous
Bs. Aires, el Palomar	PAL	34° 37′	58° 36′	400	from sunset, on req.
Bs. Aires, Moron	MOR	34° 40′	58° 38′	355	continuous
Bs. Aires, Ezeiza	EZA	34° 49′	58° 32′	365	continuous
La Plata	PTA	34° 53′	57° 56′	250 or 275	continuous
Punta Indio	PDI	35° 18′	57° 16′	325	09/2300
Dolores	DOL	36° 20′	57° 42′	235	on request, range 120 miles
Bahia Blanca	BCA	38° 43′	62° 12′	330	daylight only, not Sundays/holidays, range 250 miles
Comandante Espora	EPO	38° 45′	62° 10′	370	daylight
San Antonio Oeste	SAO	40° 44′	64° 58′	220	daylight
Trelew	TRE	43° 14′	65° 19′	205	daylight, range 300 m.
Comodoro Rivadavia	CVR	45° 47′	67° 30′	230	daylight, range 230 m.
Puerto Deseado	ADO	47° 44′	65° 55′	210	continuous
San Julian	SJU	49° 18′ 30″	67° 46′ 30″	375	occasional, range 150 miles
Santa Cruz	SCZ	50° 01′	68° 34′	245	occasional, range 250 miles
Rio Gallegos	GAL	51° 37′	69° 17′	330	09/2300 350 miles
Rio Grande	RGN	53° 47′	57° 40′	365	on request
Ushuaia	USU	54° 49′	68° 19′	235	on request 200 miles

TUGS: Use of tugs compulsory. Exceptions may be made to vessels with bow thrusters.

Working Hours at Ports of the Interior: The working hours for towage services during the week are from 0700 – 1700 hrs. Saturdays 0700 – 1100 hrs.

Ordering of Towage Services: For a service to be performed during working hours this must be ordered 3 hours beforehand, and up to 1600 hrs. on working days and 1200 hrs. on Saturdays. In Bahia Blanca and other ports this is up to 1100 hrs.

Commencement of the Service: There is 30 mins. grace without surcharge.

Overtime Rates: Working days from 1900 – 0700 hrs., 40 per cent. extra. Saturdays 0000 – 0700 hrs., 40 per cent. extra. At Buenos Aires and Bahia Blanca 1300 – 2400 hrs., 40 per cent. extra. At other ports 1100 – 2400 hrs., 40 per cent. extra. Sundays and Holidays 0000 – 2400 hrs., 80 per cent.

Surcharges for Delays: These will be applied per hour or fraction of about 15 mins.

Cancellations Without Charges: In Buenos Aires it is possible to cancel a service 3 hours beforehand, and at Bahia Blanca 2 hours beforehand during working days. At other ports 1 hours' notice is required.

Cancellations With Penalty: There is a charge of a minimum of 1 hour for services ordered during working days and cancelled. On Saturdays, Sundays and Holidays, the minimum charge is 2 hours.

LOAD LINE: Vessels are permitted to load to their Summer marks all year round at all River Plate Ports as well as Atlantic ports as far South as Cape Tres Puntas; inclusive (Lat. 47° 06′ S., Long. 65° 05′ W.) and provided they are Northbound or Eastbound. All ports in the River Parana, River Uruguay and the River Plate proper are fresh water.

With regard to Loaded Draft, the mean draft and not the maximum must be taken into account, and this should not exceed the Load Line marks.

On the mean draft an allowance will be made equal to the weight of the fuel vessel will consume until it reaches the Sea from up-river ports. No allowance is given to vessels leaving Buenos Aires or La Plata.

LIGHTENING ANCHORAGE: Vessels wishing to lighten cargo and perform topping-off operations may do so in the following positions:

Position No. 1	Lat. 34° 42.0′ S.,	Long. 57° 57.2′ W.
Position No. 2	Lat. 34° 44.1′ S.,	Long. 56° 48.0′ W.
Position No. 3	Lat. 34° 46.0′ S.,	Long. 56° 48.0′ W.
Position No. 4	Lat. 34° 43.9′ S.,	Long. 57° 57.2′ W.

For ships performing such operations in the River Parana, after passing Martin Garcia, the respective zone is between Km. 172 and Km. 173 in the River Parana Guazu, outside the channel. It is forbidden for ships not lightening or topping off to anchor at these points.

SPEED: Maximum Speed in Ports, Channel and Rivers: Vessels operating in the proximity of an open port, close to quays or loading places where other vessels or barges are operating, will reduce speed to a maximum 6 knots.

In particular this refers to

Rosario	between Saladillo and Punta Barrancos (La Florida)
San Nicolas	between Km. 347 and 351
Ramallo	between Km. 322 and 326
Zarate	between Km. 104 and 111
Campana	between Km. 96 and 98

FUMIGATION: *(a) Exemption:* Vessels of foreign registry will be fumigated when proof is not shewn that fumigation has been effected by competent authority, and in a port duly authorised by the International Office of Public Hygiene, or that they have been exempted from such operation by the Health Ministry at authorised ports, within the last 6 months. Vessels arriving with an expired Fumigation or Exemption Certificate, will be fumigated except where a request of 1 month's grace is made to allow vessel to return to home Country or a request is made for an inspection. Should the vessel be in either case in a sanitary condition and have *no trace of rats,* an Exemption Certificate will be granted.

(b) Certificates are of no value if vessel is not in good sanitary condition. The Authorities will not recognize the validity of any Certificate or issue any Exemption Certificate to those vessels which in the opinion of the National Health Ministry, after inspecting the vessel, are not in a good sanitary condition. Both cyanide and sulphur (Clayton process) Fumigation Certificates are accepted by the Health Ministry.

(c) Permit to Commence Loading of Vessels Ordered to Fumigate: No vessels which have had an annotation on their Free Pratique Certificate to the effect that they must be fumigated or inspected, are permitted to commence loading before these requisites are complied with. To this effect the necessary advice will be passed by the Customs or Port Authorities to the Health Ministry for intervention.

(d) Ports Where Vessels can Fumigate: The sulphur fumigation is exclusively effected by the Health Ministry at the ports of Buenos Aires, La Plata and Rosario. The cyanide process is effected by private companies at practically every port of the Republic, provided sufficient notice is given, as at some ports it is necessary to bring the equipment from other ports.

Masters are recommended to ensure that their vessels are in good sanitary condition and free from traces of rats on arrival. Even although vessels may be given a Free Pratique Certificate, this does not always free vessel from fumigation if on arrival at port of loading, the Authorities discover traces of rats on board. The granting of Free Pratique has, in fact, no relationship to the granting of fumigation exemption, and permission to load.

(e) Weevil: The National Grain Board is very strict on inspecting for weevil on board vessels destined to load grain.

TIDES: Following data indicates the tidal range at Spring and Neaps in feet and tenths of a foot indicating the Argentine chart number on which the respective datum is given, and the height to be added to or deducted from that datum at the various ports, which are given in North/South rotation.

	Springs	*Neaps*	*Chart number*
Martin Garcia	2	0.4	70
Buenos Aires	3.2	0.8	176
Mar del Plata	3.8	1.2	18
Quequen/Necochea	5.2	2	18
Puerto Belgrano (Bahia Blanca)	12.6	6.4	74
S. Antonio Oeste	30.4	11.8	6
Puerto Madryn	18.8	6	92
omodoro Rivadavia	19.6	7.4	30 (plus 0.6 feet)
Puerto Deseado	17.2	6.2	21
San Julian	28	9.2	H 350
Santa Cruz	39.8	9.4	2
Rio Gallegos	39.4	9.6	H 451/2
Cabo Virgenes	37.8	7.4	203 (minus 2.5)
San Sebastian	33.8	9.4	84 (minus 0.7)
Rio Grande	22.6	7.6	67 (minus 2.1)
Ushuaia	5.2	2.2	45
and for comparative purposes.			
Montevideo	0.8	0.4	242 (plus 0.8)
Punta Arenas	5.6	1	British chart 545

DRY DOCKS AND FLOATING DOCKS: There are 2 dry docks at Buenos Aires and 2 at Bahia Blanca, and 5 floating docks at Buenos Aires, with smaller ones available at Rosario and Corrientes.

The 4 dry docks are under the control of the Ministry of Marine as are some of the floating docks, but all are available for merchant vessels, and private repair companies are permitted to carry out work in these Government docks.

(a) Applications for entering either Dry or Floating Docks are the same:

Name and class of vessel; flag, characteristics; NRT as per Register; nature of repairs; estimated stay in dock, date when ready to enter dock; vessels' Register number and plans of the hull for docking.

Tank vessels must also supply a "Gas Free" certificate.

(b) Buenos Aires: The 2 dry docks are at right angles in the North Basin, on the Northeast side and have the following dimensions:

No. 1 493 ft. (150 m.), breadth at top of entrance 66 ft. (19.75 m.) gradient 1: 300.

No. 2 590 ft. (180 m.), breadth at top of entrance 92 ft. (22.10 m.).

Vessels with large beam can only enter if their draft does not exceed 20 ft.

(c) Bahia Blanca.—The two dry docks are in the Naval Dockyard base.

No. 1 is 705 ft. (215 m.) in length, width on sill 72 ft. 6 in. (22.12 m.).

No. 2 is 672 ft. 6 in. in length (closed) (205 m.).

(d) Floating Docks: There are 7 in Buenos Aires, as follows:

	Lifting Capacity	*Length*		*Internal Breadth*	
No. 1	3,500 tons	413′	126.10 m.	56.0′	17.10 m.
No. 2	1,500 tons	300′	91.50 m.	41.0′	12.50 m.
No. 3	750 tons	216′	65.79 m.	44.0′	13.32 m.
No. B	2,800 tons	397′	110.00 m.	60.7′	18.05 m.
No. C	1,000 tons	246′	75.00 m.	51.4′	15.68 m.

All supply cranes, fire fighting equipment, compressed air, water pumps, electric supply – 380 V. and 110 V. AC or 220 V. DC. Telephone, sanitary discharge for ship's bilges and sanitary services on the dock.

FUEL: Bunker stocks of diesel oil are available in bond at Buenos Aires, Bahia Blanca and Montevideo, thus these ports are the most convenient for taking Diesel bunkers. It is available at other ports, but has to be transported by lorry from Buenos Aires. Lorries are unable to go alongside at some of the elevator berths, and there are no oil barges at Rosario, San Nicolas, or Necochea.

At Buenos Aires there are barges of 150 to 550 tons with tanks to carry all classes of oil. If smaller quantities are required transportation can be effected by lorries from the tanks, the cost being cheaper than barging.

Oil can be transported by lorry to any berth in the Port of Buenos Aires.

STEVEDORES: Working hours are officially 0700 – 1300 hrs.; 1300 – 1900 hrs.; 1900 – 0100 hrs. and 0100 – 0700 hrs. From 1900 – 0100 hrs. and 0100 – 0700 hrs. there is a 100% surcharge on Mondays to Fridays, or 200% on Saturdays, Sundays or holidays. On Saturdays the second shift (1300 – 1900 hrs.) and on Sundays/holidays the 2 day shifts (0700 – 1300 hrs. and 1300 – 1900 hrs.) are paid with 100% surcharge.

In Parana River ports, shifts start and finish 1 hour earlier, except at Santa Fe.

It is forbidden for a man to work more than 1 shift daily, unless no other labour is available at the halls, and the Port Captain agrees.

Use of mechanical appliances is encouraged, and when the Port has not sufficient available, the Stevedoring companies hire this to the vessel to speed up operations.

Stevedoring Damage: It is essential that Master and/or Agent leaves on immediate record any damage done to vessel or cargo by the stevedores, in order to assist in recovering the cost of repairs.

Holidays and Non-Working Days: National Holidays: January 1st (New Year's Day), Good Friday, May 1st (National Workers' Day), May 25th (National Independence Day), June 20th (Argentine Flag Day), July 9th (Independence Day), August 17th (Death of Gral. San Martin), December 25th (Christmas Day).

Non-Working Days: Maundy Thursday, December 8th (Catholic Holiday).

Drinking Water. A good supply of drinking water should be available on board, and in hot weather this must be iced.

WATCHMAN: The use of watchmen is obligatory in all ports, and they are the auxiliary delegates of the Maritime Authority. One man per gangway must be placed. Masters may also place a crew member on watch, but in ports where there is an official service the official watchmen must be used. His duties are to control access to the vessel, control the shipment or discharge of prohibited articles, to revise all packages brought on board or landed, see that the moorings are in order, that the gangway is duly illuminated and that rat guards are in place.

WHARF CLEANING: It is the Master's duty to see that the wharf is properly cleaned up before his vessel vacates a wharf. Port Authorities can do this, and charge the Agents of the vessel last berthed with the cost.

HATCHES: Opening and closing normally carried out by the stevedores in each port. All hatches must be kept closed when vessels are not operating, and when leaving port, must be well battened down and covered with two tarpaulins.

RAT GUARDS: All moorings must be provided with regulation pattern rat guards, 80 cm. diameter.

As part of the rat control gangways must be painted white and fully illuminated at night. Fines are imposed for non-compliance.

FENDERS: At all ports, vessel must be boomed off the quay at least 1 m. 50 cm. Any type of fender meeting this requirement will do, but at San Nicolas, special fenders are supplied.

NIGHT LIGHTS: All vessels when made fast must illuminate that side towards the water with at least one screened light. When vessels are double berthed, the one lying second off must comply with this rule. Similarly, vessels moored with either stern or bows to shore must show a light over the anchor chain to seaward. Vessels laid up or being dismantled are exempt from this, but owners are responsible for any resulting damages.

DESTINATION CHANGE: When at sea if there is any change in destination, within the Argentine, Masters must report this by radio to the Marine Prefecture, indicating the reasons for such change.

DESPATCHES: Once despatch is granted, this is valid for 12 hours only, after which period new despatches must be requested, and reasons given for not sailing. In ports where local conditions impose a longer limit, the maximum allowable is 30 hours.

SEAMEN'S INSTITUTES, HOME AND CHURCHES: There is one hostel for seamen, and five institutes operating in Buenos Aires and one in Rosario, as follows:

Stella Maris (Apostleship of the Sea)
Independencia 20 (corner Ing. Huergo). Tel: 33-0832

Open every day. Vessels visited daily. Hotel – Rooms, Meals, Bar. Information – Port Office, Books, Money Exchange, Souvenirs. Amusements – Dancing, table tennis, billiards, television, excursions. Salon Dance – Wednesdays, Saturdays and Sundays.

Religion – Mass every Sunday at 1930 hrs., and in the morning on board ship by request. Confession at all times. Night prayer for all seamen.

Football games arranged. Books freely exchanged.

The Missions to Seamen
Cochabamba 223. Tel: 33-0326

Open daily from 1900 hrs., with dances on Tuesdays, Thursdays and Saturdays from 2100 hrs. Shop, post office, billiards (three tables), snooker, table tennis, television, bar (beer, no spirits), etc.

There is a service of Holy Communion at 1900 hrs. every Sunday. Football games and excursions arranged. Vessels are visited.

Sjomandskirke
Ing. Huergo 1263. Tel: 33-3861

Open daily from 0800 hrs. Library, billiards, table tennis, sightseeing visits arranged, as also football matches. Vessels visited every day.

Church services every first Sunday at 1030 hrs.

Axel Johnson Minne till Svenska Sjoman
Juan de Garay 80. Tel: 33-7304

Open daily from 1800 hrs. Library, sightseeing arranged.

Details of religious services on board of Swedish Church in Azopardo 1428 (round the corner from the Johnson Foundation).

Dansky Kirke
Carlos Calvo 257. Tel: 33-9154

Danish seamen are welcome at the Norwegian Centre, while at the Church the office is open every Tuesday from 2000 hrs. to 2200 hrs. for assistance, and the Young People meet on Tuesdays and Fridays from 2000 hrs. to 2200 hrs., all being welcome.

Church services are at 1000 hrs. every Sunday, and on third Sunday in every month at 1600 hrs.

Finnska Sjomens-Kyrken. Suommerimien Kirkko
San Juan 234. Tel: 33-6797. Open daily 1800 hrs. to 2200 hrs.

Rosario: The Missions to Seamen at Sarmiento 209.

II. *RIVER PLATE PORTS*

Acevedo
Acindar
Atucha
Borghi
Buenos Aires
Buitrago
Campana
Concepcion del Uruguay
Diamante
Ibicuy
Ing. Rocca
La Plata
Ramallo
Rocca
Rosario
San Lorenzo
San Martin
San Nicolas
San Pedro
Santa Fe
Villa Constitucion
Zarate

Distance Table
Montevideo and Buenos Aires to Parana and intermediate ports
Nautical miles

	Montevideo	Recalada Practicos	La Plata	Interseccion Practicos	Buenos Aires	Martin Garcia	Ibicuy	Campana	Zarate	San Pedro	Obligado	Ramallo	San Nicolas	Villa Constitucion	Rosario	San Lorenzo	Grondona	Gaboto	Diamante	Alvear	Santa Fe	Bajada Grande
Recalada Practicos	16																					
La Plata	118	102																				
Interseccion Practicos	108	92	10																			
Buenos Aires	128	112	30	20																		
Martin Garcia	145	129	47	37	57																	
Ibicuy	205	189	107	97	117	60																
Campana	243	227	145	135	155	98	41															
Zarate	238	222	140	130	150	93	36	5														
San Pedro	239	223	141	131	151	94	37	72	67													
Obligado	249	233	151	141	161	104	47	82	77	10												
Ramallo	261	245	163	153	173	116	59	94	89	22	12											
San Nicolas	276	260	178	168	188	131	74	109	104	37	27	15										
Villa Constitucion	285	269	187	177	197	140	83	118	113	46	36	24	9									
Rosario	310	294	212	202	222	165	108	143	138	71	61	49	34	25								
San Lorenzo	326	310	228	218	238	181	124	159	154	87	77	65	50	41	16							
Grondona	343	327	245	235	255	198	141	176	171	104	94	82	67	58	33	17						
Gaboto	348	332	250	240	260	203	146	181	176	109	99	87	72	63	38	22	5					
Diamante	374	358	276	266	286	229	172	207	202	135	125	113	98	89	64	48	33	37				
Alvear	385	369	287	277	297	240	183	218	213	146	136	124	109	100	75	59	44	48	11			
Santa Fe	400	384	302	292	312	255	198	233	228	161	151	139	124	115	90	74	59	63	26	15		
Bajada Grande	406	390	308	298	318	261	204	239	234	167	157	145	130	121	96	80	65	69	32	21	6	
Parana	410	394	312	302	322	265	208	243	238	171	161	149	134	125	100	84	69	73	36	25	10	4

THE RIVER PLATE (See Plan)

The River Plate, or Rio de la Plata, is formed by the rivers Parana and Uruguay, and is one of the greatest river systems in the world, the Basin covering nearly four million square kms. It is some 150 miles long, and the mud and sand in the waters give a thick brownish colour. Tides are small, but the water level is subject to frequent and sudden fluctuations on account of the weather.

The official depth at zero of the long entrance channel from Recalada to the Port of Buenos Aires is presently (this varies slightly from time to time):

	Width of Channel (m.)	*Depth* (m.)	*Alternative Width* (m.)	*Alternative Depth* (m.)
Punta Indio	100	9.20	200	8.00
Intermedio	100	9.75	200	9.15
Paso Banco Chico	100	9.91	200	9.15
Buenos Aires Roads, Km. 37	100	9.75	200	9.30
Access Channel, Km. 37-7.3	100	9.00	—	—
North Channel, Km. 7.3-0.9	100	9.60	—	—
South Channel, Km. 6.2-0.1	140	8.20	—	—

From Recalada Lightship West the Bay is all fresh water.

Vessels drawing 31 ft. or even 32 ft. (fresh water marks) frequently navigate safely. The tidal rise and fall is from 3 ft. to 5 ft., but the state of the river is influenced to a far greater extent by the force and direction of the wind. There is no guarantee that a vessel drawing 31 ft. may not be caught by low water caused by a North wind, which carries the water seawards. Just as a North wind will reduce the depth of water, so a Southerly or Southeasterly wind raises it considerably, often several feet.

Winds from S.W. to E.N.E. through North make the level drop, North being the strongest in this sense.

E.N.E. to S.S.W. winds make the water rise, S.S.E. having the greatest influence.

Between S.W. and S.S.W. or N.E. and E.N.E. the influence of the winds is much less.

Vessels often touch bottom, or even bump slightly, but as the bed of the river is soft mud and silt, one never learns of these ships reporting damage. The Plate Pilots, of course, warn Masters of this not infrequent occurrence. The docks and basins in the port also have soft mud bottoms, except for the entrance between North Basin and Dock 4, and it is quite customary to see vessels lying safely aground when loading or discharging.

RECALADA LIGHTSHIP: Vessels enter the Plate system passing the Recalada Lightship, 16.8 miles South of Montevideo at Lat. 35° 10′ 06″ S., Long. 56° 15′ W. At this point it is obligatory to take an Estuary Pilot, if proceeding West, and a minimum 24 hours' notice must be given both to Agents in Buenos Aires and to Recalada Lightship.

The Recalada Lightship and Pilot Station is a small vessel, whose hull is painted in vertical black and white stripes, 2 m. wide, and with an orange/red housing.

Apart from the usual pilot lights (white above red) there is a lantern on the foremast, with a white flash every 8 seconds (1 second light, 7 seconds eclipse) placed at 19 m. above river level, range 12 miles.

The lightship also has a fog signal, period 30 secs. sounding for 3 secs. and silent for 27 secs.

Radio call sign is LSR on 500 kHz type A1, transmitting in clear every hour from 05 to 08 and 35 to 38 minutes. Operator on watch 08 – 10, 12 – 14, 16 – 18 and 20 – 2200 hrs., also listens on 462 kHz using 437 kHz as working frequency. For ship to ship 468 kHz or 156.3/156.4 MHz. 2182 kHz and 2065 kHz are used in A3 H/J as well as 4125/4239.5 in A1 or 3860.5 in A3, for P 3 156.8 or 156.7 MHz.

Punta Indio Channel

The term "Adjacent Zone" comprises the zones of the main channel of the River Plate which extends 500 m. to either side of the buoy at Km. 57 and Buoy No. 30 at Punta Indio Channel, likewise 300 m. on each side, outwards, of the pairs of buoys marking the Punta Indio Channel between Buoys No. 30 and 1.

Vessels navigating in these zones have equal privileges to those navigating the Punta Indio Channel, which comprises the zone of the general channel of the River Plate between Buoy No. 30 and the Recalada Lightship following the route buoyed for ocean going vessels by the Ministry of Public Works.

Vessels drawing over 24 ft. entering or leaving the River Plate are obliged to traverse the Punta Indio Channel from Buoys No. 1 to 30, and the Adjacent Zones existing between Buoy No. 30 and Km. 57.

Westbound traffic, after passing Buoy No. 30 will leave Buoy No. 31 on the port side, and continue along the North adjacent zone to Km. 57.

Eastbound, when water level permits, after passing Km. 57 will keep to the South adjacent zone as far as Buoy No. 32, then to the North leaving Buoy No. 31 to starboard and then heading for pair of Buoys No. 30. Should the water level not allow this at Km. 57, vessels will follow the North adjacent zone to Km. 66, then take the South zone to Buoy No. 32 and then as above, leaving Buoy No. 31 to starboard.

Vessels drawing 21 ft. and up to 24 ft. inclusive must follow the route of the general channel and the corresponding Adjacent Zones and may make use of the Punta Indio Channel or not, depending on the depths of the river.

Vessels drawing 19 ft. but under 21 ft. must use the general channel of the River Plate and the corresponding Adjacent Zones, but can only use the Punta Indio Channel between Buoys No. 19 and 23 when depth of the river makes this advisable.

Vessels drawing less than 19 ft., wishing to follow the route of the main channel, may do so through the corresponding Adjacent Zones but are forbidden to navigate along the Punta Indio Channel unless there are no other ships in that channel, which by reason of their draft, must navigate there. They must use the adjacent North Zone when Westbound, or South Zone if Eastbound.

Between pairs of Buoys No. 20 and 30 no crossing is permitted in the channel, neither is overtaking allowed. The Eastbound vessel should adjust speed to avoid such crossing with an entering (Westbound) vessel.

INTERSECTION: This Pilot Station, near Km. 37 and 166 km. West from Recalada is on the South side of the principal channel, at Lat. 34° 41′ 04″ S., Long. 57° 57′ 05″ W.

Call sign is now LSP on 500 kHz or other frequencies as for Recalada. Operator on duty from 0800 – 1000, 1200 – 1400, 1600 – 1800 and 2000 – 2200 hrs.

At this point the estuary Pilot concludes his stint, inwards, or takes over outwards, and Port Pilots for Buenos Aires take over or finish. Similarly up river Pilots for vessels bound for Uruguay or Parana Rivers take over or deliver vessels here.

If, owing to the bad weather or force majeure, the launch cannot transfer Pilots, by day the blue flag with the letter "P" normally flown at the fore will be struck, or by night the red and white pilot lights will be extinguished, and a red light exhibited at the stern.

At Intersection vessels anchor while waiting for draft to proceed to the Parana or Uruguay Rivers, as well as those awaiting berth in Buenos Aires.

The holding ground here is not good, being soft mud. All ships drawing more than 15 ft. must, before leaving Martin Garcia or Interseccion outward bound, ascertain the state of the channel from LSP (Radio Interseccion) who will give the departure time, draft, and speed of vessels navigating in the channel. Only after receiving this dual information can Masters and Pilots decide to proceed, and then must communicate time, draft and speed to Radio Interseccion. Vessels drawing less than 15 ft. can navigate freely between Martin Garcia and Interseccion, but must give way to vessels of deeper draft.

INTERSECTION TO MARTIN GARCIA: No vessel may cross the bar drawing more than 7.92 m. (26 ft.) (often less) and with a minimum speed of 10 knots. For those with less than 10 knots but not below 8 knots, vessels of 5,600 tons or over cannot exceed a draft of 6.70 m. (22 ft.) or those of lesser tonnage, 6.85 m. (22 ft. 6 in.).

If speed is below 8 knots but above 5 knots, the maximum draft admissible is 6.1 m. (20 ft.) but such vessels must request a clear channel. Ships of less than 5 knots, and tug convoys will request special permission from the Naval Prefecture.

From Intersection (Km. 38) to Martin Garcia (Km. 106) vessels will anchor near Km. 37 until there is sufficient water, with 1 ft. under the keel and a rising tide or river. If it is calculated that the vessel will have 3 ft. clear through the whole passage, she may leave, but on a falling or stationary river, she must adjust speed to avoid the difficulties between Km. 37 and Km. 79.

From Martin Garcia to Intersection, vessels drawing 22 ft. 6 in. or more will leave when conditions assure 1 ft. 6 in. of water under the keel. It is essential to radio LSP as above to check on tides, etc. Such vessels coming down river must also communicate to LSP the passing of Km. 101 and 38, while those going up river must advise passing Km. 38, 72 and 101.

In the sector Intersection/Martin Garcia vessels may anchor in any suitable place until depth of water permits them to go upstream on a rising river.

No vessel drawing over 4.6 m. (15 ft.) may cross or overtake another between Km. 47/52; 57/72; 83.5/95 and 100/106; Should a crossing appear necessary in any of the prohibited zones between Km. 38 and 79, the ship which commenced to navigate with 6.8 m. (22 ft. 6 in.) and with 0.45 m. (1 ft. 5 in.) under keel will hold back or manoeuvre to avoid crossing, except when the vessels which sailed from Intersection did so on a falling tide. If the crossing were to occur between Km. 83.5 and Km. 96 or Km. 100 to Km. 106 the vessel proceeding upriver will manoeuvre or regulate speed. Nevertheless, if crossing appears inevitable, any vessel affected by such a manoeuvre has the right to lodge a protest on arriving in port or at Intersection.

Vessels drawing 6.7 m. (22 ft.) or more are recommended to cross between Km. 72/74, 80/82 and 96/98. Those drawing less than 6.7 m. (22 ft.) may cross between Km. 52/56 and 98/100 provided that they keep 0.9 m. (3 ft.) beneath their keel.

In any case of grounding which may obstruct navigation, totally or partially, owners must take immediate action to remove the obstruction, including immediate lightening of the ship without waiting for any summary report.

MARTIN GARCIA BAR: The Island itself, in Lat. 34° 11′ S., Long. 58° 17′ W. is an almost circular mass of granite, about 26 m. high and some 3 miles in circumference. Shores are muddy but also rocky.

It commands the entrance to the Rivers Parana and Uruguay, and all vessels using these rivers must pass within 0.5 miles of the shore on the South side, or within less than 1 mile by the Northern Channel. There is an Argentine Naval detachment there.

Important: It is always said that Martin Garcia Bar rules the rivers; this is not strictly correct as, usually in the second half of the year, there may be less water in the stretches above Rosario, and at times even below San Nicolas to San Pedro, where new shallows keep forming which have constantly to be watched. Caution should be used, therefore, from July to January in this connection.

Lighthouse: At an elevation of 38 m. a light is shown from a circular stone tower standing 13 m. high in the centre of the island.

Tidal Signals: These are made from a signal mast placed alongside the lighthouse. See "Plan".

Day Signals: See "Plan".

Night Signals: (White flash)	Cycle: 30 seconds
(Red flash)	Long flash: 2.5 sec. each.
(Green flash)	Short flash: 6/10 sec. each.
White flashes	Rising tide: One long. Falling tide: Two short.
Red flashes	Above zero: For each m.: One long. For each 10 cm.: One short.
Green flashes	Below zero: For each m.: One long. For each 10 cm.: One short.
Green and red flashes	Zero: One green and one red, both short.

Depth of water here varies from hour to hour, with no pattern, and is not dependant on the depth of water in the Parana. The only relation between the River Parana and Martin Garcia and San Pedro Bars, seems to be that with a full and strong river, the water which is blown into the Plate Estuary by Southerly winds against the strong head of the river, makes deeper water than a similar Southerly wind opposed to a smaller stream from the river. Likewise, the water blown out to sea by Northerly winds causes lower depths when the river is running strongly than when it is low. The effect is almost that of a new or full moon on the lunar tides.

It must always be remembered, therefore, that the dominant factors from Martin Garcia seawards are the direction and force of the wind. A Southerly wind will bank up the water, while a Northerly wind will blow it out. There may be, say, 30 ft. in the Parana, with a strong North wind, and less than 20 ft. on Martin Garcia. With the wind in the S.E., the depth at Martin Garcia can rise in a few hours up to 30 ft.

A prudent course is never to attempt to cross Martin Garcia drawing more than 25 ft. even with the river at its highest.

Martin Garcia lies at Km. 99.4 from Buenos Aires, via Intersection, i.e. at Km. 62.4 from Intersection.

Vessels continue North to Km. 140, at which point the Uruguay and Parana Rivers meet to form the River Plate. This is opposite Nueva Palmira in Uruguay, and at this point the River Uruguay buoy numbers start from Km. 0, while the Parana numbering continues from 140 on through the Parana Bravo, which is the Northerly arm of the extensive Parana Delta.

WEATHER: *The yearly average direction of winds* of Force 7 or more, as observed at Recalada Lightship shows:

N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
0.8	1.3	2.7	3.4	5.2	3.7	1.9	1.3

expressed in per cent of winds observed, the least frequent being the North. Division is relatively even over the year, with perhaps August showing a higher incidence of storms.

The average velocity of winds from the various directions, over the year, is 6.8 knots on the coast or 12.5 knots at Recalada Lightship, the highest figures being from S.E., S. and S.W. at 8.3, 9.3 and 9.2 knots respectively.

Percentagewise the direction of the winds through the year is remarkably even:

N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	calm
12.7	15.8	14.4	14.2	11.3	9.7	6.8	9.2	5.8

Visibility in the Plate area is normally good; rain storms may temporarily affect it, but these are usually of short duration. Fog (visibility less than 1,000 m.) or mist (visibility 1/2,000 m.) occurs from April to October, with June showing the highest percentage of fogs (13%). North winds seem to favour the forming of fog, as these figures show.

Direction	Calm	N	NE	E	SE	S	SW	W	NW
fog (%)	11	24	17	5	12	6	0	3	13

Fog on the river forms by a cooling from below of warm air which drifts from E. or N.E., and is formed only when the temperature of the air is greater than that of the water. If the current augments its velocity, the fog lifts and visibility improves at sea level. Shore fogs usually affect only the coast and are of short duration.

Rain falls, on average, 92 days a year, with a total of 1,089 mm. yearly in Buenos Aires, spread evenly through the year with a high in January of 113 mm.

Humidity is high, on average 77% with 82% Winter, and 71% Summer months.

Electric storms are not frequent, and usually limited in extent.

Average yearly temperature is 16.6°C, in Summer 22.2°, Autumn 17.2°, Winter 11.2° and Spring 16°. Extremes correspond to January 43.3° (all-time high) and minus 5.6° in July.

ACTION OF THE WIND ON TIDES: In this large body of enclosed and shallow water winds up and down its axis raise or lower the water level very appreciably.

Cross winds in general have much less effect, and the inner and centre sections of the Plate show greater variations than the outer part. We show below a table as estimated by the Hydrographic Office, based on many years observations showing the variations, in cm., due to speed and direction of the winds. The values quoted must be applied to the astronomic tidal figures to arrive at a net level over datum.

Four new tide-gauges have been installed – 2 in Punta Indio Canal, at Km. 99 and Km. 180, and 2 up-river. Eventually four more will operate at Palermo, Banco Ortiz, Martin Garcia and Atalaya. Connected to the Hydrographic Office, the date will be incorporated into the regular tidal bulletins.

Table showing variations in river level according to force and direction of wind in the River Plate
expressed in centimetres.

	Kilometres/hour								
	10	20	30	40	50	60	70	80	sign
N.	18	30	39	48	60	72	84	96	minus
N.N.E.	9	21	30	36	45	57	69	81	minus
N.E.	3	6	9	24	39	57	69	81	minus
E.N.E.	3	6	9	12	18	33	42	51	plus
E.	6	12	24	36	48	60	72	84	plus
E.S.E.	9	24	39	57	69	81	93	105	plus
S.E.	21	39	57	72	87	102	114	126	plus
S.S.E.	30	45	66	81	96	114	132	150	plus
S.	18	36	57	66	78	99	108	120	plus
S.S.W.	12	24	39	48	57	69	78	87	plus
S.W.	9	12	18	24	33	52	51	60	minus
W.S.W.	6	12	18	30	39	51	60	69	minus
W.	9	15	27	36	45	54	63	72	minus
W.N.W.	12	21	30	36	45	54	66	78	minus
N.W.	12	21	33	39	48	60	69	78	minus
N.N.W.	15	24	36	45	54	63	75	87	minus

(Source: Naval Hydrographic Service)

The tidal forecasts transmitted regularly over LRA (870 kHz), in telephony, in Spanish are, therefore, a combination of astronomical tide figures and meteorological influences on this basis.

Wind direction also affects the hours of the tide. In general, time of high water is not affected, but low water can be delayed or advanced by the wind force.

MITRE CHANNEL: The new channel, 5 miles off shore and 28 miles long was opened in 1976. It is between Km. 12 of the access channel to Buenos Aires and Km. 56 of the Parana de las Palmas branch of the River Parana, opposite San Fernando.

It was dredged to depth of 32 ft. with a width of 130 m. but silting up and lack of dredging have reduced the depth to 29 ft.

At present, ships going up river are allowed to use the channel but to proceed only as far as Zarate, with a draft of not more than 27 ft. (a maximum draft of 28 ft. is permissible but 2 ft. safety margin must be kept below the keel) and, because of the sharp bends in the river, the length must not exceed 220 m.

All the ships navigating down river can use the channel en route to ports in the Plate or to the sea, and the draft is limited to 27 ft. and the length to 220 m., as above.

The Mitre Channel shortens the distance between Buenos Aires and the grain loading ports up river by 36 miles compared to the Martin Garcia route Both routes are almost the same distance from Intersection. Campana is brought 95 miles closer to Buenos Aires, and Intersection about 90 miles.

The big advantage of the Mitre Channel is that ships can navigate with a draft of 27 ft. compared to an average 24 ft. via Martin Garcia, and without the risk of having to wait for more water at the bar, especially if drawing over 24 ft. This applies to ships loading grain at up-river ports and to those proceeding to and from Campana.

Vessels proceeding up river to ports beyond Zarate must still use the old Martin Garcia route. It is expected that such vessels drawing up to 27 ft., will soon be allowed to use the Mitre Channel, but some of the bends in the river above Zarate will probably have to be straightened out first.

Ships coming down river from Km. 456, just above San Lorenzo, or further South, if intending to proceed via the Mitre Channel must not draw more than 27 ft. As a point of interest, the depth of the river from Rosario to San Pedro is, on average, more than enough for ships to load to the 27 ft. maximum fixed, at present, from Km. 177 to Zarate. The Hydrographic Office records the river level, and can estimate ahead prospects of the depth of the water, and Owners should consult Agents before committing a vessel.

The regulations state that vessels over 120 m. in length or 18 ft. in draft may navigate only in day-time. The maximum speed is 12 knots, unless expressly agreed with the coastal radio station.

In the stretch between Zarate and Km. 177 (the junction with Parana Guazu) navigation down river is without restrictions but up river it is limited to pushed convoys not more than 225 m. long or 28 m. wide or 9 ft. draft, to ferry boats or to vessels not over 35 m. long or drawing not more than 11 ft. At night time, navigation is permitted to ships with a length or draft not more than 12 m. or 18 ft., respectively, to pushed convoys as above, and towed convoys not over 180 m. long or 28 m. wide.

Vessels over 35 m. long which cannot communicate with another by VHF or with the Coastal stations must not cross or overtake in the bends and stretches given below, and in any case, no vessel over 60 m. in length may do so; between Km. 175/177; 156/158; 148/149; 138/142; 134/137; 130/132; 124/128; 118/120; 105/108; 99/101; 89/91; 46/52.4. Any vessel navigating up stream in the Parana de las Palmas and meeting another coming down in the stretch 175/177 (i.e. the fork of the Parana de las Palmas – Parana Guazu), must regulate its speed until the other has cleared the sector. Similarly, if coming down river towards the Parana de las Palmas a vessel sighting another between Km. 230/235 of the Parana Guazu must regulate her speed until the other has left the stretch. Also, any vessel in the River Parana or Parana Guazu about to enter the Parana de las Palmas and sighting another coming up that branch of the river, is obliged to regulate her speed until the other has cleared Km. 177.

Ships over 35 m. long or 11 ft. draft must not anchor outside the waiting zones which are between Km. 62/75; 108/111; 120/123; 149.5/153, and those under 35 m. in length or 11 ft. draft must not anchor in the dredged channel between km 46.5 and 56 or in the bends and stretches between Km. 177 and 46, indicated above, or off Campana between Km. 95/99.

It is prohibited to extract sand or to practice nautical sports and water-skiing along the route.

Ship navigating between the Mitre Channel and the port of Buenos Aires may turn either at Km. 12 (the junction of the Mitre Channel and the Access Channel) or at Intersection depending on the weather, cargo and manoeuvrability of the ship, and with the prior consent of the Traffic Control of Buenos Aires. At Km. 12 at least 1 tug must be used for ships between 120 and 200 m. in length, and 2 tugs, if over 200 m.

Ships over 120 m. long when turning at Campana to come down river, must use one tug. Permission from the Zarate Coastal station is required for berthing and unberthing.

When passing under the Zarate-Brazo Largo Bridges, ships must have an anchor at the ready and an emergency electric generator on standby.

Ferries crossing the rivers must coordinate their movements with other vessels navigating, through the Zarate Coastal Station.

In the stretches where crossing is not allowed in the Parana de las Palmas, vessels longer than 60 m., going down river, must blow 3 blasts on the whistle – 1 long, 1 short, 1 long – to indicate that their length is more than 60 m.

All ships must reduce speed, consistent with their steerage-way, in the following stretches: off the ports of Zarate and Campana; when passing under Zarate-Brazo Largo Bridges; between Km. 69/70 (local quay).

Pilotage regulations are that of Buenos Aires port. Pilots take vessels between Intersection and Km. 12 of the Access Channel. However, revised regulations make an exception for Parana Pilots who are now authorised to operate on this stretch when vessels are proceeding to and from the Mitre Channel/Parana de las Palmas. This avoids the inconvenience and expense of having to send out the port Pilot by tug to Km. 12 or to bring him back, and the alternative of having to embark and disembark him at Campana.

When ships are coming to Buenos Aires from up-river ports, the port Pilot is sent out on the tug needed to turn the vessel at Km. 12, and vice versa.

PARANA RIVER: Maximum drafts permitted up to Km. 585 (Santa Fe) are governed by the Martin Garcia Bar, and must also, logically, take into account river conditions.

The River Parana rises in Brazil, and is formed by a junction of a number of rivers, the principal tributary being the Paraguay River.

It is a great river at all times, conveying an immense volume of water to the Atlantic. The Northern bank is comparatively high and rocky, the Southern bank low.

The stretch above Rosario is entirely riverlike in behaviour with an annual flood, rising and falling yearly. From Rosario to Martin Garcia Bar, where the river joins the Uruguay River to form the River Plate, there is also an annual flood, but this part is also influenced by the Plate tides. This section can be divided into two, from San Pedro to Villa Constitucion where the tidal fluctuations are always felt, and from Villa Constitucion to Rosario where the tide makes its influence felt only in periods of low water in the river.

Maximum depth in the river is normally reached in March and the low in September, but it is irregular in behaviour. There is a possibility that the series of dams being built in Brazil for hydro-electric purposes may eventually regularize the river by permitting some control over the seasonal increases.

When the river commences to fall, care must be taken in calculating loaded draft a few days ahead, as the official figures may be reduced one or more feet without warning.

HIGH AND LOW WATER: Maximum and minimum figures registered between Rosario and San Pedro in the last ten years.

		Jan.	*Feb.*	*March*	*April*	*May*	*June*
High	Max.	32′	32′ 8″	33′ 7″	36′ 3″	37′ 9″	30′ 5″
	Min.	27′ 2″	29′ 2″	29′ 2″	28′ 7″	29′ 5″	25′ 3″
		July	*Aug.*	*Sep.*	*Oct.*	*Nov.*	*Dec.*
High.	Max.	32′ 7″	28′ 2″	29′ 9″	31′ 5″	30′ 7″	31′ 4″
	Min.	25′ 5″	23′ 6″	22′ 8″	25′ 8″	26′ 6″	26′ 3″
		Jan.	*Feb.*	*March*	*April*	*May*	*June*
Low	Max.	31′ 3″	31′ 4″	31′ 7″	33′ 7″	36′ 6″	29′ 9″
	Min.	24′ 2″	25′	27′ 2″	27′ 6″	26′ 3″	24′ 9″
		July	*Aug.*	*Sep.*	*Oct.*	*Nov.*	*Dec.*
Low	Max.	29′ 9″	27′ 2″	25′ 6″	25′ 8″	30′	29′ 6″
	Min.	23′ 9″	21′ 8″	21′ 7″	23′ 3″	24′ 3″	24′ 3″

MAXIMUM DRAFT UP RIVER: When vessels by reason of their loaded draft have to complete loading at Buenos Aires or La Plata, they should never load deeper than 2 ft. less than the offical draft on the River Parana.

In the sector San Lorenzo/River Plate, when the height of the river is 4 ft. or more, 1 ft. must be calculated below keel depth; when the river is under 4 ft., 2 ft. clearance must be calculated.

In the sector Parana (Santa Fe)/San Lorenzo, when the height of the river on the hydrometer at Santa Fe is 5 ft. 7 in. or more over zero, 2 ft. must be calculated under the keel with vessels of under 50 fiscal units, or 2 ft. 6 in. over that size. When the depth on the hydrometer is less than 5 ft. 7 in. (1.70 m.) then 2 ft. 6 in. and 3 ft. 6 in. respectively must be allowed.

These safety margins for the Parana/San Lorenzo/Santa Fe zone refer to river navigation; in access channels and ports a margin of 1 ft. is sufficient.

The references to river height refer respectively to Rosario and Santa Fe.

A falling or rising river will also be taken into account.

BRIDGES: A road and rail bridge has been built from Zarate (Km. 107 on Parana de las Palmas) across the various islands and arms of the Parana to Brazo Largo (Km. 180 on the Parana Guazu). The span on this arm of the river is over 200 m. and clearance at high water 45 m.

A bridge from Resistencia (Capital of the Chaco Province) connects with Corrientes (Capital of Corrientes Province). This does not affect ocean shipping, beyond that going to Asuncion, and the clearance of the main span is 40 m. above high river level.

Two bridges have also been built over the River Uruguay, one at Paysandu, which will not affect ocean shipping, and another at Puerto Unzue to Fray Bentos, in Uruguay. This latter has a 220 m. span with 36 m. clearance above river level.

SHIPMASTER'S REPORT: 1979.

General: This river and its approaches serve the major ports of Montevideo, Buenos Aires and Rosario and numerous smaller ports.

The hinterland and Pampas of this area is of major importance as a grain exporting market and frozen meat exporter.

For the most part the river is shallow giving a maximum draft depending on suitable tide of 33 ft.

Although Argentina is self sufficient in oil, from her wells in the South, with prices around 70p per gallon (20.7.79) cheap by world standards, she imports about 300,000 tonnes of LPG per annum mainly from the Gulf and Venezuela.

The majority of the LPG is shipped during the Southern Winter with approximately eight 30,000 tonne shipments annually.

Shipments from Venezuela are in smaller vessels of the 15 – 30,000 cu.m. size.

All LPG is for the Account of Gas Del Estado, the state Gas Corporation, who tender for contracts from the major Gas traders generally bi-monthly.

The storage capacity at Doc Sud Buenos Aires is about 20,000 tonnes.

Currency is the Pesos which is very much orientated towards the U.S. dollar. The dollar is used for most commercial transactions.

Approaches to The River Plate:

Chui D/F (ALRS 5046) on Brasilian border is good.

A good longitude is obtained by 200 m. line. On Chart BA. 3064 the bank in the region of Lat. 35° 08′ S., Long. 53° 34′ W. is pronounced.

Cape St. Maria comes in at 35 miles on radar.

Punta Jose Ignacio is distinct on radar at 22 miles, light observed at 19 miles.

Isla Lobos observed at 26 miles on radar.

A strong N.E. current set is apparent from the 200 m. line to Isla Lobos, particularly so about 40 miles East of Lobos. Pta Del Este Light is difficult to pick out from the shore lights. This area is an important holiday resort area. A new light has been established: Fl. R. ev. sec. position Lat. 34° 51.8′ S., Long. 54° 44.0′ W. Vis. 25 miles.

Anchorages: On 2 occasions the vessel has anchored well East of Zone Alpha before proceeding to lighten. Once each in position Lat. 35° 10′ S., Long. 55° 32′ W.in15 m.andLat. 34° 57.5′ S.,Long. 55° 37.5′ W.in13 m.

It is wise to pay out plenty of cable as the wind can increase quickly.

There are 3 lightening or Topping Off anchorages – Alpha the most commonly used one being 10.5 miles South of Montevideo Pta Brava, Delta 39 miles to East and Bravo 36 miles to S.W. are little used.

Areas as marked on Argentina Charts H. 113 and H. 116 are not rigidly binding and it is as well to take advantage of the deeper water 3 miles to East of Zone Alpha.

There are 3 D/F stations in the area.

Carrasco (CAR) as Admiralty light and Radio signals (ALRS) 5036 good – Montevideo Airport. Continuous Aero 24 hours.

South Airport (CRO) 305.7 m. – Lat. 34° 50.5′ S., Long. 56° 01.5′ W. Aero Cont. 24 hours

Pta Gorda (BC) 340 m. – Lat. 34° 54′ S., Long. 56° 05′ W. Aero Cont. 24 hours.

Banco Ingles North Buoy moved position about 1.2 miles East to Lat. 35° 05.4′ S., Long. 55° 52′ W. light very weak.

The foul areas marked on Argentina Chart H. 113 and BA. 1749 (C) do not exist according to the Masters of local lightening ships and Pilots.

A – Lat. 35° 03.0′ S., Long. 55° 59.0′ W.
B – Lat. 35° 03.0′ S., Long. 56° 04.0′ W.
C – Lat. 35° 08.8′ S., Long. 56° 12.7′ W. BA 1749
D – Lat. 35° 09.0′ S., Long. 56° 15.9′ W.
E – Lat. 35° 11.0′ S., Long. 56° 14.0′ W.

The D/F on Isla Flores (ALRS 5038) is not operating and the light is very weak.

The 2 buoys to S.W. of Zone Alpha to Recalada are in position but no lights observed on passing them (20.7.79)

Communications: VHF: Montevideo Movement Control (ALRS 6-H1010) speaks little English. We tried to contact them on arrival but got no response. The Agents advise vessel to cable anchoring positions to its call sign 'CWC 104'.

Recalada Pilot Station works on Channel 12, English reasonable.

Interseccion Pilot Station works on Channel 12, English reasonable.

Lightening vessel "Permian Gas" – Channel 68.

Lightening vessel "Lavoisier" – Channel 8.

Bulk Topping off vessel on station Zone Alpha 'Arylanza' of Argentina flag with cranes works Channel 6.

Generally all Spanish communications – ALRS G 2655, 2670, 2680.

Montevideo R/T: Punta Carretas (CWF) 6020 transmits 2182 or 2768. Spanish and good English. Telephone only Montevideo area. Good.

Argentina: 'Pacheco' LPD, LPL, LPQ 5905 (no English).

Weather: Generally the weather in this region has been well documented. Reading publications one gets the impression at times that it can be severe all the time in mid winter. But this is not the case, although one should be on the guard all the time, we had very good weather during a stay of 16 days in July, generally light winds, clear skies, and little rain. Although quite quickly the opposite can happen.

Visibility can be excellent, up to 20 miles.

Forecasts for the area are predominately in Spanish.

The Fascimile that is published for Buenos Aires LRB, LRO 5910 was not received on any frequency.

Tides: Again very well documented. Generally out at Zone Alpha the tide is not strong and has little effect. Getting into Recalada and farther West to Interseccion the tide has a big effect and can alter very quickly with the wind.

The tides strength is very marked in the shipping channels from Recalada Westwards to Buenos Aires.

Density:		
	At Zone Alpha	: 1019
	At Recalada	: 1012
	At Km. 45	: 1005

Lightening: As previously mentioned there are three Zones for transhipping cargo and topping off. The most commonly used area is Zone Alpha the limits of which are not obligatory.

Before lightening can commence the ship has to be cleared by Customs/Immigration who come from Montevideo after travelling up from Buenos Aires. They either board by tug or by the first lightening tanker.

9 persons board with 4 persons leaving when formalities are complete leaving 5 persons onboard – 6 when Pilot boards at Recalada. They consist of Agency Representative, Immigration, Customs, Prefectura of Police, Gas Del Estado rep. etc. Those that stay being Agent, Police (1), Customs (1), Surveyor (1), Gas Del Estado (1). As long as vessels paper work and passes have been well prepared the formalities are quickly dealt with. Generally vessels proceed to Zone Alpha when the Officials/Lightening Tanker is due otherwise needless standby is required because of the close proximity of other lightening operations and draft.

We anchored with Pta Brava 320°×10.4 miles, depth at HW 12.5 m. Plenty of cable on port anchor is required, say up to 8 shackles to guard against any sudden gusts of wind. On occasions up to 10 shackles have been out.

Ships passing through this area are required by Argentina Law to proceed at slow speed, but rarely do with some narrow scrapes. Zone Alpha is joint Uruguay/Argentina territory.

Pratique: Cable to be sent (in Spanish) to Agent 12 hours before initial arrival. Granted when officials board.

Notice of Readiness: Send cable when vessel has anchored, N.O.R. received when Agent boards at Zone Alpha.

Mail: Agent will bring out mail at Zone Alpha and also give to Interseccion Pilot who boards after lightening at Km. 45 if requested in advance.

Money: If requested well in advance Agent will bring money out at Zone Alpha. This helps when berthing at Doc Sud as people can get ashore quickly without waiting for money.

Time: The Time Zone used at Alpha is Argentina time GMT – 3 hours. Uruguay time is on GMT – 2 hours.

Lightening Tankers: At present there are 2 vessels in this operation, however a 3rd vessel may soon be allocated. In the past numerous LPG ships of different owners have been used.

"LAVOISIER": A small semi-pressurized tanker of Argentina registry owned by Navigas.

Vessel has 3 Yokohama fenders floating and 2 small fenders hanging aft. Very good co-operation maintained – vessel was very efficient. The chief officer speaks little English but Master and one Second Mate spoke very good English. All very helpful.

Lines: 3+1 each end in moderate weather. No STBL lines.

Hose: 6 in. Braided wire (wear gloves) – 18 m. total length – 150 ASA couplings.

Tanks: 6 tanks max. temperature: –6°C 4 bar.

Capacity: Approximately 2,800 tonnes.

Rate: 300 t.p.h. Butane, 90 t.p.h. Propane which has to pass through heater for pressurization.

B.P.: Max. 8 bar.

Gangway: Use STBL gangway aft.

Radio: Use STBL UHF sets.

Vessel will take motors, etc., ashore if she is returning to Doc Sud for repair by Cromwell Engineering.

"PERMIAN GAS": Liberian Flag – call sign A8UR. Chartered by Gas Del Estado.

Has 2 Yokohama fenders and tyres forward and aft. Not very satisfactory as operations have to be broken off in any type of wind.

Lines: 3+1 plus two from STBL F & A.

Hoses: 6 in. 300 ASA with 300/150 spool piece. Compoflex type with rope lagging. Total length approximately 18 m.

Tanks: 6 semi pressurized – 6 bars 2 grades handled – not together.

Capacity: 5,200 tonnes max.

Rate: 350 t.p.h.

Gangway: From STBL, a short BOT type.

Radio: Motorola UHF sets from 'Permian Gas'.

Navigas are purchasing another LPG vessel about the same size as 'Permian Gas' and should be on station in October 1979. Generally the transferred cargo is taken to the smaller outports up the River Plate and down the coast, the vessel can be away for up to four days.

With a mixed cargo of Butane/Propane of 30,000 tonnes two to three weeks is the normal length of stay in the River Plate.

Pilot: Pilot does not board at Zone Alpha.

Pilot boards at Recalada Pilot Station at the end of the buoyed channel Canal Indio. Pilot vessel is an old coastal troop transport and has been on station for 10 years. It is painted with red upperworks and black and yellow striped hull.

Pilots board from small white launches which lie alongside the pilot vessels lee side.

Only 1 ship handled at one time, the launch returns to the pilot vessel. Long delays can occur if ships have got bunched up inwards and outwards.

Will use hoist, but have gangway and fixed pilot ladder arrangement ready. Make good lee otherwise Pilot will not board. Inwards pass to North of pilot vessel. Outwards to the South. Pilots generally speak good English.

Pilot vessel new position: Lat. 35° 10.8′ S., Long. 56° 06′ W.

Racon shows up well at 20 miles. No D/F. No boarding with wind speed above 30 m./sec. No anchoring within 1 mile of pilot vessel. Make arrangements for Pilot through Agent via Recalada or Pacheco Radio Station at least 48 hours in advance.

One Pilot to Interseccion Pilot Station, about 7 hours depending on tide. If stopping at Km. 45 for lightening, Pilot stays on board and changes at Interseccion.

In the vicinity of Recalada numerous vessels are anchored so its a case of having to proceed with caution.

Canal Indio: From Recalada to Interseccion, 95 miles.

This channel is marked by light buoys leads to the deeper water off Banco Chico near La Plata and is 50 miles in length to Canal Intermedio with a bend at Codillo.

Generally the depth is 28 ft. CD but patches of 27 ft. have been found between Recalada Pilot Station and No. 1 buoys.

We attempted to manoeuvre with a draft of 28 ft. 9 in. but constantly grounded near the wreck buoys East of No. 1 buoys.

The channel from Recalada to No. 1 buoys passes South of the wreck buoys, these wreck buoys should not be confused for channel buoys as has happened in the past.

Generally the max. draft is 31 ft. with a tide of 1.20 m.

Pilots always seem to think of drafts in terms of feet and tide heights given out in metres.

Vessels of up to 33 ft. have safely transitted.

Once inside the channel at No. 1 buoys the channel is very marked and steeply shelving.

The wreck at No. 17 buoys is to be lifted by a Japanese crane barge early in 1980. There is no passing at this point.

No dredging has been undertaken for five years in Canal Indio but it is hoped to resume in 1980 after Canal Nord and Sur have been dealt with.

On the day we left (20.7.79) three Spanish built suction dredgers arrived ("Buenos Aires", "Terra Del Fuego" and "La Plata") with three more to follow. It is reported that a total of 20 dredgers have been contracted for, partly Government owned as are the Spanish built dredgers and partly German contract work.

It is hoped dredging will start in Canal Nord and Sur late 1979 moving to Canal Indio in 1980 and Canal Mitre 1981.

The buoys are often missing or the lights out.

24 hours transit of all vessels is undertaken. Vessels of less than 22 ft. navigate outside the channel when deep draft ships approach in channel.

Vessels of less than 18 ft. navigate outside channel at all times.

No overtaking from Codillo Bend to Recalada.

Tides can be strong.

Km. 99-Racon not working (as BA.1749)

Tides given on VHF every hour plus 5 minutes in cms.

As long as no hinderances with ships ahead or draft a speed between manoeuvring full and full sea speed is requested.

La Plata Km. 45 Lightening: Further lightening is undertaken off La Plata in the deep water position: Lat. 34° 44.5′ S., Long. 57° 49.5′ W.

Pilots report that the foul area just South does not exist.

Interseccion: Pilots changed here after lightening at Km. 45.

Canal Accesio Buenos Aires: This channel is 15 miles in length and leads from Interseccion pilot vessel to the junction of Mitre Canal, Canal Nord and Canal Sur.

It has a depth of 31 ft. CD min. and is probably the deepest of all the channels in the area.

It presents no problems after final lightening.

The Beacon at Km. 14 on the North side of the channel has been destroyed.

At Km. 14 a forward tug can be engaged at extra charge. This is well worth the additional expense to get the vessel around the bend into Canal Sur and over the shallows.

Canal Sur: This relatively short length of channel leading to the Doc Sud area is 4 miles in length. It presents the worst problems with regard to draft in all the channels but the bottom is of soft mud and no grounding damage has been reported.

Ships invariably always bottom and the channel is kept open by the dredging action of vessels.

The worst area is the Eastern end between Km. 8.2 and Km. 7 with a poor area continuing to Km. 5.

The after tug is taken at Km. 8.2.

The least depth is 22 ft. CD which means vessels up to 24 ft. 6 in. can normally transit and up to 26 ft. with very high tides.

We had 60 cm. tide with a draft of 24 ft. and had to use full power with the vessel listing 5° to starboard when we got to the edge of the channel – Southern edge. The tugs were invaluable at this point.

Pilots report Southern edge of channel worst area. (One large LPG ship recently aground for 2 days at draft of 25 ft. 6 in. – 60 cm. tide and falling. Vessel aground between Km. 8.2 to 7.6.)

As soon as Canal Accesio is left at Km. 10.1 steep shelving occurs which is very marked on Echo Sounder and vessel is bottoming.

No night movements of LPG carriers.

At Km. 1 another shallow area of 21 ft. 6 in. CD is reported but we experienced no difficulty in this region.

Tugs: As previously stated forward tug can be taken at Km. 14 and after at Km. 8.2. When outward bound forward tug leaves at Km. 11 (extra charge) and after tug at Km. 5.

Tugs power varies from 2,000 h.p. to 3,500 h.p.

2 good lines are given to each tug through centre leads fore and aft, they will need them with large LPG carriers when turning in the narrow confines of Doc Sud.

Ante Puerto Sud: Vessel is swung in this area so as to enter Doc Sud stern first.

Clearance is very tight.

Pilot requires both anchors ready and engines prepared for maximum astern power.

Tide depth gauge on North inner entrance.

In Darsena 2 there are 2 floating dry docks capable of handling ships up to 15,000 d.w.t.

In Darsena 1 a Navy Synchrolift of 10,000 d.w.t. capacity has recently been constructed (vertical hoist type, not ramp type).

The new dock outside at Km. 1 in position: Lat. 34° 38′ S., Long. 58° 20′ W., has been completed but not dredged. This is to be undertaken 1980/81 and is intended for large LPG carriers for Gas Del Estado. The breakwater is completed and extends to Lat. 34° 37.9′ S. – 550 m. in N.E. direction.

Doc Sud: Least depth 33 ft. CD. In section 2 on the East side is the oil complex with Gas Del Estado berth North end section 2, South side of bend, East wall second berth. On West side are grain and frozen meat berths. Ships always berth head out. Starboard side to East wall, port side to West wall.

Narrow entrance which large vessels frequently hit, particularly the knuckle on East side which should be guarded against with fenders. From Interseccion to completion of tie up about 4.5 hours. In all of Doc Sud no engine movements are permitted. This is a new regulation.

If using midship gangway this has to be turned forward before arrival so as to land on small pipe jetty. If gangway is aft vessel has to use fixed section or hire boat on the offshore side.

Mooring: 2 headlines, 2 breastlines and 2 springs each end, the leads are not very good. Springs onto dolphins. Dolphins have poor fenders so advise use ships fenders.

Manifold: 12 in. – 150 ASA liquid, 8 in. – 150 ASA Vapour return, VRL has to be left open.

Tanks: Max. tank pressure on arrival to be 50 mbs.

Pumping: 500 to 700 t.p.h.

Berthing: Daylight hours only.

Labour: Shore labour for connection.

Surveyor: Surveyor from independent firm joins at Zone Alpha and makes survey together with Chief Officer before and after each transhipment and at Doc Sud. Generally paper work after each transfer takes about 1 hour. Ensure that signed statement of complete cargo discharged obtained.

Samples: An attempt is made to take samples at Zone Alpha.

Fresh Water: By Barge.

Stores: Arrange by Barge, very difficult otherwise.

Repairs: Cromwell Engineering: – 'Cromeng' generally good. By boat. As previously stated vessel can land motors etc. by lightening tanker if returning to Doc Sud for Cromwell to pick up.

Taxis: Difficult to obtain. Best obtained via Gas Del Estado office. Doc Sud is outside Buenos Aires municipal boundary so off meter. Meter starts at Boca Bridge. Generally about £6 into town in daytime and £10 back at night. No difficulty in getting taxi back at night, try and agree fare. Do not go ashore alone.

Do not take much money with you. Have shore pass. About 20 minutes to town if no delays.

Customs/Immigration: Board at Zone Alpha and again at Doc Sud and on Departure.

Formalities:

2 Stores Lists per department (Deck and Engine combined) (Argentine Official Papers).

1 copy taken off at Zone Alpha, 1 copy for customs at Doc Sud.

2 Copies International Maritime Declaration Health (Standard Form)

1 copy Zone Alpha, 1 copy Doc Sud.

2 Crew Personnel Declarations – (Argentina Forms)

Both Zone Alpha.

30 Crew Lists (Ship's form)

One is stamped by Immigration at Zone Alpha for Doc Sud. No officials onboard at Doc Sud.

Crew Passes – Fichas – Argentine Official Forms.

One for each crew member must contain photo. We used ships Polaroid camera. (Two heads to a shot.)

Stamped at Zone Alpha and *must* be handed back before departure Doc Sud for stamping and then given to Master.

2 Vaccination Lists (Ship's form)

Each time the vessel shifts/heaves up anchor the Agent onboard has to make out a departure declaration for Master to sign and give to Police onboard.

As long as vessel has Argentina papers and photocopier onboard no difficulties should exist.

Bond: Not sealed, quite in order and usual as long as ships staff only consume liquor.

Publications: These notes are in addition to information contained in: BA Charts 1749, 1751, 3561, 3064. Argentine Charts H 113, 116, 118, – 1979

Publications: NP 5 supp-2/78, NP 275 2 & 6 79/78, "Guide to Port Entry". C.N.T. Year Book 78/79.

SHIPMASTER'S REPORT: July/October 1983.

Navigation on the River Plate and River Parana: INWARD: The Uruguay Traffic Control System and Radar Monitoring now extend from the border with Brazil to the Recalada Pilot. Vessels are required to report course, speed, and ETA on passing each designated control point.

Recalada Pontoon was not heard on M/F radio and all messages were passed through General Pacheco. Recalada was slow to answer on VHF, and probably the watchkeeper has to call a Pilot to speak English (The ability to speak Spanish is a very marked asset trading to Argentina).

It is preferable to keep North of "Zone Alpha" and then to head for the small passenger ship that is the Recalada pilot vessel, Racon only about 8 miles.

The dredged channel is quite narrow with strict limitations about overtaking in certain areas. Averagely ballasted ships can pass outside the line of buoys. Subject to the Pilots advice it may be possible to use heavy oil for the 90 miles (7 hours) to La Plata Anchorage.

The Intersection Pontoon has been withdrawn and the operation is now based ashore in La Plata.

The 2 River Pilots are ordered for a suitable tide time to approach the Martin Garcia Channel. Each Pilot requires a cabin with bathroom en-suite, the Masters sea cabin may be refused. One Pilot had a very few words of English, the other none. Their use of English numbers was uncertain, so the Officer of the Watch must be very vigilant. The Pilots listen to 2 VHF Channels and their own radio, which makes the bridge very noisy.

The vessel proceeds always at Best Full Speed but it was difficult to get any programme from the Pilots because of the language problem.

The vessel anchored at 10 minutes notice at Km. 80 for oncoming ships in narrow channel. Then had to heave up as quickly as possible to get over the bar before tide fell.

Speed was reduced turning into the Rio Parana Guazu at Km. 121. The vessel had to stop and drift for sometime waiting for oncoming ships to clear the bridge at Km. 180. This bridge can only be passed in daylight and had a clearance of 45 m. in the prevailing floods which were estimated to be 4 m. over normal tide. If unable to pass before sunset, it is necessary to anchor and wait till the next day.

The vessel anchored for the night at Km. 243 to avoid a dangerous bend in the dark at about Km. 273. However, had to anchor again at 5 minutes' notice for fog at Km. 270. This later cleared and vessel proceeded to anchorage off San Nicolas.

Two anchors were employed, but the order to let go was given much earlier than the indicated place which caused some surprise (due to language difficulties).

The inspection party of Agent, Customs, Coastguard, Port Health, Grain Surveyor and Photographer boarded shortly after the River Pilots left. The forms had been put onboard on leaving La Plata Anchorage and were only completed in time by exceptional effort. The entry formalities were complete in about 1 hour, while the Grain Surveyor took about 1.5 hours.

A Harbour Pilot put the ship alongside, and took her off on sailing. An anchor was dropped for use on sailing.

The river is quite narrow and sparsely marked. The Pilots navigated by the tops of the trees sticking out of the flood water. Some salient points were marked by a single lighted beacon. Buoys marked critical sections. However, these could be capsized by the accumulated weight of vegetation floating down the river. Progress was erratic and diesel was used throughout the River Pilots guidance.

OUTWARD: The normal route down river is the Mitre Canal with a draft of 27 ft., however, this had silted up to 21 ft. The vessel loaded to 23 ft. (fresh water) to pass via the Martin Garcia. There is a similar bridge and restrictions on this route.

The vessel anchored at Km. 210 to wait for daylight for the bridge. Then used the River Parana Bravo to pass into the main river. This was very narrow and twisting in places, the Pilot was observed to be using reverse helm on the canal effect from the banks.

The vessel next anchored at Km. 117 to await a suitable height of tide before passing over the Martin Garcia Bars. However, the hourly VHF broadcasts showed that the tide did rise as predicted, and the vessel had to wait for the next tide.

The Regulations are that a minimum clearance of 1 ft. is required with a rising tide. The dredged channel is 100 ft. wide with minimum depths of 20 ft. – 21 ft.

The vessel sailed on the next tide and past the tide gauge at Martin Garcia when it was 1.3 m.

The Pilot watched the forward echo sounder reading and reduced speed whenever it came down to 1.0 m. However near Km. 70 the vessel first took a sheer to port, which hurriedly corrected by starboard helm. Then she took a list to port and the engine was increased to full speed to push through the shallow. Near Km. 69 the vessel again felt the ground and seawead, again the engine was put to full speed to push through.

At Km. 49 the vessel took a list but continued her progress. The crew working on deck at these times reported hearing rubbing noises.

The vessel anchored at La Plata Anchorage and the River Pilots left. The Recalada Pilot boarded almost 4 hours later as the tide was rising and the vessel sailed for Sea Channel.

At 22 ft. 6 in. salt water the vessel was not as unrestricted as when coming in. It was necessary to slow down in order to allow a deep laden vessel to clear the channel before we entered it. I understand that the normal maximum at the top of the tide is 31 ft.

Again subject to the Pilots advice it may be possible to use heavy oil for this passage.

The Pilot spoke good English and readily gave advice on the river and approaches.

We were bound for Bahia Blanca to complete loading. The Pilot advised that the banks had extended Eastward from the land, and Westward from the sea shoals, so that local knowledge was necessary for the most direct route. Tankers from the South lighten at Zone Brava and then come up to No. 1 Buoys on a North-Easterly heading (at 31 ft.) to avoid the encroaching shoals.

It was apparent that the buoys had been moved to new positions to allow for the movement of the shoals.

BAHIA BLANCA ANCHORAGE: The vessel had been warned that there was a delay of 30 days at Bahia Blanca. The Buenos Aires newspaper listed 37 ships at that port. On arrival it was found that there were 15 ships in the Buoy No. 17 Anchorage, 11 ships in the Buoy No. 11 Anchorage and 10 ships between Buoy Nos. 1 and 4. The local Port Control Radio Station speaks no English, however a Spanish speaking Officer keeping anchor watch kindly translated for us and advised that we could anchor off Buoy No. 4. The arrival telegram was sent from that position.

Contacting other company ships already anchored, it appeared that the actual time to wait was nearly 60 days. The ability to speak Spanish is an untold blessing on the Argentine coast. The Sea Pilots appear to be fluent in English, but the River Pilots and Radio Watch Keepers have no English nor French. The ability to consult ships in the nearer anchorages was most helpful.

The chart shows 3 radio beacons off the port, which are supposed to be in continuous synchronised operation. However we could only find one operating from 4 to 10 minutes past the hour and the half hour in clear weather. El Rincon and Recalada Bahia Blanca seemed to alternate day about.

A water boat of 350 tons capacity will come as far as Buoy No. 11 at a flat charge of U.S.$3,500.

BAHIA BLANCA: 28th July, 1983.

The vessel part loaded at San Nicolas where she was advised of 30 days' waiting at Bahia Blanca, the completion port.

The vessel was assisted by a Spanish speaking Officer keeping anchor watch to contact the Port Radio Station and permission was given to anchor near Buoy No. 4 due to the congestion. Arrival was reported by cable to the Agents from that position. The initial berthing prospect was quoted as being 8th September, then as time past this was amended to 22nd September and 4th October. The ship did actually berth on the 5th October.

Informatively Lloyd's List was found to have shown 57 days delay with 38 ships waiting soon after the ship's arrival. It would seem that the formula should be 2.0 – 2.5 days per ship waiting.

The delays were extended by 'go-slow' strikes, and at least two instances of contaminated cargo ex-silo.

Communications to and from Agents normally only by telegram. The Port Radio Station call sign "L4Z" – "Lima Quatro Zulu", another Control Station is "L2N" – "Lima Dos Novembre", VHF Channel 12 is watched with Channel 14 for working.

The pilot boats are modern fast launches using the call sign "Sierra Papa" 21, 30 etc. If there is a Pilot on board for your ship he may call up in English. The boats work to order and do not stay on station.

For a ship of 25,000 g.r.t. the shift from the Pilot Anchorage (Buoy No. 11) to the Commercial Ships Anchorage (Buoy No. 17) was quoted as U.S.$1,700 in July 1983. However, unless bunkers are needed there is only limited benefit from moving into this anchorage.

The Monacci Agency uses a ferry operator who has large very old white cabin cruisers, the costs were quoted in August 1983 as U.S.$500 per ship visited. In September the cost was quoted as U.S.$700 per ship visited. They operate from Port Rosales which dries out at LW. The Agency appeared to use the boats once a week only.

A water boat also operates from Port Rosales, with a nominal capacity of 350 tons. The cost per trip in July 1983 was quoted at U.S.$3,500 plus the amount of water supplied. In September this was quoted at U.S.$5,200 plus. It normally pumps in with 2 hoses in 3.5 hours. However in this vessel the available ullage was not even and the water boat stopped pumping and disconnected as soon as the first tank was full. Thus it delivered only 250 tons for the same fee! Thus it would seem necessary to ensure that there is at least 175 tons of ullage available for each of the 2 hoses. As the berth dries out where the boat secures, it may be that they will not delay by pumping only 1 hose so that they can get back alongside in the one tide.

The Monacci Agency uses one Shipchandler only, who has to deliver via the same launch described above. There is another Chandler who uses a different boat but the details are not known. All provisions sent to ships have to be cleared by the Customs with quite substantial service fees, quoted as U.S.$100 – $150 per delivery. The Customs also restrict the amount of rice that can be supplied. Of the fresh vegetables and fruit delivered the quality was not good, and condemnations had to be made when they were unpacked. The provisions came only with delivery notes, and the bills for August, September and October were prepared on board after the completion of loading! Those ships who have been to Bahia Blanca before take as much provisions as they can in the river ports, where quality and value are better, and delivery easier.

The Monacci Agency have VHF Channel 9 in their Port Rosales Office for use with their own fleet, and the Bahia Blanca Boarding Agency carries a walkie-talkie, with 60 VHF Channels, but normally on Channel 22A (the U.S. Coastguard Channel). They do not make this information known to the ships under their Agency.

In general they seem very reluctant to talk to ships, probably only a few of their staff speak English. Messages sent only to Monacci were never acknowledged and often not acted upon. Messages sent to Sudocean in Buenos Aires always acknowledged and acted upon. The use of telex numbers is preferred at least for routine messages.

Medical: Three men went to the doctor from the Inner Anchorage and stayed ashore for 6 days until the next weekly ferry trip, the hotel bills being apparently cheaper than the hire of the launch. When the vessel finally berthed after almost 70 days at anchor 12 men were medically treated and prescribed for on board plus additional tests, etc., for 4 ashore. The total fees came to about U.S.$1,000.

Grain Berths: There are 3 berths in use at Engeniro White No. 9 with a sailing draft of 38 ft. 6 in. (port side to, stern in), take bunkers by road tanker. Currently about 800 t.p.h. for 16 hours including overtime from one belt. The plant has been damaged (possibly by a dust explosion), and one belt is out of use at this time. Berth Nos. 5 and 6 are rated at 36 ft. 6 in. sailing draft, port or starboard side to, according to tide when off the berth, bunkers by barge. (Berth Nos. 7 and 8 are shallower, but was in use). This berth loaded 21,750 tonnes in 48 hours into the vessel. However, the subsequent vessel required 5 days for the similar amount due to shortage of cargo in the silos. No. 9 silo seems to be fed by road vehicles, while 5/6, 7/8 are fed by rail.

At both berths the vessels take the ground and dry out up to 10 ft. – 12 ft. at LW. The bottom is said to be soft mud, and every ship loading to the authorised drafts goes aground. The vessel has to wait for the rising tide in order to finish and be certain of the drafts.

On sailing the drafts are read by the Prefectura Naval (Coastguard) and both the Harbour and River Pilots. Thus it is necessary to be very precise when finishing. No surveyor examined the vessel after the initial hold cleanliness inspection by the National Grain Board.

On sailing (head out), with 2 tugs, the ship would not swing to port into the line of the flood tide and the ship came very close to the opposite bank before the port anchor was dropped. The beacons which are charted as being in deeper water are in fact well up on the mud bank and the channels appear much narrower. Two tugs were used inward and outward with twin ships ropes from offshore fairlead forward and centre aft. Swinging in the pilot hoist when berthing was a race against time. There are some floating fenders alongside Berth Nos. 5 and 6 but the upper works of the elevator system are very close to the edge. Bridge wings apparently often touch.

The passage outward depends on the conditions of the day. A ship at 37 ft. 2 in. sailed directly out to sea because of fresh onshore winds. Another of 38 ft. 4 in. took 4 days to reach the sea. She had to anchor at Buoy No. 18 from one daylight tide to the next, then the port was closed for naval movements, then anchor again at Buoy No. 11, before finally clearing the port. The tide predictions can be increased or decreased by as much as 5 ft. due to the weather prevailing.

Anchorages: One ship in the Commercial Ships Anchorage found that she had 4 lengths of her own chain fouled around the anchor when she hove up. She had to hire a barge to lay the chain on so that it could be cleared. The quotation was said to be U.S.$5,000 but the bill presented was for U.S.$18,000. The vessel was arrested when the bill was challenged. It would seem a wise policy to change anchors from time to time. Also when anchored off Buoy No. 18 to wait for the next HW over the bar, another ship's anchor and chain was picked up. It was necessary to put a wire onto the other cable and lower the ship's anchor out from under to clear it. The delay was about 45 minutes but the ship was still able to make the tide.

There is a dredged channel between Buoys No. 7 and 8 but in fact the shallow area extends from Buoy No. 9 to Buoys No. 3 and 4 and speed needs to be restricted to reduce the squat.

At this time British subjects were not allowed ashore.

Outline of Official Argentine Forms:

Personal effects of the crew.

In vertical columns the following items:

Radio sets
Typewriters
Sextant
Gramaphones
Gramaphone discs
Binoculars
Photographic cameras
Spirits
Tobacco
Plug Tobacco
Cigarettes
Packets of cigarette papers
Boxes of matches
Number of caged birds
Soap

Sundry other effects such as musical instruments new or used, new clothes, etc.

All electronic items, such as radios, cassettes, calculators, televisions, declared by type, makers name, model name, serial number on separate sheets which then attached to the original declaration. The original columns for such equipment must be marked "nil" so that no duplicate declaration is made. The ship's electronic items, as above, plus VHF, radars, walkie-talkie sets, the main radio equipment, etc. must all be declared on separate sheets in the above detail.

The authorities require two copies of every declaration, one of which is kept at the Port of Entry and the other travels on the ship with the clearance for landing at each subsequent port. i.e. "travelling manifest".

The ship should have its own copy for reference, as neither of the above may be on board while in port.

The Health Declaration is in the standard form and can be filled in quickly, but the Customs forms and the identity cards take a lot of time and it is better to have a rough copy ready for copying out on arrival. The official forms are not available outside Argentina, and are too big for photocopying. Photographs are required for the identity card, but if advised a photographer will board with polaroid 'mini Portrait' outfit and charge accordingly.

Crew lists should be in the IMO format with full details of date and place of birth, plus the type of identity document (passport or seaman's book).

6 copies arrival, and 6 copies each departure! Company crew lists said to be acceptable provided ALL the information required has been inserted.

The identity cards can be photocopied and this would allow them to be prepared at sea before arrival.

The inspection party was 6 strong with Coastguard, Agent, Customs, Grain Surveyor, etc. Formalities including holds took about 1.5 hours with all documents prepared since sailing from La Plata. This was a rush to be avoided. (The vessel was cleared at the loading port up-river.)

British subjects not allowed ashore, all British passports and S.N.I.C.'s taken ashore and not returned until the vessel was cleared outward and Pilots on board.

Store List

Deck Engine Refrigerating

Aluminium Paint
Paint driers
Paints assorted in pastes
Paints assorted in liquid
Enamels assorted
Varnishes assorted
Red lead
White lead
Paint Powder
Coils Manilla rope (new)
Steel cable (new)
Hemp rope (new)
Tarpaulins (new)
Tarpaulins (used)
Burlap (new)
Separation clothe
Oil engine
Oil cylinder
Oil solidified
Packing assorted
Methylated spirit
Binoculars
Nanometers
Typewriters (new or used)
Micrometers
Monographs
Ammunition, firearms, explosives, etc.
  such as:
Deck flares
Rockets
Rockets sticks
Rockets signals
Friction tubes
Blue lights
Lifebuoy lights
Company's signals
Cartridges
Carbines
Guns
Revolvers
Rifles
Rocket Projectors
Gunpowder
Other portable firearms and explosives
(Red Hand flares)
Orange Smoke floats
Deck and Engine Stores considered to be in excess of normal requirements
(Fuel Oil)
(Diesel Oil)

Signed Chief Officer/Chief Engineer/Master.

Cabin Stores:

Bitters
Brandy
Champagne
Gin
Fruit Juices
Liquors Assorted
Rum
Cider
Table Wines
Strong Wines (Sherry, Port)
Sparkling Wines
Vermouth
Whisky
Other beverages (Vodka,
Chinese Wine, Beer)
Tobacco (cut)(Chinese)
Tobacco plug
Cigars
Cigarettes
Alcohol (spirits of wine)
Jams (assorted Marmalade,)
Jellies
Caviar
Pickles
Pickles for crew
(Cooking wine)
Tobacco (50 mg./can)
Playing Cards (new)
Typewriters (new and used)
Calculating machines
(new and used)

Cameras
Wireless sets Portable
Micrometers
Monographs
Binoculars
Perfumes
Thermometers clinic
Alkaloids such as:
Morphine
Cocaine
(Phenobarbital)
(Butobarbitine)
Preserved fruits (in syrup)
Electric vacuum cleaners
Electric irons
Electric toasters
Electric kettles
Electric Rice cooker
Articles said to be in excess of
normal requirements:
Fruition declared as follows:
White sugar
Cooking oil
Tea
Coffee
Evaporated Milk
Rice
Flour
Cheese
Butter
Fresh eggs
Frozen Meats

Everything must be in units of the metric scale. Items in full time use normally not necessary to declare but extra items in quantities more than for normal use must be declared.

All electronic items were declared on a separate sheet giving type, makers name. Model type, serial number. No item can be declared twice.

Instructions for the Compiling of Argentine Official Port Arrival Forms:

1. Immigration Department – Crew Identity Card: This form is required by all crew members without exception in order to enter and depart from Argentine Ports. As well it is the only document valid for authorities. Therefore, special care must be taken by the bearer in order not to damage or lose said document as, eventually, inconvenience will arise. Furthermore, details in order to complete this form are printed in both Spanish and English. Particulars required of person, family names, status, when/how engaged. Fingerprints. One original card is required for each crew member.

Important: Each form must carry the photograph of the bearer. In this respect, Masters are kindly to inform Agent with anticipation if photographer will be required on arrival.

2. Customs Department – Deck and Engine Stores, Cabin Stores, personal effects of crew: Each form is required in original and 1 copy, the latter will travel with the ship from port to port. The ship will require one for her own records.

Store List (Green form): Instructions and details for filling this form are printed on it in Spanish and English.

Important: Even though items Fuel Oil and Diesel Oil are not listed on the form they must be declared in the blank spaces.

Cabin Store List (Yellow form): Instructions and details for filling this form are on it in Spanish and English.

Important: Even though the item coffee is not included in this form it must be declared in the blank spaces.

Personal Effects of Crew (Pink form): Instructions and details for filling this form are printed on it in Spanish and English.

N.B. Very important. Recently as per terms of local Customs Regulation Number 325/80, every vessel calling Argentine ports is compelled to declare every electronic item to Customs with their respective make, model, and serial number.

Consequently, and in order to avoid confusion, we suggest to declare on both the Pink and Yellow forms all items except electronic equipment (such as TV sets, VHF's, Radars, etc. which must be declared on an additional page (any kind) stating clearly their type, make, model and serial number particulars. The Yellow and Pink forms should be endorsed 'plus sheets declaring electronic items.' These additional sheets will also have to be signed by the owners of the equipment.

We believe that the above proceedure will prevent and avoid a possible "double declaration" which is also very important. Therefore everything declared on the additional page is not, must not, be declared on the above Pink/Yellow forms.

3. Coast Guard (Prefectura Naval)

Crew List. 12 copies for first port.

The preferred form is in the IMO format with headings in Spanish. The crew list must be completed according to the following points:

1. Name of ship
2. Port of Arrival/Departure
3. Date of Arrival/Departure
4. Nationality of ship
5. Arrival port (last port)
6. Kind and number of identity document (Seaman's Book or Passport)
7. Given name, family name (not initials)
8. Number as per Crew List
9. Rank
10. Nationality
11. Date and place of berth
12. Date, signature and stamp of Master

This form is used for clearance on arrival and again on departure.

4. Sanitary Authorities:

Maritime Health Declaration. One original form, printed in Spanish and English, international format. One Vaccination list to be attached to the above, showing cholera and yellow fever if from Africa.

SHIPMASTER'S REPORT: September 1986.

Report pertaining to recent call at the Rio de la Plata region for discharge of a cargo of approximately 53,000 tonnes of Sahara Blend crude oil.

The discharge operation encompassed two lighterages and subsequent completion at the Navipar Oil Terminal off Zarate. The cargo in question was consigned for Paraguay, and is moved onwards from the storage terminal by flat river barges (barge trains) up-river for distances of over 1,200 miles.

56,000 d.w.tonnes. Product/Crude oil carrier, on voyage charter to European Charterers, and laden with a consignment of crude oil from a North African port, consigned for discharge at Zarate to Navipar Oil Co.

Due to various draft restrictions applicable at the different areas in the Rio de la Plata estuary and the Rio Parana, 2 lighterage operations had to be conducted prior to achieving suitable drafts for passage to the Navipar Oil Terminal, off the port of Zarate.

The vessel arrived at Lighterage Zone designated as "Charlie" on the morning of the 27th, drawing 12.35 m. (40.5 ft.) aft in salt water, (12.63 m. (41 ft. 05 in.) aft in fresh water). This lighterage area lies off Cabo San Antonio and is bound by the following co-ordinates: Latitudes 35° 59′ S. and 36° 05′ S.; Longitudes 56° 30′ W. and 56° 38′ W.

The chartered lighter vessel was found awaiting our arrival and the Master of the lighter undertook the STS berthing operation himself once our vessel was anchored and brought up. The port anchor was used and the lighter was secured on the starboard side. Similarly un-mooring was also undertaken by the Master of the lighter and our vessel weighed anchor only after the lighter was cast off and clear. ICS/OCIMF STS Guidelines were followed in the main. The lighter provided 2 "Yokohama" type pneumatic fenders adequately suited for the purpose.

A quantity of approx. 17,000 tonnes was off-loaded to this lighter to achieve an even keel draft of 9.56 m. (31 ft. 04 in.) and the discharge was carried out using only 1 hose of 8 in. diameter, provided by the lighter. This quantity of 17,000 tonnes was based on the permissible transit drafts for Canal Indio and Intermedio, to reach La Plata Roads. The permissible drafts for these canals at the time was declared as 31 ft. initially but amended by the Pilotage Authorities to an acceptable 31 ft. 06 in. due to higher water available at that time.

The passage from Lightering Zone "Charlie" to Recalada Pilot Station was laid well East of Banco Rouen and Banco Ingles, this being advertised as the only safe route despite the lengthier distance involved. The lighter vessel, even despite drawing a draft of only 26 ft. also utilised these courses.

However, waters in these areas in general are quite shallow, and underkeel clearances of only 1 ft. were experienced (as expected), especially near the approaches to Recalada Light Vessel. Speeds had to be reduced to reduce squat.

The Recalada Pilot boarded the vessel from a small motor cutter when the vessel was about 2 cables from the Light Vessel. It may be noted here that Recalada Pilots insist on boarding vessels only with a combination accommodation ladder and pilot ladder system, irrespective of vessel's freeboard.

The Recalada Pilot demands full sea speeds, even with deep laden drafts and almost no underkeel clearance. On debate however it was agreed to proceed at full manoeuvring speed only.

The Pilot was received at Recalada on the early morning of the 29th and the vessel was anchored at the La Plata Lighterage Roads shortly after noon the same day.

The 2nd lighter vessel however failed to arrive till the evening of the 31st and the vessel had to therefore remain at La Plata Roads till that time.

STS operations with the 2nd lighter were also effected as with the first, only this time the starboard anchor was in use and the lighter berthed alongside on the port side. 2 "Yokohama" type rubber pneumatic fenders were again provided by the lighter.

A quantity of approx. 6,000 tonnes was discharged to this lighter at La Plata Roads to achieve a draft of 28 ft. (FW), this being the permissible draft for transiting the Emilio Mitre Access Channel to Rio Parana Las Palmas.

Transfer operations were completed on the night of the 31st but the vessel could leave the anchorage only in the morning of the 1st as transit of the Mitre Canal during hours of darkness is prohibited.

The Parana River Pilot boarded vessel on the morning of the 1st and the vessel duly transited the canal to arrive at a selected anchorage in the river at approx. Kilometre Mark No. 80. The vessel had to anchor in the river mainly due to the berth being occupied by the previous lighter vessel engaged in discharging her cargo at the Terminal.

Communications on the VHF with the Terminal were established and were good (Spanish), and the vessel weighed anchor on the following day to berth almost immediately after the departure of the lighter from the Terminal, the precise timing being attributed to the good communications.

Navipar Oil Terminal: The Terminal belonging to the Navipar Oil Co. lies at Km. No. 111, only a short distance up-river from the Port of Zarate. It has 2 berths; one being used for off-loading import cargoes from deep sea vessels and lighters, and the other being used for loading flat river barges for transhipment of the same cargo onwards to Paraguay up-river at a distance of over 1,200 miles.

The berth jetty was a bit fragile and the fendering inadequate for berthing vessels of this size and tonnage.

Use of tugs (expensive) can be dispensed with as steady river currents provide good control of the vessel. Both the berthing and unberthing operations were effected quite satisfactorily by the Pilots.

The berth is located immediately down-river of a bend and this seems to provide a "lee" from the major flow of the river current, the axis of which would be probably hitting off the opposite side of the berth before continuing downstream.

Sufficient water for 28 ft. draft was available at the berth and the vessel never rested upon the bottom. The river tides were also at Neap and this too contributed to prevent sitting on the bottom. Due attention to vessel's trim is also required.

The Navipar Terminal, which is basically a storage facility for import of crude oil for onward shipment by river craft to Paraguay, is provided with only 1 main shore line for crude oil of 14 in. diameter. The storage tanks are located atop a hill at a distance of some 2.5 km. and in the absence of any booster facilities, substantial back-pressure was experienced throughout the discharge operation, causing problems especially towards the end strippings. This is apparently the bane of all vessels calling here for discharge.

Two hoses of 8 in. diameter only were provided for the discharge.

The vessel finally completed all discharge on the night of the 4th, once again being prevented from unberthing due local regulations prohibiting movement during hours of darkness. The vessel could therefore only unberth on the morning of the 5th. Mention must be made here that local coastguards permit a maximum of 2 m. trim on the vessel.

The return passage in ballast was made via the Martin Garcia Channel to Recalada, this route resulting in substantial savings in costs at the sacrifice of some 60 miles additional steaming time.

A point of interest is the rail/road Bridge Spans across the Rio Parana Las Palmas at Km. 105 (slightly down-river from Zarate) and the Rio Parana Guazu at Km. 177. Both these spans can only be crossed during daylight as per local regulations. However, the Martin Garcia Channel can be transited at any time as with Canal Indio and Canal Intermedio.

Drafts available at the Martin Garcia Bar however are less and usually only 20 ft. – 21 ft. at Zero datum. Therefore in order to avoid anchoring to await tide, the draft, if possible could be minimised for the available depth for the transit only.

The vessel cleared the Martin Garcia Channel and arrived La Plata during the night of the 5th, and the Recalada Pilot was finally dropped in the morning on the 6th.

Manoeuvring in the Mitre Channel and in the Rio Parana had its own peculiarities but the Pilots attending the vessel were found to be very professional. A typical pecularity was the failure of the vessel to respond to hard-over helm albeit continue to swing in the opposite direction – the swing itself not having been induced but more of a shearing-off of the vessel's head, caused by the particular flow pattern of the heavily silt laden waters across and over the bulbous bow at high speeds, as reported by the Pilot. To counteract this shear the speed was immediately reduced and the vessel responded to the corrective helm rapidly.

Port Customs, Regulations and Formalities: Whilst requirements to meet the formalities and regulations governing the area in question were very much as described elsewhere in the "Guide", it may be worth mentioning here that for this operation a contingent of 3 Shore Officials boarded the vessel soon after the 1st lighter was fast at Zone "Charlie" on the morning of the 27th (they having travelled aboard that vessel to the lighterage area) and set up residency on board from that time till the vessel was finally fast alongside the Terminal at Zarate on the evening of the 2nd.

These officials comprised of representatives from the Customs, Prefectura, and Immigration. The Customs Official is appointed to oversee cargo quantities on arrival and transferred, and also clear the vessel inwards. The Prefectura Official is appointed to check vessel's movements within the port, anti-pollution watch, etc. The Immigration Official for inward clearance only.

Two Independent Cargo Inspectors appointed for the operation also stayed on board throughout the vessel's stay in the port and were responsible for all gauging, sampling and calculation of cargo quantities on board and that transferred, including effecting gauging of the lighter vessels and finally to determine shore outturn.

Further, two representatives from the Agents were also assigned to the vessel; whilst one remained permanently on board throughout the vessel's stay, the other functioned as a courier between ship and shore, using whatever means of transportation were available to him, even using the returning pilot boats to La Plata.

These representatives from the Agents proved beneficial to the vessel as all liaising, courtesies, translations, co-ordination with the shore including Pilots, and a lot of sundry chores of the like were handled by them. The paperwork here was voluminous besides being all in Spanish and each lighterage area and the berth were to be treated as independent calls as far as clearing papers were concerned, and in this respect the Agent's representatives were valuable.

Pilot offices here require some lengthy notifications; at least 24 hours notice for Recalada Pilots and minimum 12 hours notice for Rio Parana. If the vessel is delayed more than 12 hours from the ETA given to the pilot office in writing by the Agents, the booking stands cancelled and a fresh requisition for Pilot services has to be raised. Since again the minimum notices are incurred, it becomes apparent that if ETAs are not kept updated frequently, unnecessary delays to the vessel can be incurred in awaiting Pilots.

Ship's Radio facilities were abundantly utilised by the shore personnel in liaising with their offices, especially from the lighterage areas, and a substantial Radio bill amounted.

Communications from the Navipar Terminal at Zarate, to the city of Buenos Aires some 60 km. away, were good and the Agents representatives could maintain a good rapport with their offices there.

Permission to effect Crude Oil Washing operations was granted and the vessel effected same through the discharge.

ATUCHA: 33.58 S. 59.16 W.

"C" category port. Km. 132 – River Parana de las Palmas Province of Buenos Aires.

Situated on the left bank (from seaward) of the Parana de Las Palmas at Km. 132, 15 miles upstream from Zarate, and 80 miles by river from Buenos Aires, via Mitre Channel.

Also see "River Plate" – Shipmaster's Report dated July/October 1983.

BERTH: A small berth 33 m. long with two dolphins in 44 ft. built especially for the discharge of heavy material for the new Atomic Energy Plant. There is a 300 ton heavy lift crane on the concrete platform. The plant is now in full operation.

AUTHORITY: There is no port authority here, the port comes under the jurisdiction of Zarate.

BUENOS AIRES: 34.36 S. 58.22 W. (See Plan)

"A" category port

Refer to beginning of Argentina and River Plate Ports.

Also see "River Plate" – Shipmaster's Report dated July/October 1983.

APPROACHES: Access is by the "Punta Indio" channel which requires constant dredging and commences just West of the Recalada Lightship, which is situated 30 km. due South of Montevideo. The channel with 28 ft. 6 in. on a width of 100 m. or 23 ft. over 200 m. winds up to the Outer Roads, which are some 37 km. from the Port. Direct entrance is by a channel, dredged to 29 ft. 6 in. with a 50 m. width, and 28 ft. 6 in. on an 80 m. width, to within 10 km., where the channel divides into North Channel, serving the New Port and Madero Port berths, and South Channel, for the rest of the port. North Channel at present has a depth of 25 ft. with a width of 50 m. or 19 ft. with 80 m. width. South Channel has 23 ft. 6 in. with a width of 35 m., or 21 ft. 6 in. over 50 m. All depths given here and elsewhere refer to the zero of the Riachuelo tidal indicator and semaphore in Buenos Aires port, which practically corresponds to the level of the ordinary lowest water, and is marked 0.72 m. under the average medium level of tides. Tides average 3 ft., but the principal factor is that of wind, which can raise or lower the water by 5 ft. or more.

The Mitre Channel (depth 29 ft. 06 in.) enters the access channel at Km. 12, and under existing regulations the Mitre Pilot ceases his job there, and a Buenos Aires Port Pilot will either take the vessel into Buenos Aires or out to Intersection, or vice versa. This involves use of tugs for the changeover, unless the vessel goes only to Campana or comes from there, when the Buenos Aires Pilot can travel by land.

When large passenger liners or LASH vessels are entering or leaving, it is possible to have the access channel closed to all other traffic for a period of four hours on account of the narrowness of the dredged channel.

ROADS: The Outer Roads are between Buoys 25 and 37, according to draft. The Inner Roads are between Buoys 12 and 15. Intersection Pontoon, or Pilot station, is at Buoy 37, North side.

PORT: The port, which is artificial, comprises:

Puero Madero	North Basin, Docks 4, 3, 2, 1 and South Basin.
New Port	Basin A, B, C, D, E and F.
South Dock	First and Second sections.
Liquid Gas Basin	On the South side of the South Channel before reaching S. Dock
Inflammables Basin	On the South side of the South Channel between Liquid Gas Basin and South Dock.
East Basin	On the North side of the South Channel.
Riachuelo	The Districts known as Boca and Barracas.

TUGS: From vessels drawing up to 22 ft., service is rendered by a bow tug from Km. 5, and a stern tug from Km. 1, or vice versa, and to or from Kms. 8 and 4 respectively when draft exceeds 22 ft.

Stand-by time will be charged if a vessel is delayed in entering or leaving by bad weather, fog, low water, no berth, etc., plus usual Sunday/holiday surcharge.

Tug hours now coincide with ordinary port working hours and time is counted from the hour they leave their moorings and until they return.

When a vessel is leaving port, and tugs are ordered to accompany her beyond normal limits, an overcharge will be made on an hourly basis.

Once a vessel is moored, all further service in the same section will be charged by hour. If the vessel shifts section, this movement is charged plus the sections traversed.

A special compensation charge is made when tugs are ordered but not used.

For the services of tugs supplying electricity or steam, charges are made per day and per hour, varying with the size of the tug.

If vessels do not use their engines while under tow, a surcharge of 50% is made.

Tow ropes must be supplied by the vessel, but can also be hired. The towage company is not responsible for breakages, fouling of propeller, expenses of diver or any other consequence.

Also see "General" before first port.

BERTHING:

Puerto Madero (Central Zone): This is the oldest part of the Port. Ocean going vessels mainly operate in North Basin, and Docks 4 and 3.

North Basin: Built in the form of an irregular pentagon, with the entrance, 100 m. wide in one angle. The two piers at the entrance are 200 m. and 225 m. long, respectively. The West side is 390 m. long and the South 377 m., North 326 m., and with a depth presently 22 ft.

As the basin was built for a depth of 21 ft., and later dredged, when vessels load deeper than 20 ft. they should be careful to keep well off the quay wall to prevent grounding. Up to three vessels can discharge at anchor.

There are 2 dry docks in the basin, and a repair shop.

Usually only 1 berth, Section 6, is used for loading/discharging operations and can be used for containers. Sections 1 and 2 are used by vessels repairing or laid up, while Sections 3 and 5 are for Navy use. The warehouse of Section 7 is used by the Custom House.

Dock 4: Connected to North Basin by a lock 197 m. long, and 25 m. wide. The dock itself is 630 m. long and 160 m. wide, with 19 ft. of water.

On the West side there are 4 warehouses, each 4 storeys high and 12×3 ton cranes. Berths, or sections, numbered 1 to 4.

On the East side, section No. 5-8 (No. 6 reserved for State vessels) open area for handling containers and heavy lifts. Electric gantry cranes on rails of 6.3 tons capacity.

Between Berths 6 and 7 on the East side there is a large open space where vessels or lighters can discharge direct to trucks or to railcars. Trucks may also go alongside at the other berths, at all of which there are railway lines, but space is limited.

The dock heads are used for discharging sand and gravel from barges.

Dock 3: South of Dock 4, connected by a cutting 70 m. long by 20 m. wide, with a swing-bridge. This dock is 690 m. long and 160 m. wide, depth 18 ft.

On the West side, Berths 1 to 5, there are 4 four-storey warehouses, and there are 13×3 ton cranes. Section No. 3, forms part of the open space for general discharge and storage.

On the East side, there are 2 elevators used for storage.

Between the elevators, on the East side, there are open spaces where vessels may berth and discharge lumber or drummed cargo, but this section is limited to medium and small vessels only.

Dock 2: This is connected with Dock 3 by a cutting 80 m. long, and 20 m. wide, with a swing-bridge. The Dock is 570 m. long by 160 m. wide and 15 ft. deep at zero.

On the West side there are 4 berths, and 13×3 ton cranes. The area has been cleared, but at Berth No. 3 there is a warehouse for cargoes for Paraguay.

LASH barges are discharged at Berth No. 1.

The East side is used for laid-up vessels.

Dock 1: Connects with Dock 2 by a cutting 80 m. long, 20 m. wide, with 14.5 ft. This dock is chiefly used by Government-owned river craft.

The West side has 4 sections (No. 1-4), each with a Customs warehouse. Section 4 is used for cargoes for Bolivia.

On the East Side there is an elevator for shipments of grain to nearby countries.

South Basin: This basin is connected with Dock 1 by a lock 184 m. long by 20 m. wide, with a swing-bridge.

The basin is 1,029 m. long and has a width of 100 m.–200 m. and a depth of 4.00 m.–5.80 m. The dock is used by ferries to Montevideo and Ascuncion and Ro/Ro service to Santos and Colonia.

New Port: The New Port, lies to the North of Puerto Madero, and entrance is via the Northern Channel. A breakwater extending from the North anteport protects the basin of the New Port from rough seas, and extends as far as Basin D, from which point another breakwater protects Basin E. Between the two, a channel is kept dredged for the movement of coasters to and from upriver. Basin F is used entirely for small coasters and river craft.

The 5 basins of this part (excluding F, coastal) offer good accommodation for the larger vessels entering Buenos Aires, and in all the berths there is sufficient water (depths 8.0 m.–10.0 m.) to float any vessel which can navigate the entrance channels. Max. draft should not exceed 9.90 m. Basins are numbered from South/North.

Basin A: Used by passenger vessels as well as general cargo. A landing station for passengers has recently been opened here and all vessels carrying over 50 passengers must land them here, shifting later to another berth if necessary.

The basin is 365 m. long by 140 m. wide, with 870 m. of wharfage. Northern side can accommodate 2 medium/large ships. Western side is frequently reserved for the Argentine Navy. On the S.W., passenger section, there is room for 1 vessel. On the S.E. another berth is available if the vessel operating at the Maritime Station is medium size only.

Pier Head No. 1 is 100 m. long, but is mostly used as waiting berth for river going vessels. There are two railway lines on each side of the basin, and also at the back of the deposits. There are five warehouses and a total of 14×3 ton cranes.

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The South side has 3 sections. Berth No. 1 at the dock head is an open area with 2×35 ton gantry cranes for containers. Berths No. 2 & 3 have a customs shed and are equipped with 5×3 ton cranes.

The North side, Berths No. 5, 6 and 7, are reserved for the state fleet. Berths No. 5 and 6 equipped with 7×3 ton cranes and No. 7 equipped with 2×6 ton and 1×35 ton gantry cranes.

The West wharf, length 151 m., is equipped with 1×6 ton and 1×12 ton electric gantry crane on rails.

Basin C: This is 495 m. long on the North, 585 m. on the South and 140 m. wide at its Western end, with 1,284 m.

On the South side there are 3 warehouses, built 15 m. back from the quay to facilitate operations. There are 8×6 ton cranes.

On the North and West sides there are no sheds, and this is used for operating directly to or from trucks or rail cars.

There are 7×3 ton cranes on the North and 3 on the West side.

On Pier Head No. 3 which is 236 m. long there are 2×6 ton cranes and 1×12 ton crane. Berth reserved for state fleet.

Railway tracks are fitted with a third rail for narrow gauge traffic.

The South side of this basin is reserved for ELMA (State Fleet).

The North side 1/2/3 is used for grain.

Basin D: This is 495 m. long on the North, 585 m. on the South and 150 m. wide at its Western end, with 1,300 m. of wharfage.

Along the Southern side is the Grain Elevator, which occupies all the water front and extends also along Pier Head No. 4 — 295 m. Capacity is 170,000 tons. It can deliver 13,500 t.p.d. to a total of 3 vessels.

On the North side a Container yard has been operating with 25,000 sq.m. of pavement and 1 shed, 100 m. long, 10 m. high and 30 m. wide. There are also 2 side loaders for 20/22 tons and 1 for 35 tons. Eventually the flooring will be extended to twice the area. 20 ft or 40 ft. Containers can be handled by 4×35 ton gantry cranes and 1 Liebherr "T 100".

For vessels with a reduced number of Containers, Basin E, North side, can also be employed, using the same concentration area at the Ericson yard.

Also see "Developments".

Basin E: The basin is 495 m. long on the North side, 585 m. on the South and 150 m. at the West end. Coal is discharged on the North side and there is also a warehouse there for other cargoes, although basically this basin is used for coal.

On Pier Head No. 5, which is 523 m. long, the Power plant discharges its coal or oil. There is 1 oil intake and 2 travelling grabs, capacity 4 tons each, and also a 30 ton crane.

On the South side of this Basin vessels operate loading or unloading fruit and generals.

On the West, or shore side of the basin there are 20 tanks (more building) for caustic soda, present capacity 7,400 cu.m. These are all steel tanks, and there are 11 lines to the pier. There are truck loading installations in the plant, and a weighbridge, but no fire-fighting installations. Wine tanks are also being built.

Basin F: This faces North, and is used for river craft only, pusher barges and tugs, while on the land or West side there are discharging facilities for sand hoppers.

Pier Head No. 6, between Basins E and F is 310 m. long, with room for 1 vessel only, and with 2 intakes for fuel oil and a 7.5 ton travelling grab for discharging Coal, capacity 150 t.p.h.

South Dock:

First Section: The first section has continuous quays on both sides, and a width of 90 m., widening to a turning basin before reaching the connecting channel to the second section.

Before the turning basin are 8 steel tanks for chemical or vegetable oil products, total capacity 5,260 cu.m., with 2×6 in. stainless steel lines and 2×4 in. steel lines, maximum discharge rate is 175 t.p.h.

Nearer the basin itself are 28 tanks, capacity 14,494 cu.m. plus 8 more tanks in the installation for use both with caustic soda and other chemicals or alcohol. Only one tank (No. 3) of 320 cu.m. is of stainless steel, the others are all steel.

The West quay is 911 m. long, and the East side 1,109 m., both in use for liquids and general.

The old Freezing plant is inactive and on the East side of the turning basin there is an elevator capacity 6,500 tons, 4 tubes and 3 chutes, plus another storage shed for 19,100 tons grain. Only 1 tube at a time may be used at 400 t.p.h.

At warehouse 10 there are 3 steel tanks capacity 10,600 cu.m. with a 10 in. line used for caustic soda, and by the grain board elevator 11 tanks capacity 23,640 cu.m. for vegetable oils.

On Pier A there are 41 tanks, capacity 18,580 cu.m. with 2 load lines for use with inflammables, handling usually caustic soda, fatty acids, tallow dodecilbencene and vegetable oils.

At Piers E and G there are 19 tanks total capacity 21,058 cu.m. for alcohol and chemical products, with 4 lines to the pier.

At F and G there are also 15 tanks, capacity 8,199 cu.m. for caustic soda, alcohol and chemical products.

Pier G has a further 6 tanks, total 3,259 cu.m. for any kind of chemical products, with 5 lines to the pier.

Second Section: The connecting channel is 90 m. wide, with earth banks. Jetties for discharging petroleum are placed along the East side, while on the West there is a continuous quay 1,000 m. long, on which there are 4×3 ton cranes and 8×1.5 ton cranes for discharging sand.

There are 7 berths, 5 of which are for general use, 1 for the Power plant for discharge of coal, with a 5 ton grab, and 1 elevator berth, Unit 10, capacity 23,500 tons. The loading bridge has 5 turrets, each with 2 tubes and 1 chute. Only 1 can load at a time, rate 400 t.p.h.

There are also 6 tanks, total 4,698 cu.m. for use with Tung oil with 1 line to the pier.

There are 8 petroleum jetties on the East side for the discharge of tankers and loading oil barges ex-shore tanks. The jetties are marked A to H. On reaching a draft of 23 ft. 6 in. vessels must shift to New Port.

The gangways to the mooring dolphins for tankers are in a very precarious state, which may lead to the closing of this sector.

It will be seen that there has been a considerable increase in number and capacity of tanks, all for private companies. In South Dock there are 134 tanks, capacity 87,147 cu.m.

Liquid Gas Basin: The Liquid Gas Basin lies on the South side of the channel, immediately East from the Inflammables Basin, and consists of a central mooring platform 520 m. long, with 4 pairs of dolphins and 2 mooring dolphins at each end, all joined by a foot gangway. The basin is protected by a breakwater 850 m. long. The Gas lines are insulated to carry liquid gas at minus 45°C.

The berth can accept vessels up to 45,000 d.w.t. Depth at zero tide is 33 ft.

As with the Inflammables Basin, all transit to land is by launch.

Inflammables Basin: This is situated outside the South Channel in front of Km. 0.500 and about 300 m. distant from the axis of the Channel and at a right angle. The dimensions are as follows: length: 616 m. on the East side, 425 m. on the West side, 180 m. on the S.W. side and 72 m. on the South side. The dock walls at the entrance are 44 m. long on each side. The entrance is 50 m. wide. All the dock walls of this basin are of cement, as well as the intakes and landing dolphins. It has 7 jetties for mooring vessels. The present tank storage in South Dock lies to the S.E. of this basin at a distance of about 1,000 m. Depth alongside 26 ft.

Ocean going tankers discharge at the piers on the West side. There are no facilities for reaching the city by land and therefore all the transport of officials, crew, stores, etc., must be done by launch.

The oil for the Y.P.F. tanks on the East side of the Basin and the M.O.P. workshops is sent from South Dock by piping under the South Channel.

East Basin: At the entrance to the South Anteport, a breakwater and 2 new basins have been constructed.

Basin No. 1 is used exclusively by the Port Works Department for laying up and repairing dredgers and other maintenance craft. It also contains a dry dock and a shipyard. Depth of water is 24 ft. in the basin but only 16 ft. at the entrance.

Basin No. 2, in form an irregular quadrilateral, is separated from No. 1 by a mole, and is 146 m. wide at the entrance, 170 at the base and with walls 372 m. long to the S.E. and 294 m. long to the West, allowing a number of vessels to berth. Alongside this mole is the SEGBA Power Plant. Depth in the basin varies from 24 ft. to 14 ft. at the entrance.

From No. 2 there is a mole parallel to the South Access Channel, 260 m. long, with a central salient 120 m. long, and 2 side salients 15 m. long each, and at 55 m. from the central mole. This is used by tankers discharging fuel for the Power Plant. There is 1 crane, 16 tons, and a narrow gauge railway line.

The breakwater has been built on the South side of the access channel as a protection for the basins, and commences 100 m. South of the light buoy on Km. 1 of this canal.

South Anteport: The construction of the Inflammables Basin, and of the East Basins, before arriving at the entrance to South Dock, Riachuelo or South Basin has created an Anteport. The North part has a mole 384 m. long from East Basin No. 1 to South Basin. This is used by the Port Works Department for workshops, deposits and offices.

The Prefecture has an office here, on top of which is a mast 2 m. high, used as a signal station. A white-edged red flag by day or a flashing red light by night indicates that a vessel is entering by the Southern Channel from Km. 8 to the Anteport. This signal will remain until the vessel reaches the Anteport, and signifies that the Channel is closed to all except tugs, sand hoppers and river passenger craft, provided draft does not exceed 14 ft.

Riachuelo: This is a narrow, winding stream which flows to the Plate by way of the South Channel. It has a depth in its axis of 21 ft. and from 17 ft. to 19 ft. at the berths, while the banks being sloping can cause trouble with moorings on a falling tide. Ocean-going vessels rarely use this now, except for occasional discharge of timber, and it is used mainly by lighters and coastal craft, as well as by laid up vessels and what are now virtually wrecks.

This is the old-time Boca and Barracas area.

DENSITY: Fresh water.

FRESH WATER: There are hydrants at all berths, with very few exceptions, at which vessels can take water at a charge per cu.m.

There are no hydrants in the Inflammable Basin, and only at Berth No. 1 on either side of Basin E in the New Port.

Delivery rate varies from 5 to 10 t.p.h., depending on the number of vessels taking water, time of day, etc. An extra charge is made in overtime.

FUEL: Available by barge.

CARGO: *Classification of Import Cargo:* Argentina being a tariff protected country, all cargo landed is subject to Customs control.

To facilitate control, there are Custom House warehouses on the city side of the dock zone, on the quays, in the South Dock, and others away from the quays. The Dock Zone is enclosed.

The transport of all goods from vessels is currently effected by State owned vehicles. There are no longer any private warehouses.

All fine cargo, cargo in cases, and most baled cargo must be discharged to Custom House Warehouses, direct from the ship, by means of dock cranes.

Other cargo in cases, barrels, etc., which might be damaged if stowed in the open air, also cargo which from its nature might damage other cargo stowed with it must go to the Custom House warehouses away from the quays, and is conveyed there by port railway wagons that take the cargo from alongside the ship. This same class of cargo can also be sent to private fiscal warehouses and is similarly conveyed there from the ship's side by railway wagons.

Cargo that can be stowed in the open air without risk of damage, such as cases of glass, motor cars, sanitary ware, etc., is also conveyed from the ship's side by railway wagons to open spaces (plazoletas) within the dock zone, reserved for the stowage of such cargo.

Certain classes of cargo, such as bales of gunnies, jute, rice, agricultural implements, and all articles the nature of which can be seen at a glance, can be discharged direct to consignees' carts, motor lorries, etc., from the ship's tackle. Also certain classes of rough cargo, such as coal, lumber, iron, cement, etc., must be discharged direct in this way.

The Custom House, in order to expedite despatch, has enlarged the list of goods that can be discharged in this manner, and also authorises the carrying out of these operations outside ordinary working hours, which has hitherto been prohibited.

Storage of goods in Custom House Deposits is limited to six months, counting from the date of the vessel's entrance to port.

All classes of cargo can be discharged into lighters (by permit from the Custom House).

Discharge to lighters can take place in all sections of the port.

Use of Special Deposit Called "Transit" for Reception of General Cargo:

In order to facilitate the discharge of vessels with general cargo for delivery to Fiscal Warehouse, the Custom House Authorities have authorised the direct discharge from vessels to a special warehouse which receives all the cargo as it comes out of the hold, labour being supplied by Agents.

This facility is only available at certain sections of the port and whenever a vessel discharges at a berth where there is a "Transit" deposit, this must be used unless the vessel carried homogeneous cargo or of such a nature that it does not require the use of the "Transit" deposit.

The cargo discharged in these special warehouses must be delivered by the Agents at ship's expense, into the Customs warehouses.

Cargo in transit to or from Paraguay is now stored in sections of Warehouse No. 5 of Dock 4. The goods may remain in the warehouse, once onwards transportation has been arranged, for 3 days, where the ocean carrier is operating, or in a special shed in Section 1 of Dock 2, where the river vessels load for that country.

Cargo in transit for other countries can be deposited in any approved space. In all cases, special permit must be obtained in order not to lose the status of "transit cargo".

Time Limit for the Permanency of "In Transit" Cargo in Lighters: Maximum time limit is set at 90 days, but it is possible to renew this, while on the expiry of such authorisation, the cargo must be discharged to fiscal warehouses, and be subject to all the rules and conditions governing this operation.

The Custom House is authorised to grant an extension of time when the interested party requests this before expiration date, and providing the causes are, in the opinion of the Custom House Authorities, justified.

Cargo in transit that is discharged by mistake to fiscal deposit, has to be removed from there within 48 hours; otherwise it must be added to the cargo manifest as a surplus discharge.

A tariff in the style of railway tariffs is in force with a variety of charges, all depending on the class and nature of the cargo that is being trans-shipped. Therefore, Shipowners, their Agents and Forwarding Agents should, in every case, communicate with their Agents in Buenos Aires to ascertain the exact cost of these charges. Subsequently to the new tariff being enforced, various increases were declared, so that the extra freight on cargo trans-shipped is now an important item to be considered when accepting through bookings.

Delivery of Cargo: The receiver of the merchandise or holder of the Bill of Lading must deliver this document to the Custom House to clear the goods. The merchandise, whether for deposit of direct despatch is delivered to the Consignees without the intervention of the Master of the vessel or the Agents. The Bill of Lading remains with the Custom House, under whose control the cargo is delivered. The Custom House verifies the legitimacy of ownership, and whether all the import dues or services have been paid on the merchandise before leaving warehouse.

Collection of Freights on Imported Goods: In the Argentine, the Custom House releases the cargo, and not the Agent, therefore the only means of ensuring collection of freight when payable at destination, is for the Agent to place a judicial embargo on the entire cargo. This action necessitates the Consignee first obtaining the Agent's conformity to the documents before the Custom House will accept them and deliver the goods.

Without an embargo the Agent, once he has presented the Cargo Manifest, cannot intervene between the Custom House and Consignee. Not even the retention by Shipper of all the signed original Bills of Lading is a safeguard, because the Custom House, which is only concerned with the delivery of the cargo to the lawful Owner and is in no way concerned with the freight payment, will deliver the cargo against production by consignee of a bank guarantee that the Bills of Lading will be forthcoming in due course.

From the foregoing it may be gathered that freight should always be prepaid when possible.

The Custom House usually does not release the cargo, if the Bills of Lading are claused "Payable at destination", until the importer produces an account for freight, duly receipted by the Agent, but this is not a sufficient cover, as the Customs are not under any legal obligation to effect this control, and therefore cannot be held responsible for the freight of goods delivered without it being paid.

Cargo Discharged to or Loaded from Vehicles: The Custom House Administrator has authorised the access of vehicles of all classes to the quays of this port for the reception or delivery of cargo of any class, size or weight.

It is necessary for the importers, exporters or Custom House brokers to obtain a permit for this, and the applicant is held responsible for any damage to port installations caused by said vehicles. Sufficient space must be left between truck and sheds to allow passage of Port Authority vehicles and fire engines.

The authorities will not be responsible for any accidents to the vehicles, their crew or their cargo. The vehicles must be so handled as not to interfere with the railway traffic.

Discharge of Inflammables: This is now permitted in the Port of Buenos Aires under strict security control.

Discharge of Sulphur: It is compulsory to have a motor launch fire extinguisher alongside vessels during the discharge of sulphur. An extra man is also required at each hold for carrying water to the stevedores.

Delivery of Fresh Fruit: The Custom House allows the consignees of fresh fruit to take away their cargo immediately on vessel's arrival, upon presentation of a special permit endorsed by a bank and Agents, and whereby the receivers guarantee presentation of the Bill of Lading in due course.

Placing of Lighters between Vessel and Wharf: When lighters are placed between the vessel and the wharf for the convenience of discharging a vessel's hold, full Port Service Dues are charged.

Lighters may be placed between the vessel and the wharf when the vessel's work to shore is not interfered with thereby. In such cases the vessel will continue to pay full dues. Lighters are, in fact, not considered as occupying any berth unless they are allotted a special berth by the Custom House to load or discharge. It is only when lighters are so commissioned by the Custom House, that a vessel going alongside these lighters would be charged in the category of a vessel lying second off.

Discharge of Heavy Lifts: There are 3 floating cranes, one for lifts of up to 60 tons, another of 100 tons and a new one of 250 tons. The first two may have lost part of their capacity. The 250 ton crane can navigate carrying its cargo, so making special movement of the vessel unnecessary, but the two smaller cranes must operate between ship and shore in swivelling movement.

There is also a floating crane capacity 30 tons belonging to the Navy, and two others, each 75 tons capacity, belonging to the State Fleet.

Hire counts from getting the crane alongside, and in condition to work, until work is completed, plus an extra hour to compensate crews from getting the crane back to its mooring place. Slings must be supplied by

There are 2 dry docks in the basin, and a repair shop.

Usually only 1 berth, Section 6, is used for loading/discharging operations and can be used for containers. Sections 1 and 2 are used by vessels repairing or laid up, while Sections 3 and 5 are for Navy use. The warehouse of Section 7 is used by the Custom House.

Dock 4: Connected to North Basin by a lock 197 m. long, and 25 m. wide. The dock itself is 630 m. long and 160 m. wide, with 19 ft. of water.

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Before the turning basin are 8 steel tanks for chemical or vegetable oil products, total capacity 5,260 cu.m., with 2×6 in. stainless steel lines and 2×4 in. steel lines, maximum discharge rate is 175 t.p.h.

Nearer the basin itself are 28 tanks, capacity 14,494 cu.m. plus 8 more tanks in the installation for use both with caustic soda and other chemicals or alcohol. Only one tank (No. 3) of 320 cu.m. is of stainless steel, the others are all steel.

The West quay is 911 m. long, and the East side 1,109 m., both in use for liquids and general.

The old Freezing plant is inactive and on the East side of the turning basin there are an elevator capacity 6,500 tons, 4 tubes and 3 chutes, plus another storage shed for 19,100 tons grain. Only 1 tube at a time may be used at 400 t.p.h.

At warehouse 10 there are 3 steel tanks capacity 10,600 cu.m. with a 10 in. line used for caustic soda, and by the grain board elevator 11 tanks capacity 23,640 cu.m. for vegetable oils.

On Pier A there are 41 tanks, capacity 18,580 cu.m. with 2 load lines for use with inflammables, handling usually caustic soda, fatty acids, tallow dodecilbencene and vegetable oils.

At Piers E and G there are 19 tanks total capacity 21,058 cu.m. for alcohol and chemical products, with 4 lines to the pier.

At F and G there are also 15 tanks, capacity 8,199 cu.m. for caustic soda, alcohol and chemical products.

Pier G has a further 6 tanks, total 3,259 cu.m. for any kind of chemical products, with 5 lines to the pier.

Second Section: The connecting channel is 90 m. wide, with earth banks. Jetties for discharging petroleum are placed along the East side, while on the West there is a continuous quay 1,000 m. long, on which there are 4×3 ton cranes and 8×1.5 ton cranes for discharging sand.

There are 7 berths, 5 of which are for general use, 1 for the Power plant for discharge of coal, with a 5 ton grab, and 1 elevator berth, Unit 10, capacity 23,500 tons. The loading bridge has 5 turrets, each with 2 tubes and 1 chute. Only 1 can load at a time, rate 400 t.p.h.

There are also 6 tanks, total 4,698 cu.m. for use with Tung oil with 1 line to the pier.

There are 8 petroleum jetties on the East side for the discharge of tankers and loading oil barges ex-shore tanks. The jetties are marked A to H. On reaching a draft of 23 ft. 6 in. vessels must shift to New Port.

The gangways to the mooring dolphins for tankers are in a very precarious state, which may lead to the closing of this sector.

It will be seen that there has been a considerable increase in number and capacity of tanks, all for private companies. In South Dock there are 134 tanks, capacity 87,147 cu.m.

Liquid Gas Basin: The Liquid Gas Basin lies on the South side of the channel, immediately East from the Inflammables Basin, and consists of a central mooring platform 520 m. long, with 4 pairs of dolphins and 2 mooring dolphins at each end, all joined by a foot gangway. The basin is protected by a breakwater 850 m. long. The Gas lines are insulated to carry liquid gas at minus 45°C.

The berth can accept vessels up to 45,000 d.w.t. Depth at zero tide is 33 ft.

As with the Inflammables Basin, all transit to land is by launch.

Inflammables Basin: This is situated outside the South Channel in front of Km. 0.500 and about 300 m. distant from the axis of the Channel and at a right angle. The dimensions are as follows: length: 616 m. on the East side, 425 m. on the West side, 180 m. on the S.W. side and 72 m. on the South side. The dock walls at the entrance are 44 m. long on each side. The entrance is 50 m. wide. All the dock walls of this basin are of cement, as well as the intakes and landing dolphins. It has 7 jetties for mooring vessels. The present tank storage in South Dock lies to the S.E. of this basin at a distance of about 1,000 m. Depth alongside 26 ft.

Ocean going tankers discharge at the piers on the West side. There are no facilities for reaching the city by land and therefore all the transport of officials, crew, stores, etc., must be done by launch.

The oil for the Y.P.F. tanks on the East side of the Basin and the M.O.P. workshops is sent from South Dock by piping under the South Channel.

East Basin: At the entrance to the South Anteport, a breakwater and 2 new basins have been constructed.

Basin No. 1 is used exclusively by the Port Works Department for laying up and repairing dredgers and other maintenance craft. It also contains a dry dock and a shipyard. Depth of water is 24 ft. in the basin but only 16 ft. at the entrance.

Basin No. 2, in form an irregular quadrilateral, is separated from No. 1 by a mole, and is 146 m. wide at the entrance, 170 at the base and with walls 372 m. long to the S.E. and 294 m. long to the West, allowing a number of vessels to berth. Alongside this mole is the SEGBA Power Plant. Depth in the basin varies from 24 ft. to 14 ft. at the entrance.

From No. 2 there is a mole parallel to the South Access Channel, 260 m. long, with a central salient 120 m. long, and 2 side salients 15 m. long each, and at 55 m. from the central mole. This is used by tankers discharging fuel for the Power Plant. There is 1 crane, 16 tons, and a narrow gauge railway line.

The breakwater has been built on the South side of the access channel as a protection for the basins, and commences 100 m. South of the light buoy on Km. 1 of this canal.

South Anteport: The construction of the Inflammables Basin, and of the East Basins, before arriving at the entrance to South Dock, Riachuelo or South Basin has created an Anteport. The North part has a mole 384 m. long from East Basin No. 1 to South Basin. This is used by the Port Works Department for workshops, deposits and offices.

The Prefecture has an office here, on top of which is a mast 2 m. high, used as a signal station. A white-edged red flag by day or a flashing red light by night indicates that a vessel is entering by the Southern Channel from Km. 8 to the Anteport. This signal will remain until the vessel reaches the Anteport, and signifies that the Channel is closed to all except tugs, sand hoppers and river passenger craft, provided draft does not exceed 14 ft.

Riachuelo: This is a narrow, winding stream which flows to the Plate by way of the South Channel. It has a depth in its axis of 21 ft. and from 17 ft. to 19 ft. at the berths, while the banks being sloping can cause trouble with moorings on a falling tide. Ocean-going vessels rarely use this now, except for occasional discharge of timber, and it is used mainly by lighters and coastal craft, as well as by laid up vessels and what are now virtually wrecks.

This is the old-time Boca and Barracas area.

DENSITY: Fresh water.

FRESH WATER: There are hydrants at all berths, with very few exceptions, at which vessels can take water at a charge per cu.m.

There are no hydrants in the Inflammable Basin, and only at Berth No. 1 on either side of Basin E in the New Port.

Delivery rate varies from 5 to 10 t.p.h., depending on the number of vessels taking water, time of day, etc. An extra charge is made in overtime.

FUEL: Available by barge.

CARGO: *Classification of Import Cargo:* Argentina being a tariff protected country, all cargo landed is subject to Customs control.

To facilitate control, there are Custom House warehouses on the city side of the dock zone, on the quays, in the South Dock, and others away from the quays. The Dock Zone is enclosed.

The transport of all goods from vessels is currently effected by State owned vehicles. There are no longer any private warehouses.

All fine cargo, cargo in cases, and most baled cargo must be discharged to Custom House Warehouses, direct from the ship, by means of dock cranes.

Other cargo in cases, barrels, etc., which might be damaged if stowed in the open air, also cargo which from its nature might damage other cargo stowed with it must go to the Custom House warehouses away from the quays, and is conveyed there by port railway wagons that take the cargo from alongside the ship. This same class of cargo can also be sent to private fiscal warehouses and is similarly conveyed there from the ship's side by railway wagons.

Cargo that can be stowed in the open air without risk of damage, such as cases of glass, motor cars, sanitary ware, etc., is also conveyed from the ship's side by railway wagons to open spaces (plazoletas) within the dock zone, reserved for the stowage of such cargo.

Certain classes of cargo, such as bales of gunnies, jute, rice, agricultural implements, and all articles the nature of which can be seen at a glance, can be discharged direct to consignees' carts, motor lorries, etc., from the ship's tackle. Also certain classes of rough cargo, such as coal, lumber, iron, cement, etc., must be discharged direct in this way.

The Custom House, in order to expedite despatch, has enlarged the list of goods that can be discharged in this manner, and also authorises the carrying out of these operations outside ordinary working hours, which has hitherto been prohibited.

Storage of goods in Custom House Deposits is limited to six months, counting from the date of the vessel's entrance to port.

All classes of cargo can be discharged into lighters (by permit from the Custom House).

Discharge to lighters can take place in all sections of the port.

Use of Special Deposit Called "Transit" for Reception of General Cargo:

In order to facilitate the discharge of vessels with general cargo for delivery to Fiscal Warehouse, the Custom House Authorities have authorised the direct discharge from vessels to a special warehouse which receives all the cargo as it comes out of the hold, labour being supplied by Agents.

This facility is only available at certain sections of the port and whenever a vessel discharges at a berth where there is a "Transit" deposit, this must be used unless the vessel carried homogeneous cargo or of such a nature that it does not require the use of the "Transit" deposit.

The cargo discharged in these special warehouses must be delivered by the Agents at ship's expense, into the Customs warehouses.

Cargo in transit to or from Paraguay is now stored in sections of Warehouse No. 5 of Dock 4. The goods may remain in the warehouse, once onwards transportation has been arranged, for 3 days, where the ocean carrier is operating, or in a special shed in Section 1 of Dock 2, where the river vessels load for that country.

Cargo in transit for other countries can be deposited in any approved space. In all cases, special permit must be obtained in order not to lose the status of "transit cargo".

Time Limit for the Permanency of "In Transit" Cargo in Lighters: Maximum time limit is set at 90 days, but it is possible to renew this, while on the expiry of such authorisation, the cargo must be discharged to fiscal warehouses, and be subject to all the rules and conditions governing this operation.

The Custom House is authorised to grant an extension of time when the interested party requests this before expiration date, and providing the causes are, in the opinion of the Custom House Authorities, justified.

Cargo in transit that is discharged by mistake to fiscal deposit, has to be removed from there within 48 hours; otherwise it must be added to the cargo manifest as a surplus discharge.

A tariff in the style of railway tariffs is in force with a variety of charges, all depending on the class and nature of the cargo that is being trans-shipped. Therefore, Shipowners, their Agents and Forwarding Agents should, in every case, communicate with their Agents in Buenos Aires to ascertain the exact cost of these charges. Subsequently to the new tariff being enforced, various increases were declared, so that the extra freight on cargo trans-shipped is now an important item to be considered when accepting through bookings.

Delivery of Cargo: The receiver of the merchandise or holder of the Bill of Lading must deliver this document to the Custom House to clear the goods. The merchandise, whether for deposit of direct despatch is delivered to the Consignees without the intervention of the Master of the vessel or the Agents. The Bill of Lading remains with the Custom House, under whose control the cargo is delivered. The Custom House verifies the legitimacy of ownership, and whether all the import dues or services have been paid on the merchandise before leaving warehouse.

Collection of Freights on Imported Goods: In the Argentine, the Custom House releases the cargo, and not the Agent, therefore the only means of ensuring collection of freight when payable at destination, is for the Agent to place a judicial embargo on the entire cargo. This action necessitates the Consignee first obtaining the Agent's conformity to the documents before the Custom House will accept them and deliver the goods.

Without an embargo the Agent, once he has presented the Cargo Manifest, cannot intervene between the Custom House and Consignee. Not even the retention by Shipper of all the signed original Bills of Lading is a safeguard, because the Custom House, which is only concerned with the delivery of the cargo to the lawful Owner and is in no way concerned with the freight payment, will deliver the cargo against production by consignee of a bank guarantee that the Bills of Lading will be forthcoming in due course.

From the foregoing it may be gathered that freight should always be prepaid when possible.

The Custom House usually does not release the cargo, if the Bills of Lading are claused "Payable at destination", until the importer produces an account for freight, duly receipted by the Agent, but this is not a sufficient cover, as the Customs are not under any legal obligation to effect this control, and therefore cannot be held responsible for the freight of goods delivered without it being paid.

Cargo Discharged to or Loaded from Vehicles: The Custom House Administrator has authorised the access of vehicles of all classes to the quays of this port for the reception or delivery of cargo of any class, size or weight.

It is necessary for the importers, exporters or Custom House brokers to obtain a permit for this, and the applicant is held responsible for any damage to port installations caused by said vehicles. Sufficient space must be left between truck and sheds to allow passage of Port Authority vehicles and fire engines.

The authorities will not be responsible for any accidents to the vehicles, their crew or their cargo. The vehicles must be so handled as not to interfere with the railway traffic.

Discharge of Inflammables: This is now permitted in the Port of Buenos Aires under strict security control.

Discharge of Sulphur: It is compulsory to have a motor launch fire extinguisher alongside vessels during the discharge of sulphur. An extra man is also required at each hold for carrying water to the stevedores.

Delivery of Fresh Fruit: The Custom House allows the consignees of fresh fruit to take away their cargo immediately on vessel's arrival, upon presentation of a special permit endorsed by a bank and Agents, and whereby the receivers guarantee presentation of the Bill of Lading in due course.

Placing of Lighters between Vessel and Wharf: When lighters are placed between the vessel and the wharf for the convenience of discharging a vessel's hold, full Port Service Dues are charged.

Lighters may be placed between the vessel and the wharf when the vessel's work to shore is not interfered with thereby. In such cases the vessel will continue to pay full dues. Lighters are, in fact, not considered as occupying any berth unless they are allotted a special berth by the Custom House to load or discharge. It is only when lighters are so commissioned by the Custom House, that a vessel going alongside these lighters would be charged in the category of a vessel lying second off.

Discharge of Heavy Lifts: There are 3 floating cranes, one for lifts of up to 60 tons, another of 100 tons and a new one of 250 tons. The first two may have lost part of their capacity. The 250 ton crane can navigate carrying its cargo, so making special movement of the vessel unnecessary, but the two smaller cranes must operate between ship and shore in swivelling movement.

There is also a floating crane capacity 30 tons belonging to the Navy, and two others, each 75 tons capacity, belonging to the State Fleet.

Hire counts from getting the crane alongside, and in condition to work, until work is completed, plus an extra hour to compensate crews from getting the crane back to its mooring place. Slings must be supplied by the lessee, and no responsibility is accepted for damage or breakage, the charge being on a tonnage/hour basis.

The 250 ton crane is not self-propelled, and has a length of 45 m., 23 m. beam and a draft of 5 m., displacing 1,400 tons. If required it can be used in salvage operations, towage being for account of lessee.

Normally these cranes, except for the 250 ton crane, navigate under their own power, but the Craneman has the right to employ a tug or tugs for lessee's account when he considers it necessary and two tugs are also generally employed.

Wharf Cranes: The hire of shore cranes is charged by the Port Administration to the Agents of the vessel requesting their use. Special permission must be obtained for overtime work, and also to have shore cranes handle ship's machinery, ballast, or any other non-commercial commodity.

Movable Cranes: Charged per hour from arrival until work finishes. These are used for shifting cargo from one wagon to another, or for shifting cargo for convenience of consignees.

Advertisements: Advices of arrival of vessels with cargo, inspections of general cargo and notices of general average are published in the local press.

Notarial Protest and Extensions: When vessels arrive with cargo it is customary to note protest before a Public Notary, for which there are fixed fees per page to be filled in, plus further fees should an extension be necessary later.

CONSULS:

Algeria	Montevideo 1889	Tel: 41-0271
Australia	Sta. Fe 846	32-6841
Austria	French 3671	72-7095.
Belgium	Defensa 113, 8th floor	33-0066
Bolivia	25 de Mayo 611 2nd floor	31-7365
Brazil	Paraquay 580 2nd Floor	31-7743
Bulgaria	Manuel Obarrio 2967	83-7458
Canada	Suipacha 1111 25th floor	32-9081
Chile	San Martin 439 9th floor	49-8271
China, Peoples Rep. of	Sucre 3001	73-1950
Colombia	Sta. Fe 782 8th floor	31-4381
Costa Rica	Libertador 1146	42-6181
Cuba	Virrey del Pino 1810	73-4349
Czech Rep.	F. Alcorta 3240	80-3917
Denmark	L.N. Alem 1064 9th floor	32-6901
Dominican Rep.	Maipu 844 5th floor	392-2381
Ecuador	Quintana 585 10 Piso	42-6408
El Salvador	Talcahuano 1038	42-6192
Finland	Sta. Fe 846	32-0600
France	Sta. Fe 846	32-2425
Germany	Maipu 938	32-9424
Great Britain	Luis Agote 2412	80-7070
Greece	R. S. Pena 547	34-2838
Guatemala	Lavalle 1759	46-4662
Haiti	Viamonte 1167	45-8796
Holland	Maipu 66 1st floor	34-8778
Honduras	Rodriguez Pena 336 2nd floor	40-0484
Hungary	Cnel. Diaz 1874	83-0767
Iceland	J. A. Roca 610 7th floor	34-3454
India	Paraguay 580 3rd floor	31-3020
Indonesia	Mariscal Castilla 2901	80-6622
Iran	Ocampo 2901	83-9314
Ireland	Sta. Fe 782 7th floor	32-4360
Israel	Arroyo 916	392-4481
Italy	M. T. Alvear 1149	42-9841
Jamaica	Corrientes 127 4th floor	31-4872
Japan	Azcuenaga 1035	83-1031
Korea, Rep. of	F. Alcorta 3221	83-4633
Lebanon	Lib. Gral. Sn Martin 2354	821-0466
Liberia	Florida 142	49-5543
Mexico	Cordoba 1367	42-0723
Nicaragua	Venezuela 146 2nd floor	37-8375
Norway	Esmeralda 909 3rd floor	32-1904
Pakistan	Alvear 1402	44-0355
Panama	Talcahuano 1038 5th floor	42-9651
Paraguay	Maipu 464 3rd floor	392-6536
Peru	Corrientes 330 3rd floor	31-3374
Philippines	Castex 3123	80-5068
Poland	Av. M. Aguado 2870	821-9681
Portugal	Cordoba 315 3rd floor	32-3524
Rumania	Arroyo 962	392-2630
Russia	R. Pena 1741	42-1552
Sierra Leone	Cordoba 1233	40-9573
South Africa	M. T. Alvear 590	31-8991
Spain	Guido 1760	41-0078
Sweden	Tacuari 147	38-3001
Switzerland	Sta. Fe 846	31-6941
Syria	Callao 956	42-2113
Thailand	Av. Belgrano 265 9th floor	33-3690
Turkey	R. S. Pena 852 8th floor	46-8779
United Arab Republic	Guido 1530	42-8542
U.S.A.	Sarmiento 669 3rd floor	46-3211
Uruguay	Corrientes 545 6th floor	49-4129
Venezuela	Esmeralda 909 4th floor	32-2786
Vietnam	Cordoba 1184	46-6533
Yugoslavia	R. Pena 1012	411309
Zaire	Cerrito 1070	44-0902

TELEPHONE: There is no special installation for vessels in port. Many Agents have one or more lines of their own, which can be placed on board, if there are connections available in that sector. The telephone company makes a connecting charge each time, at a high cost to the vessel, plus the usual charges for the service.

REPAIRS/DRY DOCKS: Syncrolift with capacity 40,000 d.w.t.

SURVEYORS: Germanischer Lloyd, Av. Leandro N. Alem 790, 9th Floor, 1001 Buenos Aires. Tel: (01) 3112085, 3114398.

DEVELOPMENTS: Port access to be dredged to 32 ft. for a width of 460 ft. At a later stage dredging of the port to 35 ft. will be undertaken.

TIDAL SIGNALS: See "Plan".

Signals by Day: See "Plan".

Signals by Night:

(White flash) Cycle:	30 seconds.	
(Red flash) Long flash:	2.5 secs. each.	
(Green flash) Short flash:	6/10 secs. each.	

White flashes — Rising tide: One long.
Falling tide: Two short.
Above zero:
Red flashes — For each metre: One long.
For each 10 centimetres: One short.
Below zero:
Green flashes — For each metre: One long.
For each 10 centimetres: One short.
Zero:
Green and red flashes — One green and one red, both short.

A weekly bulletin is issued by the public works ministry and widely distributed among Pilots and Agents reports depths referred to the zero of the Riachuelo indicator in channels, passages, basins and berths and it is possible to know the real depths at that moment in each part of the port area.

GENERAL: *Port Zone:* No one is permitted to enter the port zone on Sundays or holidays, or any working day after 1800 hrs., unless supplied with a pass. Visitors to ships must have cards issued by the Agents and approved by the authorities.

There are several access gates open during day time, but after working hours and on Saturdays/Sundays and holidays only those at Cangallo Street (by Dock 4) and Maipu (New Port) are open on a 24-hour basis.

Allotment of Berths: Vessels to discharge are allotted berths by the Port Authorities in strict turn, as from arrival in the roads, and according to the nature of the cargo to discharge or load and its quantity. A certain time is granted for completing operations, though an extension can usually be obtained, the Port Authority reserving the right to order a vessel out if operations are not completed on time.

Berths are allotted in South Dock when the greater part of a vessel's cargo is for the factories in that zone.

Berths at the Elevators: These are allotted in accordance with the certificate given by the National Grain Board, and in strict order of arrival in the roads.

Time Limit for Occupying Berths and Commencing Operations: Vessels which do not commence operations within 4 hours of the first ordinary period, are liable to have the berth given to others. Similarly those which suspend operations without due cause may lose the berth.

ELMA Berths in New Port: Any vessels may solicit one of the reserved berths, if vacant, but must shift as soon as a State vessel requires the berth.

Discharge of Inflammables: Consignees must take delivery from alongside. Should Customs clearance for such cargo not be ready, it must be discharged into lighters and the authorities will indicate where it must be placed.

Entrance: Vessels can enter or leave at any time of day or night, with advance notice to the authorities.

Movements: Vessels are not allowed to shift if their draft is not at least 10 in. less than the depth of water on the semaphore, with a rising river. No vessel can interrupt the operations of another to shift within the port, but if ready to sail, the other vessel must facilitate its departure whatever the hour may be.

All vessels moored alongside one another, at the quay, must reciprocally facilitate their operations, and open out when the vessel on the inside finishes her operations, and must leave or change berth. They must also make room for lighters with cargo for the vessel next to the quay, outside working hours.

When a vessel has to shift along the quay up to one ship's length to discharge or load from another hatch, neither towage nor pilotage is necessary when the shift is between the forward hatches, or the after hatches. Prior permission must be obtained.

Shifting from North to South or Vice Versa: There is no set rule, but usually vessels going from say, South Dock to New Port, will let tugs go and sail out to Intersection Roads to turn round and take up tugs again in the North Channel. It is also possible to have tugs follow out to Km. 9, where the North and South Channels meet, turn there and come into the new berth with the same tugs, if length of vessel permits.

It is for the Master and Pilot to decide where the vessel will turn, depending on weather, draft, current, etc.

Opening of Dock Bridges: The established time table, twice an hour is not observed, and Agents arrange for this when a vessel is ready to move through. Vessels should not attempt to pass the lock gates if clearance is less than ten cm. and the river is not rising. It must be remembered that the sole of the locks in each case is of concrete.

It is frequent in Madero docks to see vessels resting on the soft muddy bottom.

Prefecture Control: On both entering and leaving the Prefecture Officers may check with the crew list that all members of the crew are on board, particularly on sailing.

Draft on Sailing: Must be checked by the Pilot and Master, and duly recorded in the Pilot's book. Load lines are strictly checked; in case of hogging, drafts fore and aft are taken while in sagging marks will prevail.

Shiftings and Manoeuvres: In port are carried out under the responsibility of the Master, but Pilots are also responsible, at least to the Prefecture, since they are under direct authority and at the same time considered assessors to the Prefecture.

Trim: Also controlled, no list is allowed, and maximum tolerance for difference of draft fore and aft is 6 ft. to 7 ft. according to vessel's length overall. Vessels should not be down by the head.

Hatchways: All hatches must be kept closed when a vessel is not working. If hatches are found open when a vessel is idle, the vessel is fined.

Garbage: A garbage barge goes round the port every morning to take away the garbage, which must be left in drums slung over the stern ready for lowering into the barge. It is also possible to arrange for a barge to take off refuse from holds, old dunnage, bedding, etc. Collection is often a rushed affair, and good watch must be kept for the barge. Fines are imposed if garbage is not removed.

Working Hours: Ordinary working hours are now fixed as from 0700 to 1300 and 1300 to 1900 hrs. Tugs are now also on this same time table.

Overtime can be worked from 1900 to 0100 hrs. and from 0100 to 0700 hrs., but Stevedores are not allowed to take two consecutive shifts.

Custom House guards and other official workers follow the same schedule from Monday to Friday, but earn overtime on Saturdays, Sundays and holidays.

SHIPMASTERS' REPORT: September 1980.

Documents: In addition to the papers mentioned in the "Guide" the following papers were requested.

2 Vaccination Lists.
3 Arms Lists.
2 Crew Lists with the numbers of the passports.
1 List of loading ports of the last voyage with dates of arrival and departure.

The I.D. cards were checked before departure and stamped again.

AUTHORITY: Administrador del Puerto Buenos Aires.

CAMPANA: 34.15 S. 58.58 W. (See Plan)

(Province of Buenos Aires) "B" category port.

N.B. Refer to beginning of Argentina and River Plate Ports.

Also see "River Plate" – Shipmaster's Report dated July/October 1983.

On the left bank (from seaward) of the Parana de las Palmas arm of the Delta from seaward, 155 miles by river from Buenos Aires, Martin Garcia, or 60 miles via Mitre Channel.

The port is mainly used for receiving and despatching petroleum and its products. There are also facilities for handling timber and general cargo, as well as steel tubes for the petroleum industry, both for internal requirements and for export, which are made here.

PILOTAGE: Compulsory.

RESTRICTIONS: Draft is controlled by depth of water at Martin Garcia Bar. Daily draft forecasts made by local authorities. See "Mitre Channel" (in River Plate section).

MAX. SIZE: Max. LOA 225 m. Up to 27 ft. draft, dependent on local river conditions.

HEALTH: Free Pratique can be obtained in the usual way, by notifying Buenos Aires Agents. Tankers lightening part of their cargo in Buenos Aires Roads, can take Pratique here, provided that the convoy formed by the tanker and barges follows up to Campana, and no one on board has any contact with shore until after the medical visit. If the vessel is "unclean" however, Pratique is taken before lightening.

RADIO: Use Buenos Aires stations for overseas, but for traffic control this comes under Zarate VHF (Channel 14) LSO 23.

TUGS: See "General" before first port.

BERTHS: *Siderca Wharf:* Km. 98.5. Owned by Dalmine Siderca S.A. Length 185 m. Depth 35 ft. Discharge of iron ore by travelling crane with grab, outreach 22 m. from fender line. Airdraft 23 m. Discharge rate 350-400 tonnes p.h.

Steel tubes are loaded by ship's gear at a rate of 150-180 tonnes p.h. per gang per shift (6 hours).

National Mole: Length 116 m. Depth alongside 20 ft. (5 m. off the wharf the depth is 25 ft. (upstream) and 27 ft. (downstream). 3×3 ton electric cranes.

Carboclor: Located 1,500 m. downstream from Esso Jetty "E". Privately owned by Carboclor Industrial Quimicas S.A. Berth consists of a small jetty with dolphins. Depth alongside 32 ft. Liquid chemicals loaded and discharged at rates up to 1,000 cu.m.p.h.

Tolueno: Located 500 m. downstream from Carboclor Jetty. Privately owned berth with depth of water 20 ft. Berth consists of a concrete platform (20 m.×8 m.) with connections for loading and discharging liquid chemical products to coasters.

Esso – Jetty H: See "Tankers".

There are 2 towers, one on each dolphin, 27 m. from each end of the tanker platform. Chutes are able to swivel 180° and delivery rate for petroleum coke is 4,000–5,000 tonnes per day. Airdraft 17 m.

MEDICAL: Doctors and hospital available.

TANKERS: *Esso Refinery Berths:*

Jetty A: For discharge of dirty ballast and tank washings. Max. LOA 100 m. Depth alongside 20 ft.

Jetty C: Max. size 36,000 d.w.t. Max. LOA 250 m. Depth alongside 40 ft. Berth consists of a platform on piles with 9 pipelines for crude, fuel oil, gas oil, petroleum and slops.

Jetty H: Max. size 38,700 d.w.t. Max LOA 230 m. Depth alongside 45 ft. Berth consists of a concrete platform (16 m. long) on piles with 15 connections for loading/discharging of crude oil, refined products and slops.

Jetty G: Max. size 5,000 d.w.t. Max. LOA 100 m. Depth alongside 18 ft. Berth consists of a concrete platform (14 m. long) on piles with 13 connections for crude oil, refined products and slops. Vessel lies against 2 dolphins. Fresh water available.

Jetty E: Max. size 5,000 d.w.t. Max. draft 27 ft. Berth consists of concrete platform on wooden piles and 2 concrete dolphins. Tugs compulsory for berthing and unberthing. There are 20 connections for crude oil, refined products, additives, lubricants and slops.

DENSITY: Fresh water.

FRESH WATER: Available at Esso Moles and National Mole.

FUEL: Available at Esso berths and by trucks or barges.

CONSULS: Italy.

REPAIRS: Can be effected.

AUTHORITY: Administracion de los Puertos Parana.

CONCEPCION DEL URUGUAY: 32.29 S. 58.12 W. (See Plan)

Km. 183 – Uruguay River (Province of Entre Rios) "C" category port.

N.B. Refer to beginning of Argentina and River Plate Ports.

Also see "River Plate" – Shipmaster's Report dated July/October 1983.

On the left bank of the River Uruguay from seaward, 182 miles from Buenos Aires.

APPROACHES: Access to the port is by a channel 1,000 m. long, 75 m. wide, which is 19 ft. at zero.

The roads of the port extend from the buoy marking the entrance to the channel, and about 2 km. up river, where vessels may anchor if awaiting berth.

Access is governed by the water on the Montana and Altos y Bajos passes, where there is normally no more than 19 ft. over zero and this draft should be taken as a determining factor.

PILOTAGE: Compulsory. Pilots for Uruguay River board off Buenos Aires Entry Channel.

ANCHORAGE: In Uruguay River, about 900 m. North of Entry Channel Buoy.

RESTRICTIONS: Day and night navigation allowed. Channel dredged to 21 ft. LW. Depth on bars, 19 ft. LW.

MAX. SIZE: Maximum permitted draft in Uruguay River is 19 ft. plus height above zero minus 1.0 ft. Fresh water, according to local conditions.

HEALTH: When the vessel enters the jurisdiction of Prefectura Naval Argentina, Prefectura Rio Uruguay, from about km.116, radio agent and advise the number of passengers and crew on board and health condition of vessel, on VHF Channel 16 – call sign L8T (Lima 8 Tango).

RADIO: The port station "L8T" transmit daily information about the condition of the Uruguay River from San Javier to Gualeguaychu. The radio gives the news everyday at 0055, 0655, 1255 and 1855 hrs.

TUGS: Vessels can enter or sail to the Quays No. 3,4,5,6 and 7 without tug. It is compulsory to use tugs at other quays.

BERTHS: There are two berths for general cargo and one berth for tankers. There is an elevator of 20,000 tons capacity, working with two tubes of 500 t.p.h. each. Due to the silting alongside quay, vessel should be prepared to be fendered about 1.5 m. off the quay.

MEDICAL: All medical facilities available.

TANKERS: One berth for tankers up to 19 ft. draft.

YPF Berth: Eight hose connections, 12 in. and 6 in. diameter.

DENSITY: Fresh water.

FRESH WATER: Available, there are several hydrants of 1.5 in. diameter on the mole.

FUEL: Available by tank truck from local suppliers.

REPAIRS: National and privately owned workshops for all types of minor repairs.

DRY DOCKS: One, owned by Ministerio de Obras Publicas, length 70 m.

REPATRIATION: Can be arranged subject to Immigration formalities.

AIRPORT: Situated 10 km. away at Gualeguaychu, with daily services to Buenos Aires.

CONSULS: There are Italian, French, Uruguayan and Spanish representatives.

POLICE/AMBULANCE/FIRE: Police Tel: 22222. Ambulance Tel: 27792/22464. Fire Service Tel: 23333. Vida (Emergency) Tel: 27889/27858. Hospital Tel: 22464.

TELEPHONES: Arrangements can be made for placing telephone on board.

SHORE LEAVE: Permitted subject to Immigration control.

AUTHORITY: Prefectura Naval Argentina, Prefectura Concepcion del Uruguay.

Capitania del Puerto Concepcion del Uruguay, Spiro y Estrada, 3260 Concepcion del Uruguay, Entre Rios – RCA, Argentina.

DIAMANTE: 32.05 S. 60.33 W. (See Plan)

Km. 533 – River Parana (Province of Entre Rios) "B" category port.

N.B. Refer to beginning of Argentina and River Plate Ports.

Also see "River Plate" – Shipmaster's Report dated July/October 1983.

On the right bank of the River Parana from seaward, above Rosario and 240 miles and 276 miles from Buenos Aires via the Mitre Channel and Martin Garcia respectively.

APPROACHES: There is ample depth of water in the port for vessels with 24 ft. draft, but draft is governed by the water on the various bars on the river, the shallowest above Rosario being Isla de los Pajaros, at Km. 468 to Km. 473 where 2 ft. keel clearance is required.

PILOTAGE: There is no resident port Pilot, and Pilot has to be ordered from Rosario. Minimum 10 hours notice required. The river Pilot ends his duties in the Outer Roads. Vessel must sail to make Los Pajaros Pass in daylight.

HEALTH: Vessels arriving directly from abroad must take Free Pratique at San Nicolas or Rosario, with the usual pre-advice to Agents there, which is essential for preparation of Notice of Readiness.

RADIO: Nearest station is Rosario LSQ 38, on 477 kHz. A1 LSQ broadcasts daily, at 1305 hrs., the depth of water in the Parana River from Los Ratones to Los Pajaros, and also the minimum depth between Santa Fe and Rosario.

TUGS: Tugs available from Santa Fe. No tugs required for berthing. One tug required for unberthing vessels under 160 m. LOA and 2 tugs if over 160 m. LOA.

BERTHS: Grain is loaded from the elevator at the North end of the port, Section 4, where there is 30 ft. Only one vessel may load at a time. Loading rate is up to 600 tons per tube per hour, work being possible with 2 tubes simultaneously. Max. LOA 250 m.

It is possible to load a second vessel, lying second off, if the beam of the vessel alongside permits.

Storage capacity in port is about 50,000 tons, of which 20,000 tons are in elevator at section 4.

There are tanks for vegetable oil with a capacity of 4,000 tons. Pumping rate is about 120 t.p.h. to vessels' tanks.

STEVEDORES: Working hours: 0600 hrs. – 1800 hrs. Monday to Friday and 0800 hrs. – 1200 hrs. on Saturday. Overtime if required 1800 hrs. – 2400 hrs. and 0000 hrs. – 0600 hrs.

FRESH WATER: Available at the elevator berth.

FUEL: Not available.

MEDICAL: Hospital available.

DENSITY: Fresh water.

CONSULS: None. Outward bound consulate despatches should be requested from Rosario or Buenos Aires.

REPAIRS: Only minor repairs possible.

IBICUY: 33.39 S. 59.15 W.

Km. 218 – River Parana (Province of Entre Rios) "B" category port.

N.B. Refer to beginning of Argentina and River Plate Ports.

Situated 3.5 miles up the River Ibicuy, on the right bank of the River Parana Pavon from seaward, 117 miles from Buenos Aires by river.

With the closing of the rail ferry from Zarate this port has now been closed down, and is unlikely to reopen.

LA PLATA: 34.54 S. 57.55 W. (See Plan)

(Province of Buenos Aires) "B" category port.

N.B. Refer to beginning of Argentina and River Plate ports.

Also see "River Plate" – Shipmaster's Report dated July/October 1983.

This port is situated on the left bank of the estuary of the River Plate from seaward, 30 miles South of Buenos Aires. It is the capital of the Province of Buenos Aires and is rapidly becoming industrialised.

APPROACHES: Access to the port is by a channel, which leaves the main entrance channel to Buenos Aires at Km. 57. It can be dredged to 28 ft. maximum. La Plata Roads extend for 3.5 miles from the moles.

PILOTAGE: Compulsory. Coming from the sea, or Montevideo, the Recalada or Uruguayan Pilot will take the vessel to La Plata Roads 27 ft. where a La Plata Port Pilot comes aboard.

From up river to La Plata, the River Pilot is dropped at Intersection, where a new Pilot takes the vessel to La Plata Roads for the Port Pilot to come aboard.

ANCHORAGE: Four miles S.E. of Recalada.

RESTRICTIONS: Vessels navigating in the Entrance Channel have preference over those in the River Santiago, and those which by reason of size must turn at Four Mouths have priority over others in their vicinity.

There must be no crossing or overtaking of vessels over 60 m. long or 9 m. beam, or 20 ft. draft and for this reason vessels ready to sail from Gran Dock will not let go while any vessel is entering by the Entrance Channel.

Vessels over 190 m. in length can only manoeuvre in daytime, with a minimum visibility of 1,500 m. and with a wind not exceeding 10 knots.

Regulations for the Santiago River Channel prohibit movement between sunset and sunrise for vessels over 140 m. long, or drawing over 24 ft. Vessels over 11 m. beam cannot cross or overtake, and vessels in this channel must not interfere with those moving in Four Mouths (Cuatro Bocas).

Depths: Access Channel: Length 12 km. Depth at zero tide is 23 ft. 08 in.

Turning basin: Depth 26 ft. at zero tide.

Channel to Puerto Ing. Rocca (Propulsora) dredged to 28 ft.

MAX. SIZE: Max. LOA 215 m. Draft: 24 m. beam – 25 ft. draft; 24 m. – 33 m. beam – 23 ft. draft; both drafts are with 3 ft. under keel.

Vessels with a beam in excess of 33 m. require special permission to use the channel.

HEALTH: Free Pratique — radio messages should be sent direct to Agents in La Plata if vessel is entering direct.

RADIO: Station LOM 524 kHz, A2. State oilfields have a VHF service, range 50 km. for communication with their vessels on 156.5 MHz during the first 15 minutes of each hour.

TUGS: Two tugs must be used, each of a minimum 820 h.p. Normally join vessel in entrance channel. Also see "General" before first port.

BERTHS: The port comprises Rio Santiago, Gran Dock and the Propulsora berth, 5 km. up the river Santiago, also known as Port Ingeniero Rocca.

Rio Santiago: The grain elevators on the West side of the Entrance Channel are no longer in use. The berth is 450 m. long, due West of the Four Mouths Turning Basin. Four tanks for reception of liquid chemicals have been installed here, capacity 2,300 tons. Depth alongside 23 ft.

Gran Dock: (Also see "Tankers").

Berths No. 10 and 11 are used by Copetro for the export of coke.

Berth No. 11 is equipped with a conveyor belt and can deliver 5,000 tonnes in 12 hours (2 shifts). A similar system is being installed at Berth No. 10.

The depth alongside Berth No. 11 is 26 ft. and at Berth No. 10 the depth is 23 ft.

There is a turning basin at the head of Gran Dock with a width of 200 m. where vessels up to 175 m. LOA can turn.

Prior to berthing, vessels must swing and berth head out.

Propulsora: A cold rolling steel mill has been built inland and a 5 km. channel dredged to 28 ft. from "Cuatro Bocas". There is one berth here, 154 m. long, though vessels of up to 220 m. length with beam of 31.5 m. with special permission can berth. Depth alongside 28 ft. The material used in the mill is imported in coils, and exports of cold rolled sheets and wire are also handled. There are two cranes, 30 ton and 32 ton capacity and combined rate of discharge is 500 t.p.h. Work is continuous.

Some 600 m. from the wharf itself, there is a turning basin 300 m. diameter. Vessels go in bow first, as there is less water to the South end of the wharf, and turn in this basin before returning down channel to La Plata proper. Only one vessel can operate at a time here. Vessels are secured to bollards on shore at the bow, and a mooring buoy astern. 2 tugs required for berthing and unberthing.

TANKERS: *Gran Dock:* The dock has a total length of 2,500 m. but the Northern half of the dock is in a state of disrepair and unused. The State Oil Field (YPF) Refinery is located on the East side where crude oil is received by pipeline from Bahia Blanca. The Refinery has 5 berths (Nos. 1-5) for the loading and discharging of clean petroleum products. Tankers load to maximum draft and then proceed to the roads to complete loading from barges, to the maximum draft permitted for the River Plate.

On the West side, Berths No. 6 and 7 are operated by Petroquima and Berths No. 8 and 9 are connected by pipeline to the YPF Refinery on the East side.

MOORING: Vessels of up to 150 m. length will employ 4 men for mooring, and those over 150 m., 6 men. Mooring hours in ordinary time are from 0600 – 1800 hrs. on week days, 0600 – 1200 hrs. on Saturdays. There is a 50% extra from 1800 – 2400 hrs. on week days or from 1200 – 1800 hrs. Saturdays, and 100% at all other times.

SEMAPHORE: For night signalling of the depth of water in the access channel, the system is similar to that at Martin Garcia and Riachuelo, Buenos Aires. By day signals are hoisted on a tower at Km. 4,460 on the access channel arm if tide is rising. If the river is stationary or falling, no flag is hoisted.

MEDICAL: Doctors and hospital facilities available.

FRESH WATER: Delivery by barge, capacity 300 tons and pumping with barge's own pump, 100 t.p.h. There are also connections at the berths in Gran Dock.

FUEL: Available alongside in Gran Dock and by barge or truck.

CONSULS: Following countries are represented in La Plata: Italy, Norway, Peru and Spain. All other consuls at Buenos Aires.

REPAIRS: All repairs can be effected except those requiring a dry dock.

SHORE LEAVE: Allowed, provided crew members in possession of Identification Cards.

AUTHORITY: Capitan de Puerto de La Plata.

RAMALLO: 33.32 S. 59.59 W. (See Plan)

Km. 326 – River Parana (Province of Buenos Aires) "B" category port.

N.B. Refer to beginning of Argentina and River Plate Ports.

Also see "River Plate" – Shipmaster's Report dated July/October 1983.

APPROACHES: The port is on the left bank of the Parana from seaward, where the river is divided into two by the Isla de las Hermanas.

Access Channel: The entrance is from the main river channel about 5 miles from the port. The channel is buoyed but not lighted. The depth is 23 ft. – 25 ft., depending on the river. Agent should be consulted.

PILOTAGE: Pilotage is compulsory and the Port Pilot boards at the entrance to the access channel. Agent requires 6 hours notice of arrival to order the Pilot from Rosario.

RADIO: Agents at San Nicolas must be contacted either through Buenos Aires Radio, or via Rosario, LSQ 38, on 477 kHz, A1.

TUGS: Tugs are not necessary but if required must come from Villa Constitucion.

BERTHS: *Grain Board Mole:* There is an elevator, capacity 20,000 tons and two loading belts, load rate 250 tonnes p.h. each. The berth, for one vessel 180 m.–200 m. length, consists of a small jetty (length 150 m., depth 30 ft.) and several dolphins and two mooring buoys.

Fiplasto Mole: Used for discharge of fuel to the hardboard factory, from tankers. There are two dolphins with 23 ft. depth alongside. As the current runs fast here, vessels may roll with any wind, and it is recommended to put out more ropes than usual, both fore and aft.

MEDICAL: Attention available, but no hospital.

FRESH WATER: Not available, except by drums from a tank on the National Mole.

FUEL: Not available.

CONSULS: None, consular clearances can be effected at San Nicolas.

REPAIRS: No repair facilities.

ROSARIO: 32.57 S. 60.33 W. (See Plan)

Km. 420 – River Parana (Province of Santa Fe) "B" category port.

N.B. Refer to beginning of Argentina and River Plate Ports.

Also see "River Plate" – Shipmaster's Report dated July/October 1983.

APPROACHES: Outer Roads, between Buoys 410 and 413.

PILOTAGE: The port Pilot will come on board between Km. 410/415, by launch. Vessel should whistle for him if not here to meet the ship (2 long, 1 short).

ANCHORAGES: 7 vessels can anchor at Km. 425 (Rosario Roads) and 3 vessels can anchor at Km. 407 (Punta Alvear Roads). Both anchors should be used.

RESTRICTIONS: *Fog:* In thick fog, special permit must be obtained to enter or leave. There is an average of 6 days fog per month in the period April/August but only 1 day per month in the rest of the year. Electric storms are frequent.

Maximum Speed in Zone: From Saladillo stream North, there is a limit of 6 knots, up to Punta Barrancas.

There are no restrictions as to length and breadth of vessels, but draft and size of vessels are subject to river depth, which is very variable and no standard information can be given. Vessels up to 27 ft. draft are permitted to navigate the River Parana up to Rosario and San Lorenzo, provided vessels speed exceeds 10 knots and that there is at least 1 ft. keel clearance. Above Rosario controlling depth 22 ft. Vessels loading in Parana Ports must keep close contact with Agents for daily forecasts of admissible draft crossing Martin Garcia Bar to avoid risk of overloading and consequent delays.

HEALTH: Free Pratique, use Radio LSQ 38, on 477 kHz, or via Buenos Aires Radio.

RADIO: All messages through Pacheco Radio, call sign LPD, operating on 425 kHz. Pilots equipped with VHF radio Channel 16.

TUGS: Two tugs are available, controlled by Port Authority. See "General" before first port.

BERTHING:

Berth	*Length* (m.)	*Depth* (ft.)	*Remarks*
FACA	130	30	Floating jetty. Air draft 14 m. Max. LOA 240 m. Grain loading, rate 1,000-1,200 tonnes p.h. Storage 19,000 tons.
Genaro Garcia	140	35	Private elevator. Max. air draft 21 m. Grain loading, rate 1,000 tonnes p.h. Storage 7,000 tonnes.
Unit III	80	30	Air draft 13.0 m. Max. LOA 220 m. Grain loading, rate 400 tonnes p.h. Storage 80,000 tonnes.
Unit IV	145	29	Air draft 12.0 m. Grain loading, rate 400-500 tonnes p.h. Storage 35,000 tons.
Sheds 3-17	2,000	28	Bulk cargoes (grain by-products and sugar) by belt, rate 150-200 tonnes p.h.
Bolivian Free Zone	820	28	8 cranes. Bolivian imports and exports.
Sheds A, B, C.	300	28	Storage and export of sugar.
Paraguay Free Zone	350	29	Leased to Paraguay.
Sheds F to J	550	29	5 sheds×10,000 tonnes capacity for grain by-products. Loading by portable conveyor belts. Sheds H and I are waiting berths.
New Wharf	609	30	5 electric cranes travel length of wharf. (2×6.3 tons, 2×12.5 tons and 1×20/35 tons). Sulphur and manganese ore discharged to trucks. Privately owned sheds for storage of grain by-products. 2 fixed conveyor belts, rate 190 tonnes p.h. At the South end there are 3 lines for loading vegetable oil, rate 500 tonnes p.h. Storage capacity 50,000 tonnes.
Unit VI	250	31	Grain elevator berth. 9 chutes, 5 belts, rate 1,500 tonnes p.h. (300 tonnes p.h. per belt). Storage capacity 125,000 tonnes. Max. LOA 250 m. Max. air draft 13.5 m.
Unit VII	215	30	Grain elevator berth. Storage 80,000 tonnes. Rate 1,000 tonnes p.h. Berth not in use. Control room destroyed by fire.
Carnes Argentinas	175	–	Meat and products loaded by ship's gear.
Punta Alvear	144	35	Private grain elevator 14 km. below Rosario. 3 towers. 2 towers deliver 1,800 tonnes grain or 1,200 tonnes by-products per hour. Storage 55,000 tonnes in silos and 15,000 tonnes in sheds. Max. air draft 21 m.

Cranes: There are a large number of electric cranes, and the port is built in such a way that with few exceptions all cargo discharged must be handled by shore cranes. If the river is high, and shore cranes cannot operate to the vessel, the ship may discharge to shore, for the shore crane to place on railway cars, etc.

Bills of Lading covering lifts of 2.5 tons or more should be claused in such a manner that any extra expense in landing them is for account of the cargo.

Allotment of Berths: May depend on the availability of grain to the particular shipper, but normally berths are allotted in order of arrival.

Fenders: Vessels must use fenders for keeping them off, and can use their own or hire from the port.

STEVEDORES: Working hours: 0600-1200 and 1200-1800 weekdays and Saturday morning. Other times are on overtime rates. Gangs supplied according to vessels requirements by private companies under Government supervision.

Normal capacity per gang, per shift:
20 to 25 t.p.h. frozen meat.
120 to 140 tons per shift general cargo.

MEDICAL: Private and state-owned hospitals. All facilities available.

TANKERS: Discharge at Moles 3 and 4.

FRESH WATER: Only available at the berths on the Southern part of the port, except at the new wharf.

FUEL: All grades available by barge, but cost is high.

CONSULS: The following countries are represented at Rosario:

Bolivia
Chile
Finland
Germany
Greece
Italy
Lebanon
Netherlands
Nicaragua
Norway
Paraguay
Peru
Spain
Sweden
Switzerland
Syria
Uruguay

REPAIRS: All repairs excluding dry docking, can be effected.

CUSTOMS ALLOWANCES: 60 cigarettes per day, and 2 bottles spirits each man.

AIRPORT: 16 km. from port. Daily flights to Buenos Aires.

POLICE/AMBULANCE/FIRE: Police 29071; Ambulance 45600; Fire 20147.

TELEPHONES: Can be placed aboard.

SHORE LEAVE: No restrictions.

SHIPMASTER'S REPORT: February 1988.
River Plate Passage and Loading at Rosario.

The vessel had ordered a pilot for 0200 hrs. but due to favourable winds arrived at 0100 hrs. The pilot vessel advised in English that the Pilot would only be available at 0200 hrs and the vessel reversed course for a time.

Draft had been reduced to 21 ft. to facilitate passage in the adjacent zones and near Martin Garcia. Pilot boarded at 0215 hrs. and vessel proceeded at near to sea speed on fuel oil for the 6.75 hours to the Common Zone off La Plata. The two River Pilots were standing by and the pilots were exchanged without anchoring, and the ship resumed its upriver passage. The River Pilot ascertained that shipping was light, and that it was not considered necessary to anchor for any oncoming traffic. The ship changed to fuel oil and proceeded at near to sea speed. Passage was North of Martin Garcia Island to Nueva Palmyra, where the ship turned into the Rio Parana Bravo.

A dredger was working at km. 299 and the Pilot requested reducing the maximum draft to 20 ft. to allow the use of the secondary channel, which was duly done. The vessel anchored off Rosario with two anchors at 0400 hrs., 26 hours after taking the first pilot.

An inspection party of 6 persons boarded at 0715 hrs. and the vessel was cleared at 0800 hrs. The holds were concurrently inspected and the ship passed fit for grain at 0830 hrs. This was passed by walkie-talkie to the local agency, who in turn telephoned Buenos Aires Agency who in turn gave Notice of Readiness to the National Grain Board in Buenos Aires.

The vessel had a set of port entry papers from a previous call, and there was no delay. The Customs required the completion of a 'Draft Survey' statement with draft and details of the weights on board. No copy was given to the ship, but as the Chief Officer was inspecting hatches at the time it needs to be prepared for.

The Harbour Pilot boarded at 1000 hrs. and the vessel was all fast alongside a dolphin berth called Unit 4 by 1230 hrs. in a heavy downpour. The hatches re inspected by a second surveyor, and 'fogged' by a section of the Grain Board for the prevention of insects (though none had been found).

The stevedores' working hours were from 0600–2100, or 15 hours per weekday, with 6 hours on Saturday. No work on Sunday. Access was by a small gangway lowered from one of the two elevator towers on to the ship. This berth had only 2 towers, each with 2 booms. The ship's loading plan was amended to avoid having to shift the ship. Moving ahead against the current is said to require pilot, and main engine.

One of the towers was experiencing difficulties and the loading rate was less than that forecast. The vessel had nominated 24,946 tonnes to load to not exceed 27 ft. 03 in. F.W. draft. The River Authorities published daily readings of the available depth of water on each section of the river. It is necessary to keep the ship close to even keel towards finishing in case of a sudden drop in the permitted river draft.

Provisions could not be delivered from the shore due to the pedestrian only form of access. In fact the mooring boat was hired to bring the stores to the ship's offside. However, it was of limited capacity and charged extra to the bill. This applies to the majority of the terminals, which are mounted on top of the high river bank, while ships berth offshore on dolphins that may be fixed or floating. Cash payment in United States Dollars is preferred and in general, the provisions were considered to be of good quality.

Difficulties were experienced with the shore cargo figure being about 2.7% in excess of the ship's draft calculation. The vessel's sailing was delayed for an hour, but no correction appeared to be possible. Letter of Protest submitted and the Statement of Facts endorsed. Receipts are submitted daily, and each needs to be endorsed individually. Shortages appear to be not uncommon but with no means of obtaining rapid positive corrections to documents.

The departure inspection party consisted of one person and the vessel proceeded upriver to turn off No. 1 Unit. The Harbour Pilot left near the South or No. 6 Elevators, and then proceeded with the River Pilots. The vessel passed the dredger by arrangement, at km. 299 and then anchored at km. 244 to await daylight. Vessel hove up about one hour before sunrise and was turning into the Rio Parana de las Palmas at sunrise. This is a very narrow and sinuous river that leads into the Mitre Canal. Some mornings fog was experienced in the early sections. There are very, very few aids to navigation, a string of buoys indicates one side of a dredged channel.

Once the fog had lifted, a clear run through until the Common Zone off La Plata where the Sea Pilot boarded. Fuel oil was used for the majority of the time, excepting during the twilight time and fog periods.

The Sea Pilot arrived and the pilots were exchanged without anchoring and the vessel continued to Recalada. However, at 26 ft. draft, vessel bumped over a mudlump in the channel. Pilot disembarked at 2230 hrs. Due to shallow water, slow speed maintained until 2400 hrs.

SHIPMASTER'S REPORT: July 1994.
Berth: Grain Wharf.
Cargo: Degummed soya bean oil (connection – hoses).
Gangway: Ship's accommodation ladder.
General: Port is sited 300 miles from Sea Pilot Station (River berth). Strong current. No tugs used. Ship berthed port side to. Cargo loaded via manifold and via tank hatch. No work at night or weekends, as no overtime payments sanctioned by Charterer. Max. draft 29 ft. (F.W.). Density – fresh.

Berth: Grain Terminal.
Cargo: Degummed soya bean oil (connection – hoses).
Gangway: From shore.
General: River berth 10 miles down-stream from Rosario. No tugs. Vessel berthed using offshore anchor. Strong river current at all times. Max. draft 29 ft. (F.W.). Vessel suspected of touching bottom on departure when least depth in Emilio Mitre Channel less than advised (our draft 24 ft. 3 in.) (minimum depth in channel advised as 25 ft. 7 in.).
Recommendations: Check maximum draft available for all approach channels to this port.

AUTHORITY: Rosario Port Administration.

SAN LORENZO: 32.45 S. 60.38 W. (See Plan)

Km. 442 – River Parana (Province of Santa Fe) "B" category port.
N.B. Refer to beginning of Argentina and River Plate Ports.

Also see "River Plate" – Shipmaster's Report dated July/October 1983.

On the right bank of the River Parana from seaward, 16 miles above Rosario and 238 miles by river from Buenos Aires via Martin Garcia or 202 miles via the Mitre Channel.

The port includes the separate sections of Puerto Borghi, Puerto San Lorenzo and Puerto San Martin.

APPROACHES: Access is controlled by the passes Destileria and Borghi above Rosario.
PILOTAGE: Available, 6 hours' notice required.
ANCHORAGE: Vessels may anchor in the roads between Buoys 447 and 449.
MAX. SIZE: Up to 27 ft. draft depending on river depths.
HEALTH: Vessels coming in from abroad, should take pratique in Rosario Roads, advising Agents there in good time.
RADIO: Use Radio Rosario LSQ 38, on 477 kHz A1. This broadcasts, in Spanish at 1305 hrs. daily, depth of water in the river between Santa Fe and Rosario.
TUGS: See "General" before first port.
BERTHS: Puerto San Martin:
Terminal VI: Km. 458. New privately owned jetty for handling of grain and by-products. Length 180 m. with 4 dolphins. Four loading chutes of which two can work at one time. Rate for grain 2,200 t.p.h. and 1,600 t.p.h. for by-products. Depth alongside 40 ft., but sailing draft restricted by Paso Bellavista. Fresh water available alongside and fuel by truck.
El Quebracho Elevator Wharf: Km. 456. Owned by Cargill SA. The facility is for loading grain and by-products and vegetable oil. Vessels berth on 3 dolphins and send mooring lines to dolphins fore and aft. The overhead loading gallery has 3 loading tubes but only one can be used at any one time. The loading rate for grain is 1,000 tonnes p.h. and for by-products 750 tonnes p.h. Storage capacity of silos 36,500 tonnes. There are 2×10 in. lines for vegetable oil, rate 900 tonnes p.h. Storage capacity 12,000 tonnes.

The depth alongside is 35 ft. Sailing draft is restricted by Paso Bellavista. Air draft 17 m.
PASA Wharf: Km. 452. Private berth. Vessels berth against 2 dolphins which are 80 m. apart and send lines to mooring buoys fore and aft. Maximum sailing draft on average river level is 21 ft. if proceeding bow first down river. However, if vessels proceeds stern first with the assistance of 2 tugs (or one tug for vessels with bow-thruster) and turning down stream the vessel can load to 25 ft. 5 in.
IMSA Elevator Wharf: Km. 451. Berth owned by Nidera Argentina S.A. Grain, by-products and vegetable oil handled. Vessels berth at 4 concrete dolphins with rubber fenders. Depth alongside 30 ft. Air draft 18.5 m. Distance between berthing dolphins 150 m. Head and stern lines are sent to mooring dolphins ahead and astern. The loading gallery has 4 chutes and 2 loading belts. Delivery rate for grain 15,000 tonnes p.h. and by-products 900 tonnes p.h. Vegetable oil is delivered by gravity by 2×10 in. lines at a rate of 300 tonnes p.h.

Storage capacity of the silos and cells is 85,000 tonnes and the tank capacity for vegetable oil is 30,000 tonnes.
El Transito Wharf: Km. 449. Privately owned berth operated by Bunge and Born. Grain, by-products and vegetable oil handled. Vessels berth at 3 concrete dolphins, overall distance 140 m. Head and stern lines are sent to buoys fore and aft. Depth alongside 32 ft. Air draft 15 m.

There are 2 fixed loading towers. Loading rate 400 – 500 tonnes p.h. Vessels must shift in order to load all hatches.

Vegetable oil is delivered by 2 pipelines at a rate of 700 tonnes p.h. Storage capacity for grain is 26,000 tonnes and for oil 10,000 tonnes.
Dempa Wharf: Km. 447. Owned by Indo S.A. Grain, by-products and vegetable oil loaded. Berth has 5 dolphins with rubber fenders and the overall length between dolphins is 100 m. Headlines are sent to a buoy. Berth equipped with one fixed loading tower. Delivery rate 300 – 500 tonnes p.h. Vegetable oil is loaded by 2 pipelines at 600 tonnes p.h. Depth alongside 35 ft. Air draft 15 m.

Storage capacity for grain and by-products is 110,000 tonnes and for oil 25,000 tonnes.

Vessels may experience difficulty loading end hatches. The berth is at an angle to the current which is strong and with shifting, the assistance of a Pilot and linesmen is often required.

The berth is being reconstructed and additional chutes are to be provided in order to avoid shifting.
San Lorenzo:
State Gas Wharf: Berthing for small vessels loading liquid gas. The berth receives propane at 200 cu.m.p.h. and butane at 150 cu.m.p.h. Ammonia is also handled.
Esso Wharf: 2 mooring dolphins for loading and discharging petroleum products. Discharge lines 6 in. and 10 in. Depth of water 23 ft.
Y.P.F. Wharf: Refinery berth with 5 concrete mooring dolphins. Tankers discharge crude oil and load clean petroleum products. Products are loaded through 6 in. and 10 in. lines. Rate 700 t.p.h. – 800 t.p.h.
A.C.A. Elevator Wharf: Km. 444. Owned by Asociacion de Cooperativas Argentinas. Depth alongside 30 ft., air draft 23.5 m. Loading rate for grain 1,800 tonnes p.h. with 2 belts serving 4 chutes. Storage capacity for grain 55,000 tonnes. Vegetable oil loaded at a rate of 300 tonnes p.h. Storage capacity 5,000 tonnes.
Vicentin/Duperial Pier: Km. 442.5 Jointly owned by Vicentin to load grain and by-products and by Duperial to discharge sulphur. There are 4 berthing dolphins and 2 mooring dolphins at each end. There is no restriction on length of vessel.

Grain and by-products loaded by 3 chutes. Loading rate with 2 chutes is 1,200 tonnes p.h. for grain and 900 tonnes p.h. for by-products. Storage capacity 35,000 tonnes.

Sulphur is discharged by ship's gear using grabs and conveyor belts to stockpile. Rate of discharge 300–500 tonnes p.h. Depth alongside 34 ft.
Port Borghi:
Sulfacid Wharf: Privately owned wharf for loading zinc, ores, sinters and sulphuric acid. Berth consists of 3 dolphins (6 m.×9 m.), giving an overall length of 60 m. Lines are run to mooring bollards on the shore and both anchors are used. There is a conveyor belt, rate 60–80 tonnes p.h. There is a fixed crane, so vessels have to shift to load into all hatches.
MEDICAL: Attention available.
STEVEDORES: Working hours – 0600/1200, 1200/1800, in ordinary time, and in overtime, if required, from 1800/2400, 0000/0600.
FRESH WATER: Small quantities available; Masters are recommended to take elsewhere if possible.
FUEL: Available.
CONSULS: Consular clearances must be made at Rosario.
REPAIRS: Small repairs attended to. It is also possible to bring specialists from Rosario if bigger jobs have to be handled.
AUTHORITY: Administracion de los Puertos Parana Medio.

SAN NICOLAS: 33.20 S. 60.13 W. (See Plan)

Km. 343 – River Parana (Province of Santa Fe) "B" category port.
N.B. Refer to beginning of Argentina and River Plate Ports.

Also see "River Plate" – Shipmaster's Report dated July/October 1983.

On the left bank of the Parana River, from seaward, below Rosario, and 188 miles (via Martin Garcia) by river from Buenos Aires.
APPROACHES: Between San Nicolas and Rosario are the "Paso Paraguayo" and "Abajo Yaguaron" passes, and below San Nicolas, apart from Martin Garcia, the "Tonelero" and "Las Hermanas" passes.

The old-time characteristic of a grain port has been submerged in the industrial complex which has grown up around the steel mill, but grain is still shipped here.

The entrance channel to the port from the river is kept dredged to 24 ft. 6 in. at zero.
PILOTAGE: Compulsory. 6 hours' notice required to bring Pilot from Rosario.
MAX. SIZE: Draft up to 24 ft. depending on river conditions.
August 1988: Max. sailing draft San Nicolas to San Pedro 28 ft.
RADIO: Use LSQ 38, Rosario, on 477 kHz A1.
TUGS: None needed at the New Port or Buitagro berths, as vessels enter bow upstream, and the current is strong enough to turn them on leaving. Only in the event of high winds should tugs be ordered from Villa Constitucion. Also see "General" before first port.
BERTHS: *Customs Wharf:* Consists of a 537 m. long berth, with depth 29 ft. There are no sheds on the dockside, but one railway line exists, and there are 7 portal cranes (4×20 tons and 3×27 tons).

General cargo and bulk cargoes loaded and unloaded. Grain by-products loaded by portable conveyor at 3,000 – 4,000 tonnes per day. Grabs are used for discharging scrap iron and loading petroleum coke.

There is a pipeline for loading alcohol at 250 tonnes per hour from storage tanks with capacity 21,000 tons.

2×30 tons and 1×70 tons mobile cranes available.

New Port Administration and Naval Prefecture offices have been installed on the cliff above the berth. Agency offices are in the old town.
Grain Berth: The Grain Board Elevator Berth is 220 m. in length and will accept vessels of 250 m. LOA. Depth alongside 30 ft. Rate of loading 600 – 800 tonnes p.h.

Power Plant: Length of wharf 200 m. Coal and oil discharged to power plant. 2×16 ton cranes discharge coal at 250 tonnes per hour each to the belt and stockpile.

1×200 ton fixed crane, which can lift 140 tons out of a hatch, or 180 tonnes from the deck. Max. outreach 25 m.

Puerto Buitagro lies South of the Ramallo brook, and comes under the district of Ramallo, although administered by the San Nicolas port authorities. It handles all the movement of the State Steel Mill, Somisa, the capacity of which is presently being increased to produce 2,500,000 tons of steel per year.

Ing. Buitagro Commercial Wharf: 320 m. long, for movement of general cargo. It is 16 m. wide and has 1×30 ton crane and 2×15 ton cranes.

Coal Wharf: This berth consists of 4 dolphins, 35 m. apart, with bollards on the 1st and 4th used mainly to discharge coal lightened to self-discharging barges from colliers in the roads in the River Plate.

Ing. Buitagro Bulk Wharf: Total length of wharf 680 m.

350 m. is for discharging bulk coal and mineral ores by grab from overhead cranes on rails. There are three overhead cranes (2×10 tons and 1×16 tons) and the rate of discharge for coal is 7,500 tons per day and for ore 10,000 tons per day.

330 m. of the wharf is for self discharging vessels.

Depth alongside the North end is approximately 30 ft. At the South end, the depth is less and requires regular dredging.

Work is carried out in 3×8 hour shifts and Somisa employs all its own labour.

MEDICAL: Doctor, hospital facilities available.

DENSITY: Fresh water.

FRESH WATER: Available at berths.

FUEL: Available, but must be delivered from Buenos Aires, Campana or San Lorenzo by truck.

CONSULS: None.

REPAIRS: Possible.

SAN PEDRO: 33.42 S. 59.39 W. (See Plan)

Km. 277 – River Parana (Province of Buenos Aires) "B" category port.

N.B. Refer to beginning of Argentina and River Plate Ports.

Also see "River Plate" – Shipmaster's Report dated July/October 1983.

On the left bank of the Parana River from seaward, below Rosario and 151 miles from Buenos Aires, by river.

APPROACHES: There are no bars below this port, except Martin Garcia, and vessels can therefore load to the limits of either Martin Garcia or Mitre Channel at its maximum of 30 ft.

The roads are 1,500 m. down-stream from the entrance channel. Also see "Berthing".

PILOTAGE: Compulsory. Pilot to be requested 6 hours in advance through Agent. Pilot comes from Rosario and boards in the roads.

ANCHORAGE: Vessels can anchor if necessary about 500 m. from wharf.

HEALTH: Free Pratique should be requested 24 hours in advance via Agents at Buenos Aires as there is no radio here and the Doctor must come from San Nicolas.

RADIO: None; use Rosario LSQ 38, 477 kHz A1, or Buenos Aires.

TUGS: See "General" before first port.

BERTHING: Access channel from the roads is kept at over 32 ft. Draft in all the Overseas Basin is well beyond 30 ft., soundings taken in April 1977 showing 45 ft. in the centre and a minimum of 28 ft. at plumb of the wharf (taken on a river height of 2.48 m.) the loading gallery, at 35 m. high, has 7 tubes, and an overall length of 110 m. Tube radius is 16 m., and extension to the telescopic arms is available. Vessels moor bows to the N.E., swinging in the basin East of the wharf, with a maximum turning length of 225 m., and turn on their engines, use of tugs not being necessary, since wind problems are minimal with the high cliff close in.

Vessels moor port side to with three lines from the bow, two astern and two springs from midships aft. Max. LOA 225 m. Maximum beam is 32 m. Air draft 18 m. Depth alongside 30 ft.

Elevator capacity is 7,000 tons in one, plus 24,000 tons in a second elevator which came into use in early 1978, and another 90,000 tons in underground chambers connected by belts to the main elevator. At the moment only one belt is working, capacity 500/600 t.p.h. A second belt is to be installed with a similar capacity shortly. Hand trimmers are available if needed and there are also centrifugal trimmers for use on the tube. Any bagging needed must be done on board.

By-products are also loaded over a second berth at the head of the wharf, 88 m. wide at this point, taking vessels of up to 150 m., shifting as needed. Loading is over portable conveyor belts, of which there are three in use, loading 40/50 t.p.h. each. The by-products are loaded ex-truck onto the conveyors, and can be stored in a shed on the main mole.

There are no cranes or railway lines, in the port, the station being some 4 km. away, and the grain enters by truck from the large hinterland nearby.

The coastal basin, N.W. from the main basin, can only take river barges, maximum depth being 11 ft., and some by-products enter there.

Authorisation has been granted for a second grain berth to be installed on the South side of the overseas basin, which is 100 m. wide. This will be a privately owned berth, with elevators for 150,000 tons, and an estimated yearly tonnage of 500,000 tons.

MEDICAL: All medical assistance can be obtained. Hospital.

DENSITY: Fresh water.

FRESH WATER: Available at the berths.

FUEL: Not available.

CONSULS: None; consular clearances effected at San Nicolas.

REPAIRS: Minor repairs can be effected.

SANTA FE: 31.40 S. 60.37 W. (See Plan)

Km. 585 – River Parana (Province of Santa Fe) "B" category port.

N.B. Refer to beginning of Argentina and River Plate Ports.

Also see "River Plate" – Shipmaster's Report dated July/October 1983.

Situated on the Santa Fe river, a tributary of the Parana, 90 miles by river from Rosario and 312 miles from Buenos Aires (Via Martin Garcia) or 276 miles via Mitre Channel.

APPROACHES: Entrance to the port is through an access channel, 6,085 m. long, and with 23 ft. at zero.

On this section of the river, from Rosario to Santa Fe, vessels must keep 2 ft. under the keel if measuring less than 50 fiscal units, or 2 ft. 6 in. if over. This applies when the hydrometer at Santa Fe indicates over 1.70 m. of water over zero. If the hydrometer measures less than 1.70 m. (5 ft. 7 in.) then vessels must have 2 ft. 6 in. and 3 ft. 6 in. respectively under the keel.

PILOTAGE: Port Pilot comes aboard in the Parana, at the mouth of the entrance channel. 6 hours advance notice is required for the Pilot to be in position.

ANCHORAGE: Although partially dredged in 1975, restrictions have not been lifted and vessels can only enter or sail between 0900 hrs. and 1700 hrs., and if unable to enter within this period must wait in Diamante Roads (km. 533) and follow radio instructions from the Prefecture. If the Diamante Roads have already been passed, a vessel may lie below Punta Alvear, or eventually at km. 568 (Animas de Paracao) but must immediately notify the Santa Fe Prefecture.

Vessels sailing must leave with sufficient margin to be able to pass "Los Pajaros" (km. 468/473) in daylight, and avoid anchoring in the sectors indicated above as reserved for Northbound vessels.

Exceptionally vessels under 160 m. LOA may anchor in Diamante Roads, if they leave in daylight and arrive in the roads before sunset, and provided there is no other ship anchored there. These instructions apply under normal hydrological conditions, and with unusual changes in water depth may be changed by the Prefecture.

SIGNALS: There is a signal station on the top of the tower of the new elevator (unit 1) in visual and radio contact with the control station tower at the river end of the access channel, where the signals are hoisted. It is also possible to observe movement in the roads from here.

The signals in the entrance channel are:

By day (shown at both ends of the access channel)

White globe, 60 cm. diameter	Channel free for overseas vessels.
Red biconic mark	Exit only for overseas vessels.
Green cone	Free movement of coastal vessels.
Yellow cone	Movement of coastal vessels allowed, but with precaution.

By night (interior signal staff only)

White flashes	Entrance free for overseas vessels.
Red flashes	Exit free for overseas vessels.
Green flashes	Free movement for coastal vessels.
Green and red flashes	Coastal movement only with restrictions.

Absence of signal – signifies port and channel closed.

All vessels will await the corresponding signals, which can be asked for by whistling, repeating 1 long, 3 short, for overseas vessels, or 2 short, 1 long, for coasters.

Should the absence of signals be due to a failure of the system, instructions will be sent by the Authorities.

NAVIGATION: *In the Channel:* Maximum speed in the entrance channel is 5 knots, however, the Pilot can advise on other speeds.

Movement by night is possible, but usually Pilots will not take a vessel out after 1500 hrs., since navigating the passes down river might oblige a vessel to lie in the roads, and turning there would require the use of 2 tugs, it being easier to wait until through transit down stream is possible.

During fog. Usual international precautions must be observed, but if the fog is very thick, entrance or departure of vessels is prohibited without special permission. There are no official statistics as to frequency of fog, but in the period May/August there may be 5 to 6 foggy days a month, and in the rest of the year one or two a month.

HEALTH: As there is no radio station here, Master should radio Agents with the usual request for Free Pratique.

RADIO: Regulations in this port state that Agents or Consignees must give written notice to the Port Authorities 24 hours before ETA, with details of vessel, cargo carried etc., or if in ballast, indicating for account of whom the vessel will load.

ETA should be confirmed if there is any change, since the port Pilot and tugboat must be sent out to the main river to meet the vessel. This will also allow the preparation and presentation of the Notice of Readiness without delay.

Radio LSQ 38, on 477 kHz A1, at Rosario, transmits river depth at 1305 hrs. GMT.

TUGS: 2×1,800 h.p. and 1×600 h.p. One tug is required by all vessels over 20 Fiscal units and up to 165 m. LOA, with a second tug standing by at Km. 592 unless the Pilot calls for its services (high winds, etc.).

Vessels over 165 m. will have a second tug standing by in the roads. Outbound vessels over 20 fiscal units will take two tugs, and let go the stern tug at Km. 592, the bow tug continuing until the roads are reached. However, if sailing from Basins 1 or 2 or the Terminal berth and with no other vessels in the way, one tug only may be taken, provided the wind is below 22 knots.

Also see "General" before first port.

BERTHS: The port is composed of four parts:

Dock No. 1, with stone wharves, 564 m. frontage on the East and 672 m. on the Western side, 120 m. wide and well equipped with cranes, and sheds; 24 ft. at zero.

Between Dock 1 and Dock 2, on the pierhead are tanks for vegetable oil, capacity 4,000 tons and pumping capacity 2/300 t.p.h.

Dock No. 2 lies parallel to Dock 1, and has a piling frontage 900 m. long on the East, 720 m. on the West and 120 m. wide. 22 ft. at zero.

Both docks are served by broad and narrow gauge railway lines.

Derivation Channel. 2,178 m. long, lies to the West of Dock 2. It has open banks, with no stone or wooden frontage. There are a number of dolphins and mooring facilities. It is reserved for Inflammables and there are also two deposits for Quebracho logs and for bones. Although there are railway lines, there are no cranes or facilities for handling cargo. Vessels awaiting orders or effecting repairs can lie up in the Eastern side of the Channel, North of the Esso plant. Shell and YPF plants on the Western side, where vessels may take on bunkers.

Coastal Wharf. Concrete wharf, 810 m. long, lying between the West side of Dock 1 and the Elevator at Unit 1. It has 4 dolphins and can berth and work 2 vessels simultaneously in 24 ft.

Allotment of berths. Allotted by the port by order of arrival. If berthing in the Derivation Channel, spars must be placed to fend the vessel off the bank, and an anchor may also be cast, but this must be done under the direction of the port Pilot.

Loading Grain. There are 2 units, comprising 3 elevators in use. Unit 1 on the South end of the West quay of Dock 1, next to the coastal section, can berth 2 vessels in 24 ft. The elevator has a capacity of 50,000 tons, and the loading gallery has 8 spouts with 3 belts, so that both vessels can operate simultaneously, although no more than 3 spouts can be in use together, with a load rate of 300 tons each, rising to 400 tons in favourable conditions, or when only 1 vessel is loading.

Unit 2 is now composed of the ex-Bunge Elevator on the Northwest of Dock 2, capacity 12,000 tons, and with 6 tubes, loading simultaneously by 2 at a rate of 200 t.p.h. each, and also of the De Ridder Elevator, on the S.W. side of the dock, capacity 6,000 tons, and with 2 tubes, capacity 200 t.p.h. each.

STEVEDORES: Working hours: 0600 hrs. – 1800 hrs. on weekdays and 0600 hrs. – 1200 hrs. on Saturdays.

MEDICAL: Doctors and hospital facilities available.

TANKERS: Berths owned by Esso, Shell, and YPF in Derivation Channel.

FRESH WATER: From hydrants in Docks 1 and 2, or by tug in the Derivation Channel.

FUEL: Available by truck.

CONSULS: At Santa Fe the following countries are represented: Italy, Paraguay, Spain. Other consuls at Rosario and Buenos Aires.

REPAIRS: Can be arranged. There are several tugs and lighters equipped to render assistance to vessels.

CUSTOMS ALLOWANCES: For consumption on board each man allowed 40 to 60 cigarettes a day and 1 litre of spirits a week.

AIRPORT: 17 km. from Santa Fe, regular flights to Buenos Aires and other Argentine cities.

POLICE/FIRE/AMBULANCE: Police: Tel. 21141; Ambulance: 36220 and 24687; Fire: 21212.

TELEPHONES: On board connection is only made for naval vessels.

SHORE LEAVE: Allowed, provided Crew members in possession of identification cards.

AUTHORITY: Administracion de los Puertos Parana Medio.

VILLA CONSTITUCION: 33.15 S. 60.17 W. (See Plan)

Km. 365 – River Parana (Province of Santa Fe) "B" category port.

N.B. Refer to beginning of Argentina and River Plate Ports.

Also see "River Plate" – Shipmaster's Report dated July/October 1983.

On the left bank of the River Parana from seaward, 25 miles below Rosario and 197 miles (via Martin Garcia) by river from Buenos Aires.

PILOTAGE: Port Pilot compulsory. Order through Agent 6 hours prior to arrival.

ANCHORAGE: Anchorage for 6 vessels between Km. 361.5 and Km. 363.5.

MAX. SIZE: Up to 25 ft. draft depending on river depths.

RADIO: Rosario LSQ 38, on 477 kHz, A1.

TUGS: Vessels over 110 m. LOA must use 1 tug when entering, sailing or moving. If wind speed over 22 km.p.h. 2 tugs must be used. Tugs not required at Puerto Acevedo. Also see "General" before first port.

BERTHS: *Elevator Berth:* Owned by the Grain Board. Length of pier 175 m. Depth alongside 27 ft. The Northside Berth can accommodate vessels of 230 m. LOA but due to reach of spouts the South Berth accepts vessels of 180 m. LOA. Delivery is by a maximum 2 spouts at any time (1 spout to each berth or 2 spouts to one berth) at rate of 350/450 tonnes p.h. per spout. Storage in vertical silos 55,000 tonnes and underground silos 155,000 tonnes.

Coastal/Overseas Wharf: Depth alongside 25 ft. Max. LOA 220 m. Grain and by-products loaded by portable conveyor belts at 150 tonnes per hour. Storage capacity 8,000 tonnes.

Puerto Acevedo. Two km. South of Villa Constitucion is Acindar Mole, otherwise known as Puerto Acevedo, where a large steel mill is installed. The port is under the jurisdiction of Villa Constitucion and pending a definite resolution as to Villa Constitucion Roads, vessels awaiting berth anchor off the Acindar mole.

The mole is 110 m. long by 34 m. wide, in 29 ft. and is used for the loading of steel products. It is fitted with 2×12 ton electric cranes on rails. Vessels of any length can moor, but must shift to present distant hatches.

The new wharf with length of 170 m. and depth alongside 32 ft. is used for discharge of iron ore. 1×10 ton overhead crane with grab, rate 80 tonnes p.h.

Port Pilot from Villa Constitucion attends here. Fresh water available by long hose, rate 15 t.p.h. Consult Agent before ordering tugs.

MEDICAL: Doctor and hospital facilities available.

FRESH WATER: Obtainable. (See above).

FUEL: Not available.

CONSULS: Consular despatches must be taken at Rosario.

REPAIRS: Can be effected, if necessary bringing men and equipment from Rosario, or San Nicolas.

ZARATE: 34.09 S. 59.05 W. (See Plan)

"B" Category port. Province of Buenos Aires.

Km. 108. Situated on the West bank of Parana River, 150 or 65 miles by river from Buenos Aires, and 5 miles upstream from Campana.

N.B. Refer to beginning of Argentina and River Plate Ports.

Also see "River Plate" – Shipmaster's Report dated July/October 1983.

MAX. SIZE: Up to 26 ft. depending on river depths.

TUGS: See "General" before first port.

BERTHING: The river here is wide and deep, but the old moles are no longer in use, having been silted up, with a maximum of 10 ft. at the National Mole. With the opening in 1978 of the rail road bridge over both branches of the Parana (de las Palmas and Guazu) to the Entre Rios Province the rail ferry has been closed down, and there is no sign of any new port works being undertaken here.

The Naval Prefecture at Zarate remains in charge of transit under the bridges and Pilots must maintain VHF contact with Zarate while in this zone (Channel 14). (LSO 23) Vessels not carrying VHF must use medium wave.

Shipmaster's Report: July 1983.

The river at Zarate is wide and deep but the 8 old wharves are no longer used by oceangoing vessels and have silted up to depths of 10 ft. or less.

MEDICAL: Doctor and hospital facilities available.

TANKERS: *Navipar Oil Terminal:* See "River Plate" – "Shipmaster's Report" dated September 1986.

FRESH WATER: Available.

FUEL: Not available.

CONSULS: Italy is represented locally. All other consuls at Buenos Aires.

REPAIRS: Small repairs can be effected.

III. *SOUTH ATLANTIC PORTS*

Bahia Blanca
Caleta Cordova
Caleta Olivares
Caleta Olivia
Comodoro Rivadavia
Galvan
Ing. White
Mar del Plata
Necochea
Puerto Belgrano
Puerto Deseado
Puerto Madryn
Puerto Rosales
Punta Ancla
Punta Ciguena
Punta Colorado
Punta Medanos
Punta Quilla
Quequen
Rio Gallegos
Rio Grande
San Antonio Este
San Julian
San Sebastian
Ushuaia

Distance Table

Montevideo and Buenos Aires to Ushuaia and intermediate ports

Nautical miles

	Recalada Practicos	La Plata	Interseccion Practicos	Buenos Aires	Mar del Plata	Necochea y Quequen	Arroyo Pareja	Ingeniero White	San Antonio	Madryn	Comodoro Rivadavia	Deseado	San Julian	Santa Cruz	Gallegos	Virgenes (Lighthouse)	Magellan Straits	Ushuaia
Montevideo	16																	
Recalada Practicos	118	102																
La Plata	108	92	10															
Interseccion Practicos	128	112	30	20														
Buenos Aires	206	190	292	302	302													
Mar del Plata	279	263	365	355	375	73												
Necochea y Quequen	452	436	538	528	548	246	173											
Arroyo Pareja	466	450	552	542	562	260	187	14										
Ingeniero White	626	610	712	702	722	434	361	280	294									
San Antonio	671	655	757	747	767	479	405	316	330	227								
Madryn	850	834	937	927	947	658	584	500	514	411	274							
Comodoro Rivadavia	891	875	978	968	988	700	642	568	582	473	345	156						
Deseado	1015	999	1101	1091	1111	823	762	682	696	603	473	293	153					
San Julian	1076	1060	1162	1152	1172	884	823	743	757	664	534	354	214	96				
Santa Cruz	1151	1135	1237	1227	1247	959	898	818	832	729	609	429	289	171	114			
Gallegos	1167	1151	1253	1243	1263	975	918	838	852	759	629	449	309	200	146	67		
Virgenes (Lighthouse)	1182	1166	1268	1258	1278	990	933	853	867	774	644	454	324	215	161	82	15	
Magellan Straits	1376	1360	1462	1452	1472	1184	1135	1808	1094	1009	875	703	564	487	450	390	333	315

BAHIA BLANCA: 38.47 S. 62.16 W. (See Plan)

(Incl. Galvan, Ingeniero White, Puerto Belgrano, Puerto Rosales, Punta Ancla and Punta Ciguena.)

(Province of Buenos Aires) "B" category port.

Also see "River Plate" – Shipmaster's Report dated July/October 1983.

N.B. Refer to Argentina, Section I.

PORT LIMITS: Berthing priority is fixed when vessel arrives at No. 11 Buoy in the channel entrance.

Final berthing marks the commencement of time authorised for loading and/or discharging.

DOCUMENTS: Required by foreign vessels.

Registration Certificate.
International Tonnage Certificate.
International Freeboard Certificate.
International Safety Certificates.
General Declaration, Crew List and List of Passengers (signed by the Master).

Sailing Clearance Certificate from port of origin or from last port of call, whichever the case may be.

APPROACHES/PILOTAGE: *Entrance Channel.* Commences at Rincon Light Buoy, which is a whistling Buoy, fitted with radar reflectors and is stationed some 17 miles S.S.W. from the Recalada Lighthouse. It is a large Buoy, painted with black and white vertical stripes, it can shift or be extinguished, being rather exposed. In case of doubt vessels are recommended to sound and stay outside the 10 fathom line until daylight or fog has cleared. Pilots must be requested 24 hours in advance. See "VHF".

From this Buoy vessels must proceed past Buoys 1 to 10, and the Bay Pilot comes aboard near Buoy 11 (39° 05′ S. and 61° 48′ W.). There is no pilot ship on station, and vessels arriving at this point after sunset must stand off until daybreak, unless a Pilot has been ordered and is approaching, when vessels can anchor and wait near Buoy 11. To avoid delay and waiting time, Masters should keep Agents well advised by radio to station LPW 2, which listens from 0700 to 2400 hrs. on 500 kHz. from 19 to 25 minutes past each hour, every hour. As the coast is shallow here, with South or East winds it is advisable to stand well off at night as there is also a tidal current favoured by these winds.

Locations where the Pilot can be taken on board are: Buoy 11, Buoy 22 and exceptionally Buoy 1 (at Master's request).

Pilot vessels intended for this service are: Launch "Skipper" – length 18.40 m., beam 5.6 m., depth 2.60 m., 85 h.p. engine, capacity 10 persons, steel hull; Launch "Carumbe" – length 18.6 m., beam 3.6 m., depth 1.20 m., 105 h.p. engine, capacity 10 persons, wooden hull; Launch "Alo" – length 10.46 m., beam 2.71 m., depth 1.74 m., 105 h.p. engine, capacity 10 persons, wooden hull.

The Bay Pilot takes the vessel to the Bahia Blanca roads, which commence for Ing. White and Puerto Nacional between Naposta Brook and the South Elevator. For Galvan he takes the vessel as far as the South Elevator. At either of these points the port Pilot comes aboard for actual berthing operations.

Vessels bound for Punta Ciguena, Punta Ancla, Rosales or Puerto Belgrano, take on their port Pilot (ordered in advance through the Agents by radio), at Buoy 17.

In the access channel the following regulations must be observed:

(a) in the areas included between the pairs of Buoys 07–08, 12–16, and 26–29, it is prohibited to approach or cross in front of any vessel which because of its draft has to remain in the centre of the channel, such vessels always having priority.

(b) in the event of two vessels meeting whose drafts do not permit them to depart from the centre of the channel, the vessel leaving port has priority, the vessel entering having to effect such necessary manoeuvres so as to not interrupt its navigation.

The access channel is 180 m. wide and is marked with light buoys, which permits navigation by night. Between Buoys 12–16 the depth is 30 ft. and in the access channel to port Ingeniero White, between pairs of Buoys 24 and 29, the depth is 33 ft. with a width of 170 m. The maximum draft for vessels navigating the channel is 38 ft. 6 in., and dredging operations are in hand to bring the depth to 40 ft. at LW.

Buoys 01, 02, 03, 04, 05, 06, 09, 18, 19, 20 and 21 are mid-channel, and all illuminated. There is a Degaussing Buoy between Nos. 18 and 19, conical, painted blue and white checks.

Also see "Developments".

Special warning. At very low neaps, and with strong North winds there may be up to 5 ft. less water than is shown on charts.

Tidal range is 12.6 ft. at springs to 6.4 ft. at neaps, but as much as 19 ft. has been observed with S.W. winds, whose action is similar to the Plate winds.

Inner Roads. From Ing. White to Galvan there is room for two vessels drawing 32 ft. to anchor, as well as a number of vessels drawing 24 ft. The access channel to Galvan has been dredged to 32 ft. for the new Inflammable berths, and a turning basin 400 m. in diameter at 33 ft. dredged due South of Galvan pier. The Inflammable berths are at 40 ft.

Report: November 1987.
The following telex was sent to a vessel by their local Agent.
Quote
Bahia Blanca Pilot Service:
Please note that pilot service at Bahia Blanca is very strict regarding compliance with regulations which refers to vessel's draft declaration.

Shipping Agents must declare in writing on special form for request of pilots, vessel's draft forward and aft, as accurately as possible.

Not more than one per cent of error is accepted.

Should the difference between drafts declared by Agents when requesting pilots and the actual arrival/departing drafts of vessel be in excess of one per cent, high fines will be imposed by Coast Guard (pilot service).
Kindly acknowledge receipt.
Unquote

Quote
Bahia Blanca – Information – Important:
Regulation No. 122/85 of Argentine Coast Guard addressed to all Shipping Agents. Free translation.

We herewith request you to inform all vessels consigned to your agency, timely prior arrival to his port, that in accordance with Regulation O.M. 06/82 and Law 17.094, vessels must report when abeam of "Rincon" Light Buoy to Coast Station of Coast Guard "Bahia Blanca Prefectura Radio" L2N and L2H on Channel 12 and 14 respectively of VHF, the following details:

(A) Name of vessel
(B) Flag (Nationality)
(C) Call Sign
(D) LOA, Extreme Breadth, Draft, Speed
(E) Origin

Furthermore, and in addition to the aforegoing, vessels calling this port must be informed, regarding the obligation to anchor at Buoy 4 and await the authorisation of the Naval Authority to anchor at Zone "Alpha" and/or "Bravo" according possibilities.

Please note, that the non-compliance of above mentioned Regulations will place the Masters of the vessels and/or their representatives in a position to be fined in line with these regulations.
Unquote

Please note FYG, Zone Alpha refers to Buoy 11 and Zone Bravo to Buoy 17.

ANCHORAGE: *Anchorage for merchant vessels:* Buoy 11, 7. The anchorage area has been rendered suitable for merchant vessels. This area is limited by six lit (white) buoys which mark a zone approx. 6 miles by 1.6 miles. Depth of water in the area is 10.5 m.

Punta Ancla Oil Loading Point: Constituted by a revolving buoy of the "Swedish" type, situated 1.25 miles to the East of the mid-channel buoy No. 9. It is recommended that vessels do not navigate in this area nor anchor to the North of the axis of the channel.

Punta Ciguena Oil Loading Point: One mile to the South of Punta Ciguena is the oil loading point; its alignment for anchorage is 036.7° formed by the front and rear buoys.

Ingeniero White Roads: The port roads are considered to be from the mouth of the Naposta stream to the front of the Ingeniero White South Elevators Quays, and roads "B" as far as the quays of Puerto Galvan. At high tide, the banks cannot be seen.

RESTRICTIONS: Port is experiencing silting therefore depths should be checked prior to arrival/fixture. Long delays may be expected.

Also see "Developments".

Puerto Galvan: Night entries are not authorised, sailings being subject to favourable weather conditions.

Shipmasters' Report: 1979.
The Port Authority will not allow vessels with a list to sail.

MAX. SIZE: Entry into the port is allowed for vessels up to 230 m. LOA with a keel clearance of 1 ft.; in the access channels the safety margin is 2.5 ft. In accordance with the current dredging conditions, this allows operation with 34 ft. 9 in. draft. (38 ft. 06 in. reported in January 1988).

HEALTH: It is necessary to present: Crew List, Derat Certificate and Inspection Certificate of Maritime Health.

The Ship's Agent carries out all orders for obtaining free pratique. The health inspection takes place normally at the mooring berth, and is effected by the doctor who comes on board. Notice must be given 24 hours in advance of ETA, with indication of the port from which the vessel has recently left together with any intermediate ports of call. Likewise, an indication must be given of any illness on board, particularly anything of an abnormal nature.

The Master of the vessel must indicate the number of crew members, passengers if any, and the non-existence of "plague" diseases: Cholera, Yellow Fever, Exanthematous Typhus, Recurrent Fever and Bubonic Plague. Also there is a requirement for declaration that there is no transmittable illness on board.

RADIO: LPW 2 on 500 kHz. A2, working frequency 431.5 or, LPW 45 on 4415.8. A3.

For weather forecasts in English, use either Radio Pacheco at Buenos Aires LPD 5 on 512 kHz. A2, or Radio Comodoro Rivadavia LPX 2 on 474 kHz. A2.

VHF: Pilots now use VHF, and Channel 12 is set as a "listening channel' during transit of the entrance and the Naval Base at Belgrano acts as receiver/repeater.

Channel 8 is kept for manoeuvring in port, after contacting tugs and walkie-talkies are used by Pilots and tugs in this band.

Any "bridge to bridge" communications will use Channel 6, returning later to Channel 12.

Channel 9 is reserved for oil tankers for Punta Ancla or Punta Ciguena.

Channel 4 is reserved for Navy use in the Navy Base, but may be used in emergency.

RADAR: No service available.

TUGS: No tugs are required at Punta Ancla or Punta Ciguena. For Rosales and Puerto Belgrano tugs are requested from the Naval Base at Puerto Belgrano, and make contact between buoys 24 and 25.

For the other ports (White, etc.) tugs come alongside in the anteport, where the port Pilot boards.

Argentine vessels are berthed by the Bay Pilot at any of the berths, but foreign flag vessels take a Port Pilot, who comes on board at the Inner roads on one of the tugs, regulations for which are as follows:

Vessels over 3,000 tons gross require 2 tugs, those from 500 to 3,000 tons, 1 tug, and under 500 tons none.

For the Iron mole, vessels up to 10,000 tons do not need a tug, from 10,000 to 15,000 gross, 1 tug and over 15,000 tons 2 tugs.

For Puerto Galvan, vessels over 3,000 tons gross take 2 tugs on entering, and one on leaving provided they berth bows outwards, otherwise they need 2 tugs. Between 1,000 and 3,000 tons, vessels take 1 tug when entering and leaving if they berth bow inwards. If mooring bow outwards they must take 2 tugs on berthing, but require none on leaving.

These rules are for normal weather conditions. Masters can ask for more tugs, or alternatively not pass cables to the tugs if this could be dangerous to the vessel or tugs, but in this case, tugs must accompany the vessel during the manoeuvre to act in emergency.

BERTHS: N.B. Agents must give 5 days' advance Notice of Arrival of vessels to the Authorities, and check this with 48 hours confirmation of arrival. Tankers are exempt from this rule but must confirm arrival time at Buoy No. 4, 48 hours in advance. Precedence for berthing granted in accordance with arrival at Buoy 11 at the entrance channel. All requests for free pratique by radio are made in the usual manner to Agents, with 12 hours advance notice.

The ports in the Bahia Blanca area are, from East to West:

Punta Ciguena	adjacent to each other between buoys 21 and 22 of the access channel.
Puerto Rosales	
Puerto Belgrano	
Ingeniero White	approx. 14 miles West of Puerto Belgrano.
Puerto Galvan	approx. 2 miles West of Ing. White.

Punta Ciguena and Punta Ancla

At Punta Ancla (near Buoy 21) there is a SBM in 60 ft. depth. The buoy is 2,000 m. offshore. The size of tanker is governed by the depth in the access channel of 38 ft. 6 in. The oil is pumped to tanks 10 miles away at about 3,000 cu.m.p.h. The tanker is connected to 2×12 in. lines.

At Punta Ciguena (Buoy 22) there is also a similar SBM.

Puerto Rosales

Puerto Rosales is a port used by launches servicing ships anchored in the roads for crew changes, provisioning, repairs, etc. YPF, in particular, use it in support of their tankers.

Puerto Belgrano (Naval Base)

The entrance channel, 2 miles West of Punta Ciguena buoys, is 1.7 miles long, 150 m. wide and dredged to 30 ft. at zero.

Being a Naval base, care must be taken to observe regulations. In daytime signals are hoisted at the head of Mole C, and at night lights are shown at a height of 34.5 m. from the signal station, being visible for ten miles. A strong green light prohibits entry, and a white light above green prohibits sailing from the port. Two green lights, vertical, both entry and leaving prohibited.

Gunnery Exercises. Captains are warned that in order to avoid any danger, the greatest care should be taken when navigating or anchoring in the security zone, between the coast and an imaginary broken line which passes through the following:

(A) Lat. 39° 00′ 01″ S. Long. 61° 37′ 01″ W.
(B) Lat. 39° 05′ 02″ S. Long. 61° 40′ 01″ W.
(C) Lat. 39° 02′ 05″ S. Long. 61° 47′ 09″ W.
(D) Lat. 38° 58′ 02″ S. Long. 61° 51′ 00″ W.

Danger Zone. Situation Lat. 38° 53′ S., Long. 62° 06′ W. (approx.).

During gun practice at the Naval Base of Puerto Belgrano, navigation is prohibited in the circular area of 180° from the central point of the Signal Station which extends from 152° to 332°. The boundary of this area passes 9 miles off the Signal Station.

While gun firing is being carried out, the Signal Station will hoist during the day 2 "B" flags of the International Code on the same yard-arm. This signal will be hoisted half an hour before practice commences and will be furled when firing ceases.

At night the signals will be substituted by 3 vertical lights, the top one, red, and the following two, white. In addition a searchlight will sweep the zone every 15 minutes, casting a beam of 3 minutes duration.

The Prefecture of Ingeniero White will notify all ships in good time of the expected hour and date on which firing practice will commence.

Should exercises not commence on the date and hour fixed for same, the fire signal will be hoisted half an hour before the appointed time, and on the other yard-arm, the flag "N" (negative of the International Code). These signals will be shown for half an hour from the time they are hoisted.

During exercises, the firing intervals will be signalled in the following form: during day, by hoisting "N" flag, and at night by 2 vertical lights; the top one white, and the bottom one, green.

Ingeniero White (See Plan)

Berths 1, 2, 3 and 4: Reserved for auxiliary vessels.

Berths 5 and 6: Assigned for loading cereals, length 300 m., dredged to 29 ft. Berth has 12 tubes and 2 belts of 480 t.p.h. capacity. Max. LOA 230 m. Max. sailing draft 37 ft. 06 in.

Berths 7 and 8: Same as Berths 5 and 6. Max. LOA 200 m. Max. sailing draft 36 ft. 06 in.

Berth 9: Assigned for loading cereals. Possibly general cargo using ship's derricks. Length 234 m., dredged to 40 ft. Berth has 5 tubes with a total capacity of 1,000 t.p.h. Max. LOA 230 m. Max. sailing draft 38 ft.

Also see "Shipmaster's Report" dated February 1988.

DEBA Wharf: Berth for discharging coal to power station. Since accident at No. 9, the berth has been used for loading grain from trucks. There are 4 travelling gantries on rails, each with a belt and chute and a rate of 150 t.p.h., giving a max. rate of 600 t.p.h. Max. sailing draft 38 ft. 06 in.

Iron Quay: Being dismantled.

Berth 10: Out of service.

General Cargo Quay, Berths 17, 18 and 19: With a total length of 430 m., Depth 20 ft. Has 4 cranes of 1,500 kgs. capacity.

Berth 20: Length 211 m., and dredged to 25 ft. (5 m. from the quay). Berth has 4 cranes of 3 tons capacity. On these quays there is a useful working width of 25 m. on which it is possible to work with wagons and lorries.

Shipmaster's Report: February 1982.

Ingeneiro White Elevators:

Documents: 6 Crew Lists.

Approaches & Pilotage: The line of buoys from the Rincon Light Buoy No. 1 cannot be relied upon and a vessel should remain to the South by some miles as the weather is frequently altering the relative positions while shoaling at No. 5 is considerable.

The Outer Bar between the No. 7 and 8 pairs is shoaling from the West but if the tide is low or falling after half tide, it is worth trying to call Bahia Blanca Pilots on Channel 16 VHF for advice on the relative depths prevailing. This bar is not dredged with any regularity and soundings are taken less frequently than with the Canal Principal, hence a vessel entering to anchor with a deep draft from loading "up coast" is cautioned regarding the "alleged" 10 m. prevailing.

The anchorage is not good, being of uncertain bottom nature and dragging is frequent. There is more space near to Buoy 11, the position of which has been altered, but the strongest winds are from the South and South West hence any dragging leaves little margin if in this section.

Pilotage is available from Buoy 6 at DOUBLE fees for both boat and Pilot.

The pilot launch is a large black high speed launch with white wheelhouse and "Prefecturar" in white on the starboard side "Praticos" on port side. The Pilots usually give a call when leaving their base at Puerto Rosales thus affording about 1 hour's warning. The Pilot messages are also sent from the Puerto Rosales Control Centre of the Prefecturar or Coast Guard who will supply the Pilot with tidal information obtained from the radio connected gauge to the East of the Outer Bar and showing a green light. This is essential as, despite the large modern dredger operating almost exclusively in the Canal Principal, there are depths well under the 10 m. claimed, especially near Buoy 13 Red and between 13 and 14 on the East side of the channel where the movement of the bank is not yet controlled.

It is planned to dredge a new channel directly towards Rincon Buoy but parallel to the coast to the East of the inner buoyed anchorage, but this is only now being subjected to surveys for assessing the dredging.

The buoyed channel from Belgrano inwards to the elevators is subject to problems as the buoys shift their positions and dredging has to be frequent to be effective throughout yet the loading berths are reported to require little work to keep their 30 ft. depth.

Stevedores: An 18 hour day can be worked.

Puerto Galvan (See Plan)

Berth 1: Assigned for general cargo, with a length of 150 m., and dredged to 25 ft. No cranes.

Berth 2/3: Length of 270 m., and dredged to 25 ft. Berth has an elevator for loading oil-seed by-products, rate 800 t.p.h. Vegetable oil loaded by pipeline at 450 t.p.h. Max. LOA 225 m.

Berth 5: Assigned to general cargo, with a length of 150 m., and dredged to 29 ft. Berth has 2 modern cranes with a capacity of 35 tons at 16 m. radius, and 20 tons at a 27 m. radius. Containers handled.

Berth 6: Assigned to general cargo, with a length of 115 m., and dredged to 25 ft. No cranes.

Berths 7, 8, 9 and 10: Assigned to auxiliary craft and possibly general cargo for small craft with lengths of 60 to 65 m., dredged to between 15 ft. and 20 ft.

Inflammable Quay: 2 berthing fronts of 370.80 m. each, dredged to 40 ft. Each berth has a platform of 30.80 m. length and 20.80 m. width. Berth No. 1 is intended for oil and its derivates, and Berth No. 2 for LPG and petrochemical products. Minimum LOA permissible is 110 m.

CRANES: The Puerto Belgrano Naval Base has a floating crane of 50 ton capacity, which can be hired. Also see "Berthing".

SPECIAL CARGO HANDLING FACILITIES: The cranes located at Berth 5 of Puerto Galvan are suitable for handling small containers and have grabs of 8 cu.m. capacity for operation with bulk cargo (minerals, by-products, etc.).

The port has mobile cranes of up to 45 tons capacity. The stevedoring companies have vehicles with automatic elevators and various equipment basically suited for loading boxes of fruit, loading and discharge of boxes of frozen fish, etc. There are no special facilities for Ro/Ro traffic. The elevator quays have special installations for bulk loading of cereals.

BRIDGES: There are no bridges in the access channel or in the port.

STEVEDORES: Permanent stevedores available, no prior advice being required for their availability. The vessel requiring labour must present their order 45 minutes prior to the contracting time to the Port Captaincy at the Contracting Centre.

Contracting times are 0630, 0930, 1230, 1530 and 1830 hrs. (on this shift contracting is also made for night working).

The usual working period is from 0700 to 1900 hrs. from Monday to Friday, and from 0700 to 1300 hrs. on Saturday. Nevertheless, it is possible to operate 24 hours a day, including Sundays and Holidays, but premium rates for this will apply.

MEDICAL: All kinds of medical treatment are available, there being various state and private hospitals. For very specialised treatment, in extreme cases, evacuation to the city of Buenos Aires is possible.

TANKERS: See "Berthing" – Punta Ciguena and Punta Ancla.

DRY DOCKS: Capacity of the dry docks are:

No. 1 215 m. LOA, width on the sill 22.12 m. or at 34 ft. above the sill, 26.25 m.

No. 2 235.45 m. LOA, afloat, or 205 m. closed there is also a floating dock for smaller vessels 65.8 m. LOA, beam 13.46 m., capacity up to 750 tons.

The dry docks are located at the Puerto Belgrano Naval Base, and vessels of the Argentinian Navy have priority of usage.

SURVEYORS: American Bureau, Norske Veritas, Bureau Veritas, Lloyds (insurance only).

HATCHES: Work on deck is prepared by the stevedores during working hours. Preparation of the gangway to be effected by the ship's crew. Stevedores only will close and open hatches with mechanical means. Covered ways will be closed and opened by the stevedores.

LOAD-LINE: Vessels North- or East-bound may load to Summer Marks all year round.

WEATHER: Average velocity of winds is 11 knots, direction North and N.E. 30%, and West and N.W. 32%.

Rainfall averages 558 mm., with July/August the driest months.

Maximum temperature in Summer about 31° C, with an absolute maximum of 42.5° C, and a minimum of about 15° C. In Winter, maximum of about 15° C, average minimum 3.5° C, and absolute minimum minus 8.8° C.

DENSITY: 1025.

FRESH WATER: Available at any berth at Ing. White, Galvan and Puerto Belgrano, at 10 t.p.h. and by barge at anchor (capacity 350 tons).
FUEL: All grades available ex-wharf or by barge.
GANGWAY/DECK WATCHMEN: Vessels Agent must ask Port Authority for watchman.
FIRE PRECAUTIONS: Tankers, during loading or discharge operations, whether in port, in the roads, at loading points or to other vessels, will comply with the following requirements:

All conduits for loading or discharge of hydrocarbon oils which are land-based for connection to a tanker vessel, must have insulated installations, or, in the absence of same, non-conductive hoses must be used in such a way as to constitute an insulating circuit between the main pipeline and the connecting flange with the ship.

Pipelines carrying hydrocarbon oils, converging on the quay, must be earthed in an effective manner, in the immediate section adjacent to the existing insulating flange on the quay or in the section of hose which is not electrically conductive.

In the event of pipe-lines being used with cathodic protection connected to the vessel with non-conductive loading hoses, insulating flanges must be fitted at their ends. If the pipeline does not have cathodic protection, it must be earthed conventionally.

At the commencement of and during operations, tankers must fly the "B" flag during hours of sunlight and during the rest of the day a red light in adequate safety conditions.

It is necessary to check that the connecting hoses for loading and discharge operations are in good condition, do not show any cracks or any signs of deterioration.

It is necessary to check that the connecting flanges, when they are bolt-connected, are fixed with all the bolts which they require, and when they are of another type, they must fulfil also the maximum requirements of mechanical efficiency for prevention of oil leaks.

Beneath each of the connecting flanges must be installed drip trays to prevent product reaching the water or the quay; in the same context, all loading deck scuppers must be blocked.

Loading hoses must be installed in such a way that there are no sharp bends nor sudden changes of direction. In the event that the hoses have to rest on sharp edges, adequate protection must be used, to prevent any possibility of wear.

In the event of excessive movement in the berthing area, either during bad weather or due to the manoeuvring of an adjacent vessel, pumping of the product must be stopped. Likewise, if there is any untoward occurrence, such as fire or explosion on the quay or in the quay safety area, on adjacent vessels, or in the event of electric storms of great intensity, or if leakage of the product is observed, pumping must be stopped.

In the event of operations at loading points with long pipe-lines connected to the land, approved communication systems must be used between vessel and the shore to permit the need to stop operations immediately in the event of damage to the pipe-line or any other untoward occurrence.

Whenever it may be necessary to keep open any observation cover of a tank the flame prevention fabric must be positioned.

Constant vigilance must be maintained at the access to the vessel and on deck to prevent the entry of unauthorised persons.

With the exception of very high frequency equipment, which are safe for use, the vessel's radio/electrical equipment must not be used, the wireless room being sealed.

Loading and discharge of tanks must be effected solely by the corresponding pipe-line, the usage of the integral outlets of the tanks being prohibited.

Double berthing of vessels is not permitted, unless they are carrying out operations of lightening, repairs or in the event of emergency.

A foam extinguisher must be placed next to the connecting flange of a hose, and the fire pump must be maintained operational, except where the latter incorporates a remote control system which is approved.

The hose at the loading point and on the main deck must have a proper sealing joint in its unions.

The sealed doors on the main deck must remain closed.

Tankers effecting operations between one another, in the roads or at suitable anchorages, must have main engines ready to manoeuvre at all times; likewise, the necessary personnel for operations of anchors, chains and mooring equipment.

Masters or Owners are obliged to order cessation of any operation, and to request, if necessary, the collaboration of the Maritime Authorities, whenever at the operations quay or in its safety area, in the vessel operating under their control, the requisite safety stipulations are not being met.

During degassing operations, those involved with cleaning, repairs and maintenance, tankers must comply as follows: during degassing operations, no passengers or other unauthorised persons must be on board the vessel.

Whilst gasses are being liberated during the degassing process, the use of galleys must be reduced to a minimum, and open flame burners must be sealed, except boilers and heaters. Under the same circumstances, openings to quarters on deck must be kept closed, so as to obviate any contamination, and smoking must not be permitted anywhere in the vessel.

Boilers must not be lit up, and the combustion pattern must not be altered.

On decks no rags, or absorbent material impregnated with fuel may be deposited. Such material must be placed in adequate receptacles, with covers, for transporting away from the vessel.

When opening covers, and parts of them have to be struck, only anti-spark tools must be used.

Tankers effecting minor repairs, which do not involve cutting or welding of metals but cause sparks or other risky operations of a similar nature, must carry out such work only at the quays in the oil area appropriately equipped, or outside the oil area. When work of a greater magnitude is carried out, this cannot be effected at the special quays, except where reasons of emergency dictate, and in any case only after prior permission has been obtained from the Prefecture.

All degassing operations or opening of tanks not certified as being gas-free are prohibited in the ports, docks, breakwaters, piers or quays intended for operation with combustible or inflammable products or hydrocarbon derivates.

The tasks of washing or cleaning of tanks in port, docks, breakwaters, piers or quays intended for operation with combustible or inflammable products or hydrocarbon derivates may only be effected when a Certificate for Safety of Work has been issued.

Cleaning or degassing of tanks is prohibited in vessels carrying out movement operations of combustible or inflammable products which are hydrocarbon derivates in ports, docks, breakwaters, piers or quays.
CONSULS: Belgium, Chile, Denmark, Greece, Italy, Netherlands, Norway, Peru, Portugal, Spain, Sweden.
REPAIRS: All classes of repairs possible including dry-docking.
CUSTOMS ALLOWANCES: 60 cigarettes and 1 litre of liquid per day. No cigarettes or alcohol may be taken ashore.
REPATRIATION: Possible.
AIRPORT: Regular air service with Argentine cities.
TIME: GMT minus 3 hours.
HOLIDAYS: (a) National holidays – January 1st, Good Friday, May 1st, May 25th, June 20th, July 9th, August 17th and December 25th.

(b) Not worked – Holy Thursday – December 8th. Nevertheless, the port can work; The stevedores receive an extra of 75% on their pay.
POLICE/AMBULANCE/FIRE: Argentine Naval Prefecture is responsible for port safety, Tel: 71720/71727/71833. Ingeniero White Volunteer Fire Brigade, Tel: 70115. Ambulance of the Port and Maritime Chamber can be requested from the hospital at Ingeniero White, Tel: 70267.
TELEPHONES: There are no facilities for installation of telephones on vessels at the quay. The offices of Maritime Agents, stevedoring contractors and official bodies have telephones and telex. There are public telephones at the dock gates at Puerto Ingeniero White and Puerto Galvan.
SERVICES: These can be obtained via private firms.
SHORE LEAVE: No restrictions.
IDENTITY CARDS: Seaman's Book is sufficient.
REGULATIONS:

a. Owners and Maritime Agents must communicate to the Port Captaincy and Port Administration the intention to position the vessel for loading and/or discharge five days in advance (exception to this is made for tankers and grain ships).

b. ETA at Buoy 11 must be confirmed 48 hours in advance (including tankers and grain vessels), indicating overall length, estimated draft on arrival and departure, and type of operation to be effected, with specification of tons, packages or volumes to be loaded or discharged.

c. At anchorage at Buoy 11 or on passing it, in the event of direct entry, ETA must be confirmed. This time gives the priority for entry, provided the previous communications have been made.

d. Minimum quantities authorised for loading and discharge are:

Cereals	10,000 tons per day
Fruit	21,000 boxes per day
Loading frozen fish	600 tons per day
Discharge of frozen fish	200 tons per day

Other cargoes: The Port Administration determines this in each individual case.

e. These and other regulations with regard to the operations of loading and discharge, obligation to free quays, etc., are recorded in a Circular issued jointly by the Port Captaincy and the Port Administration.
DELAYS: Normally, there are no delays in berthing of vessels, although occasionally during the peak period for cereal exports grain ships may be delayed. It can be considered that vessels load as quickly as they can receive if the cargo is in port.
DEVELOPMENTS: With the dredging work already carried out in the entry channel, and that which is to be effected in the access to the elevators, it is expected that vessels of up to 40 ft. draft can operate. A study carried out under the auspices of the P.N.U.D. is on the point of being implemented, under which a notable improvement will be made in the loading conditions of cereals by means of the construction of a new elevator, remodelling those already in existence, construction of three quays in place of those already there, construction of waiting berths, etc.
Note: The Approach Channel with 45 ft. depth from sea to the Pilot Station was opened in December 1991.

SHIPMASTER'S REPORT: February 1988.

The vessel arrived from the River Plate and anchored independently in anchorage "A". Contact was made with Bahia Blanca Port Control (L2N) on VHF Channel 12 when passing El Rincon light buoy (Buoy No. 4) and again on anchoring. The Agent also checked the vessel's progress by their own VHF, and requested a telegram confirming time of anchoring.

Anchorage "A" was occupied by 6 ships increasing to 8 ships soon after we arrived. Of these, 5 vessels were delayed by lack of cargo papers to load for the Middle East. Anchorage "B" held some 11 ships, but all were Argentine tankers and not part of the queue for the grain berths.

After a 5 day wait, the vessel was ordered in for loading. Arriving off Ingeniero White about 2.5 hours before high water, swinging round to starboard without tugs, close above the first red beacon. The vessel waited with 2 lengths of cable in the water, making fast tugs during the interval.

3 ship's lines required for the two-funnelled tug aft, and 2 lines required for the Japanese "duckpeller" type tug forward. This was reversed on departure, with the two-funnel tug forward. The vessel berthed stern first starboard side to Nos. 5/6 Berths at 0100 hrs. Inspection party of one man (Coast Guard) boarded.

Loading commenced at 0700 hrs. and continued until 2200 hrs. As No.7/8 was empty the ship had the use of 4 pipes for a while. Otherwise

2 of the 12 pipes may be used. Loading rates varied but might average 600 t.p.h. for two pipes.

The depth in berth was found to be 25 ft. 03 in. on the fenders, and 28 ft. when vessel slid some 8 ft. off the fenders during low tide. Work continues while the ship is aground. Half day worked on Saturday and no work on Sunday.

It is the preferred practice that the vessel finished the cargo on the rising tide, after coming afloat so that draft and list can be checked.

The departure draft is read by the Coast Guard, Harbour Pilot and River Pilot. It is illegal for a grain ship to sail with a list. The sailing draft had been 38 ft. 00 in. but reduced to 37 ft. 06 in. while negotiations were going on for 37 ft. 02 in. and later 36 ft. 06 in. The controlling bar being between Buoys No. 12 and 15, the dredger is out of use due to a broken cylinder block requiring a replacement from Europe.

A new wharf has been built slightly downstream to service a power station, but has been equipped to load grain from road transport. The depth is said to be 39 ft. below chart datum.

The No. 9 Berth silo has been damaged by a series of explosions and is out of use. Alternative arrangements have been made for a mixture of temporary towers and mobile conveyors to load grain from road transport. It is reported that this system has many problems and delays. Other than for ships over 220 m. it is possibly the last choice for loading from the 4 berths.

Provisions were delivered alongside, but still with a Customs, stevedores and transport surcharge. A number of cases of vegetables were sent back as not being of adequate quality. The village of Ingeniero White is conveniently close by for personal shopping, shop hours being 0800-1200 and 1600-2000 and banks, etc. from 0800-1300.

The Argentine Press had reported that a contract was to be signed between the Argentine Government and a Russian consortium to dredge out and recondition the Port of Bahia Blanca. The figure of 45 ft. at high water was being discussed, but how far in the future and how long it would be sustainable, is unknown.

On sailing at the beginning of neap tides, the vessel was anchored at Buoy 17, to await the next high water. Vessel then anchored again near Buoy 11 to await the next tide, after which the ship was able to proceed independently after reporting to VHF Channel 12 (L2N) to confirm that the tide had actually risen.

A shortage of displacement compared with the stated loading figures was also experienced of about 2.5%. Though reported on the Saturday before sailing on the Monday, apparently there was no way of obtaining correction of blatant errors. All concerned were aware of the problems in the previous port of Rosario.

The Approach buoys were in a mixed state, Buoys El Rincon to No. 4 could be seen to be in a staggered line. Speed was restricted from Buoy No. 2 due to limited depth under keel. The direction from No. 4 to No. 5 to No. 6 bent to the Southwest. The No. 7 port hand (black) buoy was missing. The No. 8 port hand (black) and No. 10 port hand appeared to be displaced Southward. No. 11 was missing, while an unknown rogue buoy was floating about to the Southwest of that position.

No. 9 and No. 10 were believed to be extinguished.

AUTHORITY: Capitan de Puerto Bahia Blanca.

COMODORO RIVADAVIA: 45.51 S. 67.27 W.

(Province of Chubut) "B" category port.

N.B. Refer to Argentina, Section 1.

On the San Jorge Gulf, 947 miles South of Buenos Aires.

PILOTAGE: Compulsory. Pilot ordered by Agent 48 hours in advance of arrival.

ANCHORAGE: Anchorage within the five or six fathom line offers little difficulty for regular work to lighters, but the reserved zone off the YPF Pier must be respected.

RESTRICTIONS: Port should be entered at high water in daylight only. Tidal range from 19 ft. 6 in. to 7 ft. 4 in.

MAX. SIZE: Dry Cargo, Length 150 m., draft 15 ft. Tankers up to 30 ft. draft.

RADIO: For radio regarding free pratique, or reporting ETA call LPX 2, on 474 kHz. This station transmits weather forecasts in English at 0400 hrs. and 1800 hrs. GMT.

TUGS: See "General" before first port.

BERTHS: The main part of the port consists of:

National Wharf: At the end of the breakwater built over the Punta Borja reef, and still unfinished. It is L shaped, presently 1,160 m. long with a depth of 17 ft. (Max. draft 15 ft.). On the inner side the depth is 15 ft. The breakwater gives some protection from the S.W. and S.E. winds, but vessels with large superstructure should not go alongside, and it is recommended to leave the pier after work is finished each day in case North or West winds blow strongly.

Cranes: 1×60 ton (often under repair), 3×7 tons and 2 mobile cranes of 5 tons and 25 tons capacity. 2 floating cranes for heavy lifts.

General Mosconi Pier: Built over the Coronel Reef a short distance North of the town. It has a length of 956 m. and 21 ft. at low water. It is used exclusively for discharging cargo consigned to YPF and for loading their oil and other products, so that special permission from YPF is required to operate here. There are 2×15 ton cranes and 1×4 ton crane on the mole.

The privileged zone extends 150 m. either side of an imaginary line projected from the mole, and 2,500 m. seawards, reserved for tankers loading YPF products, and other vessels cannot moor in this area. There are 5 mooring buoys, two each side of the mole near to its head, the fifth is 200 m. from the beacon at the sea end of the mole bearing 020°.

CARGO: It is advisable to stow inwards cargo aft for this port, as lighters lying at hatches one or two receive little protection from sea and swell, and in any case, owing to the limited number of lighters, vessels usually work with two or three gangs at most.

To avoid loss of time, it is the custom in this port to leave the sling loads "as is" in the lighters and therefore a larger quantity than usual of slings have to be hired from the Agents. It is advisable to establish in Bills of Lading that lighterage is at the risk of the cargo.

MEDICAL: Hospital available.

TANKERS: The oil berths within the Comodoro Rivadavia port area are, from North to South:

Caleta Olivares, at 45° 46′ S. and 67° 22′ W.

A loading berth for crude, with berthing in daytime only. A minimum of 6 hours advance notice of arrival must be given to Agents in Comodoro Rivadavia. There is a launch which assists in mooring to the 4 buoys, which are cylindrical painted black and clearly numbered. There is another cylindrical buoy, also black, but unnumbered marking the end of the line. Loading is through 1×14 in. line at 550 cu.m.p.h. VHF communications maintained with the shore.

Caleta Cordova, at 45° 43′ S. and 67° 21′ W., some 12 miles North.

SBM: Located 3 miles offshore and 1.5 miles South of Astra Beacon. Max. size 70,000 d.w.t. Depth 95 ft. 1×30 in. pipeline for loading crude and 1×14 in. line for deballasting. Loading rate for crude is 2,000 cu.m.p.h.

Caleta Olivia, the third oil-loading berth, is South of Comodoro Rivadavia at 46° 26′ S. and 67° 31′ W.

A small wharf, 70 m. long, is used for discharge of lighters or landing boats at high tide only. Stores are available here, and the small town is connected by phone with Comodoro.

SBM: 3,000 m. offshore. Depth 115 ft. Max. size 70,000 d.w.t. Crude oil is loaded through a 30 in. pipeline at 2,000 cu.m.p.h.

The Caleta Cordova and Caleta Olivia Terminals are operated by Terminales Maritimas Patagonicas S.A. (TERMAP S.A.), Democracia 51, 9000 Comodoro Rivadavia, Chubut, Argentina. Tel: 0967-34400. Fax: 39291.

FRESH WATER: Obtainable at National Wharf and General Mosconi Pier. Ships supply own hoses.

FUEL: Fuel oil and diesel available at the General Mosconi Pier in Comodoro Rivadavia.

CONSULS: Belgium, Chile, Greece, Italy, Netherlands and Spain.

REPAIRS: Urgent repairs can be carried out by the oil companies, and there is a permanent service of divers, equipped to operate to 150 ft.

WATCHMEN: Recommended. Normally arranged by Agent.

HATCHES: According to port regulations, stevedores open and close hatches at commencement and end of cargo operations.

CUSTOMS ALLOWANCES: Only sufficient for normal daily consumption on board.

Custom House: Fully authorised for import/export cargo, including reception of explosives for commercial use.

AIRPORT: Situated 11 km. from port. Daily services to Argentine cities.

POLICE/FIRE/AMBULANCE: Regional Hospital 2451; Clinica Central 2282; Police 2778; Fire Brigade 2505.

TELEPHONES: No connection aboard vessels.

WEATHER: Average wind velocity 17 knots, with 79% from S.W., W. or N.W.

The port is open to N.E. and E. winds.

Rainfall is scarce, 189 mm. yearly, evenly distributed.

Temperature: Summer maximum is 25.5° and minimum 13.4°C, while in Winter maximum averages about 11° and minimum 3°.

DEVELOPMENTS: Dredging to increase depth to 26 ft. alongside wharves.

AUTHORITY: Capitania de Puerto de la Patagonia.

MAR DEL PLATA: 38.00 S. 57.32 W. (See Plan)

(Province of Buenos Aires) "B" category port.

N.B. Refer to Argentina, Section 1.

On the Atlantic Coast, 302 miles from Buenos Aires.

DEPTHS: The dredged channel is officially 100 m. wide, but dredging is now only occasional, and the official depth is 24 ft. and tidal ranges 3 ft. 8 in. Spring to 1 ft. 2 in. Neaps, with constantly forming sandbanks off the South breakwater.

There is often a heavy swell in this port, causing vessels to range in all berths, fenders being essential. It is safer to lie outside in 36 ft. to 42 ft. if awaiting berth than in the anteport within the breakwaters.

APPROACHES: The port is some 3 miles South of the main town, sheltered by 2 breakwaters (Northern arm 1,099 m. long, Southern arm 2,750 m., entrance, facing North 300 m. wide). Both breakwaters carry roads and access is open to all traffic, so that car headlights and street lighting can cause confusion at night on taking the Southern bearing.

PILOTAGE: Pilotage compulsory. Pilots requested through Agent, at least 12 hours in advance.

Pilot boat about 8 m. long, grey-white in colour. Pilot boards approximately 1 mile from port entrance.

ANCHORAGE: The best anchorage bears 191° on the Southern breakwater light beacon and 313° on the Cape Corrientes Buoy, or even farther out. Holding ground is good and strong winds may safely be ridden out here, even with a big swell.

MAX. SIZE: Draft dependent on state of tide. Keel clearance of 2 ft. required. Normal maximum draft 27 ft. 06 in. at HW, but greater in best possible conditions.

RADIO: For radio regarding free pratique or reporting ETA call LPM 2 on 512 kHz. A2. English weather forecasts from Radio Pacheco, Buenos Aires, LPD 5, on 512 at 0148 and 1630 hrs. GMT.

TUGS: Use of tugs is obligatory; vessels over 1,000 N.R.T. must use 2 tugs.

Also see "General" before first port.

BERTHING: Big swell causes vessels to range, therefore Masters recommended have ready fenders for use at berth. Vessels can enter or sail any time day or night.

There are three basins (A, B, C) in the commercial port, of which the smaller fishing vessels or inshore craft use the most Southerly Basin (A), and the trawlers the Coastal basin (B). Here an extension of the marine railway and dry docking facilities is now ready.

Basin C: The basin has an Elevator (Berths No. 12 and 13) on its Northern side, capacity 25,000 tons, with 8 tubes and 2 belts, load rate 350 t.p.h. per belt. Air draft at LW is 12.5 m.

In addition to the elevator berth there are Berths No. 7 to 11.

Lengths: No. 7 – 178 m.; No. 8, 9 and 10 – Total length 500 m.; No. 11 – 134 m.; No. 12 and 13 – 276 m.

Depths: No. 7, 8, 9, 12 and 13 – 26 ft.; No. 10 – 24 ft. and No. 11 – 21 ft.

Pier 6: Cruise Ship Pier: Max. LOA 220 m. Depth alongside 30 ft.

CRANES: Mobile cranes with capacity up to 20 tons available for hire.

STEVEDORES: Gangs engaged by Port Authority according to vessels requirements.

Normal capacity per gang, per shift:

150 to 175 tons fish (direct transhipment).

70 to 100 tons general cargo.

Working hours: 0700 – 1300 and 1300 – 1900 weekdays and 0700 – 1300 on Saturday.

MEDICAL: Masters should telegraph Agent in good time expected date and hour of arrival. Hospitals and sanatoriums.

TANKERS: Tankers berth at Pier 7 (length 260 m.) or at the "Inflammables Berth". Depths alongside 22 ft. – 22 ft. 06 in. Products handled are petroleum products and liquid gas.

DENSITY: Sea water.

FRESH WATER: Available at all berths, delivery from 1 t.p.h. to 2 t.p.h. (rates better during night); at the Northern tourist berth through 3 hydrants, total 60 t.p.h. Being slightly salty it is not recommended for boiler use.

FUEL: Fuel oil and diesel available at Pier No. 7 and by truck.

CONSULS: French, Italian, Portuguese, Spanish, Uruguayan.

REPAIRS: All types of repair possible, except dry-dock repairs. Divers available.

WATCHMEN: Compulsory. Arranged by Agent.

OPENING/CLOSING HATCHES: Can be performed by crew, but in any case subject to charter party terms.

CARGO: *Loading marks.* Vessels can load to their Summer marks all year round if sailing Northbound.

Import cargo. This is a fully authorised Custom house. Berth 9 in the central basin is the most appropriate berth for handling import cargo, there being little space on shore at the other berths. Berth 7, the pierhead here, has 30 ft. and is also reasonably suitable for discharging, but in the Northern basin there is little or no room for depositing cargo alongside.

Import of Potatoes. Is permitted here, this being near the main potato growing region but permission must be obtained for the discharge of certified seed potatoes.

REPATRIATION: Can be arranged.

AIRPORT: Six miles distant. Two regular lines: Austral and Aerolineas Argentinas, 2 services/day between Mar del Plata and Buenos Aires.

HOLIDAYS: None. Work every day during year.

TELEPHONES: No telephones are available on board or on the berth.

IDENTIFICATION CARDS: Compulsory. Arranged on board immediately after arrival.

DELAYS: In accordance grain elevator capacity. Normally none.

WEATHER: *Wind.* There is no really predominating wind, 42% being from W., N.E. and N.W., average velocity being 11 knots.

Rain. Rainfull averages 941 mm. evenly distributed.

Temperature. Summer maximum about 25° and 13° minimum, while in Winter the maximum averages 14° and minimum 3.5°. Absolute maximum and minimum are 41.6° and minus 6.7° C.

DEVELOPMENTS: Dredging to obtain depth of 30 ft. in channel and port.

AUTHORITY: Captain of the port: Port Administrator.

PUERTO DESEADO: 47.46 S. 65.54 W. (See Plan)

(Province of Santa Cruz) "B" category port.

N.B. Refer to Argentina, Section 1.

988 miles South of Buenos Aires. The port is situated on the right bank of the river, and at its mouth. There is a meat packing plant.

APPROACHES: The approaches and entrance to the harbour are determined by two pairs of beacons as range or leading lights. Care must be taken not to confuse the installed portal cranes, each 18 m. high, with the beacons, which are painted the same colour.

There is 27 ft. on the bar, at low water: tidal range is 17 ft. 6 in. to 6 ft. 2 in.

PILOTAGE: Compulsory. Agent requires 48 hours' notice of arrival for Pilot to come from Puerto Madryn. If vessel Southbound, arrangements can be made for boarding at Puerto Madryn or Comodoro Rivadavia.

RADIO: For radio regarding free pratique, or reporting ETA call LPO 5 on 461 kHz. A1. For weather reports in English, listen to Comodoro Rivadavia LPX 2, on 474 kHz., at 0400 and 1800 hrs. GMT.

TUGS: See "General" before first port.

BERTHING: With a narrow entrance channel flow of tides often exceeds 5 knots. There is a mud and gravel bank almost opposite and slightly West of the wharf, some 200 yards out from it, with only 16 ft. at zero.

Commercial Wharf: Length 266 m. Depth alongside 27 ft. The Eastern part (119 m.) is served by 2×6 ton cranes. Mobile crane of 6 tons capacity also available.

MEDICAL: Attention available.

FRESH WATER: Available at the wharf, but in limited supply in Summer.

FUEL: Available by truck from Comodoro Rivadavia.

CONSULS: Italy and Spain.

REPAIRS: Minor repairs only.

WEATHER: Conditions are generally good, and winds seldom exceed 40 knots. If anchored awaiting Pilot or berth, care should be taken to watch for strong winds against the current. When a strong W. wind blows there can be heavy dust storms, which impede proper visibility; in such cases it is advisable to keep position by radar and stand off or anchor until the visibility improves.

Yearly average for winds is 14 knots, 63% of the time from W., S.W. or N.W.

Rainfall is low, 202 mm. yearly with an average 74 days a year evenly distributed. Maximum temperature in Summer months is 35.6°C., while in Winter maximum ranges to 15.6° and minimum to minus 8.6°.

DEVELOPMENTS: A new dock with length 250 m. to be constructed.

PUERTO MADRYN: 42.46 S. 65.02 W. (See Plan)

(Province of Chubut) "B" category port.

N.B. Refer to Argentina, Section 1.

On the Atlantic coast, 767 miles South of Buenos Aires. One of the most sheltered and deepest harbours in Argentina.

PILOTAGE: Compulsory. Agent required 12 hours notice for ordering Pilot. Pilot boards 0.5 miles East of pier.

ANCHORAGE: At least 1.5 miles East of pier. Depth 60 ft.

RADIO: For free pratique, or reporting ETA call LPZ 20, at Trelew, on 427 kHz. A1, and for weather forecasts to LPX 2, at Comodoro Rivadavia in English, at 0400 and 1800 GMT, on 474 kHz.

Vessel to advise Agent, 5 days in advance of arrival, ETA, vessel particulars and cargo particulars. Further advices required 48 hours and 12 hours prior to arrival.

Vessels with containers are to give 10 days and 48 hours notice.

TUGS: Not necessary but if required they are ordered from Bahia Blanca.

BERTHING:

Berth No.	*Length (m.)*	*Depth (ft.)*	*Remarks*
1	217	44-55	Aluar S.A. vessels have priority. Max. LOA 220 m. Bulk discharge by grab at 300 t.p.h.
2	217	45-55	Max. LOA 175 m. General and containers.
3	139	33-42	2×6 ton cranes. General, ingots, fruit, fish, containers.
Waiting	250	20-24	Waiting Berth. Can be used for cargo using ship's gear.

CRANES: 2 mobile cranes, capacity 40 tons and 10 tons. 2 electric gantry cranes on rails at Berth No. 3. 1×10 ton grab crane at Berth No. 1.

MEDICAL: Attention available.

FRESH WATER: Available at 20 t.p.h.

FUEL: By truck from Comodoro Rivadavia, Neuquen or Bahia Blanca.

CONSULS: Italy and Spain.

REPAIRS: Minor emergency repairs only, also divers available.

HATCHES: According to Port Regulations, stevedores open and close hatches at commencement and end of cargo operations.

CUSTOMS ALLOWANCES: Sufficient for daily requirements only.

AIRPORT: Trelew distant 64 km. Scheduled flights to Buenos Aires and other cities.

POLICE/AMBULANCE/FIRE: Police and fire tel. 249. Hospital 240.

TELEPHONES: No arrangements for placing telephones on board.

SHORE LEAVE: Crew members allowed ashore but must be provided with identification cards.

IDENTIFICATION CARDS: Required.

DELAYS: Possible delays due congestion owing berth shortage and tide.

WEATHER: *Winds* mainly West, with a yearly average of 8.3 knots but reaching 15 knots in Summer months.

Rainfall scarce, average 173 mm. evenly distributed throughout the year.

Temperature. Summer maximum is 27°C and minimum 13°, and in the rest of the year maximum 21° minimum 8°.

Tidal range is 18 ft. 8 ins. and 6 ft.

SHIPMASTER'S REPORT: July 1980

Pilotage: Compulsory. Pilot requires 24 hours notice. At present the pilot boat is small with only about 1 ft. freeboard therefore vessels do not berth or unberth in any sort of wind, sea or swell.

Restrictions: Vessels can berth and unberth at any state of the tide, day or night.

Tugs: None available. Vessel able to dock and undock without aid of tugs.

Health: Authorities require 72 hrs. notice.

Radio: Bahia Blanca (LWP) and General Pacheco (LPD).

Documents: See "General" before first port.

Services: Fresh water available. Limited amount of fresh provisions available. Minor repairs possible. Airport, Doctor and hospital available. Groceries, meats and laundry services also available. Dry docking facilities, surveyors, fuel and slop facilities not available.

Consuls: No Consular representative. Nearest at Buenos Aires.

Anchorage: In position Lat. 42° 44′ S., Long. 65° 00′ W.

Berthing: Vessel berthed at a general cargo berth in position Lat. 42° 44′ S., Long. 65° 01′ W. Berth being about one mile from the Pilot Station. Any medium sized vessel able to dock at the southern berth (general cargo berth). Vessel able to dock and undock at any stage of the tide day or night.

Density: 1025.

Cargo Handling Facilities: There is a Bulk Aluminium berth opposite the general cargo berth. Two small cranes of approximately 2.5 tonnes capacity available. No floating cranes or Ro-Ro facilities. No facilities for handling containers or palletised cargoes.

PUNTA COLORADA: 41.41 S. 65.00 W. (See Plan)

PILOTAGE: Pilotage is obligatory, and 72 hours advance notice must be given in Buenos Aires for the Pilot to travel down.

MAX. SIZE: No. 1 Berth: 70,000 d.w.t. (approx.) LOA 230 m. Draft 11.58 m.

No. 2 Berth: 25,000 d.w.t. (approx.) LOA 230 m. Draft 10.05 m.

BERTHING: The mechanical loading arm for iron ore movement from Sierra Grande iron ore mines has been placed at Punta Colorada, a small peninsula, mid-way between Point Pozos and Point Porfido, the neck of land often being under water at high tide. After grinding and concentrating at the mines, which are some 25 km. due West from the coast, the slurry is pumped to the pelletizing plant at Punta Colorada, stockpiled there and taken by conveyor some 1,600 m. to a retractable loading arm. This has a loading rate of 2,000 t.p.h., and turns on an arc permitting it to load over a length of 112 m., without shifting position of the vessel. There is 42 ft. at Berth No. 1 at LWST, vessels lying due North/South as shown on the plan and 35 ft. in Berth No. 2 lying East/West.

The port is privately owned and run by the Mining Company.

OPERATOR: Hierros Patagonicos de Sierra Grande S.A.M.

PUNTA MEDANOS: About 280 km. South of Buenos Aires.

New deep-water port under construction. On completion, expected to accept vessels up to 50 ft. draft.

PUNTA QUILLA (Santa Cruz): 50.07 S. 68.25 W. (See Plan)

(Province of Santa Cruz) "C" category port.

N.B. Refer to Argentina, Section 1.

On the estuary formed by the Rivers Santa Cruz and Chico, 1,172 miles South of Buenos Aires.

APPROACHES: The entrance to the port is by a channel 10 miles long. The Santa Cruz Lighthouse and 9 other beacons determine 4 pairs of leading lights for the approaches and entrance to the harbour, which can be entered only at HW, as both in the bar, either North or South passage, there are shoals on the leading lines, and also just before taking the anchorage in front of the town.

PILOTAGE: Compulsory. Agent requires 48 hours notice to order Pilot from Puerto Madryn.

ANCHORAGE: Good anchorage 2 miles from the entrance with 40 ft. at LW.

RADIO: For radio regarding free pratique or reporting ETA call LPT 2 on 441 kHz. A2. For weather forecasts in English tune to Comodoro Rivadavia LPX 2, on 474 kHz, at 0400 and 1800 hrs. GMT.

TUGS: None.

BERTHING: Wharf with length 160 m. with dolphins 60 m. off at each end with berths on both sides. Depth alongside 40 ft. at LW. Range of tide 30 ft.

CRANES: 1×6 ton, 1×25 ton (private) and 1×45 ton (private) mobile cranes.

STEVEDORES: Working hours: 0700 – 1300, and 1300 – 1900.

MEDICAL: Attention available.

FRESH WATER: Available, rate 15 t.p.h.

FUEL: Available to supply vessels only.

WEATHER: A dry zone, with an average of 186 mm. rain, spread over 72 days throughout the year. Wind averages 11 knots.

Tidal range is 39 ft. 8 in. to 9 ft. 4 in.

CONSULS: None.

REPAIRS: Minor repairs only.

QUEQUEN/NECOCHEA: 38.35 S. 58.42 W. (See Plan)

(Province of Buenos Aires) "B" category port.

N.B. Refer to Argentina, Section 1.

On the Atlantic Coast, 375 miles South of Buenos Aires, Necochea, is on the right bank, and Quequen, on the left bank of the Quequen River. The ports, whose administration is centered in Quequen, are the outlet for a very rich agricultural zone.

APPROACHES: The port is at the mouth of the river, protected by two breakwaters, the Western arm being 1,192 m. long, lying from N.W. to S.E., and the Easterly arm 572 m. long and lying North/South. The passage between the arms is 210 m. wide, and the entrance channel proper 90 m. wide.

PILOTAGE: Compulsory. Pilots must be applied for as usual through Agents at least 24 hours ahead, using Radio Pacheco LPD 5 on 512 kHz, A2, since there is no radio station at Quequen. This can be done by phone from Buenos Aires or other ports if vessels are not coming from abroad.

No Pilots will come out in bad weather. The small pilot boat is painted grey, with a yellow deckhead, and the Pilot comes aboard about 1.5 miles off the South end of the breakwater.

ANCHORAGES: Not advisable to anchor in bad weather due extremely dangerous winds from West through South to East. Anchorage in open sea 800 m. – 1,500 m. from cliffs.

RESTRICTIONS: Day and night entry possible. Vessels with length in excess of 175 m. require channel navigation permit obtainable from Maritime Prefecture.

MAX. SIZE: *Max. Draft.:*

Up to 175 m. LOA = 31 ft. 01 in.
Up to 185 m. LOA = 30 ft. 01 in.
Up to 195 m. LOA = 29 ft. 01 in.
Up to 205 m. LOA = 28 ft. 01 in.
Up to 215 m. LOA = 27 ft. 01 in.

Vessels with LOA 215 m.–220 m. must not enter without permission.

Vessels must have an under keel clearance of 1 ft. in calm weather on a rising tide and 2 ft. clearance on a falling tide.

Tidal range: 2 ft. (Neaps) and 5 ft. 2 ins. (Springs).

Also see "Shipmaster's Report" – February 1982.

HEALTH: Free Pratique is now given only when alongside, or in the pool. Master should advise agent in advance of health situation aboard. If proceeding from another Argentine port, health inspection not required. Derat Certificate to be shown.

RADIO: For radio regarding free pratique, or reporting ETA call Radio Pacheco LPD 5, on 512 kHz. There is no station here and advice to Agents can be given by phone or telegraph from Buenos Aires or other ports, also Costera del Mar de Plata (LPM).

TUGS: Two tugs must be used both on entering and leaving and these come alongside at the entrance, and are also needed for movements in the port. Both are old, however, and with insufficient power for anything other than work inside the port. Ship's lines used.

Two vessels cannot be in the entrance channel at the same time. Should the weather make it imprudent for the safety of the ship and/or tugs to make fast ropes in any position, the tugs will continue at the side of the vessel to be engaged when necessity arises. In every case tugs must be paid for, used or not, and any damage done by the non use or late engagement of the tugs will be attributable to the vessel.

Also see "General" before first port.

BERTHING:

Quequen

Berth No.	*Length* (m.)	*Depth* (ft.)	*Remarks*
1	200	31	6 in. lines for loading vegetable oil. Pellets loaded by conveyor at 200 t.p.h.
2	100	26	6 in. lines for loading vegetable oil. Rate 350/400 t.p.h. Storage capacity 39,000 tonnes (Berths No. 1 & 2).
3	220	32	Private elevator berth. 2 loading belts (600 t.p.h. each) and 1 pipe fitted with trimming gear. Air draft 14.0 m. Storage capacity 70,000 tonnes. Vegetable oil by pipeline, rate 1,200 t.p.h. Storage capacity 5,000 tonnes.
4 5	230	30	National Grain Board. Silo capacity 80,000 tonnes. 4 belts serving 8 tubes. Delivery rate 300/350 t.p.h. to 2-3 tubes each. Air draft 14 m.
6	120	32	Max. LOA 220 m. Elevator berth. 2 belts serving 7 tubes. Rate 600 t.p.h. (2 tubes). Grain and by-products also loaded by conveyor at 200 t.p.h.
Necochea			
7 8 9	450	30	General cargo, cement and logs by ship's gear. Grain by-products by portable conveyor at 200 t.p.h.
10			Cold stores. Loading and discharging fresh and frozen fish.
11	200	19	Fishing vessels.
12	200	22	Power station berth. Discharge of fuel oil.

MEDICAL: Attention available.

TANKERS: Fuel oil discharged. (See "Berthing").

DENSITY: Salt water.

FRESH WATER: Obtainable from hydrants on the wharves, vessel must supply hoses. Rate 6 t.p.h. – 10 t.p.h.

FUEL: Advance notice essential as deliveries by truck from Buenos Aires, Mar del Plata, or Bahia Blanca.

CONSULS: Danish, Greek, Italian and Spanish.

REPAIRS: Minor repairs only.

WATCHMEN: Compulsory.

HATCHES: Opened/closed by stevedores additional charge made.

REPATRIATION: Through Buenos Aires.
AIRPORT: 5 miles distant. Daily flights to Buenos Aires.
TIME: GMT minus 3 hours.
HOLIDAYS: Vessels worked every day of year.
POLICE/AMBULANCE/FIRE: Police, Necochea 2148 and Quequen 6008; Ambulance, Necochea 2350 and Quequen 6052; Fire, Necochea 4900.
TELEPHONES: No arrangements for placing aboard.
SERVICES: Any special services required, technicians sent from Buenos Aires.
SHORE LEAVE: Not permitted.
DELAYS: Daily cargo work 18 hours/day. One waiting berth available. Delays up to four days can occur in January and February.
WEATHER: *Winds,* average velocity is 7 knots, with 46% from N., N.E. and E., and only 29% from S.W., W. and N.W.
Rainfall. Averages 909 mm., evenly distributed.
Temperature: Summer maximum averages 26°C and minimum 14° with an absolute maximum of 39.9°, while in Winter the maximum is around 13° and the minimum 4°, with an absolute recorded minimum of – 4°.
Tidal range is 5 ft. 2 in. spring to 2 ft. neaps.

SHIPMASTER'S REPORT: February 1982.
Approaches: The channel is being maintained by a new dredger at 28 ft. 02 in. this allows a sailing draft of 30 ft. 02 in. *providing* the swell on the bar is less than 1.3 m. as decoded by the Pilots from observations.

The pool inside the breakwaters and the swell mole are used for swinging before berthing if the weather is good, and after loading if wind prevents this, hence NO anchoring is permitted in this area.

The tugs meet the vessel just outside the breakwaters and two lines each are the normal requirement (ship's lines), but these have to be sent away quickly when directed or else the vessel cannot swing in favourable weather. A deep sea tug has joined the tug fleet.
Berthing: All vessels wait at anchor in the roads where the holding ground is of mixed type. The strong Southerly winds must be watched and rise of the barometer.

A vessel of some 42,000 tonnes deadweight was accommodated head out at the main elevator berth, while two vessels waiting to sail were accommodated at the Ultramar II berth, each 183 m. overall, and without hindering the berthing and loading operations of a 31,700 ton bulk carrier. It should be noted that the inner vessel took the ground at 29 ft. draft when the tide was low; dredging is planned here when the newly restored berths on the Necochea side are completed and dredged to 10 m. as a lay-by and general cargo wharf. However, the nature of the piling is preventing much increase in depth at this old wharf. The limited number of shoots will prevent much use of this berth when it is again in use.

All linseed oil and similar cargoes are being handled at the berth to the East of the Overseas Wharf on the Quequen side but the lack of water makes taking the ground normal for tankers at low water while the swell effect is marked.
Density: This varies with the season and the flow of water down the River Quequen. A flash flood destroyed the footbridge above the elevator and this is now mainly cleared away but no extension has been planned as yet for the adjacent elevator berth. Thus the density can range from salt to near fresh in season.
Fresh Water: Very slow rate of delivery and very salty (500 parts).
Shore Leave: Permitted as soon as Argentine Identity Cards have been processed.
Developments: The Ultramar I Berth has 8 tubes and can pour four at 350 tonnes/h. each. Work now proceeds according to who pays the overtime, but an 18 hour day is available on most weekdays, from 0700 hrs. to 0100 hrs.

AUTHORITY: Capitania de Puertos de Quequen y Mar del Plata.
Contact: Francisco Cesar Gallo, Chief of Operations Division.

RIO GALLEGOS (including Punta Loyola): 51.33 S. 68.59 W.

(Province of Santa Cruz) "B" category port.
N.B. Refer to Argentina, Section 1.

About 8 miles up the river, 1,247 sea miles South of Buenos Aires.
PILOTAGE: Compulsory. Agent requires 48 hours' notice to order Pilot from Puerto Madryn.
ANCHORAGE: Good anchorage when awaiting tide is off Punta Loyola in 30 ft. or on the Northern coast in front of Punta El Gancho or between Punta Bustamante and Isla Deseado, this latter in the case of N.W. storms only.
RESTRICTIONS: Entrance to the anchorage is buoyed. The Northern Channel has a shingle bank bar 13 ft. at low water. The Southern Channel is more sheltered and the current not so strong. Rio Gallegos is a tidal port, the height of tide being as much as 40 ft. at times.

The port is characterised by the intensity of the currents, up to 6 knots, and should be entered on a rising tide there being only 22 ft. in the pool of the port at low water.
RADIO: For radio regarding free pratique, or reporting ETA call LPG 2 on 486 kHz. A2. For weather reports in English tune to Comodoro Rivadavia LPX 2 on 474 kHz. at 0400 and 1800 hrs. GMT.
TUGS: The Coal Board operate a small tug.
BERTHS: *Commercial Wharf:* Length 45 m. Vessels moor to chains on the shore and berth at high water. At low water, vessels are aground on shingle which is levelled by the Port Authority from time to time. Vessels work cargo with ship's gear and 2 mobile cranes (45 tons and 10 tons) when ship's gear cannot reach the quay at LW.
Coal Wharf: "T" shaped jetty with loading platform 60 m. in length. Loading of coal is by 2 chutes at 1,000 t.p.h. from half tide (flood) to half tide (ebb), which is approximately 5-6 hours. Vessels which do not wish to go aground can only work for 2-3 hours, as they have to go out to anchor and return to complete loading.

There are pipelines for receiving clean petrolem products. The storage tanks are 1,500 m. upstream.
Punta Loyola: Length of berth 185 m. Vessels berth against dolphins with mooring dolphins at each end giving an overall mooring length of 375 m. Depth alongside 45 ft. at LW. Range of tide 12 ft. Tankers of 60,000 d.w.t. load crude oil, eventually coal will also be loaded.
MEDICAL: Doctor available.
FRESH WATER: Available at the Coal Wharf and the Commercial Wharf.
FUEL: Available at the Coal Wharf and by truck.
CONSULS: Chilean, Spanish and Italian.
REPAIRS: Workshop facilities for small repairs.
AIRPORT: Daily air service to Buenos Aires.
WEATHER: *Winds.* Characterised by constant winds from W. and S.W. averaging 16 knots during the day. In Spring and Summer 25 knots rising to 75 knots at times. Easterly winds are rare, usually with rain.
Rain. There are usually about 100 days with rain, in total 222 mm. distributed from April to October.
Temperature. Average maximum temperature in Summer is 18°C, maximum recorded being 29°, Summer minimum is 5.8° while in Winter the average maximum is 6.5° and minimum minus 11°.
Tidal range is 39 ft. 4 in. spring and 9 ft. 6 in. neaps, tides of over 40 ft. have been registered.
AUTHORITY: General Ports Administration.

SAN ANTONIO ESTE: 40.49 S. 64.54 W. (See Plan)

PILOTAGE: Pilotage is compulsory and ordered via vessel's Agent 48 hours prior to arrival. Pilot supplied by Puerto Madryn Pilot station.
ANCHORAGE: In San Matias Gulf, 5 miles South of entrance to bay.
BERTHS: A new pier with a length of 200 m. at the head has been built. The outer berth accepts vessels of 170 m. LOA, occasionally 178 m. and the Inner Berth accepts vessels of 147 m. LOA. Depth alongside 30 ft.

Vessels over 111 m. require a tug.

Max. draft in the initial stages will be 26 ft.
STEVEDORES: Working hours: 0700-1300 and 1300-1900 Monday to Friday and 0700-1300 on Saturday.
MEDICAL: Hospital at San Antonio Oeste.
FRESH WATER: Available.
FUEL: Available by truck from Bahia Blanca.

SAN JULIAN: 49.18 S. 67.43 W. (See Plan)

(Province of Santa Cruz) "C" category port.
N.B. Refer to Argentina, Section 1.

In the Bay of San Julian, 1,111 sea miles South of Buenos Aires.
APPROACHES: Access is well buoyed, but vessels must wait for high tide to enter.
PILOTAGE: Compulsory. Agent requires 48 hours' notice of arrival in order to arrange Pilot from Puerto Madryn.
ANCHORAGE: Best anchorage situated in front of the town, in 22 ft. at LWS. When heaving anchor care must be taken as the 3 knot current drives vessels towards the shore. Puerto Scholl is the best of several anchorages.
RADIO: For radio regarding free pratique, or reporting ETA call LPY on 428.5 kHz, A2. For weather forecasts in English, tune LPX 2, Comodoro Rivadavia on 474 kHz, at 0400 and 1800 hrs. GMT.
TUGS: See "General" before first port.
BERTH: Length 60 m., with dolphins 60 m. off each end. Depth alongside 30 ft.

Loading of frozen fish, sea products and other cargoes is by ship's gear.
MEDICAL: Doctor, and hospital available.
FUEL/FRESH WATER: Not available. In emergencies, water could be supplied in drums.
CONSULS: Chile and Spain.

USHUAIA: 54.49 S. 68.18 W. (See Plan)

PILOTAGE: Compulsory. Vessels to give Agent 48 hours' notice in order to arrange Pilot.
RADIO: For Free Pratique or reporting ETA, vessels call "LPC 2" on 512 kHz or "LPC 27" on 4428.6 kHz.
TUGS: In an emergency, naval tugs can be provided.
BERTHING: Length of berth 180 m. In addition, there are 3 dolphins off the S.E. end of the berth, giving an overall berthing length of 250 m. The depth at the head of the berth is 30 ft., decreasing to 18 ft. at the shore end. Vessels can berth either side of the wharf.
CRANES: 2×45 tons mobile cranes.
STEVEDORES: Work is carried out in 2 shifts of 6 hours each. Weekdays 0700 hrs. – 1900 hrs. and Saturdays 0700 hrs. – 1300 hrs.

MEDICAL: Hospital available.
TANKERS: *YPF Pier:* The pier is 1 km. N.E. of the Commercial Pier. Length 85 m. Vessels berth starboard side to and moor to 4 dolphins. Depth alongside 35 ft. Tankers discharge clean products to storage tanks.
FRESH WATER: Available at both piers.
FUEL: Available at the YPF Pier, advance notice required.
CONSULS: Chile and Italy.
REPAIRS: Possible.
AIRPORT: There is a regular air service to Buenos Aires.

SHIPMASTER'S REPORT: July 1994.
Vessel:
LOA 156 m.
Breadth: 24.7 m.
D.w.t. 18,277 tons.
Draft 7.30 m.
Vessel called to discharge and load containers.
Location: The port of Ushuaia is close to South Polar Region, and is situated at centre of the "Canal Beagle" River, approximately 54 nautical miles from the Easterly open sea Pilot Station.
Restrictions: Restriction limits by a line joining the following approximate positions:
(a) Lat. 54° 15′ 00″ S., Long. 66° 54.7′ W.
(b) Lat. 54° 57′ 50″ S., Long. 66° 50.9′ W.
All foreign vessels without a Pilot on board prohibited entry West of this line.
Pilotage: Compulsory. Four licensed Pilots are available at any time. Pilots usually join ship in approximate position Lat. 55° 01.8′ S., Long. 66° 49′ W.

Vessel must give Agent 48 hours notice, in order to arrange Pilot and give accurate ETA to their Agents (not to the Pilot Association). When within VHF range, vessel should communicate with the Ushuaia Pilot Boat, via Channel 16, working Channels are 14 and 12.

The Pilot boat was not at the Pilot Station, but at the following approximate position: Lat. 54° 53′ S., Long. 67° 20′ 30″ W. (Pto. Harberton). Pilot boat has to sail about 20 nautical miles to the Pilot Station. Therefore the Pilot shall be confirmed 4 hours, 2 hours and 1 hour in advance by VHF. The pilot boat "La Pampa" is easily identified, as it is painted with blue hull and white bridge and clearly marked "Pilot" and displays international pilotage signals.

Pilot Office Address: Gdor. Deloqui 304-(9410) Ushuaia. Tel:/Fax: 0901-22448.
Documents:
Customs:
1 copy Crew List.
8 copies Special Form-Deck and Engine Spares and Stores List (one original, 2 copies for Customs).
3 copies Crew Effects Declaration.
3 copies Bond Stores List.
Sanitary Officials:
1 copy Health Declaration.
2 copies Crew List.
1 copy Vaccination List.
Maritime Police:
4 copies Crew List.
4 copies General Declaration, issued by Agent.
4 copies Passenger List.
3 copies Drugs List.
3 copies Arms and Ammunitions List.
Immigration:
3 copies Crew List and Shore Pass issued by each crew member (photograph necessary).
3 copies Passenger List.
Port Authority check and sight following ship's certificates:
Certificate of Vessel's Nationality.
International Tonnage Certificate.
Derat Exemption Certificate.
Cargo Ship Safety Equipment Certificate.
Cargo Ship Radio-Telegraphy Certificate.
Cargo Ship Safety Construction Certificate.
International Load Line Certificate.
International Oil Pollution Prevention Certificate.
Last Port Clearance.
Ship Reporting System: Compulsory system in effect for vessels, call sign "L4D".
Vessel should report:
(a) Vessel's name.
(b) Call sign.
(c) Flag.
(d) Port of departure (Inward-bound) next port (Outward-bound).
(e) Type of vessel.
(f) Draft.
Anchorage:
(A) Roadstead: Within 1.5 miles to 4.0 miles from Pta. Moat Lighthouse. There is an anchorage for awaiting Pilot.
(B) Port Anchorages:
South Anchorage:
(i) Lat. 54° 50.02′ S., Long. 68° 16.08′ W. (Buoy)
(ii) Lat. 54° 50.20′ S., Long. 68° 16.40′ W.
(iii) Lat. 54° 49.53′ S., Long. 68° 18.10′ W.
(iv) Lat. 54° 49.72′ S., Long. 68° 18.20′ W.
North Anchorage:
(i) Lat. 54° 48.45′ S., Long. 68° 15.71′ W.
(ii) Lat. 54° 48.38′ S., Long. 68° 15.90′ W.
(iii) Lat. 54° 48.76′ S., Long. 68° 17.35′ W.
(iv) Lat. 54° 48.65′ S., Long. 68° 17.38′ W.
Above anchorage for awaiting berth or quarantine.

Radio/VHF: Ushuaia Radio call sign "LPC2" 512 kHz, or "LPC27" 4428.6 kHz.

VHF Channel 16, working 14 and 12 for Pilot and Port Control. Channel 69 for Agents.
Tugs: None.

In an emergency, the ship's Agent requests a tug from the Navy.
Medical: Assistance available.
Fresh Water: Available at berth.
Fuel: All grades of bunkers available from Muelle "Orion" Pier, subject to advance notice being given.
Cranes: No cranes on berth, usually use ship's cranes. Stevedore company has 2×45 tons mobile cranes and 1×30 tons truck crane.
Stevedores: Working hours: 0700 hrs. – 1900 hrs. Saturdays 0700 hrs. – 1300 hrs. Overtime if required from 1900 hrs. – 2400 hrs. and 0000 hrs. – 0700 hrs.
Gangway/Deck Watchmen: Required.
Opening/Closing Hatches: Usually by crew.
Time: Summertime: GMT minus 4 hours (from October to March).
Wintertime: GMT minus 3 hours (from April to September).
Tides: Springs about 5.2 ft., Neaps about 2.2 ft.
Identification Cards: Required.
Shore Leave: Crew members allowed ashore, but must be provided with identification cards.
Airport: Small airport with service to Buenos Aires.
Currency: U.S.$ 1.00 = Un.Peso 1.00.
Seamen's Club: None.

NOTES

Please also advise Shipping Guides Ltd.

Aruba

BARCADERA: 12.29 N. 70.00 W. (See Plan)

LOCATION: The industrial harbour of Aruba is situated 3 miles S.E. of Oranjestad.
DOCUMENTS: Documents and all general information, refer to "Oranjestad".
PILOTAGE: Compulsory.
RESTRICTIONS: Harbour open day and night. Depth of water in entrance is 36 ft. Depth of water alongside is 36 ft. Swinging basin width 1,000 ft.
MAX. SIZE: Max. LOA 225 m., max. draft 32 ft.
TUGS: Available.
BERTHING: 1,150 ft. of dockside accommodation.
FRESH WATER: Not available.
FUEL: Can be supplied.
AUTHORITY: See "Oranjestad".

ORANJESTAD: 12.31 N. 70.02 W. (See Plan)

DOCUMENTS:

Clearance from Last Port.
Derat Exemption Certificate.
Ship's Register.
Manifest of Cargo (or ballast), or Bills of Lading for import goods and transit goods separately.
Crew List (4 copies).
List of Stores on Board (2 copies).
Consignee Mail (if cargo for discharge) (2 copies).
Passenger List (if any passengers) (2 copies).

The Passenger List must carry full names, date of birth, sex, nationality and occupation of passengers landing at Aruba. The ultimate destination of in-transit passengers must also be shown on the Passenger List.

Derat Exemption Certificates can be renewed at Oranjestad, Barcadera and St. Nicholas.

Outward Clearance, cargo documents and list of outgoing passengers are delivered on board by the Agent's representative, thereby making it unnecessary for Masters to visit the Customs Office to obtain outward clearance.

PILOTAGE: Masters are requested to advise Agents of their expected time of arrival at least 48 hours in advance. Arrival messages should include advice regarding cash or other requirements. This information is particularly necessary in order to give prompt attention to vessel's requirements and to avoid delay after arrival.

Pilots are government employees and pilotage is compulsory for vessels from 50 g.r.t. upward entering or leaving the harbour. Pilots board inbound vessels within 2 miles of shore. The Agent's representative will arrange for Pilots to board vessels as necessary. Inbound vessels should close the West entrance of the harbour as near as prudently possible and make a lee to facilitate the Pilot's boarding.

Every vessel arriving or departing must provide and properly secure a pilot ladder which conforms with the standards of construction normally accepted by international safety standards. Failure to provide such a ladder may result in the Pilot's refusal to board a vessel.

ANCHORAGE: Anchorages, suitable even for deepest draft vessels, are located 7-8 miles South of Orangestad, where the depth is 45 m.
Restricted Anchorage: The limits are shown on B.A. Chart No. 702. Anchorage extends West of the coast, and is reserved for the use of vessels carrying out repairs and underwater hull cleaning. Special permission for anchoring is to be obtained from Direktie Scheepvaart (Tel: 297-8-35192. Fax: 297-8-35221).

MINIMUM DRAFTS: For tankers arriving or sailing in ballast the following minimum drafts are required for manoeuvring under normal weather conditions:

G.R.T.	*Forward*	*Aft.*
16,600	8 ft.	18 ft.
18,000	8 ft.	18 ft.
27,000-30,000	10 ft.	20 ft.
30,000-36,000	14 ft.	22 ft.
37,000	14 ft.	24 ft.
46,000	16 ft.	26 ft.

MAX. SIZE: The harbour itself has a depth of 36 ft. at MLW. The safe salt water draft approved for docking at the Long Pier is 30 ft. and in the two Western Basins is 28 ft. Vessels normally enter via the West channel and depart via the East channel.

HEALTH: The Port Doctor will visit an arriving ship only if there is a case of quarantinable disease on board, if the ship has no clean Bill of Health or if one of the preceding ports of call has been declared to harbour a quarantinable disease.

RADIO/VHF: Shore station for R/T communication with 24-hour service. VHF Channel 16, 156.80 MHz (calling); Channel 11, 156.55 kHz (working channel).

HF 2182 kHz, 2558 kHz (working frequency transmitter), 2760 kHz, 2738 kHz, 3032.5 kHz, 4125 kHz (receiving frequency SSB).

TUGS: 2 tugs available, 2,200 h.p. and 3,500 h.p. Both fitted with VHF Channel 16 (working Channel 11).

BERTHING: In total there are 4,070 ft. of dock length available to accommodate ocean-going vessels and 1,090 ft. of dock for small craft, of which:

1,720 ft. with 36 ft. of water alongside
2,350 ft. with 34 ft. of water alongside
460 ft. with 16 ft. of water alongside
230 ft. with 10 ft. of water alongside
400 ft. with 6 ft. of water alongside

CONTAINER FACILITIES: 30 acre container terminal in operation. Length of quay 255 m., depth alongside 12.0 m. 1×50 ton container crane. 2×35 ton forklifts. 1 back-up mobile crane of 140 tons available.
STEVEDORES: Stevedoring is performed at a fairly fast rate compared with other ports in the Caribbean area. All cargoes are handled by shore cranes. The terminal has extensive electrical installations for refrigerated container cargoes.
MEDICAL: Excellent medical and dental attention is available at any hour of the day or night to crew members of all vessels.
BALLAST: Vessels must arrive with sufficient ballast to permit safe handling. All vessels should enter port with clean ballast that can be pumped over board when alongside, as it is prohibited to pump dirty ballast into the harbour.
FRESH WATER: Boiler and drinking water of purest quality is supplied by hose from the docks at a rate of 200 t.p.h. (in special cases 400 t.p.h.).
FUEL: Various grades of bunker oil available by barge from Coastal Fuels Marketing. A minimum of 48 hours advance notice is required.
CONSULS: The following countries have consular representatives on Aruba:

Brazil
Chile
Colombia
Costa Rica
Denmark
Dominican Republic
El Salvador
Germany
Guatemala
Haiti
Italy
Lebanon
Liberia
Nicaragua
Norway
Panama
Peru
Portugal
Spain
Sweden
Switzerland
United Kingdom
Venezuela

Necessary for Masters of Panamanian and Italian flag vessels to visit Consulates at Oranjestad to present documents and receive despatches. Other Consulates have similar requirements. Masters may check with Agent for clarification.

REPAIRS: There are no facilities at Aruba for major ship repairs. Local workshops can do repairs of minor nature. Preliminary advice regarding such minor repairs should be included in ETA messages and work requisitions for repairs should be prepared for handing to the Agent's representative immediately upon arrival.

Radar, radio and gyro repairs can be carried out. However, it is important that Masters radio in their requirements as early as possible and give a brief reference as to the nature of the breakdown or fault of the equipment concerned.

While alongside vessels must be prepared to move at 1 hour's notice. Engine repairs to the effect of demobilising the vessel may only be carried out with special permission.

SURVEYORS: Representatives of the American Bureau of Shipping, the Lloyd's Register of Shipping and the Norske Veritas are resident in the area. Masters may request the surveyors' services through the Agent.
GANGWAY/DECK WATCHMEN: An efficient and continuous watch must be maintained on deck and in the engine-room of all ships while in port, and a sufficient number of men must be on board at all times to move vessels either for harbour operations purposes or in emergency situations.
OPENING/CLOSING HATCHES: This work is normally carried out by the crew.
AIRPORT: The Port of Oranjestad – the commercial and tourist harbour of Aruba – is only 5 miles by road from the airport. The connection by air with the U.S.A. and Europe is very good and frequent (Air Aruba, KLM, VIASA); other airlines operating in Aruba are: ALM, LAV, Avensa and Avianca.
TIME: Local time is 4 hours behind GMT. Vessels are requested to use local time in ETA messages and when dealing with their Agents.
POLICE/AMBULANCE/FIRE: Police, Oranjestad, Tel: 11100/24555; Ambulance, Oranjestad, Tel: 24200/21234; Fire Alarm, Tel: 115.
CUSTOMS GUARDS: Local authorities assign 1 or more Customs guards to each vessel during its stay in port; the charges for guarding are for the account of the vessel.
SHORE LEAVE: Under normal circumstances no restrictions are imposed by the Government Immigration Authorities on shore liberty. Masters are requested to endeavour to have all crew members on board prior to departure time, so that the ship will have no delay in sailing.
AUTHORITY: Aruba Ports Authority N.V., L. G. Smith Boulevard 23, Oranjestad, Aruba. *Tel:* 2978-26633. *Telex:* 5120 Hafar NA. *FAX:* (2978) 32896. *Contact:* Managing Director – Aruba.

SAN NICOLAS: 12.26 N. 69.55 W. (See Plan)

DOCUMENTS/HEALTH and all General Information, refer to "Oranjestad".
APPROACHES: *Report:* 1982. The predominant wind in the area comes from an Easterly direction and the main ocean current sets in a Westerly direction. The tourist industry is an important economic factor in Aruba, and to avoid the possibility of vessels being erroneously accused of contributing to oil pollution of the North Coast and resort beaches, it is recommended that vesels, when practical, approach San Nicolas from the West.
PILOTAGE: (Inner Harbour) Pilotage is compulsory. Pilot boards 1.5 miles S.W. of the West Entrance Buoy.

A pilot service for anchoring off the Terminal is available upon the Master's request, providing radar and echo sounder are functioning properly.

ANCHORAGES: There are 3 anchoring areas off Aruba.

1. About 3 miles W.S.W. of Noordwest Point.
   This anchorage can be affected by swell so equipment and personnel changes can be risky in poor weather. Because of the changeable weather this anchorage is not recommended for vessels staying for long periods or for VLCCs. When anchoring care should be taken to avoid the submarine cable in this vicinity.

2. About 6 miles S.W. of Oranjestad.
   This anchorage is generally quieter than the one described above, however, transport to the shore may take longer. This area is suitable for all ship sizes and with many years of experience there have been no reported problems of anchors dragging.
3. The "Restricted Anchorage".
   There is a Restricted Anchorage about 2 miles off-shore and some 4 miles N.W. of Oranjestad. This anchorage is only to be used by vessels engaged in operations requiring assistance from the shore. Operations would include repairs, hull cleaning or tank cleaning. Vessels proceeding to this anchorage will be specially advised by Charterers or Owners. For anchoring Masters are recommended to take a Pilot.

It should be noted that in all the anchorages described above inward clearance and other formalities are not necessary, as long as there is no direct contact with the shore. If crew changes or other direct contact with the shore is to take place then normal procedures have to be followed.

Tug and launch services are available at all the anchorages for stores or personnel reasons.

Whilst waiting for orders or acting as floating storage, vessels are required to take every precaution to avoid all forms of pollution including dumping of floating garbage.

Prohibited Anchorage: Lat. 12° 25.83′ N., Long. 69° 55.52′ W., in the vicinity thereof.

Report: 1982.

Due to the high aesthetic value and pollution sensitivity of the West and S.W. coast, it is prohibited for vessels to anchor in the area bounded on the North by a line drawn with California Light (Noord Westpunt) bearing 025° True and on the South by a line drawn with Hooiberg Peak bearing 090° True.

Vessels should anchor about 12 miles West of San Nicolas Harbour. Loaded ULCC's should not anchor off the coast of Venezuela.

Another anchorage is located outside the reef South of San Nicolas Harbour. This anchorage is intended for vessels that have to perform small repairs and for which repair, parts are required from shore. These vessels are requested to proceed to the Outer Anchorage as soon as they have completed the repairs. Lightering vessels, before proceeding to the lightering area, will also be anchored off the reef in order to put the Yokohama fenders alongside. Pilots are available to anchor vessels at the Reef Anchorage 24 hours a day. All navigational equipment (fathometer, radar, etc.) must be in good working order.

RESTRICTIONS: The port is open for day and night navigation. The safe salt water draft approved for entering is 40 ft. and 41 ft. for leaving. Maximum beam for entrance to inner harbour finger pier is 135 ft. Vessels normally enter via the West channel and depart via the East channel.

Tides: Diurnal with max. amplitude of 18 in. Datum used is MLW., water level never falls more than 6 in. below MLW.

MAX. SIZE: *Reef Berths:* Tankers up to 550,000 d.w.t. No. 2 Reef berth, depth alongside, 105 ft. MLW. Also see "Reef berths".

Inner Harbour: 90,000 d.w.t.

Also see "Berthing" – "Note".

VHF: Coastal Marine on VHF Channels 16 and 8.

TUGS: 3 diesel-powered tugs are used for berthing and unberthing. For vessels over 60,000 d.w.t. a third tug is used.

BERTHING: The max. limitations for vessels using San Nicolas facilities are:

Berths	*Length* (ft.)	*Beam* (ft.)	*Salt water max. draft* (ft.)	*Bow to manifold* (ft.)	*Approx. d.w.t.*
1 South	745	UNL	39	376	50,000
1 North	740	110	39	350	50,000
2 South	out of service				
2 North	out of service				
3 South	900	130	40	450	80-90,000
3 North	850	120	41	397	80-90,000
HDS Pier	650	95	31	UNL	30,000 (Coke and dry cargo only)

The max. entering draft is 40 ft. even keel salt water.

HDS (Dry Cargo Pier): Note: The maximum beam is based on reach of coke shiploader. Also the maximum clearance under the shiploader spout to mean sea level is 50 ft.

The following is the suggested ballast draft for vessels.

MDWT	*Fore* (ft.)	*Aft* (ft.)
10 – 20	8	18
20 – 30	10	20
30 – 40	14	22
40 – 50	14	24
50 – 100	16	26

Capability of Berths to load/discharge products:

Product	Finger Pier No.1-S	No.1-N	No.3-S	No.3-N
(Loading)				
Naphtha	X			X
Lt. St. Run Gasoline	X			X
Kero/Jet A	X			X
Gas Oil/No.2 Diesel	X			X
V.G.O.		X	X	
No.6 Fuel Oil		X	X	
Asphalt			X	X
Bunker Fuel	X	X	X	X
(Discharge)				
Cutterstock		X	X	X
50 Be' Caustic	X	X		
Imported Fuel Oil		X	X	

REEF BERTHS: *Operators:* Berth No. 1: Coastal Aruba Refining Co.N.V. Berth No. 2: Wickland Oil Co.

VLCC anchorage: When anchoring is necessary, Masters of VLCCs may wish to anchor in the following position; 12° 24′ N., 70° 07′ W., approx. 12 miles West of San Nicolas Harbour in approx. 25 fathoms.

Pilot Station: 2 miles to 3 miles West of San Nicolas Harbour entrance. When Pilot is boarding, the vessel should be on an Easterly course with a speed of not more than 2 knots.

Embarking Pilot, Loaded VLCCs: On the port side with either pilot hoist or conventional pilot ladder.

Ballast VLCCs: On the port side with a combination of accommodation ladder and conventional pilot ladder, or with only accommodation ladder.

Disembarking Pilot, Loaded VLCCs: On the starboard side with either pilot hoist or conventional pilot ladder.

Ballast VLCCs: On the starboard side with a combination of accommodation ladder and conventional pilot ladder, or with only accommodation ladder.

Tugs: Normally 4 tugs used for tankers over 300,000 d.w.t. 2 on long lines, 1 forward and 1 aft and 2 alongside starboard side. Tug's lines used.

Docking: Always portside to, with starboard anchor ready.

Mooring Launch: Used for all lines, except for the spring lines fore and aft. Forward moorings first, after moorings second.

Mooring Capstans: All mooring and breasting dolphins are equipped with capstans, 2 ton pull capacity, 100 ft./min. line hauling capacity.

Max. Size:

	MDWT	*Max. LOA* (ft.)	*Beam*	*Depth* (ft.)	*Max. draft* (ft.)	*Pier Heading*	*Approach angle*
RB I	40–400	UNL	UNL	80	75	130° true	15°
RB II	40–550	1400	UNL	105	95	114° true	10°

Sailing Draft Ballast VLCCs: about 25 ft. fore and 35 ft. aft.

Lines and Winches: Mooring lines assumed to be 1.625 in. diameter steel wire with a breaking strength of 90 – 100 tons.

Mooring winches assumed to have about 25 metric tons heave capacity and 55 metric tons brake holding capacity (minimum).

Combination of a wire and a synthetic line to a single dolphin will not be permitted.

Mooring lines must not be stressed beyond 55% of their breaking strength.

Self-tensioning is not permitted. Automatic winches should be used on manual brake.

Synthetic tails on wires should have a higher breaking strength than the wire to which they are connected. The eyes of the tails should be protected from abrasion with suitable coverings, and tails should be connected to wires with suitably designed shackles.

A maximum of only 2 layers of line to be allowed on working or tension drum of split drum winches.

Current and Wind: Current is less than 0.5 of a knot 90% of the time. Wind is less than 20 knots 50% of the time, and less than 25 knots 85% of the time.

Wind direction True	*% of time*	*Current direction* True	*% of time*
20° – 40°	2	40° – 70°	24
50° – 60°	6	100° – 110°	17
70° – 80°	33	140° – 240°	10
90° – 100°	40	260° – 290°	24
110° – 120°	13	320° – 340°	25
140° – 170°	1		
220°	5		

Wind tolerance: (Not imposed at RB I). At 30 knots steady, loading will be discontinued, and the loading arms will be drained, engine to be confirmed ready for use.

At 35 knots steady, arms will be disconnected and tugs will be on stand-by.

Loading Arms: RB I; four 16 in. cargo arms with 16 in. bolted flange connections. One 8 in. bunker arm (No. 5 arm, the most Westerly arm). RB II; five 16 in. cargo arms with 16 in. connections.

Discharge/Loading Lines: RB I 36 in., 3,000 ft. long. RB II 56 in., 4,000 ft. long.

Radio Contact: Contact between Loading Master, control room, marine office by VHF and UHF. Particulars will be given by Loading Master.

Bunkers: RB II; through No. 1 or No. 5 loading arms with reducers.

Water: Not available.

Provisions: By launch; to be taken on board by ship's lifting gear on the port quarter.

Shore Leave: No pedestrian traffic allowed between ship and main gate. Arrangements for crew transportation can be made with Agent.

LIGHTERING OPERATIONS: VLCCs discharging at Aruba may be called upon to discharge part of their cargo by ship-to-ship transfer off Aruba. The lightening operation is carried out by vessels suitably equipped for ship-to-ship transfer operations, and is under the control of Coastal's Lightening Master on the lightening vessel.

The Lightening Master will board about 1.5 miles off San Nicolas Haven to discuss the operations. A derrick or crane should be ready on the lee side to pick up various equipment for the mooring and pipeline connection. A Lightening Assistant stays on board to advise and assist with mooring procedures.

The VLCC and the Lightening vessel rendezvous in position: Lat. 12° 24′ N., Long 70° 14′ W. Communications are by portable radio placed on board and/or VHF Channel 8. The designated lightening area is bounded by the following positions:

(1) Lat. 12° 25′ N., Long 70° 04.4′ W.
(2) Lat. 12° 25′ N., Long 70° 10.3′ W.
(3) Lat. 12° 30′ N., Long 70° 13.5′ W.
(4) Lat. 12° 30′ N., Long 70° 07.2′ W.

The mooring takes place whilst steaming into the prevailing wind on an Easterly course at about 3 knots. Thereafter the VLCC anchors within the designated lightening area for the ship-to-ship transfer. Wind speeds in excess of 23 knots are considered unsuitable for the mooring and the lightening operations to take place.

Masters need not come ashore to clear ship with Customs. The ship's Agent can do this by proxy. Ship's papers for clearance and signed proxy will be picked up from ship off port by tug or launch.
BALLAST: Vessels must arrive with no more than 8% d.w.t. dirty ballast. Clean ballast will be discharged overboard after docking. Slops can be discharged to the disposal facilities ashore. Shore reception facilities are limited.
FRESH WATER: Limited supply available.
FUEL: All grades of bunkers available.

Bunkers available for offshore delivery via bunker vessel. Contact Coastal Aruba or Coastal Miami (Tel: (305) 551-5288).

Also the following considerations apply:

1. Vessels working cargo have priority over vessels bunkering.
2. In assigning tugs, vessels working cargo take priority. (2 to 3 hours tug service required at the sea berth.)
3. Vessels using the Reef Berths must have at least 12 good mooring lines. All mooring winches and equipment will be inspected and must be in good order. Vessels may not be docked if equipment is faulty.
4. In the event of marginal weather, deep draft vessels calling for bunkers may not be docked.

Shipmaster's Report: November 1992.

Offshore Bunker Supply:

1. Advise Coastal Marine of ETA, 48 hours, 24 hours and 12 hours prior to arrival.

Coastal Marketing	Telex:	5244 Comar Aw
Coastal Marine	VHF:	Channels 16 and 8
	Telephone:	(297) 894-359
	Fax:	(297) 894-554
	Telex:	5241

2. When sending ETA, advise Coastal of size of manifold and location.
3. The bunkering barge "Irini K" (17,200 d.w.t.) is fitted with Yokohama fender. The bunker location is Lat. 12° 29.5′ N., Long. 70° 07.5′ W.
   The barge may be contacted by Telex No.1334160.

PORT FIRE PROTECTION: The Port of San Nicolas is very well equipped with modern equipment for fire-fighting and fire prevention.
REPAIRS: A local workshop can do minor repairs.
SPECIAL REGULATIONS: Strict compliance with Harbour Safety Regulations is mandatory. Stringent regulations prohibit the transportation of alcoholic beverages through the refinery and harbour area. No liquor or beer may be taken on board or removed from vessels except only bonded stores ordered by the Master.
POLICE/AMBULANCE/FIRE: Dial 8131 on jetty telephone. Call "Coastal Marine" on UHF set which is supplied to every ship whilst alongside.
GARBAGE DISPOSAL: Service can be provided with advance notice through ship's agent.
WASTE OIL DISPOSAL: Ship's dirty ballast and product slops may be discharged ashore or to 15,000 bbl. barge. Advance notice required.
SEAMAN'S CLUBS: None.
CURRENCY: Aruban Florin (AFl.).
SHORE LEAVE: As all ship's personnel when going ashore have to pass through the docks and the company's concession, every seaman must carry an identity card to check off against ship's Crew List at main gate. Seamen must have special pass to use any other gate than refinery main gate.
AUTHORITY: Coastal Aruba Refining Co. NV, P.O. Box 2150, San Nicolas, Aruba. *Tel:* 297-8-94359/94500. *Telex:* 5244 Comar Aw and 5241. *FAX:* 297-8-94579. *Contact:* Captain T. Touchstone, Marine Manager.

Also see "Oranjestad".

NOTES

Please also advise Shipping Guides Ltd.

Ascension Island

GEORGETOWN: 07.55 S. 14.20 W. (See Plan)

DOCUMENTS: Crew and Passenger Lists, Health Documents, Manifests and Bills of Lading if discharging cargo.

PILOTAGE: No pilots are available and not required as it is an open anchorage. 48 hours notice of ETA is required. Call Ascension Island Radio on 2182 kHz. or VHF Channel 16.

ANCHORAGE: Anchorage positions are available and will be given as bearing and distance in feet from Bates Rock Beacon, available from Harbourmaster by telex or "Turtle" Channel 6 or 16 (See Ascension Island Chart No. 1691 dated April 1985). Depths at anchorage from 11 to 31 fathoms. Abandoned cables are in the area and if picked up should be released without cutting, if possible. Regular mailship always takes precedence for anchorage and cargo facilities.

RESTRICTIONS: Advisable for ships or yachts arriving at night to wait until daylight unless contact is made with "Turtle" on Channel 16 or 6 and specific instructions are given for berthing. Occasionally a floating pipe-line connects tankers at anchor in Clarence Bay with the Pierhead.

HEALTH: Pratique should be requested when giving ETA.

RADIO: VHF Channel 6 or 16 "Turtle" or Ascension Radio 2182 kHz. Shipping Agents Ascension Island Services, Telex 3219. Harbour Authority, the Administrator, Telex 3214.

RADAR: None.

TUGS: No tugs available.

BERTHING: No alongside berthing. See "Anchorages".

Cargo Facilities: Cargo has to be discharged by ships' cranes onto lighters. Lighters pull alongside Pierhead where cargo is off loaded. Pierhead cranes can handle weights up to a maximum of 18 tonnes.

MEDICAL: Facilities available. 48 hours notice required if possible. Georgetown has a 12 bed hospital. Dental facilities usually available. Vaccination and inoculation certificates not normally required.

TANKERS: Anchorages available. Tankers for English Bay should anchor off Clarence Bay until boarded, it is not normally possible to put tankers into English Bay after 0900 hrs.

FRESH WATER: Not normally available.

FUEL: Not normally available.

CONSULS: No Consulates. British Administrator attends to all requirements.

REPAIRS: Only minor repairs can be effected.

GANGWAY/DECK WATCHMEN: Not necessary.

OPENING/CLOSING HATCHES: Preferable that this done by crew to avoid delays in starting discharge.

REPATRIATION: No facilities for crew changes. Repatriation can usually be arranged but only in the case where a person has been hospitalised or in extreme compassionate cases. No civil airlines call at Ascension but RAF (to UK) or USAF (to Antigua weekly) can usually assist. Master of vessel required to give guarantee in writing that all hospital fees and air fares will be honoured by his shipping line Agent.

TIME: Always GMT.

HOLIDAYS: Cargo vessels can be discharged during public holidays – no night work.

SERVICES: *Offshore Services:* Ascension Island Services. Contact the Senior Manager.

SHORE LEAVE: Limited facilities ashore make shore leave impracticable for most crews but Immigration Officer ready to consider special limited arrangements at the request of the Master. Yachts are normally granted 48 hour stay with daytime shore leave.

GARBAGE DISPOSAL: Open anchorage. Garbage barges can be arranged with Marine Manager. Call "Pierhead" on VHF Channels 6 or 16.

WASTE OIL DISPOSAL: No oil collection service available.

SEAMAN'S CLUBS: No seaman's clubs. Small shop available,but not for bulk buying. Normal international telephone facility available. Postage facilities. Weekly church service.

CURRENCY: Pound sterling. £1 = U.S.$1.50.

GENERAL: There are no facilities for visitors on the island. With certain exceptions no-one is allowed to land at Ascension without an entry permit.

AUTHORITY: Office of the Administrator, Ascension Island, South Atlantic. *Tel:* 247-6311/6313. *Telex:* 3214 Govt. Av. *FAX:* 247-6152. *Contact:* R.C. Huxley, The Administrator.

The Marine Manager, Ascension Island Services. *Tel:* 247-6217. *Telex:* 3219. *FAX:* 247-6139, 247-6827 (direct).

NOTES

Please also advise Shipping Guides Ltd.

Australia

GENERAL

AUSTRALIAN SHIP REPORTING (AUSREP) AREA: (See Plan)

AUSREP
Australian Ship Reporting System
Australian Maritime Safety Authority
Canberra

Foreword

The Australian Ship Reporting System (AUSREP) has been established in accordance with the International Convention for the Safety of Life at Sea, 1974 (SOLAS 1974), which requires signatories to the convention to provide marine search and rescue (SAR) facilities for prescribed areas, and also recommends the establishment of a ship reporting system. Australia, as a signatory to the 1974 SOLAS Convention, has accepted SAR responsibility for the area shown in the attached general instructions and AUSREP procedures.

The AUSREP system was established in 1973 and is operated by the Maritime Rescue Coordination Centre, Canberra, which is part of the Australian Maritime Safety Authority. It is a 'positive' system that is, if a Position Report or Final Report is not received, the Maritime Rescue Coordination Centre will initiate checks to establish the safety of the vessel. These checks are aimed solely at establishing whether a vessel is safe, and include broadcasts to shipping and communications with Owners, Agents or Charterers. If these checks are unsuccessful, then air search action will be initiated. As a 'positive' system, it is important that Masters comply with the defined procedures as closely as circumstances permit.

1. Should you need any further information, please do not hesitate to contact the Maritime Rescue Coordination Centre, telephone (06) 253 4411 (International +61 6253 4411).

May I take this opportunity to thank those Masters who have been regular participants of AUSREP, and to welcome those who are new participants to the reporting system. I would also be grateful if those of you who have not done so, would complete and promptly forward the ship's particulars form located in Appendix B to this publication.

In conclusion, may I also make the point that the effectiveness of AUSREP and any SAR response depends on the accuracy and timeliness of your reports.

P.M.McGrath
Chief Executive
Australian Maritime Safety Authority
July 1995

1.0 Functions of the Maritime Rescue Coordination Centre:

The International Convention for the Safety of Life at Sea 1974 (SOLAS 1974), and previous conventions, requires governments to '.... ensure that any necessary arrangements are made for persons in distress at sea, around its coasts'. The Australian Government, being a signatory to the SOLAS Convention, established the then Marine Operations Centre in April 1972.

The present Maritime Rescue Coordination Centre (MRCC) was previously known as the Sea Safety Centre and is now a part of the Australian Maritime Safety Authority, situated in Canberra, in the Australian Capital Territory. This Authority was established on 1st January 1991.

The principal function of the MRCC is the coordination of marine search and rescue (SAR) activity, within the Australian area of responsibility which is shown on the inside cover. The MRCC is also part of the international COSPAS/SARSAT system and is equipped to receive and evaluate information transmitted by Emergency Position Indicating Radio Beacons (EPIRBS).

The MRCC is operated 24 hours a day by persons with considerable marine, and in some cases, aviation qualifications and experience. These officers have specialised knowledge of search and rescue procedures.

Communications are the very heart of all search and rescue coordination and the MRCC is well equipped with a network enabling worldwide coverage. This network includes telephone, telex, facsimile and satellite systems, with radio communications provided by Telstra Maritime Services, which maintains the maritime radio communications stations (MCS) network in Australia. These MCS provide the link between a ship and shore, and have telex lines to the MRCC.

An important part of the SAR framework is the Australian Ship Reporting System (AUSREP), which was introduced in December 1973 on a voluntary basis. In 1981 legislation was passed making AUSREP compulsory for all Australian-flag vessels, and for foreign vessels under the circumstances which are explained in the general instructions on the following pages. On voyages where it is not compulsory, ships are encouraged to participate whenever they are in the AUSREP area.

In addition to the MRCC's functions in the SAR role, it is also the section of the Australian Maritime Safety Authority responsible for coordination and promulgation of Maritime Safety Information NAVAREA X warnings, which includes Australian Coastal Navigation Warnings (AUSCOAST).

The facilities of the MRCC are available to all seafarers whether they are private boating enthusiasts, commercial fishermen or professional seamen of the merchant fleets of the world.

2.0 Australian Ship Reporting System General Instructions:

2.1 Introduction:

The Commonwealth of Australia Navigation Act 1912 (Division 14 Part IV) makes participation in the Australian Ship Reporting System (AUSREP) compulsory for certain ships. AUSREP is a ship reporting system established in accordance with the International Convention for the Safety of Life at Sea, 1974. Its objectives are:

(i) to limit the time between the loss of a vessel and the initiation of search and rescue action, in cases where no distress signal is sent out;
(ii) to limit the search area for a rescue action;
(iii) to provide up-to-date information on shipping resources available in the area, in the event of a search and rescue incident.

The coverage of AUSREP and the Australian Search and Rescue (AUSSAR) area, as advised to the International Maritime Organisation (IMO), is identical to the International Civil Aviation Organisation search and rescue regions around Australia. It is illustrated in the map (See "Plan") together with the co-ordinates of the area.

2.2 Applicability of Navigation Act 1912 Division 14 Part IV:

Division 14 Part IV of the Act and the Regulations apply to:

(a) All Australian-registered ships engaged in trade and commerce, interstate or overseas while in the AUSREP area.
(b) Ships not registered in Australia but engaged in the coasting trade between Australia and an external Territory, or between external territories, while in the AUSREP area.
(c) Ships not registered in Australia, but demised under charter parties to charterers whose residences or principal places of business are in Australia, while in the AUSREP area.
(d) Foreign ships, other than the above-mentioned vessels, from their arrival at their first Australian port until their departure from their final Australian port. However, they are encouraged to participate from their entry into and final departure from the AUSREP area.
(e) Australian fishing vessels proceeding on overseas voyages, while in the AUSREP area, but not including those vessels operating from Queensland ports, which may call at ports in Papua New Guinea as an incidental part of their fishing operations. A definition of "overseas voyage" is given in Section 6(1) of the *Navigation Act 1912* (Commonwealth).

2.3 Offences:

The Navigation Act provides penalties involving fines of up to $10,000 for infringements of reporting provisions.

2.4 Operating Authority:

The Australian Maritime Safety Authority through the Maritime Rescue Coordination Centre.

Signal Address:	MRCC Australia.
Telephone:	Canberra (062) 253 4411 (International +61 6 253 4411).
Telex:	62349 (computer connected) – Answerback MRCC AUS (Refer Appendix D for Satcom procedures).
Facsimile:	Canberra (062) 257 2036 (International +61 6 257 2036).

2.5 Main Features of AUSREP:

On departure from an Australian port or on entering the AUSREP area, a Sailing Plan (SP) is sent to the MRCC where a computerised plot is maintained of the vessel's position. Position Reports (PR) are sent each day at the time selected by the Master so that a report is received at least every 24 hours. *Should a vessel at any time, be in a position more than 2 hours steaming from the position that would have been predicted from the last SP or PR, then a Deviation Report (DR) must be sent.* Failure to do so, in the event of a missed report, will result in the search being concentrated in the wrong area in the event of a missed report, and the possibility that survivors from a stricken ship may not be found. On arrival at the ship's destination or on departure from the AUSREP area, a Final Report (FR) is to be sent. AUSREP is a positive reporting system which means that, should an expected report not be received, action including worldwide communication checks, alerting of ships in the vicinity and the launching of search aircraft, will be initiated. Masters should note that in some parts of the AUSREP area the ability to conduct an air search is restricted by aircraft range limitations (See "Plan").

Dates and times contained in AUSREP reports are to be in Universal Co-ordinated Time which is indicated by the suffix 'UTC'.

3.0 AUSREP Format Components:

The following list shows all the AUSREP format components. The full list of components do not have to be included when sending AUSREP reports. Masters should include those components shown in the examples given for each report, others may be included at the Master's discretion or when relevant to the type of report being sent.

To assist with data processing, components of all reports should be preceded by the relevant alphabetical character and a stop(.).

The following format complies with the reporting format contained in IMO Resolution A648 (16) of 19th October 1989.

A. Vessel name and call sign.
B. Date/time of position (UTC).
C. Position (Lat. and Long.).
D. Geographical position (not to be used in AUSREP messages).
E. Course.
F. Speed (vessel's anticipated average speed until next report).
G. Name of last non-Australian port of call.
H. Date/time (UTC) and point of entry into AUSREP system. The point of entry must be the Australian port the vessel is departing from, or if entering the AUSREP area, the latitude/longitude of crossing the AUSREP boundary.
I. Next foreign (non-Australian) destination and estimated time of arrival at that port.
J. Whether Pilot is carried on vessel (notification required on all Great Barrier Reef passages).
K. Date/time (UTC) and point of exit from AUSREP system (point of exit is the latitude/longitude at which the vessel is leaving the AUSREP area, or the Australian port the vessel is to arrive).
L. Route (vessels intended track – state Rhumb Line/Coastal/Great Circle/Composite with limiting latitude).

M. Coast radio maritime communications stations monitored (include Satcom number if fitted).
N. Daily reporting time.
O. Draft.
*P. Cargo.
*Q. Defects or other limitations.
*R. Pollution (or reports of any pollution seen).
S. Weather conditions in area.
T. Ship's agents.
U. Ship type and size.
V. Medical personnel carried (Sailing Plan only).
W. Number of persons on board.
*X. Remarks.

*Harmful substances, Marine Pollution and Dangerous Goods and probability of discharge reports refer Appendix A.

4.0 Types of Reports:

4.1 Sailing Plan Report (AUSREP SP):

A sailing plan report is sent to the MRCC either within 24 hours prior or up to 2 hours after entry into the AUSREP area.

The SP contains information necessary to initiate a plot and give an outline of the intended passage.

Should a vessel not sail within 2 hours of the time stated in the SP the plan should be cancelled and a new SP sent.

If the Master of a foreign vessel departing on an overseas voyage from an Australian port does not intend sending position reports, this must be indicated in the SP by the inclusion of the words NOREP in place of the daily reporting time. Under this option, the MRCC will not undertake search and rescue action unless specific information is received, which indicates an air search is warranted.

4.2 Commencement of Active SAR Watch:

Masters should be aware that if a vessel lodges an SP prior to entering the AUSREP area, active SAR watch on their vessel WILL NOT COMMENCE until a report is received by the Centre indicating the vessel has entered the AUSREP area.

4.3 Mandatory AUSREP SP Components:

AUSREP SP
A, F, H, K, L, M, N, V.
N refer to Section 3.0 for components;
(ii) include component 'G' when entering AUSREP from overseas, or component 'I' when leaving AUSREP to an overseas destination;
(iii) if ship intends to transit Great Barrier Reef/Torres Strait notification is required regarding the carriage of a Pilot (See "J" in Section No. 3.0).
(iv) other sections of the basic format may be included at Master's discretion: for example 'X' if report required to be passed to AMVER, or details of name/call sign change since last report.

4.4 Example of SP on Entering AUSREP Area:

	Format		*Example*
AUSREP SP		AUSREP SP	
A.	Vessel name and call sign	A.	HESPERUS/BCBC
F.	Speed	F.	12
G.	Name of last port of call (when entering from overseas)	G.	Port Said
H.	Date/Time and point of entry into AUSREP system	H.	020400Z 0448S 07555E
K.	Date/Time and point of exit from AUSREP system (Australian port of arrival)	K.	180600UTC Adelaide
L.	Route (Vessel's intended track)	L.	129 to Cape Leeuwin then direct coastal route
M.	Coast radio/maritime communications stations monitored (INMARSAT number if fitted)	M.	GKA, 9VG, VIP, VIS (INMARSAT A No. 1290617)
N.	Daily reporting time	N.	0600UTC
V.	Medical personnel	V.	No medic
X.	Remarks	X.	Pass to AMVER, name/call sign changed from SWEETAPPLE/ABAB since last report.

Example of message transmitted: AUSREP SP A HESPERUS/BCBC F 12 G Pt Said H 020400UTC 0448S 07555E K 180600UTC Adelaide L 129 to Cape Leeuwin M GKA 9VG VIP VIS INMARSAT 1290617 N 0600UTC V no medic X pass to AMVER, name/call sign changed from SWEETAPPLE/ABAB since last report.

4.5 Example of SP submitted on departure from a Port within AUSREP Area to a Port outside AUSREP Area:

(May be submitted up to 24 hours prior to sailing and up to 2 hours after departure).

	Format		*Example*
AUSREP SP		AUSREP SP	
A.	Vessel's name and call sign	A.	HESPERUS/BCBC
F.	Speed	F.	12
H.	Date/Time and departure port for this voyage	H.	020500UTC Fremantle
I.	Next overseas destination and ETA	I.	090600UTC Jakarta
K.	Date/Time and point of exit from AUSREP area	K.	080600Z 1200S 10700E
L.	Route (vessels intended track)	L.	To 2900S 11327E then 1200S 10700E
M.	Coast radio/maritime communications stations monitored	M.	GKA, VIP, PRI, 9VG. (SATCOM/INMARSAT number 1290617)
N.	Daily report time	N.	0400UTC
V.	Medical personnel	V.	No medic
X.	Remarks	X.	Report to AMVER

Example of message transmitted: AUSREP SP A HESPERUS/BCBC F 12 H 020500UTC Fremantle I 090600UTC Jakarta K 080600UTC 1200S 10700E L to 2900S 11327E to 1200S 10700E M GKA VIP PRI 9VG (INMARSAT 1290617) N 0400UTC V no medic X report to AMVER.

Note: In the case of a foreign vessel whose next port of call is outside Australia, if the Master does not intend to send position reports, this should be indicated in the AUSREP SP by inclusion of the group NOREP in paragraph N.

4.6 Example of SP submitted on departure from and to a Port both within AUSREP Area:

(May be submitted up to 24 hours prior to sailing and up to 2 hours after departure).

	Format		*Example*
AUSREP SP		AUSREP SP	
A.	Vessel's name and call sign	A.	HESPERUS/BCBC
F.	Speed	F.	12
H.	Date/Time and point of entry into AUSREP system (Australian port of departure)	H.	212200UTC Adelaide
K.	Date/Time and point of exit from AUSREP system (Australian port of arrival)	K.	Melbourne 231400UTC
L.	Route (vessel's intended track)	L.	Coastal direct
M.	Coast radio/maritime communications station monitored	M.	VIM
N.	Daily reporting time	N.	0100UTC
V.	Medical personnel	V.	No medic
X.	Remarks	X.	Nil

Example of message transmitted: AUSREP SP A HESPERUS/BCBC F 12 H 212200UTC Adelaide I 231400UTC Melbourne L Coastal direct M VIA VIM N 0100UTC V no medic X nil.

4.7 Example of SP submitted when transiting AUSREP Area from and to a Port not in AUSREP Area:

	Format		*Example*
AUSREP SP		AUSREP SP	
A.	Vessel's name and call sign	A.	HESPERUS/BCBC
F.	Speed	F.	15
G.	Name of last port of call	G.	Durban
H.	Date/Time and point of entry into AUSREP system	H.	120800UTC 3550S 07500E
I.	Next overseas destination and estimated time arrival	I.	Surabaya 190200UTC
K.	Date/Time and point of exit from AUSREP system	K.	172330UTC 0806S 10107E
L.	Route	L.	Great circle
M.	Coast radio/maritime stations monitored	M.	VIP, 9VG, PKI
N.	Daily report time	N.	0600UTC
V.	Medical personnel carried	V.	No medic
X.	Remarks	X.	Pass to AMVER

Example of message transmitted: AUSREP SP A HESPERUS/BCBC F 15 G Durban H 120800UTC 3550S 07500E I Surabaya 190200UTC K 172330UTC 0806S10107E L GC M VIP 9VG PKI N 0600UTC V no medic X pass to AMVER.

4.8 Position Report (AUSREP PR):

Each day at the nominated daily reporting time given in the SP, a PR should be transmitted to the MRCC. The first PR is required within 24 hours of the SP, and daily thereafter at the nominated daily reporting time, including the day of arrival at, or departure from the AUSREP area. The information contained in the PR will be used by the Centre to update the plot. The PR must reflect the position, course and speed of the ship at the time of the report.

If it is necessary to alter the nominated daily reporting time, the alteration should be shown in the PR sent before the change. Speed must be the anticipated speed until the next report time. See "Section 6 – Sub-section 6.5".

If any PR is sent at a time other than previously nominated by the ship, the time of this PR must not exceed 24 hours from the previous port.

The ETA at the Australian destination, or AUSREP area boundary, is always confirmed in the last PR of a passage. It may also be amended in any report whenever the Master is aware of a revised ETA.

4.9 Mandatory AUSREP components for a PR:

Mandatory AUSREP format components for a PR are:
AUSREP PR
A, B, C, E, F.

4.10 Example of a PR:

	Format		*Example*
AUSREP PR		AUSREP PR	
A.	Vessel's name and call sign	A.	HESPERUS/BCBC
B.	Date/Time of position (UTC)	B.	030400UTC
C.	Position	C.	0748S 07940E
E.	Course	E.	129
F.	Speed	F.	8.5
X.	Remarks (for example, change of reporting time or revised ETA)	X.	ETA now 060200UTC

Example of message transmitted: AUSREP PR A HESPERUS/BCBC B 030400UTC C 0748S 07940E E 129 F 8.5 X ETA now 060200UTC.

4.11 Deviation Report (AUSREP DR):

Should a vessel, at any time, be in a position more than 2 hours steaming from the position that would be predicted from the last SP or PR, then a deviation report **must be sent.** Masters are reminded that this is an important component of the system, in that any alteration of course or speed sufficient to affect the estimated position as above may result in the search effort being concentrated in the wrong area, should the vessel subsequently be in distress.

4.12 Mandatory AUSREP components for a DR:
Mandatory AUSREP format components for a DR are:
AUSREP DR
A, B, C + (extra components – see example below).

4.13 Example of a DR:

Format	*Example*
AUSREP DR	AUSREP DR
A. Vessel name and call sign	A. HESPERUS/BCBC
B. Date/Time of position (UTC)	B. 050200UTC
C. Position	C. 3900S 14500E

(Then include whichever format components are affected by the deviation).

F. Speed	F. 9
I. Destination and ETA	I. Adelaide 080200UTC
X. Remarks (include reason for deviation, for example, reduction in speed due weather, change of route or port of destination, etc.)	X. Reduced speed due to main engine problems.

Example of message transmitted: AUSREP DR A HESPERUS/BCBC B 050200UTC C 3900S 14500E F 9 I Adelaide 080200UTC X reduced speed due to main engine problems.

4.14 Final Report (AUSREP FR):

When the vessel approaches the Australian destination and arrives at a position where VHF contact is made with the local Harbour Authority or Pilot Station, which under normal conditions is within 2 hours steaming of the pilotage, a FR is sent to the MRCC. Under no circumstances should a FR be sent more than 2 hours before arrival. Alternatively, if the arrival is outside radio watchkeeping hours, the FR may be telephoned immediately after berthing, but no later than 2 hours after arrival. If it is known that the vessel is to anchor or berth where telephone facilities are not available, then the FR should be passed through the appropriate coast radio/maritime communications station.

For a vessel departing from the AUSREP Area the FR is to be sent after crossing the area boundary. Again, Masters **must** ensure that an FR is sent to the MRCC to prevent unnecessary search action.

4.15 Mandatory AUSREP components for an FR:
Mandatory AUSREP format components for an FR are:
AUSREP FR
A, K, X.

4.16 Example of an FR on arrival at a port in AUSREP Area:

Format	*Example*
AUSREP FR	AUSREP FR
A. Vessel's name and call sign	A. HESPERUS/BCBC
K. Date/Time and port of arrival	K. 080200UTC Adelaide
X. Remarks (must include the words *Final Report*	X. Final Report

Example of message transmitted: AUSREP FR A HESPERUS/BCBC K 080200UTC Adelaide X Final Report.

4.17 Example of FR, vessel departing AUSREP Area:

Format	*Example*
AUSREP FR	AUSREP FR
A. Vessel's name and call sign	A. HESPERUS/BCBC
K. Date/Time and point of exit from AUSREP area	K. 070030UTC 1100S 10631E
X. Remarks (must include the words *Final Report*	X. Final Report

Example of message transmitted: AUSREP FR A HESPERUS/BCBC B 070030UTC 1100S 10631E X Final Report.

4.18 Method of Passing Reports:

In an Australian port:

A reverse charge telephone call or telex may be used when making an AUSREP or SAR message. Should Satellite Communications (INMARSAT C) be used, refer to Appendix D. It is advisable to communicate all reports direct from the ship to the MRCC to avoid delays associated with intermediate agencies: Tel: (06) 253 4411 (reverse charge); Telex 62349; Facsimile (06) 257 2036.

At Sea:

All reports are addressed MRCC AUSTRALIA and may be sent free of charge through any Australian maritime communication station controlled by Telstra Maritime Services. Schedules and frequencies are given in *Admiralty List of Radio Signals, Vol. 1.* Reports passed via Satellite Communications will be free of charge (INMARSAT C), providing procedures outlined in Appendix D are used. All reports sent by voice should include the mandatory components, including the identifying letter.

5.0 Overdue Reports:

TO AVOID UNNECESSARY SEARCH ACTION IT IS MOST IMPORTANT that ships report at the their reporting time each day and send their FINAL REPORT when leaving the AUSREP area. If a ship is unable to pass a Position Report for any reason (for example unserviceable radio equipment), attempts must be made to pass a signal to this effect through another vessel, harbour or other shore authority, either by VHF, signalling lamp, or use of emergency transmitter. Masters are requested to ensure that these procedures are followed. Please remember the AUSREP system is in operation FOR YOUR SAFETY.

Action taken by the MRCC

As AUSREP is a positive reporting system; if an expected report is not received by the MRCC within 2 hours, necessary steps are taken to ascertain the safety of the vessel. The following is an outline of the action that will be taken should a report become overdue. Circumstances may dictate more rapid action.

1. During the first 2 hours internal checks will be carried out.
2. Vessel will be listed on traffic lists requesting Master to furnish the overdue report.
3. At 6 hours overdue broadcast of ship's call sign with (JJJ/REPORT IMMEDIATE indicator*) will precede traffic lists indicating concern due to non-receipt of PR/FR. An all station (CQ) inquiry may be initiated.
4. Extensive communication checks with Australian and overseas radio stations, owners, agents and other vessels are carried out to trace the last sighting or a contact with the vessel with the aim of confirming her safety.
5. At 24 hours overdue the JJJ/REPORT IMMEDIATE broadcast may be upgraded to the Urgency Signal XXX/PAN indicator. Search planning will be in progress and details included in NAVAREA X and facsimile weather broadcasts via AXM and AXI. By the time the report is 24 hours overdue, positive action will have been initiated to locate the vessel. This action will include the launching of search aircraft** where possible. However, as indicated in paragraph 2.5, due to aircraft range limitations the resources available for an air search decrease with distance from an Australian base.

* This signal consists of the vessel's call sign followed by JJJ/(RTG) or **report immediate** (RTF). Any sighting of, or communication with, this vessel by any other vessel should be reported immediately to the CRS/MCS stating time of contact, position and estimated course and speed of the vessel overdue for report.

** Search aircraft will not necessarily be launched when it its known that the vessel is equipped with a 406 MHz float free EPIRB.

6.0 Notes on Procedures:

6.1 Date/Time Group:
Dates and times contained in AUSREP reports are to be in Universal Co-ordinated Time (UTC) which is indicated by the suffix 'UTC'.
Example: 5 November 1982, 0600 LMT (UTC 9 hrs.) transmitted as 042100UTC.

6.2 Latitude and Longitude:
Latitude
Four figure group indicated by suffix 'S' (south).
Example: Latitude 06° 15′ 46″ South. Transmitted as 0616S.
Longitude
Five figure group indicated by suffix 'E' (east).
Example: Longitude 82° 06′ 24″ East. Transmitted as 08206E.

6.3 Intended Route:
Indicate Great Circle or Rhumb Line with way points being followed, expressed in latitude or longitude. Courses are not required if way points are mentioned.

6.4 Speed:
Anticipated average speed vessel will make till next report time.

6.5 Course:
True course anticipated until next reporting time. When more than one course will be steered enter 'various'. If course shown as 'various', the Centre will interpret this as being the normal courses a vessel will follow on that particular passage. However, if the above assumption does not apply, clarification should be made.

6.6 Radio Stations Monitored:
Details should be provided of those radio stations which the vessel normally works for commercial radio communications, in addition to Australian maritime communications stations monitored. If the ship is fitted with Satellite Communications, the station identify number(s) should also be included.

6.7 Daily Reporting Time:
When selecting their daily reporting time, Masters of single-radio-operator-ships will appreciate that reports nominated during the last single-operator-period of the day, if not received, cannot be followed up until the next radio watch period. This may cause considerable delay in activating any SAR action that may be required. It is therefore desirable that reports are transmitted during the first single-operator-period of the day.

If any position report is different from the PR time, the next report should be no more than 24 hours from that PR time.

6.8 Two Hour Rule:
Should a vessel, at any time, be in a position more than 2 hours steaming from the position that would be predicted from the last SP or PR, a deviation report MUST BE SENT.

6.9 Severe Weather:
Vessels which anticipate passing through areas of severe weather conditions or are experiencing severe weather, are urged to report their position at more frequent intervals to the MRCC. The time of their next anticipated Position Report should be included under Remarks.

6.10 Reports to AMVER:
Whilst participating in AUSREP, Masters may also wish their reports to be forwarded for inclusion in the AMVER plot. This should be indicated in report remarks, and will particularly relate when sending the Final Report when vessel leaves the AUSREP area.
Masters are requested to note that AMVER reports will only be forwarded to the U.S. Coast Guard if the vessel is in the AUSREP area of responsibility, reporting to the AUSREP system. If the ship also requires its AUSREP report to be passed to AMVER, a request is to be included in the report.

6.11 Reports to Other Reporting Systems:
Reports from ships to other reporting systems (JASREP/SINGREP, etc.) are not normally forwarded by the MRCC. Ships are requested to pass these reports direct.

6.12 Computer Processing by the MRCC:
To enable efficient processing by the MRCC's computer, ships are encouraged to send reports in IMO format as detailed throughout this publication. Components should be clearly identified by the relevant alphabetical letter followed by a stop(.), and be listed across rather than down the page, this is particularly relevant to those vessels reporting by automatic or semi-automatic means. Please note examples of messages transmitted.

APPENDIX A: Detailed Reporting Requirements:

A.1 Dangerous Goods Reports (DG):

Primary reports should contain items A, B, C, M, Q, R, S, T, U of the standard reporting format; details for R should be as follows:

R 1. Correct technical name or names of goods.
2. UN number or numbers.
3. IMO hazard class or classes.
4. Names of manufacturers of goods when known, or consignee or consignor.
5. Types of packages including identification marks. Specify whether portable tank or tank vehicle, or whether vehicle or freight container or other cargo transport unit containing packages. Include official registration marks and numbers assigned to the unit.
6. An estimate of the quantity and likely condition of the goods.
7. Whether lost goods floated or sank.
8. Whether loss is continuing.
9. Cause of loss.

If the condition of the ship is such that there is danger of further loss of packaged dangerous goods into the sea, items P and Q of the standard reporting format should be reported; details for P should be as follows:

P 1. Correct technical name or names of goods.
2. UN number or numbers.
3. IMO hazard class or classes.
4. Names of manufacturers of goods when known, or consignee or consignor.
5. Types of packages including identification marks. Specify whether portable tank or tank vehicle, or whether vehicle or freight container or other cargo transport unit containing packages. Include official registration marks and numbers assigned to the unit.
6. An estimate of the quantity and likely condition of the goods.

Particulars not immediately available should be inserted in a supplementary message or messages.

A.2 Harmful Substances Reports (HS):

In the case of actual discharge, primary harmful substances reports should contain items A, B, C, E, F, L, M, N, Q, R, S, T, U, X of the standard reporting format. In the case of probable discharge, item B should also be included. Details for P, Q, R, T and X should be as follows:

P 1. Type of oil or the correct technical name of the noxious liquid substances on board.
2. UN number or numbers.
3. Pollution category (A, B, C or D), for noxious liquid substances.
4. Names of manufacturers of substances, if appropriate, where they are known, or consignee or consignor.
5. Quantity.

Q 1. Condition of the ship as relevant.
2. Ability to transfer cargo-ballast-fuel.

R 1. Type of oil or the correct technical name of the noxious liquid discharged into the sea.
2. UN number or numbers.
3. Pollution category (A, B, C or D), for noxious liquid substances.
4. Names of manufacturers of substances, if appropriate, where they are known, or consignee or consignor.
5. An estimate of the quantity of the substances.
6. Whether lost substances floated or sank.
7. Whether loss is continuing.
8. Cause of loss.
9. Estimate of movement of the discharge or lost substances, giving current conditions if known.
10. Estimate of the surface area of the spill if possible.

T 1. Name, address, telex and telephone number of the ship's owner and representative (charterer, manager or operator of the ship or their agent).

X 1. Actions being taken with regard to the discharge and the movement of the ship.
2. Assistance or salvage efforts which have been requested or which have been provided by others.
3. The Master of an assisting or salvaging ship should report the particulars of the action undertaken or planned.

Particulars not immediately available should be inserted in a supplementary message or messages.

The Master of any ship engaged in, or requested to engage in an operation to render assistance or undertake salvage should report, as far as practicable, items A, B, C, E, F, L, M, N, P, Q, R, S, T, U, X of the standard reporting format.

A.3 Marine Pollutants Reports (MP):

In the case of actual discharges, primary MP reports should contain items A, B, C, M, Q, R, S, T, U, X of the standard reporting format. In the case of probable discharge, item P should also be included. Details of P, Q, R, T and X should be as follows:

P 1. Correct technical name or names of goods.
2. UN number or numbers.
3. IMO hazard class or classes.
4. Names of manufacturers of goods when known, or consignee or consignor.
5. Types of packages including identification marks. Specify whether portable tank or tank vehicle, or whether vehicle or freight container or other cargo transport unit containing packages. Include official registration marks and numbers assigned to the unit.
6. An estimate of the quantity and likely condition of the goods.

Q 1. Condition of the ship as relevant.
2. Ability to transfer cargo-ballast-fuel.

R 1. Correct technical name or names of goods.
2. UN number or numbers.
3. IMO hazard class or classes.
4. Names of manufacturers of goods when known, or consignee or consignor.
5. Types of packages including identification marks. Specify whether portable tank or tank vehicle, or whether vehicle or freight container or other cargo transport unit containing packages. Include official registration marks and numbers assigned to the unit.
6. An estimate of the quantity and likely condition of the goods.
7. Whether lost goods floated or sank.
8. Whether loss is continuing.
9. Cause of loss.

T 1. Name, address, telex and telephone number of the ship's owner and representative (charterer, manager or operator of the ship or their agent).

X 1. Action being taken with regard to the discharge and movement of the ship.
2. Assistance or salvage efforts which have been requested or which have been provided by others.
3. The Master of an assisting or salvaging ship should report the particulars of the action undertaken or planned.

Particulars not immediately available should be inserted in a supplementary message or messages.

The Master of any ship engaged in or requested to engage in an operation to render assistance or undertake salvage should report, as far as practicable, items A, B, C, M, P, Q, R, S, T, U, X of the standard reporting format.

A.4 Probability of Discharge:

The probability of discharge resulting from damage to the ship or its equipment is a reason for making a report. In judging whether there is such a probability and whether the report should be made, the following factors, among others, should be taken into account.

1. The nature of the damage, failure or breakdown of the ship, machinery or equipment, and
2. sea and wind state and also traffic density in the area at the time and place of the incident.

It is recognised that it would be impracticable to lay down precise definitions of all types of incidents involving probable discharge which would warrant an obligation to report. Nevertheless, as a general guideline, the Master of the ship should make reports in cases of:

1. Damage, failure or breakdown which affects the safety of the ship; examples of such incidents are collision, grounding, fire, explosion, structural failure, flooding, cargo shifting, and
2. failure or breakdown of machinery or equipment which results in impairment of the safety of navigation; examples of such incidents are failure or breakdown of steering gear, propulsion plant, electrical generating system, essential shipborne navigational aids.

APPENDIX B: See Page 73

APPENDIX C: *Check List for AUSREP Reports:*

AUSREP REPORTS CHECK LIST

–	SP	PR	FR	DR	
A	*	*	*	*	name/call sign
B		*		*	date/time of position
C		*		*	lat/long of position
E		*		†	course
F	*	*		†	speed
G	%%				last port of call, only when entering from overseas
H	*				date/time and point of entry (lat/long) into AUSREP area or Australian port of departure
I	%%			†	next overseas destination and ETA
J	%				whether pilot is carried on vessel
K	*		*	†	date/time and point of exit, either the next Australian port OR lat/long when leaving the AUSREP area
L	*			†	route
M	*			†	MCS monitored/INMARSAT NUMBER
N	*			†	nominated daily reporting time
V	*				medical personnel carried
X			*	†	remarks

* Mandatory.
%% This information is only required when entering or departing the AUSREP area.
† Include these only if affected by the deviation.
% Notification of pilot required for all Barrier Reef passages.
More detailed information about these message components will be found in Section 3.0 (AUSREP format components).

APPENDIX B: Ship's particulars:

Information contained in this form will only be used for the purpose of safety of life at sea.

Please attach two colour photographs of your vessel; one beam on, the other from the air (if possible).

If you are unable to supply photographs, please sketch the vessel - illustrating main features and colours.

Basic Vessel Details

Vessel's Name	*Black/Purple*
Call Sign *CYAN*	Port of Registry *Quebec*
Previous Name	*White Red*
Previous Call Sign	*GREY*
Vessel Type	*Bulk Carrier*
Vessel Size (Length and Deadweight Tonnage)	*185 metres 35000DWT*
Hull Colour *Black*	Deck Colour *Orange*
Superstructure Colour and Postion	*White/Aft*
Normal Complement of Vessel	*26*

Doctor or medical personnel carried ? ☐ Yes ☐ No

Owner Operator Details

Registered Owner's Name	*Orange White Inc.*
Telephone (Business) International Code	*(616) 99-9999*
Telex International Code	*(616) 99-9999*
Facsimile International Code	*(616) 99-9999*
Address	*999 Black Street* *Sydney NSW 2699 Australia*

Complete this section if registered owner is NOT the actual vessel operator.

Management Company's Name	*Green Ship Management*
Telephone (Business)	*Sydney (02) 88-8888*
Telex	*9999*
Facsimile	*(02) 22-2222*
Address	*999 White Street* *Sydney NSW 2688 Australia*

Please provide details of TWO contacts ashore (eg Marine Superintendents) who could supply information on the vessel.

Name	*Mr Black*
Telephone (Business)	*Sydney (02) 22-3333*
Telephone (Home)	*Sydney (02) 33-2222*
Address	*888 Gray Street* *Sydney NSW 2677 Australia*
Name	*Mr White*
Telephone (Business)	*Sydney (02) 22-4444*
Telephone (Home)	*Sydney (02) 33-5555*
Address	*88 Blue Street* *Sydney NSW 2655 Australia*

Main Australian Agent

Agent's Name	*Blue Agency*
Telephone (Business)	*Melbourne (03) 44-4444*
Telex	*4444*
Facsimile	*(03) 44-5555*
Address	*99 Yellow Street* *Melbourne Vic 2599 Australia*

Ship Classification Society

Classification Society's Name	*Lloyd's Register*
Telephone (Business)	*London 99-9999*
Telex	*9999*
Facsimile	*99-9999*
Address	*333 Indigo St* *London UK*
Classification Society Representative's Name	*Lloyd's Agent*
Telephone (Business)	*Sydney (02) 66-6666*
Telex	*6666*
Facsimile	*66-6666*
Address	*777 Violet St* *Sydney NSW 2655*

Emergency Position Indicating Beacons (EPIRB's)

121.5 EPIRB's

Quantity	Frequencies	Manufacturer	Where Stored	Operating Duration
2	*121.5/243 MHz*	*Black Electronics Sydney*	*Liferafts*	*48 hrs*
2	*121.5/406 MHz*	*White Electronics Perth*	*Bridge Wings*	*48 hrs*

406 EPIRB/L Band EPIRB/Ship Station Identity

Quantity	SSI (L Band)	Hex ID (406 MHz)	Serial No.	Country of Registration
1		*BEED 0002000001*	*2001*	*Canada*
1	*351724513*		*4357/A*	*Canada*

Radar Characteristics

121.5 EPIRBs

Type	Frequency (MHz)	Pulse Repetition Frequency (MHz)	Pulse Width (milliseconds)	Scan Rate (seconds)
Decca 1226	*9400*	*850/1700/3400/750*	*1.0/0.25*	*2*
Ratheron 1450	*3100*	*750*	*0.4*	*4*

Search and Rescue Transponder (SART)

Number	Frequency	Manufacturer	Where Carried
2	*9.3 Giga Hz*	*Nippon Electronics Tokyo*	*Lifeboats*

Position Fixing Aids Fitted (e.g. SATNAV) - please list below

SatNav, DF, Loran, Radar, Omega, Decca

INMARSAT Numbers

INMARSAT A *1730315* Alternate *1730317*	INMARSAT B *173031951* Alternate *173032052*
INMARSAT C *173032192* Alternate *173032234*	INMARSAT M *173032323* Alternate *173032414*

D.S.C. Identification	SELCALL Number
503 000031	*12151*

Helicopter Position

Is there a helicopter transfer position? ☑ Yes ☐ No

Is a helicopter able to land on this position? ☑ Yes ☐ No

- Where is the position situated? *No. 4 hatch*
- What is the maximum size/weight the deck can support? *Size 100 m^2 Weight 9000 kg*

Please attach a list of any other details you consider relevant or which may assist search and rescue coordinators.

Date *11 April 1995*

APPENDIX D:

INMARSAT A, INMARSAT C Procedures:

The following applies to the forwarding of AUSREP reports by INMARSAT from the Pacific and Indian Ocean Regions to Perth Land Earth Station (LES). These procedures apply strictly to AUSREP messages only.

INMARSAT A or B fitted Ship Earth Stations: Please note that AUSREP reports sent via INMARAST A or B will be accepted, but at senders cost.

Select: * a. 02 (for Perth) then telex 71 62349.

* Ensure ship's antennae is directed at appropriate Indian or Pacific Ocean satellite.

INMARSAT C fitted Ship Earth Stations:

Ships will not be charged for these messages if correct procedures are followed:

Select: a Special Access Code (SAC) 43+
b (LES Perth) Pacific Ocean (222) or Indian Ocean (322)

Notes:

(i) There could be delays in Perth Land Earth Station's store and forward facility, particularly during busy periods.
If ships are concerned as to delivery of AUSREP messages to the MRCC, they should first check the status of the message on their Standard C Mobile Ship Earth Station (SES).
If no confirmation of delivery has been received some 30 minutes after receiving STATUS information indicating the transmission has been acknowledged by the LES, but not delivered to the MRCC, ships should then telex LES Perth (71 197075), to enquire as to the status of their AUSREP message before attempting to send their message again. Note however, that the AUSREP system will attempt to contact a vessel whose report has not been received.

(ii) Whilst reporting to AUSREP, ships are to ensure their INMARSAT equipment remains active in the "Login" mode.

(iii) It is expected that INMARAST will develop a short data reporting format for INMARSAT C type systems. Information will be promulgated when this system has been satisfactorily developed and implemented.

(iv) Special Access Code (SAC) 43 (Ships Reports) is available via Perth LES for INMARSAT C AUSREP Reports.

(v) AUSREP reports sent via HF radio through Australian Coast Radio Stations will be accepted free of cost to the sender.

FEDERAL SEA SAFETY AND SURVEILLANCE CENTRE:

Information Notice

The International Convention for the Safety of Life at Sea, requires governments "to ensure that any necessary arrangements are made for the rescue of persons in distress at sea, around its coasts". The Australian Government being a signatory to the International Convention for the Safety of Life at Sea, established the Marine Operations Centre in April 1972 to comply more fully with the Convention's requirements.

The Centre was subsequently renamed as the Australian Coastal Surveillance Centre (ACSC) in 1978 with the introduction of an enhanced coastal surveillance function and renamed again in 1984, as the Federal Sea Safety and Surveillance Centre (FSS&SC). This recent change reflects the Centre's primary role of Search and Rescue, as the coastal surveillance function has been largely transferred to the Coastal Protection Unit of the Australian Federal Police, which is co-located within the Centre.

The Federal Sea Safety and Surveillance Centre is a part of the Department of Transport's Maritime Safety Division, situated in Canberra in the Australian Capital Territory. The FSS&SC is in fact Australia's Maritime Rescue Co-ordination Centre.

The principal function of the FSS&SC is therefore the co-ordination of marine search and rescue activity, (other than incidents involving the defence forces), within the area of Australian responsibility, which is shown in the instructions of the Australian Ship Reporting System. The FSS&SC works in close liaison with the State Authorities who are responsible for SAR activity within port limits, and where their facilities permit, for small craft such as pleasure boats and fishing vessels in near coastal waters. The State police are the local SAR Authority around the Australian coastline, and are often assisted by the various volunteer coastal associations.

For incidents which occur further out to sea and those beyond the resources of the State Authorities, Defence Forces and Civil marine/aviation facilities are used to perform the air or sea search and the resulting rescue.

The facilities of the FSS&SC are available to all seafarers whether they are private boating enthusiasts, commercial fishermen or professional seamen of the merchant fleets of the world. When a vessel is in distress and lives are at stake, no effort is spared to search for and rescue survivors.

The FSS&SC is manned continuously 24 hours a day by co-ordinators with considerable marine and in some cases aviation qualifications and experience. These men have specialised knowledge in search and rescue procedures to analyse the various situations that may arise and devise methods to resolve them.

Communications are the very heart of all search and rescue co-ordination and the FSS&SC is well equipped with a network of telephone and telex systems giving a complete coverage throughout Australia, and overseas to other international marine authorities, such as the U.S. Coast Guard at Honolulu, San Francisco, and New York, Lloyd's Intelligence, London and the Japanese Maritime Safety Agency in Tokyo, to name only a few.

Apart from telephone and telex links, radio communications play a major role when co-ordinating a SAR incident. The Overseas Telecommunications Commission (OTC) maintains the coast radio stations (CRS) around the Australian coastline, and it is these radio stations which provide the vital link between the ship and shore. The CRS also have direct telex lines to the FSS&SC.

When advice is received at the FSS&SC of a distress, or any information likely to be related to distress, the duty co-ordinator will initiate whatever action he considers necessary depending on the type of incident reported, whether it be a single flare sighting, a report of a vessel or yacht overdue, a vessel grounding, or a radio received distress message.

Also operated at the Federal Sea Safety and Surveillance Centre as a functional part of the SAR framework is the Australian Ship Reporting System (AUSREP), the area of operations being the same as for the Australian SAR Organisations. AUSREP was introduced in December 1973 on a voluntary basis to enable mariners to familiarise themselves with the reporting system. Since then legislation has been passed which makes AUSREP compulsory for all Australian flag vessels and foreign vessels under certain circumstances which are explained in the AUSREP Instructions and the relevant Marine Notice. However, all ships are encouraged to participate whenever they are in the AUSREP area.

In addition to the Centre's functions in the SAR role, the FSS&SC is also the section of the Department of Transport responsible for:

(i) Co-ordination and promulgation of Navigational Warnings (NAVAREA X), Australian Coastal Navigation Warnings (AUSCOAST) and weapons practice warnings.

(ii) Operation of the Licensed Foreign Fishing Vessel Reporting System in the 200 nautical miles Australian Fishing Zone.

In all aspects of the Federal Sea Safety and Surveillance Centre's activities, over 2,000 incidents a year are handled, ranging from co-ordination of full scale search and rescue operations, planning evacuation of medical cases at sea, plotting the movements of oil slicks and spillage to receiving reports of illegal fishing by foreign fishing vessels and various flare sightings, around Australia's coastline.

PILOT LADDERS: Australia strictly observes the international regulations and recommendations for pilot ladders and pilot boarding arrangements:

The following refers:

SOLAS Chapter 5 reg 17	Regulations for Pilot Ladders and Mechanical Pilot Hoists.
IMO Res A.426(XI)	Recommendation on Arrangements for Embarking and Disembarking Pilots in Very Large Ships.
IMO Res A.667(16)	Recommendation on Pilot Transfer Arrangements.
IMO Res A.275 (VIII)	Recommendation on Performance Standards for Mechanical Pilot Hoists.

PILOTAGE: *Coastal and Reef Pilotage:* Licensed pilots are available for the whole of the Queensland coast, including Torres Strait, the Inner Route of the Great Barrier Reef, the Great North East Channel, and the reef entrances at Hydrographers Passage, Palm Passage and Grafton Passage. See "Torres Strait" for details.

Compulsory Pilotage: The Inner Route of the Great Barrier Reef between Cape York (Lat. 10° 41′ S.) and Cairns (Lat. 16° 40′ S.), and also Hydrographers Passage, has been declared a Compulsory Pilotage District. All vessels 70 m. or more in length and all loaded oil tankers, chemical carriers and liquified gas carriers, regardless of length, are required to use the services of a licensed Pilot. The compulsory pilotage areas are rigorously monitored by the Authorities. See "Torres Strait".

IMO Recommendation on Pilotage: The attention of Shipmasters is drawn to the IMO Recommendation A(710) on pilotage in Torres Strait and the Great North East Channel. See "Torres Strait".

Pilotage Providers:

Queensland Coastal Pilot Service Pty.Ltd., Level 13, Dalgety House, 145 Eagle Street, Brisbane, Queensland, Australia (Postal address: GPO Box 209, Brisbane, Queensland 4001). *Tel:* +61-7-3839-5144. *FAX:* +61-7-3839-5242. *Telex:* AA 140222 TORRES. *Cables:* 4B TORRES. *Contact:* Perry Sutton (after hours Tel: +61-7-3399-1478). Iain Steverson (after hours Tel: +61-7-3263-2642).

Australian Reef Pilots (previously The Queensland Coast and Torres Strait Pilots Association Pty.Ltd.), Suite 14, 2 Argyle Street, Breakfast Creek, Queensland 4010, Australia (Postal address: P.O. Box 338, Albion, Queensland 4010). *Tel:* +61-7-3262-4600. *FAX:* +61-7-3262-5633. *Telex:* AA140003 (answerback REEFS). *Cables:* 4BREEFS BRISBANE. *Contact:* Ken Casey, Operations Manager (after hours Tel: +61-18781602).

HEALTH:

QUARANTINE REGULATIONS – RADIO PRATIQUE

The attention of Mariners is drawn to current Radio Pratique regulations, which require the Master of any vessel arriving from overseas to transmit to the Quarantine Officer, if necessary through the Agent, not more than 24 hours and not less than 12 hours before arrival, a statement giving the details as per the accompanying Request for Radio Pratique Questionnaire.

Request for Pratique (Health Clearance):

Commonwealth of Australia Quarantine Act 1908.

Note: Masters or Medical Officers who wilfully make a false statement in answering A-H, are liable to a fine not exceeding $5,000 or imprisonment for a period not exceeding 2 years.

A. Name of vessel . . . .
Call sign . . . . . . Type . . . .
Nationality . . . .

B. Where is the vessel from and departure date?

C. Where bound and ETA first port?

D. ETD and name of next port?

E. Details of any deaths during the current voyage or cases of illness during the last 21 days with a fever of 38°C or above, and
(a) accompanied by rash, jaundice or glandular swelling, or
(b) accompanied by diarrhoea lasting longer than 24 hours.

F. Are there any animals onboard?

G. Have you carried livestock or grain in the last 6 months?
If Yes:
list type, ports visited and cleaning performed since the last voyage on which livestock or grain was carried.

H. Date of issue of Derat/Derat Exemption Certificate?

I. Optional Section – Ballast Water (Answering this section may assist in the clearance of your vessel when it arrives in port).

a) Do you undertake not to discharge ballast while in Australian waters? Yes/No
If No, have you:

b) Exchanged ballast water at sea during the voyage and logbook certification of time and co-ordinates when re-ballasting occurred: or Yes/No

c) Is your vessel part of a compliance arrangement for ballast water control accepted by Australian Quarantine and Inspection Service? Yes/No

NOTE: The granting of Pratique to a vessel does not release it from being subject to Quarantine. Goods require separate clearance.

Date . . . . Signed . . . .
Shipping Agency Name: . . . .
Department of Health, Canberra.

BALLAST WATER MANAGEMENT: The IMO International Guidelines for Preventing the Introduction of Unwanted Aquatic Organisms and Pathogens from Ships' Ballast Water and Sediment Discharges apply to vessels entering Australian ports. Similar Australian Ballast Water Guidelines also apply for international shipping. Masters should also note that vessels may be subject to inspection by the Australian Quarantine and Inspection Service.

HOLD LADDERS: Australian maritime legislation, which is administered by the Australian Maritime Safety Authority (AMSA), requires all vessels, other than tankers, loading or unloading at Australian ports be provided with hold access ladders which comply with specifications detailed in Appendix 7 to Marine Orders Part 32 "Cargo and Cargo Handling – Equipment and Safety Measures", Issue 1 (Order No. 12 of 1986 as amended by Order No. 5 of 1992). A vessel arriving without "Australian" hold access ladders will not be worked if Maritime Union of Australia (MUA), formerly WWF, labour is required to work in the holds. The Agent may be able to secure an exemption for a specific voyage where MUA labour is not required below deck.

Obtaining an exemption requires application to the AMSA Area Manager, Ship and Personnel Safety Services at State level. Such exemption will normally be granted within 24 hours of receipt of a written request.

For the guidance of Owners, we precis below details of the required ladder types:

Bulk Carriers: Ships used exclusively as bulk carriers must be fitted with at least one access in each hold comprising a combination of vertical and sloping step (or spiral staircase) type ladders, so arranged that the vertical entrance section does not exceed 2.5 m. in length and the bottom vertical section does not exceed 6 m. in length. The sloping section must be provided with handrails, fenced access platforms must be provided at either end of it, and wherever there is a change of slope or direction.

Holds of bulk carriers constructed on or after 17th November 1986 must be provided with a second means of access that may comply with the above or is formed of a series of vertical ladders linking fenced resting platforms spaced not more than 6 m. apart vertically.

General Cargo Vessels: Vessels with tween-decks may be fitted with vertical ladders, provided the distance between each deck does not exceed 6 m. and provided that a person may step onto the tween-deck and rest in safety. Intermediate decks used as resting stages must have the hatchway opening fenced off. Where the distance between decks exceeds 6 m., sloping step type ladders must be fitted for the full length. At least one hold access ladder must be accessible at all stages of loading and unloading.

Vessels constructed on or after 17th November 1986 must be provided with two of the above means of access placed as far apart longitudinally as possible.

In all vessels, access opening must be provided with adequate handholds and footholds.

Full details of the requirements, including maximum angles of ladders, dimensions of steps, platforms, access openings, etc. may be obtained from the vessel's Agent.

GRAIN CARGOES: *Guidelines for Grain Cleanliness Surveys:* On arrival a vessel fixed to load grain must have holds clean, dry and free from residues of previous cargoes, free from insect infestation, and be in all respects ready to load. Surveyors from the Australian Maritime Safety Authority (AMSA), and the Australian Quarantine Inspection Service (AQIS) will board, together with charterers and other surveyors to check the condition of the ship.

Ships' crews cannot be used to clean holds after arrival, so every opportunity must be taken to prepare the holds at a previous port or enroute to avoid the use of costly Australian labour.

Essential Preparation for Loading: Special attention should be placed on removal of all loose scale and rubbish, and the cleanliness of other obstructions which might harbour insects or the remnants of previous cargoes, including underdeck girders, and the underside of steel hatch covers. Scale should be removed by high pressure water jets or chipping and scraping. If jets are used to remove scale, or areas chipped and scraped are painted over, ample time must be allowed for water to dry and paint fumes to totally disperse. Loose scale or previous cargo residues must not be painted over.

AMSA surveyors will pay particular attention, in addition to the stability requirements, to the satisfactory operation of hold bilges, and will require each suction to be tested to demonstrate its efficiency. Following satisfactory test, each bilge well should have its perforated plate cover put in place, with a single layer of burlap over it to prevent grain getting into the bilge well. They will also require hold lighting to be switched off and the fuses removed, to prevent any possibility of the lights being left on and the grain being heated by the lights sufficiently to ignite it.

AQIS surveyors will pay particular attention to residues of previous grain cargoes, and to insect infestation. If such are found, the ship will probably be required to be sprayed or fumigated. The latter will normally require the crew to be accommodated ashore until the vessel is certified safe for them to return. This may be as long as 48 hours.

AMSA surveyors will require to be satisfied that the ship will have sufficient stability to carry the grain to her final destination safely. A form, Form GA, on which the fully detailed calculations should be shown, is available from AMSA offices. This should be completed in detail. Similar forms from other grain exporting countries, such as the National Cargo Bureau's form in the U.S.A., are acceptable in lieu of the Form GA. Masters are warned that good quality Australian wheat stows well, and stowage factors considerably below those normally expected are frequently encountered. AMSA surveyors will also require to be satisfied that the ship will not be overstressed during loading or on voyage. If a ship is loading a full cargo at one port, with only one or two slack hatches, there will normally be little difficulty in doing this, and reference to an approved grain loading condition will usually demonstrate compliance with the longitudinal strength requirements. However, when a ship loads at two ports, the requirements may be difficult, and for some ships, impossible, to satisfy. Where doubt exists regarding the stresses that the cargo may place on the ship, surveyors may require detailed calculations to be made.

LOAD LINE ZONES: *Extension of Seasonal Tropical Zones:* Amendments to the Load Line Convention are in course of ratification regarding changes to the Seasonal Tropical Zones in Northwest and East Australia. They extend the Seasonal Tropical Zones to cover the ports of Dampier, Port Hedland, Point Sampson and Port Walcott, on the Northwest coast of Australia, during the period 1st May to 30th November each year, and to cover the port of Gladstone on the East coast of Australia, during the period 1st April to 30th November. As the amendments have not yet been ratified, ships cannot take advantage of the additional loading as of right. In order to be able to load to her Tropical Marks during the appropriate season, a ship's *Flag State Administration must have advised AMSA in writing that it accepts the proposed amendment, under Article 8(1) of the Load Line Convention, as equivalent to the current requirements.* If in doubt, a Master should seek written advice from his Flag State Administration that it has so accepted the relevant amendment. This should be obtained prior to arrival, as after arrival it will normally be too late to obtain this confirmation.

TIME: Daylight saving is adopted in some States in accordance with table below:

Western Australia	GMT + 8 hours	No change
Northern Territory	GMT + 9.5 hours	No change
Queensland	GMT + 10 hours	No change
South Australia	GMT + 9.5 hours	GMT + 10.5 hours
Victoria	GMT + 10 hours	GMT + 11 hours
Tasmania	GMT + 10 hours	GMT + 11 hours
New South Wales	GMT + 10 hours	GMT + 11 hours

Date of change may vary by as much as 14 days from state to state (normally late October to early or mid-March).

SHIPMASTER'S REPORT: July 1983.

Radio/Health: I sent a request for Free Pratique to the Commonwealth Director of Health, Sydney, that being my first port, but the radio operator instructed our Radio Officer to address the message to Quarantine Sydney.

There was no advice as to the vessel having been granted Free Pratique when the Port Health Authorities boarded the vessel in Sydney. I was told that the Radio Pratique must be requested 18 – 24 hours prior to arrival from the Agents (See "Health" above).

The questionnaire to be answered was Form 106 No. 3.13.

ABBOT POINT, Queensland: 19.52 S. 148.05 E.

(See Plan)

PORT LIMITS: The area comprised within a line commencing at the intersection of the high water mark and meridian of Longitude 147° 59′ E. and bearing 000° True along that meridian to its intersection with parallel of Latitude 19° 48′ S.; then bearing 090° True along that parallel to its intersection with meridian of Longitude 148° 08′ E.; then by a line to the Northern extremity of Gloucester Head on Gloucester Island; then by the high water mark along the Western edge of Gloucester Island to the Southern extremity of the island; then by a line to the Northern extremity of Cape Gloucester; then by the high water mark to its intersection with the Northern edge of the wharf at Bowen; then by a line to the port entrance beacon to Bowen Boat Harbour; then by a line to the Southern extremity of Dalrymple Point; then by the high water mark to the point of commencement and including all navigable rivers and creeks communicating with that area and the banks and foreshores of the rivers and creeks.

DOCUMENTS: See "Townsville".

PILOTAGE: Compulsory. Prior notice confirming ETA 24 hours before arrival to be given through local Agent. Boarding ground is Lat. 19° 48.5′ S. Long. 148° 05′ E. or as directed by Pilot vessel.

Maintain listening watch on VHF Channel 16/67. Standard IMO pilot ladder rigged as per IMO recommendations. Usually starboard side 1 m. above water.

Coastal and Reef Pilotage: Pilotage through Hydrographers Passage, Palm Passage, Grafton Passage and the Inner Route of the Great Barrier Reef to Torres Strait is conducted by licensed pilots available from Australian Reef Pilots Ltd. and Queensland Coastal Pilot Service Pty. Ltd. See "Torres Strait" for details. For information about Hydrographers Passage see "Hay Point".

Masters are advised that pilotage in the Inner Route and at Hydrographers Passage is compulsory. Pilotage in the Great North East Channel is recommended by IMO. See "Torres Strait".

ANCHORAGE: Lat. 19° 49′ S., Long. 148° 06.5′ E. in 25 m.

RESTRICTIONS: Ballast condition, propeller fully immersed with maximum trim 1.8 m. by the stern and forward draft not less than 2% of LOA.

No restrictions on time, however berthing at discretion of Harbour Master with regards to weather conditions.

Engines must not be immobilised whilst alongside without prior permission of Harbour Master.

Unberthing in accordance with state of tide and draft. Under keel clearance required is 10% of deepest draft plus 0.61 m.

MAX. SIZE: Optimum max. size vessel is 297 m. LOA and 47.5 m. beam, however, consideration given to larger vessels provided that mooring arrangements on board vessel are satisfactory.

With a rise of tide of 3.5 m., vessels may sail with a draft of 18.26 m.

HEALTH: Standard Australian Regulations and procedures apply, radio pratique is available.

VHF: Pilot vessel and tugs, call on VHF Channel 16 and work on VHF Channel 6.

TUGS: 2 twin screw Zed-Pellor tugs of 56 tonnes bollard pull are available. Tugs' lines always used.

BERTHING: One berth only which is a bulk coal loading facility, serviced by conveyor and shiploader. Length of berth fendering 268 m. Plus 4 mooring dolphins. Depth of water in approaches is 17.2 m. below datum. Depth of water at berth is 19.4 m. below datum.

Shiploader has a rated capacity of 4,600 tonnes/p.h. and an average capacity of 4,000 tonnes/p.h.

Max. reach from fender face – 34 m.

Max. operating air draft above L.W.D. – 27.5 m.

DENSITY: 1026.5.

FRESH WATER: Not available.

FUEL: Available by barge from Townsville.

GANGWAY/DECK WATCHMEN: Ship's crew as watchman, ship's gangway used.

AIRPORT: Townsville Airport, 210 km. by road.

TIME: See "General" before first port.

EMERGENCY CO-ORDINATION: Through Abbot Point Control using internal telephone 337 or external telephone (077) 860337 or contact vessel's Agent.

TELEPHONE: Provided on berthing.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Australian Dollar.

GENERAL: Provisions available on request.

Nearest town is Bowen, 32 km. by road, Bowen has full facilities.

SHIPMASTER'S REPORT: March 1986 (Updated 1996).

Abbot Point is within a Permanent Tropical Zone, within the Great Barrier Reef.

Tropical Zone: 1st April/30th November.

Summer Zone: 1st December/31st March.

Anchoring Position: Indicated on Chart AUS. No. 255 – Abbot Point and Approaches. In position: Lat. 19° 49′ S., Long. 148° 06.5′ E.

Pilot Boarding Position: Indicated on Chart AUS No. 255 – Abbot Point and Approaches. Lat. 19° 48.5′ S., Long. 148° 05′ E.

Pilot boards by pilot boat, tugs stationed at Bowen. This chart is well recommended.

The Harbour Master and Pilots are stationed in Townsville.

Abbot Point: Australia's most Northerly deep-water coal shipping port, situated about 20 km. North of Bowen. The port is established under the auspices of the Harbours Corporation of Queensland. Developed by the MIM Holdings Ltd. and operated by the Abbot Point Bulkcoal Pty. Ltd. Development began in 1981, and operations commenced in 1984. Coking coal from Collinsville and steaming coal from Newlands are the only two MIM products handled.

Heavy duty railway, using modern rolling stock, and multiple diesel electric locomotives conveys coal from the fields to the 450 hectare site.

Loading Procedure: Coal travels on conveyors via a 1,350 tonne surge bin. There are 2 weightometers and an automatic continuous sampling plant. The conveyor system extends along a 100 m. rock causeway and a 2.8 km. approach trestle, which also supports a roadway to the deep-water wharf and shiploader.

Size of Vessels: From 20,000 d.w.t. to 165,000 d.w.t. Larger vessels have been considered on individual merits.

Depths: Approach depth, (stated) 17.2 m. Alongside berth (stated) 19.4 m.

Tugs: 2×55 tonne bollard pull. Tugs' lines used.

Line Boats: None available.

Berthing: In normal circumstances vessels will berth starboard side to. However, be prepared to berth either side to in accordance with the Harbour Master's requirements.

In normal conditions draft is to be adjusted so that the propeller is fully immersed and vessel trimmed approximately 1.8 m. by the stern. The arrival draft must be cabled to the Harbour Master and Agent who will advise any adjustment required.

To ensure maximum safety all vessels using heavy mooring wire ropes are requested to have the ends terminating in a 9 m. *rope spring finished with a standard eye for placing over the bollards and hooks.* All mooring ropes and wires should have a 6 m. tail of light rope spliced into the eye.

Hooks on mooring bollards are electrically operated and self release.

Pilot Ladder: Constructed and rigged in accordance with SOLAS requirements.

Berth: Length of trestle from shore to berth – 2.75 km.

Length of Berth: (Extent of fender system 264 m. approximately).

Length between extreme mooring dolphins – 466 m.

Length of Berthing Basin: 512 m.

Width of Berthing Basin: 70 m.

Depth at Berthing Basin: 19.4 m.

There are 7 breasting dolphins, equipped with Bridgestone energy absorbing cell-type rubber fenders.

Height of top of fenders above datum 7.5 m. approximately.

Height of underside of fenders above datum 0.9 m. approximately.

Ship Loader: Type: Travelling gantry with luffing boom.

Design rate maximum capacity: 4,600 tonnes/p.h.

Length of travel: 212 m.

Boom operating range: +12° to – 10°.

Maximum outreach from fender line: 34 m.

Height above datum (plus 12°): 27.5 m.

Height below datum (minus 10°): 19.5 m.

Travel speed variable from 3 m./min. to 30 m./min.

Stowage Factor: *Steaming coal: approx. 1.11 cu.m./tonne. Angle of repose from 35° – 50°.

Coking coal: approx. 1.05 cu.m/tonne. Angle of repose 33°.

*Vessel achieved a better stowage factor loading steaming coal.

Final Quantity: It has to be remembered when requesting to stop loading that there is about 3,000 tonne on the belt, which must be run off.

Loaded Tonnage: Calculated on draft survey. (Vessel experienced S.W'ly winds Force 4 and swell of about 1 m.).

Cargo Completion: Vessels must vacate berth without delay, subject to tidal conditions.

Arrival Notice: At least 7 days prior to arrival cable to "Abbotcoal Bowen" Telex: AA47689 (MIMABB). Fax: (077) 860305.

(a) Name of vessel.
(b) Type of vessel. (If O.B.O. confirm that vessel is "Gas Free").
(c) ETA.
(d) Total cargo quantity required. (Subject to C/P requirements and allowances).
(e) Hatch loading sequence, Pour by Pour.

Reference to (b) above – Master to advise Agent and Harbour Master.

1. Date vessel discharged last oil cargo.
2. Time and place of last Gas Free Certificate.
3. Location and amount of slops on board (and assurance that slop tanks inerted or pressed-up).

48 hours prior to arrival – advise ETA.

24 hours prior to arrival – confirm ETA and Hatch Number ("1st Pour"). Also advise Harbour Master of ETA/Berthing Draft/and ballast water is not contaminated.

Note: To avoid delays to berthing and to avoid tug cancellations it is important that all adjustments to ETA's are advised to all parties.

All hatches to be clean/dry and opened before berthing.

Hatch lids are to be clearly numbered, for easy identification, no responsibility attached to shore loading personnel if any infringement to this requirement.

All loading is expressed in metric tonnes of 1,000 kg.

Pratique: Radio Pratique is available. Send message to the "Quarantine Officer" through the ship's Agent, not more than 24 hours prior to arrival. (This stipulation is not enforced). The Agent will keep vessel advised. Text of the message is in accordance with the advised procedure in the Sailing Directions for Entry to First Australian Port.

If Radio Pratique has not been granted prior to berthing ensure that there is no contact with the wharf or employees by crew until Pratique is granted.

Shore Leave: Crew are permitted to go ashore after Immigration and Customs Clearance. The Agent can arrange a minibus service to Bowen and return. Cost about Australian $85.00 for the round trip. The trip to Bowen is 30 minutes.

Telephone: A telephone is placed onboard. No STD calls, only overseas and local operator service on a reverse charge basis.

Restrictions: Access to wharf and loading plant is restricted.

Persons requiring access (crew members/visitors) must wear safety helmets, safety shoes and adequate eye protection, and comply with all safety regulations.

Abbotcoal are not responsible for accidents incurred by personnel who use their wharf gangway.

Pedestrian access along the wharf approach is not permitted.

Special authorisation is required for private vehicles and visitors, within the port area and wharf access.

Access to the remainder of the port site is strictly forbidden.

Derat Examination Certificate: Quarantine doctor will arrange for renewal. Cost Australian $45.00.

Consuls: None available.

Repatriation: Can be arranged. Coach leaves Bowen for Townsville, with direct flights to New Zealand and Brisbane for other international connections.

Fresh Water/Fuel/Diesel: Not available from wharf, there are no facilities.

Ship Chandler: Will attend vessel if necesary. Bonded stores are also available. Prices may be high due to transportation costs.

AUTHORITY: Ports Corporation of Queensland, P.O.Box 409, Brisbane, Queensland 4001, Australia. *Tel:* (07) 3224 7088. *FAX:* (07) 3224 7234. *Contact:* Captain R.C. Johnson, Regional Harbour Master (Townsville). Tel: (077) 715135. Fax: (077) 212028.

Regional Harbour Master, 60 Ross Street South, P.O.Box 1921, Townsville, Queensland 4810, Australia.

Terminal Operator: Abbot Point Bulkcoal Pty.Ltd., Abbot Point via Bowen, P.O.Box 207, Bowen, Queensland 4805, Australia. *Tel:* 077 860300. *Telex:* ABCOAL AA47689. *FAX:* 077 860305. *Contact:* B. Byrne, Acting Operations Manager.

AGENT: See "Mackay".

ADELAIDE, S.A.: 34.51 S. 138.30 E. (See Plan)

PORT LIMITS: Northern Limit: a line drawn due East from Lat. 34° 40.42′ S., Long. 138° 22.55′ E. to shore.

Southern Limit: a line drawn due East from Lat. 34° 51.30′ S., 138° 24.80′ E. to shore.

Western Limit: a line drawn between Lat. 34° 40.42′ S., Long. 138° 22.55′ E. to Lat. 34° 51.30′ S., Long. 138° 24.80′ E.

DOCUMENTS: See "Melbourne".

Customs Officers board at the wharf and if any inspections required, Department of Transport officials also board at the wharf.

PILOTAGE: Advance notice 24 hours, telegraphic requests through ship's Agent. VHF Channel 16. Call sign "Adelaide – Outer Harbour" Pilot launch orange hull, yellow deck house, "Pilot" on each side in black letters. Give pilot launch good lee and safe pilot ladder. Pilot boards 1.5 miles seaward of Entrance Beacon.

ANCHORAGE: One mile West of Entrance Beacon.

RESTRICTIONS: Controlling depth in channel to container berth 39 ft. 4 in. (12.0 m.) and to Inner Harbour 30 ft. (9.1 m.) ISLW. All vessels to maintain 1 ft. (0.3 m.) keel clearance in berth at all times.

Night berthing/unberthing subject to Harbour Master's approval.

24 hour operations at Container Terminal.

Keel Clearance: 10% of draft with a minimum of 3 ft. (0.9 m.) under keel at all times.

MAX. SIZE: Inner Harbour – length 206 m. LOA; draft 31 ft. (9.4 m.) Neaps, subject to tide; 34 ft. 06 in. (10.5 m.) Springs. Outer Harbour (Container Berth) – length 945 ft. (288 m.) OA; draft 37 ft. (11.3 m.) Neaps, subject to tide; 39 ft. (11.9 m.) Springs.

HEALTH: Free Pratique given by radio message.

TUGS: 4 tugs available.

BERTHING: Depth at berths: Inner Harbour: 27 ft. (8.2 m.) – 36 ft.(11 m.). Outer Harbour: 36 ft. (11.0 m.) – 40 ft. (12 m.).

Berth	*Length* (m.)	*Depth LW* (m.)	*Type*	*Cargo*	*Cranes*
13 & 14	303	9.1	Conventional	Steel & scrap	2/6.5t travelling
27	204	10.7	Bulk loading	Cereals	2 loaders, 800t/hr
29	245	9.8		Dry bulk and Repair	—
H	304	11.0	Bulk loading	Cement clinker	Loader (Fixed)
Osborne					
1	208	9.8	Bulk	Liquid	—
2	159	9.4	Bulk	Bulk liquid	
O.H. 1	185	11.3	General	Sheep/Cars	
O.H. 2	183	11.0	General	General	—
O.H. 4	214	11.0	Ro/Ro quarter ramp	Containers	—
O.H. 6A O.H. 6B	453	13.0	Container berths	Containers	1×35t and 1×45t container crane 60t on hook

STEVEDORES: No advance ETA required.

MEDICAL: Contact Quarantine Department in ample time.

TANKERS: "Leak free" advice to Harbour Master to be given through Agent. 500 tons slop discharge facilities. Unauthorised persons not allowed on board.

Berths:

"M"	Oil Berth	Depth alongside 8.5 m.
"N"	Tallow Berth	Depth alongside 8.5 m.
OSB. 1	—	Depth alongside 9.8 m.

DENSITY: Slightly denser than sea water; not affected by tide.

FRESH WATER: Inner Harbour: Through Hydrants at 12 – 15 t.p.h. Outer Harbour: 50 t.p.h.

FUEL: Fuel oil, thin fuel oil, diesel, gas oil. 48 hours notice required. A bunkering barge capable of transporting 1,000 metric tons of bunkering oils operates in the port. The use of this bunkering barge will enable vessels to bunker without leaving their loading berths or using road tankers.

CONSULS: The following countries are represented:

Austria
Belgium
Denmark
Finland
France
Germany
Greece
Guatemala
Italy
Japan
Lebanon
Liberia
Netherlands
Norway
Peru
Philippines
Portugal
Sweden
USA

REPAIRS: All repairs possible.

DRY DOCKS: None.

SURVEYORS: E.J.C. Carr & Assoc. Pty. Ltd, 242 A St. Vincent Street, Port Adelaide, S.A. 5015, Australia. Tel: (08) 475924. Fax: (08) 3411564.

GANGWAY/DECK WATCHMEN: Optional except for white spirit tankers. Cost varies according to time of shift.

OPENING/CLOSING HATCHES: Carried out by crew.

CERTIFICATES:

Last Port Customs Clearance.
Ship's Register.
Load Line Certificate.
Safety Radio Certificate.
Safety Equipment.
Light Dues Receipt.
Ship's Articles (British Vessels).

CUSTOMS ALLOWANCES: Each Crew member 200 cigarettes or 40 cigars or 8 oz. tobacco. Limited amounts of spirits per man.

CARGO GEAR: Accordance Australian Regulations. See "Melbourne".

REPATRIATION: Available.

AIRPORT: Adelaide Airport 8 miles, regular airlines.

TIME: See "General" before first port.

HOLIDAYS: Xmas Day, Waterside Workers' Picnic Day (late January), Good Friday, Anzac Day (25th April), Adelaide Cup Day (3rd Monday in May), Eight Hours Day (2nd Mon. October). Restricted holidays, Boxing Day, New Year's Day.

TELEPHONES: Port Adelaide Police 207-6444. Fire Brigade 204-3825.

Note: Connection fee plus cost of calls.

SERVICES: Garbage disposal, cleaning out and fitting out and compass adjusting.

IDENTIFICATION CARDS: See "Melbourne".

GARBAGE DISPOSAL: Compulsory daily garbage collection service using plastic mobile garbage bins (M.G.B's) of 240 ltr. capacity which are placed on board. Charges: $ 40.00 plus $ 2.70 per person per day. Contractors: Waste Management Services Pty. Ltd. Tel: (08) 260-2122.

WASTE OIL DISPOSAL: Liquid road tankers (1×16,000, 1×8,000 and 1×10,000 ltr. capacity) available from Envirogaro (Cleanaway). Tel: (08) 472777. Fax: (08) 3411829.

SEAMAN'S CLUBS: Seafarer's Centre, 2 Nelson Street, Port Adelaide. Tel: 475733. Services: Telephone, snacks, bar, television, beds, table tennis, snooker, library, showers, money exchange. Open daily from 1600 hrs.

AUTHORITY: Ports Corporation South Australia, P.O. Box 19, 293 St. Vincent Street, Port Adelaide, S.A. 5015, Australia. *Tel:* (08) 470611. *FAX:* 470603. *Cables:* Depmah. *Contact:* Division Manager, Port Operations.

AGENT: Patrick Sleigh Shipping Agencies Pty. Ltd., P.O.Box 107, 22 Nile Street, Port Adelaide, S.A. 5015. Tel: (08) 47-4655. Telex: 82624 PATSLE. Fax: (08) 47-6139. Seagram Code: 5APATSLE.

AIRLIE ISLAND TERMINAL: 21.20 S. 115.10 E. (See Plan)

LOCATION: Airlie Island is situated off the N.W. Australian coast. The island is 16 nautical miles off the Australian coast and 27 nautical miles South of Barrow Island in position Lat. 21° 20′ S., Long. 115° 10′ E. Master should refer to latest hydrographic chart Aus. 743 and the Australian Pilot Volume V. The tanker mooring is situated 1.0 nautical miles N.N.E. of Airlie Island.

Crude oil produced from South Pepper, North Herald and Chervil offshore oil fields is brought ashore to storage and loading facilities on Airlie Island. The South Pepper and North Herald fields are located 15 to 18 nautical miles N.N.E. of Airlie Island.

Crude oil produced from the Chervil Field is piped ashore to production and storage facilities on Airlie Island. Chervil field is located 5 nautical miles East of Airlie Island.

The crude oil storage situated on Airlie Island consists of 2 floating roof storage tanks, a pump station, Chervil process plant and associated pipework. The Island is manned on a 24 hour basis.

Vicksburg is located 15 nautical miles N.N.E. of Airlie Island in Lat. 21° 07′ 27″ S., Long. 115° 16′ 12″ E.

Chervil is located 5 nautical miles East of Airlie in Lat. 21° 18′ 23″ S., Long. 115° 13′ 47″ E.

North Herald is located 12 nautical miles N.N.E. of Airlie Island in Lat. 21° 10′ 28″ S., Long. 115° 15′ 54″ E.

PILOTAGE: The pilot boarding ground is in Lat. 21° 10′ S., Long. 115° 06′ E. Pilot will communicate with the ship via VHF from the pilot boat prior to boarding. When the pilot is boarding the Master should ensure that a good lee is provided and that the pilot ladder is rigged in compliance with current SOLAS regulations.

Pilotage to the Airlie Island mooring is compulsory. Airlie Island is now incorporated within the Port of Onslow and there are 4 gazetted pilots for this port. On completion of mooring the Pilot/Loading Master will act as terminal representative, liasing with the tanker's Master on all matters relating to safety, loading and commercial papers.

As soon as possible prior to arrival at the pilot boarding ground the tanker should establish communications with the Vicksburg or Airlie Island on VHF Channel 16 or 74 then move to a working channel.

ANCHORAGE: *Recommended Anchorage:* Vessels waiting for the berth are recommended to anchor in position Lat. 21° 10′ S., Long. 115° 06′ E. The holding ground in this area is poor and Masters should exercise caution when anchoring or lying at anchor.

RESTRICTIONS: Terminal operates 24 hours.

Water Depth: In the berth and approach channel there is a least depth of 15.3 m. To provide a safe margin there is a minimum under keel clearance of 1.5 m. to be maintained at all times. Maximum arrival and departure draft is restricted to 13.8 m.

If the berth or channel is subject to a swell in excess of 0.5 m. the underkeel clearance may be increased at the discretion of the Pilot/Loading Master.

MAX. SIZE: Specifications for tankers berthing at Airlie Island should conform to the following dimensions and draft restrictions:

The CBM is designed for tankers size between 30,000 d.w.tonnes and 120,000 d.w.tonnes

The maximum design dimensions are:

300 m. length overall
50 m. beam
120,000 d.w.tonnes
Max. draft restriction of 13.8 m. fully loaded.

Arrival Draft: Vessels should arrive with a maximum ballast draft to assist berthing or suitable to the Pilot/Loading Master or where appropriate at IMO draft, without exceeding the maximum draft of 13.8 m.

RADIO/VHF: Perth Communications:

WMC Resources Ltd. – Office: Telephone (09) 442 2000. Facsimile (09) 442 2077. Telex 92245 Wesmin AA.

Drilling Rig "Vicksburg":

Telephone: 091 846 911 and 091 846 912.
Fax: 091 846 913.
SSB HF Radio Frequency: 4,451.5 kHz and 6,781.5 kHz.
VHF Radio Frequency: Channels 16 and 74.

Airlie Island:

Telephone: 091 846 100.
Facsimile: (091) 846 240.
VHF Radio Frequency: Channels 16 and 74.

ETA Advice: Master must ensure that WMC Resources is advised of the tanker's ETA 96 hours prior to arrival and ETA is confirmed or updated at 72 hours, 48 hours and 24 hours prior to arrival. When within range of Airlie Island contact should be established on VHF Channel 16 before going to the VHF working channel.

Pre-Arrival Messages: The 96 hour pre-arrival message should also advise arrival draft and answer the following questions:

(a) Is the hull leak free?
(b) Is an inert gas system fitted?
(c) Is the inert gas system, if fitted, fully operational?
(d) Is a crude oil washing system fitted?
(e) Is the crude oil washing system, if fitted, fully operational?
(f) Are there any defects to the ship, machinery and equipment which effect safe pilotage, mooring, cargo handling or ballast operations?
(g) Have stress calculations for the envisaged programme of cargo handling and ballasting been made?
(h) Is the hull stress calculated within recommended safety limits?
(i) Quantity and origin of all cargo onboard or expected to be loaded prior to arrival at Airlie Terminal. This should include API gravity, specific gravity and pour point specifications.
(j) Quantity of bunkers on board prior to arrival at the Airlie Terminal, detailing API gravity, specific gravity and pour point specifications.
(k) Vessel's gross tonnage.

MOORING: When the tanker has been manoeuvred into the berth, the mooring launch will run the ship's lines, preventers and swamp moorings as required by the Pilot/Loading Master.

When the tanker is safely moored at the terminal the Pilot/Loading Master and the Western Mining Corporation operator will commence pick-up operations of the submarine hose.

The tanker mooring is an 8 leg conventional buoy mooring (CBM). The berth is aligned 285°/105° with the mean flood/ebb tides running 094°/291° respectively.

The 8 buoy mooring consists of pile driven anchor points:

65 m. ground chain 81 mm.
55 m. chain 87 mm.
6 m. chain 81 mm.

Buoy with 1×100 tonnes quick release hook and preventer consisting of 50 m. of 52 mm. wire, highload swivel, 100 m. of 80 mm. polyester superline rope with a minimum breaking load of 150 tonnes.

The seabed in the vicinity of the tanker mooring is smooth hard caprock with patchy sand cover, consequently the holding ground in the area is considered poor. It should be noted by Masters that the ship's anchor cannot be considered to be an integral part of the mooring system and all preventers, swamp moorings and ship's lines required must be passed and secured for the tanker to be considered safely moored.

The normal arrangement is for one ship's line to be secured to each of the 8 buoys and a total of 8 shore lines to be taken onboard and secured (8 buoy preventers). The shore lines are to be made *fast to bitts* rather than put on winches.

Equipment and Ropes:

(a) Tankers using the mooring unit must be capable of passing and securing ship's ropes, receiving and making fast shore preventers.
The ship will have ready 8 ship's lines and the capacity to secure 8 shore lines.
(b) Fairlead positions should be noted to avoid lines crossing each other.
(c) Ship can be berthed either heading East or West depending on weather and tidal conditions. Pilot will advise once on board.
(d) Manifold and derrick/crane to be used will depend on direction of berthing. Loading hose will be brought aboard from the Airlie Island side of the tanker (Southern side of the mooring).
(e) Running Lines: Ship's lines will be run and secured to 8 buoys by line boat.
Note: If ship is equipped with wires then there is a minimum requirement to have 12 m. rope tails of suitable strength fitted. This is to allow safe handling of wires by the line boat.
(f) Ship will be required to lower a suitable messenger line to the line boat to retrieve shore lines.

BALLAST: There are no dirty ballast or slop reception facilities at Airlie Island Tanker Terminal.

De-ballasting: Tankers should not commence discharge of segregated ballast without permission of the Pilot/Loading Master. With the available depth of water at the mooring, larger tankers in ballast may in certain weather conditions find it more appropriate to discharge ballast after departure from mooring.

Pollution:

Tankers shall:

(a) Comply with the relevant provisions of the International Convention for the Prevention of Pollution from Ships defined as the "Convention" in the Pollution of Waterways by Oil and Noxious Substances Act 1987 of the State of Western Australia and the Protection of the Sea (Prevention of Pollution from Ships) 1983 of the Commonwealth, those Acts and other legislation of the State or Commonwealth pertaining to pollution.
(b) Masters must ensure that the tanker is capable of compliance with all relevent ISGOTT (International Safety Guide for Oil Tankers and Terminals) recommendations.
(c) Provide evidence to WMC Resources that the tanker is enrolled in the Tanker Owners Voluntary Agreement concerning Liability of Oil Pollution (TOVALOP), including supplement thereto effective 20th February 1987.
(d) Provide evidence to WMC that the tanker has in force insurances and certificates as are required of the owner of ships under Australian law.
(e) Provide evidence to WMC Resources that any cargoes carried by the tanker are either owned by, or deemed owned by a member of CRISTAL, being the Contract Regarding an Interim Supplement to Tanker Liability for Oil Pollution dated 14th January 1971, as amended from time to time.

LOADING: The propeller shall not be turned with the main engine while the flexible loading hose is connected or after it has been disconnected without notifying the Pilot/Loading Master.

Master and Pilot/Loading Master will exchange relevant information regarding start of loading, maximum loading rate, slow down and stopping procedure. Tankers are required to maintain a 1.5 m. under keel clearance (UKC) at all times whilst at the loading terminal, unless the pilot advises that this may be increased.

Loading Line: A 508 mm. (20 in.) loading line runs N.N.E. × 1.0 nautical miles from Airlie Island to the PLEM at the tanker mooring. Attached to the PLEM is a submarine hose string consisting of 11 lengths of 10 m.× 16 in. diameter hose and one length of 10 m.×300 mm. (12 in.) diameter rail hose. At the end of the rail hose is a butterfly valve and a 12 in. quick connect Camlock coupling plus blind flange. The hose string has a maximum working pressure of 1,550 kPa.

Tank Storage: 2×150,000 barrel floating roof tanks.

Pump Capacity: The pump station consists of 2 TKL Worthington centrifugal pumps delivering an average load rate of 2,000 cu.m./hr.

Manifold: Tankers must present a 12 in. manifold in compliance with the "Oil Companies Maritime Forum" (OCIMF) guidelines.

Derrick/Crane: Tankers must have certified derricks or cranes with a minimum SWL of 10 tonnes.

Product: Airlie Light Crude – API 44°.

UNMOORING:

Sailing Draft: Tankers will be advised of the allowable sailing draft by the Pilot/Loading Master.

Sailing: On completion of loading the submarine hose will be laid back onto the seabed. The preventers and swamp moorings will be released and laid back onto the seabed as appropriate. The mooring launch will then assist in letting go the ship's lines as required.

DEPARTURE: When the vessel is clear of the berth the Pilot/Loading Master will ensure that all WMC Resources equipment is returned to the mooring launch, that all the commercial paperwork is completed and will conduct the vessel to the pilot boarding ground.

TIME: GMT plus 8 hours.

GENERAL: *Weather Reports:* Weather reports will be sent to vessel during loading on a 12 hour basis. Airlie Island is located in a tropical cyclone belt during the months from November to April. With the development of any storms, more frequent weather reports, including hourly position broadcasts will be received.

It should be noted that with any forecast of a Northerly wind, tanker berthing may be delayed. If the vessel is positioned in the berth and wind direction swings Northerly, the Pilot will be informed and the situation reviewed as to whether to cease loading and to vacate the berth. Likewise if windspeed exceeds 30 knots during loading, the situation will be reviewed as to cease loading and vacate the berth.

Tides: The mean flood tide flows 094° with the mean ebb tide flowing 291°. The maximum speed of the tidal flow is approximately 0.5 knots. The nearest standard port is Onslow but tidal heights and times may be determined by using site specific data obtainable from the Pilot/Loading Master. Normal tidal range is approximately 2.0 m.

Safety: The Pilot/Loading Master may check some or all the ship's certificates prior to berthing and any equipment or ship's ropes as appropriate.

After berthing the tanker will be required to ensure that the following safety practices are completed prior to commencement of loading:

1. Ship/Shore safety check list is completed.
2. Smoking regulations are adhered to.
3. Emergency satchel is placed in the mooring launch.
4. Both lifeboats are turned out to the embarkation deck.
5. Fire fighting and pollution equipment is ready for immediate use.
6. Isolate impressed current cathodic protection systems before berthing.

The Pilot/Loading Master will liaise with the Master on all matters relating to safety of the vessel and loading operations. Masters should be ready to vacate the berth and put to sea at short notice when requested to do so and sufficient crew should always be on hand to tend moorings and assist with release of loading hose.

Cathodic Protection: Before berthing, Masters must ensure that vessels fitted with impressed current cathodic protection systems are switched off and remain off while in the berth.

Agents: Tankers must make their own arrangements to appoint agents.

Customs and Quarantine: Tankers requiring customs and/or clearances must make appropriate arrangements through their agents.

Agents/Customs – Arrange own transport to Onslow. Helicopter provided from Onslow to Airlie Island.

GARBAGE DISPOSAL: No service.

WASTE OIL DISPOSAL: No service.

SEAMAN'S CLUBS: None.

CURRENCY: Australian Dollar. However, there are no facilities at this port for seamen to come ashore.

AUTHORITY: *Operator:* WMC Resources Ltd., QV1 Building, 37th Floor, 250 St. George's Terrace, Perth, WA 6000, Australia. *Tel:* (09) 442 2000. *FAX:* (09) 442 2077. *Contact:* S. Keenihan, Regional Manager. P. Henderson, Engineering and Production Manager.

ALBANY, W.A.: 35.02 S. 117.53 E. (See Plan)

PORT LIMITS: All the waters of King George Sound and Princess Royal Harbour Westward of a line drawn from Herald Point to Bald Head.
DOCUMENTS: See "Melbourne".
PILOTAGE: Compulsory for vessels over 500 g.r.t. Service provided by Albany Port Authority. Captain C. Shuttleworth (Harbour Master) available on Pager No. 016983366. Tel: (098) 413056. Fax: (098) 421204.

Pilot boards vessel with King Point Light bearing 292° × 3 miles.

Address: 85 Brunswick Road (P.O.Box 175), Albany, W.A.6330.

ANCHORAGE: King Point Light, bearing 292°, distance 3 miles, or as directed by Agent's radio message. There is a Prohibited Anchorage of 0.5 miles radius from a position on the line of main leads midway between Buoys No. 1 and 2.
RESTRICTIONS: The Entrance Channel from King George Sound to Princess Royal Harbour has a width of 550 m. land to land. The Navigation Channel therein being 145 m. wide, with a depth of 12.8 m. – 12.2 m. LWOST. Depth of Swinging Basin in the harbour is 12.20 m. and vessels with a draft of 11.50 m. can work No. 3 Berth and 9.8 m. No's. 1 and 2 Berths. Although some margin is allowed at the Harbour Master's discretion, dependent upon weather and tidal conditions, (HHW 0.9 m.). Vessels up to 200 m. LOA can be berthed day or night. Vessels over 200 m. LOA daylight only.
MAX. SIZE: LOA 225 m., beam 32 m., draft 11.5 m. at Berth No. 3 and 9.8 m. at Berths No. 1 and 2, deadweight 38,000 tonnes.
HEALTH: Master should supply answers to a prescribed questionnaire 24 hours before arrival. Details of the questionnaire can be obtained from vessel's Agent and answers should be radioed to Agent, who will arrange pratique.
RADIO: Perth Radio.
VHF: Call sign is "Albany Port" and is normally open 0830 – 1630 hrs. Monday to Friday except holidays. Otherwise by special arrangement Channels 6, 12 and 16.
TUGS: Motor tug available, bollard pull 27.4 tons. Normally ships lines are used.
BERTHING:
King George Sound: Safe anchorages are available.
Princess Royal Harbour: The following berths are available:

Land Backed Wharf: A continuous wharf face of 608 m. allocated into 3 berths. Berth No. 1: 209 m., depth 10.4 m. Berth No. 2: 172 m., depth 10.4 m. Berth No. 3: 227 m., depth 12.2 m. There is no swell at any of these berths.

Max. permissible ship draft at LW is 11.5 m. at Berth No. 3 and 9.8 m. at Berth Nos. 1 and 2.

Load/discharge is by ship's gear other than loading of grain on Berth No. 3 which is by shore equipment.

The wharf berths are served by road.

Berth Uses: No. 1 Wharf has a transit shed with a floor space of 4,300 sq.m. and is used mainly for general cargoes. Whilst the berth has not been constructed to receive Ro/Ro vessels, it has been possible to work them at this berth.

No. 2 Wharf is used for loading of livestock and the discharge of rock phosphate, sulphur and for general cargoes. This wharf has also been designed as a secure wharf for petroleum products discharge.

No. 3 Wharf is a general purpose berth and has been designed for receiving Ro/Ro vessels and container traffic, although it is used mainly for the loading of bulk grain.

CRANES: No cranes are available and ships use their own gear.
BULK CARGO FACILITIES: All berths are capable of receiving bulk cargo via ships gear and grabs into hoppers and road trucks.

No. 3 Wharf has a grain loading facility consisting of conveyors, 3 loading booms and spouts of which any 2 can operate together. The design loading rate (wheat) is 1,600 t.p.h. The facility is also designed to load 50,000 d.w.t vessels, although vessels up to 67,000 d.w.t. have been accommodated on occasions.

STEVEDORES: By private companies.
Normal Working Day: Day Shift (Ordinary Time) 0730 to 1530 hrs. Evening Shift (Time and a Half) 1530 to 2330 hrs. Night Shift (Double Time) 2330 to 0730 hrs. Saturday (Double Time) 0730 to 1530 hrs., Sunday (Double Time) 0730 to 1530 hrs. and 1530 to 2330 hrs.
MEDICAL: No advance notice except in case of serious illness to be included in arrival cable, ample hospital facilities available.
TANKERS: Discharging facilities are provided only at No. 2 Wharf where the hose is 200 mm., connecting to a 300 mm. main. Loading facilities are provided on all 3 berths from 100 mm. hoses.

Max. drafts at these berths are Berth Nos. 1 and 2, 9.8 m. and Berth No. 3, 11.5 m.

DENSITY: Average salinity of water in the port is 1026 – 1027.
FRESH WATER: Available at all berths at a rate of approximately 60 – 80 t.p.h. Unlimited quantities available. Supply by 62 mm. hoses metered individually or if more hose required from 200 mm. main meter.
FUEL: Light marine diesel oil is available at all berths from pipeline or road tanker. Pipeline approximately 100 t.p.h.
FIRE PRECAUTIONS: During receival of fuel, Berth No. 2 is isolated and all Australian Association of Port and Marine Authorities' guidelines complied with.
CONSULS: None.
REPAIRS: A slipway of 340 tonne capacity is available. Small repairs only are dealt with by Board of Trade Engineers. Shore based facilities for minor engine repairs. Local shipwrights are available.
SURVEYORS: Cargo Inspectors: S.G.S., C.A.S.C.O. and Associated Marine Surveyors, W.A., Lloyd's Register, American Bureau, Bureau Veritas available at 4 hours notice from Fremantle.
GANGWAY/DECK WATCHMEN: Gangway watchmen required on all Australian crewed vessels and foreign fuel tankers.
HATCHES: Normally carried out by ships crew.
CUSTOMS ALLOWANCES: Each crew member 200 cigarettes or 40 cigars or 250 gm. tobacco; spirits 1 litre per person.
REPATRIATION: Crew changes and repatriation can be carried out with little difficulty.
AIRPORT: Airport located 11 km. from port with domestic flights to Perth.
TIME: See "General" before first port.
HOLIDAYS: As for Fremantle, except W.W.F. Picnic Day being late January.
POLICE/AMBULANCE/FIRE: Police Tel: 41 1411; Ambulance Tel: 41 1666; Fire Tel: 41 2122.
EMERGENCY CO-ORDINATION CENTRE: State Emergency Service contacted through Police Tel: 41 1411.
TELEPHONES: Telephones are available at all berths. Arrangements made through Agents.
SERVICES: Some radio and radar repair facilities available. Minor electrical and mechanical repairs.
BANKS: Commonwealth Trading, 261 York Street. Tel: 41 2022.
Australia & New Zealand, 23 Albany Highway. Tel: 41 1300.
National Commercial, 250 York Street. Tel: 41 2655.
Rural & Industries, 232 York Street. Tel: 41 1288.
Westpac Banking Corp., 281 York Street. Tel: 41 1722.
STORING: Vessels can be stored by launch in King George Sound or alongside the berth by road. Stores can be loaded during cargo operations. Forklifts can use all wharves. For stores Customs Form 43 to be submitted giving details of stores. For any storing in excess of 3 hours W.W.F. labour must be engaged.
SHIP SUPPLY SERVICES: Fremantle Tug Operators, c/o Hall's Shipping & General Agencies, Port Road, Albany, W.A. 6330.
Bairstow AG & ME, 13 Alicia Street, Albany, W.A. 6330.
Ocean Services Albany, P.O.Box 42, Albany, W.A. 6330.

Servicing of ships in this area is done by launch, as helicopters are not readily available to take off sick personnel. Ocean Services Albany operate launches and a 50 ft. tug which are used for servicing ships in the area.

The transfer of personnel, sick seamen and transport of stores is carried out by launch or tug. Communication is done by VHF.

SHORE LEAVE: No restrictions.
IDENTIFICATION CARDS: Not required.
GARBAGE DISPOSAL: Container available for dry garbage and drums available for wet garbage alongside. For service Tel: 098-412759.

Charges A$ 45.00 per day plus A$ 3.00 per crew member per day.

WASTE OIL DISPOSAL: Tanker trucks only, capacity 1,500 gallons. Current rate A$ 130.00 per load. Operator: Rassmussens Waste Disposal. Tel: (098) 41-2467, after hours (098) 44-7656.
SEAMAN'S CLUBS: Missions to Seamen (Flying Angel), Lot 12, Princess Royal Drive (P.O. Box 1299), Albany, West Australia 6330. Tel: (098) 41-2440. Located within 5 minutes walking distance from all wharves. Facilities: Canteen, international telephone calls, bus tours, sporting events arranged, chapel/church services, postal facilities, library, pool, table tennis, currency exchange.
CURRENCY: Australian Dollar.
DELAYS: Not normally experienced unless waiting for another vessel on grain loading or deep draft Berth No. 3.
GENERAL: Quarantine incinerator available.
AUTHORITY: Albany Port Authority, 85 Brunswick Road, Albany, W.A. Postal Address: P.O.Box 175, Albany, W.A. 6330. *Tel:* (Office) (098) 413056. *FAX:* (098) 417566. *Contact:* Captain C. Shuttleworth, Harbour Master.

AGENT: Patrick Sleigh Shipping Agencies Pty. Ltd., P.O.Box 42, Port Road, Albany, W.A. 6330. Tel: (098) 413538. Telex: via Fremantle 92434 PATSLE. Fax: (098) 417690. Seagram Code: 6APATSLE.

ARDROSSAN, S.A.: 34.26 S. 137.55 E. (See Plan)

DOCUMENTS: See "Melbourne".
APPROACHES: *Navigation Beacon:* The light beacon, flashing white every second, marks the Northern side of the seaward limit of the dredged exit channel.
Lead Lights: Lead light towers line up on a grid bearing 249°. Towers are located approximately 10 m. from the clifftop edge and approximately 610 m. from clifftop edge.
PILOTAGE: Compulsory (except for B.H.P. vessels). 24 hours notice required. Pilot boards one mile East of berth.
MAX. SIZE: Max. size 46,000 d.w.t. for berthing and loading. Max. LOA 200 m.
HEALTH: Officials board at berth. 24 hours notice required.
VHF: "Ardrossan Port" on Channel 16. Manned weekdays 0730 hrs. – 1200 hrs. and 1245 hrs. – 1615 hrs.
TUGS: Available from Port Adelaide.
BERTHING:
B.H.P. Jetty:

Length 931 m. "T" head – 6 Dolphins and 2 mooring platforms. Total berth length 409 m. Continuous fendering installed from Dolphin No. 2 to Dolphin No. 5 for 160 m. length. Depth of water – 9.2 m. MLWS.

Loading is via a belt conveyor system. A fixed loading boom necessitates vessel warping along "T" head during loading.

Loading rates:	Dolomite 2,400 t.p.h.
	Wheat 800 t.p.h.
	Barley 800 t.p.h.

Boom:

Height of chute above MLWS – 16.18 m. Loading chute extends across vessel from wharf face – 16.1 m.

TIDE: Average rise and fall 1.8 m. – 2.4 m. max. 3.1 m. at Spring tides.
STEVEDORING: Arranged with private companies.
Operations: Working hours are flexible to suit vessel's requirements.

Working Hours –	Night Shift	0001 – 0800 hrs.
	Day Shift	0800 – 1600 hrs.
	Afternoon Shift	1600 – 2359 hrs.

FRESH WATER: Small quantities can be made available by special arrangement. (Flow rate is approximately 3 tonnes/hour).
FUEL: Not available.
GARBAGE DISPOSAL: Not available.
WASTE OIL DISPOSAL: Not available.
SEAMAN'S CLUBS: No seaman's clubs.
Religious contact: Les Adams, Weetulta. Tel: 88-352233.
Post office and shops available in Ardrossan (2 km.).
CURRENCY: Australian Dollar.
AUTHORITY: Ports Corporation South Australia, P.O.Box 19, Port Adelaide, S.A. 5015, Australia. *Tel:* +61-8-47-0611. *FAX:* +61-8-47-0605. *Contact:* Division Manager, Port Operations.
Operator: BHP Steel, Long Products Division, Rowe Terrace, Ardrossan, South Australia 5571, Australia. *Tel:* (088) 373106. *Telex:* AA 89520. *FAX:* (088) 373676. *Contact:* A. Fisher, Manager.

AGENT: Sub-agent of Patrick Sleigh Shipping Agencies Pty. Ltd., Adelaide.

BARROW ISLAND, W.A.: 20.49 S. 115.33 E.

(See Plan)

LOCATION: The port is situated on the Eastern side of Barrow Island, Western Australia. The moorings are located approximately 9.875 km. offshore at Lat. 20° 48′ 57″ S., Long. 115° 33′ 09″ E. Refer to the current hydrographic Chart No. AUS 742 for further information.
PORT LIMITS: 7 nautical miles radius from intersection point at Lat. 20° 46′ 50″ S., Long. 115° 27′ 54″ E.
DOCUMENTS: Refer to "Melbourne" - also see "Health".
PILOTAGE: *Pilot Boarding:* The pilot ladder shall be available to the Pilot/Mooring Master and be kept at a proper height for his safe use for boarding and disembarkation. When the distance from the water to the deck exceeds 9.0 m., the pilot ladder shall be rigged with the accommodation ladder or an approved mechanical pilot boarding appliance used. Tanker shall provide adequate lee for embarking and disembarking Pilot/Mooring Master, who will board at the arrival position. The hose connection equipment is contained in 2 large metal boxes which should be lifted onboard at the Arrival Position and landed just forward of the starboard manifold.
Order of Berthing: Tankers will normally berth in the order of arrival, but due regard will also be given to nominated date ranges, and such other matters as WAPET deems relevant to a fair and necessary berthing order.
Restrictions: Unless otherwise approved by the Pilot/Mooring Master, berthing shall take place:
(a) during ebb tide;
(b) provided there is no strong wind or strong wind warning in force for the terminal area; and
(c) when there is no tropical cyclone, or tropical depression which is likely to develop into a cyclone, within 400 nautical miles of the Terminal or likely to pass within that range within 24 hours of the tanker berthing; and
(d) in daylight.
Accommodation: The tanker shall provide victualling and accommodation for the Pilot/Mooring Master. Additional personnel may at times be required by WAPET to board tankers. The Pilot/Mooring Master will advise numbers on such occasions.
Also see "Anchorage" and "Mooring".
NOTICE OF READINESS: The Notice of Readiness is accepted:
(a) where the berth is available, at such a time as the tanker is all fast in the berth, i.e. when all mooring lines and the preventer lines are made fast;
(b) where the berth is not available, 6 hours after the tanker drops anchor at the Arrival Position (See "Anchorage");
(c) in the case of a tanker:
  (i) making its first call at the port; or
  (with inadequate searchlights (See "Restrictions"). 6 hours after sunrise following arrival or when the tanker is all fast in the berth, as defined in (a) above, whichever occurs first.
Laytime ceases for the period of time taken for the tanker to move from the anchorage and is resumed when the tanker is all fast at the berth as defined in (a) above.
ANCHORAGE: *Arrival position:* On arrival at the port, the tanker should proceed to a position ("Arrival Position"), approximately 2 nautical miles off the moorings at a bearing of 090° from the moorings (See Aus. Chart No. 742) and anchor there if waiting to berth. The Pilot/Mooring Master will board the tanker at this position.
Crane/Derrick: The tanker shall arrive with a crane/derrick rigged on the starboard side and in all respects ready to lift equipment including the hose connection equipment from a mooring vessel at the Arrival Position.
MINIMUM STANDARDS OF ACCEPTANCE: A tanker will be accepted for loading at the Terminal provided it conforms to the minimum requirements described herein. WAPET may at its discretion refuse to moor or load any tanker which does not conform to the requirements of is deficient in any manner whatsoever. In all cases, the Tanker Suitability Assessment Form must be completed.

1. *Size:* See "Max. Size".
2. *Tanker Loading:* Tankers loading at the Marine Terminal must comply with the latest SOLAS and MARPOL Conventions and Protocols. Tankers found to be deficient or substandard in safety requirements will not be permitted to moor and load.
3. *Deballasting:* The Terminal will not be responsible for any free water or deadfreight. For acceptance at the Terminal, tankers must have segregated ballast tanks or otherwise comply with the ballast regulations (See "Ballast"). There are no reception facilities at the Terminal for the discharge of dirty ballast.
4. *Inert Gas System:* The cargo tanks will be checked on arrival to verify that they are inerted to 8% oxygen or less by volume and pressurised as required by existing regulations. Vessels with tanks not properly inerted, and/or with an inoperative inert gas system, will be rejected. In the event of failure of the inert gas system during tanker loading/deballasting operations, or if the tank atmosphere exceeds 8% oxygen, cargo/ballast operations will be stopped, and if the deficiency is not promptly corrected, the tanker will be removed from the berth.
5. *Mooring Equipment:* Tankers shall be equipped with mooring equipment which complies with the minimum specifications described in this regulation.

(i) Mooring Winches: The tanker shall be equipped with mooring winches which shall:
  (a) Be power operated and capable of warping the tanker.
  (b) Have a mooring line permanently attached.
  (c) Be capable of making fast mooring lines by securing the brake on the winch.
  (d) Have warping drums capable of handling preventer lines and swamped mooring lines.
  (e) If equipped with constant tension devices, have these devices disconnected and the brake fully applied.
  (f) Number at least 8 and be located in the following positions:
  Poop deck – 4.
  Foc'sle head – One each, port and starboard, located in such a position that the port and starboard swamp mooring lines may be hove in and made fast to adjacent mooring bitts (a single winch in this position, located so that ropes may be similarly handled from either side, may be acceptable).
  Aft main deck – One each, port and starboard. Tankers fitted with only one winch in the aft main deck area will be accepted provided a line can be deployed mechanically from that winch to each beam. On tankers fitted with only one winch, where only one of the two lines can be handled (hauled or veered) at once, berthing may be delayed in marginal weather. A tanker will not be accepted where only one mechanical line can be deployed and the other would be handled by hand.

(ii) Mooring Bitts: The tanker shall have at least 8 sets of mooring bitts. Each set shall be of a size and located near a mooring winch to enable making fast the preventer lines or the swamped mooring lines as the case may be.

(iii) Mooring Lines:
  (a) The mooring line on each mooring winch shall have a minimum breaking strain (MBL) of 80 tonnes. Tankers with mooring lines with a MBL of less than 80 tonnes will only be accepted at the discretion of WAPET. Tankers with mooring lines of less than 80 tonnes MBL may be subject to greater than normal delays awaiting berthing in marginal weather conditions.
  (b) Each mooring line shall have a minimum length of 220 m.
  (c) Each mooring line, if a wire line, shall have a fibre tail (attached to each wire) between 10.5 m. to 12.0 m. with strength equivalent to the wire line, plus 25%. Prior to arrival, fibre tails should be carefully inspected for damage and any suspect tails replaced. Polypropylene is not acceptable.

(iv) Bow Anchors: The bow anchors shall:
  (a) Be located on each port and starboard bow.
  (b) Have a minimum of 10 shackles (shots) of chain in tankers up to 50,000 tonnes load displacement and a minimum of 12 shackles in tankers over 50,000 tonnes load displacement.
  (c) Comply with a Classification Society recognised by the Australian Maritime Safety Authority.

(v) Crane/Derrick: The tanker shall have a crane or derrick on the starboard side with a minimum SWL of 10 tonnes. Arrangements for lifting and securing hose must comply with the Oil Companies International Marine Forum (OCIMF) recommendations.

(vi) Personnel: The tanker shall provide competent personnel to perform, supervise and approve all work to connect and disconnect the loading hose.

(vii) Manifold Specification: The tanker's manifold shall be capable of being bolted to the 12 in. USAS flange of the loading hose, and comply with OCIMF standards for oil tanker manifolds and associated equipment.

(viii) Searchlights: To permit berthing and unberthing during darkness, the tanker shall be equipped with a searchlight with a minimum diameter of 300 mm. fitted to each port and starboard bridge wing to provide a wide scanning range.

(ix) Responsibility of Owner: The onus is exclusively on the Master or Owner to ensure that the tanker is seaworthy, and that all equipment is and remains in good working order and condition. Failure by WAPET to reject any tanker not meeting the requirements will not relieve the Owner of liability.

6. *Safety and Pollution:*
   (i) Safety:
      (a) Tankers, which could in the opinion of WAPET possibly contravene the International Convention for the Safety of Life at Sea 1974 as amended by the 1978 Solas Protocol, will not be accepted.
      (b) Tankers shall be in a state of readiness at all times to leave the moorings. Engines should be on 20 minutes notice.
      Tankers visiting the Barrow Island Marine Terminal must comply with the minimum safety requirements specified in the I.S.G.O.T.T.
   (ii) Pollution: Tankers shall:
      (a) Comply with the relevant provisions of the International Convention for the Prevention of Pollution from Ships defined as the "Convention" in the Pollution of Waters by Oil and Noxious Substances Act 1987 of the State of Western Australia and the Protection of the Sea (Prevention of Pollution from Ships) Act 1983 of the Commonwealth, and comply with other legislation of the State or Commonwealth pertaining to pollution.
      (b) Ensure that no rubbish is dumped from the tanker at or near the Marine Terminal.
      (c) Provide evidence to WAPET that the tanker is enrolled in the Tanker Owners Voluntary Agreement concerning Liability of Oil Pollution, including TOVALOP Supplement thereto effective 20 February 1987.
      (d) Provide evidence to WAPET that the tanker has in force insurances and certificates as are required of the Owner of ships under Australian law.
      (e) Provide evidence to WAPET that any cargoes carried by the tanker are either owned by, or deemed owned by, a member of CRISTAL, being the Contract Regarding an Interim Supplement to Tanker Liability for Oil Pollution dated January 14th 1971, as amended from time to time.
7. *Tanker Inspections:*
   (a) When nominating a tanker for loading at the Terminal, the Shipper shall provide WAPET with a statement in writing, on the approved WAPET form, that the nominated tanker has satisfactorily undergone a ship inspection, based on OCIMF guidelines, and that the results of the inspection are acceptable to the Shipper as at the time of inspection, and at the time of nomination.
   (b) Where a tanker has undergone an inspection as specified in 7(a), WAPET, at its absolute discretion, may accept the tanker for loading at the Terminal, subject to the tanker undergoing an inspection prior to loading commencing, by a qualified inspector at the Shipper's sole cost. In such case, Notice of Readiness shall not be tendered until the Shipper provides WAPET with a written statement, including, without limitation by fax or telex, that the inspection was satisfactory.

RESTRICTIONS: *Minimum Water Depth/Underkeel Clearance:* The minimum water depth in the vicinity of the berth and in the approach channel is 12.0 m. below C.D. Barrow Island Tanker Moorings. A copy of the latest hydrographic certificate of the depth of the water is available from the Pilot/Mooring Master on request.

To provide a safety margin, should sailing be delayed for any reason, the following underkeel clearance shall be maintained at all times up to and including the low water following the tanker's projected sailing time as follows:

(a) for tankers up to 33 m. beam – not less than 1.56 m.; or
(b) for tankers over 33 m. beam – clearances specified below:

Beam (m.)	*Underkeel Clearance* (m.)
33.0	1.56
34.0	1.60
35.0	1.63
36.0	1.67
37.0	1.71
38.0	1.74
39.0	1.78
40.0	1.81
41.0	1.85
42.0	1.89
43.0	1.92
44.0	1.96
45.0	2.00
46.0	2.03
47.0	2.07

Arrival Condition: Tanker shall arrive ballasted to at least one quarter of its Summer deadweight tonnage, with propeller (and bow thruster if fitted) submerged, unless directed to carry more ballast by the Pilot/Mooring Master during adverse weather. Tankers should have a stern trim of less than 4.0 m.

MAX. SIZE: The Marine Terminal is restricted to Tankers which have:
(a) A loaded displacement of up to 105,000 tonnes.
(b) A maximum beam of 47.0 m.
(c) A maximum slab side area of 4,838 sq.m., being the product of the overall length and moulded depth.

HEALTH: Tankers arriving from foreign ports must make prior arrangements for Quarantine and Customs Clearance through their agents. Port Walcott, Western Australia, is the nearest port where Customs and Quarantine Clearances can be obtained.

RADIO: *Initial Message:* All incoming tankers must advise the Barrow Island Marine Terminal of their estimated time of arrival (ETA) not less than 96 hours before arrival, and thereafter at intervals of 48 hours, 24 hours and 12 hours before arrival at the Arrival Position. Should the expected ETA change by more than 1 hour following the 12 hour arrival notice, the incoming tanker must promptly notify the Terminal of the new arrival time.

Time to be used for ETA is local time, which is UTC plus 8 hours throughout the year.

The first message should also include:
(a) Name and nationality of tanker, radio call sign, and INMARSAT telephone number.
(b) Cargo requirements.
(c) Deballasting time, if not concurrent with loading.
(d) Maximum loading rate.
(e) Arrival draft, fore and aft.
(f) Distance in metres from the bow to the tanker's loading manifold.
(g) Distance from the bridge conning position to the bow in metres.
(h) Details of the quantity and condition of ballast.
(i) Confirmation that the inert gas system is tested and working, and that all cargo tanks are at or below 8% oxygen level (tanks will be inspected before berthing).
(j) Confirmation of the capability to carry out closed system loading.
(k) The Master's full name for the preparation of Bills of Lading.
(l) Last port of call.
(m) Confirmation that the tanker has a clean Bill of Health (if there is any sickness on board, the message must give all available information as to the possible type of sickness).
(n) Advice of voltage of power supply and type of outlet socket (i.e. British, European, Japanese, etc.).
(o) Number of shackles (shots) of anchor cable on each anchor.
(p) Number and location of mooring wires on winches.
(q) Number and location of synthetic mooring lines on winches.
(r) Number and location of mooring bitts.
(s) Is the manifold arrangement, including rigging equipment, in compliance with OCIMF recommendations.
(t) Is vessel equipped with a crane or derrick, and in what position.
(u) SWL of crane or derrick.
(v) Indicate whether tanker can receive a helicopter, land-on or winch.

ETA messages shall be sent to each of the following centres:

Barrow Island: Tel: 091 84-3700 (office hours or by arrangement). Telex: AA 99125. Fax: 091 84-3799.

Perth (all hours): Tel: 09 263 6299. Fax: 09 263 6699.

VHF: *Communications with Pilot/Mooring Master:*
Approaching the terminal:

Tankers shall listen to Marine VHF Channel 16 when within 100 nautical miles of the terminal.

The Pilot/Mooring Master can be contacted during daylight working hours or at other times by prior arrangement on the following International Maritime VHF frequencies, call sign "Barrow Island":

Channel 16	156.8 MHz	Safety and Calling;
Channel 14	156.6 MHz	Barrow Island working channel; or

During Berthing and Loading:

WAPET will provide portable UHF radios for communications between the tanker and the Terminal Onshore Control Room during berthing, loading and unberthing. Channels used are:

Channel 1	469.775 MHz
Channel 2	469.800 MHz

TUGS: *Mooring Vessels:* WAPET may provide one or two vessels to assist in mooring tankers at the Barrow Island Marine Terminal:

"Total Endeavour", a 48 tonne bollard pull (3,200 b.p.h.) omni-directional vessel is used on a tow line from its bow to the tanker's stern when berthing. It will be positioned as near to the centre line as possible. "Total Endeavour" may stand-by throughout the loading and may assist in unberthing. The vessel is equipped for fire-fighting.

If for any reason the tug is not available, berthing without tug assistance shall be at the Master's discretion. WAPET shall not be held liable for any costs or delays incurred due to a vessel awaiting a tug to berth.

A utility vessel or tug, whose hull is painted international orange, will deliver the Pilot/Mooring Master and if necessary, additional WAPET personnel, Agent, Customs and Cargo Surveyors to the tanker.

Tankers should be ready to receive 2 large metal boxes from the utility vessel, containing hose connection equipment, at the time the Pilot boards. These boxes will be lifted onboard the tanker using the starboard crane or derrick.

PORT FACILITIES: *Pilot/Mooring Master:* WAPET shall provide a Pilot/Mooring Master to:
(a) assist in piloting the tanker in and out of the moorings;
(b) advise on connecting and disconnecting the loading hose;
(c) advise on matters concerning the safety of the tanker and Terminal facilities.

Moorings: An 8 point mooring system consisting of 6 mooring buoys and 2 swamped moorings are installed.

Preventer Lines: Preventer lines are permanently connected to each mooring buoy by 4.0 m. of 56 mm. U2 stud link chain. The preventer lines and swamped mooring lines are constructed as follows:
(a) 76 m. of 52 mm. wire rope;
(b) 76 m. of 88 mm. polyester superline;
(c) 47 m. of 26 mm. FSWR; and
(d) 30 m. tail of 32 mm. polyester.

WAPET will provide stoppers for making fast the preventer lines and swamped mooring lines to the tanker's mooring bitts.

Crude Oil Handling Facilities – Onshore: The onshore storage and pumping facilities include:
(a) 5 × 200,000 bbl. (31,782 kilolitre) floating roof tanks;
(b) 2 (gas engine driven) centrifugal loading pumps rated to deliver up to 14,000 bbls. (2,200 cu.m.) per hour of Barrow Island Crude Oil with up to a maximum pressure of 100 p.s.i. at the tanker rail;
(c) one diesel driven stand-by loading pump;
(d) associated computer control and monitoring equipment;

Crude Oil Handling Facilities – Marine: The submarine pipeline is comprised of 2 sections:

(a) Linking the shorebase facilities on Barrow Island to the Marine Terminal is 9,875 m. of 510 mm. × 9 mm. steel pipe, the seaward end of which is marked with a spar buoy.

(b) At the seaward end of the pipeline described in (a) there is a flexible rubber tail/rail hose measuring 61 m. of 400 mm. and 9.0 m. of 300 mm. (which flexible tail/rail hose is referred to in these regulations as the "Loading Hose"). The tanker end of the loading hose is fitted with a 300 mm. (12 in.) locking butterfly valve. The seaward end of the loading hose is marked with a yellow conical buoy. The tanker's manifold shall be in compliance with the "Oil Companies International Marine Forum (OCIMF) Standards for Oil Tanker Manifolds and Associated Equipment", and its presentation flange shall be equipped with a 300 mm. (12 in.) ANSI Class 150 flange.

Fittings and Connections available at the Marine Terminal: WAPET will make available the following fittings to connect the loading hose to the tanker's manifold:

(a) 300 mm. to 300 mm. 150 USAS drain spool, with 25 n.p.t. and 15 n.p.t. spigots for drain line and pressure gauge, with a slipping flange at its outboard end to ease loading hose bolt alignment.

(b) Hanging-off connecting chain and specially modified "Blake Stopper" for use with loading hose.

(c) Nylon straps and associated slings to suspend loading hose from tanker's crane/derrick runner.

(d) Flange gaskets and grease.

BERTHING/UNBERTHING: *Tidal Berthing:* Berthing and unberthing at the Marine Terminal shall take place during ebb tide unless otherwise approved by the Pilot/Mooring Master.

Generally berthing will take place at high water or low water slack tide, to avoid the period of strongest tidal stream in the middle of the ebb tide. The direction of the tidal stream is approximately 245° on flood and 065° on ebb, and attains a rate 1.0 knots at Springs.

Unberthing: Unless otherwise directed by the Pilot/Mooring Master, the tanker shall unberth:

(a) during ebb tide after completion of loading; or

(b) after consultation with the Master when there are strong winds at the Terminal area or a strong wind warning has been issued for the area.

(c) in daylight, unless the tanker is fitted with approved searchlights.

Mooring Lines: The Master shall ensure that the mooring lines are run off the winch sufficiently to enable it to be passed to the mooring boat for running to the mooring buoys. To speed up the running of the first line, the mooring winch should be in single gear. On completion of mooring, the brake on each mooring winch should be securely screwed up.

Preventer Lines: The preventer lines and swamped mooring lines are to be hove onboard with a messenger of at least 24 mm. diameter, supplied by the Terminal, to the warping drum of mooring winch and then made fast to the bitts, being stoppered off, using "Chinese" of "West Country" method, with stoppers supplied by WAPET.

Propeller: The propeller shall not be turned over with the main engine while the loading hose is connected or after it has been disconnected without first notifying the Pilot/Mooring Master.

MOORING EQUIPMENT (TANKER): *Pilot/Mooring Master:* The Pilot/Mooring Master will board incoming tankers at the "Arrival Position". The Pilot/Mooring Master will advise the Master on approach to the berth, mooring and unmooring, connecting and disconnecting hoses, and all other operations within the Terminal area, including all manoeuvring of the tanker. The Master, or one of his qualified deck officers, must be on the bridge at all times while the tanker is being manoeuvred.

Mooring Vessels: WAPET will provide one or more mooring vessels and crew to handle the tanker's mooring lines to the buoys and bring the preventer lines and swamped mooring lines to the tanker, and to assist in berthing and unberthing. The mooring vessels will stand-by during loading and unmoor the tanker on completion.

The mooring vessels shall be under the direct control and supervision of the Pilot/Mooring Master. Any service and/or facilities provided by WAPET including, but not limited to, the services of a Pilot/Mooring Master, mooring vessels and their crews, or mooring and loading equipment, shall be at the tanker's sole risk.

Tanker Mooring Procedure:

(i) The Mooring is a conventional buoy mooring, with 6 mooring buoys and 2 swamped mooring lines. The swamped mooring lines are at the port and starboard shoulders. These swamped mooring lines lie on the sea bed when not in use, well clear of the manoeuvring area.

(ii) An open running moor is carried out, dropping the port anchor first, running ahead and paying out between 9 and 11 shackles (shots) of cable, depending on the tanker's size. When the tanker is in the correct position to drop the second anchor, the starboard anchor is let go. The port cable is put into gear, and the cable weighed as the tanker is manoeuvered astern into the berth, whilst the starboard anchor cable is paid out.

(iii) Whilst working the anchors, as much information as possible should be passed by the officer-in-charge of the foc'sle to the bridge to the Pilot/Mooring Master. The amount of cable paid out, the direction of the cable and the weight on the cable, are vital information for the Pilot/Mooring Master.

(iv) Berthing assistance may be rendered by 2 mooring vessels. As the tanker manoeuveres astern, the windward beam tanker mooring rope/wire, at the after end of the main deck, will be sent away to the windward buoy. The tanker's own mooring lines will be deployed as the weather dictates, and together with the tanker's anchors will be used to position the tanker in the berth.

(v) Once the tanker is in position and all the tanker's lines are fast, a mooring vessel will pick up the preventer lines in sequence and tow them alongside the tanker. The tanker should pass a heaving line to the mooring vessel to pick up the terminal messenger. The first part of the preventer line to come onboard is the preventer tail which is 39 m. × 32 mm. of polyester rope. This soft line is connected by a shackle to 48 m. of 26 mm. steel wire rope, which is in turn connected by a 32 mm. snotter to the 88 mm. polyester superline ("Superline"), which is made fast onboard.

(vi) The Superline should be hove as tight as possible, stoppered-off using the polyester stoppers supplied by WAPET and made fast to the tanker's bitts. It is important that the preventer lines and swamped mooring lines are made fast in this way. Winding onto the tanker's winches is not permitted.

(vii) The port and starboard swamped mooring lines will be the last lines to be picked up in a similar way to the preventer lines.

(viii) The tanker is not considered all fast in the berth until all the preventer lines and swamped mooring lines are made fast as required by the Pilot/Mooring Master.

(ix) Once the tanker is all fast, a mooring vessel will tow the hose marker buoy alongside, and the Pilot/Mooring Master will advise the tanker's crew on the connection of the loading hose. A responsible officer and sufficient members of the tanker's crew should be available at the manifold to carry out this operation.

(x) An emergency towing-off wire of adequate strength shall be made fast to a forward bollard on the tanker, and its eye run out and maintained at or about the waterline.

CARGO: *Barrow Island Crude Oil Properties:*

API Gravity	37.07°.
Density at 15°C in vacuum	0.8390 kg./lt.
Reid Vapour Pressure	4.6.
Pour Point	less than −54°C.
Flash Point (Abel)	less than −27°C.
Viscosity at 20°C	2.666 cSt.

The average load temperature of the crude oil will vary from Summer to Winter. As a guide, the minimum temperature during Winter (May to October) can be expected to be about 23°C. In the Summer (November to April) the maximum temperature can be expected to be about 32°C. Masters requiring more information about loading temperature should contact the Terminal.

LOADING: Throughout the loading operation, a responsible deck officer shall be in charge of operations, either on deck, or in the cargo control room. In addition, an efficient deck watch in constant contact with the cargo control room must be maintained at all times.

Loading rates can be reduced on request at any time. Except in an emergency, 10 minutes notice should be given to the Pilot when rate reduction is required. *Valves must not be closed against the oil flow without permission from the Terminal. Part or full closure of valves during loading is extremely dangerous, and can cause extensive damage to equipment. The Master will be held liable for any damage arising from such malpractice.*

Hose Connection:

1. Upon completion of the mooring operation, the loading hose will be connected to the tanker's starboard manifold. The hose connection will be made by the tanker's crew, who must be under the supervision of a responsible deck officer. The Pilot/Mooring Master will advise on the correct procedures to be adopted.
2. The crane/derrick rigged on the starboard side will be used to hoist the loading hose and assist in its connection to the starboard manifold. The crane/derrick will be used during loading to suspend and take the weight of the loading hose.
3. When the loading hose is hung-off at the tanker's rail, and lowered to manifold level, the blank flange on the end of the hose shall be removed and the loading hose bolted to the tanker's manifold. A pressure gauge is provided at the top of the spool and a drain line at the bottom of the spool.
4. The propeller shall not be turned over with the main engine while the loading hose is connected, or after it has been disconnected without first notifying the Pilot/Mooring Master.

Commencement Checks: The submarine pipeline is left full of crude oil between tanker loadings. When all hose connections have been made and approved, and safety checks outlined in the International Safety Guide for Oil tankers and Terminals have been completed, the butterfly valve on the loading hose shall be opened. The butterfly valve on the loading hose will be bolted in the open position before loading commences, and should be checked frequently during the course of loading.

Loading Commencement: The tanker's manifold shall be opened and crude oil shall be loaded by gravity. Once checks for flow have been completed on the tanker, the Pilot/Mooring Master will be advised to start the loading pumps.

WARNING Against Back Pressure: The submarine pipeline and loading hose may be damaged if subjected to sudden increases in pressure. Back pressure on the loading hose at the tanker's rails must not exceed 700 Kpa/100 p.s.i. To avoid damage to the loading equipment the tanker shall ensure that the following precautions are taken:

(a) The flow of crude oil shall not be shut off by closing the tanker's valve or the butterfly valve on the loading hose without the prior approval of the Pilot/Mooring Master;

(b) As many tanks as possible are to be open during loading. At least 2 tanks must be open while onshore pumps are operating at full speed. If the Master considers it necessary to load into one tank, or to otherwise reduce the loading rate for safety or its operations, he shall notify the Pilot/Mooring Master in sufficient time to reduce the loading rate;

(c) The Master shall advise the Pilot/Mooring Master when 250 cu.m. of crude oil are required to complete the loading, so that the onshore pumps can be eased down slowly and reduced to idle.

(d) The Master shall advise the Pilot/Mooring Master when 60 cu.m. of crude oil are required to complete loading, so that the onshore pumps can be stopped and loading completed by gravity.

(e) On completion of loading, the tanker's manifold valve is to be closed slowly to minimise the surge pressure of oil in the pipeline.

Availability of Deck Machinery: The Master shall ensure that the deck machinery is available for immediate use at any time throughout the loading operation.

Test Calls During Loading: In order to check radio communcations between the tanker and the onshore control room, the tanker shall call Barrow Island Terminal every hour at 15 minutes past the hour and advise the Terminal of the previous hour's loading rate, and total quantity loaded.

Barrow Terminal shall call the tanker every hour at 45 minutes past the hour.

Should either of these calls fail to establish communications between the tanker and the Terminal, after taking reasonable steps to re-establish communications, the Terminal will shut down loading until communications are re-established.

Suspension of Loading during Strong Winds: During periods of strong winds, the Pilot/Mooring Master may advise the tanker's Master to discontinue loading and disconnect the loading hose.

The loading hose may be hung-off ready to slip or be laid down.

Hose Disconnection:

1. On completion of loading by gravity, the tanker's manifold valve shall be closed slowly. If the manifold valve is of the type that cannot be closed slowly, the flow of oil shall be stopped by slowly closing a proportional tank valve. The back pressure at the rail will be monitored during this operation. Once the tanker's proportional valve and/or manifold has been closed, and it is confirmed that all oil flow has ceased, the hose end butterfly valve will be closed. Finally the Pilot/Mooring Master will instruct the Terminal to close the sealine valve.
2. The tanker personnel shall make every effort to drain the manifold outboard of the manifold valve between the manifold valve and loading hose end butterfly valve. A drain cock is provided in the spool attached to the manifold for this purpose.
3. When the hose is disconnected from the manifold, sufficient drip trays must be available to contain any oil remaining in the spool pieces and reducer and the blind flange will be replaced on the hose. The weight of the hose is taken on the blind pulling flange and the hose lifted above the deck. The hose is raised to sufficient height to enable the weight to be taken off the hanging-off chain. The hanging-off chain is then slipped and secured to the support chain. The hose is lowered to the rail and hung-off by the slipping chain to the Blake Slip. The crane hook is removed from the blind pulling flange. The hose buoy is then slipped and recovered by the mooring vessel. The Pilot/Mooring Master will instruct the mooring vessel to commence towing the hose buoy, and when the weight comes on the hose buoy chain, the order will be given to slip the hose. The handle of the Blake Slip is pulled and the hose falls into the sea. The mooring vessel tows the hose buoy to its resting position.

Cargo Documentation and Inspection:

1. Documents such as the Bill of Lading, Quality Certificate, Quantity Certificate, Time Loading Report, Certificate of Origin, Cargo Manifest and Master's Receipt for Documents/Samples, etc., will be prepared at the Marine Terminal. When the tanker has been loaded, the documents will be completed onboard the tanker for the Master's signature.
2. Immediately upon completion of loading, the official Bill of Lading quantity will be relayed to the Pilot/Mooring Master by radio. In the event of a dispute, the tanker will be requested to recheck the measurement and calculations of the quantity, but the Pilot/Mooring Master will not witness such measurement and calculations. After both tanker and Terminal figures have been verified, should an appreciable difference still exist, receipt of a Letter of Protest will be acknowledged by the Pilot/Mooring Master.
3. Letters of Protest, if any, should be handed to the Pilot/Mooring Master for onward delivery to WAPET. The Mooring Master will acknowledge receipt of the Letter of Protest only, and is not authorised to approve such letter or otherwise.
4. From time to time, Owners, Charterers, Consignees, or other interested parties, may appoint third party inspectors to survey the loading operation on their behalf. Any delays caused by such inspectors shall be considered delays caused by the tanker.
5. The Pilot/Mooring Master shall keep an Operations Log of the times of all operations, delays, quantities loaded, ballast discharged and arrival and departure drafts.
6. Prior to the disembarkation of the Pilot/Mooring Master, the tanker's Master shall sight and verify the times and details contained in the Operations Log, sign the log in the space provided and affix the tanker's official stamp thereto.
7. Should the Master so require, the Pilot/Mooring Master will sight, verify and sign the tanker's Record of Operations prior to his disembarkation.

BALLAST: There are no facilities at the Marine Terminal to receive ballast from tankers.

DEBALLASTING: The tanker shall wherever possible arrive at the port with clean segregated ballast which can be discharged overboard during loading.

Ballast Operations:

1. As there are no ballast or slop reception facilities at the Marine Terminal, all tankers must arrive with clean ballast suitable for discharging directly to sea in accordance with the standards set by the International Conventions. Tankers arriving with ballast unsuitable for discharge to sea will be rejected for loading. Any tanker rejected because of contaminated ballast or sea pollution will automatically invalidate her Notice of Readiness and will lose any priority of loading. Tankers discharging contaminated ballast overboard shall be subject to the anti-pollution laws of Australia. Penalties for pollution are severe.
2. Tankers arriving at the Barrow Marine Terminal should have sufficient ballast to ensure safe handling and manoeuverability in the prevailing weather and sea conditions and in accordance with good seamanship practice.
3. Tankers should have the ability to deballast concurrently with loading operations and any crossovers between cargo and ballast system must be blanked.
4. Where a tanker arrives with clean ballast, which is not part of a segregated ballast system and wishes to discharge such ballast over the side, the following conditions shall be met:
   (a) The tanker must be operating with dedicated clean ballast tanks in accordance with the provisions of Regulation 13(9) or (10) of the MARPOL Annex 1992 revision.
   (b) The tanker must comply with MARPOL Regulation 13A, 1992 revision.
   (c) When operating the oil content monitor required by MARPOL Regulation 13A, the monitor record shall be kept and the record given to the Pilot/Mooring Master for inclusion with the tanker's in port documents.
   (d) The discharge ballast from dedicated clean ballast tanks (CBT) will be carried out in daylight, so that the quality of the ballast being discharged to the sea can be constantly observed.
   (e) If possible, an independent inspector shall inspect the ballast tanks at the discharge port where the ballast is taken on and certify that the ballast is clean.
   (f) Prior to the discharge of the ballast, an independent inspector shall inspect the tanks, or tanks containing the ballast and certify that it is clean and take samples of the ballast, one sample to be retained on board and the other to be kept by WAPET.
   (g) The Master of the tanker shall make a declaration that the lines used for the discharge of such ballast are clean and that the blanks separating the discharge line and the crude oil lines and tanks are tight and free from leaks.
   (h) Where this ballast forms part of the ballast required to keep the tanker at the required safe arrival draft, it should be understood that it will not be discharged until an equivalent amount of crude oil has been loaded to maintain a safe draft as required by these regulations.
5. The attention of Masters, Owners and Shippers using the Terminal, is respectfully drawn to the Australian Government Guidelines with respect to the discharge of any ballast.

SAFETY/POLLUTION:

Safety:

(a) Tankers will not be accepted which could possibly contravene the International Convention for the Safety of Life at Sea 1974 as amended by the 1978 Solas Protocol.

(b) The tanker shall be in a state of readiness at all times to leave the moorings.

Pollution:

(a) Tankers shall comply with the relevant provisions of: the International Convention for the Prevention of Pollution from Ships as defined as the "Convention" in the Pollution of Waters by Oil and Noxious Substances Act 1978 of the State of Western Australia and the Protection of the Sea (Prevention of Pollution from Ships) 1983 of the Commonwealth; those Acts; and other legislation of the State or Commonwealth pertaining to pollution.

(b) The dumping of rubbish overboard at the port is prohibited.

GARBAGE DISPOSAL: No facilities available.

WASTE OIL DISPOSAL: No facilities available.

SEAMAN'S CLUBS: None.

CURRENCY: Australian Dollar (A.$).

GENERAL: *Port Facilities:* Mail forwarded to Barrow Island for the tanker or its crew will be delivered by the Pilot/Mooring Master. Mailing address is "Name of tanker, Barrow Island, Western Australia 6712".

None of the following services are available at the port:

(a) Customs or Quarantine;

(b) ship's agency, repairs, surveying, bunkers or potable water;

(c) medical, consular facilities, telephone, accommodation or laundry;

If a tanker requires any of the above services, most can be obtained at the port of Dampier. WAPET's prior approval should be obtained if the attendance of any person to the tanker requires the services of the mooring vessel.

Discretionary Acceptance: A tanker will be accepted for loading at the Port provided it conforms to the minimum requirements described in these Regulations. WAPET may at its discretion refuse to moor or load any tanker which does not conform to the requirements or is deficient in any manner whatsoever.

Responsibility of Owner: The onus is exclusively on the Master or Owner to ensure that the tanker is seaworthy and that all equipment is and remains in good working order. Failure by WAPET to reject any tanker not meeting the requirements will not relieve the Owner of liability.

Cathodic Protection: Tankers equipped with impressed current cathodic protection systems shall ensure the system is switched off prior to approaching the moorings until the tanker is unberthed. The Master will be required to sign a declaration to the effect that the impressed current cathodic protection system is turned off before the tanker is allowed to berth.

AUTHORITY: West Australian Petroleum Pty. Limited, 233 Adelaide Terrace, Perth. Postal Address: Box S 1580 P.O., Perth, WA 6001, Australia. *Tel:* (09) 263 6000. *Cables:* Wapet. *FAX:* (09) 263 6699. *Contact:* J.C. Wright, Operations Superintendent. Captain C.J. Sutton, Marine Superintendent (Tel: (09) 263-6299 (after hours) or 018-906-744 (mobile).

Barrow Island Tanker Terminal: *Tel:* 091-843700 (hours 0700 – 1630) *Telex:* AA 99125. *FAX:* (091) 843799. *Contact:* Captain W.E. Deacon (Tel: (09) 310-4875), Pilot/Mooring Master.

BOTANY BAY, N.S.W.: 34.00 S. 151.14 E. (See Plan)

DOCUMENTS:
2 Crew Lists (Form M. & S. II).
Stores List (Form 42 A).
Personal Effects List (Form 5).
2 copies Health Report (Form A Q360).
3 copies Ports of Call List (Form C & E 886).

APPROACHES: Channel to Kurnell berths and swinging basin 12.2 m. minimum depth. Channel to port (Port Botany) 213 m. wide and has a minimum depth of 15.0 m. The swinging basin at Brotherson Dock is dredged to 14.6 m.

PILOTAGE: Compulsory. Ordered by Agent basis Master's ETA. Pilot boards outside Botany Bay Heads in position Lat. 34° 01.1′ S., Long. 151° 17.5′ E. Vessels waiting for Pilot not to proceed West of Long. 151° 15′ E. Pilot vessels fitted with VHF for communication with other ships. Watch maintained on Channel 13 while at sea and messages conducted on Channel 6.

RESTRICTIONS: Tankers not berthed at Kurnell after sunset. Mooring normally effected 2 hours before HW at Kurnell No. 3.

MAX. SIZE:

Berth	*Max. Length*	*Max. Draft*	*Remarks*
Kurnell No. 1	183 m.	8.8 m.	
" 2	200 m.	10.7 m.	
" 3	254 m.	11.6 m.	
Bulk Liquids Berth	200 m.	14.0 m.	Max. D.W. 45,000 tonnes

HEALTH: See "Health" before first port.

RADIO: Sydney Radio.

VHF: A continuous watch is kept by the Port Operations and Communications Centre on Channels 16 and 12 (call sign 'Sydney Maritime') and all traffic movements and approval for entry or departure are controlled from the Centre on Channel 13 (call sign 'Sydney Harbour Control').

All vessels proceeding to the Port of Botany Bay are required to advise 'Sydney Maritime' by VHF or 'Marboard' at least 4 hours and again 2 hours prior to their estimated time of arrival at the Port.

All vessels (with exempt Masters only) preparing to proceed to sea are required to call "Harbour Control" on Channel 13 at least one hour prior to departure for permission to proceed.

Also see "Sydney".

TUGS: Three tugs permanently stationed at Botany Bay.

BERTHING:

Berth	*Length* (m.)	*Depth* (m.)	*Remarks*
Brotherson Dock			
Patricks, the Australian Stevedore Terminal			
No. 1	1,000	12.6 – 14.8	Max. draft 15.2 m.
No. 2			
No. 2A			
No. 3			
Container Terminals Australia Ltd. Terminal			
No. 4	936	13.9 – 14.8	
No. 5			
No. 5A			
No. 6			
Bulk Liquids Berth	185	18.3	
Tanker Berths			
Kurnell No. 1	183	11.3	
No. 2	200	11.5	
No. 3	—	13.2	Multi-Buoy Berth

CONTAINER FACILITIES: Container Terminals Australia Ltd (CTAL):

Street Address: 42 Friendship Road, Matraville, Sydney, NSW 2036. Tel: 61 2 666 4144. Fax: 61 2 666 5108.

Summary: Located on the Southern side of Brotherson Dock, CTAL has a capacity to handle more than 500,000 TEUs per year.

CTAL is owned by a consortium of shipping companies, including P&O Containers Pty.Ltd., Nippon Yusen Kaisha Ltd (NYK), Mitsui, OSK Lines (MOL) and Navix Lines Ltd.

CTAL operates 24 hours a day, 7 days a week.

Area: Total terminal area 38 ha.

Berthing Facilities: Total wharf length 936 m. Depth range 13.9 m. – 14.8 m.

Storage: Includes reefer container facilities for 216 integral and 108 non-integral units.

Equipment: Includes 4 twin-lift and 2 high-speed single lift quay cranes, each with a spreader capacity of 40 tonnes and heavy lift capacity of up to 84 tonnes. CTAL also has a modern fleet of forklift trucks, yard tractors, 'bathtub' chassis and 20 rubber tyred gantries (RTGs). CTAL is fully computerised, using a Computerised Vehicle Booking System (VBS) and the Navis Ship/Yard Planning System.

Access: Road access via Friendship Road. On-site transport facilities include 80 truck parking slots and rail sidings linked to the Freight Rail and National Rail Corporation systems.

Patrick – The Australian Stevedore:

Street Address: Penrhyn Road, Port Botany, Sydney, NSW 2036. Tel: 61 2 666 0888. Fax: 61 2 666 3704.

Summary: Located on the Northern side of Brotherson Dock, Patrick Stevedores have a capacity of more than 500,000 TEUs per year. Patrick Stevedores operate 24 hours a day, 7 days a week.

Area: Total terminal area 44.2 ha.

Berthing Facilities: Total wharf length is 1,000 m. with a stern Ro/Ro ramp located at Berth 3. Depth range 12.6 m. – 14.8 m. Maximum draft 15.2 m.

Equipment: Includes 5 single-lift quay cranes, each with a capacity of 35 tonnes, with 3 also having a heavy lift capacity of 80 tonnes.

Storage: Two sheds located near Berth 3 with an area of 6,400 sq.m. and 2,500 sq.m. Reefer container storage includes 568 integral outlets and 216 porthole outlets.

Equipment: Includes 12 rubber tyred gantries (RTGs), 2 rail mounted transtainers and a modern fleet of forklifts, prime movers and trailers.

Transport/Access: Road access via Penrhyn Road. On-site rail includes 2×600 m. sidings linked to the Freight Rail and National Rail Corporation systems.

TANKERS: See "Berthing" and "Developments".

Kurnell Nos. 1 & 2: Operators: Australian Petroleum Pty.Ltd. Finger pier with 2 berths; No. 1 – Eastside. No. 2 – Westside. Crude 1×26 in. 1×18 in. lines – 8 in. hoses. Fuel 1×24 in. 1×12 in. lines – 8 in. hoses. White 6 in. – 16 in. Bunkers and FW ex-wharf. Slop facilities up to 8,200 tons. Berthing and unberthing at all tides, berthing during daylight hours only, can unberth after dark. Vessels restricted by length or deep draft restricted to movement one hour either side of tide.

All vessels turn prior to berthing and are always heading out. At Berth No. 1 port side alongside, Berth No. 2 starboard side alongside.

Kurnell No. 3 Berth: Operators: Australian Petroleum Pty.Ltd. Vessel moors using both anchors forward and ropes to 5 buoys and 7 swamp moorings, semi-circle (astern). Hoses connected midships – 2×12 in. to submarine line (crude). Bunkers, fuel and diesel.

After embarking the Pilot, vessel proceeds on the main entrance leads, (312°), until abeam of Bumbora, or entering the arc of visibility of Bare Island Light, then turn to port on the leading beacons line 271° 22′. In the meanwhile, the Sydney Ports Corporation Superintendent has joined the vessel and taken up station on the forecastle. The vessel continues on the leading beacons line until the drop marks ashore are in line and then drops starboard anchor and turns to starboard to drop port anchor. After dropping the second anchor, the vessel goes astern (with the aid of tugs) until the hose pick-up buoys are abeam of the vessel's starboard manifold. When finishing up 8 shackles of chain will be in the water, so the vessel has to be equipped with minimum 12 shackles of chain on both anchors. The anchoring procedures vary with the individual Pilot. Some Pilots (now that a larger area has been dredged) prefer to drop first the port anchor and then starboard, depending on wind speed and direction.

Ships initially connect their own ropes to the mooring buoys and later pick up the preventer wires. Weather conditions may warrant the connection of a second ship's rope to the buoys.

Vessels moor with their anchors at 45° angle.

Usually 3 tugs are being used for vessels berthing and 2 tugs for vessels unberthing. Ship's ropes are being used for towing ropes.

An accommodation ladder should be rigged on the port side and pilot ladders on both sides.

The sequence of letting go the mooring ropes and heaving up the anchors depends on the wind direction.

Bulk Liquids Berth: Berthing and unberthing undertaken at all hours and at all stages of the tide. Vessels over 215 m. LOA berthed and unberthed in daylight hours only.

Vessels usually turn prior to berthing and go port side alongside heading out.

The Bulk Liquids Berth at Port Botany services the discharge requirements of the petro-chemical industry in New South Wales, and is the busiest of Sydney's 'common user' berths. Bulk liquid petrochemical cargoes are piped to nearby industry storage facilities in an adjacent tank farm complex which is operated by private companies, including PD Van Ommeren, Terminals Pty.Ltd., Boral Energy Pty.Ltd. and ICI Australia Ltd.

Location: This facility is located near the entrance to Brotherson Dock and comprises a piled approach roadway and pipe support structure with "T" head with mooring and berthing dolphins.

Bulk Liquids Berth Users:

PD Van Ommeren, 49 Friendship Road, Matraville, Sydney, NSW 2036. Tel: 61 2 666 4455. Fax: 61 2 694 1182.

Summary: Providing storage and handling facilities for liquid chemical and petroleum products, PD Van Ommeren is a joint venture tank terminal project between Powell Duffryn Terminals Pty.Ltd. (PD) and Van Ommeren Tank Terminals Australia Pty.Ltd. The joint venture includes PD's existing chemical and storage facility, and will mean the development of a new petroleum facility which is expected to be commissioned in 1996.

Site A Facilities (Existing Chemical Terminal):
Area: 4.5 ha.
Product Range: Easy and especially chemicals, vegetable oils and low pressure gases.
Capacity: 36,000 cu.m. with 70 tanks ranging from 30 – 2,000 cu.m.
Type of Tanks: Stainless and mild steel, including various linings.
Services: Heating, blending, nitrogen blanketing, vapour emission control, road tanker, Iso-container, IBC filling, drumming, weighbridge, pipeline connection to Site B.

Site B Facilities (Future Petroleum Terminal):
Area: 6.0 ha.
Product Range: Gasoline, distillate, jet fuel.
Capacity: 94,600 cu.m. (Phase 1) with 12 tanks ranging from 1,500 cu.m. – 16,000 cu.m.
Type of Tanks: Mild steel with aluminium internal floater and dome.
Services: Blending, vapour emission control, fully automated truck loading.
Operational: 1996.

Boral Gas (NSW) Pty Ltd, 47 Friendship Road, Port Botany, Sydney, NSW 2036. Tel: 61 2 316 3800. Fax: 61 2 316 4614.

Summary: The Boral Port Botany LPG Terminal has a (pressure) storage capacity of 4,500 tonnes LPG in 18 sand mounded tanks. The Terminal is the major supplier of high purity aerosol grade LPG propellant to the Sydney market and maintains dedicated un-odourised equipment and trucks for this market. On-site equipment enables the removal of some trace impurities from the LPG.

Area: Total Terminal area 3.78 ha.

Berthing Facilities: Operates a 6 in. marine loading arm at the Port Botany Bulk Liquids Berth.
Storage: Includes 18 sand mounded LPG storage tanks of 540 cu.m. each, giving total storage of approximately 4,500 tonnes LPG.
Equipment: Fleet of 10 LPG delivery trucks ranging from 2 – 22 tonnes capacity. Loading bays for 3 LPG trucks.
Transport/Access: Road access for outgoing product.

ICI Australia Ltd., 39 Friendship Road, Port Botany, Sydney, NSW 2036. Tel: 61 2 316 8612.
Summary: ICI operates an import terminal for propane and butane. Facilities exist for the import of ethylene and LPG, as well as ethylene export. Purging facilities are also available.
Area: 7.25 ha.
Storage: 1×8,000 cu.m. refrigerated ethylene storage tank. 1×14,000 cu.m. refrigerated propane storage tank. 1×14,000 cu.m. refrigerated butane storage tank.
Access: Pipeline distribution system to ICI Petrochemical Plant and LPG Distribution Terminal.
Berthing Facilities: Operates a 6 in. marine loading arm at the Port Botany Bulk Liquids Berth.

Terminals Pty.Ltd., 45 Friendship Road, Port Botany, Sydney, NSW 2036. Tel: 61 2 316 9743. Fax: 61 2 316 9742.
Summary: Terminals Pty.Ltd. provides bulk liquid storage, handling and repackaging services and import and export shipping of non-hazardous liquid chemicals, oils and tallows.
Storage: 64 tanks with a capacity for 47,000 cu.m. The tanks range in size from 200 cu.m. – 800 cu.m. Licensed Bond Warehouse.
Berthing Facilities: 6×150 mm. stainless steel multi-purpose docklines capable of servicing any of the tanks.
Transport/Access: Good road access, with road tanker loading or discharge capabilities.

Also see "Shipmaster's Report" dated August 1995.

BALLAST: *Tank Cleaning and Dirty Ballast Facilities:* APPL Berths No. 1 and 2: Maximum quantity acceptable 8,255 tons. Rate 1,000 t.p.h.

Approval is required to discharge ballast water within the port.

Severe penalties will be imposed by the Corporation for any infringement of Harbour Regulations.

DENSITY: 1025.

FRESH WATER: Available at all berths, rate 30 t.p.h.

FUEL: Marine fuel and diesel oil available at Kurnell Berths No. 1, 2 and 3, and at Brotherson Dock by barge (450 tons), or road tanker.

FIRE PRECAUTIONS: Normal restrictions.

REPAIRS: Most repairs. Tankers are not allowed to be immobilised. Approval is required for immobilisation, and applications are made through the work permit screen on the harbour management system.

DRY DOCKS: None.

GANGWAY/DECK WATCHMEN: Available.

AIRPORT: 6 km. – regular airlines.

TIME: See "General" before first port.

HOLIDAYS: Container Terminals work 360 days per year.

POLICE/AMBULANCE/FIRE: Tel: 000.

SERVICES: Compass adjusting only.

IDENTIFICATION CARDS: See "Melbourne".

DELAYS: Normal only.

GENERAL: *Weather:* The area is subject to severe squalls during Summer months. These line squalls can be seen approaching from the South and their passage is confirmed by strong S.-S.E. winds. Winter storms are caused by the passage of cold fronts moving up the coast from the South. Winds shift rapidly from N.-N.W. to S.W. then S. to S.E. increasing in force and building up swell from S.E.

Propellers: The turning of propellers while a vessel is secured to a berth is not permitted unless permission is granted by the Harbour Master.

DEVELOPMENTS: A second Bulk Liquids Berth is planned to the South of the existing Bulk Liquids Berth (See "Tankers" – PD Van Ommeren – Site B).

SHIPMASTER'S REPORT: August 1995.

Charts: AUS. No. 197, 198 and 199.

Approach: From the North, Port Jackson/Sydney area is prominent.

Do not get Potter Point, the Northern entrance to Bate Bay, which is to the South of Botany Bay, confused with Cape Banks, the Northern entrance to Botany Bay.

Anchorage: Only in Bate Bay to South of Botany Bay, with Point Hacking bearing 220°×8 cables. Beware of Osborn shoal in centre of Bay. This anchorage can be dangerous in poor weather (this ship's first-hand knowledge). If there is any sign of wind increasing in strength, pick-up anchor and steam outside.

Vessel cannot anchor in Botany Bay, due to berthing movements and the airport.

Ships generally have to drift off if awaiting berthing.

Pilots: VHF as per ALRS and boarding as per AUS. No. 198. Pilot often boards further out, about 4 miles from the entrance, from a fast cutter.

Pilot is very partiuclar about the pilot ladder and will give deficiency report for slightest defect.

Pilotage available throughout 24 hours.

Steaming time to Bulk Liquids Berth is about 45 minutes.

Channel: From Cape Banks to berth is 3 miles, minimum depth 15.0 m. at MLW.

Tugs: Three tugs of 35 tons bollard pull are based at Botany Bay. Tugs' lines are used. Normally 2 tugs are used and join vessel off breakwater.

Berths: Multi-User Bulk Liquid Berth: Berth is heavily utilised and under frequent repair. The berth is situated at the Southern entrance to Brotherson Container Dock (concrete construction).

It is the only refined product liquid berth in Botany/Sydney area (Crude and raw products berths and moorings on S.E. side of Botany Bay).

It is a tanker 'T' type jetty set off about 90 m. from the shore line. Fender length 95 m. Depth 14.5 m. at datum.

Vessels always berth head out port side alongside. Forward moorings go to dolphin connected by catwalk to main jetty. Stern moorings to corner of container wharf. 4,2 each end by line boat.

Fresh water available and is included in port dues, so top-up.

Accommodation ladder can be landed.

Store trucks not allowed on jetty roadway to shore. But LPG operated forklift can be supplied by Boral to take pallet stores from parking bay to ship's side.

N.E. corner knuckle has poor fendering.

It is proposed to develop a second liquids berth just South of the existing berth.

Terminal: Basically two parcels of LPG handled:

Refrigerated – Receivers were Elgas and Gogas (into ICI Terminal).

Pressured – Receivers were Boral.

Refrigerated Chicksan is the Northern arm (or stern arm port side to) and ambient the Southern arm. Distance apart 6.0 m.

Refrigerated 6 in. × ASA 300. Ambient 6 in. × ASA 300 connections.

The refrigerated arm has a height envelope restriction:

Distance above W/L – 4.0 m. to 11.7 m.
Distance to ship's side – 0.5 m. to 5.0 m.

Vessel has to shift along berth 6.0 m. (about 30 minutes) between parcels. Normally ambient (Boral) discharged first.

ICI storage (refrigerated):

1×7,500 tonnes Propane.
1×7,600 tonnes Butane.
1×4,200 tonnes Ethylene.

ICI pumping 300 tonnes/hr. at 5.0 Bar back pressure.

Boral storage: 18×500 cu.m. pressure tanks.

Pressure pumping rate 160 tonnes/hr. at 9 Bar back pressure, temperature +4°C.

The distance from berth to both tank storage installations is about 0.5 miles.

Sydney Ports Corporation who own and operate the berth are very safety conscious. They require ship's ESD to be tested before commencement of discharge. Ship's fire wallet to go ashore. Frequent check rounds are made. Fire hose connected from shore to ship via international connection. It is not to be pressurised except in an emergency, otherwise berth alarm sounds and valves shut down.

Other liquids are also handled through flexi-hoses, such as chemicals, fats and fuels.

The land on peninsular South of the berth is gradually being in-filled for further tank farm installations.

Customs: If first port of entry, Inward papers (on Australian forms) to be submitted via Agent by Fax at least 7 days in advance. Failure to do so might delay vessel.

The forms include Crew Report List (Alphabetical order), Ship's Inward Cargo Report, Quarantine Declaration, Report of Ship's Stores, Ports of Call List, Ship's Report of Arrival.

On arrival, Crew Effects Declaration (Alphabetical order) is also required. Customs are generally fair and reasonable.

If sailing coastwise, Customs then issue 'Rider Envelope' with all relevant documents, plus Clearance to next port.

Customs also act for Immigration and sign crew on and off.

Telephone: Pay/card telephone ashore in watchman's cabin at end of jetty.

Airport: Sydney-Kingsford Smith International about 4 miles away.

Chandler: East Coast – Tel: 02 317 2199. Fax: 02 317 2342. Telex: 22503.

Sealanes – Tel: 02 666 4533. Fax: 02 666 6581. Telex: 120925.

Bunkers/Lube Oil: By barge. Vessels cannot take on whilst cargo Chicksan/hose is connected, basically due to the fact that the one and only barge is not rated as intrinsically safe by the Ports Corporation.

AUTHORITY: Sydney Ports Corporation, P.O.Box 25, Miller's Point, NSW 2000, Australia. *Tel:* (02) 364 2999. *FAX:* (02) 364 2812. *Contact:* Shipping Manager.

AGENT: See "Sydney".

BOWEN, Queensland: 20.01 S. 148.15 E. **(See Plan)**

The channel was sounded in 1988 and a least depth of 7.0 m. was found. The depth in the swinging basin was 5.5 m.

The seaward end of Wharf No. 1/2 has been demolished.

The coal loading facility on Wharf No. 3 has been removed.

AUTHORITY: Department of Transport, Division of Harbours and Marine, P.O.Box 889, Bowen, Queensland 4805. *Tel:* (077) 861933. *Telex:* 47435. *FAX:* (077) 862719. *Contact:* Captain R.C.Johnson, Regional Harbour Master (Townsville). Tel: (077) 715135).

BRISBANE, Queensland (including Fisherman Islands, Hamilton, Pinkenba): 27.27 S. 153.04 E. (See Plan)

PORT LIMITS: A vessel is considered an "arrived vessel" when it is at the Pilot boarding grounds 3 nautical miles S.E. of Point Cartwright.

DOCUMENTS: See "Melbourne" and Radio Officer's Report.

APPROACHES: Good navigation conditions in Moreton Bay except in exceptionally heavy weather in N.W. channel. Minimum depth in N.W. channel 13.5 m., in Bar Cutting 13.0 m., in Swinging Basin at Luggage Point 13.0 m., to Hamilton 9.1 m. (all LWOST). Dredged channels in Moreton Bay minimum 300 m. width. River Cuttings 120 m. width, Bar Cutting 180 m. width.

In Moreton Bay and Brisbane River the mean spring rise is 2.13 m. above LWST and mean neap rise is 1.74 m. above LWST. The lowest neap tide 1.22 m. above LWST and maximum spring tide 2.7 m. above LWST. The visibility is generally good except in cyclonic weather when heavy rain.

PILOTAGE: Notify Agent approximately 1 week in advance. Confirm ETA to Duty Harbour Master 24 hours before arrival at pilotage ground, plus max. draft. Master of vessel to radio ETA Pilot boarding ground 8 hours before arrival. Messages should be sent to Telex: Harcal AA 42215 or Fax: +61-7-3895-1311.

Contact "Brisbane Harbour" by VHF Channel 16 when within range. Pilot boards S.E. of Cartwright Point in position, Lat. 26° 43′ S., Long. 153° 10.6′ E. Pilot vessel white hull with words "Pilots" in black letters. Orange superstructure. Place ladder about 2.0 m. from water.

Pilot ground is 44 miles from entrance to river. River then navigable to ocean going vessels for 14 miles from the mouth.

Same Pilot remains to berth vessel. Pilotage time about 4 hours.

Coastal and Reef Pilotage: Pilotage through the Inner Route of the Great Barrier Reef to Torres Strait is conducted by licensed pilots available from Australian Reef Pilots Ltd. and Queensland Coastal Pilot Service Pty. Ltd. See "Torres Strait" for details.

Masters are advised that pilotage in the Inner Route and at Hydrographers Passage is compulsory. Pilotage in the Great North East Channel is recommended by IMO. See "Torres Strait".

RESTRICTIONS: Berthing times dependent on vessel's draft in relation to state of tide.

MAX. SIZE: Waterline length in river 250 m. at 9.7 m. draft. Draft at HWOST for tankers 12.2 m.; for cargo vessels 9.7 m. and bulk carriers 13.2 m. downstream of Pelican Bank (Fisherman Islands).

HEALTH: See "Melbourne". Doctor boards at river entrance or at berth. Available 24 hours per day.

RADIO: Most traffic channelled through VIB, coastal radio station Brisbane. VHF Channel 16, 156.8 MHz.

RADAR: Continual watch kept at Harbour Control on relay from Caloundra Head and Redcliffe Peninsular Radar Stations.

TUGS: Five tugs available, 2×62 tonnes, 1×27 tonnes and 3×42 tonnes bollard pull. Tugs are privately owned. Tugs join vessel approaching the berth, or as may be required elsewhere in the river. Line boats available.

BERTHING:

Berth		*Length* (m.)	*Depth LWOST* (m.)
Hamilton Reach			
Hamilton Wharves	No. 1	140	10.4
	No. 2	240	10.4
	No. 3	170	10.4
	No. 4	210	10.4
Keppel Cairncross Fitting Out Wharf		307	9.1
Maritime Wharves	No. 1	170	9.1
	No. 2	260	10.2
	No. 3	260	10.4
Quarries Reach			
Mobil Wharf		190	8.0
Sugar Wharf		270	10.1
Shell Wharf		220	11.0
Pacific Terminals		180	8.5
Pinkenba Bulk Wharf		256	10.5
B.P.Wharf (Products)		225	11.0
Incitec North		122	10.1
Incitec South		150	10.5
Ampol Wharf (Products)		182	9.8
QCL		220	9.8
Fisherman Islands:			
Containers	No. 1	200	12.0
	No. 2	200	12.0
	No. 3	300	12.0
	No. 4	300	12.0
	No. 5	300	12.0
Coal/Clinker Wharf		240	13.5
Grain Wharf		240	13.0
Ampol Wharf (Crude oil)		260	12.8
B.P.Wharf (Crude oil)		274	13.5

CRANES:

Location	*No.*	*Capacity* (Tonnes)
Hamilton No. 2	1	85 (Jib Crane)
Maritime No. 3	1	75 (Jib Crane)
Fisherman Island No. 2	1	35 (Gantry), 60 (Heavy Lift)
Fisherman Island No. 3	1	30 (Gantry), 80 (Heavy Lift)
Fisherman Islands No. 4 & 5	2	36 (Gantry), 64 (Heavy Lift)
	1	45 (Gantry), 60 (Heavy Lift)

BULK LOADING FACILITIES: *Hamilton Wharf Berth No. 4:* Gross handling rate for loader is up to 1,800 t.p.h. Movable conveyor system services 110 m. of wharf. Mineral Sand – Daily rate 7,000/8,000 tonnes.

Pinkenba: Single shiploader. Loading rate for grain 1,300 t.p.h. Silica sand and other dry bulk cargoes loaded via grain shiploader.

Coal Wharf: Single shiploader, loading rate for coal up to 3,300 t.p.h. Clinker unloading rate up to 1,800 tonnes per hour.

Grain Wharf: Single shiploader, loading rate up to 2,500 t.p.h. Storage capacity 60,000 tonnes.

Woodchip Facility exports bulk pinewood chips via grain loader and wharf. Storage capacity 80,000 tonnes. Loading rate up to 1,000 t.p.h.

BRIDGES: Gateway Bridge in Quarries Reach. Clearance 57.4 m. at highest tide. Vessels with structures exceeding 45 m. above waterline must obtain approval of Harbour Master to pass under bridge.

STEVEDORES: Ample labour available for all cargo working.

Normal capacity per gang per shift: 60 tons break bulk; 75 tons palletised cargo.

TANKERS: Port and Harbour Regulations stipulate that tankers use large coir/nylon springs for attaching vessel's fore and aft springs to the mooring bollards on the wharves except where tension winches are fitted. The springs are supplied by wharf owners.

Moorings should consist of at least 4 parts out each end in addition to 2 back springs both fore and aft. If these lines are not tended and taut at all times the vessel cannot be considered to be securely moored. In addition to the above 2 lines have to be made fast: 1 fore-line from the main deck and 1 aft-line from the main deck.

A rat guard is to be properly fixed to each mooring line and where it is not possible to place a guard on the forward or after spring lines, a piece of tarred rag or hessian should be attached.

A Radar Station at Brisbane Harbour Control, Whyte Island, at the mouth of the Brisbane River, conducts a 24 hours, all weather watching brief over all ships entering or leaving the port of Brisbane.

The load-line and freeboard of tankers arriving with full cargo may be inspected by the Australian Maritime Safety Authority.

All officials or crew wishing to go to or leave the B.P. Terminal at Luggage Point must do so by launch. Masters should contact the local Agents to arrange.

Ampol Refinery, Fisherman Islands: Dolphin berth. Berth length 260 m., depth 13.0 m. Grades handled:

Crude Oil discharge, 4×10 in., 3,353 m., 150 p.s.i./3,500 cu.m.p.h. max.

Fuel Oil, Diesel Oil, Gas Oil, loading 4×8 in., 3,353 m., 290 cu.m.p.h. max.

No dirty ballast facility.

Berthing is usually starboard side alongside (so first turning in turning basin). Depending on the tide, port side alongside is also a possiblity.

B.P. Refinery, Luggage Point: Dolphin berth. Berth length 274 m., depth 13.5 m. LWOST. Grades handled:

Crude Oil discharge 2×12 in., 1,402 m., 150 p.s.i./3,500 cu.m.p.h. max.

Fuel Oil, Diesel Oil, loading 2×12 in., 1,402 m., 300 cu.m.p.h. max.

No dirty ballast facility.

Port side alongside.

Ampol Products Wharf, Lytton: T-head and Dolphins. Berth length 182 m., depth 9.8 m. LWOST. Grades loaded:

Fuel Oil, 1×8 in., 1,676 m., 200 cu.m.p.h. max.

Gas Oil, 3×8 in., 762 m., 1,500 cu.m.p.h. max.

Ballast, 2×8 in., 1,676 m., 1,000 cu.m.p.h. max.

Kerosene, 2×8 in., 1,676 m., 1,000 cu.m.p.h. max.

Diesel Oil, 1×8 in., 1,676 m., 350 cu.m.p.h. max.

Dirty Ballast: 2×8 in., 762 m., max. 6,000 tons, max. rate 1,000 cu.m.p.h.

Starboard side alongside.

B.P. Products, Bulwer Island: T-head and Dolphins. Berth length 225 m., depth 11.0 m. LWOST. Grades loaded:

All products: Loading 1×8 in., 2,764 m., 550 cu.m.p.h. max. Discharge 1×8 in., 183 m., 150 p.s.i., 1,000 cu.m.p.h. max.

LPG: Loading 1×6 in., 671 m., 45 cu.m.p.h. max.

Dirty Ballast: 1×8 in., 90 m., max. 4,460 tons, max. rate 1,000 cu.m.p.h. max. No ballast with chemicals acceptable.

Either side alongside.

Shell, Pinkenba: T-head and Dolphins. Berth length 220 m., depth 11.0 m. LWOST. Grades discharged:

Fuel Oil, Diesel Oil, Bitumen, 1×8 in., 427 m., 150 p.s.i., 1,000 cu.m.p.h. max.

Gas Oil, Ballast, Kerosene, Chemicals, 1×8 in., 427 m., 150 p.s.i., 850 cu.m.p.h. max.

Lub Oils, 1×8 in., 732 m., 150 p.s.i., 320 cu.m.p.h. max.

No dirty ballast facilities.

Starboard side alongside.

Mobil, Colmslie: T-head and Dolphins. Berth length 190 m., depth 8.0 m. LWOST. Grades discharged:

Ballast, Kerosene, Gas Oil, Chemicals, 1×8 in., 577 m., 150 p.s.i., 750 cu.m.p.h. max.

Fuel Oil, Diesel Oil, 1×8 in., 577 m., 150 p.s.i., 800 cu.m.p.h. max.

Lub Oils, 1×8 in., 577 m., 150 p.s.i., 300 cu.m.p.h. max.

LPG, 1×2 in., 91 m., 15 cu.m.p.h. max.

No dirty ballast.

Either side alongside.

Maritime Wharves, Hamilton: T-head and Dolphins. Grades discharged:

Ballast, Kerosene, Gas Oil, Fuel Oil, Diesel Oil, 1×8 in., 1,676 m., 150 p.s.i., 750 cu.m.p.h. max.

No dirty ballast facilities.

Starboard side alongside.

All berth depths must be confirmed prior to arrival.

Gas freeing facilities not available, but chemist available to issue Gas-free Certificate. There are slop discharge facilities at both refineries.

Also see "Shipmaster's Report".

Appendix: *Night Berthing/Unberthing NGF Tankers:*

		All tankers inert/ non-inert		Foreign tankers >130 m.LOA inert/ non-inert		Australian manned >130 m.LOA non-inert		All tankers Australian Foreign inert/ non-inert		Australian manned >130 m.LOA inert - after 3 trips approval	
		Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep
AMFI	HU	yes	yes								
	HD	yes	yes								
BPLP	HU	yes	yes								
	HD	yes	yes								
AMPR	HU			yes	no	yes	no	yes	yes	yes	yes
	HD			no	yes	no	yes	yes	yes	yes	yes
BPPR	HU			yes	no	yes	no	yes	yes	yes	yes
	HD			no	yes	no	yes	yes	yes	yes	yes
SHLL	HU			yes	no	yes	no	yes	yes	yes	yes
	HD			no	yes	no	yes	yes	yes	yes	yes
PACT	HU							yes	yes	no	no
	HD							yes	yes	no	no
INCN	HU			yes	no	yes	no	yes	yes	yes	yes
	HD			no	yes	no	yes	yes	yes	yes	yes
INCS	HU			yes	no	yes	no	yes	yes	yes	yes
	HD			no	yes	no	yes	yes	yes	yes	yes
PNK2	HU			no	no	no	no	no	yes	no	yes
	HD			no	yes	no	yes	no	yes	no	yes
MOBL	HU			no	no	no	no	no	yes	no	no
	HD			no	yes	no	yes	no	yes	no	yes
MAR	HU			yes	no	yes	no	yes	yes	yes	yes
	HD			no	yes	no	yes	yes	yes	yes	yes
CXFOB	HU			no	no	no	no	no	yes	no	no
	HD			no	yes	no	yes	no	yes	no	yes

There are no restrictions on berthing/unberthing for MARPOL tankers with DBTs, SBTs and IG systems, other than MARPOL mid-deck tankers.

Operator's Reports: *Caution:* Buoys may sometimes be found in positions other than charted due to the effect of bad weather conditions or being deliberately moved as required by natural channel and bank movements. The channels and banks are constantly changing due to the effect of tidal streams accentuated by bad weather conditions. Tidal streams set obliquely across channels and great caution is required.

Approaches: Caution on draft: The tidal situation in the entrance channels, Moreton Bay, Brisbane River Bar and swinging basin of Luggage Point is rather complex. Masters of crude vessels, bound for the Ampol or B.P. Refineries and not regularly trading to these terminals should, prior to loading, contact the refineries through their agents and ask for the maximum allowable draft. This is in order to avoid deadfreight claims if not loaded to maximum draft or the necessity for lightering prior to entering the river if too deeply loaded. There are 2 bunker barges available (1×1,575 tons and 1×800,000 litres).

Traffic Control and Regulations: The Port of Brisbane Corporation operates an advisory type of traffic control under the control of a certified officer in charge of the Harbour Control.

All shipping movements on Brisbane River shall be advised to the officer in charge and no vessel, with a length of 51 m. or more, shall enter any of the dredged cuttings or leave her berth except at a time approved by the Harbour Master's office. A ship about to enter the Brisbane River shall advise "Brisbane Harbour" at least 30 minutes prior to that time.

No tanker movements in the Brisbane River during the hours of darkness unless approved by the Harbour Master. Normally no permission will be granted to enter the port and to berth between sunset and sunrise, but as a rule unberthing and departure will be approved if on flood tide and heading out.

Shell Terminal:

(a) Description:

The terminal is located at Pinkenba and connected with the berth at Pinkenba by 8 in. pipeline of about 5,700 ft. length.

The berths are also used by grain, silica sand and other dry bulk and general cargo carriers, and berthing priority is in order of arrival.

(b) Berthing and Unberthing:

Harbour Regulations restrict berthing to daylight hours only. Since it is normally required that tankers berth heading downstream, berthing is in fact restricted to daylight flood only. Normally permission will be given for night time unberthing on flood tide and departure. All berths in the Brisbane River are subject to siltation and maximum allowable draft should be checked prior to loading for this port.

Pilots usually use 2 tugs for berthing and unberthing of vessels over 150 m. LOA.

Vessels turn in the Pinkenba Cutting prior to berthing with assistance of tugs. If necessary, anchor is used.

Standard mooring configuration is 3 head lines, 3 stern lines, 1 breast line forward and aft, and 1 backspring forward and aft.

Since ranging may be expected due to passing ships, it is recommended to double the back springs and to use the shore side nylon springs provided. A breasting dolphin about 75 ft. downstream of the wharf has been installed in order to decrease the overhang of longer vessels.

(c) Cargo Operations:

The berths are used for the discharge of white products, base lube oils and solvents. If flammable products are being discharged barricades will be erected, with guards.

Ship's boom is used for hose connecting and disconnecting.

Port Corporation inspectors may attend.

B.P. Crude Berth: Max. LOA 261 m. Max. draft is dredged depth less 1.0 m. plus tide (range 1.2 m. – 2.4 m.), but subject to approach channel depth of 11.58 m.

(a) Description:

The B.P. Crude Berth is an island berth, consisting of a central platform with 2 breasting dolphins and 2 mooring dolphins at either side, located at Luggage Point on the Northern side of the Brisbane River entrance. There is no fendering on the face of the central platform. There is 1 × 20 in. crude oil pipeline from the berth to the B.P. Refinery on Bulwer Island of about 6,000 ft. length. In addition there is an 8 in. bunker line and a 3 in. fresh water line. 2 × 12 in. Wheaton Loading Arms and 1 × 8 in. Wheaton Loading Arm, all with Camlock couplings.

Shore gangway. No ballast or slop facilities.

(b) Berthing and Unberthing:

Vessels turn in the swinging area off the berth, with the assistance of tugs and starboard anchor if necessary. Pilots use 2 tugs for vessels up to 700 ft. LOA and 3 tugs for longer vessels. Normally there are no restrictions on unberthing and vessels can unmoor and depart at all times and at all stages of the tide.

Standard mooring configuration is minimum 3 head lines, 3 stern lines, 1 breast line forward and aft, and 1 backspring forward and aft.

(c) Cargo Operations:

Two loading arms are used for the discharge of crude oil.

Max. pressure 200 p.s.i. (1,380 kPa).

Larger quantities of fuel oil are back loaded through the 20 in. crude oil line, smaller quantities through the 8 in. bunker line.

An inspector of the Port Corporation may attend.

(d) COW: Crude Oil Washing would be allowed during discharge only on the following conditions:

1. Any delay in crude discharge to be to vessel's account.
2. Crude Oil Wash system must be fixed, permanent installation that does not include any flexible or portable components.
3. Tank inerting system must be capable of maintaining 8% or lower oxygen content throughout operation.
4. Ship must agree to terminal inspection of both systems 2 and 3.
5. Ship to obtain any necessary approval from Port Authorities.

B.P. Products Berth: Max. LOA 185 m. (210 m. with Harbour Master's approval). Max. draft is dredged depth less 1.0 m. plus tide (range 1.2 m. – 2.4 m.).

(a) Description:

The B.P. Products Berth is located on Bulwer Island, nearly 3 miles upstream of the B.P. Crude Berth. The berth is a T-head jetty with 2 breasting dolphins, 2 mooring dolphins and mooring posts on the river bank. There is no fendering on the face of the T-head.

(b) Berthing and Unberthing:

Since the Port Corporation objects to turning loaded tankers off the berth, berthing is normally restricted to the daylight flood tide and vessels turn in the swinging area off the berth prior to going alongside. Starboard anchor is used for turning if necessary.

Pilots use 2 tugs for berthing and 1 – 2 tugs for unberthing.

Standard mooring configuration is 3 head lines, 3 stern lines, 1 breast line forward and aft, and 1 back spring forward and aft. In connection with ranging due to passing ships, it is recommended to double the back springs. Mooring lines should be tended at all times while alongside.

Ship's gangway is used.

(c) Cargo Operations:

Ship's boom is used for hose connecting and disconnecting. Ballast and slop facilities are available (7,000 tons). Shore connects and disconnects hoses.

Connections: 3×8 in. (200 mm.) arms for white products, black oil and ballast. 2×50 mm. and 1×150 mm. hoses for LPG.

An inspector of the Port Corporation may attend.

Ampol Crude Berth:

(a) Description:

The Ampol Crude Oil Berth is at Fisherman Islands on the south side of the Brisbane estuary. It consists of a central platform with 1 breasting dolphin and 2 mooring dolphins at either side of the platform. The face of the platform is fitted with fendering. There is a 28 in. crude oil pipeline of about 10,866 ft. length from the berth to the Ampol refinery situated adjacent to Fort Lytton. Shore gangway. Slop and facilities are usually not available but in an emergency the 8 in. bunker line can be used for this purpose.

(b) Berthing and Unberthing:

Vessels usually berth stemming the tide at approximately 1.5 hours after the HW at the Pile Light.

Pilots use 2 tugs for vessels up to 700 ft. LOA and 3 tugs for longer vessels. Normally vessels can unberth and depart at all times and at all stages of the tide.

The controlling depth alongside the berth is 13.0 m. below chart datum. Maximum allowable draft 41 ft. (depending on height of tide). Maximum LOA 850 ft.

Standard mooring configuration is minimum: 3 head lines, 3 stern lines, 1 breast line forward and aft, and 1 back spring forward and aft.

Shipmaster's Report: February 1992.

No objections to turning loaded vessels. According to our pilot's information, tankers usually turn before berthing, to go alongside head outward.

Foreign tankers berth in daylight only, against the tide.

(c) Cargo Operations:

3 loading arms are used for the discharge of crude oil.

An inspector of the Port Corporation may attend.

Ampol Products Berth:

(a) Description:

The Ampol Products Berth is located 2 miles further up the south bank of the river from the Crude Berth at Lytton Rocks Cutting. There is a road from the refinery main gate direct to this berth (1 mile). The berth is a T-head jetty with 2 breasting dolphins and 4 mooring dolphins.

(b) Berthing and Unberthing:

Vessels usually berth head down river and consequently berthing is restricted to the daylight flood tide and vessels turn in the swinging area at Pinkenba prior to going (starboard side) alongside. Port anchor is used if necessary.

Two tugs are being used for berthing and one tug for unberthing.

Unberthing normally at day or night floodtide.

Standard mooring configuration: 3 head lines, 3 stern lines, 1 breast line forward and aft, and 1 back spring forward and aft. It is recommended to double the back springs. Mooring lines to be tended at all times while alongside.

Ship's gangway is used.

(c) Cargo Operations:

Ship's boom is used for hose connecting and disconnecting. A number of products are loaded through common pipeline. Ballast and slop facilities are available. Shore connects and disconnects hoses.

An inspector of the Port Corporation may attend.

DENSITY: 1025 (possibly less during cyclone conditions).

CONSULS:

Austrian Honorary Consul, 30 Argyle Street, Breakfast Creek. Tel: (07) 3262 8955.

Belgium Honorary Consul, 92a Macarthur Avenue, Hamilton. Tel: (07) 3268 7955.

Bolivian Honorary Consul General, 210 Queen Street, Brisbane. Tel: (07) 3221 1606.

British Consulate General, BP House, 1 Eagle Street, Brisbane. Tel: (07) 3236 2575.

Canadian Consul General, Sydney. Tel: (02) 364 3000.

Chilean Honorary Consul, 204 Baroona Road, Rosalie. Tel: (07) 3368 4073.

Cyprus Honorary Consul General, 280 Sir Fred Schonell Drive, St.Lucia. Tel: (07) 3371 5105.

Danish Honorary Consul, 180 Queen Street, Brisbane. Tel: (07) 3221 8641.

Finnish Honorary Consul, 308 Edward Street, Brisbane. Tel: (07) 3221 8150.

French Honorary Consul, 10 Market Street, Brisbane. Tel: (07) 3229 8201.

German Honorary Consul, 10 Eagle Street, Brisbane. Tel: (07) 3221 7819.

Greek Honorary Consul General, 215 Adelaide Street, Brisbane. Tel: (07) 3228 5677.

Italian Consul, 10 Eagle Street, Brisbane. Tel: (07) 3229 8944.

Japanese Consul General, Comalco Place, 12 Creek Street, Brisbane. Tel: (07) 3221 5188.

Mexican Consulate. Tel: (07) 3221 6755.

Nepalese Consulate General, 10 Eagle Street, Brisbane. Tel: (07) 3232 0336.

Netherlands Honorary Consul, 101 Wickham Terrace, Brisbane. Tel: (07) 3839 9644.

New Zealand Consul General, 288 Edward Street, Brisbane. Tel: (07) 3221 9933.

Norwegian Honorary Consul, 301 Wickham Street, Fortitude Valley. Tel: (07) 3854 1855.

Papua New Guinea Consul, 99 Creek Street, Brisbane. Tel: (07) 3221 7915.

Philippines Honorary Consul General, 17 MacArthur Avenue, Hamilton. Tel: (07) 3268 7212.

Polish Consulate, 324 Queen Street, Brisbane. Tel: (07) 3221 3564.

Portuguese Honorary Consul, 379 Queen Street, Brisbane. Tel: (07) 3229 2233.

Republic of Malta, 4/215 Adelaide Street, Brisbane. Tel: (07) 3229 4388.

Solomon Islands Consulate General, 255 Adelaide Street, Brisbane. Tel: (07) 3221 7899.

Spanish Honorary General, 25 Mary Street, Brisbane. Tel: (07) 3221 8571.

Sri Lankan Honorary Consul, 139 Roghan Road, Taigum. Tel: (07) 3265 3693.

Swedish Consulate, 60 Edward Street, Brisbane. Tel: (07) 3221 9797.

Thailand Royal Thai Consulate, 5/101 Wickham Terrace, Brisbane. Tel: (07) 3832 1999.

United States of America Consul, 383 Wickham Terrace, Brisbane. Tel: (07) 3831 3330.

Uruguayan Honorary Consul, 140 Links Avenue, Eagle Farm. Tel: (07) 3868 1181.

FRESH WATER: From mains, generally at 35 t.p.h. Contact local agent to confirm.

FUEL: Oil bunkering facilities are available at Maritime Wharves No. 1, 2 and 3.

Also from the following oil company terminals:

B.P. (Pinkenba); Shell (Pinkenba); Ampol (Lytton); Mobil (Colmslie); B.P. Maritime (Hamilton).

The oil companies will also deliver fuel by road tanker to cargo berths.

A barge bunkering service supplying marine fuel oil, plus lube and gas oil, is operated within the port by Riverside Oil Bunkering Co. Pty. Ltd. The largest capacity barge is 1,575 tons, discharging rates up to 580 t.p.h.

This service is also available at Moreton Bay Anchorage (Brisbane Roads) for ships requiring bunkering only (24 hours service). Apart from pilotage, there are no navigation charges or tugs required to stand by at anchorage.

REPAIRS: All major repairs undertaken, including main propulsion diesel engines, steam turbines, boilers, reduction gearing servicing, propellers, tailshafts, stern bearings, all engine-room repairs, deck gear, radar, radio and sonar equipment, fitting-out berths.

DRY DOCKS: Keppel Cairncross Shipyard Complex offers 24 hour dry dock and fitting out berth, ship repair and maintenance facilities. Dry dock capacity 85,000 tonnes. Tel: 61-7-3227-0888.

SURVEYORS: Brian Petitt & Assoc. Pty. Ltd., Thynne Road, Morningside, Qld. 4171. Tel: (07) 3993755. Fax: (07) 3998850.

GANGWAY/DECK WATCHMEN: Normally by crew, but can be hired.

OPENING/CLOSING HATCHES: Performed by stevedores/crew.

CARGO GEAR: Heavy lift cranes and facilities up to 80 tons available at certain wharves.

HOLIDAYS: New Year's Day; W.W.F. Picnic Day; Australia Day; Good Friday; Easter Monday; Anzac Day; Queen's Birthday; Christmas Day; Boxing Day.

Close Holidays – Christmas Day, Good Friday, Anzac Day, Labour Day, W.W.F. Picnic Day (No labour available these days). Some public holiday dates vary from year to year. Consult Agent for current information.

CUSTOMS ALLOWANCES: See "Melbourne".

AIRPORT: International flights to all major Asian, European, Pacific and North and South American destinations.

TIME: See "General" before first port.

POLICE/AMBULANCE/FIRE: Tel: 000 and ask for service required.

TELEPHONES: At all wharves. Can be connected on board.

IDENTIFICATION CARDS: See "Melbourne".

SEAMAN'S CLUBS: Seafarers' Centre, Harbour Road, Hamilton. Tel: 3268-3495. Public transport to and from the city is convenient/available. Look for bus numbers 150, 160, 170, 180 and 190.

Seafarers' Centre, Port Drive, Fisherman Islands. Tel: 3895-1181. Regular public (bus) transport is not available. However, group bus tours and/or group bus transport to the city can be organised by informing the Seafarers' Centre. Fisherman Islands, 12 hours before the bus is required. Taxis: Black/White Tel: 131008; Wynnum Tel: 3396-2111 (local company); Yellow Tel: 3391-0191.

GENERAL: *De-Bunkering:* In order to load more cargo, a vessel de-bunkered whilst alongside and re-bunkered in Moreton Bay in deep water and was thereby able to load an additional 600 tons of cargo (October 1987).

Charts: Australian Charts No. 235, 236, 237 and 238.

DEVELOPMENTS: A strategic plan for development of the port to 2005 and beyond was released in May 1992, and is available for inspection.

Rail Intermodal Terminal, 3 container parks and standard gauge rail link to Fisherman Islands are now operating, serving road/rail/sea container traffic via Brisbane.

Please contact the Port of Brisbane Corporation for further details.

RADIO OFFICER'S REPORT: September 1990.

Brisbane was the last port of call in Australia.

Documents:

Customs will normally only board the ship at departure. Quarantine will not board the ship.

Sealed envelope from Customs in Sydney handed over. 2 copies of Crew List required.

If the vessel is going to Indonesia, Hong Kong or Singapore after Australia, the following forms should be faxed prior to departure:

Indonesia:	Crew List to be faxed to first Indonesian port for pre-arrival clearance.
Hong Kong:	Crew List to be faxed to Hong Kong for pre-arrival clearance (not possible with crew originating from communist countries). Also List of Ports of Call, copies of Registry, Safety Equipment, Safety Construction, Safety Radio, Load Line and Derat Certificates.
Singapore:	Crew List to be faxed for pre-arrival clearance.

SHIPMASTER'S REPORT: August 1995.

Charts: AUS. No. 235, 236, 237 and 238.

Approach: The prominent pinnacles of Glasshouse Mountains are unmistakable. Point Cartwright with its very conspicuous water tower stands out. Caloundra, 7 miles to South, with its many buildings, is also conspicuous.

The Racon on the Beacon NW2 at Morton Bay Channel entrance is radar conspicuous.

Anchorage: See AUS. No. 235. Anchorage is 4 miles S.S.E. from Point Cartwright, outside port limits, if awaiting pilot/berth, in about 30 m. Very exposed and holding ground is poor, so best to steam in poor weather.

Inside Port Limits/Pilotage Waters: Lower end of Morton Bay clear of main shipping channel in varying depths from 12.0 m. to 27.0 m., about 3 miles N.E. of Mud Island.

STS transfers under pilotage also take place in this area.

Pilots: VHF as per ALRS. Pilot boats as per AUS. No. 235 from Mooloolaba Harbour, inside Point Cartwright, by fast cutter.

24 hour pilotage dependent on draft and tide. Pilot boards in all weathers, and a good lee is required.

One Pilot used throughout, about 4 hours to tanker berths.

Morton Bay crossed at sea speed.

Red flasing light required for tankers (New regulations to be published).

Channel: Morton Bay Channel, about 36 miles in length from Beacon NW2 to entrance beacons of Brisbane River.

Controlling depth is 13.00 m., which is also maximum draft to Lytton Cutting, dependent on tide, squat and weather conditions.

Strong cross currents, particularly at Morton Bay entrance. Good buoyage and lights.

Upriver from Lytton Cutting depths decrease. To Pinkenba Cutting Turning Basin (the upper limit for LPG tanks) depth is 9.1 m., generally 10.0 m. is maximum draft handled, dependent on tide.

Gas carriers generally do not proceed above Pinkenba Swinging Basin, which 9.1 m. dredged datum and 280 m. swinging circle.

Tugs: Stationed at North end of Whyte Island off Lytton Rocks Cutting. 6 tugs available from 30 ton to 68 ton bollard pull, which includes 2 salvage tugs. Tug's lines used. Vessels bound for LPG/NH3 berths, met by tugs at Lytton Cutting.

Salvage tugs also do harbour towage.

For small ships often large tugs and for large ships often small tugs, Pilots have no control. Pilots said QE2 visit ended up with one small tug as tug supply depends on tug crew rotas.

Berths: Three berths handle gas carriers, BP, Shell and Incitec for NH3 (Ammonia).

BP: Products berth on North side of river on Bulwer Island, about 8 miles upriver from Brisbane River Channel entrance.

Chicksans for products. Hoses for LPG.

Wooden construction with one mooring dolphin each end.

Pilots quote depth alongside as 10.7 m. MLW.

Tanker type 'T' jetty. Out from river bank about 20 m. Good fenders.

Port or starboard side to. Generally Agents request ships head out – port side to (due to tug problems).

Length of fender landing is 80 m. Dolphin to dolphin 220 m.

Roadway about 25 m. from jetty face, which is nearest trucks can come.

Fresh water through meter.

Brow gangway available.

Moorings were 4 and 2 each end. One line boat operated by tug company. Mooring gang was good, but do not like wires. They will not handle breast wires at LW.

Use of aft store crane not possible.

Shell: 600 m. upriver from BP on North bank of river at Lytton. General products berth. No Chicksans.

Same construction as BP. Fender length 80 m. Mooring dolphin either end, 205 m. apart.

Pilots quote depth alongside as 10.5 m. MLW.

Accommodation ladder can be landed.

Either side to (Generally port side to).

Tanker 'T' jetty stands out from river bank about 15 m.

Nearest roadway for trucks about 20 m. from jetty face.

Aft stores crane can just plumb.

Moorings and procedure same as BP.

Incitec – South: For NH3. Located at Pinkenba Swinging Basin, South side of river. Vessel can land accommodation ladder.

Flat face quay used for fertiliser loading. Fender length 150 m.

One mooring dolphin either side connected by catwalks to quay, 205 m. apart.

Quoted 10.5 m. alongside MLW.

Fresh water available.

Vessels berth port or starboard side alongside, but generally starboard side to.

Terminal: LPG at BP and Shell: Interconnected by 4 in. lines. Tanks from 100 m. – 1,000 m. from jetties.

LPG pressure storage discharge.

Three receivers in total (Boral, Gogas (Shell) and Elgas).

Boral is situated beside BP Terminal, whilst Gogas and Elgas are at the Shell terminal.

If discharging at BP, Boral can receive at	150 tonnes/hr.	7 bar BP.
Gogas and Elgas receive at	130 tonnes/hr.	15 bar BP.
If discharge at Shell, Boral receive at	140 tonnes/hr.	14 bar BP.
Gogas and Elgas receive at	170 tonnes/hr.	13 bar BP.

6 in. 300 ASA hose at both berths into 10 in. line.

Discharge restrictions regarding temperature apply at both berths. Vessel can discharge C3 (Propane) down to −30°C, but first and last 50 tonnes must be at ambient or warmer.

The jetty watchman at both berths provides vessel with walkie-talkie.

NH3 at Incitec – South: Loading warm product – protest.

Found oil carry over on cleaning after discharging in Taiwan.

It is best to load first and last 2 hours into same tank.

Rate: 230 tonnes/hr. at 0.5 bar BP. Shore hose 10 in. 150 ASA.

Customs: If first port of entry inward, papers (on Australian forms) to be submitted via Agent by Fax at least 7 days beforehand. Failure to do this might delay vessel.

Papers required: Crew Report List (Alphabetical order), Ship's Inward Cargo Report, Quarantine Declaration, Report of Ship's Stores, Ports of Call List, Ship's Report of Arrival.

On arrival, the additional papers are required: Crew Effects Declaration (Alphabetical order).

Customs generally fair and reasonable.

If sailing coastwise, Customs then issue 'Rider Envelope' with all relevant documents plus Clearance to next port.

Customs also act for Immigration and sign crew on and off.

Telephone: Payphone ashore at all berths.

Airport: Brisbane International Airport on North side of river near BP and Shell berths. International and domestic flights available.

Chandler: Several boarded.

Technical: We found Heybridge Engineering very good for most engineering/technical matters. Tel: (07) 3822 3400, mobile 018 876 628, A.O.H. (07) 3344 2460. Fax: (07) 3344 3880.

Also Keppel Cairncross have recently reopened (together with dry dock) on South side of river near Hamilton. Tel: (07) 3227 0888. Fax: (07) 3899 0879.

Bunkers: Available ex-BP Jetty (IFO 180 at IFO 380 prices), or by barge.

Public Transport: All berths about 7 miles from city. BP and Shell have no public transport facilities. Incitec (NH3) is 1 mile South of Hemmatt Railway Station with cheap trains into city.

AUTHORITY: Port of Brisbane Corporation, Port Centre, 369 Ann Street, G.P.O. Box 1818, Brisbane, Australia 4001. *Tel:* (07) 32584888. *Telex:* AA42780. *FAX:* (07) 32584703. *Cables:* Portbris. *Contact:* G.J. Martin, Chief Executive Officer.

Regional Harbour Master (Captain John Watkinson), Queensland Transport, Marine Operations Base, MacArthur Avenue East, Pinkenba, Queensland 4008, Australia. *Tel:* (07) 3860 3549. *FAX:* (07) 3860 3560. *Contact:* Duty Harbour Master. (Tel: (07) 3895 1318. Fax: (07) 3895 1311).

AGENT: Patrick Sleigh Shipping Agencies Pty. Ltd., G.P.O. Box 1460, 4th Level, Elders House, 10 Felix Street, Brisbane, Queensland 4000. Tel: (07) 3221 2275. Telex: 40260 PATSLE. Fax: (07) 3221 0124. Seagram Code: 4BPATSLE.

BROOME, W.A.: 17.59 S. 122.14 E. (See Plan)

PORT LIMITS: East limit: From Fall Point (17° 59.1′ S., 122° 20.3′ E. approx.) in a direction 180° – 4.5 miles to position 18° 03.6′ S., 122° 20.3′ E., thence.

South limit: In a direction 270° – 10.5 miles to position 18° 03.60′ S., 122° 09.35′ E., thence.

West limit: In a direction 000° – 8.25 miles to position 17° 55.40′ S., 122° 09.35′ E., thence.

North limit: In a direction 090° about 3.1 miles to the shore (17° 55.40′ S., 122° 12.60′ E. approx.)

CERTIFICATES/DOCUMENTS/HEALTH: See "Melbourne".

PILOTAGE: Resident Pilot available. Inform Department of Transport of ETA 7 days in advance. Pilot boards approximately 292° (T) distant 4.5 miles from Gantheaume Point.

RESTRICTIONS: Channel between Channel Rock and Middle Bank dredged to 5.3 m. LWOST. Vessels of more than 5.2 m. draft restricted to height of tide for arrival/departure. HWOST 8.38 m. HWONT 5.24 m.

MAX. SIZE: Draft 9.15 m.

RADIO: HF SSB Marine Channel 4,620 kHz.

VHF: Channels 6, 12 and 16.

TUGS: None.

BERTHING: 2 berths. Outer berth max. length 186 m., 9.75 m. LWOST. Inner berth length 146 m., depth 8.5 m. LWOST.

STEVEDORES: Labour available 24 hours. Maximum shift length 14 hours.

CARGO GEAR: See "Melbourne".

FRESH WATER: Unlimited supply. Rate up to 20 t.p.h. at a cost of $1.50 per 1,000 litres.

FUEL: Diesel oil available, provided prior notice given to BP or Shell Agents.

REPAIRS: Minor repairs possible through Broome Slipways.

TIME: See "General" before first port.

GARBAGE DISPOSAL: Garbage disposal available with skips, A$18.00 per removal at any time.

Overseas garbage subject to quarantine restrictions as no large capacity incinerator available. Garbage Contractor: Tel: 091-921169.

WASTE OIL DISPOSAL: Very limited service available – Mobile road tanker capacity 8,000 litres.

No barges, no shore tanks, no special berth available. Telephone garbage contractor on telephone number above.

SEAMAN'S CLUBS: None.

CURRENCY: Australian Dollar. A$1.00 = U.S.$0.78. No currency restrictions.

GENERAL: Tides: Both ebb and flood in direction of line of jetty. Tide has apparent ebb period of 8 hours, flood 4 hours. Slack water 2.5 hours prior HW and LW. Information given by radio.

AUTHORITY: Department of Transport, P.O. Box 402, 1 Essex Street, Fremantle, WA 6160, Australia. *Tel:* (09) 335-0888. *Telex:* 94784. *FAX:* (9) 335-0850. *Contact:* R.S. Purkiss, Director of Marine.

Department of Transport, P.O.Box 46, Broome, WA 6725, Australia. *Tel:* (091) 921304. *FAX:* (091) 921778. *Cables:* Port General Manager. *Contact:* M. Gower, Port Superintendent. B. Martin, General Manager.

AGENT: Sub-agent of Patrick Sleigh Shipping Agencies Pty. Ltd., Fremantle.

BUNBURY, W.A.: 33.19 S. 115.38 E. (See Plan)

DOCUMENTS:

No. of Copies	*Form*	*Notes*
2	Form 5 – Part One Ship's Report of Arrival	—
2	Form 5 – Part Two Crew Effects Declaration	—
2	Form 5 – Part Three Crew Effects Declaration (continuation)	—
1	Form 5 – Part Four Record of Ship's Stores	—
2	Form 3A – Crew Report	
2	Form 3B – Crew Report	—
2	Form B921 – Loading Ports List	If entering with Cargo.
1	Ships Pets (QA 76 Form E)	Nil return required.
1	Shipmasters Bond (QA 5)	Only if Ship has Pets on Board.
1	Animal Cargo (QA 3)	Only if Animal Cargo on Board.
2	Form F. Q360 Primary Health Report	
If Passengers on Board:		
3	List of Passengers Disembarking in Australia (Form M308)	To be Divided into Ports of Disembarkation
5	List of Passengers not Disembarking in Australia (Form M309)	

In addition to the above Forms, the following certificates need to be sighted.

1. Last Port Clearance.
2. Ship's Registry.
3. Load Line.
4. Safety Radio.
5. Safety Construction.
6. Safety Equipment.
7. International Oil Pollution Prevention Certificate and Attachment.
8. International Tonnage Measurement Certificate.

Pre-Arrival (48 hours prior to Arrival): Crew List and Ship's Arrival Details (Ship's Particulars, previous Ports, Certificates).

PILOTAGE: Compulsory with exception of Masters who hold an exemption certificate for the port. Radio Harbour Master, Bunbury 24 hours and 4 hours notice. VHF Channel 16 – pilot boat. Base set not manned continuously but pilot boat may be contacted 1 hour before arrival. Pilot boat – White hull, orange wheelhouse, three blue stripes, "No. 104" on hull, name "Leschenault" and "Koombana".

Pilot boards 1.5 – 2.0 miles from Breakwater in position Lat. 33° 17′ S., Long. 115° 37′ E.

ANCHORAGE: Between Latitudes 33° 16′ S. and 33° 17′ S. and Longitudes 115° 36′ E. and 115° 37′ E.

Holding ground is good, but unprotected during bad weather conditions. In such conditions Masters are advised to remain at a minimum of 5 miles off the coast.

RESTRICTIONS: Vessel may berth and sail at night, but this will be dependent on priority of other vessels, labour availability, and weather conditions.

Channel Limitations:

Depth in Approaches	13.4 m. at Chart Datum.
Depth in Inner Harbour	12.2 m. at Chart Datum.
Stepped to 12.8 m. at seaward end, at Chart Datum.	
Depth in Approaches to Outer Harbour	9.6 m. at Chart Datum.

Tides:

Maximum predicted H.W. Springs	1.3 m. above Chart Datum.
Minimum predicted L.W. Springs	0.0 m. above Chart Datum.

Heights are subject to atmospheric conditions; up to 0.3 m. either side of predicted height.

MAX. SIZE: *Outer Harbour:* Max. length 220 m. Deepest permissible loaded draft 9.0 m. at No. 1 Berth and 8.7 m. at No. 2 Berth.

Inner Harbour: Max. length 233 m. Max. draft 11.6 m.

HEALTH: Quarantine inspection required if Bunbury is first Australian port. Quarantine inspection for Health Clearance – hours of inspection 0600 – 2200. Also see "Melbourne".

RADIO: Perth Radio.

VHF: The Base Station is "Port of Bunbury", Call Sign "V Z 6 P O", which monitors Channel 16.

It is not manned continuously, but a listening watch is kept prior to a vessel's expected arrival, except when the Master has previously been advised by radio to anchor and await pilot.

TUGS: 2 tugs available. "Capel" (42 tonne bollard pull) and "Elgin" (42 tonne bollard pull). Join vessel off berth. Ship's lines used if necessary. The tugs are normally manned from 0800 hrs. to 1600 hrs. weekdays. At other times, tugs must be pre-arranged.

BERTHING: Berth names from the 1st May 1996

Old Name	*New Name*
Outer Harbour No. 1 Land Backed Berth No. 1 Ilmenite berth	Berth 1
Outer Harbour No. 2 Land Backed Berth No. 2	Berth 2
Inner Harbour No. 1 Woodchip Berth	Berth 3
Inner Harbour "A" Alcoa/Alumina Berth	Berth 4
Inner Harbour No. 2 General Purpose Berth	Berth 5
Inner Harbour "B" Worsley Alumina Berth	Berth 6
Inner Harbour "C"	Berth 8

The number 7 is being reserved for a new berth which may be constructed on the South side of the inner harbour.

Outer Harbour:

No. 1 Breakwater (Landbacked) Berth: Primarily a specialised bulk berth, length 184 m., with a travelling mechanical Shiploader, rated at 800 tonnes per hour, linked with adjacent storage for the export of Mineral Sands. Vessels up to 233 m. in length have been safety accommodated at this berth.

Deepest Permissible Draft: 9.0 m., plus an allowance for tide.

No. 2 Breakwater (Landbacked) Berth: General purpose berth, length 184 m.

Deepest Permissible Draft: Southwest end 8.0 m. and Northeast end 9.0 m., plus an allowance for tide.

Weighbridge: Capacity 50 tonnes, platform 15 m. × 3 m.

Original Wooden Cargo Jetty: Now disused, and not maintained. Not suitable for laying up (to be removed in February 1994).

Inner Harbour:

No. 1 Berth: Primarily a specialised Woodchip loading berth, length 381 m., equipped with a fixed mechanical loader, rated at 1,000 t.p.h., linked to adjacent storage. Vessels should prepare extra long flaked back springs on the main deck amidships for hauling the vessel along the berth during loading operations.

No. 2 Berth: General purpose berth, length 240 m., equipped with mobile hoppers for bulk discharge. Large ship's side storage area available. There is a rail spur on to this berth, but not to the ship's side.

Weighbridge: Capacity 60 tonnes, platform 18 m. × 3 m.

'A' Berth: Specialised Bulk Alumina loading berth, utilised by Alcoa and Worsely Mining Companies. Equipped with a travelling mechanical shiploader rated at 2,000 t.p.h., linked to adjacent storage. Vessels up to 230 m. in length, and 36 m. beam, may be accommodated without shifting ship during loading.

There is also provision for discharging bulk liquid caustic soda through 'Chicksan' connections to adjacent storage tanks. Connection is 12 in. bore with 19 in. outer diameter flange.

Deepest Permissible Draft in Inner Harbour at all berths is 11.6 m.

Air Draft of Mechanical Loaders:

No.1	Breakwater Berth	12.0 m. above chart datum
No.2	Breakwater Berth	
No.1	Inner Habour	17.0 m. above chart datum
'A'	Inner Habour	13.5 m. above chart datum

Outreach of Mechanical Loaders:

No.1	Breakwater Berth	12.2 m. from Wharf Face. +4.6 m. with spout at 30°.
No.2	Breakwater Berth	
No.1	Inner Harbour	18.5 m. from Wharf Face over a length of 163 m.
'A'	Inner Harbour	Mechanical trimmer permanently attached.

Hopper Limits (No.2 Inner Harbour):

Ship side to hopper centre	4.3 m.
Hopper height	6.1 m.
Head clearance under hopper	3.5 m.

Bulk Discharging Rate (No.2 Inner Harbour): Free grabbing average of 100 t.p.h. per grab.

Wharf Loading Limits:	Vehicle	Stack Tonnes sq.m.
No.1 Breakwater Berth	Standard Semi Trailer	1.7
No.2 Breakwater Berth	10 tonne Mobile Crane	3.4
No.2 Inner Harbour	'Towmotor AH60' 60T.	4.4
	'Scheuerle' 96 wheel 350 T.	
	'MS18' 14.7 T.	

Fendering System Levels:		Height Above C/D
No.1 Breakwater Berth	Horizontal Rubber Fenders	3.0 m.
No.2 Breakwater Berth	Timber Facing	1.0 m.
No.1 Inner Harbour	'Bridgestone' C1600H Rubber Fenders	2.0 m.
No.2 Inner Harbour	Horizontal Rubber Fenders	2.5 m.
	Vertical rubber Fenders over 65 m. section.	1.5 m.
'A' Inner Harbour	'Seibu' H1400 Timber Faced, Rubber Fenders.	0.5 m.
All Wharf Deckings		3.66 m.

Gangway:

No.1 Breakwater Berth	Ship's Gangway
No.2 Breakwater Berth	Ship's Gangway
No.1 Inner Harbour	Shore Gangway from shiploader
No.2 Inner Harbour	Ship's Gangway
'A' Inner Harbour	Shore Gangway from S.W.dolphin

BULK HANDLING FACILITIES: See "Berthing".

Stowage Factors: (Average):

	cu.ft./ton	cu.m./ton
Ilmenite	14	0.40
Rutile	14	0.40
Zircon	14	0.40
Leucoxene	14	0.40
Synthetic Rutile	25	0.71
Kaolin Clay	27	0.77
Spodumene	24	0.68
Alumina	36.5	1.03
Woodchips	85	2.40

STEVEDORES: Weekdays – ETA to be advised by 1500 hrs. previous day for labour requirements on that day. Weekends – ETA required by 0600 hrs. Friday.

DENSITY:

Outer Harbour	1024 – 1025
'A' Inner Harbour	1022.5 – 1024
Berths No.1 & 2 Inner Harbour	1023 – 1026

MEDICAL: Medical attention available. Hospital facilities available. Vaccinations and valid certificates required.

TANKERS: No facilities.

FRESH WATER: Readily available. Rates: Outer Harbour 25 t.p.h. Inner Harbour 30 t.p.h. and Inner Harbour (non potable) 100 t.p.h.

FUEL: Furnace oil by road ex-Fremantle. Marine and light diesel by road.

CONSULS: Vice-Consul for Norway.

REPAIRS: Ship repairs, engineering, electrical and electronic repairs can be arranged through agent.

DRY DOCKS: None.

GANGWAY/DECK WATCHMEN: Not required, except for Hazchem products.

OPENING/CLOSING HATCHES: Preferably by crew.

CUSTOMS ALLOWANCES: Each crew member 200 cigarettes initially and thereafter as required in reasonable quantities. Wine and/or Spirits, open bottles of spirit on arrival not to exceed 1 litre and thereafter as required in reasonable quantities.

CARGO GEAR: Must comply with Australian Loading and Unloading Safety Regulations. See "Melbourne".

REPATRIATION: Facilities available.

AIRPORT: Light aircraft landing strip only.

TIME: See "General" before first port.

HOLIDAYS: Days on which work cannot be performed by stevedores: Good Friday, Anzac Day, Labour Day, Christmas Day, Waterside Workers' Picnic Day.

POLICE/AMBULANCE/FIRE: Emergency Number Bunbury 000.

TELEPHONES: Available on application.

IDENTIFICATION CARDS: See "Melbourne".
GARBAGE DISPOSAL: Daily collection by Bunbury Port Authority. Bins placed alongside. Charges: A$45.00 per day per visit plus A$3.00 per day per person on board.
WASTE OIL DISPOSAL: Service by road tanker. Contact: South West Waste Disposals, Short Street, Picton, W.A. 6229. Tel: (097) 254419.
SEAMAN'S CLUBS: Missions to Seamen, Victoria Street, Bunbury. Tel: (097) 212370.
DELAYS: Generally no delays.
GENERAL:
Charts: Australian Charts No. 115, 334, 335, 755, 756, 4726.
Publications: Australia Pilot, Volume V.
Oily Water Disposal: Privately owned road tankers with limited capacity available.
Stores: Available through local providoring companies, including bonded stores.
Services: Electricity, garbage disposal, and other sundry services by arrangement with the Port Authority.
DEVELOPMENTS: Two new berths to be constructed with depth 12.2 m. for handling of alumina and mineral sand.

SHIPMASTER'S REPORT: February 1993 (Updated 1996).
Approaches: Australian Chart No. AUS 115, found to be as charted.
Pilots: Pilots request that vessels arriving do not come closer than 1.5 miles from the Buoy No. 3. They will come further out to meet approaching vessels. Boarding speed about 5 – 6 knots.
Ship Supply Services: Most Fremantle chandlers will attend vessels at Bunbury.

On this visit, vessel was attended by Sealanes, 178 Marine Terrace, South Fremantle, for Unitor Gasses, and Imes Ship Supply, 47 Quarry Street, Fremantle, for provision.
Fuel: Vessels are not permitted to take bunkers at the alumina loading berth, but may take bunkers by road tanker at other berths.

The nearest bunker facility is at Fremantle.
Repatriation/Airport: Perth International Airport is about 2 hours away by road. Joining and repatriation can be arranged through this airport.
Loading Rate: At alumina facility, rate is 2,000 tones per hour, and work is reported to be on a 24 hour basis, 365 days a year.
Holds: Hold cleanliness for loading alumina is to the grain standards for Australia.
Crew List: The Agent requested a Crew List to be faxed from the previous port (Singapore), and this was updated by telex for persons signed-off at a port of refuge during the passage to Bunbury.

No problems were experienced with Immigration formalities.
Identity Cards: Immigration Authorities were happy that recent photographs of all crew on suitable I.D. cards were ready on arrival for retention on board.

The Agent arrived on board with a polaroid camera, to take the photographs if required, and also the Flying Angel will take photographs and arrange I.D. cards.
Radio Pratique: Granted prior to arrival, the required quarantine message having been sent to the agency some 36 hours before arrival.

When acknowledging ETA messages, the Agent sent reminders that this message was to be sent to them, and not direct to the Health Authorities.
Mobile Telephone: Placed on board by the Agent.

AUTHORITY: Bunbury Port Authority, P.O.Box 4, (1 Henry Street), Bunbury 6230, Western Australia. *Tel:* (097) 21-2800. *FAX:* (097) 218253. *Contact:* D. Figliomeni, General Manager. C. Ambrose, Harbour Master.

AGENT: Patrick Sleigh Shipping Agencies Pty.Ltd., Unit 1, 23 Thomas Street, Bunbury, W.A. 6230. Postal address: P.O.Box 537, Fremantle, W.A. 6160. Tel: (097) 21 5077. Telex: Via Fremantle 92434 PATSLE. Fax: (097) 21 9922.

BUNDABERG, Queensland: 24.45 S. 152.24 E. (See Plan)

PORT LIMITS: Along the major arc of a circle radius 4 miles, centred on South Head light (24° 45.6′ S., 152° 24.7′ E. approx.), commencing at a point (24° 44.3′ S., 152° 20.6′ E. approx.), extending in a Northerly, Easterly and Southerly direction to a point near Bargara (24° 48.6′ S., 152° 27.6′ E. approx.).
CERTIFICATES/DOCUMENTS/HEALTH: See "Melbourne".
DEPTHS: (Datum) Channel 7.26 m.; Swinging Basin 7.26 m., Sugar Berth 9.66 m.; Oil Berth 9.66 m. Keel clearance normally 0.9 m.
PILOTAGE: Compulsory. Radio not less than 24 hours ETA; VHF Channel 16.

Pilot boards 2.5 miles East of South Head Lighthouse.
Coastal and Reef Pilotage: Pilotage through the Inner Route of the Great Barrier Reef to Torres Strait is conducted by licensed pilots available from Australian Reef Pilots Ltd. and Queensland Coastal Pilot Service Pty. Ltd. See "Torres Strait" for details.

Masters are advised that pilotage in the Inner Route and at Hydrographers Passage is compulsory. Pilotage in the Great North East Channel is recommended by IMO. See "Torres Strait".
RESTRICTIONS: Length 182.87 m. maximum. Vessels not to pass out through sea reach on ebb. Channel width 76 m. Also see "Delays".
RADAR/VHF: No radar service. Bundaberg Port Authority office, craft, tug and pilot launch can be contacted on VHF Channel 16 during office hours.
TUGS: One tug, 33 tonnes bollard pull, owned by Gladstone Tug Services Pty. Ltd., and one work boat of 4 tons bollard pull, owned by the Port Authority, which may be used for pushing, are available, both fitted with VHF. Ship's lines or tug's lines are used, and no charge for tug's lines.
BERTHING: No. 1 Bulk Sugar Berth 190 m. long. No. 2 Oil, Molasses, 80 m. long.
SPECIALISED CARGO HANDLING FACILITIES: *Bulk Sugar Berth:* Loading by movable gantry at 1,400 t.p.h.
Bulk Molasses: Loading rate 240 t.p.h. No facilities for containers or Roll-on/Roll-off traffic.
Oil Berth: Facilities for discharge all petroleum products and loading molasses.
MEDICAL: Hospital facilities available.
TANKERS: 10 in. lines. No slop discharge facilities. Oil tankers, discharge only. Molasses tankers, load only. Depth alongside tanker berth 9.66 m. Datum.
DENSITY: Average density about 1025.
FRESH WATER: Available, delivered by hose, variable loading rate and quality (bore water) 12 t.p.h. Cost A$ 2.00 per 1,000 litres.
FUEL: All grades available, 24 hours notice required.
CONSULS: None.
REPAIRS: Almost all types of deck and engine repairs possible.
DRY DOCKS: No dry dock. Slipway for small vessels only. Mobile and floating cranes may be hired.
SURVEYORS:
(1) Cargo surveyors available (Lloyd's Agent).
(2) Classification surveyors available from Brisbane.
GANGWAY/DECK WATCHMEN: Not necessary, but available.
OPENING/CLOSING HATCHES: By crew.
CARGO GEAR: No additional local regulations. See "Melbourne".
REPATRIATION: Facilities exist.
AIRPORT: Airport 2 miles from city serviced by regular internal airlines.
TIME: See "General" before first port.
HOLIDAYS: Normal Queensland holidays observed but cargo worked regardless of holidays.
POLICE/AMBULANCE/FIRE: Dial 000 from the port.
EMERGENCY CO-ORDINATION CENTRE: Contact Bundaberg Harbour Master.
TELEPHONES: Telephone connection placed at tanker berth and sugar berths.
BANKS: Major Australian Banks have branches in Bundaberg.
STORING: See "Prelims".
(1) Yes.
(2) Yes at sugar berth. No at oil berth.
(3) Yes.
(4) Yes.
(5) Same as other Australian ports.
(6) No. None available.
IDENTIFICATION CARDS: See "Melbourne".
GARBAGE DISPOSAL: Collection service available from port authority, including quarantine garbage. Drums provided alongside. Base charge $65.00 plus $45.00 per drum. Collection time by arrangement.
WASTE OIL DISPOSAL: Waste disposal available through local contractor by tanker truck.
SEAMAN'S CLUBS: None.
DELAYS: Vessels can berth at any state of the tide provided there is 0.9 m. under keel clearance. Vessels sail on flood tide only.
AUTHORITY: Bundaberg Port Authority, M.S. 108, Bundaberg, Queensland 4670. *Tel:* (071) 594233. *FAX:* (071) 594655. *Contact:* D. Antrobus, Chief Executive Officer. Captain M. Lutze, Harbour Master.

AGENT: Sub-agent of Patrick Sleigh Shipping Agencies Pty. Ltd., Brisbane.

BURNIE, Tasmania: 41.03 S. 145.55 E. (See Plan)

PORT LIMITS: Within all waters that are bounded by an imaginary circle having a radius of 5 nautical miles and centred at the Eastern end of the Island Breakwater situated in Emu Bay.
DOCUMENTS: See "Melbourne". Port Authority requires Inward Manifests to be lodged on arrival. Agents supply Manifests and non-negotiable copy Bills of Lading to Customs for checking prior to vessels arrival.
APPROACHES: Port situated on Western shore of Emu Bay and easy of access. Bay is 2 miles wide and 1 mile deep facing in a Northerly direction. The bottom is sand and clay interspersed with patches of reef and rock, particularly in the South Eastern sector of Bay. Vessels may anchor on main leads in vicinity of Pilot Boarding Ground, but it is not advisable remain at anchor during strong on-shore winds. Port protected by 2 breakwaters: the inner, founded at inner end of Blackmans Reef, lies in a 110° direction and is 380 m. long. The other, an island structure 488 m. long and protecting the port from Easterly weather, lies in a 130°/310° direction, with its N.W. end bearing 045°, 213 m. from the S.E. end of the Inner Breakwater.

Vessels approaching the port from the West should, by day, keep the two orange beacons on the shoulder of Round Hill open to the North and then turn onto the main harbour leads which are in transit 213° true. By night, keep in the white sector of Round Hill Point Light until the green sector of the light on the back main lead is visible.

Vessels approaching from the East should keep well off until clear of Round Hill Point and then turn onto the main leads by day, or the sector light by night.
PILOTAGE: Compulsory for vessels over 35 m. LOA. Prior advice through local Agents, ETA by radio telegraphy through Melbourne Radio (VIM) or Hobart Radio (VIH) to Burnie Port Authority. Immediate advice VHF Channels 16 and 12.

Pilot launch – 12.5 m. orange hull with buff cabin aft, name "Hellyer". International Signals apply. Boarding area on main harbour leads 210° (T) with Round Hill Point Lighthouse bearing 155° (T). Ladder 1.5 m. from water, manropes, no boat rope. Boarding speed 8 knots.

ANCHORAGES: See "Approaches".
RESTRICTIONS: Maximum length 280 m. 24 hour service.
MAX. SIZE: (See "Restrictions"). Tankers at Island Breakwater to 10.0 m. draft at all states of tide.
HEALTH: Pratique automatic when from other Australian ports. When from overseas Radio Pratique should be applied for 12-24 hours before arrival to vessel's Agent.
RADIO: Melbourne Radio (VIM).
RADAR/VHF: No radar service. Port equipped with VHF, R/T operating International Maritime Bands. Pilot vessel, tug, and other floating plant similarly equipped. "Burnie Harbour" on VHF Channels 16, 12, 14 and 67 continuously. Pilot vessels and tugs on Channels 16, 12, 8, 6 and 67.
TUGS: Tug(s) join East of Island Breakwater. Usually lashed alongside with tug's lines (no extra charge). When on towing duty, usually ship's line. 1×40 tonne bollard pull tug stationed in the port. Additional tugs available from nearby ports.
BERTHING: *Ocean Wharf:* Being reclaimed.
McGaw Pier: Being reclaimed.

Berth No. 4 has 183 m. of effective berthage with a dredged depth of 10.5 m. The axle loading on this berth is unlimited. A stern loading ramp has been constructed at the inner end.

Berth No. 5, a modern pre-stressed concrete berth, is 213 m. in length with a large mooring dolphin off the seaward end. Vessels of 250 m. in length are accommodated. The width of the apron is 13.4 m. and axle loading is 50 tonnes. The berth incorporates a bulk loader with a capacity in excess of 1,000 tonnes per hour. The berth is also suitable for general cargo and container operations. The dredged depth at the berth proper is 11.0 m. At the inner end provision is made for the quarter ramps of the largest Ro/Ro vessels. There is a liquid acid loading point and a tallow loading point at this berth.

Berth No. 6 is a modern pre-stressed concrete berth 198 m. length and dredged to 11.5 m. Axle loading is 50 tonnes.

A single lift post Panamax portainer (40 ton at 44.5 m. and 80 ton at 23.5 m.) is available at this berth, which can accommodate vessels (including Ro/Ro quarter ramp) of 250 m. in length. The berth is dredged to 11.5 m.

There is a storage shed of 1,500 sq. m. and 240 reefer points.

Berth No. 7 is 219 m. long and 40 m. in width and has 2 large mooring dolphins on the seaward end which enables vessels of 250 m. in length to berth. The berth is dredged to 11.5 m.

On the inner end, a modern slewing container handling crane of 50 tonnes capacity is on this berth. On the outer end of this berth, there is a twin lift Paceco gantry crane (28 ton per normal lift and 65 ton on 2 hoists heavy lift). Both cranes travel the entire length of the berth. Stern loading facilities are provided by 8.5 m. wide ramp. Axle load is 50 tonnes. There are 146 reefer points at the berth and quarter ramp vessels can be accommodated.

On the outer end is a new woodchip shiploader which can travel the length of the berth and loads at about 1,000 t.p.h.

Mobile cranes available if required.

Cargo: The port is equipped to handle all types of cargo. This includes containers, general cargo, dry bulk, bulk liquids, woodchips, logs and livestock. Large quarter ramp vessels can be accommodated at 3 berths and there are also 2 stern loading ramps. There is ample container handling and storage area within the port with an abundant supply of power points for refrigerated containers and fantainers. Container services include steam cleaning, pre-tripping, repairs and surveys.
Mechanical Equipment: A comprehensive fleet of mechanical handling equipment is available, including container handling forklifts of up to 30 tonnes capacity.
Cold Store Complex: The Authority operates a cold store with a capacity of 31,279 cu.m. (1,104,620 cu.ft.), which can hold product at −25°C. In addition, there is a small cool room of 134 cu.m. (4,731 cu.ft.) capacity, which can operate between +15°C and −5°C.

Cold storage is available for small or large quantities of frozen goods at competitive rates. Cool storage is available only for small quantities.
BULK CARGO FACILITIES:
Conveyor Loader: At bulk berth for export of zinc, lead and copper concentrates to 1,000 t.p.h.
Inward Bulk: Berth and crane at Berth No. 6.
Sulphuric Acid: Loading and discharging facility at Island Tanker Berth and bulk berth, with rate of 1,000 t.p.h.
STEVEDORES: Labour to be ordered (1) by 1400 hrs. for following day (weekdays), (2) by 1300 hrs. Friday for Saturday and Sunday, (3) by 1400 hrs. Sunday for Monday.
MEDICAL: Notify Agent prior arrival of extra requirements other than pratique. General Hospital 1 km. from port. Cholera revaccinations arranged by prior notice.
TANKERS: Berth No. 1 (Tanker Berth) is 85 m. long and 30 m. wide, sited on South side of Island Breakwater. 10.0 m. of water in this berth, which will accommodate vessels of up to 250 m. in length. Diameter of lines are 250 mm. No residue discharge facilities. 1 berth, maximum draft 10.9 m.
DENSITY: 1025 to 1028.
FRESH WATER: Readily available at all wharves, rates 50 t.p.h.
FUEL: Diesel and heavy fuel available from road tankers.
FIRE PRECAUTIONS: Normal. 24 hour ferry service to be maintained to tanker berth. Firemen on duty while tanker pumping. Fire-fighting tug in port while tanker is at berth.
CONSULS: None.
REPAIRS: Engineering firms with extensive workshops are situated nearby.
GANGWAY/DECK WATCHMEN: Watchmen not used.
OPENING/CLOSING HATCHES: Stevedores will close hatches.
CERTIFICATES:

Tonnage Certificate.
Safety Construction.
Safety Equipment.
Safety Radio Telegraphy.
Load Line.

CUSTOMS ALLOWANCES: 200 cigs. or 250 grams tobacco. Beer is carried outside the bond. One bottle spirits per man every 10 days.
CARGO GEAR: Australian Navigation (Loading & Unloading) Regulations apply.
REPATRIATION: On crew member signing off Agent requires passport or identification card. Agent handles repatriation details and notifies Immigration Department, Hobart, re movements of crew member.
AIRPORT: Daily services: 17 km. distant.
TIME: See "General" before first port.
HOLIDAYS: Cargo work performed on all holidays except Christmas Day, Good Friday, WWF Picnic, Anzac Day, Labour Day.
POLICE/AMBULANCE/FIRE: Dial 000.
TELEPHONES: Telephones are available at all wharves, through Port Authority.
GARBAGE DISPOSAL: The port provides a full galley waste and rubbish disposal service, including incineration of garbage.
WASTE OIL DISPOSAL: No service available.
SEAMAN'S CLUBS: None.
CURRENCY: Australian Dollar. No restrictions.
AUTHORITY: Burnie Port Authority, P.O.Box 216, Burnie, Tasmania 7320, Australia. *Tel:* 004-313444. *FAX:* 004-314690. *Contact:* Captain M.J. Boss-Walker, Harbour Master.
AGENT: See "Devonport".

BUSSELTON, W.A.: 33.38 S. 115.20 E. (PORT CLOSED)

This port is closed to commercial shipping and it is unlikely that the jetty will be re-opened.

Jetty partly demolished by cyclone in 1978.
AUTHORITY: Busselton Shire Council, P.O.Box 84, Southern Drive, Busselton, Western Australia 6280, Australia. *Tel:* Busselton (097) 810444. *Contact:* Director, Technical Services (Tel: 018-933441).

CAIRNS, Queensland: 16.56 S. 145.47 E. (See Plan)

PORT LIMITS: Commencing at the HW mark on the Northernmost tip of Taylor Point and bounded thence by a line bearing approximately 83° 52′ T. (83° 30′ A.M.G.) for a distance of about 29 km. (15.66 nautical miles) to a point on the LW mark on the Northernmost tip of the coral reef surrounding Green Island.

Then from this point in an Easterly and South-Easterly clockwise direction around the aforesaid coral reef to its Easternmost tip, thence by a line bearing 180° T. (179° 38′ A.M.G.) for a distance of about 17.3 km. (9.34 nautical miles) to a point on the HW mark on the Northern shore of Fitzroy Island.

From this HW mark generally in a South-Westerly, South-Easterly and North-Easterly direction anti-clockwise around the aforesaid Fitzroy Island to a point on the Southern shore where the HW mark intersects with the Southerly projection of the line from the Easternmost tip of the coral reef surrounding Green Island to the Northern shore of Fitzroy Island.

Then by a line bearing 180° T. (179° 38′ A.M.G.) for a distance of about 7.6 km. (4.10 nautical miles) where it intersects with a line bearing 90° T. (89° 38′ A.M.G.) and distant of 10.7 km. (5.78 nautical miles) on the Northern bank of Bubbabadoo Creek where it runs into the Pacific Ocean. Then by that HW mark generally Northerly and Westerly back to the point of commencement at Taylor Point, including all navigable rivers, creeks and waters communicating with the area described above.
DOCUMENTS:

1 copy Ship's Articles.
3 copies Crew Report (Forms 3A and 3B).
4 copies Passenger Report (Forms 2A and 2B).
4 copies Transit Passenger List (Form M309).
1 copy Ship's Report of Arrival (Form 5 part 2).
1 copy Return of Barber's Stock on a Ship or of Stocks in a Ship's Shop or Canteen (Form 5 part 3).
1 copy Report of Ship's Stores (Form 5 part 4).
1 copy Ports of Call and Ports of Call Loading List (Form B921).
1 copy Last Port Clearance.
1 copy Request for Radio Pratique Health Clearance.

APPROACHES: Deep water passage to Cairns through the Great Barrier Reef is available via Grafton Passage from the East, which is 34 km. long and 8 km. wide. It is free of any encumbrances and is lighted by a group flashing light on Fitzroy Island, which is visible in clear weather for a range of 47 km. Alternately the inner reef passage via Torres Strait can be taken from the North.
PILOTAGE: Pilotage is compulsory for all vessels 35 m., unless the Master holds a Pilotage Exemption Certificate, and is available 24 hours a day.

The Department of Transport, Marine and Ports Division, provides pilotage for vessels entering or departing the port. Vessels requiring the services of a Pilot should cable their Agent or the Harbour Master from the last port of call giving the probable time of arrival and estimated draft, to enable the Pilot to be at the pilot boarding ground on their arrival.

The pilot boarding ground is approximately 4 km. seaward of the Fairway beacons, at position Lat. 16° 48.7′ S., Long. 145° 50.6′ E.

Coastal and Reef Pilotage: Pilotage through the Inner Route of the Great Barrier Reef to Torres Strait and also Grafton Passage is conducted by licensed Pilots available from Australian Reef Pilots Ltd. and Queensland Coastal Pilot Service Pty. Ltd. See "Torres Strait" for details.

Masters are advised that pilotage in the Inner Route and at Hydrographers Passage is compulsory. Pilotage in the Great North East Channel is recommended by IMO. See "Torres Strait".

ANCHORAGE: Cairns has 195 pile berths located on the Eastern side of Trinity Inlet. There are also areas designated for anchorage only, situated North and South of the piles, East of Admiralty Island and in Smith's Creek.

RESTRICTIONS: *Under-Keel Clearance:* Vessels must have 600 mm. under-keel clearance when navigating in the port and 900 mm. for larger vessels (over 30,000 tonnes d.w.t.). Whilst in a berth, an under-keel clearance of 300 mm. must be maintained.

Seasonal Operating Restrictions: Cairns Seaport is an all-weather port outside the cyclone season which runs from approximately November through to April (Draft and tidal restrictions may apply).

MAX. SIZE: Cairns can routinely accommodate vessels up to 32,000 d.w.t. Maximum draft is 8.5 m. Larger drafts may be accommodated depending on tide.

Longest Vessel to date: "Crystal Harmony", 241 m. LOA.

Heaviest Vessel to date: "Statendam", 55,451 g.r.t.

Largest Cargoes: Raw Sugar: "Eryu Maru", 30,961 tonnes, 9.3 m. draft.
Bulk Molasses: "Teamtroma" 22,980 tonnes.
Petroleum Products: "Ampol TVA" 26,162 tonnes, 9.5 m. draft.

HEALTH: Radio Pratique can be obtained 24 hours a day, 7 days a week through the ship's Agent, Piermaster or direct from the Department of Primary Industries.

RADIO/VHF: A VHF radio service is maintained by the Cairns Port Authority on Channel 16 (156.8 MHz), call sign "Cairns Harbour". Radio communication with the Piermaster's office is also available on HF frequencies 2182, 4125 (stand-by) and Marine CB 27.88 mHz (stand-by).

Arrival Advice: Vessels bound for the port are required to advise their ETA 72 hours before arrival, and again at 48 hours, and then every 12 hours.

TUGS: Patrick Sleigh are the Agents for licenced towage operator, North Queensland Marine Towage Pty. Ltd.

For vessels over 100 m., tugs are compulsory under the following conditions:

Vessels 100 m. – 130 m.	One tug
Vessels over 130 m.	Two tugs
Vessels going to and from Wharf No.12 that do not require swinging	One tug

As a general rule, twin-screw vessels do not require a tug aft and vessels fitted with a bow thruster will not require a tug forward.

These conditions can be varied according to the pilot.

Two tug are generally available in the port, one strictly for port use and the other for outer port. A third tug can be made available from the port of Mourilyan if requried. Tugs details are:

Name	*Bollard Pull*	*Propulsion System*
"Babinda"	15 tonnes	Directional Kort nozzles
"Hamilton"	28 tonnes	Twin screw
"Otto Assman" *	28 tonnes	Directional Kort nozzles

* Based at Mourilyan.

BERTHING: Wharves No. 1 to 6 form a continuous quay length of 595 m. with a height of 4.9 m. above port datum and design depth. Wharves No. 1 to 5 are reinforced concrete construction, with Wharf No. 6 a combination of timber and concrete. Wharves No. 7 and 8 are made of reinforced concrete decking on steel piles forming a continuous quay length of 250 m. Wharves No. 1 to 6 are 5.0 m. above port datum, and Wharves No. 7 and 8 are 5.2 m. above port datum. All wharves have a design depth of 8.4 m. below LAT, unless noted otherwise. Wharves No. 10, 11 and 12 are three special purpose wharves.

No. 1: Passenger vessel berth served by No. 1 International Terminal with mobile covered ship-to-shore walkway. The walkway has an adjustable height between 8.5 m. and 14.5 m. above port datum.

No. 2: This is the main cruise liner wharf, and is used in conjunction with Wharves No. 1 and 3 for longer vessels. Passenger vessel berth served by 1,271 sq.m. international passenger terminal.

No. 3: General cargo and passenger berth with 1,271 sq.m. shed.

No. 4: General cargo berth.

No. 5: General cargo and bulk molasses berth, equipped with a single 25.4 cm. (10 in.) pipeline for loading product parcel tankers with molasses at a rate of 300 – 350 tonnes/hr. from adjacent tank.

No. 6: General cargo berth and containerised cargo loading berth served by 25.4 tonne wharf crane. Adjacent container terminal has open storage area of 3,800 sq.m.

No. 7: General cargo berth and containerised cargo loading berth made of reinforced concrete deck on steel piles. It has a wharf height of 5.2 m. above port datum and design depth of 10.8 m. Used in conjunction with Wharf No. 8 for vessels up to 250 m. in length.

No. 8: General cargo berth and containerised cargo loading berth made of reinforced concrete decking on steel piles. It has a wharf height of 5.2 m. above port datum and a design depth of 10.8 m.

No. 10: Tanker berth for oil and LP gas with maximum vessel length of 189 m., design depth of 9.3 m. LAT and wharf height of 4.8 m. above port datum. Alternately used for bunkering.

No. 11: Royal Australian Navy berth.

No. 12: Bulk sugar terminal with berth length of 183 m., design depth of 10.5 m. LAT and wharf height of 4.6 m. above port datum. It is served by a travelling gantry loader with an average capacity of 1,750 tonnes/hr.

Smith's Creek No. 1: General cargo berth for vessels less than 65 m. The wharf is 53.4 m. long and has design depth of 8.3 m. LAT and wharf height of 3.7 m. above port datum. It has an open storage area of 1,360 sq.m. and cargo shed of 1,225 sq.m.

Marlin Jetty: For the embarkation or disembarkation of passengers only. Fuel is provided by Trinity Petroleum Services for commercial fishing boats and tourist vessels.

Floreat Wharf: For the embarkation and disembarkation of passengers only. Fuel is provided by road tanker with prior arrangement.

Marlin Marina: This floating marina has 114 berths – 98 for game fishing vessels, dive vessels and pleasure craft from 8.0 m. – 21 m. in length, 14 for tourist and commercial vessels up to 34 m. in length, and 2 berths for seaplanes. Each berth has access to water and power with fuel available at the adjacent Marlin Jetty.

A tourist vessel terminal with waiting lounge and booking offices is located behind the marina within the Pier Marketplace. This shopping complex offers a large food hall with numerous restaurants, bistros and bars; includes a large range of fashion stores and tourist retail outlets, together with a 200 room international standard hotel.

CRANES: A wharf crane is located on Wharf No. 6 with a capacity of 25.4 tonnes. Mobile and handling equipment is available from local stevedores or hire contractors. The equipment available includes forklifts up to 22.7 tonnes capacity, 2 tonne to 40 tonne capacity mobile cranes, tractors, bulldozers and tow motors.

SPECIALISED CARGO HANDLING FACILITIES:

Cruise Liner Terminals:

No.1: Located on the second floor of the Trinity Wharf complex at Wharf No. 1, the terminal has immigration and customs facilities. The terminal is linked by escalator and lift to the ground floor interstate coach station, and is adjacent to the Cairns central business district.

No. 2: Located at Wharf No. 2, the terminal has immigration and customs facilities. It is next door to the interstate coach station and adjacent to the Cairns central business district. Public telephones are also located within the terminal.

Containerised/General Cargo: Wharves No. 6, 7 and 8 are specialised general cargo/container berths. Wharf No. 6 has a 25.4 tonne capacity wharf crane and adjacent open storage area of 3,800 sq.m. Wharves No. 7 and 8 form a continuous quay length of 250 m., has design depth of 10.8 m. and wharf height of 5.2 m. above port datum. It has an open storage area of 10,374 sq.m.

Molasses Terminal: Located behind Wharf No. 5. The molasses terminal is operated by CSR. The tanks have a combined storage capacity of 18,500 tonnes and a loading rate of 300 – 350 tonnes/hr. via a 10 in. pipeline to Wharf No. 5.

LP Gas and Petroleum: Wharf No. 10 has a maximum vessel length of 189 m., design depth of 9.3 m. LAT and wharf height of 4.8 m. above port datum. Alternately used for bunkering.

Also see "Shipmaster's Report".

Bulk Sugar Terminal: Wharf No. 12 has a berth length of 183 m., design depth of 10.5 m. LAT and wharf height of 4.6 m. above port datum. It is served by a travelling gantry loader with an average capacity of 1,750 tonnes/hr.

TANKERS: See "Specialised Cargo Handling Facilities".

STEVEDORES: Northern Shipping and Stevedoring (NSS) has a full time workforce of ten employees, supplemented as required by casual and interport transfers. There are 3 operating shifts: 0001 hrs. – 0700 hrs., 0800 hrs. – 1500 hrs. and 1600 hrs. – 2300 hrs. Continuous work is available on request. NSS also has a range of stevedoring equipment available, including forklifts up to 23 tonnes, excavators, endloaders and container spreaders.

Cairns also has a number of intrastate coastal operators using their own labour to load vessels servicing outlying communities.

MEDICAL: Medical and dental services are located close to the port and Cairns has 2 major hospitals.

Health requirements are according to the World Health Organisation.

People from Yellow Fever areas or visitors to these areas require a vaccination certificate if entering Australia within the 6 day incubation period.

DENSITY: 45 – 50 mS/cm.

FRESH WATER: Fresh potable water is available at all wharves on arrangement with the Cairns Port Authority through Agent. Up to 120 tonnes/hr. can be loaded at Wharf No. 1 and 60 tonnes/hr. at Wharves No. 2 to 6. Charges are in accordance with the Cairns City Council scale of water charges.

FUEL: Quantities of fuel over 30,000 litres can be supplied at Wharf No. 10. For quantities less than 30,000 litres, vessels can be supplied at Wharf No. 8.

A bunkering barge service is offered by Jardine Shipping for quantities up to 700,000 litres. This service provides fuel lighterage for products from the local fuel distributors. Heavy oil, medium fuel oil and distillate can be delivered. Adequate notice must be given.

For small commercial and fishing vessels refuelling up to 50,000 litres, facilities are provided by Trinity Petroleum Services Co. at the fuel wharf at Commercial Fisherman's Base No. 1.

Pleasure craft and charter craft may refuel 7 days a week at the Trinity Petroleum Services Mobil facility at the Marlin Jetty. Trinity Petroleum also provide tanker service to vessels alongside Wharves No. 1 – 8 and in designated areas of Commercial Fishermen's Base No. 2.

FIRE PRECAUTIONS: Hydrants and hose reels are located at all wharves and berths. Fuel berth (Wharf No. 10) has an independent fire fighting pump, foam monitors and a supply of foam concentrate is available for fire brigade use. The tug "Babinda" is equipped with fire fighting equipment and can pump 2,275 litres per minute. Several other vessels are also fitted with equipment for small craft fire fighting purposes.

CONSULS: Italian Consular Agency, 91 Grafton St., Cairns. Tel: (070) 516472.

Spanish Consul, 81 Sheridan St., Cairns. Tel: (070) 516640.

REPAIRS: Cairns has an extensive, highly experienced shipbuilding and repair industry with a growing export list for vessels such as trawlers, naval patrol vessels, luxury yachts and high speed catamarans.
DRY DOCK: A dry dock is available for vessels up to 60 m. in length as well as 2 travel lifts, a floating dry dock and 5 slipways, the largest with a capacity of 3,000 tonnes. For larger vessels, voyage repairs of any kind can be undertaken alongside by experienced local repair companies.
SURVEYORS: Cargo inspectors available through the Department of Transport (Harbours & Marine). Surveyors are available through the American Bureau of Shipping (070) 534278, Det Norske Veritas (070) 576521, Lloyd's Register of Shipping (070) 314633, Rannard & Assoc. Pty. Ltd. (070) 937536, Russ Larkin & Assc. (070) 316046, Olufson D.Holdings (070) 321536, Captain Copland & Assc. (070) 937945.

Germanischer Lloyd: D. Olufson Holdings Pty.Ltd., 18 Cassia Street, Edge Hill, Cairns, Qld. 4870. Tel: (070) 321536.
GANGWAY/DECK WATCHMEN: Port Officers are on duty 24 hours per day.

Additional security is supplied during cruise liner visits, and more officers can be arranged through the ship's Agent of North Queensland Shipping Services Pty.Ltd.
HATCHES: Hatches to be closed by the crew.
CUSTOMS ALLOWANCES: 250 grams of tobacco and 1 litre of alcohol is permitted per crew member.
REPATRIATION: Facilities are available for crew repatriation. Prior arrangement should be made with Customs and the Department of Immigration through Agent.

There are 7 international airlines presently operating regular services to Cairns. Flights are available to Japan, North America, Papua New Guinea, Solomon Islands, Europe, Indonesia, Hong Kong, South East Asia and New Zealand.
AIRPORT: Cairns International Airport is located 6 km. from the seaport. It is served regularly by 7 international airlines with connections throughout the world, and 5 domestic airlines with services to all major domestic cities and more than 30 regional centres.
TIME: GMT + 10 hours "L", all year round.
HOLIDAYS:

	1995
New Years Day	January 2
Australia Day	January 26
Easter	April 14 & 17
Anzac Day	April 25
Labour Day	May 1
Queen's Birthday	June 12
Cairns Show Day	July 21
Christmas Day	December 25
Boxing Day	December 26

POLICE/AMBULANCE/FIRE: Dial 000.
EMERGENCY CO-ORDINATION CENTRE: Australian Volunteer Coast Guard: (070) 512192, (070) 512384.

They monitor radio frequencies 27.88 MHz. and 27.91 MHz., VHF Channel 16, CV11 and HF frequencies 2182 and 2524.
TELEPHONES: Wharves No. 1 – 8 have telephone lines available, the cost of connection being $34.10 per line with an additional telephone rental fee. Standard Telecom rate charges for usage. Vessels must supply: Name of the vessel, Wharf No., contact name, estimated time of arrival and to whom the bill is to be sent.

Only major vessels may have lines connected, generally arranged by the ship's Agent or through the Piermaster who organises connection of the required lines.

Public telephones are located at Commercial Fisherman's Base 1 and 2 and within the No. 2 Cruise Liner Terminal.
SERVICES: Services such as compass adjusting, radio and radar repairs, supply of charts, nautical publications and safety equipment, can be arranged through Agent or local suppliers.

Compass Adjuster: Marine Operation Service & Salvage, 35 Jones Street, Westcourt. Tel: (070) 518684.
BANKS:

Australia & New Zealand Banking Group Ltd., 15 Spence Street, Cairns. Tel: (070) 504711. Fax: (070) 518015.

Bank of Queensland Ltd., 17 Spence Street, Cairns. Tel: (070) 519188. Fax: (070) 517242.

Citibank, 42 Abbott Street, Cairns. Tel: (070) 511400. Fax: (070) 516291.

Commonwealth Bank of Australia, 76 Lake Street, Cairns. Tel: (070) 526526. Fax: (070) 521083.

National Australia Bank Ltd., 63 Abbott Street, Cairns. Tel: (070) 515844. Fax: (070) 515416.

Westpac Banking Corporation, 61 Abbott Street, Cairns. Tel: (070) 511544. Fax: (070) 314163.

Metway Bank Ltd., 13a Spence St., Cairns. Tel: (070) 311199. Fax: (070) 312279.
STORING: Vessels can be stored by barge or vessel. Vessels can be stored from barges during loading and unloading as per requirements of the Cairns Harbour Master – Department of Transport (Harbours & Marine). Trucks and forklifts are permitted to proceed alongside and local riggers can be employed to assist with storing.
SHIP'S SUPPLY SERVICE: Nautilus Trading Co. Pty. Ltd., 26b Martyn St., Cairns. Tel: (070) 311146. Fax: (070) 311256.

Pickers Yacht & Ship Chandlers, 108 Mulgrave Road, Parramatta Park. Tel: (070) 511944. Fax: (070) 510629.

R.F.D. Safety Marine Pty. Ltd., 182 Scott St., Portsmith. Tel: (070) 527381. Fax: (070) 511280.

Sharplift Pty. Ltd., 48 Aumuller St., Bungalow. Tel: (070) 351981. Fax: (070) 351065.

Taylor Marine, 93 Aumuller St., Portsmith. Tel: (070) 351322. Fax: (070) 351661.
SHORE LEAVE: Crew members are allowed ashore.
IDENTIFICATION CARDS: Seaman's Book is sufficient.
GARBAGE DISPOSAL: The Cairns Port Authority provides daily garbage collection services for both non-quarantine and quarantine garbage as determined by the Department of Primary Industries. Garbage should be placed in sealed plastic bags (inside covered bins), and kept on the vessel until collected.

Non-quarantine garbage removals are charged according to the manpower required and plant and machinery utilised.
WASTE OIL DISPOSAL: There is no dedicated berth, waste oil collected by tanker truck with prior arrangement through:

Cairns Waste Disposal: Tel. 018 772020 or 552481.

North Queensland Waste Disposals: Tel. 018 183634 or 577511.
SEAMAN'S CLUBS: None.
CURRENCY: Australian Dollar.
REGULATIONS: None.

SHIPMASTER'S REPORT: August 1995.
Charts: Aus. No. 262 and 830.
Approach: The Murray River range of hills to the South of Cairns provides a good landmark.

The beaconed channel is conspicuous with few other features around.
Anchorage: The anchorage is outside Cairns Port Limit as per AUS. 830 and is exposed. We noticed other vessels anchored around position Lat. 16° 49.5′ S., Long. 145° 53′ E.
Pilots: VHF Range is good. Contact as per ALRS. Pilotage available 24 hours but dependent on tide for large vessels. Pilot boards from fast cutter in position Lat. 16° 49′ S., Long. 145° 50.5′ E. Time to berth is approximately 1 hour. North of Cairns to Torres Strait, Barrier Reef pilotage is compulsory for most classes of vessels.
Channel: The channel has good lights and is dredged to 8.5 m.

Minimum UKC in calm weather is 0.6 m. We found 7.1 m. draft any tidal state to Tanker Berth. Normal maximum draft is 8.5 m. (dependent on tide). Deeper drafts up to 10.0 m. can be considered, but dependent on tide and weather (swell).
Tugs: 3 small tugs of 20 ton bollard pull each are available. One tug is away frequently working one of the small outports. Tugs lines are used.
Berth: Multi-User Tanker Berth No. 10: The berth handles all fuels, bunkers and LPG. Berth is a tanker type 'T' jetty of concrete construction and handles vessels up to 200 m. LOA. Berth is dredged to 9.5 m. datum. The berth has a fender flat face of 50 m. with outlying mooring dolphins North and South. The fenders are good.

For this ship starboard side alongside is best as we can more easily land Brow gangway. Tie up is 3–2 each end. Head/stern lines to detached dolphins by line boat, only one boat so mooring can take a long time.

Fresh water is available but meter is unreliable. Berths No. 1, 2, 3, 4 for Cruise Ships, No. 5 and 6 for General and No. 7 and 8 for Containers.
Terminal: BORAL Gas: 200 m. to tanks of 4,500 cu.m. capacity. Pressure storage only. We have only discharged Propane. Boral works with Townsville exchanging product by rail car. Minimum operating temperature is +5° C., preferably +7° C. Shore hoses are 6 in. 300 ASA with 10 in. line to tanks. ESD on ship which closes valves ashore and on end of hose against vessel's manifold valve (50 seconds closing time). Pumping rate about 160 tonnes/hr. at 10 bar.
Documents: Customs/Immigration documentation as Townsville.
Chandler: We used Nautilus. Fax: 070 31 1256. Tel: 070 31 1146.
Telephone: Pay/Card phone at Berth No. 8, next to toilet block (5 minutes walk).
Airport: Cairns International Airport is 4 miles to the NW. Frequent domestic flights to Brisbane. International flights to Far East destinations.
AUTHORITY: Cairns Port Authority, P.O.Box 594, Cairns, North Queensland 4870. *Tel:* (070) 523888, 523811. *Telex:* 48256. *FAX:* (070) 521493. *Contact:* D.Burgess, Piermaster.

Department of Transport, Marine and Ports Division, Tingira St., Portsmith. *Tel:* (070) 527400. *Contact:* Regional Harbour Master.
AGENT: Patrick Sleigh Shipping Agencies Pty. Ltd., P.O.Box 621, Unit 1, 35 Grafton Street, Cairns, Queensland 4870. Tel: (070) 51 5211. Telex: 48412 PATSLE. Fax: (070) 51 5082. Seagram Code: 4CPATSLE.

CAPE FLATTERY, Queensland: 14.59 S. 145.21 E.

(See Plan)

SHIPMASTER'S REPORT: April 1987 (Updated 1996).

LOCATION: Cape Flattery is situated approximately 130 miles north of Cairns on the East coast of Queensland. The Port exports bulk silica sand and is within the boundaries of the Great Barrier Reef.

Entrance through the reef for larger vessels can be made through Grafton Passage (East of Cairns), or through One and a Half Mile Passage about 30 miles E.N.E. of the Port, this latter entrance should only be transversed with local knowledge as the area of the passage is unlit and there are no navigational marks on the reefs.
PORT LIMITS: The area comprised within a line commencing at a point on the H.W. mark at Latitude 14° 50′ S. on the mainland at the northern extremity of Lookout Point, thence by a line due east for 2.0 nautical miles at its intersection with Longitude 145° 15.8′ E., thence in a S.E'ly direction for about 7.2 nautical miles to the intersection of Longitude 145° 22.1′ E. and Latitude 14° 55.2′S. Thence in a S.S.E'ly direction for a distance of about 4.5 nautical miles to the intersection of Longitude 145° 23′ E. and Latitude 15° 00′ S., thence in a W'ly direction for a distance of about 2.7 nautical miles to a point on the H.W. mark to the point of commencement together with all navigable waters, rivers, creeks communicating with that area, and the banks, shores and foreshores thereof.

DOCUMENTS:
2 copies Crew List (Form 11), Pages 1 and 2.
1 copy Crew Declaration (Customs Form 5).
1 copy Ship's Stores Consumed in Australia (Form 42A).
1 copy Loading Ports List (Form B 921).
2 copies Ship's Report Inwards (Customs Form 1).
1 copy Department of Primary Industry (Animal Declaration)(Form E).
1 copy Health Declaration (Form F).

The Agent brings a full set of papers with him and acts for Customs in the event that they do not attend.

PILOTAGE: When approaching Australia from the N.W., reef pilotage is compulsory. See "Torres Strait".

Local Pilotage: Pilotage is compulsory and the Pilots are stationed in Cairns.

It is necessary to give 48 hours notice of E.T.A. at the Pilot Boarding Ground with an update at 24 hours, via Agent at Cairns. The Pilot will board 3 miles north of the wharf or at either anchorage. At present berthing will be carried out in daylight hours only. The Pilot boat has a black hull with brown upperworks and has VHF Channel 16 and other working channels, it also doubles as one of the mooring boats.

Also see "Cairns" – "Pilotage".

ANCHORAGES: On approaching the port, and if not berthing on arrival, vessels should anchor on the North side of the Cape and maintain a listening watch on VHF Channel 16. The recommended anchorage is defined by a line joining the following co-ordinates:
(a) Lat. 14° 52.81′ S., Long. 145° 15.74′ E.
(b) Lat. 14° 52.99′ S., Long. 145° 16.72′ E.
(c) Lat. 14° 54.03′ S., Long. 145° 16.67′ E.
(d) Lat. 14° 54.49′ S., Long. 145° 18.86′ E.

RESTRICTIONS: Berthing may be suspended in winds exceeding 20 knots. Loading is usually stopped if wind exceeds 40 knots. Distance from the waterline to the top of the hatch coaming not to exceed 35 ft.

Arrival Condition: Vessels should arrive in a condition where the vessel is trimmed by the stern with the propeller completely immersed and the forward draft not less than 2% of the vessel's overall length.

MAX. SIZE: Max. d.w.t. 70,000 tons. Max. LOA 225 m. Max. beam 32 m. Max. draft 14.0 m.

HEALTH: Customs and Health Clearance can be obtained off Cairns if using Grafton Passage. If approaching from the North, arrangements for clearing the ship must be arranged through Agent at Cairns.

Note: Application for Radio Pratique was refused although all in order.

Port Health Inspection: Dry stores and fridges are inspected by Government Inspector from Cairns, garbage bins must be properly covered. No garbage collection available. Because of the restrictions on the environment in this area, no waste or garbage should be disposed of into the sea. It should be noted that a Scientific Research Station is situated on nearby Lizard Island, any waste materials may well be monitored, resulting in heavy fines if Masters of vessels are found guilty of disposing of garbage in this area.

RADIO/VHF: See "Pilotage" and "Anchorage".

TUGS: No tugs available. The two 40 ft. mooring launches are not allowed to tow.

BERTHING: Because of the exposed position of the wharf, vessels should ensure that all mooring lines are in good condition and to facilitate the handling of lines, each should have a 30 mm. rope tail attached to the eye, about 6 m. in length. This is required for handling of the fore and aft lines by the launches. Anchors and windlass must be in good working order as the normal routine is to berth starboard side to using the port anchor, which can be hove home after vessel is all fast. Vessel lies on the east side of the wharf head outward. This ship (29,000 d.w.t.) used 2 breast lines and 2 backsprings at each end plus 2 long drifts on the head and stern lines. All lines should be prepared and made ready, prior to berthing approaches to avoid delays and complications during berthing procedures. Forward breast lines are normally positioned first.

Ballast: On arrival all vessels must have clean ballast water as, being in close proximity to the Great Barrier Reef,any polluted ballast will not be tolerated. There are no facilities at Cape Flattery to transfer dirty ballast ashore.

Hold Inspection: Cleanliness required is of a higher standard than that required for grain cargoes. Should the ship fail inspection, the crew have the privilege of painting. No indications of rust will be tolerated.

Loading Arm: The loading arm is a single stacker type with telescopic chute and trimmer. Slewing angle 45° to 115°. Luffing +17° to −15°. Travelling distance 139 m. Outreach 21.5 m. from face of the fenders. Loading rate about 1,300 t.p.h. (average), 2,000 t.p.h. (maximum), clearance water to boom at dolphins is a minimum of 15 m. Max. air draft above L.A.T. – 14.5 m.

Cargo: High quality Silica Sand in bulk. Crew covers with vinyl sheeting on completion of each hold and before sailing.

Prior to sailing the Loading Master requires:-
4 copies Notice of Readiness
4 copies Stowage Plan
4 copies Statement of Facts.

MEDICAL: As there is no hospital or doctor, emergency cases only are flown to Cairns.

FRESH WATER: Not available.

FUEL: Not available.

HATCHES: Hatches are opened and closed by crew. Once open the stevedores prefer not to close them again for fear of cargo contamination by loose scale or dirt falling from the underside of the hatch covers.

CERTIFICATES: The following Certificates were examined: Ship's Register, Load-line, Safety Equipment, Safety Construction, Safety Radio, I.O.P.P. Certificate and De-Rat. Cargo Equipment and hold accesses must conform to Australian Regulations.

AIRPORT: There is a landing strip for light aircraft on the north side of the Cape. As there are no roads or rail service, this is the only means of transport for pilots, Agents and Port Officials who are all based in Cairns.

SHORE LEAVE: No shore leave as Cape Flattery is in an Aboriginal Reserve.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: No facilities are available at Cape Flattery due to the remoteness of the area and the difficult and dangerous terrain. All crew members are required to remain aboard the vessel.

CURRENCY: Australian Dollar (A$).

WEATHER: The wharf is exposed to the weather which for most of the year (9 months) is the S.E. Trades. The wharf lies in a direction of about 150° T. The berthing of vessels will be determined by the strength of the winds and currents at the time of berthing. The current usually runs under the wharf in a N.E'ly direction, ranging up to 1 knot and may be stronger during the wet season (December to March). After N'ly winds it does occasionally set S'ly or S.W.

Because of the exposed area and the wharf facilities, vessels alongside must remain with their engines ready as the weather can deteriorate rapidly and the vessel may have to vacate the berth at short notice, therefore any work on the vessel's engines is prohibited.

GENERAL:

Cleanliness: Holds must be free of all rust.

Surveys: Draft surveys are carried out although somewhat hampered by the fresh S.E'ly winds. Shore scale seems unreliable.

Shippers: Cape Flattery Silica Mines Pty. Cables: "Flattrysand". Telex: AA48381.

Stores: There are no supplies of stores available. Anything required by the local population that cannot be shipped by plane must come by lighter from Cairns.

AUTHORITY: Ports Corporation of Queensland, GPO Box 409, Brisbane 4001, Queensland, Australia. *Tel:* (07) 3224 7088. *FAX:* (07) 3224 7234. *Contact:* Captain P. Matthews, Regional Harbour Master (Cairns). Tel: (070) 527400. Fax: (070) 351127.

Operator: Cape Flattery Silica Mines Pty.Ltd., Box 6212, Mail Centre, Cairns, Queensland 4870, Australia. Tel: (070) 515099, (070) 603966. Telex: AA 48381. Fax: (070) 518960, (070) 603993. Cables: Flatrysand. Contact: A. Temperley, General Manager.

AGENT: See "Cairns".

CARNARVON (Including Useless Loop & Cape Cuvier) W.A.: 24.53 S. 113.40 E. (See Plan)

(A) CARNARVON
(B) CAPE CUVIER
(C) USELESS LOOP

(A) CARNARVON

BERTHING: There is a small boat harbour but no other facilities are available.

AGENT: See "Fremantle".

(B) CAPE CUVIER

LOCATION: Cape Cuvier is situated on the N.W. coast of Australia approximately 75 km. N.N.W. of Carnarvon, in position Lat. 24° 13′ S., Long. 113° 23′ E.

PORT LIMITS: This port is now incorporated in the Port of Carnarvon the limits of which have been extended as follows:—

"A line due West for 4 nautical miles from a point on the mainland in Lat. 24° 10′ S. and Long. 113° 26′ 4.5″ E., and thence in a S.S.W. direction to Cape Ronsard at the North End of Bernier Island" and then as for Carnarvon to the starting point.

DOCUMENTS: The following documents are currently required and must be completed prior to arrival and sailing.

Form 42A:	Ship's Stores Consumed in Australia.
Form M&S–11 (2 copies):	Crew List.
Form W080:	Boarding Report.
Form 5:	List of all Articles Owned or in Possession of Master, officers and crew.
Form QA4:	Quarantine Notice.
Form QA5 (if required):	Ship Master's Bond.
Form F Q360:	Primary Health Report.
Ship's Stationery:	Crew List.

APPROACHES: Red Bluff about 12 miles North of Cape Cuvier can be picked up by radar at a distance of about 20 miles. Cape Cuvier is easily identified by large white salt hill.

The berth is floodlit at night when a vessel is being loaded.

PILOTAGE: Facilities provided by vessels for Pilot boarding at Cape Cuvier must comply strictly with SOLAS regulations in all aspects.

Pilot, supplied by Dampier Salt Limited, will board approximately 1 mile North of jetty-head.

Any delays to vessels berthing due to non-compliance with Solas regulations (IMO current resolutions) will be for Owner's account.

Guidelines for all ships calling at Cape Cuvier: From past experience we have found it necessary to insist that all vessels intending calling at Cape Cuvier must supply plans showing winch layouts and deck machinery. In the case of older type vessels it is in the Owner's interest that the Pilot checks the vessel before arrival. The best way to organise this is to send the plans of the vessel's winch configuration to the Pilot (via Dampier Salt Limited) for approval.

The winches are the controlling factor and must be in first class working condition. There must be no rust on the brake drums and all brake linings must be renewed and to be of non-asbestos material. If the vessel is old it may be necessary to machine the brake liner so that old it may be necessary to machine the brake liner so that the brakes will grip. The worm drive brake lever must be free and greased and be able to apply considerable pressure on the brake linings without running out of thread.

The winch reels must be capable of taking 250 m.×80 mm. rope on vessels over 30,000 d.w.t. and 250 m.×70 mm. for vessels under 30,000 d.w.t. A minimum of 2 drums each end and for vessels under 30,000 d.w.t., and a minimum of 4 drums each end (but would prefer 6) on vessels over 30,000 d.w.t.

The winches must be capable of supplying full power for long periods so steam or hydraulic lines and associated machinery must be in first class working order.

Remember: The condition of the winches control the safety of the vessel while in berth.

The leads must be good with all rollers working. The 2 centre winches are used for 266 m.×36 mm. wires so they must have provision for securing the wire to the side of the drum. Roller leads (aft only) must have a 75 mm. top bar to prevent the wires from jumping off the rollers when the vessel is trimmed by the stern.

The Pilot will remain on board for the entire loading and will be responsible for moving the vessel in the berth. Good accommodation with toilet and shower facilities and meals must be provided.

ANCHORAGE: Recommended anchorage is in position with the jetty bearing approximately 200° (T) at a distance of 1.5 miles. Depth at anchorage is about 15 fathoms. 3 cables off the shore, the depth is about 9 fathoms. Holding ground is good.

RESTRICTIONS: No berthing at night. Also see "Pilotage".

MAX. SIZE: Vessels of 70,000 d.w.t. call on a regular basis. Depth alongside is 17.80 m.

HEALTH: In the case of each vessel arriving from overseas the following information must be sent to the Port Health Authorities between 12 and 24 hours before arrival, addressing the message to the relevant shipping agency (a copy of which message is required to be sent also to Dampier Salt Limited (Telex No. 99283)):

1. The expected hour and date of arrival of the vessel.
2. Confirmation that the Master has individually inspected all persons on board within 24 hours before arrival.
3. Particulars of any cases of serious illness on board.
4. Confirmation that all persons on board are satisfactorily vaccinated against cholera and in possession of valid Vaccination Certificate.
5. Request for permission to enter Port.

On receipt of quarantine message, Dampier Salt Limited, will advise anchorage position if vessel is not berthing on arrival.

Vessels must also ensure International Quarantine signals are displayed at all times until cleared by the Quarantine Officer (Clearance will be issued via Shipping Agency).

Whilst berthed at Cape Cuvier all food and organic waste must be kept in efficiently sealed containers and frequently doused with a soluble disinfectant. No garbage may be thrown overboard.

RADIO: Perth Radio.

Weather Broadcasts: Vessels are advised to listen to daily weather broadcasts by:

1. Perth Radio (VIP) at 0100 hrs. GMT and 1200 hrs. GMT, on 484 kHz, 8597 kHz, 12294 kHz or at 0200 GMT and 1000 GMT on 16947 kHz or 22315 kHz.
2. Local broadcast by VHF Channel 24, twice daily. Broadcast is via Perth Radio.

Vessels Arrival Requirements: Cape Cuvier is a First Port of Entry and all vessels bound for the berth are required to radio to Dampier Salt Limited, Telex No. 99283 (Fax: 414029. Cables: 6 CDPR SALT C), through the normal recognised coastal radio station, i.e. Perth Radio VIP the following information additional to Port Health messages (See "Health"):

1. Upon departure from previous port, estimated time of arrival and whether or not the port is the first port of call in Australia.
2. 10 days before intended arrival at the port, the estimated time of arrival and whether or not the port is the first port of call in Australia.
3. 7 days before intended arrival at the port, confirmation or any variation of the advice previously given.
4. 4 days before intended arrival at the port, confirmation or any variation of the advice previously given.
5. 48 hours before intended arrival at the port – estimate time of arrival at the Pilot boarding ground and also advise the vessel's estimated draft fore and aft.
6. 24 hours before intended arrival confirmation or any variation of the advice previously given.
7. 12 hours before intended arrival, final confirmation of time of arrival.

Note: Because of the isolated location of Cape Cuvier and the need to organise transport for the various berth services it is imperative that ample notice is given on arrival times. This is particularly so for weekend arrivals. Failure to adhere to these requirements may jeopardise vessels berthing to the detriment of Owner's account.

VHF: Call sign: Cape Cuvier. Available frequencies: Channels 6, 8, 12, 16, 67. Loading Operation Frequency: 155.97 MHz. Emergency Working Frequency: Channel 67.

A continuous watch must be maintained by the vessel on VHF Channel 16. All vessels approaching the Port or at anchor must maintain a continuous watch on this frequency. *Disregard of this requirement is a contravention of Berth By-Laws and may adversely affect expeditious berthing.*

TUGS: A contractor operates the tugs and line launches which are available at all hours.

The following craft are available to assist in berthing and unberthing.

Line launch – "Bigidda". Length 16.7 m. Twin screw.

Tug "Pilbara Neptuna". Bollard pull 28 tonnes. Length 26.41 m., breadth 9.3 m. Main engines: 2×Dilhatsu eight cylinder at 950 BHP each. Twin screw "Z" peller.

"Boolathana" – tug. Bollard pull 25 tonnes. Length 24 m., breadth 8 m., draft 3.4 m. Main engines: 2×V12 Caterpillar 398 1,400 r.p.m., 850 b.h.p. each. Twin screw kort nozzles.

BERTHING: *Salt Loading Berth:* Situated at Lat. 24° 13' S., Long. 113° 24' E. The berth is used only for salt loading.

A central timber decked wharfhead carrying a fixed position, stiff arm, slewing and luffing conveyor boom shiploader with deflector.

Six mooring buoys anchored to the seabed.

Vessels moor to buoys and warp themselves into position for loading each hold. The shiploader generally has the capacity to load 2 adjacent holds for each warped position of the vessel.

The principal berth dimensions are as follows:

Natural seabed level: R.L. – 17.8 m.

Minimum distance between vessel and jettyhead structure: 14.5 m.

Berth length 670 m. between fore and aft mooring Buoys No. 2 and 5.

Berth width 180 m., between breasting mooring Buoys No. 3 and 4, and minimum vessel stand-off from jettyhead (14.5 m.).

R.L 0.0 m. is Indian Spring Low Water at Cape Cuvier. The maximum tidal range at Cape Cuvier is 1.7 m.

The principal shiploader dimensions are as follows:

Jettyhead area:	18 m.×18 m.
Jettyhead deck level:	R.L. 13.2 m.
Shiploader boom underside:	R.L. 16.2 m.
Shiploader boom outreach:	Approx. 30 m.
Shiploader boom luff:	incline 45° decline 15°
Shiploader boom loading arc:	incline 18° decline 15°
Shiploader boom slew:	± 90°
Shiploader boom conveyor width:	1,600 mm.
Shiploader boom conveyor speed:	3.1 m./sec.
Shiploader boom conveyor capacity:	3,500 t.p.h.

Also see "Loading".

MOORING: *Ship's Mooring Lines:*

1. Vessels shall provide the following lines:

6×250 m.×80 mm. diameter polylines on forecastle deck.

6×250 m.×80 mm. diameter polylines on afterdeck (in case of vessels under 30,000 d.w.t., 70 mm. to apply).

All lines to have a reinforced soft eye, 1 m. long in the outer end.

2. All vessels shall provide satisfactory ship's lines on both fore and after decks, such to pick up the 36 mm. diameter steel wires, 2 from each mooring buoys Nos. 2 and 5.

3. All working and spare lines supplied by the vessel are to be in first class working condition.

Note: If vessel cannot supply lines, Dampier Salt Ltd. will supply at no cost.

Mooring Equipment – Supplied by Dampier Salt:

1. Dampier Salt shall supply 2×265 m.×36 mm. diameter steel wires from each of mooring buoys Nos. 2 and 5. These lines are to be run back to the vessel and secured on drum winches to act as the fore and aft longitudinal mooring lines.

2. Dampier Salt Limited shall supply all ropes necessary for stopping-off polylines.

Berth Operating Conditions: Unless the Pilot otherwise directs, berthing operations will generally be restricted to the following conditions:

Winds: Zero winds from Northern quadrants and below 25 knots within the Southern sector between East and West.

Swells: Up to a mean amplitude of 2 m. as recorded on the berth wave rider.

Ballast: The vessel to maintain ballasted state with the propeller 75% immersed and a stern trim.

Berth Occupancy: Unless the Pilot otherwise directs, berth occupancy will generally be restricted to the following conditions:

Winds: Below 35 knots from the Southern quadrants. Below 10 knots from the Northern quadrants.

Swell: Up to a mean amplitude of 2.5 m. as recorded on the berth wave rider.

Mooring Procedure:

1. Preparation before Berthing – Two central drums, both fore and aft, are to be left bare ready to receive the 36 mm. diameter wires when these wires are landed on board from mooring buoys Nos. 2 and 5.

2. On berthing – Immediately prior to berthing, a number of shore based personnel will board the vessel to assist in handling lines during berthing. As instructed by the Pilot, polylines will be run out as both breasting lines and to pick up the steel wires from the fore and aft mooring buoys. Polylines unable to be held on drum winches will be taken up on warping winches, stoppered off and placed on bitts.

The Pilot will give instructions as to how much tension is to be applied to each line.

3. On Warping – During the shiploading operation, it will be necessary to shift the vessel such that the shiploader can load the vessel in accordance with the loading schedule. Normally, the shiploader will load only two hatches from the one positioning of the vessel.

The shore-based personnel will board the vessel to assist in line handling for the warping operation. The tugs will also assist as required.

Under the direction of the Pilot, lines shall be played out or taken in such to warp the vessel to the next loading position.

4. On unberthing – All lines shall be dropped or taken in as instructed by the Pilot. The shore personnel will assist in line handling.

LOADING: *Condition to Load Salt:*

1. Ensure that vessel's holds are thoroughly washed and all traces of the previous cargo are removed.

2. Ensure that vessel's holds are thoroughly lime washed with slaked lime (calcium hydroxide – $Ca(OH)_2$ and that no other substances are mixed with it.

Note: Limewashing is a pre-requisite of vessel's loading.

In the event that holds are not acceptable, the Master may be required to sign a "Letter of Indemnity" accepting the cargo on behalf of the Operating Line, acknowledging that holds are in the condition described in the report by the independent Marine Surveyor.

Provided the vessel's holds are acceptable to the Surveyor as being "clean" the Surveyor will issue a Hold "Cleanliness Certificate".

3. Ensure that mooring lines are laid out in readiness for berthing in accordance with "Mooring Procedure".

Loading Procedure: The vessel is to ensure that the first 2 holds to be loaded have the hatch covers removed on berthing. On berthing the vessel will be positioned by the Pilot, such that the loading can commence immediately upon acceptance of the Notice of Readiness and verification that vessel's holds are clean to standards set by Dampier Salt Limited.

An independent Marine Surveyor appointed by Dampier Salt will agree all draft readings and ballast soundings with the Chief Officer prior to commencement of loading.

An Operations Supervisor from Dampier Salt Limited will board the vessel prior to berthing to check that the vessel is ready to load. This Officer will agree with the Chief Officer a loading sequence, loading schedule, warping procedures, draft problems (if any) and any other matters relating to the loading of the vessel. Warping procedures shall be confirmed with the Pilot.

The Operations Supervisor will draw up a loading schedule, after consultation with the Chief Officer, nominating the approximate hold loading duration, times of warping and the estimated time of completion of loading, and sailing time.

The Operations Supervisor will normally remain on board the vessel for the duration of loading in order to liaise with the Chief Officer on matters concerning the loading procedures.

A belt weightometer is used by Dampier Salt Limited to indicate loading rates and tonnages loaded in each hold. This instrument has an accuracy of ±1.5%. It is the practice of Dampier Salt Limited for the Surveyor and Chief Officer to agree a preliminary draft survey when the second last hold is approximately 80% loaded. This survey then allows the correct loading of the remainder of the cargo so as to ensure correct trim and prevent inadvertent overloading. The final loaded cargo tonnage is determined by draft survey, calculated by and agreed between the Surveyor and Chief Officer.

No labour is available at Cape Cuvier to board the vessel for any shipboard duties other than handling of mooring lines. Trimming is by conveyor discharge at the end of the loading spout only.

Salt – General Specifications: Stowage factor of Salt. Normal stowage density 32 cu.ft. per long ton or 0.89 cu.m. per metric tonne. Angle of repose 33°.

STEVEDORES: Dampier Salt Ltd.

MEDICAL: Master to advise by telex via coastal radio if any crew members require medical or dental services. Prior advice will generally ensure adequate arrangements can be made to accommodate such requests. Insufficient notice, or advice only on berthing may jeopardise the chances of obtaining normal medical/dental treatment. Emergency medical treatment is normally available through Carnarvon Regional Hospital.

DENSITY: 1025.

FRESH WATER: Not available.

FUEL: Not available.

REPAIRS: There are no ship repair facilities. However, vessels may carry out repairs of a limited nature but only with the prior approval of Dampier Salt Limited and the Harbour Master.

DRY DOCK: None.

WATCHMEN: No shore watchmen available.

HATCHES: To be opened/closed by ship's crew.

CUSTOMS ALLOWANCES: 200 cigarettes in opened carton, or 0.25 lb. cigars, or 0.5 lb. tobacco, and one opened bottle spirits per crew member.

An Australian Customs Boarding Officer is resident in Carnarvon. Regulations of Australian Department of Customs and Excise apply to the Port.

CARGO GEAR: Not required. Salt loading is by conveyor belt.

REPATRIATION: Road connection to Carnarvon, which is 97 km. distance from Cape Cuvier, thence air connection with Perth where international flights available.

AIRPORT: Carnarvon has a daily air service to Perth. Connecting flights for other Australian cities and also for overseas destinations are available from Perth.

TIME: See "General" before first port.

GENERAL: Port is gazetted under Western Australian legislation and controlled under Ports and Harbours Regulations.

Ordering Stores: Telex advice of any and all stores and provisions requirements should be given to Agent at least 4 days prior to arrival. Stores orders received later than this may not be able to be filled.

Charts and Publications:

Australian Pilot Volume V
Australian Chart AUS 329 (N.W. Cape to Pt. Cloates)
Australian Chart AUS 330 (Pt. Cloates to Quobba Pt.)
Australian Chart AUS 331 (Quobba Pt. to Geraldton)
British Chart BA 1055 (Bedout Island to Cape Cuvier)

Access to Vessel:

At Anchorage: Whilst at anchorage, access will be by authorised personnel only from the line launch or one of the tugs.

In Berth: Whilst in berth, access will normally be by a hydraulically operated gangway. On these occasions the shiploader supervisor will direct the timing and positioning of the shiploader boom such to minimise inconvenience to the shiploader operation.

Vessels Engines: Vessel's engines are not to be demobilised whilst the vessel is in berth. Adverse weather conditions affecting the area may require the vessel to be moved. Vessels in the berth will be on notice to shift at all times.

OPERATOR: Dampier Salt Limited, Lake Macleod Division, P.O.Box 501, Carnarvon, W.A. 6701. *Tel:* (099) 412677. *Telex:* AA 99283. *Cables:* 6CDPRSALTC. *FAX:* (099) 414029.

AUTHORITY: Department of Transport, 1 Essex Street, Fremantle, Western Australia 6160. *Tel:* (09)239-2399. *FAX:* (09) 430-6229. *Contact:* Director Marine Safety.

AGENT: See "Fremantle".

(C) USELESS LOOP (Shark Bay)

LOCATION: Useless Loop is situated in position Lat. 26° 05′ S., Long. 113° 24′ E.

DOCUMENTS: See "Melbourne".

PILOTAGE: Compulsory. Notice for Pilots is by 'Shipserv' message to Superintendent of Pilotage, Department of Marine and Harbours, Fremantle, 7 days, 48 hours and 24 hours prior to arrival.

APPROACHES: Vessels from the North proceed direct to Denham Channel, vessels from the South can navigate through Naturaliste Channel with caution using Chart AUS 331. All vessels must anchor at pilot boarding ground situated 1 mile North of Denham Channel Lat. 25° 52′ S., Long. 113° 15′ E. and wait for further instructions on VHF Channel 16. Vessels must provide a good lee for pilot boat with ladder always on starboard side unless otherwise ordered. It is important that final ETA is correct and must be amended if necessary. It is important that vessels arrive in full or good ballast condition otherwise they may be unable to berth.

Pilots remain on board during transit to Useless Loop.

TUGS: None.

BERTHING: One berth. Owned and operated by Shark Bay Salt Pty. Ltd. Conveyor belt system from Salt Stock Pile to ship gross rate 800 t.p.h. for salt, 600 t.p.h. for gypsum. Dolphin type jetty length 189 m. runs approximately North and South directions and 2.1.cables from Topper Island. Min. depth at berth 10.06 m. LWOST. Rise of tide approximately 0.91 m. Winds predominantly S.E./S.W.

As the loading equipment is fixed, the vessel must shift from hatch to hatch as required.

As strong winds prevail in the area, vessels should plan for a minimum of shift ships to prevent crew exhaustion. As no shore weights are available, the ship's officers must load by draft, and a careful check of deballasting is advised.

FRESH WATER: Not available.

FUEL: Not available.

REPAIRS: Not available.

AUTHORITY: Department of Transport, 1 Essex Street, Fremantle, Western Australia 6160. *Tel:* (09) 239-2399. *FAX:* (09) 430-6229. *Contact:* Director Marine Safety.

AGENT: See "Fremantle".

CHALLIS VENTURE: 12.07 S. 125.00 E.
JABIRU VENTURE: 11.55 S. 125.00 E.
SKUA VENTURE: 12.30 S. 124.25 E. (See Plan)

LOCATION: The Jabiru and Challis Oilfields are in the Timor Sea, about 680 km. West of Darwin and some 300 km. off the Kimberley coast of North Western Australia.

"Challis Venture" – Lat. 12° 07′ 17″ S., Long. 125° 00′ 43″ E.
"Jabiru Venture" – Lat. 11° 55′ 33″ S., Long. 125° 00′ 23″ E.
"Skua Venture" – Lat. 12° 30′ 36″ S., Long. 124° 25′ 16″ E.

ANCHORAGE/RESTRICTIONS: There are prohibited anchoring areas in the vicinity of the Timor Sea production areas. If an offtake vessel cannot moor on arrival at one of the Facilities and wishes to anchor, it must be within the Permitted Anchoring Areas. Contact should be made with the Master of either Facility for information and guidance on this matter.

Vessels should make every endeavour to arrive with propeller and rudder fully submerged and trim should not exceed 10% of the after draft. Masters should note that in event of arrival with excessive trim or too light in draft, berthing will be refused.

DOCUMENTS: Masters will complete the following forms which will be delivered to Customs by the ship's Agents at least 48 hours prior to arrival:

Ship's Inward Cargo Report (Form 1).
Passenger Report (if applicable) (Form 2A and Form 2B).
Crew Report (Form 3A and Form 3B).

Masters should endeavour to complete the following forms ready for collection on arrival by Customs Officers, if the facility is the vessel's first Australian destination:

Ship's Report of Arrival (Form 5 – Part 1).
Crew Effects Declaration (Form 5 – Part 2).
Ship's Stores consumed in Australia (Form 42A).
Shipmaster's Notice (Animals, Hides and Skins) Not for Importation (Form QA4).
Shipmaster's Bond regarding animals carried (only if pets on board) (Form QA5).

The Customs Officer in attendance will advise any other documentary requirements, and provide forms if necessary.

Because the "Challis Venture", "Jabiru Venture" and "Skua Venture" are not designated ports, offtake vessels should have their Agents apply for Certificates of Permission for Entry to Australia at other than a designated port as required under Section 58 of the Customs Act 1901 (Commonwealth of Australia).

Customs Authorities have advised that permission will generally be granted. However, Customs Officials retain the right to board offtake vessels for inspection at their discretion and Masters of offtake tankers are required to provide accommodation and mess facilities for visiting Customs Officers.

APPROACHES: The Facility Master will advise by radio the bearing on which offtaking vessels should approach.

Hazard to Navigation: An unlit wave rider buoy is located at Lat. 11° 57.97′ S., Long. 125° 03.42′ E.

PILOTAGE: Pilotage is compulsory. The Facility Master or an appropriately qualified nominee of the Facility Master will transfer to the offtake vessel when it reaches a distance of 2 nautical miles from the Facility and will act as Pilot during approach and mooring.

Two Berthing Superintendents from the Facility will board with the Facility Master and will remain on board the offtake vessel for the time the vessel is moored. Suitable accommodation is to be provided for these personnel.

READINESS: *Restricted Berthing Hours:* Notice of Readiness will only be accepted during the hours 0700 to 1600 when prevailing weather conditions permit safe mooring.

Notice of Readiness: Arriving offtake vessels may not tender Notice of Readiness until 2 nautical miles from a facility and until otherwise in all respects ready to approach, moor and offtake in accordance with these regulations and the Terminal Conditions.

MAX. SIZE: 150,000 d.w.t.

HEALTH: *Australian Government Requirements:* A Radio Pratique message should reach the vessel's Agent no more than 24 hours, and no less then 12 hours before arrival, as per the following instructions.

Please answer the following questions, indicating NIL where necessary, and answer them in order. If answers are not correct, or not in the correct order, it could cause unnecessary delay to vessel berthing.

NOTE: Masters or Medical Officers who wilfully make a false statement in answer to any question, are liable to a fine not exceeding $ 5,000 or imprisonment for a period not exceeding 2 years.

Question	*Answer*
1. Name, type and nationality of offtake vessel.	....
2. Where from and departure date?	....
3. Where bound and ETA first port	
4. Details of any communicable disease or illness or death on board since sailing.	....
5. Are there any animals or plants on board?	....
6. Have you carried livestock in the last six months?	....
If yes: List type, ports visited and cleaning performed since last livestock voyage.	....

Optional section (answering this section will facilitate clearance of your vessel when it arrives in port).

If the vessel is entering in ballast:

1. Have you:
   (a) Exchanged ballast water at sea during the voyage *and* logbook certification of time and co-ordinates when re-ballasting occurred *or*:
   (b) Certification that the area where ballasting took place is free from toxic dinoflagellates?

OR

2. Is your vessel part of a compliance arrangement for ballast water control accepted by Australian Quarantine and inspection services?
3. Will you be discharging ballast whilst in Australian waters?

Yes/No

NOTE: The granting of pratique to a vessel does not release it from being subject to quarantine. Goods require separate clearance.

Date .... Signed ....

RADIO/VHF:

Advice of Arrival: Incoming vessels must advise BHP Petroleum Operations Manager and the Facility of their ETA 72 hours and 48 hours before intended arrival and give the following information:

1. Name of vessel and radio call sign.
2. HF radio telephone frequencies, if so equipped.
3. Inmarsat identification number and which satellite in use.
4. Arrival draft and trim.

ETA should be confirmed or varied, as appropriate, 48 hours before arrival.

Radio Communication with Challis Venture: The "Challis Venture" has radio communication hours of 0600 to 1800 local time (2030 hrs., – 0830 hrs. GMT).

The "Challis Venture" operates without a dedicated Radio Officer, however messages can be sent to the Facility via Inmarsat, the shipping Agent representing the offtake vessel.

"Challis Venture" Call sign:	VLN 4720
"Challis Venture" Inmarsat number for telex:	582 1543357 CHAV X 583 1543357 CHAV X
"Challis Venture" Inmarsat number for telephone:	0011 872 1543357 0011 873 1543357

The Facility is on the Indian Ocean or the Pacific Ocean Inmarsat, depending on conditions.

Incoming offtake vessels may use the frequencies 4125 kHz or 4143.6 kHz for *radiotelephone* communications with the Facility. The "Challis Venture" will use VHF Channel 72 as a working frequency.

The "Challis Venture" is equipped with a radio direction finding (RDF) beacon with a frequency of 404 kHz. Call sign is XCHA and range is 100 nautical miles. The beacon transmits on request.

Radio Communication with "Jabiru Venture": The "Jabiru Venture" has radio communication hours of 0600 to 1800 local time (2030 hrs. – 0830 hrs. GMT).

"Jabiru Venture" Call sign:	VJJJ
"Jabiru Venture" Inmarsat number for telex:	582 1543604 JABV X 583 1543604 JABV X
"Jabiru Venture" Inmarsat number for telephone:	0011 872 1543604 0011 873 1543604

"Jabiru Venture" is on Indian Ocean or Pacific Ocean Inmarsat, depending on conditions.

Incoming offtake vessels may use frequency 4125 kHz or 4143.6 kHz for *radiotelephone* communications with the Facility, which will listen for incoming offtake vessels between 2030 to 0830 hrs. GMT on 4125 kHz, VHF Channel 16 and 500 kHz. The Facility will use VHF Channel 6 as a working frequency.

The "Jabiru Venture" is equipped with a radio direction finding (RDF) beacon with a frequency of 436 kHz. Call sign is JVX and the range is 100 nautical miles. The beacon transmits continuously.

Radio Communication with "Skua Venture":

"Skua Venture" Call sign:	VNXI
"Skua Venture" Inmarsat number for telex:	582 1543726 SKUV X 583 1543726 SKUV X
"Skua Venture" Inmarsat number for telephone:	0011 872 1543726 0011 873 1543726

The Facility is on the Indian Ocean Inmarsat, depending on conditions.

Incoming offtake vessels may use the frequencies 4125 kHz or 4143.6 kHz for *radiotelephone* communications with the Facility. The "Skua Venture" will use VHF Channel 8 as a working frequency.

TUGS: A workboat is available for line handling.

BERTHING: *"Challis Venture":* The "Challis Venture" is a purpose built 115,000 d.w.t. barge fitted with process facilities and a metering system to enable stabilisation of crude oil and delivery to offtake vessels. The "Challis Venture" has around 135,000 kl. total storage capacity (approximately 845,000 bbls. or 110,000 metric tonnes). Oil is delivered through a 16 in. floating hose system at a rate of approximately 5,000 kl. (31,500 bbl.s) per hour. Allowing for start up and slow down periods, 103,290 kl. (approximately 650,000 bbls.) will require over 20 hours pumping.

"Jabiru Venture": The "Jabiru Venture" is a converted 140,000 d.w.t. tanker with process facilities and a metering system to enable stabilisation of crude oil and delivery to offtake vessels. The "Jabiru Venture" has around 155,000 kl. total crude oil storage capacity (approximately 975,000 bbls. or 126,000 metric tonnes). Oil is delivered through a 16 in. floating hose system at a rate of approximately 3,400 kl. (21,400 bbls.) per hour. Allowing for start up and slow down periods, 103,290 kl. (approximately 650,000 bbls.) will require over 30 hours pumping.

"Skua Venture": The "Skua Venture" is a converted 132,000 d.w.t. tanker (similar in design to the "Jabiru Venture") with process facilities and a metering system to enable stabilisation of crude oil and delivery to offtake vessels. The "Skua Venture" has around 157,000 kl. total crude oil storage capacity (approximately 988,000 bbls. or 128,000 metric tonnes). Oil is delivered through a 16 in. floating hose system at a rate of approximately 3,500 kl. (22,000 bbls.) per hour. Allowing for start up and slow down periods, a standard cargo of 103,290 kl. (approximately 650,000 bbls.) will require up to 30 hours pumping.

Standard of Offtake Vessels: Offtake vessels between 25,000 d.w.t. and 150,000 d.w.t. only can be accommodated at any Facility.

Exhibited (See "Appendix") is a Questionnaire to which the offtake vessel is obliged to provide answers before being nominated to visit a Facility. It is imperative that if at any time the particulars given in those answers should be seen to be inaccurate, or should change in any respect, BHP Petroleum Operations Manager and Master of the Facility must be notified forthwith in writing. Without prejudice to any other consequence of such inaccuracy or change, failure to so notify and to provide all necessary details relating thereto may cause delay at the Facility.

The offtake vessel should be fitted with a centre Panama type fairlead and bow chain stoppers capable of handling the 76 mm. diameter chafing chain.

The bow windlass or winch must be capable of pulling 15 tonnes and should have one empty drum to take the 72 mm. diameter messenger line. The drum must have a good hauling lead from the Panama fairlead directed through the chain stopper in order to retrieve the chafing chain and hawser.

Under no circumstances will the warp end be used to heave in the system. A winch drum only is acceptable.

Offtake vessels should have manifolds and associated offtake equipment conforming to Oil Companies' International Marine Forum (OCIMF) standards and a manifold derrick or crane rated at 10 tonnes S.W.L.

Given the particular requirements of each Facility, offtake vessels should ensure that their mooring systems are checked for suitability and safety before finalisation of charter arrangements and before arrival at a Facility.

Offtake vessels must be covered by a current ITF Certificate. Offtake vessels will also be required to provide accommodation for any of the following people for the duration of offtake.

2 Berthing Superintendents from the Facility.
Independent Surveyor.
Customs Officers.
Shipping Agent.

Ship/Floating Production Facility Safety Check: On arrival at the Facility, the offtake vessel will be subject to a safety check by the Facility Operator in accordance with the International Safety Guide for Oil Tankers and Terminals. The Terminal Conditions provide that the Facility may refuse to allow the offtake vessel to berth or may order the offtake vessel away from the berth, or otherwise suspend or terminate provision or performance of services to the offtake vessel, if at any time the offtake vessel fails to meet the relevant safety standards.

Mooring: Neither tug nor supply boat services are required. The Pilot and hose coupling tools will be transferred to the offtake vessel by the Facility workboat. When the offtake vessel is "onsite" the mooring hawser will be made fast to the bow of the offtake vessel.

Mooring operations are the responsibility of the offtake vessel crew acting under the supervision of one of the Berthing Superintendents from the Facility.

Engines on Standby: Offtake vessels are required to keep their engines on continual 'stand-by' and be ready to respond to requests for engine movement immediately. Vessels will be required to move astern to prevent creeping up or jack-knifing as necessary.

The hawser system has a working load of 200 tonnes and offtake vessels may use astern power to keep station. All engine movements should be made with due care.

Deballasting Operations: The Facility Master must be consulted before commencement of deballasting operations.

Watches: A qualified officer with authority to manoeuvre is to keep a bridge watch whilst the offtake vessel is on station. Reliable communications are to be established between the bow and the bridge.

Connection of Hose: After the mooring hawser has been made fast, the workboat will pull the floating hose to the offtake vessel. At "Jabiru Venture" the hose will be connected to the starboard side of the offtake vessel. At the "Challis Venture" and "Skua Venture", the connection will be made to the port side. The hose-end must then be lifted on board using the offtaking tanker's manifold derrick or crane.

The connection of the hose is the responsibility of the offtake vessel's crew, under the guidance of the Berthing Superintendents from the Facility.

The hose-end connection is a 16 in. 'Camlock' quick release coupling and will fit standard 16 in. ANSI 150 lb. flanges.

The floating hose is fitted with a self sealing breakaway coupling for emergency disconnection.

Manifold adaptors/extenders to suit the above should be supplied by the offtake vessel.

Delivery may be suspended for safety reasons during visits by helicopters to the Facilities, should flights be necessary, and/or if weather conditions exceed safety limits.

Departure after Loading: Unless otherwise permitted by the Operator, offtake vessels shall depart within 6 hours of completion of loading. An Early Departure Procedure is available, should this be required or necessary for any reason, and is as follows. The quantity of cargo loaded is computed initially by the Operator using oil sales metered volume and a provisional density figure. The appropriate *gross* cargo so determined will be introduced on the Bill of Lading in the designated "Approximate Quantity Report" section.

After departure of the vessel, a final density, sediment and water content of the cargo will be determined by the Operator. After this determination, the Operator shall inform the vessel by telex of gross and *nett* cargo quantity loaded. The nett quantity will be introduced on the Bill of Lading in the designated"Precise Quantity Report" section and signed for by the vessel Agent and Operator.

Typical Cargo Properties:

Challis Crude:

Density at 15°C.	0.8272
API gravity	39.5
Viscosity at 20°C.	3.04 cst.
Pour Point	−9°C.
Reid Vapour Pressure	23.5 kPa (3.4 p.s.i.)

Jabiru Crude:

Density at 15°C.	0.8139
API gravity	42.3
Viscosity at 20°C.	3.45 cst.
at 40°C.	2.41 cst.
Pour Point	15°C.
Reid Vapour Pressure	31.0 kPa (4.5 p.s.i.)

Skua Crude:

Density at 15°C.	0.8128
API gravity	42.5
Viscosity at 20°C.	2.957 cst.
Pour Point	+9°C.
Reid Vapour Pressure	50.75 kPa (7.35 p.s.i.)

Offtake tankers going into cold seas may require heating coils.

MEDICAL: Medical and dental services are not available at any Facility. In emergencies, medical evacuation to Darwin can be arranged, which may take 6 hours.

FRESH WATER: Not available.

FUEL: Not available.

REPAIRS: Repairs are not permitted whilst moored to a Facility.

TIME: GMT plus 9.5 hours. Also see "General" before first port.

SHORE LEAVE: Not possible.

APPENDIX:

To: BHP Petroleum, Darwin Operations. Fax No. (089) 844139.
BHP Petroleum, Melbourne Marketing. Fax No. (03) 6541723.
From:
Date:

These vessels details are required prior to acceptance to lift from the floating production storage and offtake facilities "Challis Venture", "Jabiru Venture" or "Skua Venture".

1. Name of Vessel:
2. Previous Names, if any:
3. Port of Registry/Flag:
4. Name of Owner:
5. Registered Address:
6. Nationality of Officers/Crew:
7. Vessel Classification Society/Classed as:
8. Year of Build:
9. Call Sign:
10. Inmarsat No.:
11. L.O.A.:
12. Breadth:
13. Distance, Bow to Manifold:
14. Distance, Ship Side to Manifold:
15. Diameter of Manifold:
16. Diameters of available Manifold Reducers:
17. Does Manifold/Associated Equipment comply with O.C.I.M.F.?
18. S.W.L. of Manifold Crane/Derrick:
19. Summer/Tropical/Winter D.W.T.:
20. Summer/Tropical/Winter Drafts at Full D.W.T.:
21. Cargo Capacity at 98%:
22. Maximum Loading Rate:
23. Arrival Drafts:
24. Has Vessel C.B. Tanks?
25. Has Vessel S.B. Tanks?
26. Can Vessel load and deballast simultaneously with two valve separation?
27. Has Vessel a Centre Panama Lead?
28. Panama Lead Dimensions:
29. Has Vessel a Chain Stopper:
30. Can Chain Stopper accept 76 mm. Diameter Chain?
31. Distance, Panama Lead to Chain Stopper:
32. Can Windlass lift 15 tonnes:
33. Has Vessel Leads allowing Mooring Hawser to be hauled from the Panama Lead via the Chain Stopper onto an empty Drum? (Not the warping drum-end):
34. Has Vessel a Designated Helicopter Landing Area?
35. Does Master and/or Crew speak English?
36. Is Vessel covered by I.T.F. Agreement?
37. Vessel's Last Port of Call before Challis/Jabiru/Skua?
38. At which Port may Vessel be inspected by Operators Representative?
39. Has Vessel a "Challis, Jabiru, Skua Berthing Handbook" on board?
40. A Legible Copy of the Fo'c'sle Deck Arrangement must be supplied before an Offtake Vessel can be accepted by BHP Petroleum Pty.Ltd. for the safe berthing astern of the Challis Venture, Jabiru Venture or Skua Venture. If possible, the Plan should show the proposed lead from the Panama Fairlead to the Winch Drum.

NOTE: Submission of this Questionnaire to BHP Petroleum Pty. Ltd. shall be an acknowledgement and acceptance by Offtake Vessel (Including its Owners, Agents, Master and Crew) and Cargo Owner of the "Terminal Conditions" which govern operation of, access to and usage of, the Challis Venture, Jabiru Venture and Skua Venture Facilities.

GENERAL:

Services: The remote, deep-sea location of the Facilities severely limits the provision of services. Offtake tankers should ensure that they carry supplies adequate for a return journey.

Visitors to the Facilities: Access to any one of the Facilities is by a 2 hour light aricraft flight from Darwin to Troughton Island, and then a 1 hour helicopter flight to the the Facility. Because of the limited capacity of scheduled flights, the difficulties in arranging extra flights and the severe accommodation constraints on board each Facility, the attendance of visitors is not normally possible.

Customs, Department of Transport Officers, independent surveyors, ships' Agents, buyers' representatives and any others intending to visit, should seek permission of the Operations Manager at least 2 days before scheduled arrival of the offtake vessel. Earlier advice would be appreciated.

Fire Fighting: Each Facility has only firefighting equipment required for its own purposes. It can give no aid to offtake vessels in case of fire. In the event of an emergency on board an offtake vessel or on one of the Facilities, the offtake vessel will be released.

Pollution Control: The "Challis Venture" and "Skua Venture" hold a small quantity of dispersant for pollution control which can be dispensed from the workboat or, subject to call-out delay, from a helicopter should this be necessary.

Without derogating from the Terminal Conditions, liability for any costs of countering any pollution caused by oil which has passed the point where the offtake vessel's permanent hose connection connects to the terminal operations loading facilities will be for the account of, and recoverable from, the offtake vessel.

No refuse is to be dumped overboard. The I.M.O. convention on the dumping of waste at sea applies. Any waste water discharged should have an oil content of no more than 15 p.p.m.

Liability for pollution, its consequences and control is governed by the Terminal Conditions.

Stores: Not available.

Dirty Ballast: Dirty ballast, slops or refuse cannot be accepted at any Facility.

Government Charges: Customs, Immigration and Health inspections will usually be carried out by one Customs Officer but, at the discretion of customs authorities, several Customs Officers may carry out a particular inspection.

Offtake vessels will be liable for Customs fees charged per person per hour. Inspections will generally require a minimum of 14 hours, including travelling time.

Light Dues, Oil Pollution Levies: The Northern Territory Department of Mines and Energy advises that vessels offtaking from the Facilities are not required to pay light dues or oil pollution levies.

Weather: Prevailing winds are Southerly from May to October.

The wet season is during the Summer months – November to April – and at that time prevailing winds are Northwesterly.

During the Summer months, the Timor Sea is subject to occasional cyclones. In January and February, in particular, weather and sea states may prevent mooring and/or loading for periods of a few days.

The limiting significant wave height for mooring is 2.2 m. On this basis mooring will be feasible 85% of the time. For offtake vessels already moored, the design limits for the hawser will be approached when significant wave height reaches 2.8 m. and winds reach 36 knots. On this basis, loading will be feasible 93% of the time.

Charts:

Australian: AUS. 314.
British: B.A. 1047, B.A. 942A.

These charts cover the general area and the site of each Facility.

OPERATOR: BHP Petroleum Ltd., Lot 4233, Pruen Road, Berrimah, NT 0828, Australia. (Postal address: P.O.Box 37871, Winnellie, NT 0821, Australia). *Tel:* (089) 221122. *Telex:* AA 85146. *FAX:* (089) 844139. *Cables:* Hempet, Darwin. *Contact:* Manager, Darwin Operations.

COSSACK PIONEER, W.A.: 19.35 S. 116.27 E.

(See Plan)

LOCATION: The "Cossack Pioneer" is located in about 85 m. of water, approximately 80 nautical miles N.N.W. of the Port of Dampier in position Lat. 19° 35.4′ S., Long. 116° 26.7′ E.

General Charts for Area: AUS 327 – Port Walcott to Monte Bello Islands. AUS 741 – Approaches to Dampier Archipelago.

General Information: The "Cossack Pioneer" is a converted 150,000 d.w.t. tanker that has a total oil capacity of approximately 174,475 cu.m. (1,097,000 bbls.).

Oil is delivered to offtake tankers through a floating hose with a 16 in. (400 mm.) flange at a rate of approximately 4,000 cu.m./hr. (25,100 bbls./hr.).

For example, a cargo of 650,000 bbls. (103,290 kilolitres) will require a time period of approximately 30 hours pumping.

The floating hose is fitted with a breakaway coupling which will part in case of an emergency disconnect.

The coupling is designed to close quickly so that pollution of the environment is reduced.

DOCUMENTS: *Customs and Immigration:* Masters should complete the following forms that should be delivered to Customs by the offtake tanker's Agents at least 48 hours before arrival at the Terminal:

Form 1	Ship's Inward Cargo Report.
Form 2A and Form 2B	Passenger Report (if applicable).
Form 3A and Form 3B	Crew Report.

Masters should endeavour to complete the following forms ready for collection on arrival by Customs Officers, if the Terminal is the offtake tanker's first Australian destination:

Form 5, Part One	Ship's Report of Arrival.
Part Two	Crew Effects Declaration.
Form 42A	Ship's Stores Consumed in Australia.
Form QA4	Shipmaster's Notice (Animals, Hides and Skins). Not for Importation.
Form QA5	Shipmaster's Bond regarding animals carried (only if pets onboard).

The Customs Officer attending will advise any other necessary documentary requirements, and provide forms if necessary.

Because the "Cossack Pioneer" is not a designated port, offtake tankers should have their Agents apply for Certificates of Permission for Entry to Australia at other than a designated port, as required under Section 58 of the Customs Act 1901 (Commonwealth of Australia).

Customs Authorities have advised that permission will generally be granted. However, Customs Officers retain the right to board offtake tankers for inspection at their discretion and Masters of offtake vessels are required to provide accommodation and mess facilities for visiting Customs Officers.

Inspections: Customs, Immigration and Health Inspections will usually be carried out by one Customs Officer, but at the discretion of Customs Authorities, several Customs Officers may carry out a particular inspection.

Offtake tankers will be liable for Customs Fees charged per person per hour. If Customs Officers elect to attend the offtake tanker, it will be for the duration of the stay of the vessel at the Terminal.

ESSENTIAL REQUIREMENTS: *Offtake Tanker Standards:* Safety is paramount at the Terminal, and offtake tankers will not be accepted for berthing and loading unless they meet the following criteria:

1. Summer deadweight (SDWT) of between 25,000 d.w.t. and 150,000 d.w.t. (approx. 175,000 tonnes displacement).
2. No oil/bulk/ore (OBO) carriers or any form of combination carrier.
3. Only segregated ballast tanks (SBT) – No clean ballast tanks (CBT).
4. Current ITF Certificate or acceptable ITF conditions.
5. Offtake tankers must comply with MARPOL and SOLAS and all ship's documents and certificates must be valid. Membership of TOVALOP and a P&I Club is also required.
6. Offtake tankers must be able to run their engines astern for the duration of the offtake, if so required by the Terminal.
7. Masters should read Item 10 of the Terminal Conditions (quoted below), and be fully aware of possible action, should an offtake tanker be found deficient, substandard or fails to comply with any of the above requirements.

Terminal Conditions – Item 10:

The Facility Master is entitled to withhold the commencement of, suspend or terminate the provision or performance of Facility Services, or take such action as he thinks fit including the right to order the offtake tanker to leave the berth and to prohibit the offtake tanker from berthing or reberthing in the event that in the Facility Master's opinion:

(a) Offtake tanker fails, or is likely to fail, to comply with the provisions and requirements of the Terminal Handbook or the Oil Companies International Marine Forum (OCIMF) "Recommendations for Equipment Employed in the Mooring of Ships at Single Point Moorings" or "Recommendations for Oil Tanker Manifolds and Associated Equipment"; or

(b) Offtake tanker, is not, or is likely not, to be in all respects fit to berth or load at the Facility; or

(c) such suspension is necessary due to landing or departure at the Facility of a helicopter; or

(d) weather or other safety conditions exceed or are likely to exceed normal operational limits; or

(e) Master of offtake tanker wishes to undertake repairs to the offtake tanker.

Mooring Equipment: Bow arrangements must comply with OCIMF's "Recommendations for Equipment Employed in the Mooring of Ships at Single Point Moorings".

A summary of relevant requirements are detailed in the table below:

Bow Stopper	One or two capable of accepting 76 mm. chafe chain SWL of 200 tonnes.
Winch	Clear lead from bow stopper to winch drum (not drum end). Able to lift at least 15 tonnes. Able to store 150 m. of 80 mm. diameter pick-up rope.

Manifold Equipment: Manifolds and associated equipment must comply with OCIMF's "Recommendations for Oil Tanker Manifolds and Associated Equipment".

A summary of relevant requirements are detailed in the table below:

Ship size	25,001 to 60,000 d.w.t.	60,001 to 160,000 d.w.t.
Lifting equipment	Minimum SWL 10 tonnes. 10 m. clear lift above each manifold. Slew each way under power.	Minimum SWL 15 tonnes. 10 m. clear lift above each manifold. Slew each way under power.
Cruciform Bollards	SWL 25 tonnes. Midway between each manifold pair.	SWL 25 tonnes. Midway between each manifold pair.
Manifolds	Centre to centre spacing of 2.0 m. Flange 4.6 m. from ship's side.	Centre to centre spacing of 2.5 m. Flange 4.6 m. from ship's side.

Offtake tankers are moored bow to stern of the "Cossack Pioneer" with a 55 m. long combination chain/rope hawser. There is a capability for a quick release for the hawser, but this is only used for emergency disconnection.

A workboat will usually make fast to the stern of the offtake tanker to maintain a safe distance from the "Cossack Pioneer" and to prevent jack-knifing and minimise "fishtailing".

On occasions, the offtake tanker may be required to have its engines running astern for some or all of the time it is connected.

PILOTAGE: Pilotage is compulsory.

The offtake tanker should initially position itself 3 nautical miles astern of the Terminal.

Before boarding, the Pilot will advise the offtake tanker to proceed to a position about 1 nautical mile astern of the Terminal, where it should be stopped in the water with a good lee provided on the port side for pilot boarding and equipment transfer from the workboat.

A pilot ladder should be rigged on the port side in accordance with current SOLAS regulations. The ladder should be rigged 2.0 m. above the water with 2 manropes.

Masters should provide safe access to and from the offtake tanker at all times with regard to the SOLAS convention and IMO Resolution A.667(16). Any offtake tanker that fails to provide such access could incur a delay in berthing or sailing.

The Pilot and Terminal Representative will board with the Agent, Surveyor and, on occasions, Customs Officers. It is requested that the Offtake Tanker Chief Officer meets the Pilot to facilitate the pre-mooring inspection and distribution of equipment. Suitable messing and accommodation for these personnel will be required during the offtake. The Terminal Representative will require single berth accommodation. The Pilot will not remain on board the offtake tanker during the offtake.

A suitable derrick or crane fitted with a safety hook will be required at this time to transfer luggage and equipment from the workboat. The offtake tanker's crew will be required to transfer some equipment used in the mooring operation to the foc'sle and transfer hose connection equipment to the port manifold.

Anchors: Anchors will be housed and secured with wires before entering the 5 nautical mile restricted area.

Inspection Prior to Mooring: The Pilot and Terminal Representative will inspect the foc'sle layout and proposed securing arrangements before mooring. The manifold area will also be inspected at this time.

The Master of the offtake tanker should be aware that any discrepancies between the information given on the Questionnaire and the offtake tanker's layout or equipment will result in a delay to the mooring operation, and failure to rectify these discrepancies will ultimately result in the refusal of the offtake tanker to moor at the Terminal.

Problems with equipment that will be used in the mooring operation that have not been brought to the notice of the Terminal should be brought to the attention of the Pilot or Terminal Representative.

Winches are to have power and be observed to turn at the berthing inspection.

This Terminal uses the Shell "Safe-T" database for offtake tanker vetting, and as such may be subject to a thorough confirmation inspection by the Terminal Representative. The assistance and cooperation of offtake tanker personnel during this inspection are essential to ensure that the inspection is carried out with minimal disruption to the offtake operation.

Testing of Engines and Steering Gear: Mooring to the Terminal requires close quarters manoeuvring, and it is imperative that all possible steps are taken to avoid loss of power to the engines or steering gear at this time.

The Pilot will fully test the operation of the engines and steering gear before the commencement of approach to the Terminal.

Notice of Readiness (NOR): Notice of Readiness (NOR) may be tendered when the offtake tanker is within 3 nautical miles of the Terminal.

Notice of Readiness (NOR) will only be accepted between the hours of 0600 hrs. and 1630 hrs. Local Mean Time, by the Pilot when he is satisfied that all the Terminal requirements have been adhered to and that the offtake tanker is in all respects ready to load.

Notice of Readiness will not be accepted when the Terminal is on "Restricted" or "Closed" status.

APPROACHES: *Navigation Aids on "Cossack Pioneer":* At the bow and stern: White morse light "U" (· · —), period 15 seconds, visibility 10 nautical miles.

At the bow only: Red morse light "U" (· · –), period 10 seconds, visibility 3 nautical miles.

In restricted visibility: A fog signal – morse "U" (· · –) sounding at intervals not exceeding 30 seconds.

Hazards to Navigation: There is a 5 nautical mile restricted area around the "Cossack Pioneer", and offtake tankers should not approach closer than 5 nautical miles unless Terminal permission has been granted.

Two gas platforms to the West have a 5 nautical mile restricted area around each platform.

North Rankin "A": Lat. 19° 35.0 ′ S., Long. 116° 08.3′ E.
Goodwyn "A": Lat. 19° 39.2′ S., Long. 115° 55.75′ E.

An export gas pipeline runs between "Cossack Pioneer" RTM and North Rankin "A". Anchoraging is prohibited in the area bounded by Lat. 19° 30′ S. to Lat. 19° 40′ S. and between Long. 116° 08′ E. to Long. 116° 27′ E. (5 nautical miles either side of the pipeline). See "Plan".

The floating hose and pick-up line extends up to 250 m. astern of the Terminal.

The workboat "Burrup Tide" monitors VHF Channel 16 and will be near the Terminal when an offtake tanker is expected.

The "Cossack Pioneer" can disconnect from the yellow Riser Turret Mooring (RTM) when a cyclone is approaching, or for other operational requirements. The RTM extends about 3.0 m. above the water and is fitted with radar reflectors. A light with the following characteristics is displayed: Yellow morse light "U" (· · –), period 15 seconds, visibility 4 nautical miles.

If the "Cossack Pioneer" does disconnect, a workboat may be towing a 250 m. long floating hose with appropriate towing signals between the Terminal and the Port of Dampier, a navigation warning will be issued by Dampier Port Authority (DPA).

Restricted Zone and Anchoring/Drifting Areas: Offtake tankers should avoid anchoring closer than 10 miles North or South of the "Cossack Pioneer" to avoid possible damage to sub-sea flowlines and inter-platform pipelines.

Offtake tankers wishing to drift should remain within VHF range and should keep at least 5 nautical miles away from the "Cossack Pioneer" and adjacent platforms and pipelines to the West.

Glomar Shoal, approximately 20 nautical miles to the East, has water depths of 22 m. – 30 m. and has been used previously as an anchorage for tankers.

ANCHORAGE: See "Approaches" – *Restricted Zone and Anchoring/ Drifting Areas.*

RESTRICTIONS: Offtake tankers will normally be moored during daylight hours (0600 hrs. – 1630 hrs.) (weather permitting). Disconnection can be carried out at any time.

HEALTH: To comply with the Australian Government Health Requirements, a Radio Pratique message should reach the offtake tanker's Agent no more than 24 hours, and no less than 12 hours before arrival, according to the following instructions.

The Offtake Tanker Master should sign and date the message.

Please answer the following questions, saying "Nil" where necessary, and answer them in order. If answers are not correct, it could cause unnecessary delay to your vessel mooring.

Any costs incurred to the Operators will be to the offtake tanker's account.

NOTE: Masters or Medical Officers, who wilfully make a false statement in answer to any question, are liable to a fine not exceeding AUS$5,000 or imprisonment for a period not exceeding 2 years.

Questions:
1. Name, type and nationality of offtake tanker.
2. Where from and departure date?
3. Where bound and ETA first port?
4. Details of any communicable disease or illness or death onboard since sailing.
5. Are there any plants or animals onboard?
6. Have you carried any livestock in the past 6 months?
   If Yes:
   List type, ports visited and cleaning performed since last livestock voyage.

Optional section (answering this section will help clearance of your vessel when it arrives in port).

If the vessel is entering in ballast:
1. Have you:
   ((a) Exchanged ballast water at sea during the voyage and log book certification of time and co-ordinates when ballasting took place;
   or
   (b) Certification that the area where ballasting took place is free from toxic dinoflagelates?

   OR
2. Is your vessel part of a compliance arrangement for ballast water control accepted by Australian Quarantine and Inspection Services?
3. Will you be discharging ballast water while in Australian waters?
   Yes/No

NOTE: The granting of Pratique to a vessel does not release it from being subject to Quarantine. Goods require separate clearance.

RADIO/VHF:

Cossack Pioneer:
Call Sign: VNXP.
Hours: 24 hours.
VHF: Channel 16. Working channel to be advised.
INMARSAT:
  Satellite used: INDIAN.
  Telephone: 154 5365.
  Facsimile: 154 5366.
  Telex: 154 5365.
Workboat Name: "Burrup Tide".
Workboat Call Sign: To be advised.
Workboat VHF Channel: To be advised.

Notification of ETA: The following ETA messages are required:

72 Hours Notice:
1. Advise ETA.
2. Advise arrival and departure drafts.
3. Advise arrival displacement.
4. Confirm Master's full name for documentation purposes.

48 Hours Notice:
1. Confirm ETA.
2. Confirm arrival and departure draft.
3. Confirm the following:
   (a) Inert gas system operational and tanks inerted to less than 8% oxygen by volume.
   (b) Mooring and lifting equipment are fully operational.
   (c) No deficiencies with the offtake tanker or equipment that will affect the safety and efficiency of the mooring and/or loading operation.
   (d) Quantity of cargo on board.
   (e) Pilot ladder and equipment comply with SOLAS standard.
   (f) Pump room adequately ventilated and illuminated.
   (g) Mooring communication system is operational.
   (h) Deck lighting fully operational.

24 Hours Notice:
1. Confirm ETA.
2. Confirm arrival drafts.
3. Confirm offtake tanker has been granted Radio Pratique.

12 Hours Notice:
1. Confirm ETA.

If the ETA changes by more than 1 hour after the 12 hour notice is given, the offtake tanker must promptly notify the Terminal of the new ETA.

NOTE: Failure to give 12 hours notice will extend the Allowable Laytime by an amount equal to the period between the time the offtake tanker Final Notice was given and 12 hours before the offtake tanker arrived.

Final Notice:

The offtake tanker should call the Terminal when within VHF range for mooring instructions, or, if unable to be moored, the Offtake Tanker Master will advise the Terminal if the vessel will proceed to anchor or drift. The offtake tanker will advise the Terminal when it has achieved either of these conditions as this will be logged as arrival time.

Any changes to the information provided on the "Questionnaire" should be sent to the Terminal immediately.

Note: On arrival, the propeller must be fully submerged and maximum allowable trim is 0.015 × LOA.

MOORING: Also see "Pilotage".

Mooring Operation: The Pilot will position the offtake tanker about 300 m. astern of the "Cossack Pioneer". The Terminal Representative will be situated on the foc'sle to provide advice to the ship's crew and observe the mooring operation.

The workboat will pass a polypropylene messenger to the foc'sle of the offtake tanker, then proceed to the stern to put up a tow line from the workboat.

The messenger to the foc'sle must lead through the chain stopper to an empty drum along the path the polypropylene pick-up line will take.

The messenger line is 24 mm. × 180 m. long and the pick-up line is 72 mm. × 150 m. long.

Offtake tankers must have a winch with an empty drum of sufficient capacity available for these lines.

The messenger must be run directly onto the winch barrel and must never be placed around the drum end.

The messenger line/pick-up line should be heaved in as the offtake tanker approaches the Terminal. The pick-up line is permanently attached to the mooring hawser chafing chain and the combined weight of the hawser and chafing chain is about 3.5 tonnes.

The winch must be capable of lifting at least 15 tonnes to allow for losses due to changes in lead direction and friction.

Three links of chain must pass through the bow stopper when it is brought inboard.

Once the chafing chain is in the bow stopper and the securing bar is in position, the offtake tanker will be moved astern until there is a moderate weight on the hawser and the workboat let go.

The engines may be kept running astern until the hose is connected and the workboat has made fast to the stern of the offtake tanker to take up the static tow.

LOADING: *Crude Oil Specifications:* (Approximate)

Density at 15°C:	0.7881.
S.G. 60/60°F:	0.7885.
API:	47.9.
Pour Point:	−18°C.

Ambient temperature 36°C (to be confirmed).

Hose Connection: When the offtake tanker has stabilised in a position astern of the Terminal, the workboat will bring the floating hose to the port side manifold area.

The manifold should be prepared before berthing to accept 1×16 in. (400 mm.) 150 ASA flange.

The hose flange is fitted with a rubber "O" ring and no fibre gasket is required, but it is important that the ship's flange is smooth, clean and free of rust. Hose connection will be done by the ship's crew under the supervision of a responsible officer.

A Terminal Representative will provide advice and observe the connection of the hose.

Safety Check and Pre-Loading Meeting: The Pilot will conduct an ISGOTT Safety Check before commencement of loading. The offtake tanker should ensure that the Chief Officer is available to accompany the Pilot during this check.

Following the successful completion of the Safety Check List, the Pilot will have a pre-loading meeting with the Chief Officer to discuss the cargo operation.

Floating Hose Management in Cyclone Season: The offtake loading hose will normally contain crude oil, but during the cyclone season and occasionally due to Terminal requirements, the offtake loading hose will contain salt water.

Pilot Disembarkation: Following the pre-loading meeting, the Pilot will confirm the sea valves are closed and sealed.

Terminal Rules, Cargo Procedures and the ISGOTT Safety Check List are completed and signed, before departing the offtake tanker for the Terminal via the workboat. An officer and crew member with a heaving line will be required to assist and observe the Pilot's disembarkation.

Static Tow: After returning the Pilot to the Terminal, the workboat will then proceed to the stern of the offtake tanker to engage the static tow.

A line should be passed to the workboat to enable a towline to be sent up and secured to the stern of the offtake tanker.

When there is a steady weight on the towline, the offtake tanker's engines will be stopped under the direction of the Terminal Representative.

A responsible crew member in radio contact with the bridge must be on the foc'sle at all times during the moored period.

The ship's engines must remain on "stand-by" for the duration of the offtake as they may be required at any time.

A responsible officer with a VHF radio must be on watch on the bridge at all times. The engine room must be manned to enable an immediate response for requested engine movements.

Cargo Operations: Pre-Loading: On completion of the Ship/Terminal Safety Check List and the Pre-loading meeting, lining up for cargo operations can begin.

When the offtake tanker is lined up and ready to commence cargo, the Terminal Representative will open and lock the butterfly valve on the floating hose. The offtake tanker should then open its manifold valve under the direction of the Terminal Representative.

A member of the ship's crew should be on watch at the manifold at the commencement of and throughout the loading and immediately advise of any leaks.

The Terminal will provide a UHF and VHF radio with spare batteries and charger to allow communication with the Terminal's Central Control Room and the wheelhouse of the towing vessel.

Communications with the Terminal will be on UHF channel (to be advised – T.B.A.). Should this UHF radio fail, communications should be on VHF channel (T.B.A.) or Channel 16.

Venting: Only the "closed loading" method of loading is allowed at the Terminal. Ullage ports may be opened for short periods to allow sampling/ullaging providing the ISGOTT recommended procedures are followed.

Venting must be either through mast riser or hi-velocity vents fitted with flame arresters.

Tank pressure should be such that there is sufficient flow through the vents to minimise the build-up of hydrocarbons on deck.

Commencement of Loading: The Terminal Representative will monitor the commencement of cargo from the offtake tanker's cargo control room, and when the cargo control officer is ready, will advise the Terminal to start loading at the agreed rate (usually 500 cu.m./hr.). When cargo is confirmed to be entering the tanks and the manifold is secure, the Terminal Representative will gradually increase the loading rate to the agreed rate at the request of the offtake tanker's cargo control officer. Maximum rate is 4,000 cu.m.

During Loading: A responsible officer from the offtake tanker in possession of the Terminal UHF radio must be on cargo watch throughout the loading operation.

A member of the offtake tanker's crew must be on watch at the manifold at all times.

The foc'sle must be manned by a crew member with a radio throughout the loading and report the condition of the hawser, chafing chain and bow stopper to the cargo control officer on an hourly basis.

Loading rates can be adjusted any time during the loading, but at least 5 minutes notice should be given to the Terminal, except in emergencies.

Cargo figures must be exchanged hourly with the Terminal and any serious anomalies checked.

If all radio communications fail, the ship's whistle must sound 7 short and 1 long blast which will cause cargo operations to cease.

Suspension of Cargo Operations during Calm Conditions: Occasionally there may be conditions of little or no wind at the Terminal, and in such cases, cargo operations may be stopped to prevent a build-up of hydrocarbon gases in the area.

Suspension of Cargo Operations due to Lightning: Cargo operations will be suspended when electrical storms are in the immediate vicinity of the Terminal. Offtake tankers should ensure that all cargo tank vents are closed at this time.

Helicopter Operations: Helicopters will arrive and depart the Terminal, usually during daylight hours, and will not interrupt loading unless requested by the Offtake Tanker Master.

Interruption of Loading due to Adverse Conditions: If an offtake tanker has ceased loading and has been disconnected from the Terminal due to inclement weather or the approach of a cyclone, communications with the Terminal must be maintained.

This will enable reconnection and the resumption of loading at the earliest possible opportunity.

Completion of Cargo: The Terminal Representative will be in the offtake tanker's cargo control room 30 minutes before the completion of cargo to relay all requests for change of loading rate and stopping of cargo to the Terminal.

Responsibility for "Ship Stop" or "Terminal Stop" will be as per the pre-offtake meeting.

When the request to stop cargo has been made, the Terminal Representative will advise when the cargo flow has stopped and the ship's manifold valve can be closed. The offtake loading hose butterfly valve will then be closed and locked by the Terminal Representative, and the ship's manifold can be drained.

Hose Disconnection: Before commencing the hose disconnection, the offtake tanker engines are tested astern. The workboat is then released from the static tow and the offtake tanker's engines will then be put on to minimum revolutions astern. This operation will be co-ordinated by the Terminal Representative.

When the manifold has been drained, the hose will be disconnected under supervision of the Terminal Representative.

Departure: The Terminal Representative will advise the Terminal when preparations to slip the mooring hawser can begin.

A responsible officer with radio contact with the bridge must be on the foc'sle at this time, as the Terminal Representative will initially pilot the offtake tanker from here. Instructions for the disconnection of the mooring hawser will be given by the Terminal Representative prior to departure.

The pick-up line must be paid out as the offtake tanker moves astern, and it is important that no weight is taken on this line.

The Terminal Representative will remain on the bridge and pilot the offtake tanker until the cargo calculations have been completed and the Agent, Customs and surveyor are ready to disembark.

The offtake tanker should stand-off about 2 nautical miles from the Terminal and provide a good lee on the port side before the transfer of personnel and equipment to the workboat.

Documentation and Early Departure Procedure: The offtake tanker will be let go when the offtake loading hose is released.

For operational and safety reasons, it is usual for offtake tankers to use an Early Departure Procedure (EDP), by which the Master of the offtake tanker authorises (in writing) the ship's Agent to sign the Bills of Lading on behalf of the Master.

The Terminal will provide the approximate cargo figures soon after the completion of loading. Should the ship's figures and Terminal approximate figures differ by more than 0.5% of the volume, quantity of cargo loaded by the offtake tanker must be remeasured.

The EDP allows the offtake tanker to commence the voyage to the discharge port when the Terminal Representative, Agent and surveyor have disembarked and the representative cargo sample is onboard.

The Agent will either fax or telex the Bill of Lading figures to the offtake tanker on completion of the laboratory analysis and cargo calculations for Master's approval.

BALLAST: *Discharge of Ballast/Waste Water:* The Terminal has no provision for accepting ballast or waste water of any description.

MEDICAL: *Medical and Dental Services:* Not available.

Emergency medical facilities are available in Karratha, but transport is by helicopter and may take up to 3 hours to arrange.

FRESH WATER: Not available.

FUEL: Not available.

REPAIRS: There are no facilities available for repairs.

Under the Terminal Rules, repairs and maintenance to the offtake tanker's machinery and equipment are limited to those that do not impair the following:

1. The propulsive power or manoeuvrability of the offtake tanker.
2. The firefighting or fire detection capability.
3. The safe and efficient handling of cargo, ballast, bunkers and slops.
4. The safe operation and integrity of the foc'sle mooring system.
5. The safe operation of electrical equipment in hazardous zones.
6. The safe operation and integrity of the communications equipment.
7. The safe and efficient operation of the Inert Gas System.
8. The safe and efficient operation of the lifting equipment.
9. The safe and efficient operation of main deck lighting.
10. The safe and efficient operation of pump room lighting and ventilation.

REPATRIATION: No facilities.

SHORE LEAVE: Not possible.

GARBAGE DISPOSAL: The Terminal has no reception facilities for refuse or garbage of any description. No refuse or garbage of any description is to be dumped in the sea under Australian law.

Incinerators are not to be used within 5 nautical miles of the Terminal.

WEATHER/CURRENTS: The region is hot and subject to cyclonic activity from November to April, although cyclones may occur outside this period. The region may be affected by several cyclones a year. Masters, Owners and Charterers' attention is drawn to the Cyclone Procedures in this section.

The prevailing winds are Easterly in Winter (May to August) and South Westerly in Summer (October to March). Winds of more than 20 knots can be experienced for several days.

Currents of up to 3.0 knots can be expected at the Terminal.

Terminal Status: This table provides a general guide to the status of the Terminal based on sea and weather conditions.

Status	*Sig.Wave Height*	*Wind (10 min. avg.)*	*Visibility*
Open	<2.5 m.	<20 knots	>2 nautical miles
Restricted	>2.5 m. and <3.0 m.	>20 knots and <35 knots	<2 nautical miles
Closed	>3.0 m.	>35 knots	

Open: No limitations on berthing between 0600 hrs. – 1630 hrs., offtake or disconnection.

Restricted: No offtake tanker is allowed to berth. An offtake tanker already fast may continue offtake operations.

Closed: The decision to disconnect an offtake tanker will be based on several factors. This will be discussed with the Master of the offtake tanker if conditions are expected to be close to the limit.

The offtake tanker will also be disconnected if the following conditions occur:

(a) More than 3 hawser tension loads of 150 tonnes within one hour, or;
(b) Hawser tension equals or exceeds 200 tonnes at any time.
(c) RTM angle exceeds recommended limits.

The tension on the hawser is monitored and recorded in the Terminal's Central Control Room.

The offtake tanker will be advised on the hawser tension in marginal conditions.

Summary of the Cyclone Procedures Affecting Offtake Tankers: Circumstances may arise which will require the Terminal Master to deviate from the actions required under the cyclone procedures by:

Ordering an offtake tanker to unmoor and depart early.

Recommencement of offtake operations.

The Terminal will give the loading offtake tanker as much notice as is possible if the offtake cannot be completed.

Offtake tankers, loading at the Terminal during cyclone season, shall be capable of departing with sufficient positive stability any time, should the offtake operations have to be aborted.

The Master of the offtake tanker has the prerogative to delay berthing or, when already connected, to cease loading and disconnect from the "Cossack Pioneer" earlier than these procedures may require.

It is acknowledged that the Master of the offtake tanker may wish to clear the area early enough to ensure that the offtake tanker is not at risk from cyclonic activity.

Terminal Status during Cyclone Alert: Offtake operations will be greatly influenced by forecasts of cyclone movement, intensity, wind speed and wave heights.

Due to the erratic nature of cyclones, it is not possible to lay down absolute criteria regarding the status of the Terminal, but the following table provides a general guide:

Status	*Cyclone Alert Status*
Open	Blue
Restricted	Yellow
Closed	Red

Definitions used for Cyclone Alert Status:

All clear: Issued when a cyclone has been downgraded to a state less than a cyclone.

Blue alert: Cyclonic activity more than 1,000 nautical miles from Terminal.

Yellow alert: Cyclonic activity between 405 and 1,000 nautical miles from Terminal.

Red alert: Cyclone is less than 405 nautical miles from the Terminal or a tropical depression less than 405 nautical miles from the Terminal likely to develop into a cyclone within 24 hours.

GENERAL: *Oil Pollution:* The Terminal has a limited supply of pollution control equipment and has no provision to provide assistance in case of an oil spill from an offtake tanker.

All costs incurred as a result of pollution from the offtake tanker will be recoverable from the offtake tanker.

Any indication of oil pollution or spill is to be drawn to the attention of the Terminal Representative immediately.

Stores: Not available.

Firefighting: The Terminal cannot provide assistance in case of fire or explosion on an offtake tanker.

In case of an emergency on the offtake tanker, the loading will cease immediately. The hawser quick release system may be activated.

Where possible, the offtake hose will be disconnected first, but if this is not possible, the hose breakaway coupling will be activated.

Visitors to the Terminal: Due to the isolated position of the Terminal and the difficulty of arranging transport, it is not normally possible for non-operations personnel to visit the Terminal or the offtake tanker.

Consumption of Alcohol and/or Drugs: The offtake tanker must comply with the (OCIMF) Standards for drugs and alcohol. Failure to comply with these standards may result in the stoppage of cargo operations and disconnection from the Terminal, and could result in the offtake tanker being rejected for future liftings from any Terminal operated by the Company.

It is a requirement that Terminal Representative do not consume drugs or alcohol during their tour of duty. Offtake tanker's personnel should observe and respect this requirement.

Fishing: Fishing of any description is not permitted whilst the offtake tanker is connected to the Terminal or within the restricted zone as fishing lines may foul the sub-sea equipment and jeopardise the safety of underwater operations.

Swimming: Personnel are not allowed to swim or dive from the offtake tanker while connected to or near the Terminal.

Questionnaire: Used during tanker vetting procedure, any variation from the original copy should be advised to the Terminal at the earliest opportunity.

PLEASE NOTE:

The following details are required prior to acceptance to lift from FPSO "Cossack Pioneer".

A legible copy of the fo'c'sle deck arrangement plan must be supplied showing the proposed lead from the Panama lead to the winch drum (not drum end).

The plan is to be signed, stamped with the Company name and dated to acknowledge that the plan is accurate and that all equipment shown is in service.

Most answers are "Yes" or "No".

The completed questionnaire and the fo'c'sle plan must be sent to the Master of the offtake tanker.

The above mentioned information should be sent to:

Woodside Offshore Petroleum (W.A.Oil) Pty.Ltd.
Attention: Marine Co-ordinator
Fax: (09) 224 4999
From:
Company:
Date:

"Cossack Pioneer" Questionnaire:

(Metric Units are to be used throughout)

1. Name of Offtake Tanker.
2. Previous names, if any.
3. Port of Registry.
4. Name of Owner.
5. Registered Address.
6. Nationality of Officers and Crew.
7. Vessel Classification Society – Classed as.
8. Year of build.
9. Last three cargoes.
10. Does vessel have a Public Address/Tannoy communication system?
11. Does the system work between the Bridge and Forecastle?
12. Maximum loading rate through one port side 16 in. manifold?
13. Can Offtake Tanker comply with closed loading procedure?
14. Distance, bow to manifold (m.).
15. Distance of manifold to ship's side on port side (m.).
16. Port side manifold diameters (m.).
17. Size and condition of available reducers.
18. SWL of port side crane/derrick.
19. If derrick, is it able to slew and top under power?
20. Number and dimensions of bow/centre Panama leads?
21. Are bow stopper(s) to OCIMF standard?
22. Are test certificate(s) available for the bow stopper(s)?
23. SWL and number of bow stopper(s).
24. Distance from Panama lead to bow stopper(s).
25. Lifting capacity of winch to be used for pick-up line.
26. Can mooring hawser run from Panama lead, through bow stopper onto empty winch barrel (not drum end)?
27. Do all Senior Officers have the appropriate oil endorsements to their certificates?
28. Is there a Permit to Work system in place?
29. Call sign.
30. INMARSAT numbers Satellite in use
    Phone
    Fax
    Telex
31. Length overall (m.).
32. Beam (m.).
33. Distance, bow to manifold (m.).
34. Is there a NO SMOKING regulation in place?
35. Is Offtake Tanker enrolled in TOVALOP?
36. Are all ship's documents and certificates valid?
37. Does Offtake Tanker comply with the ITF agreement?
38. Does manifold/associated equipment comply with the latest edition of OCIMF's "Standards for Oil Tanker Manifolds and Associated Equipment"?
39. If NO, what does not comply?
40. Are the vessel's main engines capable of being run astern for prolonged periods of time at low engine revolutions?
41. Summer/Tropical/Winter deadweight tonnes.
42. Cargo capacity at 98% full.
43. Has vessel Segregated Ballast Tanks (SBT)?
44. Can chain stopper accept 76 mm. diameter chain?
45. Full Name of Master for documentation purposes.
46. Does the lead of the mooring hawser allow it to be hauled from the Panama lead via the chain stopper onto an empty drum (not the warping drum end)?
47. Do the Senior Personnel speak English?
48. Does the vessel have in place a Drug and Alcohol Policy complying with (as a minimum) the statement issued by the latest edition of the OCIMF's Guidelines for the Control of Drugs and Alcohol Onboard Ship?
49. Vessel's last port of call?
50. Has the vessel visited the Terminal before?
51. Protection and Indemnity (P&I) Club insuring the vessel?
52. What is the Pollution Liability Insurance limit U.S.$?
53. Has the vessel Cossack Pioneer Terminal Handbook(s) onboard?
54. If YES, what revision number?
55. Does the vessel operate a management system certified to ISO 9002 or equivalent?
56. Does the vessel have a dedicated helicopter winching area?
57. Are the Officers and Crew familiar with Helicopter operations?

Signed by:
Position:
Company:
Date:

OPERATOR: Woodside Petroleum (W.A.Oil) Pty.Ltd., No. 1 Adelaide Terrace, Perth, W.A. 6000, Australia. Postal address (Box D188, G.P.O. Perth, W.A. 6001, Australia). *Tel:* (09) 224 4111. *Telex:* AA92326. *FAX:* (09) 325 8178. *Contact:* Captain M. Goodwin, Marine Co-Ordinator.

DAMPIER: W.A.: 20.38 S. 116.45 E. (See Plan)

LOCATION: Port Dampier is located on the N.W. coast of Australia in the Dampier Archipelago. Legendre Island in position Lat. 20° 21′ S., Long. 116° 51′ E. forms the N.E. extremity of the Archipelago and Rosemary Island in position Lat. 20° 28′ S., Long. 116° 37′ E. forms the N.W. extremity of the Archipelago.

The port facilities are constructed:
adjacent to Parker Point in Lat. 20° 39' S., Long. 116° 43' E.
East Intercourse Island in Lat. 20° 39.03' S., Long. 116° 40.4' E.
Mistaken Island in Lat. 20° 39.2' S., Long. 116° 39.6' E.
Withnell Bay LNG: Lat. 20° 35.2'S., Long. 116° 45.7' E.
Dampier Public Wharf: Lat. 20° 36.9' S., Long. 116° 44.8' E.

PORT LIMITS: A vessel is considered to be an arrived vessel from the time of crossing the quarantine line, which runs due East from Courtenay Head Lighthouse.

Port Limits: The limits of the port extend Northwards from the N.W. tip of Legendre Island to a position Lat. 20°18.2' S., Long. 116° 50' E., then in a W.S.W. direction to a position Lat. 20° 23.7' S., Long. 116° 36' E., North of Rosemary Island, then South to the Northern shore line of West Intercourse Island, and along the shore line of West Intercourse, the mainland up to Flying Foam Passage and part of the Western side of Dolphin Island, back to Legendre.

DOCUMENTS: *Documentation Required on Entry:*

Form Q360	Two copies for Quarantine Officer to be accompanied by Crew List, showing vaccination dates.
Form 42A	One copy. All narcotics and restricted drugs to be identified by type, size and quantity. Report is to include lifeboat kits.
Form 5	One copy, including Declaration Sheet, in declaring goods, quantity, description and value to be stated. In the case of watches, radios, cameras, binoculars and the like, makers name or brand and serial numbers to be shown.
Forms M and S11	Two copies required plus 2 Crew Lists.
Form QA4	One copy. If any pets, including any animals, birds or fish are on board, then an additional Form QA5, is also required.
Form M315	One per crew member, except as detailed below.

With reference to Seaman's Identification Cards, a passport size photograph of the seaman is sufficient. A side face photograph is not required. Seamen in possession of the following National travel documents are no longer required to have an Identification Card in Commonwealth of Australia Form M315:

Barbados		British Seaman's Document.
Canada	(i)	Canadian Passport.
	(ii)	Seaman's Identity Certificate.
Chile	(i)	Chilean Passport.
	(ii)	Seaman's Book.
China (People's Republic of)		Seaman's Book
Denmark		Seaman's Book.
Egypt (Arab Republic of)	(i)	Egyptian Passport.
	(ii)	Seaman's Book.
Fiji	(i)	Fiji Passport.
	(ii)	Seaman's Certificate of Nationality and Identity.
Ghana	(i)	Ghana Passport.
	(ii)	Seaman's Certificate of Nationality and Identity.
Hong Kong		Seaman's Identity Book.
India	(i)	Seaman's Registration Book.
	(ii)	Seaman's Continuous Certificate of Discharge.
Iran	(i)	Iran Passport.
	(ii)	Seaman's Identity Card.
Israel		Seaman's Book.
Italy		Libretto Di Navigazione.
Japan		Mariner's Pocket Ledger.
Kenya	(i)	Kenyan Passport.
	(ii)	Seaman's Identification Certificate.
Lebanon	(i)	Lebanese Passport.
	(ii)	Seaman's Identification Certificate.
Malaysia	(i)	Malaysian Passport.
	(ii)	Seaman's Identification Certificate.
Malta		Continuous Service Booklet (Discharge Book).
Nauru		Seaman's Document of Identity.
New Zealand		New Zealand Identity Book.
Norway		Seaman's Document.
Pakistan	(i)	Seaman's Identity Card.
	(ii)	Continuous Discharge Certificate.
South Africa	(i)	Seaman's Record Book and Certificate of Discharge.
	(ii)	Seaman's Identity Certificate.
	(iii)	Certificate of Nationality and Identity.
South Korea		Seaman's Certificate Book.
Tanzania	(i)	Tanzania Passport.
	(ii)	Seaman's Book.
Uganda	(i)	Ugandan Passport.
	(ii)	Seaman's Book.
United Kingdom	(i)**	British Passport.
	(ii)	Seaman's Record Book and Certificate of Discharge.
	**	May be held by Master for surrender only if grantee is agreeable; otherwise an Australian Seaman's Identification Card must be completed.

Masters are reminded that crew members' travel documents and Commonwealth of Australia Forms M315, where applicable, are to be retained in the custody of the Master at all times and are to be produced to Customs Boarding Officers upon demand.

The following ship's documents should be available for inspection:
(a) Register.
(b) Load Line Certificate.
(c) Safety Equipment Certificates.
(d) Radio Certificate.
(e) Safety Construction Certificate.
(f) Australian Commonwealth Light Dues Receipt.
(g) West Australian Light Dues Receipt.
(h) Articles of Agreement and Account of the crew (or equivalent).
(i) International Transport Federation Certificate (if applicable).
(j) Oil Record Book.
(k) Register of Cargo Gear.
(l) Valid Derat or Exemption Certificate.
(m) Crews Identify Documents.
(n) International Vaccination Certificates for all aboard.

APPROACHES: From the 100 fathom line in Lat. 19° 20' S., Long. 116° 20' E., a channel 15 miles wide, leading 157° was surveyed by the Royal Australian Navy in 1963 and found to be clear of dangers. This approach is recommended for ships arriving from the North and N.E. Ships arriving from the West pass North of Tyrell Rocks situated to the N.W. of the Monte Bello Islands and then should pass not less than 5 miles to the North of Rosemary Island on the Latitude of Legendre Island Light.

Shipping Channels: Hamersley's departure channel is situated on the Western side of Mermaid Sound, and is dredged to a least depth of main channel 15.35 m. (L.A.T.).

The Woodside Channel is situated on the Eastern side of Mermaid Sound and is dredged to a least depth of 12.20 m. (L.A.T.).

ARRIVAL ADVICE: *Port Authority:* The Master of any vessel intending to enter the port shall notify the Harbour Master at least 24 hours before arrival, or if arriving from a point less than 24 hours away, then from that point.

This notification is also to advise the Harbour Master of the vessel's draft and as to whether the equipment and machinery for the navigation and propulsion of the vessel are fully operational for the purposes of safety, piloting the vessel and, also if the vessel is to berth at a Company wharf, also advise as to the vessel's proposed berthing, working and departure programme.

Vessel's proceeding to Dampier Public Wharf: If Dampier is the first port of entry into Australia, vessels should radio through the normal recognised coast stations, addressing their messages to both their Agents and the Dampier Port Authority, Telex: 198230.

In the case of vessels arriving from overseas:
(i) ETA 7 days before their intended arrival, their draft and details of cargo to be worked.

In the case of all vessels, cable:
(i) 72 hours before intended arrival at the port advising estimated time of arrival at the pilot boarding ground, including in the message, if not previously given, the forward and aft arrival draft and details of cargo to be worked.
(ii) 48 hours before intended arrival, confirmation or any variation of estimated time of arrival.
(iii) 24 hours before intended arrival, confirmation or any variation of estimated time of arrival.
(iv) Coastal vessels may not be able to advise their ETA's in accordance with these rules. Where possible, the Master should advise his ETA as soon as practical.

Coastal vessels should advise whether the Master holds a current Pilotage Exemption Certificate and, if so, the date of last time that he visited the port.

Cargo information: Prior to departure from the loading port, Masters shall forward by first class airmail a copy of the vessel's inward manifest to the Port Authority.

Vessels proceeding to Parker Point Ore Wharf, East Intercourse Island Wharf and the Service Wharf:

1. Every vessel, intending to *load a cargo of iron ore* at Dampier, shall, on departure from the last port of call, cable the following information, addressing the message 6D HAMIRON DAMPIER AA 99151.

1.1 Estimated time of arrival, quantity of cargo required, deepest departure draft and distance between keel and hatch coaming. Example: NAME OF SHIP, ETA PM20/4, 108000K/T, 16.46M, 24.15M.
7 days before intended arrival at the port, confirmation or any variation to the above, and indicate loading order by hatches of the products to be lifted.
Example: NAME OF SHIP, ETA 1000/4, 108000 k/t, 16.46, 24.15m, 1/10000 FINES, 7/10000 FINES, 9/10000 FINES, 2/10000 LUMP, 4/10000 LUMP, 6/10000 LUMP, 3/8000 FINES, 5/10000 FINES, 2/8000 LUMP, 6/6000 LUMP/ 7/5000 FINES, 3/8000 FINES, TRIM 3000 FINES. TOTAL 108000 k/t.

2. Vessels *with cargo for Hamersley Iron* shall, on departure from the loading port or 7 days before arrival, whichever occurs first, cable the following information addressing the message 6D HAMIRON DAMPIER AA99161: Estimated time of arrival, quantity and nature of cargo to be discharged, stowage and the deepest arrival draft. Example: NAME OF SHIP, ETA AM/4, 4700MT, GENERAL 1/1200, 2/200, 3/1400, 4/1800, DRAFT 7M.

Also see "Tankers".

PILOTAGE: Pilotage is compulsory except for vessels 150 g.r.t. or less and those whose Masters hold a valid Pilotage Exemption Certificate. Pilotage services operate from the pilot cutter "Pilbara Mercury" and Bell 206B Jetranger helicopter for Hamersley Iron. Pilotage for Woodside is by pilot boat "Burrup Pilot" and Puma helicopter.

Pilot boarding and disembarking arrangements must comply with the SOLAS regulations and be properly rigged and attended.

Pilot Boarding Ground: There are 4 pilot boarding grounds/pilot boarding areas. They are:

No. 1:	Lat. 20° 24.88' S., Long. 116° 42.15' E. (1 mile N.W. of the Seabuoy).
No. 2:	Lat. 20° 25.50' S., Long. 116° 44.48' E. (1 mile N.E. of Channel Buoy).
No. 3:	Lat. 20° 30.90' S., Long. 116° 43.02' E. (Abeam of No. 6 Buoy).
No. 4:	Lat. 20° 38.58' S., Long. 116° 38.18' E. (King Point, East Lewis Island 350° × 0.6 m.).

No. 1 Pilot boarding ground is for vessels using the Hamersley Iron Pilot Service to either Parker Point, East Intercourse Island, Service Wharf or Mistaken Island Salt Berth.

No. 2 Pilot boarding ground is for vessels using the Woodside Petroleum Pilot Service to Withnell Bay Terminal.

No. 3 and 4 Pilot boarding grounds will be allocated to vessels by Dampier Port Control.

Note: LNG's with helicopter landing deck aft will have Pilots boarding further seaward as directed by Pilots boarding.

Pilots may board either by helicopter or pilot boat.

Woodside Pilots operate from the vessel "Burrup Pilot" and Hamersley Pilots from the "Mercury".

Vessels should contact Dampier Port Control on Channel 16, 4 hours before arrival.

Helicopter – Landing Requirements: Pilots will board suitable vessels by means of a helicopter which will land on a hatch cover. Normally this applies to bulk carriers and not general cargo vessels. The helicopter will not be used for oil tankers, which will, with other vessels unsuitable for helicopter operations, be boarded by launch. The helicopter used is a float equipped Bell 206B Jetranger weighing 769 kilos and is fitted with VHF Channels 16 and 11.

Where a vessel is to be boarded by helicopter, the vessel must meet the following criteria:

Boarding by Helicopter: Pilots will board suitable vessels by means of a helicopter which will usually land on a hatch cover. This service generally applies to gearless bulk carriers or those vessels which have sufficiently clear landing area as described in this section and are not carrying petroleum products.

The helicopter normally used is a float equipped Bell 206B Jetranger which has a maximum all up weight of 1,450 kg. and is fitted with VHF Channels 11 and 16.

Where a vessel is to be boarded by helicopter, the vessel must meet the following criteria:

(a) A hatch cover capable of supporting 2,900 kg., that is, possessing a load density of not less than 400 kg./sq.m. and with minimum dimensions of 12 m. If cambered, then the angle should not exceed 7.5°.
(b) Mark a *hovering area* on the hatch cover with a circle of not less than 12 m. diameter and 15 cm. thick.
(c) Mark a *landing area* within the hovering area with the letter "H" having sides of 2.0 m. and a width of 13 cm. The landing area is to comprise a square space, having sides measuring no less than 5.0 m., the centre of which will be concentric with that of the hovering area, and shall be free of lifting lugs, wedges, ventilators and any other obstructions which are likely to hazard the helicopter landing skids. When the helicopter skids are positioned within the landing area as described above, the main rotor shall be contained within the hovering area.
(d) The markings in (b) and (c) above shall be in white or yellow on a dark background.
(e) Paint on handrails, lugs, ventilators and other obstructions on the hatch cover should be a distinctive colour which shall be highly visible by day or night.
(f) Surrounding the hovering area, there shall be an area not less than 6 m. in width in which there shall be no obstructions which could hazard the rotor system more than 0.5 m. above the hatch cover. Two approach paths at least 150° apart in azimuth shall exist, being free of all obstacles above an approach gradient of 11.5°.
(g) The combined hovering area and obstruction free area in (f) shall comprise the helipad area. No ship's personnel shall be within this area during helicopter operations unless they are below hatch cover level.
Any hats worn by crew approaching the helicopter must be secured by a chin strap. Crew must not attempt to approach the helicopter unless requested to do so by the helicopter pilot.
(h) Ensure that all hatch wires, derricks, cranes, aerials, etc., are clear of the approach paths to the helipad area. All loose objects must be removed from this area.
(i) The approach paths to the helipad across both sides of the ship shall be free of obstructions higher than 0.5 m. above hatch cover level.
(j) An officer shall be available to escort the Pilot to and from the helipad area.
(k) Ships departing the port must wash down the helipad before the helicopter lands (Day and night).

In addition for Night Operations:

(a) The termination area shall be illuminated with floodlights situated outside the helipad area, with the light beams directed downwards on to the hatch cover, in such a manner as not to blind the helicopter pilot.
(b) An illuminated wind indicator shall be displayed in a conspicuous position clear of the helipad area and easily visible from the air (e.g. a wind sock or answering pennant).
(c) On request, when other ships are in the area, provide a means of identification by flashing a light towards the helicopter on approach.

Before making the initial landing, the helicopter pilot will visit your ship and

(a) Decide whether your vessel is suitable for helicopter operations.
(b) Discuss with you any alterations which may be necessary to make landings possible.

Radio Procedure Vessel/Helicopter: Before landing on a vessel, the helicopter pilot must receive clearance to land from the Master on VHF Channel 11 as follows:

Helicopter: "(Name of vessel) this is Dampier pilot helicopter. I request clearance to land."

Vessel: "Dampier pilot helicopter this is (name of vessel) you are cleared to land."

Vessel should be ready to advise the helicopter pilot of the relative cross wind across the deck.

Boarding by Pilot Boat: When boarding by pilot vessel, it is most important that a lee be given to allow the Pilot to board. Generally ships will be requested to be underway prior to Pilot boarding. Failure by ships to afford a lee may result in the Pilot being unable to board, with consequent delay.

All vessels, where the Pilot is boarding by boat, must rig a ladder in accordance with "International Maritime Organisation SOLAS Regulations". Under SOLAS Chapter V, Regulation 17 amended in 1973 by IMO Resolution A263 (VIII), and in 1979 by Resolution A426 (XI), and the Port of Dampier Regulations (1979), the following points are stressed:

(a) The rigging of pilot ladders and the embarkation and disembarkation of Pilots thereby shall be supervised by a responsible officer of the ship.
(b) Every pilot ladder shall be secured in a position clear of any possible discharges from the ship, and so that each step rests firmly against the ship's side.
(c) Every pilot ladder shall be secured in a position where the Pilot can gain safe and convenient access to the ship after climbing not less than 1.5 m. and not more than 9.0 m.
(d) Whenever the distance from the water to the point of access to the ship exceeds 9.0 m., access must be by means of a combination of a pilot ladder and an accommodation ladder.
(e) Adequate lighting must be provided at night.
(f) Manila manropes of between 28 mm. and 32 mm. in diameter should be rigged on each side of the ladder for its full length.
(g) The ladder should be clean.

Failure by Masters, to comply with the requirements outlined above, has in the past in Australian ports resulted in delays to shipping and, in some instances, heavy costs against the vessel concerned.

Pilot Ladder Specifications:

Length of spreaders not less than	1,800 mm. (5 ft. 10 in.)
Length of step not less than	480 mm. (19 in.)
Width of steps not less than	115 mm. (4.5 in.)
Thickness of steps not less than	25 mm. (1 in.)
Side Ropes:	
Circumference not less than	60 mm. (2.25 in.)
Diameter not less than	20 mm. (0.75 in.)
Spacing of steps	300 mm. – 380 mm. (12 in. – 15 in.)
Recommended space between top of one step and underside of the one above	310 mm. (12.25 in.)
Recommended clear space between pairs of side ropes (not specified by SOLAS)	400 mm. (16 in.)

Note: The use of pilot ladder retrieving lines attached to the lower portion of the ladder is not permitted.

Use of Pilot Hoists: Any pilot hoist used in the Port of Dampier must comply with the Australian Standards. Use of a hoist is at the Pilot's discretion.

ANCHORAGES: *Outer Anchorage:* The area bounded by the following positions:

Lat. 20° 24′ S., Long. 116° 36′ E.
Lat. 20° 25′ S., Long. 116° 36′ E.
Lat. 20° 22′ S., Long. 116° 41′ E.
Lat. 20° 25′ S., Long. 116° 41′ E.

Vessels will be advised of their designated anchor position in this area by Port Control and will be expected to proceed to this position without the services of a Pilot. A continuous VHF radio watch must be maintained at all times.

Inner Anchorage: Under certain circumstances, anchorage positions within Mermaid Sound are available. Vessels may only proceed to this anchorage under the direction of a Pilot.

Vessels are not allowed to anchor outside these areas without the permission of the Harbour Master.

Gas Trunk Line: A high pressure subsea gas line has been established on the seabed to supply gas to the onshore treatment plant situated at Withnell Bay. The pipeline follows the following route in the approaches to and within the port. In a 135° (T) direction to:

(i) Lat. 20° 23.45′ S., Long. 116° 45.27′ E., thence to
(ii) Lat. 20° 24.36′ S., Long. 116° 46.2′ E., thence to
(iii) Lat. 20° 26.84′ S., Long. 116° 46.83′ E., thence to
(iv) Lat. 20° 29.82′ S., Long. 116° 46.68′ E., thence to
(v) Lat. 20° 32.26′ S., Long. 116° 45.58′ E., thence to shore in position
(vi) Lat. 20° 35.4′ S., Long. 116° 46.4′ E.

A prohibited area is delared 5 cables either side of this pipeline.

HEALTH: Radio Pratique is now in force for the Port of Dampier. Please send Radio Pratique message to Agency Telex Number not more than 24 hours before arrival or less than 12 hours before arrival.

See "General – Health" before first port.

On receipt of quarantine messages, Harbour Master will advise anchorage position if vessel not berthing on arrival.

Inspections may be carried out at the jetty or at anchorage at the discretion of the Quarantine Officer.

Rat guards are to be maintained on all mooring lines while vessels are berthed in Dampier Harbour.

RADIO: Perth Radio. Also see "Arrival Advice" and "Tankers".

VHF: Dampier Port Control maintains a continuous watch on VHF Channel 16. All vessels approaching the port or at anchor must also maintain a continuous watch on this frequency.

Continuous watch is also maintained on VHF Channel 11, the working channel for general port traffic information.

Failure to maintain a continuous VHF watch may result in vessels berthing out of turn.

Call Sign	Dampier Port Control
Channel 16	General call and continuous watch channel.
Channels 11 & 14	Port working channels.
Channel 72	Can be used vessel to vessel.
Channel 67	Emergency working channel.

Arrival: Vessels will either be directed to an anchorage by Port Control, or to the pilot boarding ground.

TUGS: Pilbara Harbour Services Pty. Limited own and operate 4 tugs, workboats and lines launches which are available to shipping on a 24 hour service.

The following craft are available to assist in berthing and unberthing and for hire:

"Pilbara Star"	4,800 h.p.	Bollard Pull	55 tons
"Pilbara Saturn"	4,800 h.p.	Bollard Pull	55 tons
"Pilbara Comet"	4,200 h.p.	Bollard Pull	45 tons
*"Pilbara Mars"	4,200 h.p.	Bollard Pull	45 tons

Three (3) Lines Launches
One (1) Workboat – 400 h.p.

Mermaid Sound Port & Marine Services (Woodside) also own 4 tugs and one pilot boat to assist in the berthing of vessels at Withnell Bay LNG berth.

"King Bay"	Bollard Pull	50 tonnes
"Withnell Bay"	Bollard Pull	50 tonnes
"Hearson Cove"	Bollard Pull	60 tonnes
"Cowrie Cove"	Bollard Pull	60 tonnes

MOORING: *Hamersley Wharves:* Mooring lines are taken ashore by lineboat. Vessels using heavy wire ropes are required to have the ends terminated with a 9 m. rope spring finished with a standard eye for placing over the bollards and slip hooks.

All mooring ropes and wires to have a 6 m. tail of light rope spliced into the eye to facilitate the transfer from the boat to the dolphin.

Vessels shall be ready in all respects to commence loading on completion of mooring, hatches cleaned and opened.

LOADING IRON ORE: *Hamersley Wharves:* Vessels loading iron ore are recommended to exhibit either on top of the hatch lids or on the deck or coaming adjacent to the hatch, numerals identifying the hatch. These are to be of such a colour and size as to be clearly visible to the shiploader operator stationed at the end of the shiploader boom.

Reference to loading is to be made by hatch, not hold and all weights are to be expressed in metric tonnes.

Confirmation in writing of the cargo booking is delivered on board on berthing by the Loading Supervisor.

This document contains four copies of the loading sequence. The first copy is retained on board, the remainder completed and passed to the Supervisor for distribution as required. Attention is drawn to the run-off quantity required to be loaded to clear the conveyors at the completion of loading.

Red, green and white list lights, clearly visible to the shiploader operator are recommended fittings on all vessels loading iron ore. A fixed white light shall indicate the vessel is upright.

Masters are cautioned the loading of iron ore is carried out by draft. Frequent "on the run" draft checks between hatch changes should be carried out. Whilst shiploading sequences are equipped with weight scales, these figures are to be used only as a guide and reference to them will not relieve the Master of the responsibility of adequately maintaining draft checks and supervising the loading accordingly.

Final confirmation of tonnages on board will be the result of a draft survey carried out by the Master and the Company's surveyor.

Ballast shall be adjusted to ensure at high water a minimum clearance of 1.0 m. is maintained between the vessel's structures and the shiploader. Ballast to be discharged at a rate which prevents disruption to loading, final trimming and completion.

Subject to tide, ships shall be ready to vacate the iron ore berths on completion of loading and have all gear tested and available for use on departure.

Ships departing during the hours of darkness will require to have fitted on the fore mast a small steering light visible from the bridge. Vessels in excess of 100,000 d.w.t. must be fitted with a centre line steering compass.

Stowage Factors: The following stowage factors are provided for guidance:

Lump Ore	2.35 tonnes/cu.m.
Fine Ores	2.50 tonnes/cu.m.

Angle of Repose: Lump and Fines – 37°.

PARKER POINT ORE JETTY: Operator: Hamersley Iron Pty.Ltd., P.O.Box 21, Dampier, WA 6713. Tel: (091) 436000/435924. Telex: AA99151. Fax: (091) 435804. Cables: 6D HAMIRON DAMPIER AA99151.

The ore jetty consists of a tubular steel pile structure carrying a deck and rail traverse of a slewing boom shiploader.

8 multi-spring pile dolphins fitted with Yokohama air block fenders are situated clear of the ore jetty structure and vessels berth port side alongside, mooring to these dolphins. See "Plan" for standard mooring pattern.

Iron ore is the only product handled over this facility and following are principal dimensions:

Length of jetty:	268.9 m.
Depth of water alongside:	17.20 m. (LAT)
Travel of shiploader:	180 m.
Radius of ore delivery from fender facing:	23.8 m.
Height under side boom at LAT:	23.00 m.
Total length of fendering, No. 1 to No. 9 dolphins:	344.8 m.
Rated capacity of shiploader:	7,500 tonnes/hr.

The ore jetty is connected to the East Intercourse Island departure channel by a 170 m. wide departure channel dredged to 15.35 m. (LAT) in 1982.

Parker Point ore loading facility accommodates vessels up to 140,000 d.w.t.

The maximum departure draft from this berth is dependent upon tidal conditions and adequate under keel clearance.

EAST INTERCOURSE ISLAND ORE JETTY: Operator: Hamersley Iron Pty.Ltd., P.O.Box 21, Dampier, WA 6713. Tel: (091) 436000/435924. Telex: AA99151. Fax: (091) 435804. Cables: 6D HAMIRON DAMPIER AA99151.

The ore jetty consists of a tubular steel pile structure carrying a deck and rail traverse of a slewing boom shiploader.

Nine multi-spring dolphins fitted with Yokohama air block fenders are situated clear of the ore jetty structure and vessels berth starboard side alongside, mooring to these dolphins. See "Plan" for standard mooring pattern.

Iron ore is the only product handled over this facility and the following are principal dimensions:

Length of jetty:	341.4 m.
Depth of water alongside:	21.50 m. (LAT)
Travel of shiploader:	230.0 m.
Radius of ore delivery from fender facing:	25 m.
Height under side boom at LAT:	25.0 m.
Total length of fendering, No. 1 to No. 9 dolphins:	429.8 m.
Rated capacity of shiploader:	9,000 tonnes/hr.
Basin length:	430.0 m.
Basin width:	84.0 m.

The ore jetty is connected to the open sea by a 167.7 m. wide departure channel dredged to 15.35 m. (LAT).

East Intercourse Island ore loading facility accommodates vessels up to 250,000 d.w.t. The maximum departure draft from this berth is dependent upon tidal conditions and adequate under keel clearance.

Also see "Shipmaster's Report" - February 1987.

DAMPIER PUBLIC WHARF: Operator: Dampier Port Authority.

The approach to the wharf has a least depth of 7.5 m. LAT.

The wharf consists of a concrete deck supported by tubular piles. Access is by a concrete approach bridge 35 m. long and 9.5 m. wide.

Seven berths are available; the main or Western berth can accept vessels of up to 25,000 tonnes displacement, and the Eastern berth, which is suitable for smaller craft, supply vessels, etc.

Priority Use Agreement: Masters should be aware that a "priority use" agreement is in place between the Port Authority and Woodside Offshore Petroleum. Under certain circumstances this will mean that a vessel working cargo will be obliged to move off the wharf and wait whilst a vessel carrying Woodside cargo berths, discharges and sails. Neither the Port Authority or Woodside accept any responsibility for costs incurred by this procedure.

Advice of Arrival: If Dampier is the first Port of Entry into Australia, vessels should radio through the normal recognised coast stations, addressing their messages to both their Agents and the Dampier Port Authority, telex No. 198230.

In the case of vessels arriving from overseas:

(i) ETA 7 days before their intended arrival, their draft and details of cargo to be worked.

In the case of all vessels, cable:

(i) 72 hours before intended arrival at the Port advising estimated time of arrival at the Pilot boarding ground including in the message, if not previously given, the forward and aft arrival draft and details of cargo to be worked.

(ii) 48 hours before intended arrival, confirmation or any variation of estimated time of arrival.

(iii) 24 hours before intended arrival, confirmation or any variation of estimated time of arrival.

(iv) Coastal vessels may not be able to advise their ETAs in accordance with these rules. Where possible, the Master should advise his ETA as soon as practical.
Coastal vessels should advise whether the Master holds a current pilotage exemption certificate and, if so, the date of last time that he visited the Port.

Cargo Information: Prior to departure from the Loading Port, Masters shall forward by first class airmail a copy of the vessel's Inward Manifest to the Port Authority showing description and weight of the cargo to be discharged at Dampier – a Manifest.

Principal Dimensions:

Western Berth:	
Dredged basin:	Chart datum minus 10 m. over 280 m. × 63 m.
Wharf face:	209 m.
Height of deck:	6.8 m. above chart datum.
Deck area:	4,400 sq.m.
Mooring Dolphins:	Dolphin 'A' 39 m. South of main deck. Dolphin 'B' 36 m. North of main deck.
Main deck, breast and mooring bollards:	Total 21 × 50 tonne capacity.

Fendering consists of tubular rubbers which are designed to offer a satisfactory mooring face for vessels in winds of up to 40 knots.

Bunkers and Fresh Water: Bunkers can be delivered by hard bunkering points.

SERVICE WHARF: Operator: Hamersley Iron Pty.Ltd.

Petroleum products are received over this facility and vessels are acceptable up to a max. draft of 7.19 m. (LAT).

The wharf consists of steel sheet pile cells constructed in water of surrounding depths of 6.51 m. (LAT).

A berthing basin 243.8 m. long and 38.10 m. wide has been dredged to a depth of 7.73 m. (LAT) on the Western side.

The wharf is 69.5 m. in length and faced with piles on which are secured rubber fenders. Mooring buoys are positioned off the N.E. and S.W. extremity of the wharf and head and stern lines are secured to these buoys.

Ships generally berth port side alongside.

See "Plan" for standard mooring pattern.

MISTAKEN ISLAND SALT BERTH: Operator: Dampier Salt Pty.Ltd., P.O.Box 1619, Karratha, WA 6714. Tel: (091) 436811. Telex: AA99566. Fax: (091) 436800. Cables: 6DDPR SALT LTD.

The berth is situated at Lat. 20° 39.2′ S., Long. 116° 39.6′ E. The berth is used only for salt loading and consists of 8 steel piled structures comprising of:

A central timber decked wharf head carrying a fixed position, stiff arm, slewing and luffing conveyor boom ship loader, with deflector capability for spout trimming.

Seven individual concrete decked rigid berthing/mooring dolphins, each fitted with 2 large diameter rubber fenders. The dolphins are situated so as to hold the ship clear of the wharf head at all times.

Vessels may berth either side to, moor to and warp along the dolphins using ship's winches on forward and aft lines and also central springs attached to Dolphin No. 4.

The principal berth dimensions are:

Overall length between dolphins:	358 m.
Minimum depth of water on approach path:	10.5 m. LAT.
Depth of water alongside:	12.0 m. LAT.
Vessels at berth – underkeel clearance:	1.0 m.
Minimum depth of water on departure path:	12.0 m. LAT.
Clearance up to 50,000 d.w.t.:	1.0 m.
Clearance over 50,000 d.w.t.:	1.5 m.
Maximum outreach of loading boom from fender facing:	17.4 m.
Height of dolphin fender above I.S.L.W.:	
Bottom buffer centre:	2.3 m.
Top buffer centre:	6.2 m.
Loading capacity of shiploader:	max. 3,500 tonnes/hr.
Average loading operation:	2,300/3,000 tonnes/hr.

Shore Leave: Masters are advised that the berth is situated on a privately owned mining lease. In the interests of safety, no unauthorised shore leave is permitted, although fishing from mooring dolphins and shore is permitted. Access to the mainland can be arranged through the vessel's Agent.

Loading Procedure: The vessel is to ensure that the first two holds to be loaded have the hatch covers removed on berthing. On berthing, the vessel will be positioned by the Pilot such that the loading can commence immediately upon acceptance of the Notice of Readiness and verification that vessel's holds are sufficiently clean to standards determined by Dampier Salt (Operations) Pty. Limited as acceptable to load.

An independent Ships' Surveyor, retained by Dampier Salt (Operations) Pty. Limited will take all draft readings during the berthing operation in order that the commencement of loading will not be delayed. Ship's arrival condition and ballast readings prior to commencement of loading will be agreed between the Chief Officer and Surveyor.

An Operations Supervisor from Dampier Salt (Operations) Pty. Limited will board the vessel immediately following mooring to check that the vessel is in readiness to load, and then commence the loading operation. This Officer will then agree with the Chief Officer loading sequence, loading schedule, warping procedures, draft problems (if any) and any other matters pertaining to the loading of the vessel.

He will draw up a loading schedule confirming with the Chief Officer the approximate hold loading duration, times of warping and the estimated time of completion of loading, and sailing time.

An Operations Supervisor will remain on board the vessel for the duration of loading in order to liaise with the Chief Officer concerning the procedures and times to move the vessel so as to load each hold in warp sequence and maintain critical draft, where applicable.

A belt weightometer is used by Dampier Salt (Operations) Pty. Limited, to indicate loading rates and tonnages loaded in each hold.

This instrument has a proven accuracy of ±1.5%. It is the practise of Dampier Salt (Operations) Pty. Limited, for the Surveyor and Chief Officer to agree a preliminary draft survey when the second last hold is approximately 80% loaded. This survey then allows the correct loading of the remainder of the cargo so as to ensure correct trim and prevent inadvertent overloading. The final loaded cargo tonnage is determined by draft survey, calculated by and agreed between the Surveyor and Chief Officer.

The Port of Dampier is situated in the Summer Zone for load line purposes.

No labour is available at Dampier to board the vessel for any shipboard duties. Trimming is by conveyor discharge at the end of the loading spout only. Any subsequent trimming required must be undertaken by the ship's crew.

Stowage Factor: Stowage density 32 cu.ft. per long ton or 0.89 cu.m. per metric tonne. Angle of repose 33°. It has been found that the cargo does not shift during the vessel's voyage to discharge port.

Typical Specification – Australian Salt NaCl (Sodium Chloride):

Appearance: Generally clear, white and free from organic matter.

Additives: Nil additives in final washed product.

Component:

(percentage by weight)	*Average*
Moisture content:	2.30
Calcium content:	0.004
Magnesium content:	0.02
Potassium content:	0.01
Sulphate content:	0.13
Chloride content:	58.97
Water insolubles content:	0.01
Heavy metals:	less than 15 ppm.
NaCl content:	97.40

Chemical analysis expressed in combined form:

NaCl	97.41%
$CaSO_4$	0.12%
$MgSO_4$	0.05%
$MgCl_2$	0.04%
KCl	0.03%
Moisture	2.30%
Insolubles	0.01%

Location of Berth in Relation to Dampier Township:

The berth although geographically in close proximity to the township of Dampier is in fact a journey of some 40 km. by road. The only land access to the berth being through Company property. During shiploading and/or replenishing of the salt stockpile on Mistaken Island, there is a continuous 24 hour per day movement of large heavy haulage trucks along a narrow causeway which makes the movement of private vehicles, taxis or individuals extremely hazardous. Therefore access to the township through Dampier Salt property is strictly controlled and limited.

Vessel Arrival Requirements:

Dampier Salt do not operate an agency but still have shipping officers. All vessels calling at the Salt Berth are attended by a nominated Dampier Salt (Operations) Pty. Ltd. Shipping Officer.

Services Required:

1. Master to advise by telex via coastal radio if any crew members are required to attend doctors or dentists. Prior advice will generally ensure adequate arrangements can be made to accommodate the requests. Insufficient notice, or advice on berthing may jeopardise the chances of obtaining normal medical/dental treatment. Emergency medical treatment is available at all times.
2. Telex advice of any and all stores requirements should be given to Dampier Salt (Operations) Pty. Ltd., at least 4 days prior to arrival. Stores orders received later than this may not be able to be filled, although the majority of items normally requested are carried locally by the ships' providores.

Prior telex advice will ensure the maximum supplied – whilst advice to the Agent on arrival may not be sufficient time to fulfil the full requirements of the vessel.

STEVEDORES: Subject to application. Contact local shipping Agents.

MEDICAL: Doctors are permanently resident at Dampier and Karratha and a modern General Hospital is situated in Karratha.

TANKERS: Withnell Bay Terminal: Owned and operated by Woodside Offshore Petroleum. Tel: (091) 588100. Fax: (091) 588000. Telex: AA99710. The Terminal exports LNG, LPG and Condensate from 2 single berth jetties adjacent to Withnell Bay, in position Lat. 20° 35′ S., Long. 116° 45′ E. The S.W.ly jetty is designed to support the loading and mooring facilities required to ship LNG, and the N.E.ly jetty is designed to ship LPG and Condensate. Both berths are designed to accommodate tankers from 20,000 to 150,000 S.d.w.t., with a maximum berthing dispaclement of 90,000 tonnes. To ensure 24 hour non-tidally restricted berthing, tankers should arrive with a draft of 10 m. or less. The maximum drafts alongside the berths are: Low water tide height plus 12.2 m. for the LNG berth and LWT plus 12.5 m. for the LPG/Condensate berth.

Woodside Channel: A channel has been dredged to the Withnell Bay Terminal. The entrance buoy to this channel has been placed at Lat. 20° 26.2′ S., Long. 116° 43.7′ E. This buoy exhibits a light flashing (2) Red every 5 seconds. The Woodside Channel has a least depth of 12.2 m.

Withnell Bay Jetty: The LNG and Condensate loading facility is adjacent to Withnell Bay, in position Lat. 20° 35.2′ S., Long. 116° 45.7′ E.

The loading platform is equipped with 4×16 in. LNG loading arms (2 of which also act as vapour return lines) and 2×12 in. condensate loading arms.

While alongside the berth, minor repairs and maintenance to tanker's machinery and equipment shall be limited to those items which do not impair or require the following:

(i) The fire detection or firefighting capability.
(ii) The safe and efficient handling of cargo.
(iii) The propulsive power or manoeuvrability of the tanker.
(iv) The safe operation and integrity of the mooring system.
(v) The safe operation of electrical equipment located in gas dangerous zones.

"Hot Work" in non-approved areas and work on open decks or on the jetty head which involves hammering, chipping or use of power tools, is strictly prohibited.

Fresh Water: Not available.

Bunkers: Not available.

Refuse: No garbage, rubbish or refuse may be thrown overboard whilst the vessel is within port limits. The Master may make special arrangements with the Agent or Government authorities for removal and disposal during an extended stay.

Gangway: A shore gangway is provided. This is lifted on and off the tanker by a shore crane. Ship's personnel are required to assist in this operation with respect to the best placement of the gangway on board.

Company Regulations: The ship will be provided with a copy of the Jetty Rules and Company Procedures on arrival. No tanker may load without prior agreement to comply with these requirements.

Access: Subject to Company safety requirements, access to and from the tanker is permitted via the jetty. All personnel wishing to enter or leave the Terminal must be cleared through the Woodside Terminal security gates by pass checked against a Crew List deposited by the ship's Agent.

Stores: Due to vehicle access restriction and the jetty configuration, storing of tankers via the jetty is not allowed, except to items of fresh goods which can be hand-carried down the jetty. Storing via a launch, which can be arranged by the Agent, will be strictly controlled and must take place prior to or on completion of loading. No vessels are allowed alongside the tanker without the permission of the Master and the Pilot/Loading Master.

Minimum Requirements for Tankers: As a general condition for tankers at the Terminal, it is required that tankers comply with the following:

(a) *Equipment:* All tankers must be in a sound state of repair, with main engines, mooring winches and windlasses all in proper working order.
(b) *Certification:* All tankers must be in possession of a complete and valid set of safety certificates. These to include:
  (a) Load Line Certificate.
  (b) Safety Construction Certificate.
  (c) Safety Radio Certificate.
  (d) Cargo Equipment Register.
  (e) Safety Equipment Certificate.
  (f) Cargo Gear Certificate.

(c) Tankers to be in all respects "In Class".
(d) All tankers nominated to load condensate must be a subscribing member of the "TOVALOP" (Tanker Owners Voluntary Agreement concerning Liability for Oil Pollution) scheme at the time of their visit.
(e) All tankers nominated to load condensate must be in possession of a valid IOPPC (International Oil Pollution Prevention Certificate).
(f) It is the policy of the Company that tankers loading at the Withnell Bay Terminal should have inerted tanks. Prior to loading, a tanker's tanks may be checked for O_2 content by the Terminal operator.

Minimum Condensate Tanker Mooring Requirements:
(a) Minimum requirements for tankers with all wire moorings:

Tanker Size d.w.t. (1,000 tons)	Wire Diameter (mm.)	Nylon Rope Tail Diameter (mm.)	Lines required Breasts	Springs
20 – 30	28	56/80	6	6
20 – 30	30	64/80	4	6
20 – 30	32	64/80	4	4
30 – 50	32	64/80	6	4
30 – 50	34	72/80	4	4
30 – 50	36	80/88	4	4
50 – 70	34	72/80	6	6
50 – 70	36	80/88	4	4
50 – 70	38	80/88	4	4
70 – 90	36	80/88	6	6
70 – 90	38	80/88	4	4
70 – 90	40	80/96	4	4
90 – 110	40	80/96	4	4
90 – 110	44	96	4	4
110 – 150	44	96	4	4

(b) Minimum requirements for tankers with mixed or all soft ropes:

Tanker Size d.w.t. (1,000 tons)	Wire Diam. (Springs) (mm.)	Soft Rope Diameter (Breasts) (mm.)	Lines required Breasts	Springs
20 – 30	28	64	4	4
20 – 30	–	64	4	4
30 – 50	30	64	6	4
30 – 50	–	64	6	6
50 – 70	32	64	6	4
50 – 70	–	64	6	8

All wires are to be fitted with nylon tails.

Communications: To assist in Terminal planning and to satisfy Port Regulations, the following pre-arrival messages are to be sent to the tanker's Agent. The Agents have instructions as regards to the distribution of messages.

Tanker Pre-Arrival Messages: The following information is required by the Withnell Bay Terminal and is to be sent to the tanker's Agent by all tankers using the facility. The tanker's Agent is to forward the information to the Woodside Radio Room for distribution.
(i) On departure from last port of call (in any event no less than 5 days prior to arrival): "Answer Withnell Bay Questionnaire".
(ii) 7 days prior to arrival "Advise ETA and Arrival Draft Dampier".
(iii) 3 days prior to arrival "Advise ETA".
(iv) 2 days prior to arrival 'Advise ETA, arrival and departure drafts". "Confirm all cargo systems operations".
(v) Any changes of more than 6 hours after 7 day ETA.
(vi) 24 hours prior to arrival "Confirm ETA".
(vii) Any changes of more than 1 hour in last 24 hours prior to arrival.

Note: Tanker's Agent are to request the tanker to send the 24 hours ETA (Item 6) and any changes of more than 1 hour within 24 hours of arrival (Item 7) to Woodside Radio telex direction in addition to the Agent.

Woodside Radio:
Telex: AA99571.
Fax: (091) 588131.
Tel: (091) 588198.

Withnell Bay Questionnaire: CONDENSATE: To be answered by all tankers on departure from the last port of call (in any event to be received at least 5 days prior to arrival). Australian coastal tankers, which have previously berthed at Withnell Bay, need only answer AA to EE, plus KK (Provided there have been no changes to the remainder since the previous call at Withnell Bay).

AA: ETA Pilot Boarding Ground.
BB: Arrival Draft.
CC: Arrival Displacement.
DD: Estimated Departure Draft.
EE: Confirm:
  1. Tanks free of leakage.
  2. Inert gas system operational, tanks inerted to less than 8% O_2.
  3. All cargo systems, transfer equipment inspected, leak free and operating correctly.
  4. Stress calculations for cargo, ballasting, bunkering transfers made and within recommended safety limits.
  5. The maximum loading rate for the present loading operation.
  6. All navigation, mooring equipment and engines fully operational.
FF: 1. Ballast quantity, type (SBT, CBT, DIRTY), origin.
  2. Can the vessel load and deballast concurrently. If not, advise time required to deballast.
  3. Advise if shore reception required.
GG: Has the vessel complied with voluntary regulations for exchange of ballast water.
HH: Maximum loading rate through 2 port side 12 in. manifolds.
II: Does manifold arrangement comply with OCIMF standards.
JJ: Type and complement of moorings.
KK: The Pilot will discuss the mooring operation with the Master prior to berthing. When mooring, the tanker must not tension any wire or line before shore personnel move clear.
Master to confirm understanding of this requirement.

LPG: To be answered by all tankers, on departure from the last port of call (In any event to be received at least 5 days prior to arrival).
AA: ETA Pilot Boarding Ground.
BB: Arrival Draft:
CC: Estimated Departure Draft.
DD: Confirm:
  1. Vessel fully cooled under LPG vapour and arrival tank bottom temperatures?
  2. Composition of previous 3 cargoes?
  3. All cargo systems leak free and fully operational?
  4. Starboard manifold configuration, the order (fwd to aft) and size of the presentation flanges for loading? (e.g. Butane, Propane and L 12 in./V 6 in./V 6 in./L 12 in.)
  5. Advise maximum loading rate, whether both grades can be loaded simultaneously, and if not, the order of loading required?
  6. Gas detection system is operational and calibrated for the cargo to be loaded?
  7. Cargo transfer emergency stops tested from all locations to ensure correct operations of valves, alarms and interlocks?
  8. Ensure operation of the tank high level and pressure alarms and interlocks.
  9. Where adjustable setting safety valves are installed, confirm they are set for the cargo to be loaded.
  10. Is the vessel subject to sloshing restrictions?
  11. All navigation equipment, mooring equipment and engines fully operational?
EE: Has the vessel complied with voluntary regulations for exchange of ballast water?
FF: Does manifold arrangement comply with OCIMF standards?
GG: Type and complement of moorings?
HH: The Pilot will discuss the mooring operation with the Master prior to berthing. When mooring, the tanker must not tension any wire or line before shore personnel move clear.
Master to confirm understanding of this requirement.

Note: Vapour samples taken on arrival. Masters must ensure all tanks have positive pressure.

VHF Communication of Arrival: All tankers within VHF range of the Port of Dampier must call Dampier Port Control on Channel 16 (Channel 11 working) for advice on Pilot boarding, anchorages, berthing and other traffic information, etc.

Pilotage and Berthing Arrangements: *The Pilot/Loading Master:* The Pilot/Loading Master acts as both Pilot and Terminal representative on all tankers using the Terminal. It is incumbent on the Master to ensure full co-operation with the Pilot/Loading Master. The tanker is required to provide a cabin and messing facilities for the Pilot/Loading Master whilst in the Port of Dampier.

Tanker Drafts: The following UKCs are to be allowed for the tanker to transit the Woodside Channel which has a minimum depth of 12 m.

Inwards:
20,000 ton to 150,000 d.w.t. Tanker
UKC = 2.0 m.
Outwards:
20,000 ton to 50,000 d.w.t. Tanker
UKC = 1.7 m.
50,000 ton to 150,000 d.w.t. Tanker
UKC = 1.5 m.

To ensure 24 hour non-tidal restricted berthing, tankers should arrive with a draft of 10.0 m. or less. Due to the sustained wind patterns that often affect the port, the Pilot/Loading Master may request a tanker to adjust her arrival ballast draft or trim where necessary. Maximum berthing displacement is 90,000 tonnes.

The maximum draft alongside 12.2 m. plus low water tide height.

Towage Services: All tankers berthing at the Withnell Bay Terminal will utilise the services of the tugs provided by MSP and MS; up to 4×50 tonne bollard pull tugs are available.

Tug Requirements (Minimum):

Tanker d.w.t. × 1,000 ton	Berthing	Departure
20 – 30	2	2
80 – 100	3	2
100 – 150	4	2

Berth Mooring Arrangements: The berth consists of 6 breasting dolphins and 6 mooring dolphins.

The mooring dolphins are each provided with a quick release triple hook for breast lines.

The breasting dolphins are each provided with a quick release double hook for spring lines. The breasting dolphins are fitted with double Yokohama fenders with vertical panels.

Each hook has a safe working load of 125 tonnes and is equipped with a load sensor attached to the mooring load monitoring system. The Pilot/Loading Master has access to this system via the Woodside Radio Room.

Mooring of tankers is facilitated by the use of mooring capstans on each dolphin and a messenger line system.

Weather Restrictions Alongside: The Company procedures contain the limiting criteria with regard to cyclones, wind, sea states, etc., which may affect loading and/or cause an early departure from the berth. A comprehensive alarm system with input of all critical sea and weather parameters is monitored by the Terminal and the Woodside Radio Room.

Approximate properties of North West Shelf Condensate are as follows:

Density at 15°C	0.76 to 0.77.
Flash Point	–50°C (Volatile stock).
R.V.P.	Maximum 41KPa (6 Psi).
Temperature	26° – 40°C.

Static Accumulator Cargo Handling Requirements: North West Shelf Condensate is a Static Accumulator Cargo and tankers will be loaded in accordance with the International Safety Guide for Oil Tankers and Terminals (ISGOTT) Section 7.4.

Loading Equipment: There are 2×12 in. condensate loading arms for loading condensate and receiving ballast water. The arms are designed to accept ship's manifolds of 10 in., 12 in. or 16 in. However, tankers are requested to present 2×12 in. manifolds on the port side.

The loading arms have a vertical range of 3.0 m. – 25.5 m. and are fitted with a quick connect/disconnect coupling system.

The maximum loading rate via the 2 arms is 6,000 cu.m./hr.

Emergency Shut-Down System (ESD): An ESD transmitter is placed on board the tanker prior to the commencement of loading. This transmitter is not intrinsically safe and must be installed in the tanker's cargo control room. When activated, this transmitter will shut down the loading pumps and close the loading arm valves.

Ballast Operations: Tankers must abide by the Western Australian "Pollution of Waters by Oil and Noxious Substances Act 1987". This Act incorporates the 1973 International Convention for the Prevention of Pollution from ships as corrected by the Process-Verbal of Rectification, dated 13 th June 1978 (1978 Protocol).

In effect, clean ballast and segregated ballast may, provided they conform in all respects with MARPOL requirements, be discharged overboard. Any pollution, however, can incur severe fines and heavy clean-up costs.

Shore Ballast Facilities: Limited quantities of dirty ballast can be accepted ashore. However, due to operational requirements prior permission is needed.

Contaminated Ballast: Dirty ballast containing heavy metals or chemicals cannot be accepted ashore. Masters will be required to sign a declaration to this effect prior to discharging ballast ashore. The Terminal may require the ballast to be sampled prior to discharge.

Also see "Service Wharf" and "Shipmaster's Report" dated June 1995.

DENSITY: 1025.

FUEL/WATER/REPAIRS: Fuel for ships' bunkers is available.

A limited supply of fresh water is available in an emergency.

Stores and provisions can be arranged. For large orders Masters are recommended to cable their Agent giving 7 days notice of their requirements.

Minor ship repair work can be arranged through ship's Agents. However, Masters requiring major work are recommended to cable their Agents advising their requirements in advance.

SURVEYORS: Caleb Brett. Tel: (091) 442482.

A.M.S.A. Resident goverment surveyor. Tel: (091) 852640.

GANGWAY/DECK WATCHMEN: *Gangway and Deck Watch:* Whilst alongside any berth, mooring lines are to be regularly checked and kept tight.

A continuous watch is to be maintained, and Masters should ensure that the gangway is fitted with a safety net, manropes and illumination. A lifebuoy and line is to be kept alongside the gangway.

OPENING/CLOSING HATCHES: By crew.

CERTIFICATES: See "Melbourne".

CARGO GEAR: See "Melbourne".

REPATRIATION: Limited facilities available.

AIRPORT: Daily service to Perth. Karratha Airport is 15 km. from the port.

TIME: See "General" before first port.

TELEPHONES: Ship-to-shore telephones are available at all berths for ship-to-shore communications. Ships and jetty telephones are barred access to STD and trunk line facilities.

GARBAGE DISPOSAL: Garbage skips can be provided either on the wharf or on board the vessel. Collection can be arranged as required. Contact: Brambles Manford, Tel: (091) 851433.

WASTE OIL DISPOSAL: Available by tanker truck only, at Dampier Public Wharf. Contact: Lyons & Pearce, Tel: 853422.

SEAMAN'S CLUBS: Seafarers' Centre: A seafarers' centre operated by the Missions to Seamen Flying Angel Club is located on the Esplanade, Dampier, overlooking the Hampton Harbour. The centre is equipped with a shop and recreational facilities. Telephone: (091) 83-1424.

CURRENCY: Australian Dollar (A$).

WEATHER: The Archipelago is situated in the cyclone belt with an incidence of about three cyclones per year in an area extending from Port Hedland to North West Cape.

The cyclone season lasts from November to April.

Prevailing winds are Easterly in Winter and Westerly in Summer but surrounding hills give considerable protection. Forces in excess of 20 knots are seldom experienced.

The port facilities are situated in sheltered waters and experience only slight seas and occasional low Northerly swell in the Summer months.

TIDES: Tidal streams are weak within the Archipelago, the flood flowing to the South with a maximum strength of less than one (1) knot at Spring tides in the berthing area.

Spring tidal range is 5.3 m.
Neap tidal range is 3.2 m.
Mean sea level is 2.7 m.
(Lowest Astronomical Tide).

Dampier is a standard port in the Australian National Tide Tables, published by the Hydrographer Royal Australian Navy.

SERVICES: A Walport film exchange is available – contact ship's Agent.

A sealed road connects Dampier with Perth extending North to Port Hedland. This highway provides all weather access from the State capital.

A bus service operates between Dampier and Perth and Dampier and Port Hedland.

Postal and telegraphic facilities are available at Dampier Post Office. Business Hours: 0900–1230 hrs., 1330–1700 hrs. weekdays.

Customs: A sub-collector of Customs and staff are resident in Dampier and regulations of the Department of Business and Consumer Affairs–Bureau of Customs will apply.

Police: A police sergeant and police officers are stationed at Dampier.

Township: Dampier is a modern township built overlooking Hampton Harbour at the S.W. extremity of the Archipelago. It has a population of approximately 3,000 and an enclosed air-conditioned shopping centre and hotel-motel cater for everyday requirements.

GENERAL: *Gas-freeing of Vessels:* The port requirements regarding gas-freeing of OBO or other vessels presenting at the port are as follows:

The Master of an OBO vessel shall cable the Harbour Master Port of Dampier addressing its message "6D Port Auth" or (091) 442144 (Fax), of 198230 (Telex) 72 hours before intended arrival at the port, advising:

(a) Nature of the preceding three cargoes the vessel has carried.
(b) Date and place last oil cargo was discharged.
(c) Statement on the condition of the slop tanks and whether these are pressed up or fully inerted and sealed.
(d) The date and place of issue of the Gas-Free Certificate carried on board.

1. Where vessels have been issued with a Gas-Free Certificate prior to their call at Dampier, such vessels can berth on arrival or whenever the berth is free.
2. Where vessels arrive at the Port of Dampier without a Gas-Free Certificate on board, such vessels must be issued with a Gas-Free Certificate before berthing.
3. No Gas-Free Certificates signed by the Ships' Masters will be accepted.
4. Gas-Free Certificates will be acceptable only from an industrial chemist or any other competent person approved by the Port Authority.

Charts and Publications:

1. Australian Pilot Volume V.
2. Australian Chart No. 741 (Approaches).
3. Australian Chart No. 57.
4. Australian Chart No. 58 (Port).
5. Australian Chart No. 59 (Plans).

Vessels Arriving to Discharge General Cargo:

(a) Owners are required prior to accepting cargo for Dampier, to submit a copy of the vessel's General Arrangement Plan for the purpose of ascertaining the vessel's acceptability in sufficient time to permit recommendations to be made on the positioning and stowage of the cargo.
(b) Prior to departure from the loading port, Masters shall forward by first class air mail a copy of the vessel's cargo plan showing the nature, description and weight of the cargo to be discharged at Dampier – Cargo Manifest.

The documents referred to in (a) and (b) above shall be forwarded to Dampier Port Authority, P.O. Box 285, Dampier, W.A., 6713.

Also see "Arrival Advices".

REGULATIONS:

140. Leakage and Spillage

The Master of a vessel within the Port shall ensure that:

(a) if any leakage or spillage occurs during the loading on to, or unloading from, the vessel of flammable liquid, the loading or unloading shall be forthwith stopped, all valves shall be closed, and the Harbour Master shall be forthwith notified; and,
(b) if any leakage or spillage of oil or oily ballast water on to the deck occurs, scupper plugs are not removed and steps are taken forthwith to prevent oil or oily ballast water from going overboard.

Penalty: $2,000.

138. Communication to be Maintained

(1) The Master of a vessel within the Port engaged in cargo operations involving dangerous goods shall ensure that:
  (a) 2 suitable independent telephone or radio systems for communicating between the vessel and the shore are available and
  (b) throughout the cargo operations, all reasonable endeavours are used to maintain communication between the vessel and a responsible person on the shore by means of each of the 2 systems referred to in paragraph (a).

Penalty: $2,000.

(2) For the purposes of sub-Regulation (1) (a), a radio system is not suitable unless each unit is portable and is carried by a person nominated for the purpose of maintaining communication in accordance with sub-Regulation (1) (b).

134. Certain Preliminary Requirements

(1) The Master of a vessel within the Port shall ensure the loading on to, or unloading from, the vessel of flammable liquid is not commenced until:
  (a) agreement has been reached between the persons on the vessel and those on the shore who are responsible for the loading or unloading upon a plan for the procedures to be followed;
  (b) an effective barricade has been erected on the wharf to prevent access to the vessel or pipeline hose connections by persons not concerned in the loading or unloading;
  (c) satisfactory provision has been made for watchmen to be in attendance:
    (i) to prevent the entry on to the vessel of persons not authorised to do so under Regulation 133;
    (ii) to take possession from persons about to board the vessel of matches, mechanical lighters, and other appliances capable of producing ignition; and
    (iii) generally to assist in complying with these regulations and to carry out such directions as may be given under these regulations; and,

(d) all persons concerned in the loading or unloading fully understand the stand-by requirements for normal stopping of shore pumps on completion of loading or unloading and the emergency stop procedures applicable to both the vessel and the terminal.

Penalty: $2,000.

(2) A barricade shall be taken not to comply with the requirements of sub-Regulation (1) (b) unless:

(a) it encloses an area of the wharf extending to at least 30 m. beyond each end of the vessel concerned and to at least 30 m. measured from, and at right angles to, the side of the vessel that is closest to the wharf; and,

(b) it is erected and maintained by, under the authority or under and in accordance with the direction of, or otherwise to the satisfaction of, the Harbour Master.

(3) Provision made for watchmen shall be taken not to comply with the requirements of sub-Regulation (1) (c) unless it is made by, under the authority or under and in accordance with the direction of, or otherwise to the satisfaction of, the Harbour Master.

(4) Where a vessel within the Port is to be loaded with, or unloaded of, flammable liquid, the Master of the vessel shall ensure that, before loading or unloading is commenced, a box or satchel on which the words "Emergency Documents", in black letters, are clearly displayed is placed on the wharf in a prominent and readily accessible position at least 30 metres from the vessel and that the box or satchel contains:

(a) details of the plan referred to in sub-Regulation (1) (a), including particulars of relevant times, sequences and rates;

(b) a list of the characteristics of:

(i) the cargo, if any, on board the vessel; and,

(ii) the flammable liquid to be handled

and details of the position where it is or, as the case may be, is to be stowed;

(c) a crew list, including reference to persons joining or leaving the vessel while it is in the Port; and,

(d) a plan of the general arrangement of the vessel.

Penalty: $2,000.

122. Firefighting Equipment

The Master of a dangerous goods vessel within the Port shall ensure that at all times while a vessel is berthed at a wharf or is handling dangerous goods:

(a) fire hoses complete with nozzles have been run out fore and aft, connected up, and are ready for immediate use;

(b) the vessel's supply of water for firefighting is available;

(c) the vessel's firefighting equipment is otherwise ready for immediate use;

(d) the vessel's International Ship-Shore Fire Connection is connected to the fire hydrant of the vessel that is nearest to a gangway; and,

(e) a hose is connected between the vessel's International Ship-Shore Fire Connection and a shore hydrant unless a fire tug is standing by.

Penalty: $2,000.

119. Alternative Escape Route.

The Master of a dangerous goods vessel berthed at a wharf within the Port shall ensure that the outboard side accommodation ladder or lifeboat is turned out as an alternative means of escape.

Penalty: $2,000.

99. Compliance with Certain Requirements

(1) The Master of a vessel having on board flammable liquid or on to which flammable liquid is being loaded shall ensure that, in handling the flammable liquid, the requirements of the International Safety Guide for Oil Tankers and Terminals (Third Edition) published by the International Chamber of Shipping as amended from time to time are complied with in addition to the other requirements of these regulations. Penalty: $2,000.

(2) The Master of a vessel having on board liquefied flammable gas or on to which liquefied flammable gas is being loaded shall ensure that, in handling the liquefied flammable gas, the requirements of the International Chamber of Shipping Tanker Safety Guide (Liquefied Gas)(1979 Edition) published by the International Chamber of Shipping as amended from time to time are complied with,in addition to the other requirements of these regulations.

Penalty: $2,000.

100. Safety Testing of Certain Vessels

(1) In this regulation:

"the rules" means *Rules for the Safe Handling and Storage of Dangerous Substances and Oil in Port Areas* (1984 Edition)

made by the Association of Australian Port and Marine Authorities as amended from time to time;

"hot work" means any construction, demolition, alteration, repair or maintenance involving burning, welding, riveting, grinding, drilling, grit, sand or shot blasting, or any other heat, fire or spark producing operation.

(2) Subject to sub-Regulation (4), the Master of a vessel within the Port shall not cause or permit:

(a) ore in bulk to be loaded on to the vessel into tanks or spaces in which flammable liquid has previously been carried; or,

(b) any hot work to be carried out in or near tanks or spaces in which:

(i) flammable dangerous goods have previously been carried; or,

(ii) danger may arise from breathing the atmosphere,

unless he first obtains:

(c) a Certificate of Test in accordance with the rules from any approved person, to the effect that:

(i) the appropriate standard safety designation of the tanks or spaces into which the ore is to be loaded in or near which the hot work is to be carried out is, in accordance with the rules "Safe for Men – Safe for Hot Work";

(ii) the appropriate standard safety designation of every other tank or space on the vessel is, in accordance with the rules, "Safe for Men – Safe for Hot Work"; or "Not Safe for Men – Safe for External Hot Work Only", and,

(iii) every such other tank or space on the vessel has been inerted or filled with water; and,

(d) in the case of hot work to be carried out as described in paragraph (b), the written approval of the Harbour Master.

Penalty: $2,000.

(3) The Harbour Master may exempt the Master of a vessel from the requirements of sub-Regulation (2) if he is satisfied that:

(a) flammable liquid has not, or for the purposes of sub-Regulation (2) (b) flammable dangerous goods have not been carried in the tanks or spaces into which the ore is to be loaded or in or near which the hot work is to be carried out during the last 3 voyages on which cargo has been carried in those tanks or spaces; and,

(b) since flammable liquid was or, for the purposes of sub-Regulation (2) (b), flammable dangerous goods were last carried in the tanks or spaces they have been properly cleaned and ventilated and a certificate as described and to the effect described in sub-Regulation (2) (c) has been obtained from an approved person, and any such exemption may be given subject to the taking of such other precautions as are specified by the Harbour Master.

(4) An exemption under sub-Regulation (3) shall have effect according to its tenor.

(5) Application to the Harbour Master for an exemption under sub-Regulation (3) may be made in writing setting out a description of the cargo carried on each of the last 3 voyages and the dates on which they were loaded and the application shall be accompanied by a copy of the certificate referred to in sub-Regulation (3) (b) that the Harbour Master is satisfied is authentic.

SHIPMASTER'S REPORT: February 1987 (Updated 1992). Vessel (LOA 339 m., breadth 55 m., d.w.t. 322,941 tonnes) berthed at Port Dampier, East Intercourse Island Ore Jetty in November 1992 for loading iron ore. The vessel was the largest to visit the port.

Sailing draft calculation as follows:

Depth in Channel	15.35 m.
plus	Tide
minus	1.70 m. under keel clearance

The pilot was transferred on arrival and departure by helicopter.

SHIPMASTER'S REPORT: June 1995.

Berth: Withnell Bay – LNG Wharf.

Operation: Loading.

Connection: Hard arms.

Cargo: Condensate.

Gangway: Shore gangway. Difficult to land on deck due to interference from the ship's accommodation ladder span wire.

Protest: Noted protest due to delay before berthing.

AUTHORITY: Dampier Port Authority, P.O. Box 285, Dampier, WA 6713, Australia. *Tel:* (091) 59 6555, 59 6556 (Port Control, 24 hours). *Telex:* 198230. *FAX:* (091) 59 6557, 59 6558 (Port Control). *Contact:* Captain G.F. Hammonds, Chief Executive Officer/Harbour Master. Captain S. James, Deputy Harbour Master.

AGENT: Patrick Sleigh Shipping Agencies Pty.Ltd., 1937 Pyramid Road, Karratha, W.A. 6714, Australia (Postal address: P.O.Box 152, Karratha, W.A. 6714). Tel: (091) 44 4329. Telex: 198236 PATSLE. FAX: (091) 44 4329. Seagram Code 6DPATSLE.

DARWIN, N.T.: 12.28 S. 130.50 E. (See Plan)

PORT LIMITS: A line between Charles Point and Lee Point defines the seaward limits of the port.

DOCUMENTS: Vessels arriving at Darwin as their first Australian port will require the following documentation:

1 Primary Health Report.
2 Crew Lists, Form M & S 11.
2 Passenger Lists, Forms M308, 309, 310.
2 Port of Call Lists.
1 Crew Personal Effects List, Form 5.
2 Barber's and Ship's Stock, Form 5AA.
1 Stores List, Form 42A.
1 Animal Pets Aboard, Form QA4.
Ship's Log.
Last Port Clearance.
Safety Certificates: Construction
Equipment
Load Line
Radio
International Oil Pollution Prevention Equipment (Tankers Only).

Where possible, cargo manifests and stowage plans should be forwarded by airmail or Fax, ahead of the vessel to the local Agents.

Enquiries regarding Customs Allowances should be directed to either the vessel's agent or to the Customs Officer at time of boarding.

PILOTAGE: Darwin buoyage is IALA "System A". Pilotage is compulsory for all craft exceeding 25 m. LOA unless a current Pilotage Exemption is held by the Master.

Pilot Boats: Pilot boats are dark blue with the word "Pilot" in white on either side. Decks are yellow and upperworks are white with red visibility patches. Both boats are fully seagoing and equipped with radio, radar, fire and salvage pumps, as well as equipment for treating oil pollution.

Boarding: The usual pilot boarding point is 1 nautical mile N.W. of Channel Rock Buoy (No. 6). Pilot boarding arrangements must be according to the International Maritime Organisation Regulations.

Vessels awaiting pilotage may anchor 1 nautical mile N.W. of Channel Rock Buoy, in 25 m. of water, sand bottom and good holding ground.

Special arrangements can be made for deep draft vessels, whereby the Pilot will board one mile Eastward of Charles Point Patches Buoy (No. 5) situated at Lat. 12° 20.4' S., Long. 130° 40.5' E. Vessels awaiting pilotage from Charles Point Patches Buoy may anchor 2 nautical miles North of the buoy, where there is not less than 20 m. of water and good holding ground.

In the case of bad weather, the pilot boat will lead ahead to sheltered waters, using VHF-FM radio for communication. Also see "Radio".

Coastal Pilotage: Pilotage through Clarence Strait, to or from Torres Strait or Gulf of Carpentaria ports, is conducted by pilots of the Queensland Coastal Pilot Service Pty.Ltd. and the Australian Reef Pilots Ltd. See "Torres Strait" for details.

ANCHORAGE: Masters familiar with the Port may be invited to proceed to the Quarantine Anchorage area, West of Quarantine Buoy (No. 10), situated at Lat. 12° 28.6' S., Long. 130° 49.9' E. The Quarantine Anchorage area offers good sand holding ground in not less than 15 m. of water. Also see "Health".

RESTRICTIONS: Tankers are only allowed to berth during daylight hours but may depart at night, subject to weather.

MAX. SIZE: Ships up to 246 m. LOA and 12.83 m. draft have been accepted at Berth No. 1 by special arrangement, depending on tide conditions.

HEALTH: *Quarantine Reporting:* A vessel approaching the Port and requiring pratique, should send a message to the Quarantine Office not more than 24 hours and not less than 12 hours before arrival, containing the following information: name of vessel, ETA, number of passengers, number of crew, number of passengers disembarking, and last port of departure and date. The message should also state whether or not there is any disease on board, whether or not livestock have been carried within the last 6 months, and whether or not there are any animals or birds on board at present.

On arrival the health report should be given to the Quarantine Officer, 2 copies being furnished on the prescribed form (Q360 Form A), one of which will be signed by the Quarantine Officer and returned to the Master. A Passenger List and Crew List together with a List of Passengers Disembarking including their permanent address within the country is also required. (Commonwealth Health Department – Quarantine Regulations – Part III: 18, 19, 20 and 21.)

The telegraphic address of the Quarantine Department is "Quarantine Darwin Telex AA85658" or Fax (089) 410223.

Health Clearance: The Quarantine Officer will clear vessels, other than livestock carriers, at all times, subject to the provision of suitable lighting during the hours of darkness. A gangway should be made available for the use of the Quarantine Officer. The appropriate day or night signal should be displayed until clearance is obtained. (By night – red over white lights.) Subject to receipt of a satisfactory health message, radio pratique may be available on request.

Quarantine Anchorage: The Quarantine Anchorage extends 0.5 nautical miles West of Quarantine Buoy (No. 10). Vessels requiring to use the anchorage may be subject to pilotage.

RADIO: Ships at sea should work Perth (VIP) or Sydney (VIS), these being the major West and East area stations. Darwin Radio (VID) should be worked as early as possible and full use made of Satcom and Fax.

ETA: Notice of ETA and request for a Pilot must be made to the Harbour Master not less than 24 hours before anticipated arrival at Channel Rock Buoy (No. 6), situated at Lat. 12° 25.1' S., Long. 130° 46.9' E.

Communications: Fax: +61-89-412039 or +61-89-811175.

Confirmation of ETA is required at least 2 hours before arrival at Channel Rock Buoy. Such confirmation, or any amendment to ETA, should be made on VHF-FM Channel 16 (156.8 MHz) or the Port Working Frequency of VHF-FM Channel 10 (156.5 MHz). Both Channels are continuously monitored.

VHF-FM Channel 16 is for calling and distress only; Channel 10 should be used for routine working.

The standard Colregs signals may be used by vessels requiring a Pilot.

VHF: Communication within the port is by VHF-FM radio using the following frequencies:

Channel 16 – 156.800 MHz	Distress and calling
67 – 156.375 MHz	Distress
10 – 156.500 MHz	General Port working and routine business
12 – 156.600 MHz	Tug working
6 – 156.300 MHz	Intership

Call sign is "Darwin Harbour".

Ships arriving off the port should make contact on Channel 16 and shift to Channel 10 for routine working. This can be done as part of "Notice of Arrival" which is required 4 hours before ETA Channel Rock Buoy.

RADAR: Both pilot boats are radar equipped.

TUGS: Coastal Tug and Barge Pty. Ltd. operate a tug of 1,300 kw and 20 tonne bollard pull. The tug has fire fighting facilities onboard.

Line Boats: Frances Bay Marine offer 2 small metal work boats for line handling and limited picket boat service.

Launches: Launches up to 50 passenger capacity are available for services to vessels at anchor.

Those and other vessels, including landing barges up to 20 tonne d.w.t., can be contacted through the Port Office.

BERTHING: (See Table overleaf).

No. 1 Berth (Iron Ore Wharf): No. 1 Berth is a dolphin type berth with a face length of 142 m. Two mooring dolphins are positioned 69 m. East and West of the berth, which can routinely accommodate vessels up to 250 m. LOA and 11.5 m. draft.

The berth is used mainly for the import of bulk petroleum, bulk sulphuric acid and LPG, as well as the export of bulk ores and ore concentrates. In addition, No. 1 Berth can be utilised as a Ro/Ro berth for vessels with large starboard quarter ramps, such as first and second generation PAD and SCAN carriers.

The wharf is equipped with a travelling belt loader, designed for ores and similar dry bulk cargoes. The loader has a transit distance of 140 m. along the wharf and an outreach of 14 m. beyond the fenders. The high water air draft of the loading boom is 11 m. The loader is connected by travelling belt to the shore stockpile area, a distance of approximately 450 m. Bulk cargoes can be loaded at a maximum gross rate of 600 tonnes p.h.

A variety of product lines are installed to handle petroleum and acid cargoes:

Black oil	30 cm.
White Oils	30 cm.
Distillates	20 cm.
Marine Diesel	15 cm.
LPG	10 cm.
Sulphuric Acid	20 cm.

Discharge rates up to 300 tonnes/p.h. (1,000 kPa) can be accepted on each of the main pipelines.

No. 2 Berth West (New Fort Hill Wharf): No. 2 Berth West, 150 m. in length, was opened in 1981.

Maximum deck loading is 2.5 tonnes/sq.m. and height of deck is 9.5 m. above datum. Minimum depth alongside is 12.0 m. Max. draft 11.7 m.

Power: 3 outlets, 65 amp, 415 volt, 3 phase.

Ro/Ro Facility: In 1982 the "Linkspan" Ro/Ro facility was installed at the Western end of No. 2 Berth, establishing the berth as the centre for Ro/Ro operations.

The Ro/Ro facility consists of an extendable version of the "Linkspan" ship-to-shore semi-buoyant bridge 77 m. in length, connecting with a 35 m.×42 m. pontoon and is workable at all tidal levels.

The pontoon can be extended, retracted and ballasted, thus enabling Ro/Ro vessels of any size or type – side-loading, end-loading, quarter-loading (port or starboard) – to use the Port of Darwin.

For example, when extended:

The pontoon forms a corner berth for use by ships with their own ramps. Non-ramp ships can be loaded or discharged over extendable finger flaps.

Ships with port or starboard quarter ramps or stern ramps, lying port side to the wharf, can be handled with equal ease. Vehicles discharged over a starboard quarter ramp make a 125° turn on the pontoon to reach the end of the "Linkspan",

Large international Ro/Ro vessels, such as first and second generation PAD and SCAN carriers, can lie at the No. 1 Berth, working cargo over their starboard quarter ramps.

When the pontoon is retracted, its outer end forms an extension of No. 2 Berth West. The facility can then be used for vessels like car carriers, with side doors or starboard shoulder ramps.

No. 2 Berth East: No. 2 Berth East is a 150 m. extension to No. 2 Berth, giving a total wharf length of 300 m.

Maximum deck loading is 4 tonnes/sq.m., enabling containers to be stacked 4 high and catering for forklift axle loads of 80 tonnes. Deck height above datum is 9.5 m., with minimum depth alongside 12.0 m.

Both No. 2 Berths, West and East, are served by an I.H.I./ Sumitomo rail-mounted, single lift gantry container crane. The crane has a container handling capacity of 30 TEU per hour and a heavy lift capacity of 70 tonnes. A 10 cu.m. grab is available for the handling of bulk cargoes.

Power: 3 outlets, 65 amp, 415 volt, 3 phase.

No. 3 Berths, West and East (Outer Stokes Hill Wharf): No. 3 Berths, West and East, comprise the outer side of a concrete decked, steel piled wharf with a 300 m. trestle approach. Total length of the two berths is 292 m., with a least depth of 9 m. Height above datum is 10.6 m. Permissible wheel loading for standard type vehicles is 6 tonnes, while maximum deck loadings are 2.8 tonnes/sq.m. with some local restrictions.

Power: 6 outlets, 65 amp, 415 volt, 3 phase.

Both berths are used mainly for general break bulk cargo, as well as by rig tenders, timber carriers, passenger ships, survey vessels and visiting naval craft. No. 3 Berth East, is also used for dry bulk imports, such as sulphur and clinker, which are landed by ship's grab.

No. 4 Berths, West and East (Inner Stokes Hill Wharf): These berths, on the inner side of Stokes Hill Wharf, are reserved for smaller vessels such as prawn trawlers, tugs and the like. Maximum length of vessel is restricted to 70 m.

Total length of the berths is 280 m., with a least depth alongside of 4.5 m. Height above datum is 9.2 m., with maximum deck loading of 2.2 tonnes/sq.m. Bunker fuel up to 45 cSt is available by 12 cm. pipelines.

Power: 4 outlets, 65 amp, 415 volts, 3 phase.

Fishermen's Wharf: The facility has a concrete deck on steel piles with an overall length of 200 m. The least depth is 4 m., deck height is 9.5 m. above datum and deck loading is 1.0 ton/sq.m.

Facilities include shore power at 415V., 3 phase, 65 amp and 415 volts, 15 amp, single phase at 7 outlets, bunkers and fresh water. The wharf is designed as an assistance to the fishing industry and is situated adjacent to Darwin Ship Maintenance Services repair works, with its 400 ton synchrolift dock. Full cold and dry storage facilities are under construction.

Darwin Fishing Harbour Mooring Basin: A fishing boat mooring haven with lock acess is now operational adjacent to Frances Bay Small Ships Facility. Max. LOA 35 m. Draft 4.0 m. Beam 15 m. 85 berths are available with shore power, fresh water and sanitary facilities.

Berths	*Main Cargoes*	*Depth Alongside (m.)*	*Length (m.)*	*Height above datum (m.)*	*Max. Deck Loading (Tonnes/sq.m.)*	*Width of Apron (m.)*	*Special Facilities*
No. 1	Petroleum Livestock Mineral Ores	12.0	142	10.4	3.0	12.0	Travelling Belt Loader, Ro-Ro
No. 2 West	Containers Dry Bulk	12.0	150	9.5	2.5	35.0	Container Crane, Ro-Ro
No. 2 East	Containers Dry Bulk	12.0	150	9.5	4.0	35.0	—
No. 3 West	General	9.0	146	10.6	2.8	12.2	—
No. 3 East	Dry Bulk General	9.0	146	10.6	2.8	34.0	—
No. 4 West	Fishing	4.5	140	9.2	4.2	11.9	—
No. 4 East	Fishing	4.5	140	9.2	4.2	9.0	—
Fishermen's Wharf	Fishing	4.0	200	8.5	1.0	21.0	—

Storage Facilities: The first stage of the Darwin Container Terminal, immediately adjacent to No. 2 Berth West, was completed in May, 1983. Fitted with 64 power points for refrigerated containers, the Terminal is currently able to accommodate approximately 450 TEU when double stacked.

CARGO HANDLING EQUIPMENT: An extensive range of cargo handling equipment is maintained by the Port Authority and the Stevedores.

Fork lifts vary in lifting capacity from 2.5 tonnes to 27 tonnes.

Mobile cranes of up to 16 tonnes lifting capacity are owned by the Port Authority. Larger mobile cranes of 70 tonnes can be hired locally.

A variety of tractors and trailers (6.1 m. and 12.2 m.) are available as internal transfer vehicles and for ro/ro container operations.

Container Crane: No. 2 Berths, West and East (New Fort Hill Wharf) are equipped with an I.H.I./Sumitomo rail-mounted, single lift gantry container crane.

The crane has a handling capacity of thirty 6.1 m. (or fifteen 12.2 m.) containers per hour and a heavy lift capacity of 70 tonnes at 50% outreach. It is equipped with a 10 cu.m. grab for bulk cargoes.

Selected Data – Container Crane:

Containers per hour	30 TEU
Bulk capacity	10 cu.m. grab
Capacity at 100% outreach	35 tonnes
Capacity at 50% outreach	70 tonnes
Outreach from fenders	32 m.
Total outreach	35 m.
Height to bottom of boom	30 m.
Total height	50 m.
Total height (boom raised)	70 m.
Total weight	850 tonnes
Speed of travel on rails	27 m./min.

BRIDGES: There are no bridges or other restrictions to prevent access to the Port by vessels of not more than 12 m. draft. Ships of greater draft may need await tide at Charles Point Patches.

STEVEDORES: Conaust Ltd., GPO Box 775, Darwin, NT 0801. Tel: (089) 818533. Fax: (089) 410604. Telex: M85200.

Federated Stevedores, GPO Box 939, Darwin, NT 0801. Tel: (089) 411368. Fax: (089) 411670.

Working hours: Starting and finishing times of shifts shall fall within the following ranges:

Shift	*Start*	*Finish*
Day	0700 – 0800	1400 – 1500
Twilight	1300 – 1600	2000 – 2300
Night	2200 – 2400	0500 – 0700

Night shifts by arrangement. Weekend labour (including mooring gangs) must be ordered by 1300 hrs. Friday. Monday labour must be ordered by 1300 hrs. Sunday. Monday to Friday labour must be ordered by 1300 hrs. day prior to vessel working.

MEDICAL: Full hospital facilities available without prior notice.

TANKERS: See "Restrictions" and "Berthing".

Precautions: Governed by Australian Ports Association standards. Copies of Port tanker rules are supplied on arrival and will be amplified by Pilots if necessary.

DENSITY: The usual water density of 1025 may reduce to 1022 during the wet season owing to river run-off.

FRESH WATER: Good quality potable water is available in unlimited quantities at all berths. Delivery rate is approximately 100 tonnes/p.h. per connection.

FUEL: All grades of fuel up to 45 cST and lubricants are available.

REPAIRS: Routine maintenance and boilermaking assistance to light engineering standards. There is no heavy foundry in the Port.

DRY DOCKS: Darwin Ship Repairs and Engineering operates a syncrolift platform with dimensions 51.6 m. LOA × 14 m. beam × 5.0 m. draft for vessels up to 58 m., 1,400 tons for dry docking.

Corringle Slipway, operated by Perkins Shipping, has 2 marine slipways, one capable of lifting up to 500 tons and the other 60 tons.

SURVEYORS: Representatives of most Cargo Surveyors and Classification Societies can be brought from interstate or overseas at short notice. Lloyd's Agent at the port represents most of the Classification Societies and both Commonwealth and N.T. Surveyors are appointed at the Port.

GANGWAY/DECK WATCHMEN: Gangway watchmen are compulsory for tankers and are supplied by the Stevedores at union award rates. Hold watchmen are not necessary. Shed or gate watchmen may be required during the handling of hazardous cargoes.

Gangways: Various shore gangways are available for hire from the Stevedores.

OPENING/CLOSING HATCHES: Ship's hatches are usually handled by W.W.F. labour while the vessel is alongside.

CONSULS: The following Consuls are located in Darwin:

Honorary Consul for Belgium
Mr. P. Barr, G.P.O. Box 2140, Darwin, N.T. 0801.
Honorary Consul for Finland
Mr. E. B. M. James, 16 Allen Street, Fannie Bay, N.T. 0820.
Honorary Consul for France
Vacant.
Honorary Consul for Germany
Mr. H. Maschke, P.O. Box 38995, Winnellie, N.T. 0821.
Honorary Consul for Greece
Mr. J. Anictomatis, c/o G.P.O.Box 48, Darwin, N.T. 0801.
Consulate of Indonesia
Dr. J. Halim, M.D., G.P.O.Box 1953, Darwin.
Honorary Consul for Italy
Vacant.
Honorary Consul-General for Japan
Mr. R. Morris, G.P.O.Box 1616, Darwin.
Honorary Consul for Norway
Mr. A. Furre, 18 Menmuir Street, Winnellie, N.T. 0821.
Honorary Consul for Philippines
Mr. R. Matthewson, P.O.Box 10, Berrimah.
Honorary Consul for Portugal
Mrs. M. Dos Anjos, 15 Colster Crescent, Wagaman, N.T. 0810.
Honorary Consul of Sri Lanka
Mr. V. Ranasinghe, P.O.Box 36955, Winnellie, N.T. 0820.
Honorary Consul for Switzerland
Mr. P. H. Fuchs, 46 Wells Street, Darwin.
Honorary Consul for Sweden
Mr. H. Bradley, G.P.O. Box 330, Darwin, N.T. 0801.

CUSTOMS ALLOWANCES: Australian Commonwealth Regulations apply.

Customs Officers board all vessels upon arrival, with the exception of Intermediate Port vessels. For such vessels, Officers board Mondays to Fridays between 0800 hrs. and 1600 hrs.

Prior notice of arrival is required, including details of passengers and crew leaving the vessel at Darwin.

Requests for the services of Customs Officers should be made through the vessel's Agents.

REPATRIATION: Scheduled aircraft connect with all Australian states several times daily. Direct overseas flights arrive and depart daily. All facilities exist for changes of crew and repatriation of seamen.

AIRPORT: Darwin International Airport is located 10 km. from the port.

TIME: See "General" before first port.

HOLIDAYS: Christmas Eve (pm), Christmas Day, New Years Eve (pm), New Years Day, Good Friday, May Day (Labour Day), Anzac Day (25th April) and Picnic Day (first Monday in August). Working within the port on the above days is at the discretion of the stevedoring companies.

POLICE/AMBULANCE/FIRE: All emergency services are available through the Harbour Office. Automatic fire alarms are installed throughout the Port and alarms can be raised or emergencies reported on Channel 16 at any time.

Police	22 3344
Fire	46 4122
Ambulance	27 9000
Hospital	20 7211

EMERGENCY CO-ORDINATION CENTRE: Any maritime emergency will initially be handled through the Harbour Office. The responsibility may eventually be transferred to another authority depending on the magnitude or complexity of the emergency.

TELEPHONES: This service is available aboard ships at all berths by prior arrangement through the Agents. Standard rates apply.

SERVICES: A Compass Adjuster is available in the port area.

BANKS: No foreign bank branches exist in the Northern Territory but local banks represent most overseas finance houses.

STORING: Vessels can be stored by truck or by launch if at anchor. Vehicles and boats may not approach tankers while working cargo. Forklifts and shore cranes can be used to assist stores loading. Local labour is available to assist storing. The usual Customs Regulations apply regarding drawback of duty or tax.

SHORE LEAVE: When Immigration and Customs requirements have been satisfied, there are no restrictions on crew members' shore leave. Identity cards or shore passes are not necessary.

A Telephone Interpreter service is available by telephoning 82 2111 at any time. Most major European and Asian languages are included.

GARBAGE DISPOSAL: Drums (quarantine) and skips (non-quarantine) available alongside. Garbage no charge, extra bins A$ 103.90/bin. Quarantine waste less than 25 m. no charge. Vessel of 25 m. or more in length – A$ 45.00/day plus A$ 3.00 for each person on board for each day or part of a day, subject to a daily maximum of A$ 1,500.00. Tel: (089) 816701.

WASTE OIL DISPOSAL: Tanker trucks available from contractor (6,000 litres). Contact: Hannons Pty. Ltd., Tel: (089) 819588. Fax: (089) 812564.

SEAMAN'S CLUBS: Stella Maris. Tel: (089) 814092.

CURRENCY: Australian Dollar.

DELAYS: Berthing delays are very infrequent. Occasional labour shortages develop when several general cargo vessels are working.

GENERAL:

Charts and Documents: Refer to:
AUS 27, 28, 309
Admiralty Pilot Vol V
Admiralty List of Lights (Vol K)
Admiralty Tide Tables (Pacific)
Admiralty National Tide Tables (AHP11)
Marine Information Manual Australia

A copy of the Port Handbook and (in season) the Port Cyclone Procedures will be issued to Masters of arriving vessels.

Restrictions and Regulations: Vessels must not immobilise main engines without permission from the Harbour Master.

Tankers: Tankers will not be allowed to immobilise at any time of year while working cargo. Petroleum tankers and other carriers of hazardous liquid bulk cargoes will be issued on arrival with a copy of port "Procedures for Tankers", which sets out in full the procedures to be carried out in case of fire, oil spill or other accident. Tankers are not berthed before sunrise or after sunset but can depart any time.

Anchorage: Anchorage is prohibited in area between Emery Point, Mandorah and Bullocky Point, where high voltage power lines cross the harbour bottom. Anchorage is not advised in the foul area South of Channel Rock Buoy, which is obstructed with wartime wreckage.

Cyclone Procedures: Darwin is within the Southern Zone of tropical revolving storms. The season extends from November to April and the Port and environs may be more or less affected at any time during that period. All vessels entering the port during the "Cyclone Season" are supplied with copies of the Port procedures which set out in detail the various stages of alert and warning, together with actions to be taken in the case of an approaching cyclone. Ships may be placed on short notice for sea and required to maintain themselves in seagoing condition at all times.

Allocation of Berths: The allocation of berths is determined by the Harbour Master.

Signals: The Port of Darwin adheres to the International Code of Signals and the International Rules for Prevention of Collision.

Two special emergency sound signals are used in the Port. In the case of fire, the morse letter F (· · – ·) should be continuously sounded on the ship's whistle or siren. In the case of oil spill or other pollution of the harbour waters, the morse letter P (· – – ·) should be continuously sounded.

Tides: Darwin is a standard port (No. 6323) and full predictions are given in the Australian National and Admiralty Tide Tables. Maximum range is 7.92 m., with a mean range of 3.72 m. Tidal streams at Springs may exceed 3 knots in channels and reach 3 knots at berths.

Visibility: Visibility in the district is usually good but may be affected by dust during the "Dry Season" and humidity during the "Wet Season". Fog is virtually unknown. During the "Wet Season" severe thundersqualls with heavy rain frequently occur. These are usually brief but gusts may reach 60 knots and the wind generally shifts through 360°. Vessels at anchor should veer a good scope of cable and have a second anchor ready for immediate use.

Electricity: Shore power connections are installed at all berths 415 va, 3 phase, 65 amp or 15 amp (See "Berthing").

Garbage Disposal: The dumping of garbage into port waters is strictly prohibited.

Port Security: The Port Authority operates its own security service, staffed by Port Authority personnel. Patrols throughout the Port area take place around-the-clock.

Requests for additional security for special cargoes should initially be addressed to the Port Authority.

DEVELOPMENTS: *East Arm Port:* Construction of a new port has commenced at East Arm with the first 380 m. of berth space, due for completion in December 1997.

The new facilities are adjacent to large areas of underdeveloped land, which will be made available to enhance Darwin's commercial and industrial growth.

The project has been designed to incorporate an Alice Springs to Darwin rail link, which will connect Darwin to the national rail network.

Progressively, cargo operations will be transferred to the East Arm Port as each stage of construction is completed. Passenger and naval vessels will continue to berth at Stokes Hill Wharf or Fort Hill Wharf in the existing port, which is adjacent to Darwin's central business district.

Stage 1: It is estimated, Stage 1 will cost $75 million, and will provide 300 m. of general purpose wharf and an 80 m. multi-user platform capable of berthing bulk liquid ships. There will be 4 ha. of hardstand/storage area incorporated.

The wharf will cater for 3 categories of cargo:
- Cargo operations, such as live cattle exports and bulk imports of clinker and sulphur.
- Rig tender services.
- General cargo.

The major products exported through Darwin include cattle, zinc, lead and metal manufactures, and those imported include oil and fuel, cement clinker and sulphur.

The existing port at Stokes Hill and Fort Hill Wharf will continue to provide for:
- Container traffic (in the short term).
- Visiting passenger cruise ships.
- Naval vessels.
- Fuel ships (which will continue to discharge at the iron ore wharf until the fuel farm is relocated to East Arm in 2002).
- Bulk mineral exports (which will be distributed through the iron ore wharf for some years to come).

The masterplan is flexible enough to allow for future port development, as well as the planned railway, fast freight catamarans, cargo vessels, possible naval requirements and oil storage/refinery construction.

AUTHORITY: Darwin Port Authority, G.P.O.Box 390, Darwin, NT 0801, Australia. *Tel:* (089) 81 6701 (all hours). *FAX:* (089) 81 1175, (089) 412039. *Contacts:* Captain J. Butler, Port Manager. Captain R.J. Wilson, Harbour Master (Mobile Tel: 018-89-3524).

AGENT: Sub-agent of Patrick Sleigh Shipping Agencies Pty. Ltd., Sydney.

DEVONPORT, Tasmania: 41.11 S. 146.22 E.

(See Plan)

PORT LIMITS: Within all waters that extend 3 miles seawards bounded on the Eastward by an imaginary line drawn 000° – 3 miles from the coastline and intersecting the most Easterly point of Wright Island and to the Westward by an imaginary line drawn 000° – 3 miles from the Western side of the entrance to the River Don.

DOCUMENTS: See "Melbourne".

APPROACHES: Port situated 1 mile inside Mersey River, the entrance to which is sheltered by the Mersey Bluff on the West and by a breakwater on the East bank. There is an anchorage in vicinity of boarding ground, but it is inadvisable to remain at anchor during periods of strong on-shore winds. The Inner Harbour provides good all-weather shelter. There is a swinging basin which can accommodate vessels of length 200 m. or more, especially where tugs are used.

PILOTAGE: Compulsory. 24 hour service for all vessels where Masters are not in possession of a valid Exemption Certificate. Pilots will board when required at a position within 400 m. of a point Mersey Bluff Lighthouse bearing 242° by 1.93 km.

Masters of vessels requiring the services of a Pilot are advised to radio the Harbour Master, Devonport, their ETA and vessel's arrival draft 12 hours prior to arrival.

ANCHORAGE: The quarantine anchorage is defined as to the North of a line running East and West through the Mersey Bluff Lighthouse. Vessels must lie clear of the fairway into the River.

RESTRICTIONS: Approach channel 9.5 m. LWOST. Tidal range is 2.44 m. average, 3.20 m. Spring. Enquiries should be made for vessels exceeding 30 ft. (9.6 m.) draft and 600 ft. (180 m.) length.

MAX. SIZE: LOA 200 m., max. draft 10.5 m. Also see "Restrictions".

TIDES:		
	Lowest Recorded Tide	Minus (—)0.48 m.
	Mean High Water Spring Tides	3.20 m.
	Mean High Water Neap Tides	2.62 m.
	Mean Low Water Neap Tides	0.59 m.
	Mean Low Water Spring Tides	0.33 m.

HEALTH: Pratique is mandatory for all vessels arriving from overseas ports. Agents normally make necessary arrangements.

VHF: 24 hour listening watch – Channel 16, switching to Channels 12 and 67 as required. Call sign is "Devonport Harbour".

TUGS: Twin screw 2,250 b.h.p. (bollard pull 39 tonnes) plus smaller tug 250 b.h.p. immediately available. Additional tugs, as required, available at reasonable notice.

BERTHING:

Berth No. 1 West:
Operation: Bulk cement.
Structure: Reinforced concrete decks on steel piles. One 45 m. portion and 2 dolphin type sections of 32 m. and 37 m. lengths respectively, with 19 m. space between.
Length of Wharf: 150 m. (nominal – part of 289 m. total length of wharf).
Dredged Depth: 9.5 m. below M.L.W.S.T.
Wharf Deck Level: 5.46 m. above M.L.W.S.T.
Storage: Four cement silos of 26,335 tons capacity owned by Goliath Portland Cement Co. stand directly behind the concrete portion of wharf deck. Bulk cement is transferred pneumatically from rail wagons to the silos and from the silos to ship.
Wharf Cranes: None.
Stern Ramp: Nil.
Telephone: One plug available.
Max. LOA: 180 m.
Max. Beam: 37 m.
Load Rate: Bulk cement 1,200 tonnes/hr.
Proposed Depth: 10.0 m.

Berth No. 2 West:
Operation: * Disused and awaiting re-development.
Structure: Dismantled.
Length of Wharf: 139 m. (nominal – part of 289 m. total length of wharf).
Dredged Depth: 7.3 m. below M.L.W.S.T.
Wharf Deck Level: 5.46 m. above M.L.W.S.T.
Telephone: Plug not available.
Max. LOA: 205 m.
Max. Beam: 37 m.

* Note: This berth not commercially usable, awaiting project development to replace with steel piled, re-inforced concrete deck. Proposed depth of 10.5 m.

Berths	*Main Cargoes*	*Depth Alongside (m.)*	*Length (m.)*	*Height above datum (m.)*	*Max. Deck Loading (Tonnes/sq.m.)*	*Width of Apron (m.)*	*Special Facilities*
No. 1	Petroleum Livestock Mineral Ores	12.0	142	10.4	3.0	12.0	Travelling Belt Loader, Ro-Ro
No. 2 West	Containers Dry Bulk	12.0	150	9.5	2.5	35.0	Container Crane, Ro-Ro
No. 2 East	Containers Dry Bulk	12.0	150	9.5	4.0	35.0	—
No. 3 West	General	9.0	146	10.6	2.8	12.2	—
No. 3 East	Dry Bulk General	9.0	146	10.6	2.8	34.0	—
No. 4 West	Fishing	4.5	140	9.2	4.2	11.9	—
No. 4 East	Fishing	4.5	140	9.2	4.2	9.0	—
Fishermen's Wharf	Fishing	4.0	200	8.5	1.0	21.0	—

Storage Facilities: The first stage of the Darwin Container Terminal, immediately adjacent to No. 2 Berth West, was completed in May, 1983. Fitted with 64 power points for refrigerated containers, the Terminal is currently able to accommodate approximately 450 TEU when double stacked.

CARGO HANDLING EQUIPMENT: An extensive range of cargo handling equipment is maintained by the Port Authority and the Stevedores.

Fork lifts vary in lifting capacity from 2.5 tonnes to 27 tonnes.

Mobile cranes of up to 16 tonnes lifting capacity are owned by the Port Authority. Larger mobile cranes of 70 tonnes can be hired locally.

A variety of tractors and trailers (6.1 m. and 12.2 m.) are available as internal transfer vehicles and for ro/ro container operations.

Container Crane: No. 2 Berths, West and East (New Fort Hill Wharf) are equipped with an I.H.I./Sumitomo rail-mounted, single lift gantry container crane.

The crane has a handling capacity of thirty 6.1 m. (or fifteen 12.2 m.) containers per hour and a heavy lift capacity of 70 tonnes at 50% outreach. It is equipped with a 10 cu.m. grab for bulk cargoes.

Selected Data – Container Crane:

Containers per hour	30 TEU
Bulk capacity	10 cu.m. grab
Capacity at 100% outreach	35 tonnes
Capacity at 50% outreach	70 tonnes
Outreach from fenders	32 m.
Total outreach	35 m.
Height to bottom of boom	30 m.
Total height	50 m.
Total height (boom raised)	70 m.
Total weight	850 tonnes
Speed of travel on rails	27 m./min.

BRIDGES: There are no bridges or other restrictions to prevent access to the Port by vessels of not more than 12 m. draft. Ships of greater draft may need await tide at Charles Point Patches.

STEVEDORES: Conaust Ltd., GPO Box 775, Darwin, NT 0801. Tel: (089) 818533. Fax: (089) 410604. Telex: M85200.

Federated Stevedores, GPO Box 939, Darwin, NT 0801. Tel: (089) 411368. Fax: (089) 411670.

Working hours: Starting and finishing times of shifts shall fall within the following ranges:

Shift	*Start*	*Finish*
Day	0700 – 0800	1400 – 1500
Twilight	1300 – 1600	2000 – 2300
Night	2200 – 2400	0500 – 0700

Night shifts by arrangement. Weekend labour (including mooring gangs) must be ordered by 1300 hrs. Friday. Monday labour must be ordered by 1300 hrs. Sunday. Monday to Friday labour must be ordered by 1300 hrs. day prior to vessel working.

MEDICAL: Full hospital facilities available without prior notice.

TANKERS: See "Restrictions" and "Berthing".

Precautions: Governed by Australian Ports Association standards. Copies of Port tanker rules are supplied on arrival and will be amplified by Pilots if necessary.

DENSITY: The usual water density of 1025 may reduce to 1022 during the wet season owing to river run-off.

FRESH WATER: Good quality potable water is available in unlimited quantities at all berths. Delivery rate is approximately 100 tonnes/p.h. per connection.

FUEL: All grades of fuel up to 45 cST and lubricants are available.

REPAIRS: Routine maintenance and boilermaking assistance to light engineering standards. There is no heavy foundry in the Port.

DRY DOCKS: Darwin Ship Repairs and Engineering operates a syncrolift platform with dimensions 51.6 m. LOA × 14 m. beam × 5.0 m. draft for vessels up to 58 m., 1,400 tons for dry docking.

Corringle Slipway, operated by Perkins Shipping, has 2 marine slipways, one capable of lifting up to 500 tons and the other 60 tons.

SURVEYORS: Representatives of most Cargo Surveyors and Classification Societies can be brought from interstate or overseas at short notice. Lloyd's Agent at the port represents most of the Classification Societies and both Commonwealth and N.T. Surveyors are appointed at the Port.

GANGWAY/DECK WATCHMEN: Gangway watchmen are compulsory for tankers and are supplied by the Stevedores at union award rates. Hold watchmen are not necessary. Shed or gate watchmen may be required during the handling of hazardous cargoes.

Gangways: Various shore gangways are available for hire from the Stevedores.

OPENING/CLOSING HATCHES: Ship's hatches are usually handled by W.W.F. labour while the vessel is alongside.

CONSULS: The following Consuls are located in Darwin:

Honorary Consul for Belgium
Mr. P. Barr, G.P.O. Box 2140, Darwin, N.T. 0801.
Honorary Consul for Finland
Mr. E. B. M. James, 16 Allen Street, Fannie Bay, N.T. 0820.
Honorary Consul of France
Vacant.
Honorary Consul for Germany
Mr. H. Maschke, P.O. Box 38995, Winnellie, N.T. 0821.
Honorary Consul for Greece
Mr. J. Anictomatis, c/o G.P.O.Box 48, Darwin, N.T. 0801.
Consulate of Indonesia
Dr. J. Halim, M.D., G.P.O.Box 1953, Darwin.
Honorary Consul for Italy
Vacant.
Honorary Consul-General for Japan
Mr. R. Morris, G.P.O.Box 1616, Darwin.
Honorary Consul of Norway
Mr. A. Furre, 18 Menmuir Street, Winnellie, N.T. 0821.
Honorary Consul for Philippines
Mr. R. Matthewson, P.O.Box 10, Berrimah.
Honorary Consul for Portugal
Mrs. M. Dos Anjos, 15 Colster Crescent, Wagaman, N.T. 0810.
Honorary Consul of Sri Lanka
Mr. V. Ranasinghe, P.O.Box 36955, Winnellie, N.T 0820.
Honorary Consul for Switzerland
Mr. P. H. Fuchs, 46 Wells Street, Darwin.
Honorary Consul for Sweden
Mr. H. Bradley, G.P.O. Box 330, Darwin, N.T. 0801.

CUSTOMS ALLOWANCES: Australian Commonwealth Regulations apply.

Customs Officers board all vessels upon arrival, with the exception of Intermediate Port vessels. For such vessels, Officers board Mondays to Fridays between 0800 hrs. and 1600 hrs.

Prior notice of arrival is required, including details of passengers and crew leaving the vessel at Darwin.

Requests for the services of Customs Officers should be made through the vessel's Agents.

REPATRIATION: Scheduled aircraft connect with all Australian states several times daily. Direct overseas flights arrive and depart daily. All facilities exist for changes of crew and repatriation of seamen.

AIRPORT: Darwin International Airport is located 10 km. from the port.

TIME: See "General" before first port.

HOLIDAYS: Christmas Eve (pm), Christmas Day, New Years Eve (pm), New Years Day, Good Friday, May Day (Labour Day), Anzac Day (25th April) and Picnic Day (first Monday in August). Working within the port on the above days is at the discretion of the stevedoring companies.

POLICE/AMBULANCE/FIRE: All emergency services are available through the Harbour Office. Automatic fire alarms are installed throughout the Port and alarms can be raised or emergencies reported on Channel 16 at any time.

Police	22 3344
Fire	46 4122
Ambulance	27 9000
Hospital	20 7211

EMERGENCY CO-ORDINATION CENTRE: Any maritime emergency will initially be handled through the Harbour Office. The responsibility may eventually be transferred to another authority depending on the magnitude or complexity of the emergency.

TELEPHONES: This service is available aboard ships at all berths by prior arrangement through the Agents. Standard rates apply.

SERVICES: A Compass Adjuster is available in the port area.

BANKS: No foreign bank branches exist in the Northern Territory but local banks represent most overseas finance houses.

STORING: Vessels can be stored by truck or by launch if at anchor. Vehicles and boats may not approach tankers while working cargo. Forklifts and shore cranes can be used to assist stores loading. Local labour is available to assist storing. The usual Customs Regulations apply regarding drawback of duty or tax.

SHORE LEAVE: When Immigration and Customs requirements have been satisfied, there are no restrictions on crew members' shore leave. Identity cards or shore passes are not necessary.

A Telephone Interpreter service is available by telephoning 82 2111 at any time. Most major European and Asian languages are included.

GARBAGE DISPOSAL: Drums (quarantine) and skips (non-quarantine) available alongside. Garbage no charge, extra bins A$ 103.90/bin. Quarantine waste less than 25 m. no charge. Vessel of 25 m. or more in length – A$ 45.00/day plus A$ 3.00 for each person on board for each day or part of a day, subject to a daily maximum of A$ 1,500.00. Tel: (089) 816701.

WASTE OIL DISPOSAL: Tanker trucks available from contractor (6,000 litres). Contact: Hannons Pty. Ltd., Tel: (089) 819588. Fax: (089) 812564.

SEAMAN'S CLUBS: Stella Maris. Tel: (089) 814092.

CURRENCY: Australian Dollar.

DELAYS: Berthing delays are very infrequent. Occasional labour shortages develop when several general cargo vessels are working.

GENERAL:

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Electricity: Shore power connections are installed at all berths 415 va, 3 phase, 65 amp or 15 amp (See "Berthing").

Garbage Disposal: The dumping of garbage into port waters is strictly prohibited.

Port Security: The Port Authority operates its own security service, staffed by Port Authority personnel. Patrols throughout the Port area take place around-the-clock.

Requests for additional security for special cargoes should initially be addressed to the Port Authority.

DEVELOPMENTS: *East Arm Port:* Construction of a new port has commenced at East Arm with the first 380 m. of berth space, due for completion in December 1997.

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The project has been designed to incorporate an Alice Springs to Darwin rail link, which will connect Darwin to the national rail network.

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The wharf will cater for 3 categories of cargo:
Cargo operations, such as live cattle exports and bulk imports of clinker and sulphur.
Rig tender services.
General cargo.

The major products exported through Darwin include cattle, zinc, lead and metal manufactures, and those imported include oil and fuel, cement clinker and sulphur.

The existing port at Stokes Hill and Fort Hill Wharf will continue to provide for:
Container traffic (in the short term).
Visiting passenger cruise ships.
Naval vessels.
Fuel ships (which will continue to discharge at the iron ore wharf until the fuel farm is relocated to East Arm in 2002).
Bulk mineral exports (which will be distributed through the iron ore wharf for some years to come).

The masterplan is flexible enough to allow for future port development, as well as the planned railway, fast freight catamarans, cargo vessels, possible naval requirements and oil storage/refinery construction.

AUTHORITY: Darwin Port Authority, G.P.O.Box 390, Darwin, NT 0801, Australia. *Tel:* (089) 81 6701 (all hours). *FAX:* (089) 81 1175, (089) 412039. *Contacts:* Captain J. Butler, Port Manager. Captain R.J. Wilson, Harbour Master (Mobile Tel: 018-89-3524).

AGENT: Sub-agent of Patrick Sleigh Shipping Agencies Pty. Ltd., Sydney.

DEVONPORT, Tasmania: 41.11 S. 146.22 E.

(See Plan)

PORT LIMITS: Within all waters that extend 3 miles seawards bounded on the Eastward by an imaginary line drawn 000° – 3 miles from the coastline and intersecting the most Easterly point of Wright Island and to the Westward by an imaginary line drawn 000° – 3 miles from the Western side of the entrance to the River Don.

DOCUMENTS: See "Melbourne".

APPROACHES: Port situated 1 mile inside Mersey River, the entrance to which is sheltered by the Mersey Bluff on the West and by a breakwater on the East bank. There is an anchorage in vicinity of boarding ground, but it is inadvisable to remain at anchor during periods of strong on-shore winds. The Inner Harbour provides good all-weather shelter. There is a swinging basin which can accommodate vessels of length 200 m. or more, especially where tugs are used.

PILOTAGE: Compulsory. 24 hour service for all vessels where Masters are not in possession of a valid Exemption Certificate. Pilots will board when required at a position within 400 m. of a point Mersey Bluff Lighthouse bearing 242° by 1.93 km.

Masters of vessels requiring the services of a Pilot are advised to radio the Harbour Master, Devonport, their ETA and vessel's arrival draft 12 hours prior to arrival.

ANCHORAGE: The quarantine anchorage is defined as to the North of a line running East and West through the Mersey Bluff Lighthouse. Vessels must lie clear of the fairway into the River.

RESTRICTIONS: Approach channel 9.5 m. LWOST. Tidal range is 2.44 m. average, 3.20 m. Spring. Enquiries should be made for vessels exceeding 30 ft. (9.6 m.) draft and 600 ft. (180 m.) length.

MAX. SIZE: LOA 200 m., max. draft 10.5 m. Also see "Restrictions".

TIDES:		
	Lowest Recorded Tide	Minus (—)0.48 m.
	Mean High Water Spring Tides	3.20 m.
	Mean High Water Neap Tides	2.62 m.
	Mean Low Water Neap Tides	0.59 m.
	Mean Low Water Spring Tides	0.33 m.

HEALTH: Pratique is mandatory for all vessels arriving from overseas ports. Agents normally make necessary arrangements.

VHF: 24 hour listening watch – Channel 16, switching to Channels 12 and 67 as required. Call sign is "Devonport Harbour".

TUGS: Twin screw 2,250 b.h.p. (bollard pull 39 tonnes) plus smaller tug 250 b.h.p. immediately available. Additional tugs, as required, available at reasonable notice.

BERTHING:

Berth No. 1 West:

Operation:	Bulk cement.
Structure:	Reinforced concrete decks on steel piles. One 45 m. portion and 2 dolphin type sections of 32 m. and 37 m. lengths respectively, with 19 m. space between.
Length of Wharf:	150 m. (nominal – part of 289 m. total length of wharf).
Dredged Depth:	9.5 m. below M.L.W.S.T.
Wharf Deck Level:	5.46 m. above M.L.W.S.T.
Storage:	Four cement silos of 26,335 tons capacity owned by Goliath Portland Cement Co. stand directly behind the concrete portion of wharf deck. Bulk cement is transferred pneumatically from rail wagons to the silos and from the silos to ship.
Wharf Cranes:	None.
Stern Ramp:	Nil.
Telephone:	One plug available.
Max. LOA:	180 m.
Max. Beam:	37 m.
Load Rate:	Bulk cement 1,200 tonnes/hr.
Proposed Depth:	10.0 m.

Berth No. 2 West:

Operation: *	Disused and awaiting re-development.
Structure:	Dismantled.
Length of Wharf:	139 m. (nominal – part of 289 m. total length of wharf).
Dredged Depth:	7.3 m. below M.L.W.S.T.
Wharf Deck Level:	5.46 m. above M.L.W.S.T.
Telephone:	Plug not available.
Max. LOA:	205 m.
Max. Beam:	37 m.

* Note: This berth not commercially usable, awaiting project development to replace with steel piled, re-inforced concrete deck. Proposed depth of 10.5 m.

Berth No. 3 West:

Operation:	General user berth. General cargo and bulk tallow.
Structure:	Re-inforced concrete caisson construction, except for the Northern end 45 m. portion of re-inforced concrete deck supported by timber piles. Distance between wharf face and cargo shed 10 m.
Length of Wharf:	167 m. (nominal – part of 365 m. total length of wharf).
Dredged Depth:	7.5 m. below M.L.W.S.T.
Wharf Deck Level:	5.5 m. above M.L.W.S.T.
Storage:	One shed 110 m. long × 24.7 m. wide × 7.2 m. high.
Wharf Cranes:	None.
Stern Ramp:	Nil.
Telephone:	Two plugs available.
Reefer Points:	None.
Other Buildings:	Port Operations Centre manned 24 hours per day, and wharf labour amenities are located at the Northern end of the cargo shed.
Railways:	A single track siding runs parallel to the wharf behind the storage shed, 38 m. from the wharf face.
Max. LOA:	205 m.
Max. Beam:	37 m.

Berth No. 4 West:

Operation:	General user berth. Oil products, bulk wheat, refrigerated, container, general cargo, livestock. Bulk tallow. Quarter ramp Ro/Ro.
Structure:	Re-inforced concrete deck supported by steel piles.
Wharf Length:	198 m. (nominal – part of 365 m. total length of wharf).
Dredged Depth:	11.0 m. below M.L.W.S.T.
Wharf Deck Level:	5.5 m. above M.L.W.S.T.
Hardstanding:	1.2 ha. South of cold store.
Storage:	A two storey cold store 49 m. long, 25 m. wide, with a capacity of 7,200 cu.m. is located on the wharf. Wheat silos with a capacity of 11,000 tons are located behind the wharf. Transfer of grain from ship to silo is via a belt conveyor in a tunnel below wharf level. Discharge rate 600 t.p.h.
Weighbridge:	Public weighbridge with 60 tons capacity, 20 m. LOA.
Oil Pipelines:	1×200 mm. diameter white products oil line. 1×250 mm. diameter white products oil line and 1×250 mm. diameter black products oil line convey oil from tankers at the berth, through a hatch in the wharf deck, to tank farms 0.8 km. to the South. 1×150 mm. diameter bulk tallow line to storage tanks at rear of No. 5 West Berth.
Railway:	A two track siding runs parallel to the wharf face behind the cold store.
Stern Ramp:	Nil.
Telephone:	Two plugs available.
Reefer Points:	6 portable at short notice.
Other Buildings:	Nil. Wharf width in way of cold store 10 m.
Max. LOA:	206 m.
Max. Beam:	37 m.
Firefighting Capacity:	Remote controlled fire fighting monitor on tower 12.5 m. above H.W.L. F.W. type 6% AFFF. 1,800 lts./min. delivery, at South East corner of cold store.

Berth No. 5 West:

Operation:	Boral Gas Co.Pty.Ltd. LPG pipelines to storage facility. Livestock berth.
Structure:	Three re-inforced concrete dolphins and a re-inforced concrete tee-head are supported on steel piles and inter-connected by catwalks. The structure incorporates a single stock race for transfer of livestock from the small Bass Strait Island trading vessels.
Wharf Length:	40 m. across tee-head.
Dredged Depth:	8.5 m. below M.L.W.S.T.
Wharf Deck Level:	4.5 m. above M.L.W.S.T.
Storage:	Boral Gas tank farm LPG 1,260 tonnes. Large cattle yards behind berth.
Other Buildings:	Pacific Terminals plant with 6 bulk tallow silos, total capacity 2,000 tons, situated behind wharf. 150 mm. pipeline with loading rate 200 tons/hr. to No. 3 and No. 4 West Berths.
Safety:	Equipped with an extensive fire protection system, incorporating two tower mounted fog monitors and fixed spray heads. The few electrical fittings are "flame proof".
Max. LOA:	107 m.
Max. Beam:	20 m.

Berth No. 1 East:

Operation:	Leased and operated by the TT-Line for passenger and Ro-Ro freight ferry.
Structure:	Land-tied steel sheet pile wall wharf face.
Length of Wharf:	115 m.
Dredged Depth:	7.0 m. below M.L.W.S.T.
Wharf Deck Level:	4.57 m. above M.L.W.S.T.
Hardstanding:	2.1 ha. of concrete and bituminous pavement suitable 43 tons axle loads.
Storage:	One transit shed 45 m. long × 19 m. wide × 6.5 m. high.
Stern Ramp:	11.4 m. between kerbs, no height restrictions. Loads three lanes of 43 tons axle load forklift, or one 260 tons gross low loader.
Telephone:	Plugs available at stern ramp and passenger gangway.
Reefer Outlets:	For 88 containers.
Other Buildings:	Two storey terminal building incorporating passenger facilities and labour amenities. 0.6 ha. of parking space for passenger vehicles. Gatehouse: Two storeys 37 m. long, 5 m. wide. Quarantine Inspection shed.
Max. LOA:	170 m.
Max. Beam:	37 m.

Berth No. 2 East:

Operation:	North end of berth (90 m.) dedicated to Coastal Expressline Ro-Ro service, South end of berth (90 m.) general purpose berth. Commodities handled, Ro-Ro containers, general cargo. Bulk-salt, china clay, cement, clinker, gypsum, livestock.
Structure:	24.4 m. wide re-inforced concrete deck on steel piles, land backed.
Length of Wharf:	180 m. fendered length (nominal – part of 298 m. total length of wharf).
Dredged Depth:	10.0 m. below M.L.W.S.T.
Wharf Deck Level:	4.5 m. above M.L.W.S.T.
Hardstanding:	1.9 ha. in addition to wharf deck, cargo sheds 43 tons axle load.
Storage:	One transit shed 67 m. long × 24 m. wide × 6.1 m. high, with roller shutter side doors, open ends. In addition to hardstanding areas, there is appropriately 2 ha. of space available for bulk cargo storage.
Wharf Cranes:	None.
Stern Ramp:	25 m. long, 23 m. between side rails. No height restrictions. Loads 6 tons/sq.m. uniform distribution. 35 tons forklifts and reach trucks. 80 tons capacity 4 axle "Rolux" trailer units.
Telephone:	Plug available.
Reefer Outlets:	For 54 containers.
Other Buildings:	Amenities and garage building (35 m. × 9 m.).
Max. LOA:	206 m.
Max. Beam:	37 m.

Berth No. 3 East:

Operation:	General purpose berth. Commodities handled containers (ships gear). Quarter ramp Ro-Ro. General cargo, bulk salt, clay.
Structure:	Re-inforced concrete deck on steel piles, land fill behind access ramps only.
Length of Wharf:	118 m. (nominal – part of 298 m. total length of wharf).
Dredged Depth:	10.0 m. below M.L.W.S.T. for length of 180 m., i.e. to 60 m. South of No. 3 East fendered wharf.
Wharf Deck Level:	4.5 m. above M.L.W.S.T.
Hardstanding:	1.5 ha.
Storage:	Nil.
Wharf Crane:	One travelling, slewing, class 3, capacity 25 tons at 32 m. radius, 30 tons at 25.9 m. radius. Maximum outreach beyond fender line 24.4 m. radius. Travel distance 122 m. Range of lift 18 m. above to 12 m. below wharf. Speeds: hoist 24 m./min., luff 18 m./min., slew 1.4 rev./min., containers and a 4.6 cu.m. capacity electro-hydraulic grab are available.
Load Rate:	25 cycles/hour.
Stern Ramp:	Nil.
Telephone:	2 wharf plugs.
Reefer Outlets:	For 144 containers.
Max. LOA:	206 m.
Max. Beam:	37 m.

All wharves are floodlit for night work and are under T.V. surveillance. Ample fresh water at a rate of 32 – 40 tonnes per hour available at a nominal charge. Three phase power, telephones and victualling available to all berths. Bunkering by road tankers only. Garbage disposal by arrangement. Other cranage available – floating crane 35 tonne capacity, 2 mobile cranes of 6.5 tonne and 4 tonne capacity, 2 large forklifts – capacities 20,321 kilos and 23,133 kilos and numerous small forklifts.

BULK HANDLING FACILITIES: See "Berthing".

STEVEDORES: Agents for ships arrange stevedores.

Wharf Labour Working Hours: Sunday – Friday: 0830 hrs. – 1530 hrs., 1530 hrs. – 2230 hrs. and 2230 hrs. – 0530 hrs.

Saturday: 0800 hrs. – 1500 hrs., 1500 hrs. – 2200 hrs. and 2200 hrs. – 0500 hrs.

Ro-Ro Terminal: Continuous by arrangement.

Bulk Cargoes: Continuous by arrangement.

MEDICAL: An out-patients department of the local general hospital is available 2 km. from the port. Lie-in facilities are available at the hospital proper 8 km. from port.

TANKERS: Berth No. 4 West: Discharge lines for black and white products. LPG handled at Berth No. 5 West. Also see "Berthing".

DENSITY: 1025.

FRESH WATER: Available all wharves. 40 t.p.h.

FUEL: Road tanker delivery only.

REPAIRS: The Port Authority can carry out limited repairs. Fuller repairs can easily be arranged to be carried out by the numerous engineering firms in the vicinity of the port. Underwater diving service is available with facilities for photography, welding, survey and repairs.

SURVEYORS: *Cargo Inspectors:* For Devonport, the appropriate Cargo Inspector would be R. M. Davies and Associates, Wynyard. Tel: (004) 42 2435.

Surveyors: There are no surveyors in the Devonport area but, Lloyd's Agents are readily available in Launceston, just over 1 hours' drive way.

CARGO GEAR: Australian Navigation (Loading and Unloading) Regulations apply.

HOLIDAYS: Work all days except Christmas Day, Good Friday, Anzac Day, Labour Day, Picnic Day W.W.F.

POLICE/AMBULANCE/FIRE: Fire 24-1886 (Other than alarm, 24-1887); Police 23-7511; Ambulance 24-5077.

EMERGENCY CO-ORDINATION CENTRE(S):

1. *At Sea in Australian Waters:* Under the AUSREP system which became effective from 1st April, 1982, all Australian and foreign vessels from arrival at first port until departure from the last port, must report at least once every 24 hours, a position report and destination, to the Australian Coastal Surveillance Centre, Canberra (A.C.S.C.), who are responsible for the Australian SAR area, the largest in the world covering one ninth of the earth's surface. In the event of a report not being made, SAR operations will begin within 24 hours of a missed report. Although not mandatory until first port of arrival, foreign vessels would find it in their best interests to inform Canberra of their arrival in Australian waters and their departures therefrom.

2. *Alongside:* In addition to the emergency numbers listed (Police/Ambulance/Fire), there is a State Emergency Service responsible for major emergencies. In Devonport the Harbour Master is the local co-ordinator, but the service can be contacted direct on Burnie 31-3160 or 31-4144. The service is manned 24 hours a day.

AIRPORT: Devonport (Pardoe) Airport is situated approximately 8 km. from the port with approximately 6 flights per day each way to/from Melbourne (the services are reduced on Sundays). There are also intra-island services. Facilities at the airport are being increased and an increase in the intake of flights should follow.

TIME: See "General" before first port.

TELEPHONES: Available each berth.

SERVICES: Shipwrights and carpenters available at 24 hours notice. Underwater diving services available.

BANKS: There are no American or European banks in the area, although all the Australian banks are usually affiliated to one or other of the major banking houses. There has been a Commission Report (the Campbell Report), submitted to Federal Parliament recommending that foreign banks be allowed to trade in Australia, but as yet, the report has not been acted upon.

The normal method of credit card usage is by Bankcard, issued by the Australian banks. These can be obtained outside Australia through the overseas branches of Australian banks, particularly those situated in London. Visa, American Express and Diners Club cards are also accepted by certain banks and establishments. Access usage is no longer permitted.

STORING: Vessels are normally stored by truck and not barge. On all berths, except No. 2 West, trucks are able to proceed alongside a vessel. At No. 2 West, trucks can approach within about 30 metres. The same applies to fork lift trucks. The ship's Agents are normally responsible for arranging labour for storing.

SHORE LEAVE: Once Customs and Immigration requirements have been met, there are no restrictions upon crews except those imposed by the Master and that they must have rejoined their ship by sailing time. For non-English speaking crews, there is a telephone interpreter service in the following languages: Chinese, Greek, Croatian, Serbian, Italian, Spanish, Polish and Vietnamese.

GARBAGE DISPOSAL: Port collects ships garbage, $150 per service. Bins are provided for onboard ship and alongside.

WASTE OIL DISPOSAL: Newmans Pumping Service – Burnie. Tel: (004) 314766. Collection possible at any berth, rates and conditions obtainable on application.

SEAMAN'S CLUBS: No seaman's club in operation at Devonport.

CURRENCY: Australian Dollar.

GENERAL: *Ballast:* Discharge of ballast water and sediment from ships as per Commonwealth Department of Primary Industry and Energy AQIS Notice No. 90/1.

DEVELOPMENTS: Berth No. 2/3 East is presently being developed as a cargo handling area dedicated to Coastal Expressline. Completion date is April 1996.

AUTHORITY: Port of Devonport Authority, 48 Formby Road, Devonport, 7310 Tasmania. Postal Address: P.O.Box 478, Devonport, 7310 Tasmania, Australia. *Tel:* (004) 249011. *FAX:* (004) 246418. *Contact:* R.J. Barnard, General Manager. Captain R.J. Thompson, Harbour Master.

AGENT: Patrick Sleigh Shipping Agencies Pty.Ltd., 85 Don Road (P.O.Box 606), Devonport, TAS 7310, Australia. Tel: (004) 243311. Telex: 59109. Fax: (004) 242511. Cables: Seagram 7DPATSLE.

EDEN (Twofold Bay), N.S.W.: 37.04 S. 149.55 E. (See Plan)

PILOTAGE: Compulsory, boarding ground is 1.5 miles East of Lookout Point Lighthouse (position Lat. 37° 04.5′ S., Long. 149° 56.5′ E.).

APPROACHES: Entrance depth into Twofold Bay is 36 m. Bottom sand. Tidal data: Higher HW 1.3 m., Lower HW 1.1 m.

MAX. SIZE: Woodchip Berth can accommodate vessels up to 50,000 g.r.t.

VHF: Channels 16, 12, 72 and 8 available.

TUGS: 1 tug of approximately 45 tonne bollard pull. 3×12 m. work boats.

BERTHING:

Woodchip Loading Berth: "T" Head jetty with centre loading point located at Mungaroo Point. Berth consists of a pier, extending from the shore with 5 dolphins and 5 mooring buoys. Berth can accommodate vessels up to 50,000 g.r.t. Loading rate 700 t.p.h. Depth alongside 12.5 m.

Breakwater Wharf: Situated on Eastern side of Snug Cove inside breakwater. Fendered concrete wharf 105 m. long. Depth at inner end 3.0 m. mid-point 6.0 m. and outer end 8.3 m.

Multipurpose Jetty: Situated in the centre of Snug Cove, concrete decked steel pile jetty 200 m. long. Depth at outer end 7.0 m., which extends for 100 m. inshore.

Mooring Jetty: Situated at the Western end of Snug Cove, concrete decked steel pile jetty 150 m. long, used only for fishing vessels.

Private Jetty (H. J. Heinz): Situated at the cannery at Cattle Bay. Length 145 m. Depth at outer end 5.2 m.

STEVEDORES: By arrangement.

TANKERS: Tankers moor to buoys South of the breakwater and discharge through a submarine pipeline to the shore. Max. length of vessel 180 m. Max. draft 10.3 m.

FRESH WATER: Available at Breakwater Wharf and Multipurpose Jetty.

FUEL: Distillate and diesel fuel available.

REPAIRS: Slipways, and repair facilities for fishing craft only available. Minor repairs can be effected.

DRY DOCKS: None.

AIRPORT: Merimbula, 17.7 km., with daily flights to Sydney and Melbourne.

HOLIDAYS: See "Sydney".

GENERAL: *Access:* By road only to berths.

Navigation Information: Australian Pilot Vol. II, Sailing Directions N.S.W. Coast (10th Edition). Charts: AUS 806, AUS 191.

Customs: Proclaimed First Port of Entry, Customs Tel. (064) 961667. Fax: (064) 963181. Documents as for Port Kembla.

AUTHORITY: Office of Marine Safety and Ports Strategy, GPO Box 32, Sydney, NSW 2001, Australia. *Tel:* (02) 364 2233. *FAX:* (02) 364 2033.

Port of Eden, Pilot Station, Eden, NSW 2551. *Tel:* (064) 961719. *FAX:* (064) 963024. *Contact:* Captain M. Saunders, Harbour Master.

AGENT: Sub-agent of Patrick Sleigh Shipping Agencies Pty. Ltd., Sydney.

ESPERANCE, W.A.: 33.52 S. 121.53 E. (See Plan)

DOCUMENTS: The following documents should be available for inspection:

Ship's Papers, including the following Certificates:
- *(a)* Register.
- *(b)* Load Line.
- *(c)* Safety Equipment.
- *(d)* Safety Radio.
- *(e)* Safety Construction.
- *(f)* Australian Light Dues Receipt.
- *(g)* Articles of Agreement and Account of the Crew (or equivalent).
- *(h)* Western Australian "Port Bill" – Tonnage Dues Receipt.

Valid Derat or Exemption Certificate.
Crew's Identity Documents.
International Vaccination Certificates of all persons aboard.

PILOTAGE: Pilotage is compulsory except where Exemption Certificates are held. Radio "Harbour Master – Esperance" 48 hours and 24 hours before arrival. VHF Channel 16 – pilot boat and base set. Base set not manned continuously but pilot boat may be contacted 1 hour before arrival. Pilot boat painted white with black rubbing band and white centre house. Word "Pilot" painted on both sides of house. Pilot boards 1.5 miles N.E. of Gull Island. Pilot ladder and ancillary equipment must comply with international regulations. Lee to be provided against swell.

It is more usual for vessels to approach from the Westward. In this case use may be made of either West or Causeway Channels. Approaching from the Eastward is not recommended.

ANCHORAGE: Vessels proceeding to anchorage should anchor in an E.N.E. direction from the Eastern extreme of the breakwater. Good holding is found in depths ranging from 14.5 m. – 27.5 m. However, plenty of cable should be veered and at least 6 shackles is recommended. In the most boisterous conditions vessels have held well with from 6 to 8 shackles out. However, the vessel should always be watched. A pilot ladder and not accommodation ladder is recommended for vessels at anchor due to the swell conditions which normally prevail at the anchorage.

RESTRICTIONS: The port operates throughout 24 hours.

MAX. SIZE: Max. departure displacement 70,000 tons.

PRATIQUE: A Health Message is required at the First Port of Entry from overseas. This is to be despatched within the period 12 hours and 24 hours prior arrival at the First Port of Entry, and to advise the following information:

Name of vessel, and ETA.
Last port of call.
Date of departure.
Number of crew on board.
Number of passengers on board (if any).
Confirmation that all on board have valid vaccinations and details of any sickness.

RADIO: Perth Radio, call sign VIP (continuous).

Port VHF limited to Channels 6, 9, 12, 16 and 67. Call sign "Esperance Harbour", range 70 miles.

TUGS: One tug with 30 tonne bollard pull will be used. A second tug will be delivered in March 1996.

BERTHING: The Inner Harbour consists of one land-backed berth of 244 m. (No. 1). A second berth of 213 m. in length adjoining the first is to the S.E. (No. 2). The depth in the approach Channel, manoeuvring area and alongside is 12.8 m. Maximum draft permitted is 11.5 m., pending maintenance dredging. On occasions it may be possible to exceed this draft but reference must be made to the Harbour Master before so doing, who may at his discretion permit an increase dependent on tide and prevailing weather conditions.

At all berths shore coir and/or nylon springs may be used to supplement ships moorings.

CARGO HANDLING FACILITIES: Inner Harbour berths, one link belt bulk loader on each berth, for grain at No. 1 Berth and minerals at No. 2 Berth. Rates achieved for commodities – grain 1,000 t.p.h., minerals 600 t.p.h. – 2,000 t.p.h., phosphate and sulphur 100 t.p.h. per ship's grab.

Mobile Cranes: P. & H. Omega 20, 18 tonnes capacity and Cranvel 8 tonnes capacity.

Permanent sheep yards can be erected at No. 1 Berth with holding capacity of 11,500 head. Races and loading ramps available for both sheep and cattle.

STEVEDORES: Working hours: 0800 – 1700 hrs., 1800 – 2400 hrs., 0000 – 0700 hrs. ETA to Agent by 1600 hrs. previous day for labour requirements Tuesday to Friday. For weekend requirements ETA to Agent by 1600 hrs. on Thursday. For Monday labour ETA to Agent by 1600 hrs. Friday.

MEDICAL: Advance notice not required. Normal facilities and hospitalisation available.

TANKERS: Tankers berth at No. 2 Berth, Inner Harbour.

Tanker discharge line 14 in. reduced to 8 in. at discharge manifold. Average discharge rate 800 t.p.h.

DENSITY: 1027.

FRESH WATER: Available at all berths; one hose 40 t.p.h., two hoses 70 t.p.h. charge, $1.30 per kilolitre.

FUEL: Available by road tanker only. Advise Agent of grade and quantity at least one week before arrival.

CONSULS: Nearest at Fremantle.

REPAIRS: Welding, rewinds, under-water inspections. Large structural repairs not possible.

DRY DOCKS: None.

SURVEYORS:

(1) Harbour Master acts as Cargo Inspector and Australian Maritime Safety Authority Surveyor.

(2) Harbour Master represents Lloyd's Register on request.

OPENING/CLOSING HATCHES: Preferably handled by crew or as per charter party.

GANGWAY/DECK WATCHMEN: Shore watchman is supplied at entrance to Tanker Berth in the case of tankers only. Shore watchmen are available if requested by vessel. It is more normal for ship to provide gangway watchmen from crew. Irrespective a gangway watchman must be on duty at all times at any berth.

REPATRIATION: Facilities exist for repatriation of crews.

AIRPORT: Feeder airline services connect with Perth and international flights. 13 flights per week in either direction. Airport is 25 km. from harbour area.

TIME: See "General" before first port.

POLICE/AMBULANCE/FIRE: Police 711900; Ambulance 000; Fire 713000.

EMERGENCY CO-ORDINATION CENTRE: Contact Port Authority.

TELEPHONES: Available all berths.

BANKS: Commonwealth Banking Corporation transacts business with all American and European banks. Postal address – P.O.Box 486, Esperance, 6450.

STORING: See "Prelims".

(1) By truck.

(2) Storing can be completed during loading or discharging.

(3) Trucks can unload at ship's side.

(4) Fork lifts can be operated.

(5) Normal Customs procedures apply.

(6) Storing usually completed by ship's crew although other labour may be used.

SHIP SUPPLY SERVICE: Contact "Sealanes, Fremantle".

In the case of emergencies, arrangements have been made to fly in a helicopter on charter or on less urgent cases make use of the locally based tug.

SHORE LEAVE: Crew allowed ashore provided Immigration Act complied with in relation to Identification Cards.

GARBAGE DISPOSAL: Garbage services are provided – drums are placed on board the ship on arrival and are collected daily. Tel: (090) 712 111. Charges per 24 hour period or part of: A$110.00-244.00, depending on number of crew.

WASTE OIL DISPOSAL: Road tanker service available from local contractor J.T. O'Brien Sewerage Disposal. Tel: (090) 712 151 for costs and general information.

SEAMAN'S CLUBS: None.

CURRENCY: Australian Dollar.

IDENTIFICATION CARDS: See "Melbourne".

DELAYS: Not normally encountered.

AUTHORITY: Esperance Port Authority, P.O.Box 35, Esperance, W.A. 6450. *Tel:* (090) 71 2111. *FAX:* (090) 711312. *Cables:* 6 EHMESP. *Contact:* C.A. Stewart, General Manager. After hours (090) 765039. Captain I.R. Harrod, Harbour Master. *Tel :* (090) 712601.

AGENT: Sub-agent of Patrick Sleigh Shipping Agencies Pty. Ltd., Fremantle.

EXMOUTH, W.A.: 22.20 S. 114.10 E. (See Plan)

SHIPMASTER'S REPORT: October 1984 (Updated 1996).

DOCUMENTS:

2 copies Crew List, 2 on Form M.S. 11.

1 copy Form 42A, Stores List (Ship's Bond).

1 copy Form 5. Personal Effects Declaration.

2 copies Form C & E 886. Dates and time of Departure from Overseas Ports of Loading.

*2 copies Form 0360. Health Report. 1 copy retained by Master.

Form 40. Application for Clearance.

Form QA3. Quarantine Notice and Declaration. If animals on board as cargo.

Form QA4. Quarantine Notice.

Form QA5. Shipmaster's Bond (Pink, Yellow). If ship's pets on board.

Forms in respect of Colonial Light Dues (if applicable).

*Forms obtained from Customs Boarding Officer on arrival.

Customs Officials, etc. board at berth.

PILOTAGE: Pilotage is not compulsory. Pilot boards 1 mile N.E. of jetty, from the line launch.

ANCHORAGES: 1.5 miles N.E. of jetty.

RESTRICTIONS: Berthing/sailing during daylight only. Berthing carried out at slack water. Berthing at Point Murat Pier is under the command of the Australian Deputy Commander, Royal Australian Navy at Exmouth and all enquiries should be directed to him.

HEALTH: See "General" before first port.

VHF: Port VHF system is as such non existent and consists of handheld portable sets of very limited range. However, the Naval Communication Station can be contacted on VHF Channel 16, call sign "Exmouth Control", 24 hours a day.

BERTHING: Straightforward approach from sea on recommended track to Learmonth. Reasonably deep water and no navigational hazards in vicinity of track.

Berth is a 'T' head jetty with a face 48.75 m. in length with mooring and breasting dolphins. Distance between outer dolphins is 320 m. Wharf decking is 6.1 m. above datum with depth alongside 12.0 m.

Berthing Operations: Berthing is usually starboard side to. Jetty is approached with bow slightly canted into berth and when approx. 100 m. off jetty, port anchor is let go to 1 shackle on deck and anchor dredged into berth. Forward slipline is sent away as soon as possible by mooring boat and when close enough, other lines sent by heaving line. It is essential to get either breastlines or springs ashore as soon as possible in order to hold vessel in position.

It may be necessary, once vessel is held alongside berth to change some of the moorings, as it was on this occasion. Final moorings as follows:

Forward:

1 Slip line (effectively 2 headlines), and 1 Head line.

2 Breast lines (from starboard shoulder to bollard on inshore side of jetty).

2 Springs.

In addition port anchor on bottom, 1 shackle on deck.

Aft:

1 Stern line-slip line (effectively 2 stern lines) and 1 Stern line.

2 Springs (from poop to North end of dolphin).

2 Breast lines (from aft maindeck to bollard on inshore side of dolphin).

A number of points arose from the mooring/unmooring operations:

Firstly, I am of the opinion that the anchor should be dropped further from the jetty, in order to assist the unmooring due to absence of tugs. This would be no problem if an offshore wind could be guaranteed, but the wind is invariably onshore. Secondly, mooring gangs are slow in getting ropes to their destination which proved to be the biggest hazard.

Care *must* be taken when mooring to ensure that the final ropes aft (in this case the springs) are on separate winches in order to clear the propeller as soon as possible – any delay when unmooring on an ebb tide could result in vessel drifting onto the aft isolated dolphin. The ideal time to unmoor would be on a flood tide and using the anchor to warp clear of the jetty. Unfortunately, things at sea are rarely done under ideal conditions, hence my comment regarding letting go the anchor sooner.

The mooring points on the jetty are themselves far from ideal considering the strength of the ebb stream which can be compounded by a strong offshore breeze. Breast lines end up as very short, almost vertical leads, especially when light. In this case the vessel was partially ballasted prior to arrival, which somewhat alleviated this problem.

However, having made all the bad points about the berth, I must add that the shore staff were very co-operative and a fast discharge is normal.

Also see "Restrictions" and "Plan".

DISCHARGING: 1 line only. Permanent line on jetty connected to ship's manifold amidships with hoses. Shore line 300 mm.×1 km. Max. back pressure 150 p.s.i. High rate of discharge (up to 1,200 cu.m./hr. due empty shore tanks).

No water clearance required after discharge as line rests in Gas Oil.

Grades: As far as can be ascertained only Gas Oil delivered to Exmouth.

BALLAST: No tank cleaning or dirty ballast facilities.

DENSITY: 1025.

FRESH WATER: Very limited quantities available in an emergency.

FUEL: Not available.

REPAIRS: No facilities.

GARBAGE DISPOSAL: No facilities.

GENERAL: No contact with receivers (U.S. Navy). Liaison is with a Royal Australian Navy Officer on secondment to U.S. Navy.

Immobilisation of Engines: Not recommended due to strength of current and poor mooring facilities.

Stores, etc.: No laundry facilities. Very limited quantities of bread, milk, etc., available from local shops. Any large amounts of stores require to be ordered approx. 3 weeks in advance.

AUTHORITY: Naval Communications Station – Harold E. Holt, P.O.Box 125, Exmouth, W.A. 6707. *Tel:* (099) 49-3320 *FAX:* (099) 49-1688. *Contact:* Commanding Officer.

AGENT: Sub-agent of Patrick Sleigh Shipping Agencies Pty. Ltd., Fremantle.

FREMANTLE, W.A.: 32.03 S. 115.44 E. (See Plan)

(A) FREMANTLE
(B) KWINANA – Alcoa of Australia Ltd.
(C) KWINAWA – BP Oil.

(A) FREMANTLE

PORT LIMITS: *Port Limits and Area of Jurisdiction:* The regulations of the Port of Fremantle apply to all waters within the port limits. The port limits are detailed in the Fremantle Port Authority Act and shown on charts relevant to the port. The outer boundaries of the Port of Fremantle are shown in the Plan Section.

The Port of Fremantle comprises the Inner Harbour and Outer Harbour. The Outer Harbour includes all waters of Gage Roads and Cockburn Sound (often referred to as Kwinana).

DOCUMENTS: *Documents required on Entry:*

2 copies	Form M&S 11	List of Crew.
3 copies	Form M&S 11	Attachment sheet.
2 copies	Form 42A	Stores List.
	Form 5	Articles owned or in possession of Master, Officers or crew.
1 copy	Form 5AA	If there is a shop on board.
2 copies	Form B921	Green Loading Ports List.
1 copy	Form QA3	Declaration of animals carried as cargo, only if on board.
1 copy	Form QA4	Declaration of ship's pets.
1 copy	Form QA5	Shipmaster's Bond to cover ship's pets.
2 copies	Form AQ360	Health Report.
	Form M302	One per crew member. With reference to Seaman's Identification Cards, a passport size photograph of the seaman is sufficient. Seamen in possession of some national travel documents are no longer required to have an Identification Card Form M302. Manifest of Passenger, if applicable.

Of the above, Form 42A and Form 5 need only be completed at first port of call in Australia. Individual passenger cards are utilised. Agents require 7 copies of Manifest of Cargo on board, and at least 1 set of copies of Bills of Lading. These are normally received by airfreight or airmail direct from Agents at loading port outside Australia, therefore it is not necessary for Masters to be in possession of either Manifest of Cargo onboard or appropriate copies of Bills of Lading.

Documents to be Available for Inspection: The following certificates and documents should be available for inspection on arrival:

(1) Tonnage Certificate.
(2) Register showing vessel's name, port of registry, gross and nett tonnages and Owner.
(3) Load Line Certificate, which must be current.
(4) Safety Radio Certificate.
(5) Safety Equipment Certificate.
(6) Light Dues Receipt.
(7) Ship's Articles.
(8) Clearance from previous port.
(9) Register of Cargo Gear/Cargo Gear Certificates/Marine Orders 32 refer.
(10) Safety Construction Certificate.
(11) Passenger Safety Certificate.
(12) Ship's Log.
(13) Valid Derat or Exemption Certificate.
(14) Oil Record Book.
(15) Crew Travel documents.
(16) International Vaccination Certificates of all personnel.
(17) International Oil Pollution Prevention Certificate.

APPROACHES: All vessels making to enter Port of Fremantle must make their approaches passing to the North of Rottnest Island.

Unless constrained by draft and compelled to take a Pilot at the outer boarding ground, all inward vessels may proceed to Gage Roads, either to anchor or embark a Pilot at the inner boarding ground.

A deep water channel S.E. of Fairway/Landfall Buoy and distinguished initially by Buckland Hill directional PEL light (Position Lat. 32° 01.105' S., Long. 115° 45.566' E.) provides a depth of 15.2 m. in the white sector into Gage Roads, the channel being marked by 5 buoys.

The bank between the 10.0 m. contour and the Deep Water Channel provides a minimum depth of 10.6 m. in the white sector of Woodman Lt. (Position Lat. 32° 07.92' S., Long. 115° 46.6' E.), but is subject to large swells after Westerly winds. The red/white blend of Woodman Lt. clears the 10.0 m. contour on this bank.

A least depth of 13.1 m. in the green sector of Woodman Lt., and close to the East of deep water channel, is available for those vessels which do not required the deep water channel on departure but who may be affected by swell to the West of the deep water channel.

Relevant Charts:

AUS 112	Approaches to Fremantle.
AUS 113	Port of Fremantle.
AUS 117	Gage Roads and Cockburn Sound.
AUS 754	Lancelin to Pt. Peron.

PILOTAGE: Pilotage is compulsory in the Port of Fremantle, except for ships not exceeding 150 g.r.t., and for ships, the Masters of which hold operative Pilot Exemption Certificates. There are 2 pilot boarding grounds: the outer boarding ground which is situated 3.5 nautical miles N.E. of Bathurst Point, Rottnest Is., and the compulsory pilot boarding ground in Gage Roads to the Westward of Hall Bank Buoy, which is approximately 2 miles from the entrance to the Inner Harbour.

Note: Pilotage is compulsory from the Outer Boarding Ground for ships drawing 11.0 m. or more.

It is necessary for all vessels to give 48 hours and 24 hours notice by radio telegraphy of the expected time of arrival at Fairway Buoy, followed by a third notice, confirming or amending the previous notice, 2 hours ahead of the expected arrival time in that locality.

Ships requiring a Pilot at the non-compulsory ground must include this requirement in their 24 hours Notice of Arrival.

Two pilot vessels available, both painted international orange. Pilots may be contacted by VHF Channel 12.

Usually pilot ladder is required on the port side for vessels inward and starboard side for vessels outward, even when the wind is in the East, unless Easterly wind is very strong as there is nearly always a West to N.W. swell. If in doubt call Port Signal Station on VHF Channel 12.

Pilot does not board vessel at anchor.

Pilot ladder to be 2 m. above sea level with manropes slightly shorter. Boat-rope not required. The ladder should be clean and conform with Regulation 17 of SOLAS. The vessel should be making 3 – 4 knots.

SOLAS Regulations are strictly adhered to i.e. Single length of ladder, non-slip surface (Aluminium NOT acceptable), 12 in. spacing between steps, no more than 2 replacement steps, all ropes on ladder and manropes to be manila and not covered (nylon and polypropelene not acceptable), Regulation 17(a) part (VII) and (VIII) very important, a responsible officer to standby and not a sailor.

Pilots preference is a ladder.

ANCHORAGES: The following anchorages are available for vessels to hold at prior to moving to their berth:

(a) Vessels with a draft of 11.0 m. or greater awaiting a Pilot should anchor 2 miles to the West of Fairway/Landfall Buoy. Holding ground is fine sand and coral.
(b) Vessels of less than 11.0 m. draft, expecting a Pilot on the same day of arrival, may anchor in the vicinity of Hall Bank Beacon in Gage Roads. Holding ground is fine sand and shell.
(c) Vessels of less than 11.0 m. draft, not expecting a Pilot on the same day of arrival, should anchor in the Western area of Gage Roads. Holding ground is fine sand and coral.
(d) Vessels of less than 11.0 m. draft may anchor South of a line running between S.Mole (32° 03.4' S., 115° 43.9' E.) and Success/Parmelia Channel with permission of Harbour Master. Holding ground is sand and mud.

Vessels at anchor are permitted to operate their own boats by suitable arrangement with the Customs. A ferry service will only be provided through arrangement with the Agent.

Quarantine Anchorage: Vessels which have not been granted Pratique must not pass South of a line between N.Mole (32° 03.1' S., 115° 43.4' E.) and Mewstone (32° 05' S., 115° 40' E.).

Prohibited Anchorages: Chart AUS 112:

1. Between Fairway/Landfall Buoy and No. 1 Deep Water Channel.
2. Deep Water Channel.
3. Between a line drawn through S. and N.Mole lights and a line running 263°T from S.Mole to a line running 349° parallel to the Western Beacons of Success Channel.

RESTRICTIONS: *Inner Harbour:* Approach channel from 600 m. seaward of North Mole dredged to 13.4 m., thence 13.2 m. to East end of Berth No. 2. Basin 13.0 m. and 11.0 m.

Outer Harbour: Main approach channels dredged to minimum of 14.7 m. (48.25 ft.) below datum – secondary channels leading to Alumina Refinery Jetty and Steelworks Jetties dredged to minimum of 38 ft. (11.6 m.) below datum.

Vessels in Ballast: For safe navigation, the ship's propellor should be immersed, the bow deep enough for adequate vision from the bridge and draft suitable for the vessel size, in order to minimise leeway (See table below). Vessels which cannot meet the criteria for minimum draft may be delayed if wind conditions are unfavourable.

Table of Recommended Minimum Drafts:

d.w.t.	*Forward Draft*	*Aft Draft*
Up to 10,000	2.0	No more than 0.6 m.
10,000 – 20,000	2.0 – 2.5	of the propeller
20,000 – 30,000	2.5 – 3.0	to be exposed.
30,000 – 50,000	3.0 – 5.0	6.5
50,000 – 100,000	5.0 – 7.0	6.5 – 7.5
100,000 – 150,000	7.0 – 8.0	7.5 – 8.5

Navigation Restrictions: Tankers over 250 m. in length and over 40 m. beam in ballast condition are not navigated in Success/Parmelia Channel during the hours of darkness. Tankers over 40 m. beam loaded using Success/Parmelia Channel are subject to draft limitation if the hull is a box section type.

Gas Carriers: Gas carriers will not be berthed in winds over 25 knots at Steelworks Jetty No. 2.

Depths/UKC:

Channel	*Max. Depth* (m.)	*Min. Width* (m.)	*UKC* (m.)
Inner Harbour	13.2		1.0
Deep Water	15.2		15%
Success/Parmelia	14.7	152.4	*13/14%
Woodmans/Jervoise/Medina	8.5	122/152	10%
Stirling	11.7	122.0	1.0
Calista	11.6	152.4	1.0

* 13% Summer (November to April), 14% Winter (May to October).

Deep draft tankers may transit at a reduced UKC when bound to or from BP Refinery under a controlled program based on wave and tide analysis.

MAX. SIZE: Draft limited by minimum under-keel clearance (See "Restrictions").

Outer Harbour: Up to 41 ft. 6 in. (12.65 m.) draft.

Inner Harbour: At Berths No. 4, 5, 6, 7, 8 and 9, draft of 41 ft. (12.5 m.) is available; at all other berths up to 34 ft. 6 in. (10.5 m.) draft but with suitable tide and by special permission of Harbour Master up to 35 ft. (10.6 m.) draft.

Tankers: The maximum ship draft acceptable at the BP Oil Refinery Jetty at Kwinana is 41 ft. 6 in., this being the maximum draft permitted in the approach channels. Also see Section (C).

HEALTH: All overseas vessels are subject to quarantine and may only enter Australia through a declared first port of entry. They continue to be subject to quarantine until Pratique (Health Clearance) has been granted by a Quarantine Officer. If examinations and inspections are satisfactory, the vessel is granted Pratique for all Australian ports. 24 hours Quarantine Clearance of overseas vessels is available. Treatment of crew members for illness other than quarantineable diseases is arranged by private practitioners through ship's Agent.

Radio Pratique: Concession of Radio Pratique is available to all vessels except those which carry livestock. Radio Pratique may be applied for by livestock vessels, however, they will be boarded and inspected by a Quarantine Officer before the vessel is allowed to berth.

(a) 1. The Master or Agent must make a request (Form Q2) to Department of Health within 12-24 hours prior to the arrival of the vessel, answering all the questions on the form.

2. If answers are satisfactory, Radio Pratique will be granted for Fremantle from a specified time and date enabling the vessel to proceed to the berth without displaying the "Q" flag signal.

3. A Quarantine Officer will board the vessel at the berth. If the answers given on the Declaration of Health (Q360) are satifactory, Pratique may then be granted for all Australian ports.

(b) Nothwithstanding that Pratique for all ports may have been granted, the Master will still be responsible for reporting any case of infectious disease, which may subsequently occur whilst the vessel is in Australian waters.

Should a case of infectious disease (not being a quarantineable disease) occur onboard whilst the vessel is at sea in Australian waters, the Master will be required to advise by radio the Quarantine Officer for the State in which the next port is situated, who will arange to see the case on arrival.

The Master will not be required to fill in a Supplementary Health form and the vessel will be permitted to proceed directly to berth without flying "Q" flag.

Should a case of suspected quarantineable disease occur onboard whilst at sea in Australian waters, the Master is required to radio details to the Quarantine Officer for the State in which the next port is situated and await instructions. The Quarantine Officer will decide acccording to circumstances whether to inspect the vessel outside the Quarantine Line or permit it to proceed to berth, and he will advise the Master.

(c) Should it come to notice in any particular case that Radio Pratique has been granted as a result of a wireless message sent in accordance with sub-paragraph (a), whereas in fact the wireless message contains false information, the matter will be investigated and reported to the Director General of Health who will decide whether Radio Pratique will be denied in future to the vessel on which the Master holds responsibility.

Also see "General – Health" before first port.

RADIO: VIP Perth.

Notice of Arrival: The Fremantle Port Authority regulations require that all vessels give the following notification of their expected arrival:

(a) 48 hours notice of arrival at Fairway Buoy indicating:
  (i) Maximum draft.
  (ii) Details of hazardous cargo.
  (iii) Any requirement for Pilot embarkation at the Outer Boarding Ground if the vessel's draft is less than 11.0 m.
(b) 24 hours notice of arrival at Pilot Boarding Ground.
(c) 2 hours notice of arrival by VHF.

Note: The above notifications of ETA are regulatory requirements. However, any variance from the latest advised time should be notified to the Harbour Master as soon as possible.

All messages of notification of arrival should be addressed to the Harbour Master and sent directly to the Port Authority Signal Station.

Failure to provide the correct Notice of Arrival may cause a vessel to be delayed in berthing.

Also see "VHF".

VHF: The Port of Fremantle maintains a signal station on top of the Port Authority Building (32° 03.20′ S., 115° 44.23′ E.) which is manned on a 24 hour basis.

The signal station is a limited coast radio station, and is therefore not able to handle public correspondence.

The call sign of the signal station is "Port of Fremantle".

Orders concerning shipping movements, allocation of berths and related matters are passed to ships, Pilots, tugs and mooring staff through the signal station. In addition to the recording of shipping movements, the Port Control Officer on duty deals with calls of an urgent nature involving fire, accident, mechanical and electrical breakdown, boats and/or ships in distress, the need for medical assistance and navigation light failure.

Vessels anchoring on arrival should establish communication at 2 hours notice with "Port of Fremantle" and listen on Channel 12.

All communications with the signal station whether by VHF or telephone are recorded.

VHF Allocation:

Distress and Calling:

Channel 16: All vessels are to monitor this frequency when approaching the port until they are advised to keep a watch on Channel 12.
Outward vessels are to revert to Channel 16 after passing the Fairway Buoy.

Working Channel:

Channel 12: All vessels navigating within the port limits or at an anchorage within the port must maintain a continuous listening watch on this frequency.
In addition to the signal station maintaining a radio watch on Channel 12, the Port Authority's Pilot vessels also keep watch on this channel.

Port User Channels:

Channel 6: Tug Operations – Inner Harbour.
Channel 10: Alternate Tug Operations – Inner Harbour.
Channel 11: Alternate Port Operations Working Channel.
Channel 68: Alternate Tug Operations – Outer Harbour.
Channel 13: Tug Operations – Outer Harbour.
Channel 69: Ship to ship.
Channel 14: HMAS Stirling – working channel.

Fax, Telex and Telephone:

Messages of notification of arrival may be sent directly to the Port Authority signal station by fax or telex.

Facsimile: 61 9 430 3414
Telex: FREHM AA 95919
Telephone: 430 3400
Cable: 6 FFREHM

Coast Radio Station:

All waters of the Port of Fremantle are within the VHF coverage of Perth Radio (VIP).

Public correspondence to a shore telephone may be made directly on either Channel 23, 26 or 16.

Maritime safety information messages, including coastal weather forecasts and navigation warnings, are transmitted on Channel 67 at the following times (Western Standard Time: i.e. GMT plus 8).

0718 1318 1918

TUGS: *Inner Harbour:* 3 available up to 4,800 h.p., join vessel in Gage Roads – extra charge if tug's line is used.

Outer Harbour: 2 tugs are available. Tugs join ships approx. 2.5 miles from berths – extra charge if tug's line is used.

Emergency Response Vessel: The Port Authority maintains a fully equipped response vessel equipped as a fire tender.

BERTHING: Inner Harbour: *Victoria Quay:*

Berth	*Length* (m.)	*Depth* (m.)	*Remarks*
A	201		No longer available.
B	153		No longer available.
C	198		No longer available.
D	176	11.0	General cargo berth.
E	230	11.0	General cargo berth.
F	204	11.0	Passenger Terminal over shed.
G	206	11.0	Function Centre over shed.
H	275	11.0	No shed.

Wharf strengthened for loads up to 145 tonnes.

All cranes have been removed from berths, mobile cranes only, except for Berths F and G, where an electrical crane is available for overhead gangways.

North Quay:

Berth No. 1:
Length 207 m. Depth 11.0 m. Shed 122 m. × 31 m.
General cargo berth, bulk tallow loading.
Discharge of petroleum products by pipeline.
1×200 mm. line, 200 mm. hose for BK and GO.
1×200 mm. line, 150 mm. hose for lube oil.
200 mm. and 300 mm. lines, 150 mm. and 200 mm. hoses for FO and DO.

Coflexit Stena Offshore heavy lift company operation using fixed heavy lift crane is available (hook only). Crane 300 tonnes at 25 m. and 150 tonnes at 32 m.

Berth No. 2:
Length 175 m. Depth 11.0 m.

Berth No. 3:
No longer operational.

Berths No. 4/5:
Length 296 m. Depth 13.0 m. Container terminal.
Served by twin lift portainer crane.
Capacity 70 tonne.
SWL on spreader 28.5 tonne.
Twin lift capacity.
Ro/Ro facilities – ship's quarter/side ramps.

Berths No. 6/7:
Length 336 m. Depth 13.0 m.
Container terminal. Shed 86 m. × 47 m.
Ro/Ro facilities – ship's quarter/side ramps.

Berths 7/8:
Length 371 m. Depth 13.0 m.
Container Terminal. Shed 78 m. × 47 m.
2 portainer cranes.
Ro/Ro facilities – ship's quarter/side ramps.

Berths No. 8/9:
Served by Gottwald mobile crane, capacity 80 tonne, and one container crane, capacity 63 tonne.
SWL on spreader 35 tonne.

Berth No. 10:
Length 187 m.
Depth 11.0 m.
No quay crane.
Bitumen Feedstock and Geelong Fuel can be discharged by 300 mm. line to Shell.

Berths No. 11 and 12:
Total length of wharf at this container terminal facility is 429 m.
No. 11: 196 m.
No. 12: 233 m.
Depth 11.0 m.
10 m. wide, articulated stern ramp (length 19.815 m., width 10.432 m.) at Eastern end. Capacity – main axle of forklift 53 tonne or stacked cargo, 5 tonne per service metre. Wharf decking 4.4 m. above LW.
1×twin lift portainer crane.
Container lifting capacity 48 tonnes.
Heavy lift capacity 61.3 tonnes.
Back-up area 7 ha., access by heavy duty roads.

Note: Operations at Berths No. 11/12 under review as common user berths.

Outer Harbour: Alumina Refinery Jetty (See Section B), length of berth 344 m., depth 38 ft. (11.6 m.).

Steelworks Jetty No. 1, length of berth 195 m., depth 36 ft. (11.0 m.).

Steelworks Jetty No. 2, length of berth 268 m., depth 40 ft. (12.2 m.).

Oil Refinery Jetty, see "Tankers" below.

Bulk Cargo Jetty, length of berth 480 m., depth 44 ft. (13.4 m.).

A bulk grain jetty of 955 ft. (291 m.) and depth 55 ft. (16.8 m.) serves Co-operative Bulk Handling Ltd's grain terminal.

The jetty is equipped with conveyors and ship loaders capable of handling bulk grain at the rate of 5,000 t.p.h. It will eventually be able to handle vessels up to 100,000 d.w.t. Max. sailing draft 41 ft. 06 in.

Also see "Bulk Cargo Facilities".

CRANES: 3 'twin lift' portainer cranes, 2 single lift container cranes, quay cranes of 7.5 tonne and 3 tonne capacity, mobile cranes of up to 25 tonne capacity, and 80 tonne Gottwald heavy lift crane. Also see "Berthing".

BULK CARGO FACILITIES: *Alumina Refinery Jetty:* Also see Section B.

To accommodate ships unloading bulk caustic soda and bulk carriers loading refined alumina. Maximum length of vessel 210 m.

Length of berth 326 m.
Depth 11.6 m.
Max. draft 10.97 m.
1 fixed gantry loader.
Outreach from wharf face 17.45 m.
Gross handling rate for alumina 1,200 t.p.h.

Steelworks Jetty No. 1: (Not currently in use).
Originally built for ships loading.
Length of berth 195 m.
Depth 11.0 m.

Steelworks Jetty No. 2:

For bulk carriers loading and unloading cement clinker slag, sugar, silica/mineral sands, zircon, LP gas, coke, coal, limestone, etc.

Length of berth 268 m.
Depth at berth 12.19 m.
Maximum length of ship 244 m.
Depth 12.19 m.
Max. draft 10.97 m.
1 travelling loading/unloading unit:
Maximum length of traverse 122 m.
Outreach from wharf edge – grabs 20.4 m.; spouts 23 m.

The loading section handles material from a conveyor belt to ship's hold. Unloading section involves fast grab operations between ship's hold and conveyor belt.

Gross handling rate: Loader 2,000 t.p.h. Unloader 750 t.p.h.

Bulk Cargo Jetty:

Two berths to accommodate bulk carriers unloading bulk cargoes. The berth serves the fertiliser works nearby and can be used by other importers by means of direct discharge to motor vehicles from hoppers built into the unloaders, or directly into portable hoppers on the Berth No. 2. Pipeline facilities are available for phosphoric acid, caustic, etc.

Berth No. 1:
Length 259 m.
Depth 13.4 m.
2 travelling unloaders:
Grab capacity 9.5 tonne.
Maximum length of traverse 187 m.
Outreach of grab 25.7 m.
Conveyor belt carries material to shore stockpile.
Capacity 1,000 t.p.h.

Berth No. 2:
Length 221 m.
Depth 13.4 m.
Hopper discharge to trucks.

Kwinana Grain Loading Jetty: One Berth.

To accommodate ships loading bulk grain cargoes. An approach neck 750 m. in length carries the conveyor system to berthing face.

Length 291 m.
Depth 16.8 m.
4 loaders with a combined capacity of 5,000 t.p.h.

STEVEDORES: Shipboard stevedoring by private contractor, usually arranged by ship's Agent. ETA should include particulars of cargo, showing heavy lifts, dangerous or hazardous cargoes, hatch stowage, gangs required, etc.

MEDICAL: Notice not necessary but advisable if treatment required. Full hospital facilities available. Cholera vaccinations essential if ship comes from affected areas. International certificates must be current.

TANKERS: *BP Oil Refinery Jetty:* See Section (C).

DENSITY: Salt 1025, generally at all tides.

FRESH WATER: Available 24 hours a day, delivered by up to 8 hoses each of 50 tonnes/p.h.

Note: Seasonally a water shortage in the Fremantle area may limit the amount of water which can be supplied to ships.

FUEL: Marine fuel (2 grades); Marine diesel. Notice 14 days then 48 hours.

FIRE PRECAUTIONS: Ship's watchman to be on duty. Ship heading out. Fenced off on land. Buoys 50 ft. (15 m.) out from ship marking prohibited area.

CONSULS:

Austria
Belgium
Denmark
Finland
France
Germany
Guatemala
Italy
Japan
Netherlands
Norway
Philippines
Portugal
Sweden
U.S.A.

REPAIRS: All types of deck and engine repairs possible.

DRY DOCKS: Shiplifters: Jervois Bay 7,520 tonnes; Australia Shipbuilding Industry 2,600 tonnes and Swan Dock 1,100 tonnes.

SURVEYORS: Germanischer Lloyd: C.R. Cox & Associates, c/o Tandon Marine Services, 39 Canning Highway, East Fremantle, W.A. 6158 (P.O.Box 350, Fremantle, W.A. 6160). Tel: (09) 3398222. Fax: (09) 3398023.

GANGWAY/DECK WATCHMAN: Watchman required (Ship's crew).

OPENING/CLOSING HATCHES: By arrangement between ship's Agent and Stevedore.

CERTIFICATES: Health; Derat; Load Line; Ship's Register; Articles. Also see "Melbourne".

CUSTOMS ALLOWANCES: According to local Customs Department.

CARGO GEAR: Strict surveillance of cargo handling gear by Commonwealth Government Dept. of Transport Australia. Also see "Melbourne".

REPATRIATION: Facilities exist for repatriation of crews.

AIRPORT: 35 km. to Perth International Airport. 23 km. to Perth Domestic Airport.

TIME: See "General" before first port.

HOLIDAYS: *Extraordinary Holidays – Port Closed:* Labour Day (1st Monday in March); Good Friday; Anzac Day (25th April); Union Picnic Day (celebrated on the first Tuesday in November); Christmas Day (25th December).

Ordinary Holidays: New Year's Day (1st January); Australia Day (celebrated on a Monday late in January); Easter Monday; State Foundation Day (1st Monday in June); Boxing Day (26th December).

On ordinary holidays waterside labour available to work ships in following categories:

(a) Scheduled passenger ships.
(b) Marine casualties.
(c) Ships that can complete cargo handling operations prior to the next engagement of labour.

POLICE/AMBULANCE/FIRE:
Ambulance – 277 9999, 277 8899 or 000.
Fire – 335 2201, 335 6262 or 000.
Police – 430 5244 or 000.
Port Security – 24 hours.
Rockingham Fire Brigade – 527 1827.

TELEPHONES: Telephones can be supplied to any vessel – installation time plus proportion of annual rental plus cost of calls.

SERVICES: All special services available.

SHIP SUPPLY SERVICES: Stirling Marine Services Pty. Ltd., P.O.Box 892, Fremantle, W.A. 6160. Tel: (09) 3358444. Telex: AA92821 Towboat.

Services: Passenger launches for crew ferries, agents, providores to vessels at anchor in Gage Roads and Cockburn Sound. Stores lighters and fresh water up to 150 tonnes per trip. Draft survey, paint punts, lines running.

Other Operators – Seaborne:
Australian Offshore Services, 111 St. George's Terrace, Perth, W.A. 6000.
Brambles Manford, 191 St. George's Terrace, Perth, W.A.
Finbar International, 42 Magnet Road, Canningvale, WA. 6155.
Tidewater Port Jackson Marine Pty. Ltd., 94a Murray Road, Bicton, W.A. 6157.
Atlas Offshore, c/o TNT Australia Resource Development or Union-Bulkships Pty. Ltd., 17 Henry Street, Fremantle, W.A. 6160.
Western Marine Service Co., 17 Mews Road, Fremantle, W.A. 6160.

Other Operators – Airborne:
Merifield Helicopters Pty. Ltd., 28 Broadway, Nedlands, W.A. 6009.
Mayne Bristow Helicopters Pty. Ltd., Jandakot Airport, Jandakot.
Jayrow Helicopters W.A. Pty. Ltd, 320 Great Eastern Highway, Redcliffe, W.A. 6104.
Vowell Air Services (Helicopters) Pty. Ltd., Hope Road, Jandakot Airport, 6164.
Lloyd Helicopters Pty. Ltd., 64 Canning Highway, Victoria Park, W.A. 6100.
Westcoast Helicopters Pty. Ltd, P.O.Box 108, Belmont, W.A. 6104.

IDENTIFICATION CARDS: See "Melbourne".

GARBAGE DISPOSAL: It is a breach of the Quarantine Act and F.P.A. regulations to discharge garbage, etc. into F.P.A. waters. To comply with the Quarantine Act, all food refuse on board ship must be placed in vermin proof receptacles until disposed of either by dumping at sea well away from F.P.A. or other restricted areas, or by placing in the 200L capacity containers provided by the F.P.A. and disposed of by incineration. (Flammable liquids should not be included due to incineration). Contact: Fremantle Port Authority, Tel: (09) 4304911, Fax: (09) 3361391.

WASTE OIL DISPOSAL: Service available using tanker trucks or barges.

Tanker trucks:
Apex Septics, 23A Felspar Road, Welshpool, W.A. 6106. Tel: (09) 4583706. Fax: (09) 4532831.
Cleanaway, Lot 24, Camboon Road, Malaga, W.A. 6062. Tel: (09) 2492244. Fax: (09) 2491033.
Liquid Salvage, 4 Kembla Way, Willetton, W.A. 6155. Tel: (09) 4575955. Fax: (09) 3541240.

Barges:
Stirling Marine Services, 17 Mews Road, Fremantle. Tel: (09) 3353286. Fax: (09) 3353282.
Fremantle Launch Service Pty. Ltd., 2 Doepel Street North, Fremantle. Tel/Fax: (09) 3351686.

Contact the companies direct regarding prices as these are negotiated, also re shore tank capacities.

SEAMAN'S CLUBS: Stella Maris Seafarers Centre, 14 Queen Victoria Street, Fremantle, W.A. 6162. Tel: (09) 3351958, 3356836. Fax: (09) 3356836. Facilities include accommodation, mass, telephone, currency exchange, bar and restaurant, postage facilities, shop, pool, table tennis, book and magazines, TV.

The Flying Angel Club, 76 Queen Victoria Street, Fremantle, W.A. 6160. Tel: (09) 3355000. Fax: (09) 3361690.

CURRENCY: Australian Dollar (A$).

REGULATIONS: Normal port regulations. Special Regulations for tankers berthing at Oil Refinery Jetties.
DEVELOPMENTS: Dredging of Inner Harbour to 13.0 m. completed.

Reconstruction of Berth No. 9 (Inner Harbour) to give 1,180 m. from Berth No. 4 completed.
AUTHORITY: Fremantle Port Authority, 1 Cliff Street, Fremantle, Western Australia 6160, P.O.Box 95, Fremantle, W.A. 6160. *Tel:* (09) 430 4911. After hours (09) 430 4962. *FAX:* (09) 336 1391. *Contact:* Captain E. J. Atkinson, Harbour Master/Shipping Services Manager. Mrs. K. G. Sanderson, General Manager.

AGENT: Patrick Sleigh Shipping Agencies Pty. Ltd., 1 Port Beach Road, North Fremantle, W.A. 6159, Australia. Tel: (09) 335 6311. Telex: 92434 PATSLE. Fax: (09) 430 6677. Seagram Code: 6 FPATSLE.

(B) KWINANA – Alcoa of Australia Ltd.

The following information was produced by Alcoa of Australia Ltd. Also see Section (A).

ALUMINA LOADING:
BERTHING: Berthing and loading will be facilitated if the vessel arrives with sufficient ballast for navigation requirements and retains as much ballast as possible for as long as possible without delaying the loading.

To aid the Pilot in lining up the vessel at the first hatch to be loaded it is necesary to advise the distance from the centre of the hatch to the front of the bridge. A pilot marker is then placed on the jetty.
Mooring Arrangements and Shifting Ship:

1. It is the vessel's responsibility to provide adequate mooring lines and to tend them properly whilst at the berth. A vessel with under strength or insufficient moorings will be considered unseaworthy. The quality of equipment and supervision shall be such that the ship is able to remain in the berth, in all normal weather conditions, without undue surging backwards and forwards or drifting off the wharf face.
   If, due to drift, it becomes apparent that the loading chute is endangered, loading will cease immediately. Time lost in such an event could be treated as a vessel delay.
2. Normal moorings at Kwinana, would consist of 3 headlines, 3 stern lines, a breastline at each end, a forward and an after spring. Vessels loading more than 25,000 tonnes or loading in 5 or more hatches are required to put out a stern line to the swamped mooring shoreside.
3. As the shiploader is of the fixed type, vessels are loaded by warping them backwards and forwards along the jetty so as to position the various hatches underneath the loading chute. If the ship is to be moved ahead, normally the sternlines and forward spring are slackened, whilst heaving on the headlines and the after spring. To move astern, the process is reversed and the line to the swamped mooring is used.
4. The loader spout must be completely withdrawn and retracted to its "parked" position, and the gangway removed from the vessel's side prior to commencement of warping.
   It is imperative not to commence warping the vessel without visual contact and agreement with shore personnel to proceed.
5. You will be advised 30 minutes before completion of each hold and we request your co-operation in providing your crew for vessel movements as promptly as possible.
6. The arrangement of mooring cells and bollards is such that even when shifting between adjacent hatches the breastlines typically, change their angle by up to 60° relative to the fore and aft line of the ship, thus losing most of their effectiveness. It is usually necessary therefore to relocate the breastlines at each shift by carrying the ends along the wharf from cell to cell. In the case of long shift ship (e.g. from No. 2 to No. 7 hatch) it may also be necessary to move head or sternlines and springs, since they may become unsafe or ineffective through being too short or too long.
7. IMPORTANT – SPRING LINES
   Unless care is exercised by the crew there is a tendency for the slackening spring to fall beneath the fender line and then snag there when being taken up. It can also "hold up" on the ship's side.
   This can create an extremely hazardous situation when it frees and whips up the ship's side and beyond.
   In the event of a line snagging, it is absolutely imperative that no crew member look over the side to check the cause or be in an area that could be subject to the whip of the line when freed (See "Plan"). It is suggested that the possible snagging be checked from the comparative safety of the wing of the bridge and the crew liaise with the Shore Supervisor regarding clearing the snag.
   To minimise the possibility of springs fouling the underside of the dock fenders it is strongly recommended that:
   (i) A messenger line attached to a "D" shackle be used on the slackening spring to keep the spring alongside the ship and above the fender line.
   (ii) The spring should not be slackened excessively.
8. Because of the frequency of shifting, the ship's crew will be on almost continuous standby. No matter how experienced the crew, tiredness may affect their ability and judgement.
   Normal seagoing practice dictates the responsibility of loading to the Chief Officer. At this berth he should be given sufficient support to ensure that he is not unduly fatigued. It will also help if the number of moves between hatches is kept to the minimum compatible with the vessel's strength and design limitations.

Line Priorities: Many ships are not fitted with sufficient self-tensioning or self-stowing mooring winches to be able to work all mooring ropes direct from the winch drums. Where only 2 or 3 such winches are fitted, it is important that they be used to the best advantage. We recommend that the following priorities be observed:

1. Forward
   (a) Two head lines, for warping ship ahead. (May be turned up on windlass warping drums).
   (b) For'd spring – for warping astern.
   (c) Breast line – for holding alongside.
   (d) Third head line, extra breast lines, etc.
2. Aft
   (a) Two stern lines, for warping astern.
   (b) Line to swamped mooring – for warping astern.
   (c) After spring – for warping ahead.
   (d) After breast line – for holding alongside.
   (e) Third stern line, extra breast line, etc.
3. Where a breast line cannot be secured directly to a winch or warping drum, a second breast line should be provided.

Cleanliness/Draft Survey: Prior to loading, the vessel's holds and hatch covers will be inspected by an Independent Surveyor engaged by Alcoa or the Consignor.

This Surveyor will also conduct a Draft Survey in conjunction with the Chief Officer.
Shipping Foreman: Alcoa's Shipping Foreman supervises the loading of the vessel and will liaise with the Chief Officer. Hatch stowages and order of loading should be advised to the Foreman prior to commencement of loading.
Pollution: We are obliged by Fremantle Port Authority Regulations to report any pollution caused by vessels at our berth.

GENERAL:
Jetty Approach: The Alcoa Jetty is located on the East side of Cockburn Sound and is approached from Gage Roads via the Success, Parmelia, Stirling and Calista Channels.

Vessels in ballast and subject to weather and draft limitations may as an alternative use the Woodman, Jervoise and Medina Channels within Cockburn Sound,

Alumina loaders berth on the Northern side of the jetty, port side. Loaded Caustic Tankers berth on the Southern side, starboard side to.

	Max. Draft
Fremantle Approach – Gage Roads	13.10 m.
Cockburn Approach – Parmelia and Success Channels	12.65 m.
Alcoa Kwinana – Jetty Approach	
Northern – Woodman, Jervoise and Medina Channels	8.53 m.
Southern – Sterling & Calista Channels	11.00 m.
Anchorage – Gage Roads on sand	
Cockburn Sound on clay	16.45 m.

Refer Chart AUS.117 for detail.
Facilities, Supervision and Manning: The berth consists of 8 cells, each 18.9 m. in diameter spanning 335.3 m. No. 1 Cell is 152.4 m. from the shore. No. 8 Cell is 487.7 m. from shore.

There is a maximum of 12.2 m. depth of water alongside the jetty and vessels are restricted to a maximum of 11.00 m.

The jetty runs due West from the Plant site. Loading vessels will berth port side to, heading West and discharging vessels berth starboard side to.

The loading berth is fitted with line haul winches, guides, bollards, quick release hooks and cleats to assist in line-handling operations. There is also a heavy line astern to "swamped mooring", to which the ship's line can be attached to assist between hold moves. This heavy line should be let go upon completion of loading to enable Alcoa staff to recover it before Pilot arrives.

All line handling on the jetty is carried out exclusively by Alcoa staff and ship's crew are prohibited from handling lines on the jetty.

A remote controlled gangway is situated on Cell 4 adjacent to the "loader".

The loader operator controls the gangway and will put it in position in response to the call button either from the ship for those wishing to go ashore or at the foot of the gangway for those boarding. Signs indicate location and operation of call device. However, discharging vessels on the South side must provide their own access. A safety net is required under the gangway which must be provided and fitted by the vessel. (Refer Navigation 'Miscellaneous Equipment' Regulations).
Dock Access Restrictions: Due to the construction of the jetty which provides limited access for vehicles, it is necessary to restrict traffic to ensure maximum access for emergency vehicles.

The overall control of movements at the jetty is strictly under the direction and control of the Alcoa Foreman who liaises with Security Staff on personnel and vehicle access.

Directions given by Alcoa shipping and security staff *must* be complied with immediately.

Access to the jetty by personnel and vehicles will be restricted where the access of emergency vehicles or safety is jeopardised.

Access to the dock will be allowed at the discretion of Alcoa supervisory staff whose decision is final.

(a) When the safety of personnel and vehicles is not endangered.
(b) A vehicle is on lawful business providing services to Alcoa or to the vessel, i.e. provisions, laundry, lubricating oils, servicemen and emergency services, etc.
(c) Company vehicles servicing equipment or transferring personnel.
(d) Vehicles delivering baggage, large parcels, carrying persons requiring medical attention or Pilots and Masters to and from the vessel.
(e) No hindrance to emergency vehicles will occur.
(f) When a vehicle does not exceed 15 tonnes all up weight.
(g) At the Master's request.

Vehicles are not to remain on the jetty unattended for any reason, and must complete their business and be removed from the jetty promptly. Alcoa reserves the right to remove vehicles from the jetty without consulting the owner or driver, should the need arise and will accept no responsibility for accidental damage to the vehicle should this occur. Persons proceeding in an unsafe manner on the jetty will be fully responsible for any claims made due to their actions.

No bunkering facilities are available on the dock, however a barge from Fremantle is available for the transfer of fuel oils, subject to weather conditions.

Road tanker delivery of fuel oil is prohibited on the dock.

Water is normally available at 50 tonnes per hour from connections on the dock.

Provisions, laundry and engineering services have access to the vessel from the dock.

The movement of flammable materials over Alcoa property is strictly controlled and permission must be sought from the Transportation Officer before any transfer to or from vessels at the berth.

General Information: The jetty is 17 km. from Fremantle by road with no public transport services readily available.

Alcoa Security Personnel will provide first aid for minor injuries and an ambulance is available at the plant for urgent transferring of patients to hospital, however, normal medical needs will be arranged by the Agent.

There is a telephone in the jetty office. All local calls are free. This telephone also provides the facility for interstate or overseas calls but on a "reversed charges" basis only.

Access to and from the jetty is normally by means of a remote controlled gate and it will be necessary to follow the instructions on the notice boards at the gates to gain entry or exit.

Besides voice communications with the main Security Office there is remote control television surveillance of the whole dock area.

LOADING:

Description of Product: A fine white powder Al_2O_3 - density 0.99 cu.m. (36 cu.ft.) per tonne.

Stowage factor: 1.05 cu.m. per tonne in a bulk carrier.

Transportable Moisture Limit (TML)	12%
Average Moisture Content (this product)	0.40%

Absorbs moisture, not to be loaded in heavy rain. Is chemically inert and will not contaminate or damage other cargo except through dust effect alone. No inherent vice.

Ship Loader – Dimensions, Loading Rate and Limitations: The non-traversable, lifting and slewing loader is located on the fourth cell, 318.2 m. from the shore.

The loader is an open spout feed type with a dust control box fitted on the load chute and is fed by conveyor systems from storage bins ashore.

NOTE: Vessel is required to move under its own power, to enable loader spout positioning over hold. Fullest co-operation of vessel's crew and officers is required to minimise non-loading time.

The loader is capable of a maximum of 1,300 t.p.h. whilst loading and allowing for vessel movements, achieves an average overall loading rate of 750 t.p.h. from start to finish of loading, depending on vessel's configuration and hold capacities.

All cargo is weighed continuously by a Weightometer, accurate to within 2.0%, which permits a record of hatch tonnages. However the Weightometer is a guide only and must not be relied on as total cargo loaded is determined by draft survey.

The loader spout is capable of being raised and lowered and the supporting boom swings horizontally through approximately 20° West to 15° East of North at maximum extension of boom.

HW to underside of loader boom in operating position is 17 m.

Fender face to vertical centre line of spout extended is 17.45 m.

Fender face to vertical centre line of spout retracted is 7.85 m.

Loader chute fully lowered is 7.32 m. below HW mark.

Loader chute fully raised is 8.61 m. above HW mark.

HW is 3.66 m. below top of cell.

Variation between HW and LW rarely exceeds 1.22 m.

Loader boom must be fully retracted to raise and lower for vessel berthing and departure.

Alumina Vessel Limitations:

Length Overall	200.00 m.
Breadth	30.50 m.
Draft	11.00 m.

Height of hatch coaming (or any equipment in way of loader access) not to exceed 15.85 m. above waterline.

Ship's beam; the distance from shell to inside of fore and aft coaming at centre hatches, not to exceed 7.92 m.

Vessels with division in holds or centre line bulkheads unacceptable for loading at this facility.

Projections outside main hull line must not exceed 0.5 m.

All drains, hatch wells, bridges, etc., to be dry and sealed, vents to be closed before loading.

Cargo to be protected against sweat, however not necessary to cover steel bulkheads.

Recommended that winches and engine room skylights be covered to avoid dust nuisance.

Vessels not fitted with easily closed hatch covers, should have hatch tents or tarpaulins prepared to quickly cover open holds during adverse weather.

Hatch/Hold Cleaning: Holds must not be cleaned whilst vessels are secured at Alcoa Berths.

Vessels whose holds have not been passed as suitable for loading alumina, must make arrangements to have those holds brought up to the required standard. As cleaning cannot take place at Alcoa berth, the vessel must move to a suitable berth within the port, for this purpose.

Working Times: 7 days per week, 24 hours per day, however, we request that berthing and sailing movements avoid shift change times of 0630 – 0730 hrs., 1430 – 1530 hrs. and 2230 – 2330 hrs. daily.

Berthing and Sailing: Any time, subject to weather, Pilot and tug availability. 2 tugs are required for berthing.

Vessels in excess of 10.20 m. draft and/or 185 m. in length overall require 1 tug for sailing.

Vessels in excess of 11.00 m. draft require 2 tugs for sailing.

Survey: Holds will be inspected for cleanliness by a qualified surveyor appointed by Alcoa or the Consignee prior to loading commencing. Holds must be free of all rust scale, residues of previous cargo, dry and swept as required for wheat cargo. Alcoa has no responsibility for vessel cleanliness.

A qualified surveyor will also carry out a full draft survey in conjunction with the Chief Officer.

Documentation: On completion of loading, an Alcoa Officer or Representative will attend on board to complete all documentation.

The vessel's Agent compiles the Notice of Readiness, Time Sheet/Statement of Fact, Manifest and any supplementary documents required by Charterers and Owners.

The details for the Timesheet/Statement of Fact will be taken from the shore log maintained by the Shipping Foreman.

The Alcoa Officer or Representative compiles the Bills of Lading, Weight Certificates and provides details of times, hold quantities etc., for completion of required documents.

CAUSTIC DISCHARGE:

APPROACH & BERTHING: During daylight hours, vessels approach from Cockburn Sound via Southern Channels assisted by 2 tugs and Pilot, drop the port anchor in the vicinity of Cell 8, then move astern parallel to the jetty until the vessels's discharge manifold is in line with the South Side Alcoa discharge boom on Cell 3.

The vessel is secured and Alcoa staff connect the discharge boom to the vessels's discharge manifold.

At present no gangway is provided by Alcoa and vessels must provide and rig suitable access.

A safety net must be rigged by the vessel under the gangway that complies with the Navigation (Miscellaneous Equipment) Regulations.

MAX. SIZE: *Vessel Dimension Limitations:*

Maximum Length Overall	213 m.
Maximum Breadth	Not a limiting factor
Maximum Draft	11.0 m.

(But subject to an additional allowance for tides granted by FPA).

If possible, tankers should ballast whilst discharging cargo, minimising height above water line to avoid damage to the metal discharge boom and to reduce time from completion until sailing.

Due to the fendering system and cellular structure of the jetty, minimum limitations also apply but these affect only smaller tankers and each nomination is judged separately.

DISCHARGING: *Discharge Facilities – Dimensions and Capabilities:* Articulated metal boom – single point discharge, 0.3 m. (12 in.) diameter pipe and ASA150 flange. Connected by 0.406 m. (16 in.) diameter pipe to surge tank at foot of jetty.

Pumping head 12.192 m. (40 ft.) to top of surge tank. Surge tank 335 m. from vessel's side.

Maximum throughput not to exceed 2,000 tonnes per hour governed by the following limitations:

(a)Discharge pressure not to exceed 1,241.06 kPa per sq.m. (180 p.s.i.).

(b)Minimum operating pressure 662 kPa (96 p.s.i.).

Survey: Upon arrival at the Company's berth, a Company-appointed surveyor will collect the loadport sample(s) from the vessel's Chief Officer and will take samples from each of the holds containing caustic soda for Kwinana discharge. The Surveyor will also perform an ullage survey on these holds and determine the quantity of caustic soda solution discharged. This quantity and analysis of the referred samples will be used to determine the 100% NaOH (DMT) quantity of caustic soda delivered.

The Dry Tank Certificate will be signed by the Company's Surveyor upon satisfactory completion of discharge.

Description of Product: Sodium Hydroxide (NaOH) generally known as caustic soda or lye is a commercially important alkaline, shipped for Alcoa as approximately 50% NaOH aqueous solution. It has the appearance of water, is odourless and does not appear dangerous. However, it is one of the harshest chemicals and requires stringent safety precautions. It is especially corrosive to eyes and skin and this means that:

Following eye contact, washing with water must commence within 10 seconds if permanent injury is to be avoided.

Following skin contact, washing with copious quantities of water should commence immediately, to prevent slow-healing chemical burns. (saponification).

The wearing of adequate protective clothing and proper training of all personnel is extremely important.

Waste disposal and clean up can be effected by flushing small quantities with water and by neutralising larger amounts with acid (preferably acetic acid).

Waste disposal must conform with State and Federal Laws.

Handling: Only necessary staff required to control pumping should be in the vicinity of caustic equipment whilst pumping is in progress.

All persons should wear approved clothing, gloves, helmets, shoes and eye protection whilst handling equipment.

If caustic comes in contact with skin or eyes, fresh water should be liberally applied and Alcoa security personnel contacted for assistance to enable the proper treatment to be given quickly.

Documentation: Notice of Readiness and Time Sheet compiled by the vessel's Agent will be signed upon completion of discharge and prior to departure by Alcoa's Representative.

Working Times: 7 days per week, 24 hours per day, however, we request that berthing and sailing movements avoid shift change times of 0630 – 0730 hrs., 1430 – 1530 hrs. and 2230 – 2230 hrs. daily.

Berthing and Sailing: Anytime subject to weather, quarantine, Pilot and tug availability.

REGULATIONS: Normal port regulations. Special Regulations for tankers berthing at Oil Refinery Jetties.

DEVELOPMENTS: Dredging of Inner Harbour to 13.0 m. completed.

Reconstruction of Berth No. 9 (Inner Harbour) to give 1,180 m. from Berth No. 4 completed.

AUTHORITY: Fremantle Port Authority, 1 Cliff Street, Fremantle, Western Australia 6160, P.O.Box 95, Fremantle, W.A. 6160. *Tel:* (09) 430 4911. After hours (09) 430 4962. *FAX:* (09) 336 1391. *Contact:* Captain E. J. Atkinson, Harbour Master/Shipping Services Manager. Mrs. K. G. Sanderson, General Manager.

AGENT: Patrick Sleigh Shipping Agencies Pty. Ltd., 1 Port Beach Road, North Fremantle, W.A. 6159, Australia. Tel: (09) 335 6311. Telex: 92434 PATSLE. Fax: (09) 430 6677. Seagram Code: 6 FPATSLE.

(B) KWINANA – *Alcoa of Australia Ltd.*

The following information was produced by Alcoa of Australia Ltd. Also see Section (A).

ALUMINA LOADING:

BERTHING: Berthing and loading will be facilitated if the vessel arrives with sufficient ballast for navigation requirements and retains as much ballast as possible for as long as possible without delaying the loading.

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Mooring Arrangements and Shifting Ship:

1. It is the vessel's responsibility to provide adequate mooring lines and to tend them properly whilst at the berth. A vessel with under strength or insufficient moorings will be considered unseaworthy.
   The quality of equipment and supervision shall be such that the ship is able to remain in the berth, in all normal weather conditions, without undue surging backwards and forwards or drifting off the wharf face.
   If, due to drift, it becomes apparent that the loading chute is endangered, loading will cease immediately. Time lost in such an event could be treated as a vessel delay.
2. Normal moorings at Kwinana, would consist of 3 headlines, 3 stern lines, a breastline at each end, a forward and an after spring. Vessels loading more than 25,000 tonnes or loading in 5 or more hatches are required to put out a stern line to the swamped mooring shoreside.
3. As the shiploader is of the fixed type, vessels are loaded by warping them backwards and forwards along the jetty so as to position the various hatches underneath the loading chute. If the ship is to be moved ahead, normally the sternlines and forward spring are slackened, whilst heaving on the headlines and the after spring. To move astern, the process is reversed and the line to the swamped mooring is used.
4. The loader spout must be completely withdrawn and retracted to its "parked" position, and the gangway removed from the vessel's side prior to commencement of warping.
   It is imperative not to commence warping the vessel without visual contact and agreement with shore personnel to proceed.
5. You will be advised 30 minutes before completion of each hold and we request your co-operation in providing your crew for vessel movements as promptly as possible.
6. The arrangement of mooring cells and bollards is such that even when shifting between adjacent hatches the breastlines typically change their angle by up to 60° relative to the fore and aft line of the ship, thus losing most of their effectiveness. It is usually necessary therefore to relocate the breastlines at each shift by carrying the ends along the wharf from cell to cell. In the case of long shift ship (e.g. from No. 2 to No. 7 hatch) it may also be necessary to move head or sternlines and springs, since they may become unsafe or ineffective through being too short or too long.
7. IMPORTANT – SPRING LINES
   Unless care is exercised by the crew there is a tendency for the slackening spring to fall beneath the fender line and then snag there when being taken up. It can also "hold up" on the ship's side.
   This can create an extremely hazardous situation when it frees and whips up the ship's side and beyond.
   In the event of a line snagging, it is absolutely imperative that no crew member look over the side to check the cause or be in an area that could be subject to the whip of the line when freed (See "Plan"). It is suggested that the possible snagging be checked from the comparative safety of the wing of the bridge and the crew liaise with the Shore Supervisor regarding clearing the snag.
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   (b) For'd spring – for warping astern.
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Refer Chart AUS.117 for detail.

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Ship Loader – Dimensions, Loading Rate and Limitations: The non-traversable, lifting and slewing loader is located on the fourth cell, 318.2 m. from the shore.

The loader is an open spout feed type with a dust control box fitted on the load chute and is fed by conveyor systems from storage bins ashore.

NOTE: Vessel is required to move under its own power, to enable loader spout positioning over hold. Fullest co-operation of vessel's crew and officers is required to minimise non-loading time.

The loader is capable of a maximum of 1,300 t.p.h. whilst loading and allowing for vessel movements, achieves an average overall loading rate of 750 t.p.h. from start to finish of loading, depending on vessel's configuration and hold capacities.

All cargo is weighed continuously by a Weightometer, accurate to within 2.0%, which permits a record of hatch tonnages. However the Weightometer is a guide only and must not be relied on as total cargo loaded is determined by draft survey.

The loader spout is capable of being raised and lowered and the supporting boom swings horizontally through approximately 20° West to 15° East of North at maximum extension of boom.

HW to underside of loader boom in operating position is 17 m.

Fender face to vertical centre line of spout extended is 17.45 m.

Fender face to vertical centre line of spout retracted is 7.85 m.

Loader chute fully lowered is 7.32 m. below HW mark.

Loader chute fully raised is 8.61 m. above HW mark.

HW is 3.66 m. below top of cell.

Variation between HW and LW rarely exceeds 1.22 m.

Loader boom must be fully retracted to raise and lower for vessel berthing and departure.

Alumina Vessel Limitations:

Length Overall	200.00 m.
Breadth	30.50 m.
Draft	11.00 m.

Height of hatch coaming (or any equipment in way of loader access) not to exceed 15.85 m. above waterline.

Ship's beam; the distance from shell to inside of fore and aft coaming at centre hatches, not to exceed 7.92 m.

Vessels with division in holds or centre line bulkheads unacceptable for loading at this facility.

Projections outside main hull line must not exceed 0.5 m.

All drains, hatch wells, bridges, etc., to be dry and sealed, vents to be closed before loading.

Cargo to be protected against sweat, however not necessary to cover steel bulkheads.

Recommended that winches and engine room skylights be covered to avoid dust nuisance.

Vessels not fitted with easily closed hatch covers, should have hatch tents or tarpaulins prepared to quickly cover open holds during adverse weather.

Hatch/Hold Cleaning: Holds must not be cleaned whilst vessels are secured at Alcoa Berths.

Vessels whose holds have not been passed as suitable for loading alumina, must make arrangements to have those holds brought up to the required standard. As cleaning cannot take place at Alcoa berth, the vessel must move to a suitable berth within the port, for this purpose.

Working Times: 7 days per week, 24 hours per day, however, we request that berthing and sailing movements avoid shift change times of 0630 – 0730 hrs., 1430 – 1530 hrs. and 2230 – 2330 hrs. daily.

Berthing and Sailing: Any time, subject to weather, Pilot and tug availability. 2 tugs are required for berthing.

Vessels in excess of 10.20 m. draft and/or 185 m. in length overall require 1 tug for sailing.

Vessels in excess of 11.00 m. draft require 2 tugs for sailing.

Survey: Holds will be inspected for cleanliness by a qualified surveyor appointed by Alcoa or the Consignee prior to loading commencing. Holds must be free of all rust scale, residues of previous cargo, dry and swept as required for wheat cargo. Alcoa has no responsibility for vessel cleanliness.

A qualified surveyor will also carry out a full draft survey in conjunction with the Chief Officer.

Documentation: On completion of loading, an Alcoa Officer or Representative will attend on board to complete all documentation.

The vessel's Agent compiles the Notice of Readiness, Time Sheet/ Statement of Fact, Manifest and any supplementary documents required by Charterers and Owners.

The details for the Timesheet/Statement of Fact will be taken from the shore log maintained by the Shipping Foreman.

The Alcoa Officer or Representative compiles the Bills of Lading, Weight Certificates and provides details of times, hold quantities etc., for completion of required documents.

CAUSTIC DISCHARGE:

APPROACH & BERTHING: During daylight hours, vessels approach from Cockburn Sound via Southern Channels assisted by 2 tugs and Pilot, drop the port anchor in the vicinity of Cell 8, then move astern parallel to the jetty until the vessels's discharge manifold is in line with the South Side Alcoa discharge boom on Cell 3.

The vessel is secured and Alcoa staff connect the discharge boom to the vessels's discharge manifold.

At present no gangway is provided by Alcoa and vessels must provide and rig suitable access.

A safety net must be rigged by the vessel under the gangway that complies with the Navigation (Miscellaneous Equipment) Regulations.

MAX. SIZE: *Vessel Dimension Limitations:*

Maximum Length Overall	213 m.
Maximum Breadth	Not a limiting factor
Maximum Draft	11.0 m.

(But subject to an additional allowance for tides granted by FPA).

If possible, tankers should ballast whilst discharging cargo, minimising height above water line to avoid damage to the metal discharge boom and to reduce time from completion until sailing.

Due to the fendering system and cellular structure of the jetty, minimum limitations also apply but these affect only smaller tankers and each nomination is judged separately.

DISCHARGING: *Discharge Facilities – Dimensions and Capabilities:* Articulated metal boom – single point discharge, 0.3 m. (12 in.) diameter pipe and ASA150 flange. Connected by 0.406 m. (16 in.) diameter pipe to surge tank at foot of jetty.

Pumping head 12.192 m. (40 ft.) to top of surge tank. Surge tank 335 m. from vessel's side.

Maximum throughput not to exceed 2,000 tonnes per hour governed by the following limitations:

(a)Discharge pressure not to exceed 1,241.06 kPa per sq.m. (180 p.s.i.).

(b)Minimum operating pressure 662 kPa (96 p.s.i.).

Survey: Upon arrival at the Company's berth, a Company-appointed surveyor will collect the loadport sample(s) from the vessel's Chief Officer and will take samples from each of the holds containing caustic soda for Kwinana discharge. The Surveyor will also perform an ullage survey on these holds and determine the quantity of caustic soda solution discharged. This quantity and analysis of the referred samples will be used to determine the 100% NaOH (DMT) quantity of caustic soda delivered.

The Dry Tank Certificate will be signed by the Company's Surveyor upon satisfactory completion of discharge.

Description of Product: Sodium Hydroxide (NaOH) generally known as caustic soda or lye is a commercially important alkaline, shipped for Alcoa as approximately 50% NaOH aqueous solution. It has the appearance of water, is odourless and does not appear dangerous. However, it is one of the harshest chemicals and requires stringent safety precautions. It is especially corrosive to eyes and skin and this means that:

Following eye contact, washing with water must commence within 10 seconds if permanent injury is to be avoided.

Following skin contact, washing with copious quantities of water should commence immediately, to prevent slow-healing chemical burns. (saponification).

The wearing of adequate protective clothing and proper training of all personnel is extremely important.

Waste disposal and clean up can be effected by flushing small quantities with water and by neutralising larger amounts with acid (preferably acetic acid).

Waste disposal must conform with State and Federal Laws.

Handling: Only necessary staff required to control pumping should be in the vicinity of caustic equipment whilst pumping is in progress.

All persons should wear approved clothing, gloves, helmets, shoes and eye protection whilst handling equipment.

If caustic comes in contact with skin or eyes, fresh water should be liberally applied and Alcoa security personnel contacted for assistance to enable the proper treatment to be given quickly.

Documentation: Notice of Readiness and Time Sheet compiled by the vessel's Agent will be signed upon completion of discharge and prior to departure by Alcoa's Representative.

Working Times: 7 days per week, 24 hours per day, however, we request that berthing and sailing movements avoid shift change times of 0630 – 0730 hrs., 1430 – 1530 hrs. and 2230 – 2230 hrs. daily.

Berthing and Sailing: Anytime subject to weather, quarantine, Pilot and tug availability.

OPERATOR: Alcoa of Australia Limited, P.O.Box 252, Applecross, W.A. 6153. *Tel:* (09) 3165111. *Telex:* AA 93910. *FAX:* (09) 364 8920. *Cables:* Kwinalumin – Perth. *Contact:* D. Mihovilovich, Logistics Officer.

(C) KWINANA – BP Oil.

The Marine Terminal facilities of BP Refinery (Kwinana) Pty. Ltd. are situated within the enclosed waters of Cockburn Sound of the Port of Fremantle. The Terminal operates a total of 3 jetties, handling a wide range of petroleum products for both import and export.

Terminal Name: BP Refinery Kwinana Tanker Terminal.

Charts: Australian No. 112, 117, 754.

PILOTAGE: Pilotage is compulsory. Tankers with a draft of 11.0 m. or deeper embark the pilot outside Landfall Buoy in position Lat. 31° 57′ 18″ S., Long. 115° 38′ 48″ E., and the ship must not proceed beyond this area without a pilot in attendance. For tankers on a lesser draft, the pilot will board off Hallbank Beacon within Gage Roads. Pilotage is compulsory for all or any movements within port limits.

Arriving tankers must give a 48 hour, 24 hour and 2 hour notice of arrival by radio to the Harbour Master, Fremantle. Telex No. 95919 FREHM should be included in cable address.

Arriving tankers must have the correct, up-dated charts and sailing directions for entry to the Port of Fremantle.

ANCHORAGES: Gage Roads with depths to 16.5 m. on sand.

Cockburn Sound with depths to 18.3 m. on clay, well sheltered in all weathers.

APPROACHES: *Approaches to Berths:* Least depths to 15.20 m. outer harbour approaches and deep water channel in Gage Roads. Access into Cockburn Sound is via Success and Parmelia Channels with least depth of water of 14.7 m., and bottom channel width of 152.4 m.

Tides: The average rise and fall is 0.45 m., maximum 1.5 m. and minimum 0.15 m.

RESTRICTIONS: None. However, deep draft tankers are controlled by Dynamic Wave and Tide Data, which create windows for entry and departure to the channel.

MAX. SIZE:

Berth	*Max. LOA* (m.)	*Max. Draft*
Jetty No. 1	229	Maximum draft is calculated by use of the Dynamic Wave and Tide Data, and is agreed with BP Australia prior to loading of vessel.
Jetty No. 2	229	
Jetty No. 3	229	

HEALTH: The "Approval to Berth" scheme is used if an inbound tanker submits the required information by radio to his Agents not more than 24 hours and not less than 12 hours prior to arrival.

VHF: Fremantle Port Control has Channels 6, 12, 14, 16 and 67. Kwinana Tanker Agency has Channels 8, 12, 14, 16 and 67.

TUGS: Two tugs are stationed at Kwinana for the handling of tankers. Bollard pull capacities of these tugs are as follows:

Challenger	56 tonnes
Champion	51 tonnes

Two steel workboats, 9.84 m. in length and 250 h.p., are available for running lines. Passenger capacity 6 persons.

Workboats can be contacted on VHF Channels 12 and 14.

FRESH WATER: Available by pipeline to all Jetties, delivery rate about 50 tonnes per hour per hose. Kwinana tugs can supply up to 100 tonnes of fresh water to ships at the anchorage.

FUEL: Diesel oil is supplied via a 20 cm. shore line, and fuel oil via a 25 cm. shore line, at about 200 tonnes per hour. Shore hoses of 15 cm. are used.

TANKERS: Also see "Table" below.

Berths: A concrete steel piled shore arm extends Westerly for some 396 m., joining a 549 m. arm parallel to the shore, from which three "T" Head Jetty berths extend on the seaward side. Each "T" Head is 71.6 m. in length, with a distance between centres of 259.08 m. On each "T" Head there are 4×100 ton capacity bollards. In addition, each berth has 3 bollards (North and South). Jetty No. 3 has 50 tonne mooring dolphins at each end of the "T" Head for the reception of tankers up to 110,000 s.d.w.t.

Jetties No. 1 and 2 are provided with Davits Flexes. Jetty No. 3 is provided with Modified Woodfield Flow Booms, with a maximum outreach of 12 m., and maximum height above low water of 18.20 m. Fremantle is Datum Zero.

Jetties No. 1 and 2 have a 41 cm. crude discharge line with 20 cm. shore hoses.

Jetty No. 3 has a 71 cm. crude discharge line with 4×30 cm. shore hoses. Crude oil can be received at the Terminal at up to 6,000 tonnes per hour.

Depths:

Jetty No. 1	14.7 m. at L.W.O.S.T.
Jetty No. 2	14.7 m. at L.W.O.S.T.
Jetty No. 3	14.7 m. at L.W.O.S.T.

Manning: Each Jetty is manned by a "Jetty Operator" when hoses are connected throughout the period the ship is alongside. A 24 hour continuous shift system is worked within the Terminal, with shift changes at 0700 hrs., 1500 hrs. and 2300 hrs. (local time).

The Jetty Operator must always be contacted for any ship-shore cargo, ballast, slops or tank washing operations, and for any emergency that may arise. Similarly he will contact the ship prior to any shore-ship cargo/water/bunker movements. He will arrange hose connections, sampling and ullaging prior to departure, on arrival and at other times as necessary. The Head Operator will make visits to ensure compliance with Jetty Safety Regulations and Operating Procedures, and to assist in answering queries.

The Area Supervisor (Shipping and Oil Movements) is the normal shore representative, and is responsible for all organisational and administrative duties in the Terminal area. He can be contacted via the Jetty Operator/Head Operator/Shift Supervisor Offsites, or by using the shore supplied telephone onboard the ship by dialling 419 0359 or 419 0322. Area Supervisor (Shipping and Oil Movements) in attendance 0800 hrs. to 1630 hrs., Monday to Friday.

The Process Manager Offsites is the overall co-ordinator of the Tank Farm and Jetty activities and is not on shift. In normal day working hours, he can be contacted by telephoning 419 0238, and via the Shift Supervisor Offsites on 419 0569, or the Head Operator on 419 0322 out of hours.

A Documentation Clerk will provide the ship with final Certificates of Quality/Bills of Lading and other documentation as necessary prior to departure.

A Fremantle Port Authority representative will visit all ships from time to time to ensure compliance with Port Authority Regulations. He must be contacted in any emergency via the Jetty Operator.

The ship's Agent should be contacted for all matters, including those concerned with cargo movements.

Standard Restrictions for Ship Discharge:

	Jetties No.1,2 and 3 *Max. Hose String* *Back Pressure*	*Jetty No. 3* *Max. Flow Boom* *Back Pressure*
Finished Products	1,035 kPa	—
Deballasting/Tank Washing	1,035 kPa	—
Crude/Fuels		1,380 kPa

SERVICES:

Providoring: Ship's stores can be delivered to ship by craft. Shore labour is provided to deliver stores from the craft, but ship's crew must be used to take delivery of stores onboard. The craft will come alongside, subject to suitable weather, on arrival or as otherwise required. Ship's derrick or stores crane to be rigged and ready to lift stores onboard at the required time. The craft cannot come alongside whilst ship is working cargo or ballasting, unless boat is aft of accommodation, when Fremantle Port Authority approval must be obtained.

Launch Services: One larger launch with capacity for 30 passengers or 5 tonnes × 6 cu.m. hold space for stores, etc., and is fitted with VHF Channel 12.

Also see "Tugs".

TV Cassette Exchange Service: The Tanker Agency has an exchange service for Walport Video Cassettes.

Other services: Fresh and dry stores are readily available at Kwinana with delivery as required. Prices are reasonable and quality excellent. Bond stores are readily available, but it is advisable for arriving ships to radio requirements ahead for weekend or public holiday arrivals.

A laundry service, with pick-up and return within 24 hours, can be provided.

All types of ship repairs, including engineering, electrical, shipwrighting, plumbing, etc., can be arranged.

Radio, radar, gyro compass repairs can be arranged.

Cargo Movements Facilities:

Product	*No. of Lines Available*	*Size* (mm.)	*Receiving Tank Base Height Above Sea Level* (m.)	*Loading Rate* (t.p.h.)	*Line Length to Tanks from Jetty No. 1* (m.)	*Line Length to Tanks from Jetty No. 2* (m.)	*Line Length to Tanks from Jetty No. 3* (m.)	*Average Receiving Rate* (t.p.h.)
Lube Oils	2	200	5.5	200 each	450			—
Gas/Diesel Oils	2	300	5.5	600 each	900	1,150	1,400	—
Fuel Oil	3	400	5.5	700 each	900	1,150	1,400	—
Crude Oil	1	700	5.5	—	Not available	Not available	1,550	—
	2	400	5.5	—	1,050	1,300	1,550	—
Kerosenes	3	300	5.5	550 each	1,400	1,650	1,900	—
Motor Spirit	2	300	5.5	600 each	1,400	1,650	1,900	—
Unleaded Motor Spirit	2	200	5.5	500 each	1,400	1,650	Not available	—
Avgas	1	300	5.5	550	1,400	1,650	1,900	—
TEL/CR50	1	100	5.5	—	Not available	1,800	Not available	67.5
Ballast	1	350	5.5	—	1,280	1,530	1,730	900
Bunkers-Gas Oil	1	200	5.5	400	900	1,150	1,400	—
Fuel Oil	1	250	5.5	200	900	1,150	1,350	—

A full supply of Australian and British Admiralty Charts can be provided locally.

A full range of banking and postal service are available at the "Kwinana Hub" shopping complex, some 10 km. from the Refinery.

Medical, dental, hospital and chemist facilities are all readily available in the local area. X-ray facilities are available at Rockingham and Fremantle Hospitals.

Taxis are permitted to enter the Refinery area and pick-up or deliver to the Jetties.

A telephone for local calls only is placed on board to facilitate ship's business.

Ship's requirements of lubricating oil can be delivered in bulk at all Jetties.

AUTHORITY: Fremantle Port Authority (See "Section (A)).

GEELONG, Victoria: 38.09 S. 144.22 E. (See Plan)

PORT LIMITS: A line in a 150.5° direction from a beacon 1.5 chains West of the Little River entrance intersecting with a line in a 009° direction from the N.W. extremity of Sproat St., Portarlington. N.B. – This seaward limit passes 2 cables Eastward of No. 1 beacon Pt. Richards channel.

DOCUMENTS:

3 Crew Lists Form 3A and 3B.
Store List Form 42A.
Ports of Call Form.
1 Form 2A – Ship's Passenger Report.
1 Form 2B – Ship's Passenger Report.
1 Form 5 Part 1 – Report of Arrival.
1 Form 5 Part 2 – Goods in Crew Possession.
1 Form 5 Part 3 – Return of Stores.
1 Form QA 3 – Animal Cargo.
1 Form QA 4 – Ship's Pets.
2 Form QA 5 – Shipmaster's Bond.
Request for Radio Pratique (Health Clearance).

PILOTAGE: See "Melbourne". Radio ETA to "Seapilots Melbourne" 24 hours prior arrival advising deepest draft. Pilot station equipped with radio-telephone continuous watch on 2182 kHz., and VHF Channel 16. Pilots carry portable sets.

ANCHORAGES:

1. Quarantine. As directed.
2. Explosives.
   (a) *Outer:* 088° from Pt. Wilson Beacon 3.52 miles. Circle 0.25 miles (463 m.) radius. Depth 9.7m.
   (b) *Inner:* 077° from Pt. Wilson Beacon 1.77 miles. Circle 0.15 miles (278 m.) radius. Depth 6.4 m.
3. Vessels over 9.1 m. draft: outside No. 2 Beacon Pt. Richards and South of the line of prolongation of the Pt. Richards Channel. Least depth 12.5 m.
4. Vessels over 8.4 m. draft: South of and within 1 mile of No. 16 Beacon Pt. Richards Channel. Least depth 9.1 m.
5. Inner Harbour: As directed:

Note: Vessels desiring launch communication with the shore will normally anchor South of the Hopetoun Channel.

Masters of vessels are cautioned *(a)* that the bottom of the Inner Harbour is soft mud and is not good holding ground and *(b)* that vessels should not be immobilised unless with the express permission of the Harbour Master. Vessels at anchor should be adequately ballasted.

RESTRICTIONS: The maximum draft for any vessel to navigate in port waters is 10.5 m.

The movement of vessels in the channels with a draft of 10.0 m. or more will be regulated by the Harbour Master, and is subject to the actual tidal rise.

Times for entering the channels and/or departing from the various berths for these vessels can be obtained from the Harbour Master's office.

Night Navigation: Except for special vessels, all vessels over 200 m. LOA require daylight for navigation in the port, being defined as 30 minutes before sunrise to 30 minutes after sunset, applicable from the entrance to the Wilson Spit Channel.

Vessels in Ballast: For safe navigation, the ship's propeller should be immersed and the bow deep enough for adequate vision from the bridge, e.g. 170 m. – 200 m. LOA and draft 4.5 m. forward and 7.0 m. aft. Tanker 230 m. LOA, draft 5.5 m. forward and 8.0 m. aft. Containerships, Livestock Carriers, etc., must have adequate forward vision from the wheelhouse.

MAX. SIZE: Tankers: 265 m. length with 10.5 m. draft. Other vessels: Enquiries should be made with regard to vessels over 200 m. length. Max. beam 45 m.

HEALTH: An overseas vessel approaching the port requiring Pratique shall send a message to the Quarantine Officer not more than 24 hours and not less than 12 hours before arrival containing the following information: name of vessel, ETA, number of passengers, number of crew, number of passengers disembarking, port of departure and date, disease on board.

By supplying by radio to Agent the answers to 9 questions on the request for Radio Pratique (Health Clearance) Form (See "General – Health" before first port), the vessel may be permitted to berth prior to the granting of Pratique.

On arrival the health report shall be given to the Quarantine Officer, 2 copies being furnished on the prescribed form, one of which will be signed by the Quarantine Officer and returned to the Master.

RADIO: Coastal radio station for local messages "Radio Melbourne" VIM. The Port of Geelong Authority controls movement of traffic within the port and maintains a 24-hour watch.

Communication is affected as follows:

1. Telephone. Geelong 266252.
2. Radio Telephone VHF F/M (International Channel).

(i)	Channel 16	156.8 MHz.	Calling (continuous watch).
(ii)	Channel 12	156.6 MHz.	Working (continuous watch).
(iii)	Channel 8	156.4 MHz.	Pilots and Tugs.
(iv)	Channel 6	156.3 MHz.	Tugs.
(v)	Channel 67	156.375 MHz.	Safety.

These frequencies are the same as those operated by the pilot launches, Point Lonsdale Signal Station, Melbourne Harbour Control and all Port Phillip tugboats on commercial towage.

TUGS: Vessels normally towed from Hopetoun Channel to berth, extended towage if required. Two twin-screw 40 tonnes bollard pull tugs stationed in Geelong throughout 24 hours. Use of tug's line optional. Tugs equipped with VHF Channels 6, 8, 12 and 16.

BERTHING:

	No.	*Length (m.)*	*Depth (m.)*	*Use and facilities*
Bulk Grain Pier	2	201	11.0	Bulk grain export. Gantry extends 154 m. of berth.
Corio Quay South 1	1	183	9.7	Stern loading ramp for Roll-on/Roll-off. Rail access.
Corio Quay North 1	1	183	11.0	Dry bulk loading. Rate of loader 600 t.p.h.
2	1	183	11.0	Rail access. Gen. cargo shed 91 m. × 30.5 m.
Corio Quay North 3	1	161	9.7	Gen. cargo shed 97.5 m. × 27 m.
Lascelles Wharf 1	1	173	11.0	Dry bulk cargo – See "Bulk Handling Facilities".
2	1	173	11.0	
3	1	275	11.0	
Refinery Pier 1 & 2	2	213	11.0	Petroleum products.
3 & 4	2	275	11.0	Crude oil, chemicals and LPG export.
Pt. Wilson Explosives Pier	2	168	9.1	Dangerous cargo. Commonwealth Government controlled.
Pt. Henry	1	152	11.0	Bulk alumina and allied products. Unloading gantry.

BULK HANDLING FACILITIES: Two level luffing, grabbing cranes each linked to a mobile hopper, are capable of discharging directly into road trucks or by means of a shuttle conveyor incorporated into each hopper. This allows discharge onto a wharf conveyor allowing cargo to be discharged directly into the bulk handling facility.

A wharf receival hopper is situated at the Northern end of Lascelles No. 2, allowing self-discharge vessels to unload directly into the bulk handling facility.

The cranes and hoppers can traverse the full length of Lascelles No. 2 and No. 3 berths.

The storage facility is 155 m. × 45 m. and has 3 cargo bays with a total capacity of 50,000 tonnes. Each bay is separated by a 6 m. high retaining wall with full height dust curtain.

STEVEDORES: Labour ordering: Day labour must be ordered by 1000 hrs. the preceding day. Twilight shift and midnight shift must be ordered by 1400 hrs. Saturday labour must be ordered by 0900 hrs. Friday, Sunday labour by 1100 hrs. Friday (day and twilight shift), Sunday midnight before 1100 hrs., Friday. Monday labour is ordered at 1000 hrs. Sunday. Special requirements exist for labour requirements on public holidays.

MEDICAL: Comprehensive medical facilities available, including 459-bed Geelong Hospital. If vessel to be in port less than 24 hours it is advisable to radio Agent informing him of medical requirements prior to vessel's arrival.

TANKERS: Refinery Pier. 4 berths, depth alongside 11 m. Pumping platform 4.9 m. above low water, wharf 3.7 m. above low water. One-ton crane at each berth and accommodation ladder.

No. 1 and 2 Berths: Pier 887 m. long, direction 315°, berth 213 m. approx., suitable for ships up to 180 m. LOA. Ships moor to 2 spring dolphins 61 m. apart; pumping platform set back 1.7 m. from line of these dolphins.

No. 3 and 4 Berths: A branch from the main pier, direction 330°, berth 275 m. approx., suitable for ships up to 265 m. LOA. Ships lie alongside a concrete sprung berthing beam 73 m. in length. No. 4 Berth equipped with 4 rubber coned fenders, capstans and 90 tonnes S.W.L. mooring hooks for berthing large vessels. Distance between backspring bollards 35 m. Hoses 8 in. – reduction from 10 in. available.

Ballast: Tank Cleaning and Dirty Ballast Facilities: Line 12 in. Maximum quantity restricted by ullage in shore tank. Rate 900 t.p.h. Berths 1, 2, 3 and 4. All ballast must be discharged via the shore reception facilities even though oil free. Severe penalties will be imposed by the Authorities for any infringement of harbour regulations.

Geelong Port Authority takes a serious view of any form of oil pollution within the harbour, and Courts impose heavy penalties on offenders. Essential Master advises ship personnel before berthing of necessity for extreme care to ensure no oil spillage occurs.

Port Authority Circular: Mooring Ropes: In the light of new Tanker Terminal Safety requirements based on recent I.M.O. recommendations, some modification of the former stipulation regarding wire rope moorings may now be considered. Where backsprings are crossed on Refinery Berths 1 and 2, rope remains the preferred mooring. Otherwise where sliphooks are provided, wire moorings will be accepted, whereas they are not acceptable on bollards.

Please ensure that tank vessels entering the port have either rope moorings, wires with rope tails, or that vessels with wire moorings are berthed in locations where the wire eyes are placed on sliphooks.

DENSITY: Normally 1025, may decrease to 1023 after much rain, or increase to 1027 in Summer after prolonged dry spell.

FRESH WATER: Available at all berths from shore hose at 40-50 t.p.h.

FUEL: Marine fuel to 650 sec. and diesel fuel available Corio Quay North and Lascelles Wharf; all grades to 3,500 sec. available at Refinery Pier berth.

FIRE PRECAUTIONS: Stringent restrictions against burning or welding on vessels carrying dangerous cargoes. Standard fire precautions.

CONSULS: See "Melbourne".
REPAIRS: All services available. Most Melbourne repair and service firms will also undertake work in Geelong.
DRY DOCKS: *Rippleside Slipway:* 1,000 tons on 47.85 m. B.P. and repair workshop.
GANGWAY/WATCHMEN: Shore gangwayman available.
OPENING/CLOSING HATCHES: Crew or stevedores, to Master's requirements. It is normal to request bulk carriers to arrive at berth with all hatches open.
CERTIFICATES:

Derat Certificate (Health Requirement).
Ship's Articles (British) (Customs requirement).
Ship's Register (Customs requirement).
Load Line Certificate (Customs requirement).
Safety Equipment Certificate (Customs requirement).
Safety Radio Certificate (Customs requirement).
Last Port Clearance (Customs requirement).

CUSTOMS ALLOWANCES: 200 cigarettes or 250 gm. tobacco or 40 cigars. Spirits: Any bottle opened not to exceed 1 litre.
CARGO GEAR: Australian Navigation Act requirements. See "Melbourne".
REPATRIATION: Possible without difficulty.
AIRPORT: Nearest major commercial airport is Tullamarine, 50 miles distant, from which there are frequent interstate and international flights. Airport accessible by road in about 1 hour 15 minutes (direct bus).
TIME: See "General" before first port.
HOLIDAYS: Closed holidays: Christmas Day; Waterside Workers' Picnic Day; Labour Day; Good Friday; Anzac Day (Tanker operations excepted). Other holidays: Australia Day; Easter Monday; Queen's Birthday; Geelong Cup Day.
POLICE/AMBULANCE/FIRE: Police 26 2800; Ambulance 22 2555; Fire 22 2333.
TELEPHONE: Placed aboard on arrival; ship charged for calls and service.
SERVICES: Cleaning, painting, fitting out, etc., fumigation. Good fresh stores available.
SHORE LEAVE: No restrictions.
IDENTIFICATION CARDS: See "Melbourne".
GARBAGE DISPOSAL: Service available through agent. Garbage collected from shore end of gangway. No drums or skips provided. A$ 255.00 per service charge.
WASTE OIL DISPOSAL: By private contractor. Arrange through agent.
SEAMAN'S CLUBS: Missions to Seamen, 7 The Esplanade, North Shore, Victoria 3214. Tel: (052) 786985. Facilities/Services: Shop, international telephone, church services, football matches, outings, postage facilities and mini-bus collection.
AUTHORITY: Port of Geelong Authority, 65 Brougham Street, (P.O. Box 344), Geelong, Victoria 3220. *Tel:* (052) 221644. *FAX:* 052-216883. *Contact:* P.G. Morgan, C.E.O., Captain F. Bregman, Harbour Master.
AGENT: Patrick Sleigh Shipping Agencies Pty. Ltd., P.O.Box 37, 2 Moorabool Street, Geelong, Victoria 3220. Tel: (052) 22 1155. Telex: 32658 PATSLE. Fax: (052) 21 8119. Seagram Code: 3GPATSLE.

GERALDTON, W.A.: 28.46 S. 114.36 E. (See Plan)

PORT LIMITS: Inner Harbour includes all that area of water in Champion Bay bounded by a line drawn from Gregory Street, Geraldton, along the foreshore to a point due South of the Western extremity of the breakwater; thence along the breakwater to the Western extremity of the Eastern breakwater; thence S.E. to the foot of the said Gregory Street, and also including the Entrance Channel thereto.

Outer Harbour includes all that area of water in Champion Bay and Geelvink Channel bounded by an imaginary line drawn from Point Moore lighthouse true West as far as Longitude 114° 30′ E. thence true North to the shore of the mainland about 2.75 nautical miles (North and West from Woolawar Gully), but excluding the waters of Geraldton Inner Harbour and the Entrance Channel thereto.

ETA: "6GPA Harbour Master Geraldton" requires 48 hours and 24 hours notice prior arrival. The 24 hours message should be timed to be delivered before 1630 hrs. local time on the day before arrival so that arrangements can be finalised, when possible, in working hours. Please also indicate fore and aft draft in the 48 hours' notice. Vessels with Facsimile facility may send these ETAs to Fax No. 099-640546 (There is no Telex facility).

Masters are advised for medical and or other emergencies; the Harbour Master should be contacted through Principal or Local Agents.

Vessels arriving in ballast are requested to retain all clean ballast until after berthing. Discharging ballast before arriving may preclude berthing if strong wind conditions prevail. Vessel's ballast must comply with IMO/MEPC/July 1991 Requirements.

DOCUMENTS: Shipmaster's Bond QA 5, Departure Notice, 2 Crew Lists. Also see "Melbourne".
PILOTAGE: Compulsory. Pilot boards North and West of the Fairway Buoy (Lat. 28° 45.97′ S., Long. 114° 32.61′ E.)

All vessels are advised not to approach Eastward of the Fairway Buoy.

Pilot ladder and accessories, including access to vessel, must comply in all respects with current IMO/SOLAS requirements. Failure to comply *will* incur delays.

At NO time will mechanical pilot hoists be utilised due to swell conditions.

ANCHORAGE: The anchorage for vessels off the Port of Geraldton is Westward of a North/South line drawn through the Fairway Buoy.

Vessels must not anchor Eastward of the Fairway Buoy or within 0.5 nautical miles of the buoy. Anchorage holding ground is moderate holding only.

RESTRICTIONS: Swells up to 5.0 m. in outer approaches.

Movement of loaded vessels may be restricted by Harbour Master.

Bluff Point Leads or Outer Channel: Depth of water 10 m., minimum width of channel 180 m.

Curved Section of Channel: Depth of water 9.7 m. to 9.4 m.

Inner Harbour Channel and Manoeuvring Area: 9.1 m. Depth alongside Berths No. 2-5 is 9.4 m. All depths are at Port Datum, which is zero on the tide gauge.

MAX. SIZE: Length 213 m.; Beam 30.4 m. Permissible drafts: 8.7 m. at LW – 9.1 m. at 0.8 m. of tide, 9.3 m. at 1.1 m. tide, provided swell at Waverider Buoy does not exceed 3 m. Vessels wishing to load to maximums dependent on tide prevailing should contact Harbour Master before so doing.

Vessels in excess of the above will be accepted at the discretion of the Harbour Master. Vessels up to 233 m. LOA and 32.3 m. beam have been handled.

HEALTH: First Port of Entry, radio Australian Quarantine and Inspection Service not less than 12 hours prior to arrival advising state of health. Also see "General" – 'Health" before first port.
RADIO: VHF available for communications with Pilot. Channels 6, 9, 12 and 16. Continuous watch not maintained.
TUGS: 2 × 30 tons bollard pull. Tugs used at discretion of Harbour Master.
BERTHING: The wharf is divided into 4 berths numbered 1, 2, 3 and 4 from East end.

Berth No. 1 (Length 99 m.). The berth is used as a general purpose berth.

Berth No. 2 (Length 203 m.). The berth has an unobstructed apron of 27.5 m. for almost the full length of berth.

Berth No. 3 (Length 203 m.) mainly for loading of bulk grain. There are 2 loading gantries on the wharf each capable of loading wheat at the rate of 500 t.p.h.

Berth No. 4 (Length 281 m.): It is possible to use No. 4 for general purposes, but a loading gantry and conveyor system at the berth is used for loading mineral sands. Max. rate 1,200 t.p.h. Air draft for loader is 14.0 m. at zero tide.

Berth No. 5 is situated to the N.W. of the main wharf and runs in a N.N.E. direction. The berth is 213 m. in length with a mooring dolphin at the Southern end. The berth is used for general purposes and tanker discharge.

Berth No. 6 is 235 m. in length and is a continuous extension of Berth No. 5. It is used for general cargo, livestock, fertiliser discharge, etc.

CRANES: None.
STEVEDORES: 35 men. Working hours 0800 – 1700, Monday – Friday. Extended shifts and evening shifts all days except Saturday. Midnight shifts available.
FRESH WATER: At each berth at 25 t.p.h.
FUEL: Light diesel oil at 80 t.p.h. by tanker truck or by pipeline at Berth No. 5.
FIRE PRECAUTIONS: Fire fighting unit available.
REPAIRS: Engine and engineering repairs can be carried out. Arrange through Agents.
GANGWAY/DECK WATCHMEN: Normally done by ships' crew.

Two shore watchmen are employed on all tankers, and vessels undergoing fumigation.

OPENING/CLOSING HATCHES: Done by ships' crew.
CUSTOMS ALLOWANCES: Each crew member 200 cigarettes or 40 cigars or 8 oz. tobacco and limited amounts spirits per man.
CARGO GEAR: See "Melbourne".
REPATRIATION: Crew changes can be carried out with little difficulty.
AIRPORT: Local airport 11 km. East of town. International – Perth, 430 km. to the South.
TIME: See "General" before first port (GMT plus 8 hours).
HOLIDAYS: Christmas Day, Boxing Day, Easter, Labour Day, Anzac Day, Queen's Birthday, Foundation Day.
POLICE/AMBULANCE/FIRE: Police 64 1511; Ambulance 64 1808; Fire 21 2222.
TELEPHONES: Available at each berth (ordered through Agent).
SERVICES: Compass adjustment, radio and radar repairs available. Contact Agents.
BANKS: Commonwealth, Westpac, Bankwest, A.N.Z. Banking Group, National Australia Bank.
STORING: See "Prelims".

1. Stored by truck.
2. Not applicable.
3. Trucks allowed alongside (with the exception of tankers).
4. Forklifts allowed (with the exception of tankers).
5. Storing of ships must abide by Customs Regulations.
6. Waterside workers would be employed to assist with storing if required.

SHORE LEAVE: No restrictions.
IDENTIFICATION CARDS: Not required.
GARBAGE DISPOSAL: A collection service is available. 100 litre portable plastic containers are provided for use on board. Contact: Geraldton Port Authority. Tel: (099) 640522. Charges: A$ 45.00 per service plus A$ 3.00 per crew member per day per service. Collection and dropping off clean bins daily from 0700 hrs. to 0800 hrs.
WASTE OIL DISPOSAL: "Freemans Waste Disposal". Tel: (099) 213415. Fax: (099) 214371. 2 tanker trucks of 9,000 litres each are available. Charges: A$1.81 per 100 litres. Service available at any berth. Disposal at Council tip site.
SEAMAN'S CLUBS: Missions to Seamen, Marine Terrace, Geraldton. Tel: (099) 213272. Opening hours: 1900 – 2230. Club will close earlier if unattended. If service required during other hours please ring bell. Facilities: Chapel, international telephone calls, stamps, money exchange, refreshments, T.V. and video, library, snooker and table tennis, shop with souvenirs and toiletries.

CURRENCY: Australian Dollar.
DELAYS: All subject to weather conditions.
GENERAL: *Mineral Sands Loading:* We would like to remind Owners of the very stringent hold cleanliness requirements for vessels loading mineral sands, particularly rutile and zircon.

Owners will be aware that these sands are refined very high quality products and Surveyors require vessels to be completely free of all chemical residues, especially loose rust scale, before presenting for loading. Any work required must be done by shore labour, which is costly and time consuming.
AUTHORITY: Geraldton Port Authority, G.P.O.Box 1856, Geraldton, WA 6530, Australia. *Tel:* (099) 640522. *FAX:* (099) 640546. *Cables:* "6 GPA" – to Harbour Master. *Contact:* Captain L.W. Gault, Harbour Master (Mobile 018930668, After hours Tel: 099-215192, Pager 016-981440). Captain B.J.White, Deputy Harbour Master (Mobile 018930667, After hours Tel: 099-232825).

AGENT: Patrick Sleigh Shipping Agencies Pty. Ltd., P.O.Box 67, 10 Francis Street, Geraldton, W.A. 6530. Tel: (099) 216744, 216976. Telex: 91696 PATSLE. Fax: (099) 641924. Seagram Code: 6GPATSLE.

GLADSTONE, Queensland: 23.51 S. 151.15 E. (See Plan)

PORT LIMITS: Inside a line commencing at a point 1.5 miles North of East Point, Facing Island; thence to the outer extremity of Jenny Lind Bank, and thence by a line to Tiber Point.
DOCUMENTS: See "Melbourne".
PILOTAGE: ETA's may be sent through Brisbane or Rockhampton Radio Stations, not less than 24 hours before arrival, followed by amended advices where necessary as pilot launch takes 2 hours to reach Pilot Boarding Ground from town. Pilotage compulsory for all merchant ships. Pilot boards at the Fairway Buoy which is approx. 28 km. West of Bustard Head. VHF Channel 16 may be used to contact Pilot Station, call sign "Gladstone Harbour Control"; 24 hour watch maintained. Pilot boat also has VHF. Pilot boat orange launch and displays usual signals.

Boarding of Pilots may be possible by helicopter if vessel meets certain requirements. The decision will be made after radio communication with the vessel.
Coastal and Reef Pilotage: Pilotage through the Inner Route of the Great Barrier Reef to Torres Strait is conducted by licensed pilots of the Queensland Coastal Pilot Service Pty.Ltd. and the Queensland Coast and Torres Strait Pilot Service. See "Torres Strait" for details.

Masters are advised that pilotage in the Inner Route and at Hydrographers Passage is compulsory. Pilotage in the Great North East Channel is recommended by IMO. See "Torres Strait".
ANCHORAGE: Good anchorage inside Gatcombe Head about 7 cables South of Bushy Islet in 8 to 10 fathoms, sand and mud, North of Facing Island Leads.
RESTRICTIONS: The port is served by an entrance channel, some 10 km. long, with a bottom width of 183 m., dredged to 15.7 m. at LWOST.

The max. allowable draft of a vessel passing through the channel is determined by the following formula:

Allowable draft in metres = 15.7 m. + tide height –1.5 m./2.0 m.*
*–1.5 m. (for vessels less than 85,000 d.w.t.); – 1.8 m. (for vessels of 85,000 d.w.t. to 200,000 d.w.t.) and – 2.0 m. (for vessels greater than 200,000 d.w.t.).

The max. daily tide height is 4.9 m.

The min. daily tide height is 2.7 m.

Tankers carrying petroleum products may enter during hours of darkness only at Harbour Master's discretion.
MAX. SIZE: The Port can accommodate vessels of up to 16.4 m. draft on any day of the year. The maximum draft for entrance channels is dependent on tidal conditions. Length and breadth dependent upon wharf to which vessel is to proceed.

Principal wharves are:

Auckland Wharf	No. 1	Depth 11.30 m.	at LW
" "	No. 2	" 11.30 m.	"
" "	No. 3	" 11.30 m.	"
Barney Point		" 15.00 m.	"
South Trees	East	" 12.80 m.	"
" "	West	" 12.80 m.	"
Clinton Coal Wharf		" 18.80 m.	"
Smelter Wharf		" 15.00 m.	"
Clinker Wharf		" 10.40 m.	"

HEALTH: A system of Radio Pratique has been adopted for vessels calling at Gladstone as a first port in Australia provided they are regular callers from disease free areas.

All vessels requiring Pratique must radio answers to a series of questions regarding crew health, etc. to ship's Agents 24 hours prior to arrival.

See "General – Health" before first port.
RADIO: Radio messages passed to Agents via any coastal radio station. All shipping cables to Agents, etc., should be prefixed "Shipserv" to enable delivery destination outside ordinary postal hours if necessary.
VHF: Shipping movements are controlled by VHF Radio, the base station being operated by the Harbour Master and his Staff.
TUGS: 3 tugs are available for service at all times, with bollard pulls of 46, 46, and 50 tonnes. A fourth tug is available when required. Tugs normally join vessel in vicinity of South Trees Point. Tug's lines always used when vessels are piloted. There is no extra charge for use of tug's lines.
BERTHING: Large vessels loading at all times normally swing and berth starboard side to, head to sea, on flood tide. Vessels discharging bauxite at South Trees Island Wharf, berth at periods of slack water (high or low). Vessels loading alumina at this wharf berth either on flood tide or slack water – *never* on ebb tide.
Auckland Point Wharves: With total length of 640 m., there are 3 berths at Auckland Point, owned and operated by the Gladstone Port Authority.

No. 1 Berth: Common user berth for export of bulk products (previously used for coal storage and export – now available for other bulk products). Bulk products are exported through this berth over 2 bulk shiploaders each with a capacity of 800 tonnes/p.h. These loaders travel a distance of 142 m. along the wharf and are adjoined by 2 conveyors to the stockpile area. Depth of water at berth is 11.3 m. LWOST.

No. 2 Berth: This berth handles the export of grain (wheat, grain sorghum, oil seeds) from the rich grain growing areas of the Dawson/Callide Valleys and the Central Highlands. Grain is stored in the adjoining complex of silos and storage sheds.

Total Port capacity for storage of grain is over 82,000 tonnes. Taken from the storage areas by conveyors, the grain is loaded onboard vessels by 2 mobile gantry shiploaders at a combined rate of 1,600 tonnes/p.h. The berth depth is 11.3 m. LWOST.

No. 3 Berth: Petroleum products imported through this berth are stored in the tank farms constructed by the major oil companies on reclaimed land adjacent to the berth. This vital fuel is then distributed throughout Central Queensland. Caustic soda, sulphuric acid and LPG are also imported over this wharf. General cargo and special heavy lift vessels also use this berth. The berth depth is 11.3 m. LWOST.
Barney Point Wharf: This wharf with a total length of 205 m. is owned and operated by Thiess Dampier Mitsui Coal Pty. Ltd. Coal from the T.D.M. Mine at Moura and Thiess Brothers Mine at Blackwater is exported through this facility. Coal from the Moura Mine is carried 180 km. to the port over the direct Gladstone to Moura railway line. The stockpile area has a capacity of 400,000 tonnes. Shiploading is done by a single 2,000 tonnes/p.h. mobile shiploader. The berth depth is 15.0 m. LWOST.
South Trees Wharf: Owned and operated by Queensland Alumina Limited, this facility handles all cargoes for the giant alumina refinery. Bauxite is imported from Weipa (in North Queensland) and alumina is exported to all parts of the world. The other components necessary for the alumina process – caustic soda and fuel oil are also imported over the wharf.

Depth at the berth is 12.8 m. LWOST.
Boyne Wharf: Constructed to serve the needs of the Gladstone aluminium smelter, the wharf is 250 m. long and will cater for vessels up to 60,000 tonne capacity.

A causeway 710 m. long provides access to the wharf and to a sealed area (400 m. × 50 m.) for storage of aluminium billets. On the wharf is a 400 tonnes/p.h. mobile unloader to handle petroleum coke used in the smelting process.

Depth at the berth is 15.0 m. LWOST.
Fisherman's Landing Wharf: Most Northerly of the wharf centres, the wharf at Fisherman's Landing exports clinker from the Queensland Cement Limited's Clinker Plant. The limestone is mined in the Mount Larcom area, crushed and pumped down to the plant in slurry form. After processing, the clinker is exported to Brisbane to be used in the manufacture of cement. Clinker will be loaded by a 2,000 tonnes/p.h. pivoting bulk shiploader. The shiploader will load vessels of 25,000 tonne capacity.

Ammonia and Caustic Soda are imported over this wharf also.

Depth at the berth is 10.4 m. LWOST.
Clinton Coal Wharf: Owned and operated by Gladstone Port Authority. The Facility has 2 berths at 18.8 m. depth. Two shiploaders provide operations at rate of 8,000 tonnes/p.h. (2×4,000 tonnes/hr.). Berths presently cater for vessels from 25,000 d.w.t. to in excess of 220,000 d.w.t. and of 16.4 m. draft and 55 m. beam.
STEVEDORES: Special ETA advice necessary if week-end labour required and must be ordered by 1400 hrs. on previous Friday. Monday labour for vessels arriving after Friday must be ordered by 1500 hrs. on Friday. The only commodities requiring shore labour are bulk grain and general cargo.
MEDICAL: Dependent duration stay in port, prior notice for medical attention not required (other than notice of infectious diseases). Hospital facilities available. Current vaccination certificate for each member of crew required.
TANKERS: Diameters of discharge lines 12 in., (0.305 m.) and 8 in. (0.203 m.) for white oils and 6 in. (0.152 m.) black oils, no slop discharge facilities. Main tanker berth at Auckland Point Wharf (Berth No. 3), minimum depth alongside 11.30 m. LWOST. Black oil also discharged at South Trees Island Wharf for use in alumina plant only.
DENSITY: Average density 1024 – 1028.
FRESH WATER: Available all wharves. Fresh water hydrants placed at intervals along wharves.
FUEL: All grades of marine fuels are available and can be delivered to all berths by barge. Pipeline delivery is available to all vessels working cargo at South Trees East berth. Bunker only deliveries of fuel oil and MDO is a feature of the bunkering facilities at Gladstone.
FIRE PRECAUTIONS: Where petroleum and goods of dangerous inflammable character are being unloaded, watchman shall be employed to collect matches from all persons in vicinity and to patrol wharf within the limits in which petroleum cargo is being handled. Every vessel carrying inflammable liquids when in any Queensland port shall display red flag, not less than 1 m. (3 ft.) square with white circular centre 15 cm. (6 in.) in diameter.
CONSULS: None.
REPAIRS: Minor engine and deck repairs are undertaken.

BULK HANDLING FACILITIES:

Location	Auckland Point No. 1	Auckland Point No. 2	Barney Point	South Trees East	South Trees West	Clinton Coal Wharf	Clinton Coal Wharf
Number of Units	2	2	1	1	2	1	1
Type of Unit	Mobile Gantry Loader	Mobile Gantry Loader	Mobile Gantry Loader	Mobile Gantry Loader	Mobile Gantry Grab Unloader	Mobile Gantry Loader	Mobile Gantry Loader
Length of Travel (metres)	142 (Combined)	139.5 (Combined)	149	192	184	572	572
Max. Outreach from Wharf (metres)	15.5	19.3+ Trimmer/Jetslinger available	16.2	25.6	24.45	42.8	N/A
Throw of Trimmer (metres)	15.2	N/A	11.0	N/A	N/A	N/A	N/A
Max. Beam of Vessel (metres)	32.0	32.0	35.4	35.4	35.4	55.0	N/A
Capacity (t.p.h.)	1,600	1,600 (Combined)	2,000	1,200	2,000	4,000	4,000
Commodity Handled	Bulk products	Grains	Coal	Alumina	Bauxite	Coal	Coal
Storage (Tons)	110,000	82,000	400,000	238,000	1,000,000	3,300,000	3,300,000

DRY DOCKS: None available. Slipway capable of lifting vessels up to 125 tons displacement with max. beam 23 m. and max. draft forward of 6 ft.
GANGWAY/DECK WATCHMEN: Services of watchmen is not recommended except in the case of petroleum tankers previously mentioned.
OPENING/CLOSING HATCHES: Either by ship's crew or shore labour.
CERTIFICATES: List of certificates usual for Australian ports. See "Melbourne".
CUSTOMS ALLOWANCES: 0.5 lb. of tobacco or 200 cigarettes, to be opened. 1 only 26 ounce bottle, to be opened.
CARGO GEAR: To be in accordance with Commonwealth Navigation (Loading and Unloading Safety Measures) Regulations. See "Melbourne".
REPATRIATION: Facilities for effecting crew changes and necessary repatriations can be arranged. Prior notice required.
AIRPORT: Airport approximately 3 km. from port and is regularly served by 2 internal airlines. Daily flights to Brisbane with connections with overseas airlines.
TIME: See "General" before first port.
HOLIDAYS: Only 4 official holidays in year when it is *not* possible to arrange cargo work: Christmas Day; Anzac Day (25th April); Labour Day (1st Monday in May); Good Friday.
POLICE/AMBULANCE/FIRE: Telephone number of these services in cases of emergency only is "000" and ask to be connected to the required service. Emergency call to Hospital is 72.1033.
TELEPHONES: Public phones available on wharf.
SERVICES: No tank cleaning facilities. No slop facilities.
SHORE LEAVE: Crew members allowed ashore provided vaccination certificates in order.
IDENTIFICATION CARDS: See "Melbourne".
GARBAGE DISPOSAL: A collection service is available. Drums and skips are provided alongside. Charges are A$63 per collection, A$47 to burn garbage and A$21 for dumping.
WASTE OIL DISPOSAL: A collection service is available for moderate quantities using tanker trucks. This is arranged by the ships agent.
SEAMAN'S CLUBS: The Missions to Seaman, Flinders Parade, Gladstone, Qld. 4680, Australia. Tel: (079) 722282.

Facilities available include shop, international telephone service, church services, mini-bus collection, postage facilities and games made available at the Club.
CURRENCY: Australian Dollar (A$).
DELAYS: No unusual delays other than berth availability or unusual tidal conditions.
GENERAL: No cranes on wharves. Mobile cranes available for hire. No lighterage facilities. Electricity available to ships. Passengers not normally embarked or disembarked this port, as no facilities for them.
DEVELOPMENTS: Investigations into the deepening of harbour channels are being carried out to enable vessels of 200,000 d.w.t., to be fully loaded.
Tide/Draft Table: The Harbour Master at Gladstone has issued a tide/draft table following the completion of the dredging programme. A copy of the full table is available from Agent's office, but we quote below examples of drafts extracted from the full table:

Tabulated tide height (m.)	*Vessels up to 85,000 d.w.t.* (m.)	*Vessels over 85,000 d.w.t.* (m.)
2.2	16.0	15.5
2.5	16.3	15.8
2.8	16.6	16.1
3.1	16.9	16.4
3.4	17.2	16.7
3.7	17.5	17.0
4.0	17.6	17.1
4.3	17.7	17.2
4.6	17.8	17.3
4.9	18.0	17.5

SHIPMASTER'S REPORT: August 1995.
Charts: AUS 244, 245 and 246.
Approach: No prominent features until fairly close when Rodds Peninsular with Bray Hills is conspicuous.

A new buoy has been placed in position Lat. 23° 53.3' S., Long. 151° 31' E. (Fl.W.3 sec.), surrounded by very small spar buoys.

New Fairway Beacon (with Racon) is shortly to be constructed in this position. Existing Fairway Buoy will then be removed.
Anchorages: Outer anchorage is exposed, although high winds generally only associated with tropical depression to North. The anchorage is about 5 miles N.N.W. of Richards Point (Rodds Peninsular), outside port limits.

Inner Anchorage: South Trees Anchorage, off Boyne Wharf or Quoin Anchorage, 1 mile North of South Trees Wharf for small vessels. Inner anchorages are subject to strong tidal streams.
Pilots: VHF range good, contact as per ALRS. Pilot is available 24 hours, but large vessels are dependent on tide.

Pilot boards from a fast cutter, a position indicated on AUS 246. Transit time to LPG Berth at Auckland Point is about 1.5 hours.

AMSA are conducting trial with Gladstone Pilots for 'Bridge Team Pilotage Management'.

If bunkering at South Trees Anchorage before or after berthing, Pilot generally stays onboard vessel and requires a cabin.
Channel: Good synchronised lights which are very conspicuous. The channel is dredged to 15.7 m. datum. Strong tidal currents may be encountered.
Tugs: 4 tugs available, 3×40 ton and 1×20 ton B.P. The tugs are stationed between Auckland Point and Barney Point. Tug's lines are used.
Berth: LPG into pressure storage is handled at Auckland Point on Eastern end of berth, where the flat quay is used for general and containers. The Western end is for bulk grain loading. The depth is 11.5 m. datum. Vessels always berth starboard side to.

The quay is of concrete construction. Gangway can be landed without difficulty. Fresh water is available. Tie up is 3+2 each end. A lineboat is available to assist with mooring lines.
Terminal: Boral Gas: 4×500 cu.m. Pressure tanks are located 1,000 m. from the quay. Discharge rate is 210 tonnes/hr. at 9 Bar B.P. for Propane.

The terminal works with Brisbane in taking in extra product by road and rail cars.

The cargo is discharged by shore hoses of 6 in. 300 ASA into a 10 in. line to the tanks. Terminal require at minimum of −25°C for main discharge, ideally at ambient. Road and rail tankers can only be loaded at +6°C. Hence temperature restriction. First 250 tonnes and last 100 tonnes required at minimum of +2°C to fill one shore tank with hot product for immediate delivery to rail tankers. We delivered at +1.5°C.

Shore figures given on completion, which is unusual for East Coast.

Terminal requires ship's walkie-talkie.

Watchman in hut near gangway and also at roadway gate.
Documents: Customs/Immigration documentation as Townsville.
Bunkers: Available by barge at Inner Anchorage (South Trees), but LPG ships not allowed to bunker whilst vessel alongside connected.

A modern and efficient barge can provide all grades throughout 24 hours.

The anchorage has strong tidal currents.
Technical Services: Poor. We tried for radar service, but not available. Best to use Brisbane, Townsville or Cairns.
Chandler: Nautilus: Tel: 079 721044. Fax: 079 721889.
Telephone: Coin telephone near silos, short walk from berth. Card phones in town, about 20 minutes walk away.
Airport: About 3.5 miles away along Dawson Highway. Frequent domestic flights to Brisbane.

AUTHORITY: Gladstone Port Authority, P.O.Box 259, Yarroon Street, Gladstone, Queensland 4680. Australia. *Tel:* (079) 761333. *FAX:* (079) 723045. *Contact:* B.J. Jordan, Administration Manager.

AGENT: Patrick Sleigh Shipping Agencies Pty. Ltd., P.O.Box 5010, 136 Goondoon Street, Gladstone, Queensland 4680. Tel. (079) 722088. Telex: 49431 PATSLE. Fax: (079) 724823. Seagram Code: 4GPATSLE

GOVE, N.T.: 12.12 S. 136.40 E. (See Plan)

DOCUMENTS:

2 Crew Lists Form M. & S. 11 (3 at outports).
5 Passenger Lists, Forms M. 308 and 309.
1 Loading Ports List, Form B921.
3 Barber's stocks and stock in ship's shops and canteens, (Form 5) continuation of the back, Form 5 AA.
1 List of Customable Articles, Form 5 (crew).
3 Return of Goods of Barber's stock, etc., Form 5 AA.
1 Stores List, Form 42 A.
1 Annual Declaration, Form QA76.
2 Primary Health Report, Form Q360.
1 Clearance from Last Port.
Ship's Log.
1 Derat Certificate.
1 Light Dues if paid previously.

PILOTAGE: Compulsory for vessels proceeding to Nabalco Facilities. The Pilot will board at the anchorage position.

Coastal Pilotage: Pilotage services between Gove and Darwin via Clarence Strait, or to Torres Strait, are conducted by pilots of the Queensland Coastal Pilot Service Pty.Ltd. and the Queensland Coast and Torres Strait Pilot Service. See "Torres Strait" for details.

ANCHORAGE: Melville Bay affords good holding ground, the bottom being either sand or mud and the depths ranging up to 48 ft. (14.64 m.) West of Dundas Point. Vessels awaiting a berth should anchor approximately 1.5 miles (2.41 km.) Westward of West Woody Island close by the Fairway Buoy. The Quarantine Officer and Customs Officer normally clear vessels alongside the berth, but may on occasions board at the anchorage.

A vessel is considered to be an "arrived ship" for purposes of laytime when she enters the Quarantine Anchorage.

We quote below Australian Notice to Mariners No. 510/1978.

Gove Harbour – Quarantine Anchorage Altered:

(a) A pecked line is to be inserted joining the following positions:
    From Lat. 12° 11.12′ S., Long. 136° 37.5′ E. on the Harbour Limit to
        Lat. 12° 09.58′ S., Long. 136° 37.5′ E. thence to
        Lat. 12° 09.58′ S., Long. 136° 39.6′ E. and thence to
        Lat. 12° 11.12′ S., Long. 136° 39.6′ E. on the Harbour Limit
    On Plan, from Long. 136° 39.6′ E. in the N. border to
        Lat. 12° 11.12′ S., Long. 136° 39.6′ E. on the Harbour Limit.
(b) The Legend *Quarantine Anchorage* is to be inserted within the area of 1(a).

RESTRICTIONS: Approach Channel to bulk cargo and tanker jetties has minimum depth 13.8 m.

Approach Channel to general cargo jetty has minimum depth 11.59 m.

PRATIQUE: The Port of Gove has been declared Port of First Entry for health clearance of vessels arriving from overseas.

Vessels will usually be cleared alongside the berth.

If Pratique is required, vessel must provide a Primary Health Report.

Radio Pratique may be granted if answers to the "Australian Quarantine Questionnaire" are received 12-24 hours prior to vessel's arrival. See "General – Health" before first port.

RADIO: *Notice of Arrival:* Prior to arrival, vessels are requested to radio the following information:

(i) For all vessels:
    (a) ETA Gove – 72 hours out
                 – 48 hours out
                 – 24 hours out
    (b) Anticipated draft forward and aft.
(ii) For bulk carriers, anticipated hatch loading plan, loading sequence and quantity required in each pour.
    (c) For petroleum tankers, approximate quantities to be discharged and grade of product desired for first discharge, and order of unloading various grades if more than one grade is carried.

Radio messages should be addressed to "Gobaux", Darwin. The call sign of the radio station at Darwin is VID. Radio messages will be passed by teleprinter to Gove.

Cable messages for Nabalco should be addressed to "8 D Gobaux" via Darwin Radio (VID).

VHF: The Nabalco Harbour Master's Office maintains a listening watch on Channel 16 during office hours. VHF frequencies used are 16, 12 and 6. Call sign "Gove Harbour".

TUGS: There are 3 work boats available for hire in the port, max. 41 tonnes bollard pull. Tug's lines are used in most instances, but no extra charge is made.

BERTHING: *Bulk Cargo Wharf:* The bulk cargo wharf runs in a N.W./S.E. direction and bears 189° true 2,440 m. (8,000 ft.) from West Woody Island triangulation point. The wharf has a 'T' head which is connected to the shore by an access bridge 946 m. (3,120 ft.) long and 3.05 m. (10 ft.) wide.

The Northern branch of the wharf head constitutes the bauxite/alumina berth and the Southern branch the bulk liquids berth.

The bauxite/alumina berth is mounted with a travelling, luffing shiploader with telescopic trimming spout having an outreach of 31 m. (101 ft. 6 in.) from the fender line. The distance of travel along the berth is 164.2 m. (540 ft.). The clearance beneath the spout at maximum elevation for loading is 15.0 m. above chart datum (LWOST) at berth side.

The shiploader has a designed capacity of 2,000 tonnes/p.h. for bauxite and for alumina.

The shiploader is connected by a belt conveyor system to the bauxite stockpiles and to the alumina silos, 3,202 m. (10,500 ft.) and 2,592 m. (8,500 ft.) distant respectively from the wharf head.

The bulk liquids berth consists basically of mooring dolphins and fenders associated with a pipe bridge support. Three pipe-lines are provided namely:

(1) 46 cm. (18 in.) diameter for bunker fuel oil.
(2) 30 cm. (12 in.) diameter for caustic soda.
(3) 25.4 cm. (10 in.) diameter for diesoleum, petroleum and aviation kerosene.

During the tanker discharging operations, connection between ship and shore is provided by 20.3 cm. (8 in.) diameter flexible hoses with BS Table "F" 8-hole fittings at each end.

If other types of fittings are required to effect discharge, arrangements should be made by the tanker vessel to provide such items.

The length of each pipe-line is approximately 1,982 m. (6,500 ft.) covering the distance from bulk liquids berth to shore tank farm.

A depth of water of 13.9 m. (45 ft. 08 in.) below chart datum (at low water ordinary Spring tide) is available at both the alumina/bauxite and bulk liquid berths.

This will allow simultaneous occupancy by a tanker and bulk carrier, each of up to approximately 60,000 d.w.t., under ordinary conditions. A minimum clearance under the keel of 10% of the draft is required for berthing and unberthing.

General Cargo Wharf: This wharf extends in a S.E. direction from the Eastern side of the land strip leading to Dundas Point. The wharf bears 315° (T) × 1,342 m. (4,400 ft.) from Half Tide Rock and is a substantial structure 94 m. (310 ft.) long by 27.89 m. (91 ft. 6 in.) wide connected to the shore by an access jetty 287.2 m. (950 ft.) long and 5.49 m. (18 ft.) wide.

The wharf has been designed for vessels of max. length of 165 m. (541 ft.) and of up to 20,000 d.w.t. to berth at each side under normal conditions. Vessels of up to 30,000 tons can be accommodated under suitable tidal conditions.

The depth of water alongside is 10.0 m. (32.8 ft.) below chart datum (LWOST) on the S.W. side and 11.5 m. (37.7 ft.) on the N.E. side.

Fisherman's and Light Cargo Wharf: This wharf is located near Harbour Island in Melville Bay. It is administered by V. B. Perkins Pty. Ltd. Total wharf length is 48.0 m. and width 18 m. Max. wharf loading by vehicles 4.5 tonnes/sq.m. The minimum available depth alongside is 5.0 m.

Ramps: 2 Landing barge ramps accommodating landing barges up to 1,500 g.r.t. A 28 tonne SWL fork lift is available for cargo operations.

CRANES: 8 mobile cranes, capacities between 5 tonnes and 90 tonnes.

STEVEDORES: No local stevedoring companies.

MEDICAL: Medical services and a large modern hospital with comprehensive theatre, medical and surgical facilities, at Nhulunbuy, 9 miles from the port.

TANKERS: See "Berthing".

DENSITY: 1020 – 1022.

FRESH WATER: Available at all berths.

FUEL: Diesel available at Fisherman's and Light Cargo Wharf only.

REPAIRS: Limited facilities, minor repairs only.

SURVEYORS: Local Pilots conduct draft, on-hire and bunker surveys, however, Lloyd's Surveyor available from Darwin or Cairns.

HATCHES: Opening and closing carried out by ship's crew.

CUSTOMS ALLOWANCES: 200 cigarettes and 1 litre of spirits per crew member.

REPATRIATION: Facilities exist for effecting crew changes and repatriation.

AIRPORT: Gove is served by commercial flights to and from Darwin on 5 days a week and by commercial flights several times a week from Brisbane and Sydney via Cairns. Services to other parts of Australia and the rest of the world are frequent from Darwin.

TIME: See "General" before first port.

SHORE LEAVE: After clearing inwards crew members may proceed ashore with special permission.

IDENTIFICATION CARDS: May be required.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Australian Dollar (A$).

REGULATIONS: It is forbidden to take firearms, alcoholic beverages and foodstuffs ashore.

AUTHORITY: Nabalco Pty. Limited, P.O.Box 21, Nhulunbuy, NT 0881, Australia. *Tel:* (089) 87 5211. *Telex:* 85045 (Port Telex). *FAX:* (089) 872-356. *Cables:* 8D Gobaux. *Contact:* Captain John Preston, Harbour Master. Clive Spencer, Harbour Pilot.

Gove Port Office. *Tel:* (089) 875418. *FAX:* (089) 875410.

AGENT: Agency undertaken by Nabalco Pty. Limited.

GRIFFIN VENTURE: 21.13 S. 114.39 E. (See Plan)

LOCATION: The "Griffin Venture" is located in position Lat. 21° 13′ 24″ S., Long. 114° 38′ 40.4″ E.

The "Griffin Venture" Floating Production Storage and Offtake Facility (FPSO) operates in the Griffin, Scindian and Chinook Oil Fields in the Indian Ocean.

The oilfields have been developed by Joint Venturers which operate the Facility through the agency of BHP Petroleum Pty. Ltd.

The "Griffin Venture" is a purpose built FPSO with process facilities and a metering system to enable stabilisation of crude oil and delivery to Offtake Vessels. The "Griffin Venture" has around 120,000 kl. total crude oil storage capacity (approximately 750,000 bbls. or 90,000 metric tonnes). Oil is delivered through a 16 in. floating hose system at a maximum rate of 4,000 kl./hr. (25,000 bbls./hr.). Allowing for start-up, slow-down and ballasting requirements, 103,290 kl. (approximately 650,000 bbls.) will require over 32 hours pumping.

Charts: Australian – AUS. 328, 415, 416, 743.

These charts cover the general area and the site of the Facility.

READINESS: The Notice of Readiness from arriving Offtake Vessels will not be accepted until 3 nautical miles from the Facility, and until they are in all respects ready to load in accordance with the Handbook and the Terminal Conditions.

Notice of Readiness will only be accepted during the hours 0700 to 1600 when prevailing conditions permit safe mooring.

DOCUMENTS:

Health: To comply with the Australian Government health requirements, a Radio Pratique message should reach the Offtake Vessel's Agent no more than 24 hours, and no less than 12 hours before arrival, as per the following instructions. The Offtake Vessel Master should sign and date the message.

Please answer the following questions, indicating "Nil" where necessary, and answer them in order. If answers are not correct, or not in the correct order, it could cause unnecessary delay to your vessel berthing, and any costs incurred to the Operators will be to the Offtake Vessel's account.

Note: Masters or Medical Officers, who wilfully make a false statement in answer to any question, are liable to a fine not exceeding Aus$5,000 or imprisonment for a period not exceeding 2 years.

Question	Answer
1. Name, type and nationality of Offtake Vessel.	
2. Where from and departure date.	
3. Where bound and ETA first port.	
4. Details of any communicable disease or illness or death onboard since sailing.	
5. Are there any animals or plants onboard?	
6. Have you carried livestock in the last 6 months? If Yes: List type, ports visited and cleaning performed since last livestock voyage.	

Optional section (answering this section will facilitate clearance of your vessel when it arrives in port).

If the vessel is entering in ballast:

1. Have you:
   (a) Exchanged ballast water at sea during the voyage and logbook certification of time and co-ordinates when reballasting occurred;
   or
   (b) Certification that the area where ballasting took place is free from toxic dinoflagelates?
   or
2. Is your vessel part of a compliance arrangement for ballast water control accepted by Australian Quarantine and Inspection Services?
3. Will you be discharging ballast whilst in Australian waters? Yes/No

Note: The granting of Pratique to a vessel does not release it from being subject to quarantine. Goods require separate clearance.

Customs and Immigration: Masters should complete the following forms which should be delivered to Customs by the ship's Agents at least 48 hours prior to arrival at the Facility:

Form 1 – Ship's Inward Cargo Report.
Form 2A and Form 2B – Passenger Report (if applicable).
Form 3A and Form 3B – Crew Report.

Masters should endeavour to complete the following forms ready for collection on arrival by Customs Officers, if the Facility is the Offtake Vessel's first Australian destination:

Form 5 – Part One – Ship's Report of Arrival.
– Part Two – Crew Effects Declaration.
Form 42A – Ship's Stores consumed in Australia.
Form QA4 – Shipmaster's Notice (Animals, Hides and Skins) not for importation.
Form QA5 – Shipmaster's Bond regarding animals carried (only if pets onboard).

The Customs Officer in attendance will advise any other documentary requirements, and provide forms if necessary.

Because the "Griffin Venture" is not a designated port, Offtake Vessels should have their Agents apply for Certificates of Permission for Entry to Australia at other than a designated port as required under Section 58 of the Customs Act, 1901 (Commonwealth of Australia).

Customs Authorities have advised that permission will generally be granted. However, Customs Officers retain the right to board Offtake Vessels for inspection at their discretion, and Masters of Offtake Vessels are required to provide accommodation and mess facilities for visiting Customs Officers.

Government Charges: Customs, immigration and health inspections will usually be carried out by one Customs Officer but, at the discretion of Customs Authorities, several Customs Officers may carry out a particular inspection.

Offtake Vessels will be liable for Customs Fees charged per person per hour. If Customs Officers elect to attend the Offtake Vessel, it will be for the duration of the stay of the vessel at the Facility.

Light Dues and Oil Pollution Levies: The Department of Minerals and Energy, Western Australia, advises that vessel offtaking from the Facility is not required to pay light dues or oil pollution levies.

PILOTAGE: Pilotage is compulsory. The Facility Master, or an appropriately qualified nominee of the Master, will transfer to the Offtake Vessel when it reaches a distance of 3 nautical miles from the Facility, and will act as Pilot during approach and mooring. Two Berthing Superintendents from the Facility will board with the Master and will remain onboard the Offtake Vessel for the time the vessel is moored, at the discretion of the Facility Master. Suitable accommodation shall be provided for these personnel.

Safe Access: Masters shall provide safe access to and from their vessels at all times in accordance with the SOLAS convention and IMO recommendations.

Failure to comply could incur a delay in berthing or sailing, and all and any costs shall be borne by the Offtake Vessel. Any such delays may prejudice the Offtake Vessel's acceptance in the future at any Facility operated by BHP Petroleum.

ANCHORAGE: See "Approaches".

APPROACHES: The Facility Master will advise by VHF radio final berthing instructions to the Master of the Offtake Vessel.

Anchoring within the Exclusion Zone surrounding the "Griffin Venture" and sub-sea pipeline is not permitted (See "Anchoring" below). If an Offtake Vessel cannot moor on arrival at the Facility and wishes to anchor, the Master of the Facility shall be contacted for information and guidance on this matter.

Offtake Vessels should make every endeavour to arrive with propeller fully submerged and in association with a trim by the stern of not greater than 0.015L. Masters should note that in the event of arrival with excessive trim or too light a draft, berthing may be refused.

Anchoring: The Offtake Vessel shall not anchor in the Exclusion Zone. The Exclusion Zone is centred on the Facility (Lat. 21° 13′ 24″ S., Long. 114° 38′ 40.4″ E.) and extends in a 5 nautical mile radius around it. It also extends 1 nautical mile either side of the sub-sea natural gas pipeline.

The coordinates specifying the pipeline's route are:

Latitude	Longitude
21° 13.4′ S.	114° 38.7′ E.
21° 14.4′ S.	114° 39.2′ E.
21° 28.6′ S.	114° 47.2′ E.
21° 32.2′ S.	114° 49.0′ E.
21° 42.8′ S.	114° 49.4′ E.
21° 45.0′ S.	114° 50.7′ E.

Hazards to Navigation: An unlit wave rider buoy is located at Lat. 21° 13.94′ S., Long. 114° 37.54′ E.

RESTRICTIONS: *Restricted Berthing Hours:* Notice of Readiness will only be accepted during the hours 0700 to 1600 when prevailing weather conditions permit safe mooring.

MAX. SIZE: Offtake Vessels between 25,000 d.w.t. and 150,000 d.w.t. only can be accommodated at the Facility. Maximum displacement tonnage is 175,000 tonnes.

HEALTH: See "Documents".

RADIO/VHF: *Radio Communication with "Griffin Venture":*

"Griffin Venture" has radio communication hours of 0600 to 1800 local time (2030-0830 GMT).

"Griffin Venture" call sign:	VNGP
"Griffin Venture" INMARSAT number for telephone:	873 1545221 872 1545221
"Griffin Venture" INMARSAT number for Fax:	873 1545222/GRIF 872 1545222/GRIF
"Griffin Venture" INMARSAT number for Telex:	583 450300253 582 450300253
"Griffin Venture" VHF:	Channel 72 (continuous).

Advice of Arrival: Incoming Offtake Vessels shall advise BHPP Manager Dampier and the Facility of their ETA 72 hours, 48 hours and 24 hours before intended arrival and give the following information:

Name of vessel and radio call sign.
HF radio telephone frequencies, if so equipped.
INMARSAT telephone, fax and telex numbers and which satellite to use.
Arrival draft and trim.

ETA should be confirmed or varied, as appropriate, 24 hours before arrival.

TUGS: Not available.

Note: Vessels, whilst moored to the "Griffin Venture" will be held in position using a static tow configuration. Offtake vessels are required to maintain engines on standby throughout the period while connected to the "Griffin Venture".

BERTHING: *Standard of Offtake Vessels:* Annex A (See "Annex A") is a sample of the Offtake Vessel Questionnaire which the Operator of the Offtake Vessel shall have completed (including the Foc'sle Plan) and transmitted to the Master of the Offtake Vessel. The Offtake Vessel Operator is obliged to provide answers before being nominated to visit the Facility. It is imperative that if at any time the particulars given in those answers should be seen to be inaccurate or should change in any respect, BHP Petroleum Manager Dampier and Master of the Facility must be notified forthwith in writing. Without prejudice to any other consequence of such inaccuracy or change, failure to so notify and to provide all necessary details relating thereto may cause delay at the Facility.

Visiting Offtake Vessels shall be aware of the Oil Companies' International Marine Forum (OCIMF) publication "Recommendations for Equipment Employed in the Mooring of Ships at Single Point Moorings", and shall be fitted with the appropriate equipment in accordance with these recommendations. Winches or capstans used to handle moorings shall be capable of lifting at least 15 tonnes.

The bow windlass or winch that will be used for mooring shall be capable of picking-up the mooring hawser and chaffing chain which will have a combined weight of not more than 3.2 tonnes. When assessing the capabilities of the windlass/winch, allowance should be made for the efficiency loss due to friction, and change of direction of the mooring messenger line between the bow Panama lead and the windlass/winch. The drum must have a good hauling lead from the Panama lead directed through the chainstopper, in order to retrieve the hawser and chaffing chains. The windlass/winch will have one drum empty capable of accepting a 150 m. x 72 mm. messenger line, on arrival at the Facility.

Under no circumstances shall the warp end be used to heave in the mooring system. A winch drum only is acceptable.

Offtake Vessels shall have manifolds and associated offtake equipment conforming to OCIMF Standards and a manifold derrick or crane rated at 10 tonnes SWL as a minimum.

Given the particular requirements of the Facility, Offtake Vessels should ensure that their mooring arrangements and equipment are checked for suitability, and can comply in all respects with the Terminal requirements before finalisation of charter arrangements and before arrival at a Facility. Failure to comply in all respects with these requirements could result in difficulties and delays at the Facility, all and any costs so incurred will be to the Offtake Vessel Owners' (as defined in the Terminal Conditions) account.

Offtake Vessels shall comply with latest SOLAS and MARPOL conventions and protocols. Tankers found deficient and sub-standard in any safety requirements will be refused berthing and loading.

The inert gas system shall be capable of operating throughout the Offtake Vessel's operations at the "Griffin Venture" Terminal. The Terminal may check the condition of the tanks on arrival, and throughout the operations. In the event of failure of the system or, when the tank atmospheres depart the SOLAS maximum permissible safe limits, the Offtake Vessel shall be unmoored from the Terminal.

The Owner of the Offtake Vessel or bareboat charterer shall be a party to TOVALOP and have insurance covering liabilities under the International Convention of Civil Liabilities for Oil Pollution Damage 1969; the cargo to be loaded shall be covered by CRISTAL and/or the International Convention on the Establishment of International Fund for Compensation for Oil Pollution Damage 1971. Owner of the Offtake Vessel shall have in place maximum (currently U.S.$700 million) P&I Club Insurance for oil pollution liability.

Offtake Vessels must be covered by a current ITF Certificate or equivalent.

Offtake Vessels will also be required to provide accommodation, where available, for all or any of the following personnel for the duration of the offtake:

2 Berthing Superintendents from the Facility.
Independent Surveyor.
Customs Officer.
Shipping Agent.
Management Representative.

Offtake Vessel Safety Check: On arrival at the Facility, the Offtake Vessel shall be subject to a safety check by the Facility Operator. Annex C is a sample of the Offtake Vessel Safety Check List used to perform the safety check, and is based on the Ship/Shore Safety Check List from the International Safety Guide for Oil Tankers and Terminals. The Terminal Conditions (Annex B) (Not reproduced) provide that the Facility may refuse to allow the Offtake Vessel to berth or may order the Offtake Vessel away from the berth, or otherwise suspend or terminate provision or performance of services to the Offtake Vessel, if at any time the Offtake Vessel fails to meet the relevant safety standards.

Drug and Alcohol Policy: It is a Terminal requirement that all Offtake Vessels have in place, and comply with, a Drug and Alcohol Policy that accords to the OCIMF guidelines. Such action in not complying with this requirement could result in the Offtake Vessel being rejected for further liftings from any Facility operated by BHP Petroleum in the future.

It is a BHP Petroleum requirement that under no circumstances shall any alcohol or drugs be consumed by any BHP Petroleum personnel for any reason at any time. BHP Petroleum requests that Offtake Vessel personnel also observe and respect this operating requirement whilst the Offtake Vessel is made fast to the Facility.

Mooring: Neither tug nor supply boat services are available. The Pilot, Berthing Superintendents and equipment will be transferred to the Offtake Vessel by the Facility workboat (except in inclement weather conditions – See below). The Pilot will bring the Offtake Vessel to a position astern of the Facility, when the mooring hawser will be made fast.

The mooring operations are the responsibility of the crew of the Offtake Vessel, acting under the direction of one of the Berthing Superintendents from the Facility.

Berthing in Inclement Weather Conditions: Transfer of Personnel: Due to the locality of the "Griffin Venture", there will be occasions when the prevailing weather conditions are in excess of the operating criteria of the Facility's workboat, but within the parameters of normal tanker loading operations, providing berthing can be executed and the floating hose connected.

After consultation with the Master of the Offtake Vessel, the Pilot, Berthing Superintendent, Surveyors, Agent and equipment may be transferred to the Offtake Vessel by public transport helicopter winching.

BHP Petroleum has reviewed the ICS Guide to Helicopter Ship Operations for helicopter "land on" operations as an option for "Griffin Venture" Offtake Vessel helicopter personnel and equipment transfers. Because it would not be possible to verify deck strengths, obstruction free zones and deck crew training/proficiency, to the extent necessary to meet International Civil Aviation and BHPP's own standards for helicopter operations, public transport helicopter winching shall be the preferred method, when transfer by boat is not possible. These operations shall only be performed by twin engine IFR, out-of-ground effect single engine hover capability helicopters during daylight conditions.

Public transport helicopter winching will be under the direct control of the helicopter crew, and in accordance with the Australian Civil Aviation Authority approved procedures, which have been reviewed and accepted by BHP Petroleum.

During public transport helicopter winching on the Offtake Vessel, at least 2 persons shall wear fire protective suits to attend firefighting equipment and to act as a rescue party. The bridge is to be manned at all times during winching operations.

Mooring Hawser: After the personnel and equipment have been transferred by helicopter, the Pilot will position the Offtake Vessel approximately 150 m. – 200 m. astern of the Facility. Pneumatic line throwing equipment will be used to establish initial contact using a 5 mm. messenger line.

The mooring hawser will be transferred to the Offtake Vessel by BHP Petroleum personnel according to BHP Petroleum procedures and under the direction of the Berthing Superintendent.

Engines on Stand-By: For the complete period the Offtake Vessel is made fast, it shall be ready to respond to requests for engine movements immediately. The Offtake Vessel may be required to run its main engines astern for extended periods of time on low engine revolutions. Offtake Vessels shall be required to move astern to prevent creeping up on the Facility of jackknifing (as necessary). All engine movements should be made with due care.

If for any reason there is a main engine failure, the Facility Master shall be informed immediately.

Deballasting Operations: The Offtake Vessel shall not commence deballasting operations without prior consultation with, and the agreement from, the Facility Master.

Watch: A qualified Officer(s) with the authority to manoeuvre the main engines shall keep a Bridge Watch continually for the period the Offtake Vessel is made fast. Reliable radio communications shall be established and maintained at all times between the Berthing Superintendent on the bow and the bridge. All communications shall be in English and the qualified officer shall be fluent in the English language.

LOADING: *Connection of Hose:* After the mooring hawser has been made fast, the workboat will pull the floating hose to the Offtake Vessel (Except in inclement weather). The hose will be connected to the port side manifold of the Offtake Vessel. The hose end will then be lifted onboard using the Offtake Vessel's manifold derrick or crane.

The connection of the hose is the responsibility of the Offtake Vessel's crew, under the guidance of the Berthing Superintendent from the Facility.

The hose end connection is a 16 in. Camlock quick-release coupling and will fit standard 16 in. ANSI 150 pound flanges.

The floating hose is fitted with a self-sealing breakaway coupling.

Manifold reducers to suit the above should be supplied by the Offtake Vessel.

Control of the Transfer Operations: The Facility will control the transfer of oil in a manner and at a rate mutually agreed between the Facility and the Master of the Offtake Vessel. It will be the responsibility of the Offtake Vessel Officers and personnel to monitor the loading of oil into their cargo tanks and the discharge of their ballast.

Suspension of the Transfer: The Facility will halt transfer operations when:

(a) Radio communication between the Facility and the Offtake Vessel is lost.
(b) Instructed to by the Offtake Vessel.
(c) An emergency situation concerning the Facility or floating hose occurs.
(d) Helicopter operations to the Facility at the discretion of Master or Field Superintendent.
(e) Weather conditions exceed safety limits.

Action to be taken in the Event of an Emergency: The "Griffin Venture" has in place an Emergency Response Plan which is coordinated with the Dampier Operations Base. Through this plan, shore based emergency support can be activated and controlled.

As stated in the Terminal Conditions, the Offtake Vessel Master is responsible for the Offtake Vessel at all times. In an emergency situation on the Facility, the Facility Master will inform the Offtake Vessel Master of the situation and advise of actions the Offtake Vessel should take. If an emergency situation arises on the Offtake Vessel, the vessel's Master shall immediately inform the Facility of the situation and the actions being taken.

Griffin Crude:

Density at 15°C	– 0.7583
API Gravity	– 55.0
Viscosity at 20°C	– 1.24
Pour Point °C	– –48.0
Reid Vapour Pressure	– 37.25 kPa
Temperature range of the crude oil °C	– 26-35

DEPARTURE: *Departure after Berthing and Early Departure Procedures:* At the completion of the transfer of cargo, approximately 7 hours are required for the finalisation of figures, and the completion of all documentation before the Offtake Vessel is cleared for sailing. However, an Early Departure Procedure is preferred for operational and safety reasons, and is as follows.

The quantity of cargo loaded is computed initially by the Operator using oil sales metered volume and a provisional density figure. The loaded volume ("gross cargo") cargo so determined will be recorded on the Bill of Lading in the "Approximate Quantity Report" section. The floating hose will be disconnected, and the mooring hawser slipped. The Surveyor will complete his figures on the Offtake Vessel and then return to the Facility with the Berthing Superintendents and the Agent. The Offtake Vessel is then released from any further obligations at the Terminal and may commence its voyage.

After departure of the vessel, a final density, sediment and water content of the cargo will be determined by the Operator. After this determination, the Operator will inform the Offtake Vessel of gross and net cargo (gross cargo less base sediment and water at 15°C) quantity loaded. The net quantity will be introduced on the Bill of Lading in the designated "Precise Quantity Report" section and signed for by the vessel's Agent and Operator.

MEDICAL: Medical and dental services are not available at the Facility. In emergencies, medical evacuation to Karratha can be arranged, which may take 4 hours.

FRESH WATER: Not available.

FUEL: Not available.

REPAIRS: Repairs are not permitted whilst an Offtake Vessel is moored to the Facility. Under no circumstances are the main engines to be disabled for any period of time (See "Berthing – Engines on Stand-By").

REPATRIATION: Crew changes are not permitted.

TIME: GMT plus 8 hours.

SHORE LEAVE: Not possible.

GENERAL: *Weather:* The wet season is during the Summer months (October – March), when the prevailing winds will be in the South – South West quadrant.

During the Summer months, the North West Shelf is subject to occasional cyclones. In January and February in particular, weather and sea state conditions may prevent mooring or loading for periods of up to a few days.

During the Winter months (June – August), the prevailing winds will be in the South – South East quadrant. There are two transitional periods, April/May and September, when neither conditions are prominent.

Inclement Weather Mooring/Unmooring: The weather conditions and forecasts are closely monitored before the arrival of the Offtake Vessel and during the actual offtake. In the event of deteriorating weather conditions or the approach of a cyclone, mooring may be delayed or if the Offtake Vessel is already moored, shut-down operations will be implemented in a timely manner and the Offtake Vessel unmoored.

The recommended criteria for when Offtake Vessels should be unmoored is:

(i) Three occurences of a peak mooring hawser tension greater than 150 tonnes force within one hour.

(ii) A single occurence of a peak mooring hawser tension greater than 200 tonnes force.

Fishing: No fishing shall be permitted from the Offtake Vessel within the Exclusion Zone.

Supplies and Services: The remote, deep-sea location of the Facility severely limits the provision of services. Offtake Vessels should ensure that they carry supplies adequate for a return journey.

Stores: Not available.

Dirty Ballast, Slops or Refuse: Cannot be accepted at the Facility, and under no circumstances can dirty ballast, slops or refuse be discharged to the sea.

Firefighting: The Facility has only firefighting equiment required for its own purposes. It can give no aid to Offtake Vessels in the event of fire.

Pollution Control: The "Griffin Venture" holds a small quantity of dispersant for pollution control which can be dispensed from the workboat or, subject to call-out delay, from a helicopter, should this be necessary.

Without derogating from the Terminal Conditions, liability for any pollution caused by oil, which has passed the Offtake Vessel's permanent hose connection, will be for the account of, and recoverable from, the Offtake Vessel Owners (as defined in the Terminal Conditions).

Offtake Vessel shall comply fully with all relevant provisions of the MARPOL Convention.

Visitors to the Facility: Access to the Facility is by a helicopter flight from Karratha to the Facility. Because of the limited capacity of scheduled flights, the difficulties in arranging extra flights and the severe accommodation constraints onboard the Facility, the attendance of visitors is not normally possible.

Department of Transport officers, buyers' representatives and any others intending to visit, should seek permission of the Operations Manager at least 4 days before scheduled arrival of the Offtake Vessel. Earlier advice would be appreciated. Should permission be granted, BHP Petroleum will be requiring full cost recovery in relation to the costs to BHP Petroleum in transporting visitors to the Facility.

ANNEX "A": Offtake Vessel Questionnaire.

To: BHP Petroleum, Trading & Marketing
Attention: Operations Officer – Western Australia
Fax No.: (03) 654 1723
From: ....
Date: ....

The following vessel details are required prior to acceptance to lift from the "Jabiru Venture", "Challis Venture", "Skua Venture" or "Griffin Venture" Floating Production Storage and Offtake Facilities.

Notes:

1. A legible copy of the foc'sle deck arrangement plan must be supplied showing the proposed lead from the Panama fairlead to the winch drum.
   The plan shall be signed, stamped with the company name and dated to acknowledge that the plan is accurate and that all equipment shown is in service.
2. For Yes or No answers, tick the box that applies.
3. The completed Questionnaire and the foc'sle plan must be sent to the Master of the Offtake Vessel.

Section 1.0 General Vessel Details

1. Name of Vessel: ....
2. Previous Names, if any: ....
3. Port of Registry and/or Flag: ....
4. Name of Owner: ....
5. Registered Address: ....
6. Nationality of Officers and Crew: ....
7. Vessel Classification Society / classed as: ....
8. Year of build: ....
9. Type of vessel: Crude Oil Tanker, Product Oil Tanker, Oil/Bulk/Ore, Bulk/Oil Carrier, etc. ....
   If the vessel is an Oil/Bulk/Ore or Bulk/Oil Carrier, answer questions 9.1 and 9.2.
   9.1 What were the last three cargoes? ....
   ....
   9.2 Are the following personnel familiar with oil carrying operations?

Master	Yes ☐ No ☐
1st Mate	Yes ☐ No ☐
2nd Mate	Yes ☐ No ☐
Chief Engineer	Yes ☐ No ☐
Second Engineer	Yes ☐ No ☐

9.3 Do the following personnel who are familiar with oil carrying operations have the appropriate endorsements to their certificates?

Master	Yes ☐ No ☐
1st Mate	Yes ☐ No ☐
2nd Mate	Yes ☐ No ☐
Chief Engineer	Yes ☐ No ☐
Second Engineer	Yes ☐ No ☐

9.4 Is all equipment used on deck intrinsically safe in preventing ignition sources? Yes ☐ No ☐
9.5 Is there a permit-to-work system in place? Yes ☐ No ☐
9.6 Are there No Smoking regulations in place? Yes ☐ No ☐
9.7 Are there at least two certified personnel onboard to undertake Crude Oil Washing operations? Yes ☐ No ☐

10. Call sign: ....
11. INMARSAT No.: ....
12. Length overall (m.): ....
13. Breadth (m.): ....
14. Distance, bow to manifold (m.): ....
15. Distance, ship side to manifold (m.): ....
16. Diameter of manifold (mm.): ....
17. Diameters of available manifold reducers (mm.): ....
18. Does manifold/associated equipment comply with the latest edition of OCIMF's "Standards for Oil Tanker Manifolds and Associated Equipment"? Yes ☐ No ☐
    If No, what does not comply ....
19. Safe working load of manifold crane/derrick: ....
20. Are the vessel's main engines capable of being run astern for prolonged periods of time at low engine revolutions? Yes ☐ No ☐
21. Summer/Tropical/Winter deadweight tonnes: ....
22. Cargo capacity at 98% full: ....
23. Maximum loading rate (cu.m./hr.): ....
24. Arrival drafts (m.): Forward .... Aft: ....
    (For trim calculation purposes)
25. Has vessel Segregated Ballast Tanks (SBT)? Yes ☐ No ☐
26. Has vessel Clean Ballast Tanks (CBT)? Yes ☐ No ☐
    If Yes, complete 26.1 and 26.2 Yes ☐ No ☐
    26.1 Does the vessel monitor ballast discharges from CBT using the oil in water monitor that complies with the latest IMO (MARPOL) regulations?
    26.2 Can vessel load and deballast simultaneously with two valve separation? Yes ☐ No ☐
27. Has vessel a Panama lead on the foc'sle head for acceptance of the mooring hawser? Yes ☐ No ☐
28. Dimensions of the forward Panama lead that shall be used for the mooring hawser. ....(mm.)
29. Has vessel a chain stopper that complies with the latest edition of OCIMF's "Recommendations for Equipment employed in the Mooring of Ships at a Single Point Mooring"? Yes ☐ No ☐
30. Can chain stopper accept 76 mm. diameter chain? Yes ☐ No ☐
31. Distance, Panama lead to chain stopper (m.): ....
32. What is the lifting capability of the Mooring Winch? ....
33. Does the lead of the mooring hawser allow it to be hauled from the Panama lead via the chain stopper onto an empty drum? (NOT the warping drum end): Yes ☐ No ☐
34. Do the Senior Personnel speak English? Yes ☐ No ☐
35. Does the vessel comply with the requirements of the International Transport Federation (ITF) Agreement? Yes ☐ No ☐
36. Does the vessel have in place a Drug and Alcohol Policy complying with (as a minimum) the statement issued by the latest edition of the OCIMF's Guidelines for the Control of Drugs and Alcohol Onboard Ship? Yes ☐ No ☐
37. Vessel's last port of call? ....
38. Is the vessel a participating vessel in Tanker Owners Voluntary Agreement concerning Liability for Pollution (TOVALOP)? Yes ☐ No ☐
39. Protection and Indemnity (P&I) Club insuring the vessel? ....
40. What is the Pollution Liability Insurance limit? ....
41. At which port may the Vessel be inspected by BHP Petroleum's representative?
42. Has the vessel BHP Petroleum Berthing and Terminal Handbook(s) Onboard? Yes ☐ No ☐
    If Yes for what Facilities and what revision numbers?

Facility	Revision number
....	....

43. Does the vessel operate a management system certified to ISO 9002 or equivalent? Yes ☐ No ☐
44. Does the vessel have a dedicated helicopter winching area? Yes ☐ No ☐
    If Yes, complete Section 2.0 and Section 3.0.
    If No, complete Section 3.0.

Section 2.0 Public Transport Helicopter Winching Details

1. Where is the winching area located?
   (a) Bow/Forward/Midships/Aft/Poop Deck
   (b) Port/Starboard/Centre
2. What is the size of the winching area? (Refer to Plan (See "Plan Section"))
   (a) What is the diameter of the Clear Zone?: (m.)
   (b) What is the diameter of the Intermediate Zone?: (m.)
   (c) What is the diameter of the Manoeuvring Zone?: (m.)

3. Are the Clear Zone and the Manoeuvring Zone circles marked and is "Winch only" marked?: Yes ☐ No ☐
   If Yes, what are the:
   Circle Diameter (m.) ....
   Circle Colour ....
   Colour of the "Winch only" letters ....
   If No, what is marked? ....
4. Obstructions (Refer to Plan (See "Plan Section"))
   (a) Plot all obstructions within the Manoeuvring Zone on Plan (See "Winching Area Diagram" in "Plan Section"), and state their heights.
   (b) Are obstructions in the Manoeuvring Zone marked with bright contrasting colours? Yes ☐ No ☐
5. Firefighting Equipment:
   Is the following firefighting equipment or its equivalent available for all helicopter operations?
   (a) At least 2 dry powder extinguishers with aggregate capacity of not less than 45 kg. Yes ☐ No ☐
   (b) Foam application system (fixed or portable) capable of delivering a foam solution at a rate of 6 litres per minute for each square metre of Clear Zone with sufficient foam compound to enable the rate to be maintained for at least 5 minutes. Yes ☐ No ☐
   (c) Carbon dioxide (CO2) extinguishers with an aggregate capacity of not less than 18 kg. Yes ☐ No ☐
   (d) Deck water system capable of delivering at least 2 jets of water to any part of the helicopter operating area. Yes ☐ No ☐
   (e) At least 2 fire hose nozzles of the dual purpose type. Yes ☐ No ☐
   (f) Fire resistant blankets and gloves. Yes ☐ No ☐
   (g) At least 2 fire protective suits. Yes ☐ No ☐
   (h) Is all firefighting equipment inspected, tested and in serviceable condition? Yes ☐ No ☐
6. Rescue and Medical Equipment:
   Is the following rescue and medical equipment in serviceable condition close to the helicopter operating area?
   (a) Large axe. Yes ☐ No ☐
   (b) Crowbar. Yes ☐ No ☐
   (c) Wire Cutters (Bolt Cutters). Yes ☐ No ☐
   (d) First aid equipment. Yes ☐ No ☐
7. Is the following communication equipment available for all helicopter operations?
   (a) Marine VHF FM radio capable of transmission and reception on Channel 16 and 2 other simplex working frequencies. Yes ☐ No ☐
   (b) Portable radio transceiver (walkie-talkie) capable of communication between deck and bridge. Yes ☐ No ☐
   (c) VHF AM aeronautical radio 118-136 MHz. Yes ☐ No ☐
   If Yes, specify the authorised frequency. ......MHz.
8. Is the following level of manning available for all helicopter operations?
   (a) Deck party officer-in-charge. Yes ☐ No ☐
   (b) At least one person wearing a fire protective suit and 2 persons to attend firefighting equipment and to act as a rescue party. Yes ☐ No ☐
9. Is the ship's rescue boat or lifeboat capable of immediate lowering or launch? Yes ☐ No ☐
10. Are ship's personnel familiar with shipboard helicopter operations? Yes ☐ No ☐
    If Yes, how many helicopter operations has the vessel handled in the last 12 months? ....
11. Does the vessel have the ICS (International Chamber of Shipping) Guide to Helicopter/Ship Operations Third Edition, May 1989, on board? Yes ☐ No ☐
12. Does the P&I Club insurance in Section 1 Question 40 cover aviation operations? Yes ☐ No ☐

Winching Area Diagram: See "Plan Section".

Section 3.0 Acknowledgement of the Stated Information

All information stated in this questionnaire is accurate at the date of completion shown below:
Signed: ....Date: ....
Position: ....Name: ....
Company: ....

ANNEX B – Terminal Conditions: Not reproduced.

ANNEX C – Offtake Vessel Safety Check List:
Name of the Offtake Vessel?
Name of the FPSO Facility?
Date of arrival:
Time of arrival:

CHECK LIST QUESTIONS REMARKS

1. Is the ship securely moored? Yes ☐ No ☐
2. Is the ship ready to move under its own power? Yes ☐ No ☐
3. Will there be at least four people on duty controlling the operation who speak English and have effective means of communication with each other? Yes ☐ No ☐
4. Is the agreed offtake vessel/FPSO communication system operative? Yes ☐ No ☐
5. Has the offtake vessel a plan for cargo and ballast handling? Yes ☐ No ☐
6. Have the emergency shut-down requirements of the Berthing and Terminal Handbook been understood? Yes ☐ No ☐
7. Are hoses and firefighting equipment on board positioned to cover the cargo deck and manifold and ready for immediate use? Yes ☐ No ☐
8. Are scuppers effectively plugged and drip trays in accordance with OCIMF requirements? Yes ☐ No ☐
9. Are un-used cargo connections blanked? Yes ☐ No ☐
10. Are the sea and overboard discharge valves closed and lashed? Yes ☐ No ☐
11. Are all cargo and bunker lids closed? Yes ☐ No ☐
12. Is the tank venting system away from the cargo deck and is inert gas blanketing being used? Yes ☐ No ☐
13. Are all hand-held torches of an approved intrinsically safe type? Yes ☐ No ☐
14. Are portable VHF/UHF transceivers of an approved, intrinsically safe type? Yes ☐ No ☐
15. Are the ship's main radio transmitter aerials earthed, the VHF on low power and radars switches off? Yes ☐ No ☐
16. Are all electric cables to portable electrical equipment in hazardous zones disconnected and removed from power? Yes ☐ No ☐
17. Are all external doors, windows and portholes in the accommodation leading onto or overlooking the tank deck closed? Yes ☐ No ☐
18. Are air-conditioning intakes which may permit the entry of cargo vapours closed? Yes ☐ No ☐
19. Are the "No Smoking" requirements being observed? Yes ☐ No ☐
20. Are only electric cooking appliances in use in the galley? Yes ☐ No ☐
21. Are naked light requirements being observed? Yes ☐ No ☐
22. Are there sufficient lifeboats for an emergency escape? Yes ☐ No ☐
23. Is the pumproom mechanically ventilated and able to be kept running throughout the offtake operation? Yes ☐ No ☐
24. Have the drug and alcohol requirements of the Berthing and Terminal Handbook been understood? Yes ☐ No ☐

Communication Agreement

The equipment described below shall be utilised as the communications system between the Offtake Vessel and the FPSO throughout the offtake operation:

Equipment Description/model/make	Channel/frequency/number
....	....
....	....
....	....

For Offtake Vessel	For FPSO
Name:	Name:
Rank:	Position:
Signature:	Signature:

SHIPMASTER'S REPORT: September 1994.

The "Griffin Venture" is a Floating Production and Storage Unit in position Lat. 21° 13.4′ S., Long. 114° 38.6′ E., about 30 miles from the coast of Western Australia.

Helicopter service is from Dampier, about 100 miles (approximately 1 hour flying time).

Normal production of crude oil is about 80,000 bbls. per day, though this could be increased by opening additional wells. The Terminal also exports gas by pipeline to the shore.

The maximum size of ship accepted by the Terminal has been 150,000 d.w.t. There have been 33 export cargoes loaded at the facility since it's opening in January 1994.

Agents were from Dampier. A representative of the Agency flies out to the "Griffin Venture" and boards before berthing. The Agent remains on board until departure.

Radio Pratique is sent to Agents using standard format. SBT ballast was reduced to half tank level and refilled twice at sea prior to arrival.

Customs can board on arrival at "Griffin Venture", though probably will not attend on a regular basis.

Port entry requirements are as normal for Australian ports. Customs require fax of Crew List and ship's details 48 hours prior to arrival (See Form below).

Port Dues and Marine Oil Pollution Levy are not collected at the facility.

On arrival, contacted "Griffin Venture" on VHF Channel 16 with Channel 72 as working channel. Ships are required to remain at least 5 miles off the facility until instructed to proceed closer for berthing. Ship stopped and drifted – rate of drift about 1 knot in S.E.'ly direction (September).

Berthing is carried out from 0700 hrs. until 1630 hrs.

Berthing Master and 2 assistants (plus Agent, Surveyor (SGS) and Customs) board by launch using combination ladder when ship is about 1 mile astern of the "Griffin Venture". A wave rider buoy is moored about 1 mile S.W. of the facility. It is a small orange buoy with a light, radio aerial and several floats, about 75 m. from it. The facility did not advise the ship of its presence and it is not marked on the charts.

Berthing is carried out as for normal SBM practice. The messenger line and pick-up rope are wound on to mooring winch drum and the chaffing chain is secured in AKD bracket. Only one chain is available with SWL of 200 tonnes. The pick-up rope is a 72 mm. polyproylene.

Distance off and speed are relayed to the Berthing Master from the assistants on the fo'c'sle and from the stern of the "Griffin Venture". The "Griffin Venture" has a radar gun for speed and distance off measurement.

The hose connection is to the port side and is a 16 in. line with Camlock securing arrangement.

One mooring assistant remains on the fo'c'sle throughout the time the ship is secured to the "Griffin Venture". Communication between the bridge and fo'c'sle is by VHF Channel 72. Engines are required to maintain station astern of the facility and can be required to run tor prolonged periods at dead slow astern (In our case we had the engines running continuously from 1715 hrs. until departure the next day at 1136 hrs.

The second mooring assistant supervises the lifting and securing of the cargo hose.

Normal OBQ inspection is carried out by the surveyor. Cargo density is given on basis of previous lifting from facility. Density advised prior to loading was 0.7571 at 15°C, loading temperature 83.75° F and API 55.3; actual was 0.7596 at 15°C, 83.5°F API 54.70.

No Safety Check List was presented from Terminal, so ship used own from ISGOTT, and mooring assistant countersigned same.

Loading is started as soon after connection as possible. The initial flow from the cargo hose is water and it is preferred that this is loaded into only one tank. The cargo is started at minimum rate of about 1,000 cu.m./hr. until it is established that all is correct onboard, then it is increased to a maximum rate of 4,000 cu.m./hr. Loading rate from the facility varies, depending on the amount of cargo available and the amount of ballasting the facility requires to do during the loading.

Contact is maintained by UHF radio to the "Griffin Venture" Control Room, and also on VHF Channel 72.

Slowing and stopping cargo is almost instantaneous. On completion of loading, a water plug is again pumped through the hose. It is preferred if it can be to the same tank as the initial plug. Terminal did agree to their stopping cargo on their meter, but compared readings with ship as neared completion.

As soon as loading is complete, the hose is disconnected, then the ship unmoors. The 2 mooring assistants carry out the unmooring.

After unmooring, cargo survey is carried out, and on completion of calculations the personnel depart.

EDP is used by the facility. The final density is given as soon as possible after the loading is completed. The ship's figures are used for the Bill of Lading. Due to the swell conditions, a Letter of Protest must be given to the facility for using the ship's figures and for the ship's movement during taking the ullages. Mooring assistant signs same on behalf of facility Master.

No boarding by helicopter is envisaged for this facility. Helicopters to and from facility are arranged as required. Cost varies, but is about A$8,000 to A$10,000.

No stores or shore assistance is available at the facility.

Spares and stores were picked-up by launch at Dampier. Bonded stores could be available, but Customs will consider on case by case basis. All stores and provisions are brought from Fremantle, and at least 48 hours notice is required. Quality and cost of provisions good, and most items are available. Stores are delivered in a small container which must be unpacked and returned to the launch.

Additional charts which were required are AUS.327, AUS.328, AUS.415 and AUS.744.

Weather criterion for mooring and for ships to be released from the facility is wind speed 35 knots and swell height about 3.0 m. There is also a tension monitoring device on the mooring and 3 alarms require the ship to be slipped.

Mooring does also depend on the sea condition and the ability of the "Griffin Venture" to launch her boat.

BHPP have a fixed criterion for unmooring ships and the "Griffin Venture" in the event of a cyclone being in the vicinity. Cyclone season is from October through to April.

Customs:

AUSTRALIAN CUSTOMS SERVICE

SHIPS ARRIVAL DETAILS

The vessel . . . . departed . . . . on (date) . . . .
and will arrive at . . . . on (date) . . . . . at . . . . hours.

SHIPS PARTICULARS

1. Previous Name: . . . . 2. Vessel Type: . . . .
3. Port of Registration: . . . . 4. Official Number: . . . .
5. Vessel Call Sign: . . . . 6. Animals on Board: . . . .
7. Tonnages: Gross: . . . .
Net: . . . .
Deadweight: . . . .
8. Last 4 Overseas Ports of Call: 1: . . . . Date: . . . .
2: . . . . Date: . . . .
3: . . . . Date: . . . .
4: . . . . Date: . . . .
9. Does Master hold valid identity documents for all crew?: Yes/No
10. Number of Passengers on Board: . . . .

SHIPS CERTIFICATES – EXPIRY DATED

Load Line: . . . . Safety Equipment: . . . .
Safety Construction: . . . . Oil Insurance: . . . .
Safety Radio: . . . . Navigation Levy: . . . .
IOPPL: . . . . MOPL: . . . .
Intended Date of Departure: . . . . Next Port of Call: . . . .
Note: This Document is to be lodged at Customs along with a copy of the Crew List *48 hours prior* to the vessel's arrival.

OPERATOR: BHP Petroleum Pty.Ltd., 152-158 St. George's Terrace, Central Park, Perth, WA 6000, Australia. *Tel:* (09) 278-4888. *FAX:* (09) 278-4899. *Contact:* Marine Superintendent.

GROOTE EYLANDT (Milner Bay), N.T.: 13.52 S. 136.25 E. (See Plan)

LOCATION: Milner Bay is situated on the Northwestern corner of Groote Eylandt which is itself situated in the Southwestern area of the Gulf of Carpentaria.

It is a "Port of First Entry" to Australia. Doctor and Police are in residence on the Eylandt. Customs and Quarantine service available.

PORT LIMITS: The waters in Milner Bay bounded by a line commencing at the HW mark on the N.W. coast of Groote Eylandt in position Lat. 13° 50′ 05″ S., Long. 136° 24′ 29″ E. and proceeding in a 260° 44′ 10″ direction to a point in Lat. 13° 50′ 28″ S., Long. 136° 22′ 03″ E. at the high-water mark on the East coast of Connexion Islet; thence by a line following the contour of the coast of Connexion Islet at the HW mark to "Boulder" in position Lat. 13° 50′ 46″ S., Long. 136° 20′ 14″ E.; thence by a line bearing 151° 30′ to a position Lat. 13° 53′ 34″ S., Long. 136° 21′ 47″ E.; thence by a line bearing 80° 44′ 10″ to a point being Lat. 13° 52′ 54″ S., Long. 136° 25′ 58″ E. thence by a line following the contour of the coast at high-water mark to the point of commencement.

DOCUMENTS:

1 copy of Crew List to be supplied to Agent 48 hours prior to arrival in order to obtain faster clearance.
3 Crew Lists.
5 Passenger Lists.
1 Port of Call List.
3 Stores Lists.
1 Crew's Personal Effects List.
Derat. Certificate.
Clearance from Last Port.

PILOTAGE: Compulsory to Ore Jetty.

There is a Port Superintendent and a Port Officer at Milner Bay who will assist Masters in berthing and departing from the jetty. Approaching Groote Eylandt from the Northwards, vessels should steer to a position 10 miles North of the Northeast Islet, which is rocky on the Northern coast and rises to grassy hills. From the above position, steer to pass about 3 miles North of Chasm Islet until the recommended track on chart AUS. 14 is reached. This track, 221° passes about 1 mile East of Brady Rock (light Gp. Fl. (3) ev. 12 secs.) and continues on this course until Bickerton Island Light (Fl. 5 secs.) bears 250° when the course should be altered to steer for Hand Islet on the recommended track (250°). When 2.3 miles off Hand Islet, alter course to 195° to pass 1.4 miles clear of Connexion Island Light (Fl.2.5 seconds). As soon as the jetty in Milner Bay bears 085°, alter course to 133°. Remain on this course until the jetty bears 070° × 1.7 miles, whereupon the ship should be brought round to steer 270° to pass 0.7 miles to the South of Burley Shoal South Cardinal Buoy Q(6) + LFl. 15 secs. When the jetty bears 058° × 3.7 miles, alter course to 040°, which will take the vessel to the anchorage and pilot boarding ground.

If vessels enter via the Connexion Passage, care must be taken to avoid the 5.4 m. fathom patch off N.W. Bluff and keep clear of the 8.2 m. patch about 3.5 miles N.E. of Connexion Islet.

Coastal Pilotage: Pilotage services between Gove and Darwin via Clarence Strait, or to Torres Strait, are conducted by pilots of the Queensland Coastal Pilot Service Pty.Ltd. and the Queensland Coast and Torres Strait Pilot Service. See "Torres Strait" for details.

ANCHORAGES: Good holding ground is found 1.6 miles West of the jetty where there is a good sand bottom free of obstructions with about 20 m. of water. Due to currents up to 3 knots in the area, it is advisable to use at least 6 shackles. Quarantine is granted at this anchorage.

RESTRICTIONS: Vessels berth in daylight but can unberth up till 2100 hrs.

MAX. SIZE: The max. LOA is 223 m. and max. breadth 32.2 m. The max. draft is 12.5 m. Max. airdraft 12.9 m.

HEALTH: Vessels are granted Pratique at the Anchorage 1 mile West of the wharf or at the Jetty.

RADIO: The Port is able to communicate with vessels which are fitted with VHF radio through normal international Maritime Channels and the call sign is "Milner Bay". However, the shore station is only open during office hours unless prior telegraphic arrangement is made. Office hours are 0800 to 1645, Monday to Friday.

It is requested that vessels arriving at any hour of the day should monitor VHF Channel 16 as sometimes attempts are made to contact vessels outside of office hours. Channels available are 16, 67 and 06 (private).

ETA's are requested at least 72, 48 and 24 hours prior to arrival. Telegraphic address is: 8A MILBAY, Telex AA85886 (Answerback 'Milbay'). Telephone No. (089) 874251. Fax: (089) 876359.

VHF: Port – Channels 16, 06 and 67.
Tugs – Channels 16, 12, 06 and 67.

TUGS: 2 tugs available. 1×30 tonne bollard pull and 1×16 tonne bollard pull.

Normally join the vessel 0.75 miles from berth.

Ship's lines taken for berthing.

BERTHING: The ore-loading jetty is situated in approximately Lat. 13° 51.5′ S., Long. 136° 25′ E., with a depth of water alongside of 11.9 m. L.A.T. with a tide range of 1.8 m. The jetty consists of a central landing 98.75 m. long and 10.97 m. wide, with two breasting dolphins on the North and South ends of the central landing. Distance between outer dolphins is 340 m. A roadway extends from the shore to the central landing, virtually parallel to and on the North side of the loading conveyor belt. Local Tidal Information may be obtained from the Port Superintendent on arrival.

The line of dolphins is offset 8° from the jetty stem which runs out 411.5 m. from the shore in a 249° 45′ direction so that care must be exercised in placing the vessel for loading. All breasting dolphins are fendered with vertical timbering. When berthing, vessels should keep well clear of the loading head in the centre of the jetty, as it is possible that a vessel on a too fine approach could cause damage to the loading boom with the flare of the bow.

Vessel must have rat guards in position at all times (except while shifting ship), otherwise they will be liable to a fine. As Groote Eylandt is a reserve this requirement is rigidly enforced.

Loading rate is 900 t.p.h. –1,100 t.p.h. and the vessel is required to shift ship to load each hatch as the loading boom is fixed. Shore labour is available to shift lines, etc., as required. Shore labour will not trim manganese ore, which is dump loaded from the conveyor.

This is a seasonal tropical loading zone from 1st April to 30th November.

MEDICAL: There is a Medical Centre and medical staff available if necessary. Valid vaccination certificates are required, covering the requirements of the Australian Government Department of Health.

FRESH WATER: Available. Rate 9 tonnes/hour.

FUEL: Not available.

FIRE PRECAUTIONS: A permanent fire-fighting facility is installed on the ore-loading jetty. It is an automatic system which starts as soon as a fire hydrant is turned on, and delivers a 140 p.s.i. through a 2.5 in. hydrant with a 5 TPI V thread connection.

All shore hoses are 2.5 in. and are equipped with fog nozzles. Foam equipment is also available on the jetty with an output of approximately 1,000 gallons per minute. Fire-fighting lines on the jetty deliver salt water only. International shore connection available.

CUSTOMS ALLOWANCES: 200 cigarettes, 1 bottle spirits, 3 bottles of beer per man.

REPATRIATION: Can be effected to most countries from Groote Eylandt via Darwin which is serviced by Qantas and British Airways. Due to the remoteness of Groote Eylandt, repatriation of crew members should only be considered in a 'Force Majeure' circumstance. All necessary bookings and reservations are made through the local airline office and Seamens' Discount Fares, where applicable, are utilised.

AIRPORT: Ansett N.T. operate a 5 times a week jet service to and from Darwin and Cairns. Air Queensland operate a twice weekly service to and from Cairns.

TIME: See "General" before first port.

ACCOMMODATION: Visitors accommodation in the GEMCO township of Alyangula, is severely limited and shipowners who are arranging for a change of personnel at Groote Eylandt are requested to ensure that the arrival of crew members at Groote coincides as closely as possible with the arrival of the vessel.

NOTARY PUBLIC: A Notary Public is not available.

HOLIDAYS: Cargo worked on most holidays by arrangement.

SHORE LEAVE: The area is an Aboriginal reserve and *shore leave is allowed in the town area only* provided the vessel has a permit which is supplied by the Agent on berthing.

IDENTIFICATION CARDS: Seamen calling at this port have to be in possession of Seamen's Identification Cards, Form M315, issued by the Commonwealth of Australia, however, certain nationalities are exempt.

Facilities at Groote Eylandt are severely restricted and the Port Authorities recommend seamen should be provided with the required card before arriving at Groote Eylandt. For information, we would advise that Greek nationals are not exempt from this requirement, but nationals of Great Britain, Norway, Japan, Hong Kong, India and the People's Republic of China are.

STORES: Not available.

GARBAGE DISPOSAL: No facilities available.

WASTE OIL DISPOSAL: No facilities available.

SEAMAN'S CLUBS: No seaman's club. There is one recreation club walking distance from the port.

CURRENCY: A.N.Z. bank available for currency exchange.

WEATHER/WIND/TIDE: Tides cause some eddying in both the Connexion and Warwick Channels, but these cause no concern provided normal care is exercised.

Prevailing winds from May to October are S.E. and blow strongly at times during the day but ease off considerably after sunset.

There are occasional heavy fogs in the area in June and July in the early morning and these sometimes persist until 1000 hrs. or 1100 hrs.

From November to May the wet season prevails with winds blowing mainly from the N.W. with heavy rains and occasionally, more than moderate seas.

AUTHORITY/AGENT: The Groote Eylandt Mining Company Pty. Ltd. act as ships' Agents in all cases.

Groote Eylandt Mining Company Pty. Ltd., Post Office, Alyangula, Groote Eylandt, N.T. 0885. *Tel:* Alyangula (089) 874272, 874251. *Telex:* AA 85886 Milbay. *FAX:* (089) 876359. *Cables:* 8A MILBAY. *Contact:* Port Superintendent or Port Officer.

Mail for vessels to be addressed to: "Vessel's Name", Groote Eylandt Mining Co. Pty. Ltd., Groote Eylandt, N.T. 0885.

HASTINGS (Formerly Western Port), Victoria: 38.21 S. 145.14 E. **(See Plan)**

GENERAL: The port of Hastings is the commercial port located in Western Port Bay. Within its limits are 2 large islands, namely French Island occupying the middle of the bay and Phillip Island fronting the bay to seaward and forming 2 entrances to the Port. The Western and main entrance which is easy of access has a minimum low water depth of 14.9 m. and is available for vessels of deep draft. The Eastern entrance is narrow and tortuous and is available only for small vessels. Height of tide within the bay is some 2.50 m. at Neaps and 3.20 m. at Springs.

DECLARATION: *Declaration Prior to Arrival:* The Master of a ship which carries liquid bulk dangerous substances or oil in bulk, other than oil fuel used for the propulsion or operation of the ship, shall ensure that the Port Authority is advised, in writing, with answers to the following questions at least 48 hours prior to arrival in the port:

1. Is the hull leak free?
2. Is an inert gas system fitted?
3. Is the inert gas system, if fitted, fully operational?
4. Is a crude oil washing system fitted?
5. Is the crude oil washing system, if fitted, fully operational?
6. Are there any defects to the ship, machinery and equipment, which may affect safe pilotage, berthing, cargo or ballast operations?
7. Have stress calculations for the envisaged programme of cargo handling, ballasting and bunkering been made?
8. Is the hull stress calculated within recommended safety limits?

Additional information required for liquefied gas carriers:

9. Are all cargo tanks and lines free of air?
10. Is the re-liquefaction or boil-off control equipment in good working order?

PORT LIMITS: The Port Authority considers a vessel to be arrived when she crosses an imaginary line between West Head and Point Grant.

DOCUMENTS: Application for berth, tugs, mooring launches, telephones, and notification to load or unload, to be delivered by ship's Agent to the Port Authority not less than 24 hours before arrival.

Customs Documents required:

Form 3A & 3B	Crew List and attachments, 2 copies (Required 48 hours prior to arrival).
Form 42 A	Stores List, 1 copy.
Form 5, Part 1	Ships Report of Arrival, 2 copies.
Form 5, Part 2	Articles owned by or in possession of crew, 1 copy.
Form B921	Ports of Call since commencement of voyage, 1 copy (Required 48 hours prior to arrival).
Form QA 3	Quarantine Form. (Animals carried as cargo), 1 copy.
Form QA 4	Quarantine Form. (Animals carried as pets), 1 copy.
Form QA 5	Ship Master's Bond re animals carried, 1 copy.
Form Q 360	Health report of all persons on board, 2 copies.
	Inwards Manifest, 1 copy.
	Outwards Manifest, 1 copy.
Form 40	Application for clearance.

Customs forms available from Pilot on arrival.

PILOTAGE: Pilotage compulsory for merchant vessels except those specially exempted. Pilots for the Port of Hastings are available at any time provided notification of ETA is given 24 hours in advance and confirmed 6 hours prior to arrival. Pilot for the Port of Hastings will board from a launch, painted orange and showing the signals and lights prescribed for such vessels, by day approximately 3 miles Southward from West Head. By night in the white sector of McHaffie's Point Light, with Cape Schank Light bearing 295° (White), at the entrance to Western Port. Pilot launch is equipped with VHF Channel 16 (156.8 MHz). Port working channel is VHF Channel 14 (156.70 MHz). A speed of 7 knots must be maintained.

In adverse weather, vessels to 9.75 m. draft may board Pilot adjacent to yellow buoy 2 miles – 084° from Flinders Jetty Light. At night buoy shows Fl. Y. 4 secs.

Port Authority's Office requires notification of vessel's ETA at Fairway Buoy 24 hours prior to arrival. Confirmation of ETA is required 6 hours prior to arrival. To minimise delays in co-ordinating Port services vessels expecting to arrive between the hours 0900 to 1700 hrs. should ensure Port Authority receives confirmation by 0830 hrs. that morning.

Vessels expecting to arrive between the hours 1700 to 0900 hrs. should confirm ETA by 1530 hrs. that afternoon.

Vessels expecting to arrive during a weekend period should indicate ETA by 1530 hrs. on Friday, then follow above procedure.

Telex No. of this Office is AA 34051 and Fax No. (059) 838684.

ANCHORAGES: Anchorage within port between Southern edge Tortoise Head Bank, and Northern shore of Phillip Island. Anchorage 4 miles in length, East to West, and 1.25 miles wide, depths 16 m. – 27 m. at Western end, decreasing 11 m. – 20 m. at Eastern end.

An anchorage area having a least depth of water of 8.5 m., has been established adjacent to Long Island Jetty.

RESTRICTIONS/MAX. SIZE: *Depth Below Keel Required:* 10% of draft up to 30 ft. (9.14 m.), 4 ft. (1.2 m.) between 30 ft. (9.14 m.) and 40 ft. (12.19 m.), 5 ft. (1.5 m.) over 40 ft. (12.19 m.).

Long Island Point (LIP) Jetty can accommodate vessels of up to 165,000 d.w.t. (See information relating to acceptance of large tankers into Western Port Bay.) See "Tankers".

HEALTH: Radio Pratique is available. The following procedure shall apply. In a period of 12-24 hours before the expected arrival of the ship, the ship's Agent shall present to the Port Quarantine Officer, via the Port Authority Office, a completed questionnaire giving details of ship's itinerary, health and quarantine status, etc., and request permission to berth, or Radio Pratique, as required. The answers to the questions should have been obtained by radio from the ship immediately prior to presenting the form to the Quarantine Officer and should include vessel's ETA at the Pilot Station. The ship's Agent shall advise the Quarantine Officer when the ship has berthed and the Quarantine Officer will then board the ship and will require the completed Declaration of Health forms in duplicate. If all the standard conditions are satisfactory, a Certificate of Pratique will be issued.

RADIO: *Advice to Ships Masters on Hastings Harbour Control:*

GENERAL INFORMATION (When vessel within 1 hour of port).

1. *Radio Watch*	A continuous radio watch will be kept by Harbour Control on VHF Channel 16. Main working channel is 14.
2. *Pilot Boarding Ground*	Position 3 mile × 180° from West Head will be identified as position "A".
3. *Fairway Buoy*	Position of Fairway Buoy (ISO. 2 sec.) will be identified as position "B".

INWARD BOUND VESSELS

1. Vessels shall report to Harbour Control at least 1 hour before arrival at position "A" or "B", giving ETA position "A" or "B", deepest draft and information re-hull leaks and health of crew, etc.
2. Vessels must request permission to enter port. It is an expressed condition of entry that any malfunction or impairment of machinery, steering and propeller indicators which could cause restrictions in the manoeuvring ability of the vessel, is reported to Harbour Control and to the Pilot when engaged.
3. Vessels shall advise Harbour Control when passing Fairway Buoy (position "B"). Sea lashings to be removed from anchor cables and anchors made ready for immediate use.
4. Vessels shall advise Harbour Control when rounding Sandy Point and request VHF Channel for berthing operations and tugs.
5. Vessels shall report to Harbour Control (Channel 14) when all fast, finished with engines and tugs dismissed.

OUTWARD BOUND VESSELS

1. Vessels shall contact Harbour Control 1 hour before fixed time of departure advising if they will/will not be ready to sail in 1 hour's time.
2. Vessels will be advised at sailing time by duty Harbour Master re permission to sail, port movements, etc.
3. When vessels clear their berth and tugs dismissed and proceeding they shall report this to Harbour Control (Channel 14).
4. Vessels to advise Harbour Control when (a) Rounding Sandy Point. (b) Clear of Port.

VESSELS PROCEEDING TO ANCHORAGE

1. Vessels inward and outward to an anchorage are to use the same procedure as in above for inward and outward vessels respectively. Vessels will be advised if required to anchor and what anchorage to use. Whilst at anchor vessels shall keep a continuous listening watch on Channel 14.
2. Vessels shall advise Harbour Control when they have anchored and also when vessels are underway again from an anchorage.

ENGINE TRIALS AND LIFEBOAT DRILLS, ETC.

1. Vessels wanting to carry out engine trials shall first obtain permission from the duty Harbour Master.
2. When lifeboat drills are to be held and boats swung out and put into the water the duty Harbour Master shall be given prior notice.
3. All vessels in the port shall notify Harbour Control (Channel 14) of any distress signals sighted or any untoward occurrence.

TUGS: Two tugs are available both of 3,800 kW. and 50 tonnes bollard pull. Tugs join vessel at Sandy Point. Tug's line used. Tugs are fitted with VHF and radar and fire-fighting equipment. Additional tugs available from Melbourne given 24 hours notice.

BERTHING: Berthing subject to Port Authority's direction. Two oil berths, 2 steel works berths (one is Ro/Ro) and 2 tug berths are available (One tanker berth (No. 2 Crib Point) out of commission).

Steel Industry Wharf (2 Berths) (16.5 n.m. from Entrance): Berths are owned and utilised by BHP Coated Products Division. Approach channel has a depth of 9.1 m. Depth alongside both berths is 12.1 m. Swing basin diameter 457 m. Steel works is 2.5 Km. from berth.

Steel Industry Wharf No. 1: Ro/Ro Berth – Vessels with stern door or starboard quarter ramp up to 15,000 tonnes.

Ramp details: Length 28 m. (curved), width 8.5 m. Ramp made up of 7 sections which are hydraulically operated to allow accommodation of various types of stern loading/discharging vessels.

Ramp section is approximately 3 m. proud of stern berthing fenders.

Starboard Quarter Ramp details: Concrete landing pad ashore appropriate for a quarter ramp of 10.17 m. width, 50.3 m. length overall, and angled at 31.5° to ship's centre line. Stern of vessel approximately 17 m. off ramp for stern door vessels.

Steel Industry Wharf No. 2: Conventional General Cargo Wharf. 152 m. long, 24 m. to 15.6 m. wide. Reinforced concrete wharf with wooden fendering. A mooring dolphin is provided 30 m. N.E. No. 2 Berth is adjacent and extends in a N.E. direction from No. 1 Berth.

Max. size of vessel: 200 m. length overall.
Tidal range at berth: Between 2 m. and 3 m.
Nature of Bottom: Mud, clay and some rock.

Vessel can dock/undock during hours of darkness, subject to tidal conditions.

Vessels moor using ship's lines to Port Authority's requirements.

Pilots used, unless Master holds special exemption. Water available.

Bunkers by Road Tanker only, subject to Port Authority's approval.

Engines may be immobilised whilst ship is alongside, subject to duty Harbour Master's approval.

Stores and supplies can be delivered from dock or by launch.

STEVEDORES: Hastings is a class "B" port for stevedoring facilities. Port Waratah stevedores available. Require ETAs of vessels from Agent. Ordering time for labour: Tuesday-Friday, by 1430 hrs. previous day. Saturday-Sunday, by 1430 hrs. previous Friday. Monday, by 1430 hrs. previous Sunday. All close holidays observed.

MEDICAL: Four qualified medical practitioners available and 20-bed Nursing Hospital. Agent should receive prior notice of particulars of vaccinations required.

TANKERS:

Information Relating to Acceptance of Large Crude Tankers into the Port of Hastings:

The following parameters should be used by ship charterers and agents as a guide to determine the acceptability of large tankers into the Port of Hastings.

1. Displacement tonnage in arrival ballast condition to 110,000 tonnes.
2. LOA to 300 m.
3. Draft in ballast condition to 9.5 m.
4. Distance from manifold centreline to water line: 16.5 m. at Crib Point jetty, 17.5 m. at Long Island Point jetty.

Distance from manifold flange to ship's side: Minimum 1.0 m., maximum 4.5 m. to 5.0 m.

5. Only clean ballast from segregated ballast tanks is permitted to be discharged into Western Port Bay (i.e. no ballast water from any tank capable of carrying oil is permitted to be discharged into Western Port Bay notwithstanding the cleanliness of the tank or the previous cargoes carried in the tank).

There are no ballast reception facilities at Crib Point. Esso can accept up to 16,000 tonnes of ballast without difficulty and up to 20,000 tonnes with 1 week's notice. Quantities in excess of 20,000 tonnes may, in exceptional circumstances, be accepted by Esso but only after consultation with the terminal management.

6. Consultation with Port Authority is required prior to fixing any vessel over 100,000 d.w.t. or having loaded draft over 13.0 m. into or out of Western Port.

Crib Point Jetty: *(2 Berths, 13 n.m. from Entrance):* Berths are State owned. The approach channel has 14.3 m. below chart datum, swing basin has a diameter of 610 m., and depth of 14.3 m.

No. 1 Crib Point: Capable of accommodating 90,000 tonne tankers with a depth alongside of 15.8 m. Shore gangway used at this berth.

Grades Handled – Imported motor spirit and auto diesel only through 10 in. line and flexible hose string using ship's gear.

Hose and pipeline diameters:

Max. back pressure 100 p.s.i. Hoses connected by shore labour. Airdraft to manifold 16.5 m. above MHW. Ballast capacity – Nil.

No. 2 Crib Point: State owned and now out of commission. Capable of accommodating vessels to 90,000 tonnes deadweight (in ballast) with a depth alongside of 12.8 m. Shore gangway available. Two dolphins provided 61 m. apart.

Long Island Jetty *(1 Berth 15.5 n.m. from Entrance):* Berth is State owned and utilised by Esso (Australia). The approach channel has a depth of 14.3 m., swing basin has a diameter of 548 m. and a depth of 14.3 m. There is a depth of 15.8 m. alongside the berth. Berth used for export of Gippsland Crude and LPG. Can accommodate vessels up to 165,000 tonnes. Shore gangway used.

Long Island Terminal – General:

Tank Height above sea level –	Crude Base 13.7 m. Tank Full 28 m. LPG Base 7.6 m. Tank Full 36.6 m.
Distance of tank farm to Jetty –	Crude 3 km. LPG 1 km.

Hose and Pipe-line diameters:

No Hoses. "Chicksan" arms used. Airdraft to manifold 17.5 m. above MHW.

Crude: 2×16 in. and 1×12 in. diameter loading/ballast arms. 2×30 in. diameter pipelines.

Max. pumping rate 7,250 t.p.h. Max. back pressure 125 p.s.i.

LPG: 3×12 in. diameter loading/vapour arms. 1×20 in. diameter refrigerated pipeline. 1×12 in. diameter vapour pipeline. 1×4 in. diameter pressure pipeline.

1×8 in. diameter loading arm for refrigerated and pressure LPG is also fitted with a 4 in. vapour return line.

Max. pumping rate – refrigerated products 1,400 t.p.h.
– pressure product 45 t.p.h.

Following are requirements for LPG carriers loading at Long Island Point Jetty:

1. Vessels to present at loading port with cargo tanks precooled and ready to load fully refrigerated butane and must contain a liquid butane heel. Similar procedure for propane.
2. Vapours in the ship's tanks must not contaminate the product in any way that may cause the quality specification to be exceeded in any particular case.
3. Vapours in the ship's tanks should not react with the product in any way to cause a hazard or prevent the vapours from being returned to the shore compressor system.
4. The ship's tanks must be free of sulphur compounds/L.G. odourants.

Manifold connection requirements:

Distance manifold flange to ship's side	Min. 0.91 m. (3 ft.) Max. 3.66 m. (12 ft.)
Height C/L manifold flange above water level/ vessel Lightest Condition:	17.04 m. (55.9 ft.)
Manifold spacing	Min. 1.83 m. (6 ft.) Max. 3.66 m. (12 ft.)
Height of C/L manifold flange above deck	Min. 7.6 m. (2 ft. 6 in.) Max. 1.60 m. (5 ft. 6 in.)

Flange connection 305 mm. (12 in.) 150 ASA to match Chicksan Arms. Connection to be approximately mid way between stern and stem to enable satisfactory mooring of vessel..

Hoses will not be permitted for the loading of refrigerated LPG. Compliance with standard safety check list is required.

Reducers: Terminal has 6 in., 8 in., 10 in. and 12 in. ASA Reducers.

Arms connected by Esso.

Ballast Facilities: Normal capacity 16,000 tonnes and up to 20,000 tonnes with one week's notice. Quantities in excess of 20,000 tonnes may, in exceptional circumstances, be accepted by Esso, but only after consultation with the terminal management.

Pollution: Cases of discharging dirty ballast or oil spillage will be investigated and vessels are liable to fines and/or detention. Vessels shall not discharge into the waters of the port any part of the contents of their cargo, slop or ballast tanks (this includes clean ballast) or tank washings or bilges which are liable to pollute these waters. Masters shall ensure that pipelines and equipment are clean before using them for discharging anything into the waters of the port. Scuppers shall be plugged effectively and no leakage or spillage from any vessel shall be allowed to leak or be swept overboard.

Masters of vessels must seek permission from the Port Authority before pumping anything into the waters of the bay.

The State of Victoria has stringent laws in force concerning the pollution of the sea by oil.

Smoke emissions controlled under the Clean Air Act which will operate under the jurisdiction of the Environment Protection Authority.

Ballast (Tankers): All ballast contained in tanks connected in any way to the vessel's cargo carrying system, is to be discharged to shore tankage.

Fire Precautions: Tankers shall not immobilise main engines whilst alongside jetties. No oil cargo handling or physical preparation for same permitted unless firewatch tug is on duty.

Tank Washing/Gas Freeing: Permitted alongside subject to approval from the Port Authority. All tank washings to be discharged ashore.

Garbage: No garbage or rubbish shall at any time be jettisoned into the waters of the port. The Master, Owner or Agent of a ship shall, through the Port Authority, make all arrangements for garbage and rubbish to be collected from ships within the port and to be delivered to the port incinerator for destruction.

Bunkers: Small quantities of marine fuel are available from road tankers.

Fresh Water: Available, approximate rate 100 t.p.h. Approximate price $1.00 per 4.5 cu.m. Delivered from hydrants at Jetty Heads at all Berths.

Density: Average density between 1025 and 1030 oz. per cu.ft.

Mooring: Vessels secure to oil jetties using ship's lines and shore preventer wires, if considered necessary. See "Plan".

Also see "Shipmaster's Report" dated April 1993.

CONSULS: None.

REPAIRS: Facilities for medium size deck and engine repairs. All repairs subject to Port Authority's approval.

SURVEYORS: Cargo Inspectors: Caleb Brett, Cargo Superintendents available from Melbourne. All major classification societies, surveyors and insurers represented as for Melbourne.

GANGWAY/DECK WATCHMAN: A shore watchman may be hired. Cost borne by the vessel.

CERTIFICATES:

Clearance from last port.
Ship's Register.
Articles of Agreement.
Official Log Book.
Load Line Certificate.
Safety Radio Certificate.
Safety Equipment Certificate.
Safety Construction Certificate.
Derat Certificate.
IMO Certificate of Fitness for LPG Carriers.
Light Dues Certificate (receipt).
Pratique Certificate from last port (if to be used in this port).

CUSTOMS ALLOWANCES: *(a)* Tobacco: each crew member permitted either 200 cigarettes or 250 gm. of pipe tobacco, or 250 gm. of Fine Cut Tobacco out of Bond. *(b)* Wine and/or Spirit: each crew member is allowed 1 litre of wines or spirits (opened).

CARGO GEAR: No shore cranes. All vessels must comply with Commonwealth of Australia Regulations prescribed under the Navigation Act.

REPATRIATION: Facilities available.

AIRPORT: Nearest major commercial airport is Tullamarine, 55 miles distance, from which there are frequent interstate and international flights. Airport accessible by road in about 2 hours by taxi-car.

HOLIDAYS: Oil terminals work on all holidays. Steel Works observe close holidays.

POLICE/AMBULANCE/FIRE: Police Hastings 790222; Ambulance Frankston 7832222; Fire. Hastings 791345, and Crib Point 839221.

TELEPHONES: A telephone service may be installed onboard every ship berthed at the tanker terminals. STD (Subscriber Trunk Dialling) is not available from these telephones. Trunk calls may be obtained by dialling 0176 and reversing the charges.

SERVICES: Licensed compass adjuster available. Underwriters' Representatives available. Radio and radar repairs available.

BANKS: American and European bank offices are represented from Melbourne.

EMERGENCY CO-ORDINATION CENTRE: Port Emergency Plan is activated by Duty Harbour Master with Co-ordination Centre initially established in the Port Authority Office, Stony Point.

STORING: Vessels may be stored by barge or truck. At tanker terminals storing is not allowed during loading or discharging operations. Trucks and forklifts are restricted to a point 60 m. from jetty head. Bonded stores are handled under Customs supervision. Local labour is available to assist with storing.

SHORE LEAVE: Crew members permitted shore leave, and launches can be supplied to vessels at anchor, provided vessels have pratique, and have been cleared by Customs.

IDENTIFICATION CARDS: Required for all nationalities except Canada, Chile, China, Denmark, Egypt, Fiji, Ghana, Hong Kong, India, Iran, Israel, Italy, Japan, Kenya, Lebanon, Malaysia, Malta, Nauru, New Zealand, Norway, Pakistan, South Africa, South Korea, Tanzania, Uganda and United Kingdom. Also see "Melbourne".

Cards available from Customs on arrival, if required.

GARBAGE DISPOSAL: Collected by road from small vessels at the Oil Terminal and all vessels at the steel works. Other collections by launch. The service is co-ordinated by the Port Authority.

WASTE OIL DISPOSAL: By arrangement with Oil Terminal Operator (Esso).

DELAYS: No delays anticipated. Port operates 24 hours per day.

SHIPMASTER'S REPORT: April 1993 (Updated 1996).

Information listed is additional to requirements covered in "Guide to Tanker Ports".

Berth: Long Island Point (LPG).

Pre-Arrival: ETA every 2 days to Essolip, attn. Clare Caughey (Telex: Essolip AA31457).

Crew list faxed to Agent with following information required:

1. Reference No. in agreement.
2. Family name.
3. Given names.
4. Sex.
5. Rank/rating.
6. Identity document type.
7. Document number.
8. Date of birth.
9. Country of birth.
10. Nationality.

Ballast changed on passage with coordinates in Movement Book/Deck Log/Official Log Book.

Pilotage/Immigration Pre-Arrival information as per "Guide".

Documents: All ship's certificates, copy of Certificate of Fitness to Agent.

Customs Officer doubled as Immigration Officer. Must use Australian forms which he brought out to anchorage.

Forms required:

1 copy (Australian Form 5) Articles owned by or in possession of crew.
1 copy Stores List (declare drugs only).
3 copies Crew List, 1 each for Customs/Immigration, Agent, Harbour Master.

Pilot: Boarded 3 miles South of West Head. Must use manropes.

Ship anchored North of Cowes on Philip Island. Good holding ground. Western Port is tidal with tide running at approximately 3 knots at Springs.

Berthed portside to against the ebb. Moorings (3, 2, 2), head and sternlines soft ropes.

Tugs: "Cooma" and "Hastings", each 3,800 h.p. with 50 tonne bollard pull. Tugs made fast fore and aft, tug's lines used.

Jetty: Runs North to South, and is well fendered along parallel body. Moorings made fast on slip hooks. First moorings ashore are springs sent by shore messenger, the other moorings sent by mooring launch to dolphins numbered 1 to 6 (North to South). Offshore anchor lowered clear of pipe. Standard fire wires rigged.

Shore Gangway/Connections/Bunkers: To enable gangway to land clear of obstructions on deck, Northerly 2 Chicksan arms connected to ship's aft 2 manifolds, connected 1 liquid and 1 vapour. Vapour connection fitted for emergency use only with no metering of returned gas. Connections are both 12 in. 150 ASA. No bunker/bulk lubes, no barge at Western Port, Esso do not allow any bunkering operation on their jetty, so must do this at anchor. Understand bunker/lubes barge would have to travel from Melbourne via Southern Ocean. Limited supply of lubes available in drums.

Connected ship's fire main into shore system using ship's hose.

Pre-Loading Formalities: Formalities took 1.5 hours. Ship/shore telephone (battery type) placed in Office or Cargo Control Room. Business calls only on abbreviated numbers. There is an emergency stop on the walkie-talkie which stops shore pumps and closes shore valves.

If constant wind speed reaches 30 knots, loading is stopped, and at 35 knots Chicksan arms are disconnected.

Loading went very smoothly with adjustment in rates undertaken quickly. Loading was slow as one shore tank decommissioned for 10 year inspection, and towards the end of loading, 2 remaining tanks were almost empty. Density Butane 5746 at 15°C in vacuum loading temperature −5°C.

Safety: Ship/Terminal/Port Authority Safety Check List completed for every operation. In addition, Australian Maritime Safety Authority (AMSA) conducts safety surveys.

General: Bangladeshi, Bruneian, Flipino and Pakistani nationals require Australian Seamans Identification Cards. These are provided by Customs, and require a full face photograph. We used ship's polaroid. These Identification Cards remain onboard. They are not shore passes.

For crew signing-off, Customs issue "Permission to Offsign" docket, this covers A$ 20.00 departure tax at airport.

Shore launch to anchorage costs A$ 875.00, so one has to be circumspect. This did not include Easter tariff.

Stores launch/barge is available for hire at approximately $ 160.00 per hour. Cost of labour to load stores is additional to this charge.

New Seamans Club is situated 1.0 km. North of Long Island Point Jetty. Bus collects from jetty at 1845 hrs. Club is only open 1900 hrs. – 2100 hrs., but there is a telephone and money changing facilities.

Coin operated telephone on jetty.

AUTHORITY: Port of Melbourne Authority, P.O.Box 4721, Melbourne 3001. *Tel:* 03-611-1777. *Telex:* AA 34211.

Local Authority: Port Authority – Western Port Region, P.O.Box 102, Hastings 3915, Victoria. *Tel:* (059) 839406. *FAX:* (059) 836043.

Contact: Captain W. Smith, Harbour Master.

Hastings Harbour Control: Stony Point Road, Crib Point 3919, Victoria. *Tel:* (059) 839406. *Telex:* AA34051. *FAX:* (059) 838684.

AGENT: See "Melbourne".

HAY POINT (including Dalrymple Bay), Queensland: 21.16 S. 149.19 E. (See Plan)

PORT LIMITS: The seaward Port Limits extend from the North shoreline at the entrance to Bakers Creek by a line in an East North Easterly direction to Lat. 21° 10′ S., Long. 149° 20′ E. thence East to Lat. 21° 10′ S., Long. 149° 30′ E., thence South to Lat. 21° 18′ S., Long. 149° 30′ E. thence West to the shore South of Hay Point.

A vessel is considered to have arrived when it anchors within Port Limits or if proceeding directly alongside at the time when the Pilot boards.

DOCUMENTS: The documents required by the Customs Department are:

2 Crew Lists.
1 Declaration of Dutiable Goods (Australian Customs Form 5)
1 Ports of Call List showing previous 6 ports
1 List of Dutiable Stores and Drugs held on board (Australian Customs Form 42A)
Last Port Clearance.

The Customs Officer will also wish to sight the following documents:

Ship's Register
Safety Radio Certificate
Safety Construction Certificate
Safety Equipment Certificate
Load Line Certificate.

The documents required by the Department of Health are:

2 Declarations of Health (Australian Government Department of Health Form Q.360)
Crew List
1 Vaccination List
1 Ports of Call List.

The Quarantine Officer will also wish to sight a current Derat Exemption Certificate.

PILOTAGE: *Hay Point:* Pilotage, which is compulsory is provided by the Queensland Department of Transport, Marine and Ports Division, whose Pilots are stationed at the port. Vessels should notify the Harbour Master, through their Agents of their ETA 24 hours before arrival and they will be advised of the Pilot boarding area. The boarding areas are generally 2.3 miles S.E. or N.E. of Hay Point Wharf, depending on whether the vessel is berthing port side or starboard side alongside.

Vessels must make a good lee for the pilot boat and have a pilot ladder rigged in accordance with the provisions of the Navigation (S.O.L.A.S.) Regulations.

Boarding of Pilots may be possible by helicopter if vessel meets certain requirements. The decision will be made after radio communication with the vessel.

Dalrymple Bay: Pilotage is compulsory for all vessels. The Pilot Boarding Area is normally 1.5 miles E.N.E. of the berth. Vessels should be underway and follow instructions given by either the Pilot or "Hay Point Harbour". Only during berthing, trim should not exceed 2.5 m. by the stern with the propeller fully immersed. Pilot transfer will be by helicopter. Vessels should advise their Agent at the earliest opportunity if they cannot accept a helicopter land-on situation.

Coastal and Reef Pilotage: Pilotage through Hydrographers Passage, Palm Passage, Grafton Passage and the Inner Route of the Great Barrier Reef to Torres Strait is conducted by licensed pilots of the Queensland Coastal Pilot Service Pty.Ltd. and the Queensland Coast and Torres Strait Pilot Service. See "Torres Strait" for details.

Masters are advised that pilotage in the Inner Route and at Hydrographers Passage is compulsory. Pilotage in the Great North East Channel is recommended by IMO. See "Torres Strait".

Hydrographers Passage: Masters' attention is drawn to Sailing Directions for Hydrographers Passage compiled by the Australian Department of Transport. Relevant extracts are:

"Hydrographers Passage shortens the route between Hay Point and Japan via Rossel Island by approximately 220 miles".

Note 1: In 1987 the R.A.N. surveyed Diamond Passage in the Coral Sea. Use of this channel and Jomard Entrance now results in a voyage reduction of about 245 miles.

"Vessels too deep to pass through Torres Strait in safety and bound for ports in the Singapore to Europe (via Suez) range may find it shorter, and with a greater likelihood of favourable weather and currents, via Hydrographers Passage, East and North of Papua New Guinea, and through Sagewin Strait, than the alternative route via Bass Strait and the Great Australian Bight."

Note 2: The route via Hydrographers Passage, Diamond Passage and North of Papua New Guinea to Suez is approximately 125 miles shorter than the Great Australian Bight route.

Note 3: During the Southern Winter months, vessels bound for Europe via the Cape of Good Hope have found better sailing conditions and obtained a faster voyage by taking the route North of Papua New Guinea rather than the Great Australian Bight.

ANCHORAGE: *Northern Anchorage:* 9 anchorages.
Southern Anchorage: 7 Anchorages.

Also see "Plan".

RESTRICTIONS: A vessel arriving at the port must have its propeller totally immersed and be trimmed not more than 2.5 m. by the stern.

Hay Point harbour uses a Dynamic Real Time Underkeel Clearance (UKC) Program, and Masters will be advised by the Harbour Master through their Agent on maximum sailing drafts and UKC whilst loading at the berths.

Vessels berthing port side to: Normal draft calculations apply.
Vessels berthing starboard side to: Normal draft calculations.

Dalrymple Bay

Vessels berthing starboard side to: Normal draft calculations apply.
Vessels berthing port side to: Normal draft calculations less additional 0.9 m. if vessel of 100,000 d.w.t. and over.

The state of the tide determines which side to each vessel will berth. However, by arrangement with the shippers the vessel can wait for a more suitable state of tide to enable the vessel to berth on the side where draft restrictions do not apply. This can result in delays of up to 4 hours.

MAX. SIZE: *Hay Point:*

Berth No. 1: 150,000 d.w.t.
Berth No. 2: 230,000 d.w.t.

Dalrymple Bay:

Vessel Size: 20,000 d.w.t. (minimum).
230,000 d.w.t. (maximum).
Length Overall: 320 m. (maximum).
Breadth: 50 m. (maximum).
Distance from forward end of foremost hatch to after end of aftermost hatch to be loaded: 214 m. (maximum).
Maximum Berthing Displacement: 110,000 tonnes.
Minimum Clearance between Deck Obstructions: 15.0 m.

Maximum Draft Table – Port of Hay Point:

Height of Tide (m.)	Draft (m.)	Height of Tide (m.)	Draft (m.)
0.0	11.29	3.4	14.38
0.1	11.38	3.5	14.47
0.2	11.47	3.6	14.56
0.3	11.56	3.7	14.65
0.4	11.65	3.8	14.74
0.5	11.74	3.9	14.83
0.6	11.83	4.0	14.92
0.7	11.92	4.1	15.01
0.8	12.01	4.2	15.10
0.9	12.10	4.3	15.20
1.0	12.20	4.4	15.29
1.1	12.29	4.5	15.38
1.2	12.38	4.6	15.47
1.3	12.47	4.7	15.56
1.4	12.56	4.8	15.65
1.5	12.65	4.9	15.74
1.6	12.74	5.0	15.83
1.7	12.83	5.1	15.92
1.8	12.92	5.2	16.01
1.9	13.01	5.3	16.10
2.0	13.10	5.4	16.20
2.1	13.20	5.5	16.29
2.2	13.29	5.6	16.38
2.3	13.38	5.7	16.47
2.4	13.47	5.8	16.56
2.5	13.56	5.9	16.65
2.6	13.65	6.0	16.74
2.7	13.74	6.1	16.83
2.8	13.83	6.2	16.92
2.9	13.92	6.3	17.01
3.0	14.01	6.4	17.10
3.1	14.10	6.5	17.20
3.2	14.20	6.6	17.29
3.3	14.29	6.7	17.38

Vessels over 100,000 d.w.t. berthed portside to have their underkeel clearance increased. Deduct 0.9 m. of the available draft indicated in the above table.

HEALTH: Radio Pratique may be requested through a vessel's Agents, between 12 and 24 hours prior to arrival. This is generally granted if there are no unusual circumstances. See "General" before first port.

On receipt of quarantine message the Agent will obtain from the Harbour Master an anchorage position and advise vessel not berthing on arrival.

Inspections may be carried out at the jetty or at anchorage at the discretion of the Quarantine Office.

Pratique is available in the berth on a 24 hour basis, 7 days per week.

Rat guards are to be maintained on all mooring lines whilst the vessel is alongside.

Whilst in the vicinity of the port, vessels are required to store garbage aboard in containers approved by the Quarantine Inspector.

VHF: There are VHF Marine Radios installed at the berths and on the tugs and lineboats for communications during berthing and unberthing operations.

Vessels should keep a continuous watch on Channel 16, commencing 2 hours before arrival and while at anchor.

The call sign for the Port is "Hay Point Harbour".

The port working channels are:

Channel 12: 156.60 MHz (Operations).
Channel 14: 156.70 MHz (Operations).
Channel 16: 156.80 MHz (Calling).

Channels 6, 8, 67 and 74 are also available.

TUGS: 2 tugs each of 75 tonnes bollard pull are available to service vessels using the Hay Point Services wharves and 2 Z-peller tugs each of 55 tonnes bollard pull are available for the Dalrymple Bay Terminal. Tugs normally join vessel at pilot boarding area. Tugs lines are used.

RADIO: Radio messages can be sent through Sydney Radio (VIS) but within 24 hours of arrival Townsville Radio (VIT) provides a faster service.

Notification of Expected Arrivals and Loading Plan: Hay Point: It is required that the Master of an incoming vessel notify by radio/telex of the estimated time of arrival at the Port, 7 days, 48 hours and 24 hours prior to expected arrival. Local time should be used in all communications. The loading plan should be provided 48 hours prior to expected arrival time. Messages should be addressed to 4HUTAHSHIP, Hay Point, Telex AA48148.

Advice of Arrival: Dalrymple Bay: All ships scheduled to load at Dalrymple Bay Coal Terminal (DBCT) are to radio, through the normal recognised coastal radio stations or by telex, the following notifications, addressing their messages to:

Cables: 4MDALBAY, Mackay
Telex: AA46374

(i) 7 days before the intended arrival at the Port, or on departure from the last discharge or loading Port, whichever is the sooner, advising answers to the following questionnaire?

(a)

- ETA at DBCT anchorage.
- Hatchwise stowage and loading sequence, specifying the quantity of each cargo pour, based on loading with one loader at rates of up to 7,000 t.p.h.
- Where multiple parcels are being loaded, confirm that each parcel can be completed before loading the next parcel.
- Arrival and departure drafts, fore and aft, based on the maximum allowable stern trim for berthing of 2.5 m. with propeller fully immersed.
  NOTE: Ballast tanks, where possible, should be either fully pressed up or empty.
- Total time required for deballasting.

- Berthing airdraft.
- Distance from side of vessel to inside edge of hatch coaming.
- Please confirm all cargo holds are free from previous cargo residues.
- Type of hatch cover.
- Advise any obstructions protruding beyond ship's side.
- Can your vessel accept a helicopter land-on situation? If so, specify the hatch number or dimensions of the largest hatch and the distance between obstructions one metre above hatch top.
- Does your vessel have Australian Radio Pratique format questions (A) to (K)?
- Does your vessel have a copy of all Australian Customs Forms?
- Master's Name, Number and Nationality of Crew.

NOTE: Send 48/24 hour ETA notices together with confirmation of total cargo required to Shippers 4MDALBAY, Mackay (Telex: AA46374).

(b) Masters of vessels which are only part loading at DBCT shall advise the following additional information:

If arriving part loaded:
- Berthing Displacement.
- Previous Loading Port.
- Stowage of Loaded Cargo.

If completing loading at subsequent Port(s):
- Next Loading Port.

(c) Masters of O.B.O. vessels are to supply the following information:
- Nature of the preceding 3 cargoes the vessel has carried.
- Date and place the last petroleum product was discharged.
- Statement on the condition of the slop tanks. Are these pressed up or fully inerted and sealed?
- Date, place and authority of issue of the Gas-free Certificate carried on board.

(ii) 48 hours and 24 hours before intended arrival at the Port advising:
- Confirmation or variation of previously advised ETA at the anchorage/pilot boarding ground.

(iii) Immediately upon arrival at the anchorage/pilot boarding ground as designated, within Port limits, advising:
- Arrival/Anchorage time.
- Chart position.
- Declaration that the vessel is in all respects ready to load, with clean hatches and hatch covers opened on berthing.
- First pour.
- Actual arrival drafts, Forward and Aft.

BERTHS: The Port of Hay Point currently consists of 3 coal loading berths as follows:

Hay Point Services Berth No. 1:

Berth Details:

Berth Alignment	350° True
Design ship size	14,500 – 150,000 d.w.t.
Dredged Depth	16.38 m.
Dredged Width	60.96 m.
Dredged Length	342.90 m.
Depth outside dredged area	−13.03 m.
H.A.T.	+7.14 m.
M.H.W.S.	+5.78 m.
M.H.W.N.	+4.46 m.
M.L.W.N.	+2.22 m.
M.L.W.S.	+0.90 m.
L.A.T.	−0.00 m.
Gangway Landing Platform RL	9.2 m.
Distance to the outer edges of the 6 fenders	203.6 m.

(Note: All levels refer to chart datum).

Shiploader:

Nominal loading rate	4,000 t.p.h.
Longitudinal travel distance	188.98 m.
Longitudinal travel speed	30.48 m.p.m.
Longitudinal creep speed	6.10 m.p.m.
Shuttle travel length	18.59 m.
Shuttle travel speed	10.97 m.p.m.
Telechute hoist/descent speed	10.06 m.p.m.
Spout rotation	±190° at 1 r.p.m.
Maximum outreach of telechute	26.52 m. from fender face.
Belt size	183 cm.
Belt speed	267.31 m.p.m.

Shiploader has pivoted boom.

Mooring Dolphins:

1MD1	4×100 tons sliphooks with capstan
1MD2	3×100 tons sliphooks with capstan
1MD3	3×100 tons sliphooks with capstan
1MD4	3×100 tons sliphooks with capstan

Breasting Dolphins:

1BD1	2×100 tons sliphooks with capstan
1BD2 to 5	1×150 tons sliphooks with capstan
1BD6	2×100 tons sliphooks with capstan

Hay Point Services Berth No. 2:

Berth Alignment	330° True
Design ship size	25,000 – 200,000 d.w.t.
Dredged Depth	−16.68 m.
Dredged Width	60.96 m.
Dredged Length	365.76 m.
Depth outside dredged area	13.03 m.
H.A.T.	+7.14 m.
M.H.W.S.	+5.78 m.
M.H.W.N.	+4.46 m.
M.L.W.N.	+2.22 m.
M.L.W.S.	+0.90 m.
L.A.T.	−0.00 m.
Gangway Landing Platform RL	10.0 m.
Distance to the outer edges of the 6 fenders	188.7 m.

(Note: All levels refer to chart datum).

Shiploader:

Nominal Loading Rate	6,000 t.p.h.
Maximum longitudinal travel distance	191.41 m.
Normal longitudinal travel distance (between limit switches)	184.40 m.
Longitudinal travel speed	30.48 m.p.m.
Longitudinal creep speed	15.24 m.p.m.
Shuttle Travel speed	15.24 m.p.m.
Telechute travel height	18.29 m.
Telechute hoist/descent speed	6.10 m.p.m.
Spout rotation	±190° at 0.7 r.p.m.
Maximum outreach of telechute	28.96 m. from fender face.
Belt size	213 cm.
Belt speeds:	
Inner shuttle	256.03 m.p.m.
Outer shuttle	281.94 m.p.m.
Maximum outreach of inner shuttle	3.96 m. from fender face.
Intermediate outreach of inner shuttle	3.66 m. inside fender face.
Outreach of telechute corresponding with intermediate position of inner shuttle	21.34 m. from fender face.
Elevation of bottom of inner shuttle	+23.93 m.
Elevation of telechute retracted	+23.93 m.
Elevation of telechute fully extended	+5.64 m.
Elevation of base of Operator's Cab	+25.30 m.
Telechute can be rotated in the fully retracted position to	+25.60 m.

Mooring Dolphins:

2MD1	4×100 tons sliphooks with capstan
2MD2	3×100 tons sliphooks with capstan
2MD3	3×100 tons sliphooks with capstan
2MD4	3×100 tons sliphooks with capstan

Breasting Dolphins:

2BD1	3×100 tons sliphooks
2BD2 to 5	1×100 tons sliphooks on each
2BD6	2×100 tons sliphooks

Dalrymple Bay Coal Terminal:

ONSHORE:

Train Unloading:

Rail System Gauge	1,067 mm.
Unloading Method	Bottom Dump to R.C. Pit.
Locomotives	5 locos and LRC unit.
Coal Wagons	124×61 tons net and 137×70 tons net (suitable for 80 tons future).
Train Payload	7,500 to 9,600 tons.
Train Length	2,100 m. (approx.).
Rail Track Weight	53 kg./m.

Rail Receival Station No. 1:

Conveyor Takeaway Rate	4,250 t.p.h.
Receival Conveyor Belt Width	1,800 mm.
Receival Conveyor Belt Speed	3.3 m./s.

Rail Receival Station No. 2:

Conveyor Takaway Rate	4,250 t.p.h. (5,000 t.p.h. future).
Receival Conveyor Belt Width	2,000 mm.
Receival Conveyor Belt Speed	3.75 m./s.

Stockpiling:

No. of Stockpile Rows	4
Row Length	1,200 m.
Row Width (Narrow)	60 m.
(Wide)	100 m.
Total Stockpile Capacity	2.1 million tonnes "live".
Yard Machines	3 stacker/reclaimers. 1 stacker. 1 reclaimer.
Average Stockpiling Rate per Machine	4,250 t.p.h.
Average Reclaiming Rate per Machine	3,600 t.p.h. (Babcock Moxey). 4,250 t.p.h. (Krupp).
Yard Conveyor Belt Width	1,600 mm.
Yard Conveyor Belt Speed	5 m./s.

OFFSHORE:

Surge Bin:

Surge Bin Capacity	1,000 tons.

Sample Plant:

Location	Seaward end of causeway.

Causeway:

Length	280 m.
Armour Unit Type	Hanbars.
Armour Unit Sizes	11.5 tons, 5 tons.

Approach Jetty:

Jetty Length	3,850 m.
Roadway Deck Structure	Prestressed Concrete Planks.
RL Roadway	+17 m. LWD.
Roadway Width between Kerbs	3.76 m.
Roadway Design Load	NAASRA T44.
Headstocks	Steel Box Section.

Pile Type	Steel Pile – 12 mm. 16 mm. wall.
Pile Diameter	1,200 mm.
Pile Bent Spacing	24 m.
Trestle Conveyor Capacity	7,200 t.p.h.
Trestle Conveyor Belt Width	2,000 mm.
Trestle Conveyor Belt Speed	4.94 m./s.
Wharf (2 Berths):	
Design Vessel – Maximum	2×200,000 d.w.t. vessels with 80 m. separation between them.
Design Vessel – Minimum	20,000 d.w.t.
RL Top of Front (seaward) Rail	+17.6 m. LWD.
Deck Structure	Prestressed Concrete Planks.
Pile Type	Steel Piles – 12 mm., 16 mm. and 20 mm. wall thickness.
Pile Diameter	1,200 mm.
Normal Bent Spacing	12 m./13 m.
No. of Berthing Dolphins	18
No. of Mooring Dolphins	4
Distance between Extreme Berthing Dolphins	662.5 m.
Distance between Extreme Mooring Dolphins	880.5 m.
Berthing Dolphin Fender Type	Bridgestone Cell Fenders 2×2.25 m. dia. on Berth No. 1. 1×2.5 m. dia. on Berth No. 2.
Berth Depth	−20.0 m. LWD.
Channel Depth	−13.4 m. LWD.
Highest Astronomical Tide	Approx. 6.7 m.
MHWS	5.49 m.
MHWN	4.23 m.
Available Draft in Channel at MHWS with Underkeel Clearance shown	16.6 m. (2.27 m.).
Available Draft in Channel at MHWN with Underkeel Clearance shown	15.5 m. (2.15 m.).
Wharf Conveyor Belt Width	2,000 mm.
Wharf Conveyor Belt Speed	4.94 m./s.
RL of Conveyor Belt	RL 29.37.
Shiploader:	
Maximum Loading Rate	7,200 t.p.h.
Shiploader Conveyor Belt Width	2,500 mm.
Shiploader Conveyor Belt Speed	3.2 m./s.
Maximum Operating Wind Speed	72 km.p.h.
Maximum Reach of Chute from Front Rail	41.5 m.
Fender Face from Front Rail	7.5 m.
Maximum Reach of Chute from Fender Face	34.0 m.
Shuttle Travel	21.7 m.
Shiploader Longitudinal Travel	622 m.
Highest Boom Working Position	+12°
Lowest Boom Working Position	−10°
Distance from 0.0 LWD to Underside of Boom in +12° position at Fender Face (Airdraft)	30.3 m.
Cyclone Security	Tie-down to Strongpoints (2 off).

Moorings: Due to the open sea nature of the berths vessels with wire rope moorings should have a synthetic tail at least 10 m. long fitted to assist in mooring and to reduce breakages.

MOORING: *Dalrymple Bay:* Mooring lines are taken ashore by line launches. First lines must always be of synthetic or similar floating type. Vessels using heavy wire ropes, for whatever purpose, shall have the ends terminated with a rope spring, finished with a standard eye for placing over the bollards and slip hooks. The rope spring should not be less than 17.0 m. long to facilitate manhandling.

All mooring lines are to have a 3.0 m. tail of light rope spliced into the eye to facilitate the transfer from the launch to the dolphins.

Mooring lines which do not meet these specifications may be refused.

No vessel shall be moored or fastened to any wharf except to bollards, slip hooks or other securing places provided for the purpose.

It is the Master's responsibility to ensure that all mooring lines are adequate and in good condition.

Mooring lines shall be kept taut and secure at all times whilst alongside. Time lost as a result of improperly secured lines will be charged to the vessel's account.

Heaving lines are to be tied at the splice of the eye on spring and breast lines to facilitate manhandling

Hay Point: Every vessel at berth shall be properly moored, fastened or anchored as the case may require, and it is the Master's responsibility to ensure that all lines are adequate and in good condition for all operations. Lines should be kept taut and secure at all times at the berth.

First lines must always be of synthetic or similar, preferably of floating type. Wires may be used for springs and breast lines but are not recommended for head or stern lines.

LOADING: Dalrymple Bay: *Loading Coal:* For cargo stowage calculations the following stowage factors may be used as a guide:

Blair Athol	: 41.5 cu.ft./tonne
Riverside	: 38 cu.ft./tonne
German Creek	: 37 cu.ft./tonne
Oaky Creek	: 38 cu.ft./tonne

Vessels shall be in all respects ready to commence loading on completion of mooring, with holds clean and hatch covers open. A detailed loading plan, agreed to by the Company, which clearly shows hatch quantities, loading sequence and quantity of coal to be reserved for trimming, including anticipated sailing draft, is required to be presented before loading can commence.

Ballast shall be adjusted to ensure that a minimum clearance of 1.0 m. is maintained between the vessel's structure and the Shiploader at high water. Ballast is to be discharged at a rate which prevents disruption to loading, final trimming or completion.

Geared vessels are to have cranes lowered to the horizontal position on the offshore side of the vessel during loading. Cranes should not be swung out of the parked position until the Draft Surveyor has read initial drafts and confirmed these with the Chief Officer.

Loading Procedures: A portable radio and telephone will be placed on board for ship/shore communications during shiploading operations.

The Shiploader Operator is in direct radio and telephone contact with the Control Room and the Terminal's Production Supervisor at all times. In case of problems during loading, the Production Supervisor may be contacted via the Shiploader Operator or the Control Room. The telephone numbers of these are listed on the Terminal Loading Plan, a copy of which is retained by the Master.

The responsible ship's officer may direct the Shiploader Operator at any time.

The Shiploader Operator will contact the on-duty ship's officer by radio and request that a deck officer be present during the last 15 minutes of final trimming of all hatches estimated to be loaded to between 90% to 100% capacity.

The stowage of coal is the sole responsibility of the Master or his nominee, and his instructions and directions will be complied with within the limits of the Terminal facilities. Any changes in loading sequence must be immediately relayed to the Production Supervisor.

The coal is either reclaimed from the Terminal's stockpiles by Bucketwheel Reclaimers or received direct from the Rail Receival Station. It then passes through a 1,200 tonne capacity surge bin, after which it is conveyed a distance of 3.8 km. to the Shiploader at a nominal rate of 7,000 t.p.h.

On directing the Shiploader Operator to stop loading during normal operations, between 150 and 200 tonnes of coal will need to be poured, to empty the wharf conveyor belt, before the Shiploader is permitted to travel from South to North.

At the completion of loading, the entire conveying system will need to be emptied of coal. The surge bin and all Reclaim, Jetty, Wharf and Shiploader conveyor belts can hold up to 3,355 tonnes of coal, depending on the position of the Reclaimers and Shiploader and the feed rate being used. The Production Supervisor will be able to give an estimate of the quantity of coal to be expected. An allowance for these tonnages must be made during the final stages of loading.

In the final stages of loading, a minimum quantity of 250 tonnes shall be requested for the final pour.

Red, green and white list lights, clearly visible to the Shiploader Operator, are recommended fittings on all vessels loading coal. A fixed white light shall indicate the vessel is upright.

The Shiploader Operator has been instructed to observe the trim lights and to keep the vessel upright during loading and to stop loading in the event of a hatch becoming too full.

The sole responsibility for the correct and safe loading of a vessel and the assessment of tonnages being loaded, as is customary, rests with the Master and it is strongly recommended that a responsible officer is on deck at all times, directing and supervising the loading to a spout trimmed condition. No mechanical or manual trimming will be undertaken by the Company. The vessel is to provide sufficient lights on board for night loading and shall open and close hatch covers as recommended by the Terminal.

Vessels which are scheduled to load more than one parcel shall complete each parcel before starting the next. When loading multi-parcels of coal, attention to the opening and closing of hatches is recommended to ensure each parcel is loaded into the required hold.

Masters are cautioned that the determination of the mass loaded is carried out by Draft Survey and frequent "on the run" draft checks between hatch changes should be carried out. Whilst conveyor belts are equipped with weight scales, these figures can only be used as a guide. *Reference to these will not relieve the Master of the responsibility of adequately maintaining draft checks and supervising the loading accordingly.*

Subject to tide, ships shall be ready to vacate the berth on completion of loading and have all gear tested and available for use on departure.

Draft Survey: The weight determination of coal loaded onto a vessel is carried out by an approved Draft Surveyor utilising the ship's scales. All Draft Survey calculations will be rounded to the nearest tonne.

An initial Draft Survey will be carried out on completion of berthing to determine all weights on board. The Surveyor will review the proposed loading plan and be available to advise the Master on the loading sequence and quantities most appropriate to the Terminal's facilities, equipment and early despatch of the vessel.

During the final stages of loading, the Surveyor will attend the vessel and be available to advise the Master on the final trimming and cargo distribution.

The final Draft Survey will be carried out immediately on completion of loading.

The Master or a suitable person nominated by him is required to accompany the Surveyor and assist in determining the quantity of coal loaded and its stowage.

Properly certified accurate and legible ships scales shall be made available to the Surveyor.

The Draft Surveyor is approved by the Company to give guidance and advice which he considers to be in the best interest of the Terminal and the quick despatch of the vessel. The Company does not warrant the accuracy or reliability of such information nor shall it be liable for any act or omission on the part of the advice of the Draft Surveyor, howsoever caused.

Gas-Freeing of Vessels: No Gas-Free Certificate signed by the Ship's Master will be accepted.

The Master of an O.B.O. vessel shall not allow his ship to berth at the Terminal unless the vessel is certified to be gas-free and a Certificate of Test has been issued by an authority approved by Dalrymple Bay

Coal Terminal Pty. Ltd., certifying that the tanks, holds and/or spaces are free from explosive, flammable and injurious gases, fumes and vapours and slop tanks are pressed up or fully inerted and sealed, and such certificate is still valid.

Slop tanks pressed up or fully inerted and sealed shall not be opened whilst the vessel is alongside the berth.

All costs in connection with the inspection, testing and issue of a Certificate of Test in relation to a tank or hold or space for the purposes of these requirements shall be charged to the vessel's account.

A Notice of Readiness will not be accepted from an O.B.O. vessel unless it is certified gas-free in accordance with the above requirements.

Hay Point:

(a) Vessels will be loaded in turn: Vessels will be generally loaded in turn, in the order of arrival provided that:
  (i) A suitable berth is available.
  (ii) The vessel is ready in all respects to receive cargo.
  (iii) All the specified cargo is available at the Terminal.
  (iv) It is in accordance with the instructions of the Charterer or his Agent.

(b) Detailed Loading Plan: Vessel shall present a detailed loading plan immediately on arrival, including hatch quantities with loading sequence and quantity of coal to be reserved for fore and aft trimming by hatches, including anticipated sailing draft.

(c) Independent Marine Surveyor: The weight of each shipment shall be determined by an independent Marine Surveyor. The time used for all surveys shall be to the vessel's account unless alternative arrangements have been made.

(d) Ship's Cargo Stowage: Cargo is belt weighted by weightometers during loading, however, no guarantee of accuracy can be given of this equipment. It is the ship's responsibility for maintaining draft checks during loading to obtain correct stowage and prevent overloading.

(e) Shiploader Air Draft Clearance – Berth No. 2: The Shiploader boom on Berth No. 2 is of a fixed height horizontally shuttled out over a ship's loading hatch.
The underside clearance of this loader is calculated at 24.0 m. minus the height of the prevailing high tide.
Example: 6.0 m. tide would reduce the underside clearance to 18.0 m.
Vessels arriving at Hay Point allocated for Berth No. 2 must ballast down to an air draft in accordance with this calculation.
The minimum air draft is taken as the highest point of a hatch cover or other structure that could obstruct the horizontal travel of the Shiploader from entering a designated hatch.
Deballasting during loading must not exceed the loading rate to maintain safe clearance of a minimum of 0.6 m. between ship and loader for subsequent high tides.

(f) Trimming: Vessel holds will be trimmed using the telescopic and spoon chutes on each Shiploader. No mechanical, on-board, trimming is available at the port.

(g) Berth Dredged Depth: Berth No. 1 is dredged to 16.38 m. below chart datum.
Berth No. 2 is dredged to 16.68 m. below chart datum.
During loading, Masters will be advised the maximum loading draft at L.W. when loading to maximum draft.

Gas Free Certificates: The Master of every O.B.O. vessel shall include the following information with the 48 hour arrival notice (ETA), addressed to:

By Radio: "4HUTASHIP" Hay Point
By Telex: "AA48148".
Nature of preceding 3 cargoes the vessel has carried, and dates of loading.
Date and place last petroleum product was discharged.
Statement on the condition of the slop tanks.
Date and place of issue of the Gas-Free Certificate carried on board.

No Gas-Free Certificate signed by the Ship's Master will be accepted.

The Master of an O.B.O. vessel shall not allow his ship to berth at the Terminal facilities unless the vessel is certified to be gas-free and a Certificate of Test has been issued by an authority acceptable to the Port Authority, certifying that the tanks, holds and/or spaces are free from explosive, flammable and injurious gases, fumes and vapours and slop tanks are pressed up or fully inerted and sealed, and such certificate is still valid.

Sampling Systems: Sampling of coal during shiploading operations is carried out by an independent registered analyst to determine the qualitative and quantitative aspects of each shipment.

All samples are prepared and analysed in accordance with the current British Standards.

B.S. 1016. Parts 1 – 21. Analyses and Testing of Coal and Coke.
B.S. 1017. Part 1. Sampling of Coal.

A Primary Cutter, actuated at preset time intervals, traverses the full width of the free falling coal stream delivering a representative increment onto a Belt Feeder. The Belt Feeder speed is controlled to deliver the primary increments to be continuously traversing Secondary Cutter, where a representative number of increments are extracted and deposited on a slow moving Reversible Belt Feeder. Discharge from this conveyor when reversed provides samples at top size for size analysis and other tests, while normal operation of this Feeder discharges the coal at a uniform rate into a Double Roll Crusher.

The continuous discharge from the Crusher (minus 5 mm.) falls onto a Slotted Belt Feeder which conveys the sample reject to the Sample Reject Conveyor for return onto the main conveyor.

The representative increments passing through the Slotted Belt Feeder are passed into a self-sealing container to/from the common gross sample.

An automatically operated trolley changes the sample containers at predetermined tonnage intervals.

The sampling system was tested for bias following the principles laid down in the standards. A full cross-section of coal from the stopped belt was used as the intrinsically unbiased reference method. Results from 55 pairs of samples were statistically examined and no significant bias was found.

Safe Departure Clearance: Safe clearance = 10% × Draft plus 0.6 m.
Safe Clearance in Berths: Safe clearance = 10% × Draft.

MEDICAL: Hospital and dental facilities available in Mackay 37 km. by road. Agent should if possible be notified at least 24 hours before arrival of medical attention required, or on Friday if arriving over weekend.

DENSITY: Average 1024.

FRESH WATER: Not available.

FUEL: Bunker enquiries can be directed to BHP Transport Pty.Ltd., Marine Fuels Department, Melbourne. Tel: (613) 6092473. Fax: (613) 6092276. Telex: AA 30708.

CONSULS: See "Brisbane".

REPAIRS: Minor repairs only. Vessels not permitted to immobilise at berths.

DRY DOCKS: None.

SURVEYORS: Cargo and Draft Surveyors in attendance at berths. On hire and gas-free surveys can be carried out. Arrange through Agents. Department of Transport Surveyor – see "Gladstone".

Surveys: Vessels calling at the Port should be aware that the berths are open to the sea making measurement of slack ballast tanks difficult and time consuming. It is therefore desirable that vessels present with as many tanks pressed up and overflowing or empty to stripping level as can be achieved whilst complying with the Harbour Master's requirements. This will avoid possible lengthy delays at the intital survey.

Surveyors: Associated Surveyors Queensland, Mackay, Queensland 4740. Tel: 079-572864, 079-574188. Fax: 079-572861. Mail Address: P.O.Box 384, Mackay, Queensland 4740.

Analysts and Surveyors: Carbon Consulting International Pty. Ltd., Mackay, Queensland 4740. Tel: 079-512522, (Hay Point) 079-563205. Telex: AA148180. Fax: 079-513340. Mail Address: P.O.Box 658, Mackay, Queensland 4740.

GANGWAY/DECK WATCHMEN: None available.

OPENING/CLOSING HATCHES: To be opened and closed by ships crew.

CUSTOMS ALLOWANCES: 200 cigarettes, 26 oz. bottle spirits every 10 days.

REPATRIATION: Readily available through Mackay Airport which has daily connections to Brisbane and worldwide.

AIRPORT: At Mackay 37 km. by road. Serviced by Australian Airlines and Ansett. Regular daily flights to Brisbane and Sydney.

TIME: See "General" before first port.

HOLIDAYS: Public holidays as for Brisbane. Loading operations are unaffected except for Christmas Day.

POLICE/FIRE/AMBULANCE: Police Tel: 512 000. Ambulance Tel: 572 222. Fire – contact relevant terminal operating company.

EMERGENCY CO-ORDINATION CENTRE: Australian Coastal Surveillance Centre, Canberra. Search and Rescue Tel: (062) 475 244.

TELEPHONES: *Hay Point:* A public STD telephone is available on Berth No. 2. A private telephone is available at Berth No. 2 for shipping agents.
Berth No. 2, Phone Booth No. 56308M7.
Berth No. 2, Hay Point 079-563131 (Ext. 207).

SERVICES: Compass adjusting and radio, radar or gyro repairs can be arranged if prior notice is given.

BANKS: Major Australian banks are represented in Mackay. Contact through ships' Agent.

SHORE LEAVE: Permitted. Nearest city is Mackay 37 km. away.

IDENTIFICATION CARDS: Citizens of certain non-Commonwealth countries require identification cards.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS/SERVICES: Usual local facilities.

CURRENCY: Australian Dollar (A$).

GENERAL: *Charts and Publications:* Australian Pilot Volume III. Australian Chart No. Aust. 249. Sailing directions and other information for the Ports and Harbours of Queensland. Ports of Queensland and their services.

Weather Conditions: The Port of Hay Point is situated in the cyclone belt. An incidence of about 2 cyclones per year can be expected on the Queensland coast, usually during the cyclone season between November and April.

Prevailing winds are South-Easterly and velocities in excess of 25 knots are infrequent.

The port facilities are sheltered from major swell by the Great Barrier Reef. However, prolonged South-Easterly winds of more than 20 knots can occasionally make conditions unsafe alongside and Masters are advised to order Pilot and tugs in sufficient time should these conditions occur.

Tides and Currents – Hay Point: Formal tide tables are available from the Department of Transport (Marine and Ports Division).

From studies carried out in the Hay Point area by hydrographic investigators, there is an indication that the tidal currents flood in a direction between 145° to 170° True and the ebb current flows in a direction of 330° to 360°, with a maximum speed (in knots) approximately one-tenth of the predicted tidal range (in feet) at that time. A maximum current speed occurs in a direction of 340° True with an ebbing tide. The change of direction in the current occurs about 1.25 hours prior to the tidal extremes.

Tides and Currents – Dalrymple Bay: Tidal streams are generally weak, reaching a maximum strength of 2 knots at Spring tides. The flood tide sets 150° and the ebb sets 330° parallel to the berth with the direction of the stream changing about 1.5 hours before the predicted tide times.

Mean High Water Spring Tide	5.78 m.
Mean Low Water Spring Tide	0.90 m.
Mean Spring Tidal Range	4.88 m.
Mean Neap Tidal Range	2.24 m.
Mean Sea Level above Chart Datum	3.34 m.

The Port of Hay Point is a standard port in the Australian National Tide Tables published by the Hydrographer, Royal Australian Navy and in the Official Tide Tables for Queensland published by the Department of Harbours & Marine.

This harbour uses a Dynamic Real Time U.K.C. Program.

The least depth in the channel is 13.03 m.

The Harbour Master has advised maximum permissible drafts relative to predicted height of tides, for general guidance, which may be amended from time to time at the Harbour Master's discretion to suit prevailing conditions.

Discharge of Refuse, Oil, etc.: Government Authorities demand that no person using the Port shall discharge any garbage, refuse, vegetable or food matter, deck cleanings, polluted bilge water, oil or rubbish of any description in the vicinity of the Port or within 80 km. of the Great Barrier Reef. Heavy penalties will be imposed for breaches of the relevant regulations.

Stores: Limited ships' stores and provisions may be loaded at the Terminal and would be available from Mackay based chandlers and providors.

AGENCY: *Hay Point:* BHP – Utah Coal Ltd, as Manager for Hay Point Services, has a Terminal Agency Service at Hay Point.

BHP – Utah Coal Ltd, Hay Point, will carry out the following services in accordance with the instructions of the Operational Owner (Ship's Owner or Disponent Owner) of the vessel:

(i) Procedures for entrance and clearance of vessels at the Port.
(ii) Communication regarding vessel's movements as requested.
(iii) All necessary services required for loading coal cargo.
(iv) Lodge Voyage Returns with the Deputy Commissioner of Taxation in Queensland and pay from funds already received, the Income Tax involved, if applicable.

The Operational Owner (Ship's Owner or Disponent Owner), shall arrange prior to vessel's arrival at or off Hay Point, for the Terminal Agent to be placed in funds sufficient to cover Estimated Disbursements in connection with each vessel.

All charges and expenses incurred by the Terminal Agent in execution of this service, including but not limited to such items as overtime, postages, petty cash, cables, telegrams, radiograms, telex messages, car hire, etc., shall be charged to each vessel, and such disbursements, if not already included in Estimated Disbursements, together with scheduled Agency Fees, will be paid to the Terminal Agent without delay.

The Terminal Agent will forward promptly to the Operational Owner (Ship's Owner or Disponent Owner), Voyage Account Statements, together with relative documentary evidence, after the departure of each vessel.

BHP – Utal Coal Terminal Agency may be contacted as follows:

M.S. 283, Mackay, Queensland 4740. Tel: 079-563131. Telegraphic address: '4HUTAHSHIP' Haypoint. Telex: AA48148. Fax: 079-563421.

AUTHORITY: Ports Corporation of Queensland, G.P.O.Box 409, Brisbane 4001, Queensland, Australia. *Contact:* Chief Executive Officer. *Tel:* (07) 3224 7088. *FAX:* (07) 3224-7234.

Ports Corporation of Queensland, Hay Point Road, Horyu Maru Drive, PMB 7, Mackay Mail Centre, Queensland 4740. *Tel:* (079) 563109, After Hours Harbour Control (Radio Watch) (079) 563254. *Fax:* (079) 563367. *Telex:* AA46483.

Captain B.J. Lee, Harbour Master, Hay Point. *Tel:* (079) 577238.

Operators: Hay Point Services Pty. Ltd., Hay Point (Via Mackay), Queensland 4740. Mail Address: Mail Service 283, Mackay, Queensland 4740. *Tel:* (079) 563131. *Telex:* AA48148. *FAX:* (079) 563421. *Contact:* K.E. Kelly, Port Manager, Tel: (After Hours) (079) 521402. D.T.Ney, Port Operations Superintendent, Tel: (After Hours) (079) 561529.

Dalrymple Bay Coal Terminal Pty. Ltd., Hay Point Road, M/S F283, Mackay, Queensland 4740. *Tel:* (079) 563122. *Telex:* AA46374. *FAX:* (079) 563353. *Cables:* 4MDALBAY, Mackay. *Contact:* Captain J.D. Holden, General Manager.

AGENT: See "Mackay".

HOBART (including Risdon), Tasmania:
42.53 S. 147.20 E. **(See Plan)**

PORT LIMITS: 'Harbour' means so much of the waters of the River Derwent and its Estuary as lie to the Northward of a line drawn from the Derwent Light (on the Iron Pot Islet) to Kelly Point, on North Bruny; together with so much of the D'Entrecasteaux Channel as lies to the Northward of a line drawn from the Southern end of Partridge Island to Southport Island; and together with all bays and estuaries opening either into the said River Derwent or the said D'Entrecasteaux Channel.

DOCUMENTS: As for all Australian Ports.

PILOTAGE: Pilotage is compulsory for all vessels exceeding 35 m. in length. For vessels bound for Hobart (including Risdon) the pilot boarding ground is Lat. 42° 56′ S., Long. 147° 22.6′ E. Notice of ETA and request for a Pilot must be advised at least 24 hours in advance and confirmation or amendment of this ETA must be made not less than 2 hours prior to the vessel's arrival at the Pilot Station. Channel 16 VHF is continuously monitored and ETA may be confirmed or adjusted on this frequency using the call sign "Hobart Harbour". Vessels can generally establish contact on Channel 16 at ranges in excess of 50 nautical miles from Hobart and are requested to do so. Fax: (002) 310693. Port Tower – Fax: (002) 346116.

The pilot boat is 13.1 m. LOA, white upper works, blue hull and orange deck with the word 'Pilots' on each side. The newest vessel is capable of 23 knots.

ANCHORAGE: Vessels awaiting Pilot may anchor South of a line 090° true from John Garrow Beacon. Depth of water is 20 m. with good holding ground.

MAX. SIZE: The maximum depth of water at the entrance to the River Derwent is 15.2 m. Ships of up to 12.6 m. draft can be accommodated at Macquarie No. 4 Berth. There is no restriction as to length and beam. Max. draft available at Risdon is 10.7 m.

RESTRICTIONS: Navigation within the Port of Hobart is on a 24 hour basis with the following exceptions:

(i) Vessels of 25 m. or more in length will not be permitted to pass under the Tasman Bridge from Monday to Friday inclusive between the hours of 0700 to 0915 and 1600 to 1830.
(ii) At Risdon vessels exceeding 175 m. in length and of a draft more than 10 m. may be restricted from departing berth during the hours of darkness if such vessel has to swing to proceed to sea.

The following overhead clearance restrictions exist within the Port of Hobart:

(i) The centre line of the Main Navigation Span of the Tasman Bridge is 45 m. above MHWS.
(ii) The overhead clearance of the power cable just South of the Electrolytic Zinc Company Wharf at Risdon is 45.7 m. above MHWS.

HEALTH: Australian Commonwealth Rules apply.

Requests for Radio Pratique should be forwarded to the Quarantine Office, Hobart through the vessel's Agent. They should be in writing and include answers to the Radio Pratique questionnaire.

Where delivery of the request for Radio Pratique by the Agent is difficult or impossible, such as night time or at weekends, the request and answers to the questionnaire may be given by telephone on the strict understanding that the Agent delivers the written documents as soon as practicable on the next working day.

On receipt of a request for Radio Pratique, the vessel's Agent will be informed whether Radio Pratique will or will not be granted and it will be the responsibility of the vessel's Agent to inform the vessel.

RADIO: Melbourne Radio. Call sign "VIM". 24 hour operation.

VHF: The Marine Board of Hobart maintain a listening watch on Channel 16 and Channel 67 on a 24 hour basis from the Port Control Building Hobart. When contact has been established all traffic must be passed through Channel 12. Tugs are worked on Channels 6 or 8. Vessels can usually establish contact on Channel 16 at ranges in excess of 50 nautical miles and are requested to do so. (See also "Pilotage").

RADAR: There is no Port Control Radar but the pilot boats are radar equipped. Minimal fog may occur during April to July but shipping is seldom delayed because of it.

TUGS: Five tugs as available for assisting vessels. Their bollard pulls vary from 14 tonnes to 40 tonnes. Vessels bound for Risdon will pick the tug up just North of the Tasman Bridge. A nominal additional charge is made for the use of tugs' lines.

BERTHING:

Hobart:

Macquarie No.4: Common user container/general cargo berth. Quay length 244 m., water depth 12.6 m. 3 ha. of sealed cargo area, adequate reefer holding points, rail siding connecting into main rail system, wharf apron, axle loading 70 tonnes. It is equipped with a 35 tonne container gantry crane.

Macquarie No. 2/3: Common user deep sea berth suitable for quarter ramp vessels. Quay length 328.3 m., depth 10 m. to 14.7 m.

Macquarie No. 1: General cargo berth, quay length 168.9 m., water depth 6.2 m. to 9.8 m.

Elizabeth St. Pier: Used for residential accommodation. Berth for fishing vessels and small craft only. Quay length 153 m., water depth 7 m. to 11.3 m.

Princes No. 1: Common user Ro-Ro berth for vessels equipped with their own ramps. Quay length 138 m., water depth 7.2 m. Ramp is fixed with an axle load SWL of 40 tonnes.

Princes No. 2: General cargo and bulk wheat discharge berth. Quay length 167.7 m., water depth 8.0 m.

Macquarie No. 5/6: Comprises 2 Ro/Ro berths with adjustable ramps each having an axle loading SWL of 59 tonnes. Quay lengths 135 m. and 189 m., water depth 10.1 m. to 11.2 m. A marshalling area provides 4.4 ha. of fenced hardstanding. Macquarie No. 5 is equipped with a 35 tonne container gantry crane.

Selfs Point Oil Wharf: Dolphin type berth with a wharf face length of 98 m., length over dolphins of 258 m., and a water depth of 14.0 m. Facilities are available for discharge of all black and white products including LPG. In addition vessels may obtain supplies of marine fuel oil and marine diesel oil for bunkers.

Risdon: Owned by the Electrolytic Zinc Company of Australasia, situated 2 miles above the Tasman Bridge on the Western side of the river. Quay length 400 m., water depth 10.4 m. to 10.7 m. Imports of raw and semi-processed materials such as zinc concentrates, phosphate rock, muriate of potash etc., are discharged by a conveyor system. Exports of manufactured zinc, cadmium, sulphate of ammonia are loaded via 2 modern gantry type cranes of 24 tonnes SWL, also equipped with 12 tonne grabs.

Facilities are available for loading sulphuric acid at a 151 m. acid wharf with a minimum depth of 10.2 m. at chart datum.

CRANES: One 35 tonne container handling gantry crane with 34 tonne capacity, 31 m. from face of fendering. Maximum spreader height above wharf 27 m. Also rail length 225 m.

1×31 tonne crane; 1×15 tonne crane; forklifts ranging from 170 kg. to 24,000 kg., 3 tow-motors; and 1×12 m. tri-axle trailer container handling crane.

BRIDGES: See "Restrictions".

STEVEDORES: 3 shifts, 7 days a week, 0800 hrs. – 1500 hrs., 1500 hrs. – 2200 hrs., 2200 hrs. – 0500 hrs. "Midnight" shift available only in special circumstances during the months of July, August, September.

MEDICAL: Full hospital facilities available without prior notice.

TANKERS: See "Berthing".

DENSITY: Varies from 1016 at Risdon to 1025 at Hobart.

FRESH WATER: Fresh water is available at all wharves. Delivery is effected via hydrants at convenient points along the wharves. Hose connections are 64 mm. diameter standard thread and delivery rates from 40 tonnes to 60 tonnes per hour per connection.

FUEL: All grades of fuels and lubricants available. Vessels may be supplied at Selfs Pt. Wharf (See "Berthing") or by road tankers.

CONSULS: Consulates exist for the following countries:

Denmark
Finland
France
Germany
Greece
Italy
Japan
Netherlands
Norway
Sweden
Switzerland
United Kingdom

REPAIRS: Facilities available for minor engine and hull repairs. Several repair firms are situated in Hobart.

DRY DOCKS: No dry docks, however a modern slipway owned and operated by the Marine Board is available for vessels up to 1,200 tonnes displacement.

SURVEYORS: A Commonwealth Surveyor is available from Devonport, and Lloyd's Agents also represent other Classification Societies.

Germanischer Lloyd: Wellco Pty.Ltd., 39 Derwent Park Road (P.O.Box 94), Moonah, 7009 Tasmania. Tel: (002) 723011. Fax: (002) 731019.

GANGWAY/DECK WATCHMEN: Can be supplied at Union award rates. Watchmen will be required during discharge/loading of dangerous cargoes.

OPENING/CLOSING HATCHES: Normally handled by stevedores while alongside or by ship's crew before arrival.

CUSTOMS ALLOWANCES: Australian Commonwealth Regulations apply.

CARGO GEAR: Discharge/loading is usually by ship's gear except at Risdon and Macquarie No. 4. However a number of cranes are available for hire from the Marine Board (See "Berthing" and "Cranes").

REPATRIATION: All facilities exist for crew changes and repatriation of seaman. Scheduled aircraft connect with all states several times daily where services operate world-wide and there is also one overseas flight per week via New Zealand.

TIME: See "General" before first port.

HOLIDAYS: No work will be performed on Waterside Workers' Picnic Day (January); Labour Day (March); Good Friday; Anzac Day (25th April); and Christmas Day (25th December). Work is restricted to certain types of vessels and conditions on New Year's Day (1st January); and Boxing Day (26th December).

POLICE/AMBULANCE/FIRE: Automatic fire alarms are installed throughout the port and emergencies can be reported to Port Control on Channel 16, 24 hours a day. Otherwise fire, police and ambulance calls may be reported by dialling 000.

TELEPHONES: Available at all wharves and may be placed on board vessels. Standard rates apply and coin operated telephones are available for use by ship's crews.

SERVICES: A number of Compass Adjusters are available.

SHORE LEAVE: No restriction on crew shore leave or need for shore passes as long as Immigration and Customs requirements have been satisfied.

GARBAGE DISPOSAL: The Port Authority arranges collection by drums alongside as requested.

Ships Waste Disposal: For removal and destruction or disposal of ship's waste disposal from vessels subject to Regulation 33c of the Quarantine (General) Regulations:

(a) For each collection from interstate and overseas vessels in or near the Port of Hobart actually provided where the total complement on board, including crew, does not exceed 50 persons. A$ 176.00
(b) Where the total complement exceeds 50 persons the following charges shall apply:
  (i) a fee for each collection from a vessel which remains in or near the Port of Hobart and a service is actually provided, plus A$ 57.00
  (ii) a fee in respect of each person on board said vessel during the day a collection is provided. A$ 3.45
  (iii) Maximum charge per day A$1,703.00
(c) Where ships waste at Port Huon and Spring Bay is removed by a contractor, the vessel concerned shall be debited with the total cost incurred, plus 10% administrative cost.

WASTE OIL DISPOSAL: No special berth. Contact: Taswaster: Tel: (002) 727885. Tasmanian Pumping: Tel: (002) 724544.

SEAMAN'S CLUBS: The Missions to Seamen, 31 Morrison Street, Hobart. Tel: (002) 346016. All types of services can be arranged or are available at the Mission.

AUTHORITY: Marine Board of Hobart, P.O.Box 202 B, 1 Franklin Wharf, Hobart, Tasmania 7001, Australia. *Tel:* (002) 351000. *FAX:* (002) 310693, Port Tower (002) 346116. *Contact:* C. Drinkwater, Chief Executive. C. Thompson, Port Services Manager.

AGENT: See "Devonport".

KARUMBA (Normanton), Queensland: 17.30 S. 140.50 E. **(See Plan)**

LOCATION: The port of Karumba is located on the Southern coast of the Gulf of Carpentaria. The township of Karumba is 30 km. North of Normanton and 600 km. N.E. of Mount Isa. Karumba is accessible by road from both Mount Isa and Cairns. The road from Mount Isa is sealed. The road from Cairns (800 km.) is mostly sealed, except for a 87 km. section of gravel. 37 km. of the gravel section is expected to be sealed by December 1995, and the entire section sealed by 2000.

PORT LIMITS: Within 10 nautical miles radius of Water Tower to the South of wharves.

DOCUMENTS: See "Melbourne".

PILOTAGE: Contact Regional Harbour Master in Cairns.

ANCHORAGE: None.

RESTRICTIONS: Restricted by a sand bar.

Depth over bar is 1.0 m. at LAT. Tidal range 0.4 m. at MLLW and 3.7 m. at MHHW.

Dredging is scheduled to commence July-August 1996, and will provide a 6 km. channel with a minimum depth of 3.4 m. at LAT.

TUGS: None available.

BERTHING: Facilities are privately owned.

Facility	*Wharf Use*	*Equipment and Facilities*
Fuel Wharf	Petroleum	Storage – 4,000 tons.
Raptis Wharf	Seafood	Receival depot. Unloading conveyor. Cold storage – 500 tons.
Gulf Freight Wharf	General Cargo	Fixed leg crane – 25 tons (for 6 m. containers).
	Seafood Bunkering	Storage shed – 700 sq.m. Forklift. Refuelling barge. Storage tank – 800 tons. Cold storage – 100 sq.m.
Karumba Cold Stores Wharf	General Cargo Seafood	Storage shed – 175 sq.m. Cold storage – 175 sq.m.
Ruby Marine Wharf	General Cargo Bunkering	Mobile crane – 5 tons. Diesel storage – 800 tons.
Integrated Resources International Pty. Ltd.	Livestock Exports	Mobile crane – 12 tons. Stockyards and associated infrastructure.
Mornington Barge Wharf	General Cargo	Mobile crane – 5 tons.
Karumba Slipway	Vessel Maintenance	Slipway.

CRANES: See "Berthing".

STEVEDORES: None available.

MEDICAL: No facilities.

FRESH WATER: Available in limited quantities.

FUEL: Available if arranged in advance.

DRY DOCKS: One slipway available.

AIRPORT: Only used by light aircraft.

POLICE/AMBULANCE/FIRE: Police (077) 459120. Ambulance (077) 459137.

CURRENCY: Australian Dollar.

DEVELOPMENTS: See "Plan Section".

AUTHORITY: Ports Corporation of Queensland, (P.O.Box 409, Brisbane, 4001 Qld.), 24th Floor, CML Building, 300 Queen Street, Brisbane, Qld 4000, Australia. *Tel:* (07) 3224 0728. *FAX:* (07) 3224 7234. *Contact:* Brad Fish, Operations Manager.

LAUNCESTON, Tasmania (including Inspection Head, Beauty Point, Bell Bay): 41.27 S. 147.07 E. **(See Plan)**

PORT LIMITS: A line drawn from Low Head to Hebe Reef thence to West Head defines the seaward limit of the Port of Launceston (including Port Dalrymple which comprises Bell Bay, Beauty Point Harbour and Long Reach).

Seaward Position of Port: Lat. 41° 03′ S., Long. 146° 45′ E.

A vessel is considered to have arrived when at the Pilot Boarding Ground.

Charts: Aus. No. 167 and 168.

DOCUMENTS: Agents prepare Bills of Lading and Shipping Documents. Only documents required Crew List and Passenger List. Light Dues receipt is necessary if payment is made before arrival.

PILOTAGE: The Pilot service is provided by the Port Authority and is compulsory for all vessels over 35.0 m. in length, unless a valid Pilot Exemption Certificate is held for the Port of Launceston.

Contact Harbour Master by radio giving ETA 24 hours before arrival, and give updated ETA to "Bell Bay Control" on VHF radio 3 hours before arrival. "G" flag to be flown on daylight arrival. Harbour Master also on Telephone and Facsimile (See "Authority").

Pilot boards from launch (fitted with VHF Channels 12, 16, call sign "Tamar Pilot"), 2.4 nautical miles N.W. of Low Head Lighthouse.

ANCHORAGE: Position:

(a) Low Head Lat. 41° 03′ 32″ S., Long. 146° 47′ 18″ E.
(b) 1.15 miles 280° from *(a)*
(c) 0.90 miles 308° from *(b)*
(d) 0.85 miles 038° from *(c)*
(e) 0.90 miles 128° from *(d)*
thence 0.85 miles 218° to *(b)*

Vessels may anchor off the port, however a more sheltered anchorage is available within the port at Bell Bay.

RESTRICTIONS: *Navigation of Lower Reaches:*

(a) Draft Limitations: Determined by a 1.4 m. clearance under the keel giving maximum permissible draft at LW 9.0 m. plus height of tide, and maximum permissible draft at HW 11.5 m.

(b) Size Limitations: Vessels over 170 m. LOA enter and depart according to the time limitations below. For vessels exceeding 250 m. LOA and/or 45 m. beam contact Harbour Master.

(c) Time Limitations:

Entry: Vessels over 170 m. LOA enter on flood tide only. Earliest entry is LW at George Town. Vessels then enter according to draft through to 30 minutes after HW at George Town. Pilots board approximately 15 minutes before these times.

Departure: Vessels over 170 m. LOA single up for departure within the following limits: Large vessels berthed at Woodchip Berths – from 1 hour before, up to HW or LW (George Town) depending on draft and tide. Vessels berthed at all other down river berths – from 1 hour before to 1 hour after HW or LW (George Town) depending on draft of vessel and tide.

Shifting of Vessels: The shifting of vessels of any size from berth to berth within the Port will be undertaken 24 hours a day, subject to any special requirements at the berth.

(d) Night Navigation (Entrance Channel):

Entry: Vessels over 200 m. length at Harbour Master's discretion.

Departure: Vessels over 180 m. length at Harbour Master's discretion.

Navigation of Upper Reaches: The Upper Reaches are navigable to the City of Launceston.

Limitations: Length 100 m., draft 5.5 m.

Special Navigation Conditions: Contact Harbour Master for vessels and conditions outside these limits.

Datum: Lower Reaches: LAT (Lowest Astronomical Tide)=AHD* minus 1.977 m. Upper Reaches: LWOST (Low Water Ordinary Spring Tide)=AHD minus 2.260 m.

*AHD = Australian Height Datum.

Tidal Range: George Town – average 2.3 m. Launceston – average 3.8 m.

Depths Alongside:

Eastern	
(At Lowest Astronomical Tide)	
No. 1 Bell Bay, Comalco (Private)	10.8 m.
No. 2, Bell Bay, (A.N.L. Ro/Ro and Container)	8.4 m.
No. 3, Bell Bay, (Temco, Bulk and General)	11.5 m.
No. 4, Bell Bay, (Tankers)	11.5 m.
No. 5, Bell Bay, Multi–Purpose (Ro/Ro and Container) (See "Plan")	10.0 m. to 12.4 m.
Long Reach, Thermal Power Station	12.3 m.
Long Reach, No. 1, Woodchip N. (Forest Resources)	11.5 m.
Long Reach, No. 2, Woodchip S. (A.P.P.M.)	11.2 m.
Western	
(At Lowest Astronomical tide)	
Inspection Head (Bulk Wheat and Tallow)	9.9 m.
A.M.C. Jetty, Beauty Point (Private)	9.7 m.

HEALTH: Organised by ship's Agent. Notify Agent prior to arrival. Pratique automatic if vessel visits other ports in Australia prior calling Launceston, otherwise contact: Health Department, Commonwealth Dept. of Health, Quarantine Dept., Ship Inspection Service, ANL Terminal, Bell Bay, Tas. 7252. (P.O.Box 132, George Town, Tas. 7253). Tel: (003) 82 2224.

Radio Pratique: The Master of any vessel arriving from overseas should, not more than 24 hours and not less than 12 hours before arrival, transmit to the Quarantine Officer, if necessary through the Agent, a statement giving the following details:

A. Name, type and nationality of vessel.
B. Itinerary for last 21 days. If over 21 days from last port, name of port and date of departure.
C. Name of first Australian port and ETA.
D. Number of crew.
E. Number of passengers.
F. Any deaths on board during the voyage? Give details.
G. Any cases of illness during the last 21 days with a fever of 38°C or above, and:
   (a) accompanied by rash, jaundice or glandular swelling, or
   (b) accompanied by diarrhoea lasting longer than 24 hours.
H. Persons suffering from venereal disease during the voyage?
I. Live fish, birds, reptiles or other animals being carried (including ship's pets).
J. Livestock carried on previous voyages in the last 6 months? Please advise type of livestock, date of voyage and ports visited. Have all stock-carrying compartments been thoroughly cleaned and disinfected?
K. Do you request Radio Pratique?

RADIO: Melbourne VIM.

VHF: *Port Control:* (manned 24 hours). Tel: Bell Bay (003) 820111, 820175. Telefax: Bell Bay (003) 821695. Telegraphic Address: Harbmaster Launceston. Radio Call Sign: "Bell Bay Control". Pilot Call Sign: "Tamar Pilot".

Radio Service: The P.L.A. Port Control Room at Bell Bay is manned 24 hours and operates a radio service on the following frequencies.

VHF Channel 16 (156.8 MHz) International distress and calling.

VHF Channel 12 (156.6 MHz) Port working frequency.

VHF Channel 67 (156.375 MHz) Alternate calling and distress.

HF 2182 kHz International distress and calling (for emergency use only).

Call Sign: "Bell Bay Control".

Assistance Afloat: Contact Port Control. Assistance Ashore: Contact Port Control. Emergency Assistance: Contact Port Control.

Port Office: The "Port Office" at Bell Bay includes the Harbour Master's Office and the "Port Control" room. The Harbour Master controls shipping movements, berth and shed allocations, cargo storage areas and equipment requirements.

Tugs, linesboats and linesmen are ordered by the "Port Office" staff on behalf of vessels' Agents.

It is therefore essential that any change in a vessel's ETA or ETD be communicated to the "Port Office" as soon as possible.

TUGS: Towage services are operated by North Western Shipping and Towage Co. Pty. Ltd. with 2 ship handling tugs (over 30 ton bollard pull) based at Inspection Head Wharf. Both are fitted with radar; one fitted with a fire monitor.

"Yorktown" built 1972, 249 g.r.t. LOA 29.49 m. Speed 10.5 knots with bollard pull of 33 tons, type 1.4mW, twin screw.

"Farm Cove" built 1971, 209 g.r.t. LOA 29.42 m. Speed 12 knots. Bollard pull 32 tons. Twin screw.

Other tugs are available at several hours notice from other ports. Launches are available for small ship and barge handling.

All tugs are equipped with VHF radio with Channels 6, 8, 12, 16 and 67.

BERTHING: Bell Bay: On the Eastern shore within 8 nautical miles of the entrance.

No. 1, Comalco Berth (Private):

A concrete decked and piled wharf, providing facilities for handling of aluminium and bulk cargoes. Length of wharf: 152.4 m.; width 18.95 m. Width of apron: 9.1 m. Mooring dolphins: 5 with outermost 2 at 330.4 m. apart. Width of approaches: 6.1 m. Depth alongside: 10.8 m. at LAT. Height of deck above datum: 5.40 m.

Cranes: 2×12.5 ton portal, electric, luffing, slewing, grabbing, travelling cranes. (Manufacturer: Stothert & Pitt).

Lifting capacity/speed: 12.5 ton grab full; 6.25 ton (cargo) at 91.44 m./min. Max. radius: 20.57 m. Min. radius: 7.01 m. Tail radius: 5.33 m. Max. outreach from wharf fenders: 13.96 m. Max. backreach from wharf fenders: 27.19 m. Centre of crane to outer edge of wharf fenders: 6.61 m. Max. height of hook above wharf deck/max. radius: 19.81 m. Max. height of bottom of grab above wharf deck/max. radius: 8.23 m. Max. depth of bottom of grab below wharf deck/max. radius: 15.24 m. Length of travel: Full length of wharf. Rated capacity: 300 tonnes/p.h. each. Average "alumina" complete discharge: 225 tonnes/p.h. each. Average "pitch" complete discharge: 300 tonnes/p.h. each.

Wharf deck loading: 2.7 tonnes/sq.m. (5 cwt/sq.ft.).

Axle loading: 20 tonnes.

Cargo bin: Uncovered concrete cargo bin 133.27 m. long × 8.53 m. wide × 3.66 m. deep runs along back of wharf. Alumina is now being discharged by self-unloading vessels to hoppers then by conveyor to the smelter.

Other bulk cargoes: Discharged to hoppers then road-hauled to the works.

Wharf power: Nil.

Telephone: Ship Tel: (003) 82 1482, when connected. Agents Tel: (003) 82 1471. Comalco switchboard (003) 82 5111.

Fresh Water: Available at maximum rate of 50 tonnes/p.h. per connection.

Bunkering: Road tanker.

No. 2, A.N.L., Ro/Ro, and Container Berth: A specially designed terminal for the Bass Strait and vehicular deck ships equipped with stern loading facilities capable of carrying wheeled and mobile cargo to maximum of 120 tonnes gross weight.

Length of wharf: 86.6 m.; width 38 m. Mooring dolphin: 227.9 m. East of ramp end. Fender dolphin: 116 m. East of ramp end. Depth alongside: 8.4 m. at LAT. Height of deck above datum: 5.03 m.

Ro/Ro ramp: 8.23 m. wide with max. vehicle width of 8.14 m. and capacity in excess of 120 tonnes. Axle loading on ramp: 63 tonnes (forklift). Gross loads in excess of 120 tonnes can be accommodated with reference to Chief Engineer. Ro/Ro Cassette System in use with 8 prime movers, 8 trailers and 231 cassettes.

Wharf deck loading: 2.7 tonnes/sq.m. (5 cwt./sq.ft.). Wharf axle loading: 14.5 tonnes; forklift – 43.6 tonnes.

Marshalling area: 4.72 ha.

Rail: Shipside. Rail loop services marshalling area.

Reefer outlets: 102 for 120 refrigerated containers, each 415v, 30 amp. Wharf power: 1×240v, 10 amp.

Telephones: Ship (Master) Tel: ((003) 82 1366. Ship (Crew) Tel: (003) 82 1593. Agents Tel: (003) 82 1084.

Fresh Water: Available at maximum rate of 50 tonnes/p.h. per connection.

Bunkering: Road tanker.

No. 3, Bell Bay Wharf (Temco, Bulk and General): A concrete decked, steel piled wharf providing for handling of general and bulk cargoes.

Length of wharf: 152.5 m.; width 20.4 m. Mooring dolphins: 236.9 m. apart. Depth alongside: 11.7 m. at LAT. Height of deck above datum: 5.18 m.

Cranes: 19 tonne slewing, luffing, grabbing, travelling crane with trailing hatch hopper on rails. (Manufacturer: Caillard Levage).

Lifting capacity: 19 tonne with grab; 25 tonne with hook. Lifting capacity/radius: 19 tonne at 30 m. max. radius; 25 tonne at 24 m. max. radius. Max. radius 30 m. Min. radius: 10 m. Tail radius: 6 m. Max. outreach from wharf fenders: 22.49 m. Max. backreach from wharf fenders: 37.51 m. Centre of crane to outer edge of wharf fenders: 7.51 m. Max. height of bottom of grab above wharf deck/max. radius: 18 m. Max. height of hook above wharf deck/max. radius 22 m. Max. depth of bottom of grab below wharf deck/max. radius: 14 m. Length of travel: Length of wharf for 108 m. Associated equipment: Trailing hatch hopper with operator's cabin. Estimated unloading rate (grab): 500 tonnes/p.h. Average loading rate (grab): 660 tonnes/p.h.

Wharf deck loading: Deck and approaches: 4.3 tonnes/sq.m. (8 cwt./sq.ft.) except. Deck between crane rails: 2.7 tonnes/sq.m. (5 cwt./sq.ft.). Up to 140 tonne loads on suitable transporters can be accommodated with reference to Chief Engineer. Axle loading on deck/pavement: 20 tonnes; 17.8 tonnes (forklift).

Transit shed space: 744 sq.m.

Wharf power: 2×415v, 30 amp.; 2×240v, 10 amp.

Telephones: Ship Tel: (003) 82 1768. Agents – Stevedores Tel: (003) 82 1437. Temco – Wharf Office Tel: (003) 82 1411. Customs Tel: (003) 82 1526.

Fresh Water: Available at maximum rate of 50 tonnes/p.h. per connection.

Bunkering: Road tanker.

No. 4, Tanker Berth: A "T" head concrete berth. Vessels up to 212 m. length have been accommodated. Length of wharf: 54.5 m.; width 10.4 m. Mooring dolphins: 356.2 m. and 179.2 m. apart. Depth alongside: 11.5 m. at LAT. Height of deck above datum: 5.0 m. Axle loading: No vehicles allowed on deck without reference to Chief Engineer.

Pipelines: (a) 2×250 mm.; one for black and one for clean oil.
(b) 1×100 mm.; for discharge of LP Gas, 440 kPa (64 lb/sq.in.).
(c) 1×75 mm. vapour return line.

Manifold is 19 m. from downstream fender.

Tanks: Bottom of tanks in tank farms 33 m. above manifolds on wharf.
Wharf power: Nil.
Telephones: Watchman Tel: (003) 82 1179.
Fresh Water: Available at max. rate of 50 tonnes/p.h. per connection.
Bunkering: Fuel oil 100 mm. and 150 mm. connections, rate of 50/60 tonnes/p.h. Diesel oil by road tanker, 75 mm. connection at 18 tonnes per 1 hour 15 minutes.

No. 6, Multi-Purpose Berth (General, Container and Ro/Ro): A concrete decked, steel piled, heavy duty berth designed for Ro/Ro, container, conventional and bulk cargoes.

A steel decked bridge 24.4 m. long×7.2 m. wide connects West marshalling area to the wharf. Length of wharf: 313.6 m. Mooring dolphin: Behind wharf 37.3 m. East of wharf end. Depth alongside: 9.0 m. to 12.4 m. at LAT (See "Plan"). Height of deck above datum: 5.05 m.

Cranes: (a) 50 ton portal, electric, horizontal luffing, slewing, travelling wharf crane equipped with spreaders and other equipment for the handling of 6.1 m. and 12.2 m. ISO containers and grabbing by special arrangement. (Manufacturer: Deer Park Engineering). Lifting capacity/radius: 40 ton at 32 m.; 50 ton at 22.86 m. Max. outreach from wharf fenders: 23.67 m. (40 ton); 14.53 m. (50 ton). Max. backreach from wharf fenders: 40.33 m. (40 ton); 31.19 m. (50 ton). Centre of crane to outer edge of wharf fenders: 8.33 m. Max. height of hook above wharf deck/max. radius: 24.38 m. Max. depth of hook below wharf deck/max. radius: 9.14 m. Length of travel: Length of wharf.

(b) 40 tonne mobile harbour crane, with standard capacity of 40 tonnes (under hook) and heavy lift capacity of 100 tonnes (under hook). (Manufacturer: Favco-Gottwald).

Standard load/radius limits: 40 tonnes at 11 m. to 31 m., then reducing to 26.0 tonnes at 42 m. Heavy lift/load radius limits: 100 tonnes at 11 m. to 17 m. then reducing to 26.0 tonnes at 42 m. Max. radius: 42 m. Min. radius: 11 m. Max. outreach from wharf fenders: 33.67 m. Max. backreach from wharf fenders: 50.33 m. Centre of crane to outer edge of wharf fenders: 8.33 m. Max. height of hook above wharf deck/max. radius: 32 m. Max. depth of hook below wharf deck/max. radius: 15 m. Associated equipment/spreaders, etc.: Equipped with remote controlled swivel gear, load leveller and fully automatic spreader for handling containers, general cargo and bulk materials.

For further details see "Cranes".

Ro/Ro Ramp: 8.23 m. wide stern loading ramp with max. vehicle width of 8.14 m. and capacity in excess of 100 tonnes.

Axle loading on ramp: 52.4 tonnes (forklift). Gross loads in excess of 100 tonnes can be accommodated with reference to the Chief Engineer.

Wharf Deck Loading: 3.23 tonnes/sq.m. (672 lb./sq.ft.); 1985 extensions: 5 tonnes/sq.m. (9.3 cwt./sq.ft.).

Wharf Axle Loading:
(a) Deck and pavement: 50 tonnes.
(b) 1985 deck extension: 80 tonnes.

Marshalling Area: East: 1.8 ha.; West: 1.5 ha.
Total of 3.3 ha. or 3.8 ha. including wharf decks.
Transit Shed Space: 2,675 sq.m. Sheds are fitted with exhaust fans for pre-shipment storage of primary produce.
Rail: At ship side, full length of berth.
Reefer Outlets: 72 for 144 refrigerated containers.
Wharf Power: 5×415v., 30 amp.; 6×240v, 10 amp.; 1×415v., 60 amp.
Telephones: Ship (East end) Tel: (003) 82 1840, (West end) Tel: (003) 82 1129. Agents: Tel: (003) 82 1880. First Aid: Tel: (003) 82 3174. Customs: Tel: (003) 82 1526.
Fresh Water: Available at max. rate of 50 tonnes/p.h. per connection.
Bunkering: Road tanker.

Bell Bay Industrial Area:
(a) P.L.A. Cold Stores: Cold storage capacity of 22,864 cu.m., consisting of 6 chambers each with temperature of −23°C., plus self-levelling ramp and forklift service garage.
(b) Stockyards: Area 595 sq.m.
(c) Incinerator: Quarantineable waste disposal, with average destruction rate of 325 kg.hr. over a 6 hour period, equipped with hydraulically operated loader and ram.
(d) Weighbridge: 16 m. long, weighing up to 50 tonnes.
(e) Butane Gas Storage Sphere: (Gas Corporation of Tasmania) – capacity of 600 tonnes.

Long Reach: On the Eastern shore within 12 nautical miles of the entrance.

Thermal Power Station Berth (H.E.C.):
A "T" head concrete decked, steel piled wharf, 26.2 m.×13.4 m. with a concrete approach from land 3.66 m. wide.
Mooring Dolphins: 2 at 262 m. apart.
Fender Dolphins: 2 at 61 m. apart.
Depth Alongside: 12.3 m. at LAT.
Height Above Datum: 5.66 m.
Wharf Deck Loading: 488 kg./sq.m. (100 lb./sq.ft.).
Axle Loading: 14.3 tonnes.
Pipes for Discharge: 3×250 mm. lines, feeding into 2×300 mm. lines to 3×15,000 tonne tanks: head 0.00 m. when tank is empty to 18.29 m. when tank is full. Pipe connections are "Chicksan" booms.
Wharf Power: Nil.
Telephone: Ship Tel: (003) 82 1377.
Fresh Water: Available at max. rate of 30 tonnes/hr. per connection.
Bunkering: Road tanker to 20 tonne all-up weight.

No. 1 Woodchip Berth – Northern (Forest Resources):
A berthing face 217 m. long. Approach from land is a bridge 78.7 m. long×3.81 m. wide.
Fender Dolphins: 5.
Mooring Dolphins: 2 at 482 m. apart.
Shore Trip-Hooks: 2 at 213.4 m. apart. Steel walkway between dolphins is 1.22 m. wide.
Depth Alongside: 11.5 m. at LAT.
Height of Deck above Datum: 5.64 m.
Woodchip Loader (fixed): Situated on central dolphin with loading rate of 700 tonnes/p.h. Clearance with boom horizontal 22.10 m. above datum.
Wharf Power: Nil.
Telephones: Ship Tel: (003) 94 7193. Agents Tel: (003) 94 7303. Customs Tel: (003) 82 1526. Forest Resources Switchboard Tel: (003) 94 7303.
Fresh Water: Available at max. rate of 30 tonnes/p.h. per connection.
Bunkering: Not available.

No. 2 Woodchip Berth – Southern (Associated Pulp and Paper Mills Ltd.):
A berthing face 229 m. long. Approach from land is by a causeway and a bridge 18.7 m. long×4.7 m. wide.
Fender Dolphins: 5.
Mooring Dolphins: 2 at 482 m. apart.
Shore Trip-Hooks: 2 at 210.3 m. apart. Steel walkway between dolphins is 1.07 m. wide.
Depth Alongside: 11.2 m. at LAT.
Height of Deck (Loading Dolphin) above Datum: 6.86 m.
Woodchip Loader (Fixed): Situated on central fender dolphin with loading rate of 700 tonnes/p.h. Clearance with boom horizontal 20.57 m. above datum.
Axle Loading on Deck and Approach: 14.3 tonnes; 50 tonnes (forklift).
Wharf Power: Nil.
Telephones: Ship Tel: (003) 94 7377. Customs Tel: (003) 82 1526. A.P.P.M. Switchboard: Tel: (003) 94 7201.
Fresh Water: Available at max. rate of 30 tonnes/hr. per connection.
Bunkering: Not available.

Beauty Point Harbour: On the Western shore within 6.5 nautical miles of the entrance.

Australian Maritime College Jetty (Private):
A "T" head concrete jetty, constructed for A.M.C. Seamanship Centre training vessels. A side pontoon plus lifeboat deck exist on Northern side of jetty approach.
Length: 60 m., width 9 m.
Mooring Dolphins: 2 at 115 m. apart.
Depth Alongside: 9.7 m. at LAT.
Height of Deck above Datum: 4.5 m.
Wharf Deck Loading: 1.5 tonnes/sq.m. (2.8 cwt./sq.ft.).
Axle Loading: 14.3 tonnes.
Telephones: A.M.C. Seamanship Centre Tel: (003) 83 4455.

Small Boats Marina:
Suitable for ocean-going craft. Constructed as a pontoon and catwalk type with amenities block, car park and picnic area adjacent.
Total Berths: 52.
Fresh Water: Available.

Inspection Head Wharf (Bulk Wheat, Tallow and General; Fish Processing):
No. 1, Northern end: 180.6 m. long, width 28.1 m., concrete decked and steel piled.
No. 2, Southern end: 153.6 m. long, width 34.3 m., concrete decked and piled.
Total Length: 334.3 m., providing 2 overseas berths.
Mooring Dolphins: 2 at 452.2 m. apart: Northern dolphin: 45.5 m. from end of wharf. Southern dolphin: 72.4 m. from end of wharf. Depth Alongside: 10.0 m. at No. 1 at L.A.T. and 9.5 m. at No. 2 at L.A.T. Height of Deck above Datum: 5.33 m. Swinging Room: 270 m. off North end of wharf. 210 m. off Berth No. 2.
Transit Shed Space: Shed No. 1A: 972 sq.m. (Bulk wheat capacity: 2,463 cu.m.). Shed No. 1B: 976 sq.m. (Bulk wheat capacity: 1,841 cu.m.).
Wheat Loaders: 2 "Neuro" unloaders (Tasmanian Grain Elevators Board) rated at 250 tonnes/p.h.
Tallow Storage:

Tanks	1×600 tonnes; 6×100 tonnes; 1×50 tonnes (settling);
Total Capacity	1,250 tonnes
Loading Capacity	200 tonnes/p.h.
Pipe-lines	1×100 mm., 1×152 mm.

Wharf Power: 8×240v, 10 amp.; 8×415v, 30 amp.
Telephones: No. 1 Wharf: Ship Tel: (003) 82 1665. Agents Tel: (003) 82 1647, 83 4111. Stevedores Tel: (003) 83 4141. Customs Tel: (003) 83 4131. Bulk Tallow Plant Tel: (003) 83 4455.
No. 2 Wharf: Ship Tel: (003) 82 1664. Asst. Harbour Master Tel: (003) 83 4266. Wharf Office Tel: (003) 83 4211.
Fresh Water: Available at max. rate of 30 tonnes/p.h. per connection.
Bunkering: Road tanker.

Launceston: On Eastern shore 35.4 nautical miles from the entrance.

King's Wharf: (P.L.A. Plant Berth and Flinders Island Services):
A concrete decked and piled wharf providing a total berthing length of 295.4 m. Equipped with 50 ton bollards every 18.3 m.
Depth Alongside: Subject to siltation.
Height of Deck above Datum: 5.64 m.
Wharf Deck Loading: 1.3 tonnes/sq.m. (2.5 cwt./sq.ft.); ship building area; 2.7 tonnes/sq.m. (5 cwt./sq.ft.) main deck. Axle Loading: 12.7 tonnes. Transit Shed Space: 2,463 sq.m. Rail: Siding services the adjacent P.L.A. Pileyard).
Wharf Power: 5×415v., 30 amp.
Telephone: Connection by Telecom.
Fresh Water: Available at max. rate of 30 tonnes/p.h. per connection.
Bunkering: Road tanker.
Next section of wharf has been demolished and replaced with a timber piled and decked walkway 277.3 m. long used as P.L.A. Plant Berth.

Stock Berth:

A "T" shaped timber deck 27.3 m. long connected to holding and receiving yards by an adjustable gangway near the centre of a berth 57.5 m. long.

Depth Alongside: Subject to siltation. Height of Deck above Datum: 5.64 m. Rail: Siding adjacent.

CRANES: The Port Authority operates a range of mobile cargo handling and wharf equipment and floating plant which is available for hire.

Mobile Cargo Handling and Wharf Equipment:

Mobile Harbour Crane: Favco-Gottwald (HMK 280-89) mobile harbour crane, with standard capacity of 40 tonnes (under hook) and heavy lift capacity of 100 tonnes (under hook).

Standard Load/Radius Limits:

40 tonnes at 11 m. to 31 m., then reducing to 39.3 tonnes at 32 m., 28.2 tonnes at 40 m., 26.0 tonnes at 42 m.

Heavy Lift Load/Radius Limits:

100 tonnes at 11 m. to 17 m., then reducing to 92 tonnes at 18 m., 85 tonnes at 19 m., 78 tonnes at 20 m., 59.7 tonnes at 24 m., 43.2 tonnes at 30 m., 28.2 tonnes at 40 m., 26.0 tonnes at 42 m.

These limits may vary depending on berth and crane position. Any further details are available on enquiry from the Chief Engineer.

Max. radius: 42 m. Min. radius: 11 m. Max. height of hook above wharf deck/max. radius: 32 m. Max. depth of hook below wharf deck/max. radius: 15 m. Hook speed: With no load: 84 m./min.; with 27 tonnes: 63 m./min.; with 40 tonnes: 44 m./min.

Set up time on this crane is fast with outrigger pads positioned by the operator. Change of position can be effected by the operator from cabin.

The cabin adjusts in height from the standard 17 m. up to 24 m. above wharf deck at the operator control.

Closed circuit TV installation permits the operator a clear view of the hook activities.

Operations by the crane can be carried out throughout the port area and consideration will be given to use within the industrial area.

The crane usually travels in an upright position but can be lowered automatically to a height of 6 m.

Associated equipment/spreaders, etc: Equipped with remote controlled swivel gear, load leveller and fully automatic spreader for handling containers, general cargo and bulk material.

Also see "Berthing".

BULK CARGO FACILITIES: See "Berthing".

SPECIALISED CARGO-HANDLING FACILITIES: See "Berthing".

BRIDGES: No bridges for large overseas shipping. Some inter-state vessels proceeding to Launceston will pass under Batman Bridge – 27 m. mast height allows 0.9 m. clearance at HW.

STEVEDORES: Agent for ship arranges stevedores.

MEDICAL: Agents should be notified to prepare for medical attention or hospitalisation. Hospitals at Launceston, Beaconsfield and George Town.

TANKERS: See "Berthing". No. 4 Bell Bay Tanker Berth, Long Reach Thermal Station Berth and No. 1 Bell Bay Comalco Berth.

DENSITY: 1012 to 1028, depending on rainfall.

FRESH WATER: Fresh water available at all berths. Delivery 50 t.p.h. by hose.

FUEL: Direct pipe-line bunkering from Mobil Bell Bay tank farm or road tanker is available at Berth No. 4 or by road tanker at all other berths except Woodchips Berths.

Also see "Berthing".

FIRE PRECAUTIONS: Tankers governed by the Association of Australian Port and Marine Authorities "Rules for the Handling of Dangerous Goods and Oils in Ports".

CONSULS: None.

REPAIRS/DRY DOCK: William Hart Graving Dock: Situated on South bank of North Esk River adjacent to Charles Street Bridge. A steel and concrete graving dock with a clear width at the entrance of 12.8 m., capable of accommodating vessels up to 62.5 m. in length.

Maximum permitted draft: 3.66 m.

Depth Alongside Dock Ramp: 3.0 m. to 4.0 m. at LWOST, subject to siltation. Depth maintained by dredging. Design keel loading: 33.9 tonnes/m.

Telephones: Launceston Marine. Tel: (003) 342844.

Fitting Out Berth: Town Pier: (Forms part of William Hart Dockyard).

A concrete decked berth. Length: 135.8 m. Depth Alongside: 3.0 to 4.0 m. at LWOST, subject to siltation. Depth maintained by dredging. Height of Deck above Datum: 4.98 m. Deck Loading: 2.7 tonnes/sq.m. (5 cwt./sq.ft.). Axle Loading: 14.3 tonnes.

Wharf Power: 1×240v, 10 amp.

Fresh Water: Available to max. rate of 30 tonnes/p.h. per connection.

Shore reception facilities are available for dirty bilge and fuel:

1×54,552 litres (12,000 gal.).
1×22,730 litres (5,000 gal.).
1×16,800 litres (3,698 gal.).

R.A. Ferrall Shiplift: Adjacent to Northern end of King's Wharf. A shiplift docking complex 105.3 m.×25 m. with a lifting platform 60 m.×18 m. operated by 16 synchronised lifting winches.

A transfer system is provided for up to 3×700 tonne displacement vessels leaving the platform free for larger vessels.

Maximum Vessel Size: Length 65 m., beam 18 m., draft 5.5 m. (over 4 m. subject to tide and blocking, etc.). Displacement 2,160 tonnes (ship); 3,120 tonnes (barge).

Depth Alongside: 4.5 m. to 5.6 m. at LWOST, subject to siltation. Depth maintained by dredging. Design Keel Loading: 55 tonnes/m. Height of Deck above Datum: 5.64 m. Crane: 17.5 ton stiff leg derrick crane covers Northern section of docking platform.

Lifting capacity/max. radius: 15 ton at 25.87 m.; 17.5 ton at 19.81 m. Min. radius: 6.40 m. Max. height of hook above deck/max. radius: 9.75 m. Max. depth of hook below deck/max. radius: 9.14 m.

Deck Loading: Rear wharf: 4.2 tonnes/sq.m. (7.87 cwt./sq.ft.); Inner/outer decks: 5.3 tonnes/sq.m. (9.69 cwt./sq.ft.). Axle Loading: Platform: 4.8 tonnes (forklift). Rear wharf: 58.8 tonnes. Inner/outer decks: 26.7 tonnes (with max. weight vessel); 45 tonnes (if less than 1,500 tonne weight vessel). Transfer System Capacity: 704 tonnes.

Telephones: Launceston Marine. Tel. (003) 342844.

In addition to facilities mentioned above, Port of Launceston Authority employees carry out ship repairs afloat at Bell Bay and Lower Reaches berths on interstate and overseas vessels. Such work is normally carried out simultaneously with cargo operations.

SURVEYORS: Arranged by Agent.

GANGWAY/DECK WATCHMEN: Only required at bulk berths.

HATCHES: Opening/Closing usually by stevedores.

CUSTOMS ALLOWANCES: 200 cigarettes or 250 grams of tobacco per man; 1 opened litre spirits per man; stores sealed on arrival.

CARGO GEAR: See "Berthing". Certificates of loading gear and derrick tests to be produced. Also see "Melbourne".

REPATRIATION: Arranged through ship's Agents.

AIRPORT: Approx. 64 km. from Bell Bay and 15 km. from Launceston. Served by Ansett and Australian Airlines.

TIME: See "General" before first port.

HOLIDAYS: Good Friday, Anzac Day, Christmas Day and New Year's Day close holidays, work on other holidays may be arranged through Agents.

POLICE/AMBULANCE/FIRE: Port Radio Control must be advised in the event of fire.

EMERGENCY CO-ORDINATION CENTRE: The Port of Launceston Authority operates it's own port emergency service.

Trained assistance in emergency operations is rapidly available from the adjacent industrial complexes to offset the delay in obtaining full Emergency Services from Launceston.

Port Control is equipped with a direct line to the State Emergency Service offices in Launceston and Hobart, and can be quickly converted into an Emergency Operation Centre.

All Emergencies: Contact: Port Control. Radio: Channel 16. Tel: (003) 820175.

TELEPHONES: Ship-to-shore phones available.

STORING: Vessels stored by truck; Customs require stores be "entered for export".

SHORE LEAVE: When Immigration and Customs requirements have been satisfied there is no restriction on crew shore leave so long as they rejoin the vessel on departure. There is no need for identity cards or shore passes except in so far that non-English speaking persons may wish to identify themselves.

GARBAGE DISPOSAL: Drums available. Charge A$150.00 per service. Times as requested. Contact: Port Control, Tel: (003) 820175.

WASTE OIL DISPOSAL: Service available. Small quantities only (± 10 tonnes). No special berth. Tel: (003) 944309 for service.

SEAMAN'S CLUBS: Missions to Seamen. Tel: 831034. International telephone, chapel, library, stamps and postal service, table tennis, pool table, T.V. and video.

Catholic, United, Baptist, Salvation Army and Anglican churches in the town.

CURRENCY: Australian Dollar. No restrictions.

SHIP SUPPLY SERVICES: Various providoring companies available.

In cases of emergency upon request, the pilot boat has been used for removing sick crew members, taking small quantities of stores and repair people to vessels outside the port. Water has been supplied in small quantities from the tugs to vessels anchored off the port.

GENERAL: *Surveys:* Surveys, including Damage, Draft, On and Off Hire, Protest, Classification Society, Commonwealth D.O.T. and Gas Free Certification can be arranged through Harbour Master's office or ship's Agent.

Services: Ship Chandlers, P&I Club, radio repairs and divers.

References: Australian Pilot Volume 2. AUS Charts No. 167 and 168.

Distances: From Hebe Reef Light to Launceston

	Nautical Miles
Hebe Reef Light	0
Yellow Rock Beacon	1.7
Shear Rock Beacon	2.3
Bombay Rock Beacon	4.7
Point Effingham	7.4
Inspection Head Wharf	8.2
Bell Bay No. 3 Wharf	9.5
Point Rapid	14.0
Drumstick Island Light	15.9
Barrett's Point	17.0
Swan Point Beacon	20.0
Rosevear's Tide Gauge	25.9
Dilston Light	29.5
Tamar Island	32.9
No. 7 Beacon	35.6
King's Wharf No. 1 Light	37.1

Floating Plant: Launch: One 10 m., fibreglass, twin-hulled, diesel powered, high speed launch: "Dalrymple", fitted with SSB HF, VHF and 27 MHz radio. The launch is used for workboat/rescue/patrol/VIP and river sounding.

Launch "Captain Gibson": A 16.2 m. steel launch equipped with radar, VHF radio and used as a pilot launch.

Launch "Wm. Robinson": A 11.1 m. steel launch equipped with VHF radio and used as a relief pilot launch and a harbour workboat.

Launch: "Carrington": A 15.3 m. steel launch equipped with VHF and 27 MHz radio. Vessel has a bollard pull of 6 tonnes and is used as a harbour workboat.

Other Floating Plant: Two flat top barges 24 m.×7.77 m. One flat top barge 34 m.×7.31 m.

Other Plant: A variety of construction and maintenance plant such as pumps, welders and sand-blasting equipment, etc., may be made available for special requirements. Details will be supplied upon application. A variety of other and specialised units are also available at 24 hours' notice from contract hirers to the Authority.

AUTHORITY: Port of Launceston Authority, P.O.Box 257C, Launceston, 7250 or Mobil Road, Bell Bay 7252, Tasmania, Australia. *Tel:* (003) 820111. *Cables:* Bell Bay Control. *FAX:* (003) 821695. *Contact:* C.A. Kittel, General Manager. Captain C. Black, Harbour Master.

AGENT: See "Devonport".

LUCINDA, Queensland: 18.32 S. 146.20 E. (See Plan)

LOCATION: Lucinda is a first port of call and is situated in position Lat. 18° 32′ S., Long. 146° 20′ E. This port is approximately 680 miles North of Brisbane.
PORT LIMITS: See "Plan".
PILOTAGE: Location of pilotage boarding ground for the bulk sugar loading berth is Lat. 18° 30′ S., Long. 146° 24′ E.

The pilot vessel is equipped with VHF Channels 16, 12 and 6. No regular watch is kept.

For the inshore berth the pilot boarding ground is in position Lat. 18° 15′ S., Long. 146° 03.5′ E.

Coastal and Reef Pilotage: Pilotage through the Inner Route of the Great Barrier Reef to Torres Strait, and also Palm Passage is conducted by licensed pilots available from Australian Reef Pilots Ltd. and Queensland Coastal Pilot Service Pty. Ltd. See "Torres Strait" for details.

Masters are advised that pilotage in the Inner Route and at Hydrographers Passage is compulsory. Pilotage in the Great North East Channel is recommended by IMO. See "Torres Strait".
MAX. SIZE: 52,000 d.w.t., LOA 222 m., beam 31.0 m. and max. draft 12.3 m.
HEALTH: Pratique available 24 hours a day, 7 days a week. This is carried out alongside.
TUGS: Required for all movements. One tug comes from Cairns and another tug comes from Mourilyan.
BERTHING: *Sugar Wharf:* The sugar wharf has an approach jetty from the shore 5.76 km. in length. The berth is 224 m. long.

The wharf is used for the export of bulk sugar which is loaded via a travelling gantry.

The depth of water at LWOST is 13.6 m.

The mean Spring rise is from 0.5 m. to 2.9 m. whilst the mean water neap rise is from 1.2 m. to 2.1 m.

The sugar berth was constructed to accommodate vessels of 40/45,000 d.w.t. with loading rate of up to 1,700 tonnes/p.h. at the offshore deepwater wharf. Berth starboard side to. The maximum all up weight of vehicles allowed on wharf is 5 tonnes gross. There is a height clearance of 2.1 m. on apron.

Max. air draft above L.W.D. 11.0 m. (bottom of thrower).

Max. reach from fender face 17.5 m.

There are 3 sheds and are confined to bulk sugar storage only. Total capacity 231,000 tonnes.

Inshore Berth: Length 133.35 m. Depth 9.0 m. Channel depth 3.3 m. Berth officially closed in May 1989.
FRESH WATER: Not available.
FUEL: Not available.
GARBAGE DISPOSAL: Garbage disposal facilities will be provided on request at the shipowner's expense. This is carried out by a private contractor and requires ample notice. Drums are provided. Arrangements should be made through the agent.
WASTE OIL DISPOSAL: Not available.
SEAMAN'S CLUBS: None.
CURRENCY: Australian Dollar (A$).
GENERAL: *Stores:* Available from Townsville but should be ordered prior to arrival.
AUTHORITY: Ports Corporation of Queensland, G.P.O.Box 409, Brisbane 4001, Queensland, Australia. *Tel:* (07) 3224 7088. *FAX:* (07) 3224-7234. *Contact:* Chief Executive Officer.

Regional Harbour Master (Townsville): Captain R. Johnson. Tel: (077) 7155135. Fax: (077) 212028.

AGENT: Sub-agent of Patrick Sleigh Shipping Agencies Pty. Ltd., Brisbane.

MACKAY, Queensland: 21.06 S. 149.14 E. (See Plan)

PORT LIMITS: Along Lat. 21° 03.9′ S. from Long. 149° 13.5′ E. to Long. 149° 22.08′ E., thence 180°(T) to Lat. 21° 10.0′ S. in Long. 149° 22.08′ E. thence 270°(T) to Long. 149° 20.1′ E., thence 250°(T) to Lat. 21° 12.96′ S., Long. 149° 11.5′ E.
CERTIFICATES/DOCUMENTS/CUSTOMS ALLOWANCES: See "Melbourne".
PILOTAGE: Pilotage is compulsory for merchant vessels whose Masters do not hold a current Certificate of Exemption. The pilot boarding ground is situated 1.2 miles East/S.E. of quick flash Red Southern Breakwater light.

Coastal and Reef Pilotage: See "Hay Point".
ANCHORAGES: *Prohibited Anchorages:*
- *(a)* Lat. 21° 07.63′ S., Long. 149° 13.20′ E.
- *(b)* Lat. 21° 07.63′ S., Long. 149° 15.70′ E.
- *(c)* Lat. 21° 06.78′ S., Long. 149° 16.55′ E.
- *(d)* Lat. 21° 05.82′ S., Long. 149° 13.45′ E.

RESTRICTIONS: None. Day or night access.
MAX. SIZE: Larger vessels subject to Harbour Master's approval, state and height of tide, daylight, and draft, etc.
HEALTH: See "Melbourne". Inspection at anchorage or at berth.
RADIO: See "Brisbane".
VHF: A VHF Port Radio Station has been established at Mackay Harbour. Frequency: Channels 67, 16, 13, 11 and 6, call sign "Mackay Harbour". Hours: Continuous.
TUGS: Two tugs of 30 tonne bollard pull available.
BERTHING:

	Berth No.	*Wharf Length* (m.)	*Berth Length* (m.)	*Berth Depth* (m.)	*Berth Width* (m.)
Breast Wharf	1	123	210	10.6	33
South Pier	2	190	190	10.6	30.5
North Pier	3	195	195	10.6	33
No. 4 Wharf	4	140	220	10.6	35
No. 5 Wharf	5	135	250	12.0	40

Slack water entry. Swinging basin 28 ft. (8.3 m.) LWOST. Mean high neap tide rise 13 ft. 4 in. (4.1 m.). Mean high spring tide rise 18 ft. 1 in. (5.5 m.).
SPECIALISED CARGO HANDLING FACILITIES:
Sugar Loading Gantry – Berth No. 3:
- (a) Terminal Capacity: 750,000 tonnes.
- (b) Loader Height: Clear height of loader in horizontal position from top of the pier, 26 ft. (7.9 m.). Height of pier above LW, 34 ft. (10.4 m.). Can be used in lifting slope "V" position up to 14° above horizontal. Max. vessel's hatch height above sea surface with which vessel may start loading even at HW, 35 ft. (10.7 m.).
- (c) Outreach: Max. outreach of loader from side of pier, 40 ft. (12.2 m.). Breadth of permanent fender from side of pier, 2 ft. 6 in. (0.8 m.). The chute can be traversed along the boom for a max. distance of 20 ft. (6.1 m.).
- (d) Movable Range. Length of movable range along pier, 445 ft. 8 in. (135.8 m.).
- (e) Loading Capacity: Nominal loading rate of 2,000 tonnes/hr.

Bulk Refined Sugar Loader – Berth No. 4:
- (a) Terminal Capacity: 45,000 tonnes.
- (b) Loading Capacity: Nominal loading rate of 500 tonnes/hr.

Bulk Grain Conveyor/Loader – Berth No. 5:
- (a) Terminal Capacity: 32,000 tonnes – 8 silos (at harbour). Additional storage in Hinterland.
- (b) Loading Capacity: Nominal loading rate of 1,000 tonnes/hr.
- (c) Gantry Travel: 116 m. along the wharf.
- (d) Outreach (working): 7.5 m. to 19.5 m. from quay line (without thrower).

STEVEDORES: As much notice as possible.
TANKERS: Berth at Breast Wharf. Load rate for bulk molasses 300 t.p.h. through 46 cm. dockline. 25 cm. diameter (Caltex) dockline for petroleum. 25.4 cm. dockline (Mobil) for petroleum products. 25 cm. diameter dockline (CSR) for export of industrial alcohol. 6 in. (15 cm.) dockline for export of tallow. Facilities at No. 2 Berth for loading of sulphuric acid.
DENSITY: Sea water.
FRESH WATER: Available all berths, rate of load 45 tons (45.7 tonnes) per hour.
FUEL: Available at Breast Wharf by pipeline and all berths by road tanker.
FIRE PRECAUTIONS: Normal requirements.
REPAIRS: Small repairs can be carried out.
WATCHMEN: Not obligatory.
OPENING/CLOSING HATCHES: Normally by crew, but can be done by stevedores if required.
CARGO GEAR: See "Melbourne".
REPATRIATION: Facilities available.
AIRPORT: Daily service to Brisbane and thence to world-wide destinations.
TIME: See "General" before first port.
HOLIDAYS: Bank holidays as for Brisbane, plus Waterside Workers' Picnic Day.
POLICE/AMBULANCE/FIRE: All hours 000; Police Tel: 69-4444; Fire Tel: 572244; Ambulance Tel: 572222.
TELEPHONES: Supplied by Agent or vessel.
SHIP SUPPLY SERVICES: Transport of personnel.

Roylen Cruises Pty.Ltd., P.O.Box 169, Mackay, Queensland 4740. Tel: (079) 57 2595. Telex: 48515. Fax: (079) 553186.

The barge "Tambai II" is available for charter, for the transportation of stores, oil, bulk distilate and water.
GARBAGE DISPOSAL: Ships garbage collected from ship on request. Garbage to be in sealed bags. Time of collection preferrably 1030 hrs. Charge $60.00 per 205 litre drum.
WASTE OIL DISPOSAL: Contact Towners Cleansing Service. Tel: (079) 523555. No storage facilities.
IDENTIFICATION CARDS: See "Melbourne".
AUTHORITY: Mackay Port Authority, P.O. Box 3340, North Mackay, Queensland 4740, Australia. *Tel:* (079) 558155. *FAX:* (079) 552868. *Contact:* Greg Mann, Chief Executive Officer.

Contact for Marine and Ports Division for Queensland Transport: Captain Barrie Lee, Regional Harbour Master, P.O.Box 107, Mackay, Queensland 4740, Australia. *Tel:* (079) 577238. *FAX:* (079) 514295.

AGENT: Patrick Sleigh Shipping Agencies Pty. Ltd., P.O.Box 54, 1st Level, 36 Wellington St., Mackay, Queensland 4740. Tel: (079) 53 3155. Telex: 146345 PATSLE. Fax: (079) 53 3120. Seagram Code: 4MPATSLE.

MARYBOROUGH (Urangan), Queensland: 25.18 S. 152.54 E. (See Plan)

PORT LIMITS: The area between the mainland and Great Sandy Island from a line joining Hook Point and the Eastern extremity of Inskip Point to the parallel of 25° 7′ S. latitude, including all rivers, creeks and navigable waters in the above named area.

PILOTAGE: Pilotage is compulsory for an Australian registered ship that is 50 m. or more, and a ship that is 35 m. or more (other than Australian registered ship). Masters of vessels seeking pilotage assistance should request the services of a Pilot either through Brisbane Port Control VHF Channel 16 and 12, Tel: 07 895 1318, or Manager Marine Operations Bundaberg, Tel: 071 538 208, A/H 071 760 719. Notice of ETA and request for Pilot must be made at least 24 hours in advance.

Coastal and Reef Pilotage: See "Gladstone".

TIDES: The mean Spring rise is 2.5 m., while the mean Neap rise is 1.3 m. at Urangan.

BERTHING: Berth at Urangan is closed to shipping. Port is open for commercial purposes to ships of limited size.

MEDICAL: The Hospital, situated at 185 Walker Street, Maryborough may be contacted on telephone number 071-238222. There is also a hospital at Long Street, Point Vernon, Hervey Bay. Tel: 071 281 444.

FRESH WATER: Not available.

CONSULS: None.

REPAIRS: Limited small repairs can be carried out.

POLICE/AMBULANCE/FIRE:

Fire Services: For emergency calls, dial "000" and ask the operator for the Fire Brigade. General enquiries should be directed to telephone number 071-212535. The Brigade Station is situated at 98 Lennox Street, Maryborough.

Police Services: For emergency calls, dial "000" and ask the operator for the Police. General enquiries should be directed to telephone number 212211. The Police Station is situated in Lennox Street, Maryborough.

Vessels at Urangan should ring Hervey Bay Police or Water Police on 071-283333.

Ambulance Services: For emergency services, dial "000" and ask the operator for the Ambulance. General enquiries should be directed to telephone number 071-531333. The Brigade is situated at 155 Neptune Street, Maryborough and at 118 Torquay Road, Hervey Bay (Tel: 071 243 811).

AUTHORITY: *Port of Maryborough:* The Ports Corporation of Queensland, GPO Box 409, Brisbane, Qld. 4001, Australia. *Tel:* (07) 3224-7088. *FAX:* (07) 3224-7234. *Contact:* Chief Executive Officer.

Local Authority: Captain J. Watkinson, Regional Harbour Master – South East Queensland, Brisbane. Local Administrative Authority and first point of contact, Manager Marine Services Bundaberg, P.O.Box 476, Bundaberg, Qld. 4670. *Tel:* (071) 538-208. *FAX:* (071) 528-528.

AGENT: Sub-agent of Patrick Sleigh Shipping Agencies Pty. Ltd., Brisbane.

MELBOURNE (including Maribyrnong River, Holden Oil Dock, Port Melbourne, Williamstown and Yarraville), Victoria: 37.50 S. 144.58 E. (See Plan)

PORT LIMITS: Vessels at anchor off Gellibrand Light are considered "arrived" for the purposes of priority of berthing.

DOCUMENTS:

	No. of copies required
Form M & S 11 (List of crew)	3
Form 42A (Stores List)	1
Form 5 (Articles owned or in possession of Master, Officers or crew)	1
Form B921 – Green – Loading Ports List	3
Form QA3 (Declaration of animals carried as cargo), only if on board	1
Form QA4 (Declaration of ship's pets)	1
Form QA5 (Shipmaster's Bond to cover ship's pets)	1
Form A Q360 (Health Report)	2

Of the above, Forms 42A and 5 need only be compiled at first port of call in Australia. Passenger — individual Passenger Cards are utilised therefore no List of Passengers required. Agents require 7 copies of Manifest of cargo on board and at least 1 set copies Bills of Lading. These normally received by airfreight or airmail direct from Agents at loading port outside Australia therefore not necessary for Masters to be in possession of either Manifest of cargo on board or appropriate copies of Bills of Lading.

Report: 1996.

2 copies Crew List.
2 copies Stowaway List.
1 copy Tobacco/Spirits/Personal Effects List.
1 copy Stores List.
1 copy Health Declaration.
1 copy Deratting Certificate.
1 copy Load Line Certificate.
1 copy Tonnage Certificate.
1 copy Nationality Certificate.
Safety Equipment Certificates.
1 copy Bills of Lading.
1 copy Manifest (unfreighted).
Also see "Radio Officer's Report".

PILOTAGE: Compulsory, except for interstate and intrastate vessels whose Masters hold a current Exemption Certificate and vessels not exceeding 35 m. in length.

The Pilot Boarding Ground for Port Phillip lies 3 miles to 5 miles S.W. from the Point Lonsdale Lighthouse. The preferred boarding position, because of the dangerous tidal conditions at Port Phillip Heads, is with the Point Lonsdale Lighthouse bearing 045° at a distance of 3 miles.

At Hastings the preferred boarding ground is 3 miles due South of West Head.

Both Pilot Stations are manned by a Pilot in Charge at all times. A continuous watch is kept on VHF Channels 16, 13 and 12 at Queenscliff. At Hastings, the Pilot Station can be contacted by calling on VHF Channels 16 and 14.

VHF Procedure:

Two hours prior to arrival at the boarding ground, VHF contact should be made on Channel 16 by calling "Port Phillip Sea Pilots". Please give position, course and speed; and ETA at Pilot Boarding Ground.

Following the initial contact a listening watch should then be kept on VHF Channel 12 for vessels bound for Port Phillip or Channel 14 for vessels bound for Hastings.

The pilot launch will make contact when abeam of Point Lonsdale or West Head outward bound to give final boarding directions.

Tides at Port Phillip Heads: (See Cautionary Notice on Charts AUS. 143 & 158.)

In the entrance the tidal stream runs at its strongest at times of High and Low Water, and the ebb stream may at times exceed 9 knots. You will be required to be in a position WESTWARD of the tidal stream in the fairway when embarking a Pilot.

Low powered vessels and vessels of over 10.5 m. draft should indicate such condition in their first telegram/telex, as the time of their passage through the Port Phillip entrance may be governed by the tidal stream.

Requirements for Embarkation of Pilots:

1. Make a *good lee* for the pilot launch with the wind and sea well abaft the beam on the weather side, and a speed of about 7 knots.
2. The pilot ladder constructed and rigged in accordance with I.M.O. requirements and IMPA Recommendations. The ladder should be clean, properly fitted with spreaders, well clear of all discharges and outlets, and all outboard fittings which might foul the pilot launch. The bottom of the ladder should be 1.5 m. or 5 ft. above the water. The distance from the waterline to the point of access must not exceed 9 m.
3. Two clean *manila* manropes of not less than 24 mm. dia. and not more than 32 mm. dia. are to be securely made fast to the ship, and *must not* be made fast to the ladder at any point. The manropes must not be longer than the ladder.
4. Where the ladder is rigged over a bulwark, *two* stanchions are to be securely fitted in the top of the bulwark, one on each side of the ladder, and steps are to be provided from the top of the ladder to the deck.
5. A heaving line is to be provided for mail and the Pilot's bag.
6. By night a bright light is to be provided, shaded to show *downwards and forward* to clearly illuminate the ladder and the ship's side.
7. Tripping lines and boat ropes are *not* to be used.
8. An officer should be in attendance at the ladder, with life-saving appliances ready for immediate use.
9. An approved pilot hoist may be used if permission is obtained from the Port Phillip Sea Pilot Service.

Masters are urged to have all gear kept in first class condition, to have it inspected regularly, and to ensure always that the ladder and manropes are securely made fast. Serious accidents have occurred through inattention to these matters.

Should the gear and the manner in which it is rigged not be satisfactory, pilotage services may be withheld.

Vessel's ETA: MOST IMPORTANT – For effective use of Pilots, it is essential that the Master of a vessel requiring a Pilot for either Port Phillip or Hastings, advises the Pilot Office – Port Phillip Sea Pilot Service, P.O. Box 150, North Melbourne, Victoria 3051, Australia. Tel: (03) 9329 9700. Fax: (03) 9326 6052. Telex: AA 36920. Contact: Captain C. Griffiths.

ETA advice to be sent 48 hours, 24 hours and 4 hours prior to arrival. Information required includes port of departure, draft on arrival, ETA and request pratique. Changes in the ETA of more than 1 hour should be amended immediately, and the final ETA confirmed 4 hours before arrival.

ANCHORAGE: *Quarantine Anchorage:* If, from Quarantine Regulations, Southerly gales, or other causes, it is necessary to anchor off the old Quarantine Station, a vessel drawing more than 6 m. should anchor to the Northward of the light, Fl. WG. 3 secs. adjacent to the red brick chimney 24 m. high, with the light bearing 195°; 3 to 6 cables off-shore, in depths of from 11 m. to 15 m. and at night in the white sector of the light visible from 126° through South to 199°, preferably with the light bearing 195° and Port Lonsdale Light bearing 280°.

Queenscliff Anchorage: In anchoring off Queenscliff, care should be taken to keep clear of West Channel Fairway by bringing up as near as possible to N.W. side of channel. A good berth in a depth of 12 m. and in red sector of low light, may be obtained with High Lighthouse bearing 284° distant 0.5 miles, and fixed green light at Queenscliff Pier Head bearing 326°.

Vessels awaiting berths in the Port of Melbourne are normally directed to anchor at Pilot's discretion South of Gellibrand Light and clear of the Melbourne Ship Channel. Depth varies from 11.0 m. to 15.0 m.

Tank Cleaning: The Victorian Channels Authority, the responsible authority for the waters of Port Phillip Bay, has issued a circular which requires all Masters to notify the Authority if they intend to anchor in the waters of Port Phillip for the purpose of cleaning tanks, gas freeing, cooling down or repairs.

MAX. SIZE: In the Port of Melbourne, draft and length limitations for navigation of vessels are determined by the Port Phillip Sea Pilot Service, and these divisions are outside the jurisdiction of the Victorian Channels Authority.

Note: Port Phillip Bay South Channel depth restricts draft to 11.3 m. at all times, or up to 11.9 m. with tide. Vessels that do not comply with these requirements may be berthed after consultation with the Victorian Channels Authority/Port Phillip Sea Pilot Service.

Maintained Depths and Maximum Ship's Draft and Length Specifications: (All dimensions in metres).

Berth	*Maintained Depth*		*Length and Draft Limits*		*Remarks* *MPC = Melbourne Port Corp.* *VCA = Victorian Channels Authority*
	Channel (m.)	*Berth* (m.)	*Max. length* (m.)	*Max. Draft C.D. SG 1.025* (m.)	
Swanson Dock	13.1	13.1	290	11.9	
Appleton Dock	12.0	10.7*	250	10.7	* Depth extends out from the berth for 9 m., then increases to channel depth. "F" Appleton may require head-in berthing.
Victoria Dock 2/3/4	11.0	10.3	215	9.7	
5	9.4	9.4	210	8.8	
8	9.4	9.4	135	8.8	
16/17	11.0	11.0	215	10.4	
22/24	11.0	9.4	215	8.8	
North Wharf 9	8.5	8.5	100	7.9	
South Wharf 19	8.5	8.5	185 215	7.9 7.7	May be required to berth head in if 21 SW is occupied.
21	9.4	9.4	215	8.8	
25/26	11.0	11.0	215	10.4	
27-29	12.0	9.4	215	8.8	
31	13.1	9.4	215	8.8	
33	13.1	13.1		10.5	Temporary restrictions. Consult PMC before arranging visit.
Maribyrnong 1	10.0	10.0	180	9.4	Head-in if over 90 m. If beam over 25 m., 5 Yarraville must be clear. At night, if beam is over 18 m., tugs require 5 Yarraville to be clear.
Yarraville 1	10.0	7.1	180	0.5	Head-in if over 90 m. Certain vessels require 1 Maribyrnong and 5 Yarraville to be clear.
5	10.0	9.4	180	8.8	
6	10.2	10.2	190	9.6	Upstream 190 m. of berth only.
	9.8	9.8	190+	9.2	Contact the VCA for vessels over 190 m.
Holden Dock	13.1	13.1	185	11.9	Head-out only.
Gellibrand Pier	11.2	11.8	240	10.6	Head-out only.
	11.2	10.6	290 250*	10.0	* Vessels over 250 m. in length may berth during daylight only, but may be permitted to sail at night, subject to weather conditions.
Breakwater Pier	11.2	11.2	215 230*	10.6 7.6	* Vessels up to 230 m. length can berth in daylight only with max. draft of 7.6 m.
Webb Dock 1	7.0	7.0	140	6.4	Disused.
2	7.0	7.0	140	6.4	
3	10.0	10.0	185	9.4	
4/5	12.5	12.5	250	11.9	
Station Pier OW/OE/IE	10.6	10.9	305	10.0	
IW	10.3	10.3	305	9.7	

Notes: Vessels that do not comply with these requirements may berth only subject to approval from the Harbour Master.

An under-keel clearance of 0.6 m. is required when navigating in the Port of Melbourne, and maximum drafts at berths have been compiled on this basis. However, vessels over 183 m. require 10% of draft under-keel clearance when navigating in the port.

The clearance under West Gate Bridge is 50.8 m. from Australian Chart Datum (zero on tide gauge).

All movements are subject to weather conditions.

Port Philip South Channel depth restricts draft to 11.6 m. at all times, or up to 11.9 m. with tide whilst maintaining 10% under-keel clearance.

Any enquiries to be addressed through the Duty Port Superintendent.

RESTRICTIONS: *Depths in Approach Channels:*

	Depth (m.)
South Channel (Port Phillip Bay South Channel depth restricts draft to 11.3 m. at all times, or up to 11.9 m. with tide.)	12.5
West Channel	5.0
Fawkner Beacon to No. 11 Beacon	13.1
No. 70 Beacon to Port Melbourne	10.6
No. 11 Beacon to No. 23 Beacon	13.1
No. 21 Beacon to Webb Dock	12.5
No. 23 Beacon to Swanson Dock	13.1
Appleton Dock	12.0 – 10.7
No. 24 Victoria Dock to Victoria Dock Entrance	11.0
Victoria Dock Entrance	11.0
Victoria Dock Entrance to and including No. 21 South Wharf	9.4
No. 21 South Wharf to No. 15 South Wharf	8.5
Holden Basin to No. 1 Maribyrnong	10.3 – 10.0

The nature of the bottom in the approach channels to Port Melbourne, and in the River Yarra, is clay.

Swinging Basins	*Diameter* (m.)	*Depth* (m.)
Victoria Dock (Outside)	274	11.0 – 9.7
Victoria Dock (Inside)	350	11.0
Appleton Dock	366	12.0
Swanson Dock	329	13.1
Holden	305	13.1 – 10.3
Port Melbourne	490	10.9
Gellibrand Pier	396	13.1 – 11.2
Webb Dock	390	13.1 – 11.2
Channel Junction (Port Melbourne and Williamstown Channel)	420	

BRIDGES: Clearance under Westgate Bridge is 50.8 m. at LW. (See "Max. Size").

Power Cables: Two overhead power cables cross the river, one with 61 m. (200 ft.) head-room at Yarraville and one with 56 m. (183 ft.) head-room at the entrance to Victoria Dock.

HEALTH: All overseas vessels at first port of entry to Australia or at any subsequent ports, subject to quarantine until pratique granted or until vessel released from quarantine. If examinations and inspections satisfactory vessel granted pratique for all Australian ports. A list of names and addresses of passengers also required at first port of entry. 24 hours quarantine clearance of overseas vessels available. Treatment of Crew members for illnesses other than quarantineable diseases arranged by private practitioners through ship's Agent.

Radio Pratique: Concession of Radio Pratique is available to all vessels except those which carry stock animals. Following requirements to be met in the case of a vessel requiring Radio Pratique or permission to berth.

(a) (1) The Master of the vessel or his Agent must make a request (using Form Q2) to the Department of Health within the period of 24 hours prior to the arrival of vessel giving answers to all questions on the form.

(2) If the answers given are satisfactory Radio Pratique will be given for Melbourne from a specified time and date enabling the vessel to proceed to the berth without displaying the quarantine signal.

(3) A Quarantine Officer will board the vessel at the berth, if the answers given on the Declaration of the Health (Q360) are found to be satisfactory pratique may then be granted for all Australian ports.

(b) Notwithstanding that pratique for all ports may have been granted, Master will still be responsible for reporting any case of infectious disease which may subsequently occur whilst vessel is in Australian waters.

Should a case of infectious disease (not being a quarantineable disease) occur on board whilst vessel is at sea in Australian waters, Master will be required to advise by radio Commonwealth Regional Director of Health for State in which next port situated, who will arrange for a Quarantine Officer to see case on arrival, Master will not be required to fill in a Supplementary Health Form and vessel will be permitted to proceed direct to berth without flying "Q" flag.

Should a case of suspected quarantineable disease occur on board whilst at sea in Australian waters, Master is required to radio details to the Commonwealth Regional Director of Health for State in which next port situated and await instructions. Commonwealth Regional Director of Health will decide according to circumstances whether to inspect vessels outside Quarantine Line or permit it to proceed to berth and will advise Master.

(c) Should it come to notice in any particular case that Radio Pratique has been granted as a result of a wireless message sent in accordance with sub-paragraph (a) whereas in fact wireless message contains false information, matter will be investigated thoroughly and reported to the Director-General of Health who will decide whether radio pratique will be denied in future to vessel on which Master and the ship's surgeon hold responsibility.

RADIO: Melbourne Radio VIM.

A Shipping Control Centre referred to as "Harbour Control Melbourne" is established on the southern side of Victoria Dock entrance. It is a two storied structure supported on a rectangular tower with an overall height of 39.6 m.

Movement of traffic within the Port of Melbourne is controlled from Harbour Control who direct all shipping movements in and out of the port, and co-ordinate all ancillary services connected with shipping movements on a 24 hour basis.

The radio call sign is "Harbour Control Melbourne", and the following frequencies and Channels are available continuously:

156.3 MHz	Channel 6	Intership operations.
156.4 MHz	Channel 8	Pilot and tugs.
156.6 MHz	Channel 12	Port Phillip working channel.
156.650 MHz	Channel 13	Pilot and tugs.
156.8 MHz	Channel 16	Calling and distress.
156.375 MHz	Channel 67	Calling and distress.

All vessels fitted with VHF radio shall, when navigating or at anchor within the Port of Melbourne, keep a continuous listening watch on Channel 12.

When approaching the Port of Melbourne, radio communication is made with Harbour Control initially on Channel 12 and then on a Channel as directed for berthing instructions and information regarding the movement of other vessels. Vessels entering the port shall not pass Fawkner Beacon, Charles Grimes Bridge or Shepherd Bridge without permission from Harbour Control Centre. This shall not apply to vessels less than 20 m. in length except when such vessel is towing or licensed to carry passengers.

A vessel anchored or berthed in the Port shall not leave its anchorage or berth without permission from Harbour Control and acts during the currency of the permission which shall be 15 minutes. This shall not apply to vessels less than 20 m. in length except when such vessel is towing or licensed to carry passengers.

Vessels proceeding inwards are to report their positions to Harbour Control where applicable when passing Fawkner Beacon, Breakwater Pier and Westgate Bridge.

Vessels proceeding outwards are to report their positions to Harbour Control where applicable when passing Westgate Bridge, Breakwater Pier and Fawkner Beacon. If vessels are departing from Webb Dock or Port Melbourne they are also to report when leaving berth.

The following procedure is followed in respect to the navigation of vessels in the vicinity of Webb Dock and is given for guidance.

1. If inward-bound river traffic has not reached No. 12 Beacon by the time a vessel is ready to depart from Webb Dock, the inward-bound vessel will generally be directed to wait until the departing vessel has cleared Webb Dock and is able to cross to the correct side of the channel. (In practice this takes about 5 minutes).
2. It is incumbent on a vessel not to depart from Webb Dock unless there is sufficient time for the vessel to cross to the correct side of the Channel without hindering any vessel which may be navigating between the Williamstown Breakwater and the River Entrance.
3. Permission to depart from Webb Dock will usually be given if:
   - (a) Inward bound traffic has not passed No. 12 Beacon.
   - (b) Outward bound river traffic has not passed Westgate Bridge.

Permission to depart does not relieve the vessel departing from Webb Dock of its responsibility under paragraph 2.

A Precautionary Area off Point Gellibrand, comprises an area within defined limits where ships must navigate with particular caution and within which the direction of traffic flow is recommended as follows:

Caution:

(a) When entering, transiting and leaving the Precautionary Area, vessels at all times should keep to Eastward when inward bound and to Westward when outward bound.

(b) Any inward bound vessel shall not hinder:

- (i) Any vessel using the Port Melbourne or Williamstown Channels.
- (ii) Any vessel which is outward bound which is within or which is about to enter the Precautionary Area.

(c) It is essential for vessel navigating within the Port to maintain radio contact with Harbour Control and directly with one another.

Vessels when inward bound may use the area to the East of the Port Melbourne Channel. Yachts and other pleasure craft should keep to the East of the Port Melbourne Channel as far as possible and avoid at all times hindering the movement of larger vessels, particularly those constrained by size and draft to the shipping channels.

Notification of Dangerous Goods: At least 48 hours prior notice must be advised by the ship's agent to the Environmental Services Section by Fax - (61 3) 9629 8656.

VTS: Operates on VHF Channel 12.

RADAR: A radar based automated ship monitoring system provides coverage over the whole of Port Phillip Bay, upto Point Henry on the Western side of the Bay, and seaward of Point Lonsdale over a 20 mile radius.

Harbour Control Tower: The central site of operations, provides advisory navigational information on request, and covers the approaches to Melbourne.

Point Lonsdale Signal Station is a secondary operations site and covers areas from Port Phillip Heads to Hovel Pile (South Channel) and West Channel Pile (West Channel).

TUGS: 5 tugs (42 – 62 tonnes B.P.) operated by Melbourne Tug Services. Tel: (03) 9646 0322. Fax: (03) 9646 0217. Tugs attend for inward-bound vessels at or in vicinity of Gellibrand Light for vessels proceeding either up river or to Port Melbourne berths. On departure and should vessels require attendance down river, service terminated in vicinity of river entrance. Tugs present for service at any point required by Owner or Agent. Ships lines, or tug lines at a charge. Crews of tugs will not accept wire tow line. Wire tow line with rope end of 5 or 6 fathoms acceptable, rope section being available for tugs towing hook.

BERTHING:

Yarra River – North Bank

Berth No.	Depth of Water (m.)	Length of Berth (m.)	Miscellaneous Information
9	8.5	128	Out of Commission

Appleton Dock

Berth No.	Depth of Water (m.)	Length of Berth (m.)	Miscellaneous Information
B	10.7	192	These berths are enclosed in a security compound and are used mainly for container, Ro/Ro, quarter ramp and unit loads. 1×55 ton luffing crane at B and C and 1×30 ton luffing crane at D.
C	10.7	190	
D	10.7	254	
E	10.7	144	Berths used for dry bulk cargoes, scrap metal, etc.
F	10.7	200	

Wharf decking at all berths is 3.7 m. above ACD.

River Yarra – South Bank

Berth No.	Depth of Water (m.)	Length of Berth (m.)	Miscellaneous Information
12	6.0	117	Out of commission.
13	6.0	152	Out of commission.
14	4.6	105	Out of commission.
15/16	8.5	345	Small craft only.
17/18	8.5	251	Berths No. 17-19 used as import vehicle compound. Enclosed in a security compound, with a storage area of 4 ha. behind the berths.
19	8.5	190	
21	9.4	243	General Cargo

Note: Berths No. 12-21 will be unavailable to commercial shipping after 1st March 1997 due to erection of new City Link Bridge.

Berth No.	Depth of Water (m.)	Length of Berth (m.)	Miscellaneous Information
25/26	11.0	283	Bulk cement products.
27	9.4	146	Out of commission.
28	9.4	146	
29	9.4	147	
30	9.4	183	Tug berth.
31	9.4	183	Out of commission.
32	9.4	253	Out of commission.
33	13.1	280	Bulk cement products.

Height of wharf decking above ACD:

Nos. 12 – 16	3.5 m.
Nos. 17 – 19	2.7 m.
Nos. 21 – 31	3.5 m.
No. 32	3.0 m.
No. 33	2.8 m.

Victoria Dock

Berth No.	Depth of Water (m.)	Length of Berth (m.)	Miscellaneous Information
2	10.3	165	Common user multi-purpose berths.
3	10.3	158	
4	10.3	194	
5	8.5	255	90 ton Floating Ramp, Container
6	8.5	165	Unit Load Terminal for Tasmania Service operated by Brambles Shipping. 2 berths, 2 ramps. Security compound.
8	8.5	186	Small craft only.
9	9.4	164	Fishing vessels.
10	9.4	161	Fishing vessels.
11	9.4	55	Out of commission.
14	9.4	180	Closed to commercial shipping.
15	9.4	135	Closed to commercial shipping.
16	11.0	197	Common user multi-purpose berth.
17	11.0	197	Common user multi-purpose berth.
19	9.4		Small craft only.
20	9.4		Small craft only.
21	9.4		Small craft only.
22	9.4	261	General cargo and motor cars.
24	9.4	256	General cargo and motor cars.

Note: Berths No. 2-21 will be unavailable to commercial shipping after 1st March 1997 due to erection of new City Link Bridge.

SPECIALISED CARGO HANDLING FACILITIES:

Port Melbourne

Berth No.	Locality	Depth of Water (m.)	Length of Berth (m.)	Miscellaneous Information
O.E.	Station Pier	10.9	223	Principal Overseas
O.W.	Station Pier	10.9	210	Passenger Terminal.
I.E.	Station Pier	10.9	220	Tasmanian passenger/ vehicle ferry.
I.W.	Station Pier	10.3	220	Out of commission.

Webb Dock

Berth No.	Depth of Water (m.)	Length of Berth (m.)	Miscellaneous Information
1	7.0	137	Out of commission.
2	7.0	140	Ro/Ro loading, Container and Unit cargo facilities for Tasmanian Service, operated by ANL.
3	10.0	183	Ro-Ro berth operated by Patrick.
4/5	12.5	540	Two single lift container cranes, capacity 35 tonnes, and 1 single lift container crane. Operated by Patrick.

The wharf decking is 3.0 m. above ACD at Berths No. 2, 3, 4 and 5, and 2.9 m. at Berth No. 1.

Swanson Dock

Berth No.	Depth of Water (m.)	Length of Berth (m.)	Miscellaneous Information
1 W.	13.1	942	Container Terminal operated by Conaust Ltd. 5 single lift portainer cranes, capacity 65 tons.
2 W.	13.1		
3 W.	13.1		
4 W.	13.1		

Berth No.	Depth of Water (m.)	Length of Berth (m.)	Miscellaneous Information
1 E.	13.1	844	Container Terminal operated by Patrick. Security compound. 4 single lift portainer cranes, capacity 46 tonnes each, 1 post Panamax crane, capacity 40-80 tonnes.
2 E.	13.1		
3 E.	13.1		
4 E.	13.1		

The height of the wharf decking throughout the dock is 2.7 m.

Yarraville Area

Berth No.	Depth of Water (m.)	Length of Berth (m.)	Miscellaneous Information
1	7.1	178	Out of commission.
5	9.4	178	Sugar (Operated by CSR).
6	9.8-10.2	256	Bulk Dry Chemicals (Operated by ICI).
Holden Oil Dock	13.1	200	Petroleum products and crude.

Height of wharf decking above ACD:

No. 1	3.2 m.
No. 5	3.5 m.
No. 6	3.4 m.
Holden Oil Dock	3.0 m.

Maribyrnong River Area

Maribyrnong 1	10.0	178	Bulk Petrochemicals, Molasses and Tallow.

Williamstown Area

West Side Breakwater Pier	11.2	213	L.P. Gas.
East Side Gellibrand Pier	10.6-11.8	289	Crude Oil

See also "Tankers".

STEVEDORES: ETA Advices: Firm ETA, if possible, before noon on previous day to arrival. If not possible no later than 1500 hrs. on day previous to arrival.

TANKERS: (Also see "Anchorage"). Holden Oil Dock at Yarraville suitable for tankers up to 183 m. length. Max. draft 11.9 m. at L.W. Depth alongside 13.1 m. Line sizes from 100 mm. to 400 mm. Marine Loading Arm.

Williamstown: Gellibrand Pier, depth alongside 10.6 m. can accommodate tankers up to 290 m. length. Max. draft 10.0 m. – 10.6 m., depending on length. Discharge via Chicksan arms.

Breakwater Pier, depth alongside 11.2 m. accepting tankers up to 230 m. length. Max. draft 7.6 m. – 10.6 m., depending on length.

Maribyrnong: No. 1 Berth, depth 10.0 m. can accommodate tankers up to 178 m. length. Max. draft 9.4 m. Height of wharf decking 2.9 m. above ACD. Berth is used for Bulk Petrochemicals, Molasses, Lub. Oil and Tallow.

Line sizes: 100 mm. to 250 mm. lines;
100 mm. to 200 mm. hoses.

Ballast: Slop facilities available at Holden Oil Dock and Gellibrand Pier.

Safety Requirements: The Victorian Channels Authority is introducing the following safety requirements for all tankers berthing at Melbourne and Masters of such vessels likely to call at Melbourne should be notified accordingly.

(a) A declaration required from the Tanker Master prior to arrival at Melbourne listing the following information which must be in the hands of the Victorian Channels Authority at least 24 hours prior to the tanker's arrival:
  (i) Is the hull leak free?
  (ii) Is inert gas system fitted and fully operational?
  (iii) Is crude oil washing system fitted and fully operational?
  (iv) Are there any defects to the tanker, machinery or equipment which would affect safe pilotage, berthing, cargo or ballast operations?
  (v) Have stress calculations for the envisaged programme of cargo transfer, ballasting and bunkering been made?
  (vi) Is the hull stress calculated within recommended safety limits?

The following special information is required for liquefied gas tankers:
  (vii) Are all cargo tanks and lines oxygen free?
  (viii) Is reliquefication or boil-off control equipment in good working order?

(b) The following items will be required from the tanker Master immediately upon berthing for stowage in the 'Emergency Document' box:
  (i) A list of the characteristics of the cargo on board and to be handled, and position of stowage.
  (ii) Cargo Transfer Plan, schematic type, 2 copies required. Plan to include times, sequence and rate.
  (iii) Crew List.
  (iv) Tanker's general arrangement plan.

It is recommended that the declaration required from the Tanker Master regarding Section (a), Questions 1-8, be despatched by telex in an abbreviated form to Melbourne Harbour Control, Telex: HBRCON 33437, prior to the vessel berthing in Melbourne. Below is set out a sample telex message:

HBRCON 33437
ATTENTION – PORT OPERATIONS

QUESTIONS I, III, V, VI	Yes
QUESTIONS II, IV	No
QUESTIONS VII, VIII	Not applicable

F BLOGGS
MASTER, M.V. "SEASPRAY"

New Safety Requirements at Tanker Berths: Dated 31st January, 1984.

3.2.3.3. *Emergency Towing Wires:* The Master of a ship having on board dangerous substances shall ensure that immediately after the ship has berthed, wire hawsers of adequate strength to allow the ship to be towed from the Berth are placed over the outboard side at the fore and aft ends of the ship:

1. such wires shall have an eye in the outboard end and be made securely fast to the ship at the inboard end, and shall be tended and adjusted to remain within 1 m., of the water level to meet changes in the draft of the ship;
2. in order that sufficient wire can pay out to enable the tugs to tow effectively, 55 m. of slack wire or such other lengths as required by the Port Authority shall be retained between bollard and fairlead; and
3. to prevent the slack wire from running out, it shall be stopped by rope yarn or other easily broken means.

Access Between Tanker Terminal and Ship:

The Master shall provide safe access to the ship by means of a properly rigged Gangway. Where practicable the gangway shall:

1. be adjacent to the ship's accommodation; and
2. be clear of cargo hoses and the ship and shore cargo manifolds.

Where a fire or explosion in the shore cargo manifold area could block the escape route of persons from the ship, the Master shall ensure that:

1. the outboard accommodation ladder is turned out and rigged ready for immediate lowering; and
2. the outboard lifeboat is lowered to the embarkation deck and kept ready for immediate launching.

Moorings:

The Master shall ensure that any mooring wire used to secure the ship is fitted with a rope pennant unless:

1. the mooring wire is secured on the Berth with a quick release device, or
2. permission to use mooring wires without pennants has been given by the PA.

Anchors Ready for Letting Go:

The Master shall ensure that immediately after the ship is secured at the berth an anchor is walked back clear of the hawse and is kept ready for letting go.

Operation of Sea and Overboard Discharge Valves:

Except where the PA otherwise permits, the Master of ship handling liquid bulk dangerous substances or oils shall ensure that all sea and overboard discharge valves connected to cargo or ballast pumps are kept closed.

Any valve required to be closed by the above shall be secured by lashing or, in the case of remotely operated valve, by a suitable means or marking to prevent the accidental operation of the valve.

Radio Procedures:

The Master of a ship having on board liquid flammable bulk dangerous substances shall ensure that, whilst the ship is at a berth, the main radio transmitting aerials are earthed.

The Master of ship having on board liquid flammable bulk dangerous substances shall ensure that, prior to the ship's radar or radio equipment being serviced:

1. Permission is obtained from the Melbourne Port Corporation via Victorian Channels Authority, and
2. Any conditions imposed by the Port Authorities are observed.

MEDICAL: No advance notice necessary for medical attention required on vessel's arrival. All hospital facilities available. No inoculations required for vessels coming to Australia but Master should possess International Health Cards for each member of crew.

DENSITY: 1000 – 1019.

FRESH WATER: Water available at wharf face at 30 m. intervals. Rate 50–100 t.p.h.

FUEL: 24 hours notice required. All grades 1–1500 secs. Marine Diesel. Light Marine Diesel. Gas Oil 34 sec. Red No. 100F. Bunker Fuel 600 sec. Red No. 100F. Light Diesel 37 sec. Red No. 100F.

At Gellibrand and Breakwater Piers. Minimum notice 48 hours; prefer notice 4 to 5 days.

Tanker fuel oil 450 SSF at 122°F. Volume – unlimited if 4 to 5 days' notice given.

Suppliers: Shell, B.P. and Mobil.

FIRE PRECAUTIONS: Copy of "Anti-Pollution Notice" is handed to Master of tankers on arrival.

Anti-Pollution Notice: Your attention is drawn to the comprehensive legislation in force to prevent pollution of any sort in the Port of Melbourne. Visual checks are made on all ships and on an offence being detected immediate prosecution may follow.

You are warned that the polluting by oil is an indictable offence entailing a fine of up to $50,000 *plus* costs of cleaning and damage to the environment.

Due to the poor natural flushing of Port Philip and Hobson's Bays any pollutants discharged into these Bays tend to have a long lasting effect and can cause serious environmental damage.

All Scuppers and overside deck openings shall be securely plugged or blocked during the handling of any dangerous goods or oil or ballast water.

Discharge of oily ballast water or bilges is not permitted within the Port of Melbourne. Permission of the Harbour Master must be obtained prior to taking in or discharging any ballast including water ballast.

Tank washings must not be discharged overside in the Port of Melbourne.

Sewage holding tanks must not be pumped out in the Port of Melbourne. While a vessel is lying alongside any wharf, all discharge outlets shall be properly screened or protected to ensure that discharges shall not fall upon the wharf.

Garbage and refuse must not be dumped overside but must be kept for disposal ashore as directed by the Port Authority or kept on board.

Immediate notification shall be given to Harbour Control in the event of any spillage of oil into Port waters.

REPAIRS/DRY DOCKS: Marine repairs of any description can be carried out. There is one graving dock at Williamstown – Length at floor 139.9 m. Depth on sill at ACD 7.26 m. Breadth at keel block level 19 m.

CONSULS: The following countries are represented by consuls in Melbourne:
Austria, Barbados, Belgium, Chile, China, Colombia, Croatia, Czech Republic, Denmark, Dominican Republic, Ecuador, Egypt, El Salvador, Finland, France, Germany, Greece, Honduras, Hungary, Iceland, India, Indonesia, Italy, Japan, Latvia, Lebanon, Liberia, Malaysia, Malta, Mauritius, Mexico, Monaco, Nauru, Nepal, Netherlands, New Zealand, Nicaragua, Norway, Pakistan, Peru, Philippines, Poland, Portugal, San Marino, Spain, Sri Lanka, Sweden, Switzerland, Syria, Taiwan, Thailand, Tunisia, Turkey, Ukraine, United Kingdom, U.S.A., Vanuatu.

SURVEYORS: Germanischer Lloyd: R.L.Wright & Associates Pty.Ltd., 16/285 Carlisle Street, Balaclava, Melbourne (P.O.Box 29). Tel: (03) 5272544. Fax: (03) 5271544.

Most Classification societies represented locally.

OPENING/CLOSING HATCHES: Normally carried out by Stevedores. Ship's crew may if required by vessel to do so. Crew may close hatches prior to sailing; but if Stevedores instructed to do so, they then claim right to finish, unless ship sails before completion of work.

CERTIFICATES: Register – showing vessel's name, port of registry, gross and nett tonnages and Owner. Loadline Certificate which must be current. Safety Radio Certificate. Safety Equipment Certificate. Light Dues Receipt, Ship's Articles (British), Clearance from previous port.

CUSTOMS ALLOWANCES: 200 cigarettes in an opened carton *or* 0.5 lb. cigars *or* 0.5 lb. tobacco. 1 bottle spirits (opened).

CARGO GEAR: This must comply with Australian Regulations, as issued by the Australian Maritime Safety Authority.

When working cargo with ship's gear, certificates should be available to attest to identification and good condition of all such gear. If vessel on first visit to Australia and certificates not available, a declaration by Master will be accepted provided gear in order. On subsequent visits certificates and identification of each item of gear must be readily produced.

REPATRIATION: All facilities available for effecting crew changes and repatriation – namely sea, air and rail.

AIRPORT: Melbourne International Airport 21 km. from the port.

HOLIDAYS: Sunday, Christmas Day, Good Friday, Labour Day, Picnic Day, Anzac Day: with exception of Sunday are regarded as "close holidays" and waterside workers cannot be required to work on these days. Only work of special nature performed on these days by agreement.

Following ordinary holidays observed: Boxing Day, New Year's Day, Australia Day, Easter Monday, Queen's Birthday, Melbourne Cup Day.

On Boxing Day and New Year's Day, waterside workers will work on following classes of vessels only, namely:
(a) Passenger ships to sail on schedule.
(b) Ships to finish and sail before next pick-up of labour.
(c) Ships which in opinion of local Board of Reference, should be declared "Urgent Vessels".
(d) Marine casualties.

On remaining ordinary holidays work performed if required by an employer. Work performed on holidays subject premium rates of pay.

POLICE/AMBULANCE/FIRE: Fire, Ambulance, Security – Port Emergency – Tel. 9614-2861 or, by VHF Radio Channel 12 "Melbourne Port Emergency".

TELEPHONES: Telephone can be placed aboard at all berths. Trunk calls cannot be made from shipboard telephones.

SERVICES: Tank cleaning and compass adjusters available.

SHORE LEAVE: Crew allowed ashore. No passport required while ashore.

IDENTITY CARDS: Not required to be carried by crew going ashore in Australia. However, Section 23 of the Migration Act 1958/1964 provides that Masters of vessels entering Australia from overseas shall have in their possession an identity card in an approved form for each member of crew. These provisions included in the Act to ensure positive identification available to departmental officers should any Seaman, not being an Australian citizen, desert vessel. Should vessel arrive in Australia without required Seamen's Identification Cards, seamen are unable to go ashore until photographer called to vessel in order to photograph each crew member, and identification cards completed.

Following nationalities need not complete identification card required under Migration Act provided Crew members in possession of relevant Seamen's Identity certificates/discharge book; Canada, Denmark, Fiji, Ghana, Hong Kong, India, Israel, Italy, Japan, Malaysia, Norway, South Africa, South Korea, Pakistan, United Kingdom.

Masters of vessels, Australians and New Zealanders are not required to have such an Identification Card.

Masters are reminded that Crew members' travel documents and Commonwealth of Australian Forms M.315, where applicable, are to be retained in the custody of the Master at all times, and are to be produced to Customs Boarding Officers upon demand.

GARBAGE DISPOSAL: Melbourne Port Services Pty.Ltd. provides collection service 6 days a week (Sunday excluded). No drums or skips are provided unless by special request. Cost A$114.00 per day plus A$6.50 per person on board. Maximum charge A$3,240 per day. Collection is arranged through quarantine officer when ship first berths unless Master applies for, and receives, an exemption from collection.

WASTE OIL DISPOSAL: Collection only available by private contractors arranged through ship's agent. Discharge of waste oil to road tankers is available at all berths, depending on wheel loads. Costs depend on type and quantity of waste oil to be disposed of.

SEAMAN'S CLUBS: Missions to Seamen, 717 Flinders Street, Melbourne, Victoria. Tel: (03) 9629 7083.

Stella Maris Seafarer's Centre, 600 Little Collins Street, Melbourne, Victoria. Tel: (03) 9629 7494. Services available: Church services, outings, dances, bus service to and from vessel, shops, bars, games (billiards, darts, table tennis, etc.), videos, postage and telephone facilities, counselling and support services, cleaning facilities.

CURRENCY: Local currency is Australian Dollar. Any amount over A$5,000 cash must be declared to Australian Customs. No restrictions on amounts less than A$5,000 or travellers cheques.

GENERAL:
Publications:
Australia Pilot Vol. II.
Sailing Directions for Victoria.
Port Handbook.
Charts: AUS. 154, AUS. 155, AUS. 143, AUS. 158.
List of Lights N.P. Vol. "K".
Australian National Tide Tables AHP 11.

Tidal Data:
Mean Higher High Water 0.84 m.
Mean Lower High Water 0.80 m. (Williamstown).

Port Authority: On 1st March 1996 the Port of Melbourne Authority, by an Act of Parliament, was divided into 2 distinct operating organisations:
Victorian Channels Authority
Melbourne Port Corporation

The Victorian Channels Authority is responsible for commercial shipping operating in the port waters from Port Phillip Heads until docked at the allocated berth within the port boundaries. This responsibility includes channel maintenance, harbour control, berth allocation and navigation aids.

The Melbourne Port Corporation is responsible for all land based functions within the port boundaries, this includes wharves, common user storage areas and services to shipping. Services to shipping within the port are provided by a subsidiary company of the Melbourne Port Corporation – Melbourne Port Services Pty. Ltd. The responsibilities of this subsidiary include mooring/unmooring, garbage collection, berth and facility maintenance, dredging, security/fire watch, hazardous materials inspections, etc.

RADIO OFFICER'S REPORT: September 1990.

Melbourne was the first port in Australia.

Documents: Customs and Port Health Authorities will board the ship. All Australian forms needed, IMO Crew List is accepted.
4 copies Crew List.
4 copies Form M & S 11.
1 copy Ship's Stores consumed (Part 1 only), only drugs to be declared, no Ship's Stores List required.
1 copy List of Crew's Possessions (showing value, type, make, serial number).
4 copies Ports of Call.
1 copy Animal Cargo ("Nil" return not required).
1 copy Ship's Pets ("Nil" return required).
2 copies Shipmaster's Bond (required only if any ship's pets).
2 copies Health Report.

All ship's certificates, including Australian Light Dues Certificates and Australian Identification Cards for crew are required.

Customs Allowances: 1 bottle of liquor (opened and not exceeding 750 ml.), 200 cigarettes or 225 gm. tobacco.

AUTHORITY: Melbourne Port Corporation, 5th Floor, Building D, World Trade Centre (corner of Flinders Street and Spencer Street), Melbourne. Postal Address: P.O.Box 4721, Melbourne, 3001, Victoria. *Tel:* (03) 9611-1777. *Telex:* 34211. *FAX:* (03) 9611-1905. *Cables:* "Harbor, Melbourne". *Contact:* K. Shea, Chief Executive Officer. B. Barker, Manager Operations.

Victorian Channels Authority, 6th Floor, 99 King Street, Melbourne, Victoria 3000, Australia. (Postal Address: P.O. Box 205D, Melbourne, Victoria 3001, Australia). *Tel:* (03) 9612-3512. *FAX:* (03) 9612-3599. *Telex:* 34211 Harbor AA. *Contact:* Captain I. Edwards, Chief Executive Officer. Captain T. Muir, Manager Marine Services/Harbour Master.

Also see "General – Port Authority".

AGENT: Patrick Sleigh Shipping Agencies Pty. Ltd. G.P.O.Box 4329, 7th Floor, 474-482 Flinders Street, Melbourne, Victoria 3000. Tel: (03) 9613 1300. Telex: 31293 PATSLE. Fax: (03) 9629 3234. Seagram Code: 3MPATSLE.

MOURILYAN, Queensland: 17.36 S. 146.08 E.

(See Plan)

PORT LIMITS: Mourilyan Harbour, the area to the West of a line joining Hall Point and the outer extremity of the North Head.

ARRIVAL: Requirement for vessels in ballast; minimum forward draft to be 2% of overall length, minimum after draft – propeller immersed. Draft to be notified to Agent in arrival telegram.

CERTIFICATES/DOCUMENTS/CUSTOMS ALLOWANCES:
See "Melbourne".

PILOTAGE: Order Pilot through Agent, as early as possible. Confirm through Agent or direct to Harbour Master, Innisfail. Pilot vessel, located in Mourilyan Harbour, watches on VHF Channel 16 when vessel expected to berth (Channels 12, 8, 14 and 6 available). Pilot vessel white with orange cabin and blue trim. Pilot boards 2 miles East of harbour entrance. Approved pilot ladder and good lee required, *not* accommodation ladder. Vessels awaiting Pilot anchor in boarding position above, good holding. Leading beacons – in line 270° T, showing fixed red neon. Entrance beacons flashing – red port, green starboard.

Coastal and Reef Pilotage: Pilotage through the Inner Route of the Great Barrier Reef to Torres Strait and also Grafton Passage is conducted by licensed pilots available from Australian Reef Pilots Ltd. and Queensland Coastal Pilot Service Pty. Ltd. See "Torres Strait" for details.

Masters are advised that pilotage in the Inner Route and at Hydrographers Passage is compulsory. Pilotage in the Great North East Channel is recommended by IMO. See "Torres Strait".

RESTRICTIONS: Berthing takes place for most vessels at or near slack water, day or night. Large vessels berthed during daylight only. On Spring tides, entry restricted to at or near slack water. No turbine-powered vessels accepted. Night-time sailings permitted. Vessels entering or leaving – Forward draft not to be less than 2% of overall length and propeller to be immersed.

MAX. SIZE: LOA 183 m. and beam 30.0 m. or LOA 175 m. and beam 32.2 m.

Draft Arrival: Limited by swing basin, maximum depth 7.1 m. less 0.6 m. keel clearance, all vessels swing and berth port side to main wharf.

Draft Departure: Limited by entrance depth of 8.53 m. less 0.91 m. keel clearance.

HEALTH: See "Pilotage". Also see "Melbourne".

RADIO: VIT Townsville (MF).

TUGS: 2 tugs stationed at Mourilyan. Tug usually required for unberthing. Tug normally pushing or using tug's lines, no extra charge.

BERTHING: Ships always berth port side to at Mourilyan. One sugar and molasses berth, length 193 m. depth 10.0 m. LWOST.

BULK HANDLING FACILITIES:

Sugar: Mobile gantry loader. Loading rate 1,500 t.p.h. Storage shed 175,000 tons. Maximum reach from fender face 14.3 m. Maximum operating air draft above L.W.D. 16.2 m.

Molasses: Single pipeline. Loading rate 350 t.p.h. Storage capacity 28,000 tons.

STEVEDORES: No waterside workers employed. Normal ETA advices to Agents for arrangement of bulk-loading staff.

MEDICAL: Hospital facilities available, Port Health Doctor also general practitioner.

DENSITY: Usually 1024 – 1027 irrespective of tide. After heavy rains, particularly January-April, considerable freshening occurs to 1008.

FRESH WATER: Good water readily available, shore hoses from wharf face. Approx. 25 t.p.h. capacity. $1.00 per 1,000 litres.

FUEL: Limited quantities of fuel oil and diesel oil available by road-tanker.

CONSULS: None.

REPAIRS: No major facilities available. Most types of welding, light machinery, and pipe-fitting can be arranged. Technicians can usually be obtained for radar, etc., with advance notice by radio to Agents.

GANGWAY WATCHMEN: Not normally required.

HATCHES: Worked by crew.

CARGO GEAR: See "Melbourne".

REPATRIATION: Possible.

AIRPORT: Nearest airport at Cairns, 110 km. Regular flights available.

TIME: See "General" before first port.

HOLIDAYS: Various national, state and local holidays. Cargo usually worked on all holidays except Christmas Day.

POLICE/FIRE/AMBULANCE: Ring 000 on shore public telephone.

TELEPHONE: No telephone aboard.

SHORE LEAVE: Not normally restricted. Distance to nearest township (Mourilyan) 10 km., to Innisfail 17 km. No public transport services from harbour.

IDENTIFICATION CARDS: See "Melbourne".

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Australian Dollar (A$).

DELAYS: Awaiting daylight or tide or, exceptionally, awaiting vacancy of berth or moderation of weather. No delays usually in loading.

GENERAL: Port normally used only for export of sugar and molasses. Deadweight (cargo on board on arrival) restrictions may apply to certain classes of vessel. Agents will advise details if applicable.

AUTHORITY: Ports Corporation of Queensland, G.P.O.Box 409, Brisbane 4001, Queensland, Australia. *Tel:* (07) 3224-7088. *FAX:* (07) 3224-7234. *Contact:* Chief Executive Officer.

Regional Harbour Master (Cairns): Captain P. Matthews. Tel: (070) 527400. Fax: (070) 351127.

AGENT: See "Cairns".

NEWCASTLE, N.S.W.: 32.55 S. 151.48 E. (See Plan)

PORT LIMITS: To seaward, all waters enclosed by a radius of 3 miles from Nobbys Lighthouse. Vessels are prohibited from anchoring in the following area:

Within the area enclosed by an imaginary line 057° from the green light on the outer extremity of the Northern Breakwater and a line 127° from the red light on the Southern Breakwater to the positions where both these imaginary lines meet the arc of a circle of 3 nautical miles distant with the navigation light of Nobbys Head as its centre.

DOCUMENTS: The Master is required to present the following documents to the Customs Boarding Officer:

2 copies Crew List.
3 copies Passenger List.
1 copy Previous Ports of Call List.
List of Customable Articles owned by or in possession of Master and Crew (Form 5, Part One, Part Two).
Stores List (Form 5, Part Four).
Last Port Clearance.
International Currency Transfer Report (Form 15) (carrying $5,000 or more into or out of Australia).
Shipmaster's Bond (Required if Animals on Board).

The following documents are required for sighting by the Customs Boarding Officer:

Load Line Certificate.
Safety Radio Certificate.
Safety Equipment Certificate.
Safety Construction Certificate.
Oil Pollution Prevention Certifcate.
International Tonnage Certificate.
Australian Commonwealth Receipt for Light Dues and Marine Oil Pollution Levy.
Certificate of Pratique.
Ship's Articles.
Passports/Identity Documents for all crew members.
Also see "Melbourne".

PILOTAGE: Compulsory. As much notice as possible through Maritime Radio, Sydney (VIS), amending 2 hours prior arrival. Amendment through Channel 9 VHF, to Harbour Control. Telegraphic address "Marboard". Pilot vessel painted high-visibility orange, "Pilots" on deck-house in black paint.

Pilot Boarding Ground: Vessels will be advised on VHF Channel 9 by the signal station, but will normally be 3 miles – 5 miles due East from Nobbys Head Light. Pilots board vessels up to 90,000 tonnes deadweight 3 miles off and over 90,000 tonnes 5 miles off. A good lee, speed 3 – 5 knots, no boatrope, ladder to be approximately 3.0 m. above water with manropes.

Slack Water Inward Movements: The Harbour Master has advised that when two inward vessels are programmed on the one tide, the first vessel must present itself 3 miles due East of Nobby's Signal Station within 10 minutes of the due Pilot Boarding time. Failure to meet this requirement, which may result in the second vessel facing lengthy delays, by missing the tide, may prompt the Harbour Master to provide services to the second vessel. Owners should ensure that Masters are aware of this requirement.

Coastal and Reef Pilotage: See "Torres Strait".

ANCHORAGE: No anchorage off the port is recommended for all weathers. However, a fair weather anchorage may be found South of a line 127° from Nobbys Head Light. A good anchor watch should be maintained and main engines should not be dismantled whilst at anchor. Weather conditions may deteriorate in a very short period. During Southerly weather, sea and swell conditions may become confused. Vessels at anchor should weigh and proceed to sea until the weather moderates.

RESTRICTIONS: Entrance Channel dredged to 15.2 m. ISLW – A minimum keel clearance of 10% draft required. Certain berths within port may only be worked during slack water or early ebb tide. Vessels over 250 m. navigate in daylight only (inward).

MAX. SIZE: Max. d.w.t. for bulk cargo vessels dependent on 10% under keel clearance on entry or departure.

Steelworks Channel Facility: Max. length of 300 m., max. beam 47 m., max. draft 15.2 m. plus tide less 1/11th to provide 10% under keel clearance. Depth in loading basin 16.5 m.

E.g. With a tide of 1.2 m., max. draft is 14.92 m. (tidal range this port 0 m. – 2.1 m.).

K.C.L. Loader – Kooragang Island: LOA 300 m., max. beam 50 m. Depth in loading basin 16.5 m.

HEALTH: Refer to "Melbourne".

Newcastle is a first port of entry for quarantine purposes for the coast of New South Wales (See page 266 of Sailing Directions). There are no quarantine anchorages in the Port and vessels proceed directly alongside a berth for quarantine examination. Masters of vessels are to ensure that no persons board or land from their vessel until Free Pratique is granted.

RADIO: All radio messages through Sydney (VIS).

RADAR/VHF: Nobbys Head Signal Station equipped with radar. Max. range 64.0 miles. Contact signal station on VHF. Normal VHF watch held on Channel 9, Channels 6, 8, 72 and 77 also available.

Also see "Sydney-VHF".

TUGS: Tugs usually come alongside shortly after entering breakwater. Tug's lines available for use. 4 tugs, 40-48 tonne bollard pull.

BERTHING: See "Restrictions".

Berth	*Length* (m.)	*Depth at I.S.L.W.* (m.)	*Remarks*
Merewether Street Wharf	200	6.9	Lay-up Berth
Lee Wharf No. 4	140	9.1	Tug berth.
Lee Wharf No. 5	171	9.7	General
No. 1 Throsby	183	11.0	Containers, general
Western Basin No. 1	155	9.1	Lay-up Berth.
No. 3	244	11.6	Grain, 4×1,000 t.p.h. Movable loading heads. Silo 6,200,000 bushels.
No. 4	293	11.6	Continuation of No. 3. General cargo. 30 ton portainer crane also available. Stern ramp at Northern end of berth.
Eastern Basin	367 (wharf)	11.6*	Berth length with dolphins 500 m. *Depth 11.6 m. for 46 m. width. Depth in approaches 13.1 m. Clearance from bottom of chute to I.S.L.W. is 15.2 m. Used for timber imports, general cargo. Proposal for redevelopment compiled.

Berth	*Length* (m.)	*Depth at I.S.L.W.* (m.)	*Remarks*
State Dockyard			
No. 3 Berth	213	7.0	Waiting berth – repairs.
No. 4 Berth	117	8.5	Waiting berth – water, light and power available at both berths.
Dyke Berths			
No. 2	533	12.8	Bulk zinc and lead concentrate. Loading head – 1,200 tonnes per hour.
No. 3	183	7.0	Lay-up berth.
No. 5	565	16.5	Coal loading berths in Steelworks Channel. 3 loading heads, loading rate 2,500 tonnes per hour each.
No. 6	—	—	Coal Transhipment Berth.
Kooragang Island			
No. 2	183	11.6	Cement, fertiliser, phosphate, sulphur. Located 2 miles up river – part of "Kooragang Reclamation Scheme". Bulk discharge and loading. 2 ship unloaders, rate 650 t.p.h. each. One woodchip loading gantry also available with conveyor system to adjacent woodchip stockpile.
No. 3	190	13.5	2×500 t.p.h. vacuum unloaders for alumina and petroleum coke. Dolphins North and South giving total distance of 316 m.
No. 4 and No. 5	620	16.5	Kooragang Coal Loader. 1×10,500 t.p.h. coal loader (8,000 t.p.h. into vessels 180,000 d.w.t.). Coal loading head. Rate 8,000 – 10,500 t.p.h.
KSR		7.0	Kooragang Ship Receival Berth. Coal transhipment berth.

Steelworks Wharves: These wharves consist of a long shore berth situated at the Broken Hill Pty. Co. Ltd., Iron and Steelworks on West side of North harbour Port Waratah and is owned by the Company. Length of wharf is 810 m. Diameter of Swinging Basin is 580 m. with a depth of 12.8 m. at I.S.L.W.

Depths of Water at Berths at I.S.L.W.:

No. 2 Berth	9.6 m.
No. 3 Berth	9.6 m.
No. 4 Berth	7.9 m.
No. 5 Berth	12.8 m.
No. 6 Berth	7.9 m.

Height of decking of wharf I.S.L.W. is 4.5 m.

At the Northern or top end of the wharf, Berth No. 5, the Company discharges their ironstone and limestone direct from ships by means of three powerful travelling grabs. The length of wharf allocated for this discharge of ore is approximately 275 m.

The Company's private railway lines, which are connected with the Government Railways, run direct to the wharf and their steel products are loaded direct from truck, to ship's hold.

Beyond the wharfage accommodation before mentioned, there is a coke berth, Berth No. 6, comprised of dolphins. This berth is 162 m. long × 7.0 m. wide, including the dolphins on which is erected a mechanical coke loading plant for loading direct into vessels' holds. Depth of water available at this berth I.S.L.W. is 7.9 m.

A liquid pitch loading system is also located at Berth No. 6.

The channel leading to the Steelworks Wharves is 12.8 m. I.S.L.W. Facilities at Wharves: Water, telephones and shore power are available at most wharves in the Port. A Port Corporation Patrol Officer meets all vessels berthing.

BULK HANDLING FACILITIES: See "Berthing".

Notice: Issued by Newcastle Port Corporation.

Air Draft at Dyke Berths No. 4 and 5: The max. permissible air draft of vessels loading at Dyke Wharves No. 4 and 5 is 18.5 m. This is the distance of the hatch covers above chart datum, and not the distance between the hatch covers and the water level. This fact should be brought to the Master's attention. The air draft at Kooragang No. 4 (Kooragang Coal Loader) is 21.0 m.

To assist the Master or Cargo Officer, a mark has been placed on the shiploaders indicating when the limit is being approached so that action can be taken by the ship to ensure that the limit is not passed.

Trimming Procedures: As laid down in "Coal Vessels – Working Code – N.S.W. Ports", a copy of which is in the hands of all Agents and Shippers, attention is drawn to Clause 4:

"On arrival at the loading berth, the vessel's Master or Cargo Officer shall nominate the hatches required for trimming purposes to attain the vessel's final draft and no more than 2 hatches shall be designated for this purpose. No more than 5% of the vessel's total required tonnage may be reserved for trimming purposes, and trimming will not be permitted in discreet quantities of less than 0.5% of the vessel's total required tonnage".

In the past this Clause has been ignored but it will be policed more stringently in the future.

Coal Loading: We draw the attention of both Owners and Masters to the Port Corporation's advice which is reported below:

1. Subsequent to the harbour deepening and completion of development projects on Kooragang Island, the larger vessels have caused the surge problems to manifest itself again. The surge problems are considered serious and are caused by hydraulic interaction of passing vessels.
2. Therefore, for reasons of safety to vessels and personnel employed on ship loading, extreme care will be taken with the loading of geared vessels. Loading will cease and shiploader be removed from the vessel when shipping movements occur in the Steelworks Channel.

The Port Corporation requests that, as detailed in the coal operation guidelines, all vessels due to load coal supply a hatch tonnage list together with a proposed loading sequence to the Senior Supervisor 7 days prior to arrival.

Coal shippers have been requested to ensure that Masters are advised in good time of the stowage factors of the coal to be loaded, to allow accurate calculation of hatch tonnages.

The Port Corporation have issued a notice regarding the practice of trimming vessels by the head and their handling characteristics.

The notice states that a marginally greater forward draft than aft has little effect on a vessel's manoeuvrability and handling and is acceptable. It has been noted, however, that vessels have been prepared for sailing with the head down by anything up to 0.75 m. which can make steering control and handling extremely difficult.

In the light of this problem the Port Corporation has announced that where vessels are found to be excessively trimmed by the head the services of an additional tug may be required during manoeuvring.

Apart from the extra costs involved in hiring another tug it may be that, if the vessel's condition is not noticed until sailing time, a delay may occur whilst another tug is made available. Stand-by charges will also be incurred whilst awaiting the extra tug.

MEDICAL: All hospital facilities available.

TANKERS: Bulk Berth Kooragang: Berth length 183.0 m., depth alongside 11.6 m.

Berth has flexible discharge hoses. 200 mm. dia. 8 hole ASA flanges.

DENSITY: Density varies considerably throughout port, with particular reference to upstream rains.

FRESH WATER: Available all berths, 4 – 15 t.p.h. delivery, dependent on other demands.

FIRE PRECAUTIONS: Written notice to Fire Brigade for tankers.

CONSULS: The following countries are represented at Newcastle: Belgium, France, Greece, Netherlands, Norway and Sweden.

DRY DOCK: *Floating Dock:* A floating dock, operated by Forgacs is moored in Throsby Basin. This dock has a lifting capacity of 15,000 tonnes; length overall 195 m.; clear width of entrance 33.5 m.; maximum draft of vessels is 8.5 m. Adjacent to the floating dock are repair workshops and two patent slipways, one of 1,250 tons capacity and one of 300 ton capacity.

SURVEYORS: (1) Associated Marine Surveyors International, Cargo Superintendents Co. (A'Asia) Pty.Ltd., A. Fowler and Associates, Griffith Australia Services Pty.Ltd, Newcastle Marine Surveys Pty. Ltd., S.G.S. Australia Pty.Ltd., S.G. Webb & Co.Ltd.

(2) American Bureau of Shipping, Bureau Veritas, Lloyd's Register, Norske Veritas.

Germanischer Lloyd: N.S.Harper & Associates, 29 Elizabeth Parade, Charlestown, NSW 2290 (P.O.Box 864). Tel: (049) 437325.

OPENING/CLOSING HATCHES: Dependent on type of cargo and hatch (coal, wheat, ship's crews closing hatches).

CERTIFICATES AND CUSTOMS ALLOWANCES: See "Melbourne".

CARGO GEAR: No additional other than wire preventers to derrick heads if rope guys used. Also see "Melbourne".

REPATRIATION: Normal facilities available.

AIRPORTS: Two, approximately 7 miles from city. Several flights daily to Sydney. Seaplane service operates from Newcastle Harbour to Rose Bay, Sydney.

TIME: See "General" before first port.

HOLIDAYS: Christmas Day; Good Friday; Labour Day; Picnic Day; Anzac Day are regarded as close holidays and waterside workers cannot be required to be worked on these days. On Boxing Day, New Year's Day, waterside workers will work on following classes of vessel only:

(a) Passenger ships to sail on schedule; *(b)* ships to finish and sail before next pick-up of labour; *(c)* marine casualties; *(d)* other vessels which are agreed between employer and WWF branch officials in the port concerned; if there is no agreement on a port basis, agreement as to any such ships, to be reached at Federal level.

On remaining ordinary holidays, work performed as required by an employer. Work performed on holidays subject to premium rates of pay. No Saturday afternoon work unless vessel is proceeding to sea.

POLICE/AMBULANCE/FIRE: Dial "000" for Emergency.

EMERGENCY CO-ORDINATION CENTRE: All emergency situations – refer to Australian Coastal Surveillance Centre. (Free call S.T.D. or reverse charge). Canberra (062) 476666.

SERVICES: Compass adjusters available.

STORING: See "Prelims".

(1) Yes.

(2) No restriction, except on tankships, where stores are generally hand-trucked to vessel. Dispensation may be given to use vehicle or barge under certain circumstances.

(3) Yes.

(5) Normal to Australian ports.

(6) Yes. Most unusual practice, extremely costly.

IDENTIFICATION CARDS: See "Melbourne".

GARBAGE DISPOSAL: Contact Waste Hawk Disposal Services. Tel: (049) 648511.

WASTE OIL DISPOSAL: Contact Tiger Oil. Tel: (049) 484127.

SEAMAN'S CLUBS: Seafarer's Centre (Missions to Seamen and Apostleship of the Sea), 96 Hannell Street, Wickham. Tel: 615007. International telephone and postage. Hours 1800-2200 (daily).

CURRENCY: Australian Dollar.
DEVELOPMENTS: Eastern Basin site proposed for redevelopment. Lee Berths handed over for commercial/residential development. Former State Dockyard area is included in East Basin proposals.

SHIPMASTER'S REPORT:
Harbour control: VHF Channel 13.
Anchorage: Liable to the weather – attention to be paid to the Easterly, South Easterly and Southerly winds which can suddenly blow strongly within 1 hour's time. Best anchorage: 108°, two miles from South Breakwater. Not recommended to anchor North of Latitude 32° 55′ S.

AUTHORITY: Newcastle Port Corporation, P.O.Box 663, Cnr. Scott & Newcomen Street, Newcastle, N.S.W. 2300, Australia. *Tel:* (049) 272400. *Telex:* AA28761. *FAX:* (049) 264596. *Cables:* Marboard. *Contact:* G. Connell, Managing Director. Captain N. Morrison, Harbour Master.

AGENT: Patrick Sleigh Shipping Agencies Pty.Ltd., P.O.Box 63, 78 Hannell Street, Wickham, N.S.W. 2293, Australia. Tel: (049) 69 5588. Telex: 28192 PATSLE. Fax: (049) 69 1381. Seagram Code: 2NPATSLE.

PORT BONYTHON, S.A.: 33.01 S. 137.46 E. (See Plan)

LOCATION: Port Bonython is situated on the Western shore of Spencer Gulf, South Australia, about 160 nautical miles from the entrance to the Gulf. The port includes the new Liquids Terminal (Lat. 33° 01′ S., Long. 137° 47′ E.), which is located about 9 nautical miles from the Port of Whyalla.
PORT LIMITS: See "Plan".
DOCUMENTS:
3 Crew Lists. Form M&S 11, Parts 1 and S.
1 Crew Personal Effects. Form 5.
1 Stores List. Form 42a.
3 Loading Port List (and Ports of Call).
1 Animal and Pets aboard. Form QA4.
To be sighted:
Official Log Book.
Last Port Clearance.
Seamen's Identification Card or Passport.
Safety Certificates: Construction, Equipment, Safety Equipment, Load line, Radio, International Oil Pollution Prevention, Light Dues.
PILOTAGE: Pilotage is compulsory for all vessels when within the port limits. Pilots will board inward bound vessels at a position approximately 165° (T) distance 5 nautical miles from the Whyalla Entrance Beacon (No. 1 Beacon).

Deep draft ships will use the buoyed channel to the East of Fairway Bank. Outward bound, ships will disembark the Pilot at the Entrance Buoy 165° (T), distance 6.7 nautical miles from No. 1 Beacon.

Pilot ladders must be rigged and the embarkation and disembarkation of pilots must be supervised by a responsible deck officer. Adequate lighting must be provided at night. All pilot ladders and accommodation ladders must be clean, in good condition and must comply with the IMO SOLAS Regulations.

Spencer Gulf shoals gradually from the entrance and careful navigation is needed in the Northern part. Recommended routes for large ships are described in "Approaches". If required, a Department of Marine and Harbors Pilot may be embarked, by prior arrangement, off the Port of Wallaroo (Lat. 33° 56′ S., Long. 137° 37′ E.).
APPROACHES: *Approaches and Entrance to Spencer Gulf:*
FROM THE EAST:
Vessels approaching from the East should set a course to pass no closer than 10 nautical miles clear of Cape Borda Lighthouse, from where a course may be set to enter the Gulf between Wedge and Althorpe Islands. Tracks can be subject to strong cross sets due to the tides. On entering the Gulf a safe course should be set to pass to the West of Tiparra Reef Beacon, (Lat. 34° 04′ S., Long. 137° 23.5′ E.).

Vessels with local knowledge sometimes pass to the North of Kangaroo Island, using Backstairs Passage and Investigator Strait.
FROM THE WEST:
Vessels approaching from the West should set a course to pass 10 nautical miles South of South Neptune Island Lighthouse, and thence into the Gulf by the previously mentioned track. Mariners are cautioned against passing within 5 nautical miles of South Neptune Island.
Northern Spencer Gulf:
Although good depths are available in the Northern part of the Gulf, accurate navigation is essential because the navigable widths are not great for deep draft ships, and the coast lines are low lying and featureless. The deep water channel off Tiparra Reef is only 4 nautical miles wide. From there, set a course to pass Westward of Middle Bank. A buoy marks the Southern end of Middle Bank and the navigable width for a deep draft ship at that point is less than 3 nautical miles.

From Middle Bank Beacon, steer to pass West of Yarraville Shoal Beacon, keeping clear of Planck Shoal (8.8 m.) and a 10 m. patch Northward of Middle Bank, both of which are marked by buoys.

After passing Yarraville Shoal Beacon, a course should be set to the Pilot Boarding ground.
Departure: The outward passage down the Spencer Gulf is the exact reverse of the inward passage, with the same need for very exact navigation until past Tiparra Reef.
ANCHORAGE: Inward bound vessels awaiting Pilot or Customs should anchor in the vicinity of the pilot boarding ground. Water depth is about 16 m. with good holding in sand.
RESTRICTIONS: Except for fishing vessels of less than 500 g.r.t. and port service vessels, no vessel may be navigated within the port limits at night without prior approval of the Port Manager. There are at present no facilities for handling general cargo.
MAX. SIZE: *Maximum size ships permitted at Port Bonython Terminal:*
Oil tankers: 110,000 d.w.t.
LPG carriers: 45,000 d.w.t. or 75,000 cu.m. capacity. (Larger sizes can be handled at the discretion of the Port Manager).
Maximum length overall – 265 m.
Maximum draft – 15.8 m.
Minimum size ships:
LPG carriers: 70 m. parallel length.
Maximum permitted berthing displacement: 110,000 tonnes.
Draft: Unless with the Port Manager's special permission, no vessel may navigate within the port or lie alongside the berth with a clearance underkeel of less than 20% of her maximum draft.
HEALTH: *Radio Pratique:* Vessels arriving from overseas and wishing to proceed direct to the berth must apply for clearance by radio. At least 24 hours before arrival the answers to the Commonwealth Quarantine Form 'Q2' must be radioed to the ship's Agent who will submit the information in writing to the Quarantine Officer. (See "General" – "Health" before first port). If the answers are acceptable, approval to berth or Radio Pratique will be granted.
Note: Until clearance is received, no persons other than Port Health Officials and Customs and Excise Officers will be allowed to embark or disembark.
Livestock: Masters are reminded that strict quarantine laws are in force in Australia regarding pets or livestock of all sorts. No animals or animal products may be landed without written permission.
RADIO: Adelaide Radio should be worked.

Not less than 24 hours prior to the arrival of the vessel at the port, the Master or Agent of the vessel shall convey details to the Port Manager, of the vessel's expected time of arrival at the port, draft fore and aft, the vessel's last port of call and whether the water-ballast is clean.

If the vessel is scheduled to proceed direct to the berth on arrival the Master shall confirm to the Port Manager the ETA at least 4 hours prior to arrival.
Declaration Prior to Arrival in Port:
The owner of a vessel having Dangerous Goods or Oil in Bulk on board shall make a declaration in writing to the Port Manager at least 48 hours prior to the arrival of the vessel in port providing the following information:
(a) Is the hull leak free?
(b) Is an inert gas system fitted?
(c) Is the inert gas system, if fitted, fully operational?
(d) Is a crude oil washing system fitted?
(e) Is the crude oil washing system, if fitted, fully operational?
(f) Are there any defects to the vessel, machinery or equipment, which may affect safe pilotage, berthing, cargo or ballast operations?
(g) Have stress calculations for the envisaged programme of cargo handling, ballasting and bunkering been made?
(h) Is the hull stress calculated within recommended safety limits?
Additional information required for liquefied gas tankers.
(i) Are all cargo tanks and lines free of air?
(j) Is the reliquefaction or boil-off control equipment in good working order?
(k) Any other particular information required by the Marine Authority?

If any changes in conditions on board the vessel occur, after the declaration has been made, the Marine Authority should be advised without delay.
VHF: Port Bonython Terminal has facilities for telex, telephone and VHF radio communication. VHF Channel 16 is monitored continuously by Santos at Port Bonython and by the Port Manager's Office at Whyalla, when manned.
Jetty Head: Ships at the berth must remain in communication with the control room at all times, using a portable two-way radio. The control room can contact the Port Manager, tugs or emergency services by telephone, VHF or UHF radio.
Report: 1988.
Contact should be made with Whyalla Port Control which has Channels 6, 8, 12, 16 and 67. Santos have listening watch VHF base station with Channels 9, 12, 13, 14, 16, 67 and 72.

When a vessel is within a distance of 20 miles from the pilot boarding position, the Master of the vessel shall ensure that an efficient VHF radio-telephone listening watch is maintained on Channel 16.

The Master of a vessel arriving at the port shall establish contact with the Port Control Station by means of VHF radio-telephone when not less than 15 miles from the Pilot boarding position.

BHP Co. Ltd. will relay messages to the Port Manager after hours. Call "Whyalla Harbour Control" on VHF Channel 16.
RADAR: The pilot vessel is equipped with radar. There is a jetty head approach speed radar.
TUGS: The tugs 'Taminga' and 'Turmoil', based at Whyalla, are used for berthing/unberthing. Both tugs are owned by the Adelaide Steamship Co. Ltd. 'Turmoil' is a conventional single screw tug. 'Taminga' is equipped with fully rotating propulsion nozzles and foredeck towing winch. She is also fully equipped as a fire-fighting tug and carries 14,000 litres of foam concentrate.

Additionally there is a large tug based at Port Pirie.
Tug Details:

Taminga	32 m. LOA	3,600 h.p.
	50 tons bollard pull ahead	47 tons bollard pull astern
Turmoil	31 m. LOA	2,250 h.p.
	30 tons bollard pull	

Mooring Boats: One mooring boat is available ex-Whyalla, the 'Wanilla', is 350 b.h.p. If required another mooring boat can be obtained from Port Pirie.

BERTHING: The Port Bonython jetty is 2.4 km. in length and has a jetty head at right angles to the jetty. The jetty head is 140 m. in length.

Berth Layout:

1. The berth, capable of handling ships up to approximately 110,000 d.w.t., consists of a concrete loading platform erected on steel piles. The minimum depth alongside the berth is 20 m. at datum. In the immediate approaches, the depth exceeds 17 m. at datum along the berthing line over a distance of 600 m. either side of the berth centre. No dredging has been carried out and no siltation is anticipated in the berth area. The berth is orientated 088° – 268° (T), approximately in line with the tidal currents.
2. Four breasting dolphins (BD1 to BD4) equipped with ABF rubber fenders hold large vessels clear of the loading platform. A row of fender piles immediately in front of the platform is capped with timber-fendered steel berthing beam against which smaller ships can lie.
3. Four mooring dolphins (designated MD1 to MD4), consisting of raked steel piles with concrete caps, lie to the East and West of the breasting dolphins. Both mooring and breasting dolphins carry quick release hooks for the ship's mooring lines.
4. Deck heights above mean high water springs (M.H.W.S.) are:

Loading platform	+ 10.74 m.
Breasting dolphins	+ 3.5 m.
Mooring dolphins	+ 5.5 m.
Continuous fender	+ 1.0 m.

5. Distances, centre-to-centre, between the ABF fenders are approximately:
   BD1 – BD2: 35 m.
   BD2 – BD3: 70 m.
   BD3 – BD4: 35 m.

Mooring Arrangements:

1. General Requirements:
   The suggested mooring patterns for different classes of ship are shown on Plans M1 to M6. The Pilot will advise the Master on mooring requirements. Any known defect or limitation in the ship's mooring system must also be reported to the Pilot before arrival.

   Moorings must be properly tended so that the lines are bearing an even load and the vessel is kept close alongside at all times. Back springs should be as long as possible. Wherever practical, all moorings that are led to a particular point should be of the same type, i.e. either all rope or all wire, not mixed.

   Readouts in the jetty control room indicate the load on each mooring hook. If the readout shows any line to be slack or apparently overloaded, the operator will notify the ship and the officer-in-charge shall promptly have the moorings adjusted.
2. Mooring Details – 3,000 d.w.t. (5,000 cu.m.) LPG Carrier (Plan M1):
   Head and stern lines (3 at each end) are run to the outer breasting dolphins. Breast lines are run to the inner breasting dolphins BD2 and BD3 using either the 25 tonne bollards or the mooring hooks. Springs are run to the 25 ton bollards on top of the continuous fender.
3. Mooring Details – 25,000 d.w.t. Tanker (Plan M2):
   Head/stern lines are run to the mooring dolphins. Two breast lines are required at each end, either to the inner mooring dolphins or to the breasting dolphins. Springs (2 at each end), must be of adequate length.
4. Mooring Details – 14,000 d.w.t. (22,000 cu.m.) LPG (Plan M3):
   Two breast lines and two springs are required fore and aft. In the example shown the after breast lines lead forward but adequate transverse restraint is provided by the stern lines to MD2.

   Smaller ships may run lines to the bollards on BD2, BD3 and fender top, provided the lines do not exceed 25 ton breaking strength.
5. Mooring Details – 45,000 d.w.t. (75,000 cu.m.) LPG (Plan M4):
   If practicable, five lines should be run to the mooring dolphins at either end (e.g. 3 head lines and 2 for'd breast lines or 2 head lines and 3 for'd breast lines). Two foresprings and 2 back springs are also required.
6. Mooring Details – 70,000 d.w.t. Tanker (Plan M5):
   At least 4 lines are to be run at each end, i.e. 2 head/stern lines and 2 breasts or 3 head/stern lines and 1 breast line. Two fore springs and 2 back springs should be run if practicable.
7. Mooring Details – 110,000 d.w.t. Tanker (Plan M6):
   Three head/stern lines and 2 breast lines must be run from either end of the ship. Two fore springs and 2 back springs are required, ensuring that the drift on these lines is as long as possible.
8. The Pilot will advise the Master on all mooring requirements.

LOADING: *Equipment:* All vessels must be in a sound state of repair, with main engines, mooring winches, anchors and windlasses all in proper working order.

Certification: All vessels must be in possession of a complete and valid set of safety certificates. All officers to be properly qualified and in possession of recognised certificates of competency.

All LPG vessels to be in possession of a Certificate of Fitness under the terms of the IMO code for construction and equipment of ships carrying liquefied gas in bulk, also an appropriate Classification Society Certificate.

Complies with International Transport Federation (I.T.F.) Rules and Regulations as are applicable and in operation from time to time.

Is entered into a Protection and Indemnity Club (P. & I.) acceptable to the Buyer and Seller's Representative.

Cargo Requirements: Vessels will not be accepted for loading unless the tanks to be loaded and the ship's piping are free of any liquid or vapour which would knowingly contaminate or degrade the product. The Terminal assumes no responsibility for cleanliness of ship's tanks for loading.

All vessels nominated to load crude oil or condensate must be a subscribing member of the TOVALOP (Tanker Owners Voluntary Agreement Concerning Liability for Oil Pollution) scheme at the time of their visit.

Gas carriers must be properly cooled down or inerted. Reliquefaction equipment must be in good working order.

Tank washing, gas freeing, inerting or cooling down are not permitted at the berth unless prior consent is received.

Loading Arrangements: The jetty has been designated to load refrigerated LPG, crude oil and condensate. There are 10 loading arms, all fitted with hydraulic couplings and quick-release devices. Pennant controls are operated from No. 2, 4, 6 and 9 arms.

Maximum loading rates at the berth are approximately:

Crude oil	5,000 tonnes/hour
Full Range Naphtha (FRN)	3,600 tonnes/hour
Butane	1,000 tonnes/hour
Propane	1,000 tonnes/hour

Loading Arms – Safe Envelope:

Surge: The maximum allowable movement of any arm in surge (parallel with the wharf) is ± 3 m. from the centre line.

Outreach: The maximum outreach, perpendicular to the wharf, measured from the fender face is:

(a) 300 mm. (12 in.) crude arms at a minimum operating height of + 4.14 m. above LWS: 4.8 m.
(b) 300 mm. (12 in.) crude arm at height above + 5.6 m.: 7.6 m.
(c) 150 mm. (6 in.) liquid propane arm : 6.8 m.
(d) All 250 mm. (10 in.) arms: 7.6 m.

Height: Maximum of 10.5 m. above platform deck for 300 mm. (12 in.) arms, less for smaller arms. Maximum allowable heights of ship's manifold above waterline allowing for tidal range etc., is given in Table (See "Loading Arms Table" on opposite page).

Note: If any arm moves beyond the given limits, the E.S.D. system will automatically be activated.

Ship's Manifold Requirements: Details of the loading arms and Ship's Manifold Requirements are given in Table (See "Loading Arms"). The arms are numbered 1 to 10, reading in order from the Eastern end of the jetty head.

Loading Operations – Crude or Full Range Naphtha (FRN):

1. The Master of the vessel should ensure that his vessel is securely moored alongside at all times. All tension winches to be on manual brake.
2. There must be sufficient crew members, with responsible officer supervision, on board at all times, to deal with any emergency. At least one member of the duty watch shall be visible on deck at all times.
3. The terminal will cease cargo operations and may order tugs to attend if any movement of the vessel will endanger loading arms, or in the absence of a proper deck watch on the vessel.
4. All doors, portholes and openings from the outer deck to accommodation or machinery spaces (other than the pump room) shall be kept closed, except for entry/exit purposes. All ventilators through which gas can enter shall be closed and mechanical ventilation shall be stopped if gas is being drawn into the system. Window type air conditioning units must not be used. Normal air conditioning or mechanical ventilation may be used on full recirculation mode only.
5. All cargo tank lids must be closed and secured and venting of vessel's tanks must take place only through the venting system.
6. All ullage openings must be covered with wire gauze screens, secured with weighted ullage plugs.
7. Should an accumulation of gas become apparent, loading should be stopped or loading rate reduced at the discretion of the Marine Supervisor or the responsible ship's officer.
8. Vessels in excess of 10,000 d.w.t. shall have an efficient means of readily calculating bending moments and shear stresses in the vessel's hull at all stages of loading or deballasting.

Loading Operations – LPG Vessels:

In addition to the rules applicable when loading crude oil or condensate, vessels loading LPG shall complete Section 'C' of the Safety Check List and also observe the following conditions:

1. Vessel's Master is to advise the maximum loading rate required, the maximum working temperature and pressure of the ship's tanks and details of the previous 3 cargoes carried.
2. Ship's relief valves to be set at maximum working pressure.
3. Ship's tanks to be purged of air to the satisfaction of Terminal loading officer, prior to loading. Oxygen content of tanks must be less than 2% by volume.
4. Personnel to be made aware of the danger of "frost burns".
5. The loading arms must be drained and cleared of liquid and all pressure removed prior to disconnection. Nitrogen is connected to the arms for purging.
6. Tanks and pipelines to be gradually and evenly cooled down before loading to avoid any excessive thermal stresses.
7. Ship's E.S.D. system to be operating satisfactorily. The closing of valves may be tested and timed.
8. Due account should be taken of the high coefficient of volumetric expansion when determining closing ullages, and IMO filling ratio to be strictly adhered to. At least 2 independent methods of determining ullage space to be provided.
9. All vapours to be returned ashore or recycled and not permitted to be released to atmosphere.
10. Ship's scuppers in the cargo area must be kept OPEN while loading LPG to allow liquid to escape overside in the event of spillage.

Jetty Emergency Shutdown and Surge Relief Systems:

1. The emergency shutdown (E.S.D.) system to stop loading can be activated from the shore or the jetty control room. It is also activated automatically in the event of the following occurring.
   Electrical power failure.
   Excessive pipeline pressure.
   Surge in loading pump supply current.
   Loading arm extending outside of safe envelope.
   Low level in shore tank.
2. The E.S.D. valves are power operated, backed up by emergency power and gas motors. Activating the E.S.D. system stops the loading pumps and closes the following E.S.D. valves: Tank suctions, valves at shore end of jetty, valves at loading arms. All valves in the shore E.S.D. system have a closure time of 30 seconds.
3. Prevention of Pressure Surge Damage:
   Serious damage to piping and equipment could result from pressure surge if ship's automatic valves were slammed shut while loading at maximum rates. For this reason records of tests or manufacturer's data on the ship's valves will be required by the terminal. If suitable test data is not available the Master may be asked to operate the system to allow timing of the valves.
   A surge relief system incorporated in the jetty loading lines has been designed to cater for surges resulting from the following conditions:
   (a) Crude Oil and Full Range Naphtha (FRN)
   Loading rate = 6,950 cu.m.p.h.
   Ship's E.S.D. valves: Closing time for ball valves = 5 sec.
   Closing time for gate valves = 10 sec.
   (b) Propane
   Loading rate = 2,412 cu.m.p.h.
   Ship's E.S.D. valves: Closing time for ball valves = 5 sec.
   Closing time for gate valves = 15 sec.
   (c) Butane
   Loading rate = 2,484 cu.m.p.h.
   Ship's E.S.D. valves: Closing time for ball valves = 5 sec.
   Closing time for gate valves = 15 sec.
   Separate surge drums are provided on the loading platform for butane and propane. The crude oil/FRN header relieves into the jetty sump. The capacity of these systems is limited.
   If the Marine Supervisor considers the ship's valve closure times to be too short he may ask for them to be locked off or he may order loading at a reduced rate. If loading time is unduly prolonged through this cause, the extra time may be charged against the ship.

Cargo Measurement:

1. Cargo quantity and quality will be determined by an independent surveyor. Custody of all products will take place at the ship's manifold.
2. Shore measurement and sampling will determine quantity and quality as follows:
   (a) Crude Oil and Full Range Naphtha (FRN):
   Quantity will be determined by shore tank dips.
   Quality will be determined by a sampling device designed to automatically take a pre-determined number of samples, proportional to the rate of flow during loading.
   (b) LPG:
   Quantity will be determined on tank dips and allowance made for the increased vapour space. Quality will be determined by proportional sampling.
3. Ship's tanks measurements will only be used when shore measurements are not possible.

Product Loading Data:

Product and Loading Arm Size	*S.G. at 15° C*	*Temp ° C*	*Max. Vapour Pressure*	*Max. Loading Rate* tonnes/hr.
Crude Oil 300 mm.	0.802	(approx) 20°	62 kPa	5,000
FRN 300 m.	0.716	(approx) 20°	62 kPa	3,600
Propane 250 mm.	0.505	−42°	1434 kPa	1,000
Propane 150 mm.	0.505	−42°	1434 kPa	300
Butane 250 mm.	0.575	−05°	483 kPa	1,000

BALLAST: One receiving tank is available with a normal working capacity of 15,000 cu.m. All ballast, other than that contained in the ship's permanent ballast tanks, must be discharged ashore. Ballast water containing tank cleaning chemicals or lead contaminants cannot be accepted owing to possible detrimental effects to the plant effluent-treating system and must be retained on board. It is an offence to allow discharge or escape from the ship of any liquid containing oil or other contaminating material.

The request to discharge ballast must be made as soon as possible after the vessel has been fixed for the voyage.

MEDICAL: There is a fully equipped base hospital at Whyalla. Medical attention can be arranged through the Agent. Only first aid facilities are available at the jetty.

DENSITY: Usually 1030.

FRESH WATER: Proposed fresh water supply rate of 5 t.p.h. Fresh water is of poor quality and it is not recommended for loading.

FUEL: Not available.

FIRE PRECAUTIONS: There are 6 fire monitors at the jetty head.

1 each side of loading (manifold) platform, 50 m. apart and 12 m. above platform.

1 each end on jetty head in line with outer breasting dolphins 45 m. East and West of loading platform and 12 m. above.

2 at inboard end of loading platform and 2.5 m. above platform for fighting platform fires.

1 adjacent to Administrative Block 100 m. inboard of loading platform.

SURVEYORS: A Lloyds' Surveyor is available in Adelaide.

REPAIRS: Repair work or maintenance involving welding or burning or work which may immobilise a vessel's engines may not be carried out on any vessel within the port without the written consent of the Port Manager. Chipping, scraping or hammering is prohibited on any vessel where there is inflammable liquid on deck or inflammable vapour about the vessel. Only repairs of an emergency nature will be permitted on vessels while berthed.

Repairs to electrical equipment, i.e. radios, radar and outside electrical systems will not be permitted during loading operations.

Some routine maintenance is available at Whyalla.

GANGWAY/DECK WATCHMEN: No gangway watchmen are employed. There are security personnel employed by Santos within the complex and at the entrance gates.

AIRPORT: There is a regular air service from Whyalla to Adelaide.

TIME: See "General" before first port.

POLICE/AMBULANCE/FIRE: All emergency facilities are available. There is an ambulance and fire truck within the Santos complex. Police are available from Whyalla. See "General" – "Telephone Numbers".

TELEPHONES: There is a Telecom telephone in the Administration block on the main jetty adjacent to the head of the jetty.

GARBAGE DISPOSAL: Garbage disposal available while alongside. Vessel to provide containers for off-loading. Contact via agents, Adelaide Steamships, Tel: (086) 458733.

Loading Arms:

LOADING ARMS						SHIP'S MANIFOLD REQUIREMENTS				
		Size		*Height above waterline*		*Height above deck or other obstruction*		*Set back to face of ship's manifold or reducer if requ'd*		
No.	*Service*	*Arm* (All 150	*Coupling* ANSI)	*Max.*	*Min.*	*Max.*	*Min. below lower edge of manifold flange*	*From ship's side Max.*	*From ship's side Min.*	*Min. dist. between ship's manifolds*
1 2 3	Crude FRN Ballast	12 in. 300 mm.	12 in. 300 mm.	2 m.	4.14 m.	†	0.56 m.	4 m.	1.65 m.	2 m.
4	Propane Liquid	6 in. 150 mm.	6 n. 150 mm. or 200 mm.	1 m.	3.14 m.	†	0.44 m.	3.2 m.	1.35 m.	2 m.
	Vapour hose connection	3 in. 75 mm.	3 in. 75 mm.							
5 6 7	Propane Liquid or Vapour	10 in. 250 mm.	10 in. or 12 in. 250 mm. or 300 mm.	1 m.	4.14 m.	†	0.53 m.	4 m.	1.5 m.	2 m.
8 9 10	Butane Liquid or Vapour	10 in. 250 mm.	10 in. or 12 in. 250 mm. or 300 mm.	1 m.	4.14 m.	†	0.53 m.	4 m.	1.5 m.	2 m.

† Unrestricted, except for safe access.

WASTE OIL DISPOSAL: Oil terminal: Service only available for vessels loading at berth. Capacity to handle 15,000 tons of oily water mix, no chemical additives permitted. Vessel to be capable to pumping waste oil ashore. Contact: Operations, Santos Ltd., Tel: (086) 403100.

SEAMAN'S CLUBS: None.

CURRENCY: Australian Dollar.

REGULATIONS: Masters shall ensure that their vessels and crews comply with the requirements of the S.A. Harbours Act, The Inflammable Liquids Act and the Stony Point Port Rules.

TIDES/CURRENTS: *Tides:* For tidal predictions for the area, the Whyalla tide tables should be used.

Current Speed: Strong tidal currents occur in the berth area and approaches with maximum ebb streams running about 30% faster than maximum floods. At spring tides, every 2 weeks, the current may reach a maximum of 1.7 knots (88 cm./sec.) on the ebb and 1.3 knots (67 cm./sec.) on the flood. At "King" tides, twice per year, peak current speeds will be about 10% higher. The current speeds given are for an average depth of about 10 m. Near-surface currents, which will affect small vessels, run about 10% faster than the 10 m. average.

Current Direction: Both flood and ebb currents generally set slightly across the berth, towards the shore. The peak flood stream averages 12° on to the berth. The peak ebb stream averages 7° on to the berth but varies between 16° 'on' and 2° 'off' the berth.

CHARTS: Recommended charts are:

BA.2389	'St Vincent and Spencer Gulfs'.
BA. 407	'Spencer Gulf.'
Aus. 136	'Approaches to Whyalla and Port Pirie.'
Aus. 778	'Pt. Lowly to Port Augusta.'
Aus. 777	'Winceby Island to Point Riley.'
Aus. 776	'Williams Island to Winceby Island.'

For description of coastline, anchorages, weather notes, etc., refer to the Australia Pilot, Volume 1.

GENERAL:

Provisions: Fresh and preserved foods and other stores are available through the Agent. Vessels may be stored at anchor, or alongside subject to safety requirements.

Stores Handling:

1. Loading of stores from the jetty, unless carried by hand is strictly forbidden during cargo operations. Stores may be taken during deballasting with the approval of the Marine Supervisor and agreement of the Master, provided the following regulations are complied with:
   (a) All tank hatches and ullage plugs within 16 m. (50 ft.) of the stores handling area should be battened down.
   (b) Any cargo operation which may allow vapours to escape on to the deck should be stopped whilst stores are being handled, e.g. pumping of strippings into an after tank.
   (c) Metal drums or heavy metal parts likely to cause a spark should be landed on rubber matting and not be allowed to contact the vessel's deck. If no matting is available, deballasting should be suspended and all tank lids/openings battened down whilst metal items of stores are landed on deck. The above items must not be dragged or rolled along the vessel's deck.
   (d) Gas cylinders should be carried by hand or transported on a rubber tyred trolley. They must not be rolled along the deck of a vessel or jetty.
2. A derrick of 1 tonne S.W.L. is located near the shore gangway. This derrick may be used for loading stores, with the permission of the Marine Supervisor, provided the preceeding regulations are observed.
3. The handling of stores from an approved barge may be carried out during the cargo operations provided that the barge is secured aft, and the stores are loaded on to the poop of the ship. Cargo should be stopped while the barge comes alongside or departs, and all barge personnel should observe the same SMOKING REGULATIONS as are observed on the ship. This may mean the complete prohibition of smoking on the barge while it is alongside the ship, or within 400 m. of the ship.

Visitors: No persons other than Port Health Officials and Customs and Excise Officers are allowed to embark or disembark from a vessel until clearance has been obtained and the Master's permission has been granted. Embarking and disembarking must be by gangway only. Walking through the plant is not permitted.

Intoxicated Persons: No person who appears in an intoxicated condition will be allowed on or off the vessel unless under adequate supervision of a ship's officer. Particular attention should be paid to crew members returning from shore leave.

Rabies Control: Strict quarantine regulations are enforced in Australia. Pets are to be kept onboard in an enclosed area and are not permitted to be landed for exercise or for any other reason unless permission is given in writing by a Port Health Officer. The presence on board of any pets must be reported to the Marine Supervisor.

Garbage Disposal: The dumping of garbage of any description in the harbour is strictly forbidden. Arrangements can be made for the collection of garbage from ships at anchor or alongside.

Note: The ship's Agent will arrange for the garbage to be collected by a launch and must not be landed on the loading berth or dolphins.

Weather Forecasts: Gale warnings and strong wind warnings are broadcast over the marine VHF bands. Ships at the berth will be promptly advised of any warnings received by the terminal radio.

Mooring of Boats Alongside Tankers: Small craft are prohibited from approaching or remaining alongside tankers unless approval has been given by the Marine Supervisor or from the Port Manager.

Stores barges should be positioned aft of the cargo deck.

Access to Jetty Area:

1. Vehicular Traffic: (Diesel vehicles only).
   Only vehicles approved by Santos and displaying a permit issued by the Port Manager will be allowed on the jetty.
   A safe vehicle is provided to transport ships' crews or other persons to and from the berth.
   Duly authorised stores vehicles will normally be permitted to unload at the services platform, located some 50 m. inshore of the jetty head.
2. Personnel:
   (a) Only authorised persons will be allowed into the jetty area. Ship's personnel must have a pass signed by the vessel's Master for clearance by the security guard at the entrance gate. Master is to clear all personnel visiting the vessel.
   (b) New crew members signing on must be cleared by the Master or his deputy.
   (c) Ship's Agent is to advise the Terminal of details of stores chandlers or other services required by the vessel. The driver of any authorised delivery vehicle to furnish suitable documentation as to his identity and company.

Oil Spill Clean-up Equipment: The following equipment is held at an oil spill base close to the water's edge.

Oil Booms:
2,000 m. Seaboom: Inflatable curtain type.
1,000 m. Vikoma Beach Guardian.
1,000 m. Shoreline Barrier.
200 m. Sorbent Boom: For removal of light oil film.

Vacuum Recovery Equipment:
Two Vivovac units.
One Vacuum truck, 4-wheel drive, with suction unit and 2,730 litre sludge tank.

Oleophilic Skimmers:
Two Mark 4 DP and one Mark 6 DP units.

Pollution Craft:
One 8.1 m. Shark Cat, diesel powered, shallow draft, capable of carrying spray equipment.

Floating Tanks:
Portable Flexi-tanks, 100 tonnes capacity.

Coastal Spray Units:
Two Harrier BWN units.

Dispersant:
4 tonnes Corexit 9527 concentrate.
2 tonnes Corexit 7664 concentrate.

Sorbent Materials:
Assorted synthetic recoverable pads.

Pumps:
One sludge pump, 4 × 2 in. pumps, portable.

Two 'Lovell' Trailers:
Fully equipped with manual clean-up equipment.

Tanker Berth – Fire-Fighting Equipment:

Fire Pumps:
3 electric and 3 diesel pumps, located at pumping station midway along approach jetty, capacity 113,750 litres/min. 1,240 kPa. Plant fire pumps also start automatically if fire water demand causes drop in pressure, giving 5,005 litres/min. 1,240 kPa.

Foam Equipment:
Foam ring-main fed by separate pumps.
Storage tank capacity 9,100 litres 3% foam.

Live Hose Reels:
4, each with 30.5 m. × 38 mm. hose.

Remote controlled monitors:
4 Monitors on elevated tower with foam and water covering ship.
2 Monitors on elevated tower with foam and water covering berthing head.

Fire Boxes:
4, each with 3 × 40 m. lengths of 38 mm. hose.
2 × 40 m. lengths of 63.5 mm. hose.
Water and foam nozzles.

Extinguishers:
2 × 9 kg. chemical extinguishers in fire boxes.
1 × 909 kg. dry chemical unit.
2 × 22 kg. mobile dry chemical units.

Breathing Apparatus:
1 MSA self contained breathing apparatus and
1 MSA resuscitation apparatus are stored at main control room.

Fire Tender:
1,820 litres
2,730 litres 3% foam concentrate.
1 × 909 kg. dry chemical unit.

Telephone Numbers:

Ambulance (St. John's Ambulance)		45 7777
B.H.P. Whyalla		40 4192
Doctor (Dr. White, Whyalla)		45 9277
Emergency Services, Santos		40 3100
Fire Brigade	45 8999,	A/H 45 7473
Captain Mansfield, Port Manager	48 8160,	A/H 45 5744
H.M. Customs		45 7419
Hospital		45 8711
Oil Pollution (Terminal Emergency Services)		40 3100
Police		48 8020
SANTOS Ltd.		
Port Bonython Terminal.		40 3100
Marine Superintendent		A/H 45 1030
Facsimile		(086) 40 3200
Adelaide Steamship Co. Ltd.		45 8733
Ship Chandlers		
Bridge, KB		45 5603
Taxi		45 7711

SHIPMASTER'S REPORT: November 1984. (Updated 1996).
Approaches: Recommended charts: BA 2389, 407; Aus. 136, 778, 777, 776. Passage up the Gulf is straightforward with fairly good radar echoes returned from the rather low lying coast. The lights of Whyalla and the flare at Bonython serve as useful guides.

The area is intensely fished and considerable interference may arise from concentrations of fishing vessels from Port Lincoln and Whyalla. All fishing vessels have been cautioned to keep clear of the Bonython Departure Channel but this instruction is largely ignored.

Documents: Normal port entry procedure and papers.

Pilotage: The Pilot boards from an orange hulled launch in a position 165°, distance 5 miles from Whyalla Entrance Beacon and the usual strict observance of IMO/SOLAS pilot ladder regulations is required. Ladder about 1.5 m. from water.

Pilots work Channels 16, 12 and 6 on VHF and the launch will approach from Whyalla itself. Once the Pilot is boarded, the vessel proceeds to the berth up the Western Channel or Eastern Channel, depending on tidal flow, while loaded vessels depart from the newly marked departure channel with the Pilot disembarking at the Entrance Buoy.

Time of pilotage to first line ashore, about 1.5 hours.

Max. Size: See "Berthing".

VHF: See "Pilotage".

The name rhymes with "python" and the correct pronunciation will avoid embarrassment over the VHF.

Tugs: Two tugs are available (from Whyalla): "Taminga" 3,600 h.p. and "Turmoil" of 2,250 h.p. The Pilot assured me that the tugs (capable of up to 25 tons bollard pull) are perfectly adequate for pulling loaded vessels off the berth against the fresh onshore winds that predominate. Mooring boats are available for running lines to the dolphins.

Berthing: Consists of a new liquids handling terminal situated at the Northern end of the Spencer Gulf, about 9 miles from the Port of Whyalla, in position Lat. 33° 01' S., Long. 137° 47' E., by the promontory noted on the charts as Stony Point.

The berth is designed to handle crude carriers up to 110,000 tonnes and LPG vessels up to 75,000 cu.m.

The berth consists of a "T" head jetty at the end of a 2.5 km. trestle.

Mooring arrangements are good and the berth is well fendered.

Within the next few months a 24 hour berthing operation will be put into effect although it is as well to obtain prior advice from the Agent since it occasionally suits their operation to berth vessels during daylight.

Loading: Notice of Readiness is tendered and accepted at time of vessel being secured.

The maximum outreach of the loading arms is no more than 4.0 m. beyond the ship's side which necessitates the use of low extensions to the manifold. The arms also require a minimum distance of 2.0 m. between them and this precludes the simultaneous loading of 2 grades since they require a VRL to maintain an overpressure in their shore tanks.

At the moment LPG production is about 1,000 tonnes per day and they only envisage shipments every 6 weeks or so.

Quoted rates for the 2 products at the moment are 2,400 cu.m./hr. Our overall average was 890 tonnes/p.h. on each grade with occasional hourly rates up to 1,000 t.p.h.

It will be necessary to shift ship on changing grades to line up the Chicksans/manifolds for the second grade if only loading one grade at a time.

Despite the length of pipe-line both products were cold. Butane at minus 4°C and Propane at minus 42°C.

Surveys are carried out on board but the final B/L figures are based on measurement of the shore tanks; on this occasion both sets of figures compared quite well.

Port Regulations do not allow the venting of tank vapours to atmosphere and in the event of a vessel arriving under inerts excess pressure will be vented to the shore flare. A charge for loss of product being made accordingly. Similarly, if they have doubts about contamination (ammonia) in the ship's tanks, this would also be led to the flare. Continuous sampling is done ashore.

It was not made clear whether a vessel would be asked to leave the berth to 'cool down' (Harbour Master's comment: March 1986 – two chill downs have been conducted alongside the jetty to date) and it is thought that this would be a matter for discussion/decision on an individual basis. Tug hire, at 40,000 Aus. dollars per berthing operation is expensive. Operator's comment 1996: Vessels may cool down South of Kangaroo Island. Costs are prohibitive, so cool down alongside is the normal procedure.

The ship will be subjected to the normal D.O.T. inspection during her visit. They will not necessarily be carried out prior to loading. Very thorough, especially on safety gear, lifting gear and documentation.

We received excellent co-operation throughout at all levels and stages of the operation. Since this was only their second cargo they were, perhaps, taking particular care, but there is no reason to expect this co-operation to deteriorate in the future.

Also see "Fire Precautions".

Fresh Water: Available from the jetty; the local personnel do not advise taking any since it is most unpleasant (reportedly) to drink.

Fuel: Not available.

Fire Precautions: The terminal's safety regulations require the vessel to prepare a comprehensive loading plan which must include hull stresses for each stage of the operation.

Repairs: With the Whyalla Shipyard closed, these may be difficult to arrange.

Surveyors: Nearest Lloyd's Surveyor resides at Adelaide.

Gangway/Deck Watchmen: A substantial shore gangway is provided.

Strict security control is exercised throughout the complex and authorisation for visitors must be obtained. They are especially wary about intoxicated personnel boarding or leaving the vessel and may ask for a ship's Officer as escort.

Airport: There is a local airport which facilitates the delivery of spare gear, etc.

Storing: The local chandlers have a very good working relationship with the terminal personnel and there is little problem in loading foodstuffs and small stores/spares. The usual restrictions apply to the movement of metal objects.

There is a 1 tonne crane on the jetty (Eastern end) which may be used for storing.

Meat and fish prices are very good, together with most local produce. Beers other than the local South Australian brands may be difficult to obtain (coming from Adelaide) and are more expensive.

Shore Leave: Security will arrange for transport to and from the ship to the gate.

It is some 35 km. into town and the cost (one way) of a taxi is 40 Australian dollars (U.S.$ 35.00). The Agent will be able to arrange a mini-bus service.

AUTHORITY: Department of Marine and Harbors of South Australia, P.O.Box 102, 15 Darling Terrace, Whyalla, South Australia 5600, Australia. *Tel:* (086) 488161. *FAX:* (086) 488168. *Contact:* Captain D. Mansfield, Port Manager – Whyalla/Port Bonython (after hours Tel: (086) 457682).

Operator: Santos Ltd., 39 Grenfell Street, Adelaide, South Australia 5000. *Tel:* (08) 218-5111. *Telex:* 82716. *Fax:* (08) 212-5476.

Santos Ltd., Port Bonython. P.O.Box 344, Whyalla, S.A. 5600. *Tel:* 086-403100. *Fax:* 086-403200.

AGENT: Sub-agent of Patrick Sleigh Shipping Agencies Pty. Ltd., Adelaide.

PORT GILES, S.A.: 35.02 S. 137.46 E. (See Plan)

PORT LIMITS: As marked on AUS. 125 (plans in the Gulf of St. Vincent). From a position the HW line in Lat. 35° 00.5' S. in a direction 090°×7 miles, thence 180°×1.75 miles, thence 270°×6.7 miles (approx.) to the shore.

DOCUMENTS: All documents necessary for first entry vessels are as for other Australian ports (i.e. Customs, Health, etc.)

PILOTAGE: Compulsory. Pilot boarding ground is 2.5 miles East of the seaward end of the Port Giles Jetty. Pilot vessel has aluminium hull, yellow superstructure, "Pilot" in black on topside. Vessels proceeding to Port Giles, 24 hours' notice required to Ports Corp, South Australia – Port Adelaide.

ANCHORAGE: 2.5 miles from berth.

RESTRICTIONS: Daylight berthing only. Sailing at any time. Depth in channel 11.6 m.

MAX. SIZE: Vessels to 40,000 d.w.tonnes able to load fully and depart at lowest tide. Normal limit 206 m. LOA and 40 m. beam. Larger vessels at Port Manager's discretion.

HEALTH: Radio Pratique available within 24 hours of arrival provided sufficient information supplied. Quarantine/Health Officer will still board vessel in order to grant formal Pratique. Vessels arriving from other Australian ports have automatic Pratique, but Health Officer may still attend the vessel on arrival.

RADIO: ETA messages for Agent, etc., may be routed through any Australian coastal station, less than 24 hours prior to arrival.

VHF: Channels available at Port Giles 16, 12, 6. Channel 16 used for general calls to Port Adelaide Outer Harbour, Signal Station. Call sign: "Adelaide Outer Harbour". Messages on Channel 12. Hours of operation: 24 hours per day. Messages will be relayed to Port Giles.

RADAR: No radar service.

TUGS: By arrangement from Port Adelaide.

BERTHING: Berth dimensions: Length 256 m. (840 ft.), width 39.6 m. (130 ft.), depth 11.6 m. (38 ft.), draft subject to keel clearance 0.6 m. (2 ft.). Vessels berth on North side of jetty, either head in or head out depending upon weather conditions.

CRANES: None.

BULK LOADING FACILITY: 5 booms with luffing and swinging ability. Loading rate; 2 or more booms 1,100 tonnes per hour, 1 boom 400 t.p.h. Chute clearance low water: 15.54 m. Cargo handled: Barley, wheat, peas.

SPECIALISED CARGO HANDLING FACILITIES: None available.

BRIDGES: None.

STEVEDORES: Ordering of labour organised through Agent and Grain Handling Authority.

MEDICAL: Ambulance – Yorketown (088) 521200. Doctor available in Yorketown.

TANKERS: No facilities available.

DENSITY: 1027.

FRESH WATER: Available at 15 tonnes per hour ship/shore hose.

FUEL: By road tanker, by arrangement.

CONSULS: None at Port Giles. Services available from Adelaide.

REPAIRS: None available at Port Giles. Available from Adelaide.

DRY DOCKS: None.

SURVEYORS: (1) Cargo Surveyors available through Agents, from Port Adelaide.

(2) Lloyd's Surveyor should be organised through principal Agents. Lloyd's Agents is at Port Adelaide.

Other Classification Society Surveyors also available in Australia with sufficient notice to Agents. None are resident in Port Giles.

GANGWAY/DECK WATCHMEN: Gangway watchmen not available.

HATCHES: Ship's crew.

CUSTOMS ALLOWANCES: Normal Australian allowances.

CARGO GEAR: Bulk grain loading only.

REPATRIATION: Crew changes and repatriation possible.

AIRPORT: Nearest regular airport, Adelaide.

TIME: See "General" before first port.

HOLIDAYS: New Year's Day; Australia Day (January); Good Friday; Easter Monday; Anzac Day (April); Adelaide Cup Day (May); Queen's Birthday (June); Labour Day (October); Christmas Day and Proclamation Day (December 26th).

The bulk loading plant operates on all public holidays except Good Friday and Christmas Day.

POLICE/AMBULANCE/FIRE: Police Tel: 521100 (Stansbury Tel: 524205, Edithburgh Tel: 526024, Yorketown Tel: 521100).

Ambulance Tel: 521200 (Edithburgh Tel: 526000, Stansbury Tel: 524100, Yorketown Tel: 521200).

Fire Tel: 521000.

EMERGENCY CO-ORDINATION CENTRE: Tel: (062) 475 244.

TELEPHONES: Ordinary hours 0830 to 1630 to connect $60.00 and disconnect $60.00. Overtime hours to connect $84.00 and to disconnect $84.00. Rental $1.14 per day.

SERVICES: Tank/hold cleaning services available by prior arrangement.

BANKS: Not available at Port Giles. Nearest banks at Yorketown.

Bank SA, 25 Warooka Road, Yorketown. Tel: 521570, Telex: 82082.

A.N.Z. Banking Group Ltd., 40 Warooka Road. Tel: 521211

STORING: See "Prelims".

1. Truck.
2. –
3. Normal road access.
4. Forklift trucks can use jetty.
5. Normal Customs bond regulations apply.
6. Ship's crew.

SHIP SUPPLY SERVICE: Not available.

SHORE LEAVE: No restrictions.

IDENTIFICATION CARDS: Normal Australian I.D. cards necessary, but not required to be carried ashore.

GARBAGE DISPOSAL: *Notice:*

Ports Corp, South Australia
Port Giles

Notice to Masters of Overseas Vessels

No garbage collection is available in the Port of Ardrossan.

Any enquiries should be directed to Department of Marine & Harbors via your ship's Agent.

Under the Marpol Convention plastic items including plastic bags/bottles *must not* be disposed of at sea.

Australian Quarantine requirements

Quarantinable ships garbage: (Including galley scraps, organic refuse, animal waste and used food cartons).

Must be stored in plastic bags or heavy duty wet strength paper bags. The bags must be stowed within rodent/bird proof containers with tight fitting lids.

Must not be incinerated, macerated/sterilised or held in an integral holding tank *unless* prior Quarantine permission has been obtained for this specific voyage.

Australian Quarantine also requires that:

Garbage disposal unit inlets/outlets must be kept sealed.

Garbage stowage area *must* be kept cleaned and disinfected. Food scraps *must not* be littered on deck.

N.B.: Under no circumstances are the ship's crew/visitors to remove food stuffs/animals/pot plants from your vessel.

Heavy penalties apply for breaches of Australian quarantine legislation.

WASTE OIL DISPOSAL: No facilities available.

SEAMAN'S CLUBS: None.

REGULATIONS: No unusual regulations.

DELAYS: Not normal only if another vessel is at berth loading.

DEVELOPMENTS: None in foreseeable future.

AUTHORITY: Ports Corp, South Australia, Jetty Road, Wallaroo, SA 5556, Australia. *Tel:* (088) 232307. *Telex:* (088) 232280. *Contact:* Division Manager, Ports Operations at Head Office in Port Adelaide.

Head Office: Ports Corp, South Australia, P.O.Box 19, Port Adelaide, SA 5015, Australia. *Tel:* (08) 470611. *FAX:* (08) 470605.

AGENT: Sub-agent of Patrick Sleigh Shipping Agencies Pty. Ltd., Adelaide.

PORT HEDLAND, W.A.: 20.18 S. 118.35 E. (See Plan)

PORT LIMITS: An arc of a circle of 10 nautical miles radius with centre at Hunt Point Beacon No. 47 (Chart Aus. No. 53).

DOCUMENTS:

2 Copies Health Report Q360 for Quarantine Office to be accompanied by Crew List showing Vaccination dates.

1 Copy Store List Form 42A. All narcotics and restricted drugs to be identified by type, size and quantity. Report is to include lifeboat kits.

1 List Crew Possessions. Form 5, including Declaration Sheet. In declaring goods, quantity, description and value to be stated. In the case of all watches, radios, cameras, binoculars and the like, maker's name or brand and serial numbers must be shown.

1 Crew List and Form 3A. Comprised White Cover Sheet, 2 copies plus Form 3B (white), 2 copies.

1 List Ship's Pets. QA4. If any pets, including any animal, bird or fish on board to be accompanied by 1 pink QA5.

Identification Card. Form M315. One per crew member, except as detailed below (depending on nationality).

With reference to Seamen's Identification Cards, a Passport size photograph of the seamen is sufficient. A side-face photograph is not required. Seamen in possession of the following National travel documents are no longer required to have an Identification Card in Commonwealth of Australia Form M302.

Canada	Passport or Seaman's Identity Certificate
Denmark	Seaman's Book
Fiji	Passport or Seaman's Certificate of Nationality and Identity
Ghana	Passport or Seaman's Certificate of Nationality and Identity
Hong Kong	Seaman's Identity Book
India	Seaman's Identity Book or Seaman's Continuous Certificate of Discharge
Israel	Seaman's Book
Italy	Libretto de Navigaziona
Japan	Mariners Pocket Ledger
Malaysia	Passport or Seaman's Identity Card Identity Book
New Zealand	
Norway	Seaman's Document of Identity
Pakistan	Seaman's Identity Card or Continuous Discharge Certificate
South Africa	Seaman's Record Book and Certificate of Discharge or Seaman's Identity Certificate or Certificate of Naturalisation or Identity
South Korea	Seaman's Certificate Book
United Kingdom*	Passport or Seaman's Record Book and Certificate of Discharge

*United Kingdom Passports may be held for surrender only if grantee is agreeable, otherwise an Australian Identification Card must be available.

Masters are reminded that crew members' travel documents and Commonwealth of Australia Forms M302, where applicable, are to be retained in the custody of the Master at all times and are to be produced to Customs Boarding Officers upon demand.

APPROACHES:

General Description: To seaward of the Port Limit is the "Pilotage Area" which extends out to a distance of 20 nautical miles from Hunt Point. Although this area and the navigation beacons therein come under the jurisdiction of the Commonwealth Government, a pilotage service can be provided by the Port Hedland Port Authority as directed by the Harbour Master.

The Inner Harbour commences from a line drawn between Hunt Point Beacon (No. 47) and Airey Point Beacon (No. 46).

The Channel extends from the Inner Harbour through the Port Limit and out to Beacon"C.1", some 22 nautical miles offshore in the Pilotage Area.

The Channel has varying depths in order to make maximum use of the tidal range. These depths are:-

Inner Harbour	14.6.m.	Beacon 16	14.6 m.
Hunt Point	14.1 m.	Beacon 12	14.9 m.
Beacon 30	14.2 m.	Beacon 4	15.8 m.
Beacon 24	14.4 m.	Beacon 2	16.2 m.

The turning basin in the Inner Harbour is dredged to 9.1 m. The perimeter of the turning basin is marked by buoys which exhibit a flashing yellow light at night. The Channel is marked by beacons which are set back 23 m. from the toeline of the dredged channel. Leading lights are established to assist with navigation in a number of channel sections.

From the departure basin to Hunt Point Beacon (No. 47), the channel has a large bend for most of its length, involving vessels turning through an angle of some 70°. The channel width is generally greater than 300 m., narrowing to some 244 m. at Hunt Point. Depths up to Hunt Point are 14.6 m. The current pattern is complex but on the flood tide a pronounced set to the Western Bank is experienced.

From Hunt Point to Beacons 36/37 is a bend involving a single curve with a radius of 2,540 m. Depths of 14.1 m. are available in this area. Channel widths are up to 240 m. and currents generally follow the line of the channel.

From Beacons 36/37 to Beacons 30/31 the channel section is known as Goldsworthy Straight. The depths in this section are 14.2 m. and the channel batter width is 193 m. In the section closest to Beacons 36/37 the current is parallel to the channel; in the Northern half of the section, the current on the flood tends to set South Easterly and North Westerly on the ebb.

The section between Beacons 30/31 and 19/20 is known as the Newman Straight and depths are 14.4 m. to 14.6 m. with widths varying from 183 m. to 220 m. The current again sets South Easterly and North Westerly. From Beacons 19/20 to the end of the channel at Beacons 15/16 the depth is 14.6 m. with a width of 220 m.

The Outer Channel is outside Port Limits but within the Pilotage Area. The width of the channel varies from 250 m. at Beacons C13/C14 to 470 m. at Beacons C1/C2 and is well marked by 13 beacons.

Drying coral ledges covered with a thin layer of sand extend from the shoreline near the harbour entrance, for a distance of up to 0.75 nautical miles. To seaward of these ledges there are some detached sand banks extending out to 1.5 nautical miles. A Spoil Bank extends seaward from the foreshore and is situated to the East of the dredged channel. It dries for most of its length, acting as a breakwater during Easterly winds.

The most conspicuous object is the Mt. Newman Mining Company's Crushing Plant situated in position 20° 19.05′ S., 118° 35.26′ E. The Port Control Tower in position 20° 19.0′ S., 118° 34.5′ E. and the Tower in position 20° 18.6′ S., 118° 36.68′ E., are also conspicuous as is the water tower in position 20° 18.55′ S., 118° 36.7′ E.

Seaward Approaches: Separate inwards and outwards routes extend to and from Port Hedland. Vessels approaching the port should, unless constrained by draft, follow the recommended inwards track to the East of the main channel. Before entering the Pilotage Area, vessels must call "Port Hedland Harbour" on VHF Channel 16 and receive approval to enter. Vessels must not enter without receiving approval. In addition vessels should then confirm their ETA and draft and seek advice as to the movement of other vessels, berthing instructions and other appropriate information. Where it is necessary for deep draft vessels to use the main channel, approval to do so must be obtained from "Port Hedland Harbour" on VHF Channel 16 prior to entry at "C1" and "C2".

Vessels should call Perth or Darwin Coastal Radio Stations for details of any Emergency Notice to Mariners which may affect the Port Hedland Approaches.

On occasions, and especially when required by draft to use the main channel, vessels inwards may encounter vessels outward bound displaying signals as prescribed by Rule 28 of the International Rules for the Prevention of Collision at Sea. As outward bound vessels are generally deeper, and therefore more constrained, they will as a general rule have preference.

Mariners are advised to pay due regard to the strong currents which exist off the coast, especially during Spring Tides. The height of Mean High Water Springs is 6.8 m., Mean High Water Neaps 4.7 m. and maximum range is approximately 7.3 m. The flood tide sets in an Easterly direction, whilst the ebb sets North Westerly (maximum rate approximately 1.5 knots). Vessels may request the exact height of the tide by calling "Port Hedland Harbour" on V.H.F.

PILOTAGE: Pilotage is provided within Port Limits and within a "Pilotage Area" that extends some 10 nautical miles outside Port Limits.

Port Limits embrace the area up to the High Water Mark within an arc of radius 10 nautical miles, from Hunt Point Beacon (No. 47).

The Pilotage Area embraces the area up to the High Water Mark between Port Limits and an arc of radius 20 nautical miles, from Hunt Point Beacon (No. 47).

The Master of any vessel other than a vessel exempted under the Port's Regulation 74, shall not cause or permit the vessel to enter of depart from or move within the Port or the Pilotage Area without having first taken on a Pilot, unless authorised to do so by the Harbour Master.

Regulation 74 exempts from Pilotage the following vessels:

(a) all vessels which do not exceed 35 m. in length overall;

(b) all coasting and interstate vessels exceeding 35 m. but not exceeding 65 m. in length overall the Masters of which hold a current Pilotage Exemption Certificate valid with respect to the Port;

(c) all vessels owned and operated by the Western Australian Coastal Shipping Commission exceeding 65 m. but not exceeding 135 m. in length overall the Masters of which hold a current Pilotage Exemption Certificate valid with regard to the Port;

(d) subject to the consent in writing of the Harbour Master first being obtained, vessels which are not registered in the Commonwealth of Australia exceeding 35 m. but not exceeding 65 m. in length overall, the Masters of which hold a current Pilotage Exemption Certificate valid with respect to the Port; and

(e) vessels of war.

It is intended that only outbound vessels of 150,000 d.w.t. or more will be required to take a Pilot beyond Port Limits into the Pilotage Area. However, if a Master requests the services of a Pilot then the Port will meet that request where in the opinion of the Harbour Master it is reasonable to do so. Generally speaking vessels under 150,000 d.w.t. will be authorised by the Harbour Master to proceed without a Pilot in the Pilotage Area. Within Port Limits vessels will require a Pilot unless exempted by Regulation 74.

Pilots employed by the Port Headland Pilot Company receive extensive training, both locally and overseas. It takes an average 2 years before a Pilot is classed as an "unrestricted" Pilot, that is to say he is allowed to handle any size of vessels and is not restricted to a certain tonnage. All unrestricted Pilots have attended Shiphandling Courses at the Port Revel Marine Research and Training Centre at Grenoble, France, where the principles of shiphandling are studied.

The Port has been modelled on the simulator at the Australian Maritime College at Launceston, Tasmania, ensuring that Pilots receive training in all areas of the channel experiencing a variety of wind, tide and vessels.

Helicopter Boarding: Pilots will board suitable vessels by means of a helicopter which will land on a hatch cover. Normally this applies to bulk carriers and not general cargo vessels, oil or gas tankers - vessels such as these are not suitable for helicopter and will be boarded by launch. The helicopter is a float-equipped Bell 206B Jetranger weighing, when filled to capacity, 1,360 kilos. It is fitted with VHF in the Marine band.

Where a vessel is to be boarded by helicopter, the vessel must meet the following criteria:

(a) A hatch cover capable of supporting 2,722 kilos, that is, possessing a load density of not less than 380 Kg./sq.m. and with minimum dimensions of 10.16 m. If cambered, then the angle should not exceed 7.5°.

(b) Mark a *Termination Area* on the hatch cover with a circle of not less than 15 cm. width and 10.16 m. diameter.

(c) Mark a *Touch Down Area* within the termination area with a letter "H" having sides of 2.0 m. and width 13 cm. or a spot not less than 30 cm. in diameter. The *Touch Down Area* is to comprise a square space having sides measuring no less than 7.0 m., the centre of which will be concentric with that of the termination area, and shall be free of lifting lugs, wedges, ventilators and any other obstructions which are likely to hazard the flotation system. When the floats are positioned within the touchdown area as described above, the main rotor shall be contained within the termination area.

(d) The markings in (b) and (c) above shall be white or yellow on a dark background.

(e) Paint on handrails, lugs, ventilators and other obstructions on the hatch cover, should be a distinctive colour which shall be highly visible by day or night.

(f) Surrounding the termination area, there shall be an area not less than 7 m. in width in which there shall be no obstructions likely to hazard the rotor system (i.e. higher than 0.5 m. above the hatch cover level). Two approach paths, at least 150° apart in azimuth, each approach path having a minimum of 20.32 m., and being free of all obstacles, for an approach gradient of 40°, up to a height of 200 ft.

(g) The combined termination area and obstruction-free area in (f) shall comprise the *Helipad Area*. No ship's personnel shall be within this area during helicopter operations unless they are below hatch cover level.

(h) *Ensure that all hatch wires, derricks, cranes, aerials, etc., are clear of the approach paths to the Helipad Area. All loose objects must be removed from this area.*

(i) The approach paths to the helipad across both sides of the ship shall be free of obstructions higher than 0.5 m. above hatch cover level.

(j) An officer shall be available to escort the Pilot to and from the helipad area.

(k) Ships departing the Port must wash down the helipad before the helicopter lands (day and night).

In Addition for Night Operations:

(a) The termination area shall be illuminated with floodlights situated outside the helipad area, with the light beams directed downwards on to the hatch cover, in such a manner as not to blind the helicopter pilot.

(b) An illuminated wind indicator shall be displayed in a conspicuous position clear of the helipad area and easily visible from the air (e.g. a wind sock or answering pennant).

(c) On request, when other ships are in the area, provide a means of identification by flashing a light towards the helicopter on approach.

Mimimum Fire Fighting Requirements:

(a) Officer-in-Charge, with two others, each of the latter manning a fire hose, and all three wearing highly visible coloured vests. They should be stationed clear of, but close to the termination area.

(b) Fire hose nozzles of the dual purpose type.

(c) Inductors and dipsticks connected to hoses for use with foam.

(d) Drums of foam-making compound FC3034 (FFE Number) or equivalent, one at each fire hose position and sufficient to make 14,000 litres of foam.

(e) Dry powder extinguishers — 45 kg.

(f) Carbon dioxide extinguishers — 16 kg.

(g) One fire proximity suit.

(h) Fire resistant blankets and gloves.

Radio Procedure Ship/Helicopter: Before landing, the helicopter pilot must receive clearance to land on VHF Channel 16 as follows:

"(Name of ship) this is Port Hedland Pilot Helicopter, request clearance to land".

"Port Hedland Pilot Helicopter this is (name of ship), you are clear to land".

Vessels should be ready to advise the helicopter of the relative wind across the deck.

Boarding by Pilot Boat: When boarding by pilot vessel, it is most important that a lee be given to allow the Pilot to board. Generally ships will be requested to be underway prior to pilot boarding. Failure by ships to afford a lee may result in the pilot being unable to board, with consequent delay.

All vessels, where the Pilot is boarding by boat, must rig a ladder in accordance with "International Maritime Organisation SOLAS Regulations". Under SOLAS Chapter V, Regulation 17 amended in 1973 by I.M.O.'s Resolution A263 (VIII) and in 1979 by Resolution A426 (XI), the following points are stressed:

(a) The rigging of the pilot ladders and the embarkation and disembarkation of Pilots thereby, shall be supervised by a responsible officer of the ship.

(b) Every pilot ladder shall be secured in a position clear of any possible discharges from the ship, and so that each step rests firmly against the ship's side.

(c) Every pilot ladder shall be secured in a position where the pilot can gain safe and convenient access to the ship after climbing not less than 1.5 m. and not more than 9.0 m.

(d) Whenever the distance from the water to the point of access to the ship exceeds 9.0 m., access must be by means of a combination of a pilot ladder and an accommodation ladder.

(e) Adequate lighting must be provided at night.

(f) Manila manropes of between 28 mm. and 32 mm. in diameter should be rigged on each side of the ladder for its full length.

(g) The ladder should be clean.

Failure by Masters to comply with the requirements outlined above has, in the past in Australian ports, resulted in delays to shipping and in some instances heavy costs against the vessel concerned.

Pilot Ladder Specifications:

Length of spreaders not less than	1,800 mm.	(5 ft. 10 in.)
Length of steps not less than	480 mm.	(1 ft. 7 in.)
Width of steps not less than	115 mm.	(4.5 in.)
Thickness of steps not less than	25 mm.	(1 in.)
Side ropes'		
circumference not less than	60 mm.	(2.25 in.)
diameter not less than	20 mm.	(0.75 in.)
Spacing of steps	300 mm. – 380 mm.	(1 ft. – 1 ft. 3 in.)
Recommended space between top of one step and underside of the one above	310 mm.	(12.25 in.)
Recommended clear space between pairs of side ropes (not specified by SOLAS).	400 mm.	(1 ft. 4 in.)

The size and spacing of components can vary considerably from one pilot ladder to another within the requirements of the SOLAS Regulations.

ANCHORAGE: When vessels are required to anchor they should do so clear of the main channel but inside the Port Limits. The holding ground is reported as being good on both Eastern and Western sides of the channel. Vessels should not anchor in the designated Spoil Ground Dumping Areas or in the Prohibited Anchorage as indicated on Charts AUS. 53 and AUS. 52.

Departure: If the Master wishes to anchor outside prior to proceeding to sea, he must advise the Pilot when leaving the berth, and the Pilot will advise suitable anchorage. The Master will advise the Pilot of estimated time of departure in order that this may be reported to the Port Control.

RESTRICTIONS/MAX. SIZE: Vessels of up to 315 m. LOA are now able to use the port by day and by night, whereas prior to improvements these vessels were restricted to daylight movements only.

Subject to the following conditions the port may be used by vessels up to 330 m. LOA: All movements in the channel confined to daylight hours; wind speed not to exceed a steady 25 knots; inward movements to be confined to times when the currents are the minimum possible for the tide. Owners of such vessels should provide the Port Authority with a general arrangement plan at least 2 weeks prior to vessel's arrival.

Port Hedland Port Development: To determine the maximum allowable departure draft and departure times, a computer programme has been provided which takes into account a number of factors which make the calculation of departure draft rather more complex than before. These factors include varying channel depths, and varying heights of tide throughout the passage of a vessel from the Inner Harbour out to "C1" Beacon, a distance of some 45 km., and involving a transit time of about 3 hours from departing the berth. Also included are the sea state, the required Under-Keel Clearance, an allowance for the varying speeds of ships and an allowance for the variation in tide heights between those predicted for the Inner Harbour and those experienced offshore.

The computer programme currently divides Under-Keel Clearance into 3 different swell states. These were established after investigation of all pertinent factors by the Dutch Research Group MARIN, the Authority's engineering consultants on this matter, RSF and the Port Hedland Port Authority. Further refinements to the programme are under investigation. Sea state data for the programme is provided by 2 waverider buoys sited near Beacons No. 15 and 16.

A new Dynamic (real time) Under Keel Clearance program has recently been commissioned.

Swell States:

State A	Swells less than 0.25 m. in amplitude. These occur for approximately 64% of the year.
State B	Swells of 0.25 m. to 0.50 m. in amplitude. These occur for approximately 30% of the year.
State C	Swells greater than 0.50 m. in amplitude. These occur for approximately 6% of the year, and include swells generated by the passage of cyclones.

Under-Keel Clearance:

Location	*Swell Type A*	*Swell Type B*	*Swell Type C*
Harbour	1.20	1.20	1.20
Hunt Point	1.30	1.40	1.60
Beacon 30	1.40	1.80	2.30
Beacon 24	1.60	2.00	2.60
Beacon 16	1.60	2.00	2.60
25 km. (Beacon "C14")	1.80	2.20	2.90
39 km. (Beacon "C4")	2.10	2.70	3.50
44 km. (Beacon "C1")	2.20	2.90	3.70

The UKC scales take account of any likely increase in swell conditions in the 12 hours prior to sailing. The maximum loading drafts will be determined by the Port Authority at 12 hours prior to sailing and will not be varied in this period.

It is pointed out that "overdraft" will not take place because the UKC's (and the loading drafts) contain an allowance for any likely increase in swell conditions in the interim 12 hour period.

Average times between:

Last Lines to Harbour	5 minutes
'A' Berth to Hunt Point	31 minutes
'B' Berth to Hunt Point	31 minutes
Hunt Point to Beacon 30	29 minutes
Beacon 30 to Beacon 24	17 minutes
Beacon 24 to Beacon 16	15 minutes
Beacon 16 to Beacon 12	12 minutes
Beacon 12 to Beacon 4	36 minutes
Beacon 4 to Beacon 2	12 minutes

The computer programme also maintains the minimum UKC at each of the channel control points if the vessel is 15% faster or 20% slower than the above transit times.

This is required because it is not necessarily known at departure whether a vessel will be a fast or slow vessel. The above lower and upper bounds on transit times were derived from the analysis of actual transit times for large vessels departing Port Hedland over a 3 year period, and is an on-going analysis.

Example of under-keel clearance programme print-out for a 200,000 d.w.t. vessel on an average flood tide:

		Min.	*Average*			*Fast*			*Slow*		
Location	*Depth* (m.)	*UKC* (m.)	*Time* (hr.)	*Tide* (m.)	*UKC* (m.)	*Time* (hr.)	*Tide* (m.)	*UKC* (m.)	*Time* (hr.)	*Tide* (m.)	*UKC* (m.)
Harbour	14.60	1.20	0945	6.37	4.27	0944	6.36	4.26	0946	6.38	4.28
Hunt Pt.	14.10	1.40	1026	6.73	4.13	1019	6.69	4.09	1035	6.77	4.17
Beacon 30	14.20	1.80	1106	6.79	4.26	1053	6.80	4.28	1123	6.71	4.17
Beacon 24	14.40	2.00	1125	6.70	4.33	1110	6.78	4.41	1147	6.52	4.14
Beacon 16	14.60	2.00	1144	6.55	4.30	1125	6.70	4.47	1209	6.24	3.98
Beacon 12	14.70	2.20	1200	6.37	4.17	1139	6.60	4.41	1228	5.94	3.73
Beacon 6	17.00	2.50	1236	5.81	5.84	1209	6.24	6.28	1311	5.09	5.14
Beacon 4	15.00	2.70	1248	5.58	3.60	1219	6.09	4.09	1325	4.77	2.83
Beacon 2	15.50	2.90	1301	5.31	3.79	1231	5.90	4.36	1341	4.40	2.94

Arrival drafts:

The port experiences strong winds on occasions and in order to minimise windage during transit of the channel and berthing, vessels should be ballasted to the following minimum arrival drafts:

D.W.T.	*Forward Draft* (m.)	*Aft Draft* (m.)
Up to 10,000	2.0	No more than 0.6 m.
10,000 to 20,000	2.0 to 2.5	of the propeller
20,000 to 30,000	2.5 to 3.0	to be exposed
30,000 to 50,000	3.0 to 5.0	6.5
50,000 to 100,000	5.0 to 7.0	6.5 to 7.5
100,000 to 150,000	7.0 to 8.0	7.5 to 8.5
150,000 to 200,000	8.0 to 8.5	8.5 to 9.5
200,000 to 250,000	9.0	9.5 to 10.0

Where a vessel's tonnage falls between any of the figures mentioned above, Masters are urged to interpolate when calculating drafts.

All vessels should advise their intended arrival draft to the Harbour Master 24 hours prior to their arrival. Vessels which do not meet these minimum draft requirements may have their berthing delayed. Vessels which may have difficulty in meeting the above drafts should notify the Harbour Master accordingly.

Vessels over 100,000 d.w.t. may be instructed to vary their drafts from the above prior to berthing, because of tidal conditions which may affect air draft under the ship loader.

HEALTH: Masters of all vessels arriving from overseas and wishing to proceed direct to a berth must apply for clearance by radio.

At least 24 hours before arrival the answers to the following questions should be radioed to the Ship's Agent who will submit the information to the Quarantine Officer:

A. Name, type and nationality of vessel.

B. Itinerary for last 21 days. If over 21 days from last port, please give name of port and date of departure.

C. Name of first Australian Port and ETA.

D. Number of crew.

E. Number of passengers.

F. Have you had any deaths on the voyage? If so, please give details.

G. Have you had any cases of illness during the last 21 days with a fever of 38°C or above, and
   (a) accompanied by rash, jaundice or glandular swelling, or
   (b) accompanied by diarrhoea lasting longer than 24 hours.

H. Have you had persons suffering from venereal disease during the voyage?

I. What live fish, birds, reptiles or other animals are you carrying? Ships' pets should be mentioned.

J. Have you carried livestock on previous voyages in the last six months? If yes, please advise type of livestock, date of voyage and ports visited. Have all stock-carrying compartments been thoroughly cleaned and disinfected?

K. Do you request radio pratique or radio approval to berth?

If the answers to the above are acceptable, "Approval to Berth" or "Radio Pratique" will be granted.

Vessels from overseas which do not submit health reports must anchor at the Quarantine Line and await quarantine clearance. Until clearance is received, no persons other than the Pilot, Port Health Officials and Customs and Excise Officers will be allowed to embark or disembark. Until cleared, vessels must show the appropriate day or night quarantine signals.

Whilst alongside in Port Hedland rat guards must be placed on all lines.

RADIO/VHF: Vessels trading to Port Hedland use Sydney, Perth and Darwin Radio Stations. There is no Radio Station in Port Hedland. Perth Radio transmits navigation warnings, including alterations to navigation aids at Port Hedland.

Vessels bound for Port Hedland should advise the Harbour Master 48 hours and 24 hours before their arrival, indicating their draft, fore and aft, and last port (Address: Harbour Master, Telex No. AA 99213, Port Hedland. If telex number not included messages may be delayed).

VHF: *Port Control Tower:* This communication centre is normally manned 24 hours a day and is equipped with 5 VHF radios covering the entire marine band. The International Call sign is "Port Hedland Harbour". All VHF communication is recorded on an 8 track tape recorder.

Instructions concerning shipping movements, allocation of berths and related matters are passed to ships, Pilots and berthing gangs through the Control Tower. In addition, relevant shipping information, in particular changes to orders out of office hours, are also passed to agents, customs and quarantine as required.

Vessels are required to obtain permission from the Control Tower before entering, leaving or moving from place to place within the Port and are required to verify equipment serviceability. This verification on completion, must in the case of non-piloted vessels, be passed to the Tower by radio or other suitable means. Where a vessel is piloted, an Equipment Check List must be handed to the Pilot.

During the cyclone season in North West Australia, ships alongside will be instructed to set and maintain watch on VHF Channel 16 during the early stages of the "alert" phase.

Use of VHF: Vessels equipped with VHF must maintain listening watch on Channel 16 at all times when anchored inside the Port Limits. Should a vessel at anchor wish to communicate by VHF with another vessel then it must first advise "Port Hedland Harbour" who will allocate a working channel.

The Control Tower is equipped with a Krupp Atlas 8600 ARPA radar with a stated range of up to 72 nautical miles.

Other equipment includes a telex (receiving telexes only), wind, tide and wave recording instruments and an Aldis signalling lamp. The Port Control Tower will advise tide height (above chart datum) and wind strengths on request.

A Marine Citizens Band radio is also installed and a listening watch is maintained on 27.88 MHz. for distress calls from private pleasure craft.

TUGS/LAUNCHES: Six tugs, operated and managed by Adelaide Steamship Industries, are stationed in Port Hedland. The fleet consists of:

	Gross Tonnes	*Brake (h.p.)*	*Bollard Pull (tonnes)*	*Type*
M.V. Warang	425	3600	50	Z-pellor
M.V. Warilla	425	3600	50	Z-pellor
M.V. Corunna	427	3600	50	Z-pellor
M.V. Coongan	427	3600	50	Z-pellor
M.V. Turner	365	3600	50	Z-pellor
M.V. Degrey	312	3156	52	Twin Screw

Tugs can also be utilised for the shipment of fresh water to vessels at the outer anchorage at the rate of approximately 80 tonnes per tug.

Stirling Marine Services Pty., Ltd., also operate launches and workboats, ranging from 10 m. to 13 m., which are available for use as ferries, line boats, etc.

BERTHING: There are 5 berths situated within the Inner Harbour, two of which are owned and operated by the Port Authority. Of the three BHP Iron Ore berths, two are located at Nelson Point and one at Finucane Island.

Moorings: The following telex was received by a vessel from Agent in September 1991:

Quote

Please confirm following:

Heavy wire ropes are required to have the ends terminated with a 9.0 m. rope, spring finished with a standard eye for placing over the bollards and slip hooks.

All mooring ropes and wires to have a 6 m. tail of light rope spliced into the eye to facilitate the transfer from the line boats to the dolphin.

Unquote.

Berth No. 1: This landbacked berth lies in a 347° – 167° direction and has a length of 213 m., with a mooring dolphin 58 m. from the Northern end. Depth alongside is 11.2 m. It is protected by a "Raykin" fender system. The height of the wharf deck is 9.5 m. above datum with an apron width of 22 m. Three access ramps connect to a dry cargo storage shed, adjacent to the berth. The storage shed has a floor area of 487 sq.m. and a further 12,100 sq.m. of open hard standing space is available alongside the shed for the holding or movement of cargo. The berth, shed and open area are all floodlit for security and working of cargo. General cargo is normally handled by forklift vehicles to and from the vessels or loaded direct on to road trucks. Vessels up to 230 m. LOA can be accommodated at this berth which is equipped with 1 × 102 mm. and 2 × 203 mm. bunker points (diesel only), fresh water hydrants, power and telephone connections. Vessels wishing to have telephones placed on board should advise their agents at least 48 hours prior to arrival.

A mechanical bulk loading facility with a capacity of 700 t.p.h., operated by Pilbara Stevedores Pty.Ltd., is on this wharf.

Public telephones with STD facilities are located alongside the cargo shed at the rear of the wharf.

Berth No. 3: Berth No. 3 is situated to the South of Berth No. 1 and is constructed of steel piles with a steel and concrete decking. The wharf runs in a 117°–297° direction for a distance of 183 m. with dolphins 46 m. ahead and astern to facilitate the mooring of vessels. The height of the wharf deck is 9.5 m. above datum with an apron width of 13 m. The full length of the wharf is protected by a "Raykin" fender system. On this wharf is a cargo shed with an area of 1,600 sq.m. supported by a further open hard standing area of 4,200 sq.m. immediately behind the shed. As with Berth No. 1, all areas are floodlit, and cargo is handled by forklifts to or from the storage areas. Depth alongside in the mooring basin, which is 275 m. long, is 13.2 m. and vessels up to 230 m. L.O.A. may berth.

A mechanical bulk loading facility with a capacity of 1,500 t.p.h. is owned and operated by the Leslie Salt Company on this wharf.

Fresh water is available at 50 t.p.h. and bunkers can also be obtained through 203 mm. outlets.

A public telephone offering STD facilities is located on the Eastern corner of this berth.

BHP Iron Ore Ltd. Wharf – Nelson Point: This wharf consists of 2 adjacent berths known as "A" and "B" Berths, which form a continuous line in a 117°–297° direction from a position East of the Berth No. 3 towards Nelson Point.

The westward berth is known as "A" Berth and is equipped with No. 2 shiploader whilst the eastward berth is known as "B" Berth and is equipped with No. 1 shiploader.

The overall length is 658 m. and the shiploaders can travel from one berth to another with an overall travel between stops of 564 m.

The wharf has a berth pocket 65 m. wide, 679 m. long, dredged to 19.0 m. below chart datum and has, in addition, a mooring dolphin located between this berth and the Berth No. 3 approximately 44 m. from the Western end, with access being gained via a walkway from the MNM "A" Berth.

The wharf is equipped with 47 Bridgestone rubber fender assemblies, each comprising 2 cell-type rubber energy absorbing units fronted by a steel panel which, in turn, is faced with low-friction polyurethane wear material. The wharf itself is of steel pile construction with concrete capping, equipped with bollards and quick-release hooks along each berth.

The two shiploaders are fully retractable and have an average loading capacity of 6,500 tonnes per hour each. Shiploader No. 1 has a boom reach of 25.8 m. from the fender face and the height of the underside of the shiploader is 24.5 m. above datum. Shiploader No. 2 has a boom reach of 28.9 m. and a height above datum of 27.5 m.

Vessels will normally swing on entry and berth starboard side to the berths. Starboard gangways should be rigged prior to arrival so that no delay is incurred in the boarding of Quarantine and Customs Officers upon berthing. Bunkers are not available on these berths, although emergency supplies of fresh water may be requested. Fresh water outlets are available, situated at the wharf face, close to the bridge position of vessels mooring.

BHP Iron Ore (Goldsworthy) Ltd.Pier – Finucane Island: This is situated on the Western side of the Harbour on Finucane Island, and lies S.W. of Hunt Point Beacon (No. 47). The face of the jetty extends over a distance of 220 m. and lies in the 017°– 197° direction. It consists of 7 breasting dolphins with Bridgestone cell fenders on all 7 dolphins.

There are 2 dolphins ahead and 3 astern of the jetty to facilitate the mooring of vessels. These dolphins are set back from the line of the berth face and have no fenders.

The distance from the Northern Mooring Dolphin to the Southern Mooring Dolphin is 430 m. and the dredged mooring basin 370 m. long, 61 m. wide, has a depth of 17.0 m. below datum. The shiploader has an overall length of travel of 225 m. and a max. capacity of 4,500 t.p.h.

Vessels will normally berth port side to, heading out to sea. Ship's gangways should be rigged prior to berthing on the off-side as gangways are not acceptable on the jetty. A launch service is available to ferry personnel to the town. Ship's personnel are not allowed on the loading facility. Provision for a future second loading berth ahead of the existing jetty has been made.

The height of the shiploader underside in the raised position above chart datum is 24.1 m.

The loader is not completely retractable behind the berth face but retracts to a position 0.84 m. behind the fender line.

Fresh water and fuel are not available at this berth.

STEVEDORES: *Waterside Labour:* All employment of ship and shore labour for the working of cargo vessels is drawn through Pilbara Stevedores' labour force.

There is a current strength of 9 permanent waterside workers. Casual labour is requisitioned as required to supplement the permanent work force.

Under present manning scales, most vessels can be worked on a 24 hour day.

There are 5 "closed holiday" days: Labour Day, Good Friday, Anzac Day, WWF Picnic Day and Christmas Day. Normal working days are Monday to Sunday with shift starts at 0800 hrs. and 2000 hrs.

Payment to the waterside workers for their labour is based on the following schedule:

Day Shift	Monday to Friday	0800 – 1500	Single time
		1500 – 2000	Double time
Night Shift	Monday to Friday	2000 – 0300	Double time
		0300 – 0800	Treble time
Day Shift	Saturday	0800 – 1500	Double time
		1500 – 2000	Treble time
Day Shift	Sunday	0800 – 1500	Double time & half
		1500 – 2000	Treble time

No stevedoring operations are carried out on any of the private berths within the port.

MEDICAL: Medical attention may be arranged through the Agent. No person will be attended unless he is provided with a letter from the Master authorising such treatment. All costs incurred will be charged to the vessel.

The Government operated Regional Hospital of approximately 110 beds, caters for most medical requirements. Where necessary, seriously ill patients are flown to Perth in aircraft of the Royal Flying Doctor Service. The local ambulance service is well organised both in equipment and manpower, and additionally, the pilot helicopter may be chartered for the emergency uplift of sick or injured seamen from vessels standing offshore.

TANKERS: *Connections:* 10 in. lines with 8 in. flexible hoses. Discharge rates depend on grade and consignee.

Local Installations: Shell, B.P. and Ampol.

DENSITY: Average 1026.

FRESH WATER: See individual berths.

FUEL: See individual berths.

Bunkering Agents: B.P. Australia Ltd., Tel: 73-1422. Shell Co. of Australia Ltd., Tel: 73-1365. Ampol Ltd., Tel: 73-1042.

CONSULS: At present, there is no Consular representation at Port Hedland.

REPAIRS: Comprehensive repairs can be effected. Radar, radio and Decca servicing and repairs are available. Welding, engineering, fitting and turning, electrical, plumbing, refrigeration and air conditioning, diving and building services are located in close proximity to the Port. Limited fumigation facilities are available. Sand-blasting equipment, cranes, compressors, etc., may be hired.

SURVEYORS: An Australian Maritime Safety Authority (AMSA) surveyor is located in Port Hedland, and can be contacted by telephone 732598 (after hours 731770), Fax: 732887 and mobile 018 937759.

There is a firm of Marine Surveyors based in the port. Comprehensive survey inspections and reports can be prepared by Caleb Brett, Tel: 732310 (after hours 732360).

CARGO GEAR: Ship's gear used. Mobile cranes up to 70 tons capacity may be hired. Crane of 120 tons capacity owned by BHP Iron Ore.

The following mobile equipment is owned and operated by Pilbara Stevedores Pty.Ltd.:

1 × 13.0 tonne Forklift
2 × 6.0 tonne Forklifts
1 × 5.0 tonne Forklift
1 × 3.0 tonne Forklift
1 × 10.0 tonne Mobile Crane

When not engaged on cargo operations this equipment is available for hire.

AIRPORT: An average of 5 return jet flights operate daily between Perth and Port Hedland. A weekly international flight operates between Port Hedland and Bali in Indonesia. In addition, several charter companies operate from the Port Hedland Airport, which offers a high standard of service comparable to that of city terminals.

TIME: See "General" before first port.

HOLIDAYS: See "Stevedores".

POLICE/AMBULANCE/FIRE: Police 731444; Ambulance 731800; Fire 732555; Hospital 732144.

CERTIFICATES: The following documents should be available for inspection:

Ship's papers, including the following certificates:
(a) Register.
(b) Load Line.
(c) Safety Equipment.
(d) Safety Radio.
(e) Safety Construction.
(f) Australian Light Dues Receipt.
(g) State Light Dues Receipt
(h) Articles of Agreement and Account of the Crew (or equivalent).
(i) Oil Record Book.
(j) Register of Cargo Gear.
(k) Gas Free Certificates for OBO's.
Valid Derat or Exemption Certificate.
Crew's Identity Documents.
International Vaccination Certificates of all persons aboard.

STOWAGE FACTORS: Most recent stowage factors of iron ore cargoes loaded at Port Hedland have been approximately as follows:

Fine Ore	2,723 kg. per cu.m.,	or 0.3672 cu.m. per tonne.
Lumpy Ore	2,355 kg. per cu.m.,	or 0.4247 cu.m. per tonne.
Run of Mine Ore	2,643 kg. per cu.m.,	or 0.3784 cu.m. per tonne.
Yandi Ore	1,970 kg. per cu.m.,	or 0.508 cu.m. per tonne.
Marra Mamba	1,800 kg. per cu.m.,	or 0.556 cu.m. per tonne.

However, as these factors sometimes vary from cargo to cargo, it is recommended that Masters check with loading Agents for each shipment before finalising stowage plans.

SHIP SUPPLY SERVICE: Pilbara Marine Port Services, 15 Kingsmill Street, Port Hedland, W.A. 6721. Tel: (091) 733 445. Fax: (091) 733 446.

Services: Pilot boat services to vessels that cannot be serviced by helicopter. Passenger launches for Agents, crew ferries, providores to vessels at anchor in Outer Anchorage or berth at Finucane Island. Stores run, garbage collection and line running.

GARBAGE DISPOSAL: No facilities available.

WASTE OIL DISPOSAL: No facilities available.

SEAMAN'S CLUBS: Seafarers' Centre, Lower Wedge Street, Port Hedland. This Centre, which is jointly administered by the Missions to Seamen, British Sailors Society and the Apostolatus Maris, is located in Wedge Street, adjacent to the Port Authority workshop.

Church services can be arranged to suit individual denominational needs.

A licensed bar is operated. There is a gift and souvenir shop together with facilities for international telephone calls, foreign money exchange and library exchange. Recreational facilities include pool tables, darts, table tennis and TV. Bus tours may be arranged.

The Centre opens as follows:
Monday to Friday 1100 hs. – 1400 hrs. and 1800 hrs. – 2200 hrs.
Saturday 1600 hrs. – 2200 hrs.
Sunday 1600 hrs. – 2030 hrs.

All facilities are offered during those hours, and a warm welcome is always extended to all seamen visiting the Centre.

CURRENCY: Australian Dollar.

DELAYS: Delays of port operations, including delays of other vessels waiting for berth, caused by a vessel which for any reason is not prepared and able to move from the berth when so ordered, are chargeable to the vessel which causes such delays.

PROVISIONS: Supplies of food, liquor, cigarettes, etc., are readily available in Port Hedland.

Providores will generally meet vessels on arrival but early advise to the ship's Agent of a vessel's requirements is desirable.

GENERAL: *Tonnage Dues:* All vessels entering the Port, excluding Commonwealth or fishing vessels, are subject to payment of a tonnage fee based on the GRT of the vessel. No additional fee by way of berth usage or berth occupance levy is charged against ships lying alongside the Authority's two berths.

Mooring Gangs: Gangs for the mooring or unmooring of vessels using Port Hedland Port Authority's berths are supplied from Pilbara Stevedores' permanent labour force.

Mooring and unmooring charges vary depending on circumstances. A schedule of updated charges may be obtained from Pilbara Stevedores on application.

Oil Pollution: The main stocks of oil dispersant and spray equipment, provided by AMSA under the National Plan for use on the North West coastline, are stored in Port Hedland.

Further information on this service can be obtained from The Commonwealth Marine Surveyor.

Explosives Regulations: Port Hedland Port Authority Regulations concerning the Regulation of Ships, Handling of Cargo, Inflammable Liquids and Oils, Noxious, Dangerous and Inflammable Goods and Explosives are obtainable from the Port Authority.

It is a requirement of the Port Authority that a copy of these Regulations be displayed on each vessel carrying Inflammable, Noxious, Dangerous and Explosive Goods.

Whistle Signals: It is an offence to sound a ship's whistle whilst alongside a harbour berth unless permission is obtained from the Port Control Tower - Call sign "Port Hedland harbour".

Weather Conditions: For full details refer to "Australia Pilot Vol. V". The season for cyclones on the North West coast of Australia is during the Summer months - November to April - with an average of one cyclone per year.

A weather observation station at the Port Hedland Airport is equipped with long distance weather radar and this unit, together with similar stations at Broome, Learmonth and Dampier - aided by meteorological satellite data - has proven invaluable in cyclone tracking. To assist in this service, six hourly weather reports are invited from Masters by the Commonwealth Department of Meteorology.

Climate: Port Hedland's climate ranges from extremely hot and, at times humid during the Summer to pleasantly warm days and cool nights during Winter (May to September).

Using averages taken over 80 years, Port Hedland's coldest month is July, with an average maximum temperature of 27°C and a minimum of 12°C. The hottest month is December, with an average daily maximum of 37°C and a minimum of 24°C although during Summer maximum temperatures of 46°C are not uncommon.

The average yearly rainfall is 307 mm. and rain falls on an average of 31 days per year. However, this amount of rain can fall in a very short period during the cyclone season and long very dry spells without rain can be experienced.

Crew Members Left Ashore at Time of Departure: Deserters: Masters are to inform the Customs Boarding Officer or Agent at the time of vessel's departure if any members are absent without leave from the vessel. This applies even if the vessel is continuing on to an Australian port. Customs require that all crew members' identity documents by held by the Master at all times whilst in Australian waters. The Master will be required to complete a declaration as to the crew member's absence. Customs may also examine the absent crew member's personal effects.

Repatriation and Hospitalisation: No crew member may be signed-off any vessel trading between Australian ports and overseas ports without prior permission of the Sub-Collector of Customs.

Agents wil be required to sign maintenance guarantees covering crew members landed for hospital treatment and repatriation.

Crew members may be hospitalised without Customs permission if a medical emergency arises. Customs must be informed of this as soon as possible after hospitalisation. If a crew member does not rejoin a vessel on departure, procedures will be identical to repatriation.

Stowaways: No unauthorised person should be allowed aboard the vessel. Cases of attempted stowaway have occurred. Masters should take all necessary care and precautions to prevent stowaways.

Any stowaways aboard on arrival should be reported to the Customs Boarding Officer to prevent their unauthorised landing. It should be noted that all responsibility for the repatriation of stowaways is to the account of the vessel concerned.

Services: Security patrols, garbage disposal, laundry and dry cleaning services are available and can be arranged through ships' agents.

NOTICE: To ship's Agents – Dated May 1995.

Vessels arriving without Chart Aus. 53 – Approaches to Port Hedland: Following the recent Port Users' meeting and subsequent discussions with the Australian Maritime Safety Authority (AMSA), the Authority has decided to implement the following procedure for vessels arriving at Port Hedland.

It is now compulsory for ALL vessels arriving off the entrance to Port Hedland to have on board a current edition of Chart Aus. 53 – Approaches to Port Hedland.

Vessels, which do not have a copy of the said chart, will not be granted an exemption to approach or to enter the anchorage area.

It would be appreciated if you would notify Owners of the foregoing, and as an interim measure, would it be possible for you to enter same on your arrival information telex/facsimile?

It is proposed that vessels, which do not have the relevant chart, will have a chart delivered by helicopter or pilot boat, at the Owner's expense.

I would further reiterate that the recommended arrival route into Port Hedland anchorage is via the Eastern approaches.

By copy of this letter, Port Marine Officers will be requested to question arriving ships prior to entry being granted.

Your co-operation in this important safety procedure is appreciated.

Signed: Harbour Master.

AUTHORITY: Port Hedland Port Authority, P.O.Box 2, Port Hedland, Western Australia 6721. *Tel:* (091) 73 1400 (office hours: 0800 – 1630 hrs.). Port Control Tower; (091) 73 1019 (24 hours). *Telex:* 99213. *FAX:* (091) 73 1760. *Contact:* Captain I.Baird, General Manager. Captain D. Baker, Harbour Master.

AGENT: Patrick Sleigh Shipping Agencies Pty.Ltd., 1937 Pyramid Road, Karratha, W.A. 6714, Australia (Postal Address: P.O.Box 152, Karratha, W.A. 6714). Tel: (091) 44 4329. Telex: 198236 PATSLE. FAX: (091) 44 4329. Seagram Code 6DPATSLE.

PORT HUON, Tasmania: 43.10 S. 146.59 E. (See Plan)

For Additional Information see "Hobart".

PORT LIMITS: 'Harbour' means so much of the waters of the River Derwent and its estuary as lie to the Northward of a line drawn from the Derwent Light (on the Iron Pot Islet) to Kelly Point, on North Bruny; together with so much of the D'Entrecasteaux Channel as lies to the Northward of a line drawn from the Southern end of Partridge Island to Southport Island; and together with all bays and estuaries opening either into the said River Derwent or the said D'Entrecasteaux Channel.

DOCUMENTS: As for all Australian Ports.

PILOTAGE: Pilotage is compulsory for all vessels exceeding 35 m. in length. For vessels bound to Port Huon from the North, via the D'Entrecasteaux Channel, the Pilot boarding ground is on a line drawn from the Iron Pot Lighthouse (Chart AUS. 171 – Lat. 43° 03.7′ S., Long. 147° 25.5′ E. Gp.Fl. (3) W 9 secs. 20 m. 11 nautical miles); to Kelly's Point on the Northern tip of Bruny Island. For vessels bound to Port Huon from the South, the Pilot boarding ground is on a line drawn from the Southern end of Partridge Island (Chart AUS. 173 – Lat. 43° 24.6′ S., Long. 147° 06.0′ E.) to Southport Island. Notice of ETA and request for a Pilot must be advised at least 24 hours in advance. Confirmation or amendment of this ETA must be made not less than 6 hours prior to the vessel's arrival at the Pilot Station. For additional information on this section see "Hobart".

ANCHORAGE: There are no safe anchorage positions South of the pilot line. However, vessels wishing to anchor may be guided by the Pilot on VHF to positions in the D'Entrecasteaux Channel where there is good holding ground.

RESTRICTIONS: Navigation is on a 24 hour basis, however the draft of vessels navigating within Hospital Bay, Port Huon, is restricted to 9.0 m.

MAX. SIZE: Vessels of up to 190 m. long and 9.0 m. draft can be accepted at Port Huon Wharf, while vessels of up to 160 m. in length and 8.0 m. draft are about the maximum for the Australian Paper Manufacturers' Wharf.

HEALTH: The local medical practitioner boards vessels after berthing and acts for the Commonwealth Dept. of Health. Immigration/Customs Officers travel by road from Hobart and board after Pratique has been granted. Quarantine Authorities must be informed of suspected disease or fever at least 18 hours before arrival.

RADIO/VHF: See "Hobart".

TUGS: Tugs from Hobart are available for assisting vessels. However, because of the distance involved additional notice is required, and tug charges are at higher rates.

BERTHING:

Port Huon Pier: The East side has a quay length of 172.6 m., with a water depth of 7.6 m. and the West side a quay length of 203.4 m., with a water depth of 9.8 m.

Australian Paper Manufacturers Wharf: The berthing head has a length of 82 m. and a water depth of 8.2 m. This wharf is not utilised at present.

MEDICAL: A local doctor is available and a hospital is situated at Franklin (4 miles).

STEVEDORES: Labour allocated and supplied from Hobart.

FRESH WATER: Available only at Port Huon Pier.

FUEL: Limited supplies provided by road tanker from Hobart (40 miles). Fruit ships usually call at Hobart for bunkers.

GANGWAY/DECK WATCHMEN: See "Hobart".

OPENING/CLOSING HATCHES: See "Hobart".

CARGO GEAR: At Port Huon Pier, discharge/loading is by ship's gear and at A.P.M. Wharf a fixed conveyor belt system from the shore is used.

TELEPHONES: A telephone is connected to all vessels on arrival.

AUTHORITY: Marine Board of Hobart (See "Hobart").

AGENT: See "Burnie".

PORT KEMBLA, N.S.W.: 34.28 S. 150.54 E. (See Plan)

PORT LIMITS: In the absence of any specific clause in the Charter Party, the local custom is that a vessel, having obtained Pratique, is considered to be an "arrived ship" when it is anchored off the port and reported as such to "Port Kembla Harbour".

The Port Limits are within an arc 2.5 nautical miles radius from the end of the Eastern Breakwater.

CERTIFICATES/DOCUMENTS/HEALTH/CUSTOMS ALLOWANCES/CARGO GEAR: See "Melbourne".

PILOTAGE: Pilotage is compulsory for all foreign vessels and Australian Masters without an exemption; this service operates 24 hours per day. Pilots equipped with VHF.

The pilot boarding station is in position 3.4 miles N.N.E. of Entrance.

Coastal and Reef Pilotage: See "Torres Strait" for details.

RESTRICTIONS: An artificial harbour, formed by two breakwaters with an entrance of 305 m. and a depth of 16.75 m. ISLW at the entrance. Leading from the Outer Harbour there is an Inner Harbour Basin, which is entered through a 165 m. wide channel, having a depth of 15.25 m. ISLW. The port consists of the Outer Harbour and the Inner Harbour. In the Outer Harbour the swinging basin is approximately 457.2 m. with a minimum depth of 10.70 m., and in the Inner Harbour the swinging basin is approximately 365 m. with a depth of 15.25 m.

Under Keel Clearance: Inward vessels not less than 1.37 m. Outward vessels not less than 8% of vessel's draft (draft = 15.25 m. + height of tide ÷ 1.08).

MAX. SIZE: The deepening project at Port Kembla has been completed and the port can now handle vessels in the 150,000 d.w.t. range for ore discharge and coal loading.

The depths are now as follows:

Entrance Channel 15.25 m. ISLW.

Iron Ore Discharge Berths:

No. 1 Depth alongside 13 m. ISLW.

No. 2 Depth alongside 15.75 m. ISLW.

No. 2 Coal Berth: Max. LOA 300 m. Max. beam 45 m. Max. airdraft 23 m. Depth alongside 16.25 m. at LW.

Grain Terminal: Max. LOA 290 m. Max. beam 45 m. Max. sailing draft 15.20 m.–15.88 m., depending on tide. UKC of not less than 8% required for loaded vessels.

Arrival Draft: Agents and Masters are advised that to ensure a safe entry at all times, vessels shall have minimum drafts of 2% of LOA forward and 3% of LOA aft. The propeller should also be fully immersed. In windy conditions, it will be prudent to have the vessel ballasted as deeply as possible. Failure to ensure that these conditions are met may result in delays to entry.

HEALTH: Quarantine service is available 24 hours a day with Radio Pratique available.

RADIO/VHF: A continuously manned signal station (Port Kembla Harbour) maintains constant contact with the Pilot, pilot tender, tugs and launches. In addition, a VHF radio-telephone system provides communication for vessels at sea or at anchor.

Whilst anchored off the Port of Port Kembla, it is necessary to maintain radio watches, as officially a vessel is at sea until entering the breakwaters into the port. Port operations channel is VHF Channel 11.

TUGS: At the present time 4 tugs are available, 24 hours per day, provided previous notification is given.

The tugs have bollard pulls ranging from 45 tonnes to 50 tonnes.

Vessels over 250 m. LOA proceeding to the New Coal Berth require 4 tugs and vessels 200 m. – 250 m. require 3 tugs. Vessels less than 200 m. LOA require 2 tugs.

BERTHING: Outer Harbour:

No. 4 Jetty: Length 228.6 m. Width 15.5 m. Depth 10.8 m. to 4.6 m. Facilities for discharging sulphuric acid and anhydrous ammonia.

Inflammable Liquids Berth: T-head with 2 EMCO loading/discharging heads and dolphins, can accommodate vessels up to 185 m. LOA with depth 10.67 m. or 233 m. LOA with depth 9.0 m. This berth is also used for bunkering, however, no priority is given for bunkering ships over tankers.

No. 6 Jetty: Length 298.7 m. Width 30.5 m. Depth 9.8 m. for first 205 m., then sloping to 7.3 m. Bunker facilities available by road.

Inner Harbour:

Broken Hill Pty. No. 1 Products Berth (Private): Length 192 m., depth 11 m. Bunker facilities available.

Broken Hill Pty. No. 1 Bulk Berth (Private): Length 278 m., depth 13 m. Discharging by 2×17 ton grab unloaders, each nominally 600 t.p.h. Outreach 32 m. Loading by conveyor-fed loading head – coke 700 t.p.h. and coal 1,000 t.p.h. Bunker facilities available.

Broken Hill Pty. No. 2 Bulk Berth (Private): Length 310 m., depth 15.75 m. Discharging by 1×35 ton grab unloader, nominally 2,000 t.p.h. Outreach 32 m. Bunker facilities available.

Broken Hill Pty. Ro-Ro Terminal (Private): Depth 11 m. Accommodates starboard quarter ramp vessels up to 183 m.

Broken Hill Pty. No. 2 Products Berth (Private): Length 221 m., depth 12.2 m. 2×30.5 ton cranes. Access to the berth is limited by depths of 10.7 m. in the approach channel.

Ro-Ro Terminal: Depth 9.2 m. Accommodates stern ramp vessels up to 170 m. in length. Access to the berth is limited by depths of 10.7 m. in the approach channel.

No. 2 Coal Berth: Shiploading: The berth is dredged to 16.25 m. below LW and the access channel to 15.25 m. The geometry of the berth and shiploaders will permit the loading of 10,000 d.w.t. to 150,000 d.w.t. vessels.

The berth is equipped with 2 shiploaders with a peak capacity of approximately 3,900 tons/hr. each. The loaders function in the same manner as the reclaimers with one machine loading coal at full capacity whilst the other positions itself at the next hatch.

No. 1 Coal Berth: Length 240 m. Depth 11.6 m. at LW. One shiploader loads 300 tonnes/hr. Direct loading through either the rail tippler or road hopper to 1 loading head. Also see "Shipmaster's Report".

Multi-Purpose Berth: Maximum length 300 m. Depth alongside 16.25 m. This berth handles vessels of similar size to the New Coal Berth.

Grain Terminal: Maximum length of ship 290 m. Depth alongside 16.25 m. The berth and loading facilities are capable of loading ships of 120,000 d.w.t. Grain will be loaded by 2 shiploaders with a loading rate of 2,500 t.p.h. each, 1,600 tonnes per hour whilst trimming. Storage capacity 260,000 tonnes.

STEVEDORES: *Working times:* (Not including B.H.P. and coal loader labour).

1st shift: 0730 to 1430 hrs. – Monday to Friday, Sunday
2nd shift: 1500 to 2200 hrs. – Monday to Friday, Sunday
3rd shift: 2300 to 0600 hrs. – Monday to Friday, Sunday

There are sufficient forklifts, tractors, bulldozers, etc., available to handle all general and bulk cargoes as necessary.

MEDICAL: There are sufficient doctors, dentists, etc., to handle all eventualities; also two well equipped modern hospitals.

TANKERS: Max. length of vessel 183 m. with depth alongside 10.67 m. or 233 m. LOA with depth 9.0 m.

DENSITY: Average 1025.

FRESH WATER: Fresh water is available at all berths.

FUEL: All grades of marine fuel oils including marine diesel and marine gas oil are available. Pipeline delivery of heavy fuels is available at BHP No. 1 and No. 2 Bulk Discharge Berths, No. 1 Products Berth, and at the Old Coal Terminal and the New Coal Terminal. Delivery of all grades by road tank wagon is possible at all berths. Delivery by pipeline is at 150 – 180 tonnes per hour. Delivery by road averages 40 tonnes per hour (using 2 road tank wagons).

REPAIRS: There are no drydocking facilities, but several marine engineering companies operate here, who can handle most types of repairs.
HOLIDAYS: See "Sydney".
OPENING/CLOSING HATCHES: Crew or stevedores.
CREW IDENTIFICATION: See "Melbourne".
TIME: See "General" before first port.
AIRPORT: Kingsford Smith International Airport, Sydney (80 km.).
TELEPHONES: Pilot station 750156; Signal station 744571. Telephones available.
SHIP SUPPLY SERVICE: Off-shore service may by provided by:

Stannard Bros. Launch Services Pty. Ltd., No. 4 Jetty, Port Kembla, N.S.W. 2505.

C.B. Air, Albion Park Aerodrome, Albion Park Rail, N.S.W. 2527.

T.N.T. Air Charter, 2 Hayes Road, Rosebery, N.S.W. 2018.

GARBAGE DISPOSAL: Theiss Environmental Services. Tel: 711588. No drums or skips provided except by special request. Charges: A$95 per collection plus A$1.0 per kilo. Collections: Monday, Wednesday and Friday mornings.
WASTE OIL DISPOSAL: Cleanaway. Tel: (042) 716 166. Fax: (042) 714 253. Tanker trucks: 19,000 litres. Shore tanks capacity: 55,000 litres. Charges: A$100 per hour plus approximately 15 cents per litre
SEAMAN'S CLUBS: Missions to Seamen, Darcy Road, Port Kembla, N.S.W. Tel: (042) 746 498. International telephone, church services, shop and mini-bus collection.

SHIPMASTER'S REPORT: December 1982 (Updated 1996).
Old Coal Berth (No. 1 Coal Berth).
Restrictions: The following information is required prior to arrival berthing:

1. Stem of each type of coal.
2. Stowage, tonnage and type of coal each hold.
3. Commencing holds – one loading head.
4. Trimming holds.
5. Expected departure draft.
6. LOA, gross and nett tonnages.

The vessel must conform with the following criteria:

Vessels must not present for loading with hatch coaming more than 17.4 m. above ISLW.

Minimum size of hatch openings (without prior arrangement with harbour authority) when using trimming head 4.9 m. × 4.9 m.

The Harbour Master requires not less than 0.3 m. UKC during loading operations.

Vessels of 255 m. and over enter during daylight and vessel of 265 m. and over leave during daylight.

Due to the short travel range of the loading gantries it is recommended that with the larger size vessels, i.e. LOA 228.6 m. and upwards, to avoid moving along the berth during the final phases of loading that loading be programmed to complete in the centre hatches.

Max. Size: Max. LOA 240 m., max. beam 45 m. Max. loaded draft 11.4 m. + tide – 0.3 m.

Berthing: The berth is constructed with a concrete decking on steel piles and has a length of 215 m. Bollards are placed at 18.29 m. intervals with provision for mooring lines beyond the actual berth. Maximum pull load of each bollard is 85.63 k/t. Depth of water at the berth is 11.60 m. ISLW with a bottom of natural sand and clay. This depth extends for a distance outward from berth of 12.19 m. and for a distance alongside of 267 m.

Depth after 12.19 m. distance outward from berth is 13 m. ISLW increasing to 15.25 m. ISLW in the main channel.

Vessels usually berth port side alongside.

Bulk Cargo Facilities: There is one loading gantry at ship's side which has a travelling range along the berth of 150 m.

It is fitted with a telescopic loading chute with a trimming head attached which has the effect of throwing the coal in any given direction.

Each boom has an outreach from the wharf fender of 19.8 m. Maximum angle of raise is 80°, working range of boom is horizontal to 11° below the horizontal.

For the purpose of estimating expected loading time it is recommended that a figure of 700 t.p.h. be used.

SHIPMASTER'S REPORT: January 1983 (Updated 1996).
Documents: Australian Customs Service – Notice to Master:

Section 64 of the Australian Customs Act (1901) requires that the following documents are completed and presented to Customs *within 48 hours of arrival at the first Australian port:*

Form 2A: Passenger Report (only required if carrying passengers).
Form 3A: Crew Report.
Form 3B: Crew Report.

It is also requested that the Master please complete a Ship's General Information sheet, that was included with these papers.

Section 64 of the Australian Customs Act (1901) also requires that the following documents are completed prior to the vessel's arrival, and presented to Customs *at the first Australian port:*

Form 5, Part One: Ship's Report of Arrival.
Form 5, Part Two: Crew Effects Declaration and Notice.
Form 5, Part Four: Report of Ship's Stores.
Quarantine Notice or Declaration (QA3, QA4 and QA5), see below.

These forms may be sent to shipping agents by Facsimile, Telex or Radio Telephone. Alternatively, they may be presented to the shipping agent at the vessel's last overseas port before Australia, and then sent on to the Australian Agent.

Please note: Under this legislation, there can be heavy fines imposed for failure to comply with these requirements.

Harbour Master's Note:

Also please supply Ship's Bunker figures on arrival including quantity, specific gravity and temperature.

Additional Documents:

Form QA3 (Animal Cargo)	1	Refers to cargo only. One for each relevant port. Nil return not required.
Form QA4 (Ship's Pets)	1	Nil return not required.
Form QA5 (Shipmaster's Bond)	1 (in duplicate)	Required only if ship has pets

Pilotage: Embarkation of Pilots: Masters of vessels are requested to carry out the following procedure when embarking a Pilot:

1.1 Make a good lee for the pilot launch and proceed at a speed of about five knots.
1.2 The pilot ladder, clean and fitted with spreaders at intervals, is to be rigged well clear of all discharges and outlets, and of all outboard fittings which might foul the pilot launch. The bottom of the ladder is to be maintained at a position approximately 1.5 m. above the water. The distance from waterline to point of access must not exceed 9 m.
1.3 Two clean 24 mm. in diameter manilla manropes are to be rigged. The manropes are to be securely made fast to the ship. On no account must they be made fast to the ladder at any point.
1.4 Where the ladder is rigged over a bulwark, *two* stanchions not less than one metre in length are to be securely fitted in the top of the bulwark, one on each side of the ladder. Steps are to be provided from the top of the bulwark to the deck.
1.5 A heaving line is to be provided for mail and the Pilot's bag.
1.6 By night a bright light shaded to show downwards and clearly illuminate the ladder and ship's side is to be in position before the pilot launch approaches.
1.7 Tripping lines and boatropes are not to be used.

Note: Masters are urged to have all the abovementioned gear kept in first class condition and to have it inspected frequently and to ensure always that the ladder and manropes are securely made fast.

Serious accidents have occurred through inattention to these matters. Should the abovementioned gear and the manner in which it is rigged be not satisfactory, pilotage services may be withheld.

VHF: It is necessary to maintain a VHF watch on Channel 11, whilst anchored off the port.

Berthing: Outer Harbour:

The under mentioned rules are provided for the guidance of Masters of vessels berthed in the Outer Harbour, Port Kembla.

(a) Main engines should not be taken adrift or major repairs commenced unless arranged by prior consultation with the Harbour Master.
(b) Power for main engines should be available at *four hours' notice* during normal weather conditions.
(c) Upon the International Code Signal XT being hoisted at the Signal Station, or by night the exhibition of two all round red lights therefrom, power for main engines should be available at *one hour's notice.*
(d) Sufficient crew should be maintained on board to enable removal of vessels from jetties to be effected if such removal is considered necessary for the safety of the vessel and/or other vessels.

Inner Harbour: New Coal Berth is located between Berth 12 and Berth 14. See "Plans".

Port Kembla Coal Terminal

1 – Navigation restrictions

Vessels – LOA	290 m.
– Beam	45 m.
Approach channel depth	15.25 m. below ISLW
Berthing basin depth (sand bottom)	16.25 m. below ISLW
Underkeel clearance while moving	8% draft
Tide variation – mean high of high tides	1.4 m.

Sailing restrictions:

Weather conditions – Pilot's discretion

Inward movements – 255 m. (ballasted), 244 m. (laden), and over daylight only.

Outward movements – 265 m. and over daylight only.

Vessels normally berth port side to berth.

Tug requirements:	over 250 m.	– 4 tugs
	200 m. – 250 m.	– 3 tugs
	under 200 m.	– 2 tugs
	under 108 m.	– 1 tug.

2 – Berth No.2

Length of berth face	287.12 m.
Length between extreme mooring bollards	400 m.
Length between centres of end fenders	250 m.

Fendering – 8 Seibu Type W 2000H×1500L buffer fenders at 35.64 m. centres.

Bollards – 10×100 tonne quick release hooks
– 6×120 tonne quick release hooks
– 2×100 tonne storm bollards

3 – Shiploaders – 2 travelling shuttling bridge type (only one in operation at a time).

Nominal loading rate	5,000 t.p.h.
Outreach (+ reach of chute when tilted)	32 m. (+8 m.)
Throw – pivoting spoon type (dependent on flow characteristics and moisture content)	5 m. maximum
Air Draft	22.40 m. above ISLW
Shiploader travel: park to park	235 m.
common range	185 m.

4 – Operating Authority

Port Kembla Coal Terminal Ltd.
P. O. Box 823,
Woolangong East,
N.S.W. Australia 2520.
Fax: 061-42-287605.

Repairs: There is an efficient diving service – Commercial Diving Service Pty. Ltd., (Shipping repair and maintenance division underwater), 3 South Avondale Road, Dapto P.O.Box 126, Dapto 2530, N.S.W., Australia. Neil Johnson Tel: (042) 61 4179. Keith Johnson Tel: (042) 61 4980.

Telephones: Placed on board on arrival at New Coal Berth.

Telephone Numbers:

Port Kembla Port Corporation.

Office	740201
Pilot Station	750156
Signal Station	744571 and 750159
Stannard Bros. (for moorings)	741045/75145

General:

Pollution: The Board views very seriously any kind of pollution. The regulations provide for heavy penalties on conviction. Attention is invited to the following:

1. *Oil of any description* – Discharge or escape from a ship – *Penalty up to $50,000.*
   Failure to inform of discharge or escape: *Penalty up to $10,000*
   Cost of dispersing or dealing with oil: *May be recovered from Master or Owner.*
2. *Other Pollutants* – (Including dangerous goods)
   Discharge or escape into port : *Penalty up to $400.*
3. *Dangerous Goods*
   Failure to keep pipe-line or hose gastight and free from leakage: *Penalty up to $200.*
   Failure to keep dangerous goods which have escaped in as small an area as possible: *Penalty up to $200.*
   Failure to report escape of dangerous goods from a pipe-line or hose within 24 hours: *Penalty up to $200.*

AUTHORITY: Port Kembla Port Corporation, P.O.Box 89, Port Kembla, N.S.W. 2505, Australia. *Tel:* 061-42-740201. *FAX:* 061-42-740643. *Contact:* P. McGavin, Chief Executive Officer. Captain W. Hoogendoorn, Harbour Master/Marine Services Manager.

AGENT: Patrick Sleigh Shipping Agencies Pty.Ltd., Unit 5A, 55 Kembla Street, Wollongong, N.S.W. 2500. Postal address: P.O.Box 465, Wollongong East, N.S.W. 2520. Tel: (042) 28 5666. Telex: 29025 PATSLE. Fax: (042) 28 3852. Seagram Code: 2KPATSLE.

PORT LATTA, Tasmania: 40.51 S. 145.23 E.

(See Plan)

DOCUMENTS:

Cargo Plan.
4 Crew Lists, Commonwealth No. MS11.
1 Customs Store List, Commonwealth No. 42A.
1 Personnel Effects, Commonwealth No. 5.
1 Quarantine/Animals, Commonwealth No. QA4 and QA5.
Last Port Clearance.
2 Commonwealth Government Health Forms (Q.360).
3 Lists of Ports of Call.
Tankers – Dangerous Cargo Type and Stowage Plan.
Also see "Certificates".

PILOTAGE: Compulsory pilotage from anchorage to berth. Pilot remains on board throughout loading. Pilot station equipped VHF radio Channels 16, 12, 14, 67 and 74. Pilots and line boats stationed at small boat harbour, Port Latta. Pilot boards at anchorage (2 miles N.E. of seaward end of jetty). Vessels communicate with Port Latta Marine Department on normal ship-shore frequencies, through Australian coastal stations, addressing message to "7 P Pinkands". ETA required 10 days, 2 days, 1 day prior. Accommodation ladder to be rigged and ready on port side.

ANCHORAGE: 1 mile radius from point with Rocky Cape Light. Bearing 130° (T) × 5 miles (16 fathoms).

RESTRICTIONS: Tankers and vessels over 100,000 tonnes d.w.t. berth in daylight only. Other vessels berth on arrival, day or night, weather permitting. Minimum depth of water in berth and approaches 15.25 m. (50 ft.) at I.S.L.W. A static 1.5 m. (5 ft.) under keel clearance required at all times, or 10% of draft whichever is the greater, plus 0.5 m. allowance for movement of vessel.

MAX. SIZE: LOA 245 m. (804 ft.), beam 38.5 m. (126 ft.), draft 16.0 m. (52.5 ft.). Vessels in excess by prior consultation.

HEALTH: Commonwealth appointed Quarantine Officers will board vessel at anchorage or berth when Port Latta is first port of call. Minimum 12-24 hours advance notice of pratique to Agent. Quarantine Officer requires 1 copy Crew List. Derat Certificate can be issued at this port.

RADIO: Radio messages addressed to "7 P Pinkands" and Agent.

VHF: Call sign "Port Latta".

Channel 16	Calling on arrival.
Channel 12	Port operations.
Channel 70	Shiploading.
Channel 12	Additional working channel.
Channel 67	Additional working channel.

TUGS: One tug is available "Fullerton Cove", 2,500 h.p. 40 tons bollard pull. Tug is on 30 minutes standby notice when in berth.

Second tug required for berthing of ships of 80,000 d.w.tonnes and over. Second tug, 2,500 h.p. (40 ton bollard pull).

N.B. Second tug comes from Burnie (3 hours' steaming).

2 line boats are available. On call 24 hours when a vessel is in berth. Licensed to carry 5 passengers. Used to transport all persons and goods ship to shore.

Tug will join vessel at anchorage. Tug stationed at Port of Stanley and will stay with vessel throughout loading. The use of tug or ship line is at discretion of Pilot.

BERTHING: Special towage may be required. Confirm with Harbour Authority. Propeller submerged with vessel at or near even keel. Vessels usually berth port side alongside using starboard anchor. Accommodation ladder to be rigged and ready on port side.

Mooring lines required.

(a) *Under 100,000 tonnes deadweight.* Seven (7) 220 m. (722 ft.) lines forward includes backspring. Similar aft.

(b) *100,000 tonnes deadweight plus.* As for (a) and in addition one (1) 220 m. wire forward and one (1) 220 m. wire aft. All mooring lines must comply with Classification Society requirements. Ore berth where vessel secures 3.9 m. (12.8 ft.) clear of loading facility to three (3) mooring buoys forward and three (3) aft. Backsprings to protection dolphins. *Polypropylene or similar material instead of nylon required.* Confirm with Harbour Authority.

Main engines required to be on thirty (30) minutes standby notice.

Mooring winches to be fully operational and maximum power available at all times.

LOADING/DISCHARGING: A 1,830 m. (6,000 ft.) long steel structure from the shore carries the ore conveyor and oil pipe-lines.

Shiploader: Two (2) radial arm type (one loading at any given time).
Rate: Nominal rate 2,259 long tons per hour.
Working Hours: 24 hours/day, every day weather permitting.
Outreach: (a) Central: 24.82 m. (81.4 ft.). (b) Max. slew: 17.82 m. (58.5 ft.).
Throw: Max. 3.9 m. (12.7 ft.). Working Trajectory 1.8 m. (5.9 ft.).
Height: (Air Draft) above H.W. 16.46 m. (54 ft.) minus 1.5 m. (5 ft.) for safety clearance.
Travel: 79.25 m. (260 ft.) for one loader. Total coverage both loaders 164.6 m. (540 ft.) including 6.1 m. (20 ft.) dead area between loaders.
Stowage factor iron ore pellets 0.4767 cu.m./tonne. Angle repose 27°.

MEDICAL: Minimum of 24 hours notice required by Agent to arrange doctor. Hospitals situated at Smithton, 19 miles; Wynyard, 25 miles.

TANKERS: Berth in daylight, weather permitting. Hose 10 in. diameter, discharge line only, no facilities for receiving ballast or slops. Maximum permitted draft 45 ft. (13.7 m.).

Oil/Ore vessels require Gas Free Certificate prior to landing.

A floating pipe-line connecting facility to vessel is handled by line boats.

DENSITY: 1025-1027.

FRESH WATER: Limited quantity from tug – 50 tons. Rate 14 tonnes/hr. Cost: A$10.00 per tonne.

FUEL: Not available.

FIRE REGULATIONS: Standard Mines Department fire regulations.

CONSULS: No consulates.

REPAIRS: Carried out by local contractors through Agent. Only minor repairs possible.

OPENING/CLOSING HATCHES: Ship's responsibility.

SURVEYORS: Captain D. Gunn, Bass Coast Marine Surveyors. Tel: (004) 38-1222. Fax: (004) 38-1194. Mobile Tel: 018-142-791.

CERTIFICATES: Required: Derat., Safety Equipment, Load Line, Registered Tonnage, Safety Construction, Safety Radio, Australian Oil Pollution Levy, International Oil Pollution Certificate, Australian Light Dues.

CUSTOMS ALLOWANCES: Tobacco, 200 cigarettes or 8 ozs. tobacco per man. Wine/Spirit, 1 quart per man, bottle/bottles must be unsealed.

CARGO GEAR: None required.

REPATRIATION: Agents can arrange repatriation and crew changes.

AIRPORT: Nearest airport 25 miles at Wynyard with daily domestic flights to mainland for international flight connections.

TIME: See "General" before first port.

HOLIDAYS: Cargo loading continuous throughout public holidays.

POLICE/AMBULANCE/FIRE: Police, Stanley 581104; Ambulance, Smithton 521221; Fire, Stanley 581202.

TELEPHONES: Arrange through Pilots.

STORES: Available by line boat during loading. Contact: North West Providores. Tel: (004) 31-2148. Fax: (004) 31-4020.

SERVICES: Compass adjusting, radio and radar repairs, supply of charts and publications; sounding paper and course recorder paper; Notice to Mariners; extension of Safety Equipment Certificates arranged by Agent, with maximum possible notice.

SHORE LEAVE: Arrange through Pilots. Sufficient crew remain on board to handle vessel for clearing berth – to include ten (10) competent deck crew, five (5) forward and five (5) aft.

IDENTIFICATION CARDS: See "Melbourne".

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Australian Dollar (A$).

GENERAL: *Chart:* Port Dalrymple to Circular Head, AUS 798.

Tide Predictions: See "Port of Stanley" – Australian National Tide Tables. Mean Spring range of tide 2.5 m. (8.42 ft.). Correction for Port Latta – 0.6 m.

Officials: Marine Supervisor, Quarantine Officer, Customs Clearance Officer and Agent will board on arrival, weather permitting.

AUTHORITY: Savage River Mines, Marine Department – Port Latta, P.O.Box 353, Wynyard, Tasmania 7325, Australia. *Tel:* Wynyard (004) 420444. *Cables:* 7PPickands. *FAX:* (004) 434349, (004) 423285. *Contact:* D.C. Schmidt, General Manager.

Marine Board of Circular Head, P.O.Box 61, Stanley, Tasmania 7351, Australia. *Tel:* (004) 581271. *FAX:* (004) 581442. *Contact:* Yvonne Tierney, Manager.

AGENT: See "Devonport".

PORT LINCOLN, S.A.: 34.42 S. 135.50 E. (See Plan)

PORT LIMITS:
Northern Limit: From Pt. Boston Light in a direction 059°×3 miles.
Southern Limit: From Cape Donington Light in a direction 059°×3 miles.
Eastern Limit: A line joining outermost ends of North and South limits.
DOCUMENTS: See "Melbourne".
APPROACHES: Depth in approach Channel 30 ft. (Proper Bay) – 14.2 m. (Main Pier).
PILOTAGE: Compulsory. Pilot boards 1.0 miles S.E. of Boston Point.
VHF: Radio telephone in operation. Channels 6, 12, 16 and 67.
Office hours 0845 – 1700, Monday – Friday.
TUGS: 1 tug (40 tonne bollard pull) available.
BERTHING: Kirton Point Jetty oil tanker berth at "T" head, berthing space 900 ft. (275 m.), depth 32 ft. (9.75 m.). Shipping Pier depth 27 ft. (8.2 m.) and 28 ft. (8.5 m.).

Two bulk grain loading berths 350 m. long, depth 14.93 m., with 2 travelling loaders with combined capacity of 4,000 tonnes an hour and an outreach of up to 35.5 m. on each side of jetty. Vessels up to 80,000 d.w.t. can be accommodated.

A berth, 247 m. long, depth 12 m. to accommodate general cargo including bagged grain, phosphate rock and sulphur vessels.

B.H.P. Jetty (Proper Bay) jetty and berth with mooring dolphins. Distance between outer dolphins 882 ft. (270 m.). Depth 34 ft. (10.4 m.) MLWS. Channel depth 9.1 m. Loading rate 1,900/2,000 t.p.h. Max. beam permissible 80 ft. (24 m.). Max. LOA 183 m.
FRESH WATER: Available at jetty and shipping pier. Not available at B.H.P. (Proper Bay) Berth.
FUEL: Diesel and limited fuel oil by road tanker only.
AIRPORT: There is a scheduled 1 hour air service to Adelaide with up to 6 flights a day.
EMERGENCY CO-ORDINATION CENTRE: Australian Coastal Surveillance Centre-Canberra. Tel: (062) 475344. Telex: AA 62349.
STORING: See "Prelims".
(1) Yes.
(2) Operations at Harbour Master's discretion.
(3) Yes, right alongside.
(4) Yes.
(5) Normal Australian Regulations.
(6) Yes.
GARBAGE DISPOSAL: Collection available on request to ship's agent or Quarantine Officer. Drums with covers on truck or trailer used to convey garbage in plastic bags from ship to deep burial disposal site. Charges: A$40.00 plus A$2.70 per person per day.
WASTE OIL DISPOSAL: West Coast Liquid Waste, Tel: 086-843574. 10,000 litres per load, as many loads as necessary. Cost to be discussed on removal due to availability of pump sites and distance.
SEAMAN'S CLUBS/SERVICES: The Missions to Seamen, Washington Street, Port Lincoln. Tel: 830036, 821714 or 825370. Telephone, postal services, currency exchange facilities and refreshments.
CURRENCY: Australian Dollar. No restrictions. Money can be changed in local Banks.
AUTHORITY: Ports Corporation, P.O.Box 354, (King Streett), Port Lincoln, South Australia 5056, Australia. *Tel:* (086) 823633, 823723. *FAX:* 086 826725. *Contact:* Captain R.J. Cobban, Harbour Master and Port Manager.

For Proper Bay: Broken Hill Proprietary Co. Ltd., P.O.Box 21, Whyalla, South Australia 5600.

AGENT: Patrick Sleigh Shipping Agencies Pty. Ltd., P.O.Box 1592, 79 Liverpool Street, Harwill Court No. 11, Port Lincoln, S.A. 5056. Tel: (086) 82 1011/82 1167. Telex: 80932 PATSLE. Fax: (086) 82 1182. Seagram Code: 5LPATSLE.

PORT PIRIE, S.A.: 33.10 S. 138.08 E. (See Plan)

PORT LIMITS: As per broken magenta lines passing through Ward Spit Beacon, to the North, and Eastern shoal North Beacon, to the South, of entrance to Germain Bay on Chart AUS 136.
CERTIFICATES/DOCUMENTS/HEALTH: See "Melbourne".
PILOTAGE: Compulsory. The Pilot Boarding Station is South-West to West and within 1 mile of Eastern Shoal North Beacon.

The regulation pilot ladder should be secured so that the lowest step is 1.5 m. clear of the water. Manropes must be provided but a boat rope is *not* required.

Pilotage distance is 17 miles and time occupied is approximately 2 hours.
ANCHORAGE: Vessels awaiting a Pilot should anchor near the Pilot Boarding Station which is good holding ground.

Exempt vessels only may anchor within Germain Bay. However, anchorage near Cockle Spit is not recommended for vessels of light draft under adverse weather conditions.
RESTRICTIONS/MAX. SIZE: Channel width 92 m.
Daylight: Max. length 185.0 m. OA
Max. beam 30.0 m. OA } i.e. Port Limits
At Night: Max. length 180.0 m. OA
Max. beam 28.0 m.
Vessels over these lengths and beams at Harbour Master's discretion.

The entrance, river channel and harbour area are dredged to 6.4 m. LWOST. The keel clearance of any vessel proceeding in the harbour or channel should be 0.76 m. and vessels over 22.0 m. the minimum keel clearance should be 0.91 m.

Max. draft at HWOST is 8.1 m., keel clearance of 0.9 m. required.

Vessels have sailed from the port under suitable tidal conditions with drafts in excess of 8.23 m.
Note 1: It is recommended that the maximum draft should be *decreased* by 0.20 m. when "fixing" vessels in advance, to allow for possibility of the tide being less than that predicted due to weather conditions.
Note 2: The LW heights should be considered when fixing deep vessels to ensure that the vessel always remains afloat in the berth.
HEALTH: For first port vessels, Radio Pratique is available 24 hours prior to arrival, after satisfactory response to information sought by Agent, formal Pratique will be granted after berthing.

In the event of suspected disease or fever on board, authorities must be informed *prior* to Pilot boarding.
RADIO/VHF: Port Pirie is serviced by VHF Channels 16, 12, 8, 67 and 6. Vessels arriving at the port should advise "Port Pirie Harbour", as soon as contact can be established, of their ETA and draft, also the position anchored, if applicable. Exempt vessels should advise same and seek clearance to enter the port. Listening watch is kept from 0845 hrs. to 1700 hrs., Monday to Friday, (except public holidays) or by arrangement.

There is no visual signal station.

There is no radio telegraph station at Port Pirie. All such messages are handled through "VIA" Adelaide and are forwarded to or from Port Pirie by land-line.
TUGS: Two tugs, bollard pull 11 tonnes and 22 tonnes.
BERTHING: Vessels are normally berthed in the order of first arrival at the Pilot Boarding Station and are usually swung prior to berthing.

Main engines must not be immobilised and static engine tests must not be made without prior approval of the Harbour Master.
Berths: Vessels berthed at No. 1 should not exceed 152.40 m. (500 ft.) OA length.

	Dredged to:						
Berth No.	*Depth* (m.)	ft.	*Width* (m.)	ft.	*Length* (m.)	ft.	*Normal usage*
1	7.32	24	24.38	80	152.40	500	Fishing
2	8.23	27	30.48	100	182.89	600	Silo-Bulk Grain
3	7.32	24	30.48	100	198.13	650	Tugs & Launches
4	5.79	19	—	—	106.68	350	Tugs & Launches
5	8.23	27	30.48	100	198.13	650	Concentrates – Fertiliser – Multi-purpose – Overseas
6	8.23	27	30.48	100	182.89	600	Concentrates – Overseas
7	8.23	27	30.48	100	144.79	475	Concentrates – Coal – Fertiliser – Interstate
8	8.23	27	30.48	100	179.84	590	Lead & Zinc Pigs
9	8.23	27	30.48	100	179.84	590	Lead & Zinc Pigs
10	8.23	27	30.48	100	158.51	520	Coke, Coal and Lead Concentrates, Limesand
11	3.6	12	24.38	80	47.71	150	Acid

CRANES: 6×7.5 ton electric cranes are available at Berths No. 7, 8, 9 and 10.
BULK HANDLING FACILITIES: The boom of the shiploader is 70 ft. (21.3 m.) in length and when lowered to the horizontal position for pouring should plumb the midship line of most ships loading from this machine. The "jet-trimming slinger" at the lower end of the loading chute is capable of throwing a stream of ore some 60 ft. (18.3 m.) through 360° and can be directed to any position within the vessel's hold (To be replaced by a ship unloader bridge by 1997).

Bulk wheat and barley can be delivered ex-silo on a conveyor belt which is capable of delivery at the rate of 800 t.p.h. Five outlets are available but the maximum is 800 t.p.h.
MEDICAL: All medical and dental facilities available.
TANKERS: No facilities.
DENSITY: Between 1033 and 1035.
FRESH WATER: Fresh water available all berths at rate of approx. 20 t.p.h.
FUEL: There are no bunkering facilities at any berth. Limited quantities of diesel oil may be obtained by road tanker.
REPAIRS: Subject to special arrangements.
SURVEYORS: Classification Society Surveyors available by prior arrangement. Private surveyors available.
HATCHES: Opening/closing carried out by ship's crew.
CUSTOMS ALLOWANCES: As per Australian Regulations.
REPATRIATION: Facilities available.
AIRPORT: There are no regular flights to or from the port. Charter aircraft can be arranged.

Transport to Adelaide is by bus. Bus transport is most frequent – duration of journey 3 hours.
TIME: See "General" before first port.
POLICE/AMBULANCE/FIRE: Emergency Numbers:

Police	32 1200
Fire	32 3000
Ambulance	32 1111

EMERGENCY CO-ORDINATION CENTRE: In an emergency whilst at anchor or in the vicinity of the port (i.e. not berthed), contact can be made with "Port Pirie Harbour", if during working hours. Outside those hours, radio contact with "Adelaide Outer Harbour". Both contact points will immediately contact appropriate local or regional emergency organisation.
TELEPHONES: All vessels in port will have telephones placed aboard by Agent. Local calls only available.
STORING: By truck alongside vessel. Forklifts can be used if required.
SHORE LEAVE: Unrestricted.
IDENTIFICATION CARDS: As per Immigration Authority Regulations.
GARBAGE DISPOSAL: Service is available and its use is compulsory. Contractors truck attends vessel. No garbage to be landed prior to truck's arrival. Charges: A$40.00 per full day in port plus A$2.70 per crew member per full day in port.

Refer to agent for contact number.

WASTE OIL DISPOSAL: Small quantities only. See above or contact agent for large quantities.
SEAMAN'S CLUBS: Missions to Seamen, 37 Florence Street, Port Pirie. Services: library, telephone, postal service, canteen, souvenirs, television, snooker, table tennis, hospital visits. Open daily from 1900 hrs.
CURRENCY: Australian Dollar. No restrictions.
GENERAL: *Tides:* MHW Springs 2.65 m., Neaps 1.65 m. Generally tidal heights of 2.74 m. or over occur at Springs about 50% of the days of the year. However, tides are affected by weather and may be up to 0.61 m. above or below predictions.
AUTHORITY: South Australian Ports Corporation, Ellen Street, Port Pirie, South Australia 5540. *Tel:* (086) 321455. *FAX:* (086) 325918. *Cables:* DMH Pirie. *Contact:* Port Manager.
AGENT: See "Adelaide".

PORT STANVAC, S.A.: 35.06 S. 138.28 E. **(See Plan)**

The Marine Terminal is situated on the Eastern shore of the Gulf of St. Vincent, 18 miles South of Port Adelaide in Lat. 35° 06′ S., Long. 138° 28′ E., bearing 219°, 4.0 miles from Marino Light. Mariners are referred to current hydrographic chart AUS 780.

The Terminal berths are open and unprotected. Consequently at all times a vessel must be in a suitable condition, with sufficient deadweight and personnel on board to vacate the berth immediately on short notice.

The Terminal comprises a single buoy mooring served by a 36 in. (900 mm.) submarine pipeline, for the discharge/loading of crude oil tankers of up to 233,000 tonnes displacement, limited to 17.1 m. draft, and a product berth alongside the jetty for the loading/discharge of vessels up to 42,000 tonnes displacement, limited to 10.7 m. draft. The product berth is attached to the seaward end of a pier which extends in a direction of 300°(T) from the shore.

The Terminal operates 24 hours per day, seven days per week. Vessels are berthed at the SBM at any time, 24 hours a day, subject to prevailing conditions and Port Manager's discretion. Vessels at the product berth are berthed in daylight hours only, subject to tides and/or suitable weather conditions, and may depart at any time. Cargo handling operations are continuous whilst a vessel is in the berth.
DOCUMENTS: Inward clearance is effected on board the vessel by the Customs Boarding Officer after the vessel has berthed. This official is also the Superintendent of the Mercantile Marine Office.

The following documents are required:
Clearance from last port.
Crew List in duplicate on Form M & S 11, and in addition 3 copies on plain paper.
Store List on Form 42A (1 copy).
Dutiable articles owned by Master and Crew on Form 5 (1 copy).
Form C & E 886, Loading Port List (1 copy for each Australian port of discharge).
Cargo Manifest (B/L).
Livestock Notice (Form QA4) if any livestock on board, plus Shipmaster's Bond (Form QA5) in duplicate.

Necessary forms will be supplied by the ship's Agent on a vessel's first visit to the terminal.

Clearance outward is granted on board before sailing. No documents are required by the Master when clearing outwards – the ship's Agent handles all clearance documents at the Customs House.
PILOTAGE: Prior to berthing at Port Stanvac vessels will be boarded by the Duty Port Manager in the anchorage area. The Duty Port Manager will advise the Master on the pilotage of the vessel to the berth and in respect of mooring and unmooring of the vessel. At the offshore moorings he will also advise on the hoisting and lowering of the submarine hoses and on loading/unloading. He will remain on board while the vessel is moored at the off-shore berth. The Duty Port Manager will carry out his duties subject to the authority of the Master of the vessel.

Vessels are requested to have a pilot ladder and manropes, rigged on the leeward side for the safe embarkation and disembarkation of the Duty Port Manager. At night the ladder area should be efficiently illuminated. Pilot ladder and manropes should remain rigged during vessel's stay in port, whilst in the offshore berth.

If the vessel's freeboard is more than 9 m. then the accommodation ladder should be rigged in conjunction with the pilot ladder.
ANCHORAGE: Vessels awaiting to berth at Port Stanvac are advised to anchor in the following positions unless instructed otherwise:

Crude Oil Vessels: Using starboard anchor, one nautical mile North of the SBM.

Product Vessels: With Marino Rocks Lighthouse bearing 065°(T) distance 3.0 miles in 11 fathoms of water.

Holding ground in these anchorages is good with a hard sand bottom.
RESTRICTIONS: Approaches from the West through Investigator Strait; from the East, through Backstairs Passage.

Minimum depth in channel to jetty berth is 40 ft. (12.2 m.). Vessels can approach the SBM from any direction, depending on existing conditions at the time of berthing. A charted depth of 23.0 m. above the lowest predicted astronomical tide within 400 m. of the buoy, and a minimum depth of 20 m. within 1,500 m. of the buoy position.

Height of tide, 9.0 ft. (2.7 m.) HHW, and 4.6 ft. (1.4 m.) LHW.
MAX. SIZE: *SBM:*
LOA: 300 m.
Beam: No limitation.
Draft: 17.1 m.
Displacement: 233,000 tonnes.

Products Berth: Max. size limitations for vessels using the product berth are:
LOA: 183 m.
Beam: No limitation.
Draft: 10.7 m.
Displacement: 42,000 tonnes.

Note: Ships at the Product Berth must have a parallel flat side at the lightship waterline of a minimum of 49 m. and maintain a minimum freeboard whilst loading of 1.7 m.
HEALTH: Vessels will be boarded by the Department of Health Officer either at the anchorage or in the berth.

If Radio Pratique (See "Radio") has not been obtained prior to arrival international quarantine signals must be exhibited until the vessel is cleared by the Department of Health Officer.
RADIO: *Arrival Message:* Masters are requested to radio their Agents 7 days before their estimated arrival at the port, giving the following information:
ETA
Number and nationality of crew aboard.
Crew's state of health.
Advise if the hull is free of leaks.
Whether bunkers are required and, if so, the quantity.
The number of crew members, if any, who require the services of a Doctor or a Dentist.
Advise if inert gas system is in good working order and conforms to SOLAS.
Advise if ship has C.O.W. on board and if crude oil washing is required at Port Stanvac and conforms to SOLAS.

Further ETAs should be sent 72 hours, 48 hours and 24 hours prior to arrival. The 24 hours message must also confirm that the hull is free of leaks. If there is any change to the 24 hours ETA then advice should be promptly transmitted.
VHF: Port Stanvac Refinery is equipped with VHF radio operating on the following frequencies: Channel 16 (156.8 MHz) calling and standby only; Channel 14 (156.7 MHz); Channel 9 (156.45 MHz).

Masters of vessels proceeding to Port Stanvac are required to establish VHF radio contact with Port Stanvac (call sign "Port Stanvac") as soon as possible prior to arrival to confirm the vessel's ETA. Masters will be advised on which Channel they should maintain a listening watch while in the Port Stanvac area and to receive instructions related to berthing, cargo operations and other matters.
TUGS: Tugs are not normally used for berthing at the Product Berth.
BERTHING: SBM: See "Operator's Report".
Product Berth: The Product Berth has a fixed all round green light mounted on top of the hose boom.

All vessels are berthed port side alongside heading in a direction 240°(T).

Mooring line requirements are that vessels may be required to use 8 mooring lines, in good condition. The headline can be a wire rope but, if so, must have a 15 m. synthetic tail. The stern line must be a floating synthetic line so as not to foul the propeller on berthing.

The bow and stern mooring buoys are each fitted with 1×40 mm. diameter preventer wire. These wires will be taken to the ship by launch and secured on board under the supervision of the Mooring Master.

The berth is equipped with a Woodfield Flow Boom which handles all loading hoses, except the 2 solvent hoses. There are 2×14 in. lines which are for transferring white oils and taking off clean ballast. There are 2 × 16 in. lines for transferring black oils and taking off dirty ballast. Each of these 4 lines uses a 10 in. hose. In addition there are 2×6 in. solvent lines utilising 6 in. hoses and 1×12 in. line using an 8 in. hose for loading lube oils.

Typical loading rates are:

Black oils	1,600 tonnes/p.h. both lines.
White oils	1,400 tonnes/p.h. both lines.
Solvents	100 tonnes/p.h. each line.
Lub oils	500 tonnes/p.h. one line.

Multiple grades can be loaded simultaneously if segregation and safety are assured.

Ballast at 700 tonnes/p.h. is discharged through a 16 in. line to shore. Ballast reception facilities are limited. On completion of deballasting clean salt water is to be discharged for approximately 15 minutes.
Notice of Readiness: Notice of Readiness will be accepted when vessel is securely berthed or, if berth is occupied, from the time the vessel is 'brought up' at anchor off the port in, or adjacent to, the recommended anchorage.
Draining of Hoses: Crude oil discharge hoses are cleared by creating a vacuum on the submarine crude oil line. All product hoses are drained by gravity and ship's personnel are requested to co-operate with the Terminal Operators to ensure complete draining of hoses. Drip trays must be placed in position to catch any oil which may remain in the hoses and oil absorbent material must be in readiness to absorb and clean up any small leaks.
Emergency Signal: Should normal ship to shore communication fail, the emergency signal to stop the flow of oil will be one or more blasts of the ship's whistle each blast of NOT LESS THAN 10 SECONDS DURATION. In the case of a fire this should be supplemented by a continuous sounding of the ship's general alarm system. Steam or air should never be shut off the whistle whilst the ship is in port.
Signals: Vessels discharging or loading shall, by day, display the international code inflammable flag and by night, a red light, where it can be clearly seen and visible all around the horizon.
MEDICAL: Medical and Dental treatment is available if required. The Agent should be informed of the treatment required.
FRESH WATER: Fresh water at approximately 25 cu.m.p.h. is available at the product berth.

There is no fresh water connection at the SBM. Crude oil vessels requiring water must arrange, via their Agents.
FUEL: No bunkers available at the SBM. Fuel oil and diesel oil are available at the Product Berth.

CONSULS: Most nations, with the exception of the Arabian countries and the Panama Republic, have Consulates in Adelaide.

REPAIRS: Port Stanvac is an open roadstead and while vessels are moored at either berth, the main engines must be maintained in readiness to enable the vessel to leave the berth under full power at all times. No engine repairs which may interfere with this requirement will be permitted.

No welding, hotwork or scaling is permitted on vessels whilst at either berth. All repairs must be carried out in the anchorage. There are 2 repair firms in Adelaide capable of handling emergency voyage repairs. Details of any emergency repairs should be included in the ETA message.

CUSTOMS ALLOWANCES: All dutiable goods declared on Form 5 (See "Documents"), should be ready for possible collection and sealing by Customs. Non Australian crew members are allowed to retain: 200 cigarettes (opened carton) or 0.5 lb. tobacco or 40 cigars or 300 Biddies and 1 opened bottle (quart) of liquor.

TIME: See "General" before first port.

BALLAST: No dirty ballast may be discharged into the sea.

Ballast reception facilities are limited. Advance notice is required for the discharge of ballast and/or slops to the shore.

There are no shore ballast facilities for the SBM.

POLLUTION: Extreme care must be taken to avoid pollution of water by oil. A $50,000 fine, plus the cost of any clean-up can be imposed on, among others, a Master of any vessel which causes pollution of the sea by oil

The contents of engine-room and pumproom bilges must not be discharged into the sea. All pumproom and sea suction and overboard discharge valves must be securely lashed before loading or discharging operations commence.

If vessels need to unlash sea suction valves, the Duty Port Manager must first be informed. The ship's pumps must be started and a vacuum obtained before opening any sea valve.

The area around the ship's manifold and overside in the vicinity of the submarine hoses, when on the SBM, shall be efficiently illuminated at night during loading and discharge operations.

All deck scuppers must be plugged and sealed before commencement of loading or unloading.

A stand-by warning must be given to the Terminal Operator not less than fifteen (15) minutes before any cargo transfer is completed. When topping off, the loading rate will be reduced by the Terminal Operator as required.

SHORE LEAVE: No shore leave from SBM. Port Stanvac is an open, unsheltered roadstead and it is emphasised that vessels must be in readiness to vacate the berth immediately on receiving instruction to so do.

Vessels requiring launch services from the anchorage should contact their Agents for availability and charges.

Vessel's crew members and visitors are not allowed to walk through the Refinery. Access from the wharf to the Main Gate, and vice versa, must be by car or taxi only. Taxis may be ordered through the Main Gate personnel. Taxis are free as far as the Main Gate.

GENERAL: *Gangway:* A shore gangway is provided at the Product Berth.

Ship's accommodation ladder should be rigged on the leeward side in the off-shore berth.

Garbage: The dumping of garbage into the sea at Port Stanvac is STRICTLY PROHIBITED by law. PENALTY $2,000 FINE.

Laundry: Laundry facilities are available in Port Adelaide. Master should advise requirements to his Agent prior to arrival.

Stores and Provisions: A limited amount of stores such as bread, milk, fresh vegetables and fruit, not exceeding a gross weight of 5 cwt., will be permitted to be delivered by the company launch. In such instances, it will be the responsibility of the vessel ordering such stores to make available a sufficient number of ship's crew to be taken to the launch harbour by the company launch in order to handle the stores into the launch for eventual transportation to the vessel. On no account is the launch crew to handle ship's stores. Arrangements for the handling of stores should be made through the Duty Port Manager on board the vessel, or the ship's Agent.

Stores ordered in excess of the above quantities must be arranged via the ship's Agent.

Masters are advised that whenever possible they should arrange to receive stores at other ports where facilities for storing may be more convenient.

The company will not accept responsibility for any stores handled at the Terminal.

Tides, Current and Depths of Water: The predicted tide times at Port Stanvac are approximately 10 minutes earlier than the tidal predictions for Outer Harbour, Port Adelaide. However, the times and heights may be affected quite markedly by the prevailing weather conditions. The tidal current flows in a N.S. direction and on occasions may reach 1 knot.

Weather: From September to May, the prevailing winds are from the South, S.E. to East. During the remainder of the year, winds are generally from North, West to S.W. At times winds may reach gale force.

OPERATOR'S REPORT: August 1993.

The Crude Berth is a single buoy mooring.

Max. size vessel acceptable as follows:

LOA: 300 m.
Beam: No limitation.
Draft: 17.1 m.
Displacement: 233,000 tonnes.

Berthing at SBM during daylight hours only, sailing any time. For berthing, vessel will require 2 tongue type bow chain stoppers, complying with OCIMF specifications, suitable for 76 mm. chain.

Discharge is through 2×16 in. (400 mm.) floating hoses, connected to port manifold, using 16 in. ASA flanges.

Hoses are lifted singly by ship's derrick/crane (minimum SWL 10 tonnes).

Max. weight each hose 6.5 tonnes.

Max. discharge pressure at ship's manifold 1,000 KPA (150 PSI).

Only petroleum products handled at Port Stanvac.

No gas or chemicals imported or exported at this facility.

AUTHORITY: Mobil Refining Australia Pty.Ltd., P.O.Box 821, Morphett Vale, South Australia 5162. *Tel:* 61-8-3936319. *Telex:* AA 82003. *FAX:* 61-8-3926449. *Contact:* Duty Port Manager.

AGENT: See "Adelaide".

PORT WALCOTT, W.A.: 20.37 S. 117.11 E. (including Cossack and Point Samson (defunct), Cape Lambert (operational) and Dixon Island (possible future) (See Plan)

PORT LIMITS: Pecked line joining the following positions:

	Latitude	*Longitude*	*Remarks*
(a)	20° 25.48′ S.	116° 53.02′ E.	On Aus. 741 Lat. 20° 25.4′ S.
(b)	20° 25.32′ S.	116° 57.10′ E.	On Aus. 741 Lat. 20° 25.2′ S.
(c)	20° 25.80′ S.	117° 04.58′ E.	On Aus. 55 & Aus. 740 in a direction 273° 54′ to the West border; on Aus. 57 in a direction 113° 18′ to the East border.
(d)	20° 28.00′ S.	117° 10.00′ E.	
(e)	20° 28.00′ S.	117° 17.50′ E.	
(f)	20° 31.10′ S.	117° 17.50′ E.	On Aus. 55 & Aus. 741 in a direction 113° 36′ to the East border.
(g)	20° 36.90′ S.	117° 31.60′ E.	Thence in a direction 180° to the HWL.

DOCUMENTS: See "Melbourne".

APPROACHES: Approaches are marked by 5 light buoys. The first is in position Lat. 20° 23.45′ S., Long. 117° 25.34′ E. and is fitted with a 3 cm. Racon – morse code "K". From a position about 1 mile East of this buoy, ships should proceed on a course 183° for 7 miles, then 252° for 10 miles to the anchorage area. Ships should not attempt to enter via Bass Pass.

Exit Channel: Marked by some 28 buoys and beacons. Pilotage is compulsory for all ships in this area.

PILOTAGE: Pilots resident at Wickham. 24 hours service. Pilotage is compulsory anywhere in the port, except that, with permission, ships may enter port and proceed via the Eastern route to anchorage. Ships should not enter via Bass Pass except with Pilot.

Pilots will, generally, board and leave ships by means of a small helicopter. Ships which cannot accept a helicopter must advise the Harbour Master at least 48 hours prior to arrival. All crew members should keep well clear of the hatch on which the helicopter will land. Helicopter is fitted with marine VHF radio. Call sign "Port Walcott Pilot Helicopter".

Pilotage will be provided, on request, from Buoy No. 1. However this will only be just prior to a ship berthing. Ships may anchor, outside port limits, to the East of No.1 Buoy.

Pilot Ladders, Hoists, etc: On arrival, Pilots will accept a pilot hoist, a pilot ladder not exceeding 9 m. in length, an accommodation ladder if the weather is suitable or a combination of pilot ladder and accommodation ladder.

Owing to swell conditions, a clean pilot ladder is required for departure. This should be rigged so that it is 1 m. above sea level and provided with 2 clean manropes.

This ladder is required to comply with Australian Standard Specification No. 1267 of 1975 which is based on the requirements of the SOLAS Convention and the Navigation Act.

A pilot hoist or accommodation ladder is *not* considered suitable for disembarking.

Whilst in the berth, the appropriate accommodation ladder is used for access to the ship.

Port Walcott Pilots are a private organisation located at 106 Meares Drive, Point Samson. Pilots on VHF Channels 16 and 14 (Also see "Authority").

ANCHORAGE: *Recommended Anchorages:*

Bearing of Jarman Island Lighthouse.

No. 1	191°×6 miles	No. 7	208°×8 miles
No. 2	201°×6 "	No. 8	215°×8 "
No. 3	196°×7 "	No. 9	222°×8 "
No. 4	205°×7 "	No. 10	204°×9 "
No. 5	213°×7 "	No. 11	210°×9 "
No. 6	200°×8 "	No. 12	217°×9 "

For smaller ships:

'F' 175°×6.7 miles and 'A1' 184°×5.2 miles.

RESTRICTIONS: *Max. draft for different tidal heights in order to obtain 10% U.K.C.*
Based on the availability of 16.0 m. at low water.

Tide (m.)	*Draft* (m.)	*Tide* (m.)	*Draft* (m.)	*Tide* (m.)	*Draft* (m.)	*Tide* (m.)	*Draft* (m.)
2.9	17.18	3.7	17.90	4.5	18.63	5.3	19.36
3.0	17.27	3.8	18.00	4.6	18.72	5.4	19.45
3.1	17.36	3.9	18.09	4.7	18.81	5.5	19.54
3.2	17.45	4.0	18.18	4.8	18.90	5.6	19.63
3.3	17.54	4.1	18.27	4.9	19.00	5.7	19.72
3.4	17.63	4.2	18.36	5.0	19.09	5.8	19.81
3.5	17.72	4.3	18.45	5.1	19.18	5.9	19.90
3.6	17.81	4.4	18.54	5.2	19.27	6.0	20.00

Controlling Depths for ships to the Service Jetty is 8.2 m. and Ore Jetty 12 m. For sailing from the Ore Jetty – 16.0 m.

For vessels bound for Lambert Service Jetty – 8.2 m.

Berthing of ore carriers is usually carried out at about 1 hour – 2 hours before HW. Berthing times other than HW at discretion of Harbour Master.

Part loaded ore ships are restricted to berthing at HW. The turning area has a least depth of 12 m. and a U.K.C. of 1.5 m. is required. Drafts of up to 13 m. may be accommodated, but ships are strongly advised to contact the Harbour Master for advice prior to arrival.

Sailing from the Ore Jetty is at 1 hour before HW. No variation can normally be permitted. The 18 mile exit route is 'graded' from 16 m. to 17.4 m. to accommodate tidal variations.

Drafts for sailing are calculated by adding the height of tide to the controlling depth and then deducting one eleventh of that total to give an U.K.C. of 10% of draft.

Owing to tidal peculiarities, berthing at the Lambert Service Jetty is either at about 2.5 hours before HW or 3.5 hours after HW.

TIDES: Spring range is 5.8 m. (19 ft.).

MAX. SIZE:

	Berth No. 1	*Berth No. 2*
DWT	225,000	323,000
LOA	355 m.	355 m.
Beam	50 m.	55 m.

Largest ship to date (February 1994), the "Bergeland", 322,944 d.w.t., LOA 339 m. and beam 55 m.

HEALTH: Pratique may be given by radio. Pratique is automatic if having called at another Australian port.

RADIO: Send ETA advices to "Shipserve-Harbourmaster-Portwalcott" and Agent 7 days, 72 hours, 48 hours and 24 hours prior to arrival.

VHF: VHF communications are available on a limited basis – a watch being kept on both Channels 16 and 14. Hours are approx. 0830 – 1200 and 1300 – 1630 Monday to Friday. The station is also manned if it is thought that urgent communication is necessary.

TUGS: Two tugs, "Pannawonica 1" and "Lambert", are available for use. Both tugs are 4,800 h.p. (60 tonnes bollard pull). One line launch is available. Tugs supply towing equipment.

BERTHING:
Cape Lambert Service Jetty is owned by Robe River Iron Associates (R.R.I.A.). The neck is 457.20 m. long and the berthing head is 155.45 m. long. Off each end of the head is a mooring dolphin some 27.43 m. away. This permits a vessel of about 190.50 m. long to berth. There is a min. depth of 10 m. at LW. The height of the jetty, above LW, is 10.67 m. Cargo is handled by ship's gear. The jetty is designed for road transport only. It was built to normal Australian standards and 110 ton locomotives have been landed. This is not a common-user berth and permission must be obtained from the Port Authority before any cargo, other than R.R.I.A. cargo, is handled.

Lambert Ore Jetty is owned and operated by R.R.I.A. It extends 2.67 km. to sea in a 046.75° direction. It is double sided and capable of handling ships up to 323,000 d.w.t. Max. beam at No. 1 is 50 m. and No. 2 is 55 m. The depth of water in No. 1 (South) Berth is 18.5 m. and in No. 2 (North) Berth is 19.5 m. Ships should arrange their trim so that there is always a clearance of 1 m. when in the berth. There is a single shiploader designed to operate at 6,000 t.p.h. Ships berth 'head out' and are secured to dolphins, parallel to the jetty. These dolphins are 7.62 m. above LW. The height of the jetty is 18.6 m. above LW and the boom of the shiploader is about 30.5 m. above LW. Max. distance between hatches is: No. 1 Berth, 234 m. and No. 2 Berth, 236 m.

Operator: Robe River Iron Associates, P.O. Box 21, Wickham, W.A. 6720. Tel: (091) 87-1001. Fax: (091) 87-1650. Telex: AA 99058.

The following letters from R.R.I.A. were handed to the Master on arrival in November 1991.

Letter No. 1:

SHORE LEAVE AND VISITORS – PORT WALCOTT

In connection with crews and visitors to ships berthed at Port Walcott, would you please draw to the attention of Masters, upon arrival of their ships, the following regulations:

All crew going to or returning from shore leave must do so by vehicle: either a taxi, bus, the agent's car or a Government vehicle. Private vehicles are NOT permitted to traverse our mining lease except in special circumstances. Should you wish to invite visitors to your vessel, kindly apply to the undersigned with a full list of names so that a pass may be arranged. Taxi or bus hire should be arranged directly with the ship's agent on berthing.

Crew members and visitors may walk only directly between the point of embarkation/disembarkation and the seaward end of the loading wharf.

Other than embarkation/disembarkation to and from the vessel, NO CREW MEMBERS OR VISITORS ARE PERMITTED TO WALK ON THE MINE SITE.

Safety helmets and steel capped boots are not required when only embarking/disembarking to and from the vessel.

Signed: Senior Manager – Operations.

Letter No. 2:

In welcoming you to Cape Lambert, we would like to advise that your vessel is subject to various Port Health, Customs, Immigration, Maritime and other regulations as follows:

Loading Operations:

The responsibility for safe and correct loading of the vessel rests entirely with the Master.

Shore personnel are available to operate the loading machinery and to assist the vessel in every way they can, but it must be appreciated that they are not qualified in the skills of correct stress-loading of a vessel, nor in achieving a desired draft condition.

Masters must therefore ensure that a competent officer is on duty throughout the loading period, that he visits the deck frequently, and maintains a continuous check on the draft.

Communication between your duty officer and the Shiploader Operator is by a private VHF radio frequency. A radio may be collected from the Shiploader Operator's cabin by your officer at the commencement of loading and returned immediately upon completion of loading. This must be done without delay. The responsibility of safekeeping and return of the shipper's radio remains the responsibility of the ship's Master, who will be held liable for any loss or damage to the equipment. Please note that these radios should be exchanged with the Shiploader Operator on a regular basis (0700 hrs., 1500 hrs. and 2300 hrs. daily) to prolong battery life.

One ship's crew member should at all times be available to communicate with shore personnel. Any change to the original loading plan should be communicated to the Shiploader Operator. This notice should be in writing and signed by the Master.

Tonnages indicated by the shore belt scale are to be taken as approximate only and no reliance is to be placed on these for correct stress-loading of the vessel, nor for the achievement of the final desired draft.

Washing Down:

Ore spillage on deck and dust which accumulates during the course of shiploading must not be washed into the berths. Vessels are required to defer wash-down until after they have cleared from the berth, outward.

Shore Leave and Visitors:

Robe River Iron Associates, as owners and operators of Cape Lambert port and mine-site areas, wish to draw to your attention to the attached regulations relating to shore leave and visitors (See "Letter No. 1").

Notice to Port and Towage Users:

By-Law 75 promulgated under the Gazetted Cape Lambert Ore Wharf By-Laws.

Towage Rates and Conditions:

The use of tug boats to assist vessels inwards and outwards shall be at the discretion of the Master. In all cases, the rates set out in the Second Schedule shall be payable in respect of towage services available to all vessels berthing and unberthing into and out of any berth, or any of the Company's marine facilities whether such services are used or not used.

It is the intent of this By-Law that if tugs and workboats have been mobilised then they are available.

If the pilot choses not to bring the tugs onto towlines, this is a matter for his judgement, however if tugs and craft are in attendance and available for use, then full payment at the gazetted rate is required irrespective of whether their services are used or not. Conversely, if tugs and craft are not available, no charges will be levied irrespective of whether the Master has signed an application form in accordance with By-Law 75.

Your co-operation in these matters is appreciated. Kindly indicate receipt of this letter by signing the attached copy.

Signed: Manager – Marine.

CRANES: 2×5 ton mobile cranes.

STEVEDORES: Labour for stevedoring purposes is controlled by the Association of Employers of Waterside Labour. Requests for labour should be made through an Agent or Stevedore. Hours of work are usually 0800 – 2130 and 2130 – 0630. This labour operates at Lambert Jetty.

TANKERS: Tankers berth 'head-in' or 'head-out' at Lambert Service Jetty at discretion of Harbour Master. The deeper water (10.67 m.) is at the seaward end. Discharge is through an 8 in. pipeline which is situated about the centre of the berth.

FRESH WATER: Fresh water available at both wharves – ships supply own hoses with 2.5 in. quick release fittings.

FUEL: Not available.

CERTIFICATES: Ore/Oil carriers require inspection by surveyor if previous cargo was oil. Gas-free Certificates over 24 hours old are not accepted.

REPATRIATION: Carried out regularly.

AIRPORT: At least 1 jet flight per day to Perth from Karratha, flight time 2 hours.

TIME: See "General" before first port.

HOLIDAYS: Iron ore is loaded 24 hours a day throughout the year.

STORES: Dry, chiller, freezer and Bond stores are available. It is suggested that ample notice be given.

CHARTS: AUS 55, 56, 740, 741, 326 and 327.

Port Walcott Pilots are Agents for the Chart and Map Shop in Fremantle who can supply all charts and publications.

TELEPHONES: Not available at the berths.

SHIP SUPPLY SERVICE: Port Walcott has limited ship-to-shore transport with the only non-fishing commercial craft being R.R.I.A. owned tugs (2) and workboat. All these craft are available for emergency use.

Charter craft are available through ship's Agent.

The local ship's Agents are conversant with the availability of charter craft and ship Masters and Owners would be well advised to operate through their Agent.

A helicopter Pilot Service commenced at Port Walcott in July, 1984. This service may be available for emergency use. Contact should be made through the Pilot's Office.

Port Walcott Pilots, P.O.Box 61, Wickham, W.A. Tel: (091) 871-329.

SHORE LEAVE: Crew members are allowed ashore by pre-arranged bus or taxi – nearest town is 10 miles away. No crew members or visitors are permitted to walk on the mine site.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: Port Walcott Seafarers Centre, shop only. 1×14 seat minibus operated by volunteers. Church services can be arranged.

CURRENCY: Australian Dollars. Currency can be exchanged at 2 local banks. Monday – Friday, 0930 hrs. – 1630 hrs.

GENERAL: Port Walcott is connected by sealed roads to the towns of Wickham, Roebourne, Karratha, Dampier and Port Hedland, each of which has a hospital and other facilities. The sealed road also extends to Perth, some 1,580 km. away.

Tides: Spring range is 5.70 m. (18 ft. 9 in.).

Stores: Providores operate here. Freezer, chiller, dry and Bond stores are available but advance notice is preferred.

Access: Access from the ship to the shore is by means of ship's accommodation ladder to a dolphin at the ore jetty and by means of a brow at the Service jetty.

Moorings: 1. Any wire ropes should terminate in a fibre rope tail of at least 20 m. length, including eye.

2. Spring lines should be laid out on deck, prior to coming alongside, for a distance of approx. 80 m. from the ship's lead. In the case of wires, the rope tail would be included in this 80 m. This arrangement should permit easy lowering vertically to the appropriate dolphin.

SHIPMASTER'S REPORT: November 1991.

Vessel: 190,000 d.w.t. OBO.

Mooring: Vessel used one tug each end with tugs ropes.

If springs are wires, 50 m. messengers are required.

Head and stern lines sent by boat.

First lines ashore are forward breast lines by boat.

Stern lines sent ashore (ropes) by heaving line.

As vessel comes alongside, the first after lines (breasts) are sent ashore by heaving line.

Cargo: Letter from Berth Operator:

The commodity to be loaded in your vessel is Robe River Iron Ore sinter fines and the following data has been derived via the use of recognised international and national test procedures as is required in the IMO Bulk Cargoes code.

(A) Physical/Chemical Proportions:
- i. Transportable Moisture Limit : Not applicable
- ii. Moisture Content (ISO 3087) : 6.0 – 7.5% (Continuous testing)

  Average moisture content will be confirmed by tests carried out during loading.
- iii. Angle of Repose at Moisture levels stated : 32° – 34.5°
- iv. Stowage Factor (Bulk Density): 0.50 – 0.55 cu.m./tonne
  1.82 – 2.00 tonnes/cu.m.
  20 cu.ft./ton
- v. Iron Content : 56.5 – 57.5% (Continuous testing)

This commodity is not considered to be a cargo which will liquify during transport.

(B) Chemical Hazard:
- i. Classification : Nil
- ii. Description of Hazard : Nil
- iii. Precautions to be taken : Nil
- iv. Emergency Procedures : Nil

It is certified that for the cargo nominated, any relevant hazards pertaining to marine transport have been properly described and that information given is based on the latest available including experience in storage prior to shipment.

AUTHORITY: Department of Transport, 1 Essex Street, Fremantle, W.A. 6160, Australia. *Tel:* (09) 239-2399.

Port Walcott Pilots, P.O.Box 61, Wickham, WA 6720, Australia. *Tel:* 091-761329. *FAX:* 091-871601. *Contact:* Captain M. Hairsine (Tel: 091-871119). Captain P. Horton (Tel: 091-871710). Captain M. Allan (Tel: 091-871085).

AGENT: Patrick Sleigh Shipping Agencies Pty.Ltd., 1937 Pyramid Road, Karratha, W.A. 6714, Australia (Postal address: P.O.Box 152, Karratha, W.A. 6714). Tel: (091) 44 4329. Telex: 198236 PATSLE. Fax: (091) 44 4329. Seagram Code 6DPATSLE.

PORTLAND, Victoria: 38.20 S. 141.36 E. (See Plan)

PORT LIMITS: As much of the waters of Portland Bay as lie Westward of a line bearing due North from Point Danger to the opposite shore of Portland Bay.

DOCUMENTS: See "Melbourne".

PILOTAGE: Compulsory except for Master holding valid Pilotage Exemption Certificate. Pilot boards about 1.5 miles N.E. of the main breakwater light. Pilot is available 24 hours and 24 hours notice required.

The pilot launch has a black hull and white superstructure; displays a whiteboard with "Pilot" painted in red on the landing bridge.

Pilot ladder must be positioned about 2.0 m. above the sea level with 2 manropes slightly shorter. The ladder should be *clean* and in compliance with SOLAS Regulations and ISO Standards. Single length ladder with non-slip surface. All ropes on ladder and manropes to be manila (not nylon or polypropylene). A responsible officer to stand-by when Pilot boarding or disembarking. Pilot boarding area to be properly lit in the hours of darkness.

APPROACHES: *Approach from the West:* A safe course into Portland Bay can be maintained by rounding Lawrence Rocks at a distance of 1.5 nautical miles offshore and altering until a course of 330° (T) can be steered, which will clear the Southern side of the Bay between Point Danger and Portland by 1.5 nautical miles. Steer this course until Whaler Point Lighthouse bears 270° (T) about 2.5 miles distant where course can be altered for the harbour entrance.

Approach from the East: A straight course after rounding Lady Julia Percy Island, 18 miles from the breakwater.

ANCHORAGE: Portland Bay is clear of all dangers and safe anchorage may be found 1.5 nautical miles N.E. of the Main Breakwater. Safe anchorage for small vessels is available between the Lee Breakwater and Whalers Point. Holding ground is good, and excellent shelter is obtainable from Westerly weather. Anchoring is not recommended in strong Easterly or South-Easterly weather, as there may be a confused sea and swell.

RESTRICTIONS: The Harbour is bounded by 2 breakwaters, enclosing 101 hectares. The entrance is 244 m. wide.

Swinging Basin: Between the two breakwaters, bounded by Berth No. 6 and the Lee Breakwater and the turning circle is 440 m. in diameter.

Depth of water in the harbour is based on a datum of 0.082 m. above LWOST. Mean rise and fall is approximately 0.75 m., but the prevailing wind and atmospheric pressure can cause variations to tidal prediction.

Weather: (Winds, freak weather conditions): The tidal stream off Portland is weak and variable, and is largely the result of wind conditions.

South Western Victoria is influenced by low pressure systems of the Southern Ocean, which have a predominant effect on the regional climate, which can give rise to rapid and sudden weather changes.

MAX. SIZE: Largest vessel handled up to date:

Max. deadweight – 81,796 tonnes.
Max. draft departure – 12.54 m.
Max. draft arrival – 12.01 m.
Max. length – 263 m.
Also see "Berthing".

HEALTH: Portland is a First Port of Entry. When requiring Pratique, inform the Port Health Officer of the ETA, number of crew and passengers and the state of health of the complement. Use the Seagram prefix "3P Portland" for all cabled messages. All requirements as for Melbourne.

RADIO/VHF: Maritime VHF operating on Channels 12 and 16 is installed in the Harbour Master's Office and on the tugs.

Listening watch is maintained on Channel 16 between 0800 hrs. and 1700 hrs., Monday to Friday only. Contact on this channel can however be anticipated outside these times, but only when shipping is expected.

Radio Advice of Arrival: Address ETA messages to the Harbour Master, Portland, using the seagram prefix "3P Portland" via Melbourne Radio.

TUGS: Two omni-directional propulsion stern drive tugs with 2,880 h.p., giving 35 tons bollard pull are available.

BERTHING:

K.S.Anderson Wharf – Berth No. 1: The guaranteed depth alongside is 12.5 m. Maximum draft is 12.2 m. Departure draft may be increased to 12.5 m. with tide on written application to the Harbour Master. If the draft of any vessel loading a full cargo at Berth No. 1 is in excess of 11.0 m., then the length of the vessel is restricted to 260 m. and the beam to 33 m.

Berth No. 1 has an apron of 17.5 m. width with 3 sets of rail tracks. Immediately behind the apron is a transit shed (77 m. × 33.5 m.) and open storage space of approximately 0.5 hectares.

The berth is suitable for bulk grain, general and Ro/Ro cargoes. It has rail access and is connected to the V/Line (Public Transport Corporation) rail system.

K.S.Anderson Wharf – Berth No. 2: The guaranteed depth alongside is 11.5 m. Maximum draft is 11.0 m.

Berth No. 2 is a continuation of Berth No. 1. It is suitable for bulk grain and general cargo. The apron of 17.5 m. width has 3 sets of rail tracks backed by a general cargo shed (152.5 m.×36.5 m.). A rail track along the East side of the shed is covered by a canopy for direct discharge or loading into, the transit shed.

The roadway East of the rail track is 18.5 m. wide, backed by another rail track and 5,574 sq.m. of open stacking area.

The 2 berths have a total length of 396.24 m.

The 27 m. high lateral traversing shiploaders operate over the full length of the 2 berths, providing loading rates of up to 1,200 tonnes per hour for various types of grain, and woodchips. The Grain Elevators Board controls shore-based grain handling.

The transit sheds on Berths No. 1 and 2 can be used when the loaders are in operation.

Note: As there is only one conveyor belt, grain can only be loaded at Berth No. 1 or Berth No. 2 at one time.

Berth No. 5: The guaranteed depth alongside is 12.7 m. Maximum draft is 12.2 m. Departure draft may be increased to 12.5 m. with tide on written application to the Harbour Master. Length of the berth is 240 m. It is a heavy duty cargo berth located along the East side of No. 2 Quay. The berth currently handles aluminium ingots, general cargo, containerised cargo, livestock and bulk tallow. It also has the capacity to handle fully integrated container and Ro/Ro traffic. No. 5 Transit Shed is located nearby.

Berth No. 6: Guaranteed depth alongside is 12.0 m. Maximum draft is 11.0 m. Length of the berth is 228.6 m.

Berth No. 6 is at right angles to K.S.Anderson Wharf and 137 m. to the West. The berth is designed for the handling of bulk cargoes but, as with Berth No. 5, it is also used for the handling of general cargo as well as livestock.

The concrete apron is 21 m. wide, backed by a stacking area of 24.5 m.×152 m.

Special Purpose Bulk Berth: The guaranteed depth alongside is 12.5 m. Maximum draft is 12.2 m. Length of the berth is 203 m. The berth was constructed to service the import shipping requirements of Portland Aluminium.

The Special Purpose Bulk Berth is located on the Main Breakwater, 198 m. North of K.S.Anderson Wharf.

S.L.Patterson Tanker Berth: The S.L.Patterson Tanker Berth is situated on the Lee Breakwater, approximately 457 m. from the seaward end of the Breakwater.

The berth is 76 m. long and designed for vessels up to 38,000 tonnes deadweight. Guaranteed depth alongside is 11.0 m. at low water. Maximum permissible draft is 10.5 m.

S.L.Patterson Berth may also be utilised as a loading berth for stores, a fitting out or repair berth, or for undertaking surveys.

Trawler Berth: Located adjacent to the Port of Portland Authority Slipway. Berthage for 8 trawlers, plus 3 berths reserved for fitting out and repairs to vessels are available.

The causeway length is 260 m. Maximum depth alongside is 5.0 m.

Permissible Loadings on Berths:

Berth No. 1 – Wharf Structure	Axle Load – 14.0 tonnes or 2,500 kg./sq.m.
Berth No. 2 – Wharf Structure	Axle Load – 14.0 tonnes or 2,500 kg./sq.m.
Berth No. 2 – Transit Shed	Axle Load – 5.0 tonnes or 5,000 kg./sq.m.
Berth No. 6 – Wharf Structure	Axle Load – 20.0 tonnes or 3,400 kg./sq.m.
Tanker Berth – Wharf Structure	Axle Load – 12.0 tonnes or 1,250 kg./sq.m.
Berth No. 5 – Wharf Structure	Axle Load – 52.0 tonnes or 6,200 kg./sq.m.
Special Purpose Bulk Berth	Axle Load – 52.0 tonnes or 3,000 kg./sq.m.

Roadways Axle Load – Road Traffic Authority Regulations apply. Weighbridge to 50 tonnes.

Further details are available upon request to the General Manager, who will assist with advice on any special requirements.

CRANES: No shore crane facilities available in any berths and ships are required to use their own gear for cargo operations. A wide variety of mobile cranes are available for hire locally. 24 hour notice of requirements is advisable.

BULK CARGO FACILITIES: *Bulk Grain Terminal:* Owned and operated by the Grain Elevators Board – Victoria, giving a total storage capacity for grain and woodchips of 180,000 tonnes.

Main Silo: Storage capacity 60,000 tonnes. 24 cylindrical bins, each of 2,800 cu.m. capacity. Ten star bins, each of 730 cu.m. capacity.

Horizontal Stores: Two stores with a total capacity of approximately 120,000 tonnes, linked with grain terminal and ship loading facilities.

Ship Loaders: Length 16.8 m., width 3.7 m., height 27.4 m.

STEVEDORES: The Port of Portland has currently 14 registered waterside workers plus a substantial supplementary labour pool available for shipping requirements.

The waterside workers in the port have an enviable reputation for speedy and efficient cargo handling. Hours of work are 0800 hrs. – 1700 hrs., 1700 hrs. – 2300 hrs. and 0000 hrs. – 0700 hrs. Extended shifts can be worked to 1900 hrs. and 0100 hrs. each day, by arrangement.

MEDICAL: Medical, dental and optical services are available. Notice not necessary, but advisable if treatment required. Full hospital facilities available. Cholera vaccinations essential if ship comes from affected areas. International Certificates must be current.

TANKERS: See "Berthing".

DENSITY: Salt 1025, generally at all tides.

FRESH WATER: Obtainable in unlimited quantities at a loading rate of up to 90 t.p.h. at K.S.A. Berths and 200 t.p.h. at Berths No. 5 and 6.

FUEL: By road to all berths.

REPAIRS: There are a number of firms which undertake ship repairs.

John Beever (Australia) Pty. Ltd. Tel: (055) 232235.

Lewmarine Pty. Ltd. Tel: (055) 231455. Telex: Lewmar AA 35886.

Price Engineering Pty. Ltd. Tel: (055) 232091. Telex: Prince AA 55687. Fax: (055) 231389.

GANGWAY/DECK WATCHMEN: Watchmen required, undertaken by member of crew.

OPENING/CLOSING HATCHES: By arrangement between ship's Agent and stevedore.

CERTIFICATES: Health, Derat, Load Line, Ship's Register, Articles. Also see "Melbourne".

CUSTOMS ALLOWANCES: According to local Customs Department (1992) one litre alcohol/200 cigarettes or 0.5 lb. cigars or 0.5 lb. tobacco every 7 days to 10 days when in port.

CARGO GEAR: As no shore cranes available alongside any berths, ship's gear is required for loading or discharging of general cargo (See "Cranes"). Bulk grain loading facilities are available at KSA Berths No. 1 and 2. Woodchip loading facilities are available at Berth No. 6 and KSA No. 1 Berth.

REPATRIATION: Facilities exist for repatriation of crew.

AIRPORT: A daily air service is maintained between Portland and Melbourne. 3 flights daily connecting with all interstate and international services.

TIME: GMT plus 10 hours (Australian Eastern Standard Time). Daylight saving is adopted, normally late October to early or mid-March (GMT plus 11 hours).

HOLIDAYS: New Year's Day, Australia Day, Labour Day, Good Friday, Easter Saturday, Easter Monday, Easter Tuesday, Anzac Day, Queen's Birthday, Show Day, Christmas Day and Boxing Day.

Waterside workers will perform cargo operations only by prior arrangement. Work performed on holidays subject to premium rates of pay.

POLICE/AMBULANCE/FIRE: Police (055) 231999; Ambulance (055) 231666; Fire Brigade (055) 232998; Hospital (055) 210333.

TELEPHONES: Telephones are placed onboard every vessel.

K.S.A. No. 1	018 527032	Berth No. 6	018 527034
K.S.A. No. 2	055 231633	S.P.B. Berth	055 234804
Berth No. 5	018 527033	S.L.Patterson Tanker Berth	055 231852

SERVICES: Tank cleaning, dirty ballast, sludge and chemical waste disposal available, subject to nature and quantity. Compass adjusting, radio and radar repairs, nautical publications can be organised with prior notice.

BANKS: Local branches:

Australia and New Zealand Banking Group Ltd., 44 Percy Street. Tel: (055) 231588.

Commonwealth Banking Corporation, Percy Street. Tel: (055) 231722.

National Australia Bank Ltd., 64 Percy Street. Tel: (055) 232233.

State Bank of Victoria, 73 Percy Street. Tel: (055) 233433.

Westpac Banking Corporation, 62 Percy Street. Tel: (055) 231555.

SHIP SUPPLY SERVICE: North Western Shipping & Towage Co.Pty.Ltd., P.O.Box 187, Portland, Victoria 3305. Tel: (055) 217253. Fax: (055) 217259.

SHORE LEAVE: Crew members allowed ashore.

IDENTITY CARDS: See "Melbourne".

GARBAGE DISPOSAL: Garbage drums are placed alongside by Port Authority personnel. Daily collections at 1000 hrs. Charges are levied according to the number of crew on board and duration of stay in port. For any queries, contact Harbour Master.

WASTE OIL DISPOSAL: Waste oil disposal service available, subject to the nature and quantity. Contact: Westvic Petroleum Services, P.O.Box 230, Portland, Victoria 3305. They will require prior notice and particulars of waste oil for disposal.

SEAMAN'S CLUBS: Missions to Seamen, 61 Cliff Street, Portland, Victoria 3305. Tel: (055) 232776. Facilities: Shop, currency exchange, international telephone service for seafarers, church service, postage facilities and indoor games available at the club. Mission warden visits every ship on arrival.

CURRENCY: Hard currencies such as U.S. Dollars, Deutsche Mark, British Sterling and Japanese Yen could be exchanged at the local banks. Other currencies may be difficult to exchange.

GENERAL: High freeboard and light draft vessels arriving to anchor, and/or for immediate inward pilotage *must* maintain full sea ballast condition until securely berthed. This also applies to vessels with large wind prone superstructures such as livestock carriers, woodchip vessels, etc.

The dumping of large amounts of ballast water within port limits is only permitted when evidence can be produced that voluntary ballast exchange procedures have been complied with on the high seas.

Immobilisation of main engines at the berth is only permitted upon written application to the Harbour Master. As a general rule, main engine propulsion systems should always be available at short notice.

AUTHORITY: Port of Portland Authority, Barton Place, P.O.Box 292, Portland, Victoria 3305, Australia. *Tel:* (055) 250900. *FAX:* (055) 217488. *Seagram code:* "3P Portland". *Contact:* Captain D. O'Donnell, Harbour Master, Tel: (055) 231077. Captain V. Vijayapalan, Assistant Harbour Master/Pilot, Tel: (055) 235255.

AGENT: Patrick Sleigh Shipping Agencies Pty. Ltd., P.O.Box 133, 77 Bentinck St., Portland, Victoria 3305. Tel: (055) 23 4011. Telex: 55865 PATSLE. Fax: (055) 23 5174. Seagram Code: 3PPATSLE.

ROCKHAMPTON, (Port Alma) Queensland: 23.24 S. 150.33 E. (See Plan)

DOCUMENTS: All documentation carried out by ship's Agents either in Rockhampton or at main Agent's office. Also see "Melbourne".

PILOTAGE: Agent notifies Pilot of ETA, and boarding time then determined by Pilot, taking into consideration circumstances prevailing.

Pilot boards from a 15 m. white launch. Pilots can be contacted by VHF Channels 8, 12 and 16, or radio-telephone 2182 and 2760 kHz.

Coastal and Reef Pilotage: Pilotage through the Inner Route of the Great Barrier Reef to Torres Strait is conducted by licensed pilots available from Australian Reef Pilots Ltd. and Queensland Coastal Pilot Service Pty. Ltd. See "Torres Strait" for details.

Masters are advised that pilotage in the Inner Route and at Hydrographers Passage is compulsory. Pilotage in the Great North East Channel is recommended by IMO. See "Torres Strait".

ANCHORAGES: Anchorage for Port Alma is Timandra Buoy, approximately 13 miles from Port. Vessels *Cleared* to enter may anchor at Sea Hill.

RESTRICTIONS: Channel depth 7.3 m. LWOST. Berth depth 9.5 m. LWOST. Keel clearance of 2 ft. required. Max. draft dependent on height of tide.

HEALTH: Port Alma is a First Port of Entry for overseas vessels and full quarantine and customs facilities are available when required. There is a quarantine anchorage at Sea Hill Point on the approach channel.

The Port is also a designated timber port, and facilities are available for the issue of Derat Certificates. Fumigation services for both ships and cargo are provided by private firms based at Rockhampton, and under the control of the Commonwealth Department of Health.

VHF: Port Authority call sign: "Port Alma Wharves", all usable channels. Listening watch on Channel 16 when vessel due at Fairway Buoy.

TUGS: Tug assistance obtainable if required, from Port of Gladstone, subject to sufficient notice.

BERTHING: Berth at Pilot's discretion after receiving advice from Agent as to ETA. Berths allocated by Port Manager.

Berth No. 1: Berth has a concrete deck 18.5 m. wide and 169 m. long (554 ft.) constructed to take a superimposed weight of 5 cwt. per sq.ft. This berth is suitable for all general cargo, including frozen meats and other meatworks products. There is a mooring dolphin situated 43 m. (140 ft.) North of this berth, which can safely accommodate mooring lines from vessels required to moor over the North end of the berth.

Berth No. 2: Berth has a concrete deck 18.5 m. wide and is 122 m. long (400 ft.), constructed to take a superimposed weight of 7 cwt per sq.ft. This berth is suitable for all types of cargo including containers, explosives and ammonium nitrate and is equipped with a fixed leg crane with a S.W.L. of 25 tonnes. The pivot point of the crane is situated 22 m. (72 ft.) from the junction of Berths No. 1 and No. 2 and 7.3 m. (24 ft.) from the outside line of the berth fenders. The S.W.L. of 25 tonne is at radius of 33.5 m. (110 ft.) with the hook 24.3 m. (80 ft.) above the deck. There is a mooring dolphin situated 49 m. (160 ft.) South of this berth, which can safely accommodate mooring lines from vessels required to moor over the South end of the berth.

This berth is in a continuous line with Berth No. 1, to provide 291 m. (954 ft.) of mooring space plus the above mentioned dolphins at either end.

Berth No. 3: Berth consists of 4 berthing dolphins in line with No. 1 and 2 Berths with mooring dolphins at both ends to give an overall length of 238 m. (780 ft.). It is normal practice to place head lines on South end of No. 2 Berth from larger vessels using the dolphin berth. There is a distance of 49 m. (160 ft.) between the South end of Berth No. 2 and the mooring dolphin. All dolphins are of concrete construction.

This berth is currently used for loading bulk salt and discharge of petroleum products.

Dry Shed Storage: A store shed (45 m. × 10 m.) is provided adjacent to Berth No. 1 and is available to shippers by prior arrangement. It is of steel frame construction with non-flammable metal walls. The western wall has continuous sliding doors and at each end (i.e. North and South) there are double metal roller doors. A sliding metal door is situated at the centre of East wall giving an opening of 6 m. (20 ft.).

Container Terminal: The Port Authority has a container terminal available for use subject to prior arrangements. This terminal is suitable for both dry cargo and refrigerated cargo containers. Concrete pads have been designed to take containers stacked 2 high and electrical hook up points are adjacent to each pad.

The terminal is serviced by road, has full security fencing, flood lights for night operation, with office space and telephone.

Equipment: The Port Authority has available 1 forklift truck of 3 tonne lift capacity. Stevedores also have one forklift truck.

BULK HANDLING FACILITIES: The loading section of this facility is situated on Berthing Dolphin No. 2 and is in a fixed position, hence it is necessary to shift ship during loading operations. The unit is designed for a loading rate of 1,000 t.p.h. A weigh hopper is not provided and final tonnage loaded is responsibility of vessel's Loading Officer calculated by draft survey.

A. Height from wharf deck to underside of loading boom in working position is 23 m. (75 ft.).

B. Height from wharf deck to trimmer in retracted position is 16 m. (52 ft.).

C. Maximum extension of telescopic chute and trimmer in working position is 21 m. (68 ft.).

D. Maximum outreach of loading head is 16.5 m. (55 ft.).

E. Trimmer can be rotated and trimmer belt can be raised or lowered at the direction of the Deck Officer in charge of loading.

F. Dolphin berth deck is 6.4 m. (21 ft.) above water line at MLWOST.

CRANES: A 25 ton crane (fixed leg) is available on Berth No. 2 to handle containers and other cargo.

STEVEDORES: Agent advises stevedoring company of ETA. Requisitions to be lodged for labour before 1300 hrs. on previous day. No requisition can be lodged from 1300 hrs. Friday to 1300 hrs. Monday.

MEDICAL: All medical requirements carried out by Agent. Hospital available 40 miles from Port Alma.

TANKERS: Petroleum products can be discharged at Berth No. 3. 10 in. discharge lines. No slop facilities. 1 berth 32 ft. LWOST.

Hazardous Cargo: The Port is authorised to handle exposives and other hazardous cargo. Fire protection service.

FRESH WATER: Fresh water available by road transport only, necessitating road haul of 69 km.

FUEL: Fuel oil and other bunkers can be arranged by road tankers from fuel terminals situated in Gladstone. Contact ship's Agent in advance.

FIRE PRECAUTIONS: Rockhampton Port Authority can provide fire prevention and detection services. Fire pumps and hoses available.

CONSULS: See "Brisbane".

REPAIRS: Minor repairs only.

GANGWAY/DECK WATCHMEN: Crew.

OPENING/CLOSING HATCHES: Crew.

CUSTOMS ALLOWANCES: Under supervision of Australian Customs.

CARGO GEAR: As per the Navigation Act. See "Melbourne".

REPATRIATION: Facilities available.

AIRPORT: Regular services 43 miles from Port Area.

TIME: See "General" before first port.

HOLIDAYS: Christmas Day, Good Friday, April 25th and Waterside Workers' Picnic Day.

POLICE/FIRE/AMBULANCE: Tel. No. 000. 40 miles distance.

TELEPHONES: No provisions for placing telephone on board ship. Public telephone near container yard.

IDENTIFICATION CARDS: See "Melbourne".

GARBAGE DISPOSAL: Service provided at Berths No.1 and 2 with drums placed on wharf. Collection is at 0730 hrs. daily.

At Berth No.3 by prior arrangement only.

WASTE OIL DISPOSAL: No service available.

SEAMAN'S CLUBS: None.

GENERAL: The Port is serviced by both road and rail and land is available if required by Shippers subject to negotiation.

The Port Authority has fire fighting equipment to meet requirements for handling hazardous type cargo and provides linesmen and line Launch for mooring of vessels.

AUTHORITY: Rockhampton Port Authority. P.O.Box 9, Rockhampton, Queensland 4700. *Tel:* (079) 272133. *FAX:* (079) 226096, Port Office (079) 346928. *Contact:* C.R. Munro, Port Manager. *Tel:* (079) 346931 (Port Office); (079) 346103 (after hours); 018799386 (mobile). P.R. Black, Chief Executive Officer, (079) 284795 (after hours); 018791839 (mobile).

AGENT: See "Gladstone".

SALADIN MARINE TERMINAL, W.A.: 21.24 S. 115.03 E.

(See Plan)

LOCATION: The Saladin Marine Terminal is located to the North East of Thevenard Island, Western Australia. The moorings are located 3.5 nautical miles offshore at Latitude 21° 24.3′ S., Longitude 115° 02.8′ E.

Refer to the current hydrographic chart AUS-743 for further information.

Arrival Position: The Arrival Position is 2.0 miles West of the Saladin Buoy.

APPROACHES: The approach channel to the Marine Terminal is marked by navigation buoys, fitted with lights and radar reflectors.

Warning: Tankers should not navigate outside the designated approach channel as areas outside the channel have been incompletely surveyed.

Saladin Marine Terminal Approach Channel:

Name/Number Position	*Buoy Colour*	*Top Mark*	*Light*
"Saladin" (West Cardinal) Lat. 21° 23.9′ S. Long. 114° 55.5′ E.	Yellow with broad black band	2 Triangles Apex to Apex	Q (9) 15 sec.
1. (Starboard) Lat. 21° 24.0′ S. Long. 114° 56.4′ E.	Green	Triangle Apex up	Fl.G (2) 5 sec.
2. (Terminal) Lat. 21° 23.8′ S. Long. 114° 56.3′ E.	Red	Square	Fl.R (2) 5 sec.
3. (Starboard) Lat. 21° 23.2′ S. Long. 114° 57.8′ E.	Green	Triangle Apex up	Fl.G (3) 8 sec.
5. (Starboard) Lat. 21° 22.5′ S. Long. 114° 58.6′ E.	Green	Triangle Apex up	Fl.G (4) 10 sec.
7. (Starboard) Lat. 21° 21.9′ S. Long. 114° 59.7′ E.	Green	Triangle Apex up	IQ G (2) 10 sec.
9. (Starboard) Lat. 21° 21.8′ S. Long. 115° 00.3′ E.	Green	Triangle Apex up	IQ G (3) 10 sec.
11. (Starboard) Lat. 21° 21.8′ S. Long. 115° 00.7′ E.	Green	Triangle Apex up	Q G (4) 6 sec.
15. (Starboard) Lat. 21° 22.6′ S. Long. 115° 01.8′ E.	Green	Triangle Apex up	Q G (5) 10 sec.

DOCUMENTS: *Cargo Documentation and Inspection:*

1. Documents, such as the Bill of Lading, Quality Certificate, Quantity Certificate, Time Loading Report, Certificate of Origin, Cargo Manifest and Master's Receipt for Documents/Samples, etc., will be prepared at the Marine Terminal. When the tanker has been loaded, the documents will be completed onboard the tanker for the Master's signature.
2. Immediately upon completion of loading, the official Bill of Lading quantity will be relayed to the Pilot/Mooring Master by radio. In the event of a dispute, the tanker will be requested to recheck the measurement and calcuations of the quantity, but the Pilot/Mooring Master will not witness such measurement and calculations. After both tanker and Terminal figures have been verified, should an appreciable difference still exist, receipt of a Letter of Protest will be acknowledged by the Pilot/Mooring Master.
3. Letters of Protest, if any, should be handed to the Pilot/Mooring Master for onward delivery to WAPET. The Mooring Master will acknowledge receipt of the Letter of Protest only, and is not authorised to approve such letters or otherwise.
4. From time to time Owners, Charterers, consignees, or other interested parties, may appoint third party inspectors to survey the loading operation on their behalf. Any delays caused by such inspectors shall be considered delays caused by the tanker.
5. The Pilot/Mooring Master shall keep an Operations Log in the form contained in Schedule H of the times of all operations, delays, quantities loaded, ballast discharged and arrival and departure drafts.
6. Prior to the disembarkation of the Pilot/Mooring Master, the Tanker Master shall sight and verify the times and details contained in the Operations Log, sign the log in the space provided and affix the tankers' official stamp thereto.
7. Should the Master so require, the Pilot/Mooring Master will sight, verify and sign the tanker's Record of Operations prior to his disembarkation.

PILOTAGE: The Pilot/Mooring Master will board at the Arrival Position which is 2 nautical miles West of Saladin Buoy. Tankers should have their port crane/derrick ready to lift the hose connection equipment onboard.

Pilot Boarding: The pilot ladder shall be available to the Pilot/Mooring Master and be kept at a proper height for his safe use for boarding and disembarkation. When the distance from the water to the deck exceeds 9.0 m., the pilot ladder shall be rigged with the accommodation ladder or an approved mechanical pilot boarding appliance used. The tanker shall provide an adequate lee for embarking and disembarking the Pilot/ Mooring Master.

The hose connection equipment is contained in two large aluminium boxes which should be lifted onboard at the Arrival Position and landed just forward of the port manifold.

Pilot/Mooring Master:

WAPET shall provide a Pilot/Mooring Master to:

(a) Assist in piloting the tanker in and out of the moorings,

(b) advise on connecting and disconnecting the loading hose and

(c) advise on matters concerning the safety of the tanker and Terminal facilities.

Accommodation for WAPET Personnel: The tanker shall provide victualling and accommodation for the Pilot/Mooring Master and up to 2 WAPET personnel and victualling for the crew of the mooring vessel.

RESTRICTIONS: *Berthing:* Unless otherwise approved by the Pilot/Mooring Master, berthing shall take place:

(a) During high or low water slack tides.

(b) When sustained wind speeds at the Terminal do not exceed 15 knots.

(c) Provided there is no strong wind or strong wind warning in force for the Terminal area.

(d) When there is no tropical cyclone, or tropical depression which is likely to develop into a cyclone, within 400 nautical miles of the Terminal, or likely to pass within that range within 24 hours of the tanker berthing.

(e) In daylight.

Note: In order to berth during slack tides, the tanker must be at the Arrival Position at least 3 hours before the slack tide. A tanker arriving after this time may be requested to await suitable tide conditions.

Masters are warned that anchor holding ground is poor throughout the area.

Unberthing: Unless otherwise directed by the Pilot/Mooring Master, the tanker shall unberth:

(a) during the FLOOD tide after completion of loading; or

(b) after consultation with the Master, when there are strong winds at the Terminal area or a strong wind warning has been issued for the area;

(c) in daylight (unless the tanker is equipped with adequate search lights to enable night unberthing).

Arrival Condition: The tanker shall arrive ballasted to at least one quarter of its Summer deadweight tonnage, with propeller (and bow thruster if fitted) submerged, unless directed to carry more ballast by the Pilot/Mooring Master during adverse weather. Tankers should have a stern trim of less than 4.0 m.

Searchlights: To permit berthing and unberthing during darkness, the tanker shall be equipped with a searchlight with a minimum diameter of 300 mm. fitted to each port and starboard bridge wing to provide a wide scanning range.

Tidal Berthing: Berthing and unberthing at the Marine Terminal shall take place during slack water unless otherwise approved by the Pilot/Mooring Master.

Generally berthing will take place at low water slack tide or high water slack tide, to avoid the period of strongest tidal stream in the middle of the flood tide.

The direction of the tidal stream is approximately 120° on flood and 300° on ebb and attains a rate of 1.3 knots at springs.

MAX. SIZE: The Marine Terminal is restricted to tankers which have:

(a) A loaded displacement of between 40,000 tonnes and 180,000 tonnes,

(b) a maximum beam of 47 m. and

(c) a maximum slab side area of 6,384 sq.m., being the product of the overall length and moulded depth.

Minimum Water Depth/Underkeel Clearance: The minimum water depth in the vicinity of the berth and in the approach channel is 15.60 m. LAT (Lowest Astronomical Tide) Thevenard. A copy of the latest hydrographic certificate of the depth of the water is available from the Pilot/Mooring Master on request.

To provide a safety margin, should sailing be delayed for any reason, the following underkeel clearances shall be maintained at all times, up to and including low water, following the tanker's projected sailing time:

(a) During the period to 6 hours before the expected completion of loading, an underkeel clearance of 3.0 m. shall be maintained.

(b) Six hours before the expected completion of loading, WAPET will advise the Master of the sailing underkeel clearance in accordance with the swell type running at the fairway entrance at that time. A transmitting wave rider buoy is installed at the fairway entrance to monitor the swell conditions. Sailing underkeel clearance is related to the low water following the tanker's projected sailing time.
Swell Type A: Swell up to 0.32 m. Underkeel clearance 1.8 m.
Swell Type B: Swell from 0.32 m. – 0.72 m. Underkeel clearance 2.8 m.

(c) When a swell in excess of 0.72 m. is detected during the loading of a tanker which would under normal circumstances sail on minimum underkeel clearance, loading will be suspended and the tanker may be unberthed to await more favourable weather conditions.

RADIO: *Initial Message:* All incoming tankers must advise the Saladin Marine Terminal of their ETA not less than 96 hours before arrival, and thereafter at intervals of 48 hours, 24 hours and 12 hours before arrival at the Arrival Position. Should the expected ETA change by more than 1 hour following the 12 hour arrival notice, the incoming tanker must promptly notify the Terminal of the new arrival time.

Time to be used for ETA is local time, which is UTC plus 8 hours throughout the year.

The first message should also include:

(a) Name and nationality of tanker, radio call sign and INMARSAT telephone number.

(b) Cargo requirements.

(c) Deballasting time, if not concurrent with loading.

(d) Maximum loading rate.

(e) Arrival draft, fore and aft.

(f) Distance in metres from the bow to the tanker's loading manifold.

(g) Distance in metres from the bridge conning position to the bow.

(h) Details of the quantity and condition of ballast.

(i) Confirmation that the Inert Gas System is tested and working, and that all cargo tanks are at or below 8% oxygen level (tanks will be inspected before berthing).

(j) Confirmation of the capability to carry out closed system loading.

(k) The Master's full name for the preparation of Bills of Lading.

(l) Last port of call.

(m) Confirmation that the tanker has a clean Bill of Health (if there is any sickness on board, the message must give all available information as to the possible type of sickness).

(n) Advice of voltage of power supply and type of outlet socket (i.e. British, European, Japanese, etc.).

(o) Number of shackles (shots) of anchor cable on each anchor.

(p) Number and location of mooring wires and winches.

(q) Number and location of synthetic mooring lines on winches.

(r) Number and location of mooring bitts.

(s) Is the manifold arrangement, including rigging equipment, in compliance with OCIMF recommendations?

(t) Is vessel equipped with a crane or derrick and in what position?

(u) SWL of crane or derrick.

(v) Indicate whether the tanker can receive a helicopter, land-on or winch.

These ETA messages shall be sent to each of the following centres:

Barrow Island (office hours or by arrangement).
Telephone 091 843700
Telex AA 99125
Facsimile 091 843799

Perth (all hours).
Telephone 09 2636000
Facsimile 09 2636699

Thevenard Island (Saladin Marine Terminal) (Office hours or by arrangement).
Telephone 091 843800
Telex AA 198231
Facsimile 091 843899

Notice of Readiness:

Subject to any agreement between the Owner and the vendor of the crude oil to be lifted, provided WAPET is supplied with a copy of that agreement not less than 5 days before the ETA, Notice of Readiness will be accepted when the tanker is all fast in the berth (i.e. when all mooring lines, preventer lines and swamped moorings are made fast).

VHF: *Communications with Pilot/Mooring Master:*

1. Approaching the Terminal: Tankers shall listen to VHF Channel 16 when within 100 nautical miles of the Terminal.

The Pilot/Mooring Master can be contacted during daylight working hours or at other times by prior arrangement on the following international maritime VHF frequencies, call sign "Saladin Terminal" Channel 16 – 156.8 MHz. – Safety and Calling; Channel 14 (156.6 MHz.) – working channel.

2. During Berthing and Loading: WAPET will provide portable UHF radios for communications between the tanker and the Terminal onshore control room during berthing, loading and unberthing.

Channels used are:
Channel 1 469.775 MHz.
Channel 2 469.800 MHz.

TUGS: *Mooring Vessels:* WAPET shall provide 2 vessels to assist in mooring tankers at the Saladin Marine Terminal.

"Total Endeavour", a 48 tonne bollard pull (3,200 b.h.p.) omni-directional vessel, is used on a tow line from its bow to the tanker's stern when berthing. It will be positioned as near to the centre line as possible. "Total Endeavour" will stand-by throughout the loading and will assist in unberthing. The vessel is equipped for fire-fighting.

Tankers should be ready to receive 2 large aluminium boxes from the utility vessel, containing hose connection equipment, at the time the Pilot boards. These boxes will be lifted onboard the tanker using the port crane or derrick.

BERTHING: *Order of Berthing:* Tankers will normally berth in the order of arrival, but due regard will also be given to nominated date ranges, and such other matters as WAPET deems relevant to a fair and necessary berthing order.

MOORING EQUIPMENT: The tanker shall be equipped with mooring equipment which complies with the minimum specifications described below.

Mooring Winches: The mooring winches shall:

(a) Be power operated and capable of warping the tanker,

(b) have a mooring line permanently attached,

(c) be capable of making fast mooring lines by securing brake on winch,

(d) have warping drums capable of handling preventer lines and swamped mooring lines,

(e) if equipped with constant tension devices, have these devices disconnected and the brake fully applied,

(f) number at least 8 and be located:

  (i) Poop deck – four,

  (ii) fo'c's'le head – one each port and starboard, located in such a position that the port and starboard swamp mooring lines may be hove in and made fast to adjacent mooring bitts. (A single winch in this position, located so that ropes may be similarly handled from either side may be aceptable), and

  (iii) aft main deck – one each port and starboard. Tankers fitted with only one winch in the aft main deck area will be accepted provided a line can be deployed mechanically from that winch to each beam. On tankers fitted with only one winch where only one of the two lines can be handled (hauled or veered) at once, berthing may be delayed in marginal weather. A tanker will not be accepted where only one mechanical line can be deployed and the other would be handled by hand.

Mooring Bitts: The tanker shall have at least 8 sets of mooring bitts. Each set shall be of a size and be located near a mooring winch to enable making fast the preventer lines or the swamped mooring lines as the case may be.

Mooring Lines:
(a) The mooring line on each mooring winch shall have a minimum breaking strain (MBL) of 80 tonnes. Tankers with mooring lines with a MBL of less than 80 tonnes will be accepted at the discretion of WAPET. Tankers with mooring lines of less than 80 tonnes MBL may be subject to greater than normal delays awaiting berthing in marginal weather conditions.
(b) Each mooring line shall have a minimum length of 220 m.
(c) Each mooring line, if wire, shall have a fibre tail (attached to each wire) of at least 10 m. with strength equivalent to the wire line, plus 25%. Prior to arrival, fibre tails should be carefully inspected for damage and any suspect tails replaced.

Bow Anchors: The anchors shall:
(a) Be located on each port and starboard bow,
(b) have a minimum of 10 shackles of chain in tankers up to 50,000 tonnes load displacement and a minimum of 12 shackles in tankers over 50,000 tonnes load displacement and
(c) comply with a Classification Society recognised by the Australian Department of Transport and Communications.

Moorings: An 8 point mooring system consisting of 6 mooring buoys and 2 swamped moorings are installed in the berth layout. (See "Plan").

Preventer Lines: Preventer lines are permanently connected to each mooring buoy, by 4 m. of 56 mm. U2 stud linked chain. The preventer lines and swamped mooring lines are constructed as follows:
(a) 76 m. of 52 mm. wire rope
(b) 76 m. of 88 mm. polyester superline
(c) 47 m. of 26 mm. FSWR and
(d) 30 m. tail of 32 mm. polyester.

Each of the preventer lines and swamped mooring lines are to be hove onboard with a messenger of at least 24 mm. diameter supplied by the Terminal to the warping drum of the mooring winch, then made fast to the bitts, being stoppered off, using the "Chinese" or "West Country" method.

WAPET will provide stoppers for making fast the preventer lines and swamped mooring lines to the tanker's mooring bitts.

Submarine Anchor Trenches: Two areas, 140 m.×160 m. have been prepared to receive the tanker's anchors. These areas have trenches cut into them to provide a holding ground for the tanker's anchors. The bottom is solid rock outside these area, with a sparse covering of sand.

MOORING OPERATIONS/PROCEDURE:

General:
(i) Pilot/Mooring Master: The Pilot/Mooring Master will board incoming tankers at the Arrival Position. The Pilot/Mooring Master will advise the Master on approach to the berth, mooring and unmooring, connecting and disconnecting hoses, and all other operations within the Terminal area, including all manoeuvring of the tanker. The Master, or one of his qualified deck officers, must be on the bridge at all times while the tanker is being manoeuvred.
(ii) Mooring Vessel: WAPET will provide mooring vessels and crew to handle the tanker's mooring lines to the buoys and bring the preventer lines and swamped mooring lines to the tanker, and to assist in berthing and unberthing. The mooring vessels will stand-by during loading and unmoor the tanker on completion.
The mooring vessels shall be under the direct control and supervision of the Pilot/Mooring Master. Any service and/or facilities provided by WAPET including, but not limited to, the services of a Pilot/Mooring Master, mooring vessels and their crews, or mooring and loading equipment, shall be at the tanker's sole risk.

Tanker Mooring Procedure:
(i) The Saladin Marine Terminal is approached through a 10 mile channel, marked by spar buoys.
(ii) After passing Buoy No. 15, a course is shaped to proceed to a position between 1.5 and 1.7 miles from the moorings. Course is altered to starboard to make a final approach to the moorings on a base course of 210° (T), on a predetermined transit with the lead (range) spar buoys and the rear lead (range) mark on Thevenard Island.
(iii) The mooring is a conventional buoy mooring, with 6 mooring buoys and 2 swamped mooring lines. The swamped mooring lines are at the port and starboard shoulders. These swamped mooring lines lie on the sea bed when not in use, well clear of the manoeuvring area. The mooring buoys and swamped mooring lines are connected by 176 m. of 90 mm. and 76 m. anchor cable, to 914 mm. diameter anchor piles driven 14.0 m. into the bed rock. Two areas, 140 m. × 160 m. have been prepared to receive the tanker's anchors. These areas have trenches 6.0 m. wide, 2.0 m. deep and 140 m. long at 20 m. intervals, cut into them to provide a holding ground for the tanker's anchors. The bottom is solid rock outside these areas, with a sparse covering of sand.
(iv) An open running moor is carried out, dropping the starboard anchor first, running ahead and paying out between 9 and 11 shackles (shots) of cable depending on the tanker's size. When the tanker is in the correct position to drop the second anchor, the port anchor is let go. The starboard cable is put into gear and the cable weighed as the tanker is manoeuvred astern into the berth, whilst the port anchor cable is paid out.
(v) Whilst working the anchors, as much information as possible should be passed by the officer-in-charge of the foc'sle to the bridge to the Pilot/Mooring Master. The amount of cable paid out, the direction the cable grows in and the weight on the cable, are vital information for the Pilot/Mooring Master.
(vi) Berthing assistance is rendered by 2 mooring vessels. As the tanker manoeuvres astern, the windward beam tanker mooring rope/wire, at the aft end of the main deck, will be sent away to the windward buoy. The tanker's own mooring lines will be deployed as the weather dictates, and together with the tanker's anchors will be used to position the tanker in the berth.
(vii) Once the tanker is in position and all the tanker's lines are fast, a mooring vessel will pick up the preventer lines in sequence and tow them alongside the tanker. The tanker should provide a heavy messenger with which to heave the preventer lines onboard. The first part of the preventer line to come onboard is the preventer tail which is 39 m. × 32 mm. of hawser laid polyester rope. This soft line is connected by a shackle to 48 m. of 26 mm. steel wire rope, which is in turn connected by a 40 mm. snotter to the 88 mm. polyester superline, which is made fast onboard.
(viii) The superline should be hove as tight as possible, stoppered off using the polyester stoppers supplied by WAPET and made fast to the tanker's bitts. It is important that the preventer lines and swamped mooring lines are made fast in this way. Winding onto the tanker's winches is not permitted.
(ix) The port and starboard swamped mooring lines will be the last lines to be picked up in a similar way to the preventer lines.
(x) The tanker is not considered all fast in the berth until all the preventer lines and swamped mooring lines are made fast as required by the Pilot/Mooring Master.
(xi) Once the tanker is all fast, a mooring vessel will tow the hose marker buoy alongside and the Pilot/Mooring Master will advise the tanker's crew on the connection of the loading hose. A responsible officer and sufficient members of the tanker's crew should be available at the manifold to carry out this operation.
(xii) Emergency towing-off wires of adequate strength shall be made fast to bollards on the tanker, forward, and the eye run out and maintained at or about the waterline.

HOSES: *Crane/Derrick:* The tanker shall have a crane or derrick on the port side with a minimum SWL of 10 tonnes. Arrangements for lifting and securing hose must comply with the Oil Companies International Marine Forum (OCIMF) recommendations.

Hose Connection:
1. Upon completion of the mooring operations, the loading hose will be connected to the tanker's port manifold. The hose connection will be made by the tanker's crew who must be under the supervision of a responsible deck officer. The Pilot/Mooring Master will advise on the correct procedures to be adopted.
2. The crane/derrick rigged on the port side will be used to hoist the loading hose and assist in its connection to the port manifold. The crane/derrick will be used during loading to suspend and take the weight of the loading hose.
3. When the loading hose is hung-off at the tanker's rail, and lowered to manifold level, the blank flange on the end of the hose shall be removed and the loading hose bolted to the tanker's manifold. A pressure gauge is provided at the top of the spool and a drain line at the bottom of the spool.
4. The propeller shall not be turned over with the main engine while the loading hose is connected, or after it has been disconnected without first notifying the Pilot/Mooring Master.

Personnel: The tanker shall provide competent personel to perform, supervise and approve all work to connect and disconnect the loading hose.

Manifold Specification: The tanker's manifold shall be capable of being bolted to the 12 in. USAS flange of the loading hose and comply with the OCIMF Standards for Oil Tanker Manifolds and Associated Equipment.

Fittings and Connections Available at the Marine Terminal: WAPET will make available the following fittings to connect the loading hose to the tanker's manifold:
(a) 300 mm. to 300 mm. 150 USAS drain spool, with 25 npt and 15 npt spigots for drain line and pressure gauge with a slipping flange at its outboard end to ease loading hose bolt alignment;
(b) hanging-off connecting chain and specially modified "Blake Stopper" for use with loading hose;
(c) nylon straps and associated slings to suspend loading hose from tanker's crane/derrick runner; and
(d) flange gaskets and grease.

Also see "Loading".

LOADING: Throughout the loading operation, a responsible deck officer shall be in charge of operations, either on deck, or in the cargo control-room. In addition, an efficient deck watch in constant contact with the cargo control-room must be maintained at all times.

Loading rates can be reduced on request at any time. Except in an emergency, 10 minutes notice should be given to the Pilot when rate reduction is required.

Valves must not be closed against the oil flow without permission from the Terminal. Part or full closure of valves during loading is extremely dangerous and can cause extensive damage to equipment.

Crude Oil Handling Facilities – Onshore:
The onshore storage and pumping facilities include:
(a) 3 × 350,000 bbl. (55,618 kilolitre) floating roof tanks;
(b) 2 gas turbine centrifugal loading pumps rated to deliver up to 22,600 bbls. (3,600 cu.m.) per hour of Saladin Crude Oil; and
(c) associated control and monitoring equipment.

Crude Oil Handling Facilities – Marine:
The submarine pipeline is comprised of the following 2 sections:
(a) Linking the shorebase facilites on Thevenard Island to the Marine Terminal is 6,426 m. of 584 mm. × 12.7 mm. steel pipeline, the seaward end of which is marked with a spar buoy.

(b) At the seaward end of the pipeline described in (a) there is a flexible rubber hose measuring 75 m. of 400 mm. and 9 m. of 300 mm. tail/rail hose (which flexible rail/tail hose is referred to in these Regulations as the "Loading Hose"). The "Tanker" end of the tail/rail hose is fitted with a 300 mm. (12 in.) locking butterfly valve. The seaward end of the loading hose is marked with a yellow conical buoy.
The tanker's manifold shall be in compliance with the Oil Companies International Maritime Forum (OCIMF), Standards for Oil Tanker Manifolds and Associated Equipment, and its presentation flange shall be equipped with a 300 mm. (12 in.) ANSI Class 150 flange.

Commencement Checks: The submarine pipeline is left full of crude oil between tanker loadings. When all hose connections have been made and approved, and safety checks outlined in the International Safety Guide for Oil Tankers and Terminals have been completed, the butterfly valve on the loading hose is opened. The butterfly valve on the loading hose will be bolted in the open position before loading commences and should be checked frequently during the course of loading.

Tanker Loading: Tankers loading at the Marine Terminal must comply with the latest SOLAS and MARPOL Conventions and Protocols. Tankers found to be deficient or substandard in safety requirements will not be permitted to moor and load.

Loading Commencement: The tanker's manifold is opened and crude oil shall be loaded by gravity. Once checks for flow have been completed on the tanker, the Pilot/Mooring Master will be advised to start the loading pumps.

Inert Gas System: The cargo tanks will be checked on arrival to verify that they are inerted to 8% oxygen or less by volume and pressurised as required by existing regulations. Vessels with tanks not properly inerted and/or with an inoperative Inert Gas System will be rejected. In the event of failure of the Inert Gas System during tanker loading/deballasting operations, or if the tank atmosphere exceeds 8% oxygen, cargo/ballast operations will be stopped, and if the deficiency is not promptly corrected, the tanker will be removed from the berth.

Warning Against Back Pressure: The submarine pipeline and loading hose may be damaged if subjected to sudden increases in pressure. Back pressure on the loading hose at the tanker's rail must not exceed 700 Kpa./100 p.s.i. To avoid damage to the loading equipment the tanker shall ensure that the following precautions are taken.

(a) The flow of crude oil shall not be shut off by closing the tanker's valve or the butterfly valve on the tail/rail hose without the prior approval of the Pilot/Mooring Master.
(b) As many tanks as possible are to be open during loading. At least 2 tanks must be open while onshore pumps are operating at full speed. If the Master considers it necessary to load into only one tank, or to reduce the loading rate for safety or its operations, he shall notify the Pilot/Mooring Master in sufficient time to reduce the loading rate.
(c) The Master shall advise the Pilot/Mooring Master when 500 cu.m. of crude oil are required to complete the loading, so that the onshore pumps can be eased down slowly and reduced to idle.
(d) The Master shall advise the Pilot/Mooring Master when 60 cu.m. of crude oil are required to complete loading, so that the onshore pumps can be stopped and loading completed by gravity.
(e) On completion of loading, the tanker's manifold valve is to be closed slowly to minimise the surge pressure of oil in the pipeline.

Availability of Deck Machinery: The Master shall ensure that the deck machinery is available for immediate use at any time during the loading operation.

Test Calls During Loading: In order to check radio communications between the tanker and the onshore control-room, the tanker shall call Saladin Terminal every hour at 15 minutes past the hour, and advise the Terminal of the previous hour's loading rate.

Saladin Terminal shall call the tanker every hour at 45 minutes past the hour, and advise the tanker of the wind direction and speed, together with swell conditions.

Should either of these calls fail to establish communications between the tanker and the shore, after taking reasonable steps to re-establish communications, the onshore Terminal will shut down loading until communications are re-established.

Suspension of Loading during Strong Winds: During periods of strong winds the Pilot/Mooring Master may advise the tanker's Master to discontinue loading and disconnect the loading hose.

The loading hose may be hung-off ready to slip or be laid down.

Hose Disconnection:

1. On completion of loading by gravity, the tanker's manifold valve shall be closed slowly. If the manifold valve is of the type that cannot be closed slowly, the flow of oil shall be stopped by slowly closing a proportional tank valve. The back pressure at the rail will be monitored during this operation. Once the tanker's proportional valve and/or manifold has been closed, and it is confirmed that all oil flow has ceased, the hose end butterfly valve will be closed. Finally, the Pilot/Mooring Master will instruct the onshore Terminal to close the sealine valve.
2. The tanker personnel shall make every effort to drain the manifold outboard of the manifold valve between the manifold valve and loading hose end butterfly valve. A drain cock is provided in the spool attached to the manifold for this purpose.
3. When the hose is disconnected from the manifold, sufficient drip trays must be available to contain any oil remaining in the spool pieces and reducer and the blind flange will be replaced on the hose. The weight of the hose is taken on the blind pulling flange and the hose lifted above the deck. The hose is raised to sufficient height to enable the weight to be taken off the hanging-off chain. The handing-off chain is then slipped and secured to the support chain. The hose is lowered to the rail and hung off by the slipping chain to the Blake Slip. The crane hook is removed from the blind pulling flange. The hose buoy is then slipped and recovered by the moring vessel. The Pilot/Mooring Master will instruct the mooring vessel to commence towing the hose buoy, and when the weight comes on the hose buoy chain, the order will be given to slip the hose. The handle of the Blake Slip is pulled and the hose falls into the sea. The mooring vessel tows the hose buoy to its resting position.

CARGO INFORMATION: *Saladin Crude Oil Properties:*

API Gravity	48.2° API
Density at 15°C in vacuum	0.7869 g/ml
Reid Vapour Pressure	4.70 psi
Pour Point	−30°C
Flash Point (Abel)	−32°C
Viscosity at 20°C	1.732 cSt

The average load temperature of the crude oil will vary from Summer to Winter. As a guide, the minimum temperature during Winter (May to October) can be expected to be about 28°C. In the Summer (November to April), the maximum temperature can be expected to be about 36°C. Masters requiring more information about loading temperature should contact the Terminal.

BALLAST: *Dirty Ballast Handling Facilities:* There are no facilities at the Marine Terminal to receive ballast from tankers.

Deballasting: The Terminal will not be responsible for any free water or deadfreight. For acceptance at the Terminal, tankers must have segregated ballast tanks, or otherwise comply with the ballast regulations detailed in "Ballast Operations" below.

Ballast Operations:

1. As there are no ballast or slop reception facilities at the Marine Terminal, all tankers must arrive with clean ballast suitable for discharging directly to sea in accordance with the standards set by the International Conventions. Tankers arriving with ballast unsuitable for discharge to sea will be rejected for loading. Any tanker rejected because of contaminated ballast or sea pollution will automatically invalidate her Notice of Readiness and will lose any priority of loading. Tankers discharging contaminated ballast overboard shall be subject to the anti-pollution laws of Australia. Penalties for pollution are severe.
2. Tankers arriving at the Marine Terminal should have sufficient ballast to ensure safe handling and manoeuvrability in the prevailing weather and sea conditions and in accordance with good seamanship practice.
3. Tankers should have the ability to deballast concurrently with loading operations, and any crossovers between cargo and ballast system must be blanked.
4. Where a tanker arrives with clean ballast which is not part of a segregated ballast system, and wishes to discharge such ballast over the side, the following conditions shall be met:
   (a) The tanker must be operating with dedicated clean ballast tanks in accordance with the provisions of Regulation 13(9) or (10) of the MARPOL Annex 1992 revision.
   (b) The tanker must comply with MARPOL Regulation 13A 1992 revision.
   (c) When operating the oil content monitor required by MARPOL Regulation 13A, the monitor record shall be kept, and the record given to the Pilot/Mooring Master for inclusion with the tanker's in port documents.
   (d) The discharge ballast from dedicated clean ballast tanks (CBT) will be carried out in daylight, so that the quality of the ballast being discharged to the sea can be constantly observed.
   (e) If possible, an independent inspector shall inspect the ballast tanks at the discharge port where the ballast is taken on and certify that the ballast is clean.
   (f) Prior to the discharge of the ballast, an independent inspector shall inspect the tanks or tanks containing the ballast, and certify that it is clean and take samples of the ballast, one sample to be retained on board and the other to be kept by WAPET.
   (g) The Master of the tanker shall make a declaration that the lines used for the discharge of such ballast are clean, and that the blanks separating the discharge line and the crude oil lines and tanks are tight and free from leaks.
   (h) Where this ballast forms part of the ballast required to keep the tanker at the required safe arrival draft, it should be understood that it will not be discharged until an equivalent amount of crude oil has been loaded to maintain a safe draft as required by these regulations.
5. The attention of Masters, Owners and Shippers, using the Terminal, is respectfully drawn to the Australian Government Guidelines with respect to the discharge of any ballast contained in Schedule I.

TIME: See "General" – "Time" before first port.

SERVICES: *General Facilities:* Mail forwarded to Thevenard Island for the tanker or its crew will be delivered by the Pilot/Mooring Master.

Mailing address is:

"Name of Tanker, Thevenard Island, Western Australia, 6711."

None of the following services are available at the Terminal:

(a) customs or quarantine;
(b) ship's agency, repairs, surveying, bunkers or potable water;
(c) medical, consular, telephone, accommodation or laundry;

If a tanker requires any of the above services, most can be obtained at the Port of Dampier. WAPET's prior approval should be obtained if the attendance of any person to the tanker requires the services of the mooring vessel.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

GENERAL: *Responsibility of Owner:* The onus is exclusively on the Master or Owner to ensure that the tanker is seaworthy and that all equipment is and remains in good working order and condition. Failure by WAPET to reject any tanker not meeting the requirements will not relieve the owner of liability.

Cathodic Protection: A tanker equipped with Impressed Current Cathodic Protection Systems shall ensure the system is switched off prior to approaching the moorings until the tanker is unberthed. The Master will be required to sign a declaration to the effect that the Impressed Current Cathodic Protection System is turned off before the tanker is allowed to berth.

Safety:

(a) Tankers which could in the opinion of WAPET possibly contravene the International Convention for the Safety of Life at Sea 1974 as amended by the 1978 Solas Protocol, will not be accepted.

(b) The tanker shall be in a state of readiness at all times to leave the moorings.

Tankers visiting the Saladin Marine Terminal must comply with the minimum safety requirements specified in the International Safety Guide for Oil Tankers and Terminals (ISGOTT).

Pollution: Tankers shall:

(a) Comply with the relevant provisions of the International Convention for the Prevention of Pollution from Ships defined as the "Convention" in the Pollution of Waters by Oil and Noxious Substances Act 1987 of the State of Western Australia and the Protection of the Sea (Prevention of Pollution from Ships) 1983 of the Commonwealth, and comply with other legislation of the State or Commonwealth pertaining to pollution;

(b) ensure that no rubbish is dumped from the tanker at or near the Marine Terminal;

(c) provide evidence to WAPET that the tanker is enrolled in the Tanker Owners Voluntary Agreement concerning Liability of Oil Pollution including TOVALOP supplement thereto effective 20 February 1987;

(d) provide evidence to WAPET that the tanker has in force insurances and certificates as are required of the owner of ships under Australian Law; and

(e) provide evidence to WAPET that any cargoes carried by the tanker are either owned by, or deemed owned by, a member of CRISTAL, being the Contract Regarding an Interim Supplement to Tanker Liability for Oil Pollution dated January 14th 1971, as amended from time to time.

Tank Inspections:

(a) When nominating a tanker for loading at the Terminal, the shipper shall provide WAPET with a statement in writing, on the approved WAPET form, that the nominated tanker has satisfactorily undergone a ship inspection, based on Oil Companies International Marine Forum (OCIMF) guidelines, and that the results of the inspection are acceptable to the shipper as at the time of inspection, and at the time of nomination.

(b) Where a tanker has not undergone an inspection as specified in (a), WAPET, at its absolute discretion, may accept the tanker for loading at the Terminal, subject to the tanker undergoing an inspection prior to loading commencing, by a qualified inspector at the shipper's sole cost. In such case, Notice of Readiness shall not be tendered until the shipper provides WAPET with a written statement including, without limitation, by fax or telex, that the inspection was satisfactory.

AUTHORITY: West Australian Petroleum Pty. Limited, 233 Adelaide Terrace, Perth. Postal Address: Box S 1580 P.O., Perth, WA 6001, Australia. *Tel:* (09) 2636000. *Cables:* Wapet. *FAX:* (09) 2636699. *Contact:* Captain C.J. Sutton, Marine Superintendent (Tel: (09) 332-4224 (After hours) or 018-906-744 (Mobile). Captain W.E. Deacon, Pilot/Mooring Master (Tel: (09) 310-4875).

SPRING BAY, Tasmania: 42.33 S. 147.56 E. (See Plan)

DOCUMENTS: As for all Australian ports.

PILOTAGE: Compulsory. Pilot boards from a tug (black hull, red funnel with black top), on a line joining Pt. Home Lookout and Stapleton Pt. (see Chart AUS 170). ETA is usually sent to vessel's Agent 72 hours prior to vessel's arrival and confirmed 24 hours and 6 hours before arrival at the Pilot station. ETA should also be sent to Harbour Master, Hobart, VHF Channel 16, call sign "Hobart Harbour". The tug from which the Pilot boards leaves Spring Bay Wharf 30 minutes before a vessel is due at the Pilot Station, and also keeps a listening watch on VHF Channel 16.

ANCHORAGE: A good anchorage can be found in depths of 22 m. approximately 1.25 miles South of Windlass Bay.

RESTRICTIONS: The wharf is used exclusively by vessels loading wood chips from Tasmanian Pulp and Forest Holdings. The main wharf, on which the wood chip loader is situated, is 243.8 m. long with additional dolphins (3) and a mooring block for head, stern and breast lines. Ships are normally berthed starboard side to. The shiploader is a fixed structure and vessels loading are required to move up and down the wharf using their own lines. Vessels are berthed and unberthed 24 hours a day, at the Pilot's discretion. Lights have been installed on the wharf for this purpose. Should a vessel require to immobilise her engines, application must be made to the Harbour Master; if permission is granted a tug will be required to stand by alongside.

MAX. SIZE: The minimum depth alongside the wharf is 10.7 m. and the mooring dolphins and ship loading facilities were designed to accommodate specialised ships with an overall length of 210 m. No difficulty envisaged in working ships having an overall length up to 243.8 m.

HEALTH: The local medical practitioner boards vessels after berthing and acts for the Commonwealth Department of Health. Immigration/Customs Officers travel by road from Hobart and board after Pratique has been granted. Quarantine Authorities must be informed of suspected disease or fever at least 18 hours before arrival. Also see "Melbourne".

RADIO: Hobart Radio, call sign VIH. Hours of duty EST (add 1 hour for Summer Time). Monday-Saturday inclusive 0730 – 1730 hrs. Sunday, 0800 – 1600 hrs.

TUGS: 2 tugs are stationed at Spring Bay. One of the tugs is used to embark and disembark the Pilot as well as assisting in berthing and unberthing. Should tugs be required to stand-by during loading operations an additional charge will be made in respect of crews' wages etc. It is customary to use the tug's lines, for which an additional charge is made.

MEDICAL: A local doctor is available and well equipped health clinics are situated at Triabunna (3 miles) and Orford (7 miles).

DENSITY: 1025.

FRESH WATER: Limited supplies are available from wood chip factory.

FUEL: None laid on to the wharf. In an emergency limited supplies could be provided by road tankers from Hobart.

FIRE PRECAUTIONS: No special fire precautions other than non-smoking or lighting of fires or use of naked lights.

CONSULS: None, nearest at Hobart.

REPAIRS: No facilities available for major repairs, but the wood chip factory may be able to assist in minor repairs. Local Hobart firms available.

GANGWAY/DECK WATCHMAN: None available.

OPENING/CLOSING HATCHES: Hatches opened by the ship's crew.

CERTIFICATES: Register, Load Line Certificate, Derat Certificate, Light Dues, Articles of Agreement, Clearance from previous Port.

CUSTOMS ALLOWANCES: See "Melbourne".

REPATRIATION: Facilities available through Hobart.

AIRPORT: Hobart Airport is situated 49 miles from Spring Bay Wharf. Frequent services operate to the mainland and New Zealand from where services operate world wide.

TIME: See "General" before first port.

HOLIDAYS: See "Hobart". Ships may be loaded on days which are regarded as holidays in Hobart.

POLICE/AMBULANCE/FIRE: Police, 573116; Ambulance, 573129; Fire, 573187.

TELEPHONES: A telephone is connected to all vessels on arrival.

IDENTIFICATION CARDS: See "Melbourne".

AUTHORITY: Marine Board of Hobart, G.P.O.Box 202B, Hobart 7001. *Tel:* (002) 351000. *FAX:* (002) 310693, Port Tower (002) 346116. *Contact:* C. Drinkwater, Chief Executive. C. Thompson, Port Service Manager.

AGENT: See "Devonport".

STANLEY, Tasmania: 40.46 S. 145.18 E. (See Plan)

LOCATION: The Port of Stanley on the Northern coast of Tasmania is situated on the Southern side of Circular Head. (Lat. 40° 46′ S., Long. 146° 18′ E). It is protected by the Breakwater Pier. The ore loading facility owned by Savage River Mining Co. (Port Latta) lies about 5 nautical miles to the S.E.

PILOTAGE: Pilotage is compulsory. The Pilot boards one nautical mile S.E. of the Breakwater. Contact Marine Superintendent Port Latta.

RESTRICTIONS: Depth in approaches 9.0 m. at LWOST. The nature of the bottom is sand.

VHF: "Port Latta" on Channels 6, 12 and 16.

TUGS: 1×24 ton bollard pull.

BERTHING: *Breakwater Pier:* Length 161 m. Depth 8 m. Cargo shed 55 m.×15 m.

Roll-on/Roll-off Berth: Length 100 m. Ramp 6.4 m. wide. Depth 8.8 m. to 5.8 m. at the inner end.

FRESH WATER: Available. Rate 18 t.p.h.

FUEL: Fuel oil and diesel oil available by road tanker.

REPAIRS: Minor repairs possible.

GARBAGE DISPOSAL: Pacific Waste Management Pty.Ltd., P.O.Box 249, Altona North, Victoria 3025. Tel: (03) 3609333. Fax: (03) 3609290. Drums and skips provided, collection as required.

WASTE OIL DISPOSAL: Service available from Pacific Waste Management Pty.Ltd. (see above) by road tanker at bulk berth and Ro-Ro berth.

SEAMAN'S CLUBS: None.

GENERAL: *Road and Rail Access:* Road access to both berths.

Tidal Data: Mean High Water Springs 3.5 m.
Mean High Water Neaps 3.2 m.

References: Australia Pilot Vol. II. Charts: AUS.353, AUS.798. List of Lights NP Vol. "K". Australian National Tide Tables AHP 11.

Imports: Coal and bentonite.

Exports: Timber, agricultural products.

Reefer Points: Situated on Breakwater Wharf and near Roll-on/Roll-off facility.

AUTHORITY: Marine Board of Circular Head, P.O.Box 96, Stanley, Tasmania 7331. *Tel:* (004) 581271. *FAX:* (004) 581442. *Contact:* Mrs.Y.M. Tierney, Secretary.

Marine Board of Hobart (See "Hobart").

STRAHAN, Tasmania: 42.10 S. 145.20 E. (See Plan)

PORT LIMITS: "Port of Strahan" means all waters of Macquarie Harbour and all bays and estuaries opening into that harbour, but not beyond an imaginary line bearing 000° (True) for a distance of 1.20 km. from Watts Hill and thence bearing 090° (True) to the shore line.

DOCUMENTS: As for all Australian Ports.

PILOTAGE: Pilotage is compulsory for all vessels exceeding 35 m. in length. All Pilots are stationed at Hobart and special arrangements must be made in advance if a Pilot is to be provided. Usual minimum notice is 24 hours by contacting Marine Board of Hobart by telephone (002) 351000, or Fax (002) 310693, (002) 346116 (Port Tower). The Wharf Officer at Strahan may be contacted on telephone No. 004.71 7291.

The Pilot Boarding Ground is outside the bar (Chart B.A. 3531 – Lat. 42° 12.0′ S., Long. 145° 13.0 E.). The pilot launch is fitted with VHF radio (Channels 16, 12, 8 and 6) and the Pilot will advise the ship by radio of the time he intends to board.

ANCHORAGE: There are no safe anchorage positions outside the Port of Strahan. The fairway is unprotected from the weather and during North-Westerly gales the outside bar breaks heavily making entry impossible.

RESTRICTIONS:

(i) Navigation within the port for vessels requiring a Pilot is only during daylight hours.

(ii) The entrance to Macquarie Harbour is 70 m. wide and very strong tidal streams can be experienced – up to 6 knots.

(iii) The tides are unpredictable. In Westerly gales the flood tide can run for 20 hours and when the wind backs to the South the ebb can run out for 20 hours.

(iv) A bar having a least depth of 5.5 m. exists outside the entrance, however the lead depth in the inner channel is 4.0 m.

MAX. SIZE: Largest vessel recently – "Pacific Bold", LOA 66.45 m., draft 4 m.

HEALTH: Australian Commonwealth Rules apply. The local medical practitioner boards vessels after berthing and acts for the Commonwealth Department of Health.

RADIO: See "Hobart".

TUGS: None available and not required.

BERTHING: One wharf – depths varying from 3.7 m. to 5.5 m. alongside. The port is now mainly used by fishing vessels.

MEDICAL: The nearest hospital and doctor at Queenstown (30 miles).

FRESH WATER: Limited fresh water available from town water supply.

FUEL: Bunkers may be obtained by road tanker.

GANGWAY/DECK WATCHMEN: None available.

OPENING CLOSING HATCHES: Hatches are opened by ship's crew.

AIRPORT: A small airport is located 3 miles from Strahan.

AUTHORITY: Marine Board of Hobart. (See "Hobart").

AGENT: See "Devonport".

SYDNEY, N.S.W.: 33.55 S. 151.12 E. (See Plan)

PORT LIMITS: *Seaward Port Limits:* An arc of a circle of 4 nautical miles radius, centred on Hornby Light (which is at Lat. 33° 50.1′ S., Long. 151° 16.8′ E.).

DOCUMENTS:

2 copies Form M&S11 (List of Crew).
1 copy Form 42A (Store list).
1 copy Form 5 (Articles Owned or in Possession of Master, Officers or Crew).
3 copies Form C&E886 (Ports of Call).
1 copy Form QA3 (Declaration of Animals Carried as Cargo).
1 copy Form QA4 (Declaration of Ship's Pets).
1 copy Form QA5 (Shipmaster's Bond to Cover Ship's Pets).
2 copies Form AQ360 (Health Report).

Of the above, Form 42A and Form 5 need only be compiled at the first port of call in Australia.

Ship's Agents are required to submit 2 copies of Cargo Manifest, and at least 2 sets of Bills of Lading. These are usually received direct from the loading port, and so need not be on board.

Ships carrying dangerous goods must obtain special approval to enter port (See "Entry and Departure Restrictions").

Shipmaster's Report: October 1988.
First Port: See "Melbourne".
Second Port: 3 Crew Lists.
2 Ports of Call Lists.

Also see "Radio Officer's Report".

PILOTAGE: Compulsory for seagoing commercial ships (unless specifically exempted). Preliminary arrangements for a Pilot must be made through a local Agent accredited by the Corporation.

All seagoing commercial ships (including those exempted from pilotage) are to report to "Sydney Maritime" on VHF Channel 12 when 4 hours, and again when 2 hours, from the port. When 5 miles from the port such ships are to report to "Harbour Control" on VHF Channel 13. Also see "VTS and VHF".

"Harbour Control" will instruct the ship what time to be at the Pilot Boarding Ground or, if no Pilot booking has been received, will advise the ship to contact the Agent. The Pilot Boarding Ground is at Lat. 33° 50.1′ S., Long. 151° 21.6′ E., which is 4 miles due East of Hornby Light. Ships are not to proceed Westward of the Pilot Boarding Ground without specific instruction by "Harbour Control" or the pilot vessel.

The pilot vessel is a 15 m., aluminium, semi-planing vessel, with metallic grey hull and yellow-orange topsides; the word "Pilot" is prominently displayed on each side of the deckhouse. The pilot vessel operates from a shore base within the harbour. When proceeding to a ship the pilot vessel will call on VHF Channel 13 and, after changing to a working frequency, will give Pilot boarding instructions.

In general, a ship which is about to take Pilot should steer a course which puts the sea on the quarter opposite to that on which the pilot ladder is rigged. The ship should have about 7 knots headway as the pilot vessel comes alongside.

The bottom of the pilot ladder is to be 2.5 m. to 3 m. above the waterline. The ladder is to be rigged (if possible) through an opening in the bulwarks or guard rails (or through a door in the ship's side). If there is no available opening in the bulwarks or guard rails, steps (with handrails) shall be securely fastened inside the bulwarks or guard rails, leading from the top of the bulwarks or guard rails to the ship's deck.

On each side of the ladder there is to be a clean handrope of 32 mm. (diameter) manila rope. The handropes are to be led through stanchions, one metre high, fixed to the ship's bulwarks or guard rails. There are to be no knots in the handropes. A tripping line may be used, but is to be attached not lower than the bottom spreader (which is to be the fifth step from the bottom).

If the highest point of a pilot ladder would be more than 9 m. above the waterline the pilot ladder is to be rigged in combination with an accommodation ladder. The accommodation ladder is to be secured so as to prevent it swinging away from the ship's side. The pilot ladder, and the handropes, are to be secured to the ship's side above the lower platform of the accommodation ladder. The Pilot must be able to transfer safely and easily from the pilot ladder to the accommodation ladder. The accommodation ladder is to be rigged so that a person ascending the ladder is moving towards the ship's bow. The lower platform of the accommodation ladder is to be horizontal. The lowest point of the accommodation ladder is to be 6 m. to 7 m. above the waterline.

Pilot hoists are not favoured. If a hoist is used in a ship with freeboard not exceeding 9 m., a conventional ladder (with handropes) must be rigged immediately alongside the hoist, so that the Pilot can transfer safely and quickly to the ladder if the hoist fails. If a hoist is used in a ship with freeboard exceeding 9 m., a combination ladder must be rigged immediately alongside the hoist. *Note particularly* that a pilot hoist is *not* accepted as an alternative to a combination ladder.

Master's should note that the Corporation places great emphasis on the safety of its pilots. Delays may occur if boarding arrangements are found to be substandard.

Coastal and Reef Pilotage: Pilotage through the Inner Route of the Great Barrier Reef to Torres Strait is conducted by licensed pilots. See "Torres Strait" for details.

ANCHORAGES: There is no recommended anchorage off the port, but ships frequently anchor close Northward, off the suburb of Manly (see Chart Aus. 200). The Corporation cautions any ship anchoring off the port to keep a close anchor watch, because the area is susceptible to sudden, unpredicted changes of weather. Within the port there are several short-term anchorages (See "Berthing"). Mooring buoys are available for ships awaiting orders (see under "Berthing").

Restricted Area: There is a Restricted Area off the port bounded by a line drawn from North Head in a direction 090° (T) and a line drawn from Hornby Light in a direction 130° (T) and the arc of a circle of 3 nautical miles radius centred on Hornby Light. The mid-entrance markers, in line 294° (T), divide the Restricted Area into 2 sectors. The Northern sector is "Area A"; only ships which are entering the port may pass through "Area A". The Southern sector is "Area B"; only ships which are leaving the port may pass through "Area B". Anchorage is prohibited within the whole of the Restricted Area. The ship is not to be navigated along the line of the mid-entrance markers.

RESTRICTIONS: *Entry and Departure Restrictions:* Tankers which are not gas-free are not permitted to manoeuvre West of Bradley's Head during the hours of darkness.

Arrival at the following berths is restricted to daylight hours: All tanker berths, Point Piper Anchorage and Snails Bay Dolphins. Departure from the following berths is restricted to daylight hours: all tanker berths, and Nos. 1 & 2 Snails Bay Dolphins (by consultation with pilots).

Arrival at, and departure from, Sydney Cove Passenger Terminal is not permitted during peak operating periods for commuter ferries (0730 – 0930 and 1600 – 1830 Mondays to Fridays).

Except as indicated above, manoeuvring is generally permitted at any time of day. (For *tidal restrictions* see "Restrictions-Underkeel Clearance").

Ships carrying dangerous goods must not enter port unless the ship's Agent has obtained from the Corporation a certificate of "Approval for Vessel Carrying Dangerous Goods to Enter Port".

Underkeel Clearance, Tidal Restrictions and Minimum Draft: Ships underway outward-bound are to maintain a minimum underkeel clearance equivalent to 10% of ship's draft; for inward-bound ships this requirement is increased by 0.2 m. The controlling depth for calculating underkeel clearance is the berth depth (See "Berthing" or "Tankers") except at No. 1 Gore Bay (controlling depth 13.7 m.) and No. 2 Gore Bay (controlling depth 10.2 m.).

While alongside, ships are to maintain a minimum underkeel clearance of 0.6 m., except at No. 7 Glebe Island and No. 1 Balmain where the required clearance is 0.3 m.

Tankers proceeding to No. 1 Gore Bay with a draft exceeding 10.0 m., or length overall exceeding 250 m., or beam exceeding 36.5 m., or deadweight exceeding 80,000 tonnes, are to take Pilot 1.5 hours before slack water. The absolute maximum permitted draft is 13.7 m., but the actual draft is to be such that, in the approach channel of 13.7 m. depth, the required underkeel clearance is achieved at 1 hour before slack water. Ships using the berth for the first or second time are further restricted by 0.7 m. and 0.4 m., respectively.

At other berths in Gore Bay, and at Snails Bay Dolphin berths, ships with a draft exceeding 10.0 m. are to arrive and depart berth at or near slack water.

At the AGL Wharf, Mortlake, ships are to berth at slack water.

The departure of ships from No. 1 White Bay and No. 7 Glebe Island is timed to give the required underkeel clearance at 1.5 hours after time of departure.

In all other cases berthing and unberthing is at any state of tide, provided the required underkeel clearance is maintained.

The *minimum* permissable draft for a ship manoeuvring within the port is equivalent to the following percentages of the ship's length overall:

Ships not exceeding 100,000 tonnes deadweight: Forward 2%, Aft 3%.

Ships exceeding 100,000 tonnes deadweight: Forward 3%, Aft 4%.

MAX. SIZE: In general, the maximum permitted size of ships is governed directly by berth length and depth (See "Berthing" and "Tankers") and by depth in approaches. Also see "Bulk Loading Facilities" and "Restrictions – Underkeel Clearance".

HEALTH: All overseas ships (at First Port of Entry into Australia *and* at any subsequent ports in Australia) are subject to quarantine until Pratique is granted, or until the ship is released from quarantine. (Treatment of crew members for illnesses other than quarantineable diseases is carried out by private practitioners arranged through the ship's Agent). Vaccinations are not normally required (See "Medical").

Radio Pratique may be requested by any ship, 12 to 24 hours before arrival in port (or upon shorter notice in exceptional cases). The request is normally made through the ship's Agent, but a ship's Master can send the request direct to the Duty Shipping Quarantine Officer (telex AA25310) via Sydney Radio. The request must include answers to the following questions:

A. Name, type and nationality of ship?

B. Itinerary for last 21 days? (If over 21 days from last port, give name of port and date of departure).

C. Name of first Australian port, and ETA?

D. Number of crew?

E. Number of passengers?

F. Have you had any deaths on the voyage? If so, give details

G. Have you had any cases of illness during the last 21 days with a fever of 38 degrees Celsius or above, and accompanied by: (a) rash, jaundice, or glandular swelling; or (b) diarrhoea lasting longer than 24 hours?

H. Have you had persons suffering from venereal disease during the voyage?

I. What live fish, birds, reptiles or other animals are you carrying? (Ship's pets should be mentioned).

J. Have you carried livestock on previous voyages in the last six months? If so, advise type of livestock, date of voyage, and ports visited. Have all stock-carrying compartments been thoroughly cleaned and disinfected?

K. Do you request Radio Pratique, or radio approval to berth?

Note that if the Radio Pratique request is telexed or telegrammed (whether by Master or Agent) it may be in an abbreviated form, such as:

"A: Southern Express, container ship, Italian. B: London, Lisbon, Cape Town. C: Sydney 151600H. D: 20. E to H: nil. T: one dog. J: nil, K: Radio Pratique."

It is normally the ship's Agent who is informed whether or not Radio Pratique has been granted. This information is only radioed direct to the ship if the Master made application direct. A "Q" flag need not be displayed if Radio Pratique has been granted. Such Radio Pratique is valid only for the ship's first port of entry. (If the ship's berthing is delayed the Radio Pratique will remain valid for the port, provided conditions on the ship do not change). After the ship has berthed, a Quarantine Officer will board to confirm that there has been no change in circumstances since the Radio Pratique message was sent. When satisfied, the Quarantine Officer will issue a Pratique Certificate valid for all Australian ports.

If Radio Pratique is not confirmed (or not requested) the "Q" flag (or quarantine lights at night) must be displayed. The Quarantine Officer (and Customs Officers) will board ship inside Sydney Heads (unless radio permission to berth has been granted). The Quarantine Officer will examine all persons having illness or infectious disease, as notified by the ship's Master. The Quarantine Officer will also receive the "Primary Health Report". When satisfied, the Quarantine Officer will issue a Pratique Certificate for all Australian ports. The "Q" flag may then be lowered, and the ship may proceed to her berth.

Notwithstanding that Pratique for all ports may have been granted, the Master will still be responsible for reporting any cases of infectious diseases which may subsequently occur while the ship is in Australian waters. Such report is to be made by radio if the ship is at sea when the case is discovered.

RADIO: Sydney Radio (call sign "VIS") provides a full range of Radiotelegram (RTG), Radiotelephone (RTF), Very High Frequency (VHF), and Telex Over Radio (TOR) services.

VTS/VHF: There is a "Port Operations Centre", which controls the Vessel Traffic Management System of the port. The Centre operates continuously. It may be contacted by VHF (see below) or by telephone (02) 364 2000, telex AA 27568 MSBOPS, or facsimile (02) 27 7804. The Centre operates the following VHF stations:

Call sign "Sydney Maritime" – calling and working Channel 12. Area of coverage from 50 miles North of Sydney to 50 miles South of Port Kembla and 50 miles to seaward (through an interconnected system of remote stations). Initial contact with the port should be made through this station (See "Pilotage"). "Sydney Maritime" also receives arrival messages from ships bound for Newcastle, Botany Bay and Port Kembla, and relays these messages to the port concerned.

Call sign "Harbour Control" – calling and working Channel 13. Area of coverage – within 5 miles of the port. This station controls the Vessel Traffic Management System (VTS) for the port; broadcasts navigational, meteorological, and tidal information at 5 minutes past each hour; and allocates channels for ship/tug communication (such channels comprise 77, 72, 8 and 6, in that order of preference).

Ships within 5 miles of the port must maintain continuous listening watch on Channels 16 and 13 (or Channel 16 alone, if a dual watch is not possible). Ships underway within the port *must* maintain continuous listening watch on Channel 13.

When the ship arrives at 5 miles from the port, "Harbour Control" is to be notified (See "Pilotage"); and the ship is to obtain permission from "Harbour Control" prior to entering the port. One hour prior to ship's departure "Harbour Control" is to be notified; and the ship is to obtain permission from "Harbour Control" prior to departing the berth.

Both inwards and outwards ships are required to report (to "Harbour Control") passing each of the following locations (if applicable): Sea Buoy, Bradley's Head, Fort Denison, and Longnose Point.

Safety, urgency and distress calls should be made on VHF Channel 16, which is continuously monitored by both "Sydney Radio VIS" and "Sydney Maritime".

RADAR: There is a limited port radar service covering the approaches to the port and the outer harbour area. Ships seeking radar information should contact "Harbour Control" (See "VTS/VHF").

TUGS: There are 10 modern, twin-screw tugs with bollard pulls of 40 tonnes to 50 tonnes. These tugs are operated by:

J. Fenwick and Co. Pty. Ltd., P.O.Box 82, Balmain, NSW 2041. Tel: (02) 555-1281. Telex: AA25067. Fax: (02) 818 5858.

Waratah Towage Pty. Ltd., 2-3 Montague Street, Balmain, Sydney, NSW 2041. Tel: (02) 555-7100. Telex: AA25195. FAX: (02) 810-7991.

A fleet of small tugs is operated by:

Stannard Bros. Launch Services Pty. Ltd., 2-3 Montague Street, Balmain, NSW 2041. Tel: (02) 810-0537. Fax: (02) 316-6495. This company also provides the port's lines persons.

Orders for tugs for Saturday and Sunday should be placed by 1530 hrs. on Friday. Orders for tugs for weekdays should be placed by 1530 hrs. the previous day. Orders must be placed by the ship's local Agent.

Tugs normally join a ship in the vicinity of Fort Denison. Tugs always take a ship's line when they are to tow from their hook, but may use their own line when making fast alongside. There is no extra charge for using tugs' lines.

The latest tug guidelines are:

LOA under 30 m.	None
LOA 30 m. to under 75 m.	1 small tug
LOA 75 m. to under 100 m.	2 small tugs or 1 large tug
LOA 100 m. to under 130 m.	1 large tug and 1 small tug
LOA 130 m. to under 185 m.	2 large tugs
LOA 185 m. to under 250 m.	3 large tugs
LOA 250 m. and over (by consultation with Harbour Master)	

For tankers and bulk carriers exceeding 125 m. LOA the general requirement is varied as follows:

carrying less than 25,000 tonnes cargo	2 large tugs
carrying 25,000 to under 45,000 tonnes cargo	3 large tugs
carrying 45,000 to under 80,000 tonnes cargo	4 large tugs
carrying 80,000 tonnes cargo, and over	5 large tugs

The general requirement is reduced in the following circumstances:

One less tug (inwards and outwards) if ship has a bow thruster which:

(a) was found to be effective when the ship previously called; and

(b) is currently operational.

One less tug (outwards) if:

(a) the ship is berthed "head out"; and

(b) any berth ahead of the ship is clear; and

(c) weather is fine.

If both of the above circumstances apply, the total reduction is one only.

The general requirement is increased in the following circumstances:

One extra tug if the ship is a car-carrier exceeding 20,000 gross (as calculated by the Corporation).

For a ship without main propulsion:

one extra tug if ship does not exceed 20,000 gross;

two extra tugs if ship does exceed 20,000 gross.

The requirement at mooring buoys is:

	Inwards	*Outwards*
LOA under 75 m.	None	None
LOA 75 m. to under 185 m.	1 large tug	1 large tug
LOA 185 m. to under 230 m.	2 large tugs	1 large tug
LOA 230 m. and over	2 large tugs	2 large tugs

Tug assistance is not required at anchorages unless the ship exceeds 215 m., in which case 2 tugs are required for a deep-draft ship, and one for a partly-laden ship. Such tugs stand-by the ship throughout the period of anchorage.

Except at No. 7 Glebe Island, no tugs are necessary for a shift-ship not exceeding 30 m. along the berth. One tug is required for a shift-ship of more than 30 m. along the berth. A harbour removal to another berth necessitates the full number of tugs as determined by the preceeding paragraphs.

Special variations are made to the above requirements for ships which have especially good, or poor, handling characteristics, and for large ships which are frequent users of the port. All of the above requirements may by increased in the event of adverse weather.

BERTHING: Except as indicated in "Bulk Cargo Facilities" and "Specialised Cargo-Handling Facilities" loading and discharging is by ship's gear (also see "Cranes"). Except where otherwise indicated the quoted depth is the least depth over the entire berth length; in many cases a greater depth is available if the ship does not require the full berth length.

Berth	*Nominal Length* (m.)	*Depth* (m.)	*Function*
Sydney Cove			
Passenger Terminal	300	10.5	Passengers
No. 3 Darling Harbour	229	10.9	General/Ro-Ro/Lo-Lo
No. 4 Darling Harbour	285	11.1	General/Ro-Ro/Lo-Lo
No. 5 Darling Harbour	340	10.6	General/Ro-Ro/Lo-Lo
No. 7 Darling Harbour	100	9.9	General/Ro-Ro/Lo-Lo
No. 8 Darling Harbour	244	10.1	General/Ro-Ro/Lo-Lo
No. 9 Darling Harbour	174	9.9	General/Ro-Ro/Lo-Lo
Darling Harbour			
Passenger Terminal	178	9.4	Passengers

Berth	Nominal Length (m.)	Depth (m.)	Function
C.S.R. North Wharf	113	7.0	C.S.R. sugar – gypsum wharf
C.S.R. South Wharf	166	8.0	C.S.R. sugar – gypsum wharf
No. 1 Glebe Island	234	11.7	Conaust (Cars)
No. 2 Glebe Island	234	12.0	Conaust (Cars)
No. 7 Glebe Island	229	11.4	Sugar, cement
No. 8 Glebe Island	120	8.4	ICI Soda Ash Terminal
No. 1 White Bay	168	9.8	Lay-up
No. 2 White Bay	168	9.8	Lay-up
No. 3 White Bay	279	10.5	Conaust (General)
No. 4 White Bay	265	11.0	
No. 5 White Bay	203	11.0	
No. 6 White Bay	203	11.0	
Snails Bay Dolphins:			
No. 1	215	10.8	Lay-up
No. 2	215	9.6	Lay-up
No. 3	215	9.8	Lay-up
No. 4	215	11.6	Lay-up
Buoy Moorings:			
No. 4 Athol Bight	275 radius	11.9	Lay-up
No. 1 Point Piper	260 radius	13.5	Lay-up

For tanker berths (See "Tankers"). Road access is available to all fixed berths. Rail access is available to the following berths: No. 1 Balmain; Nos. 3 and 4 White Bay; Nos. 1, 2 and 7 Balmain; Nos. 9, 10, 12, and 13 Pyrmont. The Royal Australian Navy has extensive fixed berthage, buoy berths, and dolphin berths in the port.

CRANES: *No. 4 White Bay:* One twin lift portainer crane 45.7 tonnes SWL and 1×53 ton portainer crane.

Nos. 3, 4, 5 Darling Harbour: 3 mobile container-handling cranes ("Coles Colossus"), owned by Patrick, the Australian Stevedore. Two of these cranes are "4200 Series" and have a tower height of 18 m.; a jib length of 27 m.; SWL 26 tonnes at 28 m. radius, 34 tonnes at 9 m. radius. The third crane, a "6000 Series" model, has a tower height of 18.7 m.; a jib length of 34.5 m.; SWL 29.5 tonnes at 33 m. radius, 45 tonnes at 12 m. radius.

BULK CARGO FACILITIES: (For berth lengths and depths – see "Berthing"). (Ships may berth without hold ballast, because loading units are fully retractable).

CSR North and South Wharves: Bulk raw sugar unloading facility. The berth has 2 gantry grab cranes.

No. 7 Glebe Island: A common user bulk dry cargo discharge facility, equipped for self-discharging vessels, using wharf manifold to pipelines, conveyors and adjacent storage silos.

The types of cargo discharged at this facility include bulk cement and bulk refined sugar.

Glebe Island's grain elevators were redeveloped during 1993 to provide 28,000 tonnes of bulk refined sugar storage capacity.

Cement storage of 35,000 tons consists of 16 converted wheat silos.

These facilities also include a transfer tower, a conveyor gantry from wharf to silos, chain conveyors on the silos and bagging facilities.

No. 8 Glebe Island: ICI bulk soda ash unloading berth. The berth has a mobile gantry with 2 pneumatic suction nozzles. Handling rate 125 tonnes/p.h. (maximum); 80 tonnes/p.h. (average). Maximum beam 13.7 m. Maximum length overall 100 m. Maximum draft: unrestricted for the size of ship using the berth. (Also see "Note" at end of this section).

Note: Nos. 7 and 8 Glebe Island and No. 1 and No. 2 White Bay are in close proximity. To allow a ship to berth or unberth at No. 1 Balmain it is frequently necessary to shift astern a ship at No. 7 Glebe; in the astern position it is usually only possible to load the ship's forward hatches. A similar shift is sometimes necessary to allow a ship to berth or unberth at No. 8 Glebe Island. A concession in tonnage rates is allowed when a ship at No. 7 Glebe Island is shifted, but full rates are charged for Pilot, tugs and linesmen.

SPECIALISED CARGO HANDLING FACILITIES:

Containers: No. 4 and No. 5 White Bay comprise a container terminal. Containers are also handled at Nos. 3, 4 and 5 Darling Harbour, using mobile cranes (See "Cranes").

Roll-on/Roll-off: Ships equipped with angled stern ramps are handled at Nos. 3, 4, 5, 8, 9 and 10 Darling Harbour and Nos. 5 and 6 White Bay.

Car-carrying: Car-carrying ships with side ramps and/or angled stern ramps are handled at Nos. 1 and 2 Glebe Island and No. 8 Darling Harbour.

Liquid Chemicals: Small quantities of liquid chemicals are handled at the tanker terminals (See "Tankers").

Bulk Oils: Handled at the tanker terminals (See "Tankers"). Vegetable and lube oils are occasionally handled at dry cargo berths.

Note: The sister port of Botany Bay has a major facility for the handling of liquid chemicals, bulk oils and liquefied gas.

BRIDGES: The majority of the port's berths lie beyond the Sydney Harbour Bridge, which is a single span, steel arch bridge. Maximum headway is 53.4 m. above chart datum at the centre (prominently marked). For 45 m. on either side of the centre there is not less than 53.0 m. headway. For a further 64 m. on either side there is not less than 51.5 m. headway. For a further 73 m. on either side there is not less than 49.9 m. headway. When in use, a painting gantry reduces these headways by 2.8 m.

STEVEDORES: Patrick, the Australian Stevedore, G.P.O.Box 3918, Sydney, NSW 2001. Tel: (02) 256-6700. Telex: AA75754. Fax: (02) 247-9259.

Conaust (NSW) Pty. Ltd., G.P.O.Box 4084, Sydney, NSW 2001. Tel: (02) 552-1600. Telex: AA72061. Fax: (02) 552 1032.

Patrick operate at No. 4 and 5 Darling Harbour and at Darling Harbour No. 3 and 8 for general cargo.

General, Ro-Ro, Lo-Lo, and Bulk stevedoring operations at any common-user berth in the port, using a fleet of 75 forklifts; 3 Coles cranes; and ancillary equipment.

Conaust Stevedoring provides General, Ro-Ro, Lo-Lo, and Bulk stevedoring services at any common-user berth in the port, using a fleet of 79 forklifts, and ancillary equipment. Conaust operate a container terminal at No. 4, 5 and 6 White Bay and car facilities at No. 1 and 2 Glebe Island. Conaust has a depot at Rozelle Bay for packing and unpacking containers, and for bonding and storing of containerised cargo and break-bulk cargo.

Normal hours of work at common-user berths are:

The port works 7 days a week in 3 shifts (0730 hrs. – 1430 hrs., 1500 hrs. – 2200 hrs., 2300 hrs. – 0600 hrs.). Rates are negotiable.

Labour for Monday to Friday shifts must be ordered not later than the morning of the day previous to requirement. Labour for Saturday and Sunday shifts must be ordered not later than Friday morning. Firm ETA's are consequently very important; the ship's agent should be advised immediately if the ETA changes, so that labour orders can be amended.

Main commodities handled are:

Imports – containers; motor vehicles; CKD's; lumber; paper products; heavy-lifts; steel; bulk oil and general cargo.

Exports – containers; steel and bulk cargoes and general cargo.

The private terminals employ their own labour force of stevedores.

MEDICAL: Ship's agents can arrange medical attention without prior notice, but notice should be given if possible. Full hospital, medical, dental and ophthalmic services are available. If the ship has passed through a yellow fever zone crew must be inoculated against yellow fever. Otherwise, no inoculations or vaccinations are necessary, but they can be carried out if required.

TANKERS:

Berth	Nominal Length (m.)	Depth (m.)	Company
No. 1 Gore Bay	265	14.0	Shell Co. of Aust. Ltd.
No. 2 Gore Bay	190	9.2	Shell Co. of Aust. Ltd.
No. 3 Gore Bay	172	9.1	Shell Co. of Aust. Ltd.
Ballast Point	172	9.4	Ampol
Chowder Bay	172	12.0	Royal Australian Navy

All berths are located in sheltered areas and are seldom affected by wind; no special moorings are required. Shore gangways available No. 1 Gore Bay only. Each terminal has first-response equipment for oil spills, and can readily call upon other terminals' equipment. The Corporation has an oil spill combat team on continuous duty with an extensive range of oil spill combat equipment. Industry and Government have local, regional and national contingency plans for oil spill combat. Ship-to-ship transfers are seldom undertaken at this port, but floating fenders are available.

Cargo handling: No. 1 Gore Bay: Line diameters 1×102 mm. and 4×254 mm.; maximum discharging rate 4,000 tonnes/p.h. (with crude oil, using 2 hoses); 350 tonnes dirty slops, 6,000 tonnes dirty ballast (total for terminal); S.G. 0.645 to 0.98; maximum temperature 50°Celsius; shore steam is available.

No. 2 Gore Bay: Line diameters 5×152 mm. and 1×203 mm.; maximum discharging rate 2,000 tonnes/p.h.; S.G. 0.645 to 0.98; maximum temperature 50°Celsius.

No. 3 Gore Bay: Line diameters 2×102 mm. and 10×152 mm.; maximum discharging rate 400 tonnes/p.h.; S.G. 0.845 to 0.98; maximum temperature 50°Celsius.

Ballast Point: Line diameters 102 mm., 203 mm. and 254 mm.; maximum discharging rate 1,000 tonnes/p.h.; no slop facilities; S.G. 0.84 to 0.95; maximum temperature 60°Celsius; no shore steam available.

DENSITY: The relative density throughout the port is 1025.

FRESH WATER: Fresh water is readily available at all berths. There is no restriction on quantity. The water is clean and sweet, and contains fluoride.

At fixed berths, delivery is from the town mains. Delivery rate is approximately 30 tonnes p.h. Hiring or usage of shore hoses attracts a charge.

Charges at private berths are generally the same. At buoy or dolphins berths delivery is either by a large or by small tug with barge under tow. The amount of fresh water supplied per tug or barge varies between 40 and 140 tonnes, depending upon the transport used. The delivery rate varies between 35 tonnes p.h. and 60 tonnes p.h.

Where possible at least 24 hours' notice is required for vessels requiring fresh water at buoys or anchorage.

FUEL: Fuel (and a wide range of lubricants) is available from:

Ampol Pty Ltd, Head Office, 167 Kent Street, Sydney, NSW 2000. Tel: 1800 655 315. Fax: 61 2 9981 1159. Grades: Marine Bunker Fuel Oil, 10-300 centistokes at 50°C. Light Marine Diesel Oil, 2.1-7.4 centistokes at 40°C. Gas Oil or Distillate, 2-5.8 centistokes at 40°C. Orders accepted 0700 to 1540 (Mon-Fri). 48 hours' notice.

BP Australia Ltd, GPO Box 5222, Melbourne, VIC 3001. Tel: 61 3 9268 4111. Fax: 61 3 9639 0261. Grades: Interfuel – viscosity 38.2 centistokes at 40°C. Light Diesel Oil – viscosity 2.721 at 40°C. Orders accepted 0700 to 1400 (Mon-Fri). One week's notice.

Mobil Oil Australia, 417 St. Kilda Road, Melbourne, VIC 3004. Tel: 61 3 9252 3405. Fax: 61 3 9252 3065. Grades: Bunker Fuel, 32-130 centistokes at 40°C. Diesel Gas Oil, 3 centistokes. Orders accepted 0730-1600 (Mon-Fri). 48 hours' notice.

Shell Co. of Australia Ltd., Greenwich Gore Bay Terminal, Greenwich Road, Gore Bay, NSW 2065. Tel: 61 2 237 8238. Fax: 61 2 439 4169. Grades: Marine Fuel Oil, 100 to 380 centistokes at 50°C. Light Marine Diesel Fuel, 1.8 to 5.8 centistokes at 40°C. Gas Oil (Distillate), 1.8 to 4.8 centistokes at 40°C. Orders accepted 0800 to 1630 (Mon-Fri). 48 hours' notice.

Delivery by pipeline at tanker berths. Delivery at other berths – heavy fuel by bunker barge only ("Amorena": minimum 150 tonnes, maximum per load 1,100 tonnes; "Esar Sydney": minimum 100 tonnes, maximum per load 1,500 tonnes); light fuel and lubricants (bulk or drummed) by barge or truck.

FIRE PRECAUTIONS: There are no additional requirements beyond those internationally practised.

CONSULS: The following countries maintain consulates in Sydney:

Argentina
Austria
Bangladesh
Barbados
Belgium
Bolivia
Brazil
Bulgaria
Canada
Chile
China
Colombia
Cook Islands
Costa Rica
Croatia
Cuba
Czech Republic
Denmark
Dominican Rep.
Ecuador
Egypt
Estonia
Fiji
Finland
France
Gabon
Germany
Great Britain
Greece
Guatemala
Honduras
Haiti
Hungary
India
Indonesia
Israel
Italy
Japan
Kiribati
Korea
Latvia
Lebanon
Lesotho
Luxemburg
Madagascar
Malaysia
Malta
Mauritius
Mexico
Morocco
Nauru
Nepal
Netherlands
New Zealand
Norway
Pakistan
Papua New Guinea
Paraguay
Peru
Philippines
Poland
Portugal
Romania
Russia
Slovenia
Solomon Islands
Spain
Sri Lanka
Sweden
Switzerland
Syria
Thailand
Tonga
Trinidad and Tobago
Tunisia
Turkey
Tuvalu
Uruguay
U.S.A.
Vietnam
Yugoslavia

WASTE DISPOSAL: *Metropolitan Liquid Waste Disposal:* Tel. 412 1388.

Liquid waste in bulk or drums is accepted at the Lidcombe and/or Castlereagh Depots.

Charges as from 1 April 1989 are as follows:

Tankers containing bulk liquid waste accepted at Lidcombe Depot only	$114 per tonne.
Drum Material non-flammable	$170 per tonne.
Sludge	$20 per tonne.

REPAIRS/DRY DOCKS: Groom Bros. Pty. Ltd., 18 Munro St., North Sydney 2060. Tel: (02) 957 3855.

Groom Bros. is experienced in hull and engine repairs, overhauls, pipe renewals and steel fabrication.

Australian Defence Industries (ADI), Naval Engineering Division, Garden Island, NSW 2000. Tel: 61 2 562 3333. Fax: 61 2 562 3821.

ADI's Garden Island facility operates the largest graving dock in the Southern Hemisphere. It is capable of docking ships up to 110,000 tonnes deadweight, together with a floating dock of 1,000 tonne lift capacity.

ADI has developed extensive capabilities at this one location and provides all skills and resources required for the repair, conversion and modernisation of commercial vessels.

SURVEYORS: Marine Surveyors (serving principally Shipowners, vessel Agents and Maritime Solicitors):

Avdall and Bozier Pty.Ltd., 121 Alexander Street, Crows Nest, NSW 2065. Tel: 61 2 9906 1277. A/Hrs: 61 2 427 3193. Fax: 61 2 9906 1030. Contact: Captain M.J.L.Bozier, Captain M.H.Murray.

Gibson, Minto and Aiton Pty.Ltd., P.O.Box 195, Pyrmont, NSW 2009. Tel: 61 2 810 0501. A/Hrs: 61 2 523 0982. Fax: 61 2 555 1532. Contact: Captain N.Aiton, Captain A.M.Kirkland, Captain D.J.Read.

Ian Loftus and Associates Pty.Ltd., 20 Elgin Street, Gordon, NSW 2072. Tel: 61 2 418 2276. A/Hrs: 61 2 418 2276. Fax: 61 2 418 2386. Contact: L.Loftus.

Keith Highfield Pty.Ltd., 5 Cressfield Avenue, Carlingford, NSW 2118. Tel: 61 2 871 7129. A/Hrs: 61 2 871 7129. Fax: 61 2 872 6815. Contact: W.K.Highfield.

Pyett and Co., 357 Maroubra Road, Maroubra, NSW 2035. Tel: (018) 464 860. A/Hrs.: 61 2 319 0114. Fax: 61 2 319 0114. Contact: Captain D.Pett.

S.G.Webb and Co.Pty.Ltd., 92 Hill Street, Carrington, NSW 2294. Tel: 61 49 62 2029. A/Hrs: 61 49 63 3027. Fax: (049) 61 5901. Contact: Captain S.J.Hunter.

Marine Surveyors (serving principally Marine and Insurance Solicitors):

BT Howard and Assoc.Pty.Ltd., 16 Coronation Road, Baulkham Hills, NSW 2153. Tel: 61 2 639 6335. A/Hrs: 61 2 639 6335. Fax: 61 2 686 2193. Contact: B.T.Howard.

Clifford Marine Services, P.O.Box 279, St.Leonards, NSW 2065. Tel: 61 2 438 3411. A/Hrs: 61 2 958 0529. Fax: 61 2 436 3104. Contact: A.J.Clifford.

Mathias and Assoc.Pty.Ltd., 1 Vickery Avenue, Carlingford, NSW 2118. Tel: 61 2 871 1026. A/Hrs: 61 2 871 7686. Fax: 61 2 871 5824. Contact: Captain J.R.Mathias.

Toplis and Harding Marine. 2/46 Burns Bay Road, Lane Cove, NSW 2066. Tel: A/Hrs: 61 2 810 7925. Tel: 61 2 427 0684. Fax: 61 2 428 1477. Contact: V.C.Grant-Mitchell. (NSW),

Marine Surveyors with General Practice:

Associates Marine Surveyors International Pty.Ltd., P.O.Box 69, Carrington, Newcastle, NSW 2294. Tel: 61 49 62 2877. A/Hrs: 61 49 58 6689. Fax: (049) 61 5901. Contact: Captain K.E.Schjenken.

Captain Downes and Associates Pty.Ltd., 8 Lavoni Street, Mosman, NSW 2088. Tel: 61 2 969 1444. A/Hrs: 61 2 969 1277. Fax: 61 2 969 1277. Contact: Captain A.M.Downes.

ITS – Caleb Brett, P.O.Box 773, Mascot, NSW 2020. Tel: 61 2 669 3833. A/Hrs: 61 2 822 4484. Fax: 61 2 669 3341. Contact: Captain P.Kanagasabi.

Quinlans Marine Surveys, 12 Regent Street, Maitland, NSW 2320. Tel: 61 49 32 5014. A/Hrs: 61 49 32 5014. Fax: (049) 32 5014. Contact: Captain J.M.Quinlan.

SGS Australia Pty.Ltd., P.O.Box 42, Carrington, NSW 2294. Tel: (049) 69 2222. A/Hrs: (049).82 7244. Fax: (049) 62 1569. Contact: Captain M.H.Hall-Thompson.

The following classification societies maintain surveyors at the port:

American Bureau of Shipping. Tel: (02) 9956 7322. Fax: (02) 9954 4233.

Bureau Veritas. Tel: (02) 2419 4977. Fax: (02) 2419 5128.

Germanischer Lloyd. Tel: (02) 2957 6150. Fax: (02) 2954 4095.

Lloyd's Register. Tel: (02) 2262 1424. Fax: (02) 2290 1145.

Nippon Jaiji Kyokai. Tel: (02) 2233 7751. Fax: (02) 2223 3051.

Det Norske Veritas. Tel: (02) 2922 1966. Fax: (02) 2929 8792.

GANGWAY/DECK WATCHMAN: (Shore) Gangway watchpersons are available if the ship is unable to supply a crew member. The stevedoring companies are able to supply such a watchperson. A Gangway Watchperson is *not* required for vessels under 3,000 tonnes gross. Additional Watchpersons can be provided upon (Agents) request.

HATCHES: Hatches are normally opened and closed by ships' crew. However, if it is necessary to close hatches during loading in order to load containers on deck, the hatches are usually closed by wharf labour.

CUSTOMS ALLOWANCES: 200 cigarettes (or equivalent in tobacco products), and 1 litre of alcohol (opened) per crew member.

CARGO GEAR: Except as indicated under "Bulk Cargo Facilities" and "Specialised Cargo Handling Facilities" loading and discharging is by ship's gear. (Also see "Cranes").

Lighters, of 100 to 400 tonnes capacity, are available from:

Harbour Lighterage Pty. Ltd., Oxley St., Glebe, NSW 2037. Tel: (02) 660 1922.

Stannard Bros. Launch Services Pty. Ltd., P.O Box 92, Balmain, NSW 2041. Tel: (02) 810 0537. Telex: AA20194. *Fax:* (02) 810 6114.

REPATRIATION: Full facilities are available for effecting crew changes and arranging any necessary repatriation.

AIRPORT: Sydney (Kingsford-Smith) Airport is 9 km. from the city centre. There are frequent flights to and from many national and international destinations, served by: Air India, Air New Zealand, Air Niugini, Alitalia, Ansett Airlines of Australia, British Airways, Cathay Pacific Airways Ltd., Continental Airlines, Garuda Indonesian Airlines, Japan Air Lines, KLM Royal Dutch Airlines, Lufthansa, Malaysia Airline System (MAS), Philippines Air Lines, Qantas Airways, Singapore Airlines, South African Airways, TWA Trans World Airlines, Thai International, United Airlines, UTA French Airlines and Yugoslav Airlines (JAT).

TIME: See "General" before first port.

HOLIDAYS: (Throughout New South Wales): January 1st*, (New Year's Day) January 26th*, (Australia Day); Good Friday and Easter Monday**; April 25th* (ANZAC Day); second Monday in June (Queen of Australia's Official Birthday); first Monday in August (Bank Holiday); first Monday in October (Labour Day); 25th December* (Christmas Day); 26th December* (Boxing Day).

*When any of these dates is a Sunday the next day (Monday) is a holiday. When 26th December is on a Monday the next day (Tuesday) is a holiday.

**Easter Day (the Sunday between Good Friday and Easter Monday) is generally the first Sunday after the first full moon after 21st March.

POLICE/AMBULANCE/FIRE: There are numerous stations around and adjacent to the port. The telephone number for all emergency services is 000 (tell the operator which service is required).

Both "Sydney Maritime" and "Harbour Control" (See "VTS/VHF") have direct lines to the emergency services. The Corporation has an emergency service tug, with fire-fighting capability, on continuous standby. The Water Police service has patrol launches on continuous duty, and can summon helicopter assistance at short notice.

EMERGENCY CO-ORDINATION CENTRE: In the event of an emergency within the port appropriate contingency plans will be implemented by the port's Duty Harbour Master (for Marine emergencies) or the Police (for shore emergencies).

For marine emergencies beyond the port area the central authority (for the whole of Australia) is: Federal Sea Safety and Surveillance Centre, Canberra:

Tel: Reports and Enquiries (062) 47 6666 (toll-free).
"Ausrep" Enquiries (062) 68 7920.
Search and Rescue (062) 47 5244.
Telex: AA62349. Fax: (062) 57 2036.

TELEPHONES: Mobile telephones at all fixed berths owned by the Corporation; at Snails Bay Dolphin Berths; and at most private berths. Telephones are not available at buoy berths, but VHF link calls can be made (even at fixed berths) by calling Sydney Radio on Channel 26 or Channel 23 (but check channel free before calling).

SERVICES: Sullage, garbage, and bilge slops disposal services are available. Shore Power (240V/15A/50Hz and 415V/30A/50Hz or 415V/60A/50Hz) is available at many fixed berths. Extension of certificates is possible. Many other services are available, including: compass adjusting; radio and radar repairs; charts and nautical publications; sounding and course recorder paper; Notices to Mariners (Australian, New Zealand, British, USA and Indian); and safety equipment.

BANKS: Almost 100 banks have branches or representative offices in the port, including the following:

ANZ Banking Group Ltd., 2/20 Martin Place, Sydney, NSW 2000. Tel: 61 2 227 1458. Fax: 61 2 227 1824.

Bank of America, Level 18, Bank of America Centre, 135 King Street, Sydney, NSW 2000. Tel: 61 2 227 1458. Fax: 61 2 221 1023.

Bank of China, 65 York Street, Sydney, NSW 2000. Tel: 61 2 267 5188. Fax: 61 2 262 1794.

Bank of New Zealand, 8th Floor, 333-339 George Street, Sydney, NSW 2000. Tel: 61 2 290 6666. Fax: 61 2 290 1446.

Banque Nationale de Paris, 12 Castlereagh Street, Sydney, NSW 2000. Tel: 61 2 232 8733. Fax: 61 2 221 3026.

Citibank Ltd., 1 Margaret Street, Sydney, NSW 2000. Tel: 61 2 239 9100. Fax: 61 2 39 9193.

Commonwealth Bank of Australia, 2nd Floor, Corner Pitt Street and Martin Place, Sydney, NSW 2000. Tel: 61 2 312 2914. Fax: 61 2 312 2922.

Deutsche Bank of Australia Ltd., Level 20, 225 George Street, Sydney, NSW 2000. Tel: 61 2 258 3666. Fax: 61 2 241 3565.

Hong Kong Bank of Australia Ltd., 71 York Street, Sydney, NSW 2000. Tel: 61 2 255 2209. Fax: 61 2 255 2343.

Lloyd's Bank NZA Ltd., Level 40, Governor Phillip Tower, 1 Farrer Place, Sydney, NSW 2000. Tel: 61 2 239 5555. Fax: 61 2 251 1473.

Macquarie Bank Ltd., Level 16, 20 Bond Street, Sydney, NSW 2000. Tel: 61 2 237 3333. Fax: 61 2 241 1801.

National Australia Bank Ltd., 8th Floor, Centennial Plaza, 300 Elizabeth Street, Sydney, NSW 2000. Tel: 61 2 232 5133. Fax: 61 2 233 3551.

Westpac Banking Corp., 60 Martin Place, Sydney, NSW 2000. Tel: 61 2 226 3311. Fax: 1 800 675 046.

STORING: See "Prelims".

Ships can be stored by truck at all fixed berths, and by barge at all berths.

Dry cargo ships can take stores while the ship is working cargo; trucks and barges are permitted alongside. Tankers can also take stores while the ship is working cargo; barges are permitted alongside, but trucks are stopped at least 30 m. from the ship.

Fork-lift trucks are available only at dry cargo berths. Stores are normally loaded by ship's crew, but shore labour is available if required.

An "Application to Take on Board Ship's Stores" (Form 43) must be lodged with Customs by the ship's Agent. Once approval has been given by Customs, the Agent lodges an "Entry for Exportation of Customable and Excisable Goods" (Form B958) to allow goods to be delivered from bond.

SHIP SUPPLY SERVICE: *Supply by Water Transport:* Supply craft, if available, will be provided by Stannard Bros or Harbour Lighterage if a vessel requests ship stores to be delivered at an anchorage or buoy mooring within the Port.

Should a vessel, which has been anchored *off the Port* for a protracted period, require stores replenishment in quantity, the normal procedure would be to enter the port, and anchor "on the bank" to enable stores to be loaded relatively quickly and in quantity.

Should a vessel anchored *off the port* require delivery of individual (limited) packages of stores, then this could be supplied, subject to weather and sea condiitons.

Supply by Helicopter Services:

A. Commercial:

The following helicopter companies will provide stores transportation services if requested.

(a) Heli-Aust Bankstown
24 hour service
Tel: 707 4236. Fax: 708 9061.

(b) Heli-flite
24 hour service
Tel: 680 1511. Fax: 899 1315.

The following helicopter services (Non-Commercial) are available in cases of emergency, i.e. evacuation of a sick/injured crew member(s) or delivery of essential medical supplied, or similar cases of an emergency nature.

B. Non-Commercial:

(a) Services – Westpac
Tel: (02) 311 3499 or
Tel: 311 3122 (emergency only)

(b) Care-flite
24 hour emergency service
Tel: 633 6111.

SHORE LEAVE: There are normally no restrictions on crew members' shore leave. Crew members are not required to carry identification documents while ashore (See "Identification Cards").

IDENTIFICATION CARDS: Under Section 23 of the Migration Act 1958/64, Masters of ships entering Australia from overseas are required to have in their possession an identity card (in an approved form) for each member of the crew (other than for crew members exempted as below). This provision is included in the Act to ensure that positive identification is available to Customs officers if a crew member deserts the ship. Cards can be prepared after arrival of the ship, but shore leave will be delayed until this has been completed (a photograph is required).

The following persons are not required to possess identification cards: citizens of Australia; citizens of New Zealand; Masters of all ships.

Citizens of the following countries need not complete identification cards, provided they possess a relevant Seaman's Identity Book or Discharge Book: Canada, Denmark, Fiji, Ghana, Hong Kong, India Israel, Italy, Japan, Malaysia, Norway, South Africa, South Korea, Pakistan, and United Kingdom.

All of the above documents must remain in the Master's custody at all times, and must be produced upon demand by Customs Officers.

GARBAGE DISPOSAL: Contact Seaway Disposal. Tel: 810-2472.

WASTE OIL DISPOSAL: By tanker trucks only. Also see "Waste Disposal".

SEAMAN'S CLUBS: Flying Angel, 320 Sussex Street. Tel: (02) 264-9900. Services: Meals, snacks, football, shop, money exchange, international telephone and mini-bus service.

REGULATIONS: There are regulations concerning oil, noise and smoke pollution; carriage and handling of dangerous goods; and safety. In the event of an alleged breach of such regulations the ship's Master may authorise the Agent (if agreeable) to accept any subsequent summons to appear in court on behalf of the Master; this avoids delaying the sailing of the ship.

RADIO OFFICER'S REPORT: September 1990.

Sydney was the second port of call in Australia.

Documents: Customs and Quarantine will board the ship. Sealed envelope from Customs in Melbourne handed over.

2 copies Ports of Call List.
1 copy Ship's Pets.
3 copies Crew List.

SHIPMASTER'S REPORT: October 1994.

Documents: On our most recent visit to Sydney, which was our first port of arrival, the following documents were required by Australian Customs:

2 copies 3A – Crew Report (cover sheet).
2 copies 3B – Crew List.
2 copies Form 5 (Part one) – Ship's Report of Arrival.
1 copy Form 5 (Part two) – Crew Effects Declaration.
1 copy Form 5 (Part four) – Report of Ship's Stores.
1 copy Vessel Pro-Forma.
3 copies Ports of Call List.
3 copies 2A – Passenger Report (if required).
3 copies 2B – Passenger List (if required).

AUTHORITY: Sydney Ports Corporation, P.O.Box 25, Millers Point, NSW 2000. *Tel:* (02) 364 2999. *Telex:* 72046 Msbspt. *FAX:* (02) 364 2742. *Contact:* Captain R. McGee, Harbour Master, Sydney Ports Corporation. (See also under "VTS/VHF" for details of Port Operations Centre numbers).

AGENT: *Head Office:* Patrick Sleigh Shipping Agencies Pty. Ltd., G.P.O.Box 3976, Level 14, 309 Kent Street, Sydney, N.S.W. 2000. Tel: (02) 9299 1411. Telex: 20618 PATSLE. Fax: (02) 9299 2585. Seagram Code: 2SPATSLE.

THEVENARD, S.A.: 32.09 S. 133.39 E. (See Plan)

PORT LIMITS: As marked on Chart AUS. 120 (Approaches to Thevenard).

DOCUMENTS: All documents necessary for first entry vessels are as for other Australian ports (i.e. Customs, Health, etc.).

PILOTAGE: Compulsory. Pilots board approximately 2 miles seaward of Entrance Beacon (3 miles seaward of No. 1 Light Beacon). Pilot vessel has orange hull and yellow superstructure. "Pilot" in black on superstructure. Vessels awaiting Pilot for extended periods should anchor approx. 235° – 4 miles from Entrance Beacon. Vessels approaching Pilot Station should take care not to approach the Entrance Beacon before Pilot has boarded owing to restricted sea room.

ANCHORAGES: Outer Anchorage as above. Inner Anchorage for vessels awaiting berth available in Murat Bay. This is a safe anchorage for several vessels at one time, with good holding ground. Pilotage is necessary to Inner Anchorage.

RESTRICTIONS: Daylight berthing only. Sailing at any time. Sailing times depending on tide. Tides may be greatly effected by prevailing weather conditions – adverse weather can cause a large depression below the predicted height. Channel depth 8.2 m. (27 ft.) LW. There is a minimum depth of 5.5 m. (18 ft.) in the swinging area off the berths.

MAX. SIZE: LOA 180 m., beam dependent on LOA as determined by Suez Canal formula, but not more than 28 m..

Arrival drafts: As vessels are permitted to discharge clean ballast whilst alongside, drafts should be as follows: Fore: 2 m. (min.). Aft: 6 m. (max.).

HEALTH: Radio Pratique available within 24 hours of arrival providing sufficient information is supplied. Quarantine/Health Officer will still board vessel in order to grant formal Pratique. Vessels arriving direct from other Australian Ports have Automatic Pratique, but Health Officer will still attend the vessel on arrival.

RADIO: ETA messages for Agents, Harbour Master, etc. may be routed through any Australian coastal radio station, the closest being Adelaide Radio (VIA), not less than 24 hours prior to arrival.

VHF: Channels available: 16, 12, 8, 6 and 67.

Channel 16 used for general call up, and Channel 12 usually used for Port operations. Call Sign: Thevenard Port Control. Hours of operation: Monday to Friday 0845 – 1700 hrs. except Public holidays, or by arrangement.

TUGS: One tug of 11.4 tonnes bollard pull (650 h.p.), "Wandana".

BERTHING: Berth dimensions: Length 198 m. (650 ft.). Width 30 m. (100 ft.). Draft subject to keel clearance of 0.76 m. (2 ft. 6 in.) for vessels up to 8.2 m. (27 ft.) draft, and 0.91 m. (3 ft.) for vessels over 8.2 m. (27 ft.) draft. One wharf, 2 berths, depth alongside 9.8 m. (32 ft.). Head in or head out berthing dependent on prevailing weather conditions at time of berthing.

CRANES: Nil.

BULK CARGO FACILITIES: Movable gantry and conveyor bulk loading plant. Single loading spout for each berth, however loading of only one vessel at a time is possible. The plant will be manned on a two shift basis for 24 hours, with overtime as necessary for vessels loading gypsum or salt, and from 0800 hrs. to 2300 hrs. (two shifts), overtime as required. Grain loading possible from 0800 hrs. – 2300 hrs. every day of the week.

Bulk Handling Plant Rates: Wheat 400/450* tonnes per hour. Oats 200 tonnes per hour. Barley 480 tonnes per hour. Gypsum 900 tones per hour. Salt 800 tonnes per hour.

*Dependent on which silo grain is taken from.

SPECIALISED CARGO HANDLING FACILITIES: None.

BRIDGES: None.

STEVEDORES: Ordering of labour organised through Agents and Grain Handling Authority. Loading rates as above.

MEDICAL: One private medical practice available (2 Doctors). Also one dental practice. District hospital located at Ceduna (distance 4 km.). Ambulance service also available, with connecting air ambulance service for transport to Adelaide, if necessary. Vaccination certificates as for all Australian ports.

DENSITY: Average density 1027 – 1028.

FRESH WATER: Available at 20 tonnes per hour.

FUEL: Diesel oil available from permanent bunkering facility. Fuel oil available by road tanker providing sufficient notice is given of requirements (approximately 10 days).

FIRE PRECAUTIONS: Usual precautions necessary, having in mind danger of grain dust. Local Fire Brigade available. International shore connection should be connected.
CONSULS: None.
REPAIRS: Minor repairs possible.
DRY DOCKS: None.
SURVEYORS: (1) Cargo Surveyors available – will be arranged by Agents as required.

(2) Lloyd's Surveyor should be organised through principal Agents. Lloyd's Agent is at Port Adelaide.

Other Classification Society Surveyors also available in Australia with sufficient notice to Agents. None resident at Thevenard.
HATCHES: Opening and closing by ship's crew.
CUSTOMS ALLOWANCES: Normal Australian allowances.
CARGO GEAR: Bulk loading only.
REPATRIATION: Can be achieved. Arrangements should be made through ship's Agent.
AIRPORT: 7 km. to airport. Kendell Airlines, 6 flights per week. 16 seater aircraft. Charter flights can be arranged.
TIME: See "General" before first port.
HOLIDAYS: New Year's Day; Australia Day (January); Good Friday; Easter Monday; Anzac Day (April); Adelaide Cup Day (May); Queen's Birthday (June); Labour Day (October); Christmas Day and Proclamation Day (December 26th)

The bulk loading plant operates on all public holidays except Good Friday and Christmas Day.
POLICE/AMBULANCE/FIRE: Police Tel: 252001. Ambulance Tel: 252404. Fire Tel: 252000.
EMERGENCY CO-ORDINATION CENTRE: "Coastwatch" (Australian Coastal Surveillance Organisation) free telephone call from all Australian ports by STD or reverse charge (062) 475244.
TELEPHONES: Telephones placed aboard ship on arrival. Cost approx. $40.00 plus $1.50 per day rental.
SERVICES: Tank and hold cleaning facilities available.
BANKS:

Australia and New Zealand Banking Group Ltd., Poynton Street, Ceduna, S.A. 5690. Tel: 252202.

Bank SA, Poynton Street, Ceduna, S.A. 5690. Tel: 252060.
STORING: See "Prelims".

1. By truck.
2.
3. Wharf access available for trucks.
4. Wharf access available for fork lifts.
5. Normal Customs Bond Regulations apply.
6. Labour available for storing.

SHORE LEAVE: No restriction.
IDENTIFICATION CARDS: Normal Australian ID cards necessary, but not required to be carried ashore.
GARBAGE DISPOSAL: Ports Corp, South Australia collect garbage on request. Garbage to be placed in plastic bags so as to be handled by one man during normal working hours. No extra fees for collection charged apart from Quarantine Act = $40.00 per day plus $2.70 per man per day. Outside normal working hours (0800 hrs. – 1630 hrs.) callout fees apply (double time).
WASTE OIL DISPOSAL: No facilities available.
SEAMAN'S CLUBS: None. Thevenard Football Club, 500 m. from wharf, Thevenard Hotel (licensed), 200 m. from wharf. Ceduna Hotel (licensed), 1 km. from wharf. Various church organisations are available, check with ship's agent.
REGULATIONS: No unusual regulations.
DELAYS: May be experienced due to awaiting tide or awaiting loading of other vessels during periods of heavy shipping.
AUTHORITY: Ports Corp, South Australia, Jetty Road, Thevenard, SA 5690, Australia. *Tel:* (08) 86252077. *FAX:* (08) 86253100. *Contact:* Port Manager/Pilot (Harbour Master) (After hours (08) 86252617).

Ports Corp, South Australia, P.O.Box 19, Port Adelaide, SA 5015, Australia. *Tel:* (08) 470611. *FAX:* (08) 470605.
AGENT: Sub-agent of Patrick Sleigh Shipping Agencies Pty. Ltd., Adelaide.

THURSDAY ISLAND, Queensland: 10.35 S. 142.13 E. (See Plan)

DOCUMENTS/HEALTH: See "Melbourne".
PILOTAGE: Pilotage compulsory. ETA 48 hrs. before arrival stating max. draft and direction from which vessel arriving to: Harbour Master, Cairns. Tel: 070-527412. Fax: 070-527451. Further amended ETA if necessary prior to arrival. Pilot boards 1.5 miles West of Goods Island or Scott Rock as required. Harbour Master will advise boarding ground after receipt of max. draft and direction from which vessel arriving. Pilot vessel white hull, orange top, flying pilot flag. Vessel awaiting Pilot to anchor West of Black Rock in Normanby Sound or South of Tuesday Islets.

Also see "Torres Strait".
ANCHORAGE: West of Black Rock in 5.5 fathoms. Nurses' Home over shoulder of Black Rock 098° (T) with two white beacons S.E. side Goods Island in line 005° (T).
RESTRICTIONS: Daylight movements only. Draft restricted to 6.0 m. LWOST. Deep draft vessels subject to tide.
VHF: Call sign "Thursday Island Harbour". Listening watch during working hours. Channels 67, 16, 12 and 6.

Torres Straits Pilots on VHF Channels 16 & 12. Pilot vessel on VHF Channels 16 and 6. Call sign "Reef Pilots". Watch maintained when vessels are expected.
RADAR: None.
TUGS: No tugs.
BERTHING:

Wharf	*Length* (m.)	*Depth* (m.)
Main	30.0	3.40
Engineers	27.5	4.20
Caltex	22.9	5.00

There are barge ramps at Main Wharf and Horn Island Wharf.
CRANES: Crane with 25 ton lifting capacity at Horn Island.
MEDICAL: Notice of required medical attention with ETA message to Harbour Master. Hospital, four doctors available. Vaccinations, etc., as per Commonwealth of Australia requirements.
TANKERS: *Caltex Fuelling Jetty:* 1×100 mm. pipeline. Loading and discharging rate 80 t.p.h. Storage capacity 1,000 tons.
DENSITY: Salt at all states of tide.
FRESH WATER: Not available to shipping.
CONSULS: Nil.
REPAIRS: Deck and engine repairs, excluding large castings.
FUEL: Bulk distillate available at Caltex Jetty, approx. 20 t.p.h.
CERTIFICATES: Normal Commonwealth of Australia requirements. See "Melbourne".
REPATRIATION: Available.
AIRPORT: Airport on Horn Island, 2 miles by launch, 4 miles by bus. Seven flights per week by Australian Airlines. Private charter plane available.
TIME: See "General" before first port.
HOLIDAYS: Normal Queensland Public Holidays. No cargo can be worked on Christmas Day, Good Friday, Anzac Day.
POLICE/AMBULANCE: Police 69 1520. Ambulance 69 1501.
TELEPHONES: STD facilities available with several public boxes available on the island.
SERVICES: Garbage disposal. Apply to Harbour Master.
GARBAGE DISPOSAL: Available only by arrangement with Torres Shire Council. Tel: 070-691336.
WASTE OIL DISPOSAL: No facilities available.
SEAMAN'S CLUBS: None.
DELAYS: As wharf space limited and berthing is on a "first come, first served" basis, delays vary with amount of shipping.
AUTHORITY: Ports Corporation of Queensland, G.P.O.Box 409, Brisbane, Queensland 4001, Australia. *Tel:* (07) 3224 7088. *FAX:* (07) 3224 7234. *Contact:* Chief Executive Officer.

Regional Harbour Master (Cairns): Captain P. Matthews. Tel: (070) 527400. Fax: (070) 351127.
AGENT: Sub-agent of Patrick Sleigh Shipping Agencies Pty. Ltd., Brisbane.

TORRES STRAIT: (Great Barrier Reef). (See Plan)

NOTE: Two companies are providing Australian Government licenced pilots:

1. Australian Reef Pilots Ltd. (ARP).
2. Queensland Coastal Pilot Service Pty. Ltd.

1. Australian Reef Pilots Ltd. (ARP), formerly Queensland Coast and Torres Strait Pilots Association:

PILOT SERVICES: Licensed pilots of the Australian Reef Pilots are available for Torres Strait, the full length of the Inner Route of the Great Barrier Reef, the Great North East Channel and the reef entrances at Hydrographers Passage, Palm Passage and Grafton Passage.

In addition, pilots are available for pilotage to Umuda and Kumul through China Strait and Raven Channel in Papua New Guinea and also Clarence Strait near Darwin, by arrangement with Australian Reef Pilots.

Compulsory Pilotage: Pilotage is compulsory in the Inner Route of the Great Barrier Reef between Cape York (Lat. 10° 41′ S.) and Cairns (Lat. 16° 40′ S.), and also at Hydrographers Passage. All vessels 70 m. or more in length and all loaded oil tankers, chemical carriers and liquified gas carriers, regardless of length, are required by law to use the services of a licensed pilot.

IMO Recommendation A(710) on Pilotage: The attention of Shipmasters is drawn to the IMO Recommendation on Pilotage in Torres Strait and the Great North East Channel, which recommends that:

> Ships of 70 m. and over and all loaded oil tankers, chemical carriers or liquified gas carriers, irrespective of size, use the services of a Queensland Coast and Torres Strait Pilot when navigating in the Torres Strait and the Great North East Channel.

BOARDING STATIONS:
TORRES STRAIT:

Booby Island – 24 hour launch or land-on helicopter – Lat. 10° 36′ S., Long. 141° 50′ E.

Goods Island – 24 hour launch or land-on helicopter – Lat. 10° 34′ S., Long. 142° 04′ E.

QUEENSLAND COAST:
In any port or at the following offshore grounds:

Brisbane	Pt. Cartwright – launch – Lat. 26° 43' S., Long. 153° 11' E.
Gladstone	North Point – launch – Lat. 23° 44' S., Long. 151° 22' E.
Whitsunday Region	Penrith Island – land-on helicopter only – Lat. 21° 00' S., Long. 149° 57' E. Bailey Island – land-on helicopter only – Lat. 21° 00' S., Long. 149° 36' E.
Cairns	Cairns PBG – launch – or (by arrangement) land-on helicopter – Lat. 16° 44' S., Long. 145° 45' E.

BARRIER REEF ENTRANCES:

Hydrographers Passage	Blossom Bank – land-on helicopter only – Lat. 19° 43' S., Long. 150° 26' E.
Palm Passage	Pith Reef – land-on helicopter only – Lat. 18° 13' S., Long. 147° 07' E.
Grafton Passage	Euston Reef – launch – or (by arrangement) land-on helicopter – Lat. 16° 39' S., Long. 146° 14' E.

GREAT NORTH EAST CHANNEL:

Dalrymple Island	24 hour launch – Lat. 9° 34' S., Long. 143° 24' E. (The official gazetted pilot boarding ground).

NORTHERN TERRITORY:
At the ports of Darwin, Gove, Groote Eylandt, Bing Bong and Weipa.
NEW SOUTH WALES:
At or outside Port Kembla, Botany Bay, Sydney or Newcastle.
ANY OTHER PLACE:
By arrangement with Australian Reef Pilots.

MAXIMUM DRAFT AND UNDER-KEEL CLEARANCE: The Queensland Coast and Torres Strait Pilot Service will accept for pilotage through Torres Strait, the Inner Route and Great North East Channel ships with a maximum draft of 12.2 m. (Ref: Australian Marine Notice 23/1994).

GANNET PASSAGE (BOOBY ISLAND) AND PRINCE OF WALES CHANNEL: Gannet Passage or Varzin Channel at Booby Island, and the Prince of Wales Channel, as the main tidally restricted areas, control the passage of deep draft vessels. Throughout this area, which extends for some 30 miles from Booby Island, through the Prince of Wales Channel to the Herald Patches buoy, the following minimum Under-Keel Clearances (UKCs) apply:

Drafts	*Gannet and Varzin Passages*	*P.O.W. Channel*
up to 11.90 m.	1.0 m.	1.0 m.
over 11.90 m.	1.0 m.	10% of draft

Masters of deep draft vessels are advised that speed reductions may be necessary while in Torres Strait.

Tide Gauges: Radio-transmitted tide gauges for Booby Island, Goods Island, Turtle Head and Ince Point are broadcast on VHF Channel 88. These gauges can be monitored throughout a vessel's transit to ensure an adequate UKC is maintained.

The tidal information in Torres Strait is continuously recorded and periodically updated. Check hydrographic surveys are also periodically carried out by the Royal Australian Navy Hydrographic Service.

TO ORDER A PILOT:
TORRES STRAIT:
SOUTH AND EAST BOUND via Inner Route or Great North East Channel: Five days before arrival, contact Australian Reef Pilots (Telex AA140003 BRISBANE, answerback REEFS, or cable 4BREEFS BRISBANE), giving ETA, boarding ground required (Booby or Goods Island), maximum draft, destination and required pilot disembarking place (if different from destination).

24 hours and 6 hours before arrival, confirm ETA to telex AA48822 THURSDAY ISLAND (answerback TORIND), or cable 4ITORIND THURSDAY ISLAND. Advise Torind if the vessel has sufficient clearance (minimum 20.9 m.) to enable a helicopter to land.

Three hours before arrival at Booby Island, or 2 hours before arrival at Goods Island, confirm ETA to "REEF PILOTS" on VHF Channel 20.

NOTE 1: Ships using direct ship-to-shore telex should note that the telex machine at the Pilot Station on Thursday Island is tended only in office hours (0700 – 2000 EST). During outside hours, it is more reliable to cable 4ITORIND.

NOTE 2: Masters should keep in mind when advising changes in ETA that pilot launches are based at Thursday Island, and take 2 hours for the trip to Booby Island and one hour to Goods Island.

NOTE 3: Masters of deep draft vessels will receive a cabled reply from TORIND, advising them when predicted tidal conditions will permit a transit of Gannet/Varzin and the Prince of Wales Channel on the day of arrival.

NORTHBOUND via the Inner Route: If in an Australian port, instruct the Agent to arrange a pilot with Australian Reef Pilots, giving as much notice as possible and advising the departure port, ETD, maximum draft and destination.

If from an overseas port and requiring a pilot at any offshore pilot boarding ground, 5 days prior to arrival, advise Australian Reef Pilots of ETA at the nominated boarding ground, maximum draft and destination.

WESTBOUND via Great North East Channel: Five days prior to arrival at Dalrymple Island, advise Australian Reef Pilots of ETA, maximum draft and destination.

HYDROGRAPHERS PASSAGE (See also HAY POINT):
Four days prior to arrival at Blossom Bank, advise Australian Reef Pilots of ETA, maximum draft, destination, and confirm suitability for land-on helicopter transfer.

24 hours and 6 hours prior to arrival, advise Telex AA 146023, answerback REEFS, or cable 4MREEFS MACKAY (via Townsville Radio, VIT) confirming or amending the ETA.

PALM PASSAGE:
Five days prior to arrival at Pith Reef, advise Australian Reef Pilots of ETA, maximum draft and destination.

This initial message will be acknowledged by Australian Reef Pilots. Masters will be advised of future ETA update requirements.

GRAFTON PASSAGE:
Five days prior to arrival at Euston Reef, advise Australian Reef Pilots of ETA, maximum draft and destination.

This initial message will be acknowledged by Australian Reef Pilots.

24 hours and 6 hours before arrival, confirm ETA to 4CREEFS CAIRNS or telex 146120 REEFS.

COMMUNICATIONS:
TELEX AND RADIO MESSAGES: All ETAs should be given in Eastern Standard Time (GMT + 10 hours). Queensland, unlike other Australian States, has no Summer Time.

All initial messages addressed to Australian Reef Pilots office will be acknowledged. Masters will be advised of future ETA update requirements.

VHF: The standard VHF radio call-sign for Australian Reef Pilots in all areas is "REEF PILOTS".
Calling/working channels:

Torres Strait	Channel 20 calling and working (long range VHF).
Cairns/Grafton Passage	Channel 20 calling and working (long range VHF).
Palm Passage	Channel 16 calling, Channel 12 working.
Hydrographers Passage	Channel 16 calling, Channel 9 working.
Bailey Island, Penrith Island	Channel 16 calling, Channel 9 working.
Dalrymple Island (GNEC)	Channel 20 calling and working (long range VHF).

INTERNATIONAL RADIO WATCH HOURS: All vessels are requested to maintain International Radio Watch hours when between Carpentaria Light Vessel and Gubbins Reef in the Inner Route or Bramble Cay in the Great North East Channel (see AUS N.M. 415/1975). A continuous VHF watch on Channel 16 should be maintained over the same area in accordance with the SOLAS 74 Requirements (Chapter IV Reg. 8, as amended 1981).

REFERENCES: Australia Pilot, Vol 3, (NP15), and Annual Australian Notices to Mariners, No. 22, 23 and 24.

SHIPMASTER'S REPORT: August 1995.
Pilot's Report following Anchorages:
Eastern side – Prince of Wales Channel: Lat. 10° 32.0' S., Long. 142° 31.5' E. Depth 17.0 m.
Western side – Prince of Wales Channel: Lat. 10° 33.5' S., Long. 142° 04.0' E. Depth 12.0 m.
References: Charts AUS No. 292/296 respectively.
Pilots also report following facilities on Thursday Island:

1. Good medical facilities, evacuation either by helicopter or pilot launch. For more extensive treatment, patients sent by Flying Doctor Service to Cairns.
2. Mail, air freight, limited stores can be arranged by pilot boat/helicopter.
3. Immigration facilities/Customs facilities on Thursday Island. If necessary, urgent crew/Superintendent joiners/leavers via launch/helicopter.

Regular service flights between Cairns/Thursday Island.

Thursday Island is the Northern Administrative Headquarters for the Federal and Queensland Governments for Cape York area.

AUTHORITY: Australian Reef Pilots Ltd., Suite 14, 2 Argyle Street, Breakfast Creek, Qld 4010, Australia. (Postal address: P.O.Box 338, Albion, Qld 4010, Australia). *Tel:* (07) 3262-4600. *Telex:* AA140003, answerback REEFS. *Cables:* 4BREEFS BRISBANE. *FAX:* (Free) 61-1800-641587. *Email:* 100253.1553@compuserve.com *Contact:* Ken Casey, General Manager, after hours mobile (018) 781-602.

2. Queensland Coastal Pilot Service Pty. Ltd. (QCPS).

PILOTAGE SERVICES: Licensed pilots of the Queensland Coastal Pilot Service are available for Torres Strait, the Inner Route of the Great Barrier Reef, the Great North East Channel and the reef entrances at Hydrographers Passage, Palm Passage and Grafton Passage.

In addition, Pilots of the Queensland Coastal Pilot Service are available for pilotage in Papua New Guinea waters (including ports of Daru, Umuda and to and from the Kumul Offshore loading facility) and also Clarence and Dundas Straits near Darwin by arrangement with the Service Operations Office in Brisbane.

Pilotage is compulsory for all vessels 70 m. or more in overall length and all loaded oil tankers, chemical tankers and liquified gas carriers, regardless of length, for the Inner Route of the Great Barrier Reef, between Cape York (Lat. 10° 41' S.) and Cairns Roads (Lat. 16° 40' S.) or when passing through Hydrographer's Passage (off Hay Point/Mackay).

The IMO Recommendation - Resolution A619(15) - covering pilotage in Torres Strait and Great North East Channel still applies until a revised resolution is ratified.

AUSTRALIAN GOVERNMENT RECOMMENDATION ON PILOTAGE: The attention of Masters is also drawn to an additional recommendation by the Australian Government that Masters unfamiliar with the other areas of the Great Barrier Reef, outside the compulsory and IMO recommended areas, should also engage the services of a Pilot.

BOARDING STATIONS:

TORRES STRAIT:

Booby Island	Lat. 10° 36′ S., Long. 142° 50′ E. – 24 hour launch.
Goods Island	Lat. 10° 34′ S., Long. 142° 06′ E. – 24 hour launch.

QUEENSLAND COAST:

In any port or at the following offshore stations:

Brisbane	Pt. Cartwright – Lat. 26° 43′ S., Long. 153° 11′ E. – 24 hour launch.
Gladstone*	North Point – Lat. 23° 44′ S., Long. 151° 22′ E. – 24 hour launch or land-on helicopter.
Whitsunday Region	Edward Island – Lat. 20° 12′ S., Long. 149° 14′ E. – Land-on helicopter.
Cairns*	Cairns Fairway – Lat. 16° 50′ S., Long. 145° 50′ E. – 24 hour launch or land-on helicopter.

Note: Masters of ships transiting the Inner Route to or from New Zealand or Southern Australian ports are advised that a facility now exists to board and land pilots by helicopter off Edward Island in the Whitsunday Region (see above). The boarding ground lies on the direct track outside the Whitsunday Passage and involves no deviation.

BARRIER REEF ENTRANCES:

Hydrographers Passage	Blossom Bank – Lat. 19° 43′ S., Long. 150° 26′ E. – Land-on helicopter.
Palm Passage	Pith Reef – Lat. 18° 13′ S., Long. 147° 07′ E. – Land-on helicopter.
Grafton Passage	Euston Reef – Lat. 16° 39′ S., Long. 146° 14′ E. – 24 hour launch.

GREAT NORTH EAST CHANNEL:

Stephens Island	Lat. 9° 22′ S., Long. 143° 39′ E. – 24 hour launch.
Umuda Island	Pilots can be retained to assist with berthing at the floating storage vessel.

ANY OTHER PLACE:

By arrangement with the Brisbane office.

PILOT TRANSFER METHOD: Pilot transfers are conducted by launch in all areas except Hydrographers Passage (Blossom Bank), Whitsunday (Edward Island) and at Palm Passage (Pith Reef) where a daylight only, land-on helicopters are used. Vessels unable to accept a land-on helicopter are advised that a launch service is available at Euston Reef (Grafton Passage).

In other boarding areas, and subject to aircraft availability and the suitability of the ship, transfers by land-on helicopters may be possible and Masters should request this service when ordering a pilot through the Brisbane office.

MAXIMUM DRAFT AND UNDER-KEEL CLEARANCE: The Queensland Coastal Pilot Service will accept for pilotage through)Torres Strait, the Inner Route – South of Cape Flattery and Great North East Channel ships with a maximum draft of 12.2 m. as directed by the Australian Maritime Safety Authority (AMSA) acting on behalf of the Australian Government.

GANNET AND VARZIN PASSAGES (BOOBY ISLAND) & PRINCE OF WALES CHANNEL: Gannet and Varzin Passages and the Prince of Wales Channel, as the main tidally restricted areas, control the passage of deep draft vessels. Throughout this area, which extends for some 30 miles from Gannet and Varzin Passages, through the Prince of Wales Channel and to the Herald Patches Buoy, the following minimum Under Keel Clearances (UKCs) apply:

Drafts	*Gannet and Varzin Passages*	*P.O.W. Channel*
up to 11.90 m.	1.0 m.	1.0 m.
11.90 m. up to 12.2 m.	1.0 m.	10% of draft

Masters of deep draft vessels are advised that speed reductions may be necessary while transiting Torres Strait.

Tide Gauges: Radio-transmitted tide gauges operate from Booby Island, Goods Island, Turtle Head and Ince Point. These gauges can be monitored throught a vessel's transit to ensure an adequate UKC is maintained.

The tidal information in Torres Strait is continuously recorded and periodically updated. Check Hydrographic Surveys are also periodically carried out by the Royal Australian Navy Hydrographic Service.

Advice about any increase in maximum draft will be promulgated in Notices to Mariners and other nautical publications.

TO ORDER A PILOT:

TORRES STRAIT:

South and East Bound – Torres Strait and Inner Route:

Give 4 to 5 days notice to "4BTORRES BRISBANE" by cable or Telex AA140222 (answerback TORRES).

Advise:

ETA boarding ground (Booby Is. or Goods Is. – LT = UTC + 10 hours).

Maximum draft.

Destination.

Pilot disembarkation point (if different from destination).

24 hours and 6 hours prior to arrival, confirm ETA to "4ITORRES THURSDAY ISLAND" by cable or Telex AA148048 (answerback TORRES).

Masters should keep in mind when advising of any changes in ETA that pilot launches are based at Thursday Island and take approximately 2 hours for the passage to Booby Island and one hour to Goods Island.

Masters of deep draft vessels will receive advice from 4ITORRES advising them when predicted tidal conditions will permit a transit of Gannet and Varzin Passages and the Prince of Wales Channel on the day of arrival.

North and Westbound – Torres Strait & Inner Route: Departing Australian Port – request Agent to advise "4BTORRES BRISBANE" of pilotage requirements allowing as much notice as possible.

Advise:

Departure port and ETD.

Maximum draft.

Pilot disembarkation point.

Entering Pilotage Area from overseas – advise "4BTORRES BRISBANE" 4 to 5 days in advance by cable or Telex AA140222 (answerback TORRES).

Advise:

ETA at nominated boarding ground – LT = UTC + 10 hours.

Maximum draft.

Pilot disembarkation point.

24 hours and 6 hours prior to arrival, confirm ETA at designated boarding ground to "4BTORRES BRISBANE" by cable or Telex AA140222.

Westbound via Great North East Channel: Five days prior to arrival off Basilisk Beacon advise the Brisbane office of ETA, maximum draft and destination.

24 hours and 6 hours prior to arrival at Basilisk Beacon confirm ETA to HARBOURS, Telex NE22243 (Papua New Guinea Harbours Board).

HYDROGRAPHERS PASSAGE: Give 4 to 5 days notice to "4BTORRES BRISBANE" by cable or Telex AA140222 (answerback TORRES).

Advise:

ETA boarding ground (Blossom Bank – LT = UTC + 10 hours).

Maximum draft.

Destination.

Pilot disembarkation point (if different from destination).

24 hours and 6 hours prior to arrival, confirm ETA to either Telex AA146085 (answerback HELIJET) or by cable to "4MTORRES MACKAY" through Townsville Radio or Perth Radio.

GRAFTON PASSAGE/PALM PASSAGE: Give 4 to 5 days notice to "4BTORRES BRISBANE" by cable or Telex AA140222 (answerback TORRES).

Advise:

ETA boarding ground (Euston Reef/Pith Reef – LT = UTC + 10 hours).

Maximum draft.

Destination.

Pilot disembarkation point (if different from destination).

24 hours and 6 hours prior to arrival, confirm ETA at designated boarding ground to "4BTORRES BRISBANE" by cable or Telex AA140222.

This message will be acknowledged by Brisbane office and Masters will be advised of future ETA update requirements.

COMMUNICATIONS:

RADIO MESSAGES: ETAs should be given in UTC/GMT/Z and indicated in message.

All messages to 4BTORRES will be acknowledged.

VHF: Pilot launches and helicopters used by the Service keep a listening watch on Channel 16 when on station. In the Cairns area the Service maintains a long-range VHF watch on Channel 79. At Hydrographers Passage ships will be asked to change to Channel 9 after initial contact is made on Channel 16.

The call sign for Service launches and helicopters is "Coast Pilots".

Vessels approaching Torres Strait from the West should make contact on Channel 16/79 with the Thursday Island base Pilot Station 2 hours prior to reaching the Pilot Boarding Ground. Channel 79 has extended range and if no contact has been made on this channel, "Coast Pilots" should be called on Channel 16.

INTERNATIONAL RADIO WATCH HOURS: All vessels are requested to maintain International Radio Watch hours when between Carpentaria Light Vessel and Gubbins Reef in the Inner Route or Bramble Cay in the Great North East Channel, (see Australian Notice to Mariners No. 415/1975). A continuous VHF watch on Channel 16 should be maintained over the same area in accordance with the SOLAS 74 requirements (Chapter IV Reg. 8, as amended 1981).

REFERENCES: Australian Pilot, Vol. 3, 1973; pp 81 & 234-237.

Australian Notices to Mariners Nos. 138/1970, 415/1975, 37/1978.

Australian Annual Notice to Mariners Nos. 22 and 23.

NOTICE: Dated 1st February 1996.

Notice to Ship Operators and Owners

Pilotage in the Great North East Channel

All vessels proceeding from South East Asian ports or Suez via the Torres Strait to ports in the South West Pacific must either transit the Inner Route (inside the Great Barrier Reef) or alternatively via the Great North East Channel (GNEC).

We are pleased to announce the establishment of a new service with a Pilot Boarding Ground (PBG) North of Stephens Island close to the North Eastern boundary of the IMO and Australian Government recommended pilotage area at Bramble Cay.

The new PBG is on:

Stephens Island PBG Lat. 9° 22′ S., Long. 143° 39′ E.

Previously pilotage has only been available from near Dalrymple Island, which is more than 20 miles to the South West and within the recommended pilotage area. The new PBG is well clear of all charted obstructions with extensive sea room for pilot transfers. It is positioned on the boundary of the Australian Economic Exclusion Zone.

The location of the new PBG will ensure that vessels will be able to complete the full transit of Torres Strait and GNEC under the advice of an AMSA licensed pilot. Vessels entering the GNEC Westbound from Bligh Entrance will be able to avoid significant course alterations prior to pilot boarding.

Our pilotage services to and from Port Moresby and the Umuda/Ok Tedi storage vessel will continue to be available.

Signed: Operations Manager.

SHIPMASTER'S REPORT: August 1992.

Vessel on passage from Whangarei to Singapore.

Quote:

Pilots advise change in boarding area to Dalrymple Island. No longer necessary to call off Port Moresby. This cuts pilot on board distance by about 180 miles.

Unquote.

Editor's Note:

Vessels transiting the Great North East Channel are advised that IMO Resolution A711(17) (Use of Pilotage Services in the Torres Strait and the Great North East Channel) designates the extremity of the recommended area as Bramble Cay (9° 09′ S., 143° 53′ E.), which is 40 miles beyond the present Pilotage Boarding Ground off Dalrymple Island.

SHIPMASTER'S REPORT: December 1993 (Updated 1996).

Torres Strait Pilot Associations:

On this occasion (loaded passage from Kumul to Dalian), we were instructed to sail via Torres Strait.

Torres Pilot of the Queensland Coastal Pilot Service boarded at Kumul during final stage of loading on December 2nd and left vessel off Booby Island on December 3rd at 1506 hrs.

Nomination: On this occasion I selected "Torres Strait Brisbane", merely guided by the "Guide". The given information herein was in line with my experience earlier this year (April), when we also passed through Torres Strait.

We sent our initial telex to "Torres Brisbane", copied to the old telex number of Thursday Island Pilots, unaware of the present situation of two competitive Pilot Associations covering the same area. However, within one hour I knew there were now two Associations.

I then nominated Coastal Pilots as their pilot could join the vessel at Kumul. Two reasons for that decision, the weather was not very favourable in the area, and having a pilot already on board saves up to one hour, as you can now pass Dalrymple Island at full speed, no slacking down, etc.

Performance: In my opinion, both Pilot Associations will perform equally. They are the same pilots as in earlier days, only they split themselves on July 1st 1993.

Coastal Pilots kept the Brisbane Office with the telex number, and have kept their relations with agencies.

Reef Pilots kept the launches in Torres Strait and the old telex numbers, but severed connections with agencies.

Passages: For most passages through Torres Strait, Barrier Reef and Great North East Channel, both Associations can be used.

Exception: When using Great North East Channel and Torres Strait coming from the East, Coastal Pilots do not (yet) have launch facilities at Dalrymple Island, and pilots have to board off Port Moresby (See Notice dated 1st February 1996 which supersedes these remarks).

When coming from New Zealand, there is no deviation, only that the pilot is on board for an extra 180 miles. However, coming from the South (Australia/Tasmania), ships have to deviate.

In this case, ships normally will use "Reef Pilots", as they have the launch facilities at Dalrymple Island.

The same applies for the other way, when "Reef Pilots" can leave at Stephens Island, while "Coastal Pilots" have to disembark off Port Moresby.

According to our pilot, there are plans (maybe vague ones), that in near future "Coastal Pilots" will also have launch facilities off Stephens Island.

Up to now, Masters are not coerced into traversing the Great N.E. Channel without a pilot as "Reef Pilots" are available.

Also see "Shipmaster's Report" in section above.

AUTHORITY: Queensland Coastal Pilot Service Pty. Ltd., Brisbane Operations Office, 13th Floor, Dalgety House, 145 Eagle Street, Brisbane, Australia. (Postal address: GPO Box 209, Brisbane, Qld 4001, Australia). *Tel:* 61-7-38395144. *Telex:* AA140222. *Cables:* 4BTORRES. *FAX:* 61-7-38395242. *After Hours Contact:* Perry Sutton, Tel: 61-7-33991478. Iain Steverson, Tel: 61-7-32632642.

TOWNSVILLE, Queensland: 19.15 S. 146.50 E.

(See Plan)

PORT LIMITS: *Jurisdiction:* The Townsville Port Authority exercises jurisdiction over the Port of Townsville.

Commencing at the HW mark at the most Northern extremity of Cape Cleveland, thence by a line to a point Lat. 19° 05′ 30″ S., Long. 146° 52′ E., thence by a line due Westward to 146° 45′ E., thence by a line due South to HW mark at a point on the mainland, thence by HW mark to the point of commencement and including all navigable rivers communicating with that area and the banks and shores and foreshores thereof.

The Harbour Master, representing the Department of Harbours and Marine, controls the movement of vessels within the port area whilst the allocation of berths and moorings is controlled by the Port Authority.

APPROACHES: The approach to Cleveland Bay from the Southward is clear of dangers, with the exception of Salamander Reef, the Four-foot Rock, and the Twenty-foot Rock, all these lying within a radius of 3 miles of Cape Cleveland Lighthouse.

To clear these dangers, passing North of them bring Mount Marlow in transit with the extremity of Hawkings Point, bearing 265° (258° Mag.) before approaching within 5 miles of Cape Cleveland, which will then bear 252° (245° Mag.). Proceeding into Cleveland Bay a depth of not less than 8.2 m. will be obtained by keeping North of the line Mount Marlow in line with Hawkings Point.

Approaching Cleveland Bay from the Northward, passing East of Magnetic Island a vessel should keep at least half a mile off Magnetic Island shore to obtain not less than 11 m. of water at LWOST. The shore is steep to except for Orchard Rocks off the N.E. extremity of the island.

There is good holding ground everywhere in Cleveland Bay and vessels awaiting Pilot should anchor according to draft and as close to the Fairway Beacons as possible.

ENTRANCE CHANNELS: Depth in the 92 m. wide entrance channels, which are marked by pairs of lighted beacons, is 11.7 m. at LAT (subject to change).

The Sea Channel is 1.75 miles in length and Platypus Channel 3.5 miles; the channels alter in direction at Beacons No. 6 and No. 7. For detailed information see Queensland Sailing Directions.

DOCUMENTS: *Customs:*

3 Crew Lists – Form M & S–11.
3 Passenger Lists, if applicable.
3 Lists of Ports of Call.
1 Form 42A – Ship's Stores.
1 Form 5 – Articles Owned by or in the possession of Master, Officers and Crew.
1 Form QA4 – Quarantine Notice.
2 Forms QA5 – Quarantine Shipmaster's Bond.
2 Inward Manifests.
1 Bill of Lading.
1 Form 40 – Application for Clearance and Guarantee to Pay Duty.

PILOTAGE: Pilotage is available 24 hours a day, 7 days a week, subject to notice.

Unless a Master is the holder of a Current Certificate of Exemption, pilotage is compulsory and vessels requiring the service should cable draft and probable time of arrival to their Agent, or to the Regional Harbour Master, Townsville, from their last port of departure, or advise by radio at least 24 hours before arrival (Telex: Hartow 47124; Fax: (077) 212028).

The pilot vessel is equipped with VHF Radio, having international frequencies 16 and 67 and all working frequencies.

Vessels will be advised by VHF radio which boarding ground is to be used. Generally, vessels with drafts greater than 8.0 m. will only use Pilot Boarding Ground Alpha (A).

Coastal and Reef Pilotage: Pilotage through the Inner Route of the Great Barrier Reef to Torres Strait, and also Palm Passage, is conducted by licensed pilots available from Australian Reef Pilots Ltd. and Queensland Coastal Pilot Service Pty. Ltd. See "Torres Strait" for details.

Masters are advised that pilotage in the Inner Route and at Hydrographers Passage is compulsory. Pilotage in the Great North East Channel is recommended by IMO. See "Torres Strait".

ANCHORAGES: Boundaries: Orchard Rocks/Cape Cleveland. Cleveland Bay Depths 8.2 m. to 12.2 m.

RESTRICTIONS: *Under-Keel Clearance:*

Dead Weight Tonnage	*Under-Keel Clearance*	
	Sea & Platypus Channel	*Channel Inner Harbour*
Up to 40,000 tonnes	0.90 m.	0.60 m.
40,000 – 50,000 tonnes	1.10 m.	0.90 m.
Over 50,000 tonnes	1.30 m.	0.90 m.

Vessels alongside every berth in the port are required to remain afloat at all time with a minimum clearance of 0.30 m.

For vessels arriving in the ballast condition, the forward draft must be not less than 2% of the vessel's overall length and the after draft propeller fully immersed.

Harbour Depths at L.A.T.:

Sea Channel	11.7 m.
Platypus Channel	11.7 m.
Deep Draft Swing Basin, to Berths 1, 2 and 3	11.7 m.
*No. 1 (Tanker) Berth	11.5 m.
*No. 2 Berth	12.1 m.
*No. 3 (Portainer Crane only) Berth	12.4 m.
No. 3 (including Ro-Ro) Berth	12.4 m.
*No. 4 (General Cargo and Ro-Ro) Berth	9.9 m.
*No. 7 (Minerals) Berth	10.7 m.
*No. 8 (Freezer) Berth	10.1 m.
*No. 9 (Bulk Sugar Gantry) Shed	12.2 m.
No. 10 (Container/Ro-Ro Berth)	9.5 m.
Between Nos. 4 and 6 (77 m.)	10.4 m.
Between Nos. 7 and 8 (84 m.)	11.3 m.
Between Nos. 9 and 10 (142 m.)	11.9 m.

* Depths at 4.5 m. off fender piles.

HEALTH: *Pratique:* Townsville is a First Port of Entry and notification of quarantine inspection. Requirements should be made not more than 24 hours nor less than 12 hours in advance. Inspections may be carried out at all hours at the wharf or at the quarantine anchorage, at the discretion of the Quarantine Officer. Rat guards are to be maintained on all mooring lines while vessels are berthed in the Townsville Harbour.

MAX. SIZE:

Berth No.	*Length*	*Max. Length of Vessel*	*Wharf Deck at L.A.T.*
1	270 m.	238 m.	5.46 m.
2	254 m.	238 m.	6.07 m.
3	254 m.	238 m.	6.07 m.
3	Ro/Ro pad	—	5.09 m.
4	228 m.	200 m.	5.46 m.
4	Ro/Ro pad	—	5.09 m.
6	122 m.	160 m.	5.37 m.
7	183 m.	180 m.	5.37 m.
8	213 m.	205 m.	5.77 m.
9	228 m.	238 m.	5.77 m.
10	160 m.	152 m.	5.27 m.

The maximum length of a vessel entering No. 4 Berth is 220 m., but only on condition that any vessel berthed at No. 3 Berth is *not* closer inshore than the 360 metre mark (See "Appendix").

BOARDING STATIONS:

TORRES STRAIT:

Booby Island	Lat. 10° 36′ S., Long. 142° 50′ E. – 24 hour launch.
Goods Island	Lat. 10° 34′ S., Long. 142° 06′ E. – 24 hour launch.

QUEENSLAND COAST:

In any port or at the following offshore stations:

Brisbane	Pt. Cartwright – Lat. 26° 43′ S., Long. 153° 11′ E. – 24 hour launch.
Gladstone*	North Point – Lat. 23° 44′ S., Long. 151° 22′ E. – 24 hour launch or land-on helicopter.
Whitsunday Region	Edward Island – Lat. 20° 12′ S., Long. 149° 14′ E. – Land-on helicopter.
Cairns*	Cairns Fairway – Lat. 16° 50′ S., Long. 145° 50′ E. – 24 hour launch or land-on helicopter.

Note: Masters of ships transiting the Inner Route to or from New Zealand or Southern Australian ports are advised that a facility now exists to board and land pilots by helicopter off Edward Island in the Whitsunday Region (see above). The boarding ground lies on the direct track outside the Whitsunday Passage and involves no deviation.

BARRIER REEF ENTRANCES:

Hydrographers Passage	Blossom Bank – Lat. 19° 43′ S., Long. 150° 26′ E. – Land-on helicopter.
Palm Passage	Pith Reef – Lat. 18° 13′ S., Long. 147° 07′ E. – Land-on helicopter.
Grafton Passage	Euston Reef – Lat. 16° 39′ S., Long. 146° 14′ E. – 24 hour launch.

GREAT NORTH EAST CHANNEL:

Stephens Island	Lat. 9° 22′ S., Long. 143° 39′ E. – 24 hour launch.
Umuda Island	Pilots can be retained to assist with berthing at the floating storage vessel.

ANY OTHER PLACE:

By arrangement with the Brisbane office.

PILOT TRANSFER METHOD: Pilot transfers are conducted by launch in all areas except Hydrographers Passage (Blossom Bank), Whitsunday (Edward Island) and at Palm Passage (Pith Reef) where a daylight only, land-on helicopters are used. Vessels unable to accept a land-on helicopter are advised that a launch service is available at Euston Reef (Grafton Passage).

In other boarding areas, and subject to aircraft availability and the suitability of the ship, transfers by land-on helicopters may be possible and Masters should request this service when ordering a pilot through the Brisbane office.

MAXIMUM DRAFT AND UNDER-KEEL CLEARANCE: The Queensland Coastal Pilot Service will accept for pilotage through Torres Strait, the Inner Route – South of Cape Flattery and Great North East Channel ships with a maximum draft of 12.2 m. as directed by the Australian Maritime Safety Authority (AMSA) acting on behalf of the Australian Government.

GANNET AND VARZIN PASSAGES (BOOBY ISLAND) & PRINCE OF WALES CHANNEL: Gannet and Varzin Passages and the Prince of Wales Channel, as the main tidally restricted areas, control the passage of deep draft vessels. Throughout this area, which extends for some 30 miles from Gannet and Varzin Passages, through the Prince of Wales Channel and to the Herald Patches Buoy, the following minimum Under Keel Clearances (UKCs) apply:

Drafts	*Gannet and Varzin Passages*	*P.O.W. Channel*
up to 11.90 m.	1.0 m.	1.0 m.
11.90 m. up to 12.2 m.	1.0 m.	10% of draft

Masters of deep draft vessels are advised that speed reductions may be necessary while transiting Torres Strait.

Tide Gauges: Radio-transmitted tide gauges operate from Booby Island, Goods Island, Turtle Head and Ince Point. These gauges can be monitored throught a vessel's transit to ensure an adequate UKC is maintained.

The tidal information in Torres Strait is continuously recorded and periodically updated. Check Hydrographic Surveys are also periodically carried out by the Royal Australian Navy Hydrographic Service.

Advice about any increase in maximum draft will be promulgated in Notices to Mariners and other nautical publications.

TO ORDER A PILOT:

TORRES STRAIT:

South and East Bound – Torres Strait and Inner Route:

Give 4 to 5 days notice to "4BTORRES BRISBANE" by cable or Telex AA140222 (answerback TORRES).

Advise:

ETA boarding ground (Booby Is. or Goods Is. – LT = UTC + 10 hours).

Maximum draft.

Destination.

Pilot disembarkation point (if different from destination).

24 hours and 6 hours prior to arrival, confirm ETA to "4ITORRES THURSDAY ISLAND" by cable or Telex AA148048 (answerback TORRES).

Masters should keep in mind when advising of any changes in ETA that pilot launches are based at Thursday Island and take approximately 2 hours for the passage to Booby Island and one hour to Goods Island.

Masters of deep draft vessels will receive advice from 4ITORRES advising them when predicted tidal conditions will permit a transit of Gannet and Varzin Passages and the Prince of Wales Channel on the day of arrival.

North and Westbound – Torres Strait & Inner Route: Departing Australian Port – request Agent to advise "4BTORRES BRISBANE" of pilotage requirements allowing as much notice as possible.

Advise:

Departure port and ETD.

Maximum draft.

Pilot disembarkation point.

Entering Pilotage Area from overseas – advise "4BTORRES BRISBANE" 4 to 5 days in advance by cable or Telex AA140222 (answerback TORRES).

Advise:

ETA at nominated boarding ground – LT = UTC + 10 hours.

Maximum draft.

Pilot disembarkation point.

24 hours and 6 hours prior to arrival, confirm ETA at designated boarding ground to "4BTORRES BRISBANE" by cable or Telex AA140222.

Westbound via Great North East Channel: Five days prior to arrival off Basilisk Beacon advise the Brisbane office of ETA, maximum draft and destination.

24 hours and 6 hours prior to arrival at Basilisk Beacon confirm ETA to HARBOURS, Telex NE22243 (Papua New Guinea Harbours Board).

HYDROGRAPHERS PASSAGE: Give 4 to 5 days notice to "4BTORRES BRISBANE" by cable or Telex AA140222 (answerback TORRES).

Advise:

ETA boarding ground (Blossom Bank – LT = UTC + 10 hours).

Maximum draft.

Destination.

Pilot disembarkation point (if different from destination).

24 hours and 6 hours prior to arrival, confirm ETA to either Telex AA146085 (answerback HELIJET) or by cable to "4MTORRES MACKAY" through Townsville Radio or Perth Radio.

GRAFTON PASSAGE/PALM PASSAGE: Give 4 to 5 days notice to "4BTORRES BRISBANE" by cable or Telex AA140222 (answerback TORRES).

Advise:

ETA boarding ground (Euston Reef/Pith Reef – LT = UTC + 10 hours).

Maximum draft.

Destination.

Pilot disembarkation point (if different from destination).

24 hours and 6 hours prior to arrival, confirm ETA at designated boarding ground to "4BTORRES BRISBANE" by cable or Telex AA140222.

This message will be acknowledged by Brisbane office and Masters will be advised of future ETA update requirements.

COMMUNICATIONS:

RADIO MESSAGES: ETAs should be given in UTC/GMT/Z and indicated in message.

All messages to 4BTORRES will be acknowledged.

VHF: Pilot launches and helicopters used by the Service keep a listening watch on Channel 16 when on station. In the Cairns area the Service maintains a long-range VHF watch on Channel 79. At Hydrographers Passage ships will be asked to change to Channel 9 after initial contact is made on Channel 16.

The call sign for Service launches and helicopters is "Coast Pilots".

Vessels approaching Torres Strait from the West should make contact on Channel 16/79 with the Thursday Island base Pilot Station 2 hours prior to reaching the Pilot Boarding Ground. Channel 79 has extended range and if no contact has been made on this channel, "Coast Pilots" should be called on Channel 16.

INTERNATIONAL RADIO WATCH HOURS: All vessels are requested to maintain International Radio Watch hours when between Carpentaria Light Vessel and Gubbins Reef in the Inner Route or Bramble Cay in the Great North East Channel, (see Australian Notice to Mariners No. 415/1975). A continuous VHF watch on Channel 16 should be maintained over the same area in accordance with the SOLAS 74 requirements (Chapter IV Reg. 8, as amended 1981).

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NOTICE: Dated 1st February 1996.

Notice to Ship Operators and Owners

Pilotage in the Great North East Channel

All vessels proceeding from South East Asian ports or Suez via the Torres Strait to ports in the South West Pacific must either transit the Inner Route (inside the Great Barrier Reef) or alternatively via the Great North East Channel (GNEC).

We are pleased to announce the establishment of a new service with a Pilot Boarding Ground (PBG) North of Stephens Island close to the North Eastern boundary of the IMO and Australian Government recommended pilotage area at Bramble Cay.

The new PBG is on:

Stephens Island PBG Lat. 9° 22′ S., Long. 143° 39′ E.

Previously pilotage has only been available from near Dalrymple Island, which is more than 20 miles to the South West and within the recommended pilotage area. The new PBG is well clear of all charted obstructions with extensive sea room for pilot transfers. It is positioned on the boundary of the Australian Economic Exclusion Zone.

The location of the new PBG will ensure that vessels will be able to complete the full transit of Torres Strait and GNEC under the advice of an AMSA licensed pilot. Vessels entering the GNEC Westbound from Bligh Entrance will be able to avoid significant course alterations prior to pilot boarding.

Our pilotage services to and from Port Moresby and the Umuda/Ok Tedi storage vessel will continue to be available.

Signed: Operations Manager.

SHIPMASTER'S REPORT: August 1992.

Vessel on passage from Whangarei to Singapore.

Quote:

Pilots advise change in boarding area to Dalrymple Island. No longer necessary to call off Port Moresby. This cuts pilot on board distance by about 180 miles.

Unquote.

Editor's Note:

Vessels transiting the Great North East Channel are advised that IMO Resolution A711(17) (Use of Pilotage Services in the Torres Strait and the Great North East Channel) designates the extremity of the recommended area as Bramble Cay (9° 09′ S., 143° 53′ E.), which is 40 miles beyond the present Pilotage Boarding Ground off Dalrymple Island.

SHIPMASTER'S REPORT: December 1993 (Updated 1996).

Torres Strait Pilot Associations:

On this occasion (loaded passage from Kumul to Dalian), we were instructed to sail via Torres Strait.

Torres Pilot of the Queensland Coastal Pilot Service boarded at Kumul during final stage of loading on December 2nd and left vessel off Booby Island on December 3rd at 1506 hrs.

Nomination: On this occasion I selected "Torres Strait Brisbane", merely guided by the "Guide". The given information herein was in line with my experience earlier this year (April), when we also passed through Torres Strait.

We sent our initial telex to "Torres Brisbane", copied to the old telex number of Thursday Island Pilots, unaware of the present situation of two competitive Pilot Associations covering the same area. However, within one hour I knew there were now two Associations.

I then nominated Coastal Pilots as their pilot could join the vessel at Kumul. Two reasons for that decision, the weather was not very favourable in the area, and having a pilot already on board saves up to one hour, as you can now pass Dalrymple Island at full speed, no slacking down, etc.

Performance: In my opinion, both Pilot Associations will perform equally. They are the same pilots as in earlier days, only they split themselves on July 1st 1993.

Coastal Pilots kept the Brisbane Office with the telex number, and have kept their relations with agencies.

Reef Pilots kept the launches in Torres Strait and the old telex numbers, but severed connections with agencies.

Passages: For most passages through Torres Strait, Barrier Reef and Great North East Channel, both Associations can be used.

Exception: When using Great North East Channel and Torres Strait coming from the East, Coastal Pilots do not (yet) have launch facilities at Dalrymple Island, and pilots have to board off Port Moresby (See Notice dated 1st February 1996 which supersedes these remarks).

When coming from New Zealand, there is no deviation, only that the pilot is on board for an extra 180 miles. However, coming from the South (Australia/Tasmania), ships have to deviate.

In this case, ships normally will use "Reef Pilots", as they have the launch facilities at Dalrymple Island.

The same applies for the other way, when "Reef Pilots" can leave at Stephens Island, while "Coastal Pilots" have to disembark off Port Moresby.

According to our pilot, there are plans (maybe vague ones), that in near future "Coastal Pilots" will also have launch facilities off Stephens Island.

Up to now, Masters are not coerced into traversing the Great N.E. Channel without a pilot as "Reef Pilots" are available.

Also see "Shipmaster's Report" in section above.

AUTHORITY: Queensland Coastal Pilot Service Pty. Ltd., Brisbane Operations Office, 13th Floor, Dalgety House, 145 Eagle Street, Brisbane, Australia. (Postal address: GPO Box 209, Brisbane, Qld 4001, Australia). *Tel:* 61-7-38395144. *Telex:* AA140222. *Cables:* 4BTORRES. *FAX:* 61-7-38395242. *After Hours Contact:* Perry Sutton, Tel: 61-7-33991478. Iain Steverson, Tel: 61-7-32632642.

TOWNSVILLE, Queensland: 19.15 S. 146.50 E.

(See Plan)

PORT LIMITS: *Jurisdiction:* The Townsville Port Authority exercises jurisdiction over the Port of Townsville.

Commencing at the HW mark at the most Northern extremity of Cape Cleveland, thence by a line to a point Lat. 19° 05′ 30″ S., Long. 146° 52′ E., thence by a line due Westward to 146° 45′ E., thence by a line due South to HW mark at a point on the mainland, thence by HW mark to the point of commencement and including all navigable rivers communicating with that area and the banks and shores and foreshores thereof.

The Harbour Master, representing the Department of Harbours and Marine, controls the movement of vessels within the port area whilst the allocation of berths and moorings is controlled by the Port Authority.

APPROACHES: The approach to Cleveland Bay from the Southward is clear of dangers, with the exception of Salamander Reef, the Four-foot Rock, and the Twenty-foot Rock, all these lying within a radius of 3 miles of Cape Cleveland Lighthouse.

To clear these dangers, passing North of them bring Mount Marlow in transit with the extremity of Hawkings Point, bearing 265° (258° Mag.) before approaching within 5 miles of Cape Cleveland, which will then bear 252° (245° Mag.). Proceeding into Cleveland Bay a depth of not less than 8.2 m. will be obtained by keeping North of the line Mount Marlow in line with Hawkings Point.

Approaching Cleveland Bay from the Northward, passing East of Magnetic Island a vessel should keep at least half a mile off Magnetic Island shore to obtain not less than 11 m. of water at LWOST. The shore is steep to except for Orchard Rocks off the N.E. extremity of the island.

There is good holding ground everywhere in Cleveland Bay and vessels awaiting Pilot should anchor according to draft and as close to the Fairway Beacons as possible.

ENTRANCE CHANNELS: Depth in the 92 m. wide entrance channels, which are marked by pairs of lighted beacons, is 11.7 m. at LAT (subject to change).

The Sea Channel is 1.75 miles in length and Platypus Channel 3.5 miles; the channels alter in direction at Beacons No. 6 and No. 7. For detailed information see Queensland Sailing Directions.

DOCUMENTS: *Customs:*

3 Crew Lists – Form M & S–11.
3 Passenger Lists, if applicable.
3 Lists of Ports of Call.
1 Form 42A – Ship's Stores.
1 Form 5 – Articles Owned by or in the possession of Master, Officers and Crew.
1 Form QA4 – Quarantine Notice.
2 Forms QA5 – Quarantine Shipmaster's Bond.
2 Inward Manifests.
1 Bill of Lading.
1 Form 40 – Application for Clearance and Guarantee to Pay Duty.

PILOTAGE: Pilotage is available 24 hours a day, 7 days a week, subject to notice.

Unless a Master is the holder of a Current Certificate of Exemption, pilotage is compulsory and vessels requiring the service should cable draft and probable time of arrival to their Agent, or to the Regional Harbour Master, Townsville, from their last port of departure, or advise by radio at least 24 hours before arrival (Telex: Hartow 47124; Fax: (077) 212028).

The pilot vessel is equipped with VHF Radio, having international frequencies 16 and 67 and all working frequencies.

Vessels will be advised by VHF radio which boarding ground is to be used. Generally, vessels with drafts greater than 8.0 m. will only use Pilot Boarding Ground Alpha (A).

Coastal and Reef Pilotage: Pilotage through the Inner Route of the Great Barrier Reef to Torres Strait, and also Palm Passage, is conducted by licensed pilots available from Australian Reef Pilots Ltd. and Queensland Coastal Pilot Service Pty. Ltd. See "Torres Strait" for details.

Masters are advised that pilotage in the Inner Route and at Hydrographers Passage is compulsory. Pilotage in the Great North East Channel is recommended by IMO. See "Torres Strait".

ANCHORAGES: Boundaries: Orchard Rocks/Cape Cleveland. Cleveland Bay Depths 8.2 m. to 12.2 m.

RESTRICTIONS: *Under-Keel Clearance:*

Dead Weight Tonnage	*Under-Keel Clearance*	
	Sea & Platypus Channel	*Channel Inner Harbour*
Up to 40,000 tonnes	0.90 m.	0.60 m.
40,000 – 50,000 tonnes	1.10 m.	0.90 m.
Over 50,000 tonnes	1.30 m.	0.90 m.

Vessels alongside every berth in the port are required to remain afloat at all time with a minimum clearance of 0.30 m.

For vessels arriving in the ballast condition, the forward draft must be not less than 2% of the vessel's overall length and the after draft propeller fully immersed.

Harbour Depths at L.A.T.:

Sea Channel	11.7 m.
Platypus Channel	11.7 m.
Deep Draft Swing Basin, to Berths 1, 2 and 3	11.7 m.
*No. 1 (Tanker) Berth	11.5 m.
*No. 2 Berth	12.1 m.
*No. 3 (Portainer Crane only) Berth	12.4 m.
No. 3 (including Ro-Ro) Berth	12.4 m.
*No. 4 (General Cargo and Ro-Ro) Berth	9.9 m.
*No. 7 (Minerals) Berth	10.7 m.
*No. 8 (Freezer) Berth	10.1 m.
*No. 9 (Bulk Sugar Gantry) Shed	12.2 m.
No. 10 (Container/Ro-Ro Berth)	9.5 m.
Between Nos. 4 and 6 (77 m.)	10.4 m.
Between Nos. 7 and 8 (84 m.)	11.3 m.
Between Nos. 9 and 10 (142 m.)	11.9 m.

* Depths at 4.5 m. off fender piles.

HEALTH: *Pratique:* Townsville is a First Port of Entry and notification of quarantine inspection. Requirements should be made not more than 24 hours nor less than 12 hours in advance. Inspections may be carried out at all hours at the wharf or at the quarantine anchorage, at the discretion of the Quarantine Officer. Rat guards are to be maintained on all mooring lines while vessels are berthed in the Townsville Harbour.

MAX. SIZE:

Berth No.	*Length*	*Max. Length of Vessel*	*Wharf Deck at L.A.T.*
1	270 m.	238 m.	5.46 m.
2	254 m.	238 m.	6.07 m.
3	254 m.	238 m.	6.07 m.
3	Ro/Ro pad	—	5.09 m.
4	228 m.	200 m.	5.46 m.
4	Ro/Ro pad	—	5.09 m.
6	122 m.	160 m.	5.37 m.
7	183 m.	180 m.	5.37 m.
8	213 m.	205 m.	5.77 m.
9	228 m.	238 m.	5.77 m.
10	160 m.	152 m.	5.27 m.

The maximum length of a vessel entering No. 4 Berth is 220 m., but only on condition that any vessel berthed at No. 3 Berth is *not* closer inshore than the 360 metre mark (See "Appendix").

BOARDING STATIONS:

TORRES STRAIT:

Booby Island	Lat. 10° 36′ S., Long. 142° 50′ E. – 24 hour launch.
Goods Island	Lat. 10° 34′ S., Long. 142° 06′ E. – 24 hour launch.

QUEENSLAND COAST:

In any port or at the following offshore stations:

Brisbane	Pt. Cartwright – Lat. 26° 43′ S., Long. 153° 11′ E. – 24 hour launch.
Gladstone*	North Point – Lat. 23° 44′ S., Long. 151° 22′ E. – 24 hour launch or land-on helicopter.
Whitsunday Region	Edward Island – Lat. 20° 12′ S., Long. 149° 14′ E. – Land-on helicopter.
Cairns*	Cairns Fairway – Lat. 16° 50′ S., Long. 145° 50′ E. – 24 hour launch or land-on helicopter.

Note: Masters of ships transiting the Inner Route to or from New Zealand or Southern Australian ports are advised that a facility now exists to board and land pilots by helicopter off Edward Island in the Whitsunday Region (see above). The boarding ground lies on the direct track outside the Whitsunday Passage and involves no deviation.

BARRIER REEF ENTRANCES:

Hydrographers Passage	Blossom Bank – Lat. 19° 43′ S., Long. 150° 26′ E. – Land-on helicopter.
Palm Passage	Pith Reef – Lat. 18° 13′ S., Long. 147° 07′ E. – Land-on helicopter.
Grafton Passage	Euston Reef – Lat. 16° 39′ S., Long. 146° 14′ E. – 24 hour launch.

GREAT NORTH EAST CHANNEL:

Stephens Island	Lat. 9° 22′ S., Long. 143° 39′ E. – 24 hour launch.
Umuda Island	Pilots can be retained to assist with berthing at the floating storage vessel.

ANY OTHER PLACE:

By arrangement with the Brisbane office.

PILOT TRANSFER METHOD: Pilot transfers are conducted by launch in all areas except Hydrographers Passage (Blossom Bank), Whitsunday (Edward Island) and at Palm Passage (Pith Reef) where a daylight only, land-on helicopters are used. Vessels unable to accept a land-on helicopter are advised that a launch service is available at Euston Reef (Grafton Passage).

In other boarding areas, and subject to aircraft availability and the suitability of the ship, transfers by land-on helicopters may be possible and Masters should request this service when ordering a pilot through the Brisbane office.

MAXIMUM DRAFT AND UNDER-KEEL CLEARANCE: The Queensland Coastal Pilot Service will accept for pilotage through Torres Strait, the Inner Route – South of Cape Flattery and Great North East Channel ships with a maximum draft of 12.2 m. as directed by the Australian Maritime Safety Authority (AMSA) acting on behalf of the Australian Government.

GANNET AND VARZIN PASSAGES (BOOBY ISLAND) & PRINCE OF WALES CHANNEL: Gannet and Varzin Passages and the Prince of Wales Channel, as the main tidally restricted areas, control the passage of deep draft vessels. Throughout this area, which extends for some 30 miles from Gannet and Varzin Passages, through the Prince of Wales Channel and to the Herald Patches Buoy, the following minimum Under Keel Clearances (UKCs) apply:

Drafts	*Gannet and Varzin Passages*	*P.O.W. Channel*
up to 11.90 m.	1.0 m.	1.0 m.
11.90 m. up to 12.2 m.	1.0 m.	10% of draft

Masters of deep draft vessels are advised that speed reductions may be necessary while transiting Torres Strait.

Tide Gauges: Radio-transmitted tide gauges operate from Booby Island, Goods Island, Turtle Head and Ince Point. These gauges can be monitored throught a vessel's transit to ensure an adequate UKC is maintained.

The tidal information in Torres Strait is continuously recorded and periodically updated. Check Hydrographic Surveys are also periodically carried out by the Royal Australian Navy Hydrographic Service.

Advice about any increase in maximum draft will be promulgated in Notices to Mariners and other nautical publications.

TO ORDER A PILOT:

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South and East Bound – Torres Strait and Inner Route:

Give 4 to 5 days notice to "4BTORRES BRISBANE" by cable or Telex AA140222 (answerback TORRES).

Advise:

ETA boarding ground (Booby Is. or Goods Is. – LT = UTC + 10 hours).

Maximum draft.

Destination.

Pilot disembarkation point (if different from destination).

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APPROACHES: The approach to Cleveland Bay from the Southward is clear of dangers, with the exception of Salamander Reef, the Four-foot Rock, and the Twenty-foot Rock, all these lying within a radius of 3 miles of Cape Cleveland Lighthouse.

To clear these dangers, passing North of them bring Mount Marlow in transit with the extremity of Hawkings Point, bearing 265° (258° Mag.) before approaching within 5 miles of Cape Cleveland, which will then bear 252° (245° Mag.). Proceeding into Cleveland Bay a depth of not less than 8.2 m. will be obtained by keeping North of the line Mount Marlow in line with Hawkings Point.

Approaching Cleveland Bay from the Northward, passing East of Magnetic Island a vessel should keep at least half a mile off Magnetic Island shore to obtain not less than 11 m. of water at LWOST. The shore is steep to except for Orchard Rocks off the N.E. extremity of the island.

There is good holding ground everywhere in Cleveland Bay and vessels awaiting Pilot should anchor according to draft and as close to the Fairway Beacons as possible.

ENTRANCE CHANNELS: Depth in the 92 m. wide entrance channels, which are marked by pairs of lighted beacons, is 11.7 m. at LAT (subject to change).

The Sea Channel is 1.75 miles in length and Platypus Channel 3.5 miles; the channels alter in direction at Beacons No. 6 and No. 7. For detailed information see Queensland Sailing Directions.

DOCUMENTS: *Customs:*
3 Crew Lists – Form M & S–11.
3 Passenger Lists, if applicable.
3 Lists of Ports of Call.
1 Form 42A – Ship's Stores.
1 Form 5 – Articles Owned by or in the possession of Master, Officers and Crew.
1 Form QA4 – Quarantine Notice.
2 Forms QA5 – Quarantine Shipmaster's Bond.
2 Inward Manifests.
1 Bill of Lading.
1 Form 40 – Application for Clearance and Guarantee to Pay Duty.

PILOTAGE: Pilotage is available 24 hours a day, 7 days a week, subject to notice.

Unless a Master is the holder of a Current Certificate of Exemption, pilotage is compulsory and vessels requiring the service should cable draft and probable time of arrival to their Agent, or to the Regional Harbour Master, Townsville, from their last port of departure, or advise by radio at least 24 hours before arrival (Telex: Hartow 47124; Fax: (077) 212028).

The pilot vessel is equipped with VHF Radio, having international frequencies 16 and 67 and all working frequencies.

Vessels will be advised by VHF radio which boarding ground is to be used. Generally, vessels with drafts greater than 8.0 m. will only use Pilot Boarding Ground Alpha (A).

Coastal and Reef Pilotage: Pilotage through the Inner Route of the Great Barrier Reef to Torres Strait, and also Palm Passage, is conducted by licensed pilots available from Australian Reef Pilots Ltd. and Queensland Coastal Pilot Service Pty. Ltd. See "Torres Strait" for details.

Masters are advised that pilotage in the Inner Route and at Hydrographers Passage is compulsory. Pilotage in the Great North East Channel is recommended by IMO. See "Torres Strait".

ANCHORAGES: Boundaries: Orchard Rocks/Cape Cleveland. Cleveland Bay Depths 8.2 m. to 12.2 m.

RESTRICTIONS: *Under-Keel Clearance:*

Dead Weight Tonnage	*Under-Keel Clearance*	
	Sea & Platypus Channel	*Channel Inner Harbour*
Up to 40,000 tonnes	0.90 m.	0.60 m.
40,000 – 50,000 tonnes	1.10 m.	0.90 m.
Over 50,000 tonnes	1.30 m.	0.90 m.

Vessels alongside every berth in the port are required to remain afloat at all time with a minimum clearance of 0.30 m.

For vessels arriving in the ballast condition, the forward draft must be not less than 2% of the vessel's overall length and the after draft propeller fully immersed.

Harbour Depths at L.A.T.:

Sea Channel	11.7 m.
Platypus Channel	11.7 m.
Deep Draft Swing Basin, to Berths 1, 2 and 3	11.7 m.
*No. 1 (Tanker) Berth	11.5 m.
*No. 2 Berth	12.1 m.
*No. 3 (Portainer Crane only) Berth	12.4 m.
No. 3 (including Ro-Ro) Berth	12.4 m.
*No. 4 (General Cargo and Ro-Ro) Berth	9.9 m.
*No. 7 (Minerals) Berth	10.7 m.
*No. 8 (Freezer) Berth	10.1 m.
*No. 9 (Bulk Sugar Gantry) Shed	12.2 m.
No. 10 (Container/Ro-Ro Berth)	9.5 m.
Between Nos. 4 and 6 (77 m.)	10.4 m.
Between Nos. 7 and 8 (84 m.)	11.3 m.
Between Nos. 9 and 10 (142 m.)	11.9 m.

* Depths at 4.5 m. off fender piles.

HEALTH: *Pratique:* Townsville is a First Port of Entry and notification of quarantine inspection. Requirements should be made not more than 24 hours nor less than 12 hours in advance. Inspections may be carried out at all hours at the wharf or at the quarantine anchorage, at the discretion of the Quarantine Officer. Rat guards are to be maintained on all mooring lines while vessels are berthed in the Townsville Harbour.

MAX. SIZE:

Berth No.	*Length*	*Max. Length of Vessel*	*Wharf Deck at L.A.T.*
1	270 m.	238 m.	5.46 m.
2	254 m.	238 m.	6.07 m.
3	254 m.	238 m.	6.07 m.
3	Ro/Ro pad	—	5.09 m.
4	228 m.	200 m.	5.46 m.
4	Ro/Ro pad	—	5.09 m.
6	122 m.	160 m.	5.37 m.
7	183 m.	180 m.	5.37 m.
8	213 m.	205 m.	5.77 m.
9	228 m.	238 m.	5.77 m.
10	160 m.	152 m.	5.27 m.

The maximum length of a vessel entering No. 4 Berth is 220 m., but only on condition that any vessel berthed at No. 3 Berth is *not* closer inshore than the 360 metre mark (See "Appendix").

When tankers of over 213 m. in length are being berthed at No. 1 Berth, no vessel at No. 2 Berth is to be seaward of the 660 metre mark. When vessels of over 180 m. length are being berthed at No. 2 Berth, tankers or other vessels of over 180 m. berthed at No. 1 Berth may be shifted to allow berthing space at the seaward end of No. 2 Berth.

Decking of all wharves is between 4.81 m. and 5.79 m. above datum.

Largest Single Cargo: Inward 63,870 tonnes of bulk ore. Outward, 43,772 tonnes of raw sugar.

Deepest draft vessel, 12.50 m. Longest vessel, 262.08 m. Largest vessel (Tanker) 85,180 d.w.t.

Appendix: Conditions of Vessels Berthing No. 4 Berth: The following conditions will apply to the arrival and departure of vessels at No. 4 Berth.

Arrival:

Length of vessel to No. 4 Berth	*Vessel at No. 3 Berth (not closer inshore than)*
200 m.	350 metre mark
190 m.	340
180 m.	330
170 m.	320
160 m.	310
150 m.	300
140 m.	290
130 m.	280

Departure:

Length of Vessel to No. 4 Berth	*Vessel at No. 3 Berth (not closer inshore than)*
200 m.	310 metre mark
190 m.	300
180 m.	290
170 m.	280

All vessels at No. 6 Berth to be inshore of the 50 metre mark with beam not greater than 12 m. during arrival and departure of vessels at No. 4 Berth.

Dependant on weather, type and characteristic of vessel using Berth No. 4, the above conditions are subject to alteration, which will be determined by the Regional Harbour Master or his delegate.

RADIO/VHF: Townsville Radio. The Port Radio Station "Townsville Harbour" keeps continuous watch on VHF Channel 16. Working Channels 6 and 12.

TUGS: Under licence from the Authority, North Queensland Marine Towage Pty. Ltd., operates 2 tugs, one with 32 tonnes and one with 42.5 tonnes bollard pull, which are available to shipping at all hours. Additional tugs, if required, may be brought from neighbouring ports. Tugs are equipped with VHF and SSB radios.

The necessity to use tugs is at the sole discretion of the Regional Harbour Master, and depends upon the vessel size, draft and the berth being occupied.

BERTHING: Cargo Handling:

No. 1 Berth (isolated) is used exclusively by tankers for bulk oil discharge and by all types of vessels for bunkering.

No. 2 Berth (Eastern Breakwater) is a general purpose wharf and is designated "Special Berth" for certain cargoes.

No. 3 Berth (Eastern Breakwater) is equipped with a container crane which is leased to Townsville Transport & Services Pty. Ltd. and is operated and controlled by Northern Shipping & Stevedoring Pty. Ltd. Both of these companies are part of the M.I.M. Holdings Group. The crane has lifting capacity of 55.9 tonnes and its equipment includes an extendable spreader to suit all sizes of containers, grabs of 7.6 cu.m., 13.0 cu.m. and 17.5 cu.m. capacity and a heavy lift hook. Maximum height of lift above wharf deck is 27 m. whilst the outreach over rail and road services is 23.77 m. Distance between bogies is 32.61 m. The crane traverses the full length of Berth No. 3 and Berth No. 2. A landing pad at the berth allows simultaneous use of the container crane and stern angle ramp for Ro/Ro traffic.

The berth is also equipped with 25.4 tonne, 32 m. radius travelling jib crane for container and unit load handling.

No. 4 Berth (Eastern Breakwater) has a landing pad, supported by steel piling, to service stern angle ramp Ro/Ro vessels. The molasses pipeline to this berth is capable of loading up to 400 tonnes p.h. Bulk cement imports of up to 300,000 tonnes per annum are also handled at this berth.

No. 6 Berth (No. 1 Pier E.) is a general purpose berth with oil bunker pipeline facilities.

No. 7 Berth (No. 1 Pier W.) supports a bulk shiploader through which passes mineral concentrates, phosphate rock and ores up to 102 mm. aggregate at the rate of 1,500 tonnes/hr. The berth is also equipped with bulk molasses loading pipeline facilities.

No. 8 Berth (No. 2 Pier E.) services the export frozen beef trade with cargoes drawn from freezer stores adjacent to the harbour. It also serves as a general purpose berth, and is equipped with a 25 tonne (30 m. outreach) crane. The berth is also equipped with bulk molasses loading pipeline facilities.

No. 9 Berth (No. 2 Pier W.) is the raw sugar loading berth. A bulk shiploader delivers sugar to carriers at the rate of 2,000 t.p.h. The berth is also equipped with bulk molasses loading pipeline facilities.

No. 10 Berth (Ro/Ro Berth) is equipped with a stern ramp for Ro/Ro traffic and a 30 tonne crane.

Wharf Sheds: No sheds are available for general cargo storage at the Port. Both free and bonded warehousing is available within 4 km. of the wharves.

Storage Facilities: Oils – All major Oil Companies operate ocean terminals close to the Port.

Raw Sugar – 2 storage sheds of 285,000 tonnes total capacity.

Molasses – 3 bulk storage tanks of 35,000 tonnes total capacity.

Concentrates – 115,000 tonnes covered storage area.

Frozen Meat – 5,000 tonne capacity cold store is available adjacent to the port.

Cement – 30,000 tonne bulk cement silo.

Open space storage for Rock Phosphate, Sulphur, Crude Lead and Refined Copper.

Container Terminals: No. 2 Berth with an area of 0.8 hectares for storage of 300 dry containers.

No. 3 Berth, with an area of 1.2 hectares, has storage accommodation for 184 dry containers.

No. 8 Berth, with an area of 0.4 hectares for storage of 200 dry containers and 10 reefer containers.

No. 10 Berth, with an area of 2.6 hectares, can accommodate 400 containers, 18 of which may be connected to refrigeration power outlets.

Northern Shipping and Stevedoring Terminal with an area of 1.6 hectares has a holding capacity of 160 refrigerated containers and 400 dry containers.

Container Terminals work 24 hours per day, seven days per week to effect speedy turn around of shipping.

STEVEDORES: *Port Labour:* 3 stevedoring companies engage their own labour under enterprise agreements.

Working Hours: Working hours can be arranged with the individual stevedores up to continuous 24 hours/day, 7 days a week.

MEDICAL: Advance notice not particularly required unless urgent assistance required. Hospital facilities available. Health book inspected by boarding doctor.

TANKERS: Diameter of load/discharge lines: white fuel 10 in., black fuel 12 in. No residue discharge facility available. One tanker at berth at any time. Max. permitted draft at berth 31 ft.

Also see "Shipmaster's Report".

DENSITY: Average density 1025 at all times.

FRESH WATER: Fresh water is available at all berths.

FUEL: Bunker fuel oil and distillate are available through pipelines at Berths No. 1, 6, 7 and 9. Road tankers are used to bunker small ships at other berths.

FIRE PRECAUTIONS: *Fire Fighting Equipment:* Throughout the Port there are 19 hydrants in conspicuous red boxes which are connected to flaked hoses with spray nozzles. The opening of a hydrant automatically brings an electric pump into operation.

The various oil terminals at Townsville have a stock of over 10,000 litres of foam additive.

Fire fighting monitors are also provided at No. 1 Tanker Berth, with foam making capability.

Tankers required to have safety fire wires lead off fo'c's'le head and run as far aft as possible. Vessels are at all times to be capable of manoeuvring with main engines.

DRY DOCK: *Ship Repair:* A slipway situated on the Eastern side of Ross Creek is capable of accommodating vessels up to 67 m. in length and 800 tonnes deadweight. A modern ship repair workshop is attached which has a lathe for shafts up to 7.2 m. in length.

GANGWAY/DECK WATCHMEN: This service is arranged through the ship's Agent.

OPENING/CLOSING HATCHES: Optional for either crew or stevedores.

CERTIFICATES:

Passenger Ship Safety.	Ship Safety Equipment.
International Load Line.	Ship Safety Radiotelegraphy.
Ship Safety Construction.	

CUSTOMS ALLOWANCES: Tobacco: 200 cigarettes or 250 grams tobacco on arrival and then can be purchased by the packet from bar on board. Wine and/or spirits: 1 opened bottle (26 oz.) spirits or wine on arrival and then spirits by the glass and wine by the bottle, from the bar on board.

CARGO GEAR: Australian Navigation Department requirements.

REPATRIATION: Full facilities exist for effecting crew changes and arranging repatriation.

AIRPORT: Townsville Airport is located 6.5 km. from the city, and two major airlines each operate four services daily to Brisbane with connecting flights to other State capitals.

TIME: See "General" before first port.

HOLIDAYS: Cargo can be worked on all holidays except Christmas Day, Good Friday, Anzac Day (25th April), Labour Day and the Waterside Workers' Picnic Day (First Tuesday in November).

EMERGENCY TELEPHONE NUMBERS: Police, Ambulance or Fire "000", and ask to be connected to service required. Non-emergency numbers. Police 72 3000, Ambulance 79 3722, Fire Station 71 2111, Hospital 81 9211.

TELEPHONE: Mobile telephones supplied by Townsville Port Authority are required to be placed on all vessels while in port. Oil tankers berthed in the port are required to have on board a flash proof telephone of a type approved by Telecom Australia.

Some mobile telephones have operator access.

SERVICES: Services available for compass adjusting, radio and radar service. A floating boom and an oil skimming device is available to deal with oil spills. Chemical dispersants are used for minor spills.

SHORE LEAVE: Crew members allowed shore leave.

GARBAGE DISPOSAL: A garbage collection vehicle will call at each ship which has ordered the service before 0800 hrs. each day or at other times as directed by the Quarantine Officer.

All garbage must be kept in sealed plastic bags on board the vessel until the arrival of the collection vehicle. The ship's crew is required to deliver garbage to the collection vehicle. Bags will be supplied to the vessel on arrival. Charges: A$52.00 per day plus A$3.50 per crew member per day.

WASTE OIL DISPOSAL: Townsville Trade Waste, Tel: (077) 745555. Fax: (077) 746255. Two vacuum tankers, each with 7,000 litres capacity. Rate of A$101.00 per hour each. Available to attend all berths.

SEAMAN'S CLUBS: The Missions to Seamen, No. 9 Berth. Tel: (077) 722774 and 715599. Shop, international telephone service, church services arranged, 8 and 22 seater buses, postage facilities, licence to sell beer and spirits, library, currency exchange.

CURRENCY: Australian Dollar.

SECURITY: Townsville Port Authority operates a 24 hour Port Protection Unit to maintain current Australian and IMO security requirements. The port area is also under 24 hour electronic surveillance.

SHIPMASTER'S REPORT: August 1995.
Charts: AUS. No. 256 and 257.
Approach: Magnetic Island provides a good landmark.

Beaconed channel can be visually confusing in daylight. Radar provides the best indication of channel alignment.

North Cardinal Beacon (Lat. 19° 07.7′ S., Long. 146° 51′ E) (conspicuous) which should be left to port on approach, marks S.E. line of deep water.

Anchorage: Generally exposed. Pilots advise large vessels to anchor North of Magnetic Island (Lat. 19° 05′ S., Long. 146° 51′E.). For coasters, anchorage is in Horseshoe Bay (Lat. 19° 06.3′ S., Long. 146° 51′ E.).

This vessel found a position East of Magnetic Island (Lat. 19° 09′ S., Long. 147° 00′ E.) to be satisfactory.

Pilots: VHF range is poor, masked by Mt.Cleveland to South and Magnetic Island to the North. Pilot on VHF Channels 16/12 throughout 24 hours. Contact Pilot 1 hour prior to arrival.

Pilotage available 24 hours but dependent on draft/tide.

Entry possible in winds up to 30 knots and departure in winds of 20 knots – 25 knots maximum. Pilots board as per AUS. No. 256. Alpha and Bravo grounds dependent on draft.

Pilots use fast white cutter, but are generally not on time.

Vessel has to wait off North Cardinal Beacon. Beware of set onto Magnetic Island.

Channel: Depth 11.7 m. datum.

Maximum size of vessel for port is 13.0 m. draft (dependent on tide), and 250 m. LOA.

The leading lights not constantly lit. They can be activated by telephoning No. 726861. Lights stay on for 45 minutes.

Strong cross currents at certain times of year running from S.E.

Large vessels entering/leaving through the narrow breakwater entrance require plenty of power.

Tugs: 2 tugs of 20 tons and 40 tons bollard pull. The small tug is barely adequate for the port.

Tugs' lines used. Tugs meet vessel just outside breakwater.

Berth: The multi-user tanker/liquids berth on Eastern Breakwater handles all products and LPG. The berth is of modern concrete construction (tanker type 'T' jetty) and has good fenders. Length of fender landing is 95 m. There are 2 mooring dolphins either side of central section.

The berth is dredged to 12.5 m. datum.

Normal maximum length handled is 230 m. LOA.

Berthing is nearly always starboard side alongside.

No shore gangway available, so we used 'brow' from amidships.

No Chicksans, only flexible hoses available.

Fresh water is available through meter. Tie up was 3-1-2 each end. There is one lineboat available.

Terminal: LPG receiver was 'Boral'. They have storage facility 1,200 m. away (5×500 cu.m. pressure bullet tanks). They are able to handle minimum −25°C (First 250 tonnes and last 100 tonnes to be at a minimum of +2°C), ideally at ambient.

We discharged Propane at 200 t.p.h. at 10 bar BP (Temperature +6°C). The line to terminal 10 in. and hose is 6 in. ASA 300. Positioning is critical as hose only just reaches ship's manifold, due to jetty fendering recently being extended outwards.

Customs: If First Port of Entry, inward papers to be submitted via Agent by Fax at least 7 days beforehand. Failure to do this might delay vessel. The following are required on Australian Forms:

Crew Report List (Alphabetical order), Ship's Inward Cargo Report, Quarantine Declaration, Report of Ship's Stores, Ports of Call List, Ship's Report of Arrival.

Plus on arrival, Crew Effects Declaration (Alphabetical order).

Customs are generally fair and reasonable.

If sailing coastwise, Customs then issue 'Rider Envelope' with all relevant documents plus Clearance to next port.

Customs also act for Immigration and sign crew on and off.

Telephone: Portable Cellphone provided by Harbour Authority for safety, it can also be used for Australian internal calls.

There is a payphone at base of jetty in Watchman's Cabin.

Card phones by Control Tower about 10 minutes walk.

Airport: Frequent internal flights to Brisbane from Garbutt Airport, about 4 miles from port.

Chandlers: Several boarded. We used Nautilus. Tel: 077755766. Fax: 077755966.

Seaman's Club: Small Missions to Seamen open in evening at base of Control Tower.

Construction: Reclaimed land to East of port being infilled for container and nickel ore storage.

New berth under construction on seaward side of Eastern Breakwater.

Port: The port handles Panamax bulk carriers with nickel ore (import) and sugar and concentrates (export). Petroleum products also handled.

AUTHORITY: Townsville Port Authority, P.O. Box 1031, Townsville, Queensland 4810, Australia. *Tel:* (077) 602111. *FAX:* (077) 602122. *Contact:* R.E. Kenny, Chief Executive Office. B.W. Holden, Secretary and Manager Administration.

Captain R.C. Johnson, Regional Harbour Master, Queensland Transport, P.O.Box 1921, Townsville, Queensland 4810, Australia. *Tel:* (077) 715135. *FAX:* (077) 212028.

AGENT: Sub-agent of Patrick Sleigh Shipping Agencies Pty. Ltd., Brisbane.

VARANUS ISLAND TERMINAL: 20.38 S. 115.36 E.

(See Plan)

LOCATION: The onshore terminal is situated on Varanus Island which is the largest of the Lowendal group of islands. The offshore Tanker Terminal is situated 2.0 miles offshore in Lat. 20° 38′ S., Long. 115° 36′ E. (See "Plan"). Masters are referred to the current hydrographic chart Aus. 742 for further information.

NOTE: In May 1992, two additional unmanned offshore platforms, "Campbell" in Lat. 20° 24′ S., Long. 115° 42′ E., and "Sinbad" in Lat. 20° 29′ S., Long. 115° 43′ E., were installed, including high pressure subsea gas pipelines.

APPROACHES: *Water Depth:* Within the 0.5 nautical mile mooring circle there is a least depth of 20.4 m. within the conical approach area (060°/240° and 120°/300° boundaries) depths in excess of 20.4 m. are found. Although attention is brought to the 20.1 m. patch and the 20.2 m. patch as indicated on the hydrographic survey certificate, at this stage it is envisaged that the max. draft of vessels using the port would be 17.0 m.

Departure: After completion of loading, a vessel's departure should be as prompt as practicable. Once clear of the berth and the Pilot has disembarked it is recommended that the Master follows the recommended course laid down on the appropriate hydrographic chart.

PILOTAGE: The Pilot and 2 Operators will board via a launch in position Lat. 20° 38′ S., Long. 115° 42′ E. All vessels should ensure that a good lee is provided and the derrick or deck crane is ready to pick up the terminal equipment container from the launch. Accommodation and meals are to be provided for Pilot, 2 operators, cargo surveyor and Agent's representative if applicable.

Pilot ladders should be rigged in accordance with all relevant S.O.L.A.S. Regulations.

ANCHORAGE: The recommended anchoring position is Lat. 20° 38′ S., Long. 115° 40′ E., but due to the variable holding qualities of the whole area it is recommended that Masters exercise the utmost caution when anchoring and whilst laying at anchor.

RESTRICTIONS: See "Mooring" - Paragraph (d).

MAX. SIZE: The terminal is designed to accommodate vessels from 20,000 d.w. tonnes to 140,000 d.w. tonnes. The largest dimensions being:

(a) Deadweight 140,000 tonnes (approximate).
(b) Length overall (LOA) 300 m.
(c) Beam 46 m.
(d) Draft 17 m.

Vessels exceeding the following dimensions cannot be accommodated at the Loading Terminal unless express permission is granted by Apache Energy Ltd.

RADIO: *ETA and Arrival Messages:* Vessels proceeding to the Varanus Island loading terminal shall notify Apache Energy Ltd. (See "Operator"), their estimated time of arrival, not less than 96 hours before arrival, amending or confirming the ETA at intervals of 48 hours and 24 hours before arrival at the Terminal. Failure to comply with the above procedure may result in the Pilot not being available on the vessel's arrival.

Ballast Water: Quantity, condition and origin of ballast water on board to be advised in the 96 hour message. Facilities are not available for dirty ballast or slops to be pumped ashore.

Declarations Prior to Arrival: The following declarations are to be included and verified in the 24 hour message:

(a) Is the hull leak free?
(b) Is an inert gas system fitted?
(c) If fitted, is the inert gas system fully operational?
(d) Are there any defects to the vessel, machinery and equipment, which may effect safe pilotage, berthing, cargo or ballast operations?
(e) Have stress calculations for the envisaged programme of cargo handling and ballasting been made?
(f) Is the hull stress calculated within recommended safety limits?

VHF: A 12 hour listening watch is maintained on international marine VHF Channel 16 between 0600 hrs. and 1800 hrs. local time. Vessels should tune their VHF sets to Channel 16 when within 100 nautical miles of the Lowendal Islands and as soon as practicable thereafter contact the Island Radio Room and confirm the vessel's ETA at the Pilot Boarding Station.

VHF Marine Channels available:
Marine Channel 16 calling and distress.
Marine Channel 67.
Marine Channel 9 working Channel.
Marine Channel 74 working Channel.

TUGS: Tugs are not available to assist with berthing operation.

TERMINAL FACILITIES:
ONSHORE:
Storage: 3 tanks with storage capacity of 750,000 bbls. (119,250 cu.m.).
Pumps: The 3 cargo pumps are rated at 1,654 cu.m.p.h. each.
Also see "Ballast".
OFFSHORE:
Pipeline: A 4,200 m. long × 762 mm. (30 in.) pipeline leads from the shore to the Tanker Terminal. At the pipeline end manifold (PLEM) there is a valve at the 406 mm. (16 in.) take off prior to connection to the submarine hose.

Hose: The submarine hose is 73.15 m. (240 ft.) long, consisting of 8×9.144 m. (30 ft.) sections, including (from the PLEM) 4×406 mm. (16 in.) hoses, 2×406 mm. (16 in.) buoyancy chamber hoses, 1×406 mm. (16 in.) to 305 mm. (12 in.) reducer and 1×305 mm. (12 in.) rail hose. At the end of the 305 mm. (12. in) hose there is a butterfly valve spool piece and a 12 in. flange fitted with camlocks for connection to the ship's manifold. The weight of hose to be handled by the ship is 4.0 tonnes when full of crude oil.

BOARDING STATIONS:

TORRES STRAIT:

Booby Island	Lat. 10° 36′ S., Long. 142° 50′ E. – 24 hour launch.
Goods Island	Lat. 10° 34′ S., Long. 142° 06′ E. – 24 hour launch.

QUEENSLAND COAST:

In any port or at the following offshore stations:

Brisbane	Pt. Cartwright – Lat. 26° 43′ S., Long. 153° 11′ E. – 24 hour launch.
Gladstone*	North Point – Lat. 23° 44′ S., Long. 151° 22′ E. – 24 hour launch or land-on helicopter.
Whitsunday Region	Edward Island – Lat. 20° 12′ S., Long. 149° 14′ E. – Land-on helicopter.
Cairns*	Cairns Fairway – Lat. 16° 50′ S., Long. 145° 50′ E. – 24 hour launch or land-on helicopter.

Note: Masters of ships transiting the Inner Route to or from New Zealand or Southern Australian ports are advised that a facility now exists to board and land pilots by helicopter off Edward Island in the Whitsunday Region (see above). The boarding ground lies on the direct track outside the Whitsunday Passage and involves no deviation.

BARRIER REEF ENTRANCES:

Hydrographers Passage	Blossom Bank – Lat. 19° 43′ S., Long. 150° 26′ E. – Land-on helicopter.
Palm Passage	Pith Reef – Lat. 18° 13′ S., Long. 147° 07′ E. – Land-on helicopter.
Grafton Passage	Euston Reef – Lat. 16° 39′ S., Long. 146° 14′ E. – 24 hour launch.

GREAT NORTH EAST CHANNEL:

Stephens Island	Lat. 9° 22′ S., Long. 143° 39′ E. – 24 hour launch.
Umuda Island	Pilots can be retained to assist with berthing at the floating storage vessel.

ANY OTHER PLACE:

By arrangement with the Brisbane office.

PILOT TRANSFER METHOD: Pilot transfers are conducted by launch in all areas except Hydrographers Passage (Blossom Bank), Whitsunday (Edward Island) and at Palm Passage (Pith Reef) where a daylight only, land-on helicopters are used. Vessels unable to accept a land-on helicopter are advised that a launch service is available at Euston Reef (Grafton Passage).

In other boarding areas, and subject to aircraft availability and the suitability of the ship, transfers by land-on helicopters may be possible and Masters should request this service when ordering a pilot through the Brisbane office.

MAXIMUM DRAFT AND UNDER-KEEL CLEARANCE: The Queensland Coastal Pilot Service will accept for pilotage through Torres Strait, the Inner Route – South of Cape Flattery and Great North East Channel ships with a maximum draft of 12.2 m. as directed by the Australian Maritime Safety Authority (AMSA) acting on behalf of the Australian Government.

GANNET AND VARZIN PASSAGES (BOOBY ISLAND) & PRINCE OF WALES CHANNEL: Gannet and Varzin Passages and the Prince of Wales Channel, as the main tidally restricted areas, control the passage of deep draft vessels. Throughout this area, which extends for some 30 miles from Gannet and Varzin Passages, through the Prince of Wales Channel and to the Herald Patches Buoy, the following minimum Under Keel Clearances (UKCs) apply:

Drafts	*Gannet and Varzin Passages*	*P.O.W. Channel*
up to 11.90 m.	1.0 m.	1.0 m.
11.90 m. up to 12.2 m.	1.0 m.	10% of draft

Masters of deep draft vessels are advised that speed reductions may be necessary while transiting Torres Strait.

Tide Gauges: Radio-transmitted tide gauges operate from Booby Island, Goods Island, Turtle Head and Ince Point. These gauges can be monitored throught a vessel's transit to ensure an adequate UKC is maintained.

The tidal information in Torres Strait is continuously recorded and periodically updated. Check Hydrographic Surveys are also periodically carried out by the Royal Australian Navy Hydrographic Service.

Advice about any increase in maximum draft will be promulgated in Notices to Mariners and other nautical publications.

TO ORDER A PILOT:

TORRES STRAIT:

South and East Bound – Torres Strait and Inner Route:

Give 4 to 5 days notice to "4BTORRES BRISBANE" by cable or Telex AA140222 (answerback TORRES).

Advise:

ETA boarding ground (Booby Is. or Goods Is. – LT = UTC + 10 hours).

Maximum draft.

Destination.

Pilot disembarkation point (if different from destination).

24 hours and 6 hours prior to arrival, confirm ETA to "4ITORRES THURSDAY ISLAND" by cable or Telex AA148048 (answerback TORRES).

Masters should keep in mind when advising of any changes in ETA that pilot launches are based at Thursday Island and take approximately 2 hours for the passage to Booby Island and one hour to Goods Island.

Masters of deep draft vessels will receive advice from 4ITORRES advising them when predicted tidal conditions will permit a transit of Gannet and Varzin Passages and the Prince of Wales Channel on the day of arrival.

North and Westbound – Torres Strait & Inner Route: Departing Australian Port – request Agent to advise "4BTORRES BRISBANE" of pilotage requirements allowing as much notice as possible.

Advise:

Departure port and ETD.

Maximum draft.

Pilot disembarkation point.

Entering Pilotage Area from overseas – advise "4BTORRES BRISBANE" 4 to 5 days in advance by cable or Telex AA140222 (answerback TORRES).

Advise:

ETA at nominated boarding ground – LT = UTC + 10 hours.

Maximum draft.

Pilot disembarkation point.

24 hours and 6 hours prior to arrival, confirm ETA at designated boarding ground to "4BTORRES BRISBANE" by cable or Telex AA140222.

Westbound via Great North East Channel: Five days prior to arrival off Basilisk Beacon advise the Brisbane office of ETA, maximum draft and destination.

24 hours and 6 hours prior to arrival at Basilisk Beacon confirm ETA to HARBOURS, Telex NE22243 (Papua New Guinea Harbours Board).

HYDROGRAPHERS PASSAGE: Give 4 to 5 days notice to "4BTORRES BRISBANE" by cable or Telex AA140222 (answerback TORRES).

Advise:

ETA boarding ground (Blossom Bank – LT = UTC + 10 hours).

Maximum draft.

Destination.

Pilot disembarkation point (if different from destination).

24 hours and 6 hours prior to arrival, confirm ETA to either Telex AA146085 (answerback HELIJET) or by cable to "4MTORRES MACKAY" through Townsville Radio or Perth Radio.

GRAFTON PASSAGE/PALM PASSAGE: Give 4 to 5 days notice to "4BTORRES BRISBANE" by cable or Telex AA140222 (answerback TORRES).

Advise:

ETA boarding ground (Euston Reef/Pith Reef – LT = UTC + 10 hours).

Maximum draft.

Destination.

Pilot disembarkation point (if different from destination).

24 hours and 6 hours prior to arrival, confirm ETA at designated boarding ground to "4BTORRES BRISBANE" by cable or Telex AA140222.

This message will be acknowledged by Brisbane office and Masters will be advised of future ETA update requirements.

COMMUNICATIONS:

RADIO MESSAGES: ETAs should be given in UTC/GMT/Z and indicated in message.

All messages to 4BTORRES will be acknowledged.

VHF: Pilot launches and helicopters used by the Service keep a listening watch on Channel 16 when on station. In the Cairns area the Service maintains a long-range VHF watch on Channel 79. At Hydrographers Passage ships will be asked to change to Channel 9 after initial contact is made on Channel 16.

The call sign for Service launches and helicopters is "Coast Pilots".

Vessels approaching Torres Strait from the West should make contact on Channel 16/79 with the Thursday Island base Pilot Station 2 hours prior to reaching the Pilot Boarding Ground. Channel 79 has extended range and if no contact has been made on this channel, "Coast Pilots" should be called on Channel 16.

INTERNATIONAL RADIO WATCH HOURS: All vessels are requested to maintain International Radio Watch hours when between Carpentaria Light Vessel and Gubbins Reef in the Inner Route or Bramble Cay in the Great North East Channel, (see Australian Notice to Mariners No. 415/1975). A continuous VHF watch on Channel 16 should be maintained over the same area in accordance with the SOLAS 74 requirements (Chapter IV Reg. 8, as amended 1981).

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NOTICE: Dated 1st February 1996.

Notice to Ship Operators and Owners

Pilotage in the Great North East Channel

All vessels proceeding from South East Asian ports or Suez via the Torres Strait to ports in the South West Pacific must either transit the Inner Route (inside the Great Barrier Reef) or alternatively via the Great North East Channel (GNEC).

We are pleased to announce the establishment of a new service with a Pilot Boarding Ground (PBG) North of Stephens Island close to the North Eastern boundary of the IMO and Australian Government recommended pilotage area at Bramble Cay.

The new PBG is on:

Stephens Island PBG   Lat. 9° 22′ S., Long. 143° 39′ E.

Previously pilotage has only been available from near Dalrymple Island, which is more than 20 miles to the South West and within the recommended pilotage area. The new PBG is well clear of all charted obstructions with extensive sea room for pilot transfers. It is positioned on the boundary of the Australian Economic Exclusion Zone.

The location of the new PBG will ensure that vessels will be able to complete the full transit of Torres Strait and GNEC under the advice of an AMSA licensed pilot. Vessels entering the GNEC Westbound from Bligh Entrance will be able to avoid significant course alterations prior to pilot boarding.

Our pilotage services to and from Port Moresby and the Umuda/Ok Tedi storage vessel will continue to be available.

Signed: Operations Manager.

SHIPMASTER'S REPORT: August 1992.

Vessel on passage from Whangarei to Singapore.

Quote:

Pilots advise change in boarding area to Dalrymple Island. No longer necessary to call off Port Moresby. This cuts pilot on board distance by about 180 miles.

Unquote.

Editor's Note:

Vessels transiting the Great North East Channel are advised that IMO Resolution A711(17) (Use of Pilotage Services in the Torres Strait and the Great North East Channel) designates the extremity of the recommended area as Bramble Cay (9° 09′ S., 143° 53′ E.), which is 40 miles beyond the present Pilotage Boarding Ground off Dalrymple Island.

SHIPMASTER'S REPORT: December 1993 (Updated 1996).

Torres Strait Pilot Associations:

On this occasion (loaded passage from Kumul to Dalian), we were instructed to sail via Torres Strait.

Torres Pilot of the Queensland Coastal Pilot Service boarded at Kumul during final stage of loading on December 2nd and left vessel off Booby Island on December 3rd at 1506 hrs.

Nomination: On this occasion I selected "Torres Strait Brisbane", merely guided by the "Guide". The given information herein was in line with my experience earlier this year (April), when we also passed through Torres Strait.

We sent our initial telex to "Torres Brisbane", copied to the old telex number of Thursday Island Pilots, unaware of the present situation of two competitive Pilot Associations covering the same area. However, within one hour I knew there were now two Associations.

I then nominated Coastal Pilots as their pilot could join the vessel at Kumul. Two reasons for that decision, the weather was not very favourable in the area, and having a pilot already on board saves up to one hour, as you can now pass Dalrymple Island at full speed, no slacking down, etc.

Performance: In my opinion, both Pilot Associations will perform equally. They are the same pilots as in earlier days, only they split themselves on July 1st 1993.

Coastal Pilots kept the Brisbane Office with the telex number, and have kept their relations with agencies.

Reef Pilots kept the launches in Torres Strait and the old telex numbers, but severed connections with agencies.

Passages: For most passages through Torres Strait, Barrier Reef and Great North East Channel, both Associations can be used.

Exception: When using Great North East Channel and Torres Strait coming from the East, Coastal Pilots do not (yet) have launch facilities at Dalrymple Island, and pilots have to board off Port Moresby (See Notice dated 1st February 1996 which supersedes these remarks).

When coming from New Zealand, there is no deviation, only that the pilot is on board for an extra 180 miles. However, coming from the South (Australia/Tasmania), ships have to deviate.

In this case, ships normally will use "Reef Pilots", as they have the launch facilities at Dalrymple Island.

The same applies for the other way, when "Reef Pilots" can leave at Stephens Island, while "Coastal Pilots" have to disembark off Port Moresby.

According to our pilot, there are plans (maybe vague ones), that in near future "Coastal Pilots" will also have launch facilities off Stephens Island.

Up to now, Masters are not coerced into traversing the Great N.E. Channel without a pilot as "Reef Pilots" are available.

Also see "Shipmaster's Report" in section above.

AUTHORITY: Queensland Coastal Pilot Service Pty. Ltd., Brisbane Operations Office, 13th Floor, Dalgety House, 145 Eagle Street, Brisbane, Australia. (Postal address: GPO Box 209, Brisbane, Qld 4001, Australia). *Tel:* 61-7-38395144. *Telex:* AA140222. *Cables:* 4BTORRES. *FAX:* 61-7-38395242. *After Hours Contact:* Perry Sutton, Tel: 61-7-33991478. Iain Steverson, Tel: 61-7-32632642.

TOWNSVILLE, Queensland: 19.15 S. 146.50 E.

(See Plan)

PORT LIMITS: *Jurisdiction:* The Townsville Port Authority exercises jurisdiction over the Port of Townsville.

Commencing at the HW mark at the most Northern extremity of Cape Cleveland, thence by a line to a point Lat. 19° 05′ 30″ S., Long. 146° 52′ E., thence by a line due Westward to 146° 45′ E., thence by a line due South to HW mark at a point on the mainland, thence by HW mark to the point of commencement and including all navigable rivers communicating with that area and the banks and shores and foreshores thereof.

The Harbour Master, representing the Department of Harbours and Marine, controls the movement of vessels within the port area whilst the allocation of berths and moorings is controlled by the Port Authority.

APPROACHES: The approach to Cleveland Bay from the Southward is clear of dangers, with the exception of Salamander Reef, the Four-foot Rock, and the Twenty-foot Rock, all these lying within a radius of 3 miles of Cape Cleveland Lighthouse.

To clear these dangers, passing North of them bring Mount Marlow in transit with the extremity of Hawkings Point, bearing 265° (258° Mag.) before approaching within 5 miles of Cape Cleveland, which will then bear 252° (245° Mag.). Proceeding into Cleveland Bay a depth of not less than 8.2 m. will be obtained by keeping North of the line Mount Marlow in line with Hawkings Point.

Approaching Cleveland Bay from the Northward, passing East of Magnetic Island a vessel should keep at least half a mile off Magnetic Island shore to obtain not less than 11 m. of water at LWOST. The shore is steep to except for Orchard Rocks off the N.E. extremity of the island.

There is good holding ground everywhere in Cleveland Bay and vessels awaiting Pilot should anchor according to draft and as close to the Fairway Beacons as possible.

ENTRANCE CHANNELS: Depth in the 92 m. wide entrance channels, which are marked by pairs of lighted beacons, is 11.7 m. at LAT (subject to change).

The Sea Channel is 1.75 miles in length and Platypus Channel 3.5 miles; the channels alter in direction at Beacons No. 6 and No. 7. For detailed information see Queensland Sailing Directions.

DOCUMENTS: *Customs:*

3 Crew Lists – Form M & S–11.
3 Passenger Lists, if applicable.
3 Lists of Ports of Call.
1 Form 42A – Ship's Stores.
1 Form 5 – Articles Owned by or in the possession of Master, Officers and Crew.
1 Form QA4 – Quarantine Notice.
2 Forms QA5 – Quarantine Shipmaster's Bond.
2 Inward Manifests.
1 Bill of Lading.
1 Form 40 – Application for Clearance and Guarantee to Pay Duty.

PILOTAGE: Pilotage is available 24 hours a day, 7 days a week, subject to notice.

Unless a Master is the holder of a Current Certificate of Exemption, pilotage is compulsory and vessels requiring the service should cable draft and probable time of arrival to their Agent, or to the Regional Harbour Master, Townsville, from their last port of departure, or advise by radio at least 24 hours before arrival (Telex: Hartow 47124; Fax: (077) 212028).

The pilot vessel is equipped with VHF Radio, having international frequencies 16 and 67 and all working frequencies.

Vessels will be advised by VHF radio which boarding ground is to be used. Generally, vessels with drafts greater than 8.0 m. will only use Pilot Boarding Ground Alpha (A).

Coastal and Reef Pilotage: Pilotage through the Inner Route of the Great Barrier Reef to Torres Strait, and also Palm Passage, is conducted by licensed pilots available from Australian Reef Pilots Ltd. and Queensland Coastal Pilot Service Pty. Ltd. See "Torres Strait" for details.

Masters are advised that pilotage in the Inner Route and at Hydrographers Passage is compulsory. Pilotage in the Great North East Channel is recommended by IMO. See "Torres Strait".

ANCHORAGES: Boundaries: Orchard Rocks/Cape Cleveland. Cleveland Bay Depths 8.2 m. to 12.2 m.

RESTRICTIONS: *Under-Keel Clearance:*

Dead Weight Tonnage	*Under-Keel Clearance*	
	Sea & Platypus Channel	*Channel Inner Harbour*
Up to 40,000 tonnes	0.90 m.	0.60 m.
40,000 – 50,000 tonnes	1.10 m.	0.80 m.
Over 50,000 tonnes	1.30 m.	0.90 m.

Vessels alongside every berth in the port are required to remain afloat at all time with a minimum clearance of 0.30 m.

For vessels arriving in the ballast condition, the forward draft must be not less than 2% of the vessel's overall length and the after draft propeller fully immersed.

Harbour Depths at L.A.T.:

Sea Channel	11.7 m.
Platypus Channel	11.7 m.
Deep Draft Swing Basin, to Berths 1, 2 and 3	11.7 m.
*No. 1 (Tanker) Berth	11.5 m.
*No. 2 Berth	12.1 m.
*No. 3 (Portainer Crane only) Berth	12.4 m.
No. 3 (including Ro-Ro) Berth	12.4 m.
*No. 4 (General Cargo and Ro-Ro) Berth	9.9 m.
*No. 7 (Minerals) Berth	10.7 m.
*No. 8 (Freezer) Berth	10.1 m.
*No. 9 (Bulk Sugar Gantry) Shed	12.2 m.
No. 10 (Container/Ro-Ro Berth)	9.5 m.
Between Nos. 4 and 6 (77 m.)	10.4 m.
Between Nos. 7 and 8 (84 m.)	11.3 m.
Between Nos. 9 and 10 (142 m.)	11.9 m.

* Depths at 4.5 m. off fender piles.

HEALTH: *Pratique:* Townsville is a First Port of Entry and notification of quarantine inspection. Requirements should be made not more than 24 hours nor less than 12 hours in advance. Inspections may be carried out at all hours at the wharf or at the quarantine anchorage, at the discretion of the Quarantine Officer. Rat guards are to be maintained on all mooring lines while vessels are berthed in the Townsville Harbour.

MAX. SIZE:

Berth No.	*Length*	*Max. Length of Vessel*	*Wharf Deck at L.A.T.*
1	270 m.	238 m.	5.46 m.
2	254 m.	238 m.	6.07 m.
3	254 m.	238 m.	6.07 m.
3	Ro/Ro pad	—	5.09 m.
4	228 m.	200 m.	5.46 m.
4	Ro/Ro pad	—	5.09 m.
6	122 m.	160 m.	5.37 m.
7	183 m.	180 m.	5.37 m.
8	213 m.	205 m.	5.77 m.
9	228 m.	238 m.	5.77 m.
10	160 m.	152 m.	5.27 m.

The maximum length of a vessel entering No. 4 Berth is 220 m., but only on condition that any vessel berthed at No. 3 Berth is *not* closer inshore than the 360 metre mark (See "Appendix").

BOARDING STATIONS:

TORRES STRAIT:

Booby Island	Lat. 10° 36′ S., Long. 142° 50′ E. – 24 hour launch.
Goods Island	Lat. 10° 34′ S., Long. 142° 06′ E. – 24 hour launch.

QUEENSLAND COAST:

In any port or at the following offshore stations:

Brisbane	Pt. Cartwright – Lat. 26° 43′ S., Long. 153° 11′ E. – 24 hour launch.
Gladstone*	North Point – Lat. 23° 44′ S., Long. 151° 22′ E. – 24 hour launch or land-on helicopter.
Whitsunday Region	Edward Island – Lat. 20° 12′ S., Long. 149° 14′ E. – Land-on helicopter.
Cairns*	Cairns Fairway – Lat. 16° 50′ S., Long. 145° 50′ E. – 24 hour launch or land-on helicopter.

Note: Masters of ships transiting the Inner Route to or from New Zealand or Southern Australian ports are advised that a facility now exists to board and land pilots by helicopter off Edward Island in the Whitsunday Region (see above). The boarding ground lies on the direct track outside the Whitsunday Passage and involves no deviation.

BARRIER REEF ENTRANCES:

Hydrographers Passage	Blossom Bank – Lat. 19° 43′ S., Long. 150° 26′ E. – Land-on helicopter.
Palm Passage	Pith Reef – Lat. 18° 13′ S., Long. 147° 07′ E. – Land-on helicopter.
Grafton Passage	Euston Reef – Lat. 16° 39′ S., Long. 146° 14′ E. – 24 hour launch.

GREAT NORTH EAST CHANNEL:

Stephens Island	Lat. 9° 22′ S., Long. 143° 39′ E. – 24 hour launch.
Umuda Island	Pilots can be retained to assist with berthing at the floating storage vessel.

ANY OTHER PLACE:

By arrangement with the Brisbane office.

PILOT TRANSFER METHOD: Pilot transfers are conducted by launch in all areas except Hydrographers Passage (Blossom Bank), Whitsunday (Edward Island) and at Palm Passage (Pith Reef) where a daylight only, land-on helicopters are used. Vessels unable to accept a land-on helicopter are advised that a launch service is available at Euston Reef (Grafton Passage).

In other boarding areas, and subject to aircraft availability and the suitability of the ship, transfers by land-on helicopters may be possible and Masters should request this service when ordering a pilot through the Brisbane office.

MAXIMUM DRAFT AND UNDER-KEEL CLEARANCE: The Queensland Coastal Pilot Service will accept for pilotage through Torres Strait, the Inner Route – South of Cape Flattery and Great North East Channel ships with a maximum draft of 12.2 m. as directed by the Australian Maritime Safety Authority (AMSA) acting on behalf of the Australian Government.

GANNET AND VARZIN PASSAGES (BOOBY ISLAND) & PRINCE OF WALES CHANNEL: Gannet and Varzin Passages and the Prince of Wales Channel, as the main tidally restricted areas, control the passage of deep draft vessels. Throughout this area, which extends for some 30 miles from Gannet and Varzin Passages, through the Prince of Wales Channel and to the Herald Patches Buoy, the following minimum Under Keel Clearances (UKCs) apply:

Drafts	*Gannet and Varzin Passages*	*P.O.W. Channel*
up to 11.90 m.	1.0 m.	1.0 m.
11.90 m. up to 12.2 m.	1.0 m.	10% of draft

Masters of deep draft vessels are advised that speed reductions may be necessary while transiting Torres Strait.

Tide Gauges: Radio-transmitted tide gauges operate from Booby Island, Goods Island, Turtle Head and Ince Point. These gauges can be monitored throught a vessel's transit to ensure an adequate UKC is maintained.

The tidal information in Torres Strait is continuously recorded and periodically updated. Check Hydrographic Surveys are also periodically carried out by the Royal Australian Navy Hydrographic Service.

Advice about any increase in maximum draft will be promulgated in Notices to Mariners and other nautical publications.

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Advise:

ETA boarding ground (Booby Is. or Goods Is. – LT = UTC + 10 hours).

Maximum draft.

Destination.

Pilot disembarkation point (if different from destination).

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Masters should keep in mind when advising of any changes in ETA that pilot launches are based at Thursday Island and take approximately 2 hours for the passage to Booby Island and one hour to Goods Island.

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Quote:

Pilots advise change in boarding area to Dalrymple Island. No longer necessary to call off Port Moresby. This cuts pilot on board distance by about 180 miles.

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Commencing at the HW mark at the most Northern extremity of Cape Cleveland, thence by a line to a point Lat. 19° 05′ 30″ S., Long. 146° 52′ E., thence by a line due Westward to 146° 45′ E., thence by a line due South to HW mark at a point on the mainland, thence by HW mark to the point of commencement and including all navigable rivers communicating with that area and the banks and shores and foreshores thereof.

The Harbour Master, representing the Department of Harbours and Marine, controls the movement of vessels within the port area whilst the allocation of berths and moorings is controlled by the Port Authority.

APPROACHES: The approach to Cleveland Bay from the Southward is clear of dangers, with the exception of Salamander Reef, the Four-foot Rock, and the Twenty-foot Rock, all these lying within a radius of 3 miles of Cape Cleveland Lighthouse.

To clear these dangers, passing North of them bring Mount Marlow in transit with the extremity of Hawkings Point, bearing 265° (258° Mag.) before approaching within 5 miles of Cape Cleveland, which will then bear 252° (245° Mag.). Proceeding into Cleveland Bay a depth of not less than 8.2 m. will be obtained by keeping North of the line Mount Marlow in line with Hawkings Point.

Approaching Cleveland Bay from the Northward, passing East of Magnetic Island a vessel should keep at least half a mile off Magnetic Island shore to obtain not less than 11 m. of water at LWOST. The shore is steep to except for Orchard Rocks off the N.E. extremity of the island.

There is good holding ground everywhere in Cleveland Bay and vessels awaiting Pilot should anchor according to draft and as close to the Fairway Beacons as possible.

ENTRANCE CHANNELS: Depth in the 92 m. wide entrance channels, which are marked by pairs of lighted beacons, is 11.7 m. at LAT (subject to change).

The Sea Channel is 1.75 miles in length and Platypus Channel 3.5 miles; the channels alter in direction at Beacons No. 6 and No. 7. For detailed information see Queensland Sailing Directions.

DOCUMENTS: *Customs:*

3 Crew Lists – Form M & S–11.
3 Passenger Lists, if applicable.
3 Lists of Ports of Call.
1 Form 42A – Ship's Stores.
1 Form 5 – Articles Owned by or in the possession of Master, Officers and Crew.
1 Form QA4 – Quarantine Notice.
2 Forms QA5 – Quarantine Shipmaster's Bond.
2 Inward Manifests.
1 Bill of Lading.
1 Form 40 – Application for Clearance and Guarantee to Pay Duty.

PILOTAGE: Pilotage is available 24 hours a day, 7 days a week, subject to notice.

Unless a Master is the holder of a Current Certificate of Exemption, pilotage is compulsory and vessels requiring the service should cable draft and probable time of arrival to their Agent, or to the Regional Harbour Master, Townsville, from their last port of departure, or advise by radio at least 24 hours before arrival (Telex: Hartow 47124; Fax: (077) 212028).

The pilot vessel is equipped with VHF Radio, having international frequencies 16 and 67 and all working frequencies.

Vessels will be advised by VHF radio which boarding ground is to be used. Generally, vessels with drafts greater than 8.0 m. will only use Pilot Boarding Ground Alpha (A).

Coastal and Reef Pilotage: Pilotage through the Inner Route of the Great Barrier Reef to Torres Strait, and also Palm Passage, is conducted by licensed pilots available from Australian Reef Pilots Ltd. and Queensland Coastal Pilot Service Pty. Ltd. See "Torres Strait" for details.

Masters are advised that pilotage in the Inner Route and at Hydrographers Passage is compulsory. Pilotage in the Great North East Channel is recommended by IMO. See "Torres Strait".

ANCHORAGES: Boundaries: Orchard Rocks/Cape Cleveland. Cleveland Bay Depths 8.2 m. to 12.2 m.

RESTRICTIONS: *Under-Keel Clearance:*

Dead Weight Tonnage	*Under-Keel Clearance* *Sea & Platypus Channel*	*Channel Inner Harbour*
Up to 40,000 tonnes	0.90 m.	0.60 m.
40,000 – 50,000 tonnes	1.10 m.	0.90 m.
Over 50,000 tonnes	1.30 m.	0.90 m.

Vessels alongside every berth in the port are required to remain afloat at all time with a minimum clearance of 0.30 m.

For vessels arriving in the ballast condition, the forward draft must be not less than 2% of the vessel's overall length and the after draft propeller fully immersed.

Harbour Depths at L.A.T.:

Sea Channel	11.7 m.
Platypus Channel	11.7 m.
Deep Draft Swing Basin, to Berths 1, 2 and 3	11.7 m.
*No. 1 (Tanker) Berth	11.5 m.
*No. 2 Berth	12.1 m.
*No. 3 (Portainer Crane only) Berth	12.4 m.
No. 3 (including Ro-Ro) Berth	12.4 m.
*No. 4 (General Cargo and Ro-Ro) Berth	9.9 m.
*No. 7 (Minerals) Berth	10.7 m.
*No. 8 (Freezer) Berth	10.1 m.
*No. 9 (Bulk Sugar Gantry) Shed	12.2 m.
No. 10 (Container/Ro-Ro Berth)	9.5 m.
Between Nos. 4 and 6 (77 m.)	10.4 m.
Between Nos. 7 and 8 (84 m.)	11.3 m.
Between Nos. 9 and 10 (142 m.)	11.9 m.

* Depths at 4.5 m. off fender piles.

HEALTH: *Pratique:* Townsville is a First Port of Entry and notification of quarantine inspection. Requirements should be made not more than 24 hours nor less than 12 hours in advance. Inspections may be carried out at all hours at the wharf or at the quarantine anchorage, at the discretion of the Quarantine Officer. Rat guards are to be maintained on all mooring lines while vessels are berthed in the Townsville Harbour.

MAX. SIZE:

Berth No.	*Length*	*Max. Length of Vessel*	*Wharf Deck at L.A.T.*
1	270 m.	238 m.	5.46 m.
2	254 m.	238 m.	6.07 m.
3	254 m.	238 m.	6.07 m.
3	Ro/Ro pad	—	5.09 m.
4	228 m.	200 m.	5.46 m.
4	Ro/Ro pad	—	5.09 m.
6	122 m.	160 m.	5.37 m.
7	183 m.	180 m.	5.37 m.
8	213 m.	205 m.	5.77 m.
9	228 m.	238 m.	5.77 m.
10	160 m.	152 m.	5.27 m.

The maximum length of a vessel entering No. 4 Berth is 220 m., but only on condition that any vessel berthed at No. 3 Berth is *not* closer inshore than the 360 metre mark (See "Appendix").

When tankers of over 213 m. in length are being berthed at No. 1 Berth, no vessel at No. 2 Berth is to be seaward of the 660 metre mark. When vessels of over 180 m. length are being berthed at No. 2 Berth, tankers or other vessels of over 180 m. berthed at No. 1 Berth may be shifted to allow berthing space at the seaward end of No. 2 Berth.

Decking of all wharves is between 4.81 m. and 5.79 m. above datum.

Largest Single Cargo: Inward 63,870 tonnes of bulk ore. Outward, 43,772 tonnes of raw sugar.

Deepest draft vessel, 12.50 m. Longest vessel, 262.08 m. Largest vessel (Tanker) 85,180 d.w.t.

Appendix: Conditions of Vessels Berthing No. 4 Berth: The following conditions will apply to the arrival and departure of vessels at No. 4 Berth.

Arrival:

Length of vessel to No. 4 Berth	*Vessel at No. 3 Berth (not closer inshore than)*
200 m.	350 metre mark
190 m.	340
180 m.	330
170 m.	320
160 m.	310
150 m.	300
140 m.	290
130 m.	280

Departure:

Length of Vessel to No. 4 Berth	*Vessel at No. 3 Berth (not closer inshore than)*
200 m.	310 metre mark
190 m.	300
180 m.	290
170 m.	280

All vessels at No. 6 Berth to be inshore of the 50 metre mark with beam not greater than 12 m. during arrival and departure of vessels at No. 4 Berth.

Dependant on weather, type and characteristic of vessel using Berth No. 4, the above conditions are subject to alteration, which will be determined by the Regional Harbour Master or his delegate.

RADIO/VHF: Townsville Radio. The Port Radio Station "Townsville Harbour" keeps continuous watch on VHF Channel 16. Working Channels 6 and 12.

TUGS: Under licence from the Authority, North Queensland Marine Towage Pty. Ltd., operates 2 tugs, one with 32 tonnes and one with 42.5 tonnes bollard pull, which are available to shipping at all hours. Additional tugs, if required, may be brought from neighbouring ports. Tugs are equipped with VHF and SSB radios.

The necessity to use tugs is at the sole discretion of the Regional Harbour Master, and depends upon the vessel size, draft and the berth being occupied.

BERTHING: Cargo Handling:

No. 1 Berth (isolated) is used exclusively by tankers for bulk oil discharge and by all types of vessels for bunkering.

No. 2 Berth (Eastern Breakwater) is a general purpose wharf and is designated "Special Berth" for certain cargoes.

No. 3 Berth (Eastern Breakwater) is equipped with a container crane which is leased to Townsville Transport & Services Pty. Ltd. and is operated and controlled by Northern Shipping & Stevedoring Pty. Ltd. Both of these companies are part of the M.I.M. Holdings Group. The crane has lifting capacity of 55.9 tonnes and its equipment includes an extendable spreader to suit all sizes of containers, grabs of 7.6 cu.m., 13.0 cu.m. and 17.5 cu.m. capacity and a heavy lift hook. Maximum height of lift above wharf deck is 27 m. whilst the outreach over rail and road services is 23.77 m. Distance between bogies is 32.61 m. The crane traverses the full length of Berth No. 3 and Berth No. 2. A landing pad at the berth allows simultaneous use of the container crane and stern angle ramp for Ro/Ro traffic.

The berth is also equipped with 25.4 tonne, 32 m. radius travelling jib crane for container and unit load handling.

No. 4 Berth (Eastern Breakwater) has a landing pad, supported by steel piling, to service stern angle ramp Ro/Ro vessels. The molasses pipeline to this berth is capable of loading up to 400 tonnes p.h. Bulk cement imports of up to 300,000 tonnes per annum are also handled at this berth.

No. 6 Berth (No. 1 Pier E.) is a general purpose berth with oil bunker pipeline facilities.

No. 7 Berth (No. 1 Pier W.) supports a bulk shiploader through which passes mineral concentrates, phosphate rock and ores up to 102 mm. aggregate at the rate of 1,500 tonnes/hr. The berth is also equipped with bulk molasses loading pipeline facilities.

No. 8 Berth (No. 2 Pier E.) services the export frozen beef trade with cargoes drawn from freezer stores adjacent to the harbour. It also serves as a general purpose berth, and is equipped with a 25 tonne (30 m. outreach) crane. The berth is also equipped with bulk molasses loading pipeline facilities.

No. 9 Berth (No. 2 Pier W.) is the raw sugar loading berth. A bulk shiploader delivers sugar to carriers at the rate of 2,000 t.p.h. The berth is also equipped with bulk molasses loading pipeline facilities.

No. 10 Berth (Ro/Ro Berth) is equipped with a stern ramp for Ro/Ro traffic and a 30 tonne crane.

Wharf Sheds: No sheds are available for general cargo storage at the Port. Both free and bonded warehousing is available within 4 km. of the wharves.

Storage Facilities: Oils – All major Oil Companies operate ocean terminals close to the Port.

Raw Sugar – 2 storage sheds of 285,000 tonnes total capacity.

Molasses – 3 bulk storage tanks of 35,000 tonnes total capacity.

Concentrates – 115,000 tonnes covered storage area.

Frozen Meat – 5,000 tonne capacity cold store is available adjacent to the port.

Cement – 30,000 tonne bulk cement silo.

Open space storage for Rock Phosphate, Sulphur, Crude Lead and Refined Copper.

Container Terminals: No. 2 Berth with an area of 0.8 hectares for storage of 300 dry containers.

No. 3 Berth, with an area of 1.2 hectares, has storage accommodation for 184 dry containers.

No. 8 Berth, with an area of 0.4 hectares for storage of 200 dry containers and 10 reefer containers.

No. 10 Berth, with an area of 2.6 hectares, can accommodate 400 containers, 18 of which may be connected to refrigeration power outlets.

Northern Shipping and Stevedoring Terminal with an area of 1.6 hectares has a holding capacity of 160 refrigerated containers and 400 dry containers.

Container Terminals work 24 hours per day, seven days per week to effect speedy turn around of shipping.

STEVEDORES: *Port Labour:* 3 stevedoring companies engage their own labour under enterprise agreements.

Working Hours: Working hours can be arranged with the individual stevedores up to continuous 24 hours/day, 7 days a week.

MEDICAL: Advance notice not particularly required unless urgent assistance required. Hospital facilities available. Health book inspected by boarding doctor.

TANKERS: Diameter of load/discharge lines: white fuel 10 in., black fuel 12 in. No residue discharge facility available. One tanker at berth at any time. Max. permitted draft at berth 31 ft.

Also see "Shipmaster's Report".

DENSITY: Average density 1025 at all times.

FRESH WATER: Fresh water is available at all berths.

FUEL: Bunker fuel oil and distillate are available through pipelines at Berths No. 1, 6, 7 and 9. Road tankers are used to bunker small ships at other berths.

FIRE PRECAUTIONS: *Fire Fighting Equipment:* Throughout the Port there are 19 hydrants in conspicuous red boxes which are connected to flaked hoses with spray nozzles. The opening of a hydrant automatically brings an electric pump into operation.

The various oil terminals at Townsville have a stock of over 10,000 litres of foam additive.

Fire fighting monitors are also provided at No. 1 Tanker Berth, with foam making capability.

Tankers required to have safety fire wires lead off fo'c's'le head and run as far aft as possible. Vessels are at all times to be capable of manoeuvring with main engines.

DRY DOCK: *Ship Repair:* A slipway situated on the Eastern side of Ross Creek is capable of accommodating vessels up to 67 m. in length and 800 tonnes deadweight. A modern ship repair workshop is attached which has a lathe for shafts up to 7.2 m. in length.

GANGWAY/DECK WATCHMEN: This service is arranged through the ship's Agent.

OPENING/CLOSING HATCHES: Optional for either crew or stevedores.

CERTIFICATES:

Passenger Ship Safety.	Ship Safety Equipment.
International Load Line.	Ship Safety Radiotelegraphy.
Ship Safety Construction.	

CUSTOMS ALLOWANCES: Tobacco: 200 cigarettes or 250 grams tobacco on arrival and then can be purchased by the packet from bar on board. Wine and/or spirits: 1 opened bottle (26 oz.) spirits or wine on arrival and then spirits by the glass and wine by the bottle, from the bar on board.

CARGO GEAR: Australian Navigation Department requirements.

REPATRIATION: Full facilities exist for effecting crew changes and arranging repatriation.

AIRPORT: Townsville Airport is located 6.5 km. from the city, and two major airlines each operate four services daily to Brisbane with connecting flights to other State capitals.

TIME: See "General" before first port.

HOLIDAYS: Cargo can be worked on all holidays except Christmas Day, Good Friday, Anzac Day (25th April), Labour Day and the Waterside Workers' Picnic Day (First Tuesday in November).

EMERGENCY TELEPHONE NUMBERS: Police, Ambulance or Fire "000", and ask to be connected to service required. Non-emergency numbers. Police 72 3000, Ambulance 79 3722, Fire Station 71 2111, Hospital 81 9211.

TELEPHONE: Mobile telephones supplied by Townsville Port Authority are required to be placed on all vessels while in port. Oil tankers berthed in the port are required to have on board a flash proof telephone of a type approved by Telecom Australia.

Some mobile telephones have operator access.

SERVICES: Services available for compass adjusting, radio and radar service. A floating boom and an oil skimming device is available to deal with oil spills. Chemical dispersants are used for minor spills.

SHORE LEAVE: Crew members allowed shore leave.

GARBAGE DISPOSAL: A garbage collection vehicle will call at each ship which has ordered the service before 0800 hrs. each day or at other times as directed by the Quarantine Officer.

All garbage must be kept in sealed plastic bags on board the vessel until the arrival of the collection vehicle. The ship's crew is required to deliver garbage to the collection vehicle. Bags will be supplied to the vessel on arrival. Charges: A$52.00 per day plus A$3.50 per crew member per day.

WASTE OIL DISPOSAL: Townsville Trade Waste, Tel: (077) 745555. Fax: (077) 746255. Two vacuum tankers, each with 7,000 litres capacity. Rate of A$101.00 per hour each. Available to attend all berths.

SEAMAN'S CLUBS: The Missions to Seamen, No. 9 Berth. Tel: (077) 722774 and 715599. Shop, international telephone service, church services arranged, 8 and 22 seater buses, postage facilities, licence to sell beer and spirits, library, currency exchange.

CURRENCY: Australian Dollar.

SECURITY: Townsville Port Authority operates a 24 hour Port Protection Unit to maintain current Australian and IMO security requirements. The port area is also under 24 hour electronic surveillance.

SHIPMASTER'S REPORT: August 1995.
Charts: AUS. No. 256 and 257.
Approach: Magnetic Island provides a good landmark.

Beaconed channel can be visually confusing in daylight. Radar provides the best indication of channel alignment.

North Cardinal Beacon (Lat. 19° 07.7′ S., Long. 146° 51′ E) (conspicuous) which should be left to port on approach, marks S.E. line of deep water.

Anchorage: Generally exposed. Pilots advise large vessels to anchor North of Magnetic Island (Lat. 19° 05′ S., Long. 146° 51′E.). For coasters, anchorage is in Horseshoe Bay (Lat. 19° 06.3′ S., Long. 146° 51′ E.).

This vessel found a position East of Magnetic Island (Lat. 19° 09′ S., Long. 147° 00′ E.) to be satisfactory.

Pilots: VHF range is poor, masked by Mt.Cleveland to South and Magnetic Island to the North. Pilot on VHF Channels 16/12 throughout 24 hours. Contact Pilot 1 hour prior to arrival.

Pilotage available 24 hours but dependent on draft/tide.

Entry possible in winds up to 30 knots and departure in winds of 20 knots – 25 knots maximum. Pilots board as per AUS. No. 256. Alpha and Bravo grounds dependent on draft.

Pilots use fast white cutter, but are generally not on time.

Vessel has to wait off North Cardinal Beacon. Beware of set onto Magnetic Island.

Channel: Depth 11.7 m. datum.

Maximum size of vessel for port is 13.0 m. draft (dependent on tide), and 250 m. LOA.

The leading lights not constantly lit. They can be activated by telephoning No. 726861. Lights stay on for 45 minutes.

Strong cross currents at certain times of year running from S.E.

Large vessels entering/leaving through the narrow breakwater entrance require plenty of power.

Tugs: 2 tugs of 20 tons and 40 tons bollard pull. The small tug is barely adequate for the port.

Tugs' lines used. Tugs meet vessel just outside breakwater.

Berth: The multi-user tanker/liquids berth on Eastern Breakwater handles all products and LPG. The berth is of modern concrete construction (tanker type 'T' jetty) and has good fenders. Length of fender landing is 95 m. There are 2 mooring dolphins either side of central section.

The berth is dredged to 12.5 m. datum.

Normal maximum length handled is 230 m. LOA.

Berthing is nearly always starboard side alongside.

No shore gangway available, so we used 'brow' from amidships.

No Chicksans, only flexible hoses available.

Fresh water is available through meter. Tie up was 3-1-2 each end. There is one lineboat available.

Terminal: LPG receiver was 'Boral'. They have storage facility 1,200 m. away (5×500 cu.m. pressure bullet tanks). They are able to handle minimum −25°C (First 250 tonnes and last 100 tonnes to be at a minimum of +2°C), ideally at ambient.

We discharged Propane at 200 t.p.h. at 10 bar BP (Temperature +6°C). The line to terminal 10 in. and hose is 6 in. ASA 300. Positioning is critical as hose only just reaches ship's manifold, due to jetty fendering recently being extended outwards.

Customs: If First Port of Entry, inward papers to be submitted via Agent by Fax at least 7 days beforehand. Failure to do this might delay vessel. The following are required on Australian Forms:

Crew Report List (Alphabetical order), Ship's Inward Cargo Report, Quarantine Declaration, Report of Ship's Stores, Ports of Call List, Ship's Report of Arrival.

Plus on arrival, Crew Effects Declaration (Alphabetical order).

Customs are generally fair and reasonable.

If sailing coastwise, Customs then issue 'Rider Envelope' with all relevant documents plus Clearance to next port.

Customs also act for Immigration and sign crew on and off.

Telephone: Portable Cellphone provided by Harbour Authority for safety, it can also be used for Australian internal calls.

There is a payphone at base of jetty in Watchman's Cabin.

Card phones by Control Tower about 10 minutes walk.

Airport: Frequent internal flights to Brisbane from Garbutt Airport, about 4 miles from port.

Chandlers: Several boarded. We used Nautilus. Tel: 077755766. Fax: 077755966.

Seaman's Club: Small Missions to Seamen open in evening at base of Control Tower.

Construction: Reclaimed land to East of port being infilled for container and nickel ore storage.

New berth under construction on seaward side of Eastern Breakwater.

Port: The port handles Panamax bulk carriers with nickel ore (import) and sugar and concentrates (export). Petroleum products also handled.

AUTHORITY: Townsville Port Authority, P.O. Box 1031, Townsville, Queensland 4810, Australia. *Tel:* (077) 602111. *FAX:* (077) 602122.
Contact: R.E. Kenny, Chief Executive Office. B.W. Holden, Secretary and Manager Administration.

Captain R.C. Johnson, Regional Harbour Master, Queensland Transport, P.O.Box 1921, Townsville, Queensland 4810, Australia. *Tel:* (077) 715135. *FAX:* (077) 212028.

AGENT: Sub-agent of Patrick Sleigh Shipping Agencies Pty. Ltd., Brisbane.

VARANUS ISLAND TERMINAL: 20.38 S. 115.36 E.

(See Plan)

LOCATION: The onshore terminal is situated on Varanus Island which is the largest of the Lowendal group of islands. The offshore Tanker Terminal is situated 2.0 miles offshore in Lat. 20° 38′ S., Long. 115° 36′ E. (See "Plan"). Masters are referred to the current hydrographic chart Aus. 742 for further information.

NOTE: In May 1992, two additional unmanned offshore platforms, "Campbell" in Lat. 20° 24′ S., Long. 115° 42′ E., and "Sinbad" in Lat. 20° 29′ S., Long. 115° 43′ E., were installed, including high pressure subsea gas pipelines.

APPROACHES: *Water Depth:* Within the 0.5 nautical mile mooring circle there is a least depth of 20.4 m. within the conical approach area (060°/240° and 120°/300° boundaries) depths in excess of 20.4 m. are found. Although attention is brought to the 20.1 m. patch and the 20.2 m. patch as indicated on the hydrographic survey certificate, at this stage it is envisaged that the max. draft of vessels using the port would be 17.0 m.

Departure: After completion of loading, a vessel's departure should be as prompt as practicable. Once clear of the berth and the Pilot has disembarked it is recommended that the Master follows the recommended course laid down on the appropriate hydrographic chart.

PILOTAGE: The Pilot and 2 Operators will board via a launch in position Lat. 20° 38′ S., Long. 115° 42′ E. All vessels should ensure that a good lee is provided and the derrick or deck crane is ready to pick up the terminal equipment container from the launch. Accommodation and meals are to be provided for Pilot, 2 operators, cargo surveyor and Agent's representative if applicable.

Pilot ladders should be rigged in accordance with all relevant S.O.L.A.S. Regulations.

ANCHORAGE: The recommended anchoring position is Lat. 20° 38′ S., Long. 115° 40′ E., but due to the variable holding qualities of the whole area it is recommended that Masters exercise the utmost caution when anchoring and whilst laying at anchor.

RESTRICTIONS: See "Mooring" - Paragraph (d).

MAX. SIZE: The terminal is designed to accommodate vessels from 20,000 d.w. tonnes to 140,000 d.w. tonnes. The largest dimensions being:

(a) Deadweight 140,000 tonnes (approximate).
(b) Length overall (LOA) 300 m.
(c) Beam 46 m.
(d) Draft 17 m.

Vessels exceeding the following dimensions cannot be accommodated at the Loading Terminal unless express permission is granted by Apache Energy Ltd.

RADIO: *ETA and Arrival Messages:* Vessels proceeding to the Varanus Island loading terminal shall notify Apache Energy Ltd. (See "Operator"), their estimated time of arrival, not less than 96 hours before arrival, amending or confirming the ETA at intervals of 48 hours and 24 hours before arrival at the Terminal. Failure to comply with the above procedure may result in the Pilot not being available on the vessel's arrival.

Ballast Water: Quantity, condition and origin of ballast water on board to be advised in the 96 hour message. Facilities are not available for dirty ballast or slops to be pumped ashore.

Declarations Prior to Arrival: The following declarations are to be included and verified in the 24 hour message:

(a) Is the hull leak free?
(b) Is an inert gas system fitted?
(c) If fitted, is the inert gas system fully operational?
(d) Are there any defects to the vessel, machinery and equipment, which may effect safe pilotage, berthing, cargo or ballast operations?
(e) Have stress calculations for the envisaged programme of cargo handling and ballasting been made?
(f) Is the hull stress calculated within recommended safety limits?

VHF: A 12 hour listening watch is maintained on international marine VHF Channel 16 between 0600 hrs. and 1800 hrs. local time. Vessels should tune their VHF sets to Channel 16 when within 100 nautical miles of the Lowendal Islands and as soon as practicable thereafter contact the Island Radio Room and confirm the vessel's ETA at the Pilot Boarding Station.

VHF Marine Channels available:
Marine Channel 16 calling and distress.
Marine Channel 67.
Marine Channel 9 working Channel.
Marine Channel 74 working Channel.

TUGS: Tugs are not available to assist with berthing operation.

TERMINAL FACILITIES:
ONSHORE:
Storage: 3 tanks with storage capacity of 750,000 bbls. (119,250 cu.m.).
Pumps: The 3 cargo pumps are rated at 1,654 cu.m.p.h. each.
Also see "Ballast".
OFFSHORE:
Pipeline: A 4,200 m. long × 762 mm. (30 in.) pipeline leads from the shore to the Tanker Terminal. At the pipeline end manifold (PLEM) there is a valve at the 406 mm. (16 in.) take off prior to connection to the submarine hose.

Hose: The submarine hose is 73.15 m. (240 ft.) long, consisting of 8×9.144 m. (30 ft.) sections, including (from the PLEM) 4×406 mm. (16 in.) hoses, 2×406 mm. (16 in.) buoyancy chamber hoses, 1×406 mm. (16 in.) to 305 mm. (12 in.) reducer and 1×305 mm. (12 in.) rail hose. At the end of the 305 mm. (12. in) hose there is a butterfly valve spool piece and a 12 in. flange fitted with camlocks for connection to the ship's manifold. The weight of hose to be handled by the ship is 4.0 tonnes when full of crude oil.

Moorings: The mooring consists of an 8-leg Multi-Point Mooring (MPM), with 4 buoyed legs and 4 swamped legs.

Although the ship's anchors will be laid out during the berthing, due to the variable seabed holding qualities, swamped moorings will be picked up and tensioned to back up the ship's anchors.

MOORING: Mooring is without tug assistance.

Mooring Equipment: All tankers must have sufficient equipment for mooring at the Terminal:

(a) A minimum of 4 sets of bitts are required on the after deck and a set of bitts on the port and starboard side at the after end of the main deck forward of the bridge front. A set of bitts on the port and starboard side of the main deck forward and a minimum of 2 sets of bitts on the forecastle. All the above mentioned sets of bitts must be able to accept preventer lines or swamp moorings which must be hove tight and made fast.

(b) A minimum of two, two drum tension winches on the aft deck and a minimum of one two drum tension winch on the after end of the main deck with at least 220 m. of good quality mooring line on each winch are required. All terminal mooring preventers and swamp moorings are 280 mm. circumference, and suitable winch drum capacities are required for these winches to heave tight all lines and make fast.

(c) Prior to berthing vessels should have on the after deck and the after end of the main deck, 2 mooring lines securely joined together giving an effective length of approximately 440 m.

(d) Only vessels fitted with adequate bridge wing searchlights will berth at night.

LOADING:

1. Prior to arrival vessels must have the starboard derrick or crane rigged and ready for pick up of the terminal deck box and the submarine hose.

The PLEM is marked by a spar buoy and the end of the submarine hose is marked by a pick-up buoy.

When the vessel is in position and secured to the satisfaction of the Master and Pilot/Loading Master the submarine hose pick-up shall commence. Once pick-up has commenced the propeller must not be turned until the hose is disconnected and laid back onto the seabed unless it is turned by use of the turning gear only.

2. Once the hose is connected and all ship/shore safety check lists have been satisfactorily completed, the butterfly valve and ship's manifold valve will be opened and gravity loading will commence. Once the ship's checks are completed and clearance given, the loading pumps will be started.*

3. During loading at least one ship's tank is to be open to the inflow of oil and the inflow of oil is not to be shut off by closing ship's valves or the hose valve without prior approval of the Pilot/Loading Master. In order to reduce back pressure at the ship's rail, as many tanks as possible should be open during loading. In any event the ship's rail back pressure should not exceed 150 p.s.i.

4. The Pilot/Loading Master is to be informed when 200 tonnes is required to complete loading so that the loading rate can be eased down, and again at 50 tonnes so that the loading pumps may be stopped and the loading completed by gravity. When loading is completed the ship's manifold valve is to be closed slowly. When the manifold valve is closed the butterfly valve will be closed.

5. During loading the tank tops should be kept closed at all times, ullage plugs should be kept closed at all times except when sampling, gauging, thieving or inspecting.

6. Portable UHF radios will be supplied for communication between the tanker and terminal. Hourly checks between tanker and terminal will be required so that undetected radio failure can be minimised.

*During loading operations, a responsible deck officer must be present to supervise the ship's crew and approve the hose connections.

BALLAST:

1. Vessels should arrive at ballasted draft acceptable to the pilot, a cargo free vessel is normally requested to maintain maximum segregated ballast on board, to assist steerage. No tugs are available to assist berthing.

2. *Clean Segregated Ballast:* This ballast water will be discharged consecutively within the loading. The Pilot/Loading Master must be notified prior to any deballasting and at least one quarter of the Summer deadweight must be loaded before deballasting commences.

TIDES: *Tide Times & Height:* The times of high and low water occurring at the moorings approximate to the Barrow Island times as published in the Australian National Tide Times. The heights of tide may be taken as the same as Barrow Island. The above tidal information can only be taken as a guide as times, direction, height, and rate of flow may vary dependent upon weather conditions.

Tidal Flow: The tidal flow at the Tanker Terminal is approximately 173°/353° and may attain a speed of 2 knots at Spring tides.

MEDICAL: No services available.

FRESH WATER: Not available.

FUEL: Not available.

REPAIRS: No facilities available.

CONSULS: None.

SURVEYORS: None locally.

GENERAL: *Agency:* No ship's agency services are provided by Apache Energy Ltd. Tankers arriving from foreign ports must make prior arrangements for quarantine and Customs clearance through their Agents. Dampier Agents and Customs attend on arrival, Customs only on departure.

Services: Laundry and Stores not available locally.

Ship's crews cannot be accommodated ashore on Varanus Island.

OPERATOR: Apache Energy Ltd., P.O. Box 477, West Perth, Western Australia 6872, Australia. *Tel:* 61-9-4227222. *FAX:* 61-9-4227445. *Contact:* N. Jones, Operations Manager.

WALLAROO, S.A.: 33.56 S. 137.37 E. (See Plan)

PORT LIMITS: Chart Aus.777. A line following the coast line at the HW mark between Point Riley and Point Hughes; thence a line drawn 270° from Point Hughes for 1.5 miles and thence a line drawn 360° to meet a line 270° from Point Riley for 1.5 miles.

DOCUMENTS: All documents necessary for first entry vessels are as for other Australian ports (i.e. Customs, Health, etc.).

PILOTAGE: Pilots board approximately 1 mile seaward of Entrance Beacon. Pilotage is compulsory. Vessels awaiting Pilot for extended periods should anchor 1 mile – 2 miles to seaward of Entrance Beacon. Vessels approaching Pilot Station should take care not to approach the Entrance Beacon before Pilot has boarded due to restricted sea room.

ANCHORAGES: Outer Anchorage as above.

RESTRICTIONS: Daylight berthing only. Sailing at any time. Sailing times dependent upon tides. Tides may be greatly effected by prevailing weather conditions. A high pressure system in Bight may cause tides to be depressed below predicted levels and conversely a low pressure system may cause tides to be above predicted heights. Channel depth 8.45 m. (27 ft. 9 in.) LW. There is a minimum depth of 8.40 m. (27 ft. 6 in.) in the swinging basin off the berths.

Underkeel Clearance in Channel:

1. 21.3 m. – 27.4 m. beam, clearance 0.75 m.
2. Over 27.4 m. beam, clearance 0.90 m. or 10% of draft.

HEALTH: Radio Pratique available within 24 hours of arrival providing sufficient information is supplied. Quarantine/Health Officer will board vessel after arrival in order to grant formal Pratique. Vessels arriving directly from other Australian ports have automatic Pratique, but Health Officer will attend the vessel on arrival.

RADIO: ETA messages for Agents, Harbour Master, etc. may be routed through any Australian coastal radio station, the nearest being Adelaide Radio (VIA), not less than 24 hours prior to arrival.

MAX. SIZE: LOA 200 m., beam 30 m. Consideration may be given to accommodating larger vessels on a restricted draft.

Arrival Drafts: As vessels are permitted to discharge clean ballast whilst alongside, drafts should be as follows: 2 m. minimum forward and 8.5 m. maximum aft.

VHF: Channels available, 16, 12, 8, 6, 67. Channel 16 used for general call up, and Channel 6 is usually used for port operations. Call sign; "Wallaroo Harbour". Hours of operation; Monday to Friday 0845 hrs. to 1700 hrs. except Public Holidays, otherwise by arrangement.

TUGS: One tug "Kalanbi", 11.5 tonnes bollard pull (650 h.p.). Launch available to run lines.

BERTHING: Jetty extends 870 m., W.N.W. from the foreshore abreast the town. There are 3 berths on either side of the jetty, extending over a length of 400 m. from the outer end.

Coir springs are provided at all berths and vessels may lie alongside in all weathers. Vessels may be required to berth either head to sea or head in, dependent upon weather conditions prevailing at the time of berthing.

Berths	*Length* (m.)	*Depth* (m.)	*Width Dredged Area* (m.)
No. 1 North	83.5	9.45	24.4
No. 2 North	290.0	9.45	36.4
No. 3 North	68.6	7.32	24.4
No. 1 South	168.0	9.30	24.4
No. 2 South	198.0	8.22	30.0

CRANES: None.

BULK GRAIN FACILITIES: No. 2 North Berth – 5 fixed manoeuvrable spouts. Served by a conveyor bulk loading plant. Rated at 800 t.p.h. Maximum working clearance of spout above LW 17.4 m. Maximum coverage spout tip from W.F.A. 20.12 m. The plant is manned on a 2 shift basis from 0800 hrs. to 2300 hrs. daily, Sunday to Friday and from 0800 hrs. to 1500 hrs. Saturdays.

SPECIALISED CARGO HANDLING FACILITIES: None.

BRIDGES: None.

STEVEDORES: Ordering of labour organised through Agents and Grain Handling Authority.

MEDICAL: 2 private medical practices available, also 1 dental surgery located in adjacent town (12 km.). District hospital is located at Wallaroo. Ambulance service also available and may be used to transport seriously injured patients to Adelaide if required. Vaccination certificates as for all Australian ports.

TANKERS: No facilities available.

DENSITY: Average density between 1028 – 1030.

FRESH WATER: Available at 17 tonnes/p.h. By prior arrangement may be boosted to 60 tonnes/p.h.

FUEL: Available by arrangement in small quantities from Adelaide by road tanker.

FIRE PRECAUTIONS: Usual precautions necessary, bearing in mind danger of grain dust. Local fire brigade available. International shore connection should be in position.

CONSULS: None.

REPAIRS: Minor repairs available locally, marine engineers available from Adelaide.

DRY DOCKS: None.

SURVEYORS: (1) Cargo Surveyors available – may be arranged by Agents as required.

(2) Lloyd's Surveyor should be obtained through principal Agent. Lloyd's Agent is situated at Port Adelaide.

(3) Other Classification Society Surveyors also available in Australia.

HATCHES: Opening and closing by ship's crew.

CUSTOMS ALLOWANCES: Normal Australian allowances.

CARGO GEAR: No shore based cargo gear apart from bulk grain plant. Other berths - ship's gear.

REPATRIATION: May be arranged through ship's Agent.

AIRPORT: None. Bus connection twice daily to Adelaide.

TIME: See "General" before first port.
HOLIDAYS: New Years Day; Australia Day (January); Good Friday; Easter Monday; Anzac Day (April); Adelaide Cup Day (May); Queen's Birthday (June); Labour Day (October); Christmas Day and Proclamation Day (December 26th). The bulk loading plant operates on most public holidays.
POLICE/AMBULANCE/FIRE: Police: Tel. 211200. Ambulance: Tel. 232069. Fire: Tel. 232000.
EMERGENCY CO-ORDINATION CENTRE: "Coastwatch" (Australian Coastal Surveillance Organisation) free telephone call from all Australian ports by STD or reverse charge 062-476666.
TELEPHONES: Telephones placed aboard on arrival. Cost approx. $60.00 plus $1.08 per day rental plus calls.
SERVICES: Tank and hold cleaning services available.
BANKS: Bank SA, Owen Terrace, Wallaroo.
STORING: See "Prelims".

1. By truck.
2. –
3. Wharf access available for trucks.
4. Wharf access available for forklifts.
5. Normal Customs Bond Regulations apply.
6. Labour available for storing.

SHORE LEAVE: No restrictions.
IDENTIFICATION CARDS: Normal Australian ID cards necessary, but not required to be carried ashore.
GARBAGE DISPOSAL: *Notice:*

Ports Corp, South Australia
Wallaroo

Notice to Masters of Overseas Vessels

Ships quarantinable garbage is collected on Monday/Wednesday/Friday in the Port of Wallaroo.
A fee is levied for this service. Exemption from collection/fees will not apply if your vessel has an incinerator, macerator/steriliser or integral holding tank, approved by Australian Quarantine.
Any enquiries should be directed to Ports Corp, South Australia *via your ships agent.*
Under the Marpol Convention plastic items including plastic bags/bottles *must not* be disposed of at sea.

Australian Quarantine Requirements

Quarantinable Ships Garbage:
(includes galley scraps, organic refuse, animal waste and used food cartons)
– *must* be stored in plastic bags or heavy duty wet strength paper bags. The bags *must* be stowed within rodent/bird proof containers with tight fitting lids.
– *must not* be incinerated, macerated/sterilised or held in an integral holding tank *unless* prior Quarantine permission has been obtained for this specific voyage.
Australian Quarantine also requires that:
– garbage disposal unit inlets/outlets *must* be kept sealed.
– garbage stowage area *must* be kept cleaned and disinfected. Food scraps *must not* be littered on deck.
NB. Under no circumstances are the ship's crew/visitors to remove food stuffs/animals/pot plants from your vessel.
Heavy penalties apply for breaches of Australian Quarantine legislation.
WASTE OIL DISPOSAL: No facilities available.
SEAMAN'S CLUBS: None.
REGULATIONS: No unusual regulations.
DELAYS: May be experienced due to awaiting tide or awaiting bulk loading berth during grain season.
AUTHORITY: Ports Corp, South Australia, Jetty Road, Wallaroo, SA 5556, Australia. *Tel:* 088-232307. *FAX:* 088-232280. *Contact:* Division Manager – Port Operations at Port Adelaide (Head Office).

Head Office: Ports Corp, South Australia, P.O.Box 19, Port Adelaide, SA 5015, Australia. *Tel:* (08) 470611. *FAX:* (08) 470605.

AGENT: See "Adelaide".

WANDOO MARINE TERMINAL, W.A.: 20.08 S. 116.25 E. (See Plan)

LOCATION: The Wandoo 'B' production facilities are approximately 70 km. N.N.W. of Dampier, Western Australia, and consist of:

Wandoo 'B'	Lat. 20° 07′ 43″ S., Long. 116° 26′ 04″ E.
CALM Buoy	Lat. 20° 07′ 02″ S., Long. 116° 26′ 02″ E.
Wandoo 'A'	Lat. 20° 08′ 20″ S., Long. 116° 25′ 17.5″ E.
Anchorage	Lat. 20° 05′ 00″ S., Long. 116° 23′ 48″ E.

DOCUMENTS: The Master should provide a Notice of Readiness on arrival, and have the vessel presentable for an inspection on arrival.
PILOTAGE: Pilot boarding position is Lat. 20° 05′ 00″ S., Long. 116° 23′ 48″ E.
ANCHORAGE: *Anchorage Area:* Lat. 20° 05′ 00″ S., Long. 116° 23′ 48″ E.
RESTRICTIONS: No night berthing.

Berthing only undertaken when the wind speed at the Terminal does not exceed 25 km./hr. and when there is no tropical cyclone, or tropical depression which is likely to develop into a cyclone, within 400 nautical miles of the Terminal, or likely to pass within that range within 24 hours of the tanker berthing.

Maximum bow to centre manifold 120 m.

There are no freeboard limitations.

MAX. SIZE:
LOA: No restriction.
Beam: No restriction.
Summer d.w.t.: 100,000 tonnes.
Draft: 50 m.

The minimum size of vessel accepted is 40,000 tonnes S.d.w.t.
RADIO: Prior to arrival, the Master is required to advise ETA 72 hours, 48 hours, 24 hours and 12 hours in advance.
VHF: Communication is with a full marine VHF radio, and is manned from 0600 hrs. to 1800 hrs. (local time) and stands by on Channels 16 and 71.

Additionally, the facility operates a UHF radio with the following 2 working channels:

1. 463.45 MHz
2. 453.95 MHz

The Production Facility Operations Room is manned 24 hours and stands by on UHF Channel 1 (463.45 MHz) for call up and Channel 2 (453.95 MHz) as the working channel. The tanker support vessel also stands by on the same VHF Channels 16 and 71 and UHF 3 over the 24 hour period.

The facility can also be contacted by vessels outside Australia by telephone on:

OIM	Tel: 61-9-429-8872.	Fax: 61-9-429-8843.
Control Room	Tel: 61-9-429-8870.	
Comm's Room	Tel: 61-9-429-8871.	Fax: 61-9-429-8842.

TUGS: One tug/support vessel capable of a bollard pull of 25 tonnes shall normally be available.
BERTHING: *C.A.L.M. Buoy System:* Position Lat. 20° 07′ 02″ S., Long. 116° 26′ 02″ E. It is 15 m. in diameter and is anchored in 50 m. of water, 1,185 m. South of the production facility. The buoy is anchored by 6 legs of anchor chain, attached to 6×15 tonne Stevpris anchors and classified for 100,000 tonne vessels.
LOADING: Wandoo 'B' will produce at peak production 40,000 barrels per day. The storage capacity of the CGS is 400,000 barrels and will have the capacity to load tankers at the rate of 300,000 barrels per day, using 2 export pumps.

Tankers will carry out a closed loading with the inert gas vented through the mast riser.

Tankers must have a presentation flange 16 in. (400 mm.) to take a 16 in. (400 mm.) overrail loading hose on their manifold.
BALLAST: No slops or dirty ballast accepted.
MEDICAL: Emergency medical facilities are available, and the crew members would be transferred via tug to the Wandoo platform, then to Dampier (Karratha Airport) via helicopter.
FRESH WATER/FUEL: Not available at the berth. However, tug may be used during fair weather to proceed to Dampier to arrange for utilities within 24 hours. Should this happen, then the tanker shall use own engine to maintain her station.
AIRPORT: An airport is available in Karratha, which accesses the Wandoo platform by helicopter. However, repatriation/crew changes from the Wandoo facility are not possible.
TIME: GMT plus 8 hours.
GENERAL: *Customs:* Services available at Dampier.
Weather: November to April is normal cyclone period. Wandoo platform area is most exposed during January to March.
Officials: The tanker shall provide victualling and accommodation for the Pilot and Mooring Master to the standard of a senior officer.
Charges: Port charges and associated costs are now imposed on tankers using the facility. Owners should contact the operator for the applicable rates.
OPERATOR: Ampolex Ltd., Level 29 QV1, 250 St.George's Terrace, Perth, W.A. 6000, Australia (P.O.Box L902, Perth, WA 6001). *Tel:* (09) 4293200. *FAX:* (09) 4293276 or 4293544. *Contact:* George Wilson, Production Superintendent.

WEIPA, (including Albatross Bay), Queensland: 12.42 S. 141.41 E. (See Plan)

PORT LIMITS: Seaward boundary commencing at a point at HW mark on the Western Extremity of Duyfken Point, thence by a line in a 173° (T) direction to the HW mark at Boyd Point.
DOCUMENTS/HEALTH: See "Melbourne".
PILOTAGE: Vessels requiring Pilot may apply to Harbour Master, Weipa 48 hours before arrival, confirming ETA 24 hours before. Vessels to give Harbour Master their draft. Generally speaking minimum berthing draft should be, forward 2% of vessel's length and aft, the propeller completely immersed.

Pilot boat is 15 m. (length), named "Cape Melville" and painted white and orange. It may be contacted on VHF Channel 16. Pilot boards 1 mile S.W. of Fairway Beacon.
ANCHORAGE: Anywhere in Albatross Bay except between 2 lines situated 1 mile North and South respectively of the line of leads and extended to the port limits.
RESTRICTIONS: Weipa Approach Channel is 7.8 miles long with a minimum depth of water 10.8 m. LAT. Usually vessels up to 30,000 d.w.t. enter channel at any stage of the tide. Vessels of over 30,000 d.w.t. enter at any stage of the flood up to 2.5 hours before HW.

Usually vessels up to 30,000 d.w.t. can berth at any state of the tide. Vessels of over 30,000 d.w.t. due to their departure draft and existing tug power must berth starboard side alongside and can do so at any stage of the flood tide. Vessels normally depart 1 hour 15 minutes before HW. Some vessels up to 30,000 d.w.t. can depart on LW.
MAX. SIZE: Maximum LOA 254 m. (835 ft.) Beam 35.3 m. (116 ft.) Draft depends on height of tide and 90 cm. (3 ft.) keel clearance is required.
HEALTH: Weipa is not classed as a First Port of Entry. See "General – Health" before first port.
RADIO: Forcomal, Sydney Radio and within 48 hours of arrival.

VHF: Call "Weipa Harbour" on Channel 16 on arrival 1 mile S.W. of Fairway Beacon. Tugs operate on Channels 6, 8 and 12. Vessels to advise "Weipa Harbour" passing Fairway Beacon inward and outward and on arrival at and prior to departure from the wharf.

TUGS: Vessels entering North of Cora Bank, tugs join at No. 25 Beacon. Vessels entering South of Cora Bank, tugs join at No. 19 Beacon. Tugs are usually used in the lashed up position using tug's lines.

3 tugs are available of 23, 43 and 45 Tonnes bollard pull, of which only 2 are in use at any one time.

BERTHING: Loading and discharge at Humbug Point generally by ship's gear but mobile cranes may be hired if required.

Evans Landing Wharf is generally only used for petrol and distillate discharge.

Berth	*Length* (m.)	*Depth at L.W.D.* (m.)
Lorim Pt.	548	12.5
Evans Landing	191	9.6
Heavy Equipment Wharf	114	9.5

BULK HANDLING FACILITIES: *Lorim Point East:*
Bauxite: One travelling, luffing, slewing shiploader.
Loading rates:
  Raw bauxite: 6,000 t.p.h.
  Calcined bauxite: 1,000 t.p.h.
  Live storage capacity: 350,000 tons.
  Dead storage capacity: 400,000 tons.
  Max. reach from fender face: 20.3 m.
  Max. operating air draft above L.W.D.: 18.3 m.
Lorim Point West:
Bauxite: One travelling, luffing, slewing shiploader.
Loading rates:
  Raw bauxite: 3,200 t.p.h.
  Calcined bauxite: 1,000 t.p.h.
  Max. reach from fender face: 19.2 m.
  Max. operating air draft above L.W.D.: 16.7 m.
Kaolin: One linear shiploader with retractable boom.
  Loading rate: 800 t.p.h.
  Stockpile capacity: 10,000 tons.
  Max. reach from fender face: 29.5 m.
  Max. operating air draft above L.W.D. (fixed): 15.7 m.

CRANES: 2×70 tonne P.&H. 1×31 tonne P.&H. 1×26 tonne P.&H. 2×12 tonne Austin and Weston. 1×12 tonne B.H.B. 1×8 tonne Cranville.

BRIDGES: None.

STEVEDORES: No special advice required. None available for working on ships.

MEDICAL: Inoculations per Australian Regulations. No notice required for medical attention. Urgent cases flown out and treated at Cairns or Thursday Island. Hospital facilities available for minor cases.

TANKERS: *Lorim Point West:* 1×200 mm. pipeline for heavy fuel oil imports. Max. discharge rate 400 t.p.h.
Evans Landing:
  1×200 mm. line for distillate.
  1×200 mm. line for aviation fuel/motor fuel.
  1×100 mm. and 2×70 mm. lines for aviation fuel.
  Total storage capacity: 24,400 tons.

DENSITY: Dry Season 1024. Wet Season 1012. These figures can vary considerably.

FRESH WATER: Available at all berths. 5 t.p.h.

FUEL: Not available.

FIRE PRECAUTIONS: Observe general safety precautions.

STORES: Very limited stores are available. In emergency large orders could be supplied only if several days notice given by radio, as they have to be flown from Cairns.

GANGWAY/DECK WATCHMEN: Available.

OPENING/CLOSING HATCHES: Work carried out by crew.

SHIP CERTIFICATES: Ship's Register, Load Line, Safety Radio and Safety Equipment Certificates. See also "Melbourne".

CONSULS: None.

REPAIRS: Not available.

DRY DOCKS: None.

SURVEYORS: Lloyd's Surveyor available at Cairns.

CUSTOMS ALLOWANCES: See "Melbourne".

CARGO GEAR: See "Berthing".

REPATRIATION: Can be arranged.

AIRPORT: 10 km. from port. Served by major airline.

TIME: See "General" before first port.

HOLIDAYS: Vessels are loaded and berthed or sailed at any time.

POLICE/AMBULANCE/FIRE: Police 699119, Ambulance 699811, Fire 697444. As no telephone supplied contact "Weipa Harbour" on Channel 16 for these services.

SERVICES: Not available.

BANKS: No banking facilities available.

SHORE LEAVE: See "Melbourne".

IDENTIFICATION CARDS: See "Melbourne".

GARBAGE DISPOSAL: Daily collection available on demand. Launch provided by Weipa Tug Services.

WASTE OIL DISPOSAL: Tanker truck available at Humbug Wharf.

SEAMAN'S CLUBS: None available.

REGULATIONS: Vessels may not immobilise without written permission from the Harbour Master.

DELAYS: The only delays to be normally expected are as under restrictions, i.e. awaiting tides.

DEVELOPMENTS: The Alumina Plant at Weipa has been deferred indefinitely.

AUTHORITY: Ports Corporation of Queensland, G.P.O.Box 409, Brisbane, Queensland 4001, Australia. *Tel:* (07) 3224 7088. *FAX:* (70) 3224 7234. *Contact:* Chief Executive Officer.

Captain P.J. Zealley or Captain G.W. Ring, Senior Marine Pilots. Tel: (070) 697170. Fax: (070) 697420.

AGENT: Sub-agent of Patrick Sleigh Shipping Agencies Pty. Ltd., Gladstone.

WHYALLA, S.A.: 33.02 S. 137.36 E. (See Plan)

LOCATION: Situated on Western shore of Spencer Gulf opposite to and 27 miles by sea from Port Pirie. Open to all Southerly winds, which seldom interfere seriously with operations.

BUOYAGE: "IALA" Buoyage system "A" has been adopted.

The system is that the port hand beacons are red in colour, lights red, topmarks can shape and even numbered. The starboard beacons are green in colour and lighting, topmarks cone shape and odd numbers.

FACILITIES: Jetty for iron ore loading, and dredged harbour with one main wharf for steel and general cargo, and for bulk cargoes of coal, coke, limestone, salt, etc. Harbour berths are safe berths.

DOCUMENTS: See "Melbourne".

PILOTAGE: Compulsory except for Australian vessels whose Masters hold Exemption Certificates. Pilots board 1.7 miles - 143° from Fairway Buoy. Vessels requiring Pilot should request service in sufficient time enable Pilot be ordered before 1600 hrs. Monday to Friday and should show prescribed signal within at least 10 miles of Whyalla. If delayed berthing, Master informed by radio and recommended anchor at Pilot boarding station (see above).

ANCHORAGES: Quarantine line extends in direction 241° from Black Point to Coast Southwestward of port. Quarantine anchorage shown on Australian Chart AUS.135, lies Southeastward of quarantine line and Eastward of jetty. Anchor in close proximity to Pilot boarding area. Vessels should not anchor on harbour or jetty leads, but should anchor, draft permitting, approximately 1 mile North of Outer Fairway Beacon. Holding ground good with hard clay and sand bottom.

RESTRICTIONS: Vessels will not be moved within port by Pilot unless at least 10% of max. draft in water beneath keel.

Also see "Berthing".

HEALTH: Whyalla is a Port of First Entry. 48 hours' notice of request for Pratique required. Pratique granted at anchorage or in berth. Also see "Melbourne".

Also see "Australia-General" before first port – Answers required to questions in Quarantine form by radio.

RADIO: Cable local Agent *(a)* on departure from previous port advising ETA and total cargo for discharge Whyalla (if any); *(b)* 48 hours prior arrival giving ETA; *(c)* 24 hours prior arrival giving ETA; *(d)* advise any alteration in ETA; *(e)* advise estimated draft on arrival fore and aft. These cables necessary in order ensure loading and labour. Cables to be signed with Master's name. Cables sent outside working hours should be prefixed "Shipserv". In event vessel arriving direct from overseas port requiring Pratique, following additional advice to be cabled: No. of crew, nationality, and whether health vaccination certificates required.

VHF: Port equipped with VHF. Service maintained 24 hours a day. Call sign "Whyalla Harbour".

TUGS: All tugs fitted VHF radio. 3 tugs available between 6 and 52 tons bollard pull. Wire towropes not to be used unless risk of damage to tug undertaken by ship. Charge for use of tug's lines. Orders for tugs to be made at least 2 hours before required and not later than 1530 hrs. Monday to Friday. Ferry services undertaken to ships at anchorage outside harbour when requested.

BERTHING: No. 2 Jetty: Max. length of vessel 250 m. Depth of water alongside 11.6 m. LW (Temporary restriction 11.4 m.). Approach Channel depth 10.7 m. LWOST. Swinging basin, depth 10.7 m.. LWOST.

Stowage factor iron ore, 13 cu. ft. – 15 cu. ft. per ton. No stevedoring incurred and generally cargo loaded lower holds and no trimming necessary.

Whyalla Harbour: About 1.25 miles to North of Iron Ore Jetty. Entrance Channel 120 m. wide and approx. 3,100 m. length. Water depth in Channel and basin 10.0 m. LWOST. Depth of water at Harbour Wharf 10.7 m. LWOST. 4 berths, full wharf 700 m.

DENSITY: Density of water approximately 1028 to 1035 therefore vessels must load light.

STEVEDORES: Shift work 21 hours per day on continuous 7 day roster. At least 24 hours notice for labour requirements.

MEDICAL: Resident doctors and hospital available.

FRESH WATER: Available at No. 2 Jetty and all wharves.

FUEL: Bunkering not normally undertaken. Fuel oil, coal and diesel oil available at Whyalla Harbour Wharf in emergencies only, by road tanker from Adelaide.

REPAIRS: Consult ship's Agents before maintenance or repairs undertaken.

SURVEYORS: The following Surveyors available anytime if advance notice given: (1 hour flight from Adelaide).

Lloyd's Register: 171 Commercial Road, Adelaide, South Australia 5015. Tel: Adelaide 2410366. After hours: Adelaide 2936846. Fax: 3412009.

Bureau Veritas: 20 Didett Street, Port Adelaide, South Australia 5015. Tel: 47 5924. Telex: AA88593.

STORES: Marine and bonded stores can be procured by arrangement with Adelaide. 5 days notice required. Small amounts can be arranged locally. Consult Agent for details.

GANGWAY/DECK WATCHMAN: Not available.

REPATRIATION: Air, road and rail facilities available.

STORING: See "Prelims".
Storing at the Blast Furnace Wharf:

1. Vessels can be stored by trucks.
2. Vessels can store during loading or discharging if the vessel can provide cranes and labour for this purpose. Barges not used at this wharf. Storing must not cause any delay to stevedoring operations.

Stevedoring operations cease between the hours of 0700 to 0800; 1500 to 1600; 2300 to 2400.

3. Trucks can proceed alongside at all berths.
4. Forklifts are available for hire and can be used at all berths. Bulk berth has an 8 ton axle loading limit.
5. Application to load stores should be made to Customs by submitting a requisition showing details of items required, prior to loading.

At least 24 hours notice is required by Customs during business hours, Monday to Friday.

Form 957 (Entry for Exportation) is then completed showing all details and value of the goods, and signed by the Ship Owner or his Agent, and lodged with Customs within 7 days.

6. Shore labour is not available for storing.

Storing at the Ore Loading Jetty:

Modest amounts can be loaded by launch on the port side using ship's cranes. Launch charges from $211.00 – $445.00 per hour.

Small orders can be manhandled to ship's starboard side at the jetty.

Vessels always berth head out, starboard side to the ore jetty.

AMBULANCE: In event of accident contact Agent or BHP 404000. St. John's Ambulance Services (Tel: 45-7777) available 24 hours daily or call "Whyalla Harbour" on VHF Channel 16.

Aerial Ambulance available for transfer of patients to a metropolitan hospital.

EMERGENCY CO-ORDINATION: Whyalla Police Tel: 488020.

State Emergency Service Tel: 440088.

Local Emergencies within B.H.P. Area, including Ships Alongside: e.g. Accidents, fire, flooding, deaths, electrical faults causing hazards, oil spills and other pollution.

Dial 4000 from BHP internal telephones or 404000 from external telephones.

BANKS: A.N.Z. Banking Group, Forsyth Street, Whyalla. 5600. Tel: 45 7122

Commonwealth Banking Corporation, Forsyth Street, Whyalla. 5600. Tel: 45 8666.

National Bank of Australia, Forsyth Street, Whyalla. 5600. Tel: 45 8033.

Westpac Banking Corporation, Forsyth Street, Whyalla. 5600 Tel: 457155.

SHORE LEAVE: Crew members permitted shore leave, and launches, at ship's option, provide regular schedule to anchorage – weather permitting.

Crew members are required to use taxis through steelworks from all berths.

GARBAGE DISPOSAL: Service available Monday, Wednesday and Friday morning. Additional services available with 24 hours notice. Drums provided alongside wharf. Wet garbage to be in bags in leakproof drums, dry garbage to be bagged. Charges: A$132.00 per service during office hours and A$165.00 out of office hours. Contact: B.H.P. Co. Ltd. for service (See "Authority").

WASTE OIL DISPOSAL: Restricted service available only in an emergency situation. Charges: A$50.00 per hour. Contact: B.H.P. Co. Ltd. (See "Authority").

SEAMAN'S CLUBS: None. Facilities available to seamen on request to Whyalla Tourist Information Service. B.H.P. can also assist.

AUTHORITY: *Port Authority:* B.H.P. Steel International, Long Products Division, P.O.Box 21, Whyalla, South Australia 5600 *Tel:* (086) 404444. *Telex:* AA 80270. *Cables:* "Hematite" Whyalla. *Contact:* Superintendent Shipping and Stevedoring. *Tel:* (086) 404080. *FAX:* (086) 404787.

Ports Corp South Australia, 293 St.Vincent Street, Port Adelaide, SA 5015, Australia. *Tel:* (08) 470611. *Contact:* Captain David Mansfield, Port Manager and Harbour Master – Whyalla/Port Bonython (After hours Tel: (086) 441456).

AGENT: Sub-agent of Patrick Sleigh Shipping Agencies Pty. Ltd., Adelaide.

WYNDHAM, W.A.: 15.27 S. 128.06 E. (See Plan)

PORT LIMITS: All waters in the Cambridge Gulf South of a line extending from Cape Dussejour to the summit of Hill 437 on Lacrosse Island, thence to Cape Donett.

DOCUMENTS/HEALTH: See "Melbourne".

APPROACHES: Generally speaking, it is preferable to arrive at the Pilot Station at daybreak. Approach Medusa Bank and pass Westward (buoy bearing 090° distance 1 mile). Steer 180° until Lacrosse Island Lighthouse bears 040°, distance 2 miles. Alter course to 145° to a position with Shakespeare Hill and Cone Hill in transit (086°), Cone Hill distance 4 miles. The course should then be altered to 225°. Course clears Guthrie and East Banks and puts Black Cliff right ahead.

It will be noted that a conspicuous hill (un-named) is sighted immediately behind Black Cliff Point and these together form an excellent lead down this part of the Gulf to a position off Islet Point. From this point onwards pilotage is fairly complicated. There is a submerged wreck off the jetty, which must be considered when berthing and unberthing. Large vessels may only navigate the Hare Channel at half tide or better, as there is a 5.5 m. patch in the fairway.

PILOTAGE: Compulsory for all vessels entering the port except those whose Masters have pilotage exemptions. Pilot Boarding Ground, Nicholl's Point bearing 214° distance 5.2 miles (Lat. 14° 58.2′ S., Long. 128° 10.3′ E.). By special arrangement, and if the vessel has no charts and subject to weather, the Pilot will board at the Outer Pilot Boarding Ground, Lacrosse Island Light bearing 351° distance 4.7 miles. Pilotage in daylight only.

Harbour Master/Pilot is stationed permanently at Wyndham. Early ETA advice (10 days) is essential and should be sent to Harbour Master, Wyndham. 48 hours and 24 hours prior to arrival give ETA to Harbour Master, Department of Transport, Wyndham.

The approaches Channel has a minimum depth of 5.5 m. LWOST.

RESTRICTIONS: The max. length of vessel permitted to navigate the Gulf is 189 m. overall. Longer vessels fitted with bow thrusters have used the port by special permission.

The Gulf is not navigable during hours of darkness at present.

MAX. SIZE: Length 190 m., draft 8.8 m. Max. displacement 26,000 tonnes.

HEALTH: Wyndham is a First Port of Entry. Masters are required to radio Port Health Authority, Wyndham, not less than 12 hours prior to arrival at pilotage station and giving state of health of the vessel. Examination for pratique is usually conducted after arrival alongside and nobody is permitted ashore until doctor's examination is completed.

RADIO: *ETA:* Shipserve "Harbour Master Wyndham" required 48 hours and 24 hours notice prior arrival. The 24 hours message should be timed to be delivered before 1500 hrs. local time on the day before arrival so that arrangements can be finalised, when possible, in working hours.

Indicate max. draft in the 48 hours notice.

VHF: "Wyndham Harbour" on Channel 16 during office hours (0700 – 1600).

TUGS: None.

BERTHING: There is a jetty of 342 m. in length. The Southern 210 m. having a least depth of 9.0 m., and the North end having a depth of 5.0 m.

Ordinary moorings are used. A launch is on station to run lines. There is no tug available.

CARGO HANDLING: By ship's gear only direct to motor transport. Forklift trucks and pallets are used for handling general cargo where suitable.

A container park and facilities for handling and storage of reefer and dry containers ashore has been installed.

Bulk Loader on South Berth, grain loading rate 120 t.p.h. The loader is 105 m. from the South end of berth. Airdraft 16.4 m. Outreach 9.7 m.

STEVEDORES: Working hours: 0730 – 1130 hrs., 1230 – 1630 hrs., 1630 – 1830 hrs. When no extension of work, labour finishes at 1630 hrs.

Labour is organised by stevedores. WWF conditions prevail. Prior advice as to labour requirements, hatches to be worked, etc., is of great assistance to stevedores.

FRESH WATER: Available at both berths. Supply is 10 t.p.h. approx.

FUEL: Small quantities available by arrangement with oil companies.

REPAIRS: No facilities.

CERTIFICATES: See "Melbourne".

TIME: See "General" before first port.

GARBAGE DISPOSAL: No facilities available.

WASTE OIL DISPOSAL: No facilities available.

SEAMAN'S CLUBS: None.

CURRENCY: Australian Dollar.

AUTHORITY: Department of Transport, P.O.Box 186, Wyndham, Western Australia 6740. *Tel:* (091) 611006, 611203. *FAX:* (091) 611244. *Contact:* Harbour Master.

AGENT: Sub-agent of Patrick Sleigh Shipping Agencies Pty. Ltd., Fremantle.

YAMBA, N.S.W.: 29.26 S. 153.21 E. (See Plan)

PORT LIMITS: One nautical mile Eastwards of the ends of the North and South Breakwaters defines the seaward limits of the port.

DOCUMENTS:

2 Crew Lists, Form M&S 11.
2 Port of Call Lists.
2 Passenger Lists, Forms M308, 309, 310 (2 each).
1 Crew Personal Effects List, Form 5.
1 Store List, Form 42A.
1 Animal Pets aboard, Form QA4.
Ship's Log.
Last Port Clearance.
Safety Certificates: Construction, Equipment, Safety Equipment, Loadline, Radio.

Where possible, cargo manifests and stowage plans should be forwarded by airmail ahead of the vessel to the local Agent.

PILOTAGE: The Clarence buoyage is IALA "System A". Pilotage is compulsory for all craft exceeding 30.48 m. LOA, unless a current Pilotage Exemption is held by the Master.

Notice of ETA and request for a Pilot must be made to the Harbour Master not less than 24 hours before ETA at breakwater. Cable address is "Pilot Yamba". Confirmation of ETA is required 2 hours before arrival breakwater. Channel 16 VHF is continuously watched 1 hour before last given ETA and ETA may be confirmed or adjusted on this frequency. Pilot boat is 15 m. LOA and is a black hulled tug with black funnel and white superstructure, called "Francis Freeburn". The usual international signals may be employed by vessels requiring a Pilot. The Pilot boarding point may vary according to weather and sea conditions, if possible it will be 1 nautical mile seaward of the breakwater, otherwise Pilot will either issue instructions or lead vessel into the river and board just inside breakwater entrance. Pilot boarding arrangements must be according to IMO rules. Vessels awaiting Pilot or suitable tide may anchor between 1 and 2 miles East of the breakwater entrance – sand bottom and good holding ground.

Pilot ladder 1.0 m. up from waters edge, no manropes for inward vessels, ladder on starboard side, port side for departure, plus manropes.

ANCHORAGE: Masters familiar with the port and pilotage vessels may proceed to an anchorage downstream of the Harwood Bridge for berthing at Harwood Sugar Mill in 5.0 m. of water or to a position midway between Freeburn Island and Illuka Wall in 6.0 m. of water for vessels berthing at Goodwood Island wharf. Also see "Pilotage".

RESTRICTIONS: Vessels can enter the port day or night. The only restrictions would be on bar conditions and the height of tide in relation to vessel's draft.

MAX. SIZE: Generally, there is no restriction on length, max. beam would be approximately 70 m. to get through a 91 m. passage in a rock reef inside the breakwater entrance. The main restriction is draft of vessel which is 5.0 m. to Goodwood Island Wharf plus height of tide, such tides being almost identical to Sydney in both height and time.

HEALTH: Australian Commonwealth Rules apply.

RADIO: Sydney Radio (VIS) or Brisbane Radio (VIB) are the long range area stations.

VHF: The base station with call sign "Yamba Harbour Control" is situated behind the Wooli Head Lighthouse. A continuous watch is not maintained, only on prior notice that a vessel is due. Initial calls are made on Channel 16, another Channel will be used after contact has been made. The pilot vessel, which also acts as tug, if required, has Channels 16, 12, 6, and 8.

RADAR: There is no Port Control Radar.

TUGS: There are no commercial tugs, the pilot vessel may act as a tug if required either by the Master of the vessel or on advice from the Pilot. The "Francis Freeburn" is 460 b.h.p. and five tonnes bollard pull.

BERTHING: Main general cargo berth is Goodwood Island Wharf. This is a concrete decked, concrete piled wharf with timber and rubber fender piles. Permissible wheel loading (Cargo stacking – 2,750 kg./sq.m.; forklift truck wheel loads – 6 tonnes (12 tonnes max. axle load); mobile crane loads – special permission required; gross vehicle weight for trucks – 40 tonnes), wharf 70 m., deck floor 2,600 kg./sq.m. Vessels of greater than 70 m. length can secure at the berth as bollards are available 24 m. and 30 m. up and downstream respectively from the wharf. The least depth alongside the wharf is 7.0 m. An 18 m. × 12 m. covered storage shed is available. The shed can not be used for general cargo, if goods under Customs control are stored therein. A large paved cargo stacking area is available, together with container washdown facilities and a small incinerator for waste cargo packing. The port has been upgraded to a Port of First Entry to Australia for cargo ships only. Ship's gear is usually employed, but mobile cranes up to 50 tonnes capacity are available at reasonable notice for extended hire.

There are no Roll-on/Roll-off traffic berths or berths for handling liquid chemicals or LPG carriers. The berth at Goodwood Island is suitable for loading or discharging explosives.

STEVEDORES: Working hours are from 0800 – 1900 hrs. 5 days per week, weekends by arrangement, also second and third shifts by arrangement.

MEDICAL: Full hospital facilities at Level 2 available without prior notice, Level 3 on transfer to Grafton or Lismore with specialist services.

FRESH WATER: Good quality potable water available in unlimited quantities at 30 tonnes/p.h. per connection, ship's hoses used at the present time.

FUEL: Nearly all grades of fuels and lubricants are available by road transport with arrangements being made through Agent.

CONSULS: Nearest at Sydney or Brisbane.

REPAIRS: Routine maintenance and boilermaking assistance to light engineering standards. The nearest foundry is in Ballina, 1 hour's drive from the port.

SURVEYORS: Lloyd's Agents who also represent other Classification Societies and Surveyors can be brought from Sydney or Brisbane at short notice.

GANGWAY/DECK WATCHMEN: Gangway and deck watchmen are not normally used in this port but can be obtained at Union award rates, with prior notice to the Agent. Watchmen engaged by stevedores for main gates.

HATCHES: Opening/closing normally handled by stevedores whilst alongside or by ship's crew before arrival.

CUSTOMS ALLOWANCES: Australian Commonwealth Regulations apply.

CARGO GEAR: Discharge or loading of cargo at Goodwood Island Wharf is by ship's gear, however mobile cranes up to 50 tonnes capacity are available for extended hire at short notice.

REPATRIATION: Scheduled aircraft to Sydney are available twice daily at Grafton Airport, 1 hour's drive away. Rail connections to and from Sydney are also available at Grafton. All facilities exist for changes of crew and repatriation of seamen with prior notice to Australian Customs at Coffs Harbour.

AIRPORT: See "Repatriation".

TIME: See "General" before first port.

HOLIDAYS: Christmas Day, New Year's Day, Anzac Day and Good Friday.

POLICE/AMBULANCE/FIRE: All emergency services are available through the local wharf office.

Police: Iluka 46 6019: Maclean 45 2444.
Fire: If unanswered Tel: 42 0222.
Ambulance: Maclean 54 2420/45 2020.

EMERGENCY CO-ORDINATION CENTRE: All emergencies are co-ordinated through Canberra.

TELEPHONES: This service is available aboard ships at Goodwood Island Wharf by prior arrangement through the Agent, local calls only, account rendered through the Port Authority.

SERVICES: A compass adjuster resides at the port.

STORING: Vessels can be stored by trucks, all "under Bond" goods are subject to Australian Bureau of Customs control. Trucks can proceed alongside vessel at berth during storing. Fork lift trucks can be used on wharf to handle stores. Local riggers can be employed to assist storing.

SHORE LEAVE: When Immigration and Customs requirements have been satisfied, there is no restriction on crew shore leave, so long as they rejoin the vessel before departure.

IDENTIFICATION CARDS: There is no need for identity cards or shore passes except in so far as non-English speaking persons may wish to be able to identify themselves.

GARBAGE DISPOSAL: Subject to Plant Quarantine Regulations, skips on wharf for rubbish. Charge is covered with normal utility wharf charge.

WASTE OIL DISPOSAL: No facilities.

SEAMAN'S CLUBS: None.

DELAYS: Berthing delays are very infrequent, only possible delay would be due to adverse bar conditions.

AUTHORITY: Office of Marine Safety and Ports Strategy, G.P.O.Box 32, Sydney 2001, Australia. *Tel:* (02) 3642003. *FAX:* (02) 3642321. *Contact:* John Sturday.
Local Office: Captain G.W. Gray, Pilot Station, Yamba, NSW 2464. *Tel:* (066) 462002. *FAX:* (066) 461596.

AGENT: Sub-agent of Patrick Sleigh Shipping Agencies Pty. Ltd., Sydney.

NOTES

Please also advise Shipping Guides Ltd.

Azores

HORTA, Faial: 38.32 N. 28.38 W. (See Plan)

DOCUMENTS:
3 Crew Lists.
3 Passenger Lists.
For Customs
Arrival Declaration.
Manifest of Cargo for Discharge or in Transit.
Provisions List.
Request to Commence Load/Discharge.
For Port Health
Derat Certificate or exemption.
Health Clearance from Last Port.
For Port Captain
Seaworthiness Certificate.
Certificate of Registry.
Tonnage Certificate.

PILOTAGE: Can be called by 2 long and 1 short blast on the whistle, or by International Code flag "G". Radio contact with Pilot Station can be made by VHF Channel 16; Tel: 2182; via radio station CUG, or in cases of urgency, through the Horta Naval Radio Station CTH.

Pilot launch painted black with "Pilotos" painted on each bulwark. If requested by Master, Pilot will board at entrance of Faial-Pico Channel or Faial-St. George Channel. Otherwise Pilot will board at port entrance. Vessels waiting for Pilot must remain 1.5 miles from the breakwater with Ponta de Doca Lighthouse in line with Avia Larga Lighthouse on Pico Island.

ANCHORAGE: The best holding ground is with the breakwater light in line with the tower of San Francisco church bearing 272°, and with Ilheu Negro in line with Casa Joao Catita bearing 203°. Another line of good soundings is in the open Channel dos Ingleses.

MAX. SIZE: For berthing, max. draft 22 ft. Depth in the artificial port is 36 ft. at HW. Depth at buoy moorings: 33 ft. Vessels of any draft can anchor outside the port.

HEALTH: If vessel has not touched any contaminated port, Pilot will haul up signal "TO" and Health Inspector will give Free Pratique. Master is obliged to send the Maritime Declaration of Health given by the Pilot to shore within one hour together with a Crew List and Cargo Manifest. If vessel has suspected case of fever on board or is coming from a port in a contaminated zone, Pratique will only be given after Health Inspector has boarded.

RADIO: Commercial station CUG and Naval station CTH.

TUGS: None available.

STEVEDORES: Gangs are provided by local stevedores syndicate when requested by Master or Agent.

MEDICAL: Doctors and hospital facilities always available.

FRESH WATER: Can be provided by one water barge, capacity 200 tons. Also available from 3 hydrants on quay, rate 50 t.p.h.

FUEL: Gas oil and gasoline available by pipeline on quay.

CONSULS:
France
Greece
Germany
Italy
Netherlands
Norway

REPAIRS: Machinery and small electronic repairs can be effected.

GANGWAY/DECK WATCHMEN: Police Guard or Coast Guard (Policia Maritima).

OPENING/CLOSING HATCHES: Performed by stevedores.

CUSTOMS ALLOWANCES: Up to 150 grammes tobacco and small allowance wine or spirits for each man.

REPATRIATION: Can be arranged.

AIRPORT: Several flights during the day from Faial Airport, 10 km. from the port, to Lajes Airport and International Airport at Santa Maria. There is a daily boat service to Pico and several weekly to other islands.

TIME: GMT minus 1 hour in Winter. GMT in Summer (See "Ponta Delgada").

HOLIDAYS: 1st January; 25th April; 1st May; 10th June; 24th June; 15th August; Corpus Christi; 5th October; 1st November; 8th December; 25th December.

POLICE/AMBULANCE/FIRE: Police 22022; Ambulance 115; Fire 22333 and 115.

TELEPHONES: Can be connected on board vessels berthed alongside.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Not required.

GARBAGE DISPOSAL: Containers for garbage available on the main pier.

WASTE OIL DISPOSAL: 200 litre drums are provided by the Port Authority. No private companies available.

SEAMAN'S CLUBS: No Seaman's Club available. Long distance telephone calls can be made from the Post Office. Churches available.

CURRENCY: Portuguese Escudo.

AUTHORITY: Junta Autonoma do Porto da Horta, Avenida Gago Coutinho S. Cabral 7, 9900 Horta, Azores. (Postal address: Apartado 70, 9901 Horta Codex). *Tel:* (092) 22164, 22165, 22166. *FAX:* 092-22523. *Contact:* Angelo Leonardo Andrade, Port Director.

PONTA DELGADA, San Miguel: 37.44 N. 25.40 W. (See Plan)

DOCUMENTS:
1 Stores List.
4 Crew Lists.
4 Landing Passenger Lists.
4 In-Transit Passenger Lists.
2 Manifests of Cargo being landed.
1 In-Transi Cargo Manifest.
Ship's Register.
Load-line Certificate.
Safety Equipment Certificates (London Convention).
Derat Certificate.
Shipmaster's Report: April 1990 (Research Vessel).
2 Stores Lists (Deck, Engine, Catering, Bond) – Form C 132.
5 Crew Lists.
2 Crew Effects Declarations – Form C 142.

PILOTAGE: Good deep approach. Harbour Pilot boards 0.5 miles S.E. of breakwater. Radio Harbour Master direct or through Agent ETA 48 hours notice. ETA message to include draft, reason for calling, type of bunker required, fresh water required, oil products needed, nature of repairs and what cargo, if any, aboard.

Pilot station with visual signal tower and radiotelephony, at entrance of port installations. Telephone number 2.35.50. Pilot's motorboat – Pilotos in capital white letters printed both sides hull, as well as flag "P" hoisted during day or 1 red and 1 white light at night.

When necessary, Pilot motorboat will complete identification by flashing word "Pilotos".

Besides usual signals of ICS, Pilots' station, when necessary, will hoist on main signal tower the following:

By Day – Flag "X" of ICS – Wait outside Harbour (for Portuguese or foreign ships regularly visiting Ponta Delgada); Flags "OG" of the ICS – Wait outside Harbour (for all other ships);

By Night – Two green lights (one above the other) – Wait outside the Harbour (for Portuguese and foreign ships).

ANCHORAGE: Outside artificial harbour, in roadstead and off breakwater, anchorage suitable for all ships whose drafts are too deep for admission into artificial port – over 40 ft. depth. Good holding ground.

RESTRICTIONS: Vessel considered adversely trimmed when more than 10 ft. "by the stern" or 2 ft. "by the head".

MAX. SIZE: Up to 38 ft. draft.

HEALTH: The Pilot requests Master to hoist quarantine flag when vessel comes from an infected port, or when sick people carried on board. Port doctor then boards for inspection and nobody allowed to board or leave vessel before completion of inspection.

Animals: Importation and transit of all birds and small animals allowed but valid Health Certificate and valid Rabic Vaccination Certificate required.

RADIO: San Miguel Radio, call sign CUG. Transmitting on 1663.5 kHz. Receiving on 2182 kHz. Radio telephone frequencies 4415.8, 8792.8, and 13175.5 kHz.

RADAR/VHF: Harbour radar covers range of 20 sea miles; controls inside harbour waters. VHF location – main signal tower. Call sign – "Pilotos". Operating 24 hours on Channel 16. Range 20 to 25 miles.

Calls must be made on Channel 16 and then shift to Channels 20 or 22 as indicated by Port Operations Station. Channel 14 used for communications between tug, Pilot station, Pilot aboard, during manoeuvres of mooring and unmooring. It should be understood that the Port Operations Station is not to be used for ship's business with Agents or Shippers of cargo.

TUGS: Two tugs, 1,100 h.p. and 3,400 h.p. operated by Junta Autonoma available for assistance during berthing and unberthing.

BERTHING:
No. 1 – Quay for small craft.
No. 2 – West Quay, 1,069 ft. long, min. depth alongside, LW, 20 ft.
No. 3 – Central Quay, 678 ft. long, min. depth alongside LW, 27 ft.
No. 4 – East Quay, 2,023 ft. long, min. depth alongside, LW, 40 ft.
Mooring buoys in depths ranging from 20 ft. to 30 ft.

MEDICAL: Large well-equipped hospital. Santa Casa da Misericordia de Ponta Delgada, telephone number 2.23.22 and Clinica de Bom Jesus, telephone number 2.53.52.

TANKERS: Vessels carrying explosives, inflammable liquid or any other dangerous cargoes, before entering port, must hoist International Code Signal "B" at foremast during day and a red light at night. Upon boarding vessel the harbour Pilot enquires from the Master whether there are explosives and any other dangerous cargoes on board. Masters requested to supply accurate information as to quantity and nature in order to enable Port Authorities to select a suitable berth or anchorage for vessel.

Constant Readiness: Vessels carrying dangerous cargoes, while moored, must maintain engines and propulsion machinery in readiness to leave the port under full power, if necessary.

STEVEDORES: Available. Early advice to Agent recommended.

FRESH WATER: Available at all quays ex-hydrants.

FUEL: Bunkers are readily available but, for their own convenience Masters should telegraph Agents quantity and type of bunkers required. In order to avoid possible delays to their own and other vessels, Masters e requested to replenish bunkers at the time suggested by their Agents.

GANGWAY/DECK WATCHMEN: Customs Guards are on duty upon the quay and at the entrance of the wharf. Customs guards are also placed on board and those assigned for this duty should be provided with meals (at regular meal times) and sleeping quarters on board.

CUSTOMS ALLOWANCES: Storerooms will be sealed but a reasonable quantity of stores, estimated as indispensable for consumption, may be removed before sealing. This amount should be ready for removal from the storeroom prior to arrival at berth.

CARGO GEAR: *Electric Cranes:* 1×25 tons. 1×12 tons. 2×6 tons. 1×3 tons.
Mobile Cranes: 1×15 tons.
Forklift Trucks: 2.5 tons – 42 tons.

CONSULS:

Belgium	Tel: 2 30 11	Italy	Tel: 2 42 46
Brazil	Tel: 2 26 38	Mexico	Tel: 2 27 04
Chile	Tel: 2 32 26	Netherlands	Tel: 2 22 04
Denmark	Tel: 2 42 91	Norway	Tel: 2 27 83
Dominican Rep.	Tel: 2 53 90	Panama	Tel: 2 20 45
Finland	Tel: 2 35 59	Spain	Tel: 3 26 40
France	Tel: 2 71 27	Sweden	Tel: 2 26 38
Germany	Tel: 2 39 35	Turkey	Tel: 2 26 67
Greece	Tel: 2 41 29	U.S.A.	Tel: 2 22 16

REPAIRS: Engine or other repairs can be undertaken. Repairs to electric installations, motors and refrigerating systems can also be undertaken as well as repairs to wireless stations (including VHF, radio-telephone equipment, radar, echo-sounders, direction-finders, gyro-compasses, steering-gear, Sal logs and cinema projectors).

Workshops duly equipped to undertake hull and engine repairs. Divers and equipment also available for some underwater work. Small tugs, motor-launches and lighters. Small slipway for vessels up to 200 ft. long. No dry docking available. A sea-going salvage tug, owned by Junta Autonoma is stationed in the port.

REPATRIATION: Can be arranged.

AIRPORT: 3 km. from Ponta Delgada. Daily flights to Lisbon by TAP-Air Portugal and to all other islands of the Azores, by SATA Airlines.

Daily connections with flights of TAP-Air Portugal, to and from Europe and United States or Canada.

TIME: GMT minus 1 hour in Winter. GMT in Summer from 0000 hrs. last Sunday in March to 0100 hrs. (local time) last Sunday in September.

HOLIDAYS: 1st January – New Year's Day, 25th April (Liberty Day), 1st May (Workers Day), June 10th (Portugual Day), Corpus Christi, August 15th, October 5th, November 1st, December 1st, Monday before Ascension Day. Government offices close on afternoon of Maundy Thursday and on afternoon of Christmas Eve. Most firms close on Shrove Tuesday and Good Friday.

POLICE/FIRE/AMBULANCE: Police Tel: 22022; Fire Tel: 22333; Ambulance Tel: 22022 or 115.

TELEPHONES: Any ship moored alongside can be connected to the city's telephone network, upon request through the ship's Agent.

SERVICES: Fresh and dry provisions available all the year round.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: No Crew members allowed ashore without landing cards, which are supplied by Agents.

REGULATIONS: Ballast: Vessels must arrive with sufficient ballast to permit safe handling.

Ratguards: It is advisable to use ratguards while moored alongside. Scupper Covers: Boards or other suitable devices must be used to cover outlets from lavatory discharges, etc., to prevent fouling of pier or craft alongside.

Garbage: It is absolutely forbidden to dispose of cinders, garbage, or any other refuse inside the harbour or within the territorial waters limit. Non-compliance is subject to heavy fines.

GENERAL: Visual storm signals are shown on Main Signal Tower.

AUTHORITY: Junta Autonoma do Porto de Ponta Delgada, Rua Teofilo Braga 1, 9500 Ponta Delgada, San Miguel, Azores. *Tel:* 25221-25225 (5 lines). *Telex:* 82287 Portos P. *FAX:* 23390. *Contact:* Luis Brandao, Port Director.

NOTES

Please also advise Shipping Guides Ltd.

Bahamas

FREEPORT: 26.31 N. 78.46 W. (See Plan)

DOCUMENTS:

(a) Inwards:

	Description	Customs	Immigra-tion	Agents	Total
1.	Crew Lists	2	1	1	4
2.	In Transit Passenger List	2	2	2	6
3.	Disembarking Passenger List	2	2	2	6
4.	Stores List	2	—	—	2
5.	Gift Shop Inventory	2	—	—	2
6.	Crew's Declaration	2	—	—	2
7.	Ship's Report Inwards (supplied by Agents)	2	1	1	4
8.	Maritime Declaration of Health (supplied by Agents)	1	—	—	1
9.	Cargo Manifest for Freeport	4	—	2	6

10. Landing cards supplied by Agents to be completed by each disembarking passenger.
11. Baggage Declaration forms supplied by Agents to be completed by each disembarking passenger.
12. Clearance from Last Port will be collected by Customs.
13. Derat Certificate should be available for inspection.

If vessel's previous port of call was in Bahamas items (7), (8) and (13) need not be complied with.

When vessel requires Consular Despatch to country such as Venezuela, 2 extra copies items (1), (4) and (6) should be supplied.

(b) Outwards:

	Description	Customs	Immigra-tion	Agents	Total
1.	Ship's Report Outwards (supplied by Agents)	2	—	—	2
2.	List of Embarking Passengers (if any)	2	2	2	6
3.	Outward Manifest Freeport Cargo	2	—	2	4

If vessel clearing for another Bahamian port item (1) does not have to be complied with, but copy of next port's manifest required.

APPROACHES: The following landmarks are prominent when approaching the port: Borco Refinery 3 chimneys. 369 ft. above MLW. White with red bands showing 3 sets of 4 red lights at night. Visible approx. 20 miles. Flames occasionally visible from Borco stacks. Bahamas Cement Company storage silos just to West of harbour entrance. Visible approx. 15 miles.

Currents in the area are not predictable and are largely wind induced. Harbour is approached through straight channel 1,800 ft. in length, 500 ft. width and with controlling depth of 32 ft. below MLW. Turning basin, 2,000 ft. by 1,800 ft. Vessels may enter and leave harbour on 24 hour basis, weather permitting.

Vessels using Freeport Harbour are advised that an Aero Beacon situated in the Dock 1 area transmits continuously on 209 kHz. the group "ZEP" at a rate of 7 words per minute. The output is rated at 100 Watts. Reception by surface craft has been registered at 60 – 70 nautical miles distance.

PILOTAGE: Compulsory for passenger vessels exceeding 199 gross tons and freighters exceeding 399 gross tons. Pilotage is compulsory for tankers berthing at Borco Dock, but vessels calling for bunkers only may anchor and bunker by barge without using Pilot services. However, pilotage recommended. Pilot station located in position in which Freeport Light bears 050° True, distance 2 miles. Approaching Freeport, particularly from North West, keep at least 3 miles from shore, and, when off port, remain at Pilot Station until boarded by Pilot. Pilotage area extends from Pilot Station to offshore refuelling moorings, anchorage to West of harbour entrance and harbour. Pilots available any time of day or night. Freeport Harbour Control maintains a 24 hour watch for radio signals. Borco on VHF Channel 13 only.

Vessels can communicate by RT on 2182 kHz, and once they have established contact will normally be asked to switch to one of the following frequencies: 2638 or 2738 kHz. Vessels can also communicate by VHF Channels 16 and 14. Freeport call sign on all frequencies is ZFP 81 or Freeport Harbour Control. Give ETA 48 hours in advance, with subsequent corrections as necessary.

The Restricted Area has been extended to 1 nautical mile radius from the Eastern end of No. 2 Jetty (Inner Jetty). Vessels are prohibited from anchoring in this area. No other vessels (with the exception of Borco or Harbour Company vessels) should enter the Restricted Area owing to the fire hazard created by the handling of inflammable liquids emitting explosive vapours.

Additionally, a 2 nautical mile area centered on the Eastern end of No. 2 Jetty (Inner Jetty) has been established. Any vessel closing the port from seaward in order to take on stores, land crew members, take on bunkers, fresh water, etc., other than a vessel going alongside the jetties or entering the harbour, should remain outside this 2 mile limit.

Unauthorised entry into these areas does not carry a penalty, however, the prudent mariner is advised that in any investigative proceedings into accidents within these areas, due account will be taken of any failure by a vessel to observe the 2 nautical mile and 1 nautical mile limits as indicated.

ANCHORAGES: There is a good offshore anchorage approximately 2,500 ft. to the N.W. from the entrance channel for a distance of 1.5 miles (submarine cable in existence) which is sheltered from Northerly winds. The bottom of the sea is lime and coral rock covered by sand and loose lime.

Anchorage area is exposed during periods when strong Southerly winds prevail. During these periods, vessels may drag their anchors. Mariners are therefore advised to use anchorage areas with caution.

A vessel can anchor in depths of 14.6 m. to 18.3 m. (48 ft. to 60 ft.) to the West of the harbour entrance with No. 1 Jetty (Outer Jetty) in transit. Anchorage is not recommended for vessels greater than 60,000 d.w.t. and vessel should be prepared to vacate the anchorage at short notice, particularly if the wind sets in from between S.E. and West. Pilotage is not compulsory but recommended and is available upon request.

MAX. SIZE: *Tanker Berths.*

Berth		d.w.t.	Depth Alongside (MLW)	Max. Draft
No. 3	up to	38,000	50 ft.	40 ft.*
4	" "	80,000	54 ft.	47 ft.*
5	" "	90,000	80 ft.	50 ft.*†
6	" "	312,000	87 ft.	82 ft.
7	" "	65,000	53 ft.	40 ft.*
				Heading East 42 ft.
				Heading West
8	" "	100,000	56 ft.	50 ft.*†
9	" "	130,000	68 ft.	*‡
10	" "	500,000	92 ft.	91 ft.

*Drafts on Berths No. 3, 4, 5, 7, 8 and 9 are limited by depths over submarine pipe-lines in berth approaches.

†47 ft. if headed S.E.

‡46 ft. arriving/47 ft. departing.

HEALTH: Pratique granted by Customs Boarding Officer after Maritime Declaration of Health Form completed by Master and Derat Certificate examined. Important that vessel should not commence refuelling nor work cargo until cleared. A vessel arriving from another Bahamian port, e.g. Nassau, does not require Pratique. If any suspected disease or fever on board, Pratique may be withheld, pending examination by Government Medical Officer.

RADIO: Recommended that radio messages giving ETA, etc., be transmitted via Miami Radio.

Tankers proceeding to Borco Installation should transmit the following information within 6 hours of clearing at last port:

(a) name of tanker;
(b) name of port at which the tanker last called;
(c) date and hour of estimated time of arrival at Freeport.

It is imperative that the Master of each tanker shall establish communications with the refinery at least 72 hours prior to the estimated time of arrival, and that the refinery be notified of any change in ETA. Four hours before arrival at Freeport the Master should establish contact by VHF radio and advise on vessels precise ETA. Any berthing instructions will be passed to the Master at this time.

Radio Telephone: A continuous watch is maintained by the Control Tower of Freeport (Bahamas) Harbour on 2182 kHz and on VHF Channels 16 and 14.

Working frequencies are:

Medium Frequencies:

2638 kHz – Ship-to-Shore
2738 kHz – Ship-to-Shore
2782 kHz – Freeport Harbour (Private frequency).

VHF: Channel 14

In addition, Freeport Harbour can communicate on:

2031.5 kHz – Miami Marine.
2118 kHz – Miami Marine.
2198 kHz – Nassau Marine.
2670 kHz – Coast Guard

As far in advance of the time of arrival as possible, but not less than 1 hour, vessels should establish radio communication with "Freeport Harbour Control" to amend or confirm the ETA.

TUGS: Borco Towing (Bortow) provide 3 tugs for assisting in berthing and unberthing. These are of 4,500 h.p. In addition there are 2 chartered tugs of 4,000 h.p.

BERTHING: 17 berths, depth alongside up to 30 ft.

STEVEDORES: Freeport Harbour Company, Ltd., are the sole stevedoring company. Some limitation on labour availability and difficult to obtain more than 2 gangs at any one time. Normal discharging rate 10 d.w.t. per hook per hour. First ETA at least 48 hours prior arrival, to ensure labour booked in time.

CRANES: Forklift trucks ranging from 8,000 lbs. to 36,000 lbs. capacity. Mobile cranes up to 75 tons capacity may be hired from local companies.

SPECIALISED CARGO HANDLING FACILITIES: *Cement:* Bahamas Cement Company own and operate the whole of Basin No. 3 (1,365 ft. by 350 ft. by 636 ft. – depth 30 ft. at MLW), with bulk handling facilities.

Roll-on/Roll-off: Basin No. 1: 2 ramps for 2 vessels (passenger/car ferry type) at S.E. end. Depth 28 ft. MLW. Both ramps approx. 4 ft. above MHW.

Basin No. 2: 2 ramps for landing ship type vessels at S.E. end. Depth 32 ft. MLW. 1 ramp 4 ft. above MLW (4 vls.), the other 0 ft. (1 vl.).

LPG: There is an LPG and Chemical Berth in Basin No. 4 (Berth No. 14) which accommodates coastal tankers.

Basin No. 4: Berths No. 12-14 used for bunkering vessels up to 600 ft. LOA.

Berth No. 14 used for bulk chemicals (Shell) and gas. Berth No. 12 used for wet docking.

Berths No. 14 (West) and No. 12 (West) accommodate ships and barges for loading of rock for export.

MEDICAL: No port Medical Officers. Persons requiring attention must proceed approximately 7 miles to Freeport's hospital and dental clinic, or to Antoni Clinic or Lucayan Medical Group Clinic which approximately same distance from port area. Holistic Health World also approximately 7 miles from Freeport Harbour. Advance notice to Agent desirable but not essential.

TANKER BERTHING FACILITIES: There are 4 off-shore loading platforms (Sea Islands) situated between 2,500 ft. and 3,600 ft. from the shore line at Pinder's Point. There are 2 berths on each platform making a total of 8 berths which can accommodate tankers ranging in size from 16,000 to 500,000 d.w.t.

Inside the harbour at Dock 1 are facilities for handling smaller vessels, mainly barge loading and import/export of refined products on a small scale. This is the only Mogas import berth for the island.

Borco Dock 1: The No. 1 Dock area is the centre of Bortow's Operations. Bortow is responsible for the maintenance and provision of all marine transport associated with the off-shore operation. Bortow provides tugboats, mooring boats, personnel carriers, pilotage service and bunker barge facilities, the barges being used to bunker and water vessels in the harbour and in the anchorage.

The working length of the dock is 600 ft., it will accommodate vessels up to approximately 18,000 d.w.t. with a maximum draft of 27 ft.

Bortow provide a bunkering service. This service is given to vessels visiting the Port of Freeport, (cruise ships, cargo ships), and to vessels anchoring outside the port solely to purchase, bunker fuel. The barge service is also used occasionally at Borco's marine facilities when it is more convenient to bunker a vessel by barge. Bunker fuel supplied to the above mentioned vessels ranges from diesel oil to heavy fuel oil, blends being made in between to suit individual customer requirements.

Products imported or exported via the No. 1 Dock loading facilities are:

Imports:
1. Premium Gasoline.
2. Regular Gasoline.
3. Heavy Fuel Oils for Bunkering.
4. Heavy Fuel Oil, to be supplied as bunker fuel to visiting tankships.

Exports:
1. Diesel oil to small craft for inter-island distribution.
2. All grades of fuel oil into barges or tankships when scheduled for delivery to the Out-Islands or the East Coast of U.S.A.
3. Kerosene.
4. LPG.

Note: Tankships, except for gasoline imports and local sales of kerosene and LPG, normally only use the No. 1 Dock facilities during occasions of extreme bad weather.

Loading Platforms: The 3 loading platforms which accommodate Berths No. 3 & 4, 5 & 6, 7 & 8 are of fully enclosed, box like type of construction the interior of which contain equipment for the operation of each respective platform.

The platform serving Berths No. 9 & 10 is of a slightly different design in-so-much that it is of an open type construction with no between decks storage space.

All of the platforms are situated in an elevated position approximately 40 ft. above sea-level and are supported by piling structures sunk into the sea-bed.

The platforms serving Berths No. 3 & 4, 7 & 8 and 5 & 6, 9 & 10 are interconnected by cat-walks which extend in a N.W./S.E. direction, in line with prevalent weather conditions. The overall lengths of these structures are approximately 2,040 ft. and 3,000 ft. respectively.

Each loading platform is entirely self-sufficient in that they each have their own power supply, fresh water, office and store-rooms, fire fighting and anti-pollution equipment, slop systems, storm water systems and a host of contributory operating equipment. Communication systems amount to P.B.X. Telephones, Magneto Telephones (inter-Jetty communication) and 2 VHF Radio systems.

Two fresh water lines extend from the shore, one to Berths No. 9 & 10 and the other to Berths No. 3 & 4. Fresh water is then supplied to Berths No. 5 & 6 via Berths No. 9 & 10, and Berths No. 7 & 8 via Berths No. 3 & 4. This water supply can also be used to water tankships alongside the platforms.

To enable tankships to be safely secured alongside the loading facilities, each platform and associated cat-walk unit has mooring dolphins with quick-release mooring hooks and integral capstans.

Berths No. 3 & 4: Situated approximately 2,500 ft. from the Pinder's Point shore-line with a platform size of 94 ft.×100 ft.× 12 ft. in depth. Submarine sea lines available are:

1×30 in.	Diameter	Crude Oil Line.	Mothballed
2×24 in.	"	Fuel Oil Lines.	
1×20 in.	"	Diesel Oil Line.	
1×20 in.	"	Kero/Jet Line.	
1×20 in.	"	Naphtha Line.	
2×20 in.	"	Dirty Ballast Lines.	
1×18 in.	"	Bunker Fuel Line.	

These pipelines terminate at 12 in. Chicksan marine loading arms – counter balanced and hydraulically powered.

Berths No. 5 & 6: Situated approximately 3,600 ft, from the Pinder's Point shore-line with a platform size of 100 ft.×144 ft.×12 ft. in depth. Submarine sea lines available are:

Berth No. 5.

2×30 in.	Diameter	Crude Oil Lines.	Mothballed
1×24 in.	"	Fuel Oil Line.	
1×20 in.	"	Diesel Oil Line.	
1×20 in.	"	Kero/Jet Line.	
1×20 in.	"	Dirty Ballast Line.	
1×18 in.	"	Bunker Fuel Line.	

Berth No. 6.

2×30 in.	"	Crude Oil Lines.
1×24 in.	"	Fuel Oil Line.
1×20 in.	"	Dirty Ballast Line.
1×18 in.	"	Bunker Fuel Line.

These pipelines terminate at 16 in. Chicksan marine loading arms of the same design as on Berths No. 3 & 4.

Berths No. 7 & 8: This platform was completed and handed over in 1973. Situated approximately 2,500 ft. from the Pinder's Point shoreline with a platform size of 110 ft.×90 ft.×12 ft. in depth.

Submarine sea lines available are:

2×24 in.	Diameter	Fuel Oil Lines.
1×20 in.	"	Diesel Oil Line.
1×20 in.	"	Kero/Jet Line.
1×20 in.	"	Naphtha Line.
1×20 in.	"	Dirty Ballast Line.
1×18 in.	"	Bunker Fuel Line.

There is no crude oil facility available at this berth. Crude oils will be handled by Berths No. 6, 9 & 10 under normal conditions.

The above listed pipelines terminate at 12 in. Chicksan marine loading arms, again similar in construction to the berths mentioned previously. 6 arms service each berth of which 2 are bunker lines and the remaining 4 for product loading.

Berths No. 9 & 10: This platform, the most recent addition to the marine loading facilities at Borco was completed and handed over in 1974.

Situated approximately 3,600 ft. from the Pinder's Point shore-line with a platform size of 190 ft.×125 ft. (No below deck space) this facility is of a rather different design to the other loading platforms namely:

The platform is of a completely open design with major operating equipment sited on the top surface. Ancillary equipment such as slop and storm water systems are situated below the platform. Because of its design, equipment is more readily available and build up of hydrocarbon vapours is eliminated.

Other features incorporated within the platform design are:
1. Weather recording station.
2. Meter (bunker) proving systems – electronically controlled.
3. Berthing approach system for Berth No. 10 which is used by the Pilots as an aid in safety moving vessels on or off the berth.

Submarine sea lines available are:

1×20 in.	Diameter	Bunker Fuel Line.
1×24 in.	"	Fuel Oil Line.
1×20 in.	"	Ballast Water Line.
1×42 in.	"	Crude Oil Line.
1×30 in.	"	Crude Oil Line.

As can be readily seen this platform is a crude oil/fuel oil loading/discharging facility only, white oil products are not available. The above stated lines terminate at 10 Chicksan marine loading arms, again similar in construction to those on other platforms. The service per berth as below:

Berth No. 9.

1×12 in.	Diameter	Bunker Fuel.
1×12 in.	"	Ballast.
1×12 in.	"	Fuel Oil.
2×12 in.	"	Crude Oil.

Berth No. 10.

1×16 in.	Diameter	Bunker Fuel.
1×16 in.	"	Ballast.
1×16 in.	"	Fuel Oil.
2×16 in.	"	Crude Oil.

Also see "Shipmaster's Report".

BALLAST: Facilities are provided for discharge of dirty ballast at the tanker jetties. Each jetty is connected by a 20 in. ballast pipe-line. These lines have been tested to 350 lb. pressure and are designed for 150 lb. working pressure.

DENSITY: Salt water. Rise and fall of tide between 3 ft. and 3 ft. 6 in.

FRESH WATER: Fresh water available by pipe-line in the harbour. Average pumping rate 18 t.p.h. per connection with maximum 2 connections in the harbour. Fresh water also supplied by barge to the tanker berths at the rate of about 30 t.p.h. and to vessels at anchorage.

FUEL: All grades available. 24 hours notice desirable. Bunkering facilities are provided at each tanker jetty. 1×16 in. pipe-line provides "C" fuel and intermediate fuel, and 1×16 in. pipe-line provides marine diesel and gas oils. Fuel also available to vessels at anchor by barge.

CONSULS: No Consuls in Freeport.

REPAIRS: Only minor repairs.

SURVEYORS: 1. Caleb Brett (Bahamas) Ltd., 1st Floor Administration Building, Freeport Harbour, P.O.Box F-2428, Freeport, Bahamas. Tel: (809) 352-7608. Telex: (297) 30029. Cables: Brettcalcabhm.

2. E. W. Saybolt & Co., S.A., 24C Kipling Building, P.O.Box 2049, Freeport, Bahamas. Tel: (809) 352-7616. Telex: (297) 30042. Cables: Saycosa. Additional offices South Riding Point, Grand Bahama, Harbour Area, Freeport.

3. Epic Petroleum Inspection Co. Ltd., P.O.Box F-2525, 25 Churchill Building, Freeport, Bahamas. Tel: (809) 352-2525, 352-4139, 373-4840. Telex: 30051.

GANGWAY/DECK WATCHMEN: Not necessary as security guards patrol port area 24 hours a day.

OPENING/CLOSING HATCHES: Normally carried out by stevedores.

CERTIFICATES: Derat Certificate required.

CUSTOMS ALLOWANCES: 50 cigars or 200 cigarettes or 1 lb. tobacco and 1 quart of spirits per man.

CARGO GEAR: Currently no cranes based permanently in harbour area. However, mobile cranes can usually be made available, although essential shipowners consult Agents before accepting heavy lifts requiring shore facilities for discharge

REPATRIATION: Facilities for crew changes and repatriation by air.

AIRPORT: Approximately 5.5 miles from harbour, served by following airlines: Bahamas Air, T.W.A. and Air Canada.

TIME: GMT minus 5 hours. Summertime, from April to October, GMT minus 4 hours.

HOLIDAYS: No normal business activity in the port on following days: New Year's Day; Good Friday; Easter Sunday; Christmas Day; Labour Day (1st Friday in June); Whit Monday; Independence Day (July 10th); Boxing Day (December 26th); Emancipation Day (1st Monday in August); Discovery Day (October 12th). Work ceases 1700 hrs. on day preceding above holidays and commences 0800 hrs. on day after.

POLICE/AMBULANCE/FIRE: Police Tel: 352-8333. Police Station at Passenger Terminal (Deck No. 1) and another approximately 2 miles from harbour, and operates several radio-controlled vehicles. Ambulance Tel: 352-6735. Ambulance based at Rand Memorial Hospital which approximately 7 miles from harbour. Fire Tel: 352-8888. Fire Station approximately 7 miles from harbour and at present consists of 2 fire-trucks with auxiliary vehicles.
TELEPHONES: Can be placed on board at certain berths. There is a connecting charge.
SHIP SUPPLY SERVICE: Lucaya Shipping and Trading Co. Ltd., P.O.Box F-3240, Freeport, Grand Bahama, Bahamas. Tel: (809) 352-3581. Cables: Caytrade. Telex: 30 711.

Services may be performed by launch or tug boat 2.5 to 3 miles off the port; at a berth in the harbour or at anchorage.
IDENTIFICATION CARDS: Port personnel and agents wear I.D. cards issued by Freeport Harbour Co.
GARBAGE DISPOSAL: Collection service available 0900 hrs. – 1700 hrs. Drums or skips can be provided as requested alongside. Contact: Sanitation Services on (809) 352-9721.
WASTE OIL DISPOSAL: Shore tanks, barges and tanker trucks are available through Sanitation Services. Tel: 352-9721.
SEAMAN'S CLUBS: There are no Seamans Clubs available. Freeport is a total community. There are churches, synagogue, major banks and an interesting and varies social life. International telephone calls can be made using state of the art equipment. Sporting events can be arranged and transportation is by bus or taxi.
CURRENCY: Bahamian Dollar is on a par with the U.S. Dollar and is freely exchanged with the U.S. currency.

SHIPMASTER'S REPORT: December 1984 (updated 1990).
Pilotage: Pilot boards from pilot boat.
Radio: With 5 Day Message Receivers require the following:
Name of vessel and call sign.
Deepest arrival draft.
Gross bbls. at observed temperature on arrival (estimated).
Average temperature in °F on arrival (estimated).
Expected discharge rate in bbls/hr. assuming unrestricted by shore facilities.
Maximum freeboard 55 ft.
No. and size of cargo manifolds.
No. of hours required to ballast.
Ship's loaded gross bbls. at 60°F less retained slops.
Ship's slop quantity on arrival load port indicating oil and water in bbls.
Indicate if Loading On Top (L.O.T.).
Which slop tank.
Indicate ship experience factor for last 5 cargoes excluding initial voyage after dry dock.
Was Letter of Protest noted, if so give brief details.
VHF: Channel 13 for working Pilots.
Tugs: Usually 2 tugs, 1 of which will put up 2 headlines and 2 quarter lines, the other just 2 headlines. Depends on weather conditions as to which tug is forward and which aft.

AUTHORITY: Freeport Harbour Company, Ltd., P.O.Box F-42465, Freeport, Grand Bahama. *Tel:* (809) 352-9651/4 or (809) 352-9088. *FAX:* (809) 352-6888. *Cables:* Freharco. *Contact:* Captain Michael O'Brien, Port Director. E. Charles Rolle, Harbour Master.

MORTON: 21.03 N. 73.39 W. (See Plan)

SHIPMASTER'S REPORT: June 1996.

LOCATION: The berth (Morton Salt Loading Facility) is located in Man of War Bay on Grand Inagua Island.
DOCUMENTS:
3 copies Crew List.
3 copies Ship's Stores Declaration.
3 copies Crews Declaration.
Clearance from Last Port.
PILOTAGE: Compulsory. Pilot boards 1 mile off berth.
ANCHORAGE: Not available for large vessels.
VHF: Channels 16, 12, 13 and 14 for Pilot and Agent.
TUGS: Pilot boat or other small craft used.
BERTHING: Port anchor with 2 shackles in water (See "Plan"). Four ropes are sent to dolphins. Bottom is soft coral. Depth 40 ft. – 42 ft. Length of the berth 630 ft. Anchor remains in water with about 6-8 shackles to assist with departure.
CARGO FACILITIES: Belt conveyor fixed on the centre of berth. Rate of loading 700 tonnes per hour. Normal working time, with short intervals for meals while the ship is alongside the berth.

No draft surveyor available. Quantity of cargo counted by the number of trucks. There are no scales on the salt terminal.
FRESH WATER: Not available.
TIME: GMT minus 5 hours. Daylight saving time GMT minus 4 hours.
SHORE LEAVE: No limitations. Nearest village is 7 miles from berth.
CURRENCY: Bahamian Dollar and U.S.Dollar.
GENERAL: *Stores:* Local provisions available for cash.

NASSAU: 25.05 N. 77.20 W. (See Plan)

DOCUMENTS:
(a) Inwards:

Description	*Customs*	*Immigration*	*Agents*	*Total*
1. Ship's Report Inwards (supplied by Agents)	2	—	—	2
2. Maritime Declaration of Health (supplied by Agents)	1	—	—	1
3. In transit Passenger Manifest	2	1	2	5
4. Disembarking passenger manifest	2	1	2	5
5. Crew Lists	2	—	1	3
6. Crew Curio List	1	—	—	1
7. Stores List	2	—	1	3
8. Gift Shop Inventory	1	—	—	1
9. Cargo Manifest	3	—	3	6

10. Derat. Certificate – should be available for inspection.
11. Clearance from last port to be given to Customs.
12. Immigration landing cards must be completed by all passengers. (These are supplied by Agents.)
13. Customs Declaration forms must be completed by all disembarking passengers. (These are supplied by Agents.)
14. Cargo Tally books – two per hatch where Nassau cargo is to be discharged.

If vessel's previous port of call was in Bahamas items 1, 2 and 10 need not be complied with. Item 9 – two cargo manifests supplied to Agents should show freight charges in detail.
Note: All non-Bahamian passengers finally disembarking at Nassau must be in possession of return ticket or have proper Bahamas Immigration Entry Permit.

(b) Outwards:

Description	*Customs*	*Immigration*	*Agents*	*Total*
1. Ship's Report Outwards (supplied by Agents)	2	—	—	2
2. List of embarking passengers	2	1	2	5
3. Manifest covering cargo loaded	3	—	3	6

Note: If vessel clearing for another Bahamian port, item 1 does not have to be complied with, but copy of next port's manifest required.
PILOTAGE: Presently no signal station and Masters requested telegraph ETA at least 48 hours in advance with subsequent amendments as necessary to Agents, who will inform Pilots. Pilot normally boards in approximate position one mile North of Western end of Hog Island (Paradise Island). When port closed due to bad weather a red flag will be displayed at Western end of Hog Island by day and red light in same location at night. Vessels may anchor in vicinity of Pilot Station where depth of water allows. There are three Pilots and boats are clearly marked "Pilot" and display international pilotage signals. Pilots are accustomed to boarding by pilot ladder. Pilots on VHF Channels 16 and 14. Pilots may be contacted by Tel: (809) 322-7982/3 or Fax: (809) 322-7984.
ANCHORAGES: Anchorage just off Nassau Harbour extends over area North and East of Western point of Hog Island to approximately half a mile off shore, where it becomes too deep.
RESTRICTIONS: No restrictions apart from adverse weather conditions or excessive draft which may make it advisable to enter on certain state of tide.
MAX. SIZE: No restriction on length or breadth but safe draft is considered 35 ft. Largest vessel to enter harbour to date is QE II. Safe draft cargo pier 25 ft.
HEALTH: Provided vessel healthy Customs grant Free Pratique on receipt International Declaration of Health form completed and signed. If any suspected disease or fever on board Master should advise Agent by cable, who will inform appropriate authorities and advise Master clearance procedure. Once vessel obtained Free Pratique in one Bahamas Port and proceeds another there are no further procedures at next port.
RADIO: Communications can be directed through Nassau Harbour Control, which came into existence in 1974, in an effort to control shipping and movements in and out of the harbour of Nassau.

VHF frequencies used are Channels 6, 9, 14, 16, 12, 68, 73, 74, 79, 20, 65 and 66.

Single Side Band frequencies used are 2082.5 – 2182 kHz. Also transmits 2522 kHz, receive 2126 kHz upper sideband.

AM Radio Ship-to-Shore frequencies are 2182 kHz.
TUGS: 4 tugs, 2,180 h.p. – 4,620 h.p. Tugs normally join vessel at entrance to turning basin. Usual for vessels to provide tow line.
BERTHING: No specific requirements but due to congestion essential that Agent is kept well informed of ETA.

Depths at the 12 cruise ship berths range from 30 ft. – 40 ft. (9.15 m. – 12.20 m.).
CRANES: There are 2 lift cranes for Container Handling at the Union and John Alfred Wharves. Both wharves are geared exclusively for container traffic, but a limited amount of break bulk cargo is handled at the Union Wharf.

At the Union Wharf is an "American" Truck Crane of 120 ton capacity geared to handle 20 ft. and 40 ft. containers with a 100 ft. boom used in Lo/Lo method.

The John Alfred Wharf is served by a Manitowac Track/Crawler crane of 130 ton capacity with a 150 ft. boom. Here 20 ft. and 40 ft. containers are landed by Lo/Lo method. Also available 135 ton mobile crane.

The Union Wharf encompasses a total berth length of 546 ft., while at the John Alfred Wharf berth length is limited to 500 ft.
BULK CARGO FACILITIES: There are no facilities for bulk cargo.

BRIDGES: No bridges affecting entrance to main berths.
STEVEDORES: Master should include in ETA number gangs required and tons per hatch for discharge, as shipping documents do not always arrive in advance. Discharge rate approximately 10 t.p.h.
MEDICAL: Full medical services available. In serious cases requiring immediate attention Agent should be advised so that doctor may board on arrival.
TANKERS: Limited facilities provided for tankers at Clifton Point on S.W. side of Island. Vessels moor to dolphins offshore and discharge through submarine pipeline. Vessels proceeding Clifton Point (unless otherwise advised) should pick up Pilot off Nassau and clear Customs. Only oil imports are for domestic purposes and there is no oil refinery. Max. draft Clifton Point 36 ft.
Tugs: 2 tugs of about 2,000 h.p. each are used to assist in berthing. Usually 1 tug assists when leaving.
Cautionary Advice: In the past few years several Caribbean berths/fendering systems were damaged during berthing operations, the absence of towing line, between tanker and tug(s) being a contributory cause. It is recommended that the Master discuss berthing practices with the Pilot before the approach and insist that a towing line be passed.
Berthing: The vessel is moored port side to the pier. The starboard anchor is used at times. This procedure is sometimes reversed. Mooring is usually carried out during daylight hours, but vessels unmoor and sail at all hours. A boat takes the headlines to the buoy first, then the forward and aft breastlines, the springlines to the platform last. Six ropes forward, the same number aft. The boat remains in attendance at the pier to transport personnel and crewmen, during the discharge.
Hoses and Boom: One or more 8 in. diameter hoses are used for clean products. Two or more grades can be pumped simultaneously.

The platform is fitted with oil cargo pipelines as follows:
1 LPG line, owned by Tropigas/Taylor, 6 in.
1 distilled products line, Texaco, 8 in.
1 diesel oil line, Bahamas Electric Co., 12 in.
1 jet fuel/diesel oil line, Esso, also Shell, 12 in.
1 Avgas/Mogas line, Shell, also Esso, 8 in.
1 fuel oil line, Bahamas Electric Co., 10 in.

Tankers carrying more than one grade to Clifton Point should lay out the cargoes in such a way that two or more grades can be discharged simultaneously.

1×10 in. diameter hose is used for dirty products. Maximum pressure allowed on the hoses is 125 p.s.i.

Vessel's cargo boom is required for lifting cargo hoses.

On completion of discharge, vessel's Butterworth or fire hose is connected to special hydrants on the cargo pipelines, to flush back the cargo hoses to the vessel's slop tanks.
DENSITY: 1025.
FRESH WATER: Available Prince George Wharf on old section but not yet provided on new deep water pier. Rate 10 – 15 t.p.h. from hose connections on dock. Public Water Department supplies hose end connections. Price approximately $9.55 per 1,000 gals. depending on amount required. No water barges available.
FUEL: No fuelling facilities available with exception of small quantities diesel which may be delivered by Tanker Truck (4,000 gals.) by prior arrangement.

Small tankers can deliver fuel (80,000 – 100,000 gals.).
FIRE PRECAUTIONS: No special requirements. Vessels carrying explosives should notify Agent in advance so that Authorities may be advised.
CONSULS:

Country	*Status*	*Location*	*Telephones*	
			Office	*Home*
Austria	Honorary Consul	Nassau	74258	74258
Belgium	Honorary Consul	Nassau	32371	74233
Canada	Honorary Commercial Agent	Nassau	55591	31305
Cyprus	Honorary Consul	Nassau	24292	36189
Denmark	Honorary Consul	Nassau	42265	42265
France	Honorary Consular Agent	Nassau	32371	74233
	Honorary Consular Agent	Freeport	352-7831/2	373-4611
Germany	Honorary Consul	Nassau	32156-8	51230
Greece	Honorary Vice-Consul	Nassau	24097	52025
Guyana	Honorary Consul	Nassau	35491	34880
Iceland	Honorary Consul General	Nassau	28956	57709
Israel	Honorary Consul	Nassau	28956	34095
Italy	Honorary Consular Agent	Nassau	24416	42013
Japan	Honorary Consul	Nassau	35654	Unlisted
Mexico	Honorary Consul	Nassau	52863	
Monaco	Honorary Consul	Nassau	51166	74050
Netherlands	Honorary Consul	Nassau	28210 22275	22334
Norway	Honorary Consul	Nassau	24614	41112
Peru	Honorary Consul	Nassau	57511	52177
Sweden	Honorary Consul	Nassau	77944 77785	77944
Switzerland	Honorary Consul	Nassau	28349	

REPAIRS: Only limited repairs and requirements should be passed to Agent in advance of vessels arrival.
GANGWAY/DECK WATCHMEN: Vessel to supply own watchman if required.
OPENING/CLOSING HATCHES: Roller hatches usually opened and closed by vessel's crew but older wooden hatches and tarpaulins handled by stevedores.
CERTIFICATES: Only certificate normally required for inspection is Derat Certificate.
CUSTOMS ALLOWANCES: Quantity should be reasonably based on individual requirement and length of stay in port. Actual amount is at discretion of Customs Officer clearing vessel.
REPATRIATION: Crew changes can be arranged but accommodation expensive and not always available at short notice.
AIRPORT: Extremely good air services. At certain periods airlines become fully booked and suggested that reservations be made in advance.
TIME: Local time (Eastern Standard Time) 5 hours behind GMT. Daylight Saving Time 4 hours behind GMT applicable 27th April to 26th October.
HOLIDAYS: New Year's Day (1st January); Good Friday; Easter Monday; Whit Monday; Independence Day; Labour Day; Emancipation Day; Discovery Day (12th October); Christmas Day (25th December); Boxing Day (26th December); Cargo can be worked on all holidays except Labour Day and Christmas Day.
POLICE/AMBULANCE/FIRE: Police 24444; Ambulance 22221; Fire 919.
TELEPHONES: No facilities for placing telephones on board.
SERVICES: Most specialised services unavailable, e.g. radar, radio, gyro, tank cleaning, compass adjusting. If Agent given sufficient notice arrangements can be made for technicians to be flown from Miami.
SHORE LEAVE: No limitations.
IDENTIFICATION CARDS: Not required.
GARBAGE DISPOSAL: A collection service is available, size ranges in cubic yards (containers) and are provided alongside. Garbage pick-up is $70.00 for first collection and $50.00 for any additional collections. Collection time is usually early morning to late afternoon.
WASTE OIL DISPOSAL: Not available.
SEAMAN'S CLUBS: None.
CURRENCY: Bahamian Dollar. There is no local currency restrictions placed upon seafarers. The U.S. dollar is exchanged dollar for dollar on the local market.
GENERAL: *(a)* Bonded Stores only available to passenger vessels regularly calling Nassau. *(b)* Passenger Vessels: Is of assistance to Agent to know how many passengers disembarking and how many in transit.
AUTHORITY: Port Authority of Nassau, P.O.Box N-8175, Nassau, Bahamas. *Tel:* (809) 322-8832, 326-5677. *Telex:* 20590 Bahport. *FAX:* (809) 322-5545. *Cables:* Port Department, Nassau, Bahamas. *Contact:* Harvey A. Sweeting, Port Controller.

SOUTH RIDING POINT: 26.37 N. 78.14 W. (See Plan)

LOCATION: The terminal is situated at South Riding Point on the South coast of Grand Bahama Island, about 35 miles East of Freeport.

At a distance of 4,000 ft. offshore, the Sea Island Mooring Dolphin extremities are positioned thus:
No. 1 Mooring Dolphin: Lat. 26° 36′ 43.7″ N., Long. 78° 13′ 49.5″ W.
No. 6 Mooring Dolphin: Lat. 26° 36′ 46.7″ N., Long. 78° 13′ 33.6″ W.
BAHAMIAN FLAG: Bahamian national flag shall be flown during daylight hours by all vessels within Bahamian territorial waters.
DOCUMENTS: Incoming:
Prepared by Ship:
5 Crew Lists.
3 Stores Lists.
3 Crew Declaration forms (Signed by all on board).
4 Copies of Bills of Lading.
3 Cargo Manifests.

In addition the ship will have to supply a clearance from last port of call, Derat Certificate, vaccination lists and the usual ships papers viz: Register, Safety Construction, Radio, Safety Equipment, Load Line Certificate. Oil Record Book must be up to date and available for inspection.

All vessels must have a valid certificate of insurance or other financial security in respect of civil liability for pollution damage.
Prepared by Agent:
1 Copy of Maritime Declaration of Health.
2 Copies of Inwards Report.
Customs and Immigration: After pratique has been granted, an immigration and customs inspection is carried out. The Master will be required to furnish particulars including:
(a) Name and nationality of vessel.
(b) Last port or ports of call.
(c) Nature of cargo.
(d) Number of crew.
(e) Port of destination and name of Agent.
(f) Number of days since departure from last loading/unloading port.

Copies of the Crew List and stores remaining on board will be required before clearance is granted.

Masters of vessels must take every precaution to ensure that no drugs, wine or alcoholic liquors are supplied, sold or conveyed to any person at the terminal.
Outgoing:
Prepared by Agent:
4 Copies of Outward Cargo Manifest.
2 Copies of Outwards Report.
Port Clearance Certificate.

In order to comply with Immigration regulations, crews should be checked before sailing and any missing seaman reported to the Agent. In the case of seamen left ashore for any reason, Masters are requested to furnish a letter accepting responsibility for all expenses incurred, advances if any, and instructions for repatriation.

Documentation and Clearance:

Documentation on completion of cargo operations is normally attended to prior to the vessel vacating the berth. In cases where excessive documentation is anticipated a vessel may be asked to leave the berth to complete this standing off. In such cases launches would be made available to transport documents and personnel in order to expedite the vessel's departure.

APPROACHES: Vessels approaching South Riding Point from the Eastern entrance of Northwest Providence Channel are recommended to make departure from Great Stirrup Cay Lighthouse Gp. Fl. (4) 15 sec. 14m. and head directly for South Riding Point Terminal.

Preliminary extensive soundings by U.S. Hydrographic Department indicate no underwater obstructions up to 100 fathom line within Northwest Providence Channel.

An observation airship/balloon is sited just North of the Terminal in position: Lat. 26° 38′ 00″ N., Long. 78° 14′ 22″ W.

It is clearly visible from seaward, painted white and at night a bright Qk. Fl. strobe light marks position. When in use it rises to a distance of 10,000 ft. above the ground.

A conspicuous parabolic dish antenna is situated in position: Lat. 26° 37′ 30″ N., Long. 78° 17′ 58″ W. The antenna has a face diameter of 85 ft. and maximum height above sea level is 134 ft.

The large buff-painted oil storage tanks are visible behind the sea island. The terminal frontage is backed with pine trees and scrub.

Lights: A light, Fl.R. 3 seconds, is exhibited from a height of 140 ft. above sea level on top of the sea island control building on the central platform, whilst Nos. 1 and 6 mooring dolphins are marked by quick flashing red lights.

Two leading line (range) towers mark the 300 ft. wide approach channel centre line. Lights with clear lenses, each 2.5 seconds flash, 0.5 seconds eclipse, are exhibited from the top of the towers at elevations of 39.4 ft. and 53 ft. The towers are located at Lat. 26° 37′ 21.7″ N., Long. 78° 13′ 10.2″ W., and Lat. 26° 37′ 22.8″ N., Long. 78° 13′ 11.5″ W. respectively. Daymarks are attached as follows:

Leading mark: A 9 ft. triangle at the base of the tower.

Rear mark: A 9 ft. × 6 ft. diamond immediately below the light.

Both marks are painted with 'dayglo' orange.

Buoys: Red and Black Buoys mark the outer channel entrance to the inner harbour whose light characteristics of red and green respectively are each 2.0 seconds flash, 2.0 seconds eclipse.

Three white buoys with white lights mark the 50 ft. contour.

PILOTAGE: Berthing and operational instructions will be given by South Riding Point Control on vessel's arrival at South Riding Point.

A vessel will be deemed to have arrived when in a position, 3 miles South of the sea island and in this position the Berthing Master will board from a tug.

Before a vessel is allowed to proceed the Master will be required to sign the following forms:

(a) Conditions of use of sea berths and inner harbour at South Riding Point (See "Appendix I").

(b) Tug Requisition (See "Appendix II"). The Master will also be provided with copies of the Fire and Safety Regulations (See "Appendix IIIA and IIIB") and a Ship/Shore Safety Check List Form (See "Appendix IVA and IVB").

ANCHORAGES: Anchorage or the lowering of anchors is prohibited at the Sea Island berths.

HEALTH: On completion of mooring, Customs officials acting on behalf of Health and Immigration authorities will board the vessel to grant Pratique.

RADIO: Vessels loading for South Riding Point should communicate ETA date to the terminal immediately after clearing loading port.

Variations of this original ETA date should be communicated throughout the voyage.

Vessels proceeding to South Riding Point Terminal to load should communicate their ETA immediately upon clearing departure port.

All vessels should upgrade ETA's 72, 48 & 24 hours prior to arrival and should transmit the information laid out in "Appendix VII" at least 36 hours prior to arrival.

VHF: Station "South Riding Point Shore Control" located at the terminal is equipped with VHF radio maintaining continuous watch on Channel 16. After making successful contact, vessels will be required to change to a working frequency, where information will be exchanged regarding berthing, manifold connections, quantity of ballast and deballasting time required.

The terminal is also equipped with approved intrinsically safe VHF walkie-talkie radio sets and vessels will have this additional communication with the terminal after boarding by the Berthing Master.

TUGS: 2 × 4,200 h.p. diesel tugs are stationed at the terminal. Each tug has a bollard pull of 50 tons. Additional tugs are available to handle large size vessels.

All tugs are equipped for fire fighting and can deliver water at the rate of 2,000 gallons per minute through direct or fan spray nozzles. The tugs have foam making and oil dispersant equipment.

Conditions of hire are given in Appendix II.

Small Craft: The terminal has one diesel engined personnel/general purpose carrier for up to 25 persons. Launches are available for hire when operationally convenient.

Small Craft Landing: A landing is situated on the West side of the platform of the oil berths and there are additional landing stages at mooring dolphins Nos. 1 and 6.

BERTHING/UNBERTHING: *Responsibilities:* In all circumstances, the Master of any vessel shall remain solely responsible on behalf of his owners, for the safety and navigation of his vessel.

Tugs: Tank lids and openings should be securely closed before tugs are made fast. Tug utilisation in berthing operations will be as required by the Berthing Master who will meet the vessel in position as directed off the sea island. Masters of calling vessels are reminded of their obligation to comply with statutory pilot ladder rules and associated safe access regulations

Mooring System: The Berthing Master will advise the Ship's Master of minimum mooring requirements. Usual moorings consist of 2 springs, 3 breast and 4 head/stern lines at each end.

The berths have double and triple quick release hooks of 150 and 100 tons capacity. Mooring and berthing dolphins have electrically operated capstans with 2 ton line pull at 100 ft. per minute in association with mooring assemblies. Messengers are provided on all mooring dolphins.

Ship Connection: The positioning of the vessel's deck manifold in relation to the loading arms on the berth must be carried out to a close tolerance to the requirements of terminal personnel and as directed by the Berthing Master.

Loading arm connection will be made to ship's manifold by the sea island crew with assistance from ship's personnel.

Independent oil measurement representatives will attend for ullaging and sampling and/or inspection of cargo tanks in vessels discharging or loading.

Unberthing: Tug attendance and numbers will be dependent on weather conditions and on the advice of the Berthing Master.

BERTHING FACILITIES: The Sea Island has two berths interconnected for tanker to tanker transfer and to the shore tanks and inshore berths by 2×36 in. diameter submarine lines. One line for ballast/slops and another for crude.

The island is 1,470 ft. long with a central platform 48 ft. above datum and 3 mooring dolphins 25 ft. above datum on each side.

There are 4 fixed and 4 oscillating foam/oil dispersant monitor units on the platform.

The berths have a sacrificial anode cathodic protection system and ships that have an impressed voltage cathodic protection system should turn it off in the vicinity of the sea island.

Berth No. 1: Tankers of 50,000 to 500,000 d.w.t. can dock at this outer berth which is equipped with a self levelling and articulated gangway and 4×16 in. diameter Chicksan loading arms with quick release couplings.

Water depth at the berth is 100 ft.

Berth No. 2: Tankers of 35,000 to 100,000 d.w.t. with a max. LOA of 900 ft. can dock at this inner berth which is equipped with a self levelling and articulated gangway and 4×12 in. diameter loading arms with quick release couplings.

Water depth at the berth is 85 ft.

Small Boat Harbour: This harbour is at the S.W. corner of the inner harbour and has a water depth of 25 ft. The harbour is used by the Company's tugs and small craft.

LOADING/UNLOADING: Cargo transfer operations are carried out on VHF Channel 74.

Procedure: Once the vessel is secure, the Berthing Master, who also acts as Loading Master, will advise the Master and Chief Officer of their cargo programme and discuss the vessel's ability to comply. Any adjustments will be mutually agreed at this stage and be reflected on the Loading/Discharging instructions which the Master will sign.

Ballast Water: Ballast water can be received in the terminal oil and water separation tanks through one of the submarine or onshore lines at rates of up to 5,000 t.p.h. On no account may ballast water be otherwise discharged in territorial waters, unless vessel has segregated ballast system. A charge is levied on all slops and ballast received ashore.

Dirty ballast and slops from ships' cargo tanks which, on the previous voyage, carried product including fuel oils or any crude requiring heat, cannot be accepted ashore. In such cases, vessels must arrive with clean ballast for shore reception.

During ballast operations at the berths, strict observance of rules and regulations governing the opening of sea valves is necessary and in correct sequence with ballast pump commencement to eliminate the risk of oil spills. Vessels may be required to ballast concurrent with discharge and throughout all cargo operations, maintain draft and trim conditions consistent with prevailing weather conditions, on the advice of Berthing Master.

Control: A responsible Ship's Officer is required to be on duty continuously.

The Terminal Operators in the control buildings offshore and onshore continuously monitor the cargo transfer rates and status of the onshore tanks or shuttle tankers receiving cargoes direct from VLCC's. The Ship's Officer will be advised immediately of changes necessary in the pumping programme.

The Terminal Operator in the offshore control room will activate all cargo movements from the tanker's manifold to or from shore tanks/receiving shuttle tankers.

Mooring Lines: It is the responsibilty of the Ship's Master to ensure that all mooring lines are kept tight. Berthing Master will constantly check a vessel's moorings and may at any time direct lines to be adjusted as circumstances warrant.

Tension Winches: When a vessel is fitted with tension winches, the latter must be set to manual operation and the brakes securely applied.

MEDICAL: The Rand Memorial Hospital in Freeport is open on a 24-hour emergency service and two medical clinics, Lucayan and Antoni are open during regular office hours.

FRESH WATER: Not available.

FUEL: Not available.

REPAIRS: Facilities for minor repairs to electrical, radio and mechanical equipment are available in Freeport but should these be required Masters should give as much advance notice by radio as possible.

SURVEYORS: Saybolt, Caleb Brett, Charles Martin, Redwood and Epic represented on Grand Bahama.

Lloyd's have agency in Freeport. Classification and Salvage Association Surveyors available from Florida.

TIME: Bahamian Standard Time is 5 hours behind GMT. Daylight Saving Time is observed from the end of April through the end of October when clocks are advanced one hour.

EMERGENCY CO-ORDINATION CENTRE: Bahamas Air Sea Rescue Association, Freeport. Telephone Nos.: Base Station 809 373-2264, Mobile Radio Telephone 809 352-9889, Daytime 0800 – 1700 hrs. 809 352-8826.

TELEPHONES: The Sea Berths have a telephone connection to the shore and to the Freeport exchange. Calls are restricted to emergency use only. All other calls should be made from agency offices ashore.

STORES: Stores are not available at the terminal but may be obtained through the auspices of ships' agencies and chandlers. All deliveries to vessels are restricted to daylight hours and operational convenience. Transportation and handling must be arranged and attended by the vessel's Agent and it is imperative that advance terminal approval is obtained since responsibility cannot be accepted for custody should operational considerations cause delivery delays.

BANKS: Chase Manhattan, Mall and Pioneer Way, P.O.Box F-2432, Freeport, Grand Bahama.

Citibank N.A., on the Mall, P.O.Box F-2681, Freeport, Grand Bahama.

Barclays International, Mall & Pioneers Way, P.O.Box F-2404, Freeport, Grand Bahama.

Royal Bank of Canada, Bank of Nova Scotia, Canadian Imperial Bank of Commerce, Bank of Montreal.

STORING: See "Prelims".

(i) Storing at Terminal discretion. Terminal launches normally employed.

(ii) Storing permitted during cargo transfer using stern lifting devices only.

(v) Usual Customs regulations.

(vi) Labour usually supplied by chandler.

LAUNDRY: Limited services are available in Freeport but in view of the distance from the terminal (35 miles) and the relatively short time at berths, Masters are advised not to depend on such services.

GARBAGE DISPOSAL: No facilities available.

WASTE OIL DISPOSAL: No facilities available.

SEAMAN'S CLUBS: None.

Terminal is 35 miles from town. Facilities in town include churches, shops and post office. Present taxi fare is U.S.$65.00 each way.

CURRENCY: Bahamian Dollar is equal to U.S.Dollar. Notes and coins are interchangeable. U.S.Dollars are universally accepted.

WEATHER: From November to May, average temperatures in the 70's Fahrenheit prevail, with low humidity and little rain. From June to October, average temperatures rise into the 80's with relatively high humidity and rainfall of between 5 in. and 9 in. per month.

SEA CONDITIONS: Prevailing winds are from the S.E. During the Winter season numerous cold fronts transit the area producing a normally predictable wind veer to S.W. then Northerly with the passage of the front. A strong frontal system may cause seas and swell of up to 10 ft. but these quickly subside following frontal passage.

Current in the vicinity of the Sea Island seldom exceeds 1 knot and runs predominantly East and West. Tidal ranges above datum are Low Water 0 – 0.5 m. and High Water 0.8 – 1.5 m.

SAFETY: *TERMINAL SAFETY REGULATIONS:* With the object of protecting all concerned against the possibility of fire hazards, oil and smoke pollution, vessels calling at South Riding Point Terminal must comply with the following safety regulations or other regulations which may be issued by the proper authorities from time to time.

Dangerous Area: The whole of the sea island and the onshore terminal are declared Dangerous Areas and the use of naked lights and smoking therein is strictly prohibited except in those places expressly designated by the Master of a vessel and the Terminal Manager.

A copy of the "Fire and Safety Regulations" (See "Appendix IIIA and IIIB") is given to the Master of every vessel by the Berthing Master on boarding and it is the responsibility of the Master to see that these regulations are strictly observed.

Inspection: The Berthing Master will conduct a safety inspection prior to the commencement of loading/unloading and at regular intervals thereafter to ensure that all safety regulations are being enforced.

A comprehensive list of safety requirements are detailed on a Ship/Shore Safety Check List (See "Appendix IVB") and must be signed by the Master of the vessel or his delegate and the Berthing Master (The "Check List" is as laid out in I.S.G.O.T.T.).

Galley Fires: Only approved steam or electric galleys in selected locations in the after part of the vessel, as agreed to by the Master and the Berthing Master, are permitted.

Boiler Tubes: Boiler tubes must not be blown whilst vessel is alongside and emitting smoke is strictly prohibited while vessels are in the vicinity of the terminal. Every precaution must be taken to prevent sparks and soot particles escaping from the funnel.

Firewires: Firewires of steel must be made fast and hang over the outboard bow and quarter whilst alongside to enable tugs to connect readily in an emergency situation. Firewires must be tended on board throughout cargo operations in order to maintain towing eyes at water level.

Deck Scuppers: Deck Scuppers must be securely plugged and cemented before loading/discharging operations commence. Approved mechanical means of closing scuppers may be acceptable.

Spillage Trays: See "Oil Pollution – Minor Leakages Onboard".

Main Engine(s): Immobilisation is prohibited whilst alongside a terminal berth. Minor engine repairs may be effected after receipt of written permission from the Berthing Master and providing the repair will not affect the prompt sailing of the vessel in an emergency or upon cargo completion.

Maintenance Work: No chipping, scaling, hot work or work of any kind that would cause a spark is allowed while alongside a berth.

Ventilation: When loading or discharging cargo or ballast, all open ullage pipes and sighting ports shall have installed approved flame arresters.

Stores: Inflammable or explosive ship's stores shall be kept in a safe place securely fastened.

Bilge and Dirty Ballast Water: Disposal of bilge and dirty ballast water over the side is strictly prohibited by the authorities and any pollution of the sea through these mediums will result in heavy claims and fines. The terminal will, in case of an oily discharge, take such steps as may be deemed necessary to fight the pollution before it spreads.

If the discharge is due to faulty equipment or material on the vessel or to negligence on the part of ship's personnel, the terminal shall be indemnified for any expenses incurred in connection with the preventative action taken. (See Oil Pollution – "Oil Spills").

International Code Flag 'B': International Code Flag 'B' shall be flown during the day and a red light exhibited by night by all vessels during cargo or ballast operations.

Transfer Cargo Operations: Transfer cargo operations shall not be started, or if started, shall be discontinued by the Berthing Master or Terminal Control if any of the following conditions prevail:

(a) During severe electrical storms.

(b) If fire breaks out at berth or on vessel.

(c) Should any condition develop which represents a hazard to the vessel or terminal facilities.

Fire-Fighting Equipment: Fire-fighting equipment of vessels alongside must be kept ready for use at all times.

Gas-Freeing: Gas-Freeing of vessels alongside sea island berths will not be permitted.

Earthing and Bonding: All metal on the shore side of an insulating flange should be electrically continuous to the sea island or inshore berths earthing systems and all metal to the seaward side should be electrically continuous to the vessel.

Insulating flanges are fitted on each loading arm.

Small Boats or Craft: Small boats or craft will not be permitted to moor alongside a vessel during cargo or ballast operations, unless special permission has been granted by the Berthing Master.

Permitted Entry: Only persons holding authorized passes will be permitted entry to the terminal or sea island. The terminal reserves the right to refuse admission.

Safety Responsibilities: Nothing in these regulations will relieve Masters of their responsibilities in observing the normal safety, fire prevention and security regulations. The Berthing Master is authorised to advise and request Masters to take additional measures to ensure a higher degree of safety if they find that circumstances warrant such action.

FIRE FIGHTING:

Responsibilities: The Fire and Safety Officer is responsible for all fire fighting operations at the sea island and the onshore terminal.

Fire Alarm: Do not hesitate to raise the alarm in the event of fire however small it may be.

The ship's fire alarm at the terminal will be one or more blasts of the ship's whistle or siren, each blast of not less than 10 secs. duration supplemented by a continuous ringing of the ship's bell and continuous sounding of the general alarm system.

The fire alarm at berths or elsewhere within the terminal or harbour area will be a continuous blast on the sirens sited on the onshore and offshore control buildings.

Action Ship – Fire On Your Ship:

1. Raise alarm.
2. Cease all cargo operations and then close all valves.
3. Fight fire and prevent it spreading.
4. Inform terminal of details.
5. Standby to disconnect loading arms.
6. Bring engines to standby.

Action Ship – Fire On Other Ship: You will be advised of necessary instructions to:

1. Cease all cargo operations and then close all valves.
2. Standby to disconnect loading arms.
3. Bring engines and crew to standby ready to unberth.

Action Shore: The operator in the control room will immediately contact the Fire and Safety Officer by phone or VHF radio. The Fire and Safety Officer will then direct operations.

1. Raise alarm.
2. Cease all cargo operations and then close all valves.
3. Fight fire and prevent fire spreading.
4. Standby to disconnect loading arms.
5. Inform all ships of details.
6. Terminal emergency procedure is immediately effective.

Emergency Situation: During an emergency situation on board a vessel alongside, the Berthing Master will be in charge of organising the preliminary fire-fighting/anti-pollution procedures assisted by the operators in the Control Room and at the berths until the Fire and Safety Officer at the terminal takes over the direction of all fire fighting operations.

The Berthing Master is to make use of all available means at his disposal, such as tugs, launches, terminal equipment and other facilities to assist the vessel and protect lives and terminal facilities.

OIL POLLUTION/ACCIDENTS:

Oil Spills: Oil spills from whatever source must be reported immediately to the Berthing Master or Terminal Control. Cargo movements will be ordered suspended upon such a report or upon observation of pollution by terminal personnel and they shall not resume until the source of leakage is determined and controlled and the pollution dispersed or contained. The terminal maintains adequate anti-pollution equipment to attend to minor spills and this will be mobilised promptly. Clean-up costs in regard to pollution known to be the responsibility of a vessel using the facility will be billed to that vessel. The terminal shall also be indemnified against any fines and claims for damages resulting from such pollution (See "Appendix V"). Vessels discharging oil into Bahamian waters are liable to fines not exceeding $120,000.

Minor Leakage Onboard: Spillage trays or other receptacles should be placed under the flange connection at the vessel's manifold. Oil absorbing material in suitable quantity should be available for immediate use in the event of oil leakage on deck.

Damage to Facilities: If a Master has reason to believe that damage has been caused to berth, other vessels, craft or terminal property by his vessel, he should immediately notify the Berthing Master in writing. (A Typical Accident Form See "Appendix VI").

GENERAL: *Charts:* The best available charts of the area at present are U.S. Defense Mapping Agency Hydrographic Centre N.O. 26326 and British Admiralty No. 390.

Currency: Currency is the Bahamian dollar which is on a par with the U.S. dollar. U.S. dollars are generally acceptable anywhere without changing to local currency.

Garbage: Garbage or refuse disposal overside at berths or in terminal approaches is strictly forbidden.

APPENDICES:

Appendix I:

South Riding Point Holding Ltd.
South Riding Point Oil Terminal, Grand Bahama
Contractual Berthing Conditions

This Agreement is made between SOUTH RIDING POINT HOLDING LTD., its servants and Agents and its Sub-Contractors (hereinafter called "the Terminal") and the Owners and Charterers of the vessel (hereinafter called "the vessel").

In consideration of the Terminal permitting the vessel to berth at and to use the terminal and its facilities or providing to the vessel tug line handling services, ferry services or other ancillary services connected with the use of the terminal by the vessel, the undersigned Master of thefor and on
behalf of the Vessel agrees to the following conditions.

1. The Terminal shall not be liable for any loss or damage suffered by the vessel howsoever arising including negligence on the part of the Terminal in connection with or by reason of the use or intended use of the Terminal by the vessel.

2. The Vessel will indemnify the Terminal in respect of all liability to third parties including costs and any other expenses and interest arising out of claim in connection with or by reason of the use or intended use of the Terminal by the vessel howsoever arising including negligence on the part of the Terminal. The vessel will indemnify the Terminal in respect of any penalties and fines incurred by it in connection with or by reason of the use or intended use of the Terminal by the vessel. The vessel will indemnify each party referred to in this Agreement collectively as "the Terminal" in respect of any liability to any other party referred to as "the Terminal" by reason of the use or intended use of the Terminal by the vessel howsoever arising including negligence on the part of the Terminal.

3. The vessel will indemnify the Terminal in respect of any damage or loss including financial loss suffered by the Terminal in connection with or by reason of the use or intended use of the Terminal by the vessel, howsoever caused including negligence by the Terminal.

4. It is agreed that if the vessel sinks or grounds or otherwise becomes, in the opinion of the Terminal, an obstruction or danger in any part of the port or its approaches the Terminal may in its sole discretion take any steps it deems necessary to remove the obstruction or danger and any expenses of such removal shall be payable by the vessel's Owner or Charterer.

5. The obligations of the vessel hereunder shall be joint and several.

6. The obligations of the vessel hereunder shall be without right of limitation of liability.

7. If any one or more of the provisions or part of this Agreement should at any time for any reason be declared invalid or void or otherwise inoperative by a court of competent jurisdiction, such declaration or decision shall not affect the validity of this Agreement as a whole.

8. This Agreement cannot be varied other than in writing signed by all parties.

9. This Agreement shall be governed by and construed in accordance with English Law and all disputes arising hereunder shall be and hereby are referred to the High Court of Justice in England.

Time & date:
Signed on behalf of the
Owners and Charterers of the
Master

Signed on behalf of
South Riding Point Holding Ltd.,
its servants and Agents,
and Sub-Contractors.

Appendix II:

SOUTH RIDING POINT HOLDING LTD.
Requisition

VESSEL PARTICULARS:

Ship:
Nationality:
DWT Tonnage:
Drafts Forward: Mid: Aft:
Berth No.: Berthing Master:
Date: Time on: Time off:
Berthing/unberthing:
Tugs:
Time Connected Time Released
Time Connected Time Released
Time Connected Time Released
Time Connected Time Released

We hereby request and authorise SOUTH RIDING POINT HOLDING LTD. to provide tug or tugs, line handling boat or boats, crew boat or boats and line handling, ferry and other services and a Berthing Master or Masters in order to assist in the navigation, berthing and unberthing of the vessel, and all matters related thereto, and the performance of the vessel's business at or near South Riding Point and at the facilities of South Riding Point Holding Ltd. We hereby agree that all such assistance and services rendered by you are requested and accepted by us on your usual terms and conditions printed overleaf and which we have read, understand, approve and accept:

Date
Time Signed
Master
for and on behalf of and with
the authority of the Owners
and Charterers of the

Appendix IIIA:

Safety and Fire Regulations

To be posted in prominent positions on board ship.

The following Fire Regulations and Smoking Restrictions should be brought to the notice of all personnel on board and must be strictly enforced.

SMOKING IS PROHIBITED while alongside berths EXCEPT in the following rooms in the after part of the vessel specified by Master.

Masters and Officers must ensure that these SMOKING RESTRICTIONS are strictly adhered to.

Only approved electric and steam galleys, in selected locations in afterpart of the vessel, agreed to by the Master and the Shore Authorities, are permitted.

CIGARETTE ENDS AND HOT MATERIALS MUST NOT BE THROWN INTO THE WATER AT ANY TIME.

No chipping or scaling is allowed whilst alongside. Overside hull painting is not allowed on jetty side of vessel.

All ship's scuppers on main deck must be plugged and cemented oil tight.

Approved mechanical means of closing scuppers may be accepted.

All vessels moored at these berths must have the eye of a steel hawser paid out to the water's edge and securely made fast on board on the offshore bow and quarter, to be of sufficient strength to enable tugs to take the vessel to a place of safety. Main engines must be available for use at all times whilst alongside the jetty.

Fire hoses on forward and after decks to be rigged and ready for instant use.

It is the responsibility of the Master to ensure that the mooring lines of his vessel are tight at all times.

Alarm in case of fire

1. The ship's fire alarm at the terminal will be one or more blasts of the ship's whistle or siren, each blast of not less than 10 seconds duration supplemented by a continuous ringing of the ship's bell and continuous sounding of the general alarm system.

2. The fire alarm at berths or elsewhere within the terminal or harbour area will be a continuous blast on the sirens sited on the onshore and offshore control buildings.

Overflow or escape of oil into the water

In the event of an overflow and/or escape of oil into the water, loading will be suspended immediately on the vessel concerned. Loading will not be resumed until the area has been cleared of oil and conditions declared safe.

Terminal safety and fire inspections

It is the duty of the Berthing Master to make periodical inspections on board vessels at berth in respect of any breach of the Terminal Safety and Fire Regulations.

Inspectors must be allowed free access on board all vessels at all times for this purpose.

IN ALL CASES OF EMERGENCY CONTACT SOUTH RIDING POINT CONTROL.

Appendix IIIB:

Instructions in case of fire

Ship's fire alarm at terminal

One or more blasts of the ship's whistle or siren each blast of not less than 10 seconds duration supplemented by a continuous ringing of ship's bell and continuous sounding of the general alarm system.

Terminal fire alarm

Continuous long blast on all fire sirens.

Action Ship

Fire on your ship
Raise alarm
Fight fire and prevent fire spreading
Inform terminal of details
Cease all cargo operations and then close all valves
Stand by to disconnect hoses or arms
Bring engines to standby

Fire on other ship at terminal
Cease all cargo operations and then close all valves
Stand by to disconnect hoses or arms
Bring engines to standby and crew to stand by ready to unberth

Action Shore

Fire on terminal
Raise alarm
Cease all cargo operations and then close all valves
Fight fire and prevent fire spreading
If required stand by to disconnect hoses or arms
Inform all ships of details
Terminal Emergency Procedure is immediately effective
In case of fire, terminal will direct movement of vessels.
Do not hesitate to raise the alarm.

Appendix IVA:

The Master
SS/MV . . . .
Port: . . . .
Dear Sir,

SOUTH RIDING POINT TRANSSHIPMENT TERMINAL SAFETY REQUIREMENTS

Responsibility for the safe conduct of operations whilst your ship is at this Terminal rests jointly with you, as Master of the ship, and with the responsible Terminal representative. We wish, therefore, before operations start, to seek your full co-operation and understanding on the safety requirements set out in the Ship/Shore Safety Check List, which are based on safe practices widely accepted by the oil and tanker industries.

We expect you and all under your command to adhere strictly to these requirements throughout your stay alongside this Terminal and, for our part, we will ensure that our personnel do likewise and co-operate fully with you in the mutual interest of safe and efficient operations.

Before the start of operations, and from time to time thereafter, for our mutual safety, a member of the Terminal staff, where appropriate together with a responsible officer, will make a routine inspection of your ship to ensure that the questions on the Ship/Shore Safety Check List can be answered in the affirmative. Where corrective action is needed, we will not agree to operations commencing or, should they have been started, will require them to be stopped.

Similarly, if you consider safety is endangered by any action on the part of our staff or by any equipment under our control, you should demand immediate cessation of operations.

There can be no compromise with safety.

Please acknowledge receipt of this letter by countersigning and returning the attached copy.

Signed: . . . .
Terminal Representative

Terminal Representative on duty is
. . . .
Position or Title . . . . . .
Telephone No. . . . . . .
UHF/VHF Channel . . . . . .

Signed: . . . .
Master
SS/MV . . . .
Date: . . . Time: . . . .

Appendix IVB: See opposite page.

Appendix V:

South Riding Point Transhipment Terminal

The Master,
s.s./m.v. ". . . . ."
Dear Sir,

At . . . . hours on . . . . . an oil spill occurred on board your vessel and a quantity of oil escaped into the sea, necessitating cleaning up operations by our personnel and equipment.

In accordance with Terminal Regulations, we hereby hold you responsible for any expenses incurred as a result of the oil spill and subsequent clean-up operation, in addition to fines which may be imposed by the Authorities.

You are requested to furnish the Terminal management with an extract of your "Oil Transfer Log" and a written reason for this incident.

Yours faithfully,

For: South Riding Point Holding Ltd.

Signed: . . . . , Master
Date: . . . .
cc: Ship's Agents.

Appendix VI:

South Riding Point Transhipment Terminal

. . . . . 19 . . .

The Master,
s.s./m.v." . . . . "
Dear Sir,

At . . . . . . .hours on . . . . . . the vessel under your command was involved in an incident, as a result of which, the following damage was caused:

The foregoing report is based on preliminary examination and must be considered an interim statement of damage pending survey examination the areas concerned.

In consideration therefore of "Conditions of Use of Sea Berths and Inner Harbour" and "Condition of Hire of Tugs", we hereby hold you responsible for this damage.

Please acknowledge receipt of this letter by signing the attached copies.

Yours faithfully,

For: South Riding Point Holding Ltd.

Signed: . . . .
Date: . . . .
cc: Ship's Agents.

Appendix VII:

Ship Arrival Information

Name of Vessel . . . .
Call Sign . . . .
Nationality . . . .
LOA/Beam (metres) . . . .
D.W.T. (metric tonnes) . . . .
CBT, SBT or Double Hull . . . .
ETA South Riding Point . . . .
Is Inert Gas System fully operational . . . .
Any Requirements for Tank Cleaning/Slops Disposal/COW . . . .
Name(s) of Cargo onboard . . . .
Cargo Quantity B/L (bbl.) . . . .
Cargo Tank Distribution . . . .
Cargo API and Load Temperature . . . .
Load Port OBQ . . . .
Amount Water in Cargo . . . .
Last Cargo . . . .
Vessel VEF . . . .
Arrival Draft . . . .
Master's Name . . . .
SCAC Code . . . .
Next Port . . . .
Any Hull Machinery or Equipment Defects . . . .

Appendix VIII:

South Riding Point Holding Ltd. South Riding Point Terminal Crude Oil Washing Check List

Vessel: . . . . Date: . . . . .

On Arrival

Yes No

1. Has terminal been notified?
2. Is oxygen analysing equipment tested and working satisfactorily?
3. Are tanks pressurised with good quality Inert Gas (max. 5% O_2)?
4. Is tank washing pipe-line system isolated from water heater and engine room?
5. Are all hydrant valves on tank washing line securely shut?
6. Are all valves to fixed tank washing machines shut?
7. Have tank cleaning lines been pressurised and leakages made good?

Signed: . . . . . .Master/Chief Officer. Time and Date . . . .

Alongside

1. Is quality of Inert Gas in tank(s) satisfactory (max. 5% O_2)?
2. Is Inert Gas pressure satisfactory?

Signed: . . . . . .Master/Chief Officer. Time and Date . . . .

Before Washing

1. Are valves open to machines on selected tanks?
2. Are responsible persons positioned around the deck to watch for leaks?
3. Are tank ullage gauge floats lifted on tanks to be washed?
4. Is Inert Gas System operating?
5. Are all tanks closed to outside atmosphere?
6. Have tanks positive Inert Gas pressure?

Signed: . . . . . . Master/Chief Officer. Time and Date . . . .

During Washing

1. Are all lines oil tight?
2. Are tank washing machines functioning correctly?
3. Is quality of Inert Gas in tanks satisfactory (max. 5% O_2)?
4. Is positive pressure available on Inert Gas System?

Signed: . . . . . . Master/Chief Officer. Time and Date . . . .

After Washing

1. Are all valves between discharge line and tank washing line shut down?
2. Has the tank washing main pressure been equalised and line drained?
3. Are all tank washing machine valves shut?

Signed: . . . . . . Master/Chief Officer. Time and Date . . . .

NOTICE:

South Riding Point Holding Ltd.
P.O.Box F-2530 Freeport, Grand Bahama
South Riding Point Terminal.
To: Master
s.s./m.v. . . . .

Dear Sir,

During your stay at South Riding Point Terminal, your co-operation is requested with regard to shipboard visitations by Terminal staff.

With the exception of official visits necessary to the satisfactory performance of cargo and safety operations, none of our terminal staff should board your vessel.

We are particularly concerned in cases where food and drink have been unofficially provided by visiting ships and we would respectfully request that you bring to the attention of your crew, the need to disregard any requests of this nature.

We trust that your compliance and understanding will avoid any embarrassment for your vessel whilst alongside and that as a result our operating attentions will be rendered more efficient.

Thank you.

. . . . Terminal
Manager

AUTHORITY: *Operator:* South Riding Point Holding Ltd., P.O.Box F-42530, Freeport, Grand Bahama, Bahamas. *Tel:* South Riding Point Terminal (809) 353-4471 (6 lines). *Telex:* SRPH 067-047. *FAX:* (809) 353-4573. *Contact:* Captain D.C. McNab, Marine Operations Manager. Captain M. Rolle, Marine Superintendent.

Appendix IVB:

Ship/Shore Safety Check List

Ship's Name

Berth . . . . Port

Date of Arrival . . . . Time of Arrival

Instructions for Completion:
The safety of operations requires that all questions should be answered affirmatively. ☐ If an affirmative answer is not possible, the reason should be given and agreement reached upon appropriate precautions to be taken between the Ship and the Terminal. Where any question is not considered to be applicable, a note to that effect should be inserted in the remarks column.

☐ – The presence of this symbol in the columns 'Ship' and 'Terminal' indicates that checks shall be carried out by the party concerned.

The presence of the letters A and P in the column 'Code' indicates the following:
A – The mentioned procedures and agreements shall be in writing and signed by both parties.
P – In the case of a negative answer, the operation shall not be carried out without the permission of the Port Authority.

	Ship	Terminal	Code	Remarks
1. Is the Ship securely moored ?	☐	☐		
2. Are emergency towing wires correctly positioned ?	☐	☐		
3. Is there safe access between Ship and Shore ?	☐	☐		
4. Is the Ship ready to move under its own power ?	☐	☐	P	
5. Is there an effective deck watch in attendance on board and adequate supervision on the Terminal and on the Ship ?	☐	☐		
6. Is the agreed ship/shore communications system operative ?	☐	☐	A	
7. Have the procedures for cargo, bunker and ballast handling been agreed ?	☐	☐	A	
8. Has the emergency shut-down procedure been agreed ?	☐	☐	A	
9. Are fire hoses and fire-fighting equipment on board and ashore positioned and ready for immediate use ?	☐	☐		
10. Are cargo and bunker hoses/arms in good condition and properly rigged and, where appropriate, certificates checked ?	☐	☐		
11. Are scuppers effectively plugged and drip trays in position, both onboard and ashore ?	☐	☐		
12. Are unused cargo and bunker connections, including the stern discharge line, if fitted, blanked ?	☐	☐		
13. Are sea and overboard discharge valves, when not in use, closed and lashed ?	☐	☐		
14. Are all cargo and bunker tank lids closed ?	☐	☐		
15. Is the agreed tank venting system being used ?	☐	☐	A	
16. Are hand torches of an approved type ?	☐	☐		
17. Are portable VHF/UHF transceivers of an approved type ?	☐	☐		
18. Are the ship's main radio transmitting aerials earthed and radars switched off ?	☐	☐		
19. Are electric cables to portable electrical equipment disconnected from power ?	☐	☐		
20. Are all external doors and ports in the amidships accommodation closed ?	☐	☐		
21. Are all external doors and ports in the after accommodation leading onto or over-looking the tank deck closed ?	☐	☐		
22. Are air conditioning intakes, which may permit the entry of cargo vapours, closed ?	☐	☐		
23. Are window-type air conditioning units disconnected ?	☐	☐		
24. Are smoking requirements being observed ?	☐	☐		
25. Are the requirements for the use of galley and other cooking appliances being observed ?	☐	☐		
26. Are naked light requirements being observed ?	☐	☐		
27. Is there provision for an emergency escape possibility ?	☐	☐		
28. Are sufficient personnel on board and ashore to deal with an emergency ?	☐	☐		
29. Are adequate insulating means in place in the ship/shore connection ?	☐	☐		
30. Have measures been taken to ensure sufficient pump room ventilation ?	☐	☐		

	Ship	Shore
Are tank cleaning operations planned during the ship's stay alongside the shore installation?	Yes/No *	
If so, have the Port Authority and Terminal been informed?	Yes/No *	Yes/No *

* Delete Yes or No as appropriate.

Declaration:

We have decided, where appropriate jointly, the items on this Check List, and have satisfied ourselves that the entries we have made are correct to the best of our knowledge, and arrangements have been made to carry out repetitive checks as necessary.

For Ship	For Terminal
Name	Name
Rank	Position
Signature	Signature

Time . . . .
Date . . . .

Bahrain

GENERAL (See Plan)

ANCHORING: It is compulsory for all ships entering Bahrain waters for reasons other than berthing at Mina Sulman, ASRY, Bapco, Alba, or other private jetties to obtain a prior written permission from the Port Director before anchoring in Bahrain waters. All ship's Agents are required to submit to the Harbour Master at the end of each month, a list of all vessels managed by their Agency which entered Bahrain waters.

PORT OPERATIONS SERVICE: The following has been received from the Customs & Ports Affairs, Directorate General of Ports, State of Bahrain. (Harbour Notice 4/84).

The above service is to be established based initially in the radio room of Mina Sulman. All information concerning the movement of vessels within the area under the jurisdiction of the 'Bahrain Ports Authority' will be conducted through the Bahrain Ports Operations and Information Service, hereinafter referred to by its call sign 'Bahrain Port Control'. This service will be manned continuously throughout 24 hours, with a duty Pilot available for advice on request. Close liaison will be maintained between Owners/Agents, Marine Terminals of Bapco, Alba, ASRY and G.I.I.C. and other private wharves within the Mina Sulman area.

Communications: (a) All vessels having gross tonnage of more than 50 g.r.t. and any vessel engaged in towing shall carry fixed or portable VHF radio equipment capable of operating on port operation channel in addition to Channel 16.

(b) A Port Operations VHF radio channel has been introduced, Channel 74 (156.725 MHz). All vessels must monitor this Channel when transiting the port limits or approach channels, or at anchor and communicate with 'Bahrain Port Control' as required.

Reporting Procedures: The Master of the inward bound vessels shall on coming within VHF radio range of 'Bahrain Port Control' give the vessel's ETA at Sitra Beacon, and shall at the same time advise of his vessel's draft and any other information requested, and of any circumstances which may affect the seaworthiness or handling capacity of the vessel. To facilitate keeping track of a vessel's whereabouts, vessels should inform 'Bahrain Port Control' when passing the following seamarks as appropriate:

Deep Draft Channel	*N.E. Approach Channel via Sitra Inwards Buoy*
Bahrain Light Vessel	Sitra Inwards Buoy
No. 3 Beacon	Vidal Buoy
Bahrain Approach Buoy	No. 27 Buoy
No. 14 Buoy	Sitra Beacon
No. 27 Buoy	Mina Sulman Approach Buoy
Sitra Beacon	When berthed or at anchor
Mina Sulman Approach Buoy	
When berthed or anchored	

The Master of an outward bound vessel shall inform 'Bahrain Port Control' within 15 minutes prior to commencing navigation in the area, and again immediately prior to such navigation commencing. During the outward passage he shall report to 'Bahrain Port Control' when passing the above seamarks as appropriate.

The Master of a vessel berthed, moored or anchored within the area of jurisdiction and who wishes to move his vessel to another berth, mooring or anchorage within that area shall request permission from 'Bahrain Port Control' prior to moving and report when finally secured, anchored or moored.

Special Directions: (a) The deep draft channel is primarily for vessels confined by their draft to use it. No vessel inward bound shall proceed beyond No. 3 Beacon without seeking prior approval from 'Bahrain Port Control'. No vessel outward bound shall proceed beyond Bahrain Approach Buoy without seeking prior approval.

(b) The Master of any vessel proposing to anchor should inform 'Bahrain Port Control' of the position it is intended to anchor the vessel. This notice shall be given in sufficient time to enable 'Bahrain Port Control' to give a special direction to the Master to place the vessel in an alternative anchorage if required.

(c) Any vessel engaging in towing, except tugs engaged in berthing/unberthing operations shall inform 'Bahrain Port Control' of the length of tow, speed of tow and anticipated passage. Such vessels must seek approval before commencing such operation within the area of jurisdiction.

Interpretation: In these directions: 'Port Limits' means the area of water enclosed by straight lines drawn from the following positions:

A.	Latitude: 26° 13′ N.	Longitude: 50° 32′ E.
B.	Latitude: 26° 22′ N.	Longitude: 50° 32′ E.
C.	Latitude: 26° 22′ N.	Longitude: 50° 47′ E.
D.	Latitude: 26° 06.7′ N.	Longitude: 50° 47′ E.
E.	Latitude: 26° 06.7′ N.	Longitude: 50° 38′ E.

'Area of jurisdiction' includes the marine terminals of Mina Sulman, Bapco, Alba, ASRY and G.I.I.C. and all other private wharves within the Mina Sulman area, also the deep draft and N.E. approach channels.

Commencement: A full V.T.M.S. "Vessel Traffic Management System" is in force and based in the control tower at Mina Sulman.

MINA SULMAN, including ASRY Dry Dock: 26.12 N. 50.37 E. (See Plan)

DOCUMENTS:

International Declaration of Health.
5 Crew Lists.
Ship's Report (given by Customs on arrival).
Cargo Gear Register (Blue Book).
Agents to submit Cargo Manifest 3 days before vessel's arrival.

Exports to Bahrain: Shipping documents for exports to Bahrain should include a Certificate of Origin bearing the stamp of a Bahrain Embassy or Consulate, where such representation does exist. Alternatively the stamp of any other Arab Embassy or Consulate will be acceptable.

Compliance with the above regulation will help process the clearance of goods without delay.

PILOTAGE: Mina Sulman Pilots board at Sitra Beacon. Pilotage compulsory except for naval vessels and small locally-owned craft whose Masters are familiar with the port and control.

Port equipped with 3 pilot cutters and a number of mooring launches and work boats.

Pilot cutters mostly blue with white-painted wheel-house and cabin accommodation.

ANCHORAGE: Normal anchorage in vicinity of No. 27 Buoy. Approximate position Lat. 26° 10′ N., Long. 50° 47′ E. Sitra Anchorage now restricted anchorage and may only be used by special permission of Port Authorities.

MAX. SIZE: Vessels up to 300 m. may enter port subject to tide. Depth of channel 9.75 m. New berths dredged to 10.9 m. Finger pier, depth 30 ft. (9.1 m.).

HEALTH: Port Health Authorities board vessel on arrival at berth alongside Deep Water Jetty and grant Pratique.

RADIO: Vessels intending call Mina Sulman should advise Agents via Bahrain Radio, call sign A9M, their ETA, draft, hatch distribution and any other requirements, giving as much notice as possible. Agent to give Coastguard 72 hours notice of ETA.

VHF: Vessels equipped with VHF should, when within range, contact Bahrain Port Control on Channels 16 or 74. VTM System in operation. Also see "General" before first port.

TUGS: 3 tugs available, 1×3,620 h.p. (42 tons BP), 1×1,600 h.p. (28 tons BP) and 1×1,600 h.p. (25 tons BP). Tugs usually join vessel between Channel Buoy Nos. 7 and 8 or 9 and 12 during final approach to Deep Water Jetty. Tugs fitted with VHF.

BERTHING: Finger pier 800 m. long, berthing on both sides with 10 berths each of 150 m. in length for vessels up to 9 m. draft and 3 general cargo berths each 200 m. in length with depth of 10.9 m.

Two container berths (Berth Nos. 15 and 16) each 300 m. in length and 10.9 m. depth equipped with 4 container handling gantry cranes, 2 × 30.5 tons and 2 × 35 tons capacity with 38 m. outreach.

Berths for coastal vessels, length of quay 285 m. with depth of 7 m. Small Ro/Ro ramp for vessels up to 5.5 m. draft. Width of ramp 15.5 m.

Each general cargo berth is provided with modern fork lift trucks, trailers and units to facilitate the movement of cargo.

Pallets are available to assist cargo handling. Shore mobile cranes of various capacities ranging up to 200 tons available from private companies. Cargo handling equipment of various types also available.

Storage Facilities: Storage facilities consist of 14 sheds (one of which is located in the container terminal area) having an area under roof of 1,000,000 sq.ft. in addition hard surfaced yards and the container terminal stacking/parking area provide extensive storage capacity.

Hyundai Jetty: Lat. 26° 11′ N., Long. 50° 39′ E. Length of jetty 175 m., depth alongside 9 m. Berthing permitted between 0600 and 1800 hrs.

GRAIN HANDLING: Two portable pneumatic suction/blowing units are used. Capacity 75 t.p.h. each. Wheat is discharged into 20 ton trailers, which takes about 8 to 12 minutes for each trailer.

STEVEDORES: Stevedoring gangs shall be ordered and paid for by ship's Agents.

Working Hours: The port will operate on a 2 shift basis 6 days per week. Additional work on Fridays and Public Holidays are subject to extra charges.

Saturday to Thursday – 0700 hrs. to 2300 hrs. (Container Terminal, 24 hours a day, 7 days a week).

Working hours are subject to change at the discretion of the Port Authority. Requirements for Port Labour must be submitted by Ship's Agents to the Port Authority by 1400 hrs. for work during the first shift on the following day and by 1000 hrs. on the same day for work on the second shift.

Special overtime to finish and sail a ship may be granted after 2300 hrs.

MEDICAL: As per present local regulations all crew for medical treatment have first to be reported to the Public Health Department from where patient, if required, will be referred to Government hospital or specialists.

FRESH WATER: Well water available and can be delivered on berths at Deep Water Jetty at rate of approximately 20 t.p.h. per hose. Fresh water also available by barge with capacity of 300 tons.

FUEL: Bunkers available alongside in Mina Sulman and also provided by barge of 8,700 barrels capacity, which is owned by the Bahrain Petroleum Company. All usual grades of commercial oil available. 48 hours' notice required. This can also be arranged by local Agents.

REPAIRS: Good facilities for both hull and engine repairs which can be effected by the principal slipway company. Facilities exist to receive single vessels of 1,000 d.w.t., and a tower crane capable of a 15 tons lift at 40 ft. Also see "Dry Dock".

SURVEYORS: Available on request through Agent.

DRY DOCK: ASRY Dry Dock: The dry dock measures 375 m.×75 m., the bottom structure being strong enough for double dockings.

This is the first repair dock in the world specially designed for shallow draft VLCCs. With the sill beam at 9 m., it can accept vessels of 34 ft. draft.

Four dockside arms, two per side, give access to almost the entire surface of a VLCC hull for cutting, welding, shotblasting and cleaning/painting purposes, without the need for scaffolding.

In addition to the above graving dock, ASRY has acquired 2 floating docks of the following capacities:

1. 252 m. × 45 m. for vessels up to 120,000 d.w.t.
2. 227 m. × 41 m. for vessels up to Panamax size.

The added capacity at ASRY would transfer the Yard into a three dock operation, capable of handling a large number of vessels of different sizes and types at the same time.

Manoeuvring Basin: The manoeuvring basin dredged to 10 m. allows ships of up to 32 ft. draft to dock at any time. If necessary, ships may lie directly on the basin's sandy, levelled bottom.

Jetties: The 2 finger jetties are 170 m. long × 21 m. wide and can accommodate at least 4 large vessels for in-water repairs.

Mechanical Shop: The mechanical shop is equipped with 36 major machine tools, plus additional supporting services.

Plate Shop: The plate shop is equipped with 45 machine tools and portable equipment, plus additional supporting services.

Pipe Shop: The pipe shop is equipped with 26 machine tools and portable equipment, plus additional supporting services.

Electrical Shop: The repair capability in the electrical shop is summarised as follows:

Motor rewinding
Transformer and operating coil rewinds
Generators (main and auxiliary), large motors; strip, inspect, clean, replace bearings and rebuild
Rewiring (limited facility)
Switchboards: clean and repair
Motor controllers: find fault and repair
Air conditioning equipment: servicing and repair
Engine and bridge control panels (limited repair facility).

Navigational equipment (radar, DF, UHF, gyro compass, auto pilot, echo sounder) repairs are carried out by manufacturers' agents, who are fully represented in Bahrain.

Cranes: Four rail cranes of 15 tons lifting capacity and 75 m. outreach are located on the 2 finger jetties and adjacent to the dry dock. In addition, 1 rail crane of 100 tons lifting capacity and 61 m. outreach is located adjacent to the dry dock.

These five rail cranes cover about 90% of ASRY's outdoor production area. For the remaining production areas, 4 mobile cranes each of 20 tons capacity and 2 hydraulic lifting platforms of 80 tons each are available.

Inside the workshops, overhead cranes of 6, 15, 25 and 160 tons lifting capacity are available.

Floating Crane: A floating crane of 200 tons lifting capacity, specially designed to reach any point on the deck or superstructure of a VLCC in ballast condition, is available. This lifting equipment is installed on a pontoon which has an overall length of 35.5 m. and a beam of 23 m. The crane is of the luffing type, which permits the height of the hook to be maintained while the outreach can be adjusted in travel.

Tugboats: The yard has a fleet of 6 tugboats, each of 32 tons bollard pull, which have been specially designed to manoeuvre large ships both in the yard and at sea.

Each tugboat has an overall length of 33 m. and a moulded beam of 8.5 m., with a draft fore and aft of 2.55 m. and 3.05 m. respectively.

The main engine is rated at 2,400 b.h.p. at 500 revs. per minute in accordance with DIN 6270A, and provides each tug with a normal free navigation speed of 12.5 knots.

Largest vessel so far to enter dry dock was 411,000 d.w.t.
Largest vessel to be repaired was 508,000 d.w.t.
Total workforce is 1,400 persons.

GANGWAY/DECK WATCHMEN: Not customary to employ deck watchman.

REPATRIATION: It is possible for whole crews or just individual crew members to join or leave vessels at Bahrain. As much notice as possible should be given to Agents to enable arrangements to be made for their reception, hotel accommodation and transportation.

AIRPORT: Bahrain International Airport regularly served by main international airlines, with frequent services to Europe, U.S.A., Far East, and Australia. Also frequent inter-Gulf flights.

TIME: GMT plus 3 hours.

HOLIDAYS: Public holidays in accordance with Muslim calendar as follows: 3 days during Eid Al Fitr; 3 days during Eid Al Adha; 3 days during Muharram; 12th R'Awal Prophet's Birthday; Accession of H.H. The Amir, 16th December; 1st January. Apart from 6 days, two during each of the religious anniversaries, all holidays will be worked in the port as on Fridays, the Sabbath day.

TELEPHONES: Can be provided at each berth on Deep Water Jetty. In case of emergency, dial 242 for ambulance; 236 for Duty Police Officer; 500 for Fire Brigade.

SERVICES: Bahrain well provided for services including repairs, stores and supplies, fumigation surveys, adjustments, radar and gyro compass repairs, professional diving, and underwater brushing.

SHORE LEAVE: Permitted.

IDENTIFICATION CARDS: These cards necessary for any crew member wishing to proceed ashore. Identification card is surrendered to Immigration Authorities at main entrance to port in return for a pass. On return to port, the pass is surrendered and seaman's identity card returned to him.

AUTHORITY: Ministry of Finance and National Economy, Customs and Ports Affairs, Directorate General of Ports, P.O.Box 15, Bahrain. *Tel:* 727173. *Telex:* 8642 Mina Bn. 8643 Harbour Bn. *Cables:* Stateport. *FAX:* 725534. *Contact:* Captain Saleh Al Musallam, Harbour Master (Tel: 719370, Fax: 727985). Captain Mahmood Y. Al Mahmood, Director General of Ports.

AGENT: Gulf Agency Co. (Bahrain) W.L.L., P.O.B. 412, Manama, Bahrain. Tel: (973) 530022 (10 lines). Telex: 8211 (A/B "GAC BN"). Fax: (973) 530063. Cables: "Confidence".

SITRA: 26.09 N. 50.40 E. (See Plan)

Bahrain Port incorporates all the harbours on the N.E. Coast of the Bahrain Islands. The Port Limits extending approximately Westwards and Southwards from Bahrain Approach Buoy.

The Bahrain Government Harbour Master at Mina Sulman has jurisdiction over Bahrain Port including the marine terminals of Mina Sulman, BAPCO, ALBA, ASRY, GIIC and all other private wharves within the area.

Sitra Marine Area is situated at the entrance to the Port of Mina Sulman and the Khor Khaliya which is protected by the islands of Bahrain, Sitra and Muharraq, and the ASRY-GIIC Causeways.

Sitra Inner Anchorage lies on the Northern side of the Fairway between Sitra Beacon and Mina Sulman and is afforded some protection during the prevailing N.W. winds by Muharraq Island and the ASRY-GIIC Causeways.

OPERATORS:

1. *The Gulf Industrial Investment Company – GIIC:* GIIC operates a plant producing iron pellets from imported ores.

Enquiries regarding its facilities should be sent to GIIC, P.O.Box 50177, Hidd, Bahrain. Tel: 673311. Telex: 9993 GIIC Bn.

2. *Aluminium Bahrain – ALBA:* ALBA operates a plant producing aluminium ingots from imported alumina and coke.

Enquiries regarding its facilities should be sent to Aluminium Bahrain, P.O.Box 570, Manama, Bahrain. Telex: 8253 Alba Bn. Cable address: Metalba, Bahrain. Tel: 830000. Fax: 830083.

3. *Bahrain National Gas Company B.S.C. – BANAGAS:* BANAGAS operates a plant producing refrigerated butane and propane which are exported over BAPCO's Wharf.

Enquiries regarding its facilities should be sent to Bahrain National Gas Company B.S.C., P.O.Box 29099, Rifa'a, Bahrain. Tel: 756222. Telex: 9317 Bangas Bn.

4. *The Bahrain Petroleum Company B.S.C. (Closed) – BAPCO:* The company operates the Bahrain Refinery and related facilities on behalf of the Government of the State of Bahrain and Caltex Bahrain. Petroleum products for Banoco, Caltex and Banagas are handled at the BAPCO Terminal.

Enquiries regarding port information should be sent to The Bahrain Petroleum Company B.S.C. (Closed), Bahrain Refinery, Bahrain. Telex: 8218 Bapshp Bn. Cable address: Bapco, Bahrain.

5. *Gulf Petrochemical Industries Company (B.S.C.) – GPIC:* GPIC operates a plant producing refrigerated liquified ammonia and methanol which are exported from Sitra Wharf.

Enquiries regarding its facilities should be sent to Gulf Petrochemical Industries Company (B.S.C.), P.O.Box 26730, Manama, Bahrain. Tel: 731777. Telex: 9897 Kemia Bn.

See individual berths for limitations and procedures.

SPECIAL FEATURES:

1. The Sitra Marine Area encompasses the marine facilities provided by the following companies: BAPCO, ALBA, ASRY, GIIC.

BAPCO has 6 berths for ocean-going vessels and 1 berth where small vessels of up to 240 ft. in length and 16 ft. draft may be berthed.

ALBA has a jetty with 2 berths; the outside berth being used for bulk carriers unloading coke and alumina ore and the inside berth being for vessels loading metal products.

ASRY has 2 jetties 400 ft. apart, with a solid quay wall providing 6 berths as well as the drydock 375 m. in length by 75 m. wide.

GIIC has 1 jetty with offlying dolphin providing 2 berths, the Eastern Berth being utilised for offloading iron ore, whilst the Western side is used for loading.

2. BAPCO Marine Officers advise and assist Masters in berthing, unberthing, mooring and navigating their vessels in the Sitra Marine Area.

3. All vessels entering Bahrain Port must have accredited Agents. They should also establish radio contact with BAPCO via "Bahrain Radio" (A9M), at least 48 hours prior to arrival, giving a firm ETA, arrival draft, and their requirement for bunker fuels.

4. The laws of Bahrain are in force in the Port and crew members are advised, for their own protection, to abide by them.

5. All vessels must display international quarantine signals when approaching the Port and keep them displayed until Pratique is granted. The national flag of Bahrain is to be flown at the foremast head during the vessel's stay in the port.

6. Safety is a prime concern and Masters must comply with all Safety Regulations.

DOCUMENTS: Crew List 3 copies. Passenger List 3 copies. Customs Declaration 2 copies. Health Declaration 2 copies. Log Book for Inspection by Customs Officers.

Cargo and bunker documents are delivered to the vessel as soon as possible after the vessel has been cleared on quantity and quality. Delays are sometimes incurred. As a result, BAPCO reserves the right to unberth a vessel and deliver documents by launch so as to minimise berthing delays to subsequent vessels.

Early Departure Procedure (E.D.P.) is available on Master's request.

The Tanker Owners Voluntary Agreement concerning Liability for Oil Pollution: All tankers carrying or loading/discharging at BAPCO any persistent hydrocarbon mineral oil, such as crude oil, fuel oil, heavy diesel oil and lubricating oil, whether or not carried as cargo, shall be in possession of a TOVALOP (Tanker Owners Voluntary Agreement concerning Liability for Oil Pollution) Certificate. NO other certificates will be accepted.

PILOTAGE: Pilotage is not provided between Bahrain Light Vessel and Sitra Anchorage. Pilotage is compulsory from Sitra Beacon inwards.

There are 2 Pilotage Authorities for Bahrain Port both of which co-ordinate through Bahrain Port Control.

1. The *Bahrain Pilots,* under the Bahrain Government's Harbour Master, handle all vessels bound for the Khor Khaliya. This includes the main Mina Sulman Wharfage, the wharves of Hyundai on the West side of the ASRY/GIIC Causeway and the private company wharves on the North Sitra Industrial Estate.

2. The *Sitra Pilots,* under BAPCO's Port Officer, the Superintendent Marine Operations, handle all vessels having business with the marine terminals of GIIC, ALBA, ASRY and BAPCO.

The Sitra Pilot will normally board the vessel in a position 0.5 miles South of Sitra Beacon from either an orange hulled pilot cutter, tug or a tow-boat displaying the normal pilot vessel signals.

The Sitra Pilots will only embark or disembark from vessels providing the regulation pilot ladder.

The Sitra Pilots will normally hand over control of the tugs to the ASRY Dock Master at a mutually agreed position close by ASRYs dock and jetties for completion of berthing. The ASRY Dock Master in consultation with Sitra Pilot will arrange for the number of tugs to be used in these operations.

For vessels bound for GIIC, ALBA or BAPCO's jetties the Sitra Pilot will decide on the number of tugs to be used in the berthing and unberthing operations. Normally, 2 tugs are used.

Harbour Pilotage: Under no circumstances will any vessel, irrespective of size, berth alongside Company wharves unless a Sitra Pilot is on board and the correct documentation signed. A Sitra Pilot will also be on board a vessel for the unberthing operation. However, under special circumstances certain small vessels may be allowed to unberth without a Pilot on board, providing the Pilot has given permission immediately prior to unberthing and B.P.C. have been informed.

The services of the Sitra Pilot are provided without charge.

Boarding: The Company Mooring Master may board the vessel from either a pilot cutter, tug or a tow-boat displaying the normal pilot vessel signals.

If no berth is available, vessels should anchor in the prescribed anchorage until such time as a berth is available. Every endeavour will be made to give the Master berthing instructions prior to the boarding of the Mooring Master, and to this end, Masters are requested to maintain a continuous watch on the VHF. In cases where it is impossible to give prior berthing instructions, the Master and Chief Engineer are requested to co-operate with the Company by getting the vessel's engines ready for use with the least possible delay.

APPROACHES: *General:*

1. Without accepting any responsibility, the following suggestions are made for the benefit of Masters who are not familiar with Bahrain waters.

2. The buoyed channel from Sitra Anchorage to the Bahrain Light Vessel is primarily for vessels confined by their draft to use it. Vessels intending to transit this channel must obtain clearance from Bahrain Port Control prior to entering.

3. The buoyed channel has a min. depth of 13.25 m. (43 ft. 6 in.) at Chart Datum. This permits unrestricted use at all states of the tide for vessels drawing up to 12.2 m. (40 ft.).

4. Vessels in excess of 12.2 m. (40 ft.) and up to a maximum of 13.4 m. (44 ft.) are restricted to tidal ranges.

5. Vessels with drafts of less than 9.2 m. (30 ft.) are requested to make use of Sitra Inward and Vidal Buoys.

6. The colour of beacon structures and buoys are often obliterated by Guano.

7. For details of the buoys, lights and beacons see the section marked "Sitra Channel Marks". The entrance and near approaches to Mina Sulman are marked by aids not described herein.

8. The "Alteration of Course" positions in the following directions are based upon a radius of turn of 5 cables. This may necessitate an increase in engine revolutions, together with full helm in some vessels.

(a) Inward Under 9.2 m. (30 ft.)

(i) From a position (Lat. 26° 27.8′ N., Long. 51° 00′ E.) 2.5 miles S.E. of No. 3 Beacon (Lat. 26° 28.5′ N., Long. 50° 57.4′ E.) a course should be set to position 0.75 miles North of "Sitra Inward" Buoy (Lat. 26° 21.2′ N., Long. 50° 49.7′ E.) (Qk. Fl. (9) 15 sec.) leaving the "Caisson Wreck" Buoy (Lat. 26° 24.2′ N., Long. 50° 52.7′ E.) (Qk. (6) + L. Fl. 10 sec.) at least 0.5 miles to starboard.

(ii) From the position above a course should then be set towards No. 16 Buoy (Lat. 26° 12.9′ N., Long. 50° 46.3′ E.) (Fl. Y. 6 sec.).

(iii) When the vessel has reached a position with No. 16 Buoy, 1.5 miles ahead, course can be adjusted to due South, passing Westwards of "Vidal" Buoy (Lat. 26° 14.1′ N., Long 50° 47.2′ E.) (Fl. (2) R. 10 sec.) until "Sitra Beacon" (Fl. 3.3 sec.) bears due West.

(iv) If instructed by B.P.C. or the Pilots to proceed in to meet the Pilot, course should be altered to pass South of No. 18 Buoy (Lat. 26° 10.3′ N., Long. 50° 43.9′ E.) (Qk. R.) to the Pilot Station 0.5 miles due South of Sitra Beacon; thus keeping clear of the Deep Water Channel.

(v) All vessels, unless otherwise instructed should proceed to an anchorage South of No. 27 Buoy (V. Q. (6) + L. Fl. 10 sec.).

Inward Over 9.2 m. (30 ft.):

(i) Vessels wishing to utilise the Deep Water Channel should follow the reciprocal of the courses described for the "Recommended Deep Water Departure Channel".

(ii) Vessels with drafts of between 9.2 m. (30 ft.) and 12.2 m. (40 ft.) may be required by B.P.C. to depart from the marked channel at certain points to allow freedom of movement for vessels with drafts in excess of 12.2 m. (40 ft.).

(b) Deep Water Departure Channel

(i) The Pilot will normally leave vessel after having crossed the Sitra Middle Ground Bar; 2 cables South of "Sitra Beacon" (Fl. 3.3 sec.) with the vessel proceeding to close North of No. 18 Buoy (Qk. R.).

(ii) When No. 18 Buoy comes abeam, course should then be altered to 090°(T) which will bring Sitra Beacon dead astern, bearing 270°(T) to pass South of No. 27 Buoy.

(iii) As No. 27 Buoy (South Cardinal Yellow above Black Pillar Buoy) (V. Q. (6) + L. Fl. 10 sec.) comes abeam to port, course should be altered to 022°(T).

(iv) When Buoy Nos. 21, 23 and 25 are sighted in line bearing 344°(T) course should be altered to 344°(T).

(v) On course 344°(T) Buoy No. 25 (Green Cone) (Fl. G. 5 sec.) and Buoy No. 23 (Green Conical) (Qk. Fl. G.) will be passed close on the port side and Buoy No. 16 (Yellow Can) (Fl. Y. 6 sec.) on the starboard side.

(vi) As No. 21 Buoy (East Cardinal) (V. Q. (3) 5 sec.) comes abeam to port, course should be altered to 015°(T), which should bring Buoy No. 12 (Yellow Can) (Fl. Y. 2 sec.) dead ahead and Buoy No. 21 dead astern. The bearings of these buoys should be watched closely to estimate and correct for cross set which is sometimes quite strong on this course and the next. On this course No. 14 Buoy (Yellow Can) (Fl. Y. 10 sec.) will be left to starboard.

(vii) On No. 19 Buoy (Green Conical) (Fl. G. 3 sec.) coming abeam, course should be altered to 002°(T) bringing Buoy No. 15 (Green Conical) (Occ. G. 5 sec.) dead ahead. Buoy No. 12 (Fl. Y. 2 sec.) will then be left close to starboard and No. 17 Buoy (Green Conical) (Qk. Fl. G.) will be left to port.

(viii) In order to pass over a cable Eastwards of Buoy No. 15, course should be altered to 016°(T) as Buoy No. 10 (Yellow Can) (Fl. (3) Y. 10 sec.) comes abeam to starboard and then altered to 356°(T) as Buoy No. 15 comes abeam to port. This course would pass 3.5 cables West of Bahrain Approach Buoy. It may be advisable to reduce engine revolutions shortly after steadying on course 356°(T), in order to be able to increase revolutions, if required to provide better steerage on the next course over the Bar.

(ix) When the Bahrain Approach Buoy bears 051°(T) course should then be altered to 051°(T). As this heading is approached, it should be found that Buoys No. 8 (Red Can) (Fl. R. 2 sec.) and No. 6 (Red Can) (Fl. (3) R. 6 sec.) are in line to starboard, as Bahrain Approach Buoy comes abeam at 2.5 cables, and then should commence to open. Buoys No. 13 (Green Conical) (Fl. G. 5 sec.) and No. 11 (Green Conical) (Q. G.) are parallel to the course on the port side of the vessel, give clearance on the 13.1 m. (43 ft.) patches and given the extent of the bar which should be traversed at Slow Speed.

(x) On No. 11 Buoy coming abeam to port, course should be altered to 054°(T) passing between No. 9 Buoy (Green Conical) (Fl. G. 10 sec.) and Buoy No. 4 (Red Can) (Q. R.), followed by Buoy No. 7 (Green Conical) (Fl. G. 5 sec.) to port.

(xi) When Buoy No. 2 (Red Can) (Fl. (2) R. 10 sec.) bears East, course should be altered to 071°(T) to pass close South of Buoy No. 5 (Green Conical) (Fl. G. 3 sec.).

(xii) Buoy No. 5 should be close abeam to port, when the course is altered to 057°(T) and speed reduced in readiness to cross the spit which extends in a Southerly direction from No. 3 Beacon (Fl. 6 sec.) and which has a minimum depth of 13.25 m. (43 ft. 6 in.) at Chart Datum.

(xiii) When Buoy No. 1 (Green Conical) (Q. G.) bears 040°(T), course should be altered to 040°(T) bringing the Bahrain Light Vessel (Gp. Fl. (3) 20 sec.) on the starboard bow. 1.5 miles after Buoy No. 1 has been left to port, the minimum depth of water is greater than 50 ft., and it is safe to go full ahead.

(xiv) Masters can expect to have to make adjustments from time to time, to the recommended courses, due to set. Effects of tide and current should be watched for at all times.

Sitra Channel Marks:

Bahrain Light Vessel	26° 33′ 00″ N. 51° 03′ 30″ E.	A light vessel painted Red with the word 'Bahrain' in white on both sides of the vessel.	Gp. Fl. (3) every 20 secs. Range 15 miles. Racon.
No. 1 Buoy	26° 28′ 39″ N. 50° 58′ 30″ E.	Starboard hand buoy, Green conical.	Quick Green.
No. 2 Buoy	26° 25′ 58″ N. 50° 52′ 56″ E.	Port hand buoy, Red can.	Gp. Fl. (2) Red every 10 secs.
No. 3 Beacon	26° 28′ 30″ N. 50° 57′ 21″ E.	Black framework tower 47 ft. high with Radar Reflector.	Fl. every 6 secs. Geographical Range: 12 miles.
No. 4 Buoy	26° 23′ 41″ N. 50° 49′ 14″ E.	Port hand buoy, Red can.	Quick Red.
No. 5 Bucy	26° 27′ 06″ N. 50° 56′ 11″ E.	Starboard hand buoy, Green conical.	Fl. Green 3 secs.
No. 6 Buoy	26° 22′ 26″ N. 50° 47′ 21″ E.	Port hand buoy, Red can.	Fl. (3) Red every 6 secs.
No. 7 Buoy	26° 24′ 56″ N. 50° 50′ 57″ E.	Starboard hand buoy, Green conical.	Fl. Green 5 secs.
No. 8 Buoy	26° 22′ 12″ N. 50° 47′ 00″ E.	Port hand buoy, Red can.	Fl. Red every 2 secs.
No. 9 Buoy	26° 23′ 47″ N. 50° 48′ 53″ E.	Starboard hand buoy, Green conical.	Fl. Green 10 secs.
No. 10 Buoy	26° 17′ 50″ N. 50° 46′ 32″ E.	Port hand buoy, special Yellow can.	Fl. (3) Yellow every 10 secs.
No. 11 Buoy	26° 22′ 43″ N. 50° 47′ 30″ E.	Starboard hand buoy, Green conical.	Quick Green.
No. 12 Buoy	26° 16′ 44″ N. 50° 46′ 28″ E.	Port hand buoy, special Yellow can.	Fl. Yellow every 2 secs.
No. 13 Buoy	26° 22′ 13″ N. 50° 46′ 48″ E.	Starboard hand buoy, Green conical.	Fl. Green 5 secs.
No. 14 Buoy	26° 14′ 42″ N. 50° 46′ 00″ E.	Port hand buoy, special Yellow can.	Fl. Yellow every 10 secs.
No. 15 Buoy	26° 18′ 16″ N. 50° 46′ 22″ E.	Starboard hand buoy, Green conical.	Occulting Green every 5 secs.
No. 16 Buoy	26° 12′ 52″ N. 50° 46′ 17″ E.	Port hand buoy, special Yellow can.	Fl. Yellow every 6 secs.
No. 17 Buoy	26° 16′ 59″ N. 50° 46′ 05″ E.	Starboard hand buoy, Green conical.	Quick Green.
No. 18 Buoy	26° 10′ 15″ N. 50° 43′ 53″ E.	Port hand buoy, Red can.	Quick Red.
No. 19 Buoy	26° 15′ 54″ N. 50° 46′ 00″ E.	Starboard hand buoy, Green conical.	Fl. Green 3 secs.
No. 21 Buoy	26° 13′ 52″ N. 50° 45′ 41″ E.	East Cardinal Black Yellow Black Pillar.	Very Quick (3) 5 secs.
No. 23 Buoy	26° 12′ 37″ N. 50° 46′ 05″ E.	Starboard hand buoy, Green conical.	Quick Green.

No. 25 Buoy	26° 11′ 47″ N. 50° 46′ 21″ E.	Starboard hand buoy, Green conical.	Fl. Green 5 secs.
No. 27 Buoy	26° 10′ 28″ N. 50° 45′ 32″ E.	South Cardinal Yellow Black Pillar.	Very Quick (6) + L Fl. 10 secs.
Caisson Wreck Buoy	26° 24′ 14″ N. 50° 52′ 40″ E.	South Cardinal Yellow Black Pillar.	Quick (6) + L Fl. 15 secs.
Sitra Inward Buoy	26° 21′ 03″ N. 50° 49′ 41″ E.	West Cardinal Yellow Black Yellow Pillar	Quick (9) 15 secs.
Vidal Buoy	26° 14′ 04″ N. 50° 47′ 10″ E.	Port hand buoy, Red can.	Fl. (2) Red every 10 secs.
Bahrain Approach Buoy	26° 21′ 38″ N. 50° 46′ 40″ E.	West Cardinal Yellow Black Yellow Pillar.	Very Quick (9) 10 secs.
Sitra Beacon	26° 10′ 20″ N. 50° 42′ 51″ E.	Black framework tower 50 ft. high, with Radar Reflector & Racon.	Fl. every 3.3 secs. Range: 11 miles.
Sitra Beacon Guard Buoy	26° 10′ 16″ N. 50° 42′ 51″ E.	Starboard hand buoy, Green conical.	Fl. Green 3 secs.
South Shoals Beacon	26° 09′ 25″ N. 50° 41′ 47″ E.	Pile structure, 20 ft. high.	Gp. Fl. (2) Red 4 secs.
North Range Beacon	26° 10′ 02″ N. 50° 39′ 55″ E.	Pile structure, 20 ft. high.	Fl. Red Green 2½ secs.
South Range Beacon	26° 09′ 18″ N. 50° 41′ 01″ E.	Pile structure, 20 ft. high.	Fl. Red every 4 secs.
Sitra Middle Ground Buoy	26° 10′ 01″ N. 50° 40′ 33″ E.	South Cardinal Yellow Black Pillar.	Very quick (6) + L. Fl. 10 secs.
Seistan Wreck Buoy	26° 09′ 22″ N. 50° 43′ 12″ E.	North Cardinal Black Yellow Pillar.	Very Quick Fl.
Alba Beacon	26° 09′ 14″ N. 50° 40′ 23″ E.	Pile structure, 20 ft. high.	Scintilating Fl. Green.
GIIC North	26° 11′ 17″ N. 50° 41′ 22″ E.	Green Conical.	Quick Fl. Green.
GIIC South	26° 11′ 07″ N. 50° 41′ 33″ E.	Green Conical.	Fl. Green 3 secs.

ANCHORAGE: The normal anchorage for arriving vessels waiting orders or tide is 1 mile South of No. 27 Buoy.

The whole of the navigable waters to the West of Sitra Beacon are restricted for anchorage unless specific permission has been granted by Bahrain Port Control. Pilotage is compulsory West of Sitra Beacon.

The area South of a line joining Sitra Beacon and Sitra Middle Ground Buoy is the fairway to Mina Sulman, and the approaches to ALBA, GIIC, ASRY and BAPCO terminals and as such *anchorage is prohibited.*

The area North of this line joining Sitra Beacon and Sitra Middle Ground Buoy and bounded on the North by ASRY Drydock and GIIC, is Sitra Inner Anchorage.

Vessel may ONLY anchor in Sitra Inner Anchorage after specific permission has been granted by Bahrain Port Control, as this area is also the approaches to the ASRY Drydock and GIIC jetty. Permission will be granted for vessels working with ASRY, working barges, or taking bunkers by barge.

Vessels should not immobilise their engines without having received on board written permission from the Port Authority.

A CONTINUOUS WATCH ON VHF CHANNEL 74 MUST BE MAINTAINED.

RESTRICTIONS: Berthing carried out night and day.

Explosives: Merchant vessels carrying explosives are not permitted to enter the Sitra Inner Anchorage, unless permission has been granted and anchorage allocated. Masters of such vessels will be advised by Bahrain Port Control to anchor in the Explosives Anchorage in a position 1.5 miles S.E. of Sitra Beacon.

Merchant vessels carrying explosive material are not permitted to enter the limits of BAPCO's Oil Wharves including the ALBA facilities.

Tidal Information:

The Standard Port for the area is Mina Sulman.

No.	Place	High Water Mean Springs	High Water Mean Neaps	Low Water Mean Springs	Low Water Mean Neaps
		Standard Port		Standard Port	
4252	Mina Sulman	2.4 m. (7.9 ft.)	1.9 m. (6.2 ft.)	0.6 m. (2.0 ft.)	1.0 m. (3.3 ft.)
		+0005 hours		+0005 hours	
4251	Sitra	2.3 m. (7.5 ft.)	1.9 m. (6.2 ft.)	0.6 m. (2.0 ft.)	1.0 m. (3.3 ft.)
		−0017 hours		−0013 hours	
4250a	Bahrain Approach Buoy	2.1 m. (6.9 ft.)	1.7 m. (5.6 ft.)	0.4 m. (1.3 ft.)	0.8 m. (2.6 ft.)

For vessels with drafts in excess of 12.2 m. (40 ft.) the following notes are recommended:

1. During Neap Tides vessels with drafts up to 12.8 m. (42 ft.) can navigate the channel at all stages of the tide.
2. *Tidal Sailings:* The rise of tide must be utilised to pass through the shoal areas between Bahrain Approach Buoy and No. 3 Beacon over the HW period at reduced speed. Departing vessels should be underway from No. 27 Buoy not later than 3.5 hours before the next predicted HW at Mina Sulman, or at a time not later than that which would allow vessels to make the passage between Bahrain Approach Buoy and No. 3 Beacon at a reduced speed of 8 knots, having the full benefit of the tide, and passing Bahrain Approach Buoy 1.5 hours before the predicted HW at Mina Sulman.

MAX. SIZE: See individual berths for limitations.

HEALTH: Bahrain Port Health Regulations are based on International Sanitary Regulations adopted by World Health Organisation, May 1951.

In accordance with International practice, quarantine signals must be prominently displayed by all vessels approaching Bahrain Port.

Pratique is normally granted by the Bahrain Government Port Health Officer or the Agent's Representatives, or for healthy vessels scheduled for immediate berthings in the Sitra Marine Area by the BAPCO Pilot.

No persons, excepting the Bahrain Coast Guard, Agents' Representatives and Pilots are permitted to leave or board a vessel until Pratique has been granted.

A radio message should be sent to the Government Port Health Officer, Bahrain, advising last Bill of Health and present health conditions aboard.

Rat guards should be properly placed on all mooring ropes as soon after berthing as practicable.

Bahrain Port is not classed as a "Plague Port" but all crew members must have in their possession valid certificates of vaccinations and inoculations against cholera in accordance with current Health Regulations.

The Bahrain Government Port Health Officer is available by arrangement through vessel's Agent. The Port Health Officer, in addition to official duties, will provide consultation and treatment for other than quarantine purposes.

Derat and Derat Exemption Certificates are obtainable in Bahrain. Requests should be made through the vessel's Agent.

RADIO: The company does not operate a coast radio station, long distance radio communication being routed through Bahrain Radio.

All vessels are requested to keep the company, on cable address "Bapcoship Bahrain", fully advised regarding ETA. Vessels fitted with telex may contact BAPCO by telex through A9M on Telex: 8218 Bn (answerback being BAPSHP) but messages to the vessel from BAPSHP will all be relayed through Bahrain Radio for onward transmission.

It is requested that vessels provide an ETA, arrival and departure drafts, not later than 48 hours steaming time from Sitra.

Long distance radio communication should all be routed through Bahrain Telecommunication Company's Coast Station "Bahrain Radio" (A9M) of P.O.Box 14, Manama, Bahrain, to which a regular watch should be maintained.

All communications to the Company should be quoted in GMT, and the appropriate letters, GMT, inserted after the time.

Vessels calling at Bahrain should listen to Bahrain Radio from 4 – 5 days prior to arrival, as BAPCO send the following questionnaire by *radio only.*

Telex to All Cargo Loaders:

MASTER Date:

BAHRAINRADIO

(A) We hold cargo nomination barrels/M.Tons .... for ....

(B) To assist us expedite the loading/turnaround of your vessel please provide the following information:

1) ETA at 72/48/24 hours prior arrival and when 50 miles from Bahrain L/V confirm ETA.
2) Names of last three ports of call and departure dates.
3) Arrival draft, fore and aft and berthing displacement.
4) Maximum departure draft.
5) Distance bow to manifold in metres.
6) Is vessel ready to berth/load on arrival?
7) Is a TOVALOP Certificate available for the Berthing Pilot's inspection? Please advise if Tovalop Certificate on board is valid until 20th February 1993, (English version please), issued by Tovalop, London. Without this certificate available on board, your vessel will not be allowed to dock.
8) Is vessel part loaded? Quantity.
9) Hours required to discharge ballast.
10) If required, hours to mop/clean ship's tanks after deballasting.
11) Order of loading, and maximum loading rates.
12) Slops on board: volume, contents.
    a) Do you wish to discharge same?
    b) Are slops segregated?
    c) If not segregated, do you agree to load on top?
13) If intending to load into ship's dirty tanks.
14) If comingling of cargo required.
15) Will the vessel's tanks be under IGS pressure on arrival.
16) Will you release the IGS pressure for visual inspection by independent Surveyor?
    If no, do you accept responsibility for the quality of the first-in product to approximate feet levels or until there is sufficient product in tank(s) to readily obtain a sample.
17) Do you require to inert tanks whilst alongside a berth?
    For your information, this is only permitted when absolutely necessary and when approved by shore. All delays to subsequent vessel(s) awaiting same berth and/or loading facilities as a result of this operation will be for your vessel's owner's account.
    Please note: The Terminal normally ask vessel to arrive with all tanks gas-free ready for visual inspection, inerting before loading not required. However, if vessel arriving with tanks inerted, Master will have to accept responsibility in writing for first in product, approximately 3 feet for sampling.

(C) When passing Bahrain Light Vessel: VHF contact with "Bahrain Port Control" and "Bapco Terminal" should be maintained at all times on Channel 74. Bapco Terminal will give berthing prospects/instructions.

(D) Advise present health conditions on board.

(E) Acceptable *minimum* berthing draft is calculated by following IMO Formula: Draft amidships = 2.0 + 0.02 × LOA trim not to exceed 0.015 × LOA.

LOA 182.30 m., forward 4.28 m., aft 7.02 m.

(F) Advise vessel's g.r.t./n.r.t./d.w.t. as per present certificates.

(G) Would appreciate if you could give us maximum notice in case chandler is required, listing all items.

Do you have other requirements such as cash, laundry, etc.

(H) Clearance formalities requirements: Please arrange to have following ready:

4 Crew Lists.
2 Bonded Stores Lists (alcoholic items and cigarettes).
Last Port Clearance.
Log Book.

BAPCOSHIP

Prepared by: .... *Approved by:* ....

Bahrain Radio (A9M) (SELCAL 4650)

Type	*Time (GMT)*	*Frequencies in kHz* *Calling*	*Working*	*Listening*
W/T, M/F	Continuous	500	487, 442, 516	500, 480, 454, 468
	Continuous	4302	4284	4181.2 - 4282.4
	0300 - 2000	8448	8454	8362.4 - 8364.8
W/T, H/F	0400 - 2000	12709	12698	12543.6 - 12547.2
	0400 - 2000	17175.2	17169	16724.8 - 16729.6
	0700 - 0800	17169	17169	16724.8 - 16729.6
	1245 - 1315	17169	17169	16724.8 - 16729.6
R/T, M/F	Continuous	2182	2607, 2656	2182 and as requested
R/T,H/F	Continuous	4125		4125
			4394.6	4100.2
	Continuous	6215.5		6215.5
	By W/T arrangement		8718.9	8195
			8734.6	8210.5
			13125.6	12354.8
			17285.6	16512.7
			22612.9	22016.9
R/T, VHF	Continuous	Ch. 16	Ch. 26, 27, 82, 84	Ch. 16, 26, 27, 82, 84
Telex	Continuous		4350	4170.5
	Continuous		8716	8355
	Continuous		13086.5	12506.5
	Continuous		17202	16665
	Continuous		22584	22215

Bahrain Radio is equipped with Marconi Spector "ARQ" and "FEC" equipment type U2221. The equipment conforms to CCIR Recommendation 476. There are 4 operating positions with answerbacks 8474A A9M BN, 8474B A9M BN, 8474C A9M BN, and 8474D A9M BN. For direct contact ships should call in the Master (ARQ) mode as A9M monitors in the Slave mode. During a link call A9M will work as Master once contact has been established. Bahrain Radio accepts telex tapes from local clients to be passed on to ships fitted with radio telex on Telex: 8221 Bahrad Bn. The address should include the ship's name, call sign, and SELCAL number.

Sitra Port Control

Call sign "Bapco Terminal".

R/T, VHF Continuous Channels 16, 74. Channels 6, 8, 9, 12, 14 are the working channels.

When within 50 miles of Bahrain, communication should be established on VHF with BAPCO Terminal.

Vessels must maintain a continuous watch on VHF Channels 16 and 74.

When passing "Bahrain Light Vessel" or "Sitra Inwards Buoy" they should also establish and maintain watch with Bahrain Port Control on Channel 74.

A separate radio message should be sent to the Government Port Health Officer, Bahrain, advising last Bill of Health and present health conditions on board.

The Radio and Radar equipment of any vessel must *not* be operated whilst alongside Company wharves.

VHF: See "Radio".

BAHRAIN PORT CONTROL: A Vessel Traffic Management System has been established and is responsible for co-ordinating and regulating the flow of marine traffic in all waters within the port limits and the Deep Draft and N.E. Approach Channels.

It is required that all vessels in excess of 50 g.r.t. inform Bahrain Port Control, on VHF Channel 74, prior to leaving a berth or anchorage, or immediately after berthing or anchoring, and when passing the following sea marks inwards and outwards:

Deep Draft Channel	*N.E. Approach*
Bahrain Light Vessel	—
No. 3 Beacon	—
Bahrain Approach Buoy	Sitra Inwards Buoy
No. 14 Buoy	Vidal Buoy
No. 27 Buoy	No. 27 Buoy
Sitra Beacon	Sitra Beacon
Middle Ground Buoy	Middle Ground Buoy

TUGS: The assistance of Company tugs is normally available on a 24 hour basis.

When assisting in berthing and unberthing operations, the tugs are under the direct orders of the Sitra Pilot.

The Company normally has 2 tugs on station. Each tug is fitted with fire pumps and monitors and can provide limited assistance fighting fires.

The Sitra Pilot will decide upon the number of tugs to be used in berthing and unberthing operations. Normally, 2 tugs are used in each instance.

If the assistance of a tug is required for purposes other than berthing or unberthing, the request should be directed to the Superintendent – Marine Operations, Sitra, via the vessel's Agents.

Towboats: Normally there are 3 tow-boats of 365 h.p. on station. Primarily intended for other harbour duties, these tow-boats are available for assisting in the berthing/unberthing of the smaller class of vessel.

BERTHING: Berthing and unberthing operations are conducted on a 24 hour basis at the discretion of the Sitra Pilot; wind, weather, tide and other circumstances permitting.

Full power must be available on the main engines and the vessel must be sufficiently ballasted for the operation envisaged. The Sitra Pilot will decline to berth vessels if they are not properly equipped with satisfactory mooring lines, or if deck appliances are inoperable, or if steering gear, telegraphs and whistles are not in an efficient condition. The Master should notify the Pilot of any defects or peculiarities pertaining to his vessel.

Minimum Manoeuvring Drafts for Tankers: Due to the exposed location of the wharves, vessels are required to be sufficiently ballasted with clean ballast water ballast before coming alongside.

Acceptable ballast drafts are those calculated by the following IMO formulae:

Draft amidships (2.0 + 0.02L) m.

Trim not to exceed 0.015L.

Where L = Length overall.

Minimum tanker drafts normally acceptable are:

LOA	*Forward*	*Aft*
150 m. (490 ft.)	3.9 m. (12.8 ft.)	6.1 m. (20.0 ft.)
175 m. (570 ft.)	4.2 m. (13.8 ft.)	6.8 m. (22.3 ft.)
200 m. (650 ft.)	4.5 m. (14.8 ft.)	7.5 m. (24.6 ft.)
225 m. (730 ft.)	4.9 m. (16.0 ft.)	8.1 m. (26.6 ft.)
250 m. (820 ft.)	5.2 m. (17.0 ft.)	8.8 m. (28.9 ft.)

Ballast draft should be sufficient to completely immerse the propeller. Pilots may decline to berth vessels if they are not sufficiently ballasted.

Trim: Whilst alongside the berth the period of undesirable trim shall be minimised.

Anchors: The "Offshore" anchor should be cleared and lowered to the waterline, ready for letting go, before approaching the berth. Anchor buoys are NOT to be used.

Handling Mooring Lines: BAPCO provides a shore gang for handling mooring lines on the wharves. This service is directed by the BAPCO personnel on the wharf.

Vessels berthing at BAPCO wharves must be equipped with *at least* 5 lines forward and 5 lines aft, in addition to backsprings fore and aft. These lines must be of sufficient length to enable moorings to be "doubled up" in bad weather. Method of mooring will be at the discretion of the duty Pilot.

Constant tension winches to be set on manual brake.

BAPCO TERMINAL: Two main wharves were constructed, lying 146° – 326° to handle ocean-going vessels, with a special services coastal tanker wharf lying 023° – 203°.

Whilst bunkers (fuel oil and gas oil) are available on Wharf No. 2, the main wharves handle all normal petroleum products with specialities handled on particular berths for dependent clients. Gas oil is not available at Island Wharf, but delivery of bunkers is by barge.

	Berth No.
BANOCO/CALTEX	
Asphalt	2,4,7
Pressurised LPG	2, 4
Blended Fuel Oil	2, 4
T.E.L. Imports	1
BANAGAS	
Butane/Propane (Vapour Return/Main)	1
(Main/Vapour Return)	2

No. 1 Island Wharf: No. 1 (Island) Wharf consists of 1 main central platform supported on steel piles with 4 inter-connected mooring dolphins, 2 positioned to the North-West and 2 to the South-East; giving the wharf an overall length of 281 m. (923 ft.). This wharf, which is supplied by submarine pipe-lines, provides 2 berths protected by 4 breasting dolphins each side. The latter precludes berthing freighters.

Limitations:

Berth	*LOA*	*Charted Depth*	*Sailing Draft*	*Max. Berthing Draft*	*Berthing Displacement*
5	Min: 165 m. (540 ft.)	14.00 m. (46 ft. 0 in.)	13.40 m. (44 ft. 0 in.)	12.19 m. (40 ft. 0 in.)	[3]
6	Max: 274 m. [1](900 ft.)	See table below		10.67 m. (35 ft. 0 in.)	[2]

Notes: 1. Maximum distance manifold to ends of 137 m. (450 ft.).
2. Max. d.w.t. 110,000 tonnes.
3. 72,650 tonnes.

LOA (m.)	(ft.)	*Manifold/Stern* (m.)	(ft.)	*Maximum Draft* (m.)	(ft.)
213	700	106	350	13.41	44.00
228	750	114	375	12.95	42.50
243	800	121	400	12.65	41.50
259	850	129	425	12.50	41.00
274	900	137	450	12.19	40.00

In order to ensure the required underkeel clearance of 2.0 ft. is maintained, the maximum drafts of vessels berthed at Berth No. 6 will be dependent upon the distance manifold to the stern (nominally LOA) and tidal conditions throughout the berth occupancy.

However, the above maximum draft tabulated against LOA may be increased by the *lowest* tidal level predicted in the British Admiralty Tide Tables for Mina Sulman during the period of 72 hours following the time that the vessel actually berthed at Berth No. 6.

Example:

(a) Vessel 800 ft. berthing on 16.3.88 may load to 12.65 m. + 0.2 m. = 12.85 m. (42 ft. 2 in.).

0.2 m. being the minimum predicted level above Chart Datum within the 72 hour period after berthing, i.e. at 1242 hrs. on 19.3.88.

(b) Vessel 900 ft. berthing on 12.3.88 may load to 12.19 m. + 0.7 m. = 12.89 m. (42 ft. 3.5 in.).

0.7 m. being the minimum predicted level above Chart Datum within the 72 hour period after berthing, i.e. at 0917 hrs. on 15.3.88.

No. 2 Wharf: No. 2 Wharf is a pile driven 'T' head structure with 3 interconnected dolphins, 2 positioned to the N.W. and 1 to the S.E., giving the wharf an overall length of 508 m. (1,666 ft.), and providing four berths. Both outside berths (Nos. 1 and 2) and the N.W. Inner Berth, No. 3 are protected by berthing beams. This wharf is connected by a road trestle 518 m. (1,680 ft.) to a causeway 3 miles from the main island of Sitra.

Limitations:

Berth	*LOA*	*Charted Depth*	*Maximum Arrival Draft*	*Sailing Draft*	*Berthing Displacement*
1	250 m. *1 (820 ft.)	12.80 m. (42 ft. 00 in.)	10.67 m. (35 ft. 00 in.)	12.19 m. (40 ft. 00 in.)	58,930 M.T. *3
2	250 m. *1 (820 ft.)	12.95 m. (42 ft. 06 in.)	10.67 m. (35 ft. 00 in.)	12.34 m. (40 ft. 06 in.)	58,930 M.T. *3
3	170 m. (560 ft.)	11.89 m. (39 ft. 00 in.)	10.00 m. (33 ft. 00 in.)	10.36 m. *2 (34 ft. 00 in.)	35,561 M.T.
4	160 m. (525 ft.)	11.89 m. (39 ft. 00 in.)	08.10 m. (26 ft. 06 in.)	10.36 m. (34 ft. 00 in.)	15,240 M.T.

Max. d.w.t.:

Berth 1	80,000 tonnes.
Berth 2	80,000 tonnes.
Berth 3	34,000 tonnes.
Berth 4	25,000 tonnes.

Notes:

*1. Centre of manifold to stern should not exceed 120 m.

*2. 10.97 m. may be permitted under suitable *tidal conditions.*

*3. Maximum windage 5,000 sq.m.

Coastal Tanker Wharf: This wharf is a pile driven structure, fendered on its Eastern side only and connected by a catwalk to the Causeway. At its outer end is a warping dolphin.

Limitations:

Berth	*Vessel LOA*	*Charted Depth*	*Draft Never To Exceed*
7	73.1 m. (240 ft.)	5.48 m. (18 ft. 0 in.)	4.88 m. (16 ft. 0 in.)
	or with special permission		
	73.1 – 79.2 m. (240 – 260 ft.)	4.88 m. (16 ft. 0 in.)	4.26 m. (14 ft. 0 in.)

Basic Wind Speed Guidelines:

Basic maximum Northerly wind is 35 knots.

When wind is from the Easterly/Southerly direction, the tabulated restrictions apply:

Vessel Type	*Berth*	*Wind Direction*	*Restriction Bow North*	*Berthing Bow South*
Tankers	1	Easterly/Southerly	15 – 20 knots	Up to 30,000 d.w.t.
	2	Easterly/Southerly	15 – 20 knots	Never - due to pipeline.
	3	Easterly/Southerly	15 – 20 knots	30 knots
	4	Easterly/Southerly	15 – 20 knots	15 – 20 knots Coastal tankers only.
	5	Easterly/Southerly	15 – 20 knots	35 knots
	6	Easterly/Southerly	15 – 20 knots	35 knots – Max. dep. draft 12.19 m.
	7	Easterly/Southerly	10 – 15 knots	Never
LPG		Northerly	25 knots	10 – 15 knots
LPG		Easterly/Southerly	10 – 15 knots	10 – 15 knots.

BAHRAIN NATIONAL GAS CO.:

General: Butane and propane are stored at Sitra storage tanks at 0.5 p.s.i.g., and −5°C and −42°C, respectively. Maximum storage capacity is 188,000 bbls. (29,890 cu.m.) per product.

Product is pumped to the loading arms via a 16 in. insulated loading line by 2 pumps, each with a capacity of 5,000 b.p.h. There is a 10 in. vapour return line. The vapour return line can be routed to a tank or to flare as required. Note that if during the loading, pressure on the vapour return line exceeds 1.25 p.s.i.g. at the flare, then a control valve may shut against the vessel. This may happen without prior warning.

The loading line and the vapour return line are in the configuration as per plan (See "Plan" – Sitra Wharf No. 2). Loading and vapour return operations are accomplished via Chicksan type arms, the arms having 12 in., 150 A.S.A. rating, and 8 in., 150 A.S.A. rating flanges respectively.

As propane and butane cargoes are loaded through a single shore system it may be necessary for the shore tank to be switched in order that the loading system content is displaced to the vessel with the other product. Masters are requested to maintain an accurate assessment of the cargo loaded at all times and inform the wharf staff as required.

Vessels MUST advise Terminal personnel of any need to shut down loading, even on an emergency basis, so that the Terminal emergency shut down system can be activated BEFORE on-board valves are shut to the loading hoses/arms.

Atmospheric venting is not permitted alongside the wharves. Vessels which are "hot" will be required to load a quantity of coolant, unberth and purge and cool down in the holding anchorage.

Arrival Communications: Vessels intending to load LPG at Sitra will be contacted approximately 72 hours prior to arrival, and will be required to furnish the following information to BAPSHP BN:

1. Names of last 3 ports of call and ETA at 72, 48 and 24 hour intervals to No. 27 Buoy.
2. Arrival draft, departure draft, and berthing displacement.
3. State of readiness to berth/load and composition of vapours in ships tanks. If "hot", quantity required for cooling down procedure.
4. Order of loading, disposition of cargo to load and maximum loading rate.
5. Disposition of cargo already on board, and if intend co-mingling.
6. Ships particulars:
   (a) Length overall.
   (b) Distance bow to liquid connection.
   (c) Distance bow to vapour return connection.
   (d) Maximum freeboard of manifold during cargo operations.
   (e) Minimum freeboard of manifold.
7. Bunker requirements.
8. Radio "Porthealth Bn" with present health conditions.

This information should be updated every 24 hours or sooner should any major alterations to the original be made.

Arrival Procedure: VHF communications should be established with:

(a) BAPCO Terminal to obtain the latest berthing schedule.

(b) Bahrain Port Control to whom vessels should pass their intended passage route and timings from Bahrain Light Vessel to No. 27 Buoy, and obtain clearance.

Should the berth be unavailable, vessels will be directed to the Sitra Holding Anchorage, which is 1 mile South of No. 27 Buoy. Vessels carrying out cooling down procedures will also use this designated anchorage.

LPG vessels will not under normal conditions use the Sitra Inner Anchorage but if special circumstances warrant then permission must be first obtained from Bahrain Port Control.

Berthing and unberthing operations are at all times governed by prevailing weather conditions and the larger freeboard of LPG vessels will be taken into account when considering berthing prospects.

Mooring arrangements will be generally similar to those outlined for BAPCO Berths, but particular attention should be given to extra moorings when warning of imminent weather change is received.

GULF PETROCHEMICAL INDUSTRIES CO.: BAPCO Berths No. 1 and 2.

General: Ammonia and methanol are manufactured and stored at the GPIC plant situated 2 miles from the berths on the Southern side of the causeway. Ammonia is stored in 2 tanks at atmospheric pressure and at a temperature of −33°C with a total capacity of 40,000 tonnes. Methanol is stored in 2 nitrogen blanketed tanks at atmospheric pressure and ambient temperature with a total capacity of 40,000 tonnes also.

The 16 in. ammonia loading line and the 10 in. vapour return line terminate at a combined 10 in. and 4 in. Chicksan type arm. Methanol is similarly routed through a 16 in. loading line to a separate 10 in. Chicksan type arm.

Both products can be loaded each utilising 2 pumps at a maximum capacity of 1,200 tonnes per hour.

Methanol is a typical hydrocarbon product and is handled similarly to other products on the wharf.

Ammonia is a toxic product and should be handled with additional caution. The GPIC office on the wharf contains breathing apparatus sets and other equipment for emergencies.

Arrival Communication: Vessels intending to load ammonia or methanol will be required to provide the following information to GPIC (Telex: 9897, Answerback Kemia Bn) via Bahrain Radio:

1. Names of last 3 ports of call.
2. ETA at 72, 48 and 24 hour intervals to No. 27 Buoy.
3. Arrival draft, departure draft, berthing displacement and Tovalop for Methanol.
4. State of readiness to berth/load and composition of vapours and temperatures of ship's tanks. Noting for ammonia loadings that the vapour return line can only be utilised if the tanks are filled with gaseous ammonia.
5. Order of loading, disposition of cargo to load and maximum loading rate requested.
6. Disposition of any cargo already on board.
7. Ship particulars:
   (a) Length overall.
   (b) Distance bow to liquid connection.
   (c) For ammonia loadings: Distance bow to vapour return.
   (d) Maximum freeboard of manifold during cargo operations.
   (e) Minimum freeboard of manifold.
8. Loading arms terminate with flanges of:
   (a) Ammonia liquid – 10 in. × 300 ASA.
   (b) Vapour return – 4 in. × 150 ASA.
   (c) Methanol – 10 in. × 150 ASA.
   Vessel requested to inform if suitable sized and constructed adaptors not on board, giving manifold size flange required.
9. Any deficiencies in vessels equipment, safety appliances.
10. Bunker requirements.
   Vessels are required to radio "Porthealth Bn" with present health conditions.

Arrival Procedure: VHF communications should be established with:

(a) Bahrain Port Control to whom vessels should pass their intended passage route and timings from Bahrain Light Vessel to No. 27 Buoy, and obtain passage clearance.

(b) BAPCO Terminal to obtain the latest berthing schedule.

Both on VHF Channel 74.

Should the berth be unavailable, vessels will be directed to Sitra Holding anchorage, which is 1 mile South of No. 27 Buoy.

All the normal BAPCO Terminal procedures and regulations will apply in conjunction with additional safeguards.

In addition to the mooring lines required (5 head lines and 5 stern lines), 2 fore and 2 aft backsprings must be rigged. These backsprings must be of the same type of construction (nylon, polyprop, or wires with same length tails).

Access to the "T" head will be restricted.

Loading Masters: GPIC provide Loading Masters, independent of BAPCO, who will make all necessary arrangements, inspections and checks for the loadings.

The BAPCO Wharf Superintendent and his delegates have the responsibility for the overall safety and security of the wharf and access to the wharf will be restricted during ammonia loading operations.

Loading Information: As the loading pumps for ammonia have to be cooled down prior to operations the ship's maximum acceptable loading rate, up to 1,200 tonnes/p.h. cannot be changed after receipt of arrival telex.

The max. loading rate utilising 2 shore pumps is 1,200 tonnes/p.h.

Before commencement of any cargo operations the GPIC Loading Master and the vessels Loading Officer must mutually agree on the procedures for Normal and Emergency Stoppage.

Vessels must advise the GPIC Loading Master of any need to shut down loading, even on an emergency basis, so that the Terminal shut down systems can be activated before on-board valves are shut against the loading arms.

In the event of an emergency disconnection the loading arms will automatically rise about 2 m. above its current operating position with an arm full of product, leaving 1 quick closing valve connected to the vessel.

Prior to commencing operations the GPIC Loading Master and the ship's Loading Officer will mutually agree on the correct sampling procedure for the vessel.

Gas masks, breathing apparatus and first aid equipment must be checked for full serviceability and be ready to hand prior to commencing any operations.

Prior to and on completion of loading, the loading arms will be purged with nitrogen to displace the product on to the vessel.

During ammonia loadings the vapour return line should be used to assist in the displacement of the shore tanks. However, this will only be carried out if the ship's tanks are filled with gaseous ammonia. It is not permitted for the ship to vent inert gas or other vapours into the vapour return line.

ALUMINIUM BAHRAIN:

General: Berthing and unberthing operations are conducted on a 24-hour basis at the discretion of the Bahrain Pilot; wind, weather, tide and other circumstances permitting.

Owing to the confined area of operations and the strong cross currents experienced on the Inner Berth some arriving vessels may have to anchor South of No. 27 Buoy for slack water.

Full power must be available on the main engines and the vessel must be sufficiently ballasted for the operation envisaged. The Bahrain Pilot will decline to berth vessels if they are not properly equipped with satisfactory mooring lines, or if deck appliances are not operable, or if steering gear, telegraph and whistles are not in an efficient condition. The Master should notify the Pilot of any defects or peculiarities pertaining to his vessel.

Due to exposed location, vessels alongside the Inner Berth may experience considerable surging in rough weather and careful watch should be kept on mooring ropes. Slack lines present a hazard to the safety of vessels moored alongside. It is recommended that at least half hourly routine checks on moorings are carried out. The use of shore storm moorings are mandatory for vessels moored at ALBA Inner Berth. Vessels requesting additional lines to be run out, etc., will be given every assistance by shore staff.

Anchors: The "offshore" anchor should be cleared and lowered to the waterline, ready for letting go, before approaching the berth. Anchor buoys are not to be used.

Gangways: Vessels shall provide an efficient gangway, which shall be adequately lighted during the hours of darkness and be of sufficient length to provide safe access when the vessel is discharged.

Mooring Charges: BAPCO will make a charge for the use of tugs/tow-boats and services rendered during berthing and unberthing operations, and for tugs utilised holding/repositioning vessel if required during periods of inclement weather.

Smoking: Smoking is strictly prohibited on the ALBA jetty except at approved "Smoking Points". The Marine Superintendent Operations, Sitra has approved vessels berthed alongside the ALBA jetty as "safe places" for smoking except during bunker operations. This approval may be withdrawn by ALBA's Marine Superintendent or his delegate if any condition arises which in his opinion is likely to prove hazardous.

The Master shall be responsible for ensuring that the crew of the vessel are informed of the safe places so approved and that they comply with the regulations.

Swimming: Swimming is not permitted in the vicinity of the ALBA jetty.

Vessels' Engines: The main engines and all gear must be in an operable condition and in a state of immediate readiness whilst alongside the jetty.

Fire Wires: Vessels berthed at the ALBA Jetty must have the eye of a wire hanging over the offshore bow and quarter to enable tugs to connect up readily in an emergency. The wire shall be suitable for the intended purpose and shall have sufficient scope on deck for free running. These wires must be tended to keep the eyes at sea level.

Shore Leave: Shore leave may be taken by *bona fide* crew members in accordance with the Regulations prescribed by the Government of Bahrain, and in accordance with the Agents' Notice to Masters.

All persons landing from vessels at ALBA's berths must use transport provided by the Agent between the ALBA Storage Island and ALBA Security Gate where they must show their shore leave pass, BAPCO 2564. It is not permitted to walk along the causeway between the Storage Island and ALBA Security Gate. All persons going ashore must hand in either their valid passport or Seaman's Continuous Discharge Certificate to the Immigration Officer and be cleared by the Customs Officer, both of whom are located in BAPCO's Sitra Shipping Office.

Communications: Vessels should provide their Agent through Bahrain Radio with:

1. ETA at least 72 hours in advance.
2. Names of last 3 ports of call.
3. Arrival drafts fore and aft.
4. State of readiness to berth/load/discharge.
5. Bunker requirements.

This information should be updated should any major alterations to the original be made.

They should also radio "Porthealth Bn" with present health conditions.

When within VHF range communications should be established with:

(a) Bahrain Port Control (Channel 74)

and

(b) BAPCO Terminal to obtain the latest berthing schedule from Bahrain Pilots.

During cargo operations while a vessel is alongside ALBA jetty, VHF Channel 8 is used for contact with the wharf staff. Masters are requested to maintain a watch on this channel. There are no facilities for providing vessels alongside with telephones.

ALBA Wharf: Description: The ALBA wharf is a pile driven, "L" shaped structure, 171 m. (562 ft.) long with a reinforced concrete decking. A mooring dolphin is situated 47.5 m. (165 ft.) to the N.W. and a warping/mooring dolphin 60 m. (197 ft.) to the S.E. These dolphins give the wharf an overall length of 281 m. (924 ft.).

The Alba Wharf can be easily accessed via the new constructed Alba 3.5 miles causeway, South of BAPCO Causeway. This causeway provides dedicated direct vehicular access from Sitra to the Alba Wharf without the need to utilise the BAPCO Causeway.

This causeway was constructed mainly to allow transport of raw material by Alumina bulk carrier tankers from Alba Wharf to main Alba smelter. It is exclusively for the use of Alba authorised traffic.

The old Aerial Ropeway raw material transport facilities are kept for petcoke and as a secondary means of alumina transportation.

Limitations: Outer Berth: Depth of berth is 11.3 m. (37 ft.) at Chart Datum. This allows vessels with a draft of 10.67 m. (35 ft.) to berth at all states of the tide.

Inner Berth: Forward: 9.15 m. (32 ft.) at Chart Datum.
Aft: 10.35 m. (34 ft.) at Chart Datum.

This allows vessel with a draft of 8.6 m. (28 ft.) to berth at all states of tide.

Displacement:

Outer Berth: Fenders on the Alba Outer Berth have been designed to accept loaded vessels of up to 57,000 tonnes displacement, with LOA of 189 m. (620 ft).

Vessels over 97.5 m. (320 ft.) LOA must have a minimum parallel body of 76.2 m. (250 ft.).

Smaller vessels with a LOA of between 40 m. (140 ft.) and 97.5 m. (320 ft.) may be berthed on one group of fenders either 1, 2 and 3 or 4, 5 and 6.

Inner Berth: The Inner Berth is designed to accept vessels of up to 12,000 d.w.t., with a maximum LOA of 165 m. (540 ft.) and with a maximum beam of 21 m. (68 ft.).

Facilities: A suction ship-unloader is installed on the Outer Berth as part of the Alba modernisation programme. The suction ship-unloader is capable of unloading alumina, petroleum coke and pitch from a bulk carrier of up to 40,000 tonnes deadweight.

The unloader is a "single job" type having a "free digging" rate of:

Alumina	550 tonnes per hour (approx.).
Petroleum Coke	550 tonnes per hour (approx.).
Pitch	Variable between 100 and 200 tonnes per hour.

Note: "Free digging" denotes the flow rate obtained at the start of unloading a full hold.

The annual quantities to be unloaded are as follows:

Alumina	880,000 tonnes (approx.).
Petroleum Coke	190,000 tonnes (approx.).
Pitch	44,000 tonnes (approx.).

If the suction unloader is out of service, vessels will be unloaded by 2×10 ton capacity grab equipped cranes, with maximum outreach of 28.6 m.

GULF INDUSTRIAL INVESTMENT COMPANY:

Gulf Industrial Investment Company (G.I.I.C.), P.O. Box 50177, Hidd, Bahrain. Tel: 673311. Telex: 9993 GIIC Bn.

Berthing/General: Under normal circumstances, berthing and unberthing operations are conducted on a 24 hour basis at the discretion of the Bahrain Pilot; wind, weather, tide and other circumstances permitting.

Owing to the confined area of operations for ore carriers arriving at the maximum permitted drafts for the berth, and the strong cross currents experienced on the berth, arriving vessels may have to anchor South of No. 27 Buoy for slack water.

Full power must be available on the main engines and the vessel must be sufficiently ballasted for the operation envisaged. The Sitra Pilots will decline to berth vessels if they are not properly equipped with satisfactory mooring lines, or if deck appliances are inoperable, or if steering gear, telegraphs and whistles are not in an efficient condition. The Master should notify the Pilot of any defects or peculiarities pertaining to his vessel.

Approaches: The area surrounding the wharf and its approaches have been dredged for deep drafted vessels of up to 12.8 m.

To assist in the pilotage, leading beacons and marker buoys have been installed. The beacons, rear (Gp. Fl. (2) 2 sec.) 12 m. and front (Qk. Fl.) 7 m. are situated parallel and 320 m. to the West of the wharf centreline, and provide clearance for maximum drafted vessel turning from the Main Fairway into the dredged area. The buoys, GIIC South (Fl. G. 3 sec.) and GIIC North (Fl. 3 sec.) mark the Eastern edge of the dredged area for unloading berth approaches.

Anchors: The "offshore" anchor should be cleared and lowered to the waterline, ready for letting go, before approaching the berth. Anchor buoys are not to be used.

Gangways: Vessels shall provide an efficient gangway, which shall be adequately lighted during the hours of darkness and be of sufficient length to provide safe access when the vessel is light.

Gangways shall not obstruct the ship unloader or ship loader railways, or obstruct the movement of these appliances.

Main Deck Access: The area between the ship's hatches and the dockside rail shall be prohibited for personnel access during the ship loading/unloading operations. All personnel shall be informed accordingly and suitable barriers installed and "No Entry" notices clearly posted.

Under no circumstances shall ship's crew ascend the shore loader/unloader or pass under the conveyor belts.

Illumination: Proper illumination shall be provided on the vessel's working decks, hatches, holds, and other working areas during the hours of darkness.

Swimming and Fishing: Swimming and Fishing or any other recreational activities from or on the jetty are strictly prohibited.

Fire Wires: Vessels berthed at the GIIC jetty must have the eye of the wire hanging over the offshore bow and quarter to enable tugs to connect up readily in an emergency. The wire shall be suitable for the intended purpose and shall have sufficient scope on deck for free running. These wires must be tended to keep the eyes at sea level.

Shore Leave: Shore Leave may be taken by bona fide crew members in accordance with the Regulations prescribed by the Government of Bahrain, and in accordance with the Agents' Notice to Masters.

All persons landing from vessels at GIIC's berths must hand in either their valid passport or Seaman's Continuous Discharge Certificate to the Immigration Officer and be cleared by the Customs Officer who are located at GIIC main entrance.

All persons landing from and rejoining vessels lying at GIIC jetty must use transport provided by the Agent between the Jetty and the Security Gate.

Access to the plant area shall be strictly prohibited.

Fire Points: The jetty is provided with fire fighting water and six hydrant points located along the berth.

Mooring Charges: BAPCO will make a charge for the use of Pilot, tugs/towboats and services rendered during berthing and unberthing operations.

Communications: Vessels should provide their Agent through Bahrain Radio with:

1. ETA at least 72 hours in advance.
2. Last 3 ports of call.
3. Arrival drafts fore and aft and berthing displacement.
4. State of readiness to berth/load/unload.

This information should be updated should any major alterations to the original be made.

They should also radio "Porthealth Bn" with present health conditions.

When within VHF range communication should be established with:

(a) Bahrain Port Control (Call on Channel 74), to whom vessels should pass their intended passage route and timings from Bahrain Light Vessel to No. 27 Buoy and obtain passage clearance.
(b) BAPCO Terminal to obtain the latest berthing schedule from Sitra Pilots.

Whilst alongside vessels will be provided with a telephone to communicate with the plant operators. In an emergency, vessels may utilise VHF Channel 68 to communicate with GIIC Terminal.

GIIC Wharf: Description: Situated to the North of Sitra Anchorage, and on the South side of the pelletising plant, is a 300 m. finger jetty constructed on concrete piles with a 35 m. wide concrete deck connected to the island by a 145 m. trestle. There are 2 mooring dolphins, one situated 75 m. to the South of the jetty, on the jetty centreline, and the other 79 m. to the North of the discharge berth. The jetty consisting of 2 berths, the discharge berth for iron ore on the Eastern side, and a loading berth for pellets on the Western side. 2 shore grab cranes, each with capacity 1,500 t.p.h. are available.

Parameters:

	Unloading	*Loading*
Length	300 m.	300 m.
Depth of water alongside at CD	13.4 m.	13.4 m.
Max. deadweight in tonnes	100,000	60,000
Max. displacement in tonnes	130,000	85,000
Max. freeboard to top of hatch	18.4 m.	16.5 m.
Max. outreach of appliances	29.5 m.	19.6 m.
Max. length of ship	290 m.	240 m.
Max. permissible draft of vessel for manoeuvring at all states of the tide	12.8 m.	12.8 m.

BALLAST: The discharge of dirty ballast within the territorial waters of Bahrain is strictly prohibited. As a further measure to avoid pollution by oil of the Marine environment, Masters of tankers are requested not to pump any oil overboard within the Gulf area.

Vessels should arrive with all ballast clean.

In special circumstances limited quantities up to 200 tons slops may be accepted at a certain charge per barrel. The use of these facilities is entirely at vessel's risk.

In the event of a vessel spilling oil in Sitra Harbour the Company will, at its discretion, clean up the oil and recover costs by charging the vessel.

MEDICAL: Advance notice to Agents preferable. Good hospital and medical facilities.

Emergency hospital cases will be treated as such, and will be handled by the vessel's Agent or by Company facilities, whichever is first available. Under normal conditions, the vessel's Agent should handle all personnel from vessels other than "Company" vessels.

RESIDUES: Limited slop tank facilities for oily residues at all berths.

Shipmaster's Report: May 1992.

BAPCO can receive up to 5,000 barrels of slops, provided their tanks are empty. Cost is U.S.$0.20 per barrel.

LOADING/DISCHARGING: *Readiness:* The following will apply in regard to Notice of Readiness.

Notice of Readiness to load is a warranty on the part of the Master that the vessel is in all respects ready to load and that the tanks, pipes, pumps and accessories of the vessel are fit to receive the cargo to be loaded.

The Master or his representative is required to hand to the Company, a written Notice of Readiness to load. Receipt of such Notice of Readiness by the Company does not necessarily imply acceptance.

The Company will make every effort to accept Notice of Readiness when tendered on arrival, provided vessel is in all respects ready to load. The Company will endeavour to load vessels upon arrival and/or as promptly as a berth is available.

Arrival, where used above, means when the vessel passes Sitra Beacon when proceeding straight to the berth or passing North Range Beacon on departure from Mina Sulman, or the time of anchoring in the area South of No. 27 Buoy providing that the presence of the vessel is made known to BAPCO Terminal on VHF or BAPCOSHIP (Tel: 755662) via Bahrain Radio, at the time of anchoring.

Responsibility: Loading will not start until the vessel's Loading Officer reports the vessel is ready to receive cargo and the Company's Loading Master is satisfied with the preparations for loading. Any inspection made by the Company's Loading Master in this regard is performed without the Company assuming any liability.

All operations on board the vessel in connection with loading and discharging are the responsibility of the vessel.

A Company Loading Master will be available throughout the loading to offer advice to the Master on loading procedures and loading hazards.

Warning is given of the danger of closing a valve against an incoming oil stream. This procedure will create excessive pressures which may result in damage to the loading hoses, vessel's pipe-lines or Terminal facilities. Vessels will be held liable for damages resulting from failure to observe this precaution.

Hose Handling: Without assuming any liability on behalf of BAPCO, BAPCO employees will assist in connecting and disconnecting hoses to vessels. A ship's officer must be present, and the ship's deck officer on duty must approve the hose connection on board.

All unused cargo, bunker and ballast lines must be effectively and positively isolated during loading.

BAPCO has air operated hose handling rigs on Berths No. 1, 2, 3, 5 and 6.

BANAGAS has separate liquid and vapour return Chicksan arms for RLPG on Berths No. 1 and 2.

GPIC has combined Chicksan arms for ammonia liquid and vapour return, and separate Chicksan arms for methanol, on Berths No. 1 and 2.

The vessel's hose rigging derricks should be in a constant state of readiness to give additional assistance as necessary. BAPCO employees will not operate ship's derricks or winches.

For convenience, vessels should have fittings conforming to the templates or provide adaptors. This is not mandatory, but expedites hose rigging and guarantees a good connection.

Cargo Inspection Service: The service of the Bahrain Government, Ministry of Development and Industry, Oil Inspection and Gauging Inspectors are available for the inspection and certification of the condition of a vessel's tanks, pipes, pumps and appurtenances. the Agent will, upon request, arrange for the services.

This Cargo Inspection Unit also carries out quantity and quality checks as required.

BAPCO will not issue any certificate purporting to state that vessel's tanks, pipes, pumps and appurtenances are clean or acceptable for receiving cargo. In the event a BAPCO Representative either alone or accompanied by the Bahrain Government Petroleum Inspector, inspects the vessel, BAPCO will make no representation nor assume any responsibility in connection with the condition of vessel's tanks, pipes, pumps and appurtenances, nor will BAPCO assume any liability for contamination of cargo aboard ship caused by same.

Loading Rates: This table prescribes the approximate maximum loading rates of products available at the wharves:

Product	*Up to bbls.p.h.*	*Sea Lines*	*Hoses No. × Size (in.)*
Motor gasoline	12,000	3	2×8
Naphtha	10,000	2	2×8
Jet fuel (JP4 and JP5)	10,000	2	2×8
Kerosene	8,000	2	2×8
White diesel	12,000	3	2×8, 1×12
Black diesel	2,000	1	1×8
Fuel	30,000	3	2×12, 1×8
Press. LPG	400	1	1×3
RLPG (Loading)	10,000		12 in. Chicksan
RLPG (Vapour)	10,000		8 in. Chicksan

Loading rates of kerosenes and jet fuels are restricted due to static electricity hazards. These rates, dependent upon individual tank pipeline diameter and ship's current loading pattern, will be made available by the BAPCO Loading Master.

A maximum pressure of 135 p.s.i. is allowed on the loading hoses.

Discharging Rates: The discharge rates will be governed by the vessel's pumps, which must be limited to 135 p.s.i. at the manifold.

DENSITY: Average 1030.

FRESH WATER: Only in cases of extreme emergency will vessels be berthed at BAPCO Oil Wharves for water alone, and this at an additional docking charge to the berthing/unberthing.

There is no water available on the BAPCO, ALBA or GIIC Wharves except by barge.

Water is made available from lighters in the Sitra Anchorage. Requirements should be requested well in advance through the vessels' Agents.

FUEL: *Facilities:* Bunkers can be supplied at all oil berths and can be loaded simultaneously with bulk cargoes.

Bunker quantities are measured by "Brodie" positive displacement meters.

Chief Engineers are requested to avail themselves of the opportunity of checking the opening and closing counter readings on the meters supplying bunkers to the vessel.

Product	*Bunkering Rates are approximately* Bbls./hr.	Tons/hr.
Fuel oil	2,500	360
Marine diesel	1,500	200

Bunker Barge Service: BAPCO operates a bunker barge service principally to supply diesel and gas oil to vessels at Mina Sulman. This service is also available to vessels in the Sitra Marine Areas, but delays may occur due to adverse weather conditions. This service only operates to the West of Sitra Beacon except under special circumstances when vessels may be bunkered in the Explosives Anchorage.

This service is maintained by the barges "BAPCO 1", "BAPCO 2" and "BAPCO 3", and applications for use should be via the vessel's Agent and it is desirable to give as much notice as possible. The minimum notice for diesel and gas oil deliveries is 48 hours, weekends excluded.

"BAPCO 1": This self-propelled barge has the following capabilities of loading/discharging:

	Maximum Capacity	*Gas Oil*
Diesel/gas oil	bbls.	7,700
	tonnes	1,000
Discharge	bbls.p.h	100 – 1,500
Rates	t.p.h.	30 – 200

"BAPCO 2" and "BAPCO 3": These dumb barges have the following capabilities each:

		Diesel Gas Oil
Capacity	bbls.p.h.	1,300
	tonnes	170
Discharge	bbls.p.h.	50 – 760
Rates	t.p.h.	5 – 100

Lubricating Oils and Greases: A full range of Caltex lubricants and greases are available at Bahrain.

In order that lubricating oils may be promptly delivered, Masters of vessels or their Agent's are requested to telex their requirements at least 48 hours prior to their arrival to "Caltex Bn", Telex: 7039.

Empty lubricant containers are not accepted at Bahrain.

GANGWAY/DECK WATCHMEN: An officer must be on deck during all loading or discharging operations. A deck watch must be maintained for moorings and hose connections.

TOBACCO ALLOWANCE: No restriction.

WINE AND/OR SPIRIT ALLOWANCE: Ship's requirements. Bond sealed but can be re-opened upon application. Liquor trafficking between vessels alongside wharves or between vessels and shore strictly prohibited.

CONSULS: Embassies are established in Manama, Bahrain.

SURVEYORS: The American Bureau of Shipping, Norske Veritas, Hellenic Register and Lloyd's Register of Shipping have surveyors stationed in Manama, Bahrain.

REPAIRS: Local marine repair companies can undertake most repairs of general nature.

Also see "Mina Sulman".

REPATRIATION: Facilities for crew change and repatriation by sea or air.

AIRPORT: An international airport served by regular airlines located on Muharraq Island, about 15 miles from Sitra.

TIME: GMT plus 3 hours. No changes during year.

HOLIDAYS: Holidays do not affect operation of Port, which operates 24 hours a day, 7 days a week. Thursday and Friday are the official days of rest.

TELEPHONES: No facilities for placing telephones on ships.

SHORE LEAVE: Shore leave may be taken by *bona fide* crew members in accordance with the Regulations prescribed by the Government of Bahrain, and in accordance with the Agents' Notice to Masters.

All persons landing from vessels at BAPCO's berths must use transport provided by the Agent between the "T" berths and BAPCO's Security Gate where they must show their shore leave pass, BAPCO 2564. It is not permitted to walk along the trestle and causeway. All persons going ashore must hand in either their valid passport or Seaman's Continuous Discharge Certificate to the Immigration Officer and be cleared by the Customs Officer, both of whom are located in BAPCO's Sitra Shipping Office.

All persons landing from and rejoining vessels berthed at the Island Wharf must use the Agent's launch, landing on the steps on the South side of the Sitra Shipping Office.

IDENTIFICATION CARDS: Discharge Book or Passport to be deposited with Immigration when going ashore.

SEAMAN'S CLUBS: Bahrain Seafarers Society. Mina Sulman, Manama.

CURRENCY: The unit of currency is the Bahrain Dinar, which is divided into 1,000 Fils. The value of the Bahrain Dinar is linked to the value of the IMF Special Drawing Right.

NAVIGATION: The Superintendent – Marine Operations will be available for advice concerning navigation of channel.

Navigation Warnings: Attention is drawn to the service provided by the Middle East Navigational Aids Service (MENAS) in promulgating navigation warnings covering the whole of the Gulf area.

Mariners are requested to report any hazard/obstructions encountered, observed failure of or alterations to navigational aids, etc., to:

Middle East Navigational Aids Service,
Post Box 66, Bahrain,

or if the information is urgent, radio/cable to

Megulite, Bahrain or to Telex: 8246 Menas Bn.

Printed Navigation Notices:

(a) The notices promulgate all navigational information of a permanent or semi-permanent nature.

(b) Each notice, which is serially numbered, remains in force until specifically cancelled by a later notice, when the information in the notice is:
  (i) Known to have been promulgated in British Admiralty Notice to Mariners.
  (ii) No longer valid.
  (iii) Considered sufficiently promulgated.

(c) These printed notices are distributed to various Agents, Port and Harbour Authorities, where they can be viewed.

Radio Navigation Warnings:

(a) The warnings relate to navigational information which may immediately effect the safe navigation of ships at sea.

(b) These warnings are serially numbered, with the prefix "NAV" and authenticated by the signature "Megulite".

(c) The warnings are broadcast by Bahrain Radio (A9M) on 487 kHz on receipt and at 0518, 0918, 1318 and 1718 GMT. For further details consult the latest edition of "Admiralty List of Radio Signals" Volume V.

(d) Each radio warning is rebroadcast for a period of from 24 hours to one month, depending upon the nature of the information it contains. At the end of which period it is either self-cancelling or superseded by a new warning.

WEATHER: *Winds:* The direction and strength of winds in this area vary and change at very short notice without any prior indication. However, the prevailing wind is from the N.W.

For a more complete description of winds in the Gulf, refer to the "Sailing Directions".

Weather and Temperature: The local weather during the period May through September is hot and very humid with temperatures up to 45°C in the shade. Masters should be aware of the possibilities of crews experiencing heat exhaustion or heat stroke.

Weather during the remaining months is pleasant with temperatures ranging between 10°C to 25°C.

Visibility: The visibility is generally good but at times sand and fine dust is held in suspension in the atmosphere and visibility is greatly reduced. This haze can provide deceptive visibility. Fog, with or without dust, can occur in the mornings.

GENERAL:

Anchors: The offshore anchor should be cleared and lowered to the waterline, ready for letting go, before approaching the berths. Anchor buoys are not to be used whilst moored alongside in Sitra.

Rat Guards: Every vessel berthed at Company wharves must fit adequate rat guards to all mooring ropes and wires.

Gangway: Every vessel berthed at the wharves shall provide an efficient gangway, which shall be adequately lighted during the hours of darkness and be of sufficient length to provide safe access when the vessel has discharged ballast.

Where a safe and efficient gangway to the wharf cannot be installed due to wharf/ship configuration, an accommodation ladder shall be provided on the offshore side. Hose connections, in this instance, must be made by the ship's crew and the loading operations may be commenced providing suitable methods of communication are established. Delays due to the inability of wharf staff to board the vessel shall be for vessel's account.

Alternative Access/Egress: All vessels shall provide an alternative means of access/egress from the vessel for emergency use. This will normally take the form of a pilot ladder on the offshore side of the vessel, and as such should be constantly tended to 2 ft. above the waterline.

Fire Wires: All vessels berthed alongside BAPCO Berths must have the eye of a wire hanging over the outside bow and quarter, to enable tugs to connect up readily in an emergency. The wire shall be suitable for the intended purpose and shall have sufficient scope on deck for free running. These wires must be tended to keep the eyes at sea level.

Engines: The main engines and all gear must be in an operable condition and in a state of immediate readiness whilst the vessel is alongside the wharves.

Port Police and Company Security: The Bahrain State Police maintains launch patrol in the vicinity of the wharves, and ex-officio have access to wharf installations in the course of their duty.

The Company maintains security guards and officers on its wharves to enforce the regulations of the Bahrain Government and to safeguard its own interests.

The Company security officers are fully recognised by the Bahrain Government and have the full powers of a police officer.

Masters are required to co-operate with any request made to them by a security officer.

Swimming: Not permitted in the vicinity of the wharves.

Publications and Charts: The following British Admiralty or U.S. Hydrographic publications are recommended for use in Bahrain waters:

British Admiralty
No. 3790 – Ras Laffan to Ras Tannura.
No. 3792 – Approaches to Mina Sulman and Al Manama.
No. 3796 – Mina Sulman and Approaches.
No. 3798 – Bahrain Outer Approaches to Mina Sulman.
The current edition of "The Pilot".

U.S. Hydrographic Office
No. 62411 – Ras Tannura to Ras Laffan.
No. 62412 – Approaches to Jazirat Al Muharraq.
No. 62413 – Sitra Anchorage.
The current edition of "Sailing Directions for the Gulf".

Bahrain Survey Directorate
No. 1501 – Approaches to Mina Sulman.

Launch Services: The Company does not provide launches for general use. Transportation of ship's personnel between vessel, the mainland of Bahrain and the wharves is provided by the vessel's Agents.

Tank Cleaning and/or Gas Freeing: Tank cleaning and/or gas freeing are not permitted alongside the wharves.

Fishing: Fishing is not permitted from the wharves or from vessels alongside as nylon lines constitute a safety hazard to personnel travelling on the launches and foul launch propellers.

Spares: Deck and Engine Room spares are not normally available in Bahrain.

Provisions: Supplies of provisions are available in Bahrain. All requests should be routed through the vessel's Agent prior to the vessel's arrival.

Laundry: Local laundry services are available.

SAFETY: The Company is primarily concerned with Safety, and Masters of vessels are requested to provide the maximum co-operation. Detailed regulations concerning safety are contained in the Sixth Schedule of the Bahrain Port Ordinance 1965 and certain of these regulations are summarised below for convenience:

Smoking: Smoking is strictly prohibited within 280 m. (900 ft.) of the wharves, and on board vessels alongside except in those enclosed spaces aboard ship specifically designated by the Master as "Smoking Areas". Failure to comply with this regulation can involve cessation of loading operations and unberthing pending complete investigation, and receipt of written assurance from the Master that effective controls have been established.

The Master shall be responsible for ensuring that the crew of the vessel is informed of the safe places so approved and that they comply with the Regulations.

The Company reserves the right in unusual circumstances to prohibit smoking at any time in any place on or adjacent to the Company's wharves during loading operations.

Fire Wires: Whilst alongside, vessels must have the eye of a wire hanging over the offside bow and quarter to enable tugs to connect up readily in an emergency.

Funnel Sparks: Whilst alongside, vessels must not blow boiler tubes, and every precaution must be taken to prevent sparks escaping from the funnel.

Vessels' Engines Alongside Wharves: The main engines and all gear must be in an operable condition and in a state of immediate readiness while vessels are alongside the wharves.

Trim of Vessels Alongside Wharves: During loading or discharging operations the loading officer must ensure that at no time does the vessel assume a trim which will, in case of emergency, preclude the unberthing of the vessel under her own power.

Scupper Plugs: All scuppers must be plugged and cemented prior to mooring alongside wharves.

Ullage Screens: During loading or discharge of highly volatile cargoes, all ullage pipes and sighting ports, when necessary to be left open, are to be protected by a fine mesh copper screen or gauze plug.

Fire Hoses: Whilst a vessel is within BAPCO's Terminal Area, her fire hoses shall be connected and kept ready for instant use.

Craft Alongside Vessels at Wharves: Once a vessel is berthed, no craft are allowed alongside. This applies to any local craft, agents' launches, etc.

Suspension of Loading: In the event that Safety Regulations are violated Sitra Pilots and Loading Masters are authorised to shut down loading operations.

Vessels Carrying Bulk Sulphur: Owing to the hazardous nature of this cargo, vessels having bulk sulphur on board are not allowed alongside the oil wharves and will be bunkered by barge as available.

Gas Venting: During loading, tanks must only be vented through the vessel's permanent venting system.

Tank lids must be closed prior to berthing and must be kept tightly closed throughout the period of loading. This includes permanent ballast tanks. During loading/discharge all openings must be protected by a fine mesh copper screen or gauze plug.

Radio Silence at Wharves: Vessels' radio and radar equipment, including the main VHF installation, must not be operated whilst alongside Company wharves.

Permission may be granted for the use of certificated intrinsically safe hand-held radios for the use of cargo operations only.

PORT REGULATIONS: The Superintendent – Marine Operations should be contacted for any queries not covered by lists of regulations provided on arrival.

SHIPMASTER'S REPORT: December 1979 (Updated 1994).

Anchorage: East of No. 27 Buoy, good holding ground with thick mud. Inner Anchorage thick mud and VLCC's not dragging with 6 shackles out, in force 7 winds.

Fuel: Diesel/Gas oil available from barge which holds about 1,000 L/t (BAPCOSHIP). Barge will not come alongside after 1800 hrs. or in rough weather but will stay alongside pumping after 1800 hrs. if already there. Will only bunker in inner anchorage.

AUTHORITY: The Bahrain Petroleum Company B.S.C. (closed), Bahrain Refinery, Bahrain. *Tel:* 755661. *Telex:* 8218 Bapshp Bn. *Cables:* Bapco Bahrain. *FAX:* 755890. *Contact:* Superintendent – Marine Operations.

The Harbour Master, Bahrain.

AGENT: See "Mina Sulman".

NOTES

Please also advise Shipping Guides Ltd.

Baltic Deep-Sea Pilotage

THE BALTIC PILOTAGE AUTHORITIES COMMISSION (BPAC): (See Plan)

A non governmental organisation of pilotage authorities of the countries adjacent to the Baltic Sea, i.e.

Denmark
Estonia
Finland
Germany
Latvia
Lithuania
Poland
Russia
Sweden

Informs about:

Recommendations
Rules
Requesting Deep Sea Pilots for the Baltic

Recommendation on the use of adequately qualified deep-sea pilots in the Baltic: (Resolution A. 480 (XII) Nov. 1981.

The IMO recommends that ships which wish to avail themselves of deep-sea pilots in the area of the Baltic should only take deep-sea pilots licenced by a pilotage authority of a Baltic coastal state, i.e. Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, Russia and Sweden (IMO-Resolution A.480 (XII)).

Such licensed deep-sea pilots are in possession of a red identity card.

Port-of-Departure Rule: (1st January, 1983).

The pilotage authorities of the Baltic coastal States draw special attention to the following rule which came into force on 1st January, 1983:

Deep-sea pilotage in the Baltic Sea area shall be performed by deep-sea pilots from the respective ports of departure of the Baltic coastal States only, including the Kiel-Holtenau Locks, the Sound and the Belts. A deep-sea pilot shall disembark from a ship at the first port of call and shall return home as soon as possible.

If the ship wants further advice of a deep-sea pilot it is the responsibility of the local pilotage authority of that port to supply a deep-sea pilot.

Duty Hours: A deep-sea pilot should not normally be engaged on the bridge for more than 12 hours in 24 hours. Deep-sea pilots should take adequate rest periods between spells of pilotage and should reach agreement with the Master of the ship in advance regarding adequate rest periods to be taken during the passage. The appropriate pilotage authorities shall check that this is done to their satisfaction.

The Baltic Pilotage Authorities Commission: (4th June 1985).

Recognising that deep-sea pilotage helps to enhance safety of navigation and prevention of pollution of the marine environment, in particular to reduce the risks resulting from the high density of ships carrying dangerous or noxious cargoes and that the presence of a deep-sea pilot on board would strengthen a vessel's navigational team and improve emergency measures in case of incidents and *having considered* the necessity of establishing a certain order in the Baltic Sea, *recommends.*

A. Masters of ships which are constrained by the draft and
B. Masters of ships other than registered in one of the Baltic States, *infrequently* sailing in the respective area coming from or being bound for ports in the Baltic Sea.
C. Masters of oil tankers in loaded condition and all loaded chemical tankers and gas carriers, irrespective of size

to avail themselves of deep-sea pilots, certified by a competent authority of a Baltic coastal State.

IMO Recommendations: (Baltic Sea).

Recommendation on navigation through the entrances to the Baltic, (Resolution A.620 (15), Nov.1987).

The Assembly,

Recalling Article 15(j) of the Convention on the International Maritime Organisation concerning the functions of the Assembly in relation to regulations and guidelines concerning maritime safety and the prevention and control of maritime pollution from ships.

Being aware of the close relationship between safety of navigation and the prevention of pollution from ships.

Noting that, owing to the risk of grounding or collision and the strong sea current, the navigation of large ships through the entrances to the Baltic Sea constitutes a potential danger of pollution of the entrances and of the entire Baltic Sea area.

Noting also that ships carrying radioactive material constitute a potential danger of pollution of the entrances to the Baltic Sea and a potential hazard to international shipping.

Noting further that, at several places, the entrances to the Baltic Sea are difficult to navigate,

Taking note of

(a) Resolution 5: On International pollution of the sea and accidental spillage adopted by the International Conference on Marine Pollution, 1973.
(b) Resolution A. 159 (ES. IV): – Recommendation on pilotage.
(c) Resolution A. 156 (ES. IV): – Recommendation on the carriage of electronic position-fixing equipment.
(d) Resolution A. 339 (IX): – Recommendation on navigation through the entrances to the Baltic Sea.
(e) The established routeing system (Route T) through the entrances to the Baltic Sea.

Having considered the recommendation made by the Maritime Safety Committee at its fifty-third session.

1. Recommends

(a) That ships over 40,000 tonnes deadweight, when passing through the entrances to the Baltic Sea, in view of the fact that 17 metres is the maximum obtainable depth without dredging in the area N.E. of Gedser and that the charted depths, even under normal conditions, may be decreased by as much as 2 metres due to unknown and moving obstructions, should:

(i) not pass the area unless they have a draft with which it is safe to navigate through the area, taking into account the possibility of depths being as much as 2 metres less than charted as mentioned above, and additionally taking into account the possible changes in the indicated depth of water caused by meterological or other effects;
(ii) participate in the ship reporting systems (SHIPPOS) operated by the Government of Denmark; and
(iii) exhibit the signal prescribed in Rule 28 of the International Regulations for Preventing Collisions at Sea, 1972, in certain areas in the Store-Baelt (Hatter Rev, Vengeancegrund and in the narrow route East of Langeland) when constrained by their draft;

(b) That ships with a draft of 13 metres or more should furthermore:

(i) be equipped with a VHF radiotelephone installation capable of operating on appropriate frequencies;
(ii) have on board suitable electronic position-fixing equipment to make use of hyperbolic systems providing sufficient position-fixing accuracy for navigating in these areas;
(iii) use for the passage the pilotage services locally established by the coastal States; and
(iv) be aware that anchoring may be necessary owing to the weather and sea conditions in relation to the size and draft of the ship and to the sea level and, in this respect, take special account of the information available from the pilot and from radio navigation services in the area;

(c) That, irrespective of size or draft, ships carrying a shipment of Class 7 radioactive materials, as specified in paragraph 9.5.2. of the introduction to Class 7 of the International Maritime Dangerous Goods Code (IMDG Code), should:

(i) participate in the ship reporting system (SHIPPOS) operated by the Government of Denmark;
(ii) be equipped with a VHF radiotelephone installation capable of operating on appropriate frequencies; and
(iii) use for the passage the pilotage services locally established *by the coastal states.*

Recommendation on the use of pilotage services in the Sound: (Resolution A.579 (14) 20 Nov. 1985).

The Assembly,

Recalling Article 15(i) on the Convention on the International Maritime Organisation concerning the functions of the Assembly in relation to regulations and guidelines concerning maritime safety and the prevention and control of marine pollution from ships.

Being aware of the close relationship between the safety of navigation and the prevention of pollution from ships,

Being also aware of the urgent need to protect the Baltic Sea area, which is listed as a special area in Annex I to the international Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto.

Noting that navigation of loaded gas carriers and loaded chemical tankers of 1,600 gross tonnage and above carrying noxious liquid substances of category A or B, as defined in Annex II to the international Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto, and navigation of ships carrying a shipment of Class 7 radioactive materials as specified in paragraph 9.5.2 of the introduction to Class 7 of the International Maritime Dangerous Goods Code (IMDG Code), constitutes a potential danger of pollution of the entrances to the Baltic Sea and a potential hazard to international shipping.

Bearing in mind:

(a) Resolution 5 on Intentional Pollution of the Sea and Accidental Spillages, adopted by the International Conference on Marine Pollution, 1973,
(b) Resolution A. 159 (ES. IV) on pilotage,
(c) MSC/Circ. 158 of 5 April 1974 on control of movements of chemical tankers and gas carriers,
(d) Resolution A. 620 (15) on Navigation through the Entrances to the Baltic Sea,

1. Recommends that oil tankers with a draft of 7.0 m. or more, and all loaded chemical tankers and gas carriers, irrespective of size, and ships carrying a shipment of Class 7 radioactive materials as specified in paragraph 9.5.2 of the introduction to Class 7 of the International Maritime Dangerous Goods Code (IMDG Code), when navigating the Sound between a line connecting Svinbadan Lighthouse and Hornbaek Harbour and a line connecting Skanor Harbour and Allandshage (the Southernmost point of Amager Island), use the pilotage services established by the Governments of Denmark and Sweden.
2. Revokes Resolution A.427 (XI).

Denmark

The competent pilotage authority:

Farvandsvaesenet
Division Lodsning/Kystredning
Overgadan o. Vandet 62 B
Postbox 1919
DK-1023 Kobenhavn K

Telex: 22204
Telefax: +45 31 57 43 41
Phone: +45 2 68 95 00

Please note: Danish Deep-sea Pilots require 12 hours notice.

(1) When coming from the North Sea and intending to pass the Skaw-Vinga Line:
Call: DANPILOT at Skagen
Cable: DANPILOT SKAGEN
Telex: 67550 PILOT DK
Phone: +45 98 44 55 66
Fax: +45 98 44 59 63

(2) When coming from the Western Baltic or a Danish port:
Call: DANPILOT
Cable: DANPILOT
Denmark
Telex: 50391 PILOT DK
Phone: +45 62 50 15 35
Fax: +45 62 50 15 28

(3), (4) and (5)
When coming from the Baltic or entering the Baltic via the Sound.
Call: SOUNDPILOT at Copenhagen or Bornholm Pilot
Fax: +45 35 43 10 17
Telex: 27515 SUNDET DK
Phone: +45 31 38 67 00

(6) When passing the Belt from North:
Call: DANPILOT
Cable: DANPILOT
Telex: 63 456
Phone: +45 86 32 05 50
Fax: +45 86 32 05 99

(7) When passing the Belt from South:
Call: GEDSER PILOT
Cable: GEDSPILOT
Telex: 16 600
Phone/Fax: +45 54 85 19 31

Pilot Boarding positions:

(1) Off Skagen:	57° 47′ N., 10° 42′ E.	Route T
(2) Off Spodsbjerg:	54° 52′ N., 10° 51′ E.	
(3) Off Helsingor:	(North Entrance to the Sound)	
(4) Off Drogden Lth.:	(South Entrance to the Sound)	
(5) Off Bornholm:	55° 20′ N., 14° 47′ E.	Route T
(6) Off Grenaa:	56° 24′ N., 11° 05′ E.	
(7) Off Gedser:	54° 35′ N., 12° 16′ E.	

Also see "Denmark" – "General" before first port.

Estonia

The competent pilotage authority:

Estonian National Maritime Board
Co-Ordination Centre
9 Lume Street
EE 0004 TALLINN
Telex: 173027 EVA EE
Telefax: 372-6-339226
Phone: 372-6-339223

Deep-sea pilotage should be ordered 24 hours in advance.

When ordering Pilot, the following information should be given: Port of destination, size of vessel and cargo characteristics. Deep-Sea Pilotage only performed by licensed Government Pilots.

Finland

The competent pilotage authority:

Finish Maritime Administration
Traffic Department
PoB 158
FIN-00141 Helsinki 14,
Telex: 121471
Telefax: +358 (9) 0 1808431 or 1808475
Phone: +358 (9) 0 18081

A Deep-sea Pilot may be ordered via the vessel's agents or via all coastal Pilot Stations. Deep-sea Pilot should be ordered 24 hours in advance.

Deep-sea pilotage is performed by duly licensed government pilots during their off-duty time but under supervision.

When ordering a deep-sea pilot, the usual information of the port of destination, ship's size, speed, specific behaviour or unusual characteristics should be given in advance by the agent.

Telephones:	Fax:	Tel:
Ajos	+358 (9) 698 282 307	+358 (9) 698 282 302
Emasalo	+358 (9) 15 542 788	+358 (9) 15 542 710
Hanko	+358 (9) 11 248 2251	+358 (9) 11 248 2246
Helsinki	+358 (9) 0 668 184	+358 (9) 0 668 123
Kotka Pilot	+358 (9) 52 213 091	+358 (9) 52 213 071
Mantyluoto	+358 (9) 39 638 0080	+358 (9) 39 638 3126
Mariehamn	+358 (9) 28 19 757	+358 (9) 28 19 074
Marjaniemi	+358 (9) 81 810 0809	+358 (9) 81 810 0568
Raahe	+358 (9) 82 227 3103	+358 (9) 82 227 3100
Rauma/ Kylmapihlaja	+358 (9) 38 822 4170	+358 (9) 38 822 4626
Tankar	+358 (9) 49 225 160	+358 (9) 68 822 6160
Turku Pilot	+358 (9) 26 4600 133	+358 (9) 26 4600 100
Uusikaupunki/ Isokari	+358 (9) 22 841 3772	+358 (9) 22 841 8866.
Vaasa	+358 (9) 61 352 7719	+358 (9) 61 352 7725

Germany

The competent pilotage authority:

Wasser und Schiffahrtsdirektion Nord
Hindenburgufer 247
24106 Kiel
Telex: 431780 WSDN
Telefax: +49 (0) 431/3394-348
Phone: +49 (0) 431/3394-0

Deep-sea Pilots can be ordered at:

KIEL: *
Lotsenbruderschaft NOK II
Kiel/Lubeck/Flensburg
Schleuseninsel 6
24159 Kiel
VHF: Channels 14 and 12 "Kiel Pilots"
Telex: 299857 bwki d
Telefax: +49 (0) 431/361049
Phone: +49 (0) 431/362858

LUBECK: *
Phone: +49 (0) 4502/71117

* Kiel and Lubeck – No notice required.

FLENSBURG:
Orders should be given 4 hours in advance via Kiel.

ROSTOCK: **
Lotsenbruderschaft
Wismar/Rostock/Stralsund
An der See 10a
18119 Warnemunde
VHF: Channel 12 "Warnemunde Pilot"
Telefax: +49 (0) 381/2060350
Phone: +49 (0) 381/2060350

WISMAR: **
VHF: Channel 12 "Timmendorf Pilot"
Telefax: +49 (0) 38425/20213
Phone: +49 (0) 38425/20255

STRALSUND: **
VHF: Channel 12 "Stralsund Pilot"
Telefax: +49 (0) 3831/297033
Phone: +49 (0) 3831/280633

**Orders should be given 12 hours in advance. In special circumstances, an order up to 2 hours before departure will be accepted.

Latvia

The competent pilotage authority:

Department of Maritime Administration
63 Kr. Valdemara iela
LAT-226492 Riga
Telex: 161132 West SU
Telefax: +7 0132 334892
Phone: +7 0132 331406, 333919

Deep-sea pilotage should be ordered in the ports of Riga, Ventspils, Liepaja and Salacgriva at 12 hours notice, and be confirmed 4 hours in advance to the following pilotage authorities:

RIGA:
Telex: 161117 Buhta SU
Telefax: +7 0132 321574
Phone: +7 0132 329359, 329613, 329354, 349262

VENTSPILS:
Telex: 161867 VCP SU
Telefax: +7 01336 26905
Phone: +7 01336 68959, 68396

LIEPAJA:
Telex: 161132 West SU 160
Telefax: +7 01334 22321
Phone: +7 01334 26127, 29133

SALACGRIVA:
Phone: +7 01340 41576, 41368, 41356

Lithuania

The competent pilotage autority:

Ministry of Transport
National Maritime Department
Gedimino Avenue 17
LIT-232679 Vilnius

Deep-sea pilotage should be ordered 24 hours in advance via:

KLAIPEDA:
Harbour Master's Office:
Telex: 278348 ODE
Telefax: 370+61 19047
Phone: 370+61 19047, 99509, 12511
Mobile phone: 370+22+29606
Pilot Station
Zauerveino 18
Phone: 99263, 99443

Poland

The competent pilotage authority:

Ministry of Transport & Maritime Economy
Department of Maritime and Inland Waters Administration
Chalubinskiego Str. 4/6
P-00-928 Warszawa
Telex: 816651
Telefax: +48 (22) 6288515
Phone: +48 (22) 6219437, 6211448

Deep-sea Pilots can be ordered at:

SZCZECIN:
Harbour Master's Office
Baltic Pilot Station
VHF: Channel 12
Telex: 425425
Telefax: +48 (91) 343984
Phone: +48 (91) 533944, 226557

SWINOUJSCIE:
Harbour Master's Office
Baltic Pilot Station
Telex: 42-5476
Telefax: +48 (936) 3662
Phone: +48 (936) 4394

GDYNIA:
Deep Sea Pilot's Station
Telefax: +48 (58) 201608, 201448
Phone: +48 (58) 218021 (Ext.326), 204117

Baltic Deep Sea Pilotage should be ordered by the Pilot Station or local Agent 24 hours in advance.

Russia

The competent pilotage authority:
Department for Maritime Transport of the Russian Federation, Central State Maritime Inspectorate
1/4, Rozhdestvenka
Moscow 103759
Telex: 411197
Telefax: (095) 926-90-38
Phone: (095) 926-12-05

ST.PETERSBURG:
Harbour Master's Office
Telex: 621101 SV
Telefax: (812) 3274021
Phone: (812) 251-02-90

Deep-sea pilots can be ordered at:

ST.PETERSBURG
Telex: 621101
Telefax: (812) 186-50-95
Phone: (812) 114-95-95 (24 hours)

VYBORG:
Telex: 121521 Inf. SV
Telefax: (81278) 20477
Phone: (81278) 33449 (24 hours)

Sweden

The competent pilotage authority:
Sjofartsverket
S-601 78 Norrkoping
Telex: 643 80 Shipadm S
Telefax: +46 (0) 11 101949
Phone: +46 (0) 11 191000

Deep-sea pilotage should be ordered 24 hours in advance (from the Sound 12 hours in advance) via a Pilot Station or via the Deep-sea Pilot order central offices in:

LULEA:
Telefax: +46 920 553 06
Phone: +46 920 553 56

STOCKHOLM:
Telefax: +46 8 66 66 90
Phone: +46 8 666 66 22

MALMO:
Telefax: +46 40 30 18 68
Phone: +46 406 11 52 69

(1) When coming from the North Sea or Skagerak, and intending to pass Skaw-Vinga Line bound for the Baltic via the Sound (Flintrannan):
Call: Gothenburg Pilot
Telex: 215 47
Telefax: +46 31 731 49 36
Phone: +46 31 12 54 33

(2) When coming from the Baltic via the Sound (Flintrannan):
Call: Malmo Pilot

Pilot boarding position:

(1) Off Vinga:	57° 38′ N., 11° 36′ E.
(2) Off Trelleborg:	55° 17′ N.,13° 09′ E.
South of Drogden:	55° 25′ N., 12° 41′ E.

GENERAL INFORMATION:

Maximum draft for passage into the Baltic, under normal weather and wind conditions.

From Skaw: Route T, 15.0 m. (East of Gedser).

The Sound:

Drogden Channel 7.50 m. (24 ft. 07 in.).
Flintrannan 7.00 m. (22 ft. 11 in.).

Through the Kiel Canal: Maximum: Length 235 m., beam 32.5 m., draft 7.00 m. and up to draft 9.50 m. and length 160 m. Air draft 40.0 m.

Deep-Sea Pilotage in the Gulf of Bothnia: Deep-sea pilotage in the Gulf of Bothnia, North of 59° 30′ N., within Swedish territorial waters within 12 nautical miles from baseline, with some limitations due to the boundary of fishing and territorial waters of Finland, has to be carried out by a Swedish deep-sea pilot.

Additional Information: Please consult: British Admiralty Publications NP 18, 19, 20, Baltic Pilots; NP 286, Vol. 6, Part 1; British Admiralty List of Radio Signals, Volume 6; Port Operations, Pilot Services and Traffic Management.

For the procedure to order deep-sea pilots, see under general remarks for each of the countries concerned.

AUTHORITY: Baltic Pilotage Authorities Commission, Secretariat, Farvandsvaesenet, Postbox 1919, DK-1023 Copenhagen K, Denmark.

NOTES

Please also advise Shipping Guides Ltd.

People's Republic of Bangladesh

CHITTAGONG: 22.19 N. 91.48 E.

DOCUMENTS: *Before Vessel's Arrival:*

2 copies Freight Manifest.
2 sets Bills of Lading.
3 copies Stowage Plan.
15 copies Passenger List.
4 copies Cargo Manifest.
3 copies Hatch Lists.
1 copy Exception Lists.
2 copies Passenger Money Manifest.
2 copies Special Cargo List.
2 copies Hazardous Cargo List.
2 copies Heavy Lift Cargo List.

With vessel:

1 set Arrival Papers as per booklet available from Agent.
2 copies Cargo Manifest.
Last Port Clearance.
Passenger Lists, disembarking and transit — 6 copies each.
Crew List, 8 copies plus 2 for Immigration Police.
List of Favour Parcels 2 copies.
Currency declaration of ship's money, officers and crew, together with the personal property list.
Ship's Stores Lists on local Customs forms – 3 copies.
Cargo Clearance Certificates.
Derat Exemption Certificate.
International Load Line Certificate.
Radio Safety Equipment Certificate.
Safety Equipment Certificate.
Record of Safety Equipment Certificate.
Load Line Certificate.
Ship's Articles.
Ship's Register.
Light Dues Receipt.
Radio Telegraphy Certificate.
Safety Construction Certificate.
Voyage Licence.
Exemption Certificate of Crew Members.
I.P.B. Permission of Foreign Nationals.
Gear Register Book with Annealing Certificate
Authority Letter of Supernumerary.
Stores List.

APPROACHES: Since South Patches Lightvessel is missing, it is advisable to make for Elephant Point/Cox's Bazaar, and then shape course to pass West of South Patches. Due allowance must be made for the state and rate of tide. In this area, the tide runs in a North–South direction.

Once it is ascertained that the vessel is West of South Patches, course can be shaped to pass 8 – 9 miles off Kutubdia Lighthouse. The buoys indicating the channel to Chittagong Outer Anchorage are mostly out of place or missing and cannot be relied upon. The buoys are unlit and without radar reflectors and navigating in their vicinity during hours of darkness can be hazardous.

A current and wave recorder has been placed at position Lat. 22° 10′ 39″ N., Long. 91° 47′ 37″ E., marked with a yellow spherical buoy. Flashing characteristics – flash white every 5 seconds. All vessels approaching Chittagong Roads, or leaving harbour or at anchorage, are advised to navigate with caution keeping a clear distance from the buoy.

Vessels must reach pilot grounds at mouth of River Karnaphuli 3 hours before H.W. of a particular tide. Both tides used for handling vessels.

PILOTAGE: Pilotage is compulsory. Pilots board and leave vessels 1.5 miles W.S.W. of No. 1 Sea Buoy.

Inward ships must present themselves at Fairway Buoy at least 3 hours before H.W. to enter on a particular tide, both day and night.

Night navigation possible for outward and inward movements of vessels upto 164.60 m. and 137.15 m. LOA respectively.

ANCHORAGE: The Anchorage is considered safe and the holding ground is good. The bed of the river is soft mud and is harmless in case of grounding.

Holding ground off Kutubdia fairly good but strong tides render it necessary to pay-out extra length of cable.

Spring tides at outer anchorage are very strong (6 to 8 knots) and at times of freshets the rate may be more. It is advisable to keep engines ready at all times during Spring tides, and maintain continuous and efficient anchor watches.

Ship Masters approaching Chittagong Roads are advised not to attempt to cross bow of vessels at anchor/underway to avoid drifting on them resulting in probable collision in view of the prevailing strong current at Outer Anchorage. However, if it is inevitable to cross, Ship Masters may do so with caution by giving a wide berth to the vessel at anchor/underway considering the minimum velocity of the current being 6 knots and other marine factors.

Vessels at the outer anchorage should maintain a deck watch forward and aft.

RESTRICTIONS: Night sailings both inward and outward are permitted, however with restriction on the vessels of up to 164.6 m. length for outward and 173.2 m. for inward. Night sailing not permitted for vessels with the bridge on the bow, vessels with the bridge aft are allowed but only up to 152.4 m. in length.

Draft: Normally between 7.5 m. and 9.14 m., depending on state of Karnaphuli draft restrictions. Published monthly.

Power Lines: The minimum clearance of Power Transmission Lines crossing over the River Karnaphuli from CPA Dock Office Tower – 21 (approx. Lat. 22° 18.04′ N., Long. 91° 48.47′ E.) on the opposite bank of the River Karnaphuli is 52 m. from jetty level and the transmission lines are charged at 132 kV. Mariners are advised to navigate with caution.

MAX. SIZE: Anticipated safe drafts are predicted three months in advance. The depth of water over the Outer, Inner and Gupta Bars is maintained at 4.42 m. at low water throughout the year. The bars are situated at distances of half, one and 4.75 miles from the entrance. In order to calculate the draft for entering and leaving port, the depth of 4.42 m. over the bars is added to the height of water in the tide tables for day tides. Also see "Tankers".

Shipmaster's Report: 1985.

Vessel with deep draft must go in on full tide and advice on this should be sought from a local source (Agent), and not rely on tables only, as local factors may affect the tidal situation considerably.

HEALTH: All vessels must send the standard quarantine messages by radio. Vessels which have touched ports between Port Sudan and Durban, on the East Coast of Africa including these two ports, or any other yellow fever port or other port on the continent of Africa, or ports which are declared from time to time as quarantine areas, are suspected vessels on account of yellow fever or jigger, or other infectious disease as the case may be and may not have communication with the shore till declared by the Port Health Officer, who attends only between sunrise and sunset, except in special circumstances. The incubation period for yellow fever is 9 days, but vessels arriving later than 9 days are still not free from quarantine because there is no incubation period for jigger.

RADIO: Chittagong Radio Control. MF/RT distress frequency 2182 kHz. SSB equipment with 200 mile range also available.

Arrival Advice: ETA advice should reach Agents 72 hours and confirmation cable at least 24 hours before arrival at the Pilot Station. While advising ETA Masters should bear in mind that W/T messages generally take minimum 12 hours to reach Agents.

The radio message should contain the following information:

1. Name of vessel.
2. ETA Pilot Station.
3. g.r.t.
4. n.r.t.
5. d.w.t.
6. Length.
7. Date and Hour sailed last Port of Call.
8. Quantity and description of cargo to discharge.
9. Next Port of Call.
10. Classification of Vessel and Nature of cargo carried.
11. Name of Master.
12. Max. arrival fresh water draft.

VHF: *Port VHF Service:* The Harbour Master can be contacted day and night on Channels 16 and 12. Calls may be connected to the public telephone system via Channel 27.

Private VHF Service:

(i)	Location:	Port Office.
	Call Sign:	"Port Radio Control".
	Position:	Lat. 22° 19′ 30″ N., Long. 91° 50′ 00″ E.
	Watchkeeping:	From 0830 – 1700 hrs. continuous.
	Frequency:	156.80 MHz.
(ii)	Location:	Port Signal Station.
	Call Sign:	ARH 24.
	Position:	Lat. 22° 14′ 03″ N., Long. 91° 50′ 34″ E.
	Watchkeeping:	(i) Duration of daylight Flood tide: beginning every hour. (ii) Duration of night Flood tide only when ship-movements are being performed: every half hour.
	Frequency:	156.80 MHz (Channel 16) (short range about 7 miles from Pilot Station to Anchorage).
(iii)	Location:	Pilot Vessel: Capt. Fuhrmann P.V. Rahnuma
	Call Sign:	AQEG.
	Watchkeeping:	(i) Duration of daylight Flood tide: every half an hour. (ii) As above.
	Frequency:	156.80 MHz (Channel 16).
(iv)	Location:	Patrol Tugs Kandari 7 and Kandari 8. (S. T. Khalid – under repair).
	Call Sign:	AQEF.
	Watchkeeping:	(i) Duration of daylight Flood tide: every half an hour. (ii) As above.
	Frequency:	156.80 MHz (Channel 16).
(v)	Location:	Sea-Tug "Suljuq".
	Call Sign:	AQEP.
	Watchkeeping:	Duration of daylight Flood tide and in emergencies.
	Frequency:	2182 kHz.

Remarks: Vessel should shift to some other Channel after contact has been made on Channel 16 (International Frequency 156.80 MHz).

A cable to be sent to Port Health Officer before arrival requesting free pratique, stating issuance date of Derat (Exemption) Certificate.

RADAR: No service available.

TUGS: Available, under direction of Pilot.

BERTHING: Chittagong port has 17 jetties (including 2 pontoon jetties) provided with shore cranes and railway tracks and with transit sheds. Vessels up to 186 m. LOA with day's draft may be berthed at a concrete main jetty. Depth of jetty berths range from 7.01 m. to 9.14 m. and depth at moorings ranges from 6.24 m. to 9.19 m. and above. Besides above jetties, there are jetties for the following:

Grain Silo Jetty: Grain silo has storage capacity of 170,000 tonnes, equipped with necessary equipment for unloading, storing from ship's tackle direct. Vessels up to 186 m. LOA can take berth at the jetty.

T.S.P. Jetty: Triple Super Phosphate Complex having storage capacity of 127,500 tonnes has been constructed adjacent to TSP Jetty and is equipped with necessary equipment for unloading/storing rock phosphate from ship's tackle direct. Vessels up to 175.25 m. are able to berth at TSP Jetty.

Cement Clinker Jetty: Cement clinker plant having storage capacity of 40,800 tonnes is adjacent to Chittagong Cement Clinker Jetty. The jetty is equipped with necessary equipment for unloading/storing cement clinker direct from ship's tackle. Vessels up to 175.25 m. are able to berth at the Cement Clinker Jetty.

Further there are 9 river moorings, out of which River Moorings Nos. 4, 5 and 6 are equipped with pontoons and shore connections for oil in bulk and River Mooring No. 7 for crude oil discharge in bulk. River Moorings Nos. 2, 3 and 8 are for dry cargo for overside work. River Mooring No. 9 is for repair of vessel/lay-by berth. River Mooring No. 10 for LASH vessels.

Container yard of 14,108.55 sq.m. and back-up yard facilities are available for handling container/container cargo vessels. Further there is one lighter jetty for vessels up to 70 m. with dry cargo and 5 lighter jetties for coastal and inland vessels/tankers.

CRANES: Variety of cargo handling equipment, maximum lifting capacity 125 tons.

STEVEDORES: Available through Agent. Working hours: Monday to Thursday and Saturday day shift, 0730 – 1200 and 1330 – 1700 hrs. Night shift, including Friday 2000 – 2400 and 0000 – 0400 hrs. Friday, day shift, 0700 – 1200 and 1400 – 1700 hrs.

MEDICAL: Doctors and Hospital facilities available.

TANKERS: Crude oil tankers up to a draft of 10.36 m. can be handled at the Outer Anchorage.

Clean tankers enter the river and berth at petroleum jetties inside the port, restricted to length of 170.73 m. overall, and subject to published river draft.

Tankers up to 60,000 d.w.t. discharge into lighters at Kutubdia anchorage where depth is 7 fathoms.

Also see "Shipmaster's Report" – May 1986.

DENSITY: From 1000 to 1004.

FRESH WATER: Available from quays. Also available at outer anchorage. Require 3 – 4 days notice. Capacity of water barge about 500 tons. Supply daylight hours only.

FUEL: All grades available at oil berths. Otherwise supplied by barge. The Government have occasionally suspended sale of bunkers to foreign vessels.

REPAIRS: Facilities for repairs available. Ships' engines may not be dismantled or immobilised whilst at berths or moorings without the prior sanction of the Port Authority.

DRY DOCK: Construction of a dry dock is in progress.

SURVEYORS: Germanischer Lloyd: Shaw Wallace Bangladesh Ltd, Rashid Bldg., Strand Road, Chittagong (P.O.Box 12). Tel: (031) 500624, 500628, 225416. Fax: (031) 225245, 225669.

HATCHES: Opened by ship's crew.

CARGO GEAR CERTIFICATES: International Cargo Gear Test Certificates not more than 12 months old must be presented to the Dock Labour Inspector before a vessel is allowed to use derricks/winches. Annealing and testing of gear at Chittagong is an expensive process. In certain cases dispensation can be obtained at the discretion of the Dock Labour Inspector.

CUSTOMS ALLOWANCES: 200 cigarettes or 0.5 lb. of tobacco and 1 bottle of wine/spirit per week per man or 2 pints of beer per day.

REPATRIATION: Possible.

AIRPORT: Patenga Airport about 5 miles from city.

TIME: GMT plus 6 hours.

HOLIDAYS: Eid-e-Milad, Shaheed Day, Independence Day, Bengali New Year, May Day, Buddhu Purnima, Shabe Barat, Jamatul Wida, Eid-ul-Fitr, Durga Puja, Revolution Day, Eid-ul-Azha, Muharram, Victory Day, Christmas.

POLICE/AMBULANCE/FIRE: Call "Port Control", Channels 12 and 16, call sign "S2YA" or Tel: 505021/505041.

SHORE LEAVE: Allowed, prior permission from Immigration arranged by Agent.

GENERAL: *Berthing Priority:* All concerned are reminded that vessels loading/carrying cargo/mixed-up cargo or loading/carrying cargo in less than 3 holds, or unequally stowed in more than 3 holds, or with inoperative ships derrick, will be classed as Grade-II ships and shall be given berth conveniently, and if required, shall be shifted to another berth/mooring or outer anchorge convenient to the Port Authority.

Frequent breakdown in the machinery and engine of a ship, will also entail her being classed as Grade-II ship and the consideration for priorities will rest on the Administration.

This will be strictly followed with effect from January 1st, 1984, and no further consideration will be entertained from that date.

Hydrological and Hydrographical Data: The width of the navigation channel (5.49 contour) varies from place to place. Effective width is between 243.90 m. to 304.88 m. A minimum channel width of 250 m. is maintained.

Tidal Works:	At Patenga	3.35 m.
	At Khal (Channel) No. 10	2.74 m.
	At Sadarghat	2.29 m.

Max. velocity of current opposite Khal (Channel) No. 10:

Spring Tides (S.W. Monsoon):	4.5 to 5.5 knots
Neap Tides (S.W. Monsoon):	2.5 to 3.5 knots
Spring Tides (Winter Months):	up to 3 knots
Neap Tides (Winter Months):	up to 2 knots
Freshet Ebbs (Winter Months):	up to 8 knots

Meteorological Data:

Temperature: 32.10°C Max., 13.40°C Min.

Rainfall: 24.25 Max., 0.10 Min.

Normal Pressure:

1018.80	Max.	0000 GMT.
1000.90	Min.	at 0600 hrs.
1016.20	Max.	0300 GMT.
1002.30	Min.	0900 hrs.
1013.00	Max.	1200 GMT.
1000.00	Min.	1800 hrs.

The following cautionary notice has been issued by the Chittagong Harbour Master:

"Shipmasters trading to Chittagong are informed that a hot sultry day/afternoon, followed by "Still" air conditions in the early evening, usually result in thunderstorms. The peculiarity of these thunderstorms is that they approach from the North and West in the form of a line squall, and are accompanied by intense lightning activity, thunder, rain and cyclonic rotation winds which may reach a velocity upwards of 50 knots.

When percursory signs of such a "North-Wester" storm exist shipmaster's must exercise great caution, have a responsible Officer on watch and attend carefully to moorings. Vessels at fixed moorings and pontoon jetties must exercise extreme caution when a North-Wester storm is blowing."

Mooring: Vessels moored alongside the pontoon jetty and vessels moored alongside each other must ensure that adequate numbers of rat guards are used to prevent movement of rats between ship/shore and ship/ship.

DEVELOPMENTS: Two multi-purpose berths of length 450 m. and 10.0 m. depth with back-up facilities are located downstream of No. 13 Berth to cater for the increased flow of containers. More cargo handling equipment will be procured in phases (16 forklift trucks, 8 tractor-trailer units, 27 cranes – including 19 × 6 tons and 1 × 30 ton mobile). Berth construction completed early 1991.

For maintenance or dredging of the navigational channel CPA is going to acquire a hopper dredger. Outer and inner bars to be dredged to 9.1 m. and 7.1 m. respectively.

SHIPMASTER'S REPORT: May 1986.

The route from Singapore to Chittagong was passing Pu. Perak, South Preparis Channel thence West of South Patches thence passing Kutubdia Island keeping to the deepest water. When Kutubdia Island Light bearing 109.5°×7 miles course altered 014° to make for position: Lat. 22° 05.6′ N., Long. 91° 46.2′ E. and from there into the Outer Anchorage. In this last area the minimum chartered depth is 8.5 m. therefore with the vessel on even keel draft of 10.95 m. (FW) required to stage across the shallows on the tide.

The S.W. monsoon had set in giving Westerly Force 4 winds in the Anamdan Sea and S.W. Force 4 – 5 in the Bay of Bengal with a confused S.W./N.W. swell. There was a strong Southerly – going current in the Bay of Bengal. The swell decreased considerably after passing South Patches.

The vessel anchored to await HW to cross the shallows in position Kutubdia Light bearing 046°×15.04 miles. There was another vessel anchored nearby on the position previously chosen. Unable to raise Chittagong on VHF from this position. After anchoring the wind veered N.W. and several squalls passed in the next few hours with gusts up to Force 9 – 10. These having passed through Chittagong Anchorage earlier.

The next morning proved fine with light winds and little swell and with HW at Chittagong 0840 hrs. (3.4 m.); Kutubdia Is. 0642 hrs. (3.25 m.); Normans Point 0717 hrs. (3.60 m.) aimed to cross the shallows with one metre under keel clearance and pass position: Lat. 22° 03′ N., Long. 91° 45′ E. at 0700 hrs. at the top of HW, allowing 0.25 m. for swell and 0.2 m. for squat at 6 knots. The density off Kutubdia Island was 1015.

The under keel clearance was not identified as the Sal Accord ceased to function under 2.0 m. (its minimum) and the chart recorder trace disappeared into the base line noise even at minimum settings. The seascape hovered around the one metre but when crossing the bar later did not give the same 1 ft. under keel clearance that was known from the tide guage.

Lightening Operations: The vessel anchored in Chittagong outer anchorage 'A' at 0840 hrs. in position Patenga Beacon 091°×3.1′. There were quite a few ships anchored in and outside this anchorage, mostly lightening, but there was room to have sufficient water under the vessel at LW and have 5 cables clear of other ships. Estimate the maximum current was 4 knots but no problems with 6 shackles in the water.

The first coaster arrived at 1050 hrs. with the Agent and Shore Officials onboard. After ullaging and sampling the cargo, gas/oil parcel, was started at 1310 hrs. Several coasters were used working both sides of the vessel and 11 trips were made. The vessels varied in size from 850–1,000 tons with one coaster of 1,500 tons.

Hoses were brought out with the first coasters and appeared in good condition but one set had obviously been used recently for black oils and although this was pointed out to the Shore Supervisor they were not changed. During the lightening to one of the coasters at the start, there was a blockage, which was found to be that one length of the hose had the inside stripped causing the blockage, this was changed and no further problems. The decks were well manned throughout the operations and there was no evidence of any smoking on the coasters. The discharge rates varied as the the requirements of the different vessels, but each side was given a separate line and tank so that quantities could be accurately measured onboard.

These coasters usually only use car tyre fenders when lightening vessels. Their shoulder is well padded with tyres and then more spread at intervals along the sides. The first coasters arrived with additional fenders made up from floating hoses. Originally one for each side. One being sufficient for the smaller vessels as their parallel body is short when in the light condition and subject to the most movement. I would have preferred two of these fenders for the larger vessel M.T. 'Doel' but the wire pennant parted while being brought off. As it happened the M.T. 'Doel' was well handled throughout and with their ropes being well tended there were no problems in just using one fender. The coasters, because they normally use the tyre fenders, were not well protected on the quarters but this was soon rectified by moving some of the tyres and having additional ones supplied. The hose fenders were fitted with polypropylene rope pennants shackled to a wire strop attached to each end of the hose. These did give problems caused by snatching with the movement and was solved by having them made fast to the coaster and ends passed over to us when they left to pass to the next vessel.

The weather was variable during the lightening but mostly the wind Southerly Force 4/5, this being near fore and aft caused the coasters to lay well alongside and to pitch rather than corkscrew, thus there was no danger from their superstructures. Once the wind veered to the N.W. and freshened to Force 7 gusting to Force 9 giving a rough sea. Luckily there were no vessels alongside at the time. This occurred at the change of tide and caused the vessel to sheer about as the squalls came through the anchorage. The rain squalls can be easily seen on the radar at 30 miles and seem to occur in the early evening, so the radar can give adequate warning.

The River Passage and Berth: Once the lightening has been completed the vessel has to wait for a daylight high tide to cross the bar into the river. The berthing programme can be obtained from Port Control by VHF after 1600 hrs. on the previous evening. On this occasion the notified Pilot boarding time was given as 0730 hrs. We had planned on being ready to weigh anchor at 0645 but at 0600 hrs. Port Control ordered us to heave up and come in for the Pilot. We were ready so we weighed and the Pilot boarded at 0704 hrs. (pilot ladder needs to be 3 m. above the water as the Pilot boards from a large tug). We then had to wait along with the other vessels at the Pilot Station all stemming the current until 0825 hrs. when there was sufficient water on the bar for us to cross. The Pilot had been keeping in contact with the Signal Station on VHF as the Signal Station monitors the tide guage.

Once the bar is crossed the river passage is quick. When off the berth the vessel is turned short round to starboard and may require the use of the starboard anchor. The turn is helped by a tug but this pushes and does not make fast. Once the vessel is round and stemming the tide the port anchor is made ready and when in position for the berth it is let go. The starboard head line is then run to the port head buoy. Then the port head line to the starboard buoy and the vessel is heaved across the berth into position while the after lines are run in the same fashion. Engines are required to prevent the vessel falling back on to the aft buoys. The final moorings are 3 lines each side to the opposite buoy thus 6 lines crossed each end.

The hoses come from a floating pontoon that is moored with another that is brought round to be between the pontoon and the ship. Access is by boat from shore. 4 extra men are supplied at the berth to help with the moorings and there are 2 mooring boats and a launch. 6 watchmen were supplied at the anchorage from the start and stayed with the ship in the anchorage and on the berth. The watchmen did a fair job and the vessel had no problems with thieves.

The Agents' telex was only working intermittently but found we could pass messsages via their branch office in Dhakra. Also found that the 3 VHF stations for the port had calling frequency VHF Channel 16 they then went to the working channel, mostly Channel 12, but often they had to be contacted on the working channel. Chittagong Radio calling is Channel 16 and working 24/26; was weak but workable.

While lightening there was difficulty for the Supervisors as there is no direct contact with the installation other than making a link call. However, one of the coasters has VHF and if it can be persuaded to keep it on then some sort of contact can be maintained.

SHIPMASTER'S REPORT: December 1992.

Agents: The Agents have VHF, but do not keep continuous watch. They can be contacted by telephone through Chittagong Radio, working on Channel 27.

Approaches: B.A. Charts No. 859 and 84.

From S.W. of Sri Lanka to 21° 00′ N., 92° 00′ E. to avoid Firing Area 'B', then to 21° 30′ N., 91° 40′ E., then to 22° 00′ N., 91° 40′ E., between Firing Area 'A' and North Patches, then to 22° 14.5′ N., 91° 42.2′ E. to skirt the anchorage area and approach an anchorage point with Patenga Point bearing 106° × 2.75 miles, intending to arrive about 1 hour before H.W. at Norman's Point and stem the tide on a course of 160° when anchoring.

None of the navigation marks or buoys were sighted, even though visibility was good, but radar positions were obtainable from the coast.

A number of fishing boats were passed using oil lights which were picked-up on radar before being visible.

Speed was reduced for the approach and using tide prediction charts for Kutubdia Island and Norman's Point, allowance made to maintain water under the keel, according to chart soundings, and there was sufficient water to approach safely at a draft of 10.69 m., mostly at dead slow ahead, nominally 5.3 knots, on arising tide all the way.

It was necessary to reverse course for a short period to allow the rising tide to catch up.

Anchor was let go in the planned position which was approached steering 140° T and making good 106° T.

Anchor was let go moving dead slow ahead, but stern movements were required to maintain sternway over the ground and vessel brought up with 9 shackles in the water.

Anchorage: The bottom is soft mud and the holding ground poor. With 9 shackles and a high holding power anchor in a charted depth of 12.4 m., this vessel at 49,184 tonnes displacement dragged anchor and required slow ahead on the engines (8.0 knots), to maintain position, this was with the lightening vessel alongside.

Some areas of the anchorage were found to be deeper than charted and the depths changed with each tide.

Particular emphasis is made by the Port Control and Agents not to pass ahead of other vessels at anchor due to the strong current.

The dragging line is 160° and 340°.

Communications: Port Control keep watch on VHF Channels 16 and 12 on a 24 hour basis, and should be contacted on approach and on anchoring, and will advise the Agents of a vessel's arrival.

This vessel was to discharge to lightening vessels at the anchorage. The lightening vessel made contact on VHF and was helpful with information.

The Agents have VHF, but can also be contacted by telephone through Chittagong Radio on VHF Channel 27.

Pilots: Not required to anchor in the Outer Anchorages 'A', 'B' and 'C'.

Clearance: The Charterer's Agent, one Customs Officer and Cargo Surveyors boarded at 0800 hrs. and the bonded store is sealed.

All normal declarations are required, but the Agent will also have a quantity of other forms in triplicate to be completed and signed, mostly duplicating the ship's standard declarations. The certificates requested are taken ashore to complete the clearance and returned on Outward Clearance.

Personal Currency Declaration is required.

List of Agent's forms:

Letter of Authority.
Load Line Certificate.
Certificate for Opium and Dangerous Drugs.
Arrival Report.
List of Certificates for Certificated Officers.
Maritime Declaration of Health.
Stores List, in triplicate.
Arms and Ammunition List.
Dock Labour Certificate.
Deck Cargo Certificate.
No Bangladesh Crew Certificate.

List of Certificates and Documents:

Ship's Register.
Load Line Certificate.
Safety Equipment Certificate.
Record of Safety Equipment.
Safety Construction Certificate.
Safety Radio Telegraphy Certificate.
De-Rat Exemption Certificate.
Last Port Clearance.
Crew List, 7 copies.
Ship's Articles of Agreement.
Gear Testing Certificate Register.
International Oil Pollution Prevention Certificate.
Ship's Radio Station License.

Officers' Certificates of Competency, for Master, Chief Officer, 2nd Officer, 3rd Officer, Chief Engineer, 2nd Engineer, 3rd Engineer, 4th Engineer and Radio Officer.

Officials: One Customs Officer boards to clear the vessel with the Agent, both inwards and outwards.

It is possible that a Customs rummage crew will board to search the vessel, so all declarations should be accurate.

Thieves: Board regularly at anchorage and are particularly interested in mooring ropes.

Local watchmen should be employed. On a previous visit to the port, one of the watchmen employed was identified as having been amongst a band of thieves previously chased off, after cutting the mooring ropes in use, before shore watchmen were employed.

Three watchmen were ordered, but the Agent brought six, as three would be insufficient for a vessel of this size.

Food and accommodation are required for the watchmen.

Density: At the anchorage, it varied between 1008 and 1010. The water is generally very muddy, and a sample in a 10 oz. coffee jar resulted in 10 mm. of silt settling in the bottom.

All drafts are requested in fresh water.

Cargo Work: This vessel was to discharge a cargo of bulk wheat to a draft of 7.0 m. in order to get into Mongla.

Lightening vessels of around 8,000 – 12,000 d.w.t. are brought alongside. They are well fendered, and are equipped with grain vacuvators and pipework. Drums of diesel fuel for the machines are transferred to the discharging vessel and set up on deck.

Allow 100 metric tonnes for this equipment.

14 vacuvators were brought on board, but only 12 were used at a time, and an overall discharge rate of 173.2 t.p.h. was achieved for 18,445 tonnes, about 14 t.p.h. each vacuvator.

About 100 stevedores accompany this equipment and camp out on deck, complete with cooking fires, firewood, vegetables and live chickens, the smell of curry cooking on a wood stove is delicious.

This vessel with side opening hatches was ideal for camping out, but problems could have been experienced if it was required to close the hatches for rain.

It took about 8 hours to set up the equipment, but once started, discharge was continuous to each lightening vessel, even when steaming around the anchorage whilst dragging anchor.

About 2 hours is required for disconnecting and re-connecting the pipework when changing lightening vessels.

Ship's cranes are used to rig and adjust the equipment in the holds.

Accommodation: Accommodation is required for Stevedore Supervisor, foreman and 3 persons, and food and accommodation for a Cargo Superintendent appointed by the Receivers, in addition to food and accommodation for any watchmen employed.

A number of other people request accommodation, but are usually put off by insisting that an Agent's letter is issued, also all spare accommodation on board was filled.

Thunder Box: A thunder box is required by the stevedores. Even though a stevedores toilet was available, the vessel was advised not to allow it to be used.

Fresh Water: Required by the stevedores, and 4×250 ltr. drums (ship's supply) were required 3 times a day.

Supplies of fresh water are available by barge at the anchorage, but should be ordered early. On this visit, 150 tonnes were ordered, but only 100 tonnes were delivered in 2×50 tonne lots, although the barge was large enough to carry the full order at one visit.

Fresh Provisions: Fresh provisions and most stores are available at reasonable prices.

There are a number of ship chandlers with varying prices. On this occasion, Anowar Traders were used, but took a long time to deliver, and then only after a reminder from the Agent, and also failed to bring the priced accounts before the vessel sailed.

Repatriation: Can be arranged. Departing crew members must complete an accurate Effects Declaration, in triplicate, including all currencies.

AUTHORITY: Chittagong Port Authority, Bandar Bhaban, P.O.Box 2013, Chittagong, Bangladesh. *Telex:* 66264 Port BJ. *Cables:* Potasraya.

MONGLA (Bagerhat), formerly Chalna Port: 22.29 N. 89.36 E. (See Plan)

PORT LIMITS: *To the North:* A line drawn due East-West from a point in position Lat. 22° 38′ 00″ N., Long. 89° 20′ 00″ E. to a point in position Lat. 22° 38′ 00″ N., Long. 89° 40′ 00″ E.

To the South: A line drawn due East-West from a point in position Lat. 21° 27′ 00″ N., Long. 89° 20′ 00″ E. to a point in position Lat. 21° 27′ 00″ N., Long. 89° 40′ 00″ E.

To the East: A line joining the point in position Lat. 22° 38′ 00″ N., Long. 89° 40′ 00″ E. to a point in position Lat. 21° 27′ 00″ N., Long. 89° 40′ 00″ E.

To the West: A line joining the point in position Lat. 22° 38′ 00″ N., Long. 89° 20′ 00″ E. with the point in position Lat. 21° 27′ 00″ N., Long. 89° 20′ 00″ E.

The centre of the permanent port jetty is in position Lat. 22° 29.32′ N., Long. 89° 35.57′ E.

DOCUMENTS: See "Chittagong".

ARRIVAL ADVICE: Inward ships must present themselves at Mongla Fairway Buoy at least 3 hours before HW at Hiron Point to enter on a particular day.

The Master should send the following information to port via Khulna Radio call sign S3E and Pilot Station call sign S3K 24 hours prior to arrival at Mongla Fairway Buoy.

1. ETA Mongla Fairway Buoy.
2. Fresh water draft.
3. Speed available.
4. Vessel's length.
5. Vessel's gross tonnage.
6. Fresh water requirements.
7. Flag of vessel.
8. Local Agent.

APPROACHES: Approaching from the East vessels should carefully monitor soundings and try to stay between the 10 and 20 fathom lines and alter course to North when at swatch of no ground. Vessels should sight Mongla Fairway Buoy (Fl. 1 long 10 sec.) on this course and should then contact Pilot Station for further instructions. Due care should be taken to appreciate the tide condition because vessels have been known to drift North/Northwest during strong floods and run aground in the shallows. Approaching from the West, vessels should manoeuvre to keep to the South of the 20 fathom line and steer a course of about 045°(T) when Western end of swatch of no ground is reached. This course will take the vessel to Mongla Fairway Buoy. Due care should be taken to guard against Northerly set during flood times. When approaching from S.E. or S.W. similar action as before should be taken on reaching the edges of swatch of no ground. Due care should be given to avoid the wreck of m.v. "Cherry Laju" in position Lat. 21° 26.4′ N., Long. 89° 30.2′ E.

PILOTAGE: Compulsory. Master should in addition to usual ETA to Agents keep in touch with Pilot Station at Hiron Point about 45 miles from the base calling S3K. Pilot Station is equipped with radio and maintains regular watches on 500 kHz from 0600 to 0800, 1000 to 1200, 1400 to 1600 and 1800 to 2000 hrs. local time. If a message is not being picked up, by Khulna Radio call sign S3E, it should be relayed through Chittagong Radio or the Pilot Station.

Ships over 5.0 m. draft are usually piloted on the flood to cross the bar and the pilot vessel, which has been in contact with the incoming ship, leaves from Hiron Point in time to coincide with the arrival of the vessel at the pilotage ground, situated about 5 cables S.W. of B-18 Buoy where ships can anchor. The channel from Fairway up to the B-18 Buoy has been marked with lighted buoys and pilotage is carried out by the Master.

In rough weather and especially during the monsoon, ships are led into calm waters by the pilot vessel, which maintains close radio contact, and Pilots board inside the river.

Night navigation is allowed for vessels up to 140 m. in length subject to the following conditions:–

(a) Ship's radar, gyro-compass, steering system should be in perfect working order.

(b) Weather conditions should be good and favourable.

(c) Booking for arrival/departure should be done at least 24 hours in advance.

(d) Minimum manoeuvring speed should be 10 knots.

(e) Maximum draft allowed 6.5 m.

(f) A boat will be employed with a searchlight to remove all country boats, barges and any other obstacles in the channel within the harbour limit.

ANCHORAGE: Mongla port consists of a sheltered deep-water anchorage at Mongla on Pussur River.

Depth of water 5.8 m. to 23.0 m. at LLWD. Distance from sea 65 miles.

RESTRICTIONS: Entrance to the Pussur River is about 6 miles wide at the mouth and has a bar over about 5 miles where the depth is 5.8 m.

MAX. SIZE: Ships drawing up to 7 m. can cross the bar in all seasons. In S.W. monsoons vessels up to 8.0 m. can be accommodated on spring tide. Also see "General".

HEALTH: On arrival at the mouth of the Pussur River, vessels are required to radio "Quarantine" Khulna, giving health report, to avoid difficulties with Port Health Authorities.

RADIO: At present coast station Khulna Radio of Telegraph and Telephone Dept. maintain 24 hours W/T watch on 500 kHz call sign (S3E). In addition to the T & T system, the port has harbour control station (call sign S3K) at Mongla and Pilot Station (call sign S3K) at Hiron Point to maintain 24 hours W/T watch on 500 kHz. The station at Hiron Point guides incoming and outgoing vessels from fairway to pilot grounds and vice versa and remains in touch with Khulna Radio, Mongla S3H and ships anchored at Hiron Point for movement of Pilots, mooring of vessels, etc.

VHF: The Pilot Station and harbour control of Khulna and Mongla are equipped with VHF Channel 16.

TUGS: 3 powerful tugs available to assist in emergency. Not required for berthing.

BERTHING: 8 swinging moorings and 21 anchor berths. 5 jetties also available.

CRANES: Cranes of 3, 5, 40 and 100 tons are available at the new jetties.

STEVEDORES: Plenty of labourers available.

TANKERS: Oil is not handled at the port at the present time.

DENSITY: The density of water at the Outer Bar varies from 1005 to 1025 and at Mongla from 1002 to 1015.

FRESH WATER: Available by barges.

FUEL: Fuel oil can be arranged in limited quantities if sufficient advanced notice given.

FIRE PRECAUTIONS: Fire fighting tugs are available.

CONSULS: None.

REPAIRS: Minor repairs can be arranged through Khulna shipyard.

DRY DOCKS: A dry dock for sea-going vessels is under construction at Chittagong.

SURVEYORS: Lloyds/NKK. P&I Club and private surveyors are available at Khulna.

GANGWAY/DECK WATCHMAN: On receipt of orders from the Master the Stevedores will arrange to supply watchmen by day and night.

Piracy: Acts of piracy have taken place at the port.

HATCHES: Opening and closing of hatches is normally carried out by the stevedores.

CARGO GEAR: Goods loaded and unloaded by the ship's gear, handling equipment and crane available at the port jetty.

REPATRIATION: Local shipping Agents are responsible for arranging repatriation of the crew.

AIRPORT: Jessore, which is 70 miles from the port.

TIME: GMT plus 6 hours.

HOLIDAYS: Eid-ul Azha, Moharram, Eid-I-Miladun Nabi, Independence Day, Jamat-ul-Bida, Eid-ul-Fitr, depending on the sighting of moons calculated in the basis of moon months.

POLICE/AMBULANCE/FIRE: Police telephone no. 222 and for other purposes Assistant Harbour Master's telephone No. 61460 is available.

TELEPHONES: No arrangement is available at the anchorage for placing telephones on board the vessels.

SHORE LEAVE: Crew members of foreign vessels are allowed to disembark ashore subject to Immigration permission.

IDENTIFICATION CARDS: Seaman's Book is sufficient for identification.

REGULATIONS: Crew members are not allowed to undertake chipping/painting of vessels whilst in the port. This is to be done by licenced contractors.

DELAYS: No unusual delay in the port.

GENERAL: Port of Mongla Authority

INSTRUCTIONS FOR MASTERS OF VESSELS:

1. As these are fresh water drafts, the incoming ships should give necessary allowance. The outgoing ships may have to leave anchorage a day earlier to take advantage of next A.M. tide at Outer bar.
2. Inward ships must present themselves at Fairway Buoy at least 3 hours before high water at Hiron Point to enter on a particular day.
3. Masters should send the following information to Port Khulna, via Khulna Radio (call sign S3E) and Pilot Station S3K, 24 hours prior to arrival at Mongla Fairway Buoy: (a) ETA Mongla Fairway Buoy; (b) fresh water drafts on arrival; (c) anticipated fresh water drafts at the time of sailing; (d) speed available; (e) length; (f) gross tonnage; (g) fresh water requirements; (h) nationality; (i) local Agents.

   In addition to Khulna Radio (call sign S3E) Harbour Control Station (call sign S3H) and Pilot Station (call sign S3K), maintain 24 hours W/T watch on 500 kHz. The ships are strictly to follow the instructions given by the Pilot while crossing the Outer Bar and anchor 5 cables S.W. of B-18 Buoy at Hiron Point and wait for the Pilot. The time of crossing the Outer Bar is given by the Pilot Station under instructions from the Pilot. QTG service available. VHF on Channels 16 and 11 available at Pilot Station Hiron Point, Harbour Control Mongla and Port Control Khulna.
4. *Important:* Ships due to enter must keep W/T and VHF Channel 16 watch while crossing Outer Bar and International Radio watch while waiting for Pilot at Hiron Point and in the vicinity of Fairway Buoy. Whilst navigating in Port Limits, W/T and VHF Channel 16 watch would be maintained as advised by Pilot.
5. All vessels entering port shall display their signal letters and the mooring/anchor berth in addition to pilot flags. They are also to display their signal letters while waiting for Pilot at Hiron Point and/or in the vicinity of Fairway Buoy.
6. The Port can reduce these declared drafts without notice.
7. Ship Owners and their Agents are advised to consult the Harbour Master's Office regarding incoming and outgoing deep draft vessels well in advance.
8. *Outward Ships* of deep drafts will leave the anchorage with the first of flood at Mongla.
9. Vessels entering or leaving Port must have full power on main engine and deck machinery and both anchors must be available for use at all times.
10. Masters are advised to manoeuvre with great care and make good lee while receiving and disembarking Pilots. A neat and clean pilot ladder as specified in Merchant Shipping (Pilot Ladders) Rules 1967. Manropes and boat ropes should be ready on lee side. A responsible Officer must be present on the deck near the pilot ladder while Pilot boards/disembarks and a lifebuoy must be kept handy near the pilot embarkation/disembarkation point for emergency use and also bulwark ladder for climbing down on deck.
11. In spring tides, ships of less than 10 knots shall not be permitted to transit the river. However, if permission is given under special

circumstances, a suitable tug will have to be hired from the Port to escort the vessel within the Port limits. Requests for the tug must be made at least 24 hours in advance.

12. In adverse weather if boarding is not possible at Hiron Point, the pilot vessel will lead incoming ships up to Sibsa (Akrampoint), where the Pilot will board in sheltered water.
13. Vessels of 182 m. length or more are required to have a tug standing-by during in and outward river passage and if the length is more than 198 m. a tug may be required to standby throughout her stay in the Port at the discretion of Port Authority.
14. The length of vessels entering the Port is restricted to 200 m. and may be increased depending on the season and circumstance of the case and normally only 2 vessels of more than 182 m. can be accommodated at a time.
15. Masters of the visiting vessels are advised to ensure that while their ships are in the anchorage, no Officer or crew travels to and from ships in native boat, sampan or any other boat, not authorised by the Port Authorities to ply in the anchorage for carrying passengers.
16. Masters of the visiting vessels are also advised to post 3 watchmen on duty, one on the forecastle, one aft and one on gangway all the time the ships are at the anchorage. The watchmen shall be provided with lifebuoys for use in emergency.
17. While the vessels are in Port, the Masters are to ensure that no ship's crew is employed for chipping, painting and working overside.
18. In port limits, wireless communication with any station except those operated by Port or Khulna Radio (S3E) is strictly prohibited.
19. In case of *emergency* whilst at anchor/mooring in harbour limits, the Assistant Harbour Master should be immediately contacted: (a) by use of lamp signal to signal tower; (b) by W/T on 500 kHz, call sign S3H; (c) VHF Channel 16.
20. Masters of vessels are advised that more than 8 barges or 4 flats (one flat being equivalent to 2 barges) should not be allowed to lie alongside. Under adverse conditions, this permissible number may further be reduced.
21. Whilst in anchorage limits, adequate anchor watch should be maintained and power on main engines and deck machinery should be available on immediate notice, specially during spring tides and inclement weather.
22. Fire hoses should be rigged and water kept running when working cargo of jute, jute goods and any other inflammable cargo.

Harbour Master, Mongla Port Authority, Bagerhat.

Requirements and Instructions for Securing to Single Swinging Buoy:

1. Wire snotter. Length = 1 m. wire size = 10 mm.
2. Slip wire with eyes. Length = 100 m. Wire size = 20 mm.
3. Nylon mooring rope. Length = 100 m.
4. 1 mooring shackle.
5. 1 small shackle, 5 tons.

Procedure for Preparing Chain for the Buoy (See "Plan"):

(a) Secure port anchor and break the chain.
(b) Pass the mooring shackle through the last open link.
(c) Pass the wire snotter through the 5th transverse link, counting from the chain end and then connect the eyes of the snotter with the small shackle.
(d) Lower the chain through the fair lead or panama lead from the port side, 2 transverse links into the water.
(e) Lower the slip wire from the port side down to the water level.
(f) Keep the nylon rope ready on the starboard side for lowering to the mooring party.
(g) When the vessel is close to the Buoy pass the nylon line to the mooring boat and make fast the vessel to the buoy with the nylon mooring rope.
(h) Connect the chain.
(i) Pass the slip wire and make it fast, keep it slack so that the weight is taken by the anchor chain.
(j) Let go the mooring rope and take it onboard.

SHIPMASTER'S REPORT: October 1991 (Updated 1994).

Anchorage: Special attention is required when anchoring in the Fairway/Roads. When lowering the first shackle into the water, the vessel should be stationary. When the vessel has one shackle on deck, drift back using the current until there are 7 shackles in the water.

Vessels should avoid anchoring in the above area and at Hiran Point Anchorage during S.W. monsoon season and during a depression, as over 1,000 anchors and chains have been lost.

The local authorities do not advise Masters of the above.

Loss of anchors and chains can delay ship's clearance and involve additional costs for extra pilotage and tug escorts.

Approaches: On approach, the Pussur River Estuary is marked by Fairway Buoy and 9 pairs of buoys. Masters of vessels are requested to contact Hiron Point Station (S3K) to confirm the latest positions of buoys.

Documentation: Officers and crew should declare all their personal effects. All deck stores and provisions should also be declared.

Vaccination List and yellow cards are examined by Health Control. If so much as an apostrophe is missing next to doctor's signature, vaccination is considered void and vessel is debited for a new certificate.

SHIPMASTER'S REPORT: December 1992/January 1993.

Pussur River Bar:

Position: 21° 27′ N., 89° 35′ E.

Charts: B.A. Charts No. 859 and 732.

Arrival Times and Drafts: Vessels should arrive at the Fairway Buoy when entering and Hiran Point when leaving, 3 hours before H.W. at the Pussur River entrance.

Anticipated drafts published by Mongla Port Authority for 1992 varied from a low of 6.36 m. on the A.M. tide (27th February), to a high of 8.18 m. on the P.M. tide (26th October). A rough guide for the port is 7.0 m.

The permitted drafts are published against the arrival times required at the Fairway Buoy or Hiran Point, for A.M. on 20th December this was 0429 hrs. – 6.99 m.

Notices and Pilot Station Instructions: The required notices were sent to the Pilots and Port Authorities 24 hours before arrival with an ETA at the Fairway Buoy of 0400 hrs. on 20th December 1992.

The Pilot Station was contacted on VHF when 12 miles from the Fairway Buoy, and the following instructions were received:

"On arrival Fairway Buoy, please pass 5 cables West of the Fairway Buoy at 0430 hrs. (local time) today 20th, and steer a course of 315° to B5 and B6 Buoys.

After passing B5 and B6 Buoys, alter course to starboard 003° to B15 and B16, then keeping B1, 3, 5, 7, 9, 11, 13 and 15 to starboard and B2, 4, 6, 8, 10, 12, 14 and 16 to port.

On arrival Hiron Point, drop anchor 1 mile S.E. of B18 Buoy.

Please note that B3, 4, 7, 10 and 13 are missing.

Keep VHF watch on Channel 9 and 16."

The Pilot Station was in contact a number of times, and later amended the time to pass the Fairway Buoy to between 0415 hrs. and 0420 hrs., and advised to keep close to the port side buoys as there was deeper water on that side of the channel.

Instructions from the Pilot Station were helpful and given clearly in good English.

There was one other vessel at anchor off Hiron Point and the Pilot Station gave instructions to anchor using that as a mark.

Passage: Passage over the bar can be undertaken day or night on the high tides.

Current: The current caused no problems, and no exceptional set was experienced on this tide at dead slow ahead (5.3 knots).

Approaches: The vessel approached from the East, last port Chittagong, with satellite navigator and echo sounder as a guide, and the Fairway Buoy was picked up easily.

The swatch of no ground is very distinctive on the echo sounder.

Buoyage: The Fairway Buoy was Fl. 7 sec. instead of 10 sec., and no Racon signal was seen.

The buoy marking the wreck to the East was seen (Fl. (2) 20 sec.).

The buoys listed as missing were not seen, although radar echoes in their approximate positions were noted, but these could have been fishing boats.

The other buoy lights were as noted on the chart, but no Racon was operating on B18.

Radar positions from ashore indicate that the buoys are in the charted positions.

Depths: The vessel had a draft aft of 6.81 m. in the brackish water, and a least depth of 0.65 m. was recorded under the keel at 0441 hrs. on 20th December 1992 in the approximate position of missing Buoys No. 3 and 4.

Fishing Boats: There were a number of small fishing boats anchored across the channel which made no attempts to get out of the way. They had oil lights which were lit up on close approach. The largest concentration was close to the anchorage.

Shoal Patch: The outward Pilot reported a shoal patch of 5.6 m. – 5.8 m. just South of Buoy B18 (See "Plan").

With a draft aft of 5.54 m., a sounding of 0.3 m. under-keel was recorded in approximate position Hiron Point bearing 338° by 3.6 miles, which would indicate that the shoal is further East and South of the Pilot's sketched position. This would also be indicated by the fact that the vessel anchored in the position on the chart on the inward passage with a draft of 7.0 m. and remained afloat through 2 successive low tides on 20th/21st December.

Buoy B17 has been moved as indicated by the Pilot on the copy chart (See "Plan").

Pussur River: Hiran Point to Jayman Reach.

Chart: B.A. Chart No. 732. The river was found to be as charted.

Shallowest water was experienced at 0803 hrs. shortly after picking-up the anchor.

The Pilot passed close to Buoy B18 on the port side with another vessel at anchor close to starboard.

A depth of 0.6 m. under-keel with a draft of 6.81 m. close to the pilot boarding station. Otherwise the least water under-keel was 1.1 m. at 1208 hrs., shortly before anchoring between Tatral Point and Ihir Khal, with the buoy abeam to starboard.

The upriver passage was uneventful and the Pilot capable.

Tug: One tug is required to stand-by large vessels when anchoring, and is used to push as required.

Waiting Anchorage: In Jayman Reach, and is referred to as Base Creek. Inward Clearance will be done at this anchorage.

Pussur River: Jayman Reach to Mongla Port.

This section of the river was also found to be as charted.

The shallowest water experienced was 0.5 m. under-keel at a draft of 6.9 m. in a position with Jayman Reach (green buoy) bearing 140° × 0.85 miles.

Mooring Buoys: Buoy No. 6 on the chart should be re-numbered to No. 5, and there is no Buoy No. 6.

Mongla Port:

Communications: Local telephone calls only can be made by calling Mongla Radio on VHF Channel 16 with various working channels, and requesting Mongla Agent's telephone number. These calls are charged through the Agency.

Port Control keep continous watch on VHF Channels 16 and 14.

Overseas telephone calls can be made either from the Agent's office or by using the local telephone office. These are on occasions not very good connections.

Fax messages are all sent to Khulna and can be delayed up to a day reaching the vessel via road and launch.

Size of Vessel: Maximum draft depends on the tide (See "Arrival Times and Drafts – Pussur River Bar").

The Pilot advised that the usual maximum length is 185 m., and Port Control advised that 2 years ago a vessel of 189 m. length had been allowed into the port.

Vessels of this length (188.4 m. LOA) cannot be safely anchored in the port as there is insufficient swinging room. There are 2 berths at buoys available for this size vessel, requiring the anchor cable to be broken to connect to the buoy. Large vessels will secure to the buoys on the ebb tide and sail on the flood, as there is insufficient room to turn a manoeuvring vessel in the port.

Pilots: There are 7 pilots serving the port and Pussur River. The 2 pilots handling this vessel were found to be efficient.

Night Navigation: Not permitted on the river for large vessels, but smaller ones may be permitted, from Hiran Point to the port, navigation over the bar is allowed at any time depending on the tide.

Clearance Inward: As for the Port of Chittagong, except that the Crew Agreement was not taken ashore.

Certificates: All certificates must be in date, and the correct Officers qualifications must be on board, or the vessel will not be permitted to sail.

Outward: The resident Customs official attends to the cargo papers with the stevedores and Agents.

Other Customs supervisors will board to inspect the vessel.

The Clearance Certificate was issued about 18 hours before the vessel could sail, due to the tides.

Shore Leave Passes: Issued on arrival and are to be handed back to the Agent on departure.

Customs: The Customs Officer, who boards for Inward Clearance, seals the bond store and remains on board throughout the vessel's stay in port and requires accommodation and food.

A rummage gang of about 10 persons will also board.

The resident Customs Officer issues Clearance to the various barges during discharge.

An issue to the crew is permitted after one week in port.

Watchmen: Should be employed as soon as the vessel arrives, and stationed forward, aft and at the gangway. They change about every day and do not require accommodation, but do require food. Thieves will board at any stage in the river. Another vessel was relieved of 6 mooring ropes from the forward store within half an hour of anchoring at Base Creek in the middle of the afternoon.

Brass sounding caps, butterfly nuts, etc., should be removed prior to arrival, even if they are of the thief-proof type. Anodes on the hull will also be taken when above water.

Accommodation and Food: Requested for consignees representative, stevedore overseer and foremen.

Barges: The Port Authority impose a fine on vessels if there are more than 8 barges alongside at one time and occasionally make representations on board.

As the barges are ordered in by the stevedores and consignees with no control from the vessel, they were given a letter advising them that they would be held responsible for any fines for this reason. This resulted in a marked decrease in the number of barges coming alongside.

The barges are poorly fendered, usually just a couple of old tyres, an attempt was made to use ship's fenders but these rapidly disappeared.

The barges supply their own ladders for boarding of the stevedores.

Cargo Working: Discharged 20,800 metric tonnes of bulk grain. Before starting, bales of bags are brought aboard, broken open and stencilled with appropriate marks.

The cargo is shovelled into the bags, the gangs splitting up into groups of four, two to hold the bags open, and two to fill them with grain using buckets.

The bags are then stitched, slung and lifted to the barges with ship's gear. There appeared to be about 30 men in each gang with additional men to prepare the bags on deck.

A selection of the bags are landed on deck and weighed on antique steelyards suspended from bamboo tripods. In this manner, combined with the bag tally, the stevedores arrive at a tonnage discharged.

The stevedores work one gang to a hold and do not double up at a hold.

Part of Hold No. 1 was discharged in bulk by scooping the grain into lined nets. How this quantity was measured is doubtful, as draft marks on the barges are rarely in evidence.

Working Hours: Stated as 0700 hrs. – 1900 hrs. and 1900 hrs. – 0700 hrs., with a meal break from 1100 hrs. – 1200 hrs. However, with late starts and early finishes, about 20 hours a day is achieved.

A net discharge rate of 33.63 tonnes per gang hour was achieved, which with 3 gangs working gives about 2,000 tonnes a day.

Weather: During the period mid-December 1992 to mid-January 1993, there were generally early morning fogs, but otherwise cool and dry.

The fog may delay the day gangs arriving, as the launches either do not leave the shore or cannot find the vessels.

Port Regulations: A copy of these was requested, but not forthcoming, but they generally seem to be relaxed. The local people swim in the river and no problems were experienced by the crew using local small boats for going ashore.

Provisions: Local fruit is available either from the ship chandlers or local trading boats, also local fish is available and of good quality.

Ship chandlers lists contain most items, but they may not be available and could be expensive.

Fresh Water: Available. The Pilot's Note on the way in asks for the quantity required. Generally about 2 or 3 days notice is required for delivery, after ordering through the Agent. Not recommended for drinking.

Density: 1002 (approx.).

AUTHORITY: Mongla Port Authority, P.O. Mongla Port Sub-Post Office, Bagerhat, Bangladesh. *Tel:* 62331, 61997, 60503. *Telex:* 27241 Mport BJ. *Cables:* Port Mongla. *Contact:* Md. Rezwanul Hoque, Chairman. Captain Azizul Hassan, Harbour Master. Tel: 60810, 61460, 60503, (04031) 221.

NOTES

Please also advise Shipping Guides Ltd.

Barbados

BRIDGETOWN: 13.06 N. 59.38 W. **(See Plan)**

DOCUMENTS:
8 copies Crew Lists.
5 copies Passenger Lists.
1 copy Health Certificate.
4 copies Ship Particulars.
1 copy Vaccination Report on Crew.
1 copy Vaccination Report on Passengers.
Derat Certificate.
2 copies Manifest.
1 copy Bill of Lading.
1 copy Clearance from Last Port.
2 copies Ship Stores List.
2 copies Crew s Declaration List.
1 copy Animal Declaration List.

Vessel should be entered within 24 hours and articles deposited in Shipping Office if staying longer than 48 hours.

Immigration:

1. List of passengers: (a) in-transit; (b) landing.
2. All disembarking passengers must fill out an E/D Card.
3. List of Crew, and if necessary, list of crew who will be landing.

PILOTAGE: Pilotage is compulsory for all vessels entering Bridgetown Harbour, except in cases of warships where pilotage is optional. Agents of vessels intending to visit the port are required give ETA as early as possible and to submit details on Form A in accordance with the Barbados Harbour s Regulations, 1961, and in advance of the vessel s arrival. Notification of arrival and request for services on Saturday should be known to the Harbour Master by 1100 hrs. local time on the previous Friday if there is to be no delay. Notification of arrival and requests for services on Sundays should be made known to the Harbour Master by 1200 hrs. on the previous Friday if there is to be no delay.

Pilot Station: Located 0.8 km. West of Fairway Buoy (Admiralty Chart No. 502). There is no alternative station in bad weather. Usual Jacob s ladder in good condition should be rigged on port side of vessel when approaching the harbour.

Signal for pilot boat International Code Letter G by day. Blue light by night. Call and watch on VHF Channel 12 156.60 MHz and HF SSB 2182 kHz. Pilotage vessels, (power driven launches) are approximately 10 m. in length. The two launches are painted blue, white and gold.

ANCHORAGES: Quarantine Anchorage as indicated Admiralty Chart 502. Explosive anchorage as indicated on chart. Carlisle Bay Anchorage see Chart 502.

RESTRICTIONS: Bridgetown Deep Water Harbour offers 24 hours service to ships with draft up to 9.6 m.

Tankers: May enter and leave any stage of tide, day or night, except Needham s Point where daylight berthing only.

MAX. SIZE: Max. length permitted in Deep Water Harbour 244 m. Vessels of greater length allowed to berth if fitted with bow thruster (up to 293 m.). Draft 9.6 m. Oil Carriers Pier outside Deep Water Harbour max. draft 11.6 m.

Also see Tankers .

HEALTH: Pratique may be obtained by radio or from Pilot or Health Officer on arrival. In case of suspected disease Port Doctor should be notified by radio through Agents.

Procedure for Granting of Pratique:

1. The radio request should be sent not more than 18 hours and not less than 4 hours before the expected time of arrival.
2. The message should be addressed to the Shipping Agent, who will inform the Medical Officer of Health (Port) of the contents of the Message.
3. The Medical Officer of Health will inform the Shipping Agent whether or not Pratique is granted, and the Shipping Agent will inform the Master, by radio, of the decision.
4. The Medical Officer of Health will inform the Officer on duty at the Signal Station whether or not Radio Pratique has been granted, and the Officer on duty at the Signal Station will inform the Berthing Master and the Public Health Inspector of the decision of the Medical Officer of Health.
5. The Berthing Master on boarding a ship which has been granted Radio Pratique will authorise lowering of Q flag, if still flying.
6. The Berthing Master on boarding a ship which has not requested Radio Pratique will inquire as to the presence of any illness in the ship; if there is no illness, he will grant Pratique in his capacity of Visiting Officer, *and will ensure that the Q flag is lowered.*
7. If Radio Pratique has been refused or if the Berthing Master is informed that there is illness in the ship, the Q flag *must* be kept flying and the Public Health Inspector will board the ship, and if satisfied will grant Pratique; if he is not satisfied he will refer the matter to the Medical Officer of Health (Port).
8. Disembarking passengers (not passengers in transit) and any Crew members being signed off will be kept segregated on the ship until their Vaccination Certificates have been inspected by the Public Health Inspector.
9. No person except the Berthing Master, the Public Health Inspector, the Medical Officer of Health or the Immigration Officer will be permitted to board a ship before Pratique has been granted. The granting of Pratique is indicated by the lowering of the Q flag.

   Notes: From the foregoing it will be seen:
   (i) that healthy ships will be granted Pratique either by radio or by the Berthing Master;
   (ii) that ships with any illness on board will be granted Pratique by the Public Health Inspector or the Medical Officer of Health;
   (iii) that the Public Health Inspector will board a ship for the following reasons only:
      a. when Radio Pratique has not been granted and the Berthing Master cannot grant Pratique;
      b. to inspect Vaccination Certificates of disembarking (not in-transit) passengers and signed off crew members.
   (iv) that to avoid misunderstanding and delay the Q flag must be lowered as soon as Pratique is granted.
10. A ship with disembarking passengers may be granted Pratique and permitted to work e.g. load or unload cargo, *provided* that disembarking passengers are kept segregated *on the ship* until Vaccination Certificates have been inspected and immigration formalities completed.

RADIO: Cable and Wireless, Barbados Radio: Call sign 8 PO. 24 hours watch is maintained on 500 kHz. ETA to include name and nationality of Master, number and nationality of crew. Name of last and following ports of call and quantity and grades of cargo to be discharged, if any.

VHF: Barbados Radio VHF Channels 16 and 26. Barbados Port Department VHF Channels 12 and 16.

TUGS: Three tugs available namely Barbados , Culpepper and Pelican II , 1,700 h.p., 1,500 h.p. and 4,600 h.p. respectively. 2 tugs for vessels of 20,000 n.r.t. or over, and 1 tug for vessels of 10,000 n.r.t. or over or 167.64 m. in length. The tug will meet the ship at the entrance to the harbour. For vessels under 550 ft. in length having bow thrusters the tug will be optional.

BERTHING: Harbour is situated on the North-Western side of Carlisle Bay, approximately 0.75 miles (1.21 km.) N.W. of the Molehead of the careenage. The harbour is dredged to 9.75 m. LWOST and was constructed by joining Pelican Island to the Mainland by reclamation, providing 702 m. of quay space and 829 m. of protective breakwater, and offering berths for eight ocean-going vessels. All berths are equipped to supply fresh water, bunker fuel and telephone service.

Berth	*Length* (m.)	*Width* (m.)	*Depth* (m.)	*Remarks*
No. 1	152	23	9.7	
Nos. 2 and 3	366	15	9.7	
No. 4	184*	24	9.7	Container berth. *215 m. with dolphins.
Breakwater	522 outer arm	9.3	9.7	Passenger vessels.
	307 inner arm		9.7	Bulk sugar and molasses.
Shallow Draft	156	15.2	6.7	Inter-island vessels, max. draft 6.8 m.
Bulk Handling Facility	dolphins		11.5	Max. LOA 183m.
Black Rock				Max. LOA 122 m., max. draft 7.5 m.
Spring Garden				Max. LOA 103 m., max. draft 4.9 m.

Cold Storage Facilities: Cold Storage facilities of the Port of Bridgetown are supplied by BICO Ltd., who are sub-contracted by the Barbados Port Authority to handle all locally consigned and Trans-shipment reefer cargoes .

The facility abounds the Harbour perimeter and has four receiving doors.

4×20 ft. reefer containers may be stripped simultaneously or 2×20 ft. and 2×40 ft. containers. The receiving rate is in excess of 350 tonnes per day.

Storage capacity is 2,100 tonnes frozen (−18°C), 300 tonnes chilled cargo (+2°C).

Cargo movements are effected by seven Clark 1.5 tonne capacity Forklift Trucks.

Power supply is guaranteed by Ring circuit feed supplemented by standby generator.

CONTAINER HANDLING FACILITIES: The extensions to the Harbour were completed in 1978 and included the provision of a Container Berth, a Container Shed and an open land area for the development of a Container Stacking Park and other ancillary requirements for the making of a Container Terminal.

Phase I of the development of this area was completed in 1980 and included the paving and lighting of the area adjacent to the Container Quay for the provision of a Container Park, a Container Control Office and an area for the stuffing and unstuffing of containers.

Phase II of the development of the Terminal was completed in 1981.

In January, 1981, a new Container handling unit, the Ferranti 830 L Straddle Carrier, was introduced to the Terminal which was followed by another unit in 1982 and 2 Valmet Straddle Carriers in 1985. An additional Valmet Straddle Carrier was acquired in 1987 and two others joined the fleet in 1990, bringing the total to 7 straddle carriers. These units are capable of handling fully laden 40 ft. containers.

In addition, there are ample Tractor Trailer units to cope with the present movement of containers.

During 1982, the old Container Park was re-opened to provide further space for the stacking of trans-shipment containers and also the North Gate was opened to facilitate the free movement of containers to and from the Port.

The Terminal is geared to handle 75,000 container movements annually.

The Container Terminal consists of the following:
a. Container Berth
b. Container Shed (C.F.S)
c. Container Park

The Container Berth is 188 m. long, with one breasting dolphin providing an additional 36 m. of berthing space.

This berth can accommodate a vessel up to 205 m. in length and a maximum draft of 9.60 m.

The Container Shed (C.F.S.) has a floor area of 5,314 sq.m. and is used for the storing of cargo to be stuffed into containers or for cargo unstuffed from containers.

The Container Park can accommodate a total of 2,000 containers in lane stacked positions (2 high).

The full Container Park can stack 320 containers, the empty Container Park can stack 744 containers and the Trans-shipment Park can stack 840 containers (2 high).

Space for 320 additional boxes (full) has been provided.

The Container Control Office directs the movement of the Seven Container Handling Units in the delivery, receiving and spotting of containers by means of UHF communication equipment.

A 40 ton gantry crane was purchased in 1987.

A new Engineering Workshop completed in early 1984 ensures that equipment at the Terminal is readily available and that 'downtime' is kept to a minimum.

CRANES: 1×100 ton link-belt truck crane.

BULK HANDLING FACILITIES: *Grain:* The bulk unloading facility of Barbados Mills Limited is primarily used for wheat, corn and soyabean meal. It consists of a 6 storey workhouse, 14-"Lippe" type metal silos each with a capacity of 1,000 tonnes and a 669 sq.m. flat storage warehouse of re-inforced concrete capable of receiving and storing 2,400 tonnes.

The dock consists of a 557 sq.m. apron on steel piling with 4 breasting dolphins of similar construction in line with the end of the dock and parallel to the shoreline. There is a lightweight steel catwalk between the dolphins and the dock apron.

Grain enters the Terminal by means of a 762 mm. wide covered conveyor belt running 68.5 m. to the workhouse where it is cleaned of tramp metal, sticks, dust, etc. and weighted before being directed to one of the silos or the flat storage.

The conveyor belt has a capacity of 200 tonnes per hour and is equipped with one tonne hopper mounted dockside over the belt to accommodate self-discharging vessels. In addition the facility has a drag conveying system for conventional bulk vessels and an electrically driven portable suction system that can be used separately or in conjunction with the drag system

Diesel powered skid steer tractors with buckets are used for clean-up of the holds.

Sugar and by-products: All sugar from Barbados' six sugar factories is transported to the Bulk Sugar Terminal at the Bridgetown Port in special trucks with bins, which are the property of Sugar Transport Limited.

The Bulk Sugar Installation at the Bridgetown Port has a capacity of 81,284 tonnes and is 171 m. long with a width at floor level of 43 m.

The Bulk Sugar Installation has been in operation since 1961, and is serviced by a fleet of 27 sugar trucks with bins.

Barbados Molasses Terminals were resited at the Bridgetown Port from Needham Point in 1963, commencing operations in 1964. There is a capacity of 11,356 cu.m., and this is stored for local consumption and export. There is a storage charge from July 1st to the start of the following crop.

In 1981, a new tank was constructed to facilitate T/S Molasses. This tank has a capacity of 20,000 tonnes, and is presently leased to the United Molasses Company of England which is a subsidiary of the Tate & Lyle Group of Companies for handling T/S Molasses within the Caribbean region.

Barbados Fancy Molasses is owned and operated by Jason Jones Ltd., DaCosta & Musson Ltd., Plantations Trading Company Ltd., and Evelyn Roach, Ltd.

There is a capacity of 14,006 cu.m. of which 99.5% is for export and the balance for local consumption.

Description of the Bulk Sugar Installations: The storage shed has a capacity of 81,284 tonnes of sugar and is 171 m. long with a width at floor level of 43 m. The side retaining walls are 4.6 m. high and the roof slopes from the top of these walls to a height of 31 m. at the apex.

Sugar is delivered from the factories in 7 tonne containers fitted to road lorries and is received at the reception area at the East end of the store. After weighing, the container is discharged through a side top-hung door on the container into a reception hopper. This hopper feeds a 1.65 m. conveyor belt which runs the full length of the store underground through a reinforced concrete tunnel. At the Western end of the store the conveyor, used for both reception and reclamation of sugar, rises above ground level through an enclosed steel gantry which slopes upwards to the top of a distribution and weigher tower. Here the sugar falls on a second conveyor belt which slopes back up to the top of the store and extends some 122 m. through the store at a high level. This conveyor is fitted with a mobile take-off and high speed thrower capable of throwing the sugar some 15.25 m. in any direction.

In the floor of the store and over the tunnel carrying the reception/reclamation conveyor belt, 57 louvred hoppers with 0.46 sq.m. openings are spaced along the entire length of the store. During shipment, sugar is run at a controlled rate on to the underground belt which carries it to the top of the weigh tower where it is diverted into the feed hopper of an automatic 10 tonne Servo-Balans scale. After weighing, the sugar falls on to a third which carries the sugar 165 m. through an underground tunnel to a transfer house near the breakwater. At this point the conveyor system turns through an angle of 45° and the sugar is transferred to a fourth conveyor which rises out of the ground from the transfer house and continues 152.5 m. in a covered steel gantry to the first of the three towers which house the power and control units for the ship outloaders. These towers, which are 38 m. apart, each carry 18.25 m. cylindrical boom, with 1.65 m. conveyor belt, which can be raised and lowered like a crane jib and can be slewed through an arc of 80°. A high speed thrower is suspended in the hold of the ship from a telescopic chute at the end of each boom.

During shipment a loading rate of 500 tonnes per hour can be maintained through one outloader or this loading rate can be distributed between two or three outloaders if necessary.

The conveyor system enables sugar to be recirculated within the store if desired. When a ship is loading at the same time as sugar is being received, however, the freshly delivered sugar must go direct to the ship mixed with additional sugar from store.

The store is open along the eaves of the roof and forced ventilation is possible by running extractor fans installed on both sides of roof near apex.

STEVEDORES: Gangs must be ordered before 1500 hrs. on day preceding date of arrival and 1000 hrs. on Saturday for Sunday or following Monday. Average rate of cargo discharged:

Bag Stuff, 22 tonnes (weight) per hour.
General Cargo, 12 tonnes (weight) per hour.
Ships specially equipped for handling palletised cargo, 30 tonnes/p.h.
Average rate of loading of cargo: General cargo 12 tonnes; Bag Stuff 18 tonnes.

MEDICAL: Agents should receive advance notice of required medical attention as soon as possible. Modern 800 bed hospital. Private clinics and usual medical facilities available.

TANKERS: Vessels arriving during darkness for Needham's Point Terminal should anchor in Carlisle Bay. Services of a Pilot are not compulsory but a Pilot must be taken to berth and unberth. Daylight berthing only.

Oistin: Submarine discharge. Max. LOA 172 m. Max. draft 10 m.

Needham's Point: Mobil Oil Barbados Ltd. Multi-buoy mooring Max. LOA, 198 m. Max. draft, 11.6 m. Depth at MLW, 12.19 m. Nature of bottom, sand on coral. Daylight berthing only. Vessels may berth and unberth any stage of tide. No fuel or dirty ballast facilities. Fresh water available by tug. Product handled, crude oil. Sealine taken aboard on starboard side. One 12 in. (30 cm.) pipeline, length 498.35 m. connected to 1×10 in. hose. Pumping rate 300 t.p.h. max. pressure, 50 p.s.i.

Esso Standard Oil S.A. Ltd.: 2 berths. Esso Jetty outside breakwater. "T"-Head finger jetty. Max. LOA, 244 m. Max. draft, 11.6 m. Depth at MLW 55 ft. Vessel berths port-side alongside.

Deep-water Harbour Oil Pier: Max. LOA 244 m. Max. draft 9.14 m. Depth at MLW, 9.75 m. Vessels berth either side alongside.

Fuel and fresh water available. No facilites for receiving dirty ballast.

Berth	*Grade Handled*	*Pipe-line (in.)*	*Length (ft.)*	*Load/ Discharge Rate (t.p.h.)*	*Hoses (in.)*
Esso Jetty	Bunker C	1×16	2000	400	1×8
	Marine Diesel	1×12	2000	270	1×8
	Light Marine Diesel/gasoil	1×8	2000	150	1×8

Max. Pressure 100 p.s.i.

Also see"Shipmaster's Reports".

DENSITY: 1025.

FRESH WATER: Easily available. Delivery 20 t.p.h. per hose. Delivery by hose-pipe through hydrants installed in each berth.

FUEL: Modern bunkering facilities are supplied by Esso Standard Oil on a 24 hour basis, however, a minimum of 24 hours advance notice is required. This may be done through an Esso branch in the previous port of call. Bunkering is done alongside at the bunker pits, which are supplied with Bunker "C" fuel, marine gas oil and marine diesel oil. A blend of Bunker "C" and diesel intermediate fuel can also be supplied, as well as marine lubricants. Small yachts and schooners can also be bunkered, and at the Esso Bay Street Jetty, fishing boats and pleasure craft can be supplied with diesel fuel. Loading and discharge facilities consist mainly of an 8 in. pipeline for gas oil, a 12 in. pipeline for marine diesel and a 16 in. pipeline for fuel oil. These pipelines run underground for approximately 1 km. from the Bridgetown Port to a bulk terminal at Holborn, Fontabelle. Pumps located at the terminal are used for deliveries to the Port.

The speed of delivery to the Bridgetown Port varies widely depending on the size of the vessel being bunkered. Pumps are rated to deliver from a minimum of 25 tonnes/p.h. to a maximum of 300 tonnes per hour.

There are 16 refuelling points along the berth of the Bridgetown Port. These permit any vessel with a maximum draft of 9.6 m. to be refuelled at any point within the port.

CONSULS: Consulates, Embassies and High Commissions:

Austria
Belgium
Brazil
Canada
China
Colombia
Cyprus
Denmark
Dominican Republic
Ecuador
Finland
France
Germany
Iceland
Israel
Italy
Japan
Netherlands
Norway
Sweden
United Kingdom
United States
Venezuela

SURVEYORS: Lloyd's Register, Bureau Veritas, A.B.S., N.K.K., G.L. and Det Norske Veritas.

OPENING/CLOSING HATCHES: By stevedores.

CERTIFICATES: Load Line Certificate, Certificate of Registry, Safety Certificates.

CUSTOMS ALLOWANCES: Two packages or 100 cigarettes per person. Wines and spirit allowance at discretion of Customs Officer.

REPATRIATION: Facilities for crew changes available.

AIRPORT: Served by regular lines. Distance from harbour about 13 miles (20.92 km.). Island is served by flights from Europe and fromNorth America.

TIME: GMT minus 4 hours. DST (Daylight Saving Time) 1 hour advanced is now being used from 16th April to 22nd October every year.

HOLIDAYS: New Year's Day, Errol Barrow Day (January 21st), Good Friday, Easter Monday, May Day (1st Monday in May), Whit Monday, Kadooment Day – Crop Over Festival (1st Monday in July), Caricom Day (1st Monday in August), United Nations Day (1st Monday in October), Independence Day (November 30th), Christmas Day (December 25th), Boxing Day (December 26th).

TELEPHONES: All berths equipped with telephone lines.

IDENTIFICATION CARDS: Desirable for entrance to port from shore leave.

BANKS: The following international banks service Barbados: Some are located within very close proximity to the Bridgetown Port.

Barbados Development Bank
Barbados National Bank
Bank of Nova Scotia
Barclays Bank plc
Canadian Imperial Bank of Commerce
Caribbean Commercial Bank
Citibank N.A.
Royal Bank of Canada

The main offices are located in Bridgetown. Service hours are:

0800 1500 hrs. Monday through Thursday.
0800 1730 hrs. on Friday.

SHIP SUPPLY SERVICE: The Barbados Port Authority operates 2 tugs and 1 heavy duty launch which is used when requested by Agents for transporting to super-carriers, stores and crews which are sometimes changed at this port. Service available on 24 hours basis and advance notice required.

The Ship Chandlers are as follows:

J. N. Goddard and Sons Limited,
Broad Street,
Bridgetown.

Hanschell Larsen & Company Limited,
Kensington,
Fontabelle,
St. Michael, Barbados.

Stanfield Scott & Company Limited,
Spring Garden Highway,
St. Michael, Barbados.

The cost of tug hire is Bds.$600.00 per hour and that of the launch is Bds.$150.00 per hour.

Ships can lie safely on 100 fathoms depth at a distance of 2 miles West of the Signal Station.

GARBAGE DISPOSAL: Collection service available. Skips provided alongside. Arrangements through agent or Barbados Port Authority, Tel: (246) 4366883. Charges on applications. Normal collection time 0730 hrs. 1630 hrs. Collection outside normal time at overtime rate.

WASTE OIL DISPOSAL: Collection service available using tanker truck. Arrangements made through agent. No special berth for this service. Service provided by Mobil Oil Barbados Ltd., Tel: (246) 4260580.

SEAMAN S CLUBS: None.

CURRENCY: Barbados Dollar. Pegged to U.S.Dollar exchange rate. U.S.$1.00 = BDS$ 2.05. Exchange rate stable.

SHIPMASTER S REPORT: October 1989.

Documents:

2 copies Crew Manifest.
2 copies Stores List.
1 copy Unmanifested Cargo.
4 copies Cargo Manifest.

Officials and Oil Company Representatives board the vessel at the anchorage on arrival.

An Oil Company representative boards the vessel at the berth and accepts the Notice of Readiness. He also boards prior to departure for signing of quantity discharged and issues Clearance.

The bond was not sealed.

Pilotage: Compulsory. Pilot boards at anchorage. On occasions, small vessels are allowed to unberth without a Pilot if moored at Spring Gardens.

Approaches: The Shell/Texaco offshore mooring is at Spring Gardens, which is just North of the main harbour, next to the power station, which is conspicuous. The grain silo near the main breakwater is also conspicuous.

Anchorage: Tankers waiting for clearance should anchor in the explosives anchorage which is just North of the main breakwater.

We anchored in Carlisle Bay with the Careenage Breakwater light bearing 053° at a distance of 0.3 miles, depth 12.0 m. This anchorage is safe but the Port Authorities do not like tankers mooring here as this is too close to the town.

A new fishing harbour has been constructed in the Northern part of Carlisle Bay which is West of the town.

Channel: Vessel approached the berth through a channel marked by 4 buoys. These buoys are lit when required. The buoys are liable to shift but are promptly reset in position by the Oil Company.

Restrictions: No night berthing permitted, vessels are permitted to unberth through 24 hours.

Max. Size: The maximum draft at Spring Garden is 5.0 m. Maximum LOA 100 m. The maximum beam is approximately 25 m.

Radio/VHF: Barbados Radio (8PO). Barbados Port Department on VHF Channels 16 and 12 but were difficult to raise.

Tugs: Tugs stand-by on arrival and departure but are generally not used.

Berthing: Vessel moored with 3 shackles on the port anchor and a starboard bow line to a buoy. Lines were sent from each quarter to 2 buoys. Vessel berthed head out.

A small boat is used to run lines to the buoys and will also be used for connecting the hose. The boat is also available for running crew ashore but there is a charge for this service so it is best to use the ship s lifeboat.

The maximum permitted wind force for berthing is Force 5. The wind is generally from offshore and is generally calm to slight.

Berth: Spring Garden Buoy Mooring: The mooring is designed for vessels with a stern discharge line which can be connected to the undersea line which goes ashore at the power station. This undersea line has a 3 in. flange and is connected at the water s edge by the boatman. At the time of our visits (October, November and December), the undersea line was under repair. This did not create any difficulties as all local LPG and product vessels have their own hoses. Normally, the undersea line is picked up by the vessel s stern crane/derrick. Pumping is permitted 24 hours when using the undersea lines but daylight only pumping is permitted when using the floating hose, which is best taken back aboard at night.

Water skiers and swimmers like using the hose.

The pumping rate is about 300 bbls.p.h.There is no night pumping for kerosene or LPG. When using the floating hose, vapour is pumped to clear lines.

Shell have a surveyor locally and also provide a radio. Texaco do not have a surveyor locally and use one of the ship s portable radios for communication.

General: It is a 30 minute walk along the beach to Bridgetown where telephone calls may be made via Cable and Wireless.

There are plenty of hotels and beach/water sports immediately to hand.

If arriving at around 0600 hrs., the vessel may be delayed if cruise ships are arriving at the same time, in which case the vessel may not be berthed until 0800 hrs. or 0900 hrs. (Later in November we were delayed until 0930 hrs.)

On departure in mid-afternoon we were delayed 3 hours and we requested permission to unberth without a Pilot but this was not granted.

When near the Explosives Anchorage keep a careful lookout for the Atlantis Tourist submersible, which is sometimed in the area.

The Shell tanks have a capacity of 200 tonnes.

Provisions may be obtained from Goddard s Supermarket which is near the Esso station. The supermarket is 35 minutes walk and prices of imported items are high.

SHIPMASTER S REPORT: January 1990.

Berth: Oistins Bay.

Anchorage: Vessels anchor at Bridgetown Explosives Anchorage for clearance (B.A. Chart No. 502).

If request made to Port Control, vessel may anchor East of the breakwater elbow.

Occasionally a backswell off the breakwater may be running, making it difficult for Customs Officers and officials to board.

The anchorage in Oistins Bay is 3.5 cables Northwest of Kendal Point or 4.5 cables Southwest of the Fishing Jetty.

Pilotage: Pilotage is available throughout 24 hours and is compulsory for berthing. The pilot boards in Bridgetown Anchorage from the pilot boat Clarence Lewis which has a blue hull and white superstructure. The time for transit to Oistins Bay is about 45 minutes.

Max. Size: Max. LOA 150 m. Max. draft 8.5 m.

Tugs: One tug is required to standby when berthing at Oistins Bay but not required for sailing. Tug comes from Bridgetown.

Berth: See B.A. Chart No. 502. The vessel moors to 3 buoys. Two lines are sent to a buoy on the port bow, 1 line is sent to a buoy on the port quarter and another line is sent to a buoy on the starboard quarter. The starboard anchor is used with 3 shackles in the water.

The mooring is sheltered from Easterly winds.

Loading: The ship s port manifold should be prepared for receiving an 8 in. hose which lays on the sea bed and is marked by an orange marker buoy. The line handles aviation jet fuel to the nearby shore tanks. Ships can pump to a maximum pressure of 8 Bar.

On completion of discharge the tanks are gauged ashore, this takes about 2 hours.

Night-time pumping and sailing are permitted.

Cargo operations are co-ordinated with Shell/Texaco on VHF Channel 9.

General: Clearance: Vessels can only clear inward during daylight hours. Documentation is same as for Spring Gardens (See Shipmaster s Report October 1989).

Mooring boat: The mooring boat will run the crew ashore and back to the ship. Call on Channel 9 for service.

AUTHORITY: Barbados Port Authority, University Row, Bridgetown, Barbados, W.I. *Tel:* (246) 436-6883. *Telex:* 2367 Portman WB. *Cables:* Portman. *FAX:* (246) 429-5348. *Contact:* Mr.E.Walters, General Manager. Mr.R.Alleyne, Harbour Master.

AGENT: Goddards Shipping & Tours Ltd., P.O.Box 1283, Hincks Street, Bridgetown, Barbados. Tel: (246) 426-9918. FAX: (246) 426-7322.

Belgium

GENERAL (See Plan)

ESTIMATED TIME OF ARRIVAL – REGULATION:

The commissioners in charge of the joint supervision, as indicated in Article 67 of the Scheldt Regulations.

Due to the Scheldt Radar Chain coming into use, the Vessel Traffic Services Scheldt and its Approaches (VTS – SM) as from March 1st, 1991, and considering Article 16, first paragraph of the Scheldt Regulations.

DECREE

Article 1. The Master of an inward bound ship for a Belgian port on the Scheldt or on the Ghent – Terneuzen Canal, must report his ETA at one of the Pilot Stations in the Scheldt estuary not less than 6 hours before that time.

Article 2. The Master, as meant in Article 1, has to report together with the ETA the following data:

A – B – I – J – O – (possibly P) – T – U – (possibly X).

The meaning of these letters is given in the Annex of this regulation.

Article 3. The Master of a seagoing vessel, to which the Regulations for the carriage of dangerous substances in seagoing ships apply, has to give notice as indicated in Articles 8 and 18 of those Regulations, having filled in the letter 'P' as indicated in Article 2 of this decree, to the Services and in the manner prescribed in Article 5 of this decree.

For tankers, to which apply the provisions of the EEC rule 79/116/EC of December 21st, 1978 regarding the minimum requirements for tankers entering or leaving the seaports of the Community, the notice as indicated in Article 1, has to be accompanied by the notices stipulated in that EEC rule.

Article 4. If the port of destination is Antwerp and on behalf of the municipal authorities, all data indicated in Article 2 has to be completed with hailing data in sequence and using the following codes:

Number of tugs	From 0 to 9.
Type of tugs	A or B
where:	A - tugs with a pulling power up to 14 tons. B - tugs with a pulling power over 14 tons.
Dock pilot	J (Yes) or N (No).
Boatmen	J (Yes) or N (No).
Fendermen	J (Yes) or N (No).
Helmsmen	J (Yes) or N (No).
Gangway requested	J (Yes) or N (No).

Article 5.

1. The notice indicated in Article 1 for vessels passing the Pilot Station at "Wandelaar", has to be given to "Pilot VTS Wandelaar".
   This can be passed by:
   (a) Ostend Radio (OST).
   (b) or Tel: 32-(0)50-550801.
   (c) or Fax: 32-(0)50-547400.
   (d) Telex and Satcom: 81417.
2. The notice as indicated in Article 1 for vessels passing the Pilot Station at "Steenbank" has to be given to "Pilot VTS Steenbank".
   This can be passed by:
   (a) Scheveningen Radio (PCH).
   (b) or Tel: 31-(0)1184-89600.
   (c) or Fax: 31-(0)1184-12321.
   (d) Telex and Satcom: 37811.

Article 6.

1. A delay of more than 2 hours in the expected time of arrival, as indicated in Article 1, has to be reported by stating A – B – I – J – (possibly X).
2. In case the expected time of arrival, as indicated in Article 1, has to be cancelled completely, this has to be reported by stating A – B – (possibly X).

Article 7. A Master who does not observe the obligations of Articles 1 to 6 inclusive has to take into account a delay of maximum 6 hours at both the Pilot Station and at Flushing Roads.

Article 8.

1. A Master of a ship approaching one of the Pilot Stations and requiring a pilot, will be provided with a pilot according to the following rules:
   (a) Ships that have reported their ETA at the Pilot Station in accordance with the provisions of Article 1 will be provided with a pilot in sequence of their arrival at the pilot cutter. In case such a ship arrives earlier than the reported ETA, she will not be provided with a pilot before that ETA unless a pilot can be made available earlier.
   (b) A ship that has reported her ETA in accordance with Article 1 may have priority in being provided with a pilot if the ship is limited to high tide or has to enter ports, preferably, at slack water.
   (c) Warships and government vessels of the Netherlands or Belgium will be provided with a pilot by priority when requested.
   (d) Ships that have reported their ETA at the Pilot Station less than 6 hours before are subject to the provisions of (a), (b) and (c) starting with the time of reporting.
   (e) Ships arriving at the Pilot Station more than 2 hours after their latest ETA notified in accordance with Article 1, as well as ships that did not send an ETA, may be provided with a pilot within a period of 6 hours after arrival only if this does not delay the other ships in being provided with a pilot. After this period has elapsed the provisions laid down in (a) and (b) will apply.
   (f) Ships in danger will, on request, be provided with a pilot before all other vessels and, if necessary, be assisted in any other way.
2. The Master of the pilot cutter can deviate from the provisions in Article 8, sub-paragraph 1. (a), (b), (c), (d) and (e), if circumstances so require.
3. Ships that, as a result of the above mentioned, have to wait before being provided with a pilot and, without awaiting their turn, proceed inwards without pilot, will have to pay the pilotage dues in accordance with the tariff.

Article 9. The decree comes into force from March 1st, 1991 and will be published in "Berichten aan de Zeevarenden".

ANNEX TO THE ETA REGULATION – 1/3/1991

The meaning of the letters, mentioned in the notice procedure of this regulation, are as follows:

A (ship)	Name, call sign and flag.
B (time of Notice)	Date and time group (4 digits) in G.M.T. of the moment at which the notice is given.
I (destination)	Name of port of destination.
J (ETA)	Date and time group (4 digits) in G.M.T. of the expected time of arrival (ETA) at the Pilot Station and its call name ("Wandelaar" or "Steenbank").
O (draft)	The correct draft in metres and centimetres.
P (cargo)	Nature of cargo for ships to which the "Regulations for the Carriage of Dangerous Substances" (RVGX) in seagoing ships apply. Indication of the IMDG dangerous goods classes as mentioned in the RVGZ, Article 1, 3rd paragraph. Indication "General" or "Bulk" and by approximation the total volume of dangerous substances onboard ship in accordance with the RVGZ.
T (agent)	The name of the ship's agent or owner.
U (dimensions)	The size of the ship in g.r.t., length in metres and centimetres in accordance with the ship's International Measurement Certificate.
X (remarks)	Possible remarks regarding the (general) condition of the ship, especially damage, manoeuvrability, equipment, list, etc. or particulars regarding ship's crew or cargo, or more general particulars.

ANTWERP: 51.14 N. 04.23 E. (See Plan)

DOCUMENTS:

Ship's Register.
2 Lists Passengers in Transit.
2 Lists Passengers Disembarking.
2 Personal Effects Lists.
3 Crew Lists indicating full date and place of birth, nationality and No. of Identity Document (Seaman's Book or Passport).
2 Stores Lists indicating alcoholic beverages in bottles and size of bottles.
International Health Declaration.
Manifests and usual ship documents.

PILOTAGE: Access to River Scheldt is:

(a) Via Wielingen and Scheur Channels (West) (Wandelaar Station) where Belgian sea pilot cutter is stationed near A.1. Buoy. Cutter has black hull with a white number on bow, yellow funnel with black top, red flag with white letter "P".

(b) Via Oostgat Channel (Pilot Steenbank), where 2 Dutch pilot vessels are stationed.

Incoming traffic: One pilot vessel in the vicinity of Schouwenbank Buoy (Racon).

Outgoing traffic: One pilot vessel stationed in the vicinity of M.B. Buoy.

Pilot boards at Wandelaar or Steenbank. Pilots boarding at Steenbank can use Oostgat Channel with a maximum draft of 10.0 m. at H.W. and a draft of 8.1 m. at L.W. If passage is not possible due to the draft, the pilot will route the ship via the inner route, Rabsbank – West Pit to Vlissingen.

IMO Class 2 vessels need permission from Traffic Control Steenbank.

Wandelaar and Steenbank pilots can be contacted on VHF Channel 6.

ETA Pilot Station, should be given 6 hours before arrival, stating point of entry. Changes in ETA of more than 2 hours have to be reported.

Entrance via 'A1' Buoy:
Pilot VTS Wandelaar.
Via Ostend Radio (OST) or Telex and Satcom: 81417.
Entrance via Steenbank:
Pilot VTS Steenbank.
Tel: 31-(0)1184-89600.
Fax: 31-(0)1184-12321.
Telex and Satcom: 37811.
or Scheveningen Radio.

Also see "General" before first port.

DEEP SEA PILOTAGE: See "Brixham" or "Cherbourg".

ANCHORAGE: There is sufficient anchorage for deeply loaded vessels at all times around the A.1 Buoy, and for smaller vessels around the MSB Buoy. There are unlimited possibilities for anchoring at Flushing Roads. Anchorage on the river is limited.

RESTRICTIONS: No restrictions on night entry. Tankers larger than 2,000 g.r.t. destined for berths on the river upwards of Kallo Lock are not allowed to transit during hours of darkness or visibility less than 2,000 m. Ban can be lifted by the Maritime Commissioner (Waterschout-Sambt).

LOCKS: *Right Bank:* Royers Lock, length 590 ft., width 72 ft. 2 in., depth at high tide 36 ft. 4 in.

Van Cauwelaert Lock, length 885 ft., width 115 ft., depth at high tide 49 ft. 2 in.

Boudewijn Lock, length 1,180 ft., width 147 ft., depth at high tide 50 ft. 10 in.

Zandvliet Lock, length 1,639 ft., width 187 ft., depth at high tide 60 ft. 8 in.

Berendrecht Lock, length 1,639 ft., width 223 ft., depth at high tide 60 ft. 8 in.

Kattendijk Lock, length 360 ft., width 81 ft. 4 in., depth 20 ft. 7 in.

Left Bank: Kallo Lock, length 1,180 ft., width 165 ft., depth 52 ft. 6 in.

Also see "Developments".

MAX. SIZE: Maximum size of vessels (draft) depends on the tide.

At HW under normal weather conditions and depending on tidal conditions, vessels with a draft of up 49 ft. may enter. It is advisable to check with pilot service in each case what maximum draft will be allowed for a specific large vessel.

HEALTH: No special requirements to obtain Free Pratique. Vaccination Certificates must be valid. Recent Derat Certificate required. In case of contagious illness aboard, advise Agent.

RADIO: Cable Agents ETA Flushing, max. fresh water draft, and requirements via Ostend Radio-OST or OSU (radio telephone). Radio Antwerp-OSA operates only on medium frequency.

RADAR/VHF: A radar chain established from "A1" to Kallo. Masters can keep close contact for information, day and night, on the following channels:

Pilot Cutter Wandelaar: Channel 6 and 65.
Pilot Cutter Steenbank: Channel 6 and 64.
Flushing: Channel 14.
Zandvliet Radio: Channel 12, when in appropriate sector.
Harbour Office: Channel 18.

A radar chain, depending on the zone, using from sea to port: Compulsory listening.

Radar Zeebrugge: Channel 4.
Centrale Vlissingen: Channel 21.
Radar Terneuzen: Channel 3.
Radar Hansweert: Channel 65.
Radar Waarde: Channel 19.
Radar Saeftinge: Channel 21.
Radar Zandvliet: Channel 4.
Radar Kruisschans: Channel 66.

Also see "Plans".

Vessels not equipped with VHF can rent a portable portaphone. The Scheldt Information Service gives information by VHF within an area extending from the sea to the mouth of the river Rupel, situated upstream of Antwerp. On every full hour plus 5 minutes until that hour plus 10 minutes, vessels should switch to Channel 16 to listen to the traffic list and navigation reports, issued by Antwerp Radio.

On every full hour plus 55 minutes, Flushing Radio (Channel 14) and Zandvliet Radio on every hour plus 35 minutes (Channel 12) transmit information regarding visibility and Traffic information.

As soon as one of the stations reports a decrease of visibility under 3,000 m., visibility reports are transmitted by Antwerp Radio on every hour plus 48 minutes.

TUGS: Tugs for berthing at a riverside berth or entering the lock are ordered at River Pilot's request according to weather conditions and tide. Generally at Lieftkenshoek for Van Cauwelaert and Baudouin Locks and between Saftingen and North Ballast Fort for Zandvliet Lock. For super-tankers, tugs may join at Bath. Ship's lines are usually used for towage. If ship asks for tug lines there will be an extra charge per line.

The number of tugs required in the dock area shall be mentioned on the "hailing bill". Eventually, "according to Dock Pilot's advice" can be mentioned.

Tugboats on the Scheldt belong to private companies. There are 26 tugboats. They can assist the vessels up to the entrance in the lock. Inside the dock area the service is supplied by the Port Authority (municipal tugs). 21 tugs available, up to 2,200 h.p.

BERTHING: Deeply loaded vessels normally moor at their berth in the docks 2 hours after high water or earlier, depending on geographical location of the berths.

BULK HANDLING FACILITIES: *Container Terminals:* Private terminals with gantries from 40 tons to 70 tons lifting capacity.

Name	Terminals	Gantries
Hansadock	1	1
Vrasenedock (Left Bank)	1	1
Churchilldock	3	4
Delwaidedock	4	13
New Scheldt Container Terminal	1	6

4 container cranes at railroad container terminals; 9 quay-cranes (32 and 35 tons) suitable for container handling; 4 mobile container cranes.

Grain:

1. Sobelgra Terminal at Sixth Harbour dock has 5 elevators with capacity of 400 t.p.h. each for unloading and 2 loading towers of 400 t.p.h. each for loading seagoing vessels. Elevators are combined with conveyor belts for direct transhipment or storage in silo (106,000 tons). Water depth 48 ft. in dock for seagoing vessels, 24 ft. in dock for barges. Quay length 1,200 ft.
2. Grain handling plant of S.A. des Magasins a Grains (SAMGA) at Lefebvre Dock. Quay length 500 m., draft 32 ft. fresh water, silo 120,000 tons, 5 elevators on quay plus use of floating elevators. Discharge rate 1,100 t.p.h. Loading rate 1,400 t.p.h. into barges.
3. Smaller installation of De Trouw (silo 10,000 tons) and De Molens van Antwerpen (silo 4,000 tons).
4. Cargill Terminal for seeds at Canaldock B1: Storage capacity 30,000 tons.

Potash: Plant situated at Quay Nos. 152/160 in the Albert Dock, can accommodate vessels up to 35 ft., fresh water draft. Loading rate up to 6,000 tons per day. Storage capacity 322,000 cu.m.

Ore/Coal/Phosphate:

Antwerp Bulk Terminal (ABT): Terminal at Delwaidedock (Quays No. 750-752), quay length 1,000 m. Depth 55 ft. (+600 m. for barges); 2×50 tons travelling and 5×25 tons bridges and conveyor belt system. Discharge rate 2,500 t.p.h.

Antwerp Bulk Terminal (ABT): Terminal at Canaldock (Quays No. 508-514): 5 bridges of 25 tons for non-ferrous ores. Quay length 500 ft., depth 50 ft., max. discharge rate 3,000 t.p.h. average discharge rate 2,400 t.p.h. Antwerp Bulk Terminal (ABT) also operates a terminal on the left bank (available quay length 700 m.) with mobile cranes. Also see "Report December 1984".

Coal Terminal Vloeberghs: 3 cranes 10 tons. Quay length 800 m., Several smaller installations for coal.

Sulphur: Transhipment installations of Duval Sales (Antwerp Cleaning and Storage) near Boudewijn Lock with covered storage over 100,000 sq. ft.

Soda: The Solvay concern has built specialised warehouses on the South Quay of the 5th Harbour Dock, comprising 14 silos with a capacity of 6,700 tons of soda products. This installation is equipped with 10 cranes, 3 transporter bridges and 4 km. of conveyor-belt.

Fertilisers: Besides quays of chemical plants such as Bayer and BASF there are specialised terminals for fertilisers mainly at 3rd Harbour Dock (Manuport) and Canaldock B1 (Manufert), Ferchimex (the latter used for fertiliser, sulphur, phosphates etc.) and Albert Dock (Northern Shipping Service).

Total covered warehousing space for chemical fertilisers is 38,405 sq. m.

Other specialised installations include:

Refrigerated storage:	695,000 cu.m.
Tank storage capacity:	10.7 million cu.m.

CRANES:

Container cranes	(35/53 tons)	25
Quay cranes	(2.5/100 tons)	346
Floating cranes	(40/800 tons)	6
Mobile cranes	(5/90 tons)	122
Loading bridges	(5/50 tons)	16
Grain elevators	on quay	18

STEVEDORES: To enable Agents to order gangs, important to obtain ETA Flushing before arrival. Latest time to order gangs, normal day shift 0800 – 1545 hrs. before 0630 hrs. same day. First shift 0600 – 1345 hrs., before 1400 hrs. previous day; second shift 1400 – 2145 hrs. before 1230 hrs. same day; night shift 2200 – 0545 hrs. before 1500 hrs. same day. First shift Monday, 0600 – 1345 hrs. before 1400 hrs. previous Friday. Failure to give exact ETA may result in losing 12 hours to 24 hours and the cost of gang's idle time. No work performed on Saturday and Sunday unless overtime paid.

MEDICAL: Ample medical attendance in the port. Hospital facilities available.

DENSITY: Fresh water in the docks, slightly brackish in the river.

FRESH WATER: All berths supplied by shore connections. Fresh water also available by barge.

FUEL: All grades available. Minimum 24 hours advance notice preferred. All grades can also be supplied by barge. Tankers may not refuel by barge whilst working cargo or ballast.

FIRE PRECAUTIONS: No floating objects allowed alongside during loading/discharge/ballasting.

TANKERS: Five important refineries and oil storage installations, located at Antwerp have a total tank storage capacity of 6,947,000 cu.m. The total quantity of crude oil refined amounts to nearly 40 million tons yearly. In the vicinity of the Van Cauwelaert Locks, S.I.B.P. and Esso have important plants. R.B.P. is established in the 4th Port Basin, whereas Belgian Refining Company and Nafta (B) have their installations along the Canal Dock B-2. In the Southern sector of the port, on the River Scheldt and of an earlier construction, the Oil Terminal Antwerp South is situated with restricted length of 650 ft.

Also see Table on next page.

Chemicals, Minerals and Edible Oils:

Installation	*No. of Berths*	*Quay No.*	*Max. draft FW*		*Storage Capacity*
			ft.	in.	cu.m.
Havenbehandelingen S.A.	2	273/275	36	0	290,000
Noordnatie S.A.	2	239/241	35	0	175,000
Panocean-Eurotank NV	7	387/399	36	6	459,000

LPG Terminal: Antwerp Gas Terminal at Left Bank for LPG tankers.

The first phase of the construction of AGT is now completed. It includes construction of 4 spheres of 3,300 cu.m. each and 3 jetties. These are the Main Jetty, the Secondary Jetty and the Barge Jetty. Each jetty is "T" shaped and is equipped with Wiese loading arms provided with an emergency shut-off/disconnecting device. The minimum water depth at the Main Jetty is 11.85 m. enabling tankers handling up to 75,000 cu.m. to berth.

Antwerp Cleaning and Storage CY NV: This terminal situated between the Boudewijn Lock and the Bayer plant, is able to receive ballast water from tankers and other seagoing vessels, and is fitted with separators with a capacity of 600 t.p.h.

Installation	No. of Berths	Quay No.	Max. Draft FW ft.	in.	Bunkers ex-Installation	Rate tonnes per hour load/disch.	Shore facilities for dirty ballast	Spares Stores
Fina	7	Pier 2 Pier 3/4 Jetties 429/435	34 32 40	0 4 0	Yes	Loading: 1500 Discharging: 6000	Yes	Light by truck Heavy by barge
Esso	5	Pier 1/4	18	6	Yes	Loading: 5000 Discharging: 6000	Yes	By barge
Nynas Universal Refining	3	279-285 281/283	39 40	0 0	Yes	Loading: 1500 Discharging: 4000	No	By barge
Gamatex	1	623	38	0	No	Loading: 1500 Discharging: 2000	No	By barge
Nafta B	2	641 North 641 South	50 32	0 0	No	Loading: 2000 Discharging: 3000	No	By barge
Belgian Refining Company	2	661-665	46	0	Yes	Loading: 650 Discharging: 6000	Yes	Light by truck Heavy by barge
South Pier River Scheldt	2	River Quay (tidal)	29 32	0 LLW 0 HW	Yes	Loading: 2200 Discharging: 1400	Max. 500 tons	By barge

CONSULS: The following countries are represented:

Argentina
Austria
Bangladesh
Bolivia
Cameroon
Chile
Colombia
Costa Rica
Cuba
Denmark
Dominican Republic
Ecuador
El Salvador
Finland
France
Germany
Greece
Greek Maritime Office
Guatemala
Honduras
Iceland
India
Indonesia
Ireland
Israel
Italy
Ivory Coast
Japan
Liberia
Luxembourg
Madagascar
Malta
Mexico
Monaco
Morocco
Nepal
Netherlands
Nicaragua
Norway
Pakistan
Panama
Paraguay
Peru
Philippines
Poland
Portugal
Ruanda
Russia
Senegal
Sierra Leone
South Africa
Spain
Suriname
Sweden
Switzerland
Thailand
Turkey
U.K.
U.S.A.
Zaire

REPAIRS/DRY DOCKS: 8 private drydocks for vessels up to about 150,000 d.w.t., and 19 private repair berths.

Besides carrying out general repairs, conversion and dry-docking of ships, the yard can carry out licensed repairs and are spare parts suppliers for the following diesel engines:

Burmeister & Wain; Doxford; Fiat; Gotaverken; Mann; Pillstick and Sulzer. They also are an approved repair centre for Lips and Kamewa propellers.

Dimensions of Private Dry Docks:

No.	Length (m.)	Width (m.)	Depth (m.)
1	146.30	18.50	5.85
2	166.40	21.15	6.50
3	192.60	26.00	7.25
4	206.60	27.00	7.75
7	225.00	29.78	8.25
5	255.00	39.40	8.70
8	270.00	37.29	8.25
6	312.35	50.00	9.20

Facilities:

Gritblasting machines for ship's sides and ship's bottom.
Tank cleaning (2 barges available).
Tank storage barges.
Testing plant for anchor chains and cargo gear (up to 300 tonne test capacity).
Dynamic balancing plant for motors, turbines, up to 11 tonne.
Lifting capacity in drydocks and workshops.
Floating crane and heavy mobile cranes.
Specialised fuel valve repair shop.

Apart from above yard, various smaller repair firms are available to carry out deck and engine repairs. They have qualified labour, specialised workshops but no drydock facilities. For example Messrs. Longueville Bros., Messrs. Locomar Inc. and Messrs. S.K.B.

SURVEYORS: American Bureau of Shipping, Tel: 232.28.66; Bureau Veritas, Tel: 233.79.30/31; Det Norske Veritas, Tel: 232.69.16; Germanischer Lloyd, Tel: 233.74.16; Lloyd's Register of Shipping, Tel: 232.09.40; Registro Italiano, Tel: 233.78.60.

GANGWAY/DECK WATCHMEN: Not compulsory but recommended in general and specially for ships berthed at river quays because of rise and fall of tide.

OPENING/CLOSING HATCHES: Normally opened/closed by crew. Stevedores usually helping lift beams. Tramp vessels according to charter party.

CERTIFICATES: Registered Tonnage Certificate, Derat Certificate.

CUSTOMS ALLOWANCES: 200 cigarettes or 20 cigars or 250 gm. tobacco per man. Spirits 0.25 litres per head.

REPATRIATION: All arrangements for crew changes and repatriation can be made.

AIRPORT: Zaventem Airport (distance 50 km.) served by regular airlines. Antwerp Airport Deurne (distance 15 km.) only regular service with Amsterdam and London (3 flights per day). Plans to extend.

TIME: Summertime: April to September (April to October) GMT plus 2 hours. Remainder of year, GMT plus 1 hour.

POLICE/AMBULANCE/FIRE: Harbour Police Tel: 232.18.40; Alarm and Accidents Tel: 101; Ambulance and Fire Tel: 100.

HOLIDAYS: New Year's Day; Easter Monday; 1st May; Labour Day; Ascension Day; Whit Monday; 21st July; Assumption (15th August); 1st November; 11th November; Christmas Day. Plus the replacement days when New Year's Day; 1st May; 21st July; Assumption; 1st November, 11th November or Christmas Day fall on a Saturday or a Sunday. Cargo work can be arranged when labour available and at surcharge 100%.

TELEPHONES: At shipyards and oil terminals telephone is placed on board or in the vicinity without extra cost for local calls. Long-distance calls at special request.

SHIP SUPPLY SERVICE:

Ship-to-Shore Supply Operators:

Alpina Transports & Affretements n.v., Ankerrui 2, B-2000 Antwerp. Tel: 03/231.66.90. Telex: 33759.

Clayton of Belgium n.v., Rijksweg 30, 2680 Bornem. Tel: 03/889.11.31. Telex: 31715.

Continental Lines n.v., Klipperstraat 15, 2030 Antwerp. Tel: 03/541.68.40. Telex: 72368.

I.B.S. Technical Marine Supply (Antwerp) n.v., Ijzerlaan 12/14, 2008 Antwerp. Tel: 03/231.11.28 – 03/231.11.56. Telex: 35153.

Kopcke Belgium n.v., Sint Michielskaai 21, 2000 Antwerp. Tel: 03/238.58.46. Telex: 31916.

Mercantile-Berliard n.v., Hansadok 403, 2030 Antwerp. Tel: 03/541.04.20. Telex: 31219.

Offshore Europe n.v., Begijnenvest 113, 2000 Antwerp. Tel: 03/231.87.70. Telex: 34129.

Titan Supply Company n.v., Sint Pietersvliet 3, bus 2, 2000 Antwerp. Tel: 03/234.00.66. Telex: 32655.

Unie van Redding-en Sleepdienst n.v., Jordaenskaai 15, 2000 Antwerp. Tel: 03/232.38.80. Telex: 31864.

p.v.b.a. World Wide Offshore, Westdijk 72, 2100 Deurne. Tel: 03/886.99.11. Telex: 34472.

IDENTIFICATION CARDS: Required.

GARBAGE DISPOSAL: Service can be provided by local contractors. Contact Antwerp MARPOL Operations NV. Tel: (03) 226-7040. Fax:(03) 226-7027, or ASBA, Tel: (03) 541 119. Fax: (03) 231 2294.

WASTE OIL DISPOSAL: Service available from Antwerp MARPOL Operations NV, Steenlandlaan 3, Kaai 1103, 9130 Kallo. Tel: (03) 226-7040. Fax:(03) 226-7027. Capacities: Tanks 10,000 tonnes, recycling unit 7.5 tonnes/hour. Charges dependant on quality and quantity of water. Collection available using barges and/or trucks.

SEAMAN'S CLUBS: Antwerp Seafarers Centre, Italelei 72. Tel: (03) 233 3475.

Antwerp Mariners Club, Noorderlaan 171. Tel: (03) 542 1458.
Deutsche Seemannsmission, Rotterdamstraat 30. Tel: (03) 232 4308.
Den Norske Sjomannskirke, Italelei 8. Tel: (03) 232 9361/ 233 2713
Suomalainen Merimieskirkko, Italelei 67. Tel: (03) 232 8047.
Svenska Sjomanskyrkan, Noorderlaan 169. Tel: (03) 541 3707.
Dansk Somandskirke, Violerstraat 2. Tel: (03) 232 1376.
Norwegian Government Seamen's Service, Fritidssenteret Nordahl Grieg, Narvikstraat 2. Tel: (03) 542 1180/1/3.
British Sailors Society, Duboisstraat 3. Tel: (03) 233 7297.
Swedish Government Seaman's Service, Noorderlaan 169. Tel: (03) 541 707

CURRENCY: Belgian Franc (BFr).

DEVELOPMENTS: New container terminal in the river South of Berendrecht Lock completed and operational. Quay length 1,406 m. Surface area 55.4 ha. 6 container gantries installed.

Left Bank of River Scheldt: Vrasenedock with quay length of 4,500 m. fully operational. Terminals for forest products, dry bulk, scrap and cars.

Second Scheldt container terminal (Noordzee Terminal) completed and operational second half of 1996, capacity 600,000 TEU p.a.

Various studies carried out for 3 new container terminals on the left bank of the river; terminals planned to become operational between 2,000 (1st) and 2010 (3rd).

First phase of deepening of the River Scheldt has started: (Under average tidal conditions): 48 ft. for bulk carrier entering on one tide, 42 ft. 8 in. for container vessel leaving on one tide, 38 ft. independent of tide.

REPORT: December 1984 (Updated 1994).

Bulk Handling Facilities:

1. Antwerp Bulk Terminal (ABT):
Canaldock B.1 Berths:
LOA: No restriction (See "Remarks").
Draft: 54 ft. fresh water at berth (See "Remarks").

Beam: Discharge coal: No restriction.
Discharge ores: Crane Nos. 1 – 3 outreach 41.6 m.
(See "Remarks").
Crane Nos. 4 – 5 outreach 49.0 m.
(See "Remarks").
Clear height from waterline to top of hatch coaming:
Crane Nos. 1 – 3: 17 m.
Crane Nos. 4 – 5: 21 m.

2. Antwerp Bulk Terminal (ABT):
Delwaidedock Berths
LOA: No restriction (See "Remarks").
Draft: 55 ft. fresh water (See "Remarks").
Beam: No restriction (See "Remarks").
Clear height from waterline to top of hatch coaming: 24 m.

Remarks:

Drafts are based on fresh water.

For vessels over 270 m. (884 ft. 10 in.) LOA, drafts have to be reduced as follows:

LOA 270 m. (884 ft. 10 in.) up to 280 m. (917 ft. 8 in.): 6 in. per 10 ft. (3.05 m.) exceeding 270 m.

LOA over 280 m.: 6 in. per 10 ft. exceeding 270 m. and 3 in. per 10 ft. exceeding 280 m.

The maximum LOA allowed is 300 m.

The maximum beam in the Zandvlietlock is 45 m.

Sailing: Maximum draft allowed is 12.19 m. from Zandvlietlock.

REGULATIONS: Royal Decree – dated 23rd September 1992:
Chapter IV.
Stipulations covering vessels transporting hazardous materials:
First Section: Stipulations relating to sea-going vessels.

Article 27: Para 1. The hazardous materials to which the articles of the present section apply are spread over the following classes of the IMDG Code:

Class 1 : Explosives.
Class 2 : Gases which are compressed, liquified or dissolved under pressure.
Class 3 : Inflammable liquids.
Class 4.1 : Solid inflammable materials.
Class 4.2 : Materials subject to spontaneous combustion.
Class 4.3 : Materials which, on contact with water, give off inflammable gases.
Class 5.1 : Oxidising materials.
Class 5.2 : Organic peroxides.
Class 6.1 : Toxic materials.
Class 6.1 : Infectious materials.
Class 8 : Corrosive materials.
Class 9 : Other materials for which experience has shown that they present or could present a dangerous character.

Para 2. In order to determine whether dangerous materials of Class 1 can explode en masse, the opinion of the Head of the Explosives Dept. of the Ministry of Economic Affairs is determinant.

Para 3. The stipulations of the present section do not apply to dangerous materials which form part of the provisioning or the equipment of vessels.

Article 28: Para 1. The Owner, the Operator or the Master of a vessel which intends to transport on the lower maritime Scheldt, dangerous materials for which the stipulations of Appendix 1 are applicable, is required to notify or to have notified this intention to the Scheldt Information Department.

Para 2. For the applications of Para 1 are assimilated to ocean/sea tanker vessels loaded with hazardous material, sea tankers which have been loaded with hazardous material, but for which a declaration has not yet been delivered, certifying that the vessel no longer contains hazardous material, either by an approved expert or by the competent authority or on behalf of this authority.

Article 29: The notification required in Article 28, Para 1 must be made at least 4 hours before preparing to sail, stating:

1. The name, call sign, nationality, length overall and draft of the vessel.
2. Her port of destination or departure.
3. The IMDG Class of the hazardous materials, their approximate quantity and the indication "General Cargo" or "Bulk Cargo".
4. If there has been any spontaneous hearing, fire damage to the vessel or to the cargo or presumption of such an incident.
5. Whether there have been any incidents or shortcomings susceptible of reducing the normal and safe manoeuvrability of the vessel, of comprising safety and the facility of passage or of involving a danger for the environment.

Article 30: On the lower maritime Scheldt, vessels are authorised to have on board the following quantities of explosive materials of Class 1 of the IMDG Code:

1. Danger Category 1.1 or 1.5: 30,000 kg. gross.
2. Danger Category 1.2 or 1.3: 120,000 kg. gross.
3. Danger Category 1.4: Unlimited quantity.

On condition that the stowage and segregation stipulations of the IMDG Code, or the relevant Belgian regulation quoted in Article 35, are observed.

Article 31: Para 1. The Master of a vessel loaded with hazardous material must ensure that:

1. Transport is effected in conformity with the stipulations of the IMDG Code, of the IMO Code of Safe Practice for Solid Bulk Cargoes, of the IMO Gas Carrier Code and of the IMO Bulk Chemical Codes.
2. Efficient measures are taken on board the vessel with a view to preventing and fighting against fire in accordance with or by virtue of the SOLAS stipulations.
3. In accordance with the ordinary experience of the mariner, the necessary measures are taken, and that there are on board written instructions which must be in conformity with the IMO recommendations, indicating the measures to be taken with regard to hazardous materials transported when an accident occurs or an incident occurs liable to present a danger.
4. Additional instructions emanating from the competent authority and reinforcing the stipulations laid down in the present chapter are followed.
5. Radio contact by VHF be maintained permanently with the Scheldt Information Department.
6. The prescriptions relevant to signalling laid down in Appendix 1 are applied.

Para 2. The Master of a sea tanker loaded with liquified gas in bulk covered by the IMO Gas Carrier Code must furthermore observe the following prescriptions:

1. A Pilot competent for the lower maritime Scheldt must be on board.
2. Competent crew members must be available in sufficient numbers in order to manoeuvre the vessel in complete safety.
3. It must be ensured that there is no danger of excess pressure in the tanks.
4. There must be permanent listening on VHF.
5. The onboard radar must be functioning.
6. Cleaning, degassing and scouring of tanks cannot be effected without the authorisation of the competent authority.
7. Sailing is forbidden or navigation must be interrupted as much as possible by anchoring when visibility is equal to or less than 2,000 m.
8. The intention to anchor must be reported to the Scheldt Information Department.
9. The construction and equipment of the vessel must comply with the stipulations of the Gas Carrier Codes of the IMO, and on board must be valid documents attesting to this conformity issued by or in the name of the flag State. These documents must be produced whenever requested by the competent authorities, so that they may be able to take due cognisance of them.

Second Section: Stipulations relating to all vessels.

Article 32: On the part of the lower maritime Scheldt inclusive between the extension of the straight line connecting the two alignment posts positioned approximately 1 km. upstream of the Southern extremity of the Antwerp quays and the straight line traced across the river at the level of the Southern extremity of the access channel to the Kallo Lock, a vessel loaded with one of the hazardous materials covered by the Appendices 1, 3 and 4, of the present regulation, or which after having been loaded with one of these materials has not yet been declared as degassed when it is submitted to this obligation, cannot navigate in the following conditions:

1. When visibility is less than 2,000 m.
2. At night, except in the event of force majeure, or if the functionaries or Agents of the Maritime Police have lifted this ban under exceptional circumstances.

Article 33: Except with the authorisation of the competent official, all vessels loaded with one of the hazardous materials quoted in Appendices 1 to 4 of the present regulation, or which have been loaded with one of these materials, but have not yet been declared as degassed when it is submitted to this obligation, may not, by derogation to the stipulations of Articles 6 and 7, anchor or moor in the part of the lower maritime Scheldt inclusive between the extension of the straight line connecting the two alignment posts positioned approximately 1 km. upstream of the Southern extremity of the Antwerp quays and the straight line traced across the river at the level of the sector light situated 150 m. to the West of the Western end of the access channel to the Royers Lock.

Article 34: Apart from the lights and marks laid down by the Regulation for Navigation in the lower maritime Scheldt:

1. The vessels transporting hazardous material covered by the first appendix of the present regulation or having on board hazardous residues, carry the light or the mark required in this appendix.
2. River craft transporting hazardous material covered by Appendices 2 to 4 of the present regulation or having on board dangerous residues, carry the lights and marks respectively required in these appendices, it being understood, nevertheless, that if they transport materials or have onboard residues covered by several of these appendices, they must carry the lights and marks prescribed for the most hazardous of these materials requiring the greatest number of lights and marks. When a convoy is involved, the lights and marks mentioned above are exclusively carried by the pushing tug or the propulsive vessel.

Article 35: The following are applicable apart from that which is laid down by the present chapter:

1. Royal Decree of 3rd September 1958 covering the reglementation of transport, storage and the sale of ammonium nitrate and of its mixtures.
2. Royal Decree of 23rd September 1958 covering the general regulation of manufacture, storage, detention, sale, transport and use of explosive products with the exception of Articles 121 to 123.

Note: The above is a translation of the French and Flemish originals, and they shall be the final authority on the matter.

SHIPMASTER'S REPORT: April 1988 (Updated 1996).

Pilotage: Pilot boards at Wandelaar or Steenbank. Pilots boarding at Steenbank can only use Oostgate Channel with prior permission of Flushing Control and then only with a maximum draft of 5.5 m. (dependent on tide) and for IMO Class 2 vessels if individual tanks are under 1,500 cu.m.

For the outward passage the Antwerp Agent telexed Flushing Control on behalf of the vessel, as using Oostgate and Steenbank saves over 60 minutes over Wandelaar if proceeding North or East.

Anchorage: The Netherlands Authorities are very particular about IMO Class 2 vessels anchoring in Netherlands waters if bound for Antwerp.

Wielingen North near Flushing cannot be used by IMO Class 2 vessels. Therefore vessel is to wait at Wandelaar (A1 Buoy) or at Antwerp.

Entering: Full speed permitted in the Scheldt. Passage from Wandelaar to Antwerp takes about 6 hours. If docking at Industriedock, vessel uses the old lock (Van Cauwelaert).

There are no fenders in the locks so ship's fenders have to be made ready. Tyres are not officially allowed.

Tugs: When entering the locks from the river it is advisable to use a small tug at the stern.

For Esso Berth in Industriedock we took 2 tugs, one each at the bow and stern using the ship's lines. This is advisable as manoeuvring room is very limited when barges are present. For the outward passage it is advisable to have one stern tug.

Berthing: Esso 383-Industriedock: Vessel berthed starboard side to. Depth alongside 12 m., max. draft allowed is 9.0 m.

Esso 379-Industriedock: This berth is just ahead of No. 383. Max. draft allowed 11.0 m. The berth has a modern dolphin type jetty with good fenders and mooring facilities. A mooring boat runs ropes.

Cargo: Berth 383: Ethylene is handled through a 6 in. liquid line and a 3 in. vapour line, both on the same Chicksan.

Storage tanks of 10,000 cu.m. are situated close to the berth. Maximum pressure 200 kg. Storage temperature −102° C. Gas returned to ship. Maximum allowed pumping rate 600 cu.m.p.h. We achieved a full rate of 300 cu.m.p.h. (172 t.p.h. average). The terminal personnel not in attendance at jetty while pumping.

Berth 379: Propane and Butane handled at this berth.

General: A very good hydraulic gangway is provided. Stores are allowed up to 50 m. from the ship's side. No jetty cranes available. Fresh water available through meter. We used Antwerp Radio for telephone calls as telephone on jetty out of order. This method was efficient but subject to interference from Ostend and PCH.

AUTHORITY: Port of Antwerp, General Management, Havenhuis, Entrepotkaai 1, B-2000 Antwerp, Belgium. *Tel:* (03) 2052011. *FAX:* (03) 2052020. *Contact:* E. Bruyninckx, General Manager.

AGENT: Vinke & Co. N.V., Jordaenskaai 25, B-2000 Antwerp, Belgium. *Tel:* +32 (0) 3.2024 770. *Telex:* 31310 Eknivco. *Fax:* +32 (0) 3.2250 282

BRUSSELS: 50.51 N. 04.22 E. (See Plan)

DOCUMENTS: Same as Antwerp and to be handed to Agent at Antwerp Roads, where clearance obtained.

PILOTAGE: Notice of ETA Antwerp Roads should be given 24 hours beforehand to Antwerp Agent, who will apply for upper Scheldt Pilot. This Pilot takes over at Antwerp Roads and brings ship up Rivers Scheldt and Rupel to Wintam Lock. Canal Pilot boards Wintam Lock. Boatmen service on canal optional, but advisable for ships over 164 ft. length and according weather conditions. Boatmen for possible mooring Wintam Lock Entrance always available. All locks equipped with VHF. Call and answer on Channel 68.

ANCHORAGES: Use of anchors strictly regulated on canal and only permitted certain areas in emergency.

RESTRICTIONS: Ships proceed upstream from Antwerp to Wintam day and night accordance state of tide, direction of current, length and draft.

MAX. SIZE: Overall length: 344 ft. 06 in.; Extreme breadth: 48 ft. 02 in.; Max. draft: 19 ft.

HEALTH: See "Antwerp".

RADIO: See "Antwerp".

VHF: All locks and tug boats equipped with VHF.

TUGS: Normally tug joins vessel Wintam Lock. Ship's lines always used. Although not compulsory, towage advisable in accordance length and draft or weather conditions.

BERTHING: No specific requirements for berthing in canal. Owing to dense traffic, ships should moor strongly.

The Brussels' Harbour extends over a length of about 14 km. between the regional limits, being approximately the bridge of the "ring" at Drogenbos and the bridge of the "ring" at Vilvorde.

The Inner Port offers: 14 km. of quays and mooring berths 220,000 sq.m. of wharf areas. 390,000 sq.m. of storage areas. 169,000 sq.m. of warehouses.

Materials Quay: Length: 710 m. Number of berths: 15. Depth: 3.5 m.

Barges Quay: Length: 710 m. Number of berths: 15. Depth: 3.5 m. Equipment: 1 private installation for cargo handling.

Shipowners Quay: Length: 920 m. Number of berths: 15. Depth: 4.2 m. Equipment: 6 private installations for cargo handling.

Steamers Quay: Length: 920 m. Number of berths: 15. Depth: 4.2 m. Equipment: 7 private installations for cargo handling.

Factories Quay: Length: 2,000 m. Depth: 4.2 m. (along the quay wall: 3.20 m.)

Leon Monnoyer Quay: Length: 1,800 m. Number of berths: 20. Depth: 6.5 m. Equipment: 11 private cranes from 3 to 10 tons lifting power. 9 private installations for cargo handling.

Heembeek Quay: Length: 360 m. Number of berths: 4. Depth: 6.5 m. Equipment: 9 private installations for cargo handling. Private crane with 1 ton lifting capacity.

Industrial Harbour Section: Length: 6,000 m. Number of berths: 60. Depth 6.5 m. Equipment: 59 private installations for cargo handling, (electric cranes from 1 to 10 tons lifting power, grain elevators, belt conveyors, suction devices.)

Maritime Canal: Length: 20 km. Depth: 6.5 m. Equipment: 26 private installations for cargo handling.

SPECIALISED CARGO HANDLING FACILITIES: Private cargo handling facilities exist in the whole of the Industrial Maritime Canal for grain, coal, fertilisers, liquid chemicals and L.P.G.

BRIDGES: Ships can reach outer harbour with clearance of 100 ft. and pass under fixed bridges to inner harbour with clearance of 20 ft. Road bridges open on demand. Railway bridges open according timetables, which subject to change.

STEVEDORES: Arrangements made by Agents.

MEDICAL: No notice required for medical attendance. Hospital facilities available. In case of accident or emergency call phone number 100. No particular inoculations or certificates required.

TANKERS: Oil usually imported by tank barges. No slop facilities. Max. draft permitted for wine tankers, gas tankers and acid carriers: 19 ft.

DENSITY: Canal is fresh.

FRESH WATER: Fresh potable water delivered from shore in Wintam Lock at average rate of 3 t.p.h. during passage through lock, and in outer harbour at maximum rate of 20 t.p.h. according diameter of hose.

Fresh water at all docks in Brussels, Agent requires 24 hours notice in order to arrange supply.

FUEL: All grades available. At least half a day notice should be given.

FIRE PRECAUTIONS: The usual precautions to be taken by tankers and ships handling inflammable or dangerous goods.

CONSULS:

Algeria	02	537.81.33	537.82.41
Denmark	"	648.25.25	
Finland	"	735.40.98	
France	"	220.01.11	
Germany	"	770.58.30	
Greece	"	648.17.30	
Iceland	"	512.59.65	
Italy	"	537.19.34	537.90.56
Liberia	"	217.23.00	
Luxemburg	"	733.99.77	
The Netherlands	"	230.30.20	
Norway	"	646.07.80	
Panama	"	733.90.89	
Portugal	"	539.35.21	
Spain	"	230.03.40	
Switzerland	"	230.61.45	
Tunisia	"	672.75.55	
United Kingdom	"	217.90.00	

REPAIRS: No shipyards in Brussels, but in Boom and Temse, not far from Brussels, and Antwerp. Minor deck and engine repairs by small shipyard on canal.

GANGWAY/DECK WATCHMEN: Services of shore watchmen optional.

OPENING/CLOSING HATCHES: Carried out by ship's crew.

REPATRIATION: Arrangements for repatriation can be made with Maritime Authorities on Antwerp Roads or at Brussels with the Harbour Authorities. Consuls in Brussels arrange for crew changes or repatriations (Consulates closed Saturdays, Sundays and Holidays).

AIRPORT: Brussels Airport served by regular airlines. Air terminal situated in town centre, directly connected with Airport by special railway.

HOLIDAYS: Official Holidays: January 1st (New Year), Easter Monday, May 1st (Labour Day), Ascension Day, Whit Monday, July 21st (National Holiday), August 15th (Assumption Day), November 11th (Armistice Day), December 25th (Christmas). Most offices closed on Saturdays.

POLICE/AMBULANCE/FIRE: General call, Ambulance/Fire: 100; Police: 101; Fire: 02/219.46.90. – 512.22.22. Police 02/517.96.11.

TELEPHONES: Only placed for warships at one particular berth.

SHORE LEAVE: Crew members allowed ashore without restriction.

IDENTIFICATION CARDS: Required.

GARBAGE DISPOSAL: No facilities available.

WASTE OIL DISPOSAL: No facilities available.

SEAMAN'S CLUBS: None.

REGULATIONS: At night only main gate of outer harbour on right bank is open.

GENERAL: Bus 47 near left bank and street-car 58 near right bank of outer harbour, lead to town centre (10 minutes). General Information Office situated on de Broukeresquare (town centre). Ship stores can be obtained, but no bonded stores.

DEVELOPMENTS: Complete schedule for modernising canal, including building a larger lock, widening and deepening canal.

AUTHORITY: Port de Bruxelles, (Port of Brussels Authority), Place des Armateurs, 6, 1210 Bruxelles, Belgium. *Tel:* 02/425.10.00. *Telex:* 62207. *FAX:* (02) 425.18.74. *Cables:* Bruportus. *Contact:* General Manager.

Harbour Master: Rue de L'Avant-Port 2, Boite 1, 1210 Brussels. *FAX:* (02) 215.32.66. *Contact:* L. Byloos, Harbour Master.

GHENT: 51.02 N. 03.44 E. (See Plan)

PORT LIMITS: As a rule, the Notice of Readiness must be given in writing and will generally not be accepted by the receivers before the ship has berthed. Exceptionally, when the berth is occupied, the notice can be tendered as soon as the vessel has dropped anchor at Flushing or Terneuzen Roads, or has moored at a waiting berth. Strictly speaking, port limits are at the border between the City of Ghent and the town of Zelzate, i.e. at about 3 km. from the Dutch border.

DOCUMENTS:

Documents Needed for Customs:

1 Cargo Manifest No. 125.
1 Stores List.
1 Crew List, with the list of personal effects of the crew, such as cameras, guns, cigars, cigarettes, tobacco, alcohol.

Documents Needed for the Water Bailiff:

1 Crew List.
1 Passenger List.
Tonnage Certificate.
Oil Register.
Certificate for Civil Liability when the ship carries more than 2,000 tons of oil in bulk.

PILOTAGE: See "General" before first port.

ANCHORAGE: The roads of Terneuzen offer a safe and spacious anchorage outside the fairway, at the so-called Pit of Terneuzen and at the Everingen Channel. Depth is at least 49 ft.

RESTRICTIONS: Navigation day and night. There are no restrictions for entering the locks at LW for vessels with a draft not exceeding 32 ft.

MAX. SIZE: In normal practice, length 256 m., breadth 34 m., draft 12.25 m. Fresh water. Also see "Shipmaster's Report".

RADIO: All cables to Agents, receivers, etc. to be sent via Ostend Radio (call sign OST), eventually via Scheveningen Radio (PCH) for vessels coming from the North. Also see "Pilotage".

VHF: Contact pilot-cutters via Channel 6, Flushing Radio via Channel 14 and Terneuzen Harbour via Channels 3 or 11. All communications with the Harbour Master's Office in Ghent should go via Channels 5 or 11.

RADAR: Scheldt Radar Chain.

TUGS: Tugs needed for entering the locks usually meet the vessels near Buoy 23. The Master decides whether to use own lines or not.

BERTHING: All docks in the port have direct access to the sea-canal. The quay at Sidmar Steel Factory has a depth of 13.5 m. but the draft is limited to 12.25 m.

CRANES: All docks mentioned above are equipped with handy, powerful cranes, the majority of which are owned by the Port Authority.

At the Sifferdok there are 4 multi-purpose cranes of 40 tons and 3 tobogans. The Sifferdok and Zuiddok each have two bulk-handling gantry cranes of 15 tons and 10 tons respectively. Two floating cranes of 25 tons are also available.

At the Port Arthur Quay there are 10 cranes of 5 tons, 8 cranes of 15 tons and 2 tobogans owned by Manuport.

BULK CARGO FACILITIES:

Sifferdok: The installations of Euro-Silo at the end of the dock offer facilities for all kinds of grain and derivatives. Quay length: 475 m. Storage capacity: 130,000 tons heavy grain. A warehouse for flat storage of 114,000 tons. Equipment: 2 pneumatic discharge towers of 500 t.p.h. each; 2 screw unloaders of 700 t.p.h. each; 2 mobile cranes for grab discharge of barges; 2 train unloading stations of 500 t.p.h. each. 3 loading towers of 1,000 t.p.h. each; 2 loading stations for trains of 600 t.p.h. each. The Compagnie Belge de Manutention (CBM) situated on the left bank of the Sifferdok specialises in the handling of bulk cargoes such as pyrites, ores, phosphates, coal, cokes etc. Equipment: 2×15 ton and 2×10 ton cranes for grab discharge and 2 mobile cranes of 18 tons and 28 tons. Also mechanical shovels for the discharge of bulk goods into rail-wagons. Storage capacity: 2,500,000 tons.

The same commodities are also handled by CBM at the Zuiddok; grab discharge with 10 ton cranes.

Rodenhuizedok: The new grain silo "Ghent Grain Terminal" can accommodate vessels up to 80,000 tons. For unloading, there are 2 mobile pneumatics with a capacity of 700 t.p.h. and 450 t.p.h., and a mobile crane with a capacity of 1,600 t.p.h.

For loading, there are 2 mobile posts and 1 fixed post with a total capacity of 2,400 t.p.h.

Vertical storage capacity is 120,000 tons.

Horizontal capacity is 240,000 tons.

Quay length is 800 m.

Mercatordok: Formerly the Petroleumdok. Multi-purpose dock – Steel and forest products, car terminal (Honda), Ro-Ro facility (2 Jetties), fruit terminal.

Sea Canal – Ghent Coal Terminal: Quay length 700 m., max. draft 12.25 m. Storage capacity 3,000,000 tons. Equipment 2×20 ton cranes/ 20,000 tons per day.

Sea Canal – Sidmar: Steel plant situated on the right bank of the ship-canal to Ghent, with 1,050 m. quay length of which it is the exclusive user. Maximum depth at terminal: 13.50 m. Equipment: for the loading of steel sheet and coils, 1×25 ton and 1×35 ton crane. For grab discharge: 2 portal cranes of 25 tons each and 1×15 ton crane.

SPECIALISED CARGO HANDLING FACILITIES:

Fertilisers: Equipment for handling fertilisers is available at the Grootdok Quay No. 0270 (Manuport), Middendok Quay No. 0610-0620 (GTS), Sifferdok Quay No. 0830 (Stukwerkers); cranes for grab discharge, funnels and conveyor belts.

Liquid Bulk: Liquid chemicals can be handled at the Rhone-Poulenc factory in Rieme, on the left bank of the Sea Canal, most commonly liquid sulphur, phosphoric and sulphuric acid. No berths for LPG carriers exist in Ghent.

The Rodenhuizedok (Oiltanking) has 2 jetties for tankers up to 80,000 d.w.t. The storage capacity is 600,000 cu.m. with possibility for storage of petroleum and non-petroleum products.

In the Middendok (Locachim), there is possibility for storage of non-flammable liquids (200,000 tons).

Containers: Can be handled on the right bank of the Sifferdok (See "Cranes").

Ro-Ro: One double Ro-Ro berth with a fixed concrete ramp is situated at Quay No. 1010/1020, and other Ro-Ro ramps are situated in the Noorddok and Mercatordok.

Concentrated Fruit Juice in Bulk: In the Sifferdok, there is possibility for handling fruit juice in bulk with a storage capacity of 42,000 tons.

BRIDGES: There are 3 bridges across the Ghent/Terneuzen Canal, namely at Sluiskil, Sas-van-Ghent and Zelzate. They open day and night, on signals by Pilots.

High tension cables cross the canal at the Rodenhuize and Langerbrugge power-stations. Maximum air draft permitted: 48.90 m.

MEDICAL: Agents to be advised by radio or cable if urgent medical assistance required. Ample hospital facilities available.

STEVEDORES: Will be advised by Agents of ETA. Gangs must be ordered by noon in order to commence at 0600 hrs. next working day (morning shift); by 1700 hrs. to commence at 0750 hrs. next morning (normal working day); by 0700 hrs. to commence at 1400 hrs. same day (afternoon shift); by 1300 hrs. to commence at 1325 hrs. (half working day).

TANKERS: There are 2 tanker berths for seagoing vessels, owned by Oiltanking, in the Rodenhuizedok. 3 load and discharge lines available, capacity 2,000 cu.m./hr. Each berth can accommodate ships of 70,000 tons with a draft of 12.25 m. maximum.

DENSITY: Water in the docks and the Ghent-Terneuzen Canal is practically fresh.

FRESH WATER: (For seagoing vessels). Supply by barge, to be ordered at Port Commander's Office.

FUEL: All grades are delivered either by barge or truck. At least 24 hours' notice required.

CONSULS:

Austria	Tel:	09/2224022	Mauritania	Tel.	09/3888648
Central African Republic		09/2281081	Mexico	"	09/2254429
			Netherlands	"	09/2251816
Chile	"	09/2256992	Norway	"	09/2532400
Denmark	"	09/2256562	Pakistan	"	09/3856343
Finland	"	09/2241667	Peru	"	09/2218021
Germany	"	09/2259168	Poland	"	09/2231126
Greece	"	09/2243008	Portugal	"	09/2259834
Guatemala	"	09/2231043	Spain	"	09/2301324
India	"	09/2228859	Sweden	"	09/2241991
Italy	"	09/2257385	Tunisia	"	09/2269265
Ivory Coast	"	09/2252414	Zaire	"	09/2232045
Korea	"	09/2226803			

REPAIRS: Practically all kinds of deck and engine repairs are possible. Radio and electronic apparatus can also be repaired.

DRY DOCKS: There are 2 dry docks for ships with following dimensions.

(1) length: 120 m. breadth: 13 m. draft: 5.0 m.
(2) length: 70 m. breadth: 11 m. draft: 3.9 m.

SURVEYORS: All major Classification Societies have branch offices in Antwerp.

GANGWAY/DECK WATCHMEN: Not compulsory, but recommended. Cost per watchman: Fr. 5995 per shift; Fr. 7165 per night shift and Fr. 8645 per shift on Sundays and holidays.

HATCHES: Opening and closing is normally done by crew, if not otherwise specified by Charter-Party.

CUSTOMS ALLOWANCES: 200 cigarettes or 50 cigars or 250 gm. tobacco or 100 cigarillos. Wine is practically free. Spirits, one opened bottle per crew member.

CARGO GEAR: Either shore or ship's gear may be used.

REPATRIATION: All arrangements for crew changes and repatriation can be made.

AIRPORT: Brussels (70 km.), Ostend (65 km.) or Antwerp (60 km.).

TIME: Summertime, GMT plus 2 hours, from beginning of April to end of September. Otherwise, GMT plus 1 hour.

HOLIDAYS: New Year; Easter Monday; Labour Day (1st May); Ascension; Whit Monday; National Day (21st July); Assumption (15th August); All Saints (1st November); Armistice (11th November); Christmas Day. Work on these days possible at special overtime rates.

POLICE/AMBULANCE/FIRE: Dial 100 for any emergency. Dial 101 for Police assistance. Harbour Master's Office: 51.04.57 or by VHF, Channels 5 and 11.

TELEPHONES: Only placed on board visiting warships.

SERVICES: All kinds of special services are available, e.g. tank-cleaning, reception of waste oil, discharge of tank-washings or slops, compass adjusting, etc.

BANKS: *Banks near to the Port:*

Bank Brussel Lambert Muidepoort 8 9000, Ghent Tel: 09/2510239	open from 0900 hrs. until 1230 hrs. 1400 hrs. until 1600 hrs. Friday until 1700 hrs.
Kredietbank Doorzelestraat 35 9000, Ghent Tel: 09/2256141	open from 0900 hrs. until 1230 hrs. 1400 hrs. until 1630 hrs.
Generale Bankmaatschappij Stapelplein 31 9000, Ghent Tel: 09/2231386	open from 0900 hrs. until 1230 hrs. 1400 hrs. until 1600 hrs. Friday until 1700 hrs.
A.S.L.K. Voormuide 41 9000, Ghent Tel: 09/2256206	open from 0900 hrs. until 1230 hrs. 1330 hrs. until 1600 hrs. Friday until 1830 hrs. Saturday 0900 hrs. until 1200 hrs.

STORING: See "Prelims".

(1) Truck.
(2) —
(3) Yes.
(4) Yes.
(5) —
(6) Yes.

SHORE LEAVE: No restriction of any kind. Seaman's Book is sufficient.

SEAMAN'S CLUBS: Stella Maris, Hoge Weg 71, Ghent. Tel: (91) 51.17.63. Free bus service every day to Stella Maris, city centre and back.

Departure:

	Time (hrs.)	*From*
(a)	1800	Grootdok, Rigakaai (berth)
	1810	Noorddok, Middendok, Zuiddok (on the main road)
	1820	Stella Maris (Seamen's Club – closed on Friday)
(b)	1840	Sidmar (berth)
	1845	Rodenhuizedok – Ghent Grain Terminal (berth)
	1850	Vamo Mills – Ghent Tanking (berth)
	1855	Ghent Coal Terminal (berth)
	1900	Texaco Chemical Plant (gate)
	1903	Petroleumdok (gate)
	1905	Sifferdok (from berth No. 104 to 83 on main road)
	1920	Stella Maris (Seamen's Club, telephone, mail box)
	1930	City Centre (Arrival Korenmarkt – General Post Office)

Return:
from City Centre and Stella Maris to
(a) 2230 Grootdok, Rigakaai, Zuiddok, Midden and Noorddok
(b) 2300 City Centre to Stella Maris, Sifferdok and Sidmar

For excursion and shopping in town contact your agent or Port of Ghent, Tel: 51.05.50.

Reception Department: For many years the port of Ghent has been promoted not only as a modern, versatile and dynamic port, but also as the "friendly port", a port where the human being is still at the centre.

In co-operation with the Ghent City Administration, the Ghent Port Authority has set up a whole range of services which are mainly focussed on the human aspect of the otherwise tough harbour business.

In most ports all over the world, Port Managers do their utmost to handle vessels and cargoes as efficiently as possible, but in doing so they very often forget the human beings crewing those vessels as well as the people working in the port.

Since 1971, a staff member of the Reception Department goes aboard each sea-going vessel calling at Ghent to welcome both the Master and crew, to supply some general information on the port and the city and to inform them about the services provided by the Reception Department of the Ghent Port Authority.

On the same occasion, an English summary of the most important movies being played in Ghent at that particular moment is put at the seaman's disposal. This information is handed over to the Master, together with a touristic leaflet and another brochure containing a lot of useful information on the port and the city of Ghent.

In April 1979, the Board of Burgomaster and Alderman acquiesced in the Ghent Port Authority's proposal to maintain a shuttle bus service between the port area and the city centre for the benefit of the crew of sea-going vessels mooring in Ghent port.

This proposal was made because a large number of vessels are crewed by people originating from countries with a poor standard of living. Otherwise, as public transport between the spacious port area and the city centre is almost non-existent, those seamen would have to pay an expensive taxi ride.

During the day, sightseeing tours of the town are made. The seamen are driven and escorted by a Dockmaster giving the necessary touristic explanation during the tour.

On those sightseeing tours seamen usually have the opportunity to do some shopping in the town centre during a couple of hours, what is at the same time profitable to the local tradesmen.

Furthermore, all kinds of sports activities are organised for the purpose of the visiting seamen. Transport to and from the sports field, sports-halls, swimming pools and so on is organised by the Reception Department too.

For some years, those seamen are collected about 1800 hrs. and driven to the sailor's home or to the city centre. About midnight, they are collected once more and driven back to their vessel.

GARBAGE DISPOSAL: Skips and garbage containers can be provided through ship's agent or Port Authority. Tel: 09/2510457 or VHF Channel 11.

WASTE OIL DISPOSAL: Small barge and tanker trucks are available and can be ordered through ship's agent or Port Authority. Tel: 09/2510457 or VHF Channel 11.

CURRENCY: Belgium Franc. U.S.$1.00 = 31.00 BEF (April 1996).

SHIPMASTER'S REPORT: July 1983.
Terneuzen: Terneuzen locks are used to come into the canal system to Ghent. The authorities are extremely strict on the draft being 12.25 m. or less so Masters should be warned when loading max. cargo for Ghent not to go over 12.25 m.

AUTHORITY: Havenbedrijf Gent, J.F. Kennedylaan 32, 9042 Gent, Belgium. *Tel:* 09/2510550. *Telex:* 11460. *FAX:* 09/2515406 and 09/2516061. *Contact:* Captain A. De Wilde, Director General.

AGENT: See "Antwerp".

LIEGE: 50.38 N. 05.34 E. (See Plan)

LOCATION: The Port of Liege comprises 24 public docks and quays along the banks of the Meuse and the Albert Canal, near the border with the Netherlands.

APPROACHES: Depth on Albert Canal from Antwerp to Liege is 3.4 m. Depths on River Meuse range from 2.4 m. at Namur to 3.4 m. in Liege. Merksem Bridge on Albert Canal, 6.7 m. air draft and Arches Bridge on River Meuse has 6.8 m. air draft at normal times.

To make enquiries about access to ports at normal river discharge, contact Direction de la Navigation (Tel: (32) 41/677048).

For information at flood water – contact Etudes Hydrauliques Service (Tel: (32) 2/2084054).

MAX. SIZE: *Largest Vessel:* LOA 134 m. Max. beam 12.5 m. Max. draft 3.4 m.

BERTHING: 22.1 km. of public quays; 8 km. of private quays. One sheltered dock, 110 m. long, 26 m. breadth equipped with 4 warehouses, 10,000 sq.m. total storage area, good road and rail connections. 170 berth marina.
Ro/Ro Facilities: Ramp at the Port de Seraing for loads up to 1,200 tonnes.

Berths:

	Length (m.)	*Depth* (m.)
Port of Monsin		
(a) South Dock	1,225	3.00
(b) North Dock	896	3.00
(c) Albert Canal	790	3.00
(d) In Meuse	1,150	not available
(e) Little Dock in Meuse	190	1.50
(f) Sheltered Dock	220	3.40
(g) Triangular Dock	71	2.50
Petroleum Port of Wandre	1,985	2.80
Port of Coronmeuse	952	2.50
Port Van Beneden and de Gaulle	150	2.50
Port of the Croisiers-Cheravoie	158	2.50
Port of Renory (Container Terminal)	1,691	2.50 – 3.00
Port of Sclessin	450	2.50
Port of Ougree	422	2.50 – 3.40
Port of Jemeppe	1,043	2.50
Port of Seraing	550	2.50
Port of Ivoz-Ramet	880	2.50
Port of Flemalle-Haute	730	2.80
Port of Engis-Ehein	699	3.00
Port of the Ardennes	156	1.80
Port of Argenteau	962	2.40
Port of Semeries	458	3.00
Port of Herstal	675	3.00
Pleasure Port	835	2.00
Port of Tihange	479	2.50
Port of Ampsin	675	2.50
Port of Ombret	570	2.50
Port of Statte	1,030	2.50
Port of Eclatement (Herstal)	855	3.40
Port of Lanaye	2,405	3.40
Port of Vise	840	2.50

CRANES: 140 gantry and mobile cranes.

BULK HANDLING FACILITIES: All quays have facilities to load and discharge bulk cargoes. Silos for storage of sand and gravel also available.

TANKERS: Facilities at Wandre. Storage capacity of 200,000 cu.m.

FRESH WATER: Available.

AIRPORT: At Bierset, distance 20 km.

DEVELOPMENTS: Albert Canal is being improved.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available at present time.

SEAMAN'S CLUBS: None.

CURRENCY: Belgium Franc.

AUTHORITY: Port Autonome de Liege, Quai de Maestricht 14, B-4000 Liege, Belgium. *Tel:* 3241 329797. *FAX:* 3241 231109. *Contact:* M.D. Simonet, General Manager. M.J. Namotte, Administrative Manager. G. Volker, Business Attache. M. Dupont, Harbour Master.

NIEUWPOORT: 51.09 N. 02.43 E. (See Plan)

DOCUMENTS: Immigration requires:
Ship's Papers
2 Crew Lists
2 Passenger Lists
Passport or Seaman's Books

PILOTAGE: Compulsory. Pilot station at inner end of West Pier.

ANCHORAGES: Good anchorage available in roads.

MAX. SIZE: Largest vessel 82 m. LOA, 5 m. draft.

VHF: Pilots operate on Channel 9.

TUGS: No tugs available.

BERTHING: Harbour entrance formed by two parallel piers running N.W. – S.E. giving access to inner harbour through straight channel. Wharf of 1,200 m. length. Depth in channel and harbour 3 m. at MLWS. Tidal range 4 m. – 5 m.

Yachting harbours with a capacity of 2,000 yachts.

CRANES: 3 ton and 5 ton cranes available.

MEDICAL: Hospital facilities at Veurne (10 km.).

FRESH WATER: Available.

FUEL: Light and heavy gas oil available. No coal.

REPAIRS: Small repairs only.

AIRPORT: Middelkerke, 10 km., distant.

GARBAGE DISPOSAL: Drums and skips placed alongside. No charges.

WASTE OIL DISPOSAL: Small amounts can be handled in 50 litre drums. Contact Teco, Tel: 237415.

SEAMAN'S CLUBS: None.

CURRENCY: Belgium Franc.

GENERAL: Maritime Police: Schengen Immigration Control Post, Filliaertweg 41, Nieuwpoort. Tel/Fax: 058-233045.

AUTHORITY: Administratie Waterwegen en Zeewezen, Afdeling Zeewezen, Sir Winston Churchillkaai 2, B-8400 Ostende. *Contact:* Eric Blomme.

Ministerie Van de Vlaamse Gemeenschap, Administratie Waterwegen en Zeewezen, Afdeling Zeewezen Kust, Loodswezen Nieuwpoort, Havengeul 1, 8620 Nieuwpoort, Belgium. *Tel:* 058-233000, 231550. *FAX:* 058-231575. *Contact:* Captain Edmond Legein, Harbour Master.

OSTEND: 51.14 N. 02.55 E. (See Plan)

DOCUMENTS:
2 Crew Lists or Passenger Lists.
4 Cargo Manifests.
2 Copies Bills of Lading.
3 Freight Lists prepared by Agents.
2 Customs Provision Lists prepared by Agents.
General Declaration prepared by Agents.
Customs Declaration outward bound prepared by Agents.

PILOTAGE: *(a)* From Pilot boat between "S.W. Akkaert" and "A.1" lightbuoys. Black hull, white number forward on both sides of hull, yellow funnel black top. Displays by day at top of mast, red square flag with letter "P" in white; by night lights prescribed by International Regulations. Contact pilot boat: Channel 6 VHF. Morse or flag signal: G.8. In low visibility: sound signal G.8 to be made at least 3 seconds after usual fog signal. Pilot boat answers with sound signal "H" at least 3 seconds after sounding prescribed fog-signal.

Anchorage awaiting Pilot: Anchor to the N.W. of S.W. Akkaert Lightbuoy. Depths at least 18 m. MLLWS. Advice from pilot boat VHF Channel 6. If Pilot boat not on station, shipping informed by Ostend Radio in radiotelephonic frequency 2761 kHz (108 m.) announced on 2182 kHz (137 m.) on following hours: 0103 – 0803 – 1303 – 1603 and 2103 GMT.

(b) From Pilot Station Ostend. ETA to "Pilot Station Ostend" via "Radio Ostend" at least 3 hours before arrival. Harbour Pilot boat will meet as far as Lat. 51° 15′ 30″ N., Long. 2° 52′ E. Pilot boat shows by day: red square flag white "P"; by night: international prescribed lights. Anchorage: Lat. 51° 15′ 30″ N., Long. 2° 52′ 48″ E. Depths: at least 7 m. MLLWS. Pilot Station Ostend operates VHF Channel 9 (only for Pilotage matters).

RESTRICTIONS: Traffic signals in accordance with IALA are shown at end of Eastern harbour entrance pierhead.

MAX. SIZE: Entrance of lock to Commercial Docks restricted to max. length 124 m., max. beam 57 ft. 6 in. and draft max. 24 ft. Entrance to lock of Fishing Port restricted to ships with max. length 90 m., max. beam 50 ft. and max. draft 23 ft. Harbour channel restricted to 30 ft. draft.

HEALTH: Pratique obtained from Belgian Pilot. Any advice on health matters also obtainable from Pilot services.

RADIO: Ostend Radio – OST.

TUGS: Government tug 1250 h.p. available, meets outside harbour. Tug lines optional; (if demanded from Government tug) charge according to tariff (59/701100).

BERTHING: According draft. Any specific instructions given by Harbour Pilots or Agents.

BULK HANDLING FACILITIES: Ro/Ro berths in timber dock and on deep water quay with facilities for loading and unloading containers.

STEVEDORES: ETA advices week-days before 0600 hrs. For Saturday or Sunday work advise before 1500 hrs. Fridays. All stevedoring arrangements made by Agents.

MEDICAL: Advance notice to Agents for medical attention 6 hours before arrival. Hospital services available. Medical information can be obtained on R/T via Ostend Radio.

TANKERS: Only small coastal tankers. Only discharge in Fishing Port. Max. length 285 ft., max. beam 50 ft., max. draft 23 ft., or Ostend-Bruges canal, max. length 312 ft., beam 57 ft., max. draft 21 ft. (16th May – 16th October); max. 18 ft. (16th October – 16th May).

FRESH WATER: Available quayside in docks. Rate delivery approx. 15 t.p.h.

FUEL: All grades.

CONSULS:
Austria
Chile
Denmark
Finland
France
Germany
Guatemala
Monaco
Norway
Portugal
Sweden
United Kingdom
Uruguay

REPAIRS: All types deck and engine repairs.

DRY DOCKS: In Fishing Port 2 slipways available, one 1,000 tons deadweight, the other 500 tons; a 1,750 tons shiplift along the waterway.

GANGWAY/DECK WATCHMEN: Not necessary. If required, cost approx. ±5,500 frs. per shift of 8 hrs.

OPENING/CLOSING HATCHES: Normally carried out by crew. Can be done by stevedores but will then be charged.

CERTIFICATES: Load Line, Tonnage, Radar and Radio Certificates.

TOBACCO ALLOWANCE: 200 cigarettes or 100 cigarillos or 50 cigars or 250 gm. tobacco. Fresh supply weekly.

WINE AND SPIRIT ALLOWANCE: 1 litre per man in opened bottles.

CARGO GEAR: No additional requirements.

REPATRIATION: Through Immigration Officers and Maritime Police, Tel: 500925 and 500926.

AIRPORT: 3 miles from port, served by regular airlines.

TIME: Local time GMT plus 1 hour. GMT plus 2 hours in Summertime.

HOLIDAYS: New Year (1st Jan.); Easter Monday (changeable); Labour Day (1st May); Ascension Day (changeable, in May); Whit Monday (changeable); Independence Day (21st July); Our Mary Ascension Day (15th Aug.); All Saints' Day (1st Nov.); Armistice Day (11th Nov.); Christmas Day (25th Dec.). Cargo work can be arranged on those days at sufficient notice.

POLICE/AMBULANCE/FIRE: Police Tel: 701111 and 701057; Ambulance Tel: 900; Fire Tel: 701010 and 701086.

TELEPHONES: No arrangements for placing on board.

SERVICES: Compass adjusting, radio and radar repairs.

DEVELOPMENTS: New deep water quay with max. depth 8.0 m. LLW, to be increased to 10 m. in the near future.

AUTHORITY: Stad Oostende, Havendirectie, Slijkensesteenweg 1, 8400 Ostend. *Tel:* 059-321669, 059-321687. *Telex:* 81281 (Osthav B). *FAX:* (059) 330387. *Contact:* Patrick Vermandel, Harbour Master – Director.

ZEEBRUGGE: 51.20 N. 03.12 E. (See Plan)
BRUGES: 51.13 N. 03.13 E.

PORT LIMITS: A line drawn between the seaward end of the East and West jetties.

DOCUMENTS:
1 List of Dangerous Goods.
2 Crew Lists or Passenger Lists.
4 Cargo Manifests.
2 copies Bills of Lading.
3 Freight Lists (prepared by Agents).
2 Customs Provision Lists (prepared by Agents).
1 General Declaration (prepared by Agents).
1 Customs Declaration, outward bound (prepared by Agents).
Certificate of Registry.
Tonnage Certificate.
Bill of Health.
Derat Certificate.
Oil Record Book.
Certificate of Insurance in respect of Civil Liability for Oil Pollution Damage.
Safety Certificates.

PILOTAGE: Compulsory. Notice of ETA and request for a Pilot must be made at least 6 hours in advance to "Pilot VTS Wandelaar", through Oostende Radio, Channel 16, or Tel: 32-(0)50-55.08.01, Fax: 32-(0)50-54.74.00, Telex and Satcom: 81417. Message to contain ETA Pilot, draft and destination.

First reporting is by VHF on Channel 65 to Traffic Centre Wandelaar, 1.5 hours before entering traffic zone (Line – A Noord Buoys to A Zuid Buoys).

The Pilot boards the vessel near the A1 Buoy (14 miles N.W. of the port, co-ordinates Lat. 51° 22.5′ N., Long. 02° 53.5′ E.) or for small vessels near the Scheurzand Buoy.

Pilotage Service Addresses: Ostend: Sir Winston Churchillkaai 2, B-8400 Oostende. Tel: 059-55.28.11.

Zeebrugge: Loodswezenstraat 30, B-8380 Zeebrugge-Brugge 5. Tel: 050-54.50.72.

ANCHORAGE: Safe anchorage in Zeebrugge Roads for vessels drawing up to 9.70 m. Vessels drawing more than 9.70 m. will be anchored if needed around "A1" Buoy.

RESTRICTIONS: Vessels with a draft of over 12.0 m. are dependent on tide for entry.

Access Channel: "Pas van het Zand", beaconed; 2,000 m. long, 600 m. wide; depth Z (−13.5 m.) LLWS over a width of 300 m.; direction N.W./S.E.

TIDES: *Tidal Currents:* Rising tide: direction S.W./N.E., average velocity: 2 knots. Outgoing tide: direction N.E./S.W., average velocity: 2 knots.

Tidal Differences: Mean tide: +4.35 m. at HW; +0.70 m. at LW; +4 m. from 50 minutes before HW to 1.20 hours after HW; +3 m. from 1.40 hours before HW to 2.50 hours after HW.

Spring tide: +4.70 m. at HW; +0.40 m. at LW.

Neap tide: +3.82 m. at HW; +1.05 m. at LW.

MAX. SIZE: Vessels up to 350 m. and 55 m. beam can be accepted in Outer Harbour. Max. draft is 14 m. (keel clearance 1.80 m.). Inner Harbour: LOA 400 m., beam 48 m. and draft 51 ft. (to be increased to 55 ft.).

For Bruges: Max. beam 19 m., max. draft 6.75 m.

HEALTH: Pratique is normally given at Pilot Station provided health situation satisfactory. Any advice on health matters also obtainable from pilot service.

RADIO: Ostend Radio (VHF Channel 16) used for all messages.

VHF: Pilotage: Contact Traffic Centre Wandelaar on Channel 65. Port Control: (V.T.S.): Channel 71 (continuous watch). Lockmaster and inner port: Channel 13 (continuous watch). Tugs: Channel 71 (continuous watch) working on Channel 71, 13 and 8.

TUGS: Tugs join the vessel near "Scheurzand" Buoy.

Tugs available on 1 hour's notice; extra tugs available on 4 hours notice.

From "Scheurzand" Buoy more than 4 tugs can be available with notice of 4 hours. Tugs range from 2,500 h.p. to 4,000 h.p. (38 to 45 tons bollard pull). Applications to Zeebrugge Port Control VHF Channel 71.

Towage service address: Unie van Reddings-en Sleepdiensten (U.R.S.) c/o Zeebrugge Shipping and Bunkering Co. N.V., Minister Beernaetstraat 9, 8380 Zeebrugge. Tel: 050-542411. Telex: 81138. Fax: +32-50-546098.

Salvage: Via Ostend Radio, Via Port Control VHF Channel 71; or via URS.

BERTHING FACILITIES: Outer Harbour:

Harbour Mole: Leopold II

Quay No.	*Length* (m.)	*Depth at LLWS* (m.)
101, 102, 103	450	10.5
104, 105, 106 (part)	375	9.0
106 (part), 107, 108, 109, 110	746	7.2

Cranes: 6×8 ton, 2×8 – 16 tons and 2×3 ton.

Quays No. 106 and 107 used by North Sea Ferries. Two pontoons each with a ramp connected to a central platform. Two Ro-Ro ships can be loaded/discharged at the same time.

Car Ferry Terminal: Car ferry terminal operated by P&O European Ferries, area 20.3 ha., 4 berths. Quay No. 110: Double-deck/double-lane, heavy loads up to 120 tons. Quays No. 111 and 112: Single-deck/single-lane, maximum 60 tons with axle load of 20 tons over 4 wheels. Quay No. 113: Double-deck/single-lane.

Ramps: 2×53 m. Width of the bridge, including 2 separate protected footpaths for passengers: 7.10 m. Max. load capacity: 400 kg./sq.m. (heavy articulated loads to a maximum of 60 tons with an axle load of 20 tons over 4 wheels).

Berths: 2, on both sides of a line of 6 dolphins with a diameter of 10 m., linked with a gangway length: 145 m. Water depth: 7 m. at LLWS.

Ships: Max. length allowed, no limitation. Max. beam allowed: 21.20 m. with the ship's axis in line with the ramp axis (ships of 33 m. beam, however, can berth obliquely, or out of axis).

Western Peninsula: Area: 18 ha. Total quay length: 1,915 m., of which 1,525 m. with a water depth of −13 m. and 300 m. with a water depth of −16.0 m. (LLWS), quay height 8 m. above LLWS.

West Quay: Quay No. 201: 90 m. of connecting quays. Quay No. 202, 203: 725 m. for Ocean Container Terminal Zeebrugge (31 ha.). Gantry cranes: 2×45 ton and 1×35 ton. Storage area 10,000 TEU. Straddle carriers: 14×35 ton. Forklifts 15×2 ton - 30 ton, 1 trailer tractors, 2 tractors, slots for reefer container.

North Quay: Quay No. 204: 205 m. for OCZ and waiting quay.

East Quay: Quay No. 205, 206: 595 m. and 300 m. extension with depth 16.0 m. (available March 1997) for Ocean Container Terminal Zeebrugge. Gantry cranes: 2×40 tons. and 3×65 tons (18 m. across, twin-lift).

Quay No. 207: Jetty for lighters.

The Pacific Ferry Terminal: Area: 8 ha. Quay No. 208: Berth for ferry ships. Length: 195 m. Width: 25 m. Water depth: −8.0 m. LLWS. Linkspan: 144 m., SWL 100 tons; 1 ramp, length: 50 m. Width: 9.6 m. Max. size: 193 m. LOA, 18.5 m. width. Quay No. 209: Jetty for lighters.

The Short-Sea Container Terminal (S.C.T.): Area: 9.5 ha. Quay Nos. 210, 211, length 270 m. Terminal for loading/discharging container vessels. Water depth: −7 m. LLWS. Quay height: 7.30 m. above LLWS.

2 berths for container vessels. 2 gantry cranes (Peiner) of 30 ton SWL. 2 Peiner straddle carriers (30 tons). Fork lift trucks and tractors. Capacity 2,200 TEU's.

The Swedish Quay: Area: 12.4 ha. Quays: No. 702, 703, 704 and 705. Length 913 m. Water depth: −14 m. to −18 m. LLWS. Quay height: 8 m. LLWS.

Sea-Ro Terminal: Area: 12.4 ha.; 2 Ro/Ro berths (702,703) equipped with MacGregor pontoon (50 m. × 33 m.); 1 Ro/Ro berth (705) equipped with ramp; mobile crane, linkspans (2) 1×100 tons and 1×140 tons SWL.

The Brittannia Dock (operated by Sea-Ro): Areas: 15.1 ha. Berths: 6. Quay No. 608: 245 m. Quay No. 605-607: 588 m. Quay No. 613: 250 m. (landing bridge). Quay No. 614: 251 m. (landing bridge). Water depth 8.0 m. Linkspans (2) 1×88 tons and 1×80 tons SWL. All size Ro/Ro equipment.

L.N.G. Terminal: Ships up to 280 m.; draft 11.80 m.; water depth −13.0 m.; 3 L.N.G. tanks, each 90,000 cu.m.; length of jetty 380 m.

Other Installations: Bunkering station: 5 tanks, total capacity: 20,450 cu.m. (bunkering from lighter, however, is possible on all quays).

Gas freeing station (near Bunkering station), capacity : 4,000 cu.m. in gaseous nitrogen.

Maritime station: Equipped for the embarkation and disembarkation of cruise-ship passengers (hall, banking services, refreshment rooms, etc.).

Tank storage for molasses, 10 tanks with a total capacity of 87,350 tons. Quay No. 106 for tankers up to 200 m. LOA and max. draft 32 ft.

Flanders Container Terminals: Area: 100 ha. (26.3 ha. is paved). Quay length: 1,300 m. (of which 1,023 m. is achieved). Water depth: Z (−16 m.). Quays No. 120-123: 3 post-Panamax berths, 3 gantry cranes, 60 tons – 70 tons SWL, 14 straddle carriers (33 tons).

Inner Port at Zeebrugge: The water level in the inner port is at Z (+3.50 m.) LLWS.

Pierre Vandammelock: Length: 500 m., width 57 m., sill depth: Z (−15 m.) LLWS. The water depth in the lock is (15 m. +3.50 .) = 18.50 m.

The Visart Sealock: Length: 210 m., width: 19.70 m., sill depth: −5.50 m. LLWS. The usable water depth in the lock varies between 5.50 and 9 m.

The Connection Dock: Length: 3,200 m. from P. Vandammelock to Baudouin Canal. Width: 210 m. at sealock exit, widening to 400 m. in first section, 600 m. in front of East quay of North inlet basin, and again 400 m. in front of West quay of same basin to Baudouin Canal Depth: from sealock to North inlet basin Z (−15 m.) from North inlet basin to Baudouin Canal Z (−5 m.)

The North Inlet Basin: Length: 1,130 m. with a width which varies between 275 m. (South end) and 225 m. (North end). Depth Z (−14.5 m.)

Quays: East Quay Nos. 402, 403, 404: Length 890 m. Belgian New Fruit Wharf 400 m. quay (402, 403) has 6 fully insulated sheds.

C.T.O., Quay (404-405) has 2 insulated sheds, one open timbershed and 3 covered general cargo sheds.

Cranes: 2 electric travelling cranes 8 – 16 ton, 2 mobile Gottwald cranes 8 ton, mobile Gottwald crane 20 ton and 3 cargoveyors.

West Quay Nos. 408, 409, 410, 411, 412: Length 1,130 m. Combined Terminal Operators (CTO) Quay Nos. 408, 409, 410 has 600 m. quay. Equipped with a Ro-Ro pontoon and a general cargo warehouse (6,000 sq.m.), bulk shed (30,000 cu.m.), forklifts 3 – 42 tons, tugmasters, flatbeds, bagging installation. Andrew's Fruit Terminal has 640 m. of quays (No. 410-413). Area: 14 ha. (8 ha. is reserved for container handling and storage); 2 fully insulated sheds for storage of fruit, 4 pallet hoisters with 8 tons capacity. General cargo shed operated by Lalemant. Cranes: 3 electric cranes, 8-16 tons, 2 mobile Gottwald cranes. Flanders Cold Center (Located at Quays No. 412-413) has 3 cold stores for frozen products and a veterinary clearance station.

South Inlet Basin: (A) Canada Terminal (Operated by SeaRo Terminal) for the import/export of new cars. Area: 38 ha. (36 ha. is surfaced). Quay length: 606 m. Water depth: 18.0 m., no tidal difference. Berths: 2.

Quays No. 530-532: Linkspan pontoon: 100 tons SWL. The Canada Terminal is linked to the Brittannia Dock by the Minerva Square (also operated by SeaRo). Area: 22 ha. for parking new cars. The Car Centre Zeebrugge comprises an assembly line for custom-made options to new cars.

(B) ZBM, Terminal for bulk (West side of the dock): Surface area: 80 ha. Quay length: 600 m. Water depth: 18.00 m. Quays: 501 and 502. Cranes: 2×35 ton gantry cranes and 2×28 ton mobile cranes. Bulk facilities: 2 stacker/reclaimers. Stacking capacity: 4,500 t.p.h. Reloading capacity: 2,000 t.p.h. Total length of conveyor belts: 1,810 m.

The Prince Philip Dock: Length: 560 m., width: 200 m., depth: 8.40 m.

North Sea Ferries (disused): Ro-Ro platform length 24 m., width 7.8 m. max. load 60 ton, 20 ton per axle.

The Former Ferrydock: Length: 500 m. Width: 130 m. Depth: 8 m.

The Baudouin Canal: Length between the old sealock and the bridge at Dudzele: 5.5 km. Width at water surface: 70 m. Width at bottom: 22 m. Depth: 6.40 m. Quays, with a length of 450 m., in front of the coke and glassworks.

The Turning Area behind the Old Sealock: Length: 500 m. Width: 175 m. Depth: 8 m.

Inner Port at Bruges:

The Baudouin Canal: Length between the bridge at Dudzele to the entrance of the West dock: 6,650 km. Width at water surface: 125 m. Width at bottom: 50 m. Depth: 8 m.

The East Dock: Length: 617 m. Width: 90 m. Depth: 8 m.

The West Dock: Length: 1,818 m. Width: 90 m. Depth: 8 m.

The Industrial Dock: Length: 2,300 m. Width: 125 m. Depth: 8 m.

The Junction Lock: Length: 115 m. Width: 12 m. Sill depth: 4 m.

Quays: Cranes: 2×5 ton, 2×8 ton.

Berth No.	*Dock*	*Length*
921 – 923 (Quenastkaai)	East Dock	389 m.
924 – 925 (Kaap Hoornkaai)	East Dock	228 m.
926 (Albertakaai)	East Dock	148 m.
927 – 929 (Graaf Visartkaai)	West Dock	315 m.
940 – 944 (Julius Sabbekaai)	West Dock	520 m.

BULK HANDLING FACILITIES: *Cereals:*

Borlim nv: Head Office: Lanceloot Blondeellaan, B-8380 Zeebrugge-Brugge 5. Tel: 050-54.48.61.

Storage capacity: 9 silos, total capacity: 40,000 tons. Discharge capacity: 250 t.p.h. Loading capacity: 300 t.p.h.

Shore and quay length: total shore length: 160 m., actual quay length: 99 m.

Dumon Agro, Pathoekeweg 32, B-8000 Brugge 1. Tel: 050-31.51.61.

Storage capacity: 2 silos, 11,300 tons each.

H.E.L.B., Krakeleweg 34, B-8000 Brugge 1. Tel: 050-31.50.24.

Storage capacity: 95 cells, 10,000 tons.

Voeders Huys, Krakeleweg 38, B-8000 Brugge 1. Tel: 050-31.80.38.

Storage capacity: 84 cells, 8,000 tons.

WACO, Pathoekeweg 68a, B-8000 Brugge 1. Tel: 050-31.80.08 – 016-24.26.43.

Storage capacity: 34 cells, 16,500 tons.

C.T.O., Noordelijk Insteekdok: V.S.A., Kaai B-8380 Zeebrugge -Brugge 5. Tel: 050/545464. Telex: 61608 – flatsilo of 35,000 cu.m. - bagging installation.

Coal and Ore: Zeebrugse Behandelings Maatschappij (ZBM). Zuidelijk Insteekdok, Bastenakenkaai, B-8380 Zeebrugge-Brugge 5. Tel: 32(0)50-59.99.15. Head Office: C.B.M., Sea-Invest Group, Skaldenstraat 1, B-9042 Gent. Tel: 32(0)9-255.02.22. Fax: 32(0)9-259.08.94. Area 80 ha., 690 m. quay in South Inlet Basin.

STEVEDORES: 24 hours notice required to arrange gangs.

MEDICAL: Hospital at Bruges, Blankenberge and Knokke. Facilities available without prior notice.

TANKERS: No crude oils, only refined products delivered with smaller vessels to private installations on the Baudouin Canal and in the Port of Bruges.

Company	*No. of Tanks*	*Total Capacity* (cu.m.)
Petrover	4	12,500
Detavernier	3	3,500
L. Francois	3	3,500
Rosseel	14	12,400
Traen Gebr	9	10,000
Molasses		
Tameco	11	29,700

Cleaning Station: Euroservices nv, Minister Beernaertstraat 9, B-8380 Zeebrugge-Brugge 5. Tel: 050-54.42.61. Telex: 81.138.

The nitrogen plant operated by Euroservices nv offers gasfreeing and cleaning facilities for liquid gas carriers. The station is equipped with a ground flare and provides the necessary equipment to change grade with the shortest delay. 24 hour service is guaranteed (Quay No. 101).

DENSITY: 1025.

FRESH WATER: Available from the berths, rate 30 t.p.h.

FUEL: All grades of fuel and lubricants available. Can be supplied ex-wharf or by barge provided advance notice given. There are 5 tanks (total capacity 20,450 cu.m.).

Bunker Station: Belgische Bunkeroliemaatschappij, Administrative Office: Wetstraat 33, B-1040 Brussels.

Head Office: Zeebrugge Shipping and Bunkering Co., Minister Beernaertstraat 9, B-8380 Zeebrugge-Brugge 5. Tel: 050-54.42.60. Telex: 81.138.

The bunkering station situated at the end of the mole delivers all grades of marine fuel. Supplies can be effected directly ex-wharf (Quays No. 101 and 102) or by barges and tank lorries throughout the port. The depot is offering 24 hour service.

Operators are Messrs. Belgische, Bunkeroliemaatschappij.

REPAIRS: *Ships' maintenance and repairs:* Slipway on the transverse quay of the Prince Philip Dock (Quay 305) in the inner port at Zeebrugge.

Management: MBZ. Operated by: Indimec NV, Tijdokstraat 26, B-8380 Zeebrugge-Brugge 5. Tel: 050-54.41.79. Telex: 81.426.

Actual maintenance of ships is done by the company commissioned by the shipowner.

Slope: Length: 248 m., width of the cradle: 17.50 m., capacity: ships up to 1,000 tons.

Transfer area: Length: 85 m., width: 25 m.

Equipment: Tower crane: Lifting height: 30 m., max. reach: 30 m., lifting capacity: 1.8 tons with jibs at 29 m., 6 tons with jibs at 11 m.

Several ships can use the slope and the transfer area simultaneously.

Area of the adjacent grounds: 3.8 ha., which can be used by various ship repairers.

CONSULS: Denmark, France, Netherlands, Norway, Portugal, Spain and Sweden.
SURVEYORS: Available through local Agents.
GANGWAY/DECK WATCHMAN: Available. Only required when handling explosives.
OPENING/CLOSING HATCHES: Normally by crew.
CERTIFICATES: Registry, tonnage and usual certificates.
CUSTOMS ALLOWANCES: Each crew member 200 cigarettes or 200 gm. tobacco. Officers: 1 open bottle of spirits.
CARGO GEAR: Discharge of general and containers is usually by shore gear. Heavy lifts by mobile crane or ship's gear.
REPATRIATION: Brussels Airport. All facilities exist for changes of crews and repatriation of seamen.
AIRPORTS: *Ostend Airport:* Situated at 30 km. from Bruges and Zeebrugge. Charters and private business flights; no passenger flights. *Brussels Airport:* 120 km. from Bruges and 135 km. from Zeebrugge (to be reached via E40-motorway and Circular road R0 around Brussels) or by rail (1.5 hour ride).

More than 50 airline operators have landing rights at Brussels Airport. An average of 200 take-offs and landings take place every day, of which 80% to and from European airports and 20% to and from outside Europe. These flights are either direct or indirect via the closest transit airports of Amsterdam, Paris, London, Frankfurt.
TIME: GMT plus 1 hour. Summertime GMT plus 2 hours.
HOLIDAYS: None.
POLICE/AMBULANCE/FIRE: All emergency services are available through the Port Control, VHF Channel 71. Ambulance and Fire: Tel: 100. Police: Tel: 101.
TELEPHONES: This service is available aboard ships at all berths by prior arrangement through the Agents.
SHIP SUPPLY SERVICE: *Off-Shore Facilities:* Facilities for supply of fresh water or stores and for transport of personnel by sea-going tugs available from Zeebrugge.
SHORE LEAVE: When Immigration and Customs requirement have been satisfied there is no restriction.
IDENTIFICATION CARDS: Seaman's Book is sufficient.
GARBAGE DISPOSAL: Service available through private contractors. Garbage containers provided alongside.

De Bree & Zonen, Krommewege 42, 9990 Maldegem. Tel: 050-712792.
De Keyser, Zandstraat 450, 8200 Brugge. Tel: 050-315107.
Gardin, Zeelaan 1, 8380 Brugge. Tel: 050-316102.
Vermander, Dudzelesteenweg 59, 8000 Brugge. Tel: 050-330470.

WASTE OIL DISPOSAL: No special berth. Tanker trucks available from private companies recognized by the government.
SEAMAN'S CLUBS: Octopus Seamen's Club, Kustlaan 25, 8380 Zeebrugge.
CURRENCY: Belgian Franc (BEF). U.S.$1.00 = BEF 30 (March 1996).
REGULATIONS: Port regulations and regulations concerning the handling of dangerous goods and explosives must be observed.
DEVELOPMENTS: Completion of the Albert II Dock in the Western outer port with the construction of a new container terminal to be operated by Hessenatie.

Development of the Wielingen Dock, the most seawardly located dock in the outer port for inter-European and intercontinental Ro-Ro traffic (To be operated by SeaRo).

Deepening of the access channel to the port to accommodate vessels drawing 55 ft.

Construction of 1 additional rail track between Bruges and Zeebrugge and 2 additional tracks between Bruges and Ghent.
AUTHORITY: Maatschappij van de Brugse Zeevaartinrichtingen NV (MBZ), Louis Coiseaukaai 2, B-8000 Brugge, Belgium. *Tel:* 050-44.42.11. *Telex:* 81201 Porbrg B. *FAX:* 050-44.42.24. *Cables:* Ports Brugge. *Contact:* P. Kerckaert, General Manager. R. Creyne, Senior Harbour Master.
Harbour Master's Office: P. Vandamme House, Isabellalaan 1, 8380 Zeebrugge – Brugge 5. *Tel:* (050) 54.32.40, 54.68.67 (Port Control); (050) 54.32.34 (Port Administration). *FAX:* (050) 54.32.24.
Sealock Operations: P. Vandamme Sealock: P. Vandamme House, Isabellalaan 1, 8380 Zeebrugge – Brugge 5. *Tel:* (050) 54.32.31.
E-mail: mbz@unicall.be Internet: www.Zeebruggeport.be
AGENT: See "Antwerp".

NOTES

Please also advise Shipping Guides Ltd.

Belize

BELIZE: 17.29 N. 88.11 W. (See Plan)

PORT LIMITS: Usually upon arrival at English Caye Pilot Station for vessels arriving from North and East and at anchorage in Belize Harbour for vessels arriving from South inside the reef.

DOCUMENTS:

Crew Lists – 6 copies for local use plus 10 Spanish copies for Consular Clearance.

Passenger Lists – 5 copies for local use plus 10 Spanish copies for Consular Clearance.

Stores List – 5 copies for local use plus 10 Spanish copies for Consular Clearance.

Manifests – 10 copies.

Customs Documents – Clearance for last port and crew declaration.

Health Documents – International Declaration of Health plus one copy crew vaccination list.

Ship's Papers and Certificates should be available on request.

PILOTAGE: A Pilot is always on station at English Caye. Contact can be made with the Pilot Station on VHF Channel 16. Vessels consigned to Eurocaribe can make contact on Channel 16 VHF.

ANCHORAGES: Depths in harbour anchorage area vary due to a natural slope; for example, a vessel drawing 14 ft. can anchor within 0.25 miles; 16 ft. 0.5 miles; 20 ft. 1 mile and so on Southward. Masters should refer to Pilot for this information.

MAX. SIZE: Size and length, within reason is not a problem. Tankers bringing oil to the Esso storage depot secure to buoys fore and aft. Max. draft 19 ft. 6 in.

PRATIQUE: Granted by Customs after boarding in harbour or at berth.

RADIO: Most ships' Agents man their own radio stations and usually stand-by on Channel 16 VHF with alternative Channels 6, 11, 12, 13 and 14.

TUGS: Tugs are not normally necessary but small tugs are available.

BERTHING: Main berth – length 220 ft., depth 17 ft. (approx.). Ro-Ro berth is 70 ft. wide, vessel lies alongside dolphins.

STEVEDORES: Gangs usually require 2 hours notice during normal working hours. Work rates average between 3 tons and 10 tons per gang hour.

MEDICAL: Hospital facilities are available.

TANKERS: Undersea pipe-line 8 in. in diameter.

Hand-pump discharging rate 250 to 300 g.p.m., also gravity flow. Normal discharge rate 2,000 barrels per hour.

DENSITY: Density varies with outflow from rivers during wet season (July-December).

FRESH WATER: Very scarce and expensive if vessel cannot berth at dock.

FUEL: Light diesel oil 45/48 available subject to Government approval. Can be supplied at buoys with 8 in. dia. pipe (reductions to 4 in. available or by barge). Also available by truck if vessel able to dock.

FIRE PRECAUTIONS: None.

CONSULS:

Belgium
Brazil
Canada
Chile
Cuba
Denmark
France
El Salvador
Israel
Italy
Jamaica
Lebanon
Netherlands
Nicaragua
Norway
Sweden
Germany

Embassies:

Costa Rica
El Salvador
Guatemala
Honduras
Mexico
Panama
Taiwan
United States
Venezuela

High Commission: British

REPAIRS: Only small minor repairs possible.

SURVEYORS: Lloyd's and A.B.S.

GANGWAY/DECK WATCHMEN: Not required.

HATCHES: Stevedores open and close hatches except MacGregor type.

CUSTOMS ALLOWANCES: 200 cigarettes plus 1 bottle spirits (0.20).

CARGO GEAR: Ship's gear; heavy lift cranes are available up to 140 tons for vessels which can reach the dock.

REPATRIATION: Possible, regular air services to and from Miami, New Orleans, and neighbouring Republics.

AIRPORT: Phillip Goldson International Airport 10 miles from Belize City.

TIME: Normally GMT minus 6 hours.

HOLIDAYS: Public Holidays: New Year's Day*; Baron Bliss Day (9th March); Good Friday; Holy Saturday; Easter Monday*; Columbus Day (12th October); Labour Day* (1st May); Commonwealth Day (24th May); St. George's Caye Day* (10th September); Independence Day* (21st September); Carib Settlement Day (20th November); Christmas Day* (25th December); Boxing Day* (26th December).

*Special arrangements must be made with Union. All other days are subject to overtime rates.

POLICE/AMBULANCE/FIRE: All emergencies dial 911.

EMERGENCY CO-ORDINATION CENTRE: None.

BANKS: Barclays Bank International Ltd., P.O.Box 363, Albert Street, Belize City. Tel: 77211/2. Telex: 217. Fax: 78572.

Belize Bank Limited, 60 Market Square, Belize City. Tel: 77132. Telex: 229. Fax: 72712.

Bank of Nova Scotia, P.O.Box 708, Belize City. Tel: 77027. Telex: 218. Fax: 77416.

Atlantic Bank, 6 Albert Street, Belize City. Tel: 77124. Fax: 77736.

SHORE LEAVE: Possible.

IDENTIFICATION CARDS: Seaman's Book sufficient.

CURRENCY: Belize Dollar.

STORING: See "Prelims".

1. Yes.
2. Vessels may store by barge during loading and discharging.
3. Yes.
4. Yes.
5. Prior arrangements must be made.
6. Possible to use riggers, however, it is best to use crew.

SHIP SUPPLY SERVICE: There are numerous small craft each individually owned, which ply between the wharves and ships anchored in the harbour. These craft provide ship to shore transport of personnel, and/or essential stores and/or sick crew members.

REGULATIONS: None.

DELAYS: Discharge and loading operations occasionally delayed by weather (rain) and sometimes by shortage of equipment (trailers, etc.).

GENERAL: Starboard anchor usually used to make lee for operations on portside if vessel is at anchor. It is necessary for vessels to provide toilet facilities for stevedores. Feeding of Supervisors and Customs Officials is normal.

SHIPMASTER'S REPORT: February 1987.

Port Limits: 3 miles from English Caye light and on leading lights.

Documents:

6 Crew Lists.
2 Passenger Lists.
2 Crew Declarations.
1 Health Declaration.
8 Cargo Manifests.
2 copies of Bills of Lading.

Pilotage: Pilot ordered through Agents. Pilot boards outside reefs and asks vessel to go on to English Caye leading lights 2 – 3 miles from the leading lights. Pilotage to berth is straight forward in deep natural channel. Once vessel leaves this channel the waters shoal rapidly and 20 ft. is the maximum draft, although the Pilot says he has berthed ships at 21 ft. Approach berth on 045° T and when starboard buoy almost abeam let go starboard anchor and manoeuvre into berth. First line to port aft buoy needs to be the best and to be doubled up. The stern is heaved around with this and as the wind was Northerly 10 – 15 knots it was taken steadily. Forward port buoy lines were run and vessel then heaved over to pipe-line buoy. Stern buoy line then run and vessel backed into position. Cable was out to 5 shackles on deck. Other buoy lines were run and on completion vessel was heading 108°T. Throughout our stay the weight remained on the port buoy lines as the wind stayed in the North. Very little tidal influence.

Anchorages: None specified, numerous safe areas to anchor if required.

Restrictions: Daytime berthing and unberthing.

Max. Size: Limiting factor is 20 ft. draft.

Health: Port Health Officer gives Free Pratique and 'Q' flag to be flown until given. Renewed Derat Exemption here.

Radio: All communication done via Sat Com.

VHF: Pilot on Channel 16 and 6. Port working Channel is Channel 6 which Agents and all use. Port not very busy so no problems. They have 1 tanker per month.

Radar: None.

Tugs: None.

Berthing: See "Pilotage".

Bridges: None.

Medical: Doctors in the town but anything serious has to be flown out.

Tankers: 1×8 in. submerged pipe-line through which all grades are pumped with water plug between each. Line to be left in gas oil. Max. B.P. is 140 p.s.i. and a general rate of 375 cu.m.p.h. was obtained on all grades.

Density: 1021.

Fresh Water: No means to supply at tanker berth.

Fuel: Diesel with 48 hours' notice. No fuel oil.

Fire Precautions: Normal ship precautions; no help from shore.

Repairs: Very minor repairs only.

Dry Docks: None.

Surveyors: Lloyd's, A.B.S. and B.V.

Gangway/Watchman: None.

Customs Allowances: 200 cigarettes and 1 bottle of spirits. Bond sealed.

Repatriation: No problems with staff or crew changes.

Airport: 12 miles from town.

Time: GMT minus 6 hours.

Police/Ambulance/Fire: None.

Emergency Co-Ordination Centre: None.

Telephones: None.

Services: None.

Banks: Royal Bank of Canada, Barclay's Bank, Bank of Nova Scotia, and Atlantic Bank.

Storing: Fresh vegetables only. Lobster in season January to March.

Shore Leave: No restrictions and boat stays with ship all the time.

Identification Cards: Not required.

Regulations: None.

Delays: Weather, daylight berthing and unberthing.

Developments: None anticipated.

General: Shore capacity: Avgas 2,400 bbls., REG Mogas 24,800 bbls., Premium Mogas 7,900 bbls., Avtur 22,800 bbls., gas oil 29,600 bbls.

AUTHORITY: Belize Port Authority, P.O.Box 633, Ceasar Ridge Road, Belize City, Belize, Central America. *Tel:* 72449, 72449. *FAX:* 73571. *Contact:* Mr.A. Coye, Port Commissioner and Chief Executive. Mr.L. Garbutt, Operations Manager.

Republic of Benin

COTONOU: 06.20 N. 02.32 E. (See Plan)

PORT LIMITS: The area contained within an arc of a circle of 1 mile radius centred on the red light at the West Jetty.

DOCUMENTS: Once berthed the ship must be able to produce to the Port Authorities:

6 copies Crew List.
4 copies List of Ports of Call.
6 copies Passenger List, and passengers in transit.
6 Customs Declarations (personal effects list).
2 Maritime Declarations of Health.
3 Lists Provisions and Stores, including foodstuffs.
10 copies Manifest.
1 Bill of Lading.
1 Declaration of Arms and Ammunition.
3 Lists of Dangerous Cargo (unloading or in transit).
6 Stowaway Lists.
3 Vaccination Lists.

Also international documents of ownership and safety.

PILOTAGE/APPROACHES: Vessels must advise ETA to Port Authority "Dirport Cotonou" 24 hours prior arrival weekdays, and before midday Saturday for Sundays and before midday on day preceding holidays. Cable address Pilot Station "Commandant du Port, Cotonou". Telex: 5004 "Dirport Ctnou". On approach to port vessels may also call Pilot Station on 2182 kHz or VHF Channel 16. Permanent radio watch kept by Port Coast-Guard Station. Pilot services permanent and operate night and day, Sundays and holidays, except for nights of 24th and 31st December from 1800 – 0600 hrs. Ships drawing more than 30 ft. must enter on high tide. On arrival in approaches, ships coming from West or South must steer a Northerly course in direction of lighthouse, and take Pilot about half a mile from fairway. If arriving from East, vessels should take Westerly course in direction of fairway and take Pilot about half a mile from fairway. Pilot boat is small cutter with black hull and white superstructure, by day carries flag "H" and by night carries statutory lights for pilot boats. Piloting obligatory for ships over 100 net tons.

Fairway Buoy: Position Lat. 06° 20.4′ N., Long. 02° 26.8′ E. Light-flash "A" (· –) 10 secs.

ANCHORAGES: In cases of bad weather or of waiting for Pilot, ship must anchor approx. 1 mile to South of lighthouse. Sound anchorage with sand bottom and depth 14 m. Forbidden to anchor within radius of 700 m. from red light of West Jetty.

Prohibited Anchorage: All the area to the West of the meridian of the West breakwater red light.

RESTRICTIONS: No restrictions on hours of entry or departure.

MAX. SIZE: See "Berthing" and "Tankers".

HEALTH: Free Pratique generally given by Agent.

RADIO: Advisable give Agent 72 hours notice of ETA. Thereafter re-confirm 36 hours prior arrival.

RADAR/VHF: No port radar service. VHF Channel 16, 14 and 12. R/T 2182 kHz.

TUGS: Tug assistance performed by Port Authority of Cotonou and compulsory for every vessel over 500 g.r.t., mooring, unmooring, at berth or shifting. Extra charge for using tug's lines. Vessels with length over 100 m. require 2 tugs.

BERTHING: Berthing quay 620 m. long, 10.0 m. depth, which will accept alongside a minimum of 4 ships working together. Harbour dredged up to 11 m. below chart datum and will permit almost all sizes of ships to work safely. Railway line runs 4 m. side of quay, under ship tackles, and used only for heavy lifts. Berthing priority only given cargo ships and tankers which have specially reserved berths. Other ships berth dependent on berths available and in order of arrival. As well as 2 tanker berths there is loading berth for bulk palm-oil, one waiting berth at harbour entrance, and 4 quays with warehouses for import/export traffic.

New Quay: Length 660 m. Depth alongside 11.0 m. Two conventional berths (360 m.), one container berth (200 m.) and one Ro/Ro berth.

Facilities include a container storage area of 65,000 sq.m., 2 warehouses of 6,000 sq.m. each, 1 transit warehouse of 4,000 sq.m. and an open storage area of 60,000 sq.m.

STEVEDORES: Ship must advise Agent in advance of number stevedore teams required, and specify number of hours work required. This must be done 24 hours in advance on weekdays, and before midday Saturday for Sundays, and before midday on day preceding holidays. Loading and unloading rate: Working days – 600 tons for bagged cargo. 400 tons for other cargo. Sundays and holidays, half above rates. Days counted as 24 hours starting from first break following berthing. For ships having to handle smaller quantities, assessment of time calculated in multiples of 300 tons for bagged cargo and 200 tons for other cargo, per 12 hours. Loading and unloading operations can be carried out on Sundays and public holidays if ship's Master wishes, with exception of Labour Day (May 1st), 26th October, 30th November, 31st December and Independence Day.

MEDICAL: Well-equipped modern hospital in Cotonou.

TANKERS: 2 tanker quays for ships of 215 m. length and 31 ft. draft. (Depth at seaward berth 11.0 m.). Unloading carried out by 100 mm. pipeline. Loading of petroleum products carried out by pumping (80 cu.m.p.h.) or by gravity (50 cu.m.p.h.). Products are aviation spirit 100/130, "Super" petrol, low-grade petrol, Kero Avtur, and gas oil.

Also see "Seme Terminal".

FIRE PRECAUTIONS: Port has following safety equipment: 2 tugs equipped with fire hose of 50 cu.m.p.h. 2 motor pumps of 30 cu.m.p.h., 1 draining pump of 150 cu.m.p.h. In addition special security watches are kept on dangerous merchandise in classes 1a, 1b, 1c, 1d and 111c. Normal watch up to 5 tons, double watch from 5 tons to 16 tons. Motor pump standing by from 16 – 50 tons. Tug standing by for quantities above 40 tons for inflammable liquids (flashpoint less than 55°C) and above 50 tons for other dangerous cargo.

FRESH WATER: Supplies available at all berths on quay by pipeline of 100 mm. with reduction of 70 mm. (rate 25 t.p.h.).

FUEL: Fuel oil of 1,500 seconds viscosity available at Berth No. 1 and at the Fishing Quay. Rate 50 to 80 cu.m.p.h.

CONSULS:

	Telephone	*Telex*
Belgium	301875	
China	301691, 301463	
France	300824, 300225	5209
Germany	312967, 312968	5224
Ghana	300746, 300957	
Niger	314030	
Nigeria	301142, 301879	5247
Russia	312834 & 6	5204
USA, Netherlands Zaire, Sweden/Norway	300650, 301798	

REPAIRS: Workshops for small repairs. No tank-cleaning facilities.

DRY DOCKS: Only hauling gear of 250 tons for careening small ships and trawlers.

WATCHMEN: (See "Fire Precautions".) Recommended that a watchman be on board. Can be arranged by Agents.

OPENING/CLOSING HATCHES: Carried out by stevedores

CUSTOMS ALLOWANCES: 200 cigarettes and 3 opened bottles of spirits for each crew member.

AIRPORT: 5 km. from port. Regular flights to European destinations (5 departures a week for Paris).

TIME: GMT plus 1 hour.

HOLIDAYS: January 1st; January 16th; Easter Sunday 1st April; Labour Day (May 1st) – no cargo work; 26th October; 30th November; 31st December – no cargo work; Assumption; November 1st (All Saints' Day); 25th December (Christmas); Tabaski and Ramadan at the beginning of Lunar Year (Moslem holidays).

POLICE/AMBULANCE/FIRE: Harbour Police 31-3942; First Aid 17; Hospital 31-2713 and 31-2717; Fire Brigade 18.

TELEPHONES: A telephone can be placed on board at request of ship's Master.

SHORE LEAVE: Crew must carry shore pass.

REPORT: March 1988 (Updated 1994).

The Port of Cotonou is a well sheltered harbour enclosed by a 1,200 m. long West Breakwater and a 4 cables long East jetty projecting S.S.W. from shore (East cross breakwater). It was opened to traffic in August 1965 and is managed by Port Autonome de Cotonou.

The harbour is accessible to vessels of up to 210 m. in length and a max. draft of 10 m. The entrance is from the Ocean through a 0.6 mile long channel, 180 m. wide and 12 m. deep. The harbour pool was dredged to 11 m. in 1975. Silting is reported along the North side of the West breakwater and the new Dock. Dredging work carried out (1993).

Vessels drawing more than 30 ft. transit the channel on high water.

Petroleum Berths: The inner side (Westerly side) of the East breakwater provides berthing facilities for tankers of up to 200 m. in length and a max. draft of 32 ft. There is no deadweight or displacement limitation. However, tankers of up to 40,000 d.w.t. can safely enter the harbour and moor starboard side to berth called "P II". Berth "P II" does not have fuel oil receiving facilities. Clean products are handled through 1 × 8 in. flexible hose, rate 1,000 bbls./p.h. No facilities for dirty ballast. The fendering system consists of large cylindrical rubber fenders in excellent condition.

Fuel oil is discharged at Berth "Q I" located at the very end of the main quay (East side). Vessels of up to 150 m. in length with a max. draft of 8.0 m. can be accommodated. Vessels berth port side alongside. The quay is fenderless. There is no deadweight limitation. However, it would be unsafe to berth vessels larger than 15,000 d.w.t. Fuel oil is handled through 6 in. flexible hoses, rate 700 bbls.p.h. Max. back pressure 100 p.s.i.

Fire coverage is marginal – 2 × 60 lb. wheeled dry chemical fire extinguishers.

Charts: British: 595 and 1861. U.S.: 57006, 57041 and 57100.

Tides and Currents: The spring tide values are 1.50 m. and 0.20 m.

Currents set across the entrance and may attain a rate of 4 knots. The predominant direction of the swell is from the third quadrant, reaching 12 ft. in length between June and September.

The rainy season is mid-April to mid-July (tornado season).

Anchorage: Vessels can anchor 1 mile South East of the lighthouse. Good holding ground in a depth of 48 ft.

Pilotage/Towage: The Pilot boards 0.5 miles from the head of the West breakwater. Pilotage is around the clock, but between 2200 hrs. and 0600 hrs. 2 hours' notice is required.

Towage is performed by the Port Autonome de Cotonou. 2 × 1,400 h.p. tugs and 1 × 2,000 h.p. tug are available.

Telecommunication: The service to other Francophone West African countries is good. There is usually no problem with calls to the U.S.A. placed through the operator. There is no coastal radio station. The Port Authority monitors VHF Channel 16 and SSB 2182 kHz.

Repairs: There are no repair facilities.

Supplies: Fuel and gas oil are available from SONACOP. Fresh water is available at all berths by pipeline. Rate 25 cu.m.p.h. There are no barges available. Repatriation is possible. There are frequent air connections to Europe.

Oil Surveyor: There is no representation of independent Surveyor Companies.

Caleb Brett Ltd. is present in the surrounding countries (Togo and Nigeria.)

SONACOP: Societe Nationale de Commercialisation des Produits Petroliers is a state owned company and is the sole distributor of petroleum products in the country.

SONACOP operates a tankfarm which has a storage capacity of 70,000 cu.m. (19 tanks).

The national annual consumption of products is as follows:

Clean (Mogas, Gas Oil, Kerosene, Avgas)	150,000 tons.
Fuel oil	12,000 tons.

AUTHORITY: Port Autonome de Cotonou, B.P. 927, Cotonou, Benin. *Tel:* 312890, 315280. *Telex:* 5004 Dirport. *Cables:* Dirport. *FAX:* 312891. *Contact:* I. Badaron-Soule, Port Director. Badaron Madjidi, Harbour Master (Tel: 312782).

AGENT: SCAC, B.P. 433, Cotonou, Benin. Tel: (229) 331178, 331198 and 331611. Telex: 5121. Cables: Ctnou Scac Benin. Fax: (229) 330611.

SEME TERMINAL: 06.18 N. 02.39 E. (See Plan)

LOCATION: The loading terminal is located at Lat. 06° 18′ 23″ N. and Long. 2° 39′ 32″ E., about 4 nautical miles off the coast of the People's Republic of Benin.

Depth of water at the loading berth is 18 m. The bottom is sand, mud and shell.

DOCUMENTS: See "Cotonou".

NAVIGATION AIDS: *Beaconing:* Four area marker buoy units in the IALA System A, i.e. each unit consisting of 4 beacons, are placed in position to mark the following installations:

Platform No. 1:	Lat. 6° 14′ 23″ N.	Long. 2° 41′ 16″ E.
Platform No. 2:	Lat. 6° 12′ 19″ N.	Long. 2° 41′ 35″ E.
Platform No. 3:	Lat. 6° 15′ 29″ N.	Long. 2° 42′ 05″ E.
Seme Offshore Terminal:	Lat. 6° 18′ 23″ N.	Long. 2° 39′ 32″ E.

PILOTAGE: A Mooring Master will be provided by the Operator.

Boarding position will be agreed upon with the Mooring Master by radio upon arrival.

It is the responsibility of the ship's Master to provide, rig and maintain a safe accommodation ladder for access to and exit from the vessel or hoist.

ARRIVAL: *Temporary Anchoring:* No berthing will be attempted between 1500 hrs. and 0700 hrs., unless approved by the Mooring Master, the same for leaving at night.

Notice of Readiness can only be received between 0600 hrs. and 1400 hrs.

In the event of arrival after 1500 hrs. and during the hours of darkness, a holding area is located at Lat. 6° 16′ 00″ N. and Long. 2° 34′ 00″ E., in water depth of approximately 20 m. (66 ft.) The bottom is sand, mud and shell.

RESTRICTIONS: See "Arrival".

MAX. SIZE: Maximum permissible draft is 14 m. (46 ft.). However, the Operator may reduce this draft should meteorological and tidal conditions prove unfavourable.

HEALTH: *Sanitary Boarding:* The Mooring Master shall be entitled to conduct sanitary inspection.

The Master shall supply:

1. The Maritime Declaration of Health.
2. The Vaccination Certificates for the crew.

In case of infectious disease on board, the following institutions may be contacted:

Polyclinique	Tel: 301431/301420.
Clinique les Graces	Tel: 321171.
Doctor Lam	Tel: 300766.

RADIO: Vessels should send their ETAs by telex to Tender "Drill Fish" (Benin Cotonou 5134, 5173, 5174).

Notice of Arrival: Vessels bound for the Seme Offshore Terminal must notify their ETA to Seme Oilfield Project (Attn. Loading Master) at the following times:

(1) 7 days before arrival.
(2) 72 hours before arrival.
(3) 48 hours before arrival.
(4) 24 hours before arrival.

and then every 2 hours if any change in ETA.

When within 12 hours before arrival, a continuous watch must be kept on the VHF Channel 16.

The "7 days notification" need only be given if the sea passage in progress is in excess of 2 weeks' duration.

The "72 hours notification" must include the following information:

1. Name of vessel (if available).
2. Firm ETA (local time and date).
3. Quantity of cargo required in barrels and metric tons.
4. Estimated salt water arrival draft.
5. Manifold fittings flange sizes and ASA, DIN or BSS rating.
6. Any special requirements.

The "48 hours, 24 hours and 12 hours notifications" need only the notification of the name of the vessel and ETA plus any amendments to the details already provided in the "72 hours notification".

After the initial notification has been made, any change in ETA of more than 12 hours requires immediate notification to the Seme Terminal.

VHF: During vessel's stay at the terminal, a permanent watch must be kept on the Channel 9 or 6.

Communications: Normally, Channel 6 is used as the communicating channel between Seme Tank Farm, Seme Oilfield Project personnel and Seme Oilfield Project tugs. VHF sets for this purpose are supplied by the Operator.

TUGS: An adequate number of tugs will be available for all mooring operations at all times, these will be directed and co-ordinated by the Mooring Master.

The tugs available at the Seme Offshore Terminal are of the AHTS type, each with 2 × 2,640 b.h.p., generating a bollard pull of 50 tons.

Normally, the attending tug is "Drill Fish".

Mooring Boat: An adequately powered line handling boat is provided for running moorings, under the direction of the Mooring Master. Release of mooring lines will be performed by the mooring boat, except in an emergency.

BERTHING: *Loading Berth:* This is a modified conventional buoy mooring (CBM) to which a Mediterranean style moor has been adopted for berthing operations. The centre-line is oriented in a direction of 253° True, which relates directly to the bow heading. Under certain conditions, the vessel may be required to adopt a heading of ± 10° from the established norm.

Subject to draft, the berth can accommodate tankers up to about 120,000 d.w.t. to load part cargo with Benin as first port of call.

Mooring Equipment: There are 4 mooring buoys:

Buoys No. 1 and 2 are connected to 260 m. × 76 mm. stud link chain terminating with a 7,500 kg. Stevin MK 3 anchor, having a design holding capacity of approximately 110 tons.

Buoys No. 3 and 4 are connected to 310 m. × 76 mm. stud link chain terminating with a 10,000 kg. Stevin MK 3 anchor, having a design holding capacity of approximately 145 tons.

Each buoy is equipped with 2 quick-release hooks.

Special Moorings: These are carried aboard the attending tug and if their use is deemed necessary, the tug and the mooring boat will work in conjunction to put the lines aboard the tanker. First passing the eye over the mooring buoy hook and then passing the bitter end to the tanker to be made fast.

Weather Criteria: The following criteria are for the weather conditions under which the tanker may remain berthed.

Max. wind speed at 10 m. above sea level:

1 hour mean	– 20 knots (10.3 MS – 1)
1 minute mean	– 25 knots (13.0 MS – 1)
Max. wave:	– 2.5 HSTG

Wind and/or waves to these values are not restricted to any particular direction.

BALLAST: *Ballast on Arrival:* Ships must arrive with sufficient ballast and correct trim to be able to manoeuvre with complete safety.

Deballasting will not be allowed without the consent of the Loading Master.

Deballasting – Water Pollution: The vessel must approach the terminal with clean ballast.

Any vessel approaching with polluted ballast may be forced to leave the terminal and shall be fully liable for ensuing delays. Acceptance of Notice of Readiness would also be amended accordingly.

It is forbidden to dispose of cinders, burning materials, objects and waste of any kind in the sea.

The Master shall be responsible for any leakage or overflow on board and any other difficulty which may involve an occasional jettisoning of hydrocarbon. Such leakage shall be stopped.

Scuppers shall be securely blocked during the entire loading time.

The Operator declines any liability related to non-compliance with International and Port Regulations the Mooring Master may discover.

Non-compliance with the above regulations involves express notification to the Master or filing of a report.

LOADING: *Notice of Readiness:* Notice of Readiness shall be tendered to the Loading Master (See "Arrival").

Connection of Flexible Hoses: Loading of vessels shall be carried out through a 12 in. flexible submerged hose. Connection to the manifold is by a 12 in. Camlock flange. The Operator may supply 10 in., 12 in. and 16 in. adapters.

The loading hose is equipped with a manually operated shut-off valve at ship's side of the hose end.

The tanker derrick is to be rigged on the starboard side before mooring. The S.W.L. of the derrick hook shall be at least 4 tons.

During connection and disconnection of the flexible hoses, assistance of the crew will be essential, in particular for the handling of the winches and derricks. During the entire stay of the vessel at the loading site, the Mooring Master shall ensure that a safety watch is maintained onboard. The Loading Master or his representative, performs the duties of head of loading and remains in touch with the terminal.

The assisting vessels are to remain at the disposal of the Loading Master.

A ladder must be kept permanently ready alongside the vessel so as to permit access by the team in charge of the flexible hoses. A boat rope must be rigged near the ladder.

Loading: Loading may be carried out at a maximum rate of 1,650 cu.m.p.h. or 11,000 bbls.p.h.

Inspection of tanks after deballasting and ullages after loading is to be carried out in the presence of the Loading Master.

The terminal shall place on board the vessel sealed samples representing the cargo.

Since it is a "Shore stop" operation, the Loading Master shall notify the vessel, 30 minutes before end of the loading.

The Master shall be fully responsible for operating the valves and for the safety of the cargo on board.

MEDICAL: In cases of emergency, contact the three institutions mentioned in the "Health" section.

FRESH WATER: Not available.

FUEL: Not available.

CONSULS: See "Cotonou".

REPAIRS: No facilities available.

TIME: GMT plus 1 hour.

SHORE LEAVE: Not possible.

WEATHER: *Meteorology:* The rainy seasons (monsoon) extend from May to June and from September to October.

The dry season extends over a period of 3 to 4 months, that is to say from November to February.

Air Temperature: The air temperature varies on average from 24° C to 36° C.

Sea Temperature: The sea temperature varies from 21° C to 31° C.

Visibility: During the rainy season, visibility can be reduced to less than one mile due to precipitation.

Tides: The tides are of a semi-diurnal type. Max. amplitude is 2 m.

Wind: The prevailing wind blows from the South and West, and is strongest from May through September.

Currents: Maximum current that may be present is assumed to be 3 knots, from direction around 260° (Guinea Current). Normally the current is well below the maximum from this direction. From other directions lower rate currents are to be expected (i.e. tidal current).
Swell: Southwesterly swell is most frequent from April thorugh October. The higher waves are expected as a combination of locally generated Southwesterly wind, waves and swell. Wave heights above 3 m. are relatively rare.
GENERAL: *Visitors:* Except for personnel with specific tasks on board the vessel, the boarding of personnel takes place under the full responsibility of the Master.
Chart: No. 595 (French).
Sailing Directions: Africa Pilot, Volumes No. 1 and 2, published by the British Admiralty.

REPORT: March 1988 (Updated 1994).
Seme Terminal is located about 4 miles offshore. The Oil field is now run by local technicians assisted by contractors.
Seme's output is around 6,000 barrels per day.
Location: 06° 18′ 23″ N., 02° 39′ 32″ E.
Anchorage: 06° 16′ N., 02° 34′ E. Depth 66 ft. Range of tide 6.0 ft. Current 2–3 knots. Bottom is sand, mud and shells.
Radio: ETA Instructions: Advise Seme Offshore Terminal and Agent 7 days, 72 hours, 48 hours, 24 hours and 12 hours prior to arrival of the following: ETA, quantity of cargo required, arrival draft and size of manifold fittings.
VHF: Channels 16 and 6.
Restrictions: Mooring and unmooring during daylight hours only (0700 hrs.–1500 hrs.)
Pilot: The Pilot boarding position is agreed prior to arrival.
Readiness: Notice of Readiness only received between 0600 hrs. and 1400 hrs.
Tugs: 2 × 2,650 h.p.
Documents/Clearance: See "Cotonou".
Production Platforms:

No. 1	06° 14′ 23″ N.,	02° 41′ 16″ E.
No. 2	06° 12′ 19″ N.,	02° 41′ 35″ E.
No. 3	06° 15′ 29″ N.,	02° 42′ 05″ E.

Berth: Depth in approaches and at berth 60 ft.
The berth is a conventional mooring buoy (CMB). Max. draft permissible 46 ft. Max. d.w.t. 60,000–80,000 tons. Larger tankers up to 120,000 d.w.t. can be berthed to load part cargo if Seme is first port of call (Max. displacement 75,000 tons).
The vessel berths on a heading of 253° to 4 mooring buoys. The use of wire ropes is not allowed. Synthetic hawsers are provided by the terminal. Vessel's hose boom to be rigged for 4 tons SWL minimum.
Loading: Seme Crude (API 23.0) is loaded through a single 12 in. hose which is connected to an undersea pipeline of 16 in. diameter and 5 miles long. Loading rate 11,500 barrels per hour.
Ballast: No facilities for dirty ballast.
Services: None available.

AUTHORITY: Seme Oil Terminal. *Telex:* 5173, 5174 Semoil Ctnou.

NOTES

Please also advise Shipping Guides Ltd.

Bermuda

HAMILTON, (incl. Freeport): 32.17 N. 64.47 W.

(See Plan)

NAVIGATIONAL WARNINGS: (Circulated by the Department of Marine & Ports Services)

Government Notice No. 196 (27.4.79)

The attention of all mariners is drawn to the dangers and hazards of close approach to the reefs which surround Bermuda, especially to the North and West of the Islands. They extend in places to a distance of 12 miles from the visible land and are virtually unmarked by navigational aids at their extremities.

Ships on passage with no intention of calling at Bermuda are advised to give the Islands a berth of at least 30 miles, observing that little distance is lost on the passage by so doing and nothing is gained by a closer approach. On the contrary, stranding or shipwreck has occurred all too often through the years with pollution of the surrounding reefs and beaches and destruction of the ecological life as well as possible ruin of the economy of the Islands.

Ships making for Bermuda are advised to do so from the East and South as the only entrance to the sheltered waters is at the S.E. of the Islands off St. George's. Here Pilots are available and can be embarked in daylight hours. Entry at night is dangerous and prohibited and close approach in dark hours should not be attempted without local knowledge.

Government Notice No. 197 (27.4.79)

Ships approaching Bermuda should contact the Bermuda Harbour Radio which is manned day and night on Channel 16 (VHF) or 2182 kHz or 500 kHz W/T giving vessel's name, call sign and position. Only after clearance has been given and instructions issued should ships – in daylight only – approach within 3 miles of St. David's Head on a heading between 240° and 300°. On no account should any other approach be made without local knowledge and large scale charts.

Pilots are available in this area for those who require them and are compulsory for all commercial vessels making entry to these Islands.

Notice to Boatmen. Admiralty Notices to Mariners:

1114. North Atlantic – Bermuda Islands – Caution (15.6.79).

5. Mariners are advised to navigate with extreme care in the approaches to Bermuda Islands, owing to the existence of extensive reefs which encircle the Islands and which are a constant hazard to navigation. North Rock Lt. (32° 28.5′ N., 64° 46′ W. approx.) and then outer seabuoys may not be reliable through lack of maintenance due to inaccessibility, except in very calm weather.

NOTICES: Implementation of IMO-adopted Area to be Avoided.

(1) Mariners are advised that at 0001 hrs. GMT on 1st December, 1985 an Area to be Avoided (ATBA) will be established covering the offshore reefs on the Northern coasts of Bermuda.

(2) The limit of a Restricted Area is to be:

(a) Gibbs Hill Light (Lat. 32° 15.1′ N., Long. 64° 50.0′ W. approx.).
(b) Lat. 32° 08.00′ N., Long. 64° 53.00′ W.
(c) Lat. 32° 12.00′ N., Long. 65° 10.00′ W.
(d) Lat. 32° 24.00′ N., Long. 65° 10.00′ W.
(e) Lat. 32° 39.00′ N., Long. 64° 53.00′ W.
(f) Lat. 32° 39.00′ N., Long. 64° 38.00′ W.
(g) Lat. 32° 32.00′ N., Long. 64° 29.00′ W.
(h) St. Davids Light (Lat. 32° 21.8′ N., Long. 64° 39.0′ W. approx.).

Bermuda Department of Marine and Port Services.

DOCUMENTS:

Ship's Register.
Derat Certificate.
Clearance from Previous Port.
5 Crew Lists.
5 Passenger Lists.
2 Provision Lists.
2 Crew Personal Effects Lists, i.e. cameras, binoculars, cigarettes, etc.
6 copies Cargo Manifest if discharging.

Cruise Ships: Customs require:

(Note: Forms may be secured in advance for prospective vessels.)

*5 Crew Lists
1 Crew Declaration
*5 Lists of All Disembarking Passengers
*5 Lists of All Transit Passengers
*5 Lists of All Non-United States Citizens in Transit (on ships from and returning to the United States)
1 Stores List
1 Declaration of Health
Clearance from Vessel's Last Port of Call
1 Bermuda Vessel Report (Customs No. 49).

(**Note:* Plus 1 of each of these forms for Agents)

N.B.

1. A facility for examining disembarking passengers and luggage must be provided. No passenger or luggage is to be allowed to board the tender without Custom's approval.

2. All documentation for passengers on vessels from, and returning to, the United States who are not U.S. Citizens must be seen by the Customs Official.

3. All disembarking passengers and luggage must be seen by the Customs Official.

4. Persons purchasing a ticket in Bermuda must complete an Immigration Embarkation Card which should be lodged with the Purser on embarkation. Similarly persons arriving by air and leaving by sea must lodge their duplicate immigration cards with the Purser on embarkation. It is required that the Purser pass all such cards to the Duty Customs Official prior to the vessel's departure.

PILOTAGE: Pilot ordered by Agent on receipt of vessel's ETA (72, 48 and 24 hrs.). Pilot boards vessel approximately 2 miles East of Island with St. David's Lighthouse bearing 240° True. Boats black hull with orange or white superstructure with "Pilots" or "Pilot Rescue" on side.

If vessel's ETA alters, Bermuda Harbour Radio which in direct contact with Pilot station can be contacted by VHF Channels 10, 12, 16, 26. Pilotage is confined to daylight hours only with exception of vessels calling for medical aid – some of which handled off-shore.

ANCHORAGES: Grassy Bay and Great Sound. These anchorages are used mainly by passenger liners as they are close to Hamilton Harbour and are protected from heavy weather. Also used by large vessels carrying out extensive repairs.

RESTRICTIONS: Restricted by draft of 26 ft. and length 700 ft. Daylight piloting only.

MAX. SIZE: Largest ship to enter to date, length 703 ft., draft 26.5 ft.

HEALTH: Pratique granted on 24-hour basis and can be obtained by wireless by sending message via VRT to "Health Bermuda" requesting Free Pratique be granted. If any suspected disease or fever on board advise "Health" as well as Agent.

RADIO: Bermuda Harbour Radio, controls channel traffic, call sign ZBM Bermuda.

VHF: Operated by Bermuda Harbour Radio. Contact on Channels 10, 12, 16, and 26.

Bermuda (VRT) on Channels 16, 26 and 28.

VTM system in operation.

TUGS: 3 tugs available, 1×1,200 i.h.p. and 2×3,200 i.h.p. Tugs normally join vessel in harbour if requested. Tugs ordered depending on the size of the vessel and weather conditions. Tug's lines used during normal tug operations.

BERTHING: Docks and tugs are agreed upon between Agent and Pilot prior ship's arrival.

Hamilton

Berth	*Length of Berth*	*Max. Draft*	*Remarks*
No. 1	510 ft.	26 ft.	Port layout allows ships in excess of 510 ft. in length to be accommodated. Primarily a passenger berth.
Nos. 5 and 6	620 ft.	26 ft.	Primarily a passenger berth.
No. 7	650 ft.	26 ft.	A small Ro/Ro ramp is provided at Berth No. 7 West.
No. 8	450 ft.	23 ft.	Berth Nos. 7 and 8 provide facilities for container operations, with approx. 5.5 acres of open area.
No. 8 East	250 ft.	16 ft.	Primarily a lay-by berth.

Drafts are governed by depth of water in channel approaches to the Harbour, i.e. 26 ft. MLW.

Freeport (West End Development Corporation) 32° 19′ N., 64° 50′ W.

Commercial (South Basin)	800 ft.	32 ft.	Bulk cement and Shell Company of Bermuda bunkering facilities. Max. length of vessel 600 ft.
King's Wharf (North Basin)	1,000 ft.	34 ft.	Passenger ship berth for winds below 20 knots. Bearing surface 500 ft., consisting of 2 dolphins 500 ft. apart with central dock 300 ft. long. Vessels berthing must drop anchor about 600 ft. from dock to facilitate vacating the berth. One or two tugs mandatory for berthing/unberthing, depending on size of vessel and weather conditions. Usually port side berthing.
Murray's Anchorage		36 ft.	
The Great Sound		34 ft.	
Five Fathom Hole		Unlimited	

CRANES: 1 × 225 ton Amhoist 9310, 1 × 165 ton P & H C-165.

STEVEDORES: Ordered by Agent after receipt of ETA. Average discharge general cargo 10 t.p.h.

Gangs and Priorities: Basically Bermuda operates with a maximum of 3 gangs although this can reduce when breakbulk or refrigerated cargo are being handled, or for the tying-up and letting-go of cruise ships. Gang Allocation Rules (BSA No. 97 15-3-79) are:

1. The first vessel to arrive to have all available gangs.

2. The second vessel to arrive to have 1 gang on arrival.

3. The third vessel to arrive will get labour from 1 or 2 when it becomes available.

4. When it is necessary for full utilisation of labour, all vessels must work maximum overtime in order to retain gangs.

Hours of Work (Longshoremen):

Straight time	Monday/Friday	0800 – 1200 hrs. 1300 – 1700 hrs.
Double time	Monday/Friday	1800 – 2200 hrs.
	Saturday	0800 – 1600 hrs.
	Sunday and Public Holidays	0800 – 2200 hrs.
	Meal hours	0700 – 0800, 1200 – 1300, 1700 – 1800 hrs.

Note: Normally the port stops Sunday/Friday inclusive at 2200 hrs. Should work proceed past 2200 hrs. it would be at double time. If required by the Union, a half hour meal break could be taken between 0400 hrs. and 0430 hrs.

Work stops at 1600 hrs. on Saturday until 0800 hrs. on Sunday, unless vessel is being worked through to a finish for sailing that night or early the next day.

Good Friday and Christmas Day are not worked on the Bermuda waterfront.

MEDICAL: No advance notice required for medical attention if other than critical cases. First-class hospital facilities available. Vaccination Certificates required for all seamen.

TANKERS: Shell bunkering berth, Freeport, Ireland Island. Discharge lines 8 in. and 10 in. No slop discharge facilities.

DENSITY: 1025.

FRESH WATER: Available alongside at Berths Nos. 6-7, by truck (capacity 4 tons), or by barge. Order prior arrival to avoid delay.

FUEL: Grades available from Shell or Esso: Bunker "C" fuel oil, viscosity 100 SSF at 122°F. Diesel oil. Viscosity 3616 at 100°F.

CONSULS:

Belgium
Bolivia
Chile
Denmark
Finland
France
Germany
Greece
Italy
Netherlands
Norway
Portugal
Sweden
United States

REPAIRS: All types minor deck and engine repairs can be carried out. Also major temporary repairs. Electronic repairs possible.

DRY DOCKS: Only yacht slipways available.

GANGWAY/DECK WATCHMEN: Not required.

OPENING/CLOSING HATCHES: Usually carried out by stevedores.

TOBACCO/WINE ALLOWANCE: Customs allows about 1 carton cigarettes and limited amount of spirits per man.

REPATRIATION: First-class facilities available for repatriation and crew changes.

AIRPORT: Distance from airport 10 miles. Connections to all parts of world. Average 15/20 flights per day.

TIME: Local time GMT minus 4 hours (October-April). GMT minus 3 hours (0200 hrs., last Sunday in April – 0200 hrs. last Sunday in October).

HOLIDAYS: New Year's Day; Good Friday; Bermuda Day (May 24th); Queen's Birthday (celebrated annually in June) June 17th in 1991; Cup Match (Thursday and Friday before first Monday in August); Labour Day (1st Monday in September); Remembrance Day (November 11th); Public Holiday (November 12th); Christmas Day, Boxing Day (December 26th).

POLICE/AMBULANCE/FIRE: 911. Air Sea Rescue 2971010.

TELEPHONES: Can be placed on board vessel when alongside.

IDENTIFICATION CARDS: Required by all crew going ashore.

GARBAGE DISPOSAL: Hunt's Sanitation Services. Tel: 236-7477. Fax: 236-9472.

David A. Atcheson Ltd. Tel: 238-8972

Skips are provided. Pick-up by arrangement, about twice a day, at a time of mutual convenience.

WASTE OIL DISPOSAL: Hunt's Sanitation Services – see above.

By tanker truck to regular berth, capacity about 2,500 imperial gallons.

SEAMAN'S CLUBS: Bermuda Sailor's Home, Richmond Road, Hamilton. Tel: 295-5598. Facilities: Restaurant, bar, accommodation, library, games, sports arranged.

CURRENCY: Bermuda Dollar, equivalent to U.S. dollar.

No currency restrictions for non-residents.

GENERAL: Port of Freeport, Ireland Island, situated in the Port of Hamilton at the old British Dockyard is used mainly by the Royal Navy, Shell Bunkering and cruise ships in Summer.

SHIPMASTER'S REPORT: Update 1994.

Pilotage: There are 10 Pilots who operate on a rotation basis. Least depth is in the Dundonald Channel and Two Rocks Passage approaching Hamilton. Passenger Vessels over 26 ft. anchor in Grassy Bay just North of the Dundonald Channel. Official max. draft is 26 ft.

Berthing: Vessel berths starboard side to with tug assistance. During a long stay vessels often have to shift up and down the wharf to make room for other ships making short calls. At one time the bow was overhanging the end of the quay by 100 ft. but even in this position ship can be well secured.

Cargo Operations: Two container gangs can be worked at all times. At weekends additional men are available from other areas within the stevedoring firm and a third gang can be made up.

Fresh Water: Not readily available in large quantities due to a water shortage. Price when available is $15.0 a ton. We managed without buying any in spite of a prolonged stay.

Stores: Very expensive and would suggest only plan on buying essentials from supermarket in small quantities.

Discharge Averages:

Rolls of newsprint	22.07 tons per hour
Vehicles and parts (Ro-Ro)	44.37 " " "
Breakbulk	30.72 " " "
Breakbulk items off container vessel	27.58 " " "
Containers	19.19 T.E.U. "

AUTHORITY: Department of Marine & Ports Services, P.O. Box HM180, Hamilton HM AX, Bermuda. *Tel:* (441) 295-6575. *FAX:* (441) 295-3718. *Contact:* R.D. Ross, Director. M. Dolding, Assistant Director/Harbour Master.

AGENT: Meyer Agencies Ltd., 35 Church Street, P.O.Box HM 510, Hamilton HMCX, Bermuda. Tel: 441-295-4176 (After hours 441-297-0664). Telex: 3361 Meyer BA. Fax: 441-295-4556. Cables: Meyerco Bermuda.

Shipping, Freight, Insurance, Travel Agents. Marine repairs, Tug/Barge Operators, stevedoring Operators, P and I Reps.

ST. GEORGE'S: 32.22 N. 64.41 W. (See Plan)

NAVIGATION WARNINGS: See "Hamilton".

NOTICES: See "Hamilton".

DOCUMENTS: See "Hamilton".

PILOTAGE: See "Hamilton".

ANCHORAGES: *(a)* Five Fathom Hole, located at Eastern end of Island and is point where Pilots embark/disembark. Used by vessels not required to enter or those awaiting daylight. *(b)* Murray's Anchorage, used instead of Five Fathom Hole during times of heavy weather (daylight hours only). Also, by vessels unable enter St. George's Harbour and wishing to take on water, carry out repairs, etc. A stand-by anchorage for vessels waiting berth at Esso Oil bunkering pier and for vessels leaving this pier and awaiting daylight. *(c)* St. George's Harbour, when weather conditions such that Five Fathom Hole and Murray's Anchorage unsuitable to land ill/injured persons vessel proceeds directly to St. George's Harbour and anchors for short stays only, subject to size.

RESTRICTIONS: Entry to St. George's Harbour restricted waterline length of approximately 600 ft. and by draft of 28 ft. at H.W. Murray's Anchorage restricted by draft of 38 ft. H.W.

MAX. SIZE: Largest ship to enter to date – length 704 ft. However, size controlled by max. draft of 28 ft., displacement and weather conditions.

HEALTH: Pratique granted on 24 hour basis and can be obtained by wireless by sending message via VRT to "Health Bermuda" requesting Free Pratique be granted. If any suspected disease or fever on board advise Health as well as Agent.

RADIO: Commercial radio station operated by Cable & Wireless Limited, call letters VRT Bermuda, on VHF 16, 26 and 28. Pilots and Bermuda Harbour Radio control Channel traffic, call sign ZBM Bermuda (VHF Channels 16 and 12).

VHF: Operated by Bermuda Harbour Radio. Contact on Channels 10, 12, 16, and 26.

VTS: System installed at the signal station at Fort St. George.

TUGS: 3 tugs available, 1×1,200 h.p. and 2×3,200 h.p. Tugs normally join vessel in harbour if requested. Tugs not compulsory (except for cruise ships) and ordered depending on the size of the vessel and weather conditions. Tug's lines used during normal tug operations.

BERTHING: Dock and tugs agreed upon between Agent and Harbour Master prior ship's arrival.

St. George's as a Port of Discharge: Stevedores advised the 51st meeting (1974) of The Bermuda Shipping Association that as St. George's is no longer being used for cargo, all gear and equipment have been removed from the port. In the event of discharge taking place at St. George's there will be an 'item of cost' for transport of gear and equipment from Hamilton to St. George's. Similarly an 'item of cost' is applicable to discharge at Freeport (Dockyard).

Berth	*Length*	*Max. draft*	*Remarks*
Penno's Wharf	750 ft.	28 ft.	Cruise ship (New cruise ship terminal completed 1991) or cargo-handling berth. Large area on Western end for bulk cargo discharge.
Hunter's Wharf	335 ft.	28 ft.	Concrete jetty with steps for small boat berthing. Large vessels berthed at Pennos Wharf overhang up to 250 ft. over Hunter's Wharf in depths up to 30 ft.
Ordnance Island	160 ft.	26 ft.	No cargo-handling facilities. New cruise ship terminal completed May 1994, capable of berthing 650 ft. cruise ships.

STEVEDORES: Ordered by Agent after receipt of ETA. Average discharge general cargo 10 t.p.h.

Also see "Hamilton".

MEDICAL: No advance notice required for medical attention if other than critical cases. First-class hospital facilities available. Vaccination certificates required for all seamen.

TANKERS: Esso Oil Pier: Two dolphins, centre platform and walkways. Vessels up to 700 ft. in length and 38,000 d.w.t. can be accommodated. Discharge lines 8 in. and 10 in. No slop discharge facilities.

Berthing: The berth was rebuilt in 1980 about 40 ft. further out (the old pier debris was left in place). Ships are moored to 4 buoys, forward and aft centreline and offshore on the beam also to bollards on the shoreline and on the 2 breasting dolphins. Ships normally approach from the North with 2 tugs alongside forward and aft. The anchor may be dropped and 3 – 4 lengths of chain run out. A launch will take the mooring ropes, usually to the forward buoy first, to the aft buoy and then to the breasting dolphins. When the ship is in position, all other moorings are sent out; those to the shoreline last. The minimum number of ropes is: 2 to each of the offshore buoys, 1 to the fore and aft buoys and to 4 bollards ashore, 2 or 4 spring lines to the dolphins. Length of breasting lines must be minimum 750 ft. long to reach shore.

Caution: The ropes to the buoys must be kept taut at all times; particular care must be paid to these moorings during the hurricane and Winter seasons. Occasionally ships may be berthed heading N.E. In strong winds from S.W. to N.E. vessel will not be berthed, nor be permitted to remain alongside if wind shifts onto the dock.

Cargo: Two or more 8 in. hoses are used for the discharge of cargo. The ship's cargo boom may be used to connect or support the hose. Maximum pressure on the hose 100/120 p.s.i.g. There are several cargo lines. Tankers carrying more than one grade to St. George should arrange the cargo to permit discharging two or more grades simultaneously. Hand radios are used during the cargo operations.

Requirements for Vessels Using the Esso Oil Terminal:

1. Tankers and Large Vessels for Bunkers:
   (a) It is an Oil Terminal requirement that a Pilot remains on board at all times while alongside the Terminal.
   (b) It is a Terminal requirement that all vessels on completion of either discharging or bunkering/ballasting leave the berth and proceed either to sea, or wait daylight.
   (c) One tug is mandatory for berthing and unberthing and a second tug depending upon weather and other conditions decided by the Master and Pilot, and the Agent will be informed accordingly.
   (d) Tug requirements for unberthing outside normal working hours must be discussed well in advance between Master and Pilot (and Agent informed) as it may take up to 4 hours before the second tug is available at the Terminal. Weather conditions, especially at weekends during the winter months, must be assessed and if any likelihood of strong Northerly winds, precaution should be taken of ordering a tug(s) or if necessary have a tug standing-by in readiness.
   (e) Max. draft alongside not to exceed 34 ft. (10.3 m.) and/or length 700 ft., 38,000 d.w.t. unless under exceptional circumstances and permission authorised by Esso Management.
2. Liquid Gas Carriers and Smaller Vessels for Bunkers:
   (a) It is mandatory to have a tug for berthing liquid gas carriers but depending upon conditions prevailing at the time, the Master and Pilot will decide whether or not a tug is advisable for unberthing.
3. General:
   The over-riding factor must be for the safety of the ship at all times and the Pilot with his local knowledge and skill will advise the Master (who probably is unfamiliar with Bermuda waters) as to the advisability of the necessary assistance required.
   Pilot detention will be paid at an hourly rate from the time the vessel is secured alongside as this is not in his normal line of duty. He is retained at the request of the Terminal as a precautionary measure should the ship have to be moved at short notice.

DENSITY: 1025.

FRESH WATER: Available. Order prior arrival to avoid delay.

FUEL: Grades available: Bunker "C" fuel oil, viscosity 122 SSF at 122°F. Diesel oil, viscosity 3616 at 100°F.

CONSULS: See "Hamilton".

REPAIRS: All types minor deck and engine repairs can be carried out. Also major temporary repairs.

DRY DOCKS: Only yacht slipways available.

GANGWAY/DECK WATCHMEN: Not required.

OPENING/CLOSING HATCHES: Usually carried out by the stevedores.

TOBACCO/WINE ALLOWANCE: Customs allow about one carton cigarettes and limited amount spirits per man.

REPATRIATION: First-class facilities available for repatriation and crew changes.

AIRPORT: Distance from airport 2 miles. Connections to all parts of world. Average of 15/20 flights per day.

TIME: See "Hamilton".

HOLIDAYS: See "Hamilton".

POLICE/AMBULANCE/FIRE: Police 911; Ambulance 911; Fire 911; Air Sea Rescue 297-1010.

TELEPHONES: Can be placed on board vessels when alongside.

IDENTIFICATION CARDS: Required by all crew members going ashore.

GENERAL: Esso Oil Berth, within Port of St. George, is purely a bunkering and petroleum discharge pier situated on the Southern side of Murray's Anchorage.

AUTHORITY: Department of Marine and Ports Services, P.O. Box HM 180, Hamilton HM AX, Bermuda. *Tel:* (441) 295-6575. *FAX:* (441) 295-3718. *Contact:* Michael Dolding, Harbour Master/Deputy Port Director.

AGENT: Meyer Agencies Ltd., Water Street, P.O.Box GE 48, St. George's, Bermuda. Tel: 441-297-1616 (After hours 441-297-0664). Telex: 3361 Meyer BA. Fax: 441-297-1428

Shipping, Freight, Insurance, Travel Agents. Marine repairs, Tug/Barge Operators, Stevedoring Operators, P and I Reps.

NOTES

Please also advise Shipping Guides Ltd.

Bolivia

GENERAL: Bolivia is completely land locked with no ocean ports.

The country has special port facilities or 'in transit zones' in Brazil at Santos; in Argentina at Buenos Aires and Rosario, and to the Pacific at Matarani in Peru, also Arica and Antofagusta in Chile.

Santos (Brazil): The railway is from Santos to Santa Cruz (Bolivia) via the Bolivian border town of Corumba, a total distance of 1,300 miles. The port has a shed for Bolivian and Paraguayan imports and exports.

Buenos Aires and Rosario (Argentina): At the port of Rosario, a quay of 820 m., with land and sheds, has been made available for the discharge, loading, reception, dispatch and storage of Bolivian imports and exports. A railway runs from Rosario to La Paz via the Bolivian frontier town of Villazon, and another line past Salta to Santa Cruz via Yacuiba on the boundary, distances of 1,300 miles and 1,500 miles respectively. Buenos Aires has no 'free zone' for Bolivian cargoes.

Matarani (Peru): The port has facilities for handling Bolivian imports and exports. There are storage sheds for general cargo, a mobile loading tower for ores and concentrates, and a mobile pneumatic tower for discharging bulk grain. Containers can be landed and sent through to Bolivia or stripped and the goods stuffed into local containers (railway owned, if possible) for transport to Bolivia. A railway unites the port with Puno on Lake Titicaca, where a steamer transports cargo to Guaqui and then by rail or road to La Paz (525 miles) or other Bolivian towns.

There is also an unpaved road direct to La Paz and to other Bolivian cities, that is a useful alternative to the railway, but, as with the road from Arica, it is often in bad condition during the rainy period, December to April. A road from Ilo to the Bolivian frontier town of Desaguadero has been completed.

Arica (Chile): The railway is the shortest route (283 miles) from a seaport through to La Paz. There is also a road, on which trucks take about 48 hours to transit between Arica and La Paz, but during the rainy season, December to April, the condition of this unpaved road so deteriorates that road transport can be delayed for up to 12 days.

The port has a warehouse for Bolivian cargo and facilities for handling containers and dispatching them in bond by rail or road to Bolivia.

Antofagasta (Chile): The railways transports the greatest tonnage of Bolivian imports (mostly bulk grain) and exports (minerals – ingots, ores and concentrates).

It links Antofagasta with La Paz via Oruro and is 729 miles long. There are branches to Cochabamba, and Potosi and Sucre.

DOCUMENTS: In each port there are Bolivian Customs Authorities under the control of the Bolivian Consul. At none of the 'in-transit ports' are any special Consular despatches or documents needed by vessels, other than those required by the particular country. It is only necessary to present separate manifests for cargo in transit to Bolivia.

However commercial invoices, and goods documentation does require consular intervention.

Shippers must provide Bills of Lading and Consular Invoices and also attach suppliers invoices, certificates of origin and insurance policy. Most imports are handled under letters of credit. Documents must be made out in Spanish. At Ocean Port, forwarding Agents replace the Bill of Lading with a railway bill or trucking bill. There is no exchange control or shortage of foreign exchange in Bolivia.

Claims are finally set up (shortages, condition, etc.) in Bolivia, and hook tallies, local port receipt to Bolivian Customs, railway or truck receipts, etc., all form part of the settlement.

CONTAINERS: It is possible to despatch sealed containers right through to Customs in Bolivia for opening there.

WEIGHTS AND MEASURES: All weights and measures are to be expressed in the metric system, except for lumber, in board feet.

NOTES

Please also advise Shipping Guides Ltd.

Brazil

GENERAL (See Plan)

SHIP REPORTING SYSTEM:

Information System of Maritime Traffic Control (SISCONTRAM)

Description:

A voluntary reporting system operated by the Naval Command for the Control of Maritime Traffic (COMCONTRAM). The limits of the search and rescue (SAR) area covered by the system are:

(a) 04° 31′ N., 50° 59′ W. Brazil – Guyane border.
(b) 05° 00′ N., 48° 00′ W.
(c) 05° 00′ N., 40° 00′ W.
(d) 07° 40′ N., 35° 00′ W.
(e) 06° 22′ S., 16° 00′ W.
(f) 06° 22′ S., 10° 00′ W.
(g) 34° 00′ S., 10° 00′ W.
(h) 34° 00′ S., 53° 00′ W. Brazil – Uruguay border.

In addition vessels are requested to participate in the scheme within the larger area of the Atlantic Ocean, South of 23° 30′ N.

Requirement for messages.

DEPARTURE MESSAGE (Type 1). This contains the vessel's Sailing Plan and should be sent:

(a) On sailing from a port within the area.
(b) Prior to entering the reporting area.

ALTERATION OF ROUTE MESSAGE (Type 2). This should be sent whenever the ship has to modify the route or change the destination given in the Departure Message.

POSITION MESSAGE (Type 3). This should be sent:

(a) When the vessel is more than 25 miles off the planned route.
(b) On a change in the navigational status of the vessel, e.g. stopped or damaged.
(c) When the vessel observes a danger to navigation.

ARRIVAL MESSAGE (Type 4). This should be sent:

(a) When the last point on the pre-established route close to the port of arrival is reached.
(b) When leaving the reporting area.

Form of messages.

Each message consists of a selection of items from the format list shown below. Message items should be separated by a stroke (/), omitted items by a dash between two strokes (/–/) and the end of the message by a double stroke (//).

A. Vessel's call sign (4-8 characters).
B. Vessel's nationality (2 character abbreviation of name).
C. Vessel's name (up to 18 characters).
D. Type of vessel. (CGO – general cargo, container, Ro/Ro; BLK – bulk carrier; PAS – passenger; TKR – tankers in general; TUG – tug; FSH – fishing.
E. Message type (e.g. "3" indicates Position Message).
F. Port of origin/departure (up to 18 characters).
G. ETD in GMT (6 digits with suffix Z – represents time of departure from a port, time of entry into the area or time of position).
H. ARRIVAL PORT (up to 18 characters).
I. ETA in GMT (format as for G – represents time at last route point close to destination or time on leaving the area).
J. SPEED (4 digits, knots and tenths of knots, e.g. 15.5 – this is estimated speed over pre-established route or new estimated speed if route has changed).
L. POSITION[1] (for message types 1 and 2 a minimum of 2 and maximum of 16 latitude and longitude groups, representing course change points, can be sent; each group should be separated by "/". Type 3 messages require a single latitude and longitude group).
M. COURSE CHANGE POINT NUMBER (2 digits representing the last pre-established course change point passed).
N. DATE/TIME (format as in G – time of transmission).
O. DOCTOR ONBOARD (Y for yes, N for no).
P. OTHER INFORMATION (Use codes from the International Code of Signals to provide additional information about the incident which caused the Position Message to be sent – maximum of 18 characters).

[1] Latitude (4 digits) in degrees and minutes N or S, e.g. 2125S; longitude (5 digits) in degrees and minutes E or W, e.g. 05125W.

DEPARTURE MESSAGE (Type 1) consists of items A/B/C/D/E/F/G/H/I/J/O/L/N//

ALTERATION OF ROUTE MESSAGE (Type 2) consists of items A/B/C/D/E/G/H/I/J/L/N//

POSITION MESSAGE (Type 3) consists of items A/B/C/D/E/L/G/M/I/J/P/N//

ARRIVAL MESSAGE (Type 4) consists of items A/B/C/D/E/H/I/N//

Transmission of messages.

Reports addressed to COMCONTRAMAR are free of charge and can be sent through one of the following Brazilian coast radio stations: Belem (PPL), Olinda (PPO), Rio (PPR), Juncao (PPJ). Alternatively, reports addressed COMCONTRAM RIO can be sent by radiotelex No. 2153158, 2153159 or 2153181 MMAR BR. Reports sent in this way are chargeable.

DOCUMENTS:

Required prior to arrival:

Notice of arrival:

At least 24 hours prior to the anticipated arrival of the vessel, the following must be notified: the Captain of the Port, the Federal Maritime and Air Police, and Maritime Health. Likewise, the Cooperative of Health Inspector of Bahia (VHF radiotelegraph station, Channels 12 and 18) must be notified either directly or through the agency. (The Bahia Cooperative is a private institution, controlled by the Office of the Captain of the Port.) .

Information on cargo for the port:

The agency should receive by airmail, at least 24 hours in advance of the anticipated arrival of the vessel, the following documents for distribution as indicated.

Documents	*Port Authority*	*Customs*	*Agency*	*Total*
Cargo Manifest	1	1	2	4
Manifest of Dangerous Cargo	1	1	2	4
Freighted Bills of Lading	–	1	2	3
Stowage Plan	1	–	1	2

All manifests not in the Portuguese language must be translated into Portuguese and put on a special form, (copia de traducao de manifesto de carga) copy of translated cargo manifest.

Request for port services:

At least 24 hours prior to arrival, the Brazilian Port Authority, Empresa de Portos do Brasil, S.A. (PORTOBRAS), must receive their berthing request, to obtain port services.

Additional requirements:

All communications with the above mentioned Authority must be made through a shipping broker. The Port Agent handles all cargo operations. The shipping broker may also be the Port Agent.

On arrival:

Type of Document	*Number and distribution of documents*					
Basic forms	*Port Captain(a)*	*Customs*	*Maritime Police*	*National Health*	*Agency*	*Total*
1. General Declaration(b)	1	1	1	–	1	4
2. Cargo Manifest(c)	–	1	–	–	1	2
3. Crew List	1	3	3	1	2(d)	10
4. Passenger List	1	3	3	2	2(d)	11
5. Ship's Store List	–	3(a)	1(f)	–	1	5
6. Crew Effects Declaration	–	3	–	–	–	3
7. Maritime Declaration of Health	–	–	–	1(g)	–	1
8. Mail List	–	–	–	–	1(h)	1
9. Health Pratique Book from preceding Brazilian Port	–	–	–	1	–	1
10. Entrance Declaration	1	–	–	–	–	1
11. Certificate of Customs Inspection	–	1	–	–	–	1
12. No-cargo Manifest	–	1	–	–	1	2
13. No Passenger Declaration	1	1	2	1	2(d)	8
14. List of Passengers in transit	1	–	1	1	–	3
15. Bills of Lading	–	1	–	–	1	2
16. Declaration of On-deck Cargo	1	–	–	–	–	1
17. In-ballast Declaration	1	–	–	–	–	1

(a) These documents are delivered to the Office of the Captain of the Port, where their contents are recorded. They are then sealed and returned for the vessel's departure operation.

(b) In addition to the special Entrance Declaration for the Office of the Captain of the Port, and the Certification of Customs inspection.

(c) The Manifest should include the number and contents of the containers, as well as an indication of unfreighted containers.

(d) One copy for the exit gate of the harbour.

(e) In the event that the next port of call should be Brazilian, an additional copy must be submitted, which is stamped by Customs.

(f) If the drugs are not included on the Ship's Store List, a list of medicinal drugs (narcotics) must be presented to the Maritime Police.

(g) Only for the first Brazilian port of call. There is a special form in the Portuguese language, but the LAFTA/OAS form will be accepted.

(h) For delivery to the Postal Authority.

Other requirements:

The landing card requirement provision is still current, but it is not always requested. The agency delivers blank forms. The cards are filled out on board, and a photograph of the passenger or crew member must be affixed. The cards must be presented to the Maritime Police within 48 hours after the arrival of the vessel, but in the meantime all interested persons may land. The cards must be returned to the Police before the vessel's departure.

Crew members' Documents: Certain Brazilian ports authorities have been levying fines at an increasing rate, against vessels in cases where crew members' documents have been incomplete or improperly prepared. In order to avoid such fines, the following guidelines should be adhered to:

(1) All crew members should possess a valid Seaman's Book.

(2) Crew members without a Seaman's Book must have a statement in their passport, mentioning 'Seaman' as profession, preferably with the vessel's name and the crew member's rank.

(3) If the above requirements are not satisfied, the crew member should be listed on a Passenger List, but still bear a valid passport and valid visa, plus vaccination certificates.

(4) Supernumeraries are not accepted on Crew Lists. Any relatives of crew members should be stated on a valid Passenger List, also bearing a valid passport with required visa and vaccination certificate.

Prior to Departure:

At least 24 hours prior to sailing, to avoid possible delays, the following documents must be processed:

Customs:

The original of the payment voucher covering the lighthouse and beacon fees, to obtain the clearance permit;

Captain of the Port:

A copy of the above mentioned voucher; Crew List, should there have been any crew changes; List of Passengers Embarked; upon presentation of these, the sailing permit is granted.

Maritime Police:

Passenger List or no-passenger declaration; Crew List, should there have been any crew changes.

Postal Service:

A certificate of mail delivery or a no-mail certificate must be obtained.

In the event that the next port of call is Brazilian, the local authorities check the sailing permit issued by the four agencies mentioned above; if the next port of call is foreign, the sailing permit issued by the Captain of the Port suffices.

Other Provisions:

The agency must, within seven days following the departure of the vessel, deliver a copy of the cargo manifest of freight embarked in the port, and a copy of each bill of lading issued to Customs, PORTOBRAS, and SUNAMAN.

FLAG: The Brazilian flag is a green ground with a yellow lozenge enclosing a blue sphere, with 21 white stars of which 5 form the Southern Cross and the motto 'Ordern & Progresso'.

This must be flown from the foremast when in Brazilian Ports, from 0800 hrs. to sunset daily.

The customs flag – blue with a white star – to be flown 24 hours a day after clearance is granted.

FREE PRATIQUE: Vessels must report ETA via Agent 24 hours in advance, confirming 12 hours prior to arrival. The message must report that sanitary conditions are satisfactory or otherwise and an indication of the number of passengers intending to disembark and/or in transit.

On arrival the Port Health Authority will board, and further to the documents previously mentioned will require to sight vaccination certificates.

The reception committee will only board by accommodation ladder, or gangway if the vessel is alongside, and must be met at the head of the ladder by a Ship's Officer.

PILOTAGE: This is compulsory for all vessels over 200 g.r.t. There are specific boarding points shown on the charts for each port and vessels must wait there, flying flag G, either at anchor or under way. A safe rope ladder must be provided and must be properly illuminated. Pilots should be ordered at least 2 hours prior to arrival by ship's Agent, or in the event of outlying ports 24 or 48 hours ahead (See each port).

VHF: Vessels in coastal regions to maintain watch on Channel 16.

STEVEDORES: Longshoremen are provided by the dock companies and paid for from the Port Charges. Stevedoring can be carried out either by ship's Agents or by contract. In all cases the number of men per gang and their salaries are fixed by Sunaman (Merchant Shipping Superintendency in the Ministry of Transport).

The vessel is legally the employer of the labour, and as a result the vessel is responsible for any damage to the cargo, ship or any third party, by the stevedores.

GENERAL BERTHING INFORMATION:

A berthing priority in Brazilian Ports is given as follows:–

(1) Warships, Brazilian or Foreign.
(2) Regular Passenger Liners for whom immediate berthing facilities are available. if requested at least 24 hours in advance.
(3) Cargo vessels, for whom there are special installations, are given preferential berthing rights.
(4) Vessels with perishable cargoes are given priority berthing.
(5) Vessels that can load and discharge simultaneously can obtain preference over others.

As soon as cargo operations finish, all vessels must leave their berth, or be removed by the Port Authority.

FUEL: A monopoly on supply is held by PETROBRAS, and owners requirements must be made well in advance to the Petrobras offices in New York, London or Rio de Janeiro. Supplies are not plentiful, and in certain ports only certain grades are available.

WATCHMEN: Services of watchmen compulsory.

PIRACY: Acts of piracy have taken place at Rio de Janeiro and Santos in recent times, with loss of life of crew members.

POLLUTION: Very strict penalties are enforced, and fines are the same, however little pollution is caused. No dumping of any oil is permitted within 50 miles of the coast.

Garbage: It is forbidden to dump any garbage in any harbour or river. In some ports garbage collection can be arranged.

CREW: Crew members wishing to join a vessel, must carry a Letter of Instruction for the ship's Agent. They must be signed on within 48 hours of arrival.

For Crew members joining from abroad it is advisable to be in possession of a two year multiple entry visa, as only U.S. Consulates in Rio de Janeiro, Recife and Brasilia are authorised to issue visas.

Seamen's Missions:

Scandinavian Seaman's Mission
Flying Angel Club
German Seaman's Home

The above Missions are in Santos, and can arrange football matches, tours, etc. There are no Missions in other ports.

GENERAL: Operators and Masters of Liberian flag vessels should consult Agents well in advance respecting requirements for endorsement of Seamen's Books or Passports.

SHIPMASTER'S REPORT: July 1987.

VHF: Arrival Reports: The Port Captain's Department of each port requires the vessel to make reports in a specified form:

1. On entering, in English via Pilots or Port Control.
2. On entering, (normally by Pilot in Portuguese).
3. On leaving (normally by Pilot in Portuguese).

Information to include: Name, Call Sign, Flag, Last Port, where to berth, ETA and the anchorage position (probably in Latitude and Longitude).

Customs: A regulation of 1950 is applied in some ports which requires the declaration of all ship's stores and spare gear. Items such as propeller, tail shaft, anchor, tools, paints, etc., are confiscated and sold at auction after the vessel's departure if they are not declared. It is recommended to contact Agent for the requirements at the port of call.

Pollution: No oil to be discharged within 50 miles of the coast and no garbage within 12 miles of coast. Patrols are made by aircraft. Fines are calculated on a flat rate, multiplied by the g.r.t. of the vessel, whether for 1 litre or 1,000 litres. Imprisonment up to 3 years.

ALUMAR: 02.40 S. 44.21 W. (See Plan)

LOCATION: Alumar Port is located at Sao Marcos Bay, on the West bank of Sao Luis Island, 5.5 miles South of the Port of Itaqui in position 02° 40.5′ S., 44° 21.5′ W.

The port was built in the confluence of the Rio dos Cachorros with the Estreito dos Coqueiros which was dredged to permit access to the Baia de Sao Marcos.

The dredged access channel in the Estreito dos Coqueiros is located between the Islands of Sao Luis and Taua-mirim.

DOCUMENTS:

Documents Required on Arrival:

6 copies Crew List.
3 copies Stores List.
3 copies Crew Personal Effects List.
6 copies Passenger List (or Negative Passenger List).
1 Ballast Declaration.
2 copies of Manifest and 1 copy of each Bill of Lading, if with cargo for Alumar Port.

The following will be inspected:

Crew and Passenger Vaccination Certificates.
Ship's Documents.
Fuel, Diesel, Water quantities on arrival.
Derat or Exemption Certificate.

Cargo Papers:

Master will receive copies of each document listed below:

Notice of Readiness.
Bill of Lading (non-negotiable copy).
Cargo Receipt.
Statement of Facts.
Draft Survey Result.
Cargo Manifest.

Masters shall approve and sign the Notice of Readiness, Bill of Lading, Draft Survey Result, Statement of Facts and Cargo Receipt, as required by the shippers and Agents.

Clearance:

Ship's Agent will furnish clearance papers for sailing as well as the Cargo Manifest.

PILOTAGE: Compulsory for all ships sailing to and from Alumar Port.

They will board and disembark in the Pilots waiting area, abeam of Ilha do Medo, which is also used by the Port of Itaqui.

ANCHORAGE: Masters shall contact the Pilot Station on VHF Channel 16, prior to proceeding to the Anchorage Area.

The waiting area is also used by the Port of Itaqui and is located at Lat. 02° 28.4′ S., Long. 44° 23.5′ W.

The area is a circle around the above coordinates with a minimum depth of 21.5 m.

Brazilian Government Officials may board ships in the anchorage area for clearance formalities.

A suitable and adequate ladder for this purpose must be provided soon after anchoring.

It is extremely important that Masters comply with Brazilian Anti-pollution Laws while in Brazilian waters.

RESTRICTIONS: The Access Channel is located between the Islands of Sao Luis and Taua-mirim. It is 3.0 miles long, with minimum width of 120 m., and dredged to 7.0 m.

The Turning Basin has been dredged to 7.0 m. depth and has a diameter of 400 m.

The Berthing Basin, located in front of the wharf, is 320 m. long, 50 m. wide and dredged to 11.0 m. depth.

Maintenance dredging is periodically carried out to maintain these conditions.

All depths are related to DHN - Brazilian Navy Datum (low sea level).

MAX. SIZE: Max. draft 10.5 m. (berthing only during hightide).

HEALTH: Free Pratique should be requested by radio 72 hours prior to arrival, by forwarding quarantine message to Port Health Authorities through the ship's Agent.

RADIO/VHF: Long distance radio communications shall be made through Embratel Coastal Stations.

Alumar Port Operations may be called through VHF Channel 16 from the vicinity of the waiting area or from other areas when within range.

Arrival Notice: The Master of an arriving vessel is required to cable to the Agent his ETA 15 days in advance or when sailing from previous port if distance is less than 15 days.

Additional ETAs to be sent 5 days, 48 hours and 24 hours prior to arrival at Alumar Port. Any significant change in ETA should be advised immediately.

48 hours message shall provide the following information: ETA, cargo tonnage by hatch number, arrival draft, ballast tonnage on board and deballasting time.

TUGS: Tug service is compulsory for all vessels in Alumar Port. There are 2 tugs of 1,830 h.p. (27 ton bollard pull) permanently based at the port.

BERTHING: The wharf consists of a 252 m. long×19.6 m. wide concrete platform.

There is a mooring dolphin at a distance of 50 m. from the West end of the wharf, and a mooring buoy with a 30 ton sinker, located 110 m. from the same West end of the wharf.

The docking wharf is fitted with 9 sets of fenders, spaced 29 m. apart.

Bulk Cargo Unloader: Clamshell type ship unloader, with 1,200 t.p.h. unloading rate.

Ship's air draft shall not exceed 20.3 m. at any stage of the tide.

Alumina Loader: The linear type shiploader to load alumina, is rated at 1,500 t.p.h. and has a 60 in. wide belt conveyor. Ship's air draft shall not exceed 14.0 m. at any stage of the tide.

Caustic Unloading Facilities: The caustic unloading facilities are located at the West end of the main wharf.

It consists of 1×6 in. fixed coupling system, which is to be fitted to flexible hoses supplied by the ship. The caustic soda shall be pumped by the ship.

BALLAST: There are no shore facilities available at Alumar Port for receiving slops, dirty or contaminated ballast.

Masters are cautioned that discharging of anything other than uncontaminated ballast will be subject to penalties as prescribed by Brazilian law.

FRESH WATER: Potable water is available to ships at Alumar Port. Ships which require potable water shall notify Port Authorities before berthing.

FUEL: Available by barge. Agent requires advance notice.

TIME: GMT minus 3 hours.

GARBAGE DISPOSAL: No service available.

WASTE OIL DISPOSAL: No waste oil disposal service available at the port or at Sao Luis City.

SEAMAN'S CLUBS: There are no Seaman's Clubs in Sao Luis, but the city provides good shopping at the shopping centers available, as well as international telephone services, churches, post office, and mini-bus collection can be arranged with the shipping agents.

CURRENCY: Local currency is the Cruzeiro. There are no restrictions placed upon seafarers regarding local currency.

GENERAL: *Weather:* Sao Luis is located within the Intertropical Convergence Zone (I.T.C.Z.) and it is not on the route of Tropical hurricanes and cyclones.

Local temperature ranges between 24°C. and 30°C., and mean humidity from 75% to 85%.

Annual average rainfall is 2,250 mm., distributed in 2 well defined seasons: the rainy season from January to June and the dry season from July to December.

Predominant winds, characterised as trade-winds, come from N.E. and E.N.E.

Annual average wind speed is about 10 knots.

Tides: Special care is required with the tides, which range from −0.3 m. to +7.10 m. during Spring tides.

Tide level variation generates reversible currents all over the area. During Spring tides, approximately 3 hours after the beginning of the ebb or the flood tide, current reaches 5 knots to 6 knots.

Charts: The following Nautical Charts should be consulted for navigation in the Baia de Sao Marcos area:

Diretoria de Hidrografia e Navegacao – DHN – Brazilian Navy:

Chart No.	Title
010	From Cabo Orange to Recife
400	From Cabo Gurupi to Ilha de Santana
411	Baia de Sao Marcos
412	Vicinity of the Ports of Sao Luis and Itaqui
413	Port of Itaqui
414	Vicinity of the Island of Taua-mirim

U.S.A. Defense Mapping Agency Hydrographic and Topographic Centre:

Chart No.	Title
24020	Baia do Oiapoque to Rio Parnaiba
24260	Ilha de Santana to Camocim
24270	Cabo Gurupi to Ilha de Santana
24271	Baia de Sao Marcos

Fire Protection: The wharf is equipped with 4 hydrants with double outlet of 2.5 in. diameter and 60 m. flexible hoses.

Lighthouses: Sao Marcos, Mangunca, Santana, Aracagi, Pirajura, Alcantara, Ponta da Areia, Ilha do Medo, Ponta da Madeira.

Radio Beacon: Sao Joao Lighthouse, Sao Luis Airport.

Access: The same access used for Itaqui Port, and the cited navigation aids system should be used for the approach to the waiting area of Alumar Port.

AUTHORITY: Porto da Alumar, P.O.Box 661, Sao Luis, Maranhao, C.E.P. 65095-050, Brazil. *Tel:* (098) 216-1392, 216-1878. *Telex:* 981058 (Port Operations). *FAX:* (098) 232-1272. *Contact:* Ronildo Jose Carvalho, Port Superintendent.

ANGRA DOS REIS: 23.01 S. 44.19 W. (See Plan)

(A) GENERAL CARGO SECTION.
(B) TANKER SECTION.

(A) GENERAL CARGO SECTION

DOCUMENTS: See "General" before first port.

PILOTAGE: Pilotage compulsory for tankers, propane carriers, nuclear powered vessels, vessels carrying explosives and all foreign vessels.

Pilot boards in position Lat. 23° 04′ S., Long 44° 14′ W.

Request for pilot must be made 24 hours in advance via the vessels agent

ANCHORAGES: In the Bay of Ilha Grande; approximately midway between the ports of Rio de Janeiro and Santos; offering excellent anchorages, amongst which may be mentioned: Enseada das Estrelas, Enseada do Abraao, Enseada das Palmas, Enseada Sitio Forte and Enseada de Aracatiba.

The inspection area of the Port Health, Federal Receipt and Maritime Police authorities is covered by a radius of 300 m. around the point of co-ordinates 23° 00′ 42″ S., 44° 18′ 41″ W.

Anchorage for vessels of more than 31 ft. draft and 10,000 g.r.t. 23° 01′ 54″ S., 44° 19′ 18″ W.

Anchorages for vessels of less than 31 ft. or 10,000 g.r.t. 23° 00′ 48″ S., 44° 18′ 30″ W.

Anchoring prohibited in the approach channel and manoeuvring basin.

Quarantine Anchorage: 23° 06.47′ S., 44° 27.1′ W.

RESTRICTIONS: The Bay of Ilha Grande possesses two entrances, from the East and the West, permitting immediate access to the Port of Angra dos Reis from the direction of Rio de Janeiro or the Port of Santos, without any change of course. Both access Channels are adequately marked, enabling ships of up to 14 m. draft to navigate in complete safety as far as the port basin about 1 mile from the wharf, where they may lie at anchor and take on cargo from tenders tied up alongside There is another basin with a mud bottom even nearer the wharf, permitting anchorage and docking manoeuvres for ships of up to 10 m. draft.

Access Channel: The port has an access channel 120 m. wide running in the direction 345° true, starting at the junction of the South and North channels, and is marked on Brazilian chart No. 1604. The tidal amplitude is 1.80 m. and the depth at the bar is 40 m.

Near to Ilha da Francisca and the port, the depth is about 10.5 m.

Manoeuvring Basin: The basin is 500 m. long and 320 m. wide and has a depth of 9.0 m. from the access channel up to the port where it is 150 m. wide and 9 m. deep.

HEALTH: Port doctor visits all ships on arrival and requires Maritime Declaration of Health, Derat Certificate, 2 Crew Lists. Vessels from another Brazilian port automatically receive Free Pratique and should not fly Quarantine Flag. If suspected disease or fever on board it is advisable to cable Agent before arrival.

TUGS: Available: 4 tugs of up to 600 h.p.

BERTHING: Pier of 400 m. length with 340 m. of berthing space and a depth of 9.0 m.

BULK CARGO FACILITIES: Silo for wheat and bulk grain with a capacity of 10,000 tons, owned by Moinho Sul Mineiro S/A. There are 2 suction plants of 60 t.p.h. each.

CARGO FACILITIES: 2 electric cranes of 3.2 tons capacity, 1 crane of 6.3 tons capacity and 2 electric cranes of 2 tons capacity. Mobile cranes, 1 for 40 tons, and 10 for 22 tons. Verolme have an 80 ton floating crane available for hire.

Also available for hire are 2 mechanical conveyors, each with 80 t.p.h. capacity.

MEDICAL: All facilities available. If doctor needed on arrival or making emergency call to land sick persons, cable ETA 12 hours before arrival.

FRESH WATER: Available at a rate of 8 cu.m.p.h. Connection is 4 in.

FUEL: No facilities for supplying large vessels. Small vessels can be supplied with diesel oil.

CONSULS: There are no Consuls in this port. They are situated in Rio de Janeiro.

REPAIRS/DRY DOCKS: Various mechanical workshops for the execution of shipboard repairs, equipped with lathes, presses, planes, electric and acetylene welding, drills, power-saws and grindstones, etc. The large shipyards of Verolme with facilities to dry dock vessels up to 600,000 d.w.t. are situated in the Bay of Jacuecanga, near the port of Angra.

CUSTOMS ALLOWANCES: For each crew member, 2 cartons of cigarettes and 1 bottle wine or spirits.

WATCHMEN: Gangway watchmen strongly recommended for any vessels working cargo with shore labour on board. Watchmen from shore not necessary for coal, iron ore and oil cargoes.

TIME: The local time is GMT minus 3 hours.

HOLIDAYS: 1st January; 1st May; 29th June; 7th September; 8th December; 25th December; 31st December, also local holidays January 6th, April 3rd and December 8th.

TELEPHONES: Not available.

GENERAL: *Charts:* No. 1600, 1602, 1604, 1608, 1609, 80, 81, and 30.

AUTHORITY: Porto de Angra dos Reis, Av. Beira Mar S/No., Angra dos Reis 23.900, Rio de Janeiro, Brazil. *Tel:* (0243) 65-0273, 65-0602. *Telex:* 223227 CDGB-BR. *Contact:* Fernando Mauricio de Lima Cavalcanti, Manager.

AGENT: See "Rio de Janeiro".

(B) TANKER SECTION – TERMINAL GERENCIA DA BAIA DA ILHA GRANDE – GEBIG.

POSITION: 23° 03′ 38″ S., 44° 13′ 10″ W.

IMPORTANT FEATURES:

1. Anchorage – (see Brazilian Nautical Charts No. 1600, 1602 and 1609).

Anchorage for tankers: The anchorage for tankers waiting for berth is a circle with one mile radius, its centre near Ponta Acaia. Bearing 075° – 2.8 miles from Lage Branca light – (Lat. 23° 09′ 00″ S., Long. 44° 23′ 48″ W., shown on Brazilian Nautical Charts Nos. 1600, 1602 and 1609.

2. Anchorage for lighterage: The same as for waiting for berth.

3. Vessels are prohibited from anchoring in the areas near the Terminal piers, since these areas lie on the access channel for ships making for the Port of Angra dos Reis or leaving it through the Eastern bar.

4. There is no assigned anchorage for Port Authorities clearance (for the time being).

According to the Captain of the Port of Angra dos Reis, Free Pratique will be granted upon docking at the Terminal pier.

5. Display of quarantine signals on approach to Angra dos Reis must be continuously maintained until Free Pratique is granted. These signals are: sunrise to sunset: Quarantine Flag. Sunset to sunrise: Signal lights red over white.

6. In addition to quarantine signals, the Brazilian Flag must be flown from vessel's foremast throughout the vessel's stay in port.

7. The access channel from anchorage to the manoeuvring area (near the pier) is about 8.75 miles long, 350 m. wide and 25 m. deep in a S.W. – N.E.'ly direction, beaconed with 19 resilient beacons (nine exhibit Fl. W. 5 sec. 3M. and ten exhibit Fl. R. 5 sec. 3M.).

8. The manoeuvring area near the pier is 0.6 miles Northward and nearly 1.3 miles East-Westward and more than 30 m. (90 ft.) depth.

9. Signals for emergency: Series of 7 short blasts followed by 1 long blast of the ship's whistle or siren.

10. The Terminal operates around the clock.

11. There are two "open L" shaped piers for accommodating oil tankers, projecting from Ponta do Leme into the sea, about 1,318 m. long in an East-Westerly direction.

12. Pilotage is compulsory when making for the pier and commences near Ponta Acaia.

DOCUMENTS: The Captain of the Port of Angra dos Reis authorises ship's clearance upon berthing alongside the Terminal piers.

The following documents are required for immediate inspection by the boarding officials:

Any and every document issued or related to ship's clearance at the Last Port of Call.

5 copies Crew List.
2 copies Stores List.
2 copies Personnel Effects.
3 copies Passenger List.
3 copies Cargo Manifest.
3 copies Bill of Lading.

APPROACHES: A vessel making for DTSE/GEBIG approaching by the channel Westward of Ilha Grande should steer for Lage do Coronel light column (a truncated pyramidal concrete column painted in red and black horizontal bands 4 m. in height situated in the middle of the rock (Gp. Fl. (2) W. 10 sec. 10M.) (Lat. 23° 06′ S., Long. 44° 24′ W.), bearing more than 000° which will lead Westward of Lage do Pendao de Fora. When Lage Branca light-column bears 090°, course should be altered so as to make for the swept channel, beaconed with 18 resilient beacons (Fl. G. 5 sec. 3M. and Fl. R. 5 sec. 3M.) in a S.W. – N.E.'ly direction about 8.75 miles long, 350 m. wide and 25 m. deep, which leads to the manoeuvring area near the "L" shaped piers.

The "Terminal Gerencia da Baia da Ilha Grande – DTSE/GEBIG" facilities are situated on the mainland, in front of the central part of Baia da Ilha Grande.

Its "L" shaped piers extend about 1,318 m. from Ponta do Leme in an East-Westerly direction and have berthing space for tankers up to 500,000 d.w.t.

PILOTAGE: Pilotage is compulsory when making for the piers and commences near Ponta Acaia.

Pilots moor, unmoor and supervise the movement of all vessels in the vicinity of the piers. Compulsory pilotage starts near Ponta Acaia in position Lat. 23° 09′ 00″ S., Long. 44° 23′ 48″ W.

Pilot will board the ship at this point from a launch or tugboat. Vessels must be equipped with satisfactory mooring equipment, lines, gear, etc., and ballasted to the satisfaction of the Pilot.

It is the responsibility of the Master to notify the Pilot of any special conditions, difficulties or peculiarities such as engine or boiler deficiencies, defective navigational equipment, mooring lines, tackle, gear, or lack of necessary equipment which might impose hazards in connection with the handling, mooring, unmooring, discharging and loading of vessel.

At the piers, vessels must be moored to the entire satisfaction of both the Pilot and Terminal Operators.

If the Master or the Officer of the Watch is in any doubts as to the Pilot's actions or intentions, or if he does not agree with Pilot's actions considering the safe navigation or manoeuvre of his ship it is the responsibility of the Master to take the necessary steps according to his best judgement and to notify the Captain of the Port, in writing, through the ship's Agent.

ANCHORAGE: *Anchorage for tankers waiting for berth:* Anchorage for tankers waiting for berth is within a circle with 1 mile radius, its centre near Ponta Acaia, with Laje Branca lighthouse bearing 075° (true), and 2.8 miles away (Lat. 23° 09′ 00″ S., Long. 44° 23′ 48″ W.), shown on Brazilian Nautical Charts 1600, 1607, 1631, 1632 and 1636.

Anchorage for Lighterage: Anchorage for lighterage is the same as for tankers waiting for berth (see above).

Prohibited Anchorage: Vessels are prohibited from anchoring in the vicinity of the Terminal piers since the place lies on the access channel for ships making for Angra dos Reis or leaving it by the Eastern bar.

Anchorage for Clearance: There is no assigned anchorage for Port Authorities clearance (for the time being).

According to the Captain of the Port of Angra dos Reis, Free Pratique will be granted upon berthing at the Terminal pier.

RESTRICTIONS: *Access Channel:* The swept access channel from anchorage to the manoeuvring area (near the pier) is about 8.75 miles long, 350 m. wide and 25 m. depth, running in a Southwest-Northeasterly direction and beaconed with 19 light beacons (Fl.G. 5 sec. 3M. and Fl.R. 5 sec. 3M).

Manoeuvring Area: The manoeuvring area near the pier is approximately 0.6 miles Northward and 1.3 miles East-Westward and more than 30 m. (98 ft.) depth.

Tidal Amplitude and Streams: Local and diurnal tidal rise is approximately 1.20 m. (4 ft.) above MLWS at neaps and 1.70 m. (5.5 ft.) in HWS.

Tidal streams are West going during the in-going, tide, running nearly parallel to the pier, and East going during the out-going tide.

If the wind is fresh from N.E., South or S.W., the tidal stream follows the direction of the wind.

Tidal stream normally attains a rate from 1.0 to 2.2 knots.

There are no remarkable tidal streams in this whole area.

MAX. SIZE: Max. draft 25.0 m. (82 ft.).

HEALTH: Vessels entering are inspected by the Health and Customs Offices between 0700 hrs. and 1900 hrs.; but by previous application, a special visit may be granted outside this period on payment of an extra tax.

RADIO: Radio Messages prior to arrival: ETA must be radioed by all Petrobras chartered vessels bound for DTSE/GEBIG, 72 and 48 hours prior to arrival, to Petrobras as well as to Agent through PPR Radio Station (Official Angra Coastal Radio Station).

Confirmation as well as any changes in the time of arrival must be radioed 24 hours prior to arrival.

When within VHF range, ships must contact DTSE/GEBIG for instructions.

ETA radio messages must specify "local" or "GMT" time.

VHF: DTSE/GEBIG Central Radio Station is in the Control Room. Transceivers are monitored by Terminal Operators tuned to Channel 16 (Delta), 24 hours a day.

TUGS: *General:* DTSE/GEBIG operates 3×3,720 h.p. tugs.

Mooring and unmooring assistance is provided by these tugs which are fitted with fire pumps, water cannons and foam monitors to assist in fighting fires.

At least one tug is on duty at all times in order to provide assistance should necessity of emergency or additional services arise. Tugs join when passing Buoys 11 and 14.

Tug Requirements:

Vessels up to 100,000 d.w.t. – 2 tugs.
Vessels 100,000 d.w.t. to 200,000 d.w.t. – a minimum of 3 tugs.
Vessels over 200,000 d.w.t. – 4 tugs.

Tug/Ship Communications: The tugs are equipped with VHF radiotelephones so that continuous communications between ship and tugs may be maintained during docking and undocking manoeuvres.

A 24-hour-a-day listening watch is maintained in order to comply with ship's or operational personal requests even if the vessel is already berthed.

Should a radio failure occur when docking/undocking and manoeuvres are in progress, the following whistle signals must be used:

Calling: 4 long blasts followed by 1 or 2 short blasts. Short blasts are intended to number the tugs needed, that is, one blast one tug, two blasts two tugs, and so on.

Before towing line is made fast: 2 short blasts – stand by for pushing on the bow or picking up ship bow line. 3 short blasts – stand by for pushing on the stern or picking up ship stern line.

After towing line is made fast: 1 long blast – pull to starboard. 2 short blasts – pull to port side. 3 short blasts – stop pulling.

Manoeuvring alongside ship: 1 short blast – pull. 2 short blasts – push.

Other ship's whistle signals for the tender craft:

Calling: 2 long blasts followed by 1 short blast – calling pilot launch.
1 long blast followed by 2 short blasts – calling motor launch.

Tugs will acknowledge orders received by sounding a short blast; since tugboats are equipped with radio-telephone, orders may be given by radio.

Unless otherwise ascertained, the Pilot gives orders to the fore tug sounding a mouth whistle and to the aft tug sounding the ship's whistle.

Launches:

Launches for Crew Members: Launches can be rented.

Pilot's Launch: Pilots use either one of the manoeuvring tugs or pilot's station launch since DTSE/GEBIG operates no launches for pilotage service.

Small craft for assistance in manoeuvres: Assistance in handling mooring lines is rendered to DTSE/GEBIG by contract with specialised firm including operation of two small diesel powered launches.

BERTHING: DTSE/GEBIG operates around the clock. Vessels may moor and unmoor at any hour except in severe adverse weather conditions.

Pier Facilities: There is one "L" shaped pier for accommodating oil tankers up to 500,000 d.w.t., projecting from Ponta do Leme into the sea, about 1,318 m. (3,954 ft.) long in an East-Westerly direction.

	Outer Berth	Inner Berth
Name:	P-1	P-2
Location:	South Side	North Side
Length:	570 m. (1,869 ft.)	570 m. (1,869 ft.)
Depth:	30 m. (98 ft.)	36 m. (118 ft.)
Loading Arms:	4×20 in.for oil and ballast 1×12 in. for diesel oil and fuel oil	4×16 in. for oil and ballast 1×12 in. for diesel oil and fuel oil

Ship's manifold maximum heights above loading arms platform level:

Outer berth (P-1)	23.60 m. (77.5 ft.)
Inner berth (P-2)	20.60 m. (67.5 ft.)

Height of loading arm platform above MLWS: The height of the loading arm platform level referred to the MLWS is 7.20 m. (21.6 ft.).

Max. allowed d.w.t. for operating ships:

Outer berth (P-1)	Up to 500,000 d.w.t.
Inner berth (P-2)	Up to 350,000 d.w.t.

LOADING/UNLOADING: *Equipment:* The pier is equipped with the following lines for loading/unloading and/or bunkers (both berths):

3×42 in. oil lines about 9,500 m. long; 10.5 kg./sq.cm. (150 lb./sq.in.) maximum working pressure; 12,000 cu.m./h. maximum flow rate (each).

1×26 in. line for ballast, about 1,800 m. long; 10.5 kg./sq.cm. (150 lb./sq.in.) maximum working pressure and 4,000 cu.m./h. maximum flow rate.

2×20 in. lines for fuel oil, about 2,000 m. long; 10.5 kg./sq.cm. (150 lb./sq.in.) maximum pressure and 1,350 cu.m./hr. maximum flow rate (each) or 1,800 cu.m./hr. for 2 lines. Maximum working temperature for both lines: 75°C (167°F).

1×12 in. line for diesel oil, about 1,500 m. long; 10.5 kg./sq.cm. (150 lb./sq.in.) maximum working pressure and 1,050 cu.m./hr. maximum flow rate.

1×8 in. line for drinking water, 3.2 kg./sq.cm. (45 lb./sq.in.) working pressure and 70 cu.m./hr. maximum flow rate.

Auxiliary Facilities: Both berths are equipped with recording devices to measure continuously the ship's speed and her distance to the pier, referred to the pier longitudinal axis.

Both berths are also equipped with hydraulic powered accommodation ladders for easy access aboard ship.

Cargo/Ballast Operation:

General: The terminal is equipped with 2 slop tanks with a combined capacity of 40,000 cu.m. or 251,500 bbls. (20,000 cu.m. or 125,750 bbls. each).

Discharge into the sea of any amount of oil or oil based products, either alone or in combination with ballast water, is strictly forbidden and heavily fined.

DTSE/GEBIG is particularly interested in having vessels complete the deballasting operation promptly after berthing in order to minimise time at berth.

Simultaneous loading/deballasting or unloading/ballasting is allowed on properly equipped vessels. Ships will be held responsible for any consequences whatsoever which may result of such operating procedures.

Hose Handling: Hoses are in use for fresh water supply only. For loading/unloading operations the Terminal is equipped with 11 quick release flange connection loading arms of 150 lb./sq. in. capacity.

Nominal Flow Rates: The terminal lines allow oil discharging at a rate of 25,000 cu.m.p.h. and loading up to 12,900 cu.m.p.h.

Cleaning Tanks:

Discharging of oily water resulting from conventional tank cleaning is not allowed as a rule. Provided previously scheduled and accepted by Terminal, crude washing may be authorised.

MEDICAL: In emergencies or cases of serious injury, DTSE/GEBIG may assist with first aid. Medical treatment in case of serious illness must be requested by Masters to Agents.

Dental treatment is available in Angra dos Reis.

If the patient(s) cannot speak Portuguese or Spanish, an interpreter will be desirable for better understanding.

FRESH WATER: *Drinking Water:* DTSE/GEBIG is equipped for supplying drinking water through universal quick release 2.5 in. universal manifold from a 8 in. line with a 70 cu.m.p.h. flowing rate.

Boiler Water: DTSE/GEBIG auxiliary area is equipped 'with 2×1,550 cu.m.p.h. tanks (each) for own use as well as for supplying ships with boiler water through an 8 in. fresh water line.

FUEL: DTSE/GEBIG is equipped with blending machines for mixing fuel oil and diesel oil in order to supply berthed tankers with any type of bunkers e.g. bunker C, marine gas oil, marine diesel oil and marine fuel with any grade of viscosity, and charging international prices.

Orders for bunkers must be placed 48 hours in advance and addressed to:

Divisao de Abastecimento de Navios, Departamento Comercial, Av. Republica do Chile, 65 – ZC – 06, Rio de Janeiro 20.000 – RJ – Brasil. Cable Address: Petrobrasecope. Telex: 23335. Tel: 534-3291, 262-2277.

Departamento Comercial may also be contacted through Owner's Agent.

Lubricants: Orders for lubricants must be placed 15 days in advance and addressed to:

Petrobras Distribuidora, Rua General Canabarno 500, 13 Andar, Maracana, R.J., Brasil. Cables: Petroedipe. Telex: 36301, 21409. Tel: 021-5664477.

Petrobras Distribuidora may also be contacted through owner's Agent.

CONSULS: There are no Consular representatives available in Angra dos Reis. The nearest city where such representatives can be found is Rio de Janeiro, where most of the maritime nations maintain Consulates. Agents may be able to contact Consulates if duly notified in good time.

REPAIRS/DRY DOCKS: *Ship Repairs:* There is a shipbuilding yard, Verolme Estaleiros/I.V.I., in Baia de Jacuacanga (km. 83 Estrada Rio-Santos) which may be used by vessels to effect limited repairs only, since it main activity is shipbuilding.

There is no specialised personnel or well equipped workshops intended for ship repairs.

In case of emergency repair or those which cannot possibly be postponed and which Verolme yards cannot effect, the following workshops may be contacted for limited repairs.

Industria e Comercio Angrense Ltda. Rua do Comercio 495 – Loja 6.

Oficina Mecanica Tres Irmaos, Rua Arcebispo Santos 209 – Fundos.

Electronic Repairs: There are no workshops or specialised personnel for repairs in electronics available in Angra dos Reis.

Agents may be able to take the necessary steps in order to comply with orders placed for repairs in electronics if contacted in good time.

Compass and Radio Adjustments: Orders for compass and radio direction finder adjustments must be placed through Agents well in advance, considering that such services are not available in Angra dos Reis.

SURVEYORS: *Classification Societies:* There are no classification societies representatives in Angra dos Reis. However they may be called from Rio de Janeiro and/or Santos upon Agent's request. ABS, GL, LR and BV maintain offices and representatives in Rio de Janeiro.

Petroleum Inspection: No Petroleum Inspection Services are available in Angra dos Reis. They may be contacted in Rio de Janeiro or Santos at the following addresses:

Chas. Martin & Co., Praia do Flamengo, 66/610 Bc.B, 20.000, Rio de Janeiro – RJ – ZC – 00. Tel: 242-4219, 245-5636, 265-1535.

E. W. Saybolt & Co., Rua Bras Cubas, 3, 11100 – Santos – SP. Tel: 46638.

Sociedade Brasileira de Superintendencia S/A (Redwood), Av. Presidente Vargas 466, 13° andar, Rio de Janeiro, RJ, 20.000. Tel: (021) 233-3522.

Superinspect Supervisao Vistorias e Inspecoes S/C, Av. Rio Branco 18-7° andar, 20.000 – Rio de Janeiro – RJ. Tel: (021) 253-3939. Telex: (021) 22335 SUPER BR.

Caleb Brett do Brasil Ltda., Rua Antonio de Carvalho, 20/1105, 20071 Rio de Janeiro – RJ. Tel: (021) 240-7697. Telex: (021) 352259 CBRE.

SHORE LEAVE: Ship's personnel are not permitted ashore for any purpose whatsoever until Free Pratique has been granted. Luggage and packages are subject to Customs Officers and/or Terminal Watcher inspection. As a rule shore leave is permitted with the above stated restrictions. Vessels are not permitted to sail unless all crew members are onboard. In case of seamen left ashore for any reason whatsoever all expenses are for ship's account.

Passengers: Passengers will be permitted ashore if in possession of the required visas and documents.

WEATHER:

Winds: Easterly winds predominate but due to the Ilha Grande high mountains they may blow from several directions. S.S.W. winds due to cold fronts may cause heavy seas and swells in exposed areas. S.S.W. winds often blow in the afternoon period. N.N.E. winds are not infrequent. Wind speed ranges from 3 knots to 60 knots in the Terminal area.

In the Autumn and Winter, cold fresh winds are common on the coast from Rio de Janeiro to Santos. In daytime the breeze tends to increase the East component, and at nightime the West component predominates.

In protected areas (harbours, bays and channels in this area) S.S.W. winds starts about noon, when fresh to moderate winds cause the temperature to decrease; wind force decreases at night and an interval of calm follows, before the arrival of the sea breeze from N.N.E., about 2000 hrs. (local time) until 1000 hrs. (local time).

Rain: The average annual rainfall is about 2,000 mm. in the area.

Visibility: The visibility in this area is generally fair to good.

During Autumn and Winter fog is moderately frequent in the early morning. In Summer time, dry haze is comparatively frequent, causing the visibility to be reduced.

Temperature: Local average temperature ranges from 18°C (64.4°F), in June and July, to 35°C (95°F), in December and January.

Pressure: The pressure over the area is about 1,015 mb. in good weather.

Humidity: Humidities are comparatively high, ranging from 76% to 81%.

GENERAL: *Charts:* No charts or Pilot Publications are available either at the Terminal or Angra dos Reis. If necessary, Agents must be contacted for placing orders in Rio de Janeiro.

The "Diretoria de Hidrografia e Navegacao" (Brazilian Navy Hydrographic Service) issues the following navigational publications:

Chart Numbers: 1600, 1607, 1631, 1632 and 1636 (soundings in metres) covering the area.

A Brazil Pilot of the Brazilian Coast (Roteiro).

List of Lights (Lista de Farois).

Flags: Display of Quarantine signals on approach to Angra dos Reis and DTSE/GEBIG facilities must be maintained until Free Pratique is granted. These signals are: sunrise to sunset: quarantine flag ("Q"). Sunset to sunrise: Signal lights – red over white.

In addition to quarantine signals, the Brazilian Flag must be flown from vessel's foremast throughout the vessel's stay in port.

Vessels entering or leaving Brazilian ports must display their ensign when within 3 miles of the entrance to a port or anchorage and, by day, also display their call letters in flags of the International Code of Signals.

Cranes: Neither DTSE/GEBIG and Angra dos Reis Port operate floating cranes. Verome Yards may rent a floating crane with 80 tons capacity. DTSE/GEBIG does not operate barges or lighters.

Provisions and Stores: Orders for provisions and/or stores may be placed through Agents. Since some items are only obtainable in Rio de Janeiro, orders must be placed as soon as possible.

Laundry: No laundry facilities are available at DTSE/GEBIG. There are however laundry facilities in Angra dos Reis which may be used through Agent, which must be contacted as soon as possible for such purposes.

Mail Services: No Post Office Agency is available at DTSE/GEBIG. Mail must be sent care of Agent and posted in Angra dos Reis.

Cash Advances: DTSE/GEBIG is not authorised to effect cash advances. Master must contact either Owner's Agent or FRONAPE for such purpose (FRONAPE must be contacted in the case of ships chartered by PETROBRAS).

Customs Watches: Brazilian Customs Officials may be assigned on board according to Customs Regulations in order to enforce the said regulations. Meals must be supplied to these Officials at regular meal times.

Contraband: Brazilian law is very strict in every aspect concerning smuggling. Masters are requested to instruct their crews about restrictions concerning trafficking goods of any kind including cigarettes, cigars, tobacco, alcoholic beverages, souvenirs, firearms, playing cards, narcotics. Trafficking in these articles or any others, between ships or between ships and Terminal employees or representatives, or anybody else is strictly prohibited and failure to comply with the law may result in several penalties.

Items as above stated must be kept sealed under lock and key.

Visitors: No visitors are allowed aboard ships berthed alongside unless duly authorised by Master and Terminal Superintendent and local Maritime Police. Unauthorised visitors will have to be reported to the Maritime Police.

National Holidays: All ships in port must be fully dressed on the following National Holidays: September 7th and November 15th.

Machinery in Readiness: When berthed alongside PETROBRAS' Terminal vessels must keep engines and propulsion machinery in readiness to leave the berth under full power on short notice.

No repairs are allowed which would interfere with this requirement.

Violation of this rule will entail towage from the berth at the vessel's expense and PETROBRAS will not accept any kind of responsibility for the resulting delay to the vessel.

Refuse and Garbage: All deck scuppers must be kept plugged and, as far as possible, discharging of waste water from lavatories on terminal side must be prevented.

DTSE/GEBIG has no way to deal with ship's garbage or refuse. If absolutely necessary, Agent must be contacted for such a purpose.

Fishing and Painting: Use of pier for painting ship's hull is not allowed. It is also forbidden to fish on the terminal side of the ship.

General: Shore access to DTSE/GEBIG is by car or by bus along BR-101 Highway km. 81 Jacuacanga.

DTSE/GEBIG is 150 km. (about 93 statute miles) from Rio de Janeiro.

There is a regular bus service between these cities. There is international telephone service available (Long Distance Direct Dialling) DDD (0243 for Angra dos Reis). The piers are equipped with two hydraulic powered accommodation ladders which allow personnel to board the vessel safely.

At the ladder's end, a lifebuoy is fastened to a 27 m. (29 yd.) long safety line.

Telephone Numbers: Important telephone numbers of the Terminal:

General Manager of the Terminal	5201
Operations Manager	5203
Operations Supervisor (around the clock)	5211, 5287 and 5283
Operating Room (main) (around the clock)	5215 and 5287
Operating Room (auxiliary) (around the clock)	5244
Pier (around the clock)	5246 and 5275
Traffic and Facilities Section	5241
Program and Control Section	5240 and 5204
Safety Section	5260
Marine Section	5234
Medical Section	5221

*to be called in working hours only

**when needed out of working hours call 5211, 5287 and 5283.

SHIPMASTER'S REPORT: November 1981 (updated 1994).

Port Name: Although called "Terminal Gerencia da Baia da Ilha Grande" orders for this terminal are given for "Angra dos Reis". Terminal called DTSE/GEBIG.

Anchorage: Outside the port about 3 miles West of Laje Branca. Except in special cases officials will not board vessel in this anchorage as a result of difficulties experienced in the past with sudden changes of weather. In the approaches to the port, to South and North of the buoyed channel, anchorage is possible with a max. draft of 21 m. and port officials will board vessels here, shore leave being possible by shore launch for crew.

Pilotage: Pilots board off the seabuoy at the entrance to the buoyed channel to take vessel to terminal or inside anchorages. Outward bound the Pilot remains until the last pair of channel buoys. Pilots work ships for terminal only.

Channel Lights: These are neither very bright nor very reliable.

Pratique: There is no radio pratique and quarantine officials board with Customs and Immigration but ships should cable to Agents two days prior to arrival "Codicoes Sanitarias Abordo Satisfactorias".

Formalities: 2 each Crew Lists, showing vaccination dates; 2 each Store Lists and Personal Effects; 8 Crew Lists. Ship's Certificates taken ashore by Agent to effect Clearance.

Agents: Direct VHF communication from office to ships in anchorage or at terminal. Until recently weekend cables were erratic but telex is now installed.

Shore Leave: By minibus from berth to Angra dos Reis (30 minutes) – taxis not allowed inside terminal gate (30 minutes walk from berth). No passes required.

Crew Changes: Easily possible (via Rio de Janeiro, 3 hours by car) – sometimes difficulties with Customs for crew joining and leaving bringing/taking radio/cassette players, Customs escort sometimes being required or ambiguous fines imposed.

Fresh Water/Bunkers: Available at terminal. Lighter fuel oils are sometimes a mixture of heavier fuel and diesel oils.

Tugs: Three terminal tugs (2×3,720 h.p. and 1×3,170 h.p.) always available, fourth tug for larger ships (also 4,000 h.p.) berthing is sent from Mangaratiba. Two ship's lines are used to bow and stern tug (and care should be taken sending these as tugs inclined to steam off with them) and tug's lines from shoulder tugs.

Berth: Single long finger pier, South side taking ships up to 500,000 d.w.t and North side up to 350,000 d.w.t. Ships on North side feel current flow tending to push them off the berth and short "semi-breast" stern lines are preferable to ones with long drifts. Main deck springs are sometimes impractical to the shore as centre dolphin section of the pier is about 260 ft. in length and in many ship's springs would be too short. Otherwise plenty of mooring hooks and general pattern is 2 springs, three breast and four head/stern lines.

Terminal: Communication by VHF; crude oil washing permission should be sought prior to arrival; usual check lists; terminal schedules of berthing and discharge are very variable.

AUTHORITY: Dutos e Terminais do Sudeste – DTSE – GEBIG, BR-101 km. 81 – Jacuacanga, C.P. 73091, Angra dos Reis – RJ, CEP 23900, Brazil. *Tel:* 612255 PABX, Direct long distance dialling number DDD 0243 (for Angra dos Reis) followed by the telephone number (65-0358). *FAX:* 0243-612519 DDD. *Contact:* Paulo Penchina Cortines Pereira, General Manager.

Head Office: Petroleo Brasileiro S/A – Petrobras, Avenida Republica do Chile, 65-ZC-06-Centro, Rio de Janeiro 20.000, Brazil.

Divisao de Operacoes: Same address, as above, 12th Floor, (Operations Division).

Captain of The Port: Avenida Almirante Julio Cesar de Noronha No. 13, Angra Dos Reis, Brazil. *Tel:* 0243-650365. *FAX:* 0243-651854. *Contact:* Marcos Luiz Portela, Port Captain.

AGENT: See "Rio de Janeiro".

ANTONINA (Barao de Tefe): 25.26 S. 48.41 W.

(See Plan)

Also see "General" before first port and "Paranagua".

PORT LIMITS: The limits of the Port of Barao de Tefe extend from the Teixeira Point to the port quay.

DOCUMENTS: See "Paranagua".

Inspection carried out at Paranagua.

PILOTAGE: Compulsory in the port of Barao de Tefe and in the access channel. Also see "Paranagua".

ANCHORAGE: Only anchorage is in the vicinity of Teixeira Point (See DHN Chart No. 1823). See "Paranagua" for quarantine and explosives anchorages.

Anchoring in front of the quay is prohibited.

RESTRICTIONS: *Access Channel:* This is marked on Chart No. 1823 of the DHN (National Hydrographical Directorate), the channel is 120 m. wide, running in a S.E. – N.W. direction, starting at the Island of Teixeira and proceeding as far as the manoeuvring basin.

Critical Points: Itaucu de Baixo Rocks, Shallows of Fundao Grande and Joao Fernandes; average depth 5 m. Anchoring in the channel is forbidden, and to navigate it, it is necessary to have good visibility and daylight.

Tide: The average speed reaches 3 knots on the ebb tides, average height during Spring tides – 2.2 m., Neap tides – 1.7 m.

Berthing: Manoeuvring may only be effected in daylight and good visibility. Berthing always takes place on a rising tide.

TUGS: To be requested from Paranagua.

BERTHING: The area for manoeuvring is 280 m. wide in front of the quay, with a length of 700 m. Variable depth between 6.5 m. and 7.5 m.

Length of berth, Matarazzo Quay, length 200 m. (additional quay, length 150 m. planned, being 45 m. from Matarazzo Quay); depth alongside, 6.0 m. – 6.5 m.; Bollards 50 m. apart.

Facilities: 5 warehouses, 12,200 sq.m. without cold storage; 1 vertical silo at Matarazzo of 8,500 tons capacity (not in operation); open air areas, 7,500 sq.m.

Cranes: 1 of 6.5 tons on rails, 4 on tyred wheels of 9 and 3.5 tons, stacker trucks – 4 of 5 tons capacity, 4 of 2.5 tons and 5 of 2 tons. No rolling bridge, loaders or suction units available.

Railway lines extending 3,100 m. but no locomotives available; 6 wagons which are of the open type (28 ton capacity); 22 trucks on tyred wheels (3.5–7.0 tons capacity).

No Ro/Ro or container facilities. No barges, pontoons or lighters available.

STEVEDORES: See "Paranagua".

MEDICAL: Hospital available. Tel: 432-1244.

FRESH WATER: One hydrant at end of port quay, rate 30 cu.m.p.h. and 3 hydrants at Matarazzo Quay (100 m. apart), rate 30 cu.m.p.h.

No water boat available.

FUEL: Available to vessels alongside by road tanker.

REPAIRS: See "Paranagua".

AIRPORT: At Curitiba (Afonso Pena Airport) 65 km. away, or Paranagua for light aircraft 50 km. away.

HOLIDAYS: Local: 6th November (City Anniversary), 15th August (City's Patron Saint Day).

CUSTOMS: Tel: 432-1221.

POLICE/AMBULANCE/FIRE: Police, Tel: 355 or 432-1234; Fire Brigade from Paranagua is used.

TELEPHONES: Not available.

SERVICES: Foodstuffs available. Rubbish collection is the responsibility of the Agent.

GENERAL: Following received from a ship's Agent in 1980.

The Port of Antonina is situated in the inner recesses of Paranagua Bay, about 15 miles from this port. Vessels demanding that port receive Free Pratique at Paranagua and proceed on voyage 1 hour before HW. As the channel has no light-buoys, navigation is only possible during day time. There are only 2 berths available at Antonina, and should both of them be occupied, vessels await in Paranagua, because there is no safe anchorage there.

Vessels have to turn around before docking, and for this reason only small vessels should go there.

Official Maximum Drafts: Spring tide – HW: 21 ft.
Neap tide – HW: 18 ft LW: 15 ft.

Stevedoring – Labour:

(a) Number of gangs available: Not restricted.
Stevedores affiliated to their Union.

(b) Working hours:

Normal hours:	0700–1100	1300–1700
Night hours:	1900–2300	0000–0400
Overtime:	1100–1300	1700–1900
	2300–2400	0400–0700

(c) Number of men in regular gang:
Unitised cargo: 9 men.
Break-bulk cargo 11 men
Reefer cargo: 20 men

(d) Labour available all year round.

(e) Rigging and cleaning gangs available.

(f) Capable supervision is available. In addition to normal stevedore supervisors, agency employees give ample assistance to ships' operations.

(g) Average tons worked per hour per gang, loading: Bagged cargo: average of 40 t.p.h. General cargo: average of 10/20 t.p.h.

(h) Average tons worked per hour per gang, discharging:
Bagged cargo: average 20 t.p.h.
General cargo: average of 10/15 t.p.h.

Equipment/Gear:

Shore gear, hooks, slings, etc., available.

Heavy lift slings available to handle maximum 120 tons.

Shore cranes:
1 electric crane – capacity 25 tons – Outreach 25 m.
4 electric cranes – capacity 6.3 tons – Outreach 25 m.
4 electric cranes – capacity 3 tons – Outreach 15 m.
6 electric cranes – capacity 3.2 tons – Outreach 25 m.
4 electric cranes – capacity 2 tons – Outreach 25 m.
1 automotive crane on tyres – capacity 30 tons – Outreach 20 m.
1 floating crane available, capacity 110 tons.

Cargo is discharged onto railroad trucks and trailers. Export cargo is brought alongside by trucks, railway cars or trailers.

Sideloaders also available.

No container spreaders available.

No lighters available.

Warehouse/Transit Cargo Sheds:

(a) Within the port area there are 31 warehouses of concrete construction, with tile roofs, with a total of 87,310 sq.m. of storage.

(b) A small refrigerated storage shed is available, used mostly for meat, fish, shrimps and fruit; its capacity is for 2,900 cu.m., and there are 9 chambers.

Temperature: Range of 14°/15°F. One chamber can be brought down to −13°F.

(c) Free time period allowed on cargo discharged from vessels is 6 days.

(d) Storage always paid by importer/exporter.

AUTHORITY: Administracao dos Portos de Paranagua e Antonina, Av. Conde Francisco Matarazzo, Antonina, Brazil. *Tel:* 432-1027.

Port Captain, Rua Marques de Herval 216. *Tel:* 432-1384.

ARACAJU: 10.55 S. 37.03 W. (See Plan)

LOCATION: On the right hand bank of the Rio Sergipe, 3.24 nautical miles from the entrance. D.H.N. Charts 1000 to 1003 cover this area.

APPROACHES: The access channel is 100 m. long and 2.9 m. deep. Tidal variation 2.3 m.

PILOTAGE: Compulsory.

BERTHING: Manoeuvring basin is 600 m. long with a depth of 12 m.

The quay consists of 96 m. (concrete) and 80 m. (wood) berthing space, with depths of 6 m. and 7 m. available. Warehouse of 1,200 sq.m. and 50,000 sq.m. open storage available.

CRANES: One 9 ton mobile crane available.

BULK HANDLING FACILITIES: There are 3 silos, with a capacity of 5,800 tons and one mechanical wheat loader, capacity 20 ton. A 40 ton weighbridge is also available.

FRESH WATER: Available, delivery rate 25 t.p.h.

CONSULS: Portugal (vice-consul).

REPAIRS: Can be undertaken.

AIRPORT: Nearest at Santa Maria, 13 km. distant.

TIME: GMT minus 3 hours.

HOLIDAYS: National: January 1st, April 21st, May 1st, September 7th, November 15th and December 25th.

Regional: December 8th.

Movable: Monday and Tuesday of Carnival, Ash Wednesday, Good Friday and Corpus Christi.

Commemorative: August 28th, October 28th, October 30th and November 2nd.

AUTHORITY: Administracao do Porto de Aracaju, Av. Joao Rodrigues, s/no., 49000, Aracaju, SE. *Tel:* (0792) 22-3314. *Contact:* Engineer Militino Rodrigues Ferreira, Administrator. *Tel:* (0792) 22-3217.

ARATU: 12.47 S. 38.30 W. (See Plan)

LOCATION: The port facilities of Aratu are located on the Eastern side of All Saints Bay in the Enseada do Caboto, between Marinho and Pereira Points, to the North of the Bar of Cotegipe and the Naval Base of Aratu, facing the Mare Island.

Its areas of administration and jurisdiction correspond to the Bay of All Saints, limited to the South by parallel 12° 50′.

DOCUMENTS: See "General" before first port and "Salvador".

APPROACHES: *Access Channel:* The access channel starts at Lat. 12° 58′ S., Long. 38° 31′ 55″ W. with a minimum depth of 18 m. (see Chart 1108 of the NHD). The channel is marked by 8 light buoys, 4 to starboard with red lights and 4 to port with white lights and by the lighthouse at Areia Point. To the North of the Port of Aratu is the lighthouse of Cabrito Point which provides a good landmark day and night for vessels bound for the port of Aratu. The length of the channel is about 2 miles as far as the manoeuvring area, with a minimum width of 180 m.

The improvement of the nautical signalling arrangement in the access channel to the port is planned, based on a study carried out by a Dutch firm and under an agreement which will be signed with the SSN. The following points are fairly clear and serve for direction finding purposes:

(a) Furnaces of the Salvador Cement Company, at Sacopa Point, during the day;

(b) USIBA terminal which has a red light at its top, serving as a reference point both day and night.

(c) Construction at the top of the hill at Toque-Toque Point, during the day.

(d) Church of Nossa Senhora das Neves on the Southern part of the Island of Mare during the day;

(e) The lighthouses of Areia Point and Cabeto Point, both day and night.

Existing Dangers: The shoal to the West of Sacopa Point and the banks of the Island of Mare are being permanently dredged.

Manoeuvring Area: The area intended for berthing and unberthing of vessels is defined to the East and West by the 10 m. line, with variable width from 400 m. to 1,000 m., limited to the South by the 12° 46′ 09″ S. parallel. Minimum depth 12 m. Depth at Bar 20 m. Max. height of tide 2.8 m.

PILOTAGE: Compulsory. Requests for Pilots are to be made to the Bay of Todos os Santos Pilots' Association at Serra da Raiz Building, 5th Floor, Room 510 – Rua da Grecia 8, Tel: 242-2221 or by Channel 16 VHF-FM of the coastal radiotelephone network.

Requests must be made 2 hours in advance, specifying the time of the vessel's entry.

ANCHORAGE: The anchorage of Monte Serrat, must be used for visiting vessels and for manoeuvring. Anchorage is prohibited in the manoeuvring area and in the access channel (See chart).

The visiting areas of the Port Health Authorities, Federal Receipt and Maritime Police are those defined by a radius of one mile around the points of co-ordinates Lat. 12° 58′ 07″ S. and Long. 38° 32′ 18″ W. and Lat. 12° 55′ 56″ S. and Long. 38° 31′ 37″ W., as shown in Chart 1.102 of the National Directorate of Hydrography.

Vessels may only come alongside the berth after having been visited by the authorities. The anchorage for free pratique coincides with the waiting area for Pilots and the permitted anchorage area (i.e. the anchorage area of Monte Serrat).

MAX. SIZE: Solid Bulk Terminal: 65,000 d.w.t.

Liquid Bulk Terminal: 45,000 d.w.t.

Gas Products Terminal: 20,000 d.w.t.

HEALTH: See "Anchorage".

TUGS: Salvador tugs used.

BERTHING: To carry out operations of vessels going to the Port of Aratu and movement of their cargo and storage, the Port has specific Terminals, with an infrastructure capable of giving highly efficient operations as follows:

Cargo:

1. Solid Bulk Terminal – T.G.S.
2. Solid Bulk Terminal – T.G.S. – 2.
3. Liquid Bulk Terminal – T.G.L.
4. Gas Products Terminal – T.P.G.

Solid Bulk Cargo Terminal – T.G.S.:

Finished in 1976, commenced operations in 1977 and has a basic formation of:

A berthing pier; berthing dolphins (2) – South side; access bridge; a storage area; silos and warehouses (private); various equipments.

This terminal will also be equipped with a berth for solid bulk. Beginning of operations is expected in 1988. This dock will be equipped with a pier of approximately 175.05 m. in length; draft of 12 m. for vessels of up to 40,000 g.r.t. over which electric portico cranes and special private facilities will be installed.

The mooring dolphins will also be built with access by means of passageways from the pier. For storage and handling of bulk solids, which will be performed at this site, a complete infrastructure will be prepared on the re-fill, including highway/railway access.

Handling of aggressive and/or corrosive solid bulk products currently operated at TGS, such as sulphur and fertilizer as well as alumina, will be transferred to this pier. In addition to these products, all bulk currently handled at the Port of Salvador which, due to physical/chemical difficulties could not yet be handled at Aratu, will also be transferred to this dock.

Mooring Pier:

Constructed in reinforced concrete on pipes and with the following characteristics:

Level +4.50 m.; width 37.50 m.;, length on the North side 153.20 m., on the South side 202.60 m.; distance between dolphins 286.60 m. (on the South berth).

North Berth: Depth 10.00 m.; largest permissible vessel 100,000 g.r.t.; distance between mooring points 24 m.; max. load on mooring point 50 tons (9); cylindrical fenders, external diameter 0.80 m.×1.50 m. (12).

South Berth: Depth 11.00 m.; largest permissible vessel 100,000 g.r.t.; distance between mooring points 24 m.; max. load on mooring point 50 tons (9); cylindrical fenders, external diameter 1.20 m. × 1.50 m. (24).

Note: In a later phase, after extension, the depths will be increased as will be permitted loads.

Mooring Dolphins:

There are 2 berthing dolphins in reinforced concrete on pipes situated on the South side of the pier with the following characteristics:

Distance from axis to axis, 286.60 m.; mooring capacity 100 tons; dimensions 10 m. × 10 m.

Access Bridge:

Constructed in protected reinforced concrete with the following characteristics:

Level +4.5 m.; width 9 m., length 200 m.; load projected – Class 36.

This acts as support for the conveyor belts, pipes, electrical supply, passage of vehicles and service equipment, ambulances and fire fighting equipment.

Storage Open Area:

For storage of various solid bulk cargoes in the open air, destined for import and export, with the following characteristics:

Covered by asphalt concrete; total width 114 m.; total length 600 m.; total area 68,400 sq.m.; usable area 35,840 sq.m.; Permitted load 30 tons/sq.m.; max. static load 475,000 tons.

Note: By virtue of the diversification of solid bulk cargo moved and stored in the open air, the loads stated are subject to the action of wind and rain and special care is recommended with regard to positioning; protection and cleanliness at the storage area.

Silos and Warehouses (Private):

1. Alcan – Aluminio do Brasil Nordeste S.A.

Installations for receipt and storage of calcinated aluminium, connected to the T.G.S. transport system, and constituted basically by:

1 vertical metal Silo on a structure of reinforced concrete with top feed and discharge at the bottom through 9 outlets, capacity 10,000 cu.m.

1 conveyor belt "B10" width 48 in. and 141 m. long.

Note: Extension of these installations is planned by construction of more vertical silos.

2. Nitrofertil – Fertilizantes Nitrogenados do Nordeste S.A. Installations for receipt of urea by road vehicles and rail trucks, storage under cover and shipment connected to the transport systems of T.G.S.

and constituted basically: By a discharge station for road vehicles and railway trucks under cover and containing 4 silos and two 401–V–48 in. and 402–V–48 in. transporters, both with a capacity of 300 t.p.h.

One warehouse constructed from reinforced concrete, with 50 m. width and 200 m. long and 40,000 tons capacity, equipped with 10 dehumidifiers, 1 transporter (403–V–48 in. – 300 t.p.h.) with receipt from a moving handling unit with two outlets for stacking area, 1 Kratzer of 750 tons per hour for recovery and loading to the transporter 404–V–54 in. – 730 tons, for shipment.

One external transport complex for shipment, of 730 t.p.h., including 4 transfer points and 3 conveyor belts 405–V–54 in., 406–Va–48 in., 406–Vb–48 in.

1 weighbridge for flow purposes installed in the transporter 404–V; 1 administrative office; 1 sub-station.

3. Caraiba Metais S.A.

Installations for the receipt of copper concentrate, phosphate rock and coke, covered storage and delivery for metallurgy, through a direct duct silo and road and rail system, in the future railway silo with feed in the shed by loader and constituted basically by:

1 covered shed with 15,000 sq.m. area and storage area of 79,600 tons (concentrated copper 42,000 tons, phosphate rock 35,000 tons and coke 2,100 tons).

T.G.S. Equipment:

The installations and equipment of T.G.S. are constituted by a semi-automatic system for movement of solid bulk cargoes by three lines of operation, that is to say:

Import Line: 1. Situated on the pier there are the following installations:

1 vessel discharger unit which is mobile with a nominal capacity of 970 t.p.h. lifting capacity on the hook of 25 tons, its own weight 900 tons, maximum load in the self-carrying silo of 600 tons, which uses grabs of the 'clam shell' or 'trimmer' large capacity type, with cycles of less than 60 seconds under normal conditions and two vibratory feeders for the Bla transporter with 700 t.p.h. each. Currently there are 7 grabs ranging between 4 cu.m. and 13.5 cu.m.

2. Connecting the pier and the storage area:

1 reversible conveyor belt Blb–48 in. – 1,200 t.p.h. – 1.6 m/sec. – 442 m.

3. Situated in the storage area:

1 belt transporter B2–48 in. – 1,200 t.p.h. – 1.6 m/sec. – 247 m.

1 mobile stacker, for piling bulk solid up to a height of 10.0 m., with a capacity of 1,200 t.p.h.

The recuperation of stored merchandise for delivery to the user is performed by means of mechanical shovels with direct feeding to trucks.

Railway wagon feeding is planned for the near future.

Quantity control of bulk products is performed by means of vessel draft and/or highway scale, 60 tons capacity, installed at the Port entrance.

Average unloading capacity (production) under normal conditions is 500 t.p.h.

Factors which reduce average production:

Specific weight granulometrical and aggregation of bulk products.

Improper stowage.

Necessary clean-up of terminal between operations with different bulk products.

Improper vessels (non-bulk carrying vessels).

Export Line:

1. Situated in the storage area:

1 mobile loader fed by shovel with a capacity of 12 cu.m. with 2 vibratory feeders of 700 t.p.h. each; 1 belt transporter B3–48 in. – 1,200 t.p.h. – 1.6 m/sec. – 238 m.; 1 transfer tower B2/Blb.

2. Connecting the storage area and the pier: 1 reversible belt transporter Blb (See "Import").

3. Situated on the pier: 1 transfer tower Blb/B7; 1 belt loader B7–54 in. – 1,200 t.p.h. – 1.6 m/sec. – 19 m.; 1 transfer tower B7/BB; 1 belt transporter B8–48 in. – 1,200 t.p.h. – 1.6 m/sec. – 331 m.; 1 belt transporter B9–48 in. – 1,200 t.p.h. – 1.6 m/sec. – 81.0 m.

One mobile shiploader, with a nominal capacity of 1,200 t.p.h. and equipped with a telescopic arm which includes a lifting movement and a 54 in. belt. There is a second shiploader on the opposite side.

The recovery of cargo stored for feeding the hopper is performed by means of mechanical shovel, storage being performed either directly from dump trucks onto storage area, arranging the material by mechanical shovel for area reduction, or by means of wagon/truck unloading line which is described below.

Wagon/truck unloading line: Located in the storage area, consisting of:

1 underground wagon/truck unloading station, with 220 cu.m. silo and 2 vibratory feeders, capacity 700 t.p.h.

1 B6-48 in. conveyor belt – 1,200 t.p.h. – 1.6 m./sec. 54.0 m.

1 B2 conveyoy belt (See "Imports").

1 Stacker (See "Imports").

General comments on the T.G.S.:

Maximum specific load permitted 3.88 tons per. cu.m.

Maximum granulometry – 400 mm. diameter.

Total length of the 8 conveyors – 1,848.0 m.

Currently, the conveyor system is regulated to the primary phase, that is:

Belt velocity – 1.6 m./sec.

Maximum belt volume capacity – 1,000 cu.m. per ton.

Maximum load capacity – 1,200 t.p.h.

In addition to the equipment already mentioned, the T.G.S. has at its disposal 3 sub-stations, 1 system control house with synoptic panel and 1 control building in the storage area.

In order to perform operations, pre-established teams are assigned in advance, depending on the nature of the operation to be performed, which act within Codeba facilities.

It should be noted that in operations for private facilities (Alcan, Nitrofertil, Urea and Caraiba Metais) both the equipment and the staff from the corresponding companies should work in a synchronised manner with the Codeba equipment and staff. For this purpose, the Terminal has an interlock system for basic functions and its own telephone communications system, which reaches specific areas, using VHF radio for remaining areas.

Solid Bulk Cargo Terminal – T.G.S. – 2: Construction completed 1988. Operations commenced in 1989. The berth is equipped provisionally with a 16 ton electric portico crane. Length of berth 210 m., depth alongside 10.0 m. 2 berthing dolphins available.

Liquid Bulk Cargo Terminal – T.G.L.:

Completed in 1978, commenced operations in 1979, and is composed basically of: A berthing pier; 10 berthing dolphins; access bridge; platform; storage area (tanks); installations and equipment.

Berthing Pier: In this terminal, the berthing is defined by the dolphins which are located at the side of the operations platform.

North Berth: Depth 10.6 m.; largest cargo vessel permitted, 35,000 g.r.t./220 m. length; distance between fenders (2) 66 m.; maximum load – mooring heads – 50 tons (6); cylindrical fenders (2) – external diameter 1.20 m. × 1.50 m.

South Berth: Depth 11 m.; biggest cargo vessel permitted 25,000 g.r.t.; distance between fenders (2) 66 m.; maximum load – mooring heads – 50 tons (6); cylindrical fenders (2) – external diameter 1.20 m. × 1.50 m.

Note: Near the berth there is a slope which limits the operations there to the following:

(a) Maximum vessel length – 120 m. (394 ft.)

(b) Ships over 105 m. length must be equipped with bow thruster.

(c) Ships of more than 80 m. (262 ft.) length must be assisted by a minimum of 3 tug boats and operations must be performed under favourable sea and weather conditions.

(d) Time of manoeuvring is at the Pilot's discretion.

Mooring Dolphins:

There are 10 mooring dolphins made of concrete on pipes with the following characteristics

Dimensions 10 m. × 10 m.; maximum level +4.60 m.; mooring capacity 50 tons.

By virtue of the characteristics of the T.G.L. the dolphins are fitted with quick-release hooks to enable them, in case of necessity, to carry out prompt deberthing of the vessel.

Access Bridge:

Constructed of reinforced concrete on pipes with the following characteristics.

Level – variable +10 m.; width – 9 m.; length – 324.60 m.

Purpose – Access to the dolphins and platforms, passage for service vehicles, ambulance and fire fighting equipment.

Support – There are two series of concrete supports on the bridge, level +4.65 and +6.55 m. for support and passage of pipe-lines.

Platforms:

Platforms made of concrete on pipes.

Junction – On 3 levels with approximately 1,600 sq.m.

Pumping – On only one level with access by metal ladder with approx. 200 sq.m.

Operation – On two levels: upper level with 566 sq.m. and lower level with 2,068 sq.m.

For reasons of safety, vessels must not transmit forces to the operations platform of the T.G.L.

Storage Area (Tanks):

Due to contracts with pre-established duration, signed with companies specializing in movement and storage of liquid chemical products, tanks and miscellaneous facilities were built in addition to equipment and installations on the pier and TGL feedback, capable of guaranteeing full operation of transport and storage systems for chemical and petrochemical products from the area of their entrance, with a high degree of efficiency and operational flexibility.

Tank storage area operated by Tequimar – Terminal Quimico de Aratu S.A.

A complex of 40 tanks in carbon steel, carbon steel lined with stainless steel, some for multiple purposes and others for a specific product only which will be handled and stored within rigid guidelines of security, distributed in concrete construction ducts.

Installed capacity – with 40 tanks with 99,600 cu.m., thus:

2 tanks of 300 cu.m.; 12 tanks of 750 cu.m.; 12 tanks of 1,500 cu.m.; 8 tanks of 3,000 cu.m.; 2 tanks of 8,000 cu.m. and 4 tanks of 500 cu.m.

Dichloroethane: Pipeduct for Dichloroethane (EDC) with 35 km. length connecting the terminal to the Camacari Chemical Complex.

It is planned to increase the capacity by installation of more tanks in accordance with demand.

Tank accessories: Blanketing with N_2; heat installation with cooling serpentines; inlet and outlet valves motor-operated by remote tele-control; automatic level measuring with remote indicator; Automatic temperature measuring with remote indicator; central analogical computation system for control of stocks.

System of Loading and Unloading of Vessels:

Sleeves, 2 supports and 2 cranes for the movement of sleeves.

Pier lines with flanged connection valves.

10 pre-pumping tanks of 8 cu.m. on the pier – for sampling.

10 pre-pumping tanks of 8 cu.m. in the storage area – for sampling.

A complex of centrifugal ship-loading pumps with a nominal capacity of 250 t.p.h.

Simultaneous transfer operation in all the pier lines.

"Pig" device for internal cleansing and scraping of lines which handle various different products.

A complex of pumps, of the screw type of 60 cu.m/h. used for draining the lines, pumping of samples and other emergency operations. There are also two more pumps with a capacity of 120 cu.m./h. intended for services which require greater outlet, for example transfer of liquids from one storage tank to another.

Loading/unloading System for Truck Tankers:

The operations of loading and unloading trucks are performed on bases located on parallel lines on jetties, at the points near the tanks or group of tanks. These bases (12) compose the "islands" under which are installed the pumps which permit loading or unloading trucks on one side or the other of the bases, by means of loading arms.

All storage tanks are connected to the respective pumps.

Auxiliary Units:

There is in the port area a system of steam distribution, service air, drinking water, and nitrogen for all necessary operations and cleaning of pipe-lines in the terminal.

Drinking Water System:

A raised concrete storage tank with 15 cu.m. and one made of carbonic steel, with 500 cu.m. Feed is made by the distribution mains operated by Codeba with meters.

Steam System:

A tubular frame boiler, fed by diesel oil with a capacity of 2 t.p.h. of steam at a pressure of 6 kg./sq.cm.

The steam is intended for service stations and for cooling the Dutrex tanks and the lines with "steam-tracing".

One of the uses of steam is for the production of hot water for washing hoses. For this there are various water heating points distributed at the various points of consumption.

Compressed Air System:

The compressed air system consists of 2 (twc) compressors of the two stage type with a capacity of 160 cu.m./h. at a pressure of 7 kg./sq.cm.

It is intended for feeding service stations and its main function is the drying of hoses after washing.

Mask Air System:

The air system for breathing consists of various stations distributed within the loading areas for lorries and vessels.

Nitrogen System:

Nitrogen is stored in a pressurized tank of 17.6 kg./sq.cm. with a liquid capacity of 34 cu.m. The system with vaporiser was planned for a demand of 200 N cu.m/h., operating at a pressure of 5 kg./sq.cm.

Nitrogen is used to inert tanks which require "Blanketing". It is also used for cleaning lines and for moving the "Pigs".

Firefighting System:

The firefighting system is constituted by equipments and installations.

The water mains to combat fire using sea water through a ring of firefighting water which covers the tank area, the anchorage and those where work and administration is carried out. The capacity of the mains is 1,500 cu.m./h. being fed by 3 pumps of 500 cu.m./h. capacity each and a maximum pressure of 12 kg./sq.cm. Apart from the firefighting pumps, there is a "jockey" type pressurised pump of 50 cu.m./h. which maintains the mains continually pressurised at a pressure of 7 kg./sq.cm.

With a complex of extinguishers of CO_2 and chemical powder; a system for storage tank cooling; A system for foam firefighting; a system for fire alarm by means of local manually operated units; a system of communication of emergency by telephonic lines.

Port Services: In view of foreman type contracts signed for pre-determined durations with Codeba, Tequimar may perform foreman services on its connections and those of others. However, it is up to Codeba to inspect such services as well as to control access to berths and vessel mooring.

Installations and Equipment of Nordeste Terminais S.A.:

Nordeste Tank Storage Area:

A complex of 30 tanks in carbon steel, some for multi-purposes and others for specific products which will be operated and stored within rigid security guidelines and distributed in docks of containment made of concrete.

Installed Capacity: 16 tanks with 28,200 cu.m. and there are under construction another 14 similar tanks with a planned capacity of 6,600 cu.m.

Tanks under construction: 8 × 300 cu.m. and 6 × 700 cu.m.

The capacity planned should bring up, after all phases of construction the total storage capacity to 63,000 cu.m.

System of Loading and Unloading of Vessels:

Sleeves, 2 supports and auxiliary arms for movement of sleeves.

5 pre-pumping 1 cu.m. tanks – for sampling on the pier.

5 pre-pumping 1 cu.m. tanks in the storage area, – for sampling.

A complex of chemical centrifugal pumps for loading vessels with a nominal capacity of 204 cu.m./h.

Simultaneous transfer operation in all the pier lines.

"Pig" – device for cleaning the interior of lines which use different products.

System of Loading and Unloading Lorries:

The unloading operations of tanker vehicles are carried out in localized bases on the bridges which are nearest the tank or group of tanks in question. The bases are constituted by "islands", equipped with 80 cu.m./h. and 204 cu.m./h. pumps which enable simultaneous discharge.

The loading operations of tanker trucks is centralised in a platform for loading tanker road vehicle's point in which it will be possible to load 6 tanker lorries at a time by independent lines at each storage point.

Drinking Water System:

A raised tank made of concrete of 5 cu.m. and another one in carbon steel of 500 cu.m. Feed is made by the distribution network operated by Codeba with meters.

Steam System:

A flame-tubular boiler with a capacity of 1,000 kg./hr.

The boiler is fed by BPF, the steam is destined for heating tanks with serpentines and service stations.

Compressed Air System:

Constituted by an Atlas Copco air compressor, continuously operated and which is used for feeding the service stations, cleaning and drying sleeves and tubes.

Breathing Air System:

Consists of various stations distributed in the loading areas for lorries and vessels.

The stations are formed by batteries of fixed cylinders with hoses and individual masks.

Nitrogen System:

Nitrogen is stored in a pressurised tank 17.6 kg./sq.cm. with a liquid capacity of 27,800 litres. The nitrogen converts the inert atmosphere in the tanks which require "blanketting".

Firefighting System:

Water; foam; chemical powder.

System of Industrial Safety:

Cooling of tanks; system of alarms; systems of communication of incidents.

General Information and Recommendations:

Both the piers of T.G.L. and T.G.S. were planned so as to enable future dredging to adapt to 20 m. for berthing of large bulk carriers up to 100,000 g.r.t.

Safety in operation of vessels:

It is important that safety rules be observed during operations with ships at the terminal.

(a) Special attention must be given during berthing to ensure that the vessel is properly moored avoiding any collision with dolphins and platforms or the breaking of hoses.

(b) One bow cable and one stern cable must always be available in the event of any vessel needing to be removed in the event of fire on board or on shore.

(c) Any repairs which require cutting, welding or other services involving the usage of heat on board or on the pier must be avoided wherever possible.

Where such services are absolutely vital on board, a responsible person at the Terminal must be warned in advance so that the necessary precautions may be taken ashore.

(d) It is fairly common for bunkering to take place from barges on the offside of vessels moored at the Terminal. This practice requires certain security measures and must be avoided at all costs during the loading and discharge of the vessels.

(e) It is recommended that no movement of vessels takes place at T.G.S. whilst a tanker is mooring or unmooring at T.G.L.

(f) Both at T.G.L. and T.G.S., mooring and unmooring of vessels must only be effected with the aid of tugs in accordance with the instructions of the Port Captain.

(g) It is recommended that all vessels berth with the bow turned towards the Access Channel provided that this does not cause difficulties in ensuring a proper berthing and thus permitting a rapid departure in the case of emergencies.

(h) Deballasting operations are only possible by using the adequate installation as owned by the Terminal and which is in perfect condition for usage, together with the collection of residue and at all costs contamination and pollution of the area must be avoided.

Before commencing discharge or loading operations and after having drawn up a movement plan for the liquid product, it is obligatory to carry out a general safety inspection and of the conditions of installation including the system of communication between vessel and land and as proof of this a "Declaration of Inspection" must be drawn up on the appropriate form signed by a representative of the vessel and by the responsible person for the operation within the Terminal. One copy of this declaration must be sent to Codeba.

Gas Products Terminal – T.P.G.:

The works began in July 1980 and operations began in 1983. The terminal consists of a pier for handling of liquefied gases, including only one mooring berth. The terminal is basically composed of:

Operations platform
Landing and mooring dolphins (6)
Access bridge
Access jetty
Storage area/facilities and equipment

Operations Platform:

Platform is reinforced concrete supported by tubes of reinforced concrete supported by tubes of reinforced concrete of 100 cm. diameter connected to the coast on the one hand by a land connection and by a bridge. It is protected by impact from the vessels by mooring dolphins – one at each end.

The platform will support the structures for the loading arms, tubes, pumps, auxiliary crane, the foam storage tank, the emergency gangway and operation and control buildings.

Main characteristics: area – 33 m. × 20 m. = 660 sq.m.; level – +4.50 m.; depth of the project – 10.9 m.; permitted vessel size – 20,000 g.r.t. length 180 m.

Mooring Dolphins:

The two mooring dolphins consist of a block of reinforced concrete of 18 m. × 10 m. × 1.80 m. supported by 6 concrete tubes 120 cm. diameter.

Each one of the 4 dolphins consists of a block of concrete 10 m.×10 m.×1.5 m. supported by 4 tubes of 120 cm. diameter.

All the dolphins are equipped with 10 mooring hooks of 50 tons each of the quick release type.

Each of the mooring dolphins will be equipped with 3 fenders made of rubber and in a cylindrical shape with a diameter of 60 cm. × 150 cm.

The mooring dolphins will be accessible by 4 concrete gangways and 4 metal ladders on the sea side.

Access Bridge:

The access bridge consists of a superstructure made of reinforced concrete supported by reinforced tubes of 100 cm. diameter.

Access Dock:

The access dock is built of hard stone which is resistant to sea water. The land connection and the access bridge will carry the necessary ducts and piping and the access path arranged for 2 lines of traffic, thus admitting free access for vehicles. The control of access to the pier to persons and vehicles will be the responsibility of Codeba.

Tank Park and Facilities of Terminal de Gases Ltda. – TEGAL

Tanking Park:

1 cryogen tank destined to storing ethene at 106° Centigrade and 15,000 cu.m. capacity.

Refrigerated sphere tank for butadiene at – 45° Centigrade and 3,200 cu.m. capacity.

1 sphere tank for MVC at ambient temperature. Capacity for 3,200 cu.m.

System of pumps. Flow: 250 cu.m./hr.

4 "islands" for trucks loading/unloading.

Flanged nets to connect land pipeducts.

Crane to move nets.

4 additional tanks (total capacity 18,200 cu.m.) available.

Tank Accessories:

Automatic level measuring.

Automatic temperature measuring.

Thermal insulation of lines.

Tegal complementary facilities:

Nitrogen System

N_2 is stored in pressurized tanks at 17.6 kg/sq.cm., with net capacity of 34 cu.m. Compressed air, potable water and steam are supplied by Tequimar through interconnecting lines.

Fire Defense System:

Water supply is made by Tequimar.

Other Facilities:

Control Room. Room for JPG pier operators.

Fertilizantes Nitrogenados do Nordeste, SA – Nitrofertil

This company has at TPG, complete facilities for the operation with Ammonia, which includes a sphere/reservoir with 30,000 cu.m. capacity.

PORT EQUIPMENT: The port has 3 loading shovels of 3 cu.m., 1 mobile crane up to 20 tons, 1 front stacker of 3.2 tons, 1 agricultural tractor, 1 bob cat tractor, 2 fast action fire fighting trucks, 1 pump and tank truck for fire fighting.

FRESH WATER: Small quantities available.

FUEL: This is done by lighter and only at the solid bulk cargo terminal (T.G.S.).

CONSULS: See "Salvador".

REPAIRS: There is a workshop under construction.

DRY DOCK: There is a naval dry dock in Aratu capable of handling vessels up to 45,000 d.w.t. It has dimensions 230 m. by 30 m. wide. Depth 11.5 m. However, the access channel will only allow vessels of up to 10 m. draft, though this is expected to be increased shortly.

AIRPORT: 2nd of July Airport at Salvador, 43 km. from the port.

TIME: GMT minus 3 hours.

HOLIDAYS: *National:* 1st January, 21st April, 1st May, 7th September, 15th November, 25th December.

Municipal: Fixed: 2nd February, 14th August. Movable: Good Friday.

Traditional: Movable: Carnival – Tuesday (Mardi Gras) and Ash Wednesday – Corpus Christi.

Fixed: St. John (June 24th), July 2nd, November 2nd.

GENERAL: *Useful Addresses:*

1. Terminal of Madre de Deus – Temadre. Baia de Todos os Santos. Products handled: oil and derivatives. Tel: 801-1821.

2. Dow Chemical Terminal – Baia de Todos os Santos. Products handled: chemical products. Tel: 801-1011 and 801-2211.

3. Terminal of Usina Siderurgica da Bahia – Usiba. Baia de Todos os Santos. Products handled: bulk ore. Tel: 594-8311.

4. Terminal of Fabica de Cimento Aratu. Baia de Todos os Santos. Products handled: cement and limestone. Tel: 594-9488.

5. Terminal of Equipetrol. Baia de Todos os Santos. Products handled: pre-inspection of rig structures. Tel: 594-8811.

6. Sao Roque Terminal (Petrobras). Estuary of the Paraguassu River. Products handled: rig parts and structures for oil drilling. Tel: 242-7997 and 242-7797.

7. Terminal of IMBASA – Industria de Mamona da Bahia, S.A. Baia de Todos os Santos. Products handled: vegetable oil (castor oil). Tel: 594-9133 and 594-9386.

AUTHORITY: Cia. das Docas do Esta do da Bahia – CODEBA, Av: da Franca – S/No., Estacao Maritima, Municipio de Candeias, Estado da Bahia – Cep 43700 Brazil. *Tel:* (071) 243 – 5066. *Telex:* (071) 1110. *FAX:* (071) 241 6712. *Contact:* Dr. Osvaldo C. Magalhaes.

AREIA BRANCA (Salineiro Terminal):

04.50 S. 37.03 W. **(See Plan)**

LOCATION: In open sea 14 km. out from the continent, near to the town of Areia Branca.

CLEARANCE: The Health Authorities of the Port and the Federal Police do not have representatives in the town of Areia Branca. Therefore, in the event of there being a necessity, the ship's Agent must communicate, sufficiently in advance, with the Port Authorities of Natal, when representatives will be sent to Areia Branca, to carry out vessel inspections.

Addresses and telephones of Port Authorities:

Port Captaincy Agency – Rua Joao Felix, 12 – Areia Branca. Telephone: 332-2211.

Maritime Work Post – At the top of the CP-RN Agency Building at Areia Branca. An Advocate is employed with duties and representation at Areia Branca, in the Maritime Work Delegation – Telephone 332-2022.

Federal Customs in Areia Branca: Telephones: 332-2425 and 332-2426.

APPROACHES: Access to the Terminal: The access to the terminal for vessels of medium tonnage is made by a channel 13 m. depth (length 15 km., width 1.2 km.) at minimum level. This channel goes to the mooring point from Joao da Cunha Reef.

Manoeuvring Basin: Length 2 km., depth of water 11 m., at minimum water level.

Lighting and Buoys: The lighting and buoys are as follows: One light buoy at the beginning of the access channel; along this channel and in the manoeuvring basin are distributed a further 10 unlit buoys.

Tidal Variation: From 0.10 m. to 3.90 m.

PILOTAGE: Pilotage is obligatory, from the pilotage anchorage to any point in the Port area for vessels of more than 2,000 g.r.t. Pilots must be requested by radio, through the Agencia Maritima Ltd, Rua Cel. Aureliano, 37, P.O.Box 138, Tel: 222-1449 – or, at Rua Cel. Fausto No. 481, Tel: 332-2001 and 332-2011 at Areia Branca. Contacts must be maintained with the Marine Agency with regard to the taking on of Pilots and this must be done a minimum of 10 hours in advance of the arrival of the Pilot at the point of embarkation by virtue of the distance between the town and the point of embarkation and the dependency upon the tide.

ANCHORAGES:

(a) For vessels of any g.r.t., awaiting berthing orders or awaiting repairs – between parallels 04° 49′ 18″ S. – 04° 49′ 48″ S. and meridians 37° 02′ 54″ W. – 37° 03′ 48″ W.

(b) For vessels in quarantine – As above.

(c) For pleasure craft – between parallels 04°54′00″ S. – 04°54′18″ S. and meridians 37° 07′ 24″ W. – 37° 08′ 12″ W. (Inner Area).

(d) In the event that the Island Port is not working, due to damage to its equipment, the anchorages mentioned above will be used where the vessels will receive salt directly from barges.

(1) Inner Area – Limits mentioned in (c) can be used with safety by vessels drawing up to 12 ft. of water.

(2) Outside Area – between parallels 04° 51′ 12″ S. – 04° 52′ 00″ S. and meridians 37° 04′ 00″ W. – 37° 05′ 12″ W. can be used with safety by vessels drawing up to 22 ft. of water.

(e) Restrictions: Anchoring is not permitted in the access channel nor in the manoeuvring area.

Also see "Berthing".

RESTRICTIONS: No night navigation.

Vessels not directly concerned with port operations, must travel at a minimum distance of 1,000 yards off the Island Port berthing dolphins.

TUGS: 2×1,680 h.p., 20 tons bollard pull.

Normally there is no need for tugs for berthing or for unberthing except in the case of damage to machinery or when the action of the wind is sufficiently strong to throw the vessel against the dolphins (winds from the sector S.E. – S.W.), in which case the following regulations must be observed: vessels up to 10,000 g.r.t. must use 1 tug, in the event of the wind intensity being less than 25 knots, and 2 tugs if the wind intensity is greater than that level. Vessels over 10,000 g.r.t. must use 2 tugs, but it is not advisable to try to berth or unberth with winds greater than 25 knots.

BERTHING: *Manoeuvring Area:* This is a strip 400 m. long in front of the dolphins, between the meridians 37° 02′ 24″ W. – 37° 02′ 54″ W. Depth: from 12 m. to 23 m. It is expressly prohibited to anchor anywhere in this area which is reserved for berthing and unberthing operations.

Island Port Resources:

Berthing Quay

(1) For vessels:

Constituted by 3 dolphins, each with a mooring head and a hook. Distance between the end dolphins, 78.6 m. The system of berthing is completed by 3 buoys. Depth: 12 m.

Vessels berth port side to on 3 dolphins, using starboard anchor and moored to 3 buoys.

(2) For Barges:

Situated on the S.W. side of the artificial island there is a 195 m. long quay, for berthing barges. Depth: 6 m.

River Mossoro:

For vessels with less than 3.5 m. draft, dependent on the tide, entering or leaving the town of Areia Branca, there is a deviation due to the previously used channel being silted up, which makes it obligatory to have help from the local Pilots.

BULK CARGO FACILITIES: Cranes/Stackers/Rolling Bridges/Loaders/Suction Units:

The salt is transported from the storage area on the Island Port to the vessel's hold by means of a conveyor working at a speed of 1,500 t.p.h. At the end of the conveyor there is a rotary loader, supported on one side on a pivot on a metal transfer tower platform and on the other by a curved track structure. The loader permits only rotary movement (sector of 17°–22°) with also axial displacement and rise (with a range of 39 m.) which makes it possible to load two different vessel holds when necessary.

Transport Along the Quay:

The salt is unloaded from barges moored on the quay on the S.W. face of the island by 2 jib cranes, rolling bridge type, moving on a railway line and equipped with clam shell grabs, with nominal capacity each, of 350 t.p.h., connected with weighbridges, hoppers and mats for formation of piles. It is possible to discharge the salt directly in the piles (storage area) or into the equipment which forms them, or even directly into the loading mat which makes it possible in this case to effect direct transfer of the salt into the vessels.

The salt in the storage area is also moved by 2 loading shovels with a nominal capacity of 680 t.p.h. and 3 tractors.

Pontoons/Barges/Launches/Lighters:

The Rio Grande do Norte Docks Company (CODERN) has 5 self-propelled 452 h.p. barges with a capacity for transporting 520 tons of salt each, as well as 5 dumb barges with a capacity for transporting salt from Areia Branca and Macau to the Island Port.

The SOPORMAR (Maritime & Port Services Company) has 6 barges in operation between Macau, Areia Branca and the Island Port.

STEVEDORES: On working days, Sundays and holidays, the working timetable is as follows:

Day Period

0700 to 1100 – Normal Day
1100 to 1200 – Meal Break
1200 to 1600 – Normal Day
1600 to 1800 – Possible Overtime
1800 to 1900 – Meal Break

Night Period

1900 to 2300 – Normal Night
2300 to 0000 – Meal Break
0000 to 0400 – Possible Overtime
0400 to 0600 – Only to finish vessel
0600 to 0700 – Meal Break

Stevedores are carried out to the Island Port aboard launches which are hired by the ship's Agent. The journey from Areia Branca to the Island Port is made normally in a maximum of 2 hours. The time launches leave depends on the tide, by virtue of the limitations of the bar of the River Mossoro.

SPECIALISED CARGO HANDLING FACILITIES: No facilities for container or Ro/Ro traffic.

MEDICAL: In the Island Port, there is an infirmary for first aid treatment, where there is always a nurse on duty. There is no doctor on duty. Nearest hospital is at Mossmoro, 50 km. away.

FRESH WATER: In the Island Port there is an artesian well which permits a supply of water to berthed vessels via a pipe-line in the metallic structure at the berth. Capacity: 50,000 litres/hour. From the end of the pipe, supply is effected by means of 2.5 in. hoses.

FUEL: Supply of diesel oil to vessels is possible through the self-propelled barges of the Rio Grande do Norte Docks Company (CODERN). Supply will be made preferably with the vessel anchored. Each barge has a capacity to supply up to 20,000 litres of diesel oil. Orders must be made 48 hours minimum in advance in order that the Rio Grande do Norte Docks Company (CODERN) can take the necessary steps for topping up the tanks at the Island Port.

REPAIRS: Active shipyard authorised by SUNAMAM to construct vessels up to 1,000 tons gross carrying weight. They also carry out naval repairs and have workshops and underwater repair facilities.

The Salineiro Terminal has a workshop capable of carrying out small repairs.

EMERGENCY SERVICES: The Salineiro Terminal has 2 tugs used in port operations and which can be used in a situation of emergency in life saving and salvage operations. There is no organised service.

GANGWAY/DECK WATCHMEN: The Rio Grande do Norte Docks Company (CODERN) has a group of watchmen, 25 strong, which works between the Island Port and the office in Areia Branca, there always being a minimum of 6 at the Island Port.

AIRPORT: Nearest at Natal and Fortaleza, 300 km. distant, served by commercial flights.

TIME: GMT minus 3 hours.

HOLIDAYS: National: 19th January, 21st April, 1st May, 7th September, 12th October, 15th November and 25th December.

Movable Holidays: Monday and Tuesday of Carnival, Ash Wednesday, Good Friday and Corpus Christi.

Commemorative Days: 28th August (Banks), 28th October (Public Officials), 30th October (Business), 2nd November (All Saints), 28th January (Port Workers).

Municipal Holidays: 6th January (Foundation of the City), 21st November (City of Natal Celebration), 15th August (City of Areia Branca Celebration).

Local Holidays: 15th August – Our Lady of the Mariners; 8th December – Immaculate Conception.

POLICE: Tel: 332-2057.

TELEPHONES: No facilities exist for placing telephones on board vessels.

GENERAL: *Charts:* DHN Nos. 703 and 720 cover the port area.

AUTHORITY: Companhia Docas do Rio Grande do Norte, Rua Princesa Isabel 342, 59000, Natal, RN. *Tel:* (084) 222 3774 PABX. *Telex:* (084) 2114.

Local Office at Salineiro Terminal: Cais Tertuliano Fernandes 81, 59620, Areia Branca, RN. *Tel:* (084) 332 2121 PABX. *Contact:* Heinz Zech, Director.

BARRA DO RIACHO (Portocel): 19.50 S. 40.03 W.

(See Plan)

LOCATION: Situated in Praia das Conchas, Portocel, the specialised Terminal of Barra do Riacho, is part of the municipal district of Aracruz, in the North of the State of Espirito Santo, 30 nautical miles from the Port of Vitoria, whose jurisdiction it is under.

Position: Lat. 19° 50′ 15″ N., Long. 40° 03′ W.

Description: Portocel, a private terminal belonging to Aracruz Celulose SA and Celulose Nipo-Brasileira SA – CENIBRA, specialises in the handling of woodpulp and the discharge of salt, wood and sulphur to both mills.

The Terminal consists of the following components:

2 breakwaters for protection.
A berth of 230 m. length.
A closed warehouse with an area of 12,100 sq.m.
An open warehouse with an area of 3,000 sq.m.
Administrative offices.

PILOTAGE: As pilotage is compulsory to and from the Terminal, Pilots must be requested 6 hours in advance from Vitoria, where 12 Pilots are stationed. Pilots come to the Terminal by road, a journey time of 1 hour and 30 minutes.

Pilotage area extends from the pilot receiving place at Lat. 19° 50′ 30″ S., Long. 40° 02′ 00″ W. to the berthing area.

ANCHORAGE: *Outer Anchorage Area:* Ships must anchor in a circular diameter situated approximately 2 miles East of the port entrance. Its centre point is at the coordinates: Lat. 19° 50′ 30″ S., Long. 40° 02′ 00″ W., with a basically sandy bottom and a depth of 20 m.

Prohibited Anchorage: According to Nautical Chart No. 1420, anchorage is prohibited in the area near the South side breakwater and near Aracruz's submarine pipeline.

APPROACH: The Aracruz mill, which stands approximately 1 mile inland, is very prominent from seaward and can be seen from a distance of 20 miles, giving an excellent radar response.

The maritime access to the Terminal is shown on Nautical Chart No. 67-1420, issued by DHN.

Approach Channel: The approach channel to the Terminal is on a heading of 065°, and is approximately 150 m. wide and 670 m. long. This distance is measured from the buoys to the opening between the breakwaters.

The depth varies from a maximum of 13.5 m. to a minimum of 12.0 m. The channel is marked by light buoys No. 1 and No. 2 and breakwater lights.

Buoys: There are 2 buoys placed at the approach channel entrance, two lights on the breakwaters' heads, two light buoys installed along the turning basin contour, two lights along the berthing area border, two alignment lights located in Praia das Conchas and two lights on the quay extremity.

Breakwaters: The protection against wave action is provided by 2 breakwaters; one on the North side and the other on the South side.

The Northern breakwater was constructed with 160,000 cu.m. of rubble mound, distributed along 3 stretches with a total length of 850 m. This breakwater extends Easterly for 150 m. curving, Southward for 430 m. and finally stretching North-South for 270 m.

The Southern breakwater is also composed of 3 stretches extending Eastward for 685 m., then bending Northward for 288 m. The final stretch is inclined 4° Northward for 447 m. The Southern breakwater is 1,420 m. long and was constructed with 680,000 cu.m. of rubble mound.

The breakwater layout does not cause additional difficulties to the entry to or departure from the Terminal.

Turning Basin: The turning basin is placed in the protected area provided by the breakwaters. Its diameter is 360 m. with a depth of 11.8 m.

MAX. SIZE: *Agent's Advice to Master (December 1995):*

Drafts at Portocel are as follows:

Berthing	*Low Tide* (m.)	*High Tide* (m.)	*Max. LOA* (m.)
Turning Bay	09.00	10.00	200
No turning	09.00	10.40	190
No turning	09.00	10.40	190 – 200
Unberthing:			
Turning Bay	09.00	10.00	200
No turning	10.00	11.00	200

Depth along the quay is 11.80 m. (Master reports that vessel sounded around at L.W. and found a least depth of 11.2 m. Other soundings ranged from 11.5 m. to 12.0 m.).

VHF: Contact is made with Vitoria on Channel 11, and stand-by Channel 16 for calls on a 24 hour basis. The radio communication with Portocel can also be made on Channels 10 or 12.

TUGS: Tugs used in ship's manoeuvre must be requested from Vitoria, from where they will take 3.5 hours to arrive at the Terminal.

The tugs, 13 in all, are equipped with 1,500 h.p. – 2,800 h.p. engines. Requirements are shown below:

Turning after Ship Entrance:

Draft	No. of Tugs
under 30 ft.	2
over 30 ft.	3 (one being Schotell)

Turning or not before Leaving: 2 tugs required.

BERTHING: The Terminal offers one berth of 230 m. length. It is paved with 2 m. × 2 m. steel reinforced concrete squares of 0.12 cm. thickness, and can receive ships of up to 45,000 d.w.t. It is an open piled structure with a platform 22 m. wide, dredged at 11.8 m. (Also see "Max. Size").

Near the quay front face are 8 bollards with a capacity of 100 tons each, spaced at 25 m. and 32 m. alternately.

The quay front is also provided with pneumatic fenders placed at alternated distances of 12.5 m. and 16.3 m.

Storage: Warehouse No. 1: Located at the back of the quay, 168 m. long and 72 m. wide, with a storage capacity of 40,000 tons of woodpulp, in an area of 12,100 sq.m.

Warehouse No. 2: Situated between the entrance gate and Warehouse No. 1, a metal structure with an area of 3,000 sq.m. to store woodpulp from Cenibra.

Salt Stockyard: Located near the North side breakwater is the stockyard for the storage of Cenibra's salt. It has a capacity to store 10,000 tons of bulk salt.

Equipment: As the Terminal is not equipped for cargo transshipment, this operation is handled by the ship's gear.

The discharge and handling operations from Aracruz's woodpulp trucks and Cenibra's rail wagons, as well as the stocking and cargo transport to the ship's side, is done by forklifts. Presently, there are 25 Hyster and 2 Clark forklifts in operation.

CRANES: Not available.

MEDICAL: Hospitals in Vitoria and Aracruz.

FRESH WATER: A water supply of 100 cu.m. per day is provided by Aracruz Celulose SA, by means of a 3 in. diameter pipeline.

The water is stored in a cistern with a capacity of 200 cu.m., situated under the utility building. The water is then pumped to an elevated reservoir with a capacity of 110 cu.m. on the N.E. border of the same building.

2×6 in. diameter lines leave the elevated reservoir to supply water to the administrative area and the pressurised fire control system. A 6 in. diameter cold water line runs parallel, approximately 240 m. to the front face of the quay.

REPAIRS: No facilities.

AIRPORT: At Vitoria.

TIME: GMT minus 3 hours in Winter. GMT minus 2 hours in Summer from 20th November until 20th February.

GARBAGE DISPOSAL: Available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: The seaman's club is situated in the town.

CURRENCY: Brazilian Cruzeiro.

WEATHER/WIND/TIDE: *Rainfall:* The mean annual rainfall is 1,400 mm. in the area of the Terminal.

During the rainy months of November to January, the monthly average is 200 mm., with December having the highest rainfall indicators.

June and July are dry months, with precipitation averaging 25 mm. – 45 mm./month, totalling approximately 10 rainy days during the two months.

Fog: The period in which fog can occur is September to January. The medium registers, however, for those months are below the value of 6 on a scale of 0 – 10, not causing any serious difficulty to navigation, the ship's access or port operations.

Winds: During the Summer, the predominant wind is Northeasterly, and in the Winter Southwesterly and Northwesterly. Velocities registered during the year seldom affect the ship's manoeuvring and operation.

Tides: Tides in Barra do Riacho have semi-diurnal characteristics, with the following values according to Diretoria de Hidrografia e Navegacao – DHN, from the Ministry of Naval Affairs.

MHWS (Mean High Water Spring): 148.36 cm.
MHWN (Mean High Water Neap): 103.73 cm.
MLWS (Mean Low Water Spring): 13.12 cm.
HWF&C (High Water Full and Change): 11 hours 59 minutes.

Flow: The tidal flow presents a low velocity pattern in the area, and according to measurements taken in Aracruz, do not exceed values above 0.1 m./sec. These measurements, however, indicate a corelation between wind × velocity and flow direction on the surface.

The flow velocity distribution, according to the measurements taken and the corelation between flow × wind, is:

0.25 m./sec.: exceeded velocity in 75 days/year.
0.40 m./sec.: exceeded velocity in 20 days/year.
0.50 m./sec.: exceeded velocity in 5 days/year.
0.60 m./sec.: exceeded veolcity in 1 day/year.

Due to this corelation, the Southerly flows predominate from December to March, and the Northerly flows from June to September.

The flow velocities at Portocel do not reach values that cause difficulty to shipping traffic in the area.

GENERAL: *Access:* By Road: The Terminal can be accessed by way of a paved road of 1.8 km., which also links the port to the mill of Aracruz Celulose.

This access intersects with the ES-010 highway, connecting the port to the municipal and federal transport system of the State of Espirito Santo. The Terminal is, therefore, linked to the State capital, Vitoria, and to the other economical centres of the country.

Travelling South from the Terminal, the ES-010 crosses the Summer resorts of Santa Cruz, Nova Almeida, Jacaraipe, Manguinhos and finally arriving in Vitoria, a total distance of 70 km.

Road access is also possible via the ES-257, which intersects with the BR-101, passing through the municipalities of Aracruz and Ibiracu, and on to Vitoria, 100 km. to the South.

By Rail: Rail access is available through a branch line of 46 km. from the Piraque-Acu Station, near Jooo Neiva. Here, the line connects with the main Vitoria/Itabira Estrada de Ferro Vitoria-Minas – EFVM – line, 75 km., from Vitoria, integrating it with the Companhia Vale do Rio Doce (CVRD) railway system.

Main manoeuvres take place at the marshalling yard located 4 km. from the Terminal.

Weather Station: The Terminal is equipped with a compact weather station (Davis Instruments – Weatherlink) which consists of a pluviometer, an anemometer and a thermometer, all of which are linked to a computer permitting the control of weather registers.

Security: Portocel offers complete 24 hour security service in and around the installation, as well as at main points of entry and exit.

Auxiliary Buildings: Situated 150 m. behind Warehouse No. 1 is the administrative area, the restaurant, garage and workshop, forming just one building. This internal service building is a single story building with a vaulted cover that extends over an area of 1,600 sq.m.

Administrative Buildings: The administrative section is situated in a reserved area of 600 sq.m., in the centre of the internal services building. This section houses 16 offices, WCs, dressing room, auditorium and a storehouse, as well as facilities for Customs Officers.

Restaurant: To serve port employees, a restaurant with an area of 54 sq.m., is situated on the North side of the internal services building. Adjacent to the restaurant is a snack bar of 20 sq.m.

Workshop and Garage: Next to the administrative section is a workshop and garage which is used exclusively for the maintenance and repair of port equipment.

DEVELOPMENTS:

The berth is to be dredged to 12.50 m.

The access channel is to be dredged to 13.50 m.

The quay is to be extended by 200 m.

A warehouse with capacity of 45,000 tonnes of cellulose bales is to be built on the quay extension.

AUTHORITY: Portocel-Terminal Especializado de Barra do Riacho s/a, Caminho de Barra do Riacho s/n, Barra do Riacho-Aracruz, Espirito Santo, Brazil CEP 29.197-000. *Tel:* (027) 270-4422. *Telex:* (027) 3244. *FAX:* (027) 270-4433. *Contact:* Osmar Luis Rebelo de Oliveira, Diretor-Superintendente. Mario Luis Martins de Almeida, Operations Manager.

AGENT: See "Vitoria".

BELEM: 01.28 S. 48.29 W. (See Plan)

PORT LIMITS: Subject to Charter Party Terms, vessel normally considered an "arrived ship" when at Val-de-Caes Anchorage, Icoaraci Anchorage, or alongside the quay.

DOCUMENTS: See "General" before first port.

APPROACHES: The port is located on the right-hand side of the Bay of Guajara, running North/South, limited to the left by the island of Oncas 19 km. long and other similar islands which are in front of the River Para, with 3 wide entry channels being provided i.e.

1. Between the bar and the island of Fortim used by deep sea vessels and large coasters.

2. Between the islands of Arapiranga and Cotijuba which is used by small coasters and the typical local river craft known as "gaiolas".

3. The Carnapijo Channel behind the island of Oncas which provides communication at high tide with the Bay of Marajo which measures from between 3,200 m. and 4,000 m. long in front of the island of Oncas with a shallow which divides it in the middle into two channels, one to the West with 12 m. to 20 m. depth at the foot of the above island and the other to the East next to the city and where the current port is located with 9 m. to 10 m. depth minimum water level when dredged. Comprehensive considerations make it that this latter channel to the East deserves special studies which allow the following details to be presented:

Length	6,000 m.
Width	90 m. to 180 m.
Depth	6 m.
Average annual siltation	600,000 cu.m.

The Turning Basin: The port has a wide turning basin 500 m. long, 500 m. wide with a depth of water between 5 m. – 6 m., an annual siltation of 400,000 cu.m., fully equipped with buoys and lights under the control of the Technical Council of the Directorate of Hydrography and Navigation of the Brazilian Navy.

PILOTAGE: Pilot usually ordered through vessel's Belem Agent, ETA at least 72 hours in advance and confirming not less than 24 hours prior to arrival. Vessels can apply direct to Pilot Station (on condition that local radio station is operating). Telegraphic address "Praticagem – Salinopolis", and call sign of Salinopolis (or Salinas) Radio Station is PPL. Pilot boards at a point 7 miles North of Salinas Lighthouse; a red motor-launch is used. Launch carries a red flag with a black P; it also has a black P painted on each side and on cabin roof. If pilot boat not in position on arrival of vessel, position 7 miles North of the light is a safe anchorage. Masters who do not know area should approach Salinas with caution. Also see "Radio".

ANCHORAGE: Vessels with a draft greater than 26 ft. anchor off Icoaraci, 7 miles from the port where they work cargo.

Vessels that are impounded anchor off Val-de-Caes.

Vessels undergoing repairs anchor off the Naval base dock at Val-de-Caes.

Vessels with a draft of less than 26 ft. anchor at Val-de-Caes. Co-ordinates: Lat. 01° 24′ 01″ S., Long. 48° 30′ W.; Lat. 01° 21′ 03″ S., Long. 48° 29′ 03″ W. and Lat. 01° 08′ 09″ S., Long. 48° 28′ 03″ W.

Between Icoaraci and Val-de-Caes, there is a shallow spot at Tapana, which ships should approach with caution, although bottom is soft mud and sand.

HEALTH: Maritime Police, Customs and Port Health board vessel on arrival at whichever anchorage is used, or alongside. Pratique granted on the presentation of documents. If port *not* first Brazilian port of call. Port Health Authorities not required, although Police and Customs will still board. After first Brazilian port, Port Health only required in cases of illness or death. The use of quarantine "Q" flag not necessary. Also see "General" before first port.

RADIO: Salinopolis Pilot Station on VHF Channel 16, working on Channel 11. Suggested that ship contacts Belem Agent through Barbados Radio, and this is also usual way that vessels are contacted by Belem. An alternative to Barbados Radio is the United States radio station at Chatham, Virginia.

TUGS: One tug, "Rio Acara", 700 h.p.

BERTHING: The quays are of cement and sand construction on a base of stones, which is, in turn, on a bed of hard clay. The quay height is a max. of +4.50 m. to accommodate the max. tidal rise of up to +3.20 m.

Soundings taken in 1979, for vessels alongside in relation to the hydrographic zero of the port are as follows:

Length of quay (m.)	*Depth* (m.)	*Location*
75	2.5	S. face and N. face of Marechal Hermes Dock
300	3.5 to 5.0	Quay wall – Mosqueiro & Soure Shed and Warehouses 1 and 2.
342	6.3 to 7.0	Quay wall – Warehouse 3, Maua Square and Warehouse 4.
385	6.7 to 7.5	Quay wall – Warehouses 5, 6 and 7.
100	8	Quay wall – Warehouse 8
261	7.5 to 8.5	Quay wall – Warehouses 11 and 12.
110	8.0 to 9.2	Quay wall – Ocrim Silo to the end of the Wall.

Quay Equipment: 25 electric cranes (3.2 – 12.5 tons), 4 mobile cranes on pneumatic tyres (5 – 25 tons) and 1 self propelled floating crane of 200 tons capacity. There are facilities for handling containers.

74 fork lifts (capacity 2,500 kg. – 25,000 kg.), 4 pick-ups, 3 trucks, 4 conveyor belts, 14 weighbridges (1.5 tons – 60 tons) and 4,000 pallets.

STEVEDORES: Stevedoring gangs for day shifts 0630 and 1230 hrs. and 1630 hrs. for night shift. Loading and discharging rates exceptionally good, particularly if vessel working at anchorages into lighters. Any delays to vessels alongside can usually be put down to the lack of official clearances in case of loading export cargo.

MEDICAL: Notice of required medical assistance should always be given in advance. There are a number of first-aid posts for minor complaints. Vaccination Certificates for smallpox are essential, and, although not required officially, yellow fever vaccinations recommended.

CARGO FACILITIES: 3 regular silos for grain, with a capacity of some 10,800 cu.m. 2 irregular silos with a capacity of 1,537 cu.m. Average hourly discharge rate 200 tons.

For grain suction there are 2 fixed towers, capacity 100 t.p.h. and 40 t.p.h. and 1 mobile tower with capacity 60 t.p.h.

The suction unit for 100 t.p.h. has the following characteristics: 1 mobile pneumatic suction tower for 100 t.p.h., 65 m. belt transporter of the elevated type with 200 t.p.h. capacity, including 2 end stations for drive of 40 h.p. each; 1 bucket-type elevator with 200 t.p.h. capacity, a height of 64 m., including an end drive station of 75 h.p.; 1 weighing tower with 200 t.p.h. capacity.

TANKERS: At oil terminal of Miramar (Val-de-Caes) 8 km. from Belem, vessels of 18,000 d.w.t. old "T" berth, length 76 m. may berth or unberth at any state of the tide, subject to draft. Max. depth alongside berth at LW 26 ft., the same as that of approach channel. Mooring at this berth is to buoys inside the line of the "T" jetty. 77 tanks for liquid fuel leased to Petrobras, Sabba, Texaco, Esso, Atlantic, Salgema, Tropigas and Paragas.

New Berth: Close South of "T" shaped berth. Length of platform 40 m. Vessels moor to 4 dolphins. Berth equipped with 5 ton s.w.l. hand operated winches.

DENSITY: Strong outflow of Amazon and its tributaries is such that water at Salinas is only semi-salt. In the river itself, the water becomes slightly brackish, and half way to Belem, is absolutely fresh.

FRESH WATER: Fresh water only obtainable alongside main quay, and not at oil berth. Delivery rate 25 t.p.h. (2.5 in. line). Boiler water may be taken direct from the river at a point named Capim, near the entrance to Marajo Bay.

FUEL: See "General" before first port. Available, but due to Brazilian Custom's Laws, as much advance notice as possible should be given in order to obtain correct documentation. A minimum of 1 weeks' notice recommended.

CONSULS: Argentina, Belgium, Bolivia, Colombia, Costa Rica, Denmark, Dominican Republic, France, Great Britain, Italy, Japan, Mexico, Netherlands, Norway, Peru, Portugal, Spain, Sweden, United States, Venezuela.

REPAIRS: Deck and engine repairs of all types can be carried out by the Brazilian Naval Dockyard.

DRY DOCKS: At Naval Base, there is a dry dock measuring 730 ft. by 74 ft. with a depth over the sill of 25 ft. There are also several small floating docks, but they are not adequate for sea-going vessels.

GANGWAY/DECK WATCHMEN: The employment of gangway watchmen recommended.

HATCHES: Hatches normally opened and closed by stevedores, but if it is raining they are inclined to shelter before closing.

CUSTOMS ALLOWANCES: Custom's Authorities do not normally search ship's crews, and reasonable quantity can remain in the possession of crew members. However, no attempt should be made to take more than a reasonable amount ashore.

REPATRIATION: There are 4 weekly international flights leaving for Miami, Caiena and Paramaribo, plus daily flights to Rio de Janeiro, Sao Paulo and other Brazilian cities, including Recife.

TIME: Local time GMT minus 3 hours. Summertime (1st December – 28th February) GMT minus 2 hours.

HOLIDAYS: New Year (January 1st); Carnival (variable Feb/March); Holy Friday (April 17th); Tiradentes (April 21st); Labour Day (May 1st); Corpus Christi (June 18th); Independance Day (September 7th); N.S. Aparecida (October 12th); All Saints (November 2nd); Proclamations of the Republic (November 15th); and Christmas (December 25th).

POLICE/AMBULANCE/FIRE: Maritime Police Tel: 234996; Ambulance Tel: 222523; Fire Brigade Tel: 23-3119.

TELEPHONES: Telephones can be put on board vessels alongside main quay.

IDENTITY CARDS: Foreign crew members not permitted to go ashore without presentation of identity card on which is a photograph of holder and personal details. These cards are provided by the Agent upon arrival. The identity card must be delivered on disembarkation to the Federal Police who will return it to the crew member on re-embarkation.

GARBAGE DISPOSAL: The port administration provides for garbage collection.

WASTE OIL DISPOSAL: The shipowner's representative provides for waste oil collection.

SEAMAN'S CLUBS: There is no seaman's club operating at the port.

CURRENCY: Brazilian currency is "Cruzeiro Real" (CRS).

GENERAL: Tidal action in the Guajara Bay is extensive, with the "Pororoca" phenomenon which comprises the meeting of tidal water with masses of fresh water coming from the Brazilian Equatorial rivers. The tidal wave takes 3 hours 40 minutes to come from the Salinas Lighthouse to the South end of the port of Belem. Systematic measurements at times of spring tides show that the average height of water reaches 3.22 m. at high tide and in the quadratures 2.42 m. Maximum high and low water levels recorded are +4.21 m. and −0.37 m. respectively.

During the ebb, the waters coming up the Bay of Guajara are predominantly picked up by the Western channel current, with great speed, thus explaining the great depths at that point, and also in the Western channel the average ebb and flow speeds are 1.30 and 1.74 m. per second, respectively, and in the East channel they are respectively 1.19 and 2.10 m. per second. At the extreme Southern point of the berthing quays the average flow speed record was 2.77 m. per second.

SHIPMASTER'S REPORT: June 1992.

Charts: B.A. Charts No. 3959 and 397.

Approaches: The coastline is flat and featureless, except for buildings at Salinopolis. The town is a well known holiday resort for North Brazil. Salinopolis Town showed up at 27 miles on radar from the North. The light float "Amazonas No. 1" showed up at 30 miles and the Racon at 20 miles.

Depths shoal gradually.

Salinopolis Racon was seen at 17 miles.

The buoy marking Banco de Salinas (7 miles North of Salinopolis) showed up at 8 miles on the radar.

Navigation marks approaching and at Belem are as on the latest B.A. Charts No. 3959 and 397, and found to be reliable.

Pilot: Arranged through the Agent. 48 hours notice if possible in advance as per ALRS, followed by 24 hours and 8 hours notice.

Pilots travel to Salinopolis by outbound ships or by car, taking 2.5 hours from Belem.

At present, 12 pilots are employed on the Salinopolis to Belem area of the River.

Pilot office at Salinopolis listens throughout 24 hours on Channel 16, and works on Channel 11.

Pilot office called us when we were 40 miles N.W. of the port (pilots say VHF range in the area very good).

Pilot boards from old red coloured launch (standard Brazilian Pilot colour), just North of Banco de Salinas Buoy, and takes about 1.5 hours to come out from Salinopolis.

It is 102 miles from Salinopolis to Belem Miramar Tanker Berths. Vessels maintain full sea speed to Pta. Virado, about 20 miles North of Belem. Canal Dos Pocoes used, depending on draft. Racons on Espadarte Bank Wreck and Ilha Dos Guaras, either side of Canal Dos Pocoes, show up well. Same pilot berths vessel.

Anchorages: Numerous anchorages to seaward of Belem. Off Belem, the Immigration Anchorage near Miramar Tanker Berths has a depth of 26 ft. (F.W.) at L.W. at its North end. South end is shallower.

Tugs: No tugs at Belem.

Channel: From Pt. Mosqueiro to Belem, the Channel shoals rapidly. The shallowest section is 6.0 m. at L.W. about 3 miles North of the airport. This can only be navigated by deep-draft vessels 2 hours either side of H.W. Pilots report that no dredging is presently being undertaken at Belem alongside the berths or in the approaches.

Berthing: All berthing undertaken with the aid of the offshore anchor and tide. No berthing undertaken at slack water.

At Miramar Oil Berths, pilots like to berth on the flood tide, starboard side to, about 1 hour before H.W.

We berthed port side to with draft of 26 ft. (F.W.) on the start of the ebb, as we were too late for the flood.

Deep draft ships can leave 3 hours before H.W. to about 2.5 hours after H.W.

Berthing and unberthing very professionally undertaken. When berthing, let go offshore anchor off berth to about 1.5 shackles. Vessel pulled alongside by mooring lines which are run by a boat each end. Two head/stern lines to buoys, 4 springs each end split into two sets to different bollards on jetty.

Depths: For vessels proceeding from Ville De Conde Alumina Berth, about 15 miles above Belem, maximum draft is 40 ft. (F.W.).

Tanker Jetty at Pta. Do Rendentor has a depth of 35 ft. (F.W.) at H.W., and is out of use at present.

Tanker Anchorage off Pta. Do Rendentor has a depth of 29 ft. (F.W.) at L.W., and is used for lightening for ships proceeding to Miramar Berths.

Miramar Tanker Berths: 26 ft. (F.W.) at L.W.

Belem City Berths: 22 ft. (F.W.) at L.W.

Miramar Berths: Two berths available. The old jetty to the North was built in 1938 and modernised in 1956. This has a flat face length of 78 m. and handles all refined products, including LPG. Fendering poor.

Hoses (no Chicksans available) are handled by ship's derrick/crane. On the old berth, accommodation ladder can be easily landed amidships.

The new berth was completed in 1965, and has 2 sponsons for fenders and an effective length of 90 m. All refined products are handled, including LPG.

Hoses (no Chicksans) are handled by derrick or cranes, located on the jetty. At the new berth, it is difficult to land the gangway amidships.

LPG Cargo: 1×4 in. hose. Maximum back pressure 13 bar (+10°C at 135 tonnes p.h.). The tanks are 0.25 miles away, across main road.

Total capacity 5,000 tonnes.

The survey is long and tedious.

The Petrobras watchman is located in hut on the quay.

Facilities: Fresh water available from the jetty, and has to be arranged through Agent. Supply is metered and ship's hoses are used. The rate is about 20 tonnes p.h.

Gas oil and MDO available alongside by tanker truck.

Several ship chandlers available.

No telephones available. Nearest telephones are at the airport which is about 1 mile away.

Agents (Agencias Mundias Ltda.) are Lloyd's Agent and British Consul, and were very good.

Airport, with international flights to U.S.A., near by.

Authorities: Authorities board at anchorage off the berth, before ship comes alongside. This is the usual standard practice.

Immigration landing forms made out for each crew member, but not used.

6 Crew Lists, 6 Stores Lists (General items, does not have to be comprehensive), 6 Bond Lists, 1 Health Declaration and Vaccination List, 3 Cargo Manifests. All Passports are sighted.

General: Beware of robbers. We were warned that gangs strike at night, and go for the forward paint locker. Sure enough, at about 0300 hrs., they came aboard to be met by the crew with metal bars, which saw them off. We put a hawser around the forecastle housing door, and had extra watchmen on duty at night as well as shore watchmen.

"Visitors" can also be a nuisance. It is best to tell the Terminal that you do not want any visitors.

AUTHORITY: Companhia Docas do Para, Avenida Presidente Vargas, 41-2° Andar, Belem, Para, Brazil, CEP 66010-000. *Tel:* 223-0055. *Telex:* 0912320. *FAX:* (091) 241-1741. *Contact:* Carlos Acatauassu Nunes, Director-President.

AGENT: Wilson Sons Agencia Maritima Ltda., Av. Senador Lemos, 3135 Sacramenta, 66120-000 Belem PA, P.O. Box 312, Brazil. Tel: (091) 244-1766 (After hours: (091) 223-1754). Telex: (091) 1842/6920 WSON BR. Fax: (091) 233-3240. Cables: Anglicus.

CABEDELO: 06.58 S. 34.50 W. (See Plan)

DOCUMENTS: See "General" before first port.

PILOTAGE: Contact Pilot's Headquarters by radio via vessel's Agent located at Joao-Pessoa (18 km. from Cabedelo). The messages are relayed by Natal Radio PPN or Cabedelo Radio. All messages are delivered by National Telegraph – Telegrafo Nacional. Pilots' launches painted red with capital "P".

Pilots may be requested through VHF (Channels 06, 12, 14, and 16 – 156.30 MHz, 156.6 MHz, 156.70 MHz and 156.8 MHz).

ANCHORAGE: While waiting for the Pilot, vessels should anchor 0.8 miles E.N.E. of the light beacon. At the anchorage in the vicinity of the breakwater the depth of water is from 9.0 m. (29 ft. 06 in.) to 15 m. (49 ft.) at low tide, and at the anchorage located South of the docks the depth of water is 5.50 m. (18 ft. 09 in.) at low tide.

RESTRICTIONS: For Masters calling at Cabedelo for first time it is preferable not to enter during darkness.

MAX. SIZE: Max. length 210 m., draft spring tide 30 ft., neap tide 28 ft.

HEALTH: Also see "General" before first port. If Master suspects contagious disease aboard he must report to Agent who will contact Brazilian Health Authorities at Joao-Pessoa.

VHF: See "Pilotage".

TUGS: None available.

BERTHING: Berthing takes place in accordance with vessel's draft. Master must always give Agent vessel's draft arriving off Cabedelo. Length of quay, 602 m.

Berth Length (m.)	*Depth* (m.)	*Remarks*
125	9	Tankers, veg. oil, minerals, containers, general cargo
135	9	General cargo, minerals, containers, wheat
142	9	General cargo, minerals, containers, refrig.
110	7.5	General cargo, bulk cargo and containers
90	7.5	General cargo and bulk cargo.

CRANES: 5 Portal cranes. 1×1.5 tons, 2×3.2 tons, 1×5 tons Land 1×6.3 tons.

STEVEDORES: Advise Agent ETA at Cabedelo 48 hours prior to arrival to make arrangements with dock and stevedores for discharging or loading.

MEDICAL: For urgent cases recommended that vessel call at Joao Pessoa instead of Cabedelo as Joao Pessoa has better facilities.

TANKERS: Cabedelo not a loading port for petroleum products. Messrs. Esso-Brasileira de Petroleo and Petrobras Distribuidora S.A., have tanks for reception of gasoline, diesel and other petroleum products which are carried by Brazilian fleet of tankers "Fronape" – Frota Nacional de Petroleiros. At Cabedelo only Berth No. 1 is suitable for discharging petroleum products or to bunker vessels since pipeline is only connected to Berth No. 1. Tankers enter and sail during dark hours from Cabedelo. Length of berth 200 m. Depth alongside 9 m.

DENSITY: Varies from 1020 to 1025 at HW.

FRESH WATER: Supplied by pipeline alongside quays at rate of 50 cu.m.p.h.

FUEL: Available. Suppliers Messrs. Esso-Brasileira de Petroleo. Pipeline at Berth No. 1 where vessels can bunker alongside. Pipeline fuel oil, 8 in.; pipeline diesel, 8 in.

CONSULS:

France (083) 221.2010
U.K. (083) 224.7005

Other consulates at Recife 110 km. from Joao-Pessoa about 1.5 hours by road.

REPAIRS: Minor repairs only.

DRY DOCKS: None.

GANGWAY/DECK WATCHMAN: Watchmen available. Masters have option to choose suitable times when their services are required.

OPENING/CLOSING HATCHES: By stevedores. Crew assist when stevedores not familiar with modern hatches.

CUSTOMS ALLOWANCES: 1 carton cigarettes per crew member at Customs discretion and 1 bottle of whisky or any other kind of spirit, subject to Customs discretion.

REPATRIATION: Repatriation can be arranged via Recife or direct from Joao-Pessoa to Rio de Janeiro, Sao Paulo and Brasilia.

AIRPORT: 9 km. from Joao-Pessoa. Utilised by National Lines whose planes make regular calls.

TIME: GMT minus 3 hours throughout the year.

IDENTITY CARDS: Foreign crew members not permitted to go ashore without presentation of identity card on which is a photograph of holder and personal details. These cards are provided by the Agent upon arrival. The identity card must be delivered on disembarkation to the Federal Police who will return it to the crew member on re-embarkation.

HOLIDAYS: *National Holidays:* Fraternidade Universal (January 1st); Tiradentes (April 21st); Labour Day (May 1st); Brazil's Independence Day (September 7th); Nossa Senhora Aparecida (October 12th); Commemoration of the Republic (November 15th); Christmas Day (December 25th).

State Holidays: Nossa Senhora da Conceicao (December 8th); Sexta Feira da Paixao (Movable); Sagrado Coracao de Jesus (Movable); Emancipacao Politica de Cabedelo (December 12th).

Work is possible during holidays and Sundays, except on Good Friday, Labour Day and Independence Day.

POLICE/AMBULANCE/FIRE: Police (located at Joao-Pessoa) 190. Cabedelo has a small Police Station but no telephone available. Ambulance is available. Fire Brigade (locate at Joao-Pessoa).

TELEPHONES: Facilities for placing telephones on board.

AUTHORITY: Administracao do Porto de Cabedelo, Av. Presidente Joao Pessoa, Cabedelo, Paraiba, Brazil. *Contact:* Afonso Augusto de Toledo Navarro, Administrator.

DTBASA/SE (Carmopolis): 11.03 S. 37.01 W. (See Plan)

LOCATION: Dutos E Terminais da Bahia, Sergipe E Alagoas (DTBASA), operated by Petroleo Brasileiro SA, PETROBRAS, is located on the N.E coast of Brazil at the Atalaia Velha Beach, Lat. 11° 00′ 30″ S., Long. 37° 04′ 00″ W. about 9 km. South of Aracaju City, capital of the State of Sergipe.

The mooring site is an open roadstead seaberth. It is located about 3.8 miles from the beach and at the end of a submarine pipe-line marked by 1 lighted buoy, 4 miles Southwards from the bar entrance to the port of Aracaju. The geographical position of the berth is: Lat. 11° 02′ 53″ S., Long. 37° 00′ 47″ W.

DOCUMENTS: See "General" before first port.

ESSENTIAL REQUIREMENTS: *Most essential requirements to be met by vessels loading:*

1. The ocean terminal consists of a conventional berth, i.e., tankers are moored with the ship's two anchors ahead and the terminal's six mooring buoys round the stern (See "Plans").
2. The terminal is intended to load ships with crude produced in the nearby shore and sea oil fields.
3. Loading is effected by a 26 in. diameter submarine pipe-line with a length of 7,500 m. from the mainland. It divides into two strings of hoses (North and South) through a "T" reducing piece.
4. Ship's manifold should be preferably equipped with one 10 in. flange (ANSI).
5. Amidships, derrick or crane with a minimum capacity of 5 tons must be provided to hoist and connect the nominated string of hoses, normally on starboard side. Only one string is connected.
6. Ship's windlass (chain cables, brakes, windlasses, etc.) must be in perfect operational condition so that anchor and chains can be dropped, heaved in, adjusted, etc.
7. A forward winch must also be prepared for heaving in the pick-up wire of the hose.
8. Maximum permitted draft for the terminal is 15 m. so that a 3 m. bottom clearance is assured to face extreme operating sea conditions.
9. The mooring was designed to accommodate vessels up to 65,000 d.w.t. however, in special favourable circumstances a 115,000 d.w.t., tanker has been moored. Ship's LOA (300 m.) and longitudinal position of ship's manifold are also limiting factors.
10. By daylight a Mooring Master will board the vessel about 1 mile S.E. of the terminal sea buoys. He will advise on all manoeuvres relative to berthing, connecting and disconnecting hoses, etc. When arriving at night or for awaiting berth, Masters are requested to use the recommended anchorage. However, if weather conditions permit, ships may unmoor at night.
11. One terminal loading supervisor and 7 working men will stay aboard.
12. Vessels are requested to have a pilot ladder long enough to reach the terminal's launch, rigged alongside the accommodation ladder, in order that the shore personnel may transfer to it after 2 m. or 3 m.
13. Being an open roadstead, vessels must keep engines on standby during their stay in the mooring. Steam must be kept on deck in case adjustments to anchor cables or mooring lines are found necessary.
14. No ballast discharging facilities exist at the terminal. Vessels must arrive with necessary clean ballast. Brazilian laws are very strict with regard to the pollution of coastal waters and fines are heavy.
15. Any emergency should also be immediately transmitted by radio telephone on Channel 16. When operating the vessel's and the Terminal's radiotelephones will remain to Channel 12, set apart for such use.
16. Under no circumstances should vessels drop their anchors in the area between the sea buoys and the shore and the nearby submarine pipelines (North and South) from the oil production platforms.

REMARKS:

Non-compliance of just one of the above stated conditions (items 5, 6, 8 and 14) could result in rejection of the ship as being unsuitable for this terminal.

ARRIVAL:

Mooring Turn: Arrival time is considered to be the time the vessel reaches the anchorage or the time the Mooring Master boards the vessel, whichever occurs first. However, Notice of Readiness will not be considered as the time of arrival unless the vessel is in all respects ready to load. Tankers are loaded in turn except when the Terminal Manager grants priority to a particular vessel out of turn, in special circumstances only.

APPROACHES: As it is an open roadstead the access to the terminal can be easily and safely approached either from the N.N.E. or from the S.S.W.

The shore line runs of 035°/215°. Between the Sergipe and Vaza-Barris Rivers the coast is almost a straight dune-covered sand beach which offers a very few notable natural landmarks.

Tankers must be aware of the existence of 4 oil fields with fixed production platforms which constitute in themselves good marks. Marking the bar of the port of Aracaju, located about 5 miles N.W. of the terminal berth, is a light exhibited from a conical white frame- work tower enclosing a central cylinder, 41 m. high, with a range of 14 miles (international No. G0230). There is a radio-beacon at the local airport with signal letters AR (· – · – ·) transmitting continuously on 355 kHz. Its geographical co-ordinates are: Lat. 10° 59′ 27″ S., Long. 37° 04′ 22″ W. Near to the terminal offices are 4 steel towers and a chimney of a natural gas plant.

PILOTAGE: No Pilots exist in DTBASA/SE. All manoeuvres will be undertaken by the vessel's Master, with the help of a DTBASA/SE Mooring Master, who will board the vessel in the anchorage area and advise the Master on all operations such as mooring, connecting hoses, unmooring, loading, etc. It is important to emphasise that the services of the Mooring Master are afforded without charge and upon the express undertaking and condition that PETROBRAS shall not be liable for any damage or injury resulting from any advice, assistance or actions given or made by such Mooring Master. In the event it becomes necessary to disregard the Mooring Master's advice, in order to ensure safety of the vessel, the Master must forward a full written report of the circumstances for delivery to the Captain of the Port through the Terminal. It is the responsibility of the Master to notify the Mooring Master of any special conditions or peculiarities such as defective navigation equipment, tackle, gear or lack of necessary equipment which might impose hazards related to handling, mooring and loading the vessel.

Vessel must be moored to entire satisfaction of the Mooring Master. The Mooring Master may require the vessel to unmoor at anytime he deems necessary for the safety of the vessel or mooring or both or for an infringement of terminal or port regulations.

Unsatisfactory conditions will be reported to the Terminal Superintendent who is empowered to reject the ship unless the reported deficiencies have been remedied.

ANCHORAGE: The advisable anchorage site either for awaiting berth or daylight is determined by the following geographical co-ordinates: Lat. 11° 04.1′ S., Long. 36° 59.0′ W. Depth is 25 m. (82 ft.) MLWS.

Occasionally Mooring Master will board arriving tankers whilst still underway nearby the anchorage area. This anchorage provides vessels with ready access to the berth. Holding ground in this area is very good, as the bottom is varied in character (mud and fine sand). It is recommended that vessels should stay at anchor for periods of not longer than 24 hours with the anchor in the same place, otherwise it will be difficult to heave up anchor.

IMPORTANT:

Under no circumstances should vessels drop their anchors in the area between the berth and the shore due to submarine pipe-lines.

RESTRICTIONS: Mooring at the buoys will be effected in daytime only. Nevertheless loading and connecting hoses may sometimes be effected in night-time under certain conditions.

MAX. SIZE: The berth is designed to accommodate tankers up to 65,000 d.w.t., however, under favourable circumstances and vessel Master's discretion a 115,000 d.w.t. tanker has been moored. The ship's final draft is usually 15 m. (49 ft.). This draft will usually afford a safe bottom clearance 3 m. (10 ft.) even under the most severe sea conditions in which the loading operation is feasible. Depth is 18 m. (MLWS).

ETA: Vessels bound for Aracaju or DTBASA/SE should advise their ETA 48 hours prior to arrival to radio station "PPS" (Official Coastal Radio Station) as well as to their Agent in Aracaju-SE (Cruz Irmaos & Cia.) whose cable address is Cruzirmaos, via the following coastal radio stations: Amaralina Radio (PPA) in Salvador – BA; Olinda Radio (PPO) in Recife – PE; or Rio Radio (PPR) in Rio de Janeiro-RJ.

When vessel is within 50 miles of the terminal contact may also be made by VHF radiotelephone on Channel Delta/16 (156.8 MHz). The terminal keeps a 24 hour listening watch on this Channel.

VHF: The radio and communication centre is located in the Oil Control Building. There is a VHF set operating 24 hours a day on Channel 16. Portable sets are taken aboard for the sake of safety and controlling the loading. No signal lamp (Aldis lamp) exists.

TUGS: There are no tugs available to assist berthing and unberthing.

BERTHING: The berth is of a conventional type, i.e., vessels are moored with two anchors ahead and synthetic mooring lines to the 6 sea buoys round the ship.

Ships are loaded by means of a 26 in. diameter submarine pipe-line dividing into two strings of hoses (by a "T" piece) either of which will normally be picked up on the starboard side. The end of the submarine line is 3.8 miles off-shore in 18 m. of water. Both north and south strings are 10 in. and support a maximum pressure of 225 p.s.c. Only one string is connected to the ship The 10 in. hoses are connected to the ship's manifold, through a quick release connecting device, the flanges being of normal 10 in. ANSI pattern.

MOORING: Vessels moor using both anchors forward with 2 lines to each buoy.

Turnround: To promote the economical operation of the vessel, Masters are requested to co-operate with installation representative in minimising their in-port time. Any delays which are considered unnecessary or extensive should be reported to the loading Operating Supervisor so that corrective measures can be taken in due time.

HOSES: There is a submarine pipe-line from shore installations direct to the terminal, which are divided into 2 flexible hoses long enough to reach the ship's manifold. Usually, only 1 hose is connected, of 10 in. diameter. The nominal loading rate is about 3,000 cu.m.p.h. (18,870 bbls.p.h.). Shore labour used to connect hoses. Hoses are lifted on the starboard side.

The Mooring Master will guide the terminal's workmen in lifting, connecting and lowering the hose. As soon as the vessel is securely moored, one of the strings of hoses must be lifted to the rail by ship's gear (crane or boom). Sundry hose securing and connecting equipment (strops, gaskets, quick-release device, etc.) will be supplied by the terminal and put aboard the ship soon after arrival. Hose will normally be lifted and connected on the starboard side.

LOADING: At the beginning and during the loading operation tankers are requested to observe the following:

(a) Pumping will not start without the ship's and Mooring Master's permission.

(b) The max. allowed pressure established by the ship will be maintained.

(c) During operations a constant lookout by responsible men is required on the moorings and in the manifold area to keep watch on the connections.

Also see "Hoses".

MEDICAL: Medical treatment and/or hospitalisation, if required are provided at Aracaju private hospitals. Dentists are also available in Aracaju. Agent will make such arrangements.

For emergency cases (injury etc.), Petrobras first aid may be requested by the Master.

BALLAST: Vessels should arrive at DTBASA/SE with minimum clean ballast to enable manoeuvring under prevailing weather conditions. Masters are encouraged to take advantage of the favourable weather which prevails most of the time to minimise ballast. Early radio contact with the terminal must be established in order to obtain the latest weather information so that he can decide on appropriate ballast. The terminal is particularly interested in having vessels complete the deballasting operation promptly after berthing in order to minimise time at berth. Simultaneous loading and deballasting is encouraged on properly equipped vessels. Vessels requiring excessive time to complete the deballasting operation will be given Letters of Deficiency.

To avoid any possible pollution of the local waters, all tankers calling at the terminal to load must do necessary tank cleaning prior to arrival. Before arriving at the loading berth Masters must assure themselves that all tanks, pipe-lines, and pumps are free of oil. All tank cleaning should be preferably done 50 miles off the Brazilian coast. The terminal does not have facilities to receive any significant amount of oily ballast. If, after mooring a vessel is found to have oily ballast water aboard, it will be sent to sea to accomplish the necessary tank cleaning. A new Notice of Readiness to load must then be given.

CARGO: The cargoes are called Sergipano Crude Oil of an average API 33, temp. 90°F., Plataforma Crude Oil of an average API 40.3, temp. 90°F. or Carmopolis Crude Oil of an average API 23.4, temp. 90°F. No heating required.

FRESH WATER: No water available.

FUEL: No bunkers available at Aracaju Terminal.

SURVEYORS: *Petroleum Inspection:* Petroleum inspectors are not available in Aracaju, but may be requested.

Chas. Martin & Co., Rua da Lapa 200, conj. 906, 20.000 – Rio de Janeiro. Tel: 242-4219, 245-5636 and 225-3507.

E. W. Saybolt & Co., Rua XV de Novembro 70, P.O.Box 826, Santos. Tel: 341984. Telex: (013) 1004.

CUSTOMS ALLOWANCES: Brazilian Laws are strict with regard to smuggling, and Masters are requested to instruct their crew not to retain cigarettes in carton lots, cigars, tobacco, alcoholic drinks, drugs, souvenirs, etc.

By no means will any commercial transactions be tolerated be it either among terminal employees, crew members or anyone else.

AIRPORT: There is an airport at Aracaju.

TIME: GMT minus 3 hours.

GARBAGE DISPOSAL: There is no garbage collection service available at the port.

WASTE OIL DISPOSAL: There is no waste oil collection service available at the port.

SEAMAN'S CLUBS: None.

CURRENCY: Cruzeiro. Money can be changed at Banco do Brasil SA. Tel: (079) 211-1300.

WEATHER: *Weather conditions:* Local weather and sea conditions may be considered as fair for tanker operations.

Rain: The annual precipitation averages 1,103 mm. April, May and June are the rainy season.

Visibility: Usually the visibility condition in this area is fair, except during squalls.

Temperature: Actual temperatures ranging one year from a Low of 18.2°C in June to a high of 30.8°C in February.

Pressure: The annual average atmospheric pressure is 1013.2 mb.

Relative humidity: During most of the year the relative humidity of air is about 82%.

Remarks: Weather forecasts as well as Notice to Mariners are transmitted by PWZ and PPR coastal radio stations. For details refer to Brazilian Navy H.O. publication (Radio Aids) DH.8.

Winds and Waves: Winds blowing from shore to sea are practically non-existent. Those blowing from 040° to 160° counter-clockwise are not worth mentioning. From October to March Eastern winds will prevail (070° to 110°), and between May and August SE winds will prevail, i.e. (120° to 160°). In April and September, winds will blow either from the East or the S.E. 78% of wind force will be about 2 and 4 on the Beaufort Scale. i.e. slight to moderate breeze. Seldom fresh gales (Force 8) have been observed. 19.7% of periods of calm and the rest 2.3% is of light air occurences (Force 1 to 3).

Essentially all waves near the Aracaju area are caused by the prevailing local winds. However, the changeable periods in which they occur, when the waves will give the false impression to the swell. 60% of the recorded waves were between 0.5 m. to 0.9 m. high. During one full year period of observations the studies have demonstrated that only 1.4% of the operational time, the terminal will be closed for tanker loading, periods in which the waves are equal or higher than 2 m.

Currents: Currents recorded in the terminal area are made up of diversified and simultaneous causes acting in different grades of strength and combination. The causes were identified as being winds, tides, salinity and also temperatures, none of them was outstanding enough to be regarded as the final prevailing cause. The currents chiefly run parallel to the coast, but they do not vary greatly in set and drift. This lack of constancy affords evidence that it cannot be attributed to the Brazil current. Maximum recorded speed of current was one knot. It has been reported that upon N.E. winds and at ebb tides the current sets to S.S.W. with speeds higher than usual.

Tides: The mean HW interval is 4 hours 46 minutes. Tidal velocity rarely exceeds 2 knots and the tidal range varies from 1.99 m. at Spring to 1.05 m. At Neaps.

GENERAL:

Charts and Publications: (a) Brazilian Charts: 1003 and 1000 and 60 (Brazilian Navy Hydrographic Office).

(b) Foreign Charts: No. 24210 and 24211 of the US NOO and No. 1396, 3286 and 3977 of the H.D. (U.K.).

(c) Brazilian HO publications: Sailing Directions DH 1-9, List of Lights DH 2, Radio Aids DH 8.

No supply of charts, sailing directions or other publications are available in Aracaju, however if ordered in advance by Agent they may be obtained.

Bonded Stores: Cigarettes, beverages or other goods are not available in Aracaju.
Cash Advances: No cash advances are effected by the terminal. As a rule, the ship's agent will be able to handle this service when previously requested by radio.
Classification Societies: In Aracaju, there are no A.B.S. or L.R. surveyors, however, they may come from Rio de Janeiro upon Agent's request.
Consulates: No consular representatives exist in Aracaju.
Lubricating Oil: Supplies of lubricating oil are expensive and available only in emergencies and in very small quantities. Purchase and delivery are difficult.
Mail: There is regular Post Service in Aracaju. Letters should be sent care of the ship's Agent. In turn, the letters will be delivered to the ship upon arrival.
Provision and Stores: Limited. Provisions and stores are ordered through the ship's Agent or through shipchandlers in Aracaju.
Radio and Radar Repairs: Small radar and radio repairs may be effected in Aracaju provided that prior notice has been given to ship's Agents.
Agency: DTBASA/GESAL, Av. Melicio Machado, Km. 2, CEP 49037-440, Aracaju-SE, Brazil. Tel: (079) 243-1414 or 224-1451.
AUTHORITY: Petroleo Brasileiro S.A. – PETROBRAS, Avenida Republica do Chile 65, Centro – Rio de Janeiro – 20.031-170 – Brazil.

Divisao de Coordenacao e Programacao Operacional: Same address, as above, 12th Floor (Co-Ordination and Operations Programming Division).
Terminal: Dutos e Terminais da Bahia, Sergipe e Alagoas – DTBASA, Av. Melicio Machado, Km. 2, Aracaju, Sergipe, Brazil. CEP 49037-440. *Tel:* 079-243-2611. *Telex:* (0792) 127. *FAX:* (079) 243-1735 or 224-1451.

FORNO: 22.58 S. 42.01 W. **(See Plan)**

PORT LIMITS: The port is situated in Arraial do Cabo, on the North coast of the State of Rio de Janeiro, and its limits are comprised by: on the sea side, waters of the Anjos; the creek, and by the intersection of the mountain range with the foot of Fortaleza Hill. Its entrance is located in the alignment of the last point of Santa Cruz Street (Rua Santa Cruz), and on the opposite side, terminates at the shelter breakwater quay commencement point.
APPROACHES: The access channel is 700 m. wide, with a bar (minimum depth 12 m.) between Cabo Frio and Ilha dos Porcos.
PILOTAGE: Optional.
ANCHORAGES:

Forno Creek: Lat. 22° 58′ N., Long. 42° 01′ W. Depth 8.0 m. – 14.0 m.
Anjos Creek: Lat. 22° 58′ N., Long. 42° 01′ W. Depth 7.0 m. – 12.0 m.

TUGS: Available from Rio de Janeiro or Macae on request by agent.
BERTHING: Manoeuvring Basin: Depths of 12 m. – 13 m. available.

Quay: Length 220 m., depths up to 10 m. for vessels up to 30,000 d.w.t.

Also see "Tankers".
CRANES: 3 jib cranes with a capacity of 5 – 6.3 tons. Other equipment includes 1×7 ton stacker truck and 1 tanker truck with 10,000 litres capacity.
FRESH WATER: 3 tanks, 1×450 cu.m., 1×60 cu.m. and 1×100 cu.m. Rate of delivery 20 t.p.h.
FUEL: Available by road tanker.
TANKERS: *Caustic Soda:* One tank with a capacity for storage of 14,500 tons, used previously for molasses with a pipe system which extends up to the Dukes of Alba and which permits loading of vessels at the rate of 300 t.p.h.; there is a receiving bridge for the product when transported by lorries, and pumping houses. Not in use at present.
Liquid Bulk Cargo: Pipes located at the Dukes of Alba, used for receiving fuel oil for the Companhia Nacional de Alcalis, Esso Brasileira de Petroleo and Petrobras Distribuidora. The same berthing area is frequently used also for vessels carrying chemical products such as caustic soda intended for Dow Quimica S/A., whose bulk cargo is moved by pipe-line connected to the storage tank.
REPAIRS: No facilities available.
AIRPORT: Macae and Campos.
TIME: GMT minus 3 hours.
HOLIDAYS: 1st May and 2nd November. No work possible on these days.
GENERAL: *Charts:* Brazilian Charts No. 1503, 1505 and 1508.
AUTHORITY: Porto do Forno, Rua Santa Cruz No. 15, 28.910 – Arraial do Cabo – RJ. *Tel:* (0246) 22-1105 and 22-1185. *Contact:* Gustavo Gurgulino de Souza, Director.

FORTALEZA: (including Mucuripe), Ceara: 03.41 S. 38.33 W. **(See Plan)**

PORT LIMITS: From the end of the mole on a true bearing of 235° to the meridian of 38° 29.8′ W., thence to the coast.
DOCUMENTS: See "General" before first port.
PILOTAGE: By Associacao de Praticagem do Porto de Fortaleza. Address: Rua Dragao do Mar, 372. Tel: 212088. The Pilots board ships about 0.5 miles N.W. from the breakwater, call by International Code Signals.

Pilot may be ordered through the vessel's Agent or Fortaleza Radio (PPC). One hour before arrival specifying time of arrival and from which point the Pilot is required.
ANCHORAGE: Vessels awaiting Pilot may anchor W.N.W. of the breakwater head, distance 0.5 miles. Water depth 32 ft.
RESTRICTIONS: Access channel Length 1,000 m., width 100 m., depth 10 m.
MAX. SIZE: Up to 27 ft. draft depending on the tide.
HEALTH: The inspection area for Port Health and the other authorities is within 1,430 m. of position Lat. 03° 42′ 24″ S., Long. 38° 29′ 18″ W.

All ships must be visited by Port Health Inspector. If vessel has passengers in transit for another Brazilian port, another visit will be required at port where passengers disembark. If ship's health condition satisfactory, Inspector will give Free Pratique immediately. Radio pratique available if Master able to declare satisfactory health condition before arrival. Free Pratique is valid for subsequent ports in Brazil.

If there is a crew member to be hospitalised, the Health Inspector will issue pass to hospital on request of Master or Agent who will be made responsible for all expenses incurred.

Inoculations for International Certificates can only be given by an employee of the Port Health Authority.

Ships are inspected by Custom House and Health personnel at the anchorage.
VHF: Port Radio on Channels 9, 10, 13 and 16.
TUGS: One tug 1,680 h.p. available.
BERTHING: 1,054 m. of berthing length, depth 3.6 m. – 10.0 m. Berths for five vessels. One grain elevator, capacity 150 t.p.h. Four lighters available capacity up to 70 tons each.

Berth No. 1. 106 m. long, 18 ft. deep.
Berth No. 2. 150 m. long, 20 ft. deep.
Berth No. 3. 170 m. long, 22 ft. deep.
Berth No. 4. 530 m. long, 33 ft. deep.
Berth No. 5. 160 m. long, 33 ft. deep.

Vessels are advised to take a Pilot and use a tug if available due to the peculiar port variations.

Vegetable oils can be loaded in drums, 18/20 t.p.h. or ex-barge at 100/125 t.p.h.
CRANES: A 100 ton floating crane is on order. 7 diesel cranes 9 ton – 50 ton capacity. 5 electric cranes 3.5 tons – 12.5 tons capacity. No. 3 Berth has a travelling suction tower with 2 tubes, operating at 120 t.p.h.
TANKERS: *Petrobras:* Berthing platform length 90 m., width 28 m., depth 11.0 m. (1st phase), 12.0 m. (2nd phase). Capacity 34,000 g.r.t. (1st phase), 50,000 g.r.t. (2nd phase). Length of access bridge 853 m., width 3.7 m.

Loading Lines (planned): 1×18 in. (crude); 1×16 in. (fuel oil); 1×12 in. (asphalt); 1×10 in. (diesel oil and Naphtha); 1×12 in. (petrol/alcohol); 1×12 in. (aviation kerosene); 1×12 in. (kerosene/diesel oil); 1×8 in. (LPG); 1×6 in. (LPG vapour); 1×6 in. (drinking water); 1×10 in. (ballast); 3×12 in. (not designated) and 1×4 in. (steam).

Lines available (1st phase): 1×6 in. (drinking water); 1×8 in. (fire water line); 1×12 in. (diesel/kerosene); 1×12 in. (petrol/alcohol) and 1×16 in. (fuel oil/asphalt).
FRESH WATER: 20 hydrants on the quay spaced 50 m. to 80 m. apart. Connections 2 in. Rate 20/30 t.p.h.
FUEL: Boiler fuel available from 7 connections (6 in. and 8 in.), rate 45 t.p.h., spaced along the quay. Diesel oil is available by road tanker. Also see "General" before first port.
CONSULS: None at Fortaleza.
REPAIRS: Two workshops available for machinery repairs. No electronic repairs possible.
REPATRIATION: Can be arranged.
AIRPORT: Only internal services from local airport.
POLICE/AMBULANCE/FIRE: Maritime Police Tel: 24.14.94; Ambulance 21.34.34 and 21.22.22; Fire 23.13.81.
TELEPHONES: Available on board through the Ceara Dock Co.
SHORE LEAVE: Allowed under control of Maritime Police.
IDENTITY CARDS: Foreign crew members not permitted to go ashore without presentation of identity card, on which is a photograph of holder and personal details. These cards are provided by the Agent upon arrival. The identity card must be delivered on disembarkation to the Federal Police who will return it to the crew member on re-embarkation.

SHIPMASTER'S REPORT: May 1992.
Vessel: L.P.G. vessel. 171 m. LOA.
Charts: B.A.Charts No. 3957 and 526.
Approach: Pta. Mucuripe shows up well on radar, and the City of Fortaleza is very prominent by day and night.

Fortaleza Light (Gp.Fl.2) is not easily visible, due to the backdrop of lights. The black and white lighthouse is prominent by day.

Two intense white flashing lights on TV Towers in approx. position Lat. 03° 45′ S., Long. 38° 30′ W., in the Southern part of the city are very conspicuous over 20 miles away, from the N.W.

The green (Fl.3) light on the breakwater head is not easily seen, due to the backdrop of lights from the shore.

Care should be taken when approaching Buoys No. 1 and 2 near the breakwater, as a very strong onshore set is experienced. We nearly got into difficulties and Pilots report this is usual with ships being set down onto the shoaling ground.

Buoy No. 7 on B.A.Chart No. 526 (03° 43′ S., 38° 28.3′ W.) is no longer in existence.
Pilot: Entry and departure throughout 24 hours for all ships in virtually any weather. Pilot on VHF Channels 16 and 10. Pilot speaks reasonable English and seems competent.

Pilot boards from small red launch 0.5 miles N.W. of breakwater. Notice required 2 hours prior to arrival and departure (by Agent).

We berthed at 0300 hrs. and managed to make contact on VHF when about 20 miles away.
Reporting: Brazilian Reporting System as detailed in ALRS Vol. 1 is mandatory. The Harbour Master requires copies of messages sent.
Anchorage: As per B.A.Chart No. 526 for deep-draft vessels. The anchorage was very exposed. We observed vessels anchored with S.E. winds at Force 5 with large ground swell.

Tugs: Two low powered tugs available. They are used for pushing at the oil pier.

On the general wharf they were observed using ship's lines to pull vessel off berth.

Entry: For all berths, enter between Buoys No. 1 and 2 as per B.A.Chart No. 526, and additionally for general cargo wharf, between Buoys No. 3 and 4.

Berths: For tankers, the Elbow Jetty is used, with 2 berths, East and West.

The Western berth takes vessels up to 250 m. in length with maximum draft of 10.5 m., although one pilot reported he had taken 11.0 m. draft alongside.

The Eastern berth is for small vessels only, due to less water and difficulty of leaving with low powered tugs.

The alongside loading platform is 90 m. in length, with mooring dolphins North and South.

Moorings: One mooring boat and pilot boat used for mooring. There are good fenders (large tractor tyres).

We moored with 4 lines and 2 springs each end.

Starboard anchor dropped to 2 shackles off the West berth.

Always berth head South (port side too on West berth).

Berthing tends to be slow due to wind and low tug power.

Wind generally from S.E. to South throughout year.

Cargo: Berth handles LPG for cooking fuel and refined products for local area. LPG spheres are about 3.5 km. away. Only heated discharge to 25 spheres. LPG, both butane and propane at +5°C with booster pump. We managed 120 t.p.h. at 10 bar back pressure which Petrobras said was very good. We used 4 in. flexi-hose suspended from gantry.

Very poor contact with Terminal once discharge commences.

No change over time between products.

Survey by SGS. They made many mistakes in figures inwards and outwards.

General: Authorities: No problems. We prepared just about every form. We did not require Currency List or full Stores List. Stores must contain general consumables like paint and videos. Documents required were as follows: 12 copies Personal Effects List, 6 copies Stores/Bond List, 11 copies Crew List, 1 copy 'Nil' Arms and Ammunition, 1 copy Drugs in Hospital (Dangerous only), 1 copy 'Nil' Passenger List, 1 copy Vaccination List, 6 copies Cargo Manifest, 1 photocopy of I.O.P.P. Certificate for Harbour Master, 3 copies Ship's Particulars, Copies of Messages to SISCONTRAMS Position System.

We proceeded to Recife after Fortaleza and Transit 'Rider' was issued.

Fresh water: Obtainable through meter from pier at 15 t.p.h. Ship's hoses used.

Stores: Shipchandler SERVMAR (ISSA) fair and prices reasonable, especially for meat. Imported items very expensive. Store truck allowed to corner of 'elbow' on oil pier, about 500 m. from ship's side.

Chandler has a gang of men and hand trucks to transport to ship's side.

Airfreight: We received AWB by DHL (large number of charts) in 3 days from U.K.

Medical: Comprehensive, but only Portuguese spoken and reports in Portuguese. Agent did his best to translate.

Shore Leave: Beware of contact with police. One young seaman wandered off on his own and lost U.S.$ 300 and was beaten up by police.

Gangway: Ship's amidships accommodation gangway can be landed on jetty.

AUTHORITY: Companhia Docas do Ceara, Praca Amigos da Marinha Esplanada do Mucuripe, C.P. 1099, 60.000 Forteleza-CE. *Tel:* 224.20.33. *Contact:* Livio Silva de France, Director/President.

AGENT: Wilson Sons Agencia Maritima Ltda., Av. Monsenhor Tabosa 111, Sala 35, 60165-010 Fortaleza CE, Brazil. Tel: (085) 226-4897 (After hours: (085) 224-4833 and 223-6682). Telex: (85) 2567 SBSV BR. Fax: (085) 226-6678.

GUAMARE: 04.52 S. 36.21 W. (See Plan)

LOCATION: GENEST II/SEGUAM, the onshore base of the Terminal, is located about 9 km. Southward from Guamare village in Rio Grande do Norte State.

The Offshore Terminal is situated in an open area about 11 miles Northward of Galinhos Lighthouse. Its coordinates are Lat. 04° 52' 25" S., Long. 36° 21' 30" W.

DHN Chart No. 700 covers the area.

PILOTAGE: There are no Pilots in Guamare. All manoeuvres are to be performed by the ship's Master, always assisted by a Mooring Master of the Terminal, who will come on board at the anchorage area and will advise the Master during all operational works, such a mooring, lifting of submarine hose, tanker rail hose connection, loading operations, unmooring operations, emergency stops, etc.

If the Master chooses not to follow and observe the instructions of the Mooring Master, in order to preserve the safety of his ship, the Master must send a written explanation to Capitao dos Portos do Estado do Rio Grande do Norte via the Terminal.

The ship's Master should notify the Mooring Master in advance whatever special conditions arise, if there is some deficiency in equipment, in mooring ropes, winches, rollers, mooring dolphins, derricks, main engine or auxiliary machinery.

The Mooring Master is a professional, and capable of guiding and helping the ship's Master and acts as Terminal's representative on board. It must be clear that the ship's Master will be solely responsible for manoeuvres, as the Mooring Master is his advisor and never being held liable, not even jointly responsible for whatever may happen due to decisions of any kind. Likewise, the acceptance of services and advices rendered by the Mooring Master will imply that the above mentioned conditions are also admitted.

Remarks: The Mooring Master will report any wrong operational condition to GENEST II, which may refuse the tanker for future loading operations, unless the indicated imperfections written in the Claim have been repaired before the return journey of the vessel to the Terminal.

The Mooring Master has a station at Guamare Industrial Zone, located about 9 km. S.W. from Guamare Port. His operational support boats stay at Guamare harbour.

APPROACHES: *Terminal Approach and Aids to Navigation:* As the Ubarana Multi-Buoy System is an offshore terminal, it can be accessed from almost any direction. As soon as vessel reaches Cabo Calcanhar, coming from South, safe radar positions can be obtained by using Racon-equipped fixed production platform of Agulha II (PAG-2), in position Lat. 04° 32' 29" S., Long. 36° 16' 12" W.

It is located 5 nautical miles East of the mooring system.

Vessels arriving from North may also obtain position from the Agulha II platform. However, they must take heed of Urca do Tubarao, a submarine coral plateau of 4.8 m. depth, siutated 5 miles West of the berth.

Some other fixed production platforms in the area can also be used to give good positions:

Plataforma de Ubarana II (PUB-2):
Lat. 04° 55' 46" S., Long. 36° 20' 21" W.
Plataforma de Ubarana III (PUB-3):
Lat. 04° 55' 22" W., Long. 34° 20' 23" W.
Plataforma de Ubarana IV (PUB-4):
Lat. 04° 54' 31" S., Long. 36° 24' 42" W.

Vessels should not sail in the area South of the mooring system, on account of submarine pipelines not shown in the DHN Nautical Chart No. 700. The light buoy displays yellow flashes of 0.3 second with 2.7 seconds eclipse.

ANCHORAGES: *Recommended Anchorage:* Within one mile radius of Lat. 04° 51' 05" S., Long. 36° 23' 00" W.

The area is 17.0 m. (MLWS) deep, the bottom is sand and gravel, providing good holding ground.

Tankers should not anchor to the South of this area or to the South of the buoy system.

RESTRICTIONS: Vessel cannot unmoor at night, except in an emergency.

MAX. SIZE: 116,000 d.w.t. Max. draft 14.0 m. – 15.0 m., depending on time of day. See "Loading – Loading No. 8".

RADIO: *Arrival Advice:* ETA must be advised by tanker 48 hours in advance through Coastal Stations National Network of Embratel to ship's Agent in Natal City.

BERTHING: *Berthing Preference:* Berthing preference will be given in accordance to ship's arrival sequence, unless otherwise stated by DETRAN/DICOP, or in case of peculiar situation having its priorities established by the Terminal.

Mooring Procedures: Mooring procedures are to be discussed in advance by the ship's Master and the Mooring Master, before approaching the berth.

Multi-Buoy Mooring System: The berth is a multi-buoy mooring system (CBM) of 5 mooring buoys, where ships can moor after dropping both anchors.

Synthetic mooring ropes or wire cables must be sent to the buoys. On average, 10 ropes will be sent to the mooring buoys from the stern.

The first lines to be dispatched must be shackled one to another, in order to ease the mooring work.

LOADING: *Hose Connection:* Vessels on arrival should have manifolds prepared to connect to tanker's rail hose. Hose handlers boarded by the Terminal will be under the orders of the Mooring Master regarding the lifting of the submarine hose line and its tight connection to the tanker's manifold.

As soon as all of the mooring lines are well secured on the buoys and ship's cargo tanks have been inspected, the submarine hose lines will be suspended. The hose connection will always be performed on the starboard side. Connection and hang-off devices, such as grommets, gaskets, quick couplers and Camlock ratchet, are to be furnished by Terminal.

Vessel Loading: Before and during loading, vessels are asked to comply with the following:

(a) Loading operation cannot be started without previous permission from the Terminal and the ship.
(b) The maximum pressure and receiving rate stated by the ship (if lower than the Terminal capacity) is to be maintained.
(c) While loading the vessel, the Terminal will assure the service of a watcher taking constant care of the manifold, in order to verify any abnormality.
That does not exclude the ship's own watchman service reporting any irregularity to the Mooring Master.
(d) The vessel shall inform the Terminal about cargo and rate every 2 hours.
(e) Topping-off signal is to be sounded by the vessel, it should notify Terminal personnel 5 minutes in advance.
(f) Mooring ropes and anchor cables shall be constantly inspected by a ship's officer and must be equally tightened.

Terminal Personnel: The Mooring Master and some Terminal employees come on board and stay throughout the whole operation. Therefore accommodation and food must be provided for Mooring Master/Loading Master and a 7 workmen team, as well as rations for 4 more crewmen from the support boat.

Loading:

1. The DTNEST/SEGUAM Offshore Terminal is a single berth of 5 mooring buoys named Quadro de Boias de Ubarana, where vessels up to 116,000 d.w.t. can moor after dropping both anchors.
2. The Terminal was constructed to load tankers with crude oil generated in the fields of Rio Grande do Norte State, including offshore production.
3. Loading operation is performed through a 26 in. submarine pipeline ranging 30 km. from land to berth in the multi-buoy system. At the pipeline end manifold is a yoke with a 26 in. reduction, to allow the

use of 2×16 in. submarine hose lines, each of them with a 16 in. to 10 in. reduction. The East line is composed of 8×16 in. submarine hoses, 1×16 in. to 10 in. reduction and 7×10 in. submarine hoses. The West line is composed of 15×16 in. submarine hoses.

The West line with 16 in. hoses is for loading vessels over 30,000 d.w.t. and the East line with both 16 in. and 10 in. hoses is for vessels of up to 30,000 d.w.t.

4. Tanker's manifold must be provided with 10 in. flange ANSI 150 forward, and 16 in. aft, to provide the simultaneous connection of both the 10 in. and 16 in. lines.
5. Vessel's derrick or crane must be ready on starboard side with a minimum safe working load of 10 tons, in order to lift and connect hoses and ancillary material.
6. Tanker's windlass must be kept in good condition, to permit easy anchor's dropping and easy adjustment.
7. Tanker must have a free starboard winch, in order to lift tanker rail hose by its hang-off chain or pick-up wire.
8. The deepest draft allowed is 14.0 m. (either forward or aft) for loaded vessels leaving the berth, no matter what tide, and 15.0 m. for vessels leaving with daily high water (from 0500 hrs. to 1600 hrs.). Vessels entering the berth with half load or in a heavy ballast condition, must have a deepest draft of 10.0 m. while arriving. In case of mooring, maximum draft for manoeuvre is 10.0 m. (stern to bow).
9. The multi-buoy mooring berth was designed to accommodate tankers of up to 135,000 d.w.t. in a loaded condition, with deepest draft of 14.0 m.
   When tanker sails from the berth, an initial course of between 000° and 030° is suggested, steaming in a natural channel with a depth of 16.0 m. at Spring tides.
10. The total capacity of storage at the Terminal is 172,000 cu.m.
11. If vessel arrives in the afternoon and manoeuvres are difficult to perform, she will anchor until the next morning.
    Unmooring by night-time is not allowed, except in emergency situations and with tug assistance.
12. Since vessels are at an offshore terminal, engines must be kept ready for sailing at any time.
13. No dirty ballast or slops can be received. Tankers must arrive with clean or segregated ballast.
    Any discharge of dirty ballast oil remains, or oil, into the sea is strictly prohibited. Heavy fines will be imposed on ships, furthermore indemnity of the disbursements originated by pollution and its effects on the environment.
14. Any emergency message can be sent on VHF Channel 16 or SSB emergency channel.

MEDICAL: Several physicians and dentists, health service and hospitals are available at any time, according to request sent by Agent. For emergency cases, first aid may be provided by Terminal.

BALLAST: Tankers must arrive on berth with clean or segregated ballast, in order to permit mooring with the best conditions. Cargo tank cleaning is not allowed. There is no provision to receive ballast water at the Terminal.

CONSULS: No consular representatives are reported in the area.

REPAIRS: Some repairs can be effected on request through the Agent, including engine, pumps, deck, electrical and electronic devices.

TIME: The local time is GMT minus 3 hours. Summertime is often used between October and February, changing the Zone to GMT minus 2 hours.

WEATHER: Most of the time in a year, local meteorological conditons are favourable for tanker's operations.

Rainy Days: The annual average precipitation is 408 mm. The periods starting from March and going to the middle of August is known as rainy season (Winter).

Visibility: 10 nautical miles by daylight, except in stormy weather.

Temperature: The medium annual temperature is 28°C, and varies from 22°C minimum to 34°C in the Summertime.

Atmospherical Pressure: The medium yearly atmospheric pressure is 1040 mb.

Relative Air Humidity: The relative humidity is high, its yearly average staying at about 87%.

Remarks: No meteorological station can be found in the area. However, navigators can get this kind of data by calling PPR (Radio) or PWZ (Brazilian Navy Radio) for details. Listas de Auxilios – Radio (DHN-8).

Wind and Waves: Main winds blow from S.E., East and N.E., depending on the season. From March to August, the prevailing wind comes from S.E. (Quadrant 130° – 160°). Its intensity is moderate to strong.

From August to mid-October, the Easterly moderate wind prevails. From October to March, the main winds blow from N.E. (Sector 050° – 070°) strong from noon to break of dawn, when it turns to East-S.E. and stays weak until the next day.

Waves in the area result from the prevailing wind. If the wind blows from S.E., the medium height of the waves is 2.5 m. East and N.E. winds lift surges of 4.0 m. height.

Currents: Because the tidal flow overbalances the ocean stream, currents in the multi-buoy mooring system area are almost fully born by the tidal motion, often reaching 3 knots.

Sometimes strong superficial currents make manoeuvring difficult.

Tides: High and low tides in Guamare Terminal occur 30 minutes – 40 minutes before they do in Macau Port, and can be obtained from the Tide Schedules.

GENERAL:

Engine Repairs: No repairs can be done after submission of Notice of Readiness.

Mail: There is a regular Post Office service in Guamare and Natal. Official mail is to be sent to Agent's care. The facility does not assume any responsibility for these services.

Provisions and Stores: No equipment or personnel are provided by the Terminal for handling supplies. In emergency cases, authorisation from Departamento de Transporte (DETRAN) or from Superintendent of the Terminal must be arranged through ship's Agent.

Chart Supply: No nautical charts, sailing guides or other publications are provided by the Terminal or available in Guamare or Natal. However, these periodicals can be obtained by the ship's Agent or FRONAPE, if requested in advance.

Nautical Charts and Publications: The following charts and publications are used to approach the Terminal and may prove helpful:

Brazilian Charts: DHN 700 and 720.
English Charts: B.A. No. 3955.
American Charts: USNDO 24.240.
Publications: North Coast Guide Book DHN-1.
Lighthouse List, DHN-2.
Radio Aids, DHN-8

Demurrage: Aiming at contributing to the vessel's operational economy, Masters are asked to cooperate with representatives of the Terminal in all attempts to lower demurrage.

Any delay considered as unnecessary or extensive must be reported to Mooring Master, who will contact the Shift Supervisor, in order to provide corrective measures in time. Ships will moor by preference in the morning, between 0600 hrs. and 1100 hrs., making good use of the atmospheric conditions and the favourable state of the sea, typical of that period, unless stormy weather is experienced.

Tankers, whose deballasting time exceeds the period fixed in the Charter Party, will be subject to Claim and to demurrage debt.

Flags: National flag and "Bravo" Jack (dangerous cargo) from international signal code must be flown from Brazilian and foreign vessel's foremast during the vessel's stay in port, from 0800 hrs. to sunset.

Visit by Port Authority: Vessels proceeding from abroad will be subject to Health and Customs Authorities and also Dispatcher Visit. The papers mentioned below will be asked for on ship's arrival:

(a) Port Clearance from last port.
(b) Crew List (3 copies).
(c) Crew Personal Effects List (3 copies).
(d) Stores List, engine, deck, cabin and Customs cleared goods (3 copies).

Cargo Manifest: Issued by FRONAPE Agent in Natal City.

Passengers: (If any). Due to transport difficulties as well as embarkation and disembarkation difficulties at the mooring buoys berth area, passengers are not allowed to land, except with the permission from the ship's Master and a boat provided by the Agent.

Personnel Left Ashore: In case any crewmen are left on shore for hospital attendance, repatriation or other reasons, all costs will be at Owner's expense, except if he who has been left behind is a FRONAPE vessel's sailor.

Sea Pollution: Brazilian laws are very strict regarding oil pollution in waters alongside the coast.

No dirty ballast, food remains or any kind of debris can be thrown into the sea.

Heavy fines will be imposed on ship, and indemnity of the disbursements caused by pollution and its effects to the environment.

All items of Operational Safety Control List are to be accomplished.

Remarks: The above mentioned fines will be imposed according to the ship's tonnage, that is, 2% of minimum salary running in the country by each deadweight ton (d.w.t.), no matter what the pollution extent and other legal penalties to be applied. Items of that list not able to be satisfied must be expressed in the Remarks space.

Public Visits: While the tanker is loading on berth, no visits will be allowed. Going on board will only be permitted to PETROBRAS employees whose job requires their presence, or to Port Authorities, experts, technicians, etc.; or in case of someone being authorised by the ship's Master.

Radio-Transmission While Vessel is Berthed: No radio-transmitters can be activated while the vessel is moored on the berth.

The infringement of this rule will lead to sending a Letter of Protest to vessel and being fined by the Port Authorities.

Use of Walkie-Talkies: Handy radios must be of the anti-detonation type (intrinsically safe). The Terminal will deliver some 464/1650 MHz UHF walkie-talkie radios for exclusive use in ship/shore operations. A VHF radio settled on CCC and within Terminal range is required whenever a tanker is at the facility for loading operations.

AUTHORITY: *Head Office:* Petroleo Brasileiro S.A. (PETROBRAS), Dutos e Terminais do Norte e Nordeste, Rodovia PE 60, Km. 10 s/n, Ipojuca, PE, CEP 54500-000, Brazil. *Tel:* (081) 527-1077.

In Rio Grande do Norte, the DTNEST has a representative in Natal: Gerencia do Nordeste II – GENEST II, Av. Interventor Mario Camara, 2783 – Bairro Nazare, Natal, RN, CEP 59074-600, Brazil. *Tel:* (084) 235-4120. *FAX:* (084) 235-3540.

ILHEUS (Malhado): 14.47 S. 39.02 W. **(See Plan)**

PORT LIMITS: The Port is limited by the line which goes from the estuary of the river Almada to the Ilheu Grande, and then as far as the Southern end of the Sororocas Parcel.

From there towards the Pernambuco Morro, and then going along the Pontal Coast towards the Airfield, and from this point to the Southern extremity of the Island of Frades, and then turning towards Pedra Point, and going from there following the left bank of the River Cachoeira, then continuing along the coast to the estuary of the River Almada.

DOCUMENTS: See "General" before first port.

PILOTAGE: Pilotage is controlled by the Captaincy of the Port. It is compulsory for foreign vessels of any large tonnage; for oil tankers; for propane carriers; for vessels of any size carrying explosives and for chartered, oceangoing tug boats, whether Brazilian or foreign, that are not captained by a Brazilian officer or that do not include in their crew

a Brazilian officer of the category of Nautical Officer or Master of Short-haul Cabotage. The Pilotage zone goes from the Ilheu Grande anchorage ground, marked on Chart No. 1201 of the DHN, to final berthing place.
Request for Pilot: The request for a Pilot must be made with at least 4 hours' advance notice. Pilot service in Ilheus is provided by the Pilots Association of Ilheus, with offices in the Cidade de Ilheus Building – Room 705 – Tel: (073) 231-5711. Fax: (073) 231-8439.
ANCHORAGE: Marked on charts (DHN Chart No. 1201).
Normal Anchorage: At the beginning of the access channel, with a depth of 12 m. Anchoring in the 100 m. stretch along the Wharf and in the Access Channel is forbidden.
Quarantine Anchorage: An area of 500 yards radius with its central point located at Lat. 14° 45′ 30″ S., Long. 39° 01′ 00″ W.
RESTRICTIONS: *Access Channel:* Length 1,000 m., width 200 m., depth 10 m.
Manoeuvring Basin: Length 560 m., width 200 m., depth 10 m.
Navigation Dangers: The passage between the Itaipins reefs and the Ilhote de Itapitanga should be avoided. When sailing South of the Parcel das Sororocas, the Ilheus Lighthouse should no be sighted at less than 270° until the Ilhote de Ipitanga/Ilheu Grande line has been crossed.
HEALTH: Port doctor visits all ships on arrival and requires Maritime Declaration of Health, Derat Certificate, 2 Crew Lists. Vessels from another Brazilian port automatically receive Free Pratique and should not fly Quarantine Flag. If suspected disease or fever on board it is advisable to cable Agent before arrival. Vessels can receive Pratique at any time.
TUGS: Available.
BERTHING: There is a total of 432.5 m. of quay available (3 berths), depth alongside 10 m. The wharf extends 110 m. West from the breakwater. Loading rates for bagged cargo of cocoa and coffee approximately 30/45 t.p.h. per gang. Discharge of bulk wheat by grab. Tankers moor partially off the quay to a stern buoy.
PORT EQUIPMENT: 1×24 ton P & H mobile crane(not working); 1 bucket loader of 1.6 cu.m., 1 bucket loader of 1.25 cu.m., 2 portal cranes of 6.3 tons and 3 portal cranes of 3.2 tons; 25 fork-lift trucks of 2 tons – 3 tons capacity and 1 × 30 tons for full containers.
STEVEDORES: Arranged by Agent.
MEDICAL: All facilities available. If doctor needed on arrival or making emergency call to land sick persons, cable ETA 12 hours before arrival.
TANKERS: Almirante Jeronimo Goncalves Terminal owned by Frota National de Petroleiros. Buoy mooring. (Pipe-line 12 in. × 2,600 m.).
LPG/LNG handled at Berth No. 102 of the Commercial Wharf.
FRESH WATER: Available. Rate 8 cu.m.p.h.
FUEL: Supplied by Petrobras road tankers.
CONSULS: Portugal (others at Salvador).
REPAIRS: Workshop belonging to Port Administration. Minor repairs only.
WATCHMEN: Compulsory.
HATCHES: By stevedores.
CUSTOMS ALLOWANCES: Only sufficient tobacco for daily use. No alcohol to be taken ashore.
REPATRIATION: Can be arranged via Rio de Janeiro and Brasilia.
AIRPORT: Situated at Pontal, 3 km. from the port.
TIME: GMT minus 3 hours.
HOLIDAYS: *National:* 1st January, 21st April, 1st May, 7th September, 12th October, 15th November, 25th December.
Municipal: Fixed: 23rd April, 28th June, 2nd July, 15th August.
Movable: Good Friday and Corpus Christi.
Traditional: Movable: Carnival – Tuesday (Mardi Gras) and Ash Wednesday.
Fixed: 2nd November, 24th June.
POLICE/FIRE/AMBULANCE: Police tel. 2530; Ambulance 3274 (Regional Hospital).
TELEPHONES: No connection to vessels can be made.
SERVICES: Diving service available.
SHORE LEAVE: Allowed with identity card.
IDENTIFICATION CARDS: Necessary to go ashore.
GARBAGE DISPOSAL: Collection service is made by the local town hall. Two containers and some drums are available alongside the quay, where the garbage should be placed. There is no charge for this service, which may be used 24 hours a day.
WASTE OIL DISPOSAL: When service required Petrobras should be contacted. Tel: (073) 231-1058
SEAMAN'S CLUBS: All information is available at the Port Captain's office in Ilheus(Ba.) Rua Major Homem Del Rey, 216 Cidade Nova, Ilheus, Bahia, Brasil 45.660. Tel: (073) 231-2912.
CURRENCY: Cruzeiro (Cr$).

SHIPMASTER'S REPORT: December 1982
Pilotage: Pilot is ordered by vessel's Agent and can be confirmed by VHF on Channel 16.
Tugs: Two tugs available (one of 125 h.p. and the other 130 h.p.) assist when going alongside.
Berthing: The pilot boat also assists in bringing the lines ashore. There is a total of 432.5 m. of quay available. Tankers and also general cargo vessels sometimes moor partially off the quay to a stern buoy.

AUTHORITY: Port of Ilheus (PORTIL), Avenida Almirante Aurelio Linhares No. 432, Ilheus, Bahia, Brazil, Zip 4560 . *Tel:* (073) 231-3318, 231-3173. 231-1962 (Management). *Telex:* 732118. *FAX:* (073) 231-1300. *Contact:* Flavio Martins Pimentel, Port Manager.

IMBITUBA: 28.13 S. 48.38 W. (See Plan)

DOCUMENTS: See "General" before first port.
PILOTAGE: Compulsory. Pilot ordered by ship's Agent. The Pilots have a launch with VHF equipment which is normally moored within the port and can be contacted on VHF Channel 16. The point for awaiting the Pilot is in the anchorage, in the outer part of the port, (Chart 1.908 of the Directorate of Hydrography and Navigation).
ANCHORAGE: The anchorage, near the port, is on the alignment Silo-Ponta da Ribanceira, with a depth of 12 m., and sand bottom. It is sheltered from South, North and West winds, but not so from Easterly winds.
RESTRICTIONS: The port is situated in an open inlet, with a width of approximately 3,000 m., but presenting in its external area the shallow water characteristic of the Rocks of Imbituba, with the lowest depth of 8.7 m., and the Rocks of Aracaju, with the lowest depth of 6.9 m. The sea above the rocks is normally shallow, and it is dangerous to navigation, even for vessels of small draft.
MAX. SIZE: There is no major restriction with regard to the length of vessels. The manoeuvring basin, inside the port, is 315 m. long and more than 10 m. deep. Vessels of a length of 200 m. operate normally. Max. draft 31 ft.
HEALTH: See "Itajai".
RADIO: Messages from vessels for Agents or from the latter to vessels must be sent via the EMBRATEL, which has Coastal Stations at Laguna and Florianopolis.
VHF: Port Authority on Channel 16.
TUGS: One tug, "Mar de Espanha", length 28 m., beam 8.3 m., draft 3.7 m., displacement 276 tons and power 1,680 h.p. It has VHF equipment, and its use is advisable when berthing and unberthing.
BERTHING:

Berth (No.)	*Length* (m.)	*Depth alongside* (m.)	*Max. Length* (m.)	*Size of Vessel Beam* (m.)	*Draft* (m.)	*Approx. d.w.t* (Tons)
101	200	9.5	190	28.0	9.5	38,000
201	108	9.5	150	22.0	9.5	15,000
301	250	10.0	220	28.0	9.5	60,000
401	24	8.0	Ro–Ro Vessels particulars			

Berth 101 is used for shipment of coal.
Berth 201 for general cargo, is an extension of Berth 101.
Berth 301 for bulk cargo and general cargo.
Berth 401 is a Ro-Ro terminal.
CARGO HANDLING FACILITIES: Berth 101: A conveyor system with loading capacity of 350 t.p.h. and a shoot system (8,000 tons) with two grab cranes. This system has a capacity of loading of 500 t.p.h., giving a total nominal loading capacity of 850 t.p.h. of coal.
Berth 201: Uses derrick or ship's cranes, with the possibility of assistance from port cranes.
Installations for unloading and storage of bulk liquid caustic soda are available at Berths 101 and 201.
Berth 301: A continuous shiploader for coal at 1,000 t.p.h. and a multi-purpose crane with 16 tons capacity for bulk and general cargo handling. Installation for loading phosphoric acid at rate of 400 t.p.h. is available.
CRANES: 2×8 tons electric rail-mounted grab cranes, 2×8.2 ton diesel crawler grab cranes and 1×16 ton electric rail-mounted multi-purpose crane.
STEVEDORES: Stevedoring service is carried out by port employees, with the addition per shift of personnel of the Imbituba Union of Stevedores, Imbituba and Laguna loading and discharge tallymen, Imbituba trimmers and workers in the Port Services of Imbituba. Working is 24 hours a day every day in the port, with the following shift arrangement:
By Day: Common day work from 0730 hrs. to 1100 hrs., lunch from 1100 hrs. to 1230 hrs., common day work 1230 hrs. to 1630 hrs.; first extension from 1630 hrs. to 1830 hrs., 2nd extension from 1830 hrs. to 1900 hrs.
By Night: Common night work from 1900 hrs. to 2300 hrs., meal break from 2300 hrs. to 2400 hrs., common night work from 0000 hrs. to 0400 hrs., 1st extension from 0400 hrs. to 0600 hrs., 2nd extension from 0600 hrs. to 0700 hrs.
It is necessary to make a prior agreement between the Master of the vessel and the Agent to ensure the necessary number of shifts, and the availability of other resources for loading or unloading.
MEDICAL: The Agent must be advised in advance as to the need for medical assistance. Imbituba has a hospital with 100 beds. Specialised medical assistance is available in Tubarao (45 km.) Criciuma (100 km.) and Florianopolis (100 km.), from the port on national highway BR 101.
DENSITY: 1025.
FRESH WATER: Fresh water supplied from hydrants on quays. Rate of delivery is 10 t.p.h.
FUEL: Various grades of gas oil and diesel can be supplied by road vehicles.
CONSULS: At Florianopolis and Porto Alegre.
REPAIRS: Some types of deck and engine-room repairs are possible.
SURVEYORS: Ship Surveyors available locally.
WATCHMEN: Compulsory.
OPENING/CLOSING HATCHES: Normally by ship's crew.
REFUSE COLLECTION: Drums on Berths No. 1 and 2. There is no refuse collection on Berths No. 3 and 4.
AIRPORT: At Florianopolis, 100 km. away from the port, where regular scheduled flights are handled.
TIME: GMT minus 3 hours.
HOLIDAYS: *National:* 1st January, 21st April, 1st May, 7th September, 12th October, 15th November, 25th December.
Municipal: 21st June, 2nd November, 8th December.
Movable: Good Friday and Corpus Christi.
POLICE/AMBULANCE/FIRE: Police call 550099, ambulance available in the harbour area and fire call 193.
EMERGENCY CO–ORDINATION CENTRE: Delemar Imbituba Tel. 550276. (Local station of Brazilian Navy).

SHIPMASTER'S REPORT: October 1992.
Ro/Ro Berth: The vessel was to load buses having the following dimensions: Length 13.0 m., width 3.75 m., under-clearance between road and body 0.60 m.

Owing to the height of the Ro/Ro berth being 0.50 m. at high water, and the position of the vessel's starboard stern ramp being at 10.85 m. from the keel, the vessel could not load the buses.

If the Master has an idea about the height of the quay, the vessel will lie at, then the planning about cargo operations becomes simpler.

AUTHORITY: Companhia Docas de Imbituba, Av. Graca Aranha, 226-8° Andar, Castelo, Rio de Janeiro, CEP 20030, Brazil. *Tel:* (021) 2404445. *Telex:* (021) 23568 EACB BR. *Cables:* Imbitubadocas.

At Imbituba: Av. Presidente Getulio Vargas S/N, Imbituba, Sta. Catarina, Brazil, CEP 88780. *Tel:* (0482) 550080. *Telex:* (0482) 421 DOIM BR. *FAX:* (0482) 55 0701. *Contact:* Port Manager.

AGENT: Wilson Sons Agencia Maritima Ltda., Rua Nereu Ramos 326, Centro 88780-000 SC. Tel: (0482) 55-0264 (After hours: (048) 255-1636). Telex: (48) 1085. Fax: (048) 255-1895.

ITAJAI: 26.54 S. 48.36 W. (See Plan)

DOCUMENTS: See "General" before first port.

PILOTAGE: Compulsory. To await or to receive Pilot, anchor from 0.5 to 5 miles East of South Breakwater.

Pilot Station has VHF Radio; telegrams can also be addressed to Pilot Station in Itajai, but customary to send all advices to Pilot Station via Agents. Call Pilot on VHF Channel 14/16 on arrival.

Pilot Station has 2 launches painted red with a "P" on side and on funnel. Launches always anchored inside port. In case of bad weather, vessel must wait for instructions in Porto Belo Bay, South of this port, and in case of bad weather on sailing, if impossible to disembark Pilot in entrance of bar, must be done in Porto Belo Bay.

ANCHORAGE: Waiting anchorage situated in Enseada de Cabecudas, up to 2 miles distant from South Light, depth of 9 m. in position Lat. 26° 54′ 08″ S., Long. 48° 36′ W.

RESTRICTIONS: Vessels can enter or sail at any tide with a max. draft of 30 ft. Vessels with a length over 185 m. can enter and sail in daylight only.

Depths: Depth at Bar – 30 ft. Access Channel – width 100 m., depth 30 ft. Manoeuvring Basin – width 250 m., depth 30 ft.

Also see 'Shipmaster's Report' dated November 1993.

MAX. SIZE: Max. length 250 m. for dry cargo vessels.

HEALTH: When coming from abroad, vessel will be visited by Health Authorities, who issue Free Pratique after inspection. When coming from another Brazilian port, Free Pratique issued in previous port is sufficient. This document must stay on board, to be presented in subsequent ports. In case of sickness on board, after receiving Free Pratique, Master must contact Agent who notifies Health Service.

RADIO: For telegrams (radio) direct from vessel to Agent, or vice-versa, Departamento de Correios e Telegrafos radio station in Itajai, Santos or Florianopolis, with prefixes: Santos PPS, Florianopolis PTC, Itajai PCC.

TUGS: "Anapolis" (1,680 h.p.), "Afonso" (1,820 h.p.) and "Caribe" (1,820 h.p.).

BERTHING: Length at quay, 740 m., depth alongside 30 ft.
Berth 1: Priority is given to full container and Ro-Ro vessels.
Berth 2: Preference is given to full container, Ro-Ro and general cargo vessels.
Berth 3: Preference is given to reefer vessels, if there is no programming to sugar vessels for berthing.
Berth 4: Preference is given to reefer vessels.
Storage:

Warehouse 1	Capacity 33,500 cu.m.
Warehouse 2	Capacity 53,500 cu.m.
Warehouse 3	Capacity 33,500 cu.m.

Store Yard/Container: 46,000 cu.m.
Storage Outside:
Storehouse Reefer (Private Enterprise): 27,000 cu.m.
Storehouse/EADI: 31,000 cu.m.
Storage Yard/Container: 52,489 cu.m.
Storage Yard: 121,450 cu.m.

Oil Storage/Private Terminal: 23 tanks – 14,060 cu.m. (Petrol); 6,988 cu.m. (Diesel oil); 941 cu.m. (Paraffin); 6,686 cu.m. (Fuel oil). 28 gas tanks – 3,112 cu.m.

Chemical Products/Dow Chemicals Terminal: Caustic soda – 12,000 tons.

Equipment: Stacker Trucks (Top loaders): 4×1 tons, 13×1.8 tons, 44×3 tons, 4×3.5 tons, 2×5 tons, 8×7 tons, 1×12 tons and 5×37 tons.

Tractors: 3×90 h.p.

CRANES: 1×20 tons mobile crane for containers and 2×1.5 tons, 1×4 tons, 1×5 tons and 4×3.2 tons Portal cranes.

MEDICAL: In urgent cases, advise Agent requirements in advance. Hospital available (573 beds). Normally no special vaccination required, nor presentation of certificates.

DENSITY: During low tide whole port is influenced by fresh water of River Itajai – Acu, situation changing at high tides.

Mean density: River 0.999. Sea: 1016.7.

STEVEDORES: When vessel arrives in morning, advisable that Master advises in advance number of gangs he will need so that Agency can make arrangements.

When discharging dry bulk cargo (grain or salt) trucks with special equipment used.

Average for loading: *(a)* Timber 240 tons/gang day. *(b)* General Cargo 300 tons/gang day. *(c)* Bags and Tobacco 200 tons/gang day. *(d)* Reefer 150 tons/day gang. *(e)* Containers 15 TEU/gang hour.

For discharging: *(a)* General Cargo 220 tons/gang day. *(b)* Bulk 240 tons/gang day.

Hours as follows: 0700 to 1100 hrs.; 1230 to 1630 hrs.; 1900 to 0100 hrs., except container vessels and Ro-Ro, 1900 to 0600 hrs.

TANKERS: 5 private oil terminals where vessels 155 m. length and 22 ft. draft discharge.
Shell Terminal:
Fuel oil 10 in. for discharging 8 in. for loading.
Diesel 6 in. for discharging 4 in. for loading.
Gasoline 6 in. for discharging.
Kerosene 6 in. for discharging.
Esso Terminal:
Fuel oil 8 in. for discharging 4 in. for loading.
Diesel oil 6 in. for discharging 4 in. for loading.
Gasoline 6 in. for discharging.
Kerosene 4 in. for discharging.
Atlantic Terminal:
Diesel 6 in. for discharging.
Gasoline 6 in. for discharging.
Kerosene 6 in. for discharging.
Ipiranga Terminal:
Diesel 6 in. for discharging.
Gasoline 6 in. for discharging.
Kerosene 6 in. for discharging.
Heliogas Terminal:
Gas 6 in. for discharging liquid 4 in. for discharging vapour.

FRESH WATER: Available, supplied direct by hydrants (12×2 in.) along quay. Average supply 10 cu.m.p.h.

FUEL: No bunkering facilities in the port. Small quantities can be supplied by truck. See "General" before first port.

REPAIRS: Almost all repairs on engines or deck possible.

SURVEYORS: Det Norske Veritas, Lloyd's Register, Bureau Veritas and Germanischer Lloyd have local representatives. Independent marine surveyors are also available.

GANGWAY/DECK WATCHMEN: Not compulsory, but recommended.

OPENING/CLOSING HATCHES: By stevedores.

CUSTOMS ALLOWANCES: Customs open bond every 5 days for issue.

REPATRIATION: Repatriation, normally made by Agents via Rio de Janeiro and/or Sao Paulo.

AIRPORT: Navegantes Airport is situated about 10 km. from port. Daily regular flights to Sao Paulo, Porto Alegre, and Rio de Janeiro by Varig and Rio Sul Airlines.

TIME: 2nd Mar. – 30th Nov. GMT minus 3 hours. 1st Dec. – 1st Mar. GMT minus 2 hours.

HOLIDAYS: New Year's Day (January 1st); Good Friday; Tiradentes (April 21st); Labour Day (May 1st); Foundation of Itajai (June 15th); Independence Day (September 7th); Aparecida Holy Lady (October 12th); Corpus Christi; Proclamation of the Republic (November 15th); Christmas Day (December 25th).

POLICE/AMBULANCE/FIRE: Police 190; Ambulance 193; Fire Brigade 193.

TELEPHONES: There are no facilities for placing telephones on board.

IDENTITY CARDS: Foreign crew members not permitted to go ashore without presentation of identity card, on which is a photograph of holder and personal details. These cards are provided by the Agent upon arrival. The identity card must be delivered on disembarkation to the Federal Police who will return it to the crew member on re-embarkation.

GARBAGE DISPOSAL: Collection service is available daily and is free. Service provided by City Hall.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Cruzeiro. There are no currency exchange restrictions for seafarers.

SHIPMASTER'S REPORT: November 1993 (Updated 1996).
Restrictions: Actual maximum draft allowed by Port Authority and Pilot is 30 ft. at any time.
Berthing: Depths at Manoeuvring Basin and at all berths are given as 30 ft.

Height of tide is sometimes very different from the Admiralty Tide Tables, and subject to variable and unpredictable rising and falling of the river. On this visit, I observed a difference of 0.6 m. between the 2 subsequent low tides when the Admiralty Tide Tables gave only 0.1 m.

AUTHORITY: Administradora Hidroviaria Docas Catarinense – ADHOC. Administracao do Porto de Itajai, Av. Cel. Eugenio Muller 622, P.O.Box 244, CEP 88301-090, Itajai – SC, Brazil. *Tel:* (047) 348-0722 (6 lines). *Telex:* (047) 3121. *FAX:* (047) 348-0512. *Contact:* Marcelo Werner Salles, Port Director.

Port Captain: Av. Cel. Eugenio Muller 106, CEP 88301-090, Itajai – SC, Brazil. *Tel:* (047) 348-0129.

LAGUNA: 28.30 S. 48.46 W. (See Plan)

LOCATION: The port is situated in the State of Santa Catarina on the left bank of the connecting channel of the Lake of Santo Antonio with the Atlantic Ocean.

APPROACHES: The area is covered by D.H.N. Chart No. 1901. The access channel is 1,300 m. long, 80 m. wide and 6.2 m. depth. Tidal range 0.84 m.

PILOTAGE: Compulsory. Tel: (0486) 440075.

ANCHORAGE: Recommended anchorage is at the entrance off the bar.

BERTHING: The manoeuvring basin measures 300 m. × 120 m., with a depth of 5.0 m. The quay is 300 m. long, depth alongside 5.0 m. Port used by fishing vessels only.

Freezer Installations: Ice Factory. Capacity 50 tons/day. Ice Garner capacity 100 tons. Freezing Tunnel (2) with capacity of 48 tons/day at −35°C. Freezer Capacity 800 tons at −30°C. Waiting Freezer. Capacity 160 tons at −2°C.
EQUIPMENT: 1 Electric Crane with capacity of 1.0 ton. 1 fish and ice separator machine.
FRESH WATER: 715,000 litres capacity reservoirs.
FUEL: Diesel oil available. 3 storage tanks.
REPAIRS: Workshop for repairs in the port area.
AIRPORT: Nearest commercial airport is at Florianopolis, 130 km. away.
HOLIDAYS: In addition to National holidays, local holidays are 2nd February, 13th June and 18th June.
GARBAGE DISPOSAL: There is a garbage collection service sponsored by the City Hall, and its cost is paid by the Port in the public taxes. The garbage is collected once a day.
WASTE OIL DISPOSAL: No service available.
SEAMAN'S CLUBS: None.
CURRENCY: Cruzeiro (CR.). The American dollar is also accepted almost everywhere, or can be exchanged at the local banks.
AUTHORITY: Administracao do Porto de Laguna, Avenida Getulio Vargas 728, P.O.Box 39, 88790 Laguna, Santa Catarina, Brazil. *Tel:* (0486) 440183. *FAX:* (0486) 440536. *Contact:* Eng.Marcelo Werner Salles, Port Administrator.

Port Captain: Avenida Brito Peixoto 72, Laguna. *Tel:* 440196.

MACEIO: 09.40 S. 35.44 W. (See Plan)

PORT LIMITS: Limited to the North by the shore, to the South by the mole, to the West by the Atlantic Ocean and to the East by the access mole (Lat. 09° 41′ S., Long. 35° 44′ W.). The Marine terminal of Salgema (Lat. 09° 41′ S., Long. 35° 46′ W.) is located between the beaches of Trapiche and Ouricuri where can be seen the distinctive cylindrical tanks for storage of the products of Salgema Industrias Quimicas S/A. There is a mole emerging from Trapiche beach extending seawards 145°, for about 1,000 m., and at the end of which is a quay. From the mole and extending Southwards is a submarine pipe-line for disposal of residues from the terminal.

The Sugar Institute (IAA) accepts Notice of Readiness only after having been signed by Surveyor to the effect that holds are in all respects ready to receive cargo.
DOCUMENTS: See "General" before first port.

Port Health, Customs and Maritime Police board vessels alongside. However vessels from Eastern bloc countries are boarded at the anchorage.
PILOTAGE: Compulsory. A request for a Pilot can be made via the ship's Agent, 12 hours in advance, specifying the time of entry of the vessel, and from which point pilotage is required, via radio station Amaralina (PPA) or Olinda (PPO). The Pilot boards and leaves vessels 0.5 miles to the West of the Peixe-Pau Buoy and 1 mile from the mole light.
Pilots' Association: Rua Sa e Albuquerque No.467-Room 17, Jaragua-Maceio-AL. Tel: 223-2203 and VHF radio on Channels 9, 13, 14 and 16. Listening Channel is 16. Vessels may anchor off Peixe-Pau Buoy in bad weather.
ANCHORAGES: Vessels anchor outside the area marked as "Anchoring forbidden" on the Chart 901 of the DHN.
Quarantine Anchorage: To the seaward of the Peixe-Pau Buoy.

Vessels are not permitted to anchor in the port basin.
RESTRICTIONS: Max. permitted speed between the Peixe-Pau Buoy and the port is 6 knots.

No restrictions on length. On approaching the port attention must be paid to the shallows existing to the N.W. of the Peixe-Pau. The average depth is from 10 m. to 15 m. Vessels may enter day and night. Pilot refuses to berth tankers after nightfall.
MAX. SIZE: Vessels have loaded up to 33 ft. draft.
HEALTH: No Health Authorities board vessel. In event of suspected disease or fever on board, advise Agent by cable so that Port Authority may take appropriate action.
RADIO: Radio Olinda (Recife), call sign PPO. Radio Salvador, call sign PPA.
TUGS: One tug available, bollard pull 20 tons.
BERTHING: 6 Berths (4 for general cargo and 2 for sugar) available day and night, weather permitting.

Sugar Terminal: Facilities for loading bulk molasses. Projected loading capacity 1,000 t.p.h. of bulk sugar, 300 t.p.h. molasses.

Sugar Wharf: 250 m. length. General cargo wharf 500 m. length. Depth alongside 33 ft.

One quay for loading the products of Salgema Industrias Quimicas S/A (Maritime Terminal of Salgema). This quay is located at the end of a mole some 1,000 m. long starting at Trapiche beach and extending seawards 140° (Lat. 09° 41′ S., Long. 35° 46′ W.).

The average depth of water in the port is 10 m., and at the Salgema Terminal 8.8 m.

In order to be admitted with safety into the port and terminal, vessel's length must not exceed 250 m. and 157 m., respectively.

The sugar quay has 10 bollards and the general cargo quay 16. At the Salgema Terminal Quay, only 1 vessel is berthed at a time.
Cargo Handling Facilities: There are 6 warehouses, 5 being 80 m.× 80 m. for general cargo and 1 of 200 m.×50 m. for Demerara sugar (200,000 tons).

There is a tank with a capacity of 4,000 cu.m. for alcohol and another for molasses with the same capacity. There is a refrigerated store with a capacity of 200 tonnes.

There is an open storage area covering the whole extension of the general cargo quay measuring 20,400 sq.m.

There are 5 stacker trucks, 4 with a capacity of 2 tons and 1 of 7 tons.

There are 2 mechanical sugar loaders with total capacity for shipment of 4,000 bags per hour, and 1 bulk sugar mechanical loader of 1,000 t.p.h. capacity.

There is 1 mechanical grain suction unit with capacity for unloading 100 t.p.h.. There is 1 bulk grain distributor with scales for loading lorries.
CRANES: 4×3.2 ton and 2×6.3 ton capacity electric cranes.
STEVEDORES: ETA required 24 hours before arrival to arrange gangs. When work required Saturdays and Sundays, ETA must be sent on Friday. Loading/discharge – General: 8 t.p.h. per gang. Sugar 20 t.p.h. per gang. Grain 60 t.p.h.
MEDICAL: No advance notice needed except if vessel due to arrive on Saturday/Sunday in order to arrange doctor and/or hospital. Hospital facilities available.
TANKERS: One tanker berth. Max. draft 33 ft. One pipeline 8 in. for gasoline and one 6 in. for diesel/kerosene.

Tanks: Petrobras, 9 tanks with total capacity of 38,929 cu.m.
Atlantic, 9 tanks with total capacity of 14,482 cu.m.
I.A.A., 1 tank for molasses with capacity of 7,000 tonnes.
FRESH WATER: Fresh water available. Pipeline from water tower by gravity. Rate about 5 t.p.h. 11 points at the general cargo wharf and 5 points at the sugar wharf.
FUEL: Diesel fuel oil and fuel oil 'A' (PPF) is supplied by Esso, Texaco, Shell, Atlantic and Petrobras, by gravity from tanker trucks. The availabilities are minimal, as the storage capacity is small, at times there being no products available. Orders must be placed 24 hours in advance. Also see "General" before first port.

CONSULS:				
	Norway	2276	Portugal	2449
	Italy	3302	France	2126
	Spain	2640		

REPAIRS: Small repairs only can be effected.
GANGWAY/DECK WATCHMEN: Not necessary.
OPENING/CLOSING HATCHES: Normally carried out by stevedores.
CUSTOMS ALLOWANCES: One carton cigarettes to be declared. One bottle alcohol, open, to be declared.
REPATRIATION: Carried out by Recife Consulates.
AIRPORT: Airport at Palmares, distance 30 km. Served by Varig, Vasp and Transbrazil.
TIME: GMT minus 3 hours.
HOLIDAYS: Work prohibited on Labour Day only. Other days on which work is considered overtime and charged as such are: 1st January, Good Friday, 7th September, 15th November and 25th December.
Local Holidays: 16th September and 27th August.
POLICE/AMBULANCE/FIRE: Police 221-5348; Ambulance 241-2288 and 241-1488; Fire Brigade 223-2447 and 193.
TELEPHONES: Telephone on quayside. If telephone required onboard 48 hours notice required.
IDENTITY CARDS: Foreign Crew members not permitted to go ashore without presentation of Identity Card, on which is a photograph of holder and personal details. These cards are provided by the Agent upon arrival. The Identity Card must be delivered on disembarkation to the Federal Police who will return it to the Crew member on re-embarkation.
GENERAL: Prevailing winds: Summer months – N.E. Rainy season – S.E. with strong South winds during July/August/September and strong undertow during August/September.
DEVELOPMENTS: The Salgema marine terminal has been built across the bay. It consists of a jetty 1,300 m. long. The loading platform will allow 18,000 d.w.t. vessels to load in 7.6 m. depth.

Loading Caustic Soda	12 in. line	330/350 cu.m./hr.
Ethylene Chloride	10 in. line	330 cu.m./hr.
Ethylene Cryogenic	8 in. line	330 cu.m./hr.

AUTHORITY: Administracao do Porto de Maceio, Rua Sa de Albuquerque, Jaragua, 57000 Maceio, Alagoa, Brazil. *Tel:* (082) 231-1999. *Telex:* 822153. *Contact:* Lafayete Pacheco Neto, Administrator.

MANAUS: 03.08 S. 60.00 W. (See Plan)

DOCUMENTS: See "General" before first port.
PILOTAGE: Pilots join vessel at Belem and make the round voyage back to Belem. Vessels entering via North Channel take a Pilot at Santana. No Pilots from Barra Norte to Santana.
ANCHORAGES: Suitable places can be indicated by the Pilot.

Anchorage for vessels over 3,000 g.r.t. Lat. 03° 09′ 00″ S., Long. 60° 01′ 48″ W.

Anchorage for vessels of less than 3,000 g.r.t. Lat. 03° 09′ 00″ S., Long. 60° 02′ 12″ W.

Vessels impounded or requiring considerable repairs Lat. 03° 08′ 30″ S., Long. 60° 02′ 30″ W.

Vessels in quarantine Lat. 03° 08′ 48″ S. Long. 59° 55′ 48″ W.
RESTRICTIONS: Passage across Barra Norte to be made at HW only. Berthing and unberthing preferably takes place at Manaus in daylight.
MAX. SIZE: Entry to the Amazon via the North Channel; max. draft 30 ft. Via Belem; draft 29 ft. with a length up to 175 m. and draft 24 ft. with a length up to 210 m.
HEALTH: See "General" before first port. All ships must be visited by Port Health Inspector. If vessel has passengers in transit for another Brazilian port, another visit will be required at port where passengers disembark. If ship's health condition satisfactory, Inspector will give Free Pratique immediately. Radio Pratique available if Master able declare satisfactory health condition before arrival. Free Pratique is valid for subsequent ports in Brazil.

If there is a crew member to be hospitalised, the Health Inspector will issue pass to hospital on request of Master or Agent who will be made responsible for all expenses incurred.

Inoculations for International Certificates can only be given by an employee of the Port Health Authority.

RADIO: Salinopolis Radio or Rio Radio. There is also Barbados Radio Station at Belem.

TUGS: 1×210 h.p. and 1×1,680 h.p.

BERTHING: Arranged by Agent who asks permission from local Port Authorities to provide a berth. All berths suitable for vessels able to navigate the river.

Two floating stages in "T" jetty form.

Easterly stage 272 m. long. Floating roadway 252 m.

There are 3 cranes on this stage.

Westerly stage 275 m. long. Floating roadway. No cranes.

Water depth 35 m. – 45 m. at both stages.

Warping buoys must be used when leaving stages as there are no tugs.

A third stage is planned.

A stone jetty 500 m. long will shortly be available for year round operations, when it has been fitted with Portal cranes.

Moageria Berth: Used for the discharge of bulk grain, one tube, rate 30 t.p.h.

EQUIPMENT: *Electric Cranes:* 3×3.2 tons capacity (on rails).
Mobile Cranes: 3×10 tons capacity, 1×9 tons capacity, 1×15 tons capacity, 1×50 tons capacity.
Floating Cranes: 1×100 tons capacity (name – "Joao Pessoa"), 1×15 tons capacity.
Fork Lifts: 14×3 tons capacity, 6×5 tons capacity, 8×2.5 tons capacity, 3×25 tons capacity.

Additional fork lifts with 10 tons capacity available.

Trucks: 27 trucks for moving cargo. 2 heavy lift trucks with 45 tons payload. 2 trucks with 10 tons payload.

STEVEDORES: Available.

MEDICAL: Doctors and hospital facilities available.

TANKERS: *Copam Refinery Berth:* A floating pontoon with buoy moorings ahead and astern. Vessel berths starboard side to, using port anchor.

Facilities for crude discharge. Products only loaded. No dirty ballast facilities.

No. 1 Terminal: Vessel lies to 4 buoys, and picks up a floating line, normally attached to the bank. Available for products only.

Also see "Shipmaster's Report".

DENSITY: Fresh water.

FRESH WATER: Not suitable for drinking purposes.

FUEL: Bunker C and Diesel. Available ex-barge or at the terminals.

Petrobras Distribuidora S.A., Av. 7 de Setembro, 1251 s/511. Tel: 232-5482.

Shell do Brasil S.A., Rua Ferreira Pena 222. Tel: 232-5881.

Texaco do Brasil S.A., Av. Presidente Castelo Branco 720. Tel: (092) 234-2980.

Esso Brasileira de Petroleo S.A., Rue Recife, Adrianopolis. Tel: (092) 232-1886.

Also see "General" before first port.

CONSULS: Following countries are represented at Manaus:

Belgium
Bolivia
Colombia
Denmark
Ecuador
France
Germany
Great Britain
Italy
Japan
Panama
Peru
Portugal
U.S.A.

REPAIRS: Very limited facilities available.

GANGWAY/DECK WATCHMEN: Compulsory.

OPENING/CLOSING HATCHES: Performed by stevedores.

CUSTOMS ALLOWANCES: 200 cigarettes per man. Only normal daily consumption wine/spirits allowed.

REPATRIATION: Can be arranged.

AIRPORT: Regular daily international flights from Manaus Airport.

TIME: GMT minus 5 hours.

HOLIDAYS: *National Holidays:* 1st January, 21st April, 1st May, 7th September, 12th October, 15th November, 25th December.
Municipal Holidays: Good Friday, Corpus Christi, All Soul's Day, 8th December (Devotion to Our Lady the Patroness Saint of Manaus).

POLICE/FIRE/AMBULANCE: Civil Police Tel: 22113; Maritime Police 22315; Fire 21155; Ambulance 21112.

TELEPHONES: Arrangements can be made for telephone connections on board.

SHIP SUPPLY SERVICE: Contact: Helijet Aero Taxi Ltd., Km. 4, Estr. T. Tapajos. Tel: (092) 236-2150 and (092) 236-7611 for helicopter air-lift service.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Required.

SHIPMASTER'S REPORT: June 1993.

Once orders for Manaus were received, the Agent contacted the ship almost immediately asking for ETA at Fazendinha Pilot Staton (off Macapa), and departure times last port. ETAs were required daily for Barra Norte and Fazendinha.

Vessel had been instructed to sail Suape after discharging sufficient cargo to give an arrival draft of 9.14 m. (30 ft.) fresh water at Manaus.

Once vessel had sailed from Suape, a comprehensive set of instructions were received from a sister agency at port of Macapa, giving positions of buoys in Bar and Curua Channel. These were substantially different to charted positions on B.A.Chart No. 2189, the channel being approximately 2 miles S.E. of that charted. Between Buoys 10 and 12, there was supposed to be an obstruction, we were advised to keep 6 cables North of these buoys, which meant passing within 1 cable of Buoys 9 and 11. There was an additional suggestion to cross Bar on a rising tide, early morning. We therefore anchored 1 mile North of Amazonas No. 1, charted as a light vessel, but is a Lanby buoy, radar picked this buoy up at 14.5 miles, light visible at 10 miles. There was an underkeel depth of 3.7 m. when anchored at approximate low water.

Tidal information for the area is confusing, the tide tables only have data for a position off Curua Island, although this is listed as Barra Norte, it is well South of the Bar and channel, at the mouth of the river. The Pilot Book describes how the tide is variable over the entire area, with times and heights being irregular and inconsistent. B.A.Chart No. 2189 has no tidal data, only a current diamond at a point in the middle of the Bar.

Vessel got underway at midnight (8th June) with echo sounder showing a rise in tide of about 0.7 m. Crossing the Bar took 2 hours with a strong adverse current (2-3 knots) throughout, reducing speed to less than 12 knots on sea going revs. The minimum depth encountered was 2.2 m. underkeel (11.1 m. actual). Buoy No. 2 was detected on radar at 14 miles, visually 9 miles, its position agreeing with that given by Agent. Approaching the buoy and clearing the shallow waters of the Bar, speed increased slightly, but set was still adverse. A few small fishing boats were active in the area between Buoy 2 and Curua Channel, none caused any problem.

There is a pilot boarding position marked on B.A.Chart No. 2189, recently entered as a correction, this is a total fabrication. No pilot service is officially available for the Bar area, although there is an unofficial service with the pilot boarding at Salinopolis at the Southern shore of the river. This was only learned later, the Agent having been contacted and asked for a pilot to board at the Bar, we were advised there was no pilot service at all, the pilot position was at Macapa, 174 miles from Amazonas Buoy No. 1.

Curua Channel: The channel buoys were detected from the safe water Buoy No. 3 without difficulty. One course from this buoy to No. 7/8 in the channel of 231° was sufficient. The strength of the current increased noticeably to about 5 knots running N.E.'ly, reducing the speed made good to about 9 knots in the channel. At Buoys No. 7/8, course was altered to 249°, this taking the ship to the North of the channel to pass the recommended 6 cables North of Buoys No. 9 and 11. On this course, the track passed over a tongue of the bank outside the channel to the N.W., with the minimum underkeel clearance of 2.1 m. recorded. Depths in general within the channel corresponded to those charted. All buoys were lit, although very poorly, and appeared in position advised by the Agent. The buoys are checked daily by the Brazilian Navy, as they are frequently swept out of position in the strong currents, any deficiencies are supposed to be advised by the Agents. The obstruction between Buoys No. 9/11 was doubted by the pilots when they boarded, and contrary to the advice we had received, they suggested we should have passed close to these buoys (i.e. keeping to the South of the channel, in order to avoid the shoals to the North, thus further adding to the confusion).

Clear of the channel is a straight forward, open water passage to the Canal do Norte, taking about 4 hours. Once this canal was reached, clumps of floating vegetation and logs were encountered, which according to the Pilot Book can cause severe damage to propellers, and if caught around the bow, seriously reduce the speed. The clumps show clearly on radar, avoiding action is not always possible due to restrictions in channel width. The current from here to the Pilot Station at Macapa was continuously adverse at about 6 knots, the ship making barely 9 knots through the water at full speed. There was very little traffic in the area, apart from a few small ferry boats which kept close to shore, out of the main current.

There is a choice of passage at the Canal do Norte, one to the South and the other to the North. The Southern one is wider with a long bend in the middle, at its end is a shallows/rock in the centre of the channel. The Northern passage is narrow (1.5 miles), with a single course alteration at the West end around Ilhas Predreira. The Northern route was taken, as a large, fully laden bulk carrier was already using the Southern channel, heading seawards. Position fixes were good, with plenty of recognisable features both sides, parallel indexing was used with index lines on features North and South. The Eastern end of Ilhas Predreira is shown on the chart as having a shallows stretching approximately 10 miles, this shallows had almost dried out in places, with a large sand island now existing in the middle of the "shallows." Soundings in the channel were confirmed with the chart and averaged between 17 m. and 30 m. The current set parallel to the channel at all times. The course alteration at the West end of Ilhas Predreira was made, the vessel being confirmed on track by radar, visually and by BPS. There was a shallows charted to the West, but generally the soundings just off the island indicated fairly deep water, the expected beam passing distance of the lighthouse was 1 mile, in water depth of 13.0 m. The vessel grounded 8 minutes after altering course, with positions showing the ship was still on track. The shallows were to port, that is from the island in the deep water, not extending from the shallows to starboard. The engine was put to stop, and then tested ahead and astern, movements were normal. The rudder was tested to port and starboard, full deflections were recorded. The vessel was swung to starboard and then back to port, movement to starboard was unrestricted, when turning to port the swing stopped with the heading 202°, the course in the channel was 198°. The vessel cleared the bank by turning to starboard and the engines at slow ahead, once fully clear, the vessel swung to port, in order to avoid the charted shallows on the starboard side. The indicated depths returned to normal almost immediately. The vessel regained the charted track, water depths were as expected from here on.

The route from Canal do Norte to Macapa was straight forward from this position. Navigation was mainly by radar, with visual fixes from 2 beacons on the portside on the approaches to Macapa. There was an increase in small traffic in the area, with fishing boats and ferries causing problems around the pilot boarding station at Fazendinha. Two pilots boarded from a small red hulled boat 0.8 miles off-shore at the charted pilot boarding position. One pilot took the con, the other went to the cabin.

Total time from Barra Norte Anchorage to Fazendinha was 16 hours 20 minutes, and total distance 174 miles.

Amazon River Pilotage: The total length of pilotage from Macapa to Manaus was 703 miles, time taken Westwards (1624 hrs. 8th June – 0638 hrs. 11th June) was 62 hours 14 minutes, at average speed 11.2 knots.

The speed was increased to full sea speed, current adverse throughout at between 3-6 knots. There were three areas where speed was reduced to half ahead to pass towns, with potentially large ferry traffic concentrations, at Obidos, Parintina and Itacoatiara. Obidos was potentially the area where most caution was required with a 110° blind left hand bend abeam of the town.

The pilots' approach was to keep to the outside bend on all curves, crossing from side to side as the river meandered very rapidly. The average distance off was 2 cables, with frequent closing distances of 1 cable or less. All navigation was by radar, the pilot setting the variable range marker at the chosen clearing distance on bends. We had managed to buy Brazilian charts for the Amazon (No. 4101-4105, Chart No. 4104 missing), the pilots paid no heed to these, their local knowledge being very impressive. The charts were of little practical navigational use anyway, the river was at almost full, 9.0 m. above minimum, and most coastal features were well submerged, making recognition of land very imprecise. The extra river height also rendered the soundings valueless. On numerous occasions the pilot was advised the course being steered was taking the vessel over shoals or banks, on every occasion he was proven correct in his estimations that the soundings were incorrect. The factor of error was in almost all cases greater than the rise in river level, therefore the quality of the orignal survey must be questioned.

As an example of this, the GPS plots frequently gave the vessel running well within the shore line, at one time almost 0.5 miles, this position was repeated on the Eastbound transit. The depths recorded during this "cross-country" were greater than 20.0 m. underkeel. Trying to fix the position accurately using coastal features was impossible due to the flooding as mentioned previously.

Prior to arrival, there had been much discussion as to likely channels and passages to be taken during the transit, those chosen by the pilots often seemed illogical. The narrowest passage used, 4 hours downstream from Manaus, had a total width of only 3 cables, with the vessel only 150 m. off the beach to starboard. The reason given for taking these narrows was the larger outside channels tend to have a concentration of logs and other floating vegetation, making navigation hazardous. The narrows were the lesser of two evils. Even in the very narrow channels no speed reduction was made. Water depths were at all times greater than 18.0 m. underkeel.

General: The vessel had been cleared from Suape to Manaus. If this had not been done, we would have had to anchor at Macapa for Inward Clearance by Customs and Immigration.

Tide affects the river for a distance up to 100 miles above the Pilot Station at Macapa.

Clocks were retarded 1 hour on passage, Macapa keeps GMT −3 and Manaus GMT −4.

River level varies by 10.0 m., dependent on the snow melt of the Andes. Maximum height is at end of June/early July, and minimum height is in November/December.

Brazilian charts were of little use, the B.A. Approach Chart for Macapa proved superior to its Brazilian counterpart. The chart that was unavailable was not available anywhere in the country, the mapping agency had no intention of having another print run, due to unprofitability of printing charts, according to the Agents in 2 ports. The Amazon charts we did have, were of little use other than to give an indication of our position.

Port Manaus: The Petrobras Terminal is situated approximately 4 miles downstream of the town, 2 miles above the confluence of the Negros and Solimoes rivers. The vessel anchored 1 mile S.E. of the terminal, abeam of a small naval berth, in 30.0 m. of water, awaiting tugs.

The vessel had loaded to 30 ft. FW draft at Charterer's instructions, the reason for this limitation was difficult to understand. The oil terminal consists of 3 berths, two for ocean-going ships with a draft up to 37 ft., the centre berth for smaller ships. They are pontoons attached to a pipeline system also on pontoons. The loading/discharge arms are Chicksan type fixed arms. Each berth has two unattached concrete dolphins 10 m. up/downstream of the central pontoon, and 4 mooring buoys, 2 each end. The concrete dolphins were protected by inflatable Yokohama type fenders. The pilot said that during the river low water season, the Easterly berth (No. 3, the one we were berthing on) dries out. This is very hard to believe as the underkeel clearance during our stay was 27.0 m., total depth 36.0 m. Berthing starboard side alongside would seem the norm.

The berth was approached from downstream, stemming the current, 2 small mooring boats and one old, very weak tug, were in attendance. First line was run from the port bow to the off-shore mooring buoy, which was used as a holding line. A starboard headline was run to the in-shore buoy, and aft a starboard sternline was run to the in-shore buoy, it being deemed unnecessary to place a sternline on the off-shore buoy aft. Lines were then run fore and aft to finish with 3 head/sternlines to the in-shore buoys and 2 springs to the dolphins fore and aft. The off-shore buoy headline was released when positioned. The tug served very little useful purpose, and only lay alongside in the closing stages of positioning to keep the bow from swinging off. The ship's gangway was used, room was cramped, with the end of the gangway hard against the pipelines of the pontoon.

Customs, Port Health and Ministry of Agriculture officials joined with the Agent by boat almost immediately berthing was complete. A total of 8 officials boarded. No Immigration Officers boarded, although it was suggested they might come at anytime during the ship's stay. Most formalities were routine, the two Agriculture officials did a very thorough inspection of the galley and store spaces.

1×8 in. Chicksan arm was connected. Cargo tanks were inspected by a surveyor, the survey being fairly cursory. Ship's figures, as generated by the IVMS, were accepted without question. Discharge was started using one pump, limited to 250 cu.m./hr. at 10 bar line pressure. This was maintained for almost 24 hours, until the ship on the next berth had sailed when another larger line was available. The rate was then increased to 1,200 cu.m./hr. at 10 bar, maintained using 2 main cargo pumps. Discharge was stopped at one stage for 13 minutes to adjust the moorings. As the vessel had come out of the water, the two Yokohama fenders had become "hung-up" between the dolphin and ship's side. Moorings were slackened to allow the fenders to fall back to the water. The discharge was otherwise uneventful. Surveying on completion was limited to a very quick glance down each tank. No soundings were taken to calculate R.O.B.'s.

Bunkers were loaded, 180 cst, the usual 380 cst were unavailable. The loading rate was very slow, approximately 90 tons/hr. Temperature of bunkers received 38°. Gasoil was also loaded, although only very small quantity, as the price was high, the loading rate was about 75 tons/hr.

Stores, mainly fresh fruit and vegetables were taken, the quality seemed quite good, but the price was high. Laundry was sent ashore, the quality of the wash was good, again though the price was quite high.

All contact with the shore was by launch, access to the shore via the pontoon was not permitted. A launch service was arranged for shore leave.

Unberthing: (Not usually carried out during the hours of darkness.) The vessel made the sailing in fast failing light. The same tug stood by, but did nothing to assist. The buoy lines were let go first, then the springs on the shore dolphins. The current taking the ship easily away from the jetty, the vessel turned short round to port.

Eastbound Transit: The routine was followed exactly as for the Westbound passage, only the current was favourable throughout, and speeds of 22 knots were obtained, with an average of close to 20 knots being attained overall. The vessel slowed only once for passing Obidos. Time taken from berth to Macapa Pilot Station was 38 hours.

SHIPMASTER'S REPORT: September 1994 (Received March 1995). Vessel: Tanker 40,000 d.w.t. Partly loaded 26,000 tonnes, max. draft 29 ft. (fresh water), LOA 176 m.

The Amazon River is to be entered through Canal do Norte. Pilot boards at Santana, Fazendinha Pilot Station in position Lat. 00° 04′ 06″ S., Long. 51° 06′ 45″ W. This passage is declared safe for navigation without Pilot by the Brazilian Navigation Administration.

There is no Pilot from Barra Norte to Santana, but according to Agent, it may be possible to arrange from Belem, but it would cost approx. U.S.$ 20,000. Anyhow, this part of the River Amazon is quite deep and wide in most places, and should not require a Pilot for navigators with some practice of coastal navigation. The distance from Barra Norte to Santana is about 170 nautical miles.

As the banks/depths are subject to frequent change, the river should not be entered unless information have been received on the current position of the buoys.

Brazilian charts to be used, as British charts are shown not to be adequate.

Received all Brazilian charts for the passage Barra Norte – Santana in previous port, and Manaus Agent faxed the present position of the buoys from Barra Norte to the last buoy of the entrance channel between Banco de Meio Norte and Banco Rio Branco. Agent also faxed Brazilian tide tables for Barra Norte – Ponta do Ceu. All this information, including Brazilian charts, is very important for a safe passage Barra Norte – Santana.

Due to strong tidal stream (5-6 knots) and missing or out of position channel buoys, vessel should be equipped with GPS Navigator for safe navigation in these waters.

Barra Norte (North Bar):

Note: The Brazilian tide tables "Barra Norte – Punta de Ceu" states High Water at Punta de Ceu (Lat. 00° 46′ N., Long. 50° 06′ W.). H.W. at Barra Norte is 3 hours 20 minutes before H.W. in Punta de Ceu.

Maximum draft is restricted by the North Bar (15 miles long), with charted depths of less than 10.0 m.

At date of passage, maximum draft at H.W. was stated to be 37 ft.

Passed North Bar 2 hours after H.W. and sounded minimum depth of 10.4 m. in the Western part.

Landfalls: The light vessel "Amazonas No. 01" racon could be seen very well from 15 nautical miles, and the light vessel was found in position according to charts and information from Agent.

Buoy Aguas seguras No. 01 in position Lat. 01° 25.40′ N., Long. 49° 22.20′ W. was missing.

Buoy Aguas seguras No. 02 in position Lat. 01° 17.55′ N., Long. 49° 27.72′ W. was in position/light o.k.

Buoy Aguas seguras No. 03 in position Lat. 01° 09.64′ N., Long. 49° 33.33′ W. was in position/light o.k.

Entrance Channel – Banco de Meio Nord / Banco Rio Branco: All buoys, including the Aguas securas No. 01 – 03, have a good height and are equipped with radar reflectors. They were all seen (except No. 11) on the radar within a distance of 8 nautical miles, and visually seen within a distance of 5 nautical miles. Buoy No. 11 was damaged and could not be seen as far as the others. We did not observe if the lights on the channel buoys were functioning as the passage was made during daylight.

Following information according to River Amazon Pilots:

H.W. in the channel occurs 1.5 hours before H.W. in Punta de Ceu.

The maximum N.E. current occurs between 2 hours after H.W. and 2 hours before L.W., and can then reach a peak of 6 knots.

The maximum S.W. current occurs between 1 hour after L.W. and 1 hour before H.W., and does not exceed more than 3 knots.

During passage North Bar to Entrance Channel (2 hours – 6 hours after H.W.), we encountered a steady N.E. current of 2-3 knots.

All the Channel Buoys No. 1 – 14 were found in position according to the Agent's information, but in both the Brazilian and B.A. charts the old wrong channel was marked.

Caution shall be taken when passing Buoy No. 14, as it is situated on a 9.0 m. shoal extending N.E. into the channel. At L.W., passage must be made between that shoal and the 8.0 m. shoal S.W. of Buoy No. 11

with a course of 270°/090°. Otherwise passage does not cause any problems and vessels with good radars should not have any problem with transit during the night. However, it might be better to make first time transit in daylight.

Vessels with poor radar should only transit during daylight, as missing or unlit buoys can cause problems.

All transitting vessels should be equipped with GPS satellite navigator.

Missing or damaged buoys shall be reported to Belem Radio.

From the entrance channel to Santana, the transit is safe for both day and night navigation, as the coast can be seen very clearly on the radar. The shore racons of Pta. do Guara and Pta. do Ceu were found functioning and could be seen on the radar at a distance of 10 nautical miles.

We passed close to Ilha Caviana de Dentro and South of Ilhas Pedreira.

We then passed to the Northern shore from Pta. do Pau Cavado to Santana.

All lighthouses, except "Igarape do Espirito Santo", could be seen very well on the radar, and the buoys were found to be in position.

We tried to contact Fazendinha Pilots on Channel 16 (6 hours and 4 hours prior to arrival), but did not get an answer. Two hours prior to arrival, Pilot contacted vessel on VHF Channel 16 and advised that he would be standing-by on arrival.

Santana (Fazendinha Pilot Station): Two Pilots board at Fazendinha Pilot Station, and if it is the first Brazilian port, local Port Authorities will also board.

A small launch comes out to the pilot station and the Pilot boards according to normal procedures. If authorities are to board the vessel and the current is S.W., the vessel will have to turn around and stem the current, or anchor within the area.

As no charts, except B.A. 2229, onboard for the passage Santana – Manaus, I asked Agent to ask Pilots to bring Brazilian charts onboard. The Pilots did not bring any charts and informed they did not need any. According to the Pilots, the river depth, banks and islands frequently change, and there is no chart fully up to date.

Both of the Pilots were very experienced and skillful. It also has to be mentioned that the River Amazon Pilots are working 9 full months a year on the river.

The passage Santana – Manaus is about 680 nautical miles, and vessels transit day and night.

The tidal influence from the sea is felt as far as to Obidos.

The downriver stream current is 1.5 knots – 5 knots and varies with the season. In January, which is the peak of the low water season, the current is only 1.5 knots – 2 knots. In July, which is the peak of the high water season, the current can reach 5 knots.

The range of the river level change in low/high water season is 6.0 m.

After passing Almeirim, drifting trees and small floating islands were encountered. These are numerous during the rainy season when the river level increases, and are a danger to propellers.

The passage is otherwise calm and all smaller rivercraft navigated safely and displayed good lights during the night.

There is no risk for pirates boarding during passage on the River Amazon, but if vessel anchors off Manaus or any other town, precautions should be taken, according to Pilots, who informed that ships at anchor outside Manaus have been "visited".

AUTHORITY: Administracao do Porto de Manaus, Rua Taqueirinha 25, Centro, Manaus, Amazonas, CEP 69.000 Brazil. *Tel:* 232-4250. *Telex:* (0922) 109. *Contact:* Nelson Pedro de Aguiar Falcao, Port Administrator.

AGENT: Wilson Sons Agencia Maritima Ltda., Avenida Djalma Batista 22, Bairro Chapada, 69050-010 Manaus AM. Tel: (092) 642-2626 (After hours: (092) 236-6571). Telex: (92) 1046 WSON BR. Fax: (092) 642-2755. Cables: Anglicus.

NATAL: 05.47 S. 35.12 W. (See Plan)

LOCATION: Port situated on East bank of Potengi River, 2 miles from sea.

PORT LIMITS: The port area is considered to be the estuary of the River Potengi between the parallels 05° 45′ 36″ S. and 05° 46′ 42″ S.

DOCUMENTS: See "General" before first.

Clearance: The visiting area for the Health Inspector of the Ports, Federal Customs & Maritime Police is close to the point of receipt of the Pilot (05° 45′ 06″ S. – 35° 11′ 18″ W.). In special cases, these Authorities may permit visits to be made with vessels already berthed. Also see "Health".

APPROACHES: *Access Channel:* This is shown on Nautical Chart 802 (DHN). Width 90 m. to 400 m. Minimum depth: 7 m. in relation to the Reduction Level of the Nautical Charts. Critical Points: The area between the entrance to the bar and the Manimbu Light.

Tides: Average speed on ebb: 3.5 knots at high tide and 1.3 knots at periods of low tides. Average speed of the rising tide: 1.5 knots coming up river.

PILOTAGE: Pilotage is obligatory from the point of receipt of the Pilot (05° 45′ 06″ S. – 35° 11′ 18″ W.) up to any point in the port area.

Request for the Pilot must be made to the Pilots' Association of the Rio Grande do Norte (Rua Silva Jardim, No. 1 – Ribeira Tel: 222-1613), with a minimum of 3 hours in advance of requirement. The Pilots' Association has VHF, working on Channels 6, 8, 10, 11, 12, 13 and Channel 16 (for calling up), throughout 24 hours. Normally the Pilot will be on board within 2 hours, when the request has been made on working days, during the period between 0800 hrs. and 1800 hrs. Normally Pilots go out to vessels in a red launch with the letter "P" painted in black. When very strong winds are blowing, it is recommended that Masters manoeuvre vessels in order to allow the Pilot's cutter to come alongside on the lee side.

ANCHORAGES:
- (a) For vessels of more than 3,000 g.r.t. – between the access channel and the right bank of the River Potengi, with effect from the parallel of 05° 45′ 30″ S. to parallel 05° 46′ 00″ S.
- (b) For vessels of up to 3,000 g.r.t. – between the access channel and the left bank of the River Potengi, with effect from parallel 05° 46′ 30″ S. to parallel 05° 46′ 48″ S. On anchoring, this must be done leaving a free area of a minimum of 80 m. in the access channel to the Almirante Ary Parreiras Base.
- (c) For quarantine vessels – the area between parallels 05° 45′ 24″ S. – 05° 45′ 36″ S. and meridians 35° 11′ 06″ W. and 35° 11′ 24″ W.
- (d) For pleasure craft – between the access channel and the right bank of the River Potengi, going from parallel 05° 45′ 48″ S. to the parallel of 05° 46′ 00″ S., near to the yacht club.

RESTRICTIONS:
- (a) The maximum speed permitted for navigation in the River Potengi for vessels of over 20 g.r.t. is 8 knots.
- (b) The access channel to the port in the area included between the bar and the Manimbu Light does not permit simultaneous traffic of vessels going in opposite directions.

Manoeuvring Area: Between the parallels of 05° 46′ 30″ S. – 05° 46′ 06″ S., in an area of 300 m. starting from the port quay and from the line which joins the North end of the quay to the North dolphin of the Terminal for PETROBRAS fuel. Depth: from 6 m. to 11 m. It is expressively prohibited to anchor any vessel in this area, which is reserved for the manoeuvres of berthing and unberthing.

MAX. SIZE: Length 520 ft., draft up to 23 ft. 6 in. at spring tides.

HEALTH: Official visit made on vessel's arrival if between 0700 hrs. and 1900 hrs. Visits can be arranged at other times.

The inspection area of the Port Health, Federal Receipt and Maritime Police authorities is 04° 45′ 06″ S. and 35° 11′ 15″ W.

TUGS: Not available.

BERTHING:
- (1) *Port Quay:* 400 m. long with 13 berthing bollards. Quay has a depth of 8 m. in front of warehouse A-2 and 7 m. in front of the rest of the quay, in relation to the reduction level of the Nautical Charts.
- (2) *The PETROBRAS Fuel Terminal:* Situated 200 m. downstream from the port quay, has a distance between dolphins of 100 m. and a depth of 8 m. in front of them (starting from a distance of 20 m. in the direction of the port quay, the depth decreases to 7 m.).

There are no special rules; however, the process will be most rapid and safe if berthing is made port side to on an ebb tide and unberthing being effected on a rising tide.

STORAGE FACILITIES:

(1) *Within the Port:*

Warehouses: 3 for general cargo. Usable total area: 3,945 sq.m. Total capacity: 18,200 cu.m.

Cold Store: 1 with a usable area of 925 sq.m. and a capacity of 140 tons. It is rented for operation to the Companhia de Produtos do Mar (PRODUMAR).

Open Storage Areas: 2 with a usable area of approx. 10,000 sq.m.

Covered Storage Areas: 2 with an area of 800 sq.m.

(2) *In the Vicinity of the Port:*

Warehouses: 3 belonging to the Firma Comercio e Industria de Fibras, situated in the Avenida Hildebrando de Gois, 117 to 137. Usable total area: 2,400 sq.m. Total capacity 12,000 cu.m.

Silos: 2 belonging to Natal Industrial S.A. and operated by the firm Moinho Natal. Total capacity: 4,800 tons.

PORT EQUIPMENT:

Cranes: 2 electric, jib type with a capacity for 2 tons.

2 on wheeled tyres, with a capacity for 8 to 9 tons (but these are out of operation).

Stackers: 16 Yale type, 8 of them in operation and 8 out of action.

Rolling bridges: None.

Loaders: None.

Suction Units: 2 mobile on tyred wheels, with a real capacity of 10 t.p.h. From the suction units, the wheat is carried out along a subterranean gallery and from this, by a cargo transfer unit, and a transport platform to the silos of Moinho Natal.

The Port Administration has 5 trucks, 3 tractors and 2 lorries.

STEVEDORES: On working days, Sundays and Public Holidays the following is the work timetable:

Day period	*Night Period*
0700 to 1100 – Common Day	1900 to 2300 – Common Night
1100 to 1300 – Meal Break	2300 to 2400 – Meal Break
1300 to 1700 – Common Day	0000 to 0400 – Common Night
1700 to 1900 – Possible Overtime	0400 to 0600 – Possible Overtime
	0600 to 0700 – Meal Break

LOADING: When loading sugar bags, only canvas-bottomed slings to be used. Shippers will not permit loading with ordinary rope slings. Suitable slings can be hired from shore. Six slings required for each working gang.

MEDICAL: Hospitals and doctors available.

TANKERS: Oil berth suitable for vessels up to 520 ft. length.

FRESH WATER:

(1) *On the Port Quay*

The supply of water is made by the Companhia de Aguas e Esgotos do Estado do Rio Grande do Norte (CAERN).

There are 12 hydrants spaced 22 m. apart with a discharge capacity of 6 t.p.h.

(2) *At the PETROBRAS Oil Terminal:*

The system of water supply is via one hydrant.

FUEL: There are no oil barges. Supply of diesel oil for vessels moored at the Port Quay is made by means of tanker lorries. Vessels can also be bunkered at the Fuel Terminal of PETROBRAS, which has a 4 in. pipe and capacity for supply of 30 to 40 t.p.h.

Orders can be made via the local ship's Agency, with a minimum of 48 hours' notice in advance.

CONSULS: France, Italy, Lebanon, Portugal and Spain.

REPAIRS: There is a Naval Base at Natal, which apart from providing service to naval vessels, also deals with merchant vessels requiring repairs. The Base has seven departments, Mechanical, Naval Carpentry, Electricity, Electronics, Sails, and Painting, and a Docking System comprising two floating docks and one office ship. The Goias Dock has a capacity for vessels up to 1,000 tons and 4.80 m. draft. There is a ballasting service.

The City of Natal Dock has a capacity for vessels up to 2,800 tons and 5.80 m. draft.

Apart from other facilities, the Base has maintenance, refrigeration and kitchen services, which can be placed at the disposal of vessels during repairs to their own installations.

CUSTOMS ALLOWANCES: One opened bottle spirits and 200 cigarettes per crew member per week.

AIRPORT: There is the Airport of "Augusto Severo" (20 km. distance from the port) situated in the Municipality of Eduardo Gomes. There are direct flights to Fortaleza, Recife and the rest of the country.

POLICE/AMBULANCE/FIRE: Police: Tel. 222-3656, Fire: Tel. 231-3581 or 193.

EMERGENCY CO-CORDINATION:

(a) 2 corvettes and 1 tug of the Grupamento Naval do Nordeste – These will be put into action by the command of the Third Naval District in cases of emergency on the request of the ship's Agent or his legal representative.

(b) Tugs of the concerns which operate in support to the PETROBRAS platforms, actioned by the Captaincy in accordance with the RTM, and on request of the interested party.

TELEPHONES: No facilities exist.

HOLIDAYS: *Local Holidays:* 6th January – Holy Kings; 21st November – Our Lady of Presentation (Padroeira).

GENERAL: *Garbage:* There is no collection of rubbish by the Port Administration. It is the responsibility of every vessel to deposit their rubbish in a container on the quay which is collected daily by a lorry of the Department of Urban Cleansing of the Prefecture of Natal.

SHIPMASTER'S REPORT: August 1994.
The Master received the following telex from Agent:
Quote:
Sanitary Health Inspection Natal:

We have just received information from Master on one of our vessels, that the Health Inspectors at Natal confiscated all provisions which were kept in deep-freezer or cool-store, according to following criterias:

All items with the expiry date overdue.
All items with the date "Best before" overdue.
All items without any expiry stamp.
All meat which is older than one month at the time of delivery, according to the stamp.
All buckled tins.

The Master succeeded in preventing the Authorities from taking the items ashore and burned everything in the vessel's incinerator. According to the local Agents, who tried their best to assist, everything was correct according to Brazilian Law.

Please be guided accordingly in order for you to take your own precautions before arrival.
Unquote.
Master's comment:

The Health Inspector, who had recently been sent up from Rio de Janeiro, did not board us as he was off-duty at that time. However, he is known to be strict, and it is well to be prepared.

AUTHORITY: Companhia Docas do Rio Grande do Norte (CODERN), Av. Hildebrando de Gois, Ribeira, Natal, Rio Grande do Norte, Brazil CEP – 59.000. *Contact:* Ivan Reis de Lima, Administrator.

NITEROI: 22.53 S. 42.08 W.

LOCATION: The Port of Niteroi is situated in the inlet of Sao Lourenco, on the East coast of the Bay of Guanabara. The area is covered by D.H.N. Chart Nos. 1510, 1511 and 1512.

APPROACHES: The access channel is 1,400 m. long, 70 m. wide and 6 m. deep.

PILOTAGE: Compulsory.

ANCHORAGE: See D.H.N. Chart Nos. 1510, 1511 and 1512.

MAX. SIZE: 20,000 d.w.t., previously lightened at Rio de Janeiro.

BERTHING: The manoeuvring basin is 430 m. long, 250 m. wide and 6 m. deep. The quay is 450 m. long, 7 m. depth with 20,000 sq.m. of open storage. There are 2 warehouses with a capacity of 3,300 sq.m.

CRANES: 1×1.5 tons electric jib crane and 1×20 tons mobile crane.

BULK HANDLING FACILITIES: At the S.W. extremity of the port, in the external quay area, there is a wheat silo which is the property of Moinho Atlantico and comprises of 13 cylindrical cells with a static capacity for storage of 15,000 tons. Its construction is of reinforced concrete. This silo is connected by a Radler type elevated transporter to a pneumatic suction unit of the "Buller", type with a nominal capacity of 70 t.p.h.

PORT EQUIPMENT: Stacker trucks: 5 with a capacity of 2 to 10 tons; winch: 1 of 60 tons; tractor on wheels: 1; rolling bridges: 4 of 1,500 kg.

FRESH WATER: Available ex-quay, 14 hydrants with 2.5 in. dia., rate 20 cu.m./h. Also there are 2 barges, each with 100,000 litres capacity.

FUEL: Available from Petrobras.

REPAIRS: Can be undertaken.

DRY DOCKS: "Almirante Guilhem" Floating Dock: Length 200 m. Inner width: 34 m. Clear width between fenders: 32.80 m. Moulded depth 15.60 m. Height of keel blocks: 1.75 m. Max. draft over keel blocks: 7.75 m. Lifting capacity: 15,000 tons. Cranes: 10 ton capacity.
Slipways: 1. 100 m. (length)×12.5 m. (width)×5,200 tons capacity. 2. 60 m.×9.5 m.×1,000 tons capacity. 3. 50 m.×8.3 m.×500 tons capacity.

Above facilities operated by ENAVI. Tel: 719-9292. Telex: (021) 32049 ENAV.

HOLIDAYS: National Holidays: 1st January; 21st April; 1st May; 7th September; 12th October; 15th November and 25th December.

Regional Holidays: 24th June and 22nd November.

Movable Holidays: Monday and Tuesday of Carnival, Ash Wednesday, Good Friday and Corpus Christi.

Commemorative Holidays: 28th January (port workers); 28th August, 28th October; 30th October; 2nd November (All Saints).

AIRPORT: Santos Dumont and the International Airport of Rio de Janeiro.

TIME: GMT minus 3 hours.

GENERAL: Niteroi Port Authority serves traditionally the specific areas of the Municipality of Niteroi, apart from acting as a support base for the oil rigs which operate in the Campos Basin. It is able to receive Roll-on/Roll-off type vessels and this port acts as an important alternative for vessels of this sort which are intended for the Rio de Janeiro region.

AUTHORITY: Porto de Niteroi, Av. Feliciano Sodre 215, 24.030 – Niteroi – RJ. *Tel:* (021) 718-3182, 719-5197, 717-2483. *Contact:* Engineer Antonio Manne, Manager.

OBIDOS: 01.51 S. 55.35 W.

LOCATION: Located on the left bank of the River Amazon in the town of Obidos, State of Para.

MAX. SIZE: 7,000 d.w.t.

BERTHING: Length of berth 35 m. Depth alongside 10.0 m. One warehouse of 420 sq.m. Open storage area of 600 sq.m. Floating pontoon of 39 m.×6.5 m. 1 mobile crane and 2 stacker trucks available.

Marginal quay available for small vessels.

AUTHORITY: Companhia Docas do Para, Avenida Presidente Vargas 41 – 20 Andar, Belem, Para, Brazil. *Tel:* 223-0056, 223-2066.

AGENT: See "Belem".

PARANAGUA: 25.30 S. 48.30 W. (See Plan)

(★) Indicates information received from a ship's Agent.

PORT LIMITS: The port is limited by co-ordinates Lat. 25° 29′ 45″ S. and 25° 30′ 12″ S. Long. 48° 32′ 06″ W. and 48° 30′ 00″ W. which also include commercial and inflammable berths.

DOCUMENTS: Also see "General" before first port.

The visiting areas for the Port Health, Federal Receipt and Maritime Police are those mentioned as areas 1, 2, and 3. See "Anchorages". Normally visits are made at the quay, after berthing.

Documents for clearance inwards of foreign vessels:

(a) Certificate of Registration.
(b) Classification document for the vessel in the port of registration.
(c) International Load Line Certificate.
(d) Safety Certificate for Passenger Vessels or Safety Construction Certificate for Cargo Vessels.
(e) Safety Equipment Certificate for Cargo Vessels.
(f) Safety Certificate for Radio-telegraphy or Radio-telephony on Cargo Vessels.
(g) Exemption Certificate, in respect of the foregoing certificates, where applicable.
(h) Safety Certificate for Nuclear Vessels.
(i) Certificate or other Financial Guarantee in respect of the International Convention governing Civil Responsibility in Damage caused by Oil Pollution, 1969.
Federal Receipt and Port Health Clearance.
Bill of Lading for postal purposes, where the vessel carries mail.
Copy of the payment docket in respect of the tariff for using lighthouses.
Crew List.
Written declaration from Master or Owner stating name and address of legal representative in the port.
Cargo Manifest.

National Vessels:

(1) Up to date equipment roll, accompanied by extra-roll licences and those for extra tonnage.
(2) List of Crew members in duplicate.
(3) Inscription and Registration Pass Book (CIR) or pass books of personal inscription (CIP), for verification as deemed necessary;
(4) List of passengers;
(5) Load Capacity Sheet, for checking the categories of Crew members taken on board and checking the functions effected corresponding to the upper category;
(6) Cargo Manifest;
(7) Terms of Inspection in dry dock and afloat or Certificate of Regularisation of the vessel;
(8) Provision of Register of the Maritime Tribunal, with statement of the name of the Master and his category or Document of Registration (CP-1);

(9) Ship's Log.
(10) Certificate of authorisation of the vessel's line or of extraordinary voyage, issued by the Superintendency of the National Mercantile Marine (SUNAMAM), except for "tramp" vessels.
(11) Certificate of Safety of Passenger vessels, for deep sea vessels and long distance coasting;
(12) Certificate of Safety of Construction of cargo vessels, for deep sea vessels and long distance coasting;
(13) Certificate of Safety Equipment on cargo vessels for deep sea vessels and coasters;
(14) Certificate of Safety of radio telegraphy and radio-telephony on cargo vessels, deep sea and coasting vessels;
(15) Certificate of Exemption, corresponding to the certificates mentioned above;
(16) Freeboard Certificate.
(17) Certificate or other financial guarantee corresponding to the International Convention covering Civil Responsibility for Damages caused by Oil Pollution, 1969;
(18) Passes issued by the Delegation of Federal Receipt (Customs), Port Health, Federal Police and Postal Authorities when the vessel carries mail bags (only for vessels destined for foreign countries);
(19) List of relatives of the Master and the Crew;
(20) Authentic Xerox copy of the last payment form of pension contributions to the INPS or FUNRURAL, paid by the Charterer or Owner
(21) Certificate of Tonnage or tonnage calculation notes.

(★) *Documents required on arrival and amount of each:*

	Doctor	*Police*	*Customs*	*Agency*	*Total*
Provision List	–	–	3	1	4
Crew List	1	2	3	3	9
Voyage Memorandum	–	1	1	1	3
Personal Effects of Crew	–	–	3	–	3
Baggage Declaration (when disembarking Crew members)	–	–	2	–	2
Health Declaration	1	–	–	–	1
Free Pratique	1	–	–	–	1
Vaccination List	1	–	–	–	1
Clearance from last Brazilian port of call	–	1	1	–	2
Cargo Manifest from each port where cargo loaded for Paranagua	–	–	1	–	1
Bill of Lading from each port where cargo loaded for Paranagua	–	–	1	–	1
Negative Cargo Manifest from each port of call where no cargo loaded for Paranagua	–	–	1	–	1

PILOTAGE: Pilotage is compulsory for foreign vessels and tankers, propane carriers and those carrying explosive cargo under the Brazilian flag, of any GRT, from the point at which the pilot boards, shown on DHN Chart No. 1821, approaching the port by the South East or Galheta channels as far as the berth.

Pilotage is optional for vessels of Brazilian flag of less than 500 GRT and for national or foreign support craft whilst they are operating in the Port of Paranagua with Brazilian crews or which have in their crew a Brazilian mariner of the category of Nautical Official or Master of Coasting.

Pilotage can be requested via the Ship's Agent, 4 hours in advance, stating time of entry or departure of vessel. Vessels approaching Paranagua should contact Paranagua Radio, Channel 16 VHF, two hours prior to arrival in the Pilot waiting area.

The Pilots' Association maintains permanent watch on Channel 16 VHF, passing traffic on VHF Channels 10 and 13. (Tel. 422-0530, 422-1560 and 422-1570). The greatest restriction for Pilots is the condition of the sea, which in Galheta Channel, with the sea above Force 4 – makes the passage of the pilot cutter difficult.

ANCHORAGE: Vessels must anchor in the areas circumscribed by the coordinate points mentioned below:

(a) Area "1" intended for vessels of less than 180 m. in length and a draft of less than 9.45 m. = 31 ft. Pricrity of anchorage is accorded in this area to vessels within these limits which have to be bunkered by TEFRAN-SEPAR, with fuel and lubricant oils for their own consumption.

Point	*Latitude South*	*Longitude West*
A	25° 29′ 32″	48° 31′ 28″
B	25° 29′ 51″	48° 31′ 28″
C	25° 30′ 01″	48° 33′ 31″
D	25° 29′ 40″	48° 33′ 31″

(b) Area "2" to the South of the Galheta Channel: Intended for vessels in one of the following situations, or of the types and sizes mentioned below, with the order of priority being observed for anchorage.:

1. Vessels of any size in quarantine;
2. Vessels of any size operating with explosives;
3. LASH type vessels;
4. Vessels which require to bunker with fuel oil and/or lubricants, for their own use; and
5. Vessels over more than 180 m. overall length.

Point	*Latitude South*	*Longitude West*
A	25° 29′ 45″	48° 26′ 14″
B	25° 30′ 10″	48° 26′ 14″
C	25° 29′ 46″	48° 27′ 10″
D	25° 30′ 07″	48° 27′ 10″

Area "2" to the North of the Galheta Channel: intended for vessels in one of the following situations, or of types and sizes mentioned below, observing the order of priority for anchoring in which they are located:

1. LASH type vessels.
2. Vessels requiring to bunker with fuel oil and/or lubricants for their own consumption; and
3. Vessels of more than 180 m. overall length.

Point	*Latitude South*	*Longitude West*
A	25° 29′ 08″	48° 26′ 17″
B	25° 29′ 30″	48° 26′ 17″
C	25° 29′ 34″	48° 29′ 43″
D	25° 29′ 10″	48° 29′ 43″

OBSERVATION: 1. Vessels which anchor in these areas must be positioned as closely as possible to the port of Paranagua, i.e. as close as possible to the Western limit of the area; and

2. Whilst a vessel with specific priority is in these areas, and another arrives with greater priority, it will go to another area, allowing the arriving vessel to take up position.

(c) Area "3" intended for vessels to be subjected to Health inspection by the Port Health Inspectorate or authorised body. The Ship's Agents, consigners of vessels involved in such cases, must, after obtaining from the pilot the estimated time of anchorage in this area, inform the corresponding authorities, sufficiently in advance, so that appropriate action may be taken.

Point	*Latitude South*	*Longitude West*
A	25° 29′ 46″	48° 27′ 10″
B	25° 30′ 07″	48° 27′ 10″
C	25° 29′ 48″	48° 28′ 00″
D	25° 30′ 03″	48° 28′ 00″

(d) Area "4" intended for vessels with an overall length less than 140 m., and a draft less than 6.1 m. (20 ft.).

Point	*Latitude South*	*Longitude West*
A	25° 29′ 16″	48° 30′ 19″
B	25° 29′ 30″	48° 30′ 19″
C	25° 29′ 16″	48° 31′ 28″
D	25° 29′ 32″	48° 31′ 28″

(e) Area "5" intended for vessels of overall length more than 180 m. and draft less than 9.14 m. (30 ft.).

Point	*Latitude South*	*Longitude West*
A	25° 29′ 45″	48° 26′ 14″
B	25° 30′ 12″	48° 26′ 14″
C	25° 30′ 05″	48° 24′ 45″
D	25° 30′ 26″	48° 24′ 45″
E	25° 30′ 20″	48° 24′ 20″
F	25° 30′ 30″	48° 24′ 46″

(f) Area "6" anchorage for the port of Antonina.

Point	*Latitude South*	*Longitude West*
A	25° 28′ 34″	48° 37′ 41″
B	25° 28′ 51″	48° 37′ 41″
C	25° 28′ 30″	48° 38′ 37″
D	25° 28′ 47″	48° 38′ 37″

(g) Area "7" intended, exclusively, for the anchorage and berthing of barges used in transport of "off-shore" platform structures.

Point	*Latitude South*	*Longitude West*
A	25° 32′ 28″	48° 22′ 09″
B	25° 32′ 42″	48° 22′ 14″
C	25° 32′ 28″	48° 22′ 35″
D	25° 32′ 43″	48° 22′ 16″
E	25° 32′ 54″	48° 22′ 10″

(h) Area "8" intended for vessels of overall length more than 180 m. and draft less than 8.20 m. (27 ft.)

A	25° 29′ 26″	48° 24′ 34″
B	25° 29′ 44″	48° 24′ 48″
C	25° 30′ 00″	48° 23′ 42″
D	25° 30′ 17″	48° 23′ 54″

(i) The anchorage for sport and recreation vessels must be effected, preferably, in area 1 or in the River Itibere, and Cotinga Point, in accordance with the buoy restrictions. More details are available from the Captaincy of Ports Regulations.

RESTRICTIONS: The access channels – Galheta and South East are marked on charts 1821 and 1822 of the National Brazilian Hydrographical Dept; the Galheta Channel, normally used, is dredged to a depth of 12.00 m. (39.37 ft.) with a width of 200 m., and a length of 12 miles. The official depth of the channel is 11.28 m. (37 ft.) at high Spring tides and 9.45 m. (31 ft.) at low tides. The critical points of the channel are between the pairs of buoys 3–4 and 7–8, where there are currents running across the channel, and with a heavy sea, waves break making the departure of pilot cutters difficult. In the S.E. Channel, the depth varies from 7.62 m. (25 ft.) to 6.4 m. (21 ft.)

Tides: There is a difference of approximately one hour between the tide in the port and at the bar. At the Galheta Bar, the current may reach a speed of 4 knots during Spring tides. Also see "Berthing".

MAX. SIZE: See "Berthing".

HEALTH: Authorities visit vessels at the anchorage. Port Health Service Tel: 422-0594.

(★) *Note:* Compulsory Sanitary Inspection, prior to docking, is carried out at special anchorage, for vessels proceeding direct from the following countries: U.S.A., Mexico, all Central America, Trinidad, Colombia, Venezuela, Guyana, Suriname, Guyane, all African countries, all Asiatic Countries, Australia, Polynesia.

Special areas are provided for vessels according to their lengths and drafts. Also for Sanitary Inspection special areas are provided in the vicinities of Ilha das Cobras (Cobras Island).

RADIO: Paranagua Radio, call sign PPG. VHF Channels 24, 25, 26 and 27 for vessels navigating close to the port.

TUGS: 6 tugs × 2,100 h.p. – 3,000 h.p.

BERTHING: Manoeuvring Area: **(A)** The areas for vessel manoeuvres have a width of 700 m. along the whole length of the quay with varying depths:

(1) Section "A"
10.06 m. = 33 ft., at low tide.
11.28 m. = 37 ft. at high tide

(2) Section "B"
In section "B", between the mooring heads, from Numbers 01 to 18:
11.28 m. = 37 ft., at full Spring tide
10.67 m. = 35 ft., at full Neap tide
7.62 m. = 31 ft., at low tide

(3) Sections "B" and "C"
In Section "B", from mooring head number 18 as far as Section "C", and all along that section
9.45 m. = 31 ft., at high tide
7.62 m. = 25 ft., at low tide

(4) Inflammables Quay
(a) Pier No. 2 – Internal berth
Max. drafts:
9.14 m. = 30 ft., at Spring high tides
8.23 m. = 27 ft., at Neap high tides
7.01 m. = 23 ft., at low tide
Max. vessel overall length = 176 m.
(b) Pier No. 2 – External berth
Max. drafts:
11.28 m. = 37 ft., at Spring high tides
10.67 m. = 35 ft., at Neap high tides
9.45 m. = 31 ft., at low tide
(c) Pier No. 1 – Propane berth
Max. drafts:
5.79 m. = 19 ft., at Spring high tides
5.18 m. = 17 ft., at Neap high tides
3.96 m. = 13 ft. at low tides
Max. overall length of vessels = 145 m.

At Section "B" berths, use of pontoons is obligatory for vessels of drafts greater than 27 ft. At the section "C" berths, it is convenient to use pontoons for vessels with drafts greater than 25 ft.

(B) *Restrictions:*
(i) Max. passage 50 m. = 164 ft.
(ii) Max. speed over the bottom = 9 knots
(iii) Vessels cannot move with trim or list when at the max. draft.
(iv) The max. depths at Spring and Neap tides shown above can only be used from 3 days before to 3 days after two days of full or new moon and two days of fourth crescent or waning moon, respectively. Nevertheless, the Tide Table must be consulted for the day in question in order to ensure a sheet of water over the keel of the ship greater than or equal to 8% of the depth at Spring tides or equal to 15% at Neap tides.
(v) Vessels with drafts between 35 ft. and 37 ft., inclusive, at Neap and Spring high tides, can only be moved with tugs, without using their propellers, along Section "B" of the channel (area facing Warehouses 01 and 02).
(vi) At the internal berth of Pier No. 2, night manoeuvres can only be effected with adequate illumination so that the whole berth and the area next to the deck and bridge are clearly visible, and at the discretion of the Master of the vessel.
(vii) At the internal berth of Pier No. 2, vessels can only manoeuvre during ebb tides and when the current is equal to or less than four tenths of a knot, i.e. the manoeuvres will be effected from commencement of ebb to a maximum of 2 hours afterwards; when the draft of the vessel is equal to or less than 22 ft., manoeuvres can be effected during 2 hours prior to ebb maximum until the completion of ebb.
(viii) In berthing manoeurvres at the internal berth of Pier No. 2, the minimum distance at which the end of the vessel (bow or stern) must be to the bridge is 10 m.

Traffic in port:
(a) No crossing or overtaking is permitted by vessels in the access channel if visibility is less than 2 miles.
(b) Crossing or overtaking is not permitted when one of the vessels has a draft exceeding 7.92 m. (26 ft.), between pairs of buoys 1-2 and 13-14. The vessel which has the current running at its stern, in this event, has preference in the manoeuvre, the other vessel being required to wait for it to pass.

Stay in Port:
After completion of operations, vessels must unberth within 1 hour, except where request has been made previously to the Port Administration and approval has been given.

BERTHING FACILITIES:
(a) Quays:
(1) Commercial Quay: Total length 2,106 m. with the following depths:
420 m. with a depth of 10 m.;
1,170 m. with a depth of 8 m.;
516 m. with a depth of 12.0 m.;
Mooring bollards every 25 m.
(2) Inflammables Quay – Secondary Pier (for Propane Carriers) berthable only on the outside, for vessels with max. length of 145 m. and draft up to 19 ft.
Principal Pier (Pier No. 2) – berthable on both sides, external and internal. Length of 184 m. and 174 m., bollards spaced 46 m., apart.
(b) Warehouses/Cold Stores/Silos/Open storage areas:
(1) Warehouses: 21 warehouses for general cargo, with total area of 56,400 sq.m. and total volume of 282,000 cu.m.
(2) Cold Stores: One cold store for 7,000 tons, operated by a private company on rental.
(3) Silos: Two vertical silos with total capacty of 110,000 tons.
Four horizontal silos with capacity of 68,000 tons.
Privately-operated silos:
One vertical of 10,000 tons.
Nine horizontal silos, total of 285,000 tons.
(4) Open areas: General cargo – 27,000 sq.m.
Heavy lifts 14,000 sq.m.
Containers 22,000 sq.m.
Fertilisers 3,000 sq.m.
Next to the port area are many warehouses, providing a rear-area with a capacity of 1,000,000 tons.
Also see "Bulk Handling Facilities".

CARGO HANDLING EQUIPMENT:
Cranes: 1×40 tons, 1×30 tons, 4×12.5 tons, 10×6.3 tons and 5×3 tons. 1×130 ton (Lorain) mobile crane. 1 bridge crane for 20 ft. – 40 ft. containers.
Port Authority heavy lift floating crane: 100 tons capacity.
Stacker Trucks: 8×7 tons, 8×5 tons, 15×3.5 tons, 18×2.5 tons and 1×2 tons.
Rolling Bridges: 3×1.5 t.p.h. (2 at Warehouse No. 8 and one at the cold store).
Grabs: 31×2 cu.m. – 3.8 cu.m.
Tractors: 42×45 h.p. – 105 h.p.
Ro/Ro: 1 Ro/Ro ramp but dredging is required.
Side Loaders: 2×36 tons (for containers).
Suction Units: 2 fixed in the vertical silo (Warehouse No. 1). Rate 75 t.p.h. each.
There are no barges, lighters, workboats or pontoons.

BULK HANDLING FACILITIES:
Cargill (Berth 12): One loading tower of 500 t.p.h., movable over a distance of 172 m., capacity 20,000 tons (horizontal silo). Also capacity for 3,000 tons of bulk oil with capacity of 150 t.p.h.
Sanbra (Berth 6): At Warehouses 6, 6a and 6b. 2 fixed loading towers, each 100 t.p.h., capacity 12,000 tons. Also two slightly movable elevators, with a total loading capacity of about 100 tons.
At the same berth there is a loading tower, movable over 180 m., with a loading capacity of 500 t.p.h. which is connected to a silo of 80,000 tons. Depth 9.45 m. Air draft 16.0 m.
Gransol (Berth 4): At warehouses 4 and 5. One loading tower, 400 t.p.h., movable over a distance of 150 m. and one fixed, loading rate 100 t.p.h. Storage capacity 10,000 tons. 2×12.5 ton portal cranes for containers at Shed 5.
Socopar (Berth 2): One loading tower, 300 t.p.h., movable over 110 m. Storage capacity 64,000 tons.
Port Silo (Berth 1): (Operated by the Port Administration) one loading tower, 300 t.p.h., movable over 150 m. Storage capacity 10,000 tons.
Cargill and Sanbra can handle vessels loading to 42 ft. by using pontoons. Other installations, even with the use of pontoons, can only handle vessels loading to 30 ft.
The new grain terminal at warehouse No. 13 with capacity of 164,000 tons and 2 loading towers, movable over 162 m., loading capacity 1,500 t.p.h. each. There are two additional vertical silos each with capacity of 110,000 tons.
Cold Store: Capacity 7,000 tons.
(★) *Liquid Bulk:* Liquid bulk cargoes consist mostly of soya bean, castor, peanut and cotton seed oil. Messrs. Cargill have their own storage tanks and a loading installation capable of delivering 200 t.p.h. All other shippers effect their shipments through portable pumps connected to tank-trucks. Loading capabilities of portable pumps: 30/50/80 and 100 t.p.h. Shippers provide the pumps and hoses and particulars are:
Hoses: Lengths 32 ft., 50 ft. and 100 ft. Diameters 2 in. and 4 in.
Also see "Developments".

STEVEDORES: *Working Hours:* Daywork: 0700–1100 and 1300–1700, overtime 1100–1300 and 1700–1900.
Nightwork: 1900–2300, 0000–0400. Overtime possible 2300–2400 and 0400–0600.
Same working hours are valid for Sundays and holidays with 20%–100% surcharge.

MEDICAL: All facilities available. Crew members should hold valid International inoculation certificates.

TANKERS: 2 berths, length 185 m. (outside) and 174 m. (inside). Depth alongside 9.0 m.–11.0 m. Bollards 46 m. apart. (★) Max. drafts 31 ft. and 26 ft. respectively).
Propane Quay: Length 142 m., depth 5.79 m. Bollards 46 m. apart.
Dirty Ballast: Petrobras Terminal has tanks (capacity 4,500 cu.m.) for dirty ballast and contaminated oil. At Commercial Quay collected free of charge by road tankers.
Also see "Report dated March 1993".

DENSITY: Salt water at entrance of the bar. Brackish water inside the Bay, which varies with the tides: At HW: between 1013 and 1024.
At LW: between 1012 and 1013.

FRESH WATER: 47 hydrants at 45 m. intervals available along the quays, rate up to 27 t.p.h. There is a water barge with capacity of 400 tons., pumping rate of 150 t.p.h. It is recommended that vessels advise Agent of their requirements prior to arrival, as the delivery rate is very low at some berths.

FUEL: Bunker C, fuel oil, diesel oil, Navy Special and all types of marine fuel available. Rate of supply for vessels at the Inflammables Quay: Diesel oil: 50 t.p.h. and fuel oil and mixtures: 200 t.p.h.
Bunkering of vessels in the roads or berthed at the Commercial Quay is by private barge – Empresa Transportadora "Estrela" Ltda., 1 self-propelled barge for diesel oil, capacity 185 tons, rate of supply 70 t.p.h., 1 dumb barge for fuel oil and mixtures, capacity 590 tons, delivery rate 140 t.p.h. Requests for bunkers must be made 96 hours minimum in advance through the Agencies.

FIRE PRECAUTIONS: *Fire fighting facilities:* 4 conventional fire-fighting tenders. 1 chemical spraying vehicle.

CONSULS: *In Paranagua:*
Denmark – Avenida Gabriel de Lara, 1471. Tel: 422-0605
Italy – Avenida Manoel Ribas, 317. Tel: 422-0045 and 422-0046
Norway – Avenida Gabriel de Lara, 1471. Tel: 422-0605
Paraguay – Rua Roque Vernalha, 428
Portugal – Avenida Arthur de Abreu, 29–5° andar – Sala 5
Uruguay – Rua Doutor Leocadio, 112 – Sala 102
In Curitiba:
Germany – Avenida Joao Gualberto, 1237. Tel: 52-4244
Argentina – Rua Marechal Floriano Peixoto, 228–8° andar – Conj. 803 Tel: 23-5141
Austria – Rua Marechal Floriano Peixoto, 228–17° andar – Cjto. 1707 Tel: 24-6795
Belgium – Rua 15 de Novembro, 297 – Sala 303. Tel: 23-3346 and 23-3490
Bolivia – Rua Presidente Faria, 334–4° andar – apt° 401. Tel: 22-4885
El Salvador – Travessa Oliveira Bello, 67–1° andar. Tel: 22-0820
Spain – Rua Visconde de Cerro Frio, 229 – Novo Mundo. Tel: 46-1714
France – Rua Lourenco Pinto, 68. Tel: 22-4906 and 22-8866
Honduras – Praca Rui Barbosa, 537. Tel: 24-9911
Italy – Rua Barao do Cerro Azul, 198 2° andar. Tel: 22-3877
Japan – Rua Marechal Deodoro, 51 6° andar – Conj. 601. Tel: 24-3861
Mexico – Rua Comendador Araujo, 795. Tel: 22-0367

Paraguay – Praca Osorio, Edificio ASA – 1° andar Sala 1002. Tel: 23-9010 – Ramal 45
Peru – Rua do Rosario, 63. Tel: 24-2827
Poland – Rua Agostinho Leao Junior, 234. Tel: 22-2472
Portugal – Rua Marechal Deodoro, 126 – 8° andar. Tel: 22-4022
Syria – Rua Ebano Pereira, 28 – 2° andar. Tel: 23-3875 and 24-6691
Switzerland – Rua Marechal Floriano Peixoto, 228 – 8° andar Sala 807 Tel: 23-7553
Consulate General for the U.S.A. – Main office in Sao Paulo, Rua Padre Joao Manoel, 20. Tel: 37-5574.

REPAIRS: Small structural and machinery repairs possible in the port. 3 firms available.

DRY DOCKS: None.

SURVEYORS: Principal classification societies are represented in the town:

Lloyd's Register of Shipping;
American Bureau of Shipping;
Bureau Veritas;
Nippon Kaiji Kiokai;
Registro Italiano Navale;
Germanischer Lloyd;
Det Norske Veritas;
Brazil Salvage S.A.

Marine Surveyors: P & B – Consultoria Navel e Industrial Ltda.
Inspect Consultoria e Peritagens Ltda.

GANGWAY/DECK WATCHMEN: At least 1 watchman is compulsory on board every vessel alongside 24 hours per day.

OPENING/CLOSING HATCHES: By stevedores.

REPATRIATION: Possible.

AIRPORT: Curitiba, 80 km. from the port for national connections. Paranagua, for medium distance carriers. Air taxi service also available.

TIME: Local time 3 hours behind G.M.T.

HOLIDAYS: National: 1st January; 21st April; 1st May; 7th September; 2nd November; 15th November and 25th December. Local: 29th July and Corpus Christi (movable).

POLICE/AMBULANCE/FIRE: Civil Police 422-0101 and 422-0172. First aid 422-0111. Fire 193. Maritime Police 422-0382.

TELEPHONES: Request for installation should be made to the Traffic Section of the Port Administration.

SERVICES: Cleaning services available. Electronic repairs possible. Rubbish collected daily from drums on quay. Deratting service available. Divers available.

SHORE LEAVE: No restrictions.

IDENTIFICATION CARDS: I.D. Card, Seaman's Book or Passport sufficient.

DELAYS: Normally no delays.

GENERAL:

(★) *Preferential Docking:* Port Administration regulations for Preferential Docking are as follows:

1. Preferential docking is granted to vessels operating with cereals and meats in bulk at the following berths equipped with special mechanical installations:

Berth 1	– Vertical Silo, belonging to Port Administration
Berth 2	– Vertical Silo, belonging to Soceppar
Berth 4/5	– Horizontal Silo, belonging to Gransol
Berth 6	– Horizontal Silo, belonging to Sanbra
Berth 12	– Horizontal Silo, belonging to Cargill
Berth 13	– Horizontal Silo, belonging to Port Administration

2. Preferential docking is granted to vessels discharging solid bulk cargoes (fertilisers, salt, minerals) using shore cranes and grabs at Berth 11. Upon arrival of such vessels, should this berth be occupied, they may dock at any other berth, shifting to Berth 11 when it becomes available and only if Port Administration feel this necessary.

3. Preferential docking is granted to vessels operating exclusively with containers at Berth 14.

4. Preferential docking is granted to vessels operating exclusively with liquid gas and liquid bulk cargoes at the special inflammable berths.

5. For vessels operating general cargo, docking will be granted at any berth according to time of arrival and in compliance with above mentioned preferential dockings.

6. When a general cargo vessel docks at any preferential berth, this will be done on a conditional basis, having to vacate this berth upon arrival of any other vessel with preferential docking for that particular berth, provided there is another berth available. All expenses due to shifting will have to be paid by the interested party.

7. Any vessels operating bulk and general cargo and docked at preferential berth will have to vacate this berth upon completion of loading/discharging the cargo, giving right to a preferential docking, if and whenever another vessel with the same rights should be awaiting this berth but only according to Clause 6.
   (a) Vessels docked at a preferential berth for a specific cargo may load/discharge simultaneously any other cargo provided this does not interfere or prejudice the loading of that specific cargo.
   (b) All vessels have a right to a maximum of three loading berths being allowed to shift from one berth to another without losing their priority and will do so according to Clause 6.

8. All vessels are entitled to up to three dockings.
   (a) Only under special circumstances duly justified and only with the Port Administration consent may a vessel dock more than the times established in item 8.

9. A vessel may only dock when its cargo is ready for shipment and port dues (export/import) are duly paid for up to the following percentages:
   (a) General and bulk cargo:
      1. Up to 50% of declared general cargo.
      2. Up to 50% of cargo declared at each loading berth.
      3. For the specific case of coffee the following percentages will be observed, duly verified by I.B.C. (Brazilian Coffee Institute):

Up to 5,000 bags coffee declared	100%
Up to 10,000 bags coffee declared	50%
Up to 20,000 bags coffee declared	35%
Up to 30,000 bags coffee declared	30%
Up to 50,000 bags coffee declared	25%
Up to 100,000 bags coffee declared	20%
Over 100,000 bags coffee declared	15%

For vessels arriving and initiating operations on a Monday morning or the day following a holiday, docking will be granted on a conditional basis, providing she has a minimum of 2,000 bags of coffee ready for immediate operation and if by 1100 hrs. she did not fulfil above mentioned percentages she will have to undock having to cope with all expenses and placed at the end of the line of vessels awaiting a berth.

   (b) Above mentioned percentages may be altered by the Port Administration at any moment and at their discretion.
   (c) So as to be able to comply with mentioned rules, all agencies must declare, without forfeit, to the Port Administration when requesting normal docking or with priority, vessel's complete bookings.
   (d) Any vessels not maintaining normal loading/discharging rates will be forced to undock taking last place in line of vessels awaiting berth.

10. After load/discharge operations are completed, any auxiliary operations will have to be carried out at anchor unless duly authorised by Port Administration.

11. In order to provide proper service for vessel's discharge, all agencies are obliged to hand over to Port Administration vessel's cargo manifest and a non-negotiable copy of all bills of lading, as well as furnishing time of arrival and any alteration of same.

12. Any vessels undocking voluntarily due to lack of cargo will maintain first place in line of vessels awaiting berth.

DEVELOPMENTS: New quay with length 350 m. and depth 13.0 m. to be constructed. These new berths will provide one additional berth for bulk carriers and one berth for container vessels.

Terminal Maritima Cattalini: Under construction. Facilities consist of a private pier with berthing length of 280 m. and 15 tanks (36,000 cu.m.) for vegetable oil and chemicals. Loading/discharge rate of 400 t.p.h. – 700 t.p.h., depending on product and vessel. Depth 37 ft. Also see "Report" – dated March 1993.

A shiploader rated at 1,500 t.p.h. (heavy grain) with travel of 175 m. is available, and an additional 2 shiploaders (1,500 t.p.h.) are under construction.

REPORT: March 1993.

The following was received by a tanker operator from an Agent in Paranagua.

LPG Berth Name:	Petrobras Pier and/or Inflammables Terminal.
Length:	184 m. external side, and 174 m. internal side.
Berth Operator:	Petroleo Brasileiro S/A – Petrobras.
Vessel's Max. LOA:	196 m. external side, 176 m. internal side.
Maximum Beam:	There is no official beam restrictions, but it is recommended to limit this to 40 m.
Displacement:	Restricted to the size and draft allowed for the vessels.
Max. Draft allowed:	Approach Channel "Galheta": H.W. L.W. Daytime 11.00 m. (37 ft.) 9.45 m. (31 ft.) Night-time 9.45 m. (31 ft.) 8.23 m. (27 ft.) Petrobras Pier/Inflammables Terminal: Ext. side 9.90 m. (32.5 ft.) 8.83 m. (29 ft.) Int. side 8.53 m. (28 ft.) 7.01 m. (23 ft.) As the depths in the dredged channel, manoeuvring basin and alongside the Pier/Docks, vary from time to time, the Captain of the Port, periodically issues notices giving the maximum draft permitted for navigation.
Minimum Depth at Berth:	External side 10.04 m. (33 ft. 00 in.) U.K.C. 1.21 m. (4 ft. 00 in.) Max. Draft allowed 8.83 m. (29 ft. 00 in.)
Minimum Depth in Approaches:	10.66 m. (35 ft. 00 in.) U.K.C. 1.21 m. (4 ft. 00 in.) Max. Draft allowed 09.45 m. (31 ft. 00 in.)
Water Density in Approaches:	1016 (Brackish).
Manoeuvres:	Berthing/unberthing manoeuvres are allowed at night, but conditional on draft limitations and high tidal times.
Bunkering:	In a variety of grades (FO/IFO/MDO/GO), bunkering is carried out at the Inflammables Terminal, through the 12 in. pipelines of the oil companies, and at the rate of 30 t.p.h. Bunkers could also be supplied by a 500 ton dumb barge; at a loading rate of 170 tons or more per hour.
Fresh Water:	Obtainable from hydrants lined up in the pier at a loading rate of 10 t.p.h.
Distances:	Vertical distances from ship's manifold to water line: Minimum 20.00 m. Maximum 25.00 m.
Type of Berth:	Pier – Affording the simultaneous berthing of two oil tankers.
Minimum Size of a Vessel:	No official restrictions.
Distances:	Maximum distance ship's bow to centre manifold (SCM) 92 m. Maximum distance ship's stern to centre manifold (SCM) 92 m.
Grades of Cargo Handled:	FO/IFO/MDO/DO/GO/Nafta/Kerosene/LPG.

Lighterage: Not available for liquified gas.

Dirty Ballast: May be received. Storage with capacity of 5,000 cu.m.

Slops Acceptance: May be accepted, arrangements should be made in advance directly with Petrobras.

Towage: Presently Paranagua has 6 tugs, as listed below:

Name	*H.P.*	*Bollard Pull* (tons)
Centaurus	2,170	33.4
Pegasus	2,170	33.4
Galahad	3,000	35.4
Excalibur	3,000	35.4
Lagoa Gaucha	2,100	30.0
Lagoa Mineira	2,100	30.0

Air draft: No restrictions.

Pilotage: Pilotage is mandatory from the pilot buoy, which is a distance of some 18 miles from the harbour. The pilots are normally picked-up (or dropped) within a one-mile radius area, its centre corresponding to the coordinates 26° 37' 00" S., 48° 15' 30" W. (see Brazilian Nautical Charts No. 1820/1821/1822/1823).

The pilot boarding station is radioed through VHF Channels 12 and 16. Pilots are normally requested by the ship's Agents some 4 hours prior to the ship's arrival at the pilot buoy. It is therefore advisable that vessels send their ETA to the Agents at that area.

Storage: Storage available ashore:

LPG	7,317 tons	DO	19,000 cu.m.
MFO	5,886 tons	Av. Kero	28,000 cu.m.
Gas Oil	38,000 cu.m.	OC2A	23,923 cu.m.
Nafta	37,433 cu.m.		

The storage ashore for LPG is pressurised.

Arm Configuration: According to Petrobras, both arm configurations for loading/discharging are available.

Size of Connections: Liquid 8 in. and 10 in. Vapour 6 in.

Density at Berths: 1016.

Documentation: Usual cargo documents, as well as vessels certificates are required by Port Authorities.

Additional Information: We have been informed by Petrobras that there is no specific system for emergency shut down. Escape could only be made by walking along the quay extension (800 m.), or by sea with the assistance of tugs, which may be employed in firefighting and salvage operations.

AUTHORITY: Capitania dos Portos do Estado do Parana, Rua Benjamin Constant 535, Paranagua-PR. CEP. 83.220 Brazil. *Tel:* 422–3033. *Contact:* Captain Ronald Cardoso Guimaraes, Port Captain.

Paranagua Port Authority Benjamin Constant 707, Paranagua-Re, CEP 83.200 *Tel:* (041) 422-3223.

Administracao dos Portos de Paranagua e Antonina, Av. Governador Manoel Ribas, S/No. Paranagua, Brazil. *Tel:* 422-3311, 422-0282.

AGENT: Wilson Sons Agencia Maritima Ltda., Avenida Arthur de Abreu 29, 5th Floor, 83203-480 Paranagua PR. Tel: (041) 423-1444 (After hours: (041) 423-3562 and 423-4294). Telex: (41) 4143 WSON BR. Fax: (041) 423-3020. Cables: Anglicus.

Curitiba: Wilson Sons Agencia Maritima Ltda., Rua Marechal Deodoro, 252 Conjunto 402, 80010-010 Curitiba PR. Tel: (041) 223-8044 (After hours: (041) 359-2546). Telex: (41) 35051. Fax: (041) 224-7969.

PELOTAS: 31.47 S. 52.20 W. (See Plan)

LOCATION: The port is located on the Northern edge of the Sao Goncalo channel.

APPROACHES: The access channel is 80 m. wide with depth 5.1 m.

PILOTAGE: Available through Associacao dos Praticos da Lagoa dos Patos – Rua General Bacelar, 444 Rio Grande – RS. Tel: 21349.

TUGS: Delegates Services Administration tugs are used.

BERTHING: Manoeuvring basin: 120 m. wide, depth 5.1 m.

Quay: 500 m. long, depth 2.5 m.

CRANES: 2 mobile cranes, with capacities of 50 tons each. Twelve stacker trucks with 1.8 tons capacity each.

BULK HANDLING FACILITIES: One Samrig type silo with a capacity of 6,880 tons.

STORAGE: 3 warehouses with an area of 7,160 sq.m., 6,000 sq.m. of covered storage and 1,160 sq.m. of open storage available.

FRESH WATER: 7 hydrants spaced 65 m. apart with a discharge rate of 18 t.p.h.

FUEL: Available.

CONSULS: Italy (Consular Agency) and Portugal (Vice-consul).

AIRPORT: 10 km. distant.

TIME: GMT minus 3 hours.

HOLIDAYS: National: 1st January, 21st April, 1st May, 7th September, 12th October, 15th November and 25th December.

Regional: 2nd February.

Movable: Monday and Tuesday of Carnival, Ash Wednesday, Good Friday and Corpus Christi.

Commemorative Days: 28th August (Banks), 28th October (Public Officials), 30th October (Commercial) and 2nd November (All Saints).

AUTHORITY: Porto do Pelotas, Rua Conde de Porto Alegre, 1. 96.100 – Pelotas – RS. *Tel:* (0532) 22.1125 and 22.1134. *Contact:* Engineer Jose Fernando Marques Ripoll, Harbour Manager.

PONTA DA MADEIRA: 02.34 S. 44.23 W. (See Plan)

LOCATION: Ponta da Madeira Port Complex (CPPM) is located on the Eastern shore of Sao Marcos Bay, on the island of Sao Luis. It comprises two piers in the following positions:

Pier I: Lat. 02° 34.0' S., Long. 44° 23.0' W.
Pier II: Lat. 02° 34.5' S., Long. 44° 22.3' W.

CPPM is about 8 km. South of Sao Luis City, capital of Maranhao State, to which it is linked by a roadway.

CPPM is the property of Companhia Vale do Rio Doce, and is operated and administered by them.

Pier I is a port installation for private general use, out of the area of the state owned Port of Itaqui.

Pier II is a port installation for private general use, in the area of the state owned Port of Itaqui.

Both piers provide infrastructure to stock and to ship the materials transported by Carajas Railway.

Vessels waiting in the Outer or Inner Anchorage Areas must send the Notice of Readiness, after dropping anchor, via telex to the Agent, who will contact CPPM. Vessels proceeding directly either to Pier I or Pier II shall tender Notice of Readiness as they cross parallel 02° 31.3' S.

DOCUMENTS: All vessels are boarded by the following Port Authorities in the waiting areas, or alternatively at the pier immediately after berthing:

Port Health Authority (Saude dos Portos).
Customs (Receita Federal).
Immigration (Policia Federal).

The Port Authorities clearance is carried out, every day of the week, at any time, day or night, Saturdays, Sundays and holidays included.

The following valid original documents must be presented to the Port Health Authorities, Customs and Immigration:

Port Health Authority:

Health Declaration, filled out according to the Sanitary Regulation No. 2 from World Health Organisation.
Ship's Medical Log.
Yellow Fever Vaccination Certificates of all crew members and passengers, as well as their Seaman's Book and Passports.
Crew List (Form 1-418).
Request for Free Pratique.
Passengers List, including transit and disembarking (Form CF-3171).

Customs:

Master's Oath (Form CF-1300).
Crew List (Form 1-418).
Stores List (Form CF-1303).
Crew's Personal Effects List (personal items and baggage) (Form CF-1304).
Passengers List, including in transit and disembarking (Form CF-3171).

Immigration:

Master's Oath (Form CF-1300).
General Declaration (Form CF-1301).
Crew List (Form 1-418).
Passengers List (Form CF-3171).
List of Guns and other kinds of weapons on board.
List of Narcotics on board.
List of Stowaways, if any.

Note: All forms should be fulfilled.

General:

Shore leave may be granted at Master's discretion, after clearance is given by Port Authorities.

The ship's Master must advise the crew that Brazilian Regulations concerning smuggling laws are strictly followed by the Agents and Customs. The crew must be assured that all items, cigarettes, tobacco, alcoholic beverages, should be kept in the locked store, which will be sealed by Customs Authorities during the stay of the vessel at CPPM. Only small consumable quantities of cigarettes, alcoholic beverages and personal effects can be kept in the cabin.

Passengers must have their passports in order to be able to disembark.

When ashore, crew members must have their identification documents with them.

Only persons duly authorised by CPPM will have access to the piers. Any person visiting ships must have authorisation from the Master and Port Authorities. The administration of CPPM will not be held responsible for any accident caused to or by persons visiting ships.

If any unauthorised person is found on board, loading must be stopped until the person leaves the ship, with all time and costs allocated to the ship.

Upon request, CPPM Security can arrange taxi for transportation from the Terminal to the outside area. CPPM Security is not responsible for payment of such transportation. Private vehicles are not allowed to enter the Terminal area.

The ship's Master must have ready to present, during inspection, the Derat Certificate or the Derat Exemption Certificate, as well as the Health Certificate from the last port of call.

Ships are requested to keep propeller totally immersed.

Degasification operations are not allowed when the vessel is berthed or in the vicinity of the piers, where CPPM authorities judge it to be dangerous.

After clearance by Port Health Authority, the holds of the vessel will be inspected by representatives of the Master and CPPM. The holds must be clean, free of water and ready to receive the cargo.

If the holds are suitable, the representatives of CPPM and the ship's Master will sign the Inspection Certificate. If not, the Notice of Readiness will be cancelled until all the requirements have been fulfilled.

Also see "Radio".

APPROACHES: *Access Channel:* The access channel to CPPM starts around 12 miles South of BF-3. It is 55 miles long and can be divided into the following sectors:

(a) From the pair of light Buoys No. 1 and 2 until abeam of Buoy No. 6; being 7.6 miles long, in the direction 208° – 028°.
(b) From light Buoy No. 6 until 1.8 miles after Buoy No. 14; being 11.6 miles long, in the direction 238° – 058°.
(c) From 1.8 miles after Buoy No. 14 until the pair of Buoys Nos. 19 and 24; being 33.6 miles long, in the direction 213° – 033°.

The width of the channel is 1,000 m., in almost all its extension, except in the following parts, where the width is a minimum of 500 m.:
(i) Between the pair of light Buoys No. 1 and 2, and the pair of light Buoys No. 3 and 4.
(ii) Between the pair of light Buoys No. 5 and 10, and the pair of light Buoys No. 9 and 14.
(iii) Between the pair of light Buoys No. 17 and 22.

The minimum depth of the channel is 23.0 m. in the narrowest sectors, except between light Buoys No. 17 and 22, where it was dredged to 25.0 m.

Turning Basin: The Turning Basin of Pier I is limited on its Eastern side by the docking alignment, on its Southern side by the 02° 34′ 30″ S. parallel and on its Western side by light Buoys No. 23 and 25. It is approximately 0.8 mile wide and 3 miles long. Depths range from 23.0 m. (by the docking alignment) to 35.0 m. (close to Buoy No. 25).

At Pier I, there are 2 breakwaters in order to weaken the tidal currents in the approaching and berthing areas.

The breakwaters were projected and built to lessen the effects of the tidal streams over the docking place, and also to maintain the cleaning power through the circulation of water between them. The Northern Breakwater starts at Boqueirao Beach. It is 980 m. long and at its end there is a 150 m. long appendix that was built 80° from its axle Northwards. Its appendix is more efficient during flood tides deflecting the current to the approximate direction of the centre line of the vessel, keeping it berthed. The Southern Breakwater is more efficient during ebb tides, since the lowering of its last 130 m. to the quote of −2.75 m. brings the flow of the main current to little more than 50 m. away from the breasting line, weakening considerably the effect of the whirls on the vessels and, consequently on the moorings. 200 m. out from the pier, the currents flow parallel to the pier.

Pier II: The Turning Basin of Pier II is an extension of that of Pier I. It is limited on its Southern side by light Buoy "Cardinal Norte", and on its Eastern side by the docking alignment. It has a crust instability, Guarapira Island, that forms on the Eastern side, the cove of state owned Port of Itaqui. The cove is 200 m. wide and 720 m. long.

Evaluations on the manoeuvres performed allowed the conception of two methods of performance:

The first one is to vessels up to 76,000 d.w.t., where the area for manoeuvring (200 m. wide and 720 m. long) is located between the pier of Itaqui Port and Guarapira Island, the manoeuvring is always oriented by turning round South of Guarapira Island. Depths range from 11.4 m. to 26.0 m.

The second one is to vessels larger than 76,000 d.w.t., according to which the manoeuvres are performed inside the Turning Basin of Pier I and in its extension, which adopts as a limit the contour of Buoy No. 25. Both extension and Western limit dimensions are about 0.8 miles. Depths range from 18.0 m. (by the berthing line) to 35.0 m. (near Buoy No. 25).

PILOTAGE: Pilotage is compulsory in Sao Marcos Bay, from the pilot station up to any mooring or docking point.

Schedules and forecasts for berthing or unberthing manoeuvres of vessels bound for the port installations of CPPM are scheduled by the Operational Control Centre of CPPM. Requests for Pilot must be made through this Administrative Centre.

For other necessities not mentioned above, the Pilot must be requested via Embratel Coastal Station (Estacao Costeira) through the ship's Agent, 48 hours in advance. The request will be confirmed 4 hours in advance on the following frequencies:

Channel 16, working Channels 13, 11 and 9.

Vessels with less than 11.0 m. draft must board the Pilot at the pilot station, which is shown on Nautical Chart No. 413, and the co-ordinates are the following:

Lat. 02° 28.9′ S., Long. 44° 22.2′ W.

Ships with part-cargo or in ballast, proceeding from Outer Anchorage or not, with draft over 11.0 m., must receive the Pilot between Buoys No. 17 and 22.

During the night, the pilot boat will show lights according to international regulations, that is, fixed white over a red light and the usual navigation lights.

In Sao Marcos Bay, the Pilot embarks and disembarks by boat. All vessels must have rigged a ladder in accordance with "International Maritime Organisation SOLAS Regulations", under SOLAS Chapter V, Regulation 17, amended in 1973 by IMO's Regulation A 263(VII) and in 1979 by Regulation A 426(XI).

In Sao Marcos Bay, there is a routine to embark and disembark the Pilot by starboard side.

Special care must be taken when the vessel is approaching the pilot station, in the period of 3 hours before high tide, when the ebb currents can reach a speed of 5 knots.

NAVIGATION AIDS: *Light Float:* Light Float BF-3 has a red painted framework tower that emits flashes of white light, 14.0 m. tall. The BF-3 is anchored at the following position:

Lat. 01° 34.9′ S., Long. 43° 50.8′ W., and with the following characteristics:

Length	17.00 m.
Breadth	6.70 m.
Spotlight focus height	14.00 m.
Painted	Red
Prefix	BF-3
Light	Fl. W(2), 15 seconds
Radar-Racon	Charlie

Nautical Charts: The access channel, the anchorage areas, the turning basins and the docking places are shown on the following nautical charts:

Charts No. 400, 410, 411, 412, 413 and 414, published by Diretoria de Hidrografia e Navegacao do Brasil (DHN).

Charts No. 24270 and 24271, published by the United States Hydrographic Service (HO).

Charts No. 3958 and 535 of the British Admiralty (BA).

In the charts published by DHN, the depths are indicated in meters and refer to the Tide Datum level adopted for the largest scale chart.

Radio Beacons: There are the following Radio Beacons in the area:

Sao Marcos –	Frequency: 300 kHz Signal: SM Position: Lat. 02° 29.0′ S., Long. 44° 18.0′ W.
Sao Joao –	Frequency: 320 kHz Signal: AI Position: Lat. 01° 18.0′ S., Long. 44° 54.0′ W.
Airport of Sao Luis –	Frequency: 280 kHz Signal: SL Position: Lat. 02° 35.0′ S., Long. 44° 14.0′ W.

Racons (Radar Beacons): At the entrance of Sao Marcos Bay and its surroundings, there are also Racons with the following characteristics:

Light Boat BF-3 – Racon operating in the X and S bands, signal "Charlie", active 18 sec. and inactive 12 sec.

Sao Joao Beacon Lighthouse – Racon in the X and S bands, signal "Oscar", active 8 sec. and inactive 12 sec.

Pirajuba Beacon Lighthouse – Racon in the X and S bands, signal "Zulu, active 18 sec. and inactive 12 sec.

Aracagi Beacon Lighthouse – Racon in the X and S bands, signal "Quebec", active 18 sec. and inactive 12 sec.

Lighthouses: In the area of Sao Marcos Bay and its surroundings, the following lighthouses are installed: Sao Joao, Mangunca, Pirajuba, Pirarema, Alcantara, Ilha do Medo, Ponta de Areia, Sao Marcos, Aracagi and Santana.

Their positions and characteristics are represented on the nautical charts and are also listed in the List of Lighthouses, published by DHN.

Lighted Buoys: The access channel to CPPM is beaconed by 22 light buoys equipped with active radar reflectors.

The Turning Basin of Pier I is beaconed by 7 light buoys equipped with active radar reflectors.

The Turning Basin of Pier II is beaconed by 4 light buoys equipped with active radar reflectors.

CPPM distribute a bulletin of "Occurrence Control and Buoys Status in the Channel" to ship's Agents weekly. This bulletin supplies detailed information about the status of each one of the buoys.

DGPS – CPPM holds a reference station to Differential Global Position System at Sao Marcos Radio Beacon Lighthouse that can be used by vessels. This station processes the correction of geographic co-ordinates referred to the same Datum (Corrego Alegre), of Nautical Chart No. 410, without damage to the radiogoniometry.

ANCHORAGES: *Outward Anchorage:* If occasionally all anchorage areas (Inner and Outer Anchorage Areas) are occupied and reserved for vessels bound for CPPM with part-cargo or in ballast that makes her draft over 11.0 m., vessels must anchor in the Outward Anchorage, located N.N.E. of Buoy No. 2, in the entrance of the channel.

Outer Anchorage: This area, called Area I, is between Buoys No. 6 and 10. It is reserved for vessels bound for CPPM with part-cargo with draft over 11.0 m. It is also for vessels waiting and for those doing repairs.

This area is limited by a rectangle marked by the following co-ordinates:

(A)	Lat. 01° 58.5′ S.	Long. 44° 07.0′ W.
(B)	Lat. 01° 55.5′ S.	Long. 44° 09.0′ W.
(C)	Lat. 01° 49.2′ S.	Long. 43° 58.4′ W.
(D)	Lat. 01° 51.8′ S.	Long. 43° 56.5′ W.

Anchorage Areas for Awaiting Tide Conditions:

Area 2: This area is away from the Eastern edge of the channel between Buoys No. 16 and 18. This area is for loaded ships with draft over 20.0 m. waiting for tidal conditions to pass Buoys No. 14 and 10, and also Buoys No. 4 and 2. It is limited by the polygon marked by the following co-ordinates:

(A)	Lat. 02° 02.9′ S.	Long. 44° 03.4′ W.
(B)	Lat. 02° 05.4′ S.	Long. 44° 03.4′ W.
(C)	Lat. 02° 06.0′ S.	Long. 44° 07.2′ W.
(D)	Lat. 02° 04.4′ S.	Long. 44° 06.1′ W.

Area 3: This area is located near the Eastern edge of the channel, between Buoys No. 18 and 15. This area is for loaded ships with draft over 20.0 m. waiting for tidal conditions to pass Buoys No. 14 and 10, and also Buoys No. 14 and 10, and also Buoys No. 4 and 2, when Area 2 is occupied. It is limited by the polygon marked by the following co-ordinates:

(A)	Lat. 02° 08.3′ S.	Long. 44° 08.7′ W.
(B)	Lat. 02° 10.9′ S.	Long. 44° 09.0′ W.
(C)	Lat. 02° 12.1′ S.	Long. 44° 10.0′ W.
(D)	Lat. 02° 12.1′ S.	Long. 44° 11.0′ W.

Inner Anchorages:

Area 4: This area is for ships with a maximum draft of 11.0 m. The area is away from the Eastern edge of the channel and located abeam of Buoys No. 20 and 22, and is limited by the following co-ordinates:

(A)	Lat. 02° 08.3′ S.	Long. 44° 08.7′ W.
(B)	Lat. 02° 10.9′ S.	Long. 44° 09.0′ W.
(C)	Lat. 02° 12.1′ S.	Long. 44° 10.0′ W.
(D)	Lat. 02° 12.1′ S.	Long. 44° 11.0′ W.

The bottom in this area is composed by mud and fine sand, with depths ranging from 11.3 m. to 16.0 m.

Area 5: This area is for vessels with a maximum draft of 11.0 m. It is located West of the channel next of Buoys No. 17 and 22, and is limited by the following co-ordinates:

(A)	Lat. 02° 22.2′ S.	Long. 44° 20.3′ W.
(B)	Lat. 02° 25.0′ S.	Long. 44° 21.3′ W.
(C)	Lat. 02° 24.4′ S.	Long. 44° 22.2′ W.
(D)	Lat. 02° 22.1′ S.	Long. 44° 20.4′ W.

The bottom in this area is composed by core and coarse sand with depths ranging from 14.5 m. to 34.0 m.

Area 6: This area is for vessels with a maximum draft of 11.0 m. It is located between Buoy No. 22 and the beacons of Sao Marcos and Aracagi. It is limited by the following co-ordinates:

(A)	Lat. 02° 24.1′ S.	Long. 44° 17.7′ W.
(B)	Lat. 02° 26.7′ S.	Long. 44° 15.8′ W.
(C)	Lat. 02° 27.4′ S.	Long. 44° 17.2′ W.
(D)	Lat. 02° 26.8′ S.	Long. 44° 19.4′ W.

The bottom in this area is composed by fine sand with depths ranging from 15.0 m. to 27.0 m.

Area 7: Located close to CPPM, this area is for vessels with a maximum draft of 11.0 m. The use of this anchorage area must be authorised by local Port Authorities and it is limited by the following co-ordinates:

(A)	Lat. 02° 33.6′ S.	Long. 44° 25.0′ W.
(B)	Lat. 02° 34.0′ S.	Long. 44° 23.6′ W.
(E)	Lat. 02° 35.5′ S.	Long. 44° 24.3′ W.
(F)	Lat. 02° 34.8′ S.	Long. 44° 25.7′ W.

The bottom in this area is covered by sand that varies from coarse to fine, with depths ranging from 14.0 m. to 22.0 m.

Area 7A: Located by the Western shore of the channel and near CPPM, this area is for vessels awaiting berthing at a maximum draft of 11.0 m. Its use must be authorised by local Port Authorities and it is limited by the following co-ordinates:

(A)	Lat. 02° 28.6′ S.	Long. 44° 24.5′ W.
(B)	Lat. 02° 29.2′ S.	Long. 44° 24.0′ W.
(C)	Lat. 02° 30.6′ S.	Long. 44° 25.4′ W.
(D)	Lat. 02° 29.9′ S.	Long. 44° 26.0′ W.

Area 8: It is an extension of Area 7, destinated for vessels in quarantine with maximum draft of 11.0 m. It can also be used for loading and unloading fuels and explosives. Its use must be authorised by local Port Authorities and it is limited by the following co-ordinates:

(F)	Lat. 02° 35.4′ S.	Long. 44° 26.0′ W.
(E)	Lat. 02° 34.8′ S.	Long. 44° 27.7′ W.
(D)	Lat. 02° 35.5′ S.	Long. 44° 24.3′ W.
(G)	Lat. 02° 36.8′ S.	Long. 44° 24.8′ W.
(H)	Lat. 02° 36.2′ S.	Long. 44° 26.0′ W.

RESTRICTIONS: All vessels proceeding to or leaving the anchorage areas must manoeuvre by crossing perpendicular to the axis of the channel, so as to leave the channel clear for those who are in the channel. Any vessel leaving the Access Channel to Sao Marcos Bay will have traffic priority. All those entering the channel must give way and wait in the anchorage areas.

All vessels sailing in the channel must thoroughly obey the rules of the International Regulations in order to avoid collisions (COLREG).

MAX. SIZE: *Pier I:* N.S. oriented and about 200 m. away from Ponta da Madeira, can accept vessels with a maximum of 420,000 d.w.t. Vessels of less than 20,000 d.w.t. require previous permission from CPPM Administration.

The vessel must be ballasted to allow loading at a maximum air draft of 22.4 m. Deballasting must be started after authorisation from the foreman and performed as the vessel is being loaded, at a rate that allows the loading operation to stay within the air draft limit.

Pier II: Located South of Ponta da Madeira. It was built in a N.N.E. direction and accepts vessels with a maximum of 155,000 d.w.t..

The vessel must have sufficient ballast to allow loading at a maximum air draft of 18.0 m.

Deballasting must be started after authorisation from the foreman and continue as the vessel is being loaded, at a rate that allows the loading operation, considering the air draft limit.

HEALTH: When the vessel is not considered in a satisfactory sanitary condition, the vessel must wait in the anchorage area, in Quarantine, indicated by the Port Authority. In this case, the crew are not allowed to disembark.

Also see "Documents".

RADIO: Long distance radio communication is via Embratel, by contacting one of the RENEC – National Coastal Station Networks, with priority and in the frequencies indicated below:

PPB (Belem), on 8, 12 and 16 MHz.
PPO (Olinda), on 8, 12 and 16 MHz.
PPR (Rio de Janeiro), on 8, 12, 16 and 22 MHz.

All vessels proceeding to or leaving the access channel to Sao Marcos Bay, when sailing through the channel or when anchored, must maintain communications with Port Authorities (Capitania dos Portos), from 0700 hrs. to 2200 hrs. through the Port Control, on VHF Channel 16 and 4146 kHz.

At least 4 hours before arrival, vessels must contact PPB (Sao Luis Radio) on frequency 4,125 kHz, in A3J, and CPPM, calling on Channels 16, working on Channels 12 and 13 with the Agent.

In the Estimated Time of Arrival (ETA), the legal time of Sao Luis must be used. The local legal time is the Greenwich Mean Time (GMT) less 3 hours.

Fax: (098) 218 4019, Port Operations Centre.

From October 16th to February 16th, all ports South of Sao Luis adopt Daylight Saving Time, which corresponds with GMT less 2 hours.

Arrival Advice: *The following Arrival Advice must be sent to CPPM and to the Agent:*

I. 15 days before vessel's ETA at CPPM or upon departure from the last port of call, whichever prevails:

1. Present name of the Vessel.
2. Previous name of the Vessel.
3. Master's name.
4. Estimated Time of Arrival (ETA).
5. Shipowner's name with full style.
6. Manager's/Operator's name and full style.
7. P&I Club, full name and style.
8. Hull and Machinery Insurance Company.
9. Classification Society.
10. Date of the last dry docking.
11. Date of the last Special Survey.
12. Date of expiry Continuous Hull Survey.
13. Date of expiry Continuous Machinery Survey.
14. Date of expiry Load Line Certificate, both annual an the full term.
15. Date of expiry Safety Construction Certificate, both annual and the full term.
16. Date of expiry Safety Equipment Certificate, both annual and the full term.
17. Date of expiry Internatioal Oil Pollution Prevention Certificate, both annual and the full term.
18. Date of expiry Safety Radio Certificate, annual.
19. Latest six voyages, reporting ports of calls, dates and cargoes.
20. Condition of class.

II. 8 days before vessel's ETA at CPPM:

(a) Day and time of vessel's arrival.
(b) Tropical d.w.t, in metric tons.
(c) LOA, in metres.
(d) Breadth, in metres.
(e) Tropical draft.
(f) Longitudinal distance from forwardmost superstructure bulkhead to bow.
(g) Expected arrival/departure drafts.
(h) Stowage plan and loading sequence. The cargo operations control form shall be completed after arrival.
(i) Air draft.
(j) Deballasting time.
(k) Fresh water required.
(l) Gas free condition. *O/O and OBO, vessels whose last oil loading was performed within last 12 months must present the "Gas Free Certificate", right after berthing. This Certificate must be issued by an authorised surveyor.*
(m) Number of stern and head lines, indicating the diameter and material of the ropes, if stowed on drums of the winches or on vertical bollards.
(n) Number of fore and aft springs, indicating the diameter and material of the ropes, if stowed on drums of the winches or on vertical bollards.
(o) Number of fore and aft breasts, indicating the diameter and material of the ropes if stowed on drums of the winches or on vertical bollards.
(p) Information about the winches, brakes and rope conditions.
(q) Availability of other ropes suitable for use, indicating the diameter and material of the ropes.

III. 48 hours before arrival, vessels must transit to Port Authorities (Capitania dos Portos) the following information:

(a) ETA.
(b) Request for Free Pratique or Quarantine.
(c) 1Request for instructions about anchorage place.
(d) Request for Pilot to the Agent.

At least 48 hours before arrival, to CPPM, the Master whose vessel is in satisfactory sanitary conditions must ask the Port Authorities (Capitania dos Portos) for Free Pratique.

The vessel whose Free Pratique has been granted will be boarded in the anchorage areas or at the pier.

IV. 24 hours before arrival:

(a) Day and time of vessel's arrival.
(b) Any changes in previous information.
(c) Confirmation of Gas Free Condition.

VHF: See "Radio" and "Tugs".

TUGS: The usage of tugs is compulsory for all berthing and unberthing manoeuvres of vessels bound for CPPM. Communications with tugs and the Pilot will be established preferably via VHF Channels 16, 9, 11 and 13.

The tug fleet of Sao Marcos Bay is composed of 1×52 tons bollard pull, 2×25 tons bollard pull and 2×54 tons bollard pull.

Tugs which operate at CPPM are equipped with firefighting cannons to fight fire on vessels.

In case of fire onboard, vessels must unberth for safety reasons. While berthed, all vessels must keep emergency towing wires on the opposite side of the pier, to allow vessels to be towed off in case of an emergency. The towing wires should be kept with the eye 2.0 m. from sea level and have 50 m. slacked on deck.

Fees: The pilotage fees are to be agreed between Shipowners/Agents and the Pilot Association. The fees concerning tugs and mooring boats are to be agreed between Shipowners/Agents and CPPM.

The mooring boats and tugs at CPPM are operated by Companhia Vale do Rio Doce (CVRD) or by other companies authorised by CVRD.

BERTHING: *Pier I:* The least depth in the docking alignment is 23.0 m. (75.5 ft.).

The breasting dolphins are numbered 4, 5, 6 and 7 from South to North. They are equipped with 2 sets of 3 quick release hooks of 80 tons each and a capstan to hoist the mooring lines. The mooring dolphins are numbered 1, 2 and 3 on the Southern side of the pier; and 8, 9 and 10 on the Northern side. They are equipped with a set of 4 quick release hooks of 100 tons each and a capstan. The quick release hooks are painted in different colours on each dolphin.

The breasting dolphins are equipped with fixed panel fenders. Dolphins No. 3 and 7 have 2 pairs of panels, and dolphins No. 5 and 6 have only one pair of panels.

Pier II: The least depth by the docking alignment is 18.0 m. (59 ft.). There are the following mooring devices on this pier:

One mooring dolphin, which is placed on the Northern side of the platform. There are 2 sets of 3 quick release hooks of 80 tons each and an auxiliary capstan to hoist the mooring lines.

On the platform, near vertical bollard 1, there is a set of 4 quick release hooks of 80 tons each and an auxiliary capstan.

Along the ship berthing dock there are 9 vertical mooring bollards, placed at every 26.5 m., with nominal traction capacity of 150 tons. There is also a double bollard in the position corresponding to vertical bollard 10.

At this pier, there are 9 fixed panel fenders corresponding to bollards No. 2 to 10.

Ladders of Access to the Vessel: Pier I: At breasting dolphin 4, there is a metallic tower with several levels reached by ladders. A telescopic footbridge is connected to the tower and it reaches the vessel. This allows access to the vessel at any tide condition.

Pier II: The access on board must be provided by the vessel's gangway.

Loading: CPPM has capable and available personnel to handle the mooring lines during berthing and unberthing operations. All work necessary during berthing, unberthing and loading operations, opening and closing of the hatches and deck cleaning must be performed by the crew of the vessel.

During the rainy season, only the hatch loading ore must be open. If heavy rain occurs, CPPM can decide to stop the loading operations, in which case the vessel shall close the hatch.

The responsibility for the distribution of the ore in the hatches is entirely held by the ship's Master, who must have a representative watching all the loading operation. CPPM will not accept any claim after loading has been completed.

The Master must be attentive to the drafts of the vessel, especially when the loading operation is ending. The total cargo loaded will be determined by the ship's displacement.

The loading will be performed 24 hours a day, Saturdays, Sundays and holidays included. When the loading is finished, and when all checkings being completed, the vessel must unberth. Staying without previous authorisation from CPPM is strictly prohibited.

Undocking: In order to reduce the stay of the vessel at the dock, before the end of the loading operations, the following events must have been already scheduled:

Pilot boarding.
Mooring personnel on stand-by.
Tugs on stand-by.
Mooring boats on stand-by.
Disconnect water hoses.
Complete all storing.
Removal of the gangway ladder (Pier II) or of the telescopic walkway (Pier I).
Slackening of the mooring lines.

As far as the departure draft is concerned, the articles of the Purchase Contract and the prescriptions of the ports must be fulfilled.

Sailing Clearance: The Sailing Clearance of vessels by the Port Authorities is ruled by Chapter XII of the Maritime Traffic Regulations, RTM, Decree No. 87648, of 24th September 1982. Portmainst No. 10-18 and Edict No. 032/76, from the Capitao dos Portos of Maranhao.

MOORING/UNMOORING: *Recommendations:* The approach manoeuvres for berthing and unberthing must be performed at low speed. The mooring ropes must be long enough to reach the furthest dolphins and bollards.

Special attention must be paid when passing the stern mooring lines to the mooring boats in order to avoid accidents with the propellers of the vessel and the boats.

The vessel must berth with the hatch covers opened, ready to start the loading operations. If it rains, the ship's Master must wait for instructions from CPPM before opening them. After mooring, rat guards must be placed on the mooring lines.

While berthed, vessel must keep the engines on stand-by and ready to operate. Any repairs that might interfere with this condition must be performed only after authorisation from the administration of CPPM.

The stowage plan and the loading sequence must be presented to the foreman immediately after berthing, with the cargo control operations form completed.

Repairs on deck and surrounds that might jeopardise the loading operations will not be allowed.

While vessel is berthed, *hot works* will not be allowed.

Mooring Recommendations: (See "Plan").

The mooring patterns are suggested taking into consideration the ship's d.w.t. and following recommendations:

(1) Ships shall always be kept against the berth fenders.
(2) Wires are required for spring lines.
(3) Wires are suggested for breast lines.
(4) All lines in the same service should be of same type, size, construction, length and issued from same position.
(5) Mooring lines should be arranged as symetrically as possible about the midship point of the ship.
(6) Breast lines should be oriented as perpendicular as possible to the longitudinal centre line of the ship and as far aft and forward as possible. Wires are suggested.
(7) Spring lines should be oriented as parallel as possible to the longitudinal centre line of the ship, and more than 40 m. long. Wires are required.
(8) The vertical angle of the lines should be kept to a minimum.
(9) All wire lines should be fitted with tails. All tails should be of same size, type, construction, about 11.0 m. long, and connected to the wire using a mandel shackle.
(10) The maximum allowable tension on any one line must be 55% of the maximum breaking strain (MBL) of the line.

Up to 75,000 d.w.t.:
6 head/stern lines of any type, maximum breaking strain (MBL) 50 tonnes.
6 fore/aft breast lines, wire suggested, maximum breaking strain (MBL) 50 tonnes.
4 fore/aft spring lines, wire of 38 mm. with tails.

75,000 d.w.t. up to 150,000 d.w.t.:
6 head/stern lines of any type, maximum breaking strain (MBL) 70 tonnes.
6 fore/aft breast lines, wire suggested, maximum breaking strain (MBL) 70 tonnes.
6 fore/aft spring lines, wire of 44 mm. with tails.

150,000 d.w.t. up to 225,000 d.w.t.:
6 head/stern lines of any type, maximum breaking strain (MBL) 80 tonnes.
6 fore/aft breast lines, wire suggested, maximum breaking strain (MBL) 80 tonnes.
6 fore/aft spring lines, wire of 42 mm. with tails.

225,000 d.w.t. up to 325,000 d.w.t.:
8 head/stern lines of any type, maximum breaking strain (MBL) 80 tonnes.
8 fore/aft breast line, wire suggested, maximum breaking strain (MBL) 80 tonnes.
6 fore/aft spring lines, wire of 44 mm. with tails.

Over 325,000 d.w.t.:
8 head/stern lines of any type, maximum breaking strain (MBL) 80 tonnes.
10 fore/aft breast lines, wire suggested, maximum breaking strain (MBL) 80 tonnes.
8 fore/aft spring lines, wire of 44 mm. with tails.

The vessel shall be moored according to Master's, Pilot's and Port's satisfaction.

The Pilot will board with the proposed mooring suggestion, which shall be analysed and approved by the Master.

Before berthing, Port Operations must receive from the vessel information about the availability of ropes and winches, so that the best mooring pattern can be suggested.

Special care must be taken with the breast and spring ropes in the period of 1.5 hours to 4.5 hours after high tide and low tide, mainly 1.5 hours after high tide when the fastest ebb currents start and all ropes must be tensioned.

If the vessel does not comply with the mooring requirements and recommendations, being considered unsafe to the terminal and to the ship, additional actions will be taken by the Port Operation:

(a) Written advice to the ship's Master.
(b) Keep the tugs on stand-by.
(c) Keep the Pilot on board.
(d) Unberth the vessel.

The costs resulting from these additional safety actions and time lost shall be allocated to the Shipowner, through his Agent.

BULK CARGO FACILITIES: *Pier I:* The structure of the Pier I is composed of concrete, supported by cast type metal tubes filled with concrete, and are distributed as follows:

4 breasting dolphins (4, 5, 6 and 7).
6 mooring dolphins (1, 2, 3, 8, 9 and 10).
Linear type shiploader.
Tug pier.
Access bridge, service road and walkways.

The breasting dolphins are located in front of the shiploader runway, covering a 170 m. length. The mooring dolphins, three in the North and three in the South of the pier are set back in relation to the breasting dolphins. The extreme dolphins are 490 m. from each other. The elevation of the breasting dolphins floor is +11.6 m. high and the elevation of the mooring dolphins floor is +11.0 m. high in relation to the Tidal Datum shown on Nautical Chart No. 413.

Pier II: The structure of the pier is composed of a concrete platform 280 m. long and 24.8 m. wide, supported by cast type metal tubes filled with concrete. There is a mooring dolphin on the Northern side which is 26 m. away from the platform and set back in relation to the docking dolphins.

Shiploaders: *Pier I:* The pier is equipped with a linear shiploader with the following specifications:

Loading capacity	16,000 t.p.h.
Conveyor belt width	2,200 mm.
Maximum reach from the docking alignment	46.3 m.
Transverse travel	244.0 m.
Slewing angle (each side)	47°
Vertical inclination angle	+21° and −22°
Maximum air draft	22.4 m.

Pier II: The pier is equipped with a linear shiploader with the following specifications:

Loading capacity	8,000 t.p.h.
Conveyor belt width	1,800 mm.
Maximum reach from the docking alignment	31.5 m.
Transverse travel	179.62 m.
Slewing angle (each side)	75° right and 90° left
Vertical inclination angle	+3° and −14°
Maximum air draft	18.0 m.

MEDICAL: Sao Luis has hospitals prepared for emergency treatment.

DENSITY: In the area of Ponta da Madeira, the density is as follows:

Rainy Season:	Low tide 1017.58.
	High tide 1019.32.
Dry Season:	Low tide 1009.51.
	High tide 1012.03.

FRESH WATER: CPPM can supply fresh water through orders from the Agent, by telex, at the limit of 200 tons per vessel, at a flow rate of 20 t.p.h. – 40 t.p.h.

FUEL: Lubricants and bunker supply – Pier I: There is no equipment to supply bunkers or luboil at the pier, but vessels can be supplied when undocked, by barges of private companies from Sao Luis. The Agent must make the order.

Pier II: There are connections along the pier to supply bunkers and luboil. The Agent must make order to an authorised company in the area of Itaqui Port. This operation must previously be authorised by the Administration of CPPM. All the safety rules for oil transferring must be followed. Bunkering is not allowed simultaneously with ore loading.

FIRE PRECAUTIONS: The Terminal has a Fire Brigade, duly equipped and trained for fire fighting. There are hydrants and fire fighting guns at the docks.

The tugs operating at the Terminal are equipped to fight ship's fires.

Should a fire occur on board, the ship must undock, for safety. Therefore, while moored, the ships must always have 2 towing cables lowered, one fore and one aft, on the offshore side, with the eyes about 3 m. above the water. Thus, during an emergency, tugs may undock the ship.

The fire brigade personnel are not trained to fight fires on board. The Terminal shall not be deemed responsible for any kind of loss and/or damage to the ship's equipment or injury to personel.

REPAIRS: Minor repairs possible at Sao Luis.

SURVEYORS: There are no classification society surveyors in Sao Luis.

REPATRIATION: Possible.

AIRPORT: Tirical Airport is 26 km. from the Terminal and provides regular jet connections to several Brazilian cities.

TIME: GMT minus 3 hours.

Note: From November 2nd to March 1st, daylight saving time (GMT minus 2 hours) may be adopted throughout Brazil.

EMERGENCY CO-ORDINATION CENTRE: The Brazilian government, complying with the 1979 Rescue and Salvage International Convention, and its corresponding duties, requests all foreign ships entering South Atlantic to send information concerning their navigation to COMCONTRAM (Command of the Merchant Ships Traffic Naval Control) through EMBRATEL's Coastal Station Network in accordance with PORTOMARINST No. 337801-A, dated January 3rd 1983, by Ports and Coasts Directorship.

Foreign ships in operation in Brazilian waters, as well as Brazilian ships, must report their course.

SHORE LEAVE: Possible. Also see "Documents – General".

GARBAGE DISPOSAL: No facilities available.

WASTE OIL DISPOSAL: No facilities available.

SEAMAN'S CLUBS: None.

Full facilities available in Sao Luis (10 km).

CURRENCY: The local currency is the Cruzeiro.

WEATHER/TIDES: *Meteorological Conditions:* Local climate, in accordance with the Koppen classification, is the Aw type, i.e., tropical with only one rainy season (from December to May).

Temperature varies throughout the year between 23°C. and 31°C. and is usually around 27°C.

The relative humidity is evenly high throughout the year. The monthly average varies from 75% to 85%.

The mean annual rainfall is 1,944 mm. During the rainy season, the monthly average is 325 mm., with 15 rainy days per month. In the dry season (April to November), the monthly average is 50 mm., with 5 rainy days per month.

Winds blow predominantly from the N.W., with a frequency of 25%. The velocity and freqency of the winds are as follows:

Beaufort Scale 2 (4 to 6 knots)	39%
3 (7 to 10 knots)	31%
4 (11 to 16 knots)	15%
5 (17 to 21 knots)	1%

Visibility is usually good in the Sao Marcos Bay area. The occurrence of fog is very rare. However, some mist may occur, which brings a slight reduction in visibility.

The Sao Marcos Bay area is not subject to hurricanes or tornadoes. Heavy but short rain storms, however, are common in the rainy season.

Weather forecasts are broadcast by Belem Radio – PPB – Coastal Station at the following times: GMT 0130, 0800 and 1900; The station's frequencies are 4,265.0 kHz, 8,502.0 kHz and 12,979.5 kHz, in A1.

The PPL station operates on 4,125 kHz in A3J (telephone communication).

Tides: The Sao Marcos Bay has semi-diurnal tides.

Tide tables (DG 16) published by Diretoria de Hidrografia e Navegacao (DHN) show forecasts of tidal levels and times for CPPM.

Based on observations held at Pier I, the following values were obtained:

HAT (Highest Astronomical Tide) 6.40 m.
MHWS (Mean High Water Springs) 5.94 m.
MHWN (Mean High Water Neaps) 5.03 m.
MSL (Mean Sea Level) 3.28 m.
MLWN (Mean Low Water Neaps) 1.50 m.
MLWS (Mean Low Water Springs) 0.45 m.
LAT (Lowest Astronomical Tide) −0.16 m.
HWF&C (High Water Full and Change) 7 h. 21 m.

Tides vary in phases and in amplitude along the access channel, according to remarks presented on Nautical Chart No. 410.

Tidal Streams: The circulation of water in Sao Marcos Bay is ruled by tide variations. Winds, which are mostly mild in the region, only cause small deviations on the circulation produced by tides.

The minimum values of the stream speed are near slack water and the maximum occurs 3 or 4 hours after high water, during the ebb tide, and 2 or 3 hours after low water, during flood tide. The currents are reversed and they flow in N.N.E. direction during the ebb tides and, after the slack water, reverse their direction to South and S.E. during flood tide.

In the access channel, the direction of the current ranges from 040° – 220° to 060° – 240°, and can reach a speed of 2.5 knots. In the Turning Basin and vicinity, the flood tide streams range vary from 4.3 knots at Spring tide to 3.7 knots at Neap tide. The ebb tide streams range from 5.1 knots at Spring tides to 4.2 knots at Neap tides. Nautical Chart No. 413 presents tables which enable the navigator to forecast the current direction and speed in the Turning Basin, according to the tide forecasts for CPPM.

Waves: Waves, in that area, are caused by local winds. In the Turning Basin Area, waves of 1.10 m. in periods of 6.0 seconds may occur.

GENERAL: *Power Supply:* Power will not be supplied to ships by the Terminal.

Supplies: The Agent must provide supplies for the ship. Supplies must be embarked before the end of shiploading or while the ship is undocked.

Dirty Ballast or Oily Residues: Terminal is not equipped to receive dirty ballast or oily residues.

Cleaning Tanks: The Terminal's personnel are not available to clean holds. This service is controlled by the Maritime Labour Office by means of qualified companies.

Crew, Passengers and Visitors on Board: Authorisation for shore leave shall be given by the Ship's Master, after clearance by Port Authorities.

Crew members must carry their personal identification documents whilst ashore.

Only those persons duly authorised by the Terminal Administration may have access to the docks.

Crew members leaving the Terminal may use taxis requested by means of the Terminal's Guard Service. Private cars may not circulate in the Terminal's area.

Regulations: The Diretoria dos Portos e Costa (Harbours and Coast Headquarters) through Ministerio da Marinha (Ministry of the Navy), published Edict No. 997 dated 9th March 1995; determining the performance of vessels' conditions survey by Classification Society acknowledged by the Brazilian Government in all bulk carriers over 18 years old. It also normalises the procedures to be followed by Shipowners or their representatives.

Brazilian laws are very strict when it comes to deeds that provoke, or that may provoke, pollution. Information about them must be obtained by Shipowners or their Agents. CPPM will not be held responsible for any environmental damage caused by the vessel or by its crew, and does not accept the use of any legal device to justify them.

The Master must obey the environmental laws of Brazil and MARPOL while in Brazilian Territorial Waters.

If infringements occur, the loading activities will be immediately interrupted and the Environmental and Port Authorities will be advised, making the vessel subject to suitable contractual and legal penalties.

Docking Time: Docking time is considered as the time when, after passing the cables, the gangway ladder is lowered to the dock.

Nautical Charts: The Access Channel, the Turning Basin, the anchorage area and the berthing dock are included on the following Nautical Charts:

Diretoria de Hidrografia e Navegacao (DHN) – Brasil, Charts Nos. 400, 410 411, 412 and 413;

United States Hydrographic Office – HO, Charts Nos. 24.270 and 24.271.

British Admiralty, Charts Nos. 3958 and 535.

On Nautical Charts issued by the Brazilian Navy, depths are indicated in metres and are referred to the Tide Datum level adopted for the chart of largest scale.

SHIPMASTER'S REPORT: January 1990.

Vessel: OBO 170,000 d.w.t.

Approaches: Buoys visible at about 6 nautical miles on 3 cm. and 10 cm. radars.

Light float was radar visible at 18.6 nautical miles on 'X' band and about 16 nautical miles on 'S' band.

Some of the buoy lights appear to be erratic and/or faint. This would appear to be caused by the swirling of the buoys in the strong current.

Pilotage: Pilot will board at anchorage if vessel is anchored at the South end of Bravo Anchorage.

Tugs/Berthing: Four tugs are used for berthing and unberthing a vessel of our size. Forward tug gives line through centre fairlead and ship's messenger required. After tug takes 2 ship's lines through centre fairlead. The other 2 tugs push and do not put up lines.

The moorings we used were different from those advised by agent (2-2-4-2 at each end). Moorings are supposed to be on quick release hooks but these did not appear to work too well as we had to slack down all lines when unmooring.

The mooring dolphins are all well numbered from 1 to 10 with No. 1 being at the South end.

Shore gangway was level with forward end of bridge which is 58.4 m. from stern on vessel with LOA 294.9 m.

Pilot, tugs and Berthing Supervisor all communicate on VHF Channel 13.

SHIPMASTER'S REPORT: March 1991.

Vessel: LOA 295 m., 169,000 Summer d.w.t.

Tugs: One tug forward with tug's line and one tug aft with 2 ship's lines.

Mooring: Shore dolphins are numbered 1 – 10 from South to North.

For this size of vessel, 4 lines to No. 2, 2 lines each to No. 1 and No. 2, 4 lines to No. 8 and 2 lines each to No. 9 and No. 10. Forward and after springs are sent to No. 7.

AUTHORITY: Complexo Portuario de Ponta da Madeira, P.O.Box 511, Av. dos Portugueses s/n, Praia do Boqueirao, Sao Luis, Maranhao, CEP 65085-580, Brazil. *Tel:* (098) 218-4263 (Port Operations Centre). *FAX:* (098) 218-4019. *Contact:* Alvaro de Oliveira Junior, Port Superintendent.

PONTA UBU: 20.47 S. 40.35 W. (See Plan)

LOCATION: The Port of Ponta Ubu is located on the coast of the State of Espirito Santo, approximately 40 nautical miles South of Vitoria. Geographic position of the Ponta Ubu Beacon:

Latitude: 20° 46' 48" S.
Longitude: 40° 34' 40" W.

DOCUMENTS: All ships are subject to routine arrival visits by the following port officials:

Health Officers
Customs Officers
Maritime Police Officers
Immigration Authorities
Also see "Shipmaster's Report".

APPROACHES: The Ponta Ubu area is under the jurisdiction of Diretoria de Hidrografia e Navegacao (DHN), an agency of Brazil's Ministry of the Navy. Ponta Ubu appears on DHN Charts Nos. 70, 1400 and 1402, and on Admiralty Chart No. 3972, U.S. Hydrographic Office Chart No. 24170 and Brazilian Coast Pilot (Roteiro)

Lights in the Vicinity:

Ilha Escalvada (Island)	Gp. Fl. (2) 27 metres Lat. 20° 42' S.	6.0 sec. 9 miles Long. 40° 24' W.
Ilha do Frances (Island)	Fl. 48 metres Lat. 20° 56' S.	3.0 sec. 12 miles Long. 40° 45' W.
Ilha Branca (Island)	Fl. 5 metres Lat. 21° 00' S.	10.0 sec. 9 miles Long. 40° 48' W.
Ponta Ubu	Lat. 20° 46' 48" S.	Long. 40° 34' 40" W.

Channel: See DHN Chart No. 1402 as amended by Aviso aos Navegantes (Notice to Shipmasters) No. 194/85, 71/86, 96/86 – 113/86 and E94/87. Maintained channel depth is 18.0 m. (59 ft.) referred to chart datum.

PILOTAGE: Pilotage is compulsory for all ships sailing through the channel, berthing and unberthing in Ponta Ubu. Pilots will board in the area of anchorage.

Pilots attending the Ponta Ubu area are members of the "Associacao dos Praticos do Porto e Barra do Espirito Santo".

All ships must provide an accommodation ladder and rope ladder, freeboard permitting. The landing platform of the accommodation ladder should be approximately 5.0 m. above the water. Boarding facilities should be adequately lighted.

Ships should request anchoring and/or berthing instructions from Ponta Ubu Marine Operations 4 hours prior to arrival at the pilot boarding area, or when within VHF range.

Ships must not proceed beyond specified boarding area or anchorage unless so instructed by Ponta Ubu Marine Operations.

ANCHORAGE: Anchorage instructions must be requested from Ponta Ubu Marine Operations. Anchorage area position is Lat. 20° 46' 24" S., Long. 40° 32' 33" W. Masters are advised to give due consideration to Brazilian antipollution regulations while in coastal waters.

Brazilian Government officials may board ships in anchorage for clearance formalities. A suitable and adequately secured accommodation ladder for this purpose must be provided soon after anchoring. Lifebuoy with line with a minimum length of 50 m. should be on hand and adequate lighting provided.

ARRIVAL: Ships arriving in ballast are requested to comply with the following recommended arrival drafts, observing indicated shiploading rates and shiploader clearance height limitations.

Deadweight Tons	*Recommended Arrival Draft* (m.)	(ft.)
30,000 to 40,000	6.1 – 6.7	20 – 22
40,000 to 60,000	6.7 – 7.3	22 – 24
60,000 to 75,000	7.3 – 7.9	24 – 26
75,000 to 100,000	7.9 – 9.1	26 – 30
100,000 to 170,000	9.1 – 10.0	30 – 33

Ships unable to meet these suggested drafts due to insufficient ballast capacity, anticipated deballasting problems, etc., should so advise in 48 hour ETA message, along with estimated deballasting time.

All ships must have secure bilge systems while at Ponta Ubu.

Combination ore/oil and ore/bulk oil carriers must insure that ballast tanks and piping system are free of oil contamination, prior to arrival. Gas-free condition of combination carriers must be confirmed prior to loading. Certification and inspection shall be arranged through the vessel's Agent. Vessel with inerted tanks shall be checked and monitored continuously during loading.

RESTRICTIONS/MAX. SIZE: *Access Channel:* 210 m. wide at the mouth, 300 m. at the widest stretch, 2,500 m. long and 18.0 m. deep. *Turning Basin:* Adjacent to the widest part of the access channel between Buoys 3 and 5. Minimum depth 13.4 m.

Pier: Max. LOA allowed for berthing manoeuvre is 308 m.

Max. LOA for night-time manoeuvre: Arriving, LOA max. 250 m. Sailing, LOA max. 280 m.

Max. Arrival Draft: 10.0 m. plus height of tide (0.6 m. – 1.6 m.) at moment of berthing.

Max. Departure Draft: 16.0 m. plus height of tide at moment of departure.

Report 1988: (Updated 1996).

Max. LOA	308 m.	
Max. Beam	54 m.	
Max. Airdraft	19.0 m.	
Max. Sailing Draft	16.0 m. (plus height of tide at moment of departure).	
Mean Depth Alongside	Berth – West	18.5 m.
	Berth – East	15.0 m.

HEALTH: Radio Pratique should be requested 72 hours prior to arrival, by forwarding quarantine message to Port Health Authorities through the ship's Agent. The information required is as follows:

Name and nationality of vessel; name of the last port of call; port of destination and name of Agent; nature of cargo, if any; date and place of last derating or exemption certificate; number of crew and passengers; health conditions of all on board; vaccination status of crew and passengers; ETA and any other information that may be required by the quarantine officers.

Radio Pratique alone does not constitute quarantine clearance, and the ship will require inspection upon arrival. Radio Pratique if granted, will enable ship to enter, berth, and commence loading prior to official quarantine clearance.

The Quarantine Flag must be flown until Free Pratique has been granted.

The following documents shall be submitted to the Port Health Authority boarding on arrival:

Maritime Declaration of Health, duly filled in as required by Sanitary Regulation No. 2 of the World Health Organization. Copy of up-to-date crew list. Vaccination Certificates of all Crew members as well as their seamen's books or passports.

Quarantine inspection will be carried out at the pier, or at anchorage if required, weather permitting.

Quarantine flag must be flown until Free Pratique is granted.

Masters are advised to have all Vaccination Certificates, Derat Certificate and Clearance from Last Port ready for inspection.

RADIO: Rio de Janeiro Coast Radio Station, call sign "PPR" (Telex 491) operates on a 24 hour basis on the following frequencies: 435 kHz, 8,634 kHz, 13,105 kHz.

The Master of an arriving vessel is required to cable his notice of ETA 15 days (or when departing prior port, if sailing distance is less than 15 days) then 5 days, 48 hours, and 24 hours prior to estimated time of arrival at Ponta Ubu.

Five day message shall contain ETA, cargo tonnage required by hatch number and whether vessel is O.B.O. or ore/oil carrier.

48 hours message shall provide the following information: ETA, arrival draft, ballast tonnage on board and deballasting time.

24 hours message: Cable your ETA, indicate if vessel is fitted with an inerted system and if compartments will be under control of said system during loading. Also include type, manufacturer's name and the society that approved the classification of the inert system.

When within VHF range, Master is to contact the Marine Manager's office for additional information on docking schedule, anchorage arrangements and cargo information.

VHF: Ponta Ubu Marine Operations is equipped with VHF radio monitored 24 hours a day.

Frequencies:

Calling Channel: 16 (156.800 MHz)
Working Channels: 156.375 MHz, 156.650 MHz, 156.700 MHz.

TUGS: Tug service is compulsory for all vessels at Ponta Ubu. Tugs will operate in accordance with Brazilian regulations covering this matter.

Available tugs: 3×1,680 h.p., 20 ton bollard pull. Additional tugs should be requested by the Agent.

All ships should be equipped with wire cable tow line with nylon pendant.

All communication between tugs and Pilots is via VHF.

Tugs will operate on the same Channel as the Marine Operations office.

BERTHING: Vessels are subject to the berthing/unberthing regulations exercised by Port Authority for night-time manoeuvres.

The Port of Ponta Ubu is owned and operated by Samarco Mineracao S.A., and is used solely for the purpose of handling and shipping iron ore.

The port consists of a breakwater protected pier, close to the shore with a dredged berth area and access channel.

Product stockpiling and transportation prior to loading: The stockpile has a total capacity of 1,000,000 metric tons of pellets and 500,000 metric tons of concentrates.

During normal operations, pellets and concentrates are stockpiled by a stacker- reclaimer, and 2 stackers. Both concentrates and pellets are reclaimed using the bucket wheel stacker-reclaimer. The reclaimed material is then conveyed to the shiploader for loading aboard bulk carriers, at rates of up to 6,500 metric t.p.h.

A sample station is provided to control the quality of the concentrates or pellets being loaded into a given ship. Samples are automatically obtained from the shiploading conveyor system at preset intervals, without interrupting the loading operation. Each sample is then reduced in size, and subjected to a complete range of quality control tests.

Two metal detectors are located on ship loading belts to detect scrap and other foreign objects.

Material reclaimed for shiploading by the stacker-reclaimer is conveyed to a rail-mounted travelling shiploader. The shiploader is designed to load vessels on either side of the pier. A loadout weigh scale located near the shiploader monitors the final product delivered for shipment.

Port facilities: Port facilities at Ponta Ubu are located in the open sea near the apex of a shallow indentation in the coastline where currents have provided 20 m. deep water within 2 km. of the shore.

The existing depth of water in the dredged channel is minus 18.2 m. The main berth area was dredged initially to minus 19 m.

Berthing: The breakwater protected pier consists of a 313 m. long by 22 m. wide concrete deck, extending in a 022° 30' direction. It projects from the Eastern portion of the breakwater to a distance of 685 m. from the shore.

The pier has berths on both East and West sides.

Shiploading: The mobile rail mounted pier shiploader has a 41.6 m. fixed length boom, with a 280° turning angle and a 18.5 m. air draft. Its nominal loading capacity is 9,000 metric t.p.h. Maximum outreach of loading boom from fender is 26.10 m.

Report 1988:
Tidal range: 0.3 – 1.6 m.
Max. outreach of boom from fender line: 26.1 m.
Clearance of loading at HWOST: 25.0 m.
Travel of loader: 173.0 m.
Working ranger of loader: 240°
Average loading rate to bulk carriers: 6,500 t.p.h.

LOADING: Vessels will be generally loaded in turn, in their order of arrival, provided that:
(i) They are in all respects ready to receive cargo;
(ii) All the cargo is available at the terminal;
(iii) It is in accordance with the instructions of the charterer/Agent. Vessel shall present a detailed loading plan immediately on arrival, including hatch quantities, with loading sequence and quantity of ore to be reserved for fore and aft trimming by hatches.

Loading hours, subject to change, are as follows: 24 hours operation, Sundays and holidays included.

All ships *must secure bilge systems* while at Ponta Ubu.

Combination ore/oil and ore/bulk/oil carriers must ensure that ballast tanks and piping systems are free of oil contamination, prior to arrival. Gas-free condition of combination carriers must be confirmed prior to loading. Certification and inspection shall be arranged through the vessel's Agent. Vessels with inerted tanks shall be checked and monitored continuously during loading.

MEDICAL: The medical facilities nearest to Ponta Ubu are located at Guarapari, 15 minutes away by car.

Vitoria has modern hospital facilities.

FRESH WATER: Not available.

FUEL: Not available.

REPAIRS: No facilities.

AIRPORT: Guarapari (20 km.) for light aircraft (air taxi). Vitoria (70 km.) Airport Eurico Sales, connection to other Brazilian towns.

TIME: Local time is GMT minus 3 hours.

HOLIDAYS: *Local holidays:* Confraternizacao dos Povos – 1st January; Passion Friday – movable; Tiradentes – 21st April; Labour Day – 1st May; Sao Pedro – 29th June; Independence of Brazil – 7th September; All Saints – 2nd November; Proclamation of the Republic – 15th November; Day of the City and Day of Our Lady of the Conception – 8th December.

POLICE/AMBULANCE/FIRE: Police (Guarapari) Tel. 261-0151.

SERVICES: There are supermarkets at Guarapari.

TELEPHONES: No facilities for placing telephones onboard.

GENERAL: The Brazilian National flag shall be flown while in the Ponta Ubu area.

Line-handling port personnel will be available for handling ship's lines during berthing and unberthing. All shipboard work necessary for berthing, loading and unberthing, including, but not limited to, handling and tending moorings, opening and closing hatches and normal deck cleanup, shall be performed by the ship's crew.

Ships must have main engines ready and maintain watch while alongside the pier, unless specific permission to do otherwise has been granted by Marine Operations.

The nearest town is Guarapari, 15 minutes to the North by car. Vitoria, capital of the State of Espirito Santo, is about 80 minutes by car to the North. Daily flights, operated by major Brazilian airlines, connect the state capital with the rest of the country.

Ships causing oil pollution, dumping of waste, refuse, etc., in coastal waters will be liable for all resulting fines and cleanup costs. All ships must secure bilge systems while in the Ponta Ubu area, and combination ore/oil and ore/bulk/oil carriers must exercise all precautions necessary to insure that ballast tanks and/or piping systems are free of oil contamination prior to arrival. *Accidental and deliberate oil or oily mixture discharges in the area must be reported to Ponta Ubu Marine Operations IMMEDIATELY.*

There are no shore facilities available at the terminal for receiving slops, and dirty or contaminated ballast. Masters are cautioned that discharging of anything other than uncontaminated ballast will be subject to penalties as prescribed by Brazilian law.

Solid garbage and refuse disposal ashore can be arranged through Marine Operations.

Weather conditions and temperatures are moderate with year-round average highs of 27°C (80°F) and year-round average lows of 19°C (66°F).

Winds recorded are less than 30 knots more than 95% of the time and prevailing winds are East to N.E. Local winds may have a significant effect on the tide.

There are no significant currents noticed in the turning basin.

For general information about currents in the Ponta Ubu area, use South Atlantic Pilot Charts and Brazilian Coast Pilot (Roteiro).

Sea conditions are generally moderate.

Meteorological bulletins are available 24 hours a day through Rio de Janeiro coast radio station, Radio Arpoador, call sign PPR. 17,194 kHz.

SHIPMASTER'S REPORT: 1978 (Updated 1996).
Documents: Please refer to other Brazilian ports, vessel came from Rio de Janeiro so only the Agent and the Customs boarded and asked for 3 Crew Lists, 1 Custom Store List and 1 Personal Effect List. We were told that to go ashore every Crew member needed a pass with picture attached but crew went to the near town of Guarapari after showing passport or an identity card at the gate.
Pilotage: The Pilot boards about 2 to 3 miles outside the channel. He comes on board by Pilot boat based at Point Ubu and even though we were in very light condition wanted to use the pilot ladder. Pilots come from Tubarao and Vitoria.
Tugs: Three tugs are based at Point Ubu namely the "Curitiba", "Piracicaba" and "Aquidauana". They are all good and operate respectively on the bow and stern of the ship with 2 ship's nylon ropes. If vessel over 200 m. in length the Port Captain orders a fourth tug that must come from Tubarao (about 3 hours) and it is very helpful and powerful.
VHF: Marine Operations answered us about 2 hours from berth (30 miles).
Bulk Cargo Facilities: We were the sixth ship to load in this port, the loading rate is around 4,000/5,000 t.p.h. at present.
Medical: Ship's Agent can arrange to send people to the doctor at any time or to the hospital in the near town of Guarapari.
Density: Checked over 3 days and always found to be 1026.
Loading: The Bill of Lading figures are taken from the weightometer which is believed to be extremely correct, but it showed a difference of 1,000 long tons over 37,000 long tons loaded on the ship. A surveyor carried out a draft survey on arrival and it was said that it was a check on the weightometer, being normal check that was carried out for these early loadings but the real figures are taken from the weightometer. 2,000 long tons before completion of loading we stopped for trimming and the scale showed about 1,000 long tons more loaded than the ship's figures. Because of this, the Terminal considered the ship's figures (survey) and to these figures they added according to the scale the quantity we requested to complete loading.

SHIPMASTER'S REPORT: December 1990.
Pilotage: Pilot used pilot ladder even though freeboard was over 9.0 m.
Tugs: For berthing: One tug forward on the port bow with 2 ship's lines, 2 tugs aft with one line each and 2 tugs pushing.

OPERATORS: Samarco Mineracao S.A.
Ponta Ubu: Postal address: Rodovia do Sul S/No., Caixa Postal 720004, 29230-000 Anchieta – ES, Brazil. Tel. 361-9000. Area code* 027. Fax: 361-1710. Contact: Mauricio Borloth Monjardin, Port General Manager. Renato de Almeida Padilha, Marine Operations Supervisor.
Central Office: P.O.Box 1317. 1,122 Paraiba Street, 9th Floor, 30.130-918 Belo Horizonte, MG, Brazil. Tel: 239-8787, Area Code*031. Cable Address: Samarco. Telex: 313068. Fax: 2398800.
Rio de Janeiro office: 63 Almirante Barroso Avenue, Group 2817, 20036 Rio de Janeiro, Brazil. Tel: (021) 262-4620. Telex: 31262.
*Code for Brazil: 0055.

AUTHORITY: Capimar, 66 Mandel Silvino Monjardin Square, Vitoria, Espirito Santo, Brazil. *Tel:* (027) 222-4622. *Telex:* 0272102. *Cables:* Capimar Vit. *Contact:* Roberto Ferreira da Silva.

AGENT: See "Vitoria".

PORTO ABC NORTE: 02.48 S. 50.30 W.

SHIPMASTER'S REPORT: October 1985 (Updated 1994).

LOCATION: On the Rio Pacaja about 263 nautical miles from Belem.

VESSEL: 7,405 d.w.tonnes, LOA 116.44 m., beam 17.23 m., draft 7.52 m. 10×5 – 10 ton derricks and 1×60 ton derrick. Flush tweendecks. Vessel loaded logs and lumber.

PILOTAGE/CLEARANCE: Sea Pilot boards at Salinopolis Pilot Station. Clearance is made at Belem Anchorage with the usual formalities for Brazil.

Two River Pilots accompany the vessel to Porto ABC Norte and back to Belem. These Pilots are excellent. As no charts of the rivers exist, they draw their own charts.

Two checkers, 1 Custom's Officer and 1 representative of Banco do Brasil accompany the vessel. During the trip up and down and including the time at the loading berth the bonded store will be opened by the Custom's Officer when requested by the Master.

TUGS: No tugs available.

BERTH: Wooden berth about 80 m. length, depth alongside depends on season. In October we sounded 7 m. The vessel sailed with 5.80 m. draft and even keel.

CARGO: Logs with weight up to 8 tonnes and length 12 m. Lumber sawn in packets.

Average weight of logs and lumber about 1.4 tonnes/cu.m. All loading is done by ships own gear.

MEDICAL: First aid station at Sawmill, no doctor available.

GENERAL: *Stores:* Supplies not available.
Transport: There is 1 small private plane owned by ABC Norte.

AUTHORITY: ABC – Agropecuaria Brasil Norte S/A, Prod. E Exportacao, (Rua de Cruzeiro 1145, Belem), P.O.Box 1337, Belem, Para, Brazil, CEP 66.000. *Tel:* (091) 227-1655. *Telex:* (091) 1301 ABCA. *FAX:* (091) 227-2600. *Contact:* Mr. Arizenio Nazare de Almeida.

PORTO ALEGRE (Including Santa Clara): 30.05 S. 51.15 W. **(See Plan)**

This information does not apply to Tramandai Oil Terminal which is listed separately.

DOCUMENTS: See "General" before first port.

PILOTAGE: Porto Alegre is situated 164 miles up the Lagoa dos Patos, a large fresh water lake, and vessels must take on a Pilot after receiving Pratique at Rio Grande, which lies at sea entrance of lake. Pilot and authorities board after arrival at Rio Grande Inner Anchorage. Pilots arranged by Agent upon receipt of vessel's radioed ETA via Rio Grande Radio (PPJ). Since 40-mile channel between Rio Grande and Lagoa dos Patos is unlit, vessels should proceed from Rio Grande only by daylight, allowing 3 hours to negotiate channel. Vessels over 12 knots may leave Rio Grande for Porto Alegre not later than 1700 hrs. in Summer, or 1500 hrs. in Winter. Vessels under 12 knots not later than 1600 hrs. in Summer or 1400 hrs. in Winter. Entry must be made to Rio Grande at least 3 hours before these times to allow for clearance.

ANCHORAGES: Inner harbour. Not normally used unless port congested. If vessels are too late for transit they must anchor at either end of the lagoon overnight.

RESTRICTIONS: Vessels approaching Porto Alegre from the Lagoa should do so only by daylight since 30 miles access channel leading from the Lagoa to Porto Alegre poorly lit. If necessary, vessels should anchor off Itapoan Lighthouse at head of the Lagoa, to await daylight before proceeding. On arrival at Porto Alegre, Free Pratique must again be obtained, and Crew Lists, Store Lists, etc., again presented to authorities, who usually visit vessel in berth alongside or at anchor off Santa Clara.

MAX. SIZE: Not recommended that vessel of more than 215 m. LOA attempt to reach Porto Alegre. Max. safe draft is 17 ft. at any time.

Also see "Tankers".

HEALTH: Vessels receive clearance on passing Rio Grande. No yellow flag required. Also see "General" before first port.

RADIO: All messages should be routed via Rio Grande Radio (PPJ).

VHF: On arrival at Porto Alegre, vessel can use the VHF station Porto Alegre Radio (PPP). Tel: (0512) 210322 or (0512) 141. Also VHF Channels 16, 23, 24, 25, 26, 27 and 28.

Also, at short distances, when arriving at the port or manoeuvring within the port area, vessels are able to use the radio station (as yet without call sign) of the Porto Alegre Port Administration, Tel: (0512) 245733. Also transmitting on VHF with 1 Watt, on Channels 16, 9, 10, 11, 71, 12, 13 and 14.

TUGS: 1×1,680 h.p. and 4 small low-powered tugs 220, 250, 280 and 320 h.p.

BERTHING: The berths are on the East bank of the river, and the jetties stretch over a distance of 8 km.

Maua Quays: Berths "A", "A1" to "A7" and "B", "B1" to "B3". Length, 1,482 m. Depth 17 ft.

Navegante Docks: 2,433 m. long.

Between Maua and Navegante there are several small jetties but none capable of handling ocean-going vessels.

CRANES: *Maua Quays:* 7×3.2 ton portals (narrow gauge), 2×6.3 ton cranes (wide gauge), 1×12.5 ton (wide gauge), 4×3.2 ton portals (narrow gauge).

There are no cranes available at Navegante Docks.

BULK HANDLING FACILITIES:

Samrig (Bunge) Terminal: Max. LOA 235 m. Max. beam 35 m. Max. draft 17 ft. Air draft 15.0 m.

Storage capacity: 12,000 tons (meal) and 4,400 tons (vegetable oil).

Loading rates: Meal 200 t.p.h.; Beans 300 t.p.h.; Vegetable oil 200 t.p.h.

Span of conveyor: 120 m.

Bunge have main storage of 110,000 tons at a distance of 25 km. from the port.

C.E.S.A. Terminal: Max. LOA 235 m. Max. beam 35 m. Max. draft 17 ft. Air draft 13.0 m.

Storage capacity: 18,750 tons.

Loading rates: Meal 100 t.p.h.; Beans 200 t.p.h.

Span of conveyor: 90 m.

Ciagran (Fecotrigo) Terminal: Max. LOA 235 m. Max. beam 35 m. Max. draft 17 ft. Air draft 18.0 m.

Storage capacity: 35,000 tons (meal) or 50,000 tons (beans).

Loading rates: Meal 150 t.p.h. or Beans 250 t.p.h.

Span of conveyor: 80 m.

Fertiliser Discharge: Discharged by automatic grabs at a rate of 2,000 tons per day with 3 gangs. If buckets are used the rate is 250 t.p.h.-350 t.p.h. per gang per day. Max. recommended air draft is 14.0 m.

BRIDGES: Vessels proceeding up-river from Porto Alegre to oil berth must pass under bridge with lifting-span. Span is lifted when approaching vessel sounds prolonged blast on siren.

STEVEDORES: *Working Hours:* 0730 – 1130, 1300 – 1700. Overtime 1700 – 1900, 1900 – 2300 and 0000 – 0400 hrs.

MEDICAL: Full facilities available. Crew members should hold valid international inoculation certificates.

TANKERS: Proceed to oil and LPG berths on Gravatai River for discharge. These berths accessible only to small tankers of up to 1,600 d.w.t. Also see "Tramandai".

Santa Clara Terminal:

Location: 29° 53' 52" S., 51° 22' 23" W.

The port is on the Jacui River, 17 miles from Porto Alegre at Triunfo.

Documentation: All formalities completed at Porto Alegre inner roads anchorage.

Restrictions: Navigation during daylight only. Vessel has to pass under drawbridge with max. air draft of 34.0 m.

Access Channel: Length 7,500 m. Breadth at water level 90 m. Breadth at bottom level 50 m. Turning Basin 320 m.×520 m.

Max. Size: Max. LOA 140 m. Max. draft 17 ft. fresh water. This draft is required from Rio Grande onwards, including Lagoa dos Patos.

VHF: Copesul Terminal can be contacted on Channels 16 and 12. Call sign "Santa Clara".

Berthing: Pier No. 1: Length of pier 42 m. Berth for loading petrochemicals and ethylene.

Pier No. 2: For loading Butadiene, Toluene, Benzene, Xilene, Propylene and MTBE.

Pier No. 3: For discharging coal, and when possible, purging and loading of Propane and Butadiene.

Loading Rates/Storage:

	Approximate Rates (t.p.h.)	*Storage Capacity* (tons)
Benzene	300	6,000
Propylene	150	7,000
Toluene	300	4,000
Xilene	300	2,200
Ethylene	130	21,000
Butadiene	200	4,000
Propane	180	8,100
MTBE		2,500

4,000 tonnes of Methanol discharged monthly.

Nitrogen supply rate: 4,000 cu.m.p.h. (Price U.S.$ 90.00 per 1,000 cu.m.).

Fresh Water: Available. Rate 14 cu.m.p.h.

Ballast: Up to 450 cu.m. of dirty ballast can be received. All other ballast discharged must be fresh water.

Medical: Doctor and dentist in Porto Alegre.

Repatriation: Possible.

Also see "Shipmaster's Report".

DENSITY: Fresh water at all times, unaffected by tides.

FRESH WATER: Available from hydrants at all berths. Delivery rate up to 25 t.p.h.

FUEL: Available, delivered by road tanker. Also see "General" before first port.

CONSULS:

Argentina
Austria
Belgium
Bolivia
Chile
Germany
Italy
Japan
Norway
Poland
Portugal
Spain
U.K.
U.S.A.
Uruguay

REPAIRS: All light deck and engine-room repairs possible. No dry-docking facilities available except for small vessels of up to 300 ft. LOA.

SURVEYORS: ABS at Porto Alegre and Lloyd's at Rio Grande.

GANGWAY/DECK WATCHMEN: Vessels at anchor and alongside must have a watchman.

OPENING/CLOSING HATCHES: Usually done by stevedores.

CUSTOMS ALLOWANCES: Each crew member allowed to keep out of bond 1 carton of cigarettes and 1 bottle of wine or spirits.

TELEPHONES: Connections available from warehouses A, A2, A4, A6, B, B2, O, O2 and D4 (U.S.$ 4.00 per minute to U.K.).

IDENTIFICATION CARDS: Not necessary.

DEVELOPMENTS: 2 new dredgers are being used to deepen the channels leading to Porto Alegre, permitting a working draft Rio Grande/Porto Alegre of 20 ft.

A new grain elevator with a capacity of 60,000 tons is expected to be ready shortly.

SHIPMASTER'S REPORT: May 1990.

Berth: Santa Clara, Berth No. 2.

Max. Draft: 17 ft. fresh water.

Tugs: 2 tugs of 350 h.p. available from Porto Alegre, ship's lines used. Mooring boat used.

Berthing: Vessels enter basin and turn around to berth starboard side alongside (See "Plan").

Moorings: 4 head lines, 2 forward springs, 2 after springs and 4 stern lines.

Agent's Circular: This information is offered with the aim of providing a general view about vessels' course from Rio Grande to Santa Clara – Copesul, including Terminal's main characteristics.

VESSELS' COURSE FROM RIO GRANDE TO SANTA CLARA – COPESUL: All ships destinated to Santa Clara Terminal pass by Rio Grande, where they anchor at the "Area Golf" to receive port authorities on board for clearance and also pilot changing.

Restrictions:

Maximum permitted draft: 17 ft. fresh water.

Maximum LOA: 140 m. (over this LOA it is advisable to have Port Authority and Pilot Association agreement prior to fixing the vessel).

Salt water deballasting: Not allowed under any circumstances during the whole passage from Rio Grande to Santa Clara.

Navigation in access channels: During daylight only.

The voyage to Copesul – Santa Clara, is made in four stages as follows:

(1) Forty mile channel passage.
(2) Lagoa dos Patos of 66 miles where, during the night, ships anchor to await daylight and have safer navigation.
(3) At dawn, vessel proceeds and enters Rio Guaiba Barr (Itapua), with a distance of 29 miles from Itapua to Porto Alegre, where they anchor again for clearance (Port Authorities), but no pilot changes.
(4) From Porto Alegre to Copesul, a distance of 17 miles, ships must pass under a drawbridge (crossing the Rio Guaiba). Pilot communicated with bridge operator by VHF.

The bridge has the following times for passage:

0800 hrs. – 1130 hrs.
1330 hrs. – 1700 hrs.

These times are fixed because of the intensity of road traffic.

Characteristics of the bridge:

When closed: 12 m. high.
When opened: 35.50 m. high (air draft).
Breadth: 51.50 m.
Water depth under bridge: 20 ft.

The bridge is also provided with VHF, telephone and signalling lights.

After passing the bridge, ships enter the Rio Jacui Channel, with 50 m. breadth, dredged to a depth of 6.75 m.

The narrowest passage is between Oliveira Island on the left, and Garcas Island on the right, where channels are of natural ground with a depth of 8.0 m. – 10.0 m.

The last stage of the dredged channels have the same characteristics as channels, and are provided with buoys, last buoys are No. 34 and No. 35, where there is the widest area named "Volta dos Caras", before entering the Santa Clara Channel.

Ships can anchor for waiting. However, there are cables of high voltage crossing at a height of 60 m.

On the passage from Porto Alegre to Copesul, there are 2 emergency anchorages, at Humaita and Volta dos Caras.

The bottoms of these anchorages are of sand and mud, the currents are always flowing outward and the East winds are not strong.

From June until September, during the morning, it is very common for fog to form. It is usually clear at about 1000 hrs. local time. During this period there is also the possibility of very strong wind from the West, which can delay navigation and passage through the bridge.

The terminal's access channel has the following characteristics:

Length: 7,500 m.
Breadth at water level: 90 m.
Breadth at ground level: 50 m.
Depth: 6.75 m.
Turning Basin: 320 m. × 520 m. (with an irregular form – similar to a letter "P").

Note: There are no official nautical charts from the bridge to Santa Clara Terminal, but only drawings showing the continuation of channel passage for this area.

MAIN INFORMATION OF SANTA CLARA TERMINAL – COPESUL:

Location: Triunfo, Rio Grande do Sul, Brazil. Lat. 29° 53' 55" S., Long. 51° 22' 35" W.

Maximum permitted draft: 17 ft. fresh water.

Piers: 3 piers available for loading petrochemicals, each of 40 m. length.

Pier No. 1: All products available.
Pier No. 2: Operates with all products, except ethylene.
Pier No. 3: Not possible to load ethylene, ethylbenzene and benzene.
This pier is principally for loading/discharging of pit-coal, (used for steam generators to supply electricity for their own internal consumption), and can eventually provide purging and loading/discharging of butadiene and propylene.

Dolphins: Two dolphins where vessels can berth when loading berths are occupied.

Note: Pilot and tugs are used for all manoeuvers. The only way to get ashore when the vessel is berthed at dolphins is by vessel's boats.

Main Products:	Loading Rate:
Benzene, Toluene and Xilene	about 300 t.p.h.
Ethylene	about 130 t.p.h.
Butadiene	about 200 t.p.h.
Propylene	about 150 t.p.h.
Ethylbenzene	about 300 t.p.h.

Slops: Up to 350 cu.m. of dirty ballast can be received by the terminal (except salt water).

Nautical Charts: If necessary, Agent can provide charts.

Nautical Charts from Rio Grande to Porto Alegre:

No. 2101 – Rio Grande Port; No. 2102 – Sao Jose do Norte and Setia Channel; No. 2103 – Sao Goncalo Channel Bar and Porteiras; No. 2104 – Pelotas and Surroundings; No. 2105 – Feitoria Channel; No. 2106 – Saco do Rincao; No. 2107 – Way out Porto Alegre Bar; No. 2108 – Itapua and Ponta do Arado Velho; No. 2109 – Ponta Grossa to Porto Alegre; No. 2110 – Rio Grande Port and Bar Surroundings; No. 2111 – Porto Alegre to Itapua; No. 2112 – Rio Grande to Feitoria.

AUTHORITY: Administracao do Porto de Porto Alegre, Av. Maua 1050, Porto Alegre, Rio Grande do Sul, Brazil CEP 90010. *Tel:* (0512) 24-5733. *Telex:* (051) 2540 *Contact:* Paulo Elizeu Ody, Port Administrator.

AGENT: Wilson Sons Agencia Maritima Ltda., Rua Tobias da Silva 267, Conjuntos 305/306, 90570-020 Porto Alegre RS. P.O.Box 215. Tel: (051) 222-1643 (After hours: (051) 249-4010). Telex: (51) 1058/1697 WSON BR. Fax: (051) 222-1291. Cables: Anglicus.

PORTO TROMBETAS: 01.28 S. 56.23 W. (See Plan)

LOCATION: The Porto Trombetas Bauxite Terminal is situated on the right bank of the Trombetas River, State of Para. The Trombetas River is a left hand affluent of the Amazon River.

Geographical location:

Lat. 01° 27' 31" S., Long. 56° 22' 48" W.

The shortest route through the fairway from the North Bar of the Amazon River (North Entrance) to Porto Trombetas is approximately 575 nautical miles.

The distance between the Port of Belem, capital of the State of Para, and Porto Trombetas is approximately 880 km. by air and 611 nautical miles down river.

The distance between the Terminal and Oriximina, the nearest town to Porto Trombetas, is 42 nautical miles.

DOCUMENTS

At Anchorage on Fazendinha Roads: At anchorage on Fazendinha Roads (See "Anchorage") Port Authorities will board vessel for clearance and the following documents should be delivered to the Agent, assisting Port Authorities and Master:

1 copy Health Maritime Declaration.
2 copies Vaccination List.
6 copies Crew List.
3 copies Store List.
3 copies Crew Personal Effects.
2 copies Narcotics List.
2 copies Arms and Ammunition List.
6 copies Passenger List (if any/wifes/children) (See "Note").
3 copies Bonded Stores List.
Last Port Clearance.

Documents to be Presented:

Derat or Exemption Certificate.

General Declaration Form, which the Agent will present to the Master (to be filled in during clearance).

After Customs and Health Inspections and granting of Free Pratique (which takes about 1.5 hours), the Agency will deliver to the Master the Fazendinha Clearance to be presented to Port Trombetas Authorities.

NOTE: Brazilian Federal Police – Immigration Department Laws now demand:

All officers and crew members on board or arriving in Brazil to join a vessel, must possess a valid Seaman's Book, and their Passport must state their profession as ship's Officer or Seaman. Accompanying wives and family members must not be entered on Crew List as Stewardess or Supernumary if they do not possess a valid Seaman's Book. They must be entered on a Passenger List, and they must have a Brazilian Visa in their passport if their nationality so requires.

At Porto Trombetas:

(a) Documents required:
3 copies Crew List.
3 copies Store List.
3 copies Crew Personal Effects List.
3 copies Passenger List or 1 copy "Nil" Passenger Declaration.
1 copy Ballast Declaration.
At hand to show:
Ship's Data.
Fuel, Diesel, MDO and Fresh Water Quantities on Arrival.
Dates of Issue and Expiry of all certificates of class.
Derat or Exemption Certificate.
Gas Free Certificate (if ore/oil vessel).

(b) Cargo papers: Master will receive copies of each of the documents listed below:
Notice of Readiness.
Bill of Lading (non-negotiable copy).
Documentation and Sample Receipt.
Stowage Plan.
Statement of Facts.
Draft Survey Results.
Manifest of Cargo.

Master shall approve and sign the Notice of Readiness, Bill of Lading, Draft Survey Result, Statement of Facts, Documentation and Sample Receipt, as required by the Shippers and Agents.

(c) Clearance: Ship's Agents will furnish clearance papers for sailing as well as the cargo manifest.

(d) From Trombetas the envelope of cargo documents destined to Ansanav Santana will be delivered to such Agents together with a Sailing Information Form (given to the vessel's Master by Santana Agent on the up river call at Fazendinha).

PILOTAGE: Pilot service is available between Porto de Santana and Porto Trombetas. They will board and disembark in the vicinity of Porto de Santana. The Pilots will stay on board at Porto Trombetas.

Report: February 1992.

Night pilotage for vessels up to 245 m. LOA is expected to commence in Mid-1992.

ANCHORAGE: *Anchorage at Fazendinha for Visit of Authorities and Embarkation/Disembarkation of Pilots:* In order to avoid any delay due to entrance to Porto de Santana, the Port Captaincy of the State of Para and Federal Territory of Amapa has officially determined the Fazendinha area for visit of Authorities and embarkation/disembarkation of Pilots.

Such area is located around Lat. 00° 04' 06" S., Long. 51° 06' 45" W.

Whenever passing by the Port of Macapa, vessels bound for Porto Trombetas are supposed to contact Messrs. "AMSANAV SANTANA", through VHF Channel 16.

Messrs. AMSANAV SANTANA will arrange the visit of Authorities and embarkation of Pilots.

RESTRICTIONS:

Draft Restrictions:

Amazon River North Bar:
37 ft. fresh water at high tide.
32 ft. fresh water at low tide.
Trombetas River:
37 ft. fresh water.

During the dry season (October/January), the draft may be reduced, according to the level of the river.

Remarks: These figures are subject to further confirmation with Shippers and vessel's Agent.

NAVIGATION: *Nautical Charts:*

(a) The Nautical Charts issued by the Hydrographic Navigation Offices (Brazilian Navy) and listed below are used to navigate from the Amazon River North Bar to Porto Trombetas:

200	Maraca to Machadinho Island.
210	Vicinities (approach) of the North Bar to the Amazon River.
220	From the North Bar to Porto de Santana.
201	North Bar of the Amazon River.
202	Bailique Island to Ponta do Capinal.
203	Ponta do Capinal to Pedreira Islands.
204	Pedreira Islands to Santana Island.
205	Macapa to Santana Island.
4101A	Macapa to Mangabal Island (Santana Island included).
4101B	Mangabal Island to Comandai Island.
4102A	Gurupa to Almeirim.
4102B	Almeirim to Prainha.
4103A	Prainha to Costa do Ituqui.
4103B	Costa do Ituqui to Meio Island (Santarem included).
4104A	Meio Island to Santa Rita Island (Obidos included).
4401A	Obidos to Paru Lake (entrance Trombetas River included).
4401B	Paru Lake to Caipuru Lake (Oriximina included).
4402A	Caipuru Lake to Bacabal.
4402B	Bacabal to Erepecu Lake (Narrow Channel of Bacabal and Porto Trombetas).

All charts and publications can be altered by Notice to Mariners (Brazilian Navy information service).

(b) All nautical charts are available through the vessel's sub-Agents if required in advance.

Navigation Inwards:

(a) Undoubtedly the greatest difficulty for navigators coming from the sea is to cross the Amazon River North Bar sand banks. Bulk carriers navigating to Porto Trombetas will be in ballast, for this reason there should be no need for them to await the high tide, in so far as at low tide, it is possible for them to cross the bar with 9.75 m. (32 ft.) draft.

(b) With adequate nautical charts, good radar and calibrated direction finder, an experienced navigator should be able to enter the North Bar of the Amazon River to Macapa without major difficulties.

Navigation Outwards:

(a) Navigation from Macapa to Ponta do Ceu offers no problem and it will not be necessary even to reduce speed.

(b) The critical section for navigation is from Ponta do Ceu to the open sea as, in addition to the 32 ft. draft, ships have to take advantage of the tide to cross banks of the North bar, where they are affected by the adverse action of a strong current.
Under such conditions ships have to be equipped with such facilities which will permit accurate positioning.

If it is necessary to wait for a suitable stage of the tide, the river provides good bottom to anchor at several places along the navigable routes.

Navigation Aids:

(a) Radio Beacon:

A radio beacon is installed at Ponta do Ceu.

The main details are:

Frequency:	290 kHz.
Signal Letters:	EH
Working Hours:	Continuous
Geographical Position:	Lat. 00° 45′ 40″ N. Long. 50° 06′ 58″ W.
Range:	300 miles.
Signal:	Ao and A^2 (1,020 H2)
Character of Signal:	(EH . . .), Twice in Ao during 10 seconds and A^2 (1,020 H2) during 5 seconds.

(b) Racon:

Racon (letter M – Morse Code) is located at Bailique Lights position (Lat. 00° 59′ 24″ N., Long. 49° 56′ 53″ W.) with a range of about 25 miles.

Mineracao Rio do Norte S.A. MRN is not responsible for the location and operation of the navigation aids.

Tidal Information: The Hydrographic Navigation Office of the Brazilian Navy based on data furnished by the National Astronomical Observatory publishes an Annual Tide Table for the majority of Brazilian ports, including the North Bar of the Amazon River – the Brigue Island, Lat. 00° 55′ N., Long. 50° 05′ W. and Porto de Santana.

(See DG 16 – 14 Tabuas de Mare (Tide Tables DG 16 – 14).

Outer Bar Tide: With reference to data published in the tide tables, Ilha do Brigue – Lat. 00° 55′ N., Long. 50° 05′ W., Charts 210, 202 and 201, the tidal time is local time (GMT minus 3 hours) and the tidal amplitude figures are shown in metres.

In position "E", Lat. 01° 34′ N., Long. 49° 09′ W., tidal time at and about this position is 4 hours earlier than shown in the tide tables for Ilha do Brigue. Tidal amplitude is 48% of the figures shown in the tide tables. In position Lat. 01° 09′ N., Long. 49° 36′ W., tidal time at and about this position is about 2 hours earlier than indicated in the tide tables for Ilha do Brigue. Tidal amplitude is 63% of the figures shown on the tide tables.

On Banco do Meio, tidal time at and about this position is 1 hour earlier than shown in the tide tables for Ilha do Brigue. Tidal amplitude is equal to the figures shown in the tide tables. Tidal currents in the area indicated as "Canal Grande do Curua", are reported to coincide with the direction of the axis of channel in that area.

Outer Bar Tide Current: On the Nautical Chart No. 210 information about tide current is furnished (see upper left side of the chart).

RADIO: *Arrival Advice:* For Agency purposes vessel proceeding to Porto Trombetas shall send ETA North Bar of the Amazon River to Messrs. "AMSANAV BELEM". For your guidance, one notice is required 72 hours prior to such arrival which means vessel's passage along Entrance Buoy located at Lat. 01° 14′ 30″ N., Long. 49° 37′ 16″ W. This procedure will allow sub-Agents at Belem to convey Pilots to Fazendinha Anchorage Area accordingly. After passing along the mentioned entrance buoy, vessel shall proceed via North Channel of the Amazon River up to Fazendinha Anchorage Area located at Lat. 00° 04′ 06″ S., Long. 51° 06′ 45″ W. During such sailing to Fazendinha Anchorage Area vessel will receive from Messrs. "AMSANAV BELEM" all information regarding eventual changes in position of buoys, operations of lights and other aids.

When passing along Macapa (about 8 miles before Fazendinha Anchorage Area) Master is expected to be in contact with Messrs. "AMSANAV SANTANA" through VHF Channel 16. At that time all instructions for vessel's anchorage at Fazendinha in order to receive visitation of Authorities will be forwarded by Messrs. "AMSANAV SANTANA".

When leaving Fazendinha Anchorage Area, Master will be requested to inform local sub-Agents of ETA at mouth of the Trombetas River to be re-transmitted to "DOCENAVE" Porto Trombetas.

Before entering the Trombetas River, Master must obtain "Confirmation for Entrance" from Shipper's Dock Master through VHF Channel 16.

TUGS: One tug of 25 tons bollard pull and 2 line handling boats are available for berthing and unberthing.

BERTHING:

Bauxite Loading Terminal: The bauxite loading terminal is designed to load ore carriers up to approximately the Panamax Size (LOA 245 m.). Prior permission is required from Port Authority to exceed this length.

The pier is 100 m. long and the maximum permissible air draft (the distance from the waterline to the top of the hatch coaming) is 13.50 m. at the high water period (July) and about 19.0 m. maximum in the dry period (December). The mooring system consists of four concrete dolphins upon metal piling and four mooring buoys.

Accommodation for Vessels:

(a) One vessel can be berthed at the loading dock. Two waiting vessels can be secured to lay-by buoys about 1.0 – 1.8 miles downstream from the berth. A secondary waiting area is located West of the mouth of the Trombetas River in the vicinity of Lat. 01° 54′ S. and Long. 55° 40′ W. There is good holding ground in this area and some protection from canaranas and other floating debris.

(b) The movement of all vessels within the Trombetas River system is under the control of MRN. Up-bound vessels are not permitted to enter the Trombetas River without prior clearance from MRN. Such approval can be obtained by contacting MRN or DOCENAVE on VHF. In case such permission has not been received, the vessel shall anchor at the secondary waiting area in the Amazon River until it is granted. This is necessary because there are two areas within the Trombetas River where vessels are not permitted to pass. Vessels will normally be loaded at Porto Trombetas in order of arrival, provided that they are within their lay-day period as previously agreed with MRN.

Berthing and Unberthing: For berthing and unberthing the width of the channel in front of the terminal is currently 300 m.

Manoeuvring of vessels should be performed at Master's and Pilot's discretion.

Fendering: No fenders are needed for docking. The terminal is equipped with permanent fenders.

Anchor: The use of vessel's anchor during manoeuvring is permitted at Master's and Pilot's discretion.

Loading Hours: 24 hours a day, Sundays and holidays included (except in rain).

Hold Condition: No cleaning crews are available.

Holds should be cleaned prior to arrival and they will be inspected before acceptance of vessel.

Loading Operation: The bauxite is transferred from the stockpile to the ship's holds through a conveyor belt system and automatic shiploader.

The shiploader boom moves horizontally around its hinge with an angle of 53° 24′ 44″ to each side.

The loading operation usually starts soon after the vessel is alongside and cleared by the Authorities.

The air draft (that is, the distance from the waterline to the top of the hatch coaming) is 13.5 m. (minimum) in July and 19.0 m. (maximum) in December.

The nominal rate capacity of the shiploader is 28,000 metric tons per day for dry bauxite, and 22,000 metric tons per day for wet bauxite.

The stowage factor for dried bauxite is 25 cu.ft. per ton up to 28 cu.ft. per ton depending on moisture content of the bauxite.

Careful check of vessel's draft and trim should be made by the ship's officers at all times during loading operations. Cargo is belt trimmed only.

The cargo weight should be determined by the "ship's displacement" method (light versus loaded draft survey).

Tonnage on the conveyor belt system between stockpile and ship is approximately 275 tons. This tonnage must be discharged into the holds to complete the loading.

MRN reserves the right to require any vessel to undock after loading and completing the necessary formalities in order to permit another vessel to berth or for any other reason.

GENERAL CARGO WHARF: MRN handles general cargo at a general cargo wharf 350 m. downstream from the shiploader.

MEDICAL: Medical service may be arranged at the MRN Hospital, in emergency. Health conditions in the region are good. No epidemics or tropical diseases are recorded in the region.

TANKERS: Tankers discharge bulk fuels at a floating pier situated about 400 m. upstream from the Terminal.

BALLAST: Vessels are not allowed to discharge salt ballast into the Trombetas River. Salt ballast can be discharged into the Amazon River up till Almeirim Island.

POLLUTION: No facilities are available at the terminal to receive slops, salt water or contaminated ballast.

Discharge of any material other than clean ballast will be subject to heavy penalties as prescribed by the Brazilian law. It is not permitted to discharge salt water ballast into the Trombetas River.

FRESH WATER: Available subject to prior consultation with MRN (Pressure very low at times).

FUEL: Not available.

CONSULS: None.

REPAIRS: Small repairs can be undertaken by MRN workshop in extreme emergency only.

SURVEYORS: There is no Classification Society surveyor at Porto Trombetas. Whenever needed a surveyor can be appointed, who will come from any other Brazilian port by plane.

P & I Club: Not available at Porto Trombetas. Administrative assistance and legal advice on matters concerning ship's civil liability to third parties can be obtained from a representative in another Brazilian port who will come by plane.

AIRPORT: The nearest international airport is Manaus (capital of the State of Amazon). There is a domestic airline service between Manaus and Santarem, Belem and Santarem, and Santarem-Porto Trombetas.

TIME: Local time is GMT minus 4 hours.

IDENTIFICATION CARDS: Crew and Passengers: There are no restrictions by the local authorities, but crew members and passengers should carry their identification papers when on shore. Visits to the industrial area require prior approval of MRN.

GENERAL:

Weather:

(a) Rain: during the rainy season precipitation is usually heavy but of short duration.

(b) Wind: from July to December, East and E.S.E. winds predominate and they are usually moderate with occasional strong gusts. From January to June calmness predominates followed by N.E. winds backing to S.W. with persistent showers. The predominant wind speed is 10 knots.

(c) Haze is rare in the Amazon River, but it is more frequent in the Trombetas River, particularly early in the morning.

Tide and Current: In the Porto Trombetas region, the current may reach 2 knots during high water season (January to July).

Temperature: An average of 30°C.

Mail: Ship's and crews' mail should be addressed to: Vale do Rio Doce Navegacao S/A – "DOCENAVE", Porto Trombetas, State of Para, CEP 68.275, Brazil.

Telephone: Telephone communication between Porto Trombetas and the rest of Brazil and also international calls are available.

Telegraph: There is no public station in Porto Trombetas. Telegrams from Porto Trombetas must be sent through the vessel's Agent.

Services:

Ship chandlers and laundry not available.
Derat and Fumigation not available.
Electricity not available for supplying vessels.

Porto Trombetas Port Captaincy: The Brazilian Navy has installed an Agency at Porto Trombetas with the purpose of controlling all vessels destined to the port.

MRN recommends that the Brazilian Pollution Regulations be carefully observed.

The Port Captaincy is located in the vicinity of the shiploader and for any communications, this Port Authority can be reached at the following Telex and Telephone numbers:

Telex: (091) 5458
Telephone: (091) 549-1283
(091) 549-2177

Agency:

All ships will be attended by Vale do Rio Doce Navegacao S.A. – DOCENAVE through its regional office in Porto Trombetas, and DOCENAVE's sub-Agents in Belem and Porto de Santana (Agencias Mundiais Ltda.):

DOCENAVE's head office:
Rua Voluntarios da Patria, 143
Rio de Janeiro, State of Rio de Janerio
22.270, Brasil
Telephone: (021) 286-8002
Telex: (021) 22142, 22249, 22730
Cable Address: "DOCENAVE RIO DE JANEIRO"

DOCENAVE's regional office:
Trombetas, State of Para
68.275 Brasil
Telephone: (091) 549-1114, 549-2238
Telex: (091) 5622
Fax: (091) 549-1397
Cable Address: "DOCENAVE PORTO TROMBETAS"
Manager: Mr. Edison Camargo
*Home Phone: (091) 549-1201

DOCENAVE's sub-Agents:
Agencias Mundiais Ltda.
Rua Gaspar Viana 490
P.O. Box 190
Belem, State of Para
66.020 Brasil
Telephone: (091) 224-4822
Telex: (091) 1148 and (091) 1799
Fax: (091) 225-3607
Cable Address: "AMSANAV BELEM"
General Manager: Mr. R. J. Burnett
*Home Phone: (091) 235-0359
Operations Manager: Captain E. A. St'Roas
*Home Phone: (091) 222-4078
Assistant Manager: Mr. P. Niblett
*Home Phone: (091) 235-1492

Agencias Mundiais Ltda.
Av. Senador Filinto Muller, 1445
Porto de Santana, Federal Territory of Amapa
68.935 Brasil
Telephone: (096) 632-6669, 632-6629, 632-6663
Cable Address: "AMSANAV SANTANA"
Manager: Mr. Carlos Alberto Bandeira
*Home Phone: (096) 632-6639

SHIPMASTER'S REPORT: May 1986 (updated 1988).

Please see a comparison report over tidal predictions for Barra Norte (Rio Amazonas) for the 23rd May 1986. First method: Admiralty Tide Table Vol. 2/1986 NP 202/86.

Second method: Tabuas dos Mares De-16-21/1986.

There is an error of 3 hours 41 minutes between the two predictions, note also the difference in predicted heights.

Upon arrival at Barra Norte, we only had in our possession the Admiralty Tide Tables. Referring to the time of HW given by these tables and using the rose of currents printed on Brazil chart 210, we were expecting a current setting in direction 310° at about 1.2 knots (HW+5) then later 270° at about 1.8 knots and 238° at about 2.2 knots. The correct currents were for these times: 050° – 4.1 knots, 040° – 2.2 knots, 030° – 5.5 knots, using the HW times of Tabuas dos Mares.

The difference between the two predictions is, of course prejudical in order to perform a safe and good navigation, keeping in mind that the navigator has no landmark for several hours.

Tidal predictions for May 23rd 1986 at Barra Norte – Rio Amazonas: Admiralty tide tables:

	Time		*Height*		
Standard Port	HW	LW	HW	LW	
Georgetown	0433	1051	3.2	0.2	
Guyana	1709	2302	2.9	0.7	
Seasonal change	Standard port		–	–	negligible
Differences	+0245	+0251	−0.3	−0.1	
			−0.3	−0.2	
Seasonal change	Secondary port		–	–	
Secondary port	0718	1342	2.9	0.1	
	1954	0153	2.6	0.5	
	(24 May)				

Tabuas dos Mares: 23rd May 0546 – 0.8, 1059 – 5.8, 1812 – 0.5, 2344 – 5.6.

Loading: The loading rate of bauxite during my call was about 1,100-1,200 tonnes/hr. We loaded about 55,000 tonnes.

Agents Questionnaire to Master:

Fazendinha Anchorage, May 24th 1986.

To the Master
M.V.
Fazendinha

Re.: North Channel – Amazon River

Dear Captain:

Please kindly report your observations during your transit in North Channel – Amazon River, (Nautical Chart No. 201 – 6th ed.). Any other information will be of good advice.

North Bar Racon/Buoy Positions on February 29th 1988:

Sea Racon-white light about 15 miles		Lat. 01° 34.16′ N.,	Long. 49° 00.86′ W.
Sea Buoy-red/white/red	white light	Lat. 01° 24.37′ N.,	Long. 49° 02.65′ W.
Buoy No. 2 Green	Green light	Lat. 01° 13.90′ N.,	Long. 49° 35.15′ W.
Buoy No. 4 Green	Green light	Lat. 01° 08.00′ N.,	Long. 49° 40.00′ W.
Buoy No. 6 Green	Green light	Lat. 01° 05.37′ N.,	Long. 49° 44.18′ W.
Buoy No. 8 Green	Green light	Lat. 01° 01.97′ N.,	Long. 49° 46.10′ W.
Buoy No. 10 Green	Green light	Lat. 01° 00.18′ N.,	Long. 49° 46.23′ W.
Buoy No. 12 Green	Green light	Lat. 00° 57.23′ N.,	Long. 49° 48.89′ W.
Buoy No. 1 Red	Red Light	Lat. 01° 06.38′ N.,	Long. 49° 44.32′ W.
Buoy No. 3 Red	Red light	Lat. 01° 03.38′ N.,	Long. 49° 46.70′ W.
Buoy No. 5 Red	Red light	Lat. 01° 00.63′ N.,	Long. 49° 47.02′ W.
Buoy No. 7 Red	Red light	Lat. 00° 58.70′ N.,	Long. 49° 48.87′ W.

Radio Beacon Ponta do Ceu: Good, but have given bearings totally erroneous during one hour (from 1400 to 1500 LT).

Racons: Guarah Light (range). First echo (weak) 31 nautical miles.

Bailique Light (range). First echo 24 nautical miles.

Lighthouses: Guarah Light; Bailique Light; Marinheiro Light; Ponta do Ceu; Santarem Light. Generally all good but probably too weak in case of restricted visibility due to rainfall.

Remarks: Regret absence of fairway buoys or pillars on each side of the North Bar. Buoy No. 2 and following are too small and difficult to find on the radar. Navigator on duty 5 hours between Barra Norte and Buoy No. 2 without a good fix.

It would be helpful if Agent sent by radio at least 2 days before arrival the following information concerning tides.

(1) Time of HW and LW at North Bar (we received it but at the time we were in North Bar (23rd May). The times given in the cable were for the 24th May).

(2) The direction and force of current following the current rose printed on chart 210 (Brazilian chart).

Cable should be in the following form: 23rd May HW . . . LT LW . . . LT. Current HW 070/3.6 HW+1 050/4.1, HW+2 040/5.5, etc.

It should be noted that the predicted times and heights in the Admiralty Tide Tables are erroneous.

It should also be noted that for deep draft vessel, the most difficult and narrow navigation is from Buoy No. 2 to Santana Anchorage, and without Pilot (especially between Buoy No. 2 Buoy No. 10).

SHIPMASTER'S REPORT: September 1988.

Vessel called at Porto Trombetas to load bauxite in bulk. This port is situated on the Amazon, approximately 60 miles from the mouth of Rio Trombetas and 590 miles from Amazonas No. 1 Light vessel.

Pilots embark and disembark at the anchorage off Santana, and remain on board during the vessel's stay at Porto Trombetas. Customs and other state officials visited vessel at Santana anchorage. The Pilot's English language is sufficient for navigational commands only. The two Pilots on board were very experienced.

Admiralty charts of the Amazon are not sufficient. All Brazilian nautical charts are available through the vessel's sub-agent in Santana if advance notice given. These charts were perfect for tidal height calculations.

Vessel should cable request buoy positions on Canal Norte prior to arrival as the positions of the buoys and sandbanks change.

High water at Barra Norte is 2 hours after Ilha do Curua or Canal Norte (buoyed channel, IALA Region B, seaward green buoy starboard hand). There are two Racons on the shore for fixing position, we could not find Amazonas No. 1 Light vessel, it may have drifted out of position.

Navigation from Canal Norte to Santana in ballast or with shallow draft is not difficult. Laden Bulk Carriers on Canal Norte and Barra Norte must carry out good tidal height calculations.

SHIPMASTER'S REPORT: March 1993.

The vessel called for loading a cargo of Bauxite.

Two Pilots boarded off Fazendinha (near Macapa) and though they disembarked at Trombetas, they returned for the pilotage on the outward passage. As another vessel was loading on the berth, we moored at the buoy with 2 lines aft and starboard anchor with 2 shackles in the water. We had Brazilian charts from a prevous trip. The Pilots insisted on the latest edition of the charts, which the Agent supplied in a full set.

The most important fact that I would like to emphasise here is the matter of tides at the "Barra Norte" or North Bar, which is a 18 mile stretch (least distance through the bar) with a minimum marked depth of 9.1 m. I was advised by telex by the local Agent of the latest buoy positions, along with the tide timings for my anticipated date of entry.

Though my maximum ballast draft was 7.8 m. (F.W.), I was advised to proceed inwards only on high tide. As can be seen from the telex below, the tide applicable to us was at H.W. 0328 (4.1 m.). We made our approach around 0400 hrs. local time, but to our surprise found the tide against us, though the depth below keel was maintained at a minimum of 2.8 m., we were expecting more, as the given height of tide was 4.1 m.

The passage through the bar and up to Fazendinha was uneventful and safe. At Fazendinha and on request, I was supplied with Brazilian tide tables. Our subsequent enquiries to the Pilots revealed that the tide timings given in the tables were for a point further inland called Ponta do Ceu and not for the bar. The actual tides at Barra Norte were earlier in time and had a amplitude of 78% to that published for Ponta do Ceu. Thus H.W. at the bar (in position 01° 30′ N., 49° 10′ W.) occured about 3 hours 20 minutes and L.W. about 4 hours 30 minutes *earlier* than the times at Ponta do Ceu. Thus the correct tides on our inward passage were actually 0008 hrs. (H.W.) and 0553 hrs. (L.W.), heights of tide calculated at 78% amplitude should have been 3.2 m. and 0.39 m. respectively. Hence at about 0400 hrs., the height of tide was only around 1.8 m., above the minimum charted depth of 9.1 m. Thus our experience of the under-keel clearance and falling tide agreed with these calculations.

On our outward passage, we based our tidal calculations on the above theory. Our maximum draft was 37 ft. (F.W.), hence any degree of error could be detrimental in touching bottom. H.W. at Ponta do Ceu was at 1251 hrs., thus we planned to be in the middle of the bar at 0831 hrs. L.W. with height worked out to 2.9 m. above expected 9.1 m. minimum depth. We successfully cleared the bar with a minimum under-keel clearance of about 0.5 m.

Telex: From Agent to vessel:

Tide for North Bar to 13.3.93 according to the tide tables for 1993.

H.W./h	L.W./h
0328 hrs. (4.1 m.)	1023 hrs. (0.5 m.)
1549 hrs. (4.4 m.)	2300 hrs. (0.5 m.)

Please wait H.W. to pass North Bar.

Please send your telex to us.

NOTE: Port Authorities only clear vessel from 0700 hrs. local time until 2300 hrs. local time.

We herewith transmit buoy positions for the Amazon – North Bar:

North Bar Racon/Buoys – new positions re Notices to Mariners Nos. 169 to 187, August 15th, 1991.

Sea Racon	White light	Lat. 01° 34.12′ N.,	Long. 49° 01.35′ W. (about 15 miles).
Sea Buoy	White light	Lat. 01° 25.40′ N.,	Long. 49° 22.20′ W.
Buoy No. 2	White light	Lat. 01° 17.55′ N.,	Long. 49° 27.72′ W.
Buoy No. 4	White light	Lat. 01° 09.64′ N.,	Long. 49° 33.33′ W.
Buoy No. 6	Green light	Lat. 01° 01.78′ N.,	Long. 49° 38.93′ W.
Buoy No. 8	Green light	Lat. 01° 00.29′ N.,	Long. 49° 40.52′ W.
Buoy No. 10	Green light	Lat. 00° 50.80′ N.,	Long. 49° 42.17′ W.
Buoy No. 12	Green light	Lat. 00° 57.35′ N.,	Long. 49° 44.00′ W.
Buoy No. 14	Green light	Lat. 00° 56.38′ N.,	Long. 49° 46.31′ W.
Buoy No. 16	Green light	Lat. 00° 55.41′ N.,	Long. 49° 48.58′ W.
Buoy No. 1	Red light	Lat. 01° 02.39′ N.,	Long. 49° 39.52′ W.
Buoy No. 3	Red light	Lat. 01° 00.94′ N.,	Long. 49° 41.12′ W.
Buoy No. 5	Red light	Lat. 00° 59.49′ N.,	Long. 49° 42.71′ W.
Buoy No. 7	Red light	Lat. 00° 58.12′ N.,	Long. 49° 44.41′ W.
Buoy No. 9	Red light	Lat. 00° 57.19′ N.,	Long. 49° 46.62′ W.
Buoy No. 11	Red light	Lat. 00° 56.23′ N.,	Long. 49° 48.86′ W.

According to the Brazilian Navy, all buoys are in position and working *(more or less correct).*

In position 00° 56′ N., 49° 47.68′ W., there is a minimum depth of 9.1 m. extending to the middle of the channel. Mariners in this area should take caution and navigate in channel at 0.6 miles from Buoys No. 10 and No. 12, *(unmarked even on latest edition chart).*

NOTE: Italic text is Master's comments.

SHIPMASTER'S REPORT: April 1994.

Report on Amazon River Navigation:

Vessel coming from Tenerife and bound for Porto Trombetas, which is situated about 590 miles up-river from Amazon Entrance Buoy.

Approaches to Amazon Entrance Buoy: Amazon Entrance Buoy fitted with Racon 'G' was picked-up on radar at 18 miles and ship's course was adjusted. Continuous bottom soundings check was maintained. It was noticed that water colour starts changing about 60 miles before Amazon Entrance Buoy. At about 30 miles before Amazon Buoy, water colour is totally muddy. Soundings of 8.0 m. – 10.0 m. below keel were observed. Shallow water area starts about 10 miles East of Amazon Entrance Buoy and further 20 miles until Amazon Buoy No. 1, thus total mileage of 30 miles over Amazon Bar.

It is most important that the buoys positions be checked well beforehand by local Agent, who obtains same from Brazilian Navy. Agents at Santana provided us with all latest positions of buoys. On plotting these positions on B.A. Chart No. 2189, it was found that the buoyed channel has shifted drastically and new channel buoys, especially Buoy No. 9 to Buoy No. 12, were going over sand bank. We requested Agent to re-check buoy position with Navy/Coast guards and advise correct positions of buoys. Agent came back with same positions. From sailing directions, it was clear that sand banks keep changing. B.A. Charts are not corrected by Admiralty itself, hence navigation on B.A. Charts should be done with great caution.

Position of buoys as received from Agents were plotted on chart and navigation was done with maximum caution. Vessel's bottom sounding were constantly checked. All the buoys were picked-up on radar at distance of 7-8 miles. Vessel's position plotted frequently and verified with soundings. Vessel experienced strong current. We were advised by the Agents that as per Brazilian Hydrographer/Navy, Amazon Bar has draft of 32 ft. (FW) at low water and 37 ft. (FW) at high water.

Vessel constantly got soundings of 4.0 m. – 5.0 m. below keel.

Channel Buoys were picked-up on radar at 6 miles.

In channel itself, which is wide, we observed soundings of 8.0 m. – 10.0 m. below keel. There are a total of 6 pairs of buoys in channel. During our transit only 1 buoy was not lit, otherwise channel is very clear.

After clearing the channel, depth of water increases and navigation becomes much easier. While inbound, total navigation until Fazendinha Anchorage was done on B.A. Chart No. 2189. One point to note here is that there is no mention of Fazendinha anywhere on chart. However, position of same obtained from Agents. The name of anchorage area given as there is a church named Fazendinha on North shore. After leaving buoyed channel, vessel steered course to keep in the middle of deep water. Ponta do Cue Racon was picked-up on radar at 16 miles. All lights were working.

When Southbound passing through Canal do Norte (Lat. 00° 35′ N., Long. 50° 25′ W.), vessel should keep close to Ilha Caviana de Dentro, and Banco Carolina Buoy (Fl.R.3) should be kept on starboard side. Then steer clear South of Ilhas Pedreira Island Lt., and from there steer South of Pta. do Pau Cavade Lt. with Racon 'X' and from this point steer in deep water up to Macapa. At this point, vessel starts meeting ships outbound. From Macapa to Fazendinha, steer in deep water, keeping Bancoda Cascalheria Lt. on your starboard side and Fl.G.5 sec. light on port side and steer to Fazendinha Anchorage. The safe position to anchor is by keeping Santana Leste Lt. bearing 270° × 1.3 miles. On B.A. Chart No. 2189, South side of Fazendinha Anchorage is not shown. However, as per Brazilian charts, there is enough water on South side.

Vessel anchored at Fazendinha at 0630 hrs. when it was already daylight. However, great care must be taken if anchoring during night hours, because Agent and Port officials do not board at night-time, and every ship has reported heavy thefts at anchorage and at Santana. Agent and Authorities boarded at 0830 hrs. It takes about 45 minutes to clear formalities as Quarantine undertake a thorough check of ship. Agent from Santana brought Brazilian charts and Tide Tables. However, two charts for Amazon River were not available.

Two Pilots boarded at Fazendinha. They were well experienced with river and spoke sufficient English, which is safe for navigation. Vessel picked-up anchor at 0900 hrs. and started heading towards Porto Trombetas. Amazon River itself is deep enough for safe navigation. Vessel was steaming at maximum possible safe RPM.

Amazon River is not marked. However, Pilots are very experienced and know the river well. Vessel must have good radar, as night navigation is totally done by radar only.

Porto Trombetas is situated in River Trombetas, and from entrance of river until Porto Trombetas, the river is well marked with buoys, and night navigation in clear weather is no problem. It took nearly 42 hours from Fazendinha to Porto Trombetas and vessel went straight alongside.

Pilots stay onboard as they bring the vessel back to Santana. Santana is nearest port to Fazendinha Anchorage.

Loading at Porto Trombetas is by one loader only and loading rate of 3,000 tonnes/hr. was given. Terminal operators are co-operative. To land ashore, ship has to use boat service as landing on Terminal is not allowed.

Departure from Porto Trombetas was at 1000 hrs., and vessel arrived at Fazendinha Pilot Station at 1400 hrs. next day. It took 28 hrs. downbound.

After dropping the Pilots, vessel's speed was adjusted so as to arrive 10 miles West of buoyed channel, 1 hour before low water at Ponta do Ceu. In Tide Tables, HW and LW timings are given for Ponta do Ceu. For Barra Norte, you have to calculate the tide for position 'H' (Lat. 01° 30′ N., Long. 49° 10′ W.), which has an amplitude of 78% and about 3 hours 20 minutes earlier for HW and 4 hours 30 minutes earlier for LW than the tide timings for Ponta do Ceu.

The tidal current at Barra Norte has a general direction of S.W. (flood tide) and N.W. (ebb tide) and runs at 3 knots (Neap) and 5.5 knots (Spring).

Vessel's speed was adjusted and vessel entered buoyed channel. Sometimes you might see vessels at anchor, as some vessels go at full speed and anchor off Ponta do Ceu and wait for tide. Some vessels clear buoyed channel and anchor North of channel and wait for high water at Point 'H'.

Vessel's position and soundings were constantly checked. After passing Amazon Buoy No. 1, vessel's speed was reduced to avoid heavy squatting. However, speed should be so maintained that the Bar is cleared in time. All over the Bar, soundings of 2.0 m. – 3.0 m. below keel were noted. After clearing Amazon Racon Buoy, vessel steered course so as to go through deep water. Soundings started increasing slowly. When soundings of 15.0 m. below keel were obtained, ship's speed was increased to sea speed, and before RPM could come to maximum, the soundings were more than 30.0 m. below keel.

OPERATORS: Mineracao Rio do Norte S.A. – MRN

Legal Domicile:

Rodovia Br. 316, Km 3
Ananindeua – Para.
CEP: 67.000
Telex: (91) 0977
Telephone: (091) 235-3844 Fax: (091) 235-3848

Works:

Mineracao Rio do Norte S.A. – MRN
Porto Trombetas, Para
CEP 68.275
Telex: (91) 4036
Telephone: (091) 549-1335 Fax: (091) 549-1397
Cables: "RIONORTE".
Contact: Mr. Oscar Sampaio (Dock Master).

Main Office:

Praia do Flamengo, 200 – 6° andar
Rio de Janeiro
CEP 22.210
Telex: (021) 23352
Telephone: (021) 205-9112 Fax: (021) 245-5717
Cable: "RIONORTE".
Contact: Dr. Julio Bueno (Commercial Manager)

AGENT: See "Belem".

RECIFE (Pernambuco): 08.04 S. 34.52 W. (See Plan)

PORT LIMITS: West of Longitude 34° 50′ W. and between Latitudes 08° 00′ S. and 08° 07′ S.

DOCUMENTS: Most of the documents required by the local authorities are presented by the vessel's Agents after arrival.

Master must have on hand, on arrival, the following documents:
7 Crew Lists.
1 International Health Declaration completed and signed.
Clearance from last port of call.
Manifests of the cargo to be discharged.
Copies of Bills of Lading of the cargo to be discharged.

PILOTAGE: Compulsory. Pilots board the vessel at Southern end of Banco Ingles, at approximate position Lat. 08° 05′ S., Long. 34° 50′ W. Vessels must give accurate ETA to their Agents, not to the Pilot Association, however when within VHF range, vessel should communicate with the Pilot Association, if no instructions have been received from the Agents or the Pilot does not board upon arrival.

ANCHORAGES: Most favourable position for ships to await pilot boat is 1.5 miles in direction 303° from "Picao", also just outside the 6 fathom line. In fine weather ships can sail to a position 8 cables from "Picao" in same direction just South of buoy. Anchorage in fine weather between above-mentioned places; in bad weather more than 1.5 miles in direction 303° from "Picao" and North and South of line, in water of 7 fathoms and 8 fathoms depth.

RESTRICTIONS: Vessels only enter port at night in cases of necessity. 3 ft. under keel clearance required when heavy swell running.

The port is situated between 2 channels, 1 to the North, the other to the South, which are the main fairways of the port. The Southern Channel is 850 ft. wide by 32 ft. 6 in. deep and the Northern Channel is 32 ft. deep but with variable width.

Tankers: May enter and leave during daylight only (0500 – 1800 hrs.). Also see "Tankers".

MAX. SIZE: Vessels 220 m. in length can enter, max. draft 31 ft. Also see "Tankers".

HEALTH: Free Pratique is granted by radio at any time, day or night. Masters must radio to "Saporto Recife", informing sanitary conditions of the vessel, reporting any case of sickness and requesting Free Pratique.

RADIO: A very powerful radio station "PPO"-Olinda Radio now available, operating on radiotelephony and radiotelegraphy, with VHF and HF in all maritime frequencies.

RADAR: No facilities available.

TUGS: Pilot brings vessels to inner harbour where tugs available to help to go alongside; not practice for tugs to meet vessels on Outer Roads. 3 tugs available, largest 1,680 h.p. Vessels up to 5,000 g.r.t. require 1 tug. Vessels over 5,000 g.r.t. require 2 tugs.

BERTHING: Vessels arriving at Recife Roads with 26 ft. can enter port on low tide and can go alongside from Sugar Terminal to Warehouse No. 9, over 26 ft. it is better to wait for high tides to enter, 31 ft. being the max. draft for entering Recife.

Depth alongside wharves:

Berth Nos. 1 – 2	31 ft.
Berth Nos. 3 – 6	30 ft.
Berth Nos. 7 – 14	28 ft. – 30 ft.
Berth No. 15	27 ft.

At anchorage (pool) in port, max. draft is 31 ft. Depth between 32 ft. and 26 ft., the max. rise of tide being 5 ft. Distance from the quay side, 200 m. Manoeuvring space is 1,640 ft. or 500 m. with a depth of 28 – 30 ft. max.; 590 ft. or 180 m. with a depth of 26 ft.

SPECIAL CARGO FACILITIES: *Cereals:* Silos with unloaders. Silos capacity: 25,000 tons (CAGEP), 23,500 tons (Moinho Recife).

Capacity of unloaders: 400 t.p.h. (Berth No. 1), 150 t.p.h. (Berth No. 9), 150 t.p.h. (Berths No. 9 – 10).

Sugar: Sugar Terminal: Warehouse capacity 200,000 tons, capacity of loader 1,000 t.p.h.

Molasses: Tanks: Capacity to store 14,000 tons, capacity of loader 120 cu.m.p.h.

Cranes:
1 Crane with capacity of 25 tons (Berth No. 2).
4 Cranes with capacity of 3.2 tons
3 Cranes with capacity of 5 tons
15 Cranes with capacity of 1.5 tons
3 Automobile cranes with elevated cab capacity of 8 tons, with 2 clamshell and 2 graiffers.

Forklifts:
1 special forklift for containers with capacity of 40 tons.
63 forklifts with capacity of 2.5, 3, 4 and 7 tons.

Floating Crane: 1 floating crane, capacity 100 tons.

STEVEDORES: Advise Agents of ETA at least 48 hours prior to arrival to make necessary berthing arrangements and hire dock labourers and stevedores in time.

MEDICAL: In *urgent cases* communicate with Agents immediately by means of Radio at least 48 hours prior to vessel's arrival if possible. It is necessary for vessel to enter port to enable sick person to land because on outer roads there is too much swell. Not necessary to Dock. Port Doctor must be advised by Agents and will board to see sick person and grant permission to land in Recife temporarily. Hospitals available also First Aid Stations equipped with ambulances. Port Authority also equipped with ambulance. Crews should always have yellow fever inoculation certificates.

TANKERS: Oil companies who keep petroleum products here are: Petrobras, Esso, Texaco, Shell and Atlantic. To discharge petroleum products tankers utilise 1×10 in. at Berth No. 1; 4×8 in. and 4×6 in. at No. 2; 2×8 in. and 2×6 in. at No. 3 and 1×8 in. and 1×10 in. at No. 4. Max. safe draft for a tanker to enter Recife is 30 ft. and entry must take place on high tide.

DENSITY: Low water density in Summer time 1028. High water density in Summer time 1027.

FRESH WATER: Supplied by Port Administration by means of pipelines in the docks. Vessels can be supplied alongside any quay; water fit for human consumption.

The local Port Administration has 1 water barge, capacity 210 tons, for supply to vessels inside the breakwater.

There are 71 hydrants, diameter 2.5 in., rate 15 – 20 t.p.h.

FUEL: Fuel oil and diesel can be loaded from network along the quay.
Berth No. 4: 3×8 in. and 3×6 in.
Berth No. 5: 4×8 in. and 4×6 in.
Berth No. 6: 3×8 in. and 3×6 in.
All with capacity 150 t.p.h. (fuel – 8 in.) and 45 t.p.h. – 50 t.p.h. (diesel – 6 in.)

Fuel oil and diesel also available by road trucks with capacity 30 tons at Berth Nos. 7 – 15.
Also see "General" before first port.

CONSULS: The following countries are represented in Recife/Pernambuco:

Argentina
Belgium
Costa Rica
Denmark
El Salvador
Ecuador
France
Germany
Great Britain
Guatemala
Honduras
Italy
Japan
Lebanon
Mexico
Netherlands
Norway
Portugal
Spain
Sweden
Switzerland
United States

REPAIRS: Available but limited to small mechanical equipment.

SURVEYORS: 1. Supervise and Superinspect are companies available to do cargo surveys.

2. Lloyd's Register, A.B., B.V., Salvage Association and U.S. Salvage are available at the port.

GANGWAY/DECK WATCHMEN: Compulsory.

OPENING/CLOSING HATCHES: Normally by stevedores but crew helps when stevedores not familiar with hatches of modern vessels.

CUSTOMS ALLOWANCES: One carton cigarettes and one bottle of spirits allowed each man at Customs discretion.

REPATRIATION: Facilities by air available.

AIRPORT: Situated 9 miles from docks. 228 flights per week.

TIME: GMT minus 3 hours.

HOLIDAYS: *National Holidays:* Fraternidade Universal (January 1st); Tiradentes (April 21st); Labour Day (May 1st); Brazil's Independence Day (September 7th); Nossa Senhora Aparecida (October 12th); Commemoration of the Republic (November 15th); Christmas Day (December 25th).

State Holidays: Nossa Senhora da Conceicao (December 8th); Nossa Senhora do Carmo (July 16th); Good Friday, Sao Joao (June 24th).

POLICE/AMBULANCE/FIRE: Harbour Police Tel: 2241024. Port State Fire Brigade Tel: 193. Ambulance (First Aid) Tel: 192. State Police Tel: 190.

TELEPHONES: Can be connected on board if requested.

BANKS: City Bank – Av. Marques de Olinda, 126. Tel: 224.7922. Telex: (081) 1093.

Bank of London – Rua Estreita do Rosario, s/no. Tel: 224.3729. Telex: (081) 1173.

STORING: See "Prelims".

1. Vessel can be stored only by trucks.
2. Vessel cannot store from barges. Storing must be done directly onto/from wagons and warehouses.
3. Trucks can proceed alongside at the berth.
4. Fork-lift trucks can be used on the jetty to handle stores.
5. As a rule, when cargoes go to the warehouses they must pay in advance a fee corresponding to one month's rent, which costs 1% of the value of the cargo. If the cargo remains another month then 2% of its value must be paid as a fee. If the owner of the cargo doesn't clear it through Customs in 3 months it will be confiscated. Certain kinds of cargoes, such as, fertilizers, wheat, corn, oil derivated goods and rollers have an anticipated dispatch and there will be 6 days free-of-charge for them to take them out of the port.
6. Local Riggers can be employed to assist with storing.

IDENTITY CARDS: Foreign crew members not permitted to go ashore without presentation of identity card, on which is a photograph of holder and personal details. These cards are provided by the Agent upon arrival. The identity card must be delivered on disembarkation to the Federal Police who will return it to the crew member on re-embarkation.

DEVELOPMENTS: Plans are underway to dredge the access channel to 11.5 m. It is also intended to construct new berths for general cargo and molasses tankers, and to modernise the existing berths.

AUTHORITY: Administracao do Porto do Recife – Portobras, P.O.Box 720, Praca Artur Oscar – s/no, Recife, PE, Brazil 50.000. *Tel:* 231.4044, 231.4144. *Telex:* 1018. *Contact:* Milton Pires de Souza, Administrator.

AGENT: Wilson Sons Agencia Maritima Ltda., Rua Mariz e Barros 71, Bairro do Recife, 50030-120 Recife PE. P.O. Box 116. Tel: (081) 224-9700 (After hours (081) 341-3785, (081) 441-4377). Telex: (81) 1298/4710 WSON BR. Fax: (081) 224-6161. Cables: Anglicus.

REGENCIA: 19.41 S. 39.41 W.

This terminal is located on the East coast of Brazil in the State of Espirito Santo, approximately 80 km. to the North of Vitoria. It consists of an oil storage area, a pipe-line both on land and underwater with a diameter of 16 in., 4 km. long and a set of buoys for mooring vessels. Its purpose is storage and passing to production of oil products from the fields of the State of Espirito Santo, principally the field of Lagoa Parda which is next to the terminal.

The set of buoys is designed to handle vessels up to 50,000 g.r.t., permitting a maximum draft of 13 m.

PILOTAGE: The area has Pilots to attend to the manoeuvring of vessels at the buoys.

TIME: GMT minus 3 hours.

AUTHORITY: Companhia Docas do Espirito Santo – CODESA, Av.Getulio Vargas No. 556, Vitoria, Espirito Santo, CEP 29000, Brazil. *Tel:* (027) 222-1311. *Telex:* (027) 2118. *FAX:* (027) 222-7360. *Contact:* Dirceu Cardoso, Director.

RIO DE JANEIRO: 22.54 S. 43.12 W. (See Plan)

(A) GENERAL CARGO SECTION.
(B) TANKER SECTION.

(A) GENERAL CARGO SECTION

LOCATION: The port of Rio de Janeiro is located geographically in the inlet on the coast (Western) of the Bay of Guanabara, in the city of Rio de Janeiro, capital of the state of Rio de Janeiro.

DOCUMENTS: See "General" before first port.

CLEARANCE: All clearance is taken care of at the Quarantine Anchorage (Pratique, Custom's, Immigration). Accommodation ladder must be rigged for this purpose.

Shipmaster's Report: Clearance also carried out alongside.

After clearance by the Customs a dark blue flag with a white five-pointed star in the middle must be shown day and night during vessels stay in port. Derat service is available. Inspection of the vessel will be made by inspectors to whom the valid derat or derat-exemption certificate must be shown.

PILOTAGE: The pilotage service is compulsory for national vessels of more than 42 ft. length and for foreign craft of more than 37 ft. length, in the following situation: From the Waiting Zone, in the anchorage (about 2 nautical miles to the North of Rasa Island), for any anchorage within the Bay of Guanabara.

Pilots board vessels at the following geographical point:

Lat. 23° 02′ S., Long. 43° 08′ W.

Requests for pilotage service may be made via the ship's Agent by telephone 24 hours ahead of the ship's arrival, or to Av. Rio Branco No. 4 – Room 1501, there being available a total of 33 Pilots.

Pilots may also be requested by radio, via Station PPR – Radio Rio, operating on frequencies 17,194; 13,105; and 8,364 kHz or via Channel 16 VHF for general call-up. For pilotage and other purposes, using Channels 14 and 12.

ANCHORAGE: The Bay of Guanabara is exceptionally sheltered from all winds encountered in the region. All vessels must pay maximum attention to the large number of areas and sectors where anchoring is prohibited, and which are shown on the nautical charts, and in particular on Brazilian Chart DHN No. 1501.

Permitted areas:

1. Inspection by Customs, Health and Maritime Police:
   Lat. 22° 53′ S., Long. 43° 09′ W.
2. For Warships:
   Lat. 22° 54′ S., Long. 43° 10′ W.
3. For loading and discharge:
   Lat. 22° 53′ S., Long. 43° 11′ W.
4. For LASH and container vessels:
   Lat. 22° 53′ S., Long. 43° 10′ W.
5. For LASH vessel barges:
   Lat. 22° 53′ S., Long. 43° 10′ W.
6. For vessels under repair or waiting for berths:
   Lat. 22° 51′ S., Long. 43° 10′ W. – 43° 11′ W.
7. Vessels carrying explosives:
   Lat. 22° 51′ S., Long. 43° 08′ W.

Prohibited Areas: Areas marked (DHN Chart No. 1501) where vessels must take special precautions:

(a) Anchoring prohibited: Pay attention to aircraft at low altitude during landing and take-off.

(b) Anchoring, fishing and the use of flames prohibited, due to the presence of pipe-lines, liquid gas storage areas, loading and discharge of inflammables.

(c) Anchoring prohibited: Access to the Almirante Tamandre Terminal, of Petrobras S.A.

(d) Prohibited area: No vessel, unless expressly authorised by the Commander in Chief of the Navy, may approach nearer than 200 m. during the day, the islands of Boqueirao, Rijo, Nhanqueta, Milho, Arueiras, Viraponga and Tipiti–acu.

Passage through the Boqueirao Channel is prohibited between sunset and sunrise.

The prohibited area of the Island of Boqueirao is marked by light buoys, painted yellow and orange.

(e) Anchoring is not permitted, due to the presence of various submarine cables, between the Island of Cotunduba and the Cagarras Islands, these cables coming ashore between the Copacabana and Leme Bridges.

(f) Presence of double poles, approximately 20 m. apart, running along the path of the canalisation, enable only small craft to pass.

(g) Anchoring prohibited: Presence of submarine cables and ducting.

(h) Traffic by vessels under the Presidente Costa e Silva Bridge is only permitted between the designated pillars.

Traffic under the main span is exclusively for vessels of more than 40 ft. draft or 50,000 d.w.t.

(i) Area prohibited to navigation, unless expressly authorised: The area including the islands of Flores, Carvalho, Ananas and Mexingueiro is marked by fixed buoys, topped by rectangles painted yellow and orange, containing warning notices.

(j) Area prohibited to navigation, unless expressly authorised.

RESTRICTIONS: Port is accessible to all vessels at all times and states of the tide. Attention must be paid to messages sent by Rio Radio about forbidden areas due to Marine exercises with live ammunition along the coast near entrance to the port.

Access Channel: Access to the port for large vessels is via a channel well dredged to a depth of 17 m., passing close to Copacabana Beach, and to the West of the island of Cotunduba. This channel goes as far as the port basin area, reaching also the oil terminals located inside the Bay of Guanabara. The safety depth located directly to the South of Leme Bridge is 20 m.

The Access Channels to Gamboa, Sao Cristovao, Caju and the Mineral and Coal Area are dredged, respectively, to depths of 10 m., 8.5 m., 6.0 m. and 12 m.

The total length of the main access channel is 18.5 km. There being a distance of 11.1 km. between the outer part of the Bay to the anchorages, and the other 7.4 km. in a Northerly direction, from the anchorages to the Almirante Tamandre Oil Terminal. Depths vary from 20 m. to 35 m.

Access Channel to the Quays:	*Length* (m.)	*Width* (m.)
1. Maua Pier Quay	—	—
2. Gamboa Quay	3,000	250
3. Sao Cristovao Quay	4,000	150
4. Caju Quay	5,000	80
5. PMC Quay (Oil Mineral & Coal)	3,000	150

Manoeuvring Basin: Such basins are located in the actual access channels to the quays. Normally, vessels manoeuvre off the quay and in front of their intended berth. The areas available at the various quays are as follows:

	Length (m.)	*Width* (m.)
1. Maua Pier Quay	400	200
2. Gamboa Quay	3,000	250
3. Sao Cristovao Quay	1,000	150
4. Caju Quay	1,000	80
5. PMC Quay	760	200

MAX. SIZE: No limits for entering port. Draft limited by berth depth.

HEALTH: Vessels from another Brazilian port automatically receive Free Pratique and should not fly quarantine flag. If suspected disease or fever on board it is advisable to cable Agent before arrival. Also see "General" before first port.

RADIO/VHF: Rio Radio, call sign PPR. Working frequencies 17,194; 13,105; and 8,364 kHz. VHF marine radiotelephone is available. Channel 16 for general call, Channels 14 and 12 for Pilot and harbour purposes.

TUGS: There is adequate tow-boat service at Rio de Janeiro varying from 220 h.p. to 1,200 h.p., tariff being divided into sections – 200 h.p. to 600 h.p. and 601 h.p. to 1,200 h.p. The number of tugs to be employed in a service depends on the tonnage of the vessel and/or nature of the berth and respective approaches, as determined by the naval authorities. Ship's lines usually employed.

Requirements: The assistance of tugs for mooring and departure operations is governed by the following rules:

(a) Manoeuvring at the Gamboa and Sao Cristovao Quays:
vessels up to 2,000 g.r.t. no tug.
2,001 to 5,000 g.r.t. 1 small tug.
5001 to 15,000 g.r.t. 1 large and 1 small tug.
15,001 to 30,000 g.r.t. 2 large and 1 small tug.
over 30,000 g.r.t. 2 large and 2 small tugs.

(b) Manoeuvring at the Caju Quay (Warehouses 31 to 33):
vessels up to 2,000 g.r.t. without tug.
2,001 to 5,000 g.r.t. 1 small tug.
5,001 to 15,000 g.r.t. 1 large tug and 1 small tug.
over 15,000 g.r.t. 1 large tug and 2 small tugs.

(c) Manoeuvring at the Mineral and Coal Quay:
vessels up to 2,000 g.r.t. without tug.
2,001 to 5,000 g.r.t. 2 small tugs.
5,001 to 15,000 g.r.t. 2 large and 1 small tug.
over 30,000 g.r.t. 3 large and 1 small tug.

(d) Manoeuvring at the Petroleum Terminals, Maua Pier and Docks:
vessels up to 4,000 g.r.t. 1 small tug.
4,001 to 15,000 g.r.t. 1 large and 1 small tug.
15,001 to 30,000 g.r.t. (loaded) 2 large and 1 small tug.
15,001 to 30,000 g.r.t. (in ballast) 2 large tugs.
over 30,000 g.r.t. (ballast) 3 large tugs.
over 30,000 g.r.t. (loaded) 3 large and 1 small tug.

The following must also be observed:

1. All vessels (tankers) manoeuvring at quays which are not terminals will be assisted by tugs as shown in section *(d)*.
2. The requirements in sections *(a)*, *(b)*, *(c)* and *(d)* will apply when the manoeuvre is effected under normal conditions.
3. In abnormal conditions, and according to the Pilot's judgement, other necessary measures will be adopted to ensure safety of the manoeuvre.

4. When a vessel is manoeuvring with the aid of a tug, the Pilot may call for a further tug with power compatible with the requirements of the manoeuvre.
5. A tug will be considered as large where its power is in excess of 600 h.p.

BERTHING: Berth usually accessible day and night. Ratguards obligatory.

For vessels loading iron ore, it is important that hatch coamings are not higher than 31 ft. above the water-line in order to pass under the loading belt.

Berth	*Length* (m.)	*Depth* (m.)	*Use*
1	150	9.1	General cargo, containers, steel
2	150	9.1	General, steel, chemical products, containers
3	150	8.3	General, steel, chemical products, containers
4	150	8.2	General, steel, containers
Maua 1	165	7.3	General cargo, containers
Maua 2	160	10.0	General cargo, steel, coal, minerals, containers, vehicles
Maua 3	160	9.2	General cargo, coal, chemical products, containers and new vehicles
Maua 4	160	8.3	General cargo, containers, steel, new vehicles
5	280	8.8	General cargo, steel, wheat, containers
7	150	9.1	General cargo, steel products, chemicals, containers
8	150	10.3	General cargo, steel, coal, containers
Frigorifico	150	8.5	General cargo, steel, containers
10	150	8.8	General cargo, steel, containers
11	150	9.1	General cargo, steel, containers
12	150	8.3	General cargo, steel, containers
Patio 8/9	150	9.2	General cargo, steel, fertiliser, coal, minerals, containers
13	150	7.4	General cargo, steel, containers
14	150	7.9	General cargo, steel, containers
15	140	9.0	General cargo, steel, lubricating oil, containers
16	140	8.8	General cargo, containers
17	140	8.2	General cargo, containers
18	140	7.2	General cargo, containers
22	240	7.1	General cargo, wheat, coal, minerals, salt, containers, Ro-Ro
Terminal de Sal	120	8.5	Coal, salt, containers
Parque de Carvao	790	8.0	General cargo, steel, fertiliser, chemical products, containers, Ro-Ro, new vehicles, coal, minerals, lube oil
30	100	7.0	General cargo, steel, containers, Ro-Ro
31	200	5.6	General cargo, containers
Parque de Inflamaveis	550	6.4	General cargo, steel, petroleum, vegetable oil, chemical products, containers
Parque de Minerio	480	12.0	General cargo, minerals, containers
Parque de Minerio	280	13.0	Steel products and minerals

Report: Companhia Docas do Rio de Janeiro advised the following in March 1990.

Quay	*Length* (m.)	*Depth* (m.)
Pier Maua	680	8.8–10.0
Cais da Gamboa	2,995	9.0–10.0
Cais de Sao Cristovao	1,275	6.0–8.5
Cais do Caju	873	5.0–6.5
Cais do PMC	285	11.0–12.0
Container Terminal	480	12.5

CARGO FACILITIES:

Passenger Station: 1 with an area of 2,035.5 sq.m.
Storage Areas: Covered (14) with an area of 14,215.95 sq.m.
Open – (20) with an area of 1,149,298.40 sq.m.
Warehouses: Internal – 22 with a total area of 93,600 sq.m.
External – 9 with a total area of 66,724 sq.m.
Refrigerated: area of 27,864 sq.m., volumetric capacity of 66,240 cu.m. or 15,200 tonnes.
Passenger Station – 1 with an area of 2,033 sq.m.
English Mill Area – 1 with an area of 2,033 sq.m.
Silos:
Rio de Janeiro Mill:
1 with 24 cells with 6,000 tons capacity
1 with 40 cells with 12,000 tons capacity
1 with 17 cells with 20,000 tons capacity.
Da Luz Mill:
1 with 42 cells with an individual capacity of 320 tons and a total of 15,000 tons.
Guanabara Mill:
10 with 1,500 tons capacity each.
2 with 380 tons capacity each.

Observation: There are 5 suction units for wheat discharge, with a nominal capacity of between 70 t.p.h. and 160 t.p.h.

Terminals:
Minerals:
Movement capacity: 60,000 tons per day.
Storage capacity: 250,000 tons
Normal removal rate: 6,000 t.p.h.
Length of transport conveyors: 2,129 m.
Salt:
An area of 2,157 sq.m.
Containers:

Container handling occurs as far as Caju Quay, and the areas adjacent to internal warehouse Nos. 30, 31, 32. Warehouse No. 32 (internal) is used for containerised cargo and has a total area of 50,000 sq.m.

Container discharge can be effected on all quays intended for deep sea and coastal vesels, i.e. from the Maua Pier as far as internal warehouse No. 18.

When a container is discharged on to the quay, this occurs onto trucks which go to the Terminal Area which can accommodate up to 2,673 units (including 270 reefer containers). The equipment used for container discharge and handling comprises 2×32 ton portainers, 2×32 ton transtainers on rails, 4×10 ton forklifts, 6×32 ton top loaders and various supporting equipment.

Also, the Caju Quay has facilities for loading and discharge operations of "LASH" type vessels. At the end of this quay, there was recently constructed a terminal for Ro/Ro vessels for intermodal purposes. Also, on the Caju Quay, there is an area for storage of heavy lifts, covering 29,272 sq.m.

EQUIPMENT:

Cranes: Jib – 96 with capacities from 3 tons to 40 tons.
On tyred wheels: 10, with capacities from 30 tons to 150 tons.
Railborne: 1 of 12 tons.
Stacker Trucks: 161 with capacities from 3.5 tons to 37 tons.
Winches and Floating Cranes: Winch "Piaui" with 250 tons capacity; Winch "Presidente Castelo Branco" with capacity of 200 tons.
Tractors: On tyred wheels: 10 with capacity of 50 tons to 100 tons traction
Track Mobile (Road/Rail): 6 with capacity of 700 tons to 1,500 tons traction.
Lorries: 40
Trucks: 19, from 20 tons to 40 tons.
Mechanical Shovels: 8, from 2.5 cu. yards to 4 cu. yards.
Grain Suction Units: 3×300 t.p.h., 2×70 t.p.h. (portable).
Rolling Bridges: 196, from 1.5 tons to 2 tons.
Launches: 4 with power from 35 h.p. to 150 h.p.
Locomotives: 17, with capacity from 550 tons to 1,500 tons traction
Underground Crushers: (for minerals): 1 for 2,000 t.p.h. (discharging 2 wagons at once); 1 for 4,000 t.p.h. (discharging up to 6 wagons at once).

STEVEDORES: Cable Agent ETA 36 hours before arrival in order to arrange gangs required. When arriving during week-ends or on Monday, Agent needs ETA on Friday afternoon. Loading/discharge rates:
General cargo cases 7 to 8 tons per gang/hour.
Bags 15 tons per gang/hour.
Grain in bulk 1,000 tons per eight hours.
Coal in bulk 7,000 tons per day.
Loading iron ore 25,000 tons per day.

MEDICAL: All facilities available. If doctor needed on arrival or making emergency call to land sick persons, cable ETA 12 hours before arrival.

TANKERS: See "Section – B".

DENSITY: Salt water at entrance to bay. Further inland water often brackish, and density varies with tide.

FRESH WATER: Available alongside from 87 points, loading rate 50 t.p.h. Also available by barge, capacity 450 tons, loading rate 100 – 200 t.p.h.

FUEL: Available by barge at anchorage. Rate for fuel oil 350 t.p.h. and gas oil 200 t.p.h. Also see "General" before first port.

CONSULS: Most countries have consuls in Rio.

REPAIRS: All types deck and engine repairs can be effected. Five dry docks. Largest dry dock, length 259 m., breadth 34 m., max. draft 14 m.

WATCHMEN: Gangway watchmen strongly recommended for any vessels working cargo with shore labour on board. Watchmen from shore not necessary for coal, iron ore, and oil cargoes.

PIRACY: Two crew members were killed when a vessel was raided in February 1992. The vessel was at anchor near the Petrobras Terminal. The pirates were armed with machine guns and pistols.

CUSTOMS ALLOWANCES: Each crew member allowed 2 cartons of cigarettes and one bottle wine or spirits.

AIRPORT: Santos Dumont, in the centre of the city, and Rio de Janeiro International, located on Governor's Island (Ilha do Governador).

POLICE/FIRE/AMBULANCE: Police 190; Maritime Police 263-3747; Ambulance 222-2121; Fire 232-1234.

HOLIDAYS: Requests for operational services for these days must be made in advance (minimum of 24 hours). The only holidays not worked are 1st May and 2nd November.

Fixed:

National:		Regional:
	1st January	20th January
	21st April	
	1st May	
	7th September	
	12th October	
	25th December	

Movable:

Monday and Tuesday of Carnival
Ash Wednesday
Good Friday
Corpus Christi

Commemorative Days:

28th January (Port Day)
2nd November (All Saints')

Federal and State Government Departments, as well as banks, do not work on Saturday.

TIME: GMT minus 3 hours.

TELEPHONES: Available at Warehouses 1–8 on request to the Brazilian Telephone Company.

SHORE LEAVE: Shore leave is permitted.

IDENTITY CARDS: Foreign crew members not permitted to go ashore without presentation of identity card, on which is a photograph of holder and personal details. These cards are provided by the Agent upon arrival. The identity card must be delivered on disembarkation to the Federal Police who will return it to the crew member on re-embarkation.

GENERAL: Vessels to fly signal letters when manoeuvring in port and special Brazilian Customs flag after reception.

Charts: Brazilian Charts No. 1501, 1511, 1512 and 1531.

DEVELOPMENTS: Caju Quay is being widened and dredged to 12 m. to provide 2 Roll-on/Roll-off berths, 1 sulphur and salt berth, and 1 heavy lift general cargo berth.

SHIPMASTER'S REPORT: 1980.

Clearance: Clearance of vessels undertaken at quarantine anchorage and alongside.

Identification Cards: Identification Cards required for foreign crews but no picture necessary. Cards must be shown when leaving and entering the dock.

Visitors: No unauthorised persons are allowed on board. If unauthorised persons found on board, heavy fines are imposed.

Entering and Leaving: When entering and leaving at night, the full name of the vessel has to be flashed on the Aldis Lamp to the naval signal station. No VHF communications available.

Ratguards: Should be in place when alongside.

Flags: At all ports in Brazil the Authorities are very strict about flying of flags (no tangles). The "G" flag and "H" flag should be flown when Pilot required or on board.

AUTHORITY: Companhia Docas do Rio de Janeiro, Rua Acre No. 21, 4° Andar, CEP – 20.081 Centro Rio de Janeiro, R.J. Brazil. *Tel:* (021) 233-4522. *Telex:* (021) 22163 CDGB. *Contact:* Pedro Batouli, President.

Porto do Rio de Janeiro (Riopor), Av. Rodrigues Alves No. 20, 4° Andar, Rio de Janeiro, CEP – 20.081 R.J. Brazil. *Tel:* (021) 291-2122. Port Management - (021) 263 1518, 263 1796. *Contact:* Arnaldo Soares da Silva, Manager.

(B) TANKER SECTION

All information refers to the "Petrobras Terminal – DTSE-GEGUA" *unless otherwise stated.*

LOCATION:

DTSE-GEGUD is an oil terminal consisting of 5 different mooring sites all of them located inside Guanabara Bay.

These 5 mooring sites are linked to Ilha d'Agua and then to the mainland (Duque de Caxias Refinery-Reduc) by submarine pipe-lines.

South Dock-Island (main)
Lat. 22° 49.2′ S. East Berth (PP1) or
Long. 43° 09.2′ W. West Berth (PP2)
North Dock-Island (secondary)
Lat. 22° 38.3′ S. East Berth (PS1) or
Long. 43° 09′ W. West Berth (PS2)
Ilha Redonda Pier
Lat. 22° 48.1′ S. West Berth (IR)
Long. 43° 07.2′ W.

IMPORTANT FEATURES:

1. Five mooring berths, in the vicinities of Ilha do Govenador (the largest of Guanabara Bay), are available for loading and discharging of crude oil, derivatives and LPG.
2. Pilotage is compulsory for any shifting inside the bay.
3. Safety Rules are strictly enforced.
4. Display of quarantine signal – "Quebec" flag – must be maintained until Free Pratique is granted.
5. Neither in port nor in Brazilian coastal waters may dirty ballast be pumped overboard.
6. Emergency signal consists of a series of short blasts followed by a long one on the ship's whistle or siren.
7. Tankers up to 135,000 d.w.t. operate at the terminal. Draft is 15.85 m. (52 ft.) or below at LW.

Remarks: Non-compliance of item 7 above stated will result in rejection of the ship as being unsuitable for this terminal.

DOCUMENTS:

Immigration and Maritime Police: The following documents have to be submitted to the boarding Maritime Police Officials:

1 copy Crew List.
1 copy General List.
3 copies Passengers List.
3 copies Passengers-In-Transit List.

Health: The following documents have to be submitted to the boarding Health Officials:

1 copy Vaccination List.
1 copy Certificate of Derat Exemption.
1 copy Maritime Health Declaration.
1 copy List of Drugs and Narcotics.
1 copy Passengers-in-Transit List.
1 copy Passenger List.

Customs: The following documents have to be submitted to the boarding Custom Officials:

3 copies Crew List.
3 copies Spare Parts List.
3 copies Stores List.
3 copies Provisions List.
3 copies Drugs and Narcotics List.
(if not included in the Stores List).
1 copy Cargo Manifest.
1 copy Bills of Lading.
2 copies Passengers List.
2 copies Passengers-In-Transit List.
3 copies Crew Personal Effects List.
3 Passengers Personal Effects List.

Note: Supplies, stores, cigarettes, cigars, tobacco, alcoholic beverages, arms, ammunitions, souvenirs, playing cards, drugs and narcotics, medicines (not in use) etc., must be kept under lock and key; the doors of the storage rooms will be sealed by the Customs Officials and the seal must be kept unbroken throughout the vessel's stay in port.

Any goods or personal effects omitted from the lists may be confiscated.

Extracts of Sea Protest drawn out from the Log Book must be submitted to the boarding Customs Officials in case of accident which has caused damage or loss of cargo or part of it.

Ship's Agent: The ship's Agent will need the following documents:

3 copies Passengers List.
3 copies Passengers-In-Transit List.
3 copies Crew List.

The Agent will take care of necessary steps in order to grant the Disembarkation Cards.

Leaving Clearance: Masters must appoint their ship's Agent at Rio de Janeiro and have their International Safety Certificates in force. It is also necessary for vessels Leaving Clearance:

Leaving Permit from Customs.
Leaving Permit from the Captain of the Port.
Leaving Permit from the Maritime Police.
Leaving Permit from Brazil Mail (Passe de E.C.T.).

General: The Customs flag (blue with a white star) must be flown from the vessel's mast or yard throughout the vessel's stay in port.

Special licence from the Captain of the Port must be granted for passengers bound for foreign countries and so their names must be given and their passports must be delivered to Agents at least 48 hours before they apply for the vessel's leaving permit.

The number of disembarking passengers must be radioed to Agents at least 24 hours before the vessel's expected time of arrival.

APPROACHES: The safe access to the Terminal is made through a main (deep but narrow) channel swept to 17 m. (55 ft. 9 in.) that begins between the Island of Cotunduba and the Point of Leme. It extends as far as the East neighbourhood of the South Dock-Island East Berth. As long as the ship does not exceed 11.3 m. (37 ft.) draft, the access can also be undertaken through the North – South axis passing by Ilha Cotunduba and the bar's entrance (secondary entry, larger but shallower).

A long bridge (Rio-Niteroi), linking Ponta do Caju (West) to Ilha do Mocangue Grande (East) it crosses the swept channel. Three navigable spaces: – the central one 270 m. (886 ft.) wide; 63 m. (206 ft.) high at MLWS, the side ones with 170 m. (557 ft.) in width – will maintain the safe access for ships.

A shoal (reef) in 11.5 m. (38 ft.) deep lies about 0.3 m. E.N.E. of Lage Is. just after the bar's narrow entrance (between Sao Joao and Santa Cruz Points).

A wreck marked by a green buoy (CS) lies sunk nearly 1.3 miles Eastward of Cotunduba Island.

When approaching the coast of Guanabara Bay entrance, vessels should keep a particularly sharp lookout for fishing boats and small craft.

ANCHORAGE: Vessels should anchor N.E. of Ilha Fiscal for port authorities clearance (Lat. 22° 53′ S., Long. 43° 09′ W.). After Pratique has been granted they should change anchorage site while awaiting for a berth alongside.

Vessels should anchor clear of the 17 m. (56 ft.) swept channel. They must take care to avoid dropping their anchors on the route of submarine cable near to a line joining the islands of Villegagnon and Boa Viagem.

For further information refer to Brazilian Charts No. 1501, 1511 and 1512 (DHN-Navy Hydrographic Office).

Prohibited Anchorage: Under no circumstances should ships drop anchor Westwards and between South and North platforms due to the existence of submarine pipe-lines connecting Ilha D'agua to the platforms and to Ilha Redonda.

Ships are also prohibited from anchoring in the fairway of the ferry boats plying between Rio and Niteroi.

Also see "Pilotage".

READINESS: The time of readiness, according to the contract, is usually considered the time the vessel reaches the anchorage area beyond the Rio-Niteroi Bridge or the time the vessel berths at the pier, as soon as the mooring work is finished. Notice of Readiness will be accepted at the time the tanker is in all respects ready to operate.

PILOTAGE: Pilotage is compulsory after the ship's Free Pratique has been granted.

Request for pilotage service may be made either to the Harbour Pilot's Working Co-operative (Pilot Station VHF Radiotelephone – Channels 16 and 12. Listening period from 0600 to 1800 hrs. local time) or, through ship's Agent, 24 hours beforehand.

For ships of any tonnage and draft of more than 37 ft. (11.30 m.) coming from South, pilot position is at Lat. 23° 00′ 00″ S., Long. 43° 08′ 48″ W. Coming from the North, the pilot position is Lat. 23° 00′ 00″ S., Long. 43° 06′ 12″ W.

For tankers less than 11.30 m. (37 ft.) draft, Pilot embarks beyond Sta. Cruz Point on the Villegagnon Lighthouse and Boa Viagem Island alignment.

A pilot ladder must be safely rigged for immediate use and be long enough to reach the Pilot's launch. At night adequate lighting must be rigged so as to enable the Pilot to approach and board the vessel. In addition, a boat rope should be led along the side, from well forward.

A lifebuoy with 27 m. (15 fathoms) of rope must be conveniently placed in the vicinity of gangway for use in emergency. Vessels should always make a lee.

Tankers of 40,000 d.w.t. or over are requested to have a pilot ladder (preferably with a centre gripping line) rigged alongside the accommodation ladder in order that the Pilot may transfer to it after about 2 m. to 3 m. (6 ft. to 10 ft.).

RESTRICTIONS: Ships usually moor and unmoor at any hour except when an unexpected event arises, such as breakdowns, gales, heavy squalls, etc.

See "Pilotage".

TIDES: *Tide and Tidal Currents:* The mean tide level at Rio de Janeiro is 0.69 m. (2.2 ft.), Spring range 1.38 m. (4.5 ft.). The usual rate of the tide is about 0.7 knots; Springs run at 1.5 knots. The ebb runs much longer than the flood, especially after heavy rains.

MAX. SIZE: Tankers up to 135,000 d.w.t. will operate in the terminal. Draft is 15.85 m. (52 ft.) at low water.

Berthing capacity is limited by structural resistance of installation, actual depth of the swept channel and weather conditions.

South Dock Island (Main)

East Berth (PP1) – Tankers up to 135,000 d.w.t. drawing up to 15.85 m. (52 ft.) draft can moor and unmoor at any time.

Structural resistance of pier was designed to handle tankers up to 105,000 d.w.t. but under special conditions this limit can be extended to 135,000 d.w.t.

West Berth (PP-2):

(a) During the daylight hours, berth can receive tankers up to 135,000 d.w.t. drawing up to 12.00 m. (39.37 ft.) at low water. Berthing is starboard side alongside.

(b) Tankers up to 90,000 d.w.t. will be unberthed at any time during the day or night. Max. draft 12.80 m. (42 ft.) at low water.

(c) Tankers up to 35,000 d.w.t., drawing 11.00 m. (36.08 ft.) maximum, will be berthed or unberthed during the night or the daytime, arriving or sailing from North or South of the pier.

(d) Tankers up to 35,000 d.w.t. with draft from 11.00 m. (36.08 ft.) up to 13.00 m. (42.65 ft.) will be berthed starboard side alongside during ebb tide.

Note: After sunset, the unberthing for sailing is limited to 11.30 m. (36.08 ft.) maximum draft for both berths, and is the access channel limitation.

Shifting ship from East to West Berth only by daylight, draft 12.8 m. (42 ft.), fair weather and wind speed up to 2 Beaufort.

North Dock-Island (Secondary)

East Berth (PS1) – Tankers up to 35,000 d.w.t. can moor either by day or night.

At low tide, the maximum draft permitted is 10.4 m. (34 ft.).

West Berth (PS-2):

(a) Same as PS-1, can receive tankers up to 35,000 d.w.t., but limited to 8.50 m. (27.87 ft.) draft.

(b) Tankers up to 10,500 d.w.t. and 8.50 m. maximum draft will be manoeuvred at any time of the day or night.

Ilha Redonda Pier (IR):

Pier suitable to receive tankers with refrigerated LPG, semi-refrigerated and pressurised plants.

(a) Pier can receive tankers up to 25,000 d.w.t. drawing 8.50 m. (27.89 ft.) maximum draft and 200 m. (656 ft.) LOA.

(b) Tankers up to 6,000 d.w.t. with 6.50 m. (21.33 ft.) maximum draft can unberth at night-time if it is moored port side alongside.

(c) Tankers of more than 190 m. (623.37 ft.) LOA shall berth during daylight hours only.

HEALTH: *Free Pratique:* Vessels must anchor N.E. from Ilha Fiscal for Port Authorities clearance. After Free Pratique is granted vessels must change anchorage for waiting.

Free Pratique must be requested 24 hours prior to arrival via the ship's Agent.

Vessels must remain at anchorage clear of the 17 m. (56 ft.) swept channel, and take good care not to drop anchor in the vicinity of the submarine cables along a line joining Pta. do Calabouco and Pta. Gragdata.

RADIO: *Arrival Advice:* Vessels chartered to Petrobras bound for Rio de Janeiro or vessels coming to operate in one ofthe three DTSE/GEGUA Terminals, shall advise ETA 72 hours, 48 hours and 24 hours before arrival, directly to ship's Agent via PPR-Radio Station, telex or fax.

Ship and Cargo Information List: The ship must send to the Terminal GEGUA/GINAV through the Agent 24 hours in advance of arrival, via telex or fax, the following information:

(a) Ship's name.
(b) Flag.
(c) Master's name.
(d) LOA.
(e) D.w.t.
(f) Beam.
(g) Depth.
(h) If vessel has IGS and if operational.
(i) Cargo on board, quantity and grade.
(j) Time requested and maximum rate for unloading.
(k) Cargo required and maximum rate for loading.
(l) Ballast or slops grade and quantity.
(m) Time for pumping ballast or slops.
(n) Loading/unloading can be concurrent with ballast/deballast.
(o) Arrival and sailing drafts, in metres.
(p) Bunker type and quantity requested.
(q) Fresh water quantity requested.

VHF: The terminal radio and communication centre is located in the Oil Handling Control Room situated at Ilha D'agua. There is a R/T set operating 24 hours a day, on Channel 16 (Delta) and manned by terminal operators.

It is strictly prohibited to use vessel's wireless transmitters in the port of Rio de Janeiro.

Non-compliance with this regulation may result in a fine being imposed on vessel by the authorities.

Transmitters: Radar and radio transmitting aerials must be switched off and grounded when ships are at berth. VHF communications with terminal and stand-by tug are permitted.

TUGS: Tugboat assistance is rendered by 3 Petrobras tugs. Private tugboats are also available. While rendering such assistance tugs act under the orders of the Harbour Pilot. All manoeuvring orders will normally be given by VHF telephone on Channel 13 (Alpha). However they usually keep watch on Channel 16.

The tugs are usually stationed either at the terminal dolphin or "L" pier on Ilha D'agua and also in the Port of Rio de Janeiro. The Pilot in consultation with the Master, will decide the number of tugs required for each berthing or unberthing operation. Safety of the Terminal installations demands, at least, two tugboats, even for bow thruster equipped ships. In any case, all recommendations of Port Authorities must be followed.

BERTHING: *Petrobras:* DTSE-GEGUA is an oil terminal consisting of five distinguished mooring sites located on different places inside the Guanabara Bay.

All these mooring sites are linked to Ilha D'agua and then to the mainland (Duque de Caxias Refinery – REDUC) by submarine pipelines. Three of them are dock-islands, i.e. island-type offshore platforms lying near to the Eastern edge (about half mile away) of Ilha D'agua (where storage tanks, operation controlling room and part of the administrative staff are placed). Two of these dock-islands are squared platforms (South and North) with two berths each (East and West). The South one is designed for larger tankers consisting of two mooring and two breasting dolphins on each side of the platform. It is normally used for the discharge of crude oil.

The North Dock-Island (smaller) has only two mooring dolphins on each side. Two berths (East and West) are also available. It is generally used for handling derivatives.

Besides these mooring berths, there is a berth located on Ilha Redonda (approx. 2 miles E.N.E. of Ilha D'agua). This installation comprises one single berth (West), head of a small pier. It handles LPG only. Four spherical storage tanks (7,000 tons) and 3 cylindrical (refrigerated) storage tanks (20,000 tons) can easily be seen from incoming vessels.

Recommended Mooring: Vessels, which moor at the berths of Petrobras Terminal DTSE/GEGUA, should adopt and follow the underlined standards for mooring, even though the adequate ship mooring is the Master's responsibility, also the interest of the Terminal to ensure that tankers are safety moored.

Main Pier:

Tankers more than 60,000 d.w.t.:
Forward: 4 head lines, 2 springs and 3 breast lines.
Aft: 4 stern lines, 2 springs and 3 breast lines.
Tankers less than 60,000 d.w.t.:
Forward: 3 head lines, 3 breast lines and 2 spring lines.
Aft: 3 stern lines, 3 breast lines and 2 spring lines.

Secondary Pier:

Tankers up to 35,000 d.w.t. are recommended to use the following moorings:
Outer and inner berths:
Forward: 3 head lines, 2 breast lines and 2 spring lines.
Aft: 3 stern lines, 2 breast lines and a spring line.

Ilha Redonda Pier:

Forward: 3 head lines, 1 breast line and 2 spring lines.
Aft: 3 stern lines, 1 breast line and 2 spring lines.

In special cases, when ship length is more than 200 m., it is recommended to double the breast line.

Standards:

(a) The ropes used in same direction should always be of same type, same standard and same material.

(b) If tails are used on wire ropes, the tails must be same size, same standard and same material.

(c) Moorings must be arranged symmetrically with regards to amidships.

Other Terminals: *Manguinhos Terminal* – Operators: Refineria de Petroleo de Manguinhos. At Manguinhos terminal a draft of 36 ft. is permissible. Conventional buoy berth in which two ship's anchors and four buoys are used, one on starboard forward of the bow and three buoys aft. Two ship's lines run to each buoy. The terminal is situated in the inner harbour of Rio de Janeiro and close to the quays. Three 8 in. hoses from an underwater pipe-line are connected to the ship's manifold. Maximum back pressure is 100 p.s.i., at the ship's rail. Discharge rate is about 1,000 t.p.h. Care is to be taken that the vessel shall not exceed a draft of 40 ft. during discharge. Bunkering is permitted when discharging cargo.

Riberia Terminal – depth alongside 30 ft.
Shell Terminal – " " 31 ft.
Texaco Terminal – " " 29 ft.

CARGO INFORMATION: *Terminal Facilities:*

South Dock-Island (PP): Loading/Discharging.

	Lines			*Hoses/Arms*		*Max.*
Grades	*No.*	*Dia.* (in.)	*Rate* (cu.m.)	*No.*	*Dia.* (in.)	*Pressures* (p.s.i.)
Diesel Oil/Kero	1	12	1,100	2	8	243
Gasoline	1	12	1,100	2	8	243
	1	26	1,100	2	8	243
Fuel Oil (HPP, LPP)	2	12/16	1,300	2	8 & 12	243
Water	1	6	50	1	2.5	150
LPP Crude Oil	1	32	2,640	3	8 & 12	78
	1	26	1,530	3	8 & 12	78
Ballast/Slops	1	16	1,000	2	8 & 12	250
Naphtha	2	12/14	1,200	2	8	243

Grades	Lines		Rate	Hoses/Arms		Max.
	No.	Dia. (in.)	(cu.m.)	No.	Dia. (in.)	Pressures (p.s.i.)
North Dock Island (PS): Loading/Discharging.						
Diesel Oil/Qav	1	12	1,100	2	8	243
Gasoline/Alcohol	1	12	700	2	8	243
Fuel Oil (HPP/LPP)	1	14/16	1,300	2	8 & 12	243
Water	1	4	50	1	2.5	150
Ballast/Slops	2	10/16	1,000	2	8 & 12	150/243
HPP Crude Oil	1	26	1,530	1	12	78
Naphtha	2	12/14	1,200	2	8	243
Ilha Redonda Pier (IR): Loading/Discharging.						
LPG Propane	1	12	800*	1	10	260
	1	8	300**	1	10	260
Butadieno	1	12	200***	1	10	260

* Refrigerated. **Pressurised. *** Semi-refrigerated.

LOADING: Before any loading commences, the Officer on watch may be invited to be present at the sample taking from the shore pipe-line that will be used for the oil handling. Likewise, after the first 150 cu.m. have been loaded (about 20 minutes) a new sample will be taken. From such a sample the ship will receive 2 sealed and tagged bottles containing the cargo.

At the beginning of diesel and kerosene loadings the vessel should concentrate the product in a single tank. As soon as the innage reaches 0.70 m. high, then other tank valves may be switched. From that part of the cargo a sample is obtained and tested in the laboratory, if the results stand between acceptable stated specification limits, loading will go on without any drawbacks. During the loading of this first tank, the ship is requested to flush her pipes with the same grade being handled.

Discharge of high pour point (HPP) oils will be regarded separately (as far as minimum pumping temperatures are concerned) in conformity with oil and ship characteristics.

A time sheet form will be given to the ship's Master upon arrival. The form is regarded as a receipt for information on operational procedures, oil to be loaded, etc.

Hose Connection: Pier crews are on duty continuously to handle oil hoses/arms and mooring lines. Mooring lines on board vessel will not be handled by Petrobras personnel.

Permitted Freeboard: Vessels are advised not to exceed the safety arm load limits, this should keep the freeboard such that the arms do not suffer any damage.

The maximum height when moored is:

Main Pier – 15.60 m. (51.16 ft.) at the ebb tide.

Secondary Pier – 14.0 m. (45.92 ft.) at the ebb tide.

Ilha Redonda Pier – the maximum height is 19.0 m. (62.32 ft.).

Manifolds Watchman: One ship's accredited crew member must at all times be near the manifold of the side that is operating, to ensure permanent communication with the Terminal operations.

MEDICAL: Medical treatment and/or hospitalisation, if required, is provided in local clinics. Dentists are also available. For emergency cases (serious illness or injury) first aid may be requested by the Master via VHF or internal telephone.

FRESH WATER: Facilities may be arranged to supply water in North and South platforms only. Water supplying barges are also available.

FUEL: The Terminal can supply any type of bunkers such as Bunker C, MGO, MDO and MF, with different viscosities at international prices.

The request should be sent 72 hours before ship's arrival, to PETROBRAS-DECOM (Commerical Dept.) and Dinav (Ship Bunker Division) through the Agent. Telegraphic address: Petrobunker. Telex: 021-23335 Petrobunker. Fax: 021-2628134. Tel: 021-5343292.

The supply rates are about 200 t.p.h. for fuel oil, 180 t.p.h. for diesel oil and 200 t.p.h. for intermediates.

Orders for bunkers should be placed, a minimum of 48 hrs. in advance, to: Marine Fuel Division, Commercial Department. Telegraphic Address: Petrobrasecope. Telex number: 031422 or 031423. Rio de Janeiro – Brazil.

Lubricating Oil: Marine lubricant orders should be placed a minimum of 3 days in advance for foreign vessels and 5 days in advance for national vessels, to: BR – Nucleo Maritimo, Praca 22 de Abril No. 39, 7th Floor, Centro, Rio de Janeiro, Brazil, Postal Code: 20.021-370. Telex: (021) 213-0853 BR-Nucleo Maritimo. Fax: (021) 217-8240. Tel: (021) 217-8139.

Note: Requests via Agent to be made 3 days before arrival.

BALLAST: All ballast should be pumped to the terminal slop tanks. Under no circumstances should it be pumped into the sea even if the ballast is said to be clean. As soon as the ship is moored, the Terminal Representative must be told of the quantity of ballast on board and the estimated time to pump it out. Right after discharging a sludge ballast of high pour point (HPP) oil, tankers are asked to flush the line with water from the main suction inlets. The Terminal Representative must be notified 30 minutes before the ship will be out of ballast.

There are two sludge tanks with a total capacity of about 17,000 cu.m. The terminal is particularly interested in having vessels complete the deballasting operation promptly after berthing in order to minimise time at berth. Simultaneous loading and deballasting is encouraged on properly equipped vessels.

REPAIRS: Repairs of all kinds can be effected in Rio de Janeiro. There are floating cranes with a capacity of 100 tons. Divers service may be obtained.

Repair and maintenance services for radar, radio, satellite navigator, gyro compass, echo-sounder, etc., are available. The repair man should be contacted through ship's Agent.

DRY DOCKS: Dry Docks to hold ships up to 33,000 d.w.t. are available.

SURVEYORS: Lloyd's Register of Shipping, DV Norske Veritas, American Bureau of Shipping and Bureau Veritas have representatives in Rio de Janeiro. Advance notice should be given in order to arrange for an appointment.

Cargo Inspectors: E.W. Saybolt & Co., Rua Bras Cubas, 3 11.100 – Santos – SP. Tel: 4-6638.

SGS do Brasil S.A., Av. Pres. Vargas 446, 13° Andar, 20.071 – Rio de Janeiro – RJ. Tel: 223-1252. Telex: (021) 23.588.

GANGWAY/DECK WATCHMEN: Port watchmen are compulsory on all vessels coming from overseas throughout the vessel's stay in port.

PIRACY: Two crew members were killed when a vessel was raided in February 1992. The vessel was at anchor near the Petrobras Terminal. The pirates were armed with machine guns and pistols.

TIME: GMT minus 3 hours. GMT minus 2 hours in Summer (October to February).

SERVICES: Compass adjustment or radio direction finder calibration can be effected by competent hydrographers and Extra-Masters. Contact Agents or Pilot's station.

SHORE LEAVE: Ship's Crew is not permitted ashore for any purpose whatsoever until Pratique has been granted. Luggage and packages are subject to Customs Official and/or Terminal Watcher's inspection. As a rule shore leave is permitted with the above stated restrictions. Vessels are not permitted to sail unless all crew members are aboard. In case of Seaman left ashore for any reason whatsoever all expenses are for ship's account.

GARBAGE DISPOSAL: Daily collection service by barge. Garbage service: Equiport, Tel: 296-4442.

WASTE OIL DISPOSAL: Waste oil disposal is available at Berths PP-1, PP-2, PS-1 and PS-2. Capacity 20,000 cu.m. Vessels can also deballast at anchorage by barge.

SEAMAN'S CLUBS: The Seaman's Club provides many services. Tel: 233-9691 (24 hours).

CURRENCY: Real. U.S.$ 1.00 = R$ 1.00.

GENERAL: *National Flag:* The Brazilian flag must be flown daily from 0800 hrs. until sunset and when arriving and leaving port.

Turnround: To promote the economical operation of their vessel, Masters are requested to co-operate with Terminal Representatives in minimising their in-port time. Vessels requiring excessive time to complete operations will be given Letters of Defficiency (Protest).

Gangway: All vessels using the port of Rio de Janeiro must provide a safe gangway. The use of rung ladders (sea ladders) is contrary to Port Regulations and Port Authorities will not board except by means of a safe gangway or accommodation ladder. A lifebuoy with 27 m. (15 fathoms) of rope must be conveniently placed in the vicinity of the gangway for use in emergency. It will be the responsibility of ship to provide and maintain this equipment.

At night, the gangway must be adequately lit. In addition, a boat rope should be led along the side, from well forward. A special safe gangway will be provided in the South and North Dock-Islands.

Stores: Provisions and stores are available. Requisitions should be conducted through the Agents. Ship chandlers are normally permitted to visit ships when specifically instructed by Agent.

Launches: Launch service for the transportation of personnel ashore must be arranged through ship's Agents.

Laundry: Laundry service is available each working day. Such service should be requested in the vessel's ETA message to Agents.

Photographing: The taking of photographs within the boundary of the terminal premises is prohibited.

Ratguards: Ratguards must be fitted to all mooring lines.

Sea Pollution: Brazilian law is very strict in regard to the pollution of harbour and coastal waters. Vessels should not discharge dirty ballast, ashes, refuse, etc., into the water. Heavy fines are imposed for violations. All overboard discharge valves from cargo tanks and bilges are to be conducted with the greatest care and vigilance in order that errors or delays in handling cargo valves may not result in overflows. All deck scuppers should be plugged to avoid harbour contamination should an oil spill occur.

Similarly, any hull leakages will be subject to equal restrictions. To offenders, fines will be charged (besides resulting delay) according to ship's tonnage, i.e. 2% of the largest country's minimum wage per each ship's (gross) ton.

Emergency Towing Wires: Two towing wire ropes (fore and aft) should be hung overboard to the water's edge in such way that tugs can easily make fast if an emergency situation arises.

Cleaning: Several contractors in the area provide labour for tank cleaning and mopping. Masters having need of this service should submit their requirements to ship's Agent who will contact and request a contractor to go on board to discuss details and estimate cost of work to be effected.

It must be pointed out that the Master of the vessel is solely responsible for the fitness of the ship's tanks for loading his next cargo, and will therefore be held liable for any contaminations of the cargo after loading, due to inadequate tank cleaning. Therefore it is up to him to decide the degree of tank cleaning necessary. He may, of course, seek advice from petroleum inspectors in this respect, whenever there is any doubt.

Charts: Brazilian No. 1501, 1506, 1511 and 1512. U.S. No. 24161 and 24162; British Admiralty No. 541.

Customs Watches: Sometimes while vessel is in port, Brazilian Customs Officials are assigned on board to ensure compliance with Customs Regulations. Meals must be supplied to these Officials during regular meal hours.

Important Telephone Number (PABX): Terminal's Executive Assistant, Operation Manager, Operation Supervisor, Marine Section, Safety Section and Medical Section 396-1515 (24 hours)

DEVELOPMENTS: A new berth is being built on Pombeba Island and dredged to 12 m. This is intended to relieve Ilha de Braes Port.

AUTHORITY: Petroleo Brasileiro S.A. – Petrobras, Avenida Republica do Chile, 65 – 12 Andar, Rio de Janeiro, CEP 20.035, Brazil. *Contact:* Divisao de Operacoes (Operations Division), same address as above, 12th floor.

Terminal: Petroleo Brasileiro S.A. – Petrobras, Rua Chapot Prevost 200, Ilha do Governador, Rio de Janeiro, Brazil, CEP 21910-030. *Tel:* (021) 534-6971, 6910, 6917. *Telex:* 55-2123335. *FAX:* (021) 534-6913. *Contact:* The Manager.

AGENT: Wilson Sons Agencia Maritima Ltda., Avenida Rio Branco 25, 7th Floor, 20093-900 Rio de Janeiro RJ. Tel: (021) 296-4422 (After hours: (021) 433-6383). Telex: (21) 22300 SBSV. Fax: (021) 233-2389. Cables: Anglicus.

RIO GRANDE: 32.03 S. 52.05 W. (See Plan)

DOCUMENTS: See "General" before first port.

Shipmaster's Report: 1980.

Also required: 2 Arms and Ammunition Lists, 1 Narcotics List, 1 List of Loading Ports of the Last Voyage with dates of arrival and departure.

PILOTAGE: Compulsory for all vessels entering the Bar or requiring any shifting in the port area. Also compulsory for foreign fishing boats. The Pilot's boarding area outside the Bar is the circular area with one mile radius which centre is the Buoy No. 1 of the Approach Channel.

Requests for a Pilot to be made by Agent, normally 4 hours in advance. Vessels can contact Pilots by VHF Channel 16.

The Pilot's boat is easily identified as it is painted red and is well distinguished from the various boats used in the port.

Priority to enter the Bar: Priority to enter the Bar is established by the anchoring time or arrival time at the outer anchorage or the Pilot's boarding area and vessels should, when anchoring, inform the Port Captaincy, by the 500 kHz. frequency of the coastal station EMBRATEL "PPJ", the name of the vessel, port of registry, port of origin and date-hour of arrival.

When berth is not available and all the inner anchorage areas are occupied, vessels arriving at the Port of Rio Grande should stay outside the Bar.

Pilots: Associacao de Praticagem de Barra Estado R.S., Rua Carlos Gomes No. 742. Tel: (0536) 2-5615.

ANCHORAGE: The official anchorage for vessels arriving at Rio Grande or that have to wait outside the Bar is the circular area within one mile radius, of centre Lat. 32° 12′ S., Long. 52° 02′ W.

In order to increase the safety to navigation on the inner part of the channel, the Port of Rio Grande is divided into six areas as follows:

PERMITTED ANCHORAGE AREAS:

Area Alfa: Available for anchoring of up to maximum four vessels of 200 m. LOA, outside the channel. Vessels over 200 m. LOA have to wait outside the Bar to await berth. In special conditions the Harbour Master may grant permission for those vessels to anchor at that area, to load or discharge, using one floating elevator and one barge.

The area *ALFA* is limited by the following points:

A1 – Lat.: 32° 10′ 00″ S.
– Long.: 52° 05′ 27″ W.
A2 – Lat.: 32° 10′ 00″ S.
– Long.: 52° 05′ 03″ W.
A3 – Lat.: 32° 08′ 00″ S.
– Long.: 52° 05′ 48″ W.
A4 – Lat.: 32° 08′ 00″ S.
– Long.: 52° 06′ 06″ W.
A5 – Lat.: 32° 08′ 24″ S.
– Long.: 52° 06′ 06″ W.

Area Charlie: Available for the anchoring of a maximum of two vessels of up to 180 m. LOA, to load or discharge, using one non-self-propelled floating elevator, or two floating elevators of which one has to be necessarily self-propelled.

The area *CHARLIE* is limited by the following points:

C1 – Lat.: 32° 05′ 10″ S.
– Long.: 52° 05′ 30″ W.
C2 – Lat.: 32° 05′ 00″ S.
– Long.: 52° 05′ 48″ W.
C3 – Lat.: 32° 05′ 18″ S.
– Long.: 52° 05′ 33″ W.
C4 – Lat.: 32° 05′ 18″ S.
– Long.: 52° 05′ 50″ W.
C5 – Lat.: 32° 06′ 00″ S.
– Long.: 52° 06′ 06″ W.
C6 – Lat.: 32° 06′ 00″ S.
– Long.: 52° 05′ 45″ W.

Area Echo: Available for the anchoring of a maximum of 5 (five) liner vessels of up to 170 m. LOA.

The area *ECHO* is limited by the following points:

E1 – Lat.: 32° 04′ 37″ S.
– Long.: 52° 05′ 25″ W.
E2 – Lat.: 32° 04′ 51″ S.
– Long.: 52° 05′ 03″ W.
E3 – Lat.: 32° 04′ 15″ S.
– Long.: 52° 04′ 07″ W.
E4 – Lat.: 32° 04′ 00″ S.
– Long.: 52° 04′ 37″ W.

Area Golf: Available for the anchoring of vessels proceeding or coming from the Ports of Porto Alegre and Pelotas, inland vessels and vessels loading or discharging, using one non-self-propelled floating elevator, or two floating elevators of which one has to be necessarily self-propelled.

The area *GOLF* is limited by the following points:

G1 – Lat.: 32° 03′ 27″ S.
– Long.: 52° 02′ 30″ W.
G2 – Lat.: 32° 03′ 36″ S.
– Long.: 52° 03′ 13″ W.
G3 – Lat.: 32° 02′ 21″ S.
– Long.: 52° 02′ 24″ W.
G4 – Lat.: 32° 01′ 51″ S.
– Long.: 52° 02′ 24″ W.
G5 – Lat.: 32° 00′ 48″ S.
– Long.: 52° 02′ 40″ W.
G6 – Lat.: 32° 00′ 48″ S.
– Long.: 52° 03′ 06″ W.
G7 – Lat.: 32° 02′ 32″ S.
– Long.: 52° 02′ 52″ W.
G8 – Lat.: 32° 02′ 45″ S.
– Long.: 52° 02′ 57″ W.

PROHIBITED ANCHORAGE AREAS:

There are three areas where vessels cannot anchor, two located in front of the Terminals of the Super Port and used for manoeuvring of the vessels berthing or unberthing on those Terminals, and the third located on the fork of the main channel of approach to the New Port and channel of approach to Pelotas and Porto Alegre.

Area Bravo: Limited by the following points:

B1 – Lat.: 32° 08′ 00″ S.
– Long.: 52° 06′ 06″ W.
B2 – Lat.: 32° 08′ 00″ S.
– Long.: 52° 05′ 45″ W.
B3 – Lat.: 32° 06′ 00″ S.
– Long.: 52° 06′ 06″ W.
B4 – Lat.: 32° 06′ 00″ S.
– Long.: 52° 05′ 45″ W.

Area Delta: Limited by the following points:

D1 – Lat.: 32° 05′ 00″ S.
– Long.: 52° 05′ 46″ W.
D2 – Lat.: 32° 05′ 10″ S.
– Long.: 52° 05′ 30″ W.
D3 – Lat.: 32° 04′ 51″ S.
– Long.: 52° 05′ 03″ W.
D4 – Lat.: 32° 04′ 37″ S.
– Long.: 52° 05′ 25″ W.

Area Foxtrot: Limited by the following points:

F1 – Lat.: 32° 04′ 00″ S.
– Long.: 52° 04′ 30″ W.
F2 – Lat.: 32° 04′ 15″ S.
– Long.: 52° 04′ 00″ W.
F3 – Lat.: 32° 03′ 34″ S.
– Long.: 52° 03′ 27″ W.
F4 – Lat.: 32° 03′ 32″ S.
– Long.: 52° 03′ 35″ W.
F5 – Lat.: 32° 03′ 32″ S.
– Long.: 52° 04′ 30″ W.

RESTRICTIONS: According to the Brazilian legislation it is prohibited to spill oil or throw overboard any refuse on to the Port waters. The vessels that wish to de-ballast of throw overboard residues resulting from the washing or sweeping of holds should do so outside the Bar, in the circular area of 10 miles radius, with centre at the point 32° 00′ S. and 49° 00′ W., maintaining a course of 090° and speed of 10 knots. The Port Captaincy will grant permission to vessels that need to leave the Port and cross the Bar to do these operations.

Vessels with draft up to 29 ft. handled day and night. Vessels over 29 ft. in daylight only.

Mooring/unmooring 24 hours a day.

MAX. SIZE: The deepest allowable draft in the approach channel to the Port is 40 ft. up to Portobras Wheat and Soyabean Terminal (TTS); from there inwards there is a variable and progressive reduction to the depth along the remaining part of the channel, ending with a depth of 10 m. alongside the New Port.

Bar Entrance: Max. draft 40 ft. (36 ft. 06 in. in 1984 due to heavy silting).

HEALTH:

(a) Vessels arriving from a foreign port of call must receive a visit from Port Health Authority. Each passenger (whether to land or in-transit) and crew members must be in possession of valid international vaccination certificates. Also see "General" before the first port.

(b) Maritime Health Declaration has to be made out and handed to the doctor at the time of visit. When all papers have been examined and found in order, the doctor will authorise lowering of the yellow flag and hand over Free Pratique.

(c) In case of death, suspected disease, serious accident, etc., on board, before vessel arrives in port, Master should radio Agent giving full particulars so that necessary steps may be taken with Health/Police Authorities.

RADIO: The Port of Rio Grande has a coastal station of the EMBRATEL network, "Juncao Radio", operating on the international call sign "PPJ", on a wavelength of 600 m. (500 kHz). There is telephone communication between radio station and shipping offices, so that, normally, messages are relayed without any appreciable delay. According to government regulations, EMBRATEL is to monitor/control all maritime traffic through its coastal stations, therefore only the tugs and launches used in the Port traffic are allowed to have VHF sets for manoeuvring, therefore all VHF traffic between Agent/ships is channelled through "PPJ" as Agents are not allowed to have their own VHF sets.

TUGS: The Port of Rio Grande has 9 tugs (500 h.p. – 2,100 h.p.) used in the normal port operations and in refloating vessels. In order to discipline the requisition and employment, the tugs are grouped in accordance with their power: Small, Medium and Large.

The tugs are normally requested by the Agents and placed at the disposal of the Pilot, who should use the tugs in accordance with the size and draft of the vessel, as follows:

1. For berthing/unberthing manoeuvres (vessels in d.w.t.):
   up to 2,500 – optional
   from 2,501 to 5,000 – 1 small tugboat
   from 5,001 to 10,000 – 1 small and 1 medium
   from 10,001 to 20,000 – 1 medium and 1 large
   more than 20,000 – 2 large tugboats
2. To turn vessels or to come in/go out stern first (vessels in d.w.t.):
   up to 2,500 – 2 small tugboats
   from 2,501 to 5,000 – 3 tugboats (1 medium and 2 small)
   from 5,001 to 10,000 – 3 tugboats (1 large and 2 small)

BERTHING: *Old Port:* Used by fishing boats and tugs.

New Port: 1,890 m. of continuous quay with 10 m. depth. 3 rows of sheds for general cargo, plus a series of terminals along its length, mechanically equipped to facilitate loading and unloading operations.

Container Terminal: Max. draft 37 ft. – 40 ft. (depth 46 ft.). Length of berth 250 m. and 50 m. Terminal equipped with 2×30 tons cranes, 4×37 tons top loaders, 3×15 tons frontal top loaders, 6 tractors and 15 lorries. Open storage area of 40,000 sq.m. which can accommodate 3,000 TEUs.

General cargo vessels with draft over 29 ft. may use the terminal if container vessel not operating, but will have to vacate berth and return later if container vessel arrives.

BULK HANDLING FACILITIES: *Cesa Silo:* Terminal used for storage, loading and unloading of grain in bulk. Storage capacity of 50,000 tons. Equipped with two loading/unloading towers of the pneumatic suction type with loading rate of 300 t.p.h. (beans) and 150 t.p.h. (pellets) and a discharging rate of 150 t.p.h. (maize or wheat). Travel of conveyor 150 m. Air draft 20.0 m. Max. draft 29 ft.

D3/D4 Terminal: It has a receiving grid used both for trucks and railroad wagons. Storage capacity of 56,000 tons (beans) or 39,000 tons (meal). It is mainly used for storage and loading of soyabeans, however, it can also be used for storage and loading of soyabean meal. Loading is done through a conveyor belt, 800 t.p.h. (beans) or 400 t.p.h. (meal). Travel of belt 215 m. Air draft 19.0 m. Max. draft 29 ft.

Acos Finos Piratini: Terminal used for storage, loading and discharging of iron ore via conveyor belts. The discharging of vessels is performed at a rate of 600 – 800 t.p.h. and the loading of barges at a rate of 250 t.p.h. Storage capacity of 20,000 tons.

Fertilizantes do Sul S/A-Fertisul: Receives raw material (liquid and solid) used for manufacture of fertilisers. To receive solid fertiliser the conveyor belt of Acos Finos Piratini's installation is used, and, for liquid, there is a pipeline running from Fertisul's tanks to the New Port's Southernmost part. This pipeline is used for phosphoric and sulphuric acid, while ammonia is received through a pipeline running from the Bunker Pier to Fertisul's special ammonia tank, located in the Super Port area.

Discharging rate (approx.) as follows:

Ammonia	400 t.p.h.
Phosphoric acid	1,000 t.p.h.
Sulphuric acid	600 t.p.h.
Solids	400 t.p.h.

Vegoil Terminal: Used for the receiving of, storage and loading of crude soyabean oil. Three tanks with storage capacity of 14,000 tons total. The oil is normally received from trucks or barges. Barges have a discharging rate of about 150/250 t.p.h. The loading is performed via a pipeline running from the tanks to the New Port (Bomba Geral area) with a loading rate of 300 t.p.h. Max. draft 29 ft.

AGEF Grain Terminal: Storage of soyabean and soyabean meal. Belongs to the Federal Railroad Administration and is linked to the D3/D4 Terminal loading installations. Storage capacity of 24,000 tons (2 sheds). Max. draft 29 ft.

Meat Reefer Warehouse: Has a total storage capacity of 8,200 tons.

Barge Terminal: Basically it is an installation linked to Bianchini, SAMRIG, D3/D4 and AGEF Terminals, used for discharging of soyabean meal/soyabeans from barges. It uses cranes with grabs to discharge the barges. The cargo is transported by a conveyor belt to the Terminals.

The New Port has along its extension several cranes varying from 3 tons to 12 tons, used for operations with general cargo and containers.

Super Port: Port complex located at the 4th "Secao da Barra" on the West margin of the approach channel, with various terminals equipped with loading/discharging equipment conveniently suitable for the handling of bulk cargoes.

Luchsinger Madorin Fertiliser Terminal: Located South of the bunker pier, has a T-shaped pier, 180 m. in length and max. draft of 36 ft. It has facilities for discharging sulphuric acid, phosphoric acid, liquid anhydrous ammonia and two conveyor belts for discharging of raw material used in the manufacturing of fertiliser. The storage capacity of solid fertiliser is of 100,000 tons. On the inside part of the pier there are loading facilities for barges with a loading rate of 300 t.p.h.

Discharging rates are as follows:

Liquid ammonia	544 t.p.h.
Sulphuric acid	500 t.p.h.
Phosphoric acid	1,200 t.p.h.
Solid fertiliser	500 t.p.h.

Wheat & Soyabean Terminal: It is located South of Luchsinger Terminal with a solid pier 413 m. in length and draft of 40 ft., allowing for the berthing of vessels up to 80,000 d.w.t. Loading rate of about 1,200 t.p.h. (beans) and 800 t.p.h. (meal) and storage capacity of 400,000 tons. Can receive cargo simultaneously from trucks and railroad wagons, at a rate of 250 – 500 t.p.h. It is the biggest Grain Terminal in Latin America.

Cotrijui Grain Terminal: Located South of the new Portobras' Wheat & Soyabean Terminal, it has a "T"-shaped pier of 265 m. length and max. draft of 40 ft. It can receive vessels up to 60,000 d.w.t. It has 8 sheds of 25,000 tons capacity each and two tanks for storage of soyabean oil with capacity of 5,000 tons each. 8 tubes with air draft 11.5 m. and 2 conveyor belts with air draft 15.0 m. Loading rate as follows:

Soyabean	1,000 t.p.h.
Wheat	1,000 t.p.h.
Soyabean meal	400 t.p.h.
Soyabean oil	400 t.p.h.

Transhipment Dolphins: Located South of the Cotrijui Grain Terminal is used for transhipment of vessels over 200 m. LOA. Max. draft 37 ft.

Incobrasa Grain Terminal: Location: Superport area; Draft: 38 ft. (density 1002); Airdraft: 22 m.; Quay: 412 m.; Restrictions: No LOA/beam restrictions; Storage capacity: One shed for 80,000 tonnes meal, 3 sheds for 82,000 tonnes of beans. Terminal has 3 tanks for vegoil, soya bean oil, able to store 14,000 tonnes; Load rates: Meals 600 tonnes/hr., direct from silos, 300 tonnes/hr. from barges through shore, beans 600 tonnes/hr., soya bean oil 270 tonnes/hr. Terminal equipped with 2 fixed loading towers, each with horizontal movable spouts with 180° of turn and 24 m. of outreach. Terminal able to operate upto Capesize vessels. Vegoil tanks connected to pier through one duct of 6 in. Fresh water can be supplied at a rate of 7 tonnes/hr. at a cost of U.S.$2.00/ton. Terminal equipped with 3 shore cranes with grabs in order to be able to deal with discharge of bulk imports/loading vessels with cargo coming upriver ex-barges (loading can be performed simultaneously from shore silos and from barges. Load rate the same as mentioned above, 600 tonnes/hr. due to restrictions of conveyor belt).

Bianchini Grain Terminal: Location: Superport area; Draft: 38 ft. (density 1002); Airdraft: 22 m.; Quay: 274 m.; Restrictions: No LOA/beam restrictions; Storage capacity: Terminal has one shed located at new port area with total storage capacity of 50,000 tonnes, basis beans plus 2 sheds at crushing plant (Superport area) with total storage of 170,000 tonnes, basis beans. Terminal has 3 tanks for vegoil (soya bean oil) able to store 14,000 tonnes; Load rates: Beans 1,500 tonnes/hr., meals 800 tonnes/hr. Soya bean oil 300 tonnes/hr.; Terminal equipped with 3 fixed loading towers, each one with horizontal movable spouts with 180° of turn and 30 m. of outreach. Terminal able to operate up to Capesize vessels. Vegoil tanks connected to pier through one duct of 6 in.

Meat Terminal: Located South of the Transhipment Dolphins, has a solid quay of 300 m. in length and draft of 37 ft. It has a reefer warehouse with 4 cold chambers with a total storage capacity of 10,000 tons. The pier has 2 gantry cranes for the loading/unloading of containers.

EQUIPMENT:

32 Portal cranes on rails, capacity 3.2 tons – 40 tons.
2 Jib cranes, capacity 10 tons each.
2 Portainers, capacity 30 tons each.
1 Floating crane, capacity 100 tons.
70 Forklifts, capacity 2.5 tons – 15 tons.
4 Forklifts for containers, 3×20 tons and 1×37 tons capacity.
2 Floating elevators for transhipping, capacity 300 t.p.h. each.
1 Mobile crane, capacity 100 tons.
6 Tractors.
10 Trucks.
20 Trailers, capacity 10 tons – 50 tons.
8 Floating elevators with rates of 70 t.p.h. – 200 t.p.h.
Self-propelled barges with capacity 1,500 tons – 2,000 tons.

STEVEDORES: *Working Hours:* Straight time, 0730-1130/1300-1700 (weekdays). During weekdays, labour for morning shift which commences at 0730 hrs., may be ordered up to 0715 hrs.; at 1245 hrs. extra gangs may, if necessary, be engaged for afternoon shift commencing at 1300 hrs. For night work, longshoremen (i.e. dock labourers distinct from stevedores) must be ordered before 1600 hrs.; stevedores, tally-clerks, etc., for night work may be engaged up to 1845 hrs. for shift that starts at 1900 hrs.

Sunday/holiday work must be ordered previous day, up to 1600 hrs.

MEDICAL: Two hospitals available which have adequate facilities to deal with a majority of cases.

TANKERS: *Bunker Pier:* Located approximately one mile North from the place called "Ponta da Mangueira"; it is a pier 228 m. in length and draft alongside of 33 ft. Primarily used for the receiving of crude oil and for the loading of bunker barges. There also are located the connections of the Fertisul Ammonia Terminal, Manah and CRA Phosphoric Acid Terminals.

Copesul Terminal: Located North of the Petroleum Pier. Max. LOA 170 m. Max. draft 29 ft. Max. d.w.t. 32,000 tons. Storage capacity 32,000 tonnes. Loading rate for propylene 95 cu.m.p.h. – 190 cu.m.p.h. Length of berth 44 m. Distance between dolphins 203 m.

DENSITY: New Port 1000; Anchorage and Super Port 1016.

FRESH WATER: Along the New Port quay there are 28 connections for fresh water that is delivered at a rate of about 30 t.p.h. – 60 t.p.h., or less, depending on the number of vessels being supplied. Also available at the Wheat and Soyabean Terminals and the Liquid Bulk Terminal. The terminals in the Super Port area lack those facilities apart from the Bunker Pier which has 6 connections with a rate of 20 t.p.h. For ships anchored at the Inner Roads fresh water can be supplied by barges owned by the Port Administration, with capacities of 250 tonnes and 400 tonnes at a rate of 80 tonnes per hour. The barges require the assistance of tugs to tow them.

FUEL: Can be supplied by truck (diesel), at the Bunker Pier (diesel and fuel) and ex-barges (diesel and fuel). Most commonly bunkers are supplied ex-barge. Suppliers are Petrobras, Shell, B.P., Exxon and Texaco. Stem has to be made previously abroad and price charged is the one in force on the day of delivery, 96 hours' notice recommended.

CONSULS/VICE-CONSULS: Great Britain, Denmark, Germany, Italy, Netherlands, Norway, Paraguay, Portugal, Spain and Uruguay.

REPAIRS: Two small repair shops equipped to carry out minor repairs. No dry docks. Radio, radar and gyro technicians available, but expensive.

SURVEYORS: G.L. and N.V.; Lloyd's and A.B.S. in Porto Alegre.

GANGWAY/DECK WATCHMEN: Compulsory for all sea-going vessels to have a port gangway watchman, normally requested by the ship's Agents, to the Watchman Syndicate. Apart from the gangway watchman, it is advisable to employ a crew member as deck watchman to look after the ship's safety.

OPENING/CLOSING HATCHES: Opening and closing of conventional hatches normally done by stevedores, without any extra cost, advisable, however, for steel hatches to be handled by crew.

CUSTOMS ALLOWANCES: Each crew member allowed one carton of cigarettes (or the equivalent in pipe tobacco) and one bottle of spirits, per week. Ships that remain in port over a week may request customs, through their Agent, to open bond for another weekly issue.

REPATRIATION: Seamen being repatriated have to proceed to Porto Alegre, by bus or air-taxi, where arrangements can be made for travel by air.

TIME: GMT minus 3 hours.

HOLIDAYS: *National:* 1st January*, 21st April, 1st May*, 7th September, 12th October, 25th December*.

Municipal: 2nd February, 29th June.

Movable Feasts: Carnival (Monday and Tuesday), Ash Wednesday and Passion Friday.

Commemorative: 28th August (Bank Holiday), 28th October (Civil Servants' Day); 30th October (Commercial Employer's Day) and 1st November (All Souls' Day).

*No labour available.

POLICE/AMBULANCE/FIRE: Police 2.1695; Hospitals 2.3802; Ambulance 2.3801; Fire 2.1778.

TELEPHONES: There are no facilities for placing telephones on board.

IDENTITY CARDS: Foreign crew members are not allowed to go ashore without presentation of identity card, on which there are personal details. These cards are provided by the Agent upon arrival. The identity card must be delivered on disembarkation to the Federal Police, who will return it to the crew member on re-embarkation.

GARBAGE: Authorities are very strict with regard to throwing garbage overboard.

GENERAL: *Light and Power:* The supply to the New Port is done by the State Company of Electric Energy (CEEE) with 13.8 kV, 60 Hz. voltage that is lowered by 6 sub-stations along the quay, from 600 to 1,000 kVA to 380 to 220 V. Along the quay, every 25 m. there is a power plug to connect the power to the port cranes with 300 A. Those plugs can also connect the power to the vessels along the quay.

Flags to be flown.

(a) Brazilian flag at the top of the foremast. Do not allow it to get tangled.

(b) Yellow flag (to be hoisted until the doctor's clearance is given). Vessels arriving from a Brazilian port, with no disembarking passengers, must *not* hoist yellow flag unless there is sickness on board requiring presence of the Health Authorities.

(c) Pilot flag.

(d) Customs flag (to be hoisted after the vessel is cleared by Customs and flown during the vessel's stay in port).

SHIPMASTER'S REPORT: February, 1982.

Pilotage: There are anchorages for three vessels between a position some 3 cables South of No. 12 Light Buoy to the vicinity of No. 14 Light Buoy. Here vessels can be in ample depth but, owing to the narrow channel, a Pilot must be retained aboard for, despite the current being outward the effect of the wind is critical. Despite the channel depth, there is a restriction to 38 ft. max. draft due to the inability of the dredging to guarantee more over the bar.

Documentation: At least 10 Crew Lists are required but otherwise few formalities.

Radio: This is one of the most efficient along the coast and both H/F and VHF are handled with commendable speed while W/T is equally available.

Tugs: Depending upon weather and current conditions, at least one tug is required to turn a vessel at the anchorage to sail outwards.

Fresh Water: The barge that delivered up to 400 tonnes is now condemned hence the only facility is a maximum of 45 tonnes from a tug, an expensive facility.

Fuel: There are at least two bunkering barges, one a minor coaster, but the speed of delivery is low e.g. 100 t.p.h. The depth of water at the tanker berth is 33 ft., hence loaded vessels ex-Argentine ports must remain in the stream.

Remarks: The Agencies and Pilots appear to be well geared to the prospect of a steady use of the port for bunkering, water and stores, while the radio station helps in expediting all communications. Suggestions have been made for three dolphin type berths in place of the anchorages, use being made of the Eastern side of the channel.

SHIPMASTER'S REPORT: November 1982.

My vessel is 39,026 tonnes SDWT and was ordered to load a full cargo of Soya Bean Oil for discharge in Iran:

Contained in my voyage orders was the instruction to inform Agents and suppliers of ETA at daily intervals 20/15/10/5/3/2/1 (My departure port was Bandar Abbas and routing was via Cape Agulhas).

Documentation as per "Guide to Port Entry". A "Nil" statement of drugs (excepting medical), firearms and ammunition in three copies is required.

Courtesy flag from foremast at all times.

My vessel loaded part cargo in Porto Novo (General Pumping Berth). The draft alongside was quoted to me as 29 ft. by my Agent but he stipulated actual draft was about 27 ft. with soft mud. The soft mud I do not dispute but my own sounding with the hand leadline indicated 26 ft. 4 in. and I did not load beyond 26 ft.

Loading rate never exceeded 250 – 300 tonnes per hour. After loading to 26 ft. draft I shifted ship to a pontoon berth (un-named) in position Lat. 32° 07.22' S., Long. 52° 06.15' W. (Farol da Barra Lt.Ho. 084.8°×1.34 miles). At this berth I again checked depth of water by hand leadline and got around 14 m. which presented no difficulties; my Summer draft being 11 m.

Loading at this pontoon berth was carried out by barge which varied in size from 3,000 tonnes to 1,500 tonnes; apparently they load in Porto Alegre and average turnaround time is about 5 days thus I anticipate a further week here before completing cargo as barges are not plentiful. Loading rate approx. 200–300 tonnes max.

Passes complete with photographs are required by all ship's staff.

At this pontoon berth launches are available to take crew members ashore but they are expensive and I would advise Masters to abstain from being too generous.

SHIPMASTER'S REPORT: October 1983.

Anchorages: The anchor was dropped in the Outer Roads off Rio Grande do Sul. The holding ground proved to be poor and the ship dragged anchor in a force 4 wind with less than a 2 knot tide, though anchored in 12 m. with 4 shackles in the water, i.e.: 9 times the depth. The nature of the bottom was mud with some shell, though marked gravel on the chart. While entering port the Pilot advised that ships frequently drag there, even with 8 shackles out.

Berthing: From the anchorage to the No. 1 (sea) buoy was 2 miles thence 3 miles more to the berth. There was about 17.6 m. depth at Cotrijui, reducing to 14 m. in the dredged approach channel.

The ship berthed at dolphins, in the first instance, port side to, just below the silo at Cotrijui. The village of Macaceo is just to the West of the dolphins. One floating elevator was then employed to start loading from a series of barges, pending the ship's turn at the faster, silo berth.

The gross rate of loading from the floating elevator (there are several on the river; this one was owned by Corymar) was 77 t.p.h. At 0415 hrs. 13th October, having completed loading 5,000 tonnes from 3 barges, the ship awaited the availability of the silo berth. At 1720 hrs. 18th October we left the dolphins to allow the next ship to berth there before dark and, after anchoring just upstream from the silo while the previous ship completed paperwork, berthed at Cotrijui silo, port side to, at 2124 hrs. 18th October.

The berth and equipment are very worn and in a poor state of repair. It is hard to keep the ship alongside in the strong tides due to the configuration of the river bottom. A dilapidated shore gangway is used; there is nowhere to land a ship's gangway. There ought to be another bollard and fender amidships to square the ship on to the wharf, and place an after fore spring properly. However, the shore personnel were very helpful and co-operative. As the hatches finished they were actually trimmed, without having to be requested, by men equipped with shovels. The loading spouts, working 2 holds at a time, are heavy and less manoeuvrable than most silos. Therefore the cargo cannot be thrown sideways into the wings and ends of the hatches with any force, leading to a poorer stow. The loading rate was 372 t.p.h. Ships longer than 250 m. have to have a tug pushing onto the wharf while loading, rather like some of the Mississippi berths. Cargo was completed at 0845 hrs. 21st October, after which there was a relatively large amount of documentation to be done. The ship sailed at 1249 hrs.

There is a more modern complex called Portobras Wheat and Soyabean Terminal. Unfortunately, after only about 6 months in operation, there was a fire there and the Terminal no longer works.

Fresh Water: Fresh water can be obtained from some berths but not Cotrijui silo or at the dolphins. It comes by dumb barge, capacity 250 tonnes.

REPORT: August 1985.

Copesul Terminal: Copesul's Terminal at Rio Grande is partially ready to operate with a total of 6 chemical products planned.

Shore installations and jetty were inaugurated 11th August, 1985, by vessel 173 m. LOA, 25,000 d.w.t.

Vessel loaded 2,000 tonnes Toluene and 2,000 tonnes Benzene.

Jetty: 140 m. long, equipped with 2 mooring dolphins. Distance between dolphins 200 m.

Capacity – 1 vessel max. 31,000 d.w.t.

No air draft restrictions.

Draft 29 ft. brackish water (intention is to bring draft up to 30 ft. brackish water).

Vessels LOA – Harbour Master authorised berthing up to maximum 200 m. LOA, although this in reality is impracticable as distance between dolphins is 200 m. and there would be no lead on head/stern lines.

Shore installations have a storage capacity of 32,000 cu.m.

At present operating with following liquid products:

1. Xylene.
2. Toluene.
3. Propylene.
4. Methanol.
5. Benzene.
6. Ethyl-Benzene.

The jetty is connected with shore installations by 6×8 in. lines which are connected to 6 manifolds of 6 in. each.

There are 7 pumps one connected to each line which have a loading capacity of 350 cu.m.p.h. each.

Depending on vessels conditions, Copesul is able to load up to 5 products simultaneously.

The storage tanker 'Aristoteles' for Ethylene storage, is still docked at a shipyard in Porto Alegre, carrying out final surveys/repairs. It is expected ready at Rio Grande for the end of September, for the meantime Ethylene loading continues by transhipment at Inner Roads by m.t. 'Tacosul' (capacity for 450 tonnes) or from another ship.

According to Harbour Master, intention is to stop transhipment vessel to vessel at Inner Roads (Area Echo) (presently being used to carry out transhipments, two vessels at a time), however, it will be de-activated only after the 'Aristoteles' arrives Rio Grande for the loading of Ethylene. According to Copesul, they intend to ask Harbour Master to also keep 'Area Echo' option to carry out any eventual transhipment which may be necessary in the future in case of congestion at their shore terminal.

SHIPMASTER'S REPORT: August 1994.

Berth: Cotrijui Terminal.

Cargo: Soya Bean Oil.

Connection: Hoses.

General: An unsafe berth. 3 ships in the previous month parted all moorings and were swept into the river. Very few dolphins on the jetty restrict mooring options. Ships slightly larger than ours have to have a tug pushing the vessel alongside at all times.

The berth has 3 fenders. But the central fender is larger than the others, so the vessel only rests on 2 fenders (See "Plans").

There is a partial groyne beneath walkway and grain elevator. In times of heavy inland rain and strong current, the current is deflected by the groyne to laterally push the vessel off the berth. If mooring ropes are not tight at all times, this can cause the vessel to oscillate and pivot around the central fender, and many ships have parted mooring ropes at this berth. Insufficient bollards on the jetty give poor loads.

Poor access ladder.

Berth: Incobrasa.

Cargo: Degummed Soya Bean Oil.

Connection: Hoses.

General: Max. draft 37 ft. (F.W.).

There is a strong river current at all times.

3 tugs used for mooring and unmooring.

AUTHORITY: Superintendencia do Porto de Rio Grande, Av. Honorio Bicalho S/No., P.O.Box 198, 96.200 Rio Grande RS, Brazil. *Tel:* (0532) 32-3366, 32-3396. *Telex:* (0532) 423 Aprg. *Contact:* Eng. Thierry Jose da Silva Rios, Technical Director.

AGENT: Wilson Sons Agencia Maritima Ltda., Rua Riachuelo 201/205, 96200-390 Rio Grande RS. P.O. Box 103. Tel: (0532) 31-1166 (After hours: (0532) 32-6399). Telex: (53) 2177 WSON BR. Fax: (0532) 31-1246. Cables: Anglicus.

SALVADOR (Bahia): 13.01 S. 38.35 W. (See Plan)

LOCATION: Lat. 13° 00′ 37″ S., Long. 38° 35′ W.

PORT LIMITS: The Port is limited by the line East/West which passes through the Santo Antonio Lighthouse, bridging the frontier coast of the Island of Itaparica, and from there turning to enter the bay through the same line East/West which connects the Continent and that towards the coast Northwards as far as parallel 12° 50′ and then from there going Eastwards towards the Continent.

DOCUMENTS: (See "General" before first port.)

Agent also fills out the "Entrada & Saida Capitania do Porto" to be signed by Master. The particulars for this document are:

Name of Master – name of ship – flag – code signal letters – tonnage: gross and net – horsepower – engines: twin or single – type of ship, etc. – port of registry – tons of cargo to discharge – owners – Agents in port – last port of call – previous ports of call – next port of call – number of crew – number of disembarking passengers – number of transit passengers – speed of vessel – also specifications of nature and quantity of cargo in transit.

Documents to be Supplied to the Ship Before Departure:

1 "Clearing pass" from the Port Captain
1 " " " " Federal Police
1 " " " " Post Office
1 " " " " Custom House
1 Custom House negative cargo declaration for each following Brazilian port of call.

The Port Doctor will require the following information: Class, name and flag of ship – net register tonnage – name of Master and ship's Doctor – number of officers and crew – name of Agent – all ports called at during voyage – number of days from first to previous ports of call – number of passengers disembarking and in transit – tons of cargo to be discharged – whether any sick persons or deaths occurring on board.

The Customs will require the following information: Name of vessel – nationality – gross and net tonnage – H.P. of engines – name of Master – number of officers and crew – owner's name – name of Agent – all ports called at during voyage – ports of destination – days of voyage from first to previous ports of call – tons of cargo to be discharged – particulars of passengers.

The Federal Police require the following information: Vessel's name – nationality – gross and net tonnage – name of Master – number of officers and crew – name of Agent – port of departure and all ports of call – number of days from first and last ports of call – number of passengers disembarking and in transit – specification of embarking and disembarking ports of each transit passenger.

Ships calling at Salvador are normally boarded by the authorities at any time, day or night, when required. If there is no special urgency, however, the visit is effected the following morning at 0630 hrs.

The Inspection Area of the Port Health Authorities, Federal Receipt and Maritime Police is defined by a radius of 1 mile around the point of co-ordinates Lat. 12° 58′ 07″ S., Long. 38° 32′ 18″ W., the area around the point of co-ordinates Lat. 12° 55′ 56″ S., Long. 38° 31′ 37″ W., indicated in chart 1102 of the NHD.

Vessels may only come alongside after clearance by the Federal Receipt, Port Health Authorities and Federal Police. The free anchorage coincides with the pilotage waiting area and permitted anchorage (anchorage of Monte Serrat).

APPROACHES: The port has 2 access channels. The first, called the Inner Channel is on the city side with a minimum depth of 8 m.

The second, called the Outer Channel is on the side of Itaparica Island and its depth varies from 13 m. to 55 m.

Action of Tides: Tidal amplitude in the port of Salvador is 2.5 m. on average, during the tides at the full moon. The flood tide in the port of Salvador runs for 5 hours to the N.N.E. and the ebb for 7 hours to the S.S.W., with a speed of 1.5 knots. During Spring tides, these tides can reach 2 to 3 knots.

During ebb tides, it is suggested that the approach to the quay be made by the South Entrance, between the two breakwaters, so that there will be no need for a yaw action in the manoeuvring bay formed by the breakwaters. The ebb tide may cause the vessel to swing to the South, in the entrance between the breakwaters.

Manoeuvring Area: The area intended for the manoeuvring of vessels for mooring or unmooring has a length of 100 m. along the whole extension of the quay, with a draft of 27 ft. at any state of tide. In this area, and also in the access channel the anchorage of any vessel is expressly prohibited, except with the prior permission of the Port Captaincy.

PILOTAGE: Compulsory for all vessels entering Salvador and berthing/unberthing at general docks or proceeding to other marine terminals. The following areas are considered as pilotage zones for vessels bound for the port: Monte Serrat Anchorage, the S.W. Anchorage to the Panela Bank and waiting and disembarking point for Pilots, shown on NHD chart 1102.

Also considered as pilotage area is all the internal area of the Bay of Todos os Santos (All Saints) to the North of the parallel passing through Monte Serrat. The area of the port of Salvador, inside the breakwater, is considered to be a compulsory pilotage area for vessels over 4,500 d.w.t.

Also considered to be an area of compulsory pilotage is all the zone North of parallel 12° 55′ 05″ S., which passes through Monte Serrat, for vessels over 3,000 d.w.t., bound for the terminal ports and their access channels inside the Bay of Todos os Santos. Request for Pilot can be made through the ship's Agent, 2 hours in advance, specifying the time of entry of the vessel and from which point pilotage will be required.

The Salvador Pilots' Association has VHF-FM radio, at their office and on board the pilot launch, operating on Channels 16 and 11, listening out on Channel 16.

The address of the Pilots' Association is: Rua da Grecia No. 8, Tel: 242-2221, Edificio Serra da Raiz, 5th Floor, Room 510.

Vessels should use the signal "Hotel" to call up the Pilot at the Pilot Station (Chart 1102) and may use an audible signal for this purpose.

The Amaralina (ERA) Radio Station maintains coastal communication, and can also be used to call the Pilot by vessels bound for Salvador. Amaralina Radio Station communicates with the Pilots by telephone.

ANCHORAGES: There are 3 anchorages for waiting and inspection, see Chart 1102 of the NHD.

South: To the South of Panela Bank, in position Lat. 12° 58′ 00″ S., Long. 38° 32′ 33″ W. for waiting for the Pilot.

North: In the vicinity of position Lat. 12° 56′ 01″ S., Long. 38° 31′ 06″ W. In the vicinity of position Lat. 12° 57′ 01″ S., Long. 38° 41′ 01″ W.

There is a special anchorage for LASH vessels and for the operation of loading and unloading barges. It is located on the alignment of the North Light of the North Breakwater and the Monte Serrat Lighthouse, at a distance of 0.8 miles from this lighthouse, as shown on Chart 1102 of the NHD, in note (1).

Inside the breakwater and to the South of Fort Sao Marcelo there is an exclusive anchorage for the mooring of LASH vessel barges.

PROHIBITED ANCHORAGE: Locations prohibited for anchorage and movement of foreign and national pleasure craft. Mooring and anchorage locations:

(a) Bahia Yacht Club (Chart 1102)
Lat. 12° 59′ 49″ S., Long. 38° 32′ 00″ W.
(b) Aratu Yacht Club (Chart 1103)
Lat. 12° 48′ 36″ S., Long. 38° 28′ 49″ W.
(c) Area of the Bay of Itapagipe (Chart 1110).
(d) Section included between the prohibited anchorage area and the LASH barge anchorage (Chart 1102), unless duly authorised by the CPBA.

Areas where anchorage and navigation are prohibited.

(a) All the area in front of Inema beach (Chart 1104).
(b) Almirante Alves Camara Terminal (Chart 1105).
(c) Manoeuvring bay for the quay at the port of Salvador (Chart 1102), port of Aratu (Chart 1103), Terminal of USIBA (Chart 1103), Dow Chemicals (Chart 1103), (only navigation prohibited.)
(d) D. Joao Oilfield – location designation in Caution B of Chart 1110.

RESTRICTIONS: There is sufficient depth of water in the Outer Anchorage to accommodate the largest vessels afloat with safety, and the anchorage can, in addition, take a considerable number of vessels at any one time. The average depth of water in the channel leading to the dock warehouses is 33 ft. (10 m.) except opposite Shed No. 2 where 28 ft. (8.50 m.) is the max. depth. The dock quays are sheltered by two breakwaters, one running parallel with the shore for just over 0.5 miles. Because of the shallow draft opposite No. 2 Shed, all vessels entering or leaving the port with more than 28 ft. normally enter the Northern Channel.

MAX. SIZE: *Limit of Size of Vessels Navigating in the Channels:*

Access to Temadre: Length 250 m., draft 12.8 m., beam 40 m.; Access to Dow Chemicals: Length 170 m., beam 25 m., draft 10.3 m.; Access to USIBA: Length 170 m., beam 25 m., draft 10 m.; Access to the port of Salvador: Length 180 m., beam 30 m., draft 10 m.

Also see "Berthing" and "Tankers" and Port of Aratu.

ARRIVAL INFORMATION: Required before vessel's arrival:

(a) Vessel – ETA; deepest draft.
(b) Cargo – Quantity of cargo to be discharged and specification of hatch list.
(c) Passengers – Number of passengers disembarking.
(d) Bunkers – Quantity required.
(e) Water – Quantity required.
(f) Labour – Quantity required.
(g) Any other information – Number of mailbags to be landed, etc.

Specimen of telegram to be sent from previous port:

1. Vessel's name.
2. ETA Salvador.
3. Draft.
4. Number of passengers disembarking.
5. Number of mail bags to be landed.
6. Quantity of bunkers required.
7. Quantity of water required.
8. Number of gangs required.
9. Any other information.

FLAGS: On entering the port the vessel should fly the following flags:

1. Brazilian flag on fore mast top.
2. Quarantine flag when Salvador is first Brazilian port of call, or when there is a passenger for Salvador from a foreign port.
3. Customs flag (white star on blue background) after the vessel has been visited.
4. Flag "B" if dangerous cargo on board.
5. Pilot flag.

PRIORITY: Passenger vessels and wheat vessels have priority over cargo ships and the so-called "navios mixtos", i.e. cargo ships with a limited passenger accommodation. Passengers vessels are those that carry 60 or more passengers; except when loading 1,000 tons or over in which case they loose their priority.

HEALTH: The Doctor only boards the vessel when Salvador is first Brazilian port of call or when there are passengers from abroad to disembark, in which case Master should advise Agent who will then take the necessary steps required by Port Health. A yellow flag should be flown if Port Health Doctor is required on board.

RADIO: Master should always endeavour to contact Agent through Radio Amaralina Coastal Station, call sign ERA, and Agent will contact Master the same way. Since this station has a limited range, the Agent at Salvador may be contacted via Rio Radio when North-bound, or Olinda Radio/Fortaleza Radio when South-bound.

TUGS: Always used for berthing and unberthing. At other marine terminals tugs are supplied from Salvador. For container and cargo vessels berthing at 10 m. quay, a tug is usually supplied to help vessel moor and unmoor. When coming alongside tug joins vessel inside port. 8 tugs available 120 h.p. – 1,688 h.p.

Rules for using Tugs:

(i) At Temadre and Usiba.

All berthing and unberthing of vessels with tonnage between 2,000 g.r.t. and 10,000 g.r.t. must be with the aid of 2 tugs. Vessels with gross tonnage between 10,000 and 50,000 g.r.t. must be assisted by 2 tugs of power above 1,000 h.p. Vessels over 50,000 g.r.t. must be assisted by 3 tugs of power greater than 1,000 h.p.

(ii) In the Port of Salvador and other marine terminals.

All manoeuvres of berthing and unberthing of vessels with gross tonnage between 2,000 and 10,000 g.r.t. must be assisted by 2 port tugs. All manoeuvres of vessels of gross tonnage above 10,000 g.r.t. must be aided by 3 port tugs. Vessels of tonnage less than 2,000 g.r.t., according to the Pilot's judgment, may use a port tug, in special situations.

In special situations, with winds from the East, according to the judgement of the Pilot, the use of tugs can be dispensed with for unberthing.

BERTHING: No restrictions, but if draft over 28 ft. berthing and unberthing take place from 1 hour before HW until 1 hour after HW. Anchor used for berthing. Container and cargo vessels at 10 m. quay may unberth at any time.

The Port of Salvador is protected by 1 breakwater (Northern Breakwater) and 1 mole (South Mole). There are two channels for vessels entering and leaving. On the wharf there are 9 warehouses and between some of the sheds sheltered storage spaces.

Heavy lifts are left on the wharf until taken delivery, or discharged directly to trucks.

There are 4 quays in the port:

	Length (m.)	*Depth* (m.)		*Max. draft* (ft:)
Coastal Vessel Quay	683	7 – 8	Warehouse 5 & 6	23.5
Long Distance Quay	782	7 – 9	Warehouse 7 & Marine station	32.0
Connecting Quay	238	8 – 9		
10 Metre Quay	370	9 – 10		

All warehouses (excl. No. 9) are fitted with overhead internal cranes.

Explosives would be discharged into lighters at the proper anchorage for discharge of such cargo and taken to special deposits. Forewarning must be given for this cargo in order that arrangements may be made in advance.

One grain discharger × 150 t.p.h., and 2 wheeled suction plants × 60 t.p.h. each.

Grain silos – 20,500 tons (Salvador Mill), and 13,357 tons (Bahia Mill).

Industrial cold store of 2,300 cu.m. belonging to FRIUSA.

All other goods are loaded/discharged at the wharf.

Bulk Cargo Vessels: See "Aratu".

Containers: 1×30 ton crane for containers. 2×30 ton transtainers. 2×30 ton fork lifts. Roll-on/Roll-off facilities available. 22,000 sq.m. storage for containers and 10,000 sq.m. for containers ex-Roll-on/Roll-off.

Also see "Report" dated November 1982.

CRANES:

Jib Cranes:	1×30 tons (for containers), 4×3 tons, 2×5 tons, 15×3.2 tons, 3×6.3 tons, 2×12.5 tons.
Mobile Cranes:	1×13.5 tons, 1×75 tons.
Floating Cranes:	1×100 tons.

STEVEDORES: The Agents at Salvador act as stevedores.

The work at Salvador, especially loading, is considered amongst the best in Brazil, as a rule, sufficient gangs are available.

Masks, gloves are supplied by the stevedores. All other material such as slings, nets, etc., shall be supplied by the vessel.

The ordinary working hours are 0700 1100, 1300 – 1700 hrs., Monday to Friday inclusive. Saturday 0700 – 1100 hrs.

For overtime work notice must be given the previous day. As it would be difficult to obtain permission before each overtime period, a general permission covering ship's stay in port shall be obtained prior to arrival.

1100 – 1300 hrs. Special permission must be obtained from the Dock Company which is only given to passenger vessels, or for cargo vessels to finish the cargo, or under special circumstances.

1700 – 1900 hrs. Continuation period. Advice must be given to workmen at 1645 hrs.

1900 – 2300, 0000 – 0400 hrs. Considered as night work. Advice must be given to the Dock Company at 1645 hrs. and to the stevedores at 1700 hrs.

2300 – 2400 hrs. same as 1100 – 1300 period.

0400 – 0600 hrs. Continuation period. Advice must be given to workmen at 0345 hrs.

0600 – 0700 hrs. Second night continuation period. Can be worked under special circumstances to finish the cargo. Vessels discharging/loading bulk cargoes, or loading/discharging reefer cargo, are allowed to work round the clock.

To work on holidays, advice must be given to the Dock Co. before 1700 hrs. the previous working day. For Sunday work advice must be given before 1100 hrs. on Saturday. The same applies for stevedores/tally/coopers.

CARGO INFORMATION: *Inward Cargo:* When cargo is discharged from the vessel it is checked, weighed and weight noted by the shore tally-clerk (for account of the ship), by the Dock Company tally-clerk and by the Custom House. If there is a difference in weight, the ship is held responsible and has to pay double duty on same. Once the goods have been checked and weighed ship's responsibility ceases.

Goods are delivered to the consignees on presentation of the bill of lading to the Dock Warehouse.

Transhipment Cargo: Foreign cargo for transhipment at Salvador must be so declared on the manifest, and after it has been discharged the Agents have to obtain special Customs permission to tranship it to the port destination and also sign a guarantee that the goods are going to that port and that duty will be paid there. They will be held responsible for that duty until a declaration issued by the Custom House at the port of destination is received by them and handed over to the local Customs.

Transhipment charges vary considerably with the type of cargo and are very high compared with foreign freights.

Outward Cargo: Generally, cargo to be loaded is deposited in the dock shed prior to vessel's arrival.

Refrigerated Cargo: All reefer cargo is discharged directly to trucks, and vice versa.

Dangerous Cargo: Vessels with explosives and inflammables on board are not permitted to come alongside. All vessels carrying this kind of cargo must fly the "B" signal and remain at the proper anchorage. Advance notice must always be given of any vessel carrying explosives and inflammables. Under special circumstances it may be arranged for vessels to come alongside if they only have a minimum quantity of dangerous cargo on board, and the hatch in which it is stowed is not to be opened at Salvador.

When vessels are boarded by the Harbour Officials, the Master must hand to the Customs Officer and the Federal Police the Dangerous Cargo List.

Corpses as Cargo: Notice should be given to the Port Authorities of such cargo carried, if possible, before vessel's arrival.

Vegetable Oil in Bulk: Vegetable oil in bulk is loaded directly from lighters where the oil is deposited prior to vessel's arrival. Vessels are usually required to supply steam for pumping when they can.

Loading and Discharging Rate:

Average Daily Rates:

Breakbulk	500 tons
Iron Bars	1,400 tons
Dry bulk (with grabs)	1,000 tons
Containers	1,200 tons

Heavy Lifts: For heavy lifts a request shall be made to the Dock Co. to use the 100 ton capacity floating crane. Heavy lifts may also be discharged directly to the quay with the vessel's own gear when, due to a light draft (under 24 ft.), they can come directly alongside without the use of a pontoon. It is recommended that the Agent be consulted before booking any heavy lifts for Salvador as the heavy lift crane is sometimes out of working order.

Inflammables, Fuel and Diesel Oil, Etc., as Cargo: Bulk crude oil, diesel, fuel, inflammables, lubricants, etc., are discharged at the Madre de Deus Terminal, which belongs to the Government owned Petrobras.

Damaged Cargo: When cargo is discharged, damaged or pilfered, it is immediately checked and weighed by the Dock Co. and the Customs and separately stored.

The Insurance Co. makes a survey in the presence of the Dock Co. upon request of consignees.

Bulk wheat is discharged to two mills at Salvador, namely the "Moinho Salvador" and "Moinho da Bahia". Average discharging rates (23 hours work per day) are respectively 1,500 and 800 tons.

Handling of Mail: Timely notice should be given to the Agents in case there is mail to be landed, stating the number of bags.

As regards outgoing mail the Agents will be advised by the Post Office if there is any and issue the Post Office Pass. The bags shall be placed at the quayside, loading being for the account of the ship.

MEDICAL: When vessels arrive over week-ends or during holidays advisable that Master cable Agent giving advance notice of medical attention required if case is serious. For routine medical attention no previous advice required as medical and hospital facilities available.

TANKERS: All tankers loading/discharging inflammables, lubricants, etc., must do so at the Madre de Deus Terminal, which is privately owned by Petrobras, the Brazilian Government-run oil company.

The Madre de Deus Terminal is a T-fashioned quay situated within All Saint's Bay, 18 miles from Salvador. All vessels calling at Madre de Deus must be cleared at Salvador where Agent and authorities board the vessel before proceeding to Madre de Deus. This terminal is equipped only to handle tankers. Water, bunkers and deballasting facilities are available.

Max. drafts are 41 ft. for vessels loading and 37 ft. for discharging, and length 240 m.

Berth No.	*Max.Size* (d.w.t.)	*Depth* (ft.)	*Loading Arms/Products/ Remarks*
PP 1	120,000	41	1×10 in. LPG (liquid) 1× 8 in. LPG (vapour) 2×12 in. black oils 2× 8 in. white oils
PP 2	90,000	41	2×12 in. black oils 1×12 in. white oils 2× 8 in. white oils max. LOA 240 m.
PP 3	30,000	38	3× 8 in. white oils 1×10 in. white oils 1× 6 in. bunker line max. LOA 154 m.
PP 4	120,000	41	3×16 in. black oils 1× 8 in. fuel oil supply 1× 6 in. diesel
PS 1	10,000	26	1×10 in. semi-refrig. LPG (liquid) 1× 8 in. semi-refrig. LPG (vapour) 1× 6 in. pressurised LPG (liquid) 1× 4 in. pressurised LPG (vapour) 1× 6 in. bunker line max. LOA 145 m.
PS 2	2,000	14	

Also see "Shipmaster's Reports".

DENSITY: Salt water.

FRESH WATER: Advance information recommended. Rate 20 cu.m./h. If several vessels are in need of supply, pressure may not be enough to supply all at once. No water barges available in the port, and all vessels are replenished alongside.

FUEL: Diesel oil can be supplied alongside and at anchorage at Salvador, but fuel oil can only be supplied by Petrobras at the Madre de Deus Terminal, 18 miles up the bay.

Lubricants are supplied in drums. Also see "General" before first port.

CONSULS:

Austria
Belgium
Denmark
France
Germany
Great Britain
Italy
Netherlands
Nicaragua
Norway
Portugal
Spain
Sweden
Switzerland
Uruguay.

REPAIRS: The Navy operates a dry dock at Aratu with the following capacity: 35,000 tons; length 230 m.; width 30 m.; depth 8.5 m. Various small vessels can be attended at the same time. There are a number of workshops in Bahia fitted for repairing vessels, but it is recommended that large repairs be effected at the Aratu dry dock. When time allows, repairs may be made whilst the vessel is alongside the wharf. There is no time-limit but, as a rule, a vessel is not supposed to remain idle at the wharf if the berth is needed for another vessel which has to load/discharge.

SURVEYORS: *Lloyd's Agent:* Expresso Mercantile Agencia Maritima Ltd., 340 Avenida Estados Unidos, Salvador. Tel: 242-7011.

Bureau Veritas: 3 Rua Visconde Rosario, Salvador. Tel: 243-8222.

American Bureau of Shipping: H. Taxman, 18 Avenida Estados Unidos. Tel. 242-0447.

GANGWAY/DECK WATCHMEN: All foreign vessels must employ a gangway watchman by law. Hold watchmen are optional, depending on request by Masters/Agents.

OPENING/CLOSING HATCHES: Normally carried out by stevedores.

CUSTOMS ALLOWANCES: Customs officials will place cigarettes and "souvenirs" belonging to crew members under lock and seal. Excepting the Master, each crew member may keep in his possession only 1 carton of cigarettes and 1 bottle of spirits with seal broken. The Customs will periodically renew the seals for vessels staying in the port for a lengthy period thus enabling new issues to crew.

LIGHTERS: Soc. Alvarengagem de Ilheus are operating 4 lighters in the port with a combined capacity for about 670 tons.

REPATRIATION: Most crew changes are made via Rio de Janeiro but some are made via Recife and on direct flights Salvador/Lisbon.

AIRPORT: Dois de Julio Airport is 31 km. from centre of town (40 km. from the port). No direct flights to foreign countries but various daily connections available with Rio, Sao Paulo, etc.

TIME: GMT minus 3 hours.

HOLIDAYS: *National:* 1st January; 21st April; 1st May; 7th September; 12th October; 15th November; 25th December.

Municipal: Movable: Good Friday; Corpus Christi. Fixed: 24th June (Saint John); 8th December (Our Lady of Conception).

Traditional: Movable: Carnival – Tuesday (Mardi Gras) and Ash Wednesday. Fixed: 2nd November (All Souls); 2nd July (Independence of Bahia).

POLICE/AMBULANCE/FIRE: Fire Tel: 193; Police Tel: 190.

TELEPHONES: Facilities available for placing telephones on board.

REGULATIONS: Rat-guards must be used at all times, as the Port Health make periodic inspections on the quay.

STORES: Ship chandler can supply meat, vegetables, tropical fruits, canned goods, etc., but no bonded stores for foreign goods available.

SHIPMASTER'S REPORT: September 1981.

General: Salvador, capital of Bahia State is a large city combining the old with the modern. It is an important tourist resort for both Brazilian and overseas visitors.

The tanker terminal, owned and operated by 'Petrobras' at Madre De Deus Island, is some 14 miles N.N.W. of Salvador in Todos os Santos Bay.

The most unsettled weather occurs in March to May with heavy rain.

Approach: Salvador is easily picked up on radar at maximum range with its high rise buildings situated on an elevated point called Pt. De Sto Antonio.

Vivid flashing white lights from TV towers situated about 2 miles E.N.E. of Pta. De Sto Antonio can be seen long distances at night. BA. 540 and 546 refer to Salvador. For Madre De Deus the Brazilian chart 1105 is useful.

Although the entrance to Salvador Bay (Todos os Santos) has good depths strong currents are found on rising and falling tide setting N.N.E. and S.S.W. respectively.

Pilots: Pilots are embarked in the shelter of the Bay, 1 mile West of the Southern Breakwater. They use a small dark red launch. Pilots disembark in same position.

Pilotage time to Madre De Deus is about 1.25 hours.

VHF: Pilots: Call "Salvador Pilots" Channel 16, working 11, 13, 14. Range limited to about 6 miles South of Pt. Antonio.

Tugs: Channel 13.

Public Correspondence: 'Salvador Radio' Channel 16, working 24, 25, 26, 27 local and international (IDD) calls.

Arrival: Vessels proceeding to Madre De Deus Tanker Terminal will be required to anchor about 1.5 miles South of Pta. De Monte Serrat after embarking Pilot, for customs inspection, even if coming from another Brazilian port, generally takes about 1 hour.

If waiting for berth at Madre De Deus vessels anchor off Salvador.

Anchorage: South of Monte Serrat off Salvador in least depth of 13 m., plenty of sea room.

Madre De Deus Terminal: The large tanker terminal, operated by Petrobras, was completed 15 years ago to serve the refinery at Mataeipe 4 miles to N.E. Maximum draft is 42 ft. (12.8 m.) and maximum size up to 85,000 d.w.t.

Least depth on approach to berth was found near Beacon No. 7. 2.5 miles S.E. of "P1" Berth of 11 m. Chart Datum. The terminal is set amongst wooded islands, the principal being Ilha dos Frades which has an inviting sandy beach. By sea to Salvador takes about 1.5 hours by launch. The road which branches inland to join the main Rio De Janeiro Highway is about 50 miles in length and journey time of 1.25 hours. Tidal streams off the berth are very strong with a 3 m. range at times. Rates of 4 knots are common. Vessels calling regularly at Madre De Deus will find the Brazilian charts useful, plus Brazilian Tide Tables which list the Terminal and adjacent areas.

Berthing: Vessels are swung about 3 cables S.W. of the berths and use offshore anchor when berthing (about 3 shackles in water). At "P1" Berth Starboard anchor is used which is to assist in both berthing and unberthing. Also at "P1" Berth forward moorings go to a dolphin ahead of the Berth. At "P2" and "P3" Berths there is an off-lying dolphin astern of the berths (to West). Two powerful mooring launches are used, one each end. We used on "P1" Berth 4 head/stern lines, 2 breast and 2 springs each end. The forward breast lines to have any use should be brought down the deck to a lead about third of ship's length from forward.

There are 2 large flat sprung fenders proud of Jetty face.

Tugs: 2×1,200 h.p. permanently stationed at Terminal, 2×1,000 h.p. tugs come from Salvador as required.

For large vessels 3 tugs are used, generally pushing or tied up alongside with ship's lines.

Berths: Total of 5 berths on 2 jetties for sizes up to 85,000 d.w.t. and 42 ft. draft with following characteristics.

Berth No.	*Draft* ft.	*Size* d.w.t.	*Side to*	*Berthing*	*Product*
P1	42	85,000	Port	6 hrs. either side HW	Crude, Products, Refrig LPG
P2	42	33,000	Either depends on tide	Any time	Crude, Products
P3	36	33,000	Starboard	On flood tide	Crude, Products
S1/S2	24	15,000	Below 120 m. length any side to over 120 m. "S1" starboard side to and "S2" port side to.	Any time	Products, Heated LPG

Density: Density at "P1" Berth 1025 at all states of tide.

Discharge: Refrigerated LPG only at "P1" Berth.

2 Chicksans – 10 in. vapour, 12 in. liquid, 150 ASA, both of Brazilian manufacture, similar to Santos. These are not now used due to leaks and discharge is by flexible hose to manifold on jetty. Shore will supply hose although we used our own for part of distance as they were already rigged with lower discharge pipe from Santos. Plenty of reducers available. As the vessel is off the quay face for about 5 m. due to fenders, approx. 20 m. of hose are used.

No vapour return line at present.

Discharge to tanks situated about 1.5 miles inland, varies from 200 t.p.h to 400 t.p.h. with back pressure around 6 Bar. Communication with shore is poor with operator on quay speaking no English.

3 refrigerated holding tanks of 1×10,000, 2×5,000 tonnes nominal capacity plus 4×3,000 pressure spheres. The product is either heated into spheres and then transhipped into small coastwise tankers on berths "S1"/"S2" or pumped another 2 miles to a road tanker terminal near the refinery. Surveyor, SGS, has little knowledge of LPG calculations. 5 chicksans to West of LPG arms are for products plus numerous flange connections with rubber pipes on jetty.

Facilities: Fresh Water: On each berth, couplings American type. About 15 t.p.h. dependent on how many vessels taking water.

Fuel: On each berth both H.O. and D.O. available.

Access: A roadway to each berth with weight restriction of 16 tonnes and permission to discharge stores etc., within 20 m. of ship's side.

Repatriation: Salvador Airport 1 hour from terminal. Local flight to Rio International Airport.

Taxi: Costs £26 for round trip to Salvador.

Repairs: Basic repairs possible from Salvador.

Doctor: From Salvador will come very promptly, contact Agent.

Chandler: Principal chandler – Barbosa Costa, reasonable for basics.

Communications: Telex – International. Phone – Good Internal and International Direct Dialing (IDD). About £2 per minute to UK. There is a public call box in Jetty Operators Office which you can use to reverse charges overseas – very good and easy.

Consul: Salvador has an Honorary British Vice-Consul which comes under Rio de Janeiro and was very helpful.

Salvador: 241-3222.
Brasilia: 0612-25298, 252710, 252625.

Safety Equipment Certificate extended by 5 months through Brasilia and Salvador.

Lloyds: Non exclusive surveyor in Salvador – ABS, nearest exclusive is Rio de Janeiro.

Lifeboat: Can be lowered into water. A sandy beach on wooded island opposite terminal is popular with ships but watch tidal rise and fall.

REPORT: November 1982.

Butane/Propane at Petrobras Terminal (Temadre): Capacity 20,000 tonnes at minus 45°C. Discharge rate up to 500 tonnes per hour but dependant on vessel pumping rate. For daylight berthing vessels up to 50,000 d.w.t., max. draft 40 ft., vessels up to 118,000 d.w.t. max. draft 38 ft. Max. LOA 240 m.

Butane/propane vessels with over 20,000 tons to discharge may transfer excess across the Terminal to smaller gas tankers, sometimes unrefrigerated.

Larger vessels than limits shown have gone in. We had vessel (55,173 d.w.t./39 ft. 6 in. draft) earlier this month, which berthed by special dispensation of Port Captain, under considerable pressure from Petrobras. Vessel had less than 50,000 tons on board but limitation is on registered d.w.t., not cargo. Port Captain's Office now studying possible increase d.w.t. limit for 40 ft. draft vessels but not confirmed yet, so if you are working vessel over present limits please advise soonest and details.

Remember vessels proceeding to Santos to complete discharge must arrive there with 28 ft. draft or less. Usually there is no difficulty here with transferring propane to butane tanks on board to correct trim.

REPORT: May 1983.
Refrigerated LPG Discharge: Pipe-line length 3,000 m., liquid line diameter 18 in., vapour line diameter 8 in. Discharge using 3 liquid hose lines with 8 in. diameter and 1×8 in. diameter vapour hose line.

SHIPMASTER'S REPORT: July 1992.
Charts: B.A. Charts No. 540 and 545.
Approaches: The city of Salvador is very prominent, combining old and new tower buildings, and the bay cannot be mistaken.

Pta. de Santo Antonio, a black and white stripped tower lighthouse, is conspicuous.

Care should be exercised to stay South and West of Banco de Santo Antonio, which is marked at its Northern and Southern edges by light buoys. These buoys are not easily seen.

Salvador is the second most important naval base of the country, and as such, there are frequent warship movements in the approaches to the bay, which can create difficulties, as we found out on our visit.

When proceeding into the pilotage area, as marked on B.A. Chart No. 545, do not stray North of Banco de Panela light buoys, marking the shoal areas. With many ships at anchor in the vicinity, and confusion over the pilot launch, vessel can easily drift between the buoys.
Pilots: Pilots can be contacted on VHF Channel 16, working mainly on Channel 11. The range is poor. Pilot boards in area marked on B.A. Charts No. 540 and 545. Pilot Station is at the foot of Berth No. 1 in Salvador (12° 58.3′ S., 38° 30.9′ W.).

Pilot boards from fast red hulled cutter. Pilot cutter can easily be mistaken for service launches going to the anchorage, which also have red hulls.

Officially there is 24 hour pilotage to and from Petrobras Madre de Deus Terminal, although over 4 days, no ships were in fact berthed or unberthed overnight, most berthed around 0700 hrs. or 1800 hrs., depending on tide.

A pilot must be taken to anchor vessels off Salvador, either awaiting orders, berth or clearance before proceeding to Madre de Deus or Aratu.
Anchorage: The general anchorage is off Salvador City (See "Pilotage").

We anchored for clearance and to await a berth in position Lat. 12° 57′ S., Long. 38° 31.8′ W. Anchorage was fairly well sheltered but busy.

At Madre de Deus, an emergency anchorage can be found S.W. of Berth "P2". This area is also used as a swinging basin.
Tugs: Numerous tugs available.

At Madre de Deus Terminal, Petrobras have two of their own tugs of 1,500 h.p. on permanent stand-by. Extra tugs being called for large ships. Ship's lines are used.
Mooring: Tidal range is 1.5 m. at neaps and 3.0 m. at springs. There are strong currents off the berths. All ships for all berths are swung in the turning basin to S.W. of Berth "P2", and moored head-out or East. Therefore, for Berths "S1", "P1", "P2" and "P4", vessels berth port side to, and at Berths "S2" and 'P3", vessels berth starboard side to.

Berths were very busy during our 4 days stay.

Offshore anchor sometimes used, but as sufficient tug power per size of vessel readily available, anchor not used as often as in the past.

Moorings were 4 head/stern lines, 2 breast lines, 2 back springs, on all "P" Berths. Breast lines are very important, as they hold vessel onto jetty if there is a strong current.

Two powerful mooring boats used, and large mooring gang is also provided.

At old berths ("S1", "S2", "P1", "P2" and "P3"), moorings are onto bollards and fixed hooks. At Berth "P4" (new berth), moorings are onto quick release hooks with capstans.

Large fenders of cushioned rubber at each end of jetty berthing face. These keep vessels off jetty face by about 2.5 m., which can cause gangway difficulties. Due to strong currents and tidal range, moorings must be watched carefully.
Berths: Madre de Deus Terminal:

"S2" – 5.0 m. at L.W., hoses, coastal tankers – products.

"S1" – 7.0 m. at L.W., Chicksans, up to 10,000 d.w.t., products and LPG, discharging and loading.

"P1" – 12.0 m. at L.W., Chicksans, up to 75,000 cu.m. (LPG) or 100,000 d.w.t. (products) discharging and loading.

"P2" – 12.5 m. at L.W., Chicksans, up to 150,000 d.w.t., crude or products, discharging or loading. No LPG.

"P3" – 10.0 m. at L.W., Chicksans, up to 80,000 d.w.t., products, discharging and loading.

"P4" – 12.0 m. at L.W., hoses, up to 150,000 d.w.t., crude and products, discharging and loading.

LPG only handled at Berths "S1" and "P1". For Berth "P1", there are often long waits at Salvador Anchorage, as berth is very busy.

At Berth "P4", which was commissioned in March 1992, hoses only are used, lifted by ship's derrick/crane. There is a hydraulic gangway on the jetty.

At all other berths, ship's gangway has to be used, which can be difficult to land. We used midships accommodation ladder with painting stage between platform and jetty, with safety net and manropes.
Cargo: LPG imported and coastal loading at Berth "P1", liquid arm 10 in. and VRL 6 in.

LPG at Berth "S1" with 6 in. liquid arm and 4 in. VRL.

During our visit, the VRL Chicksan was out of action, and we used 6 in. shore hose connected at base of Chicksan. Again during our visit, the loading/discharging arm developed a leak, so ended up using a 8 in. shore hose connected to base of Chicksan.

Loading for coastal distribution: Propane product warm, between −28°C and −35°C, at a maximum rate of 400 t.p.h.

Butane product variable, between −3°C and +3°C.

If vessel is a fully refrigerated vessel, it will encounter great difficulties in loading warm Propane. Minimum rate can be controlled at ship's manifold, which is quite acceptable.

VRL: The use of the VRL does not seem to carry a charge. It is sometimes returned to the shore tanks and at other times it is flared. Little flow/return was found below 170 mbs. ship tank pressure. Above this, the flow rate is variable, depending on the degree of persuasion, ship can exert on Petrobras.

We found loading rate for Propane at average −30°C to be 55 m.t.p.h., and Butane rate up to 400 m.t.p.h.

Recirculating shore line between different products can be done up the vapour return line, but Petrobras will resist this if they can.

Discharging: From reports and previous experience, discharge is against a 6/8 Bar B.P. at rates around 400 m.t.p.h. There are a lot of shore stops.

Chicksans as for loading.

Tanks are about 2.0 km. away from berth, 20,000 tonnes refrigerated and spheres.

Normally large LPG ships up to 75,000 cu.m. will do a two port discharge (Salvador and Santos).

Little English is spoken by jetty personnel and Shift Managers. Each shift does a different thing.

Difficult to get hold of any one in authority.
General: Fresh water available on all berths at rate of 25 m.t.p.h. Ship's hoses and meter were used. Fresh water is also available at Salvador Anchorage at a rate of U.S.$ 10.00 per tonne by barge.

All grades of fuel are available at all berths. Gas oil and MDO is also available by barge at Salvador Anchorage, but not fuel oil (IFO).

Stores: There are a number of chandlers in Salvador, who call vessel on VHF when vessel first enters bay. They can deliver to within 20 m. of ship. Jetty can take weights up to 18 tonnes, and all traffic seems to be allowed on jetty roadway (trucks/vans/cars – diesel or petrol).
Note: Chandlers are to be paid by owners and not by Agent or Master (New Central Bank Regulation).

Repairs: We used EMS – Engenharia Manutencao E Servicos Ltda. Telex: 713780. Fax: 71 3129579. Tel: 71 3129715. They made a good job of both mechanical and electrical repairs.

No spares available at Salvador. Prices are very very high.

Telephone: IDD telephone in box at Control Cabin at Jetty, elbow about 100 m. from Berth "P1".
Authorities: Vessel cleared at Salvador Anchorage, even if coastwise. Usual volumes of paperwork. We were coastwise and the following were required: 'Rider' from Fortaleza, 6 Crew Lists, 2 Crew Effects Lists, 2 Stores Lists, 2 Vaccination Lists, 1 Port Rotation List, 1 'Nil' Passenger List, 1 'Nil' Firearms List and 1 Dangerous Drugs List.

No foreign exchange (U.S.Dollars) can be advanced to Master. This applies to all Brazilian ports.

SHIPMASTER'S REPORT: May 1996.
Pilotage: Compulsory. Pilot comes on board about 1 mile to the North and abeam of Point S.Maria for piloting ship and dropping anchor in Salvador roadstead. Ships stay awaiting berth and Port Authorities about 1 mile from the port breakwater. Usualiy drop one anchor with 4 shackles in water. Ground is very good holding. Pilot station "Salvador Pilot" on VHF Channel 16, working on Channel 13. Pilot comes by launch, which has an orange hull and white cabin with word "Pilot" on side.
Documents:

Clearance from the last Port.
Register (photocopy).
International Tonnage Certificate.
Cargo Ship Safety Equipment Certificate.
Safety Radio Certificate.
Cargo Ship Safety Construction Certificate.
International Load Line Certificate.
International Oil Pollution Prevention Certificate.
Derat Certificate.
Minimum Safe Manning Certificate.
International Pollution Prevention Certificate for the carriage of obnoxious liquids in bulk (if any).
Fitness for the Carriage of dangerous chemicals in bulk (if any).
8 copies Crew List.
8 copies Passenger List (or nil).
6 copies Personal Effects List.
4 copies Arms and Ammunition List.
4 copies Narcotics List (or nil).
1 copy Health Declaration.
1 copy Vaccination List against Yellow Fever.
1 copy List of Ports of Call.
6 copies Stores List.

Photocopies of all Certificates of Competence of all crew members from the Master to the last member onboard on arrival, for vessels clearance for sailing. If the member of the crew has no Certificate of Competence, a copy of his Seaman's Book where his rank is shown.

2 copies Bill of Lading.
2 copies Cargo Manifest.

A statement, including Master's full name, port of registry, official registered number, maximum draft on sailing, next port of call.
Watchmen: Compulsory, but his working hours are stevedores' working hours.
Fresh Water: Available, from barge (minimum order 85 tonnes) or from berth. Order through ship's Agent. From barge price is U.S.$11.00/tonne.
Ballast: Deballasting prohibited.
Currency: Local currency is the Real. U.S.$1.00 = 0.986 Reals.
Fuel: Available from barge. Agent requires advance notice.
Garbage Disposal: No service available.
Master's Remarks:

1. In Brazilian waters, NAVTEX system is not working.
2. For sailing near coast in darkness and in bad visibility, it is very difficult, as small wooden fishing boats do not show on radar.
3. Comcontromar – No answer to messages as radiotelex not working.

4. Weather forecast by radio only, no fax charts.
5. At any Brazilian port on roadstead, according to information from Port Authorities, ship and crew may be exposed to piracy attack by men with guns, particularly at night and in bad visibility. Recommended arrival in daylight.
6. Men and women without permission are prohibited to visit the ship. Very heavy fines of about U.S.$2,000 may be imposed upon the Master, watch officer or crew watchman, and vessel may be delayed.

Additional Information: Six days prior to arrival, ship's Agent constantly informs Master about berthing prospects.

Price of one trip on ferry boat or in Agent's car costs about U.S.$.100.00.

AUTHORITY: Companhia Das Docas Do Estado Da Bahia (CODEBA), Estacao Maritima De Passageiros, Avenida Da Franca, S/N, CEP 40.000, Salvador, Bahia, Brazil. *Tel:* (071) 243-5066, 243-5165, 243-5965, 243-5765. *Telex:* 071-1110. *Fax:* (071) 241-6712.

Porto De Salvador – Porsal, Avenida Da Franca 1551, CEP 40000, Salvador, Bahia, Brazil. *Tel:* (071) 243-5066, 243-5165, 243-5965, 243-5765. Port Control: 242-1341. Port Administration: 242-4570. Traffic: 242-5998. Port Guard: 242-3497. Telex: 071-1110. *FAX:* (071) 2416712. *Contact:* A. Barreto, Port Manager.

AGENT: Wilson Sons Agencia Maritima Ltda., Avenida da Franca 164, Edificio Futuros, 8th Floor, Rooms 801/805 to 811, 40010-000 Salvador BA. Tel: (071) 241-4411, 241-4186, 241-4105, 241-4389, 241-4421 (After hours: (071) 379-2910, (071) 367-2744). Telex: (71) 1941 SCSA BR. Fax: (071) 241-8709. Cables: Saveiros.

SANTANA (Macapa): 00.03 S. 51.11 W. (See Plan)

DOCUMENTS: Also see "General" before first port.
6 Crew Lists.
3 Crew Personal Effects Lists.
7 Transit Passengers List or Negative Passengers List.
3 (each) Stores Lists (engine, deck and bonded).
5 Cargo Manifest or Ballast Declaration.
7 Disembarking Passengers List (if any).
3 Maritime Health Certificate.
3 Vaccination Lists.
Derat Certificate.
Maritime Police Pass (when proceeding from Brazilian Ports).
Clearance Certificate.

PILOTAGE: No Pilots available either for the North Channel entrance and/or for docking and casting off operations.

ANCHORAGE: In front of the port, protected anchorage between mainland and Santana Island, where vessels can safely anchor at any location. Bottom is mud.

RIVER NAVIGATION: Outer bar transit restricted to 32 ft. at LW and 37 ft. at HW. When loaded and outward bound, the Master should study carefully the tides and direction of currents.

RESTRICTIONS: Vessels can depart at any stage of tide. Night transit in North channel is at Master's discretion.

Channel transit restricted to 32 ft. in low water. Due to shifting of mud banks it is recommended that a set of up-to-date Brazilian nautical charts, covering from outer bar to Santana Port, should be used.

The Hydrographic Office of The Brazilian Navy, based on date furnished by the Brazilian National Astronomical Observatory, publishes an annual tide table for the majority of Brazilian ports, including Barra Norte do Rio Amazonas-Ilha do Brigue – Lat. 00° 55′ N., Long. 50° 05′ W. and Porto de Santana.

Nautical charts and tide tables are available through the vessel's Belem (Para) Agent.

Shipmaster's Report: The above is correct but we would advise you to add: "The charts and books are delivered by pilot launch off Salinopolis (the Pilot Station for the port of Belem), if ordered well in advance via Belem's Agent. The meeting point, anchorage, can easily be reached on B.A. Chart No. 520 and is described in South America Pilot Volume 1 (eleventh edition 1975), page 53, line R 41 – 45".

In certain periods, but mainly from April to August, there are large logs, trees, etc., drifting down river.

MAX. SIZE: On East side of floating ore pier, general cargo pier has a depth alongside of 29 ft. Along floating ore pier depth ranges from 35 ft. to 90 ft. (at LW). 35 ft. on East end of pier. Tidal range about 9 ft. to 11 ft. Tidal current at middle of river ranges from 2 to 3 knots, while close inshore along ore dock it runs approximately 1 – 1.5 knots. Amazon river water at Santana is fresh in spite of tides.

Port of Santana: Alongside the floating ore pier, the tidal current continues to run for 60 minutes beyond the time computed from the table. In mid-stream, the delay in the change of current is 90 minutes, depending on the river flow.

Report: September 1986.
Max. LOA 707 ft. 08 in.
Max. beam 95 ft. 02 in.
Max. air draft 40 ft.
Max. sailing draft 32 ft. LWOST. 37 ft. HWOST.

HEALTH: Health authorities visit vessel arriving from abroad. Authorities require regular ship's gangway to be lowered. Jacob's ladders not accepted. Also see "General" before first port.

RADIO: Vessels scheduled to load ore at Santana must radio Belem (Para) Agents (preferably via Chatham, Amagansett or Belem Radio) at least 48 hours prior to ETA North Channel. Other means of communication not satisfactory and result in delay.

TUGS: No tugs available.

BERTHING: *Private Floating Pier:* Length 247 m. Depth of water 10.6 m. A retractable loading arm loads Manganese at an effective average loading rate of 1,000 long tons per hour for each hatch loaded.

Also see "Shipmaster's Report".

Macapa Pierhead: Length 18 m. Depth of water 8.8 m. Fitted with a 65 ton crane, and used for general cargo handling.

Recommended that amidship hatches be used for Santana cargo. Vessels berth according to direction of tidal current. Berthing operations assisted by a motor craft to place lines on shore, East of pier. On West side, lines moored to the bitts on floating fender. Linesmen available to assist berthing and shifting. Ore carriers have preference when docking.

When berthing, use of the anchor must be avoided except in an emergency.

Cais Portobras: Woodchip Berth – See "Shipmaster's Report" dated April 1993.

STEVEDORES: Stevedores are available at Macapa about 25 km. by road from the port. Rates and other pertinent details must be arranged through the ship's Agents. Conveyor belt for ore loading fixed, consequently vessels must be shifted by own winches to load various hatches. Effective average loading rate 1,000 t.p.h. Special caution must be taken not to pump all ship's ballast before loading starts, since the height of boom is 40 ft. above water level. Cargo belt trimmed only.

MEDICAL: Medical attention may be arranged at Macapa through ship's Agent.

TANKERS: Discharge at the Dolphins Pier, about 150 m. West of floating pier. Depth 8.0 m. Pipe-lines lead to tanks ashore (distance from pier 1,000 m.). Storage tanks have capacities for 35,000 barrels of diesel oil, 9,500 barrels of gasoline and 60,000 barrels of fuel oil. There are no shore facilities available at the terminal for receiving slops, dirty or contaminated ballast. Masters are cautioned that discharging of anything other than uncontaminated ballast will be subject to penalties as prescribed by Brazilian law.

(See Pollution Regulations in "General" before first port).

DENSITY: The Amazon river water at Santana Port is fresh water at any stage of tide. Checking density during load operations is recommended.

FRESH WATER: No drinking water available.

FUEL: There is no suitable installation for fuel supply. See "General" before first port.

CONSULS: None. Documents which are to be visaed by a Consul must be sent to Belem.

REPAIRS: Only in cases of extreme emergency and then only minor repairs.

GANGWAY/DECK WATCHMEN: Gangway watchman compulsory.

OPENING/CLOSING HATCHES: Ore carriers: Service carried out by crew. General cargo vessels: Service executed by stevedores.

CUSTOMS ALLOWANCES: Limited quantity for use during ship's stay.

CARGO GEAR: No additional requirements as to gear. A heavy-lift stiff leg derrick mounted on the pier. Boom: 60 ft., Mast: 37 ft. 6 in., Capacity: 65 tonnes. Mobile crane (maximum lift 40 tonnes) available for discharge of general cargo from small vessels.

REPATRIATION: Effected by ship's Agent. No Immigration Authorities at Macapa.

AIRPORT: Macapa Airport 25 km. from Santana near city of Macapa. Scheduled domestic flights from Belem to Macapa, a trip of 25 minutes.

TIME: GMT minus 3 hours.

HOLIDAYS: New Year's Day (January 1st); Tiradentes (April 21st); Martyr of Independence; Labour Day (May 1st); Independence Day (September 7th); All Saints' Day (November 2nd); Proclamation of the Republic (November 15th); Christmas Day (December 25th).

TELEPHONES: No facilities for placing telephones on board.

GENERAL:

Aids to Navigation – Radio Beacon – A radio beacon is installed at Ponta do Ceu, marking the entrance from the open sea to the river proper. It is operated by the Brazilian Hydrographic Office and the main details are:

Frequency	– 290 kHz
Signal letter	– EH
Working hours	– Continuous
Geographical position	– Lat. 00° 45′ 40″ N. Long. 50° 06′ 58″ W.
Range	– 300 miles.
Signal	– A0 and A2 (1020 H2)
Character of signal	– (EH.....) Twice in A0 during 10 secs. and A2 (1020 H2) during 5 secs.

Vessels have reported that certain times the beam may stray as much as 15°/20°. This straying is most noticeable during early evening and at dawn, less so during the night, and least during the daytime hours.

Industria e Comercio de Minerios S.A. – ICOMI is not responsible for the location and operation of the various aids to navigation (lights, radio beacon, buoys, etc.).

COMMUNICATION: *Notices* – Vessels scheduled to load ore at Porto de Santana, must send radio to Belem (Para) Agents (preferably via Chatham, Amagansett or Belem Radio) at least 48 hours prior to their ETA North channel. Agents forward this information via telephone to their representative in Macapa who notify the shippers.

Telephone: Telephone communications between Porto de Santana and all Brazilian cities and also international calls, via Embratel (Brazilian Telecommunication Company) are possible every day, Sundays and holidays included.

Telegraph: There is a public telegraph service in Macapa, operated by the Brazilian Post Office and Telegraph Department.

Cable: International Cables are speeded by phoning them to the Agents in Belem (Para) who file them in the local cable offices there.

Mail: Ship's or crew's mail should be addressed in care of the ship Agents in Belem (Para). Mail should not be addressed to Macapa or to Santana.

POLLUTION REGULATIONS: Brazilian Legislation contains several sanctions and penalties applicable to those who cause pollution of any kind. The prohibition against the execution of acts which cause pollution and the respective penalties, both administrative and pecuniary, are principally contained in The Federal Law No. 5318, dated 26/9/67, and in the National Policy for Sanitation, in the Decree No. 221, dated 20/2/67 – Fishing Code, in the Federal Decree 5798, dated 11/6/40, on Rulings for Maritime Traffic, and in the State Law (State of Rio de Janeiro) No. 6753, dated 10/12/71.

The sanctions and penalties can be applied cumulatively against infractors, and among those, special attention is called to the penalties foreseen in Federal Law No. 5357, 17/11/67, of which the first article reads:

"Article 1 – Vessels or maritime or river terminals of any kind, foreign or national, which discharge debris or oil in waters which are within a strip of 6 (six) nautical miles from the Brazilian coast, or in rivers, lakes or other stretches of water, will be subject to the following penalties:

(a) Vessels, to the fine of 2% (two per cent) of the greatest minimum salary in force in the national territory, per gross register ton or fraction thereof:

(b) maritime or river terminals, to a fine of 200 (two hundred) times the greatest minimum salary in force in the national territory.

Sole paragraph – in the case of repetition the fine will be applicable in double".

In addition to the administrative and pecuniary penalties, under the new Brazilian Criminal Code, (Decree-Law No. 1004 of October 21, 1969, which was put in effect as of January 1, 1974, according to Law 5857/72, acts causing pollution constitute a violation punishable with imprisonment as follows:

"Article 303 – Pollute lakes and rivers or, in inhabited places, the shores and the atmosphere, thus breaching provisions of federal laws or regulations:

Penalty – Imprisonment up to 3 (three) years and payment of a 5 to 25 day fine.

Sole paragraph – If the crime is not wilful the penalty shall be imprisonment from 2 months to 1 (one) year".

IDENTITY CARDS: Foreign Crew members not permitted to go ashore without presentation of identity card, on which is a photograph of holder and personal details. These cards are provided by the Agent upon arrival. The identity card must be delivered on dis-embarkation to the Federal Police who will return it to the crew member on re-embarkation.

SHIPMASTER'S REPORT: July 1982.

The following concerns our recent visit to Santana to load bulk manganese ore, destined for Canada. The following should be read together with "The Pilot Book" and "Guide to Port Entry".

Communications: We were provided, by Charterers, with Agent's address, including cable address, in Santana. However cables sent here could not be delivered. All communications then sent to Agent in Belem. They responded with berthing instructions. Agent assured me that mail to Europe takes 5 to 6 days only. Incoming mail must be addressed to the Belem Agent and not direct to Santana. Agent has a VHF set but it is currently out of order. Contacted Macapa Radio on VHF Channel 16 when passing but they did not pass the message on to Santana.

D/F: When some 200 miles from the beacon at Pta. do Ceu, a clear sharp signal was obtained. However, when crossing the Barra Norte, the signal was poor with a spread of 10 to 12 degrees. Generally showing the correct bearing though and it is the only aid to navigation.

Pilots: There are no Pilots available for the passage from sea to Santana. A competent Pilot boarded at the anchorage and aided the berthing operation. This same Pilot should have aided the sailing but he arrived late and vessel was already leaving the pier. I understand that vessels proceeding further up the River Amazon embark Pilot at Santana. A mooring boat and line handlers are provided.

Charts: I found Admiralty charts adequate for the in-bound, light ship, passage. Purchased seven Brazilian charts from the Agent and these were invaluable for the outbound passage. Large important sections have been surveyed 1980. Similar detail to Admiralty charts but much better scale.

Navigational Marks: Found all buoys and beacons as charted inbound. They are well laid out and are about adequate. Outbound found Barra Norte No. 2 Buoy missing. This fact was reported to Belem Agent. Inbound and outbound passages were mostly in daylight so I cannot vouch for the lights.

Landfall: No. 2 Buoy was sighted at 14 miles on radar and visually at 10 miles. All buoys showed well on radar. Pta. do Guara Lighthouse well defined on radar at 24 miles. The coast line Northward of Rio Araguari was clearly visible on radar at 24 miles.

Tide Tables: Used Admiralty tables inbound. Predictions are based on Georgetown, Guyana. Crossing Barra Norte, inbound, could not make tidal streams conform with predictions. After berthing purchased Brazilian Tide Tables from Agent. The predictions for Santana were found to be similar in both sets of tables. However for Barra Norte found High Water some 4.5 hours and 2.2 m. difference between the tables. Sailed on basis of Brazilian predictions and found that tidal streams conformed much better. Inbound, light ship, the height of tide is not so important. Santana direction of tidal stream, which dictates berthing, is correct. Outbound use Brazilian tables and charts. The chart has a good tidal rose.

Santana Anchorage: As another vessel was already alongside I passed the berth and anchored about 1 mile above the berth in a deep pool at the confluence of three creeks. Stayed here for some 36 hours and noted that the flow of tide continues for some 60 to 90 minutes after the Admiralty predicted High and Low Waters.

Customs: Conscientious and efficient. A search of store rooms, cabins, lockers and cargo spaces was carried out. This took 1.5 hours and Agent assured me that this is normal. Two Customs Officers lived onboard throughout our stay. They come complete with spare seal should you wish to visit bonded stores.

Immigration: All matters taken care of by the Agent.

Port Health: Most thorough and meticulous. All medical books checked. The Brazilian Government is sponsoring a massive drive against Yellow Fever. Next morning Port Health Doctor returned to the vessel and vaccinated all who did not have proper documentation. International 10 year certificates issued.

Extended Derat Exemption for 6 months on proper form.

Watchman: A shore watchman was provided. Very useful for keeping the canoe people off the vessel. Also useful as a runner to the Agent.

Pier: The pier is 247 m. long, lies along 100°/280° and has a freeboard of about 4 ft. It floats on pontoons and is connected to the shore by 2 arms. It has a wood faced rubbing strip. Adequate rams horn bollards are provided. There are 2 mooring buoys at the Western end of the pier. See "Plan" for moorings and soundings.

Cargo: Vessel alongside for 48 hours and loaded 25,408.6 tonnes. Cargo pours out at a rate of some 800 tonnes per hour. Some time is lost shifting vessel up and down the quay to locate hatches under the chute. Our seven shifts accounted for 4.5 hours. When the tide is "kind" these shifts are easy enough, other times not so easy. Before the final pour into the last hatch operations were halted for 3 hours while samples were analysed. The belt weight was found to be accurate when compared to draft. There is no trimming. It lies where it falls.

Chute: The loading chute floats on a separate pontoon. The air draft is 40 ft. and of course is not affected by tide. The chute can be adjusted to pour across the ship thus taking care of vessels with varying beams.

Language: Few shore people had any knowledge of English. No personnel aboard could speak their particular brand of Portuguese. Final documentation all completed in perfect English.

Provisions: Fresh provisions were puchased and prices were reasonable. Used American dollars from Master's safe.

Fresh Water: Fresh water is not available. The loading rig has a system of pouring water to keep the belt wet, but this is just river water.

SHIPMASTER'S REPORT: April 1988.

The passage to Santana is through the Amazon River and North entrance is declared safe for navigation without pilot. The distance from North Bar to Fazendinha Anchorage (boarding place for Immigration and Pilot) is about 172 nautical miles. The Buoy "BF-2" in position 01° 34.2′ N., 49° 00.9′ W. is equipped with Racon (G) and marks the entrance of the river and North Bar. Vessels in ballast should not have any problem except for tidal stream, missing or out of position channel buoys, etc. The depth at the river mouth is subject to change to some extent and it is advisable to obtain latest position of buoys from Belem or Santana Agent. River transit in the night is risky due to unlit buoys. Otherwise the river is quite deep and wide. The shore Racons at Pta. do Guara and Ilha do Bailique were found functioning. The D/F bearings of Pointa do Ceu and Salinopolis Stations can be relied upon to some extent.

There is no berthing at night and the vessel is taken alongside from Santana Anchorage during floodtide. There is a fixed loader and frequent warping of the vessel can be avoided by keeping loading changes to a minimum.

On the outward passage in the river, the vessel anchored off Pointa do Ceu and the current was found to be quite strong. The North Bar (charted depth less than 10.0 m.) is about 15 miles long and it is advisable to enter one hour before High Water. The vessel procured Brazilian charts and tide tables which were of great assistance. The tides at the North Bar are about 4 hours 4 minutes ahead of tide timings for Ilha do Brigue.

SHIPMASTER'S REPORT: April 1993.

Port of Cais Portobras – Macapa:

River Transit: The passage to Cais Portobras (Macapa) (Chipwood Berth) is through the Amazon River via the North Bar entrance which was declared safe for navigation without the Pilot. The distance from the North entrance to the Pilot Station is about 171 miles, the distance to Cais Portobras is about 3 miles, and the position of the Woodchip Berth is about one mile East of Port of Santana. We were the second vessel to load this type of cargo in this port. The position of the Entrance Buoy on North Bar (the "Amazonas 1" with Racon signal (G)) was 01° 34.2′ N., 49° 01.6′ W. Vessels in ballast condition should not have any problems, except for strong tidal currents and out of position channel buoys at Curua Channels.

The depth in the channel is subject to frequent changes. It is advisable to obtain the latest information from your Agent in Belem. River navigation at night is risky, due to some buoys being unlit and some large floating logs can be encountered, specially during rainy seasons. Global positioning system (GPS) was used as an aid during river navigation and it rendered great assistance for river transit and back-up to ARPA Radar.

On the outbound transit in the North Bar, the vessel can anchor East of Pta. do Ceu or 2.0 miles West of Buoy No. 11 and with 15.0 m. charted depth for waiting high water. Vessels with draft of 35 ft. (10.67 m.) will not have any problems crossing the North entrance on high water. Prudent mariners should be alert for the strong currents in this area.

The charted depth at the North Bar was less than 10.0 m., and it is advisable to enter the channel 4 hours and 20 minutes before high tide, to obtain the maximum depth. The vessel utilised Brazilian tide tables which were of great assistance. Charts used in the river were American charts, which we compared with Brazilian charts, and there was quite a difference, especially the charted depth of 9.1 m. in between Buoys No. 11 and 12, that was not corrected on Brazilian charts. Also the changes in light tower in Ilhas Pedreiras was not updated on Brazilian chart. It is also advisable to check with latest American Notice to Mariners, Charts Corrections and Sailing Directions Publications for this area.

Docking/Undocking: The docking and undocking of the vessel is only done at daytime and only during flood tide, which the competent Pilot used to advantage. There will be no tugs to assist the vessel to dock alongside the berth. Vessels always come alongside port side to. However, due to favourable conditions of the river in the vicinity of the berth, difficulties are not excpected during manoeuvring of vessels.

Loading: There is a movable chiploader in this berth that can be spotted in the centre of every hold and loaded by gravity through spout loader that can rotate 360°. The average capacity of loader is 500 t.p.h. – 600 t.p.h. The length of the berth is approximately 200 m.

Stevedores: The longshoremen here are not very familiar with loading procedures, probably because this is the first chipberth in Macapa area. Stevedores require constant guidance to attain the maximum load required for the vessel.

The trimming is done with a 9 ton bulldozer which makes loading time longer.

Message: P&I Club to P&I Club, dated October 1992.

Please note following information obtained by our agency department about the loading of chips at Macapa:

1. There is a Japanese company's building facilities for production/ export of woodchips at Santana (Macapa).
2. The facilities include a loading terminal at Santana, which will be approximately 200 m. long, allowing vessels up to 220 m. long to berth, and a draft of about 37 ft. (11.28 m.), which is the maximum allowed at the estuary of Amazon River at H.W.
3. There will be no tugs to assist vessel to dock alongside the terminal. However, due to favourable conditions of the river at the site of the terminal, difficulties are not expected for vessel's manoeuvring.
4. Dredging of the terminal and approaching area will start soon, and it is expected that by beginning of 1993 the terminal will be operative.
5. Pilot boards vessels at Fazendinha, not at mouth of river. Navigation from river mouth to Fazendinha presents no problems, and vessels of 60,000 d.w.t. – 65,000 d.w.t. usually transit there when going to Port Trombetas to load bauxite.

AUTHORITY: Companhia Docas do Para, Porto de Macapa, Av. Felinto Muller, Santana, PA, Brazil. *Contact:* Agostinho Raiol da Cunha, Manager.

AGENT: See "Belem".

SANTAREM: 02.25 S. 54.43 W. (See Plan)

LOCATION: Also see "General" before first port.

Santarem is located on the right bank of the Tapajos River which joins the Amazon River.

APPROACHES: *Bar:* Width 1,100 m. depth 17.0 m. – 25.0 m.

Access Channel: Length 2,590 m. width 1,500 m. minimum depth 15.0 m.

Manoeuvring Basin: Minimum width 1,500 m. minimum depth 15.0 m.

MAX. SIZE: Max. draft 10.0 m.

BERTHING: 520 m. of quay of which 380 m. is a pier, 2 warehouses with an area of 3,000 cu.m., open air area of 10,000 sq.m.; mechanical workshop, 60 ton weighbridge, administrative building, water tower and residence for the Port Administrator.

2 deep sea vessels or larger coasters can come alongside, with a minimum of 10 m. depth of water, and at the same time, 2 vessels of lesser draft can be berthed in the inner area where the depth is 6 m.

To handle river vessels, there is a marginal quay, with a minimum depth of 3 m.

There are at present 2×6.3 ton cranes, with plans to install a further 4.

1 mobile crane, capacity 9.1 tons

The principal export is meat which is delivered by road. A cold store is to be built.

FUEL: Fuel oil available at Petroleo Sabba private wharf. Also see "General" before first port.

AUTHORITY: Companhia Docas do Para, Avenida Presidente Vargas 41 – 20 Andar, Belem, Para, Brazil. *Tel:* 223-0056, 223-2066.

AGENT: See "Belem".

SANTOS: 23.56 S. 46.19 W. (See Plan)

PORT LIMITS: The Port of Santos is situated in the centre of the State of Sao Paulo, and the port installations spread over an estuary bounded by the islands of Sao Vicente and Santo Amaro.

The port limits are:

(a) Parallel alignment of 24° 02.7′ S., in the limits Morro do Munduba (Munduba Hill) and Ponta do Itaipu (Itaipu Point).
(b) Mar Pequeno.
(c) Channel of the Port of Santos.
(d) Piacaguera Channel.

DOCUMENTS: The following documents, etc., are required to be presented to the Authorities upon ship's arrival.

Port Health Authorities: (Saude dos Portos – SAPORTOS):

1 Crew List
1 Free Pratique Certificate from the first Brazilian port of call, if any.
1 Maritime Declaration of Health (only at the first Brazilian port).
Derat Certificate.
1 Vaccination List.

To Custom House: (Delegalia da Receita Federal - D.R.F.):

3 Crew Lists.
3 Store Lists (Deck, Engines, Cabin, etc.)
3 Lists of Crew's Personal Effects.
1 copy of each of the above Lists duly visaed by the Customs House of the previous Brazilian port of call, if any.
1 copy each Cargo Manifest plus 1 copy of each Bill of Lading covering cargo loaded at foreign ports for Santos, duly signed/ stamped by the Master.
1 Customs House Sailing Pass from the last Brazilian port of call (if any).
3 List (Master's Declaration) covering empty containers to be discharged at Santos (if any).

Maritime Police/Immigration Authorities: (Delegacia da Policia Federal – D.P.F.):

5 Crew Lists
3 Stowaway Lists, if any.

All valid Passports/Seamen's Books to be verified on vessel's arrival. Immigration Sailing Pass from the last Brazilian port of call, if any.

Port Captaincy – (Capitania dos Portos do Estado de Sao Paulo):

Master must fill out an Arrival Declaration giving all data concerning his vessel as well as the number of crew, passengers on board, ports of call, cargo loaded at this port, Agents, etc., which will be supplied by the Agents on vessel's berthing.

The following Ship's Certificates must also be presented on vessel's berthing:

Certificate of Registry of the Vessel
Cargo Safety Equipment Certificate
Cargo Radio Safety Certificate
Cargo Ship Safety Construction Certificate
International Load Line Certificate
Derat Certificate
Port Captaincy Sailing Pass from the last Brazilian port of call, if any, must be presented on arrival.

PASSENGERS: Whenever there are passengers on board, the following additional documents are required:

(a) *Passengers in Transit:*
1 Passenger List (Port Health Authorities)
5 Passenger Lists together with the respective valid passport (Immigration)
3 Passenger Lists (Customs House)
1 Passenger List duly visaed by the Customs House of the previous Brazilian port of call, if any (Customs House).

(b) *Passengers Disembarking:*
5 Passenger Disembarking Lists to the Immigration Authorities
2 copies of Luggage Declaration duly signed/stamped by Master for the Customs.
The valid passport to be verified on vessel's arrival by Immigration.
3 copies of Passenger Disembarking Lists for the Customs House.

NOTE: All items missing from Stores Lists (deck, engine, radio, tools, etc.) and found during Customs inspection willl be confiscated.

APPROACHES: *Santos Approach:* Santos Approach Fairway is marked on Chart No. 1701 of the DHN (Hydrographic Office), displaying all necessary information concerning beacons, buoys (buoyage system IALA "B"), depths, leading lines.

As projected depths appearing in Chart No. 1701 are still not available in certain sections, vessels shall observe "Notice to Mariners" or call the Pilot Station for actual depth. Mean depth is 12 m. for Section A, 11.5 m. for Sections B and C and 12 m. for Piacaguera Channel (Section D). Along the general cargo quay depth does not exceed 36 ft. at HW and may get as low as 32 ft. at LW. (Also see "Developments").

PILOTAGE: Pilot Station for Santos District is at Avenida Saldanha da Gama 64, Santos. Tel: 36-8036. Cables: Praticagem – Santos. VHF Stand-by on Channel 16 (24 hours).

Pilotage is compulsory for all vessels carrying dangerous cargoes, all foreign vessels and Brazilian vessels of more than 500 g.r.t., when entering the Santos Fairway Area and Santos Port Inner Anchorage. Vessels shifting berth, changing anchorage and other special manoeuvres must have a Pilot on board. Local pilotage services include pilot boats for transporting the Pilots and mooring boats. Pilot boats are red and shall fly, exhibit, display, hoist and sound:

(a) By day the pilot flag, being a red flag with a black letter "P", displayed from the main top mast;

(b) By night the lights as prescribed by Rule 29 of the Regulations for Preventing Collisions at Sea in respect of mechanically propelled pilot vessels;

(c) During fog, mist, heavy rainstorms or any other weather conditions which in like manner causes visibility to deteriorate, the fog signal as prescribed by Rule 35 of the Regulations for Preventing Collisions at Sea in respect of mechanically propelled vessels.

Incoming Vessels: In order to avoid possible delay ships bound for Santos Port should act as follows: at least 2 hours in advance the inward vessel is to report by radio-telephony on VHF Channel 16, stating her ETA, draft and further information. Berthing instructions available at Pilot Station will be sent immediately after first contact.

Vessels on Arrival: Arriving vessels awaiting berth may enter within Outer Anchorage without pilot assistance, taking care not to cross the buoyed channel and keeping clear of leading line "A" (021.5° True bearing) and maintaining continuous listening watch on VHF Channel 16.

Port Pilotage: In general, Pilots shall be picked up and dropped abreast of Palmas Island (near Parallel 24° 00′ 33″ S.) about 0.6 miles off. Deep draft incoming vessels shall embark Pilot abreast of Ponta Grossa about 0.9 miles off or as advised by Pilot Station. When unfavourable weather conditions prevail in the Santos Fairway area preventing Pilot boarding, vessels shall remain at anchor. In case of emergency, however, vessels shall follow the pilot boat as far as conditions allow Pilot to be safely picked up. If the Pilot is unable to disembark from an outward bound vessel, he shall be landed at the nearest port.

Requesting a Pilot: According to the Brazilian Pilotage Agreement vessels requiring a Pilot shall make an application for a Pilot not less than 4 hours in advance by telephone, VHF or any other suitable means of communication (provided later confirmation in writing is furnished), also indicating the exact time the Pilot is wanted on board. Nevertheless, a prompt service can be provided under special arrangement.

Pilot Ladders: Vessels engaging pilot services shall comply with the requirements respecting pilot ladders pursuant to SOLAS Rule 17.

"H" Flag: Vessels carrying a Pilot on board shall hoist the international code signal "H" otherwise they will be subject to a fine by the Harbour Master.

Note to Masters: Pilot shall be supplied with meals when rendering services at their respective regular times. The Master shall give the Pilot all requested information concerning vessel's condition and characteristics and shall, on the completetion of the pilotage service, sign the Pilotage Certificate on the form submitted by the Pilot. Masters are advised to have the vessel's engines ready to work at their maximum output if necessary.

Dangerous Goods: Ships carrying explosives and other dangerous cargoes shall give notice at least 2 hours before arrival and 1 hour before departure via cable, telex or VHF to Pilot Station stating:

1. Name and call-sign.
2. Nationality.
3. Draft and gross tonnage.
4. Nature and quantity of dangerous cargo.
5. Berth.
6. ETA/ETD.
7. Agent.

ANCHORAGE: The following anchorages shall be observed in the Port of Santos area as indicated on Chart No. 1701 of DHN (Hydrographic Office) and permission to lie at anchor outside these areas shall be obtained in case of force majeure through the Harbour Master. Vessels are requested to note submarine cables near Anchorages No. 3 and 4 and ocean outfall near Anchorage No. 4.

(a) Anchorage No. 1 (Inner): Accessible for 3 vessels up to 180 m. LOA and with a maximum draft of 8.23 m. (27 ft.).
(b) Anchorage No. 2 (Inner): 50 m. off beach, accessible for small and pleasure crafts.
(c) Anchorage No. 3: For warships only.
(d) Anchorage No. 4: For vessels up to 100 m. LOA and maximum draft of 5.79 m. (19 ft.).
(e) Anchorage No. 5: For vessels up to 180 m. LOA and maximum draft of 9.75 m. (32 ft.).
(f) Anchorage No. 6: For vessels up to 180 m. LOA and maximum draft of 9.75 m. (32 ft.).
(g) Anchorage No. 7: For deep draft vessels.

Restrictions: Anchoring in Anchorage No. 1 is allowed only for 24 hours, but an extension of stay may be obtained from Harbour Master's Office in special cases. Due to strong Northwesterly winds, common in this area, Masters are advised to have vessel's engines and crew on standby.

Navigating and anchoring near military fortresses of Itaipu ("Itaipu") and Guaruja ("Andradas") is prohibited. All craft are requested to keep clear of the areas of Morro do Itaipu (Itaipu Hill) and Morro do Munduba (Munduba Hill) within a range of 100 m.

RESTRICTIONS/MAX. SIZE: Vessels drawing 36 ft., but not exceeding 38 ft., shall only be piloted at H.W. Night manoeuvring in such cases are under study; meanwhile maximum draft at night is 34 ft. at HW for Sections B and C. (Note: Max. draft at Alemoa No. 2 is 35 ft. 6 in. and at Alemoa No. 1 it is 31 ft. 6 in.)

In the Piacaguera Channel (Section D) vessels shall observe following limitations due to same reduced width and basin dimensions according to the latest dredging (1984):

Maximum breadth	33 m.
Length overall	228 m. (day), 215 m. (night)
Maximum draft	35 ft. 6 in. (salt water) 36 ft. (fresh water)

(a) Berthing at outer side of Cosipa's Pier:

Length	228 m.
Breadth	33 m.
Draft	36 ft.

(b) Berthing at inner side of Cosipa's Pier:

Length	228 m.
Breadth	33 m.
Draft	36 ft.

(c) Berthing at Ultrafertil's Pier:

Length	200 m.
Breadth	33 m.
Draft	31 ft.

Note: Vessels negotiating the Piacaguera Channel shall employ 2 tugs, 1 at least to be made fast. But vessels drawing more than 36 ft. shall navigate only by daylight assisted by 4 tugs within Saboo/Alemoa area and 3 tugs within Alemoa/Cosipa area (only 1 vessel at a time can pass through this channel).

Tidal Information: Mean rise and fall is about 1.5 m.; spring tide stream may reach up to 1 knot at the flood and about 1.4 knots at the ebb. Exact figures are shown on the tide tables and tidal stream tables for the Port of Santos published by the DNH (Hydrographic Office).

Speed Regulations: The allowed maximum speed in the channel is 8 knots in order to secure safe navigation. Moored vessels must be passed in such a way that no hindrance or inconvenience from suction and backwash may be caused.

HEALTH: Port Health Authorities consisting of 1 doctor and 2 assistants will check all vaccination certificates (cholera and yellow fever) and issue a Free Pratique Pass, which shall remain on board for presentation at subsequent Brazilian ports of call. Masters can obtain Free Pratique by radio, which does not mean that the doctor will not come on board, but only that other Authorities can board the ship before his arrival.

Free Pratique by Radio: Master should radio to Agent (in Portuguese) as follows:

Quote:
Para Saportos Santos
c/o Agents (Cable Address)
Navio Bandeira (vessel's flag) (vessel's name)
Procedente (Last Port of Call) com (number of crew) tripulantes abordo stop Condicoes sanitarias abordo satisfatorias na conduzindo nenhuma pessoa com doenca infecto contagiosa stop
Solicito livre pratica
Comandante (Master's name) Unquote.

RADIO: Santos Coastal Station, VHF Channel 16. Working 24, 25, 26 and 27. S.S.B. facilities will be available at a later date.

VHF: *Ship Reporting System:* Compulsory system in effect for vessels over 20 g.r.t. Call sign: PWS 88. Channels: 16, 11, 12, 13, 14, 68, 69, 71 and 74.

Procedure:

1. Vessels should report:
   (a) On anchoring.
   (b) On leaving an anchorage.
   (c) Abreast of Ilha das Palmas (inward-bound).
   (d) Immediately before leaving berth (outward-bound).
2. Reports should include:
   (i) Vessel's name.
   (ii) Call sign.
   (iii) Flag.
   (iv) Port of departure (inward-bound).
   Destination (outward-bound).
   (v) Type of vessel.
   (vi) Anchorage or berth (inward-bound).
   Estimated date of arrival at destination (outward-bound).
   (vii) Estimated date of departure (inward-bound).
   Cruising speed (outward-bound).

Vessels shifting anchorage or berth report vessel's name, call sign, and previous and present position.

3. Reports are to be Portuguese (request assistance in transmission from Pilot, Pilot Station or Santos (PPS) Channel 16, as necessary).

4. Vessels unable to contact the Control Post inform the Captaincy of the Ports of the State of Sao Paulo stating vessel's name, date, time (GMT) and reason for not reporting.

TUGS: 14 tugs available, equipped with radios (VHF Channels 10, 13 and 16) horse-power range from 1,010 h.p. – 2,360 h.p. 2 small tugs available, 505 h.p. – 545 h.p.

The use of 2 tugs or more is compulsory in the Piacaguera Channel – see "Approaches".

Vessels should dock, preferably against the tide.

The assistance of at least 2 tugs will be obligatory in the following places:

Saboo Quay – Points 1, 2 and 3.

Warehouses 13, 26 and 9, where the pneumatic wheat unloaders are located;

Piacaguera Channel: Cosipa, Alamoa, Ultrafertil and Dow Quimica Terminals and Barnabe Island.

Alemoa Terminal – For vessels of 7,000 to 15,000 d.w.t. a third tug boat should be used as pusher.

Outside the above mentioned areas, when employing tugs, the following minimum requisites should be observed:

Vessels up to 4,000 d.w.t.	optional
Vessels from 4,001 to 7,000 d.w.t.	1 tug up to 1,000 h.p.
Vessels from 7,001 to 10,000 d.w.t.	2 tugs of up to 1,000 h.p. each.
Vessels from 10,001 to 20,000 d.w.t.	2 tugs more than 1,000 h.p. each.
Vessels from 20,001 to 40,000 d.w.t.	2 tugs more than 1,500 h.p. each.
Vessels over 40,000 d.w.t.	3 tugs more than 1,500 h.p. each.

Note: Should no tug of the indicated power be available, tugs of immediately superior power should be requisitioned.

Vessels with bow-thrusters may employ 1 tug instead of 2 in certain operating areas. (Not those mentioned above).

Piacaguera Channel:

	Number of Tug Boats	
Ship's Gross Tonnage	*Minimum*	*Maximum*
Up to 4,000	Optional	
From 4,001 to 10,000	2 large	2 large
From 10,001 to 15,000	2 large	3 large
From 15,001 to 30,000	3 large	3 large
From 30,001 upwards	3 large	4 large

Until such time as a fresh dredging is carried out at the turning basin at Alemoa, in the passage or ships drawing over 34 ft., destined to or proceeding from Cosipa, 1 tug should be standing by in order to push, if necessary, vessels operating at Piers No. 1 and 2.

BERTHING: Berthing quays have 435 bollards with an average distance of 25 m. between them.

Port Administration: Linear quays 9,562 m. Dolphin berths and jetties: 1,918 m.

Private Berths: 1,386 m.

	Length (m.)	*Depth* (m.)
Continuous Quay:		
Single Use:		
General Cargo – ocean-going vessels	4,193	7 – 13
General Cargo – Coastal vessels	246	7
Bulk Solids	990	8 – 11
Bulk Liquids	631	10
Double Use:		
Bulk Solids and Liquids	200	10
Bulk Solids and General Cargo	2,267	7 – 13
General Cargo and Passengers	373	11
Diversified Use:		
Maritime Department	363	5 – 8
Lighters and small craft	159	
Terminals:		
Port Administration:		
Bulk Solids – Conceicaozinha	567	13.5
Bulk Liquids – Alemoa	841	7 – 12
Containers	510	13.5
Private:		
Bulk Solids – Cosipa	300	12
Bulk Solids – Ultrafertil	294	10
Bulk Liquids – Dow Quimica	253	10
Bulk Orange Juice – Cutrale	286	9
Bulk Solids – Cargill	250	13

Wharves: Total length 6,013 m. Inner Harbour (Saboo New Quay) 800 m. (depth 11 m.). Barnabe Island Pier 300 m. (depth 10 m.).

Special Cargo Handling Facilities – Refrigerated Cargo: Refrigerated cargo after discharge is deposited in the cold storage with capacity of 4,000 tons. The Receiver is usually responsible for cartage and storage arrangements as well as for the required temperature to be maintained in cold chambers.

Bulk Cargo – Grain Elevators: There are 3 elevators in Santos from which wheat can be discharged direct into freight cars, owned by: Cia. Docas (with external silos) between Sheds 25 and 26; Moinho Paulista between Sheds 12A and 13; Moinho Santista between Sheds 8 and 9.

Cosipa Terminal, depth 12 m.; Ultrafertil Terminal, depth 10 m.

Fertiliser, Sulphur, etc, in Bulk: Can be discharged at any point along the quay where 6 ton cranes equipped with automatic motor-driven grabs or shovels are in operation. Alternatively, cranes with ordinary hand-filled buckets are used. The usual place for handling this type of cargo is by the Saboo Bend.

Silos: *Cargo*	*No.*	*Capacity (tons)*
Cereals	1	30,000
Soya/Maize	2	80,000
Salt	3	103,000
Fertiliser	6	180,000
Pelletised Veg. Products	7	125,000

Special/Valuable Cargo: Special or valuable cargo, objects of art, precious metals, etc., are discharged without special formalities and may be kept in Shed 12A, where there is a special safe.

CONTAINER HANDLING FACILITIES:

Container Terminal: On left bank of Santos Estuary, opened September 1981, with the following characteristics; 510 m. long wharf, depth 13 m., equipped with 5 portainers with the following main characteristics:

Hoist capacity below spreader: 35 ft

Rate (40 ft. containers): 20 containers per hour.

Size of containers to be handled (ISO): 20 ft., 30 ft. and 40 ft.

Handling capacity 140,000 per year.

2 transtainers on tyres for 30.5 tons, 2 transtainers on rails for 35 tons, and 9×37.5 ton forklifts.

BULK HANDLING FACILITIES: The Ultrafertil Terminal is situated East of the Cosipa Terminal and both make use of the same manoeuvring basin with depth of 10 m., connected with the Port of Santos by a dredged channel 8 km. long, 10 m. in depth and 60 m. in width.

Cosipa Terminal: Consists of a pier 150 m. in length and 22 m. in width, built on concrete tubing, with a depth of 10 m., allowing for the berthing of vessels of up to 22,000 d.w.t. Future plans foresee the lengthening of the pier to 250 m. and a depth of 13 m., enabling it to receive vessels of 45,000 d.w.t.

Equipment for the discharge of coal and ore is installed at the pier, capable of handling 600 t.p.h., as well as equipment for the loading of steel plates produced at the plant.

Ultrafertil Terminal: An open dock in the form of an "L" built on concrete tubing, 240 m. in length and 15 m. in width. At its main point, vessels of 23,000 d.w.t. and drawing 10 m. may berth. The secondary point permits the berthing of vessels of up to 3,000 d.w.t. (liquid gas carriers).

The terminal is especially equipped for the discharge of bulk solids at a rate of 500 t.p.h. and is likewise equipped with pumps and adequate pipes for the discharge of liquified gas.

Macuco Novo Quay: Export terminal for cereals. Length 280 m. Max. draft for vessels is 13 m. Storage capacity 60,000 tons. Loading rate 3,000 t.p.h.

Conveyor Belts:

(a) 2 conveyor belts for salt, in front Warehouse No. 23, receiving product from the ship by means of grabs and transporting it to the mill of SALMAC S/A with capacity for 500 t.p.h.

(b) 8 conveyor belts for fertilisers at Conceicaozinha Island with variable capacity from 500 to 2,000 t.p.h., depending on the product.

Pellets: Length of quay 280 m., depth 13 m. with 3 warehouses, capacity 80,000 tonnes. Connected by belts and loaders, capacity 2 × 1,500 t.p.h. each, with automatic weighing machines. 2 hoppers with capacity of 500 t.p.h. and 800 t.p.h. each, permit simultaneous receival from wagons and trucks.

Pellets and Fertilisers: Stretch of quay from Warehouse 17 to Warehouse 20. 5 loaders (4 × 600 t.p.h. and 1 × 150 t.p.h.). Stocks held in Warehouses 19 and 20, and Warehouses V, VI, X, XV and XXIII.

Salt: Stretch of quay in front of Warehouses 22 and 23. Electric cranes and belts provide capacity of 600 t.p.h. Stocks discharged to Warehouses XII and XVII, and a special wooden warehouse.

Grain: 3 terminals with unloaders and conveyor belts.

(i) 3 unloaders (2× 150 t.p.h. and 1 × 60 t.p.h.) between Warehouses 12-A and 13. Discharge to Paulista Mill.

(ii) 3 unloaders (2×150 t.p.h. and 1×120 t.p.h.) in front of Warehouse 26. Discharge to Codesp's silo.

Silo capacities: Codesp – 30,000 tonnes, Santista – 34,800 tonnes, Paulista – 20,000 tonnes.

Fertilisers: A quay, at Conceicaozinha, length 567 m. with 2 piers. Each pier is 283.5 m. long with a depth 13.5 m. minimum tide. Warehouse capacity 180,000 tonnes. 12 electric portico cranes, with grabs, and conveyor belts (7,000 m. and 300 t.p.h.).

Coal: At Saboo, capacity 50,000 tonnes, serviced by electric cranes, grabs and conveyor belts. Rate 1,000 t.p.h.

Roll-on/Roll-off: 6 Ro/Ro berths in operation. For vessels with straight ramps – at Saboo Quay (Warehouse 29) and Conceicaozinha.

For vessels with angled/side ramps – at Saboo Quay (Warehouse 35).

Frozen Fruit Juice/Pellets: Terminal da Sucocitrico Cutrale S.A., used for the shipment of frozen fruit juice and "pellets" in general, which entered into operation in 1985:

Depth of water: 13.3 m.

Length of quay: 195 m.

Length of quay including two dolphins: 257 m.

Length of quay, from axis to each dolphin: 250 m.

2 warehouses with capacity of 50,000 tons each,
for storage of "pellets"

1 shiploader with a capacity of 1,000 t.p.h.

16 tanks for storage of concentrated juce with
capacity of 11,000 tons each

Installation for loading juice on to vessels at rate of 500 t.p.h.

CRANES: *Heavy Lifts:* Cia Docas operates 2 floating cranes – 1×100 ton, and 1×150 ton. The 150 ton crane reaches 22 m. in height and can handle lifts within a radius of 10 m.

Type	*No.*	*Capacity*
Cranes		
Electric portico	179	1.5 to 30.0 tonnes
On tyres	30	4.5 to 250.0 tonnes
On belts	2	6.5 to 11.0 tonnes
Conveyors/Piling up of containers	2	30.0 tonnes
Portainers	5	20 units/hr. – 35 tonnes
Transtainer	2	20 units/hr – 35 tonnes.
Transtainers on tyres	2	30.5 tonnes

EQUIPMENT:

Forklifts		
Common	167	3.0 to 23.6 tonnes
For rolls of paper	20	1.8 to 2.0 tonnes
For containers	15	30 – 37.0 tonnes
For inside containers	34	2.0 – 3.0 tonnes
Floating cranes	2	150 and 250 tonnes
Water barges	2	30 and 450 tonnes

STEVEDORES: All longshoremen are in employ of Cia. Docas, which holds charter for general operations at Santos Docks. Their services can be requisitioned up to 1500 hrs. for vessels at berth/expected to berth next day. Stevedores ordered but not used shall be paid full day or night. Therefore, if the men should be kept standing by (inactive) at 0700 hrs., their period runs up to 1700 hrs., and at 1900 hrs., their period runs up to 0400 hrs.

Working Hours: 0700 – 1300, 1300 – 1900 and 1900 – 0400.

Overtime: Sundays, holidays and meal hours.

Port Workers: In Brazilian ports there are 2 categories of workers engaged in handling cargoes in loading and/or unloading ships, namely:

Longshoreman: In the employ of Dock Company, to work ashore operating the cargo from the ship's tackles to the warehouse or to wagons, lorries, etc. as well as in the reverse operation.

Stevedores: They are called "autonomous" because they have no ties of fixed employment and they are engaged by Shipowners or their Agents to work on board the ships in loading and/or unloading operations. They are professional and qualified workers grouped in their respective syndicates or trade union.

MEDICAL: Hospitals and Nursing Homes available.

TANKERS: Discharge terminals at Saboo Quay, Alemoa and Ilha Barnabe.

Alemoa Terminal: Allows simultaneous mooring of 2 tankers with capacity of up to 60,000 d.w.t. (80,000 tons displacement). Length of wharf 630 m. Depth of 12 m. at LW. Sixteen "Chicksan" arms available. Unloading rate 500 – 2,000 t.p.h. Distance between manifolds 180 – 260 in. Connections 6 in. and 8 in.

Report: May 1983 – Refrigerated LPG discharge is carried out through hydraulic arms, 1×16 in. diameter for liquid and 1×10 in. diameter for vapour. Pipeline length 1,000 m.

Also see "Shipmaster's Report" – dated September 1981.

Ilha do Barnabe: Length of dock 301 m., depth 10 m. The dock is used for loading, unloading and storage of liquid fuel.

Saboo Quay: Connections – 6 in., 8 in. and 12 in.

FRESH WATER: Adequate supply of fresh water is always available from hydrants (rate 40 t.p.h. – connections 7 threads per inch in 2 in. and 1.5 in.) along the quay (day and night) or from water-barges (440 tons). Water barges (3) cannot supply more than 2 ships per day, their capacity being only 250 tons, which can be pumped into the ship's tanks at the rate of 80 t.p.h. Cia. Docas should be advised 24 hours in advance, priority being given to passenger vessels.

FUEL: MFO, MDF, and gas oil can be supplied at Vallongo by Shed No. 1 or at the Saboo New Quay Extension, or by barge, if up to 300 tons. Applications for supplies should be made a few days in advance to avoid delay in delivery.

CONSULS: The following countries are represented in Santos:

Argentina
Belgium
Bolivia
Chile
Denmark
El Salvador
Finland
France
Germany
Greece
Italy
Netherlands
Norway
Panama
Paraguay
Portugal
Sweden
U.K.
Uruguay

REPAIRS/DRY DOCKS:

Shipyards: Santos Dock Company, Wilson Sons S/A, and various others for small size craft.

Repair Shops: Santos Dock Company, Wilson Sons S/A and various others for maintenance services and marine repairs such as: mechanical, boiler, electrical, electronic and refrigeration.

Drydocks: Wilson Sons S/A. With capacity for vessels of 65 m. in length, 12 m. breadth and maximum drafts of 4.20 m. aft and 3.90 m. forward.

Slipways: Santos Dock Company, with two cradles and capacity up to 300 tons with a maximum of 45 m. in length and 11 m. breadth; there also exist innumerous slipways for small size craft.

Many other repair shops and slipways of lesser capacity are available.

All the main engine manufacturers (B & W, MAN, Sulzer, MaK, amongst others) have service representatives in Santos and many major repairs, including re-engining of ships, have been effected in this port.

Metalock do Brasil, S.A.: General voyage repairs, including all usual mechanical services, machining, foundry, engine repairs and electrical services.

Also specialised Metalock repairs, crank shaft *in situ* machining and chocking of engines and machinery.

SURVEYORS: Practically all the Classification Societies are represented in Santos. Hold and derrick inspections as well as cargo surveys, are executed expertly, among others, by Perimar Ltd. a surveying firm which also performs testing, sampling and technical research. Its address is: Rua Amador Bueno, No. 38, conj. 91, 9th Floor, P.O.B. 624, 11.100 Santos. Tel: 35.2677. Telex 013-1213. Cables: Perima Santos.

P & I Clubs: Most associations, British, Scandinavian, Polish, Japanese and Greek are represented by Pandibra Ltda. at the following address: Rua XV de Novembro 65, 8th Floor, P.O.B. 550, 11013 Santos. Telephone Exchange No: 34.7228. Telex: 013-1248. Cables: Pandibra Santos. Also Proinde Ltd., Rua Visconde Do Rio Branco 2, 11013 Santos. Tel: 33.1230.

WATCHMEN: It is compulsory to have 1 shore watchman at the gangway. 3 additional deck watchmen are recommended.

PIRACY: Cases of piracy (Master held at knife point) are becoming common, especially at Alemoa Terminal. Also cases of armed pirates boarding have occurred.

OPENING/CLOSING HATCHES: May be performed by ship's crew or by stevedores.

AIRPORT: Situated at Sao Paulo, about 60 km. from Santos. Full international services.

TIME: GMT minus 3 hours.

HOLIDAYS: No work is accepted on the following days: Christmas Day; New Year's Day; Independence Day; Proclamation of the Republic Day; Easter; Good Friday; May 1st.

On Christmas Day, no work available except on passengers' luggage. Working overtime on holidays is possible provided application is made not later than 1500 hrs. on the preceding day. On Sundays work stops at 1900 hrs. for freighters, and is allowed to continue for passenger vessels when only handling luggage.

Local Holidays: January 26th (City Anniversary) and September 8th (City's Patron Saint) and Corpus Christi.

POLICE/AMBULANCE/FIRE: Emergency Tel: 2170. Police (Warehouses 1-7), Tel: 31.5544. Police (Warehouses 8-28), Tel: 32.5497. Police (Warehouses 29-43), Tel: 36.9979.

TELEPHONES: Every vessel berthing between Sheds 1 to 39 will have a telephone on board, available only for local calls.

IDENTITY CARDS: I.D. cards not required.

GENERAL: Flags to be shown by incoming/outgoing vessels: *(a)* National flag. *(b)* Brazilian flag. *(c)* Yellow flag – "Q" (whenever doctor's clearance is required and up to obtainment). *(d)* Customs flag (blue with a white star – to be flown 24 hours a day, after clearance is granted.)

The following circular letter was handed to a Master by his Agent (May 1980).

Re.: PORT REGULATIONS

We kindly request your attention to the following regulations in force at this port, to which you should strictly adhere, otherwise, it will result to heavy fines being imposed by the local Port Captaincy:

1. (a) *Gala Flag:* The gala flag is obligatory on the following dates, considered as official national holidays:
   September 7th (Independence Day)
   November 15th (Proclamation of the Republic)

   (b) *Half Gala Flag:* The half gala flag must be used on the following dates:
   January 1st (New Year's Day)
   April 21st (Tiradentes' Day)
   May 1st (Labour Day)
   December 25th (Christmas Day)

   (c) *Mourning Flag:* On November 2nd (All Saints Day), the vessel should dress the flag in mourning.

   The regulations mentioned above should be followed whenever the dates are coincident.
2. *Brazilian Flag:* The Brazilian flag is to be hoisted by the vessels in port, daily at sunrise and accordingly lowered at sunset. It must be hoisted in the correct position and must be double-faced, i.e., not printed and not painted on one side only. The two sides of the flag must be absolutely identical.
3. *Pilot Flag:* The moment that a Pilot boards the vessel, his indicative flag must be hoisted immediately and should only be lowered at the time he leaves the vessel. The local Port Captaincy is imposing heavy fines on infringers.
4. *Pilot Rope:* Whenever the use of this equipment becomes necessary, same should be immediately removed as soon as the Pilot leaves the vessel, otherwise, the Port Captaincy will impose heavy fines.
5. *Gangway:* All vessels should arrange a net to be placed under the gangway in order to prevent accidents. Violators may be fined according to the Brazilian law, in the event a worker or a crew member falls from the gangway, for not having placed the said net as required.
6. *Bulbous Bow:* In accordance with the port regulations, during night time, from 1800 hrs. to 0600 hrs., a light should be placed at the bulbous bow, otherwise, the Port Captaincy will heavily fine the vessel.
7. *Refuse/Garbage:*

   (a) Vessels when berthed alongside the quay or at anchor in the areas foreseen in the "Norms for Traffic and Permanency at Ports" *must not leave* hanging from the sides of the vessel containers or any other type of recipient for collecting refuse or garbage.

   (b) Refuse/garbage originating from aboard the vessel during the ship's stay in port must be placed in containers or in drums or in any other type of collecting recipient, which must be kept with a lid or cover, on deck, until the time they are withdrawn from the ship.

   (c) The vessel not being in operation (loading or discharge), the deck must be clean and all dunnage wood should be properly stowed or lashed.

   (d) Refuse/garbage of any nature, specially in the case of solids which float, resulting from loading or unloading operations, must be discharged before the ship sails.

   (e) In order that the regulation in item (d) may be controlled, Masters of vessels should enter or record in their logbooks, item 26, the following:
   - (i) Dumping of oil or refuse/garbage into the sea, date, hour, position, distance from the coast or island/s where same occured, kind of polluting substance dumped, approximate quantity dumped and reason why the material was not transferred to shore; and
   - (ii) Register the transfer to terminals, barges alongside or lorries, with details of tugs, destination and approximate quantity which was transferred.

   (f) Refuse/garbage which are not polluting, as well as the results of the cleaning of reservoirs used for by-products of petroleum and holds where chemical products were used, *must not be dumped into the sea.*

The above-mentioned regulations should be observed and seriously noted, since the Port Captaincy keeps day and night watch on the sea and shore, photographs are taken as evidence, and heavy fines are imposed, reasons why we are asking for your kind co-operation.

Observation: In addition to regulations cited above, the Brazilian flag, as well as the flags signifying the "Call Sign" of the vessel – *properly and correctly hoisted* – must be flown on the arrival/entrance of the ship.

PORT CIRCULAR: (See "Shipmaster's Report" dated July 1983.)

1 – *Watch the Ship and the Cargo*

It is the duty of every ship's Master to look after the cargo and take the precautionary steps to ensure the full safety of the ship. The controlling of access to the vessel, as well as the activities performed on board should be exercised also by members of the crew under risk of infraction of article 141 of the RTM (Maritime Traffic Regulations), sections vii and ix.

2 – *Illuminate the Ship and its Sides*

Bad visibility makes difficult the controlling actions thus giving favourable chance to illicit activities. Keep your ship illuminated, particularly the side on the sea side all along the ship's length.

3 – *Establish Communications for External Support*

The Port Authorities maintain a permanent service for fighting criminality. Install, whenever possible, a telephone line within easy reach to the ship's watchman or ship's officer on duty. Ask for assistance over telephones 33-3238 and 33-3239 of the Federal Police Guard on duty.

Remember that the Santos Radio Station is permanently listening on Channel 16 (VHF) and it can also pass on your request for assistance.

4 – *Control the Access Leading to the Accommodation*

The cabins and other habitable compartments should be kept locked whenever their occupants are absent. Endeavour to also maintain locked the passage ways to the inner areas thus guaranteeing the entry and exit control of persons by the gangway watchman.

5 – *Maintain the Portholes Closed*

Open portholes may give easy access to undesirables.

Close the portholes with the clamps properly secured whenever leaving the cabin or any other habitable compartment.

6 – *Do not Leave Valuable Objects Exposed*

Valuable objects exposed invite robbery or "opportunity". Keep your valuable objects, money and jewellery, in a locked and safe place.

7 – *Maintain the Ladders Raised*

At the Inner Anchorage or at the Bar, make difficult the access to strangers by maintaining the accommodation and jacob's ladders raised.

In port leave only the accommodation ladder lowered.

8 – *In case of Assault Set in Motion the Alarms*

In cases of threat of assault, do not hesitate in setting in motion the ship's alarm signals. This measure, in addition to warning the ship's crew members will discourage the infractor in the felonious practice.

9 – *Maintain the Contracted Watchman Under Control of the Ship's Officer on Duty*

Demand a good service from the watchman. Make him identify every person entering or leaving the ship. Facilitate his task by recommending the ship's crew to cooperate in the controlling.

Do not permit the watchman to abandon the gangway, unless he is substituted by another watchman or crew member.

10 – *Advise the Ship's Agent Regarding any Occurrence Relative to Pilferage, Robbery or Assault*

Besides the measures taken for immediate support, the occurrences relative to robbery or assault both in respect to the cargo as well as to valuables and objects belonging to the ship or members of the crew should be reported to the ship's agents for divulgement to the competent authorities. The authorities will use such information in order to guide themselves in regard to the adoption of other steps which may contribute to guarantee the safety of the ship and crew.

SERVICES: Pollution control and tank cleaning services available.

REGULATIONS: Should vessel use any type of small craft for embarking or disembarking, the landing on shore should take place within a Customs area.

Vessels at anchor may not lower their accommodation ladder and vessels alongside may not lower the offshore gangway.

Whilst in port, at anchor or berthed alongside the quay, vessels should collect garbage in adequate containers fitted with covers whilst those lying in open spaces should be kept with their covers on.

Drainage of holds or tanks containing chemical products, oils or polluting substances which may affect the flora and fauna, is prohibited.

Painting and treatment of ship's sides and decks is authorised, the lowering of planks and craft for this purpose being permitted independently of licence from the Port Captaincy.

DEVELOPMENTS: Dredging operations being carried out in order that vessels up to 45,000 tons with a draft of 12.3 m. can come into the port and go alongside Conceicaozinha. As a second phase, this dredging will be extended to the estuary to attain a depth of about 14 m. From this locality up to the Cosipa Channel, the dredging should reach a depth of 12 m.

For the prolongation of the Macuco Quay, a depth of about 13 m. is contemplated. A section of another 375 m. with a depth of 11 m. and another of 230 m. with a depth of 13 m. will be made in an extension of 605 m.

The following development goals are for the medium and long term:

Enlargement from the Valongo Quay to Paqueta 1 and dredging to 11.0 m.

Enlargement of the Container Terminal (510 m.) by 310 m. Container forklift of 37 tons on order.

Construction of a Terminal destined for Roll-on/Roll-off operations.

Pneumatic Discharger of 300 t.p.h. to be acquired for Warehouse 26. Crane of 32 tons – 40 tons capacity to be acquired for handling containers and heavy goods at Warehouse 37.

SHIPMASTER'S REPORT: July 1980.

Officers and crew should be very alert with regard to stealing. It is not uncommon for armed robbery to take place at the anchorage. Cargo has at times been stolen from containers. Also crew's effects have been stolen and on occasions the Master's safe has been robbed.

Prior to departure, an inspection is made by the officer from the Harbour Master's Office. He will check the lashings of the deck cargo, the cleanliness of the deck and will ensure that the decks are clean with no garbage in bags, containers or cartons as it is feared that once the vessel is at sea the garbage will be dumped. There is a good garbage collection service in the port.

SHIPMASTER'S REPORT: September 1981.

General: The Port Limits are a line from Ponta Itaipu in the West to Ponta Munduba in the East.

In terms of trade the largest port in South America and the principal port of Brazil handling most of the Coffee exports. Situated on the confluence of several small rivers which have been canalised. The total length, including the extension of Canal de Piacaguera to the industrial complex at its Northern end, is 10 miles.

General cargo wharves are continuous on the S.W. side for 5.5 miles. New container and dry bulk berths on N.E. side with recently completed rail link from Barnabe Island.

Petroleum berths at Barnabe Island 5.5 miles from the port entrance on N.E. side and at Alemoa on South bank 7 miles from entrance.

Brazilian Charts of Santos seem to be very difficult to obtain, after trying in Santos itself and Rio. B.A. 19 refers.

Arrival: Vessels up to 32 ft. can leave/arrive 24 hours a day any time. Over 32 ft. depends on tide. Generally arrive and berth 2 hours before HW.

Standard Quarantine message to be cabled through Agent 24 hours beforehand.

Anchorage: Outer: The general area is to East and West of Channel. The various designated areas on B.A. 19 seem to have little relevance and vessel's position depends on draft. The closer in, the more the ground swell is apparent. Large vessels seem to favour 1.5 miles South of Ponta Grossa, with plenty of cable.

Inner: Various river anchorages are used, all fairly to very full and require engines to keep clear of other vessels when swinging to tide. One anchor. Tugs used to swing vessel on heaving up.

Approach: The coast being hilly with cliffs provides good positions. Bottom is gently shelving to 50 ft. at Outer Buoy, 4.5 miles from port entrance.

Large ground swells are often encountered.

Pilot: Pilot joins and leaves from dull red cutter between Buoys No. 7 and 8, about 1.75 miles from Pt. Fortaleza the port entrance. He will not come outside as indicated on B.A. 19. Reasonable English spoken. About 1.5 hours from No. 7 Buoy (Pilot) to Alemoa Berths. Drafts quoted in feet and inches.

For night-time sailing/arrival Pilot must be ordered before 1730 hrs. to move up to 0700 hrs. next morning.

Channel: From No. 1 Buoy to No. 7 Buoy dredged to 48 ft. No. 1 to No. 6. Buoy sufficient water outside channel for all vessels liable to use port.

No. 6 Buoy inwards max. draft 36 ft. 6 in. to Industrial Complex at North end of Canal de Piacaguera. Not all berths of this depth.

Buoyage South of No. 7 to No. 1 very liable to shift position and have lights extinguished. Not to be relied on at all.

In Southerly winds the ground swell is very large and in deep draft vessels can make steering very difficult.

We entered at 34 ft., 2 hours before HW and to negotiate the channel to No. 8 Buoy was a bit difficult.

VHF: Pilot: Call "Santos Pilot", Channel 16. Works 10 and 11.

Bunkers: Call "Estrela", Channel 12.

Repairs: Work Channel 6.

Public Correspondence: "Santos Radio", call Channel 16, works Channels 25, 26 and 27. Local and international calls. Good and efficient. English good.

Tugs: 15 ship-handling tugs in port, with power from 505 – 2,236 h.p. Large vessels generally have 4. Two ships lines used. Most vessels proceeding above Itapema Point, at new container berth take tugs 1 ahead and astern 2 alongside. Down river tugs depart at Itapema Point.

Berth – Alemoa: Alemoa Berths about 7.5 miles from sea on South bank comprise 2 concrete pile jetties at end of pier. The berths are owned by the Port Authority and leased to 'Petrobras' the state oil company for product and LPG transfers.

Length of vessel depends on Turning Basin just off berths. Max. length is 300 m.

Max. draft is 34 ft. Although at LW there is only about 32 ft. alongside berth face. Very soft mud.

Large vessels berth portside to. Small coastwise vessels berth either way. Both berths capable of same product range.

Density 1011 to 1015.

Moorings – Alemoa: 3,3,2 each end. There is a small mooring launch which takes one line at a time.

Fenders: 3 large timber faced flat fenders on rubber shock absorbers.

Gangway: Difficult to land accommodation ladder. We used B.O.T. type which was very steep at completion, to after dolphin.

Lines – Alemoa: Each berth has 2 refrigerated Chicksans, at the Western end, one vapour 10 in. and one liquid 12 in. (Western most), both 150 ASA couplings. Unfortunately both sets have severe leaks on all joints.

After trying liquid arms at both Berth Nos. 1 and 2 we ended up by using our low discharge pipe with both our flexible hoses plus 2 shore hoses giving approximately 24 m. length from ship side rail. The connection on shore main line (16 in.) to Chicksan was uncoupled and flexible hoses with reducer coupled up to main line.

The Terminal say they are now going to construct a 'Tee' piece in line below Chicksan to by-pass same and take flexible hoses.

At the Eastern end of both berths are liquid and vapour Butadiene Chicksans (8 in. and 6 in. respectively). These will be converted for 'VCM' use next year (1982).

There are 2 sets of pressure/semi-refrigerated LPG Chicksans (liquid 12 in. and 10 in., vapour 10 in. and 8 in.) situated between Butadiene and refrigerated Chicksans.

Plus 4 'AVGAS' Chicksans on each berth.

Max. air draft of LPG Chicksans is 20 m. HW.

Discharge: Varies greatly from 100 t.p.h. to 600 t.p.h. depending on shore tank pressures. VRL always coupled to ship.

Terminal say fastest discharge has been 1,200 cm. per hour on butane. We were only second refrigerated ship with import cargo to berth at jetty.

Shore tank pressure problems seem to occur frequently and the VRL is often required for return to ship.

Two points to watch are incompatible product being returned and liquid in vapour line arm which occurs when liquid/vapour cross-over valve on quay does not seat properly. This is a small auto valve about 5 m. inboard of Chicksan arms and should be checked before shore require VRL used.

Reasonable co-operation, if the Manager or Assistant Manager can be contacted they are very helpful.

On completion the terminal will blow hot vapour back.

General: Fresh Water: From meter on jetty – both piers. Port Authority connect/disconnect and arrange in advance. About 10 tonnes per hour at £1.50 per tonne (9/81).

Bunkers: By barge both heavy and diesel. Barges maximum capacity about 500 tonnes, pump at 150 t.p.h. Prices very competitive (9/81).

Repairs: Several repair firms in area covering most types of work. We used 'Metalock' for motors and pipework. Collected and returned by launch. Very quick and competitive service.

Lub. Oils: All obtainable but only by drums from barges at Alemoa. On dry cargo/non inflammable berths large quantities can be pumped from tank truck.

All international oil companies have to use 'Petrobras'.

Transport: Agent advises from Alemoa use mini-bus at night due to 'muggings', etc. We used a bus to town and everyone used their own taxi back.

Mini-bus 8 seater, £5.50 per trip.

Agent: All tankers have to use Petrobras Agent – 'L. Figeireido' S.A. (cable 'Doralice'). Seemed very efficient and was extremely attentive and helpful.

Communications: Telex: International.

Phone: S.T.D. (and works) very clear to U.K.

Cables: Rio de Janeiro Radio, "PPR" – efficient.

Brazilian Flag: Very particular. Must be lowered at sunset and hoisted again at sunrise and be in good condition.

Pollution/Garbage: Very strict. Garbage drums to be inboard with lids on them. Nothing to go overboard. Collection service available.

Holidays: Difficult to get services on weekends and public holidays, so arrange well in advance.

Formalities: Shore Passes: Some form of identification is required when going ashore. For this purpose an Official Brazilian Shore Pass is obtainable which should have crew members photograph and particulars on it.

Personnel stopped by police and showing this pass seem to be in better position than those having no pass or foreign I.D. Card.

Forms: Have large quantity of following ready: Crew Lists, Personal Declaration, Store List, Ship Information, Bond List, Vaccination, Personnel for Repatriation and Effects. Sight Ships Certificates.

Generally no difficulties as long as everything ready. Bond will be visited.

Repatriation: Through Sao Paulo Airport – a 2 hour drive from Santos.

Customs have to check baggage on ship or baggage has to be landed before departure with full list of electronic equipment (Radios, etc. and cameras).

Agent requires details of flight and passport numbers 3 days prior to departure.

ALEMOA LPG STORAGE PLANT – SANTOS, BRAZIL

General: The plant was opened in 1979.

Basic design is by Technigaz of France and construction by a Brazilian company. Most of the equipment is of U.S. design made in Brazil under licence. This causes problems over maintenance and spares.

The plant is a shipping terminal drawing LPG from refineries in the South of the country and from around Sao Paulo and re-shipping it to localities up and down the coast.

Every so often there is a requirement for import feedstock, about 10,000 tonnes every 2 months to boost local supplies.

LPG can be pumped under pressure to Sao Paulo.

Tanks: 4×10,000 tonnes nominal capacity refrigerated LPG tanks with polystyrene insulation built by Chicago Bridge and Iron Co. in 1978.

2 for Butane and 2 for Propane.

2 pressure spheres of 2,500 tonnes nominal capacity.

4 semi-refrigerated spheres of 3,000 tonnes nominal capacity. These will be converted for use to V.C.M. in 1982 a fact which considerably worries the maintenance staff.

Plant: Each refrigerated tank has own Boil Off unit – total 4.

2 Flash Gas Units can be connected to any tank to back up Boil Off units.

3 units convert pressure LPG from spheres to fully refrigerated LPG each with an output of 80 t.p.h. of condensate.

The refrigerant used on all units is Propylene which is quite successful. Freon R22 used to be used but considerable losses were being experienced plus it was more expensive.

All units work on the cascade principle. The sea water cooling being derived from a pump house on the pier. 2 electric pumps backed up by 2 diesel driven pumps all designed by Worthington.

All compressors are of the piston type designed by Ingersoll Rand U.S.A. and constructed in Brazil under licence.

Heaters, etc.: For transfer of refrigerated LPG to pressure spheres, 3 sea water heaters are employed.

Two dessicant drying towers are employed from spheres to refrigerated storage.

For refrigerated LPG transfer 8 Worthington deepwell pumps of 300 cu.m.p.h. are available.

All anti-freeze used in the plant is alcohol derived from sugar cane which Brazil has pioneered for use in car engines.

SHIPMASTER'S REPORT: July 1983 (Updated 1988).
Documents: As per "Guide to Port Entry".
Pilotage: Compulsory, Pilot usually boards at No. 3 Buoy, but boarded this vessel at No. 9. One hour's notice required, given through Agent.
Anchorages: As given on Chart, depths 10 m. – 13 m. To avoid pirates, anchor about 1 mile S.E. of Sea Buoy.
Restrictions: Berthing possible 24 hours a day, at any stage of tide.
Max. Size: Deepest draft with which vessels can safely enter port is 36 ft.
Health: Notice required by Quarantine is arranged by Agent.
Radio: Santos Pilots, telephone numbers 104 and 312988.
VHF: Pilots on Channels 16 and 11, Port Control on Channel 16.
Tugs: Available.
Berthing: Vessels berthed at Warehouse No. 37, Berth No. 2, 6 miles from entrance to port. Berthing possible 24 hours a day, at any stage of tide.

Depth of water in channel to berth 42 ft.

Nature of bottom at berth – mud.

Cranes: Ample on quay, varying from 1 ton to 40 tons SWL. Vessel used Salens equipment to handle palletised cargo.

2 floating cranes available – 1×150 tons, 1×250 tons.

Specialised Cargo Handling Facilities: 3 berths available for Ro/Ro vessels.

Facilities for handling and storage of 20 ft./40 ft. containers.

Stevedores: Ample union controlled labour. No private stevedores.
Fresh Water: Available.
Consuls: U.K. and others.
Repairs: Can be undertaken.
Dry Docks: None.
Surveyors: Lloyd's and salvage surveyors are available.
Gangway/Deck Watchmen: Pilfering was a very serious problem – suggest vessels take all precautions to prevent this.
Airport: At Sao Paulo.
General: Fresh provisions and ships' laundry service available.

SHIPMASTER'S REPORT: August 1994.
The Master received the following telexes from Agent prior to arrival:
"*Santos Anchorage – Pirates:* We have consulted Bimco and our Sao Paolo Office, who both confirm your information concerning Santos Anchorage being high risk area for piracy.

Thus Bimco suggest to keep at least 20 nautical miles off the coast as a safety margin, meaning that drifting will be required in order to delay your arrival time outside Santos. However, please keep Agents informed of arrival, also concerning drifting outside Santos, as congestion is expected – and first in first served."

"Have confirmed with Pilots possibility for a vessel to anchor 15/20 miles away from Santos Roads, and they have replied no problem since vessel can communicate via VHF with Pilot Station and Santos Radio (in case of any telephone call from Santos). As such go ahead anchoring at the position that you most prefer. Furthermore bear in mind (1) on your arrival/dropping anchor to report to Pilots over VHF Channel 16 the exact arrival time at Santos. (2) When vessel is supposed to dock, Pilots may get in touch with vessel only 1.0 – 1.5 hours before boarding time.

Fresh Water:
"Regarding fresh water, can say that we have one of the most expensive water in the world which costs U.S.$ 10.65/tonne (by barge) and U.S.$ 20.70/tonne at the quay. Kindly confirm your acceptance for such prices, as well as the quantity intended to be supplied."

"*Reporting/Documents:*
Please inform last port of call and arrival drafts. On arrival at Santos Roads please contact Pilot Station on VHF Channel 16 and inform exact arrival time, also contact "PWS 88 N Concomtram" – see your "Guide to Port Entry".

Upon berthing, local Authorities will require following documents:
10 copies Crew List.
10 copies Passenger List (if any).
2 copies Vaccination List.
1 copy Maritime Declaration of Health.
1 copy Ports of Call List.
3 copies Spare Parts List, no special form required for engine/deck/radio department – Inventory books are not allowed for presentation – Minimum 100 items inserted.
3 copies Personal Effects List with marks/Serial No./Model No. and exact quantity of objects.
3 copies Bonded Stores List.
3 copies Narcotics List.
3 copies Ammunitions List.
3 copies Animals List.

Spares and personal effects undeclared are confiscated by Customs. Please send us message addressed to Santos Port Health, requiring Free Pratique 72 hours before arrival at Santos. For your guidance, Port is not equipped with fenders alongside. A private company has them to hire for U.S.$10.00 per day/fender. In case needed, kindly ask same to Agent or to your Boarding Pilot in order to arrange accordingly. Please advise if any requirement needed upon berth.

Master's Comments on above:
Concerning Piracy: We did in fact anchor 19 miles from the Pilot Station and had no problems with communication with the Pilot Station or with unwanted visitors.

Fresh Water: We had to pay that price. The price has come into being since the Government changed the Brazilian currency.

Declaration of Spares/Stores at Santos: They are strict and have been known to remove liners, cylinder heads, etc., that have not been declared after a rummage gang visited the ship on her third call to Santos (P&I Rep and local solicitors were able to retrieve the goods, but at what cost I do not know).

In Cabedelo and Natal, the Customs were not bothered, even though I presented the same Customs papers on arrival at both ports.

Fenders: The fenders, we were given, were car tyres inserted on a solid wooden pole, which were hung-off a bollard by a wire.

Brazilian Ship Reporting System: In the ALRS Vol. 1, the system is quoted as being voluntary. However, fines have been levied on vessels not complying, so really it is mandatory to comply. I sent our telex to: Comcontram, Rio – Telex: 2153180+.

AUTHORITY: Companhia Docas do Estado de Sao Paulo – CODESP – (Portobras), (Caixa Postal 27), Avenue Conselheiro Rodrigues Alves, Bairro Estuario, Santos, (SP) – CEP 11.015. *Tel:* (0132) 33-6565. *Contact:* Eduardo G. Figueiredo, Port Administration - Managing Director.

Capitania dos Portos do Estado de Sao Paulo, Avenida Conselheiro Nebias No. 448, Encruzilhada, Santos, CEP 11.045. *Contact:* Captain Paulo Alfredo Bourguy Caetano Da Silva, Captain of the Port.

AGENT: Wilson Sons Agencia Maritima Ltda., Rua Tuiuti 58, 11010-220 Santos SP. P.O. Box 61. Tel: (013) 222-4622 (After hours: (013) 231-7106). Telex: (13) 1013 WSON BR. Fax: (013) 235-5262. Cables: Anglicus.

SAO FRANCISCO DO SUL: 26.10 S. 48.34 W.

(See Plan)

(A) GENERAL CARGO PORT.
(B) OIL TERMINAL (DTSUL).

(A) GENERAL CARGO PORT.

DOCUMENTS: See "General" before first port.
PILOTAGE: Not compulsory. Pilots join vessel at the Island Ilha da Paz about 5 km. East of bar, Pilot comes from inside with boat. Cables informing ETA to Agent. Pilot Station may be contacted on VHF Channel 16.
ANCHORAGES: Channel low tide 30 ft., high tide 35 ft. Port: low tide 20 ft., high tide 30 ft.
RESTRICTIONS: Bar draft: Max. 30 ft. Bottom: bar, channel and port: sand and mud. Speed of current: channel LW 4 knots, HW 5 knots.

Reports received in August 1976 indicate that the bar has now been dredged to a depth of 8.50 m.

HEALTH: Vessel must present Free Pratique issued at first call-port. Port's doctor will visit vessel.
RADIO: Call Agent. Sao Francisco do Sul, via Florianopolis Radio.
TUGS: Three tugboats for shifting ships and barges, 1×1,680 h.p., 1×1,010 h.p. and 1×250 h.p.
BERTHING:

Quay	*Length* (m.)	*Depth* (m.)	*Remarks*
1	225	9.75	Grain
2	150	8.50	General Cargo
3	150	7.00	General Cargo
4	150	4.25	General Cargo

CRANES: 2 cranes × 7 tons.

Neither the oil terminal or Sao Francisco do Sul Port Services operate either floating cranes, barges or lighters.

BULK HANDLING FACILITIES: Located at Berth No. 1.
Cocar Terminal:
Meals/Pellets.

Air draft:	15 m.
Storage capacity:	110,000 tonnes.
Loading rate:	800 t.p.h.
Conveyor belt:	Span: 200 m. Reach: 18 m.
Spouts:	2

Loading is performed by means of 2 movable spouts; fed by conveyor belts from the silos.

Loading operations usually performed around the clock.

Vegoil:

Storage capacity:	23,500 tonnes.
Loading rate:	500 t.p.h.

Loading is performed with a pipeline direct to the quay.

Loading operations usually performed around the clock.

STEVEDORES: Sufficient working force available, working hours 0700 – 1100 hrs., 1300 – 1700 hrs. normal period; 1700 – 1900 hrs. days-overtime; 1900 – 2300 hrs., 2400 – 0400 hrs. overtime.
MEDICAL: Medical attendance available, 2 hospitals, all medical care available.
FRESH WATER: 13 hydrants on Quays 1 and 2, American type thread 2 in., capable of supplying 14 t.p.h. to 30 t.p.h. Also a private water barge of 100 tons capacity.
FUEL: Oil for boilers, diesel engines, and gasoline are distributed by a private firm, Distribuidora Maritime Porto de Sao Francisco Ltda. by tanker trucks, coming from Itajai, where orders must be placed 12 hours in advance.

CONSULS: Chile.
REPAIRS: Minor deck and engine repairs possible, workshop in town.
WATCHMEN: Recommended.
OPENING/CLOSING HATCHES: By stevedores.
CUSTOMS ALLOWANCES: 1 package of 200 cigarettes, and 1 bottle of spirits each man.
REPATRIATION: No facilities for changing crews.
AIRPORT: None, nearest in Joinville, with regular traffic, about 40 miles distant.
TIME: GMT minus 3 hours.
HOLIDAYS: 1st January; 15th April; 21st April; 1st May; 7th September; 15th September; 15th November; 25th December; Holy Friday; Corpus Christi; 8th September; 8th December.
TELEPHONES: Available at dock entrance.
DEVELOPMENTS: The bar is expected to be dredged to a depth of 9 m.

SHIPMASTER'S REPORT: January 1988.
Location: The Port is situated on the Northernmost extreme part of the State of Santa Catarina, near the border of the State of Parana.
Documents:
3 copies Voyage Memorandum.
1 copy Health Declaration.
1 copy Vaccination List.
8 copies Crew List.
8 copies Passenger List.
4 copies Personal Effects List.
2 copies Narcotics List.
2 copies Firearms and Ammunition List.
2 copies Manifest.
2 copies Clearance from Brazilian Port, including Free Pratique.
Pilotage: Pilot Station is situated in position Lat. 26° 11′ 30″ S., Long. 48° 29′ 20″ W. Pilots can be contacted on VHF Channel 16 or 11. There are presently 4 pilots who board at any time, weather permitting. Distance from the Pilot Station to the Port is 12 miles.
Anchorage: Good anchorage inside the Bay.
Communications: The city is linked to the rest of the Country/World with direct dialling telephone system and telex service.
Tugs: Presently there are 2 tugs available to assist in docking/undocking/shifting. "Rio Preto" 1,680 h.p. belonging to Petrobras and "Lupus" 1,100 h.p. belonging to Saveiros.
Boat Services: Available for vessels anchored in the Bay.
Berthing: The Port installations are situated on the section of the Sao Francisco River which provides a natural Bay which is considered a safe anchorage as it is surrounded by hills and no strong currents exist.

There are 675 m. of quays, but 225 m. are for bulk carriers and tankers (Pier No. 1).

Pier No. 1: Length 200 m. Depth alongside 32 ft. Vessels handling soya meal/oil receive priority. Pier No. 2: Length 175 m. Depth 26 ft. Pier No. 3: Length 150 m. Depth 23 ft. Pier No. 4: Length 150 m. Depth 13 ft.

There are no restrictions on length or beam.
Mean tidal range 1.6 m.
General cargoes handled at Piers 1, 2 and 3.

Cranes: 2×7 tons, 2×40 tons (container handling). Most cargoes handled by ship's gear.
Stevedores: Working hours: 0700–1100 and 1300–1700. Overtime: 1700–1900, 1900–2300 and 0000–0400. Work can be extended to 0600 hrs. in order to finish vessel.
Bulk Handling Facilities:
COCAR Terminal: (Meal, pellets, beans).
Location: Berth No. 1.
Draft: 32 ft. (Brackish).
Airdraft: 15 m.
Storage capacity: 110,000 tonnes.
Loading rate: 600 t.p.h.
Conveyor belt: Span 200 m. Reach 25 m.
Spouts: 2.
Loading: With two spouts (movable) direct from silos/conveyor belt, loading around the clock.
COCAR Terminal: (Vegoil).
Location: Berth No. 1.
Draft: 32 ft. (Brackish).
Storage capacity: 23,500 tonnes.
Loading rate: 400 t.p.h. loading by pipeline direct from quay, loading around the clock.
MAFOR: (Grain discharge).

Normally use "Redlers" which are hung from ship's derricks. Two types of Redlers used, one weighing 4,800 kilos and the other 7,500 kilos. Also operating inside holds, one tractor weighing 10,600 kilos and a bobcat weighing 2,300 kilos.

Density: Salt water at the entrance of the Bar, brackish water inside the Bay varying during tides, 1016–1018 at H.W. and 1018–1020 at L.W.
Medical: Medical assistance available at local hospital.
Fresh Water: Supplied ex-hydrants, about 8–10 t.p.h.
Fuel: Not available locally, however it can be arranged by trucks.
Consuls: None.
Repairs: Minor repairs can be performed by two local workshops. Divers available.
Repatriation: Embarking and disembarking will be cleared by the Federal Police Authorities. Ship's Agents should be notified in advance of full flight details of arriving crew members. Crew will be met at Joinville Airport (2 flights daily from Sao Paolo). It is important to note that arriving crew must always carry Owner's letter stating Port, name of vessel and Agent's full style.
Holidays: Public holidays: September 8th, Patron Saint of the City.
General:
Provisions: Several Ship chandlers can provide fresh vegetables. Bonded stores, etc. can also be supplied (all of Brazilian origin).
Marine Note of Sea Protest: There is no Notary Public in Sao Francisco do Sul.
Fines: Heavy fines are imposed by the Port Authorities (based on the tonnage of the vessel) for the following: Spillage of oil, slops, dumping garbage or any waste into the water; water spilled on to the quay; gangway net missing; ratguards missing; unauthorised persons on board; painting ship's sides/ship's draft without Port Authority's permission; bad condition of Brazilian flag; improper hoisting/lowering of Brazilian flag.
Roads: Sao Francisco do Sul is linked with Joinville by good road, distance 45 km.

AUTHORITY: Administracao do Porto de Sao Francisco do Sul, Avenida Engenheiro Leite Rebeiro 782, CEP-89230 San Francisco do Sul, Santa Catarina, Brazil. *Contact:* Clemintino Nascimento Moura, Superintendent.

(B) DUTOS E TERMINAIS DO SUL (DTSUL)

LOCATION: Dutos e Terminais do Sul (DTSUL), operated by Petroleo Brasileiro S/A – PETROBRAS, consists of an SBM whose body is 11 m. in diameter, weighing 143 tons and exhibits a light beacon Iso. Y. Fl. 0.3 sec. ecl 2.7 sec. 6 m. 5 M. It is situated about 4 miles Eastward of Sao Francisco do Sul Island, its co-ordinates are: Lat. 26° 13′ 52″ S., Long. 48° 25′ 03″ W. Onshore base is located 18 km. from the town of Sao Francisco do Sul, which is 48 km. from Joinville City, both in Santa Catarina State. The main scope of DTSUL is to receive, store and transfer oil to Refinaria Presidente Getulio Vargas – REPAR, a refinery in Araucaria, a town in the state of Parana.
DOCUMENTS: See "General" before first port.

Any and every document issued or otherwise related to ship's clearance at the last port of call is required for immediate inspection by the boarding officials.

Immigration and Maritime Police:
1 copy Crew List.
1 copy General List.
3 copies Passenger List.
3 copies Passengers in Transit List.
Health:
1 copy Vaccination List.
1 copy Certificate of Derat Exemption.
1 copy Maritime Health Declaration.
1 copy List of Drugs and Narcotics.
1 copy Passengers in Transit List.
1 copy Passengers List.
Customs:
3 copies Crew List.
3 copies Spare Parts List.
3 copies Stores List.
3 copies Provisions List.
3 copies Drugs and Narcotics List (if not included in the Stores List).
1 copy Cargo Manifest.
1 copy Bills of Lading.
2 copies Passengers List.
2 copies Passengers in Transit List.
3 copies Crew Personal Effects List.
3 copies Passengers Personal Effects List.

NOTE: Supplies, stores, cigarettes, cigars, tobacco, alcoholic beverages, arms, ammunition, souvenirs, playing cards, drugs and narcotics, medicines (not in use) etc., must be kept under lock and key; the doors of the storage rooms will be sealed by the Customs Officials and the seal must be kept unbroken throughout the vessel's stay in port.

Any goods or personal effects omitted from the list may be confiscated.

Extracts of Sea Protest drawn out from the Log Book must be submitted to the boarding Customs Officials in case of accident which has caused damage or loss of the cargo or part of it.

Leaving Clearance:

Masters must appoint their ship's Agent at Sao Francisco do Sul and have their International Safety Certificates in force. It is also necessary for vessels Leaving Clearance:

Leaving Permit from Customs.
Leaving Permit from the Captain of the Port.
Leaving Permit from the Maritime Police.
Leaving Permit from Brazil Mail (Passe da E.C.T.).

Anchorage for Clearance: The anchorage for Port Authorities clearance is the same as for vessels waiting for mooring. Port Authorities clearance is effected during office hours only (0730 hrs. – 1900 hrs.).

Display of quarantine signals must be continuously maintained until Free Pratique is granted. These signals are: sunrise to sunset – quarantine flag "Quebec". Sunset to sunrise – signal light red over white light.

In addition to quarantine signals, the Brazilian Flag must be flown from foreign vessel's foremast throughout the vessel's stay in port.

Also see "Restrictions".

APPROACHES: Refer to Brazilian Hydrographic Office Nautical Charts No. 1800, 1830 and 1840.

Vessels approaching the port of Sao Francisco do Sul or the SBM from the North, will first see Mounts Joao Dias, Grande and do Barbosa, which are hills Northward of the port of Sao Francisco do Sul. Morro do Barbosa is the highest peak of the region, 280 m. (918 ft.) high, and near it, in the S.E. direction, the SBM is situated.

Vessels approaching the SBM will first discern Ilha da Paz Lighthouse (International number 1437 – Lat. 26° 11′ 00″ S., Long. 48° 29′ 00″ W. – Light Fl.W. 20 sec. 84 m. 23 miles – No radio signal), Mount Joao Dias, Mount Pao de Acucar and Mount Ubatuba. A hill little lower than mount Pao de Acucar is Mount Monao de Trigo, possibly seen Eastward of the first, which shows on its top a conspicuous cross.

Vessels approaching by night-time, while yet 15 miles from shore, as Ponta Caioba Lighthouse is vanishing in the dark, will find Ilha da Paz

Lighthouse which is the most prominent landmark for tankers bound for Sao Francisco do Sul and its SBM Terminal.

Vessels approaching the SBM from the East, will sight the same above mentioned landmarks when near Sao Francisco do Sul. In the night-time, Ilha da Paz Light will be first seen since its range is 23 miles. Ilha da Paz Light is the only landmark at night-time, except for the glare of the town of Sao Francisco do Sul lights which can be seen from a distance of 30 miles.

Vessels approaching the SBM from the South, in daytime, when less than 10 miles away from shore, may use Remedios and Tamboretes Islets as an indication of the nearness of the SBM; when nearer, will sight Morro Pao de Acucar, Morro Montao de Trigo, Morro Ubatuba and Morro Joao Dias, which are hills and can steer to Ilha da Paz Light.

At night-time, after loosing sight of Ponta do Vigia Light (Fl. W. 6 sec. 50 m. 15 M.) near Itapocoroia, vessels will sight no long range lights until sighting Ilha da Paz Light. These vessels, in order to navigate safely, must keep away from Remedios and Tamboretes Islets which can be accomplished by keeping Eastward of the 20 m. line, 6 miles seaward. Eastward of this line there are no dangers.

Vessels approaching Sao Francisco do Sul and the SBM will sight Ilha da Paz Lighthouse and the SBM light, with 5 miles radius range.

PILOTAGE: Pilotage is not compulsory in the area of the SBM, either when making for it, mooring at it or clearing the SBM. DTSUL provides a duly trained Mooring Master for assistance to Masters of vessels operating at SBM. His services are presently rendered without charge.

Mooring Master will advise vessel where to anchor.

For approaching manoeuvres, and after mooring to the SBM, the Master of the vessel will be assisted by the Mooring Master who boarded the vessel in the proper site and will help the Master of the vessel as far as the operational activities in the area are concerned, such as: mooring, hose connections, discharge, hose disconnection and unmooring, as well as control of small crafts which render assistance to the vessel.

It is the responsibility of the Master of the vessel to notify the Mooring Master of any special conditions, difficulties or peculiarities of the vessel such as defective navigational equipment, mooring lines, tackle, gear, helm, engine or boiler deficiencies or lack of necessary equipment which might impose hazards in connection with handling, mooring, unmooring and actually operating the vessel.

The Mooring Master must be immediately advised about any acts or facts which may jeopardise the safety of the vessel or the system, as well as operational events which may possibly alter the existing conditions.

The vessel must be moored to the entire satisfaction of both the Master and the Mooring Master.

The Mooring Master will remain on board the vessel throughout the vessel's stay at the SBM and will notify the Terminal Superintendent about any operational failures; and the vessel may be ordered off the SBM and refused to be accepted in future, unless corrective action by the ship is immediately taken.

The Mooring Master will notify the Master of the vessel, in writing, about disregard of the operational requirements established upon arrival of the ship.

For boarding the Berthing Master prefers a pilot ladder and on disembarkation a combination of pilot ladder and accommodation ladder.

ANCHORAGE: For vessels waiting either for Port Authorities Clearance or mooring or under repair, the advisable anchorage site is 1.3 miles North of the SBM, in the following position: Lat. 26° 12′ 30″ S., Long. 48° 25′ 00″ W. The seabed is fine sand and mud. The depth is 22 m. Mooring Master will board arriving tankers in this position.

In no case must vessels drop anchor near the SBM (within a circle 1 mile in radius, centered on the SBM) within the area between the SBM and the coast or in the access channel to Sao Francisco do Sul River, due to existance of submarine pipe-lines and anchor chains on the seabed.

RESTRICTIONS: The buoy is designed for tankers up to 200,000 d.w.t. but due to the depths in the area, the maximum draft allowable is 18 m. (59 ft.). Sometimes, due to bad weather, tankers have to wait for favourable weather conditions, so that mooring may safely be started. Mooring should be undertaken at daylight only.

Vessels arriving at anchorage sites 2 hours prior to sunset in clear weather can moor. If vessel arrives later berthing takes place the next morning.

MAX. SIZE: 200,000 d.w.t. Draft 18.0 m.

HEALTH: Vessels bound for DTSUL are inspected at the SBM by Health, Customs and Maritime Police Officials. Ship's Agent must apply beforehand for these visits.

RADIO: Vessels bound for DTSUL, should advise their ETA 72 hours prior to arrival directly to vessel's Agent through a Coastal Station. This arrival message will be passed by the Agent to the Terminal.

Time chartered vessels must keep updated ETA messages radioed to Frota Nacional de Petroleiros – FRONAPE.

Tankers must have their VHF radios tuned to Channel 16 (VHF) or 4125 kHz (SSB), around the clock when nearing the anchorage position, and send updated ETA messages until Mooring Master boards. Weather forecast and/or Sinoptic charts, if available aboard, must be shown to the Mooring Master when he boards.

VHF: Vessels bound for DTSUL must contact the Terminal, through Itajai Radio and Paranagua Radio via Channel 16 or directly to Terminal by Channel 14, a minimum of 2 hours prior to arrival.

During mooring and unmooring operations, and ship's staying at the SBM, the launches will keep in contact with Mooring Master through Channel 14.

TUGS: No tugs are available at the Terminal for assistance in mooring vessels.

Launches: Launches under direction of the Mooring Master will assist Terminal and the vessel when mooring, unmooring, connecting and disconnecting hoses. They will also assist in personnel transportation, that is to say, crew members, agents, Port Authorities, suppliers, and authorised persons.

Whenever a tanker is about to arrive, the 2 Terminal launches will put out to sea. One will be standing-by near the SBM, waiting for the tanker to arrive. The other will carry out a survey of the floating equipment.

The launch standing-by will go alongside the tanker, so that the Mooring Master and mooring equipment can be passed to the tanker.

This task may take place while the vessel approaches the SBM, according to the Mooring Master's guidance.

BERTHING: The Dutos E Terminais Do Sul (DTSUL) consists of facilities for receiving, storage and transfer of oil.

Discharge System: The discharge system consists of an SBM connected to 2 parallel 20 in. diameter × 271 m. long (888.5 ft.) floating hoses.

At the ship's tail end of the hoses there are 2 special 16 in. hoses – "Tanker Tail Hoses" or "Ship Tail Hoses" – to be connected to the ship's manifold, provided with a butterfly valve and a blank flange (each flange is 16 in. in diameter Standard PSI-ANSI B.16.5).

Two 16 in. × 53 m. (173 ft.) in length nylon hawsers are fastened to the SBM turntable for mooring of the vessels.

On the upper part of the SBM there are 3 turning arms for securing the mooring hawsers and the hoses, as well as to balance the system.

From the bottom of the buoy start 2 submarine hoses 20 in. in diameter, connected to the underwater manifolds of the submarine pipe-lines.

Two × 11 km. long × 34 in. diameter submarine steel pipe-lines laid on the sea bottom following the general West-Easterly direction, connect the submarine manifold to the Terminal storage tanks.

Under normal conditions discharge system allows a 10,000 cu.m./h., 10 kg./cu.cm. (150 p.s.i.) pumping rate measured at the ship's gauge.

At the site where the pipe-lines reach the mainland there is a beacon showing an intermittent blue light indicating the general direction of the lines.

The above described discharge system is shown on the Brazilian Nautical Chart No. 1804 issued by the Diretoria de Hidrografia e Navegacao da Marinha do Brasil (Brazilian Navy Hydrographic Office-DHN).

Note: It is forbidden to navigate and to drop anchor within the area limited by two parallel lines 1 mile away from each side of the submarine pipe-lines, between the SBM and the mainland as well as within a circle 1 mile in radius centered on the SBM.

Storage System: The storage system consists of 7 tanks which are able to receive crude oil directly discharged from the tankers moored at the SBM.

The 5 tanks have the following main features:

Type: Cylindrical vertical (floating roof).
Diameter: 86.56 m.
Height: 14.63 m.
Nominal Volume: 86,114 cu.m.
Operational Volume: 77,000 cu.m.
Receiving Line: 36 in. diameter.

Two tanks have the following main features:

Type: Cylindrical vertical (floating roof).
Diameter: 45.72 m.
Height: 14.63 m.
Nominal Volume: 23,850 cu.m.
Operational Volume: 21,500 cu.m.
Receiving Line: 36 in. diameter.

The tanks are equipped with remote control valves and readings, monitored from the Operations Control Room.

Neither the tanks nor the lines are heated.

Ballast System: No conventional tank cleaning procedures are allowed. The SBM is not provided with ballast line.

Arrival: Arrival time will be considered either the one in which the ship arrives at the anchorage or when the Mooring Master boards the vessel, whichever occurs first.

As a rule, if mooring has to be postponed due to bad weather, tankers will moor according to their turn, considering the time of arrival.

The Superintendent of the Terminal, however, has authority to grant priority to a ship out of her turn.

Fully or partially loaded vessels may have to be diverted to other ports or terminals. Orders about this matter will come from Charterers and/or Agents, and will be conveyed through the Terminal.

To avoid delays the following items must be observed by the tanker: keep the Terminal advised about any change in ETA; arrive with the port side derrick and an ordinary pilot ladder on lee side rigged, as well as the 2 manifold flanges to be used ready for connection of the hoses, i.e. without blind flanges, reducers fitted if necessary, etc.; 2 good eye-spliced (9 in. circumference at least) nylon ropes on forecastle head; anchor well at home and secured with stoppers and brakes. If the ship's manifold flanges are not standard 150 p.s.i., ANSI-B.16.5-16 in. in diameter, the vessel must advise Terminal through the Agent before arriving.

Mooring: Mooring Master will advise on the way of securing the ship. Tankers are moored by 2 bow nylon hawsers of 16 in. circumference and 53 m. in length. Vessel's messenger lines are shackled, one at a time, to the pick-up wires of the hawsers by the launch crew and hove in by the vessel's windlass until the lengths of the chafing chains are brought over the roller chocks/fairleads and shackled to the wire strops secured to the bollards.

Hoses Connection: The Mooring Master will direct the Terminal's working men in lifting, connecting and lowering the hoses. After the vessel is securely moored, the 16 in. floating hoses must be individually lifted to the rail by the ship's gear. Sundry hose securing and connecting equipment (strops, gaskets, nuts, bolts, wrenches, etc.) will be supplied by the Terminal and put aboard the tanker just after arriving. Hoses will be lifted by the ship's derrick on the PORT SIDE. Minimum lift of 8 tons capacity is required. Winds reaching about 8 Beaufort Scale and waves, 3.0 m. high, may determine the operation to be interrupted and the hoses disconnected, according to the Mooring Master's judgement.

The minimum distance between the fairlead rollers (or minimum fairlead diameter) must be 0.28 m. (11.0 in.), in order to allow the shackle, which connects the mooring buoy hawsers, to go through.

The distance between the ship's bow and the discharging manifold amidship must be 160 m. (525 ft.) or less.

The ship's discharging manifold flanges must be standard 150 PSI-ANSI/B.16.5 – 16 in. in diameter.

The two manifold flanges to be used must be at least 2.0 m. away from each other, 2.0 m. above deck level and 4.5 m. away from the ship's rail, in order to allow proper room for hose connections.

The ship's rail or bulwark in front of the manifold must be 900 mm. below the manifold flanges and shaped with a minimum 100 mm. radius.

The vessel is required to give proper treatment to the Terminal personnel assigned to work on board, including accommodation and meals. As a rule, seven people are assigned on duty on board the vessel.

Should the ship not comply with the above stated requirements, she may be considered unsuitable for mooring at the SBM Terminal.

Discharging: Pumping must not be started without permission of the Mooring Master. The maximum allowable pressure is 10 kg./sq.cm. (150 p.s.i.). While the vessel is moored, the vertical angle formed by the hawsers and the sea surface should not exceed 30° degrees, for safety of the SBM. If necessary the Terminal will require the ship to pump sea water through the hose lines in order to displace the remaining oil.

Ballasting: When necessary, due either to excessive pitching or by being trimmed too much by the stern, pumping of ballast must be concentrated in the fore tanks, even though interruption of discharging becomes mandatory.

As a rule, the vessel must be ballasted at the same time the discharge is being carried out. Vessels which fail to do so, will be notified in writing and will be held responsible for the extra time spent at the SBM after the disconnection of the hoses.

No dirty ballast or any oily residues must be pumped overboard, otherwise the vessel may incur a heavy fine from the Brazilian Authorities.

Terminal Personnel On Board: The vessel is required to give proper treatment to the Terminal personnel assigned to work on board, including lodging and meals. As a rule, 7 people (1 Mooring Master and 6 workmen) are assigned to duty onboard the vessel.

Machinery in Readiness: When moored at the SBM, vessels must keep engines and propulsion machinery in readiness to unmoor and proceed under full power at short notice or to prevent riding upon the SBM. An Officer must also be on duty on the bridge. Should the ship not comply with above stated requirements, she may be considered unsuitable for mooring at the SBM.

MEDICAL: Medical and hospital as well as dental care facilities are available in Sao Francisco do Sul. In case of emergency or serious injury, the patients are, as a rule, sent either to Joinville or Curitiba.

FRESH WATER: Neither DTSUL nor Sao Francisco do Sul are able to supply either drinking or boiler water to vessels either moored or at anchor.

FUEL: Neither DTSUL nor Sao Francisco do Sul port can supply bunkers for vessels.

Lubricants: DTSUL has no way of supplying lubricants to vessels, either moored or at anchor. Nevertheless in urgent cases, Agents must be contacted in order to place orders for lubricants, 15 days in advance. Even then, lubricants can only be supplied in very limited quantities, due to the natural difficulties of transportation to moored ships.

CONSULS: There are no consular representatives in Sao Francisco do Sul and Joinville.

REPAIRS: Limited repairs may be effected by private workshops. Agents must be contacted 72 hours in advance in order to make the necessary arrangements to assist vessels needing repairs (including radar, radio equipment, radio direction finder and compass).

SURVEYORS: *Classification Societies:* There are no marine surveyor representatives in Sao Francisco do Sul. If necessary, they may be called, upon Agent's request, from Rio de Janeiro, where there are representatives of the American Bureau of Shipping, Lloyd's Register of Shipping, Bureau Veritas and others.

Petroleum Inspectors: There are no petroleum inspectors available in Sao Francisco do Sul. If necessary, they can be contacted through Agents in Paranagua-PR.

Engineer Sergio Luiz Ribeiro Martins, Av. Arthur de Abreu, 29-10 andar, conj.01/02 Centro, CEP 83.203-480 Paranagua, PR. Tel: (041) 4221814. Contact: Engineer Heron Lullez.

Administracao do Porto de Paranagua, BR-227 s/n Antonina, Predio Silao, CEP 82.300-000 Paranagua, PR. Tel: (041) 4231133.

WATCHMEN: Port watchmen have to be compulsorily assigned to duty onboard all vessels coming from overseas throughout the vessel's stay in port.

CUSTOMS: Brazilian laws are strict with regard to smuggling and Masters are requested to instruct their crew not to retain cigarettes in carton lots, cigars, tobacco, alcoholic drinks, drugs, souvenirs, etc. These should be collected prior to arrival, listed with the items in the Customs Locker to be sealed by the Customs Officials and placed in the custody of the Master throughout the vessel's stay. No commercial transactions will be tolerated, be it among Terminal employees, crew members or anyone else.

TIME: Local time is GMT minus 3 hours.

HOLIDAYS: *National Holidays:* All ships in port must be fully dressed on the following National Holidays: September 7th and November 15th.

BANKS: Bank of Brazil, Rua Hercilio Luz 53, Sao Francisco do Sul, S.C. Tel: 0474-44-0202, 0474-44-0187.

GARBAGE DISPOSAL: No facilities available.

WASTE OIL DISPOSAL: No facilities available.

SEAMAN'S CLUBS: None.

GENERAL:

Flags: In accordance with international practice, quarantine signals must be displayed by vessels when approaching Brazilian ports. These signals shall be displayed continuously until Free Pratique is granted and are: Sunrise to sunset – Quarantine flag "Quebec"; sunset to sunrise signal lights red over white.

Tankers will display the red flag "Bravo" during the day and a red light during the night throughout their stay in port, indicating inflammable or explosive cargo.

Charts/Publications: The Diretoria de Hidrografia e Navegacao da Marinha do Brasil (Brazilian Navy Hydrographic Office) has issued the following nautical charts of this area: DHN 1800, 1830, 1804, as well as Roteiro DH 1.8 (Brazil Pilot), Lista de Farois DH 2.11 (List of Lights) and Lista de Auxilio Radio DH 8.8 (Radio Aids List).

No charts or navigational publications are available at DTSUL or Sao Francisco do Sul. When necessary, Masters must contact ship's Agent, in advance, for placing orders for such items in Rio de Janeiro.

Provisions and Stores: Orders for provisions and stores may be placed through the Agents or directly to shipchandlers. Most of the items are obtainable in Joinville but some may be found in Sao Francisco do Sul.

Laundry: There are limited laundry facilities in Sao Francisco do Sul. Orders for such services must be placed in advance through Agents.

Tidal Amplitudes: The tides in the area of the SBM present the same characteristics as those of the port of Sao Francisco do Sul. (Please refer to the Tide Tables issued by Diretoria de Hydrografia e Navegacao da Marinha do Brasil - Brazilian Navy Hydrographic Office - DG - 16 - 15).

High and low tides occur nearly 40 minutes before they occur in the port of Sao Francisco do Sul and the tidal amplitude at the SBM area is a little below the ones of the said port.

Weather Conditions: As a rule, the conditions in the area of the SBM may be considered fair, as far as operating conditions for the vessels are concerned, except in the occurrence of gales from the South, which sometimes blow for more than 48 hours in Winter time.

Winds: The strong winds recorded in the area originate from the South, caused by cold fronts or instability lines. One of the strongest recorded winds blew on May 18th, 1982, from N.W. reaching an intensity of 130 km. per hour, for a short period of time. It was observed that at the same time the isobathic wind at the sea, blew from the South with an intensity of 40 km. per hour.

Rain: The average annual rainfall is about 980 mm.

Visibility: The visibility in the area is generally fair all year round, except in Winter time when sometimes fog may occur.

Temperature: The local average temperature ranges from 8°C (46°F) in June, July and August, to 32°C (90°F) in January and February.

Humidity: The relative humidity of the air is nearly 80% in the region.

Currents: Currents in the area are not related to the local winds since the set, as well as swells result, as a rule, from deep sea winds which are not always in correspondence with local winds.

According to the variation of the intensity of the high sea winds, it is possible to forecast the variations of the intensity of the currents in the area of the SBM.

In the vicinity of the SBM, when there is no wind or there are only winds of low intensity, the currents of the area are strongly influenced by the tidal set of the bar of the port of Sao Francisco do Sul.

Waves: Southerly winds are originated, as a rule by cold fronts. The waves caused by them are very seldom higher than 3.5 m. (11.4 ft.).

The waves are, usually, 2.5 m. in height and have an 11 second period when Southerly winds blow during the Winter time, from June to October.

The maximum wave height allowable for operating vessels moored at the SBM is 3 m. (9.8 ft.), depending on the conditions of the mooring lines and the tensions over them.

AUTHORITY: Petroleo Brasileiro S.A.-PETROBRAS, Avenida Republica do Chile, 65 Centro, 20035 Rio de Janeiro – RJ. *Tel:* (021) 534-3886. *Telex:* 212-3355. *FAX:* (021) 262-6656. *Contact:* Chief of Operations Division.

Terminal Maritimo de Sao Francisco do Sul – DTSUL, P.O.Box 91, Ubatuba, Sao Francisco do Sul, CEP 89-240-000 Santa Catarina, Brazil. *Tel:* (0474) 35-7800. *FAX:* (0474) 42-2248. *Contact:* Chief of Operations.

AGENT: Wilson Sons Agencia Maritima Ltda., Praca Getulio Vargas 70, Centro, 89240-000 Sao Francisco do Sul SC. Tel: (047) 444-0460, 444-0513, 444-0805 (After hours: (047) 444-1174). Telex: (47) 5156 SCSA. Fax: (047) 444-1402. Cables: Savcam S.Fco.

SAO LUIS (Including Itaqui), Maranhao: 02.30 S. 44.07 W. (See Plan)

LOCATION: *Itaqui:* The Port of Itaqui is located in the bay of Sao Marcos, in the Municipality of Sao Luis, Capital of the State of Maranhao, almost at the edge of the N.E. region of Brazil, and 9 km. to the S.W. of the city, with which it is connected via a breakwater extending over the River Bacanga.

The location, fairly sheltered, encompasses Itaqui Point and extends to the North as far as Madeira Point, where a Terminal is to be constructed for handling iron ore on behalf of Serra Dos Carajas, and to the South, reaches close to the Island of Tauamirim: it is formed by a re-entrance into the coast where the contours (depths) of 0 m., 5 m., 10 m., and 15 m., are almost parallel and are between 30 and 40 m. apart. In front of Itaqui, at a distance of 400 m. from the quay, is the Island of Guarapira with maximum dimensions of 100 m. × 300 m. and stretching in a N.S. direction.

The Area of Administration of the "Maranhao Docks Company" includes the Bay of Sao Marcos and the Islands located within it, being limited by a line which joins Tatinga Point on the mainland, to Sao Marcos Point on the Island of Sao Luis.

(a) The Port of Itaqui is confined between the parallels of 02° 34' S., and 02° 36' S. and meridians 44° 21' W. and 44° 24' W.

(b) The "Administrative Area" is confined by the following co-ordinates:

Meridians of 44° 24' W. and 44° 19' W.
Parallels of 02° 37' S. and 02° 29' S.

(c) The Area of Jurisdiction encompasses the whole of the coast of the State of Maranhao, from the border with the State of Piaui as far as the frontier with the State of Para.

DOCUMENTS: See "General" before first port.

PILOTAGE: Approaching coast, the Master must inform Agent via Coast Station Sao Luis – PPB (VHF Channels 16, 24, 25, 26 and 27) or Radio Marinha de Sao Luis – PWM (HF). Pilot launch painted red and provided with conventional lights. Launch awaits at Ponta da Madeira or other places requested in limit by Brazilian Chart DHN–412.

Vessel to notify Pilot service of ETA 6 hours before arrival.

ANCHORAGE: *Sao Luis:* The following areas are reserved for the anchorage of vessels awaiting to enter port.

(a) Location No. 1 for vessels of more than 2,000 g.r.t., up to 21 ft. draft and 135 m. overall (this is the nearest anchorage to the town).

Location No. 2 for vessels up to 18 ft. draft (and that which follows No. 2).

Location No. 3 for vessels up to 18 ft. draft (the nearest to the bar).

These anchorages are situated between the parallels of 02° 30′ 5″ S. and 02° 31′ 5″ S.

(b) Vessels impounded or requiring extensive repairs:

Vessels up to 10 ft. – Lat. 02° 31′ 9″ S., Long. 44° 18′ 7″ W.

Larger vessels: Lat. 02° 30′ 0″ S., Long. 44° 20′ 0″ W.

(c) Anchorage for vessels of less than 2,000 g.r.t. To the South of the partly submerged hull of the *Maria Celeste* between the State Warehouse and the Customs Warehouse.

(d) Vessels in quarantine: Lat. 02° 29′ 5″ S., Long. 44° 20′ 5″ W.

Vessels may not anchor in the approach channel or the turning basin.

Itaqui: The following anchorage zones for vessels arriving at Itaqui:

(a) Vessels over 5,000 g.r.t.: Lat. 02° 35′ 5″ S., Long. 44° 22′ 4″ W.

(b) Vessels impounded or requiring extensive repairs:
Lat. 02° 35′ 1″ S., Long. 44° 22′ 3″ W.

(c) Vessels in quarantine: Lat. 02° 35′ 4″ S., Long. 44° 23′ 3″ W.

(d) Inspection anchorage: Lat. 02° 35′ 2″ S., Long. 44° 22′ 4″ W.

RESTRICTIONS:

Sao Luis: May only be entered during daylight hours and near HW.

Itaqui: Cargo vessels may moor any time during the day or night depending on the state of the tide. Vessels bound for the oil terminal may only berth on the rising tide during the day. Berthing should commence 1 hour before HW.

MAX. SIZE: For port of Itaqui, max. draft at LW is 34 ft. At HW, depth of 45 ft. to 48 ft. available depending on height of tide.

Also see Ponta da Madeira and Alumar.

HEALTH: (See "General" before first port.) Health Authorities visit compulsory, due to disinfection by Yellow Fever Service.

Tankers bound for the oil terminal will be inspected at the terminal after mooring is completed.

Vessels awaiting berths will be inspected at the inspection anchorages.

RADIO: Radio Marinha, code PWM, may be used for any message to the Agent.

TUGS: *Sao Luis:* Several tugs available. *Itaqui:* None.

BERTHING: *Sao Luis:* See "Anchorage".

Itaqui: Administration Quay – Length 164 m., depth 12 m.
Warehouse Quay – Length 164 m., depth 12 m.
North Quay – Length 164 m., depth 12 m.
South Quay – Length 164 m., depth 12 m.

The 80 m. quay will be provided with a ramp for car ferries.

Also see "Ponta da Madeira" and "Alumar".

CRANES: *Sao Luis:* 8 portal cranes (2×6 tons, 6×3 tons) 1×50 tons, 2×3 tons, 1×6 ton on order.

Itaqui: 6×3.2 ton (gantry), 2×6.3 ton (gantry)
3×2.5 ton (mobile), 1×4.0 ton (mobile).
1×9.1 ton (mobile), 2×4 ton (tracked mobile).

BARGES: *Sao Luis:* 11 barges of 60 tons, 5 barges of 80 tons and 1 barge of 150 tons capacity. There are also 5 oil barges with a total capacity of 1,090 tons.

BULK HANDLING FACILITIES: 2 mobile grain elevators at Warehouse Quay serving Maranhao Wheat Mill, rate 150 t.p.h. The Maranhao Wheat Mill has silos with 12 cells, capacity 6,000 tons. Additional silos with 2,000 tons capacity available. The rated capacity of the elevators will be doubled in the near future.

STEVEDORES: On receipt of vessel's ETA Agent provides the necessary gangs. Master to mention in his ETA cable the distribution in cargo hold enabling Agent to arrange for number of gangs required. When loading or discharging bagged cargo an average of 4,000 bags per 8 hours work per gang handled.

MEDICAL: Advance notice by radio preferred, since medical assistance in Sao Luis is limited to 1 general clinic and 3 hospitals.

FRESH WATER: *Sao Luis:* Fresh water available by barge, rate 60 tons per day. There is also an outlet at warehouse No. 4 on the quay.

Itaqui: Available ex-wharf, rate 18 t.p.h.

FUEL: *Sao Luis:* Fuel oil available alongside, delivery by road tanker. *Itaqui:* Diesel oil available to vessels alongside the Warehouse Quay and South Quay.

CONSULS:

France	Tel. 1117		Spain	Tel. 2664
Portugal	" 1689		Norway	" 1888
Denmark	" 1507		Bolivia, no telephone	

Italian Consul at Itaqui. Tel: 2-04-08.

REPAIRS: Shop for small repairs available.

GANGWAY/DECK WATCHMEN: Normally done by the crew.

OPENING/CLOSING HATCHES: Done by stevedores.

CUSTOMS ALLOWANCES: No limit or restrictions.

REPATRIATION: Possible. Last Port Clearance and Crew List required by Maritime Police.

AIRPORT: 13 km. from centre of town (18 km. from Itaqui), with daily flights to North and South of country.

TIME: GMT minus 3 hours.

HOLIDAYS: January 1st; April 21st; May 1st; September 7th; November 15th; December 25th (National holidays). July 28th; September 8th, December 8th, June 29th (local holidays); Maundy Thursday; Good Friday (Church holidays). On all holidays, except Good Friday, work permitted.

POLICE/AMBULANCE/FIRE: Police Tel: 1150; First Aid Ambulance 1943; Fire Brigade 1753.

TELEPHONES: No facilities for placing telephones on board.

IDENTITY CARDS: Foreign Crew members not permitted to go ashore without presentation of Identity Card, on which is a photograph of holder and personal details. These cards are provided by the Agent upon arrival. The Identity Card must be given on disembarkation to the Federal Police who will return it to the Crew member on re-embarkation.

GENERAL: Itaqui is rail-connected with the whole of Brazil, with the exceptions of the States of Para (Belem) and Amazonas (Manaus).

DEVELOPMENTS: Wharf at Itaqui to be extended to 1,068 m. Depth will vary from 30 ft. to 40 ft.

The existing petroleum berth will be replaced by the final extension of the wharf, although plans indicate the intended construction of a new Petroleum Berth on Guapira Island.

New unloader for bauxite, coke and iron ore under construction, rate 1,500 tonnes per hour.

A 16,000 t.p.h. linear shiploader has been ordered for Itaqui.

Also see "Ponta da Madeira" and "Alumar".

SHIPMASTER'S REPORT: June 1992.

Charts: B.A. Charts No. 535 and 543.

Approaches: Light float on shoal (Recife Mancel Luis), when coming from the West, shows up at 15 miles on radar. Racon "BF-3" showed up at 20 miles.

Buoys, commencing with No. 1 and 2, were found to be in approximate charted positions. But pilots warned, they cannot be relied upon.

Buoy No. 6 (Lat. 01° 53.8′ S., Long. 43° 54′ W.) and No. 7 (Lat. 01° 52.6′ S., Long. 44° 0.8′ W.) have disappeared.

Tidal streams can be strong, especially during October to April, when rates up to 8 knots can be encountered in Baia de Sao Marcos.

No shore features were prominent on radar until about Buoys No. 9 and 14.

Pilot: Available throughout 24 hours, depending on tide. Pilot can be contacted on VHF Channel 16 and 14 throughout 24 hours, call sign "Sao Luis Pilot". Pilot office at Pta. de S.Francisco (Lat. 02° 31.2′ S., Long. 44° 18.3′ W.), near Sao Luis City. Boarding positions as per B.A. Chart No. 535. Pilot cutter is based at Itaqui General Wharf.

Berthing and unberthing at Itaqui Wharf is usually from 2 hours after L.W. to H.W., and vessels normally berth starboard side to.

Depending on draft, the above is variable with port side berthing possible.

Two fast red hulled cutters are based at Itaqui.

Pilot arranged through Agent, and notice of 24 hours, 12 hours and 6 hours, when inbound, and 2 hours, when outbound, is required. Pilot is difficult to contact until in the vicinity of Buoys No. 5 – 10.

Anchorages: As marked on B.A. Charts No. 535 and 543. For vessels awaiting pilot/tide, the general anchorage (as per B.A. 535) centred on Lat. 02° 25′ S., Long. 44° 15′ W. is used. As per B.A. 535, various other anchorages for various berths.

Holding is not good in river anchorages, due to strong tidal streams and soft bottom.

The outer anchorage near Buoy No. 6 is not normally used.

Tidal Range: About 5.0 m., which makes for strong tidal streams. Brazilian Tide Tables are most useful.

LPG Berth: Located at Southern end of Itaqui General Wharf (Lat. 02° 34.9′ S., Long. 44° 22.15′ W.). Two stand-pipes on wharf as per "Plan".

Wharf is stone/concrete and has large tractor tyre fenders. Midships gangway can be landed.

Moorings: 4 head/stern lines, 2 springs each end. No mooring boat used.

Gangway and moorings to be tended frequently, due to tidal range.

Tugs: For Itaqui Wharf, 2 modern tugs of 750 h.p. are used. Tugs push when berthing and use tugs lines. When leaving, tugs tow using ship's lines.

TANKERS: Discharge at Port of Itaqui.

Tank Capacities:

	Esso		*Sabba*		*Texaco*		*Petrobras*		*Gas Butano*	
Products	*No. of Tanks*	*Volume (cu.m.)*	*No. of Tanks*	*Volume (cu.m.)*	*No. of Tanks*	*Volume (cu.m.)*	*No. of Tanks*	*Volume (cu.m.)*	*No. of Tanks*	*Volume (cu.m.)*
Gasoline	2	4,003	2	4,800	1	4,000	1	9,135		
Kerosene	1	1,580	1	8,000	1	400	1	1,544		
Diesel Oil	1	3,200	2	5,500	1	3,200	1	9,135		
Jet Kerosene					2	1,600				
Liquefied Gas									6	704
B.P.F.							1	4,032		

The iron ore berth at Ponta da Madeira has 5 powerful tugs available, 4×3,000 h.p. and 1×5,000 h.p.

Berths: Ponta da Madeira can take ore carriers up to 23.0 m. draft at L.W.

Work is progressing on a tanker pier at Itaqui, an extension of the General Cargo Wharf, with 2 berths of 21.0 m. draft, completion expected in 1993.

The General Cargo Wharf has 3 berths for moderate sized vessels. Depths at Berths No. 1 and 3 is quoted as 30 ft. at L.W., and Berth No. 2 (centre) 25 ft. at L.W.

The General Cargo Wharf has 8 electric luffing cranes of 3.5 tonnes to 7 tonnes capacity and 3 suction elevators for grain.

Coal and coke are handled at the Southern Berth (No. 3) by 2 mobile loading elevators.

Cargo: As previously mentioned, LPG is discharged at the Southern Berth via one of two underground stand-pipes at the wharf face.

2 flexi-hoses from the stand-pipe to a 'Y' piece of 6 in. coupling.

We found an average back pressure of 6 Bar (+12°C and 200 tonnes p.h.).

Butane or Mix is pumped into Petrobras tanks 2.5 km. away, capacity 700 tonnes. From here the terminal transfers by own pumps to the Northern Storage Depot 5 km. away and has 1,400 tonnes capacity.

Services: Fresh water is available from the wharf. 24 hours notice required through Agent.

A number of ship chandlers are available. Price of local produce is good. Laundry service also available.

No telephones near at hand. There is a disconnected telephone at guard hut 1 km. away.

Sao Luis is a holiday resort, 15 minutes away by taxi.

Authorities: Even though we were coastwise, full entry procedure required (6 Crew Lists, 3 Stores Lists, 2 Personnel Effects Lists). Sanitary inspection took place.

Security: There is a lack of security, and vessel was inundated with "visitors". The ferry terminal close by did not help matters.

AUTHORITY: Companhia Docas do Maranhao, Rua da Paz 561, Sao Luis, Maranhao, Brazil. *Contact:* Washington de Oliveira Viegas, President.

AGENT: Wilson Sons Agencia Maritima Ltda., Av. Castelo Branco 333, Sala 207, 65076-090 Sao Luis MA. Tel: (098) 235-4729, 235-2529 (After hours: (098) 321-4191). Telex: (98) 1032 WSON BR. Fax: (098) 235-4269. Cables: Angelicus

SAO SEBASTIAO: 23.48 S. 45.24 W. (See Plan)

LOCATION: Terminal Maritimo Almirante Barroso (TEBAR) is located on the West edge of the Sao Sebastiao Channel. Safe access is made through the South Entrance. The geographical position of berths is Lat. 23° 48' 12" S., Long. 45° 23' 18" W.

PORT LIMITS: *North Bar:* Latitude 23° 42' S. – from Longitude 45° 19' W. Westward to the coast and to the South as far as Sebastiao Island.

South Bar: Latitude 23° 54' S. – from Longitude 45° 31' W. to the North to Pta. do Toque-Toque and East to Sebastiao Island.

DOCUMENTS: The visiting area of the Port Health Authorities, Federal Revenue and others, is designated by the alignment: Ponta do Araca-Ilha das Cabras (South) and South limit of the zone of submarine cables (North).

Inward clearance is effected on board immediately after docking by Government Port Officials and Agent's Representative. It is necessary that the following documents be ready on arrival.

Any document regarding outward clearance of the ship at last port of call.

5 copies Crew List.
2 copies Store List.
2 copies Personal Effects List.
3 copies Passenger List.
3 copies Cargo Manifest, (or more if available).
3 copies Bill of Lading, (or more if available).
2 copies Maritime Declaration of Health.
Notice of Readiness (Addressed to Petrobras)
List of vessel's particulars: call sign, n.r.t., g.r.t., d.w.t., speed, engine b.h.p., draft, total crew, officers, time of arrival, loading ports and dates of sailing, quantity of cargo for Sao Sebastiao, quantity of cargo in transit for other ports, etc.

APPROACHES: *Approaching Channel:* The channel of the port of Sao Sebastiao is 12.3 miles long. The South Bar Channel, dredged to 25 m. is 300 m. wide at its narrowest part, allowing entrance and sailing of vessels drawing up to 23 m. The North Bar Channel sounded to 18 m. is 550 m. wide at its narrowest part, allowing entrance and sailing of vessels drawing up to 10 m.

Special attention should be paid by vessels drawing over 18 m. when navigating in the Sao Sebastiao Channel; Chart DHN Nos. 1614, 1644 and 1643 show several cautions with depths of 20 m. and less in the proximities of the limits of the channel.

South Entrance: It is the safest way to reach Sao Sebastiao.

There is a lighthouse whose name is Ponta da Sela at the S.W. border of Sao Sebastiao island which marks the South Bar Channel, showing a white light on white painted red striped tower, numbered G0480 by international code.

Lage dos Moleques is a levelling rock near the N.W. channel edge, marked by a green painted quadrilateral masonry lighthouse, showing green flash lights and numbered G0478 by international code.

Farolete da Pontinha, located on the S.E. channel edge, displays red fixed lights on a white painted metal quadrangular structure, numbered as G0477 by international code.

The South of the channel of the port of Sao Sebastiao, being 300 m. wide in its narrowest part and dredged to 25 m., is marked by 4 beacons:

Beacons 1 and 3 – Painted red and fixed on S.E. edge.
Beacons 2 and 4 – Coloured green and fixed on the N.W. ege.

Also see DHN Nautical Charts No. 1643 and 1644.

Speed limit for merchant vessels in and near Sao Sebastiao port is 4 knots.

Remarks: Both lights and colours of the beacons of the South Bar are in accordance with the IALA system (International Association of Lighthouse Authorities).

North Entrance: The lighthouse Ponta das Canoas, situated on North border of Sao Sebastiao Island marks the North Bar Channel, showing white light on white painted red striped tower, numbered G0470 by international code.

The Farolete Sao Sebastiao, located on the West channel edge, displays red lights on a red painted quadrangular masonry structure, numbered G0472 by international code.

The Farolete da Ponta do Viana, located on the East channel edge (Sao Sebastiao island), displays white flashing lights on a metal structure over a white quadrangular masonry base.

The Farolete Ilhabela, situated on the East channel edge (Sao Sebastiao island), shows red flash lights on red quadrangular masonry tower.

The North Entrance Channel is 18 m. deep, dredged in a 550 m. wide stretch in its narrowest band. DHN Nautical Charts No. 1614 and 1643 can assist vessels calling at Sao Sebastiao. Access is limited to 10 m. maximum draft. Safe access is made through the South Entrance.

The channel of the port of Sao Sebastiao is 12.3 m. long.

Special attention should be paid by vessels drawing over 18 m. When navigating in the Sao Sebastiao channel, DHN Charts No. 1614, 1643 and 1644 show several cautions with depths of 20 m. and less in the proximities of the limits of the channel.

Cautions on DHN Charts No. 1614 and 1644 showing the existence of submarine cable should be strictly observed. It is forbidden to anchor within the marked area.

While moving in the channel, all ships must keep their anchors secure above the sea level.

Four light beacons, exhibiting yellow flashes, visible 5 miles, are fixed on the Terminal, two of them on wharf's edge, one on the N.E. edge of the pier and another on the S.W. edge.

Remarks: For details, such as height of lights, periods, positions, range of light, descriptions, etc., consult List of Lights Brazilian Hydrographic Publication, DH-2 Lista de Farois.

Tidal Stream: The height of the tide in the port of Sao Sebastiao varies from (−) 0.2 m. at LW and 1.5 m. HW, having an average level of 0.66 m. The tide runs either Northerly into the channel or Southerly with characteristics of permanent flowing as if it was a river following the orientation as given by the channel. The current attains considerable speeds which might prejudice the manoeuvring of vessels in the channel, specially at times of entrance of a cold front when winds also attain a significant force.

Whistling: Vessels approaching the port, prior to coming to Araca Point, must give a long blast on the whistle as a warning.

PILOTAGE: Pilotage is compulsory within the port limits for all vessels over 500 d.w.t.

The request for Pilots for entering should be made through the ship's Agents 24 hours in advance via Santos Radio Station (PPS) or Sao Sebastiao Radio (PTS) when the vessel's ETA is given. The ETA should be confirmed 3 hours in advance through Channels 13 or 16 (VHF) to the Pilot's Association of the Port of Sao Sebastiao.

The positions for boarding and disembarking of the Pilot – are defined by the areas of the circles of 0.5 miles radius whose centres are the following coordinates (Chart DHN No. 1614):

(a) North Bar: Lat. 23° 42' 30" S., Long. 45° 21' W.
(b) South Bar: Lat. 23° 53' 30" S., Long. 45° 29' 30" W.

The Pilot's Association functions at Rua Duque de Caxias No. 474, Sao Sebastiao. Tel: (0124) 52-1332. Fax: (0124) 52-1762.

ANCHORAGE:

(a) North Bar – Limited by alignments: Sao Sebastiao Lighthouse – Ponta das Canas Lighthouse – Ponta da Cruz – Quay of Ilhabela. Capacity of anchorage for 4 ships.
Priority is given for vessels over 100,000 d.w.t., for those needing emergency repair, waiting sailing program or those in need of shelter from storms.

(b) South Bar – Limited by alignments Ponta do Araca – Ilha das Cabras – Ilha Toque – Toque – Ponta da Sela Lighthouse. Capacity of anchorage for 5 ships, with preference given to vessels awaiting berth.

All ships can obtain permission to anchor in the maritime areas from the North of Lat. 23° 42' S., and South of Lat. 23° 54' S., by asking Delegacia da Capitania dos Portos do Estado de Sao Paulo in Sao Sebastiao.

Recreation and sport boats must anchor outside the dredged channel.

Anchorage areas have a sand and mud bottom, providing good holding ground for the vessel's anchor. However, special care must be taken when strong winds blow in the area, mostly from S.W., when the stream can reach a high rate which causes the ship to drift.

Manoeuvering Area: Limited by alignments: Ponta do Araca – Ilha das Cabras and Pontal da Cruz – Quay of Ilhabela. Anchorage prohibited in this area.

RESTRICTIONS: The terminal normally operates around the clock. Ships are moored and unmoored at any hour except when an unexpected event arises, such as breakdowns, gales, heavy squalls, and so on.

Safe draft for passing along the dredged channel is 23 m. (75.5 ft.), no matter what existing conditions are, such as day or night, current set and drift, wind, tide or swell. However, at the discretion of Pilot, according to the prevailing above conditions vessels can use the channel with drafts up 24 m. (78.7 ft.) These figures are not final as they may change in time without previous notice.

Remarks: The limitations mentioned above could result in rejection of the ship as being unsuitable for this Terminal.

Speed: Max. speed in port limits is 4 knots.

MAX. SIZE: *Draft in Access Channel:*

South Bar Channel, allowing entrance and sailing of vessels drawing up to 23 m.

North Bar Channel, allowing entrance and sailing of vessels drawing up to 10 m.

Ship's Drafts at Terminal:

South Pier:	PP1 Berth – 23.00 m. (76 ft.).	
	PP2 Berth – 18.00 m. (59 ft.).	
North Pier:	PP3 Berth – 19.00 m. (62 ft.).	
	PP4 Berth – 13.00 m. (42 ft.) any tide.	

HEALTH: Port doctor visits all ships on arrival and requires Maritime Declaration of Health, Derat Certificate, 2 Crew Lists. Vessels from another Brazilian port automatically receive Free Pratique and should not fly Quarantine Flag. If suspected disease or fever on board it is advisable to cable Agent before arrival.

RADIO: Vessels bound for Sao Sebastiao should advise their ETA 72 hours, 48 hours and 24 hours prior to arrival to Agent via PDR (Rio), PPS (Santos) or PTS (Sao Sebastiao).

Communication with Agent can also be performed by SSB radiotelephone through coastal stations of the area: Rio Radio, Santos Radio and Sao Sebastiao Radio.

Once within VHF range, all vessels will also call Terminal or Pilot Control, in order to receive instructions.

When sending ETA, message should specify whether it is local time or GMT.

TUGS: *Owned by Petrobras:*

1×3,170 b.h.p. – Bollard pull 40 tons (twin motors equipped with controlled pitch propellers – Seize).

2×3,720 b.h.p. – Bollard pull 40 tons (twin motors equipped with Voith Schneider system).

Privately Owned:

1×2,170 b.h.p. – Bollard pull 32 tons (twin motors equipped with Schottel system).

While rendering such assistance, the tugboats act under orders of Harbour Pilot. These tugs are fitted with fire pumps and monitors (including mechanical foam to assist in fighting fires. The following ship's whistle signals code is used for tugs communications:

Calling:

4 long blasts followed by 1 or 2 short blasts.	The number of short blasts will call 1 or 2 tugs respectively.

Before Towing Line is Made Fast:

2 short blasts	Prepare to push on the bow or to pick up line from ship's bow.
3 short blasts	Prepare to push on the stern or to pick up line from ship's stern.

After Towing Line is Made Fast:

1 long blast	Pull to starboard
2 short blasts	Pull to port
3 short blasts	Stop pulling

Manoeuvring Alongside Ship's Hull:

1 short blast	To pull
2 short blasts	To push

Other ship's whistle signals are used for auxiliaries boats.

Calling:

2 long blasts followed by 1 short blast	To call small craft or Pilot (launch)
1 long blast followed by 1 short blast	To call motor-boat (launch)

All orders received by tug will be acknowledged with a distinct short blast.

As tugboats are provided with VHF, manoeuvring orders may be given by radio.

Usually orders to fore tug are given by a mouth whistle and to aft tug by ship's whistle.

Tugs are fitted with flashing signal lamps.

Instructions for Tug Service at Terminal Maritimo Almirante Barroso (TEBAR), published by Capitania dos Portos do Estado de Sao Paulo: All docking and undocking manoeuvres in normal conditions must be accomplished with at least the number of tugs mentioned in the subsequent list.

Corresponding Table between deadweight, total bollard pull and number of tugs required for mooring and unmooring manoeuvres during pilotage operations in Sao Sebastiao Channel – SP:

D.w.t. (tons)	*Total Bollard Pull* tonnes	*Minimum Number of Tugs*
Up to 2,000	2.5	2
From 2,001 to 2,500	3.0	2
From 2,501 to 5,000	7.0	2
From 5,001 to 7,500	9.0	2
From 7,501 to 10,000	11.0	2
From 10,001 to 12,500	14.0	2
From 12,501 to 15,000	17.0	2
From 15,001 to 17,500	19.0	2
From 17,501 to 20,000	21.0	2
From 20,001 to 25,000	25.0	2
From 25,001 to 30,000	28.0	2
From 30,001 to 35,000	32.0	2
From 35,001 to 40,000	36.0	2
From 40,001 to 45,000	39.0	2
From 45,001 to 50,000	42.0	2
From 50,001 to 60,000	46.0	2
From 60,001 to 70,000	51.0	2
From 70,001 to 80,000	53.0	2
From 80,001 to 90,000	55.0	2 – 3
From 90,001 to 100,000	56.0	2 – 3
From 100,001 to 110,000	58.0	2 – 3
From 110,001 to 120,000	60.0	2 – 3
From 120,001 to 130,000	62.0	2 – 3
From 130,001 to 140,000	64.0	2 – 3
From 140,001 to 150,000	66.0	2 – 3
From 150,001 to 160,000	81.0	2 – 3
From 160,001 to 170,000	83.0	2 – 3
From 170,001 to 180,000	86.0	2 – 3
From 180,001 to 190,000	87.0	2 – 3
From 190,001 to 200,000	89.0	2 – 3
From 200,001 to 210,000	90.0	4
From 210,001 to 220,000	91.0	4
From 220,001 to 230,000	93.0	4
From 230,001 to 240,000	95.0	4
From 240,001 to 250,000	96.0	4
From 250,001 to 270,000	98.0	4
From 270,001 to 290,000	101.0	4
From 290,001 to 310,000	106.0	4
From 310,001 to 330,000	110.0	4 – 6
From 330,001 to 350,000	114.0	4 – 6
From 350,001 to 370,000	118.0	4 – 6
From 370,001 to 390,000	121.0	4 – 6

Remarks: The bollard pull data shows the minimum value necessary for manoeuvres taking into account the non-existence of unfavourable currents.

Notes:

1. When for the sake of safety the Pilot may consider necessary a number of tugs beyond the number mentioned, he may act accordingly, justifying same, shortly thereafter, in writing to the Delegate of the Captaincy in Sao Sebastiao.
2. When the condition of the sea, intensity of the wind or the visibility stops operations, the Pilot's Association should officially inform the Delegacy in Sao Sebastiao, accordingly.
3. If a tug is not able to operate with all its bollard pull, the responsible Agent must report that incapability to the Delegate of the Captaincy in Sao Sebastiao and the Pilot's Association, keeping the tug out of operation.

In case of non-agreement between the Master of the ship and the Pilot about the number of tugs to be employed, the Master's decision should prevail. Anyway the Master is asked to justify his decision in writing to the Delegate of the Sao Sebastiao, Port Captaincy, as soon as the manoeuvres end.

Orders for tug services are to be placed by shipowners or its representative Agent, according to Pilot's request, but with the agreement of the ship's Master.

GENERAL CARGO WHARF: *Commercial Quay:* Length 150 m., depth 8.2 m. 6 bollards for berthing, spaced 30 m. apart. Fresh water available, 3 hydrants, capacity 10 cu.m.p.h. each. Fuel available by road tanker in small quantities.

Warehouses/Open Storage Areas: The covered storage area, available in the port area is 2,000 sq.m. and has a capacity of 12,000 cu.m. The open storage area for containers in the port area is 20,000 sq.m. and for heavy lifts 24,000 sq.m.

The storage area outside the port area, covered and open, is 10,000 sq.m. and belongs to the Companhia Nacional de Armazens Gerais Alfandegados (National Bonded General Warehousing Company).

There are no cold stores or silos on the port quay.

Cranes: 1×25 ton (private), 1×50 ton, 1×22 ton, 1×16 ton, 1×12 ton and 4×4.5 ton.

Stackers: 21×2 ton – 13.5 ton.

MEDICAL: Medical treatment and/or hospitalisation, if required, is provided in the private local hospital. Dentists are available in the area. For emergency cases (serious illness or injury), first medical aid may be requested by the Master. Internal telephone number is 232. If patient does not speak Spanish or Portuguese, an interpreter should accompany him.

TANKERS: The Terminal is located on the Western edge of the channel between the shore and Sao Sebastiao Island. Safe access for large tankers is possible through the South Entrance but smaller tanker of draft 35 ft. or less may enter through the North Entrance.

The head of the jetty which is "T" shaped is 1,690 m. (5,544 ft.) from the shore, in position Lat. 23° 48.2′ S., Long. 45° 23.3′ W.

The Terminal has 2 piers with 4 mooring berths.

North Pier:

	East Berth	*West Berth*
Name:	PP-3	PP-4
Location:	External side	Internal side
Length:	395 m.	395 m.
Depth:	19.0 m. (62 ft.)	13.0 m. (42.6 ft.)
Marine hoses:	Crude 2×10 in. D.O. (2×8 in.)	Crude 1×10 in. D.O. (2×8 in.)
D.w.t.:	150,000	65,000
Ship's manifold maximum heights above wharf's platform:	16.0 m. (52 ft.)	16.0 m. (52 ft.)

South Pier:

	East Berth	*West Berth*
Name:	PP-1	PP-2
Location:	External side	Internal side
Length:	510 m.	510 m.
Depth:	23 m. (75 ft.)	18 m. (59 ft.)
Loading arms:	Crude 4×16 in. D.O. (1×8 in.) Bunkers 1×10 in.	Crude 3×16 in. D.O. (1×8 in.) Bunkers 1×10 in.
D.w.t.:	300,000	155,000
Ship's manifold maximum heights above wharf's platform:	21.5 m. (71 ft.)	17.8 m. (58 ft.)

Pipelines: 2×34 in. diameter pipe-lines, 2,300 m. (7,500 ft.) link the South Pier to the shore tanks. 2×24 in. diameter pipelines, 2,000 m. (6,500 ft.) link the North Pier with the shore tanks.

Information required on Arrival:

Name and vessel's call sign.

Country of Register.

Cargo type and exact technical name.

Cargo layout on board indicating which one will be discharged and which will stay on board.

In case of ships equipped with inert gas system, inform its operational condition.

Any damage to engine, machinery or hull able to cause prejudice to manoeuvres and safety of other ships, or put in danger the environment, people or land properties.

Draft on arrival.

Draft after finishing loading/discharging.

Any leaks in hull, bulkhead, valves or lines prone to provoke pollution or to affect operations.

Any repair which may result in delay of the start of loading/unloading.

Whether or not there will be crude oil washing.

Manifold details, including type, diameter and connection material to be used.

Quantity and type of slops and dirty ballast to be discharged into shore tanks.

The time to issue Notice of Readiness is considered the time the vessel reaches Ponta do Araca. The Notice of Readiness will be presented at the time the tanker is in all respects moored and ready to operate.

LOADING: *Maximum Permissible Pressure:* Both piers 10 kg./sq.cm. (150 p.s.i.).

Receiving Capacity:

Product	Line No.	Pier	Rate (cu.m./hr.)	Line Size (in.)
Clean Products	01 (14)	North Pier – P.4	4,000	24
Crude	02	North Pier – P.3	4,000	24
Crude	07	South Pier – P.1	9,000	34
Crude	08	South Pier – P.2	9,000	34
Diesel (Supply)	1301	North Pier/South Pier	500	8
Bunkers	1201	North Pier/South Pier	500	12
Bunkers	1202	North Pier/South Pier	500	12
Ballast		North Pier/South Pier	1,600	16

BALLAST: Brazilian laws are very strict in regard to the pollution of harbour and coastal waters. Vessels should not discharge dirty ballast, ashes, refuse, etc., into the water. Heavy fines are imposed for violations. All overboard discharge valves from cargo tanks and bilges are to be secured before any loading or discharging commences. All deck scuppers should be plugged to avoid harbour contamination should an oil spill occur. To offenders, fines will be charged (besides resulting delays) according to the ship's tonnage. Facilities for receiving dirty ballast are available. However, amount is dependent on space in shore tanks at the time. Capacity of tanks 12,000 cu.m. (75,000 bbls).

The Terminal is particularly interested in having vessels complete the deballasting operation promptly in order to minimise time at berth. Simultaneous discharging/loading and deballasting/ballasting is encouraged on properly equipped vessels.

FRESH WATER: Fresh water can be supplied if necessary; however, supplies are limited to essential requirements (up to 400 tons). Rates: Minimum 90 t.p.h. Maximum 148 t.p.h.

FUEL: The Terminal is equipped with blending valves and is able to deliver bunker "C", fuel oil, marine gas oil, marine diesel oil and intermediates of any grade.

The supply rates are about 300 t.p.h. for bunker "C", 180 t.p.h. for M.G.O. and 450 t.p.h. for intermediates.

Orders for bunkers should be placed, with a minimum of 48 hours notice to:

Divisao de Abastercimento a Navios – Departamento Comercial, Av. Republica do Chile 65, 19.° andar, Rio de Janeiro – Brazil. Telegraphic Address: Petrobrasecope. Telex: 031422 and 031423.

Lubricating Oils: Orders for marine lubricants should be placed at least 15 days in advance and subject to confirmation to: Petrobras Distributidora, Praca 22 de Abril, 36, 4.° andar, Rio de Janeiro – Brazil. Telegraphic address: Petroedipe Telex: 031422, 031423 and 031424. Tel: 242-9381 and 242-4901.

Simultaneous Bunkering and Discharging Operations: Considering that the loading/discharging hoses cannot be crossed with bunkering hoses, the simultaneous bunkering and discharging operations will depend on the position of the ship's bunkering manifold. If the ship has 2 bunkering manifolds – 1 on each side of cargo manifold – the bunkering and the discharging may be effected at the same time. However, if a tanker has only 1 bunkering manifold at each board (located to the aft part in relation to cargo manifolds), this simultaneous operation will only be possible if the ship, is berthed port side at position 3 or starboard side at positions 1, 2 and 4. Alternatively, upon completion of loading/discharging the ship will have to be shifted a few metres forward to receive bunkers.

CONSULS: No consular representatives are reported to exist in the area.

REPAIRS: Some repairs of minor nature can be effected in Sao Sebastiao. When alongside pier, vessels must maintain engines and propulsion machinery in readiness to leave the berth under full power on short notice. No repairs are permitted which would interfere with this requirement. The ship repairing firms usually have branch offices in Sao Sebastiao which are able to undertake many kinds of small repairs. If necessary they can avail themselves of personnel of Santos or Rio de Janeiro branches.

SURVEYORS: *Petroleum Inspectors:* None available in Sao Sebastiao. If required, arrangements should be made well in advance. A representative of Chas. Martin and Co. is based in Rio de Janeiro and E. W. Saybolt & Co. in Santos.

Classification Societies: Located in Rio de Janeiro.

GANGWAY/DECK WATCHMEN: Compulsory.

CUSTOMS ALLOWANCES: For each Crew member, 2 packets of cigarettes and 1 bottle of wine or spirits. While the vessel is in port, Brazilian Custom's Officials are assigned on board to ensure compliance with Customs Regulations. Meals must be supplied to these Officials during regular meal hours. Brazilian laws are strict in regard to smuggling and Masters are requested to instruct their crews not to take cigarettes or other articles ashore. Cigarettes in carton lots, cigars, tobacco, alcoholic drinks, souvenirs, etc., should be collected prior to arrival in port, listed with the items in the slop chest and placed in the custody of the Master for deposit in the slop chest or closet which will then be sealed for the duration of the vessel's stay in port. By no means will any commercial transactions be tolerated, be it either among terminal employees, crew members or anyone else. Cigarettes or other stores in bond can be obtainable in Sao Sebastiao.

REPATRIATION: Possible, but involves lengthy car ride to Sao Paulo or Rio de Janeiro.

AIRPORT: At Sao Jose dos Campos and Sao Paulo.

TIME: Local time is GMT minus 3 hours.

HOLIDAYS: 20th January (Sao Sebastiao Day).

National Holidays: By order of the local Port Authorities it is requested that all ships in port must be fully dressed on the following National Holidays: 7th September and 15th November.

POLICE/AMBULANCE/FIRE: Police Tel: 521-400. Fire (Petrobras) Tel: 522-711 or VHF Channel 16 to Tebar.

TELEPHONES: No service at the Commercial Quay. At Tanker Terminal there are telephones in the control room.

SHORE LEAVE: The access pier is 1,600 m. long. The crew can use it to get ashore, but special passes are required for this purpose. There is, however, a launch service provided by Agent.

GARBAGE DISPOSAL: Collection service is available; drums and plastic bags should be provided by vessel. Garbage services are contracted by Petrobras. Charge not relevant. Collections possible all days, must be required through ship's agent.

WASTE OIL DISPOSAL: Petrobras Terminal receives waste oil from slop tanks of ships. Shore tank capacity 11,000 cu.m. Barges and tanker trucks not available in Sao Sebastiao, but in special circumstances can be arranged through ship's agent.

SEAMAN'S CLUBS: No seaman's clubs in the port.

Shops, international telephone, church services, football matches, dances and other facilities are available in the city.

CURRENCY: Local currency is the Cruzeiro (CR$). No currency restrictions placed upon seafarers.

REGULATIONS: *General Safety Rules:*

(1) Anchorage in the basin is prohibited.

(2) Vessels going to anchorage in the proper area can stay there only for 15 days. Exceptional cases are to be analysed by Delegacia da Capitania dos Portos.

(3) Merchant ships not bound for the Terminal or commercial port of Sao Sebastiao are forbidden to sail in the channel.

(4) The simultaneous sailing of two or more merchant ships in the channel is prohibited.

(5) Vessels moving in the channel are not allowed to cross the bow of anchored vessels closer than 500 yards.

(6) The access to the maritime port area by night is forbidden, except in crucial situations. In these cases, both Master and Pilot must send written notification to Delegacia da Capitania dos Portos, 24 hours in advance of moving, informing reason for the emergency.

(7) Any manoeuvring by unloaded ships without the ballast conditions specified in the design is forbidden.

(8) Any manoeuvre is liable to interruption, including loading and unloading operations, if the mooring ropes, valves, pipe system and equipment are said to be defective. In that case, the occurrence must be reported to Delegacia da Capitania dos Portos.

(9) No berthing manoeuvre to moor any vessel at Terminal will be allowed if the canal current equals or exceeds 3 knots, or in case of stormy weather.

GENERAL:

Charts: Diretoria de Hidrografia e Navegacao (Brazilian Hydrographic Office) has published Charts No. 081, 1600, 1614, 1643 and 1644, recommended for approaching the Terminal.

Also fully up-to-dated U.S.H.O. and British charts for the area may be used.

Brazilian Flag and Others: In accordance with international practice, quarantine signals must be displayed by vessels when approaching Brazilian ports. These signals shall be displayed continuously until Free Pratique is granted and are: sunrise to sunset – quarantine flag "Quebec"; sunset to sunrise-signal lights red over white.

Tankers will display the red flag "Bravo" during the day and a red light during the night throughout their stay in port indicating inflammable or explosive cargo.

In addition to quarantine signals which are to be shown until Free Pratique is granted, the Brazilian Flag must be flown from foreign vessel's foremast throughout the vessel's stay in port.

Vessels must provide themselves with this flag before arrival but if circumstances render this impossible, the flag may be supplied by ship's Agent.

The Brazilian Flag must be of proper size, according to the d.w.t. of the vessel.

While approaching or leaving harbour, vessel's call sign flags must also be flown.

Watches: An efficient watch must be maintained on board the ship, deck and engine room and a sufficient number of crew members should always remain on board to cope with emergency or port operation situations.

Ratguards: Ratguards must be placed on all mooring lines.

Visit of Authorities: In case the ship enters and berths directly, the official visit of Authorities together with the Agents will take place as soon as she is tied up and the gangway is lowered. However, if the ship is not berthed immediately upon arrival (e.g. in view of the pier being occupied, or any other reason), the visiting party will proceed to the ship by motorboat as soon as she drops anchor. If the ship arrives after 2100 hrs. it is possible that Authorities will decide to visit the ship next morning at 0800 hrs.; however, the ship is authorised to operate normally and crew members are allowed to go ashore.

Seamen Left Ashore: Ships are not permitted to sail until all crew members are on board. Should, however, a crew member definitely not be found, his passport (or seaman card) and his international vaccination certificates must be given to the Agents, together with a letter requesting him to be repatriated.

Weather and Tide Conditions: The weather at Sao Sebastiao is generally very favourable; however, strong winds and currents are frequent mostly during winter. 128 km.p.h. wind was registered in 1982. Swell is not observed in the channel. The winds are unpredictable for more than a few hours in advance; usually it blows from N.N.W. or S.S.W. As regards rain, the annual precipitation averages 2,000 mm. The visibility is mostly fair, although in Autumn and Winter it may become rather poor in the early morning. The temperature ranges from 15°C (59°F) in July to 39°C (104°F) in January. The relative humidity of the air is usually high, often exceeding 85%. The normal range of tides is around 1.2 m. (4 ft.). Although higher ranges of 2 m. (6.5 ft.) have been noticed during Spring. The currents are irregular but usually follow the direction of the wind; according to the intensity and the duration of the wind, the drift may range from 1 to 4 knots.

Safety Precautions in Case Imminent Bad Weather:

(a) Wind speed in excess of 30 knots and/or currents more than 3 knots.
  Permanent inspection of mooring system.
  Pilot, tugboats and longshoremen in readiness.
  1 tug to be alongside ship berthed in PP-1 and another alongside ship berthed PP-3.
  Engine room-ready.
  Steam fed to winches.
  Reduce surface exposed to wind.
  Discontinue unloading and disconnect loading arms.

(b) Wind speed in excess of 50 knots and current of more than 4 knots.
  Do not loosen winch brakes to try to run cables.
  Man manoeuvring station.
  Call Pilot, tugboats and longshoreman. Discontinue loading/unloading operation.
  Increase torque on brakes.
  Pass extra mooring lines.
  Disconnect loading arms.
  Remove gangways.

Derat Certificate: In case the Derat Certificate has expired and needs to be renewed, a radio message should be sent to the Agent a few days before arrival, so that they are able to make the necessary arrangements with the Sao Sebastiao Port Health Inspector.

Renewal of Vaccination Certificates: For the same reason mentioned above, the Master should send, beforehand, a radio message stating how many vaccinations of each kind will be required. The vaccinator has to come from Santos.

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Constant Readiness: During the time the ship is berthed alongside, her engine and propulsion machinery should be in readiness to leave the berth on short notice. No repairs are permitted which would interfere with this requirement.

Smoking: Smoking in open areas of the ship and on the pier, is strictly forbidden. The crew are not to throw lighted cigar or cigarette ends overboard.

Photography: The taking of photographs within the terminal is prohibited.

Emergency Towing Wires: 2 towing wire ropes should be always hanging to the water's surface so that the tugs can easily make fast should an emergency arise.

Gangways: All ships calling at Sao Sebastiao must provide a safe gangway. Authorities may refuse to board the ship if a safe gangway or accommodation ladder is not provided. At night, the pilot ladder must be adequately lit. The terminal is not equipped with platform ladder. The ship's ladder must be used.

Lifebuoy: A lifebuoy with 15 fathoms (27 m.) of rope should be kept nearby the gangway for use in case of emergency.

Ship's Fire-fighting Equipment: At least 2 fire hoses should be connected to hydrants on main deck: 1 forward and the other abaft the cargo valves manifolds. A third hose with an NPU nozzle and 2 mechanical foam containers should be kept nearby the pump-room. The ship's main fire-extinguishing system should be kept under constant pressure.

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Vessels of 30 – 40,000 d.w.t. draft for'd 16 ft. aft 20 ft.
Vessels of 40 – 50,000 d.w.t. draft for'd 18 ft. aft 24 ft.
Vessels of 50 – 70,000 d.w.t. draft for'd 20 ft. aft 28 ft.
Vessels of 70 – 100,000 d.w.t. draft for'd 24 ft. aft 32 ft.

Vessels over 100,000 tons should be ballasted to approximately one third of the vessel's deadweight.

Bond Wire: Before the connection of shore hoses, the bonding wire will be connected, by a terminal employee, to ensure a good grounding electric contact.

Boiler Tubes and Sparks: Whilst alongside the pier, no boiler soot blowers may be used. The use of derricks is also forbidden (excepting the poop derrick, when lifting stores, provisions, etc.). Likewise, the use of objects and/or tools which may cause sparks is also forbidden.

Fire Signal: Should fire break out in any part of the ship, the fire alarm should be given: a continuous sounding of 7 short blasts on the whistle, followed by a long one.

Transportation of Stores, etc., from Shore to Ship: The terminal does not permit the carriage of items through the jetty. Consequently, the ship has to use the services of a motorboat, or a tugboat or of a floating craft (which is towed to the ship's side). The motorboat or the tugboat may only approach the ship by the sea side. No derricks may be used, although the terminal has no objection to the use of the poop derrick or crane (sea side). Depending on the nature and the weight of items involved, they may be taken on board using the gangway (sea side).

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Radio Equipment: When the tanker is berthed, its main transmitting aerials should be earthed.

Laundry Facilities: Available at Sao Sebastiao.

Communications: Telex and telephone available at the Agencies and at the terminal.

Rubbish: Garbage bins are available at the Commercial Quay for berthed tankers and anchored vessels, garbage bins are available through boat acquired by Agent. Dry garbage facilities available for anchored and berthed vessels using boat acquired through Agent.

Oil Pollution: The terminal is equipped with a system for oil pollution fighting in the sea.

Compensation for oil pollution damage caused by tankers and cost of fighting pollution performed by terminal are owner's liability.

SHIPMASTER'S REPORT:

Pilotage: Vessels normally sail and arrive by the Southern Entrance.

Anchorages: The holding ground for VLCCs is not very good, but appears good for smaller vessels. (We had 3 cases of ships dragging during our two and a half weeks stay, all VLCCs.) The current runs Northerly or Southerly depending on the wind.

Tugs: 5 tugs normally used for berthing and unberthing irrespective of vessel's size.

Medical: Dental and routine medical matters available. Specialists are available some miles away. For inoculations the doctor comes from Santos.

Fresh Water: Rates are dependent on number of vessels watering and can be as low as 10 t.p.h.

Customs Allowance: 2 cartons cigarettes per man. Customs no longer stay on board the vessel.

Repatriation: Is possible, but involves lengthy car ride to Santos or Rio de Janeiro. The best and nearest airport is outside Sao Paulo, where international flights are available. This is quicker than going to Rio.

Telephone: Available in jetty control rooms.

Shore Leave: When berthed the Agent can arrange a minibus service from the T-head of the jetty.

Port Regulations: Vessels throwing or discharging anything into Brazilian waters are subject to a fine equalling 2% of the minimum Brazilian basic wage multiplied by the vessel's gross tonnage. Garbage disposal is difficult to arrange and they will only accept dry garbage.

General: Communications are poor, no telex and messages have to be telephoned to Santos. Best method is to use ship's equipment when at anchor.

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Secretaria dos Transportes do Estado de Sao Paulo, Avenida Dr. Altino Arantes No. 410, Sao Sebastiao. *Tel:* 52-1524, 52-1338.

Capitania dos Portos, Avenida Dr. Altino Arantes No. 544, Sao Sebastiao, C.E.P. 11600-000. *Tel:* (0124) 52-1555, 52-1550. *FAX:* (0124) 522518. *Contact:* Captain Luiz Alberto Sousa Ferrao, Harbour Master.

AGENT: See "Santos".

SEPETIBA BAY, (Guaiba Island and Ilha Madeira): 22.56 S. 43.50 W. (See Plan)

See "General" before first port.

LOCATION: About 50 miles West of Rio de Janeiro, is the site of a bulk iron ore terminal located off the S.E. end of Ilha Guaiba about 7 miles due North of the bay entrance.

APPROACHES: *Access Channel:* The distance from the entrance at the bar to the port is 22 km. The Access Channel is dredged to 22.5 m. as far as the Manoeuvring Basin in front of the quay, where the depth is 12.2 m.

PILOTAGE: Compulsory for all ships entering the bay and berthing and unberthing at the ore facility. Pilots board in the vicinity of Lat. 23° 08′ 39″ S., Long. 44° 04′ 36″ W. A pilot ladder, boat rope, and gangway must be properly rigged with the landing platform of the gangway lowered to within 5 m. (16.5 ft.) of the water. Adequate lighting should be provided at night.

ARRIVAL INFORMATION: Vessels bound for Baia de Sepetiba should send an ETA to their Rio Agents, via Rio Radio, six days, 48 hours, and 24 hours prior to arrival. Any significant change in this ETA should be corrected as soon as possible but not less than 8 hours prior to arrival. Also see "VHF".

ANCHORAGE: In the vicinity of the Pilot boarding area. Ships should not proceed beyond this point unless a Pilot is aboard and instructions have been received from Sepetiba Marine Operations to proceed.

MAX. SIZE: *Ore:* Max. draft 21.98 m. Max. air draft 21.6 m. Max. beam 54 m.

HEALTH: Radio Pratique should be requested 72 hours prior to arrival by transmitting a quarantine message to the Port Health Authorities through the the ship's Agent. This message should contain the following information: name and nationality of vessel; last port of call; number of crew and passengers; general conditions of health on board. Also see "General" before first port.

VHF: Vessels are requested to contact Sepetiba Marine Operations directly when within VHF radio-telephone range. Channel 16 is the calling channel and 11, 12 and 13 are the working channels. Anchoring or berthing instructions should be requested 4 hours prior to arrival or when within VHF radio-telephone range.

TUGS: Tug assistance is compulsory for all manoeuvring in the vicinity of the pier and 3 powerful twin screw tugs (4,000 h.p.) are available for this purpose. All ships should be equipped with a wire cable tow line with a nylon pendant. Radio-telephone communication is maintained between the tugs and the Pilots on Channel 6.

BERTHING: Ore: Guaiba Island facilities consist of a deep-water pier located about 400 m. (1,312 ft.) South of the island. The South Berth has a depth of 24 m. (78.75 ft.) alongside and the North Berth has a depth of 19 m. (62 ft.). A mooring dolphin at the West end of the pier provides an overall mooring length of 470 m. (1,541 ft.) alongside the South Berth. Bollards are spaced along both pier faces and quick release hooks and capstans are fitted for breast, bow and stern lines.

Also see "Shipmaster's Report" – dated May 1980.

Coal: Madeira Island – Terminal completed and fully operational.

Operator: Companhia Docas do Rio de Janeiro.

Berth: All bulk cargoes are handled at the single pier, length 540 m., width 39.25 m. This pier permits the berthing of the following vessel arrangement options:

(1) 1×90,000 d.w.t. on the North side and 1×65,000 d.w.t. on the South side.

(2) 2×45,000 d.w.t. at North side and 2×65,000 d.w.t. on the South side.

Depth of water is 15.0 m. on South side and 12.0 m. on North side.

Cranes: 2×1,500 tonnes/hr. and 2×800 tonnes/hr. grab unloaders for coal and 1×300 tonnes/hr. sucker for alumina.

Conveyor Belt: 2×4,500 tonnes/hr. for coal and 1×300 tonnes/hr. for alumina.

Piling Equipment: 2 stackers × 4,500 tonnes/hr. each, 2 reclaimers × 3,000 tonnes/hr. each, 1 train loading silo × 2,000 tonnes/hr.

Centralised Control: Equipment is controlled by an automated main Control Centre which supervises operations.

Storage and Warehousing: 360,000 tonnes of material can be stored on a 2.5 million sq.m. storage yard.

Rear Stacking Area: Reserved for cargo (coal, ore, solid and liquid bulks) – 5,050,000 sq.m. Reserved for the administration, maintenance and services – 800,000 sq.m. Reserved for small industries associated with the port activities – 1,200,000 sq.m.

General: Sepetiba operational system enables coal handling capacity in the order of 5.4 million tonnes/year and 160,000 tonnes/year for alumina. Sepetiba is also prepared to handle coke, scrap iron, zinc as well as other solids.

Also see "Report" – dated August 1984.

BULK HANDLING FACILITIES: Ore: One travelling shiploader serves both berths and has a boom clearance of 22 m. (72 ft.) at shipside and max. outreach of 29.9 m. from fender line. Travel of loader 250 m. Ore is stacked in a storage area and is delivered to the shiploader by conveyor belt which is loaded by either of 2 stackers having an average capacity of about 7,000 tonnes per hour each.

Coal: See "Berthing" and "Reports".

MEDICAL: Nearest hospital at Itaguai.

DENSITY: 1025.

FRESH WATER: Available.

FUEL: Supply is planned.

AIRPORT: Santa Cruz.

TIME: GMT minus 3 hours.

HOLIDAYS: No port work on 1st May and 2nd November.

TELEPHONES: Connection possible on request.

GENERAL: *Charts:* Brazilian: 1601, 1602, 1603, 1608, 1610 and 1623. British: 1683 and 3970. American: H.O. 24155, 24160 and 24164.

SHIPMASTER'S REPORT: Ore Berth: May 1980.

Agents:

(a) Mineracoes Brasileiras Reunidas, (the operators and loaders). Av. Graca Aranha, 26, 17th Floor, Rio de Janeiro. Tel: 222-5171. Cables: "Brasilore".

(b) Buarque & Cia, (ship's Agent appointed by the Solmer contract), Rua de Rosario, 113, P.O. Box 1542, Rio de Janeiro. Telex: 2121300 BUCL. Cable: "Joarce". Tel: 221-2210, 221-9961.

Arrival Telegrams: According to the charter party, telegraph "Brasilore" and "Joarce" when leaving the previous port of call, and repeat 72 hours and 24 hours prior to arrival. During the last 24 hours, a change of one hour or more in ETA must be reported.

Radio clearance is requested through the intermediary of BUARQUE to whom it is necessary to quote in the 72 hours telegram the following: last port of call, number of crew members, passengers, state of health, date of Derat Certificate, name of Master.

BUARQUE replies to the first ETA telegram indicating the possibilities of direct entry or waiting. As MBR remains silent, it is advisable to ask BUARQUE to confirm the tonnage to be loaded and the quantity, more or less, of each type of ore involved. Olinda/PPO (Recife) and Rio/PPR stations are normally used. Good easy connections and no delay. Olinda is particularly well placed for communications with vessels approaching from the North.

If the crew members have no Brazilian pass (even if made out in another port) ask for a photographer.

General Information:

The Port of Sepetiba, opened to ore traffic in 1974, belongs to Mineracoes Brasileiras Reunidas (MBR). It is the maritime outlet for a group of mines located some 1,200 km. inland.

Situation: The terminal is located at the S.E. end of the island of Guaiba, in the East part of the Bay of Ilha Grande (Large Island), some 50 miles to the West of Rio de Janeiro.

The island is connected to the mainland by a railway bridge which brings the ore for shipment.

The terminal administrative office is on Sai beach, 5 miles to the N.E. (and 120 km. from Rio by road).

Local Time: GMT minus 3 hours.

Pollution: Deballasting at sea only. The Authorities make pressing recommendations to avoid pollution, warning that fines are heavy and not alterable.

Monetary Exchange: Only at the Agency can cruzeiros be obtained, but dollars are much sought after on land, even by small traders. Advantageous exchange rate.

Navigation:

Charts: Brazilian – 1601, 1602, 1603, 1608, 1610.
British – 3970, 1683, 3970
American – HO 24155, 24164, 24160.

Landfall: No difficulties, using the mountains which are around the entrance: Ilha Grande to the West (1,037 m.) and Ilha de Marambaia to the East (620 m.).

Access: The approach channel, is in two straight parts, and is 7.6 miles long. Buoys are not very visible either by day or by night, but perfectly detectable on radar.

The width of the channel varies from 280 m. up to Buoy No. 7; 580 m. at Buoy No. 9 (bend); 330 m. up to Buoy No. 13; and then widens out into a manoeuvring basin 1.8 miles long and 0.5 miles wide.

Draft: The channel has been dredged to 22.5 m., and the manoeuvring basin to 24.5 m. Vessels drawing 21.5 m. have used it on sailing. The Pilots recommend drafts forward of 30 ft. and aft of 36 ft. for the entry for a vessel of the tonnage 122,000 d.w.t.

Currents: Along the coast, coming from the East, weak and counterclockwise. Inside, tidal currents may reach 1.5 knots.

Tides: Twice a day but not equal every day. Tidal rise about 1 m.

Times of entry and sailing: Night and day.

Maximum vessel dimensions: Within the limit of the practicable draft of 21.5 m. No length restriction.

Pilotage: Compulsory. The Pilot boards between 1 and 2 miles from the channel entrance. On sailing, he leaves the vessel between Buoy No. 8 and No. 6.

The pilot vessel has a white hull, a red roof and shows an alternating red light by night. Max. speed 9 knots.

Call up on VHF Channel 16, work on Channel 13.

For embarkation, lower the accommodation ladder to 5 m. above the water, and the pilot ladder to 1 m. above the water. On leaving the vessel, he only uses the pilot's ladder (if the vessel is fully loaded).

Anchoring: When awaiting the Pilot, vessels can anchor in 24 m. of water, 2 miles to the South or S.S.W. of the channel entrance (unmarked wreck, at a depth of 19 m. 1.5 miles to the S.E. of the entrance).

Whilst waiting to berth, the Pilot anchors the vessel, either to the North of the second part of the channel between Guaiba Island and Mangaratiba Lagoon, in 15 m. to 18 m. of water. (Four vessels of 150,000 tons would be able to lie there with ease). Or, to the East of Guaiba Island, outside the manoeuvring basin, in 25 m. to 30 m. of water.

Holding is good in all these anchorages, but vessel exposed to the swell.

Tugs: Three tugs of 4,000 h.p. available (MBR 1, 2 and 3).

The tugs are taken at the entrance near Buoy No. 11. They are released on sailing, before Buoy No. 13.

On entry and sailing, 1 tug forward and 1 astern, each taking 2 lines from the vessel. The third comes alongside amidships and passes 2 lines to the vessel. Communication with the Pilot is by walkie-talkie.

Berths: The pier is 400 m. long and orientated 238°/058°. It is connected to the Island by a bridge approximately 300 m. long carrying the conveyor belt. Vessels can come alongside on the inside (N.N.W.) but for large ships only the outside (S.S.E.) is used.

Berthing: Inside – starboard to quay

Outside – starboard to quay after manoeuvring, or portside to the quay (according to the current).

or any other reason), the visiting party will proceed to the ship by motorboat as soon as she drops anchor. If the ship arrives after 2100 hrs. it is possible that Authorities will decide to visit the ship next morning at 0800 hrs.; however, the ship is authorised to operate normally and crew members are allowed to go ashore.

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Terminal Maritimo Almirante Barroso: Av. Guarda-Mor Lobo Vianna 1111, C.P. 187, Sao Sebastiao, Sao Paulo, CEP 11.600, Brazil. *Tel:* (0124) 522.711. *Telex:* 124756. *Cables:* Tebar – Petrobras. *FAX:* (0124) 522279. *Contact:* Jose Daniel Brossi, General Manager. Antonio Carlos Matos Da Silva, Marine Assessor.

Secretaria dos Transportes do Estado de Sao Paulo, Avenida Dr. Altino Arantes No. 410, Sao Sebastiao. *Tel:* 52-1524, 52-1338.

Capitania dos Portos, Avenida Dr. Altino Arantes No. 544, Sao Sebastiao, C.E.P. 11600-000. *Tel:* (0124) 52-1555, 52-1550. *FAX:* (0124) 522518. *Contact:* Captain Luiz Alberto Sousa Ferrao, Harbour Master.

AGENT: See "Santos".

SEPETIBA BAY, (Guaiba Island and Ilha Madeira): 22.56 S. 43.50 W. (See Plan)

See "General" before first port.

LOCATION: About 50 miles West of Rio de Janeiro, is the site of a bulk iron ore terminal located off the S.E. end of Ilha Guaiba about 7 miles due North of the bay entrance.

APPROACHES: *Access Channel:* The distance from the entrance at the bar to the port is 22 km. The Access Channel is dredged to 22.5 m. as far as the Manoeuvring Basin in front of the quay, where the depth is 12.2 m.

PILOTAGE: Compulsory for all ships entering the bay and berthing and unberthing at the ore facility. Pilots board in the vicinity of Lat. 23° 08′ 39″ S., Long. 44° 04′ 36″ W. A pilot ladder, boat rope, and gangway must be properly rigged with the landing platform of the gangway lowered to within 5 m. (16.5 ft.) of the water. Adequate lighting should be provided at night.

ARRIVAL INFORMATION: Vessels bound for Baia de Sepetiba should send an ETA to their Rio Agents, via Rio Radio, six days, 48 hours, and 24 hours prior to arrival. Any significant change in this ETA should be corrected as soon as possible but not less than 8 hours prior to arrival. Also see "VHF".

ANCHORAGE: In the vicinity of the Pilot boarding area. Ships should not proceed beyond this point unless a Pilot is aboard and instructions have been received from Sepetiba Marine Operations to proceed.

MAX. SIZE: *Ore:* Max. draft 21.98 m. Max. air draft 21.6 m. Max. beam 54 m.

HEALTH: Radio Pratique should be requested 72 hours prior to arrival by transmitting a quarantine message to the Port Health Authorities through the the ship's Agent. This message should contain the following information: name and nationality of vessel; last port of call; number of crew and passengers; general conditions of health on board. Also see "General" before first port.

VHF: Vessels are requested to contact Sepetiba Marine Operations directly when within VHF radio-telephone range. Channel 16 is the calling channel and 11, 12 and 13 are the working channels. Anchoring or berthing instructions should be requested 4 hours prior to arrival or when within VHF radio-telephone range.

TUGS: Tug assistance is compulsory for all manoeuvring in the vicinity of the pier and 3 powerful twin screw tugs (4,000 h.p.) are available for this purpose. All ships should be equipped with a wire cable tow line with a nylon pendant. Radio-telephone communication is maintained between the tugs and the Pilots on Channel 6.

BERTHING: Ore: Guaiba Island facilities consist of a deep-water pier located about 400 m. (1,312 ft.) South of the island. The South Berth has a depth of 24 m. (78.75 ft.) alongside and the North Berth has a depth of 19 m. (62 ft.). A mooring dolphin at the West end of the pier provides an overall mooring length of 470 m. (1,541 ft.) alongside the South Berth. Bollards are spaced along both pier faces and quick release hooks and capstans are fitted for breast, bow and stern lines.

Also see "Shipmaster's Report" – dated May 1980.

Coal: Madeira Island – Terminal completed and fully operational.

Operator: Companhia Docas do Rio de Janeiro.

Berth: All bulk cargoes are handled at the single pier, length 540 m., width 39.25 m. This pier permits the berthing of the following vessel arrangement options:

(1) 1×90,000 d.w.t. on the North side and 1×65,000 d.w.t. on the South side.

(2) 2×45,000 d.w.t. at North side and 2×65,000 d.w.t. on the South side.

Depth of water is 15.0 m. on South side and 12.0 m. on North side.

Cranes: 2×1,500 tonnes/hr. and 2×800 tonnes/hr. grab unloaders for coal and 1×300 tonnes/hr. sucker for alumina.

Conveyor Belt: 2×4,500 tonnes/hr. for coal and 1×300 tonnes/hr. for alumina.

Piling Equipment: 2 stackers × 4,500 tonnes/hr. each, 2 reclaimers × 3,000 tonnes/hr. each, 1 train loading silo × 2,000 tonnes/hr.

Centralised Control: Equipment is controlled by an automated main Control Centre which supervises operations.

Storage and Warehousing: 360,000 tonnes of material can be stored on a 2.5 million sq.m. storage yard.

Rear Stacking Area: Reserved for cargo (coal, ore, solid and liquid bulks) – 5,050,000 sq.m. Reserved for the administration, maintenance and services – 800,000 sq.m. Reserved for small industries associated with the port activities – 1,200,000 sq.m.

General: Sepetiba operational system enables coal handling capacity in the order of 5.4 million tonnes/year and 160,000 tonnes/year for alumina. Sepetiba is also prepared to handle coke, scrap iron, zinc as well as other solids.

Also see "Report" – dated August 1984.

BULK HANDLING FACILITIES: Ore: One travelling shiploader serves both berths and has a boom clearance of 22 m. (72 ft.) at shipside and max. outreach of 29.9 m. from fender line. Travel of loader 250 m. Ore is stacked in a storage area and is delivered to the shiploader by conveyor belt which is loaded by either of 2 stackers having an average capacity of about 7,000 tonnes per hour each.

Coal: See "Berthing" and "Reports".

MEDICAL: Nearest hospital at Itaguai.

DENSITY: 1025.

FRESH WATER: Available.

FUEL: Supply is planned.

AIRPORT: Santa Cruz.

TIME: GMT minus 3 hours.

HOLIDAYS: No port work on 1st May and 2nd November.

TELEPHONES: Connection possible on request.

GENERAL: *Charts:* Brazilian: 1601, 1602, 1603, 1608, 1610 and 1623. British: 1683 and 3970. American: H.O. 24155, 24160 and 24164.

SHIPMASTER'S REPORT: Ore Berth: May 1980.

Agents:

(a) Mineracoes Brasileiras Reunidas, (the operators and loaders). Av. Graca Aranha, 26, 17th Floor, Rio de Janeiro. Tel: 222-5171. Cables: "Brasilore".

(b) Buarque & Cia, (ship's Agent appointed by the Solmer contract), Rua de Rosario, 113, P.O. Box 1542, Rio de Janeiro. Telex: 2121300 BUCL. Cable: "Joarce". Tel: 221-2210, 221-9961.

Arrival Telegrams: According to the charter party, telegraph "Brasilore" and "Joarce" when leaving the previous port of call, and repeat 72 hours and 24 hours prior to arrival. During the last 24 hours, a change of one hour or more in ETA must be reported.

Radio clearance is requested through the intermediary of BUARQUE to whom it is necessary to quote in the 72 hours telegram the following: last port of call, number of crew members, passengers, state of health, date of Derat Certificate, name of Master.

BUARQUE replies to the first ETA telegram indicating the possibilities of direct entry or waiting. As MBR remains silent, it is advisable to ask BUARQUE to confirm the tonnage to be loaded and the quantity, more or less, of each type of ore involved. Olinda/PPO (Recife) and Rio/PPR stations are normally used. Good easy connections and no delay. Olinda is particularly well placed for communications with vessels approaching from the North.

If the crew members have no Brazilian pass (even if made out in another port) ask for a photographer.

General Information:

The Port of Sepetiba, opened to ore traffic in 1974, belongs to Mineracoes Brasileiras Reunidas (MBR). It is the maritime outlet for a group of mines located some 1,200 km. inland.

Situation: The terminal is located at the S.E. end of the island of Guaiba, in the East part of the Bay of Ilha Grande (Large Island), some 50 miles to the West of Rio de Janeiro.

The island is connected to the mainland by a railway bridge which brings the ore for shipment.

The terminal administrative office is on Sai beach, 5 miles to the N.E. (and 120 km. from Rio by road).

Local Time: GMT minus 3 hours.

Pollution: Deballasting at sea only. The Authorities make pressing recommendations to avoid pollution, warning that fines are heavy and not alterable.

Monetary Exchange: Only at the Agency can cruzeiros be obtained, but dollars are much sought after on land, even by small traders. Advantageous exchange rate.

Navigation:

Charts: Brazilian – 1601, 1602, 1603, 1608, 1610.
British – 3970, 1683, 3970
American – HO 24155, 24164, 24160.

Landfall: No difficulties, using the mountains which are around the entrance: Ilha Grande to the West (1,037 m.) and Ilha de Marambaia to the East (620 m.).

Access: The approach channel, is in two straight parts, and is 7.6 miles long. Buoys are not very visible either by day or by night, but perfectly detectable on radar.

The width of the channel varies from 280 m. up to Buoy No. 7; 580 m. at Buoy No. 9 (bend); 330 m. up to Buoy No. 13; and then widens out into a manoeuvring basin 1.8 miles long and 0.5 miles wide.

Draft: The channel has been dredged to 22.5 m., and the manoeuvring basin to 24.5 m. Vessels drawing 21.5 m. have used it on sailing. The Pilots recommend drafts forward of 30 ft. and aft of 36 ft. for the entry for a vessel of the tonnage 122,000 d.w.t.

Currents: Along the coast, coming from the East, weak and counterclockwise. Inside, tidal currents may reach 1.5 knots.

Tides: Twice a day but not equal every day. Tidal rise about 1 m.

Times of entry and sailing: Night and day.

Maximum vessel dimensions: Within the limit of the practicable draft of 21.5 m. No length restriction.

Pilotage: Compulsory. The Pilot boards between 1 and 2 miles from the channel entrance. On sailing, he leaves the vessel between Buoy No. 8 and No. 6.

The pilot vessel has a white hull, a red roof and shows an alternating red light by night. Max. speed 9 knots.

Call up on VHF Channel 16, work on Channel 13.

For embarkation, lower the accommodation ladder to 5 m. above the water, and the pilot ladder to 1 m. above the water. On leaving the vessel, he only uses the pilot's ladder (if the vessel is fully loaded).

Anchoring: When awaiting the Pilot, vessels can anchor in 24 m. of water, 2 miles to the South or S.S.W. of the channel entrance (unmarked wreck, at a depth of 19 m. 1.5 miles to the S.E. of the entrance).

Whilst waiting to berth, the Pilot anchors the vessel, either to the North of the second part of the channel between Guaiba Island and Mangaratiba Lagoon, in 15 m. to 18 m. of water. (Four vessels of 150,000 tons would be able to lie there with ease). Or, to the East of Guaiba Island, outside the manoeuvring basin, in 25 m. to 30 m. of water.

Holding is good in all these anchorages, but vessel exposed to the swell.

Tugs: Three tugs of 4,000 h.p. available (MBR 1, 2 and 3).

The tugs are taken at the entrance near Buoy No. 11. They are released on sailing, before Buoy No. 13.

On entry and sailing, 1 tug forward and 1 astern, each taking 2 lines from the vessel. The third comes alongside amidships and passes 2 lines to the vessel. Communication with the Pilot is by walkie-talkie.

Berths: The pier is 400 m. long and orientated 238°/058°. It is connected to the Island by a bridge approximately 300 m. long carrying the conveyor belt. Vessels can come alongside on the inside (N.N.W.) but for large ships only the outside (S.S.E.) is used.

Berthing: Inside – starboard to quay
Outside – starboard to quay after manoeuvring, or portside to the quay (according to the current).

Fenders: Inside – two thicknesses of large tyres. Outside – metal panels fitted on thick rubber supports and shock absorbers. When heaving off, it is recommended not to slide against these fenders so as to avoid damaging them.

Mooring lines: A strong swell is experienced at the quay, therefore good moorings are necessary. 4 lines at the bow, 2 to 4 amidships and 2 astern. Two launches assist in passing lines. There are windlasses on the quay. The wire lines are positioned afterwards.

Height of Quay: 5 to 7 m. above the water, dependent upon the state of the tide.

Gangway: This is only used after the vessel is fairly well loaded.

Handling:

Equipment: A single conveyor belt, movable through 360°, 22 m. above water level. Personnel, installation and equipment belong to MBR.

Advance Arrangements: Come alongside the quay with holds clean and open. Opening of hatches can be carried out during the approach manoeuvre. Inspection of tanks and slops takes place as soon as the vessel is alongside, and a gas-free certificate is issued.

Working hours: 24 hours.

Holidays: None.

Capacity: The gear can supply 7,000 t.p.h. In reality, the nett capacity, with stops deducted was 3,100 t.p.h., and more than 40 hours had to be worked, stops and weighing included, to ship 120,000 tons.

Weighing: As the weighbridge was not operating the only check therefore was reading the draft marks, fairly approximate as there was a swell, carried out by the Master and the draft surveyor (the latter issues the gas-free certificate). It appears that it is necessary to watch calculations closely, particularly as far as the incidence of sag on the deadweight (application on the MBR leaflets of the "Means of means" rule which is less favourable than the "two-thirds rule" generally applied elsewhere).

Formalities:

On arrival: The Agent comes on board with Customs, Health and Immigration. Whilst the photographer is working, and the inspector checks the holds, the following documents are handed over to the different authorities represented:

1 Manifest of Ballast.
9 Crew Lists.
2 Passenger Lists.
5 Stores Lists.
4 Individual Declarations.
1 Health Declaration.
4 Notices of Readiness.

Photographs for passes are brought back within 2 hours and the next morning where a night arrival is concerned. (May 1980 – done on the spot using a Polaroid).

Customs: Seals placed on alcohol and tobacco. No individual limitations.

On sailing the Agent delivers on board:

2 Gas-free Certificates
2 Visaed Notices of Readiness, ship's copy
2 Notices of Readiness, Agency copy
1 Sailing Pass
1 Embarkation Pass
2 Vessel Sailing Passes
1 Draft Survey Results
1 Weight Certificate per type of Ore Loaded
2 Cargo Manifests
2 Cargo Loading Statements
2 Cargo Distribution Plans.

Facilities:

Shore access: The nearest town is Mangaratiba (7,000 inhabitants). To reach it, show your pass at the gatekeeper's office on leaving the port, take a bus (a few minutes) to the landing stage at the foot of the bridge between the island and the mainland.

Take the launch (45 minutes) to Mangaratiba.

From there, another bus goes to Rio (the bus company is EVAL) which takes about 3 hours, leaving every 2 hours. The first bus is at 0800 hrs. Price 18 cruzeiros. Last departure from Rio at 1800 hrs. (Bus station at the corner of the port, at the end of Avenida Francisco Bicalho).

The Agent arranges the times of departure of the launches with vessels' officers.

Medical care: At Mangaratiba for urgent attention and minor treatment. More serious cases must be handled in Rio.

Repairs: Small repairs possible using local personnel. For repairs of some importance, it is necessary to call in Verolme at Angra dos Reis or a shipyard in Rio.

Stores: Some direct purchases possible in Mangaratiba. Limited choice. An order can be sent by telegram to the Agent who will make the necessary purchases in Rio, which will involve the cost of transport, and therefore high prices, particularly for small quantities.

Bunkers: None available.

Fresh Water: Available on the quay, but not drinkable. Output 60 t.p.h.

Telephones: Connection possible on request to the land network.

Lifeboat practice: After prior agreement of Port Captain.

SHIP'S OFFICER'S REPORT: August 1984. Coal Berth.

Anchorage: There are 3 main anchorages used by vessels awaiting berthing at Ilha de Madeira Terminal, Sepetiba Bay.

The first is the main waiting anchorage which serves the Pta. do Leme Oil Terminal, Ilha Guaiba Ore Terminal and Sepetiba Bay. This is situated in the vicinity of Lat. 23° 08.8′ S., Long. 44° 04.5′ W. as marked on Chart No. 1683. Pilots will board here.

The second anchorage is that which the Pilots prefer you to use as the waiting anchorage and is situated in the vicinity of Lat. 23° 03.7′ S., Long. 44° 03.0′ W. This area is also the preferred boarding station for the Pilot as vessels proceeding to Sepetiba Bay do not have the draft to require them to use the approach channel to Ilha Guaiba Ore Terminal.

The third anchorage area is the main waiting area for vessels bound for Ilha de Madeira Terminal and lies to the South of Ilha Jurubaiba, North of the main channel, as marked on Brazilian Chart No. 1623, from the vicinity of No. 4 Buoy to the vicinity of the corner to the North of No. 5 Buoy Northwards to the Latitude of 22° 58.0′ S. (Approx.).

Pilotage: Pilotage is provided by the Rio de Janeiro Pilotage Authority who should be given the usual long-range ETA's etc., "Sepetiba Pilot" should be called on VHF Channel 16/13 from about 4 hours before arrival off Pta. de Castelhanos (Lat. 23° 10.2′ S., Long. 44° 05.5′ W.) for instructions. Pilots will not move vessels in Sepetiba Bay after dark and, if there is a ship on the berth at Ilha de Madeira ready to sail they prefer to make one operation of it by sailing the outward bound vessel before taking in the arriving vessel. Should they require an arriving vessel to anchor they prefer it to use the second anchorage mentioned above so that they may leave the outward vessel and transfer to the inward ship around that area. Pilotage is compulsory for all ships using the deep water channel in Sepetiba Bay.

Tugs: There are three powerful twin-screw tugs which serve the ports in and around Sepetiba Bay. They are "MBR I", "MBR II" and "MBR III". They are apparently based at Itacurca. At Ilha de Madeira Terminal they tie up one on the bow, one on the stern and the third assisting as required amidships, using ship's ropes.

Berthing: Ilha de Madeira Terminal is situated on Ilha de Madeira (Lat. 22° 56.15′ S., Long. 43° 50.2′ W.) and consists of a single long jetty lying approx. 086°/266° T. with a connected dolphin each end. The Eastern dolphin is also connected to the shore by a bridge in the direction 357° T. (approx.) which carries the coal and Bauxite belts, service lines and the approach roadway.

The main part of the jetty is 610 m. (approx.) long and can berth two ships on the outside which is protected by large pneumatic rubber fenders. These berths are served by 4 discharging gantries and two belts for the discharge of coal. At present only two of the gantries are operational but work proceeds on the other two and they should be ready in the near future. Ships berth port side at this jetty. There is a berth on the inboard side of the jetty at the Eastern end which handles Bauxite. The rest of the inboard side has bollards at the usual intervals but has no machinery serving it at present.

The jetty was opened for use in February 1983 and development continues. Further development of the port is projected.

The present limiting draft for arrival is considered to be 37 ft. with a limiting draft alongside of 41 ft. Further dredging etc. is projected to improve the approaches.

Stevedores: Stevedoring appears to be under the control of: Servicos Maritimos e Portuarios Ltda., Matriz: Rua de Quitanda 191-5e andar, Rio de Janeiro – RJ. Tel: 253 8899 Geral. Telex. 21214915 SMP BR.

Repairs: All repair firms etc. are located in Rio de Janeiro, hence all major work must be done there. Minor work may be carried out in Sepetiba Bay. Divers, etc. would come from Rio if required.

Supplies: All fuel must be obtained at Rio de Janeiro. Fresh water is supposed to be available on the berth but the berth is most unwilling to supply and only then in very limited quantities. The available hydrant is well forward and the shore will provide only sufficient hose to reach the deck. This hose is in extremely poor condition.

Provisions are supplied by road from Rio and appear to be of good variety and quality. Bonded stores are available also.

Services: All services are supplied through or at Rio de Janeiro.

Communications: There is a good road to Rio de Janeiro and there is a rail link. The nearest airfield for international flights is at Rio de Janeiro.

AUTHORITY: Madeira Island – Cia. Docas do Rio de Janeiro, Porto de Sepetiba, Ilha da Madeira, Itaquai, 23.825.400 RJ Brazil. *Tel:* 55-21-688 1424. *Telex:* (021) 36338 CDRJ. *FAX:* 55-21-688 1287. *Contact:* Marco Aurelio Braga, Port Manager.

Guaiba Island – Mineracoes Brasileiras Reunidas S.A., Av. Graca Aranha 26, 17th Floor, Rio de Janeiro. *Tel:* 222-5171. *Cables:* "Brasilore".

Mineracoes Brasileiras Reunidas SA (MBR), Sepetiba Terminal de Minerios, Ilha de Guaiba, Mangaratiba, Rio de Janeiro State, Brazil. Tel: 021 789 1400, Telex: 21 21051, FAX: 021 789 1274.

SUAPE: 08.24 S. 34.57 W. (See Plan)

SHIPMASTER'S REPORT: June 1991.

Vessel: LPG Vessel, LOA 210 m.

Port: Suape is a relatively new port constructed in the late 1980's, mainly for petroleum products, LPG, containers and Roll-on/Roll-off vessels. It is situated approximately 50 km. South of Recife.

As such there are no British Admiralty Charts of the port, although the breakwater arm is shown on B.A. Chart No. 3978 as a correction. The Brazilian Hydrographic Office do publish a chart of the port, however, during our visit it was out of stock in Recife.

Communications: The vessel had good and early communications with the agent in Recife. At our request the agent forwarded details of the port, pilotage and anchorage, as well as information gleaned from Petrobras regarding the installation and Receiver's requirements.

Approach: See B.A. Chart No. 3978.

The plan was to approach the port from the N.E. on a course of 214° to pass Cabo St. Agostinho at a distance of 4 miles, then to alter course to 255° with Agostinho light bearing 285° by 4.5 miles to take us to the pilot boarding ground, 1.5 miles E.N.E. of the breakwater head.

Position fixing on the approach was easily achieved by radar, Ponta de Pedros headland, North of Recife, was positively identified at 30 miles and Olinde Lt. sighted at 24 miles. Fixing continued by radar down the coast past Recife. Cabo Agostinho was picked up at 24 miles range and the light was clearly seen at 18 miles.

Whilst passing Recife the vessel was called by Recife Pilot Station, on VHF Channel 16, requesting confirmation of ETA. Berthing at Suape is carried out by Recife pilots who travel down to the port by road then use the local pilot boat to board the ship.

The breakwater arm at Suape was easily identified at 12 miles on the radar and no problems existed in making our alteration of course to approach the port.

Our echo sounder confirmed the soundings on the chart.

Approximately 5 miles from the entrance we were able to contact the pilot on VHF Channel 16, shortly after which he left the port to rendezvous with us, 1.9 miles E.N.E. of the breakwater.

The pilot cutter is red hulled, approximately 10 m. in length and well found. It was able to come alongside in a moderate Easterly swell at a speed of 5 knots.

Once onboard the pilot discussed the intended berthing, in reasonable English, then continued into the port on a course of 255° at 6 knots, passing 4 cables North of the harbour arm.

Berthing: Once inside the harbour entrance, the course was rapidly altered to port, the reef, which forms the Western part of the port, being only 1,100 m. ahead as the vessel enters the harbour. When on a course of 203°, the engines were put full astern and the vessel stopped in the water to enable the tugs to make fast.

Three tugs (2 from Suape and 1 from Recife) were employed for berthing. "Mercurius", 1,200 s.h.p., made fast forward on the port bow with one ship's line. "Pegasus", 2,000 s.h.p., made fast aft through the centre lead with 2 ship's lines. "Zeus", (from Recife) 2,000 s.h.p., pushed on the port side amidships.

The vessel was then brought, using tugs and engines, towards the jetty to berth on the East side, starboard side alongside.

When the bow was approximately abeam of the Chicksan arms, the port anchor was dropped and the cable paid out as the vessel came alongside. The anchor is used to assist with the unmooring operation.

It soon became apparent that the vessel was longer than the extreme distance between the mooring bollards on the jetty and that the mooring arrangement to secure the ship would be somewhat unorthodox.

Despite it being a new port, the shore mooring facilities were not modern. They consisted of standard bollards, no quick release hooks and no winches to heave lines ashore. However, the fendering on the main platform of the jetty was good, comprising 4 large sprung fenders.

First lines were the spoolers to the furthest bollards fore and aft. Once these were ashore, the pilot competently brought the vessel alongside mainly using the tugs. Speed of approach to the jetty being controlled by paying out on the port anchor chain.

Mooring took a long time due to the mooring gang, comprising 4 men, having great difficulty in manually lifting our mooring wires onto the jetty. The problem was resolved by the ship heaving its own lines ashore, using messengers, led around the bollards and back to our winches.

Due to the size of the ship, head and stern lines had to be sent from our main deck and crossed with the springs, and breast lines led from the forecastle and poop (See "Plan").

The reason for the second from aft shore bollard not being used is that it was utilised by a product tanker on the opposite side of the jetty. This meant that 5 lines had to be placed on the aftermost bollard, causing handling problems.

Once secure, the vessel's accommodation ladder was lowered onto the jetty for access. There being no shore gangway and no place on which to land our D.O.T. gangway.

Formalities: Immediately the gangway was down, a large number of officials boarded (Customs, Immigration, Health, Agriculture, etc.). The official papers required, corresponded very closely to the list given in "Guide to Port Entry" under Brazil ("General").

Very little English was spoken by the officials, however, the agent's runner spoke excellent English and was extremely helpful in ensuring that all went smoothly.

No problems were experienced and after usual customs were observed, the officials left for the return journey to Recife.

The agents's runner then assisted the Chief Officer in his dealings with the officials from the Receivers (Petrobras), and the surveyors. All of whom spoke very little English.

No problems were experienced during these discussions and the computer generated Custody Transfer Report was readily accepted.

Once all the usual safety documents and check lists had been completed pipeline connection began.

No samples were taken by the shore personnel onboard prior to discharge, in-line sampling being conducted ashore during the discharge. It appeared that the receivers greatest concern was whether the cargo contained a smell additive, which is a legal requirement in Brazil.

Discharge: 6,500 tonnes of Butane were consigned to Petrobras at this port. Information received prior to arrival was that the cargo be discharged heated, at a minimum temperature of +5°C and at a minimum pressure of 8 bar.

At the berth there is one LPG Chicksan of 6 in. diameter with an 8 in. ASA 300 connection. This was coupled to the Booster Module discharge line, utilising our 6 in. to 8 in. 300 ASA reducer.

Discharge was planned to pump first to 30×52 tonne cylindrical shore tanks owned by Novogas, NOB and CIA. Once these were full the remainder was to be pumped to 3 spheres, each of 2,000 tonnes capacity, owned by Petrobras, situated at the termination of a 1.5 km.×10 in. shore line.

Pumping was from one ship tank utilising 2 pumps, each of 450 cu.m./hr. supplying 2 booster pumps in parallel and the booster salt water heater. Maximum pressure permitted on the shore system being 21 bar.

Once the temperatures and pressures had been stabalised the discharge proceeded very smoothly with no stoppages or delays. The average discharge rate achieved being 212 tonnes per hour at a back pressure of 14 bar.

Due to the many destinations of the cargo, rates fluctuated from 150 tonnes/hr. to 260 tonnes/hr. and pressures from 8 bar to 19 bar.

Communications with the terminal was via ship's VHF on Channel 9. However, this proved somewhat difficult until it was established that both parties were fluent in pigeon Spanish.

Petrobras representatives boarded to check rates, quantities, temperatures and pressures every 4 hours.

The two Caleb Brett surveyors, one from Recife and one from Santos, proved pleasant and helpful. Both lived ashore during discharge.

On completion of discharge, the Chicksan was drained back to the tank onboard and to the sea at the shore end.

Paperwork on completion, was finished within 75 minutes.

Sailing: It is normal practice at this port to order the pilot for 3 hours after completion of cargo. As the paperwork was completed quickly, this resulted in the vessel waiting for almost 2 hours before the pilot arrived.

Unmooring went very smoothly once sufficient labour was organised ashore to lift the mooring wires off the bollards. Two tugs were employed, one secured each end as for arrival.

When all lines were let go the tugs pulled the vessel astern off the jetty, assisted by heaving on the port anchor chain which was laid out on berthing.

Once clear of the berth the stern was pulled to starboard, towards the reef, and the bow swung to port to line up for departure from the harbour.

The pilot disembarked as the ship passed the breakwater head and course was set for Santos, avoiding the isolated rock, least depth 11.5 m., marked by a buoy, 3 cables East of the breakwater.

Other Points of Interest: LPG ships of greater than 35,000 tonnes displacement normally berth at the container jetty which is approximately 100 m. longer than the product jetty. A discharge line, contained within the jetty, and flexible hoses to the ship's manifold are used. This line was out of use on the vessel's visit. The fendering on the container jetty only comprises of truck tyres.

The depth on this berth is 15 m. at M.L.W. as opposed to 12.5 m. on the products jetty.

The prevailing winds at the port are S.E. throughout the year, however, on this occasion winds were N.E. Force 6 which caused a moderate swell to enter the harbour, causing minor ranging problems on the products jetty. This would not have been a problem had the vessel berthed at the container jetty with a proper mooring configuration.

The ship took no stores or provisions at Suape although we were visited by a ship chandlers representative from Recife. The Chandler, Exportadora Star Ltda., Rua Do Apolo, 43 Recife., telex: (38) 811352, purports to belong to ISSA and is also a representative for Unitor. The agent suggested that they are reasonable.

During our stay the agency was available during office hours direct on VHF Channel 13.

SHIPMASTER'S REPORT: May 1992.

Vessel: L.P.G. vessel. LOA 171 m.

Chart: Brazilian Chart No. 906.

Location: About 22 miles South of Recife. Development during 1987 and opened early in 1988 to handle mainly hydrocarbon products for the Pernambuco area.

Protected by breakwater constructed of rough rock which is radar conspicuous.

From the North, Recife is prominent and Cabo de S.Agostinho Lighthouse is conspicuous about 3 miles to the North of Suape Breakwater.

Cabeco Sitiba Bank about half mile to East of breakwater is marked by a buoy.

About 30 ships a month call at the port, of which half are foreign flag.

Pilot: Pilot comes from Recife. Berthing and unberthing possible throughout 24 hours. Minimum notice of 3 hours for arriving and departing is required. Order pilot through Agents.

When pilot is not on station, call Recife Pilot Station on Channel 16, working Channel 13.

Pilot boards from small red launch about 0.5 miles N.E. of breakwater and departs inside breakwater.

Pilotage is not particularly difficult.

Pilot launch remains at Suape.

We used the same pilot inward and outward, and he spoke good English.

Tugs: Two moderate powered tugs on station at Suape, and seem to be permanently manned. Ship's lines used. Both tugs were used inward and outward.

The tugs berth on the S.W. corner of the Hydrocarbon Jetty.

Anchorage: N.W. of breakwater head. Exposed as are all Brazilian East Coast Anchorages.

Small vessels can safely anchor inside breakwater.

Jetties: Two jetties available, one is used for petroleum products, to the East, and the other for dry cargo and containers (no cranes) to the West. Maximum draft is 9.0 m.

The dry cargo pier has a Ro/Ro facility on its Eastern base.

The petroleum jetty can take vessels up to 200 m. length, draft 12.0 m. maximum on the Eastern side and 11.0 m. on the Western side. Vessels can berth either side too, both sides of jetty, depending on their connection requirements.

Ship's amidships accommodation gangway can be landed on jetty, either side. The effective berthing flat face is 95 m. both sides. Fenders are good, rubber shock type. Moorings are fair. For maximum length ships, the leads will have little angle ahead and astern.

Moorings handled by pilot boat. We used 3,2,2 each end.

Both berths handle same products.

Some swell inside harbour and open to S.E. wind.

Pilot reported that weather rarely stops berthing/unberthing.

Cargo: Petroleum Jetty handles LPG at +5°C through 6 in. Chicksan and 4 in. Vapour Return Chicksan. Numerous storage tanks in different facilities about 1 mile away.

Bunker C heavy fuel for power stations handled through 12 in. Chicksan, aviation gasolene handled through 2×8 in. Chicksans and gas oil handled through 8 in. Chicksan (same Chicksan also handles gas alcohol outwards and for export).

Jetty also sends fresh water outwards to other Brazilian areas, through manifold just inshore of Chicksans, through hoses.

LPG surveys are long and tedious, take about 2 to 3 hours inwards and outwards with many surveyors from the different receivers. Use 20°C with own SG. Pumping rate for LPG about 250 t.p.h. at 10 to 12 bar back pressure. Frequent stops due to full storage tanks.

Terminal representative in control cabin on North end of jetty. Communication not very good. Difficult to find out pumping requirements.

General: Fresh water: Through meter for both berths on jetty. Ship's hoses used. Good rate.

Agent: Difficult to contact other than through local Radio Station (ALRS), or if you have Brazilian coins for pay phone.

Telephone: Public pay phone at base of jetty near gate. It is possible to dial direct (UK Operator 0008044). The line was clear.

Stores: Available from several ship chandlers in Recife. We used Adriatico, who were fair. If payment is U.S. Dollars cash, Brazilian produce is good value, especially meat. Nearest that stores truck is allowed is about 200 m. from ship's side. Chandlers provide some labour, but still awkward.

Repairs: We had compressor shaft repaired with stainless steel and new bearings by Metalurgica Industrial Recife. A good job was done within 24 hours at reasonable price for U.S. Dollars (cash). Through invoicing, it would have cost 30% more.

Authorities: Ship came coastwise from Fortaleza, so had 'Riding' papers. Even so, Immigration, Customs and Harbour Master boarded. In addition to coastwise papers, they required:

6 copies Crew List.
1 copy Personal Effects List.
1 copy Stores List.

Harbour Master sighted SISCONTRAM report messages and all ships papers. He also complained about Brazilian flag being wrapped around halyard.

Shore Leave: No passes issued. No restrictions. Port is a long way from anywhere, and it is difficult to get a taxi.

TRAMANDAI (Rio Grande do Sul): 29.59 S. 50.08 W.

(See Plan)

LOCATION: *Access to the Terminal:* Tramandai SPM Terminal (DTSUL/GERIG) is located 6 km. from the tourist seaside resort Tramandai, which is 113 km. from Porto Alegre, capital of the state of Rio Grande do Sul. The road is good. Airport is available for small aircraft only (35 minutes by air cabs from Porto Alegre to Osorio).

Buoy Positions: The Buoys (SBMs) are positioned 1.9 miles and 3.7 miles from the shore, and their geographical co-ordinates are:

Buoy 1 (West): Lat. 30° 00′ 40″ S., Long. 50° 05′ 42″ W.
Buoy 2 (East): Lat. 30° 01′ 52″ S., Long. 50° 04′ 36″ W.

IMPORTANT FEATURES:

1. The Terminal consists of 2 berths (Single Point Moorings) designed for unloading crude oil and/or naphtha, in order to supply Alberto Pasqualini Refinery (REFAP), located at Canoas, near Porto Alegre, in the state capital.

   Unloading of vessels is effected by 2 submarine pipelines, whose total lengths and diameters are:

   Buoy 1 (West): 3.8 km. – 2 lines of 28 in.
   Buoy 2 (East): 6.3 km. – 2 lines of 34 in.
2. Mooring Masters moor, unmoor and supervise hose lifting, connecting and the movements of all craft in the vicinity of the SPMs.
3. Ship's windlass (warping heads, brakes, wildcats, etc.) must be in perfect operational condition, so that ship's haul-in line/messenger can be heaved.
4. Maximum permitted draft for the Terminal is 16.0 m. at Buoy 1 and 19.0 m. at Buoy 2, in order to ensure a safe U.K.C., even under extreme operating sea conditions.
5. Amidships, derrick or crane effective capacity must be not less than 5 tonnes, so that hose can be hoisted and connected.
6. Minimum free distances between forward roller/fairlead sheaves must be 0.28 m., in order to allow the pass of the triangular plate and chafing chain.
7. The distance from bow to centre manifold must not be larger than 140 m. for mooring to Buoy 1 (West), or 180 m. for mooring to Buoy 2 (East).
8. Ship's manifold should be equipped with flanges ANSI B 16.5 150 p.s.i.
9. Any emergency signal should also be immediately transmitted by radio on VHF Channel 16 or on 2182 kHz (AM or SSB).

Notes:

(a) Non-compliance of just one of the above stated conditions (Items 3, 4, 5, 6 or 7) could result in rejection of the ship as being unsuitable for the SPMs in Tramandai.

(b) SPM Terminal is an offshore Single Point Mooring for tankers, connected to shore by a submarine pipeline.

DOCUMENTS:

Health: The following documents have to be submitted to the boarding Health Officials:

1 copy Vaccination List.
1 copy Certificate of Derat Exemption.
1 copy Maritime Health Declaration.
1 copy List of Drugs and Narcotics.
1 copy Passengers in Transit List.
1 copy Passenger List.

Immigration and Maritime Police: The following documents have to be submitted to the boarding Maritime Police Officials:

3 copies Crew List.
1 copy General List.
3 copies Passenger List.
3 copies Passengers in Transit List.

Customs: The following documents have to be submitted to the boarding Customs Officials:

1 copy Crew List.
3 copies Spare Parts List.
3 copies Stores List.
3 copies Provisions List.
1 copy Cargo Manifest.
1 copy Bills of Lading.
2 copies Passenger List.
2 copies Passengers in Transit List.
3 copies Crew Personal Effects List.
3 copies Passengers Personal Effects List.

NOTE: Supplies, stores, cigarettes, cigars, tobacco, alcoholic beverages, arms, ammunitions, souvenirs, playing cards, drugs and narcotics, medicines (not in use), etc., must be kept under lock and key. The doors of the storage rooms will be sealed by the Customs Officials, and the seal must be kept unbroken throughout the vessel's stay in port.

Any goods or personal effects omitted from the lists may be confiscated.

Extracts of Sea Protest drawn out from the Log Book must be submitted to the boarding Customs Officials, in case of accidents which have caused damage or loss of the cargo or part of it.

Ship's Agent: The ship's Agent will need the following documents:

3 copies Passenger List.
3 copies Passengers in Transit List.
3 copies Crew List.

The Agent will take care of necessary steps in order to grant the Disembarkation Cards.

Leaving Clearance: Masters must appoint their ship's Agent at Porto Alegre and have their International Safety Certificates in force. It is also necessary for vessels Leaving Clearance:

Leaving Permit from Customs.
Leaving Permit from the Captain of the Port.
Leaving Permit from the Maritime Police.
Leaving Permit from Brazil Mail (Passe da ECT).

Notes:

1. The Customs flag (blue with a white star) must be flown from the vessel's mast or yard upon the visit throughout the vessel's stay in port.
2. Special licence from the Captain of the Port must be granted for passengers bound for foreign countries. Therefore their names must be given and their Passports delivered to Agents at least 48 hours before application for the vessel's Leaving Permit.
3. The number of disembarking passengers must be radioed to Agents at least 24 hours before the vessel's expected time of arrival.

PILOTAGE:

(a) There are no Pilots services available at Tramandai.

(b) Pilotage is not compulsory in the area of the SPM, either when making for it, mooring at it or clearing the SPM.

DTSUL/GERIG provides a duly trained Mooring Master to assist Masters of vessels operating at the SPM. His services are presently rendered without charge.

Upon arriving at one of the anchorage sites appointed by the Mooring Master, the Master of the vessel starts being duly guided by the Mooring Master.

For approaching manoeuvres, and after mooring to the SBM, the Master of the vessel will be assisted by the Mooring Master who boarded the vessel in the proper site and will help the Master of the vessel as far as the operational activities in the area are concerned, such as mooring, hose connection, discharge, hose disconnection and unmooring, as well as control of small craft that render assistance to the vessel.

It is the responsibility of the Master of the vessel to notify the Mooring Master of any special conditions, difficulties or peculiarities of the vessel, such as defective navigational equipment, mooring lines, tackle gear, helm, engine or boiler deficiencies or lack of necessary equipment which might impose hazards in connection with handling, mooring, unmooring and actually operating the vessel.

The Mooring Master must immediately be advised about any acts or facts which may jeopardise the safety of the vessel or the system, as well as operational events which may possibly alter the existing conditions.

The vessel must be moored to the entire satisfaction of both the Master and the Mooring Master.

The Mooring Master will remain on board the vessel throughout the vessel's stay at the SPM and will notify the Terminal Superintendent about any operational failures; and the vessel may be ordered off the SPM and refuse to be accepted in future, unless corrective action by the ship is immediately taken.

The Mooring Master will notify the Master of the vessel, in writing, about disregard of the operational requirements established upon arrival of the ship.

Mooring Master's Station and Launch Pier: The Mooring Master's station and the Launch Pier are located on the left edge of the Tramandai River – PETROBRAS concessionary area – 400 m. up from the bar's entrance.

The bar is shallow and narrow; only small, powerful craft handled by an experienced crew are able to enter the mouth of the river safely. No outer breakwater exists to serve as an immediate refuge harbour for small craft in heavy weather (seas).

The general lay-out of the Terminal is shown on Brazilian Navy Hydrographic Office Chart No. DHN 2010.

APPROACHES:

Evolution Basin: It extends to the East of the buoys in the open sea. Water depths range from 20 m. – 25 m. in the area of the SPMs. Isobatic lines run parallel to the coast.

50 m., at about 20 miles.
25 m., at about 5 miles and
20 m., at about 2 miles from shore.

Note: Manoeuvring within the Evolution Basin is safe, even at night-time.

Charts and Publications:

(a) Brazilian Charts: 2.000 and 2.010 (Brazilian Navy Hydrographic Office).

(b) Foreign Charts: No. 24.110 of the U.S. NOO (Old No. 2.495) and No. 3969 of the B.A. (UK).

(c) Brazilian HO Publications: Sailing Directions DH 1-8.
List of Lights DH 2-11.
Radio Aids DH 8-8.

Landing Approaches: There are 3 conspicuous water towers: Tourist, Agrimer and Tramandai. There is also a small radar and meteorological watch steel tower, near the pier positioned at Lat. 29° 58′ 32″ S., Long. 50° 07′ 18″ W.

Navigational Aids:

(a) South of Tramandai there is a light – International No. G 0607,4.

Position:	Lat. 30° 00′ 27″ S., Long. 50° 08′ 04″ W.
Characteristics:	Gr. Fl. (3) W. 12 sec.
Height of Light:	25 m.
Range:	15 miles.
Description:	Cylindrical brick tower painted in white and black squares – Radar reflectors are also provided.
Reference:	List of Lights (Brazilian Navy HO publication DH 2 – Lista de Farois).

(b) Radio Beacon:

Signal letters:	FB (Fox Bravo)
Frequency:	300 kHz.
Range:	300 miles.
Position:	Lat. 30° 00′ 34″ S., Long. 50° 08′ 08″ W.

(c) SPMs Lights:

Characteristics:	Buoy 1 – SBM:	1 period 3 sec. 1 flash 0.3 sec. 1 eclipse 2.7 sec.
	Buoy 2 – SBM:	1 period 3 sec. 1 flash 0.3 sec. 1 eclipse 2.7 sec.

(d) Conspicuous Landmarks:
3 water towers (Tourist, Agrimer and Tramandai) and one watch tower.

ANCHORAGE:

(a) The advisable anchorage site is 2 miles N.E. of the Buoy 2 (East).
Geographical position: Lat. 29° 59′ 39″ S., Long. 50° 03′ 34″ W.
Depth: 21 m.
Seabed: Fine sand and mud.

(b) Mooring Master will board arriving tankers in this area.

(c) Due to the peculiar conditions of the Terminal, mooring should be undertaken only at daylight.

(d) Sometimes the leaving of launches seawards depends on the height of tide and the strength of the waves upon the shore. Thus, tankers will have to wait for favourable weather conditions so that mooring may safely be started.

Important: Under no circumstances are tankers to drop anchor in the stretch of the area between the buoy and the shore, due to the existence of submarine pipelines.

MAX. SIZE: The SBM system is suitable for following tanker's sizes and drafts:

Buoy 1 (West): Designed for 200,000 d.w.t. tankers, maximum draft 16.0 m. (52 ft.).

Buoy 2 (East): Designed for 200,000 d.w.t. tankers, maximum draft 19.0 m. (62 ft.).

NOTE: The size of the vessel is limited by the structural resistance of the buoys. However, Tramandai local depths are ultimately the actual limitation.

HEALTH: Display of quarantine signal "Quebec" flag on approach to Tramandai must be maintained until Free Pratique is granted. The national Brazilian flag should remain hoisted throughout vessel's stay in the Terminal.

Also see "Documents".

Free Pratique: Vessels bound for DTSUL/GERIG, when entering the SPM or anchorage area, are inspected by Health, Customs and Maritime Police Officials.

Ship's Agent must apply beforehand for these visits.

Special visits may sometimes be granted at DTSUL/GERIG ground facilities.

Any and every document issued or otherwise related to ship's clearance at the last port of call is required for immediate inspection by the boarding Officials.

RADIO: *Pre-Arrival Radio Procedures:* Vessels bound for Tramandai should advise their ETA 48 hours prior to arrival to their Agent (through "PPR" Rio Radio). In turn that station will send messages to the Terminal. Confirmation or change of ETA should be cabled 24 hours before arrival. Vessels may also contact DTSUL/GERIG radio telephony station, either in AM or SSB on the following channels and frequencies:

VHF conventional frequencies: Channels 11, 13, 14 and 16 on 156.55/165.65/165.70/156.80 MHz respectively.

SSB frequencies: 2,182/2,815/4,383.38/8,770.8 and 2,647/ 4,078.8/8,120.8 kHz for listening.

Note: All ETAs should indicate whether it is Local Time or GMT.

VHF: See "Radio".

TUGS: *Launches:* Mooring, unmooring and connection operations are assisted by the Terminal's launches. While rendering such assistance the boats act under orders of the Mooring Master. Usually 2 service boats are at his disposition. Besides operational assistance, they undertake transportation of Mooring Masters, personnel, Agents, ship chandlers and Port Authorities.

BERTHING: *Buoy (SPM):* Both SBMs are equipped with lights and radar reflectors.

Mooring System: The mooring system consists of:

(a) Two berths (single point mooring: sea buoy with turntable).

(b) Two nylon floating hawsers for each buoy for bow mooring, which are permanently attached to the buoys.
Each 16 in. and 53 m. long hawser (braided or twisted strings 3×3).
This set is kept from sinking by the sustaining buoy.

(c) Two main floating unloading hoses 16 in. for dirty petroleum products and 12 in. for clear petroleum products at each buoy.

Average Operations Times:

(a) Approaching the SPM: 1 hour.
(b) Placing mooring and connection equipment aboard ship: 20 minutes.
(c) Mooring: 20 minutes.
(d) Hose lifting: 5 minutes.
(e) Hose connecting: 90 minutes.
(f) Hose disconnecting: 60 minutes.
(g) Unmooring: 5 minutes.
(h) Removal of personnel: 10 minutes.
(i) Ballast of the vessel is performed during unloading.

Mooring Turn (Arrival): Arrival time is considered to be the instant the vessel reaches the anchorage area or the time the Mooring Master boards the vessel, whichever occurs first. However, Notice of Readiness will not be considered as the time of arrival unless the vessel is in all respects ready to discharge. In the event berthing is delayed by weather conditions, tankers will be unloaded in turn. If however, the weather is so bad that the port is closed and vessels awaiting discharge have to go out to sea, GERIG may discharge another vessel bound for the Terminal if it arrives before the return of the delayed vessel. More rarely, the Terminal Superintendent may grant priority to a particular vessel out of turn, in special circumstances only. Exceptionally, and at the discretion of the Terminal Superintendent, two tankers will discharge at the same time. Occasionally, on account of weather or operational conveniences, tankers are diverted to other ports either fully or partially loaded. These orders usually come from Charterers or Agents.

The Terminal only conveys these instructions.

Mooring: The Mooring Master will advise on the method of securing the ship. Tankers are usually moored by 2 bow nylon hawsers with 16 in. × 53 m. length and 2 chafing chains which are permanently fastened to the buoy's turntable.

Vessel's haul-in/messengers nylon lines are then shackled, one at a time, to the pick-up wires of the chafing chains by the launch crew and hove in (through the vessel's windlass warping bollard) until the length of the chafing chains are brought over the vessel's roller chocks/fairleads.

Eventually, ship's engine will help the lead-in ropes (vessel's messenger) in coming up to the SPM.

The following items must be observed:

(a) Anchors must be well at home and secured with stoppers and brakes.

(b) Tankers must have steam on deck and crew ready at stations (6 men on the forecastle head, at least).

For pulling the ship near the SPM, 2 good eye-spliced (3 in. at least) nylon haul-in lines must be ready, at each side, on the forecastle head, to be given to the launch which in turn will shackle them to the hawser's pick-up wires (marked by small spar buoys).

On the near approach to the SPM and after the vessel's haul-in line is shackled to the pick-up wire, that line will be heaved aboard.

When the chafing chain is brought over the vessel's roller chock fairlead (the triangular plate being on the forecastle deck), this plate will be secured, by means of a 2 in. joining shackle, to a set of chain stoppers with Senhouse slip which, by that time, must have been tied to the vessel's bitts through a wire strop. After the joining shackle is properly attached, the weight of the vessel can be fully taken on chain stopper/Senhouse slip/wire strop set by slacking off the haul-in line around the warping bollard of windlass.

Note: As a member of the SPM FORUM, PETROBRAS has been attending to the meeting of improving and standardising gear, mooring arrangements, self-mooring, etc. In future time, when fitted, Smit's mooring/towing bracket will be utilised.

Unmooring: The Mooring Master will convey a message to the Launch Station stating the estimated time for the completion of discharge and asking the launches to unmoor the vessel.

Then, hose disconnecting is undertaken aboard ship.

For unmooring, the vessel must wait for the arrival of the launch that will leave her station as long as weather conditions permit, and if there is enough light, so that the ship can safely unmoor.

After unmooring takes place, the launch comes alongside ship so that all material and personnel (Terminal and Agent's representatives, Port Officials) can be transferred.

The vessel is then ready to leave the Terminal.

Remarks: Whenever the previously established limits (wind and wave) are reached, the vessel will be instructed to interrupt pumping cargo and let go lines as soon as possible, during all the time the vessel is moored to the SPM she must be ready to clear berth under her own power immediately (stand-by).

LOADING/UNLOADING: *Floating and Submarine Hoses:* Two lines of floating hoses for discharge provide the oil flow connection between the tanker and each SPM. Also 2 lines of submarine hoses connect the bottom of the buoy to the pipeline ending manifold. The outer floating line of Buoy 1 consists of 16 sections of 16 in. hose and 5 sections of 12 in. hose. Its inner floating line consists of 15 sections of 20 in. hose and 5 sections of 12 in. hose.

The outer floating line of the Buoy 2 consists of 21 sections of 20 in. hose, and its inner line consists of 20 sections of 20 in. hose and 5 sections of 16 in. hose.

The total length at Buoy 1 is 220 m. and at Buoy 2 is 240 m. Both lines can support a working pressure of 7 kg./sq.cm.

Pumping flow rates for oil viscosity 60 SSU are 5,500 cu.m./hr. (34,500 bbl./hr.) at Buoy 1 with 2×28 in. pipelines and 2×12 in. floating lines. At Buoy 2, pumping flow rates are of 7,660 cu.m./hr. (48,100 bbl./hr.), with 2×16 in. floating lines and 2×34 in. pipelines.

Hose Connection: The Mooring Master will guide the Terminal's workmen in lifting, connecting and lowering the hoses.

Immediately after the vessel is securely moored, the 16 in. and 12 in. floating hoses (derived from the main 20 in. hose by means of a "Y" piece) must be individually lifted to the rail by the ship's gear (5 ton minimum). Sundry hose securing and connecting equipment (strops, gaskets, nuts, bolts, wrenches, etc.) will be supplied by the Terminal and put aboard the ship just after arrival.

Hoses will be lifted by ship's derrick preferably on the port side.

Note: When wind force reaches about 8 on the Beaufort Scale, and waves are 3.5 m. high, emergency disconnecting operation will take place, even at night-time.

Unloading: At the beginning of and during the unloading operation, tankers are requested to observe the following:

(a) Pumping must not be started without permission of the Mooring Master.

(b) The maximum allowable pressure is 7 kg./sq.cm.

(c) While the vessel is moored, the vertical angle formed by the nylon hawsers and the sea level should not exceed 30°, for safety of the SBM's turntable. When due either to excessive pitching or for being trimmed too much by the stern (uneven keel condition) because of oil that has been discharged from the fore tanks, pumping of ballast must be concentrated in these tanks, even if interruption of unloading becomes mandatory. So the Mooring Master may require cargo to be discharged, in certain stages, either from aft or for'd compartments.

(d) As a rule, when unloading is over, the ship should have on board at least 40% of her total d.w.t. tonnage.

(e) A lookout by a responsible crewman on the forecastle head and at the manifold area to keep watch on the mooring and connections.

(f) Besides the Mooring Master himself, some Terminal workmen stay aboard ship during the whole operation time. Therefore, rooms and meals for one officer and 6 crewmen should be supplied.

(g) During inclement weather conditions, unloading must be stopped according to Mooring Master.

(h) Upon completion of discharge, the Mooring Master will require the ship to pump sea water through the submarine pipelines to displace the remaining oil.

BALLAST: No slop facilities are available for dirty ballast. Brazilian laws are very strict with regard to the pollution of coastal waters. Vessels are not allowed to discharge dirty ballast into the water. Heavy fines are imposed for violations.

Tramandai is the largest Rio Grande do Sul seaside resort and any pollution of the sea in this area will cause damage to the beaches. Hence, no dirty ballast or any oily residues must be pumped overboard within a range of over 50 miles, if no safer alternative exists.

MEDICAL: Medical treatment and/or hospitalisation, if required, are provided at Tramandai or Osorio private hospitals. Serious illness will usually be treated in Porto Alegre. Dentists are also available in Tramandai. For emergency cases (injury, etc.) GERIG first medical aid may be requested by the Master. As usual, Agent will make such arrangements.

FUEL: Not available.

FRESH WATER: Not available.

CONSULS: No consular representatives are reported to exist in the area; however, there are consulates of most maritime nations in Porto Alegre.

SURVEYORS: There are no Classification Societies surveyors in Tramandai.

Petroleum Inspectors: Petroleum inspectors are not available in Tramandai. Nevertheless, if arranged in sufficient time, they may be requested from the foregoing addresses:

SGS (Rio Grande), Av. Atalaia 1822, Rio Grande – RS, CEP 96203-000. Tel: (0532) 302200. Fax: (0532) 302236.

SGS (Poa), Rua Largo Visconde do Cairu, 12-14 andar, Porto Alegre – RS, CEP 90030-110. Tel: 227-5711. Fax: 226-0033.

Caleb Brett (Pelotas), Av. Duque de Caxias 726, Pelotas – RS, CEP 96030-002. Tel: (0532) 71-2098.

CUSTOMS REQUIREMENTS: Brazilian laws are strict with regard to smuggling and Masters are requested to instruct their crews not to retain cigarettes in carton lots, cigars, tobacco, alcoholic drinks, drugs, souvenirs, etc. These should be collected prior to arrival, listed with the items in the slop chest and placed in the custody of the Master for deposit in the chest or closet which will then be sealed for the duration of the vessel's stay at the mooring.

By no means will any commercial transactions be tolerated, be it either among terminal employees, crew members or anyone else.

TIME: GMT minus 3 hours. GMT minus 2 hours in Summer.

SHORE LEAVE: Not allowed.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

GENERAL:

Provisions and Stores: Provisions and stores are ordered through the ship's Agent or direct through ship chandlers; the majority of items come from Porto Alegre, but some of them may be obtained in Tramandai or Osorio.

Lubricating Oil: Supplies of lub oil are expensive and available in emergencies and in very small quantities only.

Purchase and delivery are difficult. Ship's Agent should be advised by radio as soon as possible.

Cash Advance: No cash advances are effected by the Terminal. As a rule, the Agent will be able to handle this service when previously requested by radio.

Mail: There is a post office in Tramandai. Letters should be sent care of the ship's Agent. In turn, he will deliver the letters to the ship upon arrival.

Radio and Radar Repairs: Minor radar and radio repairs may be undertaken in Tramandai, provided that prior notice has been given to the ship's Agent.

Laundry: Laundry facilities are available in Tramandai.

Bonded Stores: Cigarettes, beverages or other goods are not available in Tramandai.

Charts and Sailing Directions: No supply of charts, sailing directions or other publications are available in Tramandai. However, if orderd in advance to Agent, they may be obtained through him.

Visitors: Visitors to ships are prohibited, except for Company's employees, Port Officials, Surveyors, etc., whose duties require their presence on board.

Watches: An efficient watch must be maintained on deck and in the engine room; a sufficient and qualified number of men must be able to move the moored vessel in emergency situations.

Seamen Left Ashore: In case of seamen left ashore for hospitalisation, repatriation or other reason, all expenses are for the ship's account.

General Information: Although vessels can safely discharge and disconnect hoses by night, so far the same does apply to mooring and connecting operations which may only be commenced at daylight. Nevertheless, exceptions may be made at the discretion of the Terminal Superintendent.

Constant Readiness: Since moorings are in open roadstead, vessel's engines and gear must be ready with full power for immediate use through the period the vessel is moored and the ship must be able to clear the mooring immediately on the advice of the Mooring Master or Superintendent of the Terminal.

Whenever necessary, vessels may use their own power to prevent riding upon the SBM.

SHIPMASTER'S REPORT: July 1994.
Berth: Petrobras/DT Sul – SBM.
Cargo: Discharging naphtha.
Connection: Hoses.
General: SBM very open to weather, and vessel may be delayed in berthing or may have to vacate berth (2 SBM's operational).

AUTHORITY: Petrobras/Detran/Dicop, Av. Republica do Chile 65, Sala 1255, Centro, Rio de Janeiro, R.J., CEP 20035-900, Brazil. *Tel:* (021) 534-1068. *FAX:* (021) 534-2404. *Contact:* Elizio Araujo Neto, Chief of Coordination, Planning and Operations.

Terminal: Petroleo Brasileiro, S.A. – PETROBRAS, Caixa Postal 19, 95590 Tramandai-RS, Brazil. *Tel:* (051) 661 1942, 661 1342, 661 1088. (0512) 212888, 212846. *Telex:* Petr 052 3003. *FAX:* (051) 661 1088, 661 1342 (ext. 218). *Contact:* Superintendent.

TUBARAO (Including Praia Mole): 20.17 S. 40.15 W. (See Plan)

APPROACHES: The access channel is 280 m. wide and dredged to 22.5 m. and runs in a 345°-165° direction. The beginning of the channel is marked by a red light buoy in position Lat. 20° 19′ 36″ S., Long. 40° 14′ 22.5″ W. and a white light buoy in position Lat. 20° 19′ 41.5″ S., Long. 40° 14′ 34.5″ W. (See NHD chart 1401).

Tides: Tidal variation is small, on average, there being 2 high tides and 2 low tides each day. The coastal current generally runs to the South with an average speed of 1 km./hour. The current is less constant in May and June. The maximum size waves, are 1.5 m. with wind coming from N.E. and 2.5 m. with S.W. wind.

Manoeuvring Area: The manoeuvring area for berthing and unberthing has a width of 150 m. along the whole length of the quay, the manoeuvring basin has a diameter of 500 m. and depth of 18.0 m. Anchoring is prohibited in the access channel and the manoeuvring area except with prior permission of the Port Captain.

Access Channel: Vessels destined for the Coal Terminal, located on the Northern edge of the access channel to the port of Tubarao, use this channel as far as slightly ahead of Buoy No. 5 (LF. ev. 3 secs.) turning to the N.E. to enter the terminal manoeuvring basin.

PILOTAGE: Pilotage is compulsory between the anchorage and the berth. Request for the Pilot is made by port operators (CVRD) 4 hours in advance (minimum). The vessel should indicate the time of arrival of the vessel at the entrance and from which point pilotage is required. Pilot may be contacted on the following VHF Channels: 16 for constant listening and 10, 12 and 14 for conversations.

Compulsory pilotage area is from the anchorage area where the Pilot embarks, the access channel, the manoeuvring basin and the existing piers in the port. After a Pilot receives advice of vessels arrival it takes 50 minutes for the Pilot to embark, this is done by a launch of the Vitoria Pilot Service. No difficulties are encountered when embarking except when the sea is very rough and there are strong winds.

Pilotage Area: The inner maritime area is limited by the circumference of 2.5 miles radius, centered on the Tubarao South Light in the sector included between 340° and the island Boi, as far as the berth.

ANCHORAGE: The anchorage area for vessels awaiting berths is Lat. 20° 19.3′ S., Long. 40° 15.1′ W. Vessels in quarantine must anchor in an optional area indicated on chart 1401.

MAX. SIZE: See "Berthing" and "Tankers".

HEALTH: Free Pratique may be obtained by radio, the message being sent to the ship's Agent by radio via PPO (Olinda), PPJ (Juncao), PPR (Rio) or PPL (Belem), at least 72 hours prior to the vessels arrival. Declaration of Health must be prepared and typed in order that it may be delivered to the doctor when he comes on board.

RADIO/VHF: Vitoria Radio Station on VHF Channels 16, 12 and 13.

TUGS: Two tugs of at least 1,500 h.p. are used when proceeding from the entrance to the manoeuvring area off the berth. When berthing 4 tugs and 1 launch assist.

Name	*H.P.*	*Bollard Pull*
Helio Ferrzaz	3,000	31.7
Tubarao	1,900	29
Itabira	1,530	16
Carajas	2,540	39.4

Name	*H.P.*	*Bollard Pull*
Trombetas	2,540	37.6
B. Horizonte	1,680	20
Guaiba	1,680	21.5
Titan	2,170	36.6
Arcturus	2,160	25
Servemar 10	1,070	7.5
Jamie	600	6
Affonso	1,640	16.4

BERTHING: Should a vessel be departing at the same time as another vessel is entering, the vessel which is leaving has priority and the vessel which is waiting to enter is to wait outside the entrance channel. Vessels are not permitted to pass each other in the channel or the manoeuvring basin. Should the weather conditions be poor, visibility restricted or too dark for the vessel to berth or unberth the decision to manoeuvre will be taken by the Pilot who may decide to change the operations to a more convenient time.

Vale Do Rio Doce Co.:

Pier 1: Length 390 m. usable berthing length 350 m., depth on North Side and on South Side 16.0 m. Berthing is possible on both sides. Ship Loaders No. 1 and 2 can load vessels on both sides of the pier.

Ship Loader No. 1: Max. height of hatch coaming above sea level 12.50 m. Max. outreach of loading boom 24 m. Nominal capacity of loader 6,000 t.p.h. Vessels max. LOA 330 m. Max. sailing draft 15.20 m. plus height of tide (average 1.3 m.).

Ship Loader No. 2 (Seaward side of pier): Max. height of hatch coaming above sea level 17 m. Max. outreach of loading boom 33.50 m. Nominal capacity of loader 8,000 t.p.h. Max. length 330 m. Max. sailing draft 15.20 m. plus height of tide (average 1.3 m.).

Pier 2: Max. LOA permissible 350 m., depth alongside 24 m. There are 4 dolphins each with 2 hooks and 4 dolphins each with 3 hooks.

Storage Area: Old area 2 million tons, new area 4 million tons, factory area 1.7 million tons.

This is a new pier now completed parallel and inshore of the existing pier for vessels of 250,000 d.w.t. Max. sailing draft 20.0 m. plus tide (average 1.3 m.). Vessels berth at seaward side only to avoid ranging. 2 shiploaders, swivelling (20 m. airdraft). Load rate 12/16,000 t.p.h. No dirty ballast facilities. Heavy fines for pollution.

Should Pilot wish to berth a bulk carrier on Pier No.1, South side, (Vale Do Rio Doce Co.) and there is a vessel at the Petrobras Terminal, the vessel at Petrobras Terminal will be removed prior to berthing of the bulk carrier.

Praia Mole: The port is situated on the North side of the Bay of Espirito Santo in the approximate position Lat. 20° 17′ S., Long. 40° 14′ E., close to the Port of Tubarao. It is 12 km. from the centre of the town of Vitoria, capital of the State of Espirito Santo, connected by an ashphalted road.

It is an artificial port in the open sea, functioning mainly to receive metallurigal and power generation coal and the shipment of metal products for export.

The Port of Praia Mole consists of a terminal with coal receiving equipment and a terminal with equipment for export of metal products.

Coal Terminal: Built for the movement of 8 million tons/year in its first stage and 12 millions of tons/year in its second stage.

The pier is 730 m. long (operating on one side only) and the civil engineering work is finished. It should be able to receive vessels of 15,000 d.w.t. to 170,000 d.w.t. at Berth No. 1, depth 17.0 m. and vessels up to 250,000 d.w.t. at Berth No. 2 after dredging this berth to 21 m. Present depth 18.0 m. Berth No. 1 length 330 m. Berth No. 2 length 400 m. Manoeuvring basin – diameter 500 m. depth 18.0 m.

The pier is fitted with 3 discharge units with a capacity of 1,800 t.p.h. each. The discharged coal is transported via three lines of conveyor belts (1 line already functioning) for storage in the Coal Storage Area of the port or taken directly to CST or CVRD. The Coal Storage Area will have a capacity of 11 million tons, with 520,000 tons at present. In the Coal Storage Area, for stocking and recovery of coal are planned 3 stackers and 2 recovery units, with capacities per machine of 2,200 t.p.h. and 4,400 t.p.h. respectively. (Currently, 1 stacker is undergoing operational tests, 1 recovery unit is being installed.) The coal recovered from the area will be sent to the cellulos/cement industries for pelletisation by CVRD, to CST or for Usiminas/Acominas by means of a system of loading wagons on the railway system, with a capacity of 2,000 t.p.h. in the phase of current installation.

Metal Product Terminal: Built for moving 3 million tons/year in its first stage and 4.5 million tons/year in its second stage. It comprises a 638 m. long quay with depth of 14.5 m. for taking vessels from 15,000 d.w.t. to 70,000 d.w.t.

On the quay 4 loaders for metallurgical products for vessels with 40 tonnes capacity each. In the rear part of the quay will be formed an area for storage and handling products, with an area of 30,000 sq.m. in its first stage, and 100,000 sq.m. in its second stage (currently 60,000 sq.m. has been finished). This storage and handling area will have 10 rolling bridges with a capacity of 35 tons each and will be served by 5 railway lines along the quay. The railway lines are interconnecting CVRD to the quay.

STEVEDORES: Services of stevedores not normally required. Crew open hatches.

MEDICAL: Four hospitals available.

TANKERS: *Petrobras Terminal:* The berth consists of 2 mooring dolphins which enable vessels of 160 m. LOA and draft of 7.9 m. to berth.

FRESH WATER: Available at all quays of the terminal, maximum quantity per vessel 150 tons. Requests for water must be made by Ships Officers immediately on berthing. If quantity greater than 150 tons is required 48 hours notice must be given in order to establish whether or not the additional quantity is available.

FUEL: Diesel oil in quantities up to 100 tons can be supplied by Petrobras in road tankers at the berths, also vessels with Max. draft of 8 m. and Max. LOA 160 m. can berth at the Petrobras Oil Terminal inside the breakwater to take bunkers and diesel. Vessels at Praia Mole bunkered by barge.

Terminal Rates:

Diesel oil	– 100 t.p.h.
Fuel oil	– 150 t.p.h.
Mixture	– 80 t.p.h.
Crude oil	– 700 t.p.h.

REPAIRS: There is a naval repair shop in the area able to carry out normal repairs.

AIRPORT: 8 km. from the port with connections to other cities within the country.

HOLIDAYS: Confraternizacao dos Povos, January 1st; Passion Friday movable; Nossa Senhore da Penha, movable; Tiradentes, April 21st; Labour Day, May 1st; Independence of Brazil, September 7th; Our Lady of Vitoria, September 8th; All Saints, November 2nd; Proclamation of the Republic, November 15th; Christmas, December 25th.

POLICE/AMBULANCE/FIRE: Police Tel: 227-0057. Fire Tel: 228-5193.

TELEPHONES: Not available for placing on board.

BANKS: The following banks have correspondents in other countries:

Banco Frances e Brasileiro S/A: Credit Lionaise (France), Praca Presidente Vargas, 35 – Vitoria – ES. Telex: 2249.

Banco Sudameris Brasil S/A: Sudameris Paris; Comerciale Italiani; Banque de Paris et Pais Bas; Dresden Bank, Rua Treze de Maio, 48 – Vitoria – ES. Telex: 2265.

Banco Lar Brasileiro S/A: Chase Manhattan, Av. Governador Bley, 137-145. Telex: 2.2174.

Banco de Credito Nacional: Barclay's Bank – England; Av. Princesa Isabel, 53 – Vitoria – ES.

Bradesco-Banco Brasileiro de Descontos S/A (Correspondente): Av. Jeronimo Monteiro, 400 – Vitoria – ES. Telex: 132.

GENERAL:

Smoking: Smoking on tankers and OBO vessels may only take place in compartments specified and as indicated by the Master of the vessel.

Readiness: Vessels must be able to unmoor immediately in cases of emergency. Unmooring is done with the aid of tugs.

Repairs: No repairs undertaken to the vessels engines or any other repairs which may impeed emergency unmooring. Should any repairs at all be necessary these can only be done with the authority of the Terminal.

Deballasting: Discharge of dirty ballast is strictly prohibited. Failure to comply with this rule will result in fines.

Fire Fighting: The ship's fire fighting equipment must be kept in readiness at all times.

Rubbish: There is no collection service.

Deratting Service: Not available.

Stores: Specialising firms in the district, orders must be placed 24 hours in advance.

Degassing and Unloading:

(a) All ore/oil and oil/bulk/ore vessels must have their holds and tanks gas free.

(b) Ore/oil vessels carrying inert gas must have their holds inerted to receive ore cargo and be free of explosive gas and/or rendered inert.

(c) The terminal Inspector must receive, prior to loading, a certificate stating that the vessel on berthing is free of explosive gases and has been rendered/or is inert.

(d) The operation of gas freeing is not permitted when the vessel is berthed or in areas deemed to be dangerous by the Terminal authority.

SHIPMASTER'S REPORT: July 1987.

The vessel shifted from Paul Quay at Vitoria on High Water, to complete loading of pig iron at No. 1 Pier (South Side) at Tubarao.

The South Side of the Pier No. 1 has been modified for the shipment of Pig Iron, using the No. 1 loader, from pre-stacked cargo close by the pier. Front-end loaders carry wetted down cargo to the conveyor belts. There are no pre-load shaking griddles to remove the rust and residue, The ship's deck was covered in a heavy sludge, that had to be cut with a hose or shovelled up.

The No. 1 loader has no spout but could accurately place the cargo in the after, outboard and forward sides of the hold. However, for the near side, it could only drop a baffle plate in front of the cargo stream. This created a rough fan spray of cargo dropping nearly vertically close to the nearside hatch coaming. Only by rolling down the slope of the cargo could this pig iron be persuaded to the ship's side.

Thus it is not possible to load the cargo level across the hold. The loader is, however, much superior to the equipment in Vitoria for airdraft, reach and flexibility. The duty officer supervised the loading throughout to obtain the most level stow that could be managed. 3,600 tonnes were loaded in 2 hours into the one hatch.

Notes: It is understood that:-

1. There is a surcharge of U.S.$ 2.00 per tonne loaded at Tubarao, over and above the charges of Vitoria. The manufacturers, selling their goods F.O.B., refuse to pay this surcharge. They insist on shipping from Vitoria's limited berths.
2. Only 3 draft surveys are allowed by the terminal operators while the ship is alongside the pier. Thus reducing delays and the number of parcels that can be loaded.
3. The Pier is unsuitable for bringing bulldozers to the ship, and it is not possible to trim the cargo into the void spaces left by the boom. The terminal does not believe that trimming is necessary, and might not allow the time. There is a widespread disbelief that pig iron shifts.
4. At all berths in Tuburao, the swell is such that draft surveys can be greatly affected.

SHIPMASTER'S REPORT: February 1991.

Documents:

8 copies Crew List.
8 copies Passenger List.
1 copy Crew Effects Declaration.
1 copy Stores List (including Bonded Stores).
1 copy Maritime Declaration of Health.
1 copy Vaccination List.

At all Brazilian ports, wives and children have to be on Passenger List. Indian wives and children require visaes to go ashore.

Gangway: Piers No. 1 and 2 do not have shore gangways. If ship's accommodation ladder does not reach one of the dolphins at Pier No. 2, then shore boat has to be used. Call "El Cinco" on VHF Channel 16.

AUTHORITY: Companhia Vale do Rio Doce, Superintendencia do Porto-Tubarao, C.P. 1078, Vitoria, Espirito Santo, CEP 29000, Brazil. *Tel:* (027) 238-5544, 238-5945. *Telex:* (027) 2517. *FAX:* (027) 228-0612. *Contact:* Roberto W. Kenski, Port Superintendent.

AGENT: See "Vitoria".

VILA DO CONDE: 01.33 S. 48.45 W. (See Plan)

LOCATION: Situated on the right bank of the river Para, in the district known as Ponta Grossa, Municipality of Barcarena/Pa., about 40 km. from Belem. The port is an integral part of the industrial port complex built in the region of Barcarena, in conjuction with the two aluminium companies, Albras and Alunorte.

APPROACHES: The access channel to the port is the same as for the port of Belem, as far as the front of the Island of Mosqueiro from there onwards, vessels proceed to the Port of Vila do Conde via the Bay of Marajo, no restrictions of depth in this stretch. They pass to the side of the islands of Cotijuba, Arapiranga and Carnapijo.

BERTHING: Length of pier 251 m. width 45 m. Location: 01° 32′ 42″ S., 48° 45′ W.

The external berth for solid bulk cargo has a depth of 20.0 m. at low tide; the internal berth for general cargo has a depth of 18.0 m. at low tide. The quay can take vessels up to 45,000 d.w.t.

Equipment: 3 stackers and 1 mobile crane. Conveyor belt 4,500 m. long for moving alumina, copra, pitch and bauxite. Suction plant with 2 tubes and a capacity of 250 t.p.h. per tube.

One covered warehouse measuring 50 m.×150 m.

GARBAGE DISPOSAL: Not available, but in an emergency contact Port Authority.

WASTE OIL DISPOSAL: Available at Belem (50 miles away).

SEAMAN'S CLUBS: None.

SHIPMASTER'S REPORT: November 1986 (Updated 1992).

Vessel: 38,100 d.w.tonnes.

Berth: Albras Terminal.

Location: Lat. 01° 32′ S., Long. 48° 45′ W.

Pilotage: Call Salinopolis Pilots on VHF Channel 16. Pilots available 24 hours and board on arrival. River Pilot will berth vessel. Same river pilotage for Belem and Vila do Conde.

Approaches: Best approach to Salinopolis Pilot Station (Lat. 00° 31′ S., Long. 47° 22.5′ W.) is a course 167° heading for lighthouse.

Pilot will board on bearing 167° and 8 miles from the lighthouse. A strong current sets in a Westerly direction.

Radio: PPL (Belem Radio) provides reliable services.

Berthing: One berth for Alumina-in-bulk discharge. Length about 210 m. It is not possible to berth if wind greater than Force 4 as no tugs available. Whilst waiting to berth, vessel can anchor about 1 mile off the berth. There is sufficient sea room for turning around. Customs, Immigration and Health officials may board while at anchor. Berthing usually starboard side alongside, using one anchor. Jetty well fendered, but standby with fenders aft.

Discharging: Cargo work possible throughout 24 hours. Two evacuators for discharging, can reach all hatches. Total capacity 600 t.p.h. For the last 800 tons in each hold rate is 150 t.p.h.

Density: About 995 alongside berth.

Fresh Water: Available at berth.

Fuel: Available at Belem.

Watchmen: Two port watchmen compulsory, to be accommodated on board.

Repatriation: Belem Airport well connected with Recife and Rio de Janeiro, for international flights direct to Europe and U.S.A.

Time: Local time is GMT minus 3 hours. (Summer time no longer kept).

Shore Leave: No restrictions. Nearest small towns are San Francisco (20 minutes) and Vila do Conde (30 minutes) by car. Port Agent Transnav provides mini-bus. Belem in one hour from San Francisco by speed boat and two hours by regular boats.

Provisions: All fresh provisions and bonded stores available from Belem ship chandlers only, can be ordered by telephone. The transportation costs added to the provisions bill.

AUTHORITY: Companhia Docas do Para, P.O.Box 131, CEP 68447-000, Vila dos Cabanos, Barcarena, Para, Brazil. *Tel:* 091-754-1176. *FAX:* 091-744-1026. *Contact:* Mr. Kleber Menezes, General Manager (Tel: 091-754-1343).

AGENT: See "Belem".

VITORIA: 20.19 S. 40.17 W. (See Plan)

DOCUMENTS: See "General" before first port.

APPROACHES: Length of access channel 3.5 miles, width 120 m., depth 10.6 m. Maximum speed allowed 5 knots.

PILOTAGE: Compulsory. Vessel approaching port should communicate with Agent through local radio station, giving date and hour of arrival at Pilot Station so that they can arrange for a Pilot to be at the roads on arrival. Communicate direct to Pilot Association through VHF Channel 16. Pilots maintain 24 hour watch.

ANCHORAGE: The official limits of the port are:

Arc of a circle of 1 mile radius, seaward, with centre at Santa Luzia Lighthouse. There is a 8.9 m. patch which will be removed in the near future.

Notice of Readiness is accepted as at time the Master radios advising vessel has anchored, SHINC, lay time starting 3 hours afterwards (subject to C/P).

No draft limitations at anchorages.

RESTRICTIONS: All sailings are to take place on a rising tide. Vessels of up to 205 m. can enter day or night.

Vessels from 205 m. to 242 m. can enter during daylight hours, weather permitting. Vessels of this length must be assisted by 3 tugs, 2 of which must be of at least 1,000 h.p. and the other of at least 400 h.p.

For turning in the manoeuvring basin, 2 tugs are required, one to be of at least 1,000 h.p. and the other at least 400 h.p.

MAX. SIZE: 35 ft. draft at HW and 32 ft. at LW. Also see "Tankers".

HEALTH: Free Pratique obtained by radio to Agents, addressed for "Saportos Vitoria" followed by ship's name, last port, ETA, and the letters ZT (meaning "my replies to the 6 questions on the port health declaration are negative") and ZS (meaning "the sanitary condition of my ship is satisfactory"). Pratique is granted when this message is delivered by Agent to the port doctor. Also see "General" before first port.

The Agent may send a reply containing the group ZY, meaning "You have Free Pratique". In any case the time of Pratique is registered as time that the ship's cable was received by the Health Authorities. This Pratique does not allow the crew to go ashore until after Customs clearance.

Crew vaccinations are done free.

The Port Doctor usually arrives onboard some time after the visit of Authorities and it is important to have the Health Declaration ready for handing to him by a responsible person (to avoid a fine).

RADIO: Local radio station, Vitoria Radio, call sign PPT. This radio station normally used by Agents when cabling vessels.

Operating Frequencies:

2 MHz band on transmission frequencies 2086 and 2096.5 kHz and on the emergency frequency of 2182 kHz.

4 MHz band – transmission frequency 4403, 4382.2, 4403.9 and 4143.6 kHz.

8 MHz band on the transmission frequencies of 8291.1, 8780.9, 8802.6 and 8774.7 kHz and reception 8278.8 kHz and 8257 kHz.

VHF: Request Pilot on Channel 16 and 12 one hour before arrival. Upon notice it then takes Pilot 40 minutes to reach vessel.

TUGS: Tugs join vessels at anchorage. Ship's lines used. Tugs have no lines on board. The lines given to tugs should be without wire as the swell usually prevailing causes severe sudden stresses on the tow lines.

2 tugs of 1,680 h.p., (20 tons) and 4 tugs of 1,600 h.p. (22 tons).

Vessels up to 2,000 g.r.t. require 1 tug, up to 10,000 g.r.t. require 2 tugs and over 10,000 g.r.t. require 3 tugs for berthing.

Vessels up to 2,000 g.r.t. require 1 tug and vessels over 2,000 g.r.t. require 2 tugs for unberthing.

BERTHING:

Commercial Quay: No restrictions for vessels berthing at Nos. 4 and 5 Warehouse, entrance and sailing at any stage of tide. Max. drafts are:

No. 5 Warehouse – 23 ft. 08 in. (with pontoons 26 ft. 06 in. – 30 ft. 02 in.), max. length 582 ft.

No. 4 Warehouse – 23 ft. 08 in. (with pontoons 27 ft. 02 in. – 30 ft.), max. length 572 ft.

No. 3 Warehouse – 25 ft. 08 in. (with pontoons 25 ft. – 29 ft.), max. length 396 ft.

– 25 ft., max. length 297 ft.

No. 2 Warehouse – 15 ft. 04 in., max. length 402 ft.

Vessels at Nos. 2 and 3 restricted to sail on flood tide only.

Paul Quay: Mineral and other solid bulk discharge: Max.draft 35 ft. 06 in. (with pontoons 39 ft. 09 in., for discharge limited to 32 ft. at next ebb tide), max.length 853 ft., limited to entry only at beginning of ebb tide; sailing at any stage of tide. Discharge by 3 mechanical grabs, daily unloading rate 15,000 long tons.

Capuaba Quay: Length of quay: 2,145 ft. Depth: 30 ft. – 35 ft.

General cargo warehouse of 4,000 sq.m.

Open storage area of 120,000 sq.m.

Road and rail access:

Length of roadway: 10,236 ft.

Width of platform: 52 ft.

Length of bridge over River Aribiri: 413 ft.

Length of railway: 2,165 ft.

Vertical silo with capacity 30,000 tons in the first phase and 90,000 tons in the final phase, and the horizontal silo of 40,000 tons. Export cereals (soya, maize, etc.), Ro-Ro, Various products, importation of wheat and containers.

Operational speed: 2 towers of 600 t.p.h. (loading) and 300 t.p.h. (discharging).

Cells: 28 ft. diameter and 115 ft. high.

Tower elevator: 276 ft. high.

Belt transport: 2,625 ft.

Cranes: 2 electric gantry cranes 6.3 tons capacity.
2 electric gantry cranes 12.5 tons capacity.
2 electric gantry cranes 32 tons – 40 tons capacity.

Transtainer: 1 electric gantry transtainer 30.5 tons capacity.

Atalaia Quay: The Quay is an extension of the grain berth at the Capuaba Quay. Max. draft 33 ft. (35 ft. with pontoons). Max. length 364 ft. Vessels berth and sail on flood tide.

Dolphins: Max. draft 31 ft. 09 in. Max. length 394 ft.

Flexibras: Max. draft 22 ft. Max. length 426 ft.

Ro-Ro: Max. draft 30 ft. Max. length 485 ft.

Iron Ore Berths:

Paul Quay: (Also see "Shipmaster's Report" – February 1986). Max. draft 35 ft. length 524 ft. There is one loading area with a capacity of 600/900 t.p.h. depending on type of ore. Max. reach beyond quay edge, 49 ft. Width of pontoon, 14 ft.

CRANES: 13 electric gantry cranes 1.5 – 12.5 tons capacity, 2 mobile cranes 15 – 27 tons capacity and 1 heavy lift crane 200 ton capacity.
BRIDGES: Bridge under construction in position Lat. 20° 19′ S., Long. 40° 17′ W.
STEVEDORES: On ETA cable general cargo ships should include number of gangs required.
MEDICAL: No advance notice of required medical attention. Hospital facilities available.
TANKERS: *Esso and Shell Terminal:* Berthing and unberthing can take place during day or night period, provided vessels draft does not exceed 22 ft. Max. length permitted 531 ft. 5 in. with max. draft of 27 ft. Vessels must enter on ebb tide and sail at high tide.
DENSITY: Average density at Vitoria 1025, but lower during rainy season.
FRESH WATER: Fresh water available at Commercial Quay, Vitoria Iron Ore Berths, Paul Quay and Esso Terminal. Rate of delivery 30 t.p.h.

A barge with capacity of 50 tons may be adapted to carry water.
FUEL: *Esso Berth:* Bunkers can be taken here, supplied under gravity only.

Max. draft 27 ft., and length restricted to 531 ft. Due to various factors, the taking of bunkers in Vitoria is not recommended, however, fuel is available by road tanker at the Commercial Quay. Rate 10,000 litres/hour.

Esso and Petrobras can supply Bunker "C", fuel oil and diesel oil, the last two being available by truck.
CONSULS: Consular representatives available in Vitoria
REPAIRS: Deck and engine repairs available.
WATCHMEN: Compulsory at Commercial Quay in Vitoria. Not available at Vitoria Ore Terminals.
OPENING/CLOSING HATCHES: Normally done by stevedores except in cases of modern vessels using MacGregor hatch covers, when crew asked to close hatches.
CUSTOMS ALLOWANCES: Each Crew member allowed 200 cigarettes out of the bond. One bottle, wine or spirits opened, for each crew member.
REPATRIATION: There are flights daily from Rio de Janeiro to Vitoria.
AIRPORT: Airport located 8 km. from centre of town and is served by daily flights to principle cities in Brazil.
TIME: Local time GMT minus 3 hours.
HOLIDAYS: January 1st; April 21st; May 1st; September 7th and 8th; October 12th; November 2nd and 15th; December 25th; Good Friday; Nossa Senhora da Penha and Corpus Christi. Only holiday when no stevedore work is possible is Good Friday; exception made to iron-ore loading.
POLICE/AMBULANCE/FIRE: Police Tel: 190. Maritime Police Tel: 223-5000. Radio Patrol Tel: 227-2111. Ambulance Tel: 222-4646. Emergency Hospital Tel: 223-0203. Fire Brigade Tel: 193.
TELEPHONES: No facilities for placing telephones on board.
IDENTIFICATION CARDS: Required with photographs to enable officers and crew members to go ashore. Agents supply forms.

SHIPMASTER'S REPORT: February 1986.
Vessel: 40,000 d.w.t. Length 625 ft. 5-hold bulk carrier.
Berth: Paul Quay.
Cargo: Loading pig iron.

The following information was obtained during loading at Vitoria.

Question: What is the draft alongside the loading berth at low tide?
Answer: 32 ft. brackish water. This is not true all the way along the berth, as for a length of about 50 m., by way of where No.2 hold was, there is a mound of mud, which is at a depth of 26 ft. at LW. This mud is very soft.
Question: What is the minimum air draft?
Answer: 39 ft. This also can be more as the loading arm can be raised a further 6 ft., but of course then will not over reach the centre of the hold. There is no need to have ballast in No. 3 hold.
Question: What is the loading rate per hour?
Answer: If the cargo is available and if the machinery does not break down 800 t.p.h. is possible.
Question: What is the water density at low and high tide?
Answer: Low tide 1010, high tide 1024.
Question: How is the quantity of the cargo determined?
Answer: The cargo arrives by train loads and the weight is known but there is no shore scale at the loading equipment and the weight is determined by draft survey.
Question: What is the storage factor of the pig iron?
Answer: 10.80 cu.ft. per long ton.
Question: Which side alongside?
Answer: Always starboard side alongside and ship's gangway used.
Question: Availabilty of fresh water?
Answer: Yes, available at the berth. The vessel must use its own hoses. Unlimited amount.
Question: When are draft surveys taken?
Answer: By Charterer's Surveyors, prior commencement of loading and on completion of loading. The Charterer's Surveyors must be advised prior to commencement of loading of the quantity of bunkers and fresh water that the vessel intends to load. Draft survey determines the Bill of Lading.
Question: What are the working hours?
Answer: 0600 – 2200 hrs. each and every day.
Question: How many loaders?
Answer: One which moves on rails to which ever hold is to be loaded into.
Details of the loader's dimensions.
Height of loader arm from the jetty, 9.25 m.
Height from the water level at LW to the quay 3.10 m. (Neap tides).
Length of loader outreach 20.7 m. However, distance from loader on its rails to edge of the quay 6.25 m. and further deduction of 3.25 m. for thickness of fender.
Question: What are the facilities for bunkering?
Answer: All bunkers are supplied in Brazil by Petrobras and at Victoria are supplied when the vessel is alongside and are ex-barge. Bunkering can be carried out during loading.

Additional Information: Soundings taken on the starboard side of the vessel indicate an area of mud by way of No. 2 hold.

The vessel moors starboard side alongside and two floating pontoons are placed between the ship and the jetty. These pontoons are 5.0 m. long and 3.5 m. wide. As already stated there is 26 ft. of water only at low tide at No. 2 hold. Therefore once the loading has reached almost that stage, for the vessel to remain afloat, it is neccessary to move the vessel further from the quay forward. The floating pontoons are placed one forward and one aft. If the vessel is hove in aft using the breast lines and the head lines slackened then the bow will come off the quay and an additional floating fender can be placed forward thus the vessel will lie against 2 fenders. There is then enough water to load to 9.75 m. forward at low tide.

Local information says that some ships just ignore the mud (it is very soft) and just load to 9.5 m. without placing the additional fender in place. Once the vessel is lying alongside 2 fenders forward the loader arm can still deposit the cargo into No. 2 hold in the centre of the hold but for No. 1 hold this would not be possible. Therefore, if possible, ensure that the cargo to be loaded into No. 1 hold is completed before moving the vessel off the quay and placing the second fender.

SHIPMASTER'S REPORT: July 1987.

Vessel reported Time, Latitude and Longitude of anchoring position to Vitoria Pilots, Vitoria Port Control and Vitoria Radio (PPV). A telegram was sent to the Agent's telex number via PPR, giving some details and Notice of Readiness. Notice of Readiness was accepted next morning after an evening arrival. Initial advice was a wait of 10 days, and an airdraft of 11.5 m. at high water.

Vessel was ordered to Atalia Quay, by primary Charterers/Exporters after 6 days. This berth found to have 8.55 m. when using 2.5 m. stand-off fenders and only 7.47 m. on 1.0 m. tyres. The stern overhung by 35 m. – 60 m. and a shore gangway was used amidships.

The berth was originally built for iron ore shipment, with a row of bins along the cliff face. 3 loaders, the middle out of order, have a range of about 110 m. travel. The loader couples to the door of the bin, and cannot move while cargo is running. The boom has limited slew and could only reach 10.8 m. on to the ship when using the stand-off fenders (12.3 m. on the rubber tyres). The spout is manually guyed by ropes, which are then tied for the run of the bin. 4 wooden gratings were put on the tank top with a fifth grating on their junction, to break the fall of the first pieces of pig iron.

The pig iron piled up to a height of 7 m. without covering the whole tank top, despite all efforts with the spout, and listed readily towards the quay.

This vessel (45,000 d.w.t.) berthed with No. 3 hold ballasted to obtain the airdraft, and was obliged to load Holds No. 1 and No. 5 alternately while deballasting 10,500 tonnes. This created very high bending moments even on the harbour condition figure. The ship was warped some 25 m. up and down the quay in order for the loaders to reach the hatches.

The vessel finally ceased loading with a list towards the quay and waited for a bulldozer to be provided to trim the cargo. This is an extra charge, fiercely resisted by the shippers, and causes delay. While waiting, the list increased by 1° and pieces of pig iron would break away and roll down the pile dislodging other pieces on the way until some 5 to 8 pieces would hit the shell plating with a loud clang.

The tractor was used for 24 hours, concurrently with loading in other holds, to finish on the rising tide.

All parcels of cargo were measured by Draft Surveyor, with some 5 surveys for the 26,000 tonnes shipped. A claim was made for dead-freight on the shortage.

The vessel returned to sea anchorage to await the secondary Charterer/Exporter's cargo. After a total delay of 8 days the vessel was ordered to Paul Quay, said to be 160 m. long. When berthed on 3.6 m. fenders a depth of 10.0 m. was found at zero tide. The stern overhung by 35 m., and access was by pilot gangway used with small shore brow. The after lines were all abreast on to hooks set into the ground.

The single travelling loader is fed by conveyor belt, and can move while the cargo is running. The boom can also be slewed and luffed, while the spout is operated by hydraulic ram, maximum reach on board the vessel is 11.0 m. The operating range along the quay is about 120 m. and it was necessary to warp ship for No. 5 hold.

The cargo was wetted in the wagon and then shaken on a tray before loading. The pig iron piled up to a height of 5 m. and 6 m. above its sides, in a partly loaded hold. The shipper was required to hire another bulldozer to level out the pile, at a stated cost of U.S.$ 1,100 for 24 hours. The bulldozer also helped to list the ship away from the quay.

The loader is prone to breakdowns, and schedules may slip. The main stockyard for pig iron is said to be 20 km. away, making difficulties in positioning.

Final loading is done on a rising tide to a draft of 10.66 m. All measurements by draft surveys with multiple surveyors frequently in disagreement. Vessel sailed one hour before high water.

The design of both berths is said to be for vessels of 28 m. maximum beam, so it is very frustrating for vessels of 31.5 m. beam. The Inspection party for Port Clearance totalled 7 persons.
Radio: Local radio station now PPV, working only on VHF, with satellite relay further North.
Tugs: Require 2 ship's lines from same fairlead, exactly even, when near Penedo. Tugs sometimes use their own very heavy rope for alongside work.
Bridge: Span over navigation channel in position, said to be 55 m. clearance.
Density: Ranges from 1006 to 1026, according to season, position and tide. The average range for finishing loading 1018 to 1023. Pig iron cargoes require very many draft surveys.

Trimming: Bulldozers available for trimming pig iron inboard at extra cost.

Swinging Circle: Off Cupuaba Quay, said to be limited to 30 ft., with a 6.7 m. rock on the North side.

Berths: South side from West to East:

Tanker pier with dolphins.

Paul Quay – For export of pig iron. 10.0 m. depth at zero tide on pontoon fenders. Vessels load to 10.66 m. on rising tide to sail immediately. Airdraft said to 11.5 m. One loader with 11.0 m. reach inboard.

Usiminas – For import of coal cargoes. 3 grabbing cranes, depth said to be 10.6 m. on pontoon fenders.

Alcohol & Molasses Dolphins – largely unused.

Atalaia Quay – For export of pig iron, 8.55 m. depth at zero tide on metal fenders 2.5 m. from quay. Airdraft 11.5 m. 3 loaders, (one out of order) reach 10.8 m. Vessels load to 9.14 m. on rising tide to sail immediately.

Capuaba Quay – Extension of the grain berth at Atalaia Quay. Silo plant at Western end, open quay with Ro-Ro berth at Eastern end. Ro-Ro vessels berth against dolphins and cliff face.

SHIPMASTER'S REPORT: June 1988.

Documents: We received telex from Agent prior to arrival requesting the following documents on arrival:

13 copies Crew List.

3 copies Personal Effects List.

3 copies Bonded Stores List.

1 copy Health Declaration.

1 copy Vaccination List.

3 copies Spares List (Deck, Engine Room, nautical spares, e.g. Main Gyro – 1 – no spare parts; Gyro Repeaters – 3 – no spare parts; Radar – 2 – no spare parts).

Bridge: New bridge will soon be open to traffic – verticle clearance 55 m.

Agent's Advice: Prior to arrival and on sailing advise "Concontramar Rio de Janeiro" the following: Vessel's name, Nationality, Call Sign, Port of Origin, Type of Vessel, Location and ETD.

Do not leave garbage drums overboard.

Do not leave Pilot Ladder over side.

Keep Brazilian flag in good order – request new flag if necessary.

Beware of thieves boarding at anchorage and on the offside when alongside berth.

Contact Pilot Station on VHF Channel 16 on arrival to guarantee berthing position.

AUTHORITY: Companhia Docas do Espirito Santo – CODESA, Av. Getulio Vargas No. 556, Vitoria, Espirito Santo, CEP 29000. *Tel:* (027) 222-1311. *Telex:* (027) 2118. *FAX:* (027) 222-7360.

Contact: Dirceu Cardoso, Director-Presidente.

AGENT: Wilson Sons Agencia Maritima Ltda., Avenida Princesa Isabel 599, 9th Floor, 29010-361 Vitoria ES. P.O. Box 222. Tel: (027) 223-9422 (After hours: (027) 225-6182, (027) 227-4947). Telex: (27) 2151/3054 WSON BR. Fax: (027) 222-1297. Cables: Anglicus.

NOTES

Please also advise Shipping Guides Ltd.

Brunei Darussalam

LUMUT: 04.43 N. 114.26 E. (See Plan)

PORT LIMITS: Lumut is included in the Government Kuala Belait Port area. The boundary is parallel to Latitude 4° 47' N.

DOCUMENTS:

6 copies Crew List.
2 copies International Maritime Declaration of Health.
2 copies Vaccination List.
1 copy Last Port Clearance.
2 copies Cargo Declaration.
2 copies Crews Effects Declaration.
2 copies Passenger List.
2 copies Ship's Certificates.
2 copies Ship's Stores Declaration.

The Agent will board the vessel either at the anchorage or in the berth, and arranges Customs and Immigration Clearance. Port Authorities do not normally board vessels at Lumut, but may do so. Cargo documentation is handled by the BLNG Berthing Master.

APPROACHES: Caution must be taken when approaching Brunei Coastal waters because of the numerous number of platforms and drilling rigs in the oil fields. The area is serviced by numerous support craft, and barges under tow may be encountered. Latest Notices to Mariners should be consulted for details of Safety Zones.

PILOTAGE: Pilots are provided by Brunei Shell Petroleum Co.Sdn.Bhd. at the request of BLNG. The Pilot will board the vessel 2 miles North of the Terminal from a 20 m. pilot and mooring line handling launch. Masters must ensure that the pilot access is rigged as per current regulations, and a good lee is provided. A clean heaving line is necessary. The pilot launch will work on VHF Channel 71, call sign "Lumut Pilot".

The Pilot remains on board the vessel during the time it is moored and is the BLNG Berthing Master and representative on board.

ANCHORAGE: The anchorage area (Anchorage "C") is for vessels calling at Lumut and is located 3.0 miles North of the berth. The area is contained within the following limits:

Latitudes: 04° 45' N. and 04° 46' N.
Longitudes: 114° 26' E. and 114° 28' E.

RESTRICTIONS/MAX. SIZE: Lumut currently has 2 berths for LNG loading. The original berth may be used for the loading of dedicated Brunei Shell tankers with a stern loading facility, and is not available to vessels without this stern loading arrangement. Draft restrictions apply in this berth, which are advised to the vessels prior to arrival.

The new berth is of the conventional side loading design.

Maximum arrival draft	10.0 m.
Maximum arrival displacement	94,700 tonnes
Maximum departure draft	11.3 m.
Maximum length overall	290 m.
Minimum length overall	260 m.
Minimum length parallel body (centre at manifold)	90 m.
Minimum manifold elevation above still water	16.0 m.
Maximum manifold elevation above still water	23.6 m.
Maximum manifold offset from midships	10.0 m.

Detailed design restrictions of vessel's mooring, manifold and cargo equipment apply. All prospective vessel's details must be vetted by BLNG and BSP Marine Department before vessel may be accepted to the side loading berth at Lumut.

Lumut is an open sea berth without breakwaters of any kind. Therefore sea conditions may restrict the berthing and mooring of vessels in both berths. Conditions exceeding 25 knots wind and 2.0 m. seas will make berthing unlikely.

HEALTH: A detailed shipping report has to be completed for the Brunei Government Marine Department. The Agent will provide the forms for completion.

If the vessel comes from an infected port or its state of health is suspect, the Medical Officer may board in order to inspect crew and relevant Medical Certificates.

RADIO: *Arrival Advice:* Confirm ETA at least 72 hours in advance, also declaring Bill of Health and estimated cooldown time required. Communications with Brunei Liquified Natural Gas (BLNG) LPS/1/4 and Agents (Jasra Harrison) is by Telex via Inmarsat. 72 hours and 24 hours from Lumut the Master should advise his ETA to BLNG and Agents. In addition, Brunei Shell Radio (Call Sign VSL–1) maintains a listening watch for LNG carriers at 0945, 1345 and 1745 local time (GMT + 8 hours) daily, on 8354 – 8374 kHz, transmitting on 8558 kHz.

Vessels should contact "Lumut Control" on Channel 71 when within VHF range and confirm ETA.

VHF: A VHF station at Seria (call sign "Brunei Shell Radio – VSL-1") maintains a continuous watch on Channel 16 with Channel 19 as a working channel.

A VHF Station (Port Control) at Lumut (call sign "Lumut Control") maintains a watch from 12 hours before vessel's ETA on Channel 71. Channel 71 is normally used as a working channel, Channel 73 as alternative.

TUGS: Berthing at both berths is with the aid of 2×39 m. long (4,800 h.p.) tractor tugs. For larger vessels on the side berth (up to 135,000 cu.m.), 3 tugs will be utilised. Tugs will utilise tug's tow lines and connect to side shell bitts when fitted and weather conditions allow, or tow-off the deck in other cases.

One tug performs the function of emergency stand-by with the other available at longer notice during the period the vessel is alongside. The tugs are equipped with half-FF1 equipment with additionally 2 tonnes of dry powder for LNG fires.

BERTHING: The stern loading berth is restricted to Brunei Shell Tankers uniquely equipped to load from a stern loading crane. It is not suitable for other vessels.

The side loading berth (See "Plan") is designed for LNG carriers from 75,000 cu.m. up to 135,000 cu.m. with loading connections close to the midships point. The berth is at the end of a 450 m. long Westerly spur from the original 4.5 km. long jetty extending from the shore. A dredged berth pocket of 13.2 m. below C.D. allows vessels to load to a maximum draft of 11.3 m. with 1.9 m. under-keel clearance (this is subject to manifold height and loading arm restrictions).

The vessel will generally follow a Westerly track (See "Plan"), and the final approach will be from the West with tugs connected on the port side. The vessel is turned to the North and moves stern first into the berth. Moorings are run by two mooring launches.

The vessel lies alongside 4 low-friction face fenders and moors with 4 breast lines and 2 springs for smaller vessels, and 4 breast lines and 3 springs for larger vessels, fore and aft. Moorings must be minimum 44 mm. diameter wires with 11 m. nylon pendants attached by Mandel shackles or similar. All wires must be fitted to self-stow winches with minimum heave capability of 20 tonnes on the springs and 30 tonnes on the breasts. A mooring load monitoring system is incorporated in the hooks ashore, and minimum tensions on moorings must be maintained throughout the vessel's stay in the berth.

The gangway is lowered temporarily for access by BLNG personnel for connecting and disconnecting the loading arms, and is approximately 14.0 m. aft of the vapour manifold connection.

CARGO HANDLING: The side loading berth has 2×16 in. ASA liquid loading arms and one vapour return in the liquid-vapour-liquid configuration. Vessel's manifolds must conform to OCIMF and have a maximum flat face flange thickness of 39.8 mm. to accept the loading arm hydraulic couplers.

Emergency shut-down systems are effected by a fibre optic link between ship and shore, based on the Japanese Furukawa system.

Liaison with the shore is via the Berthing Master on board, utilising the telephone link via the fibre optics with VHF Channel 71 as back-up.

Vessels must have a compressor capacity of minimum 20,000 cu.m./hr. for vapour return to shore.

Maximum loading rate is 5,400 cu.m./hr.

MEDICAL: Emergency treatment only can be arranged via the Agent. There are 2 Government hospitals in the country, and one private hospital for Shell employees. All serious cases are handled by the hospital in Bandar Seri Begawan (the capital).

DENSITY: 1020 – 1025.

FRESH WATER: Not available.

FUEL: Not available. Bunkers can be obtained at Lutong (Miri).

REPAIRS: No repair facilities available.

TIME: Local time is GMT plus 8 hours.

SHORE LEAVE: Not permitted.

GENERAL: *Special Regulations:* The Brunei national flag should be flown during hours of daylight.

The ship's main radio transmitters must not be used whilst the vessel is moored at Lumut.

Immobilisation of Engines: Vessels are not permitted to immobilise main engines whilst at the berth.

Stores and Laundry Facilities: Not available.

Tank Cleaning and Dirty Ballast Facilities: Not available.

AGENCY: Agent for all Shell Owned and Chartered vessels calling at Lumut is Jasra Harrison, Jalan Sungei, P.O.Box 16, Kuala Belait, Brunei. Telex: BU 3315. Cable Address: Crosfield Kualabelait.

AUTHORITY: Brunei Shell Petroleum Company Sdn. Bhd., Seria 7082, Negara Brunei Darussalam. *Tel:* (673) (03) 78443. *Telex:* BU 3133. *Cables:* Brunshell Seria. *FAX:* 78428. *Contact:* SMR/2, Head of Marine Operations.

MUARA PORT: 05.01 N. 115.04 E. (See Plan)

PORT LIMITS: The sea area within Lat. 4° 58' N. and 5° 05' N. and Long. 115° 03' E. and 115° 10' E.

DOCUMENTS:

2 Crew Lists.
2 Passenger Lists.
2 Dangerous Goods Lists.
2 Manifests (plus 1 additional copy for Port Department).
1 Health Document.

PILOTAGE: Pilotage and tug services are under the jurisdiction of the Marine Department. Application for Pilot 24 hours in advance by telegraph through ship's Agents. Pilot boat awaits at Beacon No. 1, Lat. 5° 03' 39.9" N., Long. 115° 06' 06.3" E. Pilot boat is painted white. If on arrival No. 1 Beacon pilot boat not visible then ships should call "Muara Harbour" on VHF Channel 16. Pilotage compulsory and available from 0700 hrs. to 2200 hrs. Vessel should anchor in vicinity of No. 1 Beacon when awaiting Pilot.

ANCHORAGES: Safe anchorages available vicinity No. 1 Beacon, S.E. of Tanjong Sapo Light (Lat. 4° 59.7' N., Long. 115° 07.6' E.) and in Muara Harbour 4 cables S.S.W. of the wharf.

RESTRICTIONS/MAX. SIZE: Vessels with max. draft of 8.5 m. and maximum length overall (LOA) of 180 m. may enter the port between 0700 hrs. to 2200 hrs. without restriction.

Vessels exceeding abovementioned dimensions are to apply in writing, through their Agent, to the Director of Marine for permission to enter well in advance to their arrival.

Minimum depth in dredged channel is 10.0 m. ACD.

VHF: Ports Department VHF Channels 11, 12, 13, 14 and 16 in operation Mondays to Thursdays and Saturdays from 0745 to 1630 hrs. local time. Call sign "Muara Port".

RADAR: No port radar service available.

TUGS: Two Government owned tugs with firefighting capabilities are available at Muara Port. Normally one tug is used to assist vessels in berthing/unberthing. However, if vessel requires two tugs, then at least 24 hours notice *must* be given to the Marine Department to ensure availability. Tugs are of 1,650 b.h.p. and 1,248 b.h.p. each.
BERTHING: The main commercial berth is 611 m. in length with a maximum draft of 10.0 m. An additional berth of 87 m. with a maximum draft of 5.2 m. is also available for smaller craft. Mobile shore cranes available upto 35 tonnes capacity.
STEVEDORES: Provided by ship's Agents. Major commodities are general cargo and cement, oil well cement, tubulars, machinery and vehicles.
MEDICAL: Hospital available 16 miles from port. Port Health Clinic outside port main gate.
DENSITY: Salt water.
FRESH WATER: Readily available at wharf, cost Brunei $4 per 1,000 gallons.
FUEL: High speed diesel available in small quantities.
CONSULS: There are several Consulates, Embassies and High Commissions in Bandar Seri Begawan.
REPAIRS: Minor deck and engine room repairs possible.
DRY DOCKS: None.
SURVEYORS: Lloyd's and American Bureau are represented.
GANGWAY/DECK WATCHMEN: Not compulsory but available through Agents on request.
HATCHES: Opening and closing by crew or stevedores at ship's option.
CARGO GEAR: Loading/discharging normally effected by ship's gear but 30 tonne capacity mobile crane available from Ports Department on request. Slings, nets, tarpaulins, 30 ton capacity low loader and container platform trailer available from Ports Department.
REPATRIATION: Shipping Office is located at the Marine Department, Serasa, Muara, and branch offices are located at the Port's Department Building in Muara and the Customs' Building in Bandar Seri Begawan.
AIRPORT: International airport 12 miles from port. Regular services to Singapore, Hong Kong, Manila, Kuala Lumpur, Bangkok, Sydney and direct flights once weekly to United Kingdom.
TIME: Local time is GMT plus 8 hours. No alterations in clocks throughout year.
HOLIDAYS: Hari Raya Puasa, Hari Raya Haji, Chinese New Year (all dates moveable) Christmas Day. Work can usually be arranged on all holidays with exception of Chinese New Year when direct delivery to vehicles only available.
POLICE/AMBULANCE/FIRE: Police 772333. Ambulance 222366. Fire 772255.
EMERGENCY CO-ORDINATION CENTRE: National Search and Rescue Co-Ordination Centre is located at the Department of Civil Aviation, Berakas. Tel: 332600/01/02, 330142, 330454, 330896.
TELEPHONES: Available onboard with prior arrangement with Telecoms Dept.
SERVICES: Diver available, cold store facilities available.
BANKS: Several commercial banks operate in Bandar Seri Begawan. Additionally, Standard Chartered Bank and Hongkong Bank operate branches in Muara Town.
STORING: See "Prelims".
1. Yes.
2. Yes.
3. Yes.
4. Yes.
5. Ports transit sheds and warehouses, or depending on nature, quantity and weight, may be stored outside in the open yard. Dangerous goods are not to be stored in warehouse except with Customs approval.

Export cargo to have Customs Declaration approved before storing onboard ship.

6. Yes, but requires supervision.

SHORE LEAVE/IDENTIFICATION CARDS: After clearance inwards Crew members are allowed ashore if in possession of discharge book, identity card or passport.
GARBAGE DISPOSAL: Truck available at Muara Port at cost of B$ 40 per trip.
WASTE OIL DISPOSAL: Not available.
SEAMAN'S CLUBS: None.
CURRENCY: Brunei Dollar (B$). U.S.$1.00 = B$1.39 (March 1996).
AUTHORITY: *Land Side:* Director of Ports, Ports Department, Muara Port 4020, Brunei Darussalam. *Tel:* 02-770222/23/24/25. *Telex:* BU 2748. *Cables:* Ports Brunei. *FAX:* 02-770283.

Marine Side: Director of Marine, Marine Department, Muara 4053, Brunei Darussalam. *Tel:* 02-771347 to 771356. *Telex:* BU 2650. *FAX:* 02-771357.

SERIA (Kuala Belait): 04.43 N. 114.19 E. (See Plan)

LOCATION: Seria is an open sea berth port. At present 2 SBM's are in operation located approximately 5.4 miles off the coast in the following positions:

SBM 1: Lat. 4° 42′ 50″ N. Long. 114° 18′ 54″ E.
SBM 2: Lat. 4° 42′ 50″ N. Long. 114° 19′ 44″ E.

Both SBMs are operated by Brunei Shell Petroleum Co. Sdn. Bhd.
WARNING: Masters are requested to give the numerous drilling structures in this area a wide berth.

A safe approach can be made from 5° 02′ N., 114° 10′E. on a course of 160° but caution remains necessary.

Waiting tankers should only anchor in "Bravo" Anchorage. See BA. Chart No. 2109.
FLAGS: The Brunei National Flag should be flown during hours of daylight.

DOCUMENTS: *Papers Required On Arrival:*
6 copies of the Crew List. If the vessel is stemmed for Japan, 6 extra copies are required from non Japanese flag vessels.
2 copies of International Maritime Declaration of Health.
2 Vaccination Lists on the first visit and subsequently an updated List.
1 copy of Last Port Clearance.
3 copies of Ship's Stores Declaration.
3 copies Crews Effects Declaration.
2 copies Cargo Declaration.
3 copies Passenger List (if applicable).
2 copies of all Ship's Certificates (Certificate of Registry, Load Line Certificate, Safety Equipment Certificate, Safety Radio Certificate, Safety Construction Certificate, Derat Certificate and Civil Liability Certificate).

The boarding clerk will supply and prepare the following documents for the Master's appraisal and signature:

Marine Shipping Report. The form will be completed by the boarding clerk who will need to see the ship's papers.

Quarantine Entry Declaration Form.

Inward Manifest.

Departure: Bills of Lading will be completed by the Berthing Master before the vessel sails. Generally 2 – 3 hours after completion of loading.

No advance Outward Port Clearance for vessels at the SBM or anchorage will be issued prior to the receipt of Inward Port Clearance and copies of ship's Certificates by the Marine/Customs Departments (This requirement may be waived depending upon vessel's arrival time, etc.).
APPROACHES: *Approaches to the Berth and Anchorages:*

There are many oil field production structures off the coasts of Sarawak, Brunei and Sabah coupled with a large amount of exploration and drilling activity. These field structures both surface and subsurface pose a hazard to navigation and Masters are advised that they should give all these activities and fields a good wide berth.

Safety zones have been declared around the major oilfields. No vessel may pass through or approach within 500 m. of single platforms.
PILOTAGE: The Berthing Master and Mooring Assistant board incoming vessels 2 miles North of the SBM. The pilot launch leaves from the Kuala Belait river mouth. Low tides may restrict the launch in crossing the river bar for up to 6 hours.

Masters are requested to provide a good lee for the launch to facilitate the boarding and lifting of radio sets and mooring equipment.

The pilot ladder must be in good condition, fitted with spreaders, be properly rigged and secured, adequately lit at night and well clear of the ship's propellers. When the accommodation ladder is used it must be rigged well clear of the water with a pilot ladder below to gain access to the main ladder.

Crew members must be in attendance at the ladder head where a lifebuoy and clean heaving line should be sited.

The Pilot should be met at the ladder and will check the oxygen content of the ship's inert gas in the cargo tanks on boarding. This must be less than 8% or the vessel will be delayed berthing.

The Berthing Master and Mooring Assistant remain on board throughout and will require accommodation during the vessels stay. A Cargo Surveyor may also remain on board.
ANCHORAGE: A tanker anchorage is located approximately 3 miles North of the SBM berths in the area contained within the following limits:

Lat. 4° 45′ N. and 4° 47′ N.
Long. 114° 17′ E. and 114° 19′ E.

Tankers should not anchor in any other locations due to the presence of many submarine pipelines throughout the oil field and adjoining areas.
RESTRICTIONS: No port restrictions.
MAX. SIZE: SBM 1: 320,000 tonnes d.w.t., max. draft: 17.40 m.
Length between bow and manifold max. 168 m.
SBM 2: 200,000 tonnes d.w.t., max draft: 15.85 m.
Length between bow and manifold max. 168 m.

An allowance of 1.5 m. may also be made for 'Loading over the tide', at the discretion of the Pilot and Terminal and dependent upon prevailing weather conditions.
HEALTH: *Customs and Health Requirements:*

A detailed shipping report has to be completed for the Government Marine Department. Agent will provide the forms for completion.

If the vessel comes from an infected port or its state of health is suspect, the Medical Officer may board in order to inspect the crew and relevant International Medical Certificates. Customs Officers do not normally board incoming vessels but may do so with the Agent.
RADIO: *Information Required Prior to Arrival:*

Radio Advice: Confirm ETA at least 48 hours in advance also declaring state of Health, Master's name, number of crew, destination, advice of C.L.C./TOVALOP Certificate and quantity of cargo required.

This data is used to obtain the vessel's "Seria Port Clearance," in advance.

W/T Traffic should be passed through Singapore Radio, and addressed to your Agent; vessels using the service of Jasra Harrisons can contact them directly by telex or facsimile.

The Agent will pass ETA's to the BSP Marine Department and to Seria Oil Terminal.

Vessels making their first call at Seria will receive a message from the Agent describing the location of the anchorage and information on pilotage, radio stations and papers required on arrival.

When within range, vessels are requested to make direct W/T contact with Brunei Shell Petroleum Company (Call sign "VSL-1" or Brunei Shell Radio) at the following local times (GMT + 8 hrs.) 0945 hrs. to 1030 hrs.; 1345 hrs. to 1430 hrs.; and 1745 hrs. to 1830 hrs.

BSP will transmit on 8558 kHz, call sign Brunei Shell Radio, and listen out on 8354 to 8374 kHz. When contact is made on this frequency a standard information cable describing necessary derrick and mooring arrangements will be transmitted to the ship by BRUNSHELL.

Telex messages may be passed to Brunei Shell Petroleum Co. on BU3313, attention SMR/2, OPD/112, FTR/2.

The Jasra Harrison's launch is equipped with VHF radio and a single side band radio transmitting on 4400 kHz and 5923.5 kHz.

The ship's radio station must not be used whilst the tanker is moored to the SBM.

Agent: Agent boards arriving vessels from 0600 hrs. to about 2100 hrs.

VHF: A continuous watch on Channel 16 is maintained both by Brunei Shell Radio and by Seria Terminal. Vessels should contact either of these stations as soon as practicable, passing her latest ETA at Seria Pilot Station. While berthing, Channel 13 is normally used to communicate between bridge, mooring boat and forecastle.

Brunei Shell Radio uses Channel 19 as working Channel and can link the ship with the Agents through the Government telephone system.

TUGS: Available in emergency only.

BERTHING: Berthing and unberthing is carried out night and day.

Mooring can usually be safely carried out in sea/swell heights of between 2.0 m. and 2.5 m., operations are normally suspended if heights are in excess of 2.5 m. The operation however is governed by the mooring boat performance in the sea conditions prevailing at the time.

Wind speeds in excess of 20 knots make it difficult to prevent the "bow falling off" when on final approach. Berthing operations are as a rule suspended when wind speeds exceed 25 knots. Again this is governed by the mooring boat performance and the ship's handling characteristics.

Tanker Moorings: Tanker moorings from the buoys comprise of two 400 mm. circumference two-in-one braided nylon endless grommet type mooring ropes complete with floating sleeves. They have a soft eye to each end, both ropes being 45.7 m. long and have a breaking load of 340 tons when new. Fairlead chafing chains with triangle connecting plates are attached to the tanker end of the moorings. Each chain is 7.6 m.× 76 mm. diameter stud link chain constructed of special quality U2 grade steel. Incorporated within the chain is a further connecting triangle plate for larger tankers.

A 254 mm. circumference × 12 m. polypropylene pick-up rope is shackled to the end connecting triangle plate, the free eye of the rope being buoyed off for easy recovery by the mooring launch.

The SBM end of the 400 mm. circumference nylon mooring ropes are pinned into a twin triangle plate which in turn is secured to lugs on the revolving turntable by short lengths of chain and connecting shackles.

Only vessels with mooring arrangements as recommended by the O.C.I.M.F. Standards for Equipment Employed in the Mooring of Ships at Single Point Moorings will be accepted at Seria. Vessels not so equipped will not be berthed at the S.B.M.

Vessels above 150,000 tonnes S.D.W.T. are moored with both mooring ropes using 2 chain stoppers. Should a visiting tanker have only one bow stopper (i.e. 150,000 tonnes or less) only one mooring line is secured and the other is hung-off.

Mooring Equipment: Two portable UHF radios for ship/shore communications during loading are passed to the tanker when the Berthing Master boards approximately 2 miles North of the buoy.

A ship's mooring rope messenger of at least 254 mm. circumference should be prepared ready on the forecastle before the vessel's arrival. This will be shackled to the SBM pick-up rope by the mooring boat.

LOADING: *Load-on-Top:* Unless the vessel has other instructions then the "Load-on-Top" system applies.

Dirty ballast and slops *cannot* be accepted ashore.

Position of Hose Connections: Starboard side amidships.

Hose derrick should be rigged to lift at least 10 tonnes and the vessel to have the appropriate reducers fitted to take standard 400 mm. (16 in.) manifold hoses 150 ASA. Hose connection and disconnection by ship's crew.

Pipelines and Floating Hose Strings

Pipelines: 2 submarine sea lines are laid from the terminal to the buoys. A 800 mm. line, 10,180 m. long to SBM No. 1 and a 600 mm. line 9,845 m. long to SBM No. 2.

A 600 mm. crossover line 1,676 m. long joins the "T" piece connection situated 1,250 m. from SBM No. 1 PLEM to the Western PLEM valve on No. 2 SBM. All lines are concrete coated and cathodically protected with aluminium anodes.

The main sea lines terminate at "T" piece manifold PLEMs. 23 m. and 20 m. from the vertical axis of the buoy on SBM No. 1 and No. 2 respectively.

Two underwater hose strings in "Lazy S" configuration connect the manifolds to the underbuoy flanges. No buoyancy tanks are fitted on these strings.

Connected to the SBM-1 are 2×400 mm. hose strings, 245 m. long, and to SBM-2 1×400 mm. hose string, 245 m. long.

Floating hose strings are electrically continuous except the tail end hoses, which isolate the cathodic protection of the SBM from the tanker.

Either floating hose string can be isolated to allow loading through 1 hose, by closing the butterfly valves sited on the buoy turntable.

CARGO PARTICULARS: Crude Oil and Condensate only.

Approximate loading temperature is 87°F.

Approximate API:

SLEB (Seria Light Export Blend)	36	CE (Champion Export)	25
BL (Brunei Light)	40	BC (Brunei Condensate)	65

Crude oil is loaded at SBM-1 and Condensate at SBM-2.

Approximate loading rate at SBM-1 is 4,300 cu.m.p.h. and at SBM-2 (Condensate only) it is 2,500 cu.m.p.h.

Ships are required to load cargo as rapidly as possible in accordance with the terms in their Charter Parties. They are expected to load as fast as Seria Terminal can supply or they can safely receive. The question of how fast a ship may load is the responsibility of the Master having regard to his Owner's instructions and Charter Party and experience of his crew.

Loading is controlled by portable UHF radio sets taken on board with the Berthing Master. Incorporated in these sets is an emergency shut down button which when activated stops all the shore pumps. During loading, four hourly figure comparison checks in metric tons are required to ensure no subsea leaks develop undetected.

DIRTY BALLAST: There are no tank cleaning or dirty ballast facilities. All ships must arrive with clean ballast, pumps and lines. Pollution in any form is strictly prohibited.

MEDICAL: In cases where medical attention is required then the Agent will arrange for the patient to be taken by launch and car to the hospital.

The patient must be taken to Kuala Belait (1 hour 10 minutes by launch) where there is a possibility of delays due to tidal and weather restrictions. Unless absolutely necessary this option is not recommended.

In cases of emergency involving serious injury or illness the Berthing Master or Brunei Shell Radio can initiate Brunei Shell Petroleum Company "Medivac Procedure". Representation of the patients, remains with the Agent, who should be informed to immediately contact customs and immigration authorities.

DENSITY: Varies 1020 – 1025 depending on season and rainfall.

FRESH WATER: Not available.

FUEL: Bunkers are not available at Seria but may be obtained at Miri (Sarawak) with 3 days prior notice.

REPAIRS: Small emergency repairs to Shell owned and chartered vessels only may be undertaken at the Brunei Shell Petroleum Company workshops. There is a small yard at Kuala Belait which also undertakes repairs.

REPATRIATION/JOINING: Crew members leaving or joining at Seria require a valid Passport and Visa (Nationals from Great Britain, Switzerland, South Korea, Japan and ASEAN countries only require a transit visa). For crew joining a vessel who do require visas, these must be obtained before entering the country. A Passport is the only acceptable travel document. A Seaman's Book or similar is not recognised by the Immigration Department.

Crew to be repatriated from Seria have their travel documents endorsed in Kuala Belait before travelling to Bandar Seri Begawan International Airport. The Immigration Office in Kuala Belait is open during normal office hours on Monday to Thursday and Saturday. From Bandar Seri Begawan International Airport flights depart regularly to Singapore, Manila, Bangkok, Hong Kong, Jakarta and Darwin. Crew arriving ashore on Friday and Sunday stay overnight in Kuala Belait.

AIRPORT: At Bandar Seri Begawan; 1.5 hours by car from Kuala Belait.

There are regular daily flights to Singapore, and less frequently flights to Bangkok, Darwin, Dubai, Frankfurt, Hong Kong, Jakarta, Kota Kinabalu, Kuala Lumpur, Kuching, Manila and Taipei.

TIME: Brunei keeps local time of GMT plus 8 hours.

SHORE LEAVE: No shore leave is allowed.

GARBAGE DISPOSAL: No facilities available.

WASTE OIL DISPOSAL: No facilities available.

SEAMAN'S CLUBS: None.

CURRENCY: Brunei Dollar. B$1.00 = Singapore $1.00.

WEATHER: There are two distinct seasons, the N.E. Monsoon (from November to March) and the S.W. Monsoon (from May to September). The transition months, April and October, experience fairly light winds and favourable conditions. The N.E. Monsoon period generally sees a predominant N.E. wind direction of 15 knots – 20 knots. The S.W. Monsoon sees lighter S.W. winds but experiences squalls with violent wind gusts exceeding 50 knots and torrential rain. Squalls generally last for an hour with an average wind speed of 30 knots – 40 knots.

SAFETY: *Safety Regulations:* As per International Safety Guide for Oil Tanker and Terminal (IOTTSG).

Smoking is only permitted in two places jointly approved by the Master and Berthing Master.

The position of the vessel relative to the SBM must be closely monitored by th Ship's crew, advising the Loading Master if vessel approaches the buoy.

Engines must be kept available at all times. Immobilisation of main engines not permitted.

Brunei Shell Petroleum Company reserves the right in the event of flagrant and continued disregard of safety requirements by any ship to stop all operations and order the vessel off the berth for appropriate action to be taken by Charterers and/Owners concerned.

GENERAL: *Refuse:* No garbage, rubbish or refuse may be thrown overboard while the vessel is in Brunei Waters in accordance with Marpol V.

Stores and Laundry Facilities: None.

AUTHORITY: Brunei Shell Petroleum Co. Ltd., Seria 7082, Negara Brunei Darussalam. *Tel:* (673) (03) 78443. *Telex:* Bu 3313. *Cables:* "Brunshell" Seria. *FAX:* (03) 78428. *Contact:* SMR 2, Head of Marine Offshore Operations. M.J. Whickelow, Marine Superintendent.

TANJONG SALIRONG: 04.53 N. 115.06 E.

The log-loading anchorage at Tanjong Salirong is situated 12 miles above the Outer Bar at the mouth of the Brunei River. Vessels of up to 6.5 m. draft may cross the bar at HW.

DOCUMENTS: *(a)* To be produced on arrival:

Marine Department

Boarding Report.
1 Crew List.
1 Passenger List.

Customs Department

2 Inward Manifests.
1 Crew List.
1 Passenger List.
1 Port Clearance.
1 Stores List.
1 Arms List.

Agents
2 Inward Manifests.
1 Crew List.
1 Passenger List.
2 Hatch Lists.
1 Arms List.
(b) To be supplied before ship's departure:
Customs Department
1 Outward Manifest.
1 Passenger List.
1 Crew List.
1 Export Declaration.
Immigration Department
1 Passenger List.
2 Crew Lists.
Vessels
2 Outward Manifests.
Port Clearance.

PILOTAGE: Pilotage is not compulsory. If a Pilot is required for vessels loading logs at Tanjong Salirong then application must be made 24 hours in advance of arrival stating position where it is required for Pilot to embark (i.e. at Outer Bar or Sapo Point). A Customs Officer and Agent's clerk will proceed to Tanjong Salirong from Muara Harbour or Bandar Seri Begawan and will remain on board whilst vessel is loading, accommodation and food provided by ship. Stevedores and tally clerks provide their own food.

HEALTH: *(a)* Immigration: Immigration Officer will board vessel and clear her inward after pratique granted by Port Health Authority. Immigration will require 2 copies of passenger lists and 2 copies of crew list. Vessels inward are cleared up to 2000 hrs. only.

(b) Quarantine: For vessels coming from outside State of Brunei, Port Health Authority will board on arrival at wharf or anchorage. Port Health Authority requires complete copy of Entry Declaration of Health and copies of Passenger and Crew Lists.

RADIO/VHF: See "Muara Port".

BERTHING: Tanjong Salirong is not a port but an anchorage area where vessels are anchored to load timber logs from Limbang in Malaysia.

For all intents and purposes, Tanjong Salirong is under the jurisdiction and control of the Director of Port, Brunei. Therefore, all the relevant information required with regard to port requirements are similar to that required for vessels calling at Muara Port (which see).

STEVEDORES: Stevedoring is in the hands of contractors who supply gangs as required. Working hours are 0730 hrs. to 1215 hrs., 1315 hrs. to 1600 hrs., 1900 to 2300 hrs. (overtime). Overtime is usually worked from 1900 to 2300 hrs., permission to work overtime is required from the Customs Department. No tally clerks available. All tallies to be made by ship's own tally clerks.

MEDICAL: Government General Hospital is situated in Bandar Seri Begawan 16 miles from Muara Port. General Hospital is well equipped with facilities to carry out normal surgery. Inoculations and vaccinations given free of charge.

FRESH WATER: Can be supplied from the wharf at Muara Port and Bandar Seri Begawan. No fresh water is supplied at Tanjong Salirong. No water-boat in State.

FIRE PRECAUTIONS: Fire-floats are stationed at Fire Brigade substation near Customs sub-station in Bandar Seri Begawan.

CONSULS: There are several Embassies, Consulates and High Commissions in Bandar Seri Begawan.

HOLIDAYS: See "Muara Port".

AUTHORITY: *Waterside:* The Director of Marine, Marine Department, Muara 4053, Brunei Darussalam. *Tel:* 771347 to 771356. *Telex:* BU 2650. *FAX:* 771357.
Seaside: Director of Ports, Muara 4020, Brunei Darussalam. *Tel:* 770222-5, 770240. *FAX:* 770283.

NOTES

Please also advise Shipping Guides Ltd.

Bulgaria

BOURGAS: 42.30 N. 27.29 E. (See Plan)

Well protected port at inner end of Bourgas Bay, with good roads, anchorage.

DOCUMENTS:

Master's Declaration.
Cargo Plan.
Custom's Manifest.
Charter Party.
Derat Certificate.
Health Condition Certificate for Crew Members.
Manifest and Consignment of Cargo.
Provision List.
Crew Lists.
Passenger List.
Crew Passports.

APPROACHES: Through fairway, depth of channel 37 ft. 8 in. (11.5 m.).

PILOTAGE: Pilotage in Inner Roads compulsory for vessels above 100 g.r.t. Application for Inner Roads Pilot must be made to Agents at least 2 hours prior to arrival (if incorrect ETA given – pilotage fee is doubled). Pilot Radio on VHF Channel 14.

Outer Roads pilotage not compulsory. Vessels requiring Outer Roads pilotage must advise Agents at least 8 hours before time required and give position of required pick-up point.

Applications for Pilot should include Nationality and call letters; gross tonnage; date (2 figures); time (4 figures) when Pilot required; draft in metres (4 figures).

ANCHORAGE: Outer Roads. Vessels anchored must keep close watch on Roads Signal Station for orders given by flag or signal lamp. Vessel ordered by Authorities to proceed to position Lat. 42° 39′ N., Long. 27° 56′ E., for clearance and Pilot.

RESTRICTIONS: Arrival and sailing from Western Port and Fish Port day and night.

MAX. SIZE: See "Berthing".

RADIO/VHF: Bourgas 500 kHz and VHF Channels 16 and 28. Port Control VHF Channels 16 and 11. Pilots VHF Channel 14.

TUGS: 10×600 h.p. – 2,400 h.p. Compulsory for vessels over 1,000 g.r.t. Tugs join vessels in the Roads. Tugs lines used.

BERTHING:

Harbour	*No. of Berths*	*Length (m.)*	*Depth (ft.)*	*Max. d.w.t. (tons)*
East Harbour	10	1,990	24 – 33	25,000
Bulk Cargo Harbour	5	750	36	60,000
West Harbour	6	900	36	40,000
Oil Harbour	4	265	24 – 45	100,000

No specialised berth for passenger vessels, conventional berth can be provided with 5 days notice.

CRANES: Berths are equipped with electrical portal cranes with capacity from 3 tons to 40 tons. 100 ton capacity floating crane available.

STEVEDORES: Available. Liner ships and chartered vessels on liner terms are obliged to use stevedore and tallyman service.

MEDICAL: All facilities available.

TANKERS: Oil port Drujba. Height of quay 2 m.

Berthing: At the S.W. corner of the Bay there are 2 "T" shaped berths, max. depth 41 ft. 6 in. There are mooring dolphins for vessels length 250 m.

There is an additional tanker berth for vessels loading only, to the South of the "T" shaped berths, depth 30 ft.

Discharging: 2 × 8 in. hoses are connected to the pipe-line on the catwalk. Discharge rate 1,800 to 2,000 t.p.h. depending on the back pressure. The height limit of the hoses is about 54 ft. above sea level. The berth is protected from the prevailing N.E. wind.

Report received 1977 states that the max. draft is 39 ft. – no length limitation. Max. draft at the Product Berth (gas oil) is 23 ft.

Also see "Shipmaster's Report".

DENSITY: 1012 – 1014.

FRESH WATER: Available through hose hydrants or ex-barge. 24 hours notice required.

FUEL: From VTO "Transimpex" Tel: 45751. 72 hours notice required, diesel and gas oil available, also Shell and Castrol lubricants.

FIRE PRECAUTIONS: Constant day and night duty, and direct telephone connection with port fire service.

CONSULS: Turkey.

REPAIRS: Small repairs only.

DRYDOCKS: Floating dock with capacity 3,000 d.w.t. available.

GANGWAY/DECK WATCHMEN: Vessels in Roads not permitted to have gangways down. Vessels alongside quay with lowered gangway must have manropes, safety net, life-buoys with rope of at least 30 m. length attached, an Officer on duty at the gangway and must be lit at night.

OPENING/CLOSING HATCHES: According to charter party.

CERTIFICATES:

Construction
Safety Radio
Classification
Hull and Machinery
Load Line
Cargo gear

CUSTOMS ALLOWANCES: Tobacco – 2 packets per crew member per day. Wines/spirits – for Master, as required, for crew – 1 opened bottle. No limits on board, no seals, crew are allowed to take 1 or 2 packets of cigarettes ashore.

REPATRIATION: Can be fulfilled if necessary. Replacement of crew by Bulgarian nationals is possible.

AIRPORT: Internal and international flights.

TIME: GMT plus 2 hours.

HOLIDAYS: New Year (1st January); May Day (1st May); Day of Slavonic written language (24th May); 24th December (1400 hrs.); 25th and 26th December (Christmas). Time from 1300 hrs. on day before Sundays and Holidays until 0800 hrs. day after is non-working time, but loading and discharging carried out at overtime rates.

TELEPHONES: Port Director Tel: 42293; Pilots Tel: 48324; Customs House Tel: 42301; Bulgarian Shipping Register Tel: 47132; Shipping Agency "Inflot" Tel: 41884, 40379.

SERVICES: Tank cleaning and removal of sludge.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Required. Crew members are given shore passes.

REGULATIONS: *Immigration Regulations of Port Bourgas:*

1. The crew of foreign vessels are allowed to stay overnight in town from 0900 hrs. until 0400 hrs. the next day.
2. On going downtown and back to the ship, the crew has to pass by the Immigration Duty Office for receiving and giving back the shore passes.
3. Visits to other popular areas in the country besides Bourgas prohibited.
4. Permission for spending the night at a hotel is granted by the Immigration Authorities, and the crew's address should be registered at the hotel.
5. Embarking on board by persons without permanent or occasional permission issued by the Immigration Authorities is forbidden.
6. It is Master's responsibility to arrange crew on watch at gangway, according to the international practice.
7. It is the Immigration Authorities' right to control and check how the Immigration regulations are being complied with at any time round-the-clock.
8. Those who violate the Immigration regulations of Bourgas will be sanctioned according to the laws of Bulgaria.

Important Customs Declaration: The crews of the vessels arriving at the Port of Bourgas must be acquainted with the following:

1. After the accomplishment of Customs Control and berthing, all sailors are obliged to pass through the Customs Hall.
2. If they have received Bulgarian Lova from the Master through the Agent of the vessel, a list of the sailors and the amounts received must be presented at the Customs.
3. If they exchange currency at the Exchange Bureaux in town, they must request and keep the slip for the exchanged currency. Illegal exchange of currency is strictly forbidden and is subject to confiscation in accordance with the Customs Law.
4. If they purchase goods at the shops, they are obliged to present a shop invoice with the value of the goods and a document for exchange currency, obeying the prohibitions for export of foodstuffs and non-edible goods, in accordance with the Appendix (see below).
   Prohibitions are void if executed by official ship chandler.
5. Eligible to accomplish ship chandler activities are VTO "Transimplex" firms and private traders, in the area of the Port of Bourgas, registered at the Court and at the Customs. The suppliers issue an official document (invoice), signed and stamped by themselves, the Customs and the Master of the vessel.
6. The purchases at the two duty free shops in the port are done after certifying of the invoice by the Customs Officer on duty.
   The Customs reserve the right to carry out checks for the availability of newly bought goods on board the vessel.
7. The import and export of Bulgarian Lova is strictly prohibited.
8. Actions of the crew during their stay at the Port of Bourgas and liability against the Customs are born by the Master of the ship.

Appendix: List of the goods forbidden to be exported from Bulgaria:

Foodstuffs:

1. Meat and meat products.
2. Milk and dairy goods.
3. Beans and lentils.
4. Flour, lentils and semolina (all types).
5. Sugar.
6. Cooking oil and other vegetable oils.
7. Children's food.
8. Rice.
9. Imported products and herbs (including coffee and cocoa).
10. Red pepper (ground).
11. Cereals and products made from cereals.
12. Sugar products.
13. Canned food.
14. Margarine.
15. Potatoes.
16. Sunflower seeds and food for birds.
17. Live farm animals.

Non-edible goods:

1. Clothes and shoes for babies and children.
2. Vacuum cleaners.
3. Clocks for double-tariffed electric motors.
4. Cables and conductors (wires).
5. Water pumps.
6. Linen (all kinds).
7. Towels.
8. Paints and varnishes (all kinds).
9. Wool and woolen yarn.
10. Detergents and soap powders.
11. Natural fur and products made from it.
12. Brass appliances.
13. Jar covers.
14. Liquid fuel in excess of that normal for ship's tanks.
15. Medicines and medical products.
16. Art works of national value.

DELAYS: Possible while waiting for Pilot owing to bad weather or waiting turn for berth.

SHIPMASTER'S REPORT: March 1988.
Vessel: 40,000 d.w.t. tanker.
Documents:
7 copies Crew List.
1 copy Vaccination List.
1 copy Stores List.
1 copy Crew Declaration
Maritime Declaration of Health (including list of ports called in last 21 days.
Ship's Register.
Safety Equipment Certificate.
Safety Radio Certificate.
Certificate of Financial Security.

The vessel's certificates are retained ashore by the authorities until outward clearance is received.

7 officials boarded for inward clearance and 4 officials boarded for outward clearance.

All ship's personnel are to be sighted by Immigration officials, inward and outward.

Pilotage: The Pilot boards from a tug at the Inner Anchorage.

Tugs: 2 tugs used for berthing. Tugs lines used.

Berthing: Vessel berthed at Berth No. 1. 2 mooring boats assist and run the backsprings first.

Moorings forward: 2 headlines, 2 breast lines and 2 spring lines.
Mooring aft: 2 spring lines and 3 stern lines.
No shore gangway.

Cargo Handling: Slop facilities available. We discharged 450 tonnes.

The Safety Inspector who boarded to sight the Oil Record Book also asked to see the slop discharge receipts.

2×8 in. hoses used for loading.

On completion of loading, paperwork takes about 1.5 hours.

Pilot requires 30 minutes notice by VHF Channels 16, 14 or 11.

Shore Leave: No shore passes issued. Seaman's Book or Passport are stamped by Immigration and used as shore passes.

General: Vessel is allowed to take out sufficient meat for 2 days, remainder sealed.

Overside painting permitted, except for ship's name, draft marks and load line.

SHIPMASTER'S REPORT: March 1993.
Chart: B.A. 2399.
Certificates:
Ship's Register.
Load Line Certificate.
Safety Construction Certificate.
Safety Equipment Certificate.
Safety Radio Certificate.
I.O.P.P. Certificate.
Safe Manning Certificate.
Documents:
1 copy Health Declaration.
1 copy Vaccination List.
7 copies Crew List.
3 copies Stores List, including Bonded Stores.
2 copies Personal Effects List.
2 copies Currency Declaration.
1 copy Cargo Manifest.

Pilotage: Not compulsory for approaching the anchorage, but Port Control should be informed by VHF Channel 16 and thereafter Channel 11.

Anchorage: There are several safe and well protected anchorages with good holding ground just off the harbour and South of the Fairway Channel.

Berthing: This vessel was loaded with 10,000 tonnes of wheat in bulk, and berthed at No. 22 (West Port) with a max. draft of 8.0 m.

The cargo was discharged by shore cranes with grabs into hoppers and trucks. Rate of discharge was low (about 1,000 tonnes/day), because cargo was direct delivery and had to be taken some several hundreds of kilometres before trucks returned to be loaded again.

Density: Between 1006 and 1010, because of narrow small river outlet close to the berth.

Fresh Water: Fresh water can be obtained by barge in the roads at a cost of U.S.$ 6.00/ton, or by shore line at a cost of U.S.$ 5.00/ton at a rate of 12 ton/hr.

Shore Leave: Shore passes, filled out on arrival, are being issued and seamen are asked to pass Immigration to hand in the shore passes, and to keep passports on the way out, and to collect same when returning into the port again. Shore leave is granted from 0900 hrs. until 0400 hrs. the following day. Heavy penalties may be imposed by Immigration Authorities if regulations not complied with.

Garbage: Garbage removal is compulsory for ships with stay longer than 3 days in port. Costs per garbage drum of about 200 ltr. is U.S.$ 32.90, plus hire of barge U.S.$ 31.00.

Telephones: Customs Tel: 45398.

Agent: Dekka Shipping Agency-Burgas, 20 Slavyanska Street, P.O.Box 198, Bourgas. Tel: 42334, 43256, 48511. Telex: 83201 Dekka Bg. Fax: 42305.

AUTHORITY: Port of Bourgas Joint Stock Co., 1 Knyaz Al.Batenberg Street, 8000 Bourgas, Bulgaria. *Tel:* (35956) 42293, 42475. *Telex:* 83520. *FAX:* (35956) 42156. *Contact:* D. Alexiev, General Director.

AGENT: Naviagent, 2 Geo. Milev Street, 8000 Bourgas, Bulgaria. Tel: 52 235569, 56 46728. Fax: 56 41738. Telex: 83343, 83556. Cables: Naviagent Bourgas, also via Naviagent Varna.

PORTS IN THE AREA OF PORT BOURGAS

Port Nessebar: Situated on 18 miles North-eastern of Bourgas in the Bourgas Bay. Available 2 berths for passenger and other small ships with draft up to 19 ft.

VARNA: 43.12 N. 27.57 E. (See Plan)

Well protected port at inner end of Varna Bay.

DOCUMENTS:
General Declaration.
Cargo Plan.
Customs Manifest.
Charter Party.
Derat Certificate.
Health Condition Certificate for Crew Members.
Manifest and Consignment of Cargo.
Provision List.
Crew List.
Passenger List.
Crew Passports.

APPROACHES: Through fairway, depth of channel 39 ft.

PILOTAGE: Compulsory for vessels over 100 g.r.t. Vessels requiring pilotage at Outer Roads must radio Agents 24 and 12 hours prior to arrival giving position of required pick-up point, also: name of vessel; nationality and call letters; g.r.t.; length; draft in metres (4 figures); date (2 figures); time (4 figures).

Pilot comes from Inner Port of Varna. In bad weather impossible for pilot boat to reach Outer Roads and vessel will be so informed by Agents "Inflot" and instructed to proceed to anchorage in Varna Bay.

Pilot boat is a patrol boat with yellow funnel and letter "P" on a blue strip and carries international recognition signals by day and night.

ANCHORAGES: There are 2 anchorage areas.

Summer: Compulsory for all types of ships through the Summer, and for tankers all year round. The anchorage is situated South of the Galata Cape, not less than 6 cables offshore.

Winter: The anchorage is situated 2 miles East of "Varna" Lighthouse and North of the Separation Zone, not less than 1 mile offshore.

RESTRICTIONS/MAX. SIZE: New restrictions in force from 30th June 1995:

Varna East:

Berth No.	*LOA* (m.)	*Draft* (ft.)
1	177	23
2	129	21
3		21
4	507	21
5		20
6	143	25
7	179	35
8	146	35
9	204	29
10	145	27
11	110	21
12	240	23
13	220	21

Varna West:
Berths No. 0, 2, 6, 11, 12, 13, 14, 15, 16 and 17 – Draft 29 ft.
Berths No. 1, 3, 4, 5, 7, 8, 9 and 10 – Draft 32 ft.
Also see "Canal Road – Varna West".

Petroleum Terminal:
Berth No. 1: LOA 220 m., draft 29 ft.
Berth No. 2: LOA 180 m., draft 28 ft. (Presently out of order).
Berth No. 3: LOA 100 m., draft 18 ft.

Canal Road – Varna West:
Air draft: 41 m.
Max. draft: 29 ft. 6 in.
Vessels over 200 m. LOA, 26 m. beam and 20,000 gross tons pass through canal in daytime only.

Channel Proceeding to Shiprepair and Shipbuilding Yard:
Vessels over 12,000 gross tons pass through channel in daytime only.
Max. draft: 5.3 m.
Trim: 0.5 m. or less.
Wind speed: 5.0 m./sec. or less.

RADIO: Radio Varna LZW 500 kHz. LZW 42 – 8532 kHz. VHF Channels 26 and 16. Port Control VHF Channels 16 and 11; Pilots VHF Channel 14.

TUGS: 11 tugs available. Compulsory for vessels over 1,000 g.r.t. Ship's lines used.

BERTHING:

Port of Varna-West: Situated 14 nautical miles from Port Varna. 7 berths available for bulk carriers, 3 berths for containers and 5 berths for general cargo vessels. Ships of max. 32 ft. draft proceed in one direction only, through 2 deep channels with Varna Lake between them, with limitation in speed up to 6 knots. A container platform for loading and discharging of 20 ft. containers and specialized loading/discharging equipment available.

Port of Varna-East: Total wharf length 2,072 m. Max. depth 36 ft. Suited and used for handling general cargoes, machinery, technical equipment, metals, fertilisers and grain. Container Terminal in operation.

Ferry-boat Complex: Situated 13 nautical miles from Port Varna, next before Port Varna-West. Two specialised berths for ferries with max. draft 26 ft. available.

Port Balchik: Situated 18 nautical miles North of Port Varna, for ships with max. draft 24 ft. One berth of 150 m. for grain and cattle available. Entering and leaving the port with a Pilot commencing from the Outer Roads of Port Varna.

Lesport (Port Topolly): Specialised port for wood materials. Situated on the Northern part of Varna lake, 8 nautical miles from Port Varna. 3 berths for ships with max. draft 26 ft., 21 ft. and 15 ft. available.

Port of the Thermo-Electrical Station Varna: Specialised port for coal, situated on the West part of Varna Lake, 8.5 nautical miles from Port Varna. 2 berths (total length 610 m.) for ships with max. draft 32 ft. available.

CRANES: Bridge cranes of 5 tons – 40 tons and mobile cranes of 7 tons – 40 tons, also 100 ton floating crane is available.

Container Terminal: Loading and discharging of 20 ft. and 40 ft. containers. The necessary specialized loading and discharging equipment is available.

BULK HANDLING FACILITIES: Conveyor for bulk cargoes, capacity for 24 hours is 3,000 tons.

Automated loading station for chemical products – 3,000 tons per day for bulk cargoes and 3,000 – 6,000 tons per day for bagged cargoes.

Suction facilities for bulk cement.

Liquid cargoes handled at 300 t.p.h. – 1,000 t.p.h.

BRIDGES: When proceeding to and from Varna Lake, vessels pass under the new Asparuhov Bridge (41.72 m. above the water level).

STEVEDORES: Available. Liner ships and chartered vessels on liner terms are obliged to use stevedore and tallyman service.

MEDICAL: All facilities available.

TANKERS: 3 berths, draft 29 ft., 28 ft. and 18 ft.

Also see "Restrictions/Max. Size".

DENSITY: 1013.

FRESH WATER: Available through shore hydrants or ex-barge. 24 hours notice required.

FUEL: From VTO "Transimpex", 22 Sofia Street. Tel: 230475. Telex: 77509. 72 hours notice required. Bunker "C", diesel and gas oil available. Lubricants: Shell and Castrol – 48 hours notice required.

FIRE PRECAUTIONS: Constant day and night duty and direct telephone connection with port fire service.

CONSULS: Russia and Poland.

REPAIRS: All kinds of repairs possible in ship-repair yard.

DRY DOCKS: Suitable for vessels up to 30,000 d.w.t.

Floating Docks: 2 floating docks with lifting capacity of 4,500 tons and 12,500 tons respectively.

GANGWAY/DECK WATCHMEN: Vessels in roads not permitted to have gangway down. Vessels alongside quay with lowered gangway must have manropes, safety-net, life-buoys with rope of at least 30 m. length attached, an officer duty at the gangway and must be lit at night.

OPENING/CLOSING HATCHES: In accordance with charter party.

CERTIFICATES: Construction, Hull and Machinery, Safety Radio, Load-Line, Classification, Cargo Gear, Safety Equipment, International Oil Pollution Prevention Certificate, Tonnage, Certificate of Registry/Act of Nationality, Certificates of Competency of Master, Chief Officer, Chief Engineer, 2nd Engineer, Radio Officer and seamen.

CUSTOMS ALLOWANCES: Tobacco: 2 packets per crew member per day. Wines/spirits: For Master, as required, for crew – 1 opened bottle. No limits on board, no seals, crew are allowed to take 1 or 2 packets of cigarettes ashore.

REPATRIATION: Can be fulfilled if necessary.

AIRPORT: Internal and International Flights.

TIME: GMT plus 2 hours (1st October – 1st April). GMT plus 3 hours (1st April – 1st October).

HOLIDAYS: New Year (1st January), Day of Liberation of Bulgaria from Ottoman domination, Pasche (2 days in April), May Day (1st May), Day of Slavonic written language (24th May), 24th December (1400 hrs.), 25th and 26th December (Christmas). Time from 1300 hrs. on day before Sundays and holidays until 0800 hrs. day after is non-working time, but loading and discharging carried out at overtime rates.

TELEPHONES: Port Director 223479; Pilots 227023; Custom House 225532; Lloyd's representative 227167; Soviet Register 222651; Bulgarian Shipping Register 226122; State Shipping Agency "Inflot" 222669. State Shipping Inspectorate 225409.

SERVICES: Tank cleaning and removal of sludge. Compass adjusting.

SHORE LEAVE: Allowed.

REGULATIONS: Given to Master on arrival.

IDENTIFICATION CARDS: Required. Crew members are given shore passes.

DELAYS: Possible while waiting for Pilot owing to bad weather or waiting turn for berth.

AUTHORITY: Port of Varna Co., Slaveykov Square 1, 9000 Varna, Bulgaria. *Tel:* 222721. *Telex:* 77518. *FAX:* 242134. *Contact:* S. Paunov, Harbour Manager (Tel: 223479). Harbour Master (Primorski Blvd 5. Tel: 234031. Telex: 77460. Fax: 233009).

Port of Varna-East: Tel: 222150 (Operations Control Department), 226071 (Coordination Office).

Port of Varna-West: Tel: 231176. Fax: (0519) 3027. Telex: 77446.

Port of Varna – Thermal Power Plant: Tel: (216) 2716, 2717.

Port of Balchik: Tel: 0579/2024.

AGENT: Naviagent, 1 Primorski Boulevard, 9000 Varna, Bulgaria. Tel: 52 235569, 52 244167. Fax: 52 237510, 52 600363. Cables: Naviagent Varna. Inmarsat A: 1435501. Telex: 77351, 77525, 77388. Inmarsat A: 1435501.

NOTES

Please also advise Shipping Guides Ltd.

SHIPMASTER'S REPORT: March 1988.
Vessel: 40,000 d.w.t. tanker.
Documents:
7 copies Crew List.
1 copy Vaccination List.
1 copy Stores List.
1 copy Crew Declaration
Maritime Declaration of Health (including list of ports called in last 21 days.
Ship's Register.
Safety Equipment Certificate.
Safety Radio Certificate.
Certificate of Financial Security.

The vessel's certificates are retained ashore by the authorities until outward clearance is received.

7 officials boarded for inward clearance and 4 officials boarded for outward clearance.

All ship's personnel are to be sighted by Immigration officials, inward and outward.

Pilotage: The Pilot boards from a tug at the Inner Anchorage.

Tugs: 2 tugs used for berthing. Tugs lines used.

Berthing: Vessel berthed at Berth No. 1. 2 mooring boats assist and run the backsprings first.

Moorings forward: 2 headlines, 2 breast lines and 2 spring lines. Mooring aft: 2 spring lines and 3 stern lines.

No shore gangway.

Cargo Handling: Slop facilities available. We discharged 450 tonnes.

The Safety Inspector who boarded to sight the Oil Record Book also asked to see the slop discharge receipts.

2×8 in. hoses used for loading.

On completion of loading, paperwork takes about 1.5 hours.

Pilot requires 30 minutes notice by VHF Channels 16, 14 or 11.

Shore Leave: No shore passes issued. Seaman's Book or Passport are stamped by Immigration and used as shore passes.

General: Vessel is allowed to take out sufficient meat for 2 days, remainder sealed.

Overside painting permitted, except for ship's name, draft marks and load line.

SHIPMASTER'S REPORT: March 1993.
Chart: B.A. 2399.
Certificates:
Ship's Register.
Load Line Certificate.
Safety Construction Certificate.
Safety Equipment Certificate.
Safety Radio Certificate.
I.O.P.P. Certificate.
Safe Manning Certificate.
Documents:
1 copy Health Declaration.
1 copy Vaccination List.
7 copies Crew List.
3 copies Stores List, including Bonded Stores.
2 copies Personal Effects List.
2 copies Currency Declaration.
1 copy Cargo Manifest.

Pilotage: Not compulsory for approaching the anchorage, but Port Control should be informed by VHF Channel 16 and thereafter Channel 11.

Anchorage: There are several safe and well protected anchorages with good holding ground just off the harbour and South of the Fairway Channel.

Berthing: This vessel was loaded with 10,000 tonnes of wheat in bulk, and berthed at No. 22 (West Port) with a max. draft of 8.0 m.

The cargo was discharged by shore cranes with grabs into hoppers and trucks. Rate of discharge was low (about 1,000 tonnes/day), because cargo was direct delivery and had to be taken some several hundreds of kilometres before trucks returned to be loaded again.

Density: Between 1006 and 1010, because of narrow small river outlet close to the berth.

Fresh Water: Fresh water can be obtained by barge in the roads at a cost of U.S.$ 6.00/ton, or by shore line at a cost of U.S.$ 5.00/ton at a rate of 12 ton/hr.

Shore Leave: Shore passes, filled out on arrival, are being issued and seamen are asked to pass Immigration to hand in the shore passes, and to keep passports on the way out, and to collect same when returning into the port again. Shore leave is granted from 0900 hrs. until 0400 hrs. the following day. Heavy penalties may be imposed by Immigration Authorities if regulations not complied with.

Garbage: Garbage removal is compulsory for ships with stay longer than 3 days in port. Costs per garbage drum of about 200 ltr. is U.S.$ 32.90, plus hire of barge U.S.$ 31.00.

Telephones: Customs Tel: 45398.

Agent: Dekka Shipping Agency-Burgas, 20 Slavyanska Street, P.O.Box 198, Bourgas. Tel: 42334, 43256, 48511. Telex: 83201 Dekka Bg. Fax: 42305.

AUTHORITY: Port of Bourgas Joint Stock Co., 1 Knyaz Al.Batenberg Street, 8000 Bourgas, Bulgaria. *Tel:* (35956) 42293, 42475. *Telex:* 83520. *FAX:* (35956) 42156. *Contact:* D. Alexiev, General Director.

AGENT: Naviagent, 2 Geo. Milev Street, 8000 Bourgas, Bulgaria. Tel: 52 235569, 56 46728. Fax: 56 41738. Telex: 83343, 83556. Cables: Naviagent Bourgas, also via Naviagent Varna.

PORTS IN THE AREA OF PORT BOURGAS

Port Nessebar: Situated on 18 miles North-eastern of Bourgas in the Bourgas Bay. Available 2 berths for passenger and other small ships with draft up to 19 ft.

VARNA: 43.12 N. 27.57 E. (See Plan)

Well protected port at inner end of Varna Bay.

DOCUMENTS:
General Declaration.
Cargo Plan.
Customs Manifest.
Charter Party.
Derat Certificate.
Health Condition Certificate for Crew Members.
Manifest and Consignment of Cargo.
Provision List.
Crew List.
Passenger List.
Crew Passports.

APPROACHES: Through fairway, depth of channel 39 ft.

PILOTAGE: Compulsory for vessels over 100 g.r.t. Vessels requiring pilotage at Outer Roads must radio Agents 24 and 12 hours prior to arrival giving position of required pick-up point, also: name of vessel; nationality and call letters; g.r.t.; length; draft in metres (4 figures); date (2 figures); time (4 figures).

Pilot comes from Inner Port of Varna. In bad weather impossible for pilot boat to reach Outer Roads and vessel will be so informed by Agents "Inflot" and instructed to proceed to anchorage in Varna Bay.

Pilot boat is a patrol boat with yellow funnel and letter "P" on a blue strip and carries international recognition signals by day and night.

ANCHORAGES: There are 2 anchorage areas.

Summer: Compulsory for all types of ships through the Summer, and for tankers all year round. The anchorage is situated South of the Galata Cape, not less than 6 cables offshore.

Winter: The anchorage is situated 2 miles East of "Varna" Lighthouse and North of the Separation Zone, not less than 1 mile offshore.

RESTRICTIONS/MAX. SIZE: New restrictions in force from 30th June 1995:

Varna East:

Berth No.	*LOA* (m.)	*Draft* (ft.)
1	177	23
2	129	21
3		21
4	507	21
5		20
6	143	25
7	179	35
8	146	35
9	204	29
10	145	27
11	110	21
12	240	23
13	220	21

Varna West:
Berths No. 0, 2, 6, 11, 12, 13, 14, 15, 16 and 17 – Draft 29 ft.
Berths No. 1, 3, 4, 5, 7, 8, 9 and 10 – Draft 32 ft.
Also see "Canal Road – Varna West".

Petroleum Terminal:
Berth No. 1: LOA 220 m., draft 29 ft.
Berth No. 2: LOA 180 m., draft 28 ft. (Presently out of order).
Berth No. 3: LOA 100 m., draft 18 ft.

Canal Road – Varna West:
Air draft: 41 m.
Max. draft: 29 ft. 6 in.
Vessels over 200 m. LOA, 26 m. beam and 20,000 gross tons pass through canal in daytime only.

Channel Proceeding to Shiprepair and Shipbuilding Yard:
Vessels over 12,000 gross tons pass through channel in daytime only.
Max. draft: 5.3 m.
Trim: 0.5 m. or less.
Wind speed: 5.0 m./sec. or less.

RADIO: Radio Varna LZW 500 kHz. LZW 42 – 8532 kHz. VHF Channels 26 and 16. Port Control VHF Channels 16 and 11; Pilots VHF Channel 14.

TUGS: 11 tugs available. Compulsory for vessels over 1,000 g.r.t. Ship's lines used.

BERTHING:

Port of Varna-West: Situated 14 nautical miles from Port Varna. 7 berths available for bulk carriers, 3 berths for containers and 5 berths for general cargo vessels. Ships of max. 32 ft. draft proceed in one direction only, through 2 deep channels with Varna Lake between them, with limitation in speed up to 6 knots. A container platform for loading and discharging of 20 ft. containers and specialized loading/discharging equipment available.

Port of Varna-East: Total wharf length 2,072 m. Max. depth 36 ft. Suited and used for handling general cargoes, machinery, technical equipment, metals, fertilisers and grain. Container Terminal in operation.

Ferry-boat Complex: Situated 13 nautical miles from Port Varna, next before Port Varna-West. Two specialised berths for ferries with max. draft 26 ft. available.

Port Balchik: Situated 18 nautical miles North of Port Varna, for ships with max. draft 24 ft. One berth of 150 m. for grain and cattle available. Entering and leaving the port with a Pilot commencing from the Outer Roads of Port Varna.

Lesport (Port Topolly): Specialised port for wood materials. Situated on the Northern part of Varna lake, 8 nautical miles from Port Varna. 3 berths for ships with max. draft 26 ft., 21 ft. and 15 ft. available.

Port of the Thermo-Electrical Station Varna: Specialised port for coal, situated on the West part of Varna Lake, 8.5 nautical miles from Port Varna. 2 berths (total length 610 m.) for ships with max. draft 32 ft. available.

CRANES: Bridge cranes of 5 tons – 40 tons and mobile cranes of 7 tons – 40 tons, also 100 ton floating crane is available.

Container Terminal: Loading and discharging of 20 ft. and 40 ft. containers. The necessary specialized loading and discharging equipment is available.

BULK HANDLING FACILITIES: Conveyor for bulk cargoes, capacity for 24 hours is 3,000 tons.

Automated loading station for chemical products – 3,000 tons per day for bulk cargoes and 3,000 – 6,000 tons per day for bagged cargoes.

Suction facilities for bulk cement.

Liquid cargoes handled at 300 t.p.h. – 1,000 t.p.h.

BRIDGES: When proceeding to and from Varna Lake, vessels pass under the new Asparuhov Bridge (41.72 m. above the water level).

STEVEDORES: Available. Liner ships and chartered vessels on liner terms are obliged to use stevedore and tallyman service.

MEDICAL: All facilities available.

TANKERS: 3 berths, draft 29 ft., 28 ft. and 18 ft.

Also see "Restrictions/Max. Size".

DENSITY: 1013.

FRESH WATER: Available through shore hydrants or ex-barge. 24 hours notice required.

FUEL: From VTO "Transimpex", 22 Sofia Street. Tel: 230475. Telex: 77509. 72 hours notice required. Bunker "C", diesel and gas oil available. Lubricants: Shell and Castrol – 48 hours notice required.

FIRE PRECAUTIONS: Constant day and night duty and direct telephone connection with port fire service.

CONSULS: Russia and Poland.

REPAIRS: All kinds of repairs possible in ship-repair yard.

DRY DOCKS: Suitable for vessels up to 30,000 d.w.t.

Floating Docks: 2 floating docks with lifting capacity of 4,500 tons and 12,500 tons respectively.

GANGWAY/DECK WATCHMEN: Vessels in roads not permitted to have gangway down. Vessels alongside quay with lowered gangway must have manropes, safety-net, life-buoys with rope of at least 30 m. length attached, an officer duty at the gangway and must be lit at night.

OPENING/CLOSING HATCHES: In accordance with charter party.

CERTIFICATES: Construction, Hull and Machinery, Safety Radio, Load-Line, Classification, Cargo Gear, Safety Equipment, International Oil Pollution Prevention Certificate, Tonnage, Certificate of Registry/Act of Nationality, Certificates of Competency of Master, Chief Officer, Chief Engineer, 2nd Engineer, Radio Officer and seamen.

CUSTOMS ALLOWANCES: Tobacco: 2 packets per crew member per day. Wines/spirits: For Master, as required, for crew – 1 opened bottle. No limits on board, no seals, crew are allowed to take 1 or 2 packets of cigarettes ashore.

REPATRIATION: Can be fulfilled if necessary.

AIRPORT: Internal and International Flights.

TIME: GMT plus 2 hours (1st October – 1st April). GMT plus 3 hours (1st April – 1st October).

HOLIDAYS: New Year (1st January), Day of Liberation of Bulgaria from Ottoman domination, Pasche (2 days in April), May Day (1st May), Day of Slavonic written language (24th May), 24th December (1400 hrs.), 25th and 26th December (Christmas). Time from 1300 hrs. on day before Sundays and holidays until 0800 hrs. day after is non-working time, but loading and discharging carried out at overtime rates.

TELEPHONES: Port Director 223479; Pilots 227023; Custom House 225532; Lloyd's representative 227167; Soviet Register 222651; Bulgarian Shipping Register 226122; State Shipping Agency "Inflot" 222669. State Shipping Inspectorate 225409.

SERVICES: Tank cleaning and removal of sludge. Compass adjusting.

SHORE LEAVE: Allowed.

REGULATIONS: Given to Master on arrival.

IDENTIFICATION CARDS: Required. Crew members are given shore passes.

DELAYS: Possible while waiting for Pilot owing to bad weather or waiting turn for berth.

AUTHORITY: Port of Varna Co., Slaveykov Square 1, 9000 Varna, Bulgaria. *Tel:* 222721. *Telex:* 77518. *FAX:* 242134. *Contact:* S. Paunov, Harbour Manager (Tel: 223479). Harbour Master (Primorski Blvd 5. Tel: 234031. Telex: 77460. Fax: 233009).

Port of Varna-East: Tel: 222150 (Operations Control Department), 226071 (Coordination Office).

Port of Varna-West: Tel: 231176. Fax: (0519) 3027. Telex: 77446.

Port of Varna – Thermal Power Plant: Tel: (216) 2716, 2717.

Port of Balchik: Tel: 0579/2024.

AGENT: Naviagent, 1 Primorski Boulevard, 9000 Varna, Bulgaria. Tel: 52 235569, 52 244167. Fax: 52 237510, 52 600363. Cables: Naviagent Varna. Inmarsat A: 1435501. Telex: 77351, 77525, 77388. Inmarsat A: 1435501.

NOTES

Please also advise Shipping Guides Ltd.

Cambodia

SIHANOUKVILLE: 10.38 N. 103.29 E. (See Plan)

PORT LIMITS: The seaward boundaries are fixed by the Buoys "SV" to the South, and Buoy "A" to the North for cargo ships and Buoy "T" 2 miles to N.W. of Rocher Carre for tankers.

DOCUMENTS:
Entry form to be completed on arrival:

16 Manifests of Cargo for Discharge.
1 Manifest of Cargo in Transit.
3 copies Bill of Lading.
7 Crew Lists.
7 Passenger Lists.
3 Lists of Provisions.
3 Lists of Crew Personal Effects.
1 copy Maritime Declaration of Health on Arrival.
1 copy Vaccination List.
3 copies Lists of Drugs and Narcotics.
1 copy First Aid Declaration.
1 copy List of Animals.
1 copy Place of Origin of Fresh Water Onboard.
3 copies Cargo Plan.
1 copy Clearance from Last Port.
Valid originals of ship's documents (See "Certificates").
Derat Exemption Certificate.

PILOTAGE: Compulsory for all vessels of more than 150 n.r.t. Contact "Sihport" giving ship's particulars, cargo tonnage and ETA, 24 hours and 12 hours before arrival. Pilot boat carries international pilot signal by day and 2 lights (white over red) at night. Pilot boards cargo vessels at "SV" Buoy or "A" Buoy, and tankers at "T" Buoy situated 2 miles N.W. of Rocher Carre. All vessels can communicate with Pilot Station by international sound signal at any time and by VHF Channel 16 during working hours. Pilot refuses to board vessels which do not have a safe method of boarding.

ANCHORAGES: South Anchorage in the depth of 10 m. – 11 m. (in the vicinity of "SV" Buoy) for all ships.

Northern Anchorage in the depth of 10 m., situated West of the line 030°/210° passing Rocher Eiffel, and North of Lat. 10° 39′ N. for ships of 2,000 g.r.t. and draft less than 7.0 m.

Tanker Anchorage in the depth of 14 m. – 15 m., situated 2 miles N.W. of Rocher Carre, for all types of tankers.

RESTRICTIONS: Berthing daylight only, and unberthing day and night, but delays may occur in bad weather during S.W. monsoon. Special berthing at night-time can be arranged with Harbour Master's Office and Pilot. Draft is limited at 8.5 m.

MAX. SIZE: For ships with draft over 8.5 m., the draft must not be over 7.6 m. plus height of tide. For Tanker Wharf, draft is limited at 4.20 m. and length not more than 80 m.

HEALTH: Authorities board all vessels on arrival at the quay or in the outer harbour. Quarantine flag to be flown by all vessels. In case of suspected disease on board, contact "Sante Sihanoukville" by radio before arrival.

TUGS: Two tugs are available to assist in manoeuvring. The largest tug is 1,600 h.p. Tug joins vessel in immediate vicinity of the berth. Vessel's lines used. A minimum of one tug is required for berthing and unberthing.

BERTHING: Commercial Dock (290 m.): West side, 2 berths for vessels up to 8.50 m. draft. East side, 2 berths for vessels up to 7.00 m. draft.

New wharf (350 m.): One berth for vessel up to 7.0 m. draft and 2 berths for vessel up to 6.5 m. draft.

CRANES: Mobile cranes up to 80 tonnes capacity available.

STEVEDORES: Working times from 0600 hrs. – 1100 hrs., 1300 hrs. – 1800 hrs. and 1800 hrs. – 2300 hrs. 24 hour working can be arranged in some cases.

MEDICAL: Advance notice required of serious cases to arrange transportation to Phnom Penh. Local doctors and hospital available. Crew require cholera and yellow fever certificates.

TANKERS: One berth (length 53 m.) for vessels up to 80 m. LOA and draft 4.2 m.

DENSITY: 1022 in February; 1012 in July.

FRESH WATER: Available at dock and by truck.

FUEL: Not available.

CONSULS: Russia and Vietnam. All other consuls at Phnom Penh.

REPAIRS: Small repairs can be undertaken on board.

GANGWAY/DECK WATCHMEN: Available but not compulsory.

OPENING/CLOSING HATCHES: Performed by stevedores.

CERTIFICATES:

Ship's Register.
International Tonnage Certificate.
Passenger Safety Certificate.
Safety Equipment Certificate.
Safety Radio Certificate.
Safety Construction Certificate.
Load Line Certificate.
International Oil Prevention Certificate.

CUSTOMS ALLOWANCES: Each crew member allowed 1 carton cigarettes and 1 bottle alcohol for 5 days. Master not included in this restriction.

REPATRIATION: Can be arranged.

AIRPORT: Ream Airport, 18 km. from Sihanoukville City, domestic flights only. Pochentong Airport at Phnom Penh 226 km. from Sihanoukville City, with international services.

TIME: GMT plus 7 hours all the year round.

HOLIDAYS: Work can usually be arranged on all days except at New Year, 13th, 14th and 15th April, and for 2 days near the end of September (Buddist Soul Day).

POLICE/AMBULANCE/FIRE: Contact Port Control.

SHORE LEAVE: Allowed, if requested by Master. Passports or Seamen's Books are taken by Immigration in exchange for a shore pass, which is to be surrendered when vessel departs.

GARBAGE DISPOSAL: Collection service is available. Dustmen come on board on the first day of the ship's stay at wharf, and every 5 days or on request from Master or Agent.

DEVELOPMENTS: New wharf extension (300 m.) will be started in 1997.

Tanker mooring buoys for tankers of 7.0 m. draft will be established in near future.

AUTHORITY: Sihanoukville Port Authority, Sihanoukville Port, Kingdom of Cambodia. *Tel:* (015) 343499. *FAX:* (015) 53693. *Contact:* Port Director.

NOTES

Please also advise Shipping Guides Ltd.

Republic of Cameroon

CAMPO: 02.21 N. 09.49 E.

SHIPMASTER'S REPORT: March 1996.

DOCUMENTS: See "Douala".

Agent brings all documents on board and completes them onshore for Health, Immigration and Customs Authorities. Sometimes, one Customs Agent comes onboard.

APPROACHES: *Navigation Aids:* Punta Campo and the coast up to the mouth of the River Campo give a good target on the radar. There are no difficulties in approach and anchoring by night, but care must be taken to avoid wrecks in the vicinity of the anchorage position as shown on the British Admiralty Chart No. 1888. There are no lights available.

ANCHORAGE: With a draft of 7.0 m., a good and safe anchorage can be found in position 342° from Punta Campo at 2.3 miles.

VHF: The shipper of logs keeps a continuous watch on VHF, when a ship is in the roads.

SPECIALISED CARGO HANDLING FACILITIES: *Timber in Logs:* 2 lighters of 250/250 tons and 2 lighters of 120/150 tons are available with 2 tugs. Loading rate is about 900 to 1500 cu.m. per day with 2 gangs.

General Rules of Work: On arrival and before start of loading, Master has to accept and sign the "General Rules of Work for Loading of Logs", tendered by stevedores. The integral text is reproduced here under, and it is also valid for the roads at Kribi.

1. Owners of ships loading logs at the open sea anchorages of Kribi or Campo are deemed to be aware of all particularities of loading logs (either drift-logs, raft-logs or logs on floating lighter) on these roads, which are assimilable to open sea. As a consequence, the resulting risks for the ship's hull, as well as for the rigging of hatch-covering gear, hatch coamings and any inside equipment of tweendecks and holds are fully accepted by shipowners.
   No responsibility shall attach to the stevedore in case loss of/or damage to the ship and/or logs occur during loading operations, unless if due to the established fault, error or negligence of the stevedore.
2. Ships to provide upon request, convenient mooring for rafts or lighters:
   For rafts: Steel wires and shackles in good condition for mooring on ropes (wire excluded) for securing alongside the ship.
   For lighters: The mooring is to be made according to the requirements expressed by the ship's stevedores and/or agent. Generally, the heaviest available ropes (wire or copra excluded) of a minimum length of 30 yards are fixed from fastening point onboard the ship to the fastening point on lighter, fore and aft of the lighter, fastened on the ship's side of the lighter. The mooring ropes of the ship (if no wires) are generally convenient, either Manila or nylon. This mooring, when conveniently made, allows the lighters to go fore and aft with the swell, with the minimum of shocks to the ship. Should the ship refuse to provide the correct mooring, the stevedore/agent could refuse to start loading.
3. Ships to provide a gangway or pilot's ladder in good condition to allow boarding from lighters by labour, clerks or shore staff, ladders with round rungs always excluded.
4. Ships to point out fresh drinking water tap to foreman, for free use by the labour during (or unloading if any) operations.
5. Ships to assume liability of logs when slung (with of course the possibility of involving stevedore's liability if this latter's fault is established).
6. Ships to point out to labour the eyepads, cleats and more generally all strong points available for the use of blocks, capable to stand sufficient stresses for the trimming (in fact strong points able to stand the double of the winches traction). Should such strong points not be conveniently placed on board the ship, or be absent from the ship, the stevedore would proceed with loading without any liability whatsoever on his part and under full liability of the ship in respect of any loss or damage which could result from those inconvenient and/or missing strong points.
7. Ships never to give direct orders to labour, but through the foreman.
8. No responsibility shall attach to the stevedore/agent in respect of loss or damage which would not have given rise to a statement of facts duly established and signed by the Master on one side and the stevedore/agent (whichever is the party concerned) on the other side before the ship's sailing, it being understood it would belong to the Master to call immediately and before sailing for a joint survey in case the stevedore/agent (whichever is concerned), would reject liability upon presentation by the Master of the statement(s) of facts. In so far as damage to the ship is concerned, and whenever some responsibility attaches to the stevedore/agent (whichever is concerned), all repairs are subject to a 6 day telex notice prior to work starting date, stating place, date and time of repairs to enable the stevedore/agent (whichever is concerned) to have a surveyor appointed in agreement with its insurers.
9. Whenever a Supercargo is on board the ship, the ship is to make clear who between the Master and the Supercargo is concerned in respect of any matter or event arising during call. In case of doubt, both the Master and the Supercargo are deemed to be concerned and, therefore, are both to sign the document which the ship has to sign.
10. Master and/or Supercargo are deemed to be fully aware of the above rules (1 to 9), and accept them as soon as they have allowed the tugs and lighters or rafts to come alongside.

Swell: A S.W. to S.S.W. small or moderate swell exists all the time. Due to the general direction of the current (from South) and variable direction and strength of the wind, the rolling of the vessel can be strong enough during some periods to stop the loading for safety reasons.

STEVEDORES: They are ordered by agent taking into account the opinion of the Master. They come from Kribi. According to the quantity of lighters available, the time necessary for loading the lighters ashore and the transit time of the lighters from shore to ship by towing, 2 gangs seem to be the optimum number.

Normal working hours are during daytime, but in case of completion of loading, work during night is possible.

MEDICAL: In case of emergency, some facilities are available at Kribi, about 6 to 8 hours by road from Campo.

FUEL: No facilities.

REPAIRS: No facilities.

SERVICES: None.

DOUALA: 04.03 N. 09.42 E. (See Plan)
TIKO: 04.00 N. 09.24 E.
LIMBE (Formerly Victoria): 04.01 N. 09.13 E.
KRIBI: 02.56 N. 09.54 E.

DOCUMENTS:

5 Crew Lists.
5 Lists of Port of Call.
5 Passengers' Lists.
2 Crew Customs Declarations.
2 Declaration of Provisions on Board.
1 Arms and Ammunition.
2 Stores Lists
2 Manifests or Bills of Lading

PILOTAGE: (With the exception of Kribi and Limbe (formerly Victoria) where ships work cargo at anchorage); Compulsory at Douala and Limbe Oil Terminal (SBM). Ship's arrival must be notified at least 24 hours in advance, together with draft (F.W.) forward and aft. This must be confirmed.

At Cape Limboh (Limbe) where ships can proceed alongside, pilotage is compulsory.

For Douala, waiting anchorage at Base Buoy (Lat. 3° 54' 12.3" N., Long. 9° 32' 19.8" E.). Pilot called by VHF (16 – 14).

For entry of Tiko, waiting is at Limbe Anchorage.

ANCHORAGE: Base Buoy for entry at Douala (See "Pilotage") 8 m. depth approx. For Limbe Anchorage on Roads in Ambas Bay about 9 m. depth. Anchorage for Tiko on the Bimbia. Kribi Anchorage by red conical buoy (Lat. 02° 56' 36" N., Long. 09° 53' E.) depth 6.30 m. – 7 m.

RESTRICTIONS: Draft only, for ports of Douala and Tiko. Official level of Wouri Channel is 5.80 m.

MAX. SIZE: At Kribi and Limbe Anchorage, no restrictions.

Douala, max. length 200 m., max. draft 5.50 m. plus tide.

HEALTH: Free Pratique granted after compulsory checking of vaccination certificates against yellow fever. Health Officials hand the Master a special Health form to fill in.

RADIO: (See "Pilotage"). Douala Radio limited to broadcasting for private individuals. VHF Channels 16 and 14 and R/T 2182 kHz.

For vessels arriving at Douala, Masters should send a message to their Agent at least 48 hours prior to arrival, giving the following information:

(1) ETA at Base Buoy (given in local time).
(2) Cargo tonnage for discharge, and hatch distribution, including dangerous cargo.
(3) Number of gangs required.
(4) Vessel's draft in fresh water.
(5) Any other requirements, e.g. money, medical attendance alongside, etc.
(6) Overall length.

For vessels arriving on a Sunday or on a Public Holiday, Agents must be informed by 1100 hrs., the day before arrival. If overtime or night work is required by vessel, the Agent must be informed by 1700 hrs. the day before arrival. It is also possible to telex information from the last port of call as Douala Radio Station can sometimes be difficult to contact.

VHF: Channels 16 and 14.

RADAR: No radar.

TUGS: Three tugs: 2,000 h.p., 1,100 h.p. and 900 h.p. are available on request to Cameroon National Ports Authority, Operations Head Office. Towage is compulsory for ships of 600 d.w.t. and more, and subject to Pilot's advice.

One tug is available at Cape Limboh, obtainable from the National Ports Authority.

BERTHING: For Douala, there are 13 berths of 2,330 m. approx. Two of these berths have priority berthing for alumina carriers and occasionally tankers. Two other berths downstream from the port have priority berthing for container carriers. One of these berths has Ro/Ro accommodation with 2 dolphins 70 m. apart. One banana berth and one berth of 200 m. length for flour in bulk.

There is a berth consisting of 2 dolphins and 4 buoys used for oil discharging. Tankers moor with 3 head and stern lines to the other outer mooring buoys – 2 breast lines to the inner mooring buoys and spring lines on the dolphins.

At Douala, 9 berths have a depth of 9.50 m. approx. at LW. The tanker berths have a depth of 9.5 m. at LW (tidal range 2.20 m.).

At the right bank (Bonaberi): There are two berths equal to 300 m. in length. One is for butane tankers, length 140 m. The other berth is equipped with a Goliath crane used by mineral carriers. These berths have a depth of 13 m. at LW (Also see "Shipmaster's Report" dated November 1993).

Channel from Base Buoy to Douala Port, minimum depth (dredged) 5.5 m. Pilot boards at Base Buoy. Pilot can board at any time and vessel's sailing time depends not only on flood tide, but also on which side alongside, L.O.A. and permitted draft. Ship's watchman required, compulsory to use gendarmes and policemen. Agents submit written request to feed men twice a day during loading. Loading intermittent from both rail trucks and lorries.

Vessels have to shift alongside quay with their ropes if required. Decisions are taken every day after the Port Meeting which takes place at 1000 hrs. and 1600 hrs. in order to use optimal quay length.

Limbe: At Cape Limboh (Limbe) one berth available admitting ships of 130 m. in length. Length of quay 150 m. and depth alongside at LW is 10 m. 3 quay cranes available. One mooring buoy (SBM) for ships loading Fuel Oil, max. draft 18 m. and max. tonnage is 90,000 tons. (Also see "Shipmaster's Report").

Kribi: One quay of 250 m. for export of timber, cocoa, coffee, flour, salt and palm products by barge. One crane available.

CRANES: No berths alongside. Loading and discharging is carried out by ship's gear at anchorage. However, there are 2 cranes, one of 100 tons and the other 25 tons for barges.

BULK CARGO FACILITIES: Douala: There is a rolling gantry at the right bank to transport cement to the cement site. Max. height of loading/discharging gear above HW is 2 m. Max. loading/discharging rates – 1,000 tons per day, length 150 m., depth 8.5 m.

No. 2 Berth at right bank is equipped with a rolling gantry to transport aluminium. Max. height of discharging gear above HW level is 2 m., length 280 m., depth 9.5 m.

SPECIALISED CARGO HANDLING FACILITIES: *Containers:* A modern container and Ro/Ro terminal has been created with a frontage of 600 m., dredged to 11.50 m. Facilities include 3 berths, the first 2 of which, with a total length of 400 m., are designed for full container ships and the last for Ro/Ro ships with side ramps. Additional facilities comprise 2 dolphins and 1 Ro/Ro ramp. The adjacent yard has a surface area of 23 hectares and a width varying between 400 m. and 500 m.

At the back of this yard, there exists a stuffing and stripping container warehouse of 7,500 sq.m.

Timber: The annual capacity of the Timber Port is 2,000,000 tons. There are 2 gantry cranes.

The equipment includes:

- timber yard of 20 hectares served by road and rail,
- a water surface of 20 hectares with 3 m. draft in the area next to the quay and 9.50 m. in the rest of the dock. This dock is capable of receiving 4 ships,
- 150 m. quay frontage designed for the handling of floating timber.

Also see "Developments".

STEVEDORES: The number of stevedore gangs is requested from Charterer's Agents, taking into account size of cargo.

MEDICAL: An appropriate Medical Service can be provided on request in case of an emergency, such as an epidemic on board.

TANKERS: At Douala harbour, a berth of 180 m. can accommodate oil tankers of 12,000 tons when the tanker berth has a breakdown. No slops discharge. The depth at LW is 8.00 m. The tanker berth in the river can accommodate tankers of less than 180 m.

At the tanker berth are found 3 connections of 8 in. for white products, discharge rate of about 250 t.p.h. to 300 t.p.h. Bunkers can be supplied but are not always available.

Sailing from the tanker berth: Subject to draft, any tide between 2 hours before HW and LW; sailing/mooring, day and night. 1 or 2 tugs (optional) assist in mooring and sailing proceedings. A permanent tug assists during discharging.

Also see "Berthing" and "Shipmaster's Report" – dated 1982.

DENSITY: 1012 in dry season; 0.985 average in rainy season.

FRESH WATER: Available at berth; supplied by hoses at 50 t.p.h. Available at Cape Limboh (Limbe, formerly Victoria).

FUEL: Supplies arranged by Charterer's Agent who have their particular suppliers. Available at Cape Limboh (Limbe).

FIRE PRECAUTIONS: In addition to the usual measures, the quay station for oil tankers is isolated during discharging, and there is also a permanent watch by tugs.

CONSULS: At Douala.

	Telephone No.
Australia	42.11.19
Belgium	42.38.96
Canada	42.37.19
Chad	42.34.50
Denmark	42.64.64
Equatorial Guinea	42.26.11
Finland	42.92.88
France	42.92.50
Great Britain	42.21.77
Greece	42.44.53
Italy	42.36.01
Lebanon	42.62.65
Morocco	42.14.44
Netherlands	42.50.35
Nigeria	42.48.81
Norway	42.42.88
Spain	42.23.95
Sweden	42.42.88
U.S.A.	42.34.34
UNO	42.41.11
Zaire	42.39.90

REPAIRS: There is a ship repair unit having a 200 m. long quay for afloat repairs (capacity 10,000 tons).

DRY DOCKS: 3 floating docks of 10,000, 1,000 and 500 tons handling capacities are available.

SURVEYORS: Lloyd's Register; Bureau Veritas; Germanischer Lloyd's; A.B.S. and Det Norske Veritas.

GANGWAY/DECK WATCHMEN: Ship's crew or arranged by Charterer's Agents at Master's option. A watch by armed elements of the police has been instituted.

Piracy: Acts of piracy have taken place at the ports by armed pirates.

OPENING/CLOSING HATCHES: By ship's crew.

CERTIFICATES: Safety, Radio, Sea-worthiness, Freeboard, Derricks, etc.

CUSTOMS ALLOWANCES: 100 cigarettes per person, not more than 2 bottles of spirits per person in cabin.

CARGO GEAR: Loading and discharging affected by ship's gear.

REPATRIATION: Repatriation as well as crew changes can be arranged after consultation with the responsible Consuls.

AIRPORT: International airport is situated about 12 km. from Douala Port. Regular airline flights to Europe daily during whole year.

HOLIDAYS: *Official Holidays:* New Year's Day, 1st January; Youth Day, 11th February; Labour Day, 1st May; National Day, 20th May; Christmas Day, 25th December. Any other Day declared by Presidential Decree. *Variable Holidays:* Easter Day; Festival of the Sheep; End of Ramadan; Assumption Day; Ascension Day.

Even though there are public holidays, cargo work may be carried out by arrangements.

TIME: Local time GMT plus 1 hour. No change during year.

POLICE/AMBULANCE/FIRE: Central Police Station, Tel: 42.55.25. Ambulance (Hospital Laquintinie), Tel: 42.68.88; (Polyclinique), Tel: 42.18.40. Fire Brigade (in town), Tel: 18. Cameroon National Ports Authority, Tel: 42.01.33 or 42.73.22 or 42.33.42 (ext. 2440 or 2445).

EMERGENCY CO-ORDINATION CENTRE: None at present apart from the Cameroon National Ports Authority, B.P. 4020 – Douala. Tel: 42.01.33 and 42.73.22. Telex: 5270 KN.

TELEPHONES: No telephone connections on board.

BANKS:

Standard Chartered Bank (formerly Boston Bank Cameroon, SA.), B.P. 1784 – Douala. Tel: 42.36.12. Telex: 5858KN.

Meridien Bank Cameroon, B.P. 1132 – Douala. Tel: 42.98.05, 42.52.91. Telex: 5580KN.

Societe General de Banque au Cameroun (S.G.B.C.), Rue Joss, B.P. 4042 – Douala. Tel: 42.70.10, 42.12.31.

Societe Camerounaise de Banque (S.C.B.), B.P. 4013 – Douala. Tel: 42.98.60, 42.50.56. Telex: 5208KN, 5665KN.

Banque Internationale Pour le Commerce et l'Industrie du Cameroun (B.I.C.I.C.), B.P. 4070 – Douala. Tel: 42.28.19, 42.84.31. Telex: 5225KN.

Banque Internationale Pour l'Afrique Occidental (B.I.A.O.) Cameroun, B.P. 4001 – Douala. Tel: 42.80.11. Telex: 5218KN.

Societe Generale de Banque au Cameroun (S.G.B.C.), P.O. Box 404 – Limbe. Tel: 32.23.83. Telex: 5610KN.

Societe Camerounaise de Banque (S.C.B), P.O. Box 42 – Limbe. Tel: 33.32.38. Telex: 5281KN.

Banque International Pour l'Afrique Occidentale (B.I.A.O.) Cameroun, B.P. 244 – Limbe. Tel: 33.42.38, 33.24.38. Telex: 5661KN.

Banque International Pour le Commerce et l'Industrie du Cameroun (B.I.C.I.C.), B.P. 26 – Tiko. Tel: 35.12.27.

Banque Internationale de L'Afrique de L'Ouest B.P. 54 – Kribi. Tel: 46.10.39.

Societe Camerounaise de Banque (S.C.B), B.P. 124 – Kribi. Tel: 46.11.56. Telex: 5539KN.

STORING: See "Prelims".

1. Yes.
2. No regulations.
3. Yes.
4. wno jetty.
5. No Customs regulations in force.
6. Subject to arrangement.

SHIP SUPPLY SERVICE: For details contact: Syndicat des Compagnies de Navigation et Consignataires de Navires au Cameroun, B.P. 73, Douala.

SERVICES: Derat and fumigation.

Stores: Fresh provisions of good quality, beer and soft drinks.

SHORE LEAVE: Permitted.

GARBAGE DISPOSAL: No facilities available.

WASTE OIL DISPOSAL: Collection service available by tanker trucks at no charge.

Contact: Transports Blat et Cie., B.P. 896, Douala. Tel: 42-16-59, 42-09-08. Telex: 5950 KN.

Sotradhy, B.P. 3610, Douala. Tel: 42-97-13. Telex: 5099 KN.

SEAMAN'S CLUB: German Seaman's Mission, Foyer du Marin, Douala. Tel: 42-27-94. Services: Meals, snacks, beds, bar, swimming pool, money exchange, international telephone and mini-bus service.

CURRENCY: C.F.A. Francs.

IDENTIFICATION CARD: Seaman's Book and shore pass are sufficient.

REGULATIONS: Normal Port Regulations in force.

DELAYS: No unusual delays.

DEVELOPMENTS: A new fruit terminal, length 200 m., accepts vessels with draft 9.5 m.

SHIPMASTER'S REPORT: March 1982.

Sonara Refinery SBM at Cape Limboh Oil Terminal.

The new refinery is situated at Cape Limboh (Limboh Point). The exact position of the SBM is Lat. 03° 59′ 16″ N., Long. 09° 07′ 36″ E. (B.A. Chart 1455).

Type of Hose (Loading Hose): 16 in. ASA Serial 150 type barbell.

Manifold Derrick: Should be of minimum SWL 10 tons. Connection is made on port side.

VHF: Sonara Refinery keeps watch on Channel 14, make contact 2 hours before arrival.

Pilot: Pilot boards 1 mile South of SBM.

Pipeline: Submarine line is always kept filled with crude oil therefore if loading fuel oil, the vessel should be in position to receive about 1,500 cu.m. of line contents inside the ship's slop tanks and on

completion of loading fuel oil, the line contents must be pumped back into submarine line.
Depth: Depth of water at berth is 21 m.

CARGO SUPERINTENDENT'S REPORT: October 1993.
Vessels can safely proceed to the Base Buoy (Pilot Station). The two beacons give good radar position, and the outer buoy is in place.

Port Control is on 24 hours duty on VHF Channel 16 (English – French). Port Control inform Agents promptly.

Pilots are English speaking and very good.

The buoys in the channel have recently been painted and renumbered.

The channel is dredged to 5.5 m. at low tide (add tide tables figure). Maximum draft 8.0 m.

Length of vessel no restriction. Vessels entering on upcoming tide, swing in front of berth on their anchor and berth with assistance of 2 tugs (compulsory). Moorings are 4 and 2 fore and aft. Regular shifting along wharves on Port Authority's instructions.
Inward Clearance: Ensure safety net secured under gangway before allowing any boarding. Normal clearance procedure with Port Health (Yellow Fever), Immigration, Customs, Police.
Outward Clearance: Agent pre-arranges clearance and brings Port Clearance (stamped Manifest) one hour before departure. No problems and no delays.
Agents: Socopao contactable from the anchorage at Base Buoy on VHF Channel 73. They contacted us very late (10 hours after arrival) regarding berthing prospects. Agents have all the communications well arranged. The office is outside the gate, close to the port. Taxis not allowed in port, so must rely on Agents transport, which is hard to get. The Boarding Clerk we had, visited twice a day. The Agent's office also has an inhouse travel agency that can arrange all necessary tickets, but no service for visa, etc.
Stevedoring: Socopao inhouse stevedoring. The Manager is English speaking, and has an office opposite Berth No. 11. All faxes and telephone calls were made from this office without any problem or significant delays. The stevedores on board are quite good and disciplined. The stowage of the logs is not bad. The crane-drivers are a bit careless.

Two watchmen are compulsory day and night

Socopao Stevedoring run the tugs in the port for the rafts and the barges. They also own equipment for bulk, container, general and timber cargo handling. Plenty of stevedoring materials (slings and hooks, etc.) available. Vessel must supply lines/wires to fasten rafts and barges. One tug is on stand-by alongside at all times. As stevedores work in 12 hour shifts, it is advisable to feed the foreman, talley clerks and watchmen on board (to prevent delays and for smooth cooperation).
Loading Rates: With 4 gangs and sufficient cargo alongside, this vessel can load 2,500 cu.m. logs per 24 hours. There is little cooperation between shippers – logpond – stevedores, as all act independently.
General: Cameroon is basically French speaking (a necessity for supercargo), but quite a few people (locals) speak English, Douala is very expensive in every way. Many countries have Consulates in Douala. The international airport has daily flights to Europe (Air France, Sabena, Lufthansa and Air Cameroun are most regular). Various international banks, the best I found for cashing traveller cheques was Standard Chartered Bank.

Douala is unsafe for crew to go ashore at night. Robberies (armed) are aplenty, even in daylight. Only the Seaman's Mission bus at 1900 hrs. and return at 2200 hrs. is safe. But Seaman's Mission is expensive.
Stowage: We loaded a great deal of logs over 10.0 m. length, this gives a bad stowage factor. Also of the hardwood, many over 15 tons.

SHIPMASTER'S REPORT: November 1993.
Vessel's Particulars:
Length: 146.68 m.
Breadth: 22.86 m.
Depth: 12.20 m.
Summer Draft: 9.05 m.
Deadweight: 17,635 metric tonnes.
Berth: Cement berth at Bonaberi.
Pilotage: Pilot called by VHF Channels 16 – 12.
Health: Maritime Declaration of Health to be filled in and handed over to the boarding officers, along with List of Ports of Call and Cholera/ Yellow Fever Vaccination List.
Radio: Not operational.
VHF: Channels 16 – 14.
Tugs: Only 2 tugs were seen to be operational.
Berthing: At the right bank (Bonaberi): Only the berth with a gantry is being used for discharging clinker/gypsum for the cement plant. This berth has no fenders (the berth is not being used for banana or butane carriers).

It is advisable to employ watchmen at all berths, more so at this berth. As the berth is remote, it is not advisable to venture out at night, even for taking drafts.
Bulk Cargo Facilities: Bonaberi: Gantry crane – Max. height of discharging gear above HW is 15.0 m. Discharging rate 3,500 tonnes per day.

Berth No. 2 on the left bank is also equipped with a rolling gantry for discharging Alumina, but only the evacuators are being used. Max. height of discharging gear above HW is about 15.0 m.
Specialised Cargo Handling Facilities: Timber: The timber dock does not accommodate any ships as mentioned. Timber/logs can be loaded alongside any of the berths or at the dolphins, depending on the vessel's draft.
Density: Annual average 1012, rainy season 997.
Dry Dock: Only one floating dock (Chantier Naval et Industriel du Cameroun S.A.) of about 10,000 tons is in port.
Customs Allowances: 200 cigarettes and one bottle of spirits per person.

AUTHORITY: Cameroon National Ports Authority, B.P. 4020 – Douala, Republic of Cameroon. *Tel:* 42.01.33, 42.73.22. *Telex:* 5270KN. *FAX:* (237) 426797. *Contact:* Tchouta Moussa, Port Director. Mboum Mono Markous, Harbour Master.

AGENT: *Douala:* Socopao, B.P. 215 Douala. Tel: (237) 42.64.64. Telex: (Shipping) Freight 5319; (Direction) Freight 5252/5214. Fax: (237) 43.11.58. Cables: Freight Douala.
Kribi: Socopao, B.P. 38 Kribi. Tel: 46.11.25. Telex: 5688 (in case of difficulties please contact Douala).

KOLE: 04.13 N. 08.33 E. (See Plan)

LOCATION: The loading point is located at Lat. 04° 13′ 21″ N., Long. 08° 33′ 31″ E. (approx. 285° – 26 miles from Cape Debuncha).
DOCUMENTS:
3 copies Crew List.
3 copies List of Ports of Call.
3 copies Arms and Ammunitions List.
3 copies Animals List.
3 copies Store List.
3 copies List of the Passengers Landing or in Transit.
Ship's Manifest.
PILOTAGE: Compulsory. Piloting shall be carried out by the Pilots of the Cameroon National Port Authority. Call signals for a Pilot are those provided for by the International Code. The Pilot may be contacted on VHF Channels 11 or 12.

The Pilot will board 2 miles S.W. of loading point "KLB-2" in position Lat. 04° 12′ N., Long. 08° 32′ E.
ANCHORAGE: Vessels loading at Kole may anchor inside an area enclosed by the following coordinates:

A	04° 12.3′ N., 08° 33′ E.
B	04° 12.3′ N., 08° 34′ E.
C	04° 11.3′ N., 08° 33′ E.
D	04° 11.3′ N., 08° 34′ E.

Anchoring within the Prohibited Zone and less than one mile from the Kole loading point is prohibited.
NAVIGATION AIDS: The Elf-Serepca operating facilities located in the Rio Del Rey are protected by a zone where navigation is prohibited. Permission to enter this zone can only be obtained from Elf-Serepca. Elf-Serepca prohibited zone is enclosed by following coordinates:
Lat. 04° 13′ N., Long. 08° 22′ 36″ E.
Lat. 04° 13′ N., Long. 08° 29′ E.
Lat. 04° 13′ N., Long. 08° 36′ E.
Lat. 04° 18′ N., Long. 08° 41′ E.
Lat. 04° 26′ N., Long. 08° 34′ E.
Lat. 04° 26′ N., Long. 08° 25′ E.
Lat. 04° 19′ N., Long. 08° 22′ E.

In addition, all platforms and the floating storage facility "Serepca 1" within this zone are equipped with white lights which flash the letter "U" every 15 seconds.

The main loading point "KLB 2", is located at Lat. 04° 13′ 21″ N., Long. 08° 33′ 31″ E. It is a yellow buoy with a white light which flashes the letter "U" every 15 seconds (Range: 6 miles – radar reflector).

The emergency loading point, "KLB 1", is located at Lat. 04° 14′ 57″ N., Long. 08° 33′ 07″ E. and its markings are identical to those for "KLB 2". "KLB 1" Loading Point is presently not in use.

A floating hose which can float around each buoy over a radius of 260 m. is marked by small white intermittent lights.
Fog Signals Inside of the Prohibited Area:

Fog horns with a range of 2 nautical miles send the letter "U" every 30 seconds when the horizontal visibility is below 1 mile at the following positions:

Oil production platform "Ekoundou"	Lat. 04° 16′ 28″ N. Long. 08° 25′ 10″ E.
Oil production platform "Kole"	Lat. 04° 16′ 56″ N. Long. 08° 34′ 03″ E.
Floating storage "Serepca 1"	Lat. 04° 15′ 42″ N. Long. 08° 33′ 28″ E.
KLB 1 Loading buoy	Lat. 04° 14′ 57″ N. Long. 08° 33′ 07″ E.
KLB 2 Loading buoy	Lat. 04° 13′ 21″ N. Long. 08° 33′ 31″ E.

RADIO: The vessels should send their ETA to Elf Serepca, B.P. 2214/ 2215. Tel: 42.13.66/42.17.85/40.76.20/40.10.28 Douala. Telex: 5299 KN Elferap.

Via Coastal Station – Douala Radio.
Call signal: "TJC 5", "TJC 6" or "TJC 8".
The Coastal Station works on 500 kHz and 8718 kHz.
Transmitter Power: 1 kw.

Listening Hours: Permanent watch from 0500 – 2000 hrs. GMT on 500 kHz, 15 minutes transmission at 0600 – 0700 – 0800 – 0900 – 1100 – 1300 – 1500 – 1600 – 1700 – 1800 – 1900 hrs. GMT on the 8 MHz band.
Kole Terminal – "Serepca 1" Floating Storage Facility:
"Serepca 1" – Call sign: "TJAR" – "Kole Oil Terminal".

Continuous VHF watch on Channel 16 and working on Channels 11 and 12.
Arrival Advice: Advise "Elf Serepca" 72 hours, 48 hours and 24 hours before arrival, also advise any changes.
MAX. SIZE: Maximum permissible draft is 22 m. (72 ft.) at "KLB 2" and 16 m. (53 ft.) at "KLB 1". However, Elf Serepca may reduce these drafts should meteorological conditions be unfavourable.

Minimum underkeel clearance 4.5 m. (15 ft.).

HEALTH: Health inspection carried out by doctor or the Pilot. Master to have ready for inspection the following:

Maritime Declaration of Health
Derat Certificate
Vaccination Certificate of the Crew

In case of infectious disease on board, contact the Head Doctor or the Douala Border Health Police B.P. 1115 – Tel: 42.36.33, through the Harbour Master.

TUGS: A supply vessel is provided to assist with mooring.

BERTHING: The Elf-Serepca Kole loading points are SPMs.

The bow of the vessel is moored to a buoy consisting of a square (KLB 2) or cylindrical (KLB 1) float. The buoys are anchored by chains with 6 drilled piles. Moorings extend for a radius of 240 m. around the buoys.

Buoys "KLB 1" and "KLB 2" and the floating storage facility "Serepca 1" are respectively connected by 3,000 m. long (36 in. diameter) and 4,600 m. long (24 in. diameter) sealines. Each buoy is connected to the sealine (PLEM) by 2 underwater 20 in. hoses.

For loading, a 24 in. floating hose with 2×16 in. lines at its end connects the buoys to the tanker.

The "KLB 2" loading point is designed for the mooring and loading of tankers from 50,000 to 250,000 tonnes D.W.; "KLB 1" is limited to 150,000 tonnes D.W. maximum. Given the useful storage capacity, the quantity which may be loaded at Kole is limited to approximately 120,000 tonnes.

Water depth at Buoys "KLB 1" and "KLB 2" is 23.5 m. and 30.5 m. respectively at chart datum.

Mooring: Mooring ropes shall be supplied by Elf Serepca. The vessel shall be ready to embark 2 mooring ropes, one on the starboard side, and the other on the port side. Each rope consists of 46 m. of nylon of 13 in. circumference and a 8 m. chain, diameter 64 mm. Each rope is equipped with a polypropylene inhaul of 10 in. circumference and 150 m. long for one and 80 m. for the other.

Messengers are passed to the vessel by a motor-boat. The vessel shall prepare 2 ropes at the bow for taking the messengers onboard.

Mooring is carried out by day only (between 0600 hrs. and 1800 hrs.). In the afternoon, vessel must arrive not later than 1600 hrs. for immediate berthing.

Sailing is carried out immediately after completion of loading, day and night.

The ship's manifold shall be prepared on the port side for connection with the 2×16 in. flexible hoses.

BALLAST/POLLUTION:

Ballast on Arrival: Ship must arrive with sufficient ballast and correct trim to be able to manoeuvre in complete safety:

The ballast must not be less than 30% of the deadweight. Deballasting will not be allowed without the agreement of the Pilot.

The storage installation is not equipped to receive dirty ballast. The vessel shall, therefore, arrive with clean ballast.

Any vessel approaching with dirty ballast may be forced to leave the loading point and delays arising therefrom shall be to the vessel's account. Acceptance of Notice of Readiness would be rectified accordingly.

It is forbidden to throw into the sea any cinders, burning materials, objects and waste of any kind.

The ship's Master shall be responsible for any spills or pollution and any other difficulties which may involve discharge of oil. The terminal is equipped with an anti-pollution first aid device.

Scuppers shall be plugged during the whole loading time.

LOADING: *Notice:* Notice of Readiness shall be sent to Elf Serepca.

Connection of Flexible Hoses: Loading of the vessel shall be carried out through 1 line of 220 m. of 24 in. flexible floating hoses, terminating in 2×36 m. lengths of 16 in. flexible hose.

Connection with the ship's manifold shall be by 16 in. 150 ASA flanges. Elf Serepca can supply 16 in./10 in. and 16 in./12 in. reducers.

The tanker's derrick shall be rigged before mooring on the port side. The safe working load of the derrick hook shall be 10 tons minimum.

During connection and disconnection of the flexible hoses, assistance of the crew is essential, in particular for the working of winches and derricks. During the whole stay of the vessel at the loading point, the Pilot shall ensure that a safety watch is maintained onboard. The Elf Serepca Representative carries out the duties of Head of Loading and remains in contact with the terminal.

During the entire loading operation, the Elf-Serepca service vessel shall remain available to the tanker; after the loading hoses have been taken aboard the tanker, the service vessel can be used to move the tanker away from the buoy. A hawser shall be located at the stern of the tanker to be used for towing.

A ladder must be kept permanently ready alongside the vessel so as to permit access by the team in charge of the flexible hoses.

Loading: Loading may be carried out with a maximum flow of 4,400 tonnes per hour. The maximum capacity of each part loading is approximately 120,000 tons.

Inspection of tanks after deballasting and ullages after loading shall be taken in the presence of the Loading Supervisor representing Elf Serepca.

The terminal shall place on board the vessel sealed samples of the cargo.

Twenty minutes before the end of loading, the vessel shall notify the terminal by VHF so that pumping may be stopped accordingly.

During Loading: All the hull valves shall be closed except those required for water circulation.

The scuppers of the main deck shall be plugged.

Two fire hoses shall be connected and placed, one at the bow, the other at the stern of the vessel. The fire pump shall be maintained under pressure.

In case of electrical storms, loading may be stopped if necessary.

In case of fire on board a vessel moored at the loading point the Master shall give the alarm by means of short whistle blasts at short intervals. He shall be responsible for the implementation of technical means of fire fighting, maintenance of stability and safety on his vessel. He shall take the required steps to leave should he be required to do so.

MEDICAL: Hospitals, clinics and doctors in Douala. Transportation carried out by Elf at vessels expense.

FRESH WATER: Not available.

FUEL: Not available.

CONSULS: At Douala: Denmark, France, Germany, Lebanon, Monaco, Netherlands, Norway, Sweden and U.S.A.

REPAIRS: There are well-equipped repair workshops at Douala.

AIRPORT: 4 km. from Douala. 1 or 2 flights daily to Europe. Several flights weekly to U.S.A.

TIME: GMT plus 1 hour.

GENERAL: *Charts:* French Chart No. 5380 and British Chart No. 1860.

Safety: During the vessel's stay at the loading point the Master shall:

Maintain on board sufficient crew for handling of the vessel and moorings and fire fighting.

Maintain the engines ready for manoeuvring.

Ensure that the moorings function properly without any undue stress or wear.

Ensure that the floating hoses do not wear out or rub, thus causing deterioration.

Ensure that the vessel does not make contact with the buoy either by change in current or change in the direction of the wind or for any other reason. The service vessel moored at the stern of the tanker ensures correct positioning upon instructions from the Pilot, if necessary.

Fire Fighting: It is forbidden to:

Smoke, utilise naked lights or tools liable to give rise to sparks outside the areas normally authorized on a tanker.

Leave the anchors outside the hawse pipe.

Make any repairs or carry out maintenance on deck.

Turn the propellers.

Utilise in the areas classified as dangerous any equipment or tools of a type not recognised for this use by a competent organization. Elf Serepca reserves the right to take any steps it may deem necessary in case of danger and in particular stop loading.

Stores: Two ship chandlers at Douala can supply the vessel with any foodstuffs they need. But the distance between the Kole Terminal and Douala makes the process very difficult.

Elf Serepca can, in no way, be in charge of the orders and the transportation of foodstuffs.

Territorial Waters: The sovereignty of the Republic of Cameroon extends to 50 nautical miles from the lowest sea watermark along the coast.

Currency: Legal currency is CFA Francs. 1 CFA Franc = 0.01 French Francs.

Meteorology: The rainy season (monsoon) extends from May to September. The dry season extends over a period of 2 to 3 months that is to say from December to February.

Air Temperature: The air temperature varies on an average from 22° C to 30° C.

Sea Temperature: On the surface, the sea temperature varies from 29° C at the beginning of the year to 25° C in July, August and September.

Visibility: Owing to the Harmattan, a hot wind blowing from the Sahara, visibility can be reduced to 1 or 2 miles from December to February. During the rainy season, and especially in June, July and September, visibility can be reduced to 0.5 miles due to rain.

Tides: The tides are of a semi-daily type and the Kole cycle is 15 minutes in advance of Bonny Town. Maximum amplitude is 2.30 m., mean amplitude is: Spring tides 1.80 m. Neap tides 0.90 m.

Wind: Generally from the South and usually less than 15 knots.

Strong winds last for a short period and blow from the East or the S.S.E. in connection with tornadoes.

Current: In the Kole area currents may be of a very changeable speed and direction. However, the ruling currents are the tidal currents.

Slack tide is S.S.E. and flood tide N.N.W. On the surface its speed can reach 3 knots.

Swell: The direction of the swell is S.S.W. (210°). The average height is 2.5 m., period 8 seconds. The waves generated by the local winds are scarcely higher than 2 m.

AUTHORITY: Elf Serepca, B.P. 2214 and B.P. 2215, Douala, United Republic of Cameroon. *Tel:* 421366, 421785, 407620, 401028. *Telex:* 5299 Kn Elferap. *FAX:* 400020 (Attn: Terminal). *Contact:* Chief of Terminal Operations.

AGENT: See "Douala".

MOUDI MARINE TERMINAL: 04.07 N. 08.29 E.

(See Plan)

LOCATION: The Moudi Field, of which Kelt Cameroon is the operator, is situated in the Gulf of Guinea about 50 nautical miles West of the town of Limbe (Victoria) in Cameroon, in depths of 50 m. to 58 m.

The Moudi Field comprises the following units:

2 well platforms: VA (Lat. 4° 08′ 11″ N., Long. 8° 27′ 24″ E.) and VB (Lat. 4° 09′ 22″ N., Long. 8° 25′ 55″ E.)
1 production platform; VT (Lat. 4° 08′ 09″ N., Long. 8° 27′ 25″ E.)
1 loading terminal consisting of: 1 floating storage unit (F.S.U.), the "Moudi" (Lat. 4° 08′ 09″ N., Long. 8° 28′ 49″ E.). 1 Single Point Mooring berth (S.P.M.) (Lat. 4° 07′ 00″ N., Long. 8° 29′ 11″ E.)

DOCUMENTS:
Maritime Declaration of Health.
Derat or Exemption Certificate.
Vaccination Certificates for crew and passengers.

After ship's arrival at Moudi Marine Terminal, the Kelt Cameroon Representative boards and the Master signs the following documents:
Notice of Readiness.
Acknowledgement of receipt by the Master of Terminal Regulations.
Safety check list before loading.

Following commercial documents are filled out by Terminal and presented to the Master:
Bill of Lading.
Certificate of Quality and Quantity.
Certificate of Origin.
Cargo Manifest.
Time Sheet and Loading Report.
Ullage Report.
Receipt for Samples.
Receipt for Documents.

The Kelt Cameroon Representatives on board the ship shall assist with the inspection of tanks after deballasting and ullage measurements after loading.

PILOTAGE: Pilotage is mandatory and carried out by the Pilots of the National Port Bureau of Cameroon.

The Pilot, the Terminal Representative, the Mooring Master, the Cargo Inspector and the Customs Officer must come on board the vessel before the vessel starts mooring to the buoy.

On board the ship, the Pilot acts as a nautical adviser to the Master for handling the ship at the entry and exit of the pilot zone or for movements within this zone.

His advice shall commit neither his responsibility nor that of Kelt Cameroon.

Any ship mooring to the loading buoy is required to take the Terminal Pilot on board in the pilot zone extending from anchorage zone to the S.P.M.

The Pilot call signals are those in the International Code. The Pilot may be contacted by VHF Channel 16.

Pilot Boat:

The assistance boat insures the pilotage functions (transport of Pilot and Kelt Cameroon employees, transport of equipment required for mooring and hose connections).

It is at the ship's disposal under Pilot's instruction during the whole stay of the ship at the loading buoy for:
Tug assistance (bollard pull 100 tons).
Approach/Mooring assistance/launching of an inflatable dinghy, clearance of hoses.

Exceptionally:
Fire-fighting (2 guns, total delivery 600 cu.m./hr.)
Anti-pollution Assistance (Dispersant and Anti-pollution Spray-ramp, 25 cu.m./hr.)

During operations, the assistance boat monitors permanently the operating VHF frequency and Channel 13.

NAVIGATION AIDS:

Fixed Platforms: The 3 fixed platforms, VA, VB and VT are all equipped with the following:
4 white lights at the 4 corners, range 8 miles, flashing the letter U(· · –) operated by sun switch,
2 fixed white boat landing lights, range 3.5 miles.
2 foghorns, range 1.5 miles, emitting the letter "U", operated manually (visibility less than 1.5 miles).
1 identification panel fixed to the South side displaying "Victoria VA", "Victoria VB", "Victoria VT", respectively in black letters 1 m. high on a yellow background.

Platform VT is also equipped with a fixed red light on the crane, and fixed yellow and blue lights on the helideck.

VA/VT catwalks and flare are equipped with 3 and 4 fixed equidistant white lights respectively.

Floating Storage Unit (Moudi): The Moudi, a converted 220,000 ton tanker, carries the lights of a ship at anchor, 2×360° white lights, 1 in the bow and 1 in the stern. It is equipped with a foghorn, range 1.5 miles emitting the letter "U". It carries the inscription "Moudi" painted in white letters 1.5 m. high on the black hull at port and starboard in the bow and at the stern.

SPM (buoy/hoses): The buoy, painted orange, is equipped with the following:
1 fixed white light, range 5 miles, flashing the letter "U" every 15 secs,
a hand-operated foghorn, range 2 miles, emitting the letter "U" every 30 secs,
a radar reflector.

The floating hoses are equipped with 3 white winker lights (60 flashes per minute).

The ship shall provide adequate and safe means to take the Pilot on board on the most sheltered side.

Pilot Ladders:

1. In all ships where the distance from sea level to the point of access to, or from, the ship exceeds 5 m. (O.N.P.C. requirements), the ship must be provided to embark and disembark Pilots by means of the accommodation ladder in conjunction with a pilot ladder. The ship should carry an accommodation ladder on each side, unless such ladder is capable of being transferred.

2. The ladder should be sited leading aft. When in use, the lower end of the ladder should rest firmly against the ship's side within the parallel body length of the ship and within the mid-ship half section and clear of all discharges. Equally safe arrangements which might be more suitable for special types of ships should be acceptable.

3. The length of the accommodation ladder should be sufficient to ensure that its degree of slope does not exceed 55 degrees.

4. The lower platform of the accommodation ladder should be in a horizontal position when in use.

5. Intermediate platforms, if fitted, should be self-levelling. Treads and steps of the accommodation ladder should be so designed that an adequate and safe foothold is given at the operative angles.

6. The ladder and platforms should be equipped on both sides with stanchions and rigid handrails, but if handropes are used they should be tight and properly secured. The vertical space between the handrail or handrope and the stringers of the ladder should be securely fenced.

7. The pilot ladder should be rigged immediately adjacent to the lower platform of the accommodation ladder and the upper end should extend at least 2 metres above the lower platform.

8. Lighting should be provided at night such that the full length of the ladder is adequately lit.

9. If a trap door is fitted in lower platform to allow access from and to the pilot ladder, the aperture should be not less than 750 mm.×750 mm. In this case the after part of the lower platform should also be fenced as in paragraph 6, and the pilot ladder should extend above the lower platform to the height of the handrail.

10. The accommodation ladder(s), together with any suspension arrangements or attachments, fitted and intended for use in accordance with this Recommendation should be the satisfaction of the Administration.

ANCHORAGES: The anchorage zone is a circle 1 mile in radius centred about 2 miles E.N.E. from the SPM, at the point with coordinates: Lat. 4° 07' 33" N., Long. 8° 31' 04" E.

Approach to the anchorage should be made from the East. With the S.P.M. as the centre, vessels should steer a course of between 210° and 330°. (See "Plan").

RESTRICTIONS: The danger zone in which routine navigation and fishing activities are prohibited is defined by the four points AA, BB, CC and DD, of which the coordinates are given below. The field installations are situated about half a mile inside the limits.
AA: Lat. 4° 09' 10" N., Long. 8° 29' 43" E.
BB: Lat. 4° 06' 28" N., Long. 8° 29' 43" E.
CC: Lat. 4° 06' 28" N., Long. 8° 25' 24" E.
DD: Lat. 4° 09' 58" N., Long. 8° 25' 24" E.

Ship moorings and connections take place from 0600 hrs. to 1800 hrs. weather and sea permitting. They may be performed by night, on Kelt Cameroon preliminary agreement conditions. Departures from berth take place day and night.

MAX. SIZE: The loading station is designed for the mooring and loading of ships from 50,000 d.w.t. to 280,000 d.w.t.

The water depth at the buoy is 57 m. to hydrographic zero.

HEALTH: Sanitary boarding is carried out by the Doctor in Chief of the Border Health Police. Pilots are entitled to carry out this inspection. In case of infectious disease on board, contact the Doctor in Chief of the Border Health Police through the Harbour Master before ship's arrival at the terminal. For the application of Health Regulations, the ship shall use the signals in the International Code of Signals.

RADIO: Ships shall announce their arrival by telegram sent 72 hours before their planned arrival. This telegram, addressed to Kelt Cameroon shall be sent via Douala Radio and shall announce its ETA in GMT, as well as all information concerning the planned loading:
Arrival ballast.
Deballasting time.
Max. loading rate.
Cargo quantity.
Derrick lifting capacity.
Dimensions of manifold flanges.
Forward anchoring system characteristics.
Sanitary conditions.

The ship shall repeat contact 48 hours and 24 hours before its arrival and correct its ETA if necessary.

Communications between ship and base through Douala Radio should be in decameter or hectometer wave.

Douala Radio works on frequencies 500 kHz, 8449 kHz and 13,069 kHz. Call sign TJC 5, TJC 6 and TJC 8.

During radio contacts preceding the arrival of the ship at the site, the ship shall receive instructions from the Terminal Superintendent for direct mooring or, on the contrary, standby anchorage in the zone defined.

VHF: When 60 miles from the Terminal, the ship shall make contact by VHF on Channels 16 or 13 and then switch to the operating frequencies as indicated below.

The ship shall then receive the instructions required for its mooring to the loading buoy.

Port regulations are communicated as soon as possible to the Master, who shall acknowledge receipt by letter.

Monitoring as well as safety frequency are provided on Channel 16. Also see "Pilotage".

Communications between the ship and the Terminal are provided on:
VHF Marine Total, Channel 69 (156.475 MHz)
VHF (land) between base and Douala headquarters:
Tx: 75.550 MHz Rx 80.550 MHz
Tx: 75.650 MHz Rx 80.650 MHz
Tx: 75.700 MHz Rx 80.700 MHz
VHF Total field communication:
Tx: 159.725 MHz Rx 155.125 MHz

TUGS: See "Pilotage – Pilot Boat".

BERTHING: The Moudi Loading Buoy is of the CALM type (Catenary Anchor Leg Mooring) with a single mooring point.

It consists essentially of a cylindrical body 12 m. in diameter and 4.7 m. high, equipped at the bottom with a skirt projecting 1.7 m., and with a turn-table. The buoy is anchored by means of 6 chains extending in a radius of 380 m. around it.

A 255 m. long line of 24 in. floating hoses terminates in 2×37 m. long extensions of 16 in. hoses equipped with 16 in. Camlock type quick couplings at the ends for buoy/ship connection.

A mooring line and its accessories are used to moor the ship to the turn-table.

The mooring personnel carrying out the polypropylene connection from the buoy to the "Messenger Line" of the ship are provided by the Terminal.

Head of Loading: Representative of Kelt Cameroon co-ordinates all the following operations:

Mooring
Connection
Loading.

He is responsible for ensuring compliance with Port Regulations at the Terminal. His instructions shall not be questioned or disputed and he will not check the Pilot's action, who is the Harbour Master's representative at the Terminal.

He may refuse or prohibit, after Pilot's advice, the entry of the ship in cases such as but not limited to:

unfavourable weather conditions,
ship insufficiently equipped or possessing defective equipment,
insufficient or dirty ballast.

He is in charge of obtaining the agreement to start loading. He makes sure of the correct application of safety instructions by the shipboard personnel and of the loading plan.

Once the ship is moored, he may ask the Pilot's advice for an early removal from berth of the ship or may suspend loading of the ship for reasons such as but not limited to:

safety
bad weather
non-compliance with instructions
insufficient drainage of cargo tanks
dumping of polluted water into the sea
incidents affecting the loading buoy or the pumping installation.

During loading operations he insures the radio co-ordination between the ship and the Terminal.

Mooring Master: He acts under the direction of the Head of Terminal. Mainly in charge of inspection of specifically marine equipment, he shall assist and inform the Pilot and the Head of Terminal during approach, mooring, connection/disconnection and loading phases.

Cargo Inspector: Nominated by the buyer, he is in charge of cargo control.

Customs Officer: The attendance of an Agent of the Administration of Customs is compulsory onboard of lifting vessels.

Mooring and Connection: The engines shall be in condition to deliver their maximum capacity if required. The ship's port derrick shall be rigged to project 1 m. over the ship's side and to lift a minimum load of 10 tons.

The Pilot shall instruct the Master of the ship of the standard manoeuvres for berthing and mooring.

Mooring and connection operations shall be performed by the ship's crew.

Once it is moored, the ship shall keep its engines ready to manoeuvre. No work reducing the ship's manoeuvring potential shall be undertaken without the approval of the Terminal Superintendent or his assistant.

The ship's Master shall ensure that the mooring lines guarantee a secure mooring at all times. He shall make sure that the mooring units operate to satisfactory conditions, in order to minimise wear and to prevent their breakage.

LOADING: When the ship is absolutely ready to perform loading operations, the ship's Master shall present the "Notice of Readiness". The "Notice of Readiness" shall not be accepted if the Terminal is closed.

Once the mooring and hose connections have been completed, the check list shall be checked and signed jointly before the start of loading by the Kelt Cameroon Representative and the ship's Master.

The Terminal Superintendent shall issue the order to start pumping, after the ship has confirmed that she is ready to load and shall notify the ship of the progress of loading operations.

Radio connections shall be checked frequently. All information concerning flow rate, gas pressure, change in cargo tank, cumulative quantities, etc., shall be communicated between the ship and the control room.

30 minutes before the end of loading, the ship shall advise the Loading Master in order to stop pumping in due time.

In the case of a storm or leakage, loading shall be suspended.

Measurement of the ullages, temperatures and draft after loading, for control purposes, shall be performed in the presence of the Kelt Cameroon representative.

Throughout the loading period, the ship shall carry the following:

- by day, a red flag on the masthead ("B" flag of International Code),
- by night, a red light visible 360°.

This requirement shall also be valid for ships which are loaded, moored, or manoeuvring in the danger zone, and also for ships that are not declared "gas free".

The Terminal shall provide the ship with representative samples of the cargo.

Lookout: During the whole stay of the vessel at the SPM, the Pilot ensures watch of safety on board.

Permanent bow lookout: The Kelt Cameroon representative and the Pilot will demand permanent bow watch by a member of the ship's crew and shall be advised of the tanker's position in relation to the buoy.

Permanent lookout at manifold: As soon as connections are made, the Kelt Cameroon representative shall demand permanent manifold watch by a member of the ship's crew and shall be advised of the configuration of the tanker rail hoses and if any leaks in the manifold.

BALLAST: The Terminal is not provided with facilities for treating ballast water. Ships shall therefore arrive with clean ballast. The minimum arrival ballast shall be equal to about 30% of the ship's d.w.t., ensuring a draft consistent with safe manoeuvring, a reasonable trim and a propeller submerged, to the satisfaction of the Pilot.

Inspection of the ballast to be unloaded shall be made on arrival, and any ship arriving with dirty ballast may be required to leave the buoy, and to bear responsibility for any delay resulting from this. The acceptance of the "Notice of Readiness" shall be corrected to show this.

Deballasting operations shall only begin with the agreement of the Head of Loading and the Pilot. As a rule, loading operations shall not begin until deballasting is completed, if the ship is not fitted out for simultaneous deballasting and loading operations. An inspection of tanks shall be carried out after deballasting in the presence of the Kelt Cameroon representative.

POLLUTION: It is prohibited to dump any objects or waste of any type into the sea.

It is also prohibited to dump into the sea any liquid liable to ignite or to pollute the water.

The ship's scuppers must be closed/plugged during the loading operations.

A system designed to collect any drips and leaks shall be placed under the hose/manifold connection.

In the case of water pollution caused by the ship, for any reason whatsoever, Kelt Cameroon declines any responsibility, and the ship shall be held responsible for the direct consequences of this pollution. In particular, the assistance costs incurred by Kelt Cameroon shall be passed on to the ship.

Kelt Cameroon also declines any responsibility concerning any infringement by the ship of international regulations or Port Regulations that could be ascertained by the Pilot or any Kelt Cameroon employee. Written reservations will be expressed and report will be drawn-up.

Objects falling into the sea: Any object falling into the sea shall be stated in a declaration to the Terminal Superintendent, who shall prescribe the measures to be taken for its recovery. Similarly, the recovery or removal of various objects or equipment stationed or deposited in the danger zone shall be carried out automatically, whenever the owner or operator of the said objects or equipment cannot or does not wish to perform this removal himself.

Recovery and removal shall be carried out at the cost, risk and perils of the parties concerned. For any object, (or person) that has fallen into the sea, a written report shall be addressed to the Harbour Master.

MEDICAL: Emergency cases are evacuated to Douala by Kelt Cameroon at ship's expense. Douala has a hospital, clinics and several specialist doctors.

FRESH WATER: Not available.

FUEL: Not available.

CONSULS: Consulates in Douala:

Denmark
France
Germany
Greece
Lebanon
Monaco
Norway
Sweden
U.S.A.

REPAIRS Not available at Moudi Terminal. However, well equipped repair facilities are available at Douala.

REPATRIATION: Not permitted.

AIRPORT: The nearest airport is 4 km. from Douala. 1 or 2 flights daily for Europe, several flights weekly for the U.S.A. (with changes in Europe).

TIME: GMT plus 1 hour.

STORING: Not possible at Limbe. 2 maritime victualling companies are established in Douala.

GARBAGE DISPOSAL: Offshore Terminal, so no facilties available.

WASTE OIL DISPOSAL: Offshore Terminal, so no facilities available.

SEAMAN'S CLUBS: None.

GENERAL: *Useful Publications:* Ships planning to call at the Moudi Marine Terminal shall refer to the following regulations and documents:

- Safety of Life at Sea,
- IALA "A" system for Navigation Aids,
- International Regulations for Preventing Collisions at Sea,
- Marine Charts Nos. 5633, 5602, 6076 and 5380, of the Service Hydrographique de la Marine (French Marine Hydrographic Service),
- Marine Chart No. 1860 from Hydrographic Office of the Navy,
- ISGOTT (International Safety Guide for Oil Tankers and Terminals (OCIMF/ICS Publication)).

Meteorology: The year is characterised by 2 seasons: Rainy season from June to September, variable season from October to May with low rain frequency.

The outdoor temperature varies on average from 22°C/72°F (July and August) to 30°C/86°F (February to April).

Water temperature at the surface varies from 25°C/77°F (June to September) to 29°C/84°F (February).

The prevailing winds are 4 knots to 10 knots from the S.W. sector throughout the year. The strongest winds, up to 45 knots, are rare and occur from February to May, in October, and in December. They may accompany tornadoes generally travelling from East to West.

Visibility is rarely very good and only rarely exceeds 11 nautical miles. It may be reduced to a half mile by rainfall, especially from June to September.

Tides, Currents, Waves: Tides at the Moudi site are of the semi-diurnal type 35 minutes in advance of those at Bonny (Admiralty Tide Table, Volume 2) or about 1.5 hours in advance of those of Limbe (Victoria) (Service Hydrographique de la Marine).

Surface currents, mainly influenced by the Guinea Currents, generally flow towards the S.W. and rarely exceed a speed of 1 knot.

The predominant direction of waves is S.S.W., with a trough from 0.6 m. to 1.2 m. from October to February, and a trough from 1.3 m. to 1.9 m. from February to September. Mean period 8 seconds to 10 seconds.

SAFETY: *Nautical Safety Rules:* Apart from export tankers using the loading buoy, entry into the "danger zone" is prohibited to all ships except ships of the Administration or those necessary for the development or production of the Moudi Field.

These vessels shall be equipped with fire-fighting facilities and shall not be left without surveillance.

Moreover, it is prohibited in the "danger zone" to establish anchorages, permanent or otherwise, and ships or floating equipment are prohibited from dropping their anchors.

Safety Rules Related to Weather Conditions: Throughout the presence of the ship at the loading buoy, the ship's Master shall ensure that the standard safety regulations are observed, and especially the following:

Keep in service a sufficient portion of the crew in order to guarantee trouble-free manoeuvring of the ship and operating the preliminary fire-fighting facilities.

Keep the engines ready to manoeuvre within a period specified by the Loading Master.

Have a steel wire safety towline, in mousing arrangement, placed starboard bow and stern, in such a manner that the eye can be secured easily by an assistance vessel if the latter is present on the site.

Fire-Fighting Rules: Any person who discovers a fire at the Terminal shall immediately sound the alarm.

If the fire breaks out on the ship, the latter shall transmit the distress signals specified in the international regulations.

Fire-Fighting: The ship's Master shall be responsible for the use of the technical fire-fighting facilities, and the maintenance of the ship's stability and safety.

Throughout the presence of the ship at the loading buoy, the following is prohibited:

Smoking, the use of naked flames or tools liable to generate sparks outside areas normally authorised on a tanker.

Repairs, handling operations or work liable to generate sparks.

The use, in zones classified as dangerous, of equipment or tools which are not of a type approved for this service by a competent agency.

Turning of the propellers, except for steam-ships.

Leaving open hatches and doors leading on to the main deck.

Firing shots.

As a rule, the ships shall comply with the safety requirements specified in the International Safety Guide for Oil Tankers and Terminals. In particular, it shall:

Position and connect 2 fire-hose nozzles in the bow and stern of the ship, ready for use.

Keep the fire-fighting system under pressure.

Position hand extinguishers of a suitable type near the manifold.

Kelt Cameroon reserves the right to take any measures that it deems effective in case of danger and, in particular the postponement or interruption of loading operations.

Emergency Measures: In the case of incidents/accidents which occur during loading, the Loading Master and the Pilot shall be notified immediately in order to take the measures imposed by the incident, promptly and in association with the Terminal Superintendent.

In all cases, the Master shall be capable of coping with these situations rapidly and effectively.

SHIPMASTER'S REPORT: June 1995.

Operations: Loading.

Cargo: Crude.

Connections: Hoses.

Loading: During mooring, a zodiac boat connects ship's messenger to buoy pick-up line. It is therefore impossible to use the recommended 75 mm. messenger from the ship due to the practicalities of handling such a big line from such a small boat. Ship's 32 mm. messenger was used safely by ship's staff.

Vessel had to accommodate 1 pilot, 2 surveyors, 2 Customs officials and 2 Loading Masters without any prior warning from either Terminal or Agent.

Loading rate slow, between 3,000 t.p.h. and 4,000 t.p.h.

Only one securing line to SPM, however, this considered safe up to 280,000 tonnes d.w.t.

Check List thoroughly certified by ship, but to Terminal merely a bit of paper on which to obtain a signature.

Note/s of Protest issued by Ship: Yes.

Recommendations/Requirements: I have not been to a buoy mooring yet that is happy to use 75 mm. messenger from ship, whether or not they are practically able to cope with it.

AUTHORITY: *Operator:* Kelt Cameroon, BP 1225, Douala, Cameroon.
Tel: (237) 42-32-91. *Telex:* 5698 Kn, 5385 Kn. *FAX:* (237) 42-43-59.
Contact: Bernard Castanet, General Manager.

NOTES

Please also advise Shipping Guides Ltd.

Canada

GENERAL (See Plan)

PUBLIC HARBOURS AND PUBLIC PORT FACILITIES: The Canadian port system is a diversified, multi-layered group of over 350 commercially oriented ports. Three major port systems serve commercial marine transportation and the transshipment of national and international waterborne cargo viz. Public Harbours and Ports, Canada Ports Corporation and the Harbour Commissions, all of which fall under various forms of federal jurisdiction, through the Minister of Transport.

Transport Canada maintains, administers and develops public port facilities and public harbours at approximately 300 sites across Canada primarily to assist commercial transportation.

The program for the public harbours and public port facilities is administered by the Canadian Coast Guard's Harbours and Ports Directorate, through five regional offices, and is coordinated by a headquarters unit in Ottawa. Local port administration varies according to the complexity of local operations. A small number of sites are supervised by full-time public servants who serve as port or area managers. In most cases, Transport Canada is represented locally by fee-of-office appointees known as Harbour Masters or Wharfingers.

User Fees are assessed under the Public Harbours and Port Facilities Act, according to trade practice. Typical charges include:

Harbour Dues: A charge assessed against a vessel according to its size and previous destination.

Berthage: A charge for occupying a berth at a port. The charge is based on the vessel's size and its length of stay.

Wharfage: A charge for moving cargo over a public wharf. The fee is based on cargo type, with a rate per tonne or cubic metre.

Storage: A charge for use of sheds or open spaces for assembling or distributing cargoes. The charge depends on space occupied and duration of use.

Letting: A rent, usually based on the market value of the property.

Transport Canada publishes a tariff, as a Schedule, for all charges except lettings, in the Government Wharves Regulations and the Public Harbours Regulations. If Transport Canada must undertake improvements for the benefit of a major user, the Department may supplement or replace these tariffs with negotiated contracts designed to improve the overall rate of cost recovery on investment.

Vessel operators, their Owners or Agents trading with Canada, desiring a berth in a public harbour and/or at a public port facility or, interested in obtaining specific details concerning the operations at "public harbours and public port facilities", are requested to contact and make application, as far in advance of date of docking as possible, to the appropriate regional management at the following address(es), specifying the name of the vessel, date of docking, sailing, nature and quantity of cargo to be handled, and of any special requirements.

Labrador/Newfoundland:

Regional Director, Canadian Coast Guard, Harbours and Ports, 34 Harvey Road, St.John's, Newfoundland, Canada A1C 6H8. Tel: (709) 772-5154. Fax: (709) 772-5127.

Maritimes (Nova Scotia, Prince Edward Island, New Brunswick):

Regional Director, Canadian Coast Guard, Harbours and Ports, Royal Bank Building, Twin Towers, 44 Portland Street, Dartmouth, Nova Scotia, Canada B2Y 4K2. Tel: (902) 426-2588. Fax: (902) 426-3904.

Laurentian (Quebec):

Regional Director, Canadian Coast Guard, Harbours and Ports, Pratt Building, 104 Dalhousie Street, Quebec, Canada G1K 4B8. Tel: (418) 648-4101. Fax: (418) 648-7980.

Central (Ontario):

Regional Director, Canadian Coast Guard, Harbours and Ports, 201 Front Street North, Suite 703, Sarnia, Ontario, Canada N7T 8B1. Tel: (519) 383-1842. Fax: (519) 383-1996.

Western (British Columbia):

Regional Director, Canadian Coast Guard, Harbours and Ports, 800 Burrard Street, 10th Floor, Vancouver, British Columbia, Canada V6Z 2J8. Tel: (604) 631-3800. Fax: (604) 631-3809.

PILOTAGE REGULATIONS: Marine pilotage services in Eastern Canada are provided by the Atlantic, Laurentian and Great Lakes Pilotage Authorities, and in Western Canada by the Pacific Authority. These four Crown corporations may be contacted as follows:

Atlantic Pilotage Authority:

Purdy's Wharf, Tower 1, 1959 Upper Water Street, Suite 1402, Halifax, N.S., Canada B3J 3N2. Tel: (902) 426-2550. Fax: (902) 426-4004.

Laurentian Pilotage Authority:

715 Victoria Square, 6th Floor, Montreal, Quebec, Canada H2Y 2H7. Tel: (514) 283-6320. Fax: (514) 496-2409.

Great Lakes Pilotage Authority Ltd.:

P.O.Box 95, Cornwall, Ontario, Canada K6H 5R9. Tel: (613) 933-2991. Fax: (613) 932-3793.

Pacific Pilotage Authority:

300 – 1199 West Hastings Street, Vancouver, B.C., Canada V6E 4G9. Tel: (604) 666-6771. Fax: (604) 666-1647.

General information on pilotage services, including required notifications, pilot boarding stations and radio frequencies are contained in the Annual Edition of the Canadian Notices to Mariners (No. 23 of 1993).

Pilotage in British Columbia Waters: Pilot's accommodation aboard any ship must be clean, quiet, adequate and equivalent to a deck officer's cabin. On assignments where 2 Pilots are required, 2 such separate cabins must be supplied. Under no circumstances will Pilots accept ships' hospitals accommodation.

Two Pilots shall be assigned to a ship where:

(a) That ship requires the services of a Pilot on bridge watch for a period in excess of 8 consecutive hours, or

(b) The ship will travel more than 105 consecutive miles while under pilotage.

PILOTAGE: British Columbia Coast Pilots:

NOTICE: This Notice applies to all vessels over 350 g.t., arriving in Canadian Waters of British Columbia.

Notice of Requirement for a Pilot:

Pilot Stations:

Triple Island	48 hours
Cape Beale	48 hours
Brotchie Ledge	12 hours

The Master of a vessel may not advance his ETA after sending his 12 hour notice, and must confirm his ETA 4 hours before arriving at the pilot station.

In Harbour or Ports in the Region: The Master, Owner or Agent of a ship departing from a place where pilotage service is required shall place a Notice of Requirement in local time with the Pilotage Authority at least 12 hours before the Pilot or Pilots are required to be on board the transportation to the ship specified in the pilotage order, or at least 12 hours before the Pilot or Pilots are required to be on board the ship, if berthed at a place where Pilots are based.

Accommodation: All vessels intending transits longer than 105 miles in compulsory pilotage waters, and slow speed vessels not able to make a passage in less than 8 hours will be required to take 2 Pilots. Vessels requiring 2 Pilots must provide suitable accommodation, in 2 separate cabins. The pilot cabins must be clean and heated and have operational toilet facilities, either in the cabins or close by, fresh linen and blankets are to be provided. Cabins must be located in quiet areas of the ship and be officer rated, under no circumstances will hospitals be considered suitable.

Authority: The British Columbia Coast Pilots Ltd., 201-1199 West Hastings Street, Vancouver, B.C., Canada V6E 3T5. Tel: Victoria (604) 363-3878, Vancouver (604) 688-0291. Cel: 880-5223. Fax: (604) 688-5250.

NOTICE: *Non-Canadian Ships Compliance Certificate:* In September, 1983, the Shipping Federation of Canada advised the following:

We have been informed by the Canadian Coast Guard that many tankers are being diverted unexpectedly in mid-Atlantic to Canadian ports. Some of these vessels have never been involved in Canadian trade before and as a result do not have a Non-Canadian Ships' Compliance Certificate and are therefore in breach of Canadian regulations. The regulations governing the issuance of the certificate apply to all non-Canadian oil tankers of 500 g.r.t. or more trading in waters South of the 60° parallel of North Latitude. The regulations hinge on the 1930 and 1966 Solas Conventions, the navigating appliances regulations, the oil pollution prevention regulations, the charts and publications, regulations, etc. The certificate is valid for two years and essentially indicates that the ship complies with other Canadian regulations.

The Coast Guard has recently permitted several of these vessels to enter Canadian waters and has diverted the offenders to the nearest suitable port where ship inspectors ensure that the vessels meet Canadian standards prior to issuing a certificate. We have been informed by the Canadian Coast Guard that tankers which contravene the regulations will not be permitted to enter the Gulf of St. Lawrence. This diversion to an inspection port creates a loss of time for the shipowner and efforts must be made to correct the situation.

In waters other than Canadian, an inspector of the government of the state in which the ship is registered and representatives of recognised classification societies are empowered to issue the non-Canadian ships' compliance certificate on behalf of the Canadian Coast Guard.

ARCTIC POLLUTION PREVENTION CERTIFICATE:

Operators trading to Canada should be aware that all vessels, which intend to navigate in a shipping safety zone, should be in possession of an "Arctic Pollution Prevention Certificate". Ships over 100 gross tons with less than 453 cu.m. of oil on board must carry an Ice Advisory in certain areas during the Winter season.

No Arctic Pollution Prevention Certificate shall be issued to the owner or Master of a ship, unless the ship complies with the standards of Canada's Pollution Prevention Regulations. The certificate can be issued by one of the following below:

A. A (Canadian) Inspector, or

B. A surveyor working exclusively for

- (i) American Bureau of Shipping.
- (ii) Bureau Veritas.
- (iii) Det Norske Veritas.
- (iv) Germanischer Lloyd.
- (v) Lloyd's Register of Shipping.
- (vi) Nippon Kaiji Kyokai.
- (vii) Register of Shipping of Russia
- (viii) Registro Italiano Navale.
- (ix) Polski Rejestr Statkow.
- (x) Registrul Naval Roman.

Canadian shipping agents can assist vessel's Owners/Masters in obtaining the certificate.

NOTICE TO MARINERS:

NOTICE No. 10: Transmission of Estimated Time of Arrival:

In the interest of marine safety Masters should give an early indication of the vessel's ETA to the appropriate Port Authority and in this respect comply with any published instructions relating to this requirement. At ports where instructions have not been published, the ETA should be radioed in sufficient time for Port Authorities to make arrangements for the arrival of the vessel, taking into account actual conditions such as tide, size and draft of the vessel and notice as necessary to alert Pilots and towing services.

Notice to Mariners Nos. 25 and 26 also provides information on reporting procedures for specific areas.

Authority: Department of Transport (CGSN).

NOTICE No. 6: Ice Navigation, Routing and Requests for Icebreaker Assistance.

1. Hudson Strait and Canadian Arctic:

Arctic Canada Traffic System (Nordreg Canada). Mariners should be aware of the existence of the Arctic Canada Traffic System (Nordreg Canada) and the advantages of reporting to this system which is a voluntary Vessel Traffic Service (VTS) system covering the waters of Ungava Bay, Hudson Bay and James Bay, South of the parallel of 60° North Latitude and the waters to which the Arctic Waters Pollution Prevention Act applies. During the Arctic navigation season, a Nordreg office based at Iqaluit is staffed with an Ice Operations Officer who provides information on ice conditions and vessel routing in ice. Icebreaker assistance, when requested may be arranged through the Ice Operations Officer. For more detailed information on this VTS system, the definition of waters it covers and the requirements to make certain reports and obtain clearance, Mariners should refer to Notice No. 26 in this Annual Edition of Notices to Mariners.

For general information on ice conditions:

Address: NORDREG CANADA,
P.O.Box 718,
Iqaluit, N.W.T.
X0A 0H0.
Telephone: 819-979-5724.
Fax: (819) 979-4236.
Radiogram: Nordreg Canada.

2. East Coast and Gulf of St. Lawrence:

During the Winter navigation season a similar service is provided to ships intending to transit or to operate in East Coast and Gulf of St. Lawrence waters. Access to this service can be obtained by contacting the Eastern Canada Traffic System (ECAREG CANADA). ECAREG communications procedures are specified in the current Annual Edition of Notices to Mariners.

(a) For general information on ice conditions:

Address: Canadian Coast Guard,
Operations Centre – Maritime,
Ice Operations Section,
P.O.Box 1000,
Foot of Parker Street,
Dartmouth, N.S.
B2Y 3Z8.
Telephone: (902) 426-5664 or (902) 426-5665.
Telex: 019-22510.
Fax: (902) 426-6444.
Radiogram: ECAREG CANADA.

(b) For general information on ice conditions and icebreaker assistance in Newfoundland waters, East of Cape Chidley and Long. 58° 00′ W., including Labrador Coast and Hamilton Inlet:

Address: ECAREG CANADA
VTS Centre, St.John's,
P.O.Box 1300,
St. John's, Newfoundland,
A1C 6H8.
Telephone: (709) 772-2078 or 772-4580.
Telex: 016-4530.
Fax: (709) 772-5369.
Radiogram: ECAREG CANADA.

3. St. Lawrence River:

In the St. Lawrence River West of Long. 66° 00′ W. to Montreal, ship movement is under the general control of the Vessel Traffic Services (VTS) system. During the Winter navigation season, the ice operations centre will provide via "Escoumins Traffic", "Quebec Traffic", or "Montreal Traffic", the recommended ice routes to be used. Information regarding ice conditions and icebreaker assistance may also be requested from the traffic centres.

For general information on ice conditions:

Address: Canadian Coast Guard Fleet Systems,
Operations Centre – Quebec,
2nd Floor,
104 Dalhousie Street,
Quebec (Quebec), G1K 4B8.
Telephone: (418) 648-2442 or 648-2214.
Fax: (418) 648-7305.
Radiogram: Escoumins Traffic
Quebec Traffic
Montreal Traffic.

4. Canadian Great Lakes:

Vessels entering Canadian waters of the Great Lakes may obtain ice information, routing advice and request icebreaker assistance by contacting the following address:

Ice Toronto,
Canadian Coast Guard,
Transport Canada,
20th Foor, Toronto Star Building,
1 Yonge Street,
Toronto, Ontario, M5E 1E5.
Telephone: (416) 973-3918.
Telex: 06-23317
Fax: (416) 973-1516.
Radiogram: Ice Toronto.

5. General Remarks:

A limited number of icebreakers are available for the support of shipping and these are heavily committed. It is emphasised, therefore, that it may not be possible to provide icebreaker support at short notice. In order to make the most efficient use of all available resources, it is important that the VTS Centres be kept informed of the position and projected movements of vessels in Canadian waters.

Authority: Canadian Coast Guard (AMND) (AMFO).

NOTICE No. 25: Vessel Traffic Services (VTS).
See "Plan Section".

REPORT: February 1985.

Herewith is an outline of requirements for chemical tankers which are scheduled to call Vancouver/British Columbia ports.

1. Vessel must have on board a valid non-Canadian Ship's Compliance Certificate (or obtain it on arrival).
2. Certificate of Fitness and date.
3. Provide Agents with 7, 4, 2 and 1 day's notice prior to arrival.
4. Advise Agents of the last 2 cargoes.
5. Advise of any cargo in transit (quantity and type).
6. Vessel is required, in Vancouver, to have a clear passage while transiting the First and Second Narrows Bridge – with a minimum of 1 mile visibility. Vancouver Traffic Centre will advise vessel accordingly upon arrival.
7. Canadian Coast Guard will attend on board upon arrival for safety inspection.

In the case that a vessel arrives in Vancouver with ammonia on board, the vessel is permitted to load propane as a second cargo, providing they are fully segregated.

AMHERSTBURG, Ontario: 42.06 N. 83.08 W. (See Plan)

PORT LIMITS: Southerly Port Limits commence at Buoys 43D and 44D and extend on the Canadian side of the International Boundary Line, Northerly to the Southerly limits of Windsor Harbour.

DOCUMENTS: Vessels may clear Customs at Amherstburg upon request. No Customs Officer available at Amherstburg. Request to clear must be made through Windsor Customs Office.

Pleasure craft 24 hour reporting	Tel. 256-7811.
Customs Office bridge (commercial)	Tel. 254-0893.
Customs Office bridge (auto)	Tel. 253-7271.
Customs Office tunnel (auto)	Tel. 254-3575.

PILOTAGE: Pilotage is compulsory as required by Seaway Regulations.

ANCHORAGES: Windsor Harbour is the only recognized anchorage in Detroit River.

RESTRICTIONS: Seaway draft is maintained in main channel and shallow draft channel of 21 ft. Water levels are affected by fluctuation of Lake Erie. A Low Water Warning is broadcast from Belle Isle on 2670 kHz and 156.6 MHz on the odd hour plus 55 minutes when the water level in the West end of Lake Erie falls 1 in. or more below the lower level of the Lake Survey Centre's predicted range of levels shown in bulletins issued the 5th and 20th of each month during navigation season. Water levels are broadcast on FM radio from Group Detroit.

MAX. SIZE: About 432 ft. long and 21 ft. draft is maximum for Allied Chemical Dock.

HEALTH: Pratique is not necessary as vessel has passed all health requirements before entering Canada.

RADIO: Messages may be sent and received via VBE Sarnia Radio.

VHF: None available for port movement, except as established between vessels in Harbour.

TUGS: Available, but not usually used.

BERTHING: There is no public wharf.

Canadian Coast Guard (C.C.G. Docks available on request for distress or emergency only. Contact by radio or telephone) has two docks: South – 250 ft. in length with approach depth 17 ft.; North – 291 ft., with approach depth 17 ft. The old Town Coal Dock is converted into a public park.

Allied Chemical is a private dock (length 300 ft.)which consists of 3 cement filled caissons protected with steel sheet piling. Import fuel oil and export liquid calcium. Vessels of over 400 ft. length call here regularly, draft approach alongside 21 ft.

CRANES: Shore cranes are available for hire from Windsor, also floating barges with cranes, 100 ton capacity and 200 ft. boom if required.

BULK CARGO FACILITIES: Conditions of various wharves does not warrant any usage for bulk cargoes.

BRIDGES: No bridges within Amherstburg Harbour area.

STEVEDORES: Stevedoring is arranged through Agents in Windsor.

MEDICAL: Should medical attention be required it can be arranged through radio station VBE Sarnia by message to Canadian Coast Guard Base Amherstburg. Hospitals are available in Windsor with Ambulance service. Injured seaman can be taken off if necessary by Canadian Coast Guard in vicinity of Amherstburg, when notified via VBE Radio Sarnia.

TANKERS: Use private wharf of Allied Chemical Limited.

DENSITY: Fresh water only.

FRESH WATER: Fresh water could be supplied in an emergency by tank truck or contacting Public Utilities Commission.

FUEL: Not available on docks, except by truck.

FIRE PRECAUTIONS: Usual ship board fire precautions on board.

CONSULS: None.

REPAIRS: Small ship repairs can be carried out by local firms from Windsor.

DRY DOCK: None.
SURVEYORS: None stationed in port, but arrangements can be made to have an inspector when required.
GANGWAY/DECK WATCHMEN: No regulations requiring watchman.
CUSTOMS ALLOWANCES: Same as all Canadian Customs Regulations.
CARGO GEAR: Ship's gear, unless pallets are used.
REPATRIATION: Arrangements for crew change can be made.
TIME: Local time is GMT minus 5 hours and Summer time minus 4 hours.
HOLIDAYS: All Canadian Holidays, working time requires negotiating with local unions.
POLICE/AMBULANCE/FIRE: Police – 969-6650, Ambulance – 736-5411, Fire – 969-6650.
TELEPHONES: No telephone jacks available on any dock.
SERVICES: Laundry can be done, but takes considerable time. Foodstuffs are available, including fresh produce.
SHORE LEAVE: No restrictions.
IDENTIFICATION CARDS: Seaman's I.D. card is sufficient.
REGULATIONS: No unusual regulations.
DELAYS: Private owner's dock is only dock being used for cargo.
AUTHORITY: Canadian Coast Guard, 370 Dalhousie Street, Amherstburg, Ontario N9V 1X3, Canada. *Tel:* 519-736-5449. *Contact:* L. Bill, Sub-District Manager.

AMHERST HARBOUR, Quebec: 47.14 N. 61.50 W.

LOCATION: Situated at the N.E. end of Amherst Is., which is part of the Magdalen Islands group.
DOCUMENTS: Amherst is not a port of entry, clearance obtained at previous Canadian port of call.
PILOTAGE: Not compulsory.
ANCHORAGES: Available inside the harbour, depths 4.88 m. to 5.5 m.
RESTRICTIONS: Navigation season from April 1st to December 15th. Channel depth 16 ft. at LWST.
RADIO: Grindstone (VCN).
TUGS: None.
BERTHING: Transport Canada Wharf: Length 183 m., depth alongside 5.18 m. at LW.
STEVEDORES: Available.
FRESH WATER: Available.
FUEL: Diesel available.
REPAIRS/DRY DOCK: Not available.
AIRPORT: Flights to Charlottetown and Quebec Province.
AUTHORITY: Transport Canada, Garde Cotiere Canadienne, Region des Laurentides, 104 Dalhousie, Suite 121, Quebec, P.Q., G1K 4B8. *Tel:* (418) 648-3680. *Telex:* 051-3051. *Contact:* Felix A. Boudreau, Harbour Master, Amherst.

ARGENTIA, Newfoundland: 47.18 N. 53.59 W.

(See Plan)

LOCATION: The Public Harbour of Argentia is located on the East side of Placentia Bay. The harbour is entered between Low Room Point and Broad Cove Point and extends 3 km. in length S.W. to the head of Sandy Cove. The navigational season is year round.
DOCUMENTS:

3 copies Crew Declaration (Form Y14).
3 copies Ship's Stores List (Form E1).
3 copies Immigration Crew List (Form IMM 200), only Canadian form accepted.
2 copies Bill of Lading or Manifest.

In addition, Customs Clearance from last port, Derat Certificate, extra copy of Crew List, Vaccination List, Ship's Register, Radio Equipment Certificate, Safety Equipment Certificate, Load Line Certificate and Non-Canadian Ship Compliance Certificate. Oil Record Log Book should be up to date and readily available for inspection by Government Steamship Inspectors.
PILOTAGE: Not compulsory, however, licensed Pilots are available, if desired. Pilots board off Argentia in position Lat. 47° 20′ N., Long. 54° 06.3′ W.
Arrivals: To avoid a delay in ordering a Pilot, Masters of vessels bound for Argentia must forward their request for Pilots to "Pilots St.John's" as follows:

First notice 12 hours prior to the ETA (GMT) at the appropriate boarding station, stating:
(a) Which boarding station the Pilot is required at.
(b) Name.
(c) Call Sign.
(d) Deepest draft.
(e) Speed.
(f) Agent.
(g) Length, breadth, moulded depth, deadweight tonnage and the largest net registered tonnage.

Second notice 3 hours prior to the ETA (GMT) at the appropriate boarding station.
Departures/Movages: First notice 9 hours prior to the ETD (Local time). Second notice 3 hours prior to the ETD (Local time).
Embarkation/Disembarkation: Masters of calling vessels are reminded of their obligation to comply with statutory rules, and are recommended to comply with the following:
(a) The Officer responsible for embarkation/disembarkation of the Pilot is a watchkeeping Officer.
(b) The pilot ladder is secure.
(c) The pilot ladder is adequately illuminated at night.
(d) Means are provided to enable the Pilot to pass safely and conveniently from the head of the pilot ladder into the ship or onto the ship's deck. Portable stanchion, if used, should be independently secured to the rail or deck, one on each side of the ladder.
(e) The ladder is in good condition and its treads remain horizontal. The treads to have a rough surface.
(f) The ladder is rigged so that each step rests firmly against the ship's side.
(g) Spreaders are provided not more than 10 ft. apart, to prevent the ladder from twisting.
(h) Manropes should be available, but should not be lowered unless requested by the Pilot.
(i) A lifebuoy with a self-igniting light and a heavy line should be available.
(j) The ladder should be rigged well clear of overboard discharge and deck scuppers.

If the pilot ladder is not safe, the Pilot may refuse to board and thus cause unnecessary delay to the ship.
ANCHORAGE: Available 1.6 km. from wharf. Caution should be exercised when using anchors in Argentia due to abandoned submarine cables.
RESTRICTIONS: Will be dispatched by Transport Canada, Harbours and Ports Directorate, to ship's Agent.
HEALTH: Vessels arriving from a foreign port may obtain pratique by radio from "Quarantine St.John's" at least 12 hours before arrival. Information required by Quarantine Officer shall include:

Name and nationality of the vessel.
Last port of call.
Nature of cargo.
Number of crew and passengers.
Port of destination.
Name of Agent.
Conditions of health of all on board with details of any sickness or death incurred during the voyage.
Animals, if any.

RADIO/VHF: The best radio stations to use en route to Argentia are:
St.John's Marine Radio – call sign VON.
Halifax Marine Radio – call sign VCS.
St.Lawrence Marine Radio – call sign VCP.

To avoid a delay in obtaining a Pilot, Masters of ships bound for Argentia must report by R/T, W/T or Telex, their ETA to Vessel Traffic Management at St.John's at least 24 hours before vessels' ETA at the pilot boarding station. The times should preferably be in GMT, but whatever time is used, it should be expressly stated. ETA should be confirmed or corrected 12 hours and 6 hours prior to arrival at the pilot boarding station by R/T, W/T or Telex through VON Marine Radio Station, St.John's or via any Coast Guard Radio Station. Also see "Pilotage".

Pilotage messages may be forwarded through the nearest Canadian Coast Guard Radio Station. Direct requests can be made through St.John's Traffic Centre on VHF Channel 11 and Placentia Traffic on VHF Channels 12 and 14. Placentia Traffic Tel: (709) 227-2181.

The requirements for water, fuel and ballast should be made known to vessel's Agent in the 72 hour ETA.
TUGS: Three tugs are stationed at nearby Come-By-Chance to assist vessels in berthing and unberthing, if necessary.
BERTHING:

Berth	*Name*	*Length* (m.)	*Width* (m.)	*Depth* (m.)
1	Fleet Dock	150	12.0	10.5
2	Fleet Dock	155	12.0	10.5
3	Fleet Dock	120	18.8	6.1 – 8.5
4	Fleet Dock	48	18.8	6.1 – 8.5
5	Ro-Ro Ramp		17.0	5.5 – 7.5
6	Marine Atlantic	20		
7	Marine Atlantic	185		10.0 – 13.3
8	Navy Dock	105		7.4 – 11.0
9	Navy Dock	105		7.4 – 11.0
10	Navy Dock	105		10.9 – 12.4

MEDICAL: Masters are requested to notify their Agents at least 72 hours prior to arrival, advising the number of crew to see the doctor and their complaint. There is a cottage hospital facility at Placentia, 6.5 km. distance from the port, and full hospital facilities are located in St.John's, 130 km.
CRANES: Mobile cranes and boom trucks available. Heavy lift crane pad on Berth No. 2 (Fleet Dock). This area can accommodate a 200 ton mobile crane at minimum radius.
STEVEDORES: Local labour should be arranged by Agent.
FRESH WATER: Limited quantities of fresh water available. Arrangements should be made through Agent or Harbour Master.
FUEL: Ship's bunkers are available by tank truck.
CONSULS: The following countries have Consular Representatives in St.John's:

Brazil
Denmark
France
Germany
Iceland
Italy
Malta
Netherlands
Portugal
Spain
Sweden

REPAIRS: The Agent should receive early advice of requirements, as most repairs are only available at St.John's (Radio, radar, gyro, Satnav and Loran, etc.). The technicians for such equipment work out of St.John's. The following brand names have representatives in St.John's: Racal-Decca, Marconi, Kelvin Hughes, Furono, Atlas and Sperry.
SURVEYORS: Stationed in St.John's: Lloyd's, BV, NKK, ABS, Germanischer Lloyd, Italian Registry, Russian Registry, China Corp. and Honduran Registry.

GANGWAY/DECK WATCHMEN: Usually ship's crew.
CUSTOMS ALLOWANCES: Each crew member is allowed 200 cigarettes and one 40 oz. bottle of wine or spirits per week.
REPATRIATION: No formal facilities, however, crew changes and repatriation can be carried out. Prior notice to Agent is required.
AIRPORT: Nearest airport is St.John's, 130 km. away.
POLICE/AMBULANCE/FIRE: The Police, Fire Department and Ambulance Service are located in Placentia, 6.5 km. away from the port.
EMERGENCY CO-ORDINATION CENTRE: Canadian Coast Guard, Placentia Traffic, Tel: 709-227-5731 or VHF Channel 16.
BANKS: Several Canadian Banks provide service in the Placentia area.
TIME: GMT minus 3.5 hours. First Sunday in April clocks advance 1 hour. Last Sunday in October clocks retard 1 hour.
SERVICES: *Supplies and Laundry:* Stores and provisions have to be obtained in St.John's. In order to avoid delays, Agent should be notified prior to arrival of the vessel's requirements. Stores and supplies will be delivered by truck at the dock.
SHORE LEAVE: In order to comply with Immigration Regulations, crew should be carefully checked before sailing, and any missing crew member reported to Agent.

In case of crew members left ashore for any reason, Masters are requested to furnish a letter accepting responsibility for all expenses incurred, advances (if any) and also instructions for repatriation. An Immigration Bond may be required.
GARBAGE DISPOSAL: Arrangements must be made through Agent.
WASTE OIL DISPOSAL: Arrangements must be made through Agent.
SEAMAN'S CLUBS: None locally. Facilities available at Placentia (6.5 km.) and St.John's (130 km.).
CURRENCY: Canadian Dollar.
WEATHER: The prevailing winds are from the S.W. in Summer and N.W. in Winter. Fog is experienced regularly in April, May, June and July, the latter two months being the worst. The fog is usually associated with a Southerly wind.
CHARTS: Canadian Hydrographic Chart No. 4841.
GENERAL: Masters are strongly advised to contact their Agent 72 hours, 48 hours, 36 hours, 24 hours, 12 hours and 6 hours with ETAs. In the 72 hour message, Masters should advise all port requirements.
AUTHORITY: Transport Canada, Harbours and Ports Directorate, Newfoundland Region, P.O.Box 1300, St.John's, Newfoundland A1C 6H8, Canada. *Tel:*(709) 772-5154. *Telex:* 016-3369. *FAX:* (709) 772-5127. *Contact:* D.A. Lester, Regional Manager, Harbours and Ports.

BADDECK, N.S.: 46.06 N. 60.44 W. (See Plan)

DOCUMENTS:
4 Crew Lists.
Customs Documents.
Harbour Dues Receipt.
Stores List.
Derat Certificate.
Safety Regulations.
Clearance from Last Port.
PILOTAGE: Compulsory. Pilot boarding station at Lat. 46° 20′ 30″ N., Long. 60° 07′ 00″ W. (same as Sydney).
ANCHORAGE: Good anchorage in lake. Depths 50 ft. to 500 ft.
RESTRICTIONS: Can be restricted by heavy fog, tide, ice.
Great Bras d'Or: (Entrance to lakes restricted at Seal Island Bridge to vessels less than 119 ft. high).

Entrance into the Bras d'Or Lakes via the Great Bras d'Or is from the Northward, through a 10 mile long fiord which varies in width from 0.5 to 1 mile wide and flanked by high rolling hills.
MAX. SIZE: Largest vessel to dock 497 ft. long, 66.7 ft. wide. Draft 28 ft.
HEALTH: Pratique obtained at Sydney, N.S.
RADIO: Sydney Radio
TUGS: None.
BERTHING: The dock is 330 ft. in length, with an approach way of 80 ft. length, making an "L" shape. Depth alongside at LW is 15 ft. at the inner end and 25 ft. at the outer end.
MEDICAL: No advance notice required. Hospital available.
DENSITY: In sea 35/1000. In lake 25/1000.
FRESH WATER: Supplied at 20 t.p.h.
FUEL: Diesel oil available by truck.
CONSULS: None.
REPAIRS: Minor repairs only.
SURVEYORS: Lloyds, ABS and BV available from Halifax.
HATCHES: Normally opened and closed by crew.
CERTIFICATES: Registry, Derat and Safety Certificates.
CUSTOMS ALLOWANCES: Tobacco, 100 cigarettes per week or 0.5 lb. tobacco. Wine/spirit: None.
AIRPORT: 55 miles. Served by regular airlines.
TIME: GMT minus 4 hours. Advance 1 hour in Summer.
HOLIDAYS: Sundays and Statutory holidays; New Year's Day; Good Friday; Easter Monday; Victoria Day; Canada Day; Labour Day; Thanksgiving Day; Remembrance Day; Christmas Day.
POLICE/AMBULANCE/FIRE: 295 2350, 292 2032, 295 2110.
TELEPHONES: None available for placing on board.
AUTHORITY: Transport Canada, P.O.Box 1013, Dartmouth N.S., B2Y 4K2. *Tel:* 426-6508. *Telex:* 019-22757. *Contact:* William Beck.

Local Authority: Transport Canada, P.O.Box 162, Baddeck, Nova Scotia B0E 1B0, Canada. *Tel:* (902) 295-2502. *FAX:* (902) 295-2218. *Contact:* Mr. MacRae, Harbour Master/Wharfinger (Cel No. 902-295-7786).

BAIE COMEAU, Quebec: 49.14 N. 68.07 W.

LOCATION: Located on North shore of the St. Lawrence River, N.E. of mouth of the Manicouagan River and 440 km. from Quebec City.
PORT LIMITS: Starting from a point on the Southern limit of Baie Comeau at Pointe St. Gilles Lat. 49° 12′ 10″ N., Long. 68° 08′ 41″ W. Thence, North-Eastward to Pointe St. Pancrace, Lat. 49° 15′ 14″ N., Long. 68° 04′ 43″ W.

All waters inside of these points are understood to be part of Baie Comeau Harbour.
DOCUMENTS: Baie Comeau is a Port of Entry. Customs and Immigration facilities are located in the Town of Baie Comeau. All vessels arriving from Foreign Ports will be boarded by Customs and Immigration Officers.

The following forms are to be completed prior to arrival at the first Canadian Port:
3 copies Immigration Crew List, IMM-200
3 copies Crew Declaration, Y-14
3 copies Ship's Stores, E-1
3 copies Passenger List, IMM-264
2 copies Quarantine Service, *Q-S-1
*To be supplied by Quarantine Officer on arrival.
ETA: Advise Agent 72, 24 and 4 hours before arrival. Include fuel and stores requirements.
PILOTAGE: Not compulsory for public wharves, but recommended. The services of a qualified Docking Master are available through the facilities of Cargill Grain Company. Docking instructions will be given by radio after receiving vessel's ETA.

Normally the Docking Master boards from tug approximately 0.5 mile S.W. of Pointe St. Pancrace.
ANCHORAGES: Anchorage is available in vicinity of Baie Comeau, but a heavy sea rolls into Baie-des-Anglais with East winds.
ICE ADVISORY SERVICE: Ships inbound for Baie Comeau from seaward between December 15th and April 15th should advise the Ice Information Officer, Sydney, N.S., 36 hours prior to entering Cabot Strait stating their position, destination, whether loaded or in ballast. This procedure will facilitate the passing of ice information to the ship as necessary.

On request, ice information is also available from Marine Radio Stations at Halifax, Camperdown, Seven Islands, Twillingate and Grindstone. The Canadian Broadcasting Corporation Maritime network also broadcasts ice information daily during the Winter navigation season. Supplementary ice information may also be obtained from Canadian Marine Service icebreakers.

During the ice season, radio broadcasts of ice information are made twice daily from Marine Radio Stations as follows:

	Call	*Frequencies*	
Cape Race, Nfld.	VCE	420	kHz CW
		2582	kHz RT
Fox River, Que.	VCG	434	kHz CW
		2582	kHz RT
Mont-Joli, Que.	VCF	446	kHz CW
		2582	kHz RT
North Sydney, N.S.	VCO	489	kHz CW
		2582	kHz RT
Halifax	CFH	115.3	kHz CW
		6949.5	kHz
		8662	
		12984	
		17218.4	

RESTRICTIONS: Port open for shipping all year round, but occasionally assistance of ice-breakers may be required.

Channel depth: 8.2 m. at extreme low tide.
MAX. SIZE: Up to 40 ft. draft at Cargill at LW. Size limited only by berth depth.
RADIO: Mont-Joli Radio (VCF) 2582 kHz (VHF, CRM Co. Ltd., Wharf Office, base to ships on marine frequencies) (Channel 7A – 156.350 MHz and Channel 16 – 156.800 MHz, call XJS94).
HEALTH: Incoming vessels making Baie Comeau port of entry must obtain Pratique by radio. Radio Pratique may be obtained between 0900 hrs. and 1700 hrs. the day preceding arrival. Address message "Quarantine Quebec".

For the purpose of Radio Pratique, vessels are required to give the following information:
1. Name and nationality of vessel.
2. Ports called at during voyage.
3. Nature of cargo.
4. Number of crew.
5. Number of passengers.
6. Port of destination and name of Agent.
7. Number of persons without valid certificates.
8. Condition of health of all on board with details of any sickness or death which has occurred during the voyage.

Ships arriving in English Bay in Quarantine will be inspected by Health Officer at anchorage or on arrival alongside. Should Officer board vessel at anchorage, proper accommodation ladder must be provided.
BERTHING:

Wharf	*No.*	*Length* (m.)	*Depth* (m.)	*Remarks*
Public Wharves	1	155	9.0	
	2	155	8.5	
	3	135	8.5	
	4	220	8.5	
Private Wharves		180	7.1	Cie.de Papier Quebec et Ontario
	1	164	10.1	Canadian Reynolds Metals
	2	179	10.1	
	3	168	10.1	
	1	178	12.2	Cargill
	2	178	11.6	
	3	212	8.4	

In 1990, 7,100,000 tons of merchandise were handled which consisted mainly of grain, aluminium, coke, paper and petroleum products.

The public wharf extends N.E., then to the North, which forms a basin protecting the 4 berths inside the public harbour, the wharf of the paper company and the 2 ferry berths.

The section of the public wharf that extends North for 445 m. (1,460 ft.), protects the Berths No. 1, 2 and 3 (berths numbered from the North end). Berth No. 4 is situated at the section extending in a North-Easterly direction. A floating mobile and adjustable Ro-Ro ramp is situated near the inner end of the public wharf. It is a 400 ton capacity ramp, approximately 33 m. (110 ft.) long and 9.0 m. (30 ft.) wide.

The private wharf at the Compagnie de Papier Quebec et Ontario Limitee is situated North of the inner end of the public wharf. The ferry ramp is located on the North side of the private wharf. The rail ferry terminal is situated close North of the same wharf.

The Societe Canadienne de Metaux Reynolds Limitee operates 3 berths from a basin that is located in Anse du Moulin, 0.8 miles North of the public wharf. Berth No. 1 extends in a N.E. direction alongside the approach jetty. It is equipped with 2 pneumatic unloaders for alumina and coke. A conveyor carries the raw materials towards the 3 tanks that are located S.W. of the wharf; 2 tanks with a capacity of 40,000 tons (alumina) and the other with a capacity of 5,000 tons (coke). Connections for the handling of petroleum products are located about 64 m. (210 ft.) from the outer end of Berth No. 1. Berth No. 2 is the extension of the Berth No. 1. There is a storage shed and a dock office. Berth No. 3, situated North of Berth No. 2, is used for loading only. 3 sheds for cargo are located at the berth. Fresh water is available at these 3 berths.

The grain terminal of the Compagnie Cargill Limitee, situated close North of Anse du Moulin, consists of 2 piers, a grain elevator with a capacity of 441,784 tons (wheat), and several silos. The S.E. Pier, 212 m. (696 ft.) long, is a breakwater-wharf which protects Berth No. 3. The N.W. side of the pier is used by vessels discharging grain. The N.W. Pier is 178 m. (584 ft.) long, and ships can berth on both sides for loading. Berth No. 1 is located on the North side, while Berth No. 2 is on the South side. The piers are equipped with pipelines for fuel and fresh water.

TUGS: Available. Not compulsory, except for Cargill Grain Terminal and Canadian Reynolds Metal.
CRANES: All types of cranes available for hire.
CARGO HANDLING FACILITIES:

Canadian Reynolds Metal: 2 Pneumatic unloaders for Alumina and Coke, rate 140 t.p.h. each. at No. 3 Berth.

Cargill Grain Terminal: North Pier: 2 vessels can be loaded simultaneously at a combined average rate of 1,200 t.p.h. (long tons). South Pier: Discharging rate 1,100 t.p.h. (short tons).

STEVEDORES: Each terminal employs own stevedores.
Working Hours: Monday to Friday, 0800 hrs. – 1700 hrs. Sunday and holiday work possible with advance notice.
MEDICAL: All facilities available. Local Hospital in Baie Comeau and Hotel-Dieu, Hauterive, 5 miles.
DENSITY: 1000 – 1025.
FRESH WATER: Delivered by pipeline to the berths (April – October).
FUEL: Available by pipeline to Cargill Grain Terminal. Diesel oil and gasoline delivered by truck (Imperial, Gulf, Texaco and Shell).
CONSULS: At Montreal and Quebec.
REPAIRS: Minor repairs may be effected through local contractors.
DRY DOCKS: Nearest dry dock located at Les Mechins (48 miles from Baie Comeau).
CUSTOMS ALLOWANCES: 200 cigarettes for each man. Officers may be allowed 1 bottle wine/spirits, Master up to 5 bottles.
AIRPORT: Daily service to Quebec and Montreal from Baie Comeau Airport.
TIME: GMT minus 5 hours. Daylight Saving Time: GMT minus 4 hours, applied from first Saturday of April until last Saturday of October each year.
HOLIDAYS: New Year's Day, Good Friday, Easter Monday, Queen's Day (4th Monday of May), June 24th, Dominion Day (July 1st), Labour Day (1st Monday of September), Thanksgiving (2nd Monday of October), Remembrance Day (November 11th), and Christmas (December 25th and 26th).
SHORE LEAVE: Crew members allowed ashore. No restrictions.
IDENTIFICATION CARDS: Gate passes are issued at the gate to all Crew members when going ashore for the purpose of identity on their return.
GENERAL: *Charts:* Canadian Charts No. 1220 and 1245.
Ferry Service: Baie Comeau to Matane.
AUTHORITY: Transport Canada, Harbours and Ports Directorate, 901 Rue Cap-Diamant, 4th Floor, Quebec G1K 4K1, Canada. *Tel:* (418) 648-3680. *FAX:* (418) 648-7980.

Y. Leblanc, Harbour Master – Baie Comeau. *Tel:* (418) 296-4296, 296-6694.

BAY ROBERTS, Newfoundland: 47.36 N. 53.26 W. **(See Plan)**

DOCUMENTS: Documents as per Standard Canadian Requirements.
PILOTAGE: Non-compulsory. Can be arranged by Coast Guard Traffic Management Centre, St. John's. Tel: (709) 772-2083.
ANCHORAGES: Good anchorage in outer area of Bay Roberts Harbour in depths of 5 to 6 fathoms.
RADIO: Ship to Shore through St. John's (VON).
BERTHING: Deep water approach, channel depth approximately 60 ft. Navigable year round.
Wharves: (1) Fisheries and Ocean's Wharf – Finger pier 181 ft. long (55 m.) and 40 ft. (12 m.) across the outer face. Depths alongside 20 ft. – 21 ft. LWOST. Concrete deck. Load limits 300 p.s.f., 15 tons concentrated load.

(2) Fish Plant Wharves – Two finger piers; East Wharf 160 ft. long and 26 ft. across the outer face (49 m.×8 m.), and West Wharf 197 ft. long and 26 ft. across the outer face (60 m.×8 m.). Depths alongside East Wharf 11 ft. to 13 ft. (3.4 m. to 4 m.) and West Wharf 13 ft. (4 m.) LWOST. Load limits unknown.

(3) Spencers Wholesale Wharf – Marginal wharf 263 ft. along the outer face (80 m.) with depths alongside 11 ft. to 14 ft. (3.4 m. to 4.3 m.) LWOST. Load limits unknown.

(4) Avalon Coal Salt and Oil Wharf – Marginal wharf 149 ft. long at the outer face (45 m.) with depths alongside 15 ft. to 19 ft. (4.6 m. to 5.8 m.) LWOST. Load limits unknown.

There are several smaller wharves and piers present.

CRANES: Small mobile cranes only.
STEVEDORES: Local labour; should be arranged by Agent.
MEDICAL: Local clinic. Full hospital facilities at Carbonear, 15 km. distant.
TANKERS: See "Berthing".
FRESH WATER: Available at Fish Plant Wharf.
FUEL: Available at Fish Plant Wharf.
REPAIRS: Limited welding can be arranged locally, nearest major repair shops at St. John's, 90 km. distant.
SURVEYORS: Lloyd's Register, P.O.Box 5044, St. John's, Newfoundland A1C 5V3. Tel: (709) 726-0543, (709) 368-2538 (residence).
GANGWAY/DECK WATCHMEN: Usually ship's crew. Ship's gangway used.
REPATRIATION: Can be arranged by Agent via St. John's Airport.
AIRPORT: At St. John's, 90 km. distant.
POLICE/AMBULANCE/FIRE: R.C.M.P. Detachment at Harbour Grace, local fire station, ambulance service available.
EMERGENCY CO-ORDINATION CENTRE: Coast Guard, Search & Rescue, St. John's, Newfoundland. Tel: (709) 772-5151.
BANKING: Services available.
SHORE LEAVE: No restrictions.
GARBAGE DISPOSAL: No facilities.
WASTE OIL DISPOSAL: No facilities.
SEAMAN'S CLUBS: None.
CURRENCY: Canadian Dollar.
GENERAL: Bay Roberts is covered by Chart No. 4572.
AUTHORITY: Transport Canada, Harbours and Ports Directorate, P.O.Box 1300, St. John's, Newfoundland, A1C 6H8. *Tel:* (709) 7725154. *Telex:* 016-3369. *FAX:* (709) 7722193. *Contact:* D. A. Lester, Regional Manager.

BECANCOUR, Quebec: 46.24 N. 72.23 W. **(See Plan)**

PORT LIMITS: Normally vessel has "arrived" when first line on the bollard (subject to Charter-party terms).
DOCUMENTS: Crew Lists, Customs, Health, Manifests, Bills of Lading, Ship's Papers, Certificates, etc.

Customs, Health, Agents, Port Manager will board ship on arrival.

PILOTAGE: First Pilot boards at Les Escoumins Pilot Station. Exchanging Pilots off Quebec Pilot Station, on to berth in Becancour.
ANCHORAGES: Off berth or off main channel or, 5 miles (8 km.) West of harbour or 8 miles (14 km.) to the East off Batiscan, Que.
RESTRICTIONS: None.
Winter Navigation: From December 10th to April following, every year or as soon as the floating aids to navigation have been lifted a second Pilot is compulsory from Les Escoumins to Montreal.

Daylight navigation only between Quebec and Montreal.

Normal navigation resumes as soon as the aids are floated, normally between 15th March and 15th April.

MAX. SIZE: No restriction as to length, although 800 ft. (244 m.) is considered a respectable length. Chart datum depth 35 ft. (10.7 m.), average water level change 3 ft. (1 m.).
HEALTH: Pratique may be requested through any Canadian Coast Guard Radio Station or VHF traffic control stations.
TUGS: Not compulsory. Stationed in Trois-Rivieres and Quebec. Master's request.
BERTHING:

Berth No.	*Length* (m.)	*Depth (C.D.)* (m.)	*Remarks*
B–1	244	10.67	Outside by main channel.
B–2	150	10.67	Inside basin/Ro-Ro ramp (22 m.).
B–3	219	10.67	Inside basin
B–4	225	10.67	Inside basin
B–5	292	10.67	Smelter plant berth 2 suction systems – 1,000 tonnes per hour.

Average water level 3 ft. (1 m.) above chart datum height. No reversing tide effects. Warehousing facilities, as required paved, lighted, open spaces 35 acres (14 hectares). Total stocking area 150 acres (61 hectares).

CRANES: Up to 200 tons capacity, rental or ship's gear.
STEVEDORES: Quebec Ports Terminals Inc. (exclusive to Becancour). Normal working hours 0800 – 1700 hrs. Overtime for night work, weekends and holidays can be arranged. Tel. 1-819-294-9911.

BULK HANDLING FACILITIES: Self unloading vessels discharging at a rate of 2,000 t.p.h.

A.B.I. smelter plant – bulk equipment: 2 vacuum ship unloaders (rate 1,000 tonnes p.h.) to discharge alumina and petroleum coke.

Total stockpiling area: 150 acres (61 hectares).

SPECIALISED CARGO HANDLING FACILITIES: Ro/Ro ramp 70 ft. (21 m.) wide.

MEDICAL: Nicolet, Trois-Rivieres, emergency ambulance standing-by.

TANKERS: Special tankers are loading chemical products from trucks regularly.

DENSITY: 1000.

FRESH WATER: From dock pipelines and hoses. Agent places order to the stevedores (Can $1.28 per metric ton).

FUEL: Only by truck. Trois-Rivieres depot (35 tons truck). Rate: 20 to 30 t.p.h.

CONSULS: At Montreal and Quebec.

REPAIRS: Piping and welding repairs, other limited ships repairs.

DRY DOCKS: Quebec and Sorel.

SURVEYORS: ABS, Lloyd's, N.V., S.G.S. and private firms.

GANGWAY/DECK WATCHMEN: Recommended.

HATCHES: Opening and closing carried out by crew members.

CARGO GEAR: Ship's gear or shore gear. Heavy lift crane 200 tons (mobile).

REPATRIATION: Can be arranged without restrictions through Montreal International Airport by ship's Agent and Canadian Authorities.

AIRPORT: Inter-provincial airport in Trois-Rivieres. International airports in Montreal and Quebec (1.5 hours). Regular arrival to and from many parts of the world.

TIME: From first Sunday in April (every year) advance 1 hour to E.D.S.T.

From last Sunday of October (every year) minus 1 hour from E.S.T.

HOLIDAYS: Same as Quebec Province.

POLICE/FIRE/AMBULANCE: (819) 298-2211, (819) 298-2223 and (819) 376-1212 respectively.

SERVICES: Commercial firms tank cleaning equipment facilities. Electronic aids to navigation repairs.

SHORE LEAVE: Allowed with permission of Master.

IDENTIFICATION CARD: Seaman's Book is sufficient.

REGULATIONS: Copy of the operational regulations will be handed to Master on ship's arrival by Port Authority.

DELAYS: Delays not experienced to date.

GENERAL: The port facilities are administered and operated by "La Societe du Parc Industriel et Portuaire de Becancour" a provincial Government Corporation under the Minister of Industry, Commerce Quebec.

DEVELOPMENTS: The marine facilities of Becancour are part of an industrial park located within the Municipality of Becancour, Quebec.

The port facilities are meeting the requirements of major industrial developments.

AUTHORITY: "La Societe du Parc Industriel et Portuaire de Becancour", 1000 Boulevard Arthur-Sicard, Parc Industriel Portuaire, Becancour, Quebec, Canada G0X 1B0. *Tel:* (819) 294-6656. *FAX:* (819) 294-9020. *Contact:* Serge Girard, Vice-President - Operations.

BELLEDUNE, N.B.: 47.55 N. 65.51 W.

A deep water harbour administered from Ottawa, Ontario and serving Belledune Fertilizers and other projects in the Bathurst area. This harbour is open to shipping all the year round.

DOCUMENTS: See "Saint John".

PILOTAGE: Pilotage is not compulsory, however, should a Pilot be required, the services of Atlantic Pilotage Authority licenced Pilots are available through ship's Agent.

Regardless of pilotage, estimated times of arrival should be given to Belledune Fertilizers Ltd. 72, 48 and 24 hrs. before.

ANCHORAGE: Vessels wishing to anchor will find no difficulty in obtaining an anchorage in more than 10 fathoms, approximately 1 mile to the Northward of the Belledune Breakwater.

TUGS: None available. May be obtained from Halifax.

BERTHING: One berth, length 550 ft., depth at LW, 34 ft.

TIDES: Tides normally rise 6 ft. at springs and 3 ft. at neaps. Tidal current seldom exceeds 1 knot.

STEVEDORES: Bulk cargoes handled by Belledune Fertiliser Ltd., and general cargo by Longshoremen.

CRANES: Heavy-lift equipment available from private companies. Cranes up to 25 tons available.

MEDICAL: Hospital at Bathurst.

FRESH WATER: Available. Delivered by tank trucks upon arrangement with Belledune Fertilizer Ltd.

FUEL: None locally. Can be obtained and delivered by tank trucks.

CONSULS: None.

REPAIRS: Minor repair facilities at Belledune Fertilizer Ltd. machine shop.

STORES: All types of provisions as well as deck and engine stores can be obtained at Bathurst for delivery to Belledune.

DEVELOPMENTS: A new wharf with length 305 m. under construction. It will handle vessels of 60,000 d.w.t., and after further dredging to 15.6 m., berth will handle 100,000 d.w.t.

AUTHORITY: Canada Ports Corporation, 99 Metcalfe Street, 8th Floor, Ottawa, Ontario K1A ON6. *Tel:* (613) 957-6709. *FAX:* (613) 995-3501. *Contact:* T.A. Lauzon, Senior Port Manager.

Local Representative: Belledune Fertilizer Ltd. *Tel:* (506) 522-5250. *Contact:* R. Boudreau.

BOTWOOD, Newfoundland: 49.09 N. 55.20 W.

(See Plan)

LOCATIONS: The Public Harbour of Botwood is located on the N.W. side of Petres Arm in the Bay of Exploits on the Northern coast of Newfoundland. Navigational season is year round, with occasional icebreaker assistance between the months of January and April.

DOCUMENTS:

3 copies Crews Declaration (Form Y14).

3 copies Ship's Stores List (Form E1).

3 copies Immigration Crew List (Form IMM 200), only Canadian form accepted.

3 copies Bill of Lading or Manifest.

In addition, Customs Clearance from last port, Derat Certificate, extra copy of Crew List, Vaccination List, Ship's Register, Radio Equipment Certificate, Safety Equipment Certificate, Load Line Certificate and Non-Canadian Ship Compliance Certificate. Oil Record Log Book should be up to date and readily available for inspection by Government Steamship Inspectors.

PILOTAGE: Compulsory. Pilot boarding station: May 31st to December 14th: Lat. 49° 23′ N., Long. 55° 09′ W. and December 15th to May 30th: Lat. 47° 33′ N., Long. 52° 37′ W. (off St.John's).

Arrivals: To avoid a delay in ordering a Pilot, Masters of vessels bound for Botwood must forward their request for Pilots to "Pilots St.John's" as follows:

First notice 12 hours prior to the ETA (GMT) at the appropriate boarding station, stating:

(a) Which boarding station the Pilot is required at.
(b) Name.
(c) Call Sign.
(d) Deepest draft.
(e) Speed.
(f) Agent.
(g) Length, breadth, moulded depth, deadweight tonnage and the largest net registered tonnage.

Second notice 3 hours prior to the ETA (GMT) at the appropriate boarding station.

Departures/Movages: First notice 9 hours prior to the ETD (Local time). Second notice 3 hours prior to the ETD (Local time).

Embarkation/Disembarkation: Masters of calling vessels are reminded of their obligation to comply with statutory rules, and are recommended to comply with the following:

(a) The Officer responsible for embarkation/disembarkation of the Pilot is a watchkeeping Officer.
(b) The pilot ladder is secure.
(c) The pilot ladder is adequately illuminated at night.
(d) Means are provided to enable the Pilot to pass safely and conveniently from the head of the pilot ladder into the ship or onto the ship's deck. Portable stanchion, if used, should be independently secured to the rail or deck, one on each side of the ladder.
(e) The ladder is in good condition and its treads remain horizontal. The treads to have a rough surface.
(f) The ladder is rigged so that each step rests firmly against the ship's side.
(g) Spreaders are provided not more than 10 ft. apart, to prevent the ladder from twisting.
(h) Manropes should be available, but should not be lowered unless requested by the Pilot.
(i) A lifebuoy with a self-igniting light and a heavy line should be available.
(j) The ladder should be rigged well clear of overboard discharge and deck scuppers.

If the pilot ladder is not safe, the Pilot may refuse to board and thus cause unnecessary delay to the ship.

ANCHORAGE: In harbour, off the oil dock in depths of 10 – 20 fathoms.

RESTRICTIONS: Navigation season from mid-April to mid-January approximately. Ice-breaker assistance may be necessary in Winter months. Deep water approaches.

MAX. SIZE: Up to 32 ft. draft.

HEALTH: Vessels arriving from a foreign port may obtain pratique by radio from "Quarantine St.John's" at least 12 hours before arrival. Information required by Quarantine Officer shall include:

Name and nationality of the vessel.
Last port of call.
Nature of cargo.
Number of crew and passengers.
Port of destination.
Name of Agent.

Conditions of health of all on board with details of any sickness or death incurred during the voyage.

Animals, if any.

RADIO: The best radio stations to use en route to Botwood are:

St.John's Marine Radio – call sign VON.
Halifax Marine Radio – call sign VCS.
St.Lawrence Marine Radio – call sign VCP.
Confort Cove Marine Radio – call sign VDO.
St.Anthony Marine Radio – call sign VCM.

To avoid a delay in obtaining a Pilot, Masters of ships bound for Botwood must report by R/T, W/T or Telex, their ETA to Vessel Traffic Management at St.John's at least 24 hours before vessels' ETA at the pilot boarding station. The times should preferably be in GMT, but whatever time is used, it should be expressly stated. ETA should be confirmed or corrected 12 hours and 6 hours prior to arrival at the pilot boarding station by R/T, W/T or Telex through VON Marine Radio Station, St.John's or via any Coast Guard Radio Station. Also see "Pilotage".

Pilotage messages may be forwarded through the nearest Canadian Coast Guard Radio Station. Direct requests can be made through St.John's Traffic Centre on VHF Channel 11.

The requirements for water, fuel and ballast should be made known to vessel's Agent in the 72 hour ETA.

TUGS: None available.

BERTHING:

Name	*Length* (m.)	*Depth* (m.)
Transit Wharf (public)	83.0	8.9
Oil Dock (public)	42.5	5.9
Abitibi-Price	142.0	8.2 – 9.4
Irving Oil	12.0	8.2

MEDICAL: Masters are requested to notify their Agents at least 72 hours prior to arrival, advising the number of crew to see the doctor and their complaint. There is full hospital facilities at Botwood.

TANKERS: Finger Pier length 200 ft. with berthing face length 30 ft. Depth alongside 32 ft. Berth owned by Irving Oil Ltd. and used exclusively for discharging oil products.

CRANES: Mobile cranes and boom trucks available.

STEVEDORES: Local labour should be arranged by Agent.

FRESH WATER: Limited quantities of fresh water available. Arrangements should be made through Agent or Harbour Master.

FUEL: Ship's bunkers are available by tank truck.

CONSULS: The following countries have Consular Representatives in St.John's:

Brazil
Denmark
France
Germany
Iceland
Italy
Malta
Netherlands
Portugal
Spain
Sweden

REPAIRS: The Agent should receive early advice of requirements, as most repairs are only available at St.John's (Radio, radar, gyro, Satnav and Loran, etc.). The technicians for such equipment work out of St.John's. The following brand names have representatives in St.John's: Racal-Decca, Marconi, Kelvin Hughes, Furono, Atlas and Sperry.

SURVEYORS: Stationed in St.John's: Lloyd's, BV, NKK, ABS, Germanischer Lloyd, Italian Registry, Russian Registry, China Corp. and Honduran Registry.

GANGWAY/DECK WATCHMEN: Usually ship's crew.

CUSTOMS ALLOWANCES: Each crew member is allowed 200 cigarettes and one 40 oz. bottle of wine or spirits per week.

REPATRIATION: No formal facilities, however, crew changes and repatriation can be carried out. Prior notice to Agent is required.

AIRPORT: Nearest airport is Gander, 86 km. away.

TIME: GMT minus 3.5 hours. First Sunday in April clocks advanced 1 hour. Last Sunday in October clocks retarded 1 hour.

HOLIDAYS: Good Friday; Labour Day; Christmas Day and Boxing Day. No work performed on these holidays.

POLICE/AMBULANCE/FIRE: The Police, Fire Department and Ambulance Service are located in area.

EMERGENCY CO-ORDINATING CENTRE: Canadian Coast Guard, Search and Rescue, St. John's. Tel: (709) 772-5151 or VHF Channel 16.

SERVICES: *Supplies and Laundry:* Stores and provisions have to be obtained in area and at St.John's. In order to avoid delays, Agent should be notified prior to arrival of the vessel's requirements. Stores and supplies will be delivered by truck at the dock.

BANKS: Several Canadian Banks provide service in the Botwood area.

SHORE LEAVE: In order to comply with Immigration Regulations, crew should be carefully checked before sailing, and any missing crew member reported to Agent.

In case of crew members left ashore for any reason, Masters are requested to furnish a letter accepting responsibility for all expenses incurred, advances (if any) and also instructions for repatriation. An Immigration Bond may be required.

GARBAGE DISPOSAL: Arrangements must be made through Agent.

WASTE OIL DISPOSAL: Arrangements must be made through Agent.

SEAMAN'S CLUBS: Recreational facilities available locally.

CURRENCY: Canadian Dollar.

CHARTS: Canadian Hydrographic Chart No. 4597.

GENERAL: Masters are strongly advised to contact their Agent 72 hours, 48 hours, 36 hours, 24 hours, 12 hours and 6 hours with ETAs. In the 72 hour message, Masters should advise all port requirements.

AUTHORITY: Transport Canada, Harbours and Ports Directorate, Newfoundland Region, P.O.Box 1300, St.John's, Newfoundland A1C 6H8, Canada. *Tel:* (709) 772-5154. *Telex:* 016-3369. *FAX:* (709) 772-5127. *Contact:* D.A. Lester, Regional Manager, Harbours and Ports.

Harbour Master: Cyril Lanning, P.O.Box 236, Botwood, Newfoundland A0H 1E0, Canada. *Tel:* (709) 257-2613.

BRIDGEWATER, N.S.: 44.23 N. 64.31 W. (See Plan)

DOCUMENTS: See "Halifax".

PILOTAGE: Not compulsory. Report ETA by radio-telephone or radio-telegraph to Superintendent of Pilots, Halifax, N.S. at least 12 hours before arrival at boarding station. ETA to be confirmed 3 hours before arrival. Pilot boards off Moshers Island Light.

ANCHORAGE: At Dayspring, 2 miles below Bridgewater.

RESTRICTIONS: Port is situated on La Have River, 10 miles from the sea. Channel path at LW, 20 ft.

MAX. SIZE: Length 325 ft. Draft 20 ft.

HEALTH: Pratique granted by Customs Officer who boards on arrival at the berth. Also see "Montreal".

RADIO: Halifax Radio.

BERTHING: Transport Canada Wharf, berthing length, 1,073 ft. Depth alongside 21 ft.

MEDICAL: Hospital services available.

STEVEDORES: Available.

FRESH WATER: Available ex wharf only on West side of river.

FUEL: Diesel and gasoline from storage tanks in port.

REPAIRS: Limited facilities for engine repairs.

AIRPORT: Nearest approximately 90 miles away.

HOLIDAYS: Dominion Legal holidays.

POLICE/AMBULANCE/FIRE: Police Tel: 543-2464. Dawson Memorial Hospital Tel: 543-4603.

BANKS: Bank of Montreal, Tel: 543-2415.
Royal Bank of Canada, Tel: 543-7161.
Bank of Nova Scotia, Tel: 543-8155.
Canadian Imperial Bank of Commerce, Tel: 543-2451.

AUTHORITY: Transport Canada, P.O.Box 1013, Dartmouth, N.S., B2Y 4K2. *Tel:* 426-6508. *Telex:* 019-22757. *Contact:* William Beck.

Local Authority: Transport Canada, Bridgewater, Nova Scotia. Tel: 543-8815. Contact: Glayden L. Conrad, Harbour Master.

CAMPBELL RIVER, B.C.: 50.02 N. 125.14 W. (See Plan)

SHIPMASTER'S REPORT: June 1989.

VESSEL PARTICULARS:

D.W.T.		9,262 tons.
LOA		119.62 m.
Moulded Breadth		18.5 m.
Moulded Depth		10.0 m.
Departure Draft	Forward 7.51 m.	Aft 8.45 m.
Cargo Loaded		8,400 tonnes copper concentrate.

DOCUMENTS: See "Vancouver".

PILOTAGE: Compulsory. Pilot boards at Victoria. Confirm ETA Pilot Station by cable to "Pilots Victoria", giving 24 hours, 12 hours and 4 hours notice. Pilot uses a small tug or a pilot boat, depending upon the weather. The distance from Victoria Pilot to Campbell River is 152 miles, which can be shortened by about 10 miles by using Active Pass. Active Pass is a very narrow channel and during daylight hours there are always ferries transitting both ways. Currents in Active Pass should also be considered.

Change of Pilot takes place at Nanaimo, which is half way. Charges are very high if Pilot has done over 8 hours, therefore all ETAs/departure times, etc. should be well calculated. All vessels must follow traffic schemes on entering Juan de Fuca Straits.

ANCHORAGES: Channel is narrow but deep. Tides are very strong.

RESTRICTIONS: Please refer to depths at berth, length of pier and large range of tides. Linesmen are usually available between 0700 hrs. and 2200 hrs. on weekdays, therefore Charterers take vessels during these hours only.

MAX. SIZE: See "Berthing". Ships of 30,000 d.w.t. have loaded at this pier.

HEALTH: See "Vancouver".

RADIO: VAI/Vancouver Coast Guard Radio.

VHF: See "Vancouver".

TUGS: There are 3 very small tugs available for berthing.

BERTHING: Pier is about 120 m. long with dolphins about 22 m. fore and aft. Sea pilot only berths the vessel. These dolphins are joined by steel bridges. There are 2 bollards ashore for breast lines. There is a buoy at each end for bow and stern lines (See "Plan"). All vessels to be moored at the terminal require on board at each end, forward and aft, 6 mooring lines of 3 in. to 3.5 in. diameter nylon or such approved material, each of at least 500 ft. length, without splices and in good condition.

Three small tugs meet the vessel at berth.

The following pattern of lines is used:

1. Two lines each, head and stern lines to the buoys.
2. Two lines each forward and aft as breast lines to shore mooring bollards. These lines are to be landed on the wharf where they are fastened to and hauled ashore by the messenger ropes. Both breast lines are to be attached to the messenger and hauled ashore in one motion. This operation is done by the linesmen.
3. Two lines each forward and aft are to be provided as back springs.

Please note that the weak bollards on the "Plan" should not be used.

First lines recommended are springs fore and aft. This helps vessel to maintain her position alongside while the tugs are pushing at all times. One tug then assists in taking other lines to buoys, etc. There are 4 strong fenders on the pier. Precautions must be taken as at L.W. ship may go below these fenders.

The breast lines are to be sent ashore simultaneously at each end and kept tight at all times.

When breast lines are fast, head and stern lines are sent to the buoys. Finally last springs are made fast.

Owing to large range of tides, moorings should be tended at all times, there have been cases where ships had to haul off due to negligence of same.

The loading berth is named Westmin Resources Tyee Spit (also known as Campbell River Ore Berth/Dock). The shiploader does not have a long travel so the vessel has to shift along the berth for hatch loading changes. The currents in mid-channel are high, consequently caution must be exercised when shifting vessel along the berth.

Care should be taken with the following:

1. Shore leading breast lines must be kept taut at all times. If the vessel is small, care must be taken when shifting forward or aft as the breast lines may come into contact with existing cabins, etc. on the pier, and thus cause damage.
2. No unnecessary slack is to be allowed in the leads of head and stern lines.

3. All back springs are to be tensioned or paid out in accordance with the particular movement ahead or astern.
4. If the tide is strong, shifting at slack water and use of tugs must be considered.
5. If lines are to be shifted, linesmen should be ordered in advance.

LOADING: Mainly copper concentrates are loaded at this berth. The vessel's holds should be free of any previous cargo residue, dry and free of loose scale. Loading starts and the Notice of Readiness is accepted after holds have been inspected by the surveyor. Surveyor is usually charterer's surveyor and also performs the duties of the Port Warden (Canadian Coast Guard Ship Safety Inspector). Shipments of Ore Concentrates from Canada are governed by the Canadian Code of Safe Practice for Solid Bulk Cargoes. The requirements of this code are basically same as IMO code. Prior to commencement of loading, the surveyor will require the shipper to produce a Certificate of Analysis for Moisture Content of the Copper Concentrate. The actual moisture content shown on the certificate must be less than the "Transportable Moisture Limit" which will also be shown on the Certificate. The surveyor will require proof that the vessel is structurally sound to carry this cargo, i.e. load density of the tanktop and that the shear force and bending moments will be within the allowable limits.

Cargo is worked on a 24 hours basis on weekdays. Our vessel averaged a loading rate of 570 tonnes/hour. Cargo weight is determined by the Draft Survey. The loading scale was observed to have an error of 0.5% on the higher side. After loading, each hatch is trimmed flat by the bulldozer which weighs 9 tonnes.

CRANES: Not available.
MEDICAL: Services available.
DENSITY: Varies according to time of year. We obtained 1023.5.
FRESH WATER: Available with notice and is free of charge.
CONSULS: At Vancouver.
REPAIRS: Can be arranged from Vancouver.
DRY DOCKS: At Vancouver.
SURVEYOR: This port has a port warden. Other surveyors can be arranged from Vancouver.
GANGWAY/DECK WATCHMEN: Not required.
HATCHES: Operated by ship's crew.
REPATRIATION: Possible from Vancouver, 40 minutes flight. There are frequent flights to Vancouver from Campbell River.
TIME: See "Vancouver".
HOLIDAYS: See "Vancouver".
TELEPHONES: There is a telephone at the pier which belongs to the terminal. Facilities for using the telephone are arranged through the Agent. All overseas connections are through the operator.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Not required.
GENERAL: Ship chandlers are not available but most of the stores can be self purchased. There are a few banks in the city. Population of Campbell River city is 20,000.

CANAPORT, N.B.: 45.12 N . 65.59 W.

PILOTAGE: Compulsory. Pilot supplied by the Atlantic Pilotage Authority through "Fundy Traffic" and requires 12 hours notice with 4 hours confirmation.
ANCHORAGE: Anchorage Area "C", mud bottom with good holding under fair weather conditions but it should not be considered satisfactory in strong southerly gales. Vessels may anchor South of Lat. 45° 12′ N. without a Pilot.
RESTRICTIONS: Presently daylight berthing only with no restrictions on unmooring. Delays may be experienced due to strong Southerly winds, and in periods of reduced visibility due to fog in the Summer and sea smoke in the Winter.
MAX. SIZE: 350,000 tons Summer d.w.t. 400,000 tons may be accepted under favourable weather conditions. No restrictions on length.
RADIO: The terminal will usually request the following information from the vessel prior to arrival:

(a) Distance from bow to centre cargo manifold.
(b) Hose boom SWL.
(c) Distance from cargo manifold to ship's rail.
(d) Height of manifold above deck.
(e) Size of bow chock opening. Height and width.
(f) Distance of bow chock opening to nearest bollard.
(g) Distance of bow chock opening to mooring bracket.
(h) Number and size of cargo manifold connections.
(i) Confirm that vessel is capable of maintaining 40% of d.w.t. capacity during discharge with segregated clean and cargo tank ballast with 2 valve separation.
(j) Slops, quantity, type and location.
(k) Can vessel accommodate 2 Berthing Masters and 5 Canaport crew, who will remain on board?

ETAs to be sent through Agent, 96, 72, 48 and 24 hours prior to arrival. Vessel to contact Canadian Coast Guard via Agents for permission to C.O.W. whilst discharging at Canaport. Canaport operations on VHF Channel 11 for mooring and UHF frequency for cargo operations.

TUGS: 3 tugs used to assist in mooring and unmooring, and one tug towing astern throughout discharge to keep the vessel clear of the SBM. Tugs' lines used throughout.
BERTH: SBM: Situated 4,100 ft. offshore from Mispec Point. Depth at LW 120 ft. and HW 150 ft.
FRESH WATER: Available by tug whilst at anchor.
FUEL: Bunker, IFO and MDO available by barge whilst at anchor.
BALLAST: It is a terminal requirement that tankers maintain at any stage of the discharge sufficient cargo or ballast, or a combination of both, equal to *40% of S.d.w.t.* Vessels of less than 150,000 tons S.d.w.t. may at the discretion of the Senior Berthing Master, be allowed to reduce this percentage to 30% after taking into account the expected weather condition. In addition, the vessel is to remain at a suitable trim compatible for safe manoeuvring and *not to exceed 18 ft.* by the stern.

The commercial agreements require vessels to lift dirty ballast and discharge concurrently, failure to do so will not count for laytime and will be for the owner's account.

GENERAL: *Arrival:* Hoses may be connected on either port or starboard sides with the weather conditions being the deciding factor as to which side is used. The Berthing Master will advise the vessel which side the hoses are to be connected prior to boarding. Both hose booms should be rigged to lift the mooring equipment from the tug and to lift 2×16 in. hose tails weighing 8 tons each. Pilot ladder should be rigged one side of vessel with accommodation ladder on the other side.
Mooring: Vessel secured to SBM with 2 nylon mooring hawsers and should have 2×3 in. messengers available to pass to the mooring launch. A hammer and crowbar should be available on foc'sle for use in connecting the chafing chains. The first line handled will be dependant on which side of the vessel the hoses are connected.
Cargo Handling: 2 Berthing Masters and a Canaport crew of 5 persons remain on board throughout the discharge to assist in mooring, assist in hose connection and maintain foc'sle head lookout and co-ordinate the discharge. Vessel takes ballast part way through the discharge to maintain 40% of deadweight capacity whilst at the SBM. Vessel's engines must be ready for instant manoeuvring at all times.
Cold Weather Precautions: During January and February air temperature is −7.5°C but temperatures below −20°C may be experienced. Masters are advised in order to protect their interest and to expedite the discharge, the following precautions should be taken prior to arrival to prevent freezing:

(a) Any C.O.W. lines that contain, or suspected to contain water should be purged with dry crude oil.
(b) Quality of anti-freeze or glycol in the deck I.G. pressure vacuum breakers should be checked.
(c) Heat on-deck water seal.
(d) Deck general service, fire and foam lines should be drained of water.
(e) Steam powered deck machinery should be run continuously.
(f) Deck hydraulics and machinery not fitted with 'Arctic' type hydraulic oil should be circulated continuously prior to arrival in order to be kept fluid.
(g) Whesso type ullage gauges and C.O.W. machines should be drained of any accumulated water.
(h) Any exterior fresh water pipes should be drained or lagged.

The above list of precautions should not be considered exhaustive and will vary from ship to ship.

SHORE LEAVE: By launch.
REGULATIONS: The transfer of stores, spares, fuel and fresh water is carried out at anchorage.

SHIPMASTER'S REPORT: February 1987 (Updated 1996).
SBM Location: 45° 11′ 48.3″ N., 65° 59′ 19.9″ W.
Pilotage: Pilot boarding area: 45° 10′ 48″ N., 66° 03′ 42″ W.

Pilotage undertaken by Atlantic Pilotage Authority with the assistance of a Canaport Mooring Master, who takes up station on the forecastle. Communication is by Walkie-Talkie.

Documents:
I.O.P.P. (Also for Coast Guard Safety Inspection on arrival).
Safety Construction Certificate.
Safety Equipment Certificate.
Load Line Certificate.
Ship's Register.
3 copies Canadian Crew List (including place of birth).
3 Vaccination Lists.
1 International Maritime Declaration of Health.
3 copies Stores List.
3 copies Personal Effects List.

Prior to Arrival: Pilot ladder rigged on port side and accommodation ladder/pilot ladder combination available on starboard side. Derrick rigged on port and starboard side to receive mooring gear and 2 × 16 in. hoses. One 3 in. (25 mm. diameter) manila messenger on forecastle to pick up mooring pennant, one messenger starboard side for tug's line and one messenger on poop for tug's line.

Accommodation for 5 seamen, Mooring Master and Assistant Mooring Master to be prepared. Cold weather precautions (seasonal) to be taken, see Admiralty Pilot Volume 59. Ice reports received via Halifax Radio and Coast Guard VHF broadcast. Irving Oil and Coast Guard to be advised of discharge plan.

The vessel is to maintain 40% of Summer d.w.t. at all times whilst deballasting/loading, and have two valve separation.

Restrictions: Berthing daylight only.
Health: Radio Pratique available through "Quarantine St. John". Vessel to send standard message.
Radio: Halifax Radio, Yarmouth Radio and Canadian Coast Guard Control - Bay of Fundy.
Tugs: One tug with 35 tonne bollard pull in attendance assists Pilot in manoeuvring to buoy. 2 mooring launches are also in attendance.
Mooring: 5 Irving Oil seamen assist ship's crew with mooring.

Standard SBM bridle mooring to 2 AKD brackets capable of accepting 3 in. chain. AKD or equivalent torque type brackets are mandatory. Upon completion of mooring tug will proceed to aft end and place on board a towing wire which is connected to a quick-release hook (supplied by Irving Oil), secured to the vessel's poop bitts.

Hoses: 2 × 16 in. standard ASA fitment (150 p.s.i. maximum working pressure) connected by ship's staff assisted by 5 Irving Oil seamen and Mooring Master. Oil may be evacuated by sea water on completion of discharge by ship.

TUGS: None available.
BERTHING:

Name	*Length* (m.)	*Depth* (m.)
Transit Wharf (public)	83.0	8.9
Oil Dock (public)	42.5	5.9
Abitibi-Price	142.0	8.2 – 9.4
Irving Oil	12.0	8.2

MEDICAL: Masters are requested to notify their Agents at least 72 hours prior to arrival, advising the number of crew to see the doctor and their complaint. There is full hospital facilities at Botwood.
TANKERS: Finger Pier length 200 ft. with berthing face length 30 ft. Depth alongside 32 ft. Berth owned by Irving Oil Ltd. and used exclusively for discharging oil products.
CRANES: Mobile cranes and boom trucks available.
STEVEDORES: Local labour should be arranged by Agent.
FRESH WATER: Limited quantities of fresh water available. Arrangements should be made through Agent or Harbour Master.
FUEL: Ship's bunkers are available by tank truck.
CONSULS: The following countries have Consular Representatives in St.John's:

Brazil
Denmark
France
Germany
Iceland
Italy
Malta
Netherlands
Portugal
Spain
Sweden

REPAIRS: The Agent should receive early advice of requirements, as most repairs are only available at St.John's (Radio, radar, gyro, Satnav and Loran, etc.). The technicians for such equipment work out of St.John's. The following brand names have representatives in St.John's: Racal-Decca, Marconi, Kelvin Hughes, Furono, Atlas and Sperry.
SURVEYORS: Stationed in St.John's: Lloyd's, BV, NKK, ABS, Germanischer Lloyd, Italian Registry, Russian Registry, China Corp. and Honduran Registry.
GANGWAY/DECK WATCHMEN: Usually ship's crew.
CUSTOMS ALLOWANCES: Each crew member is allowed 200 cigarettes and one 40 oz. bottle of wine or spirits per week.
REPATRIATION: No formal facilities, however, crew changes and repatriation can be carried out. Prior notice to Agent is required.
AIRPORT: Nearest airport is Gander, 86 km. away.
TIME: GMT minus 3.5 hours. First Sunday in April clocks advanced 1 hour. Last Sunday in October clocks retarded 1 hour.
HOLIDAYS: Good Friday; Labour Day; Christmas Day and Boxing Day. No work performed on these holidays.
POLICE/AMBULANCE/FIRE: The Police, Fire Department and Ambulance Service are located in area.
EMERGENCY CO-ORDINATING CENTRE: Canadian Coast Guard, Search and Rescue, St. John's. Tel: (709) 772-5151 or VHF Channel 16.
SERVICES: *Supplies and Laundry:* Stores and provisions have to be obtained in area and at St.John's. In order to avoid delays, Agent should be notified prior to arrival of the vessel's requirements. Stores and supplies will be delivered by truck at the dock.
BANKS: Several Canadian Banks provide service in the Botwood area.
SHORE LEAVE: In order to comply with Immigration Regulations, crew should be carefully checked before sailing, and any missing crew member reported to Agent.

In case of crew members left ashore for any reason, Masters are requested to furnish a letter accepting responsibility for all expenses incurred, advances (if any) and also instructions for repatriation. An Immigration Bond may be required.
GARBAGE DISPOSAL: Arrangements must be made through Agent.
WASTE OIL DISPOSAL: Arrangements must be made through Agent.
SEAMAN'S CLUBS: Recreational facilities available locally.
CURRENCY: Canadian Dollar.
CHARTS: Canadian Hydrographic Chart No. 4597.
GENERAL: Masters are strongly advised to contact their Agent 72 hours, 48 hours, 36 hours, 24 hours, 12 hours and 6 hours with ETAs. In the 72 hour message, Masters should advise all port requirements.
AUTHORITY: Transport Canada, Harbours and Ports Directorate, Newfoundland Region, P.O.Box 1300, St.John's, Newfoundland A1C 6H8, Canada. *Tel:* (709) 772-5154. *Telex:* 016-3369. *FAX:* (709) 772-5127. *Contact:* D.A. Lester, Regional Manager, Harbours and Ports.

Harbour Master: Cyril Lanning, P.O.Box 236, Botwood, Newfoundland A0H 1E0, Canada. *Tel:* (709) 257-2613.

BRIDGEWATER, N.S.: 44.23 N. 64.31 W. (See Plan)

DOCUMENTS: See "Halifax".
PILOTAGE: Not compulsory. Report ETA by radio-telephone or radio-telegraph to Superintendent of Pilots, Halifax, N.S. at least 12 hours before arrival at boarding station. ETA to be confirmed 3 hours before arrival. Pilot boards off Moshers Island Light.
ANCHORAGE: At Dayspring, 2 miles below Bridgewater.
RESTRICTIONS: Port is situated on La Have River, 10 miles from the sea. Channel path at LW, 20 ft.
MAX. SIZE: Length 325 ft. Draft 20 ft.
HEALTH: Pratique granted by Customs Officer who boards on arrival at the berth. Also see "Montreal".
RADIO: Halifax Radio.
BERTHING: Transport Canada Wharf, berthing length, 1,073 ft. Depth alongside 21 ft.
MEDICAL: Hospital services available.
STEVEDORES: Available.
FRESH WATER: Available ex wharf only on West side of river.
FUEL: Diesel and gasoline from storage tanks in port.
REPAIRS: Limited facilities for engine repairs.
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CAMPBELL RIVER, B.C.: 50.02 N. 125.14 W. (See Plan)

SHIPMASTER'S REPORT: June 1989.

VESSEL PARTICULARS:

D.W.T.		9,262 tons.
LOA		119.62 m.
Moulded Breadth		18.5 m.
Moulded Depth		10.0 m.
Departure Draft	Forward 7.51 m.	Aft 8.45 m.
Cargo Loaded		8,400 tonnes copper concentrate.

DOCUMENTS: See "Vancouver".
PILOTAGE: Compulsory. Pilot boards at Victoria. Confirm ETA Pilot Station by cable to "Pilots Victoria", giving 24 hours, 12 hours and 4 hours notice. Pilot uses a small tug or a pilot boat, depending upon the weather. The distance from Victoria Pilot to Campbell River is 152 miles, which can be shortened by about 10 miles by using Active Pass. Active Pass is a very narrow channel and during daylight hours there are always ferries transitting both ways. Currents in Active Pass should also be considered.

Change of Pilot takes place at Nanaimo, which is half way. Charges are very high if Pilot has done over 8 hours, therefore all ETAs/departure times, etc. should be well calculated. All vessels must follow traffic schemes on entering Juan de Fuca Straits.
ANCHORAGES: Channel is narrow but deep. Tides are very strong.
RESTRICTIONS: Please refer to depths at berth, length of pier and large range of tides. Linesmen are usually available between 0700 hrs. and 2200 hrs. on weekdays, therefore Charterers take vessels during these hours only.
MAX. SIZE: See "Berthing". Ships of 30,000 d.w.t. have loaded at this pier.
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TUGS: There are 3 very small tugs available for berthing.
BERTHING: Pier is about 120 m. long with dolphins about 22 m. fore and aft. Sea pilot only berths the vessel. These dolphins are joined by steel bridges. There are 2 bollards ashore for breast lines. There is a buoy at each end for bow and stern lines (See "Plan"). All vessels to be moored at the terminal require on board at each end, forward and aft, 6 mooring lines of 3 in. to 3.5 in. diameter nylon or such approved material, each of at least 500 ft. length, without splices and in good condition.

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REPAIRS: Can be arranged from Vancouver.
DRY DOCKS: At Vancouver.
SURVEYOR: This port has a port warden. Other surveyors can be arranged from Vancouver.
GANGWAY/DECK WATCHMEN: Not required.
HATCHES: Operated by ship's crew.
REPATRIATION: Possible from Vancouver, 40 minutes flight. There are frequent flights to Vancouver from Campbell River.
TIME: See "Vancouver".
HOLIDAYS: See "Vancouver".
TELEPHONES: There is a telephone at the pier which belongs to the terminal. Facilities for using the telephone are arranged through the Agent. All overseas connections are through the operator.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Not required.
GENERAL: Ship chandlers are not available but most of the stores can be self purchased. There are a few banks in the city. Population of Campbell River city is 20,000.

CANAPORT, N.B.: 45.12 N . 65.59 W.

PILOTAGE: Compulsory. Pilot supplied by the Atlantic Pilotage Authority through "Fundy Traffic" and requires 12 hours notice with 4 hours confirmation.
ANCHORAGE: Anchorage Area "C", mud bottom with good holding under fair weather conditions but it should not be considered satisfactory in strong southerly gales. Vessels may anchor South of Lat. 45° 12′ N. without a Pilot.
RESTRICTIONS: Presently daylight berthing only with no restrictions on unmooring. Delays may be experienced due to strong Southerly winds, and in periods of reduced visibility due to fog in the Summer and sea smoke in the Winter.
MAX. SIZE: 350,000 tons Summer d.w.t. 400,000 tons may be accepted under favourable weather conditions. No restrictions on length.
RADIO: The terminal will usually request the following information from the vessel prior to arrival:

(a) Distance from bow to centre cargo manifold.
(b) Hose boom SWL.
(c) Distance from cargo manifold to ship's rail.
(d) Height of manifold above deck.
(e) Size of bow chock opening. Height and width.
(f) Distance of bow chock opening to nearest bollard.
(g) Distance of bow chock opening to mooring bracket.
(h) Number and size of cargo manifold connections.
(i) Confirm that vessel is capable of maintaining 40% of d.w.t. capacity during discharge with segregated clean and cargo tank ballast with 2 valve separation.
(j) Slops, quantity, type and location.
(k) Can vessel accommodate 2 Berthing Masters and 5 Canaport crew, who will remain on board?

ETAs to be sent through Agent, 96, 72, 48 and 24 hours prior to arrival. Vessel to contact Canadian Coast Guard via Agents for permission to C.O.W. whilst discharging at Canaport. Canaport operations on VHF Channel 11 for mooring and UHF frequency for cargo operations.

TUGS: 3 tugs used to assist in mooring and unmooring, and one tug towing astern throughout discharge to keep the vessel clear of the SBM. Tugs' lines used throughout.
BERTH: SBM: Situated 4,100 ft. offshore from Mispec Point. Depth at LW 120 ft. and HW 150 ft.
FRESH WATER: Available by tug whilst at anchor.
FUEL: Bunker, IFO and MDO available by barge whilst at anchor.
BALLAST: It is a terminal requirement that tankers maintain at any stage of the discharge sufficient cargo or ballast, or a combination of both, equal to *40% of S.d.w.t.* Vessels of less than 150,000 tons S.d.w.t. may at the discretion of the Senior Berthing Master, be allowed to reduce this percentage to 30% after taking into account the expected weather condition. In addition, the vessel is to remain at a suitable trim compatible for safe manoeuvring and *not to exceed 18 ft.* by the stern.

The commercial agreements require vessels to lift dirty ballast and discharge concurrently, failure to do so will not count for laytime and will be for the owner's account.

GENERAL: *Arrival:* Hoses may be connected on either port or starboard sides with the weather conditions being the deciding factor as to which side is used. The Berthing Master will advise the vessel which side the hoses are to be connected prior to boarding. Both hose booms should be rigged to lift the mooring equipment from the tug and to lift 2×16 in. hose tails weighing 8 tons each. Pilot ladder should be rigged one side of vessel with accommodation ladder on the other side.
Mooring: Vessel secured to SBM with 2 nylon mooring hawsers and should have 2×3 in. messengers available to pass to the mooring launch. A hammer and crowbar should be available on foc'sle for use in connecting the chafing chains. The first line handled will be dependant on which side of the vessel the hoses are connected.
Cargo Handling: 2 Berthing Masters and a Canaport crew of 5 persons remain on board throughout the discharge to assist in mooring, assist in hose connection and maintain foc'sle head lookout and co-ordinate the discharge. Vessel takes ballast part way through the discharge to maintain 40% of deadweight capacity whilst at the SBM. Vessel's engines must be ready for instant manoeuvring at all times.
Cold Weather Precautions: During January and February air temperature is −7.5°C but temperatures below −20°C may be experienced. Masters are advised in order to protect their interest and to expedite the discharge, the following precautions should be taken prior to arrival to prevent freezing:

(a) Any C.O.W. lines that contain, or suspected to contain water should be purged with dry crude oil.
(b) Quality of anti-freeze or glycol in the deck I.G. pressure vacuum breakers should be checked.
(c) Heat on-deck water seal.
(d) Deck general service, fire and foam lines should be drained of water.
(e) Steam powered deck machinery should be run continuously.
(f) Deck hydraulics and machinery not fitted with 'Arctic' type hydraulic oil should be circulated continuously prior to arrival in order to be kept fluid.
(g) Whesso type ullage gauges and C.O.W. machines should be drained of any accumulated water.
(h) Any exterior fresh water pipes should be drained or lagged.

The above list of precautions should not be considered exhaustive and will vary from ship to ship.

SHORE LEAVE: By launch.
REGULATIONS: The transfer of stores, spares, fuel and fresh water is carried out at anchorage.

SHIPMASTER'S REPORT: February 1987 (Updated 1996).
SBM Location: 45° 11′ 48.3″ N., 65° 59′ 19.9″ W.
Pilotage: Pilot boarding area: 45° 10′ 48″ N., 66° 03′ 42″ W.

Pilotage undertaken by Atlantic Pilotage Authority with the assistance of a Canaport Mooring Master, who takes up station on the forecastle. Communication is by Walkie-Talkie.

Documents:
I.O.P.P. (Also for Coast Guard Safety Inspection on arrival).
Safety Construction Certificate.
Safety Equipment Certificate.
Load Line Certificate.
Ship's Register.
3 copies Canadian Crew List (including place of birth).
3 Vaccination Lists.
1 International Maritime Declaration of Health.
3 copies Stores List.
3 copies Personal Effects List.

Prior to Arrival: Pilot ladder rigged on port side and accommodation ladder/pilot ladder combination available on starboard side. Derrick rigged on port and starboard side to receive mooring gear and 2 × 16 in. hoses. One 3 in. (25 mm. diameter) manila messenger on forecastle to pick up mooring pennant, one messenger starboard side for tug's line and one messenger on poop for tug's line.

Accommodation for 5 seamen, Mooring Master and Assistant Mooring Master to be prepared. Cold weather precautions (seasonal) to be taken, see Admiralty Pilot Volume 59. Ice reports received via Halifax Radio and Coast Guard VHF broadcast. Irving Oil and Coast Guard to be advised of discharge plan.

The vessel is to maintain 40% of Summer d.w.t. at all times whilst deballasting/loading, and have two valve separation.

Restrictions: Berthing daylight only.
Health: Radio Pratique available through "Quarantine St. John". Vessel to send standard message.
Radio: Halifax Radio, Yarmouth Radio and Canadian Coast Guard Control - Bay of Fundy.
Tugs: One tug with 35 tonne bollard pull in attendance assists Pilot in manoeuvring to buoy. 2 mooring launches are also in attendance.
Mooring: 5 Irving Oil seamen assist ship's crew with mooring.

Standard SBM bridle mooring to 2 AKD brackets capable of accepting 3 in. chain. AKD or equivalent torque type brackets are mandatory. Upon completion of mooring tug will proceed to aft end and place on board a towing wire which is connected to a quick-release hook (supplied by Irving Oil), secured to the vessel's poop bitts.

Hoses: 2 × 16 in. standard ASA fitment (150 p.s.i. maximum working pressure) connected by ship's staff assisted by 5 Irving Oil seamen and Mooring Master. Oil may be evacuated by sea water on completion of discharge by ship.

TUGS: None available.
BERTHING:

Name	*Length* (m.)	*Depth* (m.)
Transit Wharf (public)	83.0	8.9
Oil Dock (public)	42.5	5.9
Abitibi-Price	142.0	8.2 – 9.4
Irving Oil	12.0	8.2

MEDICAL: Masters are requested to notify their Agents at least 72 hours prior to arrival, advising the number of crew to see the doctor and their complaint. There is full hospital facilities at Botwood.
TANKERS: Finger Pier length 200 ft. with berthing face length 30 ft. Depth alongside 32 ft. Berth owned by Irving Oil Ltd. and used exclusively for discharging oil products.
CRANES: Mobile cranes and boom trucks available.
STEVEDORES: Local labour should be arranged by Agent.
FRESH WATER: Limited quantities of fresh water available. Arrangements should be made through Agent or Harbour Master.
FUEL: Ship's bunkers are available by tank truck.
CONSULS: The following countries have Consular Representatives in St.John's:

Brazil
Denmark
France
Germany
Iceland
Italy
Malta
Netherlands
Portugal
Spain
Sweden

REPAIRS: The Agent should receive early advice of requirements, as most repairs are only available at St.John's (Radio, radar, gyro, Satnav and Loran, etc.). The technicians for such equipment work out of St.John's. The following brand names have representatives in St.John's: Racal-Decca, Marconi, Kelvin Hughes, Furono, Atlas and Sperry.
SURVEYORS: Stationed in St.John's: Lloyd's, BV, NKK, ABS, Germanischer Lloyd, Italian Registry, Russian Registry, China Corp. and Honduran Registry.
GANGWAY/DECK WATCHMEN: Usually ship's crew.
CUSTOMS ALLOWANCES: Each crew member is allowed 200 cigarettes and one 40 oz. bottle of wine or spirits per week.
REPATRIATION: No formal facilities, however, crew changes and repatriation can be carried out. Prior notice to Agent is required.
AIRPORT: Nearest airport is Gander, 86 km. away.
TIME: GMT minus 3.5 hours. First Sunday in April clocks advanced 1 hour. Last Sunday in October clocks retarded 1 hour.
HOLIDAYS: Good Friday; Labour Day; Christmas Day and Boxing Day. No work performed on these holidays.
POLICE/AMBULANCE/FIRE: The Police, Fire Department and Ambulance Service are located in area.
EMERGENCY CO-ORDINATING CENTRE: Canadian Coast Guard, Search and Rescue, St. John's. Tel: (709) 772-5151 or VHF Channel 16.
SERVICES: *Supplies and Laundry:* Stores and provisions have to be obtained in area and at St.John's. In order to avoid delays, Agent should be notified prior to arrival of the vessel's requirements. Stores and supplies will be delivered by truck at the dock.
BANKS: Several Canadian Banks provide service in the Botwood area.
SHORE LEAVE: In order to comply with Immigration Regulations, crew should be carefully checked before sailing, and any missing crew member reported to Agent.

In case of crew members left ashore for any reason, Masters are requested to furnish a letter accepting responsibility for all expenses incurred, advances (if any) and also instructions for repatriation. An Immigration Bond may be required.
GARBAGE DISPOSAL: Arrangements must be made through Agent.
WASTE OIL DISPOSAL: Arrangements must be made through Agent.
SEAMAN'S CLUBS: Recreational facilities available locally.
CURRENCY: Canadian Dollar.
CHARTS: Canadian Hydrographic Chart No. 4597.
GENERAL: Masters are strongly advised to contact their Agent 72 hours, 48 hours, 36 hours, 24 hours, 12 hours and 6 hours with ETAs. In the 72 hour message, Masters should advise all port requirements.
AUTHORITY: Transport Canada, Harbours and Ports Directorate, Newfoundland Region, P.O.Box 1300, St.John's, Newfoundland A1C 6H8, Canada. *Tel:* (709) 772-5154. *Telex:* 016-3369. *FAX:* (709) 772-5127. *Contact:* D.A. Lester, Regional Manager, Harbours and Ports.

Harbour Master: Cyril Lanning, P.O.Box 236, Botwood, Newfoundland A0H 1E0, Canada. *Tel:* (709) 257-2613.

BRIDGEWATER, N.S.: 44.23 N. 64.31 W. (See Plan)

DOCUMENTS: See "Halifax".
PILOTAGE: Not compulsory. Report ETA by radio-telephone or radio-telegraph to Superintendent of Pilots, Halifax, N.S. at least 12 hours before arrival at boarding station. ETA to be confirmed 3 hours before arrival. Pilot boards off Moshers Island Light.
ANCHORAGE: At Dayspring, 2 miles below Bridgewater.
RESTRICTIONS: Port is situated on La Have River, 10 miles from the sea. Channel path at LW, 20 ft.
MAX. SIZE: Length 325 ft. Draft 20 ft.
HEALTH: Pratique granted by Customs Officer who boards on arrival at the berth. Also see "Montreal".
RADIO: Halifax Radio.
BERTHING: Transport Canada Wharf, berthing length, 1,073 ft. Depth alongside 21 ft.
MEDICAL: Hospital services available.
STEVEDORES: Available.
FRESH WATER: Available ex wharf only on West side of river.
FUEL: Diesel and gasoline from storage tanks in port.
REPAIRS: Limited facilities for engine repairs.
AIRPORT: Nearest approximately 90 miles away.
HOLIDAYS: Dominion Legal holidays.
POLICE/AMBULANCE/FIRE: Police Tel: 543-2464. Dawson Memorial Hospital Tel: 543-4603.
BANKS: Bank of Montreal, Tel: 543-2415.
Royal Bank of Canada, Tel: 543-7161.
Bank of Nova Scotia, Tel: 543-8155.
Canadian Imperial Bank of Commerce, Tel: 543-2451.
AUTHORITY: Transport Canada, P.O.Box 1013, Dartmouth, N.S., B2Y 4K2. *Tel:* 426-6508. *Telex:* 019-22757. *Contact:* William Beck.

Local Authority: Transport Canada, Bridgewater, Nova Scotia. Tel: 543-8815. Contact: Glayden L. Conrad, Harbour Master.

CAMPBELL RIVER, B.C.: 50.02 N. 125.14 W. (See Plan)

SHIPMASTER'S REPORT: June 1989.

VESSEL PARTICULARS:

D.W.T.	9,262 tons.
LOA	119.62 m.
Moulded Breadth	18.5 m.
Moulded Depth	10.0 m.
Departure Draft	Forward 7.51 m. Aft 8.45 m.
Cargo Loaded	8,400 tonnes copper concentrate.

DOCUMENTS: See "Vancouver".
PILOTAGE: Compulsory. Pilot boards at Victoria. Confirm ETA Pilot Station by cable to "Pilots Victoria", giving 24 hours, 12 hours and 4 hours notice. Pilot uses a small tug or a pilot boat, depending upon the weather. The distance from Victoria Pilot to Campbell River is 152 miles, which can be shortened by about 10 miles by using Active Pass. Active Pass is a very narrow channel and during daylight hours there are always ferries transitting both ways. Currents in Active Pass should also be considered.

Change of Pilot takes place at Nanaimo, which is half way. Charges are very high if Pilot has done over 8 hours, therefore all ETAs/departure times, etc. should be well calculated. All vessels must follow traffic schemes on entering Juan de Fuca Straits.
ANCHORAGES: Channel is narrow but deep. Tides are very strong.
RESTRICTIONS: Please refer to depths at berth, length of pier and large range of tides. Linesmen are usually available between 0700 hrs. and 2200 hrs. on weekdays, therefore Charterers take vessels during these hours only.
MAX. SIZE: See "Berthing". Ships of 30,000 d.w.t. have loaded at this pier.
HEALTH: See "Vancouver".
RADIO: VAI/Vancouver Coast Guard Radio.
VHF: See "Vancouver".
TUGS: There are 3 very small tugs available for berthing.
BERTHING: Pier is about 120 m. long with dolphins about 22 m. fore and aft. Sea pilot only berths the vessel. These dolphins are joined by steel bridges. There are 2 bollards ashore for breast lines. There is a buoy at each end for bow and stern lines (See "Plan"). All vessels to be moored at the terminal require on board at each end, forward and aft, 6 mooring lines of 3 in. to 3.5 in. diameter nylon or such approved material, each of at least 500 ft. length, without splices and in good condition.

Three small tugs meet the vessel at berth.

The following pattern of lines is used:

1. Two lines each, head and stern lines to the buoys.
2. Two lines each forward and aft as breast lines to shore mooring bollards. These lines are to be landed on the wharf where they are fastened to and hauled ashore by the messenger ropes. Both breast lines are to be attached to the messenger and hauled ashore in one motion. This operation is done by the linesmen.
3. Two lines each forward and aft are to be provided as back springs.

Please note that the weak bollards on the "Plan" should not be used.

First lines recommended are springs fore and aft. This helps vessel to maintain her position alongside while the tugs are pushing at all times. One tug then assists in taking other lines to buoys, etc. There are 4 strong fenders on the pier. Precautions must be taken as at L.W. ship may go below these fenders.

The breast lines are to be sent ashore simultaneously at each end and kept tight at all times.

When breast lines are fast, head and stern lines are sent to the buoys. Finally last springs are made fast.

Owing to large range of tides, moorings should be tended at all times, there have been cases where ships had to haul off due to negligence of same.

The loading berth is named Westmin Resources Tyee Spit (also known as Campbell River Ore Berth/Dock). The shiploader does not have a long travel so the vessel has to shift along the berth for hatch loading changes. The currents in mid-channel are high, consequently caution must be exercised when shifting vessel along the berth.

Care should be taken with the following:

1. Shore leading breast lines must be kept taut at all times. If the vessel is small, care must be taken when shifting forward or aft as the breast lines may come into contact with existing cabins, etc. on the pier, and thus cause damage.
2. No unnecessary slack is to be allowed in the leads of head and stern lines.

3. All back springs are to be tensioned or paid out in accordance with the particular movement ahead or astern.
4. If the tide is strong, shifting at slack water and use of tugs must be considered.
5. If lines are to be shifted, linesmen should be ordered in advance.

LOADING: Mainly copper concentrates are loaded at this berth. The vessel's holds should be free of any previous cargo residue, dry and free of loose scale. Loading starts and the Notice of Readiness is accepted after holds have been inspected by the surveyor. Surveyor is usually charterer's surveyor and also performs the duties of the Port Warden (Canadian Coast Guard Ship Safety Inspector). Shipments of Ore Concentrates from Canada are governed by the Canadian Code of Safe Practice for Solid Bulk Cargoes. The requirements of this code are basically same as IMO code. Prior to commencement of loading, the surveyor will require the shipper to produce a Certificate of Analysis for Moisture Content of the Copper Concentrate. The actual moisture content shown on the certificate must be less than the "Transportable Moisture Limit" which will also be shown on the Certificate. The surveyor will require proof that the vessel is structurally sound to carry this cargo, i.e. load density of the tanktop and that the shear force and bending moments will be within the allowable limits.

Cargo is worked on a 24 hours basis on weekdays. Our vessel averaged a loading rate of 570 tonnes/hour. Cargo weight is determined by the Draft Survey. The loading scale was observed to have an error of 0.5% on the higher side. After loading, each hatch is trimmed flat by the bulldozer which weighs 9 tonnes.

CRANES: Not available.
MEDICAL: Services available.
DENSITY: Varies according to time of year. We obtained 1023.5.
FRESH WATER: Available with notice and is free of charge.
CONSULS: At Vancouver.
REPAIRS: Can be arranged from Vancouver.
DRY DOCKS: At Vancouver.
SURVEYOR: This port has a port warden. Other surveyors can be arranged from Vancouver.
GANGWAY/DECK WATCHMEN: Not required.
HATCHES: Operated by ship's crew.
REPATRIATION: Possible from Vancouver, 40 minutes flight. There are frequent flights to Vancouver from Campbell River.
TIME: See "Vancouver".
HOLIDAYS: See "Vancouver".
TELEPHONES: There is a telephone at the pier which belongs to the terminal. Facilities for using the telephone are arranged through the Agent. All overseas connections are through the operator.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Not required.
GENERAL: Ship chandlers are not available but most of the stores can be self purchased. There are a few banks in the city. Population of Campbell River city is 20,000.

CANAPORT, N.B.: 45.12 N . 65.59 W.

PILOTAGE: Compulsory. Pilot supplied by the Atlantic Pilotage Authority through "Fundy Traffic" and requires 12 hours notice with 4 hours confirmation.
ANCHORAGE: Anchorage Area "C", mud bottom with good holding under fair weather conditions but it should not be considered satisfactory in strong southerly gales. Vessels may anchor South of Lat. 45° 12′ N. without a Pilot.
RESTRICTIONS: Presently daylight berthing only with no restrictions on unmooring. Delays may be experienced due to strong Southerly winds, and in periods of reduced visibility due to fog in the Summer and sea smoke in the Winter.
MAX. SIZE: 350,000 tons Summer d.w.t. 400,000 tons may be accepted under favourable weather conditions. No restrictions on length.
RADIO: The terminal will usually request the following information from the vessel prior to arrival:

(a) Distance from bow to centre cargo manifold.
(b) Hose boom SWL.
(c) Distance from cargo manifold to ship's rail.
(d) Height of manifold above deck.
(e) Size of bow chock opening. Height and width.
(f) Distance of bow chock opening to nearest bollard.
(g) Distance of bow chock opening to mooring bracket.
(h) Number and size of cargo manifold connections.
(i) Confirm that vessel is capable of maintaining 40% of d.w.t. capacity during discharge with segregated clean and cargo tank ballast with 2 valve separation.
(j) Slops, quantity, type and location.
(k) Can vessel accommodate 2 Berthing Masters and 5 Canaport crew, who will remain on board?

ETAs to be sent through Agent, 96, 72, 48 and 24 hours prior to arrival. Vessel to contact Canadian Coast Guard via Agents for permission to C.O.W. whilst discharging at Canaport. Canaport operations on VHF Channel 11 for mooring and UHF frequency for cargo operations.
TUGS: 3 tugs used to assist in mooring and unmooring, and one tug towing astern throughout discharge to keep the vessel clear of the SBM. Tugs' lines used throughout.
BERTH: SBM: Situated 4,100 ft. offshore from Mispec Point. Depth at LW 120 ft. and HW 150 ft.
FRESH WATER: Available by tug whilst at anchor.
FUEL: Bunker, IFO and MDO available by barge whilst at anchor.
BALLAST: It is a terminal requirement that tankers maintain at any stage of the discharge sufficient cargo or ballast, or a combination of both, equal to *40% of S.d.w.t.* Vessels of less than 150,000 tons S.d.w.t. may at the discretion of the Senior Berthing Master, be allowed to reduce this percentage to 30% after taking into account the expected weather condition. In addition, the vessel is to remain at a suitable trim compatible for safe manoeuvring and *not to exceed 18 ft.* by the stern.

The commercial agreements require vessels to lift dirty ballast and discharge concurrently, failure to do so will not count for laytime and will be for the owner's account.
GENERAL: *Arrival:* Hoses may be connected on either port or starboard sides with the weather conditions being the deciding factor as to which side is used. The Berthing Master will advise the vessel which side the hoses are to be connected prior to boarding. Both hose booms should be rigged to lift the mooring equipment from the tug and to lift 2×16 in. hose tails weighing 8 tons each. Pilot ladder should be rigged one side of vessel with accommodation ladder on the other side.
Mooring: Vessel secured to SBM with 2 nylon mooring hawsers and should have 2×3 in. messengers available to pass to the mooring launch. A hammer and crowbar should be available on foc'sle for use in connecting the chafing chains. The first line handled will be dependant on which side of the vessel the hoses are connected.
Cargo Handling: 2 Berthing Masters and a Canaport crew of 5 persons remain on board throughout the discharge to assist in mooring, assist in hose connection and maintain foc'sle head lookout and co-ordinate the discharge. Vessel takes ballast part way through the discharge to maintain 40% of deadweight capacity whilst at the SBM. Vessel's engines must be ready for instant manoeuvring at all times.
Cold Weather Precautions: During January and February air temperature is −7.5°C but temperatures below −20°C may be experienced. Masters are advised in order to protect their interest and to expedite the discharge, the following precautions should be taken prior to arrival to prevent freezing:

(a) Any C.O.W. lines that contain, or suspected to contain water should be purged with dry crude oil.
(b) Quality of anti-freeze or glycol in the deck I.G. pressure vacuum breakers should be checked.
(c) Heat on-deck water seal.
(d) Deck general service, fire and foam lines should be drained of water.
(e) Steam powered deck machinery should be run continuously.
(f) Deck hydraulics and machinery not fitted with 'Arctic' type hydraulic oil should be circulated continuously prior to arrival in order to be kept fluid.
(g) Whesso type ullage gauges and C.O.W. machines should be drained of any accumulated water.
(h) Any exterior fresh water pipes should be drained or lagged.

The above list of precautions should not be considered exhaustive and will vary from ship to ship.
SHORE LEAVE: By launch.
REGULATIONS: The transfer of stores, spares, fuel and fresh water is carried out at anchorage.

SHIPMASTER'S REPORT: February 1987 (Updated 1996).
SBM Location: 45° 11′ 48.3″ N., 65° 59′ 19.9″ W.
Pilotage: Pilot boarding area: 45° 10′ 48″ N., 66° 03′ 42″ W.

Pilotage undertaken by Atlantic Pilotage Authority with the assistance of a Canaport Mooring Master, who takes up station on the forecastle. Communication is by Walkie-Talkie.
Documents:

I.O.P.P. (Also for Coast Guard Safety Inspection on arrival).
Safety Construction Certificate.
Safety Equipment Certificate.
Load Line Certificate.
Ship's Register.
3 copies Canadian Crew List (including place of birth).
3 Vaccination Lists.
1 International Maritime Declaration of Health.
3 copies Stores List.
3 copies Personal Effects List.

Prior to Arrival: Pilot ladder rigged on port side and accommodation ladder/pilot ladder combination available on starboard side. Derrick rigged on port and starboard side to receive mooring gear and 2 × 16 in. hoses. One 3 in. (25 mm. diameter) manila messenger on forecastle to pick up mooring pennant, one messenger starboard side for tug's line and one messenger on poop for tug's line.

Accommodation for 5 seamen, Mooring Master and Assistant Mooring Master to be prepared. Cold weather precautions (seasonal) to be taken, see Admiralty Pilot Volume 59. Ice reports received via Halifax Radio and Coast Guard VHF broadcast. Irving Oil and Coast Guard to be advised of discharge plan.

The vessel is to maintain 40% of Summer d.w.t. at all times whilst deballasting/loading, and have two valve separation.
Restrictions: Berthing daylight only.
Health: Radio Pratique available through "Quarantine St. John". Vessel to send standard message.
Radio: Halifax Radio, Yarmouth Radio and Canadian Coast Guard Control - Bay of Fundy.
Tugs: One tug with 35 tonne bollard pull in attendance assists Pilot in manoeuvring to buoy. 2 mooring launches are also in attendance.
Mooring: 5 Irving Oil seamen assist ship's crew with mooring.

Standard SBM bridle mooring to 2 AKD brackets capable of accepting 3 in. chain. AKD or equivalent torque type brackets are mandatory. Upon completion of mooring tug will proceed to aft end and place on board a towing wire which is connected to a quick-release hook (supplied by Irving Oil), secured to the vessel's poop bitts.
Hoses: 2 × 16 in. standard ASA fitment (150 p.s.i. maximum working pressure) connected by ship's staff assisted by 5 Irving Oil seamen and Mooring Master. Oil may be evacuated by sea water on completion of discharge by ship.

Cargo Survey: Cargo ullages and water dips carried out by Irving Oil Surveyor and monitored by ship's staff.

Tank Dry Certificate will be signed by Irving Oil Surveyor, if acceptable, prior to ballasting concurrent with discharge and on completion of discharge.

Fresh Provisions: Plentiful and good quality but meats and fruits, etc., very costly in Winter months, bonded stores available. All stores are supplied by launch/barge depending on quantity at rate per hour basis, this also is expensive. Shore launch available.

Discharge Rate: Maximum pressure of 150 p.s.i. at the rail is permitted and by using 3 pumps and maintaining 140 p.s.i., a rate of 50,000/53,000 gross bbls. per hour was obtained. Final stripping ashore was part restricted by relatively high back pressure.

General: Throughout discharge the bridge is manned by either the Mooring Master or his assistant, who remains in contact with shore, where strain gauges are available for tension on mooring ropes. Seamen, as deck watches, are positioned, throughout the discharge. Ship's crew are required to be in attendance and on watch at all times and main engine on maximum 5 minutes notice. Ambient temperatures of minus 35°C may be experienced during the hours of darkness in Winter months with chill factor.

Canadian Coast Guard will attend onboard for general safety inspection and sighting of I.O.P.P. Certificate and Non-Canadian Ship Compliance Certificate. Sailing and/or entrance to routing may be delayed due to malfunction of Navigational equipment and/or manoeuvring ability. Master's Declaration to be radioed at least 24 hours prior to arrival to Canadian Coast Guard, relating to the foregoing.

OPERATOR: Canaport Ltd., P.O.Box 2055, Saint John, N.B., Canada. *Tel:* 506-632-7177. *FAX:* (506) 633-7445. *Contact:* Blaine M. Higgs, Canaport Manager.

CARLETON, Quebec: 48.06 N. 66.07 W.

LOCATION: Located on the South shore of the Gaspe Peninsular inside Chaleur Bay.
APPROACHES: No hazards and good anchorage outside. Channel depth at 7 m. extreme low tide. Icebreaker assistance available in Winter if necessary.
PILOTAGE: Not compulsory, but available through Pilots Dalhousie.
RESTRICTIONS: The harbour is open all year round, but occasionally assistance of ice-breakers may be required.
HEALTH: Pratique granted by radio.
RADIO: Grindstone (VCN).
TUGS: Available but not compulsory.
BERTHING: Section No. 1: Length 134 m., max. draft 7.2 m.
CRANES: Available on request.
STEVEDORES: *Working Hours:* Monday to Friday 0800 hrs. – 1700 hrs. Work possible on holidays and weekends with notice.
MEDICAL: Hospital available locally.
DENSITY: 1025.
FRESH WATER: Available.
FUEL: Diesel oil available.
REPAIRS: Minor repairs possible.
DRY DOCK: Nearest dry dock located at Les Mechins, 394 km. from Carleton.
AIRPORT: Local airport.
TIME: GMT minus 5 hours. GMT minus 4 hours in Summer (first Saturday in April to last Saturday in October).
HOLIDAYS: New Year's Day, Good Friday, Easter Monday, Queen's Day (4th Monday in May), June 24th, Dominion Day (July 1st), Labour Day (1st Monday in September), Thanksgiving (2nd Monday in October), Remembrance Day (November 11th) and Christmas (December 25th and 26th).
GENERAL:
Chart: Canadian Chart No. 4921.
Formalities: Port of entry for Customs and Immigration. Quarantine services available by radio.
Services: Bank, post office, railway, provisions and marine supplies, fumigation.
AUTHORITY: Transport Canada, Harbours and Ports Directorate, 901 Rue Cap-Diamant, 4th Floor, Quebec G1K 4K1, Canada. *Tel:* (418) 648-3680. *FAX:* (418) 648-7980. *Contact:* J.G. Boudreau, Harbour Master, Carleton. Tel: (418) 364-7916, (418) 364-3053.

CHANDLER, Quebec: 48.20 N. 64.39 W. (See Plan)

LOCATION: Situated on the South shore of the Gaspe Peninsular at the entrance of Chaleur Bay.
PILOTAGE: Not compulsory but recommended. Atlantic Pilotage Authority licenced Pilot available through Tel: (418) 689-3378.
RESTRICTIONS: *Navigation Season:* All year round, ice-breakers sometimes accompany vessels.
Channel Depth: 8.0 m.
HEALTH: Pratique is secured by radio through Quebec City.
RADIO: Grindstone (VCN).
TUGS: Available, not required for powered vessels.
BERTHING: *Transport Canada Wharf:* East Side reserved for fishing vessels.

West Side: Length 150 m. Depth at LW 9.0 m.
STEVEDORES: Skilled labour available.
Working Hours: Monday to Friday, 0800 hrs. – 1700 hrs. Sunday and holiday work possible with advance notice.
DENSITY: 1025.
FRESH WATER: Available.
FUEL: Diesel oil available. Bunker 'C' can be brought in by rail.
DRY DOCK: Nearest dry dock located at Les Mechins (185 miles from Chandler).
REPAIRS: Minor repairs only.
SURVEYORS: Lloyd's at Quebec City. ABS at Montreal.
AIRPORT: Gaspe Airport.
TIME: GMT minus 5 hours in Winter. GMT minus 4 hours in Summer (from first Saturday of April to last Saturday of October).
HOLIDAYS: New Year's Day, Good Friday, Easter Monday, Queen's Day (4th Monday of May), June 24th, Dominion Day (July 1st), Labour Day (1st Monday of September), Thanksgiving (2nd Monday of October), Remembrance Day (November 11th) and Christmas (December 25th and 26th).
SERVICES: Post office, bank, telephone, notary, telegraph, hospital, local airport, railway, provisions, marine supplies, fumigation and cranes.
GENERAL: *Formalities:* Port of entry for Customs. Immigration services available by radio or telephone. Quarantine services available from Quebec City.
Chart: Canadian Chart No. 4921.
AUTHORITY: Transport Canada, Harbours and Ports Directorate, 901 Rue Cap-Diamant, 4th Floor, Quebec G1K 4K1, Canada. *Tel:* (418) 648-3680. *FAX:* (418) 648-7980.

Mr. Jean-Guy Fullum, Harbour Master – Chandler.

CHARLOTTETOWN, P.E.I.: 46.14 N. 63.07 W. (See Plan)

PORT LIMITS: A ship is considered to be "arrived" when it reaches Pilot Boarding Station at Lat. 46° 00′ N., Long. 63° 08′ W.
DOCUMENTS: The following lists and documents must be presented on arrival at the first Canadian port:

Inward Report (on Form A 6).

The following lists must be produced in triplicate (at some ports only in duplicate):

Crew List (Imm. 200).
Passengers List (Imm. 246).
Stowaways List.
Crew's Personal Effects List (Y. 14).
Stores List (E. 1).
Vaccination Certificates.
International Marine Health Declaration.
Deratting Certificate.
Health Declaration of Animals on board.
Vessel's official documents and certificates for inspection.
Cargo documents are usually required in triplicate.

APPROACHES: *Entrance:* The 8 mile approach channel has depths of not less than 11.0 m. (36 ft.) in the fairway, which is marked by light buoys and leading lights.
PILOTAGE: Pilotage is compulsory. One Pilot active with privately owned 40 ft. wooden boat, white hull, blue vertical strip midships. The pilot boarding station is in position Lat. 46° 00′ N., Long. 63° 08′ W. No alternate area in event of bad weather. To avoid a delay in obtaining a Pilot, he may be contacted on VHF Channel 16. Master should report ETA at least 12 hours before the ETA at the pilot boarding station. The ETA must be confirmed or corrected not more than 6 hours later. The Master of a vessel that is to depart or make a move within the compulsory pilotage area must report to "Pilots Charlottetown" 6 hours prior to estimated time of departure.
ANCHORAGES: Anchorage inside harbour at Three Tides – Lat. 46° 13′ N. Long. 63° 08′ W. Average depth of water 30 ft.
RESTRICTIONS: No restrictions, except draft 30 ft.
MAX. SIZE: Draft 30 ft.
HEALTH: Pratique procedure carried out by Customs Officers. (Form QS1).
RADIO: VCA Charlottetown, Canadian Coast Guard.
VHF: Canadian Coast Guard (VCA), Channels 16 and 26.
RADAR: Service not available.
TUGS: Not available.
BERTHING: (1) Charlottetown Marine Terminal: West side, berthing length 500 ft. with depth ranging from 30 ft. at outer end to 10 ft. at inner end at low water; East side, berthing length 600 ft. with depth of water ranging from 30 ft. at outer end to 10 ft. at inner end at low water. Outer end has a berthing length of 230 ft. with a depth of water of 30 ft. at low water. Wharf used for loading and discharging general cargo; equipped with one unheated shed – 385 ft. long×50 ft. wide, one heated freight shed 385 ft.×60 ft. Electric light, water, oil and gasoline available. Mobile cranes available.

(2) Ministry of Transport Wharf, 300 ft. wide, with a depth of 33 ft. alongside. Office and stores building, buoy test shop, etc. West side berth, 450 ft. long, with depth of 26 ft. for Coast Guard use only.

(3) Texaco Canada Ltd. Wharf, 365 ft. long. Mooring dolphins have been erected adjacent to the wharf, and there is reported to be at least 28 ft. alongside at low water.

(4) Irving Oil Ltd. Wharf, on edge of channel, about 600 ft. from Old Bridge Site. Use by Irving tankers only.
CRANES: Shore cranes available.
BULK CARGO FACILITIES: See "Berthing" – "Charlottetown Marine Terminal".

SPECIALISED CARGO FACILITIES: Berths not equipped for handling containers or roll-on/roll-off traffic.
BRIDGES: None.
STEVEDORES: Advise ETA before 1600 hrs. in order to commence 0800 hrs. next day.
MEDICAL: No advance notice required, ample hospital facilities available.
TANKERS: Charlottetown Marine Terminal (East Side): Outer end has a berthing length of 230 ft. with depth of water 30 ft., discharge lines 8 in., 10 in. and 12 in., no slop facilities.

Irving Oil Wharf: On edge of channel about 600 ft. from bridge. Discharge lines 8 in. and 10 in. Depth 30 ft., no slop facilities.
DENSITY: 1025 oz. per cu.ft.
FRESH WATER: Available at Railway Wharf. Order through Agent. Rate 12 t.p.h.
FUEL: Delivered by tank truck. Most grades of bunker fuel and diesel as well as marine lubricants can be obtained through supplier.
REPAIRS: Minor repairs only.
DRY DOCKS: Not available.
GANGWAY/DECK WATCHMEN: Usually ship's crew.
OPENING/CLOSING HATCHES: Stevedores work hatches which are not mechanically operated.
CUSTOMS ALLOWANCES: 200 cigarettes or 2.0 lb. tobacco or cigars, 40 oz. of wine or spirits or 288 oz. of beer.
CARGO GEAR: Vessel required to use own gear for loading and unloading.
REPATRIATION: Crew changes and repatriation can be carried out with little difficulty.
AIRPORT: 4 miles distant, with daily flights by E.P.A. and Air Canada.
TIME: GMT minus 4 hours, May to October; GMT minus 5 hours, November to April.
HOLIDAYS: New Year's Day; Good Friday; Easter Monday; Victoria Day; Canada Day; Labour Day; Thanksgiving Day; Remembrance Day; Christmas Day; Boxing Day. Work can be arranged on these days.
POLICE/AMBULANCE/FIRE: Police, 894-5513 and 368-2677; Ambulance, 892-5311. Fire, 894-3113.
TELEPHONES: No hookup available.
BANKS:
(1) Royal Bank of Canada, Confederation Plaza, Charlottetown, PEI.
(2) Bank of Montreal, Confederation Plaza, Charlottetown, PEI.
(3) Bank of Nova Scotia, Confederation Plaza, Charlottetown, PEI.
(4) Toronto Dominion, 192 Queen Street, Charlottetown, PEI.
(5) Canadian Imperial Bank of Commerce, Queen Street, Charlottetown, PEI.
SHORE LEAVE: No restrictions.
IDENTIFICATION CARDS: Not required unless disembarking. Crew members should then possess Seaman's Book and/or Passports.
GARBAGE DISPOSAL: Superior Sanitation Service, 68 Allen Street, Charlottetown, PEI. Tel: (902) 892-1333. Service available through Agent.
WASTE OIL DISPOSAL: Creed's Petroleum Equipment Ltd., 23 Norwood Road, Charlottetown, PEI. Tel: (902) 892-6036. Service by tanker trucks available through Agent.
SEAMAN'S CLUBS: None. Church services, football matches and dances can be arranged through Agent.
GENERAL: *Chandler:* Available through Agent.
Tally Clerks: Not compulsory.
Garbage Removal: Available but not compulsory.
Slop Facilities: Not available.
Shore Watchmen: Not compulsory.
Gangway: Not available.
Tariffs: Transport Canada – "Cruise Ships".
Berthage: $0.95 per metre per day.
Passenger Fee: $2.96 passengers on board.
Harbour Dues: $0.0428 per gross registered ton.
Linesmen: Available through Charlottetown Harbour Pilot.
Tides & Currents: Tidal Range 6 ft. – 9 ft. Harbour currents approximately 2 knots.
DELAYS: If berth available, no delays in loading or unloading.
Ice: The Harbour usually freezes over in late December and is clear of ice by late April.

There are a number of days during the Winter when product cannot be loaded because of weather conditions.
AUTHORITY: Transport Canada, Box 1202, Charlottetown, P.E.I., C1A 7M8. *Tel:* (902) 566-7974. *Telex:* 014-44130. *Contact:* Don Harley, Port Manager.

CHATHAM, N.B.: 47.02 N. 65.28 W.
NEWCASTLE, N.B.: 47.00 N. 65.33 W.

DOCUMENTS:
Previous Port Clearance.
3 Immigration Crew Lists.
3 Ship Stores Lists.
3 Crew Declaration.
Derat Certificate.
Health of Animals.
Load Line Certificate.
Safety Equipment.
Safety Radio.
Safety Construction.
Ship's Register.
3 General Declaration Inwards (A6).
Cargo Manifests.
PILOTAGE: Contact Agent for Pilot at least 12 hours in advance. Pilot boat, wooden hull, length 44 ft., grey, Pilot flag about 20 ft. above sea-level. From April 16th to December 9th Pilot taken aboard 2 miles North of Escuminac Breakwater. In event of very bad weather good anchorage Egmont Bay, PEI. Dec. 10th–April 15th Pilot boards at Eddy Point N.S. when inbound from East. In other cases Pilot boards at point of departure in Canada.

From December 10th – April 15th, Pilot boards at Sydney Pilot Station (Lat. 46° 20′ 30″ N., Long. 60° 07′ W.) or as arranged.
MAX. SIZE: Max. draft 7.62 m.
HEALTH: Pratique procedure carried out by Customs Officer.
RADIO: Use Grindstone (VCN) or Charlottetown Radio (VCA), or Escuminac Pilot (VHF Channel 16).
TUGS: Not required.
BERTHING: Approx. 3 hours from Pilot Station to Berth. 11 wharves available.
BRIDGES: Bridge at Chatham 35 m. clearance high tide. Hydro wires at Middle Island 41 m. at 60 degrees Fahrenheit at lowest point, channel wide at this point, able to get 55 m. clearance. Morrisey Bridge, max. span opening is 30 m. Overhead cables at Morrisey Bridge.
STEVEDORES: Notice at least 24 hours before arrival.
MEDICAL: Hotel Dieu Hospital, Chatham and Miramichi Hospital, Newcastle.
TANKERS: Hose connections 15 cm.; no slop discharge facilities.
FRESH WATER: Available only at Government wharves at Chatham and Newcastle.
FUEL: All types by tanker truck.
CONSULS: None.
REPAIRS: Light repairs by Miramichi Foundry and Arvin Speciality Machines.
SURVEYORS: Lloyd's Surveyor at Dalhousie. N.B., others at Halifax.
GANGWAY/DECK WATCHMEN: Not necessary.
CUSTOMS ALLOWANCES: 200 cigarettes/man/5 days. Spirits: 40 oz./man/5 days.
REPATRIATION: Facilities good.
AIRPORT: Chatham. Daily flight to Montreal.
TIME: Atlantic Standard, 4 hours difference GMT. Change from Standard to Daylight Saving first Sunday in April through last Sunday in October. (1 hour forward).
HOLIDAYS: No work Labour Day, Armistice Day, New Brunswick Day. Other holidays may be worked on overtime.
POLICE/AMBULANCE/FIRE:

	Newcastle	*Chatham*
Police:	622-2111	778-8351
Ambulance:	Through Police	773-3492/733-4321
Fire:	622-2500	773-9494

EMERGENCY CO-ORDINATION CENTRE: Coast Guard (Maritimes) Emergency Centre. Tel: 1-800-565-1633.
STORING:
(1) Vessels may be stored by truck.
(2) Trucks may proceed alongside at the berth.
(3) Fork-lift trucks may be used.
(4) Local riggers may be employed to assist with storing.
SHORE LEAVE: No restrictions.
CREW IDENTIFICATION CARDS: Not needed.
DELAYS: Not normally.
GARBAGE DISPOSAL: Collection service available alongside; charges vary.
WASTE OIL DISPOSAL: None at the marine terminal site.
SEAMAN'S CLUBS: None.
GENERAL: Charts required (Canadian) 4023 – Northumberland Straits, 4910 – Miramichi River, Sailing Directions – Gulf and St. Lawrence. Tides; Spring 1.75 m. Neaps; 1.22 m. Night navigation possible.
AUTHORITY: Department of Harbours and Ports, Box 32, Newcastle, New Brunswick E1V 3M2. *Tel:* (506) 622-0918 or 773-7542. *FAX:* (506) 6220907. *Contact:* P.Deveaux, Port Manager.

CHEMAINUS, B.C.: 48.55 N. 123.42 W.
CROFTON: B.C.: 48.51 N. 123.38 W.

DOCUMENTS, PILOTAGE, HEALTH, CONSULS etc.: Refer to "Vancouver, B.C.".
ANCHORAGE: Available in Houston Passage.
RESTRICTIONS: Channel depth 48 ft. MLLW. Restricted by berth size only.
TUGS: Available. Tugs for Crofton are ordered from Chemainus.
BERTHING:
Chemainus:

Wharf	*Berthing Length* (ft.)	*Depth at LW* (ft.)	*Remarks*
MacMillan Bloedel	450	39 (North End) 19 (South End)	Crane available
MacMillan Bloedel	560	53 (North End) 30 (South End)	
Crofton:			
Stuart Channel No. 1	650 (Max. LOA)	35	Check draft with Pilot
No. 2	700 (Max. LOA)	40	
No. 3	700 (Max. LOA)	40	Check draft with Pilot. Vessels berth port side too. Ship's gear used for cargo handling.

No loading gear installed at Crofton berths.

STEVEDORES: 22 gangs available. Refer to "Vancouver, B.C.", for holidays, etc.
MEDICAL: Doctors and hospitals facilities available at Chemainus, 5 miles from Crofton.
DENSITY: Salt water.
FRESH WATER: Available at wharves.
FUEL: Diesel oil available from Imperial Oil Wharf at Chemainus.
REPAIRS: Repairs arranged from Victoria or Vancouver Shipyards. Minor repairs available locally.
CUSTOMS ALLOWANCES: See "Vancouver, B.C.".
AUTHORITY: Transport Canada, Canadian Coast Guard, P.O.Box 706, Chemainus, British Columbia, V0R 1K0 Canada. *Tel:* 246-4655, 246-2682. *Contact:* Ann Cameron Hill, Harbour Master/Wharfinger, 10031 Old Victoria Road, RR1, Chemainus, B.C., V0R 1K0, Canada.

CHURCHILL, Manitoba: 58.47 N. 94.12 W. (See Plan)

DOCUMENTS:

3 Crew Lists.
3 Passenger Lists (if applicable).
3 Ship's Stores Lists.
2 Quarantine Certificates.
1 Certificate for Harbour Master to be prepared after approval.
1 Certificate that Gyro Compass in order certified plus copy of manifest giving weight or measurement for each Bill of Lading. Certification by Local Collector of Customs.

Arctic Pollution Prevention Certificates: Ships have arrived in Churchill without such certificates and have thus contravened the Arctic Shipping Pollution Prevention Regulations. This certificate states that a vessel is in class, complies with SOLAS conventions, and has all of the equipment required by the regulations such as two radars, etc.

A certificate may be obtained from a surveyor employed by a major classification society named in the regulations. Ships unexpectedly diverted to Churchill should contact the Port Warden prior to arrival at Churchill.

Ship Masters are cautioned to ensure that they comply with the Arctic Shipping Pollution Prevention Regulations.

PILOTAGE: Pilotage is compulsory for merchant ships entering or shifting in Churchill Harbour. Fees will be advised by the Great Lakes Pilotage Authority.

Vessels must advise their ETA at the port, and should also advise their time of arrival at Fairway Buoy.

Masters can arrange for a Pilot by contacting their Agent at Churchill or calling directly to the pilot boat "H. M. Wilson" on VHF. Pilots board vessels near Fairway Buoy, 4 miles N.E. of harbour. The tug "H. M. Wilson" is used as pilot boat.

ANCHORAGES: Masters of smaller vessels consult Harbour Authorities regarding possible short-term anchorage inside the harbour. The recommended anchorage for larger vessels is 1.0 – 3.0 miles N.W. to N.E. of the Fairway Buoy, in 11 – 14 fathoms, over sand and mud. This anchorage is exposed, and vessels in light condition may drag, particularly in strong N.E. winds. Masters are advised to weigh anchor and stand out to sea when gales are expected, until the weather moderates. Vessels should not anchor off the harbour entrance because the ebb tide is strong and there is a danger of dragging ashore, should an unexpected N.E. gale develop.

RESTRICTIONS: Best time for entering is at slack high or low water, but vessels up to 160 m. in length may enter on the flood tide. Larger vessels enter during or just slightly after slack high water when the river begins to ebb, or alternatively at the last of the ebb just as slack low water is reached.

The ranges of mean tides and large tides at Churchill Harbour are 3.4 m. and 4.8 m. Shallow draft vessels will experience near-surface currents stronger than those shown on the chart. Ebbing surface flows, at the mouth of the river near Merry Rock, can reach speed of 5 knots and can cause a slight set towards the N.W. shore. Ebbing surface flows near the Ports Canada Wharf reach speeds of 4 knots and tend to set in a N.E. direction onto the wharf. During the flood, surface flows reach about 3 knots at the river mouth near Merry Rock, and about 2 knots near the Ports Canada Wharf. This current tends to run parallel to the wharf.

MAX. SIZE: The recommended maximum vessel dimensions are 735 ft. (224 m.) length overall; 105 ft. (32 m.) beam; 55 ft. (17.0 m) moulded depth. Draft would vary in accordance with tide predictions for the date and time of arrival and departure. Vessels whose parameters (approx. 55,000 tonnes d.w.t.) meet or exceed the above parameters will be dealt with on an individual case-by-case basis.
HEALTH: All vessels must fly yellow flag until cleared by authorities after docking.
RADIO: Churchill operates remote from Thunder Bay Coast Guard Radio VBA around the clock during navigation season. Channels to be used: 16 for emergency or to establish initial contact, 12 for Harbour Control and 26 (Duplex) for Coast Guard traffic.
RADAR: Requirements as laid down by Arctic Pollution Prevention Regulations (2).
TUGS: Tugs usually join vessels inside the harbour, and are compulsory for all movements. Two tugs available (1×3,000 b.h.p. and 1×600 b.h.p.). Ship's lines used.
BERTHING: The Main Wharf, 2,772 ft. (845 m.) long, has 2 grain loading berths, one general cargo berth (Dalgleish) and one deep berth (Wolfe), where loaded ships can lay at low water spring tide. There is also a coastal berth 300 ft. (91 m.) long. Depths alongside at Chart Datum (water brackish) vary from 31 ft. – 33 ft. (9.45 m. – 10.0 m.) at the grain loading berths and general cargo berth, 33 ft. – 36 ft. (10.0 m. – 11.0 m.) at the deep berth (Wolfe), and 18 ft. – 20 ft. (5.5 m. – 6.1 m.) at the coastal berth. Vessels are normally partially loaded and then turned on the flood tide so that bow is facing outbound for departure. Topping-up of the vessel's cargo is done on the last rising tide, so that departure is timed for approximately 30 minutes before high tide. Depending on cargo type, loading/discharge is done either by ship's own gear or shore gear. Note: Ports Canada By-Laws A1 are in effect when within Port of Churchill jurisdiction.
CRANES: 1×100 tonnes capacity (shore based crawler type).
BULK CARGO FACILITIES: There are 2 grain loading berths (No. 1 and No. 2), each 694 ft. (211.5 m.) long with depth alongside 31 ft. – 33 ft. (9.45 m. – 10.0 m.) at Chart Datum. Running parallel to the berths is the loading gallery 1,500 ft. (455 m.) long and equipped with 4 conveyor belts feeding 23 spouts for pouring the grain. Loading capacity from the 140,000 tonnes terminal elevator is at 60,000 bushels/hour (1,680 t.p.h.) to the ship's hold. The spouts have a reach of 85 ft. – 90 ft. (25.9 m. – 27.4 m.), and in the case of vessels with large beam, width extensions can be added. Normal loading is one vessel at a time. The Harbour Master's Department issues a maximum safe sailing draft notification to Master, based upon tidal prediction for date and time of sailing. The Port of Churchill accepts no responsibility for delays due to beam width and/or hatch configuration and height.
STEVEDORES: Gangs are available during whole of shipping season, no advance notice required.
MEDICAL: Fully staffed and equipped hospital available, approximately 1 mile from harbour.
TANKERS: Discharge pipes 10 in. diameter flexible hose reduced to 6 in. diameter steel pipe to tank terminal ashore.

Average depth between 31 ft. – 33 ft. (9.45 m. – 10.0 m.) at Chart Datum.

FRESH WATER: Fresh water available at all berths. Water pumped through 2.5 in. pipe connected directly to ship, discharged at rate of approximately 60 t.p.h.
FUEL: Bunker fuel requires 30 days advance notice. Arctic diesel fuel available all times.
CONSULS: None.
REPAIRS: Most repair work. Fully equipped machine shop available.
DRY DOCKS: None.
SURVEYORS: By arrangement with Ship Safety at Thunder Bay.
GANGWAY/DECK WATCHMEN: Ship's crew.
OPENING/CLOSING HATCHES: Carried out by ship's crew.
CUSTOMS ALLOWANCES: See "Montreal".
CARGO GEAR: Ship's gear or shore gear, depending on cargo type.
AIRPORT: Airport situated 5 miles from the harbour and served by Calm Air International Ltd. Canadian partner with flights Northbound twice daily (Monday to Friday), and Southbound twice daily (Monday to Friday). Additional flights arranged during tourist season and on request, based on number of passengers.

Trains: Passenger train (VIA) service is also available Southbound (Tuesday, Thursday and Saturday each week). The train station is situated within 1 mile of the harbour. Regular freight train (CN) intermodal service is available year round to service the port and surrounding community.

TIME: GMT minus 6 hours. Daylight Saving Time (1 hour forward starts first Sunday in April and ends last Sunday in October).
HOLIDAYS: New Year's Day (January 1st); Good Friday; Easter Monday; Victoria Day (May 24th); Dominion Day (July 1st); Civic Holiday (First Monday in August); Labour Day (First Monday in September); Thanksgiving Day (Second Monday in October); Remembrance Day (November 11th); Christmas Day (December 25th); Boxing Day (December 26th).

Arrangements normally made to have crews available for those days.

POLICE/AMBULANCE/FIRE: Police Tel: (204) 675-8821; Ambulance Tel: (204) 675-8881, Fire Tel: (204) 675-2222.
TELEPHONES: There is a pay telephone located outside Agent's office building.
BANKS: Royal Bank of Canada.
STORING: Vessels may be stored by truck, which may proceed alongside. No forklift trucks available. Riggers may be employed. Customs regulations in force.
SHORE LEAVE: Allowed, no restrictions.
GARBAGE DISPOSAL: Removal of garbage ashore is not presently permitted for vessels arriving from foreign ports. Steel mesh containers are however available at the dockside. Collection service is by Local Government District of Churchill and is available weekdays, excluding public holidays, from 0800 hrs. to 1700 hrs.. Contact Public Works Department via ships agent.
WASTE OIL DISPOSAL: Not available at present.
SEAMAN'S CLUBS: No seamen's clubs, however the local community offers the use of a large recreational complex. Its facilities include a library, swimming pool, bowling alley, arena, gymnasium, hospital and restaurant. Church services are also available locally, as are shops, postal facilities, telephone, sports grounds, and museums.
CURRENCY: Canadian Dollar (C$). U.S.$1.00 = C$1.3908 (13.2.96).
DELAYS: Little delay.
AUTHORITY: Canada Ports Corporation, Port of Churchill, P.O.Box 217, Churchill, Manitoba, Canada R0B 0E0. *Tel:* (204) 675-8823. *FAX:* (204) 675-2550. *Contact:* Pawan K. Chugh, Financial and Administrative Officer. Captain W. Goodman, Harbour Master.

CLARENVILLE, Newfoundland: 48.08 N. 53.56 W.

DOCUMENTS:
Crew List, Form 200 in duplicate.
List of Ship's Stores, Form E1 in duplicate.
Crew Declarations, Form Y.14 in duplicate.
Manifests in triplicate.
Bills of Lading in duplicate.

PILOTAGE: Contact Pilot through St. John's Radio (VON). Pilot usually boards at Clarenville Pilot Station, Lat. 48° 04′ 30″ N., Long. 53° 35′ W., or at the St. John's Pilot Station.
ANCHORAGE: Good anchorages in Random Sound.
MAX. SIZE: Largest ship 644 ft. long, breadth 84 ft., draft 26 ft.
HEALTH: See "Montreal".
RADIO: St. John's Radio (VON).
TUGS: None available.
BERTHING: Newfoundland Hardwoods Wharf: Length 375 ft., depth at LW 28 ft.
STEVEDORES: Available. 48 hours notice required.
MEDICAL: Necessary for Agents to receive advance notice of medical attention required. Hospitals available in the community and St. John's. Vaccination/Fever Certificates necessary for Pratique.
FRESH WATER: Limited supplies available.
FUEL: Light fuels only (no bunkers).
CONSULS: At St. John's.
REPAIRS: Minor repairs possible.
OPENING/CLOSING HATCHES: By crew.
CERTIFICATES: Load Line, Safety Equipment, Derat Certificates.
CUSTOMS ALLOWANCES: Tobacco 200 cigarettes allowed per crew member per week. Wine and/or Spirit, 1 bottle of spirit allowed per crew member on the first voyage in each year. Each subsequent voyage in one year, 1 bottle allowed only to officers.
REPATRIATION: Only available by air.
AIRPORT: Gander International Airport located about 2 hours distance by road/served by regular airlines.
TIME: GMT minus 3.5 hours. Daylight saving time from first week-end in April to last week-end in October, clocks advanced 1 hour.
HOLIDAYS: See "Montreal".
POLICE/AMBULANCE/FIRE: Police 466-3211; Fire 466-7777; Ambulance 466-2010.
TELEPHONES: No facilities for placing on board.
SERVICES: Only limited services available.
GARBAGE DISPOSAL: No facilities available.
WASTE OIL DISPOSAL: No facilities available.
SEAMAN'S CLUBS: None.
CURRENCY: Canadian Dollar.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Not required.
AUTHORITY: Canadian Coast Guard, P.O.Box 1300, St. John's, Newfoundland, A1C 6H8, Canada. *Tel:* (709) 772-5154. *Telex:* 016-3369. *FAX:* (709) 7725127. *Contact:* D. A. Lester, Regional Manager.

AGENT: Newfoundland Hardwoods Ltd.

COLLINGWOOD, Ontario: 44.30 N. 80.30 W.

(See Plan)

LOCATION: Collingwood Harbour is situated on Nottawasaga Bay at the extreme Southern end of Georgian Bay, Lake Huron, about 160 km. North of Toronto.
RESTRICTIONS: *Depths:* Approach Channel 7.2 m. Turning Basin 6.1 m. Inner Harbour 6.1 m.
Navigation Season: Mid-March to late December.
BERTHING:

Berth No.	*Name*	*Length* (m.)	*Depth* (m.)
B1	Small Boat Wharf	153.0	3.0 – 5.1
B2	North Terminal Wharf	141.0	6.4
B3	South Terminal Wharf	76.0	6.4
B4	East Harbour Wall	140.0	5.0
B5	Mooring Station	140.0	5.1
B6	Terminal Wharf (Private)	–	–

BULK HANDLING FACILITIES: There is a private grain elevator at the Terminal Wharf.
FUEL: Bunkering by road tanker.
AUTHORITY: Harbours and Ports, Canadian Coast Guard, 201 N. Front Street, Suite 703, Sarnia, Ontario, N7T 8B1 Canada. *Tel:* (519) 383-1942. *FAX:* (519) 383-1996. *Contact:* Regional Manager.
Port Official: Mr. Charles Sandell, Harbour Master/Wharfinger.

COME-BY-CHANCE, Newfoundland: 47.48 N. 54.01 W.

(See Plan)

LOCATION: The North Atlantic Refining Limited plant is located in Placentia Bay. The Terminal position is Lat. 47° 48′ 18″ N., Long.54° 00′ 35″ W.
DOCUMENTS:
3 copies Crew Declaration (Form Y14).
3 copies Ship Stores List (Form E1).
3 copies Immigration Crew List (Form IMM 200), only Canadian form accepted.
2 copies of Bill of Lading or Manifest.

In addition, Customs Clearance from last port, Derat Certificate, extra copy of Crew List, Vaccination List, Ship's Register, Radio Equipment Certificate, Safety Equipment Certificate, Load Line Certificate and Non-Canadian Ship Compliance Certificate. Oil Record log book should be up to date and readily available for inspection by Government Steamship Inspectors.

PILOTAGE: The Placentia Bay compulsory pilotage area is composed of 2 areas, namely:-

Zone "B" (Lat. 47° 20′ N., Long. 54° 06′ 30″ E.). Notice of Arrival should be given in UTC. Pilotage is compulsory for all vessels over 223 m. (731.62 ft.).

Zone "A" which starts off Southern Harbour, approximately 5.65 miles from the terminal. Pilotage is compulsory for all vessels.

Pilots: The pilot boarding station for vessels subject to pilotage Zone "B" is located near Red Island Shoal. The approximate position is:-
Latitude 47° 20.0′ N.
Longitude 54° 06.5′ W.

The pilot boarding station for vessels subject to pilotage Zone "A" is located near Coombes Rock. The approximate position is:-
Latitude 47° 42.3′ N.
Longitude 54° 03.3′ W.

Arrivals: To avoid a delay in ordering a Pilot, Masters of vessels bound for the Come-By-Chance Terminal must forward their request for Pilots to "Pilots St. John's" as follows:-
First notice 24 hours prior to the ETA (GMT) at the appropriate boarding station stating:
(a) Which boarding station the Pilot is required at.
(b) Name.
(c) Call Sign.
(d) Deepest draft.
(e) Speed.
(f) Agent.
(g) Length, breadth, moulded depth, deadweight tonnage and the largest net registered tonnage.

Subsequent notices are to be sent 12 hours, 6 hours and 4 hours prior to the ETA (GMT) at the appropriate boarding station.
Departures/Movages: First notice 9 hours prior to the ETD (Local time). Second notice 3 hours prior to the ETD (Local time).
Embarkation/Disembarkation: Masters of calling vessels are reminded of their obligation to comply with statutory rules and are recommended to comply with the following:
(a) The Officer responsible for embarkation/disembarkation of the Pilot is a watchkeeping officer.
(b) The pilot ladder is secure.
(c) The pilot ladder is adequately illuminated at night.
(d) Means are provided to enable the Pilot to pass safely and conveniently from the head of the pilot ladder into the ship or on to the ship's deck. Portable stanchion, if used, should be independently secured to the rail or deck, one on each side of the ladder.
(e) The ladder is in good condition and its treads remain horizontal. The treads to have a rough surface.
(f) The ladder is rigged so that each step rests firmly against the ship's side.
(g) Spreaders are provided not more than 10 ft. apart, to prevent the ladder from twisting.
(h) Manropes should be available, but should not be lowered unless requested by the Pilot.
(i) A lifebuoy with a self igniting light and a heavy line should be available.
(j) The ladder should be rigged well clear of overboard discharge and deck scuppers.

If the pilot ladder is not safe, the Pilot may refuse to board and thus cause unnecessary delay to the ship.

ANCHORAGE: Will be assigned by the Pilot in conjunction with Transport Canada, Coast Guard.

RESTRICTIONS: Will be dispatched by Transport Canada to ship's Agent.

MAX. SIZE:

Berth No. 1	Max. Size	—	326,000 d.w.t.
	LOA (berth)	—	1,500 ft.
	Max. Draft	—	85 ft.-90 ft.
	Water Depth	—	100 ft.
Berth No. 2	Max. Size	—	67,000 d.w.t.
	LOA (berth)	—	1,000 ft.
	Max. Draft	—	40 ft.-43 ft.
	Water Depth	—	48 ft.

Notes:
1. Attention is drawn to the minimum under-keel clearance of 10 ft. – 15 ft. in Berth No. 1, and 5 ft. in Berth No. 2.
2. An increased loading draft of 3 ft. maximum may be allowed, depending on height of tide where maximum tidal difference is 8 ft.

HEALTH: Vessels arriving from a foreign port may obtain pratique by radio from "Quarantine St. John's" at least 12 hours before arrival. Information required by Quarantine Officer shall include:
Name and nationality of the vessel.
Last port of call.
Nature of cargo.
Number of crew and passengers.
Port of destination.
Name of Agent.
Conditions of health of all on board with details of any sickness or death incurred during the voyage.
Animals if any.

RADIO: Best radio stations to use en route to Come-By-Chance:

St. John's Marine Radio – call sign VON.
Halifax Marine Radio – call sign VCS.
St. Lawrence Marine Radio – call sign VCP.

To avoid a delay in obtaining a Pilot, Masters of ships bound for Come-By-Chance must report by R/T, W/T or Telex, their ETA to Vessel Traffic Management at St. John's at least 24 hours before vessel's ETA at the pilot boarding station. The times should preferably be in GMT, but whatever time is used it should be expressly stated. ETA should be confirmed or corrected 12 hours and 6 hours prior to arrival at the pilot boarding station by R/T, W/T or Telex through VON Marine Radio Station, St. John's or via any Coast Guard Radio Station. Also see "Pilotage".

Pilotage messages may be forwarded through the nearest Canadian Coast Guard Radio Station. Direct requests can be made through St. John's Traffic Centre on VHF Channel 11 and Placentia Traffic on VHF Channels 12 and 14. Placentia Traffic Tel. (709) 227-2181.

The requirements for water, fuel and ballast should be made known to vessel's Agent in the 72 hour ETA.

Pre-Arrival Information Required: Following are general guidelines for the pre-arrival information required at this Terminal. Please contact Agent for specific details.

Prior to arrival, Master shall advise the Terminal either via his Agent or direct on VHF Channels 12, 14 or 16:

(a) ETA: Masters are requested to give their Agent 72, 48, 36 and 24 hours ETA messages via St.John's Radio (VON), or St.Lawrence Radio (VCP), or Halifax Radio (VCS) in GMT. When the vessel is within 24, 12, 6 and 4 hours of Come-By-Chance, the ETA should be confirmed or amended via Placentia Traffic Centre. The 4 hour message confirms the Pilot.

(b) Documents required:
3 copies Crew Declaration (Form Y14).
3 copies Ship's Stores (Form E1).
3 copies Immigration Crew List (Form IMM200).
(To be sent by fax or telex to Agent at least 48 hours prior to arrival).
In addition, the clearance form from the last port of call, and the expiry date of the following documents will be required: Derat Certificate, Load Line Certificate, Safety Equipment Certificate, Safety Construction Certificate and Radio Equipment Certificate. Ensure the Oil Record Book is up-to-date and available for inspection by Government Steamship Inspectors.

(c) Draft, quantity of cargo tank ballast to be discharged to shore tankage, and estimated deballasting time.

(d) Quantity of cargo slops on board and whether to be retained or discharged to shore tankage.

(e) Quantity of cargo to be loaded and bulk loading rate requested.

(f) Number, size and material of vessel's manifold connections.

(g) Confirmation that an inert gas system is fitted, fully operational, and that the oxygen content of all tanks does not exceed 8%.

(h) Repair requirements, as most repair services are only available at St.John's (90 miles from Come-By-Chance).

(i) Laundry requirements are available.

VHF: Both the Pilots and the tugs are equipped with VHF radios covering the following 5 channels:

Channel 16 – 156.8 MHz.
Channel 12 – 156.6 MHz.
Channel 11 – 156.55 MHz.
Channel 9 – 156.45 MHz.
Channel 6 – 156.3 MHz.

Should there be 2 ships moored, each ship will communicate with the Jetty on the *same* channel.

TUGS: Tugs are stationed at Come-By-Chance to assist vessels in berthing and unberthing. 2×2,800 h.p. (40 ton B.P.) and 1×4,000 h.p. (60 ton B.P.).

BERTHING: The jetty extends 914 m. from the shore. Berth No. 1 (outside) can accommodate 325,000 d.w.t. tankers. Length of berth face 463 m. Depth of water alongside 100 ft. Berth No. 2 (inside) can accommodate tankers up to 70,000 d.w.t. Depth of water alongside 48 ft.

Both berths are equipped with hydraulic operated loading arms which are fitted with a speed-seal hydraulically operated manifold coupling.

Berth One

Loading Arm	*Coupling (in.)*	*Product*
1	16	Crude and Ballast
2	16	Crude Ballast
3	16	Crude, Ballast, Residual
4	16	No. 2 Oil, Jet Fuel
5	10	Bunker "C"

Note: Berth No. 1 is connected by 1 × 42 in. crude line to the tank farm which is at 90 ft. elevation and approximately 2,136 m. away.

All crude connections are 16 in., but can be reduced to 12 in.

Berth Two

Loading Arm	*Coupling (in.)*	*Products*
6	10	Clean Products Ballast
7	10	Same as No. 6
8	10	Clean Products Ballast Fuel Residual
9	10	Same as No. 8
10	8	Bunker "C"
11	10	Sulphur
12	6	Propane (Manually Operated)
13	4	Propane Vapour (Manually Operated)

Note: The product tanks are approximately 1,707 m. away at elevations ranging from 80 ft. to 100 ft.

Facilities for discharging ballast are available at both berths. The pumping distance is approximately 1,525 m. away to a tank at 62 ft. elevation.

Cargo Handling Rates:

Berth	*Product*	*Connections*	*Rate*
1	Crude	4×16 in.	25,000 b.p.h./arm
1	Bunker*	1×10 in.	4,000 b.p.h.
2	Bunker*	1× 8 in.	2,000 b.p.h.
2	Jet/Stove† Kerosene†	4×10 in.	12,000 b.p.h.
1	Fuel†	1×16 in.	15,000 b.p.h.
2	Fuel†	2×10 in.	12,000 b.p.h.
1	Gasoline	1×16 in.	14,000 b.p.h.
2	Gasoline	2×10 in.	12,000 b.p.h.
1	HVGO (No. 6 Fuel)	2×16 in.	6,700 b.p.h.
2	HVGO (No. 6 Fuel)	2×10 in.	6,700 b.p.h.
1	Ballast	4×16 in.	12,000 b.p.h.
2	Ballast	4×10 in.	12,000 b.p.h.

* Meters (3) 6 in. 6,000 b.p.h. maximum, i.e. 18,000 b.p.h. maximum, presently out of commission.

† 2 bunkers 8 in. 5,000 b.p.h. maximum each. 2×No. 2 fuel oil 4 in. 2,500 b.p.h. maximum each.

MOORING: After receiving assistance to the berth, it is essential that ships are moored in a sensible and seamanlike manner with the bow facing out to sea. A line boat will be available at all times to assist in bringing lines to the jetty, except in cases of emergency.

(a) It is recommended that vessels should make fast alongside the Come-By-Chance Jetty with an all wires or wires with synthetic rope tails mooring system, which at least meets the Oil Companies International Marine Forum (OCIMF) guidelines on equipment and restraint capability. No mooring lines are provided at either berth.

(b) Vessels unable to comply with the above recommendations may be required to provide additional restraint by doubling or using both ends of certain mooring lines.

The wires and synthetic ropes of all mooring systems shall be of a similar breaking strength, with the exception of synthetic ropes used in the initial stages positioning and berthing which, if appropriate, will not be taken into consideration in the final mooring plan.

It is essential that all mooring lines are taut at all times with each line bearing equal tension. All lines should be in good condition; lines that show obvious wear will not be accepted.

For working the heaving lines, electrically operated capstans with foot operated switches are provided.

On a broad brush basis and under good weather conditions, ships will tie up as follows:

Berth No. 1	Forward:	3 head lines 3 breast lines 3 springs
	Aft:	3 stern lines 3 breast lines 3 springs
Berth No. 2	Forward:	4 head lines 2 breast lines 2 springs
	Aft:	4 stern lines 2 breast lines 2 springs

Note: Breast lines should run ashore from a lead on board directly opposite the quick release hook.

(c) Masters of the vessels must:

(i) Ensure that their vessels are secured in accordance with the preceding paragraphs and to the satisfaction of the Jetty Supervisor.

(ii) Ensure that a strict watch is maintained on their vessel's moorings and that they are tended regularly to prevent undue movement of the vessel.

(iii) Ensure that their vessel's mooring ropes or wires are secured only to the proper fixtures provided for that purpose.

(iv) Provide an efficient and safe gangway which must be adequately lit during hours of darkness.

(v) Provide and rig towing wires of 50 tonne minimum breaking strength (approx.32 mm. in diameter) secured to the offshore bow and quarter with the towing eyes maintained just above water level.

(vi) Ensure that all moorings on self-stowing winches are secured with the winch brake hardened up.

Under adverse weather conditions or at any time when the winches are suspected of, or known to have a low brake efficiency, the winches must be set in the heave position and on the brakes such as to allow the steam (the winches motive power) to retain the moorings at the required tension, should the brakes begin to render.

MEDICAL: Masters are requested to notify their Agents at least 72 hours prior to arrival, advising the number of crew to see the doctor and their complaint. The doctors work out of hospital which is about 48 km. from the berth. Dentist also available.

FRESH WATER: Limited quantities of fresh water available. Rate of 60 U.S. gallons per minute.

FUEL: Ship's bunkers are available. Bunker requirements, including quantities and specifications, should be made known in the 72 hour message.

FIRE PRECAUTIONS: Usual precautions for a refinery.

CONSULS: The following countries have Consular Representatives in St. John's:

Brazil	Germany	Malta	Spain
Denmark	Iceland	Netherlands	Sweden
France	Italy	Portugal	

REPAIRS: The Agent should receive early advice of requirements, as most repairs are only available at St. John's (Radio, radar, gyro, Satnav and Loran, etc.). The technicians for such equipment work out of St. John's. The following brand names have representatives in St. John's: Racal-Decca, Marconi, Kelvin Hughes, Furono, Atlas and Sperry.

SURVEYORS: Stationed in St. John's: Lloyd's, B.V., N.K.K., A.B.S., Germanischer Lloyd, Italian Registry, Russian Registry, China Corp. and Honduran Registry.

GANGWAY/DECK WATCHMEN: Usually ship's crew.

CUSTOMS ALLOWANCES: Each crew member is allowed 200 cigarettes and one 40 oz. bottle of wine or spirits per week.

REPATRIATION: No formal facilities, however crew changes and repatriation can be carried out. Prior notice to Agent is required.

AIRPORT: Nearest airports are St. John's, 152 km. away, and the Gander International Airport, 206 km. away.

POLICE/AMBULANCE/FIRE: The Police are located in Clarenville.

Telephone:	466–3211

Hospital located in Clarenville.

Telephone:	466–3411

The Fire Department located at refinery.

Telephone:	463–8811 (Ext. 14)

TIME: GMT minus 3.5 hours. First Sunday in April clocks advanced 1 hour. Last Sunday in October clocks retarded 1 hour.

TELEPHONES: Available at agent's office.

SERVICES: *Supplies & Laundry:* Stores and provisions have to be obtained in St. John's. In order to avoid delays, Agent should be notified prior to arrival, of the vessel's requirements. Stores and supplies will be delivered by barge, tug, or small boat, or by truck at the dock. Laundry facilities are available in Come-By-Chance.

TERMINAL REGULATIONS: With the object of protecting all concerned against the possibility of fire hazards, oil and smoke pollution, etc., vessels calling at Come-By-Chance must comply with the following Safety Regulations, as well as any prevailing Government Safety Regulations or other Regulations, which may be issued by proper authorities from time to time.

(a) SMOKING and the use of naked lights is strictly prohibited on board vessels alongside the berths, except in those enclosed spaces aboard ship specifically designated by the Master as "SMOKING AREAS."

(b) FIRE WIRES of steel must be hanging over the side of the manifold off side bow and quarter whilst alongside to enable tugs to connect readily in an emergency situation. The towing eye should be lowered to reach the water line at the vessel's minimum draft on the berth.

(c) BOILER TUBES must not be blown whilst vessel is alongside and every precaution must be taken to prevent sparks and soot particles escaping from the funnel.

(d) SCUPPERS must be securely plugged before loading/discharging commences and all possible care taken to avoid spillage on overflow.

(e) SPILLAGE TRAY or other receptacle should be placed under the flange connection at the vessel's manifold.

(f) OIL absorbing material in a suitable quantity should be placed in the proximity of the manifold.

(g) ENGINE REPAIRS must not be made alongside if they will prevent the prompt sailing in an emergency, or upon completion of cargo transfer.

(h) WORK on deck or hull that could cause sparks is not allowed.

(i) INERT GAS GAUGING: At its discretion, Refinery may require that all crude carrying vessels arrive at the terminal with cargo tanks inerted and that tanks will remain inerted throughout discharge. If vessels are instructed to arrive with inerted tanks, Refinery retains the right to request depressurisation of the tanks, under A.P.I guidelines, to allow measurements by designated inspectors, subject to any restraints by regulatory agencies and to Master's satisfaction and consent that same is deemed safe for the vessel, such consent not to be unreasonably withheld. Vessels discharging at the Refinery are considered as having warranted that they are equipped with a properly working inert gas system and that officers and crew are experienced in the operation of same. Any time lost due to improper operation of the vessel's inert gas systems should not count as laytime.

(j) CRUDE OIL WASHING: All vessels discharging crude oil at the Refinery will, at the discretion of the Refinery, be required to perform crude oil washing. Vessels are to provide any advance information or technical data that may be required relative to the conduct of such crude oil washing operations. Vessels are required to consent to crude oil washing of cargo tanks and consent to conduct same simultaneously with discharge of cargo. Any additional time consumed as a result of crude oil washing, up to a maximum of 6 hours or pro-rata on the basis of number of washed to the number of tanks loaded, shall constitute used laytime.

(k) LIGHTS of any description other than those permitted and approved by a recognised Classification Society or Government Department for use in a vapour atmosphere are not allowed.

(l) CARGO: During cargo transfer or ballast operations or when not in a gas free condition, all vessels shall show a red signal during the day and a red light during the night.

(m) TRANSFER OPERATION shall not be started, or if started, shall be discontinued by either the Duty Officer of the vessel or the Terminal Supervisor, when any of the following conditions come to his attention.

1. During severe electrical storm.
2. If a fire occurs on the vessel or terminal.
3. If there is not sufficient competent personnel aboard the vessel or on the terminal to safely handle the cargo operations in progress.
4. Should any condition develop which represents a hazard to the vessel or Terminal installation.

(n) FIREFIGHTING equipment of ships alongside must be kept ready for instant use at all times.

(o) GAS-FREEING is not allowed alongside the berths without permission of the Terminal Supervisor.

(p) MOORING of boats or craft with mechanical propulsion alongside a vessel loading/discharging or in the process of deballasting is not allowed, unless special permission has been given by the Terminal Supervisor.

(q) UNAUTHORISED or apparently intoxicated or disorderly persons shall be prohibited from entering the Terminal.

(r) NOTHING in these Regulations will relieve Masters of their responsibilities in observing the normal safety fire prevention and security regulations. Terminal personnel are authorised to advise and request Masters of calling vessels to take additional measures to ensure a higher degree of safety, if they find such advice and request warranted.

(s) NON-COMPLIANCE with Safety regulations may result in discontinuation of cargo operations, which will only be resumed upon correction of the infringement and strict compliance with the regulations. A vessel will accordingly be held responsible for any cost and delay, which arise from non-compliance with the safety procedures as outlined.

SHORE LEAVE: In order to comply with Immigration Regulations, crews should be carefully checked before sailing, and any missing crew member reported to Agent.

In case of crew members left ashore for any reason, Masters are requested to furnish a letter accepting responsibility for all expenses incurred, advances (if any) and also instructions for repatriation. An Immigration Bond may be required.

GARBAGE DISPOSAL: Available through POB Industrial Services Inc. Arrangements must be made through Agent.

WASTE OIL DISPOSAL: Facilities available. Contact Newfoundland Processing Ltd. Tel: (709) 4638811.

Due to ballast tank not being heated, the refinery will test oil to be disposed and determine whether or not to take it.

SEAMAN'S CLUBS: None locally. Facilities available at St. John's (150 km.) and Clarenville (50 km.).

CURRENCY: Canadian Dollar.

WEATHER: *Ship's Officer's Report:* The prevailing winds are from the S.W. in Summer and N.W. in Winter. Fog is experienced regularly in April, May, June and July, the latter two months being the worst. The fog is usually associated with a Southerly wind.

There is no shelter afforded on the North, East and South sides of the quay and only a nominal amount on the West side.

Local Pilots report that the range of tide is between 5.5 ft. and 8.5 ft. which can increase if the wind has been blowing from the South for any length of time.

CHARTS: Canadian Hydrographic Charts, S.E. coast of Newfoundland.

No. 4016	Saint Pierre to St.John's.
No. 4617	Red Island to Pinchgut Point.
No. 4620	Come-By-Chance Harbour.
No. 4622	Cape St. Mary's to Argentia Harbour and Long Island.
No. 4839	Head of Placentia Bay, and Come-By-Chance Harbour.

GENERAL: Masters are strongly advised to contact their Agent 72, 48, 36, 24, 12 and 6 hours with ETAs. In the 72 hour message Masters should advise all port requirements.

AGENCY: Canadian Maritime Agency Ltd., P.O.Box 119, Come-By-Chance, Newfoundland, Canada A0B 1N0. Tel: (709) 463-8753. Telex: 408257955 (U.S.A.). Fax: (709) 463-8737.

AUTHORITY: Transport Canada, Canadian Coast Guard, Newfoundland Region, P.O. Box 1300, St. John's, Newfoundland A1C 6H8. *Tel:* (709) 772-5154. *Telex:* 016-3369. *FAX:* (709) 7725127. *Contact:* D.A. Lester, Regional Manager, Harbours and Ports. Carl Osborne (Tel: 463-8528).

North Atlantic Refining Ltd., P.O.Box 40, Come-By-Chance, Newfoundland A0B 1N0. *Tel:* (709) 463-8811. *FAX:* (709) 463-8076. *Contact:* Chris Hogarth, Supply Manager.

CONTRECOEUR, Quebec: 45.53 N. 73.12 W.

(See Plan)

LOCATION: The Contrecoeur Transfer Dock is located on the South shore of the St. Lawrence River, approximately 25 miles East and downstream from Montreal. (Canadian Chart 1339, Admiralty 422).

DOCUMENTS, HEALTH, RADIO, etc.: Refer to "Montreal" and "Quebec".

PILOTAGE: Compulsory. River Pilot docks and undocks vessels. Boarding at all hours.

ANCHORAGE: Available at Lanoraie 15 miles East of dock and Sorel 20 miles East of dock. Also at Contrecoeur, off the berth.

RESTRICTIONS: Hatch openings must not be less than 25 ft.×35 ft. Vessels will be required to vacate the berth immediately after completion of loading and/or discharging. Masters and/or Agents to advise ETA 36 hours and 24 hours. If any change after 24 hours notice, Terminal will have to assess standby time changes.

MAX. SIZE: 850 ft. length; 105 ft. beam; 35 ft. depth chart datum; fresh water, (subject river levels and recommended keel clearance, average river levels vary from +7 ft. above chart datum (April, May) to +3 ft. (Aug., Sept.) with extremes recorded of +10 ft. and +1.5 ft.).

RADIO: *Arrival Notice:* Cable address: CONORE, Montreal. Master or Agent to advise the Terminal of vessel's ETA 48 hours, 24 hours, 12 hours and 6 hours prior to vessel's arrival.

Also see "Restrictions".

TUGS: Requirement based on size of ship and weather conditions.

BERTHING: Ships will be berthed in regular turn of vessels, providing they present with hatches open, ready for discharging and/or loading, based on the following reporting procedures;

(i) Downbound vessel reported out Cote Ste Catherine Lock before upbound vessel passes Trois Rivieres Pilot Station will have precedence and vice versa.

(ii) Downbound vessel reported clear of Montreal Wharf before upbound vessel passes Ile des Barques reporting station will have precedence and vice versa.

(iii) In cases of two upbound vessels, the first passing Trois Rivieres Pilot Station will be first in turn.

Berthing Facilities: The dock is 1,500 ft. in length and is divided into two berths. Berth No. 1 is 750 ft. in length with dredged depth alongside of 35 ft. fresh water chart datum. It is fitted with two Wellman travelling towers equipped with 7.5 cu.yard grabs with outreach of 57 ft. from fenderline. The tower travel is 476 ft. centre to centre. Concrete pad measuring approx. 600 ft. × 140 ft. is located adjacent to Berth No. 1 and can accommodate approx. 75,000 tons of material stowing less than 20 cu.ft./ton.

Berth No. 2 is 485 ft. in length with dredged depth alongside of 22 ft. chart datum. It is fitted with a stationary boom shuttle for loading bulk materials into vessels. This shuttle is reversible for loading to trucks or rail cars. Bulk commodities can be handled:

(a) Direct from vessel to vessel.
(b) Direct from vessel to truck or rail cars.
(c) Indirect from vessel to pad for stockpiling by truck or reloading to vessel.

Unlimited storage capacity is available for stockpiling bulk and non-bulk materials. Material is reclaimed from dead storage area and returned by trucks to pad for reloading aboard vessels or into rail cars.

The working capacity of discharging or loading free digging bulk materials with a stowage factor of less than 20 cu.ft./ton is as follows:

Transferring direct from vessel to vessel .	1600 L/T per hour
Discharging from vessel to dock	1800 L/T per hour
Loading from dock to vessel	1800 L/T per hour
Transferring from vessel to rail cars . . .	900 L/T per hour
Transferring from vessel to trucks . . .	1200 L/T per hour

The railway siding on the dock property can accommodate 70 railway cars. Dock storage and dead storage areas are available by arrangement. Materials can be held in bond subject to Canadian Government Regulations.

STEVEDORES: Available at following times: Regular working periods are from 0800 hrs. to 1600 hrs., Monday to Friday. Under special arrangement, work performed outside regular hours. Periodically working around the clock.

MEDICAL: Doctor and hospital available.

FRESH WATER: Available.

FUEL: Available.

HOLIDAYS: Legal holidays are as follows: Good Friday, Victoria Day, St. Jean Baptiste Day, Canada Day, Labour Day, Thanksgiving Day, Remembrance Day, December 24th, 25th, 26th and 31st and January 1st.

AGENCY: Contrecoeur Terminal does not handle ship agency. Shipowners or Charterers appoint their own Agents for attending ships' requirements.

AUTHORITY: Contrecoeur Maritime Terminal (A Division of Logistec Stevedoring), 1920 Marie-Victorin, Contrecoeur, Quebec, Canada J0L 1C0. *Tel:* 514-587-2073. *FAX:* 514-587-8570. *Contact:* R. Daigle or B. Chevrier.

CORNER BROOK, Newfoundland: 48.57 N. 57.57 W. (See Plan)

DOCUMENTS:

3 Crew Lists – Form IMM.200.
3 Crew Declaration – Y.14.
3 Bonded Store List – E.1.
2 Maritime Declaration of Health – Form QS 2001. (Not required from USA port).
2 Manifests of Cargo (In Transit) and Manifest of cargo for discharge.

Required by Agent:
Vessel Expiry Dates for Canadian Customs:
Load Line Certificate
Radio Equipment Certificate
Safety Equipment Certificate
Derat Certificate
Safety Construction Certificate
Non-Canadian Compliance Certificate (Tankers only)

APPROACHES: Corner Brook Harbour is approximately 20 miles inland from South Head. South Head commands the Southern entrance to the Bay of Islands. There are no off-lying shoals near the approaches.

PILOTAGE: Pilot launch is called *Glenkim* fitted with radio telephone, receives on 2182, 2558, 2134 and 2582 kHz. Radar and VHF onboard. Pilot Station, Frenchman's Head. Pilotage compulsory, operated by Atlantic Pilotage Authority with head office in Halifax. During the ice season, Pilots will board from tug *Indian Lake* approximately 1 mile from Corner Brook Pulp and Paper Ltd. berths. The tug is also fitted with VHF. Also see "Radio".

ANCHORAGES: Good anchorages in Outer Bay. Most convenient is in Humber Arm off Petitpas Cove in 15 to 20 fathoms. Masters requested to contact local Pilots regarding anchorage as a submarine cable enters waters of Humber Arm at Wild Cove and continues out of the bay to Frenchman's Head.

MAX. SIZE: Max. size tankers handled – LOA 650 ft., max. draft 30 ft. at Corner Brook Pulp and Paper Ltd. No. 4 Berth.

HEALTH: Pratique is granted when all crew have been vaccinated and no suspected sickness on board. Pratique is automatic when from a quarantine port or non-quarantine port, provided Port Health Authorities have been established. Also see "Montreal".

RADIO: For short range: Stephenville Marine Radio operated by DOT. WT 500 and 416 kHz. RT call letters VOJ. Receives 2182, 2598, 2134, 2582 kHz. For long range: Via Halifax Marine Radio.

Advice of Arrival: (Vessels docking at premises of Corner Brook Pulp and Paper Ltd.) ETA messages should be sent (to cable address – "Krugship") in GMT, 72, 48, 24 and 12 hours notice recommended. All messages sent to Agents will be given local Pilots and Customs. Cash requirements and other items requiring immediate attention on arrival should be given in the 48 hours ETA.

It is also recommended that notices advise number of gangs vessel can work, also if there is cargo for discharge, quantity and holds stowed.

Other Port Users: Same as Corner Brook Pulp and Paper Ltd. except when destined for Westerm (1983) Ltd., send to cable address "Westerm".

VHF: Humber Arm Harbour Master on VHF Channels 16, 14, 12, 11, 19A, and 24. Corner Brook Pulp and Paper Ltd. shipping office on Channels 16, 14 and 24.

TUGS: Not available.

BRIDGES: None.

BERTHING: *Corner Brook Pulp and Paper Ltd. Wharves* located near centre of city waterfront. Consist of 4 berths, and are continuous. Run parallel with shore line. Total length 1,650 ft. Max. draft 28 ft. in No. 1 Berth, elsewhere 32 ft. in No. 2 & 3 and 26 ft. in No. 4 at low tide. Fresh water and electric power available.

Vessels loading normally dock port side to No. 2 Berth. Oil and caustic soda tankers discharge port side to No. 4 Berth. General cargo is normally discharged port side to No. 4 Berth.

North Star Cement Wharf: Wharf consists of 3 dolphins. Depth of water 24 ft. at Western end and 17 ft. on inner end. Partly laden tankers of T-2 class discharge at this wharf.

Imperial Oil Ltd.: Discharging pier depth of 30 ft. minimum at low tide. Full laden tankers of the T-2 class can discharge.

Irving Oil Company Ltd.: (Pier destroyed in 1991, awaiting decision on replacement). Discharging pier with depth of water at Eastern end of 30 ft. and at Western end 26 ft. Tankers discharge with the forward draft restricted to 26 ft.

Gulf Oil Ltd.: Discharging pier has a depth at Eastern end of 28 ft. and at Western end 22 ft. T-2 tankers may discharge with restricted drafts accordingly.

Ultramar Canada Inc.: Discharge oil at Gulf Oil Wharf.

Department of Transport Wharves: Length of wharf is 1,200 ft. Steel and concrete structure. Depth of water alongside is 32 ft. to 34 ft. Shed measures 190 ft. by 120 ft. by 20 ft. high, for a capacity of 456,000 cu.ft. Fresh water is available. General cargo is handled.

CRANES: Mobile crane available at Corner Brook Pulp and Paper Ltd. – capacity 11 tons from ship's hold, 18 tons from deck. There is also a 220 ton stationary crane operated by Oceanx.

Other port users: From local rental Agent. Maximum 65 tons.

STEVEDORES: (Vessels at Corner Brook Pulp and Paper Ltd. premises)

Working Hours:

0800 to 1200	– 2 gangs
1200 to 1230	– Lunch break
1230 to 1630	– 2 gangs
1630 to 2030	– 2 gangs
2030 to 2100	– Meal break
2100 to 0100	– 2 gangs

Overtime: Can be worked Mondays to Saturdays (day gangs) 1630 to 2100 hrs. if requested.

MEDICAL: Hospital available. If ships' Crew members require emergency medical attention *on board immediately on arrival*, this should be stated in message to Agents, together with ETA. Otherwise, doctor appointments can be arranged during regular office hours.

TANKERS: It is recommended by local Pilots that oil tankers for North Star Cement Wharf arrive and sail in daylight, otherwise there are no special requirements except usual advance notice should be given to Agents in order to arrange linesmen. See "Berthing".

DENSITY: Average 1015; High water, Easterly wind 1025; High water, Westerly wind 1008; Low water 1005.

FRESH WATER: Fresh water available at Corner Brook Pulp and Paper Ltd. berths – $1.00 per ton plus $40.00 service charge and Westerm (1983) Ltd. – $1.00 per ton plus $30.00 service charge. Fresh water also available at other docks.

FUEL: (Vessels at Corner Brook Pulp and Paper Ltd. premises). Gas oil and marine diesel available by truck delivery from local oil companies.

Other port users: Available at DOT docks by tanker trucks.

CONSULS: Nearest consuls are in St. John's approximately 450 miles. Brazil, Denmark, Dominican Republic, France, Germany, Iceland, Netherlands, Norway, Portugal, Spain, Sweden.

REPAIRS: Minor ship repairs carried out. No dry docks available. Radar and VHF repairs possible.

OPENING/CLOSING HATCHES: (Vessels at Corner Brook Pulp and Paper Ltd. premises). Opening and closing hatches is normally done by ship's crew. Rigging ship's gear is normally done by stevedores.

CUSTOMS ALLOWANCES: On arrival per crew member: 3 lb. tobacco or 300 cigarettes or 75 cigars. Two dozen beers or 60 oz. spirits.

Additional issue will be made *after 7 days* in port. 2 lb. tobacco or 200 cigarettes or 50 cigars. 1.5 dozen beers or 40 oz. spirits.

REPATRIATION: All necessary crew changes and repatriation facilities available.

AIRPORTS: International Airport, 222 miles from Corner Brook, at Gander. Stephenville Airport, CP, 50 miles from Corner Brook. Deer Lake Airport, CP and Air Canada service available, 30 miles from Corner Brook.

TIME: NST-GMT less 3.5 hours. Newfoundland Daylight Saving Time – GMT less 2.5 hours, first Sunday in April to last Sunday in October.

HOLIDAYS: Following applies to ships docking at premises of Corner Brook Pulp and Paper Ltd. Newsprint Manufacturers and Shippers.

January 1st – New Year's Day

September – Labour Day (first Monday in September)

December 25th – Christmas Day. No work is performed after 1600 hrs. on Christmas Eve (December 24th), nor on New Year's Eve (December 31st).

Sunday – As per Union agreement. Work can be performed at time and a half rates as follows: *June, July and August* – a maximum of 3 consecutive Sundays. Remainder of the year – no restriction.

Other port users: Similar to Corner Brook Pulp and Paper Ltd.

POLICE/AMBULANCE/FIRE: *Police:* Alongside Corner Brook Pulp and Paper Ltd., Ext. 274, Mill Guards. Local Police. Area Code: (709) 637-4400.

Ambulance: Alongside Corner Brook Pulp and Paper Ltd., Ext. 274, Ambulance. City Area Code: (709) 634-5611.

Fire: Alongside Corner Brook Pulp and Paper Ltd. Ext. 274, Mill Brigade. City Area Code: (709) 634-4333.

Hospital: 634-5000.

TELEPHONES: (Vessels at Corner Brook Pulp and Paper Ltd. premises). None available on board ships, but phones are on the wharf in nearby offices.

Other port users: Can be available at installation and service costs.

SERVICES: Compass adjuster can be engaged.

SHORE LEAVE: Discretion of Master. No port regulations.

IDENTITY CARDS: Every Crew member should be in possession of some form of identity card.

GENERAL: Ice coverage can be expected between January 1st and April 15th. Shipmasters should contact "Ecareg Ice Halifax", Nova Scotia, Tel: (Area code 902) 526-5664 or 426-5665. Telex No. 019-22625 for routing and Icebreaker assistance. 36 hours ETA in Cabot Strait is required.

AUTHORITY: Transport Canada, 9 Forrestside Street, Corner Brook, Newfoundland, Canada A2H 4R3. *Contacts:* Mr. Ellison Butt, Harbour Master. Tel: (709) 6374282. *FAX:* (709) 6391076, or Terminal Manager, Westerm (1983) Ltd., Tel: (709) 6398961. Telex: 016-44193 (Westerm Cnbk). Cables: Westerm.

Mr.B.Hicks, Customs and Immigration, Tel: (709) 6374494.

Mr.B.Mitchell, Shipping Superintendent, Corner Brook Pulp and Paper Ltd. Tel. (709) 6342810 or 637-3291. Telex: 016-44278 (Krugship Cnbk.). Cables: Krugship.

CORNWALL, Ontario: 45.01 N. 74.43 W. (See Plan)

LOCATION: Cornwall Harbour is located on the North shore of the St. Lawrence River, 120 km. West of Montreal.

RESTRICTIONS: *Navigation Season:* Mid-April to Mid-December.

Depths: Approach Channel 8.2 m.

TUGS: Available.

BERTHING: Government Wharf: Length 175 m. Depth 8.2 m.

FUEL: Available by road tanker.

REPAIRS: Minor repairs possible.

SERVICES: Private tank farm. Storage and warehouse facilities. Divers available.

AUTHORITY: Harbours and Ports, Canadian Coast Guard, 201 N. Front Street, Suite 703, Sarnia, Ontario, N7T 8B1, Canada. *Tel:* (519) 383-1942. *FAX:* (519) 383-1996. *Contact:* Regional Manager.

Port Official: Nick Kaneb, Wharfinger.

COWICHAN BAY, B.C.: 48.45 N. 123.36 W. (See Plan)

LOCATION: Lat. 48° 44′ 50″ N., Long. 123° 36′ W. Cowichan Bay is entered from Satellite Channel Southward of Separation Point and extends 4.8 km. Westwards, terminating in a large mud flat that is the estuary of the Cowichan and Koksilah Rivers.

APPROACHES: The bay is deep and without danger. The deep sea berths at the S.W. corner of the bay on the edge of the mud flat have deep, open water approaches.

PILOTAGE: Compulsory, Pacific Pilotage Authority rates.

ANCHORAGE: Cowichan Bay Anchorage – 8 permanent anchorages in depths of approx. 40 m. – 50 m. on a line starting 700 m. S.S.W. of Skinner Point and ranging with 3 designated anchorage along the Northern side of Cowichan Bay to Separation Point and then on the Southern side of Satellite Channel with 5 designated anchorages from Separation Point to 1,000 m. North of Hatch Point. Anchorage can also be afforded to small vessels at Genoa Bay, in depths of 4.6 m. – 11 m. which has a rock marked by a beacon in the middle of its entrance, and two other rock hazards nearby.

MAX. SIZE: *Largest Vessel:* LOA 200.51 m., beam 30.89 m.

TUGS: Tug services at Cowichan Bay are provided by Falt Towing Ltd., 1805 Pritchard Road, Cowichan Bay, B.C. V0R 1N0. Tel: 748-8175. Falt Towing has one 500 h.p. and two 300 h.p. tugs operating from Cowichan Bay and can supply additional tugs as required with a minimum of 48 hours' notice.

BERTHING: *Deep Sea Vessels:* The CNR Wharf is owned by Canadian National Railways and is operated by Westcan Terminals Ltd., P.O. Box 1442, 189 Dallas Road, Victoria, B.C. V8W 2X2. Tel: 386-1321. Telex: 049-7312. The deep sea wharf consists of two berths used mainly for loading forest products.

Berth No. 1 (South end) has a length of 155 m. and a depth alongside of 9.3 m.

Berth No. 2 (North end) has a length of 198 m. and a depth alongside of 8.3 m.

At a distance of 3 m. from the wharf face the minimum depth alongside for No. 1 is 9.9 m. and No. 2 is 9.7 m.

Log bundles can be made available to adjust the vessel's position alongside for draft considerations.

The South end of Berth No. 1 has a rail barge slip which connects to the rail car handling and loading facility at the terminal and the rail lines on Vancouver Island.

Note: Berth depths alongside CNR Wharf taken from depth survey by Canadian Hydrographic Service April and May 1980.

Small Vessels: There is a Government Wharf situated on the South shore for small vessels only, with depths of 5.2 m. – 6.1 m. alongside. A pile and timber breakwater protects several floats attached to the Eastern and Western sides of the wharf approach structure. The area inside the breakwater and East of the wharf has been dredged to a depth of 3.0 m. A number of privately owned wharves and floats are located Westward of the Government Wharf, along the Southern shore of the bay.

STEVEDORES: Westcan Terminals/Stevedores Ltd. offers 24 hour 7 day cargo handling services. Shifts: first 0100–0430, 0500–0800; second 0800–1200, 1300–1700; third 1700–2100, 2130–0100. Work ceases 1200 hrs. on Christmas Eve and New Year's Day.

MEDICAL: Full medical facilities available at the Cowichan District Hospital in the town of Duncan, 10 km. away. Dental facilities also available in Duncan.

FRESH WATER: Available at berth by local water tanker truck and at berth or at anchor by water barge from Vancouver.

FUEL: Diesel fuel, gasoline and other petroleum products are available in moderate quantities by tanker truck at berth. Heavy fuel and large amounts of bunkers available by bunker barge from Vancouver.

REPAIRS: See "Victoria", B.C. for information on the graving dock and ship repair facilities in Esquimalt, a suburb of Victoria 60 km. S.S.W. of Cowichan Bay.

SERVICES: The following general services are available in the Cowichan Bay/Duncan area or from Victoria, B.C.

Decca: Racal Decca Canada Inc., 353 Harbour Road, Victoria, B.C. V9A 3S2. Tel: 388-6257.

Fumigation: PCO Pied Piper, 3374 Burns Avenue, Victoria, B.C. V8Z 3P2. Tel: 388-9721.

International Garbage: C.W. Disposals Ltd., P.O.Box 279, Duncan, B.C. V9L 3X3. Tel: 746-4589.

Laundry: Chemainus Laundromat & Dry Cleaners, 9870 Croft Street, Chemainus, B.C. V0R 1K0. Tel: 246-9912.

Marconi: Canadian Marconi Co., 1 Burnside Road W., Victoria, B.C. V9A 1B2. Tel: 386-9414.

Surveyors: Argus Marine Ltd., 2924 Wilkinson Road, RR 2, Mill Bay, B.C. V0R 2P0. Tel: 743-3463. Hull and cargo.

Lloyd's Register of Shipping, non-exclusive surveyor for hull, machinery and cargo attached to Marine Design Associates below.

Marine Design Associates, 493B Garbally Road, Victoria, B.C. V8T 2J9. Tel: 384-4191. Telex: 049-7397. Hull, machinery and cargo.

Welding: Duncan Iron Works Ltd., P.O.Box 855, RR 3, Allenby Road, Duncan, B.C. V9L 3Y2. Tel: 746-5147.

AUTHORITY: Transport Canada, 6th Floor, 224 West Esplanade Avenue, North Vancouver, British Columbia V7M 3J7. *Tel:* 984-3800. *Telex:* 04-53235.

Contact: Harbour Master – Victoria, Esquimalt, Crofton and Cowichan Bay, Tel: 388-3578. Mr. W. H. Briscoe, Government Wharfinger, Tel: 746-5215.

DALHOUSIE, N.B.: 48.04 N. 66.22 W. (See Plan)

DOCUMENTS:

- Ship's Register.
- Load Line.
- Safety Radio and Safety Equipment Certificates.
- Stores List and Crew Declaration (E–17, Y–14), if from foreign port.
- Pratique, if from a Foreign Port.
- Immigration Clearance from last Canadian Port.
- If from a Foreign Port, 2 copies of crew list.

For Shipping Master: Ship's Articles if British or Canadian Registry.

PILOTAGE: Telegram sent to Restigouche Pilots, Dalhousie, N.B., or to vessel's Agent. 6 hours minimum notice required except during Winter operations (January – April). Pilot vessel is a 40 ft. steel hull, black, grey superstructure, displays proper flag by day and proper lights by night. Pilots meet and board all inbound vessels in position Lat. 48° 03′ N., Long. 66° 15′ W. Pilots prefer pilot ladder for boarding.

ANCHORAGES: Safe anchorage 1.5 miles offshore due East of harbour entrance. Pilots will board vessels for anchorage in from 6 to 12 fathoms.

RESTRICTIONS: Tide restrictions if vessel exceeds 28 ft. on arrival.

MAX. SIZE: Max. length 750 ft., beam 100 ft., draft 34 ft. at the Government Wharf, including oil and bulk carriers. Vessels approaching these dimensions must berth at high water, port side to. Max. draft entering harbour and berthed starboard side to is 28 ft. because of restricted turning basin.

HEALTH: See "Montreal".
RADIO: Fox River.
TUGS: Available.
BERTHING: To berth starboard side to at any berth vessel is requested to arrive 3 hours before high water.
STEVEDORES: Contact Agents.
MEDICAL: Hospital and doctors available.
TANKERS: One 12 in. line with two 8 in. connections laid to the Government Wharf. Depth alongside 34 ft. LWOST.
DENSITY: Average density 1008.
FRESH WATER: Available at all berths at 50 t.p.h.
FUEL: Available by truck if necessary. Advance notice required.
CONSULS: None.
GANGWAY/DECK WATCHMEN: Available if requested.
OPENING/CLOSING HATCHES: As in Charter Party.
REPATRIATION: Facilities exist providing sufficient notice given.
AIRPORT: 1 flight daily to and from Montreal.
TIME: Daylight Saving during Summer months. Atlantic Standard otherwise.
HOLIDAYS: Official Holidays: New Year's Day; Christmas Day; Dominion Day; Labour Day.
POLICE: Telephone 684–5551.
TELEPHONES: Made available upon prior arrangement.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Not needed.
AUTHORITY: Transport Canada, Harbours and Ports, P.O.Box 1270, Charlottetown, P.E.I. CIA 7M8. *Tel:* (902) 566–7973. *FAX:* (902) 566–7948. *Contact:* Mr M.G. Cormier, Area Manager.

Local Authority: Don Mealey, Harbour Master. Albertina Sullivan, Wharfinger.

DIGBY, N.S.: 44.38 N. 65.45 W. (See Plan)

DOCUMENTS: See "Montreal".
PILOTAGE: Usually contacted through St. John radio station by VHF. 12 hours notice required. Pilot usually meets ships at entrance to Digby. As long as adequate notice is given no waiting is experienced.
ANCHORAGE: Good Anchorage N.E. from town 15 to 25 fathoms.
MAX. SIZE: Length 400 ft. and 28 ft. depth at low water.
HEALTH: See "Montreal".
RADIO/VHF: St. John Radio, call sign VAR.
TUGS: Not normally necessary, light towing available if needed.
BERTHING: Transport Canada Spur Pier 115.0 m. long 'F' shaped pier, 12 m. wide, with 100.0 m. commercial berth with 6.7 m. depth alongside at normal low tide (rise in the tide 6.4 m. – 8.5 m.). Berthing at outer boat basin can provide 100 m. with 4.6 m. depth alongside.
FRESH WATER: Supplied by pipeline under the wharf.
FUEL: Diesel oil available only.
CONSULS: None.
REPAIRS: No major repair facilities available.
GANGWAY/DECK WATCHMEN: Not necessary.
OPENING/CLOSING HATCHES: Usually carried out by crew.
CUSTOMS ALLOWANCES: 200 cigarettes per man, per week; 40 oz. alcohol per man per week for crew.
REPATRIATION: Can be arranged.
AIRPORT: Small local line based at St. John N.B. supplies service between St. John and Digby. Halifax International Airport 180 miles.
HOLIDAYS: New Year's Day (Jan. 1st); Good Friday; Easter Monday; Victoria Day and Queen Elizabeth Day (May 19th) Canada Day (July 1st); Labour Day (Sept. 1st); Thanksgiving Day (Oct. 13th); Remembrance Day (Nov. 11th); Christmas Day (Dec. 25th).
POLICE/FIRE/AMBULANCE: Police 245–2579; Fire 245–2121; Ambulance 245–2205.
TELEPHONES: Available at cost of installation.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Required or passport.
AUTHORITY: Transport Canada, Office of Harbours and Ports – Maritimes Region, P.O.Box 1013, Dartmouth, N.S. B2Y 4K2. *Contact:* The Regional Manager, Tel: (902) 426-2588.

FRASER PORT, B.C.: 49.12 N. 122.55 W. (See Plan)

DOCUMENTS, ANCHORAGE, and further information: Refer to "Vancouver, B.C.".
PILOTAGE: Compulsory from Sandheads. Contact Pilots through Vancouver Pilot Dispatch Office (604) 666-6776. 12 hours notice is required. Pilot boards 1 mile off Sandheads. Contact pilot launch on VHF Channel 74.
MAX. SIZE: Draft limited to 35 ft. on 13 ft. tide. Max. recommended length is 750 ft., max. recommended breadth 106 ft. (largest transit to date: Length 1,050 ft., beam 150 ft., draft 28 ft.).
HEALTH: Pratique and quarantine at Victoria B.C.
TUGS: Available, normally join vessel on arrival.
BERTHING: *Fraser Surrey Docks:* 5 general cargo berths. Berths No. 7 and 8: Combined lengths 1,500 ft., depth alongside at L.W. 35 ft. Berths No. 2, 3 and 4: Combined lengths 1,850 ft., depth alongside at L.W. 33 ft. Berth No. 9 under construction. Water, power and telephone connections at all berths. Cargoes handled include forest products, steel, Ro-Ro traffic, speciality grain, dry petrochemicals, project cargoes and general cargo containers. Terminal well equipped with forklifts, front-end loaders, cranes to 250 tonnes and 2×40 tonne Paceco portainers on Berths No. 7 and 8.

Other facilities include a scow ramp, a complete loop track to handle unit train operations, a warehouse for steel products and a shed for protecting kiln dried lumber. A new 130,000 sq.ft. pulp and paper shed gives the Terminal a total of 300,000 sq.ft. of covered space (built to ISO 900 Standards). Operators are Fraser Surrey Docks Ltd. Tel: (604) 581-2233.

Fraser Wharves: 1 berth, length 500 ft., width 45 ft., depth 35 ft. Berth for loading and unloading automobiles. The terminal offers complete auto refinishing and accessorising shops, computerised inventory control and motor fuel dispensers. Situated at the South end of No. 6 Road, Richmond (604) 277-1141.

Annacis Auto Terminals: 2 berths. No. 1 length 700 ft., width full face, depth 34 ft. No. 2 length 650 ft., width 60 ft., depth 34 ft. The Roll-on/Roll-off terminal specialises in cargoes shipped in car carriers and has 8 on-dock rail loading tracks. Situated at the East end of Annacis Island (604) 521-6681.
MEDICAL: All services available.
DENSITY: Varies with location and season.
FRESH WATER: Available.
FUEL: All grades available by truck or barge.
CONSULS: At Vancouver.
REPAIRS: Engine repairs only.
AIRPORT: Nearest is Vancouver International.
POLICE/AMBULANCE/FIRE: Dial 911.
SHORE LEAVE: Allowed.
GARBAGE DISPOSAL: Available through private companies. Ship's Agent to contact directly.
WASTE OIL DISPOSAL: Service provided by duly licensed private contractor. Ship's Agent to contact directly.
SEAMAN'S CLUBS: Missions to Seamen, 50 North Dunlevy Avenue, Vancouver. Tel: (604) 253-4421. Facilities: Shop, refreshments, souvenirs, mini-bus service.
CURRENCY: Canadian Dollar.
DEVELOPMENTS: Future developments call for channel improvement, expanded berthing facilities and intermodal facility. Also see "Berthing".
AUTHORITY: Fraser River Harbour Commission, Suite 505, 713 Columbia Street, New Westminster, B.C., Canada V3M 1B2. *Tel:* (604) 524-6655. *FAX:* (604) 524-1127. *Contact:* Captain Allen Domaas, Director of Operations and Harbour Master.

GASPE, Quebec: 48.50 N. 64.29 W. (See Plan)

DOCUMENTS:
Immigration Documents:
Passenger Landing Cards (Tourist) 1 each passenger.
1 Crew List from Immigration.
2 Passenger Lists.
Customs Documents:
3 Inward Reports.
3 Outward Reports.
3 Ship Stores Lists (Form E.1).
3 Crew Declarations (Form Y.14).
National Health and Welfare:
2 QS.1 Maritime Declarations of Health.
Manifests required for cargo unloaded only.
PILOTAGE: Not compulsory but recommended. Pilots available. To obtain Pilot, arrange by radio phone through marine radio station VCG at Fox River, Gaspe PQ, on receipt of message either to Agent or Port Authority, Pilot and other arrangements can be made.
MAX. SIZE: Vessels of 650 ft. and over have both docked and anchored. Tide has no effect as it is very sheltered. Government Wharf depth 35 ft. LW.
HEALTH: On arrival in Canadian waters Master applies for Radio Pratique by radio to Quarantine Officer at Quebec City. Master flies yellow flag on arrival and until Medical Officer decides it can be lowered or otherwise according to regulations. See also "Montreal".
RADIO: VCG Marine Station Fox River, Gaspe PQ.
TUGS: Not necessary, no tugs available unless called for in emergency. Line boats available for docking, by arrangement.
BERTHING: *Transport Canada (Sandy Beach) Wharf:* Wharf re-built in 1986. Berthing length 600 ft., depth alongside at LW 33 ft. to 35 ft. outer face and about 26 ft. inner side; railroad tracks on wharf, oil tanks, electric light and water.
STEVEDORES: Good stevedoring available at all times and hours.
MEDICAL: Hospital and ambulance service.
TANKERS: Oil lines on Transport Canada Wharf owned and used by Gulf Oil Canada, Irving Oil, Shell Canada Limited and Imperial Oil. These lines are privately owned.
DENSITY: 1025.
FRESH WATER: Available, arranged through ship's Agent.
FUEL: Light and medium diesel available at all times. If bunker fuel required, on request it will be brought in by tanker car.
CONSULS: None.
REPAIRS: Only minor repairs.
OPENING/CLOSING HATCHES: Done by ship's crew.
CUSTOMS ALLOWANCES: On arrival officers and crew permitted 1 bottle and 200 cigarettes and 1 lb. of tobacco for period of 1 week, further allowances of tobacco given after 1 week, as well as spirits to Master only.

REPATRIATION: May be arranged by Agent subject to Immigration control.
AIRPORT: Situated about 7 miles from the dock. Twice daily service to Quebec and Montreal. Connections to all parts from Montreal. Charter passengers and freight flights also available.
HOLIDAYS: Saturday, New Year (January 1st); Good Friday; Victoria Day (May 19th); Confederation Day (July 1st); Labour Day (September 1st); Thanksgiving Day (about October 13th); Remembrance Day (November 11th); Christmas Day (December 25th). There are a few other R.C. Church days on which some men are not obtainable. On most of these holidays stevedores and men are available.
POLICE/AMBULANCE/FIRE: Police area 418 call 368–3232. Local RCMP area 418 call 368–2543. Ambulance Area 418 call 368–2835.
TELEPHONES: Possible arrangements may be made with local telephone company for installations to vessel.
SERVICES: Radar repairman available.
Ship Supply Service and Shipping Agent: Calypso Agencies Inc., P.O.Box 890, Gaspe, Province Quebec, G0C 1R0. Tel: (418) 368-3648. Telex: 0142236. Cables: Calypso. Fax: (418) 368-7134.
SHORE LEAVE: Crew allowed ashore.
IDENTIFICATION CARDS: Not required.
GARBAGE DISPOSAL: Daily pick-up if necessary. No drums on wharf and no drums provided. Charge: C$75.00 per load. Tel: (418) 368-1631 for service.
WASTE OIL DISPOSAL: Only tanker trucks available for waste oil disposal.

The following company is located 1,000 ft. from the wharves – Plante Vacum, 2 Chantier Maritime, Gaspe. Tel: (418) 368-4411. Fax: (418) 368-6379.
SEAMAN'S CLUBS: No seaman's club in the port.

Many churches, shops, dances, sports, etc.
CURRENCY: Canadian Dollar.

Canadian and U.S. dollars accepted in local shops. Other currencies can be changed at four major banks in Gaspe.
AUTHORITY: Transport Canada, C.P. 1101, Gaspe, Province Quebec, Canada G0C 1R0. *Tel:* (418) 368-6679. *Contact:* L. Innett, Harbour Master (after hours (418) 368-5351).

GEORGETOWN, P.E.I.: 46.11 N. 62.32 W. (See Plan)

SHIPMASTER'S REPORT: January 1995.

LOCATION: Georgetown is in Cardigan Bay on the East coast of Prince Edward Island.
PILOTAGE: Available, but not compulsory.
RESTRICTIONS: *Approach Channel:* Depth 10.97 m.
BERTHING:

Section	*Length* (m.)	*Depth* (m.)
1	153	8.0
2	42	8.0
3	164	8.0
4	70	3.0 – 6.0

STEVEDORES: Available, but poorly equipped for loading logs. Vessel to provide crane operators.
FRESH WATER: Available.
FUEL: Available.
REPAIRS: Minor repairs possible.
GENERAL: There is no mooring boat or tug available at the port. Tugs may be arranged at very high cost.

Vessel with LOA 183 m. had her stern sticking out beyond wharf by over 30 m.

Strong wind of over 40 knots from S.E. pushed the ship away from the wharf by over 8.0 m., as no proper lead for stern lines. Tugs could be provided to keep the vessel alongside.

Shallow patches lie at N.E. end and 60 m. away from the wharf.

While sailing in a partly loaded condition with a 12 knots wind from S.E., vessel drifted over the shallow patch under No. 4 and No. 5 holds. With the use of both the anchors and main engine, vessel was able to refloat from mud and gravel bottom during flood of tide.

GODERICH, Ontario: 43.45 N. 81.44 W. (See Plan)

LOCATION: Goderich Harbour is situated at the mouth of the Maitland River on the East shore of Lake Huron, about 90 km. N.E. of Sarnia.
RESTRICTIONS: *Navigation Season:* Mid-April to late-December.
Depths: Harbour Basin: 7.0 m. Inner Entrance Channel: 8.2 m. Outer Entrance Channel: 8.2 m.
TUGS: Available.
BERTHING:

Berth No.	*Berth*	*Length* (m.)	*Depth* (m.)
1	Commercial Dock	152.0	8.2
2	Inner Harbour Wall	92.3	7.0
3	North Harbour Wall	440.0	7.0
4	North Pier	454.5	8.2
5	New Wharf	200.0	8.2
6	Wharf (Private)	–	–

FUEL: Available by truck.
REPAIRS: Minor repairs possible.
SERVICES: Storage and warehousing outside the port, rail line, private grain elevators, Coast Guard Search and Rescue Station.
AUTHORITY: Harbours and Ports, Canadian Coast Guard, 201 N. Front Street, Suite 703, Sarnia, Ontario, N7T 8B1, Canada. *Tel:* (519) 383-1942. *FAX:* (519) 383-1996. *Contact:* Regional Manager.

Port Official: Donald MacAdam, Harbour Master/Wharfinger.

GOOSE BAY, Labrador: 53.22 N. 60.22 W. (See Plan)

DOCUMENTS, HEALTH: See "Montreal".
PILOTAGE: Pilotage is not compulsory. Pilots are available through Pilots St.John's with 24 hours notice of arrival and 6 hours confirmation. The pilot boarding station is at Lat. 54° 13′ 30″ N., Long. 58° 21′ 06″ W.
ANCHORAGE: Good anchorage, with excellent holding ground in 36 ft. (11 m.), mud, can be obtained in the central part of Terrington Basin. Ships carrying dangerous cargoes must use the designated Explosives Anchorage situated 2 miles N.E. of Groves Point.
RESTRICTIONS: Navigation season early June to end November depending on pack ice movements. Approach – Sandy Point Channel at entrance to Goose Bay and 15 miles from the dock has a width of 300 ft. Harbour Master advises draft of 31 ft. HWF. Groves Point Channel at entrance to Terrington Basin and 1.5 miles from Main Dock has depth of 32 ft. HWF and width of 300 ft.
Caution: When a tanker is seen to be leaving her berth in Terrington Basin or is in or approaching Terrington Narrows, she shall be granted the right of way, and other vessels must not be navigated into the narrows until the tanker is well clear of the channel.
Ice: The entry into Goose Bay Harbour is entirely dependent upon ice conditions at the seaward end of Hamilton Inlet. Ice begins to form in Terrington Basin between the latter part of October and mid November, with complete coverage occurring any time between early November and the beginning of December. During Winter the ice attains a thickness of about 42 in. (1.1 m.). Break-up generally occurs between the third week of April and the first week of June.
MAX. SIZE: See "Berthing".
VHF: Pilot vessel on Channels 51 and 16.
TUGS: There are no tugs. 3 landing craft available to assist.
BERTHING: The main Government Wharf is situated 1.5 miles W.S.W. of Terrington Narrows; it has a berthing length of 244 m. and was dredged to 7.5 m. – 9.0 m., but some silting has occurred and up-to-date depths should be obtained from the Harbour Master. There is one large shed leased to Marine Atlantic. The office of the Harbour Master is in a building on the main road leading from the wharf.

Another Government Wharf is situated 0.4 miles N.W. of the main Government Wharf; it has a depth of 21 ft. (6.4 m.) at the outer end.
STEVEDORES: A local stevedoring company can provide labour for handling cargo. There are no fixed cranes on the wharves, but mobile cranes can be hired locally.
MEDICAL: Hospital, 2.5 km.
TANKERS: There is a small oil wharf used for discharging petroleum products at the E.S.E. end of the main Government Wharf. It has a depth of 18 ft. (5.5 m.) at its outer end.
DENSITY: 1000.
FRESH WATER: Available alongside berths.
FUEL: Light diesel oil available by pipeline at the main Government Wharf.
REPAIRS: Only minor repairs may be effected in emergency.
AIRPORT: 1.5 miles distant.
HOLIDAYS: New Year's Day; Good Friday; July 1st; Labour Day; November 11th; Christmas Day; Boxing Day.
GARBAGE DISPOSAL: No facilities are provided by the Port Authority, however local trucking firms may be able to assist.
WASTE OIL DISPOSAL: Not available.
SEAMAN'S CLUBS: No club available. Royal Canadian Legion and other local facilities in the nearby town of Happy Valley.
CURRENCY: Canadian Dollar(C$).
GENERAL:
Communications: Telephone. Canadian Coastguard Radio Station (See "Radio Aids to Marine Navigation").
Transportation: Airfield with frequent scheduled service to other Newfoundland centres and the mainland. Scheduled cargo and cargo/passenger services during the navigation season by Marine Atlantic.
Mail: Post Office.
Accommodation: Several motels.
Banks: Royal Bank and Bank of Nova Scotia.
Police: RCMP detachment.
Supplies: Hudson's Bay Company store and several smaller stores.
Customs: Port of Entry; the Customs Office is situated at Goose Airfield.
AUTHORITY: Harbours and Ports Directorate, P.O.Box 1300, St. John's, Newfoundland A1C 6H8, Canada. *Telex:* 016-3369. *FAX:* (709) 772-5217. *Contact:* D.A. Lester, Regional Manager.

Transport Canada, Goose Bay. *Contact:* George Shiwak, Harbour Master. *Tel:* (709) 896-2569.

GRAND BANK, Newfoundland: 47.06 N. 55.45 W. (See Plan)

PORT LIMITS: A line drawn from Grand Bank Head to L'Anse au Loup Pt. defines the port limits.
PILOTAGE: Pilotage is not compulsory, but recommended for those without local knowledge. A licensed Pilot can be arranged by giving 24 hours notice of requirement to Pilots, St. John's. The Pilot will board off St. John's in position Lat. 47° 33′ 42″ N., Long. 52° 37′ 54″ W. or off Grand Bank Harbour provided the vessel's local Agent arranges for a boat to embark the Pilot. Alternatively, Shipmaster's may arrange to use local persons in the town for pilotage purposes.
ANCHORAGES: Vessels may anchor in depths of 10 fathoms (18.3 m.) off Grand Bank, but the holding ground has been reported as poor.
RADIO: C.G.R.D.O. station St. Lawrence, call sign VCP is the best station for vessels to route ETA cables to Agents, receivers, etc. Telex communication available
VHF: Harbour Authority on VHF. Call sign CHC 442.
BERTHING: The Western Breakwater (deck elevation 4.4 m.), about 600 ft. (183 m.) in length, affords protection to the harbour entrance between the Western Pier and the Eastern Breakwater. In 1977, there was a least depth of 14 ft. (4.3 m.) alongside the Western Pier. Marine coastal vessels berth at this pier which is 240 ft. (73 m.) long. The deck of the wharf has an elevation of about 1.2 m. (4 ft.). A shed, 60 ft. by 41 ft. (18 m. by 12 m.), is located adjacent to the pier. Least depth alongside 3.7 m.

A fish wharf 245 ft. (75 m.) in length, situated on the East side of the harbour, had a least depth of 16 ft. (4.9 m.) alongside in 1977. A fish-packing plant is situated on the wharf.

Marginal wharf length 1,140 ft., depth alongside 14 ft. – 18 ft. LWOST.

A government wharf is situated at the South end of the harbour. The harbour is open all year round.
CRANES: Small mobile cranes only.
MEDICAL: Cottage hospital within the town.
FRESH WATER: Available.
FUEL: Limited supplies of fuel and diesel oil available.
GANGWAY/DECK WATCHMEN: Usually ship's crew, ship's gangway used.
REPAIRS/DRY DOCKS: 2 slipways available.
EMERGENCY CO-ORDINATION CENTRE: Coast Guard, Search and Rescue, St. John's Tel: (709) 772-5151.
BANKING: Services available.
SHORE LEAVE: No restrictions.
GENERAL: Chart: 4611.

Harbour Supervisor equipped with mobile telephone.

There is a laundromat in the town.

Day markers are being installed to assist ships entering the harbour.

A series of lights along the main wharf provide plenty of light.
AUTHORITY: Grand Bank Harbour Authority, P.O.Box 88, Grand Bank, Newfoundland, A0E 1W0, Canada. *Tel:* (709) 832-0255, 832-1823. *Contact:* George Snook, Harbour Supervisor.

GROS CACOUNA, Quebec: 47.55 N. 69.30 W.

LOCATION: On the South shore of the St. Lawrence River, approximately 188 km. downstream from Quebec City.
PILOTAGE: Compulsory.
APPROACHES: Navigable entrance of 110 m. width between breakwaters with a depth of 8.9 m. and 9.5 m. in basin and alongside wharf respectively. Occasional icebreaker assistance may be required during Winter.
HEALTH: Pratique granted by radio.
RADIO: Quebec Radio (VCC).
TUGS: Not available and not required by power driven vessels.
BERTHING:

Berth No.	*Length* (m.)	*Max. Draft* (m.)
1	135	10.2
2	135	10.2

There is a cement terminal at the port operated by Ciment Quebec Co.
CRANES: Available.
STEVEDORES: *Working Hours:* Monday to Friday 0800 hrs. – 1700 hrs. Work possible on holidays and weekends with notice.
MEDICAL: Riviere-du-Loup Hospital is 3 km. from the port.
DENSITY: 1025.
FRESH WATER: Available.
FUEL: Diesel oil available.
REPAIRS: Minor repairs possible.
DRY DOCKS: Nearest dry dock at Lauzon (Quebec), 100 km. West of Gros Cacouna.
AIRPORT: Riviere-du-Loup and Quebec.
HOLIDAYS: New Year's Day, Good Friday, Easter Monday, Queen's Day (4th Monday in May), June 24th, Dominion Day (July 1st), Labour Day (1st Monday in September), Thanksgiving (2nd Monday in October), Remembrance Day (November 11th) and Christmas (December 25th and 26th).
TIME: GMT minus 5 hours. GMT minus 4 hours in Summer (first Saturday in April to last Saturday in October).
GENERAL: *Chart:* Canadian Chart No. 1234.
Formalities: Port of Entry for Customs (Rimouski) and Immigration. Quarantine service available from Quebec City.
Services: Banks, post office, provisions, fumigation.
AUTHORITY: Transport Canada, Harbours and Ports Directorate, 901 Rue Cap-Diamant, 4th Floor, Quebec G1K 4K1, Canada. *Tel:* (418) 648-3680. *FAX:* (418) 648-7980. *Contact:* Guy Diagle, Harbour Master – Gros Cacouna.

HALIFAX, N.S.: 44.39 N. 63.34 W. (See Plan)

DOCUMENTS:
Port Doctor: Form QS1; Crew Vaccination Certificates; Derat Certificate.
Customs: Customs Clearance or Certificate From Last Port; Cargo List (if no cargo, words "In Ballast" entered); Bonded Stores List (Form E.1); Crew Declaration for each crew member (Form Y14). Ship's Register; Safety Radio, Load Line and Safety Equipment Certificates.
Immigration: Crew List (Form 200) in duplicate in English; all crew Passports (returned prior to sailing).

PILOTAGE: Compulsory. Essential send arrival notice by radio to avoid delay in waiting Pilot. 12 hour notice of ETA required and confirmed or corrected 3 hours before arrival. All times must be UTC. Radio messages should be addressed Marine Aid Centre, Chebucto Head. All pilotage messages subject to full tolls.

When possible, Pilots will board in vicinity of Inner Automatic Light and Whistle Buoy situated about 2 miles N.E. of Chebucto Head. In heavy weather not always possible for pilot vessel to take up station at above position, but will proceed as far seaward as feasible to embark or disembark Pilot.

In normal weather pilot vessel shall, in daytime, fly Pilot flag, and at night will show lights required by international regulations. In abnormal weather – fog, mist, snow, heavy rainstorms – when on station on pilotage duty, in addition to regular signals, will blow 4 long blasts at regular intervals. Vessel requiring Pilot should blow 4 short blasts on whistle at intervals until pilot boat sighted. Pilot boats equipped with radar and stand-by on radio telephone operating on frequency of 156.8 MHz or Channel 16 under international VHF designations.

ETA: For provisional clearance to enter the Halifax Marine Traffic Regulating Zone, vessels should supply the following information to "Halifax Traffic":

1. Position.
2. ETA Zone Limit (Zone boundary is approximately 16 miles radius from Chebucto Head).
3. Destination and last port.
4. Draft.
5. Description and weight of pollutants or any dirty cargo carried.
6. Deficiencies in ship's navigational equipment, engine's steering gear or anchors.
7. Any leakage of pollutants or any damage which may result in pollution.
8. Pilots must be advised ETA 12 hours and 3 hours prior arrival at the Pilots Boarding Station, using UTC, to "Pilots Halifax".

For final clearance to enter the Halifax Marine Traffic Regulation Zone:

1. Report to "Halifax Traffic" on VHF Channel 14 or 2182 kHz, when approaching the zone boundary.
2. Report to "Halifax Traffic" when approaching zone boundaries approximately 8 and 4 miles radius from Chebucto Head.

Vessels leaving Halifax are to report to "Halifax Traffic" when approaching zone boundaries.

ANCHORAGE: Vessels anchor in harbour in areas designated by Halifax Port Corporation..

RESTRICTIONS: Controlling depth in channels of approach 60 ft. in main harbour as far as the Narrows. Ice free all year. Ample turning room for the longest vessel.

MAX. SIZE: Length and breadth unlimited. Can berth ships up to 50 ft. draft. Channel depth 60 ft. Tide range 3 ft. to 6 ft. 135,000 ton tankers with drafts 50 ft. enter harbour regularly.

HEALTH: Quarantine – every vessel coming from port outside Canada shall be inspected by Quarantine Officer at a place specified by him. (Quarantine Station in Anchorage No. 1). Where sufficient information can be given by radio, Radio Pratique may be given between 0900 hrs. and 1700 hrs. local time (address "Quarantine Halifax") and message should include (i) name and nationality of vessel, (ii) ports of call during voyage, (iii) nature of cargo, (iv) number of crew and passengers, (v) statement of health, (vi) name of Agent, (vii) ETA Pilot Station in GMT. A coastwise vessel, free from disease and arriving from a disease-free coastwise port, may be exempted quarantine inspection.

RADIO: Halifax Marine Radio Station, Ketch Harbour. Radio-telephone and other services. Masters may contact Halifax Marine Radio on 500 or 2,182 kHz, VHF on 156.8, working Channel 26 (161.9 and 157.3 MHz).

RADAR: Marine Traffic Regulating Centre at Shannon Hill. Working frequencies Sector One 156.7 MHz (Channel 14); Sector Two 156.6 MHz (Channel 12). Call sign "Halifax Traffic".

TUGS: Join vessel inside harbour at Quarantine Anchorage. Tugs towing use vessel's lines. Tugs made fast alongside vessel for docking or undocking use their own lines at no extra charge.

BULK HANDLING FACILITIES: *Grain Handling Facilities:* Halifax Port Corporation Elevator – Storage capacity 144,256 tonnes wheat equivalent.
Max. Capacity: Berth 28: 1,000 tonnes per hour. (Wheat equivalent) (loading). Berth 26: 800 tonnes per hour. (Wheat equivalent) (unloading)

BRIDGES: There are two: Angus L. MacDonald Bridge (Halifax-Dartmouth) min. vertical clearance at HW 158 ft.; A. Murray MacKay Bridge (narrows) min. vertical clearance at HW 157.7 ft.

STEVEDORES: Available from several private companies.

MEDICAL: Sick Mariners' Service may be obtained for venereal disease only at the Federal Building, Suite 620, Bedford Row, Monday through Friday, Tel: 426-3998. Doctor always available either by telephone or telephone answering service. Information for emergency treatment outside these hours may be obtained from ship's Agent. Emergency hospitalisation can be obtained only at Camp Hill Hospital.

BERTHING: Port Facilities:

Berth Number (Usual Name)	Wharf Length (m.)	Depth at LW (m.)	Shedded Approx. Size (m.)	Approx. Area (sq.m.)	Approx. Open Space (sq.m.)	Remarks
Ocean Terminals:						
20	224	12.1	181 × 29	5,250	—	Cruise Ship Berth. Pipelines for tallow to storage tanks. Breakbulk.
21	178	12.1	161 × 29	4,670	—	Breakbulk.
21 Upper Floor	—	—	161 × 29	4,670	—	
22	209	12.5	153 × 29	4,440	—	Breakbulk.
22 Upper Floor	—	—	153 × 29	4,440	—	Storage.
23	213	9.7	161 × 31	4,990	—	*Heated Shed Breakbulk general cargo
24	137	8.8	—	—	3,728	Open Terminal – Containers, Steel, Heavy Lifts, etc.
25	168	11.2	—	—	5,462	Open Pier (Restricted by Grain Galleries) – Bulk Cement.
26	213	10.6	201 × 30	6,030	—	Fixed Marine Leg for discharging Grain. Hopper for self-unloading vessels. – Breakbulk general cargo.
East End Pier A	97	8.8	—	—	—	
27	207	13.4	202 × 31	6,250	—	
28	174	12.1	—	—	4,660	Open Pier (Restricted by Grain Galleries).
29	122	9.1	—	—	—	
30	190	10.5	—	—	1,858	Open Area (part.) Ro/Ro Ramp. Containers, Steel, Heavy Lifts, etc., Cruise Passengers.
31	190	13.1	—	—	5,574	Open Terminal. Containers, Steel, Heavy Lifts, etc., Cruise Passengers.
32 (East End A 1)	88	10.0	—	—	—	
33	190	12.1	188 × 31	5,830	—	*Heated Shed. Breakbulk general cargo.
34	190	8.2	126 × 31	3,906	1,953	*Heated Shed. Breakbulk general cargo, Containers Ro/Ro, etc.
35	103	4.5	—	—	3,411	Open Area – 15 m. Ro/Ro ramps (2). End loading for vessel on Berth 36 and Berth 34. Containers, Ro/Ro, etc. Ro/Ro cargo – consolidation area.
36-40	190	11.6	—	—	18,580.60	Open area. Containers.
Halterm Limited:						
37	190	13.7	—	—	8,710	Containers, Steel, Heavy Lifts, etc., Breakbulk general cargo.
38 (East End B)	91	11.5	—	—	—	
39	190	10.9	—	—	—	Breakbulk general cargo.
41	293	14.3	—	—	—	Container berths, 4 × 40.8 tonne Gantry cranes, berth 41 has 24.4 m. wide stern Ro/Ro ramp. Terminal fenced area 22.7 hectares. Consolidation shed 2,787.07 sq.m.
42	293	13.7	—	—	—	
Fairview Cove Container Terminal	660	13.7	—	—	—	Operator: Ceres Corp. Consolidation shed area: 21.17 hectares (space for expansion as required). Facilities 3×40 tonne dockside gantry cranes; Ro-Ro ramp end loading.
Richmond Terminals:						
9	213	8.1	—	—	—	
9A	240	8.1	154 × 37	5,698	—	Breakbulk General Cargo.
9B	213	8.1	168 × 37	6,216	—	
9C	140	8.7	—	—	6,131	
9D	—	—	—	—	—	No Berth. Additional area created for storage area.

*Heat available as required.

TANKERS: 135,000 ton tankers, 50 ft. draft, use port regularly. Terminals – 6 berths operated by 2 oil companies.

Imperial Oil, South Dartmouth, 3 piers, vessels up to 282 m.; max. draft 15.2 m., bunkering vessel also provides barge service.

Irving Oil Co. Ltd.: 3 berths, ocean vessels any length, max. draft 11.6 m.; located at Woodside.

Also see "Berthing".

Private Facilities:

Berth	Length (m.)	Depth LW (m.)	Remarks
Dartmouth:			
Imperial Oil No. 3	67	11.6	Bunkering.
No. 4	122	10.7	Bunkering. Refinery and Storage Tanks.
No. 5	67	15.2	Bunkering.
	30	12.8	Crane: Height 45 m., 11 t. lift, unloading 180 t. per hour. Pipeline for liquid salt to shore tank.
Mobil Oil Dock	36	8.2	Open land – 4.86 hectares.
Irving Oil Dock A	94	11.16	Bunkering. Storage tanks.
Irving Oil Dock B (L shaped)	85	—	Bunkering. Storage tanks.
Industrial Estates Wharf	152	7.6	Lay-up Berth.

Berth	Length (m.)	Depth LW (m.)	Remarks
Eastern Passage:			
Autoport – outside	201	13.7	Approx. 36.4 hectares for vehicle storage.
Autoport – inside	107	7.6	**Floating Dock– Ro/Ro side loading and end loading. Pre-servicing available for import vehicles.
Bedford Basin:			
Bedford Institute			Dock at Bedford Institute of Oceanography – Department of Fisheries and Oceans.
Secunda Marine	110	9.7	Lay-up berth
National Gypsum Ltd.	197	10.1	Loading capacity of 4,500 t. gypsum rock per hour. Diesel fuel is available.

**Terminal Operation.

DENSITY: Salt water all tides.

CONSULS: The following countries are represented in Halifax:

Austria
Belgium
Brazil
Britain
Denmark
Finland
France
Germany
Iceland
Italy
Japan
Netherlands
Norway
Peru
Portugal
Spain
Sweden
United States of America

FRESH WATER: Dock side only. Water barges available through private contractor. 50 t.p.h. per hose.
FUEL: See "Tankers".
REPAIRS: All types of repairs possible.
DRY DOCKS: Floating dock 182.9 m. by 30.5 m. by 9.45 m. deep; Lifting capacity 22,680 tons. Graving dock – 172.9 m. long, 24.4 m. wide at keel blocks; clearance at top is 31.2 m.; max. draft over the keel blocks is 7.9 m., capacity 13,610 tons. Two marine railway slips at Dartmouth capable of hauling vessels from 36 to 2,720 tons displacement. Complete machine shop and other repair facilities as well as Salvage equipment available.

New floating dock. Lifting capacity 36,000 tons. Dimensions 237 m. × 38 m. × 9 m. draft.
SURVEYORS: Surveyors and Cargo Inspectors available.
GANGWAY/DECK WATCHMEN: Can be provided.
OPENING/CLOSING HATCHES: Patent mechanical hatches by ship's crew. Wood and canvas hatch covers by stevedores.
CUSTOMS ALLOWANCES: Tobacco: 1 lb. per man per week; 200 cigarettes per man per week. Wine/spirit allowance: 40 oz. bottle per man per week.
CARGO GEAR: All ships liable to inspection by Government Inspectors. Gear Certificates to be produced, if required. Heavy-lift equipment: 59 pieces ranging in single lift capacity to 300 short tons. Normally available on a few hours notice, including floating cranes.
TIME: Standard Time GMT minus 4 hours. Daylight Saving Time from first week-end in April to last week-end in October, clocks advanced 1 hour.
AIRPORT: Halifax International. Regular services to Canada, USA and Europe.
HOLIDAYS: New Year's Day (January 1st); Good Friday; Queen's Birthday (May 20th); Dominion Day (July 1st); Labour Day (September 2nd); Thanksgiving Day (October 14th); Remembrance Day (November 11th); Christmas Day (December 25th). Cargo work can be arranged on all holidays except Labour Day, Christmas (1200 hrs. 24th December to 1800 hrs. 26th December is the "no work period") and New Year's Day.
POLICE/AMBULANCE/FIRE: Police Tel: 4105. Harbour Police (Ports Canada) Tel: 426-3629. Ambulance Tel: 429-5151. Fire Tel: 4103.
EMERGENCY CO-ORDINATION CENTRE: Coast Guard Halifax. Tel: 426-6030. Halifax Traffic Centre. Telex: 22502.
TELEPHONES: Service available at all berths.
SERVICES: All services available including compass adjusting, tank cleaning, etc.
STORING: See "Prelims".

1. Yes.
2. Yes.
3. Yes.
4. Yes.
5. None for local stores.
6. Yes.

SHORE LEAVE: Crew allowed ashore.
GARBAGE DISPOSAL: Domestic and international garbage disposal available. Arrangements can be made through vessel's Agent.
WASTE OIL DISPOSAL: Waste oil disposal available by tanker truck. Arrange through ship's Agent.
SEAMAN'S CLUBS: Missions to Seaman at Pier 25. Tel: 422-7790. International telephone service, church services, games and postal facilities available.
GENERAL: Extensive rail and road services plus extensive transit sheds, cold storage with 1,719,000 cu.ft. storage space.

SHIPMASTER'S REPORT: May/July 1989.
Documents:
Original and 2 copies Ship's Stores Declaration (Form E1).
Original and 2 copies Crew Effects Declaration (Form Y 14).
Original and 2 copies Crew List (Form Imm. 200).
Original Health Declaration (Form OS 2001).
All the above are Canadian forms based on IMO forms.
Certificates: The Agent requires advance notice of the expiry dates of the vessel's certificates, i.e. Safety Construction, Safety Equipment, Derat, Safety Radio, I.O.P.P. and Load Line.
Pilot/Tugs: July 1989: Tugs required 12 hours notice but this may be amended within the 12 hours if the vessel is delayed.
Weather: Fog is prevalent from May to July.
Crude Oil Washing: ECAREG require notification if vessel intends to crude oil wash and date of Civil Liability Certificate.
Crew Changes: The procedure for crew changes is the same as the U.S.A. (as described on back of U.S. Crew Lists).

AUTHORITY: Halifax Port Corporation, P.O.Box 336, Halifax, Nova Scotia, Canada B3J 2P6. *Tel:* (902) 426-3643. *FAX:* (902) 426-7335. *Contact:* Captain R. Sherman, Harbour Master (Tel: 426-3648). D.F. Bellefontaine, President and Chief Executive Officer.

HAMILTON, Ontario: 43.14 N. 79.41 W. (See Plan)

For important General Information refer to St. Lawrence Seaway.
DOCUMENTS:
Inward Manifest 3 days prior to arrival of vessel.
1 Steamship company release covering inward shipment.
1 Loading List, 24 hours prior to vessel loading.
1 Customs Report Outwards (A.7).
3 Vessel's Outward Manifest within 3 days after departure of vessel.
PILOTAGE: See "St. Lawrence Seaway".
MAX. SIZE: LOA 730 ft. Max. draft 26 ft.
HEALTH: First port of entry. See "Montreal".
RADIO: VBG Toronto.
Vessels Inbound: Call Burlington Bridge on radio telephone (VHF or AM) for clearance. Call Harbour Master's office for information about docking orders (VHF or AM).
Vessels Outbound: Call Burlington Bridge for clearance. Call Harbour Master's office to advise next port of call.
General: Harbour Master's office keeps radio watch on VHF Channel 12. Tug or linesmen may be ordered through the Harbour Master's office or Agent.
TUGS: Join inside harbour entrance – ship's lines used.
BERTHING: Arrangements made with Harbour Master.
Berthing Capacities: The Port of Hamilton provides berthing facilities for all vessels capable of navigating the St. Lawrence Seaway which can handle maximum size vessels of 730 ft. length × 75 ft. beam with a draft of 26 ft. 6 in.

The Hamilton Harbour Commissioners provide 7,306 m. of berthing and in addition 3,073 m. of berthing is available for private docks i.e. – The Steel Company of Canada, Dominion Foundries & Steel.
Covered Storage Space: Total 59,270 sq.m.
Open Storage Space:
Leased to Private Operators:

Centennial Terminal	74,700 sq.m.
Wellington Street Terminal	46,530 sq.m.
Pier 23	13,000 sq.m.
Pier 11	23,225 sq.m.
Pier 12	55,740 sq.m.
Pier 14	9,300 sq.m.
Pier 15	14,000 sq.m.
Pier 24	35,000 sq.m.
Pier 25	162,841 sq.m.
Pier 26	100,000 sq.m.

BRIDGES: Lift bridge at harbour entrance can be raised any time.
STEVEDORES: Must be ordered prior to 1545 hrs. on previous day.
MEDICAL: Hospital services available and doctors can be arranged.
FRESH WATER: Available.
FUEL: All types available.
CONSULS: Consuls located in Toronto.
REPAIRS: Available.
GANGWAY/DECK WATCHMEN: Not necessary.
OPENING/CLOSING HATCHES: Performed by stevedores.
CUSTOMS ALLOWANCES: See "Montreal".
AIRPORT: Hamilton CVC Airport (10 miles South), and Lester B. Pearson International Airport (30 miles East).
HOLIDAYS: Normal Canadian statutory holidays apply and labour can be arranged at extra cost. See "Montreal" for details.
POLICE/AMBULANCE/FIRE: Police 546-4925 or 911.
TELEPHONES: Can be arranged on board.
SHORE LEAVE: Crew allowed ashore.
IDENTIFICATION CARDS: Not required.
GARBAGE DISPOSAL: Skips provided alongside. Prices on request.
Philip Environmental Group. Tel: (416) 544-6687.
Laidlaw Environmental Services. Tel: (416) 332-1111.
WASTE OIL DISPOSAL: 45,000 litre capacity tank trucks. Prices on request.
Philip Enviromental Group. Tel: (416) 544-6687.
Laidlaw Enviromental Services. Tel: (416) 332-1111.
SEAMAN'S CLUBS: Missions to Seamen. Tel: (416) 528-8681. Mini-bus collection.
DEVELOPMENTS: Pier No. 26 under construction.
AUTHORITY: The Hamilton Harbour Commissioners, 605 James St. N., Hamilton, Ontario L8L 1K1, Canada. *Tel:* (905) 525-4330. *FAX:* (905) 528-6282, 525-7258. *Contact:* R.R. Hennessy, Port Director. I.M. Noble, Harbour Master.

HANTSPORT, N.S.: 45.04 N. 64.10 W. (See Plan)

DOCUMENTS: See "Montreal".
PILOTAGE: Non-compulsory, but advisable. Rates by agreement.
MAX. SIZE: Tidal port and no shipping arrives or departs at low water. Draft of largest vessel that entered port was 24 ft. A draft of 25 ft. can be taken in and out.
HEALTH: Customs Officer acts as Quarantine Officer.
RADIO: Ship-to-shore communications; through St. John N.B. or Yarmouth N.S.
BERTHING: Berthing length 400 ft., no water at low tide, ships lie aground on mud alongside. There are railroad tracks on wharf, main and electric lights laid on.
FRESH WATER: From pipeline on Government wharf.
FUEL: Oil by truck from various companies.
REPAIRS: Hull repairs can be made at low water with vessel high and dry.
SERVICES: Supplies: ship's stores can be secured in port.
GARBAGE DISPOSAL: No facilities.
WASTE OIL DISPOSAL: No facilities.
SEAMAN'S CLUBS: None.
AUTHORITY: Mr. John Harvie, Harbour Master/Wharfinger, P.O.Box 35, Hantsport, Nova Scotia B0P 1P0. *Tel:* 684-3216.

HARBOUR GRACE, Newfoundland: 47.43 N. 53.08 W.

DOCUMENTS:
Crew Lists.
Names of passengers.
Clearance from Last Port of call.
Derat Certificate.
Inoculation List of all crew members and passengers.
Manifest of Cargo.
Copy Bills of Lading.
List of Bonded Goods.

PILOTAGE: Not compulsory, but available through "Pilots St.John's".
ANCHORAGES: Pilot will instruct Master.
MAX. SIZE: Max. length 650 ft., max. draft 24 ft. low tide.
HEALTH: See "Montreal".
RADIO: Route cables and telephone calls through St. John's Newfoundland Radio.
VHF: Stand by on Channel 6.
TUGS: Not available.
BERTHING: Nothing specific, Pilot will have instructions; Agent should be given 24 hours arrival notice.
CRANE: Available on request.
STEVEDORES: Available. 24 hours notice required.
MEDICAL: Port doctors available; hospital facilities; advance notice would be helpful in providing ambulance services if needed.
TANKERS: Marine storage terminals for oil are served by Canadian tankers.
FRESH WATER: Available, pipeline delivery at piers, rate of delivery as required.
FUEL: Diesel, gas oil, marine bunkering facilities in piers, available at any time, no notice required.
CONSULS: Norway; Denmark; Spain; Portugal; France.
REPAIRS: Deck and engine repairs available.
GANGWAY/DECK WATCHMEN: Not necessary, available if required.
OPENING/CLOSING HATCHES: By crew.
CUSTOMS ALLOWANCES: Tobacco – each man 200 cigarettes per week. Wine and Spirit – each man 40 oz. wine or spirits per week.
AIRPORT: 1 hour 15 minutes drive, service by regular airlines making connection to all points in the world.
TIME: GMT minus 3.5 hours. Clocks advanced 1 hour first Sunday of April each year and are put back 1 hour last Sunday of October each year.
HOLIDAYS: New Year's Day; Good Friday; July 1st; November 11th; December 25th. Cargoes could be worked on these days with exception of Good Friday and Christmas Day.
POLICE/AMBULANCE/FIRE: One telephone number for all services 709-596-5014.
TELEPHONES: Available at pier.
SERVICES: Compass adjusting, radar repairs, RT repairs, gyro compass repairs, all types electronic equipment repaired. Divers available for surveys and underwater repairs.
SHORE LEAVE: All crew members allowed ashore.
IDENTIFICATION CARDS: Not required.
GARBAGE DISPOSAL: No facilities available.
WASTE OIL DISPOSAL: Tanker truck available from Crosbie Industrial, St.John's. Tel: 722-8272.
SEAMAN'S CLUBS: None.
CURRENCY: Canadian Dollar.
REGULATIONS: Fishing vessels must advise of week-end arrival on Friday so that permit to take supplies can be obtained from Federal Dept. of Fisheries.
AUTHORITY: Department of Fisheries and Oceans, P.O.Box 5667, St.John's, Newfoundland A1C 5X1, Canada. *Tel:* 772-2661. *FAX:* 772-4525. *Contact:* W.Jenkins.

HAVRE ST. PIERRE, Quebec: 50.14 N. 63.36 W.

LOCATION: Located on the lower North shore of the St. Lawrence River, about 98 km. downstream from Sept-Iles.
DOCUMENTS: Port of entry for Customs and Immigration. Quarantine services also available. Customs office is at Sept Isle, 208 km. to the West.
PILOTAGE: Compulsory. Pilot station at Les Escoumins.
ANCHORAGES: Safe anchorage in 42 ft. – 90 ft. to be found in Eskimo Harbour.
MAX. SIZE: Largest vessel; 10,000 tons, draft 28 ft. 6 in.
HEALTH: Pratique available by radio.
RADIO: Seven Islands – VCK.
TUGS: None available and not necessary.
BERTHING: Quebec Iron & Titanium Corp: Ore Loading Dock has 640 ft. of berthing space, depth alongside 30 ft. at LW.

Transport Canada Wharf: Section 1: Length 93 m., depth 7.5 m. Sector 2: Length 46 m., depth 7.5 m.

Tidal variation from 4.75 ft. – 7.75 ft.

CRANES: 1 rail mounted crane available at the ore loading dock.

Cranes under 30 tons available on request and over 30 tons with delay.

BULK CARGO FACILITIES: Conveyor and loading boom (40 ft. extension) at ore loading dock. Capacity 3,500 t.p.h.
STEVEDORES: *Working Hours:* Monday to Friday 0800 hrs. – 1700 hrs. Sunday and holiday work possible with advance notice.
MEDICAL: Hospital facilities nearby.
FRESH WATER: Available ex-town mains supply.
FUEL: Available on request.
REPAIRS: Minor repairs can be undertaken.
DRY DOCK: Nearest dry dock located at Les Mechins (153 miles from Havre St. Pierre).
AIRPORT: Local airstrip with services, 3 km.
TIME: GMT minus 5 hours in Winter. GMT minus 4 hours in Summer (first Saturday in April to last Saturday in October).
HOLIDAYS: New Year's Day, Good Friday, Easter Monday, Queen's Day (4th Monday of May), June 24th, Dominion Day (July 1st), Labour Day (1st Monday of September), Thanksgiving (2nd Monday of October), Remembrance Day (November 11th) and Christmas (December 25th and 26th).
GENERAL: *Chart:* Canadian Chart No. 4429.
AUTHORITY: Transport Canada, Harbours and Ports Directorate, 901 Rue Cap-Diamant, 4th Floor, Quebec G1K 4K1, Canada. *Tel:* (418) 648-3680. *FAX:* (418) 648-7980.

R. Richard, Harbour Master, Havre St. Pierre, Quebec Province. *Tel:* (418) 538-3533, 538-3389, 538-2576.

IQALUIT (Frobisher Bay), N.W.T.: 63.44 N. 68.32 W.

LOCATION: An expanding settlement at the head of Frobisher Bay, Baffin Island. Navigation season, mid-July to mid-October depending on ice conditions. Port of entry.
DOCUMENTS: See "Montreal".
APPROACHES: Anchorage in depths of 38.4 m. to 40.2 m. Approximately 925 m. East of Monument Island settlement. Minimum depths in approaches, 9.8 m.
PILOTAGE: No service as such but a senior port officer may assist vessels to moorings.
TIDES: Rise of Tide, 12.2 m., with strong tidal runs between islands. Low powered vessels generally navigate Pike Resor Channel at slack water, high or low tide if current unfavourable. This channel is mostly navigated during daylight hours.
HEALTH: Free Pratique, if health certificate is in order. In the event of suspected disease or fever on board, report to Frobisher Bay Telecommunications Branch call sign VFF, R/T or W/T.
RADIO: Frobisher Bay R/S VFF. Coast Guard Radio.
TUGS: 2 landing craft (LCM's) each powered with two 130 h.p. diesel engines assist vessels in mooring, acting as tugs and running ship's stern lines to Innuit Head.
BERTHING: Tankers of 160 m. length, 17.68 m. breadth and draft of 9.1 m., discharge approximately 243.8 m. off Innuit Head. Method of mooring is to stream both anchors in anchorage area and stern lines to mooring bollards situated on Innuit Head for this purpose. General cargo ships up to 12,000 tons also moor in this position. Vessels should be prepared for a quick departure in event of storm warnings, especially hazardous from N. and S. winds. Maximum length, breadth and draft determined by Master and Owners or Charterers. Delays can be expected due to tidal conditions. All general cargo, machinery, vehicles, etc., transferred from ship to shore and vice-versa via landing craft as no pier exists; beach gradient is gradual. Frequently barges cannot be discharged and re-floated until next rising tide. Delays expected for cargo vessels anchoring off Monument Island and discharging or loading by lighters during high winds and rough seas.
STEVEDORES: Special arrangements are necessary for these services.
MEDICAL: Hospital facilities available.
DENSITY: From August 1st to September 15th, mean approx. 1024, increasing slightly as season advances.
FRESH WATER: Small quantity in emergency. Approximately 50 gallons per minute.
Note: Due to tidal conditions considerable delay could result in delivering fresh water.
FUEL: Only supplied in emergency, Arctic diesel Grade 1, viscosity quoted as minus 60. Arrangements to be made through Shell Canada.
REPAIRS: Limited repairs, i.e. welding, R/T and radio.
OPENING/CLOSING HATCHES: According to agreements.
REPATRIATION: Crew changes can be effected by air passage to or from Montreal.
AIRPORT: Distance approximately 0.8 km. from landing beach, 6 flights weekly to and from Montreal, weather permitting, via Nordair Ltd. of Montreal. 3 flights weekly to Ottawa via First Air.
TIME: GMT minus 4 hours. Summertime kept from April to October.
POLICE/AMBULANCE/FIRE: RCMP 5202; Ambulance 979-5231; Fire 6666.
IDENTIFICATION CARDS: Required if arriving from a foreign country.
AUTHORITY: Transport Canada, Ottawa.

Transport Canada, c/o Beach Master, Frobisher Bay, Canada XOA OXO. *Tel:* (819) 797-6298 during season. *Telex:* 063-5529. Telegrams, c/o Canadian National Telegraph via VFF or VAW. *Contact:* Captain C. Cote.

KINGSTON, Ontario: 44.12 N. 76.30 W.

For important General Information refer to St. Lawrence Seaway.
DOCUMENTS: See "Montreal".
PILOTAGE: Contact Pilotage Officer, in Cornwall, tel: 613-932-8740, U.S. Pilot Station, Cape Vincent 315-654-2900.
ANCHORAGE: Good anchorage off Penitentiary.
RESTRICTIONS: Channel Depths – Controlling depth at low lake levels 22 ft. until wharves in harbour approached. In upper harbour, controlling depth 17.5 ft. Depths vary from month to month.

Navigating Season April 15th – December 15th.

HEALTH: First port of entry. Quarantine at Quebec City for incoming ships from foreign ports.

TUGS: Available. Necessary for handling ships in rough weather at Elevator and other docks.
BERTHING: Docks extend West from North of bridge (La Salle Causeway) to Little Catariqui Bay – some 4 miles. Transport Canada 455 ft., depth alongside 17 ft. Portsmouth Olympic Harbour – Environment Canada, under construction. Also smaller docks for coastal vessels and private docks, including Canada Steamship Lines Elevator dock 700 ft. long on East side 25 ft. alongside, and 600 ft. on West side depth 22 ft. La Salle Causeway 1,000 ft., 19 ft. alongside, used for berthing in Winter. James Richardson Wharf: Berthing length 800 ft., depth alongside 19 ft.
BULK HANDLING FACILITIES: *Canada Steamship Lines Elevator Dock:* Large Upper Lake vessels are unloaded on East side by two travelling marine towers; canal-size vessels are loaded on the West side, 6 loading spouts. The elevator capacity is 2,500,000 bushels, marine towers 35,000 bushels per hour. Canadian National Railways tracks run to the elevator and cars can be loaded with grain. This dock is also open to general cargo.
STEVEDORES: From Toronto.
MEDICAL: Hospitals, Kingston General and Hotel Dieu.
FUEL: Bunker coal – normal stock 2,000 tons from lighters at wharf. Bunker "C" and diesel oil also available.
FIRE PRECAUTIONS: No unusual precautions.
REPAIRS: Most repairs possible.
DRY DOCK: Will take ships of length 210 ft., beam 44 ft. Depth on sill 13 ft.
CUSTOMS ALLOWANCES: See "Montreal".
TIME: Eastern Standard Time GMT minus 5 hours. Daylight Saving Time from first week-end in April to last week-end in October, clocks advanced 1 hour.
HOLIDAYS: See "Montreal". Port Officials always available.
TELEPHONES: Ship-to-shore phone communications through Kingston (VBH).
AUTHORITY: Transport Canada, P.O.Box 592, Kingston, Ontario K7L 4X1. *Tel:* (613) 546-3335. *Contact:* E. Phipps-Walker, Harbour Master.

KINGSVILLE, Ontario: 42.02 N. 82.44 W. (See Plan)

LOCATION: Kingsville Harbour is located on the North side of Lake Erie about 48 km. S.E. of Windsor.
RESTRICTIONS: *Navigation Season:* April to mid-December.
Depths: Entrance Channel: 5.5 m.
BERTHING:

Berth	*Length* (m.)	*Depth* (m.)
West Wharf	218	5.5
East Pier	130	4.6

REPAIRS: Minor repairs possible.
SERVICES: Private fish processing plant, outdoor storage, International ferry (alternate port during inclement weather).
AUTHORITY: Harbours and Ports, Canadian Coast Guard, 201 N. Front Street, Suite 703, Sarnia, Ontario, N7T 8B1, Canada. *Tel:* (519) 383-1942. *FAX:* (519) 383-1996. *Contact:* Regional Manager.
Port Official: Jack Scratch, Harbour Master/Wharfinger.

KITIMAT, B.C.: 53.59 N. 128.46 W. (See Plan)

PORT LIMITS: All waters of Kitimat Arm and Kildala Arm bounded by the high water mark, North of a line drawn from Hilton Point (Lat. 53° 48′ 54″ N., Long. 128° 52′ 16″ W.) through Louis Point (Lat. 53° 49′ 08″ N., Long. 128° 45′ 38″ W.) on Coste Island to Steel Point (Lat. 53° 49′ 35″ N., Long. 128° 42′ 20″ W.) on the mainland. Canadian Chart 3743.
DOCUMENTS and General Information: Refer to "Vancouver".
PILOTAGE: Compulsory. Pilot boards at Cape Beale, West Coast, Vancouver Island, or Triple Island, off Prince Rupert. Pilotage Authority require 48 hours notice to allow Pilot to meet vessel at Triple Island or Cape Beale.
ANCHORAGE: No vessel shall anchor in the fairway or dredged channel approaching the wharf or otherwise in a position to interfere with or obstruct the docking or undocking of any other vessel. Pilot will instruct Master. Usual anchorage South of Eurocan Terminal, East side of Kitimat Arm.
RESTRICTIONS: Approach to the port from the South is via Laredo Sound, Laredo Channel, Campania Sound, Whale or Squally Channels and thence via Douglas Channel. From the North via Brown Passage, Arthur Passage, Grenville Channel, Douglas Channel. The route from the South is approximately 120 miles, from the open sea and from the North approximately 130 miles. Entrance channel to Terminal Wharf No. 1 (red and black buoys with flashing light) is 732 m. long, dredged to a depth of 10.67 m. at low water, width varies from 244 m. at entrance to 183 m. In addition, a turning basin has been dredged to 10.67 m. at low water on the side of the channel opposite wharf, providing a turning basin 198 m. in width. The channel has mooring dolphins on West side, 264 m. South of wharf No. 1 to accommodate vessels up to 16,000 d.w.t. while awaiting berth.
Vessels may enter or depart any time of day or night.
MAX. SIZE: LOA, 207 m. beam 27.4 m., draft 11 m. Mean tide range 4.2 m. Depth alongside at zero tide 10.67 m.
HEALTH: (Radio Pratique Waived): Only in the event of suspected disease or fever on board – also request for Derat, contact the Quarantine Officer at Prince Rupert, B.C. Tel: (604) 627-1381.
RADIO: Prince Rupert Radio "VAJ" 500, 2182, 1630.
ETA: Notice of ETA must be given to Alcan, Eurocan or Agent at Kitimat at least 24 hours and 12 hours before arrival. Alcan, Eurocan or Agent may then assign a berth to the vessel but shall not be liable for any delay in providing berth or for failure to provide a berth. Vessels carrying bulk cargoes for discharge are instructed to request Alcan via radio or wireless telegraph through shore stations as to which hatches are to be opened on arrival alongside unloading berth to permit immediate entry of unloading devices.
TUGS: Tug services available. 3 tugs, 500 h.p., 750 h.p. and 1,000 h.p.
BERTHING: Alcan Terminal Wharf No. 1 (concrete caisson construction) is 229 m. long and has two pneumatic unloading towers discharging to a belt conveyor and a Kangaroo Crane for either bulk and general cargo duties. The wharf is connected by rail direct to Aluminum Co. of Canada smelter yard and to the Terrace – Kitimat spurline of CNR.

Rivtow Straits Ltd. operates a weekly Ro/Ro barge service for containers and palletised cargo to and from Vancouver from a barge loading ramp located south of Alcan's mooring dolphins.

Eurocan Terminal is located to the East of Ocelot Terminal and is 137 m. long with mooring dolphins at South end. To the North of the terminal is located a hydraulic barge loading ramp. Dredged alongside to 10.67 m. at LLW. Principle export cargoes are paper and packaged lumber.

No container or LPG carrier facilities available.

Ocelot Industries Ltd., terminal is located South and East of Alcan's facilities and is of concrete piles and consists of a loading platform with 2 pads on either side with mooring dolphins to the North and South. The distance between breasting pads is approximately 78 m. and the overall length between dolphins is approximately 300 m. The berth area is approximately 430 m. long and 90 m. wide and is dredged to 13 m. at LLW. At the entrance there is a Q.F. flashing red buoy in line with the berth and another at the North end. F. W. range lights bearing 001° are located to the North and have a range of 4 miles. Principal export cargo is methanol. As an extension to the methanol plant, Ocelot is presently constructing a 500 tonne/day Ammonia plant, product will be shipped through existing wharf facilities. A separate pipeline and loading arm are under construction.
STEVEDORES: ETA sent by cable 24 and 12 hours before arrival.
MEDICAL: Kitimat General Hospital – complete medical service provided.
DENSITY: Varies with state of tide, water depth and season of the year.
FRESH WATER: Available at Alcan's Terminal Wharf No. 1 and at other terminals by tank truck.
FUEL: Only diesel oil available.
CONSULS: Available at Vancouver, B.C.
REPAIRS: Minor repairs only; nearest shipyard facilities Esquimalt or Vancouver.
SURVEYORS: Cargo Inspectors: S.G.S. Supervision Service Inc. located at Kitimat. A.B.S., B.V. and Lloyd's Surveyor available from Vancouver.
GANGWAY/DECK WATCHMAN: Not necessary.
OPENING/CLOSING HATCHES: Normally done by crew on bulk discharge. On general cargo, stevedores open and close hatches.
CUSTOMS ALLOWANCES: Tobacco: 200 cigarettes or 0.5 lb. tobacco. Liquor: 40 oz. per man, additional issue after 7 days.
REPATRIATION: Facilities convenient for crew changes.
AIRPORT: Three flights daily from Terrace to Vancouver International Airport. Limousine service from Kitimat to Terrace, distance 40 miles.
TIME: GMT minus 8 hours. Daylight saving time from first Sunday in April to last Sunday in October.
HOLIDAYS: New Year's Day, Good Friday, Victoria Day, Dominion Day, Labour Day, Thanksgiving Day, Christmas Day, and Boxing Day.
POLICE/AMBULANCE/FIRE: Police 632-7111; Ambulance/Fire 632-9111 or 639-9111.
EMERGENCY CO-ORDINATION CENTRE: Local fire chief, R.C.M.P. Kitimat. Tel: 632-7111 or Canadian Coast Guard, Prince Rupert. Tel: 624-9146.
TELEPHONE: Telephone available at dock offices.
STORING: Vessels can be stored by truck, which may proceed alongside the berth. Fork-lift trucks may be used to handle stores. Customs Regulations in force for bonded stores only. Riggers available to assist with storing.
SHORE LEAVE: Permitted.
AUTHORITY: Transport Canada, 224 West Esplanade Street, North Vancouver, B.C. V7M 3J7. *Tel:* 984-3800. *Telex:* 04-53235. *Contact:* Walter Koengeter, Harbour Master, P.O.Box 488, Ocelot Road, Kitimat, B.C. V8C 2R9. Tel: (604) 639-9400 (office), (604) 632-2937 (home).

LISCOMB, Nova Scotia: 45.01 N. 61.59 W.

APPROACHES: Channel depth ranges from 3.6 m. to 9.1 m.
BERTHING: Government Wharf closed as in a state of disrepair.
CRANES: None available.
MEDICAL: Sheet Harbour Hospital, 30 km.
TANKERS: Facilities closed.
AIRPORT: Halifax International Airport, 225 km.
AUTHORITY: Department of Fisheries and Oceans, Small Craft Harbours Branch, 1721 Lower Water Street, 4th Floor, P.O. Box 550, Halifax, Nova Scotia B3J 2S7. *Tel:* (902) 426-8120. *Telex:* 019-21891. *Contact:* R.W. Young.

LIVERPOOL, Nova Scotia: 44.03 N. 64.42 W.

(See Plan)

SHIPMASTER'S REPORT: November 1990 (Updated 1996).

DOCUMENTS: See "Halifax".
PILOTAGE/APPROACHES: For the approach to the outer anchorage, no pilot service is necessary.

There are numerous lighthouses and buoys which mark shallows, and the approach is without difficulties.

Pilots are sent from Halifax and require 3 – 4 hours notice from Agent, therefore vessel has to give Agent plenty of notice. Pilot will board the vessel at the outer anchorage. The pilot boat is aluminium in colour and has no special identification markings, and is also used to bring the mooring lines ashore when berthing. Pilots are only on VHF Channel 16 when they are on duty or prior to boarding a vessel for berthing. Pilots are very experienced.

In addition to listening on Channel 16, vessels should switch to VHF Channel 10 for receiving instructions for the Paper Mill.

Pilot's Remarks: Pilotage is not compulsory, but available through Pilots Halifax on 24 hours notice with 6 hours confirmation. The pilot boarding station is at Lat. 44° 01′ 34″ N., Long. 64° 38′ 55″ W.
ANCHORAGES: There is a safe outer anchorage close to the Pilot Station, situated at the centre of cross bearings from Coffin Island, Eastern Head and Moose Point, about 0.8 nautical miles from each point in about 26.0 m., with good holding ground, no dragging.
RESTRICTIONS: No information available.
MAX. SIZE: As per Bowater Agencies, depending on the state of the tide (LOA 650 ft. (approx.) and draft 26 ft.).
HEALTH: See "Halifax".
RADIO: Halifax Radio, VCS, was used for ETA messages.
VHF: Bowater Agency maintains watch on Channel 10. Coast Guard Radio stations at Halifax and Yarmouth maintain watch on Channel 16.
RADAR: No radar.
TUGS: No tugs available.
BERTHING: Berthing is done by dropping anchor in front of tip of pier and by swinging stern first, and mooring starboard side at the N.E. side of the pier.

There is a finger pier about 550 ft. long with a 26 ft. depth alongside, depending on tide. The wharf was rebuilt in 1991 and has a second berth on the West side. Ro-Ro ramp available.

Loading of newsprint paper rolls is done by ship's gear.
CRANES: There are no cranes.
BULK CARGO FACILITIES: There are no facilities available.
SPECIALISED CARGO HANDLING FACILITIES: No information.
BRIDGES: None.
STEVEDORES: Agent to be kept well informed by cable. Stevedores are local union personnel.

Normal working is 24 hours a day.

Loading rate is about 50 tonnes per gang/working hour.
MEDICAL: There is a modern hospital and several doctors in the town.
TANKERS: No information available.
DENSITY: 1025.
FRESH WATER: Available in unlimited quantities at no cost.
FUEL: Diesel oil can be supplied by trucks from Halifax. Heavy fuel oil not available.
FIRE PRECAUTIONS: Paper Mill maintains a fire brigade.
CONSULS: See "Halifax".
REPAIRS: Minor repairs can be undertaken by Steel and Engine Products Ltd. Steel and Engine Products Ltd. is a multi-disciplined manufacturing and ship repair facility, including ship repair for both wood and steel ships handling a wide range of fishing boats, trawlers, naval vessels, tugs, barges, freighters, and oil exploration craft.
DRY DOCKS: There is a slip at Liverpool for small vessels.
SURVEYORS: There are several surveyors at Liverpool and Halifax.
GANGWAY/DECK WATCHMEN: Not compulsory or necessary.
HATCHES: Opening/closing of hatches normally by crew.
CUSTOMS ALLOWANCES: Every crew member is entitled to 1 bottle of spirits and 200 cigarettes every 7 days. There is only one Customs Officer at this port.
CARGO GEAR: Ship's gear is used.
REPATRIATION: Repatriation can be undertaken without difficulties, through the airport at Halifax.
AIRPORT: Halifax International Airport is 170 km. from Liverpool.
TIME: Summer – GMT minus 3 hours. Winter – GMT minus 4 hours.
HOLIDAYS: See "Halifax".
POLICE/AMBULANCE/FIRE: Use telephone inside Paper Mill or at gate.
EMERGENCY CO-ORDINATING CENTRE: No information available.
TELEPHONES: There is a telephone at the office next to the vessel.
SERVICES: See "Halifax". No special services at Liverpool.
BANKS: At Liverpool – Bank of Montreal, Bank of Nova Scotia and Royal Bank.
STORING: See "Prelims".

1. Can be stored by truck.
2. N.A.
3. Yes, but not during loading hours, due to the very narrow pier space.
4. Yes.
5. No information.
6. Stevedores have to be used.

SHIP SUPPLY SERVICE: No ship chandlers at Liverpool. No information on other services. Fresh provisions can be obtained from Supermarkets, which deliver to ship free of charge.
SHORE LEAVE: No restrictions.
IDENTIFICATION CARDS: Not necessary.
REGULATIONS: No particular or unusual regulations.
GENERAL: Agent, Customs and stevedores – all very co-operative.
Charts: Canadian Chart No. 4379. B.A. Charts No. 340 and 730.
AUTHORITY: Bowater Mersey Paper Company Limited, P.O.Box 1150, Liverpool, Nova Scotia, B0T 1K0. *Tel:* (902) 354-3411. *Telex:* 019-21556. *FAX:* (902) 354-3579. *Contact:* Gary Levy or Jack Conrad. For administrative matters, call Bill Stewart (Tel: (902) 354-3411. Fax: (902) 354-3136).
AGENT: See "Authority".

LONG HARBOUR, Newfoundland: 47.27 N. 53.49 W.

PILOTAGE: Not compulsory, but can be arranged through St. John's Coast Guard Radio.
TUGS: 3 tugs available from Come-By-Chance.
BERTHING: Erco Wharf is approximately 488 m. long with dolphin 38 m. long, joined to wharf by catwalk. Least depth alongside 10.98 m.
MEDICAL: Nearest hospital is 10 km. away.
AIRPORT: 130 km.
AUTHORITY: Transport Canada, Harbours and Ports Directorate, P.O.Box 1300, St. John's, Newfoundland A1C 6H8, Canada. *Tel:* (709) 772-5154. *FAX:* (709) 772-5127.

LONG POND, Newfoundland: 47.31 N. 52.58 W.

(See Plan)

LOCATION: The Public Harbour of Long Pond is located on the South shore of Conception Bay, about 35 km. West of Cape St.Francis, on the East coast of Newfoundland. Navigational season is year round, with occasional icebreaker assistance in early Spring.
DOCUMENTS:

3 copies Crew Declaration (Form Y14).
3 copies Ship's Stores List (Form E1).
3 copies Immigration Crew List (Form IMM 200), only Canadian form accepted.
2 copies Bill of Lading or Manifest.

In addition, Customs Clearance from last port, Derat Certificate, extra copy of Crew List, Vaccination List, Ship's Register, Radio Equipment Certificate, Safety Equipment Certificate, Load Line Certificate and Non-Canadian Ship Compliance Certificate. Oil Record Log Book should be up to date and readily available for inspection by Government Steamship Inspectors.
PILOTAGE: Not compulsory, however, licensed Pilots are available, if desired.
Arrivals: To avoid a delay in ordering a Pilot, Masters of vessels bound for Argentia must forward their request for Pilots to "Pilots St.John's" as follows:

First notice 12 hours prior to the ETA (GMT) at the appropriate boarding station, stating:

(a) Which boarding station the Pilot is required at.
(b) Name.
(c) Call Sign.
(d) Deepest draft.
(e) Speed.
(f) Agent.
(g) Length, breadth, moulded depth, deadweight tonnage and the largest net registered tonnage.

Second notice 3 hours prior to the ETA (GMT) at the appropriate boarding station.

Departures/Movages: First notice 9 hours prior to the ETD (Local time). Second notice 3 hours prior to the ETD (Local time).
Embarkation/Disembarkation: Masters of calling vessels are reminded of their obligation to comply with statutory rules, and are recommended to comply with the following:

(a) The Officer responsible for embarkation/disembarkation of the Pilot is a watchkeeping Officer.
(b) The pilot ladder is secure.
(c) The pilot ladder is adequately illuminated at night.
(d) Means are provided to enable the Pilot to pass safely and conveniently from the head of the pilot ladder into the ship or onto the ship's deck. Portable stanchions, if used, should be independently secured to the rail or deck, one on each side of the ladder.

TUGS: Available. Necessary for handling ships in rough weather at Elevator and other docks.

BERTHING: Docks extend West from North of bridge (La Salle Causeway) to Little Cataraqui Bay – some 4 miles. Transport Canada 455 ft., depth alongside 17 ft. Portsmouth Olympic Harbour – Environment Canada, under construction. Also smaller docks for coastal vessels and private docks, including Canada Steamship Lines Elevator dock 700 ft. long on East side 25 ft. alongside, and 600 ft. on West side depth 22 ft. La Salle Causeway 1,000 ft., 19 ft. alongside, used for berthing in Winter. James Richardson Wharf: Berthing length 800 ft., depth alongside 19 ft.

BULK HANDLING FACILITIES: *Canada Steamship Lines Elevator Dock:* Large Upper Lake vessels are unloaded on East side by two travelling marine towers; canal-size vessels are loaded on the West side, 6 loading spouts. The elevator capacity is 2,500,000 bushels, marine towers 35,000 bushels per hour. Canadian National Railways tracks run to the elevator and cars can be loaded with grain. This dock is also open to general cargo.

STEVEDORES: From Toronto.

MEDICAL: Hospitals, Kingston General and Hotel Dieu.

FUEL: Bunker coal – normal stock 2,000 tons from lighters at wharf. Bunker "C" and diesel oil also available.

FIRE PRECAUTIONS: No unusual precautions.

REPAIRS: Most repairs possible.

DRY DOCK: Will take ships of length 210 ft., beam 44 ft. Depth on sill 13 ft.

CUSTOMS ALLOWANCES: See "Montreal".

TIME: Eastern Standard Time GMT minus 5 hours. Daylight Saving Time from first week-end in April to last week-end in October, clocks advanced 1 hour.

HOLIDAYS: See "Montreal". Port Officials always available.

TELEPHONES: Ship-to-shore phone communications through Kingston (VBH).

AUTHORITY: Transport Canada, P.O.Box 592, Kingston, Ontario K7L 4X1. *Tel:* (613) 546-3335. *Contact:* E. Phipps-Walker, Harbour Master.

KINGSVILLE, Ontario: 42.02 N. 82.44 W. (See Plan)

LOCATION: Kingsville Harbour is located on the North side of Lake Erie about 48 km. S.E. of Windsor.

RESTRICTIONS: *Navigation Season:* April to mid-December. *Depths:* Entrance Channel: 5.5 m.

BERTHING:

Berth	*Length* (m.)	*Depth* (m.)
West Wharf	218	5.5
East Pier	130	4.6

REPAIRS: Minor repairs possible.

SERVICES: Private fish processing plant, outdoor storage, International ferry (alternate port during inclement weather).

AUTHORITY: Harbours and Ports, Canadian Coast Guard, 201 N. Front Street, Suite 703, Sarnia, Ontario, N7T 8B1, Canada. *Tel:* (519) 383-1942. *FAX:* (519) 383-1996. *Contact:* Regional Manager.

Port Official: Jack Scratch, Harbour Master/Wharfinger.

KITIMAT, B.C.: 53.59 N. 128.46 W. (See Plan)

PORT LIMITS: All waters of Kitimat Arm and Kildala Arm bounded by the high water mark, North of a line drawn from Hilton Point (Lat. 53° 48′ 54″ N., Long. 128° 52′ 16″ W.) through Louis Point (Lat. 53° 49′ 08″ N., Long. 128° 45′ 38″ W.) on Coste Island to Steel Point (Lat. 53° 49′ 35″ N., Long. 128° 42′ 20″ W.) on the mainland. Canadian Chart 3743.

DOCUMENTS and General Information: Refer to "Vancouver".

PILOTAGE: Compulsory. Pilot boards at Cape Beale, West Coast, Vancouver Island, or Triple Island, off Prince Rupert. Pilotage Authority require 48 hours notice to allow Pilot to meet vessel at Triple Island or Cape Beale.

ANCHORAGE: No vessel shall anchor in the fairway or dredged channel approaching the wharf or otherwise in a position to interfere with or obstruct the docking or undocking of any other vessel. Pilot will instruct Master. Usual anchorage South of Eurocan Terminal, East side of Kitimat Arm.

RESTRICTIONS: Approach to the port from the South is via Laredo Sound, Laredo Channel, Campania Sound, Whale or Squally Channels and thence via Douglas Channel. From the North via Brown Passage, Arthur Passage, Grenville Channel, Douglas Channel. The route from the South is approximately 120 miles, from the open sea and from the North approximately 130 miles. Entrance channel to Terminal Wharf No. 1 (red and black buoys with flashing light) is 732 m. long, dredged to a depth of 10.67 m. at low water, width varies from 244 m. at entrance to 183 m. In addition, a turning basin has been dredged to 10.67 m. at low water on the side of the channel opposite wharf, providing a turning basin 198 m. in width. The channel has mooring dolphins on West side, 264 m. South of wharf No. 1 to accommodate vessels up to 16,000 d.w.t. while awaiting berth.

Vessels may enter or depart any time of day or night.

MAX. SIZE: LOA, 207 m. beam 27.4 m., draft 11 m. Mean tide range 4.2 m. Depth alongside at zero tide 10.67 m.

HEALTH: (Radio Pratique Waived): Only in the event of suspected disease or fever on board – also request for Derat, contact the Quarantine Officer at Prince Rupert, B.C. Tel: (604) 627-1381.

RADIO: Prince Rupert Radio "VAJ" 500, 2182, 1630.

ETA: Notice of ETA must be given to Alcan, Eurocan or Agent at Kitimat at least 24 hours and 12 hours before arrival. Alcan, Eurocan or Agent may then assign a berth to the vessel but shall not be liable for any delay in providing berth or for failure to provide a berth. Vessels carrying bulk cargoes for discharge are instructed to request Alcan via radio or wireless telegraph through shore stations as to which hatches are to be opened on arrival alongside unloading berth to permit immediate entry of unloading devices.

TUGS: Tug services available. 3 tugs, 500 h.p., 750 h.p. and 1,000 h.p.

BERTHING: Alcan Terminal Wharf No. 1 (concrete caisson construction) is 229 m. long and has two pneumatic unloading towers discharging to a belt conveyor and a Kangaroo Crane for either bulk and general cargo duties. The wharf is connected by rail direct to Aluminum Co. of Canada smelter yard and to the Terrace – Kitimat spurline of CNR.

Rivtow Straits Ltd. operates a weekly Ro/Ro barge service for containers and palletised cargo to and from Vancouver from a barge loading ramp located south of Alcan's mooring dolphins.

Eurocan Terminal is located to the East of Ocelot Terminal and is 137 m. long with mooring dolphins at South end. To the North of the terminal is located a hydraulic barge loading ramp. Dredged alongside to 10.67 m. at LLW. Principle export cargoes are paper and packaged lumber.

No container or LPG carrier facilities available.

Ocelot Industries Ltd., terminal is located South and East of Alcan's facilities and is of concrete piles and consists of a loading platform with 2 pads on either side with mooring dolphins to the North and South. The distance between breasting pads is approximately 78 m. and the overall length between dolphins is approximately 300 m. The berth area is approximately 430 m. long and 90 m. wide and is dredged to 13 m. at LLW. At the entrance there is a Q.F. flashing red buoy in line with the berth and another at the North end. F. W. range lights bearing 001° are located to the North and have a range of 4 miles. Principal export cargo is methanol. As an extension to the methanol plant, Ocelot is presently constructing a 500 tonne/day Ammonia plant, product will be shipped through existing wharf facilities. A separate pipeline and loading arm are under construction.

STEVEDORES: ETA sent by cable 24 and 12 hours before arrival.

MEDICAL: Kitimat General Hospital – complete medical service provided.

DENSITY: Varies with state of tide, water depth and season of the year.

FRESH WATER: Available at Alcan's Terminal Wharf No. 1 and at other terminals by tank truck.

FUEL: Only diesel oil available.

CONSULS: Available at Vancouver, B.C.

REPAIRS: Minor repairs only; nearest shipyard facilities Esquimalt or Vancouver.

SURVEYORS: Cargo Inspectors: S.G.S. Supervision Service Inc. located at Kitimat. A.B.S., B.V. and Lloyd's Surveyor available from Vancouver.

GANGWAY/DECK WATCHMAN: Not necessary.

OPENING/CLOSING HATCHES: Normally done by crew on bulk discharge. On general cargo, stevedores open and close hatches.

CUSTOMS ALLOWANCES: Tobacco: 200 cigarettes or 0.5 lb. tobacco. Liquor: 40 oz. per man, additional issue after 7 days.

REPATRIATION: Facilities convenient for crew changes.

AIRPORT: Three flights daily from Terrace to Vancouver International Airport. Limousine service from Kitimat to Terrace, distance 40 miles.

TIME: GMT minus 8 hours. Daylight saving time from first Sunday in April to last Sunday in October.

HOLIDAYS: New Year's Day, Good Friday, Victoria Day, Dominion Day, Labour Day, Thanksgiving Day, Christmas Day, and Boxing Day.

POLICE/AMBULANCE/FIRE: Police 632-7111; Ambulance/Fire 632-9111 or 639-9111.

EMERGENCY CO-ORDINATION CENTRE: Local fire chief, R.C.M.P. Kitimat. Tel: 632-7111 or Canadian Coast Guard, Prince Rupert. Tel: 624-9146.

TELEPHONE: Telephone available at dock offices.

STORING: Vessels can be stored by truck, which may proceed alongside the berth. Fork-lift trucks may be used to handle stores. Customs Regulations in force for bonded stores only. Riggers available to assist with storing.

SHORE LEAVE: Permitted.

AUTHORITY: Transport Canada, 224 West Esplanade Street, North Vancouver, B.C. V7M 3J7. *Tel:* 984-3800. *Telex:* 04-53235. *Contact:* Walter Koengeter, Harbour Master, P.O.Box 488, Ocelot Road, Kitimat, B.C. V8C 2R9. Tel: (604) 639-9400 (office), (604) 632-2937 (home).

LISCOMB, Nova Scotia: 45.01 N. 61.59 W.

APPROACHES: Channel depth ranges from 3.6 m. to 9.1 m.
BERTHING: Government Wharf closed as in a state of disrepair.
CRANES: None available.
MEDICAL: Sheet Harbour Hospital, 30 km.
TANKERS: Facilities closed.
AIRPORT: Halifax International Airport, 225 km.
AUTHORITY: Department of Fisheries and Oceans, Small Craft Harbours Branch, 1721 Lower Water Street, 4th Floor, P.O. Box 550, Halifax, Nova Scotia B3J 2S7. *Tel:* (902) 426-8120. *Telex:* 019-21891. *Contact:* R.W. Young.

LIVERPOOL, Nova Scotia: 44.03 N. 64.42 W.

(See Plan)

SHIPMASTER'S REPORT: November 1990 (Updated 1996).

DOCUMENTS: See "Halifax".
PILOTAGE/APPROACHES: For the approach to the outer anchorage, no pilot service is necessary.

There are numerous lighthouses and buoys which mark shallows, and the approach is without difficulties.

Pilots are sent from Halifax and require 3 – 4 hours notice from Agent, therefore vessel has to give Agent plenty of notice. Pilot will board the vessel at the outer anchorage. The pilot boat is aluminium in colour and has no special identification markings, and is also used to bring the mooring lines ashore when berthing. Pilots are only on VHF Channel 16 when they are on duty or prior to boarding a vessel for berthing. Pilots are very experienced.

In addition to listening on Channel 16, vessels should switch to VHF Channel 10 for receiving instructions for the Paper Mill.

Pilot's Remarks: Pilotage is not compulsory, but available through Pilots Halifax on 24 hours notice with 6 hours confirmation. The pilot boarding station is at Lat. 44° 01′ 34″ N., Long. 64° 38′ 55″ W.
ANCHORAGES: There is a safe outer anchorage close to the Pilot Station, situated at the centre of cross bearings from Coffin Island, Eastern Head and Moose Point, about 0.8 nautical miles from each point in about 26.0 m., with good holding ground, no dragging.
RESTRICTIONS: No information available.
MAX. SIZE: As per Bowater Agencies, depending on the state of the tide (LOA 650 ft. (approx.) and draft 26 ft.).
HEALTH: See "Halifax".
RADIO: Halifax Radio, VCS, was used for ETA messages.
VHF: Bowater Agency maintains watch on Channel 10. Coast Guard Radio stations at Halifax and Yarmouth maintain watch on Channel 16.
RADAR: No radar.
TUGS: No tugs available.
BERTHING: Berthing is done by dropping anchor in front of tip of pier and by swinging stern first, and mooring starboard side at the N.E. side of the pier.

There is a finger pier about 550 ft. long with a 26 ft. depth alongside, depending on tide. The wharf was rebuilt in 1991 and has a second berth on the West side. Ro-Ro ramp available.

Loading of newsprint paper rolls is done by ship's gear.
CRANES: There are no cranes.
BULK CARGO FACILITIES: There are no facilities available.
SPECIALISED CARGO HANDLING FACILITIES: No information.
BRIDGES: None.
STEVEDORES: Agent to be kept well informed by cable. Stevedores are local union personnel.

Normal working is 24 hours a day.

Loading rate is about 50 tonnes per gang/working hour.
MEDICAL: There is a modern hospital and several doctors in the town.
TANKERS: No information available.
DENSITY: 1025.
FRESH WATER: Available in unlimited quantities at no cost.
FUEL: Diesel oil can be supplied by trucks from Halifax. Heavy fuel oil not available.
FIRE PRECAUTIONS: Paper Mill maintains a fire brigade.
CONSULS: See "Halifax".
REPAIRS: Minor repairs can be undertaken by Steel and Engine Products Ltd. Steel and Engine Products Ltd. is a multi-disciplined manufacturing and ship repair facility, including ship repair for both wood and steel ships handling a wide range of fishing boats, trawlers, naval vessels, tugs, barges, freighters, and oil exploration craft.
DRY DOCKS: There is a slip at Liverpool for small vessels.
SURVEYORS: There are several surveyors at Liverpool and Halifax.
GANGWAY/DECK WATCHMEN: Not compulsory or necessary.
HATCHES: Opening/closing of hatches normally by crew.
CUSTOMS ALLOWANCES: Every crew member is entitled to 1 bottle of spirits and 200 cigarettes every 7 days. There is only one Customs Officer at this port.
CARGO GEAR: Ship's gear is used.
REPATRIATION: Repatriation can be undertaken without difficulties, through the airport at Halifax.
AIRPORT: Halifax International Airport is 170 km. from Liverpool.
TIME: Summer – GMT minus 3 hours. Winter – GMT minus 4 hours.
HOLIDAYS: See "Halifax".
POLICE/AMBULANCE/FIRE: Use telephone inside Paper Mill or at gate.
EMERGENCY CO-ORDINATING CENTRE: No information available.
TELEPHONES: There is a telephone at the office next to the vessel.
SERVICES: See "Halifax". No special services at Liverpool.
BANKS: At Liverpool – Bank of Montreal, Bank of Nova Scotia and Royal Bank.
STORING: See "Prelims".
1. Can be stored by truck.
2. N.A.
3. Yes, but not during loading hours, due to the very narrow pier space.
4. Yes.
5. No information.
6. Stevedores have to be used.

SHIP SUPPLY SERVICE: No ship chandlers at Liverpool. No information on other services. Fresh provisions can be obtained from Supermarkets, which deliver to ship free of charge.
SHORE LEAVE: No restrictions.
IDENTIFICATION CARDS: Not necessary.
REGULATIONS: No particular or unusual regulations.
GENERAL: Agent, Customs and stevedores – all very co-operative.
Charts: Canadian Chart No. 4379. B.A. Charts No. 340 and 730.
AUTHORITY: Bowater Mersey Paper Company Limited, P.O.Box 1150, Liverpool, Nova Scotia, B0T 1K0. *Tel:* (902) 354-3411. *Telex:* 019-21556. *FAX:* (902) 354-3579. *Contact:* Gary Levy or Jack Conrad. For administrative matters, call Bill Stewart (Tel: (902) 354-3411. Fax: (902) 354-3136).
AGENT: See "Authority".

LONG HARBOUR, Newfoundland: 47.27 N. 53.49 W.

PILOTAGE: Not compulsory, but can be arranged through St. John's Coast Guard Radio.
TUGS: 3 tugs available from Come-By-Chance.
BERTHING: Erco Wharf is approximately 488 m. long with dolphin 38 m. long, joined to wharf by catwalk. Least depth alongside 10.98 m.
MEDICAL: Nearest hospital is 10 km. away.
AIRPORT: 130 km.
AUTHORITY: Transport Canada, Harbours and Ports Directorate, P.O.Box 1300, St. John's, Newfoundland A1C 6H8, Canada. *Tel:* (709) 772-5154. *FAX:* (709) 772-5127.

LONG POND, Newfoundland: 47.31 N. 52.58 W.

(See Plan)

LOCATION: The Public Harbour of Long Pond is located on the South shore of Conception Bay, about 35 km. West of Cape St.Francis, on the East coast of Newfoundland. Navigational season is year round, with occasional icebreaker assistance in early Spring.
DOCUMENTS:
- 3 copies Crew Declaration (Form Y14).
- 3 copies Ship's Stores List (Form E1).
- 3 copies Immigration Crew List (Form IMM 200), only Canadian form accepted.
- 2 copies Bill of Lading or Manifest.

In addition, Customs Clearance from last port, Derat Certificate, extra copy of Crew List, Vaccination List, Ship's Register, Radio Equipment Certificate, Safety Equipment Certificate, Load Line Certificate and Non-Canadian Ship Compliance Certificate. Oil Record Log Book should be up to date and readily available for inspection by Government Steamship Inspectors.
PILOTAGE: Not compulsory, however, licensed Pilots are available, if desired.
Arrivals: To avoid a delay in ordering a Pilot, Masters of vessels bound for Argentia must forward their request for Pilots to "Pilots St.John's" as follows:

First notice 12 hours prior to the ETA (GMT) at the appropriate boarding station, stating:
(a) Which boarding station the Pilot is required at.
(b) Name.
(c) Call Sign.
(d) Deepest draft.
(e) Speed.
(f) Agent.
(g) Length, breadth, moulded depth, deadweight tonnage and the largest net registered tonnage.

Second notice 3 hours prior to the ETA (GMT) at the appropriate boarding station.
Departures/Movages: First notice 9 hours prior to the ETD (Local time). Second notice 3 hours prior to the ETD (Local time).
Embarkation/Disembarkation: Masters of calling vessels are reminded of their obligation to comply with statutory rules, and are recommended to comply with the following:
(a) The Officer responsible for embarkation/disembarkation of the Pilot is a watchkeeping Officer.
(b) The pilot ladder is secure.
(c) The pilot ladder is adequately illuminated at night.
(d) Means are provided to enable the Pilot to pass safely and conveniently from the head of the pilot ladder into the ship or onto the ship's deck. Portable stanchions, if used, should be independently secured to the rail or deck, one on each side of the ladder.

(e) The ladder is in good condition and its treads remain horizontal. The treads to have a rough surface.
(f) The ladder is rigged so that each step rests firmly against the ship's side.
(g) Spreaders are provided not more than 10 ft. apart, to prevent the ladder from twisting.
(h) Manropes should be available, but should not be lowered unless requested by the Pilot.
(i) A lifebuoy with a self-igniting light and a heavy line should be available.
(j) The ladder should be rigged well clear of overboard discharge and deck scuppers.

If the pilot ladder is not safe, the Pilot may refuse to board and thus cause unnecessary delay to the ship.

APPROACHES: Entrance channel is 50 m. wide with limiting depth of 7.9 m. Turning area in harbour extends 135 m. off the wharf with limiting depth of 8.2 m. near wharf face.

RESTRICTIONS: Will be dispatched by Transport Canada, Harbours and Ports Directorate, to ship's Agent.

HEALTH: Vessels arriving from a foreign port may obtain pratique by radio from "Quarantine St.John's" at least 12 hours before arrival. Information required by Quarantine Officer shall include:

Name and nationality of the vessel.
Last port of call.
Nature of cargo.
Number of crew and passengers.
Port of destination.
Name of Agent.

Conditions of health of all on board with details of any sickness or death incurred during the voyage.

Animals, if any.

RADIO: The best radio stations to use en route to Argentia are:

St.John's Marine Radio – call sign VON.
Halifax Marine Radio – call sign VCS.
St.Lawrence Marine Radio – call sign VCP.

To avoid a delay in obtaining a Pilot, Masters of ships bound for Long Pond must report by R/T, W/T or Telex, their ETA to Vessel Traffic Management at St.John's at least 24 hours before vessels' ETA at the pilot boarding station. The times should preferably be in GMT, but whatever time is used, it should be expressly stated. ETA should be confirmed or corrected 12 hours and 6 hours prior to arrival at the pilot boarding station by R/T, W/T or Telex through VON Marine Radio Station, St.John's or via any Coast Guard Radio Station. Also see "Pilotage".

Pilotage messages may be forwarded through the nearest Canadian Coast Guard Radio Station. Direct requests can be made through St.John's Traffic Centre on VHF Channel 11.

The requirements for water, fuel and ballast should be made known to vessel's Agent in the 72 hour ETA.

TUGS: Not available.

BERTHING: Public wharf has a length of 245 m. and depth of 6.9 m. – 8.2 m.

MEDICAL: Masters are requested to notify their Agents at least 72 hours prior to arrival, advising the number of crew to see the doctor and their complaint. There are local clinics in area with full hospital facilities located in St.John's, 25 km.

CRANES: Mobile cranes and boom trucks available. Heavy lift crane pad can accommodate a 200 ton mobile crane at minimum radius.

STEVEDORES: Local labour should be arranged by Agent.

FRESH WATER: Limited quantities of fresh water available. Arrangements should be made through Agent or Harbour Master.

FUEL: Ship's bunkers are available by tank truck.

CONSULS: The following countries have Consular Representatives in St.John's:

Brazil
Denmark
France
Germany
Iceland
Italy
Malta
Netherlands
Portugal
Spain
Sweden

REPAIRS: The Agent should receive early advice of requirements, as most repairs are only available at St.John's (Radio, radar, gyro, Satnav and Loran, etc.). The technicians for such equipment work out of St.John's. The following brand names have representatives in St.John's: Racal-Decca, Marconi, Kelvin Hughes, Furono, Atlas and Sperry.

SURVEYORS: Stationed in St.John's: Lloyd's, BV, NKK, ABS, Germanischer Lloyd, Italian Registry, Russian Registry, China Corp. and Honduran Registry.

GANGWAY/DECK WATCHMEN: Usually ship's crew.

CUSTOMS ALLOWANCES: Each crew member is allowed 200 cigarettes and one 40 oz. bottle of wine or spirits per week.

REPATRIATION: No formal facilities, however, crew changes and repatriation can be carried out. Prior notice to Agent is required.

AIRPORT: Nearest airport is St.John's, 25 km. away.

POLICE/AMBULANCE/FIRE: The Police, Fire Department and Ambulance Service are located in the area.

EMERGENCY CO-ORDINATION CENTRE: Canadian Coast Guard, Placentia Traffic, Tel: 709-227-5731 or VHF Channel 16.

BANKS: Several Canadian Banks provide service in the Placentia area.

TIME: GMT minus 3.5 hours. First Sunday in April clocks advance 1 hour. Last Sunday in October clocks retard 1 hour.

SERVICES: *Supplies and Laundry:* Stores and provisions have to be obtained in St.John's. In order to avoid delays, Agent should be notified prior to arrival of the vessel's requirements. Stores and supplies will be delivered by truck at the dock.

SHORE LEAVE: In order to comply with Immigration Regulations, crew should be carefully checked before sailing, and any missing crew member reported to Agent.

In case of crew members left ashore for any reason, Masters are requested to furnish a letter accepting responsibility for all expenses incurred, advances (if any) and also instructions for repatriation. An Immigration Bond may be required.

GARBAGE DISPOSAL: Arrangements must be made through Agent.

WASTE OIL DISPOSAL: Arrangements must be made through Agent.

SEAMAN'S CLUBS: None locally. Facilities available at St.John's (25 km.).

CURRENCY: Canadian Dollar.

CHARTS: Canadian Hydrographic Charts No. 4581 and 4848.

GENERAL: Masters are strongly advised to contact their Agent 72 hours, 48 hours, 36 hours, 24 hours, 12 hours and 6 hours with ETAs. In the 72 hour message, Masters should advise all port requirements.

AUTHORITY: Transport Canada, Harbours and Ports Directorate, Newfoundland Region, P.O.Box 1300, St.John's, Newfoundland A1C 6H8, Canada. *Tel:* (709) 772-5154. *Telex:* 016-3369. *FAX:* (709) 772-5127. *Contact:* D.A. Lester, Regional Manager, Harbours and Ports.

LOUISBOURG, Nova Scotia: 45.55 N. 59.58 W.

LOCATION: On the North side of N.E. arm of Louisbourg Harbour, S.E. Coast of Cape Breton Island, Nova Scotia.

PILOTAGE: Pilotage is not compulsory, but if required, may be arranged through Pilots Cape Breton.

ANCHORAGE: Safe anchorage anywhere clear of the ship channel leading to docks.

RESTRICTIONS: *Navigation Season:* Port open all year. No ice forms sufficiently to hinder shipping

Channel depth: Lowest depth at low tide in ship channels is 30 ft. Draft of largest vessel (8,000 g.r.t.) to enter port was 30 ft. 6 in. Tides rise 4 ft. to 5 ft.

HEALTH: Quarantine Station is in the South West harbour. Health officers board vessels at wharves.

RADIO: Sydney Radio (VCO).

BERTHING: (1) Small Craft Harbours Wharf: Berthing length 530 ft., depth alongside at LW 19 ft., used for general freight. The inner 181 ft. of the wharf is open faced creosoted timber cribwork. The next 217 ft. is of steel sheet pile encased creosoted timber pilework driven through remains of timber cribwork. The remaining outer stem portion and the "T" are of concrete crib construction. The limiting loads are 300 pounds per square foot on the timber cribwork section and 500 pounds per square foot on all other sections.

(2) Louisbourg Fisheries Wharf: 300 ft. long and 60 ft. wide, of concrete construction. Across the head of the wharf there is 20 ft. to 21 ft. of water alongside at LW. From the head of the wharf towards shore the depth decreases from 20 ft. to 15 ft. In addition, there are several smaller wharves in the harbour with 20 ft. and less depth alongside at LW. Administered by Small Craft Harbours.

MEDICAL: Hospital at Sydney.

FRESH WATER: Available.

FUEL: Fuel and diesel oils can be secured from tank wagons or in barrels – no ship storage in bulk. Light diesel oil on pipelines to wharves.

REPAIRS: No facilities available.

SURVEYORS: Lloyd's, Bureau Veritas and American Bureau at Halifax.

GENERAL: *Services:* Post Office, Telegraph, Telephone, Customs.

Trade: Exports: Fish. Imports: General Merchandise.

Charts: Canadian Charts No. 4375 and 4376.

Provisions: Available.

AUTHORITY: Department of Fisheries and Oceans, Small Craft Harbours Branch, P.O. Box 1085, Sydney, Nova Scotia B1P 6J7. *Tel:* (902) 564-7362. *Contact:* E. P. Gibney, District Manager.

Local Authority: C. G. Shaw, Transport Canada – Harbour Master and Fisheries and Oceans – Harbour Manager. *Tel:* 733-2117.

MARYSTOWN, Newfoundland: 47.10 N. 55.09 W.

(See Plan)

LOCATION: Located on the shore of an inlet in the Southwest part of Mortier Bay. Mortier Bay is located on the West side of Placentia Bay. The navigational season is year round.

PILOTAGE: Not compulsory, but can be arranged by reporting via any coastal radio station by radiotelephone or radiotelegraph to Pilots, Marystown. 48 hours, 24 hours and 12 hours ETA required. Time must be GMT.

BERTHING: Public wharf with length 36 m. and depth of 6.2 m. Private wharves consist of the Fishery Products Wharves: 60 m. long with 5.5 m. depth and 55 m. long with 10.7 m. depth. The oil rig servicing base, operated by the Marystown Shipyard has an L-shaped wharf extending 115 m. long by 44 m. with a depth of 15 m. This facility also has a stern loading ramp that is 33 m. wide with a depth of 5.0 m.

The Marystown Shipyard has a marine syncrolift that is 76.2 m. long by 18.3 m. wide with a lifting capacity of 3,000 tonnes. The wharves at this yard are 137 m. long with 7.3 m. depth, 73 m. long with 6.1 m. depth, 61 m. long.

STEVEDORES: Ordered by Agent.

MEDICAL: No advanced notice required unless serious emergency. Hospital facilities available.

FRESH WATER: Available.

FUEL: Available.

CONSULS: Nearest Consuls are situated in St.John's, which is approximately 300 km. away.

REPAIRS: Possible at Marystown Shipyard.

GANGWAY/DECK WATCHMEN: Usually crew.
AIRPORT: St.John's, 300 km. away and Gander, 313 km. away.
GENERAL: *Officials:* Harbour Master and Customs available.
Services: Supplies available.
Charts: Canadian Chart No. 4587.
AUTHORITY: Transport Canada, Harbours and Ports Directorate, P.O.Box 1300, St.John's, Newfoundland A1C 6H8, Canada. *Tel:* (709) 772-5154. *FAX:* (709) 772-5127. *Contact:* D.A. Lester, Regional Manager, Harbours and Ports.

MATANE, Quebec: 48.51 N. 67.34 W.

LOCATION: On the South shore of the St. Lawrence River, approximately 400 km. from Quebec City.
PILOTAGE: Not compulsory but available.
APPROACHES: Channel depth 8.5 m. (extreme low tide).
RESTRICTIONS: The harbour is open all year round, but occasionally assistance of ice-breakers may be required.
HEALTH: Radio Pratique available.
RADIO: Mont-Joli, call sign VCF.
TUGS: Available, but not required by power-driven vessels.
BERTHING:

Section	*Length* (m.)	*Depth* (m.)
1	186	10.0
2	92	4.9
3	120	4.0

CRANES: Available on request.
STEVEDORES: *Working Hours:* Monday to Friday, 0800 hrs. – 1700 hrs. Sunday and holiday work possible with advance notice.
MEDICAL: Hospital at Matane.
DENSITY: 1025.
FRESH WATER: Available on request.
FUEL: Light fuel and diesel oil available.
REPAIRS: Minor repairs possible.
DRY DOCK: Nearest dry dock located at Les Mechins (30 miles from Matane).
AIRPORT: At Mont-Joli.
TIME: GMT minus 5 hours in Winter. GMT minus 4 hours in Summer (first Saturday of April to last Saturday of October).
HOLIDAYS: New Year's Day, Good Friday, Easter Monday, Queen's Day (4th Monday of May), June 24th, Dominion Day (July 1st), Labour Day (1st Monday of September), Thanksgiving (2nd Monday of October), Remembrance Day (November 11th) and Christmas (December 25th and 26th).
GENERAL: *Formalities:* Port of entry for customs (Rimouski) and immigration. Quarantine services also available by radio or telephone.
Chart: Canadian Chart No. 1236.

SHIPMASTER'S REPORT: November, 1983.
Pilotage: Optional; advisable on first visit. Pilot can be requested by telephoning (418) 562-3201 or 4083, or by contacting the Harbour Master's Office during office hours.

Pilot boards vessel 1 mile off the entrance.
Anchorage: In the river, 1 mile from the West breakwater, in depths of 9 m. – 18 m. Bottom mud.
Max. Size: Up to 30,000 d.w.t., length 175 m. (575 ft.) and max. draft 8.5 m. (28 ft.).
Health: Pratique is granted on arrival.
Radio: Mont-Joli: VCF.
VHF: Harbour Authority has no VHF.
Berthing: Matane is on St. Lawrence River South Shore, 36 miles above Cap Chat. The new harbour is 2 miles West of the town and open to traffic throughout the Winter.

Two breakwaters protect and form Matane harbour, which provides a commercial quay of 183 m. (600 ft.) with 8.2 m. (27 ft.) depth alongside.

An underwater oil pipeline extends 600 m. seaward N.E. and parallel with the N.E. breakwater. The seaward end in 6 m. of water, is marked by a buoy.

Entry direct from the river. The 150 m. (500 ft.) wide entrance between the breakwater heads faces N.E. In the Autumn, strong N.E. winds send in a heavy sea.

Max. tidal rise is 4.4 m. (14 ft. 6 in.). The mean tidal rise: MHWS 3.4 m. (11 ft.), MHWN 2.7 m. (9 ft.) and MLWN 1.2 m. (4 ft.).
Stevedores: Good supply of labour available.
Medical: Full range of medical services available.
Density: 1013.
Fresh Water: Laid on to berth. Has to be reconnected in Winter season, which makes it expensive.
Fuel: Light fuel and diesel oil available.
Customs: Matane is a port of entry.
Airport: Daily flight to Montreal.
General: Port used mainly for Canadian timber exports.

AUTHORITY: Transport Canada, Harbours and Ports Directorate, 901 Rue Cap-Diamant, 4th Floor, Quebec G1K 4K1, Canada. *Tel:* (418) 648-3680. *FAX:* (418) 648-7980.

G. Desrosiers, Harbour Master – Matane. *Tel:* (418) 562-0042, 562-0986, 562-1842.

MONT-LOUIS, Quebec: 49.14 N. 65.44 W.

LOCATION: Located on the South shore of the St. Lawrence River, 300 nautical miles downstream from Quebec City.
PILOTAGE: Not compulsory but available.
ANCHORAGE: In the Bay in 6 fathoms, mud bottom. There is not much room to work out from this anchorage.
RESTRICTIONS: The harbour is open year round, but occasionally assistance of ice-breakers may be required.

Some Masters have found the port and certain berths in it hazardous during bad weather. Shipmasters are advised to take the advice of the local ships' Agents in this respect.
Channel: Approach channel depth 9.1 m. Tides rise 9.5 ft. at Springs and 7 ft. at Neaps.
HEALTH: Pratique available by radio.
RADIO: Fox River (VCG).
TUGS: None available.
BERTHING: (1) Transport Canada Wharf on West shore of bay. All access at this wharf is prohibited, at present this wharf is falling into ruins.

(2) Transport Canada Wharf, located on the East side of the bay, 403 ft. long and 47 ft. wide at outer end, having a depth of 30 ft. at its outer end.
CRANES: Available on request.
STEVEDORES: *Working Hours:* Monday to Friday, 0800 hrs. – 1700 hrs. Sunday and holiday work possible with advance notice.
MEDICAL: Hospital at Ste. Anne des Monts, 90 km. to the West.
DENSITY: 1025.
FRESH WATER: Available.
FUEL: Diesel oil available.
REPAIRS: Minor repairs only.
DRY DOCKS: Nearest dry dock located at Les Mechins (56 miles from Mont Louis).
AIRPORT: Matane and Gaspe.
TIME: GMT minus 5 hours in Winter. GMT minus 4 hours in Summer (first Saturday of April to last Saturday of October).
HOLIDAYS: New Year's Day, Good Friday, Easter Monday, Queen's Day (4th Monday of May), June 24th, Dominion Day (July 1st), Labour Day (1st Monday of September), Thanksgiving (2nd Monday of October), Remembrance Day (November 11th) and Christmas (December 25th and 26th).
GENERAL: *Services:* Post Office, Telephone, Provisions.
Charts: Canadian Chart No. 1230 (Mont-Louis Bay Inset).
Transportation: Good highway connects with coastal villages and Quebec. No railroad.
AUTHORITY: Transport Canada, Harbours and Ports Directorate, 901 Rue Cap-Diamant, 4th Floor, Quebec G1K 4K1, Canada. *Tel:* (418) 648-3680. *FAX:* (418) 648-7980.

N. Bernachez, Harbour Master – Mont-Louis. *Tel:* (418) 797-2491.

MONTREAL, Quebec: 45.30 N. 73.33 W. (See Plan)

DOCUMENTS:
3 copies Crew Lists.
3 copies Passenger Lists.
3 copies Customs Documents.
3 copies Health Documents.
3 copies Manifests.
3 copies Bills of Lading.
3 copies Ship's Papers.
PILOTAGE: Compulsory. Pilots board inbound vessels at Anse-aux-Basques (near Les Escoumins) to bring ships as far as port of Quebec where Pilots are exchanged for the trip to Trois-Rivieres. Pilots are again exchanged at Trois-Rivieres before ships may proceed to Montreal.

For further information refer to "Quebec".
ICE ADVISORY SERVICE: Ships inbound from seaward between December 15th and April 15th should advise "Ice St. John's" 36 hours prior to reaching 58° 00′ W., Cabot Strait or the Strait of Belle Isle, stating the name of the vessel, the position, speed, destination, whether loaded or in ballast, Classification Society, Ice Class (if any) and agency in Canada. This procedure will facilitate the passing of ice information to the ship as necessary.

Ice information is also available from Coast Guard Marine stations at regular scheduled broadcast times or upon request. For more information consult the "List of Radio Signals". Updated ice charts are also transmitted by faxsimile from Coast Guard Radio Stations at scheduled broadcast times.

Ice St. John's can be contacted through the following radio stations:

VON	St. John's
VCS	Halifax
VOO	Comfort Cove
VCO	Sydney
VCM	St. Anthony
VAU	Yarmouth

Master should obtain Canadian Coast Guard publication "Ice Navigation in Canadian Waters". This book will explain ice breaker procedure and sound advice for ice navigation.
ANCHORAGE: Available at Lanoraie, approx. 3 miles above Sorel harbour limits, and at Pointe-aux-Trembles anchorage below Berth 110. Also opposite Grain Elevator No. 4. Boatmen services are available to vessels at anchor.

Anchorages will be allocated by the Harbour Master (Montreal), through the Vessel Traffic Services Centre, Montreal.
MAX. SIZE: Entry only restricted by draft. Main channel depth is 11.00 m. Channel 243.8 m. wide at narrowest point.

HEALTH: Except in case of coastwise vessels free of disease and arriving in Canada from ports or areas that are not infected, every vessel coming from a port outside Canada is inspected by the Quarantine Officer, and shall not make customs entry until it has received pratique.

"Coastwise Vessel" means a vessel operating exclusively between Canada and the island of St. Pierre and Miquelon or between Canada and the United States, including Alaska. A "coastwise vessel" loses coastwise status and is subject to quarantine inspection on its next arrival at a Canadian port when at any time it touches a foreign port other than those mentioned above.

Where sufficient quarantine information can be given by wireless, Radio Pratique may be obtained between the hours of 0900 and 1700 the day preceding arrival:

- *(a)* From "Quarantine Halifax" by vessels bound for Halifax, Nova Scotia.
- *(b)* From "Quarantine Saint John" by vessels bound for Saint John, New Brunswick.
- *(c)* From "Quarantine Quebec" by vessels approaching Canadian ports via the Saint Lawrence River.

For the purposes of Radio Pratique vessels are required to give the following information:

- *(a)* Name and nationality of vessel.
- *(b)* Ports called at during voyage.
- *(c)* Date and place of last fumigation or Derat Exemption Certificate.
- *(d)* Nature of cargo.
- *(e)* Number of crew.
- *(f)* Number of passengers.
- *(g)* Port of destination and name of Agent.
- *(h)* Number of persons without valid vaccination certificates.
- *(i)* Condition of health of all on board with details of any sickness or death which has occurred during the voyage.

Vessels proceeding directly into the Seaway may now receive quarantine inspection and clearance while at anchor awaiting entrance to the Seaway.

RADIO: All communications via Montreal Radio, call sign VFN. Vessel Traffic Services handle VHF traffic as follows: Between Yamachiche and Cap St. Michel, VHF Channel 9 (156.45 MHz.). From Cap St. Michel to Montreal, VHF Channel 10 (156.50 MHz.). Ship to ship communication, VHF Channel 6, (156.3 MHz.). Port radar service available.

TUGS: 8 tugs, 1,000 h.p. – 1,600 h.p.

BERTHING:

Berth number (usual name)		*Wharf length (m.)*	*Depth alongside (m.)*	*Remarks*
Bickerdike Basin				
	M-6	217.6	4.60	
	M-5	628.3	7.62	
	M-4		7.62	
	M-3		7.62	
	M-2		7.62	
	M-1	91.4	7.62	
Bickerdike Terminal				
East Side	B-1	568.7	7.6-8.83	Ro-Ro Ramp
	B-2		8.83	Shed
	B-3		8.83	
North End				
	12-N	152.4	10.70	
West Side				
	B-4	585.60	8.83	Shed
	B-5		8.83	
	B-6		8.83	
	B-7	357.3	8.83	Ro-Ro Ramp, container cranes 1 × 50 tons and 1 × 35 tons
	B-8		8.83	
Windmill Point Wharf				
	5W	141.7	9.14	
	6W	152.4	9.14	
	7W	163.9	9.14	
	9 W to 10W	373.6	9.14	
Alexandra Pier				
South Side				
Lower	3	163.0	10.2	Berth 3 and 5: Total berthing length of 360.8 m.
Upper	3			Passenger terminal 'Iberville' upper shed 3
Lower	5	197.8	10.2	Parking only
Upper	5			Passenger terminal 'Iberville' upper shed 5
North Side				
Lower	4	162.4	10.2	
Upper	4			
Lower	6	215.2	10.2	
Upper	6			
King Edward Pier				
South Side				
Lower	7	386.5	10.7	Berthing only
Upper	7			
Lower	9			
Upper	9			
North Side				
Lower	8	389.5	10.7	Berthing only
Upper	8			
Lower	10			
Upper	10			
Sect. 25 – 42 inc.				
	25	295.6	9.0	
	27	251.7	9.0	Shed
	28	245.2	9.1	
	29	252.3	9.1	
	31	154.2	9.1	Not available for Marine Traffic
	32	153.6	9.1	Shed
	33	151.4	9.1	Not available for Marine Traffic
	34	143.3	9.1	
	35	168.7	9.1	Shed
	36	161.2	9.1	
	37	163.6	9.1	
	39	183.4	9.4	Shed
	40	185.6	9.4-10.7	
	41	200.0	10.7	
	42	187.1	10.7	
Laurier Terminal				
	43	266.0	10.2	Capable of handling containers.
Tarte Terminal				
	44S	225.5	9.1	
	44N	263.3	9.1	Bulk Cement Facility
Sutherland Pier				
	46SE	162.1	9.9	Bulk sugar facility
	46	143.6	10.2	
Pier IX Terminal				
	46	143.7	10.2-10.7	Shed
	48	158.0	10.4	600 ton shore crane, Ro-Ro ramp
	49	91.7	10.4	Shed
Hochelaga Terminal	49	91.3	10.4	Shed
	50	190.2	10.4-10.7	Shed
	51	239.6	10.7	Shed
	52	338.0	10.7	Shed
Elevator No. 4	54	394.7	10.7	3×1,500 t.p.h. loading towers. Grain loading
	55		10.7	
	56	244.7	8.2	Grain unloading
	57S	264.9	8.2	Salt
Racine Terminal				
	57	197.8	10.7	4 gantry cranes, 35-40 tons each, capable of container handling
	58	167.6	10.7	
	59	152.4	10.7	
	60	152.4	10.7	
	61	190.8	10.7	
	62	245.4	10.7	
	64 (Part)	157.35	9.1	
Cadillac Terminal				
	64 (Part)	157.3	9.1	Shed
Maisonneuve Terminal	66	199.3	10.7	Ro/Ro
	67	223.1	10.7	From Section 66 to Section 70, 3×35 ton + 1×40 ton travelling container cranes.
	68	194.8	10.7	
	70	200.4	10.7	
Sect. 71 – 72				
	71	198.1	10.7	Shed
	72	171.8	10.7	Two travelling cranes, 18 and 13 tonnes – Dry Bulk
Boucherville Terminal				
	73	192.9	10.7	Ro/Ro – One travelling container crane, 45 tons
	74	192.9	10.7	
Cast Terminal				
	77	249.0	10.7	
	78	489.4	10.7	Container Terminal 2×50 ton portainer cranes and 1×104 ton mobile harbour crane.
	79			
	80			
Contrecoeur Terminal:				See "Contrecoeur".

GRAIN FACILITIES:

Elevator No.	*Capacity in bushels*	*Loading galleries at berths*	*Loading capacity bushels per hour*	*Remarks*
4 (Berths 54-56)	9,500,000	54–55	120,000	Unload at 56 with 3 marine legs and a capacity of 100,000 bushels/p.h.

CRANES: Floating crane 250 ton capacity and many mobile cranes with capacity up to 200 tons.
STEVEDORES: Working hours 0800 to 1200, 1300 to 1700.
MEDICAL: All medical facilities available.
TANKERS: Petroleum Product Facilities: Also see "Fuel".

Berth No. (usual name)		*Wharf length (m.)*	*Depth alongside (m.)*	*Remarks*
Norcan	76	156.4	10.7	
Olco Petroleum Terminal	94	238.10	10.67	
Terminal	95	404.8	9.1-10.7	
Montreal	96			
Est (TME)	97			Salt
Imperial Oil	101 E	192.6	10.7	Total berthing length 384.96 m.
	102 E	192.5	10.7	
	102 W	97.5	4.6	
Shell Canada	103 S	189.6	10.7	
	103 N	189.6	8.7	
Sunoco Inc.	104	32.6	7.6	Can accommodate ships of 147.8 m. length
Ultramar	105	116.1	9.45	Total berthing length 232.57 m.
	106E	116.4	9.45	
Petro Canada	109	139.0	10.7	Total berthing length 278.12 m.
	110 E	139.0	10.7	
	110 W	163.6	4.57	
Marien Street Wharf	110	31.08	3.7	

FRESH WATER: Available by pipeline at most berths.
FUEL: All grades can be delivered at oil companies' terminals; also by bunker barges to vessels lying anywhere in the harbour.

Dock and Location: Berth 76, East Montreal.
Operator: Terminal Norcan Inc., 6370 Notre Dame St. East, Montreal, Quebec H1N 2E1. Tel: (514) 253-2222. Contact: Daniel Carrier.
Storage Capacity (Barrels): 1,000,000.
Length of Dock: 156.4 m.
Depth at Dock: 10.7 m.

Dock and Location: Berth 94, East Montreal.
Operator: Olco Petroleum Group Inc., 2561 Georges V, Montreal, Quebec H1L 6J7. Tel: 645-6526. Contact: Louis Senechal, Dock Manager.
Type of Dock: Loading and unloading.
Type of Cargo Handled: Crude oil, gasoline, stove oil, marine fuel oil, marine diesel fuel, No. 2 fuel oil, No. 6 fuel oil.
Size of Pipelines: 16 in.; 12 in. and 10 in.; 10 in.; 12 in.; 12 in.; 12 in.; 12 in.
Storage Capacity (Barrels): 1,000,000; 430,000; 80,000; Production capacity: 15,000; 400,000; 300,000.
Distance from Dock to Storage Tanks: 3.5 miles; 1,500 ft.; 1,500 ft.; 3.5 miles.
Length of Dock: 238.05 m.
Depth at Dock: 10.67 m.

Dock and Location: Berths 95, 96 and 97.
Operators: Terminal Montreal Est (T.M.E.) Ltd., 11650 Metropolitan Boulevard E., Montreal, Quebec H1B 1A5. Tel: (514) 640-9361. Contact: Jacques Riendeau, Terminal Assistant.
Type of Dock: Oil – loading and unloading, marine bunkering. Type of cargoes handled: Asphalt, distillate, bunker 'C'. Marine bunkers: A complete range of marine blended fuel oils, marine diesel, marine gas oil, marine bunker 'C', fresh water. Storage capacity: 1,800,000 barrels. Distance from dock to storage: 0.5 km. (1,500 ft.). Length of dock: 404.8 m. and water depth alongside varies from 9.1 m. to 10.7 m.

Dock and Location: Berth 101 E., 102 E. and 102 W.
Operator: Imperial Oil Products and Chemicals Division, 10515 Notre-Dame E., Montreal, Quebec H1B 2T9. Tel: (514) 640-2600. Contact: Donald Gwilliam, Tel: (514) 640-2613.
Type of Dock: Loading and unloading, bunkering.
Type of Cargo Handled: Used for loading and unloading. Both 101 E and 102 E handle gasoline, aviation and jet fuels, mid-distillates, crude, bunker, asphalt and specialty products as well as bunkering vessels with all grades of marine fuel oils (Berth 102 W is used exclusively by Marine Bunkering Barge).
Size of Pipelines: 16 in.; 12 in.; and 8 in.; 10 in.; 12 in.; 12 in.; 16 in. and 12 in.
Storage Capacity (Barrels): 3,000,000. Total storage capacity rotated by products depending on seasonal demands.
Distance from Dock to Storage Tanks: 2,800 ft.
Length of Dock: Inside 97.5 m. Outside 385 m.
Depth at Dock: 4.6 m. and 10.7 m.

Dock and Location: Berth 103 S. & 103 N. Montreal East.
Operator: Shell Canada Ltd., 10501 Sherbrooke St. East, Montreal, Quebec H1B 1B4. Tel: (514) 645-1661. Contact: C. Demers, Dock Supervisor. Tel: (514) 640-3366.
Type of Dock: Loading and unloading.
Type of Cargo Handled: Gasoline, stove oil, furnace oil, chemicals, jet fuel, aviation fuel, marine diesel, bunker "C", thin fuels 200 secs./3,500 secs.
Size of Pipeline: 2–10 in.; 2–12 in.; 20 in.
Storage Capacity (Barrels): 4,000,000.
Distance from Dock to Storage Tanks: 1.75 miles.
Length of Dock: 2×189.6 m.
Depth of Dock: 10.7 m. S., 9.1 m. N.

Dock and Location: Berth 104.
Operator: Sunoco Inc., 11055 Victoria Street, Montreal, Quebec H1B 2N6. Tel: (514) 645-6599. Fax: (514) 645-4515. Contact: Lionel Croteau, Superintendent.
Type of Dock: Loading and unloading.
Type of Cargo Handled: Gasoline and No. 1 and No. 2 fuel oil.
Storage Capacity (Barrels): 7 tanks of 50,000; 2 tanks of 25,000.
Distance from Dock to Storage Tanks: 500 m.
Length of Dock: 32 m. but can accommodate vessels up to 148 m.
Depth at Dock: 9.1 m.

Dock and Location: Berths 105 and 106 E.
Operator: Ultramar Canada Inc., 7000 Marien, Montreal, Quebec H1B 4W3. Tel: (514) 640-2333. Contact: Andre Rehault, Operations Manager.
Type of Dock: Loading and unloading.
Type of Cargo Handled: Crude oil; gasoline; light fuels; marine gasoil; marine diesel; medium fuels 200 secs/3,000 secs; bunker "C".
Size of Pipe-lines: 12 in. and 8 in.; 10 in.; 3–8 in.
Storage Capacity (Barrels): 6,300,000 total storage capacity rotated by products depending upon production requirements.
Distance from Dock to Storage Tanks: 1 mile.
Length of Dock: 232.5 m.
Depth at Dock: 9.45 m.

Dock and Location: Sections No. 109 and 110 E.
Operator: Petro-Canada, 11701 Sherbrooke Street East, Montreal, Quebec H1B 1C3. Tel: (514) 640-8000. Contact: Serge Rivard, Superintendent. Tel: (514) 640-8240.
Type of Dock: Loading and unloading.
Type of Cargo Handled: Gasoline, stove oil, furnace oil, chemicals, jet fuel, aviation fuel and marine diesel.
Storage Capacity (Barrels): 650,000; 900,000; 300,000; 540,000.
Distance from Dock to Storage Tanks: 0.75 mile.
Length of Dock: 440.1 m.
Depth at Dock: 10.7 m.
CONSULS: (Consul General unless otherwise stated)

	Tel. No.		*Tel. No.*
Argentina	842-6582	Lebanon	276-2638
Austria	845-8661	Liberia	871-4741
Belgium	849-7394	Luxembourg	489-6052
Benin Rep.(Consul)	287-1583	Madagascar (Consul)	672-0353
Brazil	499-0968	Mexico	288-2502
Chile	499-0405	Monaco	849-0589
Colombia	849-4852	Netherlands	849-4247
Costa Rica	393-1057	Norway	874-9087
Cuba	843-8897	Pakistan	845-2297/8
Czech Republic	849-4495	Panama	874-1929
Denmark	877-3060	Peru	844-5123
Dominican Republic	933-9008	Poland	937-9481/2
E. Caribbean Com. (Trade Officer)	866-7761	Portugal	499-0359
		Romania	876-1792
Ecuador	874-4701	Russia	843-5901
Egypt	866-8455	Rwanda	526-1392
Finland (Consul)	878-9641	San Marino	871-3838
France	397-7437	Senegal	526-8183
Germany	286-1820	South Africa (Consul)	878-9217
Greece	875-2119	Spain	935-5235/6
Haiti	499-1919	Sweden	866-4019
Honduras	937-1138	Switzerland	932-7181/2
Hungary	393-1555	Syria	630-4339
Iceland	982-0188	Thailand	871-1271
Israel	393-9372	United Kingdom	866-5863
Italy	849-8351	U.S.A.	398-9695
Japan	866-3429	Venezuela	842-3417/8
Korea	845-3243		

SURVEYORS: American Bureau of Shipping, Bureau Veritas, Det Norske Veritas, NKK, RIN, GL and Lloyd's Register of Shipping.
GANGWAY/DECK WATCHMEN: Required.
OPENING/CLOSING HATCHES: Always done by stevedores.
CUSTOMS ALLOWANCES: Tobacco, 200 cigarettes; 50 cigars; tobacco, 2 lb. per person over 16. Wine/Spirits, total of 40 oz. per person over age of 21.

Subsequent issues may be authorised to crew members of foreign vessels, but the max. quantity any crew member may hold at any one time must not exceed 300 cigarettes, 75 cigars, 3 lb. tobacco and 60 oz. liquor.
REPATRIATION: All facilities available.
AIRPORT: International Airports at Dorval and Mirabel.
TIME: GMT minus 5 hours. Daylight saving time applied from first Sunday of April to last Sunday of October.
HOLIDAYS: New Year's Day; Good Friday; Victoria Day; St. Jean Baptiste Day (June 24th); Canada Day; Labour Day; Thanksgiving Day; Christmas Day; Boxing Day
POLICE/AMBULANCE/FIRE: Emergency telephones at berths, directly connecting berth with Police and Ambulance.
BANKS:

- Bank of Canada.
- Bank of Montreal.
- Bank of Nova Scotia.
- Banque Nationale du Canada.
- BNP Canada Inc.
- Banque Provinciale du Canada.
- Canadian Imperial Bank of Commerce.
- Montreal City & District Savings Bank.
- Royal Bank of Canada.
- Toronto-Dominion Bank.

SHORE LEAVE: Permitted.
IDENTIFICATION CARDS: Not required.
GARBAGE DISPOSAL: Marine industrial refuse collection. Contact R.Berthiaume Marine Inc. Tel: 640-3138.

SEAMAN'S CLUBS: Mariners House of Montreal. Tel: 849-3234.
AUTHORITY: Montreal Port Corporation, Port of Montreal Building, Cite du Havre, Montreal, Quebec H3C 3R5, Canada. *Tel:* (514) 283-7011. *FAX:* (514) 283-0829. *Contact:* Dominic J. Taddeo, President and Chief Executive Officer; Michel L. Lesage, Vice President, Operations. Captain Jean-Luc Bedard, Harbour Master.

NANAIMO, B.C.: 49.10 N. 123.57 W. (See Plan)

DOCUMENTS:
3 copies Crew List Form IMM.200.
1 copy Passenger List.
3 copies Ship Stores E.1.
3 copies Crew Declarations Y.14.
1 Quarantine Certificate.
Manifest from previous Ports.

PILOTAGE: Compulsory. Pilots board off Victoria. Pacific Pilotage Authority – Tel: 666–6771.
ANCHORAGES: 5 deep sea anchorages to the West of Newcastle and Protection Islands.
RESTRICTIONS: No restrictions on Nanaimo Assembly Wharf or Duke Point. Harmac Wharf restricted from 2045 to 0700 hrs.
MAX. SIZE: Controlling depths: Harbour entrance, 17.37 m. at HW and 13.41 m. at datum. Minimum controlling depth for inner portion of harbour: Approach to "A" and "B" Berths 8.0 m.; "C" Berth 9.0 m. Mean range of tide 3.2 m., with maximum range of 4.9 m.
HEALTH: Pratique granted at Victoria, B.C.
RADIO: Vancouver Radio and Nanaimo Radio, VHF Channel 87.
VHF: Nanaimo Radio on Channel 16. Vancouver Traffic Management on Channel 11.
TUGS: Join vessel at Gallows Point, Protection Island. Ship's lines used if necessary. Available all hours in and out and as required by Pilot.
BERTHING: *Assembly Wharf:*
Berth "A" – Length 182.88 m. Depth alongside: 10.1 m.
Berth "B" – Length 182.88 m. Depth alongside: 12.4 m.
Berth "C" – Length 182.88 m. Depth alongside: 10.9 m.
Coastwise – Length 60.96 m., scow and barge berth.
60 tonne barge ramp.
Terminal Area – 15 ha. paved, 8,332 sq.m. warehouse space.
Duke Point Deep Sea Terminal:
Berth "D" – 170.0 m. long, LW depth 13.5 m.
100 tonne barge ramp.
Terminal area – 6 ha. of paved storage area. Additional 19.5 ha. of storage area available adjacent to barge ramp facility.
Cruise Ship Facility: The "Visiting Ship Pier" is a floating structure with length 180 m. and depth of 8.5 m. at L.W. is located in the inner harbour. Vessels of 3,000 tons displacement and LOA 113 m. (370 ft.) can be accommodated, and larger vessels can be accommodated, subject to approval of Harbour Master. Potable water and sewage connections available.
Private Wharves:
MacMillan & Bloedel Ltd:
(1) Harmac Pulp Wharf – 115 m. long, LW depth 10.00 m.
(2) Harmac Lumber Wharf – 137 m. long, LW depth 10.40 m.
CP Rail Coastal Marine Wharf:
N.E. side – condemned.
S.W. side – (guide pier) – 79 m. long, LW depth 9.14 m.
Canadianoxy Chemicals Ltd.:
Wharf – 70.00 m. long, LW depth 9.20 m.
Imperial Oil Ltd.:
Wharf – 48.76 m. long, LW depth 6.10 m.
Petro Canada Inc.:
Wharf – 14.00 m. long, 33.5 m. between dolphins, LW depth 4.88 m.
BULK CARGO FACILITIES:
Exports: Lumber, pulp and other related forest products.
STEVEDORES: Ordered by Agent, 16 hours minimum notice.
MEDICAL: No advance notice except in case of serious illness, to be included in arrival cable. Hospital facilities available.
TANKERS: Tanker berths at private companies' wharves where own line restrictions apply. See "Berthing".
DENSITY: Average density in port is 1019.5.
FRESH WATER: Available at all berths. Delivery by hose at $1.30 per metric ton plus connection fee.
FUEL: Bunkering by tanker truck and barge.
FIRE PRECAUTIONS: No other specific precautions except during extreme heat when smoking may be prohibited on wharf adjacent to lumber.
CONSULS: None.
REPAIRS: Possible.
DRY DOCKS: Nanaimo Shipyard - Max. 200 ft. and 600 tons. (Also see "Vancouver").
SURVEYORS: Arranged by Agent.
GANGWAY/DECK WATCHMEN: Services not necessary but security guards are available.
OPENING/CLOSING HATCHES: Either crew or stevedores whichever to ship's advantage.
CUSTOMS ALLOWANCES: Tobacco: 200 cigarettes or 1 lb. tobacco and 15 cigars per crew member per week. Wine and/or Spirit: 40 oz. per week per crew member. Beer: No restrictions.
REPATRIATION: Facilities exist in Vancouver.
AIRPORT: Nanaimo Airport 16 km. South of port, serviced by various airline companies.

Scheduled Seaplane service from Nanaimo Harbour to Vancouver Harbour. Charters available.

TIME: Pacific Standard Time, 8 hours behind GMT. Daylight Saving Time in effect from early April to late October.
HOLIDAYS:
(1) Good Friday, Easter Monday, Victoria Day (May 24th), Canada Day (July 1st), British Columbia Day (August 1st), Thanksgiving, Remembrance Day (November 11th) and Boxing Day (December 26th), crews are available at overtime rates by arrangement.
(2) No cargo work on Labour Day, Christmas Day and New Year's Day except in the case of emergency.
(3) Crews cease work at 1200 hrs. on December 24th until 0100 hrs. December 26th; also from 1200 hrs. December 31st until 0100 hrs. January 2nd.

POLICE/AMBULANCE/FIRE: Police: 753-2212, non-emergency – 754-2345; Fire: 753-1234, non-emergency 753-7311; Ambulance: 758-8181.
EMERGENCY CO-ORDINATION CENTRE: Coast Guard Search and Rescue Emergency – Tel: 1-800-742-1313.
TELEPHONES: Available for each vessel.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Not necessary.
GARBAGE DISPOSAL: Can be arranged through agent if reasonable notice given.
WASTE OIL DISPOSAL: Not available.
SEAMAN'S CLUBS: None.
CURRENCY: Canadian Dollar.
DEVELOPMENTS: The turning circle will be dredged in 1994/95 in order to increase the minimum controlling depth to 8.5 m.
AUTHORITY: Port of Nanaimo, P.O. Box 131, Nanaimo, British Columbia, Canada V9R 5K4. *Tel:* (604) 753-4146. *FAX:* (604) 753-4899. *Contact:* W.E. Mills, Port Manager and Chief Executive Officer (Tel: (604) 753-4146). Kevin G. Obermeyer, Director of Marine Operations and Harbour Master.

NANISIVIK, N.W.T.: 73.04 N. 84.32 W. (See Plan)

DOCUMENTS: Standard Canadian documents, See "Montreal".
PILOTAGE: No pilotage.
ANCHORAGE: Anchorage can be obtained 15 miles within the entrance of Strathcona Sound, 8 cables off the South shore of the Sound in a berthing depth of 69 m. (228 ft.), clay. Good anchorage is reported to be available in English Bay in a depth of 15 m. (48 ft.).
RESTRICTIONS: Vessel must comply with Canadian Arctic Pollution Regulations which govern earliest and latest dates permitted within Arctic zones depending on vessel's ice classification, nature and quantity of cargo and fuel.
MAX. SIZE: Draft must not exceed approx. 40 ft. alongside dock. Mooring facilities feasible for vessels up to 50,000 tons gross but may prove awkward for those over 20,000 tons gross especially under S.E. wind conditions.
HEALTH: See Iqaluit (Frobisher Bay). Customs Officer (R.C.M.P.) acts as Quarantine Officer.
RADIO: Vessels bound North should pass messages through Iqaluit (Frobisher Bay) VFF until into Lancaster Sound where communications regarding ETA, etc. are relayed via Resolute Bay VFR.

Nanisivik Mines no longer has regular HF radio communications available on frequency 4145.0 kHz for ship-to-shore contact.

VHF: Channel 16 monitored once arriving vessels have entered Strathcona Sound en route to port of Nanisivik. Channel 6 monitored as standby.
BERTHING: No special requirements. The dock consists of three parallel 70 ft. wide cells which are 55 ft. apart. The centre cell supports the shiploader. The right and left hand cells each have two bollards (See "plan") each with an additional bollard 150 ft. in from the dock face. To the East and West of the dock there are dolphins supporting single bollards. To connect to these the ship's bow and stern lines are towed ashore and attached to a 0.5 in. diameter × 600 ft. heaving line. Once ashore the lines are shackled to a 3.25 in. diameter × 380 ft. mooring line which is secured to the bollard. The lines are then taken up and made fast.
CRANES: The only shore cranes available are mobile units when they are not in service by the mine.
BULK CARGO FACILITIES: One fixed shiploading gantry capable of loading 100 tonnes per hour. The facilities are automatically shut down when winds exceed 50 m.p.h.
STEVEDORES: As per contract with Nanisivik Mines Limited.
MEDICAL: The community has a large modern nursing station with a full time nurse and occasionally a doctor. No advance notice required. Transportation provided by mine vehicles. For serious medical cases vessels should radio in advance so air transportation can be arranged to Iqaluit (Frobisher Bay) hospital.
DENSITY: Density varied with ice conditions and tides. Note — When reading densities it has been found that different readings have been found at different depths due to ice melting.
FRESH WATER: Available by tank truck through Nanisivik Mines Limited.
FUEL: Not available.
REPAIRS: Minor repairs only i.e. welding, etc., by mine personnel.
SURVEYORS: Not available. Nearest availability is Montreal, Quebec.
GANGWAY/DECK WATCHMEN: Not obligatory but recommended due to sudden changes in wind and tide. Nanisivik Mines Ltd. provide gangway.
OPENING/CLOSING HATCHES: Carried out by crew.
CUSTOMS ALLOWANCES: Standard Canadian allowance except no beer or alcohol permitted ashore. This restriction strongly upheld by R.C.M.P.

REPATRIATION: Crew changes can be effected 3 times weekly, Mondays at 1330 hrs. local time, to Ottawa, Ont., via First Air, Wednesday at 1600 hrs. local time, to Yellowknife, NT, via First Air, Thursdays at 1600 hrs. local time, to Ottawa, Ont., via First Air. Mine requires one weeks notice through the Port Authority for loading arrangements.
AIRPORT: Approx. 8 miles from dock, transportation provided courtesy of mine.
TIME: GMT minus 4 hours during Summer months (shipping season).
EMERGENCY CO-ORDINATION CENTRE: Canadian Coast Guard, Ottawa, Ontario. Tel: (613) 996-9788, Telex: 053-3128.
TELEPHONES: Not available on or near dock. Phone calls can be made from the mill offices or in the community.
BANKS: There are no banks in the community. However, the local Northern Store has cash machine facilities.
STORING: See "Prelims". Items 1, 2, 5, 6 not applicable. Items 3 and 4: Trucks and forklift trucks can proceed alongside at the berth.
SHORE LEAVE: Permitted.
GARBAGE DISPOSAL: Garbage pick-up available by truck. Garbage has to be in plastic bags. Charge is at an hourly rate.
WASTE OIL DISPOSAL: Not available.
SEAMAN'S CLUBS: The community is dry.
There is a recreation centre with a swimming pool.
CURRENCY: Canadian Dollar.
AUTHORITY: Nanisivik Mines Limited, P.O.Box 225, Nanisivik, N.W.T., Canada X0A 0X0. *Tel:* (819) 436-7472. *FAX:* (819) 436-7435. *Contact:* John Goyman, Mill and Material Services Superintendent.

NEW RICHMOND (Black Cape), Quebec: 48.08 N. 65.50 W. (See Plan)

LOCATION: On the North Shore of (Cascapedia Bay) Baie des Chaleurs in the municipality of New Richmond.
ANCHORAGE: Outside Black Cape Wharf. Masters are instructed not to anchor in the area of the effluent line to the West of the wharf (See "Plan").
RADIO: Ship to shore through Grindstone (VCN) or Fox River (VCG). Calling Frequency 2182 kHz.
Arrival Advice: 72, 48, 24 hours prior to arrival.
VHF: Consolidated Bathurst Inc.
Frequencies: 156.500 kHz (Simplex)
Channel No.: 10 (Marine traffic control)
Station location: New Richmond, Quebec, Canada
Co-ordinates: Lat. 48° 09′ 24″ N., Long. 65° 50′ 06″ W.
Call Sign: X 00749
Operating range is about 20 miles.
TIME: Atlantic Standard Time. Daylight Saving time is observed.
GARBAGE DISPOSAL: Not available.
WASTE OIL DISPOSAL: Not available.
SEAMAN'S CLUBS: None.
CURRENCY: Canadian Dollar.
GENERAL:
Charts: B.A. Chart No. 1715.
Tides: Atlantic Coast Tide and Current Tables.
Prevailing Winds: Southwest.
Port of Reference: Pointe St. Pierre.

SHIPMASTER'S REPORT: May 1979.
Approaches: Straightforward. We used Canadian Chart 4486 – Baie des Chaleurs. The light on the end of the pier is a rotating beacon type, which shows both Green and White on one rotation. The pier is a good Radar target, but is not conspicuous from seaward in daylight.
Anchorage: Vessels may anchor off the pier as convenient (See "Anchorage" above). We did not anchor, but we would imagine the holding ground to be good, as we found stiff clay in the vicinity of the pier.
Berthing: There are no tugs or Pilots at New Richmond. In good weather conditions, such as we experienced, berthing and unberthing present no difficulties. Caution should be exercised, since the tide and prevailing winds set across the pier.

An offshore anchor let go about 2 cables off the pier head, was found to be most useful arriving and leaving. We let the cable run to one shackle on deck. This is a little too much, for it was found necessary to slack away to 4 shackles in order to get the ship alongside. In good weather, the anchor just on the bottom should be sufficient. Line handlers should be arranged with Consolidated prior to arrival. There is no lineboat.

We berthed head in, starboard side to, on the West side of the New Wharf.

The 17 ft. depth is only available for a length of 400 ft., so vessels of greater length will find their stern overhanging. For plan of soundings taken at LW (See "Plan").
Departure: The vessel was backed easily down the pier, heaving in the cable at the same time and carrying down a bresting line to use as a check if necessary. One shackle of cable should be left out to assist with turning the vessel off the pierhead. This turn should be as short round as possible and care should be taken to keep as near as possible on the line of the axis of the pier while making it. We strayed a little to the Eastwards, but maintained a minimum depth of water of 11.5 m. while making the turn.

The pier is unlighted and it is not advisable to berth during the hours of darkness. Sailing in the dark presents no problem, as the ship's decklights proved adequate.
Density: 1016.
Agency: Matters were attended to by the Consolidated Warehouse Manager.
Documents: New Richmond was our second Canadian port and the only documents required were 2 copies of Crew List and clearance from previous port.
Officials: The only official person encountered was the local Customs Officer, who was pleasant and obliging.
Cargo Work: Normal hours of work are 0800 hrs. to 2200 hrs., with breaks from 1200 hrs. to 1300 hrs., 1500 hrs. to 1520 hrs. and from 1700 hrs. to 1720 hrs.

Vessel loaded 448 tonnes of Linerboard rolls, using 2 gangs and ship's gear. Rate of loading, nett time per gang-hour, was 27 tons. The stow was not of very good quality and a lot of chocking and securing was required on completion of loading.

The cargo is brought down to the pier by road transport and waits some time there before being loaded. On a wet day, many rolls will get wet, as Consolidated do not have sufficient covers for all trailers.
General: The pier is some miles from the town of New Richmond.

AUTHORITY: Stone-Consolidated Inc., Division Chaleur, New Richmond, Quebec Province, G0C, 2B0. *Tel:* (418)-392-2133. *Telex:* 014-43111. *FAX:* (418) 392-6668. *Contact:* J. Pierre Savard.

NORTH SYDNEY, N.S.: 46.16 N. 60.13 W. (See Plan)

DOCUMENTS:
3 Copies Crew List IMM.200.
3 Copies Ships Stores E1.
3 Copies Crew Declarations Y14.
Required ship information.
PILOTAGE: Compulsory. Pilotage distance is approximately 12 miles and administered under the Atlantic Pilotage Authority. Pilot boarding station is Lat. 46° 20′ 30″ N., Long. 60° 07′ W. ETA should be addressed to "Pilots Cape Breton" 12 hours beforehand with confirmation at 6 hours.
ANCHORAGE: The land-locked harbour affords safe anchorage for a large number of any size vessels with depths ranging from 40 ft. – 60 ft.
Vessels can anchor in depths ranging from 9.15 m. to 12.8 m., with mud bottom. Depth at entrance 11.9 m.
RESTRICTIONS: Open year round. During Winter months January/March drift ice can be expected. However, vessels can be assisted by Canadian Coast Guard (Ice Operations).
The controlling depth is 38 ft. at lowest normal tides with average rise and fall from 3 ft. – 5 ft.
MAX. SIZE: See "Berthing".
HEALTH: See "Sydney".
RADIO: Sydney Coast Guard Radio.
TUGS: Available from Sydney.
BERTHING:
Marine Atlantic: Private pier used for ferries carrying passengers and freight daily to Newfoundland. There is 1 transit shed and 2 Ro/Ro berths to handle passenger car, truck and rail car loadings. The depth of water varies from 20 ft. to 29 ft.
Transport Canada Wharf: Section 1 – Length 130 m., with depth 7.3 m. – 7.9 m.
Section 2 – Length 127 m., with depth 7.9 m.
Section 3 – Length 30 m., with depth 7.9 m.
Pier accommodated with power, telephone, fresh water and night lighting. Paved open storage area and 640 sq.m. transit shed provides facilities for handling various commercial cargoes.
Private Freight and Fish Plant Wharves: Range up to 250 ft. in length and have a 12 ft. – 16 ft. depth at LW.
FRESH WATER: Available at all wharves.
FUEL: Fuel oil and diesel oil available. See "Sydney".
REPAIRS: Sydney Engineering & Dry Dock Co. Ltd., P.O.Box 100, Sydney, N.S. B1P 2G9. Tel: 902-564 4488.
DRY DOCK: The North Sydney Marine Railway operates 5 repair cradles, the largest being 125 ft. long and 35 ft. wide at bilge. This can accommodate vessels with a draft of 12 ft. forward and 14 ft. 6 in. aft and a displacement of 550 tons. A connecting machine shop is capable of making major repairs in hulls, engines and other parts.
SURVEYORS: SGS Supervision Services Ltd., Dominion St., P.O.Box 39, Whitney Pier, Sydney, N.S B1N 3B1. Tel: 902-562 2344. Telex: 019-35219.
Ship Safety and Inspection: Canadian Coast Guard College, Westmount Road, Sydney, N.S. Tel: (902) 564-7002.
AIRPORT: Sydney. Regular service to Halifax and Montreal International Airports.
EMERGENCY CO-ORDINATION CENTRE: Canadian Coast Guard: Oil spills and other emergencies from Sydney Harbour area (no charge) ask operator for Zenith 49000.
SERVICES: Radio, Radar and Decca repairs possible. Ship chandlers available.
GARBAGE DISPOSAL: Available upon request.
WASTE OIL DISPOSAL: Service not available.
SEAMAN'S CLUBS: None.
AUTHORITY: Sydney Ports, Marine and Cruise, Development, P.O.Box 1448, Sydney, Nova Scotia B1P 6R7, Canada. *Tel:* (902) 564-4344. *FAX:* (902) 564-5422. *Contact:* George Wheeliker, Director.

OCEAN FALLS, B.C.: 52.21 N. 127.41 W.

DOCUMENTS:
2 Crew Lists.
2 Passenger Lists.
3 copies Inward Report (Customs A6).

PILOTAGE: Compulsory. Pilots may be taken at Vancouver or Victoria. ETA to be given to Pilots 6 hours before arrival through radio station VAK.
ANCHORAGE: In harbour, ample room for any size vessels.
RESTRICTIONS: Channel depth 25 fathoms.
MAX. SIZE: For berthing alongside, length 600 ft., draft 30 ft.
HEALTH: Ships from overseas are given Pratique at William Head.
RADIO: Vancouver Radio, VAK.
TUGS: Not usually considered necessary. Can be made available by prior arrangement.
BERTHING: Ocean Falls Corporation owns 4 wharves depth alongside 31 ft. at LW.
FRESH WATER: Available from wharves, free of charge.
CUSTOMS ALLOWANCES: 200 cigarettes or 2 lb. tobacco may be held out of bond per person, and 40 ounces of alcohol.
HOLIDAYS: Easter Monday; July 1st; Labour Day; Thanksgiving Day; Remembrance Day; Christmas and Boxing Day; New Year's Day.
POLICE/FIRE/AMBULANCE: Police Tel: 957-2388. Fire Tel: 289-3828.
SHORE LEAVE: Crew members allowed ashore.
GENERAL: Ocean Falls Corporation Paper Mill ceased operations in 1980 and it is very unlikely to resume in the near future. Ocean Falls Corporation is maintaining a caretaking operation (12 employees) until such a time that there is a decision made on the future of Ocean Falls.
AUTHORITY: Ocean Falls Corporation, P.O.Box 730, Ocean Falls, B.C. V0T 1P0, Canada. *Tel:* 604-289 3355. *Contact:* F. A. MacDonald, Manager.

OSHAWA, Ontario: 43.52 N. 78.50 W. (See Plan)

PORT LIMITS: The limits of the Oshawa Harbour is defined as follows:
All the waters of Lake Ontario within the following limits: Commencing at the high water mark of Lake Ontario where it intercepts the Easterly limit of Lot 1 of the broken front concession of the Township of East Whitby.

Thence along the high water mark in a Westerly direction to a point where it intercepts the Westerly limit of Lot 17 of the broken front concession of the Township of East Whitby.

Thence in a Southerly direction 3,000 ft. into Lake Ontario on the extension of the said Westerly limit of Lot 17.

Thence on a straight line in an Easterly direction to a point on a Southerly extension of the said Easterly limit of Lot 1, 3,000 ft. from the high water mark.

Thence in a Northerly direction to the point of commencement.

And all water-front property, wharves, piers, docks, buildings, shores and beaches in or along the said waters.

DOCUMENTS: The matter of documentation is done through Durham Stevedoring and Warehousing (Terminal Operator) in conjunction with the Customs Office located at the City of Oshawa.
ANCHORAGES: Off the entrance of Lake Ontario.
RESTRICTIONS: Draft 27 ft. at East Wharf and 22 ft. on West Wall.
MAX. SIZE: Applies to maximum size of vessels entering seaway.
HEALTH: Normal formalities are conducted at first port in Canada in the St. Lawrence Seaway or East Coast, and therefore the vessel is usually considered cleared prior to entering the Seaway system.
RADIO: Toronto VOR or by telephone: (416) 576-0400.
VHF: Not available.
RADAR: None.
TUGS: Tugs available at the harbour entrance.
BERTHING: East Wharf – 730 ft., draft 27 ft. West Wharf – 900 ft., draft 22 ft. Discharging: Ship's gear or shore equipment.
East Wharf – General Cargo, Petroleum, Steel, Automobiles.
West Wharf – Petroleum Products, Steel.
CRANES: Mobile cranes having a capacity of up to 300 tons are available at all times. The largest crane in the Great Lakes is permanently stationed at Oshawa with a lifting capability of 326 tonnes.
BULK CARGO FACILITIES: Dry bulk cargoes with the exception of sugar, i.e. coal, salt and gypsum, are carried by self-underloaders and discharged by ship's gear. Present discharging gear by high water level, specific details will be made available on request.
BRIDGES: None.
STEVEDORES: The port stevedore (Durham Stevedoring and Warehousing) employs members of the I.L.A., Local 1997, and 4 gangs are available from this local.

The main commodities handled are unitised general cargo, containerised general cargo, import and export steel.

The productivity rate is above average, with general cargo usually reaching a level of 20 tons plus, per gang. Depending on units, weights, runs somewhere in the region of 60 – 125 tons per gang hour. Bulk commodities are usually discharged at a rate of 250 t.p.h.

MEDICAL: A full range of medical services is available at the local Medical Clinic and Oshawa General Hospital.
FRESH WATER: Fresh water available at East Wharf only.
FUEL: Available on request.
FIRE PRECAUTIONS: Usual regulations.
CONSULS: All major consuls in Toronto, 29 miles away.
REPAIRS: Available on request.
SURVEYORS: Classification Societies are represented by Lloyd's, ABS and N.V. in Toronto.
GANGWAY/DECK WATCHMEN: Not required at the Port of Oshawa.
HATCHES: The opening and closing of hatches is normally carried out by ship's crew.
CUSTOMS ALLOWANCES: In accordance with Canadian standards.
CARGO GEAR: Wherever possible by shore crew.
REPATRIATION: Possible.
AIRPORT: Toronto International Airport. All major airlines, 45 miles West.
TIME: EST.
HOLIDAYS: Usual holidays with the exception that Ontario celebrate Civic Holiday which is the first weekend in August. Cargo work can be arranged.
POLICE/AMBULANCE/FIRE: Police Tel: 579-1234. Fire Department Tel: 725-6574. Ambulance Tel: 576-8711.
TELEPHONES: Arrangements can be made through Bell Canada for telephones to be placed on board. A cost of approximately $24.75 installation charge per line.
SERVICES: All services available on request to Terminal Operator.
SHORE LEAVE: Possible.
IDENTIFICATION CARDS: Seaman's Book is sufficient.
GARBAGE DISPOSAL: Arranged through independent service on a per vessel, as required, basis.
WASTE OIL DISPOSAL: Arranged through independent service on a per vessel, as required, basis.
SEAMAN'S CLUBS: Missions to Seamen in Toronto provides mobile service.
CURRENCY: Canadian Dollar.
AUTHORITY: Oshawa Harbour Commission, 1050 Farewell Avenue, Oshawa, Ontario L1H 6N6. *Tel:* (416)-576-0400. *Telex:* 06-981229. *FAX:* (416) 576-5701. *Contact:* Donna Taylor, Chief Executive Officer.

PARRY SOUND, Ontario: 45.20 N. 80.02 W. (See Plan)

LOCATION: Parry Sound Harbour is situated at about the midpoint of the East shore of Georgian Bay at the mouth of the Seguin River. The distance from Parry Sound to Sarnia is about 345 km. and to Sault Ste. Marie via the North Channel is about 338 km.
RESTRICTIONS: *Navigation Season:* Mid-April to mid-December.
Depths: Dredged Channel: 6.4 m.
BERTHING: Wharf with length 140 m. and depth 6.4 m. Large open storage area at wharf.
FUEL: Available by truck.
REPAIRS: Minor repairs possible.
SERVICES: Divers available.
AUTHORITY: Harbours and Ports, Canadian Coast Guard, 201 N. Front Street, Suite 703, Sarnia, Ontario, N7T 8B1 Canada. *Tel:* (519) 383-1942. *FAX:* (519) 383-1996. *Contact:* Regional Manager.
Port Official: Robert Jacklin, Harbour Master/Wharfinger.

PASPEBIAC, Quebec: 48.01 N. 65.15 W. (See Plan)

LOCATION: Located on the South shore of the Gulf of St. Lawrence in Chaleur Bay, approximately 195 km. upstream from Gaspe.
DOCUMENTS: See "Quebec".
PILOTAGE: Not compulsory but available.
ANCHORAGES: Vessels anchor in 36 ft. in Paspebiac Bay.
RESTRICTIONS: The harbour is open year round, but occasionally services of an ice-breaker are required.
Channel: Depth 6.1 m.
MAX. SIZE: See "Berthing".
HEALTH: Pratique available by radio.
RADIO: Riviere-au-Renard Radio (VCC).
TUGS: Available all year round.
BERTHING: L-shaped wharf owned by Ministry of Transport provides 150 m. for berthing with depth 6.0 m. Berthing not possible due to dangerous condition of wharf. There is a small wharf for fishing vessels.
CRANES: No cranes available on site.
STEVEDORES: *Working Hours:* Monday to Friday, 0800 hrs. – 1700 hrs. Sunday and holiday work possible with advance notice.
DENSITY: 1025.
MEDICAL: Services available on request.
FRESH WATER: Available on request.
FUEL: Fuel oil available on request.
REPAIRS: Minor repairs only.
AIRPORT: Gaspe (150 km.).
TIME: GMT minus 5 hours in Winter. GMT minus 4 hours in Summer (from first Saturday of April to last Saturday of October).
HOLIDAYS: New Year's Day, Good Friday, Easter Monday, Queen's Day (4th Monday of May), June 24th, Dominion Day (July 1st), Labour Day (1st Monday of September), Thanksgiving (2nd Monday of October), Remembrance Day (November 11th) and Christmas (December 25th and 26th).
GENERAL: *Formalities:* Port of entry for Customs (Gaspe) and Immigration. Customs Officer acts as Quarantine Officer.
Chart: Canadian Charts No. 4921 and 4486.
AUTHORITY: Transport Canada, Harbours and Ports Directorate, 901 Rue Cap-Diamant, 4th Floor, Quebec G1K 4K1, Canada. *Tel:* (418) 648-3680. *FAX:* (418) 648-7980.
Jean Baptiste Parise, Harbour Master, Paspebiac. Tel: (418) 752-2145.

PICTOU, N.S.: 45.41 N. 62.43 W.

DOCUMENTS:

Customs Report Inwards, Form A6 in duplicate.
Clearance from last port.
Stores List, Form E1 in duplicate.
Crew Declarations, Form Y14 in duplicate.
Crew List, Immigration Form 200 in duplicate.
Quarantine Q25 in duplicate.
Fumigating and Derat Certificate.
Load Line Certificate.
Inspection Certificate.
Safety Equipment Certificate.
Radiotelegraphy Certificate.
Certificate of Register.

If Pictou is first port of call in Canada, photostat copies of the ship's ocean bills of lading in duplicate to cover all goods for discharge in Canada.

PILOTAGE: Pilotage is not compulsory, but may be arranged locally by telephoning (902) 485-1278 at 12 hours and 6 hours before ETA. Boarding is at Lat. 45° 42′ 30″ N., Long. 62° 34′ W.

ANCHORAGE: Safe anchorage all over harbour in 40 ft.

RESTRICTIONS: No entry restrictions except draft over bar at entrance to harbour, which is 22 ft. low water.

MAX. SIZE: Government Pier 720 ft. long with 27 ft. water on both sides.

HEALTH: Masters must complete Quarantine Form QS.25. Vessel may be quarantined by port doctor, if any disease on board.

RADIO/VHF: Halifax, call sign, VCS, Channels 26, 59, 79. Alternate Charlottetown call sign VCA, Channel 59.

TUGS: Not necessary for berthing.

BERTHING: No specific requirements; berths usually available at all times.

STEVEDORES: Usually 24 hours' notice required for stevedores.

MEDICAL: Hospital facilities available. Serious cases may be transferred to larger hospital at New Glasgow 8 miles distant, or to Halifax 100 miles distant.

FRESH WATER: Supplied by town through 4 in. line. Water pressure 110 p.s.i.

FUEL: Diesel fuel available in quantity. 24 hours' notice required for bunker fuel as it is only brought in on order.

CONSULS: None.

REPAIRS: Facilities to carry out all types of ship's repairs, including deck, engine, electrical and hull repairs.

DRY DOCKS: Largest dry dock, 2,000 ton capacity, 250 ft. long, 42 ft. beam.

GANGWAY/DECK WATCHMEN: Not usually required unless requested by ship.

OPENING/CLOSING HATCHES: Usually by crew.

CUSTOMS ALLOWANCES: Tobacco, 200 cigarettes per man. Issue may be made if ship is in port for long periods. Wine/Spirits: One bottle per man.

REPATRIATION: Crewmen repatriated through Halifax.

AIRPORT: Closest airport is Halifax International Airport approximately 80 miles distant.

TIME: Eastern Standard Time GMT minus 5 hours. Daylight saving time from first week-end in April to last week-end in October, clocks advanced 1 hour.

HOLIDAYS: New Year's Day; Good Friday; Easter Monday; Queen's Birthday (May 19th); Dominion Day (July 1st); Labour Day (1st Monday in September); Thanksgiving Day (2nd Monday in October); Remembrance Day (November 11th); Christmas Day; Boxing Day. Cargo normally not worked on holidays. Would have to be arranged with stevedoring company.

POLICE/AMBULANCE/FIRE: Police 485-4363; Fire 485-4141; Ambulance 485-4381.

TELEPHONES: Facilities available for placing telephones on ships.

IDENTIFICATION CARDS: Not required. Customs and Immigration Officer should be notified if any crew member wants to travel any distance from port area.

GENERAL: For larger and bulk cargoes stevedores should be notified well in advance. Rates vary according to the type of cargo.

AUTHORITY: Transport Canada – Harbour Master/Wharfinger, Pictou, Nova Scotia. *Tel:* 485-5170. *Contact:* Robert Ross, Harbour Master.

POINTE AU PIC, Quebec: 47.37 N. 70.08 W.

LOCATION: Situated on the North shore of the St. Lawrence River, approximately 130 km. East of Quebec City.

PILOTAGE: Compulsory, Pilot Station at Les Escoumins.

APPROACHES: Depth of channel 7.9 m. at lowest low water.

ANCHORAGE: Good anchorage can be obtained off Murray Bay in depth of 21.9 m.

RESTRICTIONS: The harbour is open year round, but occasionally assistance of ice-breakers may be required.

HEALTH: Radio Pratique available.

RADIO: Quebec Radio (VCC).

TUGS: Available.

BERTHING: Available length 120 m. with max. depth 7.9 m.

CRANES: Available on request.

STEVEDORES: *Working Hours:* Monday to Friday 0800 hrs. – 1700 hrs. Work possible at weekends and holidays with notice.

MEDICAL: Hospital locally.

FRESH WATER: Available.

FUEL: Diesel oil available.

REPAIRS: Minor repairs possible.

DRY DOCK: Nearest dry dock at Lauzon (Quebec), 70 miles from Pointe au Pic.

AIRPORT: Quebec City (130 km.).

TIME: GMT minus 5 hours. GMT minus 4 hours in Summer (first Saturday in April to last Saturday in October).

HOLIDAYS: New Year's Day, Good Friday, Easter Monday, Queen's Days (4th Monday in May), June 24th, Dominion Day (July 1st), Labour Day (1st Monday in September), Thanksgiving (2nd Monday in October), Remembrance Day (November 11th) and Christmas (December 25th and 26th).

GENERAL: *Chart:* Canadian Chart No. 1234.
Formalities: Port of Entry for Customs and Immigration. Quarantine service available from Quebec City.
Services: Banks, post office, provisions, fumigation.

AUTHORITY: Transport Canada, Harbours and Ports Directorate, 901 Rue Cap-Diamant, 4th Floor, Quebec G1K 4K1, Canada. *Tel:* (418) 648-3680. *FAX:* (418) 648-7980. *Contact:* Raymond Gagnon, Harbour Master – Pointe au Pic.

PORT ALBERNI, B.C.: 49.14 N. 124.50 W. (See Plan)

PORT LIMITS: A line drawn 320° through Pill Pt. extending across Trevor Channel and Junction Passage (See Canadian Chart No. 3668).

DOCUMENTS, HEALTH, CONSULS, ETC.: See "Vancouver".

PILOTAGE: Compulsory, contact through Vancouver Radio. Pilot boards at Cape Beale.

ANCHORAGE: Three deep water anchorages available in harbour, each with a radius of 1,000 ft.,depths up to 66 ft.

RESTRICTIONS: Depths in approaches 84 ft. MLLW.

MAX. SIZE: "Panamax" size vessels.

VHF: Channel 74 (VTS Tofino); Channel 6, tugs and inter-harbour traffic.

RADAR: There is no Port Control Radar.

TUGS: Available and required for berthing.

BERTHING: Port Alberni Terminals, owned and operated by the Port Alberni Harbour Commission. Berth 3: 600 ft. long with a depth alongside of 40 ft., 50,000 sq.ft. covered storage and 17 acres of open storage.

Port Alberni Terminals Berths 1 and 2: Berthing length is 1,050 ft. with 50 ft. minimum depth at the South end of Berth No. 1 decreasing to 37 ft. minimum at the North end of Berth No. 2. Storage sheds and forklifts. 40 ft. container handling capability. All forest products handled.

CRANES: 4 mobile cranes – 1×150 ton, 2×50 ton and 1×70 ton.

BRIDGES: There are no bridges.

STEVEDORES: 15 Gangs available. Refer "Vancouver" for holidays, etc.

MEDICAL: Doctors and hospital facilities available.

DENSITY: 1012, approximately.

FRESH WATER: Available at wharves.

FUEL: Supplies by barge from Vancouver or by truck to dockside.

REPAIRS: Machine shop capable of major repairs. Also radar, radio, etc.

SURVEYORS: Surveyors and Cargo Inspectors available from Nanaimo and Vancouver B.C.

CUSTOMS ALLOWANCES: See "Vancouver".

TIME: Local time is GMT minus 8 hours (P.S.T.) or GMT minus 7 hours (P.D.S.T.) in Summer.

POLICE/AMBULANCE/FIRE: R.C.M.P., Tel: 723-2424; Fire Hall, Tel: 724-1234. Ambulance, Tel: 723-2444.

EMERGENCY CO-ORDINATION CENTRE: V.T.S. Centre ("Tofino Traffic") Channel 74 (VHF) or Tel: (604) 726-7777.

TELEPHONES: Service available at all berths.

SERVICES: Garbage disposal and septic tank extraction by arrangement.

Ship chandlers available.

BANKS: Contact: Port Alberni Shipping Co. Ltd. Telex: Pasco Ttal 044-64553. Tel: (604) 723-7373.

STORING: Vessels may be stored by truck, for regulations check with Terminal Manager. Trucks may proceed alongside. For distances check with Terminal Manager.

GARBAGE DISPOSAL: Port Alberni does not usually accept foreign garbage. However arrangements can be made through Canada Customs and Canadian Health Authorities for disposal. The nearest port that handles garbage disposal on regular basis is Vancouver.

WASTE OIL DISPOSAL: Collection service is available for waste oil in small amounts. Waste oil can be discharged at any one of Port Alberni Terminals berths. There are 2 local companies, each having 2 tanker trucks. Alberni Septic Tank Service has a total of 3,900 gallons capacity and 1,000 gallon land storage facility. Tel: (604) 723-8513, hourly rate of $80.00. Walco Industries has 6,000 gallon capacity. Tel: (604) 723-6919, hourly rate $110.00.

SEAMAN'S CLUBS: Port Alberni's local club is called "Seamen's Haven of Port Alberni", under International Sailors Society of Canada, located at 3071 Kingsway, Port Alberni, B.C. Canada V9Y 1X7. Tel: (604) 723-8222. This facility is within walking distance of the Deep Sea Docks. The club has international telephone, a small shop, Entertainment Centre, snooker table, table tennis, a variety of board games and a library. Transport to local malls, church, etc. can be arranged through Haven managers, Gerry and Alberta Judge, open daily until 2300 hrs.

CURRENCY: Canadian Dollar. Only Canadian and U.S. currency accepted locally.

DELAYS: No delays in berthing should be anticipated – one company scheduling – ice free port.

GENERAL: *Tides:* 12 ft. range at Springs, 8 ft. range at Neaps.
Loading: Carried out by ship's cranes or by mobile cranes if ship's equipment malfunctions.

AUTHORITY: Port Alberni Harbour Commission, 2750 Harbour Road, (P.O.Box 99), Port Alberni, B.C. V9Y 7X2, Canada. *Tel:* (604) 723-5312 (multi line). Port Alberni Terminals: 723-7922. *FAX:* (604) 723-1114. *Contact:* Denis J. White, Port Manager. Captain B. Stansbury, Harbour Master. Mr.K. Fertuck, Terminal Manager.

PORT ALFRED: Quebec: 48.20 N. 70.52 W. (See Plan)

LOCATION: Ha! Ha! Bay, Saguenay River, about 60 miles from junction of the Saguenay with the St. Lawrence.

Port Alfred, Ville de La Baie, is located within the limits of the National Harbours Board of Haut-Saguenay.

DOCUMENTS:
- 2 Crew Lists.
- 2 Passenger Lists.
- 3 Crew's Declaration (Canadian Form Y.14).
- 3 Stores Lists (Canadian Form E.1).
- Quarantine (Canadian Form QS.2001).
- 3 Cargo Manifests.
- 3 Bills of Lading.
- 2 Stowage Plans.
- Harbour Master Dues receipt.

PILOTAGE: Pilotage is compulsory. A minimum notice of 24 hours must be given to ensure availability of Pilot. This notice to be confirmed 12 hours and 4 hours prior to arrival at Pilot Station. Reports stating ETA and Nett Reg. Tonnage of Vessel to be addressed to "Pilots Montreal" and passed by the Marine Traffic Control communication system on VHF Channel 14 (156.7 MHz), or by any coast radio station.

The Pilot station for vessels upbound to Baie des Ha! Ha! is located at Anse-aux-Basques, charted 2 miles S.W. of Les Escoumins Wharf on the North shore of the St. Lawrence river and for downbound vessel at Quebec City.

ANCHORAGE: Vessels awaiting berthing facilities anchor off Anse a Philippe (48° 21′ N., 70°73′ W.).

RESTRICTIONS: None. Vessels may enter or depart at any time of day or night.

MAX. SIZE: Vessels of up to 39 ft. draft may berth at Duncan Wharf and 33 ft. and 36 ft. at Powell Wharf. Max. breadth 110 ft. LOA 800 ft. (243.8 m.).

HEALTH: Pratique obtained by cable to Quarantine Quebec, and serves for duration of vessel's stay in Canada. See also "Montreal".

RADIO: Halifax Radio Station used by vessels while in Atlantic and Sept-Iles Radio Station while in Gulf of St. Lawrence.

VHF: VHF radio telephone Channel 66.

TUGS: 2 Voith-Schneider tug-boats available 2,400 h.p. and 3,000 h.p. Join vessel 1 mile off wharves at Port Alfred. Ship's lines used. Tugs are compulsory for all vessels over 3,000 g.r.t. docking or undocking at Duncan Wharf and for tankers above 5,000 g.r.t., docking at Powell Wharf. Also, tugs will be compulsory when judged necessary by the management.

BERTHING:
Private Facilities

Berth	*Length* (m.)	*Depth at Low Water* (m.)	*Utilisation and General Remarks*
Port Alfred (Alcan Smelters and Chemical Ltd, Transport Division).			
(1) Powell Wharf			
South Side	346	10.0	Floor capacity 20,000 tons.
North Side	146	11.9	Two 5 ton electric level-luffing gantry cranes (bucket or hook) operate on a 35 ft. apron.
Across outer end	67	10.0	
(2) Duncan Wharf			
South Side	386	11.9	Berth No.1: Two electric unloading towers of 600 t.p.h. and/or one "Screw-Type" unloader with a capacity of 450 t.p.h. Berth No.2: Two electric unloading towers of 1,000 t.p.h each. Railway and truck transportation direct from wharf and conveyors to storage areas.

DENSITY: Varies, 1002 – 1015.

FRESH WATER: Available at all berths.

FUEL: By trunk.

FIRE PRECAUTIONS: Alcanport have a trained fire-fighting crew and fire hydrants installed at all strategic points.

STEVEDORES: ETA sent by cable 72, 24 and 12 hours prior to arrival is sufficient to arrange gangs.

Working hours: The regular working hours at Port Alfred are:

General commodities on Powell Wharf:

(a) From Monday to Saturday: 0800 to 1600 hours
1600 to 2400 hours

(b) For hours worked outside of above hours and on Sundays and holidays, premium will apply.

At commencement of a working period (0800 or 1600 hrs.) a minimum of four (4) hours applies to any gang ordered as per procedure.

All operations cease from 0001 hrs. Sunday to 0800 hrs. Monday except in extreme circumstances such as to complete a vessel within a maximum of two (2) hours.

Rules: The following rules and regulations are now in effect for general commodities on Powell Wharf:

(a) All requests for labour must be done by telex or cable.

(b) In order to insure that gang(s) will be available, it is imperative that Telex and Fax messages be in Alcan office by 1400 hours the day before the gang(s) is (are) required. Failing this, it will be beyond Alcan control to obtain gangs. Also note that this goes for every day of the week, including Sunday for Monday work. The following is an example of the type of information required on telex or by telephone.
- – ETA of vessel.
- – Number of gangs required and number of carpenters.
- – Tonnage of commodities to be loaded or unloaded per hatch.
- – Instruction if machines (forklifts, etc.) can be used at the beginning of the operations.
- – if overtime approved when applicable.

Nevertheless Alcanport reserves the rights as to the number of gangs to be placed on any vessel.

Bulk commodities on Duncan Wharf: From 0001 hours each Monday to 2400 hours each Saturday, and in most cases on Sunday, the unloading towers will work three 8-hour shifts daily.

MEDICAL: General hospital at Chicoutimi located 13 miles away, in addition to local hospital.

TANKERS: 1×12 in. hose (Fuel Oil) and 1×12 in. arm (Caustic Soda). ASA fittings. No slop discharge facilities. One berth available for tankers at 39 ft. draft. (No. 4 Powell Wharf).

Notice to Tankers: It is important for all vessels discharging fuel oil or caustic soda that the following specific limits be strictly adhered to:

Fuel Oil: Maximum temperatures 150°F, minimum 120°F, with maximum pressure of 115 p.s.i. to a minimum of 75 p.s.i.

Caustic Soda: Maximum temperatures 110°F, minimum 90°F, with maximum pressure of 110 p.s.i. to a minimum of 60 p.s.i.

The above specifications are for security purposes of pipelines, and official readings are those on charts on the dock.

CONSULS: Dr. Francois Brochet, 1596 Avenue Begin, Chicoutimi. Tel: 545-7098

Norway: Mr. C.J. Tremblay, 1522-6th Avenue, Ville de la Baie, Que., Canada G7B 1R6. Tel: (418) 544-1488.

REPAIRS: Only minor deck and engine repairs.

SURVEYORS: Lloyd's at Quebec City. ABS, DNV and BV at Montreal.

GANGWAY/DECK WATCHMEN: To be attended by ship's personnel.

OPENING/CLOSING HATCHES: By crew.

CUSTOMS ALLOWANCES: One carton (200) cigarettes allowed for each crew member. Wine and/or Spirits, one bottle for Officers and crew and 5-6 bottles to Master.

REPATRIATION: Facilities convenient for crew charges.

AIRPORT: At Bagotville, 6 miles from dock, Daily service to Montreal, Quebec City, Sept-Iles and Baie Comeau.

TIME: Eastern daylight saving time will prevail from early April 1989 to late October 1989 (+4). The remaining part of the year is Eastern Standard time (+5).

HOLIDAYS: 1st & 2nd January, Easter Monday, 1st Monday in June, St. Jean Baptiste Day (24th June), Confederation Day, 2nd Monday of August, Labour Day and 25th December.

POLICE/AMBULANCE/FIRE: Police 544-6804; Fire 544-6804; Ambulance 544-3335.

TELEPHONES: At the main office and public pay phone outside.

SHORE LEAVE: Crew members allowed ashore.

IDENTIFICATION CARDS: Not required.

GARBAGE DISPOSAL: Available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Canadian Dollar.

REPORTING: *Notice to Masters of vessels approaching Canadian waters during Winter months:*

Masters of vessels proceeding from sea inbound to Port Alfred (Ville de la Baie) Quebec must report, at least 24 hours before entering the Gulf of St. Lawrence, to the Canadian Coast Guard, through Halifax Radio Station, N.S. or through any other Canadian Coast Station giving all pertinent information, i.e. name of ship, d.w.t., b.h.p., date built, ice class or non-strengthened, approximate draft and time entering Cabot Strait, destination. Then the Coast Guard should acknowledge and give the vessel the recommended route. When a vessel is beset in ice, the Master must radio for ice-breaker assistance, and in the case where conditions improve and vessel makes progress, it must be reported soonest to the ice-breaker in the vicinity or the Coast Guard so that the breaker coming to the assistance is well informed of the new position.

GENERAL: *Conditions for use of Alcan dock facilities:*

1. Notice of ETA, description and tonnage of the commodity to be loaded or discharged and the number of passengers to be landed or embarked, must be given to Alcanport at least 48 hours and 24 hours before arrival. Alcanport may then assign a berth to the vessel but shall not be liable for any delay in providing a berth or for failure to provide a berth.

2. Vessels shall not berth at Alcanport's wharves before obtaining permission. Berthing instructions will be given on VHF Radio, Channel 66.

3. The normal berthing will be on a "First come, first served" basis but the port management reserves the right to change priority.

4. With a view of expediting the work of the port, Alcanport reserves the right, free of expense to itself, to order (a written three-hour notice) a vessel to vacate its berth or to shift from one berth to another at any time. If the vessel does not vacate its berth or does not shift in accordance with Alcanport's instructions, an additional dockage charge of $500.00 per hour or fraction thereof shall be payable in advance in cash to Alcanport, time to count three hours after notice to shift or vacate has been delivered in writing to the person in charge of the vessel. This clause shall not impair the right of Alcanport to compel removal of the vessel by any lawful means.

5. Any object landed from a vessel on Alcanport's property is to be accompanied by a written permit signed by the Master or Officer-in-charge of the vessel; the said permit is to be handed to Alcanport's gateman.

6. Persons wishing to visit vessels berthed alongside Alcanport's wharves are required to have written permission, signed by the Master of the vessel.

7. No person shall smoke or expose a naked light in any shed or warehouse owned or operated by Alcanport, or in any railway car while on Alcanport's property.

8. Tugs are available on call for service in accordance with the charges and the Standard Towing Conditions.

9. If an anchor is used during the berthing of a vessel at Port Alfred, the Master of such vessel is hereby requested to heave in the anchor on completion of berthing operations.

The cost of any delay caused by any vessel due to not heaving in the anchor will be charged to the owner of such vessel.

Gangways:

10. Vessels berthed on Duncan Wharf or Powell Wharf are to provide safe and efficient gangways fitted with handrails and safety nets, (no ladders allowed). The bottom end of the gangway must rest on the wharf and be tied to the eyebolts of the rails on the wharf. Gangways are to be supervised by ship's personnel.

Note: The safety net must be so installed that it will catch anyone that might fall off when embarking or disembarking the vessel. Also a life buoy with a lifeline must be placed at the bottom end of the gangway and ready for use at all times. In addition, at the Duncan Wharf, such a gangway must be positioned longitudinally in line with the vessel so as to permit free movement to the discharging towers from one berth to another as necessary. In cases where the gangway cannot reach and rest on the wharf, a small union gangway with handrails must be so placed so as to permit safe and free passage from the wharf to the ship's gangway. In order to avoid delays, we urge that these gangways be as ready as possible to be set out quickly on docking of the vessels.

In addition there must be a free passage on ship's decks, free of hazards, so as to permit officials and stevedores to safely carry out their respective duties. Any failure to comply with the above rule may cause the shore personnel to refuse to board, and the cost for any delay incurred while the ship's crew rectify the situation will be charged against the vessel.

Further, during the coldest months, all accesses including hatch covers must be kept free of ice.

For vessels berthed on Powell Wharf only:

There are 2 aluminium gangways available for rental at a minimal fee of $100.00 per 24 hours., or part thereof. It is to be noted that these gangways, as for vessels using their own, are to be under the responsibility and supervision of the ship's personnel at all times while in use by the vessel.

WARNING:

11. This is to advise vessels that Alcanport's wharves are equipped with underwater cathodic protection which prevents corrosion of the wharf structure.

Any debris on the river bed, and especially metallic objects such as wire rope, cans, etc., will adversely affect this expensive system. We request your co-operation to ensure that no refuse of any nature be thrown overboard from vessels. This will avoid damage to the cathodic protection and also claims which we would be compelled to make in the event of damage being caused by refuse from vessels.

It is unlawful to discharge or dispose of any ship's refuse at Port Alfred. (There is no incinerator in this region).

Any ship approaching or manoeuvring near the wharves at Alcanport must ensure that divers working on the cathodic protection system are not under water. When divers are at work, the International Divers' Flag is displayed at the east end of the wharf or wharves involved.

Sailing Directions: Canadian Hydrographic Service in Ottawa (Ontario). St. Lawrence Pilotage (below Quebec City). Canadian Charts Nos. 1202 and 1203.

Tide: Rise and fall 2.1 m. (7 ft.) to 6.7 m. (22 ft.).

Transfer of Funds: All transfers of funds to Alcan Smelters and Chemicals Ltd., Transport Division, or to vessels as cash advance or otherwise through Alcanport, must be sent to: The Royal Bank of Canada, Bagotville Branch, 375 rue Bagot, Ville de La Baie, (Quebec) G7B 2N6. *Tel:* (418) 544-6836.

AUTHORITY: Alcan Smelter and Chemicals Ltd., P.O. Box 10, 261 1e Rue, Ville de la Baie (Sector Port Alfred) P.Q., Canada G7B 3R1. *Tel:* (418) 544-9643. *Telex:* 051-36176. *FAX:* (418) 544-9622. *Cables:* ALCANPORT.

Contact: Andre Chevalier, Port Director. Claude Page, Agent (Tel: (418) 544-9674, after hours (418) 544-7094).

PORT ALICE, B.C.: 50.22 N. 127.28 W. (See Plan)

PILOTAGE: Compulsory. Pilots can be secured off Cape Beale, Barkley Sound, South end of Vancouver Island. Master should advise "Pilots Victoria" via Radio Station VAK giving their ETA Cape Beale.

ANCHORAGE: Good anchorage within 0.5 miles of dock in 30 fathoms.

HEALTH: The nearest station is at Victoria, B.C. Ships coming from foreign other than U.S.A. ports and having duplicate Pratique from same to British Columbia ports other than Victoria must obtain Radio Pratique through Victoria, B.C.

VHF: Ship to shore communications on Channel 6.

TUGS: 2 Small tugs (335 h.p.) available to assist berthing and departure if required.

BERTHING: Controlling depth from entrance of Quatsino Sound to Port Alice dock 24 fathoms. A draft of 25 ft. can be handled alongside dock and a vessel 525 ft. in length can be berthed with safety.

Oil tankers with draft up to 35 ft. and 580 ft. in length can berth against berthing scow positioned between dock and oil tanker. (Width of scow 35 ft.).

Bulk Carriers with draft of 35 ft., 565 ft. in length are berthed approximately 16 ft. out from dock by means of log fenders. Gantry of monck cranes extending over apron of dock. Largest ship handled of this type, 29,500 d.w.t., draft 35 ft. 4 in. (Cargo loaded – Units of woodpulp).

STEVEDORES: Working day of 12 hours.

MEDICAL: 12 bed hospital, physician in attendance.

FRESH WATER: Available.

FUEL: Limited quantity of diesel oil. Fuel oil only available in an emergency from gravity hose on dock, vessel must supply hoses.

CONSULS: None.

REPAIRS: Minor repairs can be made in the company workshop.

CUSTOMS: Customs board at Port Alice.

CARGO GEAR: No shore cranes, ships use own gear.

AIRPORT: 35 miles from Port Alice, daily service.

HOLIDAYS: All Dominion legal holidays.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Canadian Dollar.

GENERAL: Port Alice is a private port open to navigation all year round. Limited quantity of supplies available.

AUTHORITY: Western Pulp Inc., Shipping Department, P.O.Box 2000, Port Alice, B.C. V0N 2N0, Canada. *Tel:* (604) 284-7745. *FAX:* (604) 284-6631. *Telex:* 610-975 7035. *Cables:* West Pulp Pa. *Contact:* L.W. Scott.

PORT AUX BASQUES, Newfoundland: 47.35 N. 59.08 W.

PILOTAGE: Not compulsory, but can be arranged through nearest Coast Guard Radio Station to Pilots VTS Centre Port aux Basques at least 12 hours prior to arrival at pilot boarding station.

RESTRICTIONS: Occasionally the harbour may be blocked by drift ice which comes in with S.W. winds during February and March.

VHF: VTS Centre Port aux Basques on Channels 16 and 14.

BERTHING: Facilities privately owned by Marine Atlantic.

MEDICAL: Hospital available.

REPAIRS: Minor facilities available.

AIRPORT: 160 km. away.

AUTHORITY: Transport Canada, Harbours and Port Directorate, P.O.Box 1300, St.John's, Newfoundland A1C 6H8, Canada. *Tel:* (907) 772-5154. *FAX:* (709) 772-5127.

PORT CARTIER, Quebec: 50.02 N. 66.47 W. (See Plan)

LOCATION: Port Cartier is located on the North shore of the St. Lawrence River, approximately 25 miles, in a Westerly direction from Sept-Iles (Seven Islands) at Lat. 50° 02′ N., Long. 66° 47′ W.

DOCUMENTS:

Immigration:

Crew List Form IMM.200 in triplicate or IMO No. 6.

Customs:

Report Inwards (A.6) in triplicate.

Crew Declaration (Y.14) in triplicate.

Ship's Stores List (E.1) in triplicate.

Ship's Register.

The above forms will be supplied by mail on request.

The Master shall also have ready for inspection by Customs:

Certificates of Registry, Safety Construction, Safety Equipment, Derat, Safety Radio, Load Line, Clearance from Last Port. Any spares, materials for repair, or materials for furtherance must be declared on Form A6A on arrival.

Also see "Health".

On Canadian or International Crew Lists, black pen or typewriter must be used. Blue is not acceptable because of copy reproduction difficulties.

Designation and dates of expiry of all major trading certificates are required for outward clearance.

Arrangements have been made so that loading can commence before Customs Entry has been completed, and Customs Outward papers will be completed so as not to interfere with immediate departure after completion of loading.

Also see "Shore Leave".

APPROACHES: The depth of water in the harbour is 50 ft. at MLW. A depth of 54.5 ft. at MLW is maintained in the channel for a width of 200 ft. on each side of the centre line of approach into the harbour. For a distance of 300 ft. on both sides of this channel a depth of 40 ft. at MLW is maintained.

PILOTAGE: Pilotage is compulsory at Port Cartier for docking, sailing and, at Port Authority's discretion, for changing berths.

An exception is made in the case of Coasters or vessels less than 350 ft. LOA unless requested by the Master, or, if considered necessary by the Port Authority.

Pilot will board vessels from attending tug or harbour tender approximately 1 mile off the harbour entrance.

It is the responsibility of all vessels to ensure that the pilot ladder is in good condition and in a safe position for the boarding of the Pilot.

Frequencies for VHF communication with Pilot and Harbour Office. Calling 156.8 MHz. Receiving/transmitting 156.6 MHz. Internal harbour (tugs and Pilots) 156.35 MHz.

Vessels over 40,000 d.w.t. shall also provide accommodation ladder with rope ladder alongside. The landing platform of the accommodation ladder should be approximately 20 ft. above the water.

AIDS TO NAVIGATION:
Fairway Buoy: A black and white vertically striped light and bell buoy "Mo (A)" (white light showing the morse code letter A) equipped with a radar reflector, marked "Port Cartier" is in position: Lat. 50° 00′ 12″ N., Long. 66° 47′ 45.7″ W. Removed during Winter season (mid November to mid April).

Rear Range Light: F.G. 255 ft. backed by 10 ft. square fire orange daymarker. Lat. 50° 02′ 25″ N., Long. 66° 46′ 45″ W.

Front Range Light: F.G. 151 ft. backed by 10 ft. square fire orange daymarker. Lat. 50° 02′ 10″ N., Long 66° 46′ 52″ W.

Fog Horn: Signal – Continuous short pulses during poor visibility and fog off Port Cartier on request from vessel. Lat. 50° 01′ 52″ N., Long. 66° 47′. W.

Corossel Island Light: White Gp. Fl.2 ev. 18 secs. 190 ft. 20 miles radio beacon. Fog signal ev. 30 secs. Lat. 50° 05′ 20″ N., Long. 60° 22′ 44″ W.

Local Chart: Canadian Chart No. 1226 Port Cartier and Approaches.

N.B.: All aids to navigation subject to change. ALL VESSELS NOT UNDER PILOTAGE MUST GET PERMISSION FROM THE PORT AUTHORITY BEFORE ENTERING THE HARBOUR, AND MUST ALSO OBTAIN PERMISSION BEFORE LEAVING ANY DOCK WITHIN THE HARBOUR LIMITS.

ANCHORAGE: Anchorage areas have been established as follows:

Designation	*Position*
A.	Lat. 50° 00′ 57.0″ N., Long. 66° 46′ 36.2″ W.
B.	Lat. 50° 01′ 07.1″ N., Long. 66° 45′ 44.5″ W.
C.	Lat. 50° 01′ 16.4″ N., Long. 66° 44′ 53.2″ W.
D.	Lat. 50° 00′ 32.8″ N., Long. 66° 45′ 44.5″ W.
E.	Lat. 50° 00′ 22.7″ N., Long. 66° 46′ 35.0″ W.
F.	Lat. 49° 59′ 56.5″ N., Long. 66° 48′ 43.0″ W.
G.	Lat. 49° 59′ 44.0″ N., Long. 66° 49′ 32.8″ W.

Chart: (Last edition) 1226, dated 27-05-88. Publication – Gulf and River St. Lawrence Sailing Directions, 6th edition 1985.

MAX. SIZE: Vessels of 100,000 d.w.t. and over must have a draft not exceeding forward 33 ft. and aft 38 ft. on arrival. Also see "Berthing" and "General".

HEALTH: New procedure since July 1991: 24 hour Pre-Arrival Notification to be sent by Telex or Fax to the local Agent, who will in turn transmit it to the Customs Office. Pre-Arrival Notification to contain information listed under "Documents".

Free Pratique granted alongside berth by Customs/Immigration Officer. Ships trading between Canada and the United States continuously and touching no other foreign port, since last granted Canadian Pratique, comply with the above, only on first trip to Canada.

Vessels inspected by Port Health Officer soon as possible, in berth or not.

Masters shall have ready for inspection:

Maritime Declaration of Health Form Q.S.2001 (Only if death onboard).

Derat Certificate.

RADIO: Cable Address "Cartier" Port Cartier.

Vessels entering the Gulf from the Atlantic should keep watch on Halifax Radio for all traffic. Information as to time of reports and frequencies will be found in International Radio Aids to Navigation Manual.

Traffic List	420 kHz	Even hours plus 50 GMT
	2582/161.9	Even hours plus 40 GMT

Weather, Ice Reports and Notice to Shipping.

Channel 21	Receiving Frequency	161.65 MHz
Channel 59	Receiving Frequency	2582 kHz
Channel 26 and CW	Receiving Frequency	161.9 MHz

When vessels are 36 hours from Port Cartier, they should keep W/T watch on VCK Seven Islands Radio for traffic from this Port.

VCK – Seven Islands: Tel: 418-968 3118.

	Channel	*Transmitting*		*Receiving*	
W/T Frequency		500	kHz	500	kHz
R/T (HF)	Channel 51	2182	kHz	2182	kHz
	Channel 57	2514	kHz	2118	kHz
R/T (VHF)	Channel 16	156.8	MHz	156.8	MHz
	Channel 12	156.6	MHz	156.6	MHz
	Channel 24	161.8	MHz	157.2	MHz
	Channel 26	161.9	MHz	157.3	MHz
	Channel 21	161.55	MHz	157.05	MHz
Port Cartier Station					
R/T (VHF)	Channel 12	156.6	MHz	156.6	MHz
	Channel 7A	156.35	MHz	156.35	MHz
	(Internal tugs and Pilot)				
Traffic Escoumins					
RT (VHF)	Channel 14	156.70	MHz	156.70	MHz

The Port Office telephone number is 418-768 2485, Telex number is 051-8-6422 and the Fax No. (418) 768-2344. It is also fitted with VHF on the frequencies mentioned above. The office is open to receive messages on a 24 hour basis. Radio and radio telephone traffic by a ship at anchor in the area off Port Cartier is permissible.

THE ST. LAWRENCE WATERWAY TRAFFIC REGULATIONS: The zone extends from Long. 66° 00′ W. to Montreal. In general, the regulations state that a ship must report to the Marine Traffic Regulator by contacting Channel Escoumins on 156.7 MHz, Channel 14 before entering Zone 1 (i.e. crossing Long. 66° 00′ W.). The Port of Port Cartier is in Zone 1. Ships have to maintain a continuous radio watch on Channel 14, except when alongside. Authorisation to communicate on another Channel has to be requested from Channel Escoumins, unless the vessel is equipped with 2 radios. Clearance must be obtained from Channel Escoumins to move within the anchorage.

ARRIVAL ADVICE: Also see "General". ETAs – All vessels must advise ETA 72 hours, 48 hours and 24 hours before arrival. If any change in ETA of more than 1 hour occurs after transmission of the 24 hour ETA, the vessel must send a corrected ETA immediately. These ETAs shall be submitted in local time at Port Cartier.

In the 72 hours ETA vessels will advise: Tonnage of cargo required; grain fittings, if any; quantity orders for supplies; bunkers, water and cash advance requirements; and bonded stores.

In the 24 hours ETA vessels will advise the estimated time for pumping ballast after arrival alongside. However, if because of weather or any other cause the estimated pumping time should change, the Port Authority will be notified immediately.

All ships shall request docking instructions 2 hours before arrival.

TUGS: Compulsory, with the exception of coasters or vessels less than 380 ft. LOA unless requested by the Master, or, if considered necessary by the Port Authority. Meet vessel outside harbour under instructions from Pilot. Tug lines used at all times. Two tugs of 3,800 h.p. available.

BERTHING: Harbour and Terminal:

1. The North Dock is 2,600 ft. in length, the West 2,000 ft. being Berths No. 1 and 4 for ore loading and the East 600 ft. being Berth No. 4a for bentonite and limestone discharge. Facilities for oil receiving are located at Berths No. 1, 2, 3 and 4.

Coastal vessels may also use Berths No. 1, 2 and 3 when permitted to do so by the Port Authority.

2. The depth of water in the harbour is 50 ft. at MLT. A depth of 54.5 ft. at MLT is maintained in the channel for a width of 200 ft. on each side of the centre line of approach into the harbour. For a distance of 300 ft. on both sides of this channel a depth of 40 ft. at MLT is maintained.

3. Vessels of 100,000 d.w.t. and over must have a draft not exceeding forward, 33 ft. and aft, 38 ft. on arrival.

4. The harbour bottom is smooth rock and anchors are of little value, although Pilots may advise Masters as to the use of anchors under special circumstances.

5. The faces of all berths are fitted with rubber and tyre fenders.

6. Mooring bollards are positioned 75 ft. apart at Berths No. 1, 2 and 3. There are also hooks at every pier at Berth No. 4. All bollards except those at Berth Nos. 2 and 5 are 4 ft. in extreme diameter and all mooring ropes and wires should have eyes at least 8 ft. in diameter.

7. The East Breakwater Cells are cathodically protected. The cabling and anodes extend approximately 60 ft. from the cells, affording all round protection. The use of anchors, or equipment likely to damage this protection, is not permitted within these areas.

Bentonite and Limestone: The bentonite and limestone discharging facility has a rated capacity of 1,500 t.p.h., with the discharge hopper being in a fixed location on Berth No. 4.

MEDICAL: Hospital facilities are available at Port Cartier. All costs for medical and dental treatment required by seamen will be charged to the vessels in which the seamen are serving as crew members. All crew members requiring medical attention should be available upon the vessel's arrival alongside.

TANKERS: No facilities for slop discharge.

DENSITY: Has been known to vary slightly between 1025 and 1021, but is considered salt.

FRESH WATER: Available to all vessels at Berths No. 1, 2, 3, 4 and 5 with connections conveniently located. Rate of approximately 20 t.p.h. The fresh water line is 6 in. with 2.5 in. standard Quebec hose, male connection of 7 threads to the inch. Necessary connections and hoses are to be furnished and handled by vessel.

If required, fresh water can be supplied to vessels at anchor. Max. amount per trip 40 tons.

FUEL: Available at Berth Nos. 1, 2, 3 and 4 for Bunker "C", marine diesel and/or any specialised blend and connections are positioned for ready supply to all vessels. All bunker requirements are directly supplied by Gulf Oil Canada Limited, and proper credits should be established. Bunker "C" can be supplied at approximately 1,500 b.p.h. Marine diesel oil can be supplied at approximately 900 b.p.h., Bunker "C" line is 10 in. with 8 in. reducer flange connection. Marine diesel oil line is 8 in. with 4 in. reducer flange connection. There is no coal available at this port.

Vessels nominated for Port Cartier and required to anchor awaiting a berth, which in the meantime require bunkers, will be permitted to enter the harbour, if a berth is available with bunkering facilities, for the purpose of bunkering, and shall then return to anchor. The fee for this service shall be $3,780 (including second tug if used) plus applicable line handling charges.

REPAIRS: Minor repairs can be effected. They must be supervised by the vessel's personnel, and will be the responsibility of the vessel.

GANGWAY/DECK WATCHMEN: Not necessary. Security guards obtainable on request.

OPENING/CLOSING HATCHES: Normally done by crew.

REPATRIATION: Crew changes and repatriation can be carried out.

AIRPORT: Nearest airport is Seven Islands about 40 miles by road. Services to Quebec City and Montreal, 4 flights daily.

TIME: Port Cartier is located in the Eastern Standard Time Zone (GMT minus 5 hours). Daylight Saving Time (GMT minus 4 hours) is observed from first Sunday in April to last Sunday in October.

HOLIDAYS: See "General".

CUSTOMS ALLOWANCES: Canadian Customs Regulations allow each crew member to have in his possession for his personal consumption 200 cigarettes, 50 cigars, 2 lb. pipe tobacco and 40 oz. of spirits. All quantities must be declared on Crew Declaration Form Y-14 along with all personal effects such as radios, cameras, tape recorders, binoculars, souvenirs, etc., plus serial numbers of these items.

N.B.: Masters of vessels are advised that tobacco items and spirits in excess of these amounts in possession of crew members should be collected and placed in bonded stores prior to the vessel's arrival in order to speed up the clearance of the vessel.

Canadian seamen returning from voyages to American or other foreign ports are permitted $100 value of duty free merchandise every quarter for periods outside Canada of over 48 hours and $300 once a year for periods outside Canada of 7 days.

POLICE/AMBULANCE/FIRE: Police Tel: 766 2233. Ambulance/Fire Tel: (418) 768-2323.

TELEPHONES: No direct connections to vessels. Available on berths.

POLLUTION: The discharge of oil and garbage into the waters of Canada is prohibited by strictly enforced regulations which provide heavy penalties on summary conviction. Every precaution must be taken to prevent escape of oil from a vessel, but should such an escape occur, the regulations require that vessel immediately report it to the nearest Canadian Coastguard Officer or to the Chairman, Board of Steamship Inspection, Ministry of Transport, Ottawa.
SERVICES: Electronic repair services to navigational equipment. Should be requested in advance.
SHORE LEAVE: All ships arriving from a foreign port will be boarded by Customs and Immigration Officers. Ship's personnel are not allowed ashore until permission is granted by these Officers, nor shall crew members joining a vessel board without Customs permission.
IDENTIFICATION CARDS: Not necessary.
GARBAGE DISPOSAL: Not available.
WASTE OIL DISPOSAL: Not available.
SEAMAN'S CLUBS: None.
DELAYS: Occasionally Easterly weather conditions may delay vessels berthing.
GENERAL: Vessels which have completed discharging of grain and are to load iron ore should have ratguards fitted to all mooring lines at all times.
Ore Concentrate and Pellet Vessels:
I. Advising Arrival: (See also "Arrival Advice") 1. Each vessel operator or its principal shall notify Quebec Cartier Mining at least 2 weeks prior to the expected arrival of each vessel at Port Cartier and Quebec Cartier Mining Company shall forthwith advise such vessel operator or principal whether it can accept the vessel at such time. An allowance of 3 days preceding and 3 days subsequent to the date so fixed will be made for the actual arrival of each vessel. If the vessel's actual arrival is not within such 3 day period preceding or subsequent to the date fixed for its arrival, Quebec Cartier Mining Company may fix another arrival date for such vessel that will not interfere with other scheduled loading. Quebec Cartier Mining Company shall be kept fully advised of all vessel nominations, substitutions, cancellations, delays, sailing dates at Port Cartier of all vessels designated to accept delivery of ore at this Port.

2. The submission of a Notice of Readiness by the vessel will constitute acceptance of all terms and conditions of this Advice to Vessels by the vessel, its Managers, Agents, Master, Operator and or Charterer.

II. Loading Conditions: Ships will be loaded in regular turn of vessel's arrival off Port Cartier provided they present with hatches open and do not have ballast pumping time which will exceed minimum loading time. The 1 shiploader has a rated capacity of 9,000 tonnes/p.h. for concentrate and 7,200 tonnes/p.h. for pellets. A vessel which has berthed at the loading dock and is found to have a deballasting rate time which in the opinion of the Port Authority will not permit loading at maximum rate, may be ordered off the dock and moved to the standby berth or to anchorage until it is in a condition to accept its cargo at maximum loading speed.

The vessel will then be returned to the ore loading berth in turn, following re-submission of Notice of Readiness. All moves to be at vessel's expense. Quebec Cartier Mining Co., Port Authority will be final arbitrator in case of dispute.

III. Loading Minimum and Vessel Specifications: Each vessel designated to accept delivery of ore at Port Cartier, must conform in construction to the following specifications and conditions:

1. Not less than 4 ore hatches of at least 18 ft. square, except Great Lake Bulk Carriers where the minimum width of hatches shall be 9 ft., to accept ore cargo direct from loading tower at Port Cartier.

2. All vessels nominated must be suitable for the loading and the transportation of concentrates or pellets and capable of taking the entire cargo to be loaded in the lower holds without "peak-up" above the tween deck levels. The vessel shall load and stow cargo in accordance with the Canada Shipping Act and Regulations.

3. Hatch opening sufficiently clear of obstruction on deck to permit free and direct contact with loading tower.

4. Vessels may be loaded to a draft of 54 ft. if tides permit them to sail while maintaining a safe under keel clearance (at least 3 ft.) on a rising tide.

If a vessel requests to wait for a following higher tide in order to lift more cargo, and the Port Authority agrees, then this additional time is not to count and, if required by the current operational condition of the Port shifting is necessary, all additional shifting fees will be for the account of the vessel.

5. *Maximum Allowable Dimensions:* Maximum allowable dimensions of vessels at the ore berth.
LOA 995 ft.
Beam 174 ft. Moulded depth 92 ft. (to top of hatch cover).
Air draft under loader:
MHW 42 ft. water line to top of hatch covers.
MLW 52 ft. water line to top of hatch covers.
Draft of Vessel Loaded:
Draft at MLW 48 ft. loaded.
Draft at MHW 54 ft. loaded.

IV. Special Regulations: 1. Any vessel which discharges a cargo of grain and is to load a cargo of iron ore will be considered in turn for loading only after the vessel has completed discharging grain and is in all respects clean and ready to receive iron ore.

2. Loading plan should be available as soon as possible after arrival and must be presented to the ore loading foreman, in metric tons, on arrival at the berth.

3. All shipboard work necessary for docking and loading, including but not limited to line handling and tending, opening and closing hatches, and normal deck cleanup, shall be done by the vessel's crew.

4. Any Owner or Charterer with more than 1 vessel waiting turn to load may interchange his vessels, provided they are of comparable capacity (deadweight). Any interchange of turn must be arranged with and have the approval of Quebec Cartier Mining Company.

5. All weights shown on the Bill of Lading and/or Manifest will be the same as recorded on the weighing facilities of Quebec Cartier Mining Company.

6. The Port will be in operation 24 hours a day, 7 days a week; however, ore vessels will not be loaded on New Year's Day (January 1st), and on Christmas Day (December 25th), nor will they be loaded from 0800 hrs. Sunday to 1600 hrs. Sunday, nor during the same period on the following holidays: Good Friday; St. Jean Baptiste Day – June 24th; Dominion Day – July 1st; second Monday of July; first Monday of August; Labour Day – first Monday of September; Thanksgiving – second Monday of October; Boxing Day – December 26th.

7. Arrangements have been made so that loading operations will commence as soon as possible after the vessel's arrival at the loading berth.

8. Vessels usually dock port side to at Ore Berth.

V. General Instructions in Preparing Vessels' Holds to Accept Iron Ore Concentrate: Quebec Cartier's iron ore is a type of iron ore concentrate which weighs on the average 192 lb. per cu.ft., and stows at approximately 12/13 cu.ft. per gross ton.

The iron ore contains an average moisture content from 2.5% to 3.5%, and could sometimes in the Summer Season be shipped at as high as 5%. The character of this ore is self draining. It will retain moisture up to about 2.5%, but all moisture over and above this will drain on compaction of the material, and also, if the ore is left for long periods in stock-pile or in the hold of a vessel, this drainage of moisture will sometimes leave a considerable quantity of water in the hold of the vessel, and could cause some inconvenience when discharging the cargo. For this reason all bilge strums or wells should be sounded regularly and pumped out at regular intervals, so as to keep the bottom of the hold as dry as possible.

Quebec Cartier's iron ore is abrasive, and could cause damage to bilge pumps. Masters of vessels are advised to cover all bilge strums or wells with burlap in a similar manner as when receiving a grain cargo in bulk; so as to permit a free flow of the water and retain the iron ore in the hold of the vessel.

All holds for the acceptance of this cargo should be clean prior to the arrival of the vessel.

VI. Pellet Stowage Factor: Iron ore pellets will stow at about 17 – 18 cu.ft. per gross ton.

All holds for the acceptance of this cargo should be clean prior to the arrival of the vessel.

VII. All vessels loading more than 18% of their cargo capacity in iron ore concentrate must present a Certificate of "Fitness to Load" as issued by the Canadian Ministry of Transport (Port Warden) prior to loading and a "Fitness to Proceed" prior to sailing.

Port Warden costs will be charged to the vessel in accordance with the government tariff.
Grain Vessels: Berthing and use of the Elevator Dock Facilities:
Regulations, Terms and Conditions:
(The term 'Tariff' refers to the Tariff issued periodically by the Elevator Company; the term 'Company' in this section refers to the Elevator Company).

1. *Application for Berth:* For all vessels desiring a berth at the Elevator there shall be filed an Application for a Loading Berth at the Elevator Office, between 0900 – 1700 hrs. Mondays through Fridays and from 0900 – 1200 hrs. on Saturdays, except on holidays. Application shall be made in writing on forms supplied by the Company. Whether or not such Application Form is signed, the Owner and Charterer of each vessel shall be deemed to agree in consideration of the Company permitting the vessel to berth at the Elevator for the purpose of loading or discharging bulk grain, to abide by all rates, rules and regulations stipulated in the Company's current Tariff, and to acknowledge having taken communication of same and, without restricting the generality of the foregoing, to undertake and agree that the berthing of the vessel at the Elevator will be free of risk and expense to the Company. Owners and Charterers also agree to indemnify the Company against and hold it harmless from any and all damages whatsoever and howsoever caused which may be occasioned to its facilities or any of them by the vessel and in like manner to indemnify the Company against and hold it harmless from any and all claims of any nature whatsoever arising from damages which may be sustained by the vessel while berthed or during berthing or unberthing. Owners and Charterers shall in like manner be deemed to agree to make prompt payment of invoices as presented and *in the case of export grain to deliver to Les Silos Port Cartier signed written evidence of the receipt on board of the grain according to the Les Silos Port Cartier Description and Tally (i.e. "Mate's Receipts").* All charges shall constitute a lien against the vessel until paid. The Application for Berth shall be dated and timed and shall constitute a contract between the Company and the Owners and Charterers of the vessel, such that the latter shall be bound by the terms thereof and, without restriction, to comply with all the charges, rules and regulations stipulated in the Company's current Tariff.

2. *Allocation of Loading Berth:* Except as otherwise provided in these regulations, vessels shall be assigned a loading berth in the chronological order in which they file with the Elevator Office the signed Application for Berth, accompanied at the time of filing by the following documents:

(a) Certificate issued by the Canadian Government Department of Agriculture and/or by the United States Department of Agriculture, Grain Division, as the case may be, that all cargo compartments are fit to load in compliance with the regulations of the respective departments.

(b) Certificate of Readiness in all compartments issued by the Port Warden.

(c) Evidence to the effect that the vessel has been entered at the Canadian Customs House.

(d) Evidence to the effect that the vessel has been tendered to and accepted by the Charterer.

Vessels are required to present alongside the Loading Berth with hatches open and gangway and gangway net ready.

3. *Allocation of Unloading Berth to Lake Vessels:* Subject to the exceptions contained herein, but at all times in accordance with the provisions of the Canada Grain Act and Canadian Grain Commission Regulations, Lake vessels shall be assigned to an unloading berth in the order in which they arrive in port and file application and required documents for berth with the Company with evidence of vessel's readiness to discharge.

(a) A hold of a vessel having been partially unloaded at another port shall not be accepted for unloading unless by prior express arrangement with the Company.

(b) A hold of a vessel having a separation between more than one grade or kind of grain shall not be accepted for unloading.

4. *Berthing Prior to Receipt by the Company of Appropriate Certification:*

(a) At the sole discretion of the Company, a vessel may be allowed to berth alongside the Elevator prior to having received all the above certificates. If subsequently, the vessel fails to deliver such certification, it must, immediately on order of the Company vacate the berth. Nothing contained in this rule shall be deemed a waiver of any of the provisions of Item 5 hereinafter.

(b) Any vessel, which has been allowed to berth at the Elevator having previously filed all the certificates enumerated in above item 2, and which subsequently is found by an Official Inspector unsuitable to receive grain for any reason, must, if required by the Company, immediately vacate the Elevator Berth. Nothing contained in this rule shall be deemed a waiver of any of the provisions of Item 5 hereinafter.

5. *Refusal or Failure to Vacate Berth:* Any vessel which fails or refuses to vacate the berth when required by the Company for any reason whatsoever including being under arrest, except as provided hereinafter, in Item 9, shall be liable, in addition to any other charges due hereunder, to pay to the Company a charge of $1,500.00 per hour, or any part thereof after vacating notice has been given in writing to the Owner, Manager, Agent, Master, Mate, Operator or Charterer of the vessel. This charge shall be paid promptly and it is accepted that it accurately represents a minimum estimate of damages to the Company because of refusal or failure of the vessel to vacate. This payment shall not constitute a waiver on the part of the Company to claim greater actual damages that may be sustained as a result of the vessel's failure to vacate.

The Company shall have the right, authority and privilege to compel the removal of the vessel, by any lawful means, at the vessel's own risk and expense and shall not be liable for any damages, delay or other expenses, including legal costs, arising from the act of removal of the vessel, by whomsoever incurred.

6. *Berth Operations:* The Company, in its sole discretion, may:

(a) Alter the turn of vessels whether in berth or not, when confronted by an urgent need to receive or ship a particular grade or kind of grain or when in its judgment

(i) This is necessary or desirable in order to facilitate elevator operation, or

(ii) Conditions within the Elevator or approaches thereto render this necessary or desirable.

(b) Require a vessel to load in overtime hours at vessel's own expense during all hours when labour can be available, continuously until loading is completed, or for any part of such hours as the Company may determine necessary. This rule may be applied whenever more vessels are in port than can be berthed at the Elevator, or in order to expedite the movement of vessels and/or grain, or to ensure the fullest possible use of the Elevator, or to eliminate any threat of actual or possible congestion of any other vessels. Any vessel unwilling to work overtime as directed in accordance with this rule shall vacate the berth without delay and the vacating vessel shall only be permitted to berth again at the Elevator after giving written agreement to load continuously until completed whether in regular or in overtime hours. Should any vessel refuse to vacate, it will be liable for damages described in above Item 5.

(c) If a strike or other labour disturbance involving a vessel at berth or waiting for berth (whether by vessel's crew or otherwise) or any other circumstance affecting a vessel and not attributable to the Company will, in the Company's judgment, tie up or impede operations at the dock, the Company may order such vessel out of berth or refuse to accept it at the berth. Should any vessel refuse to vacate, it will be liable for damages described in above Item 5.

7. *Vessel in Berth:* Any vessel in berth shall at all times maintain appropriate Officers and crew aboard to permit shifting of the vessel or reception or discharge of cargo at any time of day or night including Saturdays, Sundays and Holidays.

All vessels discharging or loading grain shall at all times have adequate rat guards on all mooring lines.

8. *Work Interruptions:* When work is interrupted on account of rainy or other weather conditions, a vessel at its own expense may be required, at the discretion of the Company, to retain on standby, according to local labour rules, stevedore and other labour necessary to the loading, up to a maximum of 4 hours in any stevedoring work period. Any vessel or its Agent failing to have such labour available, if so required, shall be, in addition to any other charges due hereunder, assessed a charge of $1,500.00 per hour for any period where work is subsequently ordered resumed by proper authority (after the weather interruption) but cannot be carried out for lack of labour.

If such interruption occurs during an overtime period or on Saturdays, Sundays or Holidays, the usual charges for overtime periods will still be fully assessable and due in addition to the above charge. This rule shall be applicable unless otherwise agreed by the Company in writing.

9. *Completion of Loading: Upon completion of loading, a vessel shall not occupy the loading berth at the Elevator longer than is necessary to close the hatches, but in any event for not longer than 1 hour.* Vessels requiring extra time to set booms and derricks before making ready for sea or for any other reason may, at the time of docking, request written permission from the Company to do this work at the Elevator Berth, but it shall be at the sole discretion of the Company whether such permission is granted or not. Any vessel not granted such permission must vacate the berth immediately as required by the Company. Most vessels requiring extra dock time will be ordered to a lay-by berth, if available, or to anchorage, at vessel's expense.

Failure to comply with this requirement will automatically cause the vessel or its Agents to be assessed an extra charge of $1,500.00 per hour or part thereof from the time that permission was refused. This charge shall not impair the right of the Company to compel removal of the vessel from the berth nor shall it constitute a waiver on the part of the Company to claim any greater damages that may be sustained as a result of vessel's failure to vacate. The Company shall have the right, authority and privilege to compel the removal of the vessel by any lawful means at the vessel's own risk and expense and the Company shall not be liable for any damages, delay or other expenses including legal costs, arising from the act of removal of the vessel, by whomsoever incurred.

Port Expenditure: In addition to the port charges, the following charges will be applicable:

1. Grain Inspection Fee.
2. Charges as stipulated in the Company's Current Tariff.
3. The Port Warden and D.O.A. and/or U.S./D.O.A. fees when applicable, charged at cost in accordance with the regulations.

Unloading and Loading Facilities: The grain unloading berth is adequate for the largest lakers known and is equipped with 2 marine towers able to unload grain at a peak rate of over 2,240 tonnes (80,000 bushels) per hour.

The loading berth can handle ocean vessels having up to the following maximum dimensions:

Length Overall	900 ft. (See "Note" below).
Beam	137 ft. for self-trimming bulk carriers.
	137 ft. for OBO-centre holds only.
	125 ft. for tankers, provided off-shore tank openings are a minimum of 15 ft. inside ship's side.
Draft	47 ft. at MLW, subject to slight increase depending on state of tide. Port Authorities require vessels to have 3 ft. under their bottoms at all times.
Air Draft	53 ft. at MLW, to top of hatch covers.
	45 ft. at MHW, to top of hatch covers.

Note: Vessels having in excess of 730 ft. LOA up to 900 ft. LOA, may be accepted at the Elevator, but only by prior arrangement with the Company, which reserves the right, at its sole discretion, to refuse to load any vessel over 730 ft. because of its length or other physical characteristics which makes it impracticable to load.

The Port Cartier harbour as well as the grain loading berth have a depth of water of 15.2 m. (50 ft.).

REGULATIONS: Also see "General".

1. Ships will leave the loading or discharging berth immediately on completion of loading or discharging. If any delays occur on documentation, crew members missing etc., ship will leave the dock and all matters will be handled from anchorage or another berth.

2. Vessels ordered to anchor, should do so in the recommended area, see "Anchorage". Failure to do so may result in delays to vessels from being boarded by Port and Government Authorities. *Vessels at anchorage must remain 0.25 miles clear of the Harbour Approach Channel.*

3. Vessels arriving in ballast should ensure they are in good trim for safe handling into the harbour, bearing in mind the loading rate, so as not to cause any delay in loading due to deballasting. However should a vessel not be sufficiently ballasted at the time of proceeding into the harbour, the Pilot may request further ballasting, depending on the prevailing weather conditions. If in doubt the Master should contact the Port Office by Radio Telephone.

4. Vessels should have main engines and deck machinery operable at all times when alongside the berth. Permission contrary to the above must be obtained from the Port Authority.

5. All O.B.O. vessels not in possession of a valid Gas Free Certificate by an independent chemist will advise accordingly in the 72 hour ETA, and arrangements will be made to have a chemist available on arrival at vessel's expense. Masters must present a valid Gas Free Certificate before Notice of Readiness may be tendered.

6. Normally, vessels will be permitted entry to the harbour, to their assigned berth in order of their arrival. However, the Port Authority may alter the order to assure in its sole opinion, efficient operation of the harbour. The Port Authorities shall be the final arbitrator in case of dispute.

7. The Port Authority may require a vessel to vacate an assigned berth, proceed to anchor or standby berth and return to the assigned berth to complete loading or discharging as soon as conditions permit.

8. Any vessel which fails or refuses to vacate the berth when required by the Company, shall be assessed, in addition to any other charges due hereunder, an automatic charge of $2000.00 per hour or any part thereof after vacating notice has been given in writing to the Owner, Manager, Agent, Master, Mate, Operator or Charterer of the vessel. This charge shall be paid promptly and it is accepted that it accurately represents a minimum estimate of damages to the Company because of refusal or failure of the vessel to vacate. This payment shall not constitute a waiver on the part of the Company to claim greater actual damages that may be sustained as a result of the vessel's failure to vacate.

The Company, through the Port Authority, shall have the right, authority and privilege to compel the removal of the vessel, by any lawful means, at the vessel's own risk and expense and shall not be liable for any damages, delay or other expenses, including legal costs, arising from the act of removal of the vessel, by whomsoever incurred.

9. A stand-by charge of $1500.00 per hour will be assessed against any vessel causing delay of ore loading alongside berth when such delay is caused by the vessel not complying with Port regulations and requirements.

SHIPMASTER'S REPORT: December 1989.
Radio: When the vessel is alongside it is simple and quick to walk to the agent's dock office and send a telex or telefax message. When the vessel is at anchor all cables have to be routed through VCK (Sept Iles Coastguard station) as agents are not permitted to occupy the VHF with long messages. If however the Port Warden has to visit the ship for an inspection, then it is again simple to have him take a message ashore for the agent to transmit as a telex, etc.
Draft: Maximum departure draft 54 ft., depending on tide.
Restrictions: Daylight docking only for vessels over 950 ft. LOA, undocking at any time.
Tugs: 2 tugs for berthing and unberthing, tugs lines used. One tug is on standby 24 hours and will push vessel alongside if any difficulties experienced with moorings while alongside. Call Dock Office on VHF Channel 12.
Bilges: A new type of material for covering bilges is available locally and is recommended by the Canadian Coastguard for holds carrying concentrates. Material supplied free of charge.

AUTHORITY: Quebec Cartier Mining Company, Marine Services, P.O.Box 188, Port Cartier, P.Q. G5B 2G8, Canada. *Tel:* 418-768 2400/768 2439/768 2485. *Telex:* 051-86422. *Cables:* Cartier, Port Cartier. *FAX:* (418) 768-2344. *Contact:* L.S. McGee, Port Manager. A. Spence, Marine Supervisor.

PORT COLBORNE, Ontario: 42.52 N. 79.15 W.

Refer to "St. Lawrence Seaway" for important general information.
DOCUMENTS: All documentation carried out by Authorities in Montreal. Only when vessels have called at United States port after departing Montreal will any changes in documentation be necessary, which will consist of a United States Customs Clearance Certificate, to be available on board.
Immigration papers.
1 copy QS2 (Health Certificate).
3 Stores Lists.
Crew Personal Effects List.
Customs Clearance.
All of the above will have been stamped in Montreal.
PILOTAGE: Compulsory for ocean vessels over 250 tons gross. Pilots are available at Port Weller (upbound) and Sarnia (downbound). Supervisor of Pilots located in St. Catharines.
ANCHORAGE: In Lake Erie, beyond the 3-mile fairway buoy at entrance to Port Colborne Harbour.
RESTRICTIONS: Navigation season approximately from April 1st to December 31st. Channel depth 27 ft. dependent on Lake level.
Limiting depth in the channel from Port Colborne piers to Bridge 21 and 20 is 8.23 m. (27 ft.). From Bridge 21 and 20 North to Rameys Bend the limiting depth in the channel is 8.23 m. (27 ft.). The Welland Canal will accommodate vessels not exceeding 222.5 m. (730 ft.) in overall length and 23.16 m. (76 ft.) in extreme breadth. Permissible draft is 8.0 m. (26 ft. 3 in.). Air draft 35.5 m.
MAX. SIZE: 730 ft. length, 76 ft. beam, 26 ft. 3 in. draft and 35.5 m. air draft.
HEALTH: Pratique granted at Quebec City for incoming vessels from foreign ports.
TUGS: None available.
BERTHING:

Canada Starch Dock (Old Channel) Wharf No. 11:

Type	Grain Discharge into Hopper
Equipment	Ships' Equipment
Length	120 m. (390 ft.) between three dolphins
Depth	8.23 m. (27 ft.)

Rameys Bend, Wharf No. 12:

Type	Stone and Sand
Equipment	Tunnel and Belt Conveyor, Loading
Length	1,797 ft. (547.7 m.)
Depth	27 ft. (8.23 m.)
Operator	Port Colborne Quarries Ltd.

Robin Hood Dock, Wharf No. 13:

Type	Elevator – Grain and Grain Products
Length	1,000 ft. (304.8 m.)
Depth	25 ft. (7.62 m.)
Operator	Robin Hood Flour Mills Ltd.

Wharf No. 15:

Type	Sand
Equipment	Self-unloaders
Length	850 ft. (259.1 m.)
Depth	14 ft. (4.27 m.).
Operators	Beam Building & Supply Co. Ltd., and Underwater Gas Developers Ltd.

Wharf No. 16:

Type	Unloads and loads bulk cargoes, marine diesel oil and coal bunkers available.
Equipment	1 Belt Conveyor 7 in. – 8 in. Pipe-line
Length	1,480 ft. (451.1 m.)
Depth	27 ft. (8.2 m.)
Storage Capacity	27,000 tonnes above.
Operator	Rochester & Pittsburg Coal Co. (Canada) Ltd.

Fuelling Wharves:

Wharf No. 17:

Type	Unloads and loads bulk cargoes using ship's or mobile gear
Equipment	Mobile repair equipment
Length	1,120 ft. (341.4 m.)
Depth	27 ft. (8.2 m.)
Storage Capacity	225,000 tonnes.

Imperial Oil – Shell Canada, Wharf No. 18:

Type	Marine Diesel Fuel, Bunker "C" and Coal
Length	1,650 ft. (502.9 m.)
Depth	27 ft. (8.2 m.)
Storage Capacity	170,000 Barrels.

Maple Leaf Mills Ltd., Wharf No. 19:

Type	Grain Elevator
Length	1,650 ft. (502.9 m.)
Depth	27 ft. (8.2 m.)
Storage Capacity	63,000 tonnes

National Harbours Board, Wharf No. 20:

Type	Grain Elevator
Length	Holding Side 900 ft. (274.3 m.)
Depth:	Holding Side 19 ft. (5.79 m.)
Storage Capacity:	84,000 tonnes.
Operator	Goderich Elevators Ltd.

MEDICAL: Local hospital at Port Colborne. All assistance available.
DENSITY: Fresh water.
FRESH WATER: Available at West Side Wharf.
FUEL: Bunker and diesel fuel available.
REPAIRS: Local repair shops for boiler, engine and above deck repairs.
DRY DOCK: At Port Weller.
SURVEYORS: ABS and Lloyd's at Toronto.
GARBAGE DISPOSAL: Available.
WASTE OIL DISPOSAL: Mobile reception facilities available in the Welland Canal.
SEAMAN'S CLUBS: None.
GENERAL: *Publications:* Sailing Directions – Great Lakes Volume 1 – Seaway Handbook.
AUTHORITY: St. Lawrence Seaway Authority, Niagara Region, P.O.Box 370, 508 Glendale Avenue, St. Catharines, Ontario L2R 6V8, Canada. *Tel:* (905) 641-1932, (nights (905) 641-1939). *FAX:* (905) 461-4632. *Contact:* Captain A. Soni, Coordinator – Vessel Traffic Services.

PORT DALHOUSIE, Ontario: 43.12 N. 79.16 W. (See Plan)

Refer to "St. Lawrence Seaway" for important general information.
LOCATION: On the South shore of Lake Ontario 43 km. Southeast of Hamilton and 5 km. West of Port Weller, the Northern entrance of the Welland Canal. Port Dalhousie is now amalgamated with the City of St. Catharines.
APPROACHES: Access to the port is through 2 parallel entrance piers projecting out into Lake Ontario, which lead into a wide basin utilized by recreational vessels.
RESTRICTIONS: Navigation season: Usually April 1st to December 30th. Channel depth: Limiting depth in the channel between the entrance piers is approximately 21 ft. to 23 ft. below Chart Datum (Elev. 242.8 ft.) and gradually reduces in depth towards the basin.
RADIO: Ship-to-Shore communications: Through Toronto (VBG).
TUGS: No towing facilities.
BERTHING: The entrance to the harbour is between 2 parallel concrete piers 61.0 (200 ft.) apart. The East pier 701.1 m. (2,300 ft.) in length, extends out 457.3 m. (1,500 ft.) from the shore, 76.2 m. (250 ft.) beyond the outer end of the West Pier. Southward of the inner end of the entrance piers, the harbour widens out into a basin utilised by recreational vessels.
MEDICAL: General Hospital and Hotel Dieu at St. Catharines.
FUEL: Gasoline available.
SURVEYORS: Lloyd's at St. Catharine, ABS at Toronto.
CUSTOMS: Officers available at St. Catharines at any hour by previous arrangement.
SERVICES: Supplies available.
AUTHORITY: City of St. Catharines (Parks & Recreation Dept.), P.O.Box 3012, 320 Geneva Street, St. Catharines, Ontario, L2R 7C2. *Tel:* (905) 688-5601 (Ext.No.3144). *FAX:* (905) 646-9262. *Contact:* W.E. Fenwick, Harbour Manager. T.M. Cotton, Deputy Harbour Manager.

PORT HAWKESBURY AND STRAIT OF CANSO, N.S. (See Plan)

PORT LIMITS: Port Hawkesbury and Mulgrave harbour limits are from a line joining Melford Point and Bear Head, and the Canso Causeway.

DOCUMENTS:

3 copies Crew Declaration, Form Y14 (IMO Form 5 acceptable).
3 copies Store List, Form E1.
3 copies Immigration Crew List, Form IMM 200.
3 copies Inward Report, Form A6. *
2 copies Shipping Report, Form S1. **
3 copies Outward Report, Form A6. *
Completed Maritime Declaration of Health, Form QS 2001.
Valid Derating Certificate.
International Vaccination Certificates for crew members.
Complete copy of Manifest for Goods to be Discharged in Canada.
Clearance from Last Port.

* The Inward Report Form and Outward Report Form are usually prepared by the Agent.

** The Shipping Report Form is required for vessels performing coasting trade only.

ICE: Ice Advisory and Shipping Support Service is provided from mid-December to the end of the ice season. Information regarding ice conditions is broadcast regularly and special reports will be obtained on request from "Ice Halifax" through Halifax Radio (VCS).

Masters are cautioned that it may be necessary to remove certain buoys in Chedabucto Bay and the Strait of Canso during the ice season, and it is recommended that Masters request information on their deposition prior to entering.

PILOTAGE: Pilotage is compulsory. Pilotage boarding stations:

Strait of Canso, Northern Approach:	45° 41′ 42″ N. 61° 28′ 18″ W.
Strait of Canso, Southern Approach:	
(a) For vessels of 730 ft. and under:	45° 29′ 30″ N. 61° 11′ 06″ W.
(b) For vessels over 730 ft.:	45° 24′ 00″ N. 61° 01′ 00″ W.

Vessels must report by radio-telephone or radio-telegraph their ETA's 12 hours before the vessel's ETA. Time used must be UTC. ETA's must be confirmed or corrected not more than 8 hours later nor less than 4 hours prior to the new ETA.

Canso pilot boat guards Channel 14 (working on Channel 12) whilst in the area of Chedabucto Bay approach and Channel 14 whilst in the area of St. George's Bay approach.

ANCHORAGES: In the interests of safe navigation, anchorage berths for vessels of 65 ft. registered length have been established.

Anchorages "A" to "F" are situated in Chedabucto Bay in water depths from 14 to 26 fathoms.

Anchorages "G" to "O" are situated in Inhabitants Bay in water depths from 5 to 8 fathoms.

There is additional anchorage available at Pirates Harbour (45° 35′ 22″ N., 61° 22′ 28″ W.).

RESTRICTIONS: Overhead power cable – clearance 178 ft.

MAX. SIZE: Tankers of 350,000 d.w.t. can be accommodated at the Statia Terminal at Point Tupper. See also "Berthing" and "Tankers".

HEALTH: Pratique will be granted on arrival at berth by boarding officers, but it is the Master's responsibility to report by radio all details of any sickness or death occurring during the voyage to "Quarantine Halifax".

RADIO/VHF: Halifax (VCS) continuous year round. 500, A2; 2,182, A3; 156.8; F3 also 4, 6, 8, 12, 16, 22 MHz bands.

Sydney (VCO) continuous year round. 500, A2; 2,182 A3, 156.8, F3.

Canso (VAX) continuous year round. 2,182, A3; 156.8, F3.

Grindstone, Magdalien Island (VCN) continuous year round. 500, A2; 2,182, A3; 156.8 F3.

Canso Locks (VAZ3) continuous during navigation season. 2,182, A3; 156.8, F3.

Canso Traffic – VHF Channels 12 and 14 (Tel: (902) 625-5439, (902) 625-1950).

Canadian Coast Guard VTS and Pilot guard VHF Channel 14.

TUGS: Provided by Atlantic Towing Ltd. at the oil terminal.

BERTHING: *Nova Scotia Forest Industries Wharf:* Situated at Madden Point and serves the pulp and paper manufacturing facility, the wharf is 425 ft. long, with dolphins extending a farther 100 ft. from each end of the wharf, depth alongside 26 ft. at LW. Fresh water available, bunkers not available.

Georgia Pacific Corporation Terminal: Situated at Point Tupper, this gypsum loading facility consists of a series of dolphins capable of mooring a ship over 700 ft. in length and has a min. depth of 32 ft. LW. Conveyor system from plant to centre of dolphins. No fuel oil or fresh water available.

Port Hawkesbury Government Wharf: The 6.7 m. wide pier, 149.3 m. long. Provides a 80.0 m. commercial berth with 5.5 m. at LW. No fresh water or open storage area. Dockside power and telephone available.

Mulgrave Department of Transport Wharf: Berthing length 1,440 ft., depth of water 25 ft. to 32 ft. Used for wood pulp and general cargo loading/discharging rail tracks, fresh water available, fuel oil delivered by truck, No permanent hoists, mobile cranes upon request.

MEDICAL: Masters are required to give early advice to their Agent regarding medical and dental attention requirements, hospitalisation cases will be referred, Antigonish, 40 miles distant.

TANKERS: Statia Terminal – Point Tupper:

Operator: Statia Terminals Point Tupper, Inc., P.O.Box 2116, Port Hawkesbury, Nova Scotia, Canada B0E 2V0. Tel: (902) 625-1711. Fax: (902) 625-3098. Contact: Paul Crissman,Terminal Manager.

Location: Lat. 45° 34.5′ N., Long. 61° 20.5′ W.

With a current total capacity of more than 7.6 million barrels, the Terminal is the largest of its kind on the East Coast of North America, and is located in the deepest ice-free harbour. The primary function of the Terminal is to transship crude and refined hydrocarbons, blend gasoline and fuel oil, and supply ships' bunkers.

Notices and Communications: Vessels proceeding to Statia Terminals Point Tupper are required to radio Port Hawkesbury via Sydney Radio (VCO) or Halifax Radio (VCS) with 72 hours, 48 hours and 24 hours notice of ETA. For bunker requirements, the 48 hour notice should indicate the exact bunker quantities and grades required. After tendering the 24 hour ETA, any change in ETA greater than 2 hours is also to be advised. 4 hours prior to arrival, vessels should contact Statia Terminals Point Tupper via VHF Channel 7A for instructions (Control Room, Tel: (902) 625-2607). Telex notices may be made to F.K.Warren Agency (Telex No. 01937513) in Nova Scotia, Canada, or by contacting the Terminal through the following Tel: (902) 625-1711. Fax: (902) 625-3098.

Tugs: 2 tugs are available at all times in Point Tupper. Additional information and/or tugs can be obtained by contacting Point Tupper Marine Services Ltd. (See "Operator" above). Also see "Notice".

Vessel Dimension Requirements:

	Berth I	*Berth II*
Maximum Allowable Draft	84 ft.	45 ft.
Maximum LOA	1,245 ft.	750 ft.
Minimum LOA	550 ft.	N/A
Deadweight Restrictions:		
Maximum	350,000	75,000
Minimum	25,000	N/A
Loading Arms	6×16 in. 2×10 in.	2×12 in. 2×10 in. 2× 8 in.

Bunker Connections at Dock:

Fuel Oil	2×10 in.	1× 8 in.
Diesel Oil	1×16 in.	2×10 in. 1× 8 in.

Tanker Discharge Rates (B.P.H.):

Crude Oil	80,000/100,000	20,000/25,000
Fuel Oil	43,000	12,300
Diesel Oil	12,800	12,800
Gasoline	12,700	12,700

Tankage:

Crude Oil Storage: 8 tanks 450,000 bbls. each, equipped with internal floating roofs and side entry mixers.

Ballast Facilities: There is no ballast facility at Point Tupper. All vessels must arrive with only segregated ballast. No ballast contained in the vessel's cargo tanks may be discharged into the Strait of Canso, even if the ballast meets the 15 p.p.m. limitation.

Expansion Capabilities: The facility comprises 1,720 acres. Additional tanks can be constructed.

Notice: Dated 6th October 1995.

Port costs for calling at Statia Terminals Point Tupper Inc.

Vessel Size	*Rate*	*Tugs included*
0 to 5,000 d.w.t.	U.S.$ 6,450	None.
5,001 to 10,000 d.w.t.	U.S.$ 9,700	1 tug in, none out.
10,001 to 15,000 d.w.t.	U.S.$ 12,950	1 tug in, 1 tug out.
15,001 to 25,000 d.w.t.	U.S.$ 16,150	1 tug in, 1 tug out.
25,001 to 35,000 d.w.t.	U.S.$ 19,400	1 tug in, 1 tug out.
35,001 to 85,000 d.w.t.	U.S.$ 27,250	2 tugs in, 2 tugs out.
85,001 to 121,000 d.w.t.	U.S.$ 31,600	2 tugs in, 2 tugs out.
121,001 to 220,000 d.w.t.	U.S.$ 37,350	2 tugs in, 2 tugs out. *
220,001 to 290,000 d.w.t.	U.S.$ 43,250	2 tugs in, 2 tugs out. *
290,001 to 350,000 d.w.t.	U.S.$ 48,300	2 tugs in, 2 tugs out. *
350,001 up	U.S.$ 50,250	2 tugs in, 2 tugs out. *

* Additional tugs will be required by the Pilots. The additional tugs will be supplied at cost; however, will require a minimum of 10 days notice to be dispatched from another port.

The above charges include ship agency, pilotage, harbour dues, line handling, line boat(s), tug(s) (as indicated), and one round trip use of the water taxi.

Presently: Point Tupper Marine Services Limited's "Bulk Oil Cargo Fee" at Canadian$0.225 per gross metric tons cargo as of November 9/95.

Signed: Robert L. Potter, President, Point Tupper Marine Services Ltd.

DENSITY: 1025. Influenced by Spring thaw run-off.

FRESH WATER: Available at Point Tupper.

FUEL: Not available.

CONSULS: See "Halifax".

REPAIRS: Hull and machinery repairs to vessels afloat possible. Radio and radar service is available locally, the vessel's Agent should receive early advice of repair requirements.

GANGWAY/DECK WATCHMEN: Usually ship's crew.

CUSTOMS ALLOWANCES: Tobacco: 200 cigarettes or 50 cigars or 2 lb. tobacco per person per week. Beer: 288 oz. of beer or ale. Wines/spirits: Total of 40 ounces per person over 19 years old.

Subsequent issues may be authorised to crew members of foreign vessels, but the max. quantity any crew member may hold at any time must not exceed 300 cigarettes, or 75 cigars, or 3 pounds of tobacco and 60 ounces wines/spirits.

Crew personal effects such as radios, tape recorders, binoculars, etc., should be declared on manifest.

REPATRIATION: Crew changes and repatriation permitted.

AIRPORT: Regular services by Air Canada from Halifax International Airport 150 miles distance, and from Sydney Airport 90 miles distant. Charter flights by small aircraft can be arranged from Port Hawkesbury Airport to Halifax and Sydney.

SUPPLIES: Provisions and bonded stores come from Halifax, so Masters are advised that to avoid delays, their Agent should be notified prior to arrival on their requirements, particularly for deck and engine stores.

Laundry facilities are available and in order to expedite the service, Masters should request their Agent to have a representative to attend on arrival.

Supplies of stores will have to be conveyed to tankers at Statia Terminals Point Tupper, Inc. by stores boat or barge.

TIME: GMT minus 4 hours. First Sunday in April, clocks advanced 1 hour, last Sunday in October, clocks retarded 1 hour.
POLICE/AMBULANCE/FIRE: Police 625-2220; Ambulance 625-2929 or 625-1911; Fire 625-2838.
SHORE LEAVE: Permitted, via water taxi.
CANSO CAUSEWAY CANAL: Max. vessel dimensions, length 715 ft., width 75 ft., draft 28 ft., vessels with draft greater than 28 ft. and not more than 30 ft. may proceed through with special permission of the Canal Superintendent. Depth of water on the North and South approach mooring berth is 32 ft. During the months December to April, Masters should consult with Ice Operations, Halifax, whether lock in operation.
GENERAL: *Environmental Emergencies:* Tel: 1-800-565-1633 (Oil, pesticide and chemical spills, fish kills, defective aids to navigation and other environmental emergencies).
Local Clean-up Company: Point Tupper Marine Services Ltd., P.O.Box 138, Port Hastings, N.S., B0E 2T0. Tel: 1-902-625-1711.
Local Salvage Co.: Contact Point Tupper Marine Services Ltd. Tel: 1-902-625-1711.
AUTHORITY: The Port Manager, Port Hawkesbury, Nova Scotia, Canada. *Tel:* (902) 747-3143, after hours (902) 625-2508. *Contact:* John Langley, Port Manager – Mulgrave, N.S.
Transport Canada, P.O.Box 1013, Dartmouth, Nova Scotia, Canada B2Y 4K2. *Tel:* (902) 426-7132, 747-3143. *FAX:* (902) 426-3904, 747-2860.

PORT HOPE, Ontario: 43.56 N. 78.17 W. (See Plan)

TUGS: None.
BERTHING: Two breakwaters form artificial harbour. Depth at entrance 5 ft. – 10 ft. Town docks have 650 ft. total berthing length with 7 ft. – 9 ft. alongside. Queen's Wharf is 1,200 ft. long with 6 ft. alongside.
FRESH WATER: Available at Queen's Wharf.
FUEL: Diesel fuel and gasoline available.
AUTHORITY: Port Hope Harbour Committee, 56 Queen Street (P.O.Box 117), Port Hope, Ontario L1A 3V9, Canada. *Tel:* (905) 885-4544. *Contact:* E.M. Creighton, Chairman.

PORT SAGUENAY (Chicoutimi), Quebec: 48.25 N. 71.02 W. (See Plan)

DOCUMENTS:
2 Crew Lists.
2 Passenger Lists.
3 Crews Declaration (Canadian Form Y14).
3 Stores Lists (Canadian Form E.1).
Health Declaration (Canadian Form QS. 2001).
3 Cargo Manifests.
3 Bills of Lading.
PILOTAGE: Pilotage is compulsory for Grande-Anse Terminal and Albert-Maltais Marine Terminal. Pilots board vessels that are Westerly-bound at Anse-aux-Basques and Easterly-bound at Quebec City.
ANCHORAGE: Ships can anchor on the North side at the beginning of the channel.
RESTRICTIONS: Albert-Maltais Marine Terminal: The navigation season is from mid-April to end of November (approximately).
MAX. SIZE: Grande-Anse Marine Terminal: 100,000 d.w.t. Albert-Maltais Marine Terminal: 10,000 d.w.t.
HEALTH: Pratique may be obtained by radio to Quarantine Quebec. Health Officer boards on arrival.
RADIO: The Master of every ship inward bound in the Gulf of St.Lawrence and destined for ports West of Anse-aux-Basques must report his ETA to "Pilots Montreal" via Vessel Traffic Service on VHF Channel 14 (156.7 MHz), or by other means of communications to Seven Island Radio Station (VCK), giving his ETA at Escoumins Pilotage Station.
VHF: No port radio station.
RADAR: VTS Les Escoumins, Channel 14 (156.7 MHz).
TUGS: Available.
BERTHING:
Grande-Anse Marine Terminal:
Location:
On the Saguenay River at about 54 nautical miles from junction of the Saguenay with the St. Lawrence. Latitude: 48° 24.1′ N., Longitude: 70° 49.9′ W.
Wharf Length: 286 m.
Depth: 13.8 m. at mean low tide.
Berthing Capacity: Over 100,000 d.w.t.
Storage: Transit shed – length 127 m.
width 45 m.
area 5,715 sq.m.
Open storage – 5.5 hectares.
Navigation Period: Year-round.
Albert Maltais Marine Terminal:
Location: On the Saguenay River at about 60 nautical miles from junction of the Saguenay with the St. Lawrence. Latitude: 48° 27.0′ N., Longitude 70° 59.2′ W.
Dock: Length: 305 m.
Width: 150 m.
Depth: 9.1 m. at mean low tide.
Vessels: 10,000 d.w.t.
Berthing Capacity: Maximum draft: 7.8 m.
Maximum length: 137 m.
Channel: 6.0 km. × 61 m. width.
Navigation Period: From mid-April to mid-December.
CRANES: At the berth at Grande-Anse there is 1×165 ton capacity crane.
BULK CARGO FACILITIES: Dry bulk storage: 80,000 tons (salt). 40,000 tons (coal).
Liquid bulk storage: 12,000 tons (caustic).
SPECIALISED CARGO HANDLING FACILITIES: None.
BRIDGES: None.
STEVEDORES: *Loading Ships:* The regular working hours at Grande-Anse Marine Terminal are: 0800 hrs. – 1200 hrs. and 1300 hrs. – 1700 hrs. However, according to user needs, the schedule can be extended during the week until 2200 hrs. and weekend from 0800 hrs. to 2200 hrs. (7 days a week).
MEDICAL: Doctors, hospital facilities available.
TANKERS: No facilities.
DENSITY: Fresh water.
FRESH WATER: Available (24 hours a day).
FUEL: Available by truck only (24 hours a day). Make arrangements with Agent.
REPAIRS: Minor machine shop repairs only.
FIRE PRECAUTIONS: No smoking in the dangerous area.
CONSULS: Norway, France and U.S.A.
REPAIRS: Small repairs possible.
DRY DOCKS: None available.
SURVEYORS: Classification Society and Cargo Surveyors available.
GANGWAY/DECK WATCHMEN: Not necessary, but it depends on the ship.
OPENING/CLOSING HATCHES: By ship's crew.
CUSTOMS ALLOWANCES: 200 cigarettes for each man. Officers may be allowed 1 bottle wine/spirits, Master up to 5 bottles.
CARGO GEAR: See "Cranes".
REPATRIATION: Possible.
AIRPORT: 25 km. from the port. Flights operated by Air Alliance and Canadian.
TIME: GMT minus 5 hours. Daylight Saving Time: GMT minus 4 hours, applied from first Sunday of April until last Sunday of October each year.
HOLIDAYS:
New Year's Day (January 1st)
January 2nd
Easter Monday
Victoria Day (third Monday of May)
St.Jean-Baptiste Day (June 24th)
Canada Day (July 1st)
Labour Day (first Monday of September)
Thanksgiving Day (second Monday of October)
Christmas Day (December 25th)
Boxing Day (December 26th)
POLICE/AMBULANCE/FIRE: Police 418-697-5100. Ambulance 418-544-3335. Fire 418-697-5100.
EMERGENCY CO-ORDINATION CENTRE: Contact Port Authority. Tel: 418-698-5535. Pager: 418-696-8979.
TELEPHONES: Available on the berth and in stevedores office.
IDENTIFICATION CARDS: Not necessary.
GARBAGE DISPOSAL: Contact Port Authority on arrival.
WASTE OIL DISPOSAL: By truck only.
SEAMAN'S CLUBS: None.
AUTHORITY: Port Saguenay, C.P. 760, 49 Lafontaine Street, Chicoutimi, Quebec G7H 5E1, Canada. *Tel:* (418) 698-5535. *FAX:* (418) 543-4633. *Contact:* Mrs. Ghyslaine Collard, General Manager. Rejean Dufour, Planning and Operations.

PORT STANLEY, Ontario: 42.39 N. 81.13 W. (See Plan)

LOCATION: Port Stanley Harbour is located at the mouth of Kettle Creek 29 km. West of Port Burwell and 96 km. West of Long Point on the North shore of Lake Erie in the County of Elgin.
RESTRICTIONS: *Navigation Season:* March to December.
Depths:

Approach Channel	7.0 m.
Outer Harbour	6.7 m.
Outer Turning Basin	5.5 m.
Inner Harbour	6.4 m.
Inner Turning Basin	4.6 m.

TUGS: Available by arrangement.
BERTHING:

Berth No.	*Berth*	*Length* (m.)	*Depth* (m.)
B1	West Pier	642.0	6.4
B2	West Pier	70.0	4.6
B3	East Pier	259.0	6.4
B4	East Pier	300.0	4.6

FUEL: Available by road tanker.
REPAIRS: Minor repairs possible.
SERVICES: Divers, fish processing plant, fuel tank farms, rail line, storage domes, warehouses, tank farm, grain elevators.
AUTHORITY: Harbours and Ports, Canadian Coast Guard, 201 N. Front Street, Suite 703, Sarnia, Ontario, N7T 8B1 Canada. *Tel:* (519) 383-1942. *FAX:* (519) 383-1996. *Contact:* Regional Manager.
Port Official: R.C. Payne, Harbour Master/Wharfinger.

PORT HAWKESBURY AND STRAIT OF CANSO, N.S. (See Plan)

PORT LIMITS: Port Hawkesbury and Mulgrave harbour limits are from a line joining Melford Point and Bear Head, and the Canso Causeway.

DOCUMENTS:

3 copies Crew Declaration, Form Y14 (IMO Form 5 acceptable).
3 copies Store List, Form E1.
3 copies Immigration Crew List, Form IMM 200.
3 copies Inward Report, Form A6. *
2 copies Shipping Report, Form S1. **
3 copies Outward Report, Form A6. *
Completed Maritime Declaration of Health, Form QS 2001.
Valid Derating Certificate.
International Vaccination Certificates for crew members.
Complete copy of Manifest for Goods to be Discharged in Canada.
Clearance from Last Port.

* The Inward Report Form and Outward Report Form are usually prepared by the Agent.

** The Shipping Report Form is required for vessels performing coasting trade only.

ICE: Ice Advisory and Shipping Support Service is provided from mid-December to the end of the ice season. Information regarding ice conditions is broadcast regularly and special reports will be obtained on request from "Ice Halifax" through Halifax Radio (VCS).

Masters are cautioned that it may be necessary to remove certain buoys in Chedabucto Bay and the Strait of Canso during the ice season, and it is recommended that Masters request information on their deposition prior to entering.

PILOTAGE: Pilotage is compulsory. Pilotage boarding stations:

Strait of Canso, Northern Approach:	45° 41′ 42″ N. 61° 28′ 18″ W.
Strait of Canso, Southern Approach:	
(a) For vessels of 730 ft. and under:	45° 29′ 30″ N. 61° 11′ 06″ W.
(b) For vessels over 730 ft.:	45° 24′ 00″ N. 61° 01′ 00″ W.

Vessels must report by radio-telephone or radio-telegraph their ETA's 12 hours before the vessel's ETA. Time used must be UTC. ETA's must be confirmed or corrected not more than 8 hours later nor less than 4 hours prior to the new ETA.

Canso pilot boat guards Channel 14 (working on Channel 12) whilst in the area of Chedabucto Bay approach and Channel 14 whilst in the area of St. George's Bay approach.

ANCHORAGES: In the interests of safe navigation, anchorage berths for vessels of 65 ft. registered length have been established.

Anchorages "A" to "F" are situated in Chedabucto Bay in water depths from 14 to 26 fathoms.

Anchorages "G" to "O" are situated in Inhabitants Bay in water depths from 5 to 8 fathoms.

There is additional anchorage available at Pirates Harbour (45° 35′ 22″ N., 61° 22′ 28″ W.).

RESTRICTIONS: Overhead power cable – clearance 178 ft.

MAX. SIZE: Tankers of 350,000 d.w.t. can be accommodated at the Statia Terminal at Point Tupper. See also "Berthing" and "Tankers".

HEALTH: Pratique will be granted on arrival at berth by boarding officers, but it is the Master's responsibility to report by radio all details of any sickness or death occurring during the voyage to "Quarantine Halifax".

RADIO/VHF: Halifax (VCS) continuous year round. 500, A2; 2,182, A3; 156.8; F3 also 4, 6, 8, 12, 16, 22 MHz bands.

Sydney (VCO) continuous year round. 500, A2; 2,182 A3, 156.8, F3.

Canso (VAX) continuous year round. 2,182, A3; 156.8, F3.

Grindstone, Magdalien Island (VCN) continuous year round. 500, A2; 2,182, A3; 156.8 F3.

Canso Locks (VAZ3) continuous during navigation season. 2,182, A3; 156.8, F3.

Canso Traffic – VHF Channels 12 and 14 (Tel: (902) 625-5439, (902) 625-1950).

Canadian Coast Guard VTS and Pilot guard VHF Channel 14.

TUGS: Provided by Atlantic Towing Ltd. at the oil terminal.

BERTHING: *Nova Scotia Forest Industries Wharf:* Situated at Madden Point and serves the pulp and paper manufacturing facility, the wharf is 425 ft. long, with dolphins extending a farther 100 ft. from each end of the wharf, depth alongside 26 ft. at LW. Fresh water available, bunkers not available.

Georgia Pacific Corporation Terminal: Situated at Point Tupper, this gypsum loading facility consists of a series of dolphins capable of mooring a ship over 700 ft. in length and has a min. depth of 32 ft. LW. Conveyor system from plant to centre of dolphins. No fuel oil or fresh water available.

Port Hawkesbury Government Wharf: The 6.7 m. wide pier, 149.3 m. long. Provides a 80.0 m. commercial berth with 5.5 m. at LW. No fresh water or open storage area. Dockside power and telephone available.

Mulgrave Department of Transport Wharf: Berthing length 1,440 ft., depth of water 25 ft. to 32 ft. Used for wood pulp and general cargo loading/discharging rail tracks, fresh water available, fuel oil delivered by truck, No permanent hoists, mobile cranes upon request.

MEDICAL: Masters are required to give early advice to their Agent regarding medical and dental attention requirements, hospitalisation cases will be referred, Antigonish, 40 miles distant.

TANKERS: Statia Terminal – Point Tupper:

Operator: Statia Terminals Point Tupper, Inc., P.O.Box 2116, Port Hawkesbury, Nova Scotia, Canada B0E 2V0. Tel: (902) 625-1711. Fax: (902) 625-3098. Contact: Paul Crissman,Terminal Manager.

Location: Lat. 45° 34.5′ N., Long. 61° 20.5′ W.

With a current total capacity of more than 7.6 million barrels, the Terminal is the largest of its kind on the East Coast of North America, and is located in the deepest ice-free harbour. The primary function of the Terminal is to transship crude and refined hydrocarbons, blend gasoline and fuel oil, and supply ships' bunkers.

Notices and Communications: Vessels proceeding to Statia Terminals Point Tupper are required to radio Port Hawkesbury via Sydney Radio (VCO) or Halifax Radio (VCS) with 72 hours, 48 hours and 24 hours notice of ETA. For bunker requirements, the 48 hour notice should indicate the exact bunker quantities and grades required. After tendering the 24 hour ETA, any change in ETA greater than 2 hours is also to be advised. 4 hours prior to arrival, vessels should contact Statia Terminals Point Tupper via VHF Channel 7A for instructions (Control Room, Tel: (902) 625-2607). Telex notices may be made to F.K.Warren Agency (Telex No. 01937513) in Nova Scotia, Canada, or by contacting the Terminal through the following Tel: (902) 625-1711. Fax: (902) 625-3098.

Tugs: 2 tugs are available at all times in Point Tupper. Additional information and/or tugs can be obtained by contacting Point Tupper Marine Services Ltd. (See "Operator" above). Also see "Notice".

Vessel Dimension Requirements:

	Berth I	*Berth II*
Maximum Allowable Draft	84 ft.	45 ft.
Maximum LOA	1,245 ft.	750 ft.
Minimum LOA	550 ft.	N/A
Deadweight Restrictions:		
Maximum	350,000	75,000
Minimum	25,000	N/A
Loading Arms	6×16 in. 2×10 in.	2×12 in. 2×10 in. 2× 8 in.

Bunker Connections at Dock:

Fuel Oil	2×10 in.	1× 8 in.
Diesel Oil	1×16 in.	2×10 in. 1× 8 in.

Tanker Discharge Rates (B.P.H.):

Crude Oil	80,000/100,000	20,000/25,000
Fuel Oil	43,000	12,300
Diesel Oil	12,800	12,800
Gasoline	12,700	12,700

Tankage:

Crude Oil Storage: 8 tanks 450,000 bbls. each, equipped with internal floating roofs and side entry mixers.

Ballast Facilities: There is no ballast facility at Point Tupper. All vessels must arrive with only segregated ballast. No ballast contained in the vessel's cargo tanks may be discharged into the Strait of Canso, even if the ballast meets the 15 p.p.m. limitation.

Expansion Capabilities: The facility comprises 1,720 acres. Additional tanks can be constructed.

Notice: Dated 6th October 1995.

Port costs for calling at Statia Terminals Point Tupper Inc.

Vessel Size	*Rate*	*Tugs included*
0 to 5,000 d.w.t.	U.S.$ 6,450	None.
5,001 to 10,000 d.w.t.	U.S.$ 9,700	1 tug in, none out.
10,001 to 15,000 d.w.t.	U.S.$ 12,950	1 tug in, 1 tug out.
15,001 to 25,000 d.w.t.	U.S.$ 16,150	1 tug in, 1 tug out.
25,001 to 35,000 d.w.t.	U.S.$ 19,400	1 tug in, 1 tug out.
35,001 to 85,000 d.w.t.	U.S.$ 27,250	2 tugs in, 2 tugs out.
85,001 to 121,000 d.w.t.	U.S.$ 31,600	2 tugs in, 2 tugs out.
121,001 to 220,000 d.w.t.	U.S.$ 37,350	2 tugs in, 2 tugs out. *
220,001 to 290,000 d.w.t.	U.S.$ 43,250	2 tugs in, 2 tugs out. *
290,001 to 350,000 d.w.t.	U.S.$ 48,300	2 tugs in, 2 tugs out. *
350,001 up	U.S.$ 50,250	2 tugs in, 2 tugs out. *

* Additional tugs will be required by the Pilots. The additional tugs will be supplied at cost; however, will require a minimum of 10 days notice to be dispatched from another port.

The above charges include ship agency, pilotage, harbour dues, line handling, line boat(s), tug(s) (as indicated), and one round trip use of the water taxi.

Presently: Point Tupper Marine Services Limited's "Bulk Oil Cargo Fee" at Canadian$0.225 per gross metric tons cargo as of November 9/95.

Signed: Robert L. Potter, President, Point Tupper Marine Services Ltd.

DENSITY: 1025. Influenced by Spring thaw run-off.

FRESH WATER: Available at Point Tupper.

FUEL: Not available.

CONSULS: See "Halifax".

REPAIRS: Hull and machinery repairs to vessels afloat possible. Radio and radar service is available locally, the vessel's Agent should receive early advice of repair requirements.

GANGWAY/DECK WATCHMEN: Usually ship's crew.

CUSTOMS ALLOWANCES: Tobacco: 200 cigarettes or 50 cigars or 2 lb. tobacco per person per week. Beer: 288 oz. of beer or ale. Wines/spirits: Total of 40 ounces per person over 19 years old.

Subsequent issues may be authorised to crew members of foreign vessels, but the max. quantity any crew member may hold at any time must not exceed 300 cigarettes, or 75 cigars, or 3 pounds of tobacco and 60 ounces wines/spirits.

Crew personal effects such as radios, tape recorders, binoculars, etc., should be declared on manifest.

REPATRIATION: Crew changes and repatriation permitted.

AIRPORT: Regular services by Air Canada from Halifax International Airport 150 miles distance, and from Sydney Airport 90 miles distant. Charter flights by small aircraft can be arranged from Port Hawkesbury Airport to Halifax and Sydney.

SUPPLIES: Provisions and bonded stores come from Halifax, so Masters are advised that to avoid delays, their Agent should be notified prior to arrival on their requirements, particularly for deck and engine stores.

Laundry facilities are available and in order to expedite the service, Masters should request their Agent to have a representative to attend on arrival.

Supplies of stores will have to be conveyed to tankers at Statia Terminals Point Tupper, Inc. by stores boat or barge.

TIME: GMT minus 4 hours. First Sunday in April, clocks advanced 1 hour, last Sunday in October, clocks retarded 1 hour.
POLICE/AMBULANCE/FIRE: Police 625-2220; Ambulance 625-2929 or 625-1911; Fire 625-2838.
SHORE LEAVE: Permitted, via water taxi.
CANSO CAUSEWAY CANAL: Max. vessel dimensions, length 715 ft., width 75 ft., draft 28 ft., vessels with draft greater than 28 ft. and not more than 30 ft. may proceed through with special permission of the Canal Superintendent. Depth of water on the North and South approach mooring berth is 32 ft. During the months December to April, Masters should consult with Ice Operations, Halifax, whether lock in operation.
GENERAL: *Environmental Emergencies:* Tel: 1-800-565-1633 (Oil, pesticide and chemical spills, fish kills, defective aids to navigation and other environmental emergencies).
Local Clean-up Company: Point Tupper Marine Services Ltd., P.O.Box 138, Port Hastings, N.S., B0E 2T0. Tel: 1-902-625-1711.
Local Salvage Co.: Contact Point Tupper Marine Services Ltd. Tel: 1-902-625-1711.
AUTHORITY: The Port Manager, Port Hawkesbury, Nova Scotia, Canada. *Tel:* (902) 747-3143, after hours (902) 625-2508. *Contact:* John Langley, Port Manager – Mulgrave, N.S.
Transport Canada, P.O.Box 1013, Dartmouth, Nova Scotia, Canada B2Y 4K2. *Tel:* (902) 426-7132, 747-3143. *FAX:* (902) 426-3904, 747-2860.

PORT HOPE, Ontario: 43.56 N. 78.17 W. (See Plan)

TUGS: None.
BERTHING: Two breakwaters form artificial harbour. Depth at entrance 5 ft. – 10 ft. Town docks have 650 ft. total berthing length with 7 ft. – 9 ft. alongside. Queen's Wharf is 1,200 ft. long with 6 ft. alongside.
FRESH WATER: Available at Queen's Wharf.
FUEL: Diesel fuel and gasoline available.
AUTHORITY: Port Hope Harbour Committee, 56 Queen Street (P.O.Box 117), Port Hope, Ontario L1A 3V9, Canada. *Tel:* (905) 885-4544. *Contact:* E.M. Creighton, Chairman.

PORT SAGUENAY (Chicoutimi), Quebec: 48.25 N. 71.02 W. (See Plan)

DOCUMENTS:
- 2 Crew Lists.
- 2 Passenger Lists.
- 3 Crews Declaration (Canadian Form Y14).
- 3 Stores Lists (Canadian Form E.1).
- Health Declaration (Canadian Form QS. 2001).
- 3 Cargo Manifests.
- 3 Bills of Lading.

PILOTAGE: Pilotage is compulsory for Grande-Anse Terminal and Albert-Maltais Marine Terminal. Pilots board vessels that are Westerly-bound at Anse-aux-Basques and Easterly-bound at Quebec City.
ANCHORAGE: Ships can anchor on the North side at the beginning of the channel.
RESTRICTIONS: Albert-Maltais Marine Terminal: The navigation season is from mid-April to end of November (approximately).
MAX. SIZE: Grande-Anse Marine Terminal: 100,000 d.w.t. Albert-Maltais Marine Terminal: 10,000 d.w.t.
HEALTH: Pratique may be obtained by radio to Quarantine Quebec. Health Officer boards on arrival.
RADIO: The Master of every ship inward bound in the Gulf of St.Lawrence and destined for ports West of Anse-aux-Basques must report his ETA to "Pilots Montreal" via Vessel Traffic Service on VHF Channel 14 (156.7 MHz), or by other means of communications to Seven Island Radio Station (VCK), giving his ETA at Escoumins Pilotage Station.
VHF: No port radio station.
RADAR: VTS Les Escoumins, Channel 14 (156.7 MHz).
TUGS: Available.
BERTHING:
Grande-Anse Marine Terminal:
Location:
On the Saguenay River at about 54 nautical miles from junction of the Saguenay with the St. Lawrence. Latitude: 48° 24.1′ N., Longitude: 70° 49.9′ W.

Wharf Length:	286 m.
Depth:	13.8 m. at mean low tide.
Berthing Capacity:	Over 100,000 d.w.t.
Storage:	Transit shed – length 127 m. width 45 m. area 5,715 sq.m. Open storage – 5.5 hectares.
Navigation Period:	Year-round.

Albert Maltais Marine Terminal:
Location: On the Saguenay River at about 60 nautical miles from junction of the Saguenay with the St. Lawrence. Latitude: 48° 27.0′ N., Longitude 70° 59.2′ W.

Dock:	Length: 305 m. Width: 150 m. Depth: 9.1 m. at mean low tide.
Vessels:	10,000 d.w.t.
Berthing Capacity:	Maximum draft: 7.8 m. Maximum length: 137 m.
Channel:	6.0 km. × 61 m. width.
Navigation Period:	From mid-April to mid-December.

CRANES: At the berth at Grande-Anse there is 1×165 ton capacity crane.
BULK CARGO FACILITIES: Dry bulk storage: 80,000 tons (salt). 40,000 tons (coal).
Liquid bulk storage: 12,000 tons (caustic).
SPECIALISED CARGO HANDLING FACILITIES: None.
BRIDGES: None.
STEVEDORES: *Loading Ships:* The regular working hours at Grande-Anse Marine Terminal are: 0800 hrs. – 1200 hrs. and 1300 hrs. – 1700 hrs. However, according to user needs, the schedule can be extended during the week until 2200 hrs. and weekend from 0800 hrs. to 2200 hrs. (7 days a week).
MEDICAL: Doctors, hospital facilities available.
TANKERS: No facilities.
DENSITY: Fresh water.
FRESH WATER: Available (24 hours a day).
FUEL: Available by truck only (24 hours a day). Make arrangements with Agent.
REPAIRS: Minor machine shop repairs only.
FIRE PRECAUTIONS: No smoking in the dangerous area.
CONSULS: Norway, France and U.S.A.
REPAIRS: Small repairs possible.
DRY DOCKS: None available.
SURVEYORS: Classification Society and Cargo Surveyors available.
GANGWAY/DECK WATCHMEN: Not necessary, but it depends on the ship.
OPENING/CLOSING HATCHES: By ship's crew.
CUSTOMS ALLOWANCES: 200 cigarettes for each man. Officers may be allowed 1 bottle wine/spirits, Master up to 5 bottles.
CARGO GEAR: See "Cranes".
REPATRIATION: Possible.
AIRPORT: 25 km. from the port. Flights operated by Air Alliance and Canadian.
TIME: GMT minus 5 hours. Daylight Saving Time: GMT minus 4 hours, applied from first Sunday of April until last Sunday of October each year.
HOLIDAYS:
- New Year's Day (January 1st)
- January 2nd
- Easter Monday
- Victoria Day (third Monday of May)
- St.Jean-Baptiste Day (June 24th)
- Canada Day (July 1st)
- Labour Day (first Monday of September)
- Thanksgiving Day (second Monday of October)
- Christmas Day (December 25th)
- Boxing Day (December 26th)

POLICE/AMBULANCE/FIRE: Police 418-697-5100. Ambulance 418-544-3335. Fire 418-697-5100.
EMERGENCY CO-ORDINATION CENTRE: Contact Port Authority. Tel: 418-698-5535. Pager: 418-696-8979.
TELEPHONES: Available on the berth and in stevedores office.
IDENTIFICATION CARDS: Not necessary.
GARBAGE DISPOSAL: Contact Port Authority on arrival.
WASTE OIL DISPOSAL: By truck only.
SEAMAN'S CLUBS: None.
AUTHORITY: Port Saguenay, C.P. 760, 49 Lafontaine Street, Chicoutimi, Quebec G7H 5E1, Canada. *Tel:* (418) 698-5535. *FAX:* (418) 543-4633. *Contact:* Mrs. Ghyslaine Collard, General Manager. Rejean Dufour, Planning and Operations.

PORT STANLEY, Ontario: 42.39 N. 81.13 W. (See Plan)

LOCATION: Port Stanley Harbour is located at the mouth of Kettle Creek 29 km. West of Port Burwell and 96 km. West of Long Point on the North shore of Lake Erie in the County of Elgin.
RESTRICTIONS: *Navigation Season:* March to December.
Depths:

Approach Channel	7.0 m.
Outer Harbour	6.7 m.
Outer Turning Basin	5.5 m.
Inner Harbour	6.4 m.
Inner Turning Basin	4.6 m.

TUGS: Available by arrangement.
BERTHING:

Berth No.	*Berth*	*Length (m.)*	*Depth (m.)*
B1	West Pier	642.0	6.4
B2	West Pier	70.0	4.6
B3	East Pier	259.0	6.4
B4	East Pier	300.0	4.6

FUEL: Available by road tanker.
REPAIRS: Minor repairs possible.
SERVICES: Divers, fish processing plant, fuel tank farms, rail line, storage domes, warehouses, tank farm, grain elevators.
AUTHORITY: Harbours and Ports, Canadian Coast Guard, 201 N. Front Street, Suite 703, Sarnia, Ontario, N7T 8B1 Canada. *Tel:* (519) 383-1942. *FAX:* (519) 383-1996. *Contact:* Regional Manager.
Port Official: R.C. Payne, Harbour Master/Wharfinger.

PORT WELLER, Ontario: 43.14 N. 79.13 W.

LOCATION: On the South shore of Lake Ontario, West End. Port Weller is the Northern entrance of the Welland Canal and is 5 km. East of Port Dalhousie.
PILOTAGE: Master of ships requiring pilotage service in the Port Weller-Sarnia area should send a notice of their arrival by radio-telephone so as to avoid any delay in waiting for a Pilot. When Westbound, Master should order a Pilot 4 hours in advance of the ETA at Port Weller through Prescott Radio (VBR). When Eastbound, Masters should order a Pilot 4 hours in advance of their ETA at Port Huron Buoys 11 and 12 or Rogers City. Both an accommodation ladder and a pilot ladder are required to assist Pilots boarding ships at Port Weller.
District Supervisor of Pilots: P. Hansell. P.O.Box 2008, Station B, St. Catharines, Ontario L2M 6P5. Tel: (905) 934-2921.
RESTRICTIONS: Channel depth: Limiting depth at entrance and through the Welland Ship Canal is 8.23 m. (27 ft.). Permissible draft is 8.0 m. (26 ft. 3 in.). The locks will accommodate vessels not exceeding 222.5 m. (730 ft.) overall length and 23.16 m. (76 ft.) extreme breadth.
Navigation season: April 1st to December 30th.
HEALTH: Quarantine service at Quebec, P.Q., for incoming ships from foreign ports.
RADIO: Ship-to-shore communications: Through Prescott Coast Guard Station (VBR).
TUGS: Available from Port Weller Dry Docks Ltd. for dry docking only.
BERTHING: See "St. Catharines".
MEDICAL: Hospitals at St. Catharines.
FUEL: Not available.
REPAIRS/DRY DOCKS: Port Weller Dry Docks, Ltd., 222.5 m. (730 ft.) building dock, gate width 24.38 m. (80 ft.); 228.6 m. (750 ft.) graving dock gate width 24.38 m. (80 ft.). Also 365.8 m. (1,200 ft.) fitting out berth. Complete machine shop in connection; major conversion jobs and all kinds of hull and machinery repairs. Shipyard gantry crane, 45 tons capacity; shearlegs crane, 125 tons capacity; two self-propelled cranes, 15 tons and a 55 ton level luffing gantry crane extending 609.6 m. (2,000 ft.) from the shipbuilding berth to the fitting out berth. Forged finished shafting available from Canada Foundries & Forgings Ltd.
SURVEYORS: ABS and Lloyd's at Toronto.
GARBAGE DISPOSAL: Available in the Welland Canal.
WASTE OIL DISPOSAL: Mobile reception facilities available in the Welland Canal.
SEAMAN'S CLUBS: None.
GENERAL: *Transportation:* All vessels entering the Welland Canal from Lake Ontario, or vessels from Lake Erie to Lake Ontario, via the canal, use this port but no steamship line makes it a regular port of call for discharging or loading freight. Highway connects with St. Catharines, 5.5 km.
Holidays: Officials of canal available at all times during navigation season.
Publications: Great Lakes Volume I – Sailing Directions. Seaway Handbook.
AUTHORITY: St. Lawrence Seaway Authority, Niagara Region, P.O.Box 370, 508 Glendale Avenue, St. Catharines, Ontario L2R 6V8, Canada. *Tel:* (905) 641-1932, (nights (905) 641-1939). *FAX:* (905) 461-4632. *Contact:* Captain A. Soni, Coordinator – Vessel Traffic Services.

POWELL RIVER, B.C.: 49.52 N. 124.33 W. (See Plan)

DOCUMENTS:
Customs Clearance from last port.
Manifest for goods to be off-loaded and "In Transit" cargo tonnage.
Duplicate Pratique for vessels arriving from ports other than U.S. ports.
Canadian Immigration Crew List, (Imm. 200) required in triplicate.
Passenger List in triplicate.
Seamen's passports and I.D. cards should be available when arriving from sea.
Ship's Certificates.
PILOTAGE: Payment compulsory. Incoming ships take Pilot at Race Rocks, near Victoria. Pilotage District of British Columbia.
ANCHORAGE: No suitable anchorage is available in Powell River area. Vessels usually anchor in English Bay (Vancouver) or various anchorages Vancouver Island.
MAX. SIZE: Up to 660 ft. LOA. 32 ft. draft. Tankers up to 615 ft. have berthed for discharging purposes (No. 2).
HEALTH: Duplicate pratique for first port of call. See also "Montreal".
RADAR/VHF: No radar. Pilots are in contact with tugs and mill office using VHF Channel 10. Mill office on Channel 10 throughout 24 hours.
TUGS: Two tugs available, to 500 h.p.
BERTHING: Berth No. 1 requires a tug when berthing only. Berth No. 2 Pilot's discretion. Accommodation: Channel depth 30 ft. – 35 ft. LW. Two private piers; Pier A with Berth No. 1, 500 ft. long, depth alongside 30 ft. LW, Berth No. 2, 482 ft. long, accepts vessels up to 660 ft. length, depth alongside 30 ft. LW.
Three 10-ton elevators. Dock storage for 10,000 tons. The elevators are used for loading barges only.
The mill uses toxic gases in it's manufacturing process. Area evacuation procedures must be reviewed once berthing completed.
Procedures can be obtained from the ship's Agent or Mill Dock Attendant (24 hours a day).
STEVEDORES: None. Local longshoremen only. Supercargoes are sent from Vancouver to assist in loading vessels. Longshoremen are members of Papermakers' Union.
MEDICAL: Powell River General Hospital and port doctor available. Complete medical services provided.
TANKERS: Bunker oil supplied by barges.
FRESH WATER: Unlimited supply, $35.00 connection charge.
FUEL: Fuel oil, diesel, and gasoline available.
CONSULS: Available at Vancouver, B.C.
GANGWAY/DECK WATCHMEN: On request.
OPENING/CLOSING HATCHES: By crew prior to arrival and departure.
CUSTOMS ALLOWANCES: 300 cigarettes, or 50 cigars, or 1 lb. tobacco on arrival. Issues every 7 days. 60 oz. or 2 cases beer on arrival. Issues every 7 days.
AIRPORT: 5 flights per day to Vancouver International Airport. 4 miles from docks. Charter flights available to Vancouver Island on request.
TIME: Pacific Standard Time.
HOLIDAYS: Union Contract. Usual holidays are New Year's Day, Easter Monday, Labour Day and Christmas Day.
TELEPHONES: Ship's telephone available. No. 483-3326.
SERVICES: Arranged by Powell River Shipping Services.
STORING: No cargo or equipment to be lifted on or off ship except by mill crews.
SHORE LEAVE: Permitted.
IDENTIFICATION CARDS: Keep available for inspection.
GARBAGE DISPOSAL: Not available.
WASTE OIL DISPOSAL: Not available.
SEAMAN'S CLUBS: None.
CURRENCY: Canadian Dollar.
AUTHORITY: MacMillan Bloedel Ltd., 6270 Yew Street, Powell River, British Columbia V8A 4Z7, Canada. *Tel:* (604) 483-2884. *Telex:* 044755. *FAX:* (604) 483-2952. *Contact:* J.D. Hughes, Product Distribution Superintendent.
Anne Tait, Port Captain, 4727 Marine Avenue, Powell River, British Columbia, Canada. Tel: (604) 485-6866.

PRESCOTT, Ontario: 44.44 N. 75.31 W. (See Plan)

For important General Information refer to "St. Lawrence Seaway".
PORT LIMITS: The Canada Ports Corporation, Port of Prescott, is located on the N.W. shore of the upper St. Lawrence River, approximately 125 miles West of Montreal, Quebec. See "Plan" for Port Limits.
DOCUMENTS: Documentation to the satisfaction of St. Lawrence Seaway Authority, Canada Coast Guard, Canada Customs, Agriculture Canada (Grain carriers) will suffice.
Also see "Montreal".
PILOTAGE: As required by Canadian Pilotage Authority, Upper Street, Lawrence River.
ANCHORAGE: As prescribed by St. Lawrence Seaway Authority.
RESTRICTIONS: Seaway draft in both loading and unloading slips. Permission must be granted by the Administrative Officer of the Port of Prescott prior to docking at this port.
MAX. SIZE: Loading Slip: 924 ft./617 ft. length and 200 ft. width. Unloading Slip: 1,450 ft./1,294 ft. and 250 ft. width. Seaway draft in both slips. River Berth: Length 478 ft. See "Plan".
HEALTH: In case of suspected diseases or fever on board, vessels must contact Leeds & Grenville Health Unit. Tel: 613-345-5685.
RADIO: Canada Coast Guard.
VHF: Canada Coast Guard.
TUGS: Tugs not required at Port of Prescott.
BERTHING: Ships loading grain dock in Loading Slip "A": Length of dock 924 ft. This slip also used for loading/unloading cargo on adjacent side of slip, length of dock 617 ft. Width of Slip "A" 200 ft. Short dock of 478 ft. on riverside for ship to tie up.
Ships unloading grain dock in Loading Slip "B": Length of dock 1,294 ft. This slip also used for loading/unloading cargo on adjacent side of slip. Length of dock 1,450 ft. Width of Slip "B" 250 ft.
Ships loading or unloading grain: Dock in respective slips against elevator. Ships loading/unloading other cargoes, taking on fuel, etc., or berthing for repairs, tie up in loading or unloading slips or on short dock.
CRANES: No cranes on site belonging to Port. Cranes and ship loading conveyors available from others.
BULK CARGO FACILITIES: See "Berthing". In addition to paved areas on docks adjacent to elevator building, an additional 5,600 sq.m. of paved asphalt area available for containers, palletised cargo, steel, etc., at head of loading slip. Other unpaved land available for rental or lease by arrangement.
Grains can be unloaded from vessel into grain elevator on to vessels, barges, railcars or trucks (See limitations under "General"). Other bulk commodities, containers, palletised cargo and other freight may be stored on property/wharves by arrangement. Trucks, cranes and forklifts have access to wharves adjacent to elevator in both loading and unloading slips. Canada Customs regulations apply to cargoes of foreign origin.
SPECIALISED CARGO HANDLING FACILITIES: See "Bulk Cargo Facilities".
BRIDGES: No bridges.
STEVEDORES: A minimum of 16 hours notice required for ordering of gangs for grain loading/unloading. Tariff schedule available on request. Normal hours of work 0800 hrs. to 1630 hrs. Rates for overtime work also available on request. Gangs normally available up to 2200 hrs.
MEDICAL: Medical physicians, dentists, chiropractors, pharmacies and ambulance services available in Prescott. Nearest hospital is Brockville (25 km.). The Port Office will assist Agents to direct patients to appropriate medical attention as soon as possible on request.

TANKERS: Not a tanker port. However, port does have an oil containment boom which can be deployed to extend across ship's entrance to Slip A – Loading Slip. Port works in conjunction with Canada Coast Guard Base, Prescott, Ontario, in case of an oil spill.
DENSITY: Fresh water.
FRESH WATER: Potable drinking water available.
FUEL: Available by tank truck.
FIRE PRECAUTIONS: Empty tankers arriving at this port for repairs must be purged before arrival to meet the requirements of the law. No burning, welding or grinding allowed on docks against grain elevator.
CONSULS: No consulates locally. Consulates in Ottawa, 45 miles.
REPAIRS: Repairs or arrangement for repairs available by Prescott Machine & Welding. Tel: 613-925-4277.
DRY DOCKS: No dry dock.
SURVEYORS: Port Warden available from Department of Transport, Ship's Safety, Kingston, Ontario. Tel: 613-548-4451. Canadian Grain Commission, Grain Inspection, Montreal, Quebec. Tel: 514-283-7696. Agriculture Canada, Ottawa, Ontario. Tel: 613-998-9926.
GANGWAY/DECK WATCHMEN: Available through Port Administration Office.
HATCHES: Opening and closing of hatches by ship's crew.
CUSTOMS ALLOWANCES: Contact Canada Customs Office, Prescott, Ontario. Tel: 613-925-4225.
REPATRIATION: Possible, contact Canada Customs and Immigration Offices, Prescott, Ontario. Tel: 613-925-2595.
AIRPORT: Ottawa International Airport, 45 miles. Montreal International Airport, 125 miles. Both airports served by regular airlines.
TIME: Eastern Standard Time, last weekend of October to last weekend of March. Eastern Daylight Time, last weekend of March to last weekend of October.
HOLIDAYS: New Year's Day; January 2nd; Good Friday; Easter Monday; Victoria Day; Dominion Day; Civic Holiday; Labour Day; Thanksgiving Day; Remembrance Day; December 24th (half day); Christmas Day; Boxing Day; December 31st (half day). Cargo work may be arranged on these days.
POLICE/AMBULANCE/FIRE: Ontario Provincial Police, Prescott Office. Tel: 613-925-4221 or 1-800-267-8919.

Ambulance Service, Prescott. Tel: 613-925-2925.

Fire Emergency Calls. Tel: 613-925-1211.

EMERGENCY COORDINATION CENTRE: Canadian Coast Guard, Prescott Base. Tel: 613-925-2865.
TELEPHONES: Contact Bell Canada, Tel: 613-310-2355 for on board services. Pay telephones at port. Office telephones available for collect or calling card calls.
BANKS: Bank of Montreal, Prescott. Tel: 613-925-2828.

Royal Bank, Prescott. Tel: 613-925-2861.

Toronto Dominion Bank, Prescott. Tel: 613-925-4244.

STORING: Local riggers can be employed to assist in storing.
SHIP SUPPLY SERVICE: Contact ship's Agent or Seaway Authority.
SHORE LEAVE: Crew members allowed ashore as long as Canada Customs Office gives permission.
IDENTIFICATION CARDS: Shore passes not issued by port. Canada Customs will advise as to identification papers required while ashore.
GARBAGE DISPOSAL: Garbage collection available by licensed private operator. Contact: T.L.C. Waste Systems. Tel: 613-342-3413.
WASTE OIL DISPOSAL: Contact T.L.C. Waste Systems. Tel: 613-342-3413.
SEAMAN'S CLUBS: No seaman's club at this port. Churches of most denominations in Prescott, 3 miles. Prescott has all modern municipal facilities, i.e. shops, post office, sports fields and licensed taverns and dining establishments.
CURRENCY: Canadian currency. U.S.$ 1.00 = Can.$ 1.37 (2.96).
REGULATIONS: Safety regulations as prescribed by Canada Labour Code apply.
DELAYS: Unless ship's berth is occupied by another vessel, minimum delays.
GENERAL: For information not listed, contact Ports Canada Office.
DEVELOPMENTS: No new developments planned.
AUTHORITY: Ports Canada, P.O.Box 520, River Road East, Prescott, Ontario K0E 1T0, Canada. *Tel:* (613) 925-4228. *FAX:* (613) 925-5022. *Contact:* Raymond Robusky, General Manager, Port Operations (Tel: 613-957-6762). Claire Worth, Port Financial and Administrative Officer (Tel: 613-925-4228). John Horan, Operations Manager (Tel: 613-925-4228).

PRINCE RUPERT, B.C.: 54.19 N. 130.20 W. (See Plan)

PORT LIMITS: Prince Rupert Harbour Limits are shown on Canadian Charts No. 3957 and 3958, and described in British Columbia Coast Sailing Directions (Vol. II), published by the Canadian Hydrographic Service. Porpoise Harbour and Ridley Island are included within the Prince Rupert Harbour limits.

Charter-party terms govern when laytime will commence and, as such there is generally no specific geographical point at which a vessel is considered to be an "arrived ship".

DOCUMENTS: If first Canadian port:

General Declaration (A6) 5 copies.
Cargo Declaration (A6A) (inward cargo) 5 copies.
Crew List (IMM. 200) 3 copies.
List of Ship's Stores (E.1) 3 copies.
Personal Possession List (Crew Declaration Y.14) 3 copies.
Maritime Declaration of Health (QS 2001) 3 copies.
Calculation of stability for vessels loading bulk grain (82/0579).
Warning to Ship Owners (Agriculture Canada) 2 copies.

PILOTAGE: Compulsory. Telegraphic address: "Pilots Victoria", Tel: (604) 627-3015. Telex: 047-89133. 48 hours' notice required with confirmation of ETA Pilot Station at 24 hours and 12 hours. VHF Channels 17, 77 and 16. Pilot boat, "Pacific Pilot Four", 20 m. vessel with red hull and yellow/orange house. Boarding station 1 mile radius from Triple Islands (Lat. 54° 18′ N., Long. 130° 53′ W.). Heavy weather – follow pilot boat into sheltered waters when advised by Pilot.
ANCHORAGES: Inside harbour limits – allocated by Harbour Master, Port of Prince Rupert.

A: Grindstone Beacon (Fl R) bearing 276° (T) × 8.8 cables, 65 m. depth. Max. LOA 270 m.
B: Grindstone Beacon (Fl R) bearing 257° (T) × 13.9 cables, 35 m. depth. Max. LOA 270 m.
C: Grindstone Beacon (Fl R) bearing 251° (T) × 19.0 cables, 40 m. depth. Max. LOA 225 m.
D: Grindstone Beacon (Fl R) bearing 248° (T) × 24.2 cables, 40 m. depth. Max. LOA 180 m.
V: Seal Cove Beacon bearing 067° (T) × 12.5 cables, 40 m. depth. Max. LOA 170 m.
E: Seal Cove Beacon bearing 128° (T) × 4.4 cables, 46 m. depth. Max. LOA 200 m.
X: Greentop Beacon bearing 232° (T) × 19.3 cables, 57 m. depth. Max. LOA 240 m.
Y: Greentop Beacon bearing 316° (T) × 19.5 cables, 68 m. depth. Max. LOA 300 m.
Z: East Kinahan Is. Lt. bearing 281°(T) × 12.9 cables, 40 m. depth. Max. LOA 270 m.

Note: Anchorage Z used as a standby anchorage with maximum waiting time of 6 hours.

Additional anchorages area available outside harbour limits in the vicinity of Prescott Island.

RESTRICTIONS: Nil on Prince Rupert Harbour. Porpoise Harbour, slack water and daylight, Max. LOA 187 m. Swept to 7.0 m. (23 ft.) at LW.
MAX. SIZE: See "Berthing".
HEALTH: Master shall complete and furnish promptly to the Customs Inspector, 3 copies of the Declaration of Health in the prescribed form.

Advance radio notification to a Quarantine Station applies only if a condition of health irregularity occurs onboard.

Masters should acquaint themselves with Section 12 of the Quarantine Regulations.

RADIO: Prince Rupert Coast Guard Radio 'VAJ' 500, 2182, 4125 and VHF Channel 16.
VHF: Prince Rupert Vessel Traffic Services operate on VHF Channels 11 and 71. Vessels should establish communications with "Prince Rupert Traffic" on VHF Channel 11 when 50 nautical miles West of the Queen Charlotte Islands. Vessels proceeding to Prince Rupert via Vancouver or Tofino Traffic Zones will be advised when to change frequencies to VHF Channel 11. Vessels at anchor within the Harbour Limits must also maintain a radio watch on Channels 16 and 71.

Vessels wishing to communicate with the Port Authority shall call "Prince Rupert Traffic" on Channel 71.

TUGS: Join vessel off berth. Not all tugs have lines. No extra charge if tug's line used.
Mooring: Linesboat required at berths on Ridley Island. Linesmen available at all berths through ship's agent.
BERTHING: DEEP SEA BERTHS:
Fairview Terminal: (Forest Products, Mineral Concentrates, Grain By-products, Oilseed, Heavy Lifts and General).

Owner	Prince Rupert Port Corporation.
Length	645 m.
Depth.	13.70 m.
Open Area	21.5 hectares
Covered Storage. .	6,467 sq.m.
Rail Siding	2,850 m.
Ro/Ro	145.6 ton ramp

Ocean Dock: (Passenger Vessels, Max. LOA 150 m. and Max. displacement 5,000 tons).

Owner	Prince Rupert Port Corporation.
Length	151 m.
Depth.	7.90 m.
Open Area	5,754 sq.m.

Cruise Ship Lightering Dock:
Owner: Prince Rupert Port Corporation.

This facility is located 380 m. N.E. of Ocean Dock. It consists of a concrete pontoon 30 m. in length connected to the shore by a 30 m. steel ramp.

Designed to handle passengers from cruise vessels too large to berth at Ocean Dock. The facility can handle two 12 m. tenders at any state of tide. The length of the ramp allows easy access by passengers confined to wheelchairs even at low water. Total displacement alongside not to exceed 10 tonnes.

PRG No. 2 – Ridley Island: (Grain Elevator).
Owner: Prince Rupert Grain Ltd. Tel: (604) 627-8777.

Berth:	Type	Dolphin
	Length	Berthing Dolphins 118 m. Mooring Dolphins 240 m. Mooring buoys have been positioned to take the head and stern lines of vessels over 240 m. LOA. Buoys are 300 m. apart. Max.LOA 285 m.
	Depth.	14.5 m.
	Bollard Pull	100 tonnes
	Max. Berthing Speed	0.125 m./sec. (0.24 knots).

Shiploaders:
Three - Tower Mounted – Spaced 50 m. apart. Slewing Boom.

Shipping Bins . . .	8 at 750 tonnes (28,000 bu.)
Conveyor Routes .	2 at 2,000 t.p.h.
Elevator to Ship . .	600 m.
Shoreline to Ship. .	200 m.

RTI, Ridley Island.: (Coal).
Owner: Ridley Terminals Inc. Tel: (604) 624-9511.

Type	Dolphin
Length	Berthing Dolphins 150 m.
	Mooring Dolphins 370 m.
Max. ship size	LOA 325 m.
	Breadth 50 m.
	Max. guaranteed draft 20 m.
Bollards	75 and 100 tonnes.

Shiploaders:
2 × 4,500 t.p.h. capacity each.
Quadrant type with elevating boom.
Air draft on berthing – unlimited.
Max. allowable working height 34 m. above LLW
Outreach 43.0 m.
Max. permissible combined hatch length 240 m.
Storage capacity: 1.2 million tonnes.
Stacker Reclaimer: 2 × 3,500 t.p.h. (average).
Berthing/Unberthing: At Master's discretion.
Max. berthing speed: 0.15 m./sec. (0.29 knots).
Max. design impact: 15 cm./sec. 250,000 d.w.t. 80% laden.
Tokyo Keiki approach velocity indicator is installed.

Skeena Cellulose, Porpoise Harbour: (Woodpulp).
Owner: Repap Enterprises (Montreal).
Tel: (604) 628-3671.

Length	360 m.
Depth	10.6 m.
Berthing	Daylight, slack water only.

STEVEDORES: Gangs arranged through Agent.

Main Commodities for Export and Loading Rates:
Packaged Lumber – 40,000 to 90,000 fbm per gang hour*.
Logs – up to 20,000 scrib per gang hour*.
Pulp – 45 to 200 tonnes per gang hour*.
Mineral Concentrate – up to 300 tonnes per hour.
*Dependent on ship's gear.

Non-working Days:
Ridley Terminals Inc.: Christmas Day.
All other berths: Labour Day, Christmas Day, New Years Day.

MEDICAL: Hospital facilities available.

DENSITY: Variable, 1013 to 1025.

FRESH WATER: Available at all berths.

FUEL: All major companies represented. Marine diesel oil available in limited quantities and supplied by truck or barge. Masters should radio fuel requirements in advance of arrival, and advise Prince Rupert Agent.

REPAIRS: Minor repairs to hull, machinery and electronics can be effected locally.

DRY DOCKS: Two small slipways for 150 ft.) vessels.

SURVEYORS: SGS Supervision Services Ltd., 940 Saskatoon Avenue, Prince Rupert, B.C. V8J 4J2. Tel. (604) 624-9745.

Rupert Marine Surveyors Ltd., P.O.Box 75, Prince Rupert, B.C. V8J 3P4. Tel: (604) 624-6694.

Overseas Merchandise Inspection Co. Ltd., 1434 Sloan Avenue, Prince Rupert, B.C. V8J 3X7. Tel: (604) 624-5105.

Classification Societies are based in Vancouver and will attend a vessel in Prince Rupert upon request.

GANGWAY/DECK WATCHMEN: Shore gangways available. Port Operating By-Law states that gangways shall be attended at all times by a watchman or other responsible person and clearly illuminated at night.

OPENING/CLOSING HATCHES: This work is carried out by stevedores except for specially constructed hatches such as MacGregor.

CERTIFICATES: Safety Construction, Safety Equipment, Derat, Safety Radio and Load Line.

Certificate of inspection for chain or wire lashings if timber deck cargo to be loaded.

CUSTOMS ALLOWANCES: Tobacco, 50 cigars and 200 cigarettes and 2 lb. of tobacco. Wine and Spirit, 1 bottle per officer, (40 oz.) and Beer 288 oz. or 24 pts.

CARGO GEAR: Cargo Gear Book to be ready for inspection.

REPATRIATION: Crew changes and repatriation can be carried out with little difficulty. Connections for international flights are made at Vancouver.

AIRPORT: Two major airlines (Air Canada and Canadian Airlines) offer regular jet services to Vancouver, B.C. Travelling time to airport about 1 hour.

TIME: Pacific Standard Time (GMT minus 8 hours). First Sunday in April to last Sunday in October is Summer Time, clocks advanced 1 hour.

HOLIDAYS: New Year's Day (no work); Good Friday; Easter Monday; Queen's Birthday; Dominion Day; Labour Day (no work); Thanksgiving Day; Remembrance Day; Christmas Day and Boxing Day (no work).

POLICE/AMBULANCE/FIRE: Tel: 911.

EMERGENCY CO-ORDINATION: Within Port Limits call "Prince Rupert Traffic" on VHF Channel 71 or Tel: 627-3074.

TELEPHONE: Placed on board if required.

SERVICES: Compasses adjusted. No tank cleaning equipment or facilities for discharge of tank washings. Radios and electronic navigational aids may be serviced by local technicians.

SHIP SUPPLY SERVICE:

Tug Services: Minette Bay Ship Docking Ltd., 941-8th Avenue East, Prince Rupert, B.C. V8J 2N2. Tel: (604) 624-6273.

RivTow Straits Ltd., P.O.Box 65, Prince Rupert, B.C. V8J 3P4. Tel: (604) 624-1331.

Launch Services: Prince Rupert Water Taxi, P.O.Box 685, Prince Rupert, B.C. V8J 3S1. Tel: (604) 624-3337.

Minette Bay Marine Services Ltd., (See "Tug Services").

Helicopter Services: Northern Mountain Helicopters, Terrace Airport, Terrace. Tel: 638-1955.

Vancouver Island Helicopters Ltd., P.O.Box 115, Prince Rupert, B.C. V8J 3P4. Tel: (604) 624-2792.

STORING: Stores are available without restrictions with handling equipment available.

SHORE LEAVE: No restrictions.

IDENTIFICATION CARDS: Not required.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Local currency is Canadian Dollar. Most retail stores will accept Canadian and U.S. Dollars, but exchange rate of U.S. Dollars is usually unfavourable. Banks will provide best rates. Other foreign currency not accepted.

REGULATIONS: Vessels anchored in the harbour must have engines on stand-by and second anchor ready for letting go if wind speed attains 25 knots.

GENERAL: *Navigation Characteristics:* Large, deep, natural harbour with least depth of 35 m. at the entrance. Easy access and well lit with year round, ice-free navigation.

Charts: The Port of Prince Rupert and the approaches are covered by Canadian Charts 3955, 3957 and 3958 and B.A. charts. The Canadian Hydrographic Service is gradually replacing existing charts with metric versions. The first of these metric charts is 3955. Mariners should consult Canadian Notices to Mariners issued weekly for the publication dates of additional new charts.

Tidal Information: Type: Mixed, mainly semi-diurnal. Mean Tide: Range 4.9 m., HHW 6.1 m. LLW 1.2 m. Large Tide: Range 7.7 m., HHW 7.5 m., LLW –0.2 m.

Customs and Immigration: Officers board on arrival.

AUTHORITY: Prince Rupert Port Corporation, 110 Third Avenue West, Prince Rupert, B.C. V8J 1K8. *Tel:* (604) 627-7545, emergency after office hours (604) 627-3074. *FAX:* (604) 627-7101. *Email:* pcorp Kaien.awinc.com. *Contact:* Don Krusel, President and Chief Executive Officer. Captain Peter Turner, Manager - Operations/Harbour Master. Captain David Woodman, Assistant Harbour Master.

QUEBEC, P.Q.: 46.49 N. 71.12 W. (See Plan)

DOCUMENTS:
3 Crew Lists.
3 Passenger Lists (cargo vessels).
8 Passenger Lists (passenger vessels).
3 Ship's Stores Lists.
3 Crew Declarations.
1 Maritime Declaration of Health.
1 Complete Manifest of cargo to be discharged in all Canadian Ports.
5 Manifest for local cargo.
No bills of lading required to Local Authorities.

PILOTAGE: Compulsory from Les Escoumins and upstream. On arrival at Anse-aux-Basques, a ship takes on board a Pilot of the Laurentian Pilotage Authority to bring the ship to Quebec. Pilotage and payment of dues are compulsory. Pilots board inbound vessels at Anse-aux-Basques. The Master of every ship inward bound in the Gulf of the St. Lawrence and destined for ports West of Anse-aux-Basques must report ETA to Pilots Montreal, via Marine Traffic Control on VHF radio Channel 14 or by other means of communication to Seven Islands Radio Station, giving any information Control may require.

A minimum notice of 24 hours and 12 hours must be given to Montreal Pilot Station. This notice must be confirmed 6 hours prior to arrival at the Pilot station.

Note: The 3 Pilot boats and Pilot Station keep watches on 156.45 MHz. (Channel 9) and have VHF facilities, which are only used for local instructions from one to the other.

Pilot boats in operation: Canada Pilot No. 9 and No. 10 (10 knots) and Abraham Martin (20 knots). Hull painted blue, white superstructure. Pilot-jack welded on stack – all-steel vessels. Equipment: Radar – echo sounder – radio VHF/all frequencies. A.M. – all frequencies – electric whistle – loud hailer – searchlight.

Pilot station can either be raised by radiotelephone frequency 156.8 MHz., by morse lamp – semaphore – by just blowing the code letter "G" consecutively or displaying code flag "G". Exact location of Pilot Station Anse-aux-Basques, on North shore of St. Lawrence River. Lat. 48° 19.2′ N., Long. 69° 24.9′ W. Pilotage ground limits are rectangular distance of 2 miles from the station. In bad weather, pilot boats removed from station to more secure position and pilotage service held up until better conditions. Same procedure applies during severe ice conditions. Any changes regarding pilot boat service obtained through Marine Traffic Control.

Vessels using pilot boarding stations within St. Lawrence River – Seaway – Quebec Harbour – Lakehead, requested provide accommodation ladder. Landing platform of accommodation ladder should be 10 ft. above water.

Vessels arriving Anse-aux-Basques without having previously stated ETA Pilot Station 24 hours and 12 hours in advance, or during such time as pilotage service held up for any reason, vessels normally proceed to anchorage off Ile-aux-Basques on Southern side of river, where good anchorage ground can be found. Further instructions will be given to Vessel by Marine Traffic Control or Pilot Station on VHF or 156.55 MHz.

ANCHORAGE: Due to submarine cables and other submarine installations, anchoring in the harbour is prohibited without permission of the Harbour Master. Permission for anchoring is to be obtained through Marine Traffic Control Centre. The official anchorage area extends Southwestward from the fixed blue light on Queen's Wharf Lat. 46° 48′ 34″ N., Long. 71° 12′ 12″ W.

RESTRICTIONS: North Traverse – Depth of water in 11 mile dredged channel is 40 ft. at low tide to which depth add height of tide which, at times, may give up to 20 ft. maximum extra.

MAX. SIZE: No limit in length and breadth. Draft limited to 47 ft. Winter and 51 ft. in Summer.

HEALTH: Radio Pratique obtained through Seven Islands by wireless. In case of reported suspected disease instructions will be given by wireless. When Pratique granted, vessel automatically cleared for *all Canadian Ports.*

RADIO: Seven Islands: Call sign VCK. Quebec: Call sign VCC, VHF Channel 16.

RADAR/VHF: A marine traffic regulating system is in effect in the approaches to and in the Port of Quebec. The St. Lawrence River Vessel Traffic System (V.T.S.) extends from due South of Sept-Iles to the upper limits of Montreal Harbour. All vessels over 100 gross tons and more than 20 m. in length are required to be fitted with VHF radiotelephone equipment and maintain a continuous listening watch on designated frequencies which are manned at all times at Control Centres located at Les Escoumins 156.45 (Channel 9), Quebec 156.55 (Channel 11) and Montreal 156.5 (Channel 10) and intended exclusively for marine traffic safety information and traffic regulatory control messages. The Master of a vessel must obtain clearance from the proper regulating Centre before entering waters under the Marine Traffic Regulating jurisdiction. A complete description of the system is available from the Port of Quebec Harbour Master.

For vessels not provided with VHF equipment, portable VHF sets will be taken on board by Pilot. Rental charge for this service. Vessels approaching meridian of Longitude passing through Sept-Iles from Eastwards should call Channel Quebec on 156.7 (Channel 14) for further instructions.

TUGS: Tugs join vessels in stream and use ship's lines.

4 tugs available, each equipped with radio-telephone. Two tugs of 4,200 h.p.; one tug of 1,200 h.p. and one tug of 7,200 h.p.

STEVEDORES: Dead-line for orders: 1100 – 1600 – 2200 hrs. for periods starting 0800 – 1300 – 1900 hrs.; 1 hour required before deadline to order gangs.

CRANES: 100 mobile cranes up to 440 tonnes capacity.

MEDICAL: No advance notice required for medical attention. Hospital facilities available.

BERTHING:

Berth No.	Length (m.)	Depth at LW (m.)	Operator/ Owner	Remarks
Estuary				
4	240.0	3.8/5.4	Port of Quebec Corp.	Light repairs – wintering
5	180.0	5.1/6.6	Port of Quebec Corp.	Light repairs – wintering
14	178.0	6.2	Port of Quebec Corp.	Port services
17	210.0	7.5	Port of Quebec Corp.	Coast Guard
18	240.8	11.0	Port of Quebec Corp.	Grain unloading
19	192.0	8.0	Port of Quebec Corp.	Waiting
20	342.0	7.5	Port of Quebec Corp.	Light repairs – wintering
21	206.0	11.7	Port of Quebec Corp.	Visiting ships
22	325.0	10.7	Port of Quebec Corp.	Passenger vessels
24	167.6	10.0	Port of Quebec Corp.	Not in use
25	222.5	10.7	Port of Quebec Corp.	General cargo
26	240.8	11.0	Port of Quebec Corp.	General cargo
27	293.2	11.0	Port of Quebec Corp.	Ro/Ro
28	277.4	11.8	Port of Quebec Corp.	Grain loading
29	304.8	11.3	Port of Quebec Corp.	Grain unloading
30	224.0	10.0	Port of Quebec Corp.	General cargo
31	224.0	8.0	Port of Quebec Corp.	General cargo
46	210.0	6.7	Daishowa	Forest products
47	205.0	6.7	Daishowa	Forest products
Beauport				
50	235.0	11.9	Port of Quebec Corp.	Liquid and solid bulk
51	235.0	12.2	Port of Quebec Corp.	Solid bulk
52	260.0	12.2	Port of Quebec Corp.	Solid and liquid bulk
53	325.0	15.2	Port of Quebec Corp.	Solid and liquid bulk
Anse au Foulon				
101	198.1	11.3	Port of Quebec Corp.	General cargo
102	134.1	11.3	Port of Quebec Corp.	General cargo
103	210.9	10.3	Port of Quebec Corp.	General cargo
104	210.9	10.3	Port of Quebec Corp.	General cargo
105	195.4	11.3	Port of Quebec Corp.	General cargo
106	195.4	11.3	Port of Quebec Corp.	General cargo
107	173.1	10.3	Port of Quebec Corp.	Liquid and solid bulk
108	180.1	10.3	Port of Quebec Corp.	Liquid and solid bulk
109	22.0	10.0	Petroles Irving Inc.	Petroleum products
South Shore				
70	152.2	8.2	M.I.L. Davie Inc.	Lay-by berth
71	121.9	7.6	M.I.L. Davie Inc.	Lay-by berth
72	106.6	7.0	M.I.L. Davie Inc.	Out-fitting wharf
73	165.0	9.14	M.I.L. Davie Inc.	Out-fitting wharf
74	141.4	–	M.I.L. Davie Inc.	Out-fitting wharf
75	168.8	6.0	M.I.L. Davie Inc.	Floating dry dock
76	182.8	7.6	M.I.L. Davie Inc.	Lay-by berth
77	169.7	5.7	M.I.L. Davie Inc.	Lay-by berth
78	168.2	–	M.I.L. Davie Inc.	Lay-by berth
79	121.9	4.0	M.I.L. Davie Inc.	Lay-by berth
80	91.4	–	Le Groupe Equimer Enr.	Small boats building and repairs
81	220.0	10.0	Port of Quebec Corp.	Lay-by berth
82	96.0	7.0		Ferry
86	295.0	10.6	Ultramar Canada	Loading Petroleum products
87	335.0	16.7	Ultramar Canada	Unloading crude oil – 150,000 d.w.t. and more.
Canadian Coast Guard				
93	73.0	9.5	Coast Guard	Services boat
94	108.0	10.3	Coast Guard	Services boat
95	112.0	9.5	Coast Guard	Services boat
96	71.0	10.3	Coast Guard	Services boat
97	94.0	10.3	Coast Guard	Services boat
98	62.0	10.3	Coast Guard	Services boat

BULK HANDLING FACILITIES: *Grain Elevators (See Page 382):*

1. Bunge – Storage capacity: 225,000 metric tons, served by CN Railways. Grain cleaning system.

2. Terminal Sillery – Storage capacity: 76,000 metric tons, served by CN and CP Railways.

A marine terminal facility on Piers 52 and 53 which include 4 bridge towers with a loading capacity of 3,100 t.p.h. A new 1,000 m. conveyor system provides repid stockpiling and recovery of bulk cargoes, while allowing direct ship to ship transfers.Liquid storage facilities of 200,000 cu.m. for any liquid products serviced by 10 in. marine pipelines and a 8 in. loading rack.

Storage facilities: 60,000 sq.m. of shed space (6 sheds), including 3 insulated and heated buildings.

TANKERS: No slop discharge facilities available. Eight tanker berths on public and private wharves. Depths from 5.8 m. to 16.7 m. See "Berthing".

FRESH WATER: Available to all berths, provided directly from the Corporation's hydrants and hoses to vessels. Rate: St. Charles River piers, 30 t.p.h. Anse-aux-Foulons 30 t.p.h. with 1 line, and 2 lines 60 t.p.h.

DRY DOCKS: Department of Public Works located within M.I.L. Davie Inc., P.O. Box 130, Levis, Quebec. "Champlain", length 350.5 m., width at gate entrance 36.6 m. "Lorne" 190.2 m. long, 22.4 m. floor width, 18.7 m. entrance breadth at high water and 7.8 m. depth on sill at high water. Floating dry dock 182.8 m. × 30.5 m. Also 3 outdoor berths and 1 covered berth.

DENSITY: Fresh water.

FUEL: Available at any berth by truck.

FIRE PRECAUTIONS: Only usual precautions; towing wire hanging overboard.

CONSULS:

Finland: 801 Chemin St. Louis, No. 200,
Quebec, Quebec G1S 1C1 Tel: 683-3000
France: 1110 Ave des Laurentides,
Quebec, Quebec G1S 3C3 Tel: 688-0430
Italy: 376, 82 Rue Ouest,
Charlesbourg, Quebec G1G 5L9 Tel: 627-1987
Netherlands: 10 rue St-Anne,
Quebec, Quebec G1R 3X1 Tel: 692-2175
Norway: 2 Nouvelle-France,
Anse au Foulon, Quebec, Quebec G1K 7A2 Tel: 525-8171
Switzerland: 3293, 1 iere Avenue,
Quebec, Quebec G1L 3R2 Tel: 623-9864
United States of America: 2 Place Terrasse-Dufferin,
P.O.Box 939, Quebec, Quebec G1R 4T9 Tel: 692-2095

All other consuls located in Montreal and send representatives to Quebec on request.

REPAIRS: Repairs of all types can be obtained.

SURVEYORS:

Classification Societies:

Lloyd's Register of Shipping, P.O.Box 248, Levis, Quebec G6V 6N8. Tel: 837-5763.

American Bureau of Shipping, 276 St. Jacques W., No. 820, Montreal, Quebec H2Y 1N3. Tel: (514) 344-3029.

Bureau Veritas, 360 rue St-Jacques, Suite 1206, Montreal, Quebec H2Y 1P5. Tel: (514) 288-6515. Telex: 05-24691.

Det Norske Veritas, Gall Communications Inc., 2228 rue St-Antoine Ouest, Montreal, Quebec H3J 1A7. Tel: (514) 937-5363.

Cargo Surveyors:

Services de Surveillance SGS Inc., P.O.Box 1606, Quebec, Quebec G1K 7J8. Tel: 661-6624. Telex: 051-3321.

GANGWAY/DECK WATCHMEN: Watchmen at gangway not necessary, but could be obtained.

OPENING/CLOSING HATCHES: MacGregor hatches must be opened by crew. All other cases recommended to be done by crew also, but stevedores would also under conditions specified in stevedoring contract.

CERTIFICATES: Load Line, Safety Equipment, Construction, Radio, Passengers, Cargo Gear, Derat.

CUSTOMS ALLOWANCES: Tobacco, 8 oz. tobacco for 8 days, cigarettes: 1 carton per 8 days. Wine and/or Spirits, 40 oz. only. Officers and Masters will have additional supply for entertainment daily on request to Customs.

REPATRIATION: All facilities for effecting crew changes and repatriation.

AIRPORT: 20 km. from port, served by regular airlines.

TIME: Eastern Standard Time GMT minus 5 hours. Daylight saving time from first week-end April to last week-end October, clocks advanced 1 hour.

HOLIDAYS: Longshoremen Official Holidays: New Year's Day; Good Friday; Victoria Day (3rd Monday in May); Saint Jean Baptiste (June 24th); Confederation (July 1st); Labour Day (first Monday of September); Thanksgiving Day (beginning of October); Armistice Day (November 11th); Christmas Day. Cargo can be loaded or unloaded during each holiday except Labour Day and Saint Jean Baptiste Day.

If a holiday falls on a Saturday or a Sunday, the following Monday shall be deemed as a Holiday.

POLICE/AMBULANCE/FIRE: Police (Harbour) Tel: 648-3645, City Tel: 691-6911, RCMP Tel: 648-3733. Ambulance Tel: 522-1515. Fire Tel: 648-6441.

Bulk Handling Facilities

Loading Berths (Grain)

Elevator	*Number of berths*	*Berth No.*	*Length of berth*	*Depth of water*	*Number of belts*	*Total hourly capacity (metric tons)*	*Number of travelling loaders*
Bunge	1	28	277.4 m.	11.8 m.	3	5,000	3

Unloading Berths

Elevator	*Number of berths*	*Berth No.*	*Length of berth*	*Depth of water*	*Number of legs*	*Max. hourly capacity of each leg (metric tons)*	*Total max. capacity (metric tons)*
Bunge	1	18	240.8 m.	11.0 m.	2	1,200	2,400
Bunge	1	29	304.8 m.	11.3 m.	Self-unloading	2,500	2,500
Gagnon & Boucher	1	107	173.1 m.	11.3 m.	Self-unloading	600	

TELEPHONES: No existing facilities for placing telephone on board.

Telephone Numbers:

Port Warden, Captain Serge Theoret	Tel: 692-1306
Quarantine: Health and Welfare	Tel: (613) 957-0323 (24 hours)
Manpower and Immigration	Tel: 648-3625
Transport Canada – Marine Services:	
Regional Director: Pierre F. Boisvert	Tel: 648-4158
Aids to Navigation: Jacques Champagne	Tel: 648-3574
Harbours and Property: Denis Galarneau	Tel: 648-4101
Marine Traffic Regulations: R. Lamalice	Tel: 648-7459
Steamship Inspector Service	Tel: 648-3234
Laurentian Pilotage Authority:	Tel: 648-3353

SERVICE: Any services needed.

BANKS:

Bank of Montreal, 800 Place d'Youville, Quebec, Quebec G1R 3P4. Tel: 525-3774. Telex: 051-2241.

Bank of Nova Scotia, P.O.Box 444, Quebec, Quebec G1K 7R9. Tel: 522-1571. Telex: 051-3713.

Banque Nationale de Paris (Canada), 500 Grande-Allee E. – P.O.Box 579, Quebec, Quebec G1R 4R8. Tel: 647-3858. Telex: 051-3947.

Canadian Imperial Bank of Commerce, 650 boul. St-Cyrille E., Quebec, Quebec G1R 4V7. Tel: 529-2101. Telex: 051-2344.

Federal Development Bank, 871 chemin St-Louis, Quebec, Quebec G1S 1C1. Tel: 648-3972. Telex: 051-3356.

Lloyd's Bank, 2795 Boul. Laurier, C.P. 10550, Ste. Foy, Quebec G1V 4N4. Tel: 656-6941. Telex: 051-31522.

National Bank of Canada, 150 boul. St-Cyrille E. – 18th Floor, Quebec, Quebec G1R 2B2. Tel: 647-6100. Telex: 051-3946.

Royal Bank, 700 Place d'Youville, Quebec, Quebec G1K 7S8. Tel: 648-6800. Telex: 051-2294.

Toronto-Dominion Bank, 1150 Claire-Fontaine, Quebec, Quebec G1R 5G4. Tel: 522-5684. Telex: 051-3573.

SHORE LEAVE: No restrictions.

AUTHORITY: Port of Quebec Corporation, 150 Dalhousie Street, P.O.Box 2268, Quebec, Quebec G1K 7P7, Canada. *Tel:* (418) 648-4956. *FAX:* (418) 648-4160. *Contact:* Ross Gaudreault, President and Chief Executive Officer. Alexis Segal, Vice President – Marketing. Louis Riel, Harbour Master (Tel: (418) 648-3896).

RIMOUSKI, Quebec: 48.29 N. 68.31 W.

LOCATION: Situated on the South bank of the St. Lawrence River, opposite Matane on the North bank.

DOCUMENTS: See "Quebec". Rimouski is a port of entry with Customs and Immigration Officers stationed at the port. It is also a quarantine sub-station.

PILOTAGE: Not compulsory but available. Pilots board at entrance to harbour.

APPROACHES: Rimouski is approached through a dredged channel with depth 5.2 m. (lowest tide).

ANCHORAGES: Vessels anchor in the roads or near the East end of Barnaby Island.

RESTRICTIONS: *Navigation Season:* The harbour is open year round, but occasionally assistance of ice-breakers may be required.

HEALTH: Radio Pratique available.

RADIO: Mont – Joli (VCF).

TUGS: Available but not necessary.

BERTHING: There are 2 wharves, operated by Transport Canada.

Section	*Length* (m.)	*Depth* (m.)
1	213	7.3
2	184	7.3
3	130	7.3
4	150	7.3
5	150	7.3
6	113	7.3
7	255	4.3
8	30	3.5

CRANES: All types of cranes available for hire.

STEVEDORES: *Working Hours:* Monday to Friday 0800 hrs. – 1700 hrs. Sunday and holiday work possible with advance notice.

MEDICAL: Hospital in Rimouski.

DENSITY: 1025.

FRESH WATER: Available ex-wharf.

FUEL: Bunker "C" and diesel available.

REPAIRS: Minor repairs only.

DRY DOCKS: Nearest dry dock located at Les Mechins (70 miles East of Rimouski).

AIRPORT: Rimouski Airport.

TIME: GMT minus 5 hours in Winter. GMT minus 4 hours in Summer (first Saturday in April till last Saturday in October).

HOLIDAYS: New Year's Day, Good Friday, Easter Monday, Queen's Day (4th Monday of May), June 24th, Dominion Day (July 1st), Labour Day (1st Monday of September), Thanksgiving (2nd Monday of October), Remembrance Day (November 11th) and Christmas (December 25th and 26th).

BANKS: Bank Canadian National, 186 Ave. de la Cathedrale, Rimouski, G5L 5H9.

GENERAL: *Chart:* Canadian Chart No. 1236.

AUTHORITY: Transport Canada, Harbours and Ports Directorate, 901 Rue Cap-Diamant, Quebec G1K 4K1. *Tel:* (418) 648-3680. *FAX:* (418) 648-7980.

Jacques St. Laurent, Harbour Master, Rimouski. *Tel:* (418) 723-6563, 724-5734, 723-9025, or 735-2623.

ST. ANDREWS (Bayside), New Brunswick: 45.10 N. 67.08 W. (See Plan)

DOCUMENTS:

- Clearance from Last Port.
- 3 copies of Crew List.
- Crew's Effects List.
- Stores List.
- 4 copies of Customs Entrance A-6 and 2 copies Manifests.
- Current Safety Radio Certificate.
- Safety Construction Certificate.
- Safety Equipment Certificate.
- Load Line Certificate.
- Derat Certificate.

PILOTAGE: Not compulsory but strongly recommended. Pilot boards off East Quoddy Head, Campobello Island. Notice required 24 hours. The Pilot is a retired fisherman and he only gives advice on tide and weather.

ANCHORAGES: Areas are available a few hundred metres off of the wharf face, 3 miles from the Wharf just East of St. Andrews and in the vicinity of Campobello Island. All of the locations have over 70 ft. of water and good bottom. Those in the vicinity of Campobello can be reached by radio direction from the Pilot if shelter is needed and the Pilot cannot board.

RESTRICTIONS: None have been imposed but daylight berthing and departures are recommended.

HEALTH: Send advice to Saint John, New Brunswick at least 24 hours before arrival.

RADIO: Yarmouth, Nova Scotia.

VHF: Bay of Fundy, Traffic Control Channel 14 (Tel: 506-636-4696); Pilot, Channel 11(Tel: 506-752-2283). Port Stevedores and line crews, Channel 10 (Tel: 506-529-8866. Telex: 014 47321).

BERTHING: *Bayside Marine Terminal:* The wharf is located in position Lat. 45° 09' 35" N., Long. 67° 08' 30" W. The wharf is in the form of an "L" shape.

The outer face has a length of 792 ft. and draft at LWOST of 34 ft. The inner face has a length of 260 ft. and draft of 25 ft. Mean tidal range at berth is 26 ft. The ebb tide and river flow set onto the wharf, the flood tides sets off the pier.

The distance from the Pilot Station to the pier is 21 miles, with a minimum draft of 45 ft. There are navigation lights in the channel and the pier is well lit.

CRANES: Shore cranes are available in the 25 to 35 ton range.

SPECIAL CARGO HANDLING FACILITIES: Conveyors are available to load bagged cargoes (i.e. potatoes). This equipment requires ship's crew to be very diligent in tending lines.

There is a combination freezer and cool storage at the terminal. Total capacity of 5,000 tonnes.

MEDICAL: Doctor and hospital available.

DENSITY: 1017 (varies with tide).

STEVEDORES: Normal working hours are 12 to 16 hours per day (varying by commodity), 7 days per week. Cargoes handled regularly are cartoned frozen fish, butter, meats, lumber, potatoes, unitised pulp, frozen orange juice concentrate in drums as well as fresh citrus. Transhipping is also done at the pier both across the pier and directly from ship to ship.

FRESH WATER: Available.
FUEL: MDO and IFO are available. Delivery is by truck.
SURVEYORS: Located in Saint John.
GANGWAY/DECK WATCHMEN: Ship's crew. Ship's gangway used. Fixed accommodation ladders are only usable at or near high tide.
OPENING/CLOSING HATCHES: Normally carried out by crew.
CUSTOMS ALLOWANCES: Tobacco each man 200 cigarettes per week. Alcohol each man 40 oz. of wine or spirits per week. Ale or beer for each week of the voyage, to 8.2 litres (288 fluid ounces).
AIRPORT: Nearest commercial airport at Saint John, New Brunswick, (45 miles), but a small public airstrip is located in St. Stephen, New Brunswick (16 miles).
TIME: GMT minus 4 hours. First Sunday in April clocks advanced 1 hour and last Sunday in October clocks retarded 1 hour.
HOLIDAYS: New Year's Day; Easter Sunday; Thanksgiving Day; Christmas Day.
SHORE LEAVE: No restrictions.
GARBAGE DISPOSAL: Service is possible but must be done under the supervision of Canadian Agriculture officials. Cost is approximately Canadian $100.00 per service.
WASTE OIL DISPOSAL: Contact Inland Re-Refining Ltd. Tel: (902) 895-6346. Fax: (902) 895-6349.
SEAMAN'S CLUBS: None.
CURRENCY: Canadian Dollar.
GENERAL:
Services: Fresh provisions, ship's laundry service. Full chandlery locally available. Pre-arrival advice recommended (48 hours if possible) Tel./Fax: (506) 466-4259.
Chart: Use U.S. Chart (Calais to West Quoddy Head) No. 13398 for the Pilot Station to the pier and Canadian Chart No. 4011 for the entrance to Bay of Fundy and traffic control areas.
AUTHORITY: Transport Canada, Harbours and Ports, Champlain Industrial Park, Bayside, (P.O.Box 51), St. Andrews, New Brunswick E0G 2X0. *Tel:* (506) 529-5079 (office), (506) 529-3429 (Residence). *FAX:* (506) 529-5217. *Contact:* Milton Cross, Harbour Master.

ST. CATHARINES, Ontario: 43.10 N. 79.16 W.

Refer to "St. Lawrence Seaway" for important general information.
DOCUMENTS: See "Montreal".
PILOTAGE: Commences in lower St. Lawrence River and is continuous from district throughout Great Lakes. See "Quebec".
ANCHORAGES: Good anchorage areas at both ends of the Welland Canal.
MAX. SIZE: Max. size of vessel permitted in Welland Canal is LOA 730 ft. (222.51 m.), beam 76 ft. (23.16 m.), draft 26 ft. 03 in. (8.0 m.).
HEALTH: Pratique granted at Quebec City for incoming vessels from foreign ports.
RADIO: Prescott Radio (VBR), Buffalo Radio (WBL).
TUGS: Tugs may be obtained from Port Weller Dry Docks Ltd. for dry docking only.
BERTHING:

Port Weller Harbour East, Wharf No. 1:
Type – Various and Sundry Partial Cargoes
Equipment – Self Unloaders or Rented Cranes
Length – 638 ft. (194.5 m.)
Depth – 27 ft. (8.23 m.)
Operator – McKeil Marine Limited, 208 Hillyard Street, Hamilton, Ontario L8L 6B6.

Port Weller Harbour West Wharf No. 2:
Type – Coal, Sand, Zircon Ore, Bulk Sugar
Equipment – Self Unloaders, mobile cranes, ship's gear.
Length – 1,288 ft. (392.6 m.)
Depth – 27 ft. (8.23 m.)
Storage Capacity – 76,500 tons.
Operator – Seaway Terminals, Hamilton, Ontario Fourum Transport Ltd.

St. Catharines Wharf, Wharf No. 3 (Homer Dock):
No longer in commercial use.
Length – 330 ft. (100.6 m.)
Depth – 25 ft. (7.62 m.)

Abreast of Wharf No. 3 is a turning basin with a depth of 7.62 m. (25 ft.) for ships of 106.68 m. (350 ft.) in length.
BRIDGES: Vessels are instructed by Traffic control on the transit of the Canal. Generally no delay for bridges.
MEDICAL: Medical and hospital facilities are available.
TANKERS: No facilities.
DENSITY: Fresh water.
FRESH WATER: None available except in emergency by tank wagon.
FUEL: Available by truck from suppliers in the Welland Canal.
CONSULS: No consuls.
REPAIRS: Deck and engine repairs are possible at Port Weller.
DRY DOCKS: Situated at Port Weller able to accommodate vessels, LOA 730 ft.
SURVEYORS: ABS and Lloyd's at Toronto. Senior Steamship Inspector, Mr. J. Aspin.
GANGWAY/DECK WATCHMEN: At discretion of the Master.
CUSTOMS ALLOWANCES: See "Montreal".
AIRPORT: International Airport at Toronto, 75 miles away.
TIME: GMT minus 5 hours. Daylight Saving Time when clocks advanced 1 hour, usually first Sunday in April until last Sunday in October.
POLICE/AMBULANCE/FIRE: St. Catharines – Fire 684-4311; Police 905-688-4111. Welland – Fire 734-4511; Police 905-735-7811. Port Colborne – Fire 834-4511. All emergencies 911.
SHORE LEAVE: Only when usual formalities are observed, e.g. Customs, Immigration, etc.
IDENTIFICATION CARDS: Not needed.
GARBAGE DISPOSAL: Available in the Welland Canal.
WASTE OIL DISPOSAL: Mobile reception facilities available in the Welland Canal.
SEAMAN'S CLUBS: None.
GENERAL: *Publications:* Sailing Directions: Great Lakes, Volume I. Seaway Handbook.
AUTHORITY: St. Lawrence Seaway Authority, Niagara Region, P.O. Box 370, 508 Glendale Avenue, St. Catharines, Ontario L2R 6V8, Canada. *Tel:* (905) 641-1932, (nights (905) 641-1939). *FAX:* (905) 461-4632. *Contact:* Captain A. Soni, Coordinator – Vessel Traffic Services.

SAINT JOHN, N.B.: 45.16 N. 66.03 W. (See Plan)

PORT LIMITS: A vessel is considered to be an "arrived vessel" when it enters harbour limits.

Seaward limits of the Port are as follows:
From Cape Spencer Lighthouse (Lat. 45° 11′ 42″ N., Long. 65° 54′ 37″ W.) due South to position Lat. 45° 08′ 03″ N. thence due West to intersect with the HW mark on the mainland near the Easterly entrance to Little Musquash Cove (Lat. 66° 17′ 12″ W.).
DOCUMENTS:
2 Crew Lists.
2 Passenger Lists.
3 copies Customs Documents.
3 copies Health Documents.
6 copies Cargo Manifests.
6 copies Bills on Lading.
3 copies Ship's Papers.
PILOTAGE: Compulsory. Pilot boarding station in vicinity of position: Lat. 45° 10′ 48″ N., Long. 66° 03′ 42″ W. Vessels order Pilots through the Coastguard VTS Centre "Fundy Traffic", by giving 12 hours notice of ETA in GMT to "Pilots Fundy Traffic", amending or confirming ETA 4 hours before arrival. Pilot may also be ordered through Agent.

Vessels must report to the Coast Guard Vessel Traffic Management System prior to entering the Bay of Fundy. VHF Channels 14 and 12 are monitored. Vessels must follow instructions from VTS regarding traffic control.
ANCHORAGE: See chart. Also see "Plan".
RESTRICTIONS: Saint John is a tidal harbour experiencing 2 high and 2 low tides every 24 hours; most vessels being handled between 2-3 hours before to 2-3 hours after HW depending on berth.

During the Spring each year, due to thaw conditions, a strong downflow (freshet) is experienced in the main harbour from the Saint John River. Vessels entering or departing from Courtenay Bay may be restricted to 28 ft. maximum draft and daylight movements only depending on conditions at the time. Freshet conditions normally occur between March and June and their duration depends on seasonal conditions.
MAX. SIZE: Controlling depth in main channel is 30 ft. at LW. Vessels length and breadth unlimited. Also see "Tankers".
HEALTH: See "Montreal".
RADIO: VCS Halifax or VAU Yarmouth.
TUGS: Available and considered necessary for docking and undocking large ships unless such vessels are equipped with thrusters. Modern fleet available up to 4,500 h.p.
BERTHING: 27 berths. Dredging done each year to maintain depth. Due to rise and fall of tide, boatmen usually necessary for running lines and docking. All berths are tidal. Tidal range varies from 22 ft. – 28 ft. (HW) and from 0 ft. – 7 ft. (LW).
Saint John Port Corporation Facilities:

Berth	Wharf Length (m.)	Depth Low Tide (m.)	Remarks
Navy Is. 1a-1b	377	10.4	2 sheds – forest products – 2 Ro/Ro facilities. 1 for stern ramps – 1 for starboard quarter ramps
2a – 2b	312	10.6	Forest products and general cargo (1 Ro/Ro ramp for stern ramps). Piers 2 and 3 are served by Shed 1C (10,000 sq.m.).
3a – 3b	312	10.6	Pier accommodates starboard quarter ramps.
Rodney A	295	12.2	Container Terminal – 2 cranes. Floating ramp for stern ramp vessels.
Rodney B, C & D	606	12.2	
11	134	9.1	
12a – 12b	265	9.1	
Long Wharf A	189	9.1	
Long Wharf B & C	280	10.7	Heated shed and bulk salt terminal.
Pugsley North	92	10.7	Lay-by berth
Pugsley A/B	297	10.7	511 sq.m.
Pugsley C	232	10.7	Heated shed
Lower Cove	245	11.0	Open terminal – Ro/Ro facility (starboard quarter ramp vessels). Manifold for petroleum products.
Barrack Point	245	11.0	Bulk facility – potash

Berth	Wharf Length (m.)	Depth Low Tide (m.)	Remarks
Private Facilities:			
Lantic Sugar	134	9.1	Refinery – bulk sugar unloading – 2 cranes
Canadian Coastguard Base	407	7.9	East side of harbour
Irving Oil Terminals	506	12.2	3 berths Courtenay Bay – oil tankers.
Marine Atlantic	253	6.7	Terminal – Ro/Ro ferry for vehicles/passengers

CRANES: Mobile cranes available.

J. D. Irving, Limited, (Equipment Division), have available for rental mobile cranes with hydraulic boom from 8 tons to 75 tons, with conventional boom for 17.5 tons to 140 tons and crawler cranes with conventional boom from 25 tons to 300 tons.

The above (and other equipment) available on prior request only.

SPECIAL CARGO FACILITIES: *Navy Island Forest Products Terminal:* Operated by Forterm (Forest Products Terminal Corp., Ltd.).

The terminal occupies areas adjacent to and includes Piers 1, 2 and 3 with 38,000 sq.m. of shed storage. Shed 1A/1B at Pier 1 provides a 24 m. wide apron. Newly constructed Shed C serves the open Piers 2 and 3. The terminal can accommodate 3×40,000 d.w.t. vessels at one time, and is served by road and rail. Ro-Ro stern ramp facilities at Berths No. 1A and 2A. Starboard quarter ramp vessels handled at Berths No. 1B and 3A.

Rodney Container Terminal: Operated by Brunswich Terminals Inc. (BTI). Container terminal located at Rodney Terminal with 2×45 tonne gantry cranes, with supporting ground equipment. Crane outreach of 115 ft. and a back reach of 60 ft.

The cranes are designed with articulating rail trucks on each of their 4 legs, enabling them to operate on both berths at the 50 acre, L-shaped facility. BTI has a 2,000 ft. marginal berth and 1,200 ft. slip berth. Water depth (minimum) is 40 ft.

BTI provides a full range of terminal services and facilities for both electrical and cryogenic refrigerated containers. Floating ramp available for stern ramp vessels.

Barrack Point Potash Terminal: Two sheds, one of 75,000 tonnes capacity belonging to the Potash Company of Saskatchewan, a second of 115,000 tonnes belonging to Potacan, share loading facilities at a Courtenay Bay berth owned by the Saint John Port Corporation. A conveyor system moves potash to loading dock which is served by a single quadrantal-loader, with loading capacity of 2,700 tonnes per hour. Throughput at the Barrack Pt. Terminal is in excess of one million tonnes annually.

STEVEDORES: Stevedores required in morning must be ordered by 1600 hrs. preceding day, and stevedores required in afternoon must be ordered by 1100 hrs. same day.

MEDICAL: Doctors and Hospitals available.

TANKERS: Controlling depth in channel to tanker wharves at Courtenay Bay is 18 ft. LW. Also see "Restrictions" and Canaport.

FRESH WATER: Available from pipelines throughout the docks.

FUEL: Fuel oil and diesel oil – ample stocks of fuel oil and diesel oil are always available. Diesel and bunker fuel can be delivered by pipeline in Courtenay Bay (vessels restricted to navigation at HW). Irving Oil operates a bunkering barge service and also delivers to ships by pipeline or by truck or tankwagon. Gulf, Crystal Oil Ltd. and Texaco Canada Ltd. also supply vessels by truck.

CONSULS:

Belgian Consulate – Honorary Consul, Joz De Bedie, 6126 Regina Terrace, Halifax, N.S. Tel: (902) 425-6546.

Danish Consulate – Eric L. Teed, Q.C., Seawood Lane, West. Tel: 672-6856.

Dominican Republic – Honorary Vice-Consul, John A. Driscoll, 50 Broad Street. Tel: 693-1403.

Finland – Thomas L. McGloan Jr., Q.C., Harbour Building. Tel: 634-7450.

France – Honorary Consular Agent of France, Charles F. Whelly, Q.C., 1 Brunswick Square. Tel: 632-8900.

Italy – Honorary Consular Agent, Guy Gaetano De Giacinto, 634 Queen Street, Fredericton, N.B. Tel: 454-2271.

Netherlands – Honorary Consul, Charles F. Whelly, Q.C., 1 Brunswick Square. Tel: 632-8900.

Norway – Honorary Consul, Donald F. MacGowan, 40 Wellington Row. Tel: 633-3800.

Sweden – Consul, G. A. McGillivray, Hilyard Place, Building A. Tel: 632-1090. Residence 633-1046.

REPAIRS: Complete repair facilities and equipment available also salvage equipment.

DRY DOCKS: Two. One 1,780 ft.×125 ft.×53 ft. deep with 42 ft. of water over sills at high tide. Smaller one 440 ft.×60 ft.×34 ft. deep, 22 ft. water over sills at high tide.

SURVEYORS:

Lloyd's Sub Agent – Hope Marine Surveys Ltd. Tel: 632-1987.

N.K.K., Tel: 672-1083.

China Corporation Register of Shipping. Telex: 014-47512. Tel: 672-1083.

GANGWAY/DECK WATCHMEN: Available.

OPENING/CLOSING HATCHES: Carried out by stevedores.

CUSTOMS ALLOWANCES: Tobacco: 200 cigarettes or 50 cigars or 2 lb. tobacco per person over 16 years old.

Wines/Spirits: total of 40 ounces per person over 21 years old.

Subsequent issues may be authorised to Crew members of foreign vessels, but the max. quantity any Crew member may hold at any time must not exceed 300 cigarettes, 75 cigars, 3 lb. tobacco, and 60 ounces wines/spirits.

REPATRIATION: Can be arranged.

AIRPORT: Regular services by major airlines from airport 12 miles from harbour.

TIME: GMT minus 4 hours. In Summer, time is GMT minus 3 hours.

HOLIDAYS: Sundays, New Year's Day, Good Friday, Victoria Day, Dominion Day, New Brunswick Day (1st Monday in August), Labour Day, Thanksgiving Day, Remembrance Day, Christmas Day and Boxing Day, of which Labour Day and Christmas Day are "No Work Days" for longshoremen.

POLICE/AMBULANCE/FIRE: Available as follows:

(a) Through "Fundy Traffic" VTS (VHF Channel 12).

(b) On regular phones – Dial 911.

TELEPHONES: Telephones can be placed on board vessels at most facilities. Must be ordered ahead through Agent.

SERVICES: All services available including compass adjustment.

BANKS:

Bank of Canada, 75 Prince William St. Tel: 635-3600.

Bank of Montreal, 15 Market Square. (5 branches). Tel: 632-0202.

Bank of Nova Scotia, One Brunswick Square, (King Street). (10 branches). Tel: 658-3365.

Canadian Imperial Bank of Commerce, 44 King Street. (5 branches). Tel: 632-1110.

Federal Business Development Bank, 75 Prince William Street. Tel: 636-4751.

National Bank of Canada, 71 King Street. Tel: 693-2634.

Royal Bank of Canada, 100 King Street. (5 branches). Tel: 632-8080.

SHIP SUPPLY SERVICE: D.M.K. Marine Services Ltd., 58 Collins Street, Saint John, N.B. E2M 3P9, supply launch service to vessels in the vicinity when requested.

Atlantic Towing Limited, 300 Union Street, Saint John, N.B. E2L 1B6. Tel: (506) 648-3540, 648-2790 (Despatch) 24 hours. (506) 652-8090. Telex: 014-47518.

A fleet of 10 tugs ranging 8,500 i.h.p., providing:

Ocean, coastal and harbour towing.

Petroleum barging and deck load transport.

Salvage and pollution control.

Dredging, floating cranes and heavy marine winches.

SHORE LEAVE: Crew allowed ashore.

IDENTIFICATION CARDS: Not required.

GARBAGE DISPOSAL: By arrangement with Department of Agriculture. Arrangements made through vessel's Agent.

WASTE OIL DISPOSAL: Arrangements at general cargo berths made through vessel's agent. Waste oil removed by vacuum truck. Contact: Inland Oil, Tel: (902) 895-6347. Barrington Industrial Services, Tel: (506) 635-5600. Melanson's Waste Management Inc., Tel: (506) 635-8014. W & S Construction, Tel: (506) 635-8735.

Waste oil disposal can be handled by direct pipeline at Irving Terminals, Tel: (506) 633-7722, and by barge by Atlantic Towing Ltd., Tel: (506) 648-2750.

SEAMAN'S CLUBS: Saint John Seafarers Mission, located outside West side entrance, is open daily from 1900 hrs. – 2100 hrs. Volunteer operated. T.V. lounge, refreshments, essential needs, telephone service, transportation to shopping malls, City Centre. Tel: 635-1731.

CURRENCY: Crew can change currency in Banks and Seafarers Mission.

AUTHORITY: Saint John Port Corporation, 133 Prince William Street, P.O.Box 6429, Station "A", Saint John, N.B., E2L 4R8. *Tel:* (506) 636-4869. *FAX:* (506) 636-4443 or 636-3846. *Contact:* Kenneth R. Krauter, General Manager and Chief Executive Officer. R. Adam McBride, Assistant General Manager. Captain A.G.E. Soppitt, Harbour Master.

Harbour Master is available 24 hours per day through Fundy Traffic.

ST. JOHN'S, Newfoundland: 47.34 N. 52.41 W. **(See Plan)**

DOCUMENTS:

Quarantine:

Completed Declaration of Health (QSI).

Valid Derat Certificate.

International Vaccination Certificates.

Customs:

Crew Declarations (Y.14).

3 Ship's Stores (E.1).

Inward Report (A.6).

Complete copy of each Manifest for goods to be discharged in Canada.

Clearance from Last Port.

Immigration:

2 Immigration Crew Lists (200).

2 Tally Sheets (201).

3 Passenger Manifests for passengers not disembarking.

Immigration Control Cards for each person.

PILOTAGE: Compulsory. To avoid a delay in obtaining a Pilot, the Owner, Master, or Agent of a ship bound for St. John's must report via any coast station by R/T or W/T the vessel's ETA 12 hours in advance of ETA. ETA's must be confirmed or corrected not less than 3 hours prior to ETA. Time must be GMT. In message of ETA, the following information must be included.

(1) Name/call sign of vessel

(2) Nationality

(3) Length, draft, and gross registered tonnage.

Pilot Boarding Station: Lat. 47° 33′ 42″ N., Long. 52° 37′ 54″ W. (2 miles (3.22 km.) off entrance)

St. John's Traffic Centre stand by on: VHF Channel 16 (156.8 MHz); VHF Channel 11 (156.55 MHz); Telephone: 772-2083.

Berthing:
(a) Pilot – compulsory. Shifting or ETD requires a 4 hour advance notification to Coast Guard Traffic Centre.
(b) Berths arranged by Harbour Master in advance.
(c) Two small tugs available.
(d) Linesmen arranged through ship's local Agent.
(e) Boatmen – arranged through ship's local Agents.

ANCHORAGE: No anchorages near harbour. Safe anchorage in harbour.

MAX. SIZE: No restrictions except draft max. 36 ft.

HEALTH: Pratique, cable name and nationality of ship, ports of call during voyage, nature of cargo, number of crew and passengers, port of destination and Agent, condition of health of all on board with details of any sickness, and whether all vaccinated. Also see "Montreal".

RADIO: St. John's Coast Guard Radio, call sign VON duplex R/T on 2118 kHz, 2206 kHz, and 4110.8 kHz.

TUGS: As required by Pilots. Normally ship's lines used. 2 small tugs available.

CRANES: Oceanex Inc., mobile heavy lift crane 2×220 tonnes, 1×150 tonnes.

A. Harvey & Co., mobile heavy lift cranes 2×65 tonnes; 2×35 tonnes; 1×50 tonnes.

BERTHING:

St. John's Port Corporation:

Berth No.	*Wharf Length (m.)*	*Depth at Low Water (m.)*	*Remarks*
1	175	3.0-6.1	
2	165	9.1	
3	180	9.1	
4	120	9.1	Dangerous cargo berth. Note that explosives in small amounts to be approved by St. John's Port Corporation prior to arrival.
5	160	8.8-9.1	
6	150	6.1-7.0	
7	120	7.0-7.9	(Repairs) D. F. Barnes machine shop – Shed No. 3
8	150	7.9-9.1	
9	150	7.3-7.9	
10	150	9.1	
11	150	9.1	
17	180	7.9-12.2	
18	76	12-15	Dolphins
19	115	5.8-7.6	
20	162	5.5-8.2	
21	58	8.5-7.3	
SBB	122	2.7-1.2	

Private facilities:

Berth	*No.*	*Length (m.)*	*Depth, Low Water (m.)*	*Utility & General Remarks*
Harvey Terminals	12	114	7.3-8.5	Offshore services
Harvey Terminals	14	153	5.8-9.1	
Harvey Terminals	15	107	8.2-9.5	Bulk cargo, container services
Harvey Terminals	16	145	7.6-10.1	General cargo
Mobil Oil	22	153	6.7-9.1	
Imperial Oil	23	145	7.6-10.1	
Irving Oil	24	69	9.5-10.4	
Fisheries College	25	137	4.9-7.3	
D.N.D.	26	61	6.7-7.3	
Fisheries & Oceans	27	153	5.5-7.0	
Ultramar	28	69	5.2-7.0	
Ultramar	29	114	5.2-7.6	
C.O.T.C.	30	99	5.2-5.5	
M.O.T.	31	183	7.0-7.6	
C.N.R.	34	86	10.7	Dry dock
C.N.R.	35	142	7.6-8.5	Dry dock
C.N.R.	36	95	5.8-7.6	Dry dock
C.N.R.	37	114	6.7	Dry dock

STEVEDORES: Advise before 1600 hrs. ETA in order to commence 1800 hrs. same day or 0800 hrs. next day.

MEDICAL: No advance notice except in case of serious illness to be included in arrival cable, ample hospital facilities available.

TANKERS: Discharge lines 6 in., 8 in., 10 in., 12 in. No slop facilities.

Holyrood Refinery: 47.23 N. 53.08 W.

A bunkering port of Ultramar Canada Ltd., situated in the South Arm of Holyrood Bay at the head of Conception Bay, S.E. coast of Newfoundland.

Channel depth: 35 ft. right up to wharf. Tidal range is 4 ft. – 5 ft. at springs, and 3.5 ft. at neaps. Good anchorage in Holyrood Arm.

One 275 ft. long berth, depth alongside 34 ft. 6 in. high water, 32 ft. low water, with moorings for Bow and stern lines on shore. Situated at Ultramar Refinery. 3 in. water mains for fresh water.

DENSITY: 1025.

FRESH WATER: Fresh water available all berths. Order through Agent. Rate approx. 25 t.p.h.

FUEL: Oil delivered by pipeline at 8 berths, and by tank trucks at all other berths. Major grades of bunker fuel and diesel as well as marine lubricants can be obtained through suppliers.

CONSULS:

Brazil	726-7702	Netherlands	726-2961
Denmark	726-8000	Norway	579-5006
Dominican Rep.	579-5081	Portugal	726-6958
France	726-3837	Spain	726-1804
Germany	722-1525	Sweden	726-8000
Iceland	722-4270	U.S.A.	726-4524

REPAIRS: Most deck and engine repairs possible.

DRY DOCKS: St. John's Dry Dock (owned by Marine Atlantic Inc.). Length at coping head, 173.9 m.; at floor head, 173.2 m.; maximum length of keel blocks 167.1 m.; width at coping, 23.3 m.; depth of water over sill, 8.2 m.

Machine shop is equipped for major repairs to hulls machinery.

Synchrolift designed to lift ships up to 3,640 tonnes out of the water.

SURVEYORS: Lloyd's Register, P.O.Box 5054, St. John's, NF, A1C 5V3. Tel: (709) 726-0543, (709) 368-2538 (Residence).

GANGWAY/DECK WATCHMEN: Usually ship's crew. Ship's gangway used.

OPENING/CLOSING HATCHES: Stevedores or ship's crew whichever to ship's advantage.

CERTIFICATES:
Construction Certificate.
Safety Equipment Certificate.
Radio Safety Certificate.
Load Line Certificate.
Cargo Gear Book.

CUSTOMS ALLOWANCES: Tobacco: Each man 200 cigarettes per week. Wine and Spirit: Each man 40 oz. wine or spirits, per week.

REPATRIATION: Crew changes and repatriation possible.

AIRPORT: Distance 4 miles served by Air Canada and Canadian Pacific.

TIME: GMT less 3.5 hours. First Sunday in April clocks advanced 1 hour. Last Sunday October clocks retarded 1 hour.

HOLIDAYS: New Year's Day; St. Patrick's Day; Good Friday; St. George's Day; Commonwealth Day; Discovery Day; Memorial Day; Orangemen's Day; Labour Day; Armistice Day; Christmas Day; Boxing Day.

Except for Easter and Christmas, the above holidays are normally taken on the nearest Monday to the festival date.

POLICE/AMBULANCE/FIRE: Police 722-5111; Ambulance 726-3037; Fire 722-1234. Emergency No. 911. Ports Canada Police 772-4669.

EMERGENCY CO-ORDINATION CENTRE: Coast Guard, Search and Rescue (St. John's, Newfoundland). Tel: (709) 772-5151.

SERVICES: Compass adjusting, radar repairs, RT repairs, gyro compass repairs, all types electronic equipment repaired. Divers available for surveys and underwater repairs.

SHIP SUPPLY SERVICE: *Offshore Services:*
1. Seabase Limited, P.O.Box 5099, Suite 809, Atlantic Place, St. John's, Newfoundland A1C 5V3.
2. Harvey Offshore Services, P.O.Box 5128, St. John's, Newfoundland A1C 5V6.
3. Petro Canada Exploration Ltd., P.O.Box 5190, St. John's, Newfoundland A1C 5V5.

Helicopter Services: Helicopter services are available from St. John's Airport just minutes from the St. John's waterfront. These are operated by private interests as follows:
1. Sealand Helicopters Ltd., P.O.Box 5188, St. John's, Newfoundland A1C 5V5.
2. Universal Helicopters, P.O.Box 9025, Station "B", St. John's, Newfoundland A1A 2X3.

SHORE LEAVE: No Restrictions.

CREW IDENTIFICATION CARDS: Not required.

GARBAGE DISPOSAL: BFI Waste Systems, Sugarloaf Road. Tel: 753-3030.

Newfound Disposal Systems Ltd., 341 Portugal Cove Road. Tel: 739-9302.

A 6 cu.yr. container can be provided onboard or alongside.

Charges - Delivery - $80, Lift - $80, Incineration - $105, and Transportation - $157.

WASTE OIL DISPOSAL: Crosbie Industrial Services Ltd., P.O.Box 9341, St.Johns. Tel: (709) 722-8212/3. Fax: (709) 739-7540, can provide a wide range of services including septic waste disposal, sludge removal, sump and tank cleaning, trucking and cleaning services.

CURRENCY: Canadian Dollar (C$).

REGULATIONS: Fishing ships must advise of weekend arrival on Friday so that permit to take supplies can be obtained from Federal Dept. of Fisheries.

AUTHORITY: St. John's Port Corporation, P.O.Box 6178, 3 Water Street, St. John's, NF, A1C 5X8, Canada. *Tel:* (709) 772-4664, 772-4665, 772-4666. *FAX:* (709) 772-4689. *Contact:* D.J. Fox, Port Manager and Chief Executive Officer.

Captain H. Flight, Harbour Master. *Tel:* (709) 772-4667, 772-4668.

Lieut. M.L. Kenny, Director of Ports, Canada Police. Tel: (709) 772-4669.

SARNIA, Ontario: 42.59 N. 82.25 W. **(See Plan)**

Refer to "St. Lawrence Seaway" for important general information.

DOCUMENTS: All documentation carried out by Authorities in Montreal. Only when vessels have called at United States port after departing Montreal will any changes in documentation be necessary, which will consist of a United States Customs Clearance Certificate, to be available on board.
Immigration Papers.
1 copy QS2 (Health Certificate).
3 Stores Lists.
Crew Personal Effects List.
Customs Clearance.
All of the above will have been stamped in Montreal.

PILOTAGE: Notice of ETA should be given to Pilots at least 12 hours before arrival at Sarnia to avoid delays. Accommodation ladder and pilot ladder should be rigged in readiness.
RESTRICTIONS: Navigation season – ice forms about December 15th and breaks up about the middle of March. Vessels size restricted by Seaway locks.
MAX. SIZE: Length 730 ft., beam 75 ft. 6 in., draft 25 ft. 6 in.
HEALTH: Pratique granted at Montreal.
RADIO: Sarnia Radio, call sign VBE, communicate on either AM or FM radio telephone.
TUGS: Available. Tel: Sarnia 336-5588.
BERTHING: Over 2 miles of waterfront including main wharves listed below:

C.N.R. Dock, length 1,100 ft., depth alongside 23 ft.; Empire Hanna Coal Dock, length 900 ft., depth alongside 19 ft.; Elevator Dock, length 900 ft., depth alongside 27 ft.; Dept. of Transport Dock, length 1,045 ft., depth alongside 27 ft.; Reid Aggregate Dock, length 500 ft., depth alongside 26 ft.; Imperial Oil Docks – Upper Dock, length 592 ft., depth alongside 23 ft.; Fueling Dock, length 928 ft., depth alongside 26 ft.; Special Products Dock, length 284 ft., depth alongside 26 ft.; Lower Dock, length 720 ft., depth alongside 23 ft.; Polysar Corp. Dock, length 600 ft., depth alongside 26 ft.; Dow Chemical Dock, length 680 ft., depth alongside 26 ft.; Sun Oil Dock North Dock, length 600 ft., depth alongside 26 ft.; South Dock, length 500 ft., depth alongside 26 ft.; Shell Oil Dock North Dock, length 1,000 ft., depth alongside 26 ft.; Middle Dock, length 500 ft., depth alongside 26 ft.; South Dock, length 500 ft., depth alongside 26 ft.

MEDICAL: Hospital facilities at Sarnia. All assistance available.
DENSITY: Fresh water.
FRESH WATER: Available at all berths.
FUEL: All grades available from Imperial Oil and Shell Co. berths.
REPAIRS: Hull, boiler and engine repairs can be effected. No dry docks.
AUTHORITY: Transport Canada, P.O.Box 325, Sarnia, Ontario,Canada N7T 7J2. *Tel:* (519) 337-5121. *Contact:* W. D. McCart, Harbour Master.

SAULT STE. MARIE, Ontario: 46.28 N. 84.22 W.

(See Plan)

Refer to "St. Lawrence Seaway" for important general information.
Note: The water depths quoted are at extreme low water, normally more water available.
DOCUMENTS: See "Montreal".
PILOTAGE: River or local Pilots available on 24 hours' notice. U.S. Corps of Engineers, Sault area operate and control St. Mary's River Falls Canal and regulate traffic through all locks in both cities.
HEALTH: Board of Health Officers can make a call to the ship.
RADIO: Good ship-to-shore telecommunication available through Department of Transport Radio Station (UBB 800), Canadian Pacific Telecommunications and Canadian National Telecommunications. United States Coast Guard maintain fully equipped Coast Guard Base and have radio communication for all frequencies in entire St. Mary's River and Harbour area; they are available immediately for information pertaining to shipping in area and movement of ships in River.
TUGS: Harbour tugs available when required, but prefer advance notice order avoid delays. In Sault Ste. Marie, Ontario tugs available.
BERTHING: Transport Canada Dock, "L" shaped pier, length 500 ft. on East side 18 ft. deep. On South side, the river side, it is 356 ft. long, 20 ft. deep. This dock is used for discharging general cargo. No crane facilities for loading and unloading, unless ship's gear is used, mobile cranes have to be brought in. No tug required to berth or unberth a ship at this dock under normal weather conditions.

Algoma Steel Corporation Dock. Situated above Canadian Canal with following berths available:

(a) Coal and ore dock with a combined length of 2,800 ft.
(b) Commercial dock on West side of slip 400 ft. long.
(c) Limestone dock, "L"-shaped dock on West side 355 ft. long and on South side 450 ft. For loading finished steel.

All 3 Algoma Steel Corporation docks 21 ft. 6 in. deep. Only material consigned to or being shipped from Algoma Steel Corporation have access to these docks.

Parks Canada Pier: Northeast pier at Canadian Canal which could be used for berthing ships and also used occasionally to load or unload cargo into trucks. This pier approx. 500 ft. long and mobile lifting equipment could be utilised here if necessary. Depth of water 18 ft. Pier mostly used as tie-up for making minor repairs afloat, for medical purposes, or waiting for berth at Algoma Steel Corporation Dock. Berthing and unberthing carried out any time, Sundays and holidays with exception of extreme bad weather, high winds, or fog. Canal Hours 0700-2300.

STEVEDORES: Available for loading and unloading at any berths in Sault Ste. Marie area.
TANKERS: Gulf Oil Canada Ltd. Dock: Berthing length 400 ft. Depth 18.5 ft. The West side is the Government Dock, depth 22 ft. 12 tanks (capacity 12,000,000 gallons). For fuel oil and gasoline.
FRESH WATER: Available either by hose or by pumper truck at any dock.
FUEL: Diesel bunkers available at any berths via tank trucks. No bunker "C" facilities available at Sault St. Marie.
REPAIRS: Normal ship repairs are carried out on very short notice if required.
AUTHORITY: Canada Ports Corporation, 99 Metcalfe Street, Ottawa, Ontario K1A ON6. *Contact:* Senior Port Manager.

Ron Lamon, Harbour Master. Tel: (705) 946-0800.

AGENT: Algoma Steel Inc., Marine Division, P.O.Box 1400, Sault Ste. Marie, Ontario, Canada P6A 5P2. Tel: (705) 945-3060. Fax: (705) 945-3112.

SEPT ILES (Seven Islands), Quebec: 50.11 N. 66.23 W.

(See Plan)

LOCATION: The City of Sept-Iles is located on the N.E. side of the Baie des Sept-Iles, a sheltered circular basin screened to seaward by 7 small islands, on the North shore of the St. Lawrence River in Lat. 50° 11′ N. and Long. 66° 23′ W.
DOCUMENTS: The following inward papers are to be completed prior to arrival and presented to custom officer on boarding:

Health	QS-2001 Quarantine Form	in duplicate
Immigration	IMM-200 Crew List	in triplicate
Customs	A-6 Report Inward	in triplicate
Customs	Y-14 Crew Declaration	in triplicate
Customs	E-1 Ship's Stores	in triplicate
Clearance from last port		

The above forms will be supplied by mail on request.

Note: On Canadian or International Crew Lists, black pen or typewriter must be used. Blue is not acceptable because of copy reproduction difficulties.

Designation and dates of expiry of all major trading certificates is required for outward clearance.

Arrangements have been made so that loading of iron ore can commence before customs entry has been completed, and customs outward papers will be completed so as not to interfere with immediate departure after completion of loading.

Tankers: Charterers or Operators nominating tankers for discharge at Canadian ports should ensure that the vessel is provided with a "Non-Canadian Ship's Compliance Certificate" prior to sailing for Canada. All major Classification Societies are authorised to issue such a certificate.
DOCKING MASTER: The use of a Docking Master is compulsory for vessels docking, shifting and leaving all docks. When docking on arrival, Docking Master will board inside harbour limits in area of 50° 10′ N. and 66° 24′ W. Ships normally proceed to anchorage without assistance, which can be provided on request.

All vessels shall provide rope ladder for boarding Docking Master on arrival and disembarking Docking Master on departure. Ladder must be well secured by adequate lashings to rail or deck.

Power hoists, in good order and properly attended, are acceptable for boarding. In freezing temperatures however, they should not be used unless electrically powered.

Shipmaster's Report: August 1983: With all bridge and engine room equipment working well, we berthed in thick fog (visibility 50 yards – 100 yards). Pilot and tugs most efficient.
ANCHORAGE: Ships should anchor at least 1 mile off dock to facilitate ship movements in bay and should not proceed closer than 1 mile from dock while waiting for Docking Master to board. Vessels may be requested to shift anchorage if their position interferes with normal docking approaches.
MAX. SIZE: Iron Ore Co. Loading Dock (Old): Length 800 ft., beam 130 ft., draft 43 ft. Iron Ore Co. Loading Dock (New): Length 1,600 ft., beam 175 ft., draft 57 ft. Imperial Oil Dock: Length 775 ft., draft 40 ft.

Vessels arriving in ballast to load at No. 2 Dock are requested to present in accordance with the following recommended arrival drafts to ensure safe handling procedures, keeping in mind indicated ship loading rates and ship loader clearances. These drafts are intended to mean minimum draft aft with normal vessel trim.

Summer Deadweight	*Recommended Arrival Drafts*
Under 30,000	4.0 m. to 4.6 m.
30,000 to 40,000	4.6 m. to 5.2 m.
40,000 to 60,000	4.9 m. to 5.8 m.
60,000 to 75,000	5.5 m. to 6.4 m.
75,000 to 100,000	6.1 m. to 7.3 m.
100,000 to 150,000	8.5 m. to 11.0 m.
150,000 to 200,000	11.0 m. to 13.0 m.
200,000 to 250,000	13.0 m. to 14.0 m.
250,000 and over	14 m. and over

Any vessels unable to meet these suggested drafts due to insufficient ballast capacity, anticipated deballasting problems, etc., should state this in 48 hours ETA, along with estimated deballasting time.

Usually ships berth port side to for iron ore loading.

Note: Vessels have berthed with lesser draft than recommended when weather conditions permit.

HEALTH:

1. Vessels calling at Canadian ports no longer require Radio Pratique unless:
   (i) there is a condition of health irregularity aboard or,
   (ii) if vessel has called at an infected port during this same voyage or,
   (iii) if Derat Certificate is no longer valid or will soon expire.
2. Only vessels to which any of the above conditions apply, should cable "Quarantine Quebec" giving name of vessel, last port of call and detail regarding health conditions aboard.

RADIO: Sept-Iles Radio, Canadian Coast Guard Station, Call sign "VCK", Tel: (418) 968-3118, operates 24 hours a day.

CW	Calling frequency	500	kHz	
	Working frequency	420	kHz	
RT	Calling frequency	2182	kHz	Ch. 51
RT (Working Frequency)	Transmitting	2514	kHz	Ch. 57
	Receiving	2118	kHz	Ch. 57
VHF	Calling Frequency	156.8	MHz	Ch. 16
VHF (Working Frequency)	Transmitting	161.9	MHz	Ch. 26
	Receiving	157.3	MHz	Ch. 26
	Transmitting	161.8	MHz	Ch. 24
	Receiving	157.2	MHz	Ch. 24
	Port Operations	156.6	MHz	Ch. 12
Traffic Lists	420 kHz – Odd hours plus 50 minutes GMT			
	2582/161.9 0240 UTC – Every 4 hours			

Weather, Ice Reports and Notice to Shipping: A continuous marine broadcast is available on VHF Ch. 21, 161.65 MHz. and Channel 83B, 161.775 MHz. Recorded information is updated continuously as received 24 hours per day.

Extended VHF communications facilities are also available in Mingan 50° 16′ 24″ N., 64° 07′ 56″ W. and Natashquan 50° 08′ 40″ N., 61° 48′ 00″ W.

Ore Carriers:

Advising Arrival: Cable address "Iroccan" Sept-Iles.

Please advise ETA 96 hours, 72 hours, 48 hours and 24 hours out, including in 96 hours ETA the amount of cargo required in metric tons.

Vessels sailing in ballast from Montreal, Sorel, Three Rivers or Quebec should send ETA on departure from these ports with corrected ETA later if necessary.

Advise with 24 hour ETA probable ballast pumping time required on arrival. If any change in ETA or in ballast situation should occur after 24 hour ETA, it should be advised as soon as possible.

The Marine Services office is equipped with VHF radio on 156.6 MHz Channel 12, and also 156.35 MHz, Channel 18A. Vessels calling at Sept-Iles should be fitted with these VHF Channels for efficient harbour communications.

Use of Channel 12 restricted to vessel movements only.

Docking Instructions: Ships are to request instructions 8 hours before arrival. These instructions will be given as promptly and concisely as conditions permit.

Marine Services is set up to receive radio messages on 24 hour basis. Radio traffic by ships at anchor is permissible in Sept-Iles harbour area.

TRAFFIC REGULATIONS: *Traffic Regulations for the Gulf and River St. Lawrence:*

1. Eastern Canada Traffic Zone Regulations (ECAREG)
   The zone extends from outside of Belle Isle and Cabot Straits to 66° 00′ W.

   In general, it states that a ship crossing seaward boundary, either entering or leaving the zone, must report to ECAREG via any Canadian Coast Guard Radio Station. Clearance to move within the zone must be obtained from ECAREG and there are "calling-in-points" where a ship has to report.

   There are also additional reports to be made in case of any defects in machinery, navigational aids, accidents, stranding, pollution, etc.
2. The St. Lawrence Waterway Traffic Regulations.
   The zone extends from 66° 00′ W. to Montreal.

   In general, the regulations state that a ship must report to the marine traffic regulator by contacting Channel Escoumins on 156.7 MHz, Channel 14 before entering Zone 1. (i.e. crossing 66° 00′ W.) The port of Sept-Iles is in Zone 1.

   Ships have to maintain a continuous radio watch on Channel 14, except when alongside. Authorisation to communicate on another Channel has to be requested from Channel Escoumins, unless the vessel is equipped with two radios.

   Clearance must be obtained from Channel Escoumins to move within the harbour.

TUGS: Tug service is compulsory at Iron Ore Company docks and Wabush Mines Docks. Two tugs of 5,400 h.p. available.

All communications between tugs and Pilots are by VHF. Tugs operate on 156.9 (Channel 18A).

All ships should be equipped with wire cable towing line with nylon pendant for tug use in undocking. Ships not so equipped will be provided with tug tow lines. Docking Master to determine adequacy of ship's tow lines.

CRANES: Heavy-lift cranes available. Max. capacity 150 tons.

MEDICAL: Masters are requested to have ready for inspection ship's Derat Certificate.

All crew members requiring medical attention should be available upon ship's arrival. Sick Mariners dues no longer apply for treatment of seamen. Agent will provide form of application to be given to doctor for crew members requiring medical attention.

BERTHING:

Berth	Berth No.	Wharf length (ft.)	Depth at Low Water (ft.)	Remarks
Ports Canada – Facilities				
Pointe-aux-Basques	7	600	25	Small open section at East end of Shed No. 1 2 General cargo sheds 1 Bulk shed
Oil Dock	8	300	38	Dolphins increase capacity for berthing. Max. size 60,000 d.w.t.
Mgr.Blanche Wharf	14	800	25	General cargo berth. 2 sheds available.
Town Wharf*	20	381	16	Used by coastal fishing boats.
Pointe Noire Wharf	40	853	45	La Relance Wharf offering storage and transit area (30 acres), crane, ship unloader, Ro-Ro ramp and 655 acres of land for port orientated development
	41	460	33	Railcar/truck ferry terminal. Also used for general cargoes.

*This wharf has been transferred to Fisheries and Oceans Canada.

Berth	Berth No.	Wharf length (ft.)	Depth at Low Water (ft.)	Remarks
Private Facilities				
Wabush Mine Co.				
Mooring Dock	30	650	36	General cargo and mooring berth (East end).
Loading Dock	30	950	36	Iron Ore loading berth (West end). Loading ore by means of 2 travelling boom conveyors. Total capacity 8,000 long t.p.h.
Iron Ore Company of Canada				
Waiting Berth				
Terminal	5	800	34	Mooring and general cargo receiving berth (West)
Southeast Berth				
No. 1 Dock	4	800	37	Waiting berth.
No. 2 Dock	2	1,600	60	Total effective mooring length approx. 1,600 ft. 2 travelling shuttle boom loaders with 764 ft. of travel. Max. design capacity 7,500 long t.p.h. each

See also following information on The Ore Company berths. Vessels usually berth port-side alongside.

Number 1 Dock: 2,200 ft. (670 m.) dock divided into 3 berths. The S.E. or Loading Berth is 800 ft. (224 m.) in length and is fendered with large truck tyres mounted over the dock face. The adjoining 800 ft. (244 m.) mooring or waiting berth is also fendered with large truck tyres. The third and last section, 600 ft. (183 m.) in length, is a Government Berth used for general cargo.

Dredged depth at the loading berth is 37 ft. (11.3 m.) at MLW, 34 ft. (10.4 m.) at mooring berth. Designed depth at the Government Berth is 25 ft. (7.6 m.). Number 1 Dock is fitted with bollards spaced at 50 ft. (15 m.) centres.

Number 2 Dock: Deepwater berth is located some 900 ft. (274 m.) S.E. of original dock and extends approx. 230 ft. (70 m.) further into bay. This single berth is open cell construction with 9 parallel cribs giving total berthing face of approx. 925 ft. (282 m.). A tenth transfer house crib, inset from dock face and a dolphin, both structures fitted with mooring winch and bollards, are located approx. 150 ft. (46 m.) and 350 ft. (107 m.) respectively from N.W. corner of dock face. Two additional dolphins, also fitted with mooring winch and bollards, are situated in a line approx. 150 ft. (46 m.) inside dock face and approx. 100 ft. (30 m.) and 400 ft. (122 m.) from S.E. corner of dock. Dolphins are joined to main dock structure by catwalks. Total effective mooring length is approx. 1,600 ft. (488 m.). Cribs are fendered to waterline with triple sets of extra large truck tyres. Dredged depth is 60 ft. (18.0 m.) MLW. Dock is fitted with 2 travelling shuttle boom loaders with 764 ft. (233 m.) of available shiploader travel, and a maximum design capacity of 7,500 long t.p.h. each. Number 2 Dock is fitted with bollards spaced at 100 ft. (30 m.) centres. Recommended maximum airdraft for this berth is 17.0 m.

Tidal characteristics		
	Neaps	1.68 m.
	Springs	3.05 m.

TANKERS: Berth at Oil Dock. (Max. draft 38 ft.) and Ports Canada facilities at Pointe-aux-Basques.

FRESH WATER: Can be supplied at the approx. rate of 35 t.p.h. Hose is available on the dock but ship's crew are required for connecting and disconnecting.

FUEL: Available on an emergency basis only and subject to inventory situation. All enquiries should be directed to BunkerEsso Montreal.

REPAIRS: Major repairs, except dry dock, can be effected at Sept-Iles. Repairs to be conducted under the supervision of ships' personnel.

CUSTOMS ALLOWANCES: Each crew member is allowed to retain in his possession for his personal consumption 200 cigarettes, 40 ounces of spirits, 50 cigars or 2 pounds of pipe tobacco. All quantities must be declared on Crew Declaration form Y-14 along with all personal effects such as radios, cameras, tape recorders, binoculars, etc., plus serial numbers of each such item.

Canadian seamen returning from voyages to American or other foreign ports are permitted $50 value of duty free merchandise every quarter for periods outside Canada of over 48 hours and $150 once a year for periods outside Canada of 7 days.

TIME: Sept-Iles maintains Eastern Standard Time (GMT minus 5) from last Sunday in October until first Sunday in April. Eastern daylight time (GMT minus 4) is maintained the balance of the year.

SHORE LEAVE: Crew not allowed ashore until permission granted by the authorities.

GARBAGE DISPOSAL: Disposal of "international" garbage is not permitted at Sept-Iles.

WASTE OIL DISPOSAL: There are 3 companies which can service vessel's needs.

Sani Mobile, Tel: (418) 968-9862. Fax: (418) 962-9461.
S.O.S. Marine Services, Tel: (418) 968-3738.

SEAMAN'S CLUBS: Stella Maris, Pointe-aux Basques Wharf, Sept Iles. Tel: (418) 962-7310. Hours: Daily from 1000 – 1200, 1400 – 1600 and 1900 – 2100. Services: Postage, post cards, stationery, refreshments, international telephone, currency exchange, book exchange and free magazines, table tennis and darts, shopping assistance, football matches arranged.

CURRENCY: Canadian Dollar.

SAFETY: It is compulsory to have a net under the gangway.

GENERAL: *Customs of the Port:* Ships will be loaded in regular turn of vessels, subject to cargo availability and providing they present with starting hatches open and do not have ballast pumping which will exceed expected loading time. This loading time should be calculated at the rate of 6,600 metric tons/hr. at Dock No. 1 and 10,000 metric tons/hr. at Dock No. 2.

For establishing turn of vessels, a ship will be considered "arrived" at the time of crossing line between Pointe au Corbeau and Pointe aux Basques.

Loading plans should be presented to the loading foreman on arrival.

Ore-Oil and OBO vessels having discharged petroleum products at last port must advise this in first ETA. If gas-free certificate not already granted by independent chemist, arrangements will be made to have chemist attend. The arrangement for such service implies no liability whatsoever on the part of Iron Ore Co. of Canada Marine Services. Expense for ship's account.

Ships will leave the loading dock immediately upon completion of cargo and secure for sea in the bay. If any delays occur on documentation, crew members missing, etc., ship will leave the dock and all matters will be handled from anchorage.

Vessels must have main engine ready when alongside loading docks. Permission to perform work that would affect the readiness of the vessel to leave berth in case of emergency must be obtained from the Port Authority before proceeding with such work.

Services: Most supplies can be readily obtained at Sept-Iles. Quantity orders should be included in 48 hour ETA. Requests for bonded stores should be included in 96 hour ETA.

Launch service is available on request through Marine Services.

Ice Navigation in Canadian Waters: During the Winter, ECAREG CANADA (East of 66° 00′ W.) and the St. Lawrence River Vessel Traffic Management (VTM), West of 66° 00′ W. to Montreal, provide a service consisting of the promulgation of up-to-date information on ice conditions, routeing, the provision of icebreaker support where available and considered necessary, and organisation of convoys as required.

Masters requesting this service should address their request to ECAREG CANADA through any convenient Canadian Coast Guard radio station which will handle the message free of charge.

Basically, each system is under the surveillance of Canadian Coast Guard Traffic Centres which Masters may contact for advice and assistance. These centres have access to a complete and current picture of the ice conditions prevailing and the anticipated trend of conditions. The centres are therefore, well equipped to provide advice on the best route to follow. In order to obtain the maximum benefit from the service, it is essential that Masters report to the appropriate Canadian Coast Guard Traffic Centre before their ships enter waters where ice may be encountered.

Radio communications play a very important part in successful ice navigation. The Master relies upon the receipt of accurate ice information and advice upon which he can base his decisions as to his future course and progress.

Ships proceeding independently throughout the Gulf of St. Lawrence when ice is present should report their positions and progress to "Ice Halifax" at 0800 hrs. and 2000 hrs. A.S.T.

Radiogram: "Ice Halifax". Radio Station: Halifax, Call sign VCS.

Ships inbound from sea to a port in Zone B should report to "Ice Halifax" 36 hours before passing Cape Ray. Ships outbound should report to "Ice Halifax" 12 hours before departure.

DEVELOPMENTS: In 1983, the Government of Canada announced a new project development in the Pointe Noire sector.

The new project consists of building a 260 m. long wharf with an existing depth of 14.5 m. and more, the construction on an on-site access road including all services such as waterline of 400 mm., power and waste disposal services, embankments and dykes, as well as a 12 hectares storage area. These new marine infrastructures will also permit access to more than 265 hectares of land owned by Ports Canada for industrial developments.

General cargo as well as bulk commodities are handled in this sector.

In September 1989 a 1.2 billion dollar investment was announced for the Pointe Noire area. Consortium Alouette are to build an aluminum smelter with a design capacity of 215,000 metric tons of finished products in the First Phase. A Second Phase could double this capacity before 1995. Meanwhile, Ports Canada has invested 100 Million Dollars in port facilities such as a bulk unloader, conveyors, silos, a railcar ferry, etc., to accommodate the new smelter.

SHIPMASTER'S REPORT: December 1989.

Pilot: Pilot embarks and disembarks from tug.

Radio: When the vessel is alongside it is simple and quick to walk to the Agent's dock office and send a telex or telefax message. When the vessel is at anchor all cables have to be routed through VCK (Sept Iles Coastguard Station) as Agents are not permitted to occupy the VHF with long messages. If however the Port Warden has to visit the ship for an inspection then it is again simple to have him take a message ashore for the Agent to transmit as a telex, etc.

Tugs: The two tugs are on stand-by 24 hours. Tugs lines normally used. For vessels of 200,000 d.w.t. and over, a third tug is used from Port Cartier.

AUTHORITY: Ports Canada – Port of Sept-Iles, 421 Arnaud Avenue, Room 202, P.O.Box 280, Sept-Iles, Quebec Province G4R 3B3. *Tel:* (418) 968-1231. *FAX:* (418) 962-4445. *Contact:* Jean-Maurice Gaudreau, General Manager.

SHEET HARBOUR, N.S.: 44.50 N. 62.30 W. (See Plan)

DOCUMENTS: See "Montreal".
ICE: Open all year with aid of icebreaker during January, February and March. Ice forms about January 15th and breaks up between March 1st and 15th.
PILOTAGE: Pilotage is not compulsory, but may be arranged through "Pilots Halifax". Boarding station is Lat. 44° 44′ 28″ N., Long. 62° 28′ 09″ W., or in Winter off Halifax in position Lat. 44° 31′ 24″ N., Long. 63° 30′ 24″ W.
ANCHORAGE: Anywhere in harbour in depths up to 10 fathoms.
MAX. SIZE: See "Berthing".
RADIO: Ship-to-shore communications: through Halifax (VCS).
TUGS: None.
BERTHING: *Transport Canada Wharf:* Length 54.8 m. Depth at LW 6.4 m. No railroad or handling facilities on wharf. Open storage area alongside for handling general cargo.
STEVEDORES: Skilled labour available. Gangs consist of 20 men.
MEDICAL: Hospitals available.
FRESH WATER: Available by hose from mill.
FUEL: Available.
REPAIRS: No facilities available.
AIRPORT: Halifax 75 miles.
TIME: GMT minus 3 hours in Summer. GMT minus 4 hours Winter.
AUTHORITY: Transport Canada, Office of Harbours and Ports, Maritimes Region, P. O. Box 1013, Dartmouth, N.S., B2Y 4K2. *Contact:* The Regional Manager. *Tel:* (902) 426-2588.

SHIP HARBOUR, Nova Scotia: 44.49 N. 62.53 W.

ANCHORAGE: The best anchorage in the harbour is between Salmon Point and Whale Islet. 7.31 m. to 11.89 m. of water in mud bottom.
BERTHING: Government wharf no longer usable.
Tides: LWOST, 0.2 m. above chart datum. HWOST, 2.2 m. above chart datum.
MEDICAL: Hospital at Sheet Harbour, 20 km.
AIRPORT: Halifax International airport, 120 km.
AUTHORITY: Transport Canada, 73 Tacoma Drive. (P.O.Box 1013). Dartmouth, Nova Scotia, B2Y 3Z7. *Tel:* 426-2588. *Telex:* 01922757.

SHIPPEGAN HARBOUR, N.B.: 47.45 N. 64.42 W.
CARAQUET HARBOUR, N.B: 47.48 N. 64.56 W. (See Plan)

DOCUMENTS: See "Montreal".
PILOTAGE: Boarding station is Lat. 47° 54′ 24″ N., Long. 64° 48′ 30″ W. Pilot may be arranged by calling (605) 727-5642.
ANCHORAGE: Good anchorage with depth 16.5 m., usually by Fairway Buoy.
RESTRICTIONS: Entry possible night and day, good vision, lighted buoys and beacon lights.
MAX. SIZE: High tide: 23 ft. low tide: 17 ft. (Shippegan, max. tide: 20 ft.).
HEALTH: See "Montreal".
RADIO: VCN Grindstone Radio and VCG Fox River.
VHF: Ports on Channel 16.
TUGS: Not required for these ports.
BERTHING: Caraquet Wharf, 21 ft., Shippegan 25 ft. alongside outer side and 3.2 m. alongside at normal low water along the inside face of wharf.
CRANES: Cranes up to 150 tons capacity available.
MEDICAL: No notice required, hospital available, as required when conditions warrant.
FRESH WATER: Available.
REPAIRS: Minor ship repairs and all electrical repairs.
CUSTOMS ALLOWANCE: Tobacco, 200 cigarettes per week per man. Wine/Spirits, Spirits allowed to officers. Beer to crew.
AIRPORT: Moncton, 150 miles, Chatham, 70 miles. Pokemouche, 4 miles.
TIME: Atlantic Standard Time GMT minus 4 hours, Daylight saving time from first week-end in April to last week-end in October, clocks advanced 1 hour.
POLICE/AMBULANCE/FIRE: *Caraquet:* Police RCMP 727-5222; Town Police, 727-1700; Fire, 727-1700; Hospital, 727-3435. *Shippegan:* Police, RCMP, 336-6444. Hospital, 344-2261.
BANKS:

National Bank of Canada. Tel: 727-3495.

GARBAGE DISPOSAL: Service is available. Collection can be made to ship's requirements. Charges are dependant on quantity.
WASTE OIL DISPOSAL: Small quantities (approx. 1,000 gallons) can be disposed of using Terminal's own facilities. For larger quantities a specialist contractor is required. Contact: Inland Oil Ltd., Truro, Nova Scotia. Tel: 1-800-565-4383. Fax: 902-895-6349.
SEAMAN'S CLUBS: Club associated with local Catholic church. Dances can be arranged and mini-bus collection is available.
AUTHORITY: Fisheries and Oceans Canada, Small Craft Harbours Branch, P.O.Box 717, Tracadie, N.B. E0C 2B0. *Contact:* Tilmon Hache, Harbour Manager (Shippegan). *Tel:* (506) 336-4010, 336-8583.

Le Comite du Port de Caraquet Inc., 26 Rue de Quai, Caraquet, New Brunswick, Canada E1W 1B6. *Tel:* (506) 727-6145. *FAX:* (506) 727-2020. *Contact:* Rufin Doiron, Port Manager, 44 Chemin St. Simon, Caraquet, N.B., E1W 1B3. Tel: (506) 727-6145 (Office), 727-4311 (Home).

SORÉL, Quebec: 46.02 N. 73.07 W. **(See Plan)**

LOCATION: Situated on the South shore of the St. Lawrence River at the mouth of the Richelieu River, approximately 75 km. downstream from Montreal.

DOCUMENTS:
2 Crew Lists.
2 Passenger Lists.
3 Crew Declarations (Canadian Form Y14).
3 Store Lists (Canadian Form E.1).
Health Declaration (Canadian Form QS.2001).
3 Cargo Manifests.
3 Bills of Lading.
General Declaration.

PILOTAGE: Compulsory. Under the Montreal Pilotage Authority. Vessels coming in from sea secure Pilots at Escoumins, Quebec and Three Rivers.

ANCHORAGE: Safe and roomy anchorage is provided in the St. Lawrence River off Sorel in a basin 9 miles long by 0.5 miles wide with 30 ft. to 50 ft. water depth. There is no tidal influence at this point.

RESTRICTIONS: Speed limits not to exceed 8 knots in the Harbour of Sorel. Sections 8, 9 and 10 reserved for D.O.T. vessels.

MAX. SIZE: From St. Lawrence Ship Channel there is a clear approach for 10.67 m. draft vessels to Outer Dock No. 15 and from 6.10 m. to 9.14 m. to almost all other docks.

HEALTH: Pratique may be obtained by radio to Quarantine Quebec. Health Officer boards on arrival.

Sorel is also an organised quarantine sub-station. (See "Canadian Quarantine Requirements" for full particulars).

RADIO: St. Lawrence River Marine Traffic Control, call sign VFN Sorel and VBK Three Rivers.

RADAR: Radar service may be obtained by VHF from Montreal (80 km.).

TUGS: Tugs are available all year round at Sorel. Their use is advisable for all berths in the Richelieu River, for berths in Lanctot Basin and at Section 5 for ships exceeding 250 ft. in length or having low manoeuvrability. They are also needed for large ships at Sections 15 and 21 when leaving with an Easterly destination.

BERTHING: Following depths are expressed in metres reduced to chart datum and must be used as guidance only. For up-to-date information refer to Canadian Marine Chart No. 1338 (Sorel Harbour).

Berth	*Length* (m.)	*Depth* (m.)
Public Wharves (Transport Canada):		
Section 5	190	7.6
Section 6	107	7.6
Section 7	172	7.3
Section 8	160	6.1
Section 9	61	6.1
Section 10	160	6.1
Section 16	110	5.0
Section 17	144	5.0
Private Wharves (Les Elevateurs de Sorel Ltee):		
Section 11	152.4	7.32
Section 12	106.7	7.32
Section 13	76.2	7.32
Section 14	187.5	8.30
Section 15	189.6	10.67
(Omnimar Ltee):		
Section 18	167.6	4.27
(Marine Industrie Ltee):		
Section 19	182.9	6.10
(Fer et Titane du Quebec):		
Sections 20 and 21	335.3	9.14

CRANES: Mobile cranes up to 150 tons capacity available from local firms.

BULK CARGO FACILITIES: (Public Wharves). Open storage space of 25,000 sq.m.

(Private Wharves). Les Elevateurs de Sorel Ltee: Steel and concrete grain elevators 5,500,000 bushels capacity, loading rate 144,000 bushels/hr. Fer & Titane de Quebec: Electric mobile bridge capacity 900 t.p.h.

STEVEDORES: Available for loading and unloading at any berths. Working hours: 0800 hrs. – 1700 hrs.

MEDICAL: Doctors and hospitals facilities available.

DENSITY: Fresh water (1000).

FRESH WATER: Available by pipeline or tank-trucks at all berths.

FUEL: Available from major oil companies by tank-trucks. Can also be obtained by barges from Montreal (50 miles).

CONSULS: Almost all countries, nearest offices at Montreal.

REPAIRS/DRY DOCKS: Marine Industries Ltd. shops are equipped for steel shipbuilding, construction of engines and boilers and repair services of all kinds. The Company has two marine railways, one of which is the largest end-hauling marine railway in the world, capable of launching and dry-docking cargo ships up to 12,000 tons deadweight with transfer or building area admitting of the construction of 8 ships at the same time. Ships of 5,000 d.w.t or smaller can be launched on the second marine railway. The facilities include modern shops, gas and air plants, as required for the building and repairing of all types of hulls and machineries, while subsidiary and associated companies in the same vicinity for rolling mills, heavy and precision machinery, heavy forgings, all kinds of steel brass and metal castings, propellers, etc. Omnimar Ltd., has docking facilities for repairs afloat of equipment, engine and general ship repairs.

CUSTOMS: Sorel is a port of entry, customs board ships.

CUSTOMS ALLOWANCES: 200 cigarettes for each man, Officers may be allowed one bottle wine/spirit, Master up to five bottles.

REPATRIATION: Can be arranged through Department of Manpower and Immigration.

AIRPORT: Nearest at Montreal (Dorval) 70 miles.

TIME: GMT minus 5 hours. Daylight Saving Time: GMT minus 4 hours, applied from first Sunday of April until last Sunday of October each year.

HOLIDAYS: New Year's Day, Good Friday, Easter Monday, St. John the Baptist Day, Dominion Day, Labour Day, Queen's Birthday, Thanksgiving (2nd Monday in October), Remembrance Day, Christmas Day, Boxing Day.

POLICE/AMBULANCE/FIRE: Call 911.

SERVICES: Ship's stores can be secured in Port. Tank cleaning equipment available.

SHORE LEAVE: Crew members allowed ashore. No restrictions.

REGULATIONS: Public Harbours Regulations.

AUTHORITY: Transport Canada, Ports and Harbours Directorate, 901 Rue Cap-Diamant, 4th Floor, Quebec G1K 4K1, Canada. *Tel:* (514) 743-7931. *Telex:* 055-60882. *Contact:* Andre Cardin, Harbour Master – Sorel.

SPRINGDALE, Newfoundland: 49.30 N. 56.05 W.

LOCATION: Springdale is in Hall's Bay, a deep narrow inlet situated at the S.W. part of Notre Dame Bay, North coast of Newfoundland.

RADIO: Comfort Cove (VOO).

BERTHING: (1) The Main Government Wharf is a finger pier with length 90 m. and depth 10.0 m. Used for general freight. Oil pipelines on wharf. There is a red fixed electric light on outer end of wharf.

(2) George Warr Wharf, berthing length 65 ft., depth alongside at LW 28 ft. aft, 13 ft. forward. Shed 50 ft. × 30 ft. Used for general freight.

No crane, electric light or water main on the wharves. Large ships load pulpwood at West Bottom.

FRESH WATER: Not available.

SURVEYORS: Lloyd's at St. John's. ABS at Halifax.

GENERAL: *Services:* Post Office, Telegraph.

Trade: Sawn lumber and pulpwood is exported. General merchandise is imported.

Charts: Canadian Chart No. 4591. BA Chart No. 3223.

AUTHORITY: Transport Canada, P.O.Box 1300, St. Johns, Newfoundland A1C 6H8. *Tel:* (709) 772-2288. *Contact:* Harbour and Ports Department.

Local Authority: Ted Robinson, Wharfinger. *Tel:* (709) 673-4343.

SQUAMISH, B.C.: 49.41 N. 123.10 W.

PORT LIMITS, DOCUMENTS, PILOTAGE, ANCHORAGE, RESTRICTIONS, HEALTH, See "Vancouver".

MAX. SIZE: LOA 700 ft.

TUGS: 4 local tugs up to 1,800 h.p. Contact Squamish Tugboat Co., P.O.Box 1099, Squamish, B.C., V0N 3G0. Tel: (604) 898-3733.

BERTHING: Two berths, length 450 ft. and 500 ft. Depth alongside at LW 38 ft. and 40 ft. respectively. Forest products mainly handled by ship's own gear. Fork lift trucks of 2,700 kg. – 11,300 kg. available. Flat bed dual control, 40 ft. length trucks for delivery to vessels available.

CRANES: See "Vancouver".

MEDICAL: No advance notice required but in case of serious illness recommend Vancouver facilities.

TANKERS: No facilities.

DENSITY: 1025.

FRESH WATER: Ample supply available by 1.5 in. hose at 60 gallons per minute. $0.99 Canadian per metric ton.

FUEL, CONSULS, REPAIRS, DRY DOCK, SURVEYORS: See "Vancouver".

GANGWAY/DECK WATCHMEN: Not required.

OPENING/CLOSING HATCHES: By Stevedores.

CUSTOMS ALLOWANCES: See "Vancouver".

AIRPORT: 50 miles to Vancouver Airport – regular airlines.

TIME: See "Vancouver".

HOLIDAYS See "Vancouver".

POLICE/AMBULANCE/FIRE: Police (966) 898-9611. Ambulance 911. Fire (966) 898-9666.

EMERGENCY CO-ORDINATION CENTRE: See "Vancouver".

TELEPHONES: Telephone can be put on board, $50 cost for connection.

SERVICES: See "Vancouver".

BANKS: Bank of Montreal, Bank of Nova Scotia, Royal Bank of Canada.

SHORE LEAVE: No restrictions.

GARBAGE DISPOSAL: No local collection service. See "Vancouver".

WASTE OIL DISPOSAL: See "Vancouver".

SEAMAN'S CLUBS: See "Vancouver".

AUTHORITY: Transport Canada, P.O.Box 371, Squamish, B.C. V0N 3G0. *Tel:* (604) 898-9433. *FAX:* (604) 892-1083. *Contact:* T.Bruusgaard, Harbour Master.

Operator: Squamish Terminals Ltd, P.O.Box 1520, Squamish, B.C. V0N 3G0. *Tel:* (604) 892-3511. *Telex:* 04-53374. *FAX:* (604) 892-5623. *Contact:* J. R. Wilburn, Traffic Manager.

STEPHENVILLE, Newfoundland: 48.30 N. 58.33 W. (See Plan)

PORT LIMITS: Beginning at Indian Head (Lat. 48° 29′ 58″ N., Long. 58° 31′ 49″ W.); thence running true 210° for 1,700 yards; thence running true 320° for 6,000 yards; thence running true north for a distance of 2,100 yards more or less to the high water mark.
DOCUMENTS:
Completed Declaration of Health
Valid Derat Certificate
3 Crew Lists (Form 200)
3 Crew Declarations (Form Y14)
3 Ship's Stores (Form E–1)
3 Passenger Lists
Manifests
Clearance from Last Port
PILOTAGE: Compulsory. Pilot boards at Lat. 48° 29′ 40″ N., Long. 58° 33′ W. Pilot ordered by reporting via any coastal radio station by radiotelephone or radiotelegraph to Pilots, Stephenville. 12 hours and 4 hours notice of ETA required. Time used must be UTC. The Pilot at Stephenville guards Channel 16 (156.8 MHz.) and works Channel 11 (156.66 MHz.).
ANCHORAGE: No sheltered anchorage in the harbour; vessels are exposed to prevailing westerly winds. Limited swinging room and poor holding ground.
RESTRICTIONS: A 75 m. wide × 2,200 m. long channel with a limiting depth of 10 m. has to be navigated to gain access to the turning basin which has a limiting depth of 9.2 m. Tidal range 1.1 m. at mean tides and 1.7 m. at large tides. Mariners are advised to obtain a copy of the Canadian Hydrographic Services Sailing Directions for Newfoundland and Chart No. 4885 and contact the Harbour Master for any changes in depth restrictions.
RADIO: Stephenville Marine Radio, call sign VOJ. Halifax Marine Radio is recommended for all messages.
BERTHING: Marginal Wharf: Length 293 m., depth 9.2 m.
STEVEDORES: Ordered by Agent.
MEDICAL: No advance notice required unless serious emergency. Hospital facilities available.
TANKERS: Tanker berth is the main government wharf (960 ft. long). Discharge lines are: 1×6 in., 1×8 in. and 2×10 in. The pipelines and nearby tanks are owned by Harmon Corporation and are leased to users.
DENSITY: Salt water.
FRESH WATER: Available from pipes on dock at $1.00 per ton. Water pipe is operated by the Town of Stephenville.
FUEL: Marine diesel available. Delivery by truck.
CONSULS: Nearest Consuls are situated in St. John's, which is approximately 500 miles away.
REPAIRS: Minor repairs are possible locally.
GANGWAY/DECK WATCHMEN: Usually crew.
OPENING/CLOSING HATCHES: Normally carried out by vessel's crew.
REPATRIATION: Can be arranged.
AIRPORT: 5 miles from dock.
TIME: GMT less 3.5 hours. Clocks advanced from first Sunday in April until last Sunday in October. 2 hours in 1988.
POLICE/FIRE/AMBULANCE: Police 643-2118, Fire 643-2176, Russell's Ambulance 643-2472, Hospital 643-5131
EMERGENCY CO-ORDINATION CENTRE: Coast Guard, St. John's, Newfoundland. Tel: (709) 772-5151.
TELEPHONES: Can be arranged through Newfoundland Telephone Company Limited, Market Division, P.O.Box 98, Corner Brook, Nfld. Phone: 643-3197. Phone jack has already been installed on the dock.
SHORE LEAVE: No restrictions.
IDENTIFICATION CARDS: Not required.
GENERAL: Ice is navigable throughout the Winter season. Extra information can be obtained from Ice Operations in St. John's – Newfoundland, Tel: 709-737-2083. Cables: Ice Operations – St. John's – Canadian Coast Guard.
AUTHORITY: Transport Canada, P.O.Box 1300, St. John's, Newfoundland A1C 6H8. *Tel:* (709) 772-5154. *Telex:* 016-3369. *FAX:* (709) 772-5127. *Contact:* D.A. Lester, Regional Manager, Harbours and Ports.

Local Authority: G.R. McLaughlin, Area Manager, Harbours and Ports, Stephenville, Newfoundland. Tel: (709) 643-3632.

J. Cochrane, Harbour Master. *Tel:* (709) 643-5625.

SUMMERSIDE, P.E.I.: 46.23 N. 63.47 W. (See Plan)

DOCUMENTS:
2 IMM.200.
3 E.1.
1 Quarantine 2001.
2 Passenger Lists.
1 Customs Document A.6.
PILOTAGE: Pilotage is not compulsory, but may be arranged. Message to "Pilots Summerside" or through Agent 12 hours and 6 hours before arrival. Boarding station is at Lat. 46° 19′ N., Long. 63° 53′ W.
ANCHORAGE: At Fairway Buoy in depths of 30 ft. – 35 ft.
MAX. SIZE: 550 ft. length, 75 ft. beam, 24 ft. draft.
HEALTH: Vessels coming from U.S.A. accepted without Pratique. Vessel from other countries radio telephone for permission. See also "Montreal".
RADIO: Halifax N.S., Sydney N.S., Grindstone M.I., Charlottetown, P.E.I.
TUGS: None available.
BERTHING: Transport Canada Wharf: Length (West side) 600 ft. Depth at LW 26 ft. East side, length 600 ft. Depth at LW 19 ft.
Additional Wharf: Length 300 ft., depth 17 ft.
Holman Wharf: Length 300 ft., depth at LW 8 ft.
Queen's Wharf: "L" shaped wharf, head length 155 ft., depth 5 ft.
STEVEDORES: 24 hours notice required.
MEDICAL: Hospital facilities available. Current vaccination/fever certificates required.
FRESH WATER: Available 30 t.p.h.
FUEL: Limited quantities by road tanker.
REPAIRS: Only minor repairs.
OPENING/CLOSING HATCHES: Crew/Stevedores.
CUSTOMS ALLOWANCES: Tobacco: 1 carton per man per week. Wine/Spirits: Spirits 40 oz. per man per week. Further allowances made if Master requests.
REPATRIATION: Can be arranged.
AIRPORT: Charlottetown Airport 39 miles away.
TIME: Atlantic Standard Time with daylight saving in Summer.
HOLIDAYS: New Year's Day; Good Friday; Victoria Day (19th May); Dominion Day (1st July); Remembrance Day (11th November); Thanksgiving (13th October); Labour Day (1st September); Christmas Day. Plus all Saturday afternoons and Sundays.
POLICE/AMBULANCE/FIRE: Police 436-9222; Ambulance dial "O" call operator; Fire 436-4848.
TELEPHONES: Telephones can be placed on board.
SHORE LEAVE: Crew allowed ashore.
IDENTIFICATION CARDS: Passports required.
AUTHORITY: Transport Canada, Charlottetown, Prince Edward Island. *Tel:* 566-7973. *Contact:* Wendall Morrison, Harbour Master and Wharfinger, 2 Morrison Ct., Summerside P.E.I. *Tel:* (Office) (902) 436-2924, (Home) (902) 436-5269.

Transport Canada, P.O.Box 1013, Dartmouth, Nova Scotia, B2Y 4K2.

SYDNEY, N.S.: 46.09 N. 60.12 W. (See Plan)

DOCUMENTS:
Crew's Declaration Y.14 in triplicate.
Ship's Stores E.1 in triplicate.
Crew Tally IMM.201 in duplicate.
Report Inward A.6 in triplicate.
PILOTAGE: Compulsory pilotage distance is approximately 12 miles and administered under the Atlantic Pilotage Authority. Boarding station is at Lat. 46° 20′ 30″ N., Long. 60° 07′ W. Message to "Pilots Cape Breton" 12 hours and 6 hours before arrival.
ANCHORAGES: The land-locked harbour affords safe anchorage for a large number of any size vessels with depths ranging from 40 ft. to 60 ft.
RESTRICTIONS: Berthing allowed day or night. "Harbour Ice", January to March, "Drift Ice" April to May. Navigable with aid of ice breakers requested from Ice Control at Sydney.
MAX. SIZE: Governed by least depth in channel of 11.6 m. at the lowest normal tides (average rise and fall 1.0 m. – 1.5 m.).
HEALTH: Sydney is an official quarantine station. Radio Pratique obtained between 0900 and 1700 hrs. local time by radio message to "Quarantine Sydney". Information required from vessel is as follows:
Name and nationality of vessel.
Name of three previous ports called at during voyage.
Port of destination and name of Agent.
Nature of cargo.
Date and place of last deratting or exemption certificate.
Number of crew and passengers.
Condition of health of all on board with details of any sickness or death occurring during the voyage.
Vaccination status of crew and passengers.
The ETA and any other information that may be required by the Quarantine Officers.

The ship will require usual inspection on arrival. However, Radio Pratique will enable vessel to enter port, dock and commence loading or unloading operations prior to official quarantine clearance. Vessels which have not applied for Radio Pratique and all vessels with suspected infectious disease aboard will remain in quarantine until cleared.
RADIO:

Station	*Call Letters*	*Freq. kHz*
Sydney Radio	VCO	500
Grindstone Island	VCN	500
Canso Radio	VAX	500
Halifax Radio	VBO	530
Cape Race	VCE	500

TUGS: Available but not compulsory.
BERTHING: *Syd-Port Industrial Park:*

Main Jetty: The outer face of the main jetty is 259 m. long with a 11 m. depth at LW. The inner face is 244 m. with 8.0 m. LW depth.

Inner Quay: The length of the East face wall is 228.6 m. with 6.0 m. at LWOST. The North face wall is 183 m. with a maximum LW depth of 6.0 m. graduating to 3.0 m. LWOST.

Services: The services include fresh water, sewage, electric power, all weather paved roads joining the Trans Canada Highway network and 4,564 feet of rail sidings connecting to major Canadian and U.S. rail systems.

Sydney Steel Corporation Piers:

No. 3 Pier: (Bulk Discharge Berth) Berthing length 213 m. Depth at LW 11.6 m. Equipped to handle bulk cargoes by self-unloading boom type vessels and conventional bulkers. Tower to be modified to enable handling of steel scrap cargoes.

No. 4 Pier: (Steel Loading Berth) Berthing length 218 m. Depth at LW 12.5 m. Equipped with one mobile portal type 46 tonne capacity crane to handle the loading of finished and unfinished steel products (including 25 m. steel rails) and the discharging of scrap and other general cargoes.

Crane equipped with a 120 ft. hinged boom with a 60 ft. back reach. Travel distance 430 ft. Pier equipped with three railway tracks under centre section of crane and one track on the water side. Fresh water is available along with pipeline for marine diesel and bunker fuel.

Cape Breton Development Corporation Coal Piers:

Coal Pier No. 4 has a berthing length of 246 m. with 9.14 m. of water alongside at LW. There is a 15,000 short ton storage pocket for coal and coke with an additional 2,000 tons loaded car storage over full bin. A conveyor belt system carries product to the pier head where it is boom loaded into vessels at an average rate of 2,000 short tons per hour. This pier, the main of a series of three is connected with the CN railway system. Equipped with 4 in. line for fresh water.

Also see "Shipmaster's Report" and "General".

Sydney Government Wharf:

The berthing length of the West face is 242 m. with a 9.2 m. LW depth. The South face is 91 m. long sloping off to 4.5 m. LW depth. Facilities include a bonded warehouse (30 m. × 60 m.) and 30,480 sq.m. of bonded open storage with a rail spur line on the waterside with tailgate delivery in the rear. Fresh water and diesel bunkers also available.

STEVEDORES: Available by phoning Rowe Freight & Marine Service Ltd. (Tel: (902) 564-8452. Fax: (902) 562-8064) 24 hours before ETA of vessel. Ships cargo gear is usually employed but mobile cranes up to 125 tonnes are available at short notice for extended hire.

MEDICAL: Two hospitals.

TANKERS:

Irving Oil Pier: Berthing length 24 ft. Depth alongside 23 ft. at LW. 2×8 in. pipelines.

Petrofina Wharf: "T" head pier. Berthing length 74 ft. Depth alongside 22 ft. 1×10 in. pipeline.

DENSITY: Average 1023.

FRESH WATER: Available anytime, supplied through 2.5 in. hose at rate of 25 t.p.h., cost depending on tonnages, from $1.00 to 0.45 cents per ton, plus labour.

FUEL: Marine diesel, bunker fuel and galley fuels are obtainable by pipeline at Pier Nos. 2, 3 and 4. Rate of bunkering approximately 100 t.p.h.

Suppliers: Northern Petroleum Ltd., 48 Fairview Street, Sydney, N.S. B1P 1P9. Tel: (902) 564-5152.

Gulf Canada, 2020 University Street, Montreal, P.Q. H3A 2L4. Tel: (514) 284-7837.

Petrofina Canada Inc., Marine Terminal, Sydney River, N.S. Tel: (902) 539-6446.

Irving Oil, Bulk Plant, Kings Rd., Sydney, N.S. Tel: (902) 564-5566.

CONSULS:

British and Canadian Shipping Master.
Portugal Vice-Consul 794-3515.
Honorary French Consular Agent, North Sydney 794-4800.
Norwegian Vice-Consul, Sydney 564-9288.

REPAIRS/DRY DOCKS: The Sydney Engineering and Drydocks have 40,000 sq. ft. of production plants using skilled marine tradesmen. Also see "North Sydney".

SURVEYORS: See "North Sydney".

GANGWAY/DECK WATCHMEN: Crew sufficient.

OPENING/CLOSING HATCHES: Crew.

CUSTOMS ALLOWANCES: 200 cigarettes or 0.5 lb. tobacco or 15 cigars, each officer. 40 oz. of spirit per officer.

REPATRIATION: Can be arranged.

AIRPORT: Served by Air Canada, Air St. Pierre and C.P. Air.

TIME: Sydney is on Atlantic Standard Time from the last Sunday in October to the first Sunday in April, and on Atlantic Daylight Time from the first Sunday in April to the last Sunday in October. GMT minus 4 hours on Atlantic Standard Time and GMT minus 3 hours on Atlantic Daylight Time.

HOLIDAYS: Christmas Day; New Year; Good Friday; Dominion Day; Thanksgiving Day; Labour Day. No work as a rule from 0800 to 0800 hrs. next day.

POLICE/AMBULANCE/FIRE: Police 564-4415; Ambulance 564-5507; Fire 539-3552.

EMERGENCY CO-ORDINATION CENTRE: Canadian Coast Guard: Oil spills and other emergencies from Sydney Harbour Area (no charge) ask operator for Zenith 49000.

SERVICES: Compass adjusting, tank cleaning.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Seaman's identity cards.

GENERAL: *Loading Devco Coal:* The Canadian Coast Guard has issued instruction for Masters loading Devco coal at Sydney.

All Masters will receive the instructions before loading commences and Coast Guard surveyors will be in attendance prior to and during loading.

One of the important instructions is that the vessel must be equipped with a suitable surface ventilation system.

SHIPMASTER'S REPORT: February 1988.

Cape Breton's International Coal Pier has only one fixed pipe and is very unsuitable and unsafe for larger vessels, especially during Westerly winds, so it is suggested that Masters give a Letter of Protest to whom it may concern immediately after berthing. It is also suggested that the Chief Officer checks the density and reduces it for water temperature as the water is brackish, otherwise they can have significant discrepancies in quantity of cargo to be loaded.

Max. air draft permitted at pier is 30 ft.

AUTHORITY: Sydney Ports, Marine and Cruise Development, P.O. Box 1448, Sydney, Nova Scotia B1P 6R7, Canada. *Tel:* (902) 564-4344. *FAX:* (902) 564-5422. *Contact:* George Wheeliker, Executive Director. Donald F.Rowe, Harbour Master.

THOROLD, Ontario: 43.05 N. 79.10 W.

LOCATION: Town on Welland Canal, about 8 km. South of Port Weller and 32 km. North of Port Colborne, both ports being the entrances of the Canal linking Lake Ontario with Lake Erie.

RESTRICTIONS: Channel depth: Maximum permissible draft in the Welland Canal and approaches is 8.0 m. (26 ft. 3 in.).

Navigation season: April 1st to December 30th on the average.

HEALTH: Incoming vessels obtain clearance at Quebec City when coming from a foreign port.

RADIO: Ship-to-shore communications: Through Prescott Coast Guard (VBR) or Buffalo (WBL).

BERTHING:

Industrial Dock, Wharf No. 5:

Type: Coal.
Equipment: Self-unloaders.
Length: 152.4 m. (500 ft.)
Depth: 5.50 m. (18 ft.)
Operator: Industrial Docks & Supplies Ltd.

Industrial Dock, Wharf No. 6:

Type: Various Bulk and General Cargo Commodities.
Equipment: 1–2.7 ton Crawler Crane, 1–3.2 ton Crawler Crane.
Length: Dock Wall 121.9 m. (400 ft.), Berth 342.9 m. (1,125 ft.)
Depth: 7.80 m.
Capacity: 90,000 tonnes.
Operator: Industrial Docks & Supplies Ltd.

Ontario Paper Pulpwood Dock, Wharf No. 7:

Type: Unloads Chemicals.
Equipment: Ship's Gear
Length: 186 m. (610 ft.) plus 210 m. (690 ft.) between dolphins at East end.
Depth: 7.80 m.
Operator: The Ontario Paper Company Ltd.

Ontario Paper Dock, Wharf No. 8:

No longer in commercial use.
Length: 132.3 m. (434 ft.)
Depth: 7.3 m. (24 ft.)

Beaverboard Dock, Wharf No. 9:

No longer in commercial use.
Length: 306.3 m. (1,005 ft.)
Depth: 8.23 m. (27 ft.)

MEDICAL: Maplehurst Hospital, Thorold; St. Catharines General Hospital, and Hotel-Dieu Hospital, both in St. Catharines.

REPAIRS: Minor repairs possible.

DRY DOCKS: Port Weller Dry Dock – Welland Canal.

HOLIDAYS: Customs and Canal Officials always available during the season.

SERVICES: Supplies available.

GARBAGE DISPOSAL: Available through companies in the Welland Canal.

WASTE OIL DISPOSAL: Mobile reception facilities available in the Welland Canal.

SEAMAN'S CLUBS: None.

GENERAL: *Publications:* Sailing Direction: Great Lakes, Volume I. Seaway Handbook.

AUTHORITY: St. Lawrence Seaway Authority, Niagara Region, P.O.Box 370, 508 Glendale Avenue, St. Catharines, Ontario L2R 6V8, Canada. *Tel:* (905) 641-1932, (nights (905) 641-1939). *FAX:* (905) 641-4632. *Contact:* Captain A. Soni, Coordinator – Vessel Traffic Services.

THUNDER BAY: 48.25 N. 89.13 W. (See Plan)

For important General Information refer to "St. Lawrence Seaway".

DOCUMENTS: As inland Port all documentation carried out by Authorities in Montreal, prior arriving. Only when vessels have called at United States Port after departing Montreal, and prior arriving at Thunder Bay, will any changes in documentation be necessary; which will consist of a United States Customs Clearance. Certificates to be available on board:

Immigration papers.
1 copy QS 2 (Health Certificate).
3 copies of Ships' Stores.
Crew Declaration.
Customs Clearance.

All of the above will have been stamped in Montreal.

PILOTAGE: Pilots are obtained by Agent at Master's request, at which time the location of boarding the ship will be stipulated. Ship's Masters are able to contact Agent by ship-shore duplex through VBA Marine Radio, Thunder Bay.

ANCHORAGE: Anchorage areas defined by Thunder Bay Harbour Commission but due to large area and number of entrances to Harbour, Masters are permitted considerable latitude in making own decisions. Usual areas are approximately 1 mile outside of Harbour breakwall, free of shipping lanes.

HEALTH: Pratique granted at Montreal.

RADIO: Radio station: VBA Thunder Bay is Transport Canada station offering duplex services.

VBA operates 24 hours per day during shipping season on following frequencies:

VBA Canadian Coast Guard Radio Station, Federal Post Office Building, 244-33 South Court Street, Thunder Bay, Ontario P7B 5L2. Temp. Tel. (807) 345-8084.
(FM) Channels 16, 26, and 28

VBA: Thunder Bay Coast Guard Radio
Telecommunications Operations Manager
Canadian Coast Guard.
244 Lincoln St., Room M 11.
(807) 345-4918

TUGS: Arranged mutually by Shipmaster's and Agents on arrival in port. Ship lines used. Four tugs available.

Tug Service: Gravel & Lake Services
P.O.Box 2180
Thunder Bay, Ontario
(807) 345-7305
Thunder Bay Tug Services,
RR No. 6
Thunder Bay, Ontario P7C 5N5
Tel: (807) 343-4784

BERTHING: Navigational Channels for approaching or leaving the Port of Thunder Bay are identified on Canadian Hydrographic Chart 2301. Chart 2314 is the official chart for navigation within the Port. All vessels within the harbour limits are subject to Thunder Bay Harbour Commission By-Laws.

The Port is divided into four sections: Main Harbour North, Main Harbour Centre, Main Harbour South and Delta Harbour. There are three entrances into Main Harbour and two entrances into Delta Harbour. The Port is accessible on a 24 hour basis.

Berthing Facilities:

Main Harbour North:

PASCOL Engineering.	Dry dock 228 m.	Ship repairs
	Marginal dock 427 m.	
United Grain Growers "A"	Berthing length 452 m.	Grain
Saskatchewan Wheat Pool 4A and 4B	Berthing length 414 m.	Grain
Richardson Terminals Ltd.	Berthing length 274 m.	Grain
Great West Timber	Berthing length 250 m.	Forest Products.

Main Harbour Centre:

Northern Wood Preservers	Berthing length 189 m.	Forest Products
Manitoba Pool Elevator 3	Berthing length 335 m.	Grain
Canada Malting Co. Ltd.	Berthing length 305 m.	Grain
Saskatchewan Wheat Pool 7A	Berthing length 518 m.	Grain
Saskatchewan Wheat Pool 7B	Berthing length 341 m.	Grain
United Grain Growers "M"	Berthing length 377 m.	Grain
Manitoba Elevator No.1	Berthing length 273 m.	Grain
Parrish & Heimbecker	Berthing length 305 m.	Grain

Main Harbour South:

Transport Canada – Coast Guard	Berthing Length 122 m.	Government Dock Helicopter Landing Pad
Keefer Terminal	Berthing length 196 m.	General Cargo Facility
	Berthing length 365 m.	Ocean Freight Lake Freight
	Berthing length 215 m.	Marginal Wharf, Mobile Cranes, Water, Telephone, & Hydro Storage

Delta Harbour:

Imperial Oil Ltd.	Berthing length 2 dolphins	Berthing for own Tankers Fuelling Facilities
Thunder Bay Terminals Ltd.	Berthing length 262 m.	Dry Bulk Transhipment Facilities
Petro Canada Inc.	Berthing length 46 m.	
Esso Petroleum Canada	Berthing length – Centre platform	
CP Rail Wharf	Berthing length 223 m.	Open Dock
Pierre Gagne Contracting	Berthing length 283 m.	Open dock only
General Chemical Ltd.	Berthing length 35 m.	2 Breasting Dolphins
Western Grain By-Products	Berthing length 300 m.	Grain By-Products
N.M. Paterson & Sons	Berthing length 274 m.	Open Dock
Dow Chemical Ltd.	Berthing length 60 m.	Marginal Dock
Avenor	Berthing length 350 m.	Private Docks
Valley Camp "A"	Berthing length 223 m.	Dry bulk transhipment facility
Valley Camp "B"	Berthing length 389 m.	Dry bulk transhipment facility
Ontario Hydro Generating Station	Berthing length 207 m.	Marginal Dock
Cargill Grain Ltd.	Berthing length 300 m.	Grain
Abitibi-Price (Mission Mill)	Berthing length 646 m.	Marginal Dock

CRANES: *Crane and Equipment Rentals:* Thunder Bay Harbour Improvements Ltd., P.O.Box 2119, Thunder Bay, Ontario. Tel: (807) 344-7294.

BULK CARGO FACILITIES: *Grain Terminals:*

Elevator Company	*Commodities Handled*	*Total Storage Capacity* (tonnes)	*Loading Rate* (tonnes/hr.)
Canada Malting Co.Ltd.	Malt & Malt By-Products, Barley	62,800	600-1,000
Cargill Limited	All Grains plus Canola, Flax, Canary, Mustard	176,020	1,500
Manitoba Pool Elevators	Wheat, Oats, Barley, Oilseeds, Rye, Speciality Crops		
2 Locations: Pool 3		150,000	2,000
Pool 1		170,000	2,000
Parrish & Heimbecker Limited	Wheat, Oats, Barley	40,000	1,000
Richardson Terminals Limited	Cereal, Grains and Oilseeds	208,505	2,000
Saskatchewan Wheat Pool Terminals 7A	Wheat, Oats, Barley, Oilseeds, Rye and Grain Screening Pellets	362,648	3,400
7B			1,200
United Grain Growers Limited	Grain, Oilseeds, Pellets Speciality Crops		
2 Locations: Elevator A		231,000	1,900
Elevator M		91,000	2,300
Western Grain By-Products Storage Limited	Pellets, By-Products, Speciality Crops Custom Bagging	30,000	1,200

DRY BULK FACILITIES: Dry bulk commodities such as coal, potash, and other free-flowing mineral and agricultural products account for about 25% of the port's overall tonnage. Coal and potash are railed from Canada's prairie provinces into Thunder Bay, where ships take on loads of up to 30,000 tonnes.

Thunder Bay Terminals Limited and Valley Camp Inc. handle such commodities as coal, potash, urea, sand, stone, salt, gold concentrates, limestone, bark chips, uncleaned grain, and grain by-products.

Thunder Bay Terminals Ltd.: Thunder Bay Terminals Ltd. provides the link between rail and vessel for the movement of low sulphur bituminous and lignite coal from mines in British Columbia, Alberta, and Saskatchewan, destined for Ontario Hydro's thermal generating stations. The facility also handles metallurgical coal for Ontario and international markets, as well as other dry bulk commodities such as potash, urea and various agri-products. A 262 m. berth is available for ships. In terms of rail capabilities, unit trains of approximately 100 gondola cars each, arrive at the terminal along a 400 m. elevated loop track that surrounds the property. A complete unit train can be unloaded within two and a half hours. In 1984, a new, highly efficient dry bulk handling system was added for direct rail to vessel transshipment of virtually any free-flowing dry bulk commodity. Trains of up to 120 bottom dump hopper cars can be unloaded in less than 3 hours. Product quality is maintained by features which virtually eliminate product contamination, degradation, and segregation. The site is serviced by road and CP Rail, with CN Rail access for all commodities.

Storage capacity: 1,500,000 tonnes. Rate: Up to 8,000 tonnes/hr. and average 5,000 tonnes/hr. for coal, and up to 7,500 tonnes/hr. and average 4,000 tonnes/hrs. for dry bulk cargoes (potash, grain, urea, pellets).

Valley Camp Inc.: Valley Camp Inc. has 3 cargo handling areas. The facility has a free-flowing dry bulk transfer system, a bulk commodity dock with cranes, and a dry bulk handling facility. The latter was added in 1984 to meet the growing demands of the industry. This highly efficient system offers covered transfer, so that clean product flow is maintained and there is no fear of product contamination or degradation. The facility can accommodate vessels up to 304 m. at its docks which are 550 m. and 201 m. in length. A 24 m. deck scale for heavy bulk trucking is also available on the site. Valley Camp offers outside ground storage for over 2 million tonnes of cargo, and has an annual throughput capacity for 10 million tonnes of cargo. The site is serviced by road and CN Rail, with CP access via CN switching.

Rates:

Loading System	*Equipment*	*Commodities Handled*	*Storage Capacity* (tonnes)	*Loading Rate* (tonnes/hr.)
Dry Bulk Handling Facility	All weather covered conveyors, dumper pit, quandrant-type shiploaders.	Potash, grain area grain by-products and agri-products.		Up to 6,000 average 4,000
Dry bulk Transfer Facility	Shiploaders, dumper pit, radial stacker, bucket wheel reclaimers.	Coarse ore, iron ore pellets, coal.	1,500,000	Up to 6,700 average 5,000

Loading System	*Equipment*	*Commodities Handled*	*Storage Capacity* (tonnes)	*Loading Rate* (tonnes/hr.)
Bulk Commodity Dock	2 Gantry Bridge Cranes 20 ton & 12 ton	Aggregate, coal, scrap metal, structural steel, mineral concentrates and other like products.	500,000	Dependent on commodity

GENERAL CARGO FACILITIES: The Keefer Terminal is the principal general cargo facility available at Thunder Bay. The ocean vessel shed is 121.9 m. long, has a dock 198.1 m. long with a maximum apron width of 19.8 m. All types of import and export general cargo and heavy lifts can be handled at this Terminal. Rental mobile cranes are available. Dockside rail available.

MEDICAL: All facilities available and may be arranged through Agent or by calling 623-7451.

TANKERS: *Petroleum Products:* There are two petroleum companies that use the Port of Thunder Bay – Esso Petroleum Canada and Petro Canada Inc. The products are shipped to Thunder Bay for storage and further distribution to service stations, manufacturing and pulp and paper industries.

Chemicals: There are two chemical companies which maintain storage facilities at the port. General Chemical Co. receives calcium chloride, via the marine mode, from Southern Ontario. It is offloaded into storage tanks for distribution throughout Northwestern Ontario.

Dow Chemical Canada receives caustic soda by rail from Alberta. The product is offloaded into large storage tanks for local use and for further shipment to Eastern Canada and the United States.

The port has available storage tanks and docks for initiatives in canola oil, liquid nitrogen or other liquid bulk products.

Also see "Berthing".

DENSITY: Fresh water port. No tide.

FRESH WATER: Available. Contact: Keefer Terminal, P.O.Box 2266, Thunder Bay, Ontario. Tel: (807) 345-6400.

FUEL: Light diesel available by tank truck. Bunker "C" only in emergencies. Contact: Esso Petroleum Canada, 1020 Pacific Avenue, P.O.Box 632, Thunder Bay, Ontario. Tel: (807) 623-1551.

CONSULS: Following countries are represented at Thunder Bay:

Denmark, Finland, Greece, Italy, Netherlands and Norway.

REPAIRS: Full repairs available. Includes mobile equipment by both land and water conveyances.

Ship Repairs: PASCOL Engineering, P.O.Box 2690, Thunder Bay, Ontario. Tel: (807) 683-6261.

Fabmar Industrial & Marine Fabricators, 1019 Pacific Avenue, Thunder Bay, Ontario P7C 2S7. Tel: (807) 623-5212.

SURVEYORS: *Surveyors and Weighers (Consulting):* SGS Supervision Services Inc., 203 Briar Bay, P.O.Box 1101, Thunder Bay, Ontario. Tel: (807) 475-8955.

Thunderbell Marine Consultants, 202-244 Camelot Street, P.O.Box 2116, Thunder Bay, Ontario. Tel: (807) 344-7442.

Steamship Inspection: Transport Canada, 325-33 S. Court Street, Thunder Bay, Ontario. Tel: (807) 345-6953.

GANGWAY/DECK WATCHMEN: May be arranged through Agent.

OPENING/CLOSING HATCHES: Normally done by crew.

CUSTOMS ALLOWANCES: Tobacco, 200 cigarettes or 50 cigars every 7 days. Spirit/Wine: Officers: 1 bottle liquor each 7 days. Crew: Beer only, at Master's discretion.

CARGO GEAR: Normal safety certificate only required. No special port regulations.

AIRPORT: Served by major Canadian airlines.

TIME: Eastern Standard Time GMT minus 5 hours. Daylight saving time from first week-end in April to last week-end October, clocks advanced 1 hour.

HOLIDAYS: During shipping season from April to mid-December on which stevedores do not work: May 24th, July 1st, September 1st, and Thanksgiving Day (October). Work can be arranged at overtime rates.

POLICE/AMBULANCE/FIRE: Thunder Bay City Police Tel: 623-6471 and 911. Fire and Ambulance contacted most easily through "VBA" Thunder Bay or Tel: 623-5123 and 623-4542 respectively. Dial 911 for emergencies.

TELEPHONES: Telephones at each terminal/facility.

SERVICES:

Compass Repairs: Sperry Marine Systems, Thunder Bay Telecommunications, Thunder Bay, Ontario. Tel: (807) 625-1200.

Mr. Ron Thomson (setting only), 36 McKibbon Street, Thunder Bay, Ontario. Tel: (807) 344-6481.

Garbage Removal: Thunder Bay Marine Services Ltd., P.O.Box 2565, Thunder Bay, Ontario. Tel: (807) 344-9221.

Radio Repairs: Thunder Bay Communications, 1135-A Russell Street, Thunder Bay, Ontario. Tel: (807) 623-1211.

Miskelly's Electronics Limited, 60 Squire Street, Thunder Bay, Ontario. Tel: (807) 343-4880.

Ship Chandler: Frank's Locker Service, 1090 Lithium Drive, Thunder Bay, Ontario. Tel: (807) 346-8388.

Bay Quality Meats, 282 Bay Street, Thunder Bay, Ontario P7B 1R8.

GARBAGE DISPOSAL: Variety of garbage collection/disposal services available on request from Browning-Ferris Industries Ltd, 566 11th Ave, Thunder Bay, P7B 2R6. Tel: (807) 344-5736. Fax: (807) 345-9228. Services and charges on request.

WASTE OIL DISPOSAL: Potter Pumping Service Ltd., RR2, Arthur St., Thunder Bay, P7C 4U1. Tel: (807) 939-2994.

A-1 Sewage Service Ltd., RR5, Highway 17, Thunder Bay, P7C 5N9. Tel: (807) 939-2712.

SEAMAN'S CLUBS: Missions to Seamen, c/o Keefer Terminal, Main Street at Waterfront, Thunder Bay. Tel: (807) 344-8241.

CURRENCY: Canadian Dollar.

AUTHORITY: Port of Thunder Bay, Thunder Bay Harbour Commission, 100 Main Street, Thunder Bay, Ontario P7B 6R9, Canada. *Tel:* (807) 345-6400. *FAX:* (807) 345-9058. *Contact:* Dennis Johnson, Harbour Master.

TORONTO, Ontario: 43.40 N. 79.25 W. (See Plan)

For important general information refer to "St. Lawrence Seaway".

DOCUMENTS: Master should prepare for boarding of Customs, Immigration Officers:

Customs: Crew Declaration Lists (in triplicate) and Ship Store Lists (in triplicate).

Immigration: Crew List and Passenger List (in duplicate).

PILOTAGE: As required by Great Lakes Pilotage Authority.

ANCHORAGES: Vessels anchor in Humber Bay or in Inner Harbour. Anchorages allotted by the Harbour Master.

RESTRICTIONS: Vessels may enter port area at any time.

MAX. SIZE: The port has facilities to accommodate any vessel which can navigate the St. Lawrence Seaway Locks.

Max. size of vessels permitted to transit the Seaway:

(a) Ships not exceeding 730 ft. overall and 75 ft. 6 in. extreme breadth may transit.
(b) Masts must not exceed 117 ft. above the water level.
(c) Max. draft 26 ft.

HEALTH: See "Montreal".

RADIO: Controlling radio station in the Toronto area is VBG Toronto. A port communications centre is located in the Harbour Master's Office and operated for emergency, safety and operational requirements. Ships entering Toronto Harbour should contact the Toronto Harbour Master's Office for information by radio telephone. Call sign XJF on frequencies:

156.8 MHz – Safety
156.6 MHz – Working and Calling
156.7 MHz – Alternate Working

TUGS: Not normally required but available. Tugs use ship's lines.

BERTHING: 20 berths available, 2 of which are Ro/Ro berths.

CRANES: Stationary dockside crane, capacity 300 short tons at Marine Terminal 35, floating crane 50 ton capacity and mobile crane 40 ton capacity available.

SPECIALISED CARGO HANDLING FACILITIES: The following companies offer berthage and storage for the bulk commodities indicated:

Liquid Chemicals: Allied Chemical Co., Domtar (no waterside storage tanks, trucked directly from vessel). Liquiterminals at Berth No. 425.

Cement: Essroc Canada, Lafarge Canada.

Molasses: Gooderham & Wortz.

Oil: Texaco, Imperial Oil, Sun Oil, Canadian Fuel Marketers, BP, Gulf, Shell, Roy-L Canadian Fuel, Milnes Fuel Oil, Caloil.

Salt: Canadian Salt Co., Domtar, Akzo Salt.

Chemicals: Domtar.

Sugar: Redpath Sugars Ltd.

Vegetable Oils: Rothesay Concentrates Co. Ltd., Liquiterminals Ltd.

BRIDGES: Two bridges – Ship Channel Bridge and Keating Channel Bridge. Both lift bridges, no height restriction.

STEVEDORES: General rule is 24 hours notice.

To work ship at 1300 hrs., order gangs by 1030 hrs. the same day.
To work ship at 1800 hrs., order gangs by 1600 hrs. the same day.
To work ship at 0800 hrs., order gangs by 1530 hrs. previous day.

MEDICAL: Doctor and hospital facilities available.

TANKERS: Diameter of load/discharge lines are the American Standard 8 in. Max. draft at berths is 26 ft.

DENSITY: Fresh water.

FRESH WATER: Available at all berths.

FUEL: In most cases, vessels bunker in Montreal. Fuel available at 12 hours notice, either by road tanker or at oil berths.

Shipmaster's Report: Fuel and lub-oils only delivered by road tankers and vessels are not allowed to bunker while alongside Redpath Sugar Berth. Bunkers not available on Sundays and holidays due to Department of Transportation regulations ruling that no trucks are allowed on highways those days.

CONSULS:

Belgium
Brazil
Colombia
Costa Rica
Cuba
Denmark
Ecuador
El Salvador
Finland
France
Germany
Greece
Guatemala
Israel
Italy
Japan
Lebanon
Mexico
Netherlands
Nicaragua
Norway
Peru
Portugal
Spain
Sweden
Switzerland
Thailand
Turkey
United States
Yugoslavia

REPAIRS: Most repairs not requiring dry dock can be carried out in Toronto. Nearest dry dock is located at Port Weller, 30 miles distant.

GANGWAY/DECK WATCHMEN: Crew member or hired by Agent.

OPENING/CLOSING HATCHES: Carried out by stevedores.

CERTIFICATES:

Certificate of Registry.
Articles of Agreement.
Log Book.
Safety of Life at Sea.
Safety Equipment Certificate.
Safety Construction Certificate issued by the Country to which the ship is registered.

CUSTOMS ALLOWANCES: Tobacco, Crew entitlement on first arrival in Canada – 200 cigarettes, 50 cigars, 2 pounds of tobacco. Wine and/or Spirit, Crew entitlement on first arrival in Canada – 40 oz. of spirits, liquors or wines.

CARGO GEAR: Vessel requires a tackle equipment book and a certificate covering cargo equipment which must be kept up to date and notated every 12 months by a competent person. Port of Toronto has modern equipment including stationary Atlas crane, 300 ton capacity; mobile container crane designed for loading and unloading 20 ft. and 40 ft. containers; 56 ton overhead lift truck equipped with a 40 ft. spreader frame; 12 mobile cranes with capacity 16 tonnes – 46 tonnes.

Two additional container handlers and 50 ton floating crane. Private cranes, ranging in capacity from 20 tons to 150 tons are available by arrangement.
REPATRIATION: All facilities.
AIRPORT: (1) Toronto Island Airport located at Western end of harbour. General aviation only with regular airlines.
(2) Toronto International Airport approximately 15 miles distant. Airport is served by nine regular airlines.
TIME: GMT minus 5 hours. Two alterations made to clocks during year (1) First Sunday morning in April, Eastern Standard Time to Eastern Daylight Time 1 hour ahead. (2) Last Sunday morning in October, Daylight Time to Eastern Standard Time 1 hour back.
HOLIDAYS: Work can be arranged on any holiday at double time rate with the exception of Labour Day which is the first Monday in September of each year. No work is done on this day.
POLICE/AMBULANCE/FIRE: Emergency numbers as follows: Marine Unit 324-0500; Port Security 462-1244; Emergency No. 911.
TELEPHONES: No arrangements available for placing telephones on board.
SHORE LEAVE: No restrictions.
IDENTIFICATION CARDS: Visitor passes available from port police office.
GARBAGE DISPOSAL: Contact Waterman's Services (Scott) Ltd. Tel: 466-3047. Pick-up only as required by vessel. Cost per visit $ 75.00 (for regular amount of garbage), $ 125.00 per visit for excessive amounts.
WASTE OIL DISPOSAL: Local waste disposal services by tank trucks. Large quantities handled by barge. Contact McKeil Marine, Hamilton, Ontario. Tel: (416) 528-4780.
SEAMAN'S CLUBS: The Missions to Seamen provides all types of facilities and arranges private bus trips to Niagara Falls.
AUTHORITY: The Toronto Harbour Commissioners, 60 Harbour Street, Toronto, Ontario, Canada M5J 1B7. *Tel:* (416) 862-2000. *Telex:* 06-219666. *FAX:* (416) 863-4830. *Cables:* Torport or Worldtrade Toronto. *Contact:* John Jursa, Director – Public Affairs. G.F. Reid, Acting General Manager. Captain J.W. Brewster, Harbour Master and Director of Terminal Operations.

TROIS RIVIERES, Quebec: 46.22 N. 72.34 W.

(See Plan)

DOCUMENTS:
1 set Crew List.
1 set Passenger List.
1 copy Health Document.
3 sets Cargo Manifest or Bill of Lading.
1 set Ship's Stores List.
1 set Crew Effects Declaration.
1 copy Last Port Clearance.
1 copy Ship's Papers.

PILOTAGE: Pilots take charge of vessel at Quebec for Trois Rivieres destination. See "Quebec" for further information.
ANCHORAGES: No vessel shall, except in an emergency, anchor within the harbour without prior permission from the Port Manager and then only at such place as is assigned. The anchorage area used for Trois-Rivieres is located approximately 2 miles up river.
RESTRICTIONS: Port open to navigation 12 months of the year. From January – March inclusive, vessels should be reinforced for ice.
MAX. SIZE: Max. draft 11.0 m. (no tide).
HEALTH: Trois-Rivieres is a Port of Entry. Port doctor at the service of vessels. Also see "Montreal".
RADIO: St. Lawrence River Marine Traffic Control call system letters VBK Trois-Rivieres.
TUGS: Not usually considered necessary for berthing ships. However tugs can be made available upon advance notice.
BERTHING: 20 berths are available, including 16 open and 4 shedded. Total berthing length: 3,189 m., including 2 private berths.

Ports Canada Facilities:

Berth	*Wharf Length (m.)*	*Depth at LW (m.)*	*Remarks*
1	152.4	9.1	Shed
2	121.9	9.1	
3	217.9	9.1	
4	117.3	6.4	
6	91.4	6.4	
7	91.4	6.4	
9	99.0	6.4	
10	251.0	10.6	2 Sheds
11	229.0	10.6	Shed/Ro-Ro ramp
13	182.9	9.1	Shed
14	152.4	10.6	Shed
15	121.9	10.6	
16	175.3	10.6	
17	221	10.6	
19	221	9.1	
20	221	10.6	
Cap-de-la-Madeleine	122.5	9.1	
Ste Angele	197.8	4.8	
Private Facilities:			
Tripap Wharf	226.8	–	Receiving pipeline for bunker oil. 4×2.5 ton cranes for pulpwood
Stone Consolidated Inc. (Wayagamack Division) Wharf	103.6	8.5	Receiving pipeline for Bunker oil

Grain Facilities:

Elevators	*Capacity in tonnes*	*Loading galleries at berth*	*Loading capacity tonnes per hour*	*Remarks*
No. 1 No. 2 No. 3	110,000	16	2,100	2 Marine legs at Berth 17 Unloading capacity 1,960 tonnes per hour

CRANES: Mobile cranes (private) up to capacity 200 tons available.
STEVEDORES: Stevedores available through local stevedoring firms.
MEDICAL: If medical service is required upon arrival, call through No. 7 (St. Lawrence River Marine Traffic Control System). Hospital facilities available.
TANKERS: Chemical products handled at 2 wharves with depths 9.1 m. and 10.6 m. Diameter of lines 8 in.
FRESH WATER: Hoses connected to harbour hydrants at 14 berths; rate 15 tonnes per hour.
FUEL: Certain types of fuel oil, in quantity, supplied to ships by truck. Diesel oil is also available.
CONSULS: At Montreal.
DRY DOCKS: None.
REPAIRS: Minor repairs done by local machine shops.
GANGWAY/DECK WATCHMEN: Not necessary except if dangerous cargo on board.
OPENING/CLOSING HATCHES: Carried out by stevedores.
CUSTOMS ALLOWANCES: 200 cigarettes each and/or 2 lb. tobacco. Wine and/or Spirits: One bottle each.
REPATRIATION: Can be arranged.
AIRPORT: 5 miles distant. No scheduled flights.
TIME: EDST from first Sunday of April to last Sunday of October, then normal EST.
HOLIDAYS: New Year's Day (Jan. 1st and Jan. 2nd); Good Friday; Easter Monday; Victoria Day; St. Jean Baptiste Day; Canada Day; Labour Day; Thanksgiving Day; Remembrance Day; Christmas Day, Boxing Day (Dec. 25th and Dec. 26th).
POLICE/AMBULANCE/FIRE: Police and Fire 374-3535; Ambulance 373-0505, 376-1212, 376-1286; Poison Treatment 1-800-463-6050.
SERVICES: Compass adjusting only.
SHORE LEAVE: Crew allowed ashore.
IDENTIFICATION CARDS: Seamen's card and/or passport.
GARBAGE DISPOSAL: Arrangements through ship's local agent.
WASTE OIL DISPOSAL: Arrangements through ship's local agent.
SEAMAN'S CLUBS: None.
CURRENCY: Canadian Dollar. U.S.$1.00 = C$1.35 (daily variations).
AUTHORITY: Port of Trois-Rivieres, 1545 du Fleuve, P.O.Box 999, Trois-Rivieres, Quebec G9A 5K2. *Tel:* (819) 378-3939. *Fax:* (819) 378-2487. *Contact:* Captain Serge Tremblay, General Manager. Robert Masson, Manager, Projects and Development. Rejean Nadeau, Manager, Technical Services.

TWILLINGATE, Newfoundland: 49.40 N. 54.45 W.

(See Plan)

PILOTAGE: Pilotage is not compulsory, however, a licensed Pilot is available if desired. A Pilot can be arranged by giving 24 hours notice of requirement to "Pilots, St. John's".

The Pilot will board off St. John's in position Lat. 47° 33′ 42″ N., Long. 52° 37′ 54″ W. or off Twillingate Harbour provided the vessel's Local Agent arranges for a boat to embark the Pilot. Alternatively, Shipmasters may arrange to use local persons in the community for pilotage purposes.
ANCHORAGES: The anchorage in Twillingate Harbour is not good as it is open to N.E. winds that send in a heavy sea, and the holding ground is indifferent. The best anchorage is off the West shore N.E. of Twillingate Wharf Light in depths of 6 fathoms (11 m.).
RESTRICTIONS: Navigable from April to February.
BERTHING: The Government Wharf, on the West side of the harbour about 1.4 miles South of Cuckold Point, is 300 ft. (91 m.) long and 35 ft. (11 m.) wide. On the North side of the wharf, the outer 90 ft. (27 m.) decreases gradually from a depth of 34 ft. (10.4 m.) at the head to 21 ft. (6.4 m.), and the next 70 ft. (21 m.) gradually decreases to 13 ft. (4 m.). On the South side, the outer 90 ft. (27 m.) decreases from a depth of 33 ft. (10.1 m.) at the head to 15 ft. (4.6 m.), and the next 90 ft. (27 m.) decreases to a depth of 5 ft. (1.5 m.).

At the boat landing, at the root of the South side of the pier, there is a depth of 2 ft. (0.6 m.). The deck of wharf has an elevation of 10 ft. (3 m.).

A shed 90 ft. (27 m.) long and 41 ft. (12 m.) wide stands on the Government Wharf and is the base for the Canadian Coast Guard Search and Rescue Station. A bait depot is located adjacent to the Government Wharf.

A rubble mound breakwater 560 ft. (171 m.) long extends West from the North end of Fishery Products Wharf, situated on the East shore near the head of the harbour, Three finger piers, with depths of 5 ft. to 8 ft. (1.5 m. to 2.4 m.) alongside, extend 240 ft. (73 m.) South from this breakwater.

At Jenkins Cove, on the N.E. side of the harbour, there is a Community Wharf 163 ft. (50 m.) long and 21 ft. (6 m.) wide with a least depth of 11 ft. (3.4 m.) at the face. A wharf and fish storage shed extend at a right angle from the Community Wharf; this wharf is 175 ft. (53 m.) long with a depth of 3 ft. (0.9 m.) alongside the face.

Another wharf, at Jenkins Cove, is 200 ft. (61 m.) long and 20 ft. (6.0 m.) wide with a reported depth of 15 ft. (4.6 m.) at HW at outer end.

MEDICAL: Full hospital facilities available. Tel: (709) 884-2131.

SURVEYORS: Not available locally. Lloyd's Register, P.O.Box 5054, St. John's, Newfoundland, A1C 5V3. Tel: (709) 726-0543, (709) 368-2538 (Residence).

GANGWAY/DECK WATCHMEN: Usually crew.

CARGO GEAR: Mobile crane can be arranged through Agent.

AIRPORT: 100 km. by paved road to International Airport (Gander).

POLICE/AMBULANCE/FIRE:

Police: R.C.M.P. local detachment (709) 884-2811.
Ambulance: Available locally (709) 884-2131.
Fire: (709) 884-2224.

EMERGENCY CO-ORDINATION CENTRE: Coast Guard, St. John's. Tel: (709) 772-5151 or ask operator for Zenith 07021.

BANKS: Scotia Bank (709) 884-2121.

SHORE LEAVE: No restrictions.

GARBAGE DISPOSAL: Garbage collection service available. Garbage to be placed on wharf in bags. No drums or skips are provided. Garbage collector Mr.Norm Stuckless, Tel: 884-5359. Town Office, Tel: 884-2438. Garbage collected every Thursday, and should be ready for collection no later than 0800 hrs.

WASTE OIL DISPOSAL: No service available.

SEAMAN'S CLUBS: No Seaman's Clubs as of such but there are bars available such as: Anchor Inn Motel, Royal Canadian Legion, Lions Club.

Many small shops available as well as various churches. Post Office available.

CURRENCY: Canadian Dollar.

GENERAL: Chart No. 4548 covers the port.

AUTHORITY: Canadian Coast Guard, P.O. Box 1300, St. John's, Newfoundland A1C 5H8, Canada. *Tel:* 772-5154. *Telex:* 061-3369. *FAX:* 772-2193. *Contact:* D.A. Lester, Regional Manager.

VANCOUVER, B.C.: 49.17 N. 123.07 W. (See Plan)

The port is located in an excellent sheltered natural harbour, open to navigation all year round with a minimum depth of 15 m. in the approach channel and at many berths.

PORT LIMITS: The seaward boundary of the inner port within which a vessel is considered to be an "arrived vessel" is a line drawn between Port Atkinson and Port Grey at the entrance to English Bay. The seaward boundary of the outer port is running North-South between the North Arm of the Fraser River and the International Boundary and being 5 miles offshore in the Straits of Georgia.

DOCUMENTS: The following documents are required to be prepared prior to arrival:

3 copies Canadian Customs Form E1-List of ship's stores.
3 copies Canadian Customs Form Y14-List of crew's possessions.
3 copies List of ship's slop chest stores for sale.
3 copies Canadian Immigration Form 200-Crew List.
1 copy Canadian Quarantine Form CS1.

Manifests and other documents are prepared by the Agent.

PILOTAGE: Pilotage is compulsory. Pilots board at the Fairway Buoy off Victoria, Vancouver Island. ETA to be sent to "Pilots Victoria" at least 12 hours before arrival and confirmed 4 hours before arrival. Distance to Vancouver – 135 km.

Victoria Traffic Separation: Vessel Traffic Separations schemes are in effect – Straits of Juan de Fuca and Georgia Strait. Vessel Traffic System – VTS are under the control of the U.S. Coast Guard (Seattle Traffic) and the Canadian Coast Guard (Vancouver Traffic) within the respective territorial limits.

Also see "Shipmaster's Report" – "Notice", dated October 1991.

SECOND NARROWS TRAFFIC CONTROL: The following procedures are mandatory and apply to vessels intending to enter or move within the area defined in "Area" below.

In addition, East of the line joining Point Grey (Lat. 49° 15' 54" N., Long. 123° 15' 44" W.) and Point Atkinson (Lat. 49° 19' 50" N., Long. 123° 15' 48" W.), the clearance and reporting procedures detailed in *Vancouver Traffic Zone* (G1130) are mandatory for the vessels specified in G1130.

Call: CJU52.

Location: CN Railway Bridge, Second Narrows.

Frequency: Channel 12.

Area: Second Narrows Movement Restriction Area (MRA) lies between the following limits:

(a) West limit: Line due North from the light at the N.E. end of Terminal Dock to Neptune Terminals.
(b) East limit: Line due North from Berry Point Light to the North shore.

Procedure: (1) At least 12 hours before entering the MRA, the following vessels should advise Vancouver Harbour Master of their proposed transit time:

(a) Vessels of 20 m. and over in length.
(b) Towing vessels of 8 m. and over in length.
(c) Towing vessels where breadth of tow is 20 m. and over, or length of tow is 30 m. and over.

Any subsequent amendments should be notified.

(2) All deep sea vessels (i.e. vessels requiring a Pilot) intending to pass through the Second Narrows bridges should report their intentions and ETA at CN Railway Bridge to the bridge operator on Channel 12 when entering the harbour limits and before leaving a berth or anchorage in the harbour. ETA should be confirmed on arrival at the limit of the MRA.

(3) Vessels requiring the lift span of the railway bridge raised should contact the bridge operator on Channel 12 – (1) prior to departing berth or anchorage. (2) upon entering port limits if direct from sea. This signal will be acknowledged by the bridge operator on Channel 12.

ANCHORAGE: There are 26 designated anchorages in the port. 15 in English Bay (See Table below and "Plan Section"), 5 in main harbour, plus 2 emergency anchorages, and 3 anchorages, plus 1 emergency anchorage above Second Narrows. Main Harbour anchorages reserved mainly for vessels clearing for grain, bunkering or awaiting berths or tides. Main Harbour anchorages range from 9 to 21 fathoms and English Bay anchorage from 8 to 16 fathoms. Largest vessels using and expected to use Vancouver Harbour can be accommodated at designated anchorages. Holding ground is good and anchorages are protected. Requests for permission to anchor must be made to the Harbour Master.

English Bay Anchorages: Realigned anchorage positions taken from Chart No. 3481. Bearings and distances dependant on the position of V.T.S. being Lat. 49° 19' 32" N., Long. 123° 08' 01" W.

Anchorage No.	*Bearing* (T)	*Distance* (nautical miles)	*Latitude* *N.*	*Longitude* W.
1	220.5°	2.75	48° 17' 27"	123° 10' 42"
2	229°	2.5	49° 17' 53.5"	123° 10' 53.5"
3	240°	2.3	49° 18' 22"	123° 11' 04"
4	225.5°	3.14	49° 17' 20"	123° 11' 27"
5	233.5°	2.91	49° 17' 44"	123° 11' 36.5"
6	242.5°	2.76	49° 18' 15"	123° 11' 46.5"
7	230°	3.55	49° 17' 13.5"	123° 12' 11"
8	236.5°	3.37	49° 17' 41"	123° 12' 20"
9	244.5°	3.24	49° 18' 09"	123° 12' 30.5"
10	238.75°	3.81	49° 17' 35"	123° 13' 05"
11	245.75°	3.705	49° 18' 02.5"	123° 13' 15"
12	247°	4.18	49° 17' 55.5"	123° 13' 57.5"

Note: North Shore Anchorages to be renumbered No. 13, No. 14 and No. 15, but remain in same position and are same size.

RESTRICTIONS: Min. depth at LW is 15.00 m. at the First Narrows. Min. clearance at HW is 60.36 m. under First Narrows Bridge (Lions Gate); Min. depth at LW is 13.3 m. at the Second Narrows. Min. clearance at HW is 44.00 m. under Second Narrows Bridge. Vessels are allowed to transit the Second Narrows Movement Restriction Area (MRA) under conditions contained in the Second Narrows MRA Standing Orders (during periods either side of slack water and stemming the tidal current). (All Oil Terminals and Pacific Coast Bulk Terminal lie above the Second Narrows.)

Vessels carrying dangerous goods, tankers, combined carriers, must obtain special clearance from the Harbour Master prior to entry and/or departure.

Canadian Coast Guard maintain and operate the Vessel Traffic System.

All International and National pollution controls are strictly enforced.

MAX. SIZE: Berthing for vessels up to 250,000 d.w.t. and draft up to 75 ft. at Roberts Bank.

HEALTH: *Quarantine Regulations:* Vessels need only apply by radio (Station VAK), where a condition of health irregularity is suspect, or the vessel has called at a country listed under the World Health Organisation as being infected with plague, or has an expired Derat Certificate.

RADIO: VAI/Vancouver Coast Guard Radio.

VHF: VAS/Vancouver Traffic located just North of the First Narrows Bridge. Manned 24 hours per day. Pilots on radio/telephone contact with Vancouver Traffic at all times. Vessels normally communicate on Channel 12 from Iona Jetty/Cape Roger Curtis inwards. Other frequencies available for communication are 16, 6, 14 and 11.

RADAR: Vancouver Traffic continuous radar surveillance from Point Grey/Point Atkinson inward Second Narrows. Anchorage assistance available.

TUGS: Meet vessels East of First Narrows and off berth. Ship's lines are used. Pilots communicate with tugs by VHF Channel 17.

Attendant tugs are required to escort Deep Sea Vessels through the Second Narrows MRA in the vicinity of the Second Narrows Bridges in accordance with the Vancouver Port Corporation (Port of Vancouver) Second Narrows MRA standing orders.

Also see "Shipmaster's Report" – "Notice", dated October 1991.

BERTHING: Five vessel Inner Harbour anchorages, 3 anchorages at mouth of Indian Arm and one anchorage in position 49° 17' 39.5" N., 122° 58' W. (all East of Second Narrows Bridge) for vessels awaiting Grain Inspection/Clearance, etc. 15 large vessel anchorages in English Bay for vessels awaiting to berth are available.

Terminal	*No. of Berths*	*Total Length (m.)*	*Depth (m.)*	*Remarks*
Canada Place Cruise Ship Facility	3	746	9.0	Cruise ship terminal 326 m. (West Side) 110 m. (North Side) 310 m. (East side)
Ballantyne	3	470	10.0	General cargo. Cruise ships. Passenger terminal.
Centennial Terminal	6	1,304	9.0 - 18.0	Berth No. 2 (183 m.×12.2 m.); No. 3 (179 m.×12.2 m.); No. 4 (183 m.×12.2 m.); No. 5 (Container Berth – 195 m.×12.2 m.); No. 6 (195 m.×12.2 m.); No. 7 (185 m.×12.2 m.). 4×40 tonne gantry cranes and 1×45 tonne mobile crane. Forklifts to 38 tonne capacity. Cargoes handled: lumber, pulp, general, containers.
Vanterm	7	1,064	15.5	2 berths for container vessels (2×281 m.) and 3 berths for conventional vessels (1×228 m., 1×91 m. and 1×183 m.) 3 berths equipped for tallow loading. 240 reefer plugs 5×40 tonne gantry cranes. 1×250 tonne mobile crane.
Lynnterm	4	938	15.0	Storage and Shipping - Forest Products, Steel, General cargo, heavy lifts. Forklifts up to 41 tonnes.
Fibreco	1	137 m. (265 m. with dolphins)	13.1	Bulk loading woodchips (1,200 t.p.h.) - up to 42,000 d.w.t. and 11.5 m. draft.
Seaboard International Terminal	3	600	12.0	Forest products. Forklifts up to 40 tons.
Pier 94	1	182	9.0	Not in use as a cargo terminal.
Neptune Terminal	3	717	12.19–15.23	No. 1 - Depth 15.23 m. Max. LOA 277 m. (152,000 d.w.t.) draft 13.7 m. No. 2 – Depth 13.1 m. can load Panamax. No. 3 – Depth 12.19 m. Max. size 50,000 d.w.t. Cargo handled: Coal, potash, feed pellets, chemical fertilisers, phosphate rock and rape seed oil. Equipment: No. 1 – 1 stacker/reclaimer 4,000 t.p.h. and 1 reclaimer 1,000 t.p.h. 2 shiploaders of 3,000 t.p.h. No. 2 – 3 car dumper, 2 shiploaders of 2,000 t.p.h. each (3,500 t.p.h. combined). No. 3 – 2 bridges of 1,000 t.p.h. each. Hopper capacity 50 tonnes each. There is tank storage for 19,000 tonnes of canola oil which can be loaded at Berths No. 1 and 2.
United Grain Growers Elevators	2	427	7.3-11.6	Depth: 7.3 m. (East Side), 11.6 m. (West Side). 2 belts×500 t.p.h. each. Storage capacity: 102,000 tonnes. Products handled: Grain and by-products.
Pacific Elevators	3	560	7.66	Berth No. 1 – Length 134 m. plus overhang.Depth 10.6 m. Loading rate 4×16,000 bu./hr. Berth No. 2 – Length 182 m. plus overhang. Depth 13.72 m. Loading rate 4×16,000 bu./hr. Berth No. 4 – Length 244 m. Depth 9.75 m. Loading rate 2×16,000 bu./hr. Cargo handled: Wheat, barley and rye. Storage capacity: 199,150 tonnes.
Vancouver Wharves	5	1,042	10.7–12.8	Berth No. 1, 2 & 3 – Length 540 m. No. 4 & 5 – Length 502 m. Depths: No. 1 – 10.7 m. No. 2 & 3 – 11.3 m. No. 4 & 5 – 12.8 m. Facilities: No. 1: Car unloader, storage sheds, travelling shiploader. Extension with gantry unloader. Methanol receiving/ shipping systems, storage tanks. No. 2: Pulp and paper mobile equipment, storage sheds. Methanol shipping system. No. 3: Pulp and paper mobile equipment, storage sheds. No. 4 & 5: Railcar dumper; bottom-door railcar dumper, sulphur, potash, phosrock, fertiliser shipping/receiving systems. Storage silo, sheds, pads No. 4 berth has twin quadrant retractable shiploaders, and the phosrock receiving system. No. 5 berth has a travelling shiploader trimmer. Storage capacity approximately 800,000 tonnes.
Pacific Coast Terminals	2	386	13.7	2 shiploaders: 1×2,500 t.p.h. and 1×1,800 t.p.h. Bulk liquids – 600 t.p.h. (Shiploader being renewed). Storage capacity: Sulphur (200,000 tonnes), Ethylene Glycol (13,500 tonnes, Styrene Monomer (13,500 tonnes).
Westshore Terminals				See "Roberts Bank"
Alberta Wheat Pool	1		10.05-15.24	4× 380 t.p.h. spouts. 282,800 tonnes storage for grain.
Pioneer Grain Terminal	1	180	14.30	2 loaders of 1,000 tonnes/hr. each. Storage capacity 108,000 tonnes. Cargo handled: Grain, grain by-products, flax.
Saskatchewan Wheat Pool	2	460	12.2-15.3	Depths: 12.2 m. (inshore), 15.3 m. (outshore). 5 spouts at each berth. Loading rate up to 2,000 tonnes/hr. (2 commodities maximum). Storage capacity 240,000 tonnes of grain. Products handled: Wheat, canola, barley, grain by-products and durum.
B.C. Sugar Terminal	1	130	9.1	Sugar Gantry Cranes
Goodwin Johnson				To be redeveloped.
Imperial Oil Ltd.	1	165	10.1	Petroleum Products
Chevron Canada Ltd.	1	200 (Max.LOA)	9.1	Petroleum Products
Transmountain Oil Pipeline Ltd.	1	91.4 (305 m. between dolphins)	11.0	Crude oil: 12 in. and 24 in. lines 2 × 10 in. hoses for crude. Crude 20,000-25,000 bbls./hr. (Also see "Shipmaster's Report" dated October 1991).
Petrocanada Inc.	2	58 40	10.2 4.6	Petroleum Products
Canadian Occidental	1	152	10.66	Salt and Chemicals 3×11,000 tonne tanks and 27,000 tonnes ground storage.
Dow Chemicals (Lynnterm No. 4)	1	200	11.7	Caustic Soda (1,200 t.p.h.), Ethylene Dichloride (1,000 t.p.h.), Ethylene Glycol (800 t.p.h.) Storage: Caustic soda (40,000 tonnes). Ethylene Dichloride (30,000 tonnes). Ethylene Glycol (17,000 tonnes).

There are a number of smaller terminals used principally by the coastal ferry and towing services.

Roberts Bank:
Owners: Westar Group.
Operator: Westshore Terminals Ltd: Roberts Bank, Delta, BC, V4K 3N2. Tel: 946-4491. Telex: 04-355799.
Specialist handling: Coal and coke.

Berth 1: Equipped with a single travelling shiploader. Berthing velocity: Maximum 12 cm./second for a 250,000 d.w.t. vessel fully loaded, approaching 90° to the berth face. Horizontal shuttle range of discharge route: 28.7 m. Maximum chute reach from berth face: With boom elevated 15° – 39.5 m.; with boom horizontal – 41.6 m.; with boom down – 10° – 40.9 m. Operational longitudinal travel along wharf: 243.8 m. Operating luffing range of shiploader boom: 15° above horizontal to 10° below horizontal. Vertical telescopic range of discharge chute: 7.6 m. Vertical clearance under boom above HHWL at berth face: with boom elevated 15° – 19.6 m.; with boom horizontal – 14.8 m.; with boom down 10° – 10.3 m. Water depth: 22.9 m.

Berth 2: Equipped with 2 quadrant shiploaders. Berthing velocity: Maximum 12 cm./second for a 100,000 d.w.t. vessel fully loaded, approaching at 90° to berth face. Horizontal shuttle range of boom: 22.86 m. Operating slewing arc of boom: 71°. Operating luffing range of shiploader boom: 18° above and below horizontal. Vertical clearance at berth face under boom above HHWL: 18.3 m. with boom elevated 18° and fully extended; 25.7 m. with boom elevated 18° and fully retracted; 16.6 m. with boom horizontal. Vertical distance of bottom of trimmer above HHWL: 19 m. with boom elevated 18°, 6.7 m. with boom horizontal. Maximum boom reach from berth face: 34.9 m. with boom elevated 18° and fully extended; 12.04 m. with boom elevated 18° and fully retracted; 13.41 m. with boom horizontal and fully retracted. Water depth: 20.8 m.

Also see "Shipmaster's Report", dated June 1988.

CRANES: Floating cranes, 45, 75 and 100 tons and mobile cranes of 150 and 250 tons available.

BRIDGES: See "Restrictions".

STEVEDORES: Gangs normally ordered day before ship's arrival, can be ordered same day for afternoon or evening work.

MEDICAL: (1) The Mariners Medical Clinic Ltd. is located at: Suite 401, 1160 Burrard Street, Vancouver, B.C., V6Z 2E8. Contact: Dr. A.J.Trudel. Tel: 683-0206. Clinic Office Hours: Monday through Friday: 0900 hrs. to 1700 hrs. Saturday: 0900 hrs. to 1200 hrs.
Emergency Only: After clinic office hours patients must be referred to St. Paul's Hospital Emergency Department at 1081 Burrard Street, Vancouver.
(2) The Dental Clinic is at the same address as the doctor.

Please note that vessels of Norwegian registry are not covered under this arrangement but do, however, have an arrangement of their own through the Norwegian Consulate. Please contact agent for more information with repect to this situation.

TANKERS: See "Berthing".
Report: February 1985.

Herewith is an outline of requirements for chemical tankers which are scheduled to call Vancouver/British Columbia ports.

1. Vessel must have on board a valid non-Canadian Ship's Compliance Certificate (or obtain it on arrival).
2. Certificate of Fitness and date.
3. Provide Agents with 7, 4, 2 and 1 day's notice prior to arrival.
4. Advise Agents of the last 2 cargoes.
5. Advise of any cargo in transit (quantity and type).
6. Vessel is required, in Vancouver, to have a clear passage while transiting the First and Second Narrows Bridge – with a minimum of 1 mile visibility. Vancouver Traffic Centre will advise vessel accordingly upon arrival.
7. Canadian Coast Guard will attend on board upon arrival for safety inspection.

Also see "Shipmaster's Report" dated October 1991.

DENSITY: Density varies in different sections of harbour, according to times of year.

FRESH WATER: Available at most berths or by barge. Hose supplied. Delivery 25 t.p.h.

FUEL: All grades of heavy fuel oil and diesel oil are available, delivery by barge or tank truck. Suppliers are:
Chevron, Shell, Imperial, ICS Petroleum, Marine Petrobulk and Petrocanada.

FIRE PRECAUTIONS: All vessels to have suitable towing wires over offshore bow and offshore quarter.

CONSULS:
Australia – Consulate General
Austria – Consulate
Austria – Trade Commissioner
Belgium – Consulate General
Chile – Consul
China, People's Republic of – Consulate General
Colombia – Consulate
Denmark – Consulate
Ecuador – Consulate
El Salvador – Consulate
Germany – Consulate General
Fiji – Consulate
Finland – Consulate
France – Consulate General
Greece – Consulate
India – Consulate General
Indonesia – Consulate
Italy – Consulate
Japan – Consulate General
Korea, Republic of – Consulate General
Liberia – Consulate
Mexico – Consulate
New Zealand – Consulate
Norway – Consulate General
Peru – Consulate General
Philippines – Consulate General
Portugal – Consulate
Spain – Consulate
Sweden – Consulate
Switzerland – Consulate
Thailand – Consulate
United Kingdom – Consulate General
United States of America – Consulate General
Venezuela – Consulate
Yugoslavia – Consulate General

REPAIRS: All types of engine and deck repairs.

DRY DOCKS: *Vancouver Shipyard Co. Ltd.:*

	Length	*Length over blocks*	*Inner width*	*Lifting Capacity*
No. 1	220 m.	204 m.	45.8 m.	36,000 tonnes

Lay-by berths: 1×230 m., 3×110 m. and 2×140 m. Depth 10.0 m.

SURVEYORS: (1) American Bureau of Shipping. Tel: (604) 683-7606.
Germanischer Lloyd, Tel: (604) 738-6723.
Lloyds Register of Shipping. Tel: (604) 985-0477.
The Salvage Association. Tel: (604) 688-9548.
Norwegian Veritas. Tel: (604) 985-0314.
(2) A. S. Blakely Marine Surveyors Ltd. Tel: (604) 321-4166.
Columbia Surveyors (Marine) Ltd. Tel: (604) 731-4101.
General Testing Laboratories. (Div of SGS Supervision Services Inc). Tel: (604) 254-1647.
Global Marine Services Ltd. Tel: (604) 688-0654.
P. A. Haliburton. Tel: (604) 689-9738.
R. T. Harrison. Tel: (604) 738-1120.
E. Hill. Tel: (604) 682-3091.
F. I. Hopkins Marine Surveyors. Tel: (604) 688-9233.
Total Boat Marine Surveyors Ltd. Tel: (604) 656-5826.
L. C. Langill. Tel: (604) 485-4782.
SGS Supervision Services Inc. Tel: (604) 687-5636.

GANGWAY/DECK WATCHMEN: If required, employment arranged through Agent.

OPENING/CLOSING HATCHES: Normally carried out by stevedores, except in cases of bulk carriers.

CUSTOMS ALLOWANCES: 200 cigarettes or 50 cigars or 2 lbs. (0.9 kg.) tobacco and 40 oz. (1.1 litres) of liquor or 288 oz. (8.2 litres) of beer per person.

AIRPORT: 30 minutes to Vancouver International Airport.

TIME: Pacific Standard Time GMT minus 8 hours. Clocks will be adjusted to Summer Time (plus 1 hour) when advised.

HOLIDAYS: New Year's Day*; Good Friday**; Easter Monday**; Victoria Day**; Canada Day**; British Columbia Day**; Labour Day*; Thanksgiving Day**; Remembrance Day**; Christmas Day**; Boxing Day**.
*Non-working holidays.
**Labour available at premium rates.

Work ceases at noon on December 24th and resumes at 0100 hrs. December 26th; ceases at noon on December 31st and resumes at 0100 hrs. January 2nd.

POLICE/AMBULANCE/FIRE: Police 911; Ambulance 879–4511; Fire Vancouver 911; Air-Sea Rescue 732–4272; Ports Canada Police 666–3131.

TELEPHONES: Are placed on board vessels at all berths.

SERVICES: Stevedore companies equipped with tank cleaning equipment. Sludge barge available. Services of compass adjuster may be obtained.

BANKS:
Algemene Bank Nederland NV Bank Canada
Bank of America Canada
Bank of British Columbia
Bank of Canada
Bank of Montreal
Bank of Nova Scotia
Bank of Tokyo, Canada
Banque National de Paris
Barclays Bank of Canada
Canadian Commercial Bank
Canadian Imperial Bank of Commerce
Chase Manhattan Bank of Canada
Chemical Bank of Canada
Continental Bank of Canada
Daiwa Bank
Federal Business Development Bank
Hanil Bank Canada
Hong Kong Bank of Canada
Lloyds Bank International Canada
Mercantile Bank of Canada
Midland Bank of Canada
National Westminster Bank of Canada
Northland Bank
Philippine National Bank
Royal Bank
Seattle First Bank Canada
Societe Generale SA (Canada) Inc
Standard Chartered Bank of Canada
State Bank of India
Swiss Bank Corporation (Canada)
TKM Canada Ltd
Toronto Dominion Bank

STORING: Deep sea ship work – crew members may, at the option of the vessel, perform such work when the job is less than 2 hours duration. When the loading of ship's stores exceeds 2 hours, the Master and/or owners can expect a pay claim from the ILWU (Longshoremen) as this work is covered in their agreement.

Exception: The maximum duration for handling ship's stores by crew members shall be 4 hours at docks where it is not possible for a delivery truck to get alongside a vessel's gangway.

SHORE LEAVE: No restrictions, but Immigration will advise of any special circumstances where restrictions might be enforced.

GARBAGE DISPOSAL: Garbage to launch/barge on offshore side. Charges and collection times by arrangement.
Contact: Pacific Incinerations. Tel: 254-2446. Fax: 254-8086.
Tymac Launch Service. Tel: 681-8628. Fax: 685-1216.

WASTE OIL DISPOSAL: Oily slops to barge or tanker truck.
Contact: Sprayaway Marine Services Ltd. Tel: 433-8020.

SEAMAN'S CLUBS: Missions to Seamen, 50 N.Dunlevy Street, Vancouver B.C., V6A 3R1. Tel: 253-4421.

Services: Shop, international telephone service for seafarers, church services, football matches arranged, dances, mini-bus collection, postage facilities, games available at the Clubs.

GENERAL: Vessels not permitted pump bilges or discharge oil, contaminated ballast or galley refuse into water. Every vessel boarded on arrival by Harbour Master's Patrol Personnel and furnished with applicable excerpts from Harbour by-laws.

Overboard discharges for ballast and hold/engine room bilges to be sealed.

All vessels are to comply with Canadian Coast Guard Regulations concerning Oil Pollution Prevention and Response Information concerning fees to Response Authorities to be obtained from Chamber of Shipping of B.C., 1550 - 555 West Hastings Street, Vancouver, B.C., Canada, V6B 4N6. Tel: (604) 681-2351. Fax: (604) 681-4364.

DEVELOPMENTS:
Deltaport: (See "Plan").

A 40-hectare site (100 acres).

Two container berths totalling 670 m. in length (2,198 ft.).

Berth of 15.85 m. (52 ft.) depth.

A total of 5 Post-Panamax container gantry cranes capable of handling 18-wide ships with 50-tonne capacity (4 cranes at opening).

Grounded operation utilising rubber tyred gantries (RTG) equipped with auto-steering and a positional determination system, and multiple trailer system (MTS).

Container yard storage capacity at three-high of 13,000 TEU's.

Capacity for 600 reefer points equipped with four-high platforms (420 at opening).

Advanced computerised systems including full EDI capability, yard and ship planning, and fully integrated container control.

Four rail tracks of 3,500 ft. each, providing capacity for 2×7,000 ft. double-stacked trains (440 TEU's per train). Grounded storage capacity in the Intermodal Yard of approximately 1,200 TEU's – serviced directly by CN and CP Rail System.

Intermodal operations by up to 4 high-speed rail-mounted gantries also equipped with a positional determination system (2 RMG's at opening).

The Deltaport Partnership brings together the Vancouver Port Corporation and TSI (formerly Empire Stevedoring) with North America's only two transcontinental railways, CN and CP Rail System.

Target completion date for the terminal's construction is the end of 1996. Terminal opening will be early 1997.

Robert's Bank: There is a possibility that "Pod Three", a vacant section of land, may be utilised.

SHIPMASTER'S REPORT: June 1988.
Robert's Bank: 49° 00.6′ N., 123° 09.8′ W.

Operator: Westshore Terminals Ltd. Telex: 04-355799 (Westshore Rbank).

Notice of Arrival: On approaching Strait of Juan de Fuca, Master has to contact Canadian Coast Guard, cable address "Westreg Canada" or Telex No. 043-52586 and request clearance to enter Vancouver Traffic Zone.

Contact should be made:

1. 48 hours before arrival at 50 miles off Vancouver Island.

or

2. 48 hours before arrival at Longitude 127° W.

or

3. 48 hours before arrival at Latitude of Cape Alawa for Northbound vessels.

The Notice of Arrival is to include:
Call sign.
Position.
Course and speed.
Estimated time of arrival at Nos. 1, 2 or 3 above.
Vessel's destination.
Last port of call.
D.W.T.
Draft, forward and aft.

Vessel should also confirm that there are no deficiencies or leakages and that all VHF Channels are available as per Canadian Notice to Mariners Annual Edition or Canadian "Western Region Traffic Services" booklet.

Pilotage: Vessels to contact "Pilots Victoria" (Telex No. 04-97236 PPAPilots Vic.) 48 hours prior to arrival at the Pilot Station. The 48 hour notice to include: Vessel's name, call sign, agent's name, LOA, breadth, depth, deepest draft, trim, speed, propeller characteristics and ETA at Fairway Buoy off Victoria.

Amended notices are required 24 hours, 12 hours and 4 hours prior to arrival.

Anchorage: Vessels awaiting their turn to load at English Bay anchor at Vancouver.

Berths: Berth No. 1: This berth can accept vessels of 250,000 d.w.t., LOA 350 m., beam 53 m. and loaded draft 21 m.

Loading restrictions are as follows: Maximum distance between end hatches 243 m., air draft at berth face 19 m. and air draft to top of hatch cover 21 m.

Vessels may berth port or starboard side alongside. Loading rate 3,500 t.p.h., however, it is possible to load at up to 5,000 t.p.h.

Berth No. 2: This berth can accept vessels up to 100,000 d.w.t., LOA 263 m., beam 42 m. and loaded draft 18 m.

Loading restrictions are as follows: Distance between end hatches 184 m., air draft at berth face 17 m., air draft to top of hatch cover 18 m.

Vessels berth starboard side to. Loading rate approximately 2,500 t.p.h.

Vessels whose length between end hatches (centre to centre) is greater than 184 m. will be loaded at Berth No. 1.

Vessels having their own loading gear will be loaded at Berth No. 2.

Cargoes/Stowage Factors: The following are types of coal loaded, together with approximate stowage factors: Balmer, Elkview, Fording, Crow's Nest, Gregg River, Obed Marsh, Luscar, McIntyre (all grades), stowage factor 43 cu.ft. per long ton. Greenhills, 45 cu.ft. per long ton. Arco (petroleum coke), stowage factor 46-47 cu.ft. per long ton.

Gangway: Terminal gangways are available for use of ship's crew but are the responsibility of the vessel whilst being used.

Density: 1012 – 1025 (varies).

Fresh Water: Fresh water is free of charge. The vessel is to supply hoses and connections.

Emergency Telephones: Fire 946-4155, Police 946-4444, Ambulance 872-5151, Harbour Master 666-2405.

SHIPMASTER'S REPORT: October 1991.

Westreg Canada: Participation to this reporting system has been on a voluntary basis. However a couple of months ago this became compulsory. There is no information mentioned within the Admiralty Publications.

It is required to report 24 hours prior to entering Canadian territorial waters, which extend upto 50 nautical miles offshore. Receipt of this report will be confirmed and permission granted to enter, together with further reporting instructions.

It is said, that complying to the rules will reduce the charge of a visit/extensive inspection by the Canadian Coast Guard.

Arrival: A pilot and a chemist boarded the vessel at Victoria.

A gas certificate was issued with the remarks that the oxygen content was below 8% and that during the portstay the I.G. pressure had to be kept positive.

A terminal representative, boarded the vessel once at anchor in Indian Arm of the Burrard Inlet, near Westridge Terminal to perform an audit similarly to "Safe-T"-inspections.

Information about the terminal was given by the terminal representative, more specific about the closed loading with use of a gas-return line. Plans and progress already being in such a stage that intentions to use the system are February 1992.

No problems were encountered with the Canadian Coast Guard check list (see below). According to the Agent, it is possible to obtain a Non-Canadian Ship Compliance Certificate in Vancouver.

As requested by the Agent, a copy of the Civil Liability Certificate was faxed to them, for forwarding to the Department of Trade at Ottawa.

Pilotage and navigation were performed as laid down in the rules mentioned in the Notices to Pilots, dated January 17, 1990 and in the letter to Chamber of Shipping, dated January 24, 1990 (See "Notices" below).

Canadian Coast Guard Check List: Check List for all tankers entering Canadian West Coast waters.

(a) Name of Ship.
(b) Port of Registry.
(c) Gross Tonnage.
(d) Year of Building.
(e) Summer deadweight.
(f) Tonnage and Description of Cargo.
(g) Bunkers.
(h) Pollution Insurance (CLC/Other).
(i) Issue Date of Non-Canadian Ship Compliance Certificate.
(j) Vessel's Agent.
(k) ETA for Entry into Canadian Waters.
(l) ETA Pilot Station and Location.
(m) Intended Port(s) of Call.
(n) Length, Breadth and Maximum Draft of Vessel.
(o) B.H.P. of Main Engine and Number of Propellers.
(p) Description of Astern Power.
(q) Is Vessel fitted with
    i. Bow/stern thrusters.
    ii. Protective location ballast.
    iii. Segregated/dedicated ballast tanks.
    iv. Double bottom tanks in cargo space.
    vi. C.O.W.
    vii. I.G.
(r) Any Defect in the Ship's.
    i. Hull/deck fittings, or anchors.
    ii. Main propulsion machinery.
    iii. Steering.
    iv. Navigation equipment and charts.
    v. Radio equipment.
    vi. Mooring Lines.
(s) Number of
    i. Deck Officers.
    ii. Engineering officers.
    iii. Ratings.

Message from Trans Mountain Westridge Dock to Master of incoming Vessel:

(A) Pre-Arrival Requirements: A Terminal representative will usually board vessel prior to docking. All items on pre-arrival check list will be reviewed with you.
(B) Second Narrows Restrictions:
    (a) Bridge height of 44.0 m. above high water of 5.5 m.
    (b) Channel depth 13.8 m. at zero tide.
    (c) Channel width 137 m.
    (d) Tankers may transit only during daylight hours at slack tide. Tide height 3.0 m. minimum.
(C) Westridge Dock draft restriction of 11.0 m. minimum at zero tide at berth face. 11.9 m. at 5 m. from dock face.
(D) Berthing to port side to Westridge Dock. Must use all wire mooring lines with 10 m. long synthetic rope tails. Minimum of 12 mooring lines required.
(E) Vessel to be surrounded by boom at all times while docked.
(F) Terminal has 2×12 in., 150 ANS1 loading arms. Connect to 2 adjacent manifolds, maximum 3.0 m. apart.
(G) Clean ballast only may be discharged only after inspection by Harbour Patrol. No ballast reception ashore. Vessel to arrive using only segregated ballast and no ballast in cargo tanks or system.
(H) Odour Control – Cargo Tanks *must* be purged of hydrocarbon vapours prior to arrival at Westridge Dock in order to minimise the potential for odours in nearby residential areas. The loading rate to your vessel *will* be reduced if odours are present.
(I) Venting of Cargo Tanks to minimum positive I.G. pressure prior to arrival allows terminal flexibility in minimising vapour releases.

Please advise soonest:

1. Expiry date of non-Canadian Compliance Certificate.
2. Maximum airdraft from waterline to highest antenna. Special survey permit required if in excess of 42.0 m.

3. Drafts, forward, aft, and amidship.
    (a) Arrival.
    (b) Departure.
4. Distance of manifold flanges from
    (a) Bow – centre manifold.
    (b) Rail.
    (c) Waterline at arrival.
5. Distance of vent stacks/breather valves from bow.
6. Cargo tank details:
    (a) Number of tanks (including slops) to load.
    (b) Volume (capacity) of each tank.
    (c) Cross section area of each tank.
    (d) Ullage when tanks empty.
7. Types/quantities/location of any crude/dirty slops upon berthing (no slop receiving facilities).
8. Last 2 cargoes carried.
9. Loading Plan Details:
    (a) Topping-off sequence by tank number.
    (b) Final loaded volume (cu.m.) each tank.
    (c) Final loaded ullage (m.) each tank.

Pre-Arrival Check List. Please respond minimum of 48 hours before arrival at Victoria Pilot Station:
Note: Non-compliance with this Check List may result in delay of loading or refusal to load vessel.

1.0 Is cargo operations plan ready?
2.0 Are segregated ballast tanks free of oil trace?
2.1 Have SBT lines, passing through oil tanks, been checked for leaks?
2.2 Were any abnormal soundings found in empty tanks or spaces?
3.0 Are automatic and/or manual tank level (Whessoe) gauges in good order?
3.1 Are all high and high/high tank level alarms fully operational?
3.2 Is oxygen content of cargo tanks less than 8%?
3.3 Have oxygen meters been calibrated?
3.4 Have tanks been purged to less than 2% by volume of hydrocarbons?
3.5 Are combustible gas indicators calibrated and in good order?
3.6 Have tanks been purged of H_2S gas (if applicable)?
3.7 Are chemical indicator tubes availble for H_2S measurement?
3.8 Are independent pressure gauges fitted to each tank?
3.9 Will tanks contain minimum positive I.G. pressure on arrival?
4.0 Is vapour lock (closed loading) equipment fully operational?
4.1 Are ullage tables available for vapour lock positions?
4.2 Can cargo ullage/temperature/water be taken without depressurising?
5.0 Is deck I.G. water seal free of oil and operational?
5.1 Is deck I.G. water seal low flow/low level alarm operational?
5.2 Has water/glycol level of PV breaker been checked?
5.3 Has I.G.S. deck line been checked for oil leakage and drained?
5.4 Are I.G. pressure (High/Low) alarms operational?
5.5 Is I.G. pressure continuous recorder operational?
6.0 Have sea chests and air vent pipes been flushed?
6.1 Was bilge overboard valve sealed/locked after clearning?
6.2 Is high level alarm on fuel oil settling tank operational?
7.1 Was sea chest in pump room flushed?
7.2 Was temporary discharge of clean ballast/SBT carried out?
7.3 Was leak test of sea chests tested by means of inspection valve?
7.4 Was stripping overboard line flushed and cleaned?
8.0 Is sea chest valve confirmed closed?
8.1 Was sea chest inspection valve confirmed closed?
8.2 Has overboard valve blind flange been inserted?
8.3 Are air vents on manifold closed?

Notices: Notice from Canadian Coast Guard to Chamber of Shipping of B.C. (Dated January 1990).

Please bring to the attention of your members that, following discussions re the safety of large tankers in Canadian waters of Western Region and to reduce the risk of pollution, the following measures are required for tankers in excess of 40,000 d.w.t. in transit from Vancouver to Victoria Pilot Station when loaded with crude oil.

Pilots: Two pilots required from Vancouver to Victoria Station.

Tugs:

40,000 d.w.t. 50,000 d.w.t.	– 2×2,400 h.p.	tugs through 2nd Narrows and 1st Narrows.
50,000 d.w.t. 60,000 d.w.t.	– 2×2,400 h.p. + 1×1,800 h.p.	tugs through both Narrows tug through 2nd Narrows
over 60,000 d.w.t.	2×2,400 h.p. + 2×1,800 h.p.	tugs through both Narrows tugs through 2nd Narrows

If necessary vessel must anchor in English Bay in order to arrive at East Point at H.W. Slack. Vessel speed between English Bay and East Point not to exceed maximum harbour manoeuvering speed. Speed of transit through Boundary Pass and Haro Strait not to exceed 11 knots, with vessel having escort tug during transit and until pilots are disembarked.

At present these measures apply only to outbound loaded tankers, but similar measures would be applied to inbound tankers should such traffic occur.

The direction was made under the power of a Pollution Prevention Officer as described in the Canada Shipping Act.

Signed: Regional Superintendent, Technical Ship Safety.

Notice from Vancouver Port Corporation (Dated January 1990).

Governed by the Second Narrows Movement Restriction Regulations (1981), tanker movement regulations in the Port of Vancouver are among the most stringent anywhere.

SPECIAL REGULATIONS:

Tankers calling the Port of Vancouver are inspected by the Canadian Coast Guard to ensure that they meet all International and Canadian Safety Requirements.

All foreign deep-sea vessels, including tankers, carry a pilot in and out of Burrard Inlet.

Tankers are given priority for transit of the First and Second Narrows. No other vessel traffic is allowed through the Narrows while tankers are in transit.

Movement of tankers through the Narrows is prohibited in reduced visibility caused by fog, rain, snow, etc. Visibility criteria for the First Narrows is based on the ability to see clearly between Vancouver Wharves and Navy Jack Point. For the Second Narrows, the CN Bridge Operator must be able to clearly see 1 mile to the West and 1.5 miles to the East.

Deep-sea vessel movements in the Second Narrows are restricted to periods of slack water.

The upper size limit for tankers entering Burrard Inlet has been set at 90,000 tonnes deadweight (cargo carrying capacity). Tankers over 50,000 tonnes deadweight are limited to daylight transits of both First and Second Narrows. Tankers more than 170 m. in length are restricted to daylight movements through the Second Narrows.

Tankers and other deep-sea vessels must be escorted through the Second Narrows by a minimum of 2 tugs of ample horsepower – large vessels must be accompanied by 4 tugs. Additional escort may be provided by Harbour Master's patrol boats.

A 6 knot speed limit applies to all vessels transiting the Second Narrows – except in an emergency.

Tanker berth operators place oil containment booms around vessels during loading and unloading.

Tankers are prohibited from anchoring in the Inner Harbour.

OIL SPILL RESPONSE:

The Port of Vancouver has never experienced a major oil spill. However, minor spills do occur – usually when a ship is bunkering or carrying out an internal oil transfer.

In the event of a harbour spill:

The ship must notify the Harbour Master who, in turn, notifies the Canadian Coast Guard and Environment Canada. The Harbour Master or his designate attends the spill site to assess the situation. Environment officers also assess ecological danger and suggest appropriate clean-up methods.

Harbour Master's crews are often able to quickly contain the spill with booms and begin clean-up with absorbent materials.

Large-scale clean-up equipment in the Port of Vancouver is maintained by "Burrard Clean" – a cooperative operated by the oil refineries located in the harbour. Additional clean-up equipment is obtainable from the Canadian Coast Guard. A private contractor is often hired to operate the equipment and provide labour.

A spill investigation can lead to charges being laid by Vancouver Port Corporation, the Coast Guard, or Environment Canada – or all three. Before the ship at fault can leave the port, it must agree to pay clean-up costs.

Notice to Pilots from Pacific Pilotage Authority (Dated January 1990).
Subject: Operating Rules for Loaded Crude Oil Tankers of over 40,000 tons deadweight.

Agreement has been reached between the Coast Guard, the Harbour Master in Vancouver, representatives of the Oil Industry, your Directors, and the Authority that the following rules will apply to all loaded crude oil tankers of over 40,000 tons deadweight.

1. Daylight high slack water Second Narrows with a minimum tide height of 10 ft.
2. Conform to M.R.A. Rules.
3. Order time for outbound loaded vessels to be 2 hours prior to slack water Second Narrows to allow time for the Pilots to go over the passage plan with the Master.
4. Two Pilots to be dispatched to loaded tankers, the Number One Pilot to have the conduct of the vessel and the Number Two Pilot to monitor steering engine and crew performance to ensure the Number One Pilots's orders are carried out properly and to act as back up to the Number One Pilot. Both Pilots are to be on the bridge through Vancouver Harbour and from 3 miles North of East Point to the Victoria Pilot Station.
5. Vessel to anchor at English Bay to await a suitable departure time to arrive at East Point on the next slack high water. Pilots normally to remain on board (At East Point: Maximum current 2 knots.).
6. Two ship's officers and 2 seamen are to be on the bridge at all times when underway.
7. Anchors are to be clear of the pipes and ready for dropping from the terminal to English Bay anchorage.
8. Ship's speed not to exceed 6 knots in the Harbour, full manoeuvering speed between English Bay and 3 miles North of East Point, and 11 knots from East Point to the Victoria Pilot Station.
9. Two extra seamen to be called out on standby from 3 miles North of East Point to the Victoria Pilot Station in case it should be necessary to take tug lines in an emergency.
10. Tugs – Second Narrows:
    (a) 40,000 d.w.t. – 50,000 d.w.t. = 2×2,400 h.p.
    (b) 50,000 d.w.t. – 60,000 d.w.t. = 2×2,400 h.p. + 1×1,800 h.p.
    (c) 60,000 d.w.t. + = 2×2,400 h.p. + 2×1,800 h.p.
    The 2×2,400 h.p. tugs are to be used on lines and should escort the vessel to the Q.B. Buoy.
11. Tugs – Boundry Pass:
    The "Seaspan Discovery" or 2×1,800 h.p. tugs are to be used to escort the vessel from 3 miles North of East Point to the Victoria Pilot Station.
12. Harbour Master's Launch will be available to clear traffic and provide escort services through the Harbour.

AUTHORITY: Vancouver Port Corporation, 1900 Granville Square, 200 Granville Street, Vancouver, B.C. V6C 2P9. *Tel:* (604) 666-3226. *Telex:* 04-53310. *FAX:* (604) 666-3916. *Contact:* Captain N.C. Stark, Port Manager and Chief Executive Officer. Captain J.G. Houston, Harbour Master.

VICTORIA, B.C.: 48.25 N. 123.22 W. (See Plan)

PORT LIMITS: Southern tip of Albert Head, to Southern tip of Trial Island (Canadian Charts 3413, 3423 and 3415).
DOCUMENTS: "See Vancouver".
APPROACHES: The entrance to Victoria Harbour has a deep, wide, open water approach. The only hazard is Brotchie Ledge 900 m. S.W. of the outer end of the harbour entrance breakwater. The outer end of the breakwater and Brotchie Ledge are fitted with beacons.
PILOTAGE: Pilots embark at Victoria for all British Columbia ports. Pilot station within 2 mile radius of buoy in position Lat. 48° 22′ 45″ N., Long. 123° 24′ 56″ W. Radio "Pilots Victoria" through radio station VAK giving ETA at least 12 hours and confirmed 4 hours before arrival. Pilot boat on VHF Channel 16 and 17.
ANCHORAGE:

"A"	Lat. 48° 23′ 46″ N.,	Long. 123° 26′ 58″ W.
"B"	Lat. 48° 24′ 09″ N.,	Long. 123° 27′ 36″ W.
"C"	Lat. 48° 24′ 14″ N.,	Long. 123° 26′ 43″ W.
"D"	Lat. 48° 24′ 24″ N.,	Long. 123° 25′ 54″ W.
"E"	Lat. 48° 24′ 44″ N.,	Long. 123° 26′ 37″ W.
"F"	Lat. 48° 24′ 54″ N.,	Long. 123° 26′ 00″ W.

Anchor berths "A", "C" and "D" have a swinging radius of 1,500 ft. and "B", "E" and "F" 1,200 ft.
RESTRICTIONS: Outer Harbour: Depth 35 ft. MLLW. Inner Harbour: Depth 21 ft. MLLW. Largest vessel to use port, length 800 ft. draft 35 ft.
HEALTH: Quarantine Officials board with Pilot. Advise Agent of ETA.
VHF: Pilot station. VAK.

Harbour Master's Office can be contacted on Channel 73. This Channel is also used by ship's Agents in Victoria.
TUGS: Tugs and barges of various powers and sizes are available from Seaspan International Ltd., 345 Harbour Road, Victoria. B.C. V9A 3S2. Tel: 385-7711. Two harbour tugs of 500 h.p. each service the Victoria area. Additional or larger tugs are available giving minimum 48 hours notice.
BERTHING:

Berth	*Length* (ft.)	*Depth* (ft.)	*Remarks*
Ogden Point "A" N. Side	800	35	For handling lumber, pulp, paper, plywood and general cargo. Fresh water available at 20 t.p.h.
Ogden Point "A" S. Side	1,000	35	
Ogden Point "B" N. Side	800	35-40	Dock to be renovated.
Ogden Point "B" S. Side	800	33-35	The South side is used for permanent international ferry. Leased area – not available for other uses. Fresh water available at 20 t.p.h.

Between Piers A and B (distance 92 m.), at the inner end, is a small fish unloading dock used by the B.C. Packers Cold Storage Plant situated in the terminal area. Ogden Point also has the facilities to handle containers inbound and outbound. The terminal has a 20 acre paved cargo assembly area for trucks. Vessels must be self loading or unloading, but mobile cranes to 25 tons can be ordered if required.
STEVEDORES: 13 gangs available. Refer "Vancouver" for holidays, etc., arranged by Agent.
Working Hours: Westcan Terminals/Stevedores Ltd. offers 24 hour, 7 day cargo handling services. Shifts: first 0100-0430, 0500-0800; second 0800-1200, 1300-1700; third 1700-2100, 2130-0100. Work ceases 1200 on Christmas Eve and New Year's Eve.
MEDICAL: Doctors and hospital facilities available.
DENSITY: Salt water.
FRESH WATER: Available at wharves.

In Gulf Islands servicing Plumper Sound Anchorage: Gulf Islands Water Taxi Ganges – P.O.Box 814, Saltspring Island, B.C. V03 1E0. Tel: 537-2516.
FUEL: FO and MDO available by barge from Vancouver.
CONSULS: Norway.
REPAIRS: All repairs facilities available.
DRY DOCK: At Esquimalt: Length 1,173 ft.; breadth 125.6 ft.; depth 49.5 ft.
SURVEYORS: 1. Canadian Coast Guard, Victoria. Tel: 388-3646.

2. Surveyors available through Yarrows Burrard Shipyard, Victoria. Tel: 385-4421. Lloyd's Sub-Agent: King Bros. Tel: 384-1174.

Also see "Services".
GANGWAY/DECK WATCHMEN: Crew are required to act as deck watchmen.
OPENING/CLOSING HATCHES: By crew or stevedores.
CUSTOMS ALLOWANCES: See "Vancouver".
CARGO GEAR: Ship's gear.
REPATRIATION: Possible, arranged by Agent.
AIRPORT: *Victoria International Airport:* 32 km. North of Victoria. Serviced by Air Canada, Canadian Pacific Airlines, Pacific Western Airlines, Air B.C., San Juan Airlines and many international charters with same plane service to Calgary, Edmonton, Montreal, Seattle, Toronto, Vancouver and Winnipeg.
Victoria Harbour to Vancouver Harbour: Serviced by Air B.C. with daily scheduled float plane service.
HOLIDAYS: 11 statutory holidays, however work can be arranged.
POLICE/AMBULANCE/FIRE: Available at dockside 24 hours a day.
EMERGENCY CO-ORDINATION CENTRE: Rescue Co-ordination Center, CFB Esquimalt. Tel: 388-1543.
TELEPHONES: Telephones required on all ships, arranged through Agent.
SERVICES: Compass adjusting possible.
Decca: Racal Decca Canada Inc., 353 Harbour Road, Victoria, B.C. V9A 3S2. Tel: 388-6257.
Fumigation: PCO Pied Piper, 3374 Burns Avenue, Victoria, B.C. V8Z 3P2. Tel: 388-9721.
International Garbage: Cypress Disposal Ltd., 2057 Mills Road, RR 2, Sidney, B.C. V8L 3S1. Tel: 656-0951.
Laundry: Commercial Towel & Linen Supply Co. Ltd., 607 John Street, Victoria, B.C. V8T 1T8. Tel: 383-5112.
Marconi: Canadian Marconi Co., 1 Burnside Road W., Victoria, B.C. V9A 1B2. Tel: 386-9414.
Surveyors: Argus Marine Ltd., 2924 Wilkinson Road, RR 2, Mill Bay, B.C. V0R 2P0. Tel: 743-3463. Hull and cargo.

Lloyd's Register of Shipping, non-exclusive surveyor for hull, machinery and cargo attached to Marine Design Associates below.

Marine Design Associates, 493B Garbally Road, Victoria, B.C. V8T 2J9. Tel: 384-4191. Telex: 049-7397. Hull, machinery and cargo.
Welding: Edwards' Welding Ltd., 727 Caledonia Avenue, Victoria, B.C. V8T 1E4. Tel: 386-3264.
BANKS: Algemene Bank, Nederland N.V., 650 West Georgia Street, Vancouver, B.C. V6B 4N7. Tel: 682-5891.
STORING: Vessels can be stored by truck or barge, during cargo operations. Trucks may proceed alongside. Fork lift trucks may be used. Customs regulations in force. Yarrows Ltd., can provide riggers.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Seamans' Book sufficient.
DEVELOPMENTS: Work has commenced on renovation of Pier "B".
AUTHORITY: Port of Victoria, Ministry of Transport, Room 317, 816 Government Street, Victoria, B.C. V8W 1W9. *Tel:* (604) 388-3578 or 3808177 (Mobile telephone). *Telex:* Canadian Coast Guard – Victoria, No. 0497185. *Contact:* Captain D. M. Featherby, Harbour Master.

WELLAND, Ontario: 42.58 N. 79.13 W.

LOCATION: Industrial city on the Welland Canal, 5 nautical miles below Lock 8.
DOCUMENTS: See "Montreal".
RESTRICTIONS: Navigation season: April 1st to December 30th (usually). Channel depth: Controlled at 8.23 m. (27 ft.) in canal channel.
HEALTH: Pratique granted at Quebec City for incoming vessels from foreign ports.
RADIO: Ship-to-Shore communications through Prescott Coast Guard (VBR) or Buffalo (WBL).
BERTHING: New Welland Dock, Wharf 10. Length of dock wall 182.9 m. (600 ft.). Berth 222.5 m. (730 ft.). Depth alongside 8.2 m. (27 ft.). Type of facility: self unloaders and rental cranes.
SURVEYORS: ABS and Lloyd's at Toronto.
GARBAGE DISPOSAL: Available in the Welland Canal.
WASTE OIL DISPOSAL: Mobile reception facilities available in the Welland Canal.
SEAMAN'S CLUBS: None.
GENERAL: *Publications:* Sailing Directions – Great Lakes, Volume I. Seaway Handbook.
AUTHORITY: St. Lawrence Seaway Authority, Niagara Region, P.O.Box 370, 508 Glendale Avenue, St. Catharines, Ontario L2R 6V8, Canada. *Tel:* (905) 641-1932, (nights (905) 641-1939). *FAX:* (905) 641-4632. *Contact:* Captain A. Soni, Coordinator – Vessel Traffic Services.

WEYMOUTH, N.S.: 44.27 N. 66.01 W. (See Plan)

DOCUMENTS:

3 Crew Lists.
3 Passenger Lists.
3 Customs Documents.
3 Health Documents.
3 Manifests.
Ship's Papers.

PILOTAGE: Non-compulsory. Ship's Agent contacts vessel through Marine Radio Station, Yarmouth and notifies Pilot, who will then be on lookout. Ship gives standard whistle signal for Pilot, who boards about 2 hours before high tide. In meantime, ship should ride at anchor about quarter mile N.W. of Fairway Buoy. No special pilot boat. Boat used for Pilot is 35 ft. fishing boat.
ANCHORAGE: Good safe anchorage outside harbour in 33 ft. over mud. Also quarter mile N.W. of Fairway Buoy.
MAX. SIZE: Max. length permissible 375 ft., max. beam 55 ft. Draft, approx. 26 ft. of water at high tide.
RADIO: Yarmouth (VAU).
TUGS: No tugs required. The fishing-boat will run lines to wharf if required.
BERTHING: Government Wharf – North Weymouth: L-shaped pier provides 85.3 m. length berth. Depth alongside at LW: 3.0 m. (mean tidal range 6.1 m.) A gravel open storage area available at wharf approach.
STEVEDORES: Available. Experienced loading lumber and pulpwood.
MEDICAL: Hospital: at Digby, 20 miles distant. Ambulance can be arranged.

FRESH WATER: Available; delivery by truck.
GANGWAY/DECK WATCHMEN: No watchmen necessary.
TIME: Atlantic Standard Time GMT minus 4 hours. Daylight saving time from first week-end in April to last week-end in October, clocks advanced 1 hour.
POLICE/AMBULANCE/FIRE: Police Zenith 50000; Ambulance 245-2205; Fire 837-5142.
TELEPHONE: No arrangement for placing telephones on board ship. Telephone available near dock.
DEVELOPMENTS: Re-dredging of channel in near future. Dates not finalised.
AUTHORITY: Transport Canada, Weymouth, Nova Scotia. *Contact:* R.L. Long, Customs Inspector, at Digby, *Tel:* 245-4039. F. Manzer, Harbour Master, Ashmore, Digby County, Nova Scotia. *Tel:* 837-4064, 837-4467.

WINDSOR, Ontario: 42.19 N. 83.03 W. (See Plan)

For important general information refer to "St. Lawrence Seaway".

DOCUMENTS:
Sanitary Health Certificate – fixed on outside of container for agriculture plant protection. 1 paper affixed to each container.
Meat Locker Certificate.
Quarantine Certificate.
3 Crew Lists.
3 Passenger Lists.
3 Stores Lists.
Manifest – 3 A.6 – 2 A.6 out.
Bill of Lading.
PILOTAGE: Pilots board ships at Sarnia Eastbound and Port Weller Westbound.
ANCHORAGES: Windsor Harbour Anchorage lies approximately 0.5 miles North of Fighting Island marked by 2 white buoys, showing flashing white lights, an area of 800 ft. wide and 0.75 miles long. Depth of 5.5 to 6 fathoms. Permission to anchor must be obtained in advance from V.T.S. Sarnia.
MAX. SIZE: Can handle any ship the seaway passes. No tide.
HEALTH: In the case of vessels arriving via the St. Lawrence River Radio Pratique may be obtained from Quarantine Quebec. See also "Montreal".
RADIO: VBE - Sarnia on VHF Channel 85.
RADAR/VHF: No radar service. Harbour Master may be contacted on VHF Channel 14.
TUGS: Available when required.
BERTHING: (Also see "Plan").
1. Canadian Salt Co.: A major rock salt mine producing salt products for highways, water softeners and chemical use. Large tonnages are shipped by water. Lake freighters load at a 730 ft. dock with depth alongside 26 ft..
2. ADM-Grainco: (Archer Daniels Midland): A deep water grain terminal elevator with a storage capacity of 3.9 million bushels. Material handled includes soya beans, corn, wheat, oil seeds, as well as meal from adjacent ADM–Agri Industries Ltd. plant. A 1,300 ft. long (396.2 m.) dock enables ships to load and unload with modern conveyor equipment. The location provides easy access to all major railways and highways in Canada and the United States.
3. ADM-Agri Industries Ltd.: Canada's first multi-oilseed processing plant, located on a 40 acre (16 ha.) site adjacent to the grain terminal elevators and dock. The plant has an on-site storage capacity for 11,000 tonnes of soya meal and 2,500 tonnes of soft-seed meal, and operates in close co-operation with the adjacent grain terminal docking facility.
4. Morterm Limited: A commercial marine terminal on 87 acres, fenced and lit. Providing large open storage facilities. Lumber capacity of 45 million board feet with a fleet of 15 trucks ranging from 52,000 lb. capacity to 5,000 lb. capacity warehouse lift trucks. Two mobile cranes, 110 ton and 225 ton capacities to enable fast movement of goods between ship and the large paved wharves which include a concrete quay-type wharf of 2,400 ft. (731.5 m.) with direct rail transfer in a 200 ft. (60.9 m.) wide slip. Water depth is full Seaway depth. The Essex Terminal Railway connects with all major railroads.
5. Canadian Maritime Transport Ltd.: This is a Roll-on/Roll-off truck ferry service operating between Windsor and Detroit. The dock is 800 ft. in length. The location provides easy access to all major railways and highways in Canada and the United States.
6. Southwestern Sales Ltd.: The East dock is used principally to store construction aggregates. The 660 ft. (201 m.) dock accommodates self-unloaders.
7. Canadian Fine Salt Dock: Primarily for package freight of any kind, including lumber. The dock is 410 ft. long and has a depth of 27 ft.
8. Van De Hogen Group Dock: Provides outside storage area for bulk materials and lumber.
9. Coco Harbour Terminals: This dock is available for receiving and storing of aggregate.
10. Van De Hogen Group: Complete material handling, warehousing distribution and transportation services. 56 acres, marine, rail and truck terminals on the Detroit River, 75,000 sq. ft. inside storage, 3,000 ft. of trackage, heavy lift crane service, public weigh scale, 2 fully licenced motor carriers serving Ontario, Quebec and the United States. The location provides easy access to all major railways and highways in Canada and the United States.
11. K Scrap Resources: Provides dock serviced property for storage and processing metal for re-cycling purpose. The river frontage is 650 ft. (198 m.).
12. Windsor Harbour Commission – Liquid Fuel Dock: Owned by the Windsor Harbour Commission and includes a 1,000 ft. (304 m.) berth with fuel bunkering facilities, operated by Sterling Fuels (Mc Asphalt Industries Inc.) to fuel any vessel transiting the Great Lakes. A full range of fuels is available on a 24 hour basis. Depth alongside 27 ft. (8.2 m.)
13. Windsor Harbour Commission: Dock is located on a site over 30 acres. An 1,100 ft. (335 m.) by 100 ft. (30.5 m.) slip runs along the West side. Goods handled are principally bulk stone and sand from self-unloaders.
(a) Canada Building Materials cement mixing plant occupies part of the N.W. portion of the property. A large open storage area is used to receive stone for the cement operations. Length 315 ft., depth 27 ft. (8.2 m.).
(b) Lafarge Construction Materials has developed a fully integrated bulk aggregates depot on a 10 acre parcel at this site. Length 806 ft., depth 25 ft. – 27 ft. (7.6 m. – 8.2 m.)
14. Adams Cartage Dock: (Dock not in use). A large closed storage shed is on the property as well as open storage. In addition to the dock face, the property includes an 850 ft. (259 m.) by 100 ft. (30.5 m.) slip at an average water depth of 16.4 ft. (5.0 m.).
15. Pyramid Aggregates Ltd: (Dock not in use). Property includes a 450 ft. (137 m.) by 80 ft. (24 m.) slip adjacent to a steel and concrete warehouse.
16. Mill Cove Marina: Operated by Windsor Harbour Commission. A pleasure boat facility featuring indoor dry stack year-round storage, sales and service.
17. Premier Concrete and Lake Ontario Cement Ltd.: (Divisions of ESSROC). Maintain this dock for the storage of building aggregates as well as bulk cement which is off loaded into silos. The 9 acre site has a 1,000 ft. (340 m.) dock face on the Detroit River.
18. Canadian Pacific Railways: (Dock not in use). Norfolk-Southern Railway operates a daily Ro/Ro railroad car ferry to Detroit. Two loading aprons with 3 tracks each move rail cars from ferries and operate on a daily year round schedule.
19. Dieppe Gardens Dock: Owned by the City of Windsor and docking is administered by the Department of Parks and Recreation. Complete with 27 ft. (8 m.) of water at the 800 ft. (244 m.) cement-faced dock, it is used principally for visiting naval ships, cruise ships, etc. Fresh water and sewage disposal are available. Prior application to the Windsor Harbour Commission and the City is required.
20. Vacant.
21. Hiram Walker & Sons Ltd.: A private dock 2,200 ft. long with water depth at dockside from 19 ft. to 21 ft. during normal water conditions.
22. Ford Motor Company of Canada: Dock is a private installation 1,800 ft. (549 m.) long and used mainly for storage of sand.
23. Windsor Yacht Club: A private pleasure boat facility for members.
24. Riverside Marina: A public pleasure boat facility owned by Windsor Harbour Commission – ramp, fuel, sales and service.
25. Lakeview Park Marina: Operated by the City of Windsor as a facility for pleasure craft. Docks, launching ramps and parking areas provide easy access to Lake St. Clair and the Detroit River.
26. Southwestern Sales Ltd.: East Dock: A bulk storage dock accommodating large quantities of crushed stone and sand received from self-unloading vessels. Length 700 ft., depth alongside 28 ft. (8.5 m.).
STEVEDORES: Advice as to number of gangs should be received no later than 1600 hrs. on day preceding. Arrange through Agent.
MEDICAL: Four hospitals.
TANKERS: Sterling Fuels; hoses 14 in. and 10 in. Max. depth 27 ft.
Slop tanks available.
DENSITY: No tide, the water is fresh.
FRESH WATER: Tank truck delivery.
FUEL: Direct liquid fuel bunkering at Sterling Fuel Dock for ships up to and including 1,000 ft. 24 hr. service (VHF Channel 14 or Tel: (519) 253-4694). Dock adjacent to main shipping channel. No coal bunkering available.
FIRE PRECAUTIONS: Fire Dept. requires man at tank installations ashore while pumping, also notify Fire Dept. and Harbour Commission if any spillage.
CONSULS: Italian Consul, tel: 256-0092.
REPAIRS: All repairs above water can be carried out.
SURVEYORS: Lloyd's Register and 4 others.
GANGWAY/DECK WATCHMEN: Not required, but can be supplied.
OPENING/CLOSING HATCHES: Normally done by the stevedoring company.
CUSTOMS ALLOWANCES: See "Montreal".
AIRPORT: Windsor Airport approximately 5 miles. Regular flights 7 days a week by Air Canada.
TIME: GMT minus 5 hours from October to April. DST subject to local vote.
HOLIDAYS: The following are the legally observed holidays; however, vessels will be worked on these days at applicable rates: Christmas, New Year, Good Friday, Victoria Day, Dominion Day. Civic Holiday, Labour Day, Thanksgiving and Veteran's Day.
POLICE/AMBULANCE/FIRE: Police 258-6111; Fire 258-4444; Ambulance 258-2155; Emergency dial 911.
TELEPHONES: Phones can be placed on board by prior arrangement.
SERVICES: Tank truck available for tank-washings, also radio telephone and radar service. Compass adjustor not available.
SHORE LEAVE: No restrictions on shore leave.
IDENTIFICATION CARDS: I.D. cards should be carried.
GENERAL: Fluctuation of water level; high Westerly wind drops water level. Detroit River Light should be contacted for water gauge on VHF 16 for upbound ships, and Belle Isle Coast Guard Stations on VHF 16 for downbound ships.
AUTHORITY: Windsor Harbour Commission, 500 Riverside Drive West, Windsor, Ontario, Canada N9A 5K6. *Tel:* (519) 258-5741. *FAX:* (519) 258-5905. *Contact:* David S.H. Cree, General Manager.

WOODFIBRE, B.C.: 49.40 N. 123.15 W. (See Plan)

LOCATION: Port located in Howe Sound approximately 21 miles from Port Atkinson.
PILOTAGE: See "Vancouver". Arranged through ship's local Agent.
ANCHORAGE: See "Vancouver".
TUGS: Arranged through ship's local Agents. Squamish Tug Tel: 898-3733. Seaspan International Tel: 988-3111. Rivtow Straits Ltd. Tel: 255-1133.
BERTHING: Dock length – 449 ft. Dock width – 24 ft. Depth alongside 30 ft. at Chart Datum. Principal cargo – unitised baled pulp.
STEVEDORES: I.L.W.U. – Arranged through ship's Agents.
MEDICAL: Squamish Hospital Tel: 892-5211, (plus Mill First Aid). Dental – Squamish Tel: 892-3111. Doctor – Squamish Tel: 892-5151.
FRESH WATER: Limited supply available.
FUEL: Not available.
CONSULS: See "Vancouver".
DRY DOCKS/REPAIRS: North Vancouver, Versitile Corp. Tel: 988-2111.
GANGWAY/DECK WATCHMEN: Ship's crew, ship's gangway used.
CUSTOMS: Tel: Vancouver – 665-1545.
AIRPORT: Vancouver.
POLICE/AMBULANCE/FIRE: Police – R.C.M.P., Tel: Squamish – 898-9611. Ambulance, Tel: Squamish – 898-3311. (Plus Mill ambulance). Fire – Mill Fire Department. Emergency number – 911.
SHORE LEAVE: Mill area is a restricted area.
GARBAGE DISPOSAL: No service available.
WASTE OIL DISPOSAL: No service available.
SEAMAN'S CLUBS: None.
CURRENCY: Banks in Squamish or Vancouver.
AUTHORITY: Western Pulp Limited Partnership, Box 5000, Squamish, B.C., V0N 3G0, Canada. *Tel:* (604) 892-6688. *Telex:* 04-508828 (Vancouver). *FAX:* (604) 892-6673. *Cables:* Westpulp Vcr. *Contact:* Jack Westerberg, Fibre and Shipping Superintendent. G. Harley, D. Goodrick, C. Mawer, Assistant Traffic Supervisors.

NOTES

Please also advise Shipping Guides Ltd.

Canary Islands

ARGUINEGUIN: 27.45 N. 15.40 W. (See Plan)

LOCATION: On the South coast of Gran Canaria in position Lat. 27° 44.8′ N., Long. 15° 40.1′ W. Port used for loading/discharging cement products.
PILOTAGE: Compulsory. Advise Agent 6 hours prior to arrival. Pilot boards 7 cables off breakwater from a small tug named "Atlante" which is painted with red letter "P" forward on both sides.
ANCHORAGE: One mile S.E. from breakwater. Sand bottom.
VHF: Continuous watch maintained on Channel 16.
BERTHING:

Berth No.	*Length* (m.)	*Depth at LW* (m.)
1	408	5.0 – 10.5
2	25	7.0

CRANES: 2 mobile cranes each with a rate of 200 t.p.h. One crane with a rate of 250 t.p.h.
MEDICAL: Hospital at Las Palmas.
DENSITY: 1025.
FRESH WATER: Available at both berths.
OPENING/CLOSING HATCHES: By ship's crew.
AIRPORT: Distance 40 km., served by many airlines.
GARBAGE DISPOSAL: Not available.
WASTE OIL DISPOSAL: Not available.
SEAMAN'S CLUBS: None.
CURRENCY: Pesatas.
SERVICES: All services available from Las Palmas.
AUTHORITY: Cementos Especiales de las Islas S.A., Arguineguin, 35120-Las Palmas de Gran Canaria, Canary Islands. *Tel:* (928) 15-06-78. *Telex:* 95397 Puzz E. *FAX:* (928) 15-07-37. *Contact:* Juan Curbelo, Pilot, Tel: 15-05-55 (Private).

ARRECIFE: 28.57 N. 13.33 W. (See Plan)

DOCUMENTS:
Maritime Health Declaration.
5 Crew Lists.
4 Transit Passenger Lists.
2 Provisions Lists.
8 Manifests Discharge Cargo.
8 Lists of Passengers Disembarking.
PILOTAGE: Call Pilot VHF Channel 16. Pilot boards about 1,000 m. off port.
ANCHORAGE: Safe anchorage available. Cruising vessels may use own boats for transporting passengers.
RESTRICTIONS: None, except draft (See "Berthing").
HEALTH: Pratique granted in berth or at anchorage if vessel not berthing. Suspected disease on board should be reported to Agent by radio before arrival.
RADIO: Las Palmas Radio.
VHF: For communication with Pilot – Channel 16.
TUGS: No tugs stationed at Arrecife. May be ordered from Las Palmas with advance notice.
BERTHING: Muelle de los Marmoles. 1,000 m. long. Max. draft 9 m. Cargo work with ship's own gear.
STEVEDORES: Shifts 0800 – 1400 hrs., 1400 – 2000 hrs. No work Sundays or Holidays except by special arrangement.
MEDICAL: Facilities available. Advance notice required for inoculations/vaccinations which might not be immediately available.
FRESH WATER: Not available either ex-wharf or ex-barge.
FUEL: By arrangement with Spanish Oil Company CEPSA only.
REPAIRS: Slipways up to 400 tons. Workshops for minor repairs.
REPATRIATION: Via Las Palmas only.
AIRPORT: About 15 km. from port. Served by Interinsular flights and charter flights.
TIME: GMT during Winter. GMT plus 1 hour from first Sunday in April to last Sunday in September.
HOLIDAYS: As for Spain, plus local holidays February 7th and August 26th.
SHORE LEAVE: Allowed.
AUTHORITY: Grupo de Puertos de Gran Canaria, P.O.Box 156, Arrecife.

LA SALINETAS: 27.58 N. 15.22 W. (See Plan)

LOCATION: Private wharf about 15 km. South of Las Palmas, port of fertiliser plant.
DOCUMENTS:
Maritime Health Declaration.
6 Crew Lists.
2 Provisions Lists.
8 Manifests of cargo for discharge.
PILOTAGE: Pilot is taken at Las Palmas. Vessels should advise ETA to their Agents in advance and contact Las Palmas Pilots on VHF Channel 16 on arrival.
MAX. SIZE: LOA 150 m., draft 8.5 m.
HEALTH: Pratique granted on berthing.
RADIO: Las Palmas Radio.
TUGS: Not normally used, but available from Las Palmas if required.
BERTHING: Private loading quay 200 m. long, depth 8.5 m. – 15 m., can accommodate ships of 150 m. length and 8.5 m. draft. Loading by conveyor belt, 150/200 t.p.h.
MEDICAL: At Las Palmas, full facilities.
FRESH WATER: Available in an emergency only.
FUEL: Not available. Vessels should be stemmed for bunkers at Las Palmas.
REPATRIATION: Arrangeable via Las Palmas Agents.
AIRPORT: Las Palmas Gando Airport – 5 km.
TIME: GMT during Winter. GMT plus 1 hour from first Sunday in April to last Sunday in September.
HOLIDAYS: As for Spain, plus local holiday September 8th.
SHORE LEAVE: Allowed.
AUTHORITY: Compania Insular del Nitrogeno, S.A., P.O.Box 417, 35080 Las Palmas, Grand Canary, Canary Islands. *Tel:* 690688, 695860. *Telex:* 95046. *Cables:* Insunitro Las Palmas.

LAS PALMAS: 28.05 N. 15.27 W. (See Plan)

DOCUMENTS:
5 copies Crew List.
4 copies Passenger List.
5 copies Transit Passenger List.
5 copies List of Passengers Disembarking.
1 copy Tobacco/Spirits/Personal Effects List.
1 copy of Stores and Arms and Ammunition.
1 copy Health Certificate.
1 copy Derat Certificate.
2 copies Load Line Certificate.
1 copy Tonnage Certificate (GT London Conv. 1969).
1 copy Certificate of Nationality.
1 copy Safety Equipment Certificate.
1 copy Cargo Gear Certificate.
2 copies Provisions Lists.
1 copy of Manifest, with Bills of Lading covering cargo for Las Palmas.
PILOTAGE: Compulsory. Masters send radio message to Agents 72 hours, 48 hours and 24 hours prior to arrival giving ETA and requirements. It is compulsory to call both (VTS) Las Palmas Port Control 2 hours before ETA, and Pilot 1 hour in advance on VHF Channel 16. Pilot boats have black hull, white wheel house, with black "P" and boat number painted both sides of wheel house.
Pilot boards approximately 1 mile from harbour entrance.
Pilot Station: Tel: 264302. Fax: 227802.
ANCHORAGE: Good anchorage in roads, depth in excess of 35 m. Sandy bottom in North Roads, sand and shingle in South Roads. Mean tidal range 2.5 m. Tidal velocity negligible. The Anchorage Zone is under vigilance of Radar Las Palmas Port Control (VTS).

If anchoring off Las Palmas great care must be taken in choosing a position to anchor bearing in mind the great depths at relatively short distances from the island and the congested nature of the off-port area. Because the bottom is uneven and rocky ships should not steam to the anchoring position with too much cable walked out but, in view of the depths, it is necessary to lower the anchor to the bottom when all way is off the ship. Several ships have lost their anchors during the anchoring manoeuvre off La Luz.
RESTRICTIONS: No length or beam restrictions. Max. draft for vessels bunkering or working cargo 20.0 m. (Reina Sofia – South Dock). Vessels berth and unberth during day and night. Vessels carrying dangerous cargoes must apply through their Agent with 48 hours advance notice (72 hours for explosives) for permission to enter port, declaring quantity, IMO class and UN numbers also ports of origin and destination of the cargo. Tankers in ballast must declare whether tanks gas-free or inerted.
MAX. SIZE: Vessels of any length and beam can safely berth and normally discharge and load cargo while bunkering. Max. allowable draft 66 ft.
Largest vessel berthed 550,000 d.w.t.
RADIO: Las Palmas Radio Station, call sign EAL. SSB: 2,114 kHz (receiving), 1,689 kHz (transmitting).
Tankers: All tankers are requested to give a 48 hours notice (minimum) to Port Authorities and/or Harbour Master through their Agent, stating arrival conditions (type of comodity, gas free or not, etc.).
VHF:

Las Palmas Radio	Channel 16
Port Control	Channel 16
Pilots	Channels 12 or 14
Tugs	Channel 14
Rescue Co-ordination	Channel 10

RADAR: Port of Las Palmas has a VTS station since January 1995. Vessel's Masters must contact Las Palmas Port Control on VHF Channel 16 two hours prior to arrival. They will be instructed to enter in this port.
TUGS: The following harbour and/or salvage tugs are available: *Tamaran,* 2,375 i.h.p.; *Arucas,* 2,200 i.h.p.; *Boluda Cuarente,* 2,650 i.h.p.; *Orotava,* 2,062 i.h.p.; *Bandama,* 4,134 i.h.p.; *Capero Tres,* 227 h.p.; *Capero Grande,* 240 h.p.; *Capero Chico,* 133 h.p.; *Don Quijote,* 195 c.v.; *Don Quijote I,* 200 c.v.e.
The following salvage tug is available: *Punta Mayor,* 2 engines of 4,000 h.p. each.

BERTHING: Subject to availability. Information should be radioed to Agent 48 hours prior to arrival, if berthing required, and for what purpose. Harbour approach from open sea with no impediments.

Leon y Castillo: Runs North/South, approximately 2,000 m. long. This quay is normally used by vessels bunkering and is fitted with bunker and fresh water line connections along its entire length. In 1997, Leon y Castillo Mole will have a new container terminal.

Height of quay above LW averages 4.5 m. Average rise and fall of tide 2.5 m.

Vessels lie safely alongside at the following maximum drafts:

Berths No. 1 – 69	33 ft.
Berths No. 69 – 84	40 ft.

Vessels using Berths No. 1 to 14 with drafts between 34 ft. and 36 ft. must enter and clear between half and full tide.

The inside of Dique Leon y Castillo is a stone wall fendered about every 12.0 m.

The breakwater berths are allocated by bollard numbers according to the numbers free at the time of allocation. The distance between the two ships on either side of your ship's berth may not be more than 1.1 times your ship's length, therefore careful manoeuvring into berth is essential.

All bollards for moorings are on the edge of the quay spaced 25 m. apart and, therefore, when ships are light, moorings will have a large vertical angle with little breasting effectiveness. At Leon y Castillo Quay, there are double bollards, from Bollard No. 52 to No. 66, and from Bollard No. 70 to No. 82.

The public has access to the main breakwater and no control of smoking is effected. Extreme vigilance must, therefore, be exercised to guard against unauthorised boarding and fire hazards.

Muelle Grande (Ex-Muelle de la Luz): This quay is used mainly for cargo operations and has a total of 1,200 m. of berthing space.

A grain silo is situated at the North end of the quay. Maximum draft for berthing at the silo (capacity 12,000 tons) is 32 ft. Two connections for discharge of edible oils to the local refinery are also on this quay. Maximum drafts alongside the connections are 39 ft. and 32 ft. respectively; at the latter connection there is a length restriction of 150 m. One cold storage installation situated on this quay.

Muelle Pesquero (Ex-Espigon del Castillo) and Ribera Mole: These 2 quays are used mainly by fishing vessels and coastal cargo vessels. Five cold storage installations are situated on the Fish Mole.

Santa Catalina Mole: Length 915 m. (North 160 m., South 280 m., East 175 m., West 100 m. and 200 m.), depth 4 m. – 9 m. (in 1997). This quay is used as a terminal for passenger ships.

Queen Sofia Mole: 4,020 m. (only 2,845 m. for berthing) breakwater with dolphin berth for tankers. Depth of water 22 m. This allows berthing of ULCCs for repairs afloat, painting, underwater cleaning, etc.

Muelle de Gran Canaria (Ex-Muelle EN-1): Length 520 m., depth 12 m. For berthing vessels up to 300 m. LOA. There is a Ro/Ro ramp and container handling facilities.

Muelle Virgen del Pino (Ex-Muelle EN-2): Length 410 m., depth 12 m. For berthing vessels up to 300 m. LOA. Facility used by container vessels.

Muelle de la Elder (Ex-Muelle EN-3): Length 440 m., depth 14 m. For bunkering or using the grain silo. A fertiliser bagging plant and conveyor system is in operation.

CARGO HANDLING EQUIPMENT:

Muelle de Gran Canaria (Ex-Muelle EN-1): Served by 2×32 ton Paceco quay cranes and 2×35 ton Liebherr Tango container gantry cranes, with Ro-Ro ramp.

Total area 14 ha.; 31 mobile cranes (Mannesmann Demag/Pegaso/Magirus/various (1.5 tons – 125 tons)); 10 front handlers (20 tons – 42 tons); 102 yard tractors (ATA/Eurocar/various); 226 yard chassis (Fruehauf/various); CFS on Terminal; 118 forklifts (OMC 2D/Fiat 85/various (1.2 tons – 42 tons)). 100 reefer connections.

Muelle Virgen del Pino (Ex-Muelle EN-2): Total area 8 ha.; simultaneous loading/unloading 5 containers; 100 electric connections for reefer containers; served by one Liebherr container crane (Panamax) 35 tons capacity; one Imenasa conventional crane 30 tons capacity; one Paceco container (Post Panamax) 40 tons capacity; 8 forklifts 40 tons; 2 Paceco transtainers (rubber tyre); five over four/six more truck.

Marine operations 24 hours per day in 6 hour shifts throughout the year. Land operations 0800 hrs. – 2000 hrs., Monday to Friday; 0800 hrs. – 1400 hrs. on Saturdays.

BULK CARGO FACILITIES: Grain silo with 4 extractors. Rate 50 t.p.h. for each extractor. Draft alongside 32 ft. Cement silo with 2 extractors.

STEVEDORES: Loading and discharging of general cargo can be carried out between 0800 hrs. and 0200 hrs. including Saturdays; between 0800 hrs. and 1400 hrs. on Sundays.

Stevedoring labour works on a 6-hour shift system, 4 shifts per 24 hours. The shifts commence at 0800, 1400 and 2000 hrs. Overtime from 0200 hrs. to 0800 hrs.

Labour for the 0800 hrs. shift must be ordered by 0715 hrs., and for the 1400 hrs. and 2000 hrs. shifts on Monday to Fridays by 1315 hrs. Labour for all Saturday shifts must be ordered by 0800 hrs. on Saturday.

MEDICAL: Master should advise Agent if medical attention required on arrival. Hospital and ambulance services available day and night. Vaccination and inoculation available any time but notice should be given prior to arrival.

TANKERS: No facilities for slop discharge. Facilities for sludge. There is a special berth for large tankers with a draft of 22 m.

Each of the main oil companies have their own valve manifolds in pits in the breakwater roadways. These manifolds are connected to the ship's manifold by hoses and, sometimes, hard pipe strung along the breakwater road.

Berthing Procedures at Leon y Castillo: Tugs are made fast, using tug's wires putting eyes over the bitts, before entering harbour. Good messengers are required to lift tug's wires on board, especially if light ship. All ships have one tug on the hook forward, 1 tug on the hook aft and from 1 to 3 tugs alongside on the side away from the berth (usually port side). Communications between ship, tugs and mooring boat are effected by portable VHF sets carried by the Pilots, calling Channel 14 or 6.

On passing the Southern end of Dique del Leon y Castillo, the ship makes a 90° turn to starboard and proceeds to berth. Ships are normally berthed head to wind and as this prevails from the N.E., most berthings are starboard side to the breakwater. If the wind is from a Southerly quarter the ship is swung off the berth before going alongside.

The pilot boat follows the ship into the harbour and runs the head and stern moorings ashore. 2 head lines and 1 stern line are usually first ashore. At this time it is essential that the offside tugs are in a position to be able to retard the ship's movement towards the berth. Spring lines are put ashore by heaving line.

The ship is not spotted on to a hose handling point but is placed centrally between bollard numbers. Extension hoses and sometimes hard pipe are then used to connect the valve pit with the ship's manifold position.

Cargo/Bunker Connections: All hose handling is achieved with the ship's derrick which should be topped ready before berthing. Hoses used for cargo discharge are 8 in. with normally ASA bolted flange connections but some companies use quick release couplings. Hoses for supply of bunkers are 8 in., 6 in. or 4 in. with ASA bolted flange connections.

Preparation of Manifold: Hose derricks to be lifted and plumbed for 1 m. outside ship's rail. For cargo discharge 8 in. outlets should be prepared.

Gangway: Ships must provide their own gangway. Because vehicles pass along the breakwater, gangways must be put out in a fore and aft direction or an accommodation ladder used.

Cargo/Bunkers Handled: B.P., Texaco, Ducar, Cepsa, Disa, Esso, Petrocan, Shell, Mobil import IFO 180, IFO 380 and Marine Gas Oil.

Deballasting Facilities: Clean ballast allowed to be discharged within port limits. Dirty ballast discharge prohibited within port limits. No facility for dirty ballast in port area.

Ullaging, Temperature, Water Finding: To be done after arrival in conjunction with a Shore Inspector.

Cargo/Bunker Handling Facilities: B.P., Texaco, Ducar, Cepsa, Disa, Esso, Petrocan, Shell, Mobil storage are located at the shore-end of Dique Leon y Castillo, at the same elevation as the breakwater road.

The tanks are connected to the berth as follows: (All companies have pipelines in all piers mentioned below).

Pier	*Company*	*Connections* No.
Dique Reina Sofia	B.P.	15
Muelle de la Elder	Ducar	14
	Cepsa, Esso, Shell, Texaco	12
Leon y Castillo	Shell	14
	Cepsa	8
	Ducar	14
	Esso	13
	Texaco	12
	Mobil	2
Primo Ribera and Muelle Grande	Cepsa and Texaco	12
	Shell	11

If other ships require Fuel Oil bunkers during discharge of this grade, these are delivered via the 12 in. line leaving the 16 in. line for discharge.

Bunker deliveries are made at 600/700 t.p.h. maximum. Normal rates 200/500 t.p.h. All bunker deliveries are metered. Bunkers can be delivered by barge to ship at anchor by all companies with 3 barges. There is a barge service to supply fresh water at anchorage.

Passing Traffic, Weather, Tide, Current Problems: No traffic or current problems.

Maximum tidal rise 2.7 m. over datum.

Whilst the weather is generally equable, wind from S.E. can cause a problem to ships with high freeboard due to lack of adequate breasting facilities. A close watch should be kept on moorings and weather conditions.

DENSITY: *Density of Dock Water:* 1025.

FRESH WATER: Available at inner harbour mole delivered by hose at rate of approx. 50 t.p.h. per hose, while bunkering and/or loading/discharging cargo. Also available by barge at anchorage.

FUEL: Masters to include in messages to Agents amount, grade and viscosity of oil required, and name supplier, 48 hours prior arrival.

Bunkers supplied 24 hours. Fuel oil, diesel and gas oil available ex-wharf, rate 1,000 t.p.h.

CONSULS: The following countries have Consular Representations at Las Palmas:

Austria
Belgium
Bolivia
Brazil
Cape Verde
Chile
Colombia
Costa Rica
Cuba
Denmark
Dominican Rep.
Ecuador
El Salvador
Equatorial Guinea
Finland
France
Gambia
Germany
Greece
Guatemala
Guinea Bissau
Italy
Ivory Coast
Japan
Korea Rep.
Luxembourg
Mauritania
Monaco
Morocco
Netherlands
Norway
Panama
Peru
Philippines
Portugal
South Africa
Sweden
Switzerland
Syria
Togo
United Kingdom
United States of America
Uruguay
Venezuela

REPAIRS: All types of deck and engine repairs carried out afloat.

DRY DOCK: Repair Wharf length 560 m. depth 8 m. – 12 m. Syncrolift platform, lifting power 9,500 tons, for vessels up to 212 m. length, 30 m. beam and 30,000 d.w.t. 5 mooring points of 180 m. and 2 of 220 m.

There are 4 slipways, length 347 m. – 360 m., depth 7.0 m.

SURVEYORS: The following Classification Societies have resident appointed Surveyors at Las Palmas: American Bureau of Shipping, Det Norske Veritas, Lloyd's Register of Shipping, Nippon Kaiji Kyokai, Registro Italiano Navale, Bureau Veritas, Comisariado Espanol Maritimo, Com.Tecnico de Peritaciones and Korean Register of Shipping.

Cargo Surveyors: SGS.

GANGWAY/DECK WATCHMEN: Recommended. Arranged by Agents.

Port security and access to the port has been improved. Police patrol boat in operation.

OPENING/CLOSING HATCHES: Performed by stevedores.

CUSTOMS ALLOWANCES: E.E.C. allowances.

REPATRIATION: All facilities for crew changes, by sea and air.

AIRPORT: International Airport 26 km. South of Las Palmas.

TIME: GMT in Winter. Summer-time is GMT plus 1 hour.

HOLIDAYS: Local holidays: Shrove Tuesday; 30th May; 24th June; 8th September.

National Holidays: 1st January; 6th January; 1st May; 25th July; 15th August; 12th October; 6th December; 8th December; 25th December.

Feast Days: Good Friday; Ascension Day.

Cargo handling during holidays and feast days; no stevedoring labour available: 1st January and 25th December, from 2000 hrs. on day prior to and 0800 hrs. on day following holiday. 1st May, Good Friday, 25th July, from 0800 hrs. on day prior to and 0800 hrs. on day following holiday.

POLICE/AMBULANCE/FIRE: Police, 091. Ambulance, 061. Fire, 080. Port Control and Rescue, 900-202202 and VHF Channel 16.

CO-ORDINATION CENTRE: The National Rescue Society has its own Regional Maritime Rescue Co-ordination Centre (MRCC) in the port of Las Palmas. Emergency channels are as follows:

VHF Channel 16.
MMSI 002240995:
DSC: VHF Channel 70.
DSC MF/HF: 2,187.5, 4,207.5/6,312/8,414.5/12,577/16,004.5.
Telephone No.: 900 202202, 467757, 467955.
Fax No.: 467760.

TELEPHONES: Line connected to vessels alongside wharves from Harbour Board exchange if required.

SERVICES: Underwater hull cleaning, painting, surveys are carried out in clear water in outer harbour. Compass adjusting, gyro repairs, radar repairs, etc.

BANKS: The most important banks either Spanish or international have local branches in the city of Las Palmas. Some international banks located in town are:

Barclays Bank. C/Presidente Alvear 25. Tel: (3428) 263354.
Arabic-Spanish Bank. C/Leon y Castillo 324-326. Tel: (3428) 228126.
Credit Lyonnais Spain. C/Jose Franchy Roca 9. Tel: (3428) 276912.

SHORE LEAVE: Permitted. For some nationalities, passes must be issued by Immigration Authorities.

IDENTIFICATION CARDS: Not necessary.

GARBAGE DISPOSAL: Garbage removal is compulsory, fee included in fixed charges of the vessel in port. Domestic waste thrown in drums is collected every day. For cargo associated waste or from vessel maintenance work, a container alongside the vessel is provided on request.

Garbage is removed by a private enterprise: "Esponja del Teide" (Tel: 3428-469851. Fax: 3428-465604).

WASTE OIL DISPOSAL: Collection service is available in the whole port. The company in charge of collecting waste oil with tanker trucks and of Marpol extended certificate is "Emgrisa". Tel: (3428) 463283. Fax: (3428) 463349.

CURRENCY: Peseta. The approximate exchange rate is U.S.$1.00 = 125 Pesetas. Many Bureau de Change located in the main tourist resorts, even though most shops accept the main currencies.

DELAYS: Delays in berthing (about an hour) can sometimes be expected.

OFF-PORT TRANSFERS: 24 hour service throughout the year by helicopter and launch.

Helicopter: Cosmar S.A. Tel: (34-28) 467757/467955/467965. Fax: (34-28) 467760. VHF Channel 10.

Launch: Remolcadores Insulares. Tel: (34-28) 229419. Fax: (34-28) 270098.

Sefare S.L. Tel: (34-28) 414108.

DEVELOPMENTS: The extension by 1 km. of the Mole "Reina Sofia" was completed in June 1995. Its purpose was to increase berth line and to shelter a wide area of the Outer Port from N.E.ly storms, as well as to increase the area for deposit of cargo.

The two main sea works which are being carried out at present are the new container terminal in the Leon y Castillo Mole (1997) and the terminal for local Ro-Ro traffic at Muelle Virgen del Pino (Ex-Muelle EN-2) (1997).

The new container terminal will have a 1,000 m. berth line and a 200,000 sq.m. area for container operations.

The construction of a new pier with 3 ramps between Muelle Virgen del Pino (ex-EN-2) and Muelle de la Elder (ex-EN-3) quays for Ro-Ro vessels, and another ramp between Muelle Virgen del Pino (ex-Muelle EN-2) and Muelle Gran Canaria (ex-EN-1).

AUTHORITY: Autoridad Portuaria de Las Palmas, Explanada Tomas Quevedo s/n, E-35008 Las Palmas de Gran Canaria. *Tel:* (34-28) 300400, 300480. *Telex:* 96004. *FAX:* (34-28) 300422, 300423. *Contact:* Harbour Master (Tel: 468289. Fax: 468269). Port Control (Tel: 467955 (SOS), 300444 (Port Service). Fax: 467760).

AGENT: Intertransport Canary Operations, S.L., Juan Rejon 52-6°, 35008 Las Palmas de Gran Canaria. *Tel:* (28) 469057. *Fax:* (28)468991. *Telex:* 95358 Intcp.

SANTA CRUZ DE TENERIFE: 28.28 N. 16.14 W. (See Plan)

DOCUMENTS:

6 Crew Lists.
6 Passengers in Transit Lists.
8 Passengers Landing Lists.
7 Cargo Landing Manifests.
2 Stores Lists.
1 International Health Declaration.
1 Free Pratique.

If no passenger or cargo landing, must present negative declarations.

PILOTAGE: Compulsory. Recommended give Agent 48, then 24 hours notice of ETA. Contact Pilot station by VHF Channels 14 or 16. Pilot station located at shore end of Muelle Norte. Pilot boards up to 2 miles off extreme end of Muelle Sur. In daytime pilot cutter identified by blue flag with white "P" superimposed; night-time, red and white light. When pilot cutter unable proceed out of harbour due heavy weather, Pilot awaits in lee of extreme end of Muelle Sur. Pilots called by VHF when entering (Channels 16 and 14); on sailing called by local Agent, or by VHF Channel 16 or 14.

ANCHORAGE: Vessels proceeding to anchorage are conducted by Pilot. Anchorage outside breakwater in depths 10 – 40 fathoms.

MAX. SIZE: Floating pipeline terminal at Honduras, up to 240,000 d.w.t. Dolphins, up to 45,000 d.w.t.

Dique del Este (new part), 700 m. long with 300 m. LOA limitation, draft up to 60 ft.

HEALTH: Free Pratique not granted by radio. "Q" Flag must be flown until vessel cleared inward by Port Health Authorities, which procedure is very quick. If suspected disease or fever on board, Agent or Port Health Authorities must be notified by radio.

RADIO: Tenerife Radio – call sign EAT working frequency 472 kHz. Short-wave EAT 3 working frequency 1930 – 0830 hrs., 8742 kHz. Short-wave EAT 4 working frequency 0830 – 1930 hrs., 13092 kHz. Radio telephone call sign "Tenerife Radio" working frequency 1740 kHz.

There is a 24 hour telephone link with vessels within 100 miles range, which vessels may utilise by calling Tenerife Radio on VHF Channel 16 for connection to Agent's telephone number.

TUGS: Join vessels entering approximately 0.5 miles to 1 mile from extreme end of Muelle Sur. Use of tug's lines optional, but when supplied by the tug, extra charges incurred. Use of tugs not compulsory.

Tugs normally available: *Guimar* 1,600 h.p.; *Tarifa* 2,300 h.p.; *Algeciras* 3,200 h.p.; *Coria* 3,200 h.p.; *El Guanche* 2,850 h.p.; *Gran Canaria* 2,850 h.p.

BERTHING:

Dique del Este: 960 m. length, depth alongside 16.0 m. – 19.5 m.; 294 m. length, depth alongside 12 m. Quay used by tankers, bulk carriers and container vessels. Water and bunkering facilities available.

New Container Base (South Dock): Length 450 m. Depth alongside 10 m. Gantry cranes up to 35 tons available.

Dique Muelle Sur: 803 m. length, depth alongside 12 m.; 213 m. length, depth alongside 10 m.; 638 m. length, depth alongside 8.00 m. Bunkering and fresh water connections available. Quay used by passenger vessels and vessels bunkering.

Muelle de Ribera: 412 m. length, depth alongside 10 m.; 131 m. length, depth alongside 9.5 m.; 295 m. length, depth alongside 8 m., 314 m. length, depth alongside 7 m. There are 5 Ro/Ro berths. Bunkers and fresh water available.

Fishing Harbour: Total length 1,850 m. Depth alongside 6 m. Bunkers are supplied by road tanker and water available at certain points along the quay.

Muelle Norte: 103 m. length, depth alongside 8 m. Bunkers and water available.

Container Terminal (N.E. Dock): Length 420 m., depth alongside 10 m.

Honduras Mole: Length 90 m., depth alongside 8 m.

Dolphin Berth: Length 90 m., depth alongside 10 m.

CRANES:

Muella de Ribera: 3×6 ton, 1×40 ton and 8×3 ton Portal cranes.
Muelle Norte: 2×6 ton electric Portal cranes.
Dique del Este: 2×30 ton electric Portal cranes.
Container Terminal (N.E. Dock): 1×30 ton gantry crane. Mobile cranes 180 tons and 125 tons available.
Floating Cranes: 1×80 ton.

BULK HANDLING FACILITIES: Grain silo situated at entrance to East Mole, max. discharge rate per extractor, 200 t.p.h. Two extractors available and can work 24 hours a day. It is only used for government department imports. All other shipments are discharged by grabs at the South Mole.

STEVEDORES: Monday to Saturday gangs ordered at 0600, 1200 and 1800 hrs. On Sunday there is only one shift from 0800 – 1400 hrs. and gangs for Sunday work must be ordered at 1300 hrs. on Saturday. Telegraphic information from Masters to be despatched 48 hours prior arrival giving first ETA. Gangs work three 6-hourly shifts, viz. 0800 – 1400 hrs., 1400 – 2000 hrs., 2000 – 0200 hrs. Fourth shift from 0200 – 0800 hrs. by special request. Orders to be made by 1900 hrs. All necessary gear supplied by stevedores.

MEDICAL: Masters to advise by radio if medical attention required on board. Yellow fever inoculation possible in daytime subject prior notification.

TANKERS: Local refinery (Compania Espanola de Petroleos SA) have ample couplings, hoses and reducers. Slop facilities available.

Tankers up to 240,000 d.w.t. discharge at Floating Pipeline Terminal at Honduras Buoy Zone (See "Shipmaster's Report" dated August 1995).

Loading terminals situated at Dique del Este; at Puerto Honduras (used mainly for LPG and refined spirit loading) for 45,000 d.w.t.; and 2 berths at extreme end of Muelle Sur.

DENSITY: About 1025.

FRESH WATER: Available at all berths, delivered by hose any time day or night. Water barges available 24 hours to supply vessels at anchorage, 500 tons and 400 tons capacity. Night-time at extra cost.

FUEL: All grades available from CEPSA (cables "Spanoil Madrid" and/or "Tenerife"). Fuel available at all berths, average rate of loading 500 t.p.h. – 600 t.p.h. Bunkers at anchor can be supplied by bunkering barge *Mayorga*, 1,400 tons capacity, or *Spabunker*, 6,000 tons fuel; 1,500 tons gas oil. Notice required for refuelling 72 hours, to be confirmed at 48 and 24 hours before arrival.

Also see "Shipmaster's Report".

FIRE PRECAUTIONS: All tugs equipped fire-fighting equipment including foam and 4 water/foam monitors. Refinery well equipped with shore fire-fighting equipment, including mobile foam trucks.

CONSULS:

Austria
Belgium
Bolivia
Brazil
Chile
Colombia
Costa Rica
Denmark
Finland
France
Germany
Italy
Liberia
Monaco
Netherlands
Norway
Peru
Portugal
Sweden
United Kingdom
Uruguay
Venezuela

REPAIRS: NUVASA offer a synchro-lift, lifting capacity 2,000 tons, and vessels up to max. 83 m. LOA can slip at their yards, where there is space for 14 vessels at a time. Docking can be effected day and night. Also available is a floating dock with 6,000 tonne capacity.

Their workshops can carry out major repairs to ships afloat, including engine and boiler work, and is equipped with modern machinery.

SURVEYORS: Lloyds, ABS, NKK, RIN, BV, GL and NV available from Las Palmas. BV and GL in Santa Cruz.

GANGWAY/DECK WATCHMEN: Available but not compulsory.

HATCHES: Normally opened by crew, stevedores lifting beams. If whole operation carried out by stevedores, extra charge possible.

CUSTOMS ALLOWANCES: Free port, no restrictions in force.

REPATRIATION: All facilities available for repatriation and crew changes. Daily air flights to Madrid and Europe.

AIRPORT: "Reina Sofia" International Airport situated 65 km. from port, served by Iberia, KLM, Air France, Lufthansa, British Airways and others. Daily flights to and from most European capitals.

TIME: GMT in Winter, GMT plus 1 hour in Summer.

HOLIDAYS: Local holiday: May 3rd. National holidays: January 1st, January 6th, March 19th, Maunday Thursday, Good Friday, May 1st, Corpus Christi, July 25th, August 15th, October 12th, December 8th, December 25th.

POLICE/AMBULANCE/FIRE: Police 091; Ambulance 241502; Fire 220080.

TELEPHONES: Facilities exist for connecting telephones on board.

SERVICES: Underwater hull cleaning, tank cleaning-compounds (Basic Chemicals, etc.), compass adjusting.

Passenger Transport: 8 special craft are available which listen out permanently on Channel 16 VHF.

Transport, Victualling, Lubricants, etc.: There is a fleet of craft operating 24 hours a day for this pupose.

Cleaning of Hulls and Painting Afloat: The company RETRASUB using the Scamp. system operates, and has special craft for hull painting.

Sick Persons: Brought ashore in small craft, and there are ample medical and surgical services available in Tenerife.

Disembarkation of Crew, Technicians etc.: The airports of the island provide wide international coverage for moving crews, etc.

Waiting for Berths: Very reduced tariffs are applied to vessels waiting on stand-by in the anchorage.

SHORE LEAVE: No restrictions, except for Crew members of East European countries. (See "Identification Cards").

IDENTIFICATION CARDS: Not required. Citizens of East European countries may require identification cards.

SHIPMASTER'S REPORT: April 1988.

Vessel called for bunkers only. On contacting Pilot Station, the vessel was given a position to anchor outside the breakwater. The Pilot Station is to be informed after anchoring. The bunker vessel is fitted with a flow meter and the amount of bunkers supplied is ascertained by the same. The Agent boarded the vessel promptly and took care of all the formalities and issued Port Clearance. If a vessel stays for over 6 hours, additional charges are to be paid. On sailing, the Pilot Station is to be informed.

SHIPMASTER'S REPORT: August 1995.

Vessel: 139,000 d.w.t. crude oil tanker.

Charts: B.A. Charts No. 1857, 1858 and 1869.

Cargo: Vessel discharged 130,000 tonnes of crude oil to Compania Espanola de Petroloes S.A. (CEPSA), who were the cargo receivers and the operators of floating pipeline terminal at Honduras Buoy Zone (Puerto Caballo), known as CEPSA Terminal.

Pilots: Vessels are requested to contact Tenerife Pilot on VHF Channel 16, approximately 30 miles before arrival.

Restrictions: Due to safety reasons, mooring and unmooring at CEPSA Terminal is only permitted during daylight hours. To berth on arrival, provided the berth is available, the vessel must arrive at least 3 hours before sunset. That is, the vessel should have the Pilot on board and ready to commence mooring operations, with all required mooring lines (See "Berthing") on board at least 3 hours before sunset. This vessel could not make it at the required time and had to anchor for the night off Dique Muelle del Este, in position Lat. 28° 29.25′ N., Long. 16° 12.00′ W. This position was given by the pilot station. On anchoring and when leaving the anchorage, the pilot station is to be informed. On departure from anchorage, the Pilot boarded vessel 1 mile off the breakwater.

Berthing: The berth is a conventional buoy mooring (CBM) terminal located close to CEPSA Refinery and centred at approximate position Lat. 28° 26.46′ N., Long. 16° 16.08′ W.

Our vessel was required to have the following ready:

(1) Three ropes of 220 m. minimum on forecastle.
(2) Four ropes of 220 m. minimum on aft main deck. Two ropes on each side.
(3) Four ropes of 220 m. minimum on the quarters/poop (Two ropes on each side).
(4) Two ropes of 300 m. minimum and one messenger rope 4 in. × 150 m. at stern.

The use of wire ropes is forbidden by marine authorities.

The berth consists of 6 mooring buoys numbered 1 to 6 (See "Plan"). Starboard anchor with 8-10 shackle length is used. Two 300 m. long mooring lines are secured to Buoy No. 4 from the centre lead aft. This vessel did not have the 300 m. long lines and these were hired from the terminal. The Agents must be informed in advance, if such ropes are to be hired.

Four tugs were used in and out.

CEPSA Loading Master boards vessel during mooring and relieves the Pilot once the vessel is in position.

The depth at the berth is about 50 m., which was confirmed by echo sounder.

Discharging: Through 2×16 in. submarine hoses (ASA 150) connected on port side. Ship to provide winch driver, the picking up and connection to manifold is done by shore gang. Shore gang, which was excellent, consists of 3 auxiliary operators/divers who, along with the Loading Master, stay on board throughout the discharge.

Although the terminal is designed to receive cargo from the ship in a tank close to sea level, but this is not used, instead the ship is asked to pump cargo directly to the refinery tanks which are about 60 m. to 70 m. above sea level. Two booster pumps of 4,000 cu.m./hr. capacity each are provided and are switched on when the ship's manifold pressure reaches 5 bar. A couple of small booster pumps are also available to assist when stripping or pumping at reduced rate. Working pressure is 12 kg./sq.cm., and the vessel is expected to maintain a pressure of 10 kg./sq.cm. at the manifold to obtain a good discharge rate.

General: Bunkering is not permitted when the vessel is at the buoy terminal. Stores and fresh water barge may be allowed on a case to case basis.

AUTHORITY: Junta del Puerto de Santa Cruz de Tenerife, Avenida Francisco la Roche No.49, 38001 Santa Cruz de Tenerife. *Tel:* 922-27-78-50. *Telex:* 92077. *FAX:* (922) 27-12-25. *Contact:* Luis Lara Rubido, Port Director. M. Pintor Domingo, Director.

NOTES

Please also advise Shipping Guides Ltd.

Republic of Cape Verde

PALMEIRA BAY, Sal Island: 16.45 N. 22.59 W.

(See Plan)

DOCUMENTS:

5 Crew Lists.
2 Stores Lists.
2 Personal Effects Lists.
1 Health Declaration.
1 Derat Exemption Certificate.
1 Vaccination List.
1 Statement of Ports of Call from Last Loading Port.
3 Bills of Lading.
2 Certificates of Quality (2 from each shore tank at load port).
3 Certificates of Quantity.
2 Cargo Manifests.
1 Ship Particulars Paper (local supply).

PILOTAGE: Accurate ETA advice is essential, as the Mooring Master and Pilot have to leave St. Vincent over 12 hours prior to the vessel's arrival at Sal. Close radio contact must, therefore, be maintained with St. Vincent. If difficulty is experienced in contacting St. Vincent, messages can be passed via Lisbon Radio. Sal Terminal can be contacted on VHF Channels 16 and 13 and by SSB radio.

Shell, St. Vincent, send a Mooring Master from St. Vincent who will berth the vessel and remain onboard until departure.

ANCHORAGES: Position: Lat. 16° 44′ 47″ N., Long. 22° 59′ 37″ W. Sandy bottom. Pilots recommend NOT to anchor during hours of darkness, especially in the months December/March when heavy swell may be encountered.

RESTRICTIONS: Heavy swell occasionally closes port from December 1st to March 31st inclusive.

RADIO/VHF: Arrival displacement to be stated in ETA message. Also see "Pilotage".

Mooring Masters have portable VHF sets for communication to shore during berthing and discharging operations.

BERTHING: Length of pier 112.0 m. Depth alongside 4.10 m. (seaward 60 m.), 2.00 m. (next 33 m.) and 1.00 m. (Inner 22 m.) Width of pier 25 m. – 22 m. Berthing possible on one side only.

TANKERS: A four-buoy (2 forward and 2 aft) sea berth for the supply of refined products to the Airfield on Sal Island, located in Palmeira Bay. Ship drops port anchor in marked location and pays out approx. 7 shackles cable. Three good ropes are required for each buoy. Shore wires are used when swell present. Bottom is stone and rock with some sand patches. Berthing is impracticable in strong South to North West winds which occur usually during winter months.

Engines should be kept ready at all times. The months December/March particularly critical.

Discharging: Shore gang connect hose, however, ship supplies winch driver. Connection is made amidships on starboard side. 1×8 in. flexible hose to an 8 in. submarine pipeline (length approx 1,000 m.) Max. back pressure 150 lbs./sq.in.

Products Handled: Mogas, Kerosene and Avtur. First product Mogas and last product Avtur.

DENSITY: 1025.

FRESH WATER: None. Nearest at St. Vincent.

FUEL: None. Nearest at St. Vincent.

REPAIRS: None.

GENERAL: A Customs Officer, the Mooring Master and Pilot remain on board during stay in port.

SHIPMASTER'S REPORT: November 1987.

Charts: BA. Charts 366 and 369.

Cargo: Vessel discharged 6,200 tonnes of Jet A-1 to Shell Cabo Verde SARL.

Documents

4 copies Crew List.
1 copy Stores List.
1 copy Ports of Call List.
1 copy Vaccination List.
1 copy Crew Declaration.
Cargo documents from loading port.

Approaches: At night port is easily identified and two sets of leading marks which are visible at a useful distance. In daylight tanks and freezing plant are conspicuous and within 2 miles leading marks can be identified.

Communications: Telex via Portishead Radio to Shell St. Vincent was no problem. Once within 40 miles of the port VHF contact was established on Channels 16 and 13.

Restrictions: Vessels may not berth at night.

Pilotage: Pilotage not compulsory. If Pilot required he is sent by Shell from St. Vincent.

Berthing: The Pilot boards from small boat one mile West of mooring buoys. He is accompanied by the Shell Mooring/Loading Master who used to do the pilotage before Independence and now advises the pilot who advises the Master.

Approach was taken very easily with minimum number of engine movements and the light NNW wind blew the ship into the berth easily.

Two boats pick-up the first lines, 2 lines from each bow and 2 lines from each quarter, the ship is then snugged into position (See "Plan"). One more line is sent to each buoy to complete the tie-up. Lashings are required only for the last line on each buoy, the others being shackled on.

In rougher weather the port anchor is used to assist.

Letting go was simple as an off-shore breeze blew us out to sea as soon as we let go and it was just a matter of turning the ship round.

Discharging: Through 1 × 8 in. hose. Ship provides winch driver. Shore gang pick-up and connect to manifold. Shore gang, which was excellent, consists of 6 to 8 local men who stay on board throughout the discharge.

Throughout the discharge the Loading Master and one Customs Officer remain on board.

The pilot will return if weather deteriorates.

General:

Stores: Lobsters from the local freezer plant can be purchased when available for $7.0 per kilo. They average 1.5 – 2.0 kilos each.

Berth information:

Operator: Shell Cape Verde SARL.
Density: 1025.
Distance from Pilot to berth: 1 mile
Controlling depth in approaches: 46 ft.
Maximum permissible draft in approaches: 40 ft.
Depth of water in berth: 46 ft.
Maximum permissible draft alongside: 40 ft.
Maximum dimensions permissible alongside:

	1st April – 30th November (m.)	1st December – 31st March (m.)
Length	183	175
Beam	21	21
Draft	12.5	11.54

Vessels are berthed/unberthed at night except in Winter months with high winds.

Fresh Water: Not available.
Fuel: Not available.
Tugs: Not available.
Anchorage Area: To South and seaward of berth but not recommended by pilot.
Number of loading/discharge hoses: One.
Size of hose: 8 in.
Max. rate: 400 t.p.h.
Maximum pressure allowed: 150 p.s.i.
Length of Pipeline: 3,150 ft.
Slop possibilities: Only for changing grades.
Repair Facilities: None.
Veritas or Lloyd's Representation: None locally.

AUTHORITY: See "Porto Grande".

PORTO GRANDE, St. Vincent: 16.53 N. 25.00 W.

(See Plan)

PORT LIMITS: Inside of a direct line running from Pta. Joao Ribeiro to Pta. do Morro Blanco.

PORT: Porto Grande at Lat. 16° 52′ 55″ N., Long. 25° 00′ 25″ W. City: Mindelo.

HARBOUR: Porto Grande is a natural semi-circular harbour sheltered and safe, facing island of Santo Antao over a channel approximately 10 miles wide at nearest points. In this channel but nearer St. Vincent is the rock of Ilheu dos Passaros on which is a lighthouse. Entry to harbour is from North to South. Weather conditions throughout year usually good to excellent.

DOCUMENTS: On arrival Masters should hand to Agent:

3 Crew Lists.
3 Passenger Lists.
1 Maritime Health Declaration Certificate.
1 Copy Stores List.

Port Doctor will also wish to sight ship's Derat Certificate.

When discharging cargo a minimum of 5 copies of Bill of Lading and 5 copies of Manifest are required. No special form for Passenger Lists and Crew Lists, and those in general use by the vessel will be accepted.

PILOTAGE: Radio notice of ETA must be sent by Master to Agent at least 48 hours before arrival. Pilot boards mid-way between Bird Island (Ilheu dos Passaros) and the Quay. The Pilot prefers to use pilot ladder. Signal for Pilot is 2 long and 1 short blast on ship's whistle. However, sound signals prohibited between 2000 hrs. and 0800 hrs. local time. Time between Pilot boarding to vessel's anchoring or berthing at piers is 10 to 45 minutes. See "Radio".

Important: The Harbour Master requests Masters not to anchor in harbour before Pilot on board. Pilots available day and night. Pilotage compulsory for all vessels entering harbour for anchoring, or berthing. When sailing, pilotage not compulsory for vessels which anchored in harbour. Pilotage compulsory for all vessels berthing and unberthing at piers.

ANCHORAGE: Anchorage berth in 4 to 20 fathoms.

MAX. SIZE: The harbour of Porto Grande can accommodate vessels up to any size. Also see "Berthing" and "Tankers".

HEALTH: Free Pratique can be obtained before arrival on application by radio to Guarda Mor (port doctor) of Sao Vicente de Cabo Verde confirming that crew are in good health. The port doctor, however, usually boards vessel on arrival in company with Police and Customs Guards, in order to provide any medical assistance which may be required. Crew and passengers should be in possession of Vaccination Certificates. Production of these certificates will not, however, be called for unless there is a very good reason for doing so.

VHF: Pilot may be contacted on Channels 16 and 13.

Also see "Radio".

RADIO: Advice of ETA should be sent through S.Vicente Radio to Agents at least 48 hours prior to entering port.

S.Vicente de Cabo Verde Radio (D4A) keeps watch 24 hours a day on following frequencies:

MF Morse Radiotelegraphy – A1A – 500 kHz (calling frequency).
Working frequencies – 438.5/478.5, 441/481, 447/487, 450/450, 516/466.5.
HF Morse Radiotelegraphy – A1A.
4184, 8368, 12552, 16736 kHz (scanning watch).
HF Radiotelex – 4177, 8378.5, 12481.5, 16688 kHz (scanning watch).
MF Radiotelephony – 2182 kHz.
HF Radiotelephony – 4101, 8198, 12248, 16462 kHz (scanning watch).
VHF Channel 16 (calling channel).
Working channels: 18 and 19 for S.Vicente Island.
20 and 21 for Santiago Island.
22 and 79 for Sal Island.

All VHF channels are remotely controlled from S.Vicente Radio (operating centre in S.Vicente Island).

BERTHING:

Pier No.	*Max. Depth* (m.)	*Length of Pier* (m.)
1*	11.50	310.00
2	11.50	310.00
3	9.50	160.50
4	9.50	160.50
5	8.50	90.00
6	6.50	122.00
7	4.50	61.50
8	3.50	106.75
9	3.50	40.00
10	4.50	100.00
11	5.50	100.00

(*This pier is open to the sea and usable subject to prevailing winds and swell).

Floating and suspended fenders are available at the piers. Suspended fenders are each of 3 lorry tyres, 3 ft. wide with a diameter of 2 ft. 6 in. suspended at intervals of 70 ft. Floating fenders are of 5 tyres with a wooden core and are 4 ft. 6 in. long and 3 ft. 6 in. in diameter and are placed at intervals between the suspended fenders. Cruising vessels normally berth at Pier No. 2. Max. draft 33 ft.

Height of Pier No. 2 above sea level approximately 2 m. Vessels moor port side to pier. No shore gangways available. Cruising vessels with drafts too deep to berth alongside piers can anchor in harbour about 1,250/1,500 m. distance from Custom House Pier where passengers may land. Ship's launches must be used for the transport of passengers to and from shore. With tug assistance vessels may berth or unberth at any time of day or night at Pier Nos. 2, 3 and 4, but in adverse weather or other adverse conditions berthing at night may be prevented. Berthing and unberthing at night at other piers generally not possible.

CRANES: 1 heavy lift floating crane, max. lifting capacity 60 tons.

STEVEDORES: If quantity for loading or discharging is of 10 tons or under, and in comparatively small parcels, then cargo can be loaded or discharged using the only small lighter available for vessels at anchorage. If larger quantity to be handled vessel must berth alongside quay. In both instances ship's tackle must be used. Discharging rate for bagged cargo, i.e. flour, rice, etc., is about 30 t.p.h. per hatch. In all cases vessel's derricks and winches are used. There are no lighters available, therefore as described above all cargo in excess of 10 tons must be loaded or discharged at the piers. The opening/closing of hatches is the responsibility of the crew on board, but can be done by the stevedores by arrangement with the Master under the supervision and responsibility of the ship's officers.

TANKERS: Max. length 775 ft.; max. draft 36 ft. Underkeel clearance 4 ft. Max. d.w.t. 53,000 tons.

Discharge effected by barge from starboard side of tanker at anchorage, also through submarine pipeline in harbour at: Lat. 16° 53′ 30″ N., Long. 25° 00′ 50″ W. length of line, 1,000 m.; diameter, 20 in.; Buoy Berth; hoses 12 in.; number of hoses, 7; position of hose connections, midships starboard side; Max. rate per hour, 2,000 tonnes; density of water at berth 1025.

Submarine Pipe-line Buoy Berth: Tankers moored to 1 forward buoy and 3 stern buoys. Tanker also uses port anchor which is dropped before tying up to buoys. Nature of bottom is coarse sand and gravel. Berthing at buoys carried out 24 hours a day and port tugs of up to 1,200 h.p. used always on berthing and on unberthing according to weather conditions.

Cleaning Tanks: 50 miles from shore only.

Gas Freeing: At present no facilities available.

FRESH WATER: Can be supplied at anchorage or at piers or ex-lighter day or night. Water suppliers request at least 48 hours' notice giving quantity required. A minimum charge covering costs of supply of 20 tons is made on supply for under that quantity. To supply over 750 tons during a 12 hour stay in port with 2 lighters, giving between 25 to 50 t.p.h per hose, would be difficult. Connections of hose couplings from water barges are 3 in. male, 11 threads per inch.

FUEL: Oil bunkering carried out ex-lighter at anchorage at rate of up to 300 t.p.h. dependent upon speed at which vessel can receive. Both fuel and diesel oil bunkers can be supplied at the piers. Gas oil can be supplied in drums to vessel at anchorage or in bulk ex-pipeline on piers. All bunkering at anchorage ex-barge takes place on starboard side of vessel. Supplier: Empresa Nacional de Combustiveis. Telex: 86 Enacol Cv.

CONSULS:

Belgian (Vice-Consul)
Danish (Vice-Consul)
Netherlands (Vice-Consul)
Norwegian (Consul)
Portuguese (Consul)
Spanish (Consul)
Swedish (Vice-Consul)
Venezuelan (Belgian Consul acts in a friendly capacity).

REPAIRS: CABNAVE, s.a.r.l., is the biggest ship repair yard situated at Porto Grande. The yard is privately owned and started operations in 1983. For docking purposes, the yard has a slipway system with a lifting capacity of 2,800 tons, and 6 repair parks, all equipped with fresh water, sea water, compressed air, electric power and telephone connections. The slipway platform can take vessels up to 110 m. long and 18.0 m. wide. The yard is fitted with modern workshops, and it has specialised personnel who are able to execute any kind of repair work on any type of vessel. For repairs afloat, there is a pier 145 m. long and 6.0 m. depth. Repairs can be performed at anchorage with the assistance of the yard's tug.

SURVEYORS: Lloyd's, Bureau Veritas and A.B.Rinave Portuguesa are represented in Mindelo, St.Vincent.

GANGWAY/DECK WATCHMEN: Two Maritime Police are always in attendance and are compulsory.

CUSTOMS ALLOWANCES: Tobacco and Wine and/or Spirits, no restrictions within reason.

REPATRIATION: Facilities exist for effecting crew changes by air, but recommend that Lisbon be contacted by Owners for crew making flights into Sal Island in order to join vessel St. Vincent. Agents should also be informed to make necessary arrangements for flight on local plane from Sal Island to St. Vincent. All crew travelling to Cape Verde must have transit visa issued by Consul in country of origin. All crew, except cases for hospitalisation, must be in possession of a passport before police will permit them to disembark for repatriation. Crew possessing valid Passports or Seaman's Books can land in Cape Verde for medical and/or hospital treatment or for repatriation to country of nationality provided it is country with whom Cape Verde has diplomatic relations and provided Agents of vessel take full responsibility on behalf of Owners for all expenses.

AIRPORT: Airport served by Dove planes for inter-island service only. 35 flights a week in and out of St. Vincent in Winter and 45 flights in and out in Summer; 16 direct from and to Praia and 14 via Sal Island inwards; 8 via Sal and 7 direct Praia outwards. Main Airport is at Sal Island, where more than 20 flights a week by Boeing 727, 747 and DC-10, call to and from Lisbon, Paris, Amsterdam, Boston, Frankfurt, Italy, Russia, South Africa, etc.

Secondary airport at Praia Island, where 8 flights a week by Dove planes and Focker call to and from Dakar, Banjul, Guine-Conakry and Gambia.

At Sal Island, there are 4 hotels, one situated at Airport and the others at Santa Maria Beach. In Praia, there are 4 hotels and in St.Vicente there are 4 hotels.

TIME: GMT minus 1 hour all the year round.

HOLIDAYS: New Year's Day (1st January); National hero's day (20th January); St. Vincent's Day (22nd January); Workman Day (1st May); National Independence Day (5th July); Assumption Day (15th August); All Saints Day (1st November); Christmas Day (25th December).

Although offices closed on holidays, loading and discharging of vessels not generally affected.

POLICE/DOCTOR/AMBULANCE/FIRE: Contact police on board or local Agent.

SHIPMASTER'S REPORT: July, 1984 (Updated 1994).

Pilotage: Pilot boards 0.5 miles from end of breakwater.

Anchorage: Vessel anchored with Mohle No. 2 Light bearing 068° distance 0.5 miles.

Restrictions: Vessel may enter day and night at any stage of the tide.

Tugs: 2 tugs available. Tugs are compulsory for vessels over 2,000 g.r.t.

Radio: Sao Vicente de Cabo Verde.

VHF: Pilot on Channel 16. Port Authority on Channel 15. Agent on Channels 16 and 15.

Documents:

3 copies Crew List.
1 copy Stores List.
Maritime Health Declaration.

Facilities: The following facilities are available: Fresh water. Fresh provisions in limited quantity. Repair facilities. Dry docking facilities for vessels up to 11 m. draft. Machine shop. Lloyd's Surveyor and Salvage Surveyor. Laundry service. Telex. Bunker fuel oil and diesel oil. Doctor and hospital.

Berthing: Vessel berthed at Berth No. 2 (Molhe No. 2). Length of quay 1,000 ft.

Depths: Depths at N.E. end 37 ft. and at S.W. 43 ft. Least depth of water in channel from sea to berth is 44 ft. Mean tidal range 0.8 m. Bottom mud. Density 1025.

Cargo Handling Facilities: Cold storage capacity 24,000 tons. No Ro/Ro and bulk handling facilities. No quay cranes on the main quay. Floating quay available. Forklift trucks of 40 tons capacity are available. No handling equipment or storage facilities for containers. Container vessels must be self-sustaining.

AUTHORITY: Capitania dos Portos de Barlavento, C.P. 7, Mindelo, Republic of Cape Verde. *Tel:* 314492, 314144, 314271 (Area code 238). *Telex:* (993) 3032 Marpor CV. *FAX:* 0 (238) 314271. *Contact:* Antonio Cruz Lopes, Harbour Master.

Empresa Nacional de Administracao dos Portos, E.P., P.O.Box 82, S.Vicente, Republic of Cape Verde. *Tel:* (238) 314414, 314515, 314832. *Telex:* (993) 3049 Enopor CV. *FAX:* (238) 314661.

PORTO PRAIA: 14.54 N. 23.31 W.

LOCATION: The port of Praia covers a surface of 560 ha. with a maximum depth of 13 fathoms, and is situated at Lat. 14° 53′ 49″ N., Long. 23° 30′ 52″ W.

The lighthouse, "Farol de Donna Maria Pia", built on the "Temerosa" headland, rises up 25 m. on a white tower with octagonal form and is 21 m. in height.

DOCUMENTS: On arrival, the Master should be ready to hand to his Agents all the requirements of requests advised by radio. The following documents are to be distributed to local Authorities:

6 copies Crew List.
5 copies Passenger List.
1 copy Maritime Health Declaration.
2 copies Private Effects List.
2 copies Stores List.
5 copies of Bill of Lading (when vessel unloading).
5 copies of Manifest (when vessel unloading).

There is no special form for Passenger and Crew List, those in general used on board will be accepted. Immigration services have their own forms to be filled on arrival.

The Master should also be in possession of a Derat Certificate and Crew Vaccination Certificates, which will be sighted by the Port Doctor.

Officials: When anchoring or berthing operations are completed, Port Health Officer, Customs Officer, Immigration Officer, Maintenance Services Officer and Agents board the vessel for arrival formalities.

PILOTAGE: Pilotage is compulsory for all vessels which call at Praia or Mindelo, and optional outwardbound for those vessels which are anchored. Pilot available day and night. Pilots may be contacted through VHF Channel 16, which is on permanent listening.

The signal for a Pilot is two long and one short blast of the ship's whistle.

The Pilot prefers to use the pilot ladder, and boards the vessel between the lighthouse and the quay.

ANCHORAGE: The Harbour Master recommends that vessels do not anchor in the harbour before Pilot boards the vessel.

In Sao Vicente, there are anchorages in depths of 3 fathoms to 13 fathoms.

RADIO: Notice of ETA must be sent by the Master to his Agent not less than 48 hours in advance of arrival, through "Saovicente Radio", who in turn will be responsible for informing Port Authorities.

Bunker and water requirements should be advised in the first message. It is further recommended that any cash to the Master required, provisions or any other supplies should be done in advance, in order to have all these matters duly prepared before the vessel's arrival.

Any change of the Crew List to be effectuated must be informed in the same way.

For vessels discharging cargo in the harbour, the following information is required: Cargo distribution (general cargo), number of hatches to be worked and number of working gangs required.

RESTRICTIONS: Berthing and unberthing during daylight only.

TUGS: 2×150 h.p. tugs available. Use of tugs is compulsory for vessels over 5,000 g.r.t. when berthing alongside.

BERTHING: The construction of the port begun in 1973 and was completed in 1978. Reconstruction and building of new structures is underway.

Pier No.	*Length* (m.)	*Maximum depth* (m.)
1	210	9.5
2	310	9.5
3	75	7.0

Warehouses: There are 2 warehouses of 2,400 sq.m. each, and a silo divided into 15 compartments of 14,000 tons of grain.

At the end of the first phase of works, the following will be available:

2 open storage areas with a total area of 8,000 sq.m.
1 inter-island open storage area with 2,500 sq.m.
1 warehouse for long-term storage with 1,500 sq.m.

In phase 2 the following will be constructed:

2 long-term open storage areas with 6,500 sq.m. each.
1 long-term storage warehouse of 2,400 sq.m.
1 silo with 5 compartments and 12,000 sq.m. capacity for grain.
1 operations building.
1 administrative building for Port Authorities, Customs and Police.

Specialised Installations:

1 cold storage warehouse of 2,000 cu.m.

CRANES: 3 mobile cranes available (15 tons, 3 tons and 2 tons respectively).

STEVEDORES: Directed by Enapor. The rate of discharging (bagged cargo) varies between 15 tons to 20 tons per hour, depending on how the cargo is stowed.

The normal period of work is from 0800 hrs. – 1200 hrs. and 1430 hrs. – 1800 hrs. from Monday to Saturday midday.

Night work may be possible in the near future from 2000 hrs. – 2400 hrs., 0000 hrs. – 0400 hrs. and 0400 hrs. – 0700 hrs.

MEDICAL: Services available.

FRESH WATER: Limited supply available by truck.

FUEL: Gas oil in drums (200 ltr.) available to fishing vessels and coasting vessels. Lubricating oil available in drums.

REPAIRS: Minor repairs possible.

REPATRIATION: Possible.

OPENING/CLOSING HATCHES: The opening or closing of hatches is the responsibility of the crew, but can be done by the stevedores, after arrangements with the Master and under the supervision of the ship's Officer.

GANGWAY/DECK WATCHMEN: The use of two Maritime Police Guards and one Customs Guard on board is compulsory.

The presence of an Immigration Police Guard is not necessary, unless for reasons of security, Immigration Services, or the Master of the ship requires one.

It is usual and recommended, for the smooth running of the vessel in the harbour, to serve the watchmen meals. But if the Master prefers not to feed them, then he must inform so immediately on arrival, so that the guards can make necessary arrangements concerning their meals.

A charge of U.S.$ 4.80 (CFE 360.00) per guard will be collected for meals not supplied on board.

POLICE/AMBULANCE/FIRE: Contact Agent.

NOTES

Please also advise Shipping Guides Ltd.

Cayman Islands

CAYMAN BRAC: 19.42 N. 79.50 W. (See Plan)

LOCATION: The Port Authority of the Cayman Islands, Cayman Brac, is located on the North side of the island, approximately 2.5 miles West of the Eastern tip of the island.

PORT LIMITS: There are no limits. The dock is situated in open water. Light dues are charged when vessel has docked.

DOCUMENTS: Basic Customs documents for entry:

1 copy Ship's Register.
1 copy Original Clearance from last Port.
4 copies Master's Oath.
4 copies General Declaration.
4 copies Crew List.
4 copies Maritime Health Declaration.
4 copies Crew Personal Effects List.
4 copies Stores List.
4 copies Ship's Particulars List.
4 copies Narcotics List.
4 copies Bond List.
4 copies Manifest and Bill of Lading of cargo to be discharged.
4 copies Manifest of Intransit Cargo.
4 copies Dangerous Cargo List.

PILOTAGE: Not compulsory for vessels under 800 tons, unless requested. Pilotage required for cruise ships and tankers. Approaching vessels contact the Port Authority on VHF Channel 16 – call sign "Cayman Brac Port Authority". If no answer, call "Lloyds Tracking Station". Port Authority's Tel: (809) 94-80428/94-80240 and Fax: (809) 94-80408. Office hours 0830 hrs. – 1630 hrs. weekdays, and Saturdays 0830 hrs. – 1200 hrs. Notice of ETA and request for Pilot must be made to the Port Authority at least 24 hours in advance.

CHANNEL: Situated on the S.W. of the island. Entrance is 150 ft. wide and narrows down to 50 ft. Vessels with draft of no more than 6 ft. are permitted. Range markers ashore: 1 diamond and 1 square used in the daytime. Lights: 1 red and 1 green used in the night.

ANCHORAGE: Anchorage is designated by the Port Official. There are 3 anchorage positions:

1. Scotts' Anchorage: North side, West end. Lat. 19° 41.7′ N., Long. 79° 53.7′ W. Distance 0.3 miles offshore. Depth of water 90 ft. (15 fathoms). Lighthouse bearing 147° True.
2. Anchorage off Creek Dock: The Creek, North side. Lat. 19° 45.3′ N., Long. 79° 45.7′ W. Distance 0.3 miles offshore. Depth of water 90 ft. (15 fathoms).
3. Anchorage – The Channel: West end, South coast. Lat. 19° 40.6′ N., Long. 79° 53.0′ W. Distance 0.6 miles offshore. Depth of water 78 ft. (13 fathoms, 26 m.). Lighthouse bearing 339° True.

RESTRICTIONS: All ships arriving from foreign and locally must have permission from the Customs and Immigration Departments to dock before doing so. Working hours are 0830 hrs. – 1600 hrs. Monday to Friday, and 0830 hrs. – 1200 hrs. Saturdays. Any arrivals after 1600 hrs. (weekdays) or 1200 hrs. (Saturdays) will be charged overtime.

MAX. SIZE: The Port Authority's dock can accommodate ships up to:

Maximum size 800 tons.
Maximum length 200 ft.
Maximum draft 14 ft.

HEALTH: In case of fever, etc., amid crew, etc., notify the Port Authority which will then contact the Faith Hospital. Also see "Medical".

RADIO/VHF: The Port Authority call sign is "Cayman Brac Port Authority". VHF radio stand-by on Channel 16, also a single side band (SSB), stand-by on 8291.1 kHz. Other frequencies 4,125.0, 12,492.2 kHz (ALFA). If vessels cannot contact the Port Authority at night, vessel can call "Lloyds Tracking Station", stand-by on VHF Channel 16.

BERTHING: Dock has 1 slip and 1 Ro-Ro ramp. Depth of water alongside at low tide is 15 ft. – 30 ft. The maximum ship draft at low tide is 15 ft. Cargo is loaded and discharged by the Port Authority's crane or, if requested, by vessel's own crane. Transit shed storage space of 7,500 sq.ft. and yard storage area of 45,000 sq.ft. are available.

CRANES: One Lima 90 ton crane available. Safe lifting weight is 45 tons.

SPECIALISED CARGO HANDLING FACILITIES: There is 1 Ro-Ro ramp to handle cargo that needs to be driven off.

STEVEDORES: If any vessel has its own stevedores, the Port Authority will permit them to work. If stevedores are required, the Port Authority will provide them.

MEDICAL: Full hospital facilities available. Land line telephone No. (809) 94-82242, 94-82243, 94-82245, 94-82325. Emergency 555. Dentist available during working hours, 0830 hrs. – 1600 hrs. Monday to Friday. In case of an emergency, dentist will attend to patient.

TANKERS: One tanker discharges gas oil once every 3 months and is guided in by a Pilot. Vessel drops anchor in 80 ft. of water. After mooring, tanker is in 54 ft. of water.

FRESH WATER/FUEL: No fresh water or diesel are sold at the port. When these commodities are needed, they can be ordered in the following manner.

Water: Sold and delivered by the Water Authority. U.S.$34.58 for 1,056 gallons (minimum delivery) or 1 cu.m. (264 U.S.gals) at U.S.$ 8.50.

Diesel: Sold by Texaco is duty free to vessel entering international waters within 24 hours of diesel purchase, U.S.$1.40 per IMP gallon (subject to change), no personal cheques, travellers cheques or cash only.

FIRE PRECAUTIONS: Smoking is prohibited when handling any inflammable cargo. Smoking is also prohibited in any area where gasoline or diesel are being serviced to the port's equipment.

GANGWAY/DECK WATCHMEN: No requirement for watchmen, except for special vessel conditions or security reasons as determined by the Port Superintendent.

HATCHES: Normally opened and closed by ship's crew.

CARGO GEAR: 1×90 ton crane, 1×24 ton forklift and 2×5 ton forklifts.

AIRPORT: "Gerrad Smith International" Airport is 9.5 miles from the Port Authority. "Cayman Airways" has 1 flight out of Cayman Brac in the morning and arrives in the night. There are also 2 flights daily by "Island Air".

TIME: Local time is Eastern Standard, no changes.

HOLIDAYS: New Year's Day; Ash Wednesday; Good Friday; Easter Monday; Discovery Day; Queen's Birthday; Constitution Day; Remembrance Day; Christmas Day; Boxing Day.

Cargo can be worked on holidays, if the vessel is willing to pay overtime.

POLICE/AMBULANCE/FIRE:
Police, Tel: (809) 94-80331, 94-80441, 94-80223. Emergency 911.
Fire, Tel: (809) 94-81245, 94-81293. Emergency 500 or 911.
Ambulance/Hospital, Tel:(809) 94-82242, 94-82243, 94-82245, 94-82325. Emergency 555.
Air Ambulance, Tel: (809) 94-90241 or 94-96027.

BANKS: Barclays Bank PLC, P.O.Box 248, Stake Bay, Cayman Brac. Tel: (809) 94-82253. Fax: (809) 94-82294. Telex: 4320 BBICR.

Cayman National Bank, P.O.Box 88, West End, Cayman Brac. Tel: (809) 94-81451, 94-81551. Fax: (809) 94-81261.

SHORE LEAVE: Crew members are allowed ashore after clearing Customs and Immigration.

GARBAGE DISPOSAL: Garbage can be picked up from alongside the vessel by means of a garbage truck, provided by the Public Works Department, which can be contacted through the Port Authority.

CURRENCY: Cayman Island Dollar (CI$). U.S. dollars are accepted with exchange rate at stores CI$ 0.80, and at local Banks CI$ 0.84.

SHIPMASTER'S REPORT: February 1979.

Cayman Brac – Lightering Area

Chart: British Admiralty 462.

Radio: Very weak VHF only Channels 16, 10, 6. Call – "Cayman Energy" Agent recommends using Curacao (PJC) for ETAs, etc.

Boarding Positions:

No. 1: Lat. 19° 46′ N., Long. 79° 46.5′ W.
No. 2: Lat. 19° 40′ N., Long. 79° 53′ W.

Documents: 4 Crew Lists, 3 Stores Lists, 3 Personal Effects Lists, 2 Vaccination Lists, Clearance from Last Port, Cargo Manifest and Health Declaration (supplied).

Pilots: Mooring Master boards service vessel, STBL. 2 Pilots, 2 Assistants and 2 Riggers (for fenders). The above 6 men require accommodation on board.

Mooring: According to Operators "Cayman Energy Ltd.", can be carried out anytime day or night.

Cayman Energy Ltd., based in New York, are the operators of the transhipment operation. The local Terminal Manager and Senior Mooring Master resides on Cayman Brac and usually carries out the berthing operation from the service vessel. Ship to ship transfers commenced in 1977, future developments include the construction of a Transhipment Terminal on Little Cayman using SBMs, this project should come into operation late 1979.

The berthing procedure is straightforward and based on the ICS Ship to Ship Transfer Guide. On this occasion, Texaco were using vessels of about 45,000 d.w.t. as service vessels. These ships are in the region of 20 years old and have no modifications for this work. The Officers and crew of these vessels were mainly Italian and well practised in ship-to-ship transfers.

Upon completion of mooring, the Mooring Master departs and the Pilots remain on both vessels in an advisory capacity. 2×10 in. hoses are connected by the respective crews, the shore riggers assisting. Communications between the two vessels is by VHF.

During the transfer operation, the vessels are expected to remain within 4 to 5 miles from the island and the service vessel kept in the lee of the STBL. This entails maintaining a proper bridge watch and frequent use of the engines. The currents invariably set away from the island and can be quite strong at times. The winds during the latter part of January were extremely variable in both direction and force.

The Texaco practice of the STBL taking dirty ballast from the service vessel whilst reducing the risk of pollution, poses stress problems and also requires strict supervision of line draining between each operation. Ideally, water dips and ullages should be taken prior to and after the deballasting.

Unberthing is carried out by the Mooring Master whilst both vessels are drifting. The off-loader is put on the weather side of the STBL. This practice is questionable in winds over 15 knots – the movement of the smaller vessel together with reduced freeboard causes difficulties with the fenders.

The average berth time for each vessel is approximately 30 hours, the number of off-loaders for a ship of this size is five. If a safe and efficient operation is to be maintained throughout the period it is essential that two additional deck officers be available for cargo watch purposes.

SHIPMASTER'S REPORT: January 1980.

Cayman Brac – Little Cayman (See Plan)

Communications: "Cayharb Cayman Brac" via Slidell Radio WNU (See "Admiralty Radio Signals Volume 6").

Via VHF Channel 16:

"Cayman Energy" (good reception)
"Cayman Pilots" (via ship where the Pilot is at the time)
"Cayman Harbour" (weak signal)

Pilot Boarding Station:

Lat. 19° 43′ N., Long. 79° 53′ W. or Lat. 19° 40′ N., Long. 79° 53′ W.

Note: This position may change with seasonal weather conditions. The position is also used for Port Officials who request accommodation ladder in light condition but accept air pilot hoist or pilot ladder in loaded (tanker) condition.

Documents Required: 4 Crew Lists, 4 Cholera Immunisation Lists, 4 Stores Lists that include Stores, Narcotics, Bond, 4 Cargo Manifests, 4 Crew Declaration Lists.
Bond: Bonded Stores locker remains unlocked and issues may be made to the crew for onboard use only.
Postal Address: Cayman Harbour Corporation Ltd., Stake Bay, P.O.Box 50, Cayman Brac, Cayman Islands, British West Indies.
Facilities Available: Food, some stores, fresh water limited from tug.
Bunkers: Via lightering tanker ordered via Owners/Charterers.
Medical: Doctor can board ship at any time.
Hospital: Available.
Derat Certificate: No renewal certificate available but a letter of acceptance of renewal for Cayman Brac is issued.
Shore Side Facilities: Cayman Brac: Shops, hotels, post office. Little Cayman: Clubs (tourists). Fishing when in soundings.
Anchorages (under Pilots guidance):

Off Western end of Cayman Brac	up to 57 ft. draft.
Off Little Cayman	up to 69 ft. draft.

Currents: Variable, depending on season and weather. Ships experienced very little set and drift North of Cayman Brac 1.5 mile – 2.5 mile distance, other times over 2 knots. Generally N.W. direction. Stronger South of Islands.
Ship-to-Ship Cargo Pumping Operations: Cayman Energy Corporation Ltd. Tug: "Cayman Energy". Mooring ship to ship – see Plan. Fibre mooring lines instead of wire preferred. Operations under way, under guidance of Pilot/Loading Master. Ships separated by floating fenders supplied by Cayman Energy Corporation. Pumping may continue when ships are manoeuvring dead slow. Fenders remain alongside between lighterings and it is possible to manoeuvre up to 7 knots. Smaller vessel is moored on the lee side of discharging vessel (the larger one).

Pilot plus 4 assistants remain onboard for the duration of all cargo lightering operations but may be relieved if lighterings are prolonged ones.

Shore leave for ship's crew is possible via pilot boat or "Cayman Energy".
Cayman Brac Airport: Flights to Grand Cayman and then overseas.

SHIPMASTER'S REPORT: November 1980.

Vessel (230,000 d.w.t.) arrived at Cayman Brac for 2 to 3 months storage and lightening operations. No information or charts were on board prior to arrival.

Cayman Brac is a small island about 12 miles by 1.5 miles and is used solely for lightening operations, a maximum of 4 pairs of ships being handled at one time, but usually only 2.

There are 2 Pilot and Port Official Boarding Areas, North Boarding Area Lat. 19° 43′ N., Long. 79° 53′ W. and South Boarding Area Lat. 19° 40′ N., Long. 79° 53′ W., the choice depending on the wind direction. If no chart on board Cayman Brac can be approached to within 1 mile at any draft. There is no proper harbour, the launches have to be boarded from the beach using small boats, the launches remaining at moorings some distance offshore which can make transfer difficult in bad weather, especially for heavy stores.

There are no stores available on Cayman Brac, all stores have to be flown in from Grand Cayman or from Tampa, Florida. There is no official shipchandler on Cayman Brac although the Agent will assist vessels requesting small amounts of stores. We were informed by other vessels that usual method of obtaining large stores was to arrange for a supply by container direct from Tampa, Florida to the ship using a small coastal freighter. Other ships had stored at Barbados on the way in and way out. All stores are very expensive.

On arrival at Cayman Brac contact was initially made with "Cayman Brac Pilots" on Channel 16. However the call sign "Cayman Brac Pilots" is not usually used as this is in fact "Cayman Energy" who organise all Pilots, launch services and lightening operations. "Cayman Energy" is run by Captain H. Banks who appears to man the shore VHF station 24 hours a day, in addition to occasionally acting as a Pilot.

There are very few suitable anchorage positions, due to deepwater existing right up to the reef. There is one at the West end of Cayman Brac suitable for a VLCC with maximum draft of 66 ft. This is close to the boarding areas. Another at the West end of Little Cayman is suitable for a VLCC but 2 hours by launch from boarding area. There is another at East end of Little Cayman suitable only for vessels up to 100,000 tons. We used the anchorage at the West end of Cayman Brac and although very close to shore experienced no dragging during time anchored. We were informed by Pilots that no ship had ever dragged from that anchorage. Pilot essential for anchoring.

Agents are "Cayman Harbour" who monitor Channel 16 and are very helpful at all times. A doctor is available but no dentist. (Cable: "Cayharb Caymanbrac").
Lightening Operations: Normal procedure is for ship to be lightened (STBL) to fender starboard side before berthing, 4 fenders being brought out by launch "Cayman Mariner" or "North Harbour" also 2 hoses and reducers if required, on a barge. The fenders are positioned and hoses connected using 2 shore operators assisted by ship's crew. This can take up to 6 hours, during which time a Pilot is on board. Two Pilots and 2 shore operators remain on board during lightening. Then, if conditions are suitable both vessels steam with wind 15° on starboard bow, STBL at 4 knots and lightening ship comes up from astern on starboard side and closes with STBL, the operation being controlled by Pilot on lightening ship.

Berthing can take from 1 to 3 hours depending on circumstances, so a suitable clear run is required ahead of vessels to enable this to take place without altering course. Needless to say berthing vessels have right of way over all other vessels and this local rule is enforced by "Cayman Energy".

Both ships have a Pilot during the entire berthing, lightening and unberthing operrations, also Pilot remains on STBL until fenders and hoses removed. This is done unless next lightening operation is expected in near future, as fenders are liable to damage if left in position on STBL.

Due to Cayman Brac lying N.E./S.W. and wind during Winter months generally from N.E. there is not much shelter available but even so lightening operations are only occasionally interrupted due to weather.

Ullages and cargo figures on our vessel and lightening ship were checked by Caleb Brett Surveyors, this service having been arranged by charterers, it is not standard procedure, but depends on charterers.

Whilst lightening, navigation is carried out by STBL so bridge must be manned throughout, as well as cargo control room. Vessel steams normally at slow speed to maintain suitable position, with long periods of "stop" when engines are not required. During this time lightening ship's engines are not used. Maximum discharge rate permitted during discharge is 5,000 t.p.h. No difficulties were experienced during berthing or discharge except that due to communication problems with charterers, STBL and lightening ship occasionally had differing orders regarding discharge quantities, however this could usually be sorted out by "Cayman Harbour" in a short time.

There is a twice daily flight from Grand Cayman to Cayman Brac. This flight is always fully booked but even so seats are usually available. Extra flights are also made when required. Flight lasts 50 minutes and costs £10.00 single. There are 2 hotels on Cayman Brac and rooms are usually available.
Documents: On arrival Customs and Immigration board and require 4 copies each:

Crew Personal Effects Lists (Crew Lists also required before sailing).
Stores Lists including Narcotics.
Crew Lists (with full names).
Vaccination Lists.

Currency is Cayman Island Dollars (CI$), but U.S. Dollars are accepted with exchange rate U.S.$ 1.00 = CI$ 0.82.

AUTHORITY: Port Authority of the Cayman Islands, P.O.Box 1358, Harbour Drive, Grand Cayman, Cayman Islands. *Tel:* (809) 94-92055. *Cables:* Portcay. *FAX:* (809) 94-95820. *Contact:* Dale Christian, Marine Officer.

GEORGETOWN, Grand Cayman: 19.18 N. 81.23 W.

(See Plan)

DOCUMENTS:

Bills of Lading.
Crew List.
Cargo Manifest.
Ship's Register.
Safety Certificates.
Clearance from Last Port.

PILOTAGE: Available on request.
ANCHORAGE: With Georgetown Lighthouse bearing 125° – 150° distance 750 m. to 1,200 m.
RESTRICTIONS: Anchoring is not allowed on coral anywhere in the Cayman Islands.
RADIO: SSB: 8294 kHz, 0800 hrs. – 1200 hrs. Monday to Saturday. 8294.1 kHz, 1210 hrs. – 1700 hrs. Monday to Friday.
VHF: Channel 16, 24 hours a day.
TUGS: Launches available. No tugs available.
BERTHING:
South Wharf: Length 445 ft. depth 11 ft. – 24 ft.
West Wharf: Length 240 ft. depth 13 ft.
Ro/Ro Ramps: South Wharf: 1 ramp with depth 11 ft. Finger Pier at South Wharf: 1 ramp with depth 21 ft. – 26 ft. West Wharf (South End): 1 ramp with depth 13 ft. – 20 ft.
Cranes: 20 ton, 50 ton and 100 ton cranes available for hire.
Fork Lifts: 5×2.5 tons, 1×5 tons, 1×26 tons, 2×35 tons.
STEVEDORES: Stevedores arranged by Agent, recommended by the Port Authority.
Working Hours:

	0800-1200	Monday to Friday
	1300-1700	
	0800-1200	Saturdays
Overtime	1700-2100	Monday to Friday
	1300-1800	Saturdays

In the event that a vessel may finish discharging and sail, 1 additional hour may be worked.

No work Sundays and Holidays unless Port Director considers it necessary.
MEDICAL: Hospital available.
TANKERS: See "Shipmaster's Report".
FRESH WATER: Supplied by truck.
FUEL: Marine diesel only, delivered by truck.
AIRPORT: Scheduled flights by international carriers.
HOLIDAYS: New Year's Day, Ash Wednesday, Good Friday, Easter Monday, Commonwealth Day or Tree Planting Day (3rd Monday in May), Queen's Birthday, Constitution Day (1st Monday in July), Monday after Remembrance Sunday, Christmas Day, 26th December.
GARBAGE DISPOSAL: Garbage collection is provided by the Environmental Health Service twice weekly at a cost of U.S.$30.00 per day.
WASTE OIL DISPOSAL: There are no waste oil facilities available. Vessels are required to be fitted with holding tanks for such waste.
SEAMAN'S CLUBS: None.
CURRENCY: Cayman Dollar.
SERVICES: Ship chandlers available.

SHIPMASTER'S REPORT: February 1987 (updated 1990).
Port Limits: 12 miles off.
Documents:

6 Crew Lists.
4 Cargo Manifests.
2 Crew Declarations.
2 Stores Lists.
2 copies of Bills of Lading.
1 copy Ship's Particulars if first visit.
Clearance from Last Port.

Ship was cleared by Agent and 1 Customs Officer. The Immigration Officer comes aboard if any crew leaving or joining. Clearance was given to leave at this time. Officials were polite and friendly.

Pilotage: Pilot requested through Agent 48 hours in advance but Pilot lives locally and says 30 minutes notice is all he needs and is often all he gets. All communications are carried out through Port Security on Channel 16 and working Channel of vessel's choice. Port Security will contact Pilot, Agent or anyone else vessel wishes to talk to. Pilot boards from small work boat, either the "Eagle" or "Rambler", about 1 mile West of oil tanks. These boats have VHF Channel 6 and Pilot can be contacted on this Channel when he is under way.

Anchorages: Pilot recommended position with South Cay Light 350° by 6 cables if wind from North and at any other time just off town as marked on the Admiralty chart. He stated that at times there were up to 5 passenger vessels anchored here so it could be crowded. Unless vessel is expecting a long delay it is better to lie off.

Restrictions: Tankers berth between daylight and 1800 hrs. but can leave at anytime. Only restriction in berth is max. length of about 600 ft., depth in berth 60 ft. No restriction on breadth.

Health: Pratique granted by Customs Officer.

Radio: Sat Com.

VHF: All communications made through Port Security on Channel 16.

Radar: None.

Tugs: None.

Berthing: See "Plan" for final mooring position.

Vessel approached from the South and passed aft buoy close to starboard, 2 head lines were run to forward buoy and when weight was on these ropes engine was stopped and 2 lines were run aft to buoy. Vessel was then manoeuvred into position on a fore and aft line and a line was run to the port bow buoy. 2 breast lines were then run from the main deck and these were heaved together and vessel pulled towards the shore until it was close to the submarine marker buoy. These lines are very long and even when vessel is in position 1 line was too short. The lines were run efficiently and the 2 work boats being well crewed. The accommodation ladder was rigged on the port side.

Bridges: None.

Medical: Local hospital and ambulance service. Call Port Security on Channel 16 for service.

Tankers: 1×8 in. pipeline. This is always left in gasoil so if possible leave gasoil parcel to last or if necessary split discharge. This is no problem as grades are pumped face to face. Average rate of discharge was about 700 cu.m.p.h. and max. back pressure 120 p.s.i.

Density: 1024.

Fresh Water: Can be obtained, but expensive.

Fuel: Not available.

Fire Precautions: Usual ship precautions, no tugs so no fire service to ships.

Consuls: American Consular Agent.

Repairs: No facilities.

Dry Docks: None.

Surveyors: B.V. and Lloyd's.

Gangway/Watchmen: None.

Customs Allowances: 200 cigarettes and 40 oz. spirits. Bond sealed.

Repatriation: No problems with staff or crew changes.

Airport: International airport 4 miles from berth. Cayman Airlines, Northwest and American.

Time: GMT minus 5 hours.

Police/Ambulance/Fire: None.

Emergency Co-Ordination Centre: None.

Telephones: None.

Services: None.

Banks: All major banks.

Storing: Small supplies of all stores, but very, very expensive.

Shore Leave: No restrictions. One of the rope handling boats stays with the ship and runs personnel ashore when required.

Identification Cards: Not required.

Regulations: None.

Sanitation: Vessels are required to be fitted with holding tanks.

Delays: Bad weather and daylight berthing.

Developments: None expected.

General: Research Submersibles Ltd. have small submarines that take tourists down 600 ft., these can be encountered near the berth.

AUTHORITY: Cayman Islands Port Authority, P.O.Box 1358, Harbour Drive, Georgetown, Grand Cayman, Cayman Islands. *Tel:* 809-949-2055, 2228. *Cables:* Portacay. *FAX:* 809-949-5820. *Contact:* Errol L. Bush, Port Director. Dale Christian, Marine Officer.

NOTES

Please also advise Shipping Guides Ltd.

Chile

GENERAL (See Plan)

The Superior Maritime Authority in the Republic of Chile is the General Director for the Maritime Territory and Merchant Marine at Valparaiso's Headquarters, having jurisdiction over lakes and maritime river ports in the territorial, ancestrial maritime zones and its national liability in accordance with the responsibilties and power granted by current legislation mainly contained in the "Navigation Law" approved by Decree Law No.2.222, 1978, and the regulation approved by DFL No. 292, 1953.

In order to fulfil his instruction, the General Director delegates such responsibilities and functions to the Maritime Authorities called Maritime Governors and Port Captains, located at the main ports of the country.

The Maritime Authority is fundamentally responsible for watching over the safety of life at sea and safety of navigation at sea; their activities are directly related to navigation control; coastal signalling; piloting and pilotage of vessels; maritime radio communications; conservation of marine environment; order, security and discipline of ships and ports of the Republic; the reception and dispatch of vessels and the Maritime Search and Rescue Service.

Nautical Bibliography: The bibliographies (the ones mariners are interested in) are publications issued by the Hydrographic Institute of the Chilean Navy (IHA) and consist of nautical charts of the whole national maritime area as well as the following publications among others:

1. Catalogue of nautical charts and publications (IHA Publication 3.000), which contains detailed information related to chartography and nautical publications of the Chilean coast, following the recommendations and resolutions of the International Hydrographic Organisation (IHO) on the matter.
2. Sailing Directions of the Chilean coast consisting of 6 volumes:

Volume I:	IHA PUB. 3001, from Africa to Canal Chacao.
Volume II:	IHA PUB. 3002, from Canal Chacao to Golfo de Penas.
Volume III:	IHA PUB. 3003, from Golfo de Penas to Western entrance of Magellan Strait.
Volume IV:	IHA PUB. 3004, Strait of Magellan and adjacent waters.
Volume V:	IHA PUB. 3005, Tierra del Fuego and adjacent channels and islands.
Volume VI:	IHA PUB. 3006, Chilean Antarctic Territory.

3. IHA. PUB. 3007 – Lights Register contains the the most complete information about Navigation Aids, more than appears in the sailing directions and nautical charts. Such publication is looked up preferentially when mariners need to know light signals, fog signals and unlighted signals characteristics., moreover, it contains information on the beaconing system employed in Chile.
4. IHA PUB. 3008 – Radio Aids to Navigation, which is preferentially consulted when mariners need to know characteristics of radio beacon emissions, hourly signals and maritime radio stations broadcasting meteorological bulletins and any other relevant information related to navigational aids transmitted by radio.
5. IHA PUB. 3009 – Tide Tables of the Chilean Coast containing tidal predictions of national ports and the foreign ports of Cristobal and Balboa – Panama; Buenaventura – Colombia; Guayaquil, Puerto Maritimo and Posorja – Ecuador; and Talara, Callao and Matarani – Peru. In addition, it contains current predictions and astronomical forecasts such as moon phases and declinations, rise and setting of sun and moon, etc.

There are also 27 nautical publications issued by the same Institute, all of which are for sale at the main ports in Chile.

NOTICE: Every vessel coming directly from a foreign country and preceeding to a national port, must report her arrival to the Maritime Authority of the port, a minimum of 24 hours in advance. The latter can be executed by means of a message containing the following information:

Name of the vessel, call sign and flag.
Estimated time of arrival (ETA), indicating date.
Information about sanitary conditions and if she carries sick crew.
Drafts.

Commerical ports have maritime radio stations permanently listening on VHF Channel 16, 421 kHz and 2182 kHz.

POSITION REPORTING: Vessels sailing in the maritime zone of national responsibility as far as Maritime Search and Rescue is concerned, are required to communicate their position employing the notification system of vessel situation.

Such notification system employed is the one recommended in Chapter 6 of the Annex to the "International Search and Rescue Convention", 1979.

In regard to the matter, it is important to underline that such service and its use are free of charge for the user when communication is sent through the Maritime Telecommunications Network (See "Radio"); the sending of the message will facilitate prompt assistance in case of emergency.

Notwithstanding, it is reciprocally compulsory for those vessels registered in countries where Chilean ships are obliged to execute similar arrangements or equivalent to the already established ones, to give inmediately their position and navigation plan when navigating in waters under the Chilean national jurisdiction: they also need to show their names, call signals or identity of the vessel station, next calling port and destination, planned route and speed. Likewise, it is compulsory to communicate their position daily at 0800 hrs. and 2000 hrs. Chilean local time.

SHIPS NOTIFICATION SYSTEM: The fundamental objective of the system is to provide the Maritime Search and Rescue (SERBREM) and the Search and Rescue Operation (COBREM) with some information in order to attain a timely and effective action in a search and rescue operation.

The typical messages given by "SISNAV" are the following:

1. Initial Report (I.I)
   (a) When vessels go into national waters:
   The ship's Master must send the entry message through the maritime radio station intermediary corresponding to the Maritime Search and Rescue Service area or the first one he might make contact with.
2. Position Report (I.P)
   The ship's Master has to make a daily report at 0800 hrs. and 2000 hrs. with respect to the vessel situation or when such a situation changes substantially more than estimated. This fact must be informed through the maritime radio station concerned or through the first he might make contact with.
3. Final Report (I.F)
   (a) When going out of the national responsibility area.
   The ship's Master must send the message concerned through the maritime radio station intermediary of the Maritime Search and Rescue Service area in which he might be navigating or the first he could get in contact with.
   SISNAV Communications are produced through the Maritime Telecommunications Network, which can receive any sort of message (Distress, Disaster or Urgent) and those corresponding to the system.
   The Maritime Telecommunications Network is indicated in the Radio List IV, Vol. 1 & 2 of the ITU's Coastline Station List and, for the purpose of SISNAV system, the following radio stations are considered to be the most important ones: Autofagasta Radio (CBA), Playa Ancha Radio (CBV), Talcahuano Radio (CBT), Puerto Montt Radio (CBP) and Magallanes Radio (CBM).
   In order to expedite the typical message format, the operator mechanics are listed below:

Message requirements: Vessels must send:

(1) The "II" Report when entering into Chilean waters or leaving Chilean ports.
(2) The "IP" Report is made daily at 0800 hrs. and at 2000 hrs. (Chilean time) (see ALRS 5 for Local Time matters).
(3) The "IF" Report inmediately before arriving at a Chilean port or leaving Chilean waters.

Kinds of messages: Addressed to DIRECTEMAR VALPARAISO. At the same time, northbound vessels must inform the Maritime Authority of Punta Arenas, Talcahuano or Valparaiso, addressed to the Maritime Governor (MARITGOS-Port).

SP Report (Initial Report):
(a) SISNAV.
(b) SP (I.I.).
(c) Name of the ship and call sign.
(d) Local time and date (6 digits for LT, Example: 012200LT).
(e) Port of departure.
(f) Position (Latitude and Longitude – i.e.: 1832 S. 7021 W.).
(g) True course (group of 3 digits).
(h) Speed (2 digits).
(i) The letters "CO".
(j) ETA (format as for (d)) and destination port.
(k) Name and call sign of the radio station through which the report is sent.
(l) Date and local time (format as for (d)) of next port.

IP Report (Position Report):
(a) SISNAV.
(b) PR (I.P.).
(c) Name of the ship and call sign.
(d) Date and local time (0800 or 2000), 6 digits followed by LT – (Example: 010800LT).
(e) Position (Latitude and Longitude i.e.: 1924 S. 7032 W.).
(f) True course (group of 3 digits).
(g) Speed.
(h) Name and call signal of radio station through which the report sent.
(j) Date and local time (format as for (d)) of next port.

IF Report (Final Report):
(a) SISNAV.
(b) FR (I.F.)
(c) Name of the ship and call sign.
(d) Date and local time (6 digits followed by LT, Example: 252820 LT)
(e) Port of arrival or "Chilean waters departure".

Shipmaster's Report: October 1991.

The following compliments the information above:

Transmission of Message: Reports should be sent free of charge through a Chilean Coast Radio Station which accepts public correspondence.

They can also be transmitted via SATCOM to Telex No. 230602 or 330461 (Telex numbers of Valparaiso Radio), if they are addressed to DIRECTEMAR VALPARAISO-PORT.

SATCOM charges have to be paid by vessel.

Example of Message: SISNAV/SP/CASTOR/S6HG/122300LT/CALLAO/1820S/07540W/166/14/CO/151600LT/VALPARAISO/VCO1860/130800LT/

The same message via Valparaiso Radio and SATCOM should read:
TO: VALPARAISO RADIO (VCO 1860)
FR: MASTER M.V. ....
DATE: ....
TGM
DIRECTEMAR VALPARAISO
Text as given in above example.

Shipmaster's Note: Send by telex if possible, in order that vessel may have a record with answerback, in case there are complications after arrival. Fines are imposed if messages are not sent.

VESSELS RECEPTION AND DISPATCH: Particular Dispositions regarding vessels reception and dispatch are contained in the Regulations concerned approved by SD No. 364, 1980.

The formal reception of ships is carried out at the first landfall port, and dispatch at the last port, with participation of authorities taking part as far as controls to be realised are concerned.

The vessels' Reception and Dispatch Commission is presided over by the Maritime Authority. Furthermore, Customs Authority, International Police (Alien Division) and Human and Vegetable Health will be also take part.

Documents to be submitted to the Vessel's Reception and Dispatch Commission are in type and quantity, those required by the "Convention on Facilitation of International Maritime Traffic – 1965" from the IMO, ratified by the Republic of Chile, apart from the Ammunition and Arms Declaration (two copies).

The following is for quidance only:

General Health Declaration	1 (First Port)
Clearance Document from last port	1
Vessel's General Declaration	5
Crew List	5
List of Crew's Personal Effects	3
List of Passengers for the Port	5
List of Passengers in Transit	5
Mail Declaration or Negative	5
List of Provisions	6
Cargo Manifest for the Port	10
Manifest for Cargo in Transit	10
IMO Hazardous Cargo Declaration	6
Declaration of Arms and Ammunition	2

Ship's Officer's Report: The following documents are required at the second and subsequent ports: 4 copies Crew List, 4 copies Crew Personal Effects List and 4 copies Ship's Stores Declaration.

Port Captain will be able to ask for any vessel certificates: however, only the following will usually be required:

Safety Equipment Certificate.
Radio Telephony Certificate.
Radio Telegraphy Certificate.
Safety Construction Certificate.
International Tonnage Certificate.
Payment of Lights and Beacons Service's Certificate.
Civil Liability Certificate for Oil Pollution, pursuant to the International Legal Conference on Marine Pollution Damage, 1969.
Oil Record Book, pursuant to the International Convention for the Prevention of Pollution of the Sea by Oil, 1954.

At landfall port, the Alien Division will ask for passports of passengers and crew in order to make the identity cards which will identify them. Such cards have to be given back when ships leave.

Before departing, the ship must be suitably secured for sea, with hatches closed, derricks lowered and deck cargo inspection carried out by a Maritime Authority's Supervisor.

When a vessel leaves port, the Maritime Authority grants a "Departure Bill", endorsed by the Customs. The Crew and/or Passenger List is enclosed authorised by the Alien Division.

Changes of crew and passengers from/to the vessel are not allowed, after Bill has be granted. If the ship does not leave within a short period of time, due to unforeseen circumstances, the fact will be reported to the Port Captain, who will ask for the documents to be changed if appropriate.

Every ship arriving at a Chilean port has to fly the flag of the country to which it belongs on the mainmast, and the Chilean flag.

On entering port, the "Q" flag will be hoisted, and when "Free Pratique" is granted it will be hauled down.

The use of whistles and syrens will be in accordance with the International Regulations for Preventing Collisions at Sea.

Shipmaster's Report: October 1991.

The following documents should be presented by vessel on arrival:

		Total	Presented by Agent
Cargo Manifest	sometimes	2	8
Cargo in Transit Manifest	sometimes	2	8
IMO Cargo Manifest	sometimes	2	4
IMO Cargo in Transit Manifest	sometimes	2	4
Crew List		6	
Passenger List or "Nil" Declaration		3	
List of Passengers in Transit or "Nil" Declaration			
Ship Stores List (including radios, refrigerators, etc.)		5	
Crew Effects Declaration		3	
List of Passengers Baggage or "Nil" Declaration			
List of unaccompanied Baggage or "Nil" Declaration			
Maritime Declaration of Health		1	
Vaccination List		1	
Mail List or "Nil" Declaration		5	
List of Arms and Ammunition or "Nil" Declaration		3	
List of Animals or "Nil" Declaration		3	
Port of Call List (last 30 days)		2	
Last Port Clearance		1	
Light Dues from last Chilean Port		1	

HEALTH: The following is handed to vessels arriving from Peruvian waters.

Quote

To: Master M.V. ......

Dear Master,

The following are instructions from the Chilean Maritime Authorities concerning the steps and precautions you are required to take as your vessel has recently been in Peruvian waters.

Report from the Chilean Navy

Re: Preventive methods against Cholera epidemic in Peru.

Antofagasta,

Observations: The Cholera epidemic that affects the Republic of Peru and the necessity to adopt preventive methods; the Judiciary Office No. 4 A/735 of the February 8th, 1991, of the Subsecretary of Health, and having presently ordered under the by-laws of Maritime Health, Air and Boarders, Decree 263/85, by-laws of Reception and Dispatch of Vessels, Decree 680/80, and the general by-laws of Order, Health and Discipline of Vessels and the Coast of the Republic, D.S. No. 1340 to 41.

Be it resolved:

1. As of the present date, vessels and naval craft proceeding from the ports and waters situated off the coast of Peru, will observe the conditions indicated in the following.
2. The preventive sanitary measures dictated by the Health Department of this country, will be strictly followed, as much in navigation as in ports.
3. The Master of the vessel will advise his arrival to whichever national port with a minimum notice of 48 hours without compressing the information that will direct the Health Authorities.
4. The notification will contain at least the following information:
   (a) Name of the vessel, flag and international call sign.
   (b) Preceeding port and next port of call.
   (c) Ports visited during the last 7 days before this notification.
   (d) Date and hour of arrival.
   (e) General state of Health of the crew, giving special attention to gastro-intestinal pain, and/or fevers, if such exists.
   (f) Information on intake of fresh water and ballast coming from effected zones.
   (g) Ports that will be visited in Chile.
5. The following preventive measures shall be adopted without compromising the completion of the existing laws and those which are being issued by competent authorities.
   A. General Measures:
   The water deposits of the ship will be chlorinated, with the objective of obtaining a minimum 0.2 p.p.m. of free chlorine at the furthest point of the system, through the use of a chlorine colorimeter with a base of D.P.D. This arrangement will be controlled by the Health Authorities on arrival of the vessel at port and by the notation of the vessel for the duration of its stay in Chilean waters. The equipment can be provided by the respective vessel's Agent.
   The presence of flies and roaches shall be fought.
   The deposits of garbage should be located aft, sealed hermetically in a permanent form, and sprayed periodically with insecticides that impede the access and proliferation of insects.
   B. In Port:
   All vessels will be prohibited from discharging waste and bilge water in the waters of the ports and bays, this will be permanently controlled in coordination with the Department of Health.
   If vessels do not have a special location for the storage of service water and bilge water, this should be informed upon arrival in order to coordinate with the Department of Health, authorisation for a preliminary examination by said authority and the Maritime Authorities. The necessary methods will be established in order to obtain an immediate disinfection of this type of refuse. The previous subject to final agreement by order of Sanitory Authorities.
   Berthed vessels should permanently maintain anti-rat defenses on the mooring lines.
   Gangways and ladders should be heaved up when not in use.
6. Vessel that do not possess an adequate system aboard for the retention of garbage, should inform this upon arrival and coordinate at vessel's expense the daily removal for incineration, or discharge at least 12 miles from the coast, depending how so ordered.
7. In case that during navigation it is detected on board any persons suffering from Cholera, or having symptoms of said epidemic, the situation should be reported immediately, and upon approaching land the 'Q' flag and the 'L' flag of the international code of signals shall be flown.
8. The reception of the vessel will take place at anchorage, in a place indicated by local Maritime Authorities, not permitting access nor the disembarkation of persons until the vessel is declared in "Free Pratique". If during the reception, cases, or suspected cases, are detected, the instructions of the Sanitation Authorities will be followed.
9. The Captain who has on board contagious persons, or with symptoms of Cholera, and does not communicate with the Maritime of Santiation Authorities as ordered during the navigation of national waters, at the moment of reception or during the vessel's dockage at port, the prescribed sanction will be issued according to Art. 144 of D.S. 1340/91 General Regiment of Order, Security and Discipline on Vessels and the Coast of the Republic, as well as the corresponding of other authorities.
10. All vessels will be prohibited from discharging ballast in Chilean waters (Ports and Bays).

Unquote.

Shipmaster's comment on the above:

Procedure: The cable can be sent free of charge via any Chilean Coast Radio Station which accepts public traffic. It should be addressed to Area Sanidad Maritima DGTM Y MM "Port Name".
Ref. DGTM Y MM ORDINARIO N. 12600/300 VRS.
Then following details for (a) to (g) - See No.4 above:
Experience recommends that this cable be sent to Valparaiso Radio via Telex or Satcom. Telex No. 230602 DGTMM CL. Address on this telex should read like that shown above.
Notes: Check ratguards hourly as Port Captains will fine vessel if any have fallen off.

FUMIGATION: If the Derat Certificate of a ship has expired, it can be granted the appropriate exemption, provided that authorities may prove there are no rats on board and that the vessel has not recently called at any port affected by the bubonic plague.

Fumigation can be carried out by the Agriculture and Cattle Raising Bureau. In such cases, the ship must remain permanently moored with one or two anchors ahead. Her crew must be put ashore for 24 hours.

STEVEDORES: At every Chilean port there are stowage and breakbulk companies having port elements and workers trained to fulfil vessels' loading and discharging activities.

Chilean ports work daily on a shift basis:

First Shift : 0800 hrs. – 1530 hrs.
Second Shift : 1530 hrs. – 2300 hrs.
Third Shift : 2300 hrs. – 0600 hrs.

Ships in port must be watched by a maritime guard at their accesses. He is responsible for watching over the vessel's security. Nobody foreign to the ship can go on board without presenting a special authorisation.

Port labour is periodically supervised by a Security Patrol, which must take care of the stowage and break bulk activities. These have to be accomplished in accordance with national and international security standards. This patrol keeps the Port Captain informed.

FUEL: Fuel oil can be taken at any Chilean port by means of the trucks. The price is in accordance with international market fluctuations. The ship's agent will have to ask for the required amount of fuel in advance.

HOLIDAYS: The following days are holidays in Chile:

January 1st.
Easter ((holy Friday and Saturday) March/April).
May 1st. : Labour Day.
May 21st. : Iquique's Naval Combat.
June 2nd. : Corpus Christi.
June 29th. : St. Peter and Paul.
August 15th. : Virgin Mary's Assumption.
September 11th. : National Liberation's Day.
September 18th. : Independance Day.
September 19th. : Army Glories' Day
October 12th. : The Discovery of the New World.
November 1st. : All Saint's Day.
December 8th. : Immaculate Concepcion.
December 25th. : Christmas Day.

Holidays do not affect the efficiency of Port Labour System

CREW: Foreign merchant ships can hire Chilean crew without problems; they only have to ask for the suitable Embarkation Contract.

RADIO: There are 74 radio stations along the coast. Messages to ships are broadcast from Valparaiso, Punta Tumbes, Puerto Montt, Faro Corona, Punta Arenas and Punta Delgada.

Local weather observations are broadcast by radiotelephony by the following radio stations:

Playa Ancha	CBV
Talcahuano	CBT
Calbuco Radio	CBP-22
Guafo Radio	CBP-4
Raper Radio	CBM-2
Magallanes Radio	CBM

Special and general forecasts, for the area from Africa to San Pedro are broadcast by Radio Playa Ancha on frequencies 464, 4,228, 12,663 and 16,914.5 kHz.

The following information is sent by facsimile:

1130 hrs. GMT: Surface Chart.
1920 hrs. GMT: Nephoanalysis.
1940 hrs. GMT: Wave Analysis.
2310 hrs. GMT: Surface Chart.

By the telegraphic system:

0110 hrs. GMT: Meteorological Forecasting Zone I-VI
1210 hrs. GMT: Meteorological Forecasting Zone I-VI
1210 hrs. GMT: Analysis
1210 hrs. GMT: Meteorological Forecasting Zone X
2020 hrs. GMT: Meteorological Forecasting Zone X
2030 hrs. GMT: Analysis

By NAVTEX at:

0110, 0410, 0810, 1210, 1610, and 2010 hrs. GMT.
0200 hrs. GMT: Wave Forecasting Chart.

The Naval Radio Station of Magallanes broadcasts in telegraphy the General Forecast for Zones VII-VIII and X.

For weather forecasting, the country has been divided from the North to the South into the following areas or zones.

Zone I : from Arica to Coquimbo.
Zone II : from Coquimbo to Valparaiso.
Zone III : from Valparaiso to Constitucion.
Zone IV : from Constitucion to Isla Mocha.
Zone V : from Isla Mocha to Puerto Montt.
Zone VI : from Puerto Montt to Isla San Pedro.
Zone VII : from Isla San Pedro to Faro Evangelista.
Zone VIII : from Faro Islotes Evangelistas to Lat. 60° 00'S.
Zone IX : from Lat. 60° 00'S. to Lat. 90° 00'S.
Zone X : from Long. 80° 00'W. to Long. 120° 00'W.

Chile is normally 4 hours behind GMT, but from the second Saturday of March, clocks must be moved ahead 1 hour. However, for radio transmissions, GMT time will continue to be used.

For ETA messages, it is recommended to use GMT.

PILOTAGE: The use of a pilot is compulsory at all Chilean ports for berthing and unberthing. Pilotage also compulsory at all tanker and bulk terminals.

Pilotage is compulsory in the Magellan Strait. The pilot must be taken aboard (for vessels coming from the North) in Valparaiso, Ancud or at the Pilot Station of Laitec, in Quellon. For ships coming from the Atlantic, pilots board at the Pilot Station located at Bahia Possession at the Eastern Entrance of the Magellan Strait and for vessels coming from the Antarctic, pilots board at Isla Hornos or Cabo San Pio.

POLLUTION: Throwing away of any kind of ballast or waste in the sea is prohibited, as well as spilling oil of any derivative or residue of contaminated waters from processing plants or any other noxious matter, either at ports or within the 200 mile jurisdictional Chilean waters, without the Port Captain's authorisation. Current rules state that no oil tanker can spill hydrocarbons or any other derivative substance, within 50 miles of the coast.

According to international standards, ships navigating in Chilean jurisdictional waters, must be in possesion of an insurance policy. In cases of pollution, regardless of administrative sanctions imposed, Civil Liability Regulations sanctions imposed, Civil Liability Regulations will be applied as established in the international regulations.

BALLAST: The following telex was received from "Directemar Chile".

Quote

1. As from this date on, all vessels proceeding from other countries already ballasted with sea water, should replace the ballast at least one time, 12 nautical miles from the coast before arrival to Chilean ports, registering these procedures in the Deck Log, and in the Engine Room Log, detailing following information:
   Place: Geographical coordinates where the work was done.
   Volume: Quantity of water replaced and percentage ICW to total capacity of ballast.
   Date and hour: The interchange of ballast water was undertaken.
2. In case it cannot be proven in a convincing form through the Deck and the Engine Room Log, the vessel will add to the ballast tank 100 grams of sodium hipochloride in powder or 14 grams of calcium hipochloride in powder per ballast water ton before start of the ballast operation. Assuring the mixer in all water volume, and leaving to pass minimum 24 hours before to start emptying. This work should be done under Maritime Port Authorities' supervision.
3. All vessels proceeding from zones affected by Cholera, or other catching epidemics, should take the procedures indicated in Paragraph 1 and 2 of this resolution.

Unquote.

Shipmaster's Note: May 1992.

It all comes down to recording in the ship's logbook where each tank has been ballasted, in order to prove/show that all ballast is from outside the 12 mile zone.

If the vessel has to ballast at any port, this to be changed at sea outside the 12 mile zone, before reaching the next port.

MARITIME SEARCH AND RESCUE: (See "Plan").

Pursuant to the responsibility that the Chilean National Law awards to the General Direction for the Maritime Territory and Merchant Marine and to the International Agreements that Chile has acceded to regarding Maritime Search and Rescue, this activity is organised along the country, according to the Supreme Decree No. 1190 of 1976 that "Organise the Maritime Search and Rescue Service dependent from Chilean Navy".

Mission: Organise and carry out search for vessels, naval craft or any other craft in the maritime area of national responsibility, in order to rescue passengers and crew being in danger due to a sea casualty.

Cooperate by own initiative or required by authorities or individuals, and in the way prescribed by the Commander-in-Chief of the Navy, to the Human Life Search and Rescue, and materials not related to general maritime activites being in danger or lost at sea, rivers or lakes, where maritime authorities can be found.

The maritime area of national responsibility as far as Maritime Search and Rescue is concerned, includes all waters under national maritime jurisdiction and Pacific Ocean waters included among these, and parallel 18° 20' 08" N., Meridian 120° W. to the West, Antarctic Territory in the South and waters of Drake Passage.

Organisation: The Maritime Search and Rescue Service's Headquarters are located at the General Direction for the Maritime Territory and Merchant Marine, in Valparaiso (JEFSERBREM), and for its operation, it is organised and divided into 5 Maritime Search and Rescue Centres, called COBREM, located at the ports of Iquique, Valparaiso, Talcahuano, Puerto Montt and Punta Arenas.

Districts concerning each of the Maritime Search and Rescue Centres are as follows:

(a) First District of Maritime Search and Rescue:
From Lat. 18° 20' 08" S. in the North to Lat. 26° 00' S., in the South. The Maritime Search and Rescue Coordination Centre is located at the Maritime Governor's Headquarters of Valparaiso.

(b) Second District of Maritime Search and Rescue:
From Latitude 26° 00' S. to Latitude 34° 09' S.
The Maritime Search and Rescue Centre is located at the Maritime Governor's Headquarters of Valparaiso.

(c) Third District of Maritime Search and Rescue:
From Latitude 34° 09' S. to Latitude 47° 00' S., excluding the territory comprised in the Fourth District.
The Maritime Search and Rescue Centre is located at the Maritime Governor's Headquarters of Talcahuano.

(d) Fourth District of Maritime Search and Rescue:
From Latitude 41° 21' S. and Longitude 74° 00' W., corresponding to inland Chilean waters, upto Lat. 43° 16' S. and Long. 76° 00' W.The Maritime Search and Rescue Centre is located at the Maritime Governor's Headquarters of Puerto Montt.

(e) Fifth District of Maritime Search and Rescue:
From Latitude 47° 00' S. to Latitude 90° S. The Western limit comprises, exactly like the rest of the districts, meridian 120° W., and the Eastern limit, the imaginary line joining the following points:

	Latitude	Longitude
(a)	55° 07.3' S.	66° 25.0' W.
(b)	55° 11.0' S.	66° 04.7' W.
(c)	55° 22.9' S.	65° 43.6' W.
(d)	56° 22.8' S.	65° 43.6' W.
(e)	56° 22.8' S.	67° 16.0' W.
(f)	58° 21.1' S.	67° 16.0' W.

and from the last point directly to the East, through Drake Passage following parallel 58° 21.1' S., till touching the point located at Latitude 58° 21.1' S., and Longitude 53° 00' W., and from there along the meridian 53° 00' W., to the South Pole.

STRAIT OF MAGELLAN: Magellan Strait is a geographical fault crossing the South American Continent at the Southern zone of Chile and joins the Pacific Ocean to the Atlantic Ocean.

As the Strait of Magellan is a zone of great maritime traffic density with intense marine currents of variable direction and strength, especially in the First and Second Passages located in the Eastern part, and has a high percentage of rough weather and a great number of exploration and exportation platforms on the seabed at its Pacific entrance, mariners should navigate very cautiously in these waters, executing security measures established for that purpose.

Despite the fact that there are excellent aids to navigation and beacon systems, the use of 2 pilots is compulsory. They must verify the most favourable conditions for the navigation of a vessel.

It is not compulsory to use pilots in the area between the Western entrance of the Strait and Punta Arenas City but is available when necessary.

Security Standards: Every ship of any kind and nationality, using the Strait of Magellan for navigating, should fulfil the following:

(a) She must report her ETA when entering into the Strait, 12 hours in advance. Such message must contain the following information:

No. of messages.
Name of the Ship.
No. of Words.
Date.
UTC time.
MARITGOG PAR.
Text.

Name of the ship, ETA, length, maximum draft, gross tonnage, destination port, ETA, pilots zone, Master's name.

(b) During the whole voyage along the Strait, ships must keep in touch, permanently listening and standing by on VHF Channel 16 and 2182 kHz.

(c) The time of arrival and departure from the Strait and time passing Punta Dungeness lighthouse, Punta Anxious lighthouse, Isla Tamar or Cabo Pilar, depending on circumstance, must be sent to the Maritime Governor's Headquarters.

During navigation in the Strait, geographical situation and speed must be advised, according to the following criteria:

(1) Ships navigating without pilot: Every 4 hours.
(2) Ships navigating with pilot: At 0800 hrs. and 2000 hrs.

(d) There are 3 waiting areas for ships needing to anchor for safety at sea's purposes and for ships waiting to cross the passages, in accordance with the instructions imposed by the Maritime Authority, according to the traffic requirements.

For such purposes, the following waiting areas are established within specific limits for crossing the First and Second Passages (Primera y Segunda Angostura):

	Latitude	Longitude
Bahia Possession:	52° 19' 20" S.	68° 58' 30" W.
	52° 19' 20" S.	68° 53' 30" W.
	52° 21' 20" S.	68° 58' 30" W.
	52° 21' 20" S.	68° 53' 30" W.
Bahia Felipe:	52° 45' 05" S.	70° 00' 20" W.
	52° 44' 25" S.	69° 58' 10" W.
	52° 45' 15" S.	69° 57' 15" W.
	52° 45' 55" S.	69° 59' 30" W.
Punta Arenas:	53° 10' 53" S.	70° 54' 06" W.
	53° 10' 53" S.	70° 53' 27" W.
	53° 11' 19" S.	70° 53' 27" W.
	53° 11' 19" S.	70° 54' 06" W.

(e) Vessel must have the following valid international certificates, in accordance with the type of vessel:

1. Safety Construction Certificate.
2. Safety Equipment Certificate.
3. Radiotelegraphy or Radiotelephony Safety Certificates, according to the circumstances.
4. Certificate guaranteeing that the ship is insured or is in possession of other financial guarantees, in accordance with Art.146 of Navigation Law (from Civil Liability for Oil Pollution Damage and other noxious substances).

These certificates will be accepted, unless there is clear evidence for suspecting that the ship or equipment condition is not in accordance with that stipulated on such affidavit.

(f) Also vessels must comply with the following requirements:

To have a gyro-compass in good working order, with a duly know error margin and a repeater on deck operating normally, and their steering magnetic compasses suitably compensated for navigation with the updated deviation table; such table shall not be older than one year.

To be provided with navigational equipment in accordance with rules for the ship, contained in the Annex to the International Conference on Safety of Life at Sea, 1974.

To have at least one radar in good condition.

To have updated Chilean publications on board: navigational charts, sailing directions, light lists, tide tables and nautical publications necessary for conducting a ship through the Strait of Magellan.

To have in good condition, all anchoring and manoeuvring elements; main, auxiliary and emergency engines and aids to navigation.

To maintain derricks or cranes in a secure position so as not to interfere with visibility from the upper bridge of the ship.

(g) While navigating along the Strait, pilot aboard checks the existence and validity of the above mentioned certificates and the fulfillment of requirements contained in the preceding paragraphs.

(h) For those vessel's neither having certificates in force nor fulfilling requirements regarding equipment and elements for navigation, the Maritime Authority will make arrangements so that the ship adjusts her necessary conditions for safety of navigation and life at sea.

The Maritime Authority will approve navigation as soon as pertinent instructions have been executed.

Aspect relative to aids to navigation or piloting's collection:

For the collection of piloting and aids to navigation services, tariffs stipulated will be applied according to the Tariffs and Duties' Regulation of the General Direction for the Maritime Territory and Merchant Marine, approved by S.D. (M) No. 427 of June 25th, 1979.

If there was occasional piloting or if piloting was carried out over part of the Strait, at ship's Masters request, 100% of the corresponding piloting tariff will be applied.

Other complementary standards:

Every ship navigating in the Strait of Magellan experiencing an abnormal situation, either navigational or maritime fire occurence possibility, must report it to the maritime authority in order that prompt assistance may be rendered if necessary.

It is definitively prohibited to throw overboard ballast, debris or garbage and to spill oil or its derivatives or residues subjected to the indicated jurisdiction, in accordance with the international agreements subscribed to by Chile and current internal regulations on this matter.

The Government of Chile has established a new Aids to Navigation System in the Strait of Magellan, in order to give support to navigation and piloting in the zone, by means of the centralised information exchange with vessels, fully assuring safety of life at sea. This system consists of Radar Stations, installed at Punta Dungeness lighthouse and the Port Captain's Office at Punta Delgada renders service to any vessel that needs it; free of charge for the user, and it allows navigation via Boca Oriental and Banco Triton, or vice-versa.

Ships coming from the Atlantic Ocean, must inform their arrival to the landfall port located at Latitude 52° 35' S., Long. 68° 10' W., at least 24 hours in advance, to the Maritime Radio Station of Punta Arenas (CBM), using frequencies and schedules indicated in the book of Coastline Stations, List IV, of the International Telecommunication Union (ITU).

There must be direct contact with Punta Dungeness lighthouse (CBM-71) or Cabo Espiritu Santo lighthouse (CBM-72), 20 nautical miles from the landfall point, on VHF Channel 16.

Punta Arenas and Punta Delgada Stations will also provide the following information:

Traffic existing in the area.
Position of oil platforms and naval installations.
Indication of anchoring zone and waiting area for pilot.
Weather conditions.
Indications about tides.
Information about urgent Notice to Mariners.

Shipmaster's Report: January 1986.

The transit through Magellan Strait went very smoothly. There are no great difficulties as long as vessel has a good and reliable radar. Extra caution in necessary in Paso Turtoso but there is no problem in passing there during darkness.

Communications with our Agent were good. We sent telex over Maritex and they answered with cable via Valparaiso Radio. Information required by them was a minimum, g.r.t. the most important for obvious reasons. There are no paper formalities at Punta Arenas, pilot boarding was straight forward.

Pilot boards one mile due East of Punta Arenas breakwater, and leaves at Possession Bay. Our pilot left just after the First Narrows inposition: Lat. 52° 24' S., Long. 69° 24' W. There are plans to build aPilot Station at Punta Felix in position: Lat. 52° 58' S., Long. 74° 04' W.and thus making it compulsory to take a Pilot for the whole Strait (ocean to ocean). According to our pilot this to be effective late 1986 or early 1987.

There are now two reporting points, Los Evangelistas in position: Lat. 52° 23' S., Long. 75° 07' W. at the West entrance, and Cabo Espiritu Santo in position: Lat. 52° 40' S., Long. 68° 36' W. at the East entrance.

VHF contact to be made with these stations when passing them. They require such information as g.r.t. length, cargo, etc. Their English is fairly good.

Our Pilot did not agree that the best time to pass Punta Arenas was at high water. Because the tide varies in such a way that vessel still has the tide against in the Narrows. Instead he recommended that the tide was calculated for the First and Second Narrows respectively, (with Chilean tables). And then the transit to be made in such a way that the vessel transits the First Narrows just after high slack water. This meant that the vessel would sometimes run against the tide in the Second Narrows. Since the tide in the First Narrows in much stronger, this is more favourable.

Advice from Agent: The Chilean Government issued Decree No. 397 imposing compulsory pilotage for the transit of Magellan Strait in both directions.

Same will become effective from 1st December, 1985, and will apply to all vessels, even those crossing ocean to ocean.

Vessels to request Pilots through an Agent in Punta Arenas well in advance of their ETA at either entrance of the Strait.

Westbound traffic will embark Pilots at Possession Bay (Lat. 52° 16' S., Long. 69° 10' W.) and disembark them at Punta Arenas.

Eastbound traffic will embark Pilots at Punta Arenas and disembark them at Possession Bay.

Also see "Shipmaster's Report" dated February 1993.

SHIPMASTER'S REPORT: January 1985.

Painting: We called recently at Iquique – Antofagasta – Valparaiso – San Vicente. In *all* ports scraping and painting the hull only allowed after having received permission from Port Captain.

Containers: When more than 6 containers have been (re)loaded on deck the lashing of same are to be checked by Surveyor of Port Captain's Office. Surveyor at San Vicente insisted on chains, even when twistlocks were used and containers only single stacked.

Stability: Prior departure last Chilean port, stability particulars to be given to Surveyor from Port Captain's Office.
Time: Summertime is kept, GMT minus 3 hours.

SHIPMASTER'S REPORT: February 1993.
Passage: Buenos Aires to Punta Arenas, Valparaiso, Talcahuano via Magallanes Strait and Chilean Inland Waters.
Prologue: Our vessel was the first company vessel to transit Magallanes, as the South American liner service was extended to include ports in Chile. We sailed from Buenos Aires on 25th February bound for Punta Arenas, which is situated in the Magallanes Strait.
Pilotage: It is mandatory for foreign flag vessels to embark 2 pilots at Possesion Bay, which is situated about 23 miles West of Punta Dungeness Light. Arrangment of pilot should be made through the main Agent at Valparaiso, at least 3-4 days prior to arrival. Pilots fly from Valparaiso to Punta Arenas and then by road to Possesion Bay. Pilotage is compulsory from Possesion Bay to Punta Arenas and vice versa. It is also compulsory to take 2 pilots from Possesion Bay if vessel is bound for any ports in Chile. However, it is not mandatory to take a pilot on departing Punta Arenas if vessel is Westbound through the Magallanes Strait (exiting at Cabo Pillar), and not calling at any Chilean ports on the Pacific side. But it should be borne in mind that, should a Master decide to embark pilots (always 2 pilots) at Punta Arenas or Possesion Bay for the passage through the optional pilotage area between Punta Arenas to Cabo Pillar, the pilots cannot be disembarked at Cabo Pillar.

The vessel has to proceed Northward (through Pacific) along the Chilean coast for over 2 days, until the pilot disembarkation points at Golfo de Penas (approximate position 43° 20' S., 73° 38' W.) or at Ancud (approximate position 41° 51' S., 73° 50' W.) or until Concepcion Bay or Valparaiso. No matter where the pilots are disembarked (at any points as mentioned above), they return to their base at Valparaiso (all expense on owners' account).

The exercise of having to overcarry 2 pilots beyond Cabo Pillar may sound quite strange, but the fact becomes quite clear when the vessel invariably meets hostile weather at the Western part of the Magallanes Strait (where it meets Pacific), as such pilot disembarkation facilities do not exist. The seas in that area are always very rough with heavy swell, especially when the wind is S.W. to West, which unfortunately is the case most the time, and billowing to Force 8 – 9 or more with swells 4 m. – 6 m. in height under normal circumstances.

Weather in this part changes without warning. North or Northwesterly wind brings some respite from Westerly swell, but as soon as the wind backs to West or S.W., heavy rolling cannot be escaped. In order to avoid this notorious zone, the only escape is to take the inland route instead of exiting to Pacific at Cabo Pillar.

As regards the pilotage fees from Punta Arenas up to Valparaiso, it is a fixed amount depending upon the ship's g.r.t., and it is regardless of the fact whether vessel chooses to proceed via inland waters or via Pacific. Pilots however only take charge if vessel transits inland sea/channels. In our case, we arrived in Possesion Bay on 2nd March and embarked 2 pilots, who took us to Punta Arenas as we had cargo to discharge. The vessel was berthed by the Harbour Pilot on arrival at Punta Arenas, and the Magallanes Strait pilots disembarked to proceed to hotel ashore (all expenses on ship's account). We sailed from Punta Arenas on 5th March, and the Magallanes pilots returned onboard about one hour prior to sailing. We were bound for Valparaiso.

It is mandatory to provide senior officer status to the pilots, and they should be lodged in separate cabins. They certainly deserve excellent treatment, as their job is really demanding considering more than 700 miles of arduous passage through the inland waters. The pilots appeared to be very helpful and congenial.
Route Selection: It remains the Master's prerogative to opt for inland channel (which commences about 31 miles S.E. of the Cabo Pillar), or taking to Pacific after exiting at Cabo Pillar. The passage through the inland channel is about 17 miles longer and very exciting with 2 bottlenecks which require special care and precise timing. On proceeding (Northward) via inland channel, it is necessary to pass Summer Passage (Paso Summer) with a maximum draft of 25 ft. at any state of tide, and remain within yards of the shoal marking buoy. This stretch is maximum 300 m. long and safe width of about 100 m. Speed was reduced to minimum prior to the shoal depth, and the engine was stopped in time to prevent any squatting. The bottom is flat rock and the sounding increases to 60 m. or more immediately before or after the shoal patch. We had reduced our draft to 7.0 m. with a trim of 50 cm. by the stern, in order to have good steerage. However, there is an alternate passage (via Canal Gray), which may have as narrow navigable channel as Summer Passage (maximum draft 10.0 m.). But this channel has to be passed only in daylight hours and with reasonable visibility.

The second constriction is the English Narrows (Lat. 48° 59' S., Long. 74° 26' W.), which must be navigated in daylight hours and precisely at slack water. Vessels up to 180.0 m. LOA are allowed to pass via English Narrows. This is a real bottleneck and involves 2 alterations of course of more than 90° each within a distance of less than 0.75 miles. These turns had to be negotiated at full speed with generous use of helm. The exercise is breathtaking and even more exciting when proceeding in the opposite direction.

In order to avoid the English Narrows, a vessel may exit to Pacific by making the detour at Paso Caffin (50° 09' S., 74° 44' W.), and leave via Trinidad Channel. But the decision to opt for Trinidad Channel should be made only if it is considered safe enough for the subsequent Northward passage through the Pacific, as weather there may not be too different from what it has been near the Western entrance of Magallanes Strait. If continuing via English Narrows, the inland sea terminates at San Pedro (in Golfo de Penas). The whole stretch of this passage, beginning from Estrecho de Magallanes until San Pedro, is known as Patagonian Channel. The Patagonian Channel is about 300 miles long and affords relatively smooth waters as compared to the frequent gales and heavy weather associated with heavy deep swell, so often experienced along the Chilean coast in the Pacific.

The passage via Patagonian Channel features high and abrupt shores, steep to and sheer cliffs, numerous peaks and mountain ranges often capped with snow, waterfalls, glaciers, ice and icebergs. We met small icebergs between Canal Wide and Canal Concepcion. These icebergs originate from the adjacent glaciers, and are driven into inland seas by Easterly wind, most frequently in Summer, and sometimes are menacing enough to warrant reduction in speed or stoppage to avoid propeller damage or nipping. We did not meet with any icebergs during our Northward passage, but encountered many of them during our return passage 11 days later. On the whole, the Patagonian Channel offers perhaps the most panoramic views and grandeur rarely seen anywhere.

Another important fact about pilotage that should be known is that, although the pilots remain on board until their disembarkation at any positions as have been mentioned earlier, the pilotage fees are payable up to their return to Valparaiso (regardless of point of disembarkation), but their responsibility ceases when passing San Pedro Light (47° 43.5' S., 74° 47.5' W.) in Golfo de Penas. There is an optional patch of inland channel of about 280 miles which begins at Darwin Channel, and continues via Moraleda Channel and terminates at Ancud Pilot Station. This optional pilotage costs around U.S.$ 3,400.00 for this size of vessel (15,125 g.r.t.), and may be used, should it be necessary to avoid heavy seas. However, during our passage both North and Southbound, we did not use this optional channel as the weather was not so harsh as to warrant use. The optional pilotage though increases the distance by about 90 miles, but pays a handsome dividend in terms of relatively calm weather. Informatively, there is a surcharge of 5% on normal pilotage fees, should a vessel meet with heavy weather in Pacific after having decided to proceed along the same instead of the Patagonian Channel. An additional 5% surcharge is levied in the event of an erratic gyro compass.
Passage: Once it was decided to use the Patagonian Channel as described under "Route Selection", it is now described below, the passages through which we transitted, as it may serve as a good lead in the study of charts and Admiralty sailing directions. Details of routes are given from Possesion Bay up to Valparaiso in several parts.
Possesion Bay to Punta Arenas: B.A. Charts No. 1692, 1693 and 1694.

On rounding into Possesion Bay from a position South of Punta Dungeness, great care was exercised due to very strong tide. Pilot boarded precisely at the position marked on chart. Vessel followed the printed track on the chart until up to Punta Delgada. A radar station is situated there to track all ships approaching from the East, as well as all outbound ships. At times of heavy weather, pilots board near Punta Delgada. Great caution is necessary when transitting Primera Angostura and Segunda Angostura, due to strong tide which may attain 6 – 8 knots at Spring tide. The safest passage is to keep the vessel mid-channel. After clearing the Segunda Angostura, strength of tide gradually diminishes to around 1 – 2 knots. After passing about 1 mile East of Isla Magdalena, we proceeded direct to Punta Arenas, as prudent as navigation would permit.
Punta Arenas – Golfo de Penas: Chart No. 1281.

After sailing from Punta Arenas, the passage Westward through the Paso Ancho – Paso Ingles – Paso Larga – Paso del Mar and Magallanes Strait are deep and wide. On passing Cabo Froward whereafter may be the beginning of rain, snow, strong winds, gales, squalls and thick weather, which may progressively worsen as vessel proceeds N.W. through the Strait.

Interestingly, Cabo Froward (53° 54' S., 71° 18' W.) is the Southern most tip of the South American continent. The lands South of this point and on the Southern shore of Magallanes Strait are all islands, and obviously not connected to the mainland of South America.

It would be pertinent to quote from the sailing directions that "at Cabo Froward, the squalls are exceptionally heavy, the weather frequently changes to heavy rain or snow, and the shores are often obscured. This change in weather is often very striking. It is seldom however, that there are not occasional clearings which enable the position of the vessel to be ascertained".

Canal Smyth: Charts No. 631 and 1282.

When passing the Racon at Pasa Roda (52° 55.2' S., 73° 49.5' W.), course is altered to N.N.E. to head for fairway light at the entrance to the Canal Smyth, and the recommended track as printed on the charts is followed.

Canal Mayne/Canal Gray: Charts No. 631 and 1282.

After following the charted track for about 24 miles, generally Northward beginning abeam to fairway light, vessel would arrive at position Lat. 52° 25.5' S., Long. 73° 40' W., abeam of Punta Mary, where choice has to be made whether to follow Canal Mayne or Canal Gray (Canal Gray is only navigable during daylight hours as stipulated by Chilean rules). Canal Mayne leads to Paso Summer, which can be transitted at any time, but maximum draft is restricted to 24 ft., as advised by the pilot. However, admiralty sailing directions quotes " Canal Mayne is usually preferred by vessel with a draft not exceeding 6.7 m.". We passed with 6.8 m. draft during Northward passage, and 7.0 m. during Southward passage. We stopped engine when passing the first buoy (going up from South), which is located at Lat. 52° 19.1' S., Long. 73° 58.5' W., on our starboard, and remained within a few metres from the same in order to avail the relatively greater depth of 8.8 m. (as per Chilean Chart), adjacent to the buoy and along the reference line. Keeping the Hozven Light right ahead until abeam of the shoal marking buoy to starboard on the Northern bank of Banco San Juan, adjacent to Isla Larga and then alter to N.N.E., passing about 3 cables abeam to port "Ra Sim Lt" on Isla Cutler (see Chart No. 630). Distance about 11 miles from Point Mary to abeam to Northern tip of Isla Larga.

Estrecho de Collingwood: Charts No. 1282 and 630.

After steaming past the Isla Larga in Paso Summer (Canal Mayne), we followed the printed track for about 22 miles to enter Estrecho de Collingwood via Paso Victoria and then to Sarmiento Canal via Paso Farquhar (distance from Paso Victoria to Paso Farquhar is about 15 miles). Numerous shoals and reefs exist along the route, but vessels can safely steer past all dangers by remaining in mid-channel.

Canal Sarmiento: Charts No. 1282, 630 and 537.

Followed Canal Sarmiento for about 50 miles (from Paso Farquhar) until a constriction at Punta San Marcos which is about 0.5 miles wide. Then another 2 similar bottlenecks at Punta Passage (about 18 miles further North of Punta San Marcos) and the other at Punta Propoise (a passage of about 4 miles, N.W. of Punta Passage), and thereafter the canal widens to a basin before entering into Canal Inocentes at Isla Juan Light, which is a further 6 miles of steaming (total distance of Canal Sarmiento beginning at Paso Farquhar until abeam to Isla Juan Light is about 78 miles).

Canal Inocentes: Charts No. 1282, 1286 and 537.

This canal is an open basin and continued for about 11 miles before merging with Canal Concepcion. It was a relatively comfortable passage.

Canal Concepcion: Charts No. 1286 and 537.

We continued past Isla Inocentes for about 9 miles along the printed track and merged with Canal Wide 22 miles later. This is a "Y" junction, and if altering to port (when going North), would lead to Canal Trinidad via Paso Caffin. Canal Trinidad is the exit route to Pacific, and can be utilised if the weather in the adjacent areas is considered to be safe enough from heavy seas. If exiting via Canal Trinidad, then the inland pilotage ceases on clearing Cabo Trinidad, but pilots have to be overcarried until up to any of the Pilot Stations mentioned earlier.

In our case, it was preferred to continue via the inland sea owing to adverse weather conditions on the Pacific side along the Chilean coast.

Canal Wide: Charts No. 1286 and 537.

The area contained between Canal Concepcion and Canal Wide (i.e. Punta Wilmot in the North and Isla Canning in the South) are sometimes infested with drift ice and icebergs, which flow out from the adjacent glaciers via Seno Penguin and Seno Europa. During our Northward passage, we did not encounter any ice, but during our Southward passage, small sized icebergs were found scattered all over the area. In Summer time with an Easterly wind, large amounts of icebergs flow into the canal. The sights of the icebergs were very pleasant to watch by day (as long as they were no bigger), but can pose significant problems during night for obvious reasons.

After entering Canal Wide (at Punta Squire), we steamed about 32 miles along the recommended track before meeting another "Y" junction at the South end of Isla Saumarez. The choice of route was to pass via Canal Grappler or Paso del Abismo-Canal Escape (these canals are located on either side of Isla Saumarez).

The pilot told us that it is conventional to use Canal Grappler when Northbound and Canal Escape when Southbound. This stretch is about 18 – 20 miles long either way. As we were Northbound, we passed through Canal Grappler. When Southbound, we passed through Canal Escape and Paso del Abismo, and it was one of our most spectacular and memorable passage. This passage is only 2 cables or less wide with sheer and steep rocky mountains rising to staggering ranges of 2,000 ft. – 4,000 ft. The depth in the canal seems to be abysmal in relation to our draft, hence of no consideration. We only kept mid-channel and watched with wonder, as we darted through the passage, and broke the silence as we blew our horn which resonanced long enough to feel like eternity.

Angostura Ingles (English Narrows): Charts No. 570 and 1286.

After passing the island situated a few miles North of Isla Saumarez, begins the phobia of English Narrows which lies 25 miles ahead. This is the narrowest part of the whole channel and perhaps the most thrilling for any navigator. It lies between Isla Wellington and the mainland and extends 4 miles N.N.E. to Canal Messier. The pilot suggested that the passage through the English Narrows should only be attempted in daytime with fair weather and slack water. The narrowest parts are barely 1 – 2 cables wide and involve 2 alterations at right angle within a span of 0.75 miles. In order to properly time arrival at English Narrows, it might be necessary to anchor at Puerto Eden when Northbound, or at Puerto Gray when Southbound. The tide through the narrows attain 3 – 5 knots, and as such it is necessary to await slack water. Daytime transit is imperative for a better and correct perception of ship's rate of swing.

The pilots gave us written instructions to exercise all possible cautions including manning of forward anchor station. We found the pilots to be very confident and capable, which are befitting their experience of transitting the English Narrows hundreds of times.

The Southbound passage through the English Narrows requires more skilled, judicious and timely use of helm and engine. I would like to describe the manoeuvre of our Southward passage for the benefit of the readers of this report, and should be read in conjunction with the enclosed extract from Chilean chart for the relevant portion (See "Plan"). About half an hour before the final approach, the pilot observed the helm response at various degrees of helm. Then the vessel was lined up on heading 175° with the unlighted beacon off Isla Cabrales. We have been maintaining sea speed at 105 r.p.m. As the buoy "Bo Caution Norte" bore 3 points on starboard bow, starboard helm of 15° was given. Then as the beacon on the Northern end of Isla Medio Canal opened out to 2 points on the port bow, helm was eased off to midship and soon after, 15° of port helm was applied. At the same time double ring was given on the telegraph (prearranged with the Chief Engineer) for maximum r.p.m. As the r.p.m. shot up to 115 – 118 within seconds, the initial swing to starboard was arrested and very soon bow fell off to port under the effect of 15° port helm. At that instant, I think I was holding my breath which I only let go once I saw the bow swinging to port, thus getting away from the mountain which laid dead ahead at 0.5 cables from the forecastle, while the vessel was moving at break neck speed. Thanks to the transverse thrust of propeller which must have augmented the ship's rate of swing. In less than 5 minutes, the whole exercise was safely over and a job well done. It is much easier said than done, and I could not conceal my gratitude to the pilots in admiration for one of the most spectacular manoeuvres I have ever had the pleasure to witness. In my opinion, the Southward passage through the narrows is more tedious than the Northward passage through the same.

Canal Messier: From English Narrows (going up North), we entered Canal Messier which is fairly wide (2 – 3 miles), and continued for another 75 miles until abeam of San Pedro Light (in Golfo de Penas). The inland pilotage ceased at San Pedro Light. Total distance (pilotage) from Punta Arenas to San Pedro is about 600 miles and was piloted in 45 hours. However the transit time is liable to increase if the ship has to wait for slack water and daylight to pass English Narrows.

The current in the Patagonian Channel is tidal and rarely exceeds 2 knots, except at the bottlenecks where it is quite strong. The current runs along the axis of the channel and so does the wind, which is either from ahead or following. Occasional rain showers were experienced, but it hardly lasted beyond a few miles as the topography of the mountains changed.

The mountains and its shore line (if any) are desolate, except for the frequent schools of seals/sea wolves and water ducks which can be seen on the shores. The mountains are rocky with thin layers of top soil in most places, giving rise to wild trees, which all appear to be leaning to South owing to predominantly Northerly wind. The leeward sides of the peaks were still generally covered with snow, giving an indication of harsh weather in Winter.

The pilots issued certificates to all members on board conferring the title of "Honourable Explorer of the Magallanes Strait". This is a very impressive certificate and issued to seafarers transitting the Magallanes Strait for the first time.

San Pedro to Valparaiso: The passage from San Pedro in Golfo de Penas to Valparaiso was uneventful with a moderate amount of rolling, as such I decided not to use the optional pilotage area which involved additional pilotage dues, as have been mentioned earlier in detail. We arrived at Valparaiso on 9th March and the Magallanes pilots disembarked there.

Valparaiso to Talcahuano (in Concepcion Bay): We sailed from Valparaiso on 12th March and arrived Talcahuano on 13th March. The passage was normal. As we were due to sail for Santos on 15th March, through the same route (Patagonian Channel and Magallanes Strait), we had to embark pilots (2 pilots) at Talcahuano, who arrived from Valparaiso on 14th March and came on board just before our sailing on 15th March at 1030 hrs.

Talcahuano to Possesion Bay: During the sea passage up to San Pedro, we met with dense fog in the North and very rough sea in the Southern half of our passage. When we were about 100 miles S.W. of the Pilot Station at Ancud (located North of Chiloe Island), we had to make a deviation to land a crew member who was suspected to be suffering from kidney stones. The radio medical advice was sought from Goonhilly, U.K., and the doctor advised immediate hospitalisation within 2 – 4 hours. The nearest port with medical facilities was at Ancud, though it amounted to a deviation on a reciprocal course for about 6.5 hours. On arrival at Ancud Anchorage we dropped anchor. The Agent boarded immediately with doctor, Immigration Officer and a Naval Officer. The doctor examined the patient and also suggested immediate hospitalisation. The crew member was landed right away and we were underway again in less than an hour. However, we lost nearly 14 hours on this emergency. It is noteworthy that South of Chiloe Island, there is no other place until Punta Arenas where proper medical facilities are available. This delay was a blessing in disguise as we were able to transit the English Narrows without having to anchor for daylight and slack water.

The remainder of the passage from San Pedro until Possesion Bay was uneventful, and we disembarked the pilots (at Possesion Bay) on 20th March at 0105 hrs., and then continued with our onward passage to Santos.

Weather Forecasts: After sailing from Buenos Aires enroute to Punta Arenas, no weather forecast is available in English, although Argentinian station is supposed to cover all these areas in English as well. Faced with this handicap, the Marine Superintendent arranged the services of the Oceanroute Inc., USA, to furnish us with weather reports as well as weather route. We found their predictions of lows, highs and direction of wind and swell very accurate. Their prognosis for the next 3 days were in accordance with the projected position of the ship and as such were of immense help to decide on the choice of route. However, their forecasts do not include the Patagonian Channel, which of course was not of much importance to us as the channel is well sheltered, and we were primarily concerned with the weather on the Pacific side, in order to decide if to use the Patagonian Channel or exit the Pacific at Cabo Pillar or at Cabo Trinidad. The weather report which is available (on W/T) in English from Chile is good but forecast valid for 12 hours only, as such it was not possible to make correct assessment in advance, which is of great importance in view of the frequent bad weather in the Southern part of Chile. Furthermore, the above forecast was available in English only once in 24 hours (at 1210 UTC after the forecast in Spanish, from Valparaiso Radio/CBV). However, they broadcast weather forecasts twice daily in Spanish (also valid for 12 hours only). On the whole, the services of Oceanroute was worthwhile, but in my opinion it is of not much use to weather route a ship in these waters.

Position Report: While within Argentinian waters, Position Report has to be made on W/T to Naval Radio Station L2V at 1000 hrs. LT and 2000 hrs. LT. Similar report has to be made to any Chilean Coast Station (while within Chilean waters) daily at 0800 hrs. LT and 2000 hrs. LT. The report comprises of ship's name, Call Sign, Port of Registry, position, course, speed and ETA.

AUTHORITY: Direccion General del Territorio Maritimo Y de Marina Mercante, Errazuriz 537, Valparaiso, Chile. *Tel:* 258091. *Telex:* 230602, 330461.

CHILREP: Chilean Ship Reporting System: (See Plan)

The Chilean Ship Reporting System (CHILREP) has been established in accordance with the International Convention on Maritime Search and Rescue, 1979 (SAR Convention), which came into effect in June 1985, and requires signatories to the Convention to provide, amongst other actions, marine search and rescue (SAR) facilities for prescribed areas, and also recommends the establishment of a Ship Reporting System. Chile ratified the Convention in October 1981, and has accepted SAR responsibility for the area shown in the attached general instructions and CHILREP procedures (See "Plan").

The CHILREP is operated by the General Directorate of the Maritime Territory and Merchant Marine (DGTM y MM) which is a Directorate of the Navy. It is a "positive" system, that is, if a Position or Final Report is missed, the Maritime Search and Rescue Coordinator Centre or Subcentre will initiate checks to establish the Safety of the vessel. These checks are aimed solely at establishing whether a vessel is safe, and include broadcasts to shipping and communications with owners, agents or charterers. If these checks are unsuccessful, then search actions will be initiated.

Should you need any further information, please do not hesitate to contact the Head of the Maritime Search and Rescue Service (Tel: 258091. Telex: 230602 DGTM CL and 330461 DGTM CK. Fax: 252539).

Chile has an extensive coast where 5 Maritime Search and Rescue Coordination Centres (MRCCS) and 11 Subcentres (MRSCs) are located, fitted with modern maritime communication systems and facilities to carry out search and rescue operations. The responsibility area also covers the Drake Passage and an area which extends to the Antarctic, where weather conditions are generally adverse. There is an Antarctic Patrol stationed at such area during Summer months, in order to assist vessels which may require assistance and to combat oil spills.

Chile also has a LUT (Local Users Terminal) of COSPAS-SARSAT System (International Satellite System for Search and Rescue), which receives alerts from radio beacons in 406 MHz and 121.5 MHz.

Participation in this system is voluntary for foreign vessels and it began in December 1991.

Notwithstanding that participation in the system is voluntary, domestic regulations provide that every foreign vessel bound to a Chilean port must report her arrival at least 24 hours in advance. When foreign vessels navigate inland waters of the Chilean Republic, they must report their position at 1200 Z and 2400 Z. In all other conditions, the system considers a daily report between 1200 Z and 1600 Z.

FUNCTIONS OF THE MARITIME SEARCH AND RESCUE SERVICE:

The International Convention for the Safety of Life at Sea requires governments to ".... ensure that any necessary arrangements are made for the rescue of persons in distress at sea, around its coasts". The Chilean Government, being part to the Convention, established the Maritime Search and Rescue Service in December 1976.

The Maritime Search and Rescue Service depends on the General Directorate of the Maritime Territory and Merchant Marine which is the National Maritime Authority.

The principal function of this Service is the coordination of marine search and rescue activity within the area of Chilean responsibility.

The facilities are available to all seafarers whether they are private boating enthusiasts, commercial fishermen or professional seamen of the merchant fleets of the world.

The Service is operated 24 hours a day by officers with considerable marine qualifications and experience and specialised knowledge of search and rescue procedures.

Communications are the very heart of all search and rescue coordination, and the Service is well equipped with a network giving worldwide coverage.

CHILEAN SHIP REPORTING SYSTEM GENERAL INSTRUCTIONS:

1. **Introduction:**
   The CHILREP is a ship reporting system established in accordance with the International Convention for the Safety of Life at Sea and the Convention on Maritime Search and Rescue. Its objectives are:
   (a) To limit the time between the loss of a vessel and the initiation of search and rescue action, in cases where no distress signal is sent out.
   (b) To limit the search area for a rescue action.
   (c) To provide up-to-date information on shipping resources available in the area, in the event of a search and rescue incident.

   The coverage of CHILREP and the Chilean maritime search and rescue area, as advised to the International Maritime Organisation (IMO), are identical.

2. **Main Features of CHILREP:**
   On departure from a Chilean port or on entering the CHILREP area, a Sailing Plan (SP) is sent to the Communications Station which relays the information to the Service where a computerised plot is maintained for the vessel position. Position Reports (PR) are sent once a day between 1200 Z and 1600 Z, so that a report is received every 24 hours. Should a vessel at any time be in a position more than 2 hours steaming from the position that would be predicted from the last SP or PR, then a Deviation Report (DR) must be sent. Failure to do so will result in the search being concentrated in the wrong area in the event of a missed report, and the possibility that survivors from a striken ship may not be found. On arrival at the ship's destination or on departure from the CHILREP area, a Final Report (FR) is to be sent. CHILREP is a positive reporting system in that, should an expected report become overdue, actions which include worldwide communication checks, the alerting of ships in the vicinity and the launching of search aircraft, will be initiated.

   Dates and times contained in CHILREP reports are to be in Universal Coordinated Time which is indicatd by the suffix "Z".

CHILREP FORMAL COMPONENTS:

The following list shows all the CHILREP format components. The full list of components do not have to be included when sending CHILREP reports. Master should include those components shown in the examples given for each report, others may be included at the Master's discretion or when relevant to the type of report being sent.

The following format complies with IMO Resolution A.648(16) of 31st October 1989.

A. Vessel's name and call sign.
B. Date/Time of Position (UTC).
C. Position (Latitude and Longitude).
D. Geographical position (optional, to be used when sailing near the coast or inland waters).
E. Course.
F. Speed (vessels's anticipated average speed until next report).
G. Name of last port of call (when entering from overseas).
H. Date/Time and point of entry into CHILREP system (point of entry is the latitude/longitude at which the vessel is entering the CHILREP area, or the Chilean port from which the vessel is departing).
I. Next overseas destination and estimated date and time of arrival.
J. Whether pilot is carried on vessel.
K. Date/Time and point of exit from CHILREP system (point of exit is the latitude/longitude at which the vessel is leaving the CHILREP area, or the Chilean port the vessel is to arrive).
L. Route (vessel's intended track-state-Rhumb Line/Coastal/Great Circle).
M. Coast radio/maritime communications stations monitored (include INMARSAT and SELCALL number, if fitted).
N. Date/Time of next report (reports between 1200 Z and 1600 Z).
O. Draft.
P. Cargo (brief indication).
Q.* Defects or other limitations.
R.* Pollution (reports of any pollution seen).
S. Weather conditions in area (optional).
T. Ship's Agents.
U. Ship type and size.
V. Medical personnel carried (Sailing Plan only).
W. Number of persons on board.
X.* Remarks.

* Harmful substances, Marine Pollution and Dangerous Goods refer Appendix A.

TYPES OF REPORTS:

1. **Sailing Plan Report (CHILREP SP):**
   A Sailing Plan Report is sent to the communications stations within 24 hours prior or up to 2 hours after entry into the CHILREP area or departure from a port within the CHILREP area.
   The SP contains information necessary to initiate a plot and give an outline of the intended passage.
2. **Example of SP on Entering CHILREP Area:**

Format	*Example*
CHILREP SP	CHILREP SP
A. Vessel's name and call sign.	A. MAIPO/ELDQ4
F. Speed	F. 14
G. Name of last port of call (when entering from overseas).	G. AUCKLAND
H. Date/Time and point of entry into CHILREP system.	H. 280930Z 3320S 12000W
K. Date/Time and point of exit from CHILREP system (Chilean port of arrival).	K. VALPARAISO 042000Z
L. Route	L. GC
M. Coast radio/maritime communications stations monitored (INMARSAT and SELCALL number, if fitted).	M. CBV, CBT, INMARSAT 1242731
N. Date/Time of next report.	N. 281400Z
V. Medical personnel	V. NO
X. Remarks	X. NIL

Message Transmitted: CHILREP SP A MAIPO/ELDQ4 F 14 G AUCKLAND H 280930Z 3320S 12000W K VALPARAISO 042000Z L GC M CBV CBT INMARSAT 1242731 N 281400Z V NO X NIL.

3. **Example of SP Submitted on Departure from a Port within CHILREP Area to a Port Outside CHILREP Area:** (May be submitted prior to sailing and up to 2 hours after departure).

Format	*Example*
CHILREP SP	CHILREP SP
A. Vessel's name and call sign.	A. ACONCAGUA/CBAC
F. Speed	F. 16
H. Date/Time and departure port for this voyage.	H. 161300Z ANTOFAGASTA
I. Next overseas destination and ETA.	I. CALLAO 181500Z
K. Date/Time and point of exit from CHILREP area.	K. 171430Z 1821S 07530W
L. Route (vessel's intended track).	L. RL
M. Coast radio/maritime communications stations monitored.	M. CBA, CBA2
N. Date/Time of next report.	N. 171500Z
V. Medical personnel	V. NO
X. Remarks	X. NIL

Message Transmitted: CHILREP SP A ACONCAGUA/CBAC F 16 H 161300Z ANTOFAGASTA I CALLAO 181500Z K 17143)Z 1821S 07530W L RL M CBA, CBA2 N 171500Z V NO X NIL.

4. **Example of SP Submitted on Departure from and to a Port both within CHILREP Area:** (May be submitted prior to sailing and up to 2 hours after departure).

	Format		*Example*
	CHILREP SP		CHILREP SP
A.	Vessel's name and call sign.	A.	ANAKENA/CBAK
F.	Speed	F.	15
H.	Date/Time and point of entry into CHILREP system (Chilean Port of Departure).	H.	141200Z TALCAHUANO
J.	Whether Pilot is carried on vessel.	J.	YES
K.	Date/Time and point of exit from CHILREP System (Chilean Port of Arrival).	K.	PUNTA ARENAS 171300Z
L.	Route (vessel's intended track).	L.	Coastal, inland waters
M.	Coast radio/maritime communications stations monitored.	M.	CBT, CBP, CBM
N.	Date/Time of next report.	N.	151200Z
V.	Medical personnel	V.	YES
X.	Remarks	X.	NIL

Message Transmitted: CHILREP SP A ANAKENA/CBAK F 15 H 141200Z TALCAHUANO J YES K PUNTA ARENAS 171300Z L COASTAL-INTERNAL WATERS M CBT, CBP, CBM N 151200Z V YES X NIL.

5. **Example of SP Submitted when transiting CHILREP Area from and to a Port not in CHILREP Area:**

	Format		*Example*
	CHILREP SP		CHILREP SP
A.	Vessel's name and call sign.	A.	MAIPO/ELDQ4
F.	Speed	F.	16
G.	Name of last port of call.	G.	BUENOS AIRES
H.	Date/Time and point of entry into CHILREP System.	H.	150230Z 5630S 06716W
I.	Next overseas destination and estimated time arrival.	I.	AUCKLAND 301600Z
K.	Date/Time and point of exit from CHILREP System.	K.	212300Z 5500S 12000W
L.	Route	L.	RL to enter CHILREP then G.
M.	Coast radio/maritime stations monitored.	M.	CBM, CBV, ZLB
N.	Date/Time of next report.	N.	151600Z
V.	Medical personnel carried.	V.	NO

Message Transmitted: CHILREP SP A MAIPO/ELDQ4 F 16 G BUENOS AIRES H 150230Z 5630S 06716W I AUCKLAND 301600Z K 212300Z 5500S 12000W L RL TO ENTER CHILREP THEN GC M CBM, CBV, ZLB N 151600Z V NO.

6. **Position Report (CHILREP PR):**

Each day between 1200Z and 1600Z, a PR should be transmitted to the communications centres. The information contained in the PR will be used to update the plot. The PR must reflect the position, course and speed of the ship at the time of the report. If it is necessary to alter the nominated daily reporting time, the alterations should be shown in the PR sent before the change.

7. **Example of a PR:**

	Format		*Example*
	CHILREP PR		CHILREP PR
A.	Vessel's name and call sign.	A.	MAKEDONIA STAR/ CBMK
B.	Date/Time of position (UTC).	B.	141200Z
C.	Position	C.	4230S 07715W
E.	Course	E.	180
F.	Speed	F.	14
X.	Remarks (for example, change of reporting time or revised ETA).	X.	NIL

Message Transmitted: CHILREP PR A MAKEDONIA STAR/CBMK B 141200Z C 4230S 07715W E 180 F 14 X NIL.

8. **Deviation Report (CHILREP DR):**

Should a vessel, at any time be in a position more than 2 hours steaming from the position that would be predicted from the last SP or PR a Deviation Report must be sent.

9. **Example of a DR:**

	Format		*Example*
	CHILREP DR		CHILREP DR
A.	Vessel's name and call sign.	A.	MAKEDONIA STAR/ CBMK
B.	Date/Time of position (UTC).	B.	071700Z
C.	Position	C.	4730S 07710W
F.	Speed	F.	8
I.	Destination and ETA	I.	TALCAHUANO 092330Z
X.	Remarks (include reason for deviation, for example, reduction in speed due to weather, change of route or port of destination, etc.)	X.	Reduced speed due to heavy weather.

Message Transmitted: CHILREP DR A MAKEDONIA STAR/CBMK B 071700Z C 4730S 07710W F 8 I TALCAHUANO 092330Z X REDUCED SPEED DUE TO HEAVY WEATHER.

10. **Final Report (CHILREP FR):**

The Final Report FR is the information to terminate participation in the system. Accordingly reports should be sent prior to or on arrival at port, or when a ship has departed from the service area of the system.

When a FR is intended to be sent after departing from the service area, such a report should be sent as soon as practicable.

11. **Example of a FR on Arrival at a Port in CHILREP Area:**

	Format		*Example*
	CHILREP FR		CHILREP FR
A.	Vessel's name and call sign.	A.	ACONCAGUA/CBAC
K.	Date/Time and port of arrival.	K.	181315Z ARICA
X.	Remarks (must include the words final report).	X.	FINAL REPORT

Message Transmitted: CHILREP FR A ACONCAGUA/CBAC K 181315Z ARICA X FINAL REPORT.

12. **Example of FR, Vessel Departing CHILREP Area:**

	Format		*Example*
	CHILREP FR		CHILREP FR
A.	Vessel's name and call sign.	A.	QUEEN ELIZABETH 2/ GBTT
K.	Date/Time and point of exit from CHILREP area.	K.	110430Z 1821S 08745W
X.	Remarks (must include the words final report).	X.	FINAL REPORT

Message Transmitted: CHILREP A QUEEN ELIZABETH 2/GBTT K 110430Z 1821S 08745W X FINAL REPORT.

13. **Method of Passing Reports:**

(a) **In a Chilean Port:**

Reports may be transmitted either to the local coast radio station or to a main coastal station by any communications systems used.

Alternatively they may be passed in a written note which is to be sent to the Local Maritime Authority through the vessel's Agent.

(b) **At Sea:**

Reports must be transmitted to any main coast stations in times and frequencies indicated in List of Coast Radio Stations (UIT LIST IV) or in other publications which contain these updated data.

OVERDUE REPORTS:

To avoid unnecessary search action, it is important that ships report at the nominated reporting time each day, and send their FINAL REPORT when leaving the CHILREP area. If a ship is unable to pass a position report due to unserviceable radio equipment or illness of the radio officer, all attempts must be made to pass a signal to this effect through another vessel, port or other shore authority, either by VHF or use of emergency transmitter.

NOTES ON PROCEDURES:

1. **Date/Time Group:**

Dates and times contained in CHILREP reports are to be in Universal Coordinated Time (UTC) which is indicated by the suffix "Z".

Example: 17 October 1990, 1200 LMT, transmitted as 171600Z (+4).

2. **Latitude and Longitude:**

Latitude is a four digit group expressed in degrees and minutes, and suffixed with "N" for North or "S" for South.

Longitude is a five digit group expressed in degrees and minutes, and suffixed with "E" for East or "W" for West.

Example: 4230S for Lat. 42° 30' S, and 07840W for Long. 78° 40' W.

3. **Intended Route:**

Indicate Great Circle (GC), Rhumb Line (RL) or coastal with way points being followed, expressed in latitude or longitude. Courses are not required if way points are mentioned.

4. **Speed:**

Anticipated average speed vessel will make until next report time.

5. **Course:**

True course anticipated until next reporting time using three digit group. When more than one course will be steered, enter "various", the Service will interpret this as being the normal courses a vessel will follow on that particular passage. However, if the above assumption does not apply, clarification should be made.

6. **Radio Stations Monitored:**

List stations which the vessel normally works to contact managers, owners, charterers and agents, etc., in addition to Chilean maritime communications stations monitored. If the ship is fitted with INMARSAT, or SELCALL, the number should also be included.

7. **Severe Weather:**

Vessels which anticipate passing through areas of severe weather conditions or are experiencing severe weather, are urged to report their position at more frequent intervals to the Service.

8. **Geographical Position:**

When used, give well known names of landmarks.

9. **Weather Conditions in the Area:**

This is optional but desirable, when reported, the following items are recommended:

Pressure (HP), four digits. E.g.: 1024.
Wind direction and force in knots. E.g.: 220-18.
Air and water temperature when available (°C). E.g.: 12-6.
Dew point expressed in three digits (°C). E.g.: 135 (13.5).

APPENDIX A: Detailed Reporting Requirements:

1. **Dangerous Goods Reports (CHILREP DG):**

Primary reports should contain items A, B, C, M, Q, R, S, T, U of the standard reporting format; details for R should be as follows:

R. 1. Correct technical name or names of goods.
2. UN number or numbers.
3. IMO hazard class or classes.
4. Names of manufacturers of goods when known, or consignee or consignor.
5. Types of packages including identification marks or whether in portable tank or tank vehicle or packaged in vehicle, freight container or other transport unit.
6. An estimate of the quantity and likely condition of the goods.
7. Whether lost goods floated or sank.
8. Whether loss is continuing.
9. Cause of loss.

If the condition of the ship is such that there is danger of further loss of packaged dangerous goods into the sea, items P and Q of the standard reporting format should be reported; details for P should be as follows:

P. 1. Correct technical name or names of goods.
2. UN number or numbers.
3. IMO hazard class or classes.
4. Names of manufacturers of goods when known, or consignee or consignor.
5. Types of packages including identification marks or whether in portable tank or tank vehicle or packaged in vehicle, freight container or other transport unit.
6. An estimate of the quantity and likely condition of the goods.

Particulars not immediately available should be inserted in a supplementary message or messages.

2. **Harmful Substances Reports (CHILREP HS):**

In the case of actual discharge primary harmful substances reports should contain items A, B, C, E, F, L, M, N, Q, R, S, T, U, X of the standard reporting format. In the case of probable discharge, items B should also be included. Details for P, Q, R, T and X should be as follows:

P. 1. Oil or the correct technical name of the noxious liquid substances on board.
2. UN number or numbers.
3. Pollution category (A, B, C or D), for noxious liquid substances.
4. Names of manufacturers of substances, if appropriate, where they are known, or consignee or consignor.
5. Quantity.

Q. 1. Condition of the ship as relevant.
2. Ability to transfer cargo-ballast-fuel.

R. 1. Oil or the correct technical name of the noxious liquid discharged into the sea.
2. UN number or numbers.
3. Pollution category (A, B, C or D), for noxious liquid substances.
4. Names of manufacturers of substances, if appropriate, where they are known, or consignee or consignor.
5. An estimate of the quantity of the substances.
6. Whether lost substances floated or sank.
7. Whether loss is continuing.
8. Cause of loss.
9. Estimate of movement of the discharge or lost substances, giving current conditions if known.
10. Estimate of the surface area of the spill if possible.

T. 1. Name, address, telex and telephone number of the ship's owner and representative (charterer, manager or operator of the ship or their agent).

X. 1. Actions being taken with regard to the discharge and the movement of the ship.
2. Assistance or salvage efforts which have been requested or which have been provided by others.
3. The Master of an assisting or salvaging ship should report the particulars of the action undertaken or planned.

Particulars not immediately available should be inserted in a supplementary message or messages.

The Master of any ship engaged in, or requested to engage in an operation to render assistance or undertake salvage should report, as far as practicable, items A, B, C, E, F, L, M, N, Q, R, S, T, U, X of the standard reporting format.

3. **Marine Pollutants Reports (CHILREP MP):**

In the case of actual discharges, primary marine pollutants reports should contain items A, B, C, M, Q, R, S, T, U, X of the standard reporting format. In the case of probable discharge, items P should also be included. Details of P, Q, R, T and X should be as follows:

P. 1. Correct technical name or names of goods.
2. UN number or numbers.
3. IMO hazard class or classes.
4. Names of manufacturers of goods when known, or consignee or consignor.
5. Types of packages including identification marks or whether in portable tank or tank vehicle or packaged in vehicle, freight container or other transport unit.
6. An estimate of the quantity and likely condition of the goods.

Q. 1. Condition of the ship as relevant.
2. Ability to transfer cargo-ballast-fuel.

R. 1. Correct technical name or names of goods.
2. UN number or numbers.
3. IMO hazard class or classes.
4. Names of manufacturers of goods when known, or consignee or consignor.
5. Types of packages including identification marks or whether in portable tank or tank vehicle or packaged in vehicle, freight container or other transport unit.
6. An estimate of the quantity and likely condition of the goods.
7. Whether lost goods floated or sank.
8. Whether loss is continuing.
9. Cause of loss.

T. 1. Name, address, telex and telephone number of the ship's owner and representative (charterer, manager or operator of the ship or their agent).

X. 1. Action being taken with regard to the discharge and movement of the ship.
2. Assistance or salvage efforts which have been requested or which have been provided by others.
3. The Master of an assisting or salvaging ship should report the particulars of the action undertaken or planned.

Particulars not immediately available should be inserted in a supplementary message or messages.

The Master of any ship engaged in or requested to engage in an operation to render assistance or undertake salvage should report, as far as practicable, items A, B, C, M, P, Q, R, S, T, U, X of the standard reporting format.

APPENDIX B: Coast Radio Stations Handling CHILREP Messages:
I. Long and Medium Range Coast Radio Stations:

Call Sign	*Identification*	*Watch/Calling Frequencies*	*Working Frequencies*	*Schedules (UTC)*
CBV	VALPARAISO	A1A (Morse)		
	Playa Ancha			
	Radio	500 kHz	438 kHz	H24
		Common and	4349.0 kHz	0000-1200
		Channel 1	6337.0	2200-1400
		on each band	8522.0	H24
			12663.0	H24
			16914.5	1200-2400
			22473.0	1400-2200
	Selective	J3E R/Teleph.		
	Call (SELCALL)	MF		
	Number 1860	2182 kHz HF	2738.0 kHz	H24
		Channel 421	Channel 419	H24
		Channel 821	Channel 809	1200-2400
		Channel 1221	Channel 1211	1200-2400
		Channel 1621	Channel 1631	1400-0200
		Channel 2221	Channel 2225	1400-0200
		G 3E R/Teleph.		
		VHF		
		Channel 16	Channel 10	H24
			Channel 25	H24
			Channel 26	H24
		F1A R/Telex		
		HF		
		4 MHz	Series 9	0100-1200
		6 MHz	Series 9	0100-1200
		8 MHz	Series 9	H24
		12 MHz	Series 9	H24
		16 MHz	Series 9	1200-0100
		22 MHz	Series 9	1200-0100
		For CHILREP Use Command POS+		
CBA	ANTOFAGASTA	A1A (Morse)		
	Radio	MF		
		500 kHz	434 kHz	H24
		J3E R/Teleph.		
		MF		
		2182 kHz	2738 kHz	H24
		HF		
		Channel 421	Channel 401	H24
		G3E R/Teleph.		
		VHF		
		Channel 16	Channel 10	H24
			Channel 14	
			Channel 26	
CBT	TALCAHUANO	A1A (Morse)		
	Radio	MF		
		500 kHz	461 kHz	H24
		J3E R/Teleph.		
		MF		
		2182 kHz	2738 kHz	H24
		HF		
		Channel 421	Channel 401	H24
		G3E R/Teleph.		
		VHF		
		Channel 16	Channel 10	H24
			Channel 14	
			Channel 26	
CBP	PUERTO	A1A (Morse)		
	MONTT	MF		
	Radio	500 kHz	434 kHz	H24
		J3E R/Teleph.		
		MF		
		2182 kHz	2738 kHz	H24
		HF		
		Channel 421	Channel 401	H24
		G3E R/Teleph.		
		VHF		
		Channel 16	Channel 10	H24
			Channel 14	
			Channel 26	

Call Sign	*Identification*	*Watch/Calling Frequencies*	*Working Frequencies*	*Schedules (UTC)*
CBV/3	HANGA ROA	A1A (Morse)	464 kHz	H24
	Radio	500 kHz	512 kHz	
	(Easter Island)	J3E R/Teleph.		
		MF		
		2182 kHz	2738 kHz	H24
		HF		
		Channel 421	Channel 401	H24
		G3E R/Teleph.		
		VHF		
		Channel 16	Channel 10	H24
			Channel 12	
			Channel 14	
			Channel 26	
CBM	MAGALLANES	A1A (Morse)		
	Radio	MF		
		500 kHz	450 kHz	H24
		Common and		
		Channel 1 on	4322 kHz	H24
		4 and 8 MHz	8694 kHz	
		band		
		J3E R/Teleph.		
		MF		
		2182 kHz	2738 kHz	H24
		HF		
		Channel 421	Channel 401	H24
		G3E R/Teleph.		
		VHF		
		Channel 16	Channel 10	
			Channel 14	H24
			Channel 26	

II. **Short Range Coast Radio Stations:**

CBF	JUAN FERNANDEZ	A1A (Morse)		
		MF		
	Radio	500 kHz	472 kHz	1200-1600 2200-0200
		J3E R/Teleph.		
		MF		
		2182 kHz	2738 kHz	1200-1600 2200-0200
		G3E R/Teleph.		
		VHF		
		Channel 16	Channel 14	1200-1600 2200-0200
CBS	SAN PEDRO	A1A (Morse)		
	Radio	MF		
		500 kHz	458 kHz	H24
		J3E R/Teleph.		
		MF		
		2182 kHz	2738 kHz	H24
		G3E R/Teleph.		
		VHF		
		Channel 16	Channel 14	H24
CBX	BAHIA FELIX	A1A (Morse)		
	Radio	MF		
		500 kHz	434 kHz	H24
		J3E R/Teleph.		
		MF		
		2182 kHz	2738 kHz	H24
		G3E R/Teleph.		
		VHF		
		Channel 16	Channel 14	H24
CBN	CABO DE HORNOS	A1A (Morse)		
		MF		
	(Wollaston Is.)	500 kHz	472 kHz	H24
	Radio	J3E R/Teleph.		
		MF		
		2182 kHz	2738 kHz	H24
		G3E R/Teleph.		
		VHF		
		Channel 16	Channel 14	H24

APPENDIX C: Check List for CHILREP Reports:

CHILEAN REPORTS CHECK LIST

	SP	PR	FR	DR	
A	*	*	*	*	Name/Call Sign.
B		*		*	Date/time of position.
C		*		*	Lat./Long. of position.
E		*		+	Course
F	*	*		+	Speed
G	%%				Last port of call, only when entering from overseas.
H	*				Date/time and point of entry (Lat./Long.) into CHILREP area or Chilean port of departure.
I	%%			+	Next overseas destination and ETA.
J	%				Whether pilot is carried on vessel.
K	*		*	+	Date/time and point of exit, either the next Chilean port OR Lat./Long. when leaving the CHILREP area.
L	*			+	Route
M	*			+	Radio Stations monitored/INMARSAT and SELCALL number (if fitted).
N	*			+	Nominated daily reporting time.
V	*				Medical personnel carried.
X			*	+	Remarks

* Mandatory.

%% This information is only required when entering or departing the CHILREP area.

+ Include these only if affected by the deviation.

% Notification of pilot is required when route considers inland waters navigation.

ANTOFAGASTA (including La Chimba Cove):

23.39 S. 70.25 W. **(See Plan)**

DOCUMENTS: *Customs:*

General Ship's Manifest.
Cargo Manifest for the port.
Crew and Passenger List.
Personal Effects List.
Stores List.
General Declaration.

Maritime Authority:

Ship's Clearance from Last Port.
Crew List.
Passenger List.
Weapons Declaration.
Dangerous Cargo Declaration.

National Health Service:

Health Declaration.
Derat Certificate.

Agriculture Department:

Stores List.
General Declaration.

Interpol:

Crew List.
Passenger List.

APPROACHES: *Traffic Separation Scheme:* A separation scheme exists at the entrance to the port, one mile wide, covering following geographical points:

(a) Lat. 23° 37' 52" S., Long. 70° 25' 31" W.
(b) Lat. 23° 37' 52" S., Long. 70° 28' 50" W.

There is one-way traffic for ships sailing West, located between the mentioned separation scheme and a line between the following geographical points:

(a) Lat. 23° 36' 23" S., Long. 70° 25' 31" W.
(b) Lat. 23° 35' 30" S., Long. 70° 26' 58" W.

There is one-way traffic for ships sailing East, located between the mentioned separation scheme and a line between the following geographical points:

(a) Lat. 23° 39' 22" S., Long. 70° 25' 32" W.
(b) Lat. 23° 40' 22" S., Long. 70° 26' 30" W.

Principal traffic course is 090° – 270°.

PILOTAGE: Compulsory. Vessels calling at Antofagasta and willing to berth on arrival must proceed to the pilotage boarding station. Vessels that are to wait because of congestion or any other reason, are to anchor in the anchorage zone. Pilot will travel to and from the vessel in a launch specially assigned for this purpose. The launch is also used for mooring, and has VHF radio.

In order to have the vessel authorisation for manoeuvring, the ship must have:

(a) Two bower anchors with not less than 7 shackles of chain on each.
(b) Four mooring lines and two springs.

For vessels and port safety, in all berthing and/or unberthing, the assistance of one tug is compulsory. Vessels of less than 75 m. LOA do not need to comply with the above mentioned rule.

Two tugs wil be required for ships over 220 m. LOA.

Two tugs will also be required under the following special situations:

(a) Pier No. 4: Berthing of ships starboard side to, when other ships are docked at Piers No. 3 and No. 5.
(b) Pier No. 5: Unberthing of vessels docked starboard side to with no anchor in water.

Because of other ships in port, weather conditions or any other special situation, it is up to the Pilot to request a second tug.

All ships manoeuvring must request permission 4 hours in advance.

24 hours before arrival, vessels must inform the Maritime Authority their ETA, name, call sign, nationality, draft, last port of call and if there is any sickness on board.

Pilot Boarding Station:

The boarding area is within the following geographical points:

(1) Lat. 23° 37' 37" S., Long. 70° 24' 37" W.
(2) Lat. 23° 37' 37" S., Long. 70° 24' 18" W.
(3) Lat. 23° 38' 07" S., Long. 70° 24' 18" W.
(4) Lat. 23° 38' 07" S., Long. 70° 24' 37" W.

ANCHORAGE: Located outside the harbour between Paita Rocks and Cobre Norte Cove, with a depth from 25 m. to 40 m., with a good sand and mud seabed.

RESTRICTIONS: From May to July the surge is stronger and results in rough seas lasting from 2 to 4 days interrupting the traffic of small craft.

MAX. SIZE: See "Berthing" and "Tankers".

RADIO: Antofagasta Radio Station, call sign CBA-3, attends 24 hours on following frequencies:

Service	*Emission*	*Maritime Zone*
500 kHz	A1A A2A	A1 A2
518 kHz	F1B	
2182 kHz	H3E J3E	
8461 kHz	A1A	
C – 421	J3E	
C – 16	G3E	
C – 26	G3E	

Emission of urgent messages for ships (NURNAV) and meteorological information are provided on following frequencies and hours.

Service	*Emission*	*Times*
476 kHz	A1A	1405 & 0205
2738 kHz	J3E	1415 & 0215
C – 14	G3E	1430 & 0230

Security frequencies are attended as follows:

2182 kHz	Night Service	2200 & 1200
C – 421	Day Service	1200 & 2200

Navtex international emission:
Covering "A" Zone:
Time table (UTC) 0000 – 0010 0400 – 0410 0800 – 0810
1200 – 1210 1600 – 1610 2000 – 2010

Traffic list emission on 476 kHz and C – 401, will be H+50 of every even hour.

HF telephonic frequency in bands of maritime mobile service will be attended via Playa Ancha "CBV" Radio.

VHF: Harbour Master and Pilot on Channel 16 throughout 24 hours.

TUGS: 3 tugs available, 970 h.p., 1,440 h.p. and 4,100 h.p.

Also see "Pilotage".

Tankers: Vessels in excess of 75 m. LOA mooring at the buoys will require the assistance of one tug.

BERTHING:

Pier	*Length* (m.)	*Max. Draft* (m.)
Fishing zone	135	7.32
Pier 1	210	9.14
Pier 2	180	9.14
Pier 3	230	9.14
Wharf zone	130	4.87
Pier 4	142	8.71
Pier 5	175	8.99
Pier 6	130	9.45
Pier 7	220	11.25

CRANES: Pier No. 1, 2 and 3: 6×12 tons and 4×5 tons.

Pier No. 4 and 5: 4×7 tons.

Pier No. 6 and 7: Under repair.

STEVEDORES: Available through the Agents working 24 hours a day in 3 shifts, from 0800–1530 hrs., 1530–2300 hrs. and from 2300–0630 hrs.

MEDICAL: A first class hospital is available with 690 beds and all necessary elements and services. Two modern medical centres also available.

TANKERS: There are 3 tanker terminals in the North part of Antofagasta Bay.

Esso Terminal:

Owner: Esso Standard Oil Co., Chile.

Max. Length: 235 m.

Max. Draft: 60 ft.

Products Handled: Petroleum and clean products.

Mooring Facilities: The terminal has 3 buoys, painted white, buoys are named "North Buoy", "South Buoy" and "Manoeuvring Buoy".

General: For positioning of anchors there are leading marks on the shore. They are 2 metal circles, painted orange with black crosses in the centre.

Vessels must have at least 2 mooring lines of 220 m. each for sending to each buoy.

All buoys have slip hooks.

When mooring, the vessel will be berthed on a heading of 235°. Vessels are to use both anchors, with 8 shackles on the starboard anchor and 6 shackles on the port anchor.

Vessels cannot moor when the swell covers the tops of the rocks or if the wind is Force 4 or over.

The assistance of a tug is required for mooring.

Mooring is only carried out during daylight hours. Unmooring is possible at night, weather permitting.

Hoses: 3×12 in. flexible hoses are used for unloading.

Codelco Terminal:

Owner: Codelco Chile Div. Chuquicamata.

Max. Length: 235 m. Max. Draft: 60 ft.

Products handled: Petroleum and clean products.

Mooring facilities: The terminal has 3 buoys painted yellow. Mooring operation is similar to the "Esso Terminal" above.

Hoses: Diesel and petroleum products are discharged through flexible hoses. Length of hoses 670 m.

Shell Terminal:

Owner: Shell Chile Ltda.

Max. Length: 235 m.

Max. Draft: 40 ft.

Products handled: Clean products and lubricating oils.

General: The mooring facilities consist of 3 buoys, painted yellow.

On the shore there are 3 metallic circles painted orange to assist with lining up of vessel.

For mooring, vessels must have at least 2 mooring lines of 220 m. for each buoy. All buoys have slip hooks.

Mooring in daylight only. Unmooring possible during night time, weather permitting.

When vessel is in the moored position the heading is 235° True. Both anchors used for mooring, 8 shackles used on starboard anchor and 6 shackles used on port anchor.

Hoses: Clean products are discharged through 12 in. flexible hoses.

Chimba Cove:

Emalco Gas Terminal:

Owner: Empresa Nacional de Petroleo.

Operator: Emalco.

Max. Length: 110 m.

Max. Draft: 27 ft.

Product Handled: LNG.

General: Vessels moor using 2 anchor, 2 buoys and 1 bollard on the shore on Guaman Island.

There are two orange circles on the shore which are the leading lines for dropping the anchors.

Vessels moor with 2 mooring lines, length 220 m. each, to each buoy and 2 mooring lines from the port side to the bollard on Guaman Island.

When moored, the vessel is on a heading of 330°.

Vessels can only moor during daylight.

Both anchors required for mooring, each with 6 shackles out.

Hoses: Gas is discharged by 8 in. diameter flexible hoses.

FRESH WATER: Fresh water available at all berths at approximate rate of 25 t.p.h. Vessels at anchor and vessels at buoys can obtain small quantities of fresh water from tugs.

FUEL: Fuel oil and diesel oil, in small quantities, can be supplied at all berths by tank trucks. Large orders can be tendered through the oil terminal, rate of delivery for fuel oil 80 t.p.h. and for diesel oil 300 t.p.h.

CONSULS: Argentina, Belgium, Bolivia, Denmark, France, Germany, Greece, Italy, Jordan, Netherlands, Peru and Yugoslavia.

REPAIRS: There are 3 workshops for minor repairs:

Castro: Tel. 262215.
Ljubetic: Tel. 251547. Fax: 251443.
Corssen: Tel. 231880.

DRY DOCKS: None available.

SURVEYORS: Lloyd's Register, Societe Generale Sourveyance (S.G.S.), International Inspection Service (I.I.S.) and Centro de Estudios, Medicion y Certificacion de Calidad (CESMEC).

GANGWAY/DECK WATCHMEN: Supplied by Agent.

OPENING/CLOSING HATCHES: By ship's crew.

CERTIFICATES:

Safety Construction Certificate.
Safety Equipment Certificate.
Safety Radio Certificate.
Load Line Certificate.
Oil Record Book.
Light Dues.
Tonnage Register Certificate.
Oil Pollution Certificate.

CUSTOMS ALLOWANCES: Each crew member is allowed 400 cigarettes per week and 2.5 litres of wine or spirits per week.

REPATRIATION: Facilities available.

AIRPORT: The Cerro Moreno Airport, located 28 km. North of Antofagasta is available for all types of commercial aircraft. There is also another landing field in La Chimba, 11 km. North of the city.

TIME: GMT minus 4 hours. Clocks are advanced one hour on the second Saturday in October until the second Saturday in March.

HOLIDAYS: New Year's Day (January 1st), Holy week (April 1st and 2nd), Labour Day (May 1st), Iquique's Fleet Action (May 21st), Corpus Christi Day (September 11th), Saint Peter and Paul (June 29th), Ascension del Senor (August 15th), Freedom Day (September 11th), National Day (September 18th and 19th), Discovery of America (October 12th), All Saints Day (November 1st), Immaculate Concepcion (December 8th), Christmas Day (December 25th).

POLICE/AMBULANCE/FIRE: Police: Tel. 133. Ambulance: Tel. 222370. Fire Brigade: Tel. 221212.

EMERGENCY CO-ORDINATION CENTRE: Search and Rescue Service: Antofagasta Maritime Authority. Tel. 222294, 221908, 223587.

SERVICES: Compass adjusting, radar repair, radio repairs, gyro compass repairs and all other types of electronic repairs possible.

BANKS: Several banks, among them:

Banco Central de Chile, 2688 San Martin St., Tel: 221594.
Banco de Credito E Inversiones, 2683 Washington St., Tel: 225054.
Banco del Estado de Chile, 2578 San Martin St., Tel: 221617.
Banco Espanol Chile, 2600 San Martin St., Tel: 222537.

STORING: Trucks and railway carriages can proceed alongside.

Fork lift trucks and other storing machines can be used to handle stores.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: All crew are supplied with a shore pass. These passes are collected prior to sailing.

REGULATIONS: Inflammable explosives over 100 tons must be discharged in Mejillones. An Antofagasta Pilot goes to Mejillones by land, in order to take ships to be anchored.

GENERAL: Antofagasta is a transit port for Bolivia, Argentina and Paraguay cargo. It is one of the ports operated by Empresa Portuaria de Chile.

GARBAGE DISPOSAL: The port has available 12 handling buckets with capacity of 3 tons each.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: Seaman's Club "Hermandad de la Costa", Balmaceda 2709, Antofagasta. Tel: 223864.

CURRENCY: Foreign currency can only be changed at Banks (Bank Osborno, Internacional, O'Higgins, Chile, Sudamericano, Credito e Inversiones, etc.).

AUTHORITY: Empresa Portuaria de Chile, Av. Grecia S/N, P.O. Box 190, Antofagasta, Chile. *Tel:* 251800. *Telex:* 225232. *FAX:* 223171. *Contact:* Domingo Ormazabal Gonzalez, Port Manager.

AGENT: See "Valparaiso".

ARICA: 18.28 S. 70.20 W. (See Plan)

PORT LIMITS: Seaward limits are:
Lat. 18° 28.6' S., Long. 70° 19.9' W.
Lat. 18° 27.2' S., Long. 70° 20.5' W.
Lat. 18° 26.7' S., Long. 70° 19.6' W.
Lat. 18° 28.1' S., Long. 70° 18.9' W.

DOCUMENTS:

Port Captain:
1 copy General Declaration.
1 copy Last Port Clearance.
1 copy Passenger List for the port, and in-transit, (even if nil).
1 copy Crew List.
1 copy Dangerous Cargo List for the port, and/or in-transit.

Customs:
2 copies General Declaration.
6 copies Cargo Manifest for the port.
10 copies Cargo Manifest in-transit to Bolivia.
10 copies Cargo Manifest in-transit to Tacna, Peru.
2 copies Crew List.
2 copies Crew Effects List.
2 copies General Stores List.
2 copies Bazaar List.
2 copies Mail List.
2 copies Passenger List for the port, or in-transit.
1 copy General Chilean Cargo Manifest, which is stamped by Customs and returned on board.

Immigration:
1 copy General Declaration.
2 copies Passenger List for the port and/or in-transit.
1 copy Crew List.

Health Department:
1 copy Sanitary Declaration.
1 copy General Declaration.
1 copy Passenger List for the port and/or in-transit.
1 copy Crew List.

Agriculture Department:
1 copy General Declaration.
1 copy Cargo Manifest for the port.
1 copy Cargo Manifest in-transit to Peru and Bolivia.
1 copy General Stores List.

Agency:
10 copies Cargo Manifest for the port.
10 copies Cargo Manifest in-transit to Peru and Bolivia.
1 set of Bills of Lading for the cargo to Arica, Peru and Bolivia.
1 copy General Declaration.
3 copies Passenger List for the port, or in-transit.
3 copies Crew List.
1 copy Dangerous Cargo List for the port and/or in-transit.
1 copy General Stores List.
1 copy Bazaar List.
1 copy Mail List.

If the ship does not take cargo, passengers or mail for the port or in-transit to Peru and/or Bolivia, the Master must in all cases present the same "negative" documents.

PILOTAGE: Pilotage is compulsory for all vessels, except vessels of Chilean flag under 1,000 Gross Register Tons.

Ships approaching port should fly international signal flag "G" to request Pilot. Pilot boat is a small craft, painted red or white, with "H" flag on the mast.

Pilot boards incoming vessels within the following area:
(1) Lat. 18° 27.2' S., Long. 70° 20.5' W.
(2) Lat. 18° 26.7' S., Long. 70° 19.5' W.
(3) Lat. 18° 27.1' S., Long. 70° 19.3' W.
(4) Lat. 18° 27.7' S., Long. 70° 20.3' W.

Pilot Station maintains VHF watch on Channel 16. Telex No. 221084.

ANCHORAGE: Safe anchorage for vessels arriving after sunset can be found in a line bearing 194° Faro Isle Alecran distance 7 cables in depths varying from 9 to 10 fathoms.

RESTRICTIONS: Ships docked and undocked at any time, weather permitting, if application presented in advance to Port Captain.

MAX. SIZE: In the Port Area the maximum permissible draft is 34 ft. and max. length 700 ft.

Bolivian Export Buoy: Vessels up to 60,000 d.w.t. Max. draft 43 ft.

San Martin Cove Buoy: Vessels up to 54,000 d.w.t. Max. draft 45 ft.

HEALTH: In case of fever or suspected diseases on board, Master must send a telex or radio message to Port Captain advising the situation. Upon arrival, vessels will be anchored and inspected by Health Department according to international procedures and will be declared in quarantine if necessary. If arriving from another Chilean port, pratique is automatic.

RADIO: Use "Maritgob Arica", telex No. 221084. Coastal Radio Station CBA2, permanent listening watch on VHF Channel 16 and 2182 kHz and 421 kHz (HF) listening watch in daytime between 0800 hrs. and 1800 hrs.

VHF: Call "Arica Radio". Listening watch on Channel 16. Vessels approaching the port must advise Arica Pilot Station of the ETA. Arica Radio has radio telephone service on Channel 26 (duplex). Request this service by Channel 16.

When manoeuvring within the port area, the Pilot will advise which channel to use.

RADAR: No Port Radio Service.

TUGS: 1×550 h.p. and 1×850 h.p. Tugs normally join vessels at the end of the breakwater.

Tugs are compulsory for berthing/unberthing in the following cases: One tug for vessels over 90 m. length.

Two tugs for vessels over 140 m. length.

Not compulsory for vessels of 90 m. length or less.

BERTHING:

Berth No.	*Length (m.)*	*Max. Permissible Draft at LW (ft.)*
2	314	18.0
3		28.0
4	514	32.0
5		34.0
6		34.0

Loading and discharging normally by ship's gear.

CRANES: Berths No. 4, 5 and 6: 2×3 tons and 2×5 tons.

BULK CARGO FACILITIES: Four conveyor belts and loaders for bulk ores, grain, coal, etc., at approximate rate of 100 t.p.h. per conveyor.

SPECIALISED CARGO-HANDLING FACILITIES: Containers are handled with conventional gear, the port has a container yard of 115,936 sq.m., served by railroad and a bridge crane capable of lifting 40 tons. Service for containers includes 10 ton fork-lift trucks, mobile cranes with 12 tons' capacity, and specially designed wagons for their proper transportation.

BRIDGES: None.

STEVEDORES: The stevedores are nominated the day before ship arrives, according to ETA, by the Agent. Also nomination can be made during the day. Working in the port is in three shifts: 0800 hrs. – 1530 hrs., 1530 hrs. – 2300 hrs. and 2300 hrs. – 0630 hrs.

MEDICAL: Medical assistance can be obtained at any time without advance notice.

TANKERS: *Bolivian Export Buoy:* Belongs to Yacimientos Petroliferos Fiscales Bolivianos; position 039° True, 6 cables from breakwater light. Can handle vessels up to 60,000 d.w.t., 43 ft. maximum draft; 12 in. hose connection. Loading rate 9,000 bbls./hr. No deballasting facilities. Mooring in daylight. Vessels moor to 3 stern buoys.

San Martin Cove Buoy: Used for discharge of Bunker C and clean products for the city services. 45 ft. maximum draft, 54,000 d.w.t., 8 in. hose connection, vessels moor to 3 stern buoys. No wires may be used.

DENSITY: 1025.

FRESH WATER: Fresh water is available. Hoses to be provided by vessels. Rate of delivery about 10 t.p.h.

FUEL: Diesel oil available by tank truck, advanced notice to Agent required.

FIRE PRECAUTIONS: No special fire precautions at the tanker terminal, only those that are internationally required.

CONSULS: The following countries are represented in Arica:
Argentina
Belgium
Bolivia
Costa Rica
Denmark
El Salvador
Germany
Italy
Norway
Peru
Spain
United Kingdom

REPAIRS: Only small repairs can be performed in Arica, mechanical and electrical.

Immobilisation of Engines: Only granted if vessel has tug standing-by at U.S.$ 1,035.00/hour.

DRY DOCK: There are two dry docks intended for fishing boats, maximum capacity 800 tons and 45 m. length.

GANGWAY/DECK WATCHMEN: Port regulations call for a gangway watchman.

OPENING/CLOSING HATCHES: This service will be attended by the stevedores. Nomination is by number of hatches working.

CERTIFICATES:
Tonnage Certificate.
Lighthouse Dues (Chilean).
Safety Radio Certificate.

CUSTOMS ALLOWANCES: Two and a half cartons of cigarettes per man, two and a half bottles of wine/spirits per man.

REPATRIATION: Crew changes can be arranged through the local office of Immigration, if repatriated.

AIRPORT: Distance to airport 7 miles. One flight to Miami weekly, two flights to Bolivia weekly. Domestic flights are available at the rate of two per day, to Iquique, Antofagasta, Santiago; from Santiago to other cities in the South of Chile.

TIME: GMT minus 4 hours. Clocks advanced one hour from September to March.

HOLIDAYS: January 1st; First Friday and Saturday of April; May 1st and 21st.; June 2nd and 29th; August 15th; September 11th, 18th and 19th; October 12th; November 1st; December 8th and 25th. Cargo can be arranged at all holidays, except December 24th, from 1800 hrs. to December 25th, 1530 hrs. and December 31st from 1800 hrs. to January 1st, 1530 hrs.

POLICE/AMBULANCE/FIRE: Telephone 32315, 32242 and 32323 respectively.

EMERGENCY CO-ORDINATION CENTRE: Call Arica Radio: See "Radio" and "VHF".

TELEPHONES: Not available on board.

SERVICES: Supply of Chilean charts and nautical publications.

BANKS:

Name	*Address*	*Tel.*	*Telex*
Centrobanco	21 de Mayo 172	31021	221027
Banco de Chile	21 de Mayo 330	31746	221030
Banco de Santiago	21 de Mayo 212	31979	221117
Banco del Trabajo	21 de Mayo 345	32497	221034
Banco Espanol Chile	21 de Mayo 298	51648	221109
Banco Sudamericano	21 de Mayo 187	32685	221056
Banco Central de Chile	Colon 336	32116	221005
Banco de Credito e Inversiones	Bolognesi 221	32086	221004

SHIP SUPPLY SERVICE: All supplies can be obtained through the Agent.

SHORE LEAVE: Permitted.

IDENTIFICATION CARDS: Needed to leave and/or enter port area.

DELAYS: No delays under normal conditions. Port congestion causes ships to wait at anchorage 24 hours or more, depending on unusual factors such as heavy swell, or lack of room to bring vessels alongside when 5 ships are docked.

DEVELOPMENTS: Project to build a new mole in the Northern part of the port, with berthage for two ships of approximately 540 ft.

SHIPMASTER'S REPORT: April 1980.

Documents:

6 General Declarations.
6 Lists of Passengers for the Port.
6 Passengers Lists (even if nil).
6 Mail Lists (or no mail).
12 Crew Lists.
2 Crew Effects Lists.
6 Bond and Canteen Store Lists.
6 General Stores Lists.
Clearance from the Last Port and Health Declaration.

Pilotage: Compulsory. Pilot boards 0.5 miles N.W. of breakwater.

When within 200 miles of the coast of Chile, vessel to send cable to "Maritgob" at 0800 hrs. and 2000 hrs. daily. Cable to include position, speed, course and destination. The same cable is sent to the Port Captain at the port of destination, who also requires 24 hours' notice of arrival and draft. He then arranges for Authorities to board.

Anchorage: Vessels anchor 0.5 miles N.W. of breakwater. Depth 58 ft. at LW.

Max. Size: LOA 600 ft. Draft 32 ft.

Radio: Antofagasta (CBA4) and Valparaiso (CBV).

VHF: Pilot on Channel 16.

Tugs: One tug of 500 h.p. available. Tug use is not compulsory but advisable.

Berthing: Vessel berthed at Berth No. 4. Max. LOA: Over 600 ft. if adjacent berths vacant. Max. draft: 34 ft. (This allows for heavy swell during Winter time).

Cargo Handling Facilities: Two portable conveyors available for handling bulk cargoes. Rate 200 t.p.h. (approx.) There are no Ro/Ro facilities. There is ample mechanised equipment for handling palletised cargoes. Plenty of open quay space available for storage.

There are mobile cranes available and a bridge crane for loading rail cars, capacity 30 tons, however vessels must discharge with ship's gear.

Medical: Doctor and hospital available.

Fresh Water: Available. Rate 10 t.p.h.

Fuel: Bunker fuel oil and diesel oil not available.

Repairs: Minor repairs possible.

Airport: Airport for internal flights only available.

Services: Fresh provisions, laundry service, groceries and meats available.

AUTHORITY: Empresa Portuaria de Chile, P.O. Box 923, Arica. *Tel:* 32284. *Telex:* 221012. *Contact:* Domingo Ormazabal Gonzalez, Port Administrator.

AGENT: See "Valparaiso".

CALDERA: 27.03 S. 70.53 W. (See Plan)

PORT LIMITS: A line joining Punta Caldera with Punta Francisco.

DOCUMENTS:

Quarantine:	Completed Declaration of Health (Q.S.I.). Valid Derating Certificate. International Vaccination Certificates.
Customs:	Crew Declaration (Y.14). Ship's Stores (E.1), 3 copies. Inward Report (A.6). Complete copy of each Manifest for goods to be discharged in Caldera/Calderilla.
Port Captain:	Clearance from Last Port. Crew List, 3 copies. Copy of Manifest, Transit Cargo.
Immigration:	Crew List, 2 copies. Passenger Manifest for passengers not disembarking. Immigration Control Cards for each person.

PILOTAGE: Compulsory. The owner, Master or Agent of a vessel must report via any coast station, by R/T or W/T, the vessel's ETA, 24 hours and 12 hours in advance of ETA. ETAs must be confirmed or corrected not less than 3 hours prior to arrival. Time in ETA message must be GMT. The following information must be included in the message:

(1) Name and call sign of vessel.
(2) Nationality.
(3) Length, draft and G.R.T.

Pilot Boarding Station: All vessels must wait for the Pilot in position Lat. 27° 03' 00" S., Long. 70° 50' 13" W. between Point Fuerte and Pointe Caleta.

Caldera Radio on standby on VHF Channel 16. Tel: 315276. Fax: 315276 Caldera.

ANCHORAGE: Vessels anchor with the Iron Ore Quay bearing 220°, 5 shackles in the water is sufficient.

MAX. SIZE: Vessels up to 44 ft. draft with a max. length of 240 m. can moor at the Ore Quay.

HEALTH: Pratique given after official visit, and automatic for vessels from another Chilean port. In case of contagious disease on board, advance notice is required and vessel may need to be cleared first at Valparaiso.

RADIO: Radio Costera Valparaiso – CBV 20; working during even hours only between 0800–1200 hrs. and 1400–2200 hrs.

Radio Costera Caldera – CBA 5, receiving on 2182 kHz 1800 hrs. – 0800 hrs.; 421 kHz 0800 hrs. – 1800 hrs. and VHF Channel 16 throughout 24 hours.

TUGS: 1×1,860 h.p.

BERTHING: *Dicaser Pier* (Ex-Fiscal Mole): Small vessels with max. LOA 110 m. and max. draft 3.5 m. berth alongside.

Vessels of any length, and draft of less than 8.0 m. can berth with stern to the mole, using 4 lines to bollards at a distance of 80 m.

Vessels with a draft of 10.0 m. will moor 120 m. off the mole.

In both cases, 6 or 7 shackles of cable is required on the starboard anchor. Vessel's head will be 360° when moored.

This position is recommended for loading general cargo transferred from the pier by lighters to the ship.

Jorquera Pier: Built in 1991 at Pta. Caleta, as a fruit terminal and for general cargo. Vessels of any length and draft less than 11.9 m. can berth alongside.

BULK HANDLING FACILITIES: *Iron Ore Berth:* (Out of order since April 1981).

Max. length 240 m. Max. draft 44 ft. The loading arm is fixed, hence vessels must shift to position each hatch under the tower. All cranes or derricks must be swung out to starboard prior to mooring. Vessels berth port side to, using 7 mooring buoys for head and stern ropes, and 2 dolphins for springs. Loading rate 1,200 t.p.h.

STEVEDORES: In ETA to Agent indicate number of gangs required for loading/discharging. Also see "General" before first port.

MEDICAL: First-aid only at Caldera. If needed, advance notice necessary to prepare transport to Copiapo, nearest city 75 km. away. Fumigation carried out at ports of Arica, Valparaiso, or Punta Arenas.

TANKERS: *COPEC Terminal:* Tankers moor to 2 stern buoys, using both anchors. Water depth 39 ft. Max. length 200 m. Hose connection 12 in. Day time and night time berthing.

Leading lights are installed to assist with dropping of anchors.

DENSITY: 1025.3.

FRESH WATER: Available from tug.

FUEL: Not available.

CONSULS: None at Caldera.

GANGWAY/DECK WATCHMEN: Arranged by Agent.

OPENING/CLOSING HATCHES: Done by riggers.

CUSTOMS ALLOWANCES: Only amount needed while vessel in port.

REPATRIATION: Can be arranged provided that a Police Agent accompanies crew member to Santiago Airport.

AIRPORT: At Copiapo, 75 km. away, a daily flight to Santiago where international connections available.

TIME: Local time is GMT minus 4 hours during the Winter season and GMT minus 3 hours during the Summer season. See "General" before the first port for dates of local time changes.

HOLIDAYS: See "General" before first port.

TELEPHONES: No connection to vessels.

SHORE LEAVE: Allowed.

AUTHORITY: Captain of the Port, Gana 087, Caldera, Chile. *Tel:* 315276, 315551. *FAX:* 315276 Caldera.

CALDERILLA: 27.05 S. 70.52 W. (See Plan)

Vessels bound for Calderilla must first call at Caldera for pilot and official clearance.

DOCUMENTS: See "Caldera".

PILOTAGE: See "Caldera".

ANCHORAGE: Vessels less than 150 m. in length can await a berth 2 cables N.N.E. of the Mechanical Pier in 45 ft. of well sheltered water. Larger vessels must anchor in Caldera Bay.

MAX. SIZE: 60,000 d.w.t. Max. LOA 240 m. Max. draft 40 ft. Also see "Berthing".

BERTHING: *"Sademi" Mechanical Pier:* A mechanical loading belt has been built to the N.E. of the Peninsula. There are 2 loading arms each 50 m. long that can load at 1,000 t.p.h. The arms are fixed and vessels must shift to place each hatch under the tower. Vessels moor to 7 buoys, 3 forward and 4 aft. Entry can be made by day only.

Playa Blanca Terminal:

(a) A small pier for fishing boats, length 40 m., is installed on the N.W. side of the bay, for discharge operations and supply to the factory.
(b) Pontoon "URO", length 90 m., bearing 340° from the pier and anchored with 6 anchors and chains (3 forward and 3 aft). Vessels alongside the Pontoon head 215° or 035°. Max. draft: 30 ft. Max. length 200 m. Max. d.w.t. 35,000.
(c) 4 Mooring buoys for the ships berthing alongside (2 North side and 2 South side).

MEDICAL: First aid available in Caldera (5 km.). Hospital at Copiapo (80 km.).

FRESH WATER: Only available by tug.

FUEL: Not available.

REPAIRS: Only of a minor nature.

TIME: Local time is GMT minus 4 hours during the Winter season and GMT minus 3 hours during the Summer season. See "General" before the first port for dates of local time changes.

AUTHORITY: See "Caldera".

CALETA COLOSO: 23.45 S. 70.28 W. (See Plan)

LOCATION: Caleta Coloso is a dedicated port constructed to service domestic and international markets. It is owned and operated by Minera Escondida Limitada.

Located on the Northern coast of Chile, approximately 10 nautical miles South of Antofagasta, the geographic co-ordinates of the port are: Lat. 23° 45' S., Long. 70° 28' W.

It is built to handle 850,000 tonnes of concentrate per year, having storage facilities for approximately 60,000 tonnes of concentrate. Ships up to 45,000 d.w.t. will be able to load at a rate of 1,000 tonnes per hour.

Charts and Publications:

1. Chilean Charts:
   I.H.A. 200: Bahia Mejillones del Sur a Puerto de Caldera.
   I.H.A. 205: Caletas en la Costa de Chile.
2. British Admiralty Charts and Publications:
   B.A. 3071: Puerto Pan de Azucar to Bahia Algodonales.
   B.A. 3077: Plans on the coast of Chile, including Rada de Antofagasta, Puerto de Tocopilla, and a number of small non-commercial roadsteads.
3. South America Pilot: Volume III.

DOCUMENTS: The following documentation is required by Authorities to enter Chile. They may be presented on either Chilean Government forms, International forms or typed on blank white paper:

10 copies Inward Cargo Manifest.
6 copies Crew List.
4 copies Passenger List.
4 copies Crew Personal Effects List.
4 copies Bond Stores List.
3 copies Mail List ("Nil" return required).
3 copies Dangerous Cargo List.
5 copies General Declaration.
3 copies Arms and Ammunition List ("Nil" return required).

The following are required for inspection:

Last Port Clearance.
Crew Passports or Identity Documents.
Derat or Derat Exemption Certificate.
Safety Construction Certificate.
Safety Equipment Certificate.
Safety Radio Certificate.
Load Line Certificate.
International Oil Pollution Prevention Certificate.
Ship's Register.
Oil Record Book.
Articles of Agreement, or equivalent.
Chile Light Dues Receipt, if available.

PILOTAGE: Pilot service is compulsory for all ships.

General: Pilots servicing Caleta Coloso are duly authorised under Chilean law and are based at the Port of Antofagasta.

Boarding Ground: Pilots will board at the Antofagasta pilot ground which is 1.0 miles N.W. of the Antofagasta harbour entrance, in position Lat. 23° 38' S., Long. 70° 25' W.

Awaiting a Pilot: Masters of vessels required to anchor awaiting the Pilot should anchor as near as possible to the boarding ground location in about 40 m. of water. The sea bed is sand.

A vessel which anchors to await the Pilot should be under way when the Pilot boards or an extra charge will be applied if a Pilot supervises the weighing of the anchor.

Pilot Ladder: A pilot ladder complying with the SOLAS 74 requirements must be provided. The ship should be manoeuvred to provide a suitable lee for the boarding Pilot.

Other Officials: Officials from Port, Customs, Health, Immigration Authorities, etc., may board the vessel with Pilot.

ANCHORAGE: See "Pilotage".

RESTRICTIONS: Daylight berthing only.

MAX. SIZE: 45,000 d.w.t., 192 m. LOA, 31.0 m. beam and 11.25 m. max. draft.

Also see "Berthing Facilities".

NAVIGATION: *Navigation Aids:*

1. Section of Chart IHA 205 (See "Plan").
2. Lights: A landfall light showing GP. Fl. (4) 12 sec. 12 miles located in approximate position Lat. 23° 44' 44" S., Long. 70° 28' 15" W.
   A Racon beacon is located in the same position as the landfall light, and has the characteristic "0" in Morse Code.
   Two fixed yellow leading lights with vertical orange day marks on a white background on a bearing of 190° (T) at Punta Coloso.
   Two fixed green leading lights with vertical orange day marks on a green background on a bearing of 101° 41' (T) at Punta Paso Malo.

Berthing: Unless otherwise mutually agreed by all parties, vessels will normally berth in daylight only and in wind speeds of less than 14 knots.

Masters should have all normal ballast "in" and vessel in suitable trim for berthing. Engines should be tested with an astern movement before closing the port.

Port Communications: Communications will be via VHF on a channel to be advised by local authorities.

RADIO: *Communications:* Communication may be either by telex or telegram via Valparaiso Radio (call sign CBV), or Antofagasta Radio (call sign CBA3).

When in range, vessels should call Antofagasta Port Radio on VHF Channel 16 to confirm their ETA.

Advice of Arrival: Vessels bound for Caleta Coloso should advise the Charterer's Agent of their ETA at Caleta Coloso at the intervals as specified by the Charterer's instructions.

24 hours before arrival, Masters must advise the Antofagasta Port Captain of:

The name and flag of their ship.
ETA.
Number of passengers.
Quantity of hazardous cargo.
State of health.
Draft.

The telegraphic address is "Capuerto" Antofagasta.

Masters are advised that trawlers and small fishing vessels may be encountered in all Chilean coastal waters.

Before arriving at Caleta Coloso, Masters are requested to provide the Charterer's Agent in Antofagasta with a stowage plan and hatch loading sequence. Every endeavour should be made to limit the number of shift ships needed to load the vessel, whilst ensuring that all safety requirements are met.

Cargo holds must be swept clean with bilges clean, dry and burlap covered prior to vessel's arrival.

HEALTH: Radio Pratique is not available.

TUGS: Tugs from Antofagasta are available to assist with berthing and sailing, and lines launches are available to run and let go lines as required when berthing, sailing and shifting ship.

Launch: A launch is available to assist with reading of ship's drafts, and conveying personnel to and from the ship as required.

BERTHING FACILITIES: *Berth Facilities:* The berth facilities consist of a wharf head structure on which the shiploader is built and 2 dolphins, one on each side of the wharf head structure. The centre of the dolphins is 30 m. from the centre of the wharf head structure, thus the distance from the centre of one dolphin to the centre of the other dolphin is 60 m.

A minimum depth of 15.0 m. at low low water is available alongside the face of the wharf head structure and dolphins, and this depth extends to Buoys No. 1 and 3.

The wharf head structure and dolphins are adequately fendered, and weather permitting, a ship can lay against the fendering. There are mooring bollards on the dolphins.

The face of dolphins and wharf head structure lay in the direction 278° (T) to 098° (T).

Five mooring buoys are provided. The designations are:

Buoy No. 1: Head line.
Buoy No. 2: Starboard aft breast line.
Buoy No. 3: Stern line.
Buoy No. 4: Port aft breast line.
Buoy No. 5: Port forward breast line.

Principal Particulars:

Depth of water of low low water	15.00 m.
Height of underside of loader above LLW	15.50 m.
Maximum outreach of loader from fender line	25.50 m.
Height of wharf head structure above LLW	8.70 m.
Maximum LOA of vessel	192.00 m.
Maximum beam of vessel	31.00 m.
Maximum draft of vessel	11.25 m.
Maximum deadweight of vessel	45,000 tonnes
Maximum air draft	between 14.00 m. and 15.20 m.
Loading rate of ship loader	1,000 tonnes/hr.
Distance from centre of Eastern dolphin to centre of Western dolphin	60.00 m.
Distance from Buoy No. 1 to Buoy No. 3	380.00 m.
Distance from line of face of wharf head structure to Buoy No. 2	108.00 m.
Direction of line of face of wharf head structure	278° (T)/098° (T)

Shiploader: The shiploader is a fixed ship head loader which can slew left and right a total of 26°, that is 13° either side of centre, and luff down 24°. *Ship's loading must shift ship to load each hatch.*

MOORING: See "Plan Section".

Mooring Lines: Masters of ships are advised to consider in advance the positioning of their moorings whilst alongside.

Ships berth port side to. Normal moorings consist of 2 lines to each of the 5 buoys, 2 aft spring lines to the Eastern dolphin, and 2 forward spring lines to the Western dolphin.

For this reason, ships are required to have 14 full length mooring lines aboard on arrival. Wire ropes are not acceptable.

Mooring Procedure: During the berthing manoeuvre, the starboard anchor is let-go approaching the berth, and when alongside, 6 to 7 shackles of cable on the starboard anchor will remain laid out. When in position, the ship will normally be made fast with 14 lines.

Two head lines to Buoy No. 1.
Two port forward breast lines to Buoy No. 5.
Two starboard aft breast lines to Buoy No. 2.
Two stern lines to Buoy No. 3.
Two port aft breast lines to Buoy No. 4.
Two forward springs to the Western dolphin.
Two aft springs to the Eastern dolphin.

And 6 to 7 shackles out on the starboard anchor.

When berthed, ships should normally be positioned 1.0 m. clear of the fenders. During calm weather, a vessel may be positioned hard up to the fenders.

Tending Lines: Masters are advised to ensure that mooring lines are constantly tended and kept as tight as possible to minimise ship movement and reduce chafe on mooring lines. At Caleta Coloso, Masters will find that even when their ship is "in position", it will from time to time be necessary to adjust the mooring lines due to stretch of lines, tidal movements, and the movement of the ship in the berth. Sufficient crew should be maintained on board at all times to tend the moorings.

Shifting Ship: Ships loading are required to shift ship in order to load each hatch.

The ship's crew is required to perform these shifts. Under certain circumstances some extra labour from ashore can be made available to assist the ship's crew.

Masters should consider in advance their technique for carrying out these shifts and if necessary, the ship's engines should be available to assist. Shore labour and a line boat will be available during shift ships to shift lines on the dolphins and buoys as required.

Access: Whilst alongside, access to the ship will be provided by a launch service as no gangway to the wharf structure has yet been provided. During periods of calm weather, access to the wharf may be possible by pilot ladder.

Readiness of Main Engines: Under no circumstances should the ship's main engines be disabled whilst at Caleta Coloso, as weather may force the vessel to leave port at short notice.

Pollution: Ships responsible for oil discharges, dumping of waste, refuse, etc., in coastal waters, will be liable for all resulting fines and clean-up costs. All ships must have secure bilge systems while in the area. Accidental and deliberate oil or oily mixture discharge in the area must be reported to the Port Authority and Minera Escondida Limitada representatives immediately.

Disposal of Slops, Contaminated Ballast, Garbage and Solid Refuse: There are no shore facilities available at the terminal for receiving slops, and dirty or contaminated ballast. Masters are cautioned that discharging of anything other than uncontaminated ballast will incur penalties as prescribed by Chilean law.

Should concentrate spillage occur, ship crew members must collect and/or sweep material into the hold. Under no circumstances should the vessel's decks be washed down allowing concentrates to enter the water.

LOADING: *General:* Cargo is loaded 7 days a week. The rate of loading is approximately 1,000 tonnes per hour.

Responsibility: The sole responsibility for the correct and safe loading of the vessel rests with the Master.

During loading, ships are required to have a responsible officer on deck at all times.

Care must be taken when loading not to exceed the required sailing draft, nor to overload the ship under the International Load Line Regulations. Cargo cannot be discharged.

An Escondida wharf foreman is in charge of the shore loading operation. He will give every assistance possible to ship's officers.

Product Characteristics: Copper concentrate mined from Escondida is normally about 42% copper sulphide and will under high temperatures ignite to form a smouldering fire. It stows at approximately 0.50 cu.m. to the tonne, and contains approximately 8% moisture.

The Master will be provided with an Analysis Certificate stating the Transportable Moisture Limit of the cargo prior to loading.

Loader Operation: The shiploader is designed to shuttle in and out, and can slew 13° each side of centre, and can luff down 24°, thus with careful positioning of the ship's hatch under the loader, it should be possible to pour cargo evenly into most areas of the ship's hold. It is the responsibility of the ship's duty officer to direct the shiploader operator when it is required to alter the position in which the cargo is being poured into the hold.

Weightometer: Loaded quantities will be measured by a weightometer. However, this is to be treated as a guide to loading only, and the actual quantity loaded should be calculated by running draft checks. Final Bill of Lading weight will be determined by draft survey.

Trimming: A small bulldozer is available to trim the cargo.

Approximate weight is 10 tonnes. The ship's crew must rig the bulldozer and operate the ship's own crane to lift it onto and off the ship. Maximum care must be taken in doing so. The driver of the bulldozer must be a member of the shore staff.

Trimming of the cargo will be carried out to the Master's satisfaction.

Draft survey: Draft surveys are conducted by a qualified draft surveyor prior to commencement of loading and at completion of loading. It is recommended that ballast tanks be "pressed up" on arrival to facilitate the draft survey and ensure its accuracy. Draft marks must be clearly visible.

FRESH WATER: There is no facility to supply fresh water at the port. Water can be arranged through the Agent at Antofagasta.

FUEL: There is no facility to supply bunker or diesel fuel at the port. Limited fuelling is available through the Agent at Antofagasta.

REPAIRS: No engine repairs are to be carried out without Terminal Management authorisation. In an emergency, the port of Antofagasta can be used for minor repairs.

WEATHER: *General:* The climate is generally mild. The annual temperature ranges from 7°C to 27°C. Rainfall is virtually unknown, but occasional mist shrouds the coast line. It is a Tropical Seasonal Zone.

Winds: Four distinct wind patterns are experienced throughout the year:

50% light Southerly prevailing winds.
35% light winds from various directions.
13% calms experienced.
2% Southerly winds in excess of 20 knots.

Tides: The tidal range at Caleta Coloso is 1.6 m. at Springs and 0.7 m. at Neaps. Tidal predictions for Antofagasta are applicable for Caleta Coloso.

Currents: Currents run to the East at a rate of approximately 0.2 knots.

Sea/Swell: The prevailing swell is low from the S.S.W. It is rare for the swell to come from any other direction. Caleta Coloso is in the lee of Punta Coloso, providing calm to moderate conditions alongside the loading facility.

GENERAL: *Chilean Regulations:*

Food Stores and Freezers: Government officials will seal a vessel's food stores and freezers on arrival in Chile. Before food sources are sealed, a quantity of provisions for use whilst in port may be removed. If necessary, arrangements may be made through the ship's Agents to have a Government official attend the vessel to open the food stores and freezers to release further quantities of provisions.

Ballast Water: To prevent delay, Masters should ensure the vessel is ballasted with clean seawater on arrival in port, and make arrangements through an Agent to have a 250 ml. sample of ballast water drawn from one ballast tank. This should be collected in a clear container and submitted to the Port Authority at Antofagasta as soon as possible after arrival. A representative of the Port Authority may be present when the sample is drawn.

Watchman: Chilean law specifies a shore gangway watchman is required by all ships in port. A watchman will be provided by the ship's Agent.

SHIPMASTER'S REPORT: February 1992.

Max. Size: Draft limitation of 11.5 m., even when depth alongside is 15.0 m. at L.W. Maximum deadweight 45,000 tons, LOA 192 m. and beam 31 m.

Documents: The following documentation is required by Authorities on arrival. They may be presented on Chilean forms, international or typed on blank white paper.

10 copies Inward Cargo Manifest.
6 copies Crew List.
4 copies Passenger List.
4 copies Crew Personal Effects List.
4 copies Bonded Stores List.
3 copies Mail List ("Nil" return required).
3 copies Dangerous Cargo List.
5 copies General Declaration.
3 copies Arms and Ammunition List ("Nil" return required).

Documents for Inspection:
Last Port Clearance.
Crew Passports or Identity Documents.
Derat or Exemption Certificate.
Safety Construction Certificate.
Safety Equipment Certificate.
Safety Radio Certificate.
Load Line Certificate.
International Oil Pollution Prevention Certificate.
Ship's Register.
Oil Record Book.
Articles of Agreement, or equivalent.
Chile Light Dues Receipt, if available.

Pilotage: Pilot service is compulsory for all ships. Pilots will board at the Antofagasta Pilot Ground, which is 1.0 miles N.W. of the Antofagasta Harbour entrance, in position Lat. 23° 38' S., Long. 70° 25' W. A pilot ladder complying with the Solas 74 requirements must be provided.

Anchorage: Masters of vessels, required to anchor awaiting the pilot, should anchor as near as possible to the boarding ground, located in about 40 m. of water. The seabed is sand.

Tugs: Tugs from Antofagasta are available to assist with berthing and sailing, and line launches are available to run and let go lines as required when berthing, sailing and shifting ship.

Launch: A launch is available to assist reading ship's drafts, and for conveying personnel to and from the ship as required.

Radio: Antofagasta Radio (CBA). Telex: 225243 CBA CL and 325077 CBA CK.

Radio telegraphy: Working 8,461 kHz, listening Channel 1 – 8,368 kHz and Channel 4 – 8,369 kHz. Hours of watch 24 (permanent). Short range VHF Channel 16 call and contact, VHF Channels 25, 26, 27 working. Navigation information: 2,738 kHz at 1405 hrs. and 0205 hrs. UTC; VHF Channel 10 at 1415 hrs. and 0215 hrs. UTC; 8,461 kHz at 1430 hrs. and 0230 hrs. UTC.

Berthing: Ships berth port side to. Normal moorings consist of 2 lines to each of the 5 buoys, 2 after spring lines to the Eastern dolphin, and 2 forward spring lines to the Western dolphin. For this reason, ships are required to have 14 full length mooring lines (200 m. – 220 m. each) ready on arrival. Wire ropes are not acceptable. 2 tugs will assist docking approach, they make fast with their own lines at pilot's request. 2 motor boats will remain on stand-by fore and aft to receive buoy lines.

Shiftings Particulars: Ship's crew must remain ready for shifting. Shiftings for loading, according to stowage plan, will be performed by Antofagasta pilots or by Port Captain on board. Ships loading are required to shift in order to load each hatch.

Cranes: The shiploader is designed to shuttle in and out, and can slew 13° each side of centre, and can luff down 24°, thus with careful positioning of the ship's hatch under the loader, it should be possible to pour cargo evenly into most areas of the ship's hold.

Copper concentrate mined from Escondida is normally about 42% copper sulphide.

During loading, ships are required to have a responsible officer on deck at all times. It is the responsibility of the ship's Duty Officer to direct the shiploader operator, when it is required to alter the position in which the cargo is being poured into the hold. An Escondida wharf foreman will give assistance to ship's officers. A small bulldozer (approximate weight 10 tons) is available to trim the cargo.

Stevedores: Generally, stevedores are nominated the day the ship arrives, according to ETA, by charterer's Agent. Working hours are 0800 hrs. – 1530 hrs., 1530 hrs. – 2300 hrs. and 2300 hrs. – 0630 hrs. Cargo (copper concentrate) is loaded 7 days a week. The rate of loading is approximately 1,000 t.p.h.

Medical: Doctor and hospital available (See "Antofagasta"). Antofagasta Radio CBA provide a free service for ships requiring medical advice, using radio telegraphy or radio telephony. Languages are Spanish and English.

Ballast: To prevent delay, Masters should ensure that the vessel is ballasted with clean sea water on arrival in port and make arrangements, through an Agent, to have a 250 ml. sample of ballast water drawn from one ballast tank. This should be collected in a clear container and submitted to the Port Authority at Antofagasta as soon as possible after arrival. A representative of the Port Authority may be present when the sample is drawn. It is recommended that ballast tanks be "pressed up" on arrival to facilitate the draft survey.

Fresh Water/Fuel: There is no facility to supply fresh water or fuel at the port. Water and fuel can be arranged through the Agent at Antofagasta. Water and fuel may be obtained at anchorage at Antofagasta, but expensive.

Repairs: No engine repairs are to be carried out without Terminal Management authorisation. In an emergency, the port of Antofagasta can be used for minor repairs.

Watchman: Under Chilean law, a shore gangway watchman is required by all ships in port. A watchman will be supplied by the ship's Agent.

Shore Leave: Permitted.

Identification Cards: Shore passes and Seaman's Book sufficient.

General: Stores: Government officials will seal vessel's food stores and freezers on arrival in Chile. Before food stores are sealed, a quantity of provisions for use whilst in port may be removed.

Ship's stores and provisions are expensive (in Antofagasta). Should vessel require some urgent items, vessel is free to chose from what shipchandlers may offer, but payment for items acquired are to be made by the Agent.

SHIPMASTER'S REPORT: September 1992.
Documents: Clearance: Inward Clearance is carried out at Antofagasta Anchorage, where the Agent will board with Customs, Immigration and Port Captain, before the Pilot boards.

The Officials are friendly, and clearance can be completed with a minimum of fuss and delay in about 30 minutes.

The pilot ladder is acceptable for boarding, and Officials appreciate being met and escorted on and off the vessel by a uniformed officer.

Outward clearance is carried out on the berth on completion of loading. Immigration formalities may be carried out before this.
Notice of Readiness: Prepared by the Agent, and is presented on arrival at Antofagasta Anchorage.
Pour Plan: Pour Plan for loading is required by the Agents and Escondida representatives on arrival at Antofagasta.
Pilotage: Pilots board at Antofagasta Anchorage and take the vessel alongside. It is about 40 minutes from anchor aweigh to making fast the tugs. It is also required that Pilots are on board for shifting between holds, but minor adjustments of position at a hold can be carried out under the supervision of Escondida Marine Surveyor/Consultant.

On departure, Pilots leave when vessel is clear of the berth and anchor aweigh.
Restrictions: Berthing: Possible any time night or day.
Max. Size: Size of Vessel: The berth is designed to accommodate vessels up to 192 m. LOA with a maximum deadweight of 45,000 metric tonnes. It is reported that this vessel is the largest to use the facility to date (188.4 m. LOA and 31.0 m. beam).
Draft: The maximum draft permitted is 11.5 m., to allow for swell.
Radio: Communications are good through coast radio station.

On approaching Antofagasta, contact can be made through the Agents on VHF, working Channel 73, who will co-ordinate Port Authorities and Pilots.
Berth: Caleta Coloso is an ore loading berth, consisting of dolphins and mooring buoys, situated on the North side of Pta. Coloso, approximately 7 miles South of Antofagasta, and has been in use since 1990.

The port is operated by Minera Escondida Ltda. for the export of bulk copper concentrate.

The berth is exposed to the swell as there are no protecting breakwaters.

A fixed loader is situated on the centre of 3 dolphins, and it is necessary to shift the vessel for loading each hold.

Good Seibu fenders are fitted on the dolphins, and it is proposed to increase the number of fenders in the near future.

Depth alongside is reported to be maintained at 15.0 m., and this depth is available to the North and West of the berth with no obstruction reported.
Berthing/Mooring: The berth is approached on the green leading lights on the berth (bearing 190° T), and tugs join the vessel just before the anchor is let go, when the yellow leading lights on Pta. Paso Malo are in line from the bridge.

If the Pilot requires, the tugs make fast with tugs lines abreast Hatch No. 2, and the break of the bridge on the starboard side. The starboard anchor is let go initially to 5 shackles in the water and held on to check the forward motion, then slacked away as required during the mooring operation to get the vessel in position, ending with about 8 shackles in the water.

Mooring boats are in attendance fore and aft, and take lines in the following order:
Forward:
2 headlines to Buoy No. 1.
2 breast lines to Buoy No. 5.
1 or 2 springs to the dolphin.
The second spring is run to the dolphin when the vessel is in position, if only 1 spring is taken initially.

Aft:
2 stern lines to Buoy No. 3.
2 breast lines to Buoy No. 4.
1 or 2 springs to the dolphin.
2 breast lines to Buoy No. 2, and the second spring is run when the vessel is in position.

The idea is to end up holding the vessel in position, just clear of the fenders, with the mooring lines and anchor.

Head lines to Buoy No. 1 and stern lines to Buoy No. 3 should be on the windlass and mooring winch to facilitate shifting.

The mooring operation can take up to 2 hours.

The vessel is positioned with precision, with the loader at the centre of the hold to be worked by the loading overseer in VHF contact with the Pilot.
Moorings: 14 mooring lines, each of 220 m. length, in good condition, are required, 6 forward and 8 aft. Also at least 10 shackles of cable on the starboard anchor.

The Agent requires a declaration (See "Notice"), to be signed before requesting the Pilots to board. Notice of Readiness will not be accepted if the vessel does not comply with the mooring requirements.

It is reported that 4 mooring ropes are kept available at the berth for vessels which arrive with insufficient ropes. The costs of using these and whether for hire or purchase was not mentioned.

It is essential that all ropes are in good condition.

A length of 220 m. was found to be adequate, although, as a scale drawing using the 1:10,000 plan would indicate, the aft mooring winch is 280 m. from the marked position of Buoy No. 3 when working Hold No. 5, longer head lines and stern lines would be advisable.

Buoys No. 1 and 3 are reported to be 440 m. apart in their free position, but the plan shows them at 465 m. apart.

Windlass to aft mooring winch on this vessel is 171 m.

NOTICE: Issued by Agent to Master.
Quote:
I, the Master of the M/V ...., have been informed by my Owners, Operators, Charterers, Agents, that Caleta Coloso is a Loading Terminal where swell is frequent.

I have also been informed that to berth at Caleta Coloso, my ship is required to have 14 mooring ropes (combinations of rope/wire excluded) of 220 m. length, which are new or in very good conditions, without which it is impossible to berth, and therefore Notice of Readiness will not be accepted by shippers.

I hereby certify that my vessel complies with above and authorise my Agents, Messrs. ...., to call the Pilot on board for mooring purposes at Caleta Coloso.
Signature and stamp of Master.
Unquote.
Loading: The loading arm is able to move about 7.5° either side of the central position in the fore and aft direction, giving a distance of approximately 20 m. at the end, and can move in the athwartship direction, sufficient to reach the off-shore side of the holds.

The loading arm terminates in a flexible tube, suspended below the arm, with a rotatable chute at the end, which is positioned below the hatch coaming, and cargo can be spread over the hold without requiring additional trimming.

The belt and cargo areas are covered, so loading is relatively clean.
Loading Rate: Loading rate is quoted at 850 tonnes/hr. nett and 1,200 tonnes/hr. gross.
For this operation:
Actual pouring time – 39 hours 7 minutes.
Weight meter – 40,262 tonnes.
Actual rate – 1,029.28 tonnes/hr.
Time alongside berth – 61 hours 36 minutes.
Total port time E.O.P to F.A.O.P. – 68 hours.

Loading was slowed as some cargo was off-grade, having a higher than specified arsenic quantity for Germany.
Shifting: Shifting between holds is supervised by a Pilot who has to come from Antofagasta. On occasions, when there are a number of shipping movements in that port, some delays can be experienced waiting for a Pilot.

Pilots are ordered by Loading Supervisors and Agents, and the vessel advised accordingly.

The Pilots can authorise the Escondida Marine Surveyor and Consultant on board to shift the vessel, but rarely do.

The Marine Surveyor (Captain Oscar Quevedo) was a Pilot at Antofagasta for a number of years before retiring.

During shifts, a tug and line boat are in attendance, the tug usually pushing the vessel onto the dolphins.

Engines are required to be on stand-by and would probably be needed during bad swell conditions, but on this visit, all shifting was done by heaving on the lines and after spring or the stern lines and forward spring, the other lines being slacked as required.

Any lines becoming slack due to the movement of the vessel, are heaved up on completion of the shift.

It is necessary to heave up and slack the anchor cable during the shift.

Engines are required to be on stand-by throughout the vessel's stay alongside, and one tug and line boats are ready at all times for emergency use.
Draft Survey: Carried out by independent surveyors on arrival and on completion of loading.

Bill of Lading weight is the draft survey weight.

On this loading, weightmeter weight was 39 tonnes less than the survey weight.
Hold Survey: Also carried out by an independent surveyor on arrival.

Holds are required to be swept clean with no residue of previous cargo and with bilge covers secured and covered in burlap.

Cargo Certificates are presented on arrival giving the following information:
Flow Moisture Point – 11.3%.
Transportable Moisture Limit – 10.2%.
Moisture Content – 9.8%.
Angle of Repose – 37°.
Load Factor – 0.43 cu.m./tonne
15.4 cu.ft./ton.

A further certificate is given on completion, giving starting and completing times, draft survey and weightmeter weights and actual average moisture content of representative samples during loading.
Airdraft: 15.5 m. is quoted, but it would appear to be greater than this when working, although allowance must be made for swell and clearance for the chute when moving the loading arm over the vessel.
Ballast: Chilean regulations require that only clean ballast water may be pumped out and any ballast taken in foreign ports should be changed at sea and Log Book entries made.

It is not required to change ballast taken in Chilean ports unless it is in an infected port.

It is necessary to make a written request through the Agent to pump out ballast, stating the quantity and origin of ballast water.

A port official attends to sight the initial pumping to ensure that it is clean. This will be arranged by the Agent.

Minera Escondida are particularly concerned with the environment and will not tolerate pollution of any sort.

Declaration and request to pump out is also required by the Agent at Antofagasta.
Time: GMT minus 4 hours. GMT minus 3 hours from Sunday following 2nd Saturday in October to the 1st Saturday in March.
Identification Cards: Shore Passes are issued and have to be returned before departure.
Weather: Rain is unusual.

There is normally an onshore breeze from the S.W. from mid-morning until the evening, and an offshore breeze from the S.E. in the early mornings.

Cargo work is reported to be stopped when the wind is over 20 knots, and vessels are not berthed or shifted with a wind over 18 knots.

Swell is the main problem, as there is no protection at all. On this visit in September 1992, there was very little swell and no problems with moorings. However, on the vessel's previous visit, a number of mooring ropes carried away.

The most vulnerable ropes are the springs which are made fast to the dolphins, and are liable to shock tension when the vessel is surging.

General: Charts: B.A. Chart No. 3071 shows the position of Pta. Coloso, and B.A. Chart No. 3077 is required for Antofagasta.

The berth is not marked on the chart, and there is only a sketch plan available from the operators.

Accommodation: Accommodation on board is required for 3 persons, 2 from Minera Escondida and one from the agency, as an agency representative. Escondida Marine Surveyor/Consultant and an administrative foreman remain on board at all times. They board at the Antofagasta Anchorage with the Agent.

Meals: Meals are required for a total of 5 persons, two in addition to the 3 living on board.

Gangway: The ship's accommodation ladder is not required. There is a fitted swinging gangway on the West side of the loading dolphin with a watchman in attendance, which can be used when loading all holds, except No. 1. A good bulwark ladder is required for access to the gangway.

When loading No. 1, access to and from the shore is by launch from an offshore pilot ladder.

Stores: Stores and provisions are available, but the Agent advises that these are expensive, which is not surprising as this is a desert area, and all food stuffs have to be brought in from some distance. As in other Chilean ports, Chandlers cannot be paid in foreign currency direct, only through the Agent, due to Chilean Central Bank currency restrictions.

Agent: Ultramar Agencia Maritima Ltda., Copiapo 574, Casilla No.1210, Antofagasta, Chile. Tel: 264243, 263399, 263672. Telex: 225079 Ultra Cl. Fax: 227341. Cables: Ultramar Antofagasta. VHF: Channel 73.

CHANARAL (including Barquito): 26.21 S. 70.38 W.

DOCUMENTS:

Health:	Completed Declaration of Health (Q.S.I.). Valid Derating Certificate. International Vaccination Certificates.
Customs:	Crew Declaration (Y.14) 3 Ship's Stores (E.I.). Inward Report (A.6). Complete copy of each Manifest for goods to be discharged in Chanaral, and Transit Cargo. Clearance from Last Port.
Immigration:	2 Immigration Crew Lists (200). 3 Passenger Manifests for Passengers not disembarking. Immigration Control Cards or Passports for each person.

PILOTAGE: Compulsory. To avoid a delay in obtaining a Pilot, the owner, Master or Agent of a ship, must report via any coast station by R/T or W/T the vessel's ETA, 24 hours and 12 hours in advance of arrival. ETA must be confirmed or corrected not less than 3 hours prior to arrival. Time must be GMT.

The following information must be included in the ETA message:

(1) Name and call sign of vessel.
(2) Nationality.
(3) Length, draft and G.R.T.

Pilotage is compulsory for shifting and unberthing. Port Captain and tugs require 2 hours notice through the local agent.

Pilot Boarding Station: Lat. 26° 21' 18" S., Long. 70° 41' 20" W. Chanaral Radio stands by on VHF Channel 16 and 2182 kHz for giving information to the port authorities.

ANCHORAGE: In position Lat. 26° 20' S., Long. 70° 40' W., with Point Piedra Blanca bearing 118° – 1.5 miles. Depth of water 78 ft.

MAX. SIZE: LOA 250 m. Draft 40 ft.

Also see "Tankers".

RADIO:

Station call sign	*Category*	*Frequency*	*Type*	*Receives*	*Transmits*	*Schedule*
Chanaral CBH-2	(T)	2 MHz	A 3	2182	2182 2000	H30-45
		4 MHz	A 3	4091.6	4396.6 4396.6	H45-60

TUGS: There is one tug available in the Chanaral/Caldera area.

BERTHING: *Codelco Pier:* New structure at Chanaral for loading general cargo. Length 39 m., width 39 m. Depth alongside 40 ft. Vessels moor to 7 buoys as per Mechanised Quay.

Codelco Mechanised Quay: At Point Piedra Blanca there is a mechanised pier, property of Codelco, for loading bulk iron ores. 60 m. long by 10 m. wide, with 14.5 m. depth; sand and mud bottom. Ores transported by means of a conveyor belt to a loading tower from which it is loaded direct to ship's hatches. At present, loading tower is fixed so that vessels have to be moved to change hatches. Loading rate is 1,000 t.p.h. Vessels up to 250 m. length, 40 ft. draft have loaded. Vessels moor at head of quay, which has 7 buoys (3 forward and 4 aft). In addition the quay is provided with bitts to secure mooring ropes, fore and aft.

Barquito:

Buoy No. 4: Suitable for mooring large vessels for loading by lighters only (general cargo). Vessels moor stern onto the buoy and discharge into lighters, which in turn discharge at the Pier Head (Barquito Pier).

Position of Buoy: Barquito Pier bearing 046° – 850 m.

Lines: 2 lines × 150 m. each required.

CRANES: None available.

STEVEDORES: Work carried out in 3×8 hour shifts.

Also see "General" before first port.

MEDICAL: Facilities available.

TANKERS: Buoys No. 1, 2 and 3 at Barquito are for the Oil Terminal. The hose marker buoy is in position – Barquito Pier bearing 182° 400 m. Vessel's use starboard anchor to pivot onto the 2 stern buoys. The hose connection will then be made on the port side. Max. draft 50 ft. Max. length 250 m.

Lines: Forward: 2 lines × 150 m. length.
Aft: 4 lines × 200 m. length.

FRESH WATER: Available from tugs only, rate 30 t.p.h.

FUEL: Small amounts of diesel oil available by tug, rate 2.5 cu.m.p.h.

CONSULS: None at Chanaral, the nearest are at Antofagasta.

REPAIRS: No facilities for major repairs. Two shipyards to repair tugs and lighters only.

GANGWAY/DECK WATCHMEN: Usually ship's crew.

OPENING/CLOSING HATCHES: By ship's crew or stevedores, whichever to ship's advantage.

CERTIFICATES:

Safety Construction Certificate.
Safety Equipment Certificate.
Safety Radio Certificate.
Lights and Beacons Certificate (Chilean coast).
Pollution Certificate.

CUSTOMS ALLOWANCES: No fixed limits.

REPATRIATION: Facilities exist.

AIRPORT: The airport for small planes is located 2 km. North of Chanaral. Commercial airport 150 km. away.

TIME: GMT minus 4 hours between March and October. From October to March GMT minus 3 hours.

POLICE/AMBULANCE/FIRE: Maritime police, Tel: 480047 or VHF Channel 16 or 2182 kHz.

SERVICES: None.

SHIP SUPPLY SERVICE: Offshore service available.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Required.

AUTHORITY: Codelco Chile, P.O. Box No. 48, Chanaral, Chile. *Tel:* 480047, Ext. 517-520. *Cables:* Codelco Chile. *Contact:* Mario Trabucco Llanos, Maritime Agent, Codelco.

COQUIMBO: 29.57 S. 71.21 W. (See Plan)

PORT LIMITS: An area limited by parallel of Latitude 29° 56' S., meridium of Longitude 71° 20' W., and the shoreline of Peninsula Coquimbo.

DOCUMENTS: Documents required from a vessel are:

8 copies Crew List.
4 copies Pasenger List.
1 copy Vaccination List.
2 copies Personal Effects List.
1 copy General Manifest.
5 copies Manifests for the Port.
4 copies Dangerous Cargo List.
3 copies Stores List.
1 copy Sanitation Certificate.
3 copies General Information.
1 copy Clearance from Last Port.
Ship's Documents and Certificates.

PILOTAGE: Pilotage is compulsory for all vessels proceeding to quay. Service is requested through Agent. Pilot boarding point is about 1 mile East of Punta Tortuga Lighthouse. Pilot boat is a small commercial motor boat or launch. As vessels approach heading South, boarding is effected on the port side.

ANCHORAGES: Good anchorages can be found N.N.E. to E.N.E. from the quay at distances from 0.6 miles to 1.2 miles, with depths varying from 10 m. to 23 m. A forbidden zone, surrounding the quay, is shown on charts.

RESTRICTIONS: No night time or tidal restrictions for mooring. Vessels can berth and unberth 24 hours a day.

MAX. SIZE: No restriction on length or breadth, unless other vessel at the quay. Draft restrictions are 10.0 m. for Berth No. 1 and Berth No. 2. Some allowance may be permitted in special cases, according to tide height.

HEALTH: Vessels must obtain Pratique in every port of call in Chile. Pratique is requested and coordinated by the Agent. In case of anysuspected disease or fever onboard, proper and timely notice must be sent to the Port Captain and Agent.

RADIO: The main coastal station is Playa Ancha Radio, call sign CBV. The station is connected to the other coastal stations and is provided with atelex system for ships, No.01860. Vessels can also contact their Agent by satellite system, on the telex.

VHF: Ther is a local VHF station, operated by the Port Captain, call sign is "Coquimbo Radio". It can be contacted through Channel 16. It also broadcasts local weather reports.

RADAR: No Port Radar Service.

TUGS: There are 2 tugs for assisting with berthing. Assistance is compulsory under certain conditions, these are stated in the Port Regulations. Ship's or tug's lines may be used, no additional charge if tug's lines used.

BERTHING: There is one quay 378 m. long, having 2 berths of approximately 180 m. usable length each. Permitted drafts are 10.0 m. for Berth No. 1 and Berth No. 2, both in salt water.

Loading and discharging operations can be performed either with ship's gear or shore equipment, depending on conditions.

Grain cargoes are handled at Berth No. 2, while general cargo can be handled at any berth.

CRANES: There are 6 electrical, rail mounted cranes, with 5 tons lifting capacity and 17 m. reach, that can operate through both berths. There also exists a heavy lift truck crane, with 27 tons capacity at 3.5 m. reach and a 36 ton capacity crane.

BULK CARGO FACILITIES: Berth No. 2 and adjacent yards and warehouses are scheduled for bulk cargo handling. Max. permitted draft is 29 ft. 6 in., with some allowance in tidal height for special cases.

Shore equipment for bulk cargo handling consists of 2.0 cu.m. grabs, 3.0 cu.m. trays and 2 movable electrical conveyor belts with a max. airdraft of 8.5 m. on ship's side.

Handling rates are approximately 60 t.p.h. for grabs and trays, and 200 t.p.h. for conveyor belts. These rates vary according to nature of product being handled.

Bulk cargoes normally handled at this port are manganese, copper ore, copper concentrate, coal, fishmeal and wheat grain.

SPECIALISED CARGO HANDLING FACILITIES: No facilities. However, spacious yards are available for the storing of containers.

STEVEDORES: Stevedore services are arranged by Agent, based on customary ETA notice and ship's needs.

Labour time is 24 hours a day, with a 3-shift system, for general cargo as well as for bulk cargoes.

MEDICAL: Advance notice to obtain medical care is not normally required, unless some urgency arises. Medical and dental care is available, as well as hospital facilities, both in Coquimbo and La Serena, a city nearby.

Normal vaccination required is International Yellow Fever. Novaccinations available in Coquimbo.

TANKERS: No oil piers in Coquimbo.

DENSITY: Average density is 1025.5.

FRESH WATER: Fresh water is available for ships alongside from shore connections. Ship's hoses must be used. Approximate delivery rate is 7 t.p.h. at a cost of U.S.$0.25 per ton.

FUEL: Vessels alongside can take diesel oil only, from trucks. 72 hours notice to Agent is required.

FIRE PRECAUTIONS: Normal precautions to be taken.

CONSULS: Sweden, Spain, Italy, Peru.

REPAIRS: Minor mechanical and electrical repairs only. Diver services available.

DRY DOCKS: No dry docks for merchant vessels. A landing ramp for fishing and special craft is available.

SURVEYORS: Independent cargo surveyors available. No surveyors from classification societies, but they can be appointed from Valparaiso, with an advance notice.

GANGWAY WATCHMAN: Available, at Master's option and request.

HATCHES: Opening and closing by ship's crew.

CUSTOMS ALLOWANCES: Reasonable amounts of tobacco andspirits for personal use permitted out of bond.

CARGO GEAR: Loading and discharging operations can be performed by ship's gear or shore equipment.

REPATRIATION: Crew changes and repatriations can be effected through Santiago International Airport, 450 km. to the South.

AIRPORT: 20 km. from Coquimbo is located La Florida domestic airport, served by daily flights. In Santiago, the capital, international connections can be found to differant countries.

TIME: Official time zone is GMT minus 4 hours. Summertime (GMT minus 3 hours) is kept from October to April.

HOLIDAYS: January 1st; Holy Week (Friday, Saturday and Sunday, at the end of March or beginning of April); May 21st; June 29th; August 15th; September 18th and 19th; October 12th; November 1st; December 8th and 25th.

POLICE/AMBULANCE/FIRE: Telephone numbers are Police 133, Ambulance 311101, Fire 132

EMERGENCY COORDINATION CENTRE: TELEPHONES: No ship connections.

SERVICES: No special sevices or specialised nautical supplies. Some minor electronic repairs and compass adjusting available.

BANKS: A number of Chilean banks are available in Coquimbo.

STORING: Available. In small quantities, supplies can be delivered by motor boat. Mainly, storing is carried out by trucks alongside, shore personnel and fork lifts available to assist.

SHIP SUPPLY SERVICE: There are ship chandlers in Coquimbo. They can be appointed through Agents.

SHORE LEAVE: Permitted.

IDENTIFICATION CARDS: Every crew member going ashore must carry his shore pass, issued by Immigration.

DELAYS: Some delays can be expected during Summer season, as traffic is greatly increased by fruit exports. During the rest of the year there are no delays.

GENERAL: As a result of the increase in fruit exports, reefer warehouse capacity has been increased.

DEVELOPMENTS: No developments planned in the near future.

AUTHORITY: Empresa Portuaria de Chile, Administracion del Puerto Coquimbo, Cas 10-D, Melgarejo 676, Coquimbo. *Tel:* 313606. *Telex:* 220005. *FAX:* 326146. *Cables:* Coquimbo Port – Empor Cl. *Contact:* Danilo Astudillo Espinoza, Port Administrator.

CORONEL: 37.02 S. 73.10 W. (See Plan)

LOCATION: This port is located 25 km. South of Concepcion and has 3 piers, 2 mechanised piers (Puchoco Pier for loading woodchips and Jureles Pier for loading woodchips and unloading coal), and a new general cargo pier (operational mid-1996), belonging to Compania Puerto Coronel for general cargo with 2 berths.

PORT LIMITS: Seaward limit of the port is the line from Punta Puchoco Lighthouse to Bajo Playa Negra to the West.

DOCUMENTS: See "General" before first port.

PILOTAGE: Compulsory. The Pilot should be requested at Talcahuano, or Port Captain at Coronel on VHF Channel 14. Pilot boards vessels in front of Punta Puchoco.

ANCHORAGES: Vessels anchoring place when awaiting Pilot boarding is between the following points:

(A)	Lat. 37° 01' 53" S.,	Long. 73° 10' 18" W.
(B)	Lat. 37° 01' 53" S.,	Long. 73° 09' 48" W.
(C)	Lat. 37° 02' 06" S.,	Long. 73° 10' 18" W.
(D)	Lat. 37° 02' 06" S.,	Long. 73° 09' 48" W.

RESTRICTIONS: Berthing/unberthing during daylight hours only.

MAX. SIZE: Jureles Pier: LOA 220 m., draft 40 ft.

Compania Puerto Coronel Pier: 60,000 d.w.t., LOA 228 m., draft 12.3 m.

Puchoco Pier: LOA 220 m., draft 12.6 m.

RADIO: The Coastal Radio Service is situated in the Port Captain's Office, call sign "Capuerto Coronel".

TUGS: The use of 2 tugs is compulsory. Tugs are ordered through the Agent.

BERTHING: *Jureles – Mechanical Pier:* Depth 40 ft. There are 3 mooring buoys, and the vessel berths starboard size alongside. Port anchor is used with up to 8 shackles. Loading rate 200 t.p.h. Vessel will be required to shift so that each hatch is under the loading arm. Vessel will berth alongside 4 dolphins and head lines and stern lines will be made fast to 2 pylons. The berth is exposed to Northwesterly winds and vessels should be ready to sail at short notice. Operator: Carbonifera Schwager S.A.

Compania Puerto Coronel Pier: Length 172 m. (one berth each side), depth 13.0 m. – 14.5 m.

Puchoco – Mechanised Pier: For loading woodchips. It consists of platforms with a mechanical loader. There are 4 bollards, 3 dolphins and a buoy. The berth accommodates vessels up to 71,000 d.w.t. The loading rate is 8,500 tons per day.

The U.K.C. must be increased when the wave height exceeds 0.60 m. and 1.40 m. when leaving.

A tug and a launch for the lines are obligatory for berthing/unberthing; mooring by daylight only, sailing at any time. Operator: Empresa Portuaria Puchoco S.A.

STEVEDORES: Gangs are to be requested 24 hours in advance.

MEDICAL: Full hospital facilities without prior notice: Hospital de Coronel, Tel: 711065. Clinica del Trabajador de Coronel, Tel: 711918.

FRESH WATER: Available by pipeline.

FUEL: Private firms with trucks. Prior arrangement through Agent.

CONSULS: Located in Concepcion.

Argentina, San Martin 472, dep.52. Tel: 230257.
Brazil, Chacabuco 591. Tel: 242687.
Denmark, 3 Poniente 3277. Tel: 340628.
Ecuador, Anibal Pinto 1285. Tel: 238564.
France, Caupolican 521. Tel: 230606.
Germany, Libertador Bdo. O'Higgins 455, Piso 2. Tel: 230973/230621.
Italy, Barros Arana 243, piso 2, of. B. Tel: 229506.
Peru, Barros Arana 348, local 2. Tel: 224644.
Spain, Ejercito 435. Tel: 235677.
Sweden, Camino Boca Sur S/N. Tel: 371420.
United Kingdom, Castellon 317. Tel: 225655.

REPAIRS: Astilleros Nacionales in Coronel. Tel: 711007.

Maestranza Boca Maule, Tel: 711922.

Docks ASMAR Talcahuano, Tel: (41) 545999.

SURVEYORS: Available in the area (Lloyd's, ABS, Bureau Veritas).

AIRPORTS: Carriel Sur Airport in Concepcion/Talcahuano (25 km. from Coronel). Flights to different Chilean destinations.

TIME: Local time GMT minus 4 hours during the Winter season and GMT minus 3 hours during the Summer season. See "General" before the first port for dates of local time changes.

HOLIDAYS: Same as other Chilean ports.

POLICE/AMBULANCE/FIRE: Police, Tel: 711133.

Fire, Tel: 132.
Ambulance, Tel: 711061.
Maritime Search and Rescue, Tel: 137.

BANKS: Banco del Estado de Chile, Coronel. Tel: 711453.

Banco O'Higgins, Coronel. Tel: 711119.
Banco Osorno y la Union, Coronel. Tel: 711057.

STORING: The vessel can be stored by truck alongside the pier.

CURRENCY: Chilean Peso, approximate rate U.S.$1.00 = 415 Peso.

DELAYS: Normally there is no delay in berthing, loading or discharging, provided 24 hours advance notice is given.

GENERAL: The port of Coronel can handle on request all types of cargo. Ships normally use their own gear.

AUTHORITY: Capitan de Puerto Coronel. *Tel:* (41) 711124.

Operator: Cia Puerto del Coronel S.A., Monsenor Sotero Sanz 27, Officina 51, Santiago, Chile. *Tel:* Santiago (562) 2333411, Coronel (41) 711432. *FAX:* Santiago (562) 2319038. *Contact:* Eduardo Alvayay, Marine Adviser.

EASTER ISLAND: 27.09 S. 109.26 W. (See Plan)

DOCUMENTS: *Navy Port Authority:*
Last Port Clearance.
Ship's Certificates.
1 Crew List.
1 Passenger List.
Immigration:
2 Crew Lists.
2 Passenger Lists.
Passport and Visas are required for all foreigners.
Quarantine:
Declaration of Health.
Derat Certificate.
International Vaccination Certificates.
Customs:
1 Crew Declaration List.
1 Ship's Store List.

PILOTAGE: The use of a pilot for anchoring is compulsory. The services must be requested from the Port Authority.

ANCHORAGE: The best anchorage is at Hanga Roa from October to April. Vessels should anchor outside the 16 fathom line. Anchorages in general are poor, and vessels should be prepared to sail at any time, with the onset of bad weather.

HEALTH: In order to obtain free pratique, cable name and nationality of ship, number of crew and passengers, port of destination and agent, condition of health of all on board with details of any sickness.

RADIO: Pascua Radio, call sign CBV-3, on duplex R/T 2182 kHz and VHF Channel 16 for telephone connections (listens throughout 24 hours).

VHF: Radio Station and Port Captain Authority. VHF service facilities through Channel 16.

BERTHING: Berths available for passenger ships at Hanga Piko and Hanga Roa.

MEDICAL: No advance notice except in case of serious illness, which should be included in the arrival cable. Restricted hospital facilities available.

TANKERS: Vinapu Terminal (Lat. 27° 10' 45" S., Long. 109° 24' 20" W.). Discharge line 6 in. No slop facilities.

DENSITY: 1025.

FRESH WATER: A small amount of fresh water can be supplied by barge, order through Agent.

FUEL: Diesel and kerosene available at Vinapu Terminal. Lubricants available from mainland.

CONSULS: None.

REPAIRS: No facilities available.

SURVEYORS: None available.

CERTIFICATES: Construction Certificate. Safety Equipment Certificate. Radio Safety Certificate. Load Line Certificate. Certificate for receipt of light dues.

CUSTOMS ALLOWANCES: Only normal allowances for crew.

REPATRIATION: Crew change and repatriation are possible.

AIRPORT: Distance 2 miles. Served by Lan Chile, 2 flights weekly, Santiago-Pascua/Tahiti and vice-versa.

TIME: Summertime: From the second Saturday of October to the second Saturday of March, GMT minus 5 hours.

Wintertime: From the second Saturday of March to the second Saturday of October, GMT minus 6 hours.

HOLIDAYS: New Year's Day; Easter Day; Labour Day; Christmas Day; Independence Day; Corpus Christi Day; America Discovery Day; All Saints Day.

POLICE/AMBULANCE/FIRE Police, Tel. 223219 or 133; Ambulance, Tel. 223215 or 131; Fire, Tel. 132.

EMERGENCY CO-ORDINATION CENTRE: Maritime Governor, Hanga Roa, Search and Rescue, Tel. 223222.

SERVICES: Radar repairs. R/T repairs. Divers available for surveys and limited underwater repairs.

BANKS: Banco del Estado de Chile, Tel. 223221.

SHIP SUPPLY SERVICE: Not available.

SHORE LEAVE: No restrictions.

IDENTIFICATION CARDS: Not required.

AUTHORITY: Gobernador Maritimo de Hanga Roa, Avda. Apina s/n, Isla de Pascua (Easter Island), Chile. *Tel:* 22322, 223567. *FAX:* 032-208020. *Contact:* Lt. Luis F. Gracia Tapia, Captain of the Port.

GUAYACAN: 29.58 S. 71.22 W. (See Plan)

PORT LIMITS: A line joining Punta Miedo on Northern side of entrance and Punta Herradura on Southern side.

DOCUMENTS: See "Coquimbo".

PILOTAGE: Compulsory. All foreign vessels must pick up Pilot in Coquimbo. Chilean vessels can proceed to Guayacan and pick up Pilot inside the port limits. Pilotage service is requested through Agent.

ANCHORAGES: The bay is well sheltered and has good holding ground. Best place to anchor can be found heading on the entrance leading marks (140° True) and dropping anchor in 33 m. depth. Nevertheless, vessels awaiting berth must proceed to Coquimbo for an anchorage.

RESTRICTIONS: No night-time or tidal restrictions. Vessels can moor 24 hours day.

MAX. SIZE: *Ore Pier:* LOA 315 m., beam 50 m., draft 16.20 m. and 200,000 d.w.t.
Oil Pier: LOA 190 m., draft 12.0 m. and 41,000 d.w.t.

HEALTH: See "Coquimbo".

RADIO: See "Coquimbo".

VHF: See "Coquimbo".

RADAR: No service available.

TUGS: Tugs available to assist with berthing, tug's lines normally used.

BERTHING: The ore pier, of steel construction with a concrete deck, is 700 ft. long and located at the N.E. part of the bay. A total of 10 mooring bitts are available on the main pier, with 2 each on mooring dolphins to the South and North of the pier. Two twin mooring buoys, 1 North and 1 South, a distance of 350 ft. and 410 ft. from each dolphin and slightly inshore of the pier, are also available. A twin buoy to assist in docking and undocking is located 460 ft. to the West of the North end of the pier. Depth of water at the pier is 55 ft. at MLW. Max. draft 16.2 m.

MOORING: Vessels dock port side to the pier. On approaching the pier, the starboard anchor is dropped at a position indicated by cross bearing on markers located on the shore to the N.E. and at the South end of the pier and the shore. Lights are located on the markers for night docking. 9 shackles of cable are laid. The mooring ropes for the buoys and dolphins should be 220 m. long, and the use of wires is not allowed.

Two motor launches assist in rope handling to the pier and buoys. Sufficient deck crew must be available at all times to shift the vessel if required and to adjust moorings during loading.

Engines must be available at short notice. Permission for any major repair to the engines at the dock must be obtained from Maritime Authorities.

LOADING: In the case of combination ore carrier/tanker type of vessel, the Master must present a Gas-Free Certificate before Notice of Readiness will be accepted. Such certificate may be obtained from a Coquimbo firm and request for same should be included in the 96 hours ETA message, reporting if there is or there is no tank gas detecting instrument on board.

The loading boom extends 51 ft. from the face of the pier and can be retracted 22 ft. It may be raised or lowered 12° from the horizontal when loading.

The tower is mobile with a run of 390 ft. Clear height (above HWL) is 18.0 m. Vessels may have to be shifted. Aft hatches should be loaded first, when possible, to facilitate efficient loading. When not loading the rig is parked at the centre of the pier with the boom in a vertical position inside the pier face. In the horizontal loading position the boom is 40 ft. from the water at LWL and vessels should be ballasted to ensure hatch coamings and other fixed structure at the hatches have a height less than 40 ft. above water at LWL. Booms and other tackle should be cleared from all hatches.

Rated loading capacity is 3,000 long tons per hour.

Emergency stops only are permitted on the conveyor system. Vessels on which cargo reaches coamings should note that 390 tons are on the belts between the stockpiles and the ship and this must be cleared before stopping the system.

Cargo is belt trimmed only. Hire of trimmers, if required, is for vessel's account.

On completion of loading, the vessel shall leave the pier. Delays of port operations including delays of other vessels awaiting berth, caused by a vessel which for any reason is not prepared and able to move from the pier when so ordered, are chargeable to the vessel which causes such delays, at the rate of $4,000 per day or at the demurrage rate of any other vessel that may be delayed – whichever is higher.

BALLAST: Vessels should be ballasted to meet the loading tower information given and to ensure safe handling. Wind condition can make docking of light vessels difficult. Ballast may be discharged at the pier while loading. Upper wing tanks emptied by gravity should have covers fitted over discharges. Vessels are liable to fines by Maritime Authority for any oil or other contaminate discharged in the bay either from tanks or from pumping bilges.

TANKERS: There is an oil terminal with 2 mooring buoys for the discharge of clean products. Max. permitted draft is 12.0 m. Discharge is performed with ship's pumps.

Hose connection to the oil terminal is 8 in. diameter and is connected on the starboard side. Max. working pressure is 80 p.s.i., which makes an approximaste average delivery rate of 450 cu.m./hr.

No slop or ballast storage capability. No special equipment for spill control.

Vessels use both anchors and 2 buoys on the port and starboard quarter.

MEDICAL: See "Coquimbo".

DENSITY: 1025.5.

FRESH WATER: Not available.

FUEL: Diesel oil available at the Ore Pier by truck. Agent required 72 hours' prior notice.

FIRE PRECAUTIONS: Usual precautions for tankers.

CONSULS: See "Coquimbo".

REPAIRS: See "Coquimbo".

DRY DOCKS: None.

SURVEYORS: See "Coquimbo".

GANGWAY/DECK WATCHMEN: Available, at Master's option.

HATCHES: Opening and closing by ship's crew.

CUSTOMS ALLOWANCES: See "Coquimbo".

CARGO GEAR: Shore gear used at Ore Pier.

REPATRIATION: See "Coquimbo".

AIRPORT: See "Coquimbo".

HOLIDAYS: See "Coquimbo".

POLICE/AMBULANCE/FIRE: See "Coquimbo".

EMERGENCY CO-ORDINATION CENTRE: See "Coquimbo".

TELEPHONES: No ship connecitons.

SERVICES: See "Coquimbo".

Mail for vessel and crew should be addressed care of ship's Agent at Coquimbo, all mail that is received for holding by the Agent will be delivered to the vessel upon arrival.

Do not have parcel post packages sent, as they must go through Customs in Santiago and are delayed from 2 weeks to a month for their despatch.

Spare or repair parts for the vessel should be sent via air express, addressed to the ship, care of ship's agent at Coquimbo, Chile and marked "Ship's Stores in Transit", so as to avoid paying Customs duties. Information regarding the shipment should be sent to the Company via air mail correspondence.

A limited supply of provisions is available, but requests should be sent by radio 48 hours prior to arrival.

BANKS: See "Coquimbo".

STORING: See "Coquimbo".

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Issued by Immigration.

DELAYS: Usually no delays.

AUTHORITY:

Ore Pier: Cia. Minera de Pacifico, Pedro Pablo Munoz 675, La Serena, Chile. *Tel:* 215505. *Telex:* 220022 CMP LS CL. *FAX:* (051) 213652, 213672. *Contact:* Jaime Acevedo Diaz, Port Manager. Juan Torrejon, Managing Vice-President.

Oil Terminal: Cia. de Petroleos de Chile, Camino La Herradura s/n, Coquimbo, Chile. *Tel:* 312424. *Telex:* 240048 COPEC CL.

HUASCO: 28.27 S. 71.14 W. (See Plan)

PORT LIMITS: Inside a line from mouth of Huasco River and "Blanco Small Barren Islands".

DOCUMENTS:

1 Clearance from last port.
12 Cargo Manifests, or 2 "Nil" Cargo Manifests.
6 Passenger Lists, or 3 "Nil" Passenger Lists.
7 Crew Lists.
4 Stores Lists.
3 Crew Personal Effects.
2 Stowage Plans.
3 Per Passenger Baggage Declarations.
1 Health Certificate.
2 Dangerous Cargo Manifests.

PILOTAGE: Compulsory for every vessel mooring at Guacolda I and at Guacolda II. Vessels over 220 m. LOA require 2 Pilots. Pilot ladder to be rigged on port side.

Vessels wait for Pilot within area below:

(1) Lat. 28° 27' 24" S., Long. 71° 15' 29" W.
(2) Lat. 28° 27' 24" S., Long. 71° 15' 05" W.
(3) Lat. 28° 27' 37" S., Long. 71° 15' 05" W.
(4) Lat. 28° 27' 37" S., Long. 71° 15' 29" W.

ANCHORAGES: Large vessels' anchoring ground is 2.0 cables N.N.E. of Cayo Isle in 24 m. – 26 m., sandy bottom. Small vessels can anchorage 2.0 cables 090° from Cayo Isle in 12 m. of water, sandy bottom.

Depth is generally moderate and level with a sand and shell bottom. While at the maritime terminals of Guacolda I and II it is quite deep, around 16 m. to 50 m., which has to be taken into account when anchoring. The bottom at these terminals is mud, offering good holding ground.

Vessels can anchor without Pilot in the "Pilot Waiting Area". Pilot is compulsory for anchoring in the anchorage.

Anchorage for vessels over 100 m. LOA:

(1) Lat. 28° 27' 06" S., Long. 71° 14' 04" W.
(2) Lat. 28° 26' 53" S., Long. 71° 14' 10" W.
(3) Lat. 28° 27' 05" S., Long. 71° 14' 52" W.
(4) Lat. 28° 27' 17" S., Long. 71° 14' 46" W.

MAX. SIZE: See "Berthing".

RADIO:

Station Call Sign	*Category*	*Frequency*	*Type*	*Receives*	*Transmits*	*Schedule*
Huasco CBH-24	(H3E)	2 MHz	A 3	2182	2182	H 24

VHF: Vessels can communicate with the Port Captain to advise their arrival and must call the Pilot Station 4 hours before arrival through Channel 16.

TUGS: 2×3,000 h.p. tugs available. Use of one tug is compulsory. At Huasco there are 3 motor launches for use of Pilot.

BERTHING: There are 2 cargo terminals in service, Guacolda I for general cargo and Guacolda II, the mechanised one, for loading iron ore and "pellets". Guacolda I is operated by Empresa Electrica Guacolda S.A., and Guacolda II by Compania Minera del Pacifico S.A. The particulars of these installations are:

	Guacolda I	*Guacolda II*
Max. LOA	240.0 m.	315.0 m.
Max. Draft	13.5 m.	25.0 m.
Max. Air Draft	—	23.6 m.
Max. Loading Rate	—	6,000 t.p.h.
Loading Arm Reach	—	42 m.

Guacolda I Terminal: Normally used to discharge coal and general cargo.

A new mechanised coal unloading system is being installed by its new owners, and is expected to become operational by 1995.

Guacolda II Terminal: Used for loading iron ore in "pellets", discharging fuels and supplying bunkers.

Warping the Vessels: Vessels docking at Guacolda I must have at least 8 lines of 220 m. forward and 7 lines of 220 m. aft. For docking at Guacolda II, vessels must have 12 lines, 8 lines of 220 m. and 4 lines of 240 m.

STEVEDORES: There are 86 stevedores for doing the work on board. Working hours are 0800 – 1530, 1530 – 2300 and 2300 – 0800.

MEDICAL: Hospital at Huasco. 2 dentists and 2 doctors also available. There is a more specialised hospital in Vallenar, about 50 km. from Huasco.

TANKERS: Tankers berth at Guacolda I and II, see "Berthing".

DENSITY: 1026.

FUEL: Diesel oil and heavy oil available at Guacolda II, average rates for diesel 100 cu.m./hr. and heavy oil 200 cu.m./hr. Connection of hoses by shore personnel.

CONSULS: None.

REPAIRS: Only for the repair of minor craft.

OPENING/CLOSING HATCHES: By crew or stevedores.

CERTIFICATES:

Safety Construction Certificate.
Safety Equipment Certificate.
Safety Radio Certificate.
Load Line Certificate (1966).
Tonnage Certificate (1969).
Oil Record Book.
Responsibility for Pollution of Water Certificate.

Gas Free Certificate: Compulsory for OBO type vessels when the last cargo was fuel. The inspection must be requested from Port Captain, who sends an inspector and makes the certification.

CUSTOMS ALLOWANCES: Tobacco: Each man 500 cigarettes per week. Wine and spirits: Each man 2 bottles of wine or spirits per week.

REPATRIATION: Crew changes and repatriation possible.

AIRPORT: Nearest commercial airport is at Serena, 241 km. away.

TIME: Local time is GMT minus 4 hours during the Winter season and GMT minus 3 hours during the Summer season. See "General" before first port for dates of local time changes.

EMERGENCY CO-ORDINATION CENTRE: Capitania de Puerto Huasco. VHF Channel 16; HF 2182 kHz. Telephone No. 531011.

HOLIDAYS: New Year's Day, Christmas, Hispano America's Day, Independence Day, Army Day, Navy Day, Saint Peter and Paul's Day, September 11th, Assumption Day, November 1st, Memorial Day, Corpus Christi and Immaculate Conception.

TELEPHONES: Local and outward service.

STORES: It is possible to obtain provisions in limited form. Requisition must be made in advance.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Passport or Seaman's Book.

GENERAL: Zone for ballast: it is prohibited to deballast in port except clean water from deep tanks. For any other kind of ballast authorisation should be requested first from the maritime authority who will indicate the appropriate place.

SHIPMASTER'S REPORT: September 1986.

Communications: Initial cables were sent via Portishead Radio but when in range Valparaiso Radio was used. There is no shore station at Huasco. On approach to the port contact was made by VHF on Channels 16 and 14.

Approaches: As per "Sailing Directions". The pilot boarding area is in position 090° – 1,200 m. from Guacolda light.

Pilot ladder to be rigged on the port side. As this vessel is over 200 m. 2 Pilots were used.

Berthing/Berth – Guacolda II: Off the berth the starboard anchor is let go to 8 shackles on deck and then held. The vessel is then manoeuvred in towards the loading dolphins, checked with the anchor and laid parallel to the loading arm dolphins about 8.0 m. off. When close enough lines are run to the buoys forward and aft. These together with the anchor hold the vessel in position off the dolphins. When moored the vessel is made fast to 3 buoys fore and aft. 1 buoy ahead and 2 to the landward, 1 buoy astern and 1 seaward and 1 landward. 2 lines are made fast to each buoy.

Berthing took just over an hour from the time the Pilots boarded till all fast.

Pilots advise that there is about 22m. of water at the berth.

Arrival Formalities:

Pratique: Radio Pratique was requested by radio via the Agents but this was not given as the necessary formalities are carried out on berthing. The standard Maritime Declaration of Health is required.

Agriculture Inspection: The galley, refrigerators and provision store rooms are inspected. No fruit or vegetables are to be landed from the vessel.

Customs: 3 copies of Crew Personal Effects were made up and completed prior to arrival and found acceptable. Only the bonded stores (Spirits, tobacco and cigarettes) were sealed.

Immigration: Shore passes for all personnel are required and these MUST be collected and returned prior to sailing. No restrictions on shore leave and no curfew. A launch service to Huasco (15 minutes away) is available.

Arrival Documents:

1 Maritime Declaration of Health.
3 Crew Personal Effects Lists.
8 Crew Lists.
4 Stores Lists (Deck and Engine).
4 Stores Lists (Provisions).
'Nil' Passenger List.
2 'Nil' Cargo Manifests.
Register, Derat, etc., required to be sighted.

Loading: The loading of the iron ore pellets commenced once Pratique had been granted and was, with the exception of shifts and shore breakdowns, continuous. The nett loading time was 44 hours and this gave an average loading rate of 2,679 tonnes/hr.

Shifting ship was necessary to reach the end holds and was carried out by ship's personnel. Rigging gangs are available to assist in shifting and they remain onboard throughout. Before arrival the Agents had inquired if these gangs were required but I advised that the ship's personnel would carry out the shifts. No difficulties were experienced shifting but long lines to the buoys ahead and astern are essential.

As the vessel is kept off the dolphins at all times there is no access to the shore except by launch which is kept alongside for draft checks. As the shore weigh-bridge is not reliable all tonnages are by drafts. The after accommodation ladder is used for access to the vessel.

The final Bill of Lading figure is by draft survey – carried out by ship's personnel.

Departure: Final documentation is completed onboard and takes about an hour after completion of loading with the Port Captain boarding to give a clearance.

All passes are checked and the Master signs a Declaration to the effect that all personnel are onboard.

The Pilot disembarks as soon as the vessel clears the moorings using the accommodation ladder.

General: Provisions/Supplies: No fresh water or fuels available but fresh provisions in season can be supplied and appear to be of reasonable quality and price – £0.45 for a kilo of tomatoes and £8.28 for a case of oranges for example.

Postage: Mail from the UK took about 7 days to reach Huasco. Deliveries are made at noon.

Telephone: Available from the Agent's office. Local line to Vallenar then International.

Repairs: Main Engine maintenance can be carried out but the vessel must be ready for sea within 3 hours at any time. A formal request is required should immobilisation be required.

Tugs: There are no tugs. 3 mooring boats are used and are in contact with the vessel by VHF.

Shore Contact: The loading foreman keeps in contact with his office every 3 hours using the ship's VHF.

SHIPMASTER'S REPORT: March 1988.

The vessel loaded 149,000 tonnes of iron ore pellets at Guacolda II. The vessel is a combination carrier built in 1986, 280 m. length, 45 m. beam and 152,300 tonnes d.w.t.

Berthing: The vessel is required to send out 2 mooring ropes to each buoy, wires are not acceptable. The buoy pattern is similar to that on the plan in "Guide to Port Entry". As the ropes are sent out long before the vessel is near the pier the ropes must be more than 330 m. long. As a normal mooring rope is 220 m. long, this could cause embarrassment and delay if the vessel is not sufficiently prepared.

Bulk cargo facilities: The loading arm at Guacolda II can serve a 110 m. long section of the vessel. For holds more than 110 m. away, the vessel has to be shifted.

Density: 1025.5.

Services: If the Master pays cash for the purchase of provisions worth more than U.S.$1,000, the amount must then be handed over to the Agent and the Agent will in turn arrange for the ship chandler to receive the money. This is required by local regulations.

Repatriation: Crew repatriation is by bus to Santiago. Local law requires relieving crew members to enter the country 48 hours prior to the arrival of the vessel.

SHIPMASTER'S REPORT: March 1992.

Vessel: Combination Carrier. LOA 280 m., beam 45 m. and 152,300 tons d.w.t.

General: As per latest Regulations, Maritime Authority of Chile requires all vessels, coming from foreign ports, to renew all ballast water on board before entering 12 miles zone off Chilean coast.

Times, dates and positions of starting and completing this deballasting and ballasting is to be recorded in Deck and Engine Log Books. A copy of this log book entry is to be handed over to Harbour Master upon berthing.

Position reports (SISNAV) are to be sent to "Directemar Valparaiso" when entering, transitting or leaving Chilean waters. Details are given in "Guide to Port Entry" and Admiralty Lists of Radio Signals.

Documents: Documents required are Cargo Manifests, Passenger List, Mail List, Crew List, Ship's Stores List, Crew Personal Effects List, Health Certificates/Vaccination List, Bonded Stores List and List of Ports called in the last 6 months.

Anchorage: Small vessels can anchor very close East of Cayo Island.

Large vessels can anchor in deep waters about 7 cables N.N.W. of Cayo Island.

Approaching/Anchoring: When approaching from South, it is best to come up to Lat. 28° 26' S. (i.e. to a parallel about 3 miles North of Guacolda Light) before turning to starboard and head on course 090°. Continue on 090° until intended anchor position is bearing about 130°. Turn to starboard and head on course 130° and approach anchoring position with as little headway as possible. At night, due to powerful background shore lights, Cayo Island Light is not visible until less than one mile off. As depth is more than 50 m., it is preferable to carry out whole anchoring under power. (Vessel anchored with Cayo Island Light bearing 163° (T) 7 cables off, with 11 shackles in water. When swung to flood stream and heading North, clearance from Cayo Island is about 4.5 cables.)

Caution is necessary if fixing by G.P.S. while approaching, as the Plan Chart of Huasco is out in Longitude by about 6 cables (i.e. if approaching by G.P.S., the Longitude obtained by G.P.S. must be increased by 0.70 minutes before plotting it on Chart). In other words, Cayo Island Light is charted in position Lat. 28° 27.5' S., Long. 71° 14.3' W., but its actual position as obtained by G.P.S. is Lat. 28° 27.5' S., Long. 71° 13.6' W.

Pilotage: Pilot is not required for anchoring off Cayo Island.

If berthing directly, Pilot boards 090° × 1,200 m. from Guacolda Light. If at anchorage off Cayo Island, Pilot boards at anchorage for berthing.

Free Pratique/Arrival Formalities: Radio Free Pratique is not granted. Vessel must enter port with "Q" flag flying. Combination ladder must be ready on port side on arrival. All authorities (Harbour Master, Customs Officer, Doctor, Agriculture Inspector and Agents) board vessel after anchoring. Ship's provision stores, refrigerated stores, galleys, mess rooms, etc., are inspected and Free Pratique is granted.

If vessel's Derat Exemption Certificate has expired, it can be granted here, but same is valid till next port or for one month only.

Permission for ship's side painting and immobilisation of engines, etc., is usually granted.

Berthing: (Guacolda II Terminal): Always port side alongside. Six lines (220 m.) are used forward and 6 lines (220 m.) are used aft. One tug and 2 mooring boats are used. If proceeding to berth from Cayo Island Anchorage, vessel heads in general direction and line provided by leading lights (223°), situated on the head of Guacolda II Terminal. Starboard anchor is lowered to 2 shackles in water in advance. When leading lights (131°) are in line, starboard anchor is dropped and cable allowed to run out to 4 shackles in water, thereafter, gradually paid out to 8 shackles as vessel moves forward towards berth until leading lights (143°) are in line. The depth, where anchor is dropped, is about 50 m. While tug is assisting forward vessel is manoeuvred, bringing bow close to forward dolphin. Two breast ropes are passed from port bow to the buoy, which is at that time almost right ahead, and in final position becomes 90° from bow. Once the 2 breast ropes are fast, the tug comes to the starboard quarter and pushes the stern in and 2 lines are passed from port quarter as breast ropes. At this time there is too much weight on forward breast ropes, so they should be good ropes and both must have equal weight. Other lines are passed once port bow and port quarter breast lines are fast and vessel is parallel to dolphins (on a heading of 310°).

Mooring sequence goes as follows:

Forward: 2 port breast lines, 2 head lines, 2 starboard bow lines.

Aft: 2 port quarter breast lines, 2 starboard breast lines and then 2 stern ropes.

The first 2 ropes forward and aft should be a minimum of 220 m. length or preferably made longer temporarily by joining 2 ropes together with a piece of line for initial passing to buoys by mooring boats.

Berthing operation is not carried out if wind speed is more than 7 m./sec.

Loading: Loading is by a conveyor loader, which can travel in a circular arc. Two dolphins are in line with it's forward and aft extremity. While berthed, head ropes and stern ropes are adjusted to bring vessel to best position for loader to cover all hatches. When mooring is taking place, loading arm operator tries out positioning of the loading arm over various hatches and advises Pilot regarding shifting, etc.

Vessel is kept about 5.0 m. clear from dolphins (Small vessels are kept about 10.0 m. from dolphins). Max. loading length of vessel that can be covered by loader is 110 m. For loading in holds beyond the reach of loader, vessel has to be warped. For shifting more than 50 m., Pilot has to be called.

Loading rate rarely exceeds 4,500 tonnes/hr.

Mischellaneous: "Campania Minera del Pacifico" (known as CMP) are the shippers for all consignments and own all loading instalments at Huasco. Due to some regulation of CMP, loading must begin within 8 hours of presenting N.O.R., otherwise fresh N.O.R. is to be tendered.

Nearest major town is Vallenar (50 km.), which has shopping centres and specialised medical facilities.

Bunkers are available at Huasco in limited quantities. Fresh water is only available by truck from Vallenar and is very expensive (about U.S.$ 16.00 per tonne).

Whilst alongside, a boat is required for access to the shore.

Usually Pilot acts as shipper's representative and signs Hold Inspection Certificates, Draft Survey Forms, etc. Final Bill of Lading figure is taken from ship's Draft Survey.

Harbour Master, Custom Officer, etc., board again before departure for Port Clearance.

All shore passes are to be returned.

Provisions procured are of good quality and are not expensive. As per Port Regulations, cash for provisions is to be handed over to vessel's Agent, who converts into local currency and pays Chandler.

Pilot disembarks as soon as all lines are cast off and anchor is aweigh, i.e. when vessel is just a few hundred feet from berth. Head on a course 000° until about 1 mile North of Guacolda Light., then turn to port and head on course 270°.

All Authorities, Agents, Pilots and loading supervisors, etc., were found to be very helpful and cooperative.

AUTHORITY: Capitania de Puerto Huasco, Calle Concheria 104, Huasco, 111 Region, Chile. *Tel:* 054-531011. *Contact:* Ricardo Bendal Vidal, Harbour Master.

IQUIQUE (including Patillos Cove): 20.12 S. 70.09 W. (See Plan)

PORT LIMITS: The area inside the following geographical points:

(1) Lat. 20° 11' 10" S., Long. 70° 09' 30" W.
(2) Lat. 20° 11' 10" S., Long. 70° 08' 09" W.
(3) Lat. 20° 12' 05" S., Long. 70° 09' 30" W.

DOCUMENTS:

For vessels coming from foreign countries:

Clearance from last foreign port.
Crew List.
Passenger List.
Manifest of hazardous cargo (when applicable).
Insurance policy against contamination (for tankers).
International Maritime Health Declaration.
Derat Certificate.
Tonnage Certificate.
Radio-telegraphy safety Certificate.
Certificate of equipment.
Lighthouses and buoys Certificate.
Freeboard Certificate.
Construction Certificate.

For vessels coming from another Chilean port:

Clearance from last port.
Crew List.
List of passengers.
Manifest of hazardous cargo (when applicable).

PILOTAGE: Compulsory. During the day, the Pilot cutter displays the "H" flag of the International Code, and at night the lights prescribed by the International Regulations.

There is a pilot boarding area between the following geographical points:

(1) Lat. 20° 11' 10" S., Long. 70° 09' 30" W.
(2) Lat. 20° 11' 10" S., Long. 70° 09' 11" W.
(3) Lat. 20° 11' 36" S., Long. 70° 09' 11" W.
(4) Lat. 20° 11' 36" S., Long. 70° 09' 30" W.

There is no restriction on berthing and unberthing. Manoeuvres take place 24 hours.

The telegraphic address for the Pilot is "Maritgob Iquique TLX 323156 IQQ CK". It is necessary to give prior notice of Pilot requirement 72 hours and 24 hours ahead of arrival, indicating maximum draft.

Channel for calling the Pilot is VHF Channel 16, working is on Channel 8. The Pilot Boarding Area is beyond the port limits.

ANCHORAGES: *Access:* Access to the bay is not difficult. The entrance and/or exit of the port has intense fishing boat traffic.

Anchorages: There are 3 established anchorages which can be used without a pilot onboard.

The anchorage locations are as follows (bearing and distance from lighthouse Molo de Abrigo).

Anchorage	*Demarcation*	*Distance* (cables)	*Depth* (m.)
A	290°	3.5	28
B	270°	5.8	35
C	265°	7.8	43

Note: Anchorage "C" has a draft limitation due to a near sounding line of 12.7 m.

To the West part of these anchorages, vessel may anchor freely, as the depth varies from 20 m. – 60 m.

RESTRICTIONS: Mist occurs with greater frequency from December to March, and is generally slight and low which produces a danger when making a landfall. The general direction of the current is from South to North at a rate of 0.5 to 3 knots. This current is strong at Punta Gruesa, Cavancha and Punta Piedras. Fierce winds frequently occur from May to September but their action is very much less within the area protected by the breakwater.

MAX. SIZE:

Berths No. 1 and 2: Max. draft 9.2 m.
Berths No. 4 and 5: Max. draft 9.3 m.
Berths No. 6 and 7: Max. draft 9.3 m.

Also see "Berthing" and "Tankers".

PRATIQUE: On arrival in port vessel will be received by the Health Authority, and if everything is in order, by the Maritime Authority and Customs. It will then be granted "Free Pratique". In the event of illness or fever on board, contact must be made with the local Agent who will inform the medical authorities.

RADIO: The best way for the vessel to pass ETA messages, both to Agents and to the Maritime Authority, is to "Maritgob Iquique" via Playa Ancha Radio – CBV.

VHF: "Iquique Radio" controls the maritime traffic and there is VHF equipment to facilitate communications between vessel and Pilot, calling up on Channel 16. The Pilot and tug use walkie talkies which have Channel 16 and Channel 8. The Port Authority operates on Channel 62.

TUGS: 1×1,200 h.p., 1×1,690 h.p. and 1×2,800 h.p.

BERTHING: Inside the breakwater are Berths No. 1, 2 and 3. No. 3 is permanently used by deepsea fishing vessels. On the mooring pier on the West side are Berths No. 4 and 5, and on the East side Berths No. 6 and 7.

Loading and discharging is by cranes and/or ship's derricks.

Berths No. 1 and 2: Length 360 m.
Berths No. 4 and 5: Length 330 m.
Berths No. 6 and 7: Length 270 m.

Patillos Cove: It is situated 33 miles South of Iquique. Vessels berth to 6 buoys, but must move to present each hatch to the port loader. Mooring and unmooring operations must be carried out during daylight hours.

The use of Pilot is compulsory.

The loading of salt is carried out by means of a mechanical, stationary conveyor with capacity of 550 t.p.h.

Max. Size:

Max. LOA:	250 m.
Max. beam:	41 m.
Max. draft:	14.3 m.
Max. d.w.t.:	100,000 tonnes

Port Limits: Comprise a limited area between a line joining Point Cotitira and Point Patillo.

Waiting Zone for Pilot:

Comprised of an area within the following geographical points:

(1) Lat. 20° 44' 18" S., Long. 70° 11' 56" W.
(2) Lat. 20° 44' 20" S., Long. 70° 11' 43" W.
(3) Lat. 20° 44' 38" S., Long. 70° 11' 46" W.
(4) Lat. 20° 44' 36" S., Long. 70° 11' 59" W.

CRANES: Berths not equipped with cranes for discharging operations.

MEDICAL: In the event of any serious case or an emergency it is necessary to advise the Agent, otherwise advice should be by VHF Channel 16. Iquique port has a modern hospital and clinics with sufficient medical resources where crew members can be treated.

STEVEDORES: Gangs of stevedores for ship and shore must be requested from the Port Authority who will give the final instructions.

The port works 3 shifts, in the following schedules:

1st shift: 0800 hrs. – 1530 hrs.
2nd shift: 1530 hrs. – 2300 hrs.
3rd shift: 2300 hrs. – 0630 hrs.

TANKERS: Loading and discharging is by submarine line. There are no deballasting facilities in the Port. In front of El Colorado Beach there are three groups of buoys, each with 3 buoys, for mooring tankers.

The North group is for the Esso Terminal, for loading or discharging clean or dirty products, and the South group is for the Copec Terminal for loading and discharging clean or dirty products.

Esso Buoy: Located to the North, and with the following limitations:

Max. draft allowed:	10.65 m.
Max. LOA:	170.0 m.
GRT:	15,000
DWT:	26,000

Copec Buoy: Located to the South part, and with the following limitations:

Max. draft allowed:	11.34 m.
Max. LOA:	228.0 m.
GRT:	40,000
DWT:	70,000

Vessels which moor at the tanker buoys, either Copec or Esso, must berth with the bow heading 270°. Mooring must be made in daylight, unmooring anytime.

FRESH WATER: Small quantities available by truck.

FUEL: Quantities of less than 300 tonnes can be delivered by truck. If greater quantities required, vessel should proceed to the Esso or Copec buoys (See "Tankers").

CONSULS:

Bolivia
Colombia
Denmark
Italy
Netherlands
Peru
Spain
Sweden

REPAIRS: Minor repairs can be effected at the Marco Shipyard.

DRY DOCKS: There is 1 dry dock for vessels up to 500 tons.

SURVEYORS: Lloyds, Bureau Veritas and A.B.S.

GANGWAY/DECK WATCHMEN: It is necessary and compulsory for all vessels to have secuirty guard at the gangway, and in case of hazardous cargo the Maritime Authority requires a second guard.

OPENING/CLOSING HATCHES: Crew or stevedores.

CUSTOMS ALLOWANCES: It is permitted to have all that is required for normal consumption from the ship's store.

REPATRIATION: There are no problems in repatriating crew, either for exchange purposes or for holidays, who have to travel back to their country of origin.

AIRPORT: The airport of Chucumata is 30 minutes away by car, and there are connections by Lan Chile (National Airline) and Ladeco (Linea Aerea del Cobre) with foreign airlines at the Airport in Santiago de Chile.

TIME: Local time is GMT minus 4 hours during the Winter season and GMT minus 3 during the Summer season. See "General" before the first port for dates of local time changes.

HOLIDAYS: 1st January (New Year's Day); 1st May (Labour Day); 21st May (Navy Day); 2nd June (Corpus Christi); 29th June (Saint Peter and Paul); 15th August (Assumption); 11th September (Liberation National Day); 18th September (Independence); 19th September (Army Day); 12th October (Race Day); 1st November (All Saints' Day); 8th December (Immaculate Conception) and 25th December (Christmas).

There is also Holy Week which is a movable holiday between end March and middle of April.

POLICE/AMBULANCE/FIRE: Police Tel: 133; Ambulance Tel: 131; Fire Brigade Tel: 132; Maritime Rescue Tel: 137.

TELEPHONES: There is no facility for connection on board. Telephones on the quay less than 100 m. from the vessel. Cellular telephones available.

SERVICES: It is possible to obtain gangs for tank and hold cleaning.

SHORE LEAVE: Permitted, no restrictions.

IDENTITY CARDS: Any crew member coming ashore is given an identity card by the International Police, card is returned when the vessel sails.

SHIPMASTER'S REPORT: September 1987.

Vessel loaded a cargo of salt in bulk at Caleta Patillos (Patillos Cove).

When 20 miles from the terminal the vessel should call "Caleta Patillos Radio" on VHF Channel 16 and confirm ETA and advise vessel's particulars, after which the radio station will advise a position for anchoring (Latitude and Longitude). Other vessels may already be anchored in the vicinity of the position allocated.

Patillos Cove is nearly semi-circular, with a diameter of approximately one mile. The best anchoring position is close to the centre of the Cove, about 5 cables N.W. of the shiploader. The bottom is sand, with some scattered small rocks and it proved to be a good holding ground with moderate wind and heavy swell. (The Cove is absolutely unprotected and open to the Pacific Ocean. This vessel stayed 4 days in the anchorage, always rolling heavily, due to a western swell).

Port Authorities and Agents board the vessel during regular working hours, either by the ship's gangway, or by the pilot ladder, depending on the state of the sea. At this time shore passes are issued to each crew member, and the ship's stores are checked by a Health officer, who may order some fruits and vegetables to be put under seal (before ship's sailing, he returns to check if the seals are still intact).

Port Restrictions: Max. LOA 250 m., Max. draft 12.0 m. There is no restriction regarding airdraft, however, the vessel should avoid arriving in a too light condition, as the pilots may refuse to manoeuvre if the wind is anything more than light.

Transport to and from the ship is undertaken by a launch called "Icaiza", any time day or night, and which can be contacted via VHF, Channels 01 and/or 16.

Fresh water is not available in Caleta Patillos, but stores and provisions, and also laundry service are available through ship chandlers from Iquique, who usually board the vessel on arrival. Bonded stores can also be obtained through the chandler, but in our case they failed to deliver them as there was no Customs Officer available to accompany and seal the stores.

Berthing and unberthing is only undertaken during daylight hours, and during the manoeuvre the ship is assisted by a Pilot (who comes from Iquique), a tugboat (Motor Tug "Albatros II" – 1,200 h.p.), and 2 line-handling boats.

The vessel must have at least 10 lines with a length of 250 m. each for mooring to 5 buoys. This is because the shiploader is of fixed type, and the vessel must shift every time it is necessary to change the loading from one hatch to another. The terminal can supply up to 3 lines with this length, and the remainder can be arranged by splicing the ship's ropes, if these are shorter than 250 m.

For berthing, the starboard anchor, 2 head lines, 2 forward breast lines (port), 2 stern lines and 4 after breast lines (2 on port side, 2 on starboard side) are used.

Shiftings from hatch to hatch are made any time day or night, but must be done with the assistance of a Pilot, tugboat and launches. (The Pilot is assisted by 3 men holding portable radios, one on the forecastle, one on main deck and one on the stern).

The salt is loaded at a daily average of 10,500 tonnes (stowage factor 32 cu.ft./ton) by a shiploader fitted with conveyor belt. Draft surveys are performed by a local surveyor upon berthing, before trimming and after conclusion of loading.

The launch ("Icaiza") must be used to go ashore even when the ship is moored to the buoys, since no direct access from ship to shore is available. The terminal ("Salinas de Punta de Lobos S.A.M.") provides a free bus service to and from Iquique, 3 times daily. In Iquique, major attraction is the "ZOFRI", the tax-free complex which is located in the northern part of that city. The salt is brought by trucks from a very interesting salt-mine located inland, and visits can be arranged through the Terminal's Manager.

If heavy swell is experienced in the Cove, loading operations are stopped, as the vessel rolls heavily in the berth. (In extreme cases the vessel must go out to the anchorage).

On completion of loading, Port Authorities board the vessel again to check documents, collect shore passes and to issue the Sailing Clearance. If another ship is waiting for the berth, the loaded vessel must clear the berth and wait for the Authorities in the anchorage (on this occasion, we waited 12 hours as they were busy with other vessels in Iquique Harbour).

AUTHORITY: Empresa Portuaria de Chile, Casilla No. 47-D, Iquique, Chile. *Tel:* (56-57) 422848. *FAX:* (56-57) 413176. *Contact:* Pedro Davila Pino, Port Manager. Zvonimir Adasme Alcota, Chief of Operations.

AGENT: See "Valparaiso".

LIRQUEN: 36.42 S. 72.59 W. (See Plan)

DOCUMENTS: See "Talcahuano".
PILOTAGE: Pilot boards off end of pier.
RESTRICTIONS: Night berthing is allowed.
MAX. SIZE: Limited by draft.

Berth	*Max. draft* (ft.)	*Max. LOA* (m.)
No. 1	39	220
No. 2	38	200
No. 3	31.5	200
No. 4	24.25	160

HEALTH: No restrictions, except when the vessel comes from Peru. Maritime Health request 5 days notice for authorisation for berthing.
VHF: Port maintains watch on Channel 16 throughout 24 hours.
TUGS: 2×1,340 h.p. and one launch.
BERTHING: See "Max. Size".
CRANES: Vessels use their own cranes and gear.
CARGO HANDLING FACILITIES: *Warehouses:* 13 warehouses covering an area of 59,400 sq.m.

Equipment:
(a) 41 forklifts with forks, clamps and/or press from 4,500 lb. to 22,000 lb. lifting capacity.
(b) 48 tractors.
(c) 7 front loaders (large) with shovels for bulk and/or grabs for logs.
(d) 1 decorticator with capacity to bark 800 cu.m. in one shift (7.5 hours).
(e) 1 trackmobile to drag railway wagons.
(f) 6 fertiliser bagging plants with capacity of 4,000 tons per day (24 hours).

Loading/Unloading Rates:
(a) Woodpulp (loading): 13,430 tons in 3 shifts (24 hours).
(b) Logs (loading): 12,250 cu.m. in 3 shifts (24 hours).
(c) Fertiliser (unloading): 9,297 tons in 3 shifts (24 hours).
(d) Pulp logs (loading): 18,522 pcm. in 3 shifts (24 hours).

Types of Cargo which were moved through the Port during 1993:
(a) 31.66% logs.
(b) 25.10% woodpulp and paper.
(c) 13.69% fertiliser.
(d) 19.51% lumber.
(e) 10.04% general cargo (including fish meal).

The port also gives the service of storage and consolidation of containers.

FRESH WATER: Available.
FUEL: Diesel oil available.
CONSULS: See "Talcahuano".
REPAIRS: Deck and engine repairs possible.
GANGWAY/DECK WATCHMEN: Shore watchman required.
SURVEYORS: Available.
REPATRIATION: Facilities exist for repatriation of crew.
AIRPORT: 16 km. to Carriel Sur Airport.
HOLIDAYS: Port works all year round.
SERVICES: Telephone, telex and fax.
SHORE LEAVE: Crew members are allowed ashore.
IDENTIFICATION CARDS: Shore pass is sufficient.
GARBAGE DISPOSAL: Not available.
WASTE OIL DISPOSAL: Not available.
SEAMAN'S CLUBS: None.
CURRENCY: Pesos.
AUTHORITY: (Private Port) Puerto de Lirquen S.A., P.O.Box 173-D, Teatinos No. 220, Office No. 92, 9th Floor, Santiago de Chile, Chile. *Tel:* (56) 02-672941, (56) 02-671550. *Telex:* 240835 Pudel CL. *FAX:* (56) 02-6981698. *Contact:* Jaime Lea-Plaza or Juan Manuel Gutierrez.

Lirquen: Recinto Portuario S/N, P.O.Box 937, Lirquen, Octava Region, Chile. *Tel:* (56) 041-451037. *Telex:* 260193 Pudel CL. *FAX:* (56) 041-451030. *Contact:* Jorge Baksai or Mario Olquin Zuniga.

LOTA: 37.06 S. 73.10 W.

DOCUMENTS: See "General" before first port.
PILOTAGE: Compulsory. The Pilot should be requested at Talcahuano, Port Captain Coronel on VHF Channel 14.
ANCHORAGE: N.W. of the Lutrin Light. The Pilot will board here.
RESTRICTIONS: Berthing/unberthing during daylight hours only.
TUGS: One tug required for berthing and to be requested at Talcahuano.
MAX. SIZE: Length 160 m. Max. draft 27 ft. Also see "Developments".
BERTHING: Mechanical Pier: Vessels moor to 3 buoys, using both anchors, and lie with their bows heading 190°. The pier is 277 m. long, depth varies from 29 ft. at the head to 23 ft. at the 92 m. mark.

Loading rate for coal 300 t.p.h. – 400 t.p.h.

FRESH WATER: Available at a rate of 65 tons per day.
FUEL: Not available.
CONSULS: At Conception.
TIME: Local time is GMT minus 4 hours during the Winter season and GMT minus 3 hours during the Summer season. See "General" before first port, for dates of local time changes.
DEVELOPMENTS: The pier is being extended by 37 m. and dredged to 30 ft.
AUTHORITY: See "Coronel".

MEJILLONES: 23.06 S. 70.28 W. (See Plan)

DOCUMENTS:
Vessels directly from foreign ports:
5 Crew Lists.
3 Passenger Lists.
3 Stores Lists.
5 Personal Effects Lists.
3 Narcotics Lists.
5 Import Cargo Manifests.
11 Manifests for cargo destined for Bolivia.
Vessels coming from another Chilean port:
1 Crew List.
1 List of Passengers.
1 Stores List.
5 Import Cargo Manifests.
13 Manifests for cargo destined for Bolivia.

PILOTAGE: Service carried out by the Pilot Corps of Antofagasta (65 km. from this port). Service is compulsory. Agent has to apply for the Pilot, and it is important to give arrival notice in good time.
ANCHORAGES: Open bay very well protected and with deep water.
MAX. SIZE: No restrictions. Vessels work cargo at anchor.
HEALTH: Pratique is automatic for vessels coming from another Chilean port, otherwise it will be granted after Sanitary visit.
RADIO: Antofagasta radio station CBA-3. Listens out between 0800 hrs. and 1200 hrs. and between 1400 hrs. and 1800 hrs.

Transmits 8,370 receives 8,354 Telegraphy H 00–30.
Transmits 4,396 receives 4,091 Speech H 30–45.
Transmits 8,780 receives 8,230 Speech H 45–60.

The station is active listening out every 2 hours, i.e. 0800, 1000, 1200, 1400, 1600 and 1800 hrs.

TUGS: There are none available locally but can be supplied from Antofagasta if needed.
BERTHING: There are no berths. Vessels work cargo at anchor.
Annaex or Proquim Terminal: 3 mooring buoys and a small platform for connection for ammonia discharge. Max. length 180 m. (15,000 d.w.t.). Flexible hose of 6 in., temperature – 32°C.

Also see "Shipmaster's Report" dated August 1988.

STEVEDORES: Agent to be informed before 1800 hrs. the day before arrival to order gangs.
MEDICAL: There is a doctor in the port but no hospitals are available and patients are transported to Antofagasta.
DENSITY: Sea water.
FRESH WATER: No fresh water available.
FUEL: Not available.
REPAIRS: There are no workshops. Vessel repairs done by the crew are allowed.
GANGWAY/DECK WATCHMEN: This service is recommended.
OPENING/CLOSING HATCHES: This work can be carried out by crew and/or stevedores. Derricks operated only by crew.

CERTIFICATES:
Register Certificate.
Tonnage Certificate.
Radio Certificate.
Safety Equipment Certificate.
Derat Certificate.

CUSTOMS ALLOWANCES: 200 cigarettes for each member of the crew besides the ones in the stores. One bottle wine/spirits per person. One customs official stays on board.

REPATRIATION: There are facilities for changing the crew.

AIRPORT: 25 km. from Mejillones is the airport Cerro Moreno. To travel to U.S.A. one must go via Santiago. There are daily flights from Antofagasta to Santiago, and from Santiago to U.S.A. with stops in various countries.

TIME: There are two official times:

Summertime: from the second Sunday in October to the second Saturday in March. Local time is GMT minus 3 hours.

Wintertime: from the second Saturday in March to the second Saturday in October. Local time is GMT minus 4 hours.

HOLIDAYS: It is possible to work on holidays with a surcharge of 100%. New Year's Day; Maunday Thursday; Good Friday; 1st May; 21st May; Ascension Day; 18th September; 19th September; 12th October; 1st November; 8th December; 25th December.

POLICE/AMBULANCE/FIRE: Police Tel: 7 Mejillones; Ambulance 222370 Antofagasta; Fire 41 Mejillones.

TELEPHONES: It is not possible to install lines on board.

SHORE LEAVE: Members of the crew are allowed ashore. Shore passes are provided by the port.

IDENTIFICATION CARDS: Not necessary, only passport and boarding card.

SHIPMASTER'S REPORT: August 1988.

Annaex Terminal: Jetty consists of small loading dolphin with 2 separate mooring dolphins, and 3 buoys (2 aft and 1 forward). Mooring arrangement is starboard anchor, 2 headlines forward, 2 springs forward and 4 sternlines and 2 springs aft (See Plan). Shore provides 6 in. hose. Ammonia to be at −33°C and discharge rate 400 t.p.h. Cargo Surveyor attends and samples taken. Max. length 180 m. Daylight berthing only and sometimes permission given for night sailing. Max. force 4 wind for berthing. Port side alongside, ship's head 254° T. Starboard accommodation ladder required.

AUTHORITY: Captain of the Port.

PUERTO CHACABUCO (Puerto Aisen):
45.28 S. 72.50 W. **(See Plan)**

PORT LIMITS: A line joining Punta Weste and Peninsula Fontaine (North West point).

DOCUMENTS:
1 Clearance.
1 Light Dues Certificate.
7 Port Cargo Manifests.
4 General Cargo Manifests.
7 Transhipment Cargo Manifests.
3 Passenger Lists for the Port.
3 Passenger Lists for in-transit passengers.
18 Crew Lists.
1 Personal Effects List.
Passenger Baggage Declaration (2 per passenger).
1 Fumigation Certificate.

APPROACHES: To enter the Bay of Chacabuco, this must be done by day for vessels exceeding 60 m. LOA, since weather conditions and coastal configuration do not make access easy, there being gusty winds blowing mainly from the South with some frequency.

PILOTAGE: Compulsory for foreign vessels. Pilotage can be done by the Channel Pilot who is on board the ship.

Not compulsory for Chilean vessels.

ANCHORAGES: Anchorage point is Lat. 45° 28' 45" S., Long. 72° 50' 10" W.

RESTRICTIONS: Vessels over 70 m. LOA berth in daylight hours only.

MAX. SIZE: *Muelle No. 2:* Max. LOA 165 m. Max. draft 25 ft. (forward), 32 ft. (aft). Max. displacement 15,000 tons.

HEALTH: If from a Chilean port, Free Pratique is granted by the local Chilean Coast Guard Captain of the Port.

If arriving from overseas, Free Pratique can be granted by the local Chilean Coast Guard Captain of the Port after the inspection of the Health Inspector, International Police, Customs and Agriculture Inspector.

RADIO: Naval radio station of Aisen Port. Call sign CBP-3. Station receives and transmits on 2182 kHz and VHF Channel 16.

VHF: Captain of the Port, call "Chacabuco Radio" on Channel 16.

Harbour Master, call "Base Emporchi" on Channel 16.

TUGS: A small tug "Alcatraz" of 360 h.p. is based in the bay and managed by S.A.A.M. Agency. Tug call sign is "CB 2559".

BERTHING: *Muelle No. 1:* Length 71.20 m., depth 10.0 m. Max. LOA 110 m. Fresh water and fuel available. One "Mann" mobile crane, lifting capacity of 3 tons at 22 m.

Muelle No. 2:

Berth	*Length*	*Depth*	*Max. Draft*	
No.	*(m.)*	*(m.)*	*Forward (m.)*	*Aft (m.)*
2	42	9.0	6.00	8.00
3	52	10.0	7.62	9.75
4	37	9.0	6.00	8.00

Fresh water and fuel available.

CRANES: *Port Authority:* 1 electric crane × 3 tons, 1 mobile crane × 27 tons, 1 mobile crane × 12.5 tons.
Private: 1 mobile crane × 5 tons.

BULK CARGO FACILITIES: 1 conveyor belt belonging to "Minera El Toqui".

SPECIALISED CARGO HANDLING FACILITIES: To the N.W. of the new quay, there is a Ro/Ro terminal for coastal car ferries.

STEVEDORES: Each agency attends ships with both proper and syndicated Stevedores.
Working Hours: Daily in 3 shifts.
1st shift: 0800 – 1530 hrs.
2nd shift: 1530 – 2300 hrs.
3rd shift: 2300 – 0630 hrs.

MEDICAL: There is a hospital at Puerto Aisen, a First Aid Station in the Port belonging to "I.S.T." and a Public First Aid Station outside the Port Area.

TANKERS: *Fuel Terminal:* Vessels of 10,000 tons displacement discharge fuel via a submarine pipeline. Pilotage compulsory for foreign vessels. Daylight berthing and unberthing.

Gas Terminal: Vessels in the range 750 – 1,000 tons displacement discharge liquid gas via submarine pipeline. Pilotage compulsory for foreign vessels. Daylight berthing and unberthing.

FRESH WATER: Available, no restriction on amount.

FUEL: Fuel is available from Copec S.A., Shell Chile and Esso.

CONSULS: There is a Vice-Consul for Spain in Puerto Aisen.

REPAIRS: No repair facilities available.

DRY DOCKS: None.

GANGWAY/DECK WATCHMEN: Available and required by law.

OPENING/CLOSING HATCHES: To be carried out by the stevedores.

CUSTOMS ALLOWANCE: No unusual restrictions.

REPATRIATION: Facilities available.

AIRPORT: Balmaceda National Airport is 120 km. from Chacabuco, national flights. Coyhaique Airport is 80 km. from Chacabuco, flights to Puerto Montt and Santiago.

TIME: Local time: October to March, GMT minus 3 hours and March to October, GMT minus 4 hours.

HOLIDAYS: See "General" before first port.

TELEPHONES: Telephone service to the whole country and abroad, together with post and telegraph office.

SERVICES: Charts can be obtained from The Maritime Governor's Headquarters at Puerto Aisen.

BANKS: Banco del Estado de Chile, Banco de Chile and Banco de Credito e Insersiones, located in Puerto Aisen, 15 km. away.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Required.

PORT REGULATIONS: It is strictly prohibited to dismantle the main engine or effect repairs to the engines without previous notification and authorisation from the maritime authorities. Also, to deballast petroleum, pump bilges, throw overboard waste or refuse in the port.

GENERAL: At Puerto Chacabuco there is a Customs Office, police, a hospital, fire brigade and Coast Guard Captain of the Port.

To the N.W. of the quay, there is a Ro/Ro terminal for coastal car ferries.

SHIPMASTER'S REPORT: February 1993.
Vessel: LOA 160 m., 17,900 d.w.t.

The vessel was due to sail for Chacabuco to load 8,400 tonnes of zinc concentrate. At last port (Valparaiso), 2 Pilots boarded to stay until sailing from Chacabuco. As Chacabuco is a busy fishing port (main export is salmon to Japan from farms in the area), the berth was occupied on arrival by a reefer vessel.

Good holding anchor ground was found to the South with 50 m. of water.

A tug now is available (720 h.p.) to assist berthing.

According to Harbour Master, vessels with 165 m. length, forward draft 25 ft. and aft draft 32 ft. are permitted.

The loading under the fixed belt is rather slow, as the equipment is old and breakdowns are common. Working time is 24 hours, but no more than 100 tonnes/hr. can be expected.

Stevedores intended to work even during rain, but the rain tent failed to function due to age.

Long and good mooring ropes (at least 4) should be used, as sudden strong winds may occur and shifting the vessel requires good attention.

Deballasting of foreign water only in strict accordance with Navy Regulations (See "General" before first port).

During our 4.5 days overall stay, the Pilots went to the only hotel in town (100 m. from vessel) which offers good wines and excellent seafood dishes.

Dropping the Pilots at Ancud creates no difficulties, although strong current was observed near Cabo Coronado.

SHIPMASTER'S REPORT: April 1996.

Limits: Not defined on the chart, but all pilotage waters in this area for large ocean going vessels.

Documents:
Cargo Manifest.
Crew Lists.
General Declaration (also doubles as Clearance on Departure).
Passenger List.
Health Form.
Personal Declaration.

Pilotage: Vessels coming from the Atlantic take a Pilot in Punta Arenas, for Magellan Strait and approaches to Chacabuco.

On leaving, Pilots disembark at either Punta Arenas (Ancud Pilot Station near approaches to Puerto Montt) or Valparaiso. No Harbour Pilot as this is done by Sea Pilot.

Vessels entering from Pacific take Pilot at either Valparaiso or Ancud Pilot Station.

Approaches: During daylight hours and Chacabuco Bay is approached around 1100 hrs. local time. Strong winds from S/S.E. could make direct berthing difficult.

We anchored with 5 shackles on port anchor. As wind mainly from S/S.E., vessel lay in good position for the 5 days at anchor.

Any restrictions usually refer to small craft.

Health: Pratique applied for via agency and granted on arrival.

Anchorage: Situated in the S.W. corner of the bay and is exposed to strong gusts of wind coming mainly from the S.W., through a gap in the mountains. A good holding ground of mud in 30 m. – 40 m. of water was experienced.

Many fish hatcheries/farms are situated close to the Southeast, South and West coasts of the bay which may reduce the area of swing.

Vessel's Size: Reefer vessel – LOA 151 m., beam 22.0 m. and draft 8.8 m. (Sailing).

Communications/Radio: Used main Agent in Valparaiso for all messages whilst in Chilean waters. Also maintained usual "Chilean Reporting Systems".

Pilot used VHF once vessel was in range, to organise local Authorities, etc. Local Authorities use Channel 8 as working channel.

International telephone available close to port area.

Tugs: One medium powered tug available for berthing (Ship's lines used).

Radar: No radar service or communication with Port Captain prior to contact with Agent on VHF. Port Captain is Chilean Naval Officer.

Transport: Regular Ro-Ro service (3 times a week) connects Valparaiso, Puerto Montt, Puerto Chacabuco and Punta Arenas. Local bus service to Puerto Aisen throughout the day, finishing around 2100 hrs. Bus services from Puerto Aisen connect to major towns, cities in the area. There is an airport at Puerto Aisen connecting with local/international airports. Taxi services are available to Puerto Aisen, run on a share basis. Road between Chacabuco and Aisen in poor state of repair.

Trade: Ro-Ro services have brisk trade with road trailers. Timber and cattle are normal coastal trade. Main export cargo is frozen fish fillets/roe/fish products. Fish farming, stevedoring, reefer warehousing appear to be the main industry in Puerto Chacabuco.

Berths: (See "Plan").

Two berths plus a ramp arrangement for the Ro-Ro services are in constant use.

The two berths have depths alongside of 10.5 m. These depths increase rapidly to 14.0 m. and over at approximately 22 m. distant from the jetty.

Old original berth is of wooden construction with tyre fenders at various intervals along the length (Approx. 50 m.).

New berth is concrete and steel pile construction (Approx. 75 m. long) with a traversing crane 3 tonnes SWL. Yokohama fender on the North end of this jetty proved to be of great help, as vessel berthed with North jetty abreast No. 1 and No. 2 hatches and the South jetty abreast No. 4 hatch.

Berthing: There is a mooring buoy abreast North end of new berth which affects the approach of larger vessels. Vessel made a 90° approach with the North end of the old berth in line so as to clear the buoy. Port anchor was used and run out to 7 shackles. Mooring lines run out with aid of small boat and tug pushed stern round to assist with running lines to berth, being starboard side too. Line is run to the buoy on departure to assist clearing berth.

Same buoy is used by Ro-Ro vessels for similar manoeuvre.

All mooring bollards in good condition and conveniently situated throughout the length of the waterfront.

Stevedores: Appear to work all hours due to frequent rain during most of the year. All breaks appeared to be taken when rain stopped cargo work. This was a 24 hour operation. Hatches opened and closed by crew. Port pallet lifting equipment used.

Port Facilities: There is a crane situated on the Southern concrete jetty, capacity 3 tonnes SWL. Forklift trucks available of varying capacities. The port can handle 40 ft. containers.

Electric plug-in facilities for approximately 20×40 ft. reefer containers.

Density: 1008.

Fresh Water: Available on both jetties from shore connection. Good pressure (Approx. 60 t.p.h.).

Bonded Stores: Not available.

Customs Allowances: Declared usual 200 cigarettes, 1 bottle of spirits and 10 beers on Personal Customs Declaration.

Shore Leave: Shore passes issued on arrival. Not collected on departure.

Provisions/General Stores: Very limited supply. Fresh provisions are of medium/poor quality.

Medical Facilities: Small hospital in Puerto Aisen with limited facilities. No medical facilities in Puerto Chacabuco.

Banks: Located in Puerto Aisen: Banco del Estado de Chile and one other.

These banks able to change foreign currency (U.S.Dollars in my case). No transactions after 1400 hrs. for exchanging money. Rate of exchange was U.S.$. 1.00 = 400 Pesos.

Navy: Three gunboats berthed, on floating pontoon close South of commercial jetties.

AUTHORITY: *Port Authority:* Empresa Portuaria de Chile, Avendida B.O'Higgins S/No., (Casilla 20), Chacabuco, Chile. *Tel:* 351139, 351198. *Telex:* 277567 EMPOR CL. *FAX:* 351174. *Contact:* Walter Gomez Bernal, Administrator of the Port (Harbour Master).

Maritime Authority: Coast Guard Captain of the Port.

PUERTO CORRAL: 39.52 S. 73.25 W.

LOCATION: This port is located in the mouth of Valdivia River and is expected to handle over a million tons/year, including 500,000 tons of woodchips, sawn lumber, pulp logs, sawn logs, particle boards, plywood, general cargo and fertilisers from and to Valdivia general area.

The berth is located in position Lat. 39° 52' 25.7" S., Long. 73° 25' 14" W.

PORT LIMITS: Seaward limit of the port is the line from Roca del Conde to Morro Niebla.

DOCUMENTS: See "General" before first port.

PILOTAGE: Pilotage is compulsory. Pilots board 1.5 – 2.0 cables East of Roca del Conde.

ETA should be sent to to Agent 72 hours in advance with confirmation 24 hours before arrival.

MAX. SIZE: 67,000 d.w.t., LOA 229 m. and max. draft 12.2 m.

RADIO: The Coastal Radio Service is situated in the Port Captain's Office, call sign "Capuerto Corral".

TUGS: Compania Portuaria Corral has one tug of 1,200 h.p. and 24 tons bollard pull. Compania Portuaria Talcahuano has one tug of 550 h.p. On request, tugs from other locations can be made available.

Vessels up to 180 m. LOA should use one tug of minimum 1,200 h.p. to go alongside. Vessels between 180 m. and 229 m. should use one tug of minimum 2,000 h.p., or 2 tugs with a combined minimum capacity of 2,000 h.p.

The use of tugs is not compulsory when leaving, if weather conditions are favourable.

BERTHING: One berth with length 146 m. and depth 14.0 m. Berth orientation 013° – 193°.

Fenders: 4 Seibu 1150 HX 1150 LK3 and 5 Seibu 800 HX 800 L.

Buoys: 2×150 tons and 1×70 tons.

Bollards: 4×100 tons and 5×50 tons.

BULK CARGO FACILITIES: One conveyor for loading woodchips at a rate of 600 t.p.h. The vessel has to shift position to load different cargo holds. For general cargo handling, vessels should use their own gear.

STEVEDORES: Gangs are to be requested 24 hours in advance. 3 shifts are worked.

MEDICAL: Small hospital in Corral, with ambulance. Tel: 56-63-471254. Larger hospitals in Valdivia, 8 miles away.

DENSITY: 1017.

FRESH WATER: Available in small quantities.

CONSULS:

Germany. Tel: 56-63-218821.
Netherlands. Tel: 56-21-213770.
Spain. Tel: 56-21-212421.

REPAIRS: Asenav. Tel: 56-63-216102.

AIRPORTS: Pichoy Airport in Valdivia, 1 hour from Corral. Ladeco, Lan and Alta Airlines flights daily.

HOLIDAYS: Same as other Chilean ports.

POLICE/AMBULANCE/FIRE:

Police: There is a police station in Corral, and the Port Captain is the Maritime Authority and acts as Coastguard.

Firemen: Corral has fire stations and some facilities, but not for ship's emergencies.

BANKS: Located in Valdivia.

Banco Concepcion. Tel: 56-63-212711.
Banco de A.Edwards. Tel: 56-63-226400.
Banco de Credito e Inversiones. Tel: 56-63-213444.
Banco de Chile. Tel: 56-63-213611.
Banco del Desarrollo. Tel: 56-63-211303.
Banco del Estado de Chile. Tel: 56-63-212611.
Banco de Santiago. Tel: 56-63-215111.
Banco O'Higgins. Tel: 56-63-213254.
Banco Santander. Tel: 56-63-219414.
Banco Sudamericano. Tel: 56-63-222901.

CURRENCY: Chilean Peso. U.S.$1.00 = 410 Peso (approximately). No exchange restrictions.

DELAYS: Normally there is no delay in berthing, loading or discharging, provided 24 hours advance notice is given.

GENERAL: The port of Corral can handle on request all types of cargo. 1,000 ton capacity barges are used to move cargo to and from Valdivia, located 8 miles inland by the Valdivia River.

River barges will transport the cargo to different Valdivia river ports, such as Las Mulatas and Railway Station, and other destinations.

Las Mulatas River Port: River port located just down-river of the city of Valdivia by Valdivia River, and consists of a 30,000 sq.m. yard for handling cargo, a 180 m. pier, for small vessels, and ramps for barges. The pier has a 10 m. draft, but is limited by the depth along Valdivia River (4.5 m.). This river port has direct connection to the National Highways.

Railway Station River Port: River port located just up-river of the city of Valdivia by Valdivia River, and consists of a 15,000 sq.m. yard for handling cargo, and ramps for barges. This river port has direct connection to National Highways and Railroad.

Valdivia: Located 8 miles up-river from Corral and connected by ferries and road to the port. In Valdivia, all kinds of facilities are available, such as major ship repairs, airport, hotels, banks, etc.

Storing: The vessel can be stored by truck or barge alongside the pier. Forklifts are used.

AUTHORITY: Capitan de Puerto de Corral. *Tel:* 56-63-471267. *Cables:* "Capuerto Corral".

Operator: Santiago Office: Portuaria Corral S.A., Monsenor Sotero Sanz 27, Oficina 51, Providencia, Santiago, Chile. *Tel:* 56-2-2341990. *FAX:* 56-2-2323456.

Valdivia Office: Portuaria Corral S.A., Guacamayo, Casilla 39-A, Valdivia, Chile. *Tel:* 56-63-211180. *FAX:* 56-63-211080. *Contact:* Eduardo Donoso V., Port Administrator.

PUERTO MONTT: 41.28 S. 72.57 W. (See Plan)

PORT LIMITS: Between the meridian that crosses the head of "Muelle del Frigorifico" to 72° 59' W. and from the parallel 41° 29' 42" S. to the North coast in Reloncavi Bay.

DOCUMENTS: The documents to be presented to the Authorites are:
- General Declaration.
- Crew List.
- Personal Effects Declaration.
- Cargo Manifest.
- IMO Goods Manifest.
- Safety Radio Certificate.
- Safety Equipment Certificate.

APPROACHES: The approach to Puerto Montt is made through the Channels, the most important of which is Canal Chacao, which requires careful navigation due to the existence of rocks and shallow areas, as well as tidal currents that reach up to 8 knots. Any type of vessel may pass this channel without problems with a Pilot aboard.

PILOTAGE: Pilotage is compulsory and must be ordered by Agent on receipt of vessels's ETA at least 24 hours in advance. Otherwise request directly to Port Captain, cable address "Capitania de Puerto de Puerto Montt". Vessels should anchor as indicated below and exhibit code flag "G". Pilot boards from a motor boat at the anchorage. Pilot boat equipped with VHF.

If vessel is arriving without a channel Pilot, then Pilot must be requested at least 48 hours in advance and Pilot boards from a motor boat at the Ancud Port Anchorage, Pilot boat equipped with VHF.

ANCHORAGE: Vessels of any size can anchor in the outer roads of the port. Recommended positions are at 4 cables 172° of the light on the head of "Muelle de Pasajeros" (Lat. 41° 28' 50" S., Long. 72° 56' 52" W.). and 7 cables 085° from point of Tenglo Island. (Lat. 41° 29' 42" S., Long. 72° 56' 45" W.). Anchorage is 35 m. deep and bottom is sand.

RESTRICTIONS/MAX. SIZE: Vessels must turn inside "Canal Tenglo" before leaving. Vessels less than 120 m. in length are not restricted. Vessels over 120 m., but less than 172 m. in length may turn inside "Canal Tenglo", during daylight hours only and with the flood tide. Vessels over 172 m. but less than 200 m. enter the port and leave during daylight hours only. Vessels over 200 m. can enter the port and leave, but during the flood tide in daylight hours only. All manoeuvring is effected in favourable weather. Max. draft permitted is 8.0 m. plus the minimum height of the low tide, during vessel's stay in port, keeping a clearance of 0.5 m. under-keel in any tide condition.

HEALTH: All ships are boarded by the Authorities on arrival, unless they are coming from another Chilean port.

RADIO: Puerto Montt Coastal Station operates 24 hours on HF (H3E/J3E0) and VHF channels.

Telex Address: VTR 370064 CBP/CK.
Tlxch: 270038 CBP/CL.

VHF: Port Captain VHF Station operates on VHF Channels 16 and 14 throughout 24 hours.

TUGS: 2×2,000 h.p. and 1×180 h.p.

BERTHING: The Commercial Pier, owned by Empresa Portuaria de Chile, has a total length of 320 m. Berths available: No. 1: 200 m. long, depth 8 m.; No. 2: 120 m. long, depth 7.5 m., both at LW.

Ro/Ro Terminal: 200 m. to the West of the commercial pier is the Ro/Ro Terminal with 4 ramps for vessels up to 120 m. LOA, the max. draft 4 m. The commercial pier as well as the Ro/Ro Terminal operate during day and night, in good weather conditions and taking tidal effects into consideration.

CRANES: 4×3 tons capacity.

STEVEDORES: Vessel should advise Agent before arrival the number of gangs required by hatch, and amount of cargo for discharge.

Working hours are 0800 – 1530 hrs., 1530 – 2300 hrs. and 2300 – 0630 hrs.

Also see "General" before first port.

MEDICAL: All facilities available, vaccination, inoculation can be arranged. Prior notice should be given if urgent assistance required on arrival.

TANKERS: *Esso Chile S.A. Terminal:* Tankers moor at buoys in the Eastern part of the bay, in daylight hours only, for vessels up to 15,000 g.r.t.

Copec Chile Terminal: Out of service for the moment.

Vessels moor using both anchors forward and 2 buoys aft. 10 in. submarine pipeline, 2×8 in. hoses connected. No slop facilities.

FRESH WATER: Available alongside Commercial Pier at 10 t.p.h.

FUEL: Only diesel oil available, supplied by trucks at Commercial Pier or Ro/Ro Terminal.

See "General" before first port.

CONSULS: Argentina, Germany, Spain, and Netherlands are represented locally.

REPAIRS: Minor engine repairs can be effected.

OPENING/CLOSING HATCHES: Ship's crew or stevedores.

CUSTOMS ALLOWANCES: Two cartons of cigarettes and 2 bottles of liquor for each man in his cabin, the rest to be declared with his personal effects.

REPATRIATION: Can be arranged.

AIRPORT: Situated 17 km. from the port. Daily flights (75 minutes) to Santiago where international connections can be made.

TIME: GMT minus 4 hours. In Summertime: GMT minus 3 hours.

Also see "General" before first port.

HOLIDAYS: Work may be arranged on most holidays. Also see "General" before first port.

POLICE/AMBULANCE/FIRE; Police Tel: 252240. Fire Tel: 252222. Ambulance Tel: 253991.

TELEPHONES: No facilities for placing telephones on board.

TRANSPORTATION: There are de-luxe bus services, with daily departures, between Puerto Montt, Santiago, Valparaiso, and intermediate points.

SHORE LEAVE: Allowed.

DEVELOPMENTS: Outer berths have been dredged to a depth of 8.50 m.

AUTHORITY: Gobernacion Maritima de Puerto Montt, Diego Portales Av. 2300, Puerto Montt, Chile. *Tel:* 252389-253051. *Telex:* 270007. *FAX:* 262224. *Contact:* Sergio Swett Soto, Maritime Governor.

PUERTO WILLIAMS: 54.56 S. 67.37 W.

PORT LIMITS: Inside a line which joins Banco Herradura Buoy (Lat. 54° 54' S., Long. 67° 36' W.) with Punta Trucco Anterior Lighthouse (Lat. 54° 55' S., Long. 67° 32' W.) and Punta Gusano Lighthouse (Lat. 54° 55' S., Long. 67° 37' W.) with Banco Herradura Buoy.

DOCUMENTS: The documents required for entering the port are:
- General Declaration.
- Passenger List.
- Crew List.
- Cargo Manifest.
- Dangerous Cargo Manifest.
- Health Certificate.

PILOTAGE: Pilotage compulsory. 48 hours notice to be sent to the Captain of the Port at Punta Arenas or the Pilot Office. Both offices are at Libertador O'Higgins No.1401, Punta Arenas. Respective telephone numbers are 221001 and 226650 and telex numbers 380014 CK VTR and 280079 CBM CL.

Pilot boarding zone is the area within the following limits:

(a) Lat. 54° 54' 14" S.	Long. 67° 35' 26" W.
(b) Lat. 54° 54' 22" S.	Long. 67° 34' 56" W.
(c) Lat. 54° 54' 38" S.	Long. 67° 35' 11" W.
(d) Lat. 54° 54' 30" S.	Long. 67° 35' 40" W.

Other local Pilot Stations are expected to be located in the following positions:

Cabo San Pio:	Lat. 55° 07' 30" S.	Long. 66° 34' 00" W.
	Lat. 55° 07' 30" S.	Long. 66° 32' 10" W.
	Lat. 55° 08' 30" S.	Long. 66° 32' 10" W.
	Lat. 55° 08' 30" S.	Long. 66° 34' 00" W.
Paso Richmond:	Lat. 55° 20' 30" S.	Long. 66° 41' 45" W.
	Lat. 55° 20' 30" S.	Long. 66° 40' 00" W.
	Lat. 55° 21' 30" S.	Long. 66° 40' 00" W.
	Lat. 55° 21' 30" S.	Long. 66° 41' 45" W.
Cabo de Hornos:	Lat. 56° 00' 15" S.	Long. 67° 17' 45" W.
	Lat. 56° 00' 15" S.	Long. 67° 15' 00" W.
	Lat. 56° 01' 15" S.	Long. 67° 15' 00" W.
	Lat. 56° 01' 15" S.	Long. 67° 16' 45" W.
Isla Hornos:	Lat. 55° 56' 44" S.	Long. 67° 12' 30" W.

ANCHORAGE: Vessels can anchor in the pilotage zone, in depths up to 38 m. Holding ground is good.

MAX.SIZE: 2,500 g.r.t., LOA 80 m. and draft 15 ft.

HEALTH: Pratique granted on arrival.

RADIO: Puerto Williams Radio. Call sign "CBW".

Type: A1A – A2A Telegraphy.
Calling Frequency: 500 kHz.
Working Frequency: 464.5 kHz.
Hours: 0130 – 0230, 0530 – 0630, 0830 – 0930, 1030 – 1130,1330 – 1430, 1630 – 1730, 1930 – 2030, 2230 – 2330 UTC.
Type: H3E – J3E Telephony.
Calling Frequency: 2182 kHz.
Working Frequency: 2738 kHz.
Hour: 24 hours.
Type: G3E VHF.
Call Frequency: 156.800 MHz. Channel 16.
Work Frequencies: 156.450 MHz. Channel 9
156.700 MHz. Channel 14.

VHF:

Calling Frequency:	156.800 Mhz	Channel 16
Working Frequencies:	156.450 MHz	Channel 9
	156.500 MHz	Channel 10
	156.550 MHz	Channel 11
	156.600 MHz	Channel 12
	156.375 MHz	Channel 67
	156.425 MHz	Channel 68
	156.475 MHz	Channel 69
	156.525 MHz	Channel 70
	156.575 MHz	Channel 71
	156.675 MHz	Channel 73
	156.725 MHz	Channel 74
	161.525 MHz	Channel 78

RADAR: There is no radar service for marine traffic control.

TUGS: None.

BERTHING:

Berth: Guardian Brito Wharf.
Owner: Chilean Navy.
Length: 282 ft. (86 m.).
Breadth: 26 ft. (4.57 m.).
Max.Size: 25,000 g.r.t.

CRANES: Chilean Navy operate a 3.5 ton mobile crane.

BULK CARGO FACILITIES: None.

BRIDGES: None.

STEVEDORES: None available.

MEDICAL: The Chilean Navy operate a hospital and dental clinic.

TANKERS: Tankers berth near Guardian Brito Wharf to buoys and also use anchors.

Owner: Chilean Navy.

Tank Capacity:	No.1	2,117,200 Litres.
	No.2	263,520 Litres.
	No.3	113,400 Litres.

Pipelines: Petroleum Terminal: 150 m. × 6 in. diameter and 60 m. × 6 in. diameter.

Guardia Brito Wharf: 200 m. × 2.5 in. diameter.

FRESH WATER: Available at Guardian Brito Wharf at a rate of 6 t.p.h.

FIRE PRECAUTIONS: Normal international precautions for handling dangerous cargoes.

CONSULS: None.

REPAIRS: Minor repairs such as carpentry and small engine repairs.

DRY DOCKS: None.

SURVEYORS: Available.

GANGWAY/DECK WATCHMEN: Not necessary as wharf is within Chilean Navy property.

CUSTOMS ALLOWANCES: Usual allowances.

CARGO GEAR: Ship's gear. Also see "Cranes".

REPATRIATION: No facilities available.

AIRPORT: Local airport is 4 miles N.W. of Puerto Williams. Two flights a week to Punta Arenas.

TIME: Local time from October to March is GMT minus 5 hours; and March to October GMT minus 4 hours.

HOLIDAYS:

New Year's Day	1st January.
Saints Week	First weekend in April
Labour Day	1st May.
Navy Honours Day	21st May.
Assumption of the Virgin Mary	15th August.
Independence Day	18th and 19th September.
Army Day	12th October.
All Saints Day	1st November.
Immaculate Conception	8th December.
Christmas Day	25th December.

EMERGENCY CO-ORDINATION CENTRE: Emergency Co-ordination and Maritime Search – SUBCOBREM – Puerto Williams. Also see "General" before first port.

TELEPHONES: ENTEL Chile have an office in Port Williams City. There are no facilities on the wharf.

SERVICES: Charts and Notice to Mariners available.

BANKS: Bank of Chile in the commerical area in Puerto Williams City.

SHORE LEAVE: Possible.

IDENTIFICATION CARDS: Seaman's Book or Passport.

REGULATIONS: Photography prohibited as berth within naval installation.

GENERAL: Mail and telegraphy facilities, also a hotel and other public services.

AUTHORITY: Chilean Navy.

PUNTA ARENAS (including Lenadura, Cabo Negro, Clarence Cove, Gregorio, Pecket): 53.10 S. 70.54 W. (See Plan)

DOCUMENTS: See "General" before first port.

PILOTAGE: Compulsory for foreign vessels. Vessels entering from Pacific will usually embark Pilots in Valparaiso or Ancud or Laitec. Vessels coming from the Atlantic embark Pilots in Bahia Possession, 30 miles to the West side of the Eastern entrance of Magellan Strait. Pilot boats have radio telephone frequencies of 2,182 kHz and 2,638 kHz and VHF Channel 16. Four hours before arrival of the vessel, the pilot boat keeps watch on Channel 16. Pilot boat carries International Pilot lights; ETA at Bahia Possession has to be given at least 24 hours in advance. In bad weather, vessel has to anchor and wait in a circular area of one mile of radius with the centre placed at 216° – 2.7 miles off Possession Lighthouse.

Pilots usually board and disembark off the lighthouse of Punta Delgada.

The Pilot for West-bound vessels travels to Bahia Possession by air from Valparaiso. It is therefore important to order the Pilot through Valparaiso Agent with as much advance notice as possible, and keep Agent closely advised of vessel's ETA.

For vessels transiting Magellan Straits Westbound, the Pilot will disembark at Valparaiso or Ancud or Laitec. Pilot's travelling expenses from and to Valparaiso are included in pilotage charges.

It is advisable to have accommodation ladder rigged as the Port Authorities will board prior to berthing if cargo work is to commence immediately.

Also see "General" – "Straits of Magellan" and "Shipmaster's Report" dated February 1993, at beginning of Chile section.

ANCHORAGE: Anchor berths A – G are situated East and Southeast of Muelle Prat. Anchorage is prohibited within 1,300 m. of the Fiscal Quay. Vessels should be ready to leave the anchorage on orders from the Port Captain, or in the event of bad weather from the East.

RESTRICTIONS: No tidal restrictions, vessels can come alongside day or night. Max. length 170 m.

MAX. SIZE: *Magellan Straits:* Max. draft 70 ft., no limit on d.w.t. tonnage for very large vessels. Vessels with a draft in excess of 70 ft. may be allowed to pass through but only after the authorities have studied the vessel's characteristics. As a safety measure, large vessels navigate the First Narrows in daylight only and with good visibility.

HEALTH: At first Chilean port, doctor will come aboard with Authorities. In other Chilean ports, there is no need to ask for Pratique or hoist the "Q" flag as Pratique is automatic.

RADIO: The Radio Station Magallanes Radio (CBM) keeps a permanent watch on 500 kHz (A1A, A2A), 2,182 kHz (H3E) and 156.8 MHz (Channel 16 VHF).

All the communication services are included in the List of Coast Stations and List of Radio determinations and special services of the ITU.

To the West of the Magellan Strait there are 2 Radio Stations:

Radio Station Evangelista (CBM-3) has permanent watch on 2,182 kHz (H3E) and 156.8 MHz (Channel 16 VHF).

Radio Station Felix (CBX) has permanent watch on 500 kHz (A1A, A2A), 2,182 kHz (H3E) and 156.8 MHz (Channel 16 VHF).

All ships must give identification on request of the Radio Stations, Chilean Warships or merchant vessels operating with Chilean Pilots.

To the East of the Magellan Strait exists Radio Station Punta Delgada which keeps permanent watch on 2,182 kHz (H3E) and 156.8 MHz (Channel 16 VHF).

It also has a Radar Control System which assists with safety of all ships operating from Dungenes to First Narrow.

TUGS: Used to go alongside in Punta Arenas tanker terminals, ship's lines used.

BERTHING: A berth should be requested 24 hours before arrival. The pier is 372 m. long with 27 ft. – 26 ft. on the North side and 22 ft. on the South side (depth at the seaward end). Depth reduces on both sides towards the land. Vessels berth bow first and care must be taken to avoid the shallow patches on both sides of the jetty about 120 ft. off. Normally, 4 head lines, 4 stern lines and 2 or 4 springs are used.

Berthing is usually at night or early morning as strong winds blow during the day, occasionally rising to Force 12 in the Summer. The port is often closed due to inclement weather.

Weather signals are shown at the North end of the pier.

Weather	*Signal Day*	*Signal Night*	*Meaning*
Variable	Black Ball	1 green light	Put out extra moorings
Bad weather	Flag M	1 red light	Put out extra moorings
Storm	Flag R	2 red lights	Port closed

Tankers: See below. No limits for vessels at anchor.

BULK HANDLING FACILITIES: *Pecket:* (Coal). Position Lat. 52° 56' S., Long. 71° 13' W. Max. length 220 m. Max. draft 14 m. Displacement 80,000 tonnes, final heading 260° T. There are 2 buoys; 4 lines sent to forward buoy and 3 lines to stern buoy. Starboard anchor will be used. Vessel port side alongside to the jetty and 2 lines to the Duke of Alba No.1; 2 lines to the Duke of Alba No. 2; 4 spring lines to the Duke of Alba No. 3 and 4 lines to the Duke of Alba No. 4. Tug assistance is compulsory for mooring and unmooring. Ship's loader rate is2,000 tonnes p.h.

STEVEDORES: Gangs to be requested 24 hours before arrival. Three shifts are worked from 0800-1530, 1530-2300 and 2300-0630 with 10-15 minutes "coffee break" in each shift.

Overtime is the third shift on a day before a Sunday or holiday or the first and second shifts on a Sunday or holiday.

MEDICAL: No advance notice to Agent required. There is a hospital with all facilities.

TANKERS: There are the following terminals for tankers:

Lenadura: Position Lat. 53° 12' S., Long. 70° 54' W. Max. length 175 m., draft 23 ft., 20,000 d.w.t. Vessels moor to 3 buoys, 1 astern and1 on each quarter, using both anchors. Ship's head bearing 090°T. Manifold connection 8 in.

Cabo Negro: Position Lat. 53° 01' S., Long. 70° 51' W. Max. length 200 m. Draft 42 ft. Vessels berth port side alongside, using the starboard anchor. The manifold hose is 10 in. Gas is loaded at 1,000 t.p.h. A tug is compulsory for berthing.

Cabo Negro Pier has been improved to handle ships up to 45,000 d.w.t.

Clarence Cove: Position Lat. 52° 55' S., Long. 70° 09' W. Max. length 250 m. Max. draft limited by the entrance to the cove to 36 ft. (10.97 m.). Vessels berth to 4 buoys, using both anchors. 4 headlines, 3 stern lines, 4 lines to the starboard quarter buoy, and 3 to the port quarter buoy are required. A tug is available. Ship's head 255°T. There are2 × 8 in. hoses for loading and deballasting facilities will be available shortly.

Forbidden Anchorage Zone: Area within a circle of 0.9 miles radius around the terminal buoys, and leaving entrance clear from 320° to 140°.

Gregorio: Position Lat. 52° 38' S., Long. 70° 11' W. Max. length 250 m. Max. draft 49 ft. (subject to tidal conditions), 75,000 tons displacement. Manoeuvres should be done with daylight and preferably with high and slack water. Vessels moor with ship's head 232°T, using both anchors to 8 or 9 shackles. 14 mooring lines are required to 4 buoys. There are two 10 in. and 8 in. floating hoses for loading crude oil. Loading rate 1,700 cu.m./hr. Deballasting facilities are installed.

Forbidden anchorage zone is the area limiting Lat. 52° 38' 30" S. and Long. 70° 11' 00" W., maintaining entrance heading of 331° on head of wharf.

DENSITY: 1025.

FRESH WATER: Only available at Punta Arenas Quay through hoses at a rate of 8 t.p.h. In case of emergency it can be delivered by vessel of the Chilean Army, if advance notice is given.

FUEL: Available ex-barge at Punta Arenas, capacity 300 tons (diesel). See "General" before first port.

FIRE PRECAUTIONS: Tankers are forbidden alongside at the quay.

CONSULS:

Argentine
Belgium
Brazil
Denmark
Germany
Netherlands
Sweden
United Kingdom
Yugoslavia

REPAIRS/DRY DOCKS: "Asmar" (Astilleros de la Armada) has a shipyard for small vessels up to 1,500 tons as well as a good workshop to effect floating repairs. Some marine spares can be obtained.

Asmar Ovalle Moore have a small dry dock, maximum capacity 4,000 short tons and 130 m. length.

GANGWAY/DECK WATCHMEN: Foreign vessels obliged to employ a watchman, except on Tanker Terminals.

OPENING/CLOSING HATCHES: Opening and closing of hatches and rigging of ship's gear undertaken by ship's crew.

CERTIFICATES: All International Certificates to be shown on arrival.
CUSTOMS ALLOWANCES: Quantity in possession of every member of the crew to be declared at the Customs.
REPATRIATION: Facilities for repatriation, subject permission of International Police (Extranjeria) and Maritime Authority.
AIRPORT: Distance to airport is 18 km. Daily flights from and to Santiago by two national airlines LAN and LADECO.
TIME: See "General" before first port.
HOLIDAYS: See "General" before first port.
POLICE/AMBULANCE/FIRE: Maritime Police Tel: 221001; Fire 221212; Ambulance 222432.
TELEPHONES: There is no connection on the quay. It is possible to make telephone calls from the ship by calling "Telco Radio" on VHF Channel 16 and changing to Channel 26. International calls may be made from public booths of the telephone company and Entel. Direct dialling possible to most countries.
SERVICES: Compass and gyro compass adjusting can be done.
SHORE LEAVE: Crew allowed to go ashore in all ports of the area. Crew must be in possession of provisional Identity Cards issued by police.
IDENTIFICATION CARDS: Chilean International Police (Extranjeria) provides a provisional card to stay in the country. It has to be held each time a member of the crew goes ashore.
DEVELOPMENTS: Berths No. 1 (North) and No. 1 (South) are being dredged to 33 ft.

SHIPMASTER'S REPORT: March 1985 (Research Ship) (Updated 1988).
Approaches and Pilotage: Report to Chilean Radio Station when 200 miles off.

Port and Strait Pilot compulsory. The Pilot, a Chilean Naval Officer, boards/leaves via a warship. The Pilot brings his own charts. We did not have a suitable chart of Bahia Cook. On a future visit one should be obtained for a safe approach.
Berths: Either side of a 380 m. long pier. There is a Berthing Pilot, and because of the prevailing very strong winds in the afternoon and evening it is customary to use a tug aft.

Punta Arenas is a busy port.
Officials: Extremely courteous. We were made to feel most welcome. The bond was not sealed. The Port Captain (Navy) visited the vessel on several occasions, and offered every assistance should any need arise.
Immigration: Shore passes are issued, and must be returned on sailing.
Fuel: Diesel was delivered by road wagon. This took most of the day, but saved having to shift the ship to the Oil Jetty – which would have taken all day.
Water: Laid on to the quay.
Provisions: 3 shipchandlers available.

Able to supply all our requirements, even to a medical oxygen bottle adaptor.

The quality of fresh fruit and vegetables was as good as U.K., in some cases better. Prices were similar. The chandler has a refrigerated store, thus items were delivered in prime condition. Even bananas lasted 2 weeks.
Prices: Unfortunately there is, at the moment, no Duty Free facility. In addition all items (and services) are subject to +20% VAT. This included fuel.
Laundry: Very good standard. Average price range (subject to the 20% VAT).
British Consul: Mr. Bill Matheson. Tel: 22325.
Repair Facilities: Not tried, but reported good.
Repatriation: No particular problems. There are flights daily. It is however a long haul back to the U.K., requiring a night stop over in Santiago.

The best hotel accommodation at Punta Arenas was very expensive. Alternative accommodation can be had at Mother Teresa's Home for Seamen at about £20 a night (but not usually single occupancy).

AUTHORITY: Maritime Governor of Punta Arenas.

AGENT: See "Valparaiso".

QUINTERO, including Puerto Ventanas:
32.47 S. 71.33 W. **(See Plan)**

PORT LIMITS: The seaward limit of the port is a line from Punta Liles to Punta Ventanilla.
DOCUMENTS:
1 Outwards Clearance Certificate from the last port of call.
5 Cargo Manifests for the port.
5 General Manifests for cargo.
5 Manifests for Cargo in transit.
4 Lists of Passengers for the port.
4 Lists of Passengers in transit.
10 Lists of Crew Members.
5 Lists of Personal Effects.
1 Fumigation Certificate.
1 Maritime Health Declaration.
1 Certificate of Dues in respect of lighthouses and buoys.

PILOTAGE: Pilotage is compulsory. Pilots and port officials board ships 2,450 m. off the R.P.C. Pier, bearing 290°, not far from the single Mooring Buoy, and 1,500 m. on 055° from the Los Molles Lighthouse.

The accommodation ladder should be rigged on the starboard side. Vessels can enter and moor during the day only, but it is possible to sail at night.

ETA should be sent to Agent 72 hours before arrival, with confirmation 24 hours before arrival. The message should state if any special service is required, and additionally Masters are requested to inform "Capuerto, Quintero".
ANCHORAGES: Vessels may anchor within port limits. The bay is well sheltered with ample room for manoeuvring. Vessels should keep clear of the S.W. portion of the bay, due to rocky nature of the bottom, and of the prohibited zone indicated on the charts. Larger vessels may anchor West of Punta Liles lighthouse, where there are depths greater than 20 m. with sand and mud bottom. An anchorage has been established at Lat. 32° 45.77' S., Long. 71° 30.5' W.

The anchorage at Ventanilla is an open roadstead, exposed to S.W. winds and swell, with the possibility of dragging anchors, especially in the Winter months.
RESTRICTIONS: Quintero Bay is entered between Point Ventanilla and Point Liles, entrance 2.5 miles wide, with a bight extending 1.5 miles towards the S.E. Point Liles is surrounded by submerged rocks and reefs for a distance of 2 cables.

Tankers discharging at the buoy terminals may be required to disconnect hoses in the event of bad weather, to avoid damage to the installation.

Also see "Pilotage".
MAX. SIZE: *S.B.M.:* Up to 120,000 g.r.t. (215,000 displacement tons).
Oil Multi-Buoy Terminal: Up to 50,000 g.r.t. (100,000 displacement tons).
Liquid Gas Multi-Buoy Terminal: Up to 30,000 g.r.t. (40,000 displacement tons).
Puerto Ventanas Quay: LOA 175 m., draft 32 ft.
Las Ventanas Chemical Terminal: Up to 40,000 g.r.t., max. draft 41 ft.
El Durazno Quay: LOA 96 m., draft 19 ft.
RADIO: The Naval Radio Station of Valparaiso also handles commercial traffic.

The Coastal Radio Service Station situated in the Port Captain's office, call sign "Capuerto Quintero".
TUGS: One tug available at Quintero, additional tugs can be requested from Valparaiso, or through Agent.
BULK HANDLING FACILITIES:
Puerto Ventanas (Private Port): See "Plan".
North Side:
Berth No. 1: Length 164 m.
Berth No. 3: Length 180 m.
Berth No. 5: Length 181 m.
South Side:
Berth No. 2: Length 364 m.
Operating Ship Features:

Berth No. 1:	
Length:	125.00 m.
Width:	20.00 m.
D.w.t.:	12,000 tons.
Draft:	8.00 m.
Deck to bow:	100.00 m.
Deck to stern:	25.00 m.
Berth No. 3:	
Length:	200.00 m.
Width:	31.00 m.
D.w.t.:	45,000 tons.
Draft:	11.50 m.
Deck to bow:	165.00 m.
Deck to stern:	35.00 m.
Berth No. 5:	
Length:	240.00 m.
Width:	35.00 m.
D.w.t.:	70,000 tons.
Draft:	14.00 m.
Deck to bow:	200.00 m.
Deck to stern:	40.00 m.
Berth No. 2:	
Length:	200.00 m.
Width:	32.00 m.
Maximum draft on Bollard 1:	6.40 m.
Maximum draft on Bollard 9:	9.30 m.
Maximum air draft on Bollard 11:	12.00 m.

Tugs: Vessels of less than 150 m. LOA require one tug for berthing and unberthing, and vessels over 150 m. LOA require 2 tugs (Port Regulations).
Mooring Buoys: Mooring buoys located 150 m. N.E. of Berth No. 1 for assisting with mooring and unmooring. Berth No. 2 also has a mooring buoy.
Mooring Lines: There must be at least 12 long lines available from the ship. The use of lines made entirely of wire is not acceptable.
Mooring Procedure: The following should be considered a minimum:

Berth No. 1:

Forward	4 long head lines 2 springs	Aft	4 long stern lines 2 springs 1 long line to buoy

The starboard anchor is used with 7.5 – 8 shackles in water.

Berth No. 3:

Forward	4 long head lines 2 springs	Aft	4 long stern lines 2 springs

The starboard anchor is used with 6.5 – 7 shackles in water.

Berth No. 5:

Forward	4 long head lines 2 springs	Aft	4 long stern lines 2 springs

The starboard anchor is used with 7.5 – 8 shackles in water.

Shifting Ship: On Berth No. 5, bulk carrier type ships may have to make some manoeuvres in order to adjust their holds to fixed type cranes when unloading. For this reason, the ship should berth according to a specific stowing plan as previously given by the Agent, with 2 or 3 hatchways available for each one of the two cranes to operate. In keeping with the above, he should reckon on a minimum number of moves or runs at any time during the operation, using his own deck equipment and moorings without the assistance of a Pilot or tug.

Due to the absence of mechanised unloading facilities on Berths No. 1 and 3, this type of operation is not called for.

On Berth No. 2, loading is carried out by means of a fixed mechanised system, requiring the ship to place each hold in front of the loading tower, changing its position every time to suit the previously established stowing plan.

Facilities: Puerto Ventanas has facilities such as water supply, electric power, compressed air, fuels and a stock of provisions. Lighterage and tugs services also available.

Reporting: The ship must report its position, course, speed, destination and ETA relative to the next port to "Directemar Valparaiso", via Playa Ancha Radio (CBV), at 0800 hrs. and 2000 hrs. on arrival in Chilean waters (Chile's territorial sea covers 200 miles as measured from the coast).

When ships are waiting, they must radio Port Quintero's Captaincy, by VHF Channel 16, in order to confirm their ETA.

Ballast: It should be remembered that according to recent regulations issued by the Maritime Authority, every ship from foreign ports is required to change its ballast water at least once before calling at Chilean ports, at a distance not less than 12 miles from the Chilean coast. This procedure should be recorded in the Engine Room Logbook, with indication of the latitude and longitude of the manoeuvre, amount of water replaced and total capacity of ballast tanks, as well as time and date when the operation was effected. This action is undertaken in view of the need to protect human lives from any risks relative to water ballast.

Notice of Arrival: Ships going to Puerto Ventanas must advise Ventanas Agent of their ETA at specified intervals, as instructed by the Charterer in the case of chartered ships.

24 hours prior to landfall, the Master must advise "Quintero Capuerto" of the following:

- Name and flag of ship.
- ETA.
- Number of passengers.
- Amount of dangerous cargo aboard.
- Sanitary status and draft.

The cable address is "Capuerto Quintero". All Masters are advised that fishing boats and other minor fishing vessels are usually found in Chilean waters.

Masters are required to give Puerto Ventanas Agent their Stowing Plans and estimated loading sequence. In the case of bulk ships, every effort must be made to restrict the number of manoeuvres of moored ships while unloading.

Mechanised Unloading System: Berth No. 5 operates a mechanised unloading system, while Berth No. 2 has a mechanised loading system.

Berth No. 5 System Features:

Unloading System:

Number of cranes:	2 units.
Lifting power:	30 tons.
Free digging bulk unloading capacity:	Over 750 ton/hr.
Maximum range from turning axle:	40.0 m.
Maximum range from dock's edge:	26.0 m.
Maximum lifting hook height over dock's level:	25.0 m.
Height of operator's cabin floor over dock's level:	23.2 m.
Maximum depth of bucket lower drop point below dock level:	18.0 m.
Total structure weight:	280 tons.
Total crane weight:	350 tons.
Accessories:	Spreaders for 20 ft. and 40 ft. containers. Double stock hook. 20 cu.m. and 8 cu.m. buckets.
Control system:	Automatic timing of motions at a variable pace, controlled by PLC.

Mechanised Transport System:

Transport load and direction:	Sea-to-land solids in bulk.
Designed capacity:	1,500 t.p.h.
Belt width:	42 in.
Belt velocity:	4.5 m./sec. and 2.2 m./sec.
Total length of transport system:	1,560 m. (approx.).
Stand-by equipment:	Magnetic separator roller sorter; two high precision scales on belt conveyor.
Control system:	Automatic control of start-up and fenders through PLC.

Sampling system features:

Designed capacity:	1,500 t.p.h.
Material:	Coal.
Humidity:	10%.
Size:	Less than 3 in.

Berth No. 2 Features:

Loading System:

Number:	1.
Type:	Fixed tower fitted with raising type derrick and telescopic chute.
Designed capacity:	1,000 t.p.h.

Mechanised Transport System:

Transport load and direction:	Land-to-sea, solids in bulk.
Total length:	572 m.
Belt width:	36 in.
Belt velocity:	2.36 m./sec.

Acid Loading System: There are sulfuric acid shipping facilities of 540 m. in length, operating on carbon steel pipes with a diameter of 16 in., permitting the shipment of 800 t.p.h. at Berths No. 1 and 2.

Pilotage: The Pilots based in Puerto Ventanas have powers granted by Chilean Law to operate at Bahia Quintero.

Prior to the Pilot's arrival, vessel must wait in the Waiting Zone, located 329°×1,800 m. from the Muelle ENAP Lighthouse, within a radius of 500 m. The vessel waiting for the Pilot to board must be on its course prior to his boarding.

The ship must have a ladder in compliance with SOLAS 74 Regulations. The ship is to be operated in such a way as to provide an adequate lee for the Pilot boarding.

The ship's Master or Agent must submit, well in advance, the reception application, by any means available. This application must include the ship's name, date, estimated time of arrival, as well as information on sanitary status and the presence or absence of sick persons aboard. Request for Pilot must also be included in this application, since its use is obligatory in the country's ports.

Ships of any nationality coming from abroad shall be received by the Maritime Authority and, if necessary, by Customs, International Police, Maritime Plant of Animal Sanitation authorities, as the case warrants.

Following reception formalities, the ship shall be granted Free Pratique, which is the permission given by the Maritime Authority for free access aboard for any persons, landing passengers or crew members, and loading or unloading work.

Approaching the Port: For the purpose of making landfall or setting sail from Bahia Quintero, there is a Maritime Traffic Separation Scheme (indicated on Charts No. 424 and 501, issued by the S.H.O.A.).

Port Limits: The port limit has been defined as a line connecting Punta Liles and Punta Ventanilla.

Documents: The following documentation is required in order to authorise a ship's arrival in Chile, to be submitted on forms provided by the Chilean Government or international type forms or typed on standard paper:

- 10 copies Cargo Manifest.
- 6 copies Crew List.
- 4 copies List of Passengers.
- 4 copies Crew Member's Personal Effects.
- 4 copies List of Supplies aboard.
- 3 copies General Delivery (mail).
- 3 copies List of Hazardous Goods aboard.
- 5 copies General Statement.
- 5 copies Arms and Ammunition.

The following will be inspected:

- Last Port Clearance.
- Crew Member's Passports or identification documents.
- Derat Certificate.
- Safety Construction Certificate.
- Safety Radio Certificate.
- Load Line Certificate.
- International Fumes Prevention Certificate.
- Ship Inspection.
- Fuel Record.
- Payment receipts for Lighthouse and Light Buoy Fees.

Watchman: As provided by Chilean Law, all ships must be assigned a watchman, who may be appointed by the ship's Agent on request.

Operator: Puerto Ventanas S.A.

Head Office: Casa Matriz, Isidora Goyenechea No. 2934, 7 Piso, Oficina 702, Las Condes, Santiago, Chile. Tel: 2320922. Fax: 2320923.

Port Office: Camino Costero s/n, Ventanas, Comuna de Puchuncavi V Region, Chile. Tel:(032) 930245, 930688, 932053. Fax: (032) 931189.

MEDICAL: There is a small local hospital,and there is an ambulance service to Valparaiso. (20 miles away).

TANKERS:

S.B.M. Quintero Terminal: The depth at the S.B.M. is 47 m. Max. size for berthing, length 342 m. draft 25.5 m. (83 ft.). Manifold connection is 16 in. Ship's derricks must be rigged to carry a 12 ton lift. Max. pressure 200 p.s.i. Average discharge rate 8,000 t.p.h. for 25 API crude.

Gas Berth: Max. size 15,000 tons or 40,000 displacement tons. Max. draft 39 ft. Vessels drop both anchors, and moor to 3 stern buoys. Ship's head should lie on 285°. Hose connection 6 in. Discharge rate 240 cu.m.p.h.

Vessels may moor or unmoor at any time at these terminals. Mooring warps must be more than 400 ft. in length.

R.P.C.: Max. draft 50 ft. Vessels berth to 3 stern buoys, using both anchors, ship's head on 305°. Manifold connection starboard side 10 in. Hose lift 6 tons. Normal pressure 100 p.s.i.

Also see "Shipmaster's Report".

FRESH WATER: Available by barge from Valparaiso. Fresh water available at Puerto Ventanas Quay by hose.

FUEL: Available at Puerto Ventanas Quay by truck. See "General" before first port.

CONSULS: Nearest at Valparaiso.

REPAIRS: Only minor repairs may be effected at workshops ashore.

REPATRIATION: Possible.

AIRPORT: Nearest commercial airports at Pudahuel and Cerrillos, near Santiago. Military airfield at Quintero may be used in emergencies, subject to necessary authorisation.

TIME: GMT minus 3 hours (October to March). GMT minus 4 hours (March to October).

SERVICES: Food, laundry, etc. can be supplied.

SHORE LEAVE: Curfew in operation. Crew must carry an Interpol Identity Card. See "General" before first port.

GENERAL: *Charts:* Chilean Charts: Issued by Servicio Hidrografico, Armada de Chile.

Chart No. 400: Coquimbo Harbour to Valparaiso Harbour.
Chart No. 501: Punta Pite to Punta Topocalma.
Chart No. 424: Quintero Harbour.
Publication No. 3001: Derrotero de las Costas de Chile.
Volume 1. From Arica to Canal de Chacao.

British Admiralty and U.S. Charts and Publications:

B.A. 1314: Ports and Anchorages on the Coast of Chile, including Puerto de Valparaiso, Bahia Conchali and Puerto de Los Vilos, Approaches to Valparaiso and Caleta Horcon and Bahia Quintero.

U.S. 22293: Publication South American Pilots.

SHIPMASTER'S REPORT: April 1988.

A tug was used to position the vessel when berthing. 2×8 in. hoses were connected on the port side. We were nominated to load fuel oil and had to accept a 500 cu.m. line plug of crude before loading. This was discharged after the loading was completed. Terminal would not accept any dirty ballast or slops.

The following moorings were used:
Starboard anchor – 8 shackles
Port anchor – 9 shackles
Port quarter buoy – 2 lines (90 m.)
Stern buoy – 2 lines (100 m.)
Starboard quarter buoy – 3 lines (90 m.)
Port bow – 1 shore wire
Starboard bow – 1 shore wire

Ship's head in berth 305°. The pilot comes in either a small blue launch or a larger orange boat, depending on which agency is used.

Cargo details: No. 6 F/O API 13.0 temperature 130°F. Loading rate about 900 cu.m.p.h.

Due to the swell a vessel may roll heavily on leaving the berth and when at anchor.

Port officials board with the pilot. The Oil Record Book is inspected. The Port Captain requires to know to what percent capacity is the vessel bunkered and the steaming range with that amount of fuel.

AUTHORITY: Quintero Port Captaincy.

Terminal Operator: Refineria de Petroleo Con Con (R.P.C.), Puerto Ventanas S.A., Andean Mineral Company (Andina), Las Ventanas Chemical Terminal.

AGENT: See "Valparaiso".

SAN ANTONIO: 33.35 S. 71.37 W. (See Plan)

DOCUMENTS:
1 Customs Clearance Document.
2 Light Dues Certificates.
9 Cargo Manifests.
2 Crew Lists.
2 Passenger Lists.
2 Lists of Stores.
1 Arms and Ammunition List.
1 List of Personal Effects.
2 Baggage Declarations per passenger.
1 Derat Certificate.
List of Equipment.
Lifesaving Equipment Certificate.
Tonnage Certificate.
Radio Certificate.
Crew Vaccination Certificates.

PILOTAGE: Compulsory. Pilots board vessels about 1 mile outside the port. Vessels should wait for Pilot with engines stopped in position bearing 060° and 1 mile from Panul Lighthouse.

ANCHORAGES: Vessels must anchor in position 090° and 1.3 miles from the edge of the South Breakwater in 28 m. of water. The bottom is sand and mud, permitting anchorage of vessels of any length or draft.

Mooring Buoys: In the North Basin is located Buoy No. 1, situated 85° and 180 m. from the head of the Maritime Control Quay, which can be used for vessels up to 210 m. LOA, draft 36 ft. and 55,000 d.w.tonnes.

There is also Buoy Location No. 2, which permits transfer of bulk liquids from vessels of 190 m. LOA, draft 33 ft. and 40,000 d.w.tonnes.

RESTRICTIONS: No restriction on vessels of less than 210 m. LOA.

From September to March the predominant winds are from S.W.Fog is most frequent in March and April.

MAX. SIZE:

Berth	*Max. Length* (m.)	*Depth* (ft.)
No. 4/5	341	33
No. 6/7	320	28/24
North Quay	200	35
Buoy No. 1	Max. displacement 55,000 tonnes	
Buoy No. 2	Max. displacement 50,000 tonnes	

Vessels intending to discharge are authorised 1 ft. more draft at all Berths, with the proviso that they must berth within 2 hours before high tide, up to 2 hours after high tide, and commence discharge immediately.

RADIO:

Station Call Sign: San Antonio CB2. *Category:* (S)

Frequency	*Type*	*Receives*	*Transmits*	*Schedule*
2 MHz	A 3	2182	2182	24 hours
		2738	2738	As required
4 MHz	A 3	4143.6	4143.6	As required

However, it is advisable to use Radio Playa Ancha, Valparaiso, which is connected by telex with San Antonio.

Port Control can be contacted by VHF on Channel 16, 24 hours a day.

TUGS: 3 modern tugs, 1,000 h.p., 1,250 h.p. and 2,450 h.p.

BERTHING: San Antonio has 4 operational piers, 1 private quay (North Quay) and 2 mooring buoys.

All the piers have double strong fenders.

Berth Usage: Berth Nos. 4 and 5 are used preferably for container vessels, bulk grain carriers and larger sized ships in general.

Buoy No. 2: For transfer of containers, there is a mobile crane type 'Demag MC900' of 50 tons lifting capacity available.

In the open area of Berths No. 4 and 5, it is possible to store 1,175 TEU simultaneously plus 486 TEU in pre-stacking, there being also a zone for reefer containers with a capacity of 96 TEU.

In the port there are 15,800 sq.m. of covered areas intended for cargo warehousing, and 120,395 sq.m. of open areas.

The private companies entrusted with stevedoring within the port have the necessary equipment for this work, there also being equipment owned by Port Administration which can provide a minimum service.

Note: Berths No. 2 and 3 damaged by earthquake.

Fumigation: When vessels are required to be fumigated due to Chilean health restrictions, they must be towed to Buoy No. 2 where the treatment is appropriately carried out. In general, this takes 72 hours, during which time only a security guard may remain on board. It is recommended that these vessels arrive equipped with high resistance ropes.

Policarpo Toro Quay: Length 70 m. For vessels of 200 ft. LOA and draft not exceeding 33 ft. discharging bulk liquids. Hoses and pipelines and 4 mooring bollards available.

Also see "Developments".

CRANES:
Berth No. 4: 1 × 5 ton, 2 × 7.5 ton.
Berth No. 5: 2 × 6 ton, 1 × 5 ton.
Berth No. 6: 2 × 5 ton.} can be used at
Berth No. 7: 2 × 5 ton.} Berths No. 6 or 7.

The North Quay has mechanical plant for discharge of bulk cargo.

STEVEDORES: There are various stevedoring contractors who between them have some 2,400 workers specialised in the various port and maritime operations (dockers, shipboard workers, watchmen, deckhands, tallymen, crane operators, etc.). The contractors have equipment for all kinds of work, including 2 fork lifts (Hyster & Taylor) with spreaders for 20 ft., 35 ft. and 40 ft. containers, industrial tractors, lorries, etc. The work timetable for the port is from 0800 hrs. to 0630 hrs. the next day (i.e. 22.5 hours a day).

Average cargo handling rates per gang:
Copper: 120 t.p.h. per shift.
Copper concentrate: 550 t.p.h. per shift.
Wheat pellets: 300 t.p.h. per shift.
General cargo: 30 – 40 t.p.h. per shift.
Containers: 14 – 16 TEU/hour per shift.
Bulk salt: 100 – 120 t.p.h. per shift.
Drums: 35 – 40 t.p.h. per shift.

MEDICAL: Hospital with 190 beds and necessary surgeons. 3 clinics with 40 beds for minor surgery.

TANKERS: Oil products can be transferred at North Quay, Berth Buoy No. 2 and Berths No. 5 and 6. From North Quay, cargo is transferred to the terminal owned by Liquidos a Granel who have tanks with a total capacity of 25,360 cu.m.

At Berth Buoy No. 2 liquids can be transferred to Terquim who have tanks with a storage capacity of 12,830 cu.m.

Berths No. 5 and 6, as with the above locations, have facilities for transfer of liquid products to the Esso terminals, where there is a maximum storage capacity of 19,780 cu.m.

FRESH WATER: All berths equipped with standpipes to supply fresh water direct to vessels at a rate of about 20 t.p.h.

FUEL: Marine diesel oil can be supplied to vessels, provided this is requested with sufficient advance notice.

Also see "General" before first port.

CONSULS: Italy.

REPAIRS: Three workshops for minor repairs. Major repairs in Valparaiso.

GANGWAY/DECK WATCHMEN: Available.

OPENING/CLOSING HATCHES: Done by stevedores.

REPATRIATION: Facilities exist.

AIRPORT: At Arturo Merino Benitez Airport near Santiago only 2 hours away by road. National and foreign airline services to world-wide destinations.

TIME: Local time GMT minus 4 hours; October to March (Daylight Saving) GMT minus 3 hours.

SHORE LEAVE: Allowed. Also see "General" before first port.

IDENTIFICATION CARDS: Required.

DEVELOPMENTS: A new berth with depth alongside 33 ft. for handling solid bulk cargoes is under consideration.

AUTHORITY: Empresa Portuaria de Chile, Casilla 163-A, San Antonio, Chile. *Tel:* (035) 32159. *Telex:* 238505 Empor CL. *FAX:* (035) 32114.
Contact: Patricio Toro Ferrari, Port Director.

AGENT: See "Valapraiso".

SAN VICENTE: 36.44 S. 73.08 W. (See Plan)

Also see "General" before first port.

PORT LIMITS: East of meridian from Punta Pardo and South of parallel from Punta Gualpen.

DOCUMENTS: See "General" before first port and "Valparaiso – Documents".

PILOTAGE: Compulsory. Pilot boards inside the port limits. Pilot will designate anchorage. Accommodation ladder must be rigged if the vessel is at anchor awaiting berth as the Port Authorities will board. Pilots are arranged by Agent.

RESTRICTIONS: Berthing or unberthing from 0000 hrs. to 2400 hrs. weather permitting. For tankers, daylight only.

MAX. SIZE: Draft only restrictions, can berth ships greater than 200 m. LOA and 42 ft. draft.

HEALTH: Port Authorities give Pratique on arrival.

RADIO: Radio Estacion Naval Talcahuano. 500 kHz. A-1 H-24.
Costera Talcahuano 2182 A-3 H-24.
Radio Estacion Naval Valparaiso. A-1 and A-3 all frequencies H-24.

VHF: Channel 16 safety and calling.

TUGS: 4 privately owned tugs ranging from 2,800 h.p. – 4,200 h.p.

BERTHING: *CAP Pier:* North, length 240 m. draft 32 ft. 06 in. at any time; South, length 200 m. draft 26 ft. at any time.

San Vicente General Cargo Berth: Total length 603 m.

Berth No. 1: Draft 37 ft. at any time, ships' own gear.

Berth No. 2: Draft 37 ft. at any time, 1 crane and 1 unloading tower with a rate of 200 t.p.h. for bulk cargoes. Ship's own gear used for general cargo.

Berth No. 3: Draft 39 ft. at any time. For tankers loading bulk liquids and oil.

Comap Berth "A": Vessel moors with starboard anchor with 7 shackles and 3 lines to 2 buoys astern. Max. LOA 150 m. 1 hose with 8 in. connection on port side midships. Gasoline, kerosene, diesel oil and jet fuel handled. 1 tug and 1 mooring launch available.

ENAP Berth "B": Vessel moors with 2 anchors with 8 shackles on starboard, and 3 lines to 3 buoys astern. Max. LOA 250 m. or up 42 ft. draft. 1 tug and 2 mooring launches required. 1 hose with 18 in. connection for crude and fuel oil. Handling rate 1,500 cu.m.p.h.

ENAP Berth "C": Vessel moors with both anchors, using 8 shackles starboard side, and 3 lines to 3 buoys astern. Max. LOA 200 m. and 36 ft. draft. 1 tug and 1 mooring launch required. 2 hoses with 12 in. and 16 in. connections, 1 for fuel oil rate 900 cu.m.p.h. can also be used for crude. 1 hose for gasoline, kerosene, turbo, diesel and liquid gas.

STEVEDORES: Through Agents. Stevedores available 24 hours.

Working Hours:
1st shift: 0800 – 1530 hrs.
2nd shift: 1530 – 2300 hrs.
3rd shift: 2300 – 0630 hrs.

MEDICAL: Good hospitals, no special notice required.

DENSITY: Salt water.

FRESH WATER: Available at all piers.

FUEL: Diesel available by truck.

CONSULS:
Argentina
Belgium
Bolivia
Colombia
Ecuador
France
Germany
Italy
Netherlands
Norway
Paraguay
Peru
Spain
Sweden
United Kingdom.

REPAIRS: Deck and Engine workshops.

DRY DOCKS: ASMAR for large vessels.

SURVEYORS: Lloyds, N.V., B.V., N.K.K., A.B.S., G.L.

WATCHMEN: Gangway watchmen compulsory. Deck or Hatch watchmen optional.

HATCHES: Open and closed by riggers gangs.

CARGO GEAR: Ship's gear. 1 crane for bulk cargoes, rate 200 t.p.h. Heavy lift crane with 50 tons capacity.

REPATRIATION: There are facilities for crew changes.

AIRPORT: One airport for internal flights.

POLICE/AMBULANCE/FIRE: Available in the port.

IDENTIFICATION CARDS: Immigration provide identification cards.

SHIPMASTER'S REPORT: 1977 (Updated 1990).

Documents:

Customs:
- 2 copies List of Ammunition.
- 7 copies Cargo Manifest.
- 4 copies Stores List.
- 4 copies Personal Effects List.
- 4 copies Crew List.
- 4 copies Passenger List (or negative).

Port Captain:
- Clearance from Last Port.
- 2 copies Crew List.
- 2 copies Passenger List (or negative).
- International Certificates.

Police:
- 2 copies Crew List.
- 2 copies Passenger List (or negative).

Health Inspector:
- 1 copy Declaration of Health.
- 1 copy Vaccination List.
- 1 copy Passenger List (or negative).

Agent:
- 1 copy Crew List.
- 2 copies Passenger List (or negative).
- 2 copies Stores List.
- 2 copies Personal Effects List.

Navigation: Bay of San Vicente is entered between rock "Villa de Burdeos" and "Point Gualpen".

There is a traffic route for vessels leaving and entering Bay San Vicente. The separation zone bounded by lines connecting the following geographical positions: 73° 10.7' W., 73° 10.6' W. and 73° 09.7' W., 73° 09.8' W. Vessels inbound should keep close South of this separation zone and vessels outbound close North of the separation zone.

In the traffic route, Pilot boarding position and the anchorage, the depth is 36 ft. Maximum permissible draft is 38 ft.

The wreck in position Lat. 36° 44.3' S., Long. 73° 08.6' W. has been removed.

The present breakwater is under extension to 800 m.

Pilot: Pilotage is compulsory and the boarding position is about Lat. 36° 44.7' S., Long. 73° 09.8' W. in Bay San Vicente, or 1 mile S.W. of rock "Villa de Burdeos" Gp. Fl. (2) 10 secs.

Anchorage: The anchorage is about 900 m. East of rock "Villa de Burdeos". The Pilot anchors the vessel.

Radio: Advance notice: Vessels bound for San Vicente must advise Port Captain by radio 24 hours before arrival giving information about ETA, draft, if vessel carries passengers or mail, and state of health on board. Cable address: "Maritgob Talcahuano".

Also ETA to Pilot Station, VHF Channel 16, 1 hour prior to arrival. Pilot station's name is "Gobernacion Maritima Talcahuano" or Capitania de Puerto de San Vicente.

Tugs: At present there are 2 tugs (1,200 h.p.) in operation. Tugs use ship's lines.

Pilot is in VHF contact with the tug(s) which assists in mooring and unmooring vessels.

Mooring Method: Vessel approaches and enters the berth from South. Mooring and unmooring may take place also during hours of darkness, provided weather conditions are fair and visibility good.

When the vessel is near the berth, port anchor is usually let go and dragged or paid-out while a tug slowly pushes the vessel alongside.

The vessel is moored with 4 headlines and 2 springs forward and 4 sternlines and 2 springs aft.

Wharves: The pier is 435 m. long and is provided with rubber fenders. A new pier 110 m. long is under construction. Depth alongside the pier is 34 ft. to 36 ft.

There are 2 cranes on the pier for grain or other bulk cargoes. Each has a capacity of 240 m.t.p.h. (grain).

Behind the pier is 41,975 sq.m. for log storage. There are railway tracks on the pier and the log deposit area. Logs are brought in by railway wagons.

Stevedores: Stevedores work in 3 shifts of 8 hours each.

Logs are loaded with ship's gear and at present the capacity is max. 60 cu.m. per log-gang per hour. Stevedores working rather slowly but make very good stowage.

Medical: There is an ambulance station just outside the pier gate and good hospital facilities near the port.

Supply Service: Bunkers, provision, fresh water and laundry are available.

Shore Leave: All Crew members are issued with landing permit/identification card, which has to be returned before departure.

Time: Local time is GMT minus 4 hours but from second Saturday in October to second Saturday in March GMT minus 3 hours.

Weather and Tide: During Summer the prevailing wind is Southwesterly. In the Winter and specially in the months May to August, the winds are North and Northwesterly.

In general, the weather throughout the year is good, sometimes however, during Wintertime with a Northwesterly wind, weather may become too rough for cargo operations due to the swell and the vessel's heavy movements. In this case the Port Authorities may order the vessel to leave the pier and shift to the anchorage, however that is a rare occurrence.

Tidal difference is 1.80 m. in Syzygies.

Advice: All store rooms on deck and in the accommodation should be locked. Crew members should lock their doors, even if they are leaving their cabins for a short period.

Crew members should also take care not to walk alone during late night time near or around the harbour area.

SHIPMASTER'S REPORT: December 1991.

Vessel: LOA 265 m. 115,000 d.w.t.

Operation: STS Transfer.

Vessel anchored on arrival under pilotage in Concepcion Bay (Position Lat. 36° 40' S., Long. 73° 01' W.) with starboard anchor, 8 shackles in the water.

1st Lightering into "Cabo Pilar":

After clearance of vessel by Port Authorities, the first lightering vessel "Cabo Pilar" commenced approach under pilotage and with assistance of 2 tugs. One tug made fast centre forward and one centre aft.

Lightering vessel paralleled our vessel at approximately 100 m. distance. Lightering vessel equipped with 3 main fenders and moorings of fenders transferred to our vessel after completion of mooring operations.

Both tugs kept lightering vessel in position.

Lightering vessel alongside our vessel by means of heaving ropes (forward rope, aft rope and aft spring) and our vessel heading 195°.

Weather conditions were fine (no swell, wind Southwesterly, Force 2). First mooring lines: Forward rope, aft spring followed by aft rope. Lightering vessel finally secured with forward: 3 soft breast lines; 1 forward rope leading to aft and 1 soft spring. Aft: Double soft spring and 3 soft stern lines.

All mooring lines polypropylene and all except one stern line secured on bitts.

Two mooring launches (1 forward and 1 aft) used and only some spring lines by means of heaving lines.

Discharge hoses (2×8 in. diameter) connected by shore gang (4 men) using nuts and bolts and port derrick/crane of our vessel. Max. cargo transfer rate 5,000 cu.m./hr. permitted by "Cabo Pilar".

Prior to approach, 2 independent cargo surveyors and a Loading Master came on board our vessel. Hose connecting personnel on board during all cargo operations.

Good accommodation/meals required to satisfy shore personnel. The Loading Master advised Pilot on "Cabo Pilar" for final position alongside our vessel.

Lightering vessel only used common safety check list, however the rendered STS safety check list from our vessel signed and applied to.

Radio contact between vessels by means of handy talky.

VHF contact prior to and during mooring/unmooring operations via VHF with lightering vessel.

Usual time required for approach, mooring, unmooring, loading cargo surveys, connecting/disconnecting, etc.

Unmooring operations after cargo survey on board both vessels completed and cargo transferred figures compared as per Customs Regulations.

Unmooring of "Cabo Pilar" under pilotage and using one tug forward in centre. Singled up to spring aft, a stern line and the forward rope leading to aft. After which ropes let go in sequence as follows: Stern line, spring aft and forward line.

After completion of cargo transfer, cargo hoses left on board our vessel.

2nd Lightering into OBO "Makedonia Star":

Our vessel heading 240°, wind W.S.W.'ly, Force 4, no swell. "Makedonia Star" using pilots, tugs, approach similar to "Cabo Pilar".

Prior to approach, same shore personnel on board our vessel.

Sequence of mooring lines:

Forward:	Aft:
Forward Rope	Aft Spring
Forward Spring	Aft Rope

Ship heaved into final position alongside our vessel.

Total mooring lines, all soft and propylene and all secured on bits: Forward: 4 head lines and double spring, all from forecastle of "Makedonia Star".

Aft: 4 stern lines and double spring, all from poopdeck of "Makedonia Star".

During cargo transfer, moorings of fenders transferred to "Makedonia Star".

After completion, discharge hoses disconnected and transferred to "Makedonia Star".

Safety check list and cargo transfer of 2 different grades (1 by 1) as per "Cabo Pilar".

Max. allowed cargo transfer rate 4,000 cu.m./hr.

Cargo transfer, mooring/unmooring operations as per "Cabo Pilar".

Local information received from agency on arrival: "Cabo Pilar" (d.w.t. 68,932) length 250 m. and "Makedonia Star" length 238 m.

Local information from Loading Master: Usual lightering only by "Makedonia Star", and 3 transfers required.

Turnaround of this vessel for discharge at San Vicente approximately 24 hours.

Mooring, unmooring and lightering operations only in daylight.

At approximately 1600 hrs. daily, wind increased to Force 4 to 5, and during the night decreased to Force 2 (S.W.'ly).

General Port Information:

Shore leave by means of launch permitted (40 minutes).

Shore passes in use.

Same launches used for supply of all provisions, stores, etc.

Fresh and other provisions, stores/spares available locally and reasonable prices/good quality.

Bonded beer and bonded cigarettes very expensive.

Good laundry services available.

24 hour agency via VHF Channels 16 and 62.

Embarkation/disembarkation of ship's personnel permitted. Concepcion Airport approximately 1 hour from Talcahuano, with flight connections to Santiago Airport.

Ultramar Agency provided very good local services. Cash deliveries to be ordered in advance. Customs will seal bonded store on arrival. Dentist and doctor in Concepcion.

AUTHORITY: Armada de Chile, Dirrecion Del Litoral y M.M., Gobernacion Maritima, Blanco No. 475, Talcahuano. *Contact:* Captain Cesar Moreno Poblete, Maritime Governor.

Empresa Portuaria de Chile, Blanco Avda. No. 839, Valparaiso. *Tel:* (032) 257167. *Telex:* 230313. *FAX:* 259937. *Contact:* Raul Urzua Marambio, Director General.

Talcahuano/San Vicente Ports: Empresa Portuaria de Chile, Avda. Latorre No. 1590, Talcahuano. P.O. Box No. 265, Talcahuano. *Tel:* (041) 542249. *Telex:* 260095. *FAX:* (041) 541807. *Contact:* Alberto Arismendi Torres, Administrator.

TALCAHUANO (including Concepcion Bay):

36.41 S. 73.06 W. **(See Plan)**

DOCUMENTS: See "General" before first port.

PILOTAGE: Compulsory. Pilot boards 3 cables off Belen Lighthouse.

ANCHORAGES:

Anchorage Positions:

(1) Lat. 36° 42' 00" S., Long. 73° 05' 14" W.
(2) Lat. 36° 42' 00" S., Long. 73° 04' 51" W.
(3) Lat. 36° 42' 18" S., Long. 73° 04' 51" W.
(4) Lat. 36° 42' 18" S., Long. 73° 05' 14" W.

Explosives Buoy: Lat. 36° 06' S., Long. 73° 05' 14" W.

Quarantine Anchorage: Vessels in quarantine must anchor 182° from Belen Lighthouse and 7 cables off.

Vessels that transport explosives are anchored in the same direction but 9 cables from Belen Lighthouse.

RESTRICTIONS: Port works 24 hours. Only 6 vessels can moor alongside quay at one time.

MAX. SIZE: Vessel that arrives with a draft of 29 ft. and length 180 m. can dock on the East side of the Government Pier.

RADIO: Talcahuano Radio, call sign CBT-4 (Category S).

Frequency MHz	*Type*	*Receives* kHz	*Transmits* kHz	*Remarks*
5	A-1	500	500	24 hours
5	A-1	512	512	Working frequency
2	A3J	2182	2182	24 hours
4	A3J	4043.6	4143.6	Vessel request
	A3J	4063.0	4357.4	
	A3J	4125.0	4419.4	
6	A3J	6218.6	6218.6	

TUGS: 3×1,580 h.p.

The shipyard (Asmar) has 3 tugs; 2×285 h.p. and 1×1,000 h.p.

BERTHING: *Talcahuano General Cargo Government Pier (Emporchi):* Berth No. 1 – Length 155 m. Berth No. 2 – Length 205 m.

Berth No. 1 – Max. draft 29 ft., Max. LOA 180 m. Berth No. 2 – Max. draft 22 ft. Max. LOA 100 m.

Mole 500: (Naval base) Max. length 230 m., max. draft 27 ft.

Vessels moor with 4 head lines, 4 stern lines and 2 springs. Loading and discharging by ship's gear.

Passenger Mole: At a distance of 80 m. from the Fiscal Quay and on the Blanco Encalada Mole is the Passenger Pier with concrete steps for passenger traffic.

Chacabuco Quay: Situated in the Inner Harbour for repairs. Vessels up to 21 ft. draft can moor. No railway line or cranes, therefore vessels must work with own derricks to vans. "Asmar" tugs are used for mooring.

Concepcion Bay: Penco Private Pier: The pier is 1700 m. long ending in a platform on which stands a fixed base rotary crane. Vessel's bows lie on 348°T, both anchors used to final shackle. There are 4 buoys, 1 on each bow, 1 astern, and 1 on the starboard quarter. Vessels also tie up to 3 dolphins on the East side of the pier. 12×600 ft. mooring lines are required and also 2 springs. A tug is required. The berth is exposed to strong Northerly winds, and vessels must be prepared to leave at short notice.

Max. draft 33 ft. There are 2 sea-going tugs for docking and undocking. Also see "Lirquen".

CRANES: 4 × 5 ton Portal crane on the Fiscal Pier. One floating crane 180 tons. One mobile crane 30 tons.

STEVEDORES: 12 gangs available. Loading: assorted goods 12 t.p.h./gang/hatch. Cereals 25 t.p.h./gang/hatch. Timber 100 t.p.h./gang/hatch. Newsprint 20 t.p.h./gang/hatch.

Discharge: assorted goods 12 t.p.h./gang/hatch. Bagged cargo 25 t.p.h./gang/hatch.

When loading is carried out by means of lighters, this is usually done from privately owned moles belonging to the principal commercial firms of the port from their warehouses situated inside the Morro Channel. Working hours are 0800 – 1530 hrs., 1530 – 2300 hrs. and 2300 – 0630 hrs. Also see "General" before first port.

MEDICAL: Public hospital with board and sanatorium for infectious/contagious diseases. In addition, private clinics and a naval hospital.

FRESH WATER: Available at Berths No. 1 and No. 2.

FUEL: Can be supplied only to vessels moored alongside quay and this in small quantities up to 100 tons, by means of cistern-truck or in drums.

A fuel line is laid to Berth No. 2, for supply to fishing vessels only, but commercial vessels in the future.

Fuel suppliers are Esso, Shell, Copec, Comar and Sunoco. Also see "General" before first port.

CONSULS: Brazilian and Norwegian consulates. At Concepcion the following:

Argentina
Belgium
Bolivia
Colombia
Denmark
Ecuador
El Salvador
Finland
France
Guatemala
Germany
Honduras
Italy
Mexico
Netherlands
Paraguay
Panama
Peru
Sweden
Switzerland
Spain
U.K.
Uruguay
Venezuela

REPAIRS: "Asmar" or the navy workshop has capable personnel and modern equipment to effect all kinds of repairs, not only to hull, but also to engines, boiler plates, welding, carpentry and electrical works. Chilean Navy has high-sea tugs to effect salvage and assist vessels in danger. 3 private-owned workshops, which can effect small repairs to vessels afloat. Several slipways for construction and repair of small craft.

DRY DOCKS: Naval shipyard and workshops have 2 dry docks, Dock number 1 is 180 m. long by 30 m. wide. Dock number 2 is 250 m. long by 40 m. wide.

Two floating docks: one 200 ft. long by 30 ft. wide for vessels up to 1,000 tons, and the other 333 ft. long by 50 ft. wide for vessels up to 3,500 tons. There is also a workshop for repairs to be effected afloat. There are 6 anchored mooring buoys used by vessels when entering Dry Dock 2.

GANGWAY/DECK WATCHMEN: Available.

OPENING/CLOSING HATCHES: By stevedores.

REPATRIATION: Good facilities exist.

AIRPORT: Carriel-Sur is situated between Talcahuano and Concepcion, 7 km. N.W. of Concepcion. Lan-Chile has connections from this airport with all the towns of the country from Arica to Punta Arenas and abroad.

TIME: GMT minus 4 hours. Also see "General" before first port.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Required.

GENERAL: South wind affects vessels only when moored outside the port zone. Weather signals are indicated on Signal Station of Port Authorities' Building.

Climate: Temperate.

Predominant Wind: South – West at 26 knots.

Rainfall: 736 mm. per year.

Temperature: Average maximum 16°C, average minimum 7° C.

AUTHORITY: Empresa Portuaria de Chile, Blanco Avda. No. 839, Valparaiso. *Tel:* (032) 257167. *Telex:* 230313. *FAX:* 259937. *Contact:* Raul Urzua Marambio, Director General.

Talcahuano/San Vicente Ports: Empresa Portuaria de Chile, Avda. Latorre No. 1590, Talcahuano. P.O. Box No. 265, Talcahuano. *Tel:* (041) 542249. *Telex:* 260095. *FAX:* (041) 541807. *Contact:* Alberto Arismendi Torres, Administrator.

AGENT: See "Valparaiso".

TALTAL: 25.24 S. 70.29 W. (See Plan)

DOCUMENTS: See "General" before first port.
PILOTAGE: No official Pilot Station at Taltal. If professional assistance required vessel should give ETA 24 hours in advance via Valparaiso Radio. Pilot boards at the anchorage. International code signals used. Harbour Master's Office can be contacted by radio-telephone on 2182 kHz.
ANCHORAGES: Sheltered deep-water anchorage suitable for any size vessels. Locations of designated areas marked on the chart.
RESTRICTIONS: Port closed in Summer from 2000 hrs. to 0600 hrs.; in Winter from 1900 hrs. to 0700 hrs.
MAX. SIZE: Limited only by depths in anchorage.
HEALTH: Vessel boarded on arrival by Health Inspector.
RADIO: Radio Naval Valparaiso or Radio Naval Arica. Use R/T on 2182 kHz. and 2738 kHz. A3 on the half hour from 0800 hrs. to 1800 hrs.
TUGS: One privately owned tug may be called on to assist if necessary.
BERTHING: No berths alongside shore. Vessels work cargo in open anchorage. One buoy berth for tankers. Mooring, unmooring in daylight only. 6 in. hoses for discharging fuel and diesel.
STEVEDORES: At least 24 hours advance notice of ETA required to arrange gangs. Also see "General" before first port.
MEDICAL: Doctors and hospital facilities available. Advance notice desirable.
TANKERS: *Caleta Ossa Mooring Berth:* Vessels berth to 2 stern buoys, using both anchors. Ship's head on approximately 225°T. Depth of water 47 ft. A Pilot is required and comes from Antofagasta.
FRESH WATER: Not available.
FUEL: Not available.
CONSULS: There are no local representatives.
REPATRIATION: No facilities for crew change or repatriation.
AIRPORT: There is no airport.
TIME: GMT minus 4 hours. Also see "General" before first port.
HOLIDAYS: See "General" before first port.
TELEPHONES: There is a telephone service.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Required by all crew members.
AUTHORITY: Capitania de Puerto, Taltal, Chile. *Contact:* Luis Alegre Lepe, Capitan de Puerto.

TOCOPILLA: 22.05 S. 70.11 W. (See Plan)

PORT LIMITS: All vessels have to tender Notice of Readiness on arrival and during office hours. All port limits in accordance with Charter Party. Other considerations are Port Regulations Orders dated 7th November 1991 which state that all vessels proceeding from foreign countries to Tocopilla in full ballast must change ballast during navigation at a distance not less than 12 nautical miles from the coast. This situation must be registered in the logbook of the bridge and engine room, detailing place, date and volume. This will be required by the Port Authority.

The port limits are the area of meridian tangental to Algondonales Point, East of Latitude 22° 04' 30" S.

DOCUMENTS: All vessels have to tender to the Port Authority the following documents to ensure speedy Free Pratique:

5 copies Crew List.
3 copies Passenger List.
3 copies Stores List.
3 copies Personal Effects List.
3 copies Cargo Manifest.
Derat Certificate.
Health Certificate.
Tonnage Certificate (Convention 1969).
Safety Radio Certificate.
OIPP Certificate.
Safety Construction Certificate.
Safety Equipment Certificate.
Safety Certificate and Arrival conditions.

Also see "General" before first port.

PILOTAGE: Compulsory. Pilot will board between 0700 hrs. until dusk for mooring. For unmooring, any time of day and night for SIT Terminals only. For Central Termoelectrica "Tocopilla" Pier – mooring/unmooring at any time.

The Pilot calls on VHF Channel 16 or 6, when vessel is at the Pilot Anchorage Point, and Tocopilla Radio stands by on VHF Channel 16.

ANCHORAGE: See "Pilotage" and "Mooring".
MAX. SIZE: *SIT Terminals:* Buoy SIT 1: Max. length 200 m. Max. draft 45 m. Displacement 23,000 tons.
Buoy SIT 11: Max length 200 m. Max. draft 45 ft. Displacement 23,000 tons.
Mechanical Plant SIT: Max. length 200 m. Max. displacement 50,000 tons. Minimum airdraft 10.5 m., max. draft (depth) 11.0 m.
Central Termoelectrica Tocopilla S.A. Pier (Ex-Codelco): Max. length 234 m., max. draft 13.5 m., displacement 80,000 tons.
HEALTH: On arrival vessel boarded by Sanitary surgeon or Maritime Sanitary Inspector, who will grant the Sanitary Pratique valid for all Chilean ports of call in the present voyage.
RADIO: All calls should be directed via Arica, Iquique, Antofagasta or Playa Ancha (Valparaiso) Naval Radio Stations. According to Chilean Regulations all vessels in Chilean coastal waters (within 200 miles) must inform position, course, speed and previous and next port of call to Radio Naval Valparaiso to the nearest Coast Guard at 0800 hrs. and 2000 hrs. every day whilst at sea.

Valparaiso "CBU" listen on 4349 kHz or 8748 kHz or 12714 kHz.

Also see "General" before first port.

VHF: Tocopilla Radio (CBA-21) on VHF Channel 16.
TUGS: It is compulsory to use a tug for mooring and unmooring.
BERTHING: *Mooring at SIT Terminals:* The port has 2 buoys for mooring vessels of any tonnage and which are used exclusively by ships discharging or loading general cargo and bagged nitrate/fishmeal. The depth of these moorings is 15 m. – 30 m.

The Mechanical Plant Terminal for loading bulk/bagged cargo has a permissible airdraft of 10.5 m. and depth 11.0 m. The permissible length is 200 m. and max. displacement 50,000 tons.

Central Termoelectrica Tocopilla Pier (Ex-Codelco): For discharging bulk cargo, bunkers, containers, heavy pieces of machinery, any loading bagged cargoes and containers. Draft 13.5 m., length 234 m, breadth 32.4 m. and max. displacement 80,000 tons.

Also see "Bulk Cargo Facilities" and "Tankers".

CRANES: The Central Termoelectrica Tocopilla S.A. Pier has 2 cranes and a lifting capacity of 30 tons at a distance of 40 m. each. They are specially for bulk cargoes, containers and heavy pieces of machinery. Discharge rate is 750 t.p.h. each for bulk cargoes.

Pier No. 5 – SIT has 3 cranes for loading bagged nitrate, fishmeal, bulk cargoes and general cargo, with capacity of 5 tons for 2 cranes and 2 tons for the other crane. Rate is about 150 t.p.h. to loading barges.

BULK CARGO FACILITIES: This port is specially for discharge and loading of bulk cargo.

Mechanical Plant Terminal – Loading rate: Nitrate 1,000 t.p.h., fishmeal 800 t.p.h. Hidrororacita 300 t.p.h.

Central Termoelectrica Tocopilla Pier – Loading rate: Coal 1,500 t.p.h. (two cranes). Muriate Potash 5,000 t.p.h.

This port has a stockpile specially for bulk cargo.

SPECIALISED CARGO HANDLING FACILITIES: The Central Termoelectrica Tocopilla Pier has facilities for discharging cargo, bunkers and acid.
BRIDGES: None.
STEVEDORES: Number of gangs required for loading and/or unloading operations should be radioed 24 hours in advance to Agent.

Also see "General" before first port.

MEDICAL: In case of urgent need of a doctor on arrival the Master should request medical assistance by VHF to Agent and/or Port Captain. A modern hospital is available with adequate facilities. There are also 2 clinics.
TANKERS: *Central Termoelectrica Tocopilla S.A. (Ex-Codelco) Pier:* This Pier has 2×8 in. lines. There are 3 tanks for fuel oil (22,543 cu.m.), one tank for diesel oil (8,744 cu.m.) and one tank for sulphuric acid (7,850 cu.m.).
SIT Tankers: Two tanks for fuel oil (13,457 cu.m.) and 3 tanks for diesel oil (7,430 cu.m.).

Also see "Shipmaster's Report", dated July 1986.

FRESH WATER: Small quantities available at SIT and Codelco.
FUEL: Not available.
CONSULS: None.
REPAIRS: Facilities only for minor repairs.
GANGWAY/DECK WATCHMEN: Compulsory to employ services of a gangway watchman.
OPENING/CLOSING HATCHES: Ship's crew allowed to open or close hatches.
CERTIFICATES:

Safety equipment (radio, etc.).
Tonnage.
Derat.
Radio.
Chilean Light Dues Certificate.

CUSTOMS ALLOWANCES: No special restrictions.
CARGO GEAR: Gear that complies with standard Port Safety Regulations.
REPATRIATION: There are facilities.
AIRPORT: At Antofagasta (Cerro Moreno), 180 km. by good road.
TIME: GMT minus 4 hours. Also see "General" before first port.
HOLIDAYS: See "General" before first port.
POLICE/AMBULANCE/FIRE: Police Headquarters 811812; Hospital 811081; Fire Department 811842.
TELEPHONES: No facilities for placing telephone lines aboard.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Required.
REGULATIONS: Not allowed to pump oil or dirty water from bilges or throw rubbish overboard while anchored.
DELAYS: Probable on surf days, mainly in June, July and August.
GENERAL: *Hold Cleanliness:* All vessels that arrive for loading nitrates as bulk cargo must have clean holds. The surveyor is very strict and will not accept holds with rust scale, loose paint or residue of last cargo.
Provisions: Available.

SHIPMASTER'S REPORT: July 1986 (Updated 1988).
Cargo: 36,400 tonnes of sodium nitrate in bulk.
Shipper: Sociedad Quimica y Minera de Chile (now S.I.T.)/Tocopilla.
Receivers: China National Chemical Import and Export Corporation, Peking.

Documents:
1 copy Last Port Clearance.
3 copies General Declaration.
5 copies Crew List.
3 copies Stores List.
2 copies Personal Effects List.
1 copy International Health Declaration.
Ship's Register.
Ship's Safety Equipment Certificate.

Anchorage: A good anchorage can be found 5 cables from shore, in depths of 50 m. The vessel rolled constantly in a S.S.W. swell.

Pilotage: Compulsory for berthing/unberthing. There is one Pilot (Captain Jerko Huerta Rochas), who is very good.

Mooring at Nitrate Plant: Mooring in daylight only; unmooring any time of day and night.

Clearing: Shortly after anchoring at 2230 hrs., Authorities and Soquimich Surveyors came on board, for which accommodation ladder was prepared.

Health: Applying for Radio Pratique not necessary.

Radio: Vessel, possessing Satcom/telex had no problems contacting Agent. Agent is reachable 24 hours a day on VHF Channel 16. ETA notice to Harbour Master will be given by Agent.

Note: When in 200 mile territorial waters of Chile, daily report to Radio Naval Valparaiso should be given, stating ship's movements.

Tugs: 1×1,500 h.p. and 1×300 h.p. For berthing/unberthing we used the larger tug.

Berthing: Without problems; port side to plant/70 m. from shore (See "Plan").

Sequence:
1. Drop starboard anchor and slack away.
2. 2 lines (not wires) to port forward buoy (all buoys have hooks).
3. 2 lines to starboard aft buoy.
4. 2 lines to port aft buoy.
5. Extra line to starboard buoy on recommendation of Pilot.

When above is completed, a mooring gang comes on board to pick up 2 polypropylene springs from shore, using ship's winches. They stay on board in 3 shifts, to shift vessel under rotating telescopic loading arm. Officers should ensure that vessel is kept within line of port buoys as there are a few rocks close by.

Warning: When loading No. 1 hold (our vessel's length being 186 m.) ship had to be heaved very close to the port aft buoy. Longer vessels could have problems. Problem was recognised by the Pilot, who in the past said to have applied for buoys being replaced to create room for larger vessels.

Maximum permissible draft 36 ft. Depth of water 42 ft. All during her loading vessel experienced a 4 ft. – 5 ft. swell, which kept her rolling constantly.

Medical: Hospital facilities available.

Provisions: Chandler very expensive; many products not available.

Shore Communications: Distance to shore is 70 m.; accommodation ladder found best on starboard side. Agent boats U.S.$12 – 18/two ways, but crew found out, that for a small amount there was always/any time transport available and Agents boat-service was abandoned.

Customs Allowances: No special restrictions; bonded store was not sealed.

Meatroom: Not sealed as in most other Chilean ports.

Identification Cards: Necessary. Will be issued by arrival boarding party. Have to be returned on sailing.

Time: Local time is GMT minus 4 hours (second Saturday in March to second Saturday in October), otherwise GMT minus 3 hours.

Delays: Vessel experienced no delays due to weather or swell. Apparently delays occur sometimes on surf days, mainly in June, July and August, when vessel has to leave berth.

Authority: Port Captain.

Watchmen: From shore 24 hours a day in 3 shifts. Found very co-operative; no pilferage.

Report Loading 36,400 tonnes Sodium Nitrate in Bulk:

1. Holds have to be extremely clean. Most vessels find themselves rejected on arrival and after agreeing about price of cleaning, will be cleaned by Soquimich (now S.I.T.) personnel with their water-pressure equipment. This being the only way to start loading. For taking the heavy compressor on board cargo gear at all holds is necessary. Some vessels were said to have been forced to have their holds/tanktops painted, before being passed.
2. The cargo is stowed in 6 silos and transported to the ship via a belt, which runs into a turnable arm, which can bridge a distance of 90 m., including the last 26 m., covered by a telescopic extension. The loading did not produce extensive dust and the vessel's decks and accommodation were easily cleaned after sailing.
3. Loading rate found to be max. 900 t.p.h., overall calculation (including minor delays) 600 t.p.h. (Max. rate 1,200 t.p.h., depending on type of product).
4. Stowage factor appeared to be slightly higher than stated (0.88 against 0.84/0.86).
5. Air draft as per Charter Party had to be max. 10.50 m. Found air draft loading arm-end to be approximately 12 m. But there has to be a safe allowance for the 4 ft. – 5 ft. swell. Vessel experienced no problems however, the air draft being the recommended 10.5 m.
6. When loading was completed, the cargo was covered with plastic sheets, before closing the holds.
7. The stevedores were found very co-operative.

SHIPMASTER'S REPORT: August 1994.

Vessel:
Type: Bulk carrier.
Summer d.w.t.: 27,476 tonnes.
Summer draft: 31 ft. 6 in.
Length of stay: 4 days.

Position Reporting System: To avoid heavy fines, when entering and within Chilean territorial waters, reporting system must be followed (See "General" before first port).

Documents: Last Port Clearance and normal inward papers.

Clearing: Undertaken upon arrival after anchoring.

Pilotage: Pilots board at anchorage area from 0700 hrs. to 2000 hrs. for berthing. Unberthing any time.

Anchorage: Good anchorage 7-10 cables from shore. Depths 30 m. – 70 m. Anchorage became unsafe when vessel rolled in bad weather (strong winds, heavy swell). When winds blowing from shore, brown dust is produced from the nearby mountains, and vessel covered, but dust washed away easily.

Draft: Max. permissible draft 37 ft. Max. air draft 10.5 m. – 11.0 m.

Tugs: Two powerful tugs assist with mooring/unmooring. In case of bad weather (emergency), while alongside, tugs can be contacted by VHF Channel 16.

Berthing: Vessel moored port side to. Firstly starboard anchor is dropped and kept slack (finally slacked to 8 shackles). Then 2 ropes secured to each buoy (No. 1 forward, No. 3 and No. 4 aft, No. 2 forward). Then 2 spring lines secured to shore hooks. Shore gang do not board for spring lines. All lines are transferred to buoys and shore by boat. Distance from shore 50 m. – 60 m.

At a distance of about 25 m. from the vessel's port side, there are a few hidden rocks which are uncovered at low tide.

Special attention must be given all the time to vessel's lines, especially those at Buoy No. 3.

Mooring Lines: At least 10 new or very good mooring lines of 220 m. length each are required, otherwise local lines can be rented at U.S.$300.00 per line per day.

Holds: Should be extremely clean with special care to higher and hidden parts of holds. Local surveyors are very strict, and many vessels are rejected.

Cargo: Loaded part cargo of bulk and bagged nitrates (19,846 tonnes).

Bulk cargo loaded with mechanical belt loader, and vessel shifted by Pilot and her own means as per rotation plan.

Steel bars and machines for trimming (7-8 tonnes) taken on board by stevedores and ship's cranes.

Loading rate 300 – 600 tonnes/hr. Bagged cargo of normal bags 50 kg. and maxi-bags of 1,000 kg. in slings of about 12 tonnes loaded over bulk with plastic separation between cargoes.

Watchmen: Compulsory. Good 24 hours service provided.

Fresh Water: Not available.

Fuel Oil: Not available.

Fresh Provisions: Available from local market, but expensive.

Shore Leave: Allowed from anchorage and mooring buoys. Boat service through Agent, costs U.S.$70.00 per round trip.

AGENCY: Servicios Integrales de Transitos y Transferencias Ltda. (S.I.T.), Arturo Prat No. 1060, (Castilla 2098), Tocopilla, Chile. *Tel:* 56-55-812139, 812239, 812163, 812815. *Telex:* 225628. *FAX:* 56-55-812650 *Contact:* Eduardo Villalon M.

AUTHORITY: Port Captain.

VALPARAISO: 33.02 S. 71.38 W. (See Plan)

PORT LIMITS: A line joining Roca la Baja and Punta Gruesa.

DOCUMENTS:
1 Clearance.
1 Light Dues Certificate.
7 Port Cargo Manifests.
4 General Cargo Manifests.
7 Transhipment Cargo Manifests.
3 Passenger Lists for the Port.
3 Passenger Lists for Transit.
18 Crew Lists.
1 Personal Effects List.
Passenger Baggage Declaration (2 per passenger).
1 Fumigation Certificate.

24 hours prior to vessel's arrival, the Port Authority require a Cargo Manifest, Stevedoring Plan, List of Cargo per hatch, List of Hazardous Goods in accordance with I.M.D.G. Code, tally books and List of Containers.

Also see "Ship's Officer's Report".

PILOTAGE: Compulsory. Vessels reception is made about 2.5 cables off the breakwater on a bearing of 009° from the breakwater head light.

ANCHORAGES: Outside the harbour and close by, vessels find good anchorage in 25 – 15 fathoms of water. it is always prudent to secure a good anchorage, owing to possible strong winds during all periods of the year which cause heavy swells.

In Winter, vessels anchor with one anchor with full chain and have another ready for emergencies. During Winter, it is not convenient to anchor near the coast due to the risk of dragging, during Summer the near to coast, the better.

The anchorge is marked on Chart No. 511, with Pier Baron bearing 168°, at a distance of not less than 600 m. Vessels under 100 m. LOA can anchor between Pier Baron and the breakwater head, position also indicated on chart.

RADIO/VHF: Maritime Radio Station of Valparaiso in Playa Ancha which attends the public maritime service. Coastal Radio Service (SRC) with its station situated in the Port Captaincy Building, attends the maritime service to receive information regarding arrival and departure and also provides information on safety of navigation, (call sign CBV-20).

Maritime Radio Station "Valparaiso Playa Ancha Radio/CBV" serves the Official Correspondence (OC) and Public Correspondence (PC) of the National and International Maritime Mobile Service (MMS).

Station Call Sign	Frequency	Type	Receives	Transmits	Schedule (UTC)
Valparaiso	500 kHz	A1A	500	500	H24
Playa Ancha Radio "CBV"	4 MHz	A1A	b.4/c.1, 5, 6	4349	0400-0430 0600-0630 0800-0830 1000-1030 1200-1400 2200-2400
	8 MHz	A1A	b.8/c.1,5,6	8478	1200-0400
	12 MHz	A1A	b.12/c.1,5,6	12714	1200-1400 1600-2000 2200-0400
	16 MHz	A1A	b.16/c.1,5,6	16956	1400-1600 2000-2200
	22 MHz	A1A	b.22/c.1,5,6	22473	1400-1600 2000-2200
	2 MHz	A3H J3E	2182	2182	H24
	4 MHz	A3H J3E	4125	4419.4	H24
	156.80 MHz	F3	c.16 VHF	c.16 VHF	H24

Station Call Sign	Frequency	Type	Receives	Transmits	Hours of service
Gobernacion Maritima Valparasio Radio/"CBV5"	2 MHz	J3E	2182	2182	H24
	156.80 MHz	F3	c.16 VHF	c.16 VHF	H24

The Pilot Station "Gobernacion Maritima Valparaiso Radio/CBV5", located in the same building, has a VHF Radio and communications are carried out directly with ships for the entrance and/or departure from port. Contact pilot boat on VHF Channel 6.

ETA: Port Authorities require 24 hour and 4 hour notice prior arrival.

TUGS: There are 8 privately owned tugs, ranging from 800 s.h.p. – 2,500 s.h.p. Use of tugs is compulsory.

BERTHING:

Berth No.	1	2	3	4	5	6	7	8	9	10
Quay No.	1	1	1	2	2	3	4	5	6	7
Length (m.)	617			366		245	112	245	225	225
Depth (m.)	8.79	9.49	9.79	9.27	8.69	8.09	6.19	8.49	9.10	7.47
Quay cranes	(1)		—	(1)	—	(2)	—	2	2	—
Telephone	—	—	1	1	—	1	—	—	1	—

(1) Private Crane.

Berthing 24 hours.

Facilities and Equipment: Lift on: Outside the Port of Valparaiso, there are Inland Terminals for full and empty containers, operated by private companies. The main operators are: Tesco, Transcontainer, Ultramar, Segetrans, Sitrans, Cosan, Sepsa.

STEVEDORES: The stevedoring syndicate has 397 registered members and 108 substitutes. Working hours are 0800 – 1530 hrs., 1530 – 2300 hrs. and 2300 – 0630 hrs.

MEDICAL: Several hospitals and clinics with qualified staff.

TANKERS: *Las Salinas Oil Terminal:* Depth 40 ft. Max. displacement 40,000 – 50,000 tons. Sailing anytime, day or night.

FRESH WATER: Delivered by hoses connected to the existing standpipes. The quality of the water is good and can be delivered at the rate of approximately 20 t.p.h. The couplings are 2.5 in.

FUEL: Copec, Shell Chile, or Esso Standard Oil deliver petroleum or diesel oil in any quantity needed by pipeline at Salinas, approximately 5 miles North of the port, mooring vessel in 7 fathoms water to special buoys and embarking a Pilot at Valparaiso Port. Delivery is at a rate of 180-200 t.p.h. Diesel can be delivered by truck and by pipe at the quay.

Report: 1988.

Vessel loaded 80 tonnes of fuel oil in 7 hours from tanker trucks. Ship's crew to stand-by with fire hose and fire extinguisher.

CONSULS:

Consulate Generals:

Argentina	Ecuador	Italy	Spain
Bolivia	Germany	Norway	Sweden
Brazil	Greece	Panama	Venezuela
Colombia	Guatemala	Peru	

Consulates:

Belgium	Finland	Netherlands	United States
Denmark	France	Nicaragua	Uruguay
Dominican Republic	Haiti	Paraguay	
	Honduras	Switzerland	
El Salvador	Monaco	United Kingdom	

REPAIRS: Several shipyards, workshops and foundries for repairs to hull, boilers, machinery and engines. The principal is Asmar belonging to the Navy. There are several other smaller shipyards for construction and repair of minor craft.

DRY DOCKS: Floating dock 10,000 tons lifting capacity with length 167.1 m. and inside width 26.1 m. Max. draft possible is 9.7 m. Max. displacement 30,000 tons. Max. d.w.t 24,000 tons. 2 × 15 ton cranes.

GANGWAY/DECK WATCHMEN: Available.

OPENING/CLOSING HATCHES: Carried out by the stevedores or by ship's crew.

CUSTOMS ALLOWANCES: No unusual restrictions.

REPATRIATION: Facilities available.

AIRPORT: International airport at Pudahuel, 90 km. from Valparaiso. Los Cerrillos is the nearest airport. From Pudahuel, Lan-Chile maintain daily services to Arica to the North and to Punta Arenas with stops at all the principal towns.

TIME: Local time October to March, GMT minus 3 hours. March to October, GMT minus 4 hours.

HOLIDAYS: See "General" before first port.

SERVICES: Compasses, radars, meteorological instruments and other nautical equipment can be tested and fixed. Charts and maps can be obtained from the Chilean Navy Navigation and Hydrographic Department.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Required.

GARBAGE DISPOSAL: Waste disposal services can be contracted by ship's Agent.

WASTE OIL DISPOSAL: No facilities.

SEAMAN'S CLUBS: None.

PORT REGULATIONS: It is strictly prohibited to dismantle the main engine or effect repairs to the engines without previous notification and authorisation from the Maritime Authorities. Also, to deballast petroleum, pump bilges, throw waste or refuse overboard in the artificial port.

WEATHER: A weather report showing the condition at various points off the coast of Chile can be obtained from Playa Ancha Radio twice a day. A general rule for the next day's forecast: the weather condition at Juan Fernandez Islands will be 24 hours later than the conditions at Valparaiso.

Climate: Temperate.

Average Amount of Cloud: 4.8 – 8 hours.

Predominant Winds: S.W. and N.W., speed 23 knots.

Rainfall: 360.2 mm. in one year.

Temperature: Average max. – 19°C.
Average min. – 11°C.

DEVELOPMENTS: Berths No. 1, 2 and 3 to be modernised by 1998. The continuous length will be 624 m. and depth 12.0 m.

SHIPMASTER'S REPORT: April 1980 (Updated 1990).

Documents:

6 General Declarations
12 Crew Lists
6 Passenger Lists for the Port
6 Passenger Lists (even if nil)
6 Mail Lists (or no Mail)
2 Crew Effects Lists
6 Bond and Canteen Lists
6 General Stores, Food Lists
Clearance from Last Port.

Pilotage: Compulsory. Pilot boards vessel 0.5 miles East of Dupret Light. 24 hours notice required to Port Captain (Maritgob).

Anchorage: Anywhere outside the "Prohibited Anchorage Area". The holding ground is moderate.

Restrictions: Port closed for all kinds of activities only in bad weather.

Max. Size: Max. LOA: 200 m. (depending on berth). Max. draft 10 m. (except Berths No. 9 and 10) after completion of dredging which is in progress. 2 ft. keel clearance required.

Health: Quarantine message should be sent 24 hours prior to arrival.

Radio: Playa Ancha Radio "CBV".

VHF: Port Captain on Channel 16. Pilot on Channel 6, vessel's Agent equipped with Private Channels, contact on Channel 16.

Tugs: 4 tugs available. Compulsory for large vessels.

Density: 1025.

Fresh Water: Available. Rate 15 to 20 t.p.h.

Fuel: Bunker fuel oil and diesel oil available, but expensive.

Airport: At Santiago.

Repairs: Very good services available.

Services Available: Fresh provisions, machine shop, Lloyd's Surveyor, Salvage surveyor, laundry service, lubricating oil, doctor, hospital, meats and groceries.

SHIP'S OFFICER'S REPORT: November 1990.

Documents:

Clearance from Last Port.
Light Dues Certificate.
1 copy Port Cargo Manifests (Manifiesto de carga para puerto).
Transit Cargo Manifests (Manifiesto de carga en transito), see Note (b).
Cargo Manifests, covering cargo shortshipped but manifested on previous vessels calling at Valparaiso (Manifiesto de carga de transbordo) – not required.
1 copy Dangerous Cargo List (Lista de carga peligrosa).
2 copies Passenger List (Pasajeros para puerto).
Transit Passengers List (Pasajeros en transito) – not required (See Note (a)).
5 copies Crew List (Rol de tripulacion).
2 copies Crew's Personal Effects Declaration (Declaracion de effectos de la tripulacion).
4 copies Stores List (Declaracion de suministoros del buque).
Mail Manifests (Guia de correos) – not required (See Note (a)).
Baggage Declaration (Equipajes acompanades) – not required.
Fumigation Certificate.

Notes:

(a) The vessel is a general cargo vessel, without passengers or mail on board.
(b) All cargo was discharged in Valparaiso, so no Transit Cargo Manifests were necessary.
(c) There was no transhipment cargo on board.
(d) It seemed preferable to prepare the documents in Spanish for the good reason that "everything ran smoother".

AUTHORITY: Empresa Portuaria de Chile, Casilla 133-V, Valparaiso, Chile. *Contact:* Gabriel Aldoney Vargas, Director, Calle Blanco 839, Valparaiso, Chile. *Tel:* (056) 32-257167, ext. 301.

Maritime Governor of Valparaiso, Av. Errazuriz 537, Valparaiso. *Tel:* 258091.

Port Administration, Avda. Errazuriz 25, Valparaiso, Chile. *Tel:* (056) 32-257167, ext. 511. *FAX:* (056) 32-234427. *Contact:* Domingo Ormazabal Gonzalez, Port Administrator.

AGENT: Ian Taylor - Chile, Prat 827, Of.301, Valparaiso, Chile. Tel: 56-2-259096. Telex: 230018, 330504. Fax: 56-2-214904.

People's Republic of China

GENERAL: (See Plan)

We have been advised by the Head Office of the China Ocean Shipping Agency in Beijing that Ship Masters of foreign vessels calling at Chinese Ports should contact the Branch Office at the Port concerned (cable address "Penavico") in order to be provided in due time with necessary information relating to port entry requirements.

DOCUMENTS: *Shipmaster's Report:* 1987.

First Port:

1 Maritime Declaration of Health.

2 Reports of Entry for foreign ships.

6 Crew Lists (names and addresses of Chinese and Hong Kong crews to be written in Chinese and others in English).

3 Lists of Specified Articles (money, gold and silver).

4 Passenger Lists (if carrying passengers).

1 Import Cargo Manifest. (If none on board then it is essential for the Master to make one. Suitable blank Chinese forms are available).

Note: All the above are to be made on Chinese forms.

Second and Subsequent Ports:

2 Report of Entry and 6 Crew Lists, Last Port Clearance and travelling documents in a sealed envelope.

Departure:

1 Report of Clearance form.

4 copies of a simple declaration of all crew changes.

All crew Identity cards and shore passes for checking.

Other Notes on Arrival:

Ship's Certificates are examined on board. If any taken ashore ensure a receipt is obtained.

Bond locker is usually not sealed, or the contents declared. However, some ports now reported to be sealing the Bond Locker.

Shore Leave: Shore leave is granted after inspection of documents. Chinese and Hong Kong seamen need only Identity card to go ashore. Non-Chinese need a shore pass in addition.

For Arrival or Departure Inspections a large room is needed, capable of seating 8 to 12 persons. Cigarettes, tea, soft drinks and occasionally beer are acceptable. Sometimes a meal will be requested. One cabin will be requested for the Guards (2 berth cabin such as hospital is suitable) for duration of stay in port. Sometimes another room is required for a Customs Officer.

PILOTAGE: *Regulations with Respect to Sea-port Pilotage issued by The Ministry of Communications:* These Regulations have been made with a view to safeguarding the sovereignty of the People's Republic of China and ensuring the safety of ports and vessels.

Article 1: For all foreign vessels which enter, leave, or navigate or shift berths within any port of the People's Republic of China, pilotage is compulsory. No foreign vessel shall enter, leave, or navigate or shift berths within a port without having on board a Pilot designated by the Harbour Superintendency Administration. In cases of emergency, such as a sudden change of weather, a vessel at anchor may, however, for the purpose of ensuring safety, shift from her original anchor position to any other position in its vicinity without a Pilot, provided the Harbour Superintendency Administration is notified of the same simultaneously.

Article 2: Incoming foreign vessels shall anchor in the designated anchorage or Pilot Station and await the Pilot. In case an outgoing foreign vessel requests the Pilot to conduct the vessel beyond the limits of the pilotage waters, the Pilot has the right to refuse such request.

Article 3: Prior to arrival at the pilot anchorage, incoming foreign vessels shall communicate with the Pilot Station (boat) or the port signal station by exhibiting appropriate signals prescribed by the Chinese Port Authorities and follow the instructions given by the Pilot Station (boat) or the port signal station.

Article 4: When the Pilot is boarding or leaving, it is the duty of the Master of the vessel piloted to take safety measures and furnish a pilot ladder complying with the requirements of the International Convention for the Safety of Life at Sea for embarking and disembarking the Pilot safely and quickly, with due regard being paid to the safety of the pilot boat.

Article 5: The Master of the vessel piloted shall give the Pilot a correct description of the vessel's navigability and steering qualities, and shall meet the Pilot's demands in piloting. Failing to do so, the Master shall be responsible for the consequences arising therefrom.

Article 6: While the vessel is under pilotage, the Master thereof shall in no way be relieved of his responsibility for management and operation of the vessel. The Master shall still give care to the safe navigation of the vessel and must co-operate closely with the Pilot. In the interests of safe navigation, the Master may put forward reasonable recommendations and requirements, but shall not interfere in the Pilot's work unreasonably. If the Master has to leave the bridge temporarily, he shall inform the Pilot of the same and designate an officer as his representative during his absence.

Article 7: In order to ensure the vessel's safety, the Pilot has the right to suspend pilotage when necessary until the circumstances are suitable for safe navigation again.

Article 8: For marine accidents occasioned by the fault of a Pilot in the course of piloting, the Pilot shall be duly punished, but shall hold no liability for loss or damage resulting therefrom.

Article 9: When sea conditions or other special circumstances make it impossible for the Pilot to board an incoming vessel at the designated place, the vessel shall first be guided by the pilot boat to a place at which the Pilot can safely embark and then be conducted by the Pilot into the port after his boarding.

In the case of an outgoing vessel, if the Pilot finds it difficult to disembark at the designated place for the same reasons as are stated above, he may disembark midway at a safe place and then guide the vessel out of the port with the pilot boat.

Article 10: The Pilot may be accompanied by apprentice Pilots who go on board for practice. The Master of the vessel piloted shall provide them with conveniences in regard to both work and life.

Article 11: The Master of the vessel piloted shall sign the Pilotage Bill and pay the pilotage or shifting charges according to the prescribed tariff. If the Pilot considers that the vessel should be assisted by a tug or tugs, the charges for the tugs actually employed shall also be for the account of the vessel.

Article 12: These Regulations shall come into force on the date of publication. The "Regulations Relating to Sea-Port Pilotage", promulgated by the Ministry of Communications of the People's Republic of China on 9th December 1959, shall at the same time be abrogated.

ANCHORAGES: Typhoon Shelters: Approaching the typhoon season, seriously affecting the safety of shipping along the Southern stretch of China's coast, we publish herewith a circular received from the Mapping Agency of the Navigation Guarantee Department of the Chinese Navy Headquarters.

In the text "Dao" means island, "Gang" port, "Shan" mountain and "Wan" bay. The chart numbers refer to those issued by the same authority.

Anchorages: The coast in this area is very indented and hence numerous good harbours and bays are found. The anchorages affording shelter from bad weather for foreign vessels are Dongshan Wan, Jiazi Gang and Hailingshan Gang. Guangzhou Gang, Huangpo Gang, Zhanjiang Gang and Shantou Gang also have good anchorages for shelter.

Section 1 – Dongshan Wan Anchorage: Charts 9111, 9314.

General Remarks: Dongshan Wan is situated near the boundary line of Fuijan and Guangdong Provinces. Xiamen Gang lies 68 miles to the N.E. It is considered to be one of the good harbours in South Fuijan.

Its entrance lies between Dongshan Dao and Gulei Bandao. Gulei Bandao is long and narrow, with several outstanding mounts 100 m. to 270 m. high on its Southern half.

Huyu Dao Southwestern Anchorage lies between Huyu Dao and Ta Yu (Dong-men Yu). It has a water area about 4 cables wide and about 10 m. deep, bottom is mud, sand-mud, shell and small rock. It is good for shelter from N.E.'ly gales. In this anchorage, tidal streams are strong and swell is rather heavy.

Meteorology and Hydrography:

Winds: Southerly to Southwesterly winds prevail from June until August, while Northeasterly winds prevail in the other months. The annual average wind force is 4. Wind is stronger from October to March, during which period the average wind force is 5 to 6. It may attain Force 9 to 10 during the onset of severe cold air wave. The number of gale days (wind Force 6 and above) is about 119 days in a year, and about 11 to 16 days per month during the period from October to March, and only 1 to 2 days in July, which is the minimum.

Typhoon: Occurs mostly in August and September. In September 1957, when the centre of a typhoon landed here, the wind velocity exceeded 44 metres per second, and high waves of 3 m. to 5 m. were experienced.

Fog: There are about 31 fog days in a year. The monthly average of fog days in March and April is about 7 to 8, and in January, February, May and June, about 2 to 4 days. It is the least in October and November.

Tides: Tide is of irregular semi-diurnal nature. The Spring rise is 3.52 m. and neap rise, 2.96 m., and mean sea level, 2.16 m.

Tidal streams: At Gulei Anchorage, flood sets Northward, and ebb Southward, at a rate of about 1.5 knots. Outside the entrance, flood sets Northeastward, at a rate of about 2.3 knots.

Aids-to-Navigation and Lankmarks:

Gulei Tou, lying at the Southern extremity of Gulei Bandao, is a steep cliff. At its Southern part, a light (U) is exhibited, at an elevation of 113 m., from a square stone column.

Gulei Shan, lying about 3.6 m. N × E of Gulei Tou Lightbeacon, has a conspicuous sharp peak. There is one more summit close to its Southeast, so that a comparatively deep saddle is formed.

Ta Yu (Dongmen Yu) lies about 2.3 miles Westward of Gulei Tou Lightbeacon, with the main summit lying at its Southwestern part. There is a stone tower on its top at an elevation of 91 m. (height of the tower is 10 m.).

Shuwei Yu lies at the outer extremity of a reef extending Southeastward from Ta Yu.

Huyu Dao lies about 1.4 miles N × E of Shuwei Yu. Its Eastern top, surmounted by a pile of stone, is high. Yousui Yan, 34 m. high, lies Southward of Huyu Dao.

Daping Yu, lying about 0.6 miles N.W. of Huyu Dao, is fringed with rocky ledges extending outwards.

Obstructions: Yunnan Yan, with a depth of 3.8 m. over it, lies about 3 miles S.W. of Gulei Tou Lightbeacon. Between this rock and Gulei Tou there is a shoal of less than 10 m. depth, with a least depth of 6.8 m. over it.

A shallow spot, with a depth of 8.4 m. over it, lies about 3.2 miles S.E. of Gulei Tou Lightbeacon.

At the Southern extremity of Yousui Yan, Southward of Huyu Dao, there is a rocky ledge and reefs extending Southward about 1.5 cables.

Directions for Navigation: Ships intending to enter Gulei anchorage should first sight Gulei Tou, and on reaching a position about 0.6 miles Southwestward of Gulei Tou Lightbeacon, alter course so as to make for the anchorage.

Section 2 – Jiazi Gang Anchorage: Charts 9113, 9423.

General Remarks: Jiazi Gang, lying between Shantou Gang and Shanwei Gang, is situated at the place where the river named Ying Jiang empties into the sea. The anchorage is situated with Jiazi Jiao Lighthouse bearing 104°, about 1.5 miles distant, having depths of 7 m. to 10 m., sand bottom. It can afford shelter from Easterly to Northeasterly winds. There is a mooring buoy at its Northeastern part. It is an anchorage generally used for shelter by vessels plying between Shantou Gang and Shanwei Gang.

Meteorology and Hydrography:

Tides: Tide of this harbour is diurnal. However, during the period of semi-diurnal tides, mean high water is 0.81 m. and mean low water, 0.57 m. During the period of diurnal tides, mean higher high water is 1.26 m., mean lower low water, 0.18 m. and mean sea level 0.89 m.

Tidal Streams: Flood sets Northeastward at a rate of 1 knot and ebb sets Southeastward at a rate of 1.5 knots.

Aids-to-Navigation and Landmarks: Jiazi Jiao is an outstanding cape. A lighthouse named Jiazi Jiao, exhibiting a light at an elevation of 78 m. from a white square brick tower, lies on Qilin Shan about 2.5 cables Northeastward of Jiazi Jiao.

Bie Yan, a rock 5.4 m. high, lies about 1.5 miles Southward of Jiazi Jiao Lighthouse. Haijia Shan, situated about 8.6 miles W × N of Jiazi Jiao Lighthouse, is a conspicuous summit in its vicinity.

Hudong Jiao, an outstanding cape, lies about 3.2 miles Southwestward of Jaijia Shan.

Obstructions: Wu Jiao, a rock 2 m. high, lies about 1.7 miles Northwestward of Jiazi Jiao Lighthouse.

A wreck lies about 13.6 miles Southeastward of Jiazi Jiao Lighthouse. An obstruction lies about 13.6 miles Southwestward of Jiazi Jiao.

Directions for Navigation: Ships from the West may use Jiazi Jiao Lighthouse as an aid, and steer to about 5 miles S.W. of Jiazi Jiao Lighthouse, and then alter course for the anchorage.

Ships from the East should steer to about 5 miles Southward of Jiazi Jiao Lighthouse, when it is in line with Bie Yan, bearing 000°, alter course for the anchorage.

Section 3 – Hailingshan Gang Anchorage: Charts 9316, 9426.

General Remarks: Hailingshan Gang, between Zhujiang Kou and Zhanjiang Gang, lies on the Western side of Hailingshan Dao, and is an anchorage affording shelter for vessels plying between Guangzhou Gang and Zhanjiang Gang.

This anchorage lies on the Western side of a line from about 1 mile Westward of Hudie Zhou to Huoyan Shan. It is about 4 miles long and about 0.5 miles wide, in depths of from 6 m. to 13 m., bottom sand and mud-sand. It is sheltered from Northeasterly, Easterly and Southeasterly winds. During Southwesterly, Northwesterly and Northerly winds, there is considerable swell.

Meteorology and Hydrography:

Winds: In Summer, S.W. wind is predominant and rainstorms are frequent. In Winter, N.E. wind is predominant and thick fog is frequent. Typhoons are most frequent from June to August. N.E. gales are mostly experienced here during the approach of a typhoon.

Tides: Tide in this harbour is irregular, diurnal. During the period of semi-diurnal tides, mean high water is 2.45 m., mean low water 0.95 m. During the period of diurnal tides, mean higher high water is 2.98 m., mean lower low water 0.52 m. and mean sea level 1.70 m.

Tidal Streams: Flood sets N × E at a rate of 1.3 knots and ebb sets S.W. at a rate of 2.5 knots.

Aids-to-Navigation and Landmarks: In this vicinity, there are numerous islands and islets, which are isolated and readily identifiable. Landmarks usually used are, Mawei Zhou Lightbeacon, Mawei Shan, Longgao Shan, Shuangshan Dao, Hudie Zhou, Paotai, Zui, Xizaizai Shan, Dier Shan, Huoyan Shan, etc.

Obstructions: There are many shoals on either side of the anchorage, some of them dry at low water.

Yamui Pai, a rock, lies about 1 mile Northward of Paotai Zui. At its Western side, there is a rock which dries.

Directions for Navigation: Ships, arriving S.W. of Mawei Zhou Lightbeacon and when Xizaizai Shan is in line with Huoyan Shan, should alter course so as to follow this leading line. When Mawei Zhou Lightbeacon comes abeam to starboard, alter course N×E for the anchorage. Traffic of fishing vessels in this harbour is very heavy. Ships should always be on the alert to take appropriate action to avoid collision.

TIME: GMT plus 8 hours.

REGULATIONS:

Regulations governing the passage of non military foreign vessels through the Chiungchow Straits.

Article 1. According to "The Declaration of the Government of the People's Republic of China on China's Territorial Seas, the Chiungchow Straits (the Hainan Straits) are Chinese inland waters, where all foreign military vessels are prohibited from passing through. Any non military foreign vessel in need of passing through the Straits must apply for permission in accordance with the present Regulations.

Article 2. For facilitating the control of the Chiungchow Straits, the Chinese Chiungchow Straits Authority of the People's Republic of China (hereinafter referred to as the Chinese Chiungchow Straits Authority) is hereby set up.

The present Regulations are to be carried out under the supervision of the Chiungchow Straits Authority.

Article 3. The water area which comes under the control of the Chiungchow Straits Authority (hereinafter referred to as the Control Area) is bounded temporarily as follows: West of the line connecting the Hainan Head Light Beacon (approx: Lat. 20° 09' 37" N., Long. 110° 41' 00" E.) and San Kao Lung Light Beacon (approx: Lat. 20° 26' 00" N., Long. 110° 30' 22" E.) (known as the East Line) and East of the line connecting Cape Kami Light Beacon (approx: Lat. 20° 13' 30" N., Long. 109° 55' 30" E.) and Cape Lin Kou Light Beacon (approx: Lat. 20° 00' 22" N., Long. 109° 42' 06" E.) (known as the West Line).

Article 4. Any non military foreign vessel passing through the Chiungchow Straits must comply with the following procedures:

1. Apply for passage permission by cable to the Chiungchow Straits Authority 48 hours before the vessel enters the control area, or before the vessel leaves the port of departure, giving detailed information on ship's name, nationality, gross tonnage, speed, hull colour, funnel marks, port of departure and destination as well as date and time of sailing.

2. After obtaining the passage permission, inform the Chiungchow Straits Authorities 24 hours before entering the control area or within 2 hours after vessel port of departure of the exact time of entering the control area.

All cables relating to the application and permission for the passage through the Straits are to be transmitted through the Haikou Branch of China Ocean Shipping Agency.

Article 5. Notification may be given by the Chiungchow Straits Authority, whenever it deems necessary, to cancel the permission already granted to those non military vessels for passing through the Straits.

Article 6. Passage through the control area by non military foreign vessels should be made in the day time only. They should enter the control area after sunrise and leave before sunset. On the basis of the ship's speed the Chiungchow Straits Authority shall fix the time for the non military foreign vessel concerned to enter or leave the Straits.

Article 7. Non military foreign vessels entering and leaving the Chiungchow Straits should pass through the middle channel, unless special permission has been granted by the Chiungchow Straits Authority.

Article 8. Non military foreign vessels passing through the control area should navigate within the following specified navigation area: North of the line connecting the point on the East line 4 nautical miles away from the Hainan Head Light Beacon to the point on the West line 4 nautical miles away from the Cape Lin Kou Light Beacon; and South of the line connecting the point on the East line 6 nautical miles away from the Hainan Head Light Beacon, the point 4 nautical miles due South of the Cape Paimi Light Beacon (approx: Lat. 20° 15' 00" N., Long. 100° 17' 00" E.) and the point on the West line 14 nautical miles away from the Cape Lin Kou Light Beacon.

Article 9. Non military foreign vessels passing through the Chiungchow Straits must punctually observe the time as reported and comply with the stipulations on the limit of the navigation area. All vessels entering and passing through the control area should immediately answer and unconditionally comply with the signals from the shore or patrol ships. The vessels in question shall be held responsible for all consequences arising from non observance of the above stipulations.

Article 10. Non military foreign vessels passing through the Chiungchow Straits are not allowed to use radar. If the vessels are under the conditions of restricted visibility caused by dense fog, torrential rains, etc., which necessitates the use of radar, they should make an application to the Chiungchow Straits Authority, giving their reasons as well as the ship's position, speed, etc., and they may set ship's radar in operation when permission is obtained. In the case of emergency which endangers safe navigation of the ships, they may use their radar while making their application simultaneously; after that, they should submit a detailed account (report) to the Chiungchow Straits Authorities giving a full account, together with a statement of facts of the time as to when the radar set in use and when ended for the archives.

Article 11. Non military foreign vessels passing through the Chiungchow Straits are not allowed to take photographs, soundings, or do any other things in violation of the laws and regulations of the People's Republic of China.

Article 12. Any non military foreign vessel violating the present Regulations shall be treated as follows:

1. Before entering the control area, the vessel may be ordered to stop proceeding and to round out by her original route, so as to sail around the Hainan Island; or, to wait until the necessary formalities are completed and the permission for passage granted.

2. In case the vessel has entered the control area, she may be ordered to stop and be escorted to Haikou for inspections; and she shall be treated according to the findings after inspection. After that, the vessel may, as circumstances require, be allowed to pass through the control area, or ordered to return out from the control area, or even be escorted out of the Straits.

Guide to foreign vessels calling at Shanghai

1. Regular channel in Chusan area: Foreign vessels may navigate in the regular channel between Chusan and Raffles Island which is open to navigation, but are not allowed to navigate in other channels between these islands. (By the regular channel is meant the channel from Tongting Island, Steep Island, Elgar Island, Bonham Island, Button Island, Gutzlaff Island to Chang Kiang Kou).

2. Pilotage Area:

(a) Pilotage on vessels entering/leaving port commences from/termination at the position Lat. 31° 05' N., Long. 122° 10' E. at Chang Kiang Kou.

(b) The Pilot vessel, when engaged on her pilotage duty, will anchor near 1 mile East of the entrance buoy No. 54 (Lat. 31° 04' 52" N., Long. 122° 10' 00" E.) at Chang Kiang Kou.

3. Anchorage awaiting for the tide:

(a) Foreign vessels may, when the draft at the time of entry is 25 ft. or less, proceed direct to the Pilot Station (Lat. 31° 05' N., Long. 122° 11' 30" E.).

(b) In the case of draft at time of entry is more than 25 ft. or it is impossible to arrive at the Pilot Station at the declared ETA or impossible to proceed direct to the Pilot Station for reasons of the tide, then the foreign vessels may anchor and wait for the tide near 1 mile N.E. of the Chang Kiang Kou Lightvessel. Such foreign vessels waiting there may telegraph to ask "Penavico" Shanghai for the time of arrival at Pilot Station and picking up the Pilot.

4. Notice to Mariners: Chang Kiang Kuo South Channel.

Also see "Shipmaster's Report", date July 1984 (after No. 7).

(a) The Chang Kiang Kuo Light vessel No. 50 is as described below:
Location Lat. 31° 01' 48" N., Long. 122° 25' 14" E.
Characteristic Flashing every 6 seconds.

(b) Vessels entering or leaving the port should keep Chang Kiang Kou Lt. Vessel on vessel's port side:
1. Fairway Buoy M.1:
Location Lat. 31° 02' 51" N., Long. 122° 19' 35" E.
Characteristic Group flashing (3) every 6 seconds.
Shape – can shape, red and white chequered.

(c) No vessel allowed to enter the dangerous areas bounded by lines connecting the following points:
1. Lat. 30° 47' 15" N., Long. 123° 03' 00" E.
2. Lat. 30° 47' 15" N., Long. 123° 05' 54" E.
3. Lat. 30° 44' 45" N., Long. 123° 03' 00" E.
4. Lat. 30° 44' 45" N., Long. 123° 05' 54" E.

5. Telegraphic Communication:
Foreign vessels at sea may despatch radiograms to "Penavico" Shanghai via Shanghai Coastal Radio Station, the particulars of which are as follows:

Call sign: XSG
Calling frequency: 500 kHz
Working frequency: 458 kHz
Working hours: 0000 – 2400

Answering frequency:		Listening frequency:	
8502 kHz	GMT 0000 – 2400	8364 kHz	GMT 0000 – 2400
6414.5 kHz	GMT 2200 – 1000	6273 kHz	GMT 2200 – 1000
12871 kHz	GMT 0000 – 1400	12546 kHz	GMT 1000 – 1400
4349 kHz	GMT 1000 – 2200	4182 kHz	GMT 1000 -- 2200

6. Large number of fishing vessels around areas 25-30 miles N.E. of North saddle and 20-25 miles East of East saddle, Barren Island and Lukon Island, please navigate with caution.

7. Anchorage for awaiting tide – Changkiang Kuo:

(a) The water area bounded by lines connecting the following points is the anchorage of Changkiang Kuo for vessels awaiting tide:
Lat. 31° 01' 00" N., Long. 122° 24' 42" E.
Lat. 31° 01' 00" N., Long. 122° 20' 00" E.
Lat. 30° 56' 00" N., Long. 122° 20' 00" E.
Lat. 30° 56' 00" N., Long. 122° 24' 42" E.

(b) All vessels are strictly prohibited to anchor at any place out of the said anchorage of Changkiang Kuo for waiting tides without obtaining permission (permits) from Shanghai Harbour Authority concerned.

Shipmaster's Report: July, 1984.

Following telex received July 1984.

Quote:

AAA Changkiangkou Lightvessel 31° 03' 30" N., 122° 23' 1" E.

BBB Changkiangkou Lightbuoys M1 H11-H20 replaced by Buoys 44-49.

Buoy 44	Lat. 31° 03' 22" N., Long. 122° 19' 52" E.	Fl. 3/10 secs.
Buoy 45	Lat. 31° 03' 14" N., Long. 122° 16' 58" E.	Fl. 3/6 secs.
Buoy 46	Lat. 31° 03' 06" N., Long. 122° 14' 02" E.	Fl. 3/10 secs.
Buoy 47	Lat. 31° 03' 00" N., Long. 122° 11' 06" E.	Fl. 3/6 secs.
Buoy 48	Lat. 31° 03' 34" N., Long. 122° 08' 14" E.	Fl. 3/10 secs.
Buoy 49	Lat. 31° 04' 11" N., Long. 122° 05' 26" E.	Fl. 3/6 secs.

Pilot vessel moving in/area Buoy 47/49 serving/as Pilot Station.

Unquote.

Regulations governing Supervision and Control of Vessels of Foreign Registry sailing in the Chanjiang (Yangtse River). (Dated April 1983).

Article 1. The Chanjiang (Yangtse River) is the inland waterway of the People's Republic of China. These Regulations have been formulated with a view to safeguarding the sovereignty of the People's Republic of China, to ensuring safety of vessels and to maintaining order of traffic in the Chanjiang (Yangtse River) Waterway and its Ports in accordance with the Regulations governing supervision and control of foreign vessels by the People's Republic of China.

Article 2. These Regulations and all relevant laws and administrative statutes issued by the Government of the People's Republic of China shall be complied with by all propelled and non-propelled vessels and other water-borne means of transport of foreign registry (hereinafter referred to as "vessels") sailing in the Chanjiang (Yangtse River) Waterway or berthing at its Ports.

Article 3. For the purpose of these Regulations, the "Chanjiang (Yangtse River) Waterway" shall mean the main waterway extending from the line joining Liuheiwu (Lat. 31° 30' 52" N., Long. 121° 18' 54" E.) at the lower reaches of the Estuary of the Liu River, and the signal post (Lat. 31° 37' 34" N., Long. 121° 22' 30" E.) at the lower reaches of the Estuary of the Shiqiao River, Congming Island, and upwards to the upper boundary of Zhangjiagang (a line joining point Lat. 31° 59' 35" N., Long. 120° 20' 00" E. and point Lat. 31° 57' 13" N., Long. 120° 20' 00" E.).

For the purpose of these Regulations, the term "Ports" shall mean Nantong and Zhangjiagang, being those open to vessels of foreign registry in the Chanjiang (Yangtse River) Waterway.

Article 4. These Regulations shall be enforced by the Harbour Superintendency Administration of the People's Republic of China, and all vessels shall be subject to their supervision and control.

Article 5. No vessels can enter the Chanjiang (Yangtse River) Waterway or its Ports without the Permission of the Harbour Superintendency Administration of the People's Republic of China. Those permitted to enter the Chanjiang (Yangtse River) Waterway shall be subject to inspection of the Quarantine Office, the Harbour Superintendency Administration, the Frontier Defence Office, the Customs and the Animal and Plant Inspection Office, and complete all relevant formalities. The above-mentioned authorities are entitled to exercise control on board if required.

Article 6. Vessels entering the Chanjiang (Yangtse River) Waterway shall not engage in shipping business between the ports along the Chanjiang (Yangtse River) and between the Ports and the Port of Shanghai, nor shall they engage in other unauthorised operations.

Article 7. Vessels entering the Chanjiang (Yangtse River) Waterway and its Ports shall:

(a) a week prior to its expected time of passing through the Port of Shanghai, apply to the Harbour Superintendency Administration at her expected port of arrival through the port Agent for completion of entry formalities;

(b) 24 hours in advance of her passing through the Port of Shanghai (or on her departure from the last port of call if the voyage takes less than 24 hours), report the vessel's expected time of passage and the vessel's ETA at her expected port of arrival along the Chanjiang (Yangtse River), the vessel's size, fore and aft drafts, the maximum height above the actual water line to the Harbour Superintendency Administration of Shanghai and of the expected port of arrival through the port Agents;

(c) give timely advice of any alteration in the ETA reported.

Article 8. Vessels sailing in the Chanjiang (Yangtse River) Waterway or berthing at its Ports shall apply to the Harbour Superintendency Administration at the port of arrival along the Chanjiang (Yangtse River) for pilotage and for passing through the Port of Shanghai, shall apply to the Shanghai Harbour Superintendency Administration for pilotage.

Article 9. Upon arrival at the port, vessels shall immediately submit the Entry Report and other relevant forms, ship's papers and relevant documents for examination and be subject to inspection. Before leaving the port, vessels shall report the time of departure and the port of destination to the Harbour Superintendency Administration and complete departure formalities through the port Agent and may only leave the port after port clearance has been obtained.

Article 10. Vessels sailing in the Chanjiang (Yangtse River) Waterway or berthing at its Ports shall by day hoist the national flag of the People's Republic of China at the top of the foremast and the national flag of state of registry at the stern; an "H" flag shall in addition be hoisted when there is a Pilot on board. On entering or leaving Ports or shifting berths, vessels shall moreover display signal-letters and other prescribed signals.

Article 11. Vessels making use of their VHF radio-telephone in the Chanjiang (Yangtse River) Waterway or its Ports shall comply with the provisional Regulations Governing the use of VHF Radio-telephone by foreign vessels issued by the Ministry of Communications of the People's Republic of China.

Article 12: In the Chanjiang (Yangtse River), vessel's radio-telegraph and radio-telephone transmitters can only be used to communicate with the river or coastal radio-stations of the People's Republic of China, and they can only be used in Ports in case of emergency, and reports shall be made to the Harbour Superintendency Administration immediately afterwards.

In the Chanjiang (Yangtse River) Waterway and its Ports, vessel's signal rockets, flare or gun signals can only be set off in case of emergency, and reports shall be made to the Harbour Superintendency Administration immediately afterwards.

Article 13. Vessels sailing in the Chanjiang (Yangtse River) Waterway or berthing at its Ports are prohibited from carrying out the following activities:

(a) having military installations and military ships photographed, drawn pictures of, videotaped or surveyed; or

(b) shooting, swimming, fishing, and setting off firecrackers or fireworks; or

(c) other activities threatening the national safety, interests and good order of the People's Republic of China.

Article 14. Vessels sailing in the Chanjiang (Yangtse River) Waterway shall anchor as near the outer limit of the fairway as is practicable under extraordinary circumstances such as bad weather, flood peaks, etc., which make temporary anchoring necessary, and shall not take the main fairway. Those vessels shall have the position and time of anchoring and the time of departure promptly reported to the nearest Harbour Superintendency Administration, and no one shall be allowed ashore without permission of the local public security authorities.

Article 15. Vessels sailing in the Chanjiang (Yangtse River) Waterway shall not proceed at a speed that would threaten the safety of other vessels and installations ashore.

Article 16. With respect to the regulations on navigation, berthing and prevention of collisions, vessels in the Chanjiang (Yangtse River) Waterway or berthing at its Ports shall comply with the Regulations governing prevention of collision in inland waterways promulgated by the Ministry of Communications of the People's Republic of China.

Article 17. While using signals, vessels shall comply with the Regulations governing prevention of collision in inland waterways and other relevant signal regulations; signals not being specified therein shall be displayed in accordance with the relevant international regulations.

Article 18. No vessel sailing in the Chanjiang (Yangtse River) Waterway or berthing at its Ports shall discharge or dispose of oils, oily mixtures or other harmful pollutants or refuse into water.

Article 19. Matters provided for in these Regulations shall be carried out in accordance therewith, while those not being set forth herein shall be dealt with in accordance with the Regulations governing supervision and control for foreign vessels by the People's Republic of China and other relevant laws and statutes.

Article 20. These Regulations shall become effective upon the date of promulgation.

Regulations for Merchant Ships passing through Lao Tie Shan (Liau-ti-shan) Channel.

Merchant vessels passing through the Lao Tie Shan Channel must observe the following regulations:

1. The water area with Lao Tie Shan Lighthouse as centre and a distance of 10 miles as radius, and the water area with North Huang Cheng Dao Light Beacon as centre and a distance of 7 miles as radius are prohibited areas.

The middle channel between these two prohibited areas is a navigable channel.

Note:

(a) Characteristics of Lao Tie Shan Lighthouse (Lat. 38° 43' 37" N., Long. 121° 08' 02" E.) Fl. (2) 30 sec. 25 miles.

(b) Characteristics of North Huang Cheng Dao Light Beacon (Lat. 38° 23' 40" N., Long. 120° 54' 33" E.) Fl. 3 sec. 15 miles.

2. Merchant vessels intending to pass through Lao Tie Shan Channel must send a radio message to "Harbour Master, Dalian" at least 8 hours prior to the passage reporting the following matters:

Ship's name, nationality, call sign, port of departure, port of destination, speed, colours of ship's hull, funnel mark and the accurate expected time to pass the line joining Lao Tie Shan Lighthouse and North Huang Cheng Dao Light Beacon.

Note:

(a) Dalian Coastal Radio Station:
Signal letters: XSZ; calling frequency 500 kHz;
Working frequency: 462 kHz; 8694 kHz; reserve frequency: 8678 kHz; working day and night.

(b) If weather conditions should cause any change in the expected time of passage, the facts must be immediately reported to "Harbour Master, Dalian".

3. Merchant vessels passing through the Lao Tie Shan Channel must show the lights or signals in accordance with the International regulations for Preventing Collisions at Sea, 1972.

4. Vessels are prohibited to pass through the area with Hai Mao Dao (Lat. 38° 52' N., Long. 121° 01' E.) as centre and a distance of 10 miles radius.

5. Any vessel violating any of the above mentioned regulations will be held responsible for all consequences.

Guide to Foreign Vessels Calling at Dalian (Dairen): Also see "Dalian". – Shipmaster's Report, dated April 1984.

(1) When entering or leaving Dalian Harbour please pass through the channel between Daisansantao and Hwangpotsui. You are not allowed to navigate within area 2.5 miles radius from Daisansantao Lighthouse Lat. 38° 51' 50" N., Long. 121° 49' 20" E. and 1 mile radius from Lighthouse Hwangpotsui Lat. 38° 54' 14" N., Long. 121° 42' 54" E.

(2) After entering joining line between Daisansantao and Hwangpotsui Lighthouses, radar, radio transmitter and other forbidden articles are prohibited from use, in case of danger or necessity for transmitting emergency message you must report to Harbour Superintendency Administration immediately after using.

(3) You are requested to wait for quarantine and Pilot within area bounded by lines connecting the following areas: Lat. 38° 57' 02" N., Long. 121° 45' 00" E., Lat. 38° 55' 30" N., Long. 121° 44' 28" E., Lat. 38° 57' 02" N., Long. 121° 41' 11" E., Lat. 38° 56' 19" N., Long. 121° 41' 11" E.

(4) All merchant vessels are informed that vessels passing through the Liau-ti-shan Channel entering or leaving the Port of Dalian, besides it ought to observe the regulations relating to the Liau-ti-shan Channel, must keep the way to navigate through the Southern water area beyond the tangent line joining from the Encounter Rock (Lat. 38° 34' 21" N., Long. 121° 38' 12" E.) to the outer verge of the Liau-ti-shan prohibited area and the Eastern water beyond Northward meridian line of the Encounter Rock to the continent.

(5) Dalian Coast Radio Station.
Call sign: XSZ
Calling frequency: 500 kHz
Working frequency: 462 kHz
Answering frequency: 8694 kHz
Listening frequency: 8364 kHz
Working day and night.

Guide to Foreign Vessels Calling at Huangpu (Whampoa).

(1) Foreign vessels are prohibited to sail in the water areas of the joint lines among Vanshan, Chaieng and Tankan Islands, except the route as designated hereunder:

(a) The vessels calling at Huangpu from ports other than Hong Kong, should proceed from seaward to Lat. 21° 40' 44" N., Long. 113° 56' 00" E. and set course to 318°T, or to Lat 21° 37' 30" N., Long. 113° 37' 45" E. and set course to 047°T; proceed to Lat. 21° 47' 45" N., Long. 113° 49' 32" E. then alter course to 013°T; proceed to Lat. 22° 00' 00" N., Long. 113° 52' 34" E., then alter course to 334°T; to Lat. 22° 05' 36" N., Long. 113° 49' 36" E., then straight to Lafsami Pilot Anchorage waiting for Pilot.
Vessels departing should sail along the opposite course and positions above mentioned, after disembarking Pilot at Lafsami Pilot Anchorage.

(b) The vessels calling at Huangpu from Hong Kong should proceed throught West Lamma Channel to Lat. 22° 08' 44" N., Long. 113° 55' 30"E. then alter course to 295°T; to Lat. 22° 12' 04" N., Long. 113° 47' 41" E. then alter course to 204°T to Lat. 22' 10' 36" N., Long. 113° 47' 00" E. then straight to Lafsami Pilot Anchorage waiting for Pilot.
The vessels departing for Hong Kong should sail along the opposite course and positions above mentioned, after Pilot disembarked at Lafsami Pilot Anchorage.

(2) The position of Lafsami Pilot Anchorage:
Lat. 22° 07' 20" to 22° 08' 30" N.
Long. 113° 45' 48" to 113° 47' 54" E.
3. Kwangchow (formerly Canton) Coastal Radio Station:
Call sign: XSQ
Calling frequency: 500 kHz
Working frequency: 445 kHz
Answering frequency: 8514 kHz
Listening frequency: 8364 kHz
Working day and night.

Guide to Foreign Vessels Calling at Qinhuangdao (Chinwangtao):

(1) When non-military foreign vessels call at Qinhuangdao, they may pass through Liau-Ti-Shan channel. For governing regulations, please refer to "Regulation for merchant vessels passing through Liau-Ti-Shan Channel". If a vessel violates the said regulations and enters the prohibited area, the Master of the vessel is to be held responsible for whatever consequence arising therefrom.

(2) All foreign vessels should anchor 3 miles off Qinhuangdao Lighthouse waiting for Pilot. In case vessels come from foreign ports, quarantine inspection will be carried out at anchorage. After all formalities completed vessels can enter the harbour with Pilot.

(3) In order to make necessary arrangements beforehand, when vessels calling at this port, the ship should send the following information to Penavico Qinhuangdao:

(a) Vessels ETA, the draft fore and aft, stowage plan (if loading export cargo), length overall and derricks' capacities (if first call this port).

(b) Further advice of accurate time of arrival will be required 24 hours before arrival.

(c) If any change in the arrival time owing to certain cause, it should be reported to the Agents immediately.

(4) If weather permits, vessels are requested to lift up all derricks before going alongside, thus enabling vessel to load cargo immediately after berthing.

(5) All telegrams to "Penavico Qinhuangdao" from the vessels at sea should be sent via Qinhuangdao Coastal Radio Station:
Call sign; XSE
Working frequency: 286, 8734 kHz
Calling frequency: 500, 8364 kHz
Working hours: 0600 – 2400

Guide to Foreign Vessels Calling at Taku Bar:
(Xiang Jiang, Tanggu and Tianjin)

(1) Foreign vessels entering Bohai (Pohai Gulf) are only allowed to pass through Changshan Channel and/or Liau-ti-Shan Channel. If the latter way is taken, the vessel must send a radio message to "Harbour Master, Dalian" for directions 8 hours prior to passage. It should be noted that no other channels are permitted for navigation.

(2) Vessels passing Liau-ti-Shan Channel for Dalian must take a detour along the East of "Encounter Rock".

(3) Position of sunken dredger "SE Ho" is at Lat. 38° 31' 00" N., Long. 119° 10' 05" E. Vessels should keep far away from the above mentioned area during navigation.

(4) Position of the Taku Bar Light Vessel is at Lat. 38° 56' 51" N., Long. 117° 55' 32" E. Vessels may anchor at N.E. direction of the Light Vessel, according to different condition of vessel's arrival draft, to wait for Pilot.

(5) Vessels are prohibited to enter into the area joining the following four buoys:

Lat.	Long.	
38° 56' 35" N.	117° 58' 33" E.	flash every 6 secs.
38° 56' 29" N.	117° 59' 11" E.	flash red (2) every 6 secs.
38° 55' 45" N.	117° 58' 59" E.	flash red every 6 secs.
38° 55' 51" N.	117° 58' 22" E.	flash (2) every 6 secs.

(6) Vessels may send radiogram to "Penavico Xiang Jiang" (via Xiang Jiang Coastal Radio Station, Call Sign XSV, calling frequency 500 kHz, working frequency 445 kHz, reserve frequency calling 8600 kHz, listening 8364 kHz, working hours 0000 – 2400) giving exact *ETA also fore and aft draft, before entering Bohai (Pohai Gulf).*

(7) The Pilot Station is at Tanggu. Any foreign vessel, according to harbour regulations, is required to have a Chinese Pilot when entering or leaving the port and among Taku Bar, Xiang Jiang, Tanggu and Tianjin. The Pilot will board the vessel at Taku Bar Anchorage after receipt of exact ETA given by the Master.

Guide to Foreign Vessels Calling at Qingdao (Tsingtao):

(1) Definite route must be taken when sailing in or out : From Lat. 35° 56' 24" N., Long. 121° 05' 00" E. to Lat. 35° 56' 24" N., Long. 120° 46' 42" E. course 270° (090°).
From Lat. 35° 43' 15" N., Long. 120° 53' 09" E. to Lat. 35° 56' 24" N., Long. 120° 46' 42" E. course 335° (155°).
Thence from Lat. 35° 56' 24" N., Long. 120° 46' 42" E. course 283° (103°) to Lat. 36° 02' 00" N., Long. 120° 15' 56" E. then alter course 000° (180°) proceed to Quarantine Anchorage within following 4 points: Lat. 36° 05' 18" N., Long. 120° 15' 34" E.; Lat. 36° 05' 18" N., Long. 120° 16' 50" E.; Lat. 36° 04' 00" N., Long.120° 16' 22" E.; Lat. 36° 04' 00" N., Long. 120° 15' 20" E.

(2) Pilot station is within the area: with the point Lat. 36° 02' 00" N., Long. 120° 18' 16" E. as its centre and 3 cables length as its radius (all called Outer Anchorage where vessels inward anchor for initial clearance from Authorities).

(3) Dropping and dragging anchor are strictly prohibited within the following areas:

(a) Within the 4 points: Lat. 36° 04' 00" N., Long. 120° 14' 00" E.; Lat. 36° 03' 12" N., Long. 120° 17' 00" E.; Lat. 36° 03' 27" N., Long. 120° 14' 00" E.; Lat. 36° 02' 40" N., Long. 120° 16' 56" E.

(b) Within the 4 points: Lat. 36° 02' 42" N., Long. 120° 20' 00" E.; Lat. 36° 00' 48" N., Long. 120° 18' 00" E.; Lat. 36° 03' 36" N., Long. 120° 23' 16" E.; Lat. 35° 59' 48" N., Long. 120° 18' 30" E.

(4) Must advise ETA Chalientao 24 hours before ship's arrival.

(5) When abeam Chalientao on ship's entry, should cable again immediately time abeam Chalientao and accurate time arriving Pilot Station and awaiting Authorities instructions attentively.

(6) Proceeding on above mentioned route following stipulations should be observed:

(a) Ship's national flag and code flags should be flown in daytime.

(b) Dumping rubbish and pumping out oil and oily substance are prohibited.

(c) If by some reasons the vessel needs to anchor, Master should report to Harbour Authorities first for permission.

(7) Within harbour limit the prohibited articles should not be used. In case the use of radar is required for navigation, Master should report to Harbour Authorities beforehand.

(8) Above mentioned Regulations should be strictly complied with. Otherwise the vessel is held responsible for all the consequences arising from the violation of the above.

(9) Qingdao Coastal Radio Station:
Call sign: XST
Calling frequency: 500 kHz
Working frequency: 435 kHz
Answering frequency: 8546 kHz
Listening frequency: 8364 kHz
Working day and night.

Guide to Foreign Vessels Calling at Lianyungang (Lienyunkang):

(1) Foreign vessels must anchor at Pilot Station to wait for Pilot.
Pilot anchorages:
(a) For vessels under 5,000 d.w.t.
Lat. 34° 45' 20" N., Long., 119° 31' 36" E. (about 3,000 m. East of Tunglientao Lighthouse).
(b) For vessels over 5,000 d.w.t.
Lat. 34° 46' 54" N., Long. 119° 34' 45" E. (about 4.5 miles off Tunglientao Lighthouse).

(2) Foreign vessels calling this port shall advise the Agents (Penavico Lianyungang) of her ETA via the Shanghai Coastal Radio Station.

Guide to Foreign Vessels Calling at Zhanjiang:

(1) Pilot station: North Anchorage of Nau Chow Island.
Lat. 20° 58' 21" N., Long. 110° 36' 42" E.

(2) Zhanjiang Coastal Radio Station:
Call Sign: XSJ
Calling frequency: 500 kHz
Working frequency: 462 kHz
Answering frequency: 8614 kHz
Listening frequency: 8364 kHz
Working day and night.

Guide to Foreign Vessels Calling at Basuo (Pasuo):

(1) Basuo Coastal Radio Station:
(a) Call Sign: XSH
(b) Working frequency: 452 kHz 0000 – 2400 (local time)
4278 kHz 1800 – 0900 (local time)
8634 kHz 0900 – 1800 (local time)
(c) Listening frequency: 500 kHz 0000 – 2400 (local time)
4182 kHz 1800 – 0900 (local time)
8364 kHz 0900 – 1800 (local time)
(d) Traffic list at 20 minutes pass every odd hour.

(2) Pilot station:
Lat. 19° 07' 09" N., Long. 108° 36' 02" E.
Bearing upon Telanchau 175° (T) distance 1 mile.

(3) Signal station:
The signal station is on top of Telanchau Hill (Lat. 19° 06' N., Long. 108° 37' E.) with light beacon of white light Gp. Fl. (2) 6 sec. 54 m. 12 M. at night.

(4) Radio report before ship's arrival:
Masters are requested to advise "Penavico Basuo" of the following particulars. 48 hours before ship's arrival or right after departure from last port:
(a) 48 and 16 hours ETA.
(b) Route taken (via Hainan Straits or Yulinkong).
(c) Cargo to be loaded in each hold and/or tweendeck.
(d) The ship's length overall (first call only).
(e) Ship's breadth (first call only).
(f) T.P.I. (laden) (first call only).
Remarks: All derricks up and beams off before arrival if and when weather permits.

Guide to Foreign Vessels Calling at Wenzhou (Wenchow):

(1) When arriving at or departing from the Port of Wenzhou, foreign vessels should pass through Whang Dan Sha Channel to enter or leave the Quarantine and Pilot Anchorages.

Before reaching Whang Dan Sha Channel, the vessels should navigate along the water areas 27° 46' N. – 27° 54' N. between Fu Tou You Light Beacon and Dong Yu, Dong Tou, Heng Zhi Shan Light Stations, but keep off the area within 27° 55' N. – 28° 05' N. and 121° 35' E. – 121° 55' E. a suspected minefield.

The vessels should not be allowed to enter into the water areas East of the joint line of Dong Yu and Heng Zhi Shan Light Stations, and also the water areas West of Fu Tou You Light Beacon and Dong Tou Light Station for navigation or anchorage.

(2) Quarantine Anchorage is in the water area with the point Lat. 28° 01' 10" N., Long. 121° 05' 20" E. as its centre and 0.6 nautical miles in length as its radius.

(3) The above Regulations should be effective as from 0000 hrs. 1st January, 1972, and observed by foreign vessels accordingly.

(4) Aids to navigation available for fixing ships position.
(a) Fu Tou You Light Beacon:
Lat. 27° 50' 08.7" N., Long. 121° 14' 48.8" E.
White light Gp. Fl. 6 sec. 99 m. 16 M. (U).
Fog signal sounded on foggy day.
(b) Dong You Light Station:
Lat. 27° 55' 56.8" N., Long. 121° 13' 24" E.
White light Gp. Fl. (3) 10 sec. 39 m. 9 M. (U).
(c) Dong Tou Light Station:
Lat. 27° 57' 43.5" N., Long. 121° 08' 46.7" E.
White light Gp. Fl. (2) 6 sec. 21 m. 7 M. (U).
(d) Heng Zhi Shan Light Station:
Lat. 28° 01' 03" N., Long. 121° 08' 34" E.
White light Gp. Fl. (3) 10 sec. 58 m. 7 M. (U).
(e) Quarantine Light Buoy:
Lat. 28° 01' 10" N., Long. 121° 05' 20" E.
Orange and yellow can buoy; orange and yellow light Gp. Fl. (2) 6 sec.
(f) Yuan Yi Shan and Lang Dang Light Stations should be suspended to navigate by the foreign vessels as from 0000 hrs. 1st January, 1972.

Other points for attention:

When it is necessary for the foreign vessels to call at Fuzhou, Xiamen, Shantou and Beihai, it is requested to contact Messrs. Penavico at relative port direct 48 hours before vessel's arrival at the port in order to know the position of Pilot Station and quarantine anchorage as well as directions to be observed for navigation.

Regulations Governing Supervision and Control of Foreign vessels by the People's Republic of China (ENGLISH TRANSLATION)
Dated: 1979

GENERAL PROVISIONS

Article 1

These Regulations have been formulated with a view to safeguarding the sovereignty of the People's Republic of China, to maintaining traffic order in port areas and coastal waters, to ensuring safety of navigation and to preventing pollution of waters.

Article 2

These Regulations as well as all relevant laws, statutes and rules issued by the Government of the People's Republic of China shall be complied with by all foreign vessels (hereinafter referred to as "vessels") navigating in port areas and coastal waters of the People's Republic of China. Vessels shall be subject to inspections by the Harbour Superintendency Administration set up in the port by the Government of the People's Republic of China where the latter deems such inspections necessary.

The term "coastal waters" mentioned in these Regulations means inland waters and territorial sea of the People's Republic of China as well as water areas officially defined as coming under the jurisdiction thereof.

Part 1 ENTRY, DEPARTURE AND NAVIGATION

Article 3

The Master or owner of a vessel shall, a week prior to its expected arrival at the port, submit the required forms to the Harbour Superintendency Administration through the vessel's port Agent for completion of entry formalities, and shall report, 24 hours in advance of her arrival (or on her departure from the last port of call if the voyage takes less than 24 hours), the vessel's ETA, fore and aft drafts on arrival to the Harbour Superintendency Administration through the port Agent. Should there be any change in the ETA, same shall be reported in time.

A report shall be submitted in advance to the Harbour Superintendency Administration in case of special circumstances, such as the vessel being in distress, the engines broken down or her crew or passengers suffering from acute disease, which necessitate the vessel to make an emergency entry into or to return to the port during the voyage.

Article 4

No vessel shall enter or leave the port, or navigate or shift berths therein without a Pilot being appointed by the Harbour Superintendency Administration. Matters regarding pilotage shall be dealt with according to the Regulations with respect to Sea-port Pilotage issued by the Ministry of Communications of the People's Republic of China.

Article 5

Upon arrival at the port, vessels shall immediately submit the Entry Report and other relevant forms for checking; besides, vessels shall submit ship's papers and relevant documents for examination and be subject to inspections. Prior to leaving, vessels shall submit the Departure Report and other relevant forms for clearance examination and may only leave the port after port clearance has been obtained.

Article 6

Upon arrival at the port, arms and ammunition on board are to be sealed up by the Harbour Superintendency Administration. Radio-telegraph transmitter, radio-telephone transmitter, signal rockets, flare signals and signal guns shall only be used in case of emergency, and a report shall be made to the Harbour Superintendency Administration immediately afterwards.

Article 7

Shooting, swimming, fishing, setting off of firecrackers or fireworks and other actions calculated to endanger the order and security of the port shall be prohibited.

Article 8

The Harbour Superintendency Administration is fully authorised to detain the vessel concerned, or to order the vessel to stop sailing, to change route or to return to the port under any of the following circumstances:
(a) unseaworthiness;
(b) violation of laws or regulations of the People's Republic of China;
(c) involvement in marine accident;
(d) non-payment of expenses to which the vessel is liable or failure to produce security required; or
(e) other cases prohibiting the vessel from sailing.

Article 9

Vessels navigating in Chinese port areas and coastal waters shall not be engaged in activities endangering the national safety, rights and interests of the People's Republic of China and shall comply with regulations governing straits, waterways, routes and areas closed to navigation.

Article 10

Vessels navigating within the port areas shall not proceed at a speed liable to endanger the safety of other vessels and port installations.

Article 11

Boats (rafts) attached to vessels shall not be manoeuvred within port areas except for life-saving purposes.

Article 12

No vessel shall have its boats, derricks and gangways, etc., rigged outboard while navigating or shifting berths within port areas.

Article 13

Vessels requiring to enter any of the Chinese ports open to foreign trade for shelter or temporary stay shall apply to the Harbour Superintendency Administration for permission. Such application shall state: name of the vessel, call-sign, vessel's nationality, name of the shipping company, port of sailing, port of destination , vessel's position, speed, drafts, colour of hull and colour and mark of funnel. Such vessels shall take shelter at places designated.

Vessels requiring to take shelter or to lie at anchor temporarily at places other than any of those Chinese ports open to foreign trade shall, in addition to the above formalities observe the following regulations:

(a) reporting promptly to the nearest Harbour Superintendency Administration the time and position of anchoring and the time of departure;
(b) fulfilling the requirements of local authorities concerned and submitting to their inspections, inquiries and instructions; and
(c) no one to be allowed ashore and no cargo loaded or discharged without permission of local authorities concerned.

Part 2 BERTHING

Article 14

While berthing in port, vessels shall have on board a sufficient number of men to ensure safe manoeuvring, and, in case of emergency such as typhoon warning, etc., all hands shall return immediately aboard to take necessary precautions and urgent measures.

Article 15

Gangways for access of crew members, passengers and other persons shall be properly secured and fitted with railings or manropes. Rope ladders shall be safe and strong. Sufficient illumination shall be available at night.

Article 16

Vessels requiring to turn propellers shall pay close attention to the surroundings at the stern, and shall only do so under the condition that the safety of other vessels and harbour installations has been ensured.

Article 17

While berthing in port, all exhaust valves and discharge openings of the vessel which may give trouble to other vessels, harbour craft, the wharf or the access of persons shall be properly covered.

Article 18

No light of any vessel shall be exhibited in such a manner as to impair the safe navigation of other vessels; strong lights directed at the fairway must be properly screened.

Article 19

All vessels should be in safe and good working condition for cargo operation as required. All cargo handling equipment should be maintained in good working order and certificate of fitness should be made available.

Article 20

Vessels shall apply in advance for and obtain permission from the Harbour Superintendency Administration before carrying out the following operations:

(a) overhauling of any boiler, main-engine, windlass, steering gear or radio-station;
(b) trial trip of engine-test;
(c) lowering boat (raft) for life-saving drill;
(d) welding (except for repairing in shipyard) or working with naked light on deck; or
(e) decorating with colourful lights.

Article 21

Vessels under fumigation shall take strict safety measures and exhibit appropriate signals prescribed by the Harbour Superintendency Administration.

Article 22

In order to ensure the safety of the port and vessels, when ordered to shift berth or to sail ahead of or behind the schedule, vessels shall observe such orders as given by the Harbour Superintendency Administration.

Part 3 SIGNALS AND COMMUNICATIONS

Article 23

Vessels navigating or berthing in Chinese port areas or coastal waters shall by day hoist the national flag of the country of registry. On entering or leaving port or shifting berths, vessels shall in addition display signal-letters and relevant signals prescribed by the Harbour Superintendency Administration.

Article 24

When entering or leaving port or at anchor, vessels shall pay close attention to the call and signals of the port signal-station. When visual signals are used, the Regulations with respect to Coastal Port Signals issued by the Government of the People's Republic of China shall be complied with. Where signals are not specified by Chinese coastal ports, the International Code of Signals shall be applicable.

Article 25

Vessels shall not make sound signals at will within the port except when necessitated by safety of navigation. Vessels requiring to test whistles shall make an advance report to the Harbour Superintendency Administration.

Article 26

Vessels making use of their VHF radio-telephone in port shall comply with the Provisional Regulations governing the Use of VHF Radio-telephone by Foreign Vessels issued by the Ministry of Communications of the People's Republic of China.

Part 4 DANGEROUS CARGOES

Article 27

Vessels carrying or handling dangerous cargoes shall exhibit the prescribed signals, comply with the regulations relating to the carriage of dangerous cargoes and take all necessary safety measures. Cargoes of contradictory nature, in particular, must be separately stowed. It is strictly forbidden to stow explosives with ignitable materials or inflammable cargoes in the same hold.

Article 28

Vessels carrying Grade 1 highly hazardous cargoes shall, 3 days prior to the ETA, apply to the Harbour Superintendency Administration through their port Agent for endorsement, with their descriptive names, properties, packing, quantity, place of stowage stated in detail and a booklet of Description of Dangerous Materials attached, and shall not enter the port, discharge the cargoes or make transit unless permission has been obtained. Such cargoes being: explosives, highly poisonous articles, radio-active substances, compressed gases, liquefied gases, oxidising agents, substances liable to spontaneous combustion, substances which, in contact with water, emit inflammable gases, inflammable liquids, inflammable solids, acidic corrosives, etc.

Vessels intending to carry the above-mentioned hazardous cargoes for export shall, 3 days prior to the loading thereof, apply for endorsement and shall not load until permission has been obtained.

Article 29

Vessels applying for Certificate of Safety Stowage of Export Dangerous Cargoes shall, 3 days prior to loading, submit a written application to the Harbour Superintendency Administration, stating, inter alia: descriptive names, properties, packing, quantity, place of stowage (accompanied by stowage plan), intermediate ports, port of destination, and shall load at the berths designated by the Harbour Superintendency Administration.

Part 5 FAIRWAY PROTECTION

Article 30

Vessels under way shall comply with the Rules of Navigation and maintain traffic order. In case of accidents involving the risk of sinking, a report shall immediately be made to the Harbour Superintendency Administration and all effective measures shall be taken to steer clear of the fairway to avoid impeding the traffic and endangering other vessels. If the vessel is sunk, a temporary signal shall promptly be marked by the parties involved at the place of the wreck.

Article 31

Salvage operations on shipwrecks or other objects in port areas or coastal waters shall be carried out in accordance with the Regulations Governing the Salvage of Shipwrecks or Sunken Objects issued by the Government of the People's Republic of China. The Harbour Superintendency Administration may, as it thinks fit, notify the owners thereof to carry out salvage and clear the fairway within a specified time, or to arrange an immediate salvage to refloat or demolish the sunken vessel or object and to clear the fairway, with all responsibilities and expenses incurred borne by the owners concerned.

Article 32

Where any sunken or floating object has been found by any vessel, a report thereon shall be made and the object salvaged handed over to the Harbour Superintendency Administration, whereupon, a reward may be given by the latter as appropriate.

Article 33

Where any vessel wishes to dispose of any refuse such as garbage in port, it shall exhibit signals prescribed by the Harbour Superintendency Administration to request ash boats (cars).

Article 34

Fairway installations and aids to navigation shall be well cared for. Vessels causing damages thereto or to harbour constructions or other facilities shall report immediately to the Harbour Superintendency Administration and shall be held responsible for the restoration made or the expenses incurred.

Part 6 PREVENTION OF POLLUTION

Article 35

No vessel shall discharge oils, oily mixtures or other harmful pollutants or refuse within port areas and coastal waters of the People's Republic of China.

Article 36

If any ballast water, tank washings or bilge water is to be discharged from any vessel, an application shall be made to the Harbour Superintendency Administration for approval. Where a vessel has arrived from a plague-infested port, necessary sanitary treatment should been given by the Quarantine Authorities. Dirty water and hold washings from holds where dangerous cargoes or harmful pollutants have been stowed shall only be discharged at the designated place after their having been tested by and to the satisfaction of the sanitation departments concerned.

Article 37

Oil tankers and vessels with oil as fuel shall carry the Oil Record Book on board and make appropriate entries as required.

Article 38

Where a pollution has occurred within the port area or coastal waters, the vessel at fault shall have all relative particulars entered in the Oil Record Book and the Deck Log, and shall have the matter immediately reported to the Harbour Superintendency Administration. Meanwhile, all effective measures shall be taken to prevent the oil from spreading. Where any chemicals should be applied, an application together with a description of their compositions and properties shall be sent to the Harbour Superintendency Administration for approval.

Article 39

Matters not provided for in this part shall be dealt with in accordance with the regulations relating to the prevention of pollution of marine environment issued by the Government of the People's Republic of China.

Part 7 FIRE FIGHTING AND SALVAGE

Article 40

Smoking or naked flames in the hold or elsewhere liable to cause fire hazard to the vessels is strictly prohibited.

Article 41

Vessels bunkering oil or oil/tankers handling cargo oil shall take strict fire prevention measures for safety.

Article 42

While welding in port, vessels shall clean up the surrounding area beforehand, take strict precautionary measures, be provided with fire-fighting apparatus and examine the work site before and after the operation. No welding can be done inside or near oil compartments, unless and until all the oil has been emptied, oil residues cleared out, the compartments sufficiently ventilated, the inflammable gases expelled, and a certificate of fitness obtained.

Article 43

Should any vessel be involved in a fire hazard or marine casualties, an immediate report shall be made to the Harbour Superintendency Administration. Such report must contain ship's position, tonnage, drafts, cargo on board, damages suffered and assistance required.

Article 44

Where necessary, the Harbour Superintendency Administration may order and direct any vessel in port or in coastal waters to rescue the vessel in distress. The vessel so ordered and directed is obliged to do its utmost to render every possible assistance as long as its own safety will not be endangered.

Article 45

As soon as the officers from the Harbour Superintendency Administration or the salvage departments concerned have arrived, the Master of the vessel in distress shall report the accident occurred and measures taken so far, provide all information and facilities required and make suggestions with regard to the salvage as appropriate. All decisions taken by the Harbour Superintendency Administration for maintaining safety and order shall be complied with by all parties concerned.

Part 8 MARINE ACCIDENTS

Article 46

Should any vessel be involved in marine accident, the Master shall give the Harbour Superintendency Administration a summarised report by telegram or radio-telephone soonest possible. In case the accident has occurred outside of port areas, the Master shall, within 48 hours of the vessel's arrival at the first port of call, submit a marine accident report to the Harbour Superintendency Administration. Such report shall be submitted within 24 hours of the accident if the same has happened in port.

Article 47

Should any vessel be involved in marine accident causing death of or injury to persons or damages to properties in port areas or coastal waters of the People's Republic of China, the Master of the vessel at fault shall render every possible assistance to the ship and persons in distress, make timely report to the Harbour Superintendency Administration and be prepared for investigation and settlement. Should the party at fault refrain from rendering any assistance in spite of the imminent danger or flee into hiding, severe punishment will be imposed.

Article 48

Should death happen to any person on board, an immediate report thereof shall be sent to the Harbour Superintendency Administration. Where any damage or death has caused to the port or its persons through the fault of the ship, or vice versa, the spot should be kept untouched and timely reports should be given to the Harbour Superintendency Administration by both parties. In case of dispute, either party may resort to the Harbour Superintendency Administration for investigation and settlement. Matters involving penal proceedings shall be dealt with by judicial organs of the People's Republic of China.

Article 49

Matters not provided for in this part shall be dealt with in accordance with the Regulations Governing Investigation and Settlement of Marine Accidents promulgated by the Ministry of Communications of the People's Republic of China.

Part 9 PENALTIES FOR VIOLATION OF REGULATIONS

Article 50

Vessels violating these Regulations and all relevant laws, statutes and rules issued by the Government of the People's Republic of China shall, according to the seriousness of the case, be warned or fined by the Harbour Superintendency Administration. All offences of vicious or serious nature shall be handed over to the judicial organs.

Article 51

Any offender not yielding to the conclusions made by the Harbour Superintendency Administration may, within 15 days of the receipt thereof, appeal to the Bureau of Harbour Superintendency of the People's Republic of China. The above said conclusions, however, shall remain valid before its being modified.

Part 10 SUPPLEMENTARY PROVISIONS

Article 52

Matters concerning prevention of collisions not provided for in these Regulations and relevant rules and regulations issued by the Government of the People's Republic of China shall be dealt with in accordance with the International Regulations for Preventing Collisions at Sea accepted by the Government of the People's Republic of China.

Article 53

These Regulations shall become effective upon the approval by the State Council of the People's Republic of China. The Regulations Governing Entry and Departure of Foreign Vessels Into and From Ports of the People's Republic of China promulgated by the Ministry of Communications of the People's Republic of China on the 12th March, 1957 shall at the same time repealed.

ANQING: 30.30 N. 117.02 E.

PILOTAGE: Pilot available day and night.
ANCHORAGE: There is a general cargo anchorage and a tanker anchorage for vessels up to 10,000 d.w.t. Depth of water 6.0 m. – 10.0 m. Bottom is sand and mud.
RESTRICTIONS: Vessels may enter and sail after sunset.
MAX. SIZE: *Draft Limitation in Channel:*
Wusong to Anqing: 4.5 m.
Anqing to Wuhan: 4.0 m.
TUGS: 1×300 h.p., 2×400 h.p., 1×600 h.p. and 1×800 h.p.

BERTHING:

Working District	*Berth No.*	*Length (m.)*	*Depth (m.)*	*Cargo Handled*
First	Xiao Nan Men Berth	50	2.0 – 5.0	General cargo.
	Pao Yingshan Berth	40	6.0	Sand, ore.
Second	6	40	3.0	Passenger ferry.
	7	65	3.2	Passenger.
	8	90	8.0	Passenger.
	9	76	8.0	Passenger.
	11	67	6.5	General cargo.
	13	36	4.8	Heavy cargo.
Third	14	36	4.0	Coal.
	17	36	4.0	Coal.
	18	50	4.0	Ore.
	20	65	4.0	Sand, ore.
	15 16	150	4.0 – 10.0	General cargo, heavy cargo.
Anqing Petroleum and Chemical Zone	2	66	6.0	Crude oil.
	3	90	6.0 – 10.0	Crude oil.
	4	66	6.0	Crude oil.
	5	90	6.0 – 10.0	Petroleum.
	6	66	7.0	Petroleum.
	7	65	6.0	Petroleum.

CRANES: 1×15 tons floating crane.
STEVEDORES: *Working hours:*

Weekday:	0630 – 1530. 1630 – 0030
Sunday:	0630 – 1600
Holidays:	0630 – 1530 1600 – 0030.

FRESH WATER: Not available.
FUEL: Not available.
AUTHORITY: Anqing Port Authority, 7 Yan Jiang R2, Central, Anqing, China 246030. *Tel:* 514810-7001.

BASUO: 19.06 N. 108.37 E. (See Plan)

PILOTAGE: Compulsory. Pilotage is undertaken day and night. Pilot boards in the Quarantine Anchorage.
RESTRICTIONS: Entry and sailing possible after sunset.
MAX. SIZE: Max. draft in channel and in berths is 9.0 m.
Range of tide: 0.03 m. – 3.28 m.
VHF: Call sign XSH. Station on Channel 16 throughout 24 hours.
TUGS: 1×1,960 h.p., 1×1,670 h.p and 1×980 h.p.
BERTHING:

District	*Berth No.*	*Length (m.)*	*Max. LOA (m.)*	*Max. Draft (m.)*	*Remarks*
No. 1	1 & 2	368	371	9.0	Ore
No. 2	3 & 4	320	360	9.0	General cargo

Warehouse and Open Store Space:

Warehouse	10,015 sq.m.
Open store space	60,000 sq.m.

Main Import and Export Cargo:
Imports: Fertiliser, cement, rice, equipment and coal.
Exports: Salt, cre, quartz, sand and local products.
STEVEDORES:
Working hours: 0730 – 1130 hrs. and 1430 – 1730 hrs.(Sundays and holidays included).
FRESH WATER: Available.
FUEL: Not available.
GENERAL: *Stores:* Provisions available from Basuo Ocean Shipping Supply Corporation.
Floating Cranes: None available.

BEI HAI: 21.29 N. 109.05 E. (See Plan)

LOCATION: The port is located at Beihai City in the Guangxi Zhuang Autonomous Region, known as the foot of Beihai Peninsula, and lies N.E. of the Beibu Bay of the South Sea. The port is 124 miles from Haikou City (Hainan Province), 255 miles from Zhanjiang City (Guangdong), 425 miles from Hong Kong, 157 miles from Haiphong (Vietnam) and 1,295 miles from Singapore.
PORT LIMITS: The North limit extends East from Lat. 21° 31' 00" N. to Long. 109° 08' 55" E.; the South limit is Lat. 21° 21' 20.8" N.; the East limit extends North from Long. 109° 05' 00" E. to the shore line; the West limit is Long. 108° 59' 36" E. The above mentioned limits comprise the port limits. Dockage charges (Mooring, unmooring, berthing, etc.) commence when vessel is made fast to wharf, and are on a 24 hour basis.
DOCUMENTS: Basic documents for entry:
5 copies General Declaration.
4 copies Cargo Declaration (enclosed with 2 copies of Cargo Manifest).

3 copies Stores List.
2 copies Crew's Effects Declaration.
4 copies Crew List.
4 copies Passenger List.
1 copy Maritime Declaration of Health.
1 copy Ship's Particulars.
1 copy Clearance from Last Port.
Valid original vessel documents.

All vessels shall, upon arrival, report via vessel's Agent to Port Director all cargo to be discharged/loaded. Such report shall be in form of copies of Ship's Manifest and Stowage Plan, and shall show number of units, commodity, weight, destination, consignee, and all other information which Port of Beihai deems necessary for compilation of commercial statistics, for reserving necessary warehouse or wharf space, or other purposes.

PILOTAGE: Compulsory. Provided by Pilot's Department of Beihai Port Authority, 75 Haijiao Road, Beihai, Guangxi, China 536000. Tel: (779) 3034011-435/249. Fax: (779) 3035423. Telex: 48748. Position of Pilot Station: Lat. 21° 21' 20.8" N., Long. 109° 00' 06.8" E.

Pilots communicate with vessel on VHF Channel 16. If no answer, contact Beihai Radio on VHF Channel 14 to call Pilots on land line. Notice of ETA and request for Pilot must be made to the Pilots at least 24 hours in advance.

APPROACHES: *Channel:* Both of the new and old districts of Beihai Ports are to the South and face Lianzhou Bay. Entrance to the harbour is by a dog-leg channel running due North and then turning N.E. to the new and old terminals.

The first part of the channel is 7 miles long, from Buoy No. 0 of the Pilot Station, with a depth of 12.0 m. to Buoy No. 6.

The second part of the channel is 2 miles long, running N.E. from Buoy No. 6 to Buoy No. 9.

The third part of the channel is 1 mile long.

The channel is in total 17.28 km. long, with depths 8.0 m. – 12.9 m. and width 100 m. – 130 m.

There are 18 navigation buoys.

ANCHORAGE: The port has two designated anchorages, the Pilot (Inspection) Anchorage and the Lightening Anchorage.

Pilot (Inspection) Anchorage: The area with centre Lat. 21° 21' 20.8" N., Long. 109° 00' 06.8" E. with a radius of 2,000 m. and depths 12.3 m. – 16.0 m.

Lightening Anchorage: Port has 3 lightening anchorages:

	Latitude	Longitude
No. 1:	21° 29' 14" N.	109° 04' 14" E.
(Depth 9.0 m.)	21° 29' 32" N.	109° 04' 14" E.
	21° 29' 20" N.	109° 04' 43" E.
	21° 29' 39" N.	109° 04' 43" E.
No. 2:	21° 29' 20" N.	109° 04' 43" E.
(Depth 7.0 m.)	21° 29' 39" N.	109° 04' 43" E.
	21° 29' 32" N.	109° 05' 16" E.
	21° 29' 49" N.	109° 05' 16" E.
No. 3:	21° 29' 32" N.	109° 05' 16" E.
(Depth 5.0 m.)	21° 29' 43" N.	109° 05' 16" E.
	21° 29' 43" N.	109° 05' 49" E.
	21° 29' 59" N.	109° 05' 49" E.

MAX. SIZE: Vessels up to 12.0 m. draft must be lightened in the Inspection Anchorage.

HEALTH: Before entering Beihai Port, all overseas vessels (foreign and domestic flag) must obtain Free Pratique from Beihai Quarantine Office via an inspection at the Inspection Anchorage or by telex.

RADIO: Port has radio station, VHF and ground satellite station. Vessels calling at Beihai Port may communicate with port radio station as per international methods, see table below.

When shifting or anchoring in the port, VHF can be used to contact the Harbour Master and Agents.

Telex and cables are also used to communicate with the Agent or receiver.

Name of Beihai Port's ground satellite station: The National Satellite Special Communication Net Beihai Terminal. Working channel: 3700-4200 MHz (receiving), 5,925-6,425 MHz (transmitting).

Beihai Radio: Position Lat. 21° 29' 39" N., Long. 109° 04' 48" E.

Call Sign	*Transmitting kHz*	*Receiving kHz*	*Type of Transmission*	*Working Hours*
"XSK"	500,486	500	A1A	24
	4,244		A1A	1800-0900
	8,530		A1A	0900-1800
	2,730	2,182	A3E	

VHF: Beihai Radio on Channels 14 and 16 throughout 24 hours.

TUGS: 5 tugs available to assist with berthing. Total power 3,984 kW and maximum power 1,706 kW. Service is provided by Port Shipping Co., arranged by Port General Dispatching Office and paid as per the regulation/tariff of the Ministry of Communications. Tel: (779) 3032129 and 3034011-343 (incl. nights and holidays).

BERTHING:

Port Area	*Berth*	*Length (m.)*	*Depth (m.)*	*Max. Size (d.w.t.)*	*Use*	*Shore Cranes*
1st	1	60	4.5	1,000	General Cargo	1×5 tons
	2	92	3.8	700	General Cargo	
	3	100	3.8	700	General Cargo	2×5 tons
	4	88	2.0		Tyre Cranes	10 tons, 20 tons, 25 tons, 50 tons.
	5	88	2.0	200	Bulk & General	
2nd	1	170	9.5	15,000	General Cargo	1×5, 1×27.5
	2	170	9.5	14,000	Bulk & General	1×10, 1×27.5
	3	200	10.5	25,000	General Cargo	2×10 tons
	4	200	12.0	30,000	Bulk Cargo	1×10, 1×16

The first port area has 5,124 sq.m. of warehouse and 18,000 sq.m. of open storage area.

The 2nd port area has 18,000 sq.m. of warehouse. Open storage areas consist of 97,531 sq.m.

Both of the warehouses in 1st and 2nd port areas are dry bulk storage.

STEVEDORES: *Working Hours:* Governmental working shifts: 0000 hrs. – 0800 hrs., 0800 hrs. – 1600 hrs., 1600 hrs. – 0000 hrs. Mondays to Fridays, holidays excepted.

MEDICAL: Port has a hospital. Full hospital facilities available in the city without prior notice. Dentists available during normal working hours.

FRESH WATER: Fresh water delivered to vessels at wharves or docks by pipeline. Water barge is available for supplying water at the anchorage. Cost U.S.$1.00/ton.

FUEL: Private and Governmental firms with trucks or barges available, by prior arrangement through vessel's Agent.

FIRE PRECAUTIONS: Smoking is strictly prohibited in transit sheds, warehouses, or on apron of wharves and on vessel, handling dangerous, hazardous or inflammable cargo. Smoking is also prohibited in any areas where gasoline or like materials are being handled or equipment serviced. The receiving, handling or storage of explosives and hazardous or highly inflammable commodities or materials shall be subject to relevant Chinese laws, rules and regulations. Insurance is requested for party concerned.

DRY DOCKS/REPAIRS: Port has one mechanical repair factory for mobile and electrical repairs. Others such as radio, radar and navigation repairs available.

SURVEYORS: Marine surveyors representing China Classification Societies are Zhanjiang Bureau, Beihai Office or Ship Survey Department of Beihai Harbour Master. Services are operated at the port or nearby ports. Tel: (779) 3037049. Fax: (779) 3033990.

GANGWAY/DECK WATCHMEN: No requirement, except for special vessel conditions or security reasons as determined by Port Authority.

OPENING/CLOSING HATCHES: Normally by ship's crew.

CUSTOMS ALLOWANCES: Customs Regulations of PRC.

REPATRIATION: Facilities exist for changes of crews and repatriation. Scheduled aircraft service from Beihai City daily to most big cities of the country. International flights are available. Airport is 20 km. from port.

POLICE/AMBULANCE/FIRE: Police Tel: 3032441 or 112; Fire Department Tel: 119; Ambulance Tel: 2022245; Hospital Tel: 3034011-403, 3032125 or via Agent.

CARGO GEAR: 16 cranes, 8 straddle carriers, 33 forklifts, 8 sets of automatic bulk bagging systems, mobile crane with lifting capacity of 50 tons.

HOLIDAYS: New Year's Day; Labour Day; Women's Day; Youth's Day; National Day; Lunar New Year. When any one of these falls on a Sunday, the next Monday is observed. When any one of these falls on a Saturday, the preceding Friday is observed, or subject to Governmental notice.

BANKS: Beihai banks all have foreign departments. The major one is Bank of China, Beihai Branch, Beihai Avenue. Tel: 3051013.

GARBAGE DISPOSAL: Beihai Harbour Master provides compulsory service. Tel: 3033492.

SEAMEN'S CLUBS: Available.

CURRENCY: Ren Min Bi (RMB).

GENERAL: The port is directly connected with important cities in the S.W. such as Kunming, Guizhou, Chengdu, Chongqing, etc.

DEVELOPMENTS: A series of berths are under preparation to begin construction. Container dock is also under design. Beihai Port will develop into a modernised port.

SHIPMASTER'S REPORT: January 1994.

Cargo: Discharged gas oil into barges.

Approaches: B.A. Chart No. 3892 and 41.

When approaching Beihai, the water depth has to be watched very closely. Also the Admiralty Tide Table has to be consulted and a tidal curve has to be made for reference. The position as given by the Agent for lightering was too shallow as it gives a depth of 9.6 m. and less, based on Chart Datum. The vessel's draft was 10.6 m., and when we arrived at low water, there was a rise of 0.8 m., so the depth was still insufficient. When we had a keel clearance of 2.8 m., we anchored in position Lat. 21° 21' N., Long. 109° 00' E. Position given by the Agent was 21° 23' 25" N., 109° 02' 25" E. The keel clearance of 2.8 m. was also based on a trim of 3.0 m. during discharge. During the swinging of the vessel, manual soundings were taken and compared with the echo sounder readings, which proved to be the same. During discharge, the minimum depth encountered was 0.8 m.

Holding ground good for anchoring.

Agency: The Agent and Customs, etc., came out the next day around noon. The visibility was quite poor in what seemed to be normal during this period of the year. The boat with the boarding party had no radar and was guided from Beihai to the vessel's anchor position by our ship's radar and by the Duty Officer's instructions. Customs, Immigration and Quarantine Officers boarded and formalities were done very smoothly and without any difficulties.

Discharge: Discharging was done by STS by means of 2 lightening vessels of 1,000 tonnes each. After loading, lightening vessel went back for discharge and after approximately 7 hours was back again for another lightening. Fendering was quite poor, only old car tyres were used. From our side, we had some old large car tyres for fendering. Connecting was done by stevedores from the shore who stayed on board during the lightening operation. No difficulties were encountered during the operation.

Discharging was completed on a Sunday evening. During the weekend, all official offices were closed and a Clearance could not be obtained by the Agent. On Monday morning, the Clearance was obtained at 0900 hrs. and put on board at 1200 hrs. at the anchorage.

The only person who spoke English was the Agent. All other people did not speak any English, so the communication was done by 'arm gestures'.

Communications: VHF Channel 16 for port and VHF Channel 14 for Agent.

SHIPMASTER'S REPORT: March 1994.

From departure Singapore, we were unable to make contact by telex with "Penavico Beihei". All messages were relayed by Agent in Hong Kong. They supplied me with a Fax number for Beihai, but again this number did not give us contact.

Vessel's arrival draft 11.2 m.

Several ships were already at anchor and we settled in position 21° 19' N., 109° 00' E. This gave us a minimum under-keel clearance of 5.0 m. with the expected tidal range. Holding ground was good.

Even with arrival on a Sunday, the Agent appeared 4 hours after our first VHF contact. Very little English was spoke, but all official paperwork was completed. The only point of note being that the Quarantine Officers demanded that all crew have Hepatitis injection. A compromise was reached in that the documents would be taken ashore and stamped as no shore leave would be allowed. About 10 persons boarded, and there was much passing of paperwork between the various officals.

The discharge was done by 2 coastal ships of 1,000 tonnes capacity. One of them did 5 cargoes and the other only one cargo.

The interval between trips varied, but 6 hours was the normal period.

Initially, the "Chang Da 2" tried to come alongside without any fenders at all, but we refused this. Luckily on our last visit to Singapore, we acquired a large number of old car tyres, and had made these into twin tyre fenders. Ten of these units plus 4 normal fenders were positioned by ourselves on the starboard side and the lightening then took place. The second vessel "Hua Qing" did have tyre fenders.

The surveyors arrived on the first vessel and departed on the same, leaving only a squad of 4 men for connecting and mooring operations. There was some confusion on the small vessels regarding the size and length of hose required, but with hand signals and the mooring squad supervisor, who spoke a little English, the operation was accomplished.

Loading of each small vessel took approximately 1 hour 10 minutes, using their hoses each time.

At the end of discharge, the supervisor inspected the tanks and signed the Dry Certificate, the gang then left on the last vessel.

The Agent informed us that he would arrive at the vessel approximately 4 hours after completion (daytime hours). After some 6-8 hours and after numerous attempts at VHF contact, he informed us that due to reduced visibility the boat was unable to find the vessel, and that no further attempts would be made that day, however he had secured clearance for us and all papers would be forwarded to the next port (Zhuhai) for our arrival.

Offers to guide their boat to the vessel by our radar were refused. As the weather conditions could remain with poor visibility for several days, we telephoned Owner and Agent in Hong Kong to inform them of the situation.

The Letter of Protest concerning delays was faxed to Hong Kong for retransmission to Beihai.

The vessel then departed with all parties aware of the situation, "Penavico Beihai" forwarding all outward papers and personal health papers to "Penavico Zhuhai" by the quickest method.

Communications by VHF Channels 14 and 16, but very limited.

AUTHORITY: Port of Beihai (Beihai Port Administration Bureau), 75 Haijiao Road, Beihai, Guangxi, China. *Tel:* (779) 3033481. *Contact:* Yue Zhiwei, Executive Port Director. Xu Bingzhong, Liu Xingjia, Deputy Port Directors.

BZ 34 TERMINAL: 38.07 N. 119.33 E. (See Plan)

LOCATION: The locations of the SPM and Well Head Platforms (WHP) are:

SPM:	Lat. 38° 06' 56.557" N., Long. 119° 33' 23.569" E.
2EP WHP:	Lat. 38° 07' 38.698" N., Long. 119° 33' 23.051" E.
2EW WHP:	Connected with 2EP WHP by Bridge.
4EP WHP:	Lat. 38° 05' 28.482" N., Long. 119° 32' 35.374" E.

The SPM and the three WHP are joined by submarine crude oil pipelines.

Masters of vessels are reminded that BZ 34 Terminal area is located in the People's Republic of China internal zone; moreover, they are requested to comply with any relevant laws and regulations.

BZ 34 Terminal consists of:

1. The three Well Head Platforms (WHP).
2. Fixed Tower (SPM – Single Point Mooring).
3. Floating Production and Storage Unit (FPSU) "Bohai Chang Qing Hao" is moored by one Mooring Yoke.

DOCUMENTS: *Customs and Inspection:* In accordance with normal practice, the vessel's national flag, the Chinese courtesy ensign, and following flags, must be displayed by all vessels approaching BZ 34 Terminal.

The principal signals are as follows:

1. Signal Flag "Q" in daytime : Request Quarantine.
2. Signal Light "Red over White" at night time : Request Quarantine.
3. Signal Flag "G" in daytime : Request Pilot.
4. Signal Flag "H" in daytime : Pilot on Board.
5. Signal Flag "B" in daytime : Hazardous Cargo on Board.
6. Signal Light "Red" at night-time : Hazardous Cargo on Board.
7. Vessel's Signal Letters : From before reaching the anchorage to mooring and from before unmooring to Pilot disembarking the Vessel.

The Joint Inspection Team (Representatives of Chinese Harbour Superintendency Administration, Customs, Frontier Defence Inspection Station, Quarantine Service, and Export and Import Commodity Inspection Bureau (E.I.C.I.B.) will board the vessel to grant clearance and inspect cargo.

Vaccination Certificates: Valid Yellow Fever Vaccination Certificates for all crew members and passengers, if the vessel comes from South America or Africa, shall be required by the Quarantine Service.

Furthermore, any possible medical trouble or illness on board the vessel must be indicated before the vessel's arrival, so that a representative of the Quarantine Service goes on board the vessel at mooring before any other person.

Certificates and Documents: The following documents shall be submitted for examination as soon as the Berthing Master and the Joint Inspection Team come on board the vessel:

1. Certificate of Nationality.
2. Certificate of Registry.
3. Safety Construction Certificate.
4. Safety Equipment Certificate.
5. Safety Radio/Telephone/Telegraph Certificates.
6. Cargo Gear Certificate.
7. Tonnage Certificate.
8. Navigation Certificate.
9. Passenger Certificate (if applicable).
10. International Load Line Certificate.
11. Deratting or Deratting Exemption Certificate (less than 6 months old).
12. Deck Log Book.
13. Engine Log Book.
14. Oil Record Book (machinery space operations and cargo/ballast operations).
15. Tonnage Dues Certificate.
16. Certificate of Financial Security in respect of Civil Liability for Oil Pollution Damage.

Berthing Master is allowed to reject any vessel, which is considered unseaworthy or not holding up-to-date official documents.

Declarations: The Joint Inspection Team shall require the following to be filled and delivered:

6 copies Crew List (Chinese form).
4 copies Passenger List (if any).
1 copy Cargo Manifest for import/transit cargo with a summary (ballast or cargo already on board).
1 copy List of Specified Articles (Money, gold and silver, transistors, tobacco, alcohol, cameras, tape recorders, T.V. sets, video tape recorders, motor cycles, watches, walkie-talkies, etc. (if any)).
1 copy Maritime Declaration of Health (Chinese form).
2 copies Ship's Stores List (inventory).
Clearance from the last Port of Call.
Valid Seaman's Certificate for all crew members.
1 copy Declaration of Arms and Ammunition.
2 copies Reports of Entry for Foreign Vessel (Chinese form).

Cigarettes, cigars, tobacco, matches, spirits, wine, beers, perfume, and possibly other items, have to be locked up under customs seal from time of arrival of vessel in port, until time of leaving territorial waters. Each person is allowed to bring in 2 bottles of spirits and 200 cigarettes, or the equivalent in grams of tobacco or cigars. Special allowances are made for the Master under special circumstances. The Customs Officer will seal the stores.

Documents of Loading Cargo: Crude oil shipping documents will be prepared at BZ 34 Terminal, and after the vessel has been loaded, the documents will be completed, and final clearance formalities will be carried out on board.

Protests: Any protests by the Master of the vessel concerning the quantity of cargo should be made before departure and any resulting investigation should be made before the vessel sails out.

Outward Clearance: A vessel will be considered clear to depart BZ 34 Terminal, when the crude oil shipping documents, the Release Certificate and the Port Clearance for a foreign-going ship have been delivered.

APPROACHES: *Charts and Sailing Directions:* Charts and Sailing Directions for the area are as follows:

Charts:

Japanese	383,	392,	1403,
Chinese	9303,	9304,	9701,
British Admiralty	1250,	1255,	1256,
American	94360,	94420,	94440.

Sailing Directions:

Japanese	Pub. No. 203, 412, 782.
Chinese	Pub. No. 901A, 902, 903, 904.
British Admiralty	N.P. No. 32, 79F, 203.
American	Pub. No. 157, 112
	Pilot Chart No. 55, Tide Table Vol. 4.

Approach: Approaches to BZ 34 Terminal are safe and without navigational difficulties, but in some seasons special attention is drawn to the numerous fishing boats.

Chinese Regulations for Passing Through Bohai Gulf: Should the Master of a vessel decide to pass through the Bohai Gulf, he must apply for permission in accordance with the following Regulations:

(1) Vessels passing through the Bohai Gulf: No vessel is allowed to pass through any channel, except Laotiehshan Channel, Changshan Channel and Dengchou Channel (only vessels under 200 g.r.t. are allowed to sail).

(2) With Laotiehshan Lighthouse as centre and a distance of 10 miles as radius, and North Hwangchengtao Light Beacon as centre and a distance of 7 miles as radius, are to be two prohibited areas. Vessels are only allowed to pass through middle of these areas, namely Laotiehshan Channel.

(3) All vessels, passing through the Laotiehshan Channel, must send a message to the Harbour Master Dalian at least 8 hours prior to the estimated time of passing the line joining Laotiehshan Lighthouse and North Hwangchengtao Light Beacon's two points, or after departure from the port (her passage is less than 8 hours), reporting the following details:
Name of vessel, nationality, call sign, last port of call, port of destination, speed, colour of hull and funnel, and the exact time of passing through the line joining Laotiehshan Lighthouse and North Hwangchengtao Light Beacon's two points.
In case there is any alteration of time to pass through the line owing to bad weather, such vessels should immediately report to the Harbour Master Dalian.

(4) Dalian Coastal Radio Station:
Call sign : XSZ
Calling frequency : 500 kHz
Working frequencies : 462 kHz; 8,694 kHz
Reserve frequency : 8,678 kHz.
Working day and night.

(5) Vessels passing through the Laotiehshan Channel must display navigation lights in accordance with the Regulations for Preventing Collisions at Sea.

(6) Vessels are prohibited from navigating in the water area within a radius of 10 nautical miles from the Reef Island.

(7) Navigational aids are as follows:
- (a) Laotiehshan Lighthouse: 38° 43' 37" N., 121° 08' 02" E. Gp.Fl.(2)W., ev. 30.0 sec. 25 M.
- (b) Beihuang Cheng Island navigation: 38° 23' 40" N., 120° 54' 33" E. Fl.W., ev. 3.0 sec. 15 M.
- (c) Houji Lighthouse: 38° 03' 29" N., 120° 56' 27" E. Gp.Fl.(2)W., ev. 10.0 sec. 15 M.
- (d) Beichangshan navigation: 37° 59' 32" N., 120° 41' 37" E. Fl.R., ev. 2.5 sec. 8 M.
- (e) Xiaozhushan Light: 38° 01' 17" N., 120° 52' 09" E. Fl.W., ev. 5.0 sec. 14 M.

PILOTAGE:

(1) Pilotage is compulsory for any vessel arriving at BZ 34 Terminal for mooring, and unmooring.

(2) The Pilot will board the vessel, and will act as Pilot for approaching and mooring, when she reaches the Anchoring Area and BZ 34 Terminal is available.

(3) The Pilot will advise the vessel's officers and crew on the layout of the mooring equipment to be fitted on the forecastle head.

Pilot Ladder: The vessel is required to have a clean and efficient pilot ladder, fitted with spreaders and manropes, safely and securely rigged, ready for the Pilot to immediately embark and disembark on the side of the vessel, and of sufficient length to reach the Pilot's boat.

Life Buoy: A life buoy with safety line and self-igniting light, together with a rope messenger for the Pilot's bag, shall also be available at the pilot ladder head.

Good Weather Lee: Vessels shall afford a "good weather lee", and shall reduce speed as directed by the Pilot, in order to effect the safe embarking or disembarking of the Pilot.

ANCHORAGES: A "Prohibited Fishing" and "Restricted Navigation and Anchoring" area has been defined around BZ 34 Terminal.

Anchorage Area: If vessels are obliged, or instructed, to anchor, they should do so in the anchorage area which is indicated by the following four points. Water depth is about 24 m., and sea-bed mainly consists of mud. While at anchor, they should exercise vigilance at all times, and if necessary, make contact with BZ 34 Terminal by VHF on Channel 67, or Channel 16, at any time.

(1) Lat. 38° 16' N., Long. 119° 41' E.
(2) Lat. 38° 16' N., Long. 119° 44' E.
(3) Lat. 38° 13' N., Long. 119° 41' E.
(4) Lat. 38° 13' N., Long. 119° 44' E.

This anchorage area is also available for vessels arriving at BZ 28 Terminal, adjacent to BZ 34 Terminal, at about 23 km. distance.

NAVIGATION AIDS: *Well Head Platform (WHP):* Two main white lights (visible at 10 nautical miles, morse code letter "U" every 15 seconds) are installed on opposite corners of the 2EP and 4EP WHP.

Red lights (15 candelas, quick flashing) are installed on the crane head, crane operation cage and top of gas vent line.

Single Point Mooring (SPM): The SPM is equipped with a radar reflector and a fog horn (I.A.L.A. usual audible range of 2 nautical miles) sounding the morse code letter "U" every 30 seconds.

Floating Production and Storage Unit (FPSU): The navigation and signal lights are provided according to the international regulations. When gases are burning, the flare can be seen farther than above lights. This flare is about 38 m. height above the sea level.

RESTRICTIONS: Vessels are moored and unmoored in daylight only.

Draft Requirements: Vessels arriving at BZ 34 Terminal should have the minimum following drafts:

1. The moulded draft amidships (dm.) in metres (without taking into account any ship's deformation), shall not be less than:
   $dm. = 2.0 + 0.02 \times L$
2. The drafts at the forward and after perpendiculars shall correspond to those determined by the draft amidships (dm.), as specified in the preceding Paragraph 1, in association with the trim by the stern, of not greater than 0.015 L
3. In any case the draft at the after perpendicular shall not be less than that which is necessary to obtain full immersion of the propeller(s).

NOTE: "L", as measured in metres, mean 96% of the total length on a waterline at 85% of the least moulded depth, measured from the top of the keel, or the length from the foreside of the stem to the axis of the rudder stock on that waterline, if that be greater.

MAX. SIZE: Maximum 110,000 d.w.t., minimum 15,000 d.w.t.

RADIO/VHF:

PRE-ARRIVAL REQUIREMENTS AND COMMUNICATIONS:

Communications Before Arrival: The Owner (in case of a voyage chartered vessel) or the Charterer (for a long term chartered vessel) should, 1 week prior to vessel's arrival, telex to "Penavico Tanggu", Tokyo Office and Tianjin Office of Operator JCODC and Production and Transportation – Sales Department of Partner BOC, to attend the vessel at BZ 34 Terminal, advising of the following items in addition to the way for the disbursement remittance.

1. Name and address of the Owners or Charterers, with telex and telephone numbers.
2. Name of the vessel and international call sign.
3. Vessel's nationality.
4. Particulars of the vessel (Length, Breadth, g.r.t., n.r.t., Summer draft and Deadweight tonnage).
5. Last and next ports of call.
6. Master's name.
7. Destination(s) after loading.
8. ETA BZ 34 Terminal in local time. (UTC plus 8 hours or plus 9 hours, if daylight saving time (from the second Sunday of April to the second Sunday of September), is in force).
9. Cargo requirement.
10. Speed.
11. Colour of hull and colour mark of funnel.
12. Consignee.
13. Crew List.

Entry Formalities: The Master or Owner of the vessel shall, 1 week prior to its expected arrival at BZ 34 Terminal, submit the required forms to the Harbour Superintendency Administration through "Penavico Tanggu", for completion of entry formalities. In order to proceed with such entry formalities, it is compulsory that "Penavico Tanggu" receive the information, as specified in "Communications Before Arrival", 1 week prior to vessel's arrival.

Advice of Arrival: 72 hours prior to arrival at BZ 34 Terminal, vessels should advise Tianjin Office and Tokyo Office of Operator JCODC, Production and Transportation – Sales Department of Partner BOC and "Penavico Tanggu", of their ETA by telex (See "Authority" and "Agent"). They should also confirm or amend it when they are 48 hours, 24 hours and 6 hours distant from BZ 34 Terminal.

Details of message to be sent by the Master of the Vessel: The following information shall be included in the first message to be sent by the Master of the vessel:

1. Name of vessel and international call sign.
2. Vessel's nationality.
3. Owner's name.
4. Master's name.
5. ETA and date in local time (See "Communication Before Arrival – No. 8").
6. Last and next ports of call.
7. Destination(s) after loading and consignee.
8. Cargo requirement.
9. Possible cargo on board.
10. Ballast on board on arrival in Segregated Ballast Tanks and in Cargo Tanks.
11. Deballast time: Only clean ballast (as mentioned in the Marpol International Convention), may be discharged into the sea.
12. Estimated fore and aft draft on arrival and on sailing.
13. Particulars of the vessel (See "Communcation Before Arrival – No. 4").
14. Flange size of vessel's manifold connection.
15. Maximum loading rate.
16. Number of crew on board.
17. If there is any sickness aboard or clean Bill of Health.
18. Whether BZ 34 Terminal is first or second port.

Communications with Penavico (Agent) and BZ 34 Terminal:

PENAVICO:

(1) Penavico Radio communication hours are 0800 – 1700 local time on telex.

(2) Message to and from the vessels shall be transmitted by telex (See "Agent").

BZ 34 TERMINAL:

(1) BZ 34 Terminal keeps continuous dual watch on Channel 67 and Channel 16 throughout 24 hours.

(2) Vessels equipped with VHF radio telephone should call BZ 34 Terminal on Channel 67 and/or Channel 16 in the Bohai Bay.

(3) Other channel that can be used after a first call is Channel 73.

Report to the Harbour Master Dalian: All vessels passing through the Laotiehshan Channel must send a message to the Harbour Master Dalian (See "Approaches").

Language: The working language of BZ 34 Terminal is English.

BERTHING: *Main Particulars of FPSU "Bohai Chang Qing Hao":*

LOA : 215.62 m. (707 ft. 05 in.) (L.W.L.: 210.00 m.).
Breadth : 31.00 m. (101 ft. 08 in.).
Depth : 17.60 m. (57 ft. 08 in.).

Mooring:

(1) Equipment and tools for mooring and hose connection will be brought on board the vessel by the Berthing Master.

(2) When all preparations have been completed on the vessel and BZ 34 Terminal, the Pilot will approach the FPSU.

(3) The vessel will then come close enough to the free floating pick-up rope, so that the crew of the workboat can secure the messenger rope to the hawser pick-up rope.

(4) The messenger rope is then led through the centre Panama chock to the winch.

(5) When the chafe chain is in the fairlead and the special triangle plate on board, they must be connected to a triangle plate using the special fork and shaft.

(6) The shaft must be secured with the stopper provided.

NOTE: Special triangle's size is as follows. The size of Panama chock of the vessel should be larger than that of this special triangle.

Unmooring:

(1) Lead the pick-up rope of the mooring hawser to the mooring winch.
(2) Pilot will manoeuvre the vessel ahead to slacken the mooring.
(3) Take the weight off the mooring by heaving on the pick-up rope.
(4) Pay-out the pick-up rope while the vessel moves slowly dead astern, then let go the free end.

LOADING: *Derrick:* Vessels must be equipped with a hose lifting derrick at the port side manifold with a lifting capacity of more than 10 tons – SWL.

Flange Size of Loading Hose: The hose end connection is a 12 in. "Camlock" quick release coupling, and will fit standard 12 in. ANSI 150 flanges.

BZ 34 Terminal is equipped with flanged spools to connect with manifolds different from 12 in. diameter (10 in. – 12 in., 14 in. – 12 in. and 16 in. – 12 in.).

Vessel's manifolds should terminate in ANSI 150 flanges.

Hose Connection:

(1) After the vessel is securely berthed, the Berthing Master will instruct the workboat to tow the end of the floating hose to a position underneath the vessel's hose handling derrick.
(2) The connection of the hose is the responsibility of the vessel's crew, who should endeavour to complete this task as quickly as possible.

Loading:

(1) Maximum loading rate is about 3,000 kl./hr.
(2) Care should be taken not to overload as there is no possibility of pumping back into BZ 34 Terminal.

Closing Valves against Oil Flow: Warning is given of the danger of closing valves against an incoming oil stream. This will create excessive pressures which may result in damage to the loading hoses and BZ 34 Terminal facilities. Vessels will be held liable for any damage resulting from failure to observe this precaution.

Bad Weather Conditions: When the weather condition develops worse than the below-mentioned permissible criteria at BZ 34 Terminal, the Operator may suspend work. However, the final decision on implementing the work will be made by the Production Superintendent on the FPSU.

Kind of Work	*Permissible Criteria*
Mooring	Wind speed of 15 m./sec., or Visibility of 1,000 m.
Pumping	Wind speed of 18 m./sec., or 50 ton force of tension on mooring rope to the vessel.
Unmooring in case of emergency	Wind speed of 20 m./sec., or 75 ton force of tension on mooring rope to the vessel.

CARGO: *Crude Oil:* There is only one grade of crude oil available at BZ 34 Terminal. Its density is approximately 0.8445 at 15° C. or 0.8411 at 20° C. (API gravity 36.0), pour point 27.5° C. and the minimum loading temperature 45° C.

Notice to Masters of Vessels: Vessels loading Bohai Light Crude Oil No. 2 are required to be equipped with heating coils. It is recommended as from commencement of loading of Bohai Light Crude Oil No. 2, that the vessel should endeavour to heat the oil at a temperature of 40° C. minimum, until the time the vessel discharges her cargo at the unloading port.

As this crude oil has a high pour point and significant paraffin content, Masters of vessels are recommended to keep the COW (Crude Oil Washing) equipment in a very good operational condition. They shall carry out COW operations only when sure of the efficiency of the lines and machines, and after they have taken all precautions to prevent the washing oil from solidifying in the COW piping system. Their attention is therefore drawn to difficulties they may encounter when COW operations have not been prepared properly.

BALLAST/POLLUTION: *Adequate Ballast:* Vessels are required to carry sufficient ballast for safe handling, having due regard to existing weather and sea conditions. A vessel found by the Pilot or Berthing Master to be inadequately ballasted, will be rejected.

Clean Ballast: As there are no ballast reception facilities, vessels must arrive at BZ 34 Terminal with *clean ballast*, ensuring that all pipelines, pumps and strainers have been flushed out prior to arrival (See Marpol Convention 73/78: Regs. 9, 13 and 18).

The Berthing Master will inspect vessel's ballast on boarding, and has the power to reject any vessel that he deems would cause pollution of the sea area, in which case the vessel must proceed to sea and return only when ballast is completely free of oil. The rejection of any vessel, because of dirty ballast will automatically cause its Notice of Readiness to be nullified, and the rejected vessel will lose any priority of position for loading. Ballast discharge should not be commenced without the prior permission of the Berthing Master. At no time may the oil content of ballast discharged exceed 15 p.p.m., or produce a sheen on the surface of the water.

Inspection:

(1) At night the sea area around the vessel shall be adequately lighted, as frequent inspection by the Berthing Master will be made during the discharge of ballast. Any pollution, whatsoever, will be cause for rejection. Similarly, any hull leaks causing pollution during loading will be cause for rejection.
(2) Cargo hose connection should be inspected during loading, drip-pans should be placed under the manifold, all unused cargo connections blanked off, sea-valves closed and lashed upon completion of deballasting, and all scuppers must be securely plugged.

Segregated Ballast: When a vessel is fitted with segregated ballast tanks, the Master of the vessel will not discharge the ballast as long as a sufficient cargo has not been loaded. A vessel not so equipped, should examine the possibility of safe loading and deballasting simultaneously.

Pollution: Owners and Masters of vessels are responsible to observe International Convention (Marpol 73/78) and Chinese relevant regulations concerning pollution of the sea.

Bilges: Bilges must not be discharged while at BZ 34 Terminal.

Fines and Claims: Any fines imposed by any governmental Authority for pollution shall be for the vessel's account.

In the event that the Operator has to settle any third party claims as a result of damage to property, caused by pollution attributable in any way to the vessel, the Operator will have the right to demand reimbursement by those responsible for the vessel, for all expenses incurred.

In the event of oil spillage, or pollution of the waters, all labour and equipment costs for cleaning operations will be for the vessel's account.

FACILITIES: There are no facilities of any kind at BZ 34 Terminal.

No ballast reception facilities at BZ 34 Terminal area or in the vicinity.
No engineering repair shop.
No fresh water.
No bunkers available.
No provisions or stores.
No cranes or barge service.
No shore leave.
No crew changes.
No consulates available.
No clinic available.

AUTHORITY: The Port Supervision Commission of the People's Government of Tianjin Municipality, Xin Gang, Tianjin. *Tel:* 86-22-579-3752, 2920.

Operator: Japan China Oil Development Corporation (JCODC).

(A) Tokyo Office: 1-8-21 Shiba-Koen (Shiba-Koen Ridge Building) Minato-ku, Tokyo, Japan. *Tel:* 03 (3436) 7483. *Telex:* 02222179 Jcoil. *FAX:* 03 (3436) 7489.

(B) Tianjin Office: P.O.Box 546, Tanggu, Tianjin, The People's Republic of China. *Tel:* 86-22-579-2081 (Int'l subscriber dial call). *FAX:* 86-22-579-2078.

Partners: (A) Bohai Oil Corporation (BOC), P.O.Box 547, Tanggu, Tianjin, The People's Republic of China. *Tel:* 86-22-580-7445 (Int'l subscriber dial call). *Telex:* 23163 Obpcc Cn. *FAX:* 86-22-580-7445.

(B) China National Offshore Oil Corporation (CNOOC), P.O.Box 9623, Beijing, The People's Republic of China. *Tel:* 86-1-466-9008 (Int'l subscriber dial call). *Telex:* 210561 Cnooc Cn. *FAX:* 86-1-466-9008.

AGENT: Penavico Tanggu, Zhu Tang Gu Qu Ji Gou, 2 Hao Lu, Xingang Tanggu Qu, Tianjin, The People's Republic of China. *Tel:* 86-22-579-3312, 579-3756. *Telex:* 23164 Xgpen Cn., 23167 Xgpen Cn. *Cables:* Penavico Tanggu. *FAX:* 86-22-579-2537.

Penavico Tianjin, Zhu Tianjin Jigou, 23 Chongqing Dao, Tianjin, The People's Republic of China. *Tel:* 86-22-230-1008. *Telex:* 23231 Tjpen Cn. *Cables:* Penavico Tianjin. *FAX:* 86-22-331-7906.

CHIWAN, Including Shekou and Mawan: 22.28 N. 113.53 E. (See Plan)

LOCATION: Shekou Gang (port) is about 30 kilometres from Shenzhen Urban District and about 20 nautical miles from the centre of Hong Kong. The port is an important component of the expanding Shenzhen economic special zone (Sez).

The port area covers wharves in Shekou and Chiwan and is still under further development.

PILOTAGE: Pilotage available in daytime. Compulsory for foreign vessels entering and leaving the port. Pilot boards at Shekou Anchorage in position Lat. 22° 23' 42" N., Long. 113° 53' 42" E.

Port Entry Guidance:

AAA. Shekou/Chiwan/Mawan share same pilot station, where central point is 22° 23' 42" N., 113° 53' 42" E. with radius 0.5 miles and can be reached through Mawan Channel (Hong Kong waters).

BBB. Hong Kong Pilot is compulsory for non-tanker vessel whose g.r.t. is 5,000 or above and tanker g.r.t. is 1,000 or above for transit in Hong Kong waters.

CCC. Hong Kong Pilot to be arranged by your Agent in Hong Kong before entering Hong Kong waters, embarks at Green Island (22° 16' 00" N., 114° 06' 36" E.) and disembarks at Tap Shek Kok (22° 23' 30" N., 113° 53' 30" E.).

DDD. Before entering Hong Kong waters, Master should inform Mardep HK with details in Annex (see below), which must be made 4 hours in advance by VHF for transit of Hong Kong waters.

EEE. Navigation warning at anchorage – prohibition of dropping anchor area.

Centre 22° 27' 02" N., 113° 52' 44" E., radius 375 m.
Centre 22° 26' 32" N., 113° 52' 48" E., radius 375 m.
Centre 22° 26' 01" N., 113° 52' 48" E., radius 375 m.

Annex:

No.	*Information required*	*Sample Message*
01.	Name of vessel and call sign:	Hardship/GABC
02.	Flag:	British
03.	Type (Bulk/tank/G.Cargo/Cont):	Bulker
04.	Gross Tonnage (as per Register):	24123
05.	Length Overall (as per Register):	168 m.
06.	Total number of persons on board:	22
07.	Reason for call:	Disch/Change Crew
08.	Estimate maximum arrival draft:	9.7 m.
09.	Any defects affecting manoeuvrability or seaworthiness:	Nil
10.	Any DG of IMO Class 1, 2, 3 (Yes/No): and quality:	Yes. 14 tonnes Class 3
11.	Local Agent:	Silver Lining
12.	Are you taking a Pilot:	Yes
13.	ETA indicated Pilot Boarding Station:	091400 Tathong Ch
14.	Last port:	Keelung

Departure:
01. Name of vessel/call sign: Hardship/GABC
02. ETA Pilot Boarding Station: 091515 Tathong Ch
03. Any changes to Annex 1: Nil

ANCHORAGE:

Name	*Location*	*Bottom*	*Capacity (d.w.t.)*	*Use of Anchorage*
Pilot Quarantine Anchorage	22° 26' 00" N., 113° 52' 13" E. 22° 22' 42.9" N., 113° 53' 12" E. 22° 27' 42.9" N., 113° 58' 58" E. 22° 25' 11" N., 113° 53' 01" E. 22° 26' 00" N., 113° 52' 52" E.	Mud with good holding ground.	10,000	Pilot. Quarantine
Tanker (less than 3,000 g.t.) Anchorage	22° 28' 36" N., 113° 50' 38" E. 22° 27' 00" N., 113° 50' 38" E. 22° 27' 00" N., 113° 52' 32" E. 22° 28' 36" N., 113° 51' 40" E.			Pilot
Ship (less than 2,000 g.t.) Anchorage	22° 26' 36" N., 113° 54' 00" E. 22° 26' 00" N., 113° 54' 00" E. 22° 27' 50" N., 113° 56' 00" E. 22° 28' 26" N., 113° 56' 00" E.			Pilot
Cargo Ship Anchorage	22° 28' 36.5" N., 113° 51' 30" E. 22° 28' 36.5" N., 113° 52' 13" E. 22° 27' 36" N., 113° 52' 02" E. 22° 25' 34" N., 113° 53' 36" E.	Mud with good holding ground.	10,000	Quarantine
Tanker Anchorage	22° 28' 36.5" N., 113° 51' 30" E. 22° 28' 36.5" N., 113° 50' 40" E. 22° 27' 36" N., 113° 50' 40" E. 22° 27' 36" N., 113° 51' 41" E.	Mud with good holding ground.	5,000	Quarantine
Ship (less than 3,000 g.t.) Anchorage	22° 25' 34" N., 113° 52' 02" E. 22° 25' 34" N., 113° 52' 23" E. 22° 27' 36" N., 113° 52' 00" E. 22° 27' 36" N., 113° 50' 40" E.	Mud with good holding ground.	3,000	Quarantine

CHANNELS: Shekou Port Channel is sub-divided into Shekou Port Area Channel and Chiwan Port Area Channel. The former comprises the outer one between light Buoys No. 1 to No. 5, and the inner one between light Buoys No. 5 to No. 9. The channel has a total length of 3.14 miles, a width of 60 m. and a minimum depth of 5.8 m.

Chiwan Port Area Channel, with a total length of 1,000 m., a width of 80 m. and a minimum depth of 9 m. is marked by the light buoys No. 1 to No. 3. Light buoy No. 1 is at the entrance of the Chiwan Port Area. Light buoys No. 2 and No. 3 are positioned at the junction of the basin and the channel.

RESTRICTIONS: Vessel may enter and sail after sunset. Tidal range: Max. 3.44 m. Average 1.36 m. Draft limitation of the Channel: 12.5 m.

VHF: Shekou Radio on Channels 16 and 25 throughout 24 hours. Penavico Shenzhen on Channels 11 and 8, Sinoagent on Channel 61, throughout 24 hours.

TUGS: 1×1,900 h.p., 1×1,600 h.p. and 2×400 h.p.

BERTHING:

Name of Stevedore Company	*Name of Berth*	*Length (m.)*	*Depth (m.)*	*Permissible Size (d.w.t.)*	*Cargo handled*	*Shore Cranes (tons)*
Shekou:						
Shekou	Passenger	605	4.5			
Shekou	Tanker	260	6.5			
Shekou	No. 1	152	7.5	5,000	General Cargo	
Shekou	No. 2	170	8.8	15,000	General Cargo	
Shekou	No. 3	195	9.1	15,000	General Cargo	
Shekou	No. 4	236	11.5	35,000	General and Bulk Cargo	2×10 tons
Shekou	No. 5	90	4.6	3,000	General and Bulk Cargo	
Shekou	No. 6	176	6.5	5,000	General and Bulk Cargo	
Shekou	No. 7	186	10.0	15,000	General and Bulk Cargo	5×10 tons
Shekou	No. 8	270	12.0	35,000	General and Bulk Cargo	
Shekou	No. 9	300	12.5	76,000	General and Bulk Cargo	2×10 tons
Shekou	SCT	650	13.6	50,000	Container	Bridge Cranes 6×40 tons
Mawan:						
Mawan	35,000 t	226	12.4	50,000	Bulk and General Cargo	2×10 tons 1×60 tons
Mawan	5,000 t	150	7.5	5,000	General Cargo	
Chiwan:						
Chiwan	No. 1	464	10.0	35,000	Bulk and General Cargo	2×10 tons
Chiwan	No. 2		11.0	35,000	Bulk and General Cargo	2×10 tons
Chiwan	No. 3		9.0	15,000	General Cargo	2×10 tons
Chiwan	No. 4	70	9.0	15,000	General Cargo	
Chiwan	No. 5	216.5	12.5	50,000	Bulk and General Cargo	2×10 tons
Chiwan	No. 6	210	12.0	50,000	Bulk and General Cargo	2×10 tons
Chiwan	No. 7	300	13.0	60,000	Bulk and General Cargo	
Chiwan	F.O.	130	7.5	5,000	F.O.	1×40 tons
Kaifeng	No. 9	325	14.0	60,000	Container, Bulk and General Cargo	Bridge Cranes 2×40 tons

FRESH WATER: Available.
FUEL: Available.
REPAIRS: Facilities available.
TIME: GMT plus 8 hours.

SHIPMASTER'S REPORT: April 1984.

New port still under construction situated in Lat. 22° 28.5' N., Long. 113° 53' E. Pilot station is located in position Lat. 22° 25' N., Long. 113° 52.6' E. It is reached by passing through Hong Kong East Lamma Channel then passing North of Ma Wan Island. There is plenty of water until the Pilot Station. Anchorage is in very good holding ground. Density of water at any stage of the tide is 1020. Alongside the pier (only one working at the moment), the depth is 8.5 m. but the bottom is soft mud. At HW it varies from 9.5 m. to 10 m. according to the stage of the tides. Fresh water is available at a low rate alongside the pier. Chiwan Radio working on Channel 16 and 84. Discharging at about 1,000 tons per day with ship's gear and shore cranes. Only one crane is assembled at the moment. 3 cranes of 10 tons capacity will be available in the near future, 1 crane of 40 tons is already working.

Facilities to go to Hong Kong: (2 photographs must be available for the Immigration Visa) Hong Kong dollars are accepted as currency. U.S. dollars must be changed at the local Banks. Entering and leaving the port only during daylight hours.

SHIPMASTER'S REPORT: April 1990.
Port: Chiwan (Shekou).
Position: Lat. 22° 28.5' N., Long. 113° 53' E.
Chart: BA Charts No. 342 and 343.
Cargo: Vessel discharged a full cargo (18,000 tons) of rape seed oil.
Documents:
Last Port Clearance.
3 copies Cargo Manifest.
2 copies Crew Declaration (Chinese form).
4 copies Health Form (Chinese form).
6 copies Crew List.
All Crew Discharge Books and Passports checked.
Bonded Stores List (Ship's and Local Chinese form).

About 10 personnel board with agent by tug about 20 minutes after anchoring in position Lat. 22° 25.5' N., Long 113° 52.8' E. This position is just North of the boundary line between Hong Kong territory and Chinese territory in about 20 m. depth.

Pilotage: As vessel has to transit Hong Kong waters, it is mandatory to obtain a Hong Kong pilot for cargo ships over 10,000 g.r.t. and all tankers. Pilot arranged through liasing agents in Hong Kong who pass all communications, etc., to the Chinese state agency "Penavico", pilot boards at Green Island after passing East Lemma Channel.

Vessel must make arrival report to 'MARDEP Hong Kong' (see A.L.R.S. Volume 6) for permission to enter Hong Kong waters, this is usually granted 12 hours before arrival in Hong Kong waters.

Pilotage is via Mawan Channel, max. draft acceptable is 16.5 m., subject to tide, tide is not necessary for draft up to 9.0 m. and L.O.A. below 170 m. Pilot disembarks prior to entry into Chinese waters and thereafter Master must proceed to anchor, anchorage fairly congested, this vessel was carrying full load of 18,000 tons of crude rape seed oil at a draft of 8.5 m. maximum and used 7 shackles on the port anchor with Shekou approach buoy "A1" bearing 069° × 0.9 miles off, strong currents exist here but the holding ground is reasonably good.

VHF: Port maintains an excellent watch on Channel 16 and all telephone conversations with agent carried out on Channel 25. Vessels should listen for berthing orders on VHF between 0800 hrs. – 1730 hrs. local time.

Berthing: Vessel berthed port side alongside with 3 head/stern lines and 2 springs forward and aft.

Oil Tanker Discharge: Facility exists for discharge of 500 tonnes.p.h. to 600 tonnes.p.h. and usually vessel can expect to complete cargo of 20,000 tons of vegetable oil within 40 hours.

Vessel discharged through 2 × 10 in. hoses with a pressure limit of 6 kg./sq.m. at the ship's rail.

All liaison personnel are most co-operative but they are not very fluent in English.

Fresh Water: Available ex-jetty, but the meters are erratic.
Custom Allowances: No restrictions. Bond is sealed.
Time: GMT plus 8 hours in Summer (After April 16th).
Shore Leave: No restriction on crew going ashore, passes (returnable) are issued on arrival. Port is in an economic free zone and Hong Kong dollars are used freely ashore, as such no currency restrictions are in force. Cash advance can be obtained.
Stores: Bonded stores through the liasing agent in Hong Kong.

Provisions and stores are available through ship chandler on cash payment basis, bonded beer is available.

Departure: Departure Boarding Party boards one hour prior to departure and checks deck, engine room and accommodation for stowaways and also re-checks all crew Discharge Books and Passports before giving Sailing Clearance. After their departure no persons are permitted to board, until pilot comes on board.

Sailing: Departure was at night and vessel had to give Hong Kong pilots a minimum of 3 hours notice via telex as high hills obscure VHF communication. Hong Kong Pilot met vessel on schedule at Urmston Roads Pilot Station for outbound passage through Mawan Channel and Lemma Passage.

Agent: China Ocean Shipping Agency, Shekou Branch. Cables: Penavico Shekou. Telex: 420834 cosac cn. Tel: 695216. Fax: 692769.

Agency service was excellent and agent visits vessel every 6 hours for any liaison, provision arrangements. etc.

Charterers had also appointed agent in Hong Kong to liaise, but this was not really necessary.

SHIPMASTER'S REPORT: December 1993.

Entering: It is necessary to pass through Hong Kong waters to reach Chiwan, and for this Hong Kong Agents are appointed to liaise with the Pilots and Chiwan Agents. All advertised messages for Hong Kong Pilots are required, and a clearance will be issued by MARDEP before arrival.

Navigation Restrictions: Vessels over 180 m. length are only permitted to pass through the Ma Wan Channel in daylight and stemming the tide, and also require a tug standing-by off Laan Pai.

Prior to arrival, the Hong Kong Agents will advise the arrival time required at Green Island Pilot Station to comply with the passage requirements.

Pilotage: Two Hong Kong Pilots board at Green Island to take the vessel through Hong Kong waters and leave at the Pilot Station in Urmston Road.

The Hong Kong Pilots will contact Chiwan Pilots or Penavico on VHF Channel 11, and advise the vessel's ETA at Chiwan Pilot Station.

On this visit, the vessel went directly alongside after a short wait in the roads, but it is reported that it is more likely that arriving vessels will anchor for clearance.

Chiwan Pilots do not board before anchoring, so it is necessary to pick a suitable vacant spot.

Departure: Chiwan Agents will liaise with Hong Kong Agents and Pilots to arrange the time of boarding for the Hong Kong Pilot.

Chiwan Pilot will leave the vessel just after passing Buoy No. 1.

VHF contact with Hong Kong Pilots is difficult until almost at the Pilot Station.

Passage through Ma Wan Channel outward is again stemming the tide in daylight and a tug stands-by.

VHF: Agent maintains continuous watch on Channel 11.

Berthing: Two Pilots boarded in the roads from the tugs which are made fast on the bow and quarter with tug's lines before reaching the approach channel.

The Pilots used the tugs more than the engine and the vessel was pushed bodily alongside starboard side to on the Western end of the North side of the dock with a third tug pushing amidships.

Leading Lights: See "Plan".

There are three leading lights, two as charted are the rear and middle and a front light situated on the Eastern side of a building by the dock side (See "Plan").

The three marks are not exactly in line, and an exact explanation of their use could not be obtained. However, a satisfactory approach was made by the Pilots, apparently using the front and rear for the outer approach and rear and middle after passing Buoy No. 1 (Fl. G. 4 sec.).

These leading marks and lights would be conspicuous at night if a floodlight tower had not been positioned close West of the leading line between the front and middle marks, and by day if the front and middle marks are not obscured by dockside cranes.

There is an illuminated red cross on the hospital building, close East of the rear light.

Buoys: Buoys have been positioned just inside the harbour entrance, one on each side of the channel, with appropriate green and red flashing lights (See "Plan").

Chimney: A conspicuous chimney is situated to the South and West of Xiaonan Shan, and in good visibility, is a good mark for the approach to the anchorage.

There are red flashing lights on the chimney at night.

Clearance: Clearance Inward and Outward on this visit was carried out alongside as the vessel berthed on arrival without anchoring, friendly and efficient with 6 officials attending.

Shore passes are issued and have to be returned before departure. Bond stores were not sealed.

Coffee, soft drinks and biscuits and a carton of cigarettes for each official are appreciated.

No guards are posted on the vessel. Access to the dock area is through a gate manned by guards around the clock.

Depth: A least depth of 4.0 m. under-keel at a draft of 9.75 m. was recorded at approximately low water in the harbour entrance.

The vessel was advised the maximum draft for the port was 11.0 m. (brackish water).

Density: Density was found to be 1022 on arrival and 1023 on departure.

Berths: The Southern 100 m. of the West side of the harbour is used for small container vessels and is served by a container gantry crane. The remaining 200 m. of this side and the Western 400 m. of the Northern side are used for deep-sea vessels up to at least 40,000 d.w.t., and served by cranes for grab and hook discharge of bulk, steel and general cargoes.

There are 2 permanent bagging plants for bulk cargoes, one on the West and one on the North side of the harbour, as well as a number of portable bagging plants.

There were 4 cranes on the North side and 2 on the West side with a number of other cranes under construction.

Cargo Working: Discharged 35,353 tonnes of bulk fertiliser using 4 shore cranes, discharging into one permanent and 3 portable bagging plants, at a net rate of 114.4 tonnes/crane/hr., and gross rate of 87.7 tonnes/crane/hr.

Working hours are nominally 24 per day, but there is lost time for meal breaks and change of shift, also the period from 0400 hrs. to 0800 hrs. seems to be optional.

The cargo was loaded at Norsk Hydro in Heroya and received by Norsk Hydro, who have a large packing factory at Chiwan, the cargo going direct into Norsk Hydro bags for stockpiling in the dock area.

I suspect that the discharge rate of 7,400 tonnes per day for this visit is unusually high, and that a more usual rate would be around 6,000 tonnes per day for this cargo.

The decks, hatch covers and dock side are kept continuously swept clean throughout discharge and the decks swept clear on completion.

Fresh Water: Available from the quay at about U.S.$ 1.00 per tonne. A delivery rate of 14 tonnes per hour was noted on this visit.

Fresh water can also be supplied at the anchorage, but this is reported to be very expensive.

Provisions and Stores: Available at reasonable prices, although slightly more expensive than average for other ports.

Currency: Most prices are quoted in U.S. dollars for services on board, and this is an acceptable currency in most shops with a negotiable exchange rate of around 8.5 Yuan to U.S.$ 1.00.

Medical: Medical attention will be arranged by the Agents at Shekou.

Repatrition: Possible, provided sufficient notice is given. The Agent did not say how much notice was required.

Developments: The whole Chiwan/Shekou area is under development as an industrial complex.

At noon, daily, blasting takes place in quarries on Chiwan Shan, which at the present rate will soon disappear. A continuous stream of lorries are transporting quarry stone towards Mawan Shangjiao, so the area will change rapidly.

Ma Wan Channel: There is a bridge under construction over the channel. So far the suspension towers, reported to be 198 m. high, are almost completed in approximate positions Lat. 22° 21.5' N., Long. 114° 04.6' E. and Lat. 22° 21.2' N., Long. 114° 03.8' E.

It was not known what the intended height of the span will be, but the Pilot was sure that someone would have calculated that it would be high enough for shipping to pass underneath.

Agent: China Ocean Shipping Agency, Room 401, Chiwan Harbour Building, Shenzhen, China 518067. Tel: 6694340, 6694231. Fax: 6694231, 6692769. Telex: 420834 Cosas Cn, 420882 Cosas Cn. Cables: Penavico Sz.

SHIPMASTER'S REPORT: March 1994.

Lightering at Shekou Anchorage: Vessel had to discharge approximately 10,000 tonnes of gas oil into lightering vessels at Shekou anchorage.

Ship's max. arrival draft was 10.60 m.

Shekou Lightering Anchorage is situated just across the border with Hong Kong.

Shekou Anchorage is reached through Hong Kong waters.

Ship had to anchor at South Lamma Anchorage (Hong Kong) and wait for suitable tide.

When destination is China, one seems to anchor more than 2 miles from the Hong Kong coast.

The governing point is passing Ma Wan Channel at daylight and reaching Shekou Anchorage near slack tide high water.

After picking-up the anchor, ship proceeds through East Lamma Channel to Green Island Pilot Station for boarding of Hong Kong Pilot. Then under Hong Kong pilotage, ship proceeds through Ma Wan Channel to Tap Shek Kok Pilot Station (abreast of Tap Shek Kok).

This Pilot Station is not correctly drawn in B.A. Charts 343 and 1919, or in the Admiralty List of Radio Signals Vol. 6, Part 2, page 123.

The reason is unknown to me, but after discussions with Hong Kong Pilot, I understand that this was a delicate matter.

During passage at Ma Wan, an escorting tug is available and on stand-by. The purpose of the tug is to clear other traffic. In Ma Wan Channel, traffic is dense and current is strong. However, at full manoeuvring speed, this channel was passed without any difficulty.

At Tap Shek Kok, Hong Kong Pilot leaves ship and Master has to proceed without Pilot to position 22° 23' 12" N., 113° 53' 42" E. The distance from Tap Shek Kok to this position is only a few miles. This position is called Shekou Pilot Station by the mainland Chinese. However, the Hong Kong Pilot did not recognise this Pilot Station. The position is notified by Shekou Agency (Penavico Shenzhen) by telex directly to ship.

Looking at the British Admiralty Chart is confusing, as one may conclude, that it is still in Hong Kong waters. However, it must be in mainland China as the Pilot wanted to leave the ship before this position at any cost.

So if you feel confused about Pilot Stations in this part of the Pearl River, just stick to the position given by Penavico and mentioned before as 22° 23' 12" N., 113° 53' 42" E.

The only problem there is the dense traffic and current.

It appeared we were somewhat too early. The current was still flooding, but not strong. So we had to turn the ship round and anchored as close as possible to the Shekou Pilot Station (22° 23' 12" N., 113° 53' 42" E.).

Be aware of the pipeline and 15.5 wreck in the vicinity.

During passage to Shekou, I contacted the Master of a vessel who called at Shekou earlier. He gave me valuable information which I include in this report.

Before I left Singapore, I was supplied with faxed pages regarding Shekou and also mentioning in this fax was a vessel at 14.3 m. draft.

In this fax, the same position is mentioned as before (Shekou Pilot Station). However, the fact of mentioning this as lightering position is not correct.

At Shekou Anchorage, ship has to wait for the Chinese Authorities who come onboard by means of a tug. They will come at their convenience and can take as long as 4-6 hours before they board. Their estimated arrival is announced by "Penavico" Agent on VHF Channel 11. Channel 11 is the working channel of "Penavico Shenzhen" and has to be monitored continuously. It is also the Tap Shek Kok Pilot Station calling channel.

En route to Shekou from Green Island, communication with "Penavico" via Channel 11 is difficult and full of disruptions, probably due to the high hills, etc., obstructing the transmission signal. Once anchored at Shekou, transmission and reception works well.

Do not forget to hoist the Chinese national flag and lower the Hong Kong flag. When departing from Shekou, the reverse has to be carried out. Also do not forget the "Q" flag when arriving at Shekou.

The minimum of 12 hours notice to MARDEP also applies when en route from Shekou to outward as one has to cross Hong Kong waters.

Agent who boarded spoke good English, but the officials did not speak any English. They are kind but strict. They did appreciate an officer meeting them at the accommodation ladder. Paperwork was simple. They do check the certificates thoroughly. They also checked Passports and Seaman's Books. Later on, Port Authorities came on board to check the Oil Record Books.

A Loading Master stays on board for communication between ship and lightering vessels. He speaks good English.

After ship had been cleared, unexpectedly a Pilot boarded ship to move ship further up-river. He had with him a photo-copy of a Chinese edited nautical chart of the region. His English was good. He pointed out to me that he would move the ship to Anchorage No. 3 or 4, very near the place called Chiwan.

I informed him my draft of 10.6 m. and he said "no problem". I asked him to show me his copy chart and saw the depth at the intended lightering anchorage was 11.4 m. So I made him aware of the very small margin left under the keel. Again he said "no problem". So I told him that I had no intention of proceeding up-river as there was not enough water. His answer "no problem".

So we went to an anchor place on Urmston Anchorage with 9.0 m. left under the keel.

Pilot Book of this region clearly mentions the silting of the river near Chiwan and depths could be decreased by 2.0 m.

On both occasions, we anchored with starboard anchor, 7 shackles in the water. At Urmston Anchorage, current runs at 4 knots. Good holding ground.

More ships were anchored there, of which 2 were also tankers to be lightened. One tanker was about 100,000 d.w.t.

Charterer's Agent in Hong Kong will notify ship regarding arrival time at Green Island Pilot Station for boarding Hong Kong Pilot when inward bound. They will also organise the Hong Kong Pilot when departing from Shekou, as from Tap Shek Kok Pilot Station outward.

On departure from the lightering anchorage, a Chinese Pilot had boarded and a tug was pushing as the current was running strongly outward. Approximately 6 hours before departure, Authorities come on board and again check Passports and Seaman's Books. Normally they also carry out a search for stowaways, accompanied by ship's staff. However, on this occasion they did not, so we made our own stowaway search just before departure.

Ma Wan has again to be passed during daylight and with suitable tide. Charterer's Agent will monitor this. Escorting tug also again on the spot. Ship had to proceed to South Lamma Anchorage and await berthing for Tsing Yi – Shell Terminal.

Ship's Operator will supply telex/fax numbers of "Penavico Shenzhen". The telephone number of Penavico is 86-755-6691136. I called them on the telephone and was attended in good English. Charterer's Agent is very helpful if there are problems or questions.

The lightering itself did not produce any specific problems. No lightering vessels bigger than 2,000 tonnes came alongside. However, the fendering is still poor. Only car tyres are used on the lightering vessel and the amount is minimal (depending on the vessel coming alongside). No damage was caused.

For future trade to this port, I suggest vessel be supplied with some extra car tyres.

Following deficiencies were observed on the lightering vessels:
Coming alongside with tank lids open.
No firehoses or firefighting equipment ready near manifold.
The offside of the loading manifold not equipped with a blind flange, and only one valve separation on that side.
The rubber discharge hose (6 in.) looked in order.
We discharged with a back pressure of 5 bar.
The turnaround was swift.
Manoeuvring alongside very skilful.

There is no swell at the anchorage, however when the Hong Kong to Canton ferry passes, there is swell and the lightering barges do move for a short time.

Mooring ropes looked in order.

We experienced a 4 knot current and a wind of Force 4 Northerly.

The swinging of the ship takes a long time and is done slowly and smoothly.

AUTHORITY: Chiwan Wharf Holdings Ltd., Chiwan Building, Port of Chiwan, Shenzhen, China 518068. *Tel:* 6694888. *FAX:* 6699429.

DALIAN (Dairen): 38.55 N. 121.40 E. (See Plan)

Also see "General" before first port.

PORT LIMITS: The new harbour limits of the Port of Dalian are from the Huangbaizui Lighthouse (Lat. 38° 54' 14" N., Long. 121° 42' 54" E.), then it passes through Dasanshan Lighthouse (Lat. 38° 51' 50" N., Long. 121° 49' 29" E.) and then Xianjiao Light Beacon (Lat. 38° 57' 49" N., Long. 121° 59' 11" E.) and ends at Shayuzui (Lat. 39° 01' 51" N., Long. 121° 57' 42" E.).

Also see "Plan".

APPROACHES: From 1st June 1995, a reporting system for vessels' positions was implemented. The full instructions on traffic control is as follows:

Traffic Control of the Port of Dalian

There are 2 navigation traffic control stations equipped with radar and VH in the Port of Dalian. The Huangbaizui Station controls all vessels entering or leaving the Port of Dalian, and also controls the navigation traffic in the area of Dalian Wan and it's adjacent waters (West of Dasanshandao – 121° 49' 29" E.). The Dayaowan Station controls the navigation traffic in the area of Xingang and Dayaowan also their adjacent waters (East of 121° 49' 29" E.).

Reporting Systems: Vessels proceeding to/leaving Dalian Wan, report to the Port Control Huangbaizui Station by VHF Channel 6. Vessels proceeding to/leaving Xingang or Dayaowan, report to the Port Control Dayaowan Station by VHF Channel 9.

Following reports shall be made by the ship to the concerned port traffic control station:

(a) When vessel crosses over the border line of the Southern semi-circle with 12 miles as its radius and Dasanshandao Lighthouse (38° 51' 50" N., 121° 49' 29" E.) as its centre.

(b) When vessel passes through Buoys HO (38° 54' 12" N., 121° 46' 12" E.), Buoy H2 (38° 57' 21" N., 121° 46' 12" E.), Buoy 7 (38° 57' 17" N., 121° 38' 14" E.) and Buoy 2 (38° 55' 55" N., 121° 40' 47" E.), report the time of passing of the respective buoy.

(c) When vessel drops anchor, report the time and anchor position (bearing and distance from Huanbaizui Lighthouse or from Xianjiao Light Beacon).

(d) When vessel needs to heave up anchor for sailing, shifting or any other reason, vessel should report and give reason to the concerned station, 30 minutes before and request permission.

(e) When vessel has problems affecting safety of navigation, such as hull, machine and equipment damage or troubles, insufficient manning or vessel has marine accident such as fire, collision, pollution, etc., Master should immediately report to the concerned station.

One telegram from Agent to Master following up the above Reporting Systems:

Master /Dalianradio/XSZ
Please report to port control by VHF Channel 9 when you cross border line of Southern semi-circle centred by Dasanshandao Lighthouse 38° 51' 50" N., 121° 49' 09" E. with 12 miles as radius. Then you should report your anchor time and position. Please request permission 30 minutes in advance for any shifting.
Penavico.

Also see "Notice".

DOCUMENTS: *Port Facilities:* Joint inspection upon vessel's arrival ceased in 1995.

The Quarantine Officer and Boarding Agent will go onboard first. Free Pratique will be granted soon after their boarding. The Boarding Agent will collect all necessary documents and papers for Harbour Master, Customs and Immigration. The officers from "Animal and Plant Quarantine" will check the vessel at same time. The officers from Harbour Master will come onboard to check the Oil Record Book during ship's stay.

Before sailing, the Boarding Agent will collect necessary papers and obtain Clearance from Immigration, Customs and Harbour Master, and will give Master "Port Clearance" issued by Harbour Master.

Documents required on Arrival:
2 copies Report of Entry for Foreign Ships.
1 copy Maritime Declaration of Health.
5 copies Crew List.
1 copy Vaccination List.
5 copies Passenger List (if any).
1 copy Bonded Stores List.
1 copy Personal Effects List.
2 copies Provisions List.
1 copy Arms and Ammunition List (if any).
1 copy Narcotics List (Drugs List).
1 copy Import Manifest.
1 copy Bills of Lading.

The following Certificates will be taken by Agent for Harbour Master's inspection:
Nationality Certificate.
Classification Certificate.
Safety Equipment Certificate.
Safety Construction Certificate.
Safety Radio Telegraphy Certificate.
Load Line Certificate.
IOPP Certificate.
The Register Book for Examination and Inspection of Cargo Handling Gear.

All crew's passports will be taken by Agent for Immigration to issue Shore Passes.

Documents required on Departure:
5 copies Crew List (if crew change occurs).
1 copy Maritime Declaration of Health for departure of ship.
2 copies Report of Clearance.
1 copy Export Cargo Manifest (if any cargo loaded).

All crew's passports with shore passes will be handed to Immigration for inspection.

PILOTAGE: Available day and night. Pilot boards at Dalian Anchorage.

ANCHORAGES: ANCHORAGE IN DALIAN WAN:

(A) *No. 1 Quarantine Anchorage for Cargo Ships:* No. 1 Quarantine Anchorage for Cargo Ships is assigned to those cargo vessels which call at Dalian Port (Old Port) for loading or discharging operations and/or for repairs, bunkering and other purposes. It is located within the area of following 4 geographical positions:

Lat. 38° 57' 00" N.,	Long. 121° 46' 00" E.
Lat. 38° 57' 00" N.,	Long. 121° 41' 00" E.
Lat. 38° 56' 18" N.,	Long. 121° 41' 00" E.
Lat. 38° 55' 00" N.,	Long. 121° 46' 00" E.

Depth (m.)	*Bottom*	*Capacity* (d.w.t.)	*Use of Anchorage*
7.0 – 18.0	Mud with good holding ground	over 10,000	Quarantine, shelter, provisions and fresh water supply, Pilot, Repairs

(B) *No. 2 Quarantine Anchorage for Cargo Ships:* No. 2 Quarantine Anchorage for Cargo Ships is also assigned to those cargo vessels which call at Dalian Port (Old Port) for discharging or loading operations and/or for repairs, bunkering and other purposes. It is located within the area of following 4 geographical positions:

Lat. 38° 59' 08" N.,	Long. 121° 46' 55" E.
Lat. 38° 59' 08" N.,	Long. 121° 42' 30" E.
Lat. 38° 57' 39" N.,	Long. 121° 42' 30" E.
Lat. 38° 57' 39" N.,	Long. 121° 46' 55" E.

Depth (m.)	*Bottom*	*Capacity* (d.w.t.)	*Use of Anchorage*
7.0 – 18.0	Mud and sand with good holding ground	over 10,000	Quarantine, shelter, provisions and fresh water supply, Pilot, Repairs

(C) *The Quarantine Anchorage for Tankers:* The Quarantine Anchorage for Tankers is specially assigned to those tanker vessels and chemical carriers which call at Dalian Port (Old Port) for loading or discharging different kinds of oil which include crude, petroleum products and chemicals in bulk, etc., and/or for repairs, bunkering and other purposes. It is located within the area of following 4 geographical positions:

Lat.	Long.
Lat. 38° 59' 08" N.	Long. 121° 42' 30" E.
Lat. 38° 59' 08" N.	Long. 121° 40' 30" E.
Lat. 38° 57' 39" N.	Long. 121° 40' 30" E.
Lat. 38° 57' 39" N.	Long. 121° 42' 30" E.

Depth (m.)	*Bottom*	*Capacity* (d.w.t.)	*Use of Anchorage*
7.0 – 18.0	Mud and sand with good holding ground	over 10,000	Quarantine, shelter, provisions and fresh water supply, Pilot, Repairs

(D) For vessels (cargo vessels or tankers) with deep draft (over 10.0 m.) which can not find a suitable place to anchor in the nominated inner anchorage, but by special reason needs to anchor and stay in Dalian Wan, an application should be given to the Harbour Master who may then assign a special anchor position in Dalian Wan to the vessel. If so, it will normally be the area of 0.15 miles away and East of the separation line (from 38° 55' 00" N., 121° 46' 12" E. to 38° 57' 00" N., 121° 46' 12" E.). Occasionally the application may be rejected, and vessel may be ordered to drop anchor in the outer anchorage.

OUTER ANCHORAGE AND ANCHORAGE FOR XINGANG:

(A) Outer Anchorage (also called Xingang Quarantine Anchorage for Cargo Ships) is a reserved anchorage for Dalian Port. When the port gets congested, the Harbour Master may decide to start control on the entering of the vessels into Dalian Wan. The Outer Anchorage shall then be assigned to those vessels having g.r.t. 5,000 or more. They shall shift to Inner Anchorage only when permission is granted by the Harbour Master. The anchorage is located within the area of following 4 geographical positions:

Lat.	Long.
Lat. 38° 55' 00" N.	Long. 121° 59' 00" E.
Lat. 38° 55' 00" N.	Long. 122° 02' 00" E.
Lat. 38° 53' 00" N.	Long. 122° 02' 00" E.
Lat. 38° 53' 00" N.	Long. 121° 59' 00" E.

(B) *Xingang Quarantine Anchorage for Tankers:* Xingang Quarantine Anchorage for Tankers is specially assigned for those tankers calling Xingang (Nianyuwan) Crude Oil Berth to load export crude oil. For easy operation and manoeuvring, by special arrangements, tankers may receive an order to drop anchor in "Xingang Anchorage Points" (See (C)) instead of dropping anchor in this anchorage. The position of the anchorage is within following points:

Lat.	Long.
Lat. 38° 55' 00" N.	Long. 121° 59' 00" E.
Lat. 38° 56' 48" N.	Long. 121° 59' 00" E.
Lat. 38° 56' 48" N.	Long. 122° 02' 00" E.
Lat. 38° 55' 00" N.	Long. 122° 02' 00" E.

(C) *Xingang Anchorage Points:* Xingang Anchorage Points are 7 anchor positions to be given to tankers which call "Xingang Crude Oil Berth". They are closer and more convenient. Orders must be obtained before using these points. Their positions are as follows:

No.	Lat.	Long.
No. 1	Lat. 38° 57' 50" N.	Long. 121° 56' 32" E.
No. 2	Lat. 38° 57' 42" N.	Long. 121° 57' 14" E.
No. 3	Lat. 38° 57' 15" N.	Long. 121° 56' 44" E.
No. 4	Lat. 38° 57' 03" N.	Long. 121° 55' 56" E.
No. 5	Lat. 38° 56' 34" N.	Long. 121° 55' 26" E.
No. 6	Lat. 38° 56' 28" N.	Long. 121° 56' 11" E.
No. 7	Lat. 38° 56' 00" N.	Long. 121° 55' 12" E.

Depth (m.)	*Bottom*	*Capacity* (d.w.t.)	*Use of Anchorage*
18.0	Mud and sand with good holding ground	over 10,000	Quarantine, shelter, provisions and fresh water supply, Pilot, Repairs

DAYAOWAN ANCHORAGE:

This anchorage is only used by vessels calling Dayaowan. It is the area which is within following 4 points:

Lat.	Long.
Lat. 38° 59' 27" N.	Long. 122° 00' 53" E.
Lat. 38° 59' 04" N.	Long. 122° 02' 52" E.
Lat. 38° 57' 44" N.	Long. 122° 02' 26" E.
Lat. 38° 58' 04" N.	Long. 122° 00' 26" E.

RESTRICTIONS: Vessels may enter and sail after sunset.
Maximum speed in harbour limits is 8 knots.

MAX. SIZE: *Max. Draft:*

Type of Cargo	*Summer* (m.)	*Winter* (m.)
General/Ore	10.05	10.66
Iron/Fertiliser	9.75	10.36
Crude	14.93	(Not available)
Others	8.83	9.44

Max. d.w.t.: 80,000 d.w.t. or crude oil tankers 100,000 d.w.t.

RADIO: *Information required by State Agents prior to Arrival:* Vessel's name/call sign/nationality/last port/next port/ETA/max. draft/LOA/g.r.t./n.r.t./type of vessel.

Also the following must be sent to Agent by Master:

(1) Calling purpose (including loading or discharging, repairs, delivery).
(2) Numbers of crew, passengers, health condition.
(3) Sanitary Certificate No., port and date issued.
(4) Derat or Derat Exemption Certificate, port and date issued.
(5) The ports of call and date of arrival/departure prior 10 days to calling this port.
(6) Provisions, drinking water and ballast water, place and date supplied.
(7) Type of cargo and quantity.

VHF:

Station	Channel
Harbour Master and Traffic Stations	Channel 6
Pilot Station	Channel 12
Penavico	Channel 25
Sinoagent	Channel 74
Customs	Channel 67
CHIMBUSCO	Channel 11

TUGS: 2×428 h.p., 2×980 h.p., 4×1,970 h.p., 1×2,000 h.p., 1×2,400 h.p and 6×3,200 h.p.

BERTHING:

Name of Stevedore Company	*Berth No.*	*Length* (m.)	*Depth* (m.)	*Permissible Berthing Size* (d.w.t.)	*Cargo*	*Equipment* (tons)
Eastern	1	186	9.0	10,000	Soybean General Cargo	Shiploader 500 t.p.h.
Eastern	2	133	6.8	3,000	General Cargo	Shore Cranes 2×10 tons
Eastern	3	133	5.8	3,000	General Cargo	Shore Cranes 2×10 tons
Eastern	4	134	6.8	3,000	General Cargo	Shore Cranes 2×10 tons
Eastern	5	150	7.8	5,000	General Cargo, Passengers	Shore Cranes 2×5 tons
Eastern	6	197	8.5	7,000	General Cargo	Shore Cranes 2×5 tons
Eastern	7	120	8.7	3,000	General Cargo, Passengers	Shore Cranes 2×10 tons
Eastern	8	232	10.1	25,000	Grain	Shore Cranes 2×10 tons
Eastern	9	246	11.6	25,000	Grain	Pneumatic Suckers 2×600 t.p.h.
Eastern	10	186	9.1	10,000	Grain, Ore	Shore Cranes 2×10 tons
Eastern	11	180	9.0	10,000	General Cargo	Shore Cranes 2×10 tons
Eastern	12	120	7.7	3,000	General Cargo, Passengers	Shore Cranes 2×10 tons
Eastern	13	120	7.7	3,000	General Cargo, Passengers	Shore Cranes 2×10 tons
Eastern	14	120	7.7	3,000	General Cargo, Passengers	Shore Cranes 2×10 tons
Eastern	15	153	7.7	5,000	General Cargo	Shore Crane 1×10 tons
Western	16	180	9.0	10,000	General Cargo	Shore Cranes 1×5,10,20 tons
Western	17	180	9.0	10,000	General Cargo	Shore Cranes 2×10 tons
Western	18	246	10.6	25,000	Chemical Products	Shore Cranes 3×10 tons
Western	19	180	9.0	5,000	General Cargo	Shore Cranes 2×5 tons 1×27.5 tons
Western	20	210	9.0	10,000	General Cargo	Shore Cranes 1×20 tons 4×10 tons
Western	21	216	9.0	10,000	General Cargo	Shore Cranes 2×5 tons 2×10 tons
Western	22	135	9.0	5,000	Containers	Bridge Cranes 2×27.5 tons
Western	23	135	9.0	5,000	Containers	
Western	24	180	10.6	10,000	General Cargo, Ore	Shore Cranes 3×10 tons
Western	25	180	10.6	10,000	General Cargo, Coal	Shore Cranes 4×10 tons
Western	26	246	10.8	25,000	General Cargo, Coal	Shore Cranes 2×30 tons 3×33 tons
Western	27	180	8.6	10,000	General Cargo, Grain	Shore Cranes 3×10 tons
Western	28	180	9.2	10,000	General Cargo, Ore, Steel	Shore Cranes 3×10 tons
Western	29	123	9.2	5,000	General Cargo, Grain	
Western	30	123	9.2	5,000	General Cargo, Grain	
Xianglujiao	1	207	8.0	7,000	Steel, Timber General Cargo	Shore Cranes 2×10 tons
Xianglujiao	2	200	8.0	7,000	Steel, Grain, General Cargo	Shore Cranes 2×10 tons
Xianglujiao	3	200	6.6	5,000	Steel, Timber, General Cargo	Shore Cranes 2×10 tons
Xianglujiao	4	203	7.0	5,000	Steel, Timber, General Cargo, Grain	Shore Cranes 1×10 tons
Xianglujiao	5	148	7.7	7,000	Steel, Timber, General Cargo	Shore Cranes 2×10 tons
Xianglujiao	6	190	9.6	10,000	Containers	Bridge Cranes 2×30.5 tons
Xianglujiao	7	190	9.2	10,000	Steel, Grain, General Cargo	Shore Cranes 2×10 tons
Xianglujiao	8	150	6.8	7,000	Steel, Timber, General Cargo, Grain	Shore Cranes 3×10 tons
Siergou	1	232	9.1	20,000	Diesel Crude Oil	Loading Arm 1,050 cu.m./hr.
Siergou	2	232	9.3	20,000	Diesel Crude Oil	Loading Arm 1,050 cu.m./hr.
Siergou	3	229	9.1	20,000	Petrol Crude Oil	
Siergou	4	229	9.4	20,000	Petrol Crude Oil	
Ganjingzi	1	200	9.5	10,000	Coal	Shiploaders 2×750 t.p.h.
Ganjingzi	2	200	9.3	10,000	Grain	Shiploaders 2×750 t.p.h.
Dalianwan Heshangdao District	1	227	11.5	30,000	Grain, General Cargo	Shore Cranes 2×5 tons
Dalianwan	2	235	11.5	30,000	Grain, General Cargo	Shore Cranes 2×10 tons
Dalianwan	3	273	9.7	20,000	Coal	
Xingang	1	423	17.5	100,000	Crude Oil	Loading Arms 4×2,360 cu.m./hr.
Xingang	2	423	14.5	50,000	Crude Oil	Loading Arms 3×2,360 cu.m./hr.
Dayaowan	1	240	12.1	25,000	Grain	Shore Cranes 3×16 tons
Dayaowan	2	240	12.1	25,000	Grain	

Name of Stevedore Company	Berth No.	Length (m.)	Depth (m.)	Permissible Berthing Size (d.w.t.)	Cargo	Equipment (tons)
Dayaowan	3	296	12.1	30,000	Containers	Bridge Cranes 3×30 tons
Dayaowan	4	282	12.1	30,000	Containers	
New Port Product Oil (Atlantic)	1	346.5	13.5	50,000	Petroleum Products	
New Port Product Oil (Atlantic)	2	334	13.5	10,000	Petroleum Products	

CRANES: Floating cranes with 100 tons and 200 tons capacity available. Also see "Berthing".

MEDICAL: Hospital available.

TANKERS: *Area 1:* For petroleum products with storage tanks and railway connection. Total berth length 847 m. with average depth 10 m., capable of accommodating 4 tankers of 10,000 d.w.t. each. Also 2 smaller berths for tankers of up to 3,000 d.w.t. This area is able to accept up to 10,000 tonnes of slops a day.

Area 5: The Nianyuwan Crude Oil Terminal can accept tankers up to 100,000 d.w.t. for loading and discharging. The export crude oil is sent by pipeline direct from the Daqing oil field, at a rate of 70,000 bbls/hr. The main berth (205 m.) has maximum depth 17.50 m., while two secondary berths on the other side have depth of 14 m., suitable for 50,000 d.w.t. tankers. Onshore storage capacity is about 350,000 tonnes and maximum slop receiving capacity is about 20,000 tonnes per day. Berths are equipped with fresh water supply, fire fighting equipment and tug services.

FRESH WATER/FUEL: Available.

AIRPORT: Dalian Airport, flights to Hong Kong and Japan.

TIME: GMT plus 8 hours. No alterations during the year.

DEVELOPMENTS: Container Berth: Length 270 m. under construction. 2 × 30.5 ton Paceco portainers and 2 × 30.5 ton transtainers will be provided.

Grain Terminal: To be built for vessels of 80,000 d.w.t. 2×750 t.p.h. shiploaders to be installed.

NOTICE: *Traffic Control of Dalian Port and its Reporting System*

With effect from 1st June 1995, the new rules concerning the Traffic Control and Navigation Reporting System were announced and enforced by the Dalian Harbour Superintendency Administration of the People's Republic of China. You are therefore kindly requested to observe the relevant rules listed below when you are entering, staying and leaving the Port of Dalian.

1. All vessels calling, staying or leaving Dalian Wan must make following reports to the Port Control Huangbaizui Station by VHF Channel 6:
   (A) When vessel crosses the border line of the Southern semi-circle with 12 miles as its radius and Dasanshandao Lighthouse (38° 51' 50" N., 121° 49' 29" E.) as its centre, whether entering or leaving, should report vessel's name, call sign, flag, time and position for crossing the border line.
   (B) At any time and for any reason, when vessel passes through the Buoy HO, Buoy H2, Buoy 7 or Buoy 2, vessel must immediately report the actual time of passing (abeam) of each buoy respectively and separately (both for entering and leaving).
   (C) When vessel drops anchor in inner or outer anchorage, vessel should report the time and position of the anchor (bearing and distance from Huangbaizui Lighthouse). Meanwhile, vessel should also report same to her Port Agent (by VHF Channel 25 to "Penavico").
   (D) For anchoring vessel, in any case and for any reason, vessel should request permission 30 minutes before any kind of shifting (berthing, leaving, shifting of position, etc.).
2. Vessel should immediately report to the Port Control if vessel has problem affecting safety, navigation, such as hull, machinery and equipment damage or trouble, insufficient manning, or vessel has marine accident such as fire, collision, pollution, etc.
3. Vessel loaded with dangerous cargo onboard (including transit cargo) should have permission to enter, to be granted by the Harbour Master 3 days before vessel's arrival. When necessary, for security, the Harbour Master may send escort boat sailing with the vessel which has dangerous cargo on board, and the escort charge to be for vessel's account.

SHIPMASTER'S REPORT: March 1980.

Berth: Oil Terminal No. 1 Berth (Lat. 38° 58' 30" N., Long. 121° 54' 10" E.).

Chart: B.A. 1798.

Draft: Departure draft, 38 ft. 4 in., fore and aft.

Approach: The approach to the Inspection/Pilot Boarding Anchorage is clear of obstructions but large concentrations of fishing vessels were encountered off Shantung Promontory.

Anchorage: S.E. of Hsien Chiao Light (Lat. 38° 57' 45" N., Long. 121° 59' 05" E.) and bounded by Positions:

Lat. 38° 55' 42" N.,	Long. 121° 59' 00" E.
Lat. 38° 56' 48" N.,	Long. 121° 59' 00" E.
Lat. 38° 56' 48" N.,	Long. 122° 02' 00" E.
Lat. 38° 55' 42" N.,	Long. 122° 02' 00" E.

Depth 15/18 fathoms.

Entry Inspection: Carried out at the Anchorage, during daylight hours, by 8 officials representing Customs, Immigration, Harbour Authority and Agency. The entry formalities were very easy and a Bonded Stores List was not required and the Bond was not sealed. The Immigration Officer checked all passports but a Crew muster was not required. After pratique has been granted and other entry formalities completed, 2 Immigration Guards stay on board until the vessel berths, and during this time they make out Crew Shore passes from Passports. After berthing, the Agent's representative lives on board during the vessel's stay and is very obliging and helpful.

Berth: A modern (1977) concrete dolphin structure with tower/elevator gangway and winches on all dolphins, 420 m. long, direction 149°/329°.

No. 1 (outside)	Max. size:	100,000 d.w.t.
	Depth:	17 m.
	Max. draft:	15 m.
	Max. length:	360 m. O.A.
	Loading arms:	4×12 in. Chicksans
	Max. load rate:	10,000 t.p.h.
No. 2 (inside)	Max. size:	50,000 d.w.t.
	Depth:	14 m.
	Max. draft:	12 m.
	Max. length:	230 m.

Fresh water is available on the berths but bunkers are supplied by barge from Dalian old port.

The berths are connected to the shore by a cantilever bridge 0.5 miles long approx. and vehicles are not permitted over the bridge.

There is a dirty ballast reception facility with a maximum rate of 3,000 t.p.h.

Berthing/Unberthing: Carried out at any time with 3 Pilots, 2 large and 1 medium tug for berthing and 2 Pilots and 2 large tugs for unberthing. Berthing at No. 1 Berth is always port side to and is straightforward with plenty of men for handling moorings. Starboard anchor is let go about 100 ft. off the berth. Pilots advise there can be moderate swell with E./S.E. winds.

On departure the vessel is swung to starboard off the berth by 2 tugs and the Pilots disembark shortly after the swing is completed. The Red Flashing Buoy in Lat. 38° 58' 20" N., Long. 121° 55' 00" E. is left to port when berthing and to starboard on sailing.

Communications: Agents: China Ocean Shipping Agency, Cable: Penavico, Dalian, require following message 7 days, or after sailing from previous port; name, call sign, nationality, ETA, draft fore and aft, cargo quantity to be loaded, crew's nationality and number, departure port and destination after Dalian.

72 hours: ETA, clean and dirty ballast to discharge, cash required.
48, 24 and 8 hours: ETA.

8/12 hours: ETA to Harbour Master Dalian.

8/12 hours: ETA, crew health condition to Port Health Dalian.

Dalian Port Radio can be contacted on VHF Channel 16 and will transfer call to Agents on Channel 9.

Agent: China Ocean Shipping Agency, will provide cash advance but any unused currency must be returned to Agent before departure. Foreign currency can be exchanged ashore. Agents will provide mini-bus/taxis for crew travel to Dalian Town which is about one hour's drive. After completion of loading there is a delay of 3 to 5 hours before documents are brought on board for signature. Immigration require all shore passes to be returned and Customs wish to sight Tonnage Dues Certificate provided on arrival. There is an armed guard stationed at the shore end of the gangway at all times, and he inspects shore passes and Passports when leaving and returning to the vessel.

Cargo: Taching Crude Oil. A.P.I.: 32 – 33, Pour Point: 28° – 33°C, Sulphur: 0.1%, Load Temp: 40° – 45°C.

Harbour Authority: As vessel's first call, authorities visited after arrival alongside and checked and inspected all safety and fire-fighting equipment, and required details of engine room bilge and sewage disposal whilst in port. Also checked Oil Record Book. They were a little concerned at direct mooring with wires and would perhaps be better to have rope pendants on mooring wires. Normal tanker port restrictions apply regarding pollution avoidance from oil, garbage and sewage, also no fishing is allowed either at anchorage or alongside. When alongside shore labour empty garbage receptacles once per day.

Chandler: Dalian Ocean Supply Corporation have a comprehensive range of catering supplies, and limited deck and engine stores. From the price list obtained the range and price of provisions was extremely competitive. As no stores were purchased quality cannot be commented upon although the Catering Officer did visit the store in Dalian and reported that most of the articles listed in their brochure seemed to be available and of reasonable quality. Our call being in Winter season, fresh vegetables, fruits, salads, etc., were in short supply.

Chandlers Cable Address: Supco, Dalian. Telephone 26820.

SHIPMASTER'S REPORT: September, 1980.

This is a brief report on port information obtained when vessel (42,764 g.r.t. 75,877 d.w.t.) called at Dalian in September, 1980 for loading Daqing Crude Oil.

Oil Terminal: Position Lat. 38° 59' N., Long. 121° 54' E.

Restrictions: Entering formalities, so-called "General Examination" made, as a general rule, during day time only by the Port Officials of Quarantine, Immigration, Customs and Harbour Superintendency Administration.

Berthing and sailing operations take place 24 hours a day with the exception that the vessel does not berth on Berth No. 2 during nighttime.

Documents:

To be submitted to the Port Officials:

(a)	Crew Lists (Chinese Form)	6 copies
	* Japanese crew members are required to fill in their names and address in Chinese characters	
(b)	Report of entry for foreign-going ship (Chinese Form)	2 copies
(c)	Maritime Declaration of Health	1 copy
(d)	Import Manifest (Free Form)	1 copy
(e)	List of specified articles, foreign currencies, gold, silver belonging to ship and/or member of crew (Chinese Form)	1 copy
	* Specified articles means watches, cameras, recorders and transistor radioes, etc.	
(f)	Vaccination List (Free Form)	1 copy
(g)	Application for discharge of dirty ballast water to shore facility (Chinese Form)	1 copy
(h)	Application for discharge of segregated ballast water into sea (Free Form)	1 copy

* Stores List is not required
* Chinese Forms are obtainable by the Agent

To be shown to the Port Officials:
(a) Ship's Register
(b) Last Port Clearance
(c) Derat Certificate
(d) Load Line Certificate
(e) Safety Equipment Certificate
(f) Safety Construction Certificate
(g) Safety Radiotelegraphy Certificate
(h) Oil Record Book
(i) Certificate of Financial Security in respect of Civil Liability for Oil Pollution Damage
(j) Discharge Books, Passports and Yellow Cards

Pilotage: Compulsory for berthing and unberthing at the oil jetty. Pilot boards about 5 miles E.S.E. of the jetty.

No pilot boat, tug used.

Anchorage: Quarantine Anchorage surrounded by the following four points is established:
(a) Lat. 38° 56' 48" N., Long. 121° 59' 00" E.
(b) Lat. 38° 56' 48" N., Long. 122° 02' 00" E.
(c) Lat. 38° 55' 42" N., Long. 122° 02' 00" E.
(d) Lat. 38° 55' 42" N., Long. 121° 59' 00" E.

Nature of bottom is mud, depth of water 27 m. to 35 m.

Berths: There are 2 tanker berths on the oil jetty with a length of about 400 m. and depth of 17 m. at Berth No. 1, 14 m. at Berth No. 2.

Max. Size:
Berth No. 1: 100,000 d.w.t., LOA approx. 260 m., max. draft 15 m.
Berth No. 2: 50,000 d.w.t., LOA about 230 m., max. draft 12 m.

Berth No. 1 is located on the offshore side of the jetty and Berth No. 2 on the inshore side.

Vessels generally berth portside alongside.

Health: Radio Pratique is not available. The Master has to show the yellow cards together with a vaccination list and submit a Declaration of Health.

Radio: The Master or owner of a vessel, shall 7 days prior to vessel's arrival, submit the required forms to the Harbour Superintendency Administration through the Agent (Penavico, Dalian) for completion of entry formalities. They require:
(a) Vessel's name
(b) Nationality
(c) ETA
(d) Arrival draft
(e) Quantity of cargo to be loaded at Dalian
(f) Nationality and the number of the ship's personnel
(g) Last port
(h) Destination

The Master has also to radio to the Agent her ETA and arrival draft, 24 hours in advance of her arrival, through Dalian Radio, who is to advise the Harbour Superintendency Administration.

Furthermore, the Master is also required to advise her Agent 2 or 3 days prior to her arrival, of the quantities of the segregated water ballast and other water ballast retained on board at the time of arrival.

VHF: Dalian VHF station keeps a 24 hour listening watch on Channel 16 and is available to communicate with Agent (Penavico).

Tugs: Available. Normally 3 tugs join the vessel for berthing and 2 for unberthing.

Fresh Water: Available either from the shore or barge.

Fuel: Fuel oil and marine diesel oil are both available from barge.

Ballast: No ballast water is allowed to be discharged into the sea, except segregated ballast water.

Shore reception facilities with a capacity of 30,000 tons can receive 3,000 tons of oily ballast water per hour at a cost of 0.8 Yuan per ton.

According to the Regulations, the Authorities will allow discharge of ballast water into the sea subject to the oil content of the ballast water being less than 10 p.p.m. However, as a matter of fact, any ballast water loaded in cargo tanks is not allowed to be discharged into sea for the reason that the Master cannot give them any evidence of the oil content of the ballast water.

Therefore, there is no necessity for cleaning cargo tanks for ballasting purpose.

Customs Allowances: Ship's bonded stores are not sealed. No limitation to cigarettes or wine/spirit for use on board.

Identification Cards: Shore leave is granted from sunrise to midnight.

Shore passes are issued by the Immigration Officer.

Crew members going ashore must carry the shore passes together with their Passports or Discharge Books.

There is a seamen's club with a Chinese restaurant and some souvenir shops. Bus service is also available between the terminal and the seamen's club.

Cargo: The crude oil shipped at this terminal is the Daqing Crude. The properties of Daqing Crude which the vessel loaded in September 1980 at this terminal were as follows:

(a) API	32.84
(b) Temperature of cargo loaded	41.0°C. (106.0°F)
(c) Pour point	24.0° – 25.0°C (77.0°F)

Cargo heating may be required.

Loading:

Berth	Size of arm flange	Number of arm
No. 1	12 in.	5
No. 2	12 in.	3

Max. loading rate is reported to be about 7,000 t.p.h. using 3 arms.

Notice of Readiness will be accepted at the time of completion of the general examination.

Agent: China Ocean Shipping Agency, Dalian Branch (Penavico Dalian).

Provisions: Available at a low price. Ship chandler will be arranged by the Agent.

SHIPMASTER'S REPORT: April, 1984.

I made a port call at Dalian in April 1984 and found after anchoring without Pilot that I had made a wrong passage in the channel, switching off radar, etc. in accordance with previous regulations.

There is now no restrictions or prohibitions on using navigational aids in the harbour.

When entering the Inner Harbour Anchorage without Pilot it is important for the Master, on the first visit, to know that there is a Traffic Separation Scheme and it is sometimes congested with vessels.

SHIPMASTER'S REPORT: October, 1984.

Master received following telex from Dalian Agent:

"When entering Dalian Harbour you must pass through Dasanshan Channel and navigate within Right Traffic Lane of Traffic Separation Scheme.

Separation Zone, 0.3 nautical miles wide, is centred upon following geographical positions:
Lat. 38° 51' 00" N., Long. 121° 46' 12" E.
Lat. 38° 54' 24" N., Long. 121° 46' 12" E.

Separation Lane is connecting following:
Lat. 38° 55' 00" N., Long. 121° 46' 12" E.
Lat. 38° 57' 00" N., Long. 121° 46' 12" E.

and turn into Ganjingzi Channel at Light Buoy H2 (Lat. 38° 57' 21" N., Long. 121° 46' 12" E.) then enter into Quarantine Anchorage:
Lat. 38° 59' 08" N., Long. 121° 42' 30" E.,
Lat. 38° 57' 39" N., Long. 121° 42' 30" E.,
Lat. 38° 57' 39" N., Long. 121° 45' 00" E.,
Lat. 38° 59' 08" N., Long. 121° 45' 00" E.

The East Boundary Line between the Separation Lane and the Inshore Traffic Zone is:
Lat. 38° 51' 00" N., Long. 121° 48' 30" E.,
Lat. 38° 54' 24" N., Long. 121° 48' 00" E."

SHIPMASTER'S REPORT: December 1986.

Documents: Only 1 copy of each document required except for Crew List (6 required). Refused to accept 'Marine Declaration of Health' as it was in English only. All documents had to be in Chinese/English – all available from Agent as well as 'application' forms (de-ballast, postage, etc.). Main papers were Customs Declaration (including Foreign Currency List) Vaccination List, and 'normal' ship's papers. (Register, Derat, etc.).

Officials: Boarded by 'Joint Inspection Team', which consists of 8 people (Immigration, Customs, Port Authority and Agent).

Bond sealed by Customs and unsealed prior to sailing, when the 'Joint Inspection Team' clears the vessel for sailing.

Anchorage: Instructed by Agent to anchor in 'Tanker Quarantine Anchorage' (North of fairway). No problems encountered in entering, buoys in position, but lights rather weak.

No. 1 General Cargo Anchorage very crowded with small vessels.

Unable to contact Port Radio (VHF) on entering and had to wait until following morning.

All vessels are visited at anchor; possibly in order of arrival.

Radio Station: Receives and transmits as per ALRS; but not very good at answering on H/F. Once within M/F range, Radio Officer reported the station as reasonable.

Berth: Vessel berthed starboard side to Pier No. 1, which has a maximum draft of 9.5 m. Pier No. 2, to the East, is believed to be restricted to 8.7 m.

Cargo: 18,000 tonnes of gas oil. Pumping rate: 750 t.p.h. – 800 t.p.h.

Shore Leave: No apparent restrictions, except that all crew have to be back onboard by midnight. Shore pass and Passport/CDC Book to be carried when going ashore.

Local Seaman's Club and Friendship Store will change any foreign currency.

Taxis to and from club or store apparently paid for by them; from elsewhere taxis appeared to be a little expensive.

SHIPMASTER'S REPORT: January 1987.

Vessel: 105,000 d.w.tonnes with segregated ballast tanks.

Berth: No. 1 Berth.

Max. Draft Allowed: 15.0 m.

Loading: The shore loading rate was given as 2,000 tonnes p.h./boom. This was an optimistic estimate as we received at a maximum rate of 5,200 tonnes p.h. with 4×12 in. booms connected. This decreased to about 4,000 tonnes p.h. when a vessel was loading at Berth No. 2.

Ballast: During entry formalities, the Harbour Master checked the Oil Record Book and the Deck Log Book to confirm where the ballast was shipped. Any ballast taken in Singapore or the Malacca area is considered 'infected' and must be discharged ashore.

Mooring Wires: Vessel is fitted with mooring wires and this caused a delay when sailing as there were not enough personnel to heave in sufficient slack to let go.

Shore Leave: A minibus is available to take personnel ashore to the International Seaman's Club and times are organised to suit ship's staff. For 8 round trips during the vessel's stay the charge was approximately £7 and the journey takes about 10 minutes. Local cash is available but almost any currency can be used at the Seaman's Club, where there is a bar/restaurant, shop and facilities for International telephone calls (£2.00 per minute to the U.K.)

Documents: Discharge Books only were checked by Immigration Officials on arrival, no passports or vaccination cards were required.

SHIPMASTER'S REPORT: September 1991.

Dalian is a very busy port, and is congested most of the time.

Navigation: Reference: B.A. Chart No. 3694 – Dalian Wan Approaches.

Traffic separation zones are marked on the chart and vessels are required to keep within the zones. Numerous fishing boats will be encountered in the separation zones.

North of Quarantine Anchorage No. 2 and the tanker anchorage, is used for seaweed cultivation, and many nets and stakes extend to the Northern areas of the above anchorages. Vessels should navigate with extreme caution in these areas. It is advisable to use Anchorage No. 1 when not congested.

When port is congested the Agent advises vessel to anchor in the outer anchorage.

Vessel should advise Port Control on VHF Channel 6 when entering Dasanshan Shuido (Entrance to the Bay – See B.A. Chart No. 3694).

Penavico (Agent) working channel is VHF Channel 25. Vessel should inform Penavico time of anchoring and position from Hungbai Zui Lighthouse, bunkers remaining and water onboard, and arrival draft.

Pilotage: Pilots board vessel at the quarantine anchorage.

Pilots will call vessel on VHF Channel 16, working channel is Channel 12.

Berthing prospects advised by Penavico on VHF Channel 25 at 1100 hrs. everyday. They also advise approximate time of berthing. Pilots will call VHF Channel 16 to advise boarding time.

Dalian Main Port: Port consists of 30 main berths. See "Plan" for berth lengths and depths. Depths shown are minimum depth.

Xiang Lu Jiao Area: This area has been in operation for at least 5 years, but the B.A. Charts have not been updated.

The main channel depth is 8.6 m., and this connects "Ganjingzi Fairway". Both channels are marked by buoys, but buoys are shifted frequently and may be out of position during winter months.

Berths No. 1 and 2 – Used mainly for timber exports.

Berths No. 3 and 4 – General, soya bean, maize, steel, pig iron, etc.

Berths No. 5 and 6 – Containers, fitted with 2 gantry cranes.

Berths No. 7 and 8 – General.

Our vessel berthed at Xiang Lu Jiao No. 3 for loading soya beans in bags, and when loaded upto 7.0 m. draft we shifted to Berth No. 7 to complete loading.

Due to the depth at the berth, the vessel had to be berthed with the stern overhanging, and with Northerly winds vessel was exposed to the weather.

Upon sailing at high tide, vessel had to be towed stern first towards Berth No. 6 for turning, due to insufficient depth near Berth No. 7.

Berths in the Xiang Lu Jiao area are not recommended for vessels over 150 m. in length.

Fresh Water: Due to uncertain berthing conditions, and due to the port being congested, it is advisable to arrive with maximum fresh water onboard. If water is required at anchorage, at least 4 days notice should be given to the Agent. The barge will not leave the harbour during strong winds.

Fresh water at Xiang Lu Jiao is supplied by barge from the main port.

SHIPMASTER'S REPORT: April 1992.

Berths: Vessel (50,000 d.w.t.) called at Dalian for loading unleaded Mogas.

Vessel used two berths during stay in Dalian

1st Berth: Ganjingzi Oil Berth No. 11. Hoses: 1×8 in. Loading rate: 700 cu.m./hr.

2nd Berth: Dalian Oil Berth No. 3. Hoses: 2×6 in. Loading rate: 800 cu.m./hr.

Berthing/Unberthing: 2 Pilots and 2 tugs.

Shifting: Shifting from one berth to another not allowed during night time, due to vessel partly loaded. Shifting from berth to anchorage allowed throughout 24 hours.

Entry Inspection: Carried out at anchorage during daylight hours, by "Joint Inspection Team" of 8 officials representing Customs, Immigration, Harbour Authorities and Quarantine Doctor.

Customs: Sealed the Bonded Stores.

Immigration: Checked all passports and issued shore passes.

Quarantine: Doctor issued Free Pratique.

After the Joint Inspection Team had left, Agent came on board. Prior to departure, the same Team came on board.

Harbour Authorities issued Port Clearance.

Quarantine Doctor issued Quarantine Certificate for departure of ship.

As vessel's next port was Ningbo, all Customs documents handed over to Master in a sealed envelope for Customs at Ningbo.

Shore passes also valid for Ningbo.

Tonnage Dues Certificate: 30 days was minimum length of issue.

Communications: Agents: China Ocean Shipping Agency, Dalian. Cables: Penavico Dalian. Telex: 86161 Cosad CN.

Agent required following information prior to arrival:

(a) Vessel's name.
(b) Nationality.
(c) ETA.
(d) Arrival draft.
(e) Quantity of cargo to be loaded at Dalian.
(f) Nationality and number of crew.
(g) Last port.
(h) Destination.

All messages sent to Agent via Satcom.

Agent tried to send messages to ship via Satcom, but did not succeed, so all messages from Agent received by cable through Dalian Radio/XSZ.

Following cable received from Agent before arrival:

Quote

Please advise the following by return cable or telex:

1. Last port of call.
2. Sailing draft from Dalian.
3. Quantity deballast ashore, if ballast contains dangerous chemicals, it is not acceptable.
4. Has vessel segregated ballast tanks, if not, please advise quantity and distribution of clean ballast which is to be pumped into the sea.
5. Name of last cargo.
6. Water/bunkers must be supplied before berthing. Please advise quantities, if required.
7. If blank Bill of Lading forms available on board.
8. Any transit IMO cargo on board, if any, please advise name and IMO class.
9. Amount of cash advance required.

Penavico Tlx 86161 cosad cn.

Unquote

VHF: Penavico listens on Channel 25 throughout 24 hours.

Every day at 1100 hrs. (local time), a berthing schedule is broadcasted on Channel 25 by Penavico.

Documents:

On arrival:

4 copies Crew List (IMO Form accepted).
2 copies Crew Effects Declaration (IMO Form accepted).
2 copies Currency List (Free form).
2 copies Gold and Silver List (Free form).
1 copy Vaccination List (Free form).
2 copies Ports of Call List (Free form).
1 copy Maritime Declaration of Health (Chinese form).
2 copies Report of Entry for foreign-going ships (Chinese form).
1 Application for discharge of segregated ballast water into sea (Free form).
1 copy Bonded Stores List (IMO form accepted).
6 copies Ship's Particulars (Free form).

On departure:

4 copies Crew List (only if crew changes).
1 copy Maritime Declaration of Health for departure of ship (Chinese form).
1 copy Report of Clearance (Chinese form).
1 copy Report on the Chinese Currency (Chinese form).

All Chinese forms supplied by Agent, and are easy to fill in.

On arrival, ship's certificates were shown to port officials together with Oil Record Books.

Shore Leave: Shore passes required together with passports.

Shore leave allowed from sunrise to midnight. One guard stationed at ship's gangway throughout 24 hours, and he inspected shore passes and passports when leaving and returning to vessel.

From Ganjingzi Oil Berth No.11, a minibus to Seamen's Club/town arranged via Loading Master. Transportation time is 40 minutes each way. Minibus to be paid for by crew members (approx. U.S.$15.00 each way).

Delays: Ship was delayed several hours due to no Cargo Surveyor being available.

AUTHORITY: Port of Dalian Authority, 1 Gangwan Street, Zhongshan District, Dalian, China. *Tel:* 237873, 222824. *Telex:* 86246 DHAB CN.
Contact: Shen Chun, Deputy Director.

AGENT: See "Shanghai".

DANDONG: 39.38 N. 124.09 E. (See Plan)

LOCATION: *Langtou Port District:* 40° 07' N., 124° 24' E.
Dandong Port District: 39° 38' N., 124° 09' E.

PILOTAGE: Pilotage is compulsory and is undertaken day and night. Pilot boards vessel at the mouth of River Anchorage in Lang Tou Port District, and at Quarantine Anchorage in Dadong Port District.

ANCHORAGES:

Name	*Location*	*Depth (m.)*	*Size of Vessel (d.w.t.)*	*Use of Anchorage*
River Anchorage	39° 41' N. 124° 08' E.	8.0 - 10.0	over 10,000	Shelter
Langtou	40° 12' N. 124° 21' E.	4.0 - 5.0	under 1,000	Shelter
Donggang	39° 47' N. 124° 09' E.	8.0 - 13.0	over 10,000	Lightering
Quarantine	39° 47' N. 124° 07' E.	8.9 - 9.1	over 10,000	Quarantine
Dandong Port	38° 41' N. 124° 09' E.	9.0 - 10.0	over 10,000	Quarantine

RESTRICTIONS: Vessels may enter port after dark, but may not sail.

Draft Limitation in the Channel:
Langtou Port District: 6.93 m.
Dadong Port District: 8.00 m.

Tidal Range:
Langtou Port District: Maximum 6.93 m., minimum 2.23 m.
Dadong Port District: Maximum 6.93 m., minimum 1.56 m.

VHF: Radio Station 'XSB 93' maintains a 24 hour service. Calling on Channel 16 and working on Channel 11.

TUGS: 1×400 h.p., 1×600 h.p. and 1×900 h.p.

BERTHING:

Name of District	*No. of Berth*	*Length (m.)*	*Depth (m.)*	*Use*
Old Berth	–	68	5.2	General Cargo
Langtou	No. 1	126	8.2	General, Grain, Ore, Oil
	No. 2	126	8.2	
	No. 3	126	8.2	
Dandong	No. 1	190	10.0	General and Coal

FRESH WATER: Available.

FUEL: Available.

REPAIRS: Facilities available for carrying out repairs.

DONGSHAN: 23.45° N. 117.31 E.

PILOTAGE: Compulsory. Pilot service is available during 10 hours. Pilot boards vessel at Lat. 23° 43' 00" N., Long. 117° 33' 00" E.

ANCHORAGE:

Anchorage No./Name	*Location*	*Depth (m.)*	*Use*
1	Lat. 23° 45' 00" N. Long. 117° 35' 00" E.	10-15	Sheltering, Lightening
2	Lat. 23° 45' 00" N. Long. 117° 34' 18" E.	10-15	Sheltering, Lightening
3	Lat. 23° 44' 42" N. Long. 117° 33' 24" E.	10-15	Sheltering, Lightening
4	Lat. 23° 45' 42" N. Long. 117° 30' 18" E.	8	Lightening
Quarantine Anchorage	Lat. 23° 43' 00" N. Long. 117° 33' 00" E.	10-15	Joint Inspection, Pilot

All anchorages have good holding ground with mud and sand bottom.

RESTRICTIONS: Vessel may only enter and sail during daylight.

Tidal range: Max. 3.8 m. Average 2.2 m.

Draft limitation in the Channel: 8.0 m.

VHF: Penavico Dongshan – Channel 16. Sinoagent Dongshan – Channels 16 and 12.

TUGS: None.

BERTHING:

Stevedore Company	*Berth Name*	*Length (m.)*	*Depth (m.)*	*Max. Size (d.w.t.)*	*Cargo Handled*	*Equipment*
$Si0_2$ Sand Bureau	$Si0_2$ Sand	130	7.2	8,000	$Si0_2$ Sand	Automatic Shiploader
Transport Co. of Dongshan	General Cargo	130	5.5	5,000	General Cargo, Containers	1×40 ton, 2×5 ton Shore Cranes
Oil	Oil	152	5.2	4,000	Petroleum	

Warehouse and Open Storage Space:

Warehouse	2,020 sq.m.
Open Storage Space	12,000 sq.m.
Container Yard	5,000 sq.m.

Main Import and Export Cargo:
Cement, steel, general cargo, containers and $Si0_2$ sand.

FRESH WATER: Available at berth and anchorage.

FUEL: Available, except fuel oil.

REPAIRS: Possible.

GENERAL:

Agency: Penavico Zhangzhou, 2nd Floor, Port Building, Zhangzhou, Fujian, China. Tel: 86-596-2028623. Fax: 86-596-2028622. Telex: 929009 Penfz CN.

Sinoagent Dongshan, Port Building, Dongshan, Fujian, China. Tel: 86 596 5620474, 5623474. Fax: 86 596 5623516. Telex: 929017 Agent CN.

Provisions: Available.

FANGCHENG: 21.31 N. 108.20 E. (See Plan)

PILOTAGE: Compulsory. Pilotage is undertaken day and night, subject to tidal variation. The pilot boards from a tug which flashes its lights when approaching the vessel. The boarding place is 1 mile South of the Quarantine Light Buoy.

ANCHORAGE: *Quarantine Anchorage:* A Quarantine Anchorage has been established in position Lat. 21° 27' 56" N., Long. 108° 21' 13" E. The anchorage can accept vessels up to 25,000 d.w.t. Nature of bottom is mud and sand.

RESTRICTIONS: There is a depth of 5.8 m. on the bar. The channel has a minimum width of 100 m. and is dredged to a minimum depth of 8.0 m. The channel is 7.5 miles long and is marked by light buoys and leading light beacons. The width of the turning basin off the berths is 1,200 ft.

Vessels may enter and sail after sunset.

MAX. SIZE: Maximum draft 9.5 m.

VHF: Port Radio Station on Channel 16 throughout 24 hours.

TUGS: 1 × 2,600 h.p., 1 × 1,200 h.p. and 2 × 600 h.p.

BERTHING:

Berth	*Length (m.)*	*Depth (m.)*	*Cargo Handled*
No. 1	180	9.0	General Cargo
No. 2	180	9.0	General Cargo
No. 3	180	9.6	Heavy Cargo
No. 4	180	9.6	Grain
No. 5	180	9.6	Chemicals, Fertiliser
No. 6	210	11.2	Ore
No. 7	210	11.2	Coal
No. 8	220	11.4	Grain, Special Loads

CRANES:

Berth No. 1: 3 × 10 tons.
2: 3 × 10 tons.
3: 2 × 10 tons.
4: 2 × 10 tons.
Berth No. 5: 1 × 16 ton.
6: 2 × 10 tons.
7: 1 × 16 tons.
8: 2 × 16 tons.

FRESH WATER: Available, contact China Marine Bunker Supply Co.

FUEL: Available, contact China Marine Bunker Supply Co.

REPAIRS: No facilities.

GARBAGE DISPOSAL: There is a company who can assist with garbage service to vessels in harbour. They have drums, skips and boats, and men to remove garbage on board every morning. Ring 822546 or 822071 (Ext. 2411, 2419) for service.

WASTE OIL DISPOSAL: Collection service, shore tanks, barges and tanker trucks available. Ring telephone numbers above for service. There are also some berths for waste oil disposal.

SEAMAN'S CLUBS: Fangcheng International Seamen's Club, Xinggan Street, Fangcheng Port, Guangxi, China. Tel: 822388. Facilities available: Guest rooms in different classes, restaurant serving both Chinese and Western food, shops, ballroom, reading room, theatres, recreation rooms and telecommunication service. Seamen's Club often organises recreational, sports and sightseeing tours for seamen from different countries.

CURRENCY: Chinese Yuan.

GENERAL: *Floating Cranes:* None available.

Provisions: Available. Contact China Shipping Supply Corporation.

Cargoes Handled: Sugar, coal, grain, fertiliser, cement, ore, timber, steel and general cargo.

Storage:

Warehouse: 4,500 sq.m.

Open storage space: 200,000 sq.m.

DEVELOPMENTS: Upon completion of the port modernisation program, 54 berths will be available for handling of vessels up to 50,000 d.w.t.

SHIPMASTER'S REPORT: March 1989.

Location: The port is located in position Lat. 21° 37' N., Long. 108° 20' E. It is a small port at the end of a dredged channel which is 7 miles long and 80 m. wide.

Formalities: Customs, Immigration and Health Officials board on arrival, together with the Agent. We prepared ships papers in advance of arrival and all were accepted, except for the Crew List which has to be made out on Chinese forms. The Agent will deliver Chinese clearance forms and assist with completing them.

Shore passes are issued for each crew member and are collected prior to departure. The port rules are also handed over to the Master and these again are collected prior to departure.

The bonded store was sealed by Customs but the beer store is left unsealed.

Pilotage: The Pilot boards the vessel from a tug, one mile South of the pilot buoy. There are 4 pilots available at the port.

On arrival the vessel should call Fangcheng Radio on VHF Channel 16, who will connect the vessel with the pilot office, after which the vessel may communicate with the Pilot Station on VHF Channel 16. The language of communication is English and no difficulties were encountered.

Pilot Ladder: No special requirements.

Approaches: The charts used on our visit were B.A. Chart No. 3990 and Chinese Chart Nos. 16791 and 16792.

No difficulties were encountered on our approach, Cape Pak Loung is a good radar target and the yellow pilot buoy is visible at 5 miles on the radar.

Channel: The Channel is marked by light buoys and leading lights and has a width of 80 m. Vessels with a draft of 7.0 m. may use the Channel at any time day or night.

Anchorage: Quarantine Anchorage: A Quarantine Anchorage has been established between parallels of 21° 21.5' N. and 21° 28' N., and the meridians of 108° 20' E. and 108° 26' E. This anchorage is not marked on B.A. Chart No. 3990.

We anchored on the Northern border of this anchorage, which was 2 miles to the South of the pilot buoy. The depth of water is approximately 16.0 m. and nature of the bottom is mud and sand.

Tide: Most arriving vessels have to anchor, due to the tidal situation. The tidal range is about 4.0 m.

Max. Size: The port can accommodate vessels up to LOA 185 m.

Vessels up to LOA 210 m. may be accepted if the Agent seeks Harbour Master's approval.

The maximum permissible draft on the highest tide is 11.0 m. If a vessel has a draft greater than 11.0 m. it may be lightened in the outer roads if advanced notice is given to the Agent.

Tugs: There are 4 tugs available, of which 2 are powerful tugs of international standard. When berthing alongside the tugs use their own lines and make fast fore and aft.

Berthing: The port of Fangcheng has 7 berths. Berths No. 1 and 2 have a depth of 8.0 m. and Berths No. 3 – 7 have a depth of 9.0 m. – 10.0 m. at lowest low water.

All berths are fitted with rubber spring fenders and at high water they are below the water surface.

Stevedores: Work is carried out throughout 24 hours in 3 shifts (0800 hrs. – 1600 hrs., 1600 hrs – 2400 hrs. and 2400 hrs. – 0800 hrs.). Meal hours are 0400 hrs. – 0500 hrs., 1130 hrs. – 1300 hrs. and 1930 hrs. – 2100 hrs. The gangs consist mainly of labourers from farms and mines.

Cranes: There are 10 cranes of 10 tons capacity which are available at all berths.

Medical: Medical facilities and doctors available locally.

Fresh Water: Fresh water is available. As the water is not frequently used by vessels, the first water in the line is very rusty and may take as long as one hour before clear water is running. Fresh water is also available by barge at the outer roads on request.

Fuel: Fuel is available by barge from other ports in an emergency but it is very expensive.

Watchmen: There are 2 watchmen (Immigration Officers) on board day and night.

Surveyors: No surveyors available locally. If required Lloyd's and ABS can provide surveyors from Hong Kong.

Local surveyors for bunkers or off-hire surveys can be ordered from nearby Chinese ports.

Repatriation: Possible. Information should be provided to the Agent when the vessel is alongside.

Airport: Nanning Airport is approximately 180 km. from the port by bus.
Time: GMT plus 8 hours. In Summertime from April 21st to September 22nd, clocks are advanced one hour.
Shore Leave: Possible. Shore passes and passports must be carried when going ashore.
General:
Seaman's Club: There is a Seaman's Club locally from which overseas telephone calls may be made.
Telephone/Telex: Available in the Agent's office. Connections to foreign countries are made through the operator, waiting time of 30 minutes or more can be expected. Within the next year or so a direct dialling system will be established.
Garbage: Form for garbage removal is signed by the Master on arrival. Garbage will be removed daily by the collector and should be in plastic bags.
Ship Chandler: The ship chandler boards on request with a price list and speaks good English.
Laundry: Laundry service is available and is handled by the ship chandler.
Currency: The currency is the Yuan. The official rate of exchange in March 1989 was 3.62 Yuan to U.S. $1.00.
Imports: Grain, fertiliser and raw sugar.
Exports: Manganese ore, coal, bauxite, cement and refined sugar.
Agent: PENAVICO (China Ocean Shipping Agency). The Agent speaks good English and was very helpful in every respect.

AUTHORITY: Fangcheng Harbour Superintendency Administration, Fangcheng Port Area, Guangxi, People's Republic of China.
Contact: Mr. Chen, Harbour Master.

FUZHOU (Foochow): 26.03 N. 119.18 E.

(See Plan)

PILOTAGE: Compulsory. Pilot available between 0400 hrs. and 2000 hrs. Pilot boards vessel in the anchorage (position: Lat. 26° 07' 44" N., Long. 119° 38' 44" E.).
ANCHORAGE: Tingjing Guantou Anchorage has a depth of 6.0 m. – 12.0 m. and accepts vessels up to 20,000 d.w.t.
MAX. SIZE: Max. draft in channel is 8.0 m. at LW and 8.5 m. at HW.
Tidal range: 6.0 m. maximum and 3.5 m. minimum.
VHF: Port radio on Channel 16 throughout 24 hours.
TUGS: 1×400 h.p., 1×980 h.p., 1×1,600 h.p., 1×2,200 h.p. and 2×3,200 h.p.
BERTHING:

Wharf	*Berth No.*	*Length (m.)*	*Depth (m.)*	*Use*	*Cranes*
Ma Wei	1	592	9.0	General Cargo	5×10 tons
	2		9.0	General Cargo	
	3		7.0	General Cargo	
	4		7.0	General Cargo	
Qing Zhou (New wharf)	1	170	12	Passengers	
	2	190	12	General Cargo	1×10 tons
	3	190	11	General Cargo	2×16 tons
	4	220	10	Containers	2×40.5 tons
	5	220	10	Containers	
Song Men	1	333	11	Bulk Cargoes	1×16 tons belt conveyor
	2		11	Bulk Cargoes	
Tai Jiang		303+522	2 – 5	General Cargo	
Steel Wharf		277	8.5	Consignee Wharf	2×10 tons
Fishery Wharf		107	7.5	Consignee Wharf	
Chou Dong Electric Factory Wharf		322.45	14	Consignee Wharf	1×16 tons, 2 sets of belt conveyors
Hong Shan Oil Wharf		116	11.5	Consignee Wharf	

CRANES: *Floating Cranes:* 1×80 tons, 1×60 tons and 1×40 tons.
FRESH WATER: Laid on at wharf. With difficulty, water is supplied at anchorage by barge (capacity 400 tons).
FUEL: Contact Penavico Agency.
REPAIRS: Available, contact Penavico Agency.
GENERAL: *Provisions:* Contact China Ocean Shipping Supply Co.
Storage: Warehouse: 5,500 sq.m. Open storage: 5,700 sq.m. Container storage: 4,000 sq.m. – 30,000 sq.m.
Imports: Cement, fertiliser, rice, coal and general cargo.
Exports: General cargo and stone.

SHIPMASTER'S REPORT: July 1985 (Updated 1996).
Documents: Documents required are same as for other Chinese Ports. 7 copies of Notice of Readiness must be provided. Inspection party boards with Agents and all formalities are carried out promptly. Formalities include Port Health Inspection (granting of Quarantine) and Immigration and Customs clearance. 2 Police Officials remain on board throughout until vessel's departure.
Pilotage: At Quarantine Anchorage 2 Pilots board, and the vessel is taken 5 miles up river to either Guantou Anchorage or a few miles further up river to Minan Anchorage.
Approach: From 5 miles S.W. of Baiquan Liedo pass around its S.W. side and approach position Lat. 26° 06.22' N., Long. 119° 52' E. Then turn West to cross bar at HW (daytime only). Set course 265.5°T against Baiyun Shan leading lights. (These are visible clearly as white concrete structures on hills in daytime at least 15 miles off). On reaching Lat. 26° 05' 37" N., Long. 119° 41' 40" E. and 0.21 miles Southward of Buoy No. 3 in position Lat. 26° 05' 49" N., Long. 119° 41' 42" E. alter course to 308°T against Culudao leading lights. These leading lights are not marked on BA. Chart 2400. The forward light (white concrete structure) is on Xifengshi Point in approximate position Lat. 28° 08.2' N. Long. 119° 38.3' E. Thence approach Quarantine Anchorage centred on Lat. 26° 07' 42" N., Long. 119° 38' 44" E. Whilst awaiting daylight HW vessel can anchor in position Lat. 26° 06' 30" N., Long. 119° 50' 00" E. There is no restriction on use of Radar or echo sounder.
General: Vessel must cross bars and arrive at Quarantine Anchorage marked on BA. Chart 2400. Time of arriving at Quarantine Anchorage is time of Arrival at the Port. Pilots usually do not reply when called on VHF, however, Fuzhou Radio can be called on Channel 16 at any time and asked to convey message to Pilots. Fuzhou Radio will also make VHF contact with Penavico. Thus for any assistance Fuzhou Radio on VHF Channel 16 can be contacted at any time.

Authorities do not board at this anchorage, since it is far from Ma Wei. Agents main Office is situated in Fuzhou City but their full Operations Department is stationed in Ma Wei within the dock area. From Quarantine Anchorage vessel is Piloted to either Guantou or Minan waiting anchorage, about 12 miles and 6 miles respectively from Ma Wei. The Arrival formalities are carried out at these anchorages.
Restrictions: Navigation and all movements during daylight HW only. Max. draft 8.0 m. for going to Ma Wei. No navigation is possible beyond Ma Wei. If vessel is drawing more than 8.5 m. she can be lightened at anchorage, but this will be difficult and cause delays due to shortage of barges, etc. In any case maximum draft permissible is 8.5 m. However it is advisable not to load to more than 8.0 m. if complications are to be avoided. Vessels of more than 180 m. length may find difficulties at anchorages. Ideally vessels of 10,000 tons gross are suitable.
Note: If drawing more than 9.0 m. or length more than 180 m., vessel should contact "Penavico Fuzhou" before arrival.

There are 2 spring tides each month. A draft of less than 9.0 m. can be handled at spring tides.

Prohibited area for Navigation is bounded by Beipiao Peninsular Lat. 26° 21' N., Long. 119° 55' E.; Mazuleidao Lat. 26° 09' N., Long. 119° 55' E.; Baiquan Liedo Lat. 25° 57' N., Long. 119° 58' E. and Tongyindao Lat. 26° 22' N., Long. 120° 30' E.
Radio: 48 hours and 24 hours Notices of Arrival must be sent via Fuzhou Radio. Call sign "XSL". Frequencies: MF-430 kHz all day, and HF-4343 kHz (1800 hrs. – 0600 hrs. local time) or 8598 kHz (0600 hrs. – 1800 hrs. local time) to "PENAVICO Fuzhou". All foreign vessels are handled by Penavico. They will reply with radio message giving tide times and arrival instructions which are similar to those found in BA. Pilot.
Berthing: Four ships can be berthed at Ma Wei Wharf and 5 ships can be berthed at Qing Zhou Wharf. At Ma Wei Wharf, Berths No. 1 and No. 2 are suitable for ships drawing 8.5 m. and Berths No. 3 and No. 4 are suitable for ships drawing 7.5 m. At Qing Zhou Wharf, Berth No. 1 is a passenger wharf, Berths No. 2 and No. 3 are suitable for ships drawing 11.0 m. Berths No. 4 and No. 5 are container wharves, suitable for ships drawing 11.0 m.
Discharge Rate: About 2,400 tons per day (bags/4 gangs) and 3,500 – 5,000 tons per day for bulk cargo.
Cargo Gear: There are 4 cranes of about 5 tons capacity, one for each berth. Cargo work is mostly carried out with ship's derricks. There are several new mobile cranes, and new fork lifts capable of handling 20 ton containers. Cargo is discharged on to trailers and taken to storage sites or directly to railway wagons.
Stevedores: State controlled. Work is continuous in three shifts daily.
Medical: Hospitals situated very close to dock area with full facilities. Inoculations can be carried out.
Fresh Water: Laid on at wharf. Rate 50 t.p.h. Due to waiting period vessels must arrive with tanks full, and water must be rationed during waiting period. With difficulty water is supplied at anchorages by barge (capacity 60 tons.)
Fuel: All grades available.
Density: 1000 at LW. 1015 at HW.
Time: GMT plus 8 hours.
Delays: Sometimes 3 to 4 days.
Developments: Large areas are being reclaimed and long term plans exist to increase berthing facilities. Extensive dredging is also in progress.
General: Provisions: Reasonable amounts of fresh provisions are available at very good prices. However dairy products like butter and frozen provisions not available. Vegetables in limited variety. Fresh meat, poultry and fish are plentiful.
Laundry: Local Seamen's Club handles laundry. Delivery after about 4 days.
Agents: China Ocean Shipping Agency Fuzhou, No. 9 Guang An, Guohuo Road (West), Fuzhou, China. Tel: (0591) 3682405, 3687070, 3363053. Fax: (0591) 3683354, 3363076. Telex: 924086 PENFZ CN.

AUTHORITY: Fuzhou Port Authority, No. 3 Harbour Road, Fuzhou, Ma Wei District, China. *Tel:* (0591) 582132.

GAOGANG 32.07 N. 119.51 E.

PILOTAGE: Compulsory. Pilot service is available during daytime. Pilot boards vessel at the Liuhe Pilot Anchorage.
ANCHORAGE: Port Anchorage: Located inside of Port Shoal. Depth 10.0 m. Bottom is mud and sand with good holding ground. Max. size 25,000 d.w.t.

Luochengzhou Anchorage: Inside of No. 2 Red Buoy. Depth 10 m. Bottom is mud and sand with good holding ground. Max. size 15,000 d.w.t.
RESTRICTIONS: Vessel cannot enter and sail after sunset.
Tidal range: Max. 2.5 m. Average 1.19 m.
Draft limitation of the channel: Mouth of Yangzi River Channel 9.7 m. (fresh water).
VHF: Gaogang Port on Channel 14 throughout 24 hours.

TUGS: 1×800 h.p. and 1×2,640 h.p.
BERTHING:

Stevedore Company	*Berth Name*	*Length (m.)*	*Depth (m.)*	*Max. Size (d.w.t.)*	*Cargo*	*Shore Cranes*
Gaogang	Zhenhai	186.7	17.0	25,000	General	3×5-25 tons
Gaogang	Synthesize	80	8.0	5,000	General	
Gaogang	No. 5	68	8.0	5,000	General	2×10 tons
Gaogang	No. 6	65	6.0	3,000	Passengers	
Gaogang	No. 7	65	6.0	3,000	Passengers	

Warehouse and Open Storage Space:

Warehouse	2,969 sq.m.
Open Storage Space	26,640 sq.m.

Main Import and Export Cargo:
Steel, ore, grain, containers, coal, chemical fertilisers and timber.
CRANES: 1×60 ton and 2×8 ton floating cranes.
Also see "Berthing".
FRESH WATER: Available at berth and anchorage.
FUEL: Available at berth and anchorage.
REPAIRS: Facilities available.
GENERAL:
Agency: Penavico Yangzhou, No. 14 Dahongqiao Road, Yangzhou, Jiangsu, China. Tel: 86-514-7348382. Fax: 86-514-7348399. Telex: 364012 Penyz Cn.

Sinoagent Yangzhou, No. 86, 4/F Jiangdu Road, Yangzhou, Jiangsu, China. Tel: 86-514-7247791. Fax: 86-633-7243832. Telex: 342339 Agtjs Cn.
Provisions: Available.

GUANGZHOU, including Huangpu (Whampoa): 23.05 N. 113.25 E. (See Plan)

Also see "General" before first port.
LOCATION: *Guangzhou:* Lat. 23° 06' 05" N., Long. 113° 14' 05" E.
Huangpu: Lat. 23° 05' 49" N., Long. 113° 26' 16" E.
PILOTAGE: *Guangzhou:* Compulsory. Pilotage is undertaken day and night.

Pilot boards vessel at La Sa Wei Anchorage (22° 07' 20" N. – 22° 08' 30" N. and 113° 45' 47" E. – 113° 47' 54" E.).
Huangpu: Compulsory. Pilotage is undertaken day and night.

Pilot boards vessel at La Sa Wei Anchorage. However, pilotage is not undertaken between 1800 hrs. and 0600 hrs. to the Oil Wharf, Voyage Repairs Station Wharf, Nan Hai Shipyard and Petroleum Wharf.
ANCHORAGES: *Guangzhou:*

Anchorage	*First Bar*	*Dian Cao Zhou*	*Xin Zao*	*Nan He Dao*
Depth (m.)	7.5	9.0	7.0	6.0
Holding Ground	good	good	good	good
Size for Mooring Vessels (d.w.t.)	Quarantine	10,000	5,000	5,000
Location	23° 04' 08" N. 113° 28' 43" E.	23° 24' 40.2" N. 113° 27' 49" E.	23° 03' 23.8" N. 113° 02' 53" E.	22° 25' 08" N. 113° 14' 46" E.
			23° 03' 05" N. 113° 24' 48" E.	22° 05' 13" N. 113° 14' 44" E.
	23° 04' 17" N. 113° 28' 34" E.	23° 04' 51" N. 113° 26' 59" E.	23° 02' 05" N. 113° 24' 41.5" E.	22° 05' 32.5" N. 113° 14' 37.8" E.
			23° 23' 37" N. 113° 34' 32.5" E.	22° 05' 37.5" N. 113° 14' 36.5" E.

Huangpu: For vessels up to 10,000 d.w.t.

Anchorage	*Ground*	*Nature of Anchorage*	*Location*
La Sa Wei	Mud	Pilot and Quarantine	22° 07' 20" - 22° 08' 30" N. 113° 45' 48" - 113° 47' 54" E.
Shan Ban Zhou	Sand and Mud	1. Waiting for Berth 2. Shelter	22° 47' 21" - 22° 42' 42" N. 113° 37' 29" - 113° 41' 00" E.
Er Hu	Sand and Mud	"	22° 50' 36" - 22° 51' 48" N. 113° 34' 24" - 113° 33' 34" E.
Ni Zhou Tou	Sand and Mud	"	22° 54' 09" - 22° 56' 06" N. 113° 33' 45" - 113° 32' 55" E.
Lian Hua Shan	Sand and Mud	"	23° 00' 14" - 23° 03' 02" N. 113° 23' 03" - 113° 31' 12" E.
Da Hao Zhou	Sand and Mud	Shelter from Typhoon	23° 02' 01" - 23° 03' 32" N. 113° 30' 45" - 113° 29' 55" E.

RESTRICTIONS: *Guangzhou:* Vessels may enter and sail after sunset.
Draft Limitation in the Channel:
Dian Cao Zhou: 9.0 m.
Inner port: 6.0 m.
Tidal Range:
Maximum 2.0 m.
Minimum 0.9 m.
Huangpu: Vessels may enter and sail after sunset.
Draft Limitation in the Channel:
Bulk grain vessel: 9.14 m.
General cargo vessel: 8.84 m.
Tidal Range:
Maximum 2.4 m.
Minimum 2.0 m.
VHF: Guangzhou Harbour Master on Channel 8 throughout 24 hours.
TUGS: *Guangzhou:* 20 tugs with maximum 900 h.p.
Huangpu: 32 tugs with maximum 3,200 h.p.
CRANES: *Guangzhou:* 1×30 ton floating crane.
Huangpu: 3 floating cranes with capacity up to 250 tons.
FRESH WATER: Available.
FUEL: Available.

BERTHING: *Guangzhou:*

Working District	*Wharf*	*Length (m.)*	*Depth (m.)*	*Permissible Draft/LOA (m.)*	*Berth Use/ Shore Cranes*
He Nan	Inner No. 1	219	5.0-5.4	5.8/114	General Cargo 11×3-5 tons, 8×16 tons.
	Ha Xin Sha	500	4.0-8.0	5.8/114	Bulk Cargo 6×5-10 tons
Fang Zai	Inner No. 3	208	5.8	5.8/105	General Cargo 6×3 tons, 4×16 tons
	Inner No. 4	285	6.0	5.8/114	General Cargo 1×30 tons Container 4×16 tons
Xin Feng	Xin Feng	785	3.5	3.5/80	General Cargo 12×3-5 tons, 4×16 tons
	Huang Sha	356	5.4	5.5/102	General Cargo 1×16 tons
	Zhou Tou Zui Passenger	420	4.2	5.0/100	Passenger

REPAIRS: Possible.

SHIPMASTER'S REPORT: July 1981 and October 1984.
Item Nos. 6 – 9 amended by report received in October 1984.
Southern Approaches to Huangpu:

1. Vessels approaching from the South, bound for Canton and Whampoa should steer a course of 005°, so as to arrive approximately 5 miles West of Wen-Wei Chou (Gap Rock). An occasional light is exhibited from Gap Rock Lighthouse, but more often this light does not function and therefore should not be relied upon.

2. On approaching Gap Rock the first land mark that appeared on the horizon was the group of Great Ladrone Islands at a distance of approximately 20 miles on a clear afternoon. On closing Great Ladrone to a distance of about 10 miles, the group of islets to the East of Gap Rock were seen. Closing further to a range of 8 miles only, the Gap Rock was seen and identified.

3. The Gap Rock Islet is rugged in appearance and devoid of any vegetation. The lighthouse is located at the centre of the islet and differs slightly from the illustration in the Pilot, in that the dome-like structure is non-existent. The structure is slightly inclined and looks neglected.

4. The light on the Chuk Wan Shan Island is prominent and was visible at a distance of approximately 15 miles and is located at the summit. It is whitish and dome-like in appearance.

5. On identifying Gap Rock, vessel should proceed on the recommended course of 013°, keeping clear of the wreck marked 3 miles (approximately) West of Gap Rock and follow the recommended track so as to arrive at the Quarantine Anchorage demarcated West of La Sa Wei Island. It was observed that most ships prefer to anchor closer to the Ma Wan Light due to deeper waters. The anchorage off La Sa Wei affords good holding ground and shelter from all types of weather.

6. Vessels remain at this Quarantine Anchorage for a considerable length of time and all ships requirements, Pilot, berthing instructions, movements, etc., will have to be sought from the Agents "Penavico" through Guangzhou Radio on 8490 MHz.

7. Loaded vessels may have to anchor at the Bar before entering the Chuen Pi Channel at Lat. 22° 45' N., Long. 113° 39' E. (B.A. 1741) to await the next tide. Once ready for heaving anchor and swinging the vessel's bow into port direction, Pilots ask for the lights "Red" over "White" to be switched on for turning and to switch them off again after completing the turning manoeuvre.

Pilots listen on VHF Channels 9 and 16 and vessels can try to contact them once approaching La-Sa-Wei Quarantine Anchorage but vessels have to be patient as not many of shore personnel appear to understand English and they will not reply unless there is a Pilot standing by to attend.

8. The usual muster of crew is not carried out. However, a very thorough inspection is carried out by Immigration at Pratt Point, about 3.5 miles downstream (B.A. 1742). At that position the vessel drops anchor and awaits Immigration, who once on board order all the crew into one messroom, leaving wardrobes, lockers and cabin doors open. Then 4 men of the crew will be chosen, 1 to go with 1 soldier through the accommodation, 1 to go with another through the engine room and 2 others to accompany 2 other soldiers through the cargo holds. This procedure takes about 1 hour. Only after this inspection does Master obtain his clearance and is able to sail.

9. Huangpu Port (Whampoa) has been extended enormously. There are pier facilities for at least 6 medium size general cargo ships and at approx. position Lat. 23° 03.25' N., Long. 113° 28.5' E. near Shuang Kang (B.A. 1742) there exists a new container and Ro/Ro pier for 3 ships.

The cargo of my vessel (ST 14 of 11,363 tonnes) of bagged urea was discharged in 62 hours after working with up to 9 gangs (5 hatches) day and night.

10. The Seaman's Club Representatives board the vessel soon after arrival and will arrange any sight seeing tours at nominal cost. Seaman's Club provides good meals and club facilities. Seaman's Store and the Friendship Stores afford good shopping at reduced prices. Ship provisions and fresh vegetables are available in abundance.

11. Vessels leaving Whampoa, Northbound will have to follow the same route unless prior approval is sought from the Agents to go through the Lema Channel.

AGENT: Jardine Shipping Agencies, Guangzhou Representative Office, Room 903, T.P.Plaza, 9/109 Liu Hua Road, Guangzhou 510010, People's Republic of China. Tel: 86-20-86675529. Fax: 86-20-86692796. Telex: 44407 JMCGZ CN.

(Initial correspondence to be made through Jardine Shipping Agencies, Hong Kong).

HAIKOU (including Macun): 20.01 N. 110.16 E. (See Plan)

PILOTAGE: Compulsory. Pilotage is undertaken day and night. Pilot boards vessel at quarantine anchorage.

Also see "Anchorage".

ANCHORAGE: Depth 4.0 m. – 18.0 m. Can accommodate vessels 20,000 d.w.t. – 25,000 d.w.t.

Pilotage Anchorage: Between Lat. 20° 05' 14" N. and Lat. 20° 05' 36" N. and Long. 110° 16' 08" E. and Long. 110° 16' 51" E.

Depth 15 m. – 18 m. Bottom: Mud and sand.

RESTRICTIONS: Entry and sailing after sunset is possible.

MAX. SIZE: Max. draft in channel 6.0 m.

Tidal range: 0.5 m. – 2.4 m. at Spring tides. 1.1 m. – 2.0 m. at Neap tides.

Also see "Berthing".

VHF: Haikou Radio on Channel 16 (24 hours). Penavico on Channel 9 (24 hours).

TUGS: 1×1,440 h.p., 1×1,320 h.p., 1×900 h.p. and 1×600 h.p.

BERTHING: For ocean-going vessels.

District	*Berth No.*	*Length (m.)*	*Max. LOA (m.)*	*Max. Draft (m.)*	*Remarks*
2nd District	9 – 11	340	120	6.0	General cargo
	14 – 18	440	150	8.0	Bulk
	15 – 16	230	50	4.0	General

Vessels arriving with a draft of over 6.2 m. are normally required to lighter at anchorage or await a suitable tide.

Warehouse and Open Store Space:

Warehouse	29,000 sq.m.
Open store space	86,000 sq.m.

Main Import and Export Cargoes:

Ore, local products and general cargo.

STEVEDORES: Work throughout 24 hours, 7 days a week.

TANKERS: See "Shipmaster's Report".

FRESH WATER: Supplied by Haikou branch of China Marine Bunker Supply Company.

FUEL: Supplied by Haikou branch of China Marine Bunker Supply Company.

GENERAL: *Stores:* Supplied by Haikou Ocean Shipping Supply Company.

Floating Cranes: Not available.

SHIPMASTER'S REPORT: June 1993.

Vessel (LOA 170 m.) discharged fuel oil/gas oil at Macun Coal Terminal. Depth alongside 10.2 m.

1. Passing through Hainan Straits from the East can be performed normally. Master should be aware that Fairway is only 1 mile wide (see B.A.Chart No. 3892). However, route is well buoyed and agrees with Chart/GPS. Racon on lightvessel (Buoy No. 1) inoperative. Tidal streams are strong and variable. See Admiralty Tide Tables and sailing directions covering area.
2. Route that leads to Haikou is a controlled area, and permission must be obtained from Hainan Straits Authorities. See "Guide to Tanker Ports" and China Sailing Directions – NP 30. Protecting agent in Hong Kong is able to arrange this permission.
3. In general, communication by telex with "Penavico Haikou" is difficult.
4. Vessel proceeds to Haikou Anchorage, where authorities embark. Agent also boards vessel, and he informs Master when pilot will arrive.
5. Route from Haikou to Macun is under pilotage and is covered by numerous fishing nets which are stretched between Yokohama Fender Style Buoys.

   Moving West from Haikou Anchorage, towards Macun, cannot be recommended during the hours of darkness or times of restricted visibility.

   Distance from Haikou to Macun is approximately 25 miles.
6. In spite of several attempts, no chart of Macun Port could be obtained. According to Agent, a chart of Macun does not exist.
7. Last part of route: Distance is approximately 5 miles and is buoyed. Water depth is 20 m. – 30 m., be aware of fishing nets. Course to be steered to Buoy No. 4 is 180° (approx.).
8. Harbour Pilot embarks at Buoy No. 4. Pilot is experienced, but English is poor.
9. No berth movements take place during hours of darkness.
10. At Macun, ship/shore communications only possible with "Penavico Haikou" by VHF.

    Note: Limit of VHF range.
11. On departure, Harbour Pilot disembarks at Buoy No. 4, and vessel proceeds to Haikou Anchorage without pilot, and awaits port clearance. Route not to be recommended during hours of darkness and at times of restricted visibility.
12. Please see plans and drawings for additional remarks.

HAIMEN: 28.41 N. 121.27 E.

PILOTAGE: Pilot is compulsory, provided by pilot station of Taizhou Harbour. Notice of ETA and request for Pilot must be made to the Pilots at least 24 hours in advance.

Address: 38 Jiang Bin Road, Jiaojiang, Taizhou City. Tel: 8883722, 8224571 (Ext. 287 or 286).

ANCHORAGES:

	Pilot and Quarantine Anchorage	*Barge Anchorage*
Depth:	9.0 m.	9.0 m.
Ground:	mud	mud
Holding:	good holding capacity	good holding capacity
Size for Mooring Vessels:	10,000 d.w.t.	10,000 d.w.t.
Location:	28° 40' 12" N. 121° 45' 18" E.	28° 41' 06" N. 121° 44' 30" E.
	28° 39' 12" N. 121° 47' 18" E.	28° 40' 18" N. 121° 44' 30" E.
	28° 39' 12" N. 121° 45' 18" E.	28° 40' 18" N. 121° 45' 42" E.
	28° 40' 12" N. 121° 47' 18" E.	28° 41' 06" N. 121° 45' 42" E.

RESTRICTIONS: Vessel's inward and outward passage may be restricted by visibility at night, state of tide, vessel's draft, etc.

Draft Limitation in the Channel: Maximum draft 6.80 m.

Tidal Range: Maximum 6.30 m., average 4.0 m.

VHF: Harbour Master – Channel 14. Harbour Bureau – Channel 9. Shore Radio Station – Channel 16.

TUGS: 2×60 h.p.

BERTHING:

Wharf	*Length (m.)*	*Depth (m.)*	*Permissible d.w.t.*	*Cargo handled*	*Shore Cranes*
No. 1	105	5.0	3,000	Coal	3×5 tons
No. 3	165	4.8	1,000 3,000	General cargo	1×16 tons, 3× 5 tons
No. 7	36×3	4.0	500 1,000	Passengers	1×1 ton
Taizhou goods and material wharf	71	5.8	3,000	Cargo owner owned	1×5 tons
Taizhou Petroleum Company	93	7.0	3,000	Tanker	
Taizhou Power Plant Wharf	215	6.0	3,000 5,000	Coal	Bridge Crane 4×15 tons

FRESH WATER: Available.

STEVEDORES: *Working Hours:* 0730 hrs. – 1130 hrs., 1430 hrs. – 1800 hrs., 1900 hrs. – 2100 hrs., 2100 hrs. – 0300 hrs., 0300 hrs. – 0700 hrs.

REPAIRS: Possible.

AUTHORITY: Taizhou Harbour Superintendent Bureau, 38 Jiang Bin Road, Jiaojiang District, Taizhou City, Zhejiang Province, China. *Tel:* 86-576-8881169. *Cables:* 3263. *FAX:* 86-576-8881169.

Contact: Mr.Ji Jie Chao, Mr.Wen Jun Zhu and Mr.Xia Dong Chen, Port Directors.

HANGZHOU: 30.43 N. 121.20 E.

PILOTAGE: The pilot boards in position Lat. 30° 38' N., Long. 121° 20.3' E.

BERTHING: *Jinshan Tanker Terminal:* The recently completed tanker terminal has 2 berths where vessels with draft 6.5 m. can berth.

FRESH WATER: Not available.

FUEL: Not available.

GENERAL: Officials travel from Shanghai which is 100 Km. from the port.

HUANGSHI: 30.13 N. 115.08 E. (See Plan)

PILOTAGE: Undertaken from sunrise to sunset (0500 hrs. – 2100 hrs.).

ANCHORAGE: Huang Shi Gang Anchorage and Dao Shi Fu Anchorage, depth 5.0 m. – 6.0 m.

RESTRICTIONS: Draft limitation in channel is 4.5 m.

VHF: Port on Channel 23 throughout 24 hours.

TUGS: Tugs up to 2,930 h.p. available.

BERTHING:

Working District	*Berth No.*	*Length (m.)*	*Depth (m.)*	*Permissible Draft (m.)*	*Cargo handled*
1st	1	65	3.5	3.0	Bulk
	2	106	3.5	3.0	Cement
	3	55	3.5	3.0	Coal
	16	245	5.0	4.0	Bulk
2nd	9	90	4.5	4.0	Passengers
	10	90	4.5	4.0	Passengers, General
	11	40	4.0	3.5	Ore
	13	40	3.0	2.5	Limestone
	14	40	3.0	2.5	Coal
	15	61	3.5	3.0	Steel

CRANES: 1×25 tons, 1×15 tons, 2×10 tons, 4×5 tons, 5×3 tons.

FRESH WATER: Available.

FUEL: Available.

REPAIRS: No facilities.

HUIZHOU: 22.42 N. 114.34 E. (See Plan)

LOCATION: N.W. of Daya Bay and North of Ya-ling Wan (Dambell Bay), in position Lat. 22° 41.8' N., Long. 114° 33.5' E.

The port opened in October 1992.

DOCUMENTS: The following are to be submitted by vessel upon arrival:

5 copies Crew List.
5 copies General Declaration.
5 copies Cargo Declaration.
3 copies Crew's Declaration of Personal Effects.
4 coies Ship's Stores Declaration.
1 copy Ship's Particulars.
7 copies Cargo Manifest.
1 copy Maritime Declaration of Health.
1 copy Declaration of Animals and Plant Quarantine for ships.

Departing Vessels:

5 copies General Declaration.
5 copies Cargo Declaration.
1 copy Crew List.

PILOTAGE: Compulsory. Pilotage is undertaken from sunrise to sunset.

ANCHORAGE: Pilot and Quarantine Anchorage:

Depth: 10.0 m.
Ground: Mud.
Holding: Good holding capacity.
Size for mooring vessels: 10,000 d.w.t.
Location: Lat. 22° 38' 42" N., Long. 114° 36' 30" E.
Lat. 22° 38' 42" N., Long. 114° 37' 27" E.
Lat. 22° 37' 42" N., Long. 114° 36' 30" E.
Lat. 22° 32' 42" N., Long. 114° 37' 27" E.

RESTRICTIONS: Vessels may enter and sail from sunrise to sunset. Draft limitation in the channel 8.5 m., inner port 9.0 m.

Tidal Range: Maximum 2.7 m.
Minimum 1.5 m.

RADIO/VHF: Huizhou Harbour Master on VHF Channel 16 throughout 24 hours.

TUGS: 1×1,900 h.p.

BERTHING: Total length of wharf is about 450 m., including East side dolphin jetty.

CRANES: 3×10 ton and 1×40 ton shore cranes available.

STEVEDORES: General cargo working hours:

0800 – 1200 hrs.
1300 – 1800 hrs.
1800 – 2300 hrs.
0000 – 0400 hrs.

Port performance 800 – 1,000 tons/gang/day.

FRESH WATER: Available.

FUEL: Not available.

REPAIRS: No facilities.

SHIPMASTER'S REPORT: August 1994.

Location: The port opened in October 1992. Port area under reclamation in May 1994.

Pilotage: Compulsory. Undertaken from sunrise to sunset. 3 Pilots and an Assistant Pilot work with 1×1,900 h.p. tug. Also used as pilot boat.

Approaches: Pilot boarding position: Lat. 22° 36.24' N., Long. 114° 36.35' E.

After passing Fisherman Rk. Beacon 1.3 cables off on starboard side with course 325°, Fairway Entrance Buoys No. 1 (G) and No. 2 (R) are seen. Channel course is 320°(T) until wharf. Channel width 80 m. Depth is 8.5 m. in L.W.

		Lat.	Long.
Fairway buoy locations (approx.)	No. 1 (G)	22° 39.90' N.	114° 35.38' E.
	No. 2 (R)	22° 39.84' N.	114° 35.32' E.
	No. 3 (G)	22° 40.70' N.	114° 34.62' E.
	No. 4 (R)	22° 40.69' N.	114° 34.57' E.
Port Basin starboard buoy (G)	No mark	22° 45.52' N.	114° 33.92' E.
Port Basin port buoy (R)	No mark	22° 41.61' N.	114° 33.52' E.

Restrictions: LOA less than 150 m. and max. draft 8.5 m.

Radio/VHF: Vessel must advise ETA at Huizhou Port 24 hours prior to the ship's arrival. Huizhou Harbour Master on VHF Channel 16, but signal is very weak and English poor.

Tugs: Only one small tug available.

Berth: Total length of wharf is about 350 m., not including East side dolphin jetty.

Cranes: 2×10 ton shore cranes available.

AUTHORITY: Huizhou Harbour Master. *Tel:* (0752) 5571282, 5577866. *FAX:* (0752) 5577877.

AGENT: China Ocean Shipping Agency Guangahou Huizhou Company. Tel: 0752-5577971. Fax: 5577970.

HUIZHOU TERMINAL: 21.22 N. 115.25 E. (See Plan)

LOCATION: Huizhou Terminal is located in the South China Sea within the continental waters of the People's Republic of China.

Its geographical coordinates as follows:

Latitude:	21° 21' 39.3" N.
Longitude:	115° 24' 38.4" E.

Publications: Nautical references can be found in the following publications:

British Admiralty Sailing Direction No. 30 – South China Sea.

United States Hydrographic Office Sailing Direction No. 93 – Western Shores of South China Sea.

British Admiralty Charts No. 2161B and 1968.

Chinese Nautical Charts and Sailing Directions relating to the area.

DOCUMENTS: The following are to be prepared by an export tanker upon arrival:

6 copies Crew List.
6 copies Passenger List (if any).
Valid Passports or Seaman's Books for all crew members.
1 copy Maritime Declaration of Health (Chinese form).
1 copy Clearance from last port.
4 copies Vaccination List.
2 copies Ship's Stores List.
2 copies Crew's Declaration of Personal Effects.
2 copies Arms and Ammunition Declaration.
1 copy Cargo Manifest for transit cargo with a summary (ballast and/or cargo already on board).
2 copies Report of Entry for Foreign Ships (Chinese forms).

PILOTAGE: See "Berthing" – "Mooring".

Vessels must comply with Regulation 17, Chapter V, of Solas 74/83 Convention (Pilot Boarding Facilities).

APPROACHES: *Navigation Aids/Obstructions and Dangers:*

The FPSO is equipped with the following navigation aids:

Racon System: Responds one dash and one dot (morse code letter "N"), range about 20 miles. Services "X" band and "S" band radars.

Nautophone: Emitting in fog 2 short and 1 long blast (morse code letter "U"). Range about 2 miles. There are 2 fog signals, one on the bow and one on the poop, synchronized.

Position lights: One on the bow and one on the poop, synchronized. Emitting white light morse code letter "U", range 5 miles.

The Buoyant Turret Mooring (BTM) system extends for a distance of 1,200 m. all around the FPSO bow. The system consists of 8 anchors laid down on the sea bottom holding 8 mooring chains. The chain ends are connected to a floating buoy secured to the FPSO bow bottom by clamps.

The FPSO has a 16 in. loading hose string, approximately 273 m. in length, floating on the stern, port side. It consists of 23 hose lengths.

It is emphasised that great care must be taken while in areas around the pipelines between the "HZ 21 – 1" and "HZ 26 – 1" platforms and FPSO, and telecommunications cables in the area. These areas have to be avoided.

An area within 2 miles from the platforms and FPSO is a prohibited area. Masters are warned that it is strictly forbidden to enter this area. Furthermore Masters are warned to keep a good lookout due to the numerous fishing vessels in the area.

ANCHORAGES:

Waiting Area: A waiting area is located 2.65 miles N.W. of the FPSO (bearing 135° to the FPSO) having the following coordinates:

Latitude: 21° 23' 20" N. Longitude: 115° 22' 50" E.

If the export tanker Master prefers to anchor, the anchorage area is a one mile radius from the position located by the following coordinates:

Latitude: 21° 23' 00" N. Longitude: 115° 21' 30" E.

Sea bottom is silty sand, having good holding power for anchors. Water depth is about 120 m.

Before anchoring, the export tanker Master has to inform the Terminal about his intention. He has to keep in mind good seamanship when deciding to anchor due to the depth of water.

The export tanker can anchor only in the anchoring area. Dropping anchor outside the assigned area is strictly forbidden because of the risk of damaging pipelines or fouling the anchors with the FPSO mooring lines sitting on the bottom.

RESTRICTIONS/MAX. SIZE:

Terminal Requirements and Limitations:

Tanker Size: The minimum tanker size acceptable at the Terminal is 40,000 tonnes S.D.W.T.

The ship has to maintain a safe freeboard during her stay.

The maximum size tanker acceptable at the Terminal is 160,000 tonnes S.D.W.T. – Tandem mooring only.

The S.D.W.T. is the maximum scantling S.D.W.T., i.e. the D.W.T. referred to the physical size of the vessel at the maximum design draft, not to any lower remeasured tonnage occasionally used by shipowners.

No exception to these requirements shall be allowed. Vessels unable to comply will be rejected.

Environmental Limitations:

(a) For an export tanker mooring:

Tandem Mooring System:

Significant wave height	3.0 m. (head on)
Safe mean period	6.5 seconds
Wind speed (10.0 m. 1 minute average)	25 knots (head on)
Current speed at surface	1 knot (head on)

(b) For an export tanker while loading:

Tandem mooring system for tankers up to 140,000 S.D.W.T.:

Significant wave height	4.0 m. (head on)
Wave mean period	6.5 seconds
Wind speed (10.0 m. 1 minute average)	35 knots (head on)
Current speed at surface	1 knot (head on)

(The tension on the hawser should never exceed 200 tons)

Tandem mooring system for tankers above 140,000 S.D.W.T. to 160,000 S.D.W.T.:

Significant wave height	3.5 m. (head on)
Wave mean period	6.5 seconds
Wind speed (10.0 m. 1 minute average)	25 knots
Current speed at surface	1 knot

(The hawser tension has to be carefully monitored as sea states exceed 3.0 m. The tension should never exceed 200 tonnes)

RADIO/VHF:

ETA Messages: The export tanker's Master shall provide ETA message to the Terminal 96 hours before the anticipated time of arrival. The ETA message shall be repeated 72 hours, 48 hours and 24 hours before arrival. If the transit time from the last port is less than 96 hours, the Master shall send the first ETA message on departure from such port.

After the 24 hour ETA message has been sent, the Master shall send amended ETA messages to the Terminal if the ETA changes 3 hours or more.

Information Required by the Terminal: The following information shall be included in the first ETA message sent by the Master:

Name of vessel.
Nationality.
Owner.
Port of Registry.
Call sign.
Master's Name.
Last port of call.
Next port of call.
Last two cargoes.
Quantity of cargo required.
If ballast clean or SBT.
Deballasting time.

Additional information may be required by the Terminal at a later time.

Message Routing: Messages from the export tanker can be transmitted to:

FPSO "Nan Hai Fa Xian".
Call sign 'ELJB 4'.
Marine identification No. 000-4835-036.

or

ACT (Operators Group of Huizhou Terminal).
Telex 44242 ACT CN or 44254 ACT CN.

The FPSO can be contacted on telephone via Inmarsat through No. 00872/00873 - 1241575.

The FPSO can be telexed via Inmarsat through No. 00582/00583 - 1241575.

The FPSO transmits and receives on 4434.9 kHz during daytime hours and on 2502.5 kHz during night hours.

Use of VHF: When the vessel is within VHF range, the Master of the export tanker shall contact the FPSO by VHF Channels 16 or 13. The FPSO keeps 24 hours VHF watch on Channel 13. The call sign is "Nan Hai Fa Xian".

TUGS: 1×6,000 b.h.p. fire fighting tug and 1×8,000 b.h.p. tug/supply vessel.

BERTHING: *Terminal Description:* The Terminal comprises 4 production platforms and a moored Floating Production Storage Offtaking Unit (FPSO), which is a converted VLCC. The Terminal is operated by ACT – Operators' Group.

Geographical co-ordinates are:

Production Platform HZ 21-1:
Lat. 21° 20.9' N. Long. 115° 25.4' E.
Production Platform HZ 26-1:
Lat. 21° 10.6' N. Long. 115° 15.9' E.
Production Platform HZ 32-2: Installed June 1995.
Lat. 21° 09.7 ' N., Long. 115° 10.2 ' E.
Production Platform HZ 32-3: Installed June 1995.
Lat. 21° 09.7' N., Long. 115° 13.1' E.
FPSO "Nan Hai Fa Xian": (Bow)
Lat. 21° 21.6' N., Long. 115° 24.6' E.
FPSO "Nan Hai Fa Xian" principle dimensions are:
LOA 348.9 m., beam 51.8 m., depth 25.6 m.

The 2 platforms (HZ 21-1 and HZ 26-1) are connected to the FPSO by crude oil subsea pipelines (8 in. diameter from "HZ 21-1" and 12 in. from "HZ 26-1").

The water depth at the FPSO site is 116 m. (380 ft. – 63.2 fathoms).

The export tanker will be moored as follows:

Tandem Mooring: Export tanker is moored with her bow to the stern of the FPSO. For this mooring, suitable equipment, i.e. hawser with chafing chains and 16 in. loading hose is available.

The decision on which system to be used will be a Terminal option, depending on operating situations as well as weather conditions. The export tanker Master will be informed about the mooring system to be used prior to his arrival.

A Lightering Advisor (Mooring Master) is in charge of mooring operations. He will remain onboard the export vessel during her stay at the Terminal and will liase with FPSO personnel.

Mooring: Mooring operations are usually performed during daylight.

The Lightering Advisor (Mooring Master), CCIB Inspector and Chinese interpreter/Mooring Assistants will board in the waiting area. The team may board either by boat or helicopter. The export tanker is not allowed to approach the FPSO without advice from the Lightering Advisor.

Mooring Terminal operating procedures will be given to the export tanker Master by Lightering Advisor with all appropriate port documents.

Two assisting tugs of approximately 6,000 b.h.p. each will be available for mooring.

No anchor must be used during manoeuvring. Anchors must be secured in such a way to avoid accidental release.

Export tanker mooring equipment:

Bow check 600 mm. × 450 mm. in line with chain stopper.
Chain stopper, 200 tonnes S.W.L. minimum, able to handle 76 mm. diameter link chain.
Winch drum to store 200 m. × 10 in. messenger.
Roller lead in line with winch storage drum.
Winch capacity 15 tonnes S.W.L.

In case of tandem mooring, a polypropylene rope coil should be kept ready on the forecastle deck to enable the assisting tug to secure it to the messenger rope of the mooring hawser. Furthermore the crew should be ready to lift on board equipment and tools for mooring and hose connection from the assisting tug.

VHF sets should be switched to a mutually agreed working channel, tested and confirmed as being in satisfactory working order. The usual working channel is Channel 69.

In case an emergency occurs, it should immediately be indicated by sounding the emergency signal consisting of a series of short rapid blasts on the ship's whistle or siren.

Unmooring: On completion of cargo transfer operations and when the hose(s) have been flushed to the satisfaction of the Lightering Advisor, the hose(s) may be disconnected.

The unmooring operations can start as per the advice of the Lightering Advisor.

Departure: While the export tanker is moved to a safe area clear from the FPSO and platform, the cargo documentation should be completed and brought aboard by the assisting tug, unless Early Departure Procedure (EDP) has been previously agreed. The export tanker can depart as soon as documents are signed, and Lightering Adviser will give authorisation for departure. Any protest regarding the cargo quantities shall be made before departure.

LOADING:

Crude Oil Specification: The "Nan Hai Light" crude oil has the following specifications:

API	39°
Pour Point	28.5° – 35°C 85° – 96°F
Loading temperature	(approx.) 50°C

The oil has a tendency to form a tight emulsion in water and a tendency to gel below 29.5°C when shut-in.

Cargo Heating: To avoid waxing due to the high pour point of Huizhou Crude, cargo has to be maintained at the loading temperature of 52°C (125°F).

Tankers calling at Huizhou Terminal must be fitted with heating coils suitable to maintain the loading temperature of 50°C.

Discharging procedures must be carefully reviewed in order to assure COW operations and good tank drainage at discharging port.

Manifold Size: The cargo transfer is performed through 1×16 in. floating hose.

Hose flanges are 150 ANSI standard. The hoses are connected to the export tanker's port side cargo manifold amidship.

The manifold arrangement should comply with OCIMF recommendations as per "Standards for Tanker Manifolds and Associated Equipment" booklet. It is emphasised that only one reducer is allowed between distance piece and the hose flange. All manifolds shall be clearly marked with the loads they have been designed to withstand.

The export tanker must have 1×16 in. connection ready at her port side cargo manifold.

Ships not meeting the above hose connection requirements will be rejected.

Cargo Hose Lifting Equipment: The export tanker should be equipped at her port side cargo manifold with cargo hose lifting equipment (crane or derrick) with the minimum safe working load (SWL) of 10 tonnes as per Chapter 12 of the OCIMF recommendations "Standards for Tanker Manifolds and Associated Equipment". The safe working load has to be clearly marked on the boom.

Deballasting and Loading: The Lightering Advisor shall inspect ballast prior to starting deballasting operations.

All cargo tanks are inspected by CCIB Inspector before loading starts for OBQ.

The export tanker must arrive with, and be able to maintain during berthing and loading operations, at least 30% of its S.D.W.T. to keep a safe draft and trim at all times while in the berth. This should be achieved (a) by loading cargo and discharging ballast simultaneously or, (b) if that cannot be done, by loading part cargo first, then discharging the ballast, and then loading the balance of the cargo. Masters are warned to carefully check the loading and deballasting procedures to avoid any pollution.

Hoses should be connected by the export tanker crew.

When a vessel is moored in tandem, her load is continuously monitored by a load monitoring system on the FPSO which is equipped with warning and danger alarms. Also, an assisting tug should take up station at the stern of the export tanker keeping her in tandem with the FPSO.

On tandem mooring, the export vessel should accept the loading hose displacement water which will be recovered in the slop tanks. The quantity of the water to be flushed is 70 cu.m. before the loading starts and 210 cu.m. at the end of loading operations.

Due to the metering system on board the FPSO, the max. loading rate is 5,400 cu.m./hr. (34,000 barrels per hour).

Continuous VHF monitoring must be maintained during cargo transfer operations.

All cargo tanks are inspected by a CCIB Inspector after loading completed for ullages report.

BALLAST/POLLUTION:

Pollution Prevention: There are no facilities for receiving clean or dirty ballast at the Terminal. Only clean ballast can be discharged to sea. The following rules shall apply:

No oil pollution is allowed in the Terminal area.
No dirty ballast can be discharged at sea.
No bilges can be pumped overboard.
No waste can be discharged at sea.
Vessels have to comply with MARPOL 73/78 Rules.

Owners of vessels calling at the Terminal must be members of the TOVALOP agreement. Master must have on board the TOVALOP Certificate.

Arrival: For the purpose of manoeuvring, vessels are requested to maintain a reasonable ballasted condition, complying with Regulation 13.3 of Annex 1 of MARPOL 73/78 Convention. This means that:

(a) The moulded draft amidships (DM) in metres shall be not less than DM = 2.0 + 0.022 L.
It corresponds roughly to ballast on board of minimum 30% of S.D.W.T.
(b) A trim by the stern not greater than 0.015 L.
(c) The propeller fully immersed by at least 3 ft.

Also see "Loading".

MEDICAL: Medical assistance is not available except in case of emergencies. Medical evacuation of injured persons will be by helicopter to Shekou Hospital for PRC nationals and expatriates, or to Hong Kong hospital for expatriates only. The injured expatriates have to be provided with individual Seaman's Book or Passport. In this case the Master of export tanker has to inform immediately his agent in Hong Kong. All expenses incurred will be on owner's account.

FRESH WATER: Not available at the Terminal.

FUEL: Not available.

REPAIRS: No repairs are permitted when moored at the Terminal.

REPATRIATION: No repatriation is permitted at the Terminal. Only the cases of injured persons can be considered.

SHORE LEAVE: No shore leave is permitted at the Terminal.
No persons are allowed to visit the FPSO.

MAIL: No mail can be sent from the Terminal.

WEATHER:
General Climate of the Area: The climate of the South China Sea is mainly dominated by seasonal winds. These monsoons are related to fairly regular seasonal fluctuations of the atmospheric pressure over the Asiatic continent.

During the Winter, from October to March, a high pressure area settles over Southern Siberia and China because the North Asian land mass cools as a result of the decreased solar heating. The "Siberian High" in conjunction with the semi-permanent high pressure area of the subtropical North Pacific Ocean, centred approximately along latitudes 25° N. to 30° N., causes predominantly N.E.ly winds, the N.E. monsoon, over the South China Sea.

The development of the "Siberian High pressure" starts in September and from October the N.E.ly wind regime is established.

During late April and May, the "Siberian High" weakens and displaces Northward because the Asian land mass warms up as a result of the increased solar heating. More or less simultaneously, a low pressure area begins to develop over North India and S.E. Asia.

As a result, the N.E.ly winds decrease and a flow of South-S.W. winds, the S.W. monsoon, progressively settles over the South China Sea. This is a period of transition from the N.E. monsoon season to the S.W. monsoon season. The S.W. monsoon season lasts from June to August. It is characterised by the extension of the "heat low pressure" area over North India and South China.

In September the "heat low pressure" weakens and progressively dissipates due to the decreasing solar heating, while the "Siberian High pressure" is intensified and moves Southward. The S.W. monsoon weakens and is gradually substituted by the N.E. monsoon.

By October the S.W. monsoon has virtually ceased and the N.E. monsoon dominates over the Northern area of the South China Sea.

Climate analysis influenced by monsoon leads to sub-divide the year into five periods:
Winter (December to March – N.E. monsoon season).
Spring (April to May – transitional period).
Summer (June to August – S.W. monsoon season).
(September – transitional period).
Autumn (October to November – N.E. monsoon season).

These periods can be considered as "normal conditions".

Exceptional conditions sometimes exist due to low pressure depressions rising close to the equator which move towards temperate zones following routes at different speed and covering different distances and reaching forces up to cyclone (in this area called "typhoons"). The periods in which these phenomenon occur most are in the Summer time up to September.

GENERAL: All vessels calling at Huizhou Terminal must fly the People's Republic of China flag, and the International code quarantine signal must be displayed upon the Authorities visit.

Masters and operating personnel of tankers calling at the Terminal must be aware of the information contained herein and in the OCIMF "International Safety Guide for Oil Tankers and Terminals – Edition in Force".

SAFETY: The following OCIMF guidelines will be enforced at the Terminal as applicable:
International Safety Guide for Oil Tankers and Terminals.
Ship-to-Ship Transfer Guide (Petroleum), 2nd edition.
Guide to Helicopter/Ship Operations.

Smoking, Lighters and Matches: Smoking is prohibited on board during loading operations, except in those areas in the accommodation jointly agreed between the Master and the Terminal Representative. Personnel must not carry lighters or matches other than in the accepted areas.

Portable Equipment: Any electrical equipment which is not wholly within an approved explosion proof container, an approved air pressured container or any equipment which is not intrisically safe, must be disconnected from the power supply.

Hand Torches: Only those hand torches provided with a certificate of approval delivered by a recognised authority are allowed.

Satellite Communication Equipment: Consultation between Master and Lightering Adviser is advisable in order to ascertain that there is no risk due to the presence of flammable gas before a satellite terminal is operated.

Main Engine: While moored at the FPSO the main engine must remain on instant readiness. No engine repairs are permitted. In the tandem mooring system, it may be necessary for the vessel to use the engines while moored. Use of main engine shall be made with the advice of the Lightering Adviser only.

Helicopter Operations: No helicopter operations on the export tanker can take place during ballast and/or cargo operations. Helicopter operations may take place only after such operations have been stopped and the integrity of the IGS system has been verified.

A helicopter landing or winching area must be painted on the tanker deck and must be in accordance with the requirements of the "Guide to Helicopter/Ship Operations" published by the International Chamber of Shipping. All helicopter operations shall be in accordance with said Guide. The helicopter pilot and export tanker crew shall be familiar with its content.

AGENCY: Operator does not have a local appointed agent.
Available for owner's agent are Penavico – China Ocean Shipping Agency, located in Shekou, Shenzhen. Tel: 86-755-669-5216/2746. Telex: 420834 Cosas CN. Fax: 86-755-669-2769.

OPERATOR: ACT Operators Group, 10-16 Floor, Offshore Petroleum Building, No. 1 Industry Road 2, Shekou Special Industrial Zone, Shenzhen, Guangdong Province, People's Republic of China 518069. *Tel:* 669-1608 (Public Line). *Telex:* 44242, 44254 ACT CN. *FAX:* 669-1606. *Contact:* Captain G. Harrison, Huizhou Terminal Supervisor.

JIANGYIN: 31.55 N. 120.11 E.

ANCHORAGE: Jiangyin Port Anchorage is located 6.5 km. from the South bank of the upper reaches of the Chang Jiang River at Huang Tian Port. Depth of water 13.0 m. – 21.0 m. Nature of bottom is medium fine sand. Anchorage is suitable for vessels up to 25,000 d.w.t.
RESTRICTIONS: Vessels may enter and sail after sunset.
Draft is restricted to 9.5 m. as vessels have to cross a bar at the mouth of the Chang Jiang River.
MAX. SIZE: Draft limitation in channel is 15.0 m.
Tidal range 0.0 m. – 3.15 m.
VHF: Call sign: Jiangyin Radio. Channels available 16, 21 and 71. Channel 21 is usual working channel. Station operates 24 hours.
TUGS: 1×150 h.p., 1×428 h.p. and 1×980 h.p.
BERTHING:

Cargo Handling Department	*Wharf*	*Max.Size* (d.w.t.)	*Length* (m.)	*Depth* (m.)	*Cargo Handled*	*Shore Cranes*
Jiangyin Port	No.2	1× 5,000	100	12.0	General Cargo	2×10 tons
Ward		2×25,000	535	21.0	General Cargo	

FUEL: Not available.
REPAIRS: Facilities available for vessels up to 30,000 d.w.t.
GENERAL: *Storage Areas:*
Warehouse 3,300 sq.m.
Open storage area 2,000 sq.m.
Cargo Handled: General cargo, steel, grain and cotton.

JINZHOU: 40.48 N. 121.04 E.

PILOTAGE: Compulsory. Pilot service is available throughout 24 hours (in Summer), and daytime (in Winter). Pilot boards vessel at Lat. 40° 42.4' N., Long. 121° 06.5' E.
ANCHORAGE:

Anchorage No.	*Location*	*Depth* (m.)	*Bottom*	*Use*
1	Lat. 40° 42' 24" N. Long. 121° 06' 30" E.	9.5	Mud with good holding ground.	Quarantine, waiting, Pilot.
2	Lat. 40° 33' 00" N. Long. 121° 26' 30" E.	11.0	Mud with good holding ground.	Waiting.

RESTRICTIONS: Vessel cannot enter and sail after sunset.
Tidal range: Max. 4.06 m. Average 2.05 m.
Draft Limitation in the Channel: 7.90 m.
VHF: "Jinzhou Radio" on Channel 16 throughout 24 hours.
TUGS: 1×1,380 h.p., 1×2,000 h.p. and 1×3,700 h.p.
BERTHING:

Stevedore Company	*Berth Name*	*Length* (m.)	*Depth* (m.)	*Max. Size* (d.w.t.)	*Cargo Handled*	*Shore Cranes*
Jinzhou	General Cargo	217	9.9	10,000	General Cargo	2×5 tons
Jinzhou	Product Oil	241	10.4	10,000	Oil	
Jinzhou	No. 2	193	9.7	10,000	General Cargo	2×10 tons

Warehouse and Open Storage Space: Warehouse: 3,600 sq.m.
Open Storage Space: 60,000 sq.m.
Main Import and Export Cargo: Crude oil, oil products, general cargo, grain, ore and cement.
FRESH WATER: Available at berths.
FUEL: Available (except fuel oil) at berths.
REPAIRS: Facilities available.
GENERAL: *Agency:* Penavico Jinzhou, Port Building, Economic Development District, Jinzhou, China. Tel: 86-416-3127123. Fax: 86-416-3123663. Telex: 813061 Jzgwj Cn.
Sinoagent Jinzhou, 11-2 Sec. 2, Zhongyang Street, Jinzhou, Liaoning, China. Tel: 86-416-3120189, 3122557. Fax: 86-416-3121817. Telex: 813068 Jzagt Cn.
Provisions: Available.

JIUJIANG: 29.38 N. 115.56 E.

PILOTAGE: Compulsory. Pilotage is undertaken day and night. Pilots board vessels at River Jiujiang.
ANCHORAGE: Guang Pai Jiao Anchorage: Depth 3.0 m. – 15.0 m. Ground of anchorage: Mud and sand. Size of vessel: 50,000 d.w.t.
RESTRICTIONS: Only passenger vessels may enter between sunset and sunrise.
Range of Tide: 7.0 m. – 21.0 m.
Draft Limitation in Channel: 4.5 m. (during dry season).
VHF: Jiujiang Radio on Channels 12, 16 and 21 throughout 24 hours.
TUGS: 1×800 h.p., 2×428 h.p. and 1×300 h.p.
CRANES: Floating cranes: 1×3 tons, 1×10 tons and 1×15 tons.
STEVEDORES: *Working Hours:*
Heavy and bulk cargo: 0700 hrs. – 1600 hrs., 1800 hrs. – 0700 hrs.
Bagged cargo: 0700 hrs. – 1600 hrs., 1600 hrs. – 2400 hrs.
FRESH WATER: Available.
FUEL: Available.
REPAIRS: No facilities.

JIUZHOU: 22.14 N. 113.35 E.

PILOTAGE: Compulsory. Pilot service available from 0830 hrs. – 1730 hrs. Pilot boards vessel at Datouzhou, Touzhou or Jiuzhou (See "Anchorages").
ANCHORAGES:

Name	*Location*	*Depth (m.)*	*Use*
Datouzhou	Lat. 22° 03' 37" N. Long. 113° 44' 00" E.	12.0	Pilot
Touzhou	Lat. 22° 07' 00" N. Long. 113° 44' 36" E.	6.0	Pilot
Jiuzhou	Lat. 22° 13' 37" N. Long. 113° 37' 00" E.	4.0	Pilot

The bottom is mud and the holding ground is good in all anchorages.
RESTRICTIONS: Vessel cannot enter or sail after sunset.
Tidal range: Max. 2.84 m. Average 1.07 m.
Draft Limitation in the Channel: 6.0 m.
VHF: "Zhouhai Radio" on Channel 16 throughout 24 hours.
TUGS: Available.
BERTHING:

Stevedore Company	*Berth Name*	*Length (m.)*	*Depth (m.)*	*Max. Size (d.w.t.)*	*Cargo Handled*	*Shore Cranes*
International Container	5,000 ton	230	6.0	5,000	Bulk, General Cargo	–
International Container	2,000 ton	458	4.0	2,000	Containers, General Cargo	–
Tangjia Dawuwan	2,000 ton	200	5.0	2,000	Oil, LPG	–

Warehouse and Open Storage Space: Warehouse: 14,200 sq.m.
Container Yard: 70,000 sq.m.
Main Import and Export Cargo: Oil products, steel, containers, general cargo and chemical products.
FRESH WATER: Available at berths and at anchorage.
FUEL: Available at berths and at anchorage.
REPAIRS: Facilities available.
GENERAL: *Agency:* Penavico Zhuhai, Freight Centre Building, Jiuzhou, Zhuhai, Guangdong, China. Tel: 86-756-3336431. Fax: 86-756-3333187. Telex: 456291 Penaj Cn.

Sinoagent Jinzhou, 5/F New Lian Jian Building, Shihua East Road, Jiuzhou, Zhuhai, China. Tel: 86-756-3353040. Fax: 86-756-3339694. Telex: 456205 Shazh Cn.
Provisions: Available.

LAN SHUI TERMINAL: 20.50 N. 115.42 E.

LOCATION: The converted tanker "Lan Shui" (F.S.P.U.) is moored in position Lat. 20° 50' 04.3" N., Long. 115° 41' 47.1" E.

The offtaking tanker is to be rigged in accordance with OCIMF Requirements for bow loading.

Vessels will be moored by the bow, to the stern of the F.S.P.U. by a 14 in. hawser.
LOADING: Crude oil only handled.
GENERAL: China Ocean Shipping Agency (COSA) is the only Agent available for this port. The vessel or her owner should contact COSA approximately 6 days prior to the vessel's expected arrival into Chinese waters and appoint COSA as the vessel's Agent. COSA will normally require full payment before clearing the vessel, so it is important for the vessel/owner to establish contact with COSA as early as possible. COSA can be contacted at the following address:
China Ocean Shipping Agency,
2/F, Skiz Building,
Shekou, Shenzen,
The People's Republic of China.
Telephone: Shekou 691136.
Telex: 420834 COSAS CN.
Cable: Penavico Shekou.

LANSHAN: 35.06 N. 119.22 E.

LOCATION: Lanshan is located at the Northern part of Haizhou Bay of Shandong Province. Distance by sea is about 81 miles South of Qingdao, and about 384 miles North of Shanghai.
APPROACHES: The approaches to Lanshan are open sea without any outlying dangers. The coast lines are generally well defined, with conspicuous mountains for terrestrial fixes.

The fairway leading to the berth is buoyed. The buoys are unlit and night navigation is difficult. The depth in the fairway is 12.0 m. – 15.0 m.
PILOTAGE: Compulsory for all berthing movements. The pilot boarding ground is approximately 3 miles S.E. of the berth. Ample advance notice must be given to "Penavico" Lanshan Branch for booking a Pilot.
ANCHORAGE: The sea anchorage is located approximately 3 miles S.E. of the port. The anchorage is about 1,852 m. in radius. Maximum draft limitation for anchoring is 14.0 m. The nature of bottom is mainly sand/mud. The holding ground is reported to be good.
RESTRICTIONS: Large loaded vessels can only berth/unberth during high water. This is due to a shoal patch of 6.20 m. approximately 30 m. off the berth.
MAX. SIZE: See "Berthing".
VHF: "Penavico" Shijiu Branch and "Penavico" Lanshan Branch maintain 24 hour watch on Channel 16.
TUGS: 2×1,080 h.p. There are also 4×3,200 h.p. tugs available from Shijiu.
BERTHING: There are 2 berths open for foreign vessels. One for vessels up to 5,000 tons displacement, length 180 m. and depth 8.5 m., and the other for vessels up to 25,000 tonnes d.w.t., length 210 m. and depth 10.20 m. The berths are solid concrete type, and can handle dry cargo and edible oils. 2×10 ton cranes available.
Berth Facilities:

Pipeline connection:	1×6 in. diameter.
Max. back pressure:	6 kg.
Rate:	Average about 120 tonnes/hour. Max. 150 tonnes/hour.

Note: The shore tank farm is located on elevated hills. Total shore tank capacity is 14,000 tonnes.

Distance between shore manifold to ship's side is about 61 m. Short lengths of pipeline are connected between the ship's side and shore manifolds.
FRESH WATER: Available.
FUEL: Not available.
TANKERS: See "Berthing".
No slop facilities available.
REPAIRS: No facilities available.
GARBAGE DISPOSAL: No facilities available.
WASTE OIL DISPOSAL: No facilities available.
SEAMAN'S CLUBS: None.
CURRENCY: Chinese Ren Min Bi (RMB).
GENERAL: *Weather Conditions:*

Wind:	The prevailing wind is from the North. Average wind speed 3.4 m./sec. Max. wind speed 20 m./sec.
Rain:	The annual average rainfall is 915.7 mm.
Fog:	Fog generally between March – July. Average 26.7 days per year.
Temperature:	The annual average temperature is 12.6° C. Maximum temperature recorded was 38.3° C. and minimum was −14.5° C.

Tidal Conditions: The tidal conditions for Lanshan are similar to the pattern at Lianyungang, the nearest standard port for tidal prediction. The tidal stream runs in an anti-clockwise direction, max. rate during flood tide is 88 cm./sec., and max. rate during ebb tide is 69 cm./sec. The average tidal range is about 2.5 m.
Charts: Presently, there is no British Admiralty Chart available for the port of Lanshan. Vessels proceeding to Lanshan can only use B.A. Chart No. 1253 (Sheyanghe Kou to Qingdao Gang) to approach the port.

Navigation charts for the port of Lanshan will be published by the Chinese Authority in late 1990 or early 1991.
Stores: Not available.
Agency: China Ocean Shipping Agency, Shijiu Branch, Nuanghai 1 Road, Rizhao, Shandong Province, People's Republic of China. Tel: (05400) 441089. Telex: 320021. Fax: (05400) 441086.
DEVELOPMENTS: *Under Construction:* Berth No. 3: Length 130 m., depth 7.5 m. Max. size 5,000 d.w.t.
Berth No. 4: Length 180 m., depth 8.5 m. Max. size 10,000 d.w.t.

SHIPMASTER'S REPORT: December 1989 (Updated July 1992).
Documents:
Maritime Declaration of Health (a Chinese form is presented on arrival).
Report of Entry for Foreign Vessels (Chinese form).
6 copies Crew List.
Customs Declaration (Chinese forms brought on board on arrival by the Agent).

Additional forms are provided for next Chinese port of call.
Formalities: Officials board for Port Health Inspection (quarantine) and Immigration and Customs Clearance.
Pilotage: Two pilots boarded the vessel from a large new tug. The boarding position is Lat. 35° 02.24' N., Long. 119° 25.18' E.

The distance from the boarding position to the berth is 4.5 miles.
Approaches: BA. Chart No. 1253 is the only available chart. No larger scale charts exist. Approach is clear from the East with good radar targets.

There is a black buoy at the pilot boarding position but it is not marked on the chart. The buoy is unlit and was sighted at 3.5 miles with a wind of Force 3 – 4.
Anchorage: The anchorage is located one mile South of the Pilot Station. The bottom is mud.
Restrictions: All movements are during daylight only.

After the Pilot boarded we sighted 2 more small black buoys which were unlit. The first buoy is left on the port side and the second buoy is left on the starboard side. In the near future, this will be the position of the fairway buoys.

Pilotage is suspended when the wind reaches Force 4 – 5 as the tug has to come from Shijiu, also there are draft restrictions at low water.

Max. Size: Maximum draft 10.2 m., but preferably below 10.0 m.

Vessels with an LOA of 175 m. can be berthed. Vessels over 175 m. LOA can only berth and unberth at high water as the range of the tide is about 4.0 m. The time of high water is based on mean high water Shinjiu plus 30 minutes (tide times will be given by Agent).

Radio/VHF: Notice of Arrival should be sent to "Penavico Shijiu" 48 hours and 24 hours prior to arrival. This notice should be confirmed 3 hours prior to arrival by VHF on Channels 16 and 11.

Penavico handle all foreign vessels and it is important to contact them as soon as possible in order that they may arrange pilotage and clearance.

Tugs: 3 tugs available for mooring.

Berthing: There is only one berth available for the discharge of oil cargoes. The length of the pier is 180 m. and Pilot advised that the maximum depth alongside was 10.2 m., the actual depth alongside is no more than 9.78 m. at low water. Nature of the bottom is sand.

The vessel moored starboard side alongside and ship arranged mooring ropes to own requirements. Port anchor also used.

Cargo Operations: There is 1 × 6 in. hose available. The vessel provided 2 lengths of rubber hose. The hose was connected to the ship's starboard manifold by the ship's crew.

The storage tanks are about one mile from the berth and are at an elevation of 40 m. There are several sharp bends in the pipe so the back pressure was considerable (about 5 bars).

We achieved a pumping rate of approximately 120 cu.m.p.h. The pumping arrangement is not fixed and was removed after completion of discharge as this berth is also used for the export of sea sand for which 2 movable cranes are available.

Stevedores: The stevedores are state controlled and work is continuous in 3 shifts.

Medical: Facilities are available in a village nearby.

Time: GMT plus 8 hours.

Shore Leave: Possible. Shore passes are issued on arrival. Crew going ashore must show the Immigration Officer at the gangway their shore passes and passports.

General: The number of English speaking personnel was very limited and the Agent was required on occasions for translation purposes.

Prior to departure a strict search is made for stowaways and all shore passes are collected before clearance papers are issued.

SHIPMASTER'S REPORT: August 1992.

Location: Position: 35° 05.5' N., 119° 22' E. The port is near Point Lanshantuo (B.A. Chart No. 1253). The port has been in operation for 2 years.

Port Limits: Approximately 6 miles radius off the end of the breakwater.

Documents: On arrival:

6 Crew Lists.
1 Customs List (Chinese Form).
1 Health Declaration (Chinese Form).
1 Vaccination List (free form).
1 List of Arms and Ammunition (free form).
2 Reports of Entry for Foreign-Going Ships (Chinese Form).
1 Animal and Plant Quarantine Declaration Form for repairing vessel (Chinese Form).
1 List of Specified Articles, foreign currency, gold, silver, belonging to ship and/or members of crew (Chinese Form mandatory).
1 List of Articles to be sealed, cigarettes and liquor belonging to ship and/or members of crew (Chinese Form mandatory).

To be shown to the Port Officials:

Ship's Register.
Tonnage Dues (Chinese Form mandatory, issued by the Port Office at the first Chinese Port of Call).
Tonnage Certificate.
Load Line Certificate.
Safety Construction, Equipment, Radiotelegraphy Certificates.
Certificate of Financial Security in respect of Civil Liability for Oil Pollution Damage.
Certificate of Insurance.
Tovalop Certificate.
Derat Certificate.
Health Books and Yellow Cards of the crew members.
Seamen's Books (Passports).

On Departure:

2 Sailing Reports (Chinese Form).
1 Customs List (Chinese Form).

Collect and return all Shore Passes issued on arrival.

Tonnage Dues (Chinese Form) must be shown to the Port Officials before sailing.

Pilotage: Compulsory. Pilotage for large vessels performed between sunrise and sunset.

The Pilot boards at anchorage from a tug. The entrance channel (315° – 135°) has a depth of 13.0 m., is about 3.5 miles in length, and about 1.2 miles in width, and is marked by two black buoys with white irregular flashes in the following positions:

(a) Lat. 35° 03.9' N., Long. 119° 25.2' E.
(b) Lat. 35° 03.0' N., Long. 119° 24.0' E.

The Pilot listens on VHF Channel 16, working on Channel 13, but there was no answer. Berthing information comes from the local Agents only.

Anchorage: The anchorage is situated about 5.5 miles S.E. of Lanshantuo Point (B.A. Chart No. 1253) and is marked by 4 black buoys, as follows:

(a) Lat. 35° 02.0' N., Long. 119° 28.0' E.
(b) Lat. 35° 02.2' N., Long. 119° 23.6' E.
(c) Lat. 35° 04.0' N., Long. 119° 26.0' E.
(d) Lat. 35° 00.4' N., Long. 119° 25.8' E.

Depths range from 10.0 m. – 15.0 m., and the nature of the bottom is sand and mud, normal holding ground. Vessel anchored with 6 shackles in the water. Tidal streams of about 2 knots were experienced.

Restrictions: Entry and departure not permitted after sunset for large vessels.

Max. Size: Vessel of 185 m. length with draft 9.2 m. can moor.

Health: Ship cleared by Health Officials on arrival. Quarantine and Veterinary Officials carried out the inspection of the crew mess, galley, dry and freezing stores. Pay strict attention to the Health Books and Yellow Cards of the crew members, especially anti-cholera injections.

Radio: Telegraphic communciations: ETA cables via Qingdao Coastal Radio Station (Call sign XST). Calling frequency 500 kHz, working 425 kHz, answering 435 kHz. Working day and night.

VHF: Pilot and local Agents keep watch on Channel 16.

Pilot works on Channel 13.
Local Agent "Penavico", working on Channel 16.
Local Agent "Sinoagent", working on Channels 74 and 73.

Radar: There is no radar station in the port.

Tugs: The port has 2 tugs: 1×2,500 h.p. and 1×800 h.p.

Berthing: Two concrete berths.

First Berth: Length 180 m., depth alongside 7.5 m.
Second Berth: Length 210 m., depth alongside 10.2 m.

Vessels can only berth starboard side alongside, port anchor used with 4 – 5 shackles in the water. Fendering is insufficient.

Cranes: 4×25 ton luffing cranes.

Bulk Cargo Facilities: The port is equipped with 4 multi-purpose portable cranes for handling bulk.

Cargoes: Coal, ores and cement.

Specialised Cargo Handling Facilities: On the first berth, another vessel loaded frozen fish, garlic in cases and peaches. She used her own equipment. She was berthed starboard side to, cargo was delivered alongside my lorries.

Tankers: On the Second Berth (210 m. length), we unloaded 3,800 tonnes of soya bean oil.

Connection: 1×6 in. hose to underground pipelines. Collector has 4×6 in. pipelines, discharging rate about 200 tons per hour.

Density: Salt water.

Fresh Water: Available.

Fuel: Available, but preliminary (7 days minimum) notice required.

Consuls: None.

Repairs: Small repairs only.

Dry Docks: No information.

Gangway/Deck Watchmen: One gangway guard for inspecting crew members passes.

Customs Allowances: Crew allowed 200 cigarettes on arrival. The bond is sealed.

Repatriation: Possible, arranged by local Agents. It takes 3 – 4 days to arrange visas.

Airport: Airport at Qingdao (180 km.).

Time: GMT plus 8 hours, no change.

Police/Ambulance/Fire: It is sufficient to ask guard to advise the desired department.

Shore Leave: Allowed. Passes issued on arrival by Immigration (must be returned before departure).

Identification Cards: Shore Passes issued on arrival by Immigration. Must be kept with Seamen's Books.

Delays: We had to wait 6 days for a berth.

Agent: China Ocean Shipping Agency, Ocean Hotel, Zhong Shan C.W.J.Road, Lanshan. Tel: 0518-312393. Fax: 311842. Telex: 36902. Cables: Penavico.

Another Agency is Sinoagent (Telex: 320034 Lsbrz-Cn. Cables: Sinoagent Lanshan).

AUTHORITY: Lanshan Harbour Bureau, Lanshan Port, Rizhao City, Shandong Province, People's Republic of China. *Tel:* (05400) 441046, 441047. *Telex:* 320036. *FAX:* (05400) 221397. *Contact:* Mr. Mu Naishan, Port Director.

LIANYUNGANG: 34.45 N. 119.27 E. (See Plan)

DOCUMENTS: See "Dalian".

PILOTAGE: Compulsory. Pilotage undertaken day and night. Pilot boards at Pilot Anchorage.

ANCHORAGE: No. 1 Quarantine, Pilot Anchorage: Lat. 34° 49' 10" N., Long. 119° 42' 02" E. as centre with 1.5 nautical miles radius. Depth 13.0 m. – 15.0 m., mud and sand bottom with good holding ground.

No. 2 Quarantine, Pilot Anchorage: Lat. 34° 45' 58" N., Long. 119° 33' 47" E., as centre with 1 nautical mile as radius. Depth 6.0 m. – 8.0 m., mud bottom with good holding ground.

RESTRICTIONS: Draft limitation in the channel: 8.6 m.

Possibility of entry or sailing after sunset: Possible.

Tidal range: 6.48 m., average 3.39 m.

If vessel anchors in Lianyungang Road for a long time, the anchor chains will become twisted, due to ships' irregular turning. The Master should heave up anchor to one or two shackles in water and then slack to his requirements at least once a week.

VHF: Lianyungang Radio on Channel 16 throughout 24 hours.

TUGS: 1×428 h.p., 1×660 h.p., 1×980 h.p., 2×1,200 h.p., 2×1,670 h.p. and 2×3,200 h.p.

BERTHING:
Berths No. 1, 2, 3, 4, 5 and 6 are operated by No. 1 Stevedoring Company of the Port.

Berths No. 8, 9, 10, 11, 12 and 14 are operated by No. 2 Stevedoring Company of the Port.

Berths No. 33, 34, 35 and 36 are operated by No. 3 Stevedoring Company of the Port.

Berths No. 31 and 32 are operated by the Container Company of the Port.

Berths No. 38 and 39 are operated by the Coal Stevedoring Company of the Port.

Berth No.	*Length* (m.)	*Depth* (m.)	*Max. Size* (d.w.t.)	*Cargo handled*	*Equipment*
1	153	9.0	10,000	General Cargo, Bulk Cargo	Shore Cranes 3× 10 tons
2	156	7.0	5,000	General Cargo, Bulk Cargo	Shore Cranes 3×10 tons
3	142	7.0	5,000	General Cargo, Bulk Cargo	Shore Cranes 3×10 tons
4	180	9.0	10,000	General Cargo, Bulk Cargo	Shore Cranes 2×10 tons
5	188	9.0	10,000	General Cargo	Shore Cranes 3×10 tons
6	190	9.0	10,000	General Cargo	Shore Cranes 3×10-16 tons
8	160	9.0	10,000	General Cargo	Shore Cranes 2×10 tons
9	210	11.0	25,000	General Cargo, Bulk Cargo	Shore Cranes 2×10 tons
10	200	10.0	25,000	General Cargo	
11	210	10.0	25,000	General Cargo	Shore Cranes 3×10 tons
12	160	9.0	10,000	General Cargo	Shore Cranes 3×10 tons
14	162	9.0	10,000	Coal	Shiploader 1×1,000 t.p.h.
31	270	11.0	25,000	Containers	Bridge Cranes 2×30 tons
32	270	11.0	25,000	Containers	Bridge Cranes 2×30 tons
33	280	10.0	35,000	Grain	
34	269	10.0	10,000	General Cargo	
35	215	11.0	25,000	Timber	Shore Cranes 2×16 tons
36	205	11.0	25,000	Timber	Shore Cranes 2×16 tons
38	236	11.0	16,000	Coal	Shiploader 1×3,000 t.p.h.
39	240	11.0	35,000	Coal	Shiploader 1×3,000 t.p.h.

CRANES: 1×200 ton crane.
Also see "Berthing".
FRESH WATER: Available.
FUEL: Contact China Marine Bunker Supply Co., Lianyungang Branch.
REPAIRS: Facilities available.
GENERAL: *Provisions:* Contact Lianyungang Foreign Vessel Supply Corporation.
Imports: Steel, timber, fertiliser, sugar.
Exports: Coal, agricultural products and general cargo.
DEVELOPMENTS: *Xugou Port Area:* 10 general cargo berths will be built, 2 berths × 5,000 tons and 6 berths × 10,000 tons. In the first phase, 6 general cargo berths will be constructed along the 1,100 m. quay on reclaimed land of 0.5 million sq.m. This project commenced in 1994, and will be completed late 1997.
Miaoling Port Area: 6 deep-water berths will be built. There will be 2 container berths (35,000 tons and 25,000 tons) and 4 general berths (50,000 tons, 30,000 tons, 20,000 tons and 15,000 tons). The period of construction is 5 years, starting from the beginning of 1996.
AUTHORITY: Lianyungang Harbour Administration Bureau, 99 Zhongshan Road, Lianyungang, China. *Tel:* 86-518-2383374, 2383835. *Telex:* 369032 Lygha Cn. *FAX:* 86-518-2331261.

LONGKOU: 37.29 N. 120.20 E. (See Plan)

DOCUMENTS: Documents as required by the Joint-Inspection Party and/or as international practice. These documents are supplied by ship's Agent.
PILOTAGE: Pilotage is compulsory in the Port of Longkou and is available 24 hours.

It is necessary for all vessels to give notice of ETA 72 hours, 48 hours and 24 hours prior to arrival to their Agent by cable, or telex, or VHF. Pilot boats available. Pilot may be contacted by VHF Channel 16, and can board the vessel in the anchorage. Vessel should make all the necessary arrangements beforehand.
ANCHORAGES: Present anchorage is bounded by the co-ordinates below, in depth of 9.50 m. with area of 9 sq.km. It will hopefully be enlarged to 30 sq/km. with depth from 10.0 m. – 20.0 m. in the future.

The Quarantine Anchorage is the same as the Pilot Anchorage, and is bounded by the following co-ordinates:

(a) Lat. 37° 37' 48" N., Long. 120° 12' 30" E.
(b) Lat. 37° 37' 00" N., Long. 120° 12' 30" E.
(c) Lat. 37° 37' 48" N., Long. 120° 13' 52" E.
(d) Lat. 37° 37' 00" N., Long. 120° 13' 52" E.

MAX. SIZE: Limited by draft. Vessels not over 200 m. in length and 10.0 m. draft can be accepted.
HEALTH: No restriction except quarantine. Pratique procedure and action undertaken by the Quarantine Service. "Q" flag must be hoisted upon vessel's arrival. Masters should tender Maritime Declaration of Health and Deratting or Deratting Exemption Certificate.
RADIO: "Longkou Radio". Call sign: XSS. Telex: 32575 PENLK CN.
VHF: The radio station is manned throughout 24 hours by the Port Authority, keeping watch principally on Channel 16. Three other channels are also available, Channel 9 or 13 for contact via the station to get through to any departments required and Channel 10 for Inner Port contact.
TUGS: Three tugs available up to 3,500 h.p. Vessels usually use tug's line and 2 tugs are usually used for berthing and unberthing.
BERTHING: 12 berths available which can accept vessels with maximum draft 10.50 m. (SW) at low water.

Berth (No.)	*Length* (m.)	*Depth* (m.)	*Usage*
1	180	10.50	General cargo
2	120	7.50	General cargo
3	104	6.50	General cargo
4	104	6.50	General cargo
5-6	200	6.50	Bulk cargo and Ro/Ro
7-10	350	4.50 - 7.00	General and bulk cargo
11-12	355	10.30	Specialised Quay for coal and ore

Also see "Developments".
CRANES: 4 gantry cranes with capacity of 10 – 16 tons at Berths No. 1 – 2. 4 gantry cranes with capacity of 10 tons at Berths No. 7 – 10. 5 gantry cranes with capacity of 10 – 16 tons at Berths No. 11 – 12. Movable electric shore cranes and truck cranes up to 7 tons and 50 tons capacity respectively are available at other berths. All cranes are optional.
BULK CARGO FACILITIES: Bulk cargoes handled at Berths No. 5 – 6 for sand, No. 9 – 10 for salt, and are equipped with belt conveyors. Berth No. 11 is specially for handling coal.
SPECIAL CARGO-HANDLING FACILITIES: A Roll-on/Roll-off ramp is available at Berth No. 6.
Also see "Developments".
STEVEDORES: Arranged by the Port Authority. ETA notice to include particulars of cargo, showing heavy lifts, dangerous or hazardous cargoes, hatch stowage and gangs required, etc. Stevedores work 24 hours.
MEDICAL: Notice not necessary but advisable to Agents if treatment required. Full hospital facilities available. Vaccination essential if ship comes from affected area, inspection carried out by the Quarantine Service. International certificates must be current.
DENSITY: 1025 generally at all tides (salt).
FRESH WATER: Available throughout 24 hours and delivered by shore hoses at a rate of 50 t.p.h. Cost is $ 1.00 per ton and handling charge $ 3.5 per ton should be added per time.
FUEL: Available, delivered by trucks. Advance notice required. If bunkers are supplied by barge, minimum quantity is 100 tons.
FIRE PRECAUTIONS: Ship's watchman to be on duty. Fire-engine equipped for tankers loading/discharging on stand-by. Smoking prohibited in inner port area.
REPAIRS: Minor repairs possible.
DRY DOCKS: None.
SURVEYORS: Cargo inspectors available. Marine surveyors available, e.g. China Classification Society carry out co-ordinated survey on behalf of international societies.
HATCHES: Hatch operation optional. Stevedores can render assistance.
CUSTOMS ALLOWANCES: According to local Customs Department allowances.
REPATRIATION: Facilities exist for crew repatriation, arranged by ship's Agents.
AIRPORT: 120 km. from the port.
TIME: G.M.T. plus 8 hours.
HOLIDAYS: Ordinary holidays: New Year's Day (1st January), Spring Festival, May Day, National Day (1st and 2nd October).
POLICE/AMBULANCE/FIRE: Police: (05456) 211641. Ambulance: 212001-245/212870. Fire: 119.
SERVICES: Port service to ship for garbage removal, etc.
SEAMAN'S CLUBS: Seaman's Club, 17 Longhai Road, Longkou. Tel: (05456) 212311.
BANKS: Bank of China for currency exchange.
SHIP SUPPLY SERVICE: Ship chandler available. Tel: (05456) 212539. Address: 53 Zhenxing Road, Longkou.
IDENTIFICATION CARDS: Crew need Seaman's Book.
REGULATIONS: According to Port Authority and Harbour Master.
DEVELOPMENTS: A 10,000 d.w.t. berth for handling dangerous/liquid chemicals is under construction (Designed draft 10.00 m., 350 m. in length) with pipes connection system underground.

A special berth for handling containers is under construction.
AUTHORITY: Longkou Harbour Administration Bureau, 24 Huanhai Road, Longkou City, Shandong Province, P.R. of China. *Tel:* (05456) 212091. *Telex:* 32575 Penlk Cn. *FAX:* (05456) 211137. *Cables:* 3203. *Contact:* Mr. Wang Shu-bo, Port Director.

FRESH WATER: Not available at the Terminal.

FUEL: Not available.

REPAIRS: No repairs are permitted when moored at the Terminal.

REPATRIATION: No repatriation is permitted at the Terminal. Only the cases of injured persons can be considered.

SHORE LEAVE: No shore leave is permitted at the Terminal.
No persons are allowed to visit the FPSO.

MAIL: No mail can be sent from the Terminal.

WEATHER:
General Climate of the Area: The climate of the South China Sea is mainly dominated by seasonal winds. These monsoons are related to fairly regular seasonal fluctuations of the atmospheric pressure over the Asiatic continent.

During the Winter, from October to March, a high pressure area settles over Southern Siberia and China because the North Asian land mass cools as a result of the decreased solar heating. The "Siberian High" in conjunction with the semi-permanent high pressure area of the sub-tropical North Pacific Ocean, centred approximately along latitudes 25° N. to 30° N., causes predominantly N.E.ly winds, the N.E. monsoon, over the South China Sea.

The development of the "Siberian High pressure" starts in September and from October the N.E.ly wind regime is established.

During late April and May, the "Siberian High" weakens and displaces Northward because the Asian land mass warms up as a result of the increased solar heating. More or less simultaneously, a low pressure area begins to develop over North India and S.E. Asia.

As a result, the N.E.ly winds decrease and a flow of South-S.W. winds, the S.W. monsoon, progressively settles over the South China Sea. This is a period of transition from the N.E. monsoon season to the S.W. monsoon season. The S.W. monsoon season lasts from June to August. It is characterised by the extension of the "heat low pressure" area over North India and South China.

In September the "heat low pressure" weakens and progressively dissipates due to the decreasing solar heating, while the "Siberian High pressure" is intensified and moves Southward. The S.W. monsoon weakens and is gradually substituted by the N.E. monsoon.

By October the S.W. monsoon has virtually ceased and the N.E. monsoon dominates over the Northern area of the South China Sea.

Climate analysis influenced by monsoon leads to sub-divide the year into five periods:

Winter (December to March – N.E. monsoon season).
Spring (April to May – transitional period).
Summer (June to August – S.W. monsoon season).
(September – transitional period).
Autumn (October to November – N.E. monsoon season).

These periods can be considered as "normal conditions".

Exceptional conditions sometimes exist due to low pressure depressions rising close to the equator which move towards temperate zones following routes at different speed and covering different distances and reaching forces up to cyclone (in this area called "typhoons"). The periods in which these phenomenon occur most are in the Summer time up to September.

GENERAL: All vessels calling at Huizhou Terminal must fly the People's Republic of China flag, and the International code quarantine signal must be displayed upon the Authorities visit.

Masters and operating personnel of tankers calling at the Terminal must be aware of the information contained herein and in the OCIMF "International Safety Guide for Oil Tankers and Terminals – Edition in Force".

SAFETY: The following OCIMF guidelines will be enforced at the Terminal as applicable:
International Safety Guide for Oil Tankers and Terminals.
Ship-to-Ship Transfer Guide (Petroleum), 2nd edition.
Guide to Helicopter/Ship Operations.

Smoking, Lighters and Matches: Smoking is prohibited on board during loading operations, except in those areas in the accommodation jointly agreed between the Master and the Terminal Representative. Personnel must not carry lighters or matches other than in the accepted areas.

Portable Equipment: Any electrical equipment which is not wholly within an approved explosion proof container, an approved air pressured container or any equipment which is not intrisically safe, must be disconnected from the power supply.

Hand Torches: Only those hand torches provided with a certificate of approval delivered by a recognised authority are allowed.

Satellite Communication Equipment: Consultation between Master and Lightering Adviser is advisable in order to ascertain that there is no risk due to the presence of flammable gas before a satellite terminal is operated.

Main Engine: While moored at the FPSO the main engine must remain on instant readiness. No engine repairs are permitted. In the tandem mooring system, it may be necessary for the vessel to use the engines while moored. Use of main engine shall be made with the advice of the Lightering Adviser only.

Helicopter Operations: No helicopter operations on the export tanker can take place during ballast and/or cargo operations. Helicopter operations may take place only after such operations have been stopped and the integrity of the IGS system has been verified.

A helicopter landing or winching area must be painted on the tanker deck and must be in accordance with the requirements of the "Guide to Helicopter/Ship Operations" published by the International Chamber of Shipping. All helicopter operations shall be in accordance with said Guide. The helicopter pilot and export tanker crew shall be familiar with its content.

AGENCY: Operator does not have a local appointed agent.

Available for owner's agent are Penavico – China Ocean Shipping Agency, located in Shekou, Shenzhen. Tel: 86-755-669-5216/2746. Telex: 420834 Cosas CN. Fax: 86-755-669-2769.

OPERATOR: ACT Operators Group, 10-16 Floor, Offshore Petroleum Building, No. 1 Industry Road 2, Shekou Special Industrial Zone, Shenzhen, Guangdong Province, People's Republic of China 518069. *Tel:* 669-1608 (Public Line). *Telex:* 44242, 44254 ACT CN. *FAX:* 669-1606. *Contact:* Captain G. Harrison, Huizhou Terminal Supervisor.

JIANGYIN: 31.55 N. 120.11 E.

ANCHORAGE: Jiangyin Port Anchorage is located 6.5 km. from the South bank of the upper reaches of the Chang Jiang River at Huang Tian Port. Depth of water 13.0 m. – 21.0 m. Nature of bottom is medium fine sand. Anchorage is suitable for vessels up to 25,000 d.w.t.

RESTRICTIONS: Vessels may enter and sail after sunset.
Draft is restricted to 9.5 m. as vessels have to cross a bar at the mouth of the Chang Jiang River.

MAX. SIZE: Draft limitation in channel is 15.0 m.
Tidal range 0.0 m. – 3.15 m.

VHF: Call sign: Jiangyin Radio. Channels available 16, 21 and 71. Channel 21 is usual working channel. Station operates 24 hours.

TUGS: 1×150 h.p., 1×428 h.p. and 1×980 h.p.

BERTHING:

Cargo Handling Department	*Wharf*	*Max.Size* (d.w.t.)	*Length* (m.)	*Depth* (m.)	*Cargo Handled*	*Shore Cranes*
Jiangyin Port	No.2	1× 5,000	100	12.0	General Cargo	2×10 tons
Ward		2×25,000	535	21.0	General Cargo	

FUEL: Not available.

REPAIRS: Facilities available for vessels up to 30,000 d.w.t.

GENERAL: *Storage Areas:*
Warehouse 3,300 sq.m.
Open storage area 2,000 sq.m.
Cargo Handled: General cargo, steel, grain and cotton.

JINZHOU: 40.48 N. 121.04 E.

PILOTAGE: Compulsory. Pilot service is available throughout 24 hours (in Summer), and daytime (in Winter). Pilot boards vessel at Lat. 40° 42.4' N., Long. 121° 06.5' E.

ANCHORAGE:

Anchorage No.	*Location*	*Depth* (m.)	*Bottom*	*Use*
1	Lat. 40° 42' 24" N. Long. 121° 06' 30" E.	9.5	Mud with good holding ground.	Quarantine, waiting, Pilot.
2	Lat. 40° 33' 00" N. Long. 121° 26' 30" E.	11.0	Mud with good holding ground.	Waiting.

RESTRICTIONS: Vessel cannot enter and sail after sunset.
Tidal range: Max. 4.06 m. Average 2.05 m.
Draft Limitation in the Channel: 7.90 m.

VHF: "Jinzhou Radio" on Channel 16 throughout 24 hours.

TUGS: 1×1,380 h.p., 1×2,000 h.p. and 1×3,700 h.p.

BERTHING:

Stevedore Company	*Berth Name*	*Length* (m.)	*Depth* (m.)	*Max. Size* (d.w.t.)	*Cargo Handled*	*Shore Cranes*
Jinzhou	General Cargo	217	9.9	10,000	General Cargo	2×5 tons
Jinzhou	Product Oil	241	10.4	10,000	Oil	
Jinzhou	No. 2	193	9.7	10,000	General Cargo	2×10 tons

Warehouse and Open Storage Space: Warehouse: 3,600 sq.m.
Open Storage Space: 60,000 sq.m.

Main Import and Export Cargo: Crude oil, oil products, general cargo, grain, ore and cement.

FRESH WATER: Available at berths.

FUEL: Available (except fuel oil) at berths.

REPAIRS: Facilities available.

GENERAL: *Agency:* Penavico Jinzhou, Port Building, Economic Development District, Jinzhou, China. Tel: 86-416-3127123. Fax: 86-416-3123663. Telex: 813061 Jzgwj Cn.

Sinoagent Jinzhou, 11-2 Sec. 2, Zhongyang Street, Jinzhou, Liaoning, China. Tel: 86-416-3120189, 3122557. Fax: 86-416-3121817. Telex: 813068 Jzagt Cn.

Provisions: Available.

JIUJIANG: 29.38 N. 115.56 E.

PILOTAGE: Compulsory. Pilotage is undertaken day and night. Pilots board vessels at River Jiujiang.
ANCHORAGE: Guang Pai Jiao Anchorage: Depth 3.0 m. – 15.0 m. Ground of anchorage: Mud and sand. Size of vessel: 50,000 d.w.t.
RESTRICTIONS: Only passenger vessels may enter between sunset and sunrise.
Range of Tide: 7.0 m. – 21.0 m.
Draft Limitation in Channel: 4.5 m. (during dry season).
VHF: Jiujiang Radio on Channels 12, 16 and 21 throughout 24 hours.
TUGS: 1×800 h.p., 2×428 h.p. and 1×300 h.p.
CRANES: Floating cranes: 1×3 tons, 1×10 tons and 1×15 tons.
STEVEDORES: *Working Hours:*
Heavy and bulk cargo: 0700 hrs. – 1600 hrs., 1800 hrs. – 0700 hrs.
Bagged cargo: 0700 hrs. – 1600 hrs., 1600 hrs. – 2400 hrs.
FRESH WATER: Available.
FUEL: Available.
REPAIRS: No facilities.

JIUZHOU: 22.14 N. 113.35 E.

PILOTAGE: Compulsory. Pilot service available from 0830 hrs. – 1730 hrs. Pilot boards vessel at Datouzhou, Touzhou or Jiuzhou (See "Anchorages").
ANCHORAGES:

Name	*Location*	*Depth (m.)*	*Use*
Datouzhou	Lat. 22° 03' 37" N. Long. 113° 44' 00" E.	12.0	Pilot
Touzhou	Lat. 22° 07' 00" N. Long. 113° 44' 36" E.	6.0	Pilot
Jiuzhou	Lat. 22° 13' 37" N. Long. 113° 37' 00" E.	4.0	Pilot

The bottom is mud and the holding ground is good in all anchorages.
RESTRICTIONS: Vessel cannot enter or sail after sunset.
Tidal range: Max. 2.84 m. Average 1.07 m.
Draft Limitation in the Channel: 6.0 m.
VHF: "Zhouhai Radio" on Channel 16 throughout 24 hours.
TUGS: Available.
BERTHING:

Stevedore Company	*Berth Name*	*Length (m.)*	*Depth (m.)*	*Max. Size (d.w.t.)*	*Cargo Handled*	*Shore Cranes*
International Container	5,000 ton	230	6.0	5,000	Bulk, General Cargo	–
International Container	2,000 ton	458	4.0	2,000	Containers, General Cargo	–
Tangjia Dawuwan	2,000 ton	200	5.0	2,000	Oil, LPG	–

Warehouse and Open Storage Space: Warehouse: 14,200 sq.m.
Container Yard: 70,000 sq.m.
Main Import and Export Cargo: Oil products, steel, containers, general cargo and chemical products.
FRESH WATER: Available at berths and at anchorage.
FUEL: Available at berths and at anchorage.
REPAIRS: Facilities available.
GENERAL: *Agency:* Penavico Zhuhai, Freight Centre Building, Jiuzhou, Zhuhai, Guangdong, China. Tel: 86-756-3336431. Fax: 86-756-3333187. Telex: 456291 Penaj Cn.

Sinoagent Jinzhou, 5/F New Lian Jian Building, Shihua East Road, Jiuzhou, Zhuhai, China. Tel: 86-756-3353040. Fax: 86-756-3339694. Telex: 456205 Shazh Cn.
Provisions: Available.

LAN SHUI TERMINAL: 20.50 N. 115.42 E.

LOCATION: The converted tanker "Lan Shui" (F.S.P.U.) is moored in position Lat. 20° 50' 04.3" N., Long. 115° 41' 47.1" E.

The offtaking tanker is to be rigged in accordance with OCIMF Requirements for bow loading.

Vessels will be moored by the bow, to the stern of the F.S.P.U. by a 14 in. hawser.
LOADING: Crude oil only handled.
GENERAL: China Ocean Shipping Agency (COSA) is the only Agent available for this port. The vessel or her owner should contact COSA approximately 6 days prior to the vessel's expected arrival into Chinese waters and appoint COSA as the vessel's Agent. COSA will normally require full payment before clearing the vessel, so it is important for the vessel/owner to establish contact with COSA as early as possible.
COSA can be contacted at the following address:

China Ocean Shipping Agency,
2/F, Skiz Building,
Shekou, Shenzen,
The People's Republic of China.

Telephone:	Shekou 691136.
Telex:	420834 COSAS CN.
Cable:	Penavico Shekou.

LANSHAN: 35.06 N. 119.22 E.

LOCATION: Lanshan is located at the Northern part of Haizhou Bay of Shandong Province. Distance by sea is about 81 miles South of Qingdao, and about 384 miles North of Shanghai.
APPROACHES: The approaches to Lanshan are open sea without any outlying dangers. The coast lines are generally well defined, with conspicuous mountains for terrestrial fixes.

The fairway leading to the berth is buoyed. The buoys are unlit and night navigation is difficult. The depth in the fairway is 12.0 m. – 15.0 m.
PILOTAGE: Compulsory for all berthing movements. The pilot boarding ground is approximately 3 miles S.E. of the berth. Ample advance notice must be given to "Penavico" Lanshan Branch for booking a Pilot.
ANCHORAGE: The sea anchorage is located approximately 3 miles S.E. of the port. The anchorage is about 1,852 m. in radius. Maximum draft limitation for anchoring is 14.0 m. The nature of bottom is mainly sand/mud. The holding ground is reported to be good.
RESTRICTIONS: Large loaded vessels can only berth/unberth during high water. This is due to a shoal patch of 6.20 m. approximately 30 m. off the berth.
MAX. SIZE: See "Berthing".
VHF: "Penavico" Shijiu Branch and "Penavico" Lanshan Branch maintain 24 hour watch on Channel 16.
TUGS: 2×1,080 h.p. There are also 4×3,200 h.p. tugs available from Shijiu.
BERTHING: There are 2 berths open for foreign vessels. One for vessels up to 5,000 tons displacement, length 180 m. and depth 8.5 m., and the other for vessels up to 25,000 tonnes d.w.t., length 210 m. and depth 10.20 m. The berths are solid concrete type, and can handle dry cargo and edible oils. 2×10 ton cranes available.
Berth Facilities:

Pipeline connection:	1×6 in. diameter.
Max. back pressure:	6 kg.
Rate:	Average about 120 tonnes/hour. Max. 150 tonnes/hour.

Note: The shore tank farm is located on elevated hills. Total shore tank capacity is 14,000 tonnes.

Distance between shore manifold to ship's side is about 61 m. Short lengths of pipeline are connected between the ship's side and shore manifolds.
FRESH WATER: Available.
FUEL: Not available.
TANKERS: See "Berthing".
No slop facilities available.
REPAIRS: No facilities available.
GARBAGE DISPOSAL: No facilities available.
WASTE OIL DISPOSAL: No facilities available.
SEAMAN'S CLUBS: None.
CURRENCY: Chinese Ren Min Bi (RMB).
GENERAL: *Weather Conditions:*

Wind:	The prevailing wind is from the North. Average wind speed 3.4 m./sec. Max. wind speed 20 m./sec.
Rain:	The annual average rainfall is 915.7 mm.
Fog:	Fog generally between March – July. Average 26.7 days per year.
Temperature:	The annual average temperature is 12.6° C. Maximum temperature recorded was 38.3° C. and minimum was −14.5° C.

Tidal Conditions: The tidal conditions for Lanshan are similar to the pattern at Lianyungang, the nearest standard port for tidal prediction. The tidal stream runs in an anti-clockwise direction, max. rate during flood tide is 88 cm./sec., and max. rate during ebb tide is 69 cm./sec. The average tidal range is about 2.5 m.
Charts: Presently, there is no British Admiralty Chart available for the port of Lanshan. Vessels proceeding to Lanshan can only use B.A. Chart No. 1253 (Sheyanghe Kou to Qingdao Gang) to approach the port.

Navigation charts for the port of Lanshan will be published by the Chinese Authority in late 1990 or early 1991.
Stores: Not available.
Agency: China Ocean Shipping Agency, Shijiu Branch, Nuanghai 1 Road, Rizhao, Shandong Province, People's Republic of China. Tel: (05400) 441089. Telex: 320021. Fax: (05400) 441086.
DEVELOPMENTS: *Under Construction:* Berth No. 3: Length 130 m., depth 7.5 m. Max. size 5,000 d.w.t.
Berth No. 4: Length 180 m., depth 8.5 m. Max. size 10,000 d.w.t.

SHIPMASTER'S REPORT: December 1989 (Updated July 1992).
Documents:
Maritime Declaration of Health (a Chinese form is presented on arrival).
Report of Entry for Foreign Vessels (Chinese form).
6 copies Crew List.
Customs Declaration (Chinese forms brought on board on arrival by the Agent).

Additional forms are provided for next Chinese port of call.
Formalities: Officials board for Port Health Inspection (quarantine) and Immigration and Customs Clearance.
Pilotage: Two pilots boarded the vessel from a large new tug. The boarding position is Lat. 35° 02.24' N., Long. 119° 25.18' E.

The distance from the boarding position to the berth is 4.5 miles.
Approaches: BA. Chart No. 1253 is the only available chart. No larger scale charts exist. Approach is clear from the East with good radar targets.

There is a black buoy at the pilot boarding position but it is not marked on the chart. The buoy is unlit and was sighted at 3.5 miles with a wind of Force 3 – 4.
Anchorage: The anchorage is located one mile South of the Pilot Station. The bottom is mud.
Restrictions: All movements are during daylight only.

After the Pilot boarded we sighted 2 more small black buoys which were unlit. The first buoy is left on the port side and the second buoy is left on the starboard side. In the near future, this will be the position of the fairway buoys.

Pilotage is suspended when the wind reaches Force 4 – 5 as the tug has to come from Shijiu, also there are draft restrictions at low water.

Max. Size: Maximum draft 10.2 m., but preferably below 10.0 m.

Vessels with an LOA of 175 m. can be berthed. Vessels over 175 m. LOA can only berth and unberth at high water as the range of the tide is about 4.0 m. The time of high water is based on mean high water Shinjiu plus 30 minutes (tide times will be given by Agent).

Radio/VHF: Notice of Arrival should be sent to "Penavico Shijiu" 48 hours and 24 hours prior to arrival. This notice should be confirmed 3 hours prior to arrival by VHF on Channels 16 and 11.

Penavico handle all foreign vessels and it is important to contact them as soon as possible in order that they may arrange pilotage and clearance.

Tugs: 3 tugs available for mooring.

Berthing: There is only one berth available for the discharge of oil cargoes. The length of the pier is 180 m. and Pilot advised that the maximum depth alongside was 10.2 m., the actual depth alongside is no more than 9.78 m. at low water. Nature of the bottom is sand.

The vessel moored starboard side alongside and ship arranged mooring ropes to own requirements. Port anchor also used.

Cargo Operations: There is 1 × 6 in. hose available. The vessel provided 2 lengths of rubber hose. The hose was connected to the ship's starboard manifold by the ship's crew.

The storage tanks are about one mile from the berth and are at an elevation of 40 m. There are several sharp bends in the pipe so the back pressure was considerable (about 5 bars).

We achieved a pumping rate of approximately 120 cu.m.p.h. The pumping arrangement is not fixed and was removed after completion of discharge as this berth is also used for the export of sea sand for which 2 movable cranes are available.

Stevedores: The stevedores are state controlled and work is continuous in 3 shifts.

Medical: Facilities are available in a village nearby.

Time: GMT plus 8 hours.

Shore Leave: Possible. Shore passes are issued on arrival. Crew going ashore must show the Immigration Officer at the gangway their shore passes and passports.

General: The number of English speaking personnel was very limited and the Agent was required on occasions for translation purposes.

Prior to departure a strict search is made for stowaways and all shore passes are collected before clearance papers are issued.

SHIPMASTER'S REPORT: August 1992.

Location: Position: 35° 05.5' N., 119° 22' E. The port is near Point Lanshantuo (B.A. Chart No. 1253). The port has been in operation for 2 years.

Port Limits: Approximately 6 miles radius off the end of the breakwater.

Documents: On arrival:

6 Crew Lists.
1 Customs List (Chinese Form).
1 Health Declaration (Chinese Form).
1 Vaccination List (free form).
1 List of Arms and Ammunition (free form).
2 Reports of Entry for Foreign-Going Ships (Chinese Form).
1 Animal and Plant Quarantine Declaration Form for repairing vessel (Chinese Form).
1 List of Specified Articles, foreign currency, gold, silver, belonging to ship and/or members of crew (Chinese Form mandatory).
1 List of Articles to be sealed, cigarettes and liquor belonging to ship and/or members of crew (Chinese Form mandatory).

To be shown to the Port Officials:

Ship's Register.
Tonnage Dues (Chinese Form mandatory, issued by the Port Office at the first Chinese Port of Call).
Tonnage Certificate.
Load Line Certificate.
Safety Construction, Equipment, Radiotelegraphy Certificates.
Certificate of Financial Security in respect of Civil Liability for Oil Pollution Damage.
Certificate of Insurance.
Tovalop Certificate.
Derat Certificate.
Health Books and Yellow Cards of the crew members.
Seamen's Books (Passports).

On Departure:

2 Sailing Reports (Chinese Form).
1 Customs List (Chinese Form).

Collect and return all Shore Passes issued on arrival.

Tonnage Dues (Chinese Form) must be shown to the Port Officials before sailing.

Pilotage: Compulsory. Pilotage for large vessels performed between sunrise and sunset.

The Pilot boards at anchorage from a tug. The entrance channel (315° – 135°) has a depth of 13.0 m., is about 3.5 miles in length, and about 1.2 miles in width, and is marked by two black buoys with white irregular flashes in the following positions:

(a) Lat. 35° 03.9' N., Long. 119° 25.2' E.
(b) Lat. 35° 03.0' N., Long. 119° 24.0' E.

The Pilot listens on VHF Channel 16, working on Channel 13, but there was no answer. Berthing information comes from the local Agents only.

Anchorage: The anchorage is situated about 5.5 miles S.E. of Lanshantuo Point (B.A. Chart No. 1253) and is marked by 4 black buoys, as follows:

(a) Lat. 35° 02.0' N., Long. 119° 28.0' E.
(b) Lat. 35° 02.2' N., Long. 119° 23.6' E.
(c) Lat. 35° 04.0' N., Long. 119° 26.0' E.
(d) Lat. 35° 00.4' N., Long. 119° 25.8' E.

Depths range from 10.0 m. – 15.0 m., and the nature of the bottom is sand and mud, normal holding ground. Vessel anchored with 6 shackles in the water. Tidal streams of about 2 knots were experienced.

Restrictions: Entry and departure not permitted after sunset for large vessels.

Max. Size: Vessel of 185 m. length with draft 9.2 m. can moor.

Health: Ship cleared by Health Officials on arrival. Quarantine and Veterinary Officials carried out the inspection of the crew mess, galley, dry and freezing stores. Pay strict attention to the Health Books and Yellow Cards of the crew members, especially anti-cholera injections.

Radio: Telegraphic communciations: ETA cables via Qingdao Coastal Radio Station (Call sign XST). Calling frequency 500 kHz, working 425 kHz, answering 435 kHz. Working day and night.

VHF: Pilot and local Agents keep watch on Channel 16.

Pilot works on Channel 13.
Local Agent "Penavico", working on Channel 16.
Local Agent "Sinoagent", working on Channels 74 and 73.

Radar: There is no radar station in the port.

Tugs: The port has 2 tugs: 1×2,500 h.p. and 1×800 h.p.

Berthing: Two concrete berths.

First Berth: Length 180 m., depth alongside 7.5 m.
Second Berth: Length 210 m., depth alongside 10.2 m.

Vessels can only berth starboard side alongside, port anchor used with 4 – 5 shackles in the water. Fendering is insufficient.

Cranes: 4×25 ton luffing cranes.

Bulk Cargo Facilities: The port is equipped with 4 multi-purpose portable cranes for handling bulk.

Cargoes: Coal, ores and cement.

Specialised Cargo Handling Facilities: On the first berth, another vessel loaded frozen fish, garlic in cases and peaches. She used her own equipment. She was berthed starboard side to, cargo was delivered alongside my lorries.

Tankers: On the Second Berth (210 m. length), we unloaded 3,800 tonnes of soya bean oil.

Connection: 1×6 in. hose to underground pipelines. Collector has 4×6 in. pipelines, discharging rate about 200 tons per hour.

Density: Salt water.

Fresh Water: Available.

Fuel: Available, but preliminary (7 days minimum) notice required.

Consuls: None.

Repairs: Small repairs only.

Dry Docks: No information.

Gangway/Deck Watchmen: One gangway guard for inspecting crew members passes.

Customs Allowances: Crew allowed 200 cigarettes on arrival. The bond is sealed.

Repatriation: Possible, arranged by local Agents. It takes 3 – 4 days to arrange visas.

Airport: Airport at Qingdao (180 km.).

Time: GMT plus 8 hours, no change.

Police/Ambulance/Fire: It is sufficient to ask guard to advise the desired department.

Shore Leave: Allowed. Passes issued on arrival by Immigration (must be returned before departure).

Identification Cards: Shore Passes issued on arrival by Immigration. Must be kept with Seamen's Books.

Delays: We had to wait 6 days for a berth.

Agent: China Ocean Shipping Agency, Ocean Hotel, Zhong Shan C.W.J.Road, Lanshan. Tel: 0518-312393. Fax: 311842. Telex: 36902. Cables: Penavico.

Another Agency is Sinoagent (Telex: 320034 Lsbrz-Cn. Cables: Sinoagent Lanshan).

AUTHORITY: Lanshan Harbour Bureau, Lanshan Port, Rizhao City, Shandong Province, People's Republic of China. *Tel:* (05400) 441046, 441047. *Telex:* 320036. *FAX:* (05400) 221397. *Contact:* Mr. Mu Naishan, Port Director.

LIANYUNGANG: 34.45 N. 119.27 E. (See Plan)

DOCUMENTS: See "Dalian".

PILOTAGE: Compulsory. Pilotage undertaken day and night. Pilot boards at Pilot Anchorage.

ANCHORAGE: No. 1 Quarantine, Pilot Anchorage: Lat. 34° 49' 10" N., Long. 119° 42' 02" E. as centre with 1.5 nautical miles radius. Depth 13.0 m. – 15.0 m., mud and sand bottom with good holding ground.

No. 2 Quarantine, Pilot Anchorage: Lat. 34° 45' 58" N., Long. 119° 33' 47" E., as centre with 1 nautical mile as radius. Depth 6.0 m. – 8.0 m., mud bottom with good holding ground.

RESTRICTIONS: Draft limitation in the channel: 8.6 m.

Possibility of entry or sailing after sunset: Possible.

Tidal range: 6.48 m., average 3.39 m.

If vessel anchors in Lianyungang Road for a long time, the anchor chains will become twisted, due to ships' irregular turning. The Master should heave up anchor to one or two shackles in water and then slack to his requirements at least once a week.

VHF: Lianyungang Radio on Channel 16 throughout 24 hours.

TUGS: 1×428 h.p., 1×660 h.p., 1×980 h.p., 2×1,200 h.p., 2×1,670 h.p. and 2×3,200 h.p.

BERTHING:

Berths No. 1, 2, 3, 4, 5 and 6 are operated by No. 1 Stevedoring Company of the Port.

Berths No. 8, 9, 10, 11, 12 and 14 are operated by No. 2 Stevedoring Company of the Port.

Berths No. 33, 34, 35 and 36 are operated by No. 3 Stevedoring Company of the Port.

Berths No. 31 and 32 are operated by the Container Company of the Port.

Berths No. 38 and 39 are operated by the Coal Stevedoring Company of the Port.

Berth No.	*Length (m.)*	*Depth (m.)*	*Max. Size (d.w.t.)*	*Cargo handled*	*Equipment*
1	153	9.0	10,000	General Cargo, Bulk Cargo	Shore Cranes 3× 10 tons
2	156	7.0	5,000	General Cargo, Bulk Cargo	Shore Cranes 3×10 tons
3	142	7.0	5,000	General Cargo, Bulk Cargo	Shore Cranes 3×10 tons
4	180	9.0	10,000	General Cargo, Bulk Cargo	Shore Cranes 2×10 tons
5	188	9.0	10,000	General Cargo	Shore Cranes 3×10 tons
6	190	9.0	10,000	General Cargo	Shore Cranes 3×10-16 tons
8	160	9.0	10,000	General Cargo	Shore Cranes 2×10 tons
9	210	11.0	25,000	General Cargo, Bulk Cargo	Shore Cranes 2×10 tons
10	200	10.0	25,000	General Cargo	
11	210	10.0	25,000	General Cargo	Shore Cranes 3×10 tons
12	160	9.0	10,000	General Cargo	Shore Cranes 3×10 tons
14	162	9.0	10,000	Coal	Shiploader 1×1,000 t.p.h.
31	270	11.0	25,000	Containers	Bridge Cranes 2×30 tons
32	270	11.0	25,000	Containers	Bridge Cranes 2×30 tons
33	280	10.0	35,000	Grain	
34	269	10.0	10,000	General Cargo	
35	215	11.0	25,000	Timber	Shore Cranes 2×16 tons
36	205	11.0	25,000	Timber	Shore Cranes 2×16 tons
38	236	11.0	16,000	Coal	Shiploader 1×3,000 t.p.h.
39	240	11.0	35,000	Coal	Shiploader 1×3,000 t.p.h.

CRANES: 1×200 ton crane.

Also see "Berthing".

FRESH WATER: Available.

FUEL: Contact China Marine Bunker Supply Co., Lianyungang Branch.

REPAIRS: Facilities available.

GENERAL: *Provisions:* Contact Lianyungang Foreign Vessel Supply Corporation.

Imports: Steel, timber, fertiliser, sugar.

Exports: Coal, agricultural products and general cargo.

DEVELOPMENTS: *Xugou Port Area:* 10 general cargo berths will be built, 2 berths × 5,000 tons and 6 berths × 10,000 tons. In the first phase, 6 general cargo berths will be constructed along the 1,100 m. quay on reclaimed land of 0.5 million sq.m. This project commenced in 1994, and will be completed late 1997.

Miaoling Port Area: 6 deep-water berths will be built. There will be 2 container berths (35,000 tons and 25,000 tons) and 4 general berths (50,000 tons, 30,000 tons, 20,000 tons and 15,000 tons). The period of construction is 5 years, starting from the beginning of 1996.

AUTHORITY: Lianyungang Harbour Administration Bureau, 99 Zhongshan Road, Lianyungang, China. *Tel:* 86-518-2383374, 2383835. *Telex:* 369032 Lygha Cn. *FAX:* 86-518-2331261.

LONGKOU: 37.29 N. 120.20 E. (See Plan)

DOCUMENTS: Documents as required by the Joint-Inspection Party and/or as international practice. These documents are supplied by ship's Agent.

PILOTAGE: Pilotage is compulsory in the Port of Longkou and is available 24 hours.

It is necessary for all vessels to give notice of ETA 72 hours, 48 hours and 24 hours prior to arrival to their Agent by cable, or telex, or VHF. Pilot boats available. Pilot may be contacted by VHF Channel 16, and can board the vessel in the anchorage. Vessel should make all the necessary arrangements beforehand.

ANCHORAGES: Present anchorage is bounded by the co-ordinates below, in depth of 9.50 m. with area of 9 sq.km. It will hopefully be enlarged to 30 sq/km. with depth from 10.0 m. – 20.0 m. in the future.

The Quarantine Anchorage is the same as the Pilot Anchorage, and is bounded by the following co-ordinates:

(a) Lat. 37° 37' 48" N., Long. 120° 12' 30" E.
(b) Lat. 37° 37' 00" N., Long. 120° 12' 30" E.
(c) Lat. 37° 37' 48" N., Long. 120° 13' 52" E.
(d) Lat. 37° 37' 00" N., Long. 120° 13' 52" E.

MAX. SIZE: Limited by draft. Vessels not over 200 m. in length and 10.0 m. draft can be accepted.

HEALTH: No restriction except quarantine. Pratique procedure and action undertaken by the Quarantine Service. "Q" flag must be hoisted upon vessel's arrival. Masters should tender Maritime Declaration of Health and Deratting or Deratting Exemption Certificate.

RADIO: "Longkou Radio". Call sign: XSS. Telex: 32575 PENLK CN.

VHF: The radio station is manned throughout 24 hours by the Port Authority, keeping watch principally on Channel 16. Three other channels are also available, Channel 9 or 13 for contact via the station to get through to any departments required and Channel 10 for Inner Port contact.

TUGS: Three tugs available up to 3,500 h.p. Vessels usually use tug's line and 2 tugs are usually used for berthing and unberthing.

BERTHING: 12 berths available which can accept vessels with maximum draft 10.50 m. (SW) at low water.

Berth (No.)	*Length (m.)*	*Depth (m.)*	*Usage*
1	180	10.50	General cargo
2	120	7.50	General cargo
3	104	6.50	General cargo
4	104	6.50	General cargo
5-6	200	6.50	Bulk cargo and Ro/Ro
7-10	350	4.50 - 7.00	General and bulk cargo
11-12	355	10.30	Specialised Quay for coal and ore

Also see "Developments".

CRANES: 4 gantry cranes with capacity of 10 – 16 tons at Berths No. 1 – 2. 4 gantry cranes with capacity of 10 tons at Berths No. 7 – 10. 5 gantry cranes with capacity of 10 – 16 tons at Berths No. 11 – 12. Movable electric shore cranes and truck cranes up to 7 tons and 50 tons capacity respectively are available at other berths. All cranes are optional.

BULK CARGO FACILITIES: Bulk cargoes handled at Berths No. 5 – 6 for sand, No. 9 – 10 for salt, and are equipped with belt conveyors. Berth No. 11 is specially for handling coal.

SPECIAL CARGO-HANDLING FACILITIES: A Roll-on/Roll-off ramp is available at Berth No. 6.

Also see "Developments".

STEVEDORES: Arranged by the Port Authority. ETA notice to include particulars of cargo, showing heavy lifts, dangerous or hazardous cargoes, hatch stowage and gangs required, etc. Stevedores work 24 hours.

MEDICAL: Notice not necessary but advisable to Agents if treatment required. Full hospital facilities available. Vaccination essential if ship comes from affected area, inspection carried out by the Quarantine Service. International certificates must be current.

DENSITY: 1025 generally at all tides (salt).

FRESH WATER: Available throughout 24 hours and delivered by shore hoses at a rate of 50 t.p.h. Cost is $ 1.00 per ton and handling charge $ 3.5 per ton should be added per time.

FUEL: Available, delivered by trucks. Advance notice required. If bunkers are supplied by barge, minimum quantity is 100 tons.

FIRE PRECAUTIONS: Ship's watchman to be on duty. Fire-engine equipped for tankers loading/discharging on stand-by. Smoking prohibited in inner port area.

REPAIRS: Minor repairs possible.

DRY DOCKS: None.

SURVEYORS: Cargo inspectors available. Marine surveyors available, e.g. China Classification Society carry out co-ordinated survey on behalf of international societies.

HATCHES: Hatch operation optional. Stevedores can render assistance.

CUSTOMS ALLOWANCES: According to local Customs Department allowances.

REPATRIATION: Facilities exist for crew repatriation, arranged by ship's Agents.

AIRPORT: 120 km. from the port.

TIME: G.M.T. plus 8 hours.

HOLIDAYS: Ordinary holidays: New Year's Day (1st January), Spring Festival, May Day, National Day (1st and 2nd October).

POLICE/AMBULANCE/FIRE: Police: (05456) 211641. Ambulance: 212001-245/212870. Fire: 119.

SERVICES: Port service to ship for garbage removal, etc.

SEAMAN'S CLUBS: Seaman's Club, 17 Longhai Road, Longkou. Tel: (05456) 212311.

BANKS: Bank of China for currency exchange.

SHIP SUPPLY SERVICE: Ship chandler available. Tel: (05456) 212539. Address: 53 Zhenxing Road, Longkou.

IDENTIFICATION CARDS: Crew need Seaman's Book.

REGULATIONS: According to Port Authority and Harbour Master.

DEVELOPMENTS: A 10,000 d.w.t. berth for handling dangerous/liquid chemicals is under construction (Designed draft 10.00 m., 350 m. in length) with pipes connection system underground.

A special berth for handling containers is under construction.

AUTHORITY: Longkou Harbour Administration Bureau, 24 Huanhai Road, Longkou City, Shandong Province, P.R. of China. *Tel:* (05456) 212091. *Telex:* 32575 Penlk Cn. *FAX:* (05456) 211137. *Cables:* 3203. *Contact:* Mr. Wang Shu-bo, Port Director.

LUFENG TERMINAL: 21.36 N. 116.09 E. (See Plan)

LOCATION: Lufeng Terminal is located in the South China Sea, approximately 115 miles E.S.E. of Waglan Island Lighthouse, in the People's Republic of China continental waters.

Its geographical coordinates are as follows:
Lat. 21° 36' 05.8" N., Long. 116° 08' 52.3" E.

Nautical reference can be found in the following publications:
British Admiralty Sailing Direction No. 30 – South China Sea, Volume 1.
United States Hydrographic Office Sailing Direction No. 93 – Western Shores of South China Sea.
British Admiralty Charts No. 1968 and 2161B.
Chinese Nautical Charts and Sailing Direction relating to the area.

DOCUMENTS: To be submitted by export tanker upon arrival:
6 copies Crew List.
6 copies Passenger List (if any).
Valid Passports or Seaman's Books for all crew members.
1 copy Maritime Declaration of Health (Chinese Form).
1 copy Last Port Clearance.
4 copies Vaccination List.
2 copies Ship's Stores List.
2 copies Crew's Declaration of Personal Belongings.
2 copies Arms and Ammunition Declaration.
1 copy Cargo Manifest for Transit Cargo with a summary (Ballast and/or cargo already on board).
2 copies Report of Entry for Foreign Ships (Chinese Form).

PILOTAGE: See "Mooring".

APPROACHES: *Boarding Area:* A Boarding Area is located 3 miles N.W. of the FSO, having the following coordinates:
Lat. 21° 38' 00" N., Long. 116° 06' 00" E.

Waiting Area: The Master of the export tanker is requested to note the following, in case he has to wait for the berth.

(A) There is no suitable area for anchoring in the vicinity of the FSO since the sea depth is too deep.
(B) Anchoring within the 5 miles radius of the FSO is strictly prohibited, due to many pipelines and fixing chains located on the seabed in the area.

Therefore, the Master may judge the waiting point himself, except the area in (B) above, but he is advised to consider the following for safety reasons.

(A) In the vicinity, the strong N.E.'ly seasonal wind is expected in the Winter season.
(B) Also, strong tidal current can be expected.

Navigation Aids – Obstructions and Dangers: The FSO is equipped with the following navigation aids:

Nautophone:	Emitting in fog 2 short and 1 long blast (morse code letter "U"). Range about 2 miles. There is a fog signal on the compass bridge deck.
Position Lights:	One on the bow and one on the poop synchronised. Emitting white light (morse code letter "U"), range 5 miles.

The BTM mooring system extends for a distance of approximately 1,200 m. all around the FSO turret centre. The system consists of 8 anchors laid down on the sea bottom, holding 8 mooring lines (3.75 in., 4 in. and 5 in. chains mixed with 4 in. cables). The chain ends are connected to a floating buoy secured to the FSO bow bottom by fingers.

The FSO has a 16 in. loading hose with 12 in. end hose string, 242 m. in length, floating on the stern, port side. It consists of 23 hoses.

It is emphasised that great care must be taken while in area around the pipelines between the "LF 13-1" Platform and FSO. These areas have to be avoided (See "Plan").

An area within 2 miles from the "LF 13-1" Platform and FSO is a prohibited area. Masters are warned that it is strictly forbidden to enter into this area.

Furthermore, Masters are warned to keep a good lookout due to the numerous fishing vessels in the area.

JHN has been informed by Hong Kong Telecom International that there are 2 submarine cable routes near the "LF 13-1" Platform, approximately 10 km. and 30 km. North from the Platform. Masters have to be careful not to damage them.

RESTRICTIONS/MAX. SIZE: *Arrival:* For the purpose of manoeuvring, vessels are requested to maintain a reasonable ballasted condition complying with Regulation 13.2 of Annex 1 of MARPOL 73/78 Convention.

This means that:
(a) The moulded draft amidship (DM) in metres shall be not less than DM = 2.0 + 0.022 L.
It corresponds roughly to ballast onboard of minimum 30% of S.d.w.t.
(b) A trim by the stern not greater than 0.015 L.
(c) The propeller fully immersed at least 3 ft.
(d) Vessels must comply with Regulation 17, Chapter V of SOLAS 74/83 Convention (Pilot Boarding Facilities).

Terminal Requirements and Limitations: The minimum tanker size acceptable at the Terminal is 35,000 S.d.w.t. tonnes.

The maximum tanker size acceptable at the Terminal is 100,000 S.d.w.t. tonnes.

The above tankers can be moored in tandem only. Information for maximum freeboard expected have to be given by Masters to allow Terminal to check that the offloading hose string is long enough.

The Summer deadweight is the maximum scantling S.d.w.t., i.e. the d.w.t. referred to the physical size of the vessel at the maximum design draft, not to any lower remeasured tonnage occasionally used by shipowners.

No exception to these requirements shall be allowed. Vessels unable to comply will be rejected.

Environmental Limitations:

For an export tanker mooring by tandem mooring system:

Significant Wave Height:	3.0 m. (head on).
Mean Wave Period:	6.5 seconds.
Wind Speed (10 m./min. average):	25 knots (head on).
Current Speed at Surface:	1 knot (head on).

For an export tanker while offloading by tandem mooring system:

Significant Wave Height:	4.0 m. (head on).
Mean Wave Period:	6.5 seconds.
Wind Speed (10 m./min. average):	35 knots (head on).
Current Speed at Surface:	1 knot (head on).

RADIO/VHF: *ETA Messages:* The export tanker's Master shall provide ETA message in local time (Beijing Time, i.e. GMT plus 8 hours) to the Terminal, 96 hours before the anticipated time of arrival. The ETA message shall be repeated 72 hours, 48 hours and 24 hours before arrival. If the transit time from the last port is less than 96 hours, the Master shall send the first ETA message on departure from such port.

After the 24 hours ETA message has been sent, the Master shall send amended ETA messages to the Terminal if the ETA changes 3 hours or more.

Information required by the Terminal: The following information shall be included in the first ETA message sent by the Master:
Name of Vessel.
Nationality.
Owner.
Port of Registry.
Call Sign.
Master's name.
Last Port of Call.
Next Port of Call (if known).
Last two cargoes.
Quantity of cargo required.
If ballast clean or SBT.
Deballasting time (hours).

Additional information may be required by the Terminal later on.

Message Routing: Message from the export tanker can be transmitted to: "FSO NANHAI SHENGKAI"
Call sign A8IV
Marine Identification No. 4989
or
JHN Oil Operating Company for Lufeng Terminal.
Telex 44255 JHN CN or 44250 JHNAD CN.

FSO can be contacted on telephone via Inmarsat through No. 1250266.

FSO can be telexed via Inmarsat through No. 1250266.

FSO transmits and receives on 4434.9 kHz. during day hours and on 2502.5 kHz during night hours.

Use of VHF: Once in VHF range, the Master of the export tanker shall contact the FSO by VHF Channel 16 or Channel 12. The FSO maintains a 24 hours VHF watch on Channel 12. The VHF call sign is "NANHAI SHENGKAI".

TUGS: 2 tugs available (See "Mooring").

BERTHING: *Terminal Description:* Lufeng Terminal consists of:

Centre of production platform (PP) named "LF 13-1" located at the following geographical position:
Lat. 21° 35' 16.0" N., Long. 116° 09' 25.1" E.

Floating Storage Offloading (FSO) tanker named "Nanhai Shengkai" which is moored forward by a Buoyant Turret Mooring (BTM) system. The FSO is a 120,000 S.d.w.t. tonnes converted tanker with the following main specifications:

LOA	259.1 m.	(about 850.00 ft.)
Breadth	40.6 m.	(about 133.20 ft.)
Depth	22.3 m.	(about 73.16 ft.)

The geographical position of the BTM is as follows:
Lat. 21° 36' 03.0" N., Long. 116° 08' 54.0" E.

The platform is connected to the FSO by crude oil subsea pipelines (6 in. diameter from the "LF 13-1" Platform).

The water depth at the FSO site is 141.7 m. (464.89 ft.) (78.7 fathoms).

The export tanker can be moored using "Tandem Mooring" system only.

Tandem Mooring, i.e. with her bow to the stern of the FSO. For this purpose, suitable equipment , i.e. hawser with chafe chains and 16 in. loading hose (with 12 in. ends) is available.

Mooring Master (Lightering Advisor) is in charge of mooring operations. He will remain on board the export vessel during her stay at the Terminal and will liaise with the FSO personnel.

Mooring: Mooring operations are usually carried out during daylight.

The Mooring Master, CCIB Inspector and Chinese interpreter will board in the boarding area. The team may board either by boat or by helicopter (See "Safety" for helicopter operations). The export tanker is not allowed to approach the FSO without instruction from the Mooring Master.

Terminal mooring procedures will be given to the export tanker Master by the Mooring Master with all appropriate port documents.

Two assisting tugs of approximately 8,600 b.h.p. each are available for mooring. Vessels have to be ready to give suitable good towing lines to the assisting tugs, as per the Mooring Master's instructions.

No anchor may be used during manoeuvring. Anchors must be secured in such a way to avoid accidental release.

The FSO can provide fore and aft wire lines (44 mm. diameter) with soft nylon tails of 10 in. circumference whose end eyes have to be made fast to bitts on the export tanker.

For tandem mooring, a polypropylene rope coil should be kept ready on the forecastle deck to enable the assisting tug to secure it to the messenger rope of the mooring hawser. Furthermore, the crew should be ready to heave on board equipment and tools for mooring and hose connection from the assisting tug.

VHF sets should be switched to a mutually agreed working channel, tested and confirmed as being in satisfactory working order. The usual working channel is Channel 69.

In case an emergency occurs during mooring operations, it should immediately be indicated by sounding the emergency signal, consisting of a series of short rapid blasts on the ship's whistle or siren.

LOADING: *Deballasting and Loading:* Mooring Master shall inspect ballast prior to starting deballasting operations.

All cargo tanks are inspected by CCIB Inspector before loading starts for OBQ.

The export tanker must arrive with, and be able to maintain during berthing and loading operations, at least 30% of its S.d.w.t. to keep a safe draft and trim at all times while in the berth.

This should be achieved

(a) by loading cargo and discharging ballast simultaneously or,

(b) if that cannot be done by loading part cargo first, then discharging the ballast, and then loading the balance of cargo.

Masters are warned to carefully check the loading and deballasting procedures to avoid any pollution.

Hose should be connected by the export tanker crew.

When a vessel is "tandem moored", her load is continuously monitored by a load monitoring system on the FSO, which is equipped with warning and danger alarms. Also, an assisting tug should take up station at the stern of the export tanker, keeping her in tandem with the FSO.

On tandem mooring, the export vessel should accept the loading hose displacement diesel oil which will be loaded in the final topping-off tank. The quantity of the diesel oil to be flushed is 70 cu.m. at the end of loading operations.

Due to the metering system on board the FSO, the maximum loading rate is 4,000 cu.m./hr. (925,000 barrels per hour).

Continuous VHF monitoring must be maintained during cargo transfer operations.

All cargo tanks are inspected by CCIB Inspector after loading completed for ullage report.

Cargo Heating: To avoid waxing, due to the high pour point of Lufeng Crude, cargo has to be maintained at the loading temperature of 60°C (140°F).

Tankers calling at Lufeng Terminal must be fitted with heating coils suitable to maintain the loading temperature of 60°C (140°F).

Cargo has to be heated at the commencement of loading operations.

Discharging procedures must be carefully reviewed, in order to assure C.O.W. operations and good tanks drainage at discharging port.

Manifold Size: In the tandem mooring system, the cargo transfer is carried out through one end string of floating hose of 12 in. diameter.

In this case, the hose flanges are 150 ANSI standard. The hose is connected to the export tanker port side cargo manifold amidship in the mooring systems.

The manifold arrangement should comply with OCIMF recommendations as per "Standards for Tanker Manifolds and Associated Equipment" booklet. It is emphasised that only one reducer is allowed between the distance piece and the hose flange. All manifolds shall be clearly marked with the loads they have been designed to withstand.

The export tanker must have 1×12 in. connection ready at her port side cargo manifold. Ships not meeting the above requirements will be rejected.

Cargo Hose Lifting Equipment: The export tanker should be equipped at her port side cargo manifold with cargo hose lifting equipment (crane or derrick) with a minimum safe working load of 10 tonnes, as per Chapter 12 of the OCIMF recommendations "Standards for Tanker Manifolds and Associated Equipment". The SWL is to be clearly marked on the boom.

Crude Oil Specifications: The "Nan Hai Medium" Crude oil has the following specifications:

API can range from:	27.1 – 32.1
Viscosity at 40°C:	CP 39
at 50°C:	CP18
at 60°C:	CP12
Pour Point:	38°C 100.4°F
Cloud Point:	55°C 131°F

The oil has a tendency to form a tight emulsion with water, and a tendency to get below 38°C (100.4°F) when shut in.

DEPARTURE: *Unmooring:* On completion of the cargo transfer operations, and when the hose has been flushed to the satisfaction of the Mooring Master, the hose may be disconnected.

The unmooring operations can start as per the instructions of the Mooring Master.

Departure: While the export tanker is moved to a safe area clear from the FSO and the platform, the cargo documentation should be completed and brought aboard by the assisting tug, unless EDP (Early Departure Procedure) has been previously agreed. The export tanker can depart as documents are signed and Mooring Master will give authorisation for departure. Any protest regarding the cargo quantities shall be made before departure.

Early Departure Procedure (EDP): EDP avoids departure delays waiting for cargo documentation. EDP is not compulsory, but is strongly encouraged because it permits faster vessel turnaround. Vessels using EDP normally sail immediately after unberthing, unless there is a large ship/shore cargo figure difference. In such a case, the vessel must wait in the area until reconciliation of cargo figures is completed and the vessel is released by the Terminal.

If the EDP is used, the Master will receive the following documents:

(a) Master's request for EDP – one copy.

(b) Complete set of Bills of Lading that the Master will be required to sign, leaving blank only the cargo quantities. He will retain only the "Non-Negotiable" Master's copies. All originals and copies will be returned to the Mooring Master.

(c) Complete set of "Receipt for Documents and Samples". He will retain 2 copies only (one for himself and one for the Receiver).

(d) 2 copies of "Quantity and Quality Report" only, blanked with all cargo figures (one for himself and one for the Receiver).

(e) 2 copies of "Cargo Manifest" only, blanked with all cargo figures (one for himself and one for the Receiver).

(f) Complete set of "OBQ Certificates". He will retain 2 copies only (one for himself and one for the Receiver).

(g) Complete set of "Ullage Report After Loading". He will retain 2 copies only (one for himself and one for the Receiver).

(h) Complete set of "Time and Loading Report". He will retain 2 copies only (one for himself and one for the Receiver).

(i) Samples.

All documents shall be filled in with all data (Consigner, Consignee, Master's name, vessel's name, destination, etc.), except for the cargo quantities. After departure, the Terminal will send the Bill of Lading cargo quantities to the Master by radio. The Master will insert these figures in his copy(s) of the Bill of Lading, Quantity and Quality Report and Cargo Manifest, and will send a message back to the Terminal, repeating the cargo figures and authorising the Terminal to fill in the figures in all other Bills of Lading, including the "Originals" and the other documents (Quantity and Quality Report and Cargo Manifest). If the figures are disputed, the Master will state so in his message to the Terminal and can request that the Bill of Lading be annotated "under protest".

Two copies of "CCIB Certificate of Origin", "CCIB Inspection Certificate of Quality", "CCIB Inspection Certificate – Weight by Flowmeter" and "CCIB Inspection Certificate – on Tank" will be sent by mail to the destination port.

MEDICAL: Medical assistance is not available, except in case of emergencies. Medical evacuation of injured persons will be by helicopter to Shekou Hospital for PRC nationals and expatriates, or to Hong Kong hospital for expatriates only. The injured expatriates have to be provided with individual Seaman's Book or Passport. In this case, the Master of the export tanker has to inform immediately his Agent in Hong Kong. All expenses occurred will be on Owner's account.

FRESH WATER: Not available.

FUEL: Not available.

REPAIRS: No repairs are permitted when moored at the Terminal.

REPATRIATION: No repatriation is permitted at the Terminal. Only the case of injured persons can be considered (See "Medical").

SHORE LEAVE: No shore leave is permitted at the Terminal. No persons are allowed to visit the FSO.

SAFETY: The following OCIMF/ICS guidelines will be enforced at the Terminal as applicable:

International Safety Guide for Oil Tankers & Terminal (Edition in force).

Ship-to-ship Transfer Guide (Petroleum) (Edition in force).

Guide to Helicopter/Ship Operations (Edition in force).

Satellite Communication Equipment: Consultation between Master and Mooring Master is advisable, in order to ascertain that there is no risk due to the presence of flammable gas before a satellite terminal is operated.

HVAC: Central air conditioning is allowed, but air intakes must be shut off and internal circulation must be adopted. All window type coolers must be disconnected. To avoid flammable gases entrance, a positive pressure should be maintained inside accommodation.

Main Engine: While moored at the FSO, the main engine must remain on instant readiness. No engine repairs are permitted. In the tandem mooring system, it may be necessary for the vessel to use the engines while moored. Use of main engine shall be made with the advice of the Mooring Master only.

Firefighting: The Master of the vessel must keep continuous fire watch during loading operations. All fire equipment must remain ready for immediate use.

Impressed Current: It can stay on if working properly while berthed in tandem.

Helicopter Operations: No helicopter operations on the export tanker can take place during ballast and/or cargo operations. Helicopter operations may take place only after such operations have been stopped, and the integrity of the IGS system has been verified.

A helicopter landing or winching area must be painted on the tanker deck, and must be in accordance with the requirements of the "Guide to Helicopter/Ship Operations", published by the International Chamber of Shipping. All helicopter operations shall be in accordance with said Guide. The helicopter pilot and export tanker crew shall be familiar with its content.

WEATHER: *General Climate of the Area:* The climate of the South China Sea is mainly dominated by seasonal winds. These monsoons are related to fairly regular seasonal fluctuations of the atmospheric pressure over the Asiatic continent.

During Winter, from October to March, a high pressure area settles over Southern Siberia and China, because the North Asian land mass cools as a result of the decreased solar heating. The "Siberian High" in conjunction with the semi-permanent high pressure area of the subtropical North Pacific Ocean, centred approximately along latitudes 25° N. to 30° N., caused predominately N.E.'ly winds, the N.E. Monsoon, over the South China Sea.

The development of the "Siberian High Pressure" starts in September, and from October, the N.E.'ly wind regime is established.

During late April and May, the "Siberian High" weakens and displaces Northward, because the Asian land mass warms up as a result of the increased solar heating. More or less simultaneously, a low pressure area begins to develop over North India and Southeast Asia.

As a result, the N.E.'ly winds decrease and a flow of S.S.W. winds, the S.W. Monsoon, progressively settles over the South China Sea. This is a period of transition from the N.W. Monsoon season to the S.W. Monsoon season. The S.W. Monsoon season lasts from June to August. It is characterised by the extension of the "heat low pressure" area over North India and South China.

In September, the "heat low pressure" weakens and progressively dissipates due to the decreasing solar heating, while the "Siberian High Pressure" is intensified and moves Southward. The S.W. Monsoon weakens and is gradually substituted by the N.E. Monsoon.

By October, the S.W. Monsoon has virtually ceased and the N.E. Monsoon dominates over the Northern area of the South China Sea.

Winter (December-March / N.E. Monsoon season).
Spring (April-May / transitional period).
Summer (June-August / S.W. Monsoon season).
(September / transitional period).
Autumn (October-November / N.E. Monsoon season).

These periods can be considered as "Normal Conditions".

Exceptional conditions sometimes exist due to low pressure depressions, rising close to the Equator which move towards temperate zones following routes at different speed, covering different distances, and reaching forces up to cyclone (in this area called "Typhoons"). The periods, in which these phenomena occur most, are in the Summer time up to September.

GENERAL: All vessels calling at the Lufeng Terminal must fly the People's Republic of China flag and the international code Quarantine signal must be displayed upon the Authorities' visit.

Masters and operating personnel of tankers calling at the Terminal must be aware of the content of the Terminal Manual and of the OCIMF "International Safety Guide for Oil Tankers and Terminals – Edition in Force".

Mail: No mail can be sent from the Terminal.

Pollution Prevention: There are no facilities for receiving clean or dirty ballast at the Terminal. Only clean ballast can be discharged at sea. The following rules shall apply:

No oil pollution is allowed in the Terminal area.
No dirty ballast can be discharged at sea.
No bilges can be pumped overboard.
No waste can be discharged at sea.
Vessels have to comply with MARPOL 73/78 Rules.

Owners of vessels calling at the Terminal must be members of the TOVALOP agreement. Master must have on board the TOVALOP Certificate.

AUTHORITY: *Operator:* JHN Oil Operating Co., 13th Floor, Finance Center, Tai Zi Roads, Shekou Industrial Zone, Shenzhen/Bao'an, Guangdong Province, China. *Tel:* 693174, 693177. *Telex:* 44255 JHN. *FAX:* 695364.

NANJING (Nanking): 32.03 N. 118.47 E. (See Plan)

PORT LIMITS: A vessel is considered to be an "arrived ship" only when she reaches Nanjing Port, or at the Nanjing Waiting Anchorage or Quarantine Anchorage, located in position Lat. 32° 14.5' N., Long. 119° 10' E., about 165 miles upriver from the Changjiang Entrance, or 15 miles before Nanjing Oil Port.

DOCUMENTS: For Joint Inspection on arrival:

6 copies Crew List.
2 copies Report of Entry.
1 copy Maritime Health Declaration.
1 copy Crew Effects Declaration.
1 copy Ship's Equipment List.
1 copy Bonded Stores List.

For Joint Inspection on departure:

1 copy Maritime Health Declaration.
4 copies Report of Clearance.

Note: Chinese forms must be used for Report of Entry, Report of Clearance and Maritime Health Declaration. Ship's own forms can be used for the other documents, if it is the vessel's first call. On arrival obtain blank forms for Report of Clearance and have them filled out prior to departure.

PILOTAGE: Compulsory. Pilotage upriver is in two stages. The first stage is from the mouth of the Yangtze River to Baoshan, which is by Shanghai Pilots. The second stage is from Baoshan to Nanjing, which is by Nanjing Pilots. The pilotage up to Baoshan is arranged by "Penavico Shanghai". Changjiang Entrance is the customary waiting anchorage for vessels for Shanghai or proceeding upriver.

Application for Pilot should be made to Shanghai Agent "Penavico Shanghai" by cable or telex, prior to arrival. When the arrangements are made, they will reply by cable or telex and the Pilot boards at South Channel, Buoy No. 5, as indicated on B.A. Chart No. 1602. The distance from Changjiang Entrance to Baoshan is 53 miles. Baoshan is located 3 miles upriver. The vessel may have to anchor here for Nanjing Pilots, they board on arrival and the Shanghai Pilot disembarks. The vessel continues without stopping, which is a distance of 177 miles up to Nanjing. When the vessel anchors at the Nanjing Waiting or Quarantine Anchorage, the Pilots leave and the Berthing Pilot boards.

Note: At least 2 day's notice of application for pilotage.

Telex No:

Penavico Shanghai: 33052 Penav C Cn.
Penavico Nanjing: 34059 Nipen Cn.
Sinochem Nanjing: 34109 Cienj Cn.(Shippers).
Nanjing Port Authority: 34034 NJPACN.

ANCHORAGE: Nanjing Waiting Anchorage: Lat. 32° 14.5' N., Long. 119° 19' E. with good holding ground, depth of water 13.0 m. – 16.0 m. It can accept vessels up to 30,000 d.w.t.

RESTRICTIONS: Size: Up to 30,000 d.w.t. Draft limitation: 9.5 m.

MAX. SIZE: The draft limitation in the channel which is fresh water is 9.5 m.

HEALTH: No Radio Pratique available. On arrival at Quarantine Anchorage, the Quarantine Officer boards and grants Pratique.

RADIO: Communications are by Inmarsat telex.

VHF: Port Authority Signal Station manned 24 hours. Contact Agents "Penavico Shanghai" on Channel 11 and Shanghai Pilot on Channel 16. At Nanjing, contact Agents "Penavico Nanjing" on Channel 8 and Pilots on Channel 6. Contact Nanjing Port on Channel 25 throughout 24 hours.

RADAR: No port radar service.

TUGS: 1×1,940 kW., 2×1,764 kW., 4×1,440 kW., 3×1,227 kW. and 6×720 kW.

BERTHING:

Terminal No.	*Berth* No.	*Length* (m.)	*Permissible Draft LOA* (m.) (m.)	*Use*	*Cranes* (tons)
1	15	90	6.0/130	General Bulk	2×5
2	22-24	180	7.0/150	General Steel	2×10
	28	120	7.0/150	Bulk	3×5
3	35	101	6.0/130		2,500 t.p.h.
	37	99.4	6.0/130	Coal	Shiploader
4	400	186	9.5/180		4×10
	401-403	180	9.5/180	Multi-use	
	406-407	224	9.5/200		6×5
5	51	75	9.0/180	Oil	3×8
6	65	65	5.0/120	Oil Chemical Liquid Material	1,000 t.p.h. Shiploader & unloader
7	701-702	274	9.5/180	Steel	
	703-705	360	9.5/200	Ore	5×10
	706-707	310	9.5/200	Coal	2×16 grab
Container Terminal	404	186	9.5/200	Portainer	1×25
	405	224	9.5/200	Portainer	1×35

CRANES: Floating cranes of 63 tonne, 50 tonne and 5×10 tonne, also gantry cranes of 10 tonne, 8 tonne and 5 tonne. See "Berthing".

Bulk Cargo Equipment: No. 7 Terminal: 16 tonne gantry crane.

No. 3 Terminal: Rotary car dumper system and shiploader system.

Specialised Cargo Handling Equipment: 2 portainer cranes of 35 tonne and 25 tonne.

BRIDGES: No bridges prevent vessels up to 30,000 d.w.t. from entering the port.

STEVEDORES: Main cargoes include general cargo, coal, oil, ore, cotton, steel, construction material, agricultural and chemical products, container, dangerous or hazardous cargoes, etc. Loading or unloading rate changes regarding different cargoes.

MEDICAL: Full medical and dental facilities available. Agent must make all the necessary arrangements. At Nanjing, usually the treatment is made in Worker's Hospital.

TANKERS: One berth for tankers up to 180 m. LOA, draft limitation 9.0 m., depth of water 14 m. One berth for tankers up to 120 m. LOA, draft limitation 5 m., depth of water 12 m. Max. size for tankers 70,000 d.w.t.

Also see "Shipmaster's Report".

FRESH WATER: Contact China Marine Bunker Supply Company, Nanjing Branch. Available 24 hours a day. Cost is 1.5 RMB per ton.

FUEL: Advise "Penavico Shanghai" and "Penavico Nanjing" of requirements by telex or cable before arrival. Contact China Marine Bunker Supply Company, Nanjing Branch. Fuel and diesel available through 24 hours. Tel: (025) 806316.

FIRE PRECAUTIONS: Ship's watchmen to be on duty. The Port No. 1 fire fighting ship of 1,000 h.p. on duty and two special tugs also equipped as fire tenders.

CONSULS: No consuls in Nanjing.

REPAIRS: All types of deck and engine repairs possible. Repair services available through Nanjing Jinling Shipyard, Xinhua Shipyard or Nanjing Port Repairing Station.

SURVEYORS: Cargo tank inspection prior to loading, and cargo calculations on completion of loading are carried out by CCIB (China Commodity Inspection Bureau). China Register Surveyor available on behalf of other classification societies.

GANGWAY/DECK WATCHMEN: Watchmen required (Member of crew, or shore-based watchmen available). The Frontier Inspection Station also have guards on duty at the gangway.

OPENING/CLOSING HATCHES: By arrangement between ship's Agent and stevedore.

CUSTOMS ALLOWANCES: According to local Customs Department.

REPATRIATION: Facilities exist for repatriation of crews.

AIRPORT: Nanjing Airport (26 km.). Daily 737 airline service to Hong Kong.

HOLIDAYS: New Year's Day (January 1st); Labour Day (May 1st); National Celebration Day (October 1st). The port is available for foreign vessels all year round, no restrictions.

POLICE/AMBULANCE/FIRE: Police: Tel. 110. Ambulance: Tel. 633898. Fire: Tel. 119. Port Security: VHF Channel 25 throughout 24 hours.

EMERGENCY CO-ORDINATION CENTRE: Contact Nanjing Port on VHF Channel 25 in case of emergency.

TELEPHONES: Telephones can be supplied to any vessel.

SERVICES: Many special services available.

BANKS: China Bank, Nanjing Branch is located in Xinchenwei Foreign Trade Port Area. Exchange of money, etc., can be arranged.

STORING: Provisions and bonded stores available. They are inexpensive and of average quality. Fresh vegetables are seasonal. The Nanjing Foreign Shipping Supply Corporation should be contacted for service. Tel: (025) 633780/304734.

SHIP SUPPLY SERVICE: Contact: Nanjing Foreign Shipping Supply Corporation (Tel: (025) 633780). Agents "Penavico Nanjing" (Tel: (025) 804056).

SHORE LEAVE: Permitted. Nanjing town is located about 15 miles away and takes about 50 minutes by car. Transport must be arranged by the Agent or Seaman's Club (taxis, etc.). A round trip by minibus costs about 80 RMB. Nanjing is a pleasant town with modern hotels like Jinling Hotel and famous sights such as Dr.Sun Yat-Sen's Mausoleum.

IDENTIFICATION CARDS: Seamen's Book is sufficient.

GARBAGE DISPOSAL: Use 5 ton "QY" truck crane and one "OG400" garbage furnace.

WASTE OIL DISPOSAL: A cleaning ship of LOA 40.6 m. is used to dispose of waste oil. It has two sets of waste oil disposal equipment, and two sets of sewage disposal equipment.
SEAMAN'S CLUBS: Nanjing International Seamen's Club is located in Xinshenwei Foreign Trade Port Area. It provides excellent accommodation and all kinds of entertainment services. Overseas calls can be made here. Tel: (025) 561798.
REGULATIONS: Normal Port Regulations.
DELAYS: The date for loading or unloading is decided according to the contract signed between the Ship's Agent and the Port.
GENERAL: The Agent stays on board throughout the vessel's stay in Port. He is of great assistance in all matters.
Tidal Range: Maximum 1.47 m. Minimum 0.02 m.
Storage: Warehouse 54,731 sq.m. Open storage space 391,481 sq.m.
DEVELOPMENTS: In the second phase of the Xinshenwei Project with a total investment of RMB 358.8 million, 13 berths for 25,000 d.w.t. vessels have been completed. The total length of the wharf is 2,500 m. The project of Rong Tan Foreign Trade Area is being planned.

SHIPMASTER'S REPORT: June 1995.
Berth: No. 611 at Yizheng.
Type of Berth: Pontoon (See "Plan").
Operations: Discharging.
Cargo: Condensate.
Connection: Hard arm.
General: This vessel (41,000 d.w.t. and LOA 176 m.) is too large for the berth. All ship's lines forward act as springs and all ship's lines from poop deck act as springs. Aft maindeck winch ropes may be sent as breast lines. One shore line taken each end as head line and stern line, rigged from ashore (all ship's lines taken to pontoon). Shore head line parted during mooring operations. When not in use, the shore lines lie in the water/mud.

Note/s of Protest issued by Ship: Yes.

One Pilot from sea to Liuhe. 3 Pilots from Liuhe to Nanjing, they also berth the ship. Daytime passage only for river section above Liuhe. Strong 2 knots – 3 knots current running at all times.
Accident Report: Breaking of mooring lines:

The incident occurred whilst the vessel was mooring. This is a pontoon berth situated on the North bank of the Yangtze River at Yizheng. The vessel berths starboard side to the berth heading upstream. There is a continuous current flow of between 2 knots to 3 knots at the berth, flowing downstream from forward to aft.

Prior to arrival at the berth, the vessel had been advised that the mooring plan was to use 3 head lines/stern lines and 2 springs fore and aft from the vessel, and to take onboard 1 shore head line/stern line. On arrival at the berth, it was apparent that all ship's lines from forward would act as springs, there being no facilities ashore to utilise to send out head lines or breast lines. Similarly aft most lines would act as springs. All ship's lines had to be sent to the pontoon. The shore mooring lines had one end permanently secured ashore, and the eye of the other end made fast to the pontoon when not in use. These lines therefore lay submerged on the river bed when not in use. The length of the lead for the shore lines to the vessel was approximately 200 m. Refer to "Plan Section" for final mooring plan.

AUTHORITY: Nanjing Port Authority, Jiangbian Road 19, Xia Guan District, Nanjing, P.R.C. (Postcode: 210011). *Tel:* (025) 633898. *Telex:* 34034 NJPACN. *FAX:* 802803-688. *Cables:* 9876 NANJIN. *Contact:* Wu Min, Foreign Affairs Office.

NANTONG: 32.01 N. 120.49 E. (See Plan)

LOCATION: The port is situated on the North bank on the lower reaches of the Changjiang (Yangtse River), Nantong port is in Nantong City which is about 51 miles East of Wusong Kou. The position of the port is Lat. 32° 00' 45" N., Long. 120° 48' 45" E.
APPROACHES: Foreign vessels proceeding upstream from Baoshan Anchorage are required to be well informed of the water depth along Baimaosha Nan Shuidao, the South Channel, so that they may safely pass with the tide. Before approaching light buoy No. 12A a close watch should be paid to see if any ship is steaming down the river. If a vessel is outward bound it is advisable to reduce speed and wait until it is clear of the channel, in order to avoid meeting at the shallow part of the channel.

All foreign vessels entering or leaving the port are requested to observe the following regulations:

1. "The Regulations on Supervision and Control of Foreign Vessels by the People's Republic of China".
2. "The Regulations on Supervision and Control of Vessels Flying Foreign Flags Sailing in the Changjiang by the People's Republic of China".
3. "Regulations for Prevention of Collision at Inland Waters".

Foreign vessels are requested to take great care, as the buoyage system of the coastal waters and the river are different.
PILOTAGE: Compulsory. Pilot available from sunrise to sunset from Baoshan Anchorage.

Pilot for Nantong boards at Baoshan Anchorage.
ANCHORAGE: Baoshan Anchorage 31° 28' N., 121° 28' E.
Joint Inspection Anchorage: The anchorage is situated at Dong Shuidao on the lower reaches of the Changjiang (Yangtse River). This is within the harbour limits and has an area of 2,500 m.×600 m., depths range from 7.0 m. – 25.0 m. and the nature of the bottom is sand and mud.
RESTRICTIONS: Entry and departure not permitted after sunset.

Draft is restricted to 9.5 m. as vessels have to cross a bar at the mouth of the Chang Jiang River.
MAX. SIZE: See "Berthing".
VHF: Pilots: Channels 16 and 6.

Penavico: Channels 16 and 27.

Oil Terminal: Agent on Channel 11.
Pilot on Channels 11 and 20.
Port on Channel 20.
TUGS: 1×2,400 h.p., 1×1,670 h.p., 2×980 h.p. and 2×480 h.p.
BERTHING:

Name of District	*No. of Berth*	*Length* (m.)	*Depth* (m.)	*Max. Draft* (m.)	*Max. LOA* (m.)	*Use*
Langshan	No. 1	180	(D) 10.0 (F) 16.0	9.5	180	Coal/Containers/Ore
	No. 2	180		9.5	180	Feed/Sugar/Containers
	No. 3	187		9.5	180	Timber/Pig iron/Fertiliser
Nangtong	No. 3	74.0	(D) 5.5 (F) 10.8	5.0	70	General Cargo
	No. 4 No. 5 No. 7	–	–	–	–	Passengers
Tian Sheng Gang	No. 1	65	(D) 4.8	–	–	Coal
	No. 2	65	(F) 4.8	–	–	Coal

Note: (D) Dry Season.
(F) Flood Season.

With prior agreement vessels can also load/discharge certain types of cargoes at buoys.
CRANES:

Langshan: 2×5 tons and 3×10 tons.

Nantong: 3×5 tons.

One floating crane of 10 tons capacity available.
FRESH WATER: Available.
FUEL: Available.
REPAIRS: Facilities available.
GENERAL: *Imports:* Timber, ore, bulk sugar, fertiliser and pig iron.
Exports: General cargo and cotton.
Meteorology and Hydrography: The tide at this port is irregular semi-diurnal, with Spring rise of 3.4 m., Neap rise of 2.7 m. and mean sea level of 2.1 m.

The direction of the stream, either floor or ebb, is approximately parallel to the bank of the river. The rate of flood is 0.8 knots, while that of the ebb may reach 4.3 knots.

The wind is variable in direction and force, due to the effect of the monsoons. The average wind force is 3.1 m. per second. Gales may arise suddenly, but mostly occur in Winter. The annual average of "gale days" is 12.8. This port may be threatened by typhoons from July to September with wind forces ranging from Force 6 to Force 8. In August a wind Force 11 is sometimes experienced.
Aids to Navigation: The aids mainly consist of light buoys. The lateral port hand buoys are black in colour with spherical shaped top-marks. Starboard hand buoys are painted red in colour.

SHIPMASTER'S REPORT: August 1991.
Location: Nantong Harbour is situated on the North bank of Chianjiang Kou River, about 60 nautical miles upstream of Wusong Kou (Shanghai Harbour entrance).

This harbour has been developed in recent years and now offers 14 general cargo berths for vessels up to 25,000 d.w.t., one modern coal wharf and 10 buoys for the mooring of ships of less than 10,000 d.w.t., one floating platform of 35,000 tons storage capacity, one oil berth and one oil storage tanker "Gero".

During our stay, it was very difficult to obtain precise information from our associates as their English is generally very poor. Furthermore, harbour installations are spread all along the bank over a distance of about 26 km.
Port Limits: It was understood that a vessel is considered to be within port limits when arriving at Nantong Quarantine Anchorage (2 miles downstream from first berths) and that Notice of Readiness should not be tendered before.
Documents: Joint inspection takes place once alongside. Customs, Immigration and Health officers appeared to be very helpful and courteous and formalities were promptly carried out in 30 minutes.

They requested the following documents:

5 copies Crew List.
1 copy Cargo Manifest.
1 copy Health Declaration (Chinese form).
3 copies Inward Declaration (Chinese forms).
2 copies Crew Personnel Effects List (detailed).
1 copy Ship's Provisions and Stores List.

All ship's documents were briefly inspected (first call of a French flag vessel), but none were taken ashore.

All passports were seen by Immigration officers who issued shore passes which were collected prior to departure.
Pilotage: Shanghai pilots should be called on VHF Channel 16. ETA must be given at least 3 hours prior to arrival. Pilot usually boards 1.5 hours before high tide (Luashan H.W. time). Boarding will be cancelled in cases of bad weather (i.e. strong Easterly winds) and vessels will have to wait at CJK anchorage. Pilot vessel is a white hulled stationary vessel, pilot joins ship from a small dinghy.

Inbound vessels should pass to the North of CJK light vessel and then proceed to Buoy No. 1 near which the pilot vessel waits.

Outbound vessels will be attended to between Buoy No. 4 and Buoy No. 5.

Shanghai pilot leaves the ship at Baoshan anchorage where Nantong pilots take over (two or three persons).

During hours of darkness there is no navigation or berthing, vessel remains at anchor and food and accommodation for pilots should be arranged accordingly.

Pilots all Refused Combination Ladder – Only Pilot Ladder is Used.
Navigation: It takes 4 hours to proceed from CJK to Baoshan and another 4 hours from Baoshan to Nantong. It is usually made in two stages as there is a time limit for passing the bar at Bai Mao Sha and as berthing

in Nantong must take place at slack water. Chinese charts from the river above Baoshan exist but are not delivered to foreign vessels.

In Nantong harbour, ebb current is predominant and the period of slack water is very short.

Anchorages: CJK anchorage is located E.S.E. of CJK light vessel as shown on B.A. Chart No. 1602. Maximum depths of 15.0 m. are found in the Eastern half, which is more suitable for deep draft vessels.

As tide currents are strong (up to 5 knots), at least 6 shackles should be used.

Baoshan Anchorage (31° 28' N., 120° 27' E.) is used at night and for awaiting relief pilot. Depth is 15.0 m.. but ebb current is very strong (5 knots), at least 8 shackles should be used.

Nantong Quarantine Anchorage is situated 3 miles down river from Nantong Harbour and offers depths of 18.0 m. Same precautions as above should be taken.

Restrictions: No navigation or berthing at night up river from Shanghai.

Maximum draft permitted is 9.50 m. (F.W.), extended to 10.0 m. during Spring tides.

Deep water fairway Beicao Hangdao is dredged to 7.00 m. with maximum depths of 8.5 m. near the entrance. Thus with rough seas, it is not possible for deep draft vessels to proceed inwards.

There is also a bar with minimum depth of 7.10 m. at Bai Mao Sha, about 30 miles up river from Wusong Kou. It is the only difficult part of the waterway before Nantong, fairway being only 200 m. wide and speed must be reduced to minimum.

Max. Size: No information could be obtained, the only restriction for docking at oil berth is 9.50 m.

Health: No Free Pratique by radio. Pratique is granted by Quarantine Officer when vessel alongside.

Radio: Shanghai Radio may be contacted by W/T or via Inmarsat (Telex No. 30305).

Government Shipping agencies (Penavico or Sinoagent) can be telexed or telephoned directly via Inmarsat but they never acknowledge and they never request any information prior to arrival.

VHF: Penavico keeps watch on Channel 11 and Sinoagent Shanghai on Channel 74. They must be contacted when arriving at CJK.

Sinoagent Nantong maintains watch on Channel 73.

Pilots keep watch on Channel 16 and work on Channels 6 and 71.

Tugs: 1×2,000 h.p. and 2×980 h.p. Tugs are often busy and delays may be experienced.

Berthing: Our vessel went alongside storage tanker "Gero", LOA 237 m. which is anchored 200 m. off the North bank in a depth of 35.0 m. This vessel is held by 6 anchors and mooring was made heading up stream with 4 headlines, 1 breast and 1 spring forward and 3 springs and 4 sternlines aft, due to very strong ebb current (over 6 knots).

Medical: Hospital and dental facilities available. There are no special requirements about vaccinations.

Tankers: Receivers (Nantong Fuel Corp.) provided 2 hoses of 6 in. diameter and requested maximum working pressure of 5 kg. at ship's rail.

Jiangsu Petroleum operates an oil jetty for ships up to 25,000 d.w.t. No slop discharge facilities are available. This jetty also receives chemical tankers (benzene and alcohol).

Density: 1000 (fresh water).

Fresh Water: Available by barge.

Fuel: Common grades said to be available as well as Lub. oil.

Provisions: Available. There are several ship chandlers.

Consuls: None at Nantong. Major countries have consulates in Shanghai.

Dry Docks/Repairs: 30 miles up river from Shanghai is Nantong Shipyard which is able to carry out major repairs with a 100,000 d.w.t. floating dock.

Surveyors: Cargo inspections are made by C.C.I.B. (Government Co.).

Customs Allowances: 1 bottle of spirits and 200 cigarettes for each crew member. Special allowance for Master; 5 bottles and 3,000 cigarettes. NOTE: If sailing from one Chinese port to another, even if going into international waters and for more than 24 hours, seals must not be broken. Vessel can be fined U.S.$5,000 for none compliance.

Repatriation: Possible via Shanghai and Hong Kong. There is a regular service of hydrofoil shuttles, trip takes about 2.5 hours. Immigration request 2 photographs of members signing off. In our case it worked very well.

Airport: Major airlines operate international flights. Numerous flights to Hong Kong.

Time: GMT plus 8 hours (GMT plus 9 hours from May to August).

Shore Leave: Permitted until midnight.

Identification Cards: Shore passes must be accompanied by Passport or Seaman's Book.

General: Two Immigration Officers remain on board during ship's stay. Accommodation and food must be provided.

Launch service for going ashore must be arranged through agent.

There is no Loading Master and no one understood English among the storage tanker staff.

SHIPMASTER'S REPORT: October 1994.

Pilotage: The Pilot cannot be arranged by the Agent to take vessel from Nantong to Liuhe Anchorage if loading is completed after 1500 hrs. local time. Sometimes vessel can be shifted from the berth to Langshan Anchorage.

General: Sailing through shallow waters of the Yangtze River has a harmful effect on the condition of the sea chest and stern tube. The level of water contamination is very high in the Yangtze River.

AUTHORITY: Nantong Port Authority, 120 Remin Road West, Nantong, China. *Tel:* (0513) 513135. *Telex:* 3651 Ntpad CN.

Nantong Harbour Superintendent, 104 Remin Road West, Nantong, China. *Tel:* (0513) 518292.

AGENT: Penavico. Tel: 6500. Telex: 36501. Cables: Penavico Nantong.

NINGBO (Ningpo), Including Beilun: 29.52 N. 121.31 E. (See Plan)

LOCATION: Ningbo Port District: 29° 52' 54" N., 121° 33' 24" E.
Zhenhai Port District: 29° 57' 00" N., 121° 43' 05" E.
Beilun Port District: 29° 56' 8.6" N., 121° 51' 05" E.

PILOTAGE: Compulsory. Pilotage is undertaken day and night at Qi Li Yu Anchorage and Jin Tang Anchorage, but only in daytime at Xin Qi Anchorage.

ANCHORAGES:

Anchorage	*Location*	*Nature*	*Depth* (m.)	*Bottom*	*Size for Vessels* (d.w.t.)
Qi Li Yu	29° 59' 18" N. 121° 46' 30" E. 30° 00' 18" N. 121° 47' 30" E.	Pilotage	8.0	Mud	3,000–5,000
Jin Tang	30° 00' 00" N. 121° 48' 12" E. 30° 02' 30" N. 121° 50' 00" E.	Pilotage	15.0	Mud & Sand	10,000
Xia Qi	29° 43' 30" N. 122° 20' 30" E. 29° 46' 00" E. 122° 21' 30" E.	Pilotage	17.0	Mud	10,000–100,000
Bei Lun		Operating	20.0	Mud	Lightening for over 10,000

RESTRICTIONS: Day and night entry and departure possible at Ningbo and Zhenhai Port Districts but not at Beilun Port District.

Tidal Range: Ningbo: Maximum 3.62 m. Minimum 0.92 m.
Zhenhai: Maximum 3.51 m. Minimum 0.02 m.
Beilun: Maximum 3.36 m. Minimum 0.40 m.

MAX. SIZE: *Draft Limitation in the Channel:*
Ningbo 5.5 m.
Zhenhai 9.0 m.
Beilun 18.0 m.
Also see "Berthing".

TUGS: 2×370 h.p., 1×428 h.p., 2×600 h.p., 4×980 h.p., 1×1,670 h.p. and 3×3,200 h.p.

VHF: Pilot on Channels 16 and 9. Agent on Channel 12, contact through Ningbo Harbour Radio on Channel 16.

BERTHING:

Working District	*Berth* No.	*Length* (m.)	*Depth* (m.)	*Permissible Draft/Length* (m.)/d.w.t.	*Remarks*
Beilun	1	351	18.2	17/300 100,000	Bulk cargo
	2	250	12.0	12/200 25,000	"
	3	249	12.0	25,000	"
Zhenhai	1	130	9.0	3,000	coal
	2	180	9.5	10,000	"
	5	180	9.5	8.5/135	general cargo
	6	180	9.5	10,000	"
	7	114	7.0	3,000	"
	8	114	7.0	3,000	"
	9	180	9.5	8.5/150 10,000	
	Chemical	80	7.0	5,000	chemicals
Crude Oil Wharf	1	304	12.0	11-13/130-200	crude oil & oil product
	2	304	9.1		
	3	180	5.2		
Ningbo	Zhongma				
	5	92	4.5	3,000	passenger berth
	6	80	4.5	3,000	"
	8	110	4.5	3,000	freezing berth
	Baisha				
	2	125	5.5	3,000	general cargo
	3	125	5.5	3,000	"
	4	111	5.5	3,000	"
	5	92	5.5	3,000	"

CRANES: 16 ton crane at Zhenhai Berth No. 7.
3 ton crane at Zhenhai Berth No. 8.

CONTAINER FACILITIES: New berth with length 200 m. and depth 12.0 m. Two cranes available.

BULK HANDLING FACILITIES: 2 unloaders × 2,100 t.p.h. each. 2 loaders × 4,200 t.p.h. each.

TANKERS: The VLCC "Beilun" is anchored a mile or so off Beilun, storing crude oil and other products delivered by smaller tankers from the onshore fields. Depth of water 23.0 m.

The petroleum berth is operated by Sinochem, Ningbo branch, and accepts at one end loading product tankers and at the other discharging crude oil tankers.

Also see "Berthing".

STEVEDORES:
Weekdays: 0730 hrs. – 1130 hrs.
1200 hrs. 1600 hrs.

FRESH WATER: Available.

FUEL: Available.

REPAIRS: Facilities available.

TIME: GMT plus 8 hours.

GENERAL:
Storage: Warehouse: 46,900 sq.m.
Open Storage: 260,000 sq.m.

Exports/Imports: Oil, ore, coal, fertiliser, timber, steel, cement and containers.

DEVELOPMENTS: A new project, to build a berth capable of handling 200,000 ton vessels in Beilun Harbour, was recently approved by China's Government.

Beilun Harbour is one of the 3 harbour areas of Ningbo Port, which serves as one of the four international ocean shipping hubs along the coast of Mainland China.

Presently, Ningbo Port operates 19 berths, of which a 150,000 ton berth, a 100,000 ton berth and several 50,000 ton berths are in Beilun Harbour.

The new 200,000 ton berth will be one of the major steps to make full use of the deep-water coast line of Beilun Harbour. It will be the largest of its kind in China.

Construction of this new 200,000 ton berth is expected to begin in 1992, if the detailed plan is well-implemented. The new berth may begin to handle ships at the end of 1994.

Beilun Harbour is about 100 km. away from China's biggest city, Shanghai, and one of China's most productive areas, the Yangtze River Delta.

The channel of Beilun Harbour is generally deeper than 20 m. The shallowest point of the channel is 17.6 m., which means that a vessel of 200,000 tons can be accepted in the harbour.

According to an initial survey, the harbour has 13 km. of deep-water coastline for construction of berths for vessels of 100,000–200,000 tons. Harbour officials have indicated that they could build 30 more berths to raise the harbour's capacity to handle over 100 million tons of cargo per year.

Much of the imported iron ore, China buys from Australia and Brazil, are carried by 100,000 ton ships. When these ships reach Beilun Harbour, half of the cargo is unloaded, in order to reduce the draft of the ships, for eventual discharge at Shanghai's Baoshan Steel Mill's private berth.

SHIPMASTER'S REPORT: May, 1983.
Beilun

Port Limits: The port is part of Ningbo Port Complex and situated at approx. Lat. 29° 55.7' N., Long. 121° 52.6' E. Port consists of a pier accommodating 1 ship of 100,000 d.w.t. and a pier accommodating 2 ships of 25,000 d.w.t. – See B.A. Chart 1429.

Documents:
12 copies Crew List (preferably Chinese forms).
1 copy Customs List (Chinese form mandatory).
2 copies Health Declaration (Chinese forms mandatory).
4 copies List of Narcotics (free form).
2 copies Master's Report (Chinese forms mandatory).
12 copies Passenger List (free form).
4 copies Arms and Munitions List (free form).

Regarding Customs List: Following to be declared: tobacco, spirits, watches, cameras, radios, tape-recorders, T.V. sets, video recorders. Gold, silver jewels, foreign currency. All electronic equipment and cameras to be named with brand, number, etc.

Pilotage: Following received by cable from agents before arrival: "From outer sea steer to position Lat. 30° 10' 15" N., Long. 123° 03' 20" E. Then, course 218° to reach position Lat. 29° 45' 00" N., Long. 122° 40' 36" E. at 8.3 miles from Tung Ting Tae L/H bearing 326°. Then course 270° steering directly to Pilot Station between Lat. 29° 44' 30" N., – 29° 46' 00" N. – Long. 122° 20' 30" E. – 122° 22' 30" E. Use of other channels is forbidden. Please contact Pilots through VHF Channel 16 one hour before arrival Pilot Station."

Call: Ningbo Pilot VHF Channel 16. Pilot boards from pilot vessel which comes from Ningbo. Pilot vessel is same size as a large harbour-tug, white hull and long white superstructure. Funnel placed aft-part of superstructure, and painted in chinese colours – red band with yellow stars. Equipped with radar and VHF. Difficulties experienced in contacting Pilot on arrival and the difficulties are believed to be because of distance from the pilot vessels stationed in Ningbo and the ship waiting on the above Pilot Station.

3 Pilots boarded the ship, and the ship continued via the narrow but deep strait of Shih-Peng-Chiang.

Anchorages: Above designated pilotage area considered to be a good anchorage for large vessels. Minimum depths of 10 fathoms. Current setting NW and SE with rates up to 4 knots.

Restrictions: No information on restrictions upon entry. The Strait of Shih-Peng-Chiang and inwards to the port was found to be well equipped with lighthouses and other navigational aids (not shown on the chart). Shore based Decca-radars cover the area and give instructions to Pilots during navigation in these waters. The outermost of the radar station is situated in approx. position Lat. 29° 44.4' N., Long. 122° 18.3' E. Our vessel arrived at Pilot Station on LW. Echo-sounder was used and there was not found to be less water than charted.

Max. Size: The port is designed to accommodate 1 ship of 100,000 d.w.t. and 2 ships of 25,000 d.w.t. Minimum depth on the outer-pier said to be not less than 18 m. on LLW.

During ship's stay in Beilun at Outer Pier the LLW depth alongside the pier was found to be 22.30 m. Only measured by echo-sounder.

Health: No special requirements. Ship cleared by Health Authorities after arrival.

Radio: No special instructions. During voyage cables regarding ETA and arrival-conditions were sent to Penavico Beijing and Penavico Ningbo via Shanghai Radio XSG. When within range Ningbo Radio was used (XSN).

VHF: See "Pilotage".

Radar: See "Restrictions".

Tugs: 2 tugs of 3,200 h.p. stationed in port. Very efficient. Meet ships off the pier using tug's lines. They handle vessels "Japanese style" in making fast on ship's sides.

Berthing: The port consists of 2 piers built out into the sea, parallel to the coast. The piers are connected to the coast by a long bridge, estimated 3 km. long. The density of water was measured to be 1019 but varies.

The outermost pier is used for large vessels. It is equipped with a sonar docking system, which shows the distance between the pier and the ship's bow and stern, and the vessel's approach speed in cm. per second. This pier is for bulk cargo discharge only. It is well protected with large rubber fenders. The pier is high and fenders keep ship so far from the pier that most ships unable to use normal accommodation ladder. Necessary to use gangway at right angles to the ship. No gangway supplied from shore.

Cranes: The outermost pier is equipped with 2 large gantry cranes with grabs. They are Japanese built Hitachi-cranes 30 ton SWL. Grabs used are 9.5 cu.m. The cranes discharge from ship to a belt conveyor leading to storage facilities on shore. Estimated length of conveyor belt 3.5 km. During our stay the cranes did not work in wind force exceeding 10.8 m./sec., or in dense fog. Also not working during periods of rain.

The innermost pier is equipped with 2 plants designed for loading bags into ships. The plants are fed with bags from 2 belt conveyors coming from the storage/packing area on shore. The bags slide from the top of the plant to the ship's hold via a "snail".

None of the piers are designed for anything other than discharging bulk or loading bags. Maximum discharge rate unknown. Our ship, which was unloading potash was guaranteed 1,500 tons per day but more than 5,000 tons per day was experienced. Only one crane was used, and it was only working slowly, because of delays in the packing area. All cargo from the ship was bagged immediately after discharge.

Stevedores: Labour arranged by Agent. Working day and night without any stops, weather permitting.

Medical: Seaman's hospital in Ningbo about 45 km. from the port.

Density: Varying with tide but average 1019. Water discoloured by mud.

Fresh Water: Available from pipes on the pier. Delivery rate 18 t.p.h. Approximate cost 1.5 Yuan/Tons.

Fuel: No fuel on the pier. Not known if any bunker supply in the area.

Consuls: None.

Hatches: Operated by ship's crew.

Customs Allowances: On arrival each man had max. 1 bottle of spirits and 200 cigarettes. No objections was made to this. No cabins were searched. Neither were the Chief Steward's lockers with spirits, beer and slop chest checked. Chief Steward was allowed to take out any of the above mentioned goods for use during stay in port.

Cargo Gear: All cargo work carried out with shore gear.

Repatriation: Arrangements can be made. Crew members are transported to Shanghai by ship or train.

Time: GMT plus 8 hours.

Holidays: None.

Shore Leave: Crew members not allowed to go outside the gate situated on the shore end of the bridge connecting pier to shore. Distance from pier to gate about 3 km. There is a seaman's club in Ningbo. On request the club will arrange tours and sightseeing. The cost for a tour to Ningbo and return to the ship is 7.5 Yuan per man.

Identification Cards: Shore passes are issued on arrival. Each time a crew member steps ashore or comes aboard the ship, the shore pass and national passport should be shown to the Emigration Officer.

Watchman: An Emigration Officer is constantly on board checking passports each time people leave or come to the ship.

Telephones: Telephone placed on board for convenience of Agents, Stevedores, etc.

Regulations: Following received by cable from Agent before arrival: "Not permitted to use radio transmitters at anchorage or in port unless emergency. Must keep main engine, steering gear, rudder indicator, telegraph communication equipment, whistle/siren, gyro compass repeaters, radars and echo sounder in good condition, but not permitted to use any of them unless allowed by Pilot. Photographing and survey are not allowed in Chinese territorial waters, stay at anchorage or in port. The above regulations must be observed strictly."

Delays: No delays observed.

General: A ship's chandler from Ningbo is able to deliver all usual kinds of provisions.

Agent will arrange for laundry.

During the stay I was invited to see the packing area. The potash goes from the belt conveyor to 8 spouts, which weigh out the cargo and fill it into bags. Each spout capable of average 45 t.p.h. I was told that more equipment would be installed this year thereby doubling the packing capacity. Behind the packing house, there was a large area where ore of various kinds, which was discharged from large bulk-carriers at the outer pier, could be stored. The ore is reloaded into smaller ships at the inner pier using the same plants as when loading bags. These plants are designed for both bags and bulk. The loading rate of ore is said to be up to 4,000 t.p.h.

Agent: China Ocean Shipping Agency, Ningbo Branch. No agent's port office at Beilun. No telex available from Ningbo. Cables from ship to Owners/Charterers and vice versa are taken by car to/from Ningbo which makes communication slow and expensive.

SHIPMASTER'S REPORT: December 1985

Location: Beilun Oil Terminal in position 29° 57.4' N., 121° 48.7' E., about 45 km. by road from the town of Ningbo.

Chart: B.A. Chart No. 1429.

Documents:
Required on arrival:
*5 Crew Lists.
*1 Personal Effects List (see 'note' below).
*1 Health Declaration.
1 Vaccination List.
2 Cargo Manifests ('Nil' return if in ballast).
1 Drugs List.
*1 List of Arms and Ammunition.
*3 Copies of Application for Entry and Inspection.
*Indicates a Chinese form, others not acceptable.

On Personal Effects List individual crew members must declare radios, cassette players, cameras, watches, jewellery and currency.

No Stores Lists of any kind required. Bond is not sealed and crew issues may be made without restriction.

Formalities: All Officials board in Quarantine anchorage (believe occasionally in Ching Tang Yang). Pratique granted first and then vessel berths, remainder of formalities completed alongside.

Formalities are minimal and consist mainly of checking arrival papers, Register and Statutory certificates. No searches, crew inspections, etc. 2 Immigration Officers (Frontier Police) remain on board throughout vessel's stay and require accommodation.

Approaches/Pilotage: Telex from Agents prior to arrival with information as to approach track to follow and position of Pilot Station Anchorage – see "copy of telex" below. Communications with Pilot on VHF Channel 16.

Difficult from outer anchorage due distance involved. Pilot establishes contact from pilot vessel or an outward bound ship about 1 hour to 2 hours before boarding. Pilot boards within Shih Peng Chiang which is well sheltered. It should be noted that this approach to Ningbo Gang is the only one permitted to foreign vessels and passage is in daylight only.

Thereafter navigation to anchorages/berth is straightforward. No objections raised to use of any of the vessel's navigational equipment or charts. Pilot brought his own charts of certain sections which could be referred to but not copied.

From entrance to Shih Peng Chiang inwards there are a considerable number of navigation marks and lights not marked on B.A. chart.

There is a Harbour Radar System with a chain of stations which would appear to give complete coverage from outer approaches to Ningbo; this was not in operation on either our inward or outward passage. Pilot stated that radar itself was excellent (Decca) but standard of operators poor and information received on VHF link unreliable.

Copy of Telex: Ningbo approaching guidance as follows please steer from high-seas to position 28° 53' 00" N., 122° 26' 45" E. 10 miles East of Beiyushan lighthouse (disused), therefrom take course of 013 degrees to reach position 29° 45' 00" N., 122° 40' 36" E. at 8.3 miles from Dongtingshan lighthouse (bearing 326 degrees) stop Then A/C 270 degrees and steer directly to p/anchorage (situated between 29° 44' 30" N.-29° 46' 00" N., 122° 20' 30" E.-122° 22' 30" E.) and must await Pilot there stop Other channels forbidden stop Photographing and survey are not allowed after entering China's territorial waters stop Please contact Pilot through VHF Channel 16 one hour before arrival at p/anchorage and keep on listening VHF Channel 16 until Pilot aboard stop Not allowed to use radio transmitter at anchorage unless emergency stop Must keep main-engine steering-gear rudder-indicator telegraph communication equipment whistle/siren gyro-compass repeaters radar and echo-sounders in good condition but not allowed to use any of them after arrival at anchorage unless permitted by Pilot stop Above regulations must be observed strictly stop Please confirm upon receiving.

PENAVICO

Anchorages:

1. Outer (Pilot Station) Anchorage as given in pre-arrival telex (See "Approaches/Pilotage").

2. 'Mashi' Anchorage, to North and N.W. of Tieng-fing Shan (29° 52.5' N., 122° 13.6' E.), which is used for bad weather and typhoon shelter.

3. Quarantine Anchorage in area between Latitudes 30° 00.3' N. and 30° 02.4' N. and Longitudes 121° 48.0' E. and 121° 49.7' E. (approximate position).

Note: Quarantine Anchorage already marked on chart, centred on approximate position 29° 59.8' N., 121° 46.9' E. is used for small vessels only.

4. There were a number of vessels anchored in Ching Tang Yang between the Ore and Oil terminals, apparently awaiting cargo.

Also a crude oil storage tanker of approximately 220,000 d.w.t. on a permanent mooring here. Good holding ground reported at all anchorages.

Radio: Agents: China Ocean Shipping Agency, Ningbo Branch, 20 Xi Cao Ma Road, Ningbo, China. Telephone: 55375, 56449, 55744-573. Cable address: PENAVICO. Telex: 37028, 35289 NBPEN CN.

All communications prior to arrival by sat/comm telex without problem.

W/T traffic lists copied from Ningbo Radio (M/F only) and Shanghai Radio; both stations appeared to handle traffic efficiently. Good weather forecasts in English from Shanghai Radio. As mentioned initial VHF contact with Pilot difficult. Within the port, Agents may be contacted on VHF through 'Ningbo Harbour Radio'; call on Channel 16 and then switch to working Channel 12. Agents listen on Channel 12 but this is the preferred method of contact. Use of main transmitter prohibited after arrival at Pilot Station, as is use of sat/comm.

When in port all cables and telex messages are required to be routed through Agents; these can be passed by VHF. If Agent has to collect/deliver messages it can take some time due to distances involved – all port offices and telex facilities are at Ningbo town.

All Chinese personnel dealing with vessel, i.e. Pilot, Agents and Port Officials spoke excellent English.

Tugs: 4 tugs available of 3,200 h.p. 2 tugs used when berthing and unberthing, tugs' lines used. Tugs well handled to Pilot's instructions. It was noted that Chinese tankers of about 20,000 d.w.t. berthed/unberthed without tugs.

Berthing: Vessel moored to Berth No.2. Conventional berth (See "Plan") with good mooring points and fendering. Ship's gangway used.

Berthing and unberthing daylight only at any state of the tide; berthing in wind up to Force 5/6, unberthing up to Force 8 (Pilot's estimate).

No mooring boats; all lines passed by messenger with winches adjacent to each shore bollard (except for springs). Offshore anchor used.

Shore based berthing approach aid on Berths No. 1 and No. 2. Visual display on top of jetty house gives speed of approach (cm./sec.) and distance off (metres) of each end of vessel. No details available.

Strong tidal streams (probably up to 5 knots) but run along line of berth, i.e. 134° – 314° and did not cause any difficulties.

Berth exposed to North and N.W.; a Northwesterly gale gave rise to some swell movement.

Maximum permitted draft on berth given variously as 9.0 m. and 12.0 m. Echo sounder indicated a minimum depth of approximately 15.0 m. at LW but not permitted to sound round the vessel.

Cargo Facilities: Cargo hoses on Berth No. 2 all of 6 in. diameter and handled by ship's equipment and small (mobile) shore crane.

An English speaking interpreter on duty at jetty head throughout vessel's stay alongside.

Communication between jetty head and pump station/tank farm appeared to be slow and difficult.

Berth No. 1 (of similar construction to No. 2 – See "Plan") is understood to handle only crude oil imports from North China; apparently all by Chinese tankers.

Berth No. 2 handles all export products. Understand only products available are gas oil, gasoline, naphtha and fuel oil. A cargo of approximately 20,000 tonnes of gas oil is exported each month. No information on other grades.

Berth No. 3 is for LPG. No information available.

The previously mentioned 220,000 d.w.t. storage tanker (Chinese) (See "Anchorages") moored in Ching Tang Yang is understood to be for transhipment of crude oil (from North China) for export. Equipped with Yokohama type fenders on starboard side. No other information available.

Ballast Facilities: No ballast may be discharged overboard without Harbour Master's permission. This is virtually automatic in case of segregated/permanent ballast.

Permission to discharge clean cargo tank ballast must be requested in writing and ballast water is subjected to analysis before permission is granted. Analysis takes about 6 hours.

Dirty ballast or ballast which fails analysis, may be discharged ashore. Receiving rate approximately 250 cu.m.p.h., maximum capacity unknown. There is a charge for this, understood to be 1.5 Yuan/ton.

Medical Facilities: Hospital at Ningbo. Transport provided by Seamen's Club.

Fresh Water: Available on jetty at cost of U.S.$1.00/ton. Rate and quantity unknown. Also available by barge at Quarantine and Ching Tang Yang anchorages but 3 days' notice required. Cost unknown.

Fuel: Agents advise that marine diesel and also fuel oil bunkers are available but minimum of 7 days' notice required.

Repairs: No information on facilities available. Harbour Master's permission required for immobilisation of main engines.

Cargo Surveyors: Zhejiang Import & Export Commodity Inspection Bureau who attended for final ullaging and sampling were efficient.

Repatriation: No difficulties with repatriation of sick crew members or arranging routine changes. It takes 1 to 2 days to arrange visas and Agents will only arrange flights as far as Hong Kong. Airline Prepaid Ticket Advice accepted.

Shore Leave: Allowed. Passes issued on arrival by Immigration (must be returned). Transport provided by Seamen's Club at Ningbo and arranged through Agent.

General: Chandler: Not used. Understand meat/fish available at any time. Vegetables and salad seasonal.

Laundry: Available. Not used. Reputed to be good quality service and fast.

SHIPMASTER'S REPORT: April 1992.

Berth: Vessel (50,000 d.w.t.) called for loading unleaded Mogas, after call at Dalian.

Vessel anchored at Xia Qi Pilot Anchorage to await Pilot and berth. Berth: Shunsan No.3. Hose: 1×10 in. Loading rate: 2,000 cu.m./hr.

Documents: On Arrival:

6 copies Crew List (IMO form accepted).

4 copies Ship's Particulars (free form).

1 copy List of Narcotics (free form).

4 copies Application for Discharge of segregated ballast water into sea (free form).

As Ningbo was 2nd port in China, all Customs documents were handed over to Customs in a sealed envelope.

On departure:

4 copies Crew List (only if crew changes).

1 copy Maritime Declaration of Health for departure of ship (Chinese form).

1 copy Report of Clearance (Chinese form).

1 copy Report of Chinese Currency (Chinese form).

All Chinese forms supplied by Agent.

Entry Inspection: Carried out while vessel was anchored off berth by "Joint Inspection Team". 10 officials representing Customs, Immigration, Harbour Authorities, Quarantine Doctor and Agency. They cleared vessel before berthing.

Agents stayed on board while vessel was alongside.

On departure, same "Team" came on board for clearance.

Communications: Agent: China Ocean Shipping Agency, Ningbo. Cables: Penavico, Ningbo. Telex: 37028 nbpen CN.

All communications to and from Agent via Satcom without problems.

Following telex received from Agent before arrival:

Quote

Ningbo approaching guidance as follows: Please steer from high-seas to position Lat. 28° 53' 00" N., Long 122° 26' 45" E., 10 miles East of Beiyushan Lighthouse (disused), from there take course of 013° to reach position Lat. 29° 45' 00" N., Long. 122° 40' 36" E., 8.3 miles from Dongtingshan Lighthouse (bearing 326°). Alter course to 270° and steer directly to Pilot Anchorage (situated between 29° 44' 30" N. and 29° 46' 00" N., and 122° 20' 30" E. and 122° 22' 30" E.) and must await Pilot there. Other channels are forbidden. Photographing and surveys are not allowed after entering China's territorial waters. Please contact Pilot through VHF Channel 16 one hour before arrival at Pilot Anchorage, and keep listening on VHF Channel 16 until Pilot boards. Vessel not

allowed to use radio transmitter at anchorage, unless emergency. Vessel must keep main engine, steering gear, rudder indicator, telegraph communication equipment, whistle/siren, gyro compass repeaters, radar and echo-sounding in good condition, but not allowed to use any of them after arrival at Pilot Anchorage, unless permitted by Pilot. The above regulations must be observed strictly.
Unquote
(Radar: Inward and outgoing ships seem to use radar. We switched on the radar when inbound, due to rain and fog. Radar was switched on when vessel left berth.)
Shore Leave: 2 immigration guards stayed on board during stay. Shore leave allowed from sunset to midnight. Shore passes were returned before sailing.
Delays: The number of cargo surveyors, pilots and tugs are not sufficient, which can delay the vessel.

Joint Inspection Team only works from 0800 hrs. – 1700 hrs. If the Joint Inspection Team has been told by Agent that vessel will be ready for inspection at i.e. 1600 hrs., and ship is delayed more than 30 minutes, they will leave for inspection on another ship.

QINGDAO (Tsingtao): 36.04 N. 120.19 E. (See Plan)

Also see "General" before first port.
DOCUMENTS: See "Dalian".
PILOTAGE: Available 24 hours. Pilots will board at the Pilot Station.
ANCHORAGE: No. 1 Quarantine Anchorage (Former No. 21 Anchorage):
Lat. 36° 00' 46" N., Long. 120° 20' 41" E.
Lat. 36° 00' 40" N., Long. 120° 21' 58" E.
Lat. 36° 00' 12" N., Long. 120° 20' 51" E.
Lat. 36° 00' 12" N., Long. 120° 21' 42" E.
Depth: 31 m. – 44 m.
Bottom: Mud and sand with good holding ground.
Oil Tanker Anchorage (Former No. 23 Anchorage):
Lat. 36° 05' 42" N., Long. 120° 13' 06" E.
Lat. 36° 05' 42" N., Long. 120° 14' 00" E.
Lat. 36° 04' 51" N., Long. 120° 13' 06" E.
Lat. 36° 04' 51" N., Long. 120° 14' 00" E.
Depth: 10 m. – 37 m.
Bottom: Mud with good holding ground.
Inner Anchorage (Former No. 22 Anchorage):
Lat. 36° 06' 00" N., Long. 120° 14' 30" E.
Lat. 36° 06' 00" N., Long. 120° 16' 50" E.
Lat. 36° 04' 18" N., Long. 120° 14' 30" E.
Lat. 36° 04' 18" N., Long. 120° 16' 50" E.
Depth: 5 m. – 38 m.
Bottom: Mud and sand with good holding ground.
RESTRICTIONS: Harbour manoeuvring speed: 10 knots.
Tidal range: Max. 4.75 m., average 2.78 m.
Possibility of entry or sailing after sunset: Possible.
Masters are strongly recommended to delay vessel's movements (Entry or sailing) if the visibility is poor.
MAX. SIZE: LOA 265 m., beam 39 m. and draft 14.0 m.
Max. draft for oil tankers 20.5 m.
VHF: Qingdao Radio on Channel 16 throughout 24 hours. Pilot on Channel 9. Port Operations on Channel 11.
Report System: When vessel is approaching Chaolian Dao (35° 53' 36" N., 120° 52' 48" E.), Master should call the Harbour Master through Qingdao Radio (VHF Channel 16). The following is to be reported: Vessel's name, call sign, flag, ETA, draft fore and aft, if any dangerous cargo onboard and quantity, request of Pilot, permission for anchoring area, etc.

When vessel passes Dagong Dao (35° 57' 36" N., 120° 29' 30" E.), Master should report to Harbour Master for further information.

Master should also contact the Traffic Control Centre of Qingdao Port, reporting present ship's position, asking for sailing guidance. If he fails to do so, there might be a penalty.

After anchoring, the anchor position should be reported to the Agent and the Harbour Master.
TUGS: 2 × 1,000 h.p., 2 × 1,670 h.p. and 5 × 3,200 h.p.
BERTHING:

Name of Stevedore Company	*Berth No.*	*Length (m.)*	*Depth (m.)*	*Permissible Berthing Size (d.w.t.)*	*Cargo*	*Equipment (tons)*
Dagang:						
Wharf I	1	146	7.2-7.6	10,000-20,000	General Cargo, Ore	Shore Cranes 15×10 tons
Wharf I	2	181	8.1-8.3	10,000-20,000	General Cargo, Ore	Shore Crane 1×16 tons
Wharf I	3	217	8.8-9.0	30,000	Grain	Shore Crane 1×16 tons
Wharf I	4	200	9.0	10,000	General Cargo, Steel	
Wharf I	5	140	8.5	10,000	General Cargo, Steel	
Wharf I	6	120	7.8	7,000	General Cargo, Steel	
Wharf I	7	120	7.2	6,000	General Cargo, Steel	
Wharf I	8	120	6.2	3,000	General Cargo, Steel	
Wharf II	9	120	6.1	3,000	General Cargo, Steel	
Wharf II	10	160	8.3	8,000	General Cargo, Steel	
Wharf II	11	160	9.0	10,000	General Cargo, Steel	
Wharf II	13	160	8.3	10,000	General Cargo, Steel	
Wharf II	14	160	8.3	8,000	General Cargo, Steel	
Wharf II	15	120	8.0	7,000	General Cargo, Steel	
Wharf IV	25	160	7.8	5,000	Liquid Chemicals	
Zhonggang:						
Wharf VI	35	146	7.9	8,000	Sand	Shore Cranes 2×10 tons
Wharf VI	36	150	8.0	8,000	General Cargo	Shore Cranes 3×10 tons
Wharf VI	40	180	5.5	3,000	General Cargo	Shore Cranes 2×10 tons
Wharf VI	41	120	6.8	5,000	General Cargo	
Wharf VI	42	162	7.3	8,000	General Cargo	
Beigang:						
Wharf VII	43	120	7.0	5,000	Coal	
Wharf VII	44	263	8.8	10,000	Coal	Shiploader
Wharf VIII	45	210	12.8	60,000	Ore	Shore Cranes 16×10 tons
Wharf VIII	46	210	12.8	60,000	Ore	Shore Cranes 16×10 tons
Wharf VIII	47	250	12.4	50,000	Container	Bridge Cranes 3×40 tons
Wharf VIII	48	225	11.4	50,000	General Cargo, Bulk Cargo	
Wharf VIII	49	225	12.0	35,000	Bulk Cargo, General Cargo	Shore Cranes 2×30.5 tons
Wharf VIII	50	198	10.3	20,000	Bulk Cargo, General Cargo	Shore Cranes 4×10 tons
Wharf VIII	51	218	10.3	20,000	Bulk Cargo, General Cargo	Shore Cranes 4×10 tons
Container:						
Wharf VIII	52	260	10.3	50,000	Containers	Bridge Cranes 2×30 tons
Huangdao	Eastern	314	12.5	50,000	Crude Oil	3 Loading Arms
Huangdao	Western	314	10.0	20,000	Crude Oil	3 Loading Arms
Qianwan	63	279	13.5	50,000	Coal, Bulk Cargo	
Qianwan	64	220	13.5	35,000	Coal, Bulk Cargo	
Qianwan	65	280	13.5	50,000	Iron Ore	Shore Cranes 2×16 tons
Qianwan	66	220	11.0	25,000	Iron Ore, General Cargo	
Qianwan	67	195	11.0	20,000	General Cargo	Shore Cranes 6×6-8 tons
Qianwan	68	229	11.0	20,000	General Cargo	
Huangdao	Oil Storage Area	320	22.0	200,000	Crude Oil	4 Loading Arms

Qianwan District: Only Berths No. 63, 64, 65, 66, 67 and 68 have been completed and are in operation.

Qianwan is to some extent an unopened area for foreign vessels. Extra charges will be levied by Immigration, Customs, Harbour Master and Quarantine. The party who appoints the berth will bear all extra charges.
CRANES: 1×500 ton floating crane.
Also see "Berthing".
TANKERS:
Huangdao Eastern/Western Oil Wharf – Lat. 36° 04' 00" N., Long. 120° 13' 30" E.
Huangdao Oil Storage Area Oil Wharf – Lat. 36° 03' 00" N., Long. 120° 14' 20" E.
See "Berthing".
FRESH WATER: Available at berths and at anchorage.
FUEL: Available at berths and at anchorage.
REPAIRS: Facilities available.
AIRPORT: Qingdao airport.
GENERAL:
Stores: Contact Qingdao Foreign Supply Corporation.
Storage: Warehouse: 57,574 sq.m.
Open Storage: 340,253 sq.m.
Imports: Steel, ore, fertiliser, timber and other general cargoes.
Exports: Crude oil, peanut oil, groundnut cake, corn, cotton, hardware and other general cargoes.

SHIPMASTER'S REPORT: September 1979.
Documents: On arrival: 1 Report on Entry, 4 Crew Lists, 1 Import Cargo Manifest, 1 List of specified Articles, Currency, gold, etc. and all ship's certificates.
Navigation: BA Chart 876. On passing Cha Lien Tao Island, call "Qingdao Radio" for entry instructions. The outer quarantine anchorage for which Pilot is not compulsory is in position Lat. 36° 02' N., Long. 120° 18.3' E. The approach is straightforward and the lighthouses are in good working order. The authorities board at the outer anchorage via pilot ladder from a tug. The use of radar in the harbour area must be sanctioned by Pilot or Harbour Authorities. All other navigational gear may be used as required.
Communications: Both Agents and Harbour Authorities have VHF with most Channels. When vessel is at Inner anchorage, Agency contact vessel twice daily for berthing times, etc.
Currency: Local Yuan available.
Draft: Up to 35 ft. alongside at discharging berth – in approach entrance off Horseshoe Reef up to 34 ft. depending on tide.
Agents: China Ocean Shipping Agency are sole Agents. They visit vessels twice daily and are also in VHF contact from their office. Communications with other countries from Qingdao is by cable only, telex is due to be installed next year.
Medical: Hospital and doctors available.
Laundry: Excellent and not expensive.
Provisions: Not expensive but very limited in both content and availability. Not to be relied on, especially if in port for short stay.

Fresh Water: Alongside from quay – 35 t.p.h. Also available at anchorage from water barge.
Time: GMT plus 8 hours.
Immobilisation: Permitted by arrangement with Harbour Authorities.
Opening/Closing Hatches: Either ship's crew or stevedores. In the case of the latter, a charge is payable.
Garbage: Removed when requested by small barge.
Repatriation: Difficult at present as no regular air passenger flights from Qingdao. Only way would be overnight train journey to Beijing then flight to Europe.
Repairs: Possible, large repair shops and naval yards in port area.
Bunkers: Available to Chinese vessels. Gas oil also available if adequate notice given.
Cargo Working: Discharged 24,000 m/tons sulphur in 6.75 working days, using shore cranes and grabs. Discharged into railway wagons on twin rail tracks also into large "silo" adjacent to the berth. Good standard of crane operation. Cargo tonnage discharged determined by draft surveys performed by Government surveyors and ship's staff. Statement of facts drawn up by Agents.
Watchmen: One gangway guard for inspecting Crew members' passes.
Tugs: Four large tugs – one of 3,000 h.p.
Pilots: Usually three on each vessel – reasonable English.
Density: Varies between 1020 and 1025.
Tours, etc.: Tours are arrangeable via the Seaman's Club and are good value. There are no shore leave restrictions and cameras may be used. Inter ship visiting is allowed also film and book exchanges between ships.

Shore leave is possible from the Inner anchorage by tug.
Mail: From Europe by air freight via Tokyo and Beijing takes 7 days.
Bond, etc.: Not sealed or inspected by Authorities. Stores Lists NOT required.
Floating Crane: Available, lifts estimated 150 tons.
General: Stevedore labour appeared plentiful – delays are occurring due to large increase in foreign trade. New berths are being planned and dredging is taking place continuously. Officials, Agents, etc. most pleasant and helpful and very eager to learn English. It is advisable to make a 'sea protest' to the Harbour Authorities if any bad weather experienced on voyage.

SHIPMASTER'S REPORT: June 1981.
Berth: Huang Dao Oil Terminal. 36° 04' N., 120° 13.5' E.
Departure Draft: Forward 11.7 m. Aft 12.1 m.
Charts: BA 1255, 876, 857. Chinese (up to date) 9106, 9408, 9432.
Approach: Only by 'defined routes':

from: 35° 56' 24" N., 121° 05' 00" E. or 35° 43' 15" N., 120° 53' 09" E.
Course 270°T Course 338°T
to 35° 56' 24" N., 120° 46' 42" E.
then Course 283°T
to 36° 02' 00" N., 120° 18' 16" E. (Pilot boarding/Arrival Inspection Anchorage)

and reverse courses to same positions outward.
Entry: Arrival inspection formalities carried out at above anchorage, by boarding party of 8 persons from Agents, Customs, Immigration and Harbour Authority. We arrived at 1700 hrs, and inspection party boarded at 0930 hrs. next morning. China Ocean Shipping Agents, representatives spoke very good English and most helpful. Chinese documents required, including crew declaration form but Bonded Stores list not required and Bond not sealed. After inspection, about 30 minutes, shifted to Inner Tanker Anchorage with 2 Pilots.
Agents: China Ocean Shipping Agents, Cable: Penavico 2213 Qingdao.
VHF: Channel 16 to Qingdao Radio who will give you a channel to Agents, usually Channel 11.
Anchorage: Inner Tanker Anchorage is 1 mile North of Oil terminal with varying depths from 11 m. to 30 m.
Berths: Concrete dolphin structure, adequately fendered. West berth max. draft 12 m., berth port side to, approach from North. East berth max. draft 13 m., approach from South rounding No. 23 buoy to starboard when coming from Inner anchorage, Port side to. No shore gangway. Connection with flexible hoses so derrick required. Usual moorings. Head and stern line dolphins have small winches on them but out of order so mooring gang reluctant to handle wires.
Berthing/Unberthing: Competently carried out by 3 Pilots and 2 tugs. Tugs, Nos. 10 and 11 are 3,200 h.p. Gather vessels of our size (55,000 d.w.t.), and above only depart during daylight and on HW.
Cargo: Loaded Shengli Crude API. 23.3, loading temperature 40°C. Terminal state maximum loading rate 2,500 tonnes per hour. We achieved 1,980 t.p.h. Connection is by 2×10 in. 'Y' connectors at manifold connected to flexible hoses. After completion documents take 3/5 hours to prepare and bring on board.
Ballast: As first cargo after dry dock we received permission from Harbour Authority to deballast to sea although pumped tank bottoms ashore just in case. I gather that it is normal to deballast to shore reception at maximum rate of 600 t.p.h. and believe charge per ton is quite high so it is prudent to arrive with minimum dirty ballast.
Repairs: Appear to be quite readily available. We had some boiler tubes welded and Chief Engineer reported that the work was competently carried out. Chinese surveyors also act on behalf of Lloyd's.
Fresh Water: Available at anchor from powered barge at 50 t.p.h. and also available on terminal but pressure is unreliable.
Shore Leave: Allowed from anchorage and terminal. Request for launch to be passed to Agents by VHF before 1100 hrs. and launch alongside around 1230/1300 hrs. and returns from shore between 1700/1900 hrs. There is a Seamen's Club with a new hotel attached which was opened during our stay. Seamen's Club will arrange football matches, and various tours. International telephone calls can be made from Agents' office.
Garbage: A garbage collection boat calls every other day whilst at anchor.
General: During our 16 day stay in June there was fog during some part of nearly every day, occasionally dense.

SHIPMASTER'S REPORT: May 1989.
Vessel: 35,000 g.r.t., 64,440 d.w.t. Vessel discharged 47,250 tonnes of bulk wheat. Length of stay 38 days.

Vessel arrived with a draft of 12.0 m. and proceeded to Pier No. 8 – Berth No. 49 and lightened to a draft of 9.6 m. She then proceeded to Pier No. 1 – Berth No. 3.

Self-sustaining vessels may lighten into barges at the anchorage.
Documents: Officers from Harbour Master's office, Quarantine Department, Customs, Immigration and Agent's office board the vessel upon arrival at the Inner Quarantine Anchorage.

The following documents are required on arrival:
2 Reports of Entry for Foreign Going Vessels.
2 Reports of Articles Restricted for use in port.
5 copies Crew List (IMO Form accepted).
4 copies Passenger List (Not required if no passengers on board).
2 Lists of specified articles (Foreign currencies, gold, silver belonging to ship or members of crew).
1 copy Maritime Declaration of Health.
1 copy Ammunition List (Not required if no ammunition on board.)
1 copy Bonded Stores List.
3 copies Ship's Particulars.
1 copy Vaccination List (required if the vessel coming from a suspected country).
2 copies Ports of Call within last 6 months.
1 copy Import Manifest.
1 copy Bills of Lading.

Last Port Clearance and all ship's certificates submitted for examination on board.

After inspection, Harbour Master's officers issue 30 days, 60 days, or 90 days optional Tonnage Dues Certificate as requested by the Master.
Pilotage: Compulsory. Pilotage available throughout 24 hours. Master should send ETA at Chaolien Dao to Harbour Master through Qingdao Radio 24 hours in advance, any change of ETA must be advised. VHF Channel 16 may be used to contact Pilot Station after passing Chaolien Dao. Within pilot area limited with a circle 3 cables radius centered on position Lat. 36° 02' N., Long. 120° 18.02' E., 1 senior Pilot and 1 junior Pilot board the vessel from a tug boat, which displays pilot signal while on duty.
Anchorage: Vessels may anchor South of pilot area, according to Pilot's instructions, without a Pilot, otherwise Inner Quarantine Anchorage is used. In case of congestion, West of Inner Quarantine Anchorage may be used. Good holding ground.
Health: Vessels should hoist 'Q' flag on arrival. Pratique is obtained at the Inner Quarantine Anchorage on arrival.
Radio: Qingdao Radio (XST).
VHF: Qingdao Radio on Channel 16, Pilot on Channels 16 and 14, Sinoagent on Channel 74 and Penavico on Channel 11.
Tugs: 7 × 3,200 b.h.p. tugs operating in the port. Tug's lines are used for berthing and ship's lines for unberthing. Tugs join the vessel before entering breakwater. Number of tugs to be used depends on Pilot's advice and Master's demand. Generally, 2 tugs used for large vessels.

Berthing:

Pier No.	*Berth* No.	*Cranes & Use*
1	1, 2	8 × 10 tons and 1 × 15 tons. Coal cargoes.
	3	5 × 10 tons. Grain cargoes.
	4, 5, 6, 7,	No cranes. Bulk and general cargo.
2	8, 9, 10, 11, 12, 13, 14	Equipped with cranes. General cargo and ore cargoes.
3, 4, 5		For naval vessels.
6	36, 37, 38	4 × 10 ton. General cargo and No. 38 generally for bulk sand.
7		Coal loading terminal for small size vessels.
8	45	Clean bulk cargo.
	46	Bulk ore.
	47	Bulk ore and logs.
	48	Logs and large foreign passenger vessels.
	49, 50	Lightening deep draft vessels.
	50, 51	Sugar and occasionally foreign passenger vessels.
		Berths No. 45, 46 and 47 equipped with 13 × 10 ton cranes.
		Berths No. 49, 50 and 51 equipped with 11 × 10 ton cranes.

Berth No. 52 (between Piers No. 5 and 8) and Berth No. 53 (at the East end of Pier No. 5) are used by container vessels. Also the berth between Piers No. 6 and No. 1 is used by Chinese passenger liners. The berth between Piers No. 1 and No. 2 is for tugs and passenger catamarans. The berths between Piers No. 2 and No. 3 and Piers No. 3 and No. 4 are for naval use.

All shore cranes are on rails and all cargo piers except Berths No. 4 and No. 48, are rail-served. Cargo can be handled direct between ship and train.

Stevedores: Gangs are arranged by the Agent. Crane operators are competent. Hold sweeping is done by stevedores. Generally a few of the foremen can speak English.
Medical: 24 hours' advance notice is required for medical attention. Arranged by Seamen's Club through Agent. All hospital facilities available. Dental facilities available.
Density: 1022.5 at low water and 1024 at high water observed by ship but draft surveys at 1024 all the time.
Fresh Water: Good quality water available by pipeline at Piers No. 1, 2 and 6 and by barge at all berths at the other piers and at the anchorage. Rate 50 tonnes/hr. Cost U.S.$ 1.0 per ton by pipeline and U.S.$ 3.0 per ton if supplied by barge.
Fuel: Fuel comes from Dairen and all grades are not available at all times. Appropriate advance notice is required. Minimum supply quantity for fuel oil and diesel oil is 100 tonnes. MDO is not available, only LDO and HDO available at Qingdao.

Consuls: No consuls locally. Nearest at Beijing.
Dry Docks/Repairs: One dry dock for vessels up to 30,000 d.w.t. at Fushansuo Bay. All kinds of temporary repairs can be undertaken to foreign vessels.
Surveyors: Only Z.C. China Classification Society acts on behalf of other classification societies when authorised.
Gangway/Deck Watchman: Gangway watchman compulsory. Maintained by ship's crew.
Hatches: Opening/closing hatches is optional. If by ship's crew, Master has to sign a formal paper on arrival.
Customs Allowances: For the first 10 days, 2 cartons of cigarettes and 1 bottle spirits for each crewman. 15 cartons of cigarettes and 5 bottles spirits for the Master. Seal can be opened on request after 10 days.
Repatriation: Possible.
Airport: Located at about 37 km. N.W. of Qingdao. It only has international connections with Hong Kong. Regular flights once a day on Monday, Wednesday and Saturday, sometimes there is an extra flight on Sunday by China Airlines only.
Time: GMT plus 8 hours. Summertime is kept from first Sunday after April 10th until September.
Communications: Cable, telex, direct telephone and Fax available for all over the world from the agent's office. Direct trunk calls also available from large hotels.
Shore Leave: Permitted from 0700 hrs. – 2400 hrs. with I.D. and shore passes which are issued by Immigration Officer on arrival. The shore passes are valid for all Chinese ports to be called at consecutively. Shore leave is also possible from the Inner Quarantine Anchorage by launch on request.
Regulations: If shifting more than 100 m. or from berth to berth, use of Pilot is compulsory.

Approval must be obtained from the Harbour Superintendency Administration in advance through Ship's Agent, if the following are to be undertaken whilst in port.

1. Hull painting
2. Deck cleaning and washing
3. Discharging of ballast water and bilge water (including tail shaft water).
4. Discharging of hold washings (including crude oil tanker washing).
5. Use of oily water separating equipment to dispose of any sewage containing oil.
6. Using any type of dispersants.
7. Discharging sewage and waste oil into reception facilities.
8. Funnel cleaning and boiler water discharging.
9. Discharging of any harmful or corrosive substances into the harbour.
10. Whistle testing.

Approval is generally received from the Agent orally.
Provisions & Supplies: Limited kinds and amounts available at low prices through ship's Agent (ships supply branch). Chinese charts also available.
Garbage: Collecting service is available by barge at anchorage and by truck at berth if requested.
Agents: There are 2 governmental agents at Qingdao.

1. China Ocean Shipping Agency Co. Cables: Penavico–Qingdao.
2. China Marine Shipping Agency Co. Cables: Sinoagent – Qingdao. Telex 32132 TRSQ DCN.

Both Agents have VHF.

AUTHORITY: Qingdao Harbour Administration Bureau, 4 Dai Gang Yan Road, Shi Nan District, Qingdao, People's Republic of China. *Tel:* 86-532-2982024. *FAX:* 86-532-2823053. *Contact:* Bai Wen-Xuan, Deputy Director.

QINHUANGDAO (Chinwangtao), including Shanhaiguan: 40.00 N. 119.30 E. (See Plan)

Also see "General" before first port.
NOTICE: Chinese Notice June 1984.

Anchorages with bearings and distances from Nanshan Tou light (Lat. 39° 54.6′ N., Long. 119° 36.9′ E. approx.):

(a) Oil tanker anchorage. Sector between bearings 100° and 110° and distances 3.0 miles and 7.0 miles.

(b) East Anchorage. Sector between bearings 110° and 135° and distances 3.0 miles and 7.0 miles.

(c) West Anchorage. Sector between bearings 165° and 190° and distances 3.0 miles and 5.0 miles.

PILOTAGE: Compulsory. Pilotage is undertaken day and night. Pilot boards at the Pilotage Quarantine Anchorages.
ANCHORAGES: There are 3 anchorages in the Port of Qinhuangdao.

1. Eastern Pilotage Quarantine Anchorage:
Location: A sector area with Nanshantou Lighthouse as its centre, lying between the true bearings of 119° and 135° and between two arcs of 3 miles and 7 miles in radius.
Depth: 14.0 m.
Bottom: Mud and sand.
Vessel size: 50,000 d.w.t.

2. Western Pilotage Quarantine Anchorage:
Location: A sector area with Nanshantou Lighthouse as its centre, lying between the true bearings of 165° and 190° and between two arcs of 3 miles and 5 miles in radius.
Depth: 12.0 m.
Bottom: Mud and sand.
Vessel size: 35,000 d.w.t.

3. Anchorage for Tankers:
Location: A sector area with Nanshantou Lighthouse as its centre, lying between the true bearings of 110° and 119° and between two arcs of 3 miles and 7 miles in radius.
Depth: 14.0 m.
Bottom: Mud and sand.
Vessel size: 50,000 d.w.t.

RESTRICTIONS: Entry and departure possible after sunset.
Draft limitation in channel is 13.5 m.
MAX. SIZE: General Cargo: LOA 200 m. and draft 11.5 m.
Coal and Oil: LOA 230 m., beam 22.5 m. and draft 12.5 m.
VHF: Qinhuangdao Radio on Channel 16 throughout 24 hours.
TUGS: 7 × 3,500 h.p. and 3 × 167 h.p.
BERTHING:

Berth No.	*Length* (m.)	*Depth* (m.)	*Cargo handled*
2	123.44	5.6	General cargo and bulk
3	87.00	4.5	Petroleum
4	107.26	6.5	Coal
5	151.70	9.0	General cargo and bulk
6	151.70	9.1	General and bulk
7	151.70	10.0	Coal
8	200.50	9.5	Coal
9	200.50	9.5	Coal
10	253.50	11.1	General and bulk
11	253.50	11.1	General and bulk
12			(Closed)
13	202.00	11.6	General and bulk
14	230.00	10.7	General and bulk
15	230.00	10.6	General and bulk
16	171.00	12.1	General and bulk
17	250	10.2	General and bulk
18	210	10.2	General and bulk
19	210	10.2	General and bulk
101	278	9.9	Crude oil
102	278	10.3	Crude oil
103	340	13.5	Crude oil
201	252	13.0	Coal
202	252	13.0	Coal
203	300	13.3	Coal
204	300	13.1	Coal
301	340	14.8	Coal
302	340	14.8	Coal
303	340	14.8	Coal
304	240	6.5	General and bulk
Bunkers	200	4.3	Oil

CRANES: 1×70 tonne floating crane.
STEVEDORES: First shift: 0730 hrs. – 1930 hrs. Second shift: 1930 hrs. – 0730 hrs. (Sundays and holidays included).
MEDICAL: Facilities available.
FRESH WATER: Available.
FUEL: Available.
REPAIRS: Facilities available for repairs to large vessels.
TIME: GMT plus 8 hours.
DEVELOPMENTS:

Berth	*Depth* (m.)	*Remarks*
General Cargo (2nd phase)	12.0	3×35,000 d.w.t. 3×15,000 d.w.t.
General Cargo (3rd phase)	12.0	2×35,000 d.w.t. 3×20,000 d.w.t.
	10.5	2×20,000 d.w.t.
Coal Terminal (By Year 2000)		5×20,000 d.w.t.
	12.0	3×35,000 d.w.t.
Crude Oil Terminal (3rd phase)		1×100,000 d.w.t.
	13.5	2×35,000 d.w.t.

SHIPMASTER'S REPORT: March 1981.
Lat. 39° 54.6′ N., Long.: 119° 36.7′ E.
Chart: BA No. 3378.
Documents:
5 copies Crew Lists.
1 copy Import Manifest.
1 copy List of Specified Articles belonging to Ship and/or Members of Crew.
1 copy Maritime Declaration of Health.
Anchorage: In case there is ice at anchorage in Winter it is advisable to anchor further off and not pay out too long scope of chain.
Also see "Notice".
Pilotage: Pilotage is compulsory for foreign vessels entering and leaving the port. Pilots board ships at pilotage/quarantine anchorage. Pilotage is undertaken day and night. Pilot boat (tugboat) displays the International Pilot Signal when on pilotage duty. There are about 12 Pilots available. Pilots can speak and understand English sufficiently.
Channels: In port there are three channels. Original channel, new channel and oil pier channel.

Original channel is about 1.7 miles in length, 100 m. in width and 9 m. to 10.4 m. depth. It is used bys berthing and leaving the large pier and the small pier.

New channel about 0.9 miles in length, 100 m. in width and 9.4 m. to 10.4 m. in depth. It is a branch of the original channel and is used by ships berthing and leaving the new pier.

Oil pier channel is about 2 miles in length, 100 m. in width and 10.7 m. in depth. It is used by ships berthing and leaving the oil pier.

Berthing:

Name			Capacity
Small pier	Berth No. 2		1 × 5,000 ton
Large pier	Berth No. 4		1 × 7,000 ton
Large pier	Berth No. 5		1 × 10,000 ton
Large pier	Berth No. 6		1 × 10,000 ton
Large pier	Berth No, 7		1 × 10,000 ton
New pier	Berth No. 8	Pier B	1 × 10,000 ton
New pier	Berth No. 9		1 × 10,000 ton
New pier	Berth No. 14	Pier A	1 × 10,000 ton
New pier	Berth No. 15		1 × 10,000 ton
Oil pier	East Berth		1 × 10,000 ton
Oil pier	West Berth		1 × 10,000 ton

Radio: Foreign ships calling at this port may according to International Radio Regulations communicate with Qinhuangdao Coastal Radio Station.

Name	Qinhuangdao Radio
Call sign	XSE
Medium frequency (kHz)	486
Hours of service	0000 – 2400
High frequency (kHz)	8484
Hours of service	0600 – 2400
Time of traffic list	At H + 10 each given hour.

There is VHF Channel 16 at port control and Channel 11 at 'Penavico' Agents. To call Agents first call port control and then change to Channel 11 after informing the vessel's intention to use VHF.

General: The port is equipped with lifting machinery, tippers, universal lifting machines, belt conveyors. Cargo is unloaded directly into railway wagons. Coal loading is done by conveyor belts. Hatches are opened by ship's crew. Stevedores are not competent in derrick work. Stevedores work in three shifts of eight hours each commencing at 0600 hours. Discharging rate is fully dependent on availability of wagons. There are 11 tugs available. Fresh water and fuel are available by boats. Limited provisions are available.

There is a Seaman's club in the city, well equipped with recreation facilities. A trip to Great Wall of China can be arranged through the club.

SHIPMASTER'S REPORT: June 1990.

Port: Sub-Port of Shanhaiguan.

Location: 10 miles E.N.E. of Qinhuangdao.

Exports: The Port is now a major exporter of coal and oil. China exported 15.29 million tons of coal during 1989, and a majority passed through this Port.

The Port also exports soyabean meal, maize and pig iron, in small geared vessels up to a maximum draft of about 6.5 m., mostly working cargo at Berth No. 1.

Radio: ETA to be sent to "Penavico Qinhuangdao".

Pilotage: Pilot boards at Qinhuangdao.

After passing Joint Inspection, vessel is piloted to an anchorage off the Port of Shanhaiguan, pilot then returns to Qinhuangdao.

Dockyard pilot, with the assistance of Dockyard and/or Qinhuangdao tugs, berths the ship.

Health: Formalities take place at Qinhuangdao Quarantine Anchorage. Standard Chinese forms used.

Berthing:

Berths No. 1 – 4: Length 450 m. Max. draft 6.5 m.

Berths No. 5 – 6: Length 300 m. Max. draft 6.5 m.

Cranes:

Berths No. 1 – 4: One crane for repair work.

Berths No. 5 – 6: Two cranes for repair work.

Mobile cranes available.

Fuel: Available from Qinhuangdao by barge.

Dry Docks:

1 dry dock 240 m. × 38 m. × 6.0 m. over sill. 2 cranes available.

1 dry dock 170 m. × 28 m. × 6.0 m. over sill. 2 cranes available.

1 × 63 tonne crane and 6 × 25 tonne cranes available.

Shan Hai Guan Shipyard, Tel: 551131. Telex: 27131 QH SHG CN. Fax: 0335-551350. The Shipyard also monitors VHF Channel 12.

General: Telephone, Fax and Telex facilities available.

Agency and ship chandler services are from Qinhuangdao, about 45 minutes drive.

The Port is an hour's walk from the seaward end of the Great Wall of China, described as "The Old Dragon's Head".

On sailing, a Qinhuangdao pilot is required to take the vessel to the Joint Inspection Anchorage. Only after Outward Clearance has been completed, can the vessel sail, which may cause delay.

AUTHORITY: Qinhuangdao Port Adminstration, 6 Haibin Road, Qinhuangdao, The People's Republic of China. *Tel:* 34812-3522. *Telex:* 271051 QH PEN CN. *Cables:* 2156 Qinhuangdao. *Contact:* Huang Guo-sheng, Port Director.

QINZHOU: 21.43 N. 108.35 E.

LOCATION: Lat. 21° 43' 30" N., Long. 108° 35' 12" E.

DOCUMENTS: See "Documents" before first China port.

PILOTAGE: Compulsory. Provided by Qinzhou Port Pilot Station. Pilots communicate with vessel on VHF Channel 16, if no answer, contact Qinzhou Radio by VHF Channel 16. Notice of ETA and request for Pilot must be made to the Pilots at least 24 hours in advance.

APPROACHES: *Channel:* The channel is 14.2 miles long, 6.6 m. depth, the minimum width is 110 m., vessels with draft up to 9.5 m. can pass on high tide.

ANCHORAGE: The anchorage is 1,600 m. × 1,600 m. square, centre point is Lat. 21° 29' 28" N., Long. 108° 31' 51" E.

VHF: Port only has a VHF station at present, vessels must contact Qinzhou Port Radio by VHF before arrival at the anchorage.

TUGS: 1×2,600 h.p. tug available at present.

BERTHING: The jetty is 360 m. long and 9.4 m. depth. It can accommodate 2×10,000 ton vessels at one time.

CRANES: There are 5 cargo cranes on the jetty with a maximum capacity of 16 tons.

FRESH WATER: Available. Contact Qinzhou Port Shipping and Cargo Agency for supply.

FUEL: Available. Contact Qinzhou Port Shipping and Cargo Agency for supply.

DEVELOPMENTS: There are 7 jetties (2,000 ton to 10,000 ton class) under construction. Two container terminals and 2 oil terminals are planned.

AGENCY: Qinzhou Port Shipping and Cargo Agency, 1st Wen Feng Six Road, Qinzhou City, Guang Xi, China. Tel: (0777) 2830819, 2822485. Fax: (0777) 2830819. Telex: 482081 QZPSA CN. Cables: 8307 Qinzhou.

SHIPMASTER'S REPORT: July 1994.

Location: The port opened in February 1994 and is located in position Lat. 21° 49' 30" N., Long. 108° 35' 12" E.

Anchorage: Vessel was unable to enter port due to draft restriction (vessel's draft 9.32 m.), so anchored in position Lat. 21° 28' 42" N., Long. 108° 31' 54" E. in depth 10.5 m. There is a yellow buoy close to this position, in position Lat. 21° 29' 28" N., Long. 108° 35' 51" E.

VHF: There is a port radio station, but vessel requires a Chinese speaking person on board as no English spoken.

Cargo Operations: Vessel discharged into barges with ship's cranes.

Report: Charterer's Information sent to Master:

The anchorage outside the port is 1,600 m. × 1,600 m. square. A maximum of 4 vessels can anchor.

Centre point of anchorage is Lat. 21° 29' 28" N., Long. 108° 31' 51" E.

10,000 ton Wharf:

(1) 180 m. long.

(2) Depth of pool port 9.4 m.

Feature of tide level:

(1) Average several years high tide level	+3.66 m.
(2) Average several years low tide level	+1.15 m.
(3) Average tide differences	+2.51 m.
(4) Highest tide differences	+5.52 m.
(5) Highest tide level of recent years	+5.83 m.
(6) Lowest tide level of recent years	–0.59 m.

AUTHORITY: Qinzhou Port Authority, Qinzhou Port, Qinzhou City, Guang Xi, China. *Tel:* (0777) 3888361, 3888330. *FAX:* (0777) 3888330.

QUANZHOU: 24.53 N. 118.41 E.

PILOTAGE: Compulsory. Pilotage undertaken during daylight hours only.

ANCHORAGES:

Name of Anchorage	*Depth* (m.)	*Bottom*	*Size of Mooring Vessels* (d.w.t.)
Bai Oi	5.0	Mud and sand	3 × 2,000
Xiu Tu	7.0	Mud and sand	2 × 5,000
Bei Wu Jiao	8.0	Mud and sand	2 × 5,000
Shi Hu	11.0	Mud and sand	2 × 10,000
Seven Star	12.0	Mud and sand	2 × 15,000

RESTRICTIONS: Entry and sailing at night is prohibited.

MAX. SIZE: Draft limitation in channel is 9.5 m. at H.W.

Tide: Regular semi-diurnal tide.

Tidal Range: Maximum 6.3 m. Minimum 5.1 m. Maximum tidal difference 6.93 m. Average tidal difference 4.52 m.

RADIO: Radio Quanzhou – Call Sign XSM 4.

High frequency communication: Hours: 0800 hrs. – 1800 hrs.
  Sending frequency 8525 kHz.
  Receiving frequency 8368 kHz.
Medium frequency communication: Hours: 0000 hrs. – 2400 hrs.
  Sending frequency 470 kHz.
  Receiving frequency 500 kHz.

VHF: Channel 16 and Channel 12 for Pilot Station and Penavico Quanzhou (Agency).

Quanzhou Radio on Channel 16 throughout 24 hours.

TUGS: 2×600 h.p.

BERTHING: Capacity: 2×500 tons, 1×1,000 tons, 1×3,000 tons, 2×5,000 tons and 1×3,500 tons (oil tankers only).

CRANES: 2×5 tons, 1×8 tons, 2×10 tons, 2×16 tons and 1×36 tons.

STEVEDORES: *Working Hours:* 0700 – 1600 and 1600 – 0100.

TANKERS: *Xiaocuo Terminal:* The Terminal accepts tankers of 100,000 d.w.t. with draft 16.0 m. for discharge of crude oil.
FRESH WATER: A fresh water barge with 200 tons capacity is always available.
FUEL: Contact Penavico Quanzhou.
REPAIRS: No facilities available.
GENERAL: *Provisions:* Contact Penavico Quanzhou.
Storage:
Warehouse: 8,448 sq.m.
Open Storage: 43,800 sq.m.
Imports/Exports: Stone and its products, salt, grain, coal, building materials and petroleum.

AGENT: China Quanzhou Ocean Shipping Agency – Penavico. Tel: (0595) 253106, 250941-3. Fax: (0595) 258709.

RIZHAO (Shijiusuo): 35.22 N. 119.17 E. (See Plan)

PILOTAGE: Compulsory. Pilot boards vessel at Quarantine Anchorage, day and night.
ANCHORAGE: Depth 17.0 m. – 19.0 m. Bottom is mud and sand. Vessels up to 200,000 d.w.t. may use anchorages.

The anchorages are within the following areas.

Anchorage No. 1:	35° 20' 29" N., 119° 37' 23" E.
	35° 20' 29" N., 119° 39' 53.5" E.
	35° 16' 29" N., 119° 37' 23" E.
	35° 18' 29" N., 119° 39' 53.5" E.
Anchorage No. 2:	35° 20' 29" N., 119° 39' 53.5" E.
	35° 20' 29" N., 119° 42' 24" E.
	35° 18' 29" N., 119° 39' 53.5" E.
	35° 18' 29" N., 119° 42' 24" E.
Anchorage No. 3:	35° 18' 29" N., 119° 37' 23" E.
	35° 18' 29" N., 119° 39' 53.5" E.
	35° 18' 29" N., 119° 37' 23" E.
	35° 16' 29" N., 119° 39' 53.5" E.
Anchorage No. 4:	35° 18' 29" N., 119° 39' 53.5" E.
	35° 18' 29" N., 119° 42' 24" E.
	35° 16' 29" N., 119° 39' 53.5" E.
	35° 16' 29" N., 119° 42' 24" E.

RESTRICTIONS: Vessels may enter and sail after sunset.
MAX. SIZE: Max. draft in Channel to Coal Wharf is 15.0 m. and to General Cargo Wharf is 7.1 m. Maximum tidal range 4.9 m.
VHF: Rizhao Radio operates throughout 24 hours on Channel 16, working on Channels 1, 10, 23 and 26.
TUGS: 1×1,600 h.p. and 4×3,200 h.p.
BERTHING:

Stevedore Company	*Berth Name*	*Length (m.)*	*Depth (m.)*	*Max. Size (d.w.t.)*	*Cargo Handled*	*Equipment*
No. 1	Coal A	452	17.0	125,000	Coal	Shiploader 1×6,000 t.p.h.
No. 1	Coal B	452	17.0	100,000	Coal	Shiploader 1×6,000 t.p.h.
No. 2	No. 1	130	6.9	5,000	Petroleum	
No. 2	No. 2	239	8.5	10,000	General Cargo	Shore Crane 1×10 tons
No. 2	No. 3	180	9.5	15,000	General Cargo, Timber	Shore Crane 3×16 tons
No. 2	No. 4	214	10.5	25,000	General Cargo, Timber	
No. 3	No. 1	60	3.3	500	General Cargo	Under repair
No. 3	No. 2	60	3.3	500	General Cargo	Under repair
No. 3	No. 3	79	5.0	1,000	General Cargo	Under repair
No. 3	No. 4	80	5.0	1,000	General Cargo	Under repair
No. 3	No. 5	100	5.1	1,000	General Cargo	Under repair
No. 3	No. 6	120	6.5	3,000	General Cargo	Under repair Shore Crane 1×10 tons
No. 3	No. 7	147	7.1	5,000	General Cargo	Under repair Shore Crane 1×16 tons
No. 4	No. 1	171	11.0	10,000		
No. 4	No. 2	171	11.0	10,000		
No. 4	No. 3	180	11.0	15,000		
No. 4	No. 4	180	11.0	15,000		
No. 4	No. 5	190.5	11.0	15,000		

CRANES: 1×10 ton crane at General Cargo Wharf, and 1 floating crane with capacity of 200 tonnes.
FRESH WATER: Available.
FUEL: Available.
REPAIRS: Facilities available.
GARBAGE DISPOSAL: Ship chandlers can arrange this service. Drums or skips are provided either on board or alongside. No peculiar restriction on charges and collection time. For service, Tel: (05400) 31002.
WASTE OIL DISPOSAL: No special shore tanks, but Penavico can arrange collection service if needed. Tel: (05400) 31468 or 31218. Telex: 323021 Penrz Cn or 320021 Penrz Cn. Fax: (05400) 31116.
SEAMAN'S CLUBS: No seaman's clubs available. Shop, telephone, football matches, dances, mini-bus, postage facilities are available at the port.
GENERAL: *Agency:* Penavico Rizhao, No. 105, 2 Huanghai Road, Shijiu, Rizhao, Shandong, China. Tel: 86-633-8331486. Fax: 86-633-8331116. Telex: 320021 Penrz Cn.

Sinoagent Rizhao, 2 Huanghai Road, Shijiu, Rizhao, Shandong, China. Tel: 86-633-8332045. Fax: 86-633-8331998. Telex: 320026 Trsrz Cn.
Provisions: Available.

SHIPMASTER'S REPORT: July 1989.
Pilotage: 2 Pilots boarded the vessel from a tug. The approach to the general cargo quay was through a channel and was carried out confidently.

The distance from the Pilot Station to the berth is 1.5 miles.
Anchorage: Port Control advised the vessel to anchor in position Lat. 35° 19' 30" N., Long. 119° 35' 30" E., which is South East of the Fairway Buoy. The bottom is heavy mud and the holding ground good. The tidal stream is strong in this area.
Documents: The following are to be completed on Chinese Forms:
1 copy Crew Declaration (should include currency, gold items, cameras, watches, etc.).
1 copy Report of Articles restricted for use in port.
1 copy detailed Ship Information Sheet.
1 copy Quarantine Declaration.
Ship's forms may be used for the following:
1 copy Crew Declaration.
1 copy Vaccination List (Cholera vaccinations to be up to date).
4 copies Crew List.
2 copies Bills of Lading.
2 copies Cargo Manifest.
2 copies Cargo Plans.
Formalities: The authorities require the "Q" flag to be flown until Pratique has been granted. The Agent and 12 Port Control Officials come on board at the anchorage by tug and require a large room for completing formalities. The Port Control party consists of 2 Port Health Officials, 2 Immigration Officials, 2 Officials from the Harbour Master's Department, 4 Customs Officials and 2 other persons. The documentation listed above is dealt with at this time. Pratique is granted prior to all other business, after which papers are processed and the Customs seal the bond locker. The formalities take 1.5 – 2 hours. A routine search is made of the accommodation.
Restrictions: The controlling depth in the approaches is 20 m. The depth in the dredged channel is 9.5 m. No night time berthing or unberthing at present.
Max. Size: Maximum permissible draft alongside 6.5 m., plus height of tide (maximum 4.0 m.), less 0.5 m. for keel clearance. There is no restriction on length.
VHF: The Agent's office may be contacted during the working day on Channel 16, working on Channel 11.
Tugs: Large powerful tugs available. Use of 2 tugs is compulsory.

The tugs were secured when the vessel was East of the quay. One tug forward and one tug aft, tugs lines used.
Berthing: There is only one general cargo berth in operation. If a tanker wishes to berth and a general cargo ship is alongside at the time, the general cargo vessel will have to vacate the berth.

Vessel berthed starboard side alongside on a heading of 045°. Moorings consisted of 2 head/stern lines, 2 breast lines and 2 springs at each end. All lines had a good drift. The anchor may be used for berthing but only in an emergency.
Bulk Handling Facilities: There is a very efficient coal berth in the South East part of the port. The berth is operated by Japanese interests and coal is brought from inland mines by train. The coal berth will accept 2 bulk carriers and is capable of loading 4,000 t.p.h.
Cargo Operations: If a vessel is to discharge oil, 10 officials representing the Port Public Health Board come on board to take tank samples and ullages and calculate cargo quantity. Analysis of samples takes about 2 hours, after which permission is given to pump cargo ashore.

The distance from the manifold to the shore line is about 20 m.
Hoses: Ship's hose is used as no shore hoses available. Reducers also supplied by the ship. 5 sections of ship's 6 in. hose used for connecting to the 6 in. shore line. The distance to the 2 shore tanks is approximately 1,000 m. The maximum pressure allowed on the line is 7 kg./sq.cm. – 8 kg./sq.m. There are no facilities for ship's slops.
Tank Dry Certificate: If a Tank Dry Certificate is required on completion of operations a formal written application must be made through the Agent for such inspection.
Cranes: There are 3 modern luffing cranes with limited travel along the quay.
Ballast: Discharge of any clean ballast is not permitted unless a written application has been made to the Harbour Master's office. This application should indicate the amount to be discharged and the time required. Officers from the Harbour Master's office make frequent visits to the ship to check that all port regulations are being complied with, especially anti-pollution regulations. If any scuppers are found unplugged or uncemented or if any discolouration of the water is found in the vicinity of the ship, an explanation is required.
Bridges: None.
Density: 1025.
Fresh Water: Available. Rate of delivery 15 t.p.h.
Fuel: Gas oil is available with notice from Qingdao.
Surveyors: No surveyors locally, nearest are at Qingdao which is approximately 140 km. to the North.
Customs Allowances: On arrival, Customs allow 15 cartons of cigarettes and 5 bottles of spirits to be kept out of the bond.
Airport: Qindao Airport is 140 km. by road. There are flights to Hong Kong, Osaka and Chinese cities.
Repairs: Minor repairs can be undertaken.
Shore Leave: An Immigration guard is on duty at the foot of the gangway at all times while the ship is in port. All crew members must produce a pass and identity card when going ashore.
General:
Stores: Fresh stores can be obtained from the State Shipchandler.
Chart: BA. Chart No. 1253.
Developments: Extensive expansion of the port is currently being undertaken. An area adjacent to the general cargo quay is being filled in to make a large container area.

SHIPMASTER'S REPORT: April 1995.

On arrival, the visiblity was poor, maximum 2 miles.

There are many fishing vessels in the area.

The approach was undertaken carefully.

Due to the non-existance of a detailed chart/map, we more or less navigated on the sketch as received by Fax.

Details of the shore on the radar showed that this map is quite accurate.

The coal wharf in the outer harbour was very conspicuous.

Communications were as expected and as experienced on earlier visits.

Approached Buoy No. 1 and No. 2 (start of the entrance of dredged channel, to the general cargo jetty in inner harbour), to board Pilot. Water depth well over 15.0 m.

When the Pilot did not show up at the time agreed, I made a round-turn. Watch out for numerous fishing boats.

Pilots communication via the VHF on the tug, which is always used as the pilot boat.

I had the impression that the Pilot(s) tried to get the vessel into the harbour as far as possible verbally, before they joined the vessel. But as the U.K.C. was still acceptable, I went close to the breakwater, passed Buoy No. 3, where they came on board. A sharp starboard turn and the vessel was in the inner harbour (We noticed a lot of drifting/floating fishing nets).

Pilotage was very good and cooperative. Pilot reacted immediately when I suggested slowing down.

We berthed at the general cargo jetty and received 2×8 in. rubber hoses, which came from a "built-in" manifold below the jetty surface.

At first sight, condition of the hoses appeared good, but on closer inspection, I am not sure if they could handle 10 bar.

We discharged with an (initial) pressure of 6.5 bar at the vessel's manifold and that went fine, until the shore changed tanks without warning the vessel. One of the hoses could not handle the sudden increased pressure of 10 bar. It was changed and from that time the discharge continued with max. 4 bar at the ship's manifold.

Formerly being a small fishing harbour, but with a big advantage, no need to dredge extensively to expand the jetties.

In the inner harbour over 10.0 m. water depth.

Large export coal wharf and outside harbour, with over 15.0 m. water depth.

Starboard side too and after leaving the berth turned in the basin with the aid of 2 powerful tugs (in the inner harbour).

Normally only daylight berthing and sailing, but we sailed at 2200 hrs.

Penavico (local Agent) was there when we needed him and gave good service.

Local Chinese chart available.

SANYA: 18.14 N. 109.30 E. (See Plan)

PILOTAGE: Compulsory. Pilot boards in Quarantine/Pilot anchorage.
ANCHORAGE: *Quarantine/Pilot Anchorage:* Depth 20 m. – 28 m. Bottom: Mud. Max. Size: 50,000 d.w.t.
Sheltered Anchorage: Depth: 5.0 m. –16.0 m. Bottom: Mud and sand. Max. size: 50,000 d.w.t.
Loading/Discharging Anchorage: Depth 8.0 m. – 16.0 m. Bottom: Mud. Max. size: 50,000 d.w.t.
RESTRICTIONS: Entry and departure possible day and night. Depth in channel 7.0 m.

Tidal Range: 0.06 m. – 2.26 m.

VHF: Sanya Radio on Channel 16 (24 hours).
TUGS: 2×248 h.p., 1×400 h.p. and 1×300 h.p.
GENERAL: *Floating Cranes:* Available if notified in advance.
Supply Services: Arranged by Hainan Autonomous Prefective Sanya Ocean Shipping Supply Corporation.
Stevedores Working Hours: As per advanced arrangement with Haikou.
Warehouse and Open Store Space:

Warehouse:	9,034 sq.m.
Store Space:	51,000 sq.m.

Main Imports and Exports:

Imports: Grain, cement, chemical, fertilisers, coal and steel.

Exports: Salt, sugar, rubber and local products.

SHANGHAI, including Luhuashan Anchorage: 31.14 N. 121.28 E. (See Plan)

Also see "General" before first port.

DOCUMENTS: China Ocean Shipping, Shanghai Branch, as ship's Agent, must submit to Shanghai Customs one complete set of the cargo manifests covering all the cargoes to be discharged at Shanghai (including the transit cargoes via Shanghai) for the declaration and the clearance within 24 hours after the completion of the joint inspection. If there is any shortage of the cargo manifests such as the incomplete cargo manifest or the missing/omitting of some bills of lading, the Agent is forced to bear the penalty (maximum RMB 30,000.00), in accordance with the Customs Law in order to improve the quality of the cargo manifest and other relevant documents from abroad.

In consideration of the above, principals are kindly requested to pay special attention to this matter and ensure that all the documents, especially the cargo manifest, made and sent by principals should be perfectly correct. Otherwise, the Agent will transfer all the fines imposed upon them by Shanghai Customs to the ship owner or the agents at the loading ports.

Also see "General" before first port.

PILOTAGE: Compulsory. Pilot available 24 hours. Working VHF Channels 16 and 6.

Pilot boards in position Lat. 31° 03' 34" N., Long. 122° 08' 14" E.

Send ETA at the outer roundabout, when at least 4 nautical miles from it, on Channels 6 or 16. Vessels making for North Passage should make a safety broadcast 3 nautical miles before entering it and on entry, broadcast their name and the time. Vessels intending to navigate in Yawosha Channel should be equipped with VHF Channel 6.

RESTRICTIONS: Vessels may enter and sail day and night.
MAX. SIZE: Maximum fresh water draft in channel is 9.5 m.
Tidal Range: Maximum 3.45 m., minimum 2.60 m.
VHF:

Station	*Hours*	*Channels*
Penavico	24	11 or 27
Sinoagent	24	73 or 74

TUGS: 7 × 980 h.p., 5 × 1,670 h.p., 1 × 1,900 h.p., 1 × 2,200 h.p., 3 × 2,600 h.p., 5 × 3,200 h.p. and 1 × 3,500 h.p.
BERTHING:

Cargo Handling District	*Length* (m.)	*Total No. of Berths*	*No. of Deep Water Berths*	*Draft* (m.)	*Cargo Handled*	*No. of Shore Cranes*
Dongchang	813	7	4	8.0 – 10.0	General	2
Mingsheng	615	3	3	9.0 – 10.0	Bulk Grain	8
Huishan	1,121	8	—	8.0 – 8.5	General, Passengers	9
Timber Handling Co.	758	5	4	9.0 – 10.0	Timber, General	10
Gaoyang	1,114	7	5	8.5 – 10.0	General, Passengers	6
Kaiping	308	2	2	10.0	General	6
Coal Handling Co.	2,199	15	8	9.5 – 10.0	Coal	35
Xinhua	1,584	9	9	10.0	Iron Ores, Fertiliser	19
Zhanghuaban	1,324	7	7	10.0	Containers, General	14
Jungonglu	1,600	9	6	8.0 – 10.0	Containers, Hazard cargoes	9
Gongqing	993	10	—	3.0 – 5.0	Construction Materials	11
Fuxing	560	6	—	4.0 – 4.5	Coal, General	—
Baoshan	1,330	8	6	8.0	Containers, General	5
Wujing	2,422	28	8	8.5	General	3
Passenger Terminal	1,060	10	—	5.0	Passengers	—

Lightening is requested for the vessels over 9.5 m. draft by floating platform of Shuangfenghai at Luhuashan before entering the port.

CRANES: *Floating Cranes:* 1 × 32 tons, 1 × 63 tons, 1 × 200 tons, 1 × 500 tons, 1 × 2,500 tons.

Also see "Berthing".

SPECIALISED CARGO HANDLING FACILITIES:
Chemicals/Fertilisers: The special berths for handling bulk chemical fertiliser have a quay length of 149 m. able to accommodate one 20,000 d.w.t. vessel. The berth are equipped with screw-type continuous ship-unloaders, portal cranes and an enclosed horizontal conveyor system. Modern bagging facilities are available in the port.
Bulk Grain: With a quay length of 384 m., the mechanised bulk grain handling wharf can accommodate a 25,000 d.w.t. ocean-going vessel and a smaller coastal vessel simultaneously. 6 pneumatic ship-unloaders are available alongside with capacity of 150 – 250 tonnes per hour each. The bulk material discharged from ship is transported to the silo of 51,000 cu.m. via an enclosed horizontal conveyor.
Timber: Handling of timber takes place at 4 specialised berths with a total quay length of 689 m. for 10,000 d.w.t. ocean-going vessels as well as at mooring buoys. The terminal has a stacking yard of 40,000 sq.m. and a river basin of over 10,000 cu.m. for timber storage. Timber is handled with 6 portal gantry cranes of 10 tonnes capacity and other specialised equipment.
Containers: 7 container berths capable of accommodating Second Generation container vessels are equipped with container cranes alongside. A 380,000 sq.m. container yard is served by 20 transtainers for box stacking operations and 264 electrical plugs for reefer box storage. The 2 container handling districts are served by railway for easy access to trunk railway system across the country.
MEDICAL: Hospitalisation possible at the Seaman's Hospital, 505 Dongchan Zilu, Shanghai. Tel: (86-21) 5414600.
TANKERS: See "Shipmaster's Reports".
FRESH WATER: Available by barge and alongside.
FUEL: Available
REPAIRS: Facilities available. Contact Shanghai Foreign Vessel Repairs, 6 Pudong Xiao Nanmatou, Shanghai. Tel: (86-21) 8849912.
AIRPORT: Shanghai International Airport is 30 km. from the port. Duty free shops and hotels available.
GARBAGE DISPOSAL: Available by contacting Shanghai Ocean Shipping Agency (Penavico), 13 Zhongshan Road (E.1). Tel: 3290088. Plastic bags are provided on board by Fuxing Shipping Service Co., at 60 Yuan (RMB) per time. Collection time between 0800 hrs. and 1600 hrs. every Monday, Wednesday and Friday.
WASTE OIL DISPOSAL: Available by contacting Penavico. The service is undertaken by a designated environmental team using tankers. Charges are imposed according to amount of waste oil.
SEAMAN'S CLUBS: Shanghai International Seaman's Club, 60 Huangpu Road, Shanghai. Tel: 3251500, 3245265. Shanghai Seaman's Club is an entertainment company for international and domestic seamen. There is an area of 12,000 sq.m. in the new building containing 105 suites with modern facilities; all kinds of souvenirs, wines, arts, ceramics, antiques, wares, precious drugs, food, embroiders, seal engravings are available in the shopping centre. In addition, a billiard

room, table tennis, video, chess, mah-jong and reading room, electric games, post office, barber, restaurant, bar and a multi-functional hall for 200 members will open to seamen.

CURRENCY: Renminbi (RMB), Foreign Exchange Certificate (FEC). Currency exchange is available through Bank of China and other designated agencies.

DEVELOPMENTS: The 1990's have witnessed a rapid progress in port development. Anticipated cargo traffic through the port will be up to 200 million tonnes by the end of the century, embracing 1.20 million TEU of international containerised cargoes. Both rehabilitation and new marine facilities build-up (Waigaoqiao, Luojing and Jingshanzui) are under upmost prior consideration. 4 marginal berths of Waigaoqiao Marine Facility (Phase I) will be on stream by year 1994, followed by inland basin facilities of Phase II.

Located at South bank of Changjiang River, 17 km. West to Wusong Kou, is Luojing Marine Facility, specialised for coal and iron ore handling. First phase comprising 2 coal-offloading berths is to commence construction in 8th 5 Year Plan period (1991 – 1995) and more facilities to be constructed in the following 5 years, this will result in eventual removal of bulk handling facilities out of densely residential areas.

Jingshanzui Marine Facility has a geographically advantageous position on the North bank in Hangzhou Bay with deep water alongside for accommodation of third generation container vessels (two berths) before the end of the century.

Two deep water berths and an 80,000 ton silo system are under construction in Minshen District. The facilities for coastal passenger traffic is to be constructed while some container handling gear is being delivered to the port which will eventually bring about improved performance.

SHIPMASTER'S REPORT: October 1980.

Shanghai pilot vessel will now give orders about proceeding inwards to pilot vessel or remaining outside at designated anchorage. Pilot checked to make sure we had anchored in the correct anchorage. Channel buoys as per "Guide to Port Entry". See "Circulars – Guide to foreign vessels calling at Shanghai – Para 3(c)". These buoy positions and descriptions were transmitted to vessel but only 4 hours before arrival at channel entrance. Pilot vessel tends to be between Buoy Nos. 14 and 18. All other information in the Shipmaster's reports appears to be still valid.

Since about July 1980 foreigners changing money ashore are issued with Bank of China foreign exchange certificates, likewise if drawing cash from Agent. Denominations of 50, 10, 5, 1, 0.50, 0.10 yuans. The certificates (like banknotes) are printed with the following:

"The yaun expressed in this certificate is equivalent in value to the Renminbi yuan. This certificate can only be used within China at designated places. No request to register its loss will be accepted by the Bank".

The Renminbi Yuan is the official currency unit. Designated places are Seaman's Club, Seaman's Store and Friendship Store. The two former have cheaper prices for seamen. Other designated places are the tourist hotels.

For tankers, authorities require a Cargo Manifest of nil cargo, no special form required.

For entry papers the official Chinese forms must now be used for 'Report of Entry for Foreign-Going Ship, Crew List and List of Specified Articles, Foreign Currencies, Gold, Silver belonging to Ship and/or Members of Crew'. If not available on board before arrival then vessel must now transfer the information to the Chinese forms.

If vessel coming from what they describe as a cholera infected port then the following are required. A statement of ballast quantities and disposition (required from clean port also) and where the ballast came from, i.e. open sea or which river. They are most concerned that no ballast is imported from a cholera infected port. Ballast is inspected by quarantine officials and the slightest "rainbow" on top means the top one third of that tank will have to be pumped into a barge. They will not give statement to say they consider any tank is not suitable to pump overboard into river. A statement of where you last took fresh water, amounts taken and amounts remaining on board. They analysed our water from Bangkok and declared it was not very good and chlorinated the drinking water tank and also the wash water tanks but again they would not give a statement to say what was wrong with it, although they do not give a certificate to say the tanks have been chlorinated. A list of stores taken at any 'cholera infected port'. If any fresh stores were taken then samples are taken ashore for analysis. Obviously, it is best to endeavour to ascertain beforehand whether they consider your last port cholera infected.

Other papers required are crew declaration (to include makers names for items like watches, radios, etc.). Ten copies of Notice of Readiness. They do not consider a vessel ready until all ballast has been discharged. They did not require lists of bridge navigational equipment or lists of pyrotechnics or lists of radio equipment.

Light dues are payable for 3 months or 30 days. For 30 days, dues are calculated at Yuan 0.90 per nett registered ton. For 3 months it is more expensive.

At Quarantine Anchorage, accommodation required for 2 guards. At berth same required plus accommodation for 2 Customs Officials, 1 Agent and possibly 1 cargo surveyor.

Inspection is carried out on arrival at the Quarantine Anchorage and prior to departure berth. This was just the entry and departure formalities. No search was made and there was no crew assembly. Passes issued to everyone and collected prior to sailing.

Apparently fresh water and bunkers are available. There appeared to be no restrictions on use of radar, echo sounder, binoculars, etc.

Gasoline cargo loaded was about average S.G. with a loading temperature of 23.5°C. Cargo papers on sailing are manifests and Bills of Lading only.

SHIPMASTER'S REPORT: July, 1984.

Shanghai Entrance. Buoys as follows:

AAA Changkiangkou Lightvessel Lat. 31° 03' 30" N., Long. 122° 23' 1" E.

BBB Changkiangkou Lightbuoys M1 H11-H20 replaced by Buoys 44 – 49.

Buoy 44	Lat. 31° 03' 22" N.,	Long. 122° 19' 52" E.	Fl. 3/10 secs.
Buoy 45	Lat. 31° 03' 14" N.,	Long. 122° 16' 58" E.	Fl. 3/6 secs.
Buoy 46	Lat. 31° 03' 06" N.,	Long. 122° 14' 02" E.	Fl. 3/10 secs.
Buoy 47	Lat. 31° 03' 00" N.,	Long. 122° 11' 06" E.	Fl. 3/6 secs.
Buoy 48	Lat. 31° 03' 34" N.,	Long. 122° 08' 14" E.	Fl. 3/10 secs.
Buoy 49	Lat. 31° 04' 11" N.,	Long. 122° 05' 26" E.	Fl. 3/6 secs.

Pilot vessel moving in/area Buoys 47 – 49 serving/as Pilot Station.

SHIPMASTER'S REPORT: January 1986

Documents: The following papers are required by the Port Authorities:

1 copy Maritime Declaration of Health.
2 copies Report of Entry for Foreign Going Vessels.
4 copies Crew List.
1 copy List of Specified Articles, Foreign Currency, Gold, Silver belonging to the ship or crew members.
1 Import Manifest.

The following certificates and papers are to be submitted for examination by the Port Authorities:

Registry Certificate.
Tonnage Certificate.
International Load Line Certificate.
Derat Certificate.
Deck and Engine Log Books.
Tonnage Dues Certificate.
Manifest of Cargo for Discharging and Transit Cargo.
Oil Record Books.

Clearance: Clearance of the vessel usually takes place at the Shanghai Quarantine Anchorage located in the following position between the buoys:

Buoy No. 25	Lat. 31° 20.8' N.,	Long. 121° 39.7' E.
Buoy No. Q1	Lat. 31° 21.9' N.,	Long. 121° 37.8' E.
Buoy No. 29	Lat. 31° 23.0' N.,	Long. 121° 35.9' E.
Buoy No. Q4	Lat. 31° 23.5' N.,	Long. 121° 36.3' E.
Buoy No. Q3	Lat. 31° 22.6' N.,	Long. 121° 38.4' E.
Buoy No. Q2	Lat. 31° 21.8' N.,	Long. 121° 40.4' E.

After clearance vessel proceeds for berthing/mooring. Occasionally Port Authorities instruct Pilots to proceed direct for berthing/mooring and Entry Clearance of the vessel carried out after berthing or mooring.

Navigation: B.A. Charts No. 1601 and No. 1602 proved most useful when entering the South Channel in order to receive Pilots.

The positions and new numbers of the buoys are indicated below:

Changjiang Kou Lightvessel	Lat. 31° 03.4' N.,	Long. 122° 23.2' E.
Buoy No. 1 (ex-Buoy No. 44)	Lat. 31° 03.4' N.,	Long. 122° 19.8' E.
Buoy No. 2 (ex-Buoy No. 45)	Lat. 31° 03.2' N.,	Long. 122° 17.0' E.
Buoy No. 3 (ex-Buoy No. 46)	Lat. 31° 03.1' N.,	Long. 122° 14.0' E.
Buoy No. 4 (ex-Buoy No. 47)	Lat. 31° 03.0' N.,	Long. 122° 11.1' E.
Buoy No. 5 (ex-Buoy No. 48)	Lat. 31° 03.6' N.,	Long. 122° 08.2' E.
Buoy No. 6 (ex-Buoy No. 49)	Lat. 31° 04.2' N.,	Long. 122° 05.4' E.
Buoy No. 7 (ex-Buoy No. 50)	Lat. 31° 05.4' N.,	Long. 122° 02.8' E.
Buoy No. 8 (ex-Buoy No. 51)	Lat. 31° 06.6' N.,	Long. 122° 00.2' E.
Buoy No. 9 (ex-Buoy No. 52)	Lat. 31° 07.6' N.,	Long. 121° 57.7' E.

The characteristics of all the above buoys of the South Channel are Red/White with radar reflector on top.

The South Channel is used for vessels in light condition or vessels with a draft up to 7.5 m. (FW).

The North Channel is used for large vessels or vessels with a draft over 7.5 m.

The numbering of the buoys of the North Channel is still the same as indicated on B.A. Chart No. 1602 but in the near future this channel will also be re-numbered.

Pilotage: During good weather the pilot vessel is anchored in position Lat. 31° 03.8' N., Long. 122° 07.2' E. and Pilots board vessels between Buoys Nos. 5 and 6 in the South Channel.

For vessels using the North Channel, boarding area is between Changjiang Kou Lightvessel and Buoy No. 1 of South Channel.

During bad weather or strong winds Pilots board between Buoys No. 6 and No. 7 of South Channel and occasionally near Buoy No. 8.

For entry or departure through the South Channel all ships navigate anti-clockwise within a radius of 1.3 miles of the Changjiang Kou Lightvessel but clear of an inner radius of 0.3 miles centred on Changjiang Kou Lightvessel and then entering South Channel within 500 m. North of the line joining mid-channel Buoys No. 1 – 9 or 500 m. South of the line joining mid-channel Buoys No. 1 – 9 on leaving.

Pilots listen on VHF Channel 16, and give instructions to vessels entering or berthing at Shanghai. They also give instructions as to the Pilots' boarding position. Foreign vessels contact the Pilot Station at 0845 hrs., 1115 hrs., 1515 hrs. and 1915 hrs. to enquire if they are on the daily list for entering.

Local Agents "Penavico Shanghai" also inform vessels by cable via Shanghai Radio of berthing prospects and Pilots' boarding time. Two Pilots board vessel and they stay on board until vessel is berthed or moored.

Anchorage: Vessels anchor in the area indicated to the S.E. of Changjiang Kou Lightvessel (between 30° 35' N. and 31° 00' N. and between 122° 25' E. and 122° 32' E.).

Due to strong current and tide at least 6 – 7 shackles are recommended when anchoring in the above anchorage.

Radio: All telexes transmitted to Agents via Singapore Radio and Shanghai. Agents "Penavico" relay cables via Shanghai Radio only.

The following information is required by the Agents:

Forward and aft arrival draft (Salt Water).
Crew/Passengers on board and if all healthy.
Ports of call from Loading Port with dates of arrival/departure each port.

Quantity of main provisions, drinking water, ballast water on board and when and where taken.

Derat or Derat Exemption Certificate, port and date of issue.

"Penavico" use VHF Channel 11 for all ships when giving any information required by the vessels.

Berthing: All berthing information received from the Agent via VHF. Berthing or shifting carried out day and night.

For discharging of soyabean oil, vessel moored to Buoys No. 81 – 82 located on the ninth section of the river. The actual berth for soyabean oil is a small wooden pier used only by small coasters and barges. During mooring 1 tug used only for pushing. 4 headlines and 1 slip wire used forward and only 4 stern lines used aft.

No ballast water can be discharged into the river without the permission of the Harbour Master.

For a short period (6 – 8 hours) the Port Authorities (through the Agent) give permission for engine inspection and overhauling of pistons.

Discharging: Notice of Readiness tendered on vessel's arrival at the Outer Anchorage but accepted by "Penavico" after berthing and only during office hours.

Cargo Surveyors (3 persons), board vessel and check the quality of the cargo, taking ullages and samples. The Surveyors company is the national firm China Commodity Inspection Bureau.

After cargo inspection and test, and if they find cargo in good order, they give permission for discharge to commence. No ship's papers or cargo calculations signed by them.

Cargo discharged into barges at a maximum rate of 350 tonnes/p.h. through a flexible 6 in. hose. Each barge has a capacity of about 350 – 500 tonnes. There is always a shortage of barges. For a quantity of 10,000 tonnes the discharging time is usually 4 – 7 days.

The daily quantity discharged was:

Day 1 – 350 tonnes (1 barge).
Day 2 – 685 tonnes (2 barges).
Day 3 – No discharging. No barges available.
Day 4 – 1,250 tonnes (3 barges).
Day 5 – 1,745 tonnes (4 barges).
Day 6 – 2,200 tonnes (5 barges).
Day 7 – 3,515 tonnes (9 barges) maximum.
Day 8 – 485 tonnes (1 barge).

The daily maximum quantity which they can receive is approximately 3,500 tonnes.

After discharging and squeezing of the cargo the Surveyors inspected all the tanks carefully and gave their own Dry Certificate. If there is a difference between the ship's figures and shore figures, vessel's departure is postponed until a final settlement is reached.

Unberthing: 2 tugs are used for unmooring, one each end, using tugs' lines.

Large vessels always use 2 Pilots and they speak good English. The Pilots use the ship's whistle a lot in order to keep the main channel clear as no safety regulations followed by small craft, barges, ferries, etc.

Both anchors to be ready for use at all times when berthing/unberthing.

Facilities: Free transportation by a small ferry is available from the ship to the ferry station.

Two guards and 1 Customs Officer stay on board from arrival until sailing.

Provisions, stores, bunkers and water are available with 2 – 3 days' notice. The water is not very good quality so should be avoided if possible. Bonded stores are not sealed. Port Authorities and Agents are very pleasant and polite. The vessel did not face any problems during entering, stay alongside or when leaving Shanghai.

SHIPMASTER'S REPORT: March 1986.

Vessel anchored with 6 shackles in the water; Changjiang Kou Lightvessel bearing 277°×9.5 miles. Strong winds (Force 6) were experienced and vessel rolled 20°. Ebb tide is stronger than the flood. All messages were passed on to the Agents via W/T, who keep watch 24 hours on VHF Channel 11, but there was no answer. Entry and departure is through the South Channel (Nancao Hangdoa). Changjiang Kou Lightvessel and the buoys are in position as marked on Chart No. 1602; but no racon was observed on any of the lightvessels. Light Buoy Nos. 44 onwards are re-numbered as Nos. 1 onwards; and are red and white can buoys with spherical topmarks. The lightvessel and all the buoys are to be passed on the port side. 2 pilot vessels were cruising between Buoys No. 5 and 6 and Pilot boards from a small boat coming alongside.

Vessel had to anchor for Free Pratique at Woosung Quarantine Anchorage, which was granted in 30 minutes. After the vessel was tied up at berth between Buoys No. 44 and 45, Customs and Immigration boarded the vessel (4 people). The following documents were required: 6 Crew Lists; 1 Private Property List including currency; List of Provisions and where purchased; quantity of fresh water, ballast and where and when taken; List of Ports of Call during last 30 days.

All passports and health books to be collected. Bonded Stores not sealed. No separate List of Foreign Currency on Board required. Foreign currency can only be changed at "Friendship Stores", Seamen's Club or big hotels in exchange for specially made notes for use of foreigners – but can also be used in any other stores or hotels. No restrictions on the use of VHF, radar, echo sounder or any other navigational equipment. Cargo Manifest was sighted.

Two officials from Customs and Immigration stay on board and a cabin has to be made available. Everyone has to show shore passes before going ashore. There is a launch every hour – last one at 2330 hrs. Charges U.S.$10.0 per day for every ship on the buoys.

SHIPMASTER'S REPORT: July 1993.

Chimbusco Terminal:

1. On route to Changjiang Kou Anchorage numerous fishing nets are encountered.
   At anchorage, contact Shanghai Pilots on VHF Channel 16.
2. Depending on draft, vessel enters/leaves via North or South Channel.
3. Essential to calculate tidal predictions. – Beware of squat.
4. Ordered and received new B.A.Chart No. 1603. B.A.Charts No. 1601 and 1602 were updated to latest Notice to Mariners received.
   In spite of this, it is necessary to obtain updated Chinese charts regarding Shanghai area, because when comparing B.A. No. 1603 and the local chart, some differences regarding the channel were noticed.
   Several changing depths "Notes" regarding channel on B.A.Charts as well as on the local charts.
5. Although visibility between 150 m. and 3 miles on route to Pilot Station (and during transit), South Channel pilot services were not suspended.
6. Pilot boarded between Buoy No. 4 and No. 5 South Channel.
   Pilot not in possession of charts.
   Outward bound pilot disembarks between Buoy No. 3 and No. 4 in the South Channel.
7. Vessel proceeds to Anchorage No. 1 and anchored 1 mile E.N.E. off Chimbusco Terminal.
8. At this anchorage, Immigration authorities board vessel.
   Documentations required:
   All Certificates.
   4 copies Crew List.
   Personal Effect List.
   Firearms "Nil" Declaration.
   Passengers "Nil" Declaration.
   Chinese Customs forms to be completed by Master, including Chinese forms Maritime Declaration of Health and Animal/Plant Declaration form.
9. When documentation completed, vessel proceeded to jetty where berthing was carried out by same pilot who boarded at South Channel.
10. Vessel moored 4 hours before low water.
    Due to many ship movements at that time, only 1 tug (estimated 1,400/1,500 h.p.) available.
    Although wind Force 1 – 2 (BF) during mooring, pilot showed concern.
    According to pilot, current is 2 – 4 knots.
    No mooring launches and mooring winches available.
    Moorings:

Forward:	First:	Starboard anchor (1 shackle).
	Secondly:	5 head lines.
	Thirdly:	Breast rope.
	Last:	Spring.
Aft:	First:	Spring (leading forward).
	Secondly:	Spring (leading aft).
	Last:	5 stern lines.

    Note: Only one bollard available for 5 head lines forward, and one bollard for 5 stern lines aft (See "Plan").
11. When alongside plotted GPS position on Chinese Chart No. 9504.
    As can be seen on chart (See "Plan"), there is a deviation in position.
    (1) As GPS position obtained from satellite, navigation systems are normally referred to the World Geodetic System (WGS), adjustments for plotting such positions are not known, but it should not be assumed that they are negligible.
    (2) Due to the fact that GPS type on board is a 2 D fix type, accuracy (95%) approximately 100 m.
12. Ship's draft 7.20 m. even keel (fresh water).
    Low water 07/07/93: 2200 hrs. LT.
    Transducer of echo sounder situated in fore peak tank.
    At low water calculated depth forward 11.00 m.
    Remarks:
    See Note 11: Looking at Chart No. 9504, where ship's position is plotted, you may expect the vessel on the port and aft side to be within the 10 m. sounding line.
    According to information given by Penavico Shanghai Agency, Terminal restrictions are LOA 180 m. draft in F.W. 9.5 m.
    On July 9th at 0830 hrs. (LT), soundings on the port side of the vessel were taken.
    See tidal predictions (See "Plan").
    Draft of vessel at 0830 hrs.: Forward 1.00 m., aft 7.15 m.
    Density: 1005.

Results:	Calculated Depth
In way of No. 1 Port C.O.T.	11.10 m.
In way of No. 3 Port C.O.T.	10.95 m.
In way of Manifold Port	10.50 m.
In way of No. 6 Port C.O.T.	10.30 m.
In way of Pump Room	10.40 m.
In way of Aftship Port	10.25 m.

13. Vessel discharged light diesel. Average rate 600 cu.m./hr. with 1×6 in. discharge hose. Maximum back pressure 5 Bar.
14. According to Loading Master, this berth is normally used by bunker barges.

Safety:

1. No Safety Check List by shore – supplied by ship.
2. On all manifolds (shown on sketch), hoses are connected, none of them are blanked.
3. No fixed fire or foam installation on jetty.
4. No international ship/shore connection on jetty.
5. Portable fire extinguishers on jetty: Three (1× P50 and 2× P9).
6. Only one bollard available forward for 5 head lines, and one bollard aft for 5 stern lines.
7. Jetty illumination is poor.
8. Small electric hose crane on jetty in way of middle manifold. Intrinsically safe: Unknown.
9. On all hoses on jetty is mentioned (with paint) 91/09/07. Probably test date (test pressure not found). External damage to discharge hose.
10. Telephone No./VHF channel in case of emergency not supplied.
11. Non-smoking area indication limited and almost unreadable.

12. Some fenders missing/damaged. Concrete edges of jetty badly damaged in a few places.

SHIPMASTER'S REPORT: November 1993.

1. Approach to Changjiang Anchorage: Good radar targets are the islands of Maan Liedao. Anchorage heavily crowded. Vessels are anchoring anywhere. A lot of small craft and fishing vessels passing. On arrival anchorage, we had strong Westerly winds and a good Easterly current running. We anchored with 7 shackles in water. Arrival draft at anchorage 7.50 m. (even-keel) = 7.75 m. (FW). Vessels have to anchor on arrival awaiting entry arrangements for Shanghai.

2. Pilot Information: VHF contact with "Shanghai Pilot" on Channel 16. Pilots will pass boarding time and position. Same information also passed by "Penavico Agency" via telex.

Care has to be taken with the Pilot boarding position. We were ordered to pick-up Pilot at Buoy No. 5 at South Channel. This information was wrong, vessel would have been aground in this position.

3. Approach to Pilot Boarding Position: We approached from Changjiang Kou Anchorage to Changjiang Kou Light Buoy, turning into the "roundabout" heading for Buoy No. 1 of South Channel. The light buoy was a replacement buoy (no Racon) and a very poor target, and was difficult to locate between all the small craft. Visibility at that time was about 3 miles. A strong Easterly current was running and we stopped between Buoys No. 1 and No. 2, with an under-keel clearance of 1.0 m.

The pilot vessel was heading towards Changjiang Kou Light Buoy as about 6 vessels were queueing up at the "roundabout" for the passage via South Channel.

The Pilot boarded at 0730 hrs. from a small pilot cutter (speed 3-4 knots) and we turned to starboard heading for the North Channel.

4. Approach North Channel: All other vessels were redirected to the North Channel. Due to Pilot information, the water depth in the South Channel was only 5.0 m. Depth shown in B.A. Charts No. 1602 and 1603 are not reliable and are changing. We picked up speed and were the only vessel in the "convoy" turning into the North Channel. The passage was done with "Pitch 7" and rising tide.

The pilot boarding area at "Beicao Hangdao" is cancelled due to strong tidal streams. Care has to be taken when entering the Beicao Channel (dredged to 7.0 m.), and a good helmsman is required as the bottom width of the channel is only 250 m. – 300 m. and a strong current was setting to the Northwest.

The bar at Yuanyuasha Hangcao is dredged to 9.0 m.

Three hours after Pilot boarded, we anchored at the "Large Vessel Anchorage No. 2". Care to be taken for slowing down ship's speed in time, as the current was setting from the stern and with rudder hard-to-starboard, vessel was swinging into the crowded anchorage with starboard anchor 1 shackle in water and engine astern dragging into a suitable position.

5. Approach to the Huangpu Jiang: Vessel had to anchor for about 2 hours, until the ebb tide starts running, before the approach is done to Wusong Kou.

When entering the Huangpu Jiang, the call sign and berth number (advised by Pilot) have to be hoisted. Two crew (officer and bosun) required on fo'csle to stand-by both anchors until moored. The Huangpu Jiang is heavily crowded with all kinds of craft and vessels. Pilot uses the whistle continuously to make his way through the traffic. There is no discipline on this waterway. There were 10 "near misses" before reaching the berth. Another dangerous situation occurred when vessels ahead stop in the river. With the help of 2 tugs, we were kept in position until the transit commenced. Both tugs (new) of 3,200 h.p. each, well equipped, also used for mooring alongside Quing Ning Shi Wharf. It was difficult to come alongside as small craft always passed between ship and berth.

6. Quing Ning Shi Wharf: Once in position, the mooring operation was quite smooth. Sufficient line handlers and 1 mooring boat available. Mooring with "Atlas ropes" is a great advantage. Both tugs stayed alongside for pushing until vessel moored. For moorings see "Plan Section".

The tank inspection and the discharge can be called a normal and smooth operation. Discharge with 2 pumps into 2×6 in. flexible hoses, connected to an 8 in. shore line. There was no interruption during discharge. Signals to be hoisted advised by Harbour Master. To shore side flag "B" or 1 red light, to riverside flags "R" above "Y" or green above red light (pass tanker slowly).

Discharge rate 1,000 cu.m./hr.

7. Departure Shanghai: Departure condition – Total ballast onboard 8,300 tonnes. Draft forward 4.20 m., aft 6.80 m. (fresh water).

On departure, Pilot requested vessel to minimise the draft aft to maximum 6.40 m., due to transit via South Channel. Ballast was run internally to reach the required draft (F: 4.6 m. A: 6.4 m. (F.W.)). Unmooring during slack water (low water) at 1020 hrs. with 2 tugs. Forward tug required ship's rope.

Vessel proceeded to turning position upstream between mooring Buoys No. 38 and 40, passing newly built bridge which said to have 50 m. clearance. Vessel's air draft was 42 m. Vessel was turned by 2 tugs without any tug lines. The passage downstream the Huangpu Jiang was similar to arrival. Once Wusong Kou passed, the passage via the South Channel can be called a normal transit. Passing South Channel from Buoy No. 77-1 – Juidan Light Vessel to Buoy No. 2, the under-keel clearance was not more than 1.0 m. Pilot disembarked between Buoy No. 7 and No. 8 at 1610 hrs. Changjiang Kou Light Buoy was unlit, water depth slowly increasing. A strong S.E.'ly current was observed while passing the South Channel.

At 1730 hrs., Changjiang Kou Light Buoy was passed and vessel proceeded on voyage.

Documents: The following documents required by Customs and Immigration in order to complete the necessary port formalities:

1. Port Clearance from Last Port.
2. Load Line Certificate.
3. Safety Radio Certificate.
4. Safety Equipment Certificate.
5. Safety Construction Certificate.
6. Certificate of Registry.
7. Civil Liability Certificate.
8. I.O.P.P. Certificate.
9. International Tonnage Certificate.
10. Derat Exemption Certificate.
11. Tonnage Dues Certificate of China (Valid for 1 month).
12. Certificates of Competancy.

Documents to be prepared before arrival Shanghai:

7 copies Crew List (Ship's Form).
1 copy Crew Personal Effects List (Ship's Form).
1 copy Foreign Currency List (Ship's Form), not required this voyage.
1 copy Maritime Health Declaration (Chinese Form).
1 copy Ship's Stores List (Ship's Form).
2 copies Reports of Entry for Foreign-Going Ships (Chinese Form).
1 copy Passenger List (Plain Form).
1 copy Arms List (Plain Form).
2 copies Report of Clearance (Chinese Form).
1 copy Vaccination List (Ship's Form).
1 copy Port of Call List (Ship's Form).
4 copies Cargo Manifest – Copies from Cargo Documents.

Chinese Forms will be received on arrival if no spare forms on board.

Customs and Immigration on arrival: Ship's documents and forms as per above list.

Harbour Master:

Ship's Documents.
Liferaft Certificates.
CO-2 Certificate.
Oil Record Books (Deck and Engine).

Quarantine for animals and plants: Checking provision rooms and issue certificate.

Bonded Stores are not sealed by Customs (should not be opened during stay in Shanghai).

No documents taken ashore.

Customs check bonded stores before sailing.

Immigration collect shore passes before sailing.

Port Clearance and Quarantine Certificate delivered on board by Port Authorities.

Passports and shore passes required for shore leave.

Agent: Penavico Shanghai. Telex: 33052 Penav Cn. VHF Channel 11 (Call for information: 1115 hrs. – 1130 hrs. and 1515 hrs. – 1530 hrs.). Tel: 3234603, 3231352.

Agent prepares a Notice of Readiness on arrival. Timesheet is also prepared by Agent. He will sign Ship's Notice of Readiness, Port Activity Report and Cargo Report Handling Log. Cargo documents (copies only) handed to Agent.

Any crew members for doctor (not on short notice), only emergency cases.

Care has to be taken for arranging tank inspectors for tank inspection after discharging. It was not quite clear who will do the arrangements, Agent or Cargo Receiver, as they arrived 6 hours after completion of discharging, and vessel had to wait for ballasting cargo tanks.

The sailing time was arranged by the Agency via VHF Channel 11 on the previous day. The Agency is open 24 hours, but after office hours it is not possible to make any arrangements.

One Immigration officer will stay on board during port call. One cabin is required.

SHIPMASTER'S REPORT: November 1994.

Location: Luhuashan Anchorage.

Chart: B.A. Chart No. 1199.

Approach: Open, apart from fishing fleets. From the South, there are shoals Wai Baimtian Jiao giving 3.5 miles passage – 3 miles South of Luhuashan.

Lookout tower (Lat. 30° 49.5' N., Long. 122° 37.2' E.) on Luhuashan Island at the rear of Fangang village is conspicuous.

Anchorage: See plan inset on B.A. Chart No. 1199, situated South of Luhuashan Island. It is sheltered from all winds, except Southerlies.

Depth around 30 m., except North end where depth is 12.0 m. – 16.0 m. in lee of islands.

Parts of the anchorage, particularly the centre section, are subject to strong tidal currents. The strongest tide was found to be on the ebb.

Anchorage is under the jurisdiction of Fangang Harbour Master. We firstly anchored in position Lat. 30° 47.4' N., Long. 122° 37.5' E., which was found to be very susceptible to strong currents, vessel swinging/shearing strongly around 25°, 2 hours before and until LW.

Our second anchorage position was Lat. 30° 46.6' N., Long. 122° 37.0' E., and was somewhat calmer.

On ebb, tidal current runs for about 2 hours after LW.

The flood tide is not as strong, possibly because it is broken up by islands.

Sometimes the Northerly wind overcame the flood tide with the vessel not completely swinging. Vessel always swung through North.

The Northern end of the anchorage, about 0.8 miles South of the Luhuashan Islands, is occupied by 2 anchored transhipment vessels, a bulk carrier to the West and a crude carrier to the East. Positions are Lat. 30° 48.05' N., Long. 122° 37.3' E., and Lat. 30° 48.00' N., Long. 122° 37.7' E. respectively.

Anchorage is mainly used for bulk, crude and LPG transhipments and as shelter for small vessels under the lee of Luhuashan.

LPG vessels are not allowed to anchor within 1.1 miles from the transhipment bulk carrier which has continuous operations.

Holding ground was found to be good, bottom mud/sand.

In strong Southerly winds, local information advises to anchor to North of Luhuashan Islands.

VHF: Channel 9 for tugs and Pilot call "Shauangfenghai CPT Tong".

Channel 14 for fresh water and supplies, call "Luhua".

Weather Forecast: Shanghai on Navtex twice daily. Good synopsis. Tokyo Fax charts as per ALRS.

Services: Fresh water obtainable from 150 tonne capacity barge (an old inter-island coaster) from Fangang. Initially order through state Agent "Penavico". Cost U.S.$ 6.00 per tonne (Compares with Shanghai at U.S.$ 0.50 per tonne).

Provisions obtainable from water suppliers "Luhua". Standard list given. If vessel lightening, can obtain from Shanghai via "Shanghai Development Company" Chandlers (Fax: 86 21 3069614).

Communications: Communication with Shanghai is by means of coast guard tug at U.S.$1,500. Journey takes 6/7 hours, depending on tide/weather.

Medical: Difficult, via Shanghai by tug or lightening ship.

Formalities: Shore leave allowed. Landing cards given by Immigration. Shore leave only via Shanghai. Tug cost and night in hotel would probably make shore leave prohibitive.

If vessel working cargo, Authorities from Shanghai board vessel by coast guard tug.

Officials: About 10 persons (Customs, Immigration, Harbour Master, Agent) board and require meals. Bond not sealed.

Documents:
8 copies Crew List.
3 copies Crew Manifest.
3 copies Stores List.
1 copy Health Declaration (Chinese Form).
1 copy Vaccination List.
2 copies Ports of Call List.
2 copies Arms/Ammunition List, or "Nil" Declaration.
2 copies Passenger Status.
6 copies Cargo Manifest (Chinese Form).

AUTHORITY: Port of Shanghai Authority, 5th Floor, Shanghai Customs House, 13 Zhongshan Road (E.1), Shanghai 200002, People's Republic of China. *Tel:* 3290660. *Telex:* 33023 Shaco Cn. *FAX:* 3290202. *Contact:* Mr. Tu Deming, Port Director.

AGENT: Jardine Shipping Agencies, Shanghai Representative Office, Room 706, 864 Ren Min Road, Shanghai, People's Republic of China. Tel: 86-21-63747762, 63743288 (Ext. 84). Fax: 86-21-63747769.

Initial correspondence to be made through Jardine Shipping Agencies, Hong Kong.

SHANTOU: 23.21 N. 116.40 E. (See Plan)

PILOTAGE: Compulsory. The Pilot Station is located in position Lat. 23° 17' N., Long. 116° 48' E.

ANCHORAGES: There are 11 anchorages which are numbered 1, 2, 3, 4, 5, 6, 7, 11, 12, 13 and 14. The depths vary from 4.8 m. to 12.0 m. The nature of the bottom is mud and the holding ground is good. Vessels up to 40,000 d.w.t. may use the anchorages.

MAX. SIZE: The draft limitation in the channel is 6.0 m.

Tidal Range: Maximum 2.1 m., minimum 0.54 m.

VHF: The port radio station is on Channel 16 throughout 24 hours. Penavico are on Channel 11 from 0800 hrs. to 1800 hrs.

TUGS: 1 × 428 h.p. and 1 × 980 h.p.

BERTHING:

District	*Berth No.*	*Length (m.)*	*Max. Draft (m.)*	*Max. Size (d.w.t.)*	*Type of Cargo*	*Crane Capacity (tons)*
First	1	250	4.0	5,000	General	1 × 5
	2	250	4.0	5,000	General	1 × 5
	3 M	100	4.0	3,000	General	—
Second	Coal	130	7.5	16,000	Coal	1 × 100
Passenger	—	133	6.0	5,000	Passenger	—
Third	1	75	4.2	1,000	General	—

FRESH WATER: Contact Harbour Administration.

FUEL: Not available.

REPAIRS: Repair facilities available.

GENERAL:

Provisions: Contact China Ocean Shipping Agency, Shantou Branch or Shantou Ocean Shipping Supply Company.

Storage: Warehouse: 20,401 sq.m.
Open Storage: 17,189 sq.m.

Imports: Cement, chemical, fertiliser and steel.

Exports: General Cargo.

SHIDAO: 36.53 N. 122.25 E.

PILOTAGE: Compulsory. Pilot service available during 12 hours. Pilot boards vessel at the Pilot Anchorage.

ANCHORAGE:

Name	*Location*	*Depth (m.)*	*Max. Size (d.w.t.)*	*Use*
Quarantine Anchorage	Lat. 36° 52' 08" N. Long. 122° 27' 00" E. Lat. 36° 52' 08" N. Long. 122° 27' 48" E. Lat. 36° 51' 40" N. Long. 122° 27' 00" E. Lat. 36° 51' 40" N. Long. 122° 27' 48" E.	9.5-11.0	15,000	Quarantine, waiting.
Lightening Anchorage	Lat. 36° 52' 51" N. Long. 122° 27' 00" E. Lat. 36° 52' 51" N. Long. 122° 27' 48" E. Lat. 36° 52' 12" N. Long. 122° 27' 00" E. Lat. 36° 52' 12" N. Long. 122° 27' 48" E.	8.0-10.0	10,000	Shelter, waiting.

The bottom is mud and sand, and the holding ground is good in both anchorages.

RESTRICTIONS: Vessels cannot enter and sail after sunset.
Tidal range: Max. 3.09 m. Average 1.68 m.
Draft Limitation in the Channel: 6.40 m.

VHF: "Shidao Radio" on Channel 16 throughout 24 hours.

TUGS: One tug available.

BERTHING:

Stevedore Company	*Berth No.*	*Length (m.)*	*Depth (m.)*	*Max. Size (d.w.t.)*	*Cargo Handled*	*Shore Cranes*
Harbour Authority	1	60	4.0	1,000	General and Bulk cargo	1×25 tons
Harbour Authority	2	65	5.0	1,000	General and Bulk cargo	1×25 tons
Harbour Authority	3	130	6.4	5,000	General and Bulk cargo	1×25 tons
Harbour Authority	4	60	6.4	500	General and Bulk cargo	1×25 tons

Warehouse and Open Storage Space: Warehouse: 1,784 sq.m.
Open Storage Space: 16,450 sq.m.

Main Import and Export Cargo: Coal, petroleum, granite and general cargo.

FRESH WATER: Available at berths and anchorage.

FUEL: Available at berths and anchorage.

REPAIRS: Facilities available.

GENERAL: *Agency:* Penavico Shidao, No. 93 Huanghai Road, Shidao, Shandong, China. Tel: 86-896-7382186. Fax: 86-896-7382186. Telex: 327935 Pensd Cn.

Sinoagent Shidao, No. 79 Guangming Road, Shidao, Shandong, China. Tel: 86-896-7381716. Fax: 86-896-7381716.

Provisions: Available.

SHUIDONG: 21.28 N. 111.07 E.

PILOTAGE: Compulsory. Pilot service is available during 9 hours. Pilot boards vessel at Datouzhou, Touzhou and Jiuzhou.

ANCHORAGE:

Anchorage No.	*Location*	*Depth (m.)*	*Use*
1	Lat. 21° 23' 07" N. Long. 111° 07' 46" E.	10.0	Pilot, Joint Inspection.
2	Lat. 21° 23' 52" N. Long. 111° 05' 15" E.	10.0	Dangerous Cargo
3	Lat. 21° 24' 25" N. Long. 111° 03' 45" E.	10.0	Quarantine
4	Lat. 21° 23' 07" N. Long. 111° 07' 46" E.	10.0	Shelter

The bottom is mud and the holding ground is good in all anchorages.

RESTRICTIONS: Vessels cannot enter and sail after sunset.
Tidal range: Average 1.75 m.
Draft Limitation in the Channel: 9.5 m.

VHF: "Shuidong Radio" on Channel 16 throughout 24 hours.

TUGS: 1×900 h.p., 1×1,300 h.p., 1×1,960 h.p. and 1×3,400 h.p.

BERTHING:

Stevedore Company	*Berth Name*	*Length (m.)*	*Depth (m.)*	*Max. Size (d.w.t.)*	*Cargo Handled*	*Shore Cranes Pipelines*
Harbour Bureau	500 ton	115	6.5	1,500	General Cargo	5×2 tons Shore cranes
Harbour Bureau	10,000 ton	139	11.0	10,000	General Cargo, Container	1×5 ton 1×35 ton Shore cranes
Maoming Petro-Chemical Co.	20,000 ton	243	11.0	20,000	General Cargo, Container	1×16 ton Shore cranes
Maoming Petro-Chemical Co.	50,000 ton	276	12.0	20,000	Oil product, chemicals	6 in. Pipeline
Maoming Petro-Chemical Co.	3,000 ton	151	7.5	3,000	Oil product	6 in. Pipeline
Maoming Petro-Chemical Co.	250,000 ton (SBM)		22.0	250,000	Crude oil	16 in. Pipeline

Warehouse and Open Storage Space: Warehouse: 7,000 sq.m.
Open Storage Space: 40,000 sq.m.
Container Yard: 2,000 sq.m.

Main Import and Export Cargo: Crude oil, oil products and chemical products.

FRESH WATER: Available at berths.

FUEL: Available at berths.

REPAIRS: No facilities.

GENERAL: *Agency:* Penavico Maoming, 6-23 Youcheng, Maoming, Guangdong, China. Tel: 86-668-2280028. Fax: 86-668-2280038. Telex: 453048 Pnncm Cn.

Sinoagent Maoming, 10 Guanghua North Road, Maoming, Guangdong, China. Tel: 86-668-2285373. Fax: 86-668-2298195. Telex: 453031 Mmftb Cn.

Provisions: Available.

SHIPMASTER'S REPORT: November 1994.

Vessel:

G.T.: 7,150 tons.
N.T.: 4,051 tons.
Summer d.w.t.: 12,784 tons.
LOA: 123.3 m.
Beam: 20.0 m.
Draft: 8.79 m.

Shuidong is a new port still under major construction and facilities are limited.

Vessel loaded 1,900 tonnes Linear Alkyl Benzene in Japan for discharge at this port. No information is available in any publications on board. Agents in Hong Kong were asked to obtain as much information as possible from Agents in Shuidong. Despite their efforts, no reliable guidance could be obtained.

The only chart covering the area is B.A. Chart No. 3892 and Sailing Directions NP 30 (4th Edition, Chapter 10, Parts 10.48 to 10.55). The port is not shown or mentioned. I was advised that this is a new port and no information has been published yet.

Port is located on the left bank of river, in position Lat. 21° 28.30' N., Long. 111° 07.30' E. The Pilot Station is located in position Lat. 21° 23.07' N., Long. 111° 07.46' E. The port is approached via a buoyed channel, with leading marks on shore.

Approach to the port is not difficult. A storage tanker (250,000 tonnes) is moored in approx. position Lat. 21° 21' N., Long. 111° 25' E. It is not operational, but is expected to start in the near future. It has a Racon type mark, but no distinct letters to identify it. Agent could not give me name of vessel.

The island of Dafangij Dao, shows well on radar at 12 miles and gives good guidance to Pilot Station and buoyed channel. The only difficulty is the large concentration of fishing vessels. It is a case of picking your way through them. They are nearly always stopped and respond to whistle signals.

Vessel anchored 0.5 miles South of Buoys No. 1 and No. 2. These are in position Lat. 21° 23.4' N., Long. 111° 07.4' E. and Lat. 21° 23.5' N., Long. 111° 08.1' E. respectively. Our draft was forward 4.7 m. and aft 5.65 m. Echo sounder showed 7.0 m. of water under-keel at this point.

No communication directly with Pilots or port. Contact is made via Shuidong Radio on Channel 16, shifting to Channel 83. All information is passed to vessel via this station. Agent will be on VHF Channel 68 in near future.

Pilot boat came out to vessel at anchorage and guided the vessel to berth. Three Pilots boarded, only one of which spoke limited English. The leading marks give a course up the first part of the channel of 349°, this is followed up to Buoys No. 7 and No. 8. The depth under the keel was never less than 4.0 m., this at Buoys No. 5 and No. 6, most of the time 6.0 m. was normal. At Buoy No. 8, course is altered to 335°. At Buoy No. 10, course altered to 316°. This takes vessel to Buoy No. 14, where the wharves for the port start.

Major construction works are taking place, especially further up the river, where conventional wharves and terminals are being built. First jetties in the river are the tanker berths. Both brand new with modern facilities. Good fenders. No tugs used for berthing. Vessel berthed on the ebb tide, port side too Berth No. 2. Starboard anchor is used as a brake. It is important to get a head line and aft back spring out as soon as possible. Current is strong on the berth and frequent use of engine must be used to hold vessel against current. Final moorings were 3 head and 3 stern lines and 2 springs either end. Starboard anchor finally ending up with 4 shackles in water. Depth of water alongside at low water 2.0 m.

Accommodation ladder was used on the jetty in our particular position, but if Chicksan arms are to be used, then portable gangway would have to be used.

As normal in Chinese ports, many officials board. All documents and certificates are checked closely. No difficulties with any officials. Quarantine do not allow any ballast water to be discharged into river, unless it is disinfected first. They also checked all stores and toilets/bathrooms, if any signs of cockroaches, they disinfect and spray these areas. As some Cholera Certificates had expired, all persons requiring injections were done.

Terminal is new and tank farm is close. It would appear that more building will take place close to jetty. Plans are to open up the port even more, mainly coastal traffic at present. We discharged using a 6 in. flexible hose. No difficulties with rate or pressure. Total discharge time was 18 hours.

Agent was asked to supply a chart of the port area, but none is available at this time. None have been published. They intend to issue one soon. As it is also difficult to communicate with any officials or surveyors, information was hard to come by.

Shuidong town is about 14 km., and can be reached by local motorcycle taxi. There are some small roadside restaurants outside the gate and a hotel. Food is cheap and reasonable.

Vessel leaves berth near the end of slack water/beginning of ebb tide. This is straight forward. Weight is taken on anchor and all lines let go aft. Single up to a forward spring. Effect of current pushes stern off jetty. Anchor is heaved and with use of engine and rudder, vessel is moved of jetty. When well clear, forward spring is let go and anchor heaved home. It is best to leave anchor ready as it may be required to turn vessel round in river. After turning, vessel proceeds outwards. Pilot leaves vessel in vicinity of Buoys No. 5 and No. 6. The only problem outwards can be the fishing craft in the channel.

SHIPMASTER'S REPORT: September 1995.

General:
Port: Shuidong SPM.
Vessel: 138,000 d.w.t. crude carrier.
Cargo: Crude oil – 135,000 tonnes.
Draft: 17.0 m.

Port Limits: Single Point Mooring. Buoy position Lat. 21° 20.09' N., Long. 111° 24.06' E.

No facilities nearby the SPM. Vessel "arrived" when 5 nautical miles South of SPM (Anchorage). SPM is a crude oil discharge port for the Maoming Refinery, located in Guangdong Province, via Beishaling crude oil tank storage farm.

Documents: Standard Chinese regulations. Agent requires most documents to be faxed before arrival, if possible.

Pilotage: Pilot boards in good time, usually at anchorage when anchor aweight. The mooring gang/gear arrives on the same boat. Only one Pilot assigned for the SPM, employed by the Port of Shuidong. He stays onboard during the entire discharge.

Anchorage: Customary anchorage in position Lat. 21° 14' N., Long. 111° 24' E. Water depth 28.0 m. Holding ground is very good, despite strong prevailing Easterly currents of about 2 knots, setting to West.

Restrictions: Normally no berthing or unberthing during hours of darkness. Weather limits for berthing: Maximum wind 15 m./sec., seas 1.83 m. and visibility 1,000 m.

Max. Size: 270,000 tons d.w.t. or max. draft 19.20 m.

Health: No Radio Free Pratique possible. Straight forward operations once Agent and officials onboard. Clearance can be done during vessel's approach to the buoy.

Radio: Shuidong Port Radio on VHF Channel 16 for contact with Agent.

VHF: Pilot and port on Channel 13, but no answer if Pilot not onboard.

Radar: No Vessel Traffic Service or similar services in the area.

Tugs: Two tugs and one large service boat designated for the SPM operations and Zhanjiang port operations as required. Normally one tug stays on location during whole of port stay and connected to vessel's stern. Tugs always use ship's mooring ropes. Tug operation appeared to be quite inexperienced and small problems may be expected.

Berthing: Berthing only during daylight hours. Normally SPM approached from S.W. against the current. Tidal conditions are to be noted for the correct time of mooring.

One tug is connected astern and one on starboard side main deck forward. Floating cargo hoses left to port side of vessel. Depth at SPM varies between 23 m. and 27 m., depending on tide and currents. Location is very vulnerable to Easterly swell and down time is always expected. Two chafe chains of 76 mm. diameter from the SPM as a minimum requirement, due to location and weather conditions. Condition of the mooring gear offered from the SPM to be monitored closely on arrival. Two 16 in. floating hoses supplied by the terminal. These will be connected by the terminal crew of approximately 15 persons. Derricks of 15 tonnes minimum SWL required.

Medical: Patients may be sent ashore by launch arranged by Agent, but distances are great, and it takes several hours to reach the nearest doctor or hospital (Maoming).

Tankers: Two 16 in. discharge hoses supplied by terminal. Normally port manifolds to be used. Long pipelines to tank farm/refinery and no booster pumps ashore, so the discharge back pressure is high. Loading Master stays onboard for the whole discharge with numerous assistants keeping a watch in the vessel's cargo control room, monitoring the vessel discharge rate/performance. No real oil spill combat facilities available in the area. Engines to be on stand-by during the whole SPM stay (5 minutes notice is acceptable).

Density: 1025.

Fresh Water: Not available.

Repairs: Not available. No engine repairs allowed at SPM.

Surveyors: Local Chinese surveyor, employed by the receiver.

Repatriation: Possible without any significant problems.

Airport: Nearest airport at Zhanjiang, with domestic connections to Guangzhou, and from there to Hong Kong.

Time: GMT plus 8 hours throughout the year.

Telephones: Most of the shore party personnel staying onboard have local mobile telephones for easy contact with the shore.

Services: Shipchandler can be arranged by the Agent.

Shore Leave: Not possible.

Garbage/Waste Oil: No services available for disposal.

Authority: MMPC Shuidong Port Co. – SINOPEC Maoming.

SPM Operator: Maoming King Ming Petroleum Co.Ltd. Tel: 86-668-2680321. FAX: 86-668-2680573.

Agent: Penavico, Maoming. Telex: 453048. Fax: 86-668-2280038.

TAKU BAR: 38.56 N. 117.53 E.

Also see "General" before first port and "Tianjin".

Guide to foreign vessels calling at Taku Bar (Xiang Jiang, Tanggu and Tianjin): Issued by the Harbour Master at Tianjin.

1. Foreign vessels entering Bohai (Pohai Gulf) are only allowed to pass through Changshan Channel and/or Laotiehshan Channel. If the latter way is taken, the vessel must send a wireless message to "Harbour Master, Dalian" for directory 8 hours prior to passage. It should be noted that no other Channels are permitted for navigation. (Also see "Dalian").

2. Vessels passing Laotiehshan Channel for Dalian must make a detour along the East of "Encounter Rock".

3. Position of sunken dredger "Se Ho" is at Lat. 38° 31' N., Long. 119° 10.5' E. Vessels should keep far away from the above-mentioned area during navigation.

4. Vessel may anchor to wait for Pilot.

5. Vessel may send radiogram to "Penavico Xingang" (via Xingang Coastal Radio Station XSV, calling frequency 500 kHz, working frequency 445 kHz, reserve frequency calling 8630 kHz. Listening 8364 kHz, working hours 0000 – 2400), giving exact ETA also fore and aft draft, before entering Bohai (Pohai Gulf).

6. The Pilot Station is at Tanggu. All vessels are required to have a Pilot when entering or leaving the Ports of Tanggu and Xingang. The Pilot will board the vessel at the anchorage after receipt of exact ETA given by the Master.

Regulations Issued by the Harbour Superintendent's Office:

1. All foreign vessels (hereafter referred to as vessels) entering or leaving the Port of Tianjin (hereafter referred to as this port) are required to observe strictly the provisions of the Regulations Governing the Entry and Departure of Foreign Vessels into and from Ports of the People's Republic of China (hereafter referred to as Regulations Governing Foreign Vessels) and of the Port Regulations of Tianjin.

2. On arrival at this port, vessels are prohibited to use the articles enumerated in Article VII of the Regulations Governing Foreign Vessels. Should it be necessary to repair any of the articles enumerated in Item 2 of the same article, permission to do so must be obtained beforehand from the Harbour Superintendent's Office.

3. Articles placed under seal shall not be used and the seals shall not be removed without permission. Should any of the paper seals be found falling off, the fact shall be reported to the Harbour Superintendent's Office immediately.

4. Whilst in port, vessels are not allowed to dress ship or hoist flag at half mast without the permission from the Harbour Superintendent's Office.

5. Vessels in port desiring to undertake any of the following work must first apply in writing to the Harbour Superintendent's Office. After permission is obtained the work can then be carried out at the appointed place.

(a) Lifeboat practice;
(b) Overhauling boiler, main engine, steering engine or windlass;
(c) Engaging in welding work or burning anything on board;
(d) Pumping out ballast water regardless of whether the water is contaminated with oil or not.

6. After a vessel's arrival at this port, sounding, survey sketching, photo-taking, fishing and swimming are strictly prohibited.

7. After arrival at this port, vessels are strictly prohibited to dump ballast materials, coal ashes, garbage, rubbish and mud, or to discharge dirty oil or oily bilge water into the harbour. It is also prohibited to wash double bottom oil tanks or oil deep tanks inside the harbour.

8. Vessels in port must provide secure gangways or gang planks with rails or manropes for passengers, crew and all workers to embark or disembark. All gangways or gang planks are to be provided with lights at night.

9. Vessels lying alongside the pier should properly cover up all their exhaust valves and discharge openings on the ship's side facing the pier. 10. Garbage bins or drums with tight covers must be provided on board. The bins or drums should not be filled to overflow. When the garbage-collecting cart comes daily to the ship to collect the garbage and rings the bell on its arrival, the ship should arrange to deliver the ship's garbage into the cart.

11. If, owing to some special reasons, a vessel desires to return to this port after departure, the Master should first telegraph to the Harbour Superintendent for permission and must act according to the instructions given.

Frontier Inspection Station:

1. All the officers and crew of a foreign vessel and the passengers on board should produce their passports or other certificates to the Frontier Inspection Station and submit to the inspection of the Station.

2. When the ship's crew or passengers in transit desire to go ashore, the Master is to apply to the Frontier Inspection Station and the passport endorsing authorities, respectively, for landing permits.

3. A landing permit is valid only at the port where it is issued. On the ship's departure, all landing permits for the crew should be returned to the Frontier Inspection Station for cancellation.

4. The time limit for going ashore is from sunrise to midnight. When any Crew member wishes to stay overnight on shore, the Master should apply for permission on his behalf. Staying overnight ashore without permission is not allowed.

5. All laws and regulations of the People's Republic of China must be observed.

Quarantine Office:

1. During a vessel's stay in port, if any person on board is found to be in high fever or to be feverish continuously for several days (or with the swelling of the lymphatic gland), or to suffer from acute rash on the skin with or without fever, or to suffer from acute diarrhoea and in a state of collapse, or to suffer from jaundice with fever, the matter should first be reported to the Quarantine Office. The patient can go ashore for medical treatment only when he has been examined and allowed to do so by the Quarantine Officer.

2. Effective rat-guards or other rat-preventing devices should be fixed on all mooring ropes.

3. Gangways and gangplanks are not allowed to be put on to the wharf when not required. Should they be used at night, strong electric lights should be provided.

4. Should any dead rats or mice be found or any rats or mice caught on board a vessel, the fact should be reported to the Quarantine Office for the necessary inspection to be made.

The above regulations are in force at most Chinese ports.

Berthing: In the fairway and on the West side of the first pier vessels may pass on 34 ft. draft. Length of pier about 1,500 ft.

Another pier is under construction, and when ready will have berths for 5 vessels of about 600 ft. length. The depth alongside will be 34 ft.

On the first pier 7 cranes with a capacity of about 10 tons. It was not possible to obtain information on the older berths. Four tugs with up to 1,000 h.p.

All bunkers to be brought in from Dalian.

SHIPMASTER'S REPORT: June 1990.

Tientsin is closed for navigation.

Tungku for small vessel above lock and not likely to be used by foreign ocean going vessels.

SHIPMASTER'S REPORT: July 1990.

Taku Bar is not a port but the shallow bar at the entrance to the channel, where a light vessel was stationed in earlier years and which was removed at least 4 to 5 years ago.

All references now taken from Dagu Lighthouse which also fitted with a Racon.

TIANJIN/XINGANG, including Tanggu: 39.06 N. 117.10 E. (See Plan)

Also see "General" before first port.
Also see "Taku Bar".

PILOTAGE: Compulsory. Pilotage undertaken day and night.

APPROACHES: *Tianjin:* The channel to Tianjin is dredged to allow vessels with max. draft 4.0 m. to be handled. The distance from Dagukou Maodi (anchorage) to the city is 54 miles.

Tianjin New Port: The new port is situated in position Lat. 38° 59' N., Long. 117° 45' E. in Bohai Bay at the mouth of the Haihe River. The main channel has a depth of 11.0 m. at H.W. and is 150 m. wide.

ANCHORAGE: Da Gu Kou anchorage has a depth of 10 m. – 13 m. and can accept vessels up to 50,000 g.r.t. The anchorage is unprotected and provides no shelter from wind, sea or swell. With a North Westerly or Westerly wind the sea is slight but when the wind is strong the tide is greatly reduced. Ships should take great care in selecting a suitable anchorage position.

RESTRICTIONS: Vessels may enter and sail throughout 24 hours.

MAX. SIZE: Draft limitation in channel is 10.0 m.

The general draft restrictions are as follows:

Vessels loaded with bulk grain (Winter)	10.1 m.
Vessels loaded with bulk grain (Summer)	10.4 m.
Vessels loaded with steel products and general cargo for import	8.5 m.
export	8.2 m.

Tidal Range: Maximum 3.5 m., minimum 2.0 m.

VHF: Penavico on Channel 11 throughout 24 hours. Sinoagent on Channels 73 and 74 throughout 24 hours.

TUGS: 5 × 980 h.p., 6 × 1,670 h.p., 1 × 1,900 h.p., 1 × 1,960 h.p., 3 × 2,600 h.p. and 2 × 3,200 h.p.

BERTHING: *Tianjin:* The Tianjin area for smaller ships and barges further upstream is situated along the right bank of the river within the Urban district of Tianjin.

Tianjin New Port: The new port lies on the North side of the river and is a man-made harbour. Between two breakwaters, constructed on the South and North sides of the work area is the entrance to this harbour with a width of 1,300 m. 5,000 ton vessels can pass through the 13 mile long, two-way channel of the port at high water. The channel is being dredged to 16 m. (now 13 m.) and will enable 10,000 ton general cargo vessels to pass through.

Area	*Berth* No.	*Water Depth* (m.)	*LOA* (m.)	*Capacity* (tons)	*Cargo Handled*
	1-4	7.5	175 × 4	7,000	General
No. 1	5	8.5	179	7,000	General
	6	10.5	201	10,000	General
	7-8	9.0	182 × 2	10,000	General
No. 2	9-11	9.0	177 × 3	10,000	General
	12-13	11.5	246 × 2	35,000	Bulk Grain
	14-15	9.0	189 × 2	10,000	
	5-6	4.5	115 × 2	3,000	General
No. 3	7	6.5	200	6,000	General
	8	6.5	148	6,000	General
(River Port in Tianjin)	9	5.5	131	5,000	General
	10-11	4.5	177 × 2	5,000	Passenger
	16-17	9.0	182 × 2	10,000	General
No. 4	18	10.0	182	10,000	General
	19-20	10.0	184 × 2	10,000	Steel
Fuel Berth		11.0	186	10,000	Fuel
	22-23	10.0	177 × 2	10,000	General

Area	Berth No.	Water Depth (m.)	LOA (m.)	Cargo Capacity (tons)	Cargo Handled
No. 5	24	10.0	176	10,000	General
	25-26	10.0	229 × 2	10,000	General
Container Terminal	21	11.0	398	25,000	Containers
	27-28	12.0	300	30,000	Containers
	29	12.0	295	30,000	Containers
Passenger Terminal	River Port	4.5	250	3,000	Passenger
	Sea Port	8.1	311	7,000	Passenger

Tanggu: Also see Area No. 3 above.

There is a lock at the Western end of the New Port, connecting it with the Tanggu area on the left bank of the river. The river from the lock is narrow and winding and its water level varies greatly with the seasons. The lock is 180 m. long×21 m. wide and 5,000 ton vessels in a laden condition can pass at high water.

Tanggu has 7 berths – five for general cargo and two for passenger vessels. Berths No. 5 and No. 6 have a total length of 230 m. for 1×3,000 ton and 1×5,000 ton vessel. Berths No. 10 and No. 11 have a combined length of 355 m. for 5,000 ton vessels. Connection with railway system.

CRANES: 4 × 40.5 tonne cranes at container terminal.

1 × 200 tonne and 1 × 120 tonne floating cranes.

MEDICAL: Facilities available.

FRESH WATER: Contact China Marine Bunker Supply Co., Tianjin Branch.

FUEL: Contact China Marine Bunker Supply Co., Tianjin Branch.

REPAIRS: There are ship repair facilities at Tianjin and at the New Port.

AIRPORT: Tianjin Airport. Flights to Shanghai and other major cities.

GENERAL:

Storage:

Warehouse: 188,832 sq.m.

Open Storage: 840,596 sq.m.

Imports: Grain, steel and machinery, etc.

Exports: General cargo and maize, etc.

Provisions: Contact Tianjin Ocean Shipping Supply Co.

SHIPMASTER'S REPORT: June 1990.

Xiang Jiang is the primary port for ocean-going shipping delivering cargo for Tientsin and Beijing and is under ongoing development. About 28 berths are in use, and the number will increase. A number of portainer cranes are available on the container berths and there are heavy lift cranes on some of the general cargo berths, also 10 ton cranes. Berths No. 1-5 have no cranes. General draft is 9.0 m., but channel has 11.0 m. at low water. Dredging dues are levied on excess draft over 9.0 m. One berth for grain, with 2 "siporters" and grab cranes, but it is necessary to turn round to complete discharge. Coal and minerals are exported.

SHIPMASTER'S REPORT: July 1990.

Tianjin: Tianjin is the city situated about 54 miles to West of the port of "Tianjin Xingang". Tianjin was previously called "Tientsin" and with the policy of changing all names into a national language, i.e. Mandarin, all the port names were changed (Peking became Beijing). Vessels cannot navigate to Tianjin, except small barges.

For guidance: New name Tianjin Xingang, old name Hsingkang. New name: Tianjin (City), old name Tientsin.

Name of Port: Tianjin Xingang or commonly called "Xingang" (old English name Hsingkang).

Position: Latitude 38° 59' N., Longitude 117° 45' E.

Information: One of the busiest ports in The People's Republic of China and believed to be second only to Shanghai with regard to cargo handled. Being the closest port to Beijing and to the economic zone of Tianjin, the port has become the most important port for North China.

Navigation: Reference B.A. Chart No. 2653 – Tianjin Xingang approaches.

Vessels bound for Xingang should advise Harbour Master "Dalian", 8 hours prior to passing Laotieshen Shuidao via Dalian Radio (XSZ), the following information:

(1) Name.
(2) Nationality.
(3) Port of departure and destination.
(4) Call Sign.
(5) Speed.
(6) Colour of hull and funnel.
(7) ETA at line joining 38° 43.5' N., 121° 08.0' E. and 38° 23.8' N., 120° 54.6' E. (Please also see Admiralty List of Radio Signals Vol. 2, part 6).

When approaching the port, it is advisable to be a minimum of 8 miles – 10 miles South of the "Caofeidian" Lighthouse (38° 56.1' N., 118° 30.4' E.) (fitted with a Racon "C"), to avoid numerous fishing boats and nets.

Pilotage: Pilot boards at anchorage or 2 miles East of the Dagu Light. Pilotage provided for Xingang and Tanggu.

Vessels should send their ETA's to "Penavico Xingang" as required with all relevant information.

As a general rule the pilots do not instruct vessels when approaching, and vessels should call "Penavico" on Channel 11 (VHF) for information and instructions.

Penavico requires following information after anchoring:

(1) Time of anchoring.
(2) Position – bearing and distance from Dagu Lighthouse.
(3) Fuel, diesel and water remaining on board and arrival drafts.

Vessels should keep listening watch on Channel 11 throughout the stay at anchorage.

Berthing information announced daily by Penavico at 1100 hrs. and 1600 hrs. local time.

At times agents do not give sufficient notice for vessels berthing and vessel's main engine should be kept prepared.

Vessels under "Sino Chart" should advise their ETA's as required.

Port Facilities: Large passenger terminal available West of Berth No. 1, draft up to 8.0 m. Regular local passenger service to Dalian. Many foreign passenger vessels call at this port.

Berths No. 1-5: Used for general cargo up to 7.0 m.
6: Used for general cargo up to 8.5 m.
7: Used for general cargo up to 9.0 m.
8: Used for discharging bulk sugar up to 9.0 m.
9: Used for loading bulk coke, drafts allowed 9.0 m. Loading by shore cranes with grabs.
12-13: For bulk grain discharging. Main berth is No. 13, discharged by evacuators. Draft allowed up to 11.0 m., but may allow deeper drafts depending on tide.

Prior to completion vessels are shifted to Berth No. 12.

Large vessels up to 60,000 d.w.t. can berth.

Average discharging time for 40,000 tonnes of grain at this berth is about 5 days.

Due to only one proper grain berth, and due to large amounts of grain imported via Xingang, grain vessels may be delayed by 3-4 weeks when 2 or 3 grain vessels are at anchor.

14, 15, 16: Used for general cargo up to 9.0 m. or more.
17, 18: Used for discharging bulk fertiliser. Draft allowed up to 10.5 m. Discharging done by shore cranes and cargo bagged automatically at the pier.
19, 20: For loading coal in bulk. Draft up to 10.5 m. to 11.0 m.
21: Containers – regular container service to Hong Kong.

All depths are given only as guide and believe depths allowed at some berths are more than indicated.

Port charges extra for vessels berthing with deeper drafts and for quick discharging, when discharging with a falling tide.

Masters are warned regarding signing invoices for quick discharging and deeper drafts, as charges may be exorbitant.

Port Developments: Extensive dredging and land reclamation taking place at present, including extending the present breakwater.

Fresh Water: Fresh water supplied by barge, even alongside, as not many hydrants available at the berths.

Water can be supplied at the anchorage at approximately U.S.$4.50 per metric tonne, but 3 to 4 days notice required to agents. Due to uncertain berthing prospects, vessels should arrive with maximum water on board.

Repairs: Xingang Shipyard can provide all services required. If required, shipyard can board at the anchorage, but prior permission should be obtained by agents from Immigration.

Large dry dock available, vessel of length 200 m. and beam 26 m. can enter.

Shipyard has new building yard, where vessels of 30,000 d.w.t. are built.

Draft at shipyard berths up to 6.0 m.

Shipyard can be contacted on VHF. Vessel must first call "Tianjin Radio" on Channel 16, who will allocate a channel for communication.

Medical: Special medical facilities available for foreigners at Tanggu Hospital and arranged by agents, about 20 minutes by taxi.

Airport: Situated at the city of Tianjin, about 54 miles to the West of the port of Xingang, about one hour by car.

Daily flights to and from Hong Kong, and to many other Chinese cities.

Cranes: Many heavy lift floating cranes available.

Mail Service: Speedpost parcel service available to Hong Kong. Parcels arrive within 4 days from Hong Kong. Believe courier service will be available in the very near future.

Provisions: Available, but during the Winter months fresh provisions may be difficult to obtain.

Bonded stores available at moderate prices.

Port of Tanggu: All regulations and arrival information to be sent to "Penavico Xingang" for vessels bound for Tanggu.

Lock gates situated South of the Xingang shipyard area.

Mainly used by coastal vessels of 3,000 d.w.t. tonnes, 5 berths are available for general cargo and small tankers.

AGENT: See "Shanghai".

WEI HAI: 37.31 N. 122.08 E. (See Plan)

PILOTAGE: Compulsory. Pilot boards in the Quarantine Anchorage and pilotage only undertaken during day time.

ANCHORAGE: *Lightering Anchorage:* A lightering anchorage is located in Lat. 37° 29' 44" N., Long. 122° 09' 41" E. The depth of water is 7.8 m. – 16.40 m. The nature of the bottom is mud and vessels up to 10,000 d.w.t. may use the anchorage.

RESTRICTIONS: Vessels may only enter and sail during daylight hours.

MAX. SIZE: Draft limitation in the channel is 6.5 m.

VHF: Radio Station "Qing 234" on Channel 16 throughout 24 hours.

TUGS: 1 × 1,200 h.p.

BERTHING:

Working District	*Berth Name*	*Length* (m.)	*Depth* (m.)	*Cargo Handled*	*Shore Cranes*
Foreign Vessels Working District	First Working District	234	7.0	Bulk Grain Bulk Salt Coal	4 × 5 tons

STEVEDORES: *Working Hours:* Weekday: 0700 – 1100, 1200 – 1600. Sundays and Holidays: 0700 – 1100, 1200 – 1600.
FRESH WATER: Supplied by Wei Hai Harbour Authority Bureau.
REPAIRS: No facilities available.
GENERAL: *Storage Areas:* Warehouse: 3,012 sq.m. Open storage space: 90,000 sq.m.
Imports: Timber.
Exports: Various bulk cargoes and bulk salt.
Provisions: Contact Wei Hai Foreign Supply Corporation.

WENZHOU: 28.02 N. 120.39 E. (See Plan)

PILOTAGE: Compulsory. Pilotage is undertaken day and night. Pilots board vessels at Huang Da Cao Quarantine Anchorage (57° 56' N., 121° 06' 41" E.).
ANCHORAGE: Pan Shi Anchorage accepts vessels of 10,000 d.w.t. – 20,000 d.w.t. Depth of water 9.0 m. – 12.0 m. (Wusong Datum Level), holding ground is good.
RESTRICTIONS: Large vessels can enter or sail at H.W.
MAX. SIZE: *Draft Limitation in the Channel:*
Pilot Anchorage to Pan Shi Lightening Anchorage – 9.0 m.
Pan Shi Lightening Anchorage to Shuo Wharf (by tidal) – 6.0 m.
VHF: "Wenzhou Radio" on Channels 16 and 13.
Penavico on Channel 11.
TUGS: 5 tugs up to 600 h.p. available.
BERTHING:

Wharf	*Length* (m.)	*Depth* (m.)	*Cargo Handled*
No. 1	82	6.0	General Cargo
No. 2	80	6.0	General Cargo
No. 3	83	6.0	General Cargo
No. 4	84	5.0	Passenger Vessels
No. 5	70	7.0	General Cargo and Containers
No. 6	86	4.5	General Cargo
An Lan	90	6.5	General Cargo
Yangfu Shan	343	7.0	General Cargo
Long Wan	425	9.0	Containers

STEVEDORES: *Working Hours:*
0000 – 0800
0800 – 1600
1600 – 2400
FRESH WATER: Available.
GENERAL: *Cargo Handled:* Containers, timber, steel, fertiliser, cement, ore and general cargo.
AUTHORITY: Wenzhou Harbour Administrative Bureau, No. 138 Ma Heng Seng Street, 325000 Wenzhou, China. *Tel:* 105772, 8222931. *Telex:* 37128 Wzhar Cn. *Cables:* 3969. *FAX:* 105772, 8230420.
Contact: Fu Zhu-Hua, Harbour Master.

WUHAN: 30.34 N. 114.17 E.

PILOTAGE: Pilot boards at Qing Shan Xia Anchorage. Pilot available from 0800 hrs. until 1800 hrs.
ANCHORAGE: Qing Shan Xia Anchorage suitable for vessels up to 35,000 d.w.t. Depth of water 7.0 m. – 15.0 m.
RESTRICTIONS: Berthing and unberthing in daylight hours only.
Draft is restricted to 9.5 m. as vessels have to cross a bar at the mouth of the Chang Jiang River.
MAX. SIZE: Draft limitation in the channel:
November – April: 4.5 m.
March – October: 8.0 m.
VHF: Port on Channel 16 throughout 24 hours.
TUGS: Available.
BERTHING:

Working District	*Berth* No.	*Length* (m.)	*Depth* (m.)	*Draft* (m.)	*Cargo Handled*	*Shore Cranes*
Han Knu	24	105	6.0	5.5	General	4×14 tons
	25	98	6.0	5.5	General	4×10 tons
Jiang Wan	35	101	5.0	4.5	General	4×10 tons
Han Yan	9-10	800	8.0	7.0	General	10×30 tons
Yan Luo	1	78	10.0	9.0	General	3× 5 tons

CRANES: *Floating Cranes:* 3×30 tons and 2×50 tons.
FRESH WATER: Available.
FUEL: Available.
GENERAL: *Cargo Handled:* Textiles, local livestock products and light industrial products.
Storage:
Warehouse: 62,000 sq.m.
Open storage area: 400,000 sq.m.

WUHU: 31.22 N. 118.22 E.

PILOTAGE: Pilotage is undertaken from 0800 hrs. – 1700 hrs., and Pilot boards vessel at Pilot Station.
ANCHORAGE: Anchorage No. 1 at Wuhu Port has a depth of 8.0 m. – 12.0 m. The bottom is mud and sand. The anchorage can accept vessels of 10,000 d.w.t. – 15,000 d.w.t.
RESTRICTIONS: Entry and departure throughout 24 hours.
Draft limitation in the channel in dry season is 6.1 m.
Tidal Range: Maximum 4.36 m. Minimum 0.10 m.
VHF: Port on Channel 6 throughout 24 hours.
TUGS: 7 tugs up to 980 h.p.
BERTHING:

Handling Dept.	*Berth* (No.)	*Max. Size* *Draft* (m.)	*LOA* (m.)	*Cargo Handled*	*Shore Cranes*
Wuhu	5	8.0	120	General	
	6	7.0	100	General	1×3 tons
	8	10.0	140	Passenger	
	11	7.0	100	General	1×3 tons
Fu	12	9.0	120	General	
	13	7.0	100	Heavy Cargo	1×15 tons
	15	6.0	100	Bulk	2×3 tons
	16	6.0	100	Bulk	
	17	8.0	402	General	4×5 tons 1×16 tons 1×30 tons
	29	5.0	100	various	2×5 tons 2×10 tons
	32	6.0	120	Coal	2 Quay Cranes

CRANES: Floating crane with capacity 15 tons.
Also see "Berthing".
STEVEDORES: *Working Hours:* 24 hours.
FRESH WATER: Available.
REPAIRS: Possible.
GENERAL: *Storage:* Warehouse: 28,179 sq.m. Open storage space: 109,129 sq.m.
Cargo Handled: Coal, metal ore, timber, fertiliser, grain and general cargo.
AUTHORITY: Wuhu Port Authority, Wuhu, Anhui Province, People's Republic of China.

XIAMEN (Amoy): 24.30 N. 118.04 E. (See Plan)

PILOTAGE: Pilotage is compulsory and is undertaken in day time only. The pilot boards the vessel in the Pilot/Quarantine Anchorage.
ANCHORAGE: *Pilot/Quarantine Anchorage:* The anchorage is located in position Lat. 24° 25' N., Long. 118° 03' E. The depth of water in the anchorage is 12.0 m. and the bottom is sand and mud. Vessels up to 100,000 d.w.t. may use the anchorage and larger size vessels may use the anchorage for shelter only.
MAX. SIZE: The draft limitation in the Channel up to the Pilot/Quarantine Anchorage is 12.0 m. and the limitation in the Channel from the Pilot/Quarantine Anchorage to Dong Du Wharf is 8.0 m.
Tidal Range: Maximum: 6.0 m., minimum 4.5 m.
VHF: Xiamen Radio on Channels 16, 12 and 25. A 24 hour service is maintained.
TUGS: 1 × 600 h.p., 2 × 800 h.p., 2 × 1,670 h.p. and 1 salvage tug of 2,640 h.p.
BERTHING:

District	*Berth* No.	*Length* (m.)	*Depth* (m.)	*Max. Size* (d.w.t.)	*Cargo Handled*	*Cranes* (tons)
Ha Ping	No. 1 Floating Berth	64	7.0	Below 3,000	General	2×1.5
	No. 2 Floating Berth	100	8.0	Below 5,000	General and Passengers	2×1.5
Dong Du	1	142	9.9	Below 15,000	Grain	1×30.5
	2	228	12.6	Below 80,000	Bulk	2×10
	3	165	12.6	Below 80,000	General	2×10
	4	142	9.9	Below 15,000	General	2×10

FRESH WATER: If vessel requires fresh water alongside, she should contact Xiamen Waterboat Bureau. If vessel is at the anchorage, she should contact Xiamen Tug Water Company.
FUEL: Contact China Marine Bunkers Supply Co., Xiamen Branch.
REPAIRS: Repair facilities available.
GENERAL:
Storage: Warehouse: 41,000 sq.m. Open Storage Space: 354,000 sq.m.
Imports: Wheat, fertiliser, cement, steel, coal and sugar.
Exports: Salt, tea and graphite powder.
Provisions: Contact China Ocean Shipping Supply Corporation.

SHIPMASTER'S REPORT: February 1986.
Documents: Standard Chinese Forms.
Pilots: Pilots ordered by Agents only if the vessel shifting from working anchorage to alongside after clearance.

Approaches: As per sailing directions and charts. The swept channel is very narrow, and the ship must pass 3 cables off a rock awash to port soon after an alteration. Then 3 cables off another rock to starboard. The channel is not marked for night navigation, and navigation should only be attempted with good radars and very careful planning. Navigation lights are weak and extinguished. Pilotage is not available from sea to Quarantine/Working Anchorage and vice versa. (Quemoy and Matsu lie close to starboard of channel).

Anchorage: Quarantine and cargo working anchorages are to the South and West of Gulang Yu Island. Cable crossing area to Eastward, some dangers as shown on chart. Good shelter from monsoon.

Health: Standard Chinese Health Declaration and Vaccination Lists required.

Radio: Xiamen Radio Station used when within range and if the operator is on watch. Otherwise vessel should use Guangzhou or Shanghai Radio.

VHF: Xiamen Radio. Call on Channel 16, ask for 'Penavico' and the station will patch through, normally on Channel 12.

Tugs: For berthing 2 tugs pushing, for sailing 1 tug pushing.

Berthing: The Inner Harbour or Neigang is only suitable for small coastal vessels. Ocean-going vessels may berth at Dong Du (24° 30' N., 118° 04' E.) at new wharf for 5 vessels. Large range and fall of tide, loaded vessel's bulwarks drop below wharf level. Said to be capable of berthing two 50,000 ton vessels, and others of 10,000 tons.

Cranes: At Dong Du, one standard container crane on rails at No. 1 Berth. A number of standard Chinese two wire grabbing/general cranes. Ship's gear also used which may work ashore or overside.

Bulk Cargo Facilities: At Dong Du, 2 berths equipped for bagging bulk cargo discharged by grabs. Artificial fertilisers are worked at wharf and anchorage.

Specialised Cargo Handling Facilities: Full container terminal behind container crane.

Density: About 1022 at Dong Du.

Fresh Water: By barge at anchorage or by low pressure shore hose at Dong Du.

Fuel: Fuel oil and diesel oil said to be available but details not known.

Repairs: A small local shipyard, and several boatyards but details not known.

Repatriation: Possible. Local airfield with flights to major cities in China and some times to Hong Kong. Twice weekly overnight ferry to Hong Kong.

Time: GMT plus 8 hours.

Telephones: Telephones/Telexes: Recently modernised as part of the Special Economic Zone centred on the nearby Huli Industrial Estate. Direct dialling to Hong Kong. Quick operator service to the U.K.

Mail service was erratic, 7-20 days from Hong Kong, one despatch went missing.

Storing: Provisions supplied by light truck to foot of gangway at Dong Du.

Shore Leave: Allowed. Shore passes issued for non-Chinese personnel.

Developments: 4 berths to be built. One berth for container vessels and 3 berths for general cargo and bulk (3×25,000 d.w.t. vessels). The port is likely to have a Free-port within the next few years.

Agent: China Ocean Shipping Agency. Cables: "Penavico".

XIJIANG TERMINAL: 21.18 N. 114.57 E. (See Plan)

LOCATION: The 152,404 tonnes deadweight tanker "Nan Hai Kai Tuo" was converted to a Floating Storage Production and Offloading (FPSO) unit, and is moored with a disconnection system in the Pearl River Mouth Basic Oil Field, approximately 80 miles S.E. of Hong Kong.

Geographical Position – Platform: Platform "24-3" is in position Lat. 21° 22' 45" N., Long. 114° 58' 40" E.

Platform "30-2" is in position Lat. 21° 18' 19" N., Long. 114° 58' 33" E.

Geographic Position – FPSO: The FPSO is moored in position Lat. 21° 18' 19" N., Long. 114° 57' 12" E.

This position is on a straight line connecting the position of the two platforms (See "Plan").

Designated Waiting Area: Tankers arriving to load must not approach within 10 miles of the undersea pipelines connecting the platforms to the FPSO, until directed to do so by the Mooring Master.

DOCUMENTS: *Customs Clearance:* Non-Chinese flag tankers scheduled to loading Xijiang Crude will be required to obtain Port Clearance through the ship's Agent.

Available in Shekou is Penavico China Ocean Shipping Agency. Tel: 86-755-6695216, 6692746 or 6685692. Fax: 86-755-6692769, 6689946. Telex: 420833 Cosas Cn, 420882 Cosas Cn.

In order to obtain clearance without delay, the shipowner should submit, by fax, the following information or documents to the shipping agency well in advance:

1. Name of vessel.
2. Nationality/Flag.
3. LOA, beam, Summer draft of the vessel.
4. Name of Owner/Manager.
5. Contact person, telephone, telex number.
6. Vessel's ETA.
7. International Certificate of Registry.
8. Load Line Certificate.
9. Crew List.
10. Last Port Clearance.
11. Safety Construction Certificate.
12. Safety Equipment Certificate.
13. Safety Radio Certificate.
14. IOPP Certificate.
15. Vessel's GRT/NRT/DWT.
16. Vessel's last/next discharge port.

Export Permit: Cargo destined for discharge outside China must be scheduled at least one month in advance to enable the necessary export permit and Customs documents to be obtained.

NAVIGATION: *Navigational Signals:*

Day Signal:

(a) One black ball – black diamond – black ball in vertical line on the signal mast.

(b) One black ball on the bow.

Night Signal:

(a) Three vertical lights (Red – White – Red) on the signal mast.

(b) One red light (Dangerous Cargo light) on the signal mast.

(c) One white light (anchor light) on the bow.

(d) One white light (Anchor light) on the stern.

MAX. SIZE: *Size Limitations for Offtaking Vessel:* The Terminal is designed to load vessels between 35,000 d.w.t. and 120,000 d.w.t.

RADIO/VHF:

1. FPSO Radio Station: The FPSO is equipped with HF radio call sign "5LUG" (five-lima-uniform-golf). FPSO Inmarsat telex number is 1243253 Javax.

2. Office Telex and Telephone: The Terminal Operator, Philips Petroleum International Corporation Asia (PPICA), can be contacted at their office in Shekou.

Telephone: 755-6691786.
Telex: 44245.
Fax: 755-6691162.

3. Marine VHF Equipment: The FPSO and the support vessels are equipped with marine VHF. The preferred channels are 6 (Ship-to-ship) and 12 (Port Operations).

The VHF call sign for the FPSO is "Nanhai Kai Tuo".

4. Walkie-Talkie Sets: Hand held VHF radios are available for communication between the Mooring Master, FPSO and support vessels during mooring, loading and unmooring procedures.

5. Long Range Communications – FPSO: All long range communications should be conducted by telex whenever possible, otherwise by HF radio.

Information regarding tanker ETA's, arrival or departure from the loading terminal should also be directed to the PPICA office in Shekou.

The tanker's Master should advise his ETA 96 hours, 72 hours, 48 hours and 24 hours prior to arrival at the NOR position. If the transit time from the previous port is less than 96 hours, the ETA should be sent if the ETA changes by more than 3 hours.

6. Contact with FPSO: When within range, the tanker's Master should contact the FPSO on VHF Channel 16 and agree on another channel for further communications.

Good communications between the tanker and the FPSO is an essential feature of the loading operation. Primary and secondary methods of communication must be established and agreed on to allow for possible equipment failure.

7. Contact with Support Vessels: After boarding the tanker, the Mooring Master will establish primary and secondary communications with the support vessels using the taker's VHF or hand held sets.

8. Emergency Communications: In the event of an emergency when at the FPSO or near approaches, the first line of communication will normally be on VHF radio on the channel currently used. VHF traffic may be heavy and the words "emergency" and "priority" should be emphasised.

9. Failure of Radio Communication: In the event of such failure on the tanker when moored or in close proximity to the FPSO, the vessel shall sound a series of short horn blasts on the whistle and make a series of short flashes on the signal lamp to attract the attention of the FPSO and the support vessels.

On receipt of such signals, the FPSO will immediately stop all pumps, should loading be in progress. The support vessels will proceed to the tanker and relay communication as required.

TUGS: *Support Vessels:* Two support vessels are available to assist a tanker mooring, loading and unmooring.

One of these tugs (8,000 b.h.p.) will act as a stern tug throughout the loading operation, while the tanker is moored to the FPSO.

BERTHING: *General Description of the FPSO:* The FPSO is moored by a Buoy Turret Mooring (BTM), connected to a submerged mooring buoy. In the event of an imminent typhoon, the FPSO may disconnect from the mooring and sail to safety. When the FPSO is disconnected, the mooring buoy sinks to its free float depth of 31 m. below sea level and supports the anchor lines awaiting reconnection.

A tanker loading Xijiang Crude will be berthed by a single bow mooring hawser connected to the stern of the FPSO.

Crude is loaded through a floating hose string from the stern of the FPSO to the loading tanker's midship manifold. 1×16 in. connection may be made on the port side.

Requirements for Offtaking Vessels:

(a) A bow centre fairlead with minimum dimensions 600 mm. × 450 mm.

(b) A chain stopper fitted at the bow and conforming to the OCIMF Recommendations for Equipment for Mooring at Single Point Moorings.

(c) The distance from bow to midship manifold connection not to exceed 450 ft.

(d) A midship hose lifting capacity of 10 tons SWL.

(e) An empty winch drum with capacity for 150 m. of 10 in. messenger line.

(f) Midship hose connections conforming to the OCIMF recommendations for oil tanker manifolds.

(g) Fully segregated clean water ballast.

(h) The Terminal will refuse to accept a vessel with deficient inert gas system, or any deficiency which may constitute a safety or oil pollution risk.

(i) Capacity required to receive at least 200 tons hose flushing in slop tank on arrival.

LOADING: *Storage Capacity:* The FPSO has a total storage capacity of about 1,000,000 barrels of crude oil. In practice, the maximum cargo to be loaded is unlikely to exceed 800,000 barrels.

Cargo Heating: Xijiang Crude has a high pour point and will be loaded at a temperature around 135°F. Loading tankers must be capable of maintaining the cargo temperature throughout loading, carriage and discharge.

Floating Hoses: Loading is effected through a floating hose string comprising 20×40 ft. length hoses of 20 in. diameter and 7×30 ft. hoses of 16 in. diameter.

The capacity of the floating hose string is approximately 297 barrels (47.5 cu.m.).

Cargo: Approximate data for Xijiang Crude Oil:

	Platform 24-3	Platform 30-2
API at 60°F	33.1	28.3
Loading Temperature	135°F	135°F
Vapour Pressure	13 psia at 135°F	12 psia at 135°F
Viscosity	8.3 cp	16 cp
BS & W	less than 0.5%	less than 0.5%
Pour Point	105°F	100°F

Initially, oil will be received from Platform "24-3" only. When Platform "30-2" commences production, the loaded oil will be a blend from both sources.

MEDICAL: No medical attention is available at the Terminal. In emergency, only evacuation by helicopter can be considered. For non-PRC nationals, this must be arranged by Owner's Agent in Hong Kong.

PORT SERVICES/SUPPLIERS, REPAIRS: No bunkers or fresh water can be provided at the Terminal.

No mail or supplies can be received or sent.

No repairs to the tanker are permitted while moored at the FPSO.

SHORE LEAVE/REPATRIATION: No shore leave or repatriation can be considered from the offshore Terminal.

GENERAL: The chart datum depth in the FPSO location is 100 m. (328 ft.).

The tidal range is less than 1.7 m.

The average surface current is approximately 1.0 knots to 1.5 knots in a prevailing Westerly direction.

The average sea water density in the area is 1026.

SHIPMASTER'S REPORT: February 1995.

Location: The Xijiang Terminal is located in the South China Sea in the Pearl River Mouth Basic Oil Field, approximately 80 nautical miles S.E. of Hong Kong (25 nautical miles East of Huizhou Terminal), in the People's Republic of China continental waters.

(a) Production Platforms:
No. 24-3 in position Lat. 21° 24' N.
Long. 114° 55' E.
No. 30-2 in position Lat. 21° 17' N.
Long. 114° 58' E.

At the time of loading (February 1995), only Platform 24-3 was producing, while Platform 30-2 was under construction.

(b) Floating Storage Production and Offloading (FPSO), the 152,404 d.w.t. tanker "Nan Hai Kai Tuo" moored by a Buoy Turret Mooring (BTM) connected to a submerged mooring buoy in position Lat. 21° 18.3' N., Long. 114° 57.2' E.

Positions of platforms and FPSO were observed by ship's GPS during loading at the Terminal.

Publications: Nautical references of the area can be found in the following publications:

British Admiralty Sailing Directions No. 30 – South China Sea.
U.S. Hydrographic Office Sailing Direction No. 93 – Western Shores of South China Sea.
British Admiralty Charts No. 1968 and 2661B.
Chinese Nautical Charts and Sailing Directions relating to the area.

Documents: Port Authorities or Agent did not board vessel on arrival, during loading or on departure. This seams to be routine.

Prior to arrival, the following documents should be faxed to the local Agent in Shenzhen:

Last Port Clearance.
Crew List.
Certificate of Registry.
Load Line Certificate.
Safety Construction Certificate.
Safety Equipment Certificate.
Safety Radio Certificate.
IOPP Certificate (No need for Form "B" to be faxed).

Cargo documents were issued by Chief Officer of "Nan Hai Kai Tuo", and departure clearance issued by Shekou Harbour Superintendency Administration handed over by Mooring Master, who will do most of the paper work.

Approaches: Approaching from the West, it would be recommended to keep oil fields well clear on the port side. Position can be obtained by charted platform at position Lat. 21° 30' N., Long. 116° 09' E., and Huizhou FPSO at position Lat. 21° 21.5' N., Long. 115° 24.6' E., later being equipped with Racon System on "X" and "S" band, emitting Morse code sign "N" at range of more than 35 nautical miles. Xijiang FPSO gives a good echo on the radar, as well as the Platform "24-3", but due to numerous fishing boats in the vicinity, this target is not easily recognisable, especially during restricted visibility.

According to the Terminal instructions, tankers arriving to load must not approach within 10 miles of the undersea pipelines connecting the platforms to the FPSO, until directed to do so by the Mooring Master.

Anchorage: There is no designated anchorage area in the vicinity. Echo sounder recorded depths slightly slopped for last 30 miles of approach from 100 m. to 90 m. contour. Even though there is a chartered depth of 57 m., the spot could not be found and with 9 shackles on deck, ship rested quietly at anchor during the night with Force 5-6 N.E.'ly Monsoon. Sea bottom 12 miles North of Xijiang FPSO was silty sand and provided good holding for the anchor. Great care must be taken while choosing anchorage, as this area is crowded with submerged pipelines, telecommunication and power cables. Good seamanship has to be kept in mind when anchoring, due to the depth of water. According to the local information, ships waiting for a longer period (a few days) anchor 30-35 nautical miles off Chinese mainland. During the N.E. Monsoon, good and well sheltered anchorage in 30 m. – 35 m. of water could be found. As we were first foreign ship to call at Xijiang Terminal (4th in total), this may apply for Chinese ships only, but in case of need could be verified with local Agent. Ship will need 5 to 6 hours steaming time from such anchorage to the Terminal.

Restrictions/Max. Size/Requirements: The Terminal is designed to load vessel between 35,000 d.w.t. and 120,000 d.w.t.

Berthing is restricted to daylight operations only. There are no restrictions for unberthing.

In the event of an imminent typhoon, ships may be disconnected and sent for shelter. When the FPSO is disconnected, the mooring buoy sinks to its free float depth of 31 m. below sea level, and supports the anchor lines awaiting reconnection, while FPSO sails to safety. According to the local information, ships stayed moored and continued loading in up to 40 knots winds. The hawser tension is monitored at all times during the operation and the tension should never exceed 200 tons.

Terminal requirements for tankers loading at Xijiang are:

(a) A bow centre fairlead with minimum dimensions 600 mm. × 450 mm.
(b) A chainstopper fitted at the bow and conforming to the OCIMF Recommendations for Equipment for Mooring at Single Point Moorings.
(c) An empty winch drum with capacity for 150 m. of 10 in. messenger line.
(d) The distance from bow to midship manifold connection not to exceed 450 ft.
(e) Helicopter winching area on port side forward.
(f) A midship hose lifting capacity of 10 tons SWL.
(g) A midship hose connection conforming to the OCIMF recommendations for oil tanker manifolds.
(h) Fully segregated clean water ballast.
(i) Capacity required to receive at least 200 tons hose flushing in slop tank on arrival.
(j) The Terminal will refuse to accept a vessel with deficient inert gas system or any deficiency which may constitute a safety or oil pollution risk.

Radio/VHF: The FPSO (Call sign "5 LUG") is equipped with:

HF radio.

Inmarsat telex number 1243253 answerback JAVAX operating in P.O.R.

VHF marine equipment, preferred Channels are 6 and 12, but would answer on 16 as well.

Hand-held VHF sets for communication between FPSO and Loading Master. A spare set could be obtained from FPSO on loading tanker request, for communication between two CCR;.

Both support vessels are equipped with VHF radios, long range and portable sets.

Communications: According to Terminal regulations:

"All long range communications should be conducted by telex whenever possible, otherwise by HF radio. The tanker's Master should advise his ETA 96 hours, 72 hours, 48 hours and 24 hours prior to arrival at the N.O.R. position. If the transit time from the previous port is less than 96 hours, ETA should be sent as soon after departure as possible. Amendments should be sent if the ETA changes by more than 3 hours. When within range, the Master should contact the FPSO on VHF Channel 16 and agree on another channel for further communications".

After several unfruitful attempts to contact FPSO, both by telex and HF radio, this practice was abandoned and ETA messages sent via Agent (Penavico located in Shekou, Shenzhen, P.R.C.) without any problem. Before arrival and after anchoring, communication with FPSO could not be established. It was 1 hour after ship had anchored that we received call from Loading Master on Channel 16 with instructions.

Pilotage: Mooring Master joins by helicopter whenever possible. It is a large helicopter, and landing on deck was never in question. Terminal operators insist on winching only. Helicopter is not equipped for night operation, and in case ship has to unberth during the night, Mooring Master and his party will disembark by pilot ladder. There is a brand new personnel basket on board the FPSO, and if requested, Mooring Master will make necessary arrangement and disembark by basket. Although this method is not routine practice at this Terminal, due to high swell it is much safer. Mooring Masters (3 Italians) are stationed ashore and not on the FPSO. They are contracted for job and could service any Terminal in the area. I found them highly professional.

Tugs and Support Vessels: Two support vessels are available to assist mooring, loading and unmooring operations. Tug "Hua Hai" of 8,000 b.h.p. is equipped with firefighting equipment, and acts as a stern tug throughout the loading operation while ship is moored to the FPSO. Tug "Hua Da" of approximately 3,000 b.h.p. is used for handling cargo hoses during mooring. Both tugs have orange hull with white house and company logo on the white funnel. It appeared that craft were manned by European Masters and Chinese crew. They performed all operations satisfactorily.

Berthing: The "Nan Hai Kai Tuo" is a converted (adapted) 152,404 d.w.t. tanker built in the 70's. It has a huge black hull, and unusual white structure, in addition to normal accommodation with twin black and blue funnels, heading in to the wind or current.

Mooring Master boarded ship by helicopter about 3 nautical miles off FPSO port quarter, this gives ship sufficient room for manoeuvring at slow ahead to swing to the wind for helicopter operation party of 3 men to be winched down on main deck (Mooring Master, Assistant Mooring Master and Surveyor). Ship proceeded on dead slow ahead at speed of approximately 4 knots to about 1,000 m. off FPSO stern. With engine stopped, and due to wind and current, ship was gradually loosing speed, and when 300 m. off FPSO stern, vessel stopped and 3 in. lead line connected. No line throwing equipment was used. Rope led through starboard "centre" fairlead and chainstopper to the ready and empty starboard windlass drum. After 150 m. of lead line was coiled on winch drum, 10 in. messenger appeared. Ship's engine was used to give minimum head movement and provide steering. Heaving of 150 m. of 10 in. messenger and coiling it on winch drum took 15 minutes, and final 3 in. chafing chain was secured on ship's chainstopper. Complete operation (from lead line to chain) took 18 minutes. Ship was safely moored to the FPSO with combined 45 m. hawser and 8 m. of chafing chain on each side of hawser. After hose was connected, supply tug "Hua Hai" took line from ship's stern.

Connection: Loading is effected through a floating hose string comprising 20×40 ft. lengths of 20 in. diameter hose and 7×30 ft. lengths of 16 in. diameter hose. Total length of 1,010 ft. with capacity of approximately 297 U.S. barrels. One 16 in. manifold connection is required with standard 150 ANSI flange. Equipment to secure hose during loading is supplied by Terminal. Connection is made by ship's crew under the supervision of Loading Master. The method of hose connection conforms with OCIMF recommendations, at least in general. Floating hose is full of sea weeds, and marking lights on the hose itself are all out of order, making identification during dark hours impossible. During our loading, floating hose was not fitted with stop valve, making connecting and disconnecting very difficult and filling up manifold drip tray.

Loading: Approximate data for Xijiang Crude Oil supplied by Terminal are:

	Platform 24-3	Platform 30-2	Loaded by vessel
API at 60°F	33.1	28.3	38.4
Load Temperature	135°F	135°F	142°F
Vapour Pressure	13 psia at 135°F	12 psia at 135°F	unknown
Viscosity	8.3 cp	16 cp	unknown
BS & W	less than 0.5%	less than 0.5%	0.17
Pour Point	105°F	105°F	unknown

At the time of loading, only Platform "24-3" was in exploitation. API changed frequently, and even after loading was completed, Terminal changed API 3 times in less than 1 hour. When Platform "30-2" commences production, the loaded oil will be blend from both sources. The FPSO has a total storage capacity of about 1,000,000 U.S. barrels of crude oil. In practice, the maximum cargo to be loaded is unlikely to extend 800,000 barrels.

Maximum loading rate offered by Terminal was 45,000 U.S. barrels per hour. As ship is limited by "only" 19,895 U.S. barrels flow rate through one connection, loading rate was agreed at maximum 20,000 U.S. barrels. Terminal could or would not keep such low rate, and at the end of loading, average loading rate came to 23,520 U.S. barrels per hour, resulting in protests from both sides.

Loading tanker must accept the loading hose displacement water (very common practice in this area), and keep it segregated in slop tank. The quantity of the water to be flushed is 70 cu.m. before the loading starts, and 400 cu.m. at the end of loading operations. Ship's tanks are inspected by Terminal surveyor prior to loading and after final flushing has been completed. Surveyor issues flushing water report. Samples of cargo from all ship's tanks are taken and sent to FPSO. After initial flushing, it is good practice to start loading in only one tank, and collect all eventual remaining water in that tank. Due to high pour point, cargo has to be heated at the commencement of loading operations. On completion of loading, all deck lines drained, and if possible blown through by inert gas to insure good drainage of the cargo that could not be heated during passage.

Unmooring: With loading hose flushed (operation takes 12 minutes) and disconnected (45 minutes), hose remains attached to the ship's manifold and is released only after chafing chain is off the ship. On the bow, crew starts heaving on the messenger rope and releases chafing chain from chainstopper. Aft tug starts pulling the ship away from FPSO and messenger and lead rope are slacked away, and finally handed over to supply boat. With stern movement, and as the rope on loading hose starts picking-up weight, same is realised. Next the tug is dismissed aft and this tug then tows hose away. With deck lights on, hose was still visible.

Cargo documents are normally ready in 1 to 2 hours. We were not so lucky, and when Terminal finally proclaimed final API, complete set of documents fell in the water and were lost. A new set of documents had to be made, and 5 litres of cargo samples had to be delivered to the ship. After 3.5 hours waiting and drifting, Mooring Master and his party departed and ship was ready to sail.

Safety: In general, OCIMF publications, such as International Safety Guide for Oil Tankers and Terminals, Ship to Ship Transfer Guide (Petroleum) and Guide to Helicopter/Ship Operation are used at the Terminal.

FPSO has a permanent helicopter service connecting it with the shore, occasionally several times a day. We were never warned of such operations going on, or that loading was not interrupted due to helicopter operations.

During loading, on several occasions, slight oil film was noticed in the area, and I suspected it came either from the FPSO or loading hose. Loading Master was advised on each such occasion, and internal investigation made.

According to Ship to Ship Transfer Guide, maximum allowed loading rate per 16 in. connection should not exceed 31,050 U.S. barrels per hour. It would be prudent to clarify this.

Operator: Phillips Petroleum International Corporation Asia operates the Terminal. FPSO is fully manned with European (Italian) Officers and Filipino crew. Additional production crew is a mixture of mostly Europeans and Americans. Assistant Mooring Master and Surveyor are Chinese, and as with rest of the personnel on FPSO, fluent in English language.

Phillips has office in Shekou, P.R.C., and could be contacted by:
Tel: 755 669 1786.
Fax: 755 669 1162.
Telex: 44245.

Agent: For this voyage, 2 Agents were contracted by Charterer.
Protecting Agent:
Pertamina Shipping JKR
Jardine Shipping Hong Kong
Tel: 2579 3557.
Fax: 2856 9951.
Telex: 63454.
Load Port Agent:
Penavico – China Ocean Shipping Agency, Shekou, Shenzhen, P.R.C.
Tel: 755 669 5216.
Fax: 755 699 2769.
Telex: 420834.

OPERATOR: Phillips Petroleum International Corp. Asia, 9th Floor, Finance Center, P.O.Box 166, Shekou, Guangdong Province, 518066 China. Also see "Radio".

XIUYU (Meizhou): 25.13 N. 118.59 E. (See Plan)

PILOTAGE: Compulsory. Pilot service is available during 12 hours. Pilot boards vessel at Lat. 24° 59' 06" N., Long. 119° 05' 01" E.

ANCHORAGE:

Name	*Location*	*Depth (m.)*	*Max.Size (d.w.t.)*	*Use*
Joint Inspection Anchorage	A circle with radius 550 m. centred on Lat. 25° 02' 10" N., Long. 119° 03' 14.6" E.	20.00	100,000	Quarantine
Joint Inspection Anchorage	A circle with radius 550 m. centred on Lat. 25° 02' 34.5" N., Long. 119° 02' 17.5" E.	20.00	100,000	Quarantine
No. 1 Buoy Anchorage	Lat. 25° 12' 52" N. Long. 118° 58' 41" E.	9.45	20,000	Lightening
No. 2 Buoy Anchorage	Lat. 25° 12' 34" N. Long. 118° 58' 52" E.	11.70	50,000	Lightening
No. 3 Buoy Anchorage	Lat. 25° 12' 46" N. Long. 118° 58' 22" E.	8.80	10,000	Lightening

The bottom is mud and sand in all anchorages, and the holding ground is good.

RESTRICTIONS: Vessels cannot enter and sail after sunset.
Tidal range: Max. 7.59 m. Average 5.12 m.
Draft Limitation in the Channel: 13.0 m.

VHF: "Meizhouwan Radio" on Channel 16 throughout 24 hours.

TUGS: 1×400 h.p., 3×600 h.p., 1×900 h.p. and 1×3,200 h.p.

BERTHING:

Stevedore Company	*Berth Name*	*Length (m.)*	*Depth (m.)*	*Max. Size (d.w.t.)*	*Cargo Handled*	*Shore Cranes*
Meizhouwan	1,000 ton	64	4.5	1,000	General and coal	2×8 ton
Meizhouwan	1,000 ton	149	5.5	3,000	General and Containers	1×30 ton, 2×8 ton
Meizhouwan	10,000 ton	213	9.6	10,000	General	4×10 ton, 2×16 ton

Warehouse and Open Storage Space: Warehouse: 8,640 sq.m.
Open Storage Space: 98,000 sq.m.
Container Yard: 1,500 sq.m.

Main Import and Export Cargo: General cargo, coal, cement and grain.

CRANES: 1×30 ton floating crane.
Also see "Berthing".

FRESH WATER: Available at berths and anchorages.

FUEL: Available at berths and anchorages.

REPAIRS: No facilities.

GENERAL: *Agency:* Penavico Meizhouwan, Xuenyuanbei Road, Chengxiang District, Putian, Fujian, China. Tel: 86-594-2696290. Fax: 86-594-2696690. Telex: 925009 Penpt Cn.

Sinoagent Meizhouwan, 4 Gongye Road, Hanjing District, Putian Fujian, China. Tel: 86-594-3597637. Fax: 86-594-3598734.

Provisions: Available.

SHIPMASTER'S REPORT: September 1995.

Location: Fujian Refinery Terminal is located at Lat. 25° 10' N., Long. 118° 58.5' E.

Note: The information below is based on information received from the vessel's Owner and conversations with the Pilot and Agent.

Port Limits: We did not find any boundaries drawn on local chart for the port limits.

Documents:
(a) Health:
1 copy Vaccination List.
1 copy Maritime Declaration.
(b) Arrival:
6 copies Crew List.
3 copies Currency List.
3 copies Passenger List.
4 copies Ports of Call List.
5 copies Cargo Manifest.
(c) 2 copies Report of Entry (Chinese Form).

(d) Port Clearance.
To be shown to Port Officials:
(a) Ship's Register.
(b) Tonnage Certificate.
(c) Derat Certificate.
(d) Load Line Certificate.
(e) Safety Equipment Certificate.
(f) Safety Construction Certificate.
(g) Safety Radio Telegraphy Certificate.
(h) Oil Record Book.
(i) CLC Certificates.
(j) Discharge Books, Passports and Yellow Cards.
(k) Tonnage Dues Certificate (Chinese tonnage).
(l) Manifest of Cargo destined for other Chinese port(s).
(m) Manifest of Cargo for foreign port(s).

Pilotage: Send ETA via Guangzhou Radio (XSQ) for 72 hours, 48 hours, 24 hours and 12 hours notice. Compulsory pilotage. Pilot station located at Lat. 25° 02.5' N., Long. 119° 03' E. The approaches were busy with coasters and fishing boats who will not give way to large vessels. Port entry and pilotage only during daylight. Leading marks available but not well built. They are painted with black arrows up/down on concrete structures. We detected the Racon "N" on Dazhu Dao on 3 cm. radar at 15 nautical miles during approaches. Very useful during restricted visibility.

Anchorage: There are two Joint Inspection/Quarantine Anchorages:
(1) With centre at Lat. 25° 02' 10" N., Long. 119° 03' E. and radius of 550 m. with depth 20 m. The bottom is sand and the holding is good. Max. size 100,000 d.w.t.
(2) With centre at Lat. 25° 02' 24.5" N., Long. 119° 02' 17.5" E. and radius of 550 m. with depth 20 m. The bottom is mud and sand. This anchorage was not recommended by our Pilot.

Initial contact with Quanzhou Radio. VHF Channels 16/12 for telephone call to Agent "Penavico Quanzhou". Due to non-availability of large scale B.A. Chart for this area (only B.A. No. 1761), I was reluctant to go to pilot station, which in my opinion was not safe for our size (86,000 d.w.t.), therefore anchored at position Lat. 24° 57' N., Long. 119° 05.5' E. and waited for Pilot. Agent instructed Pilot who waited at pilot station to come to our location. Pilot boarded from a tug (No pilot boat). The Pilot was able to speak English, but only marine/navigational vocabulary. He brought me a local Chinese chart (photocopy), which I had requested before arrival.

Restrictions: Tankers up to 100,000 d.w.t. Depth in the channel is 13 m. maximum. Vessel's draft was 12.0 m. even-keel. Minimum under-keel clearance recorded was 2.0 m. at about LW.

Tugs: 1×3,200 h.p., 2×1,800 h.p., 1×900 h.p., 3×600 h.p. and 2×400 h.p.

Berthing: We anchored on arrival at berth and awaited shore berthing arrangements, about 9 cables East of the jetty. 3 tugs used, forward tug ship's line, aft and midship tugs used tugs' lines. Vessel berthed starboard to at the terminal with port anchor used during berthing.

Depth at berth 16.0 m.

Tidal range was 7.5 m. maximum, but average was 4.5 m.

Discharge via 2×12 in. Chicksans. The Chicksans can go a maximum of 14.0 m. over the wharf. Shore gangway used. Discharging rate was restricted to 3,600 cu.m./hr. (Vessel discharged Sumatran Light Crude Oil). The berth can only accommodate one foreign-going vessel at a time. Two small coastal tankers (of about 5,000 tonnes d.w.t.) berthed on opposite side of the jetty.

Fresh Water: Available at the terminal. Average rate 17 tonnes/hr.

Time: GMT plus 8 hours.

Agency: China Ocean Shipping Agency Quanzhou, 5/F, Harbour Building, Quanzhou Fujian. Tel: 2584750, 2582954. Telex: 928001 OSAQZ CN. Fax: 0595-2588709. Cables: Penavico Quanzhou.

Operator: Fujian Refinery. Fax: 86-595-7789164. Contact: Mr. Chen Fei Shan.

YANGJIANG: 21.52 N. 111.52 E. (See Plan)

SHIPMASTER'S REPORT: December 1995.

VESSEL: This vessel (capacity 5,280 cu.m.) called at Yangjiang for discharging a part cargo of LPG-Mix. The vessel was the first to discharge at the newly built LPG Terminal.

DOCUMENTS: The following documents (minimum) are required for clearance (IMO Forms to be used where possible):
6 copies Crew List.
4 copies Ship's Stores Declaration.
4 copies Crew Effects Declaration.
1 copy Health Declaration.
4 copies Report of Ship's Particulars.

Additional documents have to be signed when the vessel is cleared and others have to be prepared for sailing.

Many officials board the vessel for arrival and departure clearance. The ship's office is too small to accommodate them all. At least one Customs Officer will remain on board during discharge.

APPROACHES/PILOTAGE: The entrance to this port is at Hailingshan Gang. Pilot boarding area is at Lat. 21° 33' N., Long. 111° 46' E. There is no usual pilot cutter available. A Chinese built sampan is used and is difficult to identify. The boat does not fly the international pilot flag.

Communication with the pilot station on VHF Channel 16 during hours of darkness is difficult. There is no piloting during night-time, as far as I could determine.

The average depth of the deep water channel is said to be 9.00 m. and alongside berth 9.50 m.

Berthing in strong N.E.'ly winds could mean a problem to get alongside, but a medium strong insetting tide assists the berthing. A typical Chinese sampan acts as a line boat.

The position of channel buoys seemed to be correct. Only Buoy No. 1 has been moved further inside.

ANCHORAGE: Vessel anchored approximately 1 mile S.S.W. of pilot boarding area, and the anchorage is quite good with excellent holding ground. Anchoring further inside is only permitted with Port Captain's approval.

RESTRICTIONS: Berthing and unberthing only during daytime.

TUGS: Not available.

BERTHING/CARGO OPERATIONS: The jetty is of concrete construction, but durable with sufficient fenders and bollards. There is 1×16 in. line for liquid and 1×4 in. line for vapour to discharge the cargo. Connection to vessel is made by flexible hoses. The hose connections vary a little from international ASA types, but fit to the ship's manifold. The jetty has reducers which are fitted.

Maximum pressure for shore line is 25 bar, but shore limit this to 12 bar. Discharge temperature was requested between +5° and +10° Centigrade. Experience from shore personnel in handling liquid gas cargoes is very poor at the moment. This might improve after several vessels have discharged.

The tankfarm contains 4 spherical tanks, each of 900 cu.m. capacity, but these are not the only ones. There are also tanks for oil products as well as pipelines and connections on the jetty for fuel oil, diesel, gasoline, etc.

YANGZHOU: 32.16 N. 119.26 E.

PILOTAGE: Compulsory. Pilot service is available during daytime. Pilot boards vessel at the Liuhe Pilot Anchorage.

ANCHORAGE:
Port Anchorage: Inside of port shoal, depth is 10.0 m. Bottom is mud and sand with good holding ground. Max. size 25,000 d.t.w.
Luochengzhou Anchorage: Inside of No. 2 Red Buoy, depth is 10.0 m. Bottom is mud and sand with good holding ground. Max. size 15,000 d.w.t.

RESTRICTIONS: Vessels cannot enter and sail after sunset.

Tidal range: Max. 2.10 m.

Draft Limitation in the Channel: Mouth of Yangzi River Channel 9.70 m. (fresh water).

VHF: "Yangzhou Port" on Channels 16 and 13 throughout 24 hours.

TUGS: 2×500 h.p. and 2×1,360 h.p.

BERTHING:

Stevedore Company	*Berth Name*	*Length (m.)*	*Depth (m.)*	*Max. Size (d.w.t.)*	*Cargo Handled*	*Shore Cranes*
Changjiang	No. 1	180	10.0	10,000	Containers and General	12×30 ton 2×10 ton
Changjiang	Floating Berth	180	10.0	10,000	General	3×8 ton
Changjiang	No. 2	300	12.0	10,000	General	1×35 ton 2×10 ton
Changjiang		110	4.0	2,000	General	1×25 ton 4×5 ton

Warehouse and Open Storage Space: Warehouse: 3,740 sq.m.
Open Storage Space: 65,000 sq.m.
Container Yard: 7,480 sq.m.

Main Import and Export Cargo: Steel, ore, grain, containers, coal, chemical fertilisers and timber.

CRANES: 1×30 ton floating crane.
Also see "Berthing".

FRESH WATER: Available at berths.

FUEL: Available at berths.

REPAIRS: Facilities available.

GENERAL: *Agency:* Penavico Yangzhou, No. 14 Dahongqiao Road, Yangzhou, Jiangsu, China. Tel: 86-514-7348382. Fax: 86-514-7348399. Telex: 364012 Penyz Cn.

Sinoagent Yangzhou, No. 86, 4/F Jiangdu Road, Yangzhou, Jiangsu, China. Tel: 86-514-7247791. Fax: 86-633-7243832. Telex: 342339 Agtjs Cn.

Provisions: Available.

YANTAI (Yentai): 37.33 N. 121.24 E. (See Plan)

LOCATION: The Port of Yantai is situated on the Northern shore of the Shandong Peninsula, facing the Huang Hai. The harbour is embraced by the Northern Chefoo Island and other islands providing natural shelter for it, and is an ice-free port owing to its moderate climate.

PILOTAGE: Compulsory. Pilot service is available throughout 24 hours. Pilot boards vessel at the No. 1 or No. 2 Pilot and Quarantine Anchorage.

ANCHORAGES: Boundaries:

No. 1 Pilotage and Quarantine Anchorage:
Lat. 37° 34' 54" N. Long. 121° 24' 44" E.
Lat. 37° 34' 54" N. Long. 121° 26' 44" E.
Lat. 37° 33' 54" N. Long. 121° 26' 44" E.
Lat. 37° 33' 54" N. Long. 121° 24' 44" E.

Vessels with draft less than 10.0 m. and LOA less than 200 m. shall anchor in this anchorage.

No. 2 Pilotage and Quarantine Anchorage:
Lat. 37° 40' 30" N. Long. 121° 29' 15" E.
Lat. 37° 40' 30" N. Long. 121° 31' 45" E.
Lat. 37° 39' 00" N. Long. 121° 31' 45" E.
Lat. 37° 39' 00" N. Long. 121° 29' 15" E.

Vessels with draft of more than 10.0 m. or those in length of 200 m. or over shall anchor in this anchorage.

Tanker Cargo-Oil Transferring Anchorage:
Lat. 37° 38' 50" N. Long. 121° 24' 00" E.
Lat. 37° 38' 50" N. Long. 121° 25' 30" E.
Lat. 37° 38' 00" N. Long. 121° 25' 30" E.
Lat. 37° 38' 00" N. Long. 121° 24' 00" E.

Anchorage for Shelter:
Lat. 37° 34' 32" N. Long. 121° 27' 30" E.
Lat. 37° 33' 42" N. Long. 121° 28' 36" E.
Lat. 37° 33' 08" N. Long. 121° 30' 10" E.
Lat. 37° 32' 29" N. Long. 121° 27' 30" E.

RESTRICTIONS: Vessels may enter and sail after sunset.

MAX. SIZE: Draft limitation in Channel: Eastern Channel 8.5 m., Western Channel 10.1 m.

VHF: Station "XSU" on Channel 16 throughout 24 hours.

TUGS: 10×3,200 h.p.

BERTHING:

Working District	*Berth* No.	*Length* (m.)	*Depth* (m.)	*Cranes*
1st Stevedoring Company	11	181.9	6.4	
	12	108.9	6.9	
	13	108.9	6.9	2×32 tons
	14	108.9	6.9	
	15	180	9.9	2×25 tons
	16	180	9.9	
	17	180	9.9	11×10 tons
	18	125.9	7.9	
	19	112.4	6.9	
2nd Stevedoring Company	21	230	11.3	
	22	195	11.3	3×16 tons
	23	195	12	
	24	210	11.3	10×10 tons
	25	170	10.3	
	26	236	10.3	
	27	100	5.7	
	28	100	5.7	
Passenger Transport Company	K1	112.4	6.2	
	K2	141.6	6.9	mobile cranes
	K3	140	6.9	
	K4	126	6.9	
	K5	162	6.9	
New berths to be put into use in 1997:				
	32	186	10.5	
	33	186	10.5	3×16 tons
	34	186	10.5	
	35	152.7	11.5	
	36	152.7	11.5	3×10 tons
	37	300	14	2×40.5 tons (gantry container crane)

CARGO HANDLING FACILITIES: The port is equipped with modern cranes, conveyors, loaders, tractors and carriers. The maximum lifting capacity of the shore cranes is 36.5 tons and that of a floating crane 63 tons. The coal wharf has 3 unloaders.

Packing and Transhipment Services: Automatic bagging machines available. The production lines of the bagging machines for bulk fertiliser and bulk aluminium are completely automated.

FRESH WATER: Available.

REPAIRS: Facilities available.

REGULATIONS:

Regulations Relating to Port Administration:

1. While entering or leaving the port of Yantai, all foreign vessels and domestic ocean-going vessels are required to observe, in addition to the Regulations Governing Supervision and Control of Foreign Vessels by the People's Republic of China and these Regulations, all the relevant laws, decrees, rules and regulations promulgated by the People's Republic of China.

2. Port boundaries and anchorages
   (1) Port Boundaries.
   The port boundaries are the lines connecting the Eastern point of Zhifudao and Northern extremity of Kongtongdao, the Southeastern point of Kongtongdao and Yutaizui of Yudaishan.
   (2) Anchorages.
   See "Anchorages".

3. Vessels entering or leaving this port shall pass through the North Channel between Xiaoshanzi and Dajiaoshi. No foreign vessels are allowed to navigate within the East Channel between Kongtongdao and Yudaishan.

4. Vessels with a draft of more than 10.0 m. or those with length of 200 m. or over shall anchor in the No. 2 Pilotage and Quarantine Anchorage. Foreign vessels must not enter or leave the Tanker Cargo-Oil Transferring Anchorage without a pilot appointed by the Harbour Superintendency Administration.

5. Vessels intending to enter this port (or No. 2 Pilotage and Quarantine Anchorage) by day shall, prior to approaching the port boundary (or No. 2 Pilotage and Quarantine Anchorage), hoist such flags as nationality, signal letters as well as those flags as have to be hoisted. On leaving the port, vessels shall keep flying those flags until they get out of the port boundary (or No. 2 Pilotage and Quarantine Anchorage).

6. Vessels navigating within the port area shall keep radio watch on VHF Channel 6, in case of emergencies, such as typhoon warning, vessels at anchor shall, by day and night, keep radio watch on VHF Channel 16.

7. Vessels handling or carrying dangerous cargoes shall comply strictly with the Regulations Governing Supervision and Control of Vessels Carrying Dangerous Goods issued by the Ministry of Communications of the People's Republic of China.

Vessels intending to work with naked fire shall, 24 hours in advance, submit a written application to the Harbour Superintendency Administration and the work can only be done after being verified and granted.

8. If any ballast water, tank washings or bilges are to be discharged from any vessel which stays in this port, a written application shall be made 12 hours in advance to Harbour Superintendency Administration. No such discharging operation can be carried out unless permission has been obtained.

9. Judging from the extent of the violation of these Regulations, the Harbour Superintendency Administration may impose such penalties as warning, suspension or withdrawal of Certificate of Competency, fine and/or other penalties.

Rules to be Observed by Crew Members and Passengers of Foreign Ships:

1. Foreign ships, crew members and passengers shall be subject to the inspection of the Frontier Defence Inspection Station, and observe all laws and regulations of the Chinese Government.

2. When a foreign ship is entering or leaving port, crew members and passengers on board should present their passports or other identity certificates to the Frontier Defence Inspection Station for inspection.

3. When entering or leaving China, everybody should present their luggage and articles to the Frontier Defence Inspection Station for inspection.

4. Foreign crew members and their dependants intending to go ashore must apply, through the Master, to the Frontier Defence Inspection Station for the "landing permits", with which and their passports or other identity certificates they are permitted to land, while the Chinese crew members and their dependants may go ashore on producing their valid identity certificates with photos, which sufficiently certify their Chinese nationality.

5. Foreign passengers without valid transit visas for China intending to go ashore should apply, through the Master, to the local visa-issuing authorities for landing formalities, with which they are permitted to land.

6. On embarking or disembarking, crew members and passengers must produce the landing permits and their valid certificates to the inspectors of the Frontier Defence Inspection Station.

7. Crew members go on board each others vessels in the same port by their valid passports or other identity certificates and the landing permits, while the Chinese crew members only by their valid identity certificates.

8. The time-limit for landing is from sunrise to 2400 hrs. (local time) of the same day.

9. The crew members going ashore are only permitted within the area confined by the local administration.

10. Any crew having the need to stay ashore must apply, through the Master, to the Frontier Defence Inspection Station for lodging certificates, with which he is permitted to stay ashore.

11. Crew members travelling beyond the port city or leaving China, the Master shall report the circumstances to the Frontier Defence Inspection Station, and the crew member himself should go through with all necessary formalities in compliance with the regulations concerned. Only after the certificates and visas have been granted and submitted to the Frontier Defence Inspection Station for inspection, can he be permitted to leave the ship.

12. If Chinese crews wives or children intend to go onboard the ship, the Master should make a written application to the Frontier Defence Inspection Station. With the issued embarking permits they may go on board the ship on presentation of their permits. The Master should also make a written application for permission when they intend to go to other ports in China by the ship, or else they are not allowed. But with them on board, the ship must not deviate from her set course and go abroad.

Parents or wives and children of Chinese crew who have been sent by China to work on the foreign ships intending to go on board the ship, the Master should also apply for the embarking permits for them. But generally they are not allowed to stay on board.

13. If there are any arms and ammunition on board the ship, the Master must declare to the Frontier Defence Inspection Station when the foreign ship is entering the port. The arms and ammunition should be sealed up by the Frontier Defence Officers. The sealing labels are not allowed to be unsealed by the ship during the ship's stay in port. Air guns and toy guns projecting metallic pellets are not allowed to be used or taken ashore.

14. If there is any stowaway on board the ship, the Master must report the fact to the Frontier Defence Inspection Station immediately. The stowaway should be watched carefully on the ship side, waiting for the decision.

15. Those (crew members and passengers) who break the above mentioned rules shall be given punishment, varying from warning, fining, signing a statement of repentance, to prohibiting going ashore, according to the seriousness of their case. Those who violate the criminal law of

China shall be brought to justice by the Public Security Organs according to Chinese law.

Customs Notice to Shipmasters and Seamen:

1. It is prohibited to carry the national currency of the People's Republic of China into or out of the country.
2. After exchange of foreign currencies, gold or silver for Chinese national currency, shipmaster's and seamen shall carefully keep the bank's exchange memo for Customs inspection.
3. Bringing ashore or taking on board of any articles must be reported to the Customs Officer on duty for permission. Selling of articles thus brought ashore is strictly prohibited.
4. The seals affixed by the Customs to any place on board shall not be tampered with.
5. Shipmasters shall declare to the Customs all un-manifested cargo or parcels on board while performing formalities for ship's entry.
6. Ships sailing between Chinese ports shall not deviate from the set course and go abroad without Customs approval. Previous permission must be obtained for such deviation if these is such a need.

The Importation of the Following Articles is Prohibited:

Arms, ammunition and explosives of all kinds; radio transmitter receivers and principal parts, Renminbi (with the exception of those in compliance with an agreement or protocol on the exchange of national currency notes).

Manuscripts, printed matter, films, photographs, gramophone records, cinematographic films, loaded recording tapes and video-tapes, etc., detrimental to Chinese political, economical, cultural and moral interests.

Poisonous drugs, habit-forming drugs, opium, morphine, heroin, etc.

Animals, plants, and products thereof, infected with or carrying disease germs and insect pests.

Unsanitary foodstuffs and germ-carrying foodstuffs from infected areas.

Other articles the importation of which is prohibited by state regulations.

The Exportation of the Following Articles is Prohibited:

Arms, ammunition and explosives of all kinds.

Radio transmitter-receivers and principal parts.

Renminbi and securities, etc., in Renminbi.

Foreign currencies, bills and securities in foreign currencies (with the exception of those allowed to be taken out).

Manuscripts, printed matter, films, photographs, gramophone records, cinematographic films, loaded recording tapes and video-tapes, etc., which contain state secrets or otherwise prohibited exports.

Valuable cultural relics and rare books relating to Chinese revolution, history, culture and art.

Rare animals, rare plants and their seeds.

Precious metals and articles made thereof, jewellery, diamonds and ornaments made thereof (with the exception of those within the quantity allowed to be taken out by outgoing passengers).

Other articles the exportation of which is prohibited by state regulations.

The Sanitary Measures to be taken by Vessels while in Port:

1. If a case or a suspected case of any quarantinable disease or any death not from an accident trauma is found on board, the responsible person on duty shall at once report to the quarantine service for temporary quarantine.
2. When rats are found dead or rodents are caught on board, the Master (or responsible person on duty) shall report to the quarantine service for examination.
3. Efficient rat guards or other means against rats shall be properly put on all mooring ropes.
4. When a gangway or gangplank is used in the night it is to be illuminated by a strong electric light.
5. When flies, mosquitoes, cockroaches or other disease-spreading insects are found aboard, necessary measures should be taken immediately to destroy them.
6. Waste and garbage on board shall not be thrown overboard or discharged into the port waters.
7. The sanitary measures put down on the Pratique Form must be continued as long as the vessel is in the harbour.

SHIPMASTER'S REPORT: March 1987.

Documents: See "General" before first port.

Pilotage: Refer to BA. Charts 1255 & 1260. Pilot usually boards at Inner Quarantine Anchorage in position Lat. 37° 34.5' N., Long. 121° 25.7' E. For deep draft vessels, Pilot will board on request at Quarantine Anchorage No. 2 in position Lat. 37° 39' N., Long. 121° 29.5' E. Yantai Gang is a large sheltered bay and may only be entered by the Bei Shuidao. Passage through Dong Shuidao is prohibited.

Navigation: Vessels may enter Yantai Gang without a Pilot and proceed to the Quarantine Anchorage. Entry presents no problems, except for deeper draft vessels which have little choice of anchorages. Most navigation lights are low powered and Diliuxing and Dajiaoshi are fishing lights and will probably not be seen. The bay is exposed to Northerly gales which are frequent in Winter and heavy swell will develop inside the bay. The bottom is soft mud and poor holding ground. During gales both anchors will be needed with a large amount of cable.

Restrictions: Despite occasional ice in Winter the port is always open. Maximum depths in the Quarantine Anchorage, where ships are lightened, is 13 m. to 15 m. The inner harbour has been dredged to give 10 m. at a number of berths. Largest ship berthed 225 m. LOA.

Tugs: 2 large tugs of 3,200 h.p. and 7 smaller tugs are available.

Berthing: Depth alongside berths is 10.0 m.

Cranes: 9 large grab cranes are available on the main quay. There are 2 floating cranes, one with a lifting capacity of 60 tons and a larger one of unknown capacity.

Lightening operations are carried out at the anchorage, weather permitting.

Fresh Water: Water can be supplied alongside the quay at a rate of 5 t.p.h. Water barges of 200 tons and 400 tons capacity are also available.

Fuel: IFO and MDO available by barge from Dalian.

Consuls: None locally.

Repairs: Minor repair facilities available. Repair squads can be brought in from Qingdao.

Repatriation: Partial crew change of some 20 crew members undertaken with difficulty.

Airport: Adjacent to the city. Services available to Shanghai, Nanking, Beijing, etc.

General:

Trade & Developments: Yantai had a population in 1987 of about 380,000. It has little export trade, but is a large importer of logs and fertiliser. Some steel is also imported. A ship breaking yard is also in operation. The port area and the Western shore of the bay are under development.

Communications: Yantai is connected, by road and rail and has regular passenger ship services to Dalian and other coastal cities on daily basis.

Agent: China Ocean Shipping Agency, 23 Hai Gang Road, Yantai. Cables: "PENAVICO YANTAI". Telephone: (0535) 223181, 243181. Telex: 32562 OSAYT CN.

SHIPMASTER'S REPORT: August 1989.

Vessel:

Type:	Log/bulk carrier
Summer draft:	9.54 m.
LOA:	167 m.
Beam:	26 m.
DWT:	26,500 tonnes
Holds:	5
Cranes:	4

Navigation:

1. Advance Notices: The usual 7 days/4 days/2 days and 1 days ETA notice despatched to "Penavico Yantai" agents. Four days prior to arrival, Penavico responded by advising the vessel's port schedule.
2. Radio pratique not available.
3. Pilotage compulsory for foreign vessels. Pilots, consisting of one senior pilot with two assistant pilots who board at the anchorage. Pilots monitors VHF Channel 11. Services available 24 hours with prior arrangement through Agents. Same number of pilots board on departure.
4. Anchorage area as shown in Chart No. 1260. The depth of Quarantine Anchorage No. 1 was reportedly dredged to 12.0 m. The bottom consists mainly of mud. Good shelter is afforded from the South side.
5. Approaches to port: From a position South of Quarantine Anchorage No. 2, a SW'ly course was steered to enter the North Channel (Bei Shuidao) between Xiaoshanzi and Dajiaoshi, after which vessel steered direct to the anchorage/Pilot Station.
6. On berthing, with starboard anchor on stand-by, the vessel was moored with 4 head/stern lines and 2 springs. Shore bollards are spaced every 10 m.
7. No special entry/sailing restrictions at the new wharf, except in the old berths (Nei Gang) where local passenger liners' movements are given priority by the Harbour Master.
8. Communications: Two hours prior to arrival (about 30 miles from the port), Yantai Port Radio was raised on VHF Channel 16.

While at anchorage, vessels are advised to keep watch on Channel 16 for port movements and berthing instructions, which are announced in good English. The agent could be reached at any time during office hours on Channel 14, through Yantai Port Radio.

Tugs: On shifting to berth from anchor position, one tug was secured at the bow (tug lines used) as vessel manoeuvres through the channel. Another tug meets the vessel by the jetty. Two tugs also used on sailing.

Facilities: The new wharf has an alongside depth of 11.5 m. at low tide and can accommodate 6 Panamax size vessels.

Four shore mobile cranes were used to discharge the log cargoes. Exact maximum capacity of the cranes was not available at the time, but they were prone to breakdowns. Vessel's cranes were used simultaneously to shift deck cargoes.

Cargo Operations: Shore labour works 24 hours (including Sundays) in 3 shifts from 0700 – 1500, 1500 – 2300 and 2300 – 0700. Except for occasional shore crane breakdowns, discharging was fast. Crane operators are good and a minimum of damage was reported.

Repairs/Dock Yards: Not available. Minor repairs possible. Welding repairs, due to stevedores damage, carried out prior to ship's departure.

Supplies/Services: Provisions available through the government ship suppliers at prices remarkably higher than local retail shops.

Fresh water available by barge only.

Fuel not available in Yantai.

Time: GMT plus 9 hours in Summer.

General:

1. During vessel's stay in port, the weather has been generally fair. Northerly/Southerly shifts of tidal current (about 1 knot) was experienced whilst at Anchorage No. 1. The tidal range whilst alongside was observed as about 1.0 m.
2. No size limitations at the new wharf. Construction of transit sheds, rails and roads are in progress. Bottom soundings of berth indicates average depths of 11.5 m. alongside. The buoyed channel that leads to the wharf is, according to the Pilots, dredged to 12.0 m. (Echo sounder readings shows approx. 11.5 m. along the length of the channel).
3. Chart used: B.A. Chart No. 1260.
4. If vessel wishes to undertake welding on deck, either by shore labour or by ship's crew, Harbour Police will first board the vessel to inspect the work area to see if safety precautions have been complied with. They will then give the final approval to start the repairs. No welding work should be started unless the Harbour Police are at hand, otherwise the vessel will incur a fine.

Authority: Port formalities are carried out at the anchorage on arrival. Chinese forms should be used for papers. However, they also accept vessel's forms and will transfer the information to their Chinese forms themselves. They will hand out blank Chinese forms if vessel has none. Boarding officials are courteous and direct. They speak little but understandable English. With agent's assistance, entry formalities were carried out in a quick and efficient manner.

SHIPMASTER'S REPORT: September 1991.
Lightening Operations:
Message to Master from Agent:

Discharging operations will be carried out at lightering anchorage by barges (about 15,000 tonnes d.w.t.).

There are no restrictions on vessel, such as length, draft, etc. Depth at the anchorage is 18.0 m.

Fresh water will be supplied by barge and bunkers can be supplied through Chimbusco Yantai.

No dirty ballast facilities.

Slops can be accepted by barge.

Tug company owns 4 tugs with 3,200 h.p. and 5 tugs with over 1,200 h.p.

Pilots will board at No. 2 Anchorage within the following area:

Lat. 37° 40' 30" N., Long. 121° 29' 15" E.
Lat. 37° 40' 30" N., Long. 121° 31' 45" E.
Lat. 37° 39' 00" N., Long. 121° 31' 45" E.
Lat. 37° 39' 00" N., Long. 121° 29' 15" E.

Then will shift the vessel to lightering anchorage.

Statement of Facts concerning Fine: The barge was moored alongside the vessel to transfer a parcel of export crude oil.

Safety Check List was jointly completed with the Sinochem Loading Master before commencement of transfer.

On a number of points the barge did not comply and corrective action was requested.

Our vessel complied with all safety and operational requirements.

The crew was carrying out painting on the poop deck. At approximate 1100 hrs. we were notified by the attending Port Authority representative that crew members were chipping on the deck in violation of port regulations. It appeared that a crew member was just removing a rough spot. Corrective action was taken immediately.

After having discussed the matter with this Port Officer in the presence of the Boarding Agent, who acted as translator, and after apologising for this occurance, the matter seemed settled.

At 1530 hrs. the next day, however, the same Port Officers boarded the vessel and presented us with a letter (Note of Fine) in the Chinese language. A free translation was given, and this made it clear that the vessel was being fined for chipping rust during cargo operations with a fine of 10,000 Yuan Renmimbi. Allegations were made that electrical equipment was used for chipping, which is not true. As we do not have that kind of equipment on board (a hand hammer was used at the time), this was repudiated.

Further allegation was made that the vessel was operating the radar, this was true, although intermittently used for regularly checking the vessel's position. This was necessary because the Yantai Oil Transfer Anchorage is situated in an open roadstead, only one and a half miles offshore and has poor holding ground.

A Letter of Protest was made up and presented to the Port Officer who refused to sign anything.

Note of Fine was signed under protest and for receiving only.

Port Officers left vessel after 90 minutes.

SHIPMASTER'S REPORT: August 1993.
Lightening Operation:

The vessel arrived at Yantai Tanker Anchorage at 0845 hrs.

Communications with the Pilot Station was established at 0830 hrs. after several attempts. Vessel was ordered to anchor and wait for further instructions.

Notice of Readiness was telexed to several addresses, as no telex number was available for Yantai. Jardine Shipping Hong Kong caught the message and sent the telex number of "Penavico Yantai".

The Notice of Readiness was sent to them again and instructions and details about the port were requested. No information was passed by this Agent, except their confirmation that my provisions ordered via Qingdao had been received.

My request for a nautical chart of Yantai Port was not honoured. At that moment it was completely unknown where the discharge would take place, as no details were mentioned in sailing directions.

The following day, the vessel made contact with Pilots. Instructions received that at 1100 hrs. Pilot would embark to bring vessel to "the other tanker anchorage".

At 1115 hrs. a party of 7 officials, 3 Pilots and one Agent embarked.

Then it became clear that the discharge would take place by lightening at the most Eastern anchorage off Yantai Port.

The vessel was cleared at 1200 hrs. Meanwhile the anchor was weighed.

Under pilotage of 3 Pilots, vessel shifted to the other anchorage. I noticed that the Pilots were not used to handling this size of vessel (83,000 d.w.t.). With the co-operation of the Pilots, I anchored the vessel by myself. The Pilots used our "own home-made nautical chart" of the Yantai Port vicinity.

After anchoring, a tug embarked a gang of labour to secure the Yokohama fenders (3 middle sized fenders in good condition) on board the vessel. Also chemist, surveyor and other cargo interested people embarked.

The lightening vessel was already anchored near anchor position. It has to be said, that the preparations for the lightening operation were well organised. Ship's crew assistance was only required for the hose crane. Mooring lines of the lightening vessel were handled by the Chinese mooring gang on board our vessel. They also connected the hoses (4×6 in. connected on ship's connections).

The "Penavico" Agent was of great help with the cargo discharge planning. The Chief Officer of the lightening vessel was present during this meeting. The "Ship-to-Ship Transfer Guide" Safety Check List was discussed and understood by the lightening vessel's mate. However, it was noticed from our side that this Check List is not yet common on Chinese vessels.

The discharge to the lightening vessel caused no problems. The bulk discharge rate was approximate 2,000 cu.m./hr. at 3.5 bar at the vessel's manifold.

A Lightening Bill of Lading was made by myself. The Agent has signed this Bill of Lading "as Agent only" for the Master of the lightening vessel. No figures available from lightening vessel on completion of lightening operations.

Hoses and fenders remained connected/secured on our vessel for the next operation.

The total time of this "unexpected" operation can be in a range of one week up to one month.

SHIPMASTER'S REPORT: October 1994 (Received 1995).
Vessel: 30,000 d.w.t.
Draft: 11.0 m.
Cargo: Soya Bean Oil.
Time: GMT plus 8 hours.
Documents:
6 copies Crew List.
1 copy Stores List.
1 copy Crew Effects and Currency Declaration.
4 copies Passengers List (if any).
1 copy Health Declaration.

Shore Leave: Crew's shore passes to be returned before sailing (shore leave ends at midnight).

General: The vessel arrived at Quarantine Anchorage No. 2 at 0000 hrs., where we were ordered by Penavico to anchor and await free berth.

Communications with Penavico were on VHF Channel 11 and Yantai Radio on Channel 16. Contact was established about 1 hour before arrival.

N.O.R. was tendered by telex to Penavico, but no answer with regard to berthing prospects was given.

Next afternoon at short notice, 2 Pilots boarded by tug for shifting the vessel to Inner Anchorage No. 1. When anchored, a party of 7 Officials and one Agent boarded the vessel for Free Pratique and Inward Clearance formalities. Dinner was provided.

Imperative, when entering harbour limits, to hoist Call Sign and Quarantine flags.

After a wait of 5 days, Cargo Surveyors boarded to take cargo ullages and samples, after which vessel was called to berth, proceeding under pilotage during H.W. by a buoyed channel and moored to Berth No. 25/26, using 2 tugs.

The berth was protected by 2 large Yokohama fenders to maintain the vessel well away from the quay, due to the draft.

Shore gang connected 2×6 in. hoses, and discharge started immediately as ebb tide running. At L.W., the draft was 10.65 m. and the vessel floated freely. Max. pressure allowed 6.5 Bar, rate 200 tonnes/hr.

The discharge was completed during the night, but the surveyors came on board to inspect the cargo tanks at 0830 hrs. next morning. A Tank Dry Certificate was issued (application has to be submitted to Agent in advance) and hoses disconnected. When all cargo operations were completed, the Official Party boarded to clear the ship, and Outward Clearance was granted. Pilots were then called by the Agent and the ship sailed, using 2 tugs for unmooring.

All manoeuvers were carried out by 2 Pilots who seemed to be most cautious, proceeding at slow speed and using the whistle a lot. Good assistance given by tugs. Receiver's representatives never made an appearance.

Agent: China Ocean Shipping (Penavico), 155 Baima Road, Yantai, P.R.China. Tel: 535-243181. Telex: 32562. Fax: 535-247872.

When at berth, the Agent visited the vessel daily.

AUTHORITY: Port of Yantai Authority, 155 Beima Road, Yantai, China. *Telex:* 32521 Habyt Cn.

YANTIAN: 22.35 N. 114.15 E.

ANCHORAGE: Lat. 22° 34' 02" N., Long. 114° 15' 21" E.
RESTRICTIONS: Depth in channel 15.0 m.
BERTHING: July 1992.

Berth No.	*Length* (m.)	*Depth* (m.)
1	185	13.0
2	165	9.2
3	115	6.5
4	55×3	4.2

DEVELOPMENTS: Construction commenced in 1988. On completion, there will be 48 berths (total length 16,000 m.), including 6 coal berths, 9 container berths and 23 dry bulk and general cargo berths.

AUTHORITY: Yantian Port Authority, 7/F Sha Towian Official Building, Yantian , Shenzhen, China 518081. *Tel:* 5552049, 5550301. *FAX:* (0755) 5551530.

YINGKOU, Including Ba Yu Quan: 40.41 N. 122.15 E. (See Plan)

LOCATION:
Yingkou Working District: 40° 41' N., 122° 15' E.
Ba Yu Quan Working District: 40° 17' N., 122° 06' E.

PILOTAGE: Compulsory. Pilotage is undertaken day and night. Pilot boards vessel at Pilot/Quarantine Anchorage and (or) Lightening Anchorage.

ANCHORAGE: *Lightening Anchorage:* Depth: 9.0 m. – 12.0 m. Max. size: 30,000 d.w.t.
Ba Yu Quan Working Anchorage: Depth 11.0 m. – 12.0 m.

VHF: Harbour Bureau on Channel 10 (24 hours). Penavico on Channel 11.

TUGS: 1×3,600 h.p., 1×1,600 h.p., 2×980 h.p., 1×600 h.p., 1×428 h.p., 1×240 h.p. and 2×150 h.p.
Ice breaker of 3,000 h.p. available.

BERTHING:

Working District	*Name of Berth*	*Length (m.)*	*Permissible Draft (m.)*	*Cargo Handled*
Yingkou	No. 2 North	60.0	6.5	Oil
	No. 2 Middle	100.0	6.5	General Cargo
	No. 2 South	125.9	6.5	General Cargo
	No. 2 Grain	85.8	6.5	Grain
	No. 3	244.2	6.8	General Cargo
	No. 4	80.0	6.3	General Cargo
Ba Yu Quan	No. 21	290.0	11.3	Oil
	No. 22	36.0	6.0	Liquid Chemical
	No. 23	289.0	11.0	Coal
	No. 30	123.0	8.5	General Cargo
	No. 31	212.0	12.0	General Cargo
	No. 32	182.0	11.0	General Cargo
	No. 33	187.0	11.0	General Cargo
	No. 34	154.0	11.0	Containers
	No. 35	155.0	11.0	Containers
	No. 36	212.0	11.0	General Cargo
	No. 37	182.0	11.0	General Cargo
	No. 38	187.0	11.0	General Cargo
	No. 40	136.0	8.5	General Cargo
	No. 42	260.0	9.5	Ro-Ro Traffic

Warehouses and Open Store Space:

	Warehouse	Open Store Space
Yingkou	270,000 sq.m.	240,000 sq.m.
Ba Yu Quan	77,000 sq.m.	—

Main Imports and Exports:
Exports: Maize, steel, wood, magnesium and containers.
Imports: Ores, fertiliser, cars, general cargo and containers.

FUEL: Not available.

GENERAL: *Barges:* 3×1,000 tons (self propelled), 7×2,000 tons and 2×1,000 tons.
Floating Crane: Not available.
Supplies: Available from Foreign Shipping Supply Corporation.

SHIPMASTER'S REPORT: October 1994 (Updated 1996).
Berth: Bayuquan.
Documents: Prepare the following prior to arrival:
1 copy Maritime Declaration of Health.
10 copies Crew List.
2 copies Personal Effects List.
2 copies Bonded Stores List.
2 copies Dangerous Cargo List.
2 copies Currency List.
2 copies Ports of Call List.
Agent gives Report of Entry Form to be filled-in.
Departure:
All Crew Shore Passes will be collected for Immigration checking.
Pilotage: Compulsory for all vessels.
VHF: Prior to approaching Pilot Station, vessel must call Bayuquan Port Control through Channel 8. At Xingang, call Xingang Port Control on Channel 10 and report vessel's name, max. draft, last port of call, your intention to load or discharge, and name of your Agent.
Tugs: Tugs and mooring assistance available, 2 tugs used.
Stevedores: To be arranged by Agent.
Fresh Water: Available.
Fuel: Fuel oil available.
Customs Allowance: 200 cigarettes and 1 bottle of spirits.
Repatriation: Possible.
Time: GMT plus 8 hours.
Shore Leave: Every crew member going ashore must carry a Shore Pass and Seaman's Book.

ZHANGJIAGANG: 31.58 N. 120.24 E. (See Plan)

LOCATION: Zhangjiagang is situated at the South bank of the Changjiang, about 114 km. East of Wusong Kou (anchorage for Shanghai).

The port is almost land-locked, with Changshan on the West; Wushan and Xiangshan on the South and Fujiangsha on the North; all of which shelter the port from strong winds and heavy seas. The port is a natural harbour having deep water, able to accommodate vessels of 10,000 tons which can enter or leave whenever necessary.

The port is under the administration of the Shanghai Harbour Bureau.

APPROACHES: *Tidal Stream:* During the dry period, the tidal stream is multi-directional, while during the flood period it changes between multi and single directions. The rate of ebb is greater than that of flood. The direction of flood or ebb stream is somewhat parallel to the river bank and the direction of the deep channel, with the exception of a few places.
Wind: Year round the prevailing wind is S.S.E. and E.S.E. or E.N.E. and S.E. The strong wind is from E.S.E. and S.E. The annual average wind force is 3.8 m. per second. Typhoons may threaten the port in the period from July to September, especially in August, with a force up to Force 10.
Aids to Navigation: The harbour is provided with 16 light buoys numbered Funan No. 1 to 14, beginning from the lower entrance. There are two No. 7 and two No. 8 light buoys. No. 14 light buoy stands as a Fairway Buoy, navigable on both sides. Port hand buoys are painted black with a black spherical topmark, starboard hand buoys are painted red.
Obstructions: At the West side of the lower entrance along the channel, there is a large shoal patch, extending Eastward with a depth of less than 5 m. over it.

PILOTAGE: Pilotage is compulsory for vessels flying foreign flags on entering or leaving. The Pilot Station is off Baoshan, within the area bounded by a line connecting Buoys No. 67, 69, 15 and 14, where the depth of water varies from 8 m. – 17 m., mud bottom.

ANCHORAGE: Quarantine Anchorage is situated in the area North of the line connecting No. 30 light buoy and No. 30B light buoy. Water depth is 10 m. – 13 m., bottom sand and mud, capacity of four to five vessels. This anchorage is also for Joint Inspection.

RESTRICTIONS: Draft is restricted to 9.5 m. as vessels have to cross a bar at the mouth of the Chang Jiang River.

TUGS: 2 × 960 h.p.

BERTHING: There are 2 groups of floating wharves consisting of 4 berths each, of which two are for taking vessels of 10,000 tons. No. 1 and No. 2 floating wharves are each composed of 3 pontoons and 2 joint bridges and connected to the shore by 6 steel bridges.

There are also floating piers for harbour tugs, and temporary floating piers.

There are 7 mooring buoys numbered from No. 1 to No. 7, beginning from the lower entrance.
Warehouses: There are warehouses and storage ground along the wharves for cargo stowage.

SHIPMASTER'S REPORT: January 1992.
Chang Jiang River:
B.A. Charts No. 1602 and 1603.

Navigation aids were found to be as charted, positions were checked against the pilot's chart, except for the following:
(1) Niupi Jiao lightfloat has been replaced by a red and white pillar buoy.
(2) Buoy No. 251 has been removed and is not in either the deleted or un-deleted positions.
(3) Beicao Zhong lightfloat is in the charted position but is a mid-channel mark. The Southern boundary line of the channel starts at Buoy No. 262 and runs 115° to join the existing line at Buoy No. 258.

The pilot's chart showed some depths of 6.9 m. in the Biecao Hangdao Channel.

Beicao Hangcao Channel is reported to be maintained at 7.0 m.
Pilotage Inwards:
Chang Jiang Kou to Baoshan Anchorage: (Distance 49 miles, time 4.5 hours).

On 12th December 1991 inward vessels were called to take pilots at Buoy No. 257 at 1230 hrs. with a published high water time at Wusong Kou of 1532 hrs. and 3.2 m. (3 hours before H.W. Wusong).

This vessel experience no difficulty with a maximum draft on arrival at the anchorage of 5.89 m. aft.

On occasions the pilot took the vessel outside the buoyed channel to pass deep draft vessels.

Vessel anchored in position Lat. 31° 25.2' N., Long. 121° 32.3' E. (1 hour after H.W. Wusong) with 6 shackles on starboard anchor, to await river pilots to Zhangjiagang at daylight next morning.

The anchorage was outside the designated anchorage areas on the chart.

There is no night navigation above Wusong.
Baoshan Anchorage to Zhangjiagang: (Distance 77 miles, time 7 hours).
B.A. Chart No. 2946.

On 13th December 1991 vessel left Baoshan Anchorage at first light (0630 hrs.), and arrived at Zhangjiagang at 1315 hrs.

There were no draft restrictions with a draft of 5.88 m. aft on arrival.

Above Wusong the channel is marked with black and red buoys, mostly fitted with lights and radar reflectors.

Generally these are passed black to starboard and red to port inward bound, but in some places are passed on the wrong side or ignored completely.

There are a considerable number of barges on the river, individually or in groups secured fore and aft and abreast in trains secured fore and aft with one towing barge ahead and a steering barge aft. Most navigate as one vessel and swing to whichever side of the channel offers the most favourable current, without warning and with little regard for collision regulations.

There are also a number of ferries and log booms moving in the river.

Instant manoeuvring speed is required, also plenty of air for the whistle, which is in use constantly.

The river banks are protected for most of the way on both sides by levees with mud flats extending some distance out.

Considerable industrial development is in progress for the full distance especially in the region of Nantong, where on the North bank there are a number of cargo berths and repair facilities for seagoing vessels, including a floating dock.

South of the channel in this area is used for cargo work at anchor or at buoys.

The pilots used no charts and it is reported that only Naval charts exist, which are not available to foreign shipping.

Pilotage Outwards:

Zhangjiagang to Beimou Bar: (Distance 44 miles, time 4 hours).

Beimou Bar to Liu He Anchorage: (Distnce 17 miles, time 1.75 hours).

Departure time is arranged in order to cross Biemou Bar at high water when at deep draft.

Vessel cleared the buoys at 0930 hrs. on 2nd January 1992 and crossed the bar between 1338 hrs. and 1359 hrs. (15 and 36 minutes after predicted H.W. at Xuliujing).

Visibility was poor on departure but improved later.

There appeared to be less barge traffic than on the inward passage, possibly due to the poor visibility.

A survey vessel preceeded the vessel out of the harbour area. Some soundings of 3.0 m. underkeel at 8.82 m. draft were obtained shortly after leaving the buoys, otherwise there was good water to Beimou Bar.

The channel is marked throughout by buoys, but, as for inwards, they were not always passed according to colour.

The pilots kept mainly to the South bank to Nantong where the North bank was followed to Dongzhou Cao then the South bank to Liu He Anchorage.

Hengsha Anchorage to Chang Jiang Xou: (Distance 35 miles, time 4 hours).

The vessel cleared Hengsha Anchorage at approximately 0830 hrs. on 4th January 1992.

There was a predicted H.W. at Wusong Kou of 3.3 m. at 1218 hrs. Soundings obtained were as follows:

Time (Hrs.)	*Position*	*Sounding* (m.)	*Depth* (m.)	*H.W. Wusong* (Hr./Min.)
0808	Hengsha Anchorage 31° 18' N., 121° 47.7' E.	7.8	16.6	−4.10
0826	Anchor aweigh	6.4	15.2	−3.52
0857	Zhongsha lightfloat	3.1	11.9	−3.21
0915	Buoy 274	1.2	10.0	−3.03
0924	Buoy 272	0.9	9.7	−2.53
0928	Buoy 271	1.0	9.8	−2.50
0934	Buoy 270	1.1	9.9	−2.43
0938	Buoy 269	1.0	9.8	−2.40
0948	Buoy 267	1.2	10.0	−2.29
0956	Buoy 266	1.3	10.1	−2.22
1010	Buoy 263	1.9	10.7	−2.07
1016	Buoy 262	2.0	10.8	−2.01
1037	Beicao Zhong lightfloat	4.05	12.85	−1.41
1058	Buoy 258	2.8	11.6	−1.20
1136		2.3	11.1	−0.42
1153	Niupi Jiao Buoy	2.9	11.7	−0.25
1242	Chang Jiang Kou lightfloat	3.0	11.8	+0.24
1330	Chang Jiang Kou lightfloat 273°×10.5 miles	10.2	19.0	+1.12
1345	Chang Jiang Kou lightfloat 280°×13.5 miles	12.0	20.8	+1.27

Zhongsha to Niupi Jiao: (Distance 26.3 miles, time 2 hours 56 mins., speed 8.97 knots).

The vessel was generally close to mid-channel and then close to the mid-channel buoys.

The first inward deep draft vessel passed at 0915 hrs. and the last at 1010 hrs. inward.

At an estimate from the buoy indications, high water for the vessel was at 1037 hrs.

Port Information:

Zhangjiagang is on the Chiang Jiang River in position Lat. 31° 58' N., Long. 120° 26' E.

Time zone is G.M.T. plus 8 hours, Summertime from mid-April to mid-September is G.M.T. plus 9 hours.

Agents:

China Ocean Shipping Agency, Zhangjiagang Branch, Guang Qu Zhen, Zhangjiagang, Jiang Su. Tel: 05222 – 332535. Telex: 363821 ZGPEN CN. Fax: 05222 – 323928. Cables: Penavico, Zhangjiagang. VHF: Channel 11 during office hours. Contact: Zhao Hou-zing, Senior Economist, Shipping Department. Office hours: 0730 hrs. – 1130 hrs., 1330 hrs. – 1700 hrs.

Agents are generally very helpful and can be contacted outside office hours on VHF by arrangement.

The practical office hours can be cut short by a half hour at the end of each day but important items can usually be arranged.

Shanghai Pilots – Inwards: Pilots are arranged by "Penavico, Shanghai", who will advise the boarding time and position by cable prior to arrival. It is therefore essential to keep these agents advised of any change in ETA. On this occasion the agents advised that the pilots would board at 1200 hrs. at Buoy No. 5 but the pilots changed this to 1230 hrs. at Buoy No. 257, so it is also essential to contact the pilots as soon as possible on VHF.

Pilot boarding area is arranged somewhere between Chang Jiang Kou and either Buoy No. 5, for shallow draft, and Buoy No. 257, for deep-draft vessels.

There is apparently one pilot vessel serving both areas and it would appear that they choose the most appropriate area for all vessels on a particular tide.

The pilots board from a small boat launched from a large white vessel, pilot ladder to be 0.5 m. above the water, a boat rope is not required.

All vessels taking a pilot on a particular tide are called in at the same time for boarding and no particular advantage will be gained from jumping the queue.

The Shanghai pilot will take the vessel to Wusong Anchorage where vessels will anchor to await Chang Jiang pilots.

On this occasion the vessel arrived at Wusong at 1624 hrs. and the Shanghai pilot left shortly afterwards. He was unable to advise the boarding time of the river pilots and the vessel was unable to make intelligible contact with Penavico for information.

Zhangjiagang Pilots: Pilots are arranged by local agents who are in contact with Shanghai agents, for the vessels arrival at Wusong.

The pilots are employed for the various river ports, there are 10 pilots employed for Zhangjiagang and 2 pilots board for all services for that port. The various river pilots have their own launches or use an independent launch service.

The two river pilots boarded at 1800 hrs. and required meals and accommodation for the night.

There is no night navigation above Wusong, pilotage above Wusong commencing at first light.

Two pilots are employed for all movements in the port, arrangements being made by the agents.

For outward pilotage, the river pilots go as far as Lu He Anchorage and anchor the vessel to await the Shanghai outward pilot.

Shanghai Pilots – Outward: Pilots are arranged by Shanghai agents on advice from local agents. Lu He Anchorage is about 15 miles above Wusong and pilots board at a time suitable to pass the shallow water at the entrance on the tide for the day.

On this occasion he boarded at 0718 hrs. to make a tide at about 1030 hrs. which was not possible for a vessel with a manoeuvring speed of under 11 knots against a strong tide all the way and at the last minute it was necessary to anchor at Heng Sha Anchorage where the following morning the anchor was weighed at 0800 hrs. to make a tide about 30 minutes later than the previous day.

The pilot remains on board at anchorage if the vessel cannot make a tide.

General Information: The port of Zhangjiagang was started in May 1983 and is still under construction.

It was originally administered from Shanghai but has been under independent administration, under the control of the Transport Ministry since 1987.

The port electricity is reportedly supplied by 2 power stations whose capacity is insufficient to keep up local demand and cuts are frequent in domestic and office premises with occasional cuts affecting the port installation.

Penavico frequently have no power to run VHF, telex or fax machines.

There is deep water in the port although it is shallower from Buoy No. 9 to the Northern tip of Fujiangsha island.

Main Berth – General Cargo Berth: This was too far distant to get an accurate impression but has been completed for some time and has 7 cranes of about 10 tonnes capacity.

Container Berth: Completed but not yet in use as the container storage area behind it is still being paved.

It has a container gantry crane and a 10 tonne crane, neither of which has yet been rigged.

Liang You Berth (Grain/Oil berth): Still under construction.

The Western 180 m. has been completed and is in use.

The construction is on concrete piles, the face of the berth is some 100 m. from the shore with a 20 m. wide working apron served by access bridges for the completed section.

Floating wooden fenders are fitted along the face of the berth.

In December 1991 the top of the berth was approximately 4.0 m. from the water at high water and 5.5 m. at low water.

Depth alongside was 17.0 m. at low water.

Bollard spacing is approximately 25 m.

There are 2 cranes with no S.W.L. marked but they are reported to be able to lift 10 tonnes and also to lift 12 tonne bulldozers into bulk vessels.

A large number of small mobile cranes of approximately 5 tonnes capacity are in use and there is also a quantity of grain handling and bagging equipment.

There are a number of large warehouses, mostly empty. Bagged rice and other bagged commodities are stored in the open and covered with tarpaulins.

This berth is used for the import and export of cereals, cereal products and vegetable oils.

The tanker connection is approximately at the mid-length of the completed section and is a flexible hose connected to a pipeline ending at the inshore side of the working apron.

Cargo Working: Loading bagged rice.

Work is continuous round the clock in three shifts.

1st Shift 0700 hrs. – 1500 hrs. (meal break 1100 hrs. – 1200 hrs.).
2nd Shift 1500 hrs. – 2300 hrs. (meal break 1800 hrs. – 1900 hrs.).
3rd Shift 2300 hrs. – 0700 hrs. (meal break 0200 hrs. – 0300 hrs.).

The meal breaks are supposed to be 45 minutes but in practice extend to an hour and occasionally longer.

The shifts may also start and finish up to half an hour late.

It is usual that all cargo for a vessel is on the shore prior to the vessel berthing and it is reported that a loading rate of up to 6,000 tonnes per day can be reached with 5 gangs.

On this occasion about half the cargo was loaded direct from barges alongside onto the ship direct, or on to the pier and transferred to the ship, a net loading rate for 415,000 bags or 794.6 bags per gang hour was achieved or about 4,250 tonnes per day gross.

Cargo loaded direct from the barges to the ship was by ship's cranes and from barges alongside at any convenient point on the berth either direct into the ship by shore crane or transferred to the dock by mobile crane and into the ship by shore crane.

The average net weight of a bag of rice is 50 kg., gross weight 50.6 kg. On earlier tally sheets the gross weight of 53 kg. was used. Sample bags are weighed, reportedly 1 bag per thousand, during loading and a final weight is given to the shippers by the surveyors.

Cargo stored on the dock is raised on pallet boards and well covered by tarpaulins against the weather and no wet bags were noted from these consignments.

Cargo in the barges is not so well protected and some wet bags were noted, these were sorted before loading and not brought on board. There were no difficulties experienced in having to reject wet bags.

No hooks were used for handling the bags during loading either on board or ashore and the few torn bags in loading were sewn up on the spot or rejected by the survey/tally clerks.

The bags are loaded in rope net slings of 40 bags and lifted on board by chain hooks. Some damage was noted due to the hooks fouling the bags but again minor damage was sewn up and major damage rejected.

The storage on the dock would appear to be an ideal breeding ground for rats, however few were noticed.

Dunnage and paper were laid by stevedores prior to loading whilst the vessel was at the buoys awaiting the berth. Dunnage and paper were supplied by barge from Shanghai, arranged by the protecting agents in Hong Kong.

Cargo is loaded with two fore and aft and two athwartships ventilation channels throughout the whole stow, these are tied with bags every 5 tiers, no additional dunnage is required for this purpose.

Stevedores at this berth are experienced in the loading procedure.

A stowage factor of 53 (1.48) is given but this is more appropriate for tweendeck vessels. In this vessel, bulk carrier with hopper tanks top and bottom, 49 (1.37) was achieved.

Cargo working from 14th to 29th December 1991 was delayed due to fog, mist, rain, snow and high winds with sub zero temperatures, and awaiting the previous vessel to complete loading. Time lost due to weather was about half the total loading time.

De-Ballasting: The Harbour Master requires a written request to pump ballast and harbour officials attend on board at the start of pumping to ensure that no contaminated ballast is being pumped.

The officials do not remain on board throughout the operation but the gangway guards usually keep a close watch on proceedings. It is recommended that any officials coming on board are entertained with coffee, soft drinks and cigarettes.

Cargo Hold Survey: Survey is carried out by CCIB, Import and Export Commodity Inspection Bureau of the People's Republic of China, prior to loading. Their initial certificate is added to the letter of request for survey. This was carried out at the buoys whilst awaiting the berth and is required before Notice of Readiness is accepted.

Port Clearance Inwards: Although there is a designated anchorage in the approach to Zhangjiagang, this is only used for dangerous cargo vessels and the normal practice for vessels awaiting berth is to moor to buoys on arrival.

Port side accommodation ladder is required for boarding.

'Q' flag must be flown and the pilots usually check that this is being complied with.

The correct P.R.C. papers are required but if these are not available prior to arrival the officials are prepared to wait while the information is transferred from the vessel's forms.

A supply of tea, coffee and soft drinks is appreciated and a gift of a couple of packets of cigarettes per man is standard, these will be distributed by the agent.

About 10 officials and 2 guards board.

The formalities are amicable and Penavico local agent ensures a smooth clearance.

Shore passes are issued to all crew members and must be shown to the gangway guards when going ashore, together with Passports or Seamen's Books, whichever have been used for the Crew List.

Port Clearance Outward: Six officials board and require a health form and Clearance Request/Information form which the agent should have put on board previously.

The port officials only work between 0800 hrs. and 1700 hrs. so if it is required to depart earlier than 0800 hrs., clearance can be arranged for the previous afternoon.

The guards leave the vessel after clearance has been granted.

Guards: Two guards join with the port officials and remain with the vessel whilst at the buoys.

The only accommodation available was the hospital and this was accepted.

The guards are officers and it is as well to ensure that they receive the same treatment as officers onboard, particularly with food.

When alongside the guards remain on the dock and do not require food and accommodation.

Liberty Boat Service: Available at the buoys and is arranged by agent.

On this occasion, on the first night the crew were landed at one jetty and not advised that the return boat would leave from a different jetty. On the second night the last boat left the shore early, on both occasions crew members paid cash to the operators for an unscheduled launch. The operators expected however an additional launch to be signed for, but were disappointed.

Fresh Water: Fresh water is available from the berth and is cheap and not metered. An agreement is reached with the port official who acts as shipchandler and general supplier.

Fresh water is also available at the buoys but is expensive.

Provisions and Stores: Local provisions are available, fresh fruit and vegetables in season and judging by the items on sale ashore would be quite good quality.

Other items are available from Shanghai and delivery charges are reported to be high.

Medical: Medical attention and vaccinations are available and can be arranged very quickly.

Movements in the Port of Zhangjiagang: Two pilots board for all movements.

Two tugs are normally used and secure at the break of the forecastle and break of the bridge on the appropriate side using tugs lines.

If the tugs are not available for any reason movement of vessel is subject to the direction of the tide and it may be necessary to wait for the tide to turn to a favourable direction.

Most vessels are berthed heading West but occasionally some in the other direction.

The anchor is used for coming alongside and for mooring to the buoys.

When mooring to buoys the line boat will take all lines from forward (five) in one pass and then go aft and take all lines (four). Lines are secured to the buoys with wire strops and shackles provided by the mooring boat, lashings are not required.

Cargo Fumigation: The suppliers of the cargo, China National Cereals, Oils and Foodstuffs Import and Export Corp., require that the cargo is fumigated after completion of loading.

Instructions from the fumigation contractors will be supplied.

Equipment for fumigation is put on board prior to leaving the berth and the fumigation team of 6 men commence work as soon as hatches are closed.

A government inspection party of 2 Port Health officials also board to supervise, together with 2 guards.

The guards require food and accommodation in the normal manner but the Port Health officials only require accommodation as they eat with the fumigation team.

The fumigation team bring their own bedding and food and only require a messroom for sleeping and use of the galley for cooking.

A skeleton crew are allowed to remain on board, about 6 men (Chief Officer, 2nd Engineer, Bosun, Cook and 2 oilers), to maintain services. The remaining personnel leave the vessel by launch and are accommodated ashore in an hotel.

Communication is maintained by VHF and if required changes of personnel are permitted.

The fumigation guidelines were not strictly complied with, as the vessel was delayed leaving the berth awaiting the change of tide, the gas was released into the holds before leaving the berth, this was done without prior notice to the ship's personnel. Also the gas was not released at the buoys due to weather conditions.

Normal schedule would be:

4 – 5 hours sealing and setting up equipment.

36 – 48 hours with gas in holds.

4 – 5 hours releasing the gas and testing that the vessel is safe.

Fumigation started without informing any ship's personnel while the deck crew were still at mooring stations and working on deck. Although it was ensured that there was no chance of gas leaking from the holds, it was found that some of the drainage holes of the coamings were not properly covered.

Port Health officials made occasional rounds on deck and inside the accommodation with a gas detector to check for presence of gas outside the holds.

Persons staying on board during fumigation were advised to keep their cabin doors unlocked at all times for random testing.

The occupied cabins were tested only three times during the fumigation period.

The fumigants were injected from gas cylinders through a small diameter rubber hose led through the access hatches with the gaps sealed with tape. When the hoses were removed the small holes remaining were not sealed.

Fumigation personnel and Port Health officials leave the vessel with the equipment on the launch used to return the ship's staff. The guards remain with the vessel until outward clearance.

Warning: In Winter the hotel is very cold and personnel must take Winter coats even if they intend to remain inside. Hotel accommodation is fairly basic but friendly and the food is good.

Repair Work: Permission is required from the Port Authorities for immobilisation of the main engines and also for hot work.

Permission is not always granted, particularly for hot work whilst alongside.

ZHANGZHOU: 24.25 N. 118.02 E.

PILOTAGE: Compulsory. Pilot service is available during 10 hours. Pilot boards vessel at Lat. 24° 44' 30" N., Long. 118° 05' 24" E.

ANCHORAGE: Pilot Anchorage (See above) has a depth of 13.0 m. The bottom is mud and the holding ground is good.

RESTRICTIONS: Vessels cannot enter and sail after sunset.

Tidal range: Max. 5.80 m. Average: 3.98 m.

Draft Limitation in the Channel: 13.0 m.

VHF: "Penavico Zhangzhou" and "Sinoagent Zhangzhou" on Channel 16 throughout 24 hours.

TUGS: Available.

BERTHING: One berth with length 260 m. and depth 12.5 m. Max. size 35,000 d.w.t. 2×10 ton cranes. General cargo and containers handled.

CRANES: Floating crane available from Xiamen.

FRESH WATER: Available at berth and at anchorage.

FUEL: Available at berth and at anchorages.

REPAIRS: Facilities available.

GENERAL: *Agency:* Penavico Zhangzhou, 2nd Floor, Port Building, Zhangzhou, Fujian, China. Tel: 86-596-2028623. Fax: 86-594-2028622. Telex: 929009 Penfz Cn.

Sinoagent Dongshan, Port Building, Dongshan, Fujian, China. Tel: 86-596-5620474, 5623474. Fax: 86-596-5623516. Telex: 929017 Agent Cn.

Provisions: Available.

ZHANJIANG (Tsamkong): 21.11 N. 110.24 E.

(See Plan)

Also see 'General' before first port.

PILOTAGE: Pilotage is compulsory and is undertaken day and night.

ANCHORAGE: The anchorage is located between the following positions, Lat. 21° 11' 36" N., Long. 110° 25' 17" E. and Lat. 21° 04' 55" N., Long. 110° 33' 20" E. The depth in the anchorage is 15 m. – 35 m. and the bottom is sand and mud. Vessels up to 100,000 d.w.t. may use the anchorage.

RESTRICTIONS: Vessels may enter and sail after sunset.

MAX. SIZE: The draft limitation in the Channel is 9.5 m.

Tidal Range: Maximum 4.51 m., minimum 0.70 m.

VHF: Zhanjiang Radio is on Channel 16 throughout 24 hours.

TUGS: 1×1,000 h.p., 1×1,200 h.p., 1×2,300 h.p., 2×1,960 h.p. and 4×3,200 h.p.

BERTHING:

Working District	*No. of Berths*	*Length (m.)*	*Depth (m.)*	*Cargo Handled*	*Shore Cranes*
No. 1	7	906	9.0	General	18
No. 2	3	336	12.5	Oil	
No. 3	6	1,166	12.0	Ore and General	24
No. 4	11	1,352	12.0	Grain	20
				Coal	2
No. 5	1	141	7.4	General	2

CRANES: There is a floating crane with lifting capacity of 50 tons. Also see "Berthing".

FUEL: Contact China Marine Bunker Supply Company, Zhanjiang Branch.

REPAIRS: Facilities available.

GENERAL:

Storage: Warehouse: 155,000 sq.m. Open space: 410,000 sq.m.

Imports: Steel, fertiliser and grain.

Exports: Bauxite and general cargo.

Provisions: Contact Zhanjiang Ocean Shipping Supply Corporation.

SHIPMASTER'S REPORT: December 1987 (Updated 1994).

Port Limits: Port Limits extend to Longitude 110° 38' E.

Notes: Vessel not normally 'Arrived' until cleared.

Notice of Readines may not be accepted until the vessel has berthed.

Documents: Standard Chinese Forms used.

6 copies Arrival Crew List required.

Anchorages: There are about 18 anchorages designated by the Harbour Master. In addition there are 12 mooring buoys that may be used by vessels of 10,000 tons during a typhoon.

Pilotage: Total distance about 22 miles. Vessels over 9.5 m. draft and vessels of irregular dimensions embark the Pilot at the Outer Pilot Station from a large tug.

Regular size vessels and vessels of light draft embark the Pilot at the Inner Pilot Station.

There is a heavy concentration of fishing vessels between the dredged channel and the Inner Pilot Station.

Restrictions: Channel said to be 9.5 m. (Datum) and Inner Basin Channel 9.5 m. (Datum).

Max.Size: Tankers up to 11.73 m. and cargo vessels up to 11.4 m. draft. It is however necessary to confirm this on each visit.

Health: Standard Chinese Arrival Inspection Procedure carried out at anchorage, preferably as near to the port as is accessible at the time. The Inspection Party consists of 8 or more persons.

Pratique is only required at the first port of entry.

Radio: Radio Station 'XSJ' on W/T MF and HF and VHF Channels 16, 11 and 13. No public telephone correspondence available.

VHF: Call Radio Station on Channel 16 and change to Channel 13 to speak to Harbour Master, Stevedores, Agents, etc.

Radar: The Harbour Master's Office is equipped with radar. However, we do not believe it is used to assist vessels in harbour.

Tugs: There are 5 'Duck-Peller' tugs equipped with VHF and fire fighting equipment. Normally 2 tugs are used, with ship's lines. There is a dedicated fire float and 2 large and older tugs used as pilot boats.

Berthing: The harbour operates in 5 sections (length 5,260 m., depths up to 12.5 m.).

Section One: There are 11 berths and an 'end-on' berth for Ro-Ro operations of local ferries.

Section Two: Located at the South end of the harbour. All oil operations are carried out at this section.

Section Three: Located upstream from the port.

Section Four: Newly built on reclaimed land. Six berths, including a silo at the end of the quay, with depths of 11.0 m. or more.

Cranes:

Section One: 18 Portal grabbing cranes on the newest berths.

Section Three: 24 cranes available.

Section Four: There are cranes available at all berths, suitable for grabbing.

Bulk Handling Facilities:

Imports: Wheat is handled by pneumatic elevators or crane and grab. Other cargoes handled by crane and grab into mobile hoppers. All bulk cargoes are bagged for onward carriage into hinterland.

Exports: Barytes, talc lumps, fluorspar, etc. Cargo is tipped by lorries onto the quay and loaded by grab and crane. Phosphate and coal also handled.

Bridges: None.

Stevedores: Cargo worked throughout 24 hours in 3 shifts.

Medical: Facilities available. Foreign seamen handled by ship chandler at the request of the agency.

Tankers: Mostly domestic Chinese vessels observed. No details of berths obtained.

Density: 1018 – 1020.

Fresh Water: Available ex-wharf and by barge.

Fuel: Standard Chinese Grades available. Vessels should be aware of the wax content and high pour points. Bunkers available by barge, normally in daylight. Also available at anchorage.

Repairs: Minor repairs possible.

Surveyors: The Chinese Classification Society 'ZC' acts on behalf of most major Societies for survey work. Cargo Surveyors and Draft Surveyors available from Chinese National Organisations.

Gangway/Deck Watchmen: Immigration Police act as gangway guards on all foreign vessels.

Customs Allowances: Crew allowed 200 cigarettes on arrival. The bond is sealed. Weekly issues are allowed upon written application.

Cargo Gear: All berths are equipped with railway lines and have standard Chinese two wire portal cranes of possibly 10 tons SWL, but unmarked. Various designs of grabs available according to normal commodities handled.

One four wire crane observed handling 20 ft. containers. Floating crane observed. Some mobile cranes also available. In the main, ship's gear is used as a last resort.

There are a number of mechanical handling units such as front end loaders, tipping lorries, tractors and trailers. Some fork lifts with tines or hook gantries. Mobile conveyors, bagging plants, hoppers, etc.

Repatriation: Possible via Kwangchow and/or Hong Kong. Land communication is mostly by overnight bus. Occasional ferry to Hong Kong.

Airport: Domestic flights, but recently 3 charter flights per week to Hong Kong direct.

Telephones: Section 4: Some berths have telephones whose installation is compulsory. Foreign ships are charged 200 F.E.C. for connection.

Storing: Permitted alongside but usually in limited quantities, delivery is by trishaw or minivan.

Shore Leave: Permitted until midnight only. Foreign seamen are logged out and back at the Dock gate by Immigration Officials.

Identification: Seamen's I.D. or Passports to be carried at all times. Foreigners also require 'Landing Permit'.

Regulations: Standard uniform Port Regulations for China.

Delays: Possible due to congestion or for operational reasons. Port is also in the typhoon area, which may require ship's to clear the wharves.

Supercargo's can sometimes arrange despatch agreements.

Developments: Nine berths newly built and in use, five berths under reconstruction on the old quay.

Authority: Harbour Superintendancy Administration.

Agent: China Ocean Shipping Agency, No. 7 Ren Min Road, E.1. Xia Shan, Zhanjiang, Guangdong, China. Telephones: 24936, 24255. Telex: 45234 PNVCZ CN. Cables: PENAVICO, Zhanjiang.

SHIPMASTER'S REPORT: January 1991.

Vessel: 40,000 d.w.t. product carrier.

General: The city of Zhanjiang is located on Leizhou peninsula and was formerly known as Guangzhou Bay. It has 3 wharves with 15 berths for general cargo and an oil pier. A new jetty was commissioned in late 1990 where vessels upto 5,000 d.w.t. can be berthed. The draft restriction is 11.73 m. for tankers and 11.40 m. for general cargo vessels, subject to confirmation.

Documents: Forms in English that were prepared by the vessel were accepted but Chinese/English forms were supplied for future use.

7 copies of Crew List showing names in full and home address of each crew member.

1 copy of Maritime Declaration of Health.

The following documents are prepared on the spot by the respective authorities: Dangerous Drugs List; Arms and Ammunition List; Stowaways List; Passengers List; Bonded Stores List; Ship's Stores List.

Last Port Clearance not requested.

Communications: No problem with telex communication for a vessel fitted with telex/Satcom.

Health: Pratique granted after inspection by officials.

Pilotage: Pilots prefer to board vessels at Pilot Boarding Station No. 2. A Pilot and a Berthing Master board the vessel on each occasion.

Standard of pilotage found to be very good.

Entrance Channel/Berth Approach: Due caution to be exercised against fishing boats, stakes, junk traffic, etc.

Berthing: Vessel berthed at the Oil Pier Dolphin Jetty, Berth No. 202, port side to. Only two medium sized vessels can berth on the Eastern side of the pier. Smaller local tankers were observed berthing on the Western side.

Two tugs in attendance use ship's lines. Mooring boats used for passing lines to dolphins.

The jetties lie in an approximate North/South direction and the prevailing wind (in January) was predominently from the Northeast.

Medical: Assistance organised promptly. Patients taken care of by the ship chandler.

There are 8 well equipped hospitals in the city.

Tankers: Various products are exported from Zhanjiang. Vessel loaded gasoil and Jet A1 from shore tanks which are supplied from an oil refinery at Mamoming, 100 km. Northeast of Zhanjiang. The supplies are irregular and the vessel may have to load product as it becomes available. The exact density and temperature of the cargo could not be ascertained until loading was almost complete.

There are no loading arms on the jetty. Hoses are used with 6 in. reducers.

The Loading Master never boarded the vessel throughout the stay and the vessel was not supplied with a walkie talkie to communicate with the shore. An Agent's interpreter remained on board throughout the loading operations at the insistence of the Master.

Actual loading took 38 hours through 2 connections, one for each grade being loaded. A combined loading rate of 380 t.p.h. was achieved.

Vessel has to provide own gangway.

Slop reception facilities exist ashore but a written application has to be submitted through the Agent immediately upon arrival. Despite this rule it is advisable to telex this requirement in advance so as to enable the Agent to cater for it.

No telephones provided at the tanker jetties.

Ballast: Clean ballast cannot be discharged without prior written application and without prior inspection by the Harbour Authorities. The Authorities would normally encourage the Master to discharge ballast to the shore reception facility on payment. Vessel was able to obtain permission to discharge ballast overboard but it is worth remembering that Authority Inspectors board the vessel for this purpose only during working hours (0830 hrs. – 1700 hrs.). The vessel has to wait until the next day if written application is submitted out of hours.

Protest: Agents are reluctant to accept Protests, even for receipt only, hence these may have to be sent by telex.

Supplies: Adequate supplies of quality fresh provisions, including poultry products, pork, seafood, etc. are available as are fresh fruit and vegetables, especially in season. Bonded imported and local liquor are available at prices much less than Singapore and Hong Kong.

Banks: The following banks have branches in the city: The People's Bank of China, The Bank of China, The Industrial and Commercial Bank of China and The Chinese People's Construction Bank.

SHIPMASTER'S REPORT: July 1992.

Vessel: 96,000 tonnes d.w.t., 243 m. LOA, 38 m. beam, 57,082 g.r.t., 12.0 m. arrival draft (even keel S.W.).

Cargo: Crude oil.

Approach to the Pilot Anchorage No. 1 is easy if visibility is good and the leading lights can be seen. If draft is over 9.0 m., then Pilot boards at Pilot Anchorage No. 1 from an old tug which can keep up with the vessel at speeds of less than 5.0 knots.

Vessel was anchored at Pilot Anchorage No. 2 (0.4 nautical miles from Buoy No. 10). All leading lights and buoys were found to be in position.

If vessel arrives before high water, then it is advisable to attempt an approach to Pilot Anchorage No. 1 at high water, depending upon vessel's draft. While awaiting high water, good anchorage can be found about 8 nautical miles due East of Naozhou Dao Lighthouse, in a depth to about 21 m. We sounded a depth of 3.0 m. below keel near Buoys No. 2 and 3, when the tide height was 4.0 m.

The vessel was boarded by 8 officials and the Agent at Pilot Anchorage No. 2 for "General Examination". There is no provision for issuing Radio Free Pratique.

Despite tendering Notice of Readiness upon arrival, the N.O.R. was accepted only after the vessel was given Free Pratique at the Pilot Anchorage No. 2 by the Port Health Officials.

Vessel always berths at the oil jetty portside alongside. Berthing is assisted by 2 tugs and is carried out at high water. There are only 2 Chicksan arms of 10 in. size, and the discharge pressure requested is 5.0 kg./sq.m. at the ship's manifold, which achieves a rate of approximately 2,300 cu.m./hr.

Except for the Agent, the other officials and Terminal Operators do not speak English, and communication can pose a problem. Hence it is advisable to request the Agent to stay onboard to act as an interpreter.

At least a week's notice is required if any of the crew has to see a doctor, unless in an emergency case. The visit to the doctor is arranged by the shipchandler.

Bonded Stores, dry and fresh provision are very reasonably priced. However, there is not much choice of Bonded Stores.

Crew members are not allowed to go ashore directly along the jetty. The Agent has to be requested to arrange for a launch, which takes about 15 minutes to drop the crew ashore near the port main gate. The charge for each launch trip is U.S.$ 15.00.

A Government surveyor carries out a joint survey with the Chief Officer prior to commencing discharge. The surveyor's figures always vary from the ship's figures, as they use a different method of calculations, using density at 20°C for obtaining net volume.

Crude Oil Washing cannot be started unless written permission has been obtained from the Harbour Master. Officials from the Harbour Master's Office come onboard and witness one Crude Oil Washing sequence, check oxygen content and the Oil Record Book, before granting this permission.

Crew can go ashore using shore passes issued by the Immigration, but have to be back onboard by midnight.

The Bonded Stores are sealed upon arrival by the Custom Officials.

Notice: From Agent (Penavico) to Master:

Quote:

You are welcome to the port of Zhanjiang.

During your stay at this port, please kindly comply with the following rules and regulations of the Port Authorities concerned:

1. Please kindly apply to the Harbour Master in writing for permission for the following items. *Do not* start the below until the permission is granted from the parties concerned.
   (a) Open-fire repair/operation, e.g. welding, fire cutting.
   (b) Deballasting.
   (c) Discharge of slops/sludge or oily water to shore tank.
   (d) Overhauling of piston or main engine. Please indicate in your application form how long the immobilisation takes, and how many hours are needed for refitting the engine for emergency use.
   (e) Painting the hull and draft marks.
   (f) Put down working rafts or boats to sea as assistance to work.
   (g) Echo sounding for the depth of the port area.
2. It is banned to operate radio transmitter, single-side band radio (SSB) and radar.
3. To discharge crude oil, if C.O.W. is to be made, please inform Harbour Master directly or via the Agent by cable/telex your application for C.O.W., 7 days before arrival. Upon arrival, please apply to Harbour Master in written forms:
   (a) Application paper for C.O.W.
   (b) C.O.W. Plan.
   (c) Photocopies of C.O.W. Certificates for ship's Master or Officer.
   (d) Item List for information checking for C.O.W.
   (e) Information for facilities of the ship required for C.O.W.

   When receiving the above information, Harbour Master Officers will attend your vessel to give written permission and detailed instruction. *Do not, do not* start a C.O.W. until you receive the permission letter from Harbour Master.
4. According to the Frontier Defence Officials, crew members are allowed to stay ashore not later than midnight (2400 hrs.). Please kindly note and inform the crew members to come back to the ship before midnight.
5. To apply for Free Pratique when arriving from other countries, please hoist quarantine (yellow) flag at day time, and open three red lights at night.
6. Regarding Pilot and tug hire, please ascertain how long it takes and how many tugs are hired and write down in the Bills.
7. If any problems, plase do not hesitate to consult the Agent.

Please pay kind attention to the above and act accordingly. Thank you very much for your cooperation.

Unquote.

SHIPMASTER'S REPORT: October 1993.

Vessel: 30,000 d.w.t. product carrier.

Max. Draft: 10.90 m., even keel.

Cargo: Part cargo of gas oil, 7,200 tonnes.

Pilots: If draft exceeds 9.0 m., Pilot boards the vessel at Pilot Anchorage No. 1 from a tug.

VHF: "Penavico" Agents can be received 10 miles off the bar.

It was noted that Zhinjang Radio relayed messages to "Penavico" Agents and to the Pilot Station if vessel's transmitter lost contact.

Approach: If vessels arriving before high water, then it is advisable to attempt an approach to Pilot Anchorage No. 1 at high water, depending upon vessel's draft and weather.

However, when arriving with deepest draft of 10.90 m., no problems should occur when approaching Anchorage No. 1 at low water.

All leading lights and buoys were found to be in position, and were showing the charted characteristics.

We sounded a depth of 3.50 m. below keel near the Buoys No. 2/3, and 1.00 m. near Buoys No. 4/5 when the tide height was 4.0 m.

All soundings in the channel showing the same depths as stated in the sea charts.

Due caution to be exercised against heavy concentration of fishing boats and junk traffic.

Pratique: Vessel did not anchor in the Pilot Anchorage No. 2, where the authorities normally board for general examination.

Due to tidal reasons, vessel proceeded direct to the berth where authorities agreed to clear the vessel.

Documents: Documents that were prepared by the vessel in English were accepted, but Chinese/English forms were supplied for further calls.

The following documents were prepared by the vessel:

7 copies Crew List (without addresses).
1 copy Maritime Declaration of Health.
1 copy Declaration of Personal Effects.
1 copy Declaration of Currencies. *
1 copy Declaration of Bonded Stores.
1 copy Declaration of Ship's Stores.

* Apparently nobody was interested to check foreign currencies.

The following documents were prepared on the spot by the respective authorities:

Arms and Ammunitions List.
Bonded Stores List.
Ship's Stores List.
Report of Clearance.
Report of Entry for Foreign-Going Ships.

Notice of Readiness was accepted after the vessel was given Free Pratique.

Pratique is only required at the first port of entry.

Berthing: 2 tugs of 3,500 h.p. were in attendance, using ship's lines.

One mooring boat used for passing the lines to the dolphins.

Vessel berthed at the Oil Pier Dolphin Jetty starboard side to.

Berth: An old reinforced concrete berth, fairly well maintained, but without any facilities to handle their hoses or equipments. The ship's gangway was not landed due to inadequate space on shore.

The existence of a Ship Shore Safety List was unknown, and a walkie-talkie was not supplied to communicate with the shore side.

Vessel discharged via 1×6 in. hose. With an allowed back pressure of 5 bars, we achieved an average discharging rate of 350 cu.m./hr.

An Agent's interpreter remained on board throughout the stay because neither the jetty personnel nor the authorities spoke English.

Shore Leave: Crew members are not allowed to go ashore directly along the jetty. The Agent has to arrange a boat service, which takes about 10 minutes to drop the crew ashore near to the port main gate.

Private transports (motor cycles/taxis) are an adequate possibility to reach a shopping area, where a variety of daily goods are offered.

It is worth remembering to exchange foreign currencies in Exchange Offices/Banks only.

Shore leave is permitted until midnight only, and passports and the Landing Permits are to be carried at all times.

AUTHORITY: Zhanjiang Port Authority, 1 Youyi Road, Xiashan, Zhanjiang, Guangdong Province, People's Republic of China. *Tel:* (86759) 250103. *Telex:* 452051 JZGDDCN. *Cables:* (9054) Zhanjiang. *FAX:* (86759) 280814. *Contact:* Liang Datong, Managing Director.

ZHAPU: 30.35 N. 121.05 E.

PILOTAGE: Compulsory. Pilot service is available during 7 hours. Pilot boards vessel at Luhuashan Anchorage.

ANCHORAGE:

Name No.	Lat.	Long.	*Depth* (m.)	*Bottom*
Joint Inspection Anchorage	30° 33' 36" N.	121° 05' 00" E.	11.4	Mud and sand with good holding ground
	30° 33' 36" N.	121° 05' 32" E.		
	30° 34' 18" N.	121° 05' 32" E.		
	30° 34' 18" N.	121° 05' 00" E.		
Awaiting Berth Anchorage	30° 34' 27.82" N.	121° 04' 43.32" E.	12.7	Mud with good holding ground.
	30° 34' 43.60" N.	121° 04' 39.74" E.		
	30° 34' 35.72" N.	121° 05' 29.38" E.		
	30° 34' 51.34" N.	121° 05' 24.49" E.		

RESTRICTIONS: Vessels may enter and sail after sunset.

Tidal range: Max. 7.52 m. Min. 1.06 m. Average 4.69 m.

Draft Limitation in the Channel: Southern Channel 7.7 m.; Northern Channel 8.0 m.

VHF: Station "008" on Channel 8 throughout 24 hours.

TUGS: Available.

BERTHING: One berth with length 232 m. and depth 11.30 m. Max. size 25,000 d.w.t. 2×5 ton and 4×16 ton cranes for handling general cargo.

Warehouse and Open Storage Space: Warehouse: 5,000 sq.m.

Open Storage Space: 6,000 sq.m.

Container Yard: 6,000 sq.m.

Main Import and Export Cargo: Coal, oil, timber, steel, cement, grain and general cargo.

FRESH WATER: Available at berths.

FUEL: Available at berths.

REPAIRS: No facilities.

GENERAL: *Agency:* Penavico Jiaxing, No. 4 Tongchuang Building, Xuexiubei Road, Jiaxing, Zhejiang, China. Tel: 86-573-2061874. Fax: 86-573-2061884. Telex: 37209 Penav Cn.

Sinoagent Jiaxing, Foreign Trade Lane, Chengdong Road, Jiaxing, Zhejiang, China. Tel: 86-573-2081413, 2084820. Fax: 86-573-2083416. Telex: 37204 Shiac Cn.

Provisions: Available.

ZHENJIANG: 32.13 N. 119.27 E. (See Plan)

PILOTAGE: Pilot boards vessel at Bao Shan Pilot Station. Pilotage is undertaken between sunrise and sunset.

ANCHORAGE: Vessels anchor in Luo Cheng Zhou Anchorage in a depth of 12.0 m. – 16.0 m. The nature of the bottom is mud and sand. Maximum size vessel that can anchor is 25,000 d.w.t.

The anchorage is contained within the following coordinates:

A.	32° 16' 41" N.	119° 41' 53" E.
B.	32° 16' 31" N.	119° 42' 05" E.
C.	32° 17' 26" N.	119° 42' 16" E.
D.	32° 17' 21" N.	119° 42' 28" E.

RESTRICTIONS: Vessels may only enter and sail during daylight hours.

MAX. SIZE: Draft limitation in Channel is 9.5 m.

Tidal Range: Maximum 2.10 m., minimum 1.0 m.

VHF: Radio station on Channels 11, 16 and 23. 24 hour service maintained.

TUGS: 1×397 kw., 3×721 kw., 2×1,228 kw., 2×1,442 kw. and 1×2,500 kw.

BERTHING:

Working District	*Berth*	*Length* (m.)	*Depth* (m.)	*LOA* (m.)	*Cargo Handled*	*Crane Capacity* (tons)
First	No. 2	60	5.5	80	General	2 × 1.5
	No. 3	80	6.0	100		
	No. 4	60	6.0	80	Coal	1 × 3
	No. 5	60	6.0	80	Sand	1 × 3
Second (Da Gang)	No. 1-1	188	11.0	200	Bulk	1 × 5
	No. 1-2	90	11.0	200	Bulk	1 × 5
	No. 2	182	11.0	200	Bulk	2 × 10
	No. 3	182	11.0	200	Timber	1 × 10
	No. 4	182	11.0	200	General	2 × 10
	No. 5	187	11.0	200	Grain	5 × 2
	No. 6-1	100	11.0	200	Bulk	1 × 10
	No. 6-2	99	11.0	200	Bulk	1 × 10
	No. 7	233	11.0	200	Container	2 × 40
	No. 8	185	11.0	200	General	2 × 10
	No. 9	185	11.0	200	Timber	1 × 10
Jian Bi	No. 1	80	11.0	100	Oil Products	
	No. 2	110	11.0	140	Oil Products	–
Buoy	No. 1-2	280	11.0	185	General	–
	No. 2-3	280	11.0	185	General	–

CRANES: There is a floating crane with capacity 150 tonnes.

Also see "Berthing".

FUEL: Contact Chang Jiang Bunker Supply Station.

GENERAL:

Provisions: Contact Zhen Jiang Ocean Ship Supply Company.

Storage: Warehouse: 40,000 sq.m. Open storage: 317,000 sq.m.

Imports: Timber, ore, coal, scrap, chemical fertilisers and oil products.

Exports: Cotton, forage, steel, cement, grain and general cargo.

AUTHORITY: Zhenjiang Port Authority, 19 Changjiang Road, Zhenjiang, Jiangsu Province, 212001 China. *Tel:* 86-511-5271038. *Telex:* 360008 ZJPAB CN. *Cables:* 0002 Zhenjiang. *FAX:* 86-511-5277837. *Contact:* Xia Mao Xiang, Harbour Master.

ZHOUSHAN, including Ao Shan: 30.01 N. 122.06 E.

PILOTAGE: Pilotage is undertaken from 0700 hrs. to 1800 hrs. Pilots board vessels at Xia Si Men Anchorage (29° 43' N., 122° 21' E.).

ANCHORAGE: Ma Si Men Wai Achorage for quarantine and Yeji Shan Anchorage for lightening. Depth is 15.8 m. – 30.0 m. Vessels of 150,000 d.w.t. and 200,000 d.w.t. may use the anchorage.

RESTRICTIONS: Vessels may enter and sail after sunset.

MAX.SIZE: Draft limitation in channel is 15.0 m. Tidal range is 0.45 m. – 4.32 m.

VHF: Zhoushan Radio on Channel 16 throughout 24 hours.

TUGS: 1 × 600 h.p., 1 × 1,200 h.p. and 1 × 1,800 h.p.

BERTHING:

Working District	*Berth*	*Length* (m.)	*Depth* (m.)	*Max. LOA/Draft* (m.)	*Cargo Handled*
Ding Hai	Jiang Kou Pu	–	–		Coal
Shenglia-Men	Dun Tou	92	6.0	120/6.0	Multi – use
		153	7.0	160/7.0	Petroleum
	Ma Shi Shan Buoy No. 1,2,3		11.0 – 15.8		Lightening
Lackuang-shan	Lackuang Shan	130	10.5	170/10.0	Multi – use
	Ye Ya Shan Anchorage		19.0/13.0		

CRANES: 2 × 8 ton cranes at Dun Tou and 2 × 10 ton gantry cranes at Laokuang Shan

TANKERS: See "Regulations" and "Shipmaster's Report".

FRESH WATER: Available.

REPAIRS: Facilities available.

GENERAL:

Storage: Warehouse 3,970 sq.m. and open storage space of 10,000 sq.m.

Cargo Handled: Imports: Grain, cement, timber, steel, bagged fertiliser and petroleum. Exports: Sea products, frozen cargo and tin.

REGULATIONS: *Guidelines for Oil Handling Operation of Ships at Zhoushan:* In order to keep the Harbour Waters from being polluted, the concerned parties shall abide by the following when vessels are involved in oil handling operations at the port.

1. Before Operations:
   (1) Working procedures for oil handling shall be pre-planned and tank capacities, pipelines (including sounding pipes and air-pipes) and valves (including valves for fuel oil filling main on both sides) shall be carefully checked. The balance of the ship shall be kept. All deck scuppers shall be plugged tightly.
   (2) Drip trays shall be placed in position where oil spillage and leakage are likely to occur.
   (3) Pumping rate and signals of communication shall be agreed upon, which shall be understood by both sides.
2. During Operations:
   (1) A sufficient number of duty men shall be assigned to check the operations constantly. A warning shall be given in time if the pump needs relieving pressure or stopping.
   (2) Adequate ullage shall be left in receiving tanks. The valves of next receiving tanks shall be opened before the valves of full tanks can be closed when shifting of tanks is to be performed.
3. Upon Completion of Operations:
   (1) Pressure shall be properly controlled in stripping pipelines.
   (2) Relevant valves shall be correctly closed and hoses are to be sealed with blank-flanges as soon as they are disconnected.
   (3) "Oil Record Book" shall be carefully filled out.
4. Emergency Measures:
   In case of oil spillage, effective measures shall be taken immediately by both sides to control, and eliminate pollution (if using dispersants, approval from the Harbour Authorities must be obtained), meanwhile such pollution shall be reported to the Harbour Authorities at once. A written report of accident shall be submitted and be subject to investigation and settlement.
   The guidelines also apply to all vessels and terminals between which oil handling and operations of noxious liquid substances in bulk are to be carried out.

Issued by: Zhoushan Harbour Superintendency Administration of the People's Republic of China.

Appendix: List of Articles Prohibited by the People's Republic of China from Entering or Leaving the Territory:

1. Articles prohibited from entering the territory:
   (1) Arms, ammunition and explosives of all kinds.
   (2) Counterfeit currencies and counterfeit negotiable securities.
   (3) Printed matter, films, photographs, gramophone records, cinematographic films, loaded recording tapes and video-tapes, compact discs (video and audio), storage medium for the computer and other articles which are detrimental to the political, economic, cultural and moral interests of China.
   (4) Deadly poisons of all kinds.
   (5) Opium, morphia, heroin, marijuana and other addiction-inducing drugs and psychedelics.
   (6) Animals, plants and products infected with or carrying disease germs, insect pests and other harmful organisms.
   (7) Foodstuff, medicines and other articles coming from epidemic-striken areas and harmful to man and livestock or those capable of spreading diseases.
   (8) Renminbi (with the exception of Renminbi dealt with and carried in compliance with an agreement of protocol on the exchange of national currencies in the case of Foreign Exchange Certificates, relevant regulations shall be applied).

2. Articles prohibited from leaving the territory:
   (1) All articles enumerated as articles prohibited from importation.
   (2) Manuscripts, printed matter, films, photographs, gramophone records, cinematographic films, loaded recording tapes and video-tapes, compact discs (video and audio), storage medium for the computer and other articles which involve state secrets.
   (3) Valuable cultural relics and other relics prohibited from exportation.
   (4) Endangered and rare animals and plants (including their specimens) and their seeds or reproducing materials.

Notice to Master and Crews of Vessels Entering or Leaving China:

1. Masters and crews of vessels entering or leaving Chinese territory are required to comply fully with the "Customs Law of the People's Republic of China", "Procedures of the P.R.C. for the Supervision of Inward and Outward International Sailing Vessels and Goods on Board", and other relevant regulations.
2. Such a vessel shall enter or leave the territory only at the place where there is a Customs establishment and be there berthed, either for loading or unloading cargo or for embarking or disembarking passengers.
3. Either the Master or his Agent shall report beforehand to the Customs, through the Harbour Authority, the time of arrival or departure of his vessel, its location and movements, as well as the time required for loading or unloading its cargo.
4. Upon arrival of vessel, either the Master or his Agent shall present to the Customs the following documents:
   (a) An Arrival Report.
   (b) A Manifest, in duplicate, of all the cargo carried on board, or a "Nil" report in case none is carried.
   (c) A list of Inward Passengers (including those booked as "Through Passengers", "Nil" being required when there is no passenger).
   (d) A Crew List.
   (e) A list of Ship's Stores, articles belonging to the crew, currencies and gold and silver bullion.
   (f) A statement of rolled tobacco and alcoholic beverages kept under seal fo use by ship or crew.
   (g) A Customs Control Register of inward and outward vessels, "Nil" being required for vessels in countries other than P.R.C.).
   (h) Any other document required by the Customs.
5. At the time of the vessel's departure, the Master or his Agent shall present to the Customs the following documents:
   (a) An Export Manifest or a "Nil" report, if no cargo is loaded.
   (b) A list of Outward Passengers (not required when no change has taken place in the original list, and no new passengers have been taken on board).
   (c) A Crew List (not required when there has been no change).
   (d) A Customs Control Register of inward and outward vessels (not required for vessels registered in countries other than P.R.C.).
   (e) Any other document required by the Customs.
6. Inward or outward goods and articles carried by vessels (including those consigned for shipment on someone's behalf) shall be truthfully declared by the Master to the Customs, and be subject to the Customs control and supervision. On no account shall any goods be taken either ashore or on board without Customs permission.
7. Before taking any action with respect to the discharge, replenishment, transfer or abandonment of fuel for ship's use or ship stores, application for so doing shall be submitted to the Customs for approval.
8. Rolled tobacco and alcoholic beverages carried on board for use by ship or crew shall be truthfully declared to the Customs, except for the limited portion allowed by regulations on a voyage with a view to meeting the needs of ship and crew during the vessel's stay in port, they shall be sealed up by the Customs. As long as the vessel remains in Chinese territorial waters, this seal cannot be removed without Customs permission.
9. Any crew member intending to take things on board or ashore shall declare them to the Customs for examination. Articles that are on the Import or Export Prohibitive List of P.R.C. (see Appendix) must on no account be taken into or out of the territory, either for his own or on behalf of others.
10. On leaving or boarding a vessel application must be made by the crew member to the Customs for completion of the necessary formalities beforehand.
11. Violation on the part of a Master or crew member of the "Customs Law of P.R.C.", or of the "Procedure of the Customs of P.R.C. Governing the Control and Supervision of Inward and Outward International Sailing Vessels and Goods on Board", etc., shall be dealt with by the Customs in accordance with the Customs Law, Implementation Rules concerning Infliction of Administrative Penalties by the Customs of P.R.C.

SHIPMASTER'S REPORT: February 1993.

Ao Shan:

Vessel arrived at the anchorage to the S.E. of Tao Hua Dao having received the following instructions from the Agents 'Penavico Zhoushan' "Proceed from the high seas to 29° 35' N., 122° 38' 09" E., then alter course to 301° and approach the pilot anchorage. The channel depth is 17.2 metres. When the tide rises, proceed to the Pilot Anchorage at a maximum speed of 8 knots, you must be below 8 knots for the last 10 miles. No photography is allowed. Your radio transmitter must be off. The pilot will listen on VHF Channel 16."

The anchorage is centred around 29° 44' N., 122° 41' E., and had about 6 ships waiting there to make the passage through the Shih-Peng Chiang. The anchorage depths are in the range 19 m. – 25 m., about 8.0 m. deeper than the immediate approaches. We did, however, find approximately 4.00 m. of water more than we had expected. There was a clear line of demarkation on the sea surface as we entered the waters coming from the Shih-Peng Chiang, which have much silt in suspension. Our vessel was drawing about 15.2 m. in a part-loaded condition, but is the biggest ship ever (318,000 d.w.t.) to have visited China. We were blessed with the senior pilot of the Zhoushan District plus 2 assistants, both fairly senior men themselves, for the passage from the outer anchorage to the berth. The arrangement was that we would berth in daylight and at high tide, we therefore sailed up the Shih-Peng Chiang at first light, which we assumed to be the norm as none of the lights and racons in this channel were working.

Immigration formalities must be carried out before berthing, so we anchored in about 100 m. of water, 2.5 miles to the West of Ta-ma I Dao. About 10 Immigration and Customs officials, accompanied by the Agent's boarding clerk, were shown into the vessel's conference room. Proceedings got off to a good start by offering these officials coffee and biscuits, and by having the appropriate documents to hand. They want to see all Discharge Books (or passports for supernumeraries), all ship's documents and most of the documentation listed in "Guide to Tanker Ports". Contrary to advice contained therein, they do not insist on information being on PRC forms, Company's standard forms were happily accepted.

Forms requested were:
- 3 copies Bills of Lading.
- 6 copies Crew List.
- 3 copies Cargo Manifest.
- 1 copy Personal Effects List.
- 1 copy Arrival Condition (drafts, deadweight, cargo details).
- 1 copy Voyage Memo, to include details of ports of call during the voyage.
- 1 copy Provisions List.

On the completion of formalities, which was a friendly and easy process, most of the officials left the ship, but accommodation and food must be provided for 4 men throughout the vessel's stay at the berth. A gangway watch is maintained at all times. Shoregoers must take their Discharge Books and Shore Passes with them, and are allowed ashore between sunrise and midnight. Foreign Exchange Certificates with a value against the Reminimbi Yuan of one to one are issued to "Aliens".

The approach to the new terminal at Ao Shan was made from the West at high tide. Five "tugs" were employed to assist in berthing, but it appeared that of the 5 vessels, only 2 were real tugs with the other 3 being old minesweepers. It must be said that none of them was really man enough for the job. A Force 6 N.W.'ly came up at about midday and effectively held the vessel off the berth. The berthing operation then became difficult and protracted on a falling tide, and was not helped by the reluctance of the mooring boat crew and mooring gangs ashore to handle our mooring wires. It had to be slowly explained that it was impossible for us to provide all fibre ropes, and once the message was understood, the operation continued relatively smoothly. The final tie-up configuration was 5, 2 and 2, with the starboard anchor out to 7 shackles on deck, the impression given was that the anchor would not be used in normal circumstances. The senior pilot carried out his duties in a calm and unruffled manner, and maintained his demeanour at all times.

This new terminal has a jetty and berth capable of handling vessels up to a maximum of 230,000 d.w.t. The jetty is well found with 3 mooring dolphins either side of the main jetty. There are permanent firefighting towers either side of the 3×16 in. Chicksans, the maximum allowed airdraft is 22.5 m., sea to Chicksans. There is a gantry-type gangway supplied from shore, complete with permanently attached armed guard to check the documentation of visitors and shoregoers alike. The tank capacity is currently 2×100,000 cu.m. and 2×50,000 cu.m., with 4 more tanks, doubling the capacity, to be on stream later this year. There is a fresh water connection which will be in use later this year. The jetty and the ship are surrounded by an oil boom during all discharge operations.

Once alongside this new terminal, it became apparent that the terminal personnel had a very limited experience of normal tanker practice. There was no Tanker Safety Check List, and they had not heard of ISGOTT. The "Surveyor" did not check the empty ballast tanks or the bunkers, and did not issue an Ullage Report. No one ashore understood the basics of Crude Oil Washing, they all had assumed that COW was tank cleaning with water, until explanations were given to the Terminal Manager and his staff by the writer, the attending Operations Superintendent and the Chief Officer. Once the message had been passed by the Manager to the Harbour Master, we were told that we had to apply in writing to the Harbour Master's office for permission to COW, we were well into our COW programme by this time, but a simple note on company headed paper was sufficient to appease him.

The initial stages of discharge progressed quickly as all lines, valves and tanks ashore were proved. Once they were happy, we were asked to pump at a maximum rate of 3,000 cu.m./hr. per Chicksan and a maximum of 13 Bar to 4 empty reception tanks ashore. They could not understand why we did not achieve the maximum permissible line back pressure, and so we explained that we would find it almost impossible to achieve anything like 13 Bar when pumping to 4 empty tanks which were effectively lower than the ship at the end of two 700 mm. × 1.0 km. lines. The discharge operation progressed smoothly for the most part, with the one major fault being the lack of communication between ship and shore. We were told we could contact the shore via VHF Channel 16 at any time, but this was not the case. Very often there was no reply to our call, and when a reply was forthcoming, the language barrier proved formidable. The Agents and Terminal Manager spoke good English, but a majority of the people with whom we dealt had little knowledge of English.

Incoming stores and mail from Europe came via Beijing, Shanghai and Ningbo to the local town of Ding Hai, and then by ferry to the terminal. It takes time for them to reach the ship. Outgoing mail was accepted by the Agent, who said that it would take about a week for it to reach Europe. We called in a chandler and found the quality of local fresh produce to be high and at a cheap price. Rubbish disposal is available, but it has to be landed from amidships to the jetty. Before it goes ashore, it is inspected by a Customs Officer, and then it has to be sealed in non-breakable bags. We did not make use of any laundry service but, as you would expect in this part of the world, an allegedly good service is available with a prompt turnround time.

On completion of discharge, a very cursory inspection of tanks, during which there was no inspection of any of the permanent or sailing ballast, was carried out. Immigration formalities have to be taken before the vessel can sail. All shore passes must be returned, and they must be in good condition to avoid the wrath of the Immigration Officer, who will not work before 0800 hrs. As the vessel must sail on high tide and in daylight, we had an overnight stay alongside. For sailing, only 2 tugs were used by the same senior pilot and 1 assistant.

Overall, the level of operation was fairly low , but the jetty is well found and manned by operators who were more than happy to learn and to listen to the advice we were pleased to give them.

ZHUHAI: 22.18 N. 113.35 E. (See Plan)

SHIPMASTER'S REPORT: April 1994.

Discharge of two parcels of gas oil:

This operation was the second discharge port in China. At the initial port (Beihai), 5,400 tonnes of gas oil was discharged into barges. Due to poor weather, no officials visited the vessel prior to departure, but all paperwork was forwarded by State Agents "Penavico" to Zhuhai.

Communications by telex and fax prior to arrival gave an indication that operations would be relatively well organised.

The vessel updated ETA's as per normal and arrived at night.

Anchoring position being in the Southern end of the waiting and unloading area (approx. 22° 04' N., 113° 44' E.). As the maximum arrival draft was 11.2 m., great care was taken with tidal information. Minimum under-keel clearance was noted at 2.0 m. during stay.

The area is very busy with naval traffic and numerous fishing craft, although the anchorage area is not particularly well used.

After arrival, very little information was obtainable from "Penavico", and the services of the Agent in Hong Kong were invaluable. All messages were copied to them and numerous telephone calls were the norm to try and gain information regarding the discharge.

It was 3 days before there was any discharge operation, and this was a combined 2 Bill of Lading parcel into small tankers. We discharged to tankers on either side, after the usual meeting about using fenders/proper hoses, etc., as is the standard for Chinese ports.

This parcel was completed after 2 days (approx. 11,000 tonnes discharged into 13 vessels). The remaining parcel of 4,000 tonnes proved more difficult. As it had been sold on from the original consignee to a company not in the region of Zhuhai, there appeared to be difficulties ashore with numerous points.

We were informed that it would be lifted in one tanker of 4,800 d.w.t. size. "Penavico" were informed that the proper fendering and hoses would be required by a vessel of this size, as up until then the largest barge had been 1,700 tonnes.

As there was so much confusion ashore, Mabanaft sent a representative from Singapore to help out with matters in Zhuhai. It was 8 days before discharge was commenced into tanker "Daqing 212", a rather large looking 4,800 d.w.t. vessel. She was equipped with 2 × 3.0 m. × 1.5 m. diameter pneumatic fenders. We had rigged all available twin tyre fenders (9 units). 3 lengths of 6 in. hose were used for the transfer. This was assembled on board our vessel and returned to the "Daqing 212" at the end of discharge. Discharge was completed the same evening and the "Daqing 212" sailed.

We awaited final Clearance before sailing for Hong Kong to discharge the final parcel of 10,184 tons of diesel.

Nobody was available on the next day, but we were assured that by the following afternoon all would be fixed, and Clearance given. The Agent and officials boarded at 1645 hrs. This was the first visit by any proper shore representative of Penavico/Customs/etc., since the vessel had arrived some 15 days earlier.

Customs officials were not happy with papers received from Beihai and refused to clear ship outward. They said things had to be confirmed with Beihai area, and that it would be cleared by the next day. The Penavico Agent was of no assistance in the matter, and it appeared that there was no intention of giving us Clearance in the first place.

They left the vessel at 1730 hrs. Owner and Hong Kong Agent were both informed of the situation.

We were later informed by Hong Kong Agent that Clearance would be granted next day.

The next day we were informed by Hong Kong that the Agent and Customs were on their way to the vessel, to give Clearance. Later, I was asked by Penavico to clarify the cargo carried from Beihai, as there appeared to be a discrepancy in the Beihai Customs papers. Having done this, I was asked to check the Entry Report form, but as I had already informed them, I did not have any Customs papers from Beihai at all. This was stated on telex, and Zhuhai Customs were given copies of all Bills of Lading relating to the cargo.

At 1700 hrs., Hong Kong informed the vessel that Customs would not now be attending the vessel, and we would have to wait another 2 days. We received message from Penavico stating that Customs wished me to make out new Entry Report form with the figure 25,114 tonnes as through-cargo from Beihai, after which all would be in order, and Clearance Inspection undertaken. I was told that the original figure was incorrect.

We were asked to supply a statement absolving Zhuhai Customs from any financial responsibility. I was told by Hong Kong Agent that this was in case if later there followed a claim for the difference in the through-cargo figures. If I did not supply this statement, the delay would perhaps run to several more days.

At 1600 hrs., the Agent in Hong Kong called and informed me that the Customs were on their way to the vessel. Officials boarded at 1715 hrs., 10 persons in total, the Report of Entry from Beihai was presented. There was an error in the onward cargo column. I changed the figure from 26,113 tonnes to 25,113 tonnes and initialled it. That was Clearance completed.

I fail to understand why this could not have been done in the first place, but as already stated, there was more behind this than just a simple error in figures.

At 1750 hrs. Clearance was given.

At 1800 hrs. commenced heaving anchor to leave area, after 18 days in port.

Agents in Hong Kong must be thanked for their assistance throughout the period, as they were our main line of communication. The representative of Mabanaft Singapore worked very hard on arrival at Zhuhai to smooth the operation along.

SHIPMASTER'S REPORT: April 1995.

The report was compiled when this LPG Carrier discharged a cargo of LPG-Mix at the port.

The vessel arrived at Zhuhai Pilot on April 20th, at 1712 hrs. It was not possible to establish any contact with Pilot or Agent on VHF, Telex or Fax. The best communication arrangement was by telephone via our Agent in Hong Kong, as vessel called there beforehand. On arrival at Zhuhai Pilot (Lat. 22° 04' N., Long. 113° 44' E.), we dropped the anchor and tendered N.O.R.

Later I was able to send N.O.R. by fax directly to Zhuhai Gas Co.

At 1730 hrs., I received a fax message from Sinoagent Zhuhai, to self-pilot the vessel to Tangija Inner Anchorage. The information that vessel had arrived at the pilot station must have come from the Hong Kong Agent.

The anchor was home at 1748 hrs. We set course to a position close to the chartered Racon Buoy. The buoy was unlit and no Racon signals were received. A second buoy was detected close to the Fairway Buoy, marking the beginning of the buoyed channel to Macao.

From position Lat. 22° 05.8' N., Long. 113° 40.9' E., we set course of 359°. Vessel was able to maintain near full speed with a max. draft of 5.30 m. aft. We passed the buoy marking the ferry speedway between Hong Kong and Macao, which was detectable on the radar, but was unlit and looked more like a drifting empty drum.

Close to the next buoy, we altered course to 342° (in position Lat. 22° 15.2' N., Long. 113° 40.7' E.) and headed directly for Zhuhai. The chartered buoy close to this position was unlit, but gave a good echo on the radar. Approximately 1.5 miles after course alteration, it was no longer possible to maintain full speed, although I reduced to half speed approximately 1 mile earlier.

The critical passage is approximately 1.5 miles after passing the buoy and approximately 3 miles long. We reduced speed to slow. Great care was observed to maintain the planned course, as there is not much water to port or starboard.

As chartered, we found deeper water when approaching the Zhuhai jetty. Three buoys have been placed, which we marked on the chart ourselves. We anchored in position Lat. 22° 21.7' N., Long. 113° 38.5' E., as we found our berth occupied by another vessel.

On April 22nd, vessel received a VHF call from Sinoagent to come closer to the jetty, in order to receive the "Joint Inspection" on board. In the meantime, we made our first contact with the Agent on April 21st, on VHF Channel 3. Our next anchor position was Lat. 22° 22.8' N., Long. 113° 37.7' E., approximately 0.3 miles from the jetty.

The vessel was notified that Pilot would board the vessel on April 22nd in the afternoon. Pilot boarded without further notice. At the time of berthing, the tide was setting Northerly. No tugs were used, as vessel was equipped with bow thruster. The port anchor was used, and vessel berthed starboard side alongside with 3 head lines, 2 springs fore and aft and 3 stern lines.

The Joint Inspection was the usual Immigration and Customs Clearance. At this time, only 9 Officials came onboard at the anchorage, but there can be many more. The Officials were very polite. I arranged the Officer's Messroom for the clearance, and had tea and coffee with biscuits ready for them. Most of the clearance papers are required to be on Chinese Forms, which vessel should carry onboard.

The use of a tug is up to the Pilot. The Agent tries to have a tug bill signed in advance.

The jetty is equipped with fenders and bollards.

Cargo hoses are of flexible type, vapour and liquid line have 6 in. 300 ASA connections.

Vessel stopped discharge twice on "shore request", the reason could not be established. It seems to be the limited capacity of the shore tanks. The vessel was able to maintain a discharge rate of approximately 150 t.p.h., once discharging commences.

It is almost impossible to communicate with the watchman on shore, as he was not able to speak English.

I established communication with Sinoagent through VHF Channel 3, twice a day at 0830 hrs. and 1500 hrs.

No crew members are allowed to go ashore. It was said that the surrounding area is a military zone.

Christmas Island

CHRISTMAS ISLAND, Indian Ocean:
10.25 S. 105.43 E. **(See Plan)**

PORT LIMITS: The area of sea in and adjacent to Flying Fish Cove in the Territory of Christmas Island enclosed by a line commencing at a point where a line bearing 270° True from the flagstaff at Government House intersects the coastline of Christmas Island at MHW thence bearing 270° True for a distance of 2 km. thence bearing 360° True for a distance of 2 km. thence S.E. by a straight line to Rocky Point thence generally S.W. along the coastline of Christmas Island at MHW to the point of commencement.

DOCUMENTS:

Port Clearance.
2 Crew Lists.
2 Passenger Lists.
2 Manifests.
Health Certificate.
Certificate of Registry.
Load Line Certificate.

On arrival at the Island, all usual customs formalities must be observed.

Immigration Officers will board to clear vessel inward. Until the vessel has been cleared, crew members and passengers must not go ashore.

PILOTAGE: Vessels must not close the moorings nearer than one mile until such time as the Harbour Master, or his Assistant, boards to supervise securing to the mooring system. All Harbour Masters are qualified Master Mariners and will render pilotage assistance.

ANCHORAGE: No sea anchorage is available at Christmas Island, the depth of water being too great. Vessels unable to moor due to adverse weather, berth occupancy or late arrival, usually drift off the port and return by daylight next morning, or when advised to do so by the Harbour Master.

RESTRICTIONS: It is not normal practice to moor vessels at night, but unmooring is carried out at all hours.

MAX. SIZE: LOA 192 m. Beam 28 m. Summer d.w.t. 35,000 tons.

HEALTH: Health procedures are basically as those set out by the World Health Organisation in their International Sanitary Regulations. Vessel whose last port of call was in Australia, do not need Pratique clearance.

All other vessels should request Free Pratique by radio when less than 48 hours from the Island.

The Pratique cable should state:

Last port of call and date of departure.

Number of persons on board and number of passengers for the Island.

Any suspected or confirmed infectious diseases on board.

The Port Health Officer may board to inspect passengers, crew, medical papers and/or cargo.

Also see "Regulations".

RADIO: *ETA Advice:* The telegraphic address is "CIPHOS, Christmas Island", and through Perth, Western Australia, or Singapore Radio. On sailing from the previous port, an ETA should be radioed to the Harbour Master. 48 hours before arrival, a confirmation of the ETA should be sent.

Also, the Island should be advised of:

the passengers on board,
number of bags of mail,
total quantity of inward cargo, and
the hatch disposition of the inward cargo.

Ships in Port: In conformity with international regulations, no radio transmissions are allowed by vessels whilst berthed at Christmas Island. Any telegrams requiring despatch must be lodged at the Post Office for transmission. Post Office hours are 0800-1200 and 1300-1500, Monday to Friday only.

VHF: The Marine Office is equipped with VHF and may be called on Channel 16 from 0000-0900 hrs. (G.M.T.), Monday to Friday, weekends by arrangement only.

Call sign is "Christmas Island Marine".

TUGS: None.

BERTHING: On receipt of radioed advice, arrangements should be made to arrive at the boarding position, i.e. one mile West of Smith Point, at the appointed time. On arrival, the way should be taken off the ship and the engines stopped, as, when the weather permits, the mooring gear is also loaded at this position. Six 52 mm. mooring lines will be placed on board. Shore labour carry out this operation and also moor the vessel.

Main Engines and Deck Machinery: It is imperative for the vessel's safety that the main engines are ready for proceeding to sea at all times, as occasionally sharp squalls set in which make it necessary for the ship to proceed offshore at very short notice.

When the vessel is moored, the engines must not be used except for proceeding to sea. This also applies to moving engines for testing, for which the prior permission of the Harbour Master must be obtained.

Power, whether steam, electric or hydraulic, must be kept on the windlass and all winches the whole time the vessel is in port. It is particularly important that the windlass and aft mooring winch are in first class order.

BULK CARGO HANDLING: Vessels Loading Bulk Phosphate:

Loading Plant: Bulk phosphate is loaded by 2 cantilever arms. When the ship is moored in the loading position, the arms are swung over the appropriate hatches and the cargo poured directly into the holds. The capacity of each arm is 1,500 tonnes per hour; i.e. 3,000 tonnes per hour overall loading rate.

Ballast: Vessels should arrive with sufficient ballast to allow them to be handled without tugs in a strong breeze. However, on ships loading bulk phosphate the amount of ballast should be restricted to the amount which can be discharged comfortably whilst loading. The bottom of the loading chute, when fully raised, is 16 m. above MHWS.

The Loading Berth: The bulk loading plant is served by a system of outer and inner buoys. Initially, a vessel is secured to the outer buoys, which are anchored in very deep water and then breasted to an inner buoy system (Inner Berth).

Preparation Before Arrival:

(i) The forecastle head should be left as clear as possible of chain, lashings, etc., so that all pipes, fairleads and bitts are available for use.

(ii) The derricks or cranes at No. 1 and at the aftermost hatch should be ready for loading cantilever mooring gear. At the other hatches, all derricks should be hoisted and swung over to the port side so that derricks, guys, preventers and runners are well clear of the hatchway. Hatches should be open before the Pilot boards ready for immediate loading once the ship is secured in the berth. It is essential that all lower holds are clean and free of dunnage on arrival. Hatch beams need not be removed.

(iii) If general cargo is to be discharged, a good boat rope should be rigged on the both sides for the full length of the vessel going well forward and well aft with "stirrups" abreast of the ends of each hatchway.

(iv) Any jumper stay, mast stay, or wireless aerial which obstructs a hatch should be free and ready for releasing.

(v) The ship is required to have ready 3 mooring ropes forward and 3 mooring ropes aft. These ropes should be at least 52 mm. in diameter and in good condition. One rope forward and one rope aft should be at least 200 m. in length.

If there is doubt about the condition, size or length of ship's ropes, the Harbour Master should be requested, by telegram, 24 hours before arrival, to supply extra shore ropes.

(vi) The pilot ladder should be rigged on the starboard side sufficiently far forward to be on the flat side of the vessel clear of the overhang of the hull aft. The bottom rung should be one metre above the water. Manropes must be fitted.

(vii) All discharges or scuppers in the vicinity of cargo boats, pilot ladders or gangways, must be effectively screened or blocked off.

(viii) As the loading rate is high (approximately 3,000 tonnes per hour) vessels should endeavour to arrange the discharge of water ballast so that loading can be completed without interruption. However, the vessel should not arrive trimmed excessively by the stern as this could make her extremely difficult to handle in the prevailing fresh South East breeze.

(ix) All derricks, hatch boards, and beams will be handled by ship's crew only.

(x) Mooring winches aft and windlass forward should have power on ready for shore labour to handle mooring ropes.

Stowage Factor: The free pour stowage factor of Christmas Island phosphate is 0.75-0.84 cu.m./tonne in bulk carriers. The angle of repose is about 35°.

Weighing Machine: A weighing machine is installed at the loading plant *but it must only be used as a guide to the quantity loaded and scale figures should be checked against the vessel's draft.*

Loading will be stopped at any quantity desired short of the final figure to allow the draft to be determined and alterations made to end hatch figures for adjusting the vessel's trim.

Loading Distribution Plan: A loading distribution plan should be made up, to be presented to the Loading Master on arrival.

Fastest overall loading time will be achieved if amounts can be more or less evenly distributed between the two loading arms.

Draft gauges are supplied from shore and fitted to ship's side to assist with draft readings.

It is recommended that planned loading allows a balance of 500/1,000 tonnes for trimming after draft survey. No draft surveys are carried out by shore personnel. The ship must carry out is own draft survey and call for additional cargo required to make up Bill of Lading or Manifest quantity as per charter party.

Vessels Loading Bagged Phosphate Dust:

The Loading Plant: Bagged phosphate dust is loaded by ship's gear. The bags, stowed on cloverleaf slings, are brought alongside by powered barges, hoisted inboard and block stowed in the hold. The net weight on each sling is 2 tonnes.

Ballast: Ships loading bagged dust should, to expedite loading, retain all their ballast until approximately half the cargo is on board.

The Loading Berth: Bagged phosphate is usually loaded at 'B2' mooring. Here the vessel is moored between two buoys, the bow to the main mooring and the stern to a buoy further inshore.

Preparation Before Arrival:

(i) The derricks should be raised and ready to work. Weather permitting, 2 hatches should be open and ready to commence loading with 2 gangs immediately upon arrival.

(ii) A good boat rope should be rigged on both sides of the vessel going well forward and well aft with supporting "stirrups" abreast of the ends of each hatchway.

(iii) Two heavy mooring ropes should be ready forward to run from either bow to the buoy. In addition to the head mooring lines, 2 good mooring ropes should be available aft. These ropes should be positioned so that they can be run from either quarter.

(iv) All ropes should be at least 200 m. long. If there is doubt about the condition or length of the ship's ropes, the Harbour Master should be requested by telegram 24 hours before arrival to supply extra shore ropes.

(v) The pilot ladder should be rigged on the starboard side sufficiently far forward to be on the flat side of the vessel clear of the overhang of the hull aft. The bottom rung should be one metre above the water. Manropes must be fitted.

(vi) All discharges or scuppers in the vicinity of cargo boats, pilot ladders or gangways must be effectively screened or blocked off.

(vii) All derricks, hatch boards and beams will be handled by ship's crew only.

Stowage Factor: Bagged dust stows at approximately 45 cu.ft. per ton (1.25 cu.m./tonne).

Bill of Lading Tonnage: Loading will be stopped at any quantity desired short of the final figure to allow the draft to be determined and alterations made to end hatch figures for adjusting the vessel's trim.

CRANES: On wharf, 1 Favco 20 tonne S.W.L. and 1 Babcock & Wilcox 4 tonne S.W.L.

STEVEDORES: Supplied by Agents.

MEDICAL: The Medical Superintendent may be consulted on payment of the usual fees. Members of the ship's company requiring treatment should be provided with a letter from the Master stating the nature of their ailments. This letter will also be an undertaking from the Master that the Doctor's fees will be paid.

If Hospital accommodation is desired, please apply to the Medical Superintendent beforehand, regarding fees, etc.

TANKERS: Furnace and diesel oils pumped ashore simultaneously through floating pipelines, 8 in. and 6 in. diameter respectively.

DENSITY: 1023 constant.

FRESH WATER: In an emergency, a limited quantity of fresh water may be obtained. Requirements should be advised by radio the day prior to arrival and confirmed with the Harbour Master when he boards.

Sufficient water should be carried to allow for a prolonged period of drifting off the Island in unfavourable weather conditions.

FUEL: No facilities are available for the provision of fuel oil, other than very small quantities of diesel oil for boats or visiting yachts.

CONSULS: Administrator's Office performs some consular functions.

REPAIRS: No facilities exist.

SURVEYORS: Cargo Surveyors: The Harbour Master or his assistant in his capacity as Lloyd's Agent. There are no authorised hull surveyors.

GANGWAY/DECK WATCHMEN: Not required.

OPENING/CLOSING HATCHES: All beams and hatches to be handled by ship's crew.

CERTIFICATES: Register of Cargo Gear and Test Certificates.

CARGO GEAR: To comply with requirements of the Australian Navigation Act, 1912-58.

REPATRIATION: Only for medical emergencies.

AIRPORT: Weekly flights from Perth and Singapore.

TIME: GMT plus 7 hours throughout the year.

HOLIDAYS: New Year's Day; Australia Day (26th January); Hari Raya Haji; Chinese New Year – two days; Good Friday; Easter Monday; Queen's Birthday; Territory Day (1st October); Hari Raya Puasa; Christmas Day; Boxing Day.

No work performed on New Year's Day, Hari Raya Puasa, Good Friday, 1st day of Chinese New Year and Christmas Day.

POLICE/AMBULANCE/FIRE: Police Tel: 444. Ambulance Tel: 333. Fire Tel: 222.

EMERGENCY CO-ORDINATION CENTRE: The nearest Co-ordination Centre is the Coastal Surveillance Centre, Canberra. Tel: Canberra 476666. Cables: "Marineops" Canberra.

TELEPHONES: Placed aboard when required by Port Authorities. No charge.

BANKS: The Bank of New South Wales, Christmas Island, Indian Ocean. Telex linked direct to head office of the Bank of New South Wales in Perth, Australia.

STORING: See "Prelims".

1. The Island is stored purely for local needs with limited quantities and range of supplies. It would therefore only be in cases of extreme emergency that stores would be supplied to ships.
2. In such cases vessels would be stored by barge, and this would take place at any convenient time prior to or during loading.
3. Not applicable as moorings are off shore.
4. Fork lifts are available to assist in loading stores.
5. There are no Customs regulations or requirements pertaining to the loading of ship's stores.
6. Local labour is available to load stores onto ships.

SHORE LEAVE: See "Regulations."

IDENTIFICATION CARDS: Not required.

REGULATIONS: The importation of animals and poultry into Christmas Island is subject to strict control. No animals or poultry may be imported into Christmas Island without a permit from the Administrator; therefore animals or poultry must not be accepted on board a ship for carriage to the Island unless the following documents are produced:–

(a) A Permit from the Administrator..
(b) A Certificate of Health and Declaration by Owners on Form B301 signed by a Government Veterinary Surgeon and Quarantine Officer (Animal).
(c) A Certificate of Stock signed by an Inspector of Stock.
(d) A permit to embark animals on Overseas vessels signed by a Quarantine Officer (Animal).

Shore leave is, in normal weather, at the discretion of the Master and shall *expire at 1700 hours local time.* When the weather is doubtful the Harbour Master may prohibit shore leave altogether.

We must ask the Master to take action to prevent the Steward and other members of the crew selling or supplying liquors or other goods to any person on the Island. Breaches of the Liquor and Trading Laws render offenders liable to heavy penalties.

Whilst the vessel is in port the disposal of garbage overboard is prohibited.

The port of Christmas Island is a gazetted port regulated by the Australian Navigation Act and the Merchant Shipping Ordinance of the former Colony of Singapore. The Mining Corporation's Harbour Master and Assistant Harbour Masters are appointed by the Government as Deputy Harbour Masters responsible for enforcing these regulations. Your co-operation with them is earnestly requested.

WEATHER: The barometer is not a reliable guide in these latitudes. While the wind is steady from the Eastward with a clear sky, fine weather may be expected; but if the wind falls light or if clouds bank up in any quarter, squalls blowing onshore can be expected. Also, lightning in any quarter is usually followed by unsettled weather.

Whilst shore labour is on board, a Harbour Master is on duty. He will advise if the weather conditions necessitate taking the vessel to sea and will supervise the unmooring operations. However, when the ship is moored, but idle, sea watches must be kept. Should the wind blow onshore at Force 3 or more, or the vessel's movements place undue strain on the moorings, the ship must be taken to sea at once.

QUESTIONNAIRE: To facilitate loading the vessel, the questionnaire should be completed and forwarded to the Corporation's General Manager on arrival.

M.V. ______
S.S. ______
Off. ______

The General Manager,
Phosphate Mining Corporation of Christmas Island,
CHRISTMAS ISLAND,
INDIAN OCEAN.

Dear Sir,

I acknowledge receipt of your brochure giving information in connection with mooring and loading at Christmas Island which I have carefully noted.

The following are the particulars of this ship:-

Call Sign ______
Tonnage – Gross ______ Net ______
Tonnage Summer Displacement ______
Length ______ Breadth ______ Depth ______
Size of Panama Lead – if fitted ______
Size of Chain Cable ______
Weight of Anchors ______
Last Port of Departure ______
Date of Sailing ______
Quantity of Phosphate required for full cargo this voyage ______ tonnes
Number of hatches into which Phosphate will be loaded ______
Quantity to be loaded into each Hatch : No. 1 ______ No. 2 ______
No. 3 ______ No. 4 ______ No. 5 ______ No. 6 ______
Spare cabins available ______
Additional cabins which can be made available if required ______
Number of berths in additional cabins ______
Total number of passengers who can be taken ______
Quantity of fuel on board on arrival ______
Service Speed ______
Daily Fuel Consumption – Steaming ______ Drifting ______

______
( ) MASTER

AUTHORITY: Phosphate Mining Corporation of Christmas Island, Christmas Island 6798, Indian Ocean. *Tel:* 8264. *Telex:* Indian Ocean 766 78005. *Cables:* Ciphos, Christmas Island. *Contact:* Captain A. G. Turner, Harbour Master.

NOTES

Please also advise Shipping Guides Ltd.

Colombia

GENERAL:

DOCUMENTS:

Consular Documents:

In foreign ports where cargo for Colombia is loaded, the Colombian Consulate must receive two copies of the Cargo Manifest, on a special form (Colombian Freight List), one of which is returned to the vessel and the other is filed at the Consulate.

Prior to Arrival:

Notice of arrival:

The agency must prepare the standard Colombian document for confirmation of vessel arrival, giving the characteristics of vessel and indicating the services requested: pilotage, towing, anchorage, berthing, cargo to be loaded and unloaded, as well as water, electric power, telephone, fuel and lubricants.

This form is addressed to the Director of Operations of the Marine Terminal of the Colombian Port Authority (COLPUERTOS) and is submitted in seven copies (original and three copies for the Marine Terminal and a copy each to the Port Captain, the Customs Security Office, and the Port Public Health Officer). If passengers disembark, an additional copy must be submitted to Migration.

Information on cargo for the port:

At least 24 hours in advance of the vessel's arrival, the agency must receive the following documents by airmail, for distribution as indicated:

Documents	*Customs*	*Marine Terminal*	*Agency*	*Total*
Freighted Manifest (Freight List)	–	–	1	1
Freighted Bills of Lading	1(a)	3	1	5
List of Cargo by Hatch	–	1	1	2
List of Dangerous Cargo in Transit	–	1	1	2
Stowage Plans	–	1	1	2

(a) Stamped.

Request for Port Services:

The agency must submit to COLPUERTOS, 8 hours in advance of the vessel's arrival, the following documents, in original and two copies: request for berthing crew, cranes, terminal crew, motorised equipment and storage; request for inward pilotage and towing.

On Arrival:

On the entrance of a vessel, the following documents must be submitted, either on the model forms established by LAFTA Resolution 254 (IX), or on similar forms, except the Cargo Manifest, which will be made out on the Colombia Freight List form.

Type of Documents	*Number and Distribution of Documents*						
Basic Forms	*Port Capt.*	*Cust. Sec.*	*Marine Term.*	*Port Pub. Health*	*Migr.*	*Agency*	*Total*
1. General Declaration	1	1	–	–	–	1	3
2. Cargo Manifest	–	1	1	–	–	–	2
3. Crew List	1	2	–	1	1	1	6
4. Passenger List	1	1	–	1	1(a)	1	5
5. Ship's Stores	1	2	–	–	–	1	4
6. Crew Effects Declaration	1	2	–	–	–	1	4
7. Maritime Declaration of Health	–	–	–	1	–	–	1
8. Mail List	–	2(b)	–	–	–	1	3
Additional Documents:							
9. Clearance from Last Port	–	–	–	–	–	–	–
10. List of Passengers in Transit	1	1		1	–	1	4
11. "No Passengers" Declaration (c)	1	2	–	1	–	1	5
12. List of Dangerous Cargo in Transit (c)	1	–	1	–	–	1	3
13. "No Mail" Declaration (c)	–	2(b)	–	–	–	1	3
14. List of Passengers' Baggage (a)	–	3	–	–	–	–	3

(a) Only for those disembarking.
(b) One copy for the Post Office.
(c) When required.

Other Requirements:

The agency provides a landing permit for each crew member and passenger, which is stamped on board by the Captain of the Port.

Prior to Departure:

Clearance for the vessel is requested from the Captain of the Port on a special form. It is prepared in triplicate (original for the vessel, one copy for the Port Captain's file and one for the agency). The following documents accompany it:

1 Crew List.
1 Passenger List or "No Passengers" Declaration.
1 Ship's Stores List, and
1 Fuel Supply Declaration or negative

Request for Pilotage:

At least 2 hours before departure, a request for pilotage, clearance and unberthing crew must be submitted to the COLPUERTOS Maritime Section.

Port Authority Circular: July 1986.

Documentation Required:

The Maritime Agencies must present:

(a) Maritime Sector Discharge (imports and transit):

Up to date stevedoring plans showing the location of the cargo for the port and hazardous cargo.

List of Cargo per Discharge Hold.

List of Containers for the Port.

Sets of Bills of Lading.

Sets of Check Lists of Cargo with Manifest.

Tally Books.

List of Missing Cargo showing the ship which recorded them but did not load them, together with their Bills of Lading and Check Lists against the Manifest.

For cargoes in-transit, national or international, transhipment, Declaration of Final Destination, with presentation of the Memorandum of Authorisation of Customs.

Certificate of the draft survey of the port of shipment for bulk cargo.

(b) Maritime Sector Cargo (Exports):

List of Cargo for Shipment by Port of Destination.

List of Empty Containers to be Shipped.

Shipment Orders Authorised by the Customs.

Sets of lists checking loading against Manifest once loading has been completed.

CUSTOMS REGULATIONS: New Customs Regulations now in force from 1st July 1992.

The Customs Authorities now stipulate that:

(A) All cargo on board a vessel destined for Colombia must be manifested.

(B) The Manifest (cargo/freight) together with freighted copies of Bills of Lading must be given to Customs Authorities before vessel's arrival.

(C) Cargo not covered by Manifest may not be discharged. If discharged, same will be immediately confiscated by Customs.

Violations of the aforementioned regulations can result in fines of up to 100% of the cargo value as determined by Customs Authorities. Similar fines will be levied for discrepancies found in the Cargo Manifest, as well as for short-landed or overlanded cargoes, in cases where fault lies with the carrier and no reasonable explanation is provided. When the Cargo/Freight Manifest does not comply with all the requirements (as established by Customs Authorities) the carrier will be fined the equivalent of 20 minimum wages (about U.S.$ 3,000.00 as of July 1992).

Introduction of V.A.T.: The Colombian Government, under a Decree signed 30th June 1992, introduced a new tax reform which, inter alia, establishes Value Added Tax (VAT) of 12% on all port related services (i.e. wharfage, anchorage, lights/buoys, tugs, stevedoring, agency, etc.) with no exemptions.

V.A.T. at 12% came into effect as from 1st July 1992, and will be increased to 14% as from 1st January 1993.

PILOTAGE: Pilotage is compulsory for all vessels over 200 g.r.t. The Pilot must be requested by the Agent at least 24 hours in advance.

Berthing preference will be given as follows:

1. Warships.
2. Passenger vessels and Mail Boats on a fixed itinerary.
3. Vessels with livestock and perishable cargoes.
4. Passenger vessels not on a fixed itinerary.
5. Vessels loading cargo for export.
6. Vessels discharging cargo for import.
7. Tankers.
8. Coasters.
9. Vessels carrying explosives.

On sailing all vessels must fly the "P" flag.

Vessels at anchor can be authorised to work to lighters.

All Colombian ports are open 24 hours a day.

ARRIVAL ADVICE:

(1) The local Agent must advise Empocol 72 hours, 48 hours and 24 hours in advance the vessel's ETA.

(2) With the ETA pre-arrival advice, Owner or Master must advise the Agent the following:
   (a) Estimated arrival draft, forward and aft
   (b) Full vessel's particulars, including breadth
   (c) Vessel's side for which she must be docked (port side or starboard)
   (d) Cargo hatch distribution

(3) At least with 48 hours in advance, the Agent must receive in order to give to Empocol (together with others issued by the Agent according to the information supplied by the Master and Owner), the following documents:
   (a) 5 original copies (not photocopies) of each Bill of Lading, duly freighted and signed by the shipper
   (b) Stowage plan.

(4) Also 24 hours prior vessel's arrival, the Agent must pay to Empocol the proforma invoice which amounts to the estimated port expenses plus 25 per cent surcharge. Hence it is of paramount importance the Agent receives well in advance the funds required, in order to convert the U.S. Dollars into local currency and proceed to effect the corresponding payment.

It is important to point out that in case the above mentioned instructions are not fulfilled, or the documents are not presented and the proforma invoice is not paid in due time by the Agent, Empocol will not authorise docking and operations of the vessel.

FREE PRATIQUE: There is no Radio Pratique. The standard W.H.O. Health Certificate must be used.

As of May 1st 1992, Yellow Fever Vaccination Certificates are required by crew members visiting Colombia.

STEVEDORES: Supplied by the Port Authorities although it is often necessary to employ extra labour through the Agent, due to the fact that gangs are seldom complete. At week-ends, gangs required for Monday must be ordered by 1000 hrs. on Saturday. Masters should bear this in mind when sending their ETA.

Cargo in a damaged condition or showing signs of pilferage will not be handled until inspected by a Port Official and ship's officer, leaving on record the actual condition of the cargo.

Containers are discharged or loaded as all other cargo, though if they are stuffed or unstuffed immediately this must be done with the Port Labour provided.

Opening and closing of hatches, and the rigging of gear, is done by a gang of riggers. The ship's crew can do this work, but it is advisable to use Union Labour.

Rain tents are not supplied by the port.

All gear, slings, spreaders, etc., must be supplied by the ship.

Rat guards must be fitted on all mooring lines whilst in port.

PORT SECURITY MEASURES: All ports are rigorously patrolled by Port Police, and crew members are advised to carry Identification Cards at all times when ashore.

FUMIGATION: This can only be carried out alongside with the permission of the Port Authority.

GARBAGE: No garbage may be thrown overboard. This includes flakes of paint from vessels chipping or scraping the hull. No paint must be allowed to drop into the water or onto the quayside. Overboard discharges must be kept off the quay.

POLLUTION: The standard requirements for the prevention of oil pollution must be adhered to within the continental shelf off the Colombian coast.

All vessels calling at Colombian ports must have "Pollution Policy" onboard. If not onboard vessel will be heavily fined and clearance will not be granted by the Port Captaincy.

All vessels must ensure that the Oil Record Book is up to date prior to arrival, as it is likely to be inspected.

Fines can range from 50,000 to 500,000 Pesos, not including the cost of any clean up operation.

No vessel contaminating the waters of any port may sail until the corresponding fine has been paid.

Oil Tankers are not permitted to clean tanks within 60 miles of the Colombian shores. A vessel arriving in port with dirty ballast will be ordered to proceed to sea beyond the 60 mile limit, and take on clean ballast.

CREW: The authorities will not allow crew to be of unkept appearance or improperly dressed at any time while the vessel is in port.

FUEL: Requests for bunkers must be made to Agents at least 1 week in advance.

TIME: GMT minus 5 hours. Summertime is not observed.

STOWAWAYS: 70 stowaways were found on one vessel in 1988.

Likely hiding places are containers and palletised cargo.

SHIPMASTER'S REPORT: September 1990.

The ship was not troubled by thieves or other persons at any of the three ports visited (Santa Marta, Barranquilla, Cartagena), while normal precautions were taken, such as locking all, but one, accommodation doors; hanging light-clusters over the off-side bow and stern areas, and general vigilance. In turn, the ports seemed to maintain a strict watch at the gate against unauthorised persons. At Cartagena, the local watchman kept a strict watch by exchanging a pass card for the stevedores identity card on boarding, which was returned when leaving the vessel.

Anti-Drug Abuse: A day before arriving at the first port in Colombia, the crew were advised about the dangers of drugs and smuggling. In particular, their attention was drawn to the Company's notices as posted about the accommodation and the requirements of Paragraph 8 of the Sea Carrier Initiative.

BARRANQUILLA: 10.58 N. 74.47 W. (See Plan)

DOCUMENTS:

Clearance from Last Port.
Ship's Register.
Load Line.
Safety Radio.
Safety Equipment.
Cargo Gear.
Oil Pollution Certificate – Policy of Insurance.
6 Crew Lists.
5 Crew Personal Effects Lists.
5 Provision Lists.
5 Store Lists.
6 Passenger Lists (In Transit).
6 Passenger Lists (Disembarking).
4 Declarations of Passenger Baggage.
4 Lists Port Mail.
1 Sanitation Declaration.
Sets of manifests covering port cargo.

PILOTAGE: Compulsory for all vessels over 200 g.r.t. The Pilot requires that the vessel's Agent advises them with at least 24 hours in advance, the best vessel's ETA, together with the estimated arrival draft (fresh water).

Therefore it is important that Masters of vessels advise Agent 72, 48 and 24 hours in advance the best ETA to the port, in order to avoid any delays because of unavailability of Pilot.

The Pilot will board and leave vessels at Bocas de Ceniza, 1 mile North of the Western Breakwater, and they are not authorised any more to pick up/leave vessels at either Cartagena or Santa Marta, except when the weather does not permit such operation at Bocas, in which case the Pilot Department will decide whether the Pilot must be picked up/left at any other place.

Radio telephone frequency of Pilot Station 2738 alternative 2638 or 2182 kHz and VHF Channels 16, 13 and 8. 2 pilot boats speed 7 – 9 knots. Sufficient depth to allow vessels wait for Pilot in boarding position, including trade wind season end November to beginning April.

ANCHORAGE: If awaiting Pilot, anchor 1 or 2 miles West of West Breakwater during non-windy season. After Pilot boards and when no berthing space at the quay, anchorage is made in the river, about 1,500 ft. off the dock in approximately 40 ft. of water. 3 shackles of chain required in good holding ground.

RESTRICTIONS: Depth at the river bar is being maintained at a minimum of 40 ft., however, the actual permissible draft has been curtailed to 30 ft. (check with Agent) on account of silting conditions of the river and low river levels, particularly around the area known as Siape, approximately 4 miles from the dock area.

MAX. SIZE: Recommended max. LOA 600 ft. due necessity for turning vessel before sailing. Also see "Restrictions". Rate of current 2.5 knots during dry season, 4 knots in rainy season.

HEALTH: On arrival port doctor boards vessel to inspect crew Yellow Fever Certificates, also Derat Certificate. If any crew members suspected suffering contagious disease Master to radio prior arrival advising Agents accordingly. Port doctor visits vessel even if previous port was in Colombia.

RADIO: Messages to and from Agents routed through station HKB. Ship's messages should include call letters.

VHF: Port on Channels 16, 9, 10, 12 and 14.

TUGS: Generally no tugs required for river entrance. Tug assists berthing and turning vessels before sailing. 1×1,225 h.p. tug available.

BERTHING: 6 berths. Total length of quay 1,058 m. (Berths No. 1 – 5: 600 ft. each and Berth No. 6: 470 ft.). Depth alongside 30 ft. Vessels berth starboard side alongside.

CRANES/EQUIPMENT:

Cranes: 1×200 tons, 1×115 tons, 1×100 tons, 1×80 tons and 2×15 tons.

1 Liebherr crane (Model LHM 1300) with a 45 m. boom and 104 tons lifting capacity. Spreader for 20 ft., 40 ft. and 45 ft. containers. Clams (10 cu.m. capacity) for bulk cargo. Two hooks for general and loose cargo.

Lift Trucks: 100 × 2 tons – 40 tons capacity.

Container Elevators: 5 top lifters.

Tractors: 25.

Heavy Load Trucks: 6×200 tons on level ground, 100 tons on inclined ground.

Trailers: 9×40 ft. and 5×20 ft.

Platforms: 5×40 tons, 12×20 ft. and 15×40 ft.

Hoppers: 2 × 4 m. × 4 m.; 4 × 3.5 m. × 3.5 m.; 4 for automatic packing.

Additional Equipment: Paper grabs, headclamps, automatic sackers, front lifters, spreaders for large bags, clams, unloading belts.

STEVEDORES: Agents should receive advance copies of stowage plan and adequate notice ETA order arrange gangs. Working hours: 24 hour working in shifts of 6 hours, 8 hours or 12 hours, depending on type of cargo handled. No work on Sundays.

MEDICAL: All facilities available.

TANKERS: No facilities.

FRESH WATER: Available. Rate about 20 t.p.h.

FUEL: Only small quantities of gas oil available.

FIRE PRECAUTIONS: No vessel requirements. Terminal has own fire-extinguishing equipment.

CONSULS:

Austria
Belgium
Bolivia
Brazil
Chile
Costa Rica
Denmark
Dominican Republic
Ecuador
Egypt
El Salvador
Finland
France
Germany
Greece
Guatemala
Haiti
Honduras
Italy
Jordan
Mexico
Netherlands
Norway
Panama
Peru
Portugal
Spain
Sweden
Switzerland
Syria
United Kingdom
U.S.A.
Venezuela

REPAIRS: Good facilities for mechanical or electrical and radio repairs.

DRY DOCKS: Only one dry dock for very small vessels.

GANGWAY/DECK WATCHMEN: Request watchmen through Agents.

CUSTOMS ALLOWANCES: No limitations for individual consumption.

REPATRIATION: Good facilities available.

AIRPORT: 6 km. from city. Airport served by major airlines.

TIME: GMT minus 5 hours.

HOLIDAYS: 1st January, 6th January, 8th April, 9th April, 1st May, 23rd May, 2nd June, 29th June, 20th July, 7th August, 15th August, 12th October, 1st November, 11th November, 8th December, 25th December.

POLICE/FIRE/AMBULANCE: Fire 411828, ext. 38. Ambulance 410736 or 319594. Police 411937.

TELEPHONES: Arrangements available for placing telephones on board.

SPECIAL RECOMMENDATION: Masters to warn crew to close and lock cabins.

IDENTIFICATION CARDS: Supplied by Agents.

REGULATIONS: No special facilities for discharging explosives.

If explosives on board vessel not allowed berth.

DEVELOPMENTS: Two more berths under construction. Dredging under way in access channel. Dry bulk storage silos to be constructed. Electronic surveillance and security system to be installed.

SHIPMASTER'S REPORT: April 1996.

Documents:

2 copies Ports of Call during last 6 months.
2 copies Stowage Plan.
2 copies Cargo Declaration.
6 copies Crew List.
4 copies Provisions List.
2 copies Personal Effects Declaration.
1 copy Vaccination List.

Tugs: Only 1 tug available in port. According to order of the Harbour Master it is used for turning the vessel for departure.

Stevedores: 24 hour working for loading/unloading vessel.

Deck Watchmen: Recommended. Master of ship to order watchmen from darkness till 0600 hrs. Watchmen are armed and should be provided with cabin and food.

Certificates: Representative of Harbour Master checks all ship's documents on arrival.

Shore Leave: No restrictions. Passes are supplied by ship's agent on arrival.

Provisions: Available through shipchandler, but crew must check quality when it arrives onboard.

Anchorages: Vessels usually load/unload in inner river roadstead between Lat. 11° 03.12' N., Long. 74° 49.82' W. and Lat. 11° 02.75' N. Long. 74° 49.36' W. Ships use 2 anchors, starboard 4 shackles in water and port 3 or 4 shackles in water.

Ferry: Master of ship may order ferry at any time by calling VHF Channel 16, 13, call sign "Aquamar Pilot". Taxi/ferry also available but payment of cash required.

Notices to Mariners: Dredging in the port under way continuously.

AUTHORITY: Sociedad Portuaria Regional de Barranquilla, Carrera 38, Calle 1a, Orilla del Rio, Terminal Maritimo y Fluvial de Barranquilla, Barranquilla, Colombia. *Tel:* (575) 37-99-555 (Switchboard), 37-99-545 (Commercial Office), 34-48-463 (General Management). *FAX:* (575) 37-99-557 (Commercial Office). 37-99-544 (General Management).

Contact: Ciro Avila V., General Manager. Hector Gonzales I., Operations Manager.

BUENAVENTURA: 03.53 N. 77.05 W. (See Plan)

DOCUMENTS: On vessel's arrival, Master must present following documents to Port Captain's Office:

Travel Memorandum.

Sole document or Consular despatch from the last port or ports where vessel disembarked or embarked passengers.

3 Crew Lists.

3 Provision Lists.

3 Lists Crew's Personal Effects.

3 Lists Passengers in transit (or negative).

3 Lists Disembarking Passengers (or negative).

3 Lists Port Mail (or negative).

1 Sobordo or Manifest of Cargo for the port.

2 Declarations of Passenger Baggage, if any.

Destined to Maritime Terminal:

3 Sets Sobordos or Manifests covering port cargo (or negative).

1 Set of Bills of Lading, covering discharge cargo.

20 Tally Books for discharge cargo.

Destined to the Custom House:

3 Sets of Sobordos or Manifests for cargo destined to the port.

1 Set of Bill of Lading for port of destination.

1 Tally Book for cargo to be discharged in port.

2 Declaration Lists for Passenger Baggage, if disembarking.

Destined to the Health Doctor:

Vessel's Travel Memorandum.

International Health Certificate.

1 Crew List.

List of Passengers in Transit (or negative).

1 Vessel's Fumigation Certificate (for presentation only).

1 Port Passengers List (or negative).

Certificate of Exemption of Derat (for presentation only).

Destined to Immigration Authorities:

1 Crew List.

1 List of Transit Passengers (or negative).

1 List of Port Passengers (or negative).

Destined to Agents:

1 Travel Memorandum as above mentioned.

9 Crew Lists for Consular despatch and handling of sailing permit.

6 Lists of Passengers in Transit (or negative), for Consular despatch.

6 Lists of Personal Effects for Consular despatch.

2 Mail Lists for the Port (or negative).

3 Sets of Sobordos or Manifests covering port discharge cargo (or negative).

4 Sets of Bills of Lading covering port discharge cargo.

10 Tally Books covering discharge cargo.

2 Lists of Passenger Baggage Declaration for the port, if any baggage.

PILOTAGE:

(a) Entry marked by Channel having minimum depth of 3.25 fathoms low tide. Advisable enter Channel or leave wharf 1 hour after low tide and 2 hours after high tide, restricting departure during any other periods, particularly when draft exceeding 20 ft. Pilot boards in vicinity of No. 1 Buoy (Position: Lat. 03° 50' 00" N., Long. 77° 10' 00" W.).

(b) 72, 48, 24 and 12 hours before reaching port, Master must cable separately to Agent and Port Captain confirming hour of arrival Punta Basan (Pilot Station). Message to Agency must indicate, in addition to ETA, quantity of cargo destined for the port, number of disembarking or in-transit passengers, number of gangs required for operations, draft, mail for the port, if fresh or running water is required; fuel-oil, cash to Master or any other special requirement; whether special side of wharf is required for berthing, and whether dangerous cargo (explosive) or inflammable cargo, and what quantity. Message to Port Captain must also indicate arrival time, quantity of cargo destined to the port, number of disembarking or in transit passengers, mail, whether dangerous or inflammable cargo is carried and in what quantity, and any other data that may be considered useful in accordance with International regulations.

Note: A Master has suggested that the "Arrival Telex" should state where pilot required (Punta Basan or Buoy No. 1).

(c) Radio beacon at Punta Soldado, characteristics: Frequency, 317 kHz. Letters, B.T. Time 0000 – 2400 hrs. every day and every 10 minutes with 20 minutes of rest during 30 minutes work. Flashes 12 seconds duration.

(d) Radio-telephone in Pilot Station of Punta Basan or La Bocana (opposite to Punta Soldado), characteristics: VHF Channels 11 and 16 every day from 0600 – 2400 hrs.

(e) Since Master's advice to Agency serves as notification to Pilot Station, Pilot will be at Punta Basan ready for vessel. In case of delay due to any circumstance, vessel may anchor and request Pilot by 4 short blasts.

(f) Port has 8 Pilots.

(g) Pilot ladder must be lowered a few feet from the surface. Vessel must proceed slowly in order facilitate boarding.

(h) Pilotage compulsory.

ANCHORAGE: Marked by Buoy No. 7, located Lat. 03° 53' 59" N., Long. 77° 04' 04" W.; depth from 33 ft. to 70 ft. and distance from wharves approximately 1,000 yards.

There are 3 additional anchorage zones and their use will be ordered by the Authorities.

RESTRICTIONS: Max. draft for crossing bar is 28 ft. one hour before/after HW. Bar is located in position 03° 48' N., 77° 19' W.

MAX. SIZE: No restrictions on the length of vessel, depth alongside wharf approximately 12 ft. – 30 ft. under terms "not always afloat but safely aground", low tide.

HEALTH: *(a)* As soon as vessel anchored by Pilot within bay, Port Authorities including doctor, will board by means of ladder which must be lowered when port area entered.

(b) In case of sickness on board, Master must advise in order doctor may determine whether vessel will be under quarantine or not. This will apply even if vessel arriving from a port of the same country.

(c) Time-table for meeting vessel: Ordinary or regular time – ordinary time: 0800/1200-1400/1800 hrs.; overtime – 0700/0800-1200/1400-1800/2200 hrs. Sundays and holidays, overtime.

(d) After 2000 hrs. and up to 0700 hrs. of following day it is not possible to make arrangements for meeting vessels, unless in emergency.

RADIO: (Also see "Pilotage"). Port has receiving-transmitting radio station Buenaventura/Colradio HKC. For listening and transmitting there are following frequencies:

Listening	*Transmitting*
8354 to 8374 kHz	8574 kHz
12531 to 12561 kHz	13087.5 kHz
6265 to 6280 kHz	6386.5 kHz

In emergency: Listening: 500 kHz. Transmitting: 441 kHz. Station operates 24 hours a day.

TUGS: Normally only required for berthing. Tug operation handled by Pilot. Generally tug service consists of pushing from stern or bow as required. When necessary to use ropes, they must be supplied by vessel. 2 tugs of 1,200 h.p. each and 1 of 350 h.p.

BERTHING: Main wharf 2,136 m. long, where import and export cargoes handled. There are 3 warehouses for the storage of export cargoes, including Colombian coffee.

Berthing arranged by turn according to time of anchoring in bay for each vessel. Tidal currents exist alongside berths.

Berth	*Length*	*Depth at LW*
Shed No. 1	202 m.	12 ft.
Shed No. 2 – No. 9	1,257 m.	23 ft. – 25 ft.
New Pier	80 m.	30 ft.
	597 m.	17 ft. – 20 ft.

Depth 25 m. off the quays is 30 ft. – 32 ft.

BULK HANDLING FACILITIES: The port is equipped with an automated bulk sugar loading installation which can load 12,000 tonnes in about 4 days.

STEVEDORES: Port has 80 gangs of 16 men each.

Working Hours: First Shift: Monday to Saturday and holidays from 0800 – 1700 hrs. Second Shift: Monday to Friday and holidays from 1700 – 0100 hrs. and Saturdays from 1700 – 2400 hrs.

No work from 2400 hrs. Saturday until 0800 hrs. Monday.

MEDICAL: Agent must be given advance notice of urgent medical attention. Properly equipped hospital.

TANKERS: *Ecopetrol:* Oil pier (Lat. 3° 54' N., Long. 77° 04.5' W.) with depth 33 ft. (25 m. off) with capacity to accommodate vessels of medium size. 4×8 in. hoses for discharge of petroleum products, and 2×6 in. and 1×4 in. hoses for unloading chemicals. Average rate of discharge of gasoline is 5,000 b.p.h. (approx.) Fuel oil and chemicals 1,500 b.p.h. Max. LOA 200 m. Max. beam 30 m. Max. draft 10.0 m. at LW.

It is important to note that Buenaventura is a tidal port, with variations up to approximately 4.0 m. Also at the entrance to the access channel of the port, there is a sandbar with a maximum draft of 7.0 m. at LW, which therefore restricts the entrance/departure times of vessels according to their drafts.

DENSITY: 1012 (approx.) average.

FRESH WATER: Drinking water unlimited quantity. Delivered through hose from end of wharf. Rate of delivery: 6 t.p.h.

FUEL:

(a) Two kinds of fuel, marine gas oil and bunker "C" fuel. Characteristics of gas oil: API gravity 33.0 at 60°F. Specific gravity: 0.8602. Characteristics of bunker "C" fuel: API gravity, 13.2 at 60°F. Specific gravity, 0.9779.

(b) To take bunkers vessel must berth between warehouse 2 to 9, and for delivery of gas oil between warehouse 1 to 5.

(c) Rate of delivery (approx.), 250 b.p.h. for bunkers and 700 b.p.h. for gas oil.

(d) Deliveries depend on quantity available when order placed, consequently Agent must know well in advance (10 – 15 days) vessel's requirements.

(e) Cash payment according to prevailing prices at time of delivery; otherwise, according to contracts between Shipowner and supplier.

FIRE PRECAUTIONS: Fire station within port installations with proper equipment. In city also another fire station, co-operating if necessary.

CONSULS: Panama Tel: 2 22 50. Most countries have consuls in Cali – approximately 120 km. from Buenaventura.

REPAIRS: According to port regulations vessels must at all times be ready with engines to sail, consequently repairs of engines not allowed when ship berthed at wharf. No prohibition against minor repairs on deck. When engine or deck repairs taking a long time are necessary, vessels not being loaded and/or discharged simultaneously with repairs must go to anchoring ground, since crowding of vessels at port does not permit vessel being inactive occupying space while other vessels are anchored waiting for berth.

WATCHMEN: Service necessary both by crew members' and Agents' personnel. There is an established body of watchmen named "Policia de Vigilancia Portuaria" (National Police); additionally, the steamship agencies carry out this work with their own personnel with previous request by Master. The port has a Port Police body and Custom House Guards which co-operate in vessels' watch.

Piracy: Mariners are advised to be alert to unusual, abnormal or hostile activities by pirates (especially during darkened hours) in the approaches to and in Buenaventura Harbour/Anchorage.

OPENING/CLOSING HATCHES: All Agents have special gangs to handle this operation and to fix the vessel's gear for discharge and/or loading. These personnel permanently stand by on board on account of climatic conditions of port with frequent and sudden rains. No prohibition against crew carrying out such operations when charter parties are involved and which stipulate that such operation must be done by crew. It is known from experience, however, that vessel's personnel are not, on occasions, sufficient to do this work.

CUSTOMS ALLOWANCES: No regulations establishing quantities which each crew member may have outside bond, but must not be excessive order avoid problems with authorities.

CARGO GEAR: Ship's gear used. Also see "General".

REPATRIATION: Authorities render co-operation for change of crew and arrangements of repatriation in co-ordination with ship's Agent.

AIRPORT: Located 18 km. from Buenaventura. Airport is small and is inactive. Agent in charge of the repatriation of a crew member must handle necessary connection in Cali or Bogota, where there are international airports.

TIME: GMT minus 5 hours. Permanent.

HOLIDAYS: New Year's Day; Good Friday; Workers Day (May 1st); July 14th and 16th (from 1200 hrs. to 2400 hrs.); December 24th and 31st (from 1200 hrs. to 2400 hrs.); Christmas Day (no working in the port). On Sundays there is no work in the port, but sometimes when required there is working, especially to finish loading or unloading vessels.

POLICE/AMBULANCE/FIRE: A voluntary firemen corps in the city. Alarm, Tel: 22222; Guard, Tel: 23720; Firemen, Tel: 15; Ambulance, Tel: 22830, 22638, 23708, 24475; Police, Tel: 22738.

BANKS: Colombia Republic Bank, Popular Bank, Bogota Bank, etc.

SHORE LEAVE: Permitted (with ID cards).

IDENTIFICATION CARDS: Agent will supply special cards to crew and passengers in transit so that they may go ashore. Cards valid for entering and leaving port installations and for identification with the Immigration authorities. Must be returned before vessel departure.

DELAYS: At anchorage in Bay average delay of 1 day while waiting for berth. On account of the rainy condition of the port, discharge or loading is at times stopped up to 12 hours.

GENERAL: Provisions available. Cable service to all parts of the world. Telephone and telex service inside country and to foreign countries through Bogota. Weather conditions: generally rainy. Explosives: if the vessel is transporting dynamite and detonating caps they are placed in separate lighters, and armed guards are required on board any vessel transporting explosives. In such cases, the vessel must anchor in front of Buoy No. 9 and discharge to lighters during daylight. No vessel can berth at the wharf if transporting explosives, and only permitted with dynamite in closed hatches, which will not be opened at the wharf according to government regulations. Port is equipped with following shore cranes and equipment: 2×80,000 lb. capacity (mobile), 1×60,000 lb. capacity (mobile), 3×20,000 lb. capacity (mobile), 2×14,000 lb. capacity (mobile), and 1×10,000 lb. capacity (fixed). New equipment includes 3×16 ton mobile cranes to work in yard operations only and 2×40 ton Hyster heavy lift trucks for container handling.

1×60 ton Hyster heavy lift truck has recently been purchased and is expected to arrive in the port in the near future.

Floating crane: 1×45 tons capacity.

Lighters available: 3 with following characteristics:

Size Length/width	Capacity	Type
24.40 m.× 9.45 m.	280 tons	Flat surface
34.40 m.× 7.60 m.	150 tons	Flat surface
38.80 m.×10.60 m.	150 tons	Flat surface

No refrigeration space available.

DEVELOPMENTS: Container and general cargo yards are being rebuilt and expanded to improve storage and other facilities. Sheds are also being constructed, and a general port modernisation plan is under way.

SHIPMASTER'S REPORT: May 1990.

Vessel's max. draft was 27 ft.

We tried to contact pilot 2 hours before arrival (ETA 0400 hrs.) but received no reply.

When we arrived at the Sea Buoy (Buoy No.1) a small boat approached, without navigation lights or pilot lights. We stopped the engine when we saw the pilot flag.

The pilot boarded and advised that we would berth at high water (1100 hrs.).

When vessel proceeded inward we passed 6 cables North of Buoy No.1 and headed for Buoy No.4 (sailing outside the channel). At high water we had at least 5.0 m. under the keel.

It was not possible to use the main channel as it was shifting.

SHIPMASTER'S REPORT: September 1992.

Chart: B.A. Chart No. 2319 (November 1991 Edition).

Pilotage: Available at Sea Buoy No. 1 (03° 47.75' N., 77° 19' W.) for deep draft vessels, but normally at Pta.Bazan, South of Buoy No. 13.

Anchorage: Vessels are warned not to anchor in the vicinity of Buoy No. 1 at night, daytime no problem. Vessels normally anchor at Pta.Bazan for waiting their turn to berth, but should request *watchmen* for *piracy*.

Buoyed Channel: All buoys are subject to change in positions without warning, due to either tidal current or maintenance made by authorities. Please refer to local Chart No. COL 153 (See "Plan").

Berthing: 24 hours service. Normally 12 to 13 ocean-going vessels berthed.

Stevedores: For grain cargoes 24 hours round the clock, 7 days a week.

Watchmen: Strongly recommend 2 watchmen throughout 24 hours through Agents. Victualling by vessel. No piracy if watchmen onboard. It is also useful for preventing stowaways and drug smuggling, both a big problem for vessels calling at this port.

Fresh Water: Available at berth by hose, at about 10 tonnes/hr.

Cargo Gear: Ship's gear used with shore grabs for grain cargoes.

Shore Leave: Allowed with shore pass, ID cards not required.

Repatriation: Possible through Agents with advance notice.

Airport: Nearest airport is at Cali, about 120 km. away, which has connections to Bogota for Intercontinental flights.

Class Surveys: Available locally. Advance notice required through Agents for Classification Surveys.

Supplies: Provisions and fresh items, including seafood, are all available at very reasonable prices. Bonded items can be supplied directly from shop inside port area. Stores items difficult to supply. MDO available.

AUTHORITY: Puertos de Colombia, Terminal Maritimo de Buenaventura, Apartado 570, Buenaventura, Colombia. *Tel:* 24421, 24425. *Telex:* 052371. *Cables:* Termarit. *Contact:* Edgardo Caicedo Rivas, General Manager. Victor Julio Gonzalez R., Operations Director.

CARTAGENA (Incl. Mamonal and Ecopetrol): 10.25 N. 75.32 W. (See Plan)

(A) GENERAL CARGO
(B) TANKERS

(A) GENERAL CARGO

LOCATION: Cartagena is located in the bay with the same name and is one of the most secure, large and deep ports of the Americas. The port is well protected from all winds and has plenty of water and few currents.

DOCUMENTS:

Pollution Policy Certificate.
Sanitary Certificate.
Load Line Certificate.
Cargo Ship Safety Radiotelegraphy and Radiotelephony Certificates.
Cargo Ship Safety Equipment Certificate.
Cargo Inspection Certificate.

The following documents are required on arrival:

3 copies Crew List.
2 copies Stores list.
1 copy Personal Effects List.
List of Vaccination dates with expiration dates (Yellow Fever).

PILOTAGE: Compulsory. Boarding position at sea buoy position: Lat. 10° 19' N., Long. 75° 35' W. Pilot can board vessel any time. Pilots ordered through ship's Agent. Several private companies of Pilots available. Pilot on VHF Channels 11 and 16 throughout 24 hours.

APPROACHES: *Channel:* Width of entrance channel is 152 m. and depth 41 ft. When entering the bay (Buoy No. 1), there is a depth of 36 ft.

ANCHORAGE: Anchorage is possible at any time 0.5 miles S.W. from Buoy No. 1 for vessels awaiting berth in the Bay of Cartagena (Sociedad Portuaria Regional de Cartagena and Muelles el Bosque), South from Punta Castillogrande. Tankers for Mamonal anchor West of the pier of Refineria Ecopetrol.

MAX. SIZE: Vessels up to 270 m. (890 ft.) length with a draft up to 33 ft.

HEALTH: Derat Certificate and Vaccination List required by doctor on arrival.

VHF: Port on VHF Channels 11 and 16.

TUGS: There are several private tug companies available to assist with berthing. Ship's Agent can make necessary arrangements.

BERTHING: The Terminal has 7 cargo berths and 2 berths for Ro-Ro vessels.

Berths No.	Length (m.)	Depth (m.)
1	176	6.4 (21 ft.)
2	202	9.7 (31.8 ft.)
3	182	9.1 (29.8 ft.)
4	130	8.4 (27.5 ft.)
5	202	11.5 (35 ft.)
6	182	8.4 (27.5 ft.)
7	258	11.5 (35 ft.)
Ro-Ro 1	40	9.5 (31.2 ft.)
Ro-Ro 2	40	10.6 (35 ft.)

There is year round permanent service for the vessels (24 hours a day, 7 days a week).

Storage: Warehouses with 29,000 sq.m., 120 reefer plugs.

STEVEDORES: Charges for the service of unloading and loading will be rendered against the vessel, their Owners or Agents. Working hours 24 hours a day, 7 days a week.

CRANES: The Gottwald crane HMK 280 started operation in 1994 with a maximum capacity of 100 tons. This crane is used for the operation of loading and unloading of vessels with efficient results.

Maximum Capacity	100 tons.
Reach	44 m.
Maximum Efficiency	25 TEU/hr.
Total Weight	400 tons.

The post Panamax gantry crane will start operations in March 1996. This crane can use spreaders of 20 ft., 40 ft. and 45 ft., if needed, to lift general cargo up to 50 tons.

Maximum Capacity	52 tons.
Reach	46 m.
Maximum Efficiency	44 TEU/hr.
Total Weight	980 tons.

Cargo Handling Equipment:

Front Loaders	5×40 tons Taylor.
	5×40 tons Hyster.
	5×40 tons Yale.
	5×40 tons Clark.
Yard Hustlers	45 (Capacity, Ottawa, Sisu, Mack).
Forklifts (2 ton – 12 ton)	40 (Hyster, Yale, Clark, Datsun, Nissan).

MEDICAL: Full hospital facilities available without prior notice.
TANKERS: See "Section B".
FRESH WATER: Available at all berths. Capacity of supplying 600 tons in 8 hours to a vessel (75 tons/hr.). Cost is $3.50 per ton.
FUEL: Available from Mobil, Exxon and Texas Petroleum by barges. All through Agent.
CONSULS:

Austria
Belgium
Brazil
Canada
Chile
Denmark
Dominican Republic
Ecuador
El Salvador
Finland
France
Germany
Greece
Honduras
Italy
Mexico
Norway
Panama
Peru
Portugal
Spain
Sweden
Uruguay
Venezuela

DRY DOCK/REPAIRS: Shipyards available: Conastil, Ferrocem, Astilleros Cartagena.
SURVEYORS: The following cargo inspectors are available: Saybolt, Lloyd's Register of Shipping, American Bureau of Shipping, Societe Generale de Surveillance, Bureau Veritas and Germanischer Lloyd.
WATCHMEN: No requirement for watchmen, except for special security reasons as determined by the shipping line or shipping agency.
OPENING/CLOSING HATCHES: Undertaken by port stevedores.
CUSTOM ALLOWANCES: Colombia Customs Regulations apply.
REPATRIATION: Facilities available for crew changes.
AIRPORT: International airport 5 km. Regular airlines such as Avianca, Sam, Intercontinental, Viasa, Copa and charters. Daily international flights.
TIME: GMT minus 5 hours all year round.
HOLIDAYS: There are 18 holidays in Colombia, but at the Terminal, there is 24 hour service, 365 days a year.
POLICE/AMBULANCE/FIRE: Police Station Tel: 662-2004. Ambulance of terminal Channel 16. Firemen of terminal Channel 16. Available 24 hours a day.
TELEPHONES: Telephone service available at the terminal for crew member from 0800 hrs. – 1700 hrs.
BANKS:

Banco de Colombia.	Tel: 664-2116.
Banco Cafetero.	Tel: 664-4150.
Citybank.	Tel: 664-2169.
Banco Union.	Tel: 660-1052.
Banco de Bogota.	Tel: 664-0876.
Banco Antiqueno.	Tel: 664-6055.

SHIP SUPPLY SERVICE: The following ship chandler companies are available: Andrea Ship Chandlers, Tel: 666-0651. Ariza Heredia, Tel: 664-2067. Hector Silguero Ship Chandler, Tel: 665-0037. Humar, Tel: 662-0695. Inpromar, Tel: 664-3294. Jaime Rozo, Tel: 669-0750. Mansilca, Tel: 664-1141. Suministros Generales, Tel: 664-2866.
GARBAGE DISPOSAL: Restricted solid waste disposal. Liquid sludge to be notified in advance of vessel's arrival.
CURRENCY: Pesos. U.S.$ 1.00 = 1,000 Colombian Pesos (March 1996).
DEVELOPMENTS: Total investment of approximate 50 million dollars for the next 3 years.

Extension of the marginal wharf by 180 m. (600 ft.).
Dredging of the access channel and all of port berths to 44 ft.
Extension of the container yard.
3 Post Panamax gantry cranes.
2 Transtainers.
Electronic data information system.
Security system.

A total of 50 million dollars for a new cruise terminal for 2010. First stage and second stage cost $ 7 million, expected to be complte by 1999.
AUTHORITY: Sociedad Portuaria Regional de Cartagena, Manga Terminal Maritimo, Cartagena, Colombia. *Tel:* (575) 660-8071, (575) 660-7535. *FAX:* (575) 660-8071, (575) 660-7622. *Contact:* Alfonso Salas Trujillo, General Manager.

(B) TANKERS

LOCATION: Cartagena is located on the Bay of Cartagena, North coast of Colombia, Lat. 10° 19' N., Long. 75° 31' W.
DOCUMENTS: Documents necessary for a petroleum tanker arriving at Cartagena are as follows:

1 copy Clearance (Despacho) from Last Port (if vessel was directed while en-route, Master's affidavit). Consular visa unnecessary.
1 copy Consular Dispatch.
4 copies Crew List.
4 copies Personal Effects Lists.
2 copies Ballast Manifest (Manifiesto de Lastre).
4 copies Stores List.

PILOTAGE: Pilotage is compulsory. If, on arrival outside the entrance to the channel leading to Cartagena harbour, a Pilot does not meet vessel, vessel is to sound the whistle signal, 4 long blasts, and display International Code Flag "G" for a Pilot.

Vessels are not to pass each other in the channel leading into the harbour of Cartagena and inbound vessels are to give way to outbound vessels.

Vessels entering or leaving the port must have a Pilot on board, otherwise they might be subject to a fine for failure to comply with this regulation.

The vessel must sound 4 long whistle blasts so that it will be met by the Mooring Master inside the harbour and who will take it alongside immediately if berth is available. If the ship's Master sees that another ship is at the loading berth, he must anchor.

It will be necessary to deliver to the Mooring Master a report stating the exact time he arrived on board and left vessel outside the channel. If, when inbound, the Pilot does not meet vessel outside the channel, Master is to note this fact on the Pilot's Report.

NAVIGATION AIDS: For information pertaining to Navigation Aids, consult the latest edition of the Light List (H.O. III A) or equivalent British Light List; also the Sailing Directions covering the area.

RADIO: Masters of vessels proceeding to the Cartagena Terminals are to send a radio notice at least 48 hours prior to arrival to the Agent at Cartagena; this should be corrected promptly in the event of any change in the time of arrival.

The Agency, upon receipt of the arrival cable, will cable the vessel with pertaining instructions about the cargo, if not ready, or if the berth is occupied at the time of arrival by another vessel. In these instructions, the Agency will indicate the estimated docking time.

RESTRICTIONS/MAX. SIZE:

		Refinery Terminal Max. – Min.	*Nestor Pineda Terminal* Max. – Min.
Size of vessel that can safely berth:	Length (ft.):	853 – 492	853 – 577
	Beam (ft.)	125 – 65	125 – 82
	Draft (ft.):	37 ft. 6 in.	37 ft. 6 in.
	d.w.t.:	85,000 – 12,000	85,000 – 25,000
Location of Terminals South of the City of Cartagena:		7 miles	5 miles

	Refinery Terminal	*Nestor Pineda Terminal*
Latitude:	10° 19' 09" N.	10° 19' 39" N.
Longitude:	75° 30' 42" W.	75° 30' 54" W.
Distance from port entrance:	5.5 miles	6.5 miles
Least depth of water from Boca Chica Channel to Terminal:	44 ft.	44 ft.
Depth of water at Terminal at Mean Low Tides:	40 ft.	40 ft.
Mean Tidal Range at Terminal:	1.5 ft.	1.5 ft.
Nature of bottom at Terminal:	Mud	Mud
Docking and unloading:	Night and day	Night and day

Also see "Berthing".

BERTHING: Ecopetrol owns 2 terminals on the Bay of Cartagena:
Refinery Terminal: The dock of the Refinery Terminal consists of a "T" loading platform with trestle connection to shore, 4 breasting dolphins and 2 mooring dolphins. These facilities are used for receiving crude oil, gas oil and white products and shipping refined products and spent caustic in tankers up to 85,000 d.w.t., either empty or partially loaded to a maximum draft of 36 ft.
Nestor Pineda Terminal: Consists of an isolated loading platform, connected to the shore by 7 submarine pipelines, 3 breasting dolphins, and 2 mooring dolphins. These facilities are used for receiving crude oil and shipping fuel oil and aromatics in tankers up to 85,000 d.w.t., either empty or partially loaded to a maximum draft of 36 ft.

The size of tankers entering Cartagena's bay is limited by the depth of the entrance channel (Boca Chica), which is limited to ships with a maximum draft of 38 ft.

Vessels are supposed to berth alongside the dock with bow and stern lines from both the port and starboard bow and stern.

To dock vessels over 2,000 d.w.t., Maritime and Port Authorities request the use of tugs. Tug costs are on the ship's account. It is recommended that 2 mooring lines be bent together on the starboard quarter. The Mooring Master boards the vessel about 0.5 mile from dock and remains aboard during the entire stay of the vessel at the dock. The Loading Master is to be supplied with room and meals on board.

LOADING/DISCHARGING:
Name of grades handled at Refinery Terminal:

	No. and Size of F.M.C. Tubular Arms	*Diameter of Pipe-line (in.)*	*Max. Pumping Rate – Barrels Per Hour*	*Max. Pump. Pressure psig.*
Crude Oil	3 – 12 in. × 60 ft.	20	20,000	150
Fuel Oil	3 – 12 in. × 60 ft.	2 – 14	5,000	150
Gasoline	3 – 12 in. × 60 ft.	18	10,000	150
Kerosene-turbo	1 – 12 in. × 60 ft.	8 – 10	2,100	150
Diesel	2 – 12 in. × 60 ft.	12	7,000	150
Spent Caustic Soda	1 – 12 in. × 60 ft.	6	2,000	150
Ballast Water	3 – 12 in. × 60 ft.	16	20,000	150

Name of grades handled at Nestor Pineda Terminal:

	No. and Size of F.M.C. Tubular Arms	*Diameter of Pipeline (in.)*	*Max. Pumping Rate – Barrels Per Hour*	*Max. Pump. Pressure psig.*
Crude Oil	3 – 10 in. × 60 ft.	20	20,000	150
Combustoil	3 × 10 in. × 60 ft.	24	16,000	150
White Products (2)	2 – 10 in. × 60 ft.	6	15,000	150
Ballast Water	3 – 12 in. × 60 ft.	16	20,000 (1)	150

(1) From ship to shore facilities.
(2) Includes facilities for loading Aromatics (Benzenes and Xilenes).

LPG: *Location:* The pier is situated at Lat. 10° 19' N., Long. 75° 30' 05" W.

The land access is the same for the gas terminal as the refinery terminal.

Usage: The platform is being utilised for the gas transfer to ships up to 4,100 d.w.t. (max. LOA 110 m.) empty or partially full to a maximum draft of 6.0 m. aft and 5.0 m. forward. The minimum depth next to the platform is 8.0 m.

Note: The draft of the tanker is subject to the situation of the manifold itself. There will be harbour pilots to determine, in specific cases, if the tanker can berth at the terminal.

Characteristics: The platform is connected to the refinery by aerial pipelines arranged under the access platforms.

The connection system is a bridle of 6 in. diameter and ANSI 300. The distance between the bridle and the external part of the pier is 6.0 m.

The distance from the port entrance (Boca Chica) is 5.5 nautical miles.

The minimum depth of the water between the Canal of Boca Chica and the terminal is 44 ft.

Average tide at the terminal is 1.5 ft.
Depth at platform is 6.0 m.
Nature of bottom is mud.
Mooring and unmooring is possible day and night.

Cargo: Propane and butane handled through 6 in. line and 6 in. hose at 1,800 bbls./hr.

BALLAST: Vessels must arrive with sufficient ballast to permit safe handling in port. Vessels in ballast shall not have greater than 4 ft. trim difference between the fore and after draft. Dock Master requirements in this connection under normal weather conditions are interpreted as drawing approximately 14 ft. forward and 18 ft. aft.

The deballasting facilities are as follows:

In the Refinery Terminal the pipeline to the shore installations is 2,835 ft. long and 16 in. diameter, 3×12 in. loading arms are available to a maximum rate of deballasting of 20,000 bbls.p.h. In the Nestor Pineda Terminal the pipeline to the shore is 3,600 ft. long, and 16 in. diameter, also there are 3×12 in. loading arms to a maximum rate of deballasting 20,000 bbls.p.h.

No dirty or clean ballast, nor engine room, or pump room material must be pumped overboard while inside the port.

The Ship's Master should be fully aware of the Colombian laws and regulations pertaining to pollution of the environment and the sanctions derived from their infringement.

Extreme care must be taken to avoid spillage of oil or any other contaminants. In the occurrence of any spillage attributable to the crew's responsibility, immediate action must be taken in order to clean the affected areas. The costs of this action are on the ship's account.

There are strict legal regulations concerning pollution problems. Those responsible for this type of situation will be heavily fined by the Port Authority.

FRESH WATER: Fresh water is available only at Nestor Pineda Marine Terminal. This water is not recommended for drinking.

FUEL: Bunker C, Marine Diesel and Diesel Oil are available only in the tanker anchorage area, from local suppliers.

GANGWAY/DECK WATCHMEN: An accommodation ladder shall be lowered on the port side upon arrival at the port.

SHORE LEAVE: Shore leave is granted to members of the crews of vessels calling at Cartagena. Before granting shore leave, the Master must address a letter to the Port Authority requesting permission to grant shore leave and must assume all responsibility for his men.

Crew deserters will be arrested by the local police and the vessel in all probability will be fined. Every precaution, therefore, is to be taken to prevent members of the crew from going ashore without permission from the Master. The Port Authority restricts, under penalty of fine, the boarding of any tanker while at the loading terminal by all persons except those having official duties to perform on board. Masters are to make sure that no unauthorised persons are permitted to come on board their vessel while at the terminal.

REGULATIONS: Ecopetrol requires that all vessels loading or unloading at their terminals comply with the following regulations:

a. Tankers must arrive in port with hose derricks rigged and mooring lines on deck.
b. During the time the tanker is at the loading platform a sufficient number of the ship's crew must be on duty to properly attend the mooring and hose lines; so that necessary changes can be promptly made.
c. The tanker must furnish one member of the crew to operate the ship's winch, which operation, however, is to be under the direction of the Loading Master.
d. The tanker's crew must handle all ship's valves.
e. The ship's officers must follow the instructions, in all aspects, from the Loading Master as to all the signals to be given to the shore loading stations. When the tanker is about to be loaded, a "stand-by" signal is to be given. The "Slow-down" signal must be given at least 5 minutes before the "Shut-down" signal.
f. In order to facilitate the above, the crew should be on deck immediately following the "stand-by" signal and preparations must start to unberth the ship on completion.
g. No ship will be berthed except under the sole direction of the Mooring Master.
h. While the ship is berthed, the propellers must not be moved; engines shall be ready for immediate use and steam, or power must be available to work winches and windlasses to meet emergencies at all times.
i. All instructions from the Loading Master, whether contained in these regulations or not, must be followed by the ship's officers and if not, all operations will be discontinued, and, if necessary, the ship removed from the loading berth until such time as the ship's officers comply with orders of the Loading Master.
j. No maintenance, or repair to the ship, such as welding, or any other hot work will be undertaken, while at the berth and which will endanger the safety of the installations, or equipment, owned by Ecopetrol.
k. When loading/unloading operations are complete, the crew shall endeavour toward clearing the facilities in the shortest period of time possible.

SHIPMASTER'S REPORT: August 1979 (Updated 1986).

Approaches: Cape Santa Domingo shows up at 35 miles on radar. During Summer months May to September strong N.E. winds with heavy swell are prevalent in the approaches.

Thunderstorms and squalls are usual in Summer near the coast with a marked shift in wind.

Boca Chica Light and Fairway Buoy Light are conspicuous. Bancas Salmedina Light on wreck merges with shore lights from the West.

Generally even with strong N.E. winds in Summer it is fairly calm off Fairway Buoy, even if blowing strongly a few miles further seaward.

Pilotage: Pilot boards off Fairway Buoy, usually starboard side, using gangway/pilot ladder arrangement.

The Pilot Station is on Isla Draga on the South side of Boca Chica Channel, 24 hour service maintained.

The proper launch is a large black hulled craft but at present (August '79) it is being re-engined. A small pleasure type craft is being used at present of very low speed and light construction. In the bay the Pilots have a turbo craft, small but very fast. The Boca Chica Pilots are a Government service and dock vessels at public piers only, otherwise take vessels to area off private piers and hand over to private Pilot, same when leaving. Pilots speak some English.

The private Pilot at Mamonal Pier is good and speaks good English.

VHF: Appear to use Channel 16 only.

Boca Chica: The narrow entrance to Cartagena Bay Channel well lighted by buoys as per British Admiralty Chart. Max. draft 38 ft. accepted. Sometimes cross currents are Southerly across the entrance with strong Northerly winds. Course steered 086°.

Anchorages: For Mamonal Oil Pier, 1 mile S.W. of pier, with 3 shackles, whole of bay affords good shelter and all the bay is compulsory pilotage.

Berths: Mamonal Pier virtually due East of Boca Chica Channel. It is owned by Ecopetrol and leased to Amocar Refinery behind the berth. Both state owned. Max. size 75,000 d.w.t. (approx.).

Draft: Limited by Boca Chica Channel. This vessel's draft: 41 ft. 3 in. forward and 50 ft. aft.

Jetty: Vessel berthed heading North. A short jetty, length 50 m. with pipe gantry and dolphin each end connected by catwalk. Total length 100 m.

The pier ashore is for the pipes and has a narrow catwalk. No stores could be loaded along jetty. No fresh water on the berth. Gangway is a problem and is nearly impossible to land. Ships with long "B.O.T. type" can be landed on the jetty. We lowered ours to the water and used mooring boat which is on constant stand-by at jetty.

Fenders in a bad state of repair. The aft dolphin has no fender and vessel is kept off by port quarter buoy line. Fender is under repair.

Tugs: Generally two small tugs used for pushing, however, we used only one. A larger tug of 2,500 h.p. should be back in service after repairs.

Mooring: (See "Plan"). The first two lines fast each end are the springs, then the port quarter line aft to keep vessel off the damaged dolphin.

A line boat is used which goes backwards and forwards each end. The berth is approached from the South and port anchor is let go off the berth. Vessel eventually had 5 shackles in water. It takes about three hours from picking up Boca Chica Pilot to all fast.

Cargo: The pier handles gasoline, ammonia, propane and butane outward and crude oil inward. About 6,000 tonnes a month of ammonia is shipped for export.

About three 40,000 ton shipments of crude per month are brought in mostly from the Colombian Pacific coast but an occasional Nigerian shipment is also received.

Hoses: All flexible hoses, no Chicksan arms. Ammonia 8 in. 150 ASA with gate valve at ship's manifold, flexible wire braided with rubber covering. Joints liable to leak. Generally two connected ready, but we had to use three and P&O 'Galara' class have to use four due to high freeboard.

No vapour line. No Nitrogen purging. Shore labour connect. Can take up to 1.5 hours to connect/disconnect.

Rate: Maximum Ammonia rate 450 t.p.h. Four pumps at refinery, using two only seems to make 50 t.p.h. difference. Emergency stop – recirculates on jetty.

Survey: Bill of Lading on ship's tanks.

Loading Master: Speaks good English and very helpful. He requires a cabin as does a Pollution Inspector, Agent's runner and Surveyor.

Pratique: No radio pratique available.

N.O.R.: Signed by Pier Master on behalf of 'AMOCAR' refinery on arrival alongside or at anchor if waiting for berth.

Holidays: Public holidays with banks closed. 1st January, 1st May, 20th July, 7th August, 25th December.

Documents:
5 Crew Lists.
2 Personnel Effects.
2 Stores Lists.
Vaccination List.
Maritime Declaration of Health.
Ship's Papers.

Generally very good co-operation with four persons boarding, none on departure, Agent brings clearance. Require to sight register, load line certificate, radio certificate, safety certificate and DTI/P&I Pollution Certificate.

In some publications a document called 'SOLE' form is mentioned. The Agent said this was a form from Colombian Consul at last port to say all papers in order but no longer required. Shore passes valid for 3 days are issued, no photographs required. Passes are not returned.

Customs: Will only board between 0700 hrs. and 1900 hrs. If the vessel has not cleared before 1900 hrs. she cannot start cargo. This is a new law by the Port Captain since the end of July 1979, previously he used to issue a waiver and allow loading but some Agencies didn't apply to him and started before Customs came with waiver. A meeting is due to be held before the end of August 1979 on this subject between Agencies, Customs and Port Captain. This means, at present, that it is not advisable to pick up the Boca Chica Pilot between 1730 hrs. and 0530 hrs. as vessel will not be able to work cargo and will probably have to pay an extra day's port costs as they are on 24 hour arrival Pilot basis.

Communications: Barranquilla "HKB". Frequencies: 476; 6463.5; 8666; 13087.5. HF: Channels 5/6; 6, 8, 12 MHz.

Telex: Good.

Telephones: To Europe from Cartagena, 2 to 3 hours delay.

Bunkers/Fresh Water: At Bay piers, can easily be obtained by barge.

Agent: Did not seem aware of new Port Captain decree on not starting cargo at night which cost extra day's port charges, which could have been avoided, until he boarded with Customs.

Apart from the above, very good and attentive. Can be contacted on VHF Channels 16 and 6. A "runner" is on board all the time with a walkie-talkie.

I was told that crew changes are easily done as long as 24 hours notice is given for Immigration clearance. It is quite normal for ships to sail with crew members adrift and as long as Master gives Agent letter of authority for hotel costs and air ticket there are no problems with the Authorities. The nearest British Consul is in Bogota.

Shore Leave: It takes about 20 minutes from Amocar Refinery (At foot of Mamonal jetty) to Cartagena by bus. Rate of exchange: Pesos to Dollar = 200 (1986).

Thieving/Stabbing: All officials and Pilot advised us to make sure we had a very good deck patrol with no ladders overside, thieving at Bay Berths is rife. Also make sure you have some strong weapon with you and you lock yourselves in at night as people have been stabbed in bed when woken by thieves. Lock everything up.

Developments: Considerable developments have taken place in the area in recent years. Cartagena is a big tourist centre from Venezuela and the U.S.

Exports include coffee, fruit, lumber, tobacco, precious metals and petroleum products.

Good road and rail communications exist with Bogota the capital taking about 18 hours.

The Eastern shore of the bay is being developed as an industrial area. The following piers and sea island are in evidence.

ECOPETROL Sea Island (Nestor Pinead Terminal) takes up to 100,000 d.w.t. tankers, 54 ft. at the berth but limited by Boca Chica Channel. Chicksan connections. FW piped to berth, mooring to buoys. Used for export of fuel oil and other petroleum products. Situated just North of Brujas Island.

Cement Jetty	in position:	Lat. 10° 20.4' N., Long. 75° 30.9' W.
Soda Pier	in position:	Lat. 10° 19.9' N., Long. 75° 30.85' W.
Syncrolift	in position:	Lat. 10° 19.7' N., Long. 75° 30.8' W. 15,000 d.w.t.
LPG Barge Pier	in position:	Lat. 10° 19.4' N., Long. 75° 30.8' W.
Mamonal Pier	in position:	As charted
Industrial Berth	in position:	Lat. 10° 17.3' N., Long. 75° 30.4' W.
Products Pier	in position:	Lat. 10° 18.2' N., Long. 75° 30.55' W.
Products Pier	in position:	Lat. 10° 18.2' N., Long. 75° 30.7' W.

Considerable barge traffic with big pusher tugs use the River Dique, which comes out in the Southern part of the bay, this joins up with the River Rio Magdalena in the interior and to Barranquilla, etc.

SHIPMASTER'S REPORT: May 1987.

Manomal is the oil port for Cartagena. It consists of an industrial complex with several berths, mainly handling bulk cargoes. The tanker berth is a relatively small sea island about 600 ft. long. This vessel, (Panamax, Summer d.w.t. 61,391 tonnes, L.O.A. 738 ft. Beam 106 ft.) visited Manomal in May 1987.

Approaches: At a distance of 15 miles – 20 miles Isla Tierra Bomba Light is clearly visible. It is now equipped with a Racon (C) which shows clearly on both 3 cm. and 10 cm. radars. Land shows up clearly on radar, and is easily identifiable with topography shown on BA. Chart No. 2434. Light on Boca Chica Sea Buoy also very good and seen at 7.5 miles – 8 miles on this occasion. Vessel had to anchor to await berth, and did so in about 36 fathoms of water, 7 cables S.W. of the Sea Buoy. No difficulties experienced anchoring or weighing anchor. Government Pilot boards vessel in the vicinity of the Sea Buoy and takes vessel as far as the berth where a Mooring Master takes over. The Berth is marked on the Plan on BA. Chart No. 2434 in position Lat. 10° 20.63' N., Long. 75° 30.93' W. as a "Platform". Ships always berth starboard side to, the normal mooring pattern being 3 head and stern lines, 2 breast lines and 2 springs, each end. The berth is a fairly recently built Sea Island but is not really large enough for ships over about 500 ft. in length. All our lines with the exception of lines from the main deck mooring winches ended up as springs. The berth is well fendered, so no problems lying alongside. 2 tugs available for berthing, one of about 2,500 h.p. is quite useful, but second one is small, and not much help berthing, although it does help to keep the vessel alongside whilst mooring is in progress. Line boat available and linesmen seem quite competent. No shore Gangway, but vessel was able to use her accommodation ladder amidships with a little difficulty.

Facilities: 3 × 10 in. Chicksan arms available for loading. Informed by shore that berth is served from the shore by 3 × 24 in. lines. (1 for Crude, 1 for Fuel Oil and 1 for deballasting ashore.) Loading Rate (F.O.) is about 15,000 bbls./hr., although vessel told that 10,000 bbls./hr. would be maximum. All shore personnel found to be helpful and cooperative. 4 hours required for cargo documentation after the completion of cargo.

Informed by the shore that there is 55 ft. of water at the berth, but limiting factor is the Boca Chica Channel, where we were limited to 37 ft. 06 in. Outgoing Pilot informed that there is an absolute maximum depth of 39 ft. in this Channel. Range of tide only about 1.5 ft.

Security: KEEP A SHARP LOOKOUT FOR THIEVES. Strict security measures, everything locked up. Vigilant deck watch to be maintained. Very little security seems to be practised by Terminal personnel. Shore Watchmen are available, and should be employed. Also had trouble with a large number of women who tried to board the vessel soon after shore Authorities had cleared ship inwards. Master had to personally refuse access to vessel for these "unauthorised visitors". Suggest deck watch doubled when near the completion of loading when vessel has a small freeboard. This vessel kept a good deck watch at all times, even so, an after store was broken into and a small quantity of paint stolen.

Sailing: No difficulties experienced leaving the berth. Tugs used but not made fast, they just push. Mooring Master unberths ship and turns her round off berth, when Sea Pilot takes over. Under normal circumstances this Pilot leaves the ship when passing between the last channel buoys (outwards) in Boca Chica Channel.

Note: During night approach to the port, the Stranded Wreck in Position Lat. 10° 22.9' N., Long. 75° 38.7' W. was showing clearly on the radar, but the light was not seen, and therefore presumed unlit, either temporarily or permanently.

SHIPMASTER'S REPORT: August 1993.

Charts: B.A. Charts No. 1277 and 2434.

Pilot Books: NP 7A (9.102 and following pages).

Approaches: Approach was made from S.W. in near gale force conditions with poor to moderate visibility. At the time, both radars were performing poorly and erratically and the Satnav was out of use, so it made for interesting navigation.

Although the radars did get a weak echo, this turned out to be Cartagena itself, which thoroughly confused the officer on duty, as closer low lying features did not appear at all, and the navigation marks on offshore reef and islands were either destroyed or operating on reduced power.

Bancos de Salmedina Lt. is reported destroyed – not seen.

Isla de Tesoro Lt. operating on reduced power – very difficult to see.

Isla Tierra Bomba Lt. – visible only at 5 miles.

Isla Tiera Bomba D/F station – not operating.

Communications: Agents were informative prior to arrival and did warn about Bancos de Salmedina Lt. They laid great emphasis on security and the necessity of keeping unauthorised people off the ship.

Pilots were contacted in good time and responded well.

Pilotage: Pilot boarded from a very small slow boat by the outer buoy at Boca Chica. Agent had requested that the accommodation ladder be rigged for him, but I considered this unsafe as our rig is aft and leads aft, and would have required the boat to come right under the round-in of the stern by the propeller. Once on board, the passage through Boca Chica was taken slowly and carefully. Once clear of the entrance, the short run across the bay was taken slowly to allow time for a ship to leave our berth. The Agent's boarding officer boarded from a very fast, unlit boat, which was mistaken for some unauthorised approach, and he was lucky not to have been hosed down.

On departure, the Pilot left well inside Boca Chica. I think they do not relish long voyages on their boat.

Berthing: The oil berth at Mamonal is modern and well maintained. Two large tugs were used (tug's ropes), and berthing was accomplished starboard side to without any difficulties.

11,700 tonnes was loaded without incident. Shore personnel were efficient. Officials were pleasant and quick.

Agent's boarding clerk remained on board throughout loading and was very helpful.

Security: We arrived expecting trouble, but the berth is well guarded and secure and no one tried to board from boats.

The Agent's warnings about security are a routine addition to his normal communications and seem to refer more to the general cargo berths.

All in all a surprisingly pleasant and efficient berth and loading operation. No delays, no problems and no thefts.

AUTHORITY: *Operator:* Empresa Colombiana de Petroles, "Ecopetrol", Apartados Aereo 2778 and 1452, Cartagena, Colombia. *Tel:* 685400. *Telex:* 037726, 037858. *Contact:* Ramon Benavides.

COVENAS (Gulf of Morresquillo): 09.25 N. 75.42 W.

(See Plan)

OFFSHORE PETROLEUM TERMINAL – CRAVO NORTE ASSOCIATION

See "General" before first port.

LOCATION: Situated in the Gulf of Morresquillo approximately 56 miles S.S.W. of Cartagena. "Arrived Ship" position is Lat. 09° 33' N., Long. 75° 51.5' W. which is 4.5 nautical miles from the Floating Storage Unit (FSU). (See "Plan"). The Terminal loads one grade of crude oil (API 29.3°. Temperature 88°/90°F).

DOCUMENTS:
Clearance from Last Port.
9 Crew Lists.
9 Personal Effects Lists.
Health Declaration.
Vaccination Certificate.
Derat Certificate.
Copy of Communique of vessel's agency
Ships Register
Log Book
Marpol Compliance Certificate
Certificates – Load Line, Safety Construction,
Safety Equipment, Safety Radio, Oil Pollution
Insurance, Cargo Gear.

APPROACHES: Golfo de Morrosquillo is entered between San Bernardo (9° 42' N., 75° 42' W.), which is low and sandy, and Punta Mestizo 17 miles S.S.W., its shores are fringed by mangroves and wooded swamps.

The head of the Gulf is backed by a plain, skirted by extensive savannahs, rounded to the East by a mountain range. The highest peaks, standing 12 miles East of the town are Tetas de Tolu, which forms two easily identified hills.

A lighted buoy (flash every 6 secs.), is established on Roca Morrosquillo (9° 35.5' N., 75° 59.5' W.) and represents the mid entry point to the Gulf.

PILOTAGE: Compulsory except for anchoring. A company Mooring Master will board the incoming tanker approximately 4.5 nautical miles N.W. of the FSU. VHF Radio – Stand-by on Channel 16, shift to Channel 10 for manoeuvring – 24 hours' service, weather permitting.

ANCHORAGE: The recommended anchorage for export tankers and vessels having business with the off-shore terminal is within a radius of 1.5 nautical miles of position: Lat. 09° 33' N., Long. 75° 51.5' W.

RESTRICTED AREA: An area has been nominated as a Restricted Area. Within this area all activities which could endanger the subsea installations such as anchoring of vessels, dredging, mechanical fishing (trolling and trawling), disposal of refuse, etc. are forbidden.

The area is bounded by lines joining the following reference points:

1. Punta Bolivar:	Lat. 09° 25' 20" N.,	Long. 75° 43' 40" W.
2. Punta Piedras:	Lat. 09° 25' 25" N.,	Long. 75° 39' 05" W.
3.	Lat. 09° 32' 54" N.,	Long. 75° 47' 12" W.
4.	Lat. 09° 31' 36" N.,	Long. 75° 48' 30" W.
5.	Lat. 09° 32' 12" N.,	Long. 75° 43' 30" W.

RESTRICTIONS: Berthing night and day, weather permitting, in open water in the Gulf of Morrosquillo.

MAX. SIZE: *FSU:* 180,000 tonnes displacement with LOA 300 m.

Minimum Size: 55,000 tonnes displacement with LOA 220 m. for berthing alongside. Vessel can berth either side.

TLU: For berthing at the Tanker Loading Unit (TLU) 145,000 tonnes displacement with LOA 300 m.

Minimum Size: No minimum size providing vessel can handle the system equipment.

The max. draft at the FSU and TLU is 17.0 m. and the max. beam 40.0 m.

HEALTH: Port Authorities grant Free Pratique on clearing the vessel inwards. International regulations in cases of contagious sickness or epidemic are carried out.

RADIO: Radio Barranquilla, HKB.

Arrival Advice: All vessels arriving to load at Covenas Terminals should give following notice, which must be received through agent 72 hours, 48 hours and 24 hours prior to vessel's arrival:

AA Vessel particulars, year built, distance from manifold to bridge, number and diameter of manifold connections and if any reducers 12 in./16 in. available?
BB Arrival/sailing draft. Does your arrival draft keep propeller fully immersed with a trim not exceeding 8 ft.
CC Quantity of ballast. Position and specification (SBT-CBT) and expected deballasting time (hours).
DD Cargo to be loaded.
EE Max. loading rate and topping-off loading rate.
FF Grade of previous cargo. State your last port.
GG Destination port.
HH Is your IGS fully operational and oxygen content in the cargo oil tanks below 8%?
II Is your vessel's closed loading system operational?
JJ Does your vessel comply with OCIMF standards for oil tanker manifolds and associated equipment?
KK Does your vessel comply with OCIMF standards for equipment employed in the mooring of ships at SPM?
LL Your vessel has SWL 10 tons capacity cargo boom/crane operational and capable of handling 16 in. floating hoses?
MM Your vessel's fire fighting system/equipment is in good working condition?
NN Your vessels COW system is in good working condition?
OO Your vessel has closed fair leads for all mooring?
PP Vessel class and type of classification.
QQ Vessel P and I Club name and expiry date.
RR Type of oil pollution policy, expiration date.
SS Vessel ETA.
TT Please advise SDWT in long tons, number of crew members and Master's name, LOA, beam, NRT, GRT.

Note: Please be advised that cargo tanks must be fully inert on arrival. At Covenas 0_2 content below 8% Ecopetrol informs that failure to comply with the above might lead to the vessel being delayed until all are inert. Confirm if vessel has inert gas system.

VHF: Initial radio contact with FSU Covenas or with Covenas Control, Terminal Superintendent and Agents on Channel 16. Shift to Channel 10 for pilot boat, manoeuvring and for cargo operations. The loading vessel, either at FSU or TLU, will be attended on VHF Channel 10.

In case of 2 vessels loading simultaneously at FSU and TLU, the Cargo Loading Master will assign VHF communications channels to each one of them. One of the vessels will work on Channel 10.

RADAR: No port radar service.

TUGS: The use of terminal tugs (2) is at the Mooring Master's and/or Port Authorities' discretion. The mode of operation is made in conjunction with the vessel's Master.

BERTHING: The terminal can load 2 tankers simultaneously, one alongside the FSU and one at the TLU (See "Plan").

The FSU (Position: Lat. 09° 31' 45" N., Long. 75° 47' 11" W.) is a modified 384,000 tons ULCC, yoke-moored on a custom built catenary anchor leg mooring system with a 6 anchor pile spread. The installation is the principal unit in the terminal complex. The Terminal operations and control centre, communications network and accommodation facilities are housed on board. Water depth is 35 m. at the berth. Tankers can berth either side (preferably port side alongside) with 3×12 in. hard arm loading arms. Maximum loading rate 55,000 bbls.p.h. Max. height of manifold above sea level is 30 m.

The TLU (Position: Lat. 09° 29' 46" N., Long. 75° 44' 15" W.) is a catenary anchor, 6 legged, SPM functioning as a secondary tanker loading berth. Water depth is 25 m. at the berth. Loading is via 24 in. floating hose string with 2×16 in. connections on tanker port side, lifted by 10 ton S.W.L. ship derrick. Maximum loading rate 27,000 bbls.p.h. Max. height of manifold above sea level is 15.0 m. Max. distance bow to manifold 140 m.

BALLAST: No facilities for accepting dirty ballast or slops.

MEDICAL: Emergency medical services are available if needed but not on a routine basis.

DENSITY: 1015–1025, depending on state of Sinu River which empties into the Gulf.

FRESH WATER: Not available locally but could in an emergency be barged from Cartagena.

FUEL: Not available locally but can be barged from Cartagena.

FIRE PRECAUTIONS: See "Port Regulations" (copy placed on board on arrival).

CONSULS: Nearest at Cartagena (3 hours drive) or Barranquilla (4 hours drive).

REPAIRS: No dry dock facilities – minor repairs can be carried out through Cartagena or Barranquilla.

SURVEYORS: ABS, Lloyd's Register and Det Norske Veritas, available from Cartagena with sufficient notice.

Cargo Inspectors: SGS, Saybolt, Caleb Brett.

CARGO GEAR: Port derrick (10 tons S.W.L.) required at TLU.

REPATRIATION: Can be arranged but not encouraged.

AIRPORTS: Cartagena (3 hours drive) or Barranquilla (4 hours drive) to U.S.A. and Monteria (1.5 hours drive) to Bogota for connections worldwide.

TIME: GMT minus 5 hours all year round.

HOLIDAYS: Terminal loads 24 hours per day, 365 days per year.

SHORE LEAVE: Not permitted.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Colombian Peso.

GENERAL: *Prevailing Currents:* Currents off the North coast are set generally E.N.E. to N.E., being a continuation of the Caribbean counter current, and have rates of 0.5 knots – 1.5 knots.

In the entrance to the Gulf, the flow is affected by the coastal counter current, which is E.N.E.-going and attains a rate of nearly 0.75 knots.

Within the Gulf it is affected by tidal streams which are sometimes strong enough to cause a resultant W.S.W.-going flow. This reverse flow seldom exceeds 0.25 knots.

CHARTS: BA. Chart No. 1277. U.S. Chart No. 24512.

SHIPMASTER'S REPORT: June 1986 (Updated 1992).

Vessel: 36,800 g.r.t.

Operator of Terminal: Ecopetrol.

Pilotage: Compulsory within terminal area, except when proceeding to anchor.

A Company Mooring Master will board all vessels scheduled to occupy a loading berth at a position nominated by Mooring Master. At present 3 miles North of SPM (approx.). Mooring Masters are fully licensed Colombian Master Pilots. Mooring Masters remain on board throughout loading and require facilities complying with accepted standards.

Anchorage: At present 3.5 miles North of SPM. Actual position will be given by Covenas Control.

Max. Size: Vessels up to 145,000 tonnes displacement and not exceeding 300 m. LOA may be loaded at SPM. Mean sea level at berth is 25 m.

Tugs: 2 multi-service vessels, including tug capability (equipped with fire fighting and anti-pollution equipment). 2 personnel/pilot vessels. 1 fast boom layer. 1 oil-mop vessel/line handler. 1 hose and line handling vessel.

Medical: No facilities except in an emergency.

Shore Leave: Strictly forbidden.

Fuel: Available from Cartagena; 7 days' notice required.

Repairs: No dry dock available. Minor repairs may be carried out by local engineering firm in Cartagena. These services should be arranged through Agents.

Ballast: Discharge of dirty ballast into sea is strictly prohibited. No facilities for accepting dirty ballast or slops. Vessels must arrive with clean ballast. Ballast samples taken by shore Authorities (this vessel has segregated ballast and samples were taken).

Berthing: One SPM (Tanker Loading Unit) in position Lat. 09° 29' 46" N., Long. 75° 44' 15" W. is a catenary anchor, 6 legged, SPM.

Development – An FSU consisting of a converted 384,000 tons ULCC yoke moored on a custom built catenary anchor leg mooring with a 6 anchor pile spread, mooring in position Lat. 09° 31' 45" N., Long. 75° 47' 11" W. This installation will be the principal unit in the terminal complex as it is due for operation in August 1986. This unit will house Terminal Operations and Control Centre, communications network and accommodation facilities. The unit (FSU) will be capable of simultaneously receiving stabilised crude oil, and loading 2 export

Customs: Will only board between 0700 hrs. and 1900 hrs. If the vessel has not cleared before 1900 hrs. she cannot start cargo. This is a new law by the Port Captain since the end of July 1979, previously he used to issue a waiver and allow loading but some Agencies didn't apply to him and started before Customs came with waiver. A meeting is due to be held before the end of August 1979 on this subject between Agencies, Customs and Port Captain. This means, at present, that it is not advisable to pick up the Boca Chica Pilot between 1730 hrs. and 0530 hrs. as vessel will not be able to work cargo and will probably have to pay an extra day's port costs as they are on 24 hour arrival Pilot basis.

Communications: Barranquilla "HKB". Frequencies: 476; 6463.5; 8666; 13087.5. HF: Channels 5/6; 6, 8, 12 MHz.

Telex: Good.

Telephones: To Europe from Cartagena, 2 to 3 hours delay.

Bunkers/Fresh Water: At Bay piers, can easily be obtained by barge.

Agent: Did not seem aware of new Port Captain decree on not starting cargo at night which cost extra day's port charges, which could have been avoided, until he boarded with Customs.

Apart from the above, very good and attentive. Can be contacted on VHF Channels 16 and 6. A "runner" is on board all the time with a walkie-talkie.

I was told that crew changes are easily done as long as 24 hours notice is given for Immigration clearance. It is quite normal for ships to sail with crew members adrift and as long as Master gives Agent letter of authority for hotel costs and air ticket there are no problems with the Authorities. The nearest British Consul is in Bogota.

Shore Leave: It takes about 20 minutes from Amocar Refinery (At foot of Mamonal jetty) to Cartagena by bus. Rate of exchange: Pesos to Dollar = 200 (1986).

Thieving/Stabbing: All officials and Pilot advised us to make sure we had a very good deck patrol with no ladders overside, thieving at Bay Berths is rife. Also make sure you have some strong weapon with you and you lock yourselves in at night as people have been stabbed in bed when woken by thieves. Lock everything up.

Developments: Considerable developments have taken place in the area in recent years. Cartagena is a big tourist centre from Venezuela and the U.S.

Exports include coffee, fruit, lumber, tobacco, precious metals and petroleum products.

Good road and rail communications exist with Bogota the capital taking about 18 hours.

The Eastern shore of the bay is being developed as an industrial area. The following piers and sea island are in evidence.

ECOPETROL Sea Island (Nestor Pinead Terminal) takes up to 100,000 d.w.t. tankers, 54 ft. at the berth but limited by Boca Chica Channel. Chicksan connections. FW piped to berth, mooring to buoys. Used for export of fuel oil and other petroleum products. Situated just North of Brujas Island.

Cement Jetty	in position:	Lat. 10° 20.4' N., Long. 75° 30.9' W.
Soda Pier	in position:	Lat. 10° 19.9' N., Long. 75° 30.85' W.
Syncrolift	in position:	Lat. 10° 19.7' N., Long. 75° 30.8' W. 15,000 d.w.t.
LPG Barge Pier	in position:	Lat. 10° 19.4' N., Long. 75° 30.8' W.
Mamonal Pier	in position:	As charted
Industrial Berth	in position:	Lat. 10° 17.3' N., Long. 75° 30.4' W.
Products Pier	in position:	Lat. 10° 18.2' N., Long. 75° 30.55' W.
Products Pier	in position:	Lat. 10° 18.2' N., Long. 75° 30.7' W.

Considerable barge traffic with big pusher tugs use the River Dique, which comes out in the Southern part of the bay, this joins up with the River Rio Magdalena in the interior and to Barranquilla, etc.

SHIPMASTER'S REPORT: May 1987.

Manomal is the oil port for Cartagena. It consists of an industrial complex with several berths, mainly handling bulk cargoes. The tanker berth is a relatively small sea island about 600 ft. long. This vessel, (Panamax, Summer d.w.t. 61,391 tonnes, L.O.A. 738 ft. Beam 106 ft.) visited Manomal in May 1987.

Approaches: At a distance of 15 miles – 20 miles Isla Tierra Bomba Light is clearly visible. It is now equipped with a Racon (C) which shows clearly on both 3 cm. and 10 cm. radars. Land shows up clearly on radar, and is easily identifiable with topography shown on BA. Chart No. 2434. Light on Boca Chica Sea Buoy also very good and seen at 7.5 miles – 8 miles on this occasion. Vessel had to anchor to await berth, and did so in about 36 fathoms of water, 7 cables S.W. of the Sea Buoy. No difficulties experienced anchoring or weighing anchor. Government Pilot boards vessel in the vicinity of the Sea Buoy and takes vessel as far as the berth where a Mooring Master takes over. The Berth is marked on the Plan on BA. Chart No. 2434 in position Lat. 10° 20.63' N., Long. 75° 30.93' W. as a "Platform". Ships always berth starboard side to, the normal mooring pattern being 3 head and stern lines, 2 breast lines and 2 springs, each end. The berth is a fairly recently built Sea Island but is not really large enough for ships over about 500 ft. in length. All our lines with the exception of lines from the main deck mooring winches ended up as springs. The berth is well fendered, so no problems lying alongside. 2 tugs available for berthing, one of about 2,500 h.p. is quite useful, but second one is small, and not much help berthing, although it does help to keep the vessel alongside whilst mooring is in progress. Line boat available and linesmen seem quite competent. No shore Gangway, but vessel was able to use her accommodation ladder amidships with a little difficulty.

Facilities: 3 × 10 in. Chicksan arms available for loading. Informed by shore that berth is served from the shore by 3 × 24 in. lines. (1 for Crude, 1 for Fuel Oil and 1 for deballasting ashore.) Loading Rate (F.O.) is about 15,000 bbls./hr., although vessel told that 10,000 bbls./hr. would be maximum. All shore personnel found to be helpful and cooperative. 4 hours required for cargo documentation after the completion of cargo.

Informed by the shore that there is 55 ft. of water at the berth, but limiting factor is the Boca Chica Channel, where we were limited to 37 ft. 06 in. Outgoing Pilot informed that there is a~~n~~ absolute maximum depth of 39 ft. in this Channel. Range of tide only about 1.5 ft.

Security: KEEP A SHARP LOOKOUT FOR THIEVES. Strict security measures, everything locked up. Vigilant deck watch to be maintained. Very little security seems to be practised by Terminal personnel. Shore Watchmen are available, and should be employed. Also had trouble with a large number of women who tried to board the vessel soon after shore Authorities had cleared ship inwards. Master had to personally refuse access to vessel for these "unauthorised visitors". Suggest deck watch doubled when near the completion of loading when vessel has a small freeboard. This vessel kept a good deck watch at all times, even so, an after store was broken into and a small quantity of paint stolen.

Sailing: No difficulties experienced leaving the berth. Tugs used but not made fast, they just push. Mooring Master unberths ship and turns her round off berth, when Sea Pilot takes over. Under normal circumstances this Pilot leaves the ship when passing between the last channel buoys (outwards) in Boca Chica Channel.

Note: During night approach to the port, the Stranded Wreck in Position Lat. 10° 22.9' N., Long. 75° 38.7' W. was showing clearly on the radar, but the light was not seen, and therefore presumed unlit, either temporarily or permanently.

SHIPMASTER'S REPORT: August 1993.

Charts: B.A. Charts No. 1277 and 2434.

Pilot Books: NP 7A (9.102 and following pages).

Approaches: Approach was made from S.W. in near gale force conditions with poor to moderate visibility. At the time, both radars were performing poorly and erratically and the Satnav was out of use, so it made for interesting navigation.

Although the radars did get a weak echo, this turned out to be Cartagena itself, which thoroughly confused the officer on duty, as closer low lying features did not appear at all, and the navigation marks on offshore reef and islands were either destroyed or operating on reduced power.

Bancos de Salmedina Lt. is reported destroyed – not seen.

Isla de Tesoro Lt. operating on reduced power – very difficult to see.

Isla Tierra Bomba Lt. – visible only at 5 miles.

Isla Tiera Bomba D/F station – not operating.

Communications: Agents were informative prior to arrival and did warn about Bancos de Salmedina Lt. They laid great emphasis on security and the necessity of keeping unauthorised people off the ship.

Pilots were contacted in good time and responded well.

Pilotage: Pilot boarded from a very small slow boat by the outer buoy at Boca Chica. Agent had requested that the accommodation ladder be rigged for him, but I considered this unsafe as our rig is aft and leads aft, and would have required the boat to come right under the round-in of the stern by the propeller. Once on board, the passage through Boca Chica was taken slowly and carefully. Once clear of the entrance, the short run across the bay was taken slowly to allow time for a ship to leave our berth. The Agent's boarding officer boarded from a very fast, unlit boat, which was mistaken for some unauthorised approach, and he was lucky not to have been hosed down.

On departure, the Pilot left well inside Boca Chica. I think they do not relish long voyages on their boat.

Berthing: The oil berth at Mamonal is modern and well maintained. Two large tugs were used (tug's ropes), and berthing was accomplished starboard side to without any difficulties.

11,700 tonnes was loaded without incident. Shore personnel were efficient. Officials were pleasant and quick.

Agent's boarding clerk remained on board throughout loading and was very helpful.

Security: We arrived expecting trouble, but the berth is well guarded and secure and no one tried to board from boats.

The Agent's warnings about security are a routine addition to his normal communications and seem to refer more to the general cargo berths.

All in all a surprisingly pleasant and efficient berth and loading operation. No delays, no problems and no thefts.

AUTHORITY: *Operator:* Empresa Colombiana de Petroles, "Ecopetrol", Apartados Aereo 2778 and 1452, Cartagena, Colombia. *Tel:* 685400. *Telex:* 037726, 037858. *Contact:* Ramon Benavides.

COVENAS (Gulf of Morresquillo): 09.25 N. 75.42 W.

(See Plan)

OFFSHORE PETROLEUM TERMINAL – CRAVO NORTE ASSOCIATION

See "General" before first port.

LOCATION: Situated in the Gulf of Morresquillo approximately 56 miles S.S.W. of Cartagena. "Arrived Ship" position is Lat. 09° 33' N., Long. 75° 51.5' W. which is 4.5 nautical miles from the Floating Storage Unit (FSU). (See "Plan"). The Terminal loads one grade of crude oil (API 29.3°. Temperature 88°/90°F).

DOCUMENTS:
Clearance from Last Port.
9 Crew Lists.
9 Personal Effects Lists.
Health Declaration.
Vaccination Certificate.
Derat Certificate.
Copy of Communique of vessel's agency
Ships Register
Log Book
Marpol Compliance Certificate
Certificates – Load Line, Safety Construction, Safety Equipment, Safety Radio, Oil Pollution Insurance, Cargo Gear.

APPROACHES: Golfo de Morrosquillo is entered between San Bernardo (9° 42' N., 75° 42' W.), which is low and sandy, and Punta Mestizo 17 miles S.S.W., its shores are fringed by mangroves and wooded swamps.

The head of the Gulf is backed by a plain, skirted by extensive savannahs, rounded to the East by a mountain range. The highest peaks, standing 12 miles East of the town are Tetas de Tolu, which forms two easily identified hills.

A lighted buoy (flash every 6 secs.), is established on Roca Morrosquillo (9° 35.5' N., 75° 59.5' W.) and represents the mid entry point to the Gulf.

PILOTAGE: Compulsory except for anchoring. A company Mooring Master will board the incoming tanker approximately 4.5 nautical miles N.W. of the FSU. VHF Radio – Stand-by on Channel 16, shift to Channel 10 for manoeuvring – 24 hours' service, weather permitting.

ANCHORAGE: The recommended anchorage for export tankers and vessels having business with the off-shore terminal is within a radius of 1.5 nautical miles of position: Lat. 09° 33' N., Long. 75° 51.5' W.

RESTRICTED AREA: An area has been nominated as a Restricted Area. Within this area all activities which could endanger the subsea installations such as anchoring of vessels, dredging, mechanical fishing (trolling and trawling), disposal of refuse, etc. are forbidden.

The area is bounded by lines joining the following reference points:

1. Punta Bolivar:	Lat. 09° 25' 20" N.,	Long. 75° 43' 40" W.
2. Punta Piedras:	Lat. 09° 25' 25" N.,	Long. 75° 39' 05" W.
3.	Lat. 09° 32' 54" N.,	Long. 75° 47' 12" W.
4.	Lat. 09° 31' 36" N.,	Long. 75° 48' 30" W.
5.	Lat. 09° 32' 12" N.,	Long. 75° 43' 30" W.

RESTRICTIONS: Berthing night and day, weather permitting, in open water in the Gulf of Morrosquillo.

MAX. SIZE: *FSU:* 180,000 tonnes displacement with LOA 300 m.

Minimum Size: 55,000 tonnes displacement with LOA 220 m. for berthing alongside. Vessel can berth either side.

TLU: For berthing at the Tanker Loading Unit (TLU) 145,000 tonnes displacement with LOA 300 m.

Minimum Size: No minimum size providing vessel can handle the system equipment.

The max. draft at the FSU and TLU is 17.0 m. and the max. beam 40.0 m.

HEALTH: Port Authorities grant Free Pratique on clearing the vessel inwards. International regulations in cases of contagious sickness or epidemic are carried out.

RADIO: Radio Barranquilla, HKB.

Arrival Advice: All vessels arriving to load at Covenas Terminals should give following notice, which must be received through agent 72 hours, 48 hours and 24 hours prior to vessel's arrival:

AA Vessel particulars, year built, distance from manifold to bridge, number and diameter of manifold connections and if any reducers 12 in./16 in. available?
BB Arrival/sailing draft. Does your arrival draft keep propeller fully immersed with a trim not exceeding 8 ft.
CC Quantity of ballast. Position and specification (SBT-CBT) and expected deballasting time (hours).
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EE Max. loading rate and topping-off loading rate.
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GG Destination port.
HH Is your IGS fully operational and oxygen content in the cargo oil tanks below 8%?
II Is your vessel's closed loading system operational?
JJ Does your vessel comply with OCIMF standards for oil tanker manifolds and associated equipment?
KK Does your vessel comply with OCIMF standards for equipment employed in the mooring of ships at SPM?
LL Your vessel has SWL 10 tons capacity cargo boom/crane operational and capable of handling 16 in. floating hoses?
MM Your vessel's fire fighting system/equipment is in good working condition?
NN Your vessels COW system is in good working condition?
OO Your vessel has closed fair leads for all mooring?
PP Vessel class and type of classification.
QQ Vessel P and I Club name and expiry date.
RR Type of oil pollution policy, expiration date.
SS Vessel ETA.
TT Please advise SDWT in long tons, number of crew members and Master's name, LOA, beam, NRT, GRT.

Note: Please be advised that cargo tanks must be fully inert on arrival. At Covenas 0_2 content below 8% Ecopetrol informs that failure to comply with the above might lead to the vessel being delayed until all are inert. Confirm if vessel has inert gas system.

VHF: Initial radio contact with FSU Covenas or with Covenas Control, Terminal Superintendent and Agents on Channel 16. Shift to Channel 10 for pilot boat, manoeuvring and for cargo operations. The loading vessel, either at FSU or TLU, will be attended on VHF Channel 10.

In case of 2 vessels loading simultaneously at FSU and TLU, the Cargo Loading Master will assign VHF communications channels to each one of them. One of the vessels will work on Channel 10.

RADAR: No port radar service.

TUGS: The use of terminal tugs (2) is at the Mooring Master's and/or Port Authorities' discretion. The mode of operation is made in conjunction with the vessel's Master.

BERTHING: The terminal can load 2 tankers simultaneously, one alongside the FSU and one at the TLU (See "Plan").

The FSU (Position: Lat. 09° 31' 45" N., Long. 75° 47' 11" W.) is a modified 384,000 tons ULCC, yoke-moored on a custom built catenary anchor leg mooring system with a 6 anchor pile spread. The installation is the principal unit in the terminal complex. The Terminal operations and control centre, communications network and accommodation facilities are housed on board. Water depth is 35 m. at the berth. Tankers can berth either side (preferably port side alongside) with 3×12 in. hard arm loading arms. Maximum loading rate 55,000 bbls.p.h. Max. height of manifold above sea level is 30 m.

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BALLAST: No facilities for accepting dirty ballast or slops.

MEDICAL: Emergency medical services are available if needed but not on a routine basis.

DENSITY: 1015–1025, depending on state of Sinu River which empties into the Gulf.

FRESH WATER: Not available locally but could in an emergency be barged from Cartagena.

FUEL: Not available locally but can be barged from Cartagena.

FIRE PRECAUTIONS: See "Port Regulations" (copy placed on board on arrival).

CONSULS: Nearest at Cartagena (3 hours drive) or Barranquilla (4 hours drive).

REPAIRS: No dry dock facilities – minor repairs can be carried out through Cartagena or Barranquilla.

SURVEYORS: ABS, Lloyd's Register and Det Norske Veritas, available from Cartagena with sufficient notice.

Cargo Inspectors: SGS, Saybolt, Caleb Brett.

CARGO GEAR: Port derrick (10 tons S.W.L.) required at TLU.

REPATRIATION: Can be arranged but not encouraged.

AIRPORTS: Cartagena (3 hours drive) or Barranquilla (4 hours drive) to U.S.A. and Monteria (1.5 hours drive) to Bogota for connections worldwide.

TIME: GMT minus 5 hours all year round.

HOLIDAYS: Terminal loads 24 hours per day, 365 days per year.

SHORE LEAVE: Not permitted.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Colombian Peso.

GENERAL: *Prevailing Currents:* Currents off the North coast are set generally E.N.E. to N.E., being a continuation of the Caribbean counter current, and have rates of 0.5 knots – 1.5 knots.

In the entrance to the Gulf, the flow is affected by the coastal counter current, which is E.N.E.-going and attains a rate of nearly 0.75 knots.

Within the Gulf it is affected by tidal streams which are sometimes strong enough to cause a resultant W.S.W.-going flow. This reverse flow seldom exceeds 0.25 knots.

CHARTS: BA. Chart No. 1277. U.S. Chart No. 24512.

SHIPMASTER'S REPORT: June 1986 (Updated 1992).

Vessel: 36,800 g.r.t.

Operator of Terminal: Ecopetrol.

Pilotage: Compulsory within terminal area, except when proceeding to anchor.

A Company Mooring Master will board all vessels scheduled to occupy a loading berth at a position nominated by Mooring Master. At present 3 miles North of SPM (approx.). Mooring Masters are fully licensed Colombian Master Pilots. Mooring Masters remain on board throughout loading and require facilities complying with accepted standards.

Anchorage: At present 3.5 miles North of SPM. Actual position will be given by Covenas Control.

Max. Size: Vessels up to 145,000 tonnes displacement and not exceeding 300 m. LOA may be loaded at SPM. Mean sea level at berth is 25 m.

Tugs: 2 multi-service vessels, including tug capability (equipped with fire fighting and anti-pollution equipment). 2 personnel/pilot vessels. 1 fast boom layer. 1 oil-mop vessel/line handler. 1 hose and line handling vessel.

Medical: No facilities except in an emergency.

Shore Leave: Strictly forbidden.

Fuel: Available from Cartagena; 7 days' notice required.

Repairs: No dry dock available. Minor repairs may be carried out by local engineering firm in Cartagena. These services should be arranged through Agents.

Ballast: Discharge of dirty ballast into sea is strictly prohibited. No facilities for accepting dirty ballast or slops. Vessels must arrive with clean ballast. Ballast samples taken by shore Authorities (this vessel has segregated ballast and samples were taken).

Berthing: One SPM (Tanker Loading Unit) in position Lat. 09° 29' 46" N., Long. 75° 44' 15" W. is a catenary anchor, 6 legged, SPM.

Development – An FSU consisting of a converted 384,000 tons ULCC yoke moored on a custom built catenary anchor leg mooring with a 6 anchor pile spread, mooring in position Lat. 09° 31' 45" N., Long. 75° 47' 11" W. This installation will be the principal unit in the terminal complex as it is due for operation in August 1986. This unit will house Terminal Operations and Control Centre, communications network and accommodation facilities. The unit (FSU) will be capable of simultaneously receiving stabilised crude oil, and loading 2 export tankers, 1 secured alongside and 1 at the TLU (SPM) at a maximum of 55,000 bbls.p.h. on FSU. Mean sea level at this berth is 35 m. At present the TLU (SPM) has a maximum loading rate of 27,000 bbls.p.h. and only 1×16 in. hose is connected; 2 will be available when complete complex in operation. Vessels arriving at TLU (SPM) should have port derrick rigged and a bow chain stopper capable of accepting a 76 mm. diameter chain. The vessel is also required to supply a good mooring rope on the forecastle head to use as a messenger for the buoy mooring. Bow fairlead(s) require an opening of 600 mm. × 450 mm. The complex is a joint venture between Ecopetrol, Occidental and Shell.

SHIPMASTER'S REPORT: September 1986 (Updated 1992).

The conventional buoy mooring no longer exists, it has been replaced by a Tanker Loading Unit (TLU) in position Lat. 09° 29' 46" N., Long. 75° 44' 15" W., which is in effect an SBM. There is also a Floating Storage Unit (FSU) in position Lat. 09° 31' 45" N., Long. 75° 47' 11" W., which is a 390,360 d.w.t. tanker permanently moored.

Documents: All ship's certificates sighted. Authorities mainly interested in vessel's Safety Certificates and Pollution Certificates. Shore personnel board vessel once on the SBM, sometimes at anchor if more than one ship being cleared. It would appear authorities only board vessels during daylight hours but this does not prevent commencement of cargo operations.

Pilotage: Vessel contacts FSU when 30 miles off port, FSU will pass on any information regarding berthing, etc. When due to berth Pilot will contact vessel on VHF Channel 16. Pilot usually boards when vessel passing North of FSU, actual boarding area is 2 miles - 292° from FSU (Lat. 09° 32.4' N., Long. 75° 49.1' W.).

Anchorage: Approximately 3 miles West of FSU centred on Lat. 09° 32.9' N., Long. 75° 51.1' W. with a radius 1.5 miles from this position.

Restrictions: None, 24 hour port operations.

Tugs: One small tug assists in berthing, pushing only as required.

Ballast: There are *no shore facilities for dirty ballast so vessels must arrive with clean ballast.*

Berthing: SBM. One chain through centre panama lead onto vessel's AKD stopper, shore able to provide mooring gear if vessel not fitted with AKD stopper. Pilot on forecastle head when approximately one mile from SBM, he is in radio contact with Master on bridge.

Loading: 2×16 in. hoses connected port side. Shore labour connects hoses. 1 crew member required to drive crane/winch. Loading rate 25,000 bbls.p.h. (4,000 cu.m.p.h.). Vessels can load directly from shore or from the FSU.

Points of Interest: Accommodation required for Pilot (who also acts as Loading Master), and 1 Cargo Surveyor. One person (clerk) arrives on board towards end of cargo operations, he completes Bills of Lading on board on completion of loading. Medical facilities are available, the largest town close to Covenas being Tolu.

SHIPMASTER'S REPORT: September 1986 (Updated 1992).

Documents: The officials (Immigration, Customs, Agent, etc.) board before the approach manoeuvre.

The following documents are required:

Crew Lists.
Stores Lists.
Crew Effects Lists.
Cargo Lists.

The authorities also checked the following certificates: Classification, Radio, Construction, Safety Equipment, Oil Pollution and Insurance, Cargo Gear Register (at least 10 tonnes SWL), Last Port Clearance, Derat Certificate.

Pilotage: The pilot boarding area is about 1.0 miles – 2.0 miles W.N.W. of the FSU. The Pilot (Loading Master) remains on board during the loading.

Restrictions: Mooring is carried out during daylight only, unmooring possible day and night.

VHF: VHF Channels 16, 10 and 13 used.

Tugs: There are 2 tugs (supply vessels) with sufficient power to moor and unmoor large vessels. Tugs lines are used.

Berthing: The conventional buoy mooring is no longer in operation and has been replaced by two new units:

Floating Storage Unit: Tankers up to 230,000 tonnes' displacement moor alongside on either side of the FSU. The FSU has 3×12 in. loading arms on each side and hydraulic cranes for the transfer of Loading Master, Assistant, etc.

Mooring consists of 4 headlines, 2 breast lines and 2 spring lines forward and aft. If the vessel uses wire moorings, nylon tails are required. The FSU has quick release hooks.

Tankers Loading Unit: This is a Single Point Mooring for tankers up to 145,000 tonnes' displacement and is equipped with two ADK bow stoppers and fairleads of 600 mm.×450 mm. (for 76 mm. chain).

Manifold connections are on the port side (2×16 in.). Ship's derrick/crane required for hoisting hoses.

IGS: Tankers are required to be inerted (less than 8% oxygen) and are checked prior to loading.

AUTHORITY: *Operator:* Ecopetrol, Distrito Cano Limon Covenas, Redoma San Mateo, Autopista Internacional, P.O. Box No. 1107, Cucuta, Norte de Santander, Colombia, South America. *Tel:* (975) 760260, 760673. *Telex:* 76636. *FAX:* (975) 760422. Contact: Luis E. Duarte, Cano Limon Covenas - District Manager.

FSU – Covenas, P.O.Box 1261, Monteria. *Tel:* (952) 880165. *Telex:* 6300. *FAX:* (952) 880166. *Contact:* Jairo Quintero, Terminal Superintendent.

Port Authority: Port Captain, Naval Base Covenas. *Tel:* (952) 880177. *Contact:* Captain Ruben Dario Sandoval.

POZOS COLORADOS: 11.09 N. 74.15 W. (See Plan)

LOCATION: The terminal is on the North coast of Colombia, approximately 6 miles S.W. of Santa Marta.

DOCUMENTS:

For the Port Captain:

1 Clearance for Last Port.
1 Voyage Report.
1 Crew List.
1 List of Passengers for Santa Marta.
1 List of Passengers in Transit.

Vessel Certificates: (These only need to be shown).

Registration Certificate.
Load Line Certificate.
Classification Certificate.
Safety Equipment Certificate.
Radiotelegraphy Safety Certificate.
Construction Certificate.
Cargo Handling Equipment Safety Certificate.
Oil Pollution Certificate (Insurance for U.S.$1,000,000).

For Port Health Authority:

Derat Certificate.
Maritime Health Declaration.
Toxic Element Certificate.
Crew List with dates of vaccination.
List of Passengers for Santa Marta.
List of Passengers in Transit.

For Customs:

3 Cargo Manifests.
3 Crew Lists.
3 Lists of Passengers for Santa Marta.
3 Lists of Passengers in Transit.
3 Lists of Crew Personal Effects.
3 Lists of Provisions.
3 Mail Lists.

For Agencies:

1 Voyage Report (these only need to be shown).
2 Crew Lists.
2 Lists of Passengers for Santa Marta.
2 Lists of Passengers in Transit.
2 Crew Personal Effects Lists.
2 Lists of Mail for the Port.
4 Cargo Manifests.
4 Bills of Lading.
2 Cargo Stowage Plans.

PILOTAGE: Mooring Master will meet vessels approximately 1 mile seaward of terminal location. He will remain on board throughout the vessel's stay and should be provided with accommodation.

ANCHORAGE: When vessels arrive at night, they anchor 1 mile out to sea from the Terminal.

RESTRICTIONS: Docking only during daylight 0500 hrs. – 1700 hrs. Undocking 0430 hrs. – 1800 hrs.

MAX. SIZE: Berth in approximately 52 ft. of water and can accommodate vessels up to 69,000 d.w.t., LOA 300 m., beam 33 m., max. draft 15.0 m.

HEALTH: Port Authorities board with Mooring Master to enter ship and attend all formalities.

RADIO: *Notice of Arrival:* Agent for the vessel must confirm arrival of vessel at the Port with a minimum advance notice of 24 hours, giving with this information the following information:

Name of the vessel
Name of the Master
Nationality
Last port of call
Destination of the vessel
Overall length
Draft forward and aft
Tonnage to be unloaded
Time at which Pilot is required.

VHF: Permanent communications Vessel-Terminal with VHF Channels 16 and 6. National and International communications through "Empresa Nacional de Telecomunicaciones (Telecom)" 0800 hrs. – 2200 hrs.

TUGS: Tugs are available if necessary for manouevring when berthing and unberthing.

BERTHING: The vessel will be berthed in the area surrounded by the 7 mooring buoys, in following order from for'd port side, passing round stern to for'd starboard side: No. 7, 1, 2, 3, 4, 5, 6. Vessels lie in berth on approximate due North heading; vessel's lines run by means of mooring launch to stern, quarter, and breast buoys. Vessels up to 20,000 d.w.t. require at least 5 good manila lines; vessels in excess of 20,000 d.w.t. require at least 12 good manila lines. These lines must be of not less than 120 fathoms in length each. Synthetic lines of equivalent strength may be used. Vessels equipped with wire mooring winches may use wires in lieu of fibre lines. The mooring requires use of both bower anchors, each having at least 150 fathoms of chain and be prepared to handle 5-ton lift on starboard side at ship's manifold. Because of rigidity of submarine hose, a small movement of vessel out of correct position could damage submarine equipment. Extreme caution must be exercised to ensure that vessel is correctly moored. During loading operation slack must be kept out of submarine hose by adjustment of vessel's anchor and lines.

TERMINAL REPRESENTATIVE: The Terminal has skilled personnel to represent its business on board and they will remain on board during all operations.

HOSES: Submarine hose 16 in. with 16 in. to 12 in. reducer for connection to vessel's 12 in. deck hose. For vessels not equipped with 12 in. deck hose, a 12 in. to 10 in. reducer is available. A 25 ft. length of 10 in. deck hose is also available for vessels not having a deck hose on board. Ship's crew perform all hose connecting, disconnecting, etc.

PUMPING: Pumping rate 23,000 b.h.p. Max. working pressure 150 p.s.i.

CARGO HANDLING: Terminal is designed for loading and unloading crude oil or products. Currently, it is used to unload white products (motor gasoline and virgin naphtha). The products must be transported and unloaded in segregated form. The total capacity of storage is 750,000 bbls. Distance to tanks 9,997 ft. Diameter of line 20 in.
FUEL: No bunkers available at terminal. Acquisition is possible at Cartagena (Colombia). See "General" before first port.
MEDICAL: Doctor and hospital located at Santa Marta, throughout 24 hours.
CONSULS: No consular office in vicinity of terminal.

The following countries have consulates in Santa Marta:

		Phone
Costa Rica	Avda. Libertador No. 33-47	32199
Dominican Republic	Cra. 21 No. 15-99	32962
Ecuador	Las Villas 2a. etapa, Villa No. 15, El Rodadero	27590
Finland	Edificio de bs Bancos Oficina No. 605	35317
France	Calle 17 No. 2-56, Of. 212	32014
Guatemala	Calle 11 No. 1C-23 P. 8	34048
Netherlands and Sweden	Calle 15 No. 3-94	33403
Norway	Calle 11 No. 1C-23 Dpto. 306	33501
Panama	Calle 17 No. 2-56 Of. 416	34253
Peru	Calle 16 No. 1-92	33420

Other Consuls located in Barranquilla, approximately 35 miles distant.
BALLAST: The utmost care must be exercised by all tankers to avoid any contamination of the terminal bay waters, since the entire area is a developing tourist resort. This means that absolutely no deballasting or disposal of bilge water must take place in the bay. Shore deballasting facilities can handle up to 84,000 bbls. if ship provides advance warning.
FRESH WATER: Not available.
REPAIRS: Limited repair facilities available in Santa Marta, approximately 6 miles from terminal.
SURVEYORS: There are 3 petroleum inspection companies.
SHORE LEAVE: Through the ship's Agent, shore leave can be arranged, but sufficient crew must remain on board to handle emergencies. Most Maritime Agencies own 2 safety launches for vessel-shore-vessel routine.
SHIPMASTER'S REPORT: November, 1984.

1. The Terminal is now used exclusively for the import of gasoline.
2. *Mooring:* Forward: 2 anchors and 1 starboard breast line to buoy.
Aft: Lines to 5 buoys, 3 of which require double lines (8 ropes in total aft).
N.B. All ropes require a 'long drift' as buoys are well away from ship. Wire ropes not suitable for this terminal.
(Mooring is a long procedure).
3. Pilot and 'Loading Master' joined at anchor – awaiting tide – and stayed on board throughout stay; in addition 10 personnel have to be fed.
4. *Port Papers:* All ship's documents required for sighting and expiry dates (except, in our case, Ship's Register).
Agents advised the following required:
4 Crew Lists (provided 12 copies and all 'required').
3 Personal Effects Lists (provided 9 copies and all 'required').
3 Stores Lists (provided 4 copies and all 'required').
3 Bonded Lists (provided 4 copies and all 'required').
N.B. Federal Police require at least 2 Crew Lists with complete names not just surnames and initials ('difficult' with Indian crew).
5. *Stores:* Fresh provisions.
6. *Shore Leave:* Shore Passes issued, no problems except for distance to shore. Passes to be returned prior to sailing.
7. No repairs possible – no fresh water – no bunkers.
8. *Discharge:* With 1×12 in. line but fitted with 10 in. reducer to 24 in. undersea line to shore, about 2 km.
Can accept 15,000 bbls./p.h. subject to 7 kg./sq.cm. pressure.
9. *Weather:* (November) Very heavy swell running but this was reported as being very unusual for this time of year. Vessel rolled heavily.

SHIPMASTER'S REPORT: March 1988.
Mooring: The following arrangement was used.

Starboard fo'c's'le shoulder	Two ropes of 150 m.
Starboard aft maindeck	One rope of 150 m.
Starboard quarter	One rope of 200 m.
Stern buoy	
Centre lead aft	Two ropes of 200 m.
Port quarter	One rope of 180 m.
Port aft maindeck	One rope of 180 m.
Port fo'c's'le shoulder	One rope of 200 m.
Port anchor	9.5 shackles
Starboard anchor	8.0 shackles

Vessel moored with a North-going current, in a freshening N.N.E. wind, which reached 30 knots by the end of the mooring. The trade wind is augmented by the sea breeze and blows from approximately 1300 hrs. to 0100 hrs., making conditions difficult for the mooring launch, which is underpowered. One 750 h.p. tug was used and proved effective in positioning the vessel by pushing.

Ship's head in berth was 020°, Pilot stated that 025° to 030° would have been preferable, in order to present less angle to the wind. Berth was originally configured for a ship's head of 000°. The buoy pattern has remained the same, but the ship is now aligned to starboard, which accounts for the differing lengths of moorings required. Winter months are stated to be worst weather conditions, especially February and March.
Cargo Discharge: Rate overall was 2,119 cu.m.p.h. and reached a maximum of 2,640 cu.m.p.h.
AUTHORITY: *Operators:* Empresa Colombiana de Petroleos "Ecopetrol", Departamento de Coordinacion de Operaciones, Bogota, Colombia. Telex: 44 787. Tel: 85 67 97.

Estacion Pozos Colorados, Santa Marta, Colombia. Telex: 38 849. Tel: 7499, 7095.

PUERTO BOLIVAR: 12.16 N. 71.57 W. (See Plan)

LOCATION: Puerto Bolivar is at the entrance of Bahia Portete, a natural bay on the North coast of Colombia's Guajira Peninsula, located at Lat. 12° 16' N., Long. 71° 57' W. It is on the Caribbean, about 350 km. N.E. of Barranquilla.

DOCUMENTS:

1. According to the rules in force at the time these regulations were approved, the vessel's Master shall show the Authorities and the Port Cargo Inspector the following documents:
Register Certificate.
Classification Certificate. Cargo ships shall show the Certificate of Safety Construction for Cargo Vessels.
Load Line Certificate.
Pollution Certificate that must cover Colombian waters (See "Note").
Certificate of Radiotelegraphy and/or Radiotelephony.
Cargo vessel Safety Equipment Certificate with valid annual inspection carried out by an independent surveyor.
Derat Certificate.
Clearance from the Last Port.
Notwithstanding the above, the Master shall show the Port Authorities whatever other documents they may require.
Note: All vessels and marine craft that arrive in Puerto Bolivar shall comply fully with the International Convention for the Prevention of Pollution by Vessels of 1973 and its 1978 Protocol (Marpol 73/78) including all its amendments in force.
2. According to the rules in force at the time these Regulations were approved, the Master shall hand over the following documents to the Port Authorities:
5 Crew Lists containing the following information: name, capacity in which serving, I.D. Documents – class and number – or licence, nationality, date and place of birth.
4 Stores Lists; narcotics for medical use must be listed in detail as well as tobacco, alcoholic beverages and taxable goods according to the Customs General Directorship.
4 Mail Lists, if any.
3 Crew Curio and Personal Effects Lists.
3 Passenger Lists, if any.
2 Quarantine Declarations.
4 Stowage Plans.
Notwithstanding the above the Master shall hand over to the Port Authorities other documents that they may require.

APPROACHES: *Landmarks:* For vessels arriving from the Eastern Caribbean, Punta Gallinas (Lat. 12° 28' N., Long. 71° 40' W.) is approximately 20 miles E.N.E. of Puerto Bolivar.

For vessels arriving from the Panama Canal or ports to the West of Puerto Bolivar, Cabo de la Vela (Lat. 12° 13' N., Long. 72° 10' W.) is approximately 12 miles W.S.W. of Puerto Bolivar. Both Landmarks have prominent lighthouses which are shown in the appropriate light lists.

In addition there is a rotating beacon on the shiploader at Puerto Bolivar with the following characteristics:
Position: Lat. 12° 15.6' N., Long. 71° 58.9' W.
Description: Rotating white beacon.
Period: Flashing white every 2 seconds.
Height: 35 m. (115 ft.).
Visibility: 18.75 miles.
Fairway Buoy: The Port entrance is marked by Channel Buoy No.1 (Racon). Located in position Lat.12° 17' 30" N., Long. 71° 58' 54" W., flashing green every 2 seconds. Code (M) international code signal.
Aero Beacon: The company airport at Puerto Bolivar has an aero beacon located in position Lat. 12° 13' N., Long. 71° 58' W. with the following characteristics/frequencies: 400 kHz – "PTE" – Continuous. Also 415 kHz – "PB".
Channel: Vessels will enter and leave the port by a dredged channel 3.5 km. in length that connects the turning basin with the open sea. The channel's allowable ship's draft is 17 m. (max.). Minimum depth in channel and Berth Reach is 19 m.
Turning Basin: Allowable ballasted draft is 9.0 m. (max.). Vessels scheduled to load enter the circular turning basin, depth 11.5 m., where they are completely stopped, then turned by tugs to berth at the coal pier, port side to.

PILOTAGE: Compulsory. Pilot normally boards 2 miles North West of Buoy No.1 or at anchorage.
Pilot Ladder: Unless otherwise advised, the pilot ladder should be rigged on the starboard side of arriving ships.

The pilot ladder, should be of a SOLAS 1974 approved type. To meet those specifications it must have one-piece non skid steps equally spaced, about 14 in. apart with spreader bars five steps from the bottom and then at 9 ft. intervals.

Ships having a freeboard in excess of 30 ft. must have a suitable accommodation ladder rigged adjacent to the pilot ladder so that the Pilot can transfer to it when boarding. Ships' Masters may know this as "The Rotterdam Rig".

ANCHORAGES: Defined by Colombian Port and Maritime Directorship (DIMAR) as follows:

The anchorage area for vessels and marine craft that arrive in Puerto Bolivar shall be located within the following points and geographical co-ordinates:

Point A.	Lat. 12° 19' N.,	Long. 72° 02' W.
Point B.	Lat. 12° 19' N.,	Long. 72° 00' W.
Point C.	Lat. 12° 17' N.,	Long. 72° 00' W.
Point D.	Lat. 12° 17' N.,	Long. 72° 02' W.

The quarantine area for vessels and marine craft that arrive in Puerto Bolivar shall be located within the following points and geographicalco-ordinates:

Point A.	Lat. 12° 19' N., Long. 72° 04' 30" W.
Point B.	Lat. 12° 19' N., Long. 72° 03' W.
Point C.	Lat. 12° 17' N., Long. 72° 03' W.
Point D.	Lat. 12° 17' N., Long. 72° 04' 30" W.

The anchorage and quarantine areas established in the above articles are experimental and therefore all vessels and marine devices shall manoeuvre with care.

MAX. SIZE: The Port can accommodate vessels with the following dimensions:

LOA	300 m. (984 ft.).
Beam	45 m. (147 ft.).
Max. Loaded Draft	17 m. (55 ft.).
Max. Ballasted Draft	9 m. (30 ft.).

Minimum Acceptable Drafts for Manoeuvring in Puerto Bolivar:

Deadweight (tons)	*Forward Draft* (m.)	*Aft Draft* (m.)
10,000 – 30,000	3.04	4.87
30,000 – 50,000	3.65	5.48
50,000 – 70,000	4.57	6.40
70,000 – 100,000	5.49	7.31
Over 100,000	7.31	9.00

HEALTH: Radio Pratique is not granted and vessels arriving will have to be granted Pratique upon entering port or at anchorage. The standard World Health Organisation Certificate must be used.

RADIO: Coastal Station HKB may be used for routine messages.

Estimated Time of Arrival Notices: Masters should advise their ETAs upon receipt of orders to proceed to Puerto Bolivar. In addition, 72, 48 and 24 hour ETAs should be transmitted to INTERCOR with a copy to Agent.

ETA Message Text: (To be cabled with the first ETA, at least 72 hours before arrival).

		Bulk Carrier	*OBO*	*General Cargo*	*Tanker*
AAA	Vessel's name and previous names	R	R	R	R
BBB	ETA – date and time (local) *	R	R	R	R
CCC	Call Letters, Register No., Flag and Port of Registry	R	R	R	R
DDD	Agent's name	R	R	R	R
EEE	Last port of call	R	R	R	R
FFF	Arrival draft fore/aft	R	R	R	R
GGG	Extreme arrival air draft to hatch top	R	R	NA	NA
HHH	Expected sailing draft	R	R	NA	NA
III	Ballast on arrival (M.T.) and expected deballasting time **	R	R	NA	NA
JJJ	Is Ballasting/deballasting concurrent with loading/discharging at normal port handling rates? **	R	R	NA	R
KKK	Type of previous cargo	R	R	NA	R
LLL	Date of next special survey (including if overdue)	R	R	R	R
MMM	Port of destination	R	R	R	R
NNN	Cargo to be loaded/discharged by hold and total quantity	R	R	R	R
OOO	Hold rotation with quantities	R	R	NA	NA
PPP	Is vessel gas free?	NA	R	NA	NA
QQQ	Condition of steering/navigation equipment	R	R	R	R
RRR	Condition of mooring equipment	R	R	R	R
SSS	Parcels and sequence of grades to be discharged	NA	NA	R	R
TTT	Official deadweight tonnage (d.w.t.) taken from Ship's Registry	R	R	R	R
UUU	Length of loading area from Hatch No.1 fwd to end of last hatch aft, and width	R	R	NA	NA
VVV	Grain capacity (cubic metres) of each hold	R	R	NA	NA

R = Information requested.
NA = Information not requested because not applicable to vessel's type.

NOTES:

* Colombian local time 5 hours slow compared with GMT.

** Maximum segregated ballast possible provided maximum draft does not exceed 9.0 m., the propeller is acceptably immersed and the trim does not exceed 6 ft. by the stern. Double ballast tanks used to comply with draft requirements must be completely full or empty. Also top tanks used must be empty or measurable (completely full), so loading can commence as soon as draft readings are completed.

The boarding pilot will usually be accompanied by a draft surveyor. Masters are requested to provide a ship's officer or other qualified representative so that tank soundings, as part of the draft survey, can commence during the vessel's transit to the loading berth.

Lack of compliance with any of the above requirements may result in unnecessary delays in acceptance of the vessel to load. Serious misrepresentations could result in non-acceptance of the vessel.

The Master should be aware of government regulations on port operations (Res. 162. April 3rd 1995 of Superintendencia General de Puertos) before arrival. If not, he should consult with his agent to ensure his vessel's compliance.

Normal port handling rate for coal is average 3,000 – 5,000 tonnes/hour reaching peaks of 10,000 tonnes/hour.

VHF: VHF Radio Channels 14 and 16; call "Puerto Bolivar Marine" for anchoring or berthing instructions. Normal marine communications will be available.

TUGS: 3×4,000 h.p. and 1×3,000 h.p. to be located at the port. The use of tugs both entering and leaving is mandatory. Tugs will be utilised as deemed necessary by the Pilot. Tugs will normally be made fast prior to entering the channel for inbound ships. Tugs will utilise their own lines but ships should have crew standing-by with heaving and messenger lines to be used as directed by the Pilot.

BERTHING: *Cerrejon Coal Terminal:* The single coal berth is in operation 24 hours daily, year round, except December 31st (1200 hrs.) till January 6th (0600 hrs.). The berth has 3 breasting dolphins and is designed for a maximum ship size of 150,000 d.w.t., 300 m. LOA, 45 m. beam, and 17 m. draft.

Oversize vessels will be considered on an individual basic and will require special approval by Port Authorities and Port Operator prior to acceptance.

Access to the Port is via a dredged lighted buoy channel approximately 3.5 km. (1.9 miles) long and 225 m. (738 ft.) wide on a 327° – 147° true heading. The principal coal loading berth is located on the West side of the bay.

An additional pier designed for other commodities may be utilised for coal loading. Length of pier 280 m. Max. draft permissible 9.8 m. Tankers berth on East side and general cargo vessels on the West side.

After embarking the Pilot, vessel proceeds down the main ship channel past the coal loading pier. During transit and mooring tugs are used depending on vessels size. Vessel continues into turning basin where she is completely stopped and turned, to berth port side to. Smaller ships using the commodities pier may or may not be turned prior to berthing.

Vessels will normally load on a first come, first served basis.

Ships to load must arrive with clean ballast carried in segregated ballast tanks, with holds swept clean and, in the case of ore-oil or OBO vessels gas free.

At Pilot's discretion and with approval of Port Operator a vessel may be requested to ballast a cargo hold for manoeuvring and berthing purposes.

The maximum distance between the bottom of the shiploader spout and MLW is 23 m. The average tide is 0.35 m.

Mooring Line Arrangements: The number of lines or wires will depend on the d.w.t. and/or displacement of the vessel. In general, vessels will utilise head, stern and spring lines. The leads for the head and stern lines are almost perpendicular to the ship's side.

The number of lines and specific mooring arrangement will vary from ship to ship and will be reviewed by Pilot and Master, prior to mooring.

Should a vessel have insufficient or poor quality mooring ropes or wires to safely keep her properly berthed, the terminal will provide same as necessary. This determination will be made by the Pilot prior to berthing or by the loading supervisor after the ship is alongside. Charges will be assessed against the vessel for these services.

BULK HANDLING FACILITIES: *Railroad:* The 150 km. mine to port railroad is dedicated to handling Cerrejon coal.

Stockpile: Maximum storage is 1.7 million metric tons (tonnes), live storage is 1 million tonnes.

Weights: Will be determined by draft survey.

Sampling: The Ramsey automatic sampler operates according to ASTM standards.

Analysis: ASTM standards are applied.

Shiploader: One line loader can handle up to 10,000 tonnes/p.h.

Trimming: Spout trimmed.

Also see "General".

MEDICAL: First aid treatment is available, but not on a routine basis. Extreme emergencies must be handled at Barranquilla.

FRESH WATER: Not available.

FUEL: Not available. Nearest bunkering ports are Cartagena, Aruba and Curacao.

CONSULS: Located at:

Barranquilla:

Austria
Belgium
Bolivia
Brazil
Chile
Costa Rica
Denmark
Dominican Republic
Ecuador
Egypt
El Salvador
Finland
France
Germany
Greece
Guatemala
Haiti
Honduras
Italy
Jordan
Mexico
Netherlands
Norway
Panama
Peru
Portugal
Spain
Sweden
Switzerland
Syrian Arab Republic
United Kingdom

Cartagena:

Belgium
Bolivia
Chile
Costa Rica
Denmark
Dominican Republic
Ecuador
Finland
France
Germany
Guatemala
Honduras
Italy
Mexico
Nicaragua
Norway
Panama
Peru
Spain
Sweden
Venezuela

Santa Marta:

Costa Rica
Ecuador
Finland
France
Guatemala
Netherlands
Norway
Panama
Peru
Sweden

REPAIRS: No facilities for major repairs. Also see "General".

SURVEYORS: Exclusive surveyors for A.B.S. and Lloyds' are located at principal Colombian ports. These surveyors may or may not also act as non-exclusive surveyors for other classification societies.

Masters should be reminded that sufficient advance notice (at least 72 hours) should be given when requesting classification society services.

OPENING/CLOSING HATCHES: All hatches must be open in order to permit hold inspection before entering Puerto Bolivar Channel.

REPATRIATION: Because of the port's remoteness, it is suggested that seamen neither join or leave at Puerto Bolivar.

AIRPORT: The nearest international airport is at Barranquilla (326 km.).

TIME: Local time is GMT minus 5 hours.

WASTE OIL DISPOSAL: Available only via tanker truck. Any interruption to loading will be for vessel's account, and will be additional to truck charges which are under review at present. Service should be arranged through agent.

SEAMAN'S CLUBS: None at present. Shore leave not permitted.

GARBAGE DISPOSAL: Up to 20 tonnes of solid waste, bagged and segregated can be received under the conditions and tariffs included in the Port Manual.

CURRENCY: Colombian Pesos.

GENERAL: Port charges available upon Master's and/or Agent's request. Charges will be made for pilotage and tug service. Full agency service will be provided through a licensed Colombian Agent of Owner's and/or Charterer's choice.

Publications:

N.O. Chart No. 24460.
B.A. Chart No. 1529, 1966.
Colombian Chart No. 228.
Sailing Direction No. 144 (U.S.) and Coast Pilot No. 7A (British).

Weather: Puerto Bolivar is generally outside the hurricane belt. Prevailing winds are from the North East. In the area of the Port, winds may gust to 35 – 40 knots.

Months of high winds are December to March and July and August. Dry season is from November to May. The wet season is from May to November. This is in general for this area. At Puerto Bolivar, rain is infrequent.

Stores: Very limited amounts of stores of an emergency nature only will be available and can be expected to be expensive due to the remote location. Request must be advised with the first ETA and availability still cannot be guaranteed.

Bonded Stores: No bonded stores are available.

Navigational Publications and Charts: Navigational charts and/or publications are available on a very limited basis with prior radio request through the Agent (See "Publications").

Mail: Mail may be sent and received through vessel's local Agent. Owners should be advised that as all mail must be channelled through Barranquilla or Cartagena Agents, addresses in those respective cities should be used as no mail is received at Puerto Bolivar at this time.

Laundry: No laundry services are available at this time.

Transportation: As Puerto Bolivar is in a remote location it is suggested that crew members neither join nor be repatriated from Puerto Bolivar. However, should it be deemed necessary that this be done, the Agent can arrange same. As the closest international airport is in Barranquilla, approximately 326 km. away, the cost will be significant. Air transportation out of Barranquilla is not on a daily basis to all world points and costly delays could possibly be encountered.

Gangway: Terminal will normally provide gangway, ship's crew will be responsible for it's mooring and safety. If necessary, vessels will utilise their own gangway or accommodation ladder.

Emergency Towing Wires: Vessels while alongside piers shall have fire wires to enable the vessel to be towed from the pier should it become necessary. These fire wires will consist of at least 2 wires, one forward and one aft, hanging from the vessel on the outboard side. They shall be made fast on deck and small hang approximately 6 ft. from the water's edge when the vessel is in a light condition. They shall consist of wire of a diameter in proportion to the size of the vessel, however, the minimum acceptable fire warp shall be 1 in. wire. Each wire will have an eye at the end hanging over the water.

Notice of Readiness: Notice of Readiness shall be submitted by Master and will be accepted by the Loading Supervisor at such time when vessel has arrived at the loading port, is ready to load, and in Free Pratique whether at berth or not.

Cleanliness of Holds: All holds will be inspected prior to entering Puerto Bolivar Channel, by the Pilot.

Emergency Shutdown: If an emergency should occur making it necessary to immediately stop loading operations, the ship shall sound short blasts in groups of five blasts on the ship's whistle and immediately contact Puerto Bolivar Marine Operations on VHF Channel 14 or 16.

Ballast: The maximum ballasted draft for vessels entering Puerto Bolivar is 9.0 m. All ballast must be clean and carried in segregated ballast tanks. It is prohibited to pump any ballast overboard other than that which has been carried in designated ballast tanks and is clean. Vessels arriving at Puerto Bolivar should have all cargo holds clean and ready to receive cargo. Should ballast have been carried in the holds, it would be necessary for this hold to be cleaned and dried prior to entering port.

Prior to entering port the Pilot will inspect the vessel and may or may not request more segregated ballast to be pumped out or additional ballast be added to certain segregated ballast tanks should the trim of the vessel so require. Vessels down by the head or according to their size, trimmed excessively by the stern thus making their manoeuvrability unacceptable will not be allowed to enter port.

Trim: The terminal shall co-operate in every possible way with the ship to obtain the required trim. Masters are reminded that the responsibility to trim their vessel for sailing draft shall be their responsibility and the terminal shall load the vessel based on information submitted by the ship's Master.

Customs and Immigration: Puerto Bolivar is a Port of Entry and Colombian Government Customs and Immigration officials will board vessel either at anchor or when made fast alongside the pier. All formalities and necessary documents should be made available to them at this time. Masters are advised that they are expected to extend the usual common courtesies to visiting officials. However, gratuities in the form of liquor or cigarettes are neither necessary nor expected.

Swimming and Fishing: Swimming in the harbour is prohibited, either from the ship, pier or shore.

Fishing over the side or from the pier is also prohibited.

Firearms and Ammunition: The display, carrying or discharge of firearms is prohibited on board or within the port area.

Drugs and Alcohol: The purchase or sale of drugs is illegal and is strictly prohibited. Violation of this law may result in fines and/or imprisonment.

The sale of alcohol by ship's crew is also prohibited.

Fire Signal: Fire on board shall be indicated in the same manner as emergency shutdown – short blasts in groups of 5 on the ship's whistle for at least 1 minute or until acknowledged by shore side marine operations. Advice of fire should also be given by VHF on Channel 12 or 16.

Fire Fighting Procedures: Vessels while alongside or at anchor have the responsibility for fire fighting aboard their own vessels. Upon request, the terminal operator may join in fighting a shipboard fire by utilising the tug boat water/foam fire fighting capabilities.

INTERCOR reserves the right to fight fires and take other action as deemed necessary, even if not requested, including removal of the vessel from her berth to anchorage if it appears that the fire is a threat to the terminal.

Loading Supervisor: The Loading Supervisor shall be in charge of all cargo operations and in conjunction with the vessel's Chief Officer shall control the vessel's loading operation. Prior to commencement of loading, planned loading procedure and hatch sequence will be agreed upon between the Loading Supervisor and the Chief Officer. Prior to arrival, the Chief Officer should be requested to have drawn up a proposed loading plan for review.

Loading Rate: Normal loading rate is 10,000 t.p.h. Vessels must be able to discharge all ballast in time so as not to impede loading. Should a cargo loading shutdown be necessary because of vessel's inability to discharge her ballast in time to prevent exceeding her permissible draft, all time lost will be for vessel owner's account.

Overload Drafts: Prior to loading, the full amount of cargo to be loaded should be determined between the Chief Officer and the Loading Supervisor. Masters are advised that they are responsible for obeying all laws pertaining to International Load Lines and shall be held solely responsible for any overloading on their part. When topping off, the terminal shall in every way co-operate with the ship to assist in attaining their legal draft within Puerto Bolivar constraints. Should erroneous information be given to the terminal and should the vessel for some reason be overloaded, the costs of discharging any cargo shall be for the account of the vessel's Owners.

Repairs: Only repairs of a very minor nature can be effected at Puerto Bolivar. These must be proven to be of an emergency nature and necessary for the pursuit of the voyage. While every effort will be given to assist vessels in any way possible, Masters must keep in mind that no shore side facilities are available.

SHIPMASTER'S REPORT: August 1986 (Updated 1996).

Vessel: 107,000 d.w.t.

Location: Puerto Bolivar is situated at the entrance to the Bay of Bahia Portete approximately 350 km. N.E. of Barranquilla. The port is the outlet for coal mined at Cerrejon 150 km. away, the coal is transported from the mine by train.

Organisation: Marketing is handled by either of the two partners, Intercor or Carbocol, on a 7 day on 7 day off basis. The terminal is self sufficient in all services, electricity, fresh water, maintenance, etc.

Product:

Bituminous steam coal from El Cerrejon.
Density +0.8 to 1.0 tonnes/cu.m.
Stowage factor is given as 41/42 cu.ft./ton but as a practical guide we stowed at 41.5 cu.ft./tonne.
All cargo weights used are tonnes.
Particle size loaded: Max. 50 mm.
No methane gas is emitted from coal.
No history of spontaneous combustion. No ventilation is recommended, holds being kept sealed whilst under way.
Moisture content: 11.5%.

Maximum size of vessel: The largest ship to visit the port to date is 150,000 d.w.t. which is the maximum allowed at this time. Max. allowed sailing draft is 17 m., max. LOA 300 m. and max. beam 45 m.

Approach: No Radio Pratique is granted.

Two hours before arrival contact "Puerto Bolivar Marine" on VHF Channel 16 for berthing/anchoring instructions.

All vessels are allowed to berth 24 hours daily.

Channel Buoy No. 1 is fitted with racon (morse 'M'). (Also see "Shipmaster's Report" – September 1986).

Charts: Colombian chart COL. 228 issued by the Colombian Government and the United States Hydrographic Department. This chart is available from the Port Captain's Office at Puerto Bolivar. There is also a small chartlet issued by Intercor.

Anchorage: The anchorage is very exposed. Recommended anchorage is 3.5 nautical miles N.W. of Buoy No. 2 in 170 ft. of water. The prevailing winds are N.E. 25 to 35 knots. The prevailing current is S.W. going at a rate of 1 knot to 2 knots. We anchored with 8 shackles in the water and yawed between N.N.E. and East.

Pilot: The Pilots board from a tug in position 2.5 nautical miles N.W. of Channel Buoy No. 2. The Draft Surveyor also boards with the Pilots.

The pilot ladder was rigged on the starboard side 2.0 m. from the water. The Pilot carries out an inspection of the holds and issues a Hold Inspection Certificate if the holds are found dry and clean without mineral residues. Ballast holds are inspected after the vessel is alongside.

The Pilot will not berth the vessel if the wind exceeds 35 knots.

Draft Surveyor: The Bill of Lading weight is determined by draft survey carried out by independent Surveyor. The Surveyor determines the net lightweight of the vessel prior to loading then completes his survey on completion.

A Weight Certificate and Survey Report is provided for the ship.

Tugs: All 4 tugs make fast on the starboard side of the vessel using their own lines. 3 tugs make fast before the vessel enters the approach channel.

Channel: Well buoyed. Length of channel 4 km. Width 225 m. and depth 19 m. Maximum draft allowed 17.0 m.

Turning Basin: Width 600 m., depth 11.0 m. Max. allowable draft 9.0 m.

Masters should ensure that propeller is acceptably immersed, according to minimum acceptable drafts for manoeuvring in Puerto Bolivar (See "Max. Size").

Vessels are turned to port before berthing port side to the loading berth.

Coal Loading Berth: Maximum air draft allowed 21.0 m.

The Coal Berth operates throughout 24 hours.

The vessel berths against 3 large patent fenders with mooring lines being made fast to quick release bollards using shore capstans to heave the lines.

Springs are made fast first, then breast lines, then head/stern lines.

Shore gangway is usually rigged by shore gang. Once the gangway is secured on board, its safety and care is the ship's responsibility.

Three stacker/reclaimers now in operation. Exceptional case, loading rate usually between 6,000 t.p.h. - 10,000 t.p.h.

Most of the coal is reclaimed from the stockyard and only occasionally is coal sent directly from rail cars. The loading rate may reach peaks of about 10,000 t.p.h.

The stockpile can store a maximum of 1.7 million tonnes.

The loader stops work if wind exceeds 35 knots.

Officials on Arrival: 1 Port Captain, 3 Customs Officers, 1 Port Health Official, 2 Agents.

No Immigration Officials as shore leave is not allowed.

Arrival Forms: 6 Crew Lists, 1 Maritime Health Certificate, 2 Bonded Stores Lists, 2 Ship's Stores Lists, 2 Crew Effects Lists, 2 Vaccination Lists.

Certificates Required by Port Captain Prior to Clearance: Ship's Register, Clearance from Last Port, Derat Certificate, International Oil Pollution Certificate, Load Line Certificate, Safety Radio Certificate, Safety Equipment Certificate.

Shore Leave: Not allowed.

Repatriation: Not recommended due to the remoteness of the port.

Fresh Water: Not available.

Bunkers: Not available.

Ship Repairs: No facilities.

Chandler and Provisions: None available.

Medical: First Aid treatment is available only in emergency. Extreme cases must be flown to Barranquilla.

Time: Local time is GMT minus 5 hours.

Security: Watertight as no unauthorised persons are allowed on board and no shore leave is allowed.

SHIPMASTER'S REPORT: August 1986 (Updated 1996).

Vessel: 72,000 d.w.t. LOA 230 m. Sailing Draft: Forward 12.78 m. Aft 12.80 m.

ETA: Master to give 14, 10, 5, 4, 3, 2 and 1 days ETA to INTERCOR Barranquilla, INTERCOR Puerto Bolivar and ship's Agent.

Arrival: Pilots and tugs meet ships about 2 nautical miles N.W. off Buoy No. 1. Two tugs making fast with tug's ropes assist ship through the dredged channel. Having passed the loading pier, the ship is stopped, and the 2 tugs swing the ship assisted by 1 or 2 more tugs as appropriate. Vessels always berth port side alongside. This vessel (230 m. LOA) used 2 lines, 2 breasts and 2 springs each end.

After Pilot came on board, Master and Pilot exchanged information regarding ship's particulars and berthing procedure, etc.

A Vessel Inspection Report/Pre-Berthing delivered by Pilot and to be filled in before entering port. Puerto Bolivar Safety Regulations and Safety Check List also delivered.

Various regulations received from Agents by telex. The essence of the regulations is that the loading facility is very effective, and ship's officers are not allowed to stop loading for making draft surveys, etc. A stop can only be done *once,* and it should be for trimming purposes. The importance of having calculated a fixed and reliable loading rotation should be emphasised.

Approaches to Puerto Bolivar: Colombian Chart Col. 228 is available from the Port Captain's Office at Puerto Bolivar.

Anchorage: The anchorage is about 2 nautical miles N.W. of Outer Channel buoys, holding ground found to be good.

Ballast: It is recommended to have the ship well ballasted when passing through the dredged channel when current and wind are abeam of the ship.

Crew Changes: Crew change is difficult but possible. One crew member joined the ship and one was repatriated. They were transported from and to Barranquilla by car – a journey of about 6 hours.

VHF: Puerto Bolivar Marine (Port Control) and Agents listen on VHF Channel 16 around the clock, working on Channel 14.

Tugs: All 4 tugs are under Colombian flag and owned by the Port Operator.

Survey: A surveyor appointed jointly by the Shipper and Buyer carries out draft surveys, and will board outside the Entrance Channel with the Pilot.

Supplies: No people live in the port and surrounding area. All workers work for 4 days and then go home for 4 days. No shops or markets or ship's chandlers available. All necessary supplies have to come from Barranquilla which is costly and difficult. However, in the port area there is a small supermarket, where shore personnel can buy their daily needs. It may be possible for Agents to supply a very limited amount of fresh fruit and a few kilos of coffee.

Port: Port found to be very safe in spite of the wind constantly blowing against the pier with wind forces up to 40 knots. There was no swell at all, but very choppy sea made it difficult to read ship's draft.

SHIPMASTER'S REPORT: September 1986 (Updated 1990).

Vessel: 117,600 d.w.t.

Navigation: Buoy No. 1 (position Lat. 12° 17' 31" N., Long. 71° 58' 48" W.) in the Harbour Approach Channel has been fitted with Racon and bell.

No light exists on Point Coco.

Pilot boards about 2 nautical miles W.N.W. of Buoy No. 1.

Tugs: 4 good tugs work in this harbour.

General: Cargo holds are inspected by the Pilot while at anchor, and a Certificate of Cleanliness is issued if the holds are found acceptable.

Used St. Lys Radio (FFL) when in the Atlantic and when in the Carribean used Barranquilla Radio (HKB). All cables received at Agents main office in Bogota without delay.

Messages regarding ETA should also be cabled direct to Port Authorities in Puerto Bolivar, care of "INTERCOR Puerto Bolivar".

Shore Leave: Not permitted.

SHIPMASTER'S REPORT: January 1991 (Updated 1994).

ETA Message: See "Radio".

If the vessel does not send this message at least 72 hours before arrival the port operator can refuse to permit start of loading operations until the Master conforms with the regulations requested by the operator.

Information must be given by the Master to INTERCOR and the ship's agent with first ETA telex, at least 72 hours prior to arrival at Puerto Bolivar.

Ballast: Vessel should arrive with maximum segregated ballast such that maximum draft does not exceed 9 m., the propeller is accepably immersed and trim does not exceed 6 ft. by stern. Ballast tanks used to comply with draft requirements must be completely full or empty so that loading can commence as soon as draft readings are completed.

The boarding Pilot will usually be accompanied by a draft surveyor. Masters are requested to provide a ship's officer or other qualified representative to enable tank soundings and part of the draft survey to be completed during the vessel's transit so as to avoid unnecessary delay in acceptance of the vessel to load.

The Master should be aware of government regulations on Port Operations (Res. 1429 15 Nov-DIMAR) before arrival. If not, he should consult with his agent to ensure his vessel's compliance.

Loading: The shippers loading procedures allow a maximum of 2 rotations per hold. One stoppage of a maximum of 45 minutes is permitted for a draft check with additional stoppages being for the vessel's account. Trimming is restricted to 3 holds after draft check to obtain vessel's sailing draft.

Maximum quantity for final pour in any hold is 100 tonnes.

Any delay caused by vessel during loading operation will be charged by the shippers at U.S. $1,500 per hour.

In an emergency the belt can be stopped immediately.

Chart: New U.S.A.-DMA Chart No. 24469 has been published (Approaches to Bahia de Portete, Puerto Bolivar Approach Channel).

AUTHORITY: Capitania de Puerto Puerto Bolivar, International Colombia Resources Corporation, A.A.(P.O.Box) 52499, Barranquilla, Colombia. *Tel:* (958) 562131. *Telex:* 31251. *FAX:* 562131, Extn. 6401. *Contact:* Steve C. Catton, Port Operations Superintendent (Tel: (9) 3506424). Juan Alvarez, Marine Operations, Puerto Bolivar (Tel: (9) 3506424).

Capitania de Puerto. *Tel:* (9) 3506511. *FAX:* (9) 3581960 (Port Operations).

SANTA MARTA (Including Puerto Prodeco): 11.15 N. 74.14 W. **(See Plan)**

DOCUMENTS:

For the Port Captain:

1 Clearance from Last Port.
1 Voyage Report.
1 Crew List.
1 List of Passengers for Santa Marta.
1 List of Passengers in transit.
1 List of Provisions.

For Port Health Authority:

Derat Certificate.
Maritime Health Declaration.
Crew List with dates of vaccination.
List of Passengers for Santa Marta.
List of Passengers in Transit.

For Customs:

3 Cargo Manifests.
3 Crew Lists.
3 Lists of Passengers for Santa Marta.
3 Lists of Passengers in Transit.
3 Lists of Crew Personal Effects.
3 Lists of Provisions.
3 Mail Lists.

For Agencies:

1 Voyage Report.
6 Crew Lists.
6 Lists of Passengers for Santa Marta.
6 Lists of Passengers in Transit.
2 Crew Personal Effects Lists.
2 Lists of Mail for the port.
4 Cargo Manifests.
4 Bills of Lading.
2 Cargo Stowage Plans.

PILOTAGE: Pilot boarding station: Lat. 11° 14' 44" N., Long. 74° 13' 58" W. Information regarding ETA should be relayed to Agent, who will advise Port Authority. Pilotage compulsory for all vessels over 200 g.r.t.

ANCHORAGES: When it is not possible to come alongside a berth immediately, the vessel may anchor within the area included within the following coordinates.

Lat. 11° 14' 45" N., Long. 74° 13' 15" W.
Lat. 11° 14' 45" N., Long. 74° 14' 00" W.
Lat. 11° 14' 15" N., Long. 74° 13' 25" W.
Lat. 11° 14' 15" N., Long. 74° 14' 00" W.

Seabed is rocky and sandy, with depths about 120 ft.

Vessels should anchor in the lee of the Morro Grande and Morro Paqueno (large and small headlands), particularly during the months of December to March, when there is a strong N.E. wind.

RESTRICTIONS: None. Good visibility throughout year. Difference in tides negligible.

MAX. SIZE: 730 ft. length, 40 ft. draft. No limit to beam.

Oil carriers: See "Pozos Colorados".

PRATIQUE: Pratique granted by Port Captain who visits vessel immediately on arrival. Doctor also attends on this visit.
RADIO: Barranquilla Radio or Cartagena Radio; radio stations messages relayed by telex to Sta. Marta. Ship's Agents use same system. Terminal Office may be contacted on radiotelephone, 2738 kHz.
TUGS: Join vessels just before entrance to inner harbour; they may use own lines or vessels lines.
CRANES: 5×10 ton – 30 ton mobile cranes and 2 cranes 90 tons and 100 tons on rails. 1×42 ton Kalmar crane available.
BERTHING:

Quay	*Length*	*Minimum Depth*
No. 1	175 m.	38 ft.
No. 2	145 m.	33 ft.
No. 3	232 m.	45 ft.
No. 4	153 m.	40 ft.
No. 5	153 m.	60 ft.
No. 6	100 ft.	15 ft.

Facilities exist for container traffic. 30,000 tons silo for grain storage and discharge facilities for up to 5,000 tons per day.
BULK HANDLING FACILITIES: *Puerto Prodeco:*
Location: Lat. 11° 09' N., Long. 74° 13' W.
Depth: 18.0 m.
Loading: At anchorage 1 mile – 2 miles offshore.
Working: 24 hours a day, 7 days a week.
Facilities: 4×1,500 d.w.t. barges for carrying coal.
Barges loaded at pier at a rate of 8,000 tonnes per day.
STEVEDORES: ETA to be given 72 and 24 hours before arrival, indicating number of gangs required. Unloading rate of general merchandise 10 t.p.h., and homogeneous cargoes around 15/20 tons. *Working Hours:* First shift: Monday to Saturday and holidays, from 0800 to 1200 hrs. and 1400 to 1800 hrs. Second shift: Monday to Friday, from 1800 to 0200 hrs.
MEDICAL: Advance notice required whenever special medical attention needed on arrival; hospital available.
TANKERS: See "Pozos Colorados".
DENSITY: 1025.
FRESH WATER: Available alongside docks: delivery (approx.) 10 t.p.h.
FUEL: Not available.
CONSULS:
Costa Rica
Ecuador
Finland
France
Guatemala
Italy
Netherlands
Norway
Panama
Peru
Sweden
REPAIRS: Only minor welding.
GANGWAY/DECK WATCHMEN: Deck watchmen supplied by Agent.
OPENING/CLOSING HATCHES: By special gang ordered by Agent.
CERTIFICATES: (These only need to be shown)
Registration Certificate.
Load Line Certificate.
Classification Certificate.
Safety Equipment Certificate.
Radiotelegraphy Safety Certificate.
Construction Certificate.
Cargo Handling Equipment Safety Certificate.
Oil Pollution Certificate.
CUSTOMS ALLOWANCES: (Tobacco), 2 cartons of cigarettes per man. All other tobacco will be sealed by Customs. (Wine and/or Spirits), 1 open bottle of liquor permitted per crew member. All other spirits will be sealed by Customs.
REPATRIATION: Facilities available.
AIRPORT: 19 miles from town.
TIME: 75th Meridian time, Eastern standard time. GMT minus 5 hours.
HOLIDAYS: New Year (January 1st); Church Holiday (April 12th); Labour Day (May 1st); Local Holiday (July 29th); Church Holiday (December 24th); Christmas Day (December 25th); Church Holiday (December 31st). No work on New Year's Day, Labour Day, Local Holidays, Christmas Day. Work until 1600 on other holidays.
POLICE/AMBULANCE/FIRE: Police, Tel: 6079; Ambulance, Tel: 3116 – 5555; Fire, Tel: 6091 – 4545 – 6055.
SHORE LEAVE: Granted after quarantine cleared.
IDENTIFICATION CARDS: Given by Port Captain once quarantine is cleared.
DELAYS: Up to 12/14 hours because of shortage of docking space.
AUTHORITY: Captain Jaime Sanchez, General Manager. Captain Jaime Gaviria, Port Captain.

TUMACO: 01.49 N. 78.45 W. (See Plan)

DOCUMENTS:
5 Crew Lists.
5 Stores Lists.
5 Passenger Lists (local, in transit, or negative).
1 Sanitation Declaration.
12 Complete sets Manifests.
3 Mail Certificates (when not included in Manifest).
PILOTAGE: Compulsory. Entrance to the port can only be made during the day by vessels with a max. draft of 19 ft. – 20 ft., due to the bar between Buoy Nos. 2 and 3.
For the Tumaco Terminal vessels are boarded by the Pilot in position Lat. 01° 53' 00" N., Long. 78° 48' 35" W.
ANCHORAGE: Sufficient area available in depths of 25 ft. to 35 ft.
RESTRICTIONS: Entrance channel depth 20 ft. Height of tide varies from 8 ft. to 12 ft.
HEALTH: On arrival, port doctor boards vessel to inspect crew Yellow Fever Certificates, also Derat Certificate. If any crew members suspected suffering contagious disease Master to radio prior arrival advising Agents accordingly. Port Doctor visits vessel even if previous port was in Colombia.
RADIO: Ships must communicate with the Texaco Head Office in Bogota, who will then inform the Terminal. The Terminal can be reached using VHF Channel 16 at a range of up to 30 miles.
BERTHING: Wharf is 310 m. long. Depth alongside averages 22 ft. Berthing for two vessels of 4,000 – 5,000 tons. 1×5 ton and 1×10 ton crane available.
STEVEDORES: Stevedores work continuously with breaks at 1200-1400 hrs. and 1800-2000 hrs.
TANKERS: *Empresa Colombiana de Petroleos:* Vessels moor to 6 buoys, using both anchors. Ship's Head 255°T.
Manifold connections are 12 in., although 10 in. and 8 in. reducers are available. Hoses are connected on the starboard side.
The Mooring Master will remain on board throughout, and accommodation must be provided.
Location: Lat. 01° 50' 25" N., Long. 78° 49' 49" W.
Tidal Conditions: Range of tide: 12 ft. Currents: 2 knots.
Controlled depth in the proximity of the mooring is 110 ft. of MLT.
Maximum Size of Vessels: 100,000 tonnes d.w.t., LOA 250 m. and draft 20.0 m.
Class of Cargo and Pumping Rate: Crude. Maximum rate of pumping 22,000 bbls.p.h.
Ballast and Bunkering Facilities: There are no ballast facilities. No bunkers or water available.
Additional Information:
1. The discharge of dirty ballast is prohibited in Tumaco.
2. Berthing can only be carried out during daylight hours and on the rising tide.
3. Tankers can sail at night.
4. Customs documents are required for berthing.
5. Medical services available.
FRESH WATER: Available from wharf.
FUEL: Supplied by Esso Colombia, by barge.
CARGO GEAR: Terminal owns 3 cranes of 5 to 15 tons capacity.
AIRPORT: Suitable for DC.4 type aircraft, situated 4 km. from port.
DEVELOPMENTS: Programme for deepening the port to 33 ft. at HW.
AUTHORITY: Empresa Puertos de Colombia, Tumaco, Colombia. *Contact:* Vicente Marines Valencia, Manager.

TURBO: 08.06 N. 76.43 W.

ANCHORAGES: Anchorage 2.5 to 3 miles off mouth of Leon River, used for loading bananas from barges.
CLEARANCE: Vessel must first proceed to Punta las Vacas for official visit of Port Authorities to obtain clearance.
MOORING: With sea and wind from the North, loading operations are not possible unless vessel employs the "Baltic Moor".
On arrival at the Leon River Anchorage, vessels should let go a couple of shackles. After that, a 3 in. to 3.5 in. wire (or mooring line) is passed from the after leads on the poop, along the ship's side, outside and clear of everything. This wire is to be shackled to a number three chain shackle.
By heaving in the wire and slacking the chain as required (about a 60° angle) vessel will give the necessary shelter to banana barges, for normal cargo operations.
GENERAL: Drug smuggling, pirate attacks and stowaways are a problem at the port.

SHIPMASTER'S REPORT: 1976. *Chart used No. 24515 (American).*
Vessels ordered to Turbo first proceed for clearance off Turbo town and anchor in position about 1 mile West of Pta. las Vacas Lighthouse (Lat. 08° 04' N., Long. 76° 45' W.). The lighthouse, which is situated on the Southern end of Pta. las Vacas is not readily identifiable from the N.W. until within about 2 miles and the light is reported to be poor. The chart in the area of Pta. Turbo, about 4 miles Northward of Pta. las Vacas, does not correspond to the radar picture presented, and therefore a berth of at least 2 miles is recommended.
After clearance by Port Authorities at Turbo vessels should proceed to Pinchindi, about 7 miles W.S.W. of Pta. las Vacas, for loading during the period December to May. It is reported that during the season May to December vessels load off the mouth of the Rio Leon, about 7.5 miles S.S.E. of Pta. las Vacas. Approaches to this berth apparently pose no problems and the loading position is reported to be close to a buoy off the river mouth, the position of which could not be confirmed.
There is no Pilot available at Turbo.
Vessels loading at Pinchindi should steer to pass about 1.5 to 2 miles S.E. of Boca Pinchindi. When the black buoy, Fl. 3 sec. (marked on chart No. 24515) bears about 335°(T), but not less than 315°(T) course should be altered to bring the buoy right ahead and anchorage should be taken up as convenient on this bearing. The black buoy referred to above is very difficult to pick up against the land, and in February 1976 was extinguished. There are two mooring buoys to the Eastward of the black flashing buoy. These are unlighted and not marked on the chart. Positions of these mooring buoys are as follows, bearings and distances from the black Fl. 3 sec. buoy: BWVS 83.5° (T)×380 m. R 99.5° (T)×760 m. These mooring buoys are more readily identifiable from the offing than the Fl. 3 sec. buoy, particularly the red one, which is painted in "International Orange". However it should be borne in mind that this buoy may have just received a new coat of undercoat at the time this report was written. The red buoy may be seen over the land which lies on the Eastern side of the anchorage before course is altered

for the final approach. Vessels of draft up to 25 ft. may anchor up to within about 300 m. of the Fl. 3 sec. buoy in about 22 m. of water.

As the wind strengthens during the afternoon to about force 5/6 from between N. and N.E., and due to the proximity of other vessels in the anchorage, it was considered advisable to use two anchors; the vessel in fact used port anchor with 4 shackles on deck and starboard anchor underfoot. This prevented the vessel from yawing more than a maximum of about 15°, while other vessels moored with only one anchor were observed to be yawing considerably more during the afternoon breeze.

Winds, during the period while the vessel was at Turbo (February 2-4) were predominately from North to N.E. and no significant currents were observed in the anchorage described above.

Caution is advised while navigating in this anchorage at night, as vessels loading logs often have large unlighted timber rafts alongside. It should also be borne in mind that tugs, lighters and launches are often unlighted, and radar echoes from these might easily be mistaken for those of the buoys. While the radar echoes of the land in this anchorage are quite clear, they do not in any way correspond with the chart.

No opportunity presented itself for checking soundings, however, on the vessel's track arriving and sailing soundings on the whole agreed with charted depths.

Loading of bananas is carried out in the anchorage using mechanical conveyors from lighters through vessels sideports, and on the whole was found to be quick and efficient.

No fresh water or provisions are available at Turbo. Indeed no facilities whatever are available from ashore. There is no radio station, although banana shippers "Uniban" have VHF 16 in their office during office hours, Spanish language only. Agents for United Brands Company have VHF Channel 16, call sign is "Casanova".

Caution should be exercised when taking any navigational advice from Officials in Turbo as this may at times be misleading and it is questionable whether persons proffering advice regarding best anchorage position etc. are in possession of all facts necessary for safe navigation in the area.

Documents Required for Inward Clearance at Turbo:

1 Clearance from last port.
6 Crew Lists.
5 Passenger Lists (Nil passengers to be declared).
5 Disembarking Passengers.
5 Mail Lists (No mail to be declared).
1 Maritime Declaration of Health.
1 Vaccination List.
6 Manifests.

Ships Certificates for Inspection:

Register.
Safety Equipment Certificate.
Safety Radio Certificate.
Radio Station Certificate.
Cargo Gear Certificate.
Derat Certificate.
Ship's Capacity Plan.

In addition to above list of documents required, the following are also to be presented to Authorities on arrival:

2 Store Lists.
2 Crews Personal Effects.

SHIPMASTER'S REPORT: February 1979.
Pilotage: It is necessary to take a Pilot at Punta las Vacas for entrance to the bay. Thereafter, any movement inside the bay will also require a Pilot.

SHIPMASTER'S REPORT: July 1979.
Vessel arrived Pta. las Vacas Anchorage at 0207 hrs. 30th July. Cleared Port Officials and proceeded to R. Leon Anchorage where vessel anchored at 1010 hrs. to port anchor, 4 shackles in water. Rigging gangs boarded at 1330 hrs. 31st July and completed rigging hatches at 1900 hrs. Loading commenced at 2230 hrs. and completed at 1210 hrs. 2nd August. All gear and labour off vessel at 1220 hrs. At the start there was no co-operation from the stevedores and repeated requests for information regarding which side doors and how hatches and derricks were required to be rigged met with no response until such time as the riggers boarded. It was then expected that the vessel could do everything at one and the same time. To commence only starboard side doors were used but on completion of No. 5 hatch it was decided to work No. 2 hatch both sides, once again no mention of doubling No. 2 hatch was made although the question had been asked repeatedly, the stevedore assured the Chief Officer that the port side doors would not be required. No information regarding quantity of bananas to be loaded or number of Bills of Lading was forthcoming and there was a very definite language barrier until it was made clear that any Bills would be claused "mixed". From this point co-operation improved and the language problem became less difficult. During loading there were numerous delays for weather, machinery breakdowns on the barges and waiting for cargo to arrive alongside. Before cargo operations commenced vessel was requested to "point" the ship using a rope from the port quarter to the port anchor cable and this was attempted with varying amounts of cable paid out, before operation could be completed the wind died down and wind and tide were acting against one another with result that operation was ineffective.

Turbo must now be regarded as being on a par with "ports" regarding theft and all precautions taken, many horrific reports on theft were heard from other vessels; however, if vessel was obviously taking all precautions then generally after being looked over, vessel is left alone. One case concerning a crew member and radio took place but his property was recovered by Cargo Supervisor and Customs Official, although culprit was not apprehended.

SHIPMASTER'S REPORT: August 1981.
Pilots are now compulsory at Turbo and board with the inspection party off Pta. las Vacas. They also board after loading is completed and leave off Pta. Vacas.

The larger United Brands banana vessels now use overhead conveyors for loading instead of the sideports.

AGENT'S REPORT: September 1989.
Anchorage: Vessels should anchor for clearance 1.5 miles to 2.0 miles West of Punta de las Vacas.

For anchorage area or Pilot Station, please see Navigation Chart.

Arrival: Vessels can arrive at Pilot Station at any hour; for the entrance there are aids lights, all of which are marked on the Navigation Chart. It is compulsory to arrive at Pilot station at Punta de las Vacas; no other area of anchorage is permitted within territorial waters.

Ballast: While in Colombian waters vessel should not throw refuse overboard, or contaminate the Gulf with ballast or bilge residues.

Cargo Handling Facilities:

In the Uraba Zone there are 3 shipping enterprises:

C.I. Uniban S.A., C.I. Proban S.A. and C.I. Banacol S.A.

They all have the necessary infrastructure such as bongos (roofed barges) and zungos (floating docks with conveyor belts and tugs) to bring bananas to ships. Bananas are shipped in boxes or on pallets.

Capacity of each bongo: 8,500 banana boxes.
Capacity of each belt: 1,300 – 1,500 boxes per hour.
Bananas are also exported on pallets.

Warning: During night navigation it should be kept in mind that small craft, barges and long log rafts are often unlit in the anchorage. Also, the National Army Coast Guard may request information.

Communications:

Authority	*Mode*	*Call Sign*
Port Authority	VHF	Capitania
National Army	VHF	Apostadero
Maritime Agents		
Turbaduana	VHF-Telex-Fax	Turbaduana
United Brands Co	VHF-Telex-Fax	Almendros/Casanova
Colsemar	VHF	Colsemar
Colmares	VHF	Gamboa/Colmares
Shippers		
C.I. Uniban S.A.	VHF-Telex-Fax	Uniban
C.I. Proban S.A.	VHF-Telex-Fax	Casanova
C.I. Banacol S.A.	VHF-Telex-Fax	Banacol
Pilotage		
Copimur	VHF	Estacion Pilotos
Marcom	VHF	Estacion Pilotos

Customs:

Clearance takes place between 0800 hrs. and 1700 hrs. Ships arriving outside these hours may obtain Port Authority's permission to proceed to anchorage/loading place, and the official visit will take place the next morning.

Density: As a result of non-salt waters of Leon and Atrato Rivers that flow into the Uraba Gulf, the density is approximately 0.950. There are no fluctuations in draft caused by density.

Documents:

Clearance from last port.
5 copies Crew List.
5 copies Passenger List.
5 copies Provisions List.
3 copies Personal Effects List.
1 copy Vaccination List.
2 copies of List of No Passengers, No Arms, No Munitions, No Drugs.
3 copies of Manifest of Cargo in Transit.
6 copies of the Cargo Manifest.
The following valid certificates.
  Pollution Policy.
  Sanitary Certificate.
  Load Line.
  Cargo Ship Safety Radio and Radio Telephony Certificates.
  Cargo Ship Safety Equipment Certificate.
  Cargo Gear Inspection Certificate.

Entrance: The approach is said to offer no difficulty, but as the coastline extends further West than charted, a berth of at least 2 miles is recommended in the vicinity of Point Turbo and Southward.

Please take into account the small ships travelling through the Gulf and also "Punta Yarumal" similar to "Punta de las Vacas" as sometimes Masters have been confused and anchored there. See Navigation Chart.

ETA: Please advise ETA 72, 48, 24 and 12 hours prior to arrival.

Fire Fighting Tugs: At present time there are no facilities.

Harbour: Turbo is a natural port, there are no facilities such as docks or jetties.

Harbour Authorities: Harbour Master (Capitania de Puerto) and National Customs (Aduana Nacional).

Health and Medical: Only general medicine. In an emergency, cases may be sent to Medellin by plane.

Dental services available.

Ice: Not available in Turbo.

Obstructions: No difficulties with draft.

Pilotage: Compulsory for arrival and sailing. See Navigation Chart.

Location:

a. Pilot Station – Punta de las Vacas: Lat. 08° 04' N. Long. 76° 46' W.
b. Turbo (Village): Lat. 08° 05' N. Long. 76° 44' W.

Slop Reception: There are no facilities.

Supplies: There are no ship chandlers. The Agent can obtain some fruits, vegetables and some other provisions.

Towage: Only the Shippers have tugs.

Trade and Shipping: The main trade is banana export of about 43,000,000 boxes per year through the 3 enterprises Uniban, Banacol and Proban.

Another secondary activity is the transportation of wood between Turbo and Barranquilla.

Watchmen: On vessel's arrival, 2 Customs Officers come onboard on official duty, to control import and export cargo; they remain on board until the vessel sails. This service is compulsory and the Master is requested to provide meals and accommodation.

In order to prevent robbers, stowaways, foreign people, etc., it is possible to make a contract with a Private Security Firm "Vigilar de Uraba", which costs US $ 2.00 per man/hour. This service is requested by owners or charterers.

Vessels with cargo for USA, normally use 2 men per hatch to be loaded and vessels bound for Europe, normally use 4 men per vessel.

NOTES

Please also advise Shipping Guides Ltd.

Comoros

DZAOUDZI, Ile Mayotte: 12.50 S. 45.10 E. **(See Plan)**

SHIPMASTER'S REPORT: August 1982 (Updated 1988).

Mayotte Island is situated in position Lat. 12° 46' S., Long. 45° 13' E. in the Indian Ocean and known to be one of the Comoro group of Islands, but it is under the administration of French Government. It has no connection with the Comoro Government. Therefore, vessels calling "Zaoudzi" should hoist French National flag. Population is mostly Muslims. The island is surrounded by a barrier reef which is broken by many small passages but the main passage to arrive Dzaoudzi is via Passe Mount Zamboro. This passage is deep but very narrow with a width of 9 cables safe water in between the Eastern extremity of Recif du Nord and the N.W. extremity of Grand Recif du Nord-East. It leads to the anchorage off Ile Pamanazi and the Ile Dzaoudzi, where vessels work cargo on anchor moorings. The maximum draft permissible is 40 ft. The inhabitants of the island speak French, Arabic and a mixture of Somali and other African languages. There is nobody who can speak English, therefore care should be taken while arranging Pilot and entry to the Zaoudzi harbour.

DOCUMENTS: On arrival Harbour Master and Customs Officer boards the vessel.

Customs Officer Requires: 2 copies Cargo Manifest; 2 Crew Lists; Bonded and Provision Stores Declaration Lists. (2 copies).

Harbour Master Requires: 2 Crew Lists; 1 Vaccination List; 1 copy Cargo Manifest.

No other documents are asked for. Agent does not require any documents, not even ship's papers. Agents are only interested in ship's husbandry.

PILOTAGE: Pilotage is compulsory for vessels over 40 m. LOA. Messages to Agent or Pilot Office are to clearly indicate which Pass the vessel will use, ETA at Pilot Station, LOA and max. draft.

Pilot boards vessel about 1.5 miles off M'Zamboro Passage. Only one Pilot available.

Pilot available from sunrise to sunset in M'Zamboro Passage and throughout 24 hours via Baudele Passage for vessels with draft up to 5.0 m.

ANCHORAGES: Vessels should only call or enter the barrier reefs in daytime, that is from sunrise to 1 hour before sunset. Therefore daytime approaches should be maintained. There are no good anchoring grounds outside or inside Recif du Nord. Vessels arriving after hours have to keep on steaming until day breaks. However in case of emergency a temporary anchorage can be made on Banc de la Prudente, 2 miles N.W. of Ile M'Zamboro. This anchorage should be used with utmost care because of poor holding ground. In case vessels can cross barrier reefs and shallows from the Passe M'zamboro entrance to Bancs Jameaux (position: Lat. 12° 40' S., Long. 45° 08' E.), then she can anchor in depths where it is safe and sound, or she can make, if time permits, to arrive straight to Zaoudzi anchorage.

Anchorage Around Dzaoudzi: According to wind season, anchorages are fixed North or South of Dzaoudzi, near Dzaoudzi or Mamoutzou, according to freight destination.

MAX. SIZE: There is no restriction on the size of the vessel, because there are no berths. Every vessel has to anchor and work cargo, however drafts are taken into consideration. Max. draft permitted 40 ft. (12.19 m.). Vessel's engines and steering should be very reliable while navigating through passage to Zaoudzi.

HEALTH: All persons are required to have valid health certificates against Cholera. Yellow fever vaccination not required, but can be arranged if ship requires.

COMMUNICATION/ETA's: It is the vessel's duty to communicate ETA at Pilot Station 24 hours prior to arrival to Pilot Office (Telex No. 915807 MY) or to Agent (Telex No. 915811 MY) and confirm by VHF Channel 16 when 24 miles off.

Satellite Station permits direct contact by telephone or telex worldwide.

On arrival off M'Zamboro passage vessels can call "Zaoudzi Harbour Control" on VHF Channel 16. The range of their VHF is about 25 miles. Therefore vessels can call "Zaoudzi Harbour" when 25 miles off and arrange passage through barrier reefs to Zaoudzi. Pilots are always booked by cable, because it takes a long time for Pilot to arrive outside M'Zamboro Pass from Zaoudzi.

TUGS: One tug of 700 h.p. belonging to the French Navy. A tow boat is available for towing the barges and lighters.

BERTHING: There are no berths, all vessels have to anchor.

MEDICAL: Good hospitals are available in Zaoudzi and Momutzu. All kinds of cases are dealt with.

STEVEDORES/CARGO HANDLING: Agents work as stevedores, they arrange lighters and labour. There is no limit in ordering labour but lighters are limited. Therefore cargo discharging rate is affected.

If continuous flow of lighters is available then bagged cargo could be discharged at the rate of 100–150 tons per hook per day. There is no night work. During Ramadan they work from 0700 hrs. to 1600 hrs. and no work in the night. During normal days they work from 0700 hrs. to 1900 hrs. There is no floating crane. About 6 steel barges and remainder are wooden sail boats which carry 10 to 20 tonnes at a time.

DENSITY: 1025.

FRESH WATER: Abundance of fresh water on the island but no arrangements to supply to the ships. In case of emergency naval barge which has desalting plant can supply small quantity of evaporated water (up to 40 to 50 tonnes) provided it is arranged 7 days in advance. This is very expensive, therefore it should be avoided.

PROVISIONS: Very small quantities of meat, fish, vegetables and fruits are available. Ship's personnel can only go and buy it. There is little variety of vegetables or fruits. Vegetables: Lettuces, local spinach, French beans, local onions and potatoes, etc.

Fruits: Apples from South Africa, bananas, coconuts and when in season pineapples are available but in small quantities.

FUEL: Nothing can be arranged.

CONSULS: No Consulates. Difficulties if any, can be handled by Mayotte Administration.

REPAIRS: No workshop. No repairs possible by shore persons.

GANGWAY WATCHMEN: This is a very peaceful island, no pilferage, therefore watchmen are not kept or arranged.

OPENING/CLOSING HATCHES: It is normally done by ship but in case of frequent rains and with special cargo like rice or wheat, extra labour could be arranged with Agents.

CUSTOMS ALLOWANCES: No restrictions on any type of goods. Bonded stores are not sealed, therefore no limit on allowances.

CARGO GEAR: Only ship's gear is used, however rope slings are arranged by the stevedores.

SHORE LEAVE: No restrictions on shore leave and no passes are issued.

REPATRIATION: There are three flights a week from Ile Pamanzi Airport to Reunion Island only, i.e. on Tuesday, Thursday and Saturday. Repatriation can be arranged on these days.

TIME: GMT plus 3 hours. No variation in the time throughout the year.

HOLIDAYS: French administrative holidays i.e. 1st January, 1st May, and 25th December (Christmas Day), the local people enjoy Muslim rites holidays such as Eid-ul-Fitar, Eid-ul-Azha, 10th of Muharam holidays. The labour works on Saturdays and Sundays.

GENERAL: *Communications: While at Anchor:* Ships are allowed to use their transmitters for sending cables. However, cables can be sent through Agent. Ship to shore communication is by VHF Channel 16 for Port Control and Pilot Office and VHF Channel 12 with Agent's office, during office hours only.

Currency: French franc is the local currency. There are two banks: Banco de Franco, (one on Zaoudzi Island and other on Mamuzu). U.S. dollars can be changed either at the banks or direct at shops. No other currency is accepted in the shops.

SHIPMASTER'S REPORT: February 1989.

VESSEL: 18,700 g.r.t., 12,175 n.r.t., 31,275 d.w.t., 170 m. LOA, 26 m. beam, Summer draft 11 m., arrival draft 11 m.

APPROACHES: The vessel arrived off Ile Mayotte at 0100 hrs. and stopped engines about 10 miles off Recif du Nord and drifted till 0500 hrs. (daybreak), then steamed in towards the entrance and picked up pilot at 0600 hrs., about 2 miles N.E. of M'Zamboro Pass. At the original position of stopping the ship, the current set E.S.E. at about 1 knot. At the pilot boarding grounds the current set in the reverse direction, i.e. Westerly at 1.5 knots. This reversal of current is a regular feature in that area, and has to be kept in mind while approaching the pilot boat.

Charts: B.A. Charts No. 2110, 563 and 2741. Chart No. 2741 is not very accurate, and gives a false impression of the critical area around the Bancs Jumeau. The French Hydrographic Chart No. 6240 (Published May 1959; Edition No. 2 November 1968; large corrections: No. 1 February 1974; small corrections: 1988 - 2229) is a much more accurate and a larger scale chart, and is used by the pilot for reference.

DOCUMENTS: 4 copies Crew List, 1 copy Vaccination List, 1 copy Cargo Manifest, 1 copy Bonded Stores List, 1 copy Personal Effects List.

These were taken ashore by the pilot for the Harbour Master and the Customs.

No Customs, Port Health or Immigration Authorities boarded during vessel's stay of about 30 hours. The bonded stores were not sealed. Agents do not board unless the Master needs some service. They can then be contacted on VHF Channel 12, Call sign "Smart Dzaoudzi".

PILOTAGE: Pilotage is compulsory for vessels exceeding 35 m. in length. There is only one pilot there. He is a very good and experienced ex-Navy pilot, who works for the Harbour Master's office, and not the French Navy. If he is indisposed or away on leave, a French Navy Pilot Stationed on the island can substitute for him for short periods. For longer periods or whenever necessary, a pilot is flown from France.

Pilotage Movements: (A) Daily from 0600 hrs. to 1800 hrs. by M'Zamboro Pass. Deep drafted vessels are taken in and out at time of high water when passing the 8.8 m. and 10.0 m. patches off the Bancs Jumeau, E.S.E. of Cap Douamougno.

(B) 24 hours for small vessels using Bandele Pass.

The pilot boards from a blue-hulled launch with white superstructure, about 2 miles N.E. of the entrance between the reefs, with the beacon on Cap Douamougno in line with Dziani Bole peak, bearing 202° (T). If the vessel has arrived at night, the pilot boards at the break of dawn, otherwise at the next high water.

Note: The M'Zamboro Pass is well buoyed throughout, and according to the Pilot, not a single buoy has been carried away by rough seas or dragged out of position during the last six years, contrary to information given in the Sailing Directions (South Indian Ocean Pilot – 1971, page 205, lines 41, 42).

It is also not true that the beacon on Cap Douamougno is difficult to see, as reported in Supplement No. 11, 1987, to the above pilot (39S corrected to 21.3.87). All the beacons constituting leading marks are painted white and are placed in prominent positions, and are highly visible, at least in normal weather conditions.

There is no night pilotage as none of the beacons or buoys are lit at present. The local authorities are hoping to get a financial allocation from the government for installing the necessary lights within the next year, but it is unlikely that the work will be completed in less than 3 years.

MAX. SIZE: Max. draft 11.5 m.

RADIO/VHF: Agents: Smart Dzaoudzi. Telex No. 0935-915811. When near the island call on VHF Channel 12.

Pilot/Harbour Master: Telephone by SATCOM via Sans Lys Radio, No. 19269 60 19 16. Pilot also on VHF Channels 16 and 14.

TANKERS: Tankers of between 30,000 – 37,000 tonnes d.w.t. have been using the port. After arriving off Ile Pamanzi the vessel is turned around, heading outwards, approximately N.E.'ly and moored with both anchors down (4 shackles on the port anchor and 6 shackles on the starboard anchor in our case), and the stern made fast to 2 mooring buoys, one on each quarter, with 2 stern lines out from each quarter, passed through fairleads with a fore and aft separation of 10 m. to 15 m. between them.

This berth is just off the muddy beach fronting the Army Oil Terminal on the N.W. side of the Ile Pamanzi.

A small Navy tug of about 800 b.h.p. assists in pushing and holding the stern of the vessel in position between the buoys against the tide while a Navy mooring boat with Naval personnel runs out the lines.

The tug is very expensive, and the charge is made by the minute. We used the tug for only 14 minutes, but this depends entirely on the pilot, because he is the person who calls out the tug by VHF at the time he estimates that the ship will be in position for the tug to commence assisting.

DISCHARGING: After mooring is completed, Army personnel from the terminal board the ship to assist in connecting the hose. There is a submerged pipeline to the shore tanks, the outer end of which is kept buoyed near the berth. This is hoisted up on board by ship's derrick or crane (on either side, in our case it was on the port side), and connected to the ship's manifold. The flange size is 6 in. only, and we had to use our bunkering reducers to connect up to the cargo manifold.

The line can take a discharge pressure of max. 8 kg./sq.m. at the manifold. This gave us an average discharge rate of only 130 cu.m.p.h. for 3 grades of products.

An Army Loading Master attends on board during the discharging operation, and an Army soldier sits in the Cargo Control Room, watching the gauges throughout.

For discharging about 3,200 tonnes of products of 3 grades, the vessel stayed in port for about 30 hours.

After completion of discharge, the tanker has to give a water push to the last product to clear the submarine pipeline. This takes about 30 minutes.

MEDICAL: Excellent medical facilities are available if required.

SHORE LEAVE: The Agent has to obtain permission from the Immigration Authorities, and then arrange the necessary boat service.

GENERAL: *Population:* There is a total of about 60,000 inhabitants, mostly of mixed Asian and African origin, and about 5,000 French nationals.

Provisions: There were no ship chandlers in evidence. One has to do one's own shopping. Except for bananas and coconuts, everything else is imported from France, Madagascar, Reunion Island, etc., and therefore expensive, and available in small quantities.

SHIPMASTER'S REPORT: October 1994.

POSITION: Lat. 12° 45.62' S., Long. 45° 16.31' E.
BERTH: Sea berth.
VESSEL: 11,300 d.w.t.
ENTERING: By M'Zamboro Pass only. Pilot joins ship 2 miles from the entrance in daylight only.
CHANNEL: Very good buoy channel (day and night).
ANCHORING: Pilot advised that it is possible to anchor at Banc de l'Iris only (no swell or rough seas). We remained drifting.
TUGS: One tug assists with mooring and unmooring.
BERTHING: Vessel moored on a heading of 335° with Goumbe Doume Island ahead of the vessel. The starboard anchor was used with 5 shackles with 2 ropes to 2 quarter buoys.
CARGO HANDLING: 6 in. submerged hose used on the starboard side to discharge at 145 cu.m./hr. and 3 kg. maximum pressure. The distance to the shore tanks is 800 m.
CARGO: Discharged part cargo (3,000 tons).
FRESH WATER: Not available.
FUEL: Not available.
SHORE LEAVE: Allowed. Cost of boat U.S.$170.000 for 24 hours.
DEPARTURE: Possible anytime. We left at 1900 hrs.

AUTHORITY: Mr. Le Capitaine du Port de Dzaoudzi, Representation du Gouvernement, B.P. 20, 97610 Dzaoudzi, Comoros Islands. *Tel:* 19 (269) 60.10.33. *Telex:* 915810 MY.

AGENT: There is only one Agent at the moment who is M/S Societe Mohoraise d'Acconage de Representation et de Transit (short form SMART), Dzaoudzi Mayotte. Cable address: SMART Dzaoudzi. They work ship to shore communication via VHF Channel 12 – only during office hours i.e. from 0800 to 1600 hrs. If one wishes to communicate during night hours, one should call VHF Channel 16 and ask Port Control to inform "SMART" to call the ship on VHF Channel 12, then communications can be established.

MAMUTZA (Mamoutsou), Ile Mayotte: 12.47 S. 45.15 E.

SHIPMASTER'S REPORT: April 1996.

VESSEL: Cruise ship. GRT: 18,591. NRT: 6,719. LOA: 164.35 m. Extreme Breadth: 25.00 m. Draft: 6.20 m.

DOCUMENTS: Clearance documents were taken ashore by the Pilot. The following documents should be available:

5 copies Passenger List (for passenger ship only).
3 copies Crew List.
3 copies Staff List (for passenger ships only).
1 copy Health Declaration.
5 copies Nationality List.
2 copies Stores List.
2 copies Crew Effects List.

An Inward Clearance was not performed. For Outward Clearance, one agency official boarded the vessel. According to Pilot information, agency S.M.A.R.T. Dzaoudzi worked on VHF Channel 18. However, several calls were made, but no reply received.

APPROACHES: The vessel approached the pilot boarding ground 1.5 nautical miles N.E. off Passe M'Zamboro in order to pick up Pilot at 0900 hrs. Pilot station had confirmed vessel's ETA 1.5 hours earlier on VHF Channel 14. Excessive currents were not observed at the boarding ground (6 hours before high water at Dar Es Salaam). In fair weather conditions and good visibility, the approach and the passage of Passe M'Zamboro is without any difficulties. Cape Douamougno Lighthouse is a conspicuous leading mark for approach, and even Pointe Bandaboi leading lights in 174° direction (white beacons) are clearly visible at the pilot boarding ground.

PILOTAGE: For Pilot embarkation, speed had to be reduced to about 10 knots, as the pilot launch (black hull and white superstructure) is capable of steaming at about 8 knots – 10 knots. After boarding the vessel at exactly 0900 hrs., the Pilot, who is an ex-French navy officer, ordered a speed of about 15 knots for the lagoon passage. Contrary to former Master's Reports, the Pilot speaks fluently English and appeared to be a skilled and experienced Pilot.

Lagoon Passage: All courses to be steered during the passage are clearly marked by leading lights, buoys and beacons, all being lit (except 1 patch buoy, see "Anchorage"). All buoys and beacons appeared to be well maintained so that, contrary to former reports, passages during night-time are possible. The Pilot confirmed that 24 hour pilotage is provided.

ANCHORAGE: The vessel dropped anchor at the "W" Anchorage, position marked on the chart between Mamutzu and Dzaoudzi Island, 4 th shackle on deck. A 3.6 m. patch 0.5 nautical miles S.W. of I.Mogne Amiri is now marked by a white conical buoy, which is presently unlit. This buoy has not yet been charted on B.A. Chart No. 2744.

GENERAL: *Currents:* During the first part of the lagoon passage until passing Kongo Buoy, remarkable currents were not observed. During approach to the anchor position and during anchoring, partly strong currents in unpredictable directions were noted. The current set partly contrary to the indicated directions in the tidal stream table on B.A. Chart No. 2744 related to high water at Dar Es Salaam.

Remarks: The pilot station provided an excellent service during the whole stay. Support was given regarding tenderboat traffic and also for agency matters.

B.A. Chart No. 2744 appeared to be not very accurate. Differences between charted positions and reality were observed for several buoys and beacons. The Pilot informed that all relevant information regarding changes at Mamutzu port were given to the French Naval Office. Thus the French chart for this port may be more accurate.

MUTSAMUDA, Ile Anjouan: 12.09 S. 44.25 E. (See Plan).

SHIPMASTER'S REPORT: October 1994.

We attempted to berth at Moroni on Grande Comore, but it was not successful, due to closeness of reef to vessel when in the berthed position.

The Charterer decided to discharge all cargo (3,000 tons) at Mutsamuda. Previously all cargo had been delivered to Dzaoudzi and then transported to Moroni and Mutsamuda by small barges.

This was the first visit for a vessel of this size (11,300 d.w.t.).

DOCUMENTS:
5 copies Crew List.
2 copies Cargo Manifest.
2 copies Stores List.
2 copies Crew Declaration.
2 copies Arms and Ammunition List.
2 copies Passenger List.
2 copies Vaccination List.

PILOTAGE: Pilot not experienced to handle large vessels.
APPROACHES: B.A. Chart No. 563 is sufficient.
ANCHORAGES: It is better to drift.
RESTRICTIONS: Tankers berth in daylight only.
TUGS: Tug not available as it was being repaired.
BERTHING: (See "Plan").

There are two mooring buoys (Chart indicates 3 buoys). They are both small and very old.

It is not safe to moor in winds over Force 4.

Main engine should be ready at all times.

Vessel moored with 5 shackles on starboard anchor on heading 284° with lines to 2 buoys aft and one line to the oil jetty.

The depth at the buoys is 12.0 m.
The depth at the stern was 20 m. – 30 m.
The depth at the bow was 40 m. – 50 m.

Discharging: The 6 in. hose was connected on the starboard side. Average discharge rate 140 cu.m./hr. Maximum pressure 6 kg. for gas oil and Mogas, and 4 kg. for Jet A1.

MEDICAL: Hospital available.
FRESH WATER: Not available.
FUEL: Not available.
REPAIRS: No facilities.
CUSTOMS ALLOWANCES: 200 cigarettes, no alcohol.
REPATRIATION: Possible, but not advisable, as Immigration Visa takes a long time.
SURVEYORS: *Cargo Surveyor:* Societe Comorienne Des Hydrocarbones.
WATCHMEN: At least 3 watchmen, food to be provided.
SHORE LEAVE: Allowed.
GENERAL: *Currency:* U.S.Dollars and French Francs.
Language: French and English.

Republic of Congo

DJENO TERMINAL: 04.56 S. 11.54 E. (See Plan)

LOCATION: The loading point is located 3,800 m. from the coast in position Lat. 4° 56' 20" S., Long. 11° 54' 07" E., that is to say 9.75 miles S.S.E. of the main Pointe Noire Lighthouse.

NAVIGATION:

Djeno Lighthouse: Position Lat. 04° 55' 01" S., Long. 11° 55' 45" E.

The Terminal has a prohibited area which is covered by the red sector of light. No vessel may enter this area between depths of 50 m. and 70 m. as there are offshore production installations, underwater pipelines and the loading point within the red sector from approximately S. 3° W. to S. 73° W. Also vessels may not proceed inside 25 m. depth of the red sector without a Pilot on board.

The lighthouse has the following characteristics:

17 m. metallic tower, aluminium colour;

Light is regular occulting light at 4 second intervals, light 29 m. above MHWS.

Range of white light 18 miles and red light 15 miles.

SBM: Equipped with radar reflector and white light with 60 flashes per minute, range 3 miles. The floating pipe extending over a radius of 270 m. round the buoy is lit by small white intermittent lights.

PILOTAGE: Compulsory. Pilotage is carried out by Pilots from Pointe Noire (See "Shipmaster's Report"). The Pilot remains onboard for the duration of the vessel's stay at the buoy. The Pilot Station keeps a permanent watch on VHF Channel 16.

For vessels of 240,000 d.w.t to 270,000 d.w.t., a second Pilot assists for the approach to and mooring at the loading buoy.

The Pilot boards the vessel 2.3 miles to the West of the end of the Outer Dyke (Lat. 4° 46' 15" S., Long. 11° 47' 06" E.). Vessel to be stopped dead in the water, not anchored.

Limits of Pilotage Zone: South, parallel 5° 07' S.; West, meridian 11° 46' E.; North, parallel 4° 42' S.

During the day, when leaving the mooring, request for Pilot is to be made to the Port Commander's Office 3 working hours before the hour of departure. If vessel is ready to leave and the Pilot has not boarded, he may be called by means of the following signal, International flag "G" and at the same time 3 long blasts on the ship's whistle.

If departure should be during the night, request for Pilot should be made to the Port Commander's Office before 1700 hrs., indicating as near as possible the probable time of departure.

Should any changes take place in the time of departure the Port Commander's Office is to be advised at least 1 hour in advance in order that the vessel should not incur any surcharge. During these hours call for the Pilot shall be made at the Port Commander's Office by the ship's Master or his representative.

Sound Signals: The use of ship's whistle is forbidden between 1700 and 0600 hrs.

Should Pilot be required at any time on a Sunday, order should be placed before 1200 hrs. on Saturday. Should a Pilot be required on a public holiday, order should be placed by 1700 hrs. on the day prior to holiday.

ANCHORAGE: Vessels coming to load at Djeno can anchor in 26 m. of water within a radius of 0.5 miles, centred on the point located at 4.5 miles × 300° from the end of the Outer Dyke of Pointe Noire (Lat. 4° 44' S., Long. 11° 45' 05" E.).

MAX. SIZE: Maximum permissible draft 16 m. (52 ft. 6 in.). However, Elf Congo may reduce this draft if weather conditions are unfavourable.

Also see "Berthing".

For tankers from 240,000 d.w.t. to 270,000 d.w.t. (270,000 d.w.t. class), the maximum permissible draft shall be according to sea and weather conditions.

Also see "Berthing" – Loading of Tankers' of 240,000 d.w.t. – 270,000 d.w.t. (270,000 d.w.t.).

HEALTH: The Pilot may act for the Hygiene Department, Pointe Noire if instructed to do so by Pointe Noire.

RADIO/VHF: Call signal "TNA".

Permanent watch on 500-512-524 and 2182-2754 kHz from 0600 to 1800 hrs.

Transmits on 8,435 kHz	from 0930 to 0945 hrs.	(GMT)
	from 1030 to 1045 hrs.	"
	from 1330 to 1445 hrs.	"
	from 1530 to 1545 hrs.	"
	from 1730 to 1800 hrs.	"
on 12,682.5 kHz	from 0620 to 0645 hrs.	"
	from 0730 to 0745 hrs.	"
	from 0830 to 0900 hrs.	"
	from 1700 to 1715 hrs.	"

Elf Congo Terminal: Permanent watch on VHF Channels 14 and 11 whilst tanker at the loading point.

Pointe Noire Office: Call signal: "Echo Lima". Watch radiotelephony – 2182 kHz.

Port of Pointe Noire Management and Pilot Station: Permanent watch on VHF Channel 16.

Advice of Arrival: Tankers shall have their arrival at Djeno notified by their Agent 72 and 24 hours in advance.

Thereafter, they shall notify any appreciable change in their ETA.

TUGS: Two tugs available from Pointe Noire. 900 h.p. and 1,800 h.p. Request for tugs should be made at least 3 hours in advance and before 1700 hrs. if required during the night. For berthing, mooring boats will be supplied by Elf Congo.

BERTHING: The loading point of Elf Congo at Djeno is of an SBM type, with single mooring at the bow.

The vessel is moored by the bow to a buoy consisting of a cylindrical frame of diameter 10 m. and 4.35 m. high.

This buoy is moored by chains to 6 drilled piles. Anchor moorings extend over a radius of 265 m. around the buoy.

A 40 in. sea-line connects the tank farm with the loading point; the buoy is connected to the sea-line by 2 lines of flexible hoses 20 in.

The loading point is provided for the mooring and loading of tankers of approximately 40,000 d.w.t. – 240,000 d.w.t. with a draft limitation of 16.0 m.

Tankers of 240,000 d.w.t. to 270,000 d.w.t. can also be loaded, subject to application of the instructions and procedures laid down in the annex, setting out the restrictions concerning use of the buoy and the maximum drafts according to sea and weather conditions.

Depth of water at the buoy is 22 m.

Notice of Readiness: Shall be sent to Elf Congo.

Loading of Tankers of 240,000 to 270,000 d.w.t. (270,000 d.w.t. Class): *Loading Tanker:*

Loading in first port.

Draft complying with attached sheet according to sea and weather conditions.

Chain stopper compliant with O.C.I.M.F.

Response to questionnaire (See below) with acceptance of nomination (to be followed by DCI).

Reverse operational.

Support Staff and Resources:

Two Pilots.

One Loading Master.

One inshore pilotage team (3 divers).

One tug of minimum 80 tonnes bollard pull equipped with a bow pusher with inshore pilotage boat and vessel for divers, equipped according to the specifications for staying astern of the vessel during loading and the running of a towline when the vessel is released.

Means of measuring and forecasting sea and weather conditions.

A control system for approaching the buoy.

Permanent monitoring of stress on the mooring ring.

Procedure: The Pilots and Loading Master board the loading vessel.

The tug links up with the tanker in order to pass the inshore pilotage box.

The inshore pilotage boat lays out the flexible hoses beyond the line of approach of the tanker.

The divers' launch is connected to the end of the lead.

During this time, the vessel is dead in the water, but can move slow ahead or half ahead, in order to be dead in the water when 2 miles off and in line with the buoy.

At this distance, the following operations are carried out:

(1) Test of tanker's machinery, reverse the engine for a sufficient amount of time (refuse the vessel which has no reverse).

(2) Take the towline (of the tug) to the stern of the loading vessel along the axis if possible.

(3) Do not carry out deballasting during approach.

(4) The tanker shall not have more than 2.5 m. of trim (difference between draft forward and aft).

The final phase of the approach then begins. The Loading Master is with his team on the fore deck – the towline is taut enough to clear the propeller – the approach is made very slowly in order to arrive 200 m. from the buoy (place where the lead is taken aboard) almost at a standstill. Once the lead is aboard on the windlass, slow ahead is continued, following the indications of the Loading Master on the bow and the distance indicator.

At the final approach (200 m.), the tug is pulling at around 20% to 30% of its power. The tension required from the tug can be varied to serve as a brake, thus allowing the Pilot to move ahead in order to navigate without moving forward.

Once the chain is in place in the stopper, vessel is around 50 m. from the buoy. The tug pulls with between 20% and 30% power in order to make head against the mooring line. Once the running gear is connected, the tug extends its towline to 250 m. to establish a tension of 15-20 tonnes during all loading operations, the tension between the hawse pipe and the buoy is controlled by means of a stress-gauge shackle, the stress being monitored by the Djeno Loading Control Room and on the 80 tonne tug, the upper limit of this tension being 100 tonnes.

Criteria for tanker speed of approach: (Direction and speed of current permitting).

At 800 m. from the buoy slow ahead at around 150 cm./sec. (3 knots).

At 600 m. from the buoy, engine stopped, continue ahead.

At 200 m. from the buoy, very slow approach at 50 cm./sec. (1 knot) with towline taut at the stern.

Once mooring is completed, the diving team move to the manifold to connect the flexible hoses; the connection time for the hoses is 45 minutes on average and disconnection time is 30 minutes.

Restrictions regarding Use of Loading Buoy:

(1) Use of the stress-gauge shackle and datawell buoy:
Maximum permissible stress on the buoy is 100 tonnes.
During loading, the measurements of:
stress on mooring line
swell, as well as forecast development
shall be permanently monitored on board the tug and in the control room of Djeno Terminal.

(2) Use of the chart:
To ensure tha the sea and weather conditions recorded on the chart allow for loading in favourable areas of same.

(3) Tanker Loading List:
A list shall be completed by the Loading Master and the tanker's Master.

Loading and Release Procedure: F being the stress on the mooring line and SH the significant wave height.

If:

$O < F < 95$ tonnes, and $O < SH < 1.65$ m., the loading operation continues as usual.

If:

$95\ T < F < 100\ T$, stop loading crude oil. Close the valves.

Monitor the stress on the mooring in order to restart if there is a downward trend.

If the stress continues to increase:

(1) Disconnect the floating flexible hoses.
(2) Release the tanker with tug assistance.

According to the Pilot's instructions, the tug can be used either to push the vessel or by passing a towline.

If:

F > 100 tonnes for more than 15 minutes,
leave the mooring point.

In the event of disconnection and release of the tanker, the Loading Master shall attach a letter to the tanker files giving details of the sea and weather conditions and the loading lists.

By his signature, the Pilot shall confirm the validity of the figures given in the sea and weather reports at the time in this document.

In the event of disconnection of a tanker for reasons concerning sea/weather conditions, *the decision regarding re-connection shall be made on a case by case basis* after consultation with the parties concerned: Elf Congo (Terminal/Operations/Logistics) – Pilots – Tanker Master (Tug Captain).

This consultation shall allow for the definiton of any new conditions of approach and resources to be implemented.

Loading and Releasing Procedure: Normal operation: The operation is normal if the pressure on the moorings is between 0 and 95 tonnes and the operating point is within the blue area of the chart.

Stop Loading Crude Oil: Stop loading crude oil, close all valves and monitor pressure on moorings if mooring pressure is between 95 and 100 tonnes.

Release of Tanker: Leave the mooring point if the pressure on the moorings exceeds 100 tonnes for more than 15 minutes.

Flexible Hoses: Rough seas: SH > 1.65 m., ensure that stress borne by flanges of pipe manifold and flexible hoses is reduced to minimum by mooring flexible hoses firmly to the tanker by means of auxiliary straps.

Control of Tanker Manoeuvrability:

(1) Test tanker's machinery, reverse the engine for a sufficient amount of time prior to approaching buoy.
(2) The tanker shall not carry out deballasting during approach to the loading buoy.
(3) The propeller must be immersed to its maximum according to the permissible draft of around 13.5 m.
(4) The difference between draft forward and aft (trim) must not exceed 2.5 m.

Questionnaire:

From : Djeno Terminal Superintendent
To: Master of Tanker
Date:

Please answer a.s.a.p. following questionnaire:

(1) Ship's name / flag / call sign.
(2) Inmarsat number.
(3) Name of Master.
(4) Last port of call and destination.
(5) Voyage number after leaving Djeno.
(6) ETA at Djeno Roads.
(7) Previous names and date of building.
(8) Summer deadweight.
(9) (a) Quantity of clean and permanent ballast on board on arrival.
    (b) Maximum draft required at Djeno Buoy is 13.5 m., this draft to confirm.
(10) (a) Could loading be initiated while deballasting?
    (b) How long is required for deballasting?
(11) (a) What is the quantity/quality of slops on board?
    (b) Has the load-on-top procedure to be followed this voyage?
(12) Advise your loading rate:
    (a) With 1×16 in. hose.
    (b) With 2×16 in. hoses.
(13) Confirm ship in good order and operation for:
    (a) Inert gas system and all tanks inerted.
    (b) Engine ready at any moment for manoeuvring.
    (c) Heating coils not leaking.
    (d) Windlass, winches and derricks/cranes.
(14) (a) Give hose boom capacity and safe working load.
    (b) Are there cleats and bitts available in manifold area for tying of submarine hoses?
(15) Give dimensions and number of your forward Panama fairlead(s).
(16) Only tongue type chain stopper(s) will be used. Advise:
    (a) Number of stoppers (Vessel between 100,000 and 150,000 d.w.t. should have one tongue stopper of minimum 200 tons SWL, and between 150,000 and 280,000 d.w.t., two tongue stoppers of minimum 200 tons SWL).
    (b) Are stoppers positioned in correct alignment between fairleads and winch's drum end or pedestal lead?
    (c) Distance between fairlead(s) and stopper(s).
(17) Have you received Owner's instructions regarding insertion or special mentions to add on Bill of Lading?
(18) According to your instructions, when can loading be initiated (Date and time)?
(19) What is your vessel's experience factor? (Calculated as follows: Total of ship's figures for last 5 voyages divided by total of Bill of Lading quantities for the same voyage)?
(20) What is your cargo request?

MOORING: Mooring ropes supplied by Elf Congo. The vessel shall be ready to take aboard one mooring rope. The rope consists of 45 m. of nylon of 18 in. circumference and 9.0 m. of 3 in. anti-chafing chain with 4×2.5 in. links at the end.

This chain is intended to provide the nip for the fairlead; in addition, to facilitate embarkation, the mooring line is provided with a polypropylene lead of 10 in. circumference and length of 125 m.

The "Lead" is passed to the vessel by a motorboat. The vessel must prepare one messenger line, at least 150 m. long, to take it aboard.

Mooring is carried out during the day between 0600 hrs. and 1600 hrs., except for special time dispensations, sea permitting. A stress-gauge shackle between the buoy and the moorings permanently transmits to the Djeno Control Room and the support vessel the amount of stress on the buoy.

Departures take place both day and night.

The cargo derrick shall be rigged prior to arrival on the port or starboard side with a minimum hook SWL of 10 tonnes.

The vessel's manifold shall be ready on the port side for connection of the 2×16 in. flexible hoses.

LOADING: *Notice of Readiness:* The Notice of Readiness is to be addressed to "Elf Congo".

Flexible Hoses: Loading of vessels carried out through 2 lines of 270 m. of 20 in. flexible floating hose, terminating in 2×30 m. sections of 16 in. flexible hose. Manifold connections on board shall be 16 in. ASA flanges. The hoses are taken onboard on the port side.

During connection and disconnection of the flexible hoses, assistance by the crew is essential, in particular for the handling of the winches and derricks. During the whole stay of the vessel at the loading point, the Pilot shall maintain safety watch on board. The Elf Congo Loading Master takes responsibility for the part of the loading that concerns him and is in permanent contact with the Terminal.

After running the flexible hoses, Elf Congo's support vessel remains available to the Pilot and is under tow at the stern of the tanker to keep the buoy/loading tanker in line. It maintains continuous traction.

The towline used is provided by the tug.

A ladder shall be kept permanently in place along the side to allow access by the team connecting the flexible hoses.

The Elf Congo service vessel shall remain at the disposal of the Pilot and shall remain alongside the tanker or nearby. A ladder must be kept permanently alongside the vessel so as to permit access by the team in charge of the flexible hoses.

Loading: Loading may be carried out with a maximum flow of 7,500 cu.m./h. with two pumps or 5,500 cu.m./h. with one pump.

Inspection of tanks after deballasting and the ullages after loading shall be undertaken in the presence of the Loading Master representing Elf Congo.

The Terminal shall place on board the vessel sealed samples of the cargo.

30 minutes before the end of loading, the vessel shall warn the Loading Master in order to stop the pumping in time.

The ship's Master shall be fully responsible for the manoeuvring of the valves and safety of the cargo on board.

DEBALLASTING: The Djeno storage installation is not equipped to receive dirty ballast. The vessel shall, therefore, arrive with clean ballast.

Any vessel arriving with dirty ballast may be forced to leave the loading point and delay arising therefrom shall be fully incumbent on it. Acceptance of Notice of Readiness will be rectified accordingly.

It is forbidden to throw into the sea any cinders, burning materials, objects and waste of any kind.

The ship's Master shall be responsible for any leaks on board. Such leakage shall be stopped immediately.

Scuppers shall be plugged during the whole loading time.

SAFETY: The ship's Master shall be responsible for safety aboard the vessel at all times. Sufficient crew members must be aboard the vessel at all times for handling moorings and fire appliances. The vessels main engines must be kept ready at all times. A watch should be maintained to ensure that no undue stress is placed on the moorings and that the floating pipelines do not rub against the vessel. Also the vessel should not be allowed to come into contact with the single buoy mooring which may be caused by changes in current, wind direction or other reasons.

Smoking outside of authorised area, use of naked lights, or tools liable to cause sparks not allowed.

Vessel's anchors should be secured in the hawse pipe. No repairs allowed whilst at the mooring also no stores or equipment may be handled on the deck whilst at the mooring.

Whilst Loading: All hull valves shall be kept closed except those required for water circulation. The scuppers on the main deck shall be blocked. Two fire hoses shall be connected and placed one at each end of the vessel. The fire lines should be under pressure at all times.

If there is a fire aboard a vessel moored at the SBM, the following sound signal shall be given on the vessel's whistle: continuous short blasts. The Master of the vessel shall immediately take charge of fire fighting operations.

MEDICAL: There is one hospital, 2 clinics and several doctors.

FRESH WATER: Not available.

FUEL: Not available at Djeno. Vessels proceed to tanker berth at Pointe Noire.

CONSULS: At Pointe Noire: Angolan Consulate. Tel: 94.20.75.
Cuban Consulate. Tel: 94.15.37.
French Consulate. Tel: 94.00.02.
German Consulate. Tel: 94.05.07.

REPAIRS: Workshops at Pointe Noire. Facilities for repairing radar and radios.

WATCHMEN: Compulsory.

AIRPORT: 6 km. from the Port of Pointe Noire. 2 or 4 flights daily to Brazzaville. 1 or 2 flights daily from Brazzaville to Europe.

TIME: GMT plus 1 hour.

CURRENCY: CFA Franc.

GENERAL: *Charts and Publications:* Masters may usefully refer to the following documents:

French:

Charts: 6599 – Approaches to Pointe Noire.
6666 – from Gabon Estuary to Congo Estuary.
6132 – Port of Pointe Noire.

Documents: I.N.French Volume V, C Series, West Coast Africa.
2nd Volume List of Lights – Series C.

Annex entitled: "Loading conditions for tankers of 240,000 to 270,000 d.w.t. (270,000 d.w.t. class) at the Djeno Buoy.
Operational Conditions.
Chart allowing for linking of stress on the mooring line with sea and weather conditions.

British:
Charts: 604 – Cap Lopez to Luanda.
3206 – Bay of Loango to Rio Lucunga.
3285 – Approaches to Pointe Noire.

U.S.:
Charts: 57241 – Bay of Pointe Noire
Approaches to Pointe Noire.
57220 – Pointe Noire to Pointe Pedras
Congo/Gabon.
57240 – Pointe Noire to Cabeca do Cobra
(Omega) Congo River Entrance.

Stores: A ship chandler at Pointe Noire can supply vessels with any foodstuffs required.

Territorial Waters: The sovereignty of the Republic of Congo extends to 30 nautical miles as from the lowest sea watermark along the coast.

Boat Service: A motor boat can be rented through the consignee. Elf Congo motor boats must not be used by the tanker crew except for an urgent medical evacuation.

Meteorology: The rainy season extends from November to May with a maximum in February and March.

Visibility: Visibility can be reduced to less than 1 mile in June, July and August.

Sea: Mean density of the sea at the loading point is 1025. Sea temperature varies between 27°C in February (austral Summer) and 22°C in August (austral Winter).

Tide: Tide is of a semi-diurnal type. Mean amplitude of spring tides is 1.60 m.

Wind: S.S.W. generally less than 15 knots.

Swell: Generally S.S.W. less than 2.50 m. with periods of 10 to 12 seconds.

Current: Sector S. to S.S.E. generally less than 1.5 knots on surface. The current can change to the North without any apparent reason for a period rarely greater than 2 days.

SHIPMASTER'S REPORT: September 1984 (Updated 1994).

Documents: Documents required: 3 each of Crew Lists, Vaccination Lists, Stores & Crew Declaration. 2 each of Passengers (or Nil) List, Birds and Animals, Narcotics, Arms and Ammunition. 1 Notice of Readiness. All paperwork carried out by Loading Master.

On departure, vessel steams slowly back to Pointe Noire while calculations and papers are completed on board.

Pilotage: Pilot and Loading Master boarded from pilot boat which has speed of about 20 knots.

On departure, the Pilot, Loading Master and Cargo Surveyor left using an inflatable dinghy. They prefer the ladder on the starboard side. The tug carries 2 inflatable dinghies.

Anchorages: For tankers waiting to berth at Djeno the indicated anchorage off Pointe Noire was found to be good with thick grey mud. Gear for mooring and hose connecting put on board from tug at anchorage. The tug then goes to Djeno to standby.

Tugs: After mooring, the tug takes a tanker's rope and stays astern during loading.

Mooring: While mooring, tug is used to keep hoses clear.

Loading: Cargo Surveyor boarded while deballasting. Used combination accommodation ladder/pilot ladder on port side. Pilot, Surveyor and Loading Master stay on board.

OPERATOR: Elf Congo, Terminal de Djeno, B.P. 761, Pointe Noire, Congo. *Tel:* 94.20.41. *Telex:* Elfco 8239 Kg. and 8277 Kg.
Contact: Hubert Larche, Terminal Superintendent.

POINTE NOIRE: 04.47 S. 11.49 E. (See Plan)

PORT LIMITS: *Pointe Noire Pilotage area limits:*
South: 5° 07' S.
West: 11° 46' E.
North: 4° 42' S.

DOCUMENTS: On arrival, the Master must hand over to:

The Agents:
4 Crew Lists.
4 Lists of Crew Boys.
4 Passenger Lists or negative.
4 Lists of Ports of Call.
2 Lists of Crew Personal Effects.
2 Stores Lists.
5 copies of Cargo Manifest.
1 List of Narcotics.
1 List of Arms.
1 List of Ammunition.
1 List of Animals.
Master's copy of B/L.

Harbour Authorities:
1 Arrival Form issued by Port of Pointe Noire.
1 Departure Form issued by Port of Pointe Noire.

Health Authorities:
1 Vaccination List for crew members.
1 Declaration of Health (form issued by the port of Pointe Noire).
Vaccination cards for the whole crew.

APPROACHES: *Shipmaster's Report:*
The approach to Pointe Noire from the West using Chart 4105 Freetown to Luanda is clear of dangers as far as our experience goes. After crossing the 200 m. (100 fathom) line, the soundings are consistent with a gently shelving coast until there is 30 m. – 40 m., 3 miles West of Pointe Noire breakwater.

Approaching Pointe Noire from the West the radar picture of the coast about 20 miles North of Pointe Noire is very similar to Pointe Noire itself. This could confuse and lead one to think that the ship is further South than she really is, but the cluster of oil rigs should be a good guide.

There is a cluster of oil rigs with flares S.S.W. by 13 miles from Pointe Noire main lighthouse, with another cluster about due South by 17 miles, both good radar targets. Do not go in between these clusters. Watch out for numerous small dugouts, etc. fishing.

Oil rigs with 1 flare in position Lat. 4° 28.8' S., Long. 11° 15.4' E.

PILOTAGE: Compulsory. Telegraphic address: Harbour Master's Office of the Port of Pointe Noire. Pilot station can be contacted by VHF Channel 16; 24 hour service.

Boarding position: Pilot boards 1 mile North of the green channel light buoy.

Tankers awaiting a Pilot for the SBM at Djeno should wait 2 miles West of the main light at Pointe Noire.

RESTRICTIONS: Minimum draft allowed for ore-carrying vessels of more than 130 m. drawing alongside at Quay G: 20 ft. aft and 15 ft. forward. Max. draft allowed for all vessels: 31 ft. at any hour. Max. draft allowed for ore carriers leaving Quay G is 34 ft. 4 in. (1 hour before high tide). Tying to mooring buoy can be done only between sunrise and sunset.

Max. draft tankers 33 ft. 6 in. and max. LOA 230 m. Tankers to enter in same period as departing ore carriers (1 hour before high tide).

HEALTH: Port Health Officer boards immediately on berthing. Compulsory vaccinations: Yellow fever and cholera.

RADIO: Pointe Noire Radio, call sign TNA. Continuous service on 500 and 2182 kHz from 0600 to 1800 hrs. GMT. Transmission on 8722 kHz. TNA from 0930 to 0945, 1030 to 1045, 1330 to 1445, 1530 to 1545, 1730 to 1800 hrs. GMT; on 13101 kHz. TNA from 0630 to 0645, 0730 to 0745, 0830 to 0900, 1700 to 1715 hrs.

Shipmaster's Report: If vessel is coming from the South it is advisable to pass messages through Luanda.

RADAR/VHF: The Harbour Master's Office has a VHF set (call Channel 16) but no radar.

TUGS: 2 tugs 1,800 h.p. and 900 h.p. Tugs normally join the vessel as soon as it crosses the passage. The vessel's own lines are usually used.

BERTHING:

	Length	Draft Permitted
Quay D: Berth 1	720 m.	24 ft.
" 2		26 ft.
" 3		28 ft.
" 4		29 ft.
" 5		29 ft.
Quay G: Ore Berth	530 m.	34 ft. 04 in. (See "Restrictions")
Tanker Berth	—	33 ft. 06 in.
Mole 1: Timber Berths	350 m.	31 ft.
Lighter Berth	—	12 ft.

Potash Berth: 4 miles Southward of Pointe Noire. Max. draft 44 ft.

STEVEDORES: The Agent requires the following information 48 hours in advance, in order to arrange gangs: precise ETA; number of gangs required for unloading/loading; distribution per hold unloading/loading; draft, fore and aft – before 0600 hrs. in the morning on weekdays counting as overtime; before 0600 hrs. Saturday mornings for the weekend or day before holiday also counted as overtime.

MEDICAL: Notice for medical attention not needed. There are 2 private clinics.

TANKERS: Diameter of loading/unloading lines: 6 in.=aircraft fuel. 10 in.="white product". 12 in.=1500 fuel. Hoses=8 in.

Also see "Djeno Terminal".

DENSITY: 1025 on average. Only slight variations according to tides.

FRESH WATER: 2 hoses can be connected at each berth.
Rate: 20 t.p.h. per hose.

FUEL: Ordered from suppliers: Hydrocongo. Pipe-line supply to tanker berth and Berths No. 1 and 8.

FIRE PRECAUTIONS: The port must be informed of ETA of tanker 24 hours in advance.

CONSULS: France, Tel: 94.00.02–94.00.03. Germany, Tel: 94.00.10.

REPAIRS: Most repairs for the deck and engines are possible. Also facilities for electronic repairs.

DRY DOCKS: One slipway for vessels up to 800 tons.

GANGWAY/DECK WATCHMEN: Compulsory for tankers and gas carriers.

OPENING/CLOSING HATCHES: Usually the crew's responsibility. Can be carried out by the stevedore for payment.

CUSTOMS ALLOWANCES: No limit – must be stated on crew declaration, and quantities must be accurately stated.

CARGO GEAR: Derricks to be in good condition. There are 2 cranes at the new jetty.

REPATRIATION: Every facility for crews equipped with a crew card and passport.

AIRPORT: 6 km. from the port. 1 to 2 flights per day to Brazzaville. 1 to 2 flights per day from Brazzaville to Europe.

TIME: Local time is GMT plus 1 hour.

HOLIDAYS: 1st January (1 day's holiday); 1st May (2 days' holiday); 31st July (1 to 2 days' holiday); 15th August (2 to 3 days' holiday); 1st November; 25th December (1 day's holiday).

POLICE/AMBULANCE/FIRE: Police 17; Fire 94.00.49; Ambulance 94.00.49, 94.21.98.

TELEPHONE: Cannot be connected on board ship but there is one in the middle of Quay D for the use of vessels.

SHORE LEAVE: No restrictions.

IDENTIFICATION CARDS: Seaman's cards or passport needed.
PORT REGULATIONS: In the event of congestion, vessels are obliged to work at night and on Sundays, and if they refuse to do this, they may be relegated to the roadsteads and thereby lose their turn to draw alongside.
DELAYS: *Shipmaster's Report:* Occasionally tankers are delayed for long periods as the shore tanks may be full.
GENERAL: As the Congolese Customs are very strict, the drawing up of the Store List and Crew Declaration should be carried out very carefully, as the slightest error is penalised and a fine imposed.

Stores are expensive and not easily obtainable. Fish available, also fruit and vegetables but not in the Rainy Season.

SHIPMASTER'S REPORT: Mail takes between 3 days and 7 days from Pointe Noire to Paris, and Pilot assures that it is reliable.

SHIPMASTER'S REPORT: March 1980.
Pilotage: Compulsory. Pilot boards in position 4° 45.5' S., 11° 45.9' E. 24 and 12 hours notice required.
Anchorage: Position 4° 47.2' S., 11° 49.4' E.
Restrictions: Vessels able to enter and leave at any stage of the tide day or night.
Max. Size: Max. draft 31 ft.
Health: Quarantine Authority require 12 hours notice of arrival.
Tugs: 1 tug available.
Radio: Luanda or Portishead. No replies locally.
VHF: Pilot and Port Authority on Channel 16.
Berthing: Position 4° 46' S., 11° 50' E. Distance from entrance to berth less than 1 mile. Nature of bottom sand and mud. Vessel able to dock and undock at any stage of the tide day or night. There are facilities for loading coal in bulk. No quay cranes available, ships gear used. There is no link span for Ro/Ro vessels. Usual precautions taken with regard to security, no losses suffered. There is sufficient equipment for handling palletised cargo. Ship's gear is used for handling containers and the necessary shore equipment is available.
Density: 1025.
Fresh Water: Available.
Fuel: Bunker fuel oil, diesel oil and lubricating oils available.
Medical: Doctor and hospital available.
Provisions: Fresh provisions available but expensive as they are flown in from South Africa. Meats and groceries also available.
Repairs: Small repair facilities and small machine shop available.
Airport: Local airport with flights to Brazzaville.

SHIPMASTER'S REPORT: July 1987.

When approaching the port from the N.W., vessel should steer 105° T directly towards Dique Exterieure Head Lt. When 5 miles off steer 090° T for 2 miles thence about 100° T, shaping towards the anchorage and keeping at least 5 cables off the land. We disregarded the 148° T leading line on BA. Chart No. 3285 due to shoaling taking place to the North and West of West Breakwater. Sight the green conical buoy on the starboard hand and stop the ship some 5 cables off the breakwaters, heading about 170° T, directly towards the entrance. The green buoy will be about 2 cables abeam to starboard at this position. The pilot will then board from a launch on the port side, manropes and bulwark ladder required.

The Petroleum Pier (P.P.) is situated 3 cables directly inside the harbour entrance. 2 tugs, pushing only, and 1 mooring boat, even though 2 mooring boats are normally available. Vessel berthed Port side alongside. No photography allowed.

Moorings: Forward: 4 headlines to shore, 2 forward head springs to dolphin. Aft: 2 aft back springs to dolphin, 2 stern lines to a hook buoy, 2 long stern lines to shore with lashings.

Berthing and sailing at any time during daylight hours on 31 ft. draft, or 3 hours before to 2 hours after HW on 33 ft. 06 in. maximum draft. Density 1025.

1 × 8 in. Chicksan connection, loading rate about 875 cu.m./h., temperature of fuel oil 140° F.

The Officials are French speaking and are courteous and obliging if all in order. The following boarded, 6 Customs Officers, 2 Immigration Officials (shore passes required), 2 Port Health Officers (vaccinations up to date), 1 Agent, 2 Harbour Masters, 1 Port Captain (Safety Check List and dates of SOLAS Certificates inspected), 1 Loading Master and 1 Charterer's Representative.

No port watchmen, firemen, security etc., and no extra meals required.

Loading Master advises that mugging, etc. prevalent on the shore.

Weather: Dry season from mid-May to mid-September, when cloudy and cool. The remainder of the year is hot, wet and humid.

AUTHORITY: Direction du Port de Pointe-Noire, P.O.Box 711, Pointe-Noire, Republic of Congo. *Tel:* 94.00.52.

AGENT: Socopao, BP 664/714, Pointe Noire, Republic of Congo. Cable address "Freight Pointe Noire". Tel: (242) 94.11.20, 94.11.21. Telex: 8300 and 8252. Fax: (242) 94.12.84.

YOMBO: 04.27 S. 11.06 E. (See Plan)

LOCATION: Yombo Oil Terminal is located in the territorial waters of the Republic of the Congo and consists of the following:

1. Production Platform "Yombo A" located offshore in position Lat. 04° 28' 50.27" S., Long. 11° 05' 36.85" E. and Production Platform "Yombo B" located offshore in position Lat. 04° 28' 16.67" S., Long. 11° 05' 26.68" E.
2. An offshore loading berth composed primarily of a Floating Production, Storage and Offloading Vessel, (FPSO), "Conkouati" (LOA 325 m., Beam 48.1 m., Max. draft 20 m., Min. draft 10.2 m. and D.W.T. 232,083 tons), permanently affixed by 12×21 ton anchor assemblies consisting of 3,290 ft. of 4 in. and 5 in. chain with 5 ton piggyback anchors extending beyond attached by 2.5 in. chain and 3 in. cable.
   The FPSO is located at Lat. 04° 27' 25" S., Long. 11° 06' 19" E. in approximately 325 ft. of water and is situated in open and unsheltered waters approximately 23.3 miles off Pointe Tchitembo, bearing 226° from it.
3. A submarine pipeline system connects the Production Platforms "Yombo A" and "Yombo B" to the FPSO.
4. A submarine electric power cable system connecting platforms "Yombo A" and "Yombo B", to the FPSO.

Company's Facilities: The Company's administrative offices are located in Pointe Noire. The Company's Terminal offices, storage facilities and laboratory for testing stock are located onboard the FPSO.

DOCUMENTS: The following documents are required when calling at Yombo Oil Terminal:
4 copies Crew List.
4 copies Crew Boy List.
4 copies Passenger List.
4 copies Ports of Call List.
2 copies Crew Personal Effects List.
2 copies Stores List.
5 copies Cargo Manifest.
1 copy Narcotics List.
1 copy Arms List.
1 copy Ammunition List.
1 copy Animals List.
1 copy Vaccination List and Vaccination Cards for entire crew.

PILOTAGE: *Mooring Master:* The Mooring Master will board in the anchorage area, unless otherwise agreed.

Lifting vessels will not be allowed to approach or depart from the loading berth without the assistance of the Company designated Mooring Master. The Mooring Master will advise the lifting vessel's personnel on the approach to the loading berth; the operations of mooring and unmooring and in all other operations within the loading berth area. The Mooring Master will be in direct charge of the portable VHF radiotelephone and all ship-to-tug and ship-to-launch communications will be by portable VHF radiotelephone. The lifting vessel's Oil Record Book shall be made available for inspection by the Mooring Master on his arrival at the lifting vessel. All manoeuvres of lifting vessels within the loading berth area shall be performed by the lifting vessel's personnel as directed by the lifting vessel's officer-in-charge and in accordance with the procedure advised by the Mooring Master. The vessel being manoeuvred shall remain solely responsible, on behalf of the lifting vessel's owners, for the safety and proper manoeuvring of the lifting vessel. The lifting vessel's Master must be on the bridge at all times while the lifting vessel is manoeuvring.

Lifting vessels are required to have a clean and efficient pilot ladder fitted with spreaders and manropes, safely and securely rigged, ready for the Mooring Master to embark and disembark on either side of the lifting vessel as advised by the Mooring Master and of sufficient length to reach the Mooring Master's launch. If at night, adequate lighting must be rigged overside for the Mooring Master to depart from the lifting vessel and to use the pilot ladder safely. A lifebuoy with safety line and self-igniting light together with a rope messenger for the Mooring Master's bag shall also be available on deck adjacent to the pilot ladder. Lifting vessels shall afford a "good weather lee" and shall reduce speed as directed by the Mooring Master in order to effect the safe embarking or disembarking of the Mooring Master.

Whenever, as in the case of large lifting vessels in light condition, the freeboard exceeds 30 ft., the accommodation ladder shall also be used in conjunction with the pilot ladder and shall be lowered to about 12 ft. above the water with the pilot ladder rigged immediately adjacent to the bottom platform of the accommodation ladder. A mechanical hoist of an approved pattern shall be considered an acceptable alternative to a conventional pilot ladder for use in conjunction with the accommodation ladder, but a mechanical hoist whose operation relies upon a single wire shall not be considered as an approved type. The rigging of the pilot ladder for the embarkation and disembarkation of the Mooring Master shall be supervised by a licenced deck officer of the lifting vessel and shall be positioned so that the ladder is well clear of any overboard discharge and so that each step of the ladder rests securely against the lifting vessel's side. If, in the opinion of the Mooring Master, the pilot ladder is not safe, the Mooring Master may refuse to board the lifting vessel and any delay caused by such refusal shall be for the lifting vessel's account.

Lifting vessels shall provide food for the Terminal and Government representatives as required while on board the lifting vessel and shall accommodate the Mooring Master, assistants and officials as required. Should the lifting vessel not be equipped with a pilot cabin, the Mooring Master shall be accommodated in a cabin equivalent to that required for an officer on the lifting vessel. The Mooring Master shall have access to the bridge and/or central area of the lifting vessel, including the cargo control room, and such areas shall not be locked or otherwise arranged to prevent immediate entry at any time by the Mooring Master.

APPROACHES: Caution is required when navigating near Yombo Oil Terminal since oil installations and marine activities may be encountered in the area. Mariners are recommended to pass to seaward of all such areas and are advised not to anchor or fish in the vicinity of such oil installations or their pipelines. Mariners are specifically cautioned that all navigation is restricted in the area bounded by Lat. 04° 25' S. and 04° 31' S. and the meridians of Long. 11° 03' E. and 11° 09' E. (See "Plans").

Restricted Zone: Lifting vessels are prohibited from navigating within the restricted zone at Yombo Oil Terminal at any time unless the Mooring Master is on board. The restricted zone is bounded by lines connecting the following points:

Point	*Latitude*	*Longitude*
1	04° 25' 00" S	11° 03' 00" E
2	04° 25' 00" S	11° 09' 00" E
3	04° 31' 00" S	11° 09' 00" E
4	04° 31' 00" S	11° 03' 00" E

ANCHORAGE: The customary anchorage area for vessels awaiting the loading berth is an area one mile in radius centered at Lat. 04° 16' 30" S., Long. 11° 12' 30" E. with FPSO "Conkouati" bearing approximately 210°×12.7 miles.

Anchorage within the Restricted Area (see above) is prohibited unless otherwise designated by the Company or the Mooring Master.

RESTRICTIONS: Mooring between 0600 hrs. and 1100 hrs. only.

MAX. SIZE: 155,000 d.w.t., LOA 280.15 m., Beam 53.60 m. and loaded draft 15.0 m. Also see "Mooring" and "Loading".

HEALTH: *Quarantine Regulations:* The rules governing the quarantine of lifting vessels are the same as those found in other parts of the world.

RADIO/VHF:

Initial Radio Communications: The radio station at Pointe Noire will handle the initial radio communications between lifting vessels and the Company. The station call sign is "TNA", and the station operates on 500 kHz and 2182 kHz from 0600 hrs. – 1800 hrs. daily. The "Conkouati", call sign "D5SI", is equipped with Marisat and maintains Marisat No. 1244274.

Advice of Arrival: It is important that lifting vessels establish radio contact with the Company when 3 days distant from the Terminal and maintain such contact until just prior to arrival at the Terminal. Lifting vessels should send an ETA message to the Company (telex 8216 KG) not less than 72 hours prior to arrival at the Terminal, providing the following information:

(1) The estimated time of arrival and name of local agent for lifting vessel.
(2) The estimated draft, fore and aft, upon arrival.
(3) The quantity of crude oil to be loaded and the grade of such.
(4) The estimated sailing draft.
(5) The last port of call.
(6) Whether the lifting vessel has a clean Bill of Health.
(7) The distance from the bow to the centre of the lifting vessel's manifold.
(8) Confirmation that hose handling gear and mooring equipment, navigation equipment, radars, steering gear and engine propulsion are in good order and condition, that the lifting vessel can accept 1×16 in. diameter cargo hose fitted with a 16 in. diameter flange.
(9) Confirm that any slops on board are isolated by double valve segregation.

The first ETA message should also include a definite statement of the details of any equipment required from the FPSO for connecting the cargo hose to the lifting vessel's manifold. Further ETA messages should be sent to the Company when the vessel is 48 hours and 24 hours distant from the Terminal confirming or giving notice of any change in the 72 hour ETA and at any other time after the 24 hour ETA message when a change by more than 2 hours occurs in the ETA. The 24 hour ETA message should include a positive statement regarding the lifting vessel's readiness to load on arrival and the number of hours prior to commencement of loading that will be required by the lifting vessel to discharge clean ballast.

Local time is G.M.T. plus one hour and daylight saving time (Summer time) is not applicable.

Ship-to-Terminal Communications: The FPSO is equipped with VHF radiotelephone using international frequencies and maintains a radio watch on VHF Channel 16. Not less than 12 hours prior to the lifting vessel's ETA at the Terminal, the lifting vessel is required to maintain a radio watch on VHF Channel 16. Masters are recommended to use this facility as soon as the lifting vessel is within range since such communications are the best means of avoiding delay in the mooring of the lifting vessel.

While the Mooring Master is on board the lifting vessel, the Mooring Master will be in direct charge of the portable VHF ship-to-terminal radiotelephone and all ship-to-terminal, ship-to-tug and ship-to-launch communications will be by VHF radiotelephone. The Mooring Master will advise the Master and officers regarding the emergency signals set up for use in the event the VHF radiotelephone units become inoperative. The use of the lifting vessel's H/F radio station and/or battery charging equipment is prohibited during cargo loading operations.

Radio Watches: While at the anchorage awaiting the loading berth, lifting vessels should maintain a listening watch on VHF Channel 16 with the FPSO.

TUGS: Available.

Also see "Mooring" – "Mooring Operation".

BERTHING: Tenders to load crude oil will normally be accepted and the loading berth will be assigned to a lifting vessel in the order of its arrival, provided the lifting vessel has a nomination for crude oil valid at the time and is in all respects equipped and ready to moor. In the event that mooring is delayed on account of weather, the lifting vessel will keep its position in line. Should the lifting vessel be required to leave the area on account of weather, the lifting vessel should keep in radio contact with the Terminal in order to make the lifting vessel available as soon as the weather moderates. The Company reserves the right to load lifting vessels "out of turn" following the return of good weather, to the extent that such loading "out of turn" does not materially delay the loading of other lifting vessels in line. For example, should weather make it necessary for a specific lifting vessel waiting at the loading berth or at the anchorage to vacate the area, the Company may load another lifting vessel which arrived at the anchorage after the specific lifting vessel but before the return of the specific lifting vessel which was waiting in line ahead of the other lifting vessel.

MOORING: Yombo Oil Terminal is operated by Walter International Congo, Inc. and is operated 24 hours a day, 7 days a week, weather and other circumstances permitting. Vessels are moored from 0600 hrs. to 1100 hrs. only, loaded at any hour, and unmoored at any time, weather and other circumstances permitting.

Mooring Facilities: The FPSO is permanently fixed by a 12 point spread system, with each point secured directly to the seabed by a 21 ton anchor. On the port side of the FPSO, the fore and after chains run through specially constructed fairleads at the vessel's bottom before terminating at the deck. On the starboard side, the chains run directly to the deck. Lifting vessels are moored alongside, starboard side to the port side of the FPSO by means of a terminal supplied 10 in. braided mooring hawsers. Seven primary and 7 secondary fenders will be deployed by the storage vessel. Upon the completion of mooring, 14 hawsers will be used; 3 headlines, 3 sternlines, 2 forward breastlines, 2 after breastlines, 2 forward springs and 2 after springs. The loading berth will accept vessels up to 155,000 d.w.t., with displacement not to exceed 182,000 metric tonnes and length not to exceed 280 m. overall. The FPSO is equipped with anchor lights and a red light (360°) displayed on its top mast.

Vessel's Gear: Prior to the berthing of any lifting vessel, the derrick of the lifting vessel should be raised and fully rigged. The derrick should be swung inboard so as to be clear of the manifold and ensure that it does not interfere with the operation of the FPSO's derrick. The warping winches and windlass should be in good working order and condition at all times while at the loading berth and must be adequate to handle mooring lines under heavy strain and efficient stoppers must be readily available to "stop-off" the mooring lines and transfer same from winch to the bitts. The vessel shall have 4 messengers of 4 in. circumference and 110 m. in length available, 2 forward and 2 aft, in way of head, stern and springline bitts.

On the sides, opposite the lifting vessel's manifolds, there must be equipment rated by an approved Classification Society and in accordance with O.C.I.M.F. "Standards for Manifolds and Associated Equipment" and capable of lifting the cargo hoses safely and efficiently from the FPSO over the rail to the lifting vessel's manifold. Lifting vessels must also have an adequate supply of nuts, bolts, gaskets and wrenches to connect the cargo hoses. If, in the opinion of the Mooring Master, the lifting vessel is not equipped with adequate mooring or loading facilities or lines or gear, the Mooring Master must so inform the lifting vessel's Master and in such event the lifting vessel will not be brought into the loading berth until the facilities or lines or gear are deemed satisfactory by the Mooring Master.

Mooring Operation: The Company will provide assist tug(s) to assist in the mooring and unmooring of the lifting vessel. The assist tug(s) will be based at the loading berth and will operate under the direct control of the Mooring Master.

Prior to approaching the FPSO "Conkouati" all anchors shall be secured.

When the mooring operations have been completed, 2 tugs will be standing-by in Yombo Field for the duration of the loading operations in case of an emergency.

Vessel's Alertness: The loading berth is in open and unsheltered waters; therefore, from the time the Mooring Master boards the lifting vessel until the lifting vessel has loaded her cargo and the Mooring Master has disembarked, full power must be available at all times on all deck winches and windlass and other gear of the lifting vessel. The lifting vessel's engines, steering machinery and other manoeuvring equipment must likewise be maintained in a constant state of readiness with full power for immediate use so as to allow the lifting vessel to manoeuvre in an emergency or so as to allow the lifting vessel to depart from the loading berth at any time following a request by the Mooring Master or the Company to do so.

The lifting vessel's personnel should be at their stations and alert at all times during mooring, unmooring, hose handling and cargo loading operations. Where lifting vessels are equipped with an electric clutch control to the propeller shaft, such lifting vessels must disconnect the electrical clutch control and the manual clutch so that there will be no possibility of the engine engaging the propeller shaft while the lifting vessel is moored. Turbine vessels will not be accepted. A constant watch in the engine room, control room, cargo control room and on the bridge shall be provided at all times aboard any lifting vessel while at or in the vicinity of the loading berth.

LOADING: Lifting vessels are loaded by means of 1×16 in. flexible cargo hose directly from the port side manifold of the FPSO. The FPSO is loaded by means of submarine pipelines which run from Production Platforms "Yombo A" and "Yombo B" and are directly connected by 2 fluid risers to the starboard quarter. The maximum draft allowed for lifting vessels is 15.0 m.

Rate of Loading: The crude oil flow is by pump and the maximum crude oil loading rate for lifting vessels using 1×16 in. hose is approximately 30,000 bbls./hr. or approximately 5,000 tonnes/hr. In order to save vessel time and make the loading berth available for other lifting vessels, it is required that only clean, oil-free ballast be pumped as fast as possible and that lifting vessels receive oil as fast as it can be delivered with both operations having due regard for safety. It is also requested that any impediments such as 'Y' pieces, strainers or mud boxes which may restrict the flow of crude oil into the lifting vessel be removed prior to arrival of the lifting vessel at the loading berth.

Hose Connection: After the lifting vessel has been securely moored, the cargo hose will be hoisted to the lifting vessel's rail amidships by the FPSO's equipment. The cargo hose is 1×16 in. hose fitted with a 16 in. valve and a 150 p.s.i. ANSI flange. The lifting vessel should have reducers and fittings onboard so as to enable such cargo hose to be connected to the lifting vessel's manifold. The raising and lowering of the cargo hose will be conducted by the FPSO. All hose connecting and disconnecting will be performed by the lifting vessel's crew as directed by the lifting vessel's officer-in-charge, under the supervision of the Mooring Master. The Mooring Master will remain onboard as Loading Master during the entire time the lifting vessel is at the loading berth. Particular care should be taken during all phases of operations to avoid damage to the cargo hoses and their fittings.

Loading Readiness and Arrival Time: Upon the arrival of the lifting vessel at the customary anchorage for the loading berth, the Master or his agent shall give the Company Notice by letter, telegraph, radio or telephone that the lifting vessel is ready to load. Laytime shall commence upon the expiration of 6 hours following the acceptance of such Notice by the Company provided that the lifting vessel has been nominated to load cargo and the Terminal holds such cargo nomination and further provided that the Mooring Master has deemed the lifting vessel to be in all respects ready to moor and load. This Notice of Readiness will be accepted only between 0600 hrs. and 3 hours before sunset, but will not be accepted at any time when the Terminal is closed. If, however, the lifting vessel is moved to the loading berth without delay after having arrived at any time and the lifting vessel is in all respects ready to moor and load in the opinion of the Mooring Master, the Notice of Readiness will be accepted at the time that the Mooring Master boards the vessel. Laytime shall continue until the cargo hose has been disconnected from the lifting vessel's manifold.

Responsibility: Prior to the commencement of any cargo loading operation, the Mooring Master and officers-in-charge of the loading operations for the lifting vessel and the FPSO "Conkouati" shall engage in a pre-loading conference to formulate a loading plan and to ensure that the lifting vessel is in all respects ready to load. No cargo loading shall take place without the permission of the Mooring Master, which permission shall not be given until the pre-loading conference and the lifting vessel Safety Check List have been completed. The lifting vessel's Master shall remain responsible for the safety of the lifting vessel and all operations on board the lifting vessel at all times. The Mooring Master will advise the officer-in-charge of the loading operations for the lifting vessel with respect to the loading pressures and hazards but the Mooring Master will not direct any aspect of the loading except as may be necessary to protect the loading berth and related facilities and equipment. The manipulation of the lifting vessel's valves is the direct responsibility of the lifting vessel's personnel. The Mooring Master shall have the right to suspend cargo loading operations or to require the lifting vessel to unmoor and depart from the loading berth at any time when the mooring plan, pre-loading plan or safety requirements and regulations are not being followed by the lifting vessel or at any time the Mooring Master believes or becomes aware of the existence of any other reason which in his opinion shall require the suspension of the mooring or the loading of the lifting vessel. All time lost in such circumstances shall be for the lifting vessel's account.

Oil Valve Control: The incoming oil stream is controlled on the FPSO and the lifting vessel's valves must not be closed at any time against the incoming oil stream. Such a procedure creates an excessive pressure which may damage the hoses or other Terminal facilities and could result in a pollution incident. Lifting vessels and their owners and charterers and Masters will be held legally liable for any damage resulting from the lifting vessel's failure to observe this precaution. Frequent checks of the cargo loading must be made by lifting vessel personnel during the loading operation so that a reduction in the loading rate, before topping-off the final tank or tanks, may be arranged through the Mooring Master by the officer-in-charge of the loading operations for the lifting vessel. A normal standby warning should be given about 20 minutes before the shutdown of the loading operations. Upon the request from the lifting vessel to shut down the loading operations, a minimum of 3 minutes will be normally required to stop the flow of crude oil. Lifting vessel's personnel shall be responsible for the call to stop the loading of the lifting vessel. When cargo has ceased to flow, the valves on the FPSO will be closed and the lifting vessel's manifold valves may then be closed.

Emergency Signal: The emergency signals employed at the Terminal shall be demonstrated prior to transfer. Should normal ship-to-terminal communications fail, the emergency signal, consisting of a continuous blast on the ship's whistle, must be sounded by the lifting vessel and all loading operations shutdown until communications can be re-established. Steam or air should never be shut off from the whistle of the lifting vessel during loading. For this reason, it is requested that lifting vessels in the area refrain from using their whistles for other than essential purposes and that the use of "continuous blast" whistle signal be reserved for emergency purposes only. All crew members who stand a deck watch during the transfer of crude oil are expected to know the emergency shutdown signal.

Code Flag: During all cargo loading operations, the International Code flag 'B' shall be displayed from a topmast signal halyard during daylight hours and a red light shall be displayed during the hours of darkness. The red light should be of a character as to be visible at a distance of at least 2 miles and show an unbroken light around the horizon.

Terminal Stops: Request for the Terminal to stop the flow of crude oil at a predetermined tonnage (shore stop) must be made in writing to the Company and will be deemed to include the statement and understanding that the Company will not be responsible for (1) any errors, costs or claims arising from such request and (2) any crude oil loaded in excess of that requested will not be pumped back aboard the FPSO. Some delays in stopping the flow of crude oil are always incurred when such a stop is made.

BALLAST: *Precautions and Rules:* There are no facilities for the off-loading of dirty ballast but clean oil-free ballast may be discharged overboard from the lifting vessel. It is the responsibility of the Master of the lifting vessel to see that no oil (crude, bunker, diesel, bunker C, slops, residues, contaminated water ballast or oily bilge water) is pumped or spilled overboard from the lifting vessel. All deck scuppers must be plugged tight and adequate drip pans with sand and sawdust must be provided where necessary on deck for use at all times, especially when disconnecting hoses, in order to prevent any such loss of oil overboard. The waters in and adjacent to the loading berth must not be polluted and only clean oil-free ballast may be discharged.

The discharge of oil mixtures from lifting vessels while enroute to the Terminal is prohibited except when the following conditions are all satisfied:

1. The instantaneous rate of discharge of oil content of the oily mixture does not exceed 60 litre/mile.
2. The total quantity of oil discharged on the ballast voyage does not exceed that quantity permitted by the "International Convention for the Prevention of Pollution from Ships Act 1973" as modified by the Protocol of 1978 thereto.
3. The lifting vessel is more than 50 miles from the nearest point on the coastline of the Republic of the Congo.

Masters are warned that when disposing of dirty ballast or bilge water 50 miles or more from the coastline of the Republic of the Congo, all pipelines, sea suctions, strainers and pumps which are later to be used to discharge clean ballast, must be flushed clean, so that there will be no chance of even a small amount of pollution when the clean ballast is pumped overboard.

Lifting vessels must have sufficient ballast or cargo (30% of their deadweight) for safe manoeuvring and, where practicable, should arrive at the loading berth with the propeller completely submerged and the vessel properly trimmed. The Mooring Master may refuse to permit the mooring of any lifting vessel not in compliance with these requirements until the vessel takes on sufficient ballast and/or alters her trim to meet these requirements.

As soon as practicable after arrival, lifting vessel's tanks will be inspected for evidence of oil in ballast and during the discharge of ballast a similar inspection will take place. If evidence of oil appears at either of these inspections, the lifting vessel must vacate the loading berth and discharge such dirty ballast more than 50 miles offshore. All time lost resulting from such condition shall be solely for the lifting vessel's account.

Any lifting vessel required to vacate the loading berth for the purpose of discharging dirty ballast, cleaning tanks or for any similar reason, automatically nullifies any Notice of Readiness already tendered and at the same time loses any priority held for loading. Lifting vessels must tender a new Notice of Readiness upon their return and the lifting vessel will be entered for loading upon the Company's acceptance of the new Notice of Readiness.

Lifting vessels must keep a constant watch on the side of the lifting vessel from which clean ballast is being discharged for any indication of water discoloration or oil sheen. Discharge of ballast must be immediately suspended should there be any indication of discoloration or sheen and the Mooring Master shall be immediately informed of such. An investigation of any such discoloration or sheen shall be carried out by the lifting vessel and the findings reported to the Mooring Master. Discharging shall not resume without permission of the Mooring Master.

In addition to the lights usually displayed, lifting vessels are required to illuminate the lifting vessel and the waters around the lifting vessel with all available and suitable searchlights and floodlights during the discharge of clean ballast and the loading of crude oil during the hours of darkness and restricted visibility. Such illumination must be to the satisfaction of the Mooring Master and must be undertaken so as to assist in the loading operations and in order that any oil on the surface of the sea may be readily detected and appropriate action taken. Lifting vessels unable to illuminate the sea satifactorily may not discharge ballast or engage in the loading of crude oil during the hours of darkness and any such delay shall be for the account of the lifting vessel.

Loading and Deballasting Simultaneously: Lifting vessels equipped with segregated ballast will be allowed to discharge segregated ballast and load oil simultaneously, subject to the approval of the Mooring Master.

Pollution Damage Liability: The lifting vessel, its Master, owners and charterers shall be liable for any pollution damage and fines/penalties applicable for any pollution caused by the lifting vessel in the waters and territory of the Republic of the Congo to the full extent provided under Congolese Law. Every lifting vessel, to be acceptable for berthing and loading, must possess a current and valid TOVALOP Certificate evidencing its enrollment in TOVALOP and the owners, charterers or purchasers of the cargo must be a member of CRISTAL Ltd., with full CRISTAL coverage to be applicable as evidence of financial responsibility in the event of a pollution incident.

MEDICAL: *Emergency Medical Assistance:* Lifting vessels requiring emergency medical assistance should contact the Terminal by VHF radio and supply the necessary pertinent information which will be passed on to the vessel's agent. Neither medical or hospital facilities are available at the Terminal, but private doctors and hospital facilities are available in the city of Pointe Noire.

FRESH WATER: Not available.

FUEL: Not available.

CONSULS: Consular or Diplomatic representatives for many nations maintain offices in Pointe Noire and Brazzaville.

REPAIRS: The Masters of lifting vessels loading at the loading berth are advised that the loading berth is located in open and unsheltered waters and under no circumstances may engines be shut down for repairs while the lifting vessel is at the loading berth or at the anchorage.

There are no facilities for making repairs to a lifting vessel at the Terminal and no repairs will be allowed at the loading berth. However, arrangements can be made through the vessel's agent to utilise the repair facilities at other ports.

REPATRIATION: There are no facilities for crew changes.

TIME: G.M.T. plus 1 hour. No Summertime.

SHORE LEAVE: Not allowed.

GENERAL:

Flag: Lifting vessels are required to fly the flag of the Republic of the Congo on the foremast during daylight hours while in the territorial waters of the Republic of the Congo. The territorial waters extend 30 nautical miles seaward from the coastline of the Republic of the Congo.

Government Officials: Governmental officials such as the Customs Officer, Quarantine Officer, Immigration Officer, Captain of the Port and the Police, are stationed in Pointe Noire. Should Customs guards be stationed on board the lifting vessel while at the loading berth, it is expected that the lifting vessel will provide food and accommodation for these guards and other governmental officials.

Agency: The Company does not perform any vessel agency functions. Lifting vessels calling at the Terminal must arrange for their own agent.

Supplies: Commissary supplies, stewards stores, laundry services and marine lubricants are not available through the Company and may not be loaded at the loading berth. Any questions concerning the availability of such items from other sources and the loading of such items elsewhere should be handled through the vessel's agent.

Contraband: The Company prohibits unauthorised craft from coming alongside lifting vessels while at the loading berth without the permission of the Mooring Master. To avoid the possibility of undesirable items getting aboard lifting vessels, it is recommended that Masters discourage any such craft from coming alongside while lifting vessels are at or in the vicinity of the loading berth.

Garbage: The dumping of garbage, sewage and refuse outside is prohibited and there are no facilities for receiving such at the Terminal.

WEATHER:

General: The Company can advise of the following general environmental characteristics for the area off the coast of the Republic of the Congo, but the navigator is referred to the published Sailing Instructions and Directions for the area for more detailed information on the climate, weather, wind, tide, current and sea.

Climate: The coast between Cape Lopez and the Congo River is dominated by the Basin of the Ogooue and is covered with a dense equatorial forest which is frequently subjected to heavy rainfall. The area exhibits a characteristic diurnal variation in cloudiness, and the climate along the coastline is heavily influenced by the heated continental interior, the extratropical storms and the cool Benguela current. The average annual rainfall is 123 in. and ranges from a maximum of 19.9 in. in November to a minimum of 0.04 in. in July. Temperatures seldom exceed 95°F and seldom fall below 65°F, and are moderately high throughout the year with an average annual temperature of 79°F and a mean maximum temperature of 86°F.

Weather Data Summary: January is the stormiest month because thundersqualls (combined thunderstorms and squalls) are frequent. Summarised wind data does not indicate strong winds during this month, but gusty winds occur during the thunderstorms, these being brief and irregular. In February and March, the weather is unsettled with occasional rain. In April weather generally improves, becoming cooler and drier. In May the weather becomes fair, but by the end of the month it again becomes more settled and a breeze blows steadily from a S.E'ly. direction. In June and July, the weather is very misty and gloomy, decreasing visibility significantly. In August, light breezes persist, generally cloudy and overcast conditions exist, by the end of the month, heavy mists clear away. In September, hotter weather and more S.W'ly. winds develop with frequent light showers. Sea breezes become stronger to the end of the month, and thundersqualls moving from the S.E. occur. In October, the wind is still more W'ly. with occasional small showers, and generally overcast skies until noon. In November and December, strong breezes move off the land, sometimes with rain, thunder and lightning.

Annual average rainfall	123 in.
Average daily maximum air temperature	84°F.
Average daily minimum air temperature	72°F.
Extreme highest average monthly air temperature	131°F.
Extreme lowest average monthly air temperature	54°F.
Average relative humidity (0600 hrs.)	92% – 96%.
Average relative humidity (1300 hrs.)	68% – 75%.

Winds: The prevailing winds off the Republic of the Congo are characteristically light and S'ly. the year round. Land and sea breezes dominate along the coast and generally blow between the S.W. and S.E. The highest offshore wind speeds occur during local thundersqualls. These thundersqualls may be violent, occur quickly and without warning, and are often accompanied by heavy winds, seas, swells and rain which may reduce visibility substantially.

Tides: The tides can be predicted with reasonable accuracy, through use of the Tide Tables for Takoradi, Ghana, with the appropriate correction factor for Pointe Noire applied.

Currents: The Benguela Current flows North along the West coast of Africa from the vicinity of the Cape of Good Hope to the Gulf of Guinea. The general direction of the current off the Republic of the Congo is parallel to the coast. The current is generally stronger during December and January when the current flows Southward at 10 miles to 20 miles off Cape Lopez, but during the remaining months of the year, the current generally sets in a N.W'ly. direction and sometimes attains a velocity of about 2 knots. The current is usually more rapid close to the coast than it is farther offshore, but its velocity is variable because of the effect of the winds.

Seas: The coast is influenced by swells from the South and S.W., but most of the higher waves occur in association with thundersqualls. The highest collection of waves can be expected during March and April and during October and December, but waves of 6 ft. or more do not occur more than 2.5% of the time.

SAFETY: *Lifting Vessel Preparedness – Hyrogen Sulphide Gas:* Walter International Congo Inc., Yombo field operations has hydrogen sulphide (H_2S) gas in concentrations significant enough to be a toxicity concern for personnel. It is therefore mandatory that lifting vessels be properly equipped and that all vessel personnel shall undergo training provided by Walter International Safety Personnel in H_2S safety, including the proper handling of breathing apparatus, prior to the vessel's berthing at the Terminal loading facility.

Although the crude is classified as sweet regarding sulphur content, H_2S gases remain entrained in the oil and offer concern during loading, hauling and unloading operations. Additionally, as vessels will be loading side-by-side, there could be an exposure to H_2S gas during an operational upset on the FPSO.

AUTHORITY: Walter International Congo Inc., P.O. Box 212, Pointe Noire, Republic of the Congo. *Tel:* (242) 94-24-70/75/77. *Telex:* 8216 KG. *Contact:* George Ross, Production Manager.

NOTES

Please also advise Shipping Guides Ltd.

Cook Islands

AVATIU, (Including Avarua) Rarotonga: 21.12 S. 159.47 W. (See Plan)

DOCUMENTS:

Health: International Maritime Declaration of Health.
1 Passenger List
1 Crew List

Customs: (Immigration)
2 Manifests of Cargo showing weight or measurement (basis on which freight calculated).
2 Crew Lists.
2 Passenger Lists (landing and transit).
Each disembarking passenger to complete a landing card and baggage declaration.
Clearance from Last Port.

Agent: 5 Manifests of Cargo.
1 Crew List.
1 Passenger List.

PILOTAGE: Not compulsory at present. However, Pilot available. Arrange through vessel's Agent 24 hours notice of ETA. Pilot boards from 35 ft. steel tug *Avatiu*. Craft painted blue hull, white superstructure. Tug equipped with VHF Channels 6, 12, 14 and 16. Pilot normally boards 0.75 miles off entrance Avatiu on line of leads.

ANCHORAGES: *Avarua:* As shown on Admiralty Chart No. 1264. Prevailing wind is S.E. and the anchorage is safe except in some instances when wind and/or sea are fresh from N.W. through N.E. 4 to 5 shackles of cable in the water has been found the most satisfactory in normal circumstances in 25 fathoms.

RESTRICTIONS: None. Anchorage, in 25 fathoms, is well defined with cross leads.

MAX. SIZE: No restrictions.

HEALTH: Vessel should radio "Porthealth Rarotonga" not less than 24 hours before arrival giving ports of call for preceding 3 weeks, number of crew, number of passengers, state of health and requesting Free Radio Pratique.

RADIO: Call sign ZKR continuous listening watch on 2182, 4125 and 8198 kHz, also Channel 16 on the VHF. Weather forecasts are broadcast daily by R/T on 2207 kHz, and 8291.1 kHz at 0615 hrs. GMT and 1815 hrs. GMT after a preliminary call on 2182 kHz.

VHF: Harbour Master has VHF for communication between vessel and office on Channels 6, 12, 14 and 16. Listening watch on Channel 16 between the hours 0800 – 1200 and 1300 – 1600 (local time) from Monday to Friday. Harbour Master can be contacted after hours by arrangement through vessel's Agent.

TUGS: Small tug available (1.25 ton bollard pull) to assist with mooring.

BERTHING: *Avatiu:* Vessels berth port or starboard side too as may be necessary, berth having a maximum depth alongside of 6.2 m. below MSL. Inner Overseas Berth, length 128 m. Outer Overseas berth, length 135 m. Swinging basin for vessels not over 120 m. in length. Draft 5.5 m. aft, 4.8 m. forward.

STEVEDORES: Arranged by ship's Agent or Waterfront Commission.

MEDICAL: Medical and hospital facilities available. International vaccinations/inoculations required depending on prior ports of call.

TANKERS: Small tanker from Fiji, using ship's 4 in. hose for discharge. The LPG shore manifold is sited at the Northern corner of No. 1 shed. The oil shore manifold is sited at the Northern corner of No. 3 shed in Avatiu Harbour.

DENSITY: 1025.

FRESH WATER: Available at berth.

FUEL: Available by delivery trucks.

CONSULS: France and New Zealand are represented.

REPAIRS: Only minor repairs possible such as welding and repairs to pumps and other auxiliaries.

GANGWAY/DECK WATCHMEN: Not necessary.

OPENING/CLOSING HATCHES: By crew or stevedores to vessel's convenience.

TOBACCO ALLOWANCE: 200 cigarettes, or half pound tobacco or 50 cigars.

WINE AND/OR SPIRIT ALLOWANCE: Allowance is 1 opened bottle of either wine or spirits, or a reasonable quantity of beer per person, for consumption on board. Under no circumstances may any wines, spirits or beer be brought ashore.

CARGO GEAR: Ship's gear for discharging and loading, 1×12 ton heavy lift crane available.

REPATRIATION: Confined to repatriation of crew landed for hospitalisation.

AIRPORT: Rarotonga International Airport is 2 miles away.

TIME: GMT minus 10 hours throughout the year.

HOLIDAYS: Cargo cannot be worked on any Sunday or on Good Friday and Christmas Day. Other Holidays: Boxing Day (26th December); New Year's Day; Easter Monday; ANZAC Day (25th April); Queen's Birthday (1st Monday in June); Constitution Celebrations (4th Monday in August).

POLICE/AMBULANCE/FIRE: Ring exchange operator or dial 999, 998 or 996.

TELEPHONES: No connection available at present. Telephone available at Wharf Gate for emergency services.

SHIP SUPPLY SERVICE: There are no ship-to-shore services available as a regular daily schedule. However, there are occasions when vessels are anchored off the Avatiu Harbour or in the 'Roads' that requests for boat transport are provided by the small tug of the Department of Transport after application by the Shipping Agent for its services.

The Agent is The General Manager of the Waterfront Commission. Fax No. (682) 21921. Rarotonga, Cook Islands.

IDENTIFICATION CARDS: Not required.

GARBAGE DISPOSAL: Collection service available by arrangement with Department of Internal Affairs. Tel: 29370.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: New Zealand and Cook Island Dollars are of equal value.

GENERAL: Bananas available at times. Green vegetables are sometimes difficult to obtain. Oranges, lemons, mandarines available March-August, pineapples November-February.

AUTHORITY: Department of Trade, Labour & Transport, P.O.Box 61, Rarotonga, Cook Islands. *Tel:* (682) 28810. *Telex:* Tradcom RG 62079. *Cables:* Labcom, Rarotonga. *FAX:* (682) 23880. *Contact:* Joseph Caffery, Director-Marine Transport.

Waterfront Commission, P.O.Box 84, Rarotonga. *Tel:* (682) 21921. *Fax:* (682) 21191. *Contact:* Harbour Master.

NOTES

Please also advise Shipping Guides Ltd.

Costa Rica

GENERAL: (See Plan)

DOCUMENTS: *Prior to Arrival:* Arrival Notice: In practice, owing to the closeness of other ports of call, the shipping Agent notifies the Port Authority 48 to 72 hours in advance of the vessel's arrival. 24 hours before the vessel's arrival in the Pilot Waiting Zone, the Agency must report in writing to the Port Authority (Dockmaster) the vessel's time of arrival and the company that owns it. 12 hours before arrival, the time of arrival is confirmed, also in writing. One of these two written notices must contain the distribution list of the cargo to be unloaded, although failure to submit this information shall not delay docking. In addition, the number of longshoremen for loading and unloading, and if necessary, the number of launches or feluccas that will be required if the pier is occupied on both sides (Puntarenas) must be reported. Failure to confirm the time of arrival may result in losing the vessel's turn in docking.

Copies of the arrival notice should be sent to the Port Captain's Office, which performs the functions of Migration, Customs Administration, Customs Security, Delegate of the Ministry of Agriculture and Livestock (MAG) and the Veterinary Health Officer. In addition, copies must be submitted to the shipping agent and Customs for them to report to their clients on the arrival of the shipments and to initiate import procedures.

Information on cargo for the port:

It is recommended that the shipping Agency send by airmail 2 Cargo Manifests and 2 copies of the Bills of Lading; 1 copy of each document shall be kept for the Agency's internal use, and the other shall be used to report to the Customs Agents and the cargo consignees.

On Arrival:

Type of Documents	Number and Distribution of Documents					
Basic forms	*Captain of Port*	*Customs*	*Maritime Health*	*MAG*	*Port Authority*	*Total*
General Declaration	1	1	–	1	–	3
Cargo Manifest	12(a)	5	–	–	3	20
Crew List	3(b)	–	1	–	–	4
Passenger List	1	1	1	–	–	3
Ship's Stores List	–	1	1	1(d)	–	3
Crew Effects Declaration	–	–	–	–	–	–
Maritime Health Declaration	–	–	1	–	–	1
Mail Guide	–	–	–	–	–	1(e)
Additional Documents:						
Visaed Clearance Permit	1	–	–	–	–	1
Consular Manifest	–	2	–	–	–	2
Crew List (f)	–	1	–	–	–	1
Passenger List (f) (g)	1	1	–	–	–	2
Maritime Health Declaration (f)	–	1	–	–	–	1
Cargo Tally Books	–	15(h)	–	–	–	15

(a) To be distributed among Customs agents.
(b) A copy remains in the control booth at the exit of the port area.
(c) Sometimes checks vaccination certificates.
(d) Inspects meat in ship's stores (Ministry of Agriculture & Livestock).
(e) If there is a mail bag, the list is submitted to the ship's Agent.
(f) With consular visa.
(g) A visaed "no passengers" declaration is also required, when appropriate.
(h) For use of Customs and the Port Authority.

Other Requirements:

The Agency must provide a card to each crew member and passenger, which is stamped by the Captain of the Port and filled out on board. The card is used when passengers and crewmen go ashore and return on board the ship.

Prior to Departure:

The clearance permit is requested from the Captain of the Port 24 hours in advance of the ship's departure, or immediately upon itsarrival, if the ship is to remain less than 24 hours in the port.

The clearance permit requires Customs Clearance (certification that there are no charges pending) and remains in force up to 24 hours after the requested departure time.

CALDERA: 09.54 N. 84.43 W. (See Plan)

LOCATION: The Port of Caldera is located in the Gulf of Nicoya in position Lat. 09° 54' 44" N., Long. 84° 43' 14" W.

DOCUMENTS:

2 Certified copies of Clearance from Last Port.
2 Certified copies Crew Lists and 6 copies for distribution.
2 Certified copies Passenger Lists and 6 copies for distribution.
2 Certified copies Cargo Manifest and 25 copies for distribution.
2 Certified copies Stores/Provisions List and 6 copies for distribution.
3 Sets of Bills of Lading.
Construction Certificate.
Safety Equipment Certificate.
Radio Safety Certificate.
Load Line Certificate.
Cargo Gear Book.

PILOTAGE: Pilots are available and compulsory, arranged by Agents.

ANCHORAGE: Anchorages are defined on a chart supplied by the Port Authority (approx. position 09° 55' N., 84° 45' W.).

RESTRICTIONS: None. Vessels can enter or depart at any time.

MAX. SIZE: Max. LOA 205 m. Max. draft 10 m.

HEALTH: Vessels must be in possession of a Maritime Sanitary Declaration signed by the Master. In case of any suspected disease or fever aboard, Master to notify by radio to Port Authorities and vessel to wait outside the limits of territorial waters until clearance is given.

RADIO: *Arrival Notice:* Agents must be advised 24 hours and 12 hours prior to ship's arrival, indicating amount of cargo to be discharged in metric tons. This information is required by the Port Authority.

Radio Station: "Puntarenas". Call sign: TEC (Tango Echo Charlie).
24 hours, working 8,291.1 kHz (J3E).
24 hours, working 12,429.2 kHz (J31).
On VHF 24 hours, working Channel 16.
On VHF 24 hours, working Channel 14.

TUGS: Compulsory for berthing and unberthing. 2 tugs available. 1×1,700 h.p. and 1×1,800 h.p.

BERTHING:

No. of Berth	*Length (m.)*	*Depth (m.)*	*Max. d.w.t.*
1	210	10.0	25,000
2	150	9.2	15,000
3	130	7.5	5,000

CARGO HANDLING FACILITIES: The port is equipped to handle general cargo, containers and solid bulk cargoes.

Cranes: Mobile cranes and stacker trucks of varying capacities, also other modern port equipment. See "Port Equipment".

Bulk Cargoes: The Port Authority operates a discharge system with pneumatic suction units.

Port Equipment: In its first stage, operations at Caldera will be supported by the following equipment:

Forklifts: 28×3 ton, 5×6 ton, 4×10 ton, 1×12 ton, 2×16 ton and 1×35 ton.
Top loaders: 2×40 ton.
Flat Beds: 20×8 ton, 5×30 ton.
6 Towing tractors.
4 Mobile cranes from 10 tons to 127 tons.
3 Trucks.

Containers: Container reefer station with capacity to handle 40 containers. Container storage area with capacity to handle 700 TEU's.

STEVEDORES: The Port Authority provides stevedores throughout 24 hours.

Gangs must be ordered at the following times: At 0700 hrs. to commence working at 0900 hrs., 1200 hrs. or 1500 hrs. At 1500 hrs. to commence working at 1800 hrs., 2000 hrs. or 0800 hrs. the following day.

MEDICAL: Medical services can be provided at a clinic in the port or at a hospital in Puntarenas.

TANKERS: *Caldera Bay:* Buoy mooring for tankers about 1,000 ft. offshore. Vessels moor using starboard anchor and lines to 3 buoys astern. Hoses connected on port side by ship's crew.

FRESH WATER: Provided by the Port Authority at all berths.

FUEL: Available by road tanker, arranged by Agents.

FIRE PRECAUTIONS: Vessels must comply with all the port requirements regarding fire prevention, contamination and safety to navigation within the port.

GANGWAY/DECK WATCHMEN: At the discretion of the Port Authority. All vessels anchored in the port must be adequately covered by watchmen service.

REPATRIATION: Crew changes and repatriation possible.

AIRPORT: Distance 100 km. Served by KLM, LACSA, COPA, etc. Various flights daily.

TIME: Local time is GMT minus 6 hours.

HOLIDAYS: January 1st, March 19th, Holy Thursday and Good Friday, April 11th, May 1st, June 29th – Saint Peter and Paul, July 25th, August 2nd, August 15th, September 15th, October 12th, December 8th and December 25th. The port works throughout 24 hours, except Good Friday.

TELEPHONE: Telephones may be placed onboard on request. International and local telephone and telex services available on shore.

SHORE LEAVE: Possible.

IDENTIFICATION CARDS: On landing, crew members and passengers in transit must carry identity documents which are to be submitted to the Port Authority.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Local currency is the Colon. No restrictions placed on seamen. The Central Bank has been making weekly mini-devaluations recently.

REGULATIONS: The vessel, the Owner and his Agent must comply with all the arrangements set out in the Port Services Regulations and the General Tariff. The Port Authority will supply these regulations on request.

GENERAL: The new Port of Caldera commenced operating in 1982. Since commencing operations at Caldera, Puntarenas is considered as an extension of the port of Caldera. Caldera has a marginal wharf of 490 m. long consisting of three berths. The outer berth or Berth No. 4 at Puntarenas and the inner berth or Berth No. 5 are at Puntarenas. Both of these berths are out of service due to their poor condition.

Please note that Puntarenas is now strictly for handling bulk cargoes and Caldera is for break-bulk and container operations.

DEVELOPMENTS: In the medium term, the second stage of the port complex of Caldera will be constructed, with which the current capacity will be doubled to 1,200,000 tons per annum.

SHIPMASTER'S REPORT: October 1982

Draft: Forward 5.6 m. Aft 8 m.

Pilot: Pilot boards vessel 2 miles S.W. off end of breakwater.

Tugs: 2 tugs available, one is compulsory for berthing. We employed one pushing and the other as a line boat taking 2 stern lines ashore.

Berthing: Vessel let go port anchor to 2 shackles in water with view to it being used to draw vessel away from quay on leaving.

Line Gangs: Good – 4 men per gang.

Tie-up: 4 headlines and 2 springs each end. This proved sufficient throughout stay, even though moderate surge from swell was experienced.

Gangway: A shoreside gangway was available and used. Gangway/line watchman was provided by Port Authority.

Quay: Modern concrete construction 490 m. in length. 50 tonne bollards and good solid, non spring loaded rubber fenders – both placed every 20 m. along quay.

Electricity, telephone and water all supplied to wharf.

Cargo: Port has good lighting and good sized sheds. Container storage area under construction.

No shore side cranes at present – proposed 40 tonne capacity container gantry.

Fork lifts are plentiful and in good working order.

AUTHORITY: Instituto Costarricense de Puertos del Pacifico, Caldera, Costa Rica. *Tel:* 634-4169, 634-4441. *Telex:* 6046. *FAX:* 634-4137, 634-4112. *Contact:* Elias Enriquez Caruso, Operations Manager.

Institute Costarricense de Puertos del Pacifico, Apartado 001-5400, San Jose, Costa Rica.

GOLFITO: 08.37 N. 83.10 W. (See Plan)

DOCUMENTS:

2 certified copies of Clearance from Last Port.

6 certified copies of Crew List and 6 copies for distribution.

6 certified copies of Passenger List and 6 copies for distribution.

2 certified copies of Cargo Manifest and 25 copies for distribution.

4 certified copies of Stores Provisions List and 6 copies for distribution.

3 sets of Bills of Lading.

PILOTAGE: No Pilot in port. Cia. Bananera sends a launch to guide vessel to quay if requested. Arrival has to be notified at least 24 hours in advance.

ANCHORAGES: Anchorage area to S.E., diagonal towards end of quay. Depth: 35 ft. – 50 ft. Area 1,000 m. by 300 m. approx. Quay distance: approx. 500 m. Sufficient space for 4 vessels.

RESTRICTIONS: Vessel allowed to enter at any time, day or night.

MAX. SIZE: Length of quay is 1,040 ft., enough for two vessels to berth, one in banana berth and the other in cargo berth, each one of 450 ft. Depth 35 ft. alongside.

HEALTH: Any vessel that enters this port has to be in possession of a Sanitary Manifest (Sanitary Maritime Declaration) signed by Master of vessel. In case of any suspected disease or fever aboard, Master to notify by radio to Port Authorities and vessel to wait outside the limit of territorial waters until clearance is given.

RADIO: Station call sign TIM, frequencies 8478 and 500 kHz. Working hours 0400 – 1300 GMT.

Notice of Arrival: Radio Agent at least 24 hours before arrival advising date and time of arrival, number passengers disembarking, if any, amount of cargo to discharge in metric tons, number of gangs required to work on board. This information is required by Port and Customs Authorities.

TUGS: No tugs. A launch from the Cia. Bananera takes lines from vessel to quay.

BERTHING: Vessels berth starboard side to. Vessels of Cia. Bananera have preference.

STEVEDORES: Cia. Bananera controls gangs. Advance notice required. Work possible 24 hours a day.

MEDICAL: Cia. Bananera has a hospital for its employees. They can give assistance if a request through the Agency has been made 24 hours in advance. On arrival of vessel a valid vaccination certificate of each member of crew has to be shown.

TANKERS: Can berth in cargo area if length is less than 450 ft., depth is 35 ft. Diameter of pipelines 8 in. and 6 in.

FRESH WATER: Cia. Bananera supplies any quantity at a rate of 50 t.p.h. through shore hoses.

FUEL: Diesel and fuel oil available from time to time.

CONSULS: Nicaragua, Honduras and Panama represented locally.

REPAIRS: Cia. Bananera of Costa Rica has a workshop that can do small repairs such as soldering or small winch repairs.

GANGWAY/DECK WATCHMEN: Available but not compulsory. Customs guard on gangway.

OPENING/CLOSING HATCHES: Normally carried out by stevedores.

CUSTOMS ALLOWANCES: No limit on board but only one packet cigarettes when going ashore. No alcohol may be taken ashore.

IDENTIFICATION CARDS: Required.

REPATRIATION: Can be arranged.

AIRPORT: Airport one mile from port. Serviced by two airlines "Lacsa Airlines" with two daily flights, one at 0700 hrs. and the other at 1030 hrs. "Ave Airlines" offer only one daily flight, Sundays included, at 0700 hrs. "Lacsa" has no Sunday flights.

TIME: GMT minus 6 hours.

HOLIDAYS: 1st January, no work can be arranged; 19th March, work at double time; Easter Thursday, no work can be arranged; Easter Friday, no work can be arranged; 11th April, work at double time; 1st May, no work can be arranged; Corpus Christi, work at double time; 29th June, work at double time; 2nd August, work at double time; 15th August, work at double time; 15th September, no work can be arranged; 12th October, work at double time; 8th December, work at double time; 25th December, no work can be arranged. Stevedores are not obliged to work Sundays and holidays if not voluntary.

POLICE/AMBULANCE/FIRE: It is sufficient to ask operator for connection with the desired department.

TELEPHONES: No facilities on board vessels.

SHORE LEAVE: Crew are allowed on shore.

DELAYS: Only when quay is occupied by vessels of Cia. Bananera de Costa Rica, which have preference.

SHIPMASTER'S REPORT: January 1980.

Documents: As per "Guide to Port Entry". Documents to be certified by Costa Rican Consul at last port.

Pilotage: No Pilot available.

Restrictions: It is advisable to berth and unberth during daylight hours. Vessel can enter and leave at any stage of the tide.

Max. Size: Safe draft in channel 30 ft. Mean tide range 10.5 ft.

Tugs: None available.

VHF: Agent on Channels 16 and 14.

Berthing: Vessel berthed at the Banana Wharf which is 2 miles from the entrance and is 1,000 ft. in length. There is a banana elevator at the N.W. end.

Docking: Starboard side alongside: Approached Golfito as per Pilot Book, steering North until leading marks bear 047° then steer on leading marks at dead slow speed to pass 2 cables S.E. of Beacon 'A'. With ebb tide running vessel sets to the S.E. when approaching Beacon 'B'.

Vessel stopped and way taken off when about 3 cables from wharf, then proceeded to a position between Beacon 'F' and shore to attempt to turn round to port with port anchor on the bottom, however anchor did not hold against engine, so hove up anchor and turned short to starboard. Final approach to wharf made at an angle of about 30°, let go port anchor when approaching close to wharf and canted stern well in to wharf to pass heaving line. No noticeable current when close to wharf. When in position, port anchor had 3 shackles in water.

Unberthing: Left on ebb tide with another vessel moored close astern. Singled up to headline and spring forward, tightened up on anchor cable and hove on headline to cant stern off. Very short ahead movements and full starboard rudder necessary to achieve this, as current had little effect. Anchor did not hold sufficiently to pull head off the wharf, so came astern on engine until sufficiently clear of wharf to make port turn to leave harbour.

Very little wind on docking or undocking.

Facilities: The following are available: Fresh water, fresh provisions, minor repairs, airport, telex, bunker "C", diesel oil, doctor and hospital.

No dry docking facilities, no laundry service and no lubricating oils available.

Consuls: Nicaragua, Honduras and Panama.

General: Cautions: Beacon 'G' destroyed (January 1980). Rear range lights/marks 047° have very little horizontal separation. There is a small buoy in the approximate position of Beacon 'G' but exact position not established.

If vessel is loading on the Banana Berth, the secondary leading marks will probably be obscured by that vessel's superstructure.

Poor holding experienced when anchoring off the berth.

SHIPMASTER'S REPORT: July 1984.

Documents: As per "Guide to Port Entry".

Pilotage: Not available.

Restrictions: Vessels may enter/leave at any stage of the tide day or night as long as the lights are working and they are familar with the port.

Max. Size: Max. LOA 680 ft. Max. draft alongside 30 ft. Tidal range 10.5 ft. Limiting conditions are the swinging room between Beacons "4-G" and "6-F" and the wharf.

Tugs: None available or necessary.

Radio: Limon Radio "TIM" and Slidell Radio "WMU".

VHF: Bananera on Channels 16, 14, 6 and 8.

Berthing: See "Report" below.

Density: 1010.

Equipment: 1 small mobile crane. 4 banana elevators. 2×3 ton fork lift trucks.

Report: Berthing at Golfito:

From a position 2.8 miles due South of Curupacha Point Light the vessel was turned onto the channel leading marks (047°T) and speed reduced to pass Beacon "H-2" at dead slow ahead, a course of 049°T was required to maintain the leads in line with Buoy "4-G". Beacons "4-G" and "6-F" have now been replaced with square white buoys, same light characteristic as the original beacons. S.S.W. of Beacon "B-3" turned onto leads 036°T. Both these leading marks are quite small and the front triangle is not easy to make out against the steel work of the shed.

A very small tidal stream was observed passing Beacon "4-G" setting approximately West.

Rounding Beacon "4-G" the ship was swung to starboard to bring the channel marks 2 points on the port bow then commenced swinging to port using engines and rudder the ship was brought to within heaving line distance and a head line landed, the vessel now lying at approximately 45° to the wharf. Despite several engine movements she would not swing any further to port. The line boat (an old ship's lifeboat) lacked power, and dedication of the crew to pull a rope ashore in an attempt to land a stern line and control the stern while using the engine to back against the tide.The tidal stream was noticibly stronger the closer the ship came to the wharf, running parallel to the wharf in a N.W.'ly direction. After the failure of the boat to land a stern line I decided to berth port side to. By the time the stern line was inboard the vessel was being carried rapidly N.W.'wards and lying bows on at 90° to the wharf. The head line was let go and the vessel backed off to about 300 ft. and commenced swinging to starboard with the engines. Due to the stronger current closer to the wharf the swing to starboard was checked on each astern movement. The starboard anchor was let go to one shackle to control the bows. The use of the anchor proved very effective and the ship was steered alongside dredging the anchor through the mud. Berthing safely port side to at 1310 hrs., nearly 3 hours after HW.

Departure: Sailing time was set for 2 hours after HW with the tide running diagonally out under the wharf. Singled up to after backspring, head line and for'd spring and with all lines slack I expected the ship to be set off the quay by the tide, but she remained alongside.

The after spring was let go and the stern canted off by heaving on the head line, finally the engines were used against the for'd back spring to cant her to approximately 60° to the wharf. Let go for'd and came astern until the poop as in a line between Beacons "7-D" and "5-C" then commenced turning short around to starboard, the tide carried the ship down to line up on the 036°/216° leads nicely and course was set down the channel to sea.

Conclusions: 1. The ebb tide sets N.W. along the wharf and is about 50% stronger than the flood.

2. Berthing starboard side to is preferred as sailing is much easier at any state of the tide, but should not be attempted after HW.

3. Considering the ease with which the ship dredged the anchor I would say that the holding ground is poor and due to the limited swinging room and the necessity to use a short scope cable I would not recommend waiting at anchor within the harbour.

A safe waiting anchorage can be found approximately 6 miles S.W. of the entrance channel in depths of 60 ft., firm mud and shell.

4. No reliance should be placed on the line boat.

5. Use of the anchor should be considered when berthing either side to, even under ideal conditions, as this would greatly reduce the number of engine movements and conserve engine starting air.

AUTHORITY: Instituto Costarricense de Puertos del Pacifico, 001-5400 Puntarenas, Costa Rica. *Tel:* 63-40-06 and 63-40-23. *Telex:* 6045 Incop Cr. *Contact:* Lic. Rodrigo Arauz Bonilla, Presidente Ejecutivo.

PUERTO LIMON: 10.00 N. 83.01 W. (See Plan)

PORT LIMITS: Limits considered as arrival are 0.5 – 1.0 mile distance from breakwater, anchorage is required.

DOCUMENTS: Required by Port Authorities at Port Limon:

2 certified copies of Clearance from last port. (Zarpe) (original and dup.)

Crew List, 1 original legalised copy. 5 copies not legalised.

Passenger List, 1 original, 1 copy. 5 additional copies not legalised (if no passengers carried, this must be stated on the same document).

Maritime Health Certificate, 1 original, 1 copy.

Provisions List, not legalised : 7 copies.

Stowage Plan, not legalised : Total cargo on board, 4 copies.

Hatch List, not legalised: Total cargo on board, 4 copies.

Cargo Manifest, legalised (manifiestos de carga): From each calling port. 1 original, 1 copy. 30 additional copies, not legalised.

Bills of Lading: 4 sets.

Local Agents or General Agents require the following documents urgently, by Air Mail (Special Delivery), from each calling port directly to address in San Jose, Costa Rica.

2 sets Cargo Manifest – copies
2 sets Ship's Declaration
2 sets Bills of Lading.

If there are Ocean Freight rates to be collected at destinations, please send Agent by Air Mail (registered), the 3 originals and 2 copies, in order to get the payment of the freight rates in time.

Data in every document must be in Spanish or with proper translation.

PILOTAGE: Pilot boards ship with Port Authorities about 1 mile from pier. Also see "Shipmaster's Report".

ANCHORAGES: All anchorages are South-West of "Isla Uvita" in depths between 34 ft. – 36 ft.

MAX. SIZE: See "Berthing".

HEALTH: In the event of contagious disease or fever being suspect on board, agency should be advised immediately.

RADIO: Call letters TIM, frequency 500 kHz and 8478 kHz – working hours 0400 to 1300 GMT.

Notice of Arrival: Radio Agent at least 24 hours before arrival, advising date and time of arrival, length, draft, number of passengers disembarking (if any), amount of cargo to discharge in metric tons, number of gangs required to work on board. This information is required by Port and Customs Authorities.

VHF: Port Authority on VHF Channel 16. All vessels anchoring in the port must communicate with the Pilot office on Channel 16.

TUGS: Two tugs are available, each with a capacity of 850 h.p., these are required for berthing and unberthing.

BERTHING:

Berth No.	*Usage*	*Depth* *Fore* (ft.)	*Aft* (ft.)	*LOA* (ft.)
1	Conventional	32	29	600
2	Conventional	25	26	400
3	Conventional	29	30	450
4	For small craft			
5	Conventional	12	16	300
6	Ro/Ro	28	30	300
7	Conventional	29	35	500
8	Conventional	30	30	500
9	Conventional	18	28	200
10	Ro/Ro	32	30	800

Container Terminal:

Berth No.	*Usage*	*Depth* (m.)	*Length* (m.)
4/1	Ro/Ro	8.0	185
4/2	Conventional/Container	8.5	185
4/3	Conventional/Container	9.0	235
2/1	Conventional	6.3	170

Reduction in depths is due to earthquake in April 1991.

Note: Measurements are given in feet. Berths No. 1–2 have a length of 1,020 ft. In order to use Berth No. 2 Agents need to know or check LOA of the vessel at Berth No. 1, if it is less than 520 ft. it is possible to berth a vessel.

CRANES:

1 Portal Crane	10 ton capacity.
1 Grove Crane	30 ton capacity.
1 P & H Crane	50 ton capacity.
1 Liebherr Container Crane	45 tons, under hook, and 35 tons, under spreader.

STEVEDORES: ETA should be sent to Agent in due time. There are 2 stevedoring companies who work throughout 24 hours.

MEDICAL: No advance notice except in case of serious illness to be included in arrival notice, ample hospital facilities available.

TANKERS: See "Puerto Moin".

FRESH WATER: Available and obtained alongside pier delivered by hose, 1.5 to 2 t.p.h. cost $1.56 per ton.

FUEL: Any quantity can be obtained as there is a refinery at Limon.

CONSULS:

Colombia	Tel: 58.02.21	Nicaragua	Tel: 58.04.47
Ecuador		Norway	58.01.83
France	58.02.21	Panama	58.09.65
Honduras	58.03.13		

REPAIRS: Minor repairs only.

SURVEYORS: Lloyd's, ABS and Norske Veritas.

GANGWAY/DECK WATCHMEN: Recommended.

OPENING/CLOSING HATCHES: Carried out by stevedores.

CUSTOMS ALLOWANCES: One packet of cigarettes may be taken ashore. No alcohol may be taken ashore.

REPATRIATION: Facilities available.

AIRPORT: 5 miles from city. 2 daily flights (except Sundays) to San Jose International Airport. Also air taxi service to the whole country.

TIME: Local time minus 6 hours.

HOLIDAYS: Holidays and days on which the port will remain closed:

1st January from 1200 hrs. to 0600 hrs. following day; Holy Thursday and Good Friday from 0001 hrs. on Thursday to 2400 hrs. on Friday; 1st May from 0001 hrs. to 2400 hrs.; 15th August; 15th September; 12th October from 0001 hrs. to 2400 hrs.; 24th December 1800 hrs. – 26th December 0001 hrs.

The first Sunday in February every 4 years is a holiday for Presidential Elections.

POLICE/AMBULANCE/FIRE: Police Tel: 117; Red Cross Ambulance Tel: 580125; Fire Tel: 118.

BANKS:

Banco Popular.
Banco Nacional de Costa Rica.
Banco Anglo Costarricense.
Banco de Costa Rica.

STORING: Vessel can be stored by truck, which can proceed alongside the berth, local riggers can be employed.

SHORE LEAVE: Crew members are allowed to go ashore.

IDENTIFICATION CARDS: They are needed and supplied by the Agent.

GENERAL: There is a small surge alongside the berths in Port Limon, especially when winds coming from the South East, which occurs occasionally (August and September).

In Port Moin the surge occurs when winds come from the North, which occurs occasionally in the months of December and January.

DEVELOPMENTS: Old Railroad Pier is being removed and 2 Ro/Ro ramps are being built.

SHIPMASTER'S REPORT: May 1984.

Before leaving Gulfport I contacted Standard Fruit Company at Boca Raton, Florida. They confirmed that the Pilot boards off Limon breakwater. They also confirmed that there is a heavy surge alongside the berths in Moin Bay due to the prevailing swell and that shore springs are not normally available at the cargo berths although they are supplied to tankers.

This vessel possesses 2×6 in. nylon tails and 2×3.25 in. mooring wires and these were made ready.

A cable was sent to the Agent at Limon requesting information concerning berthing arrangements. A reply was received to the effect that the ship would berth at the "German Wharf". This conveyed nothing to me at the time.

It turned out that the "German Wharf" is, in fact, the new container berth in Puerto Limon. This berth does not appear on the navigational chart but is shown in the "Plan Section" of "Guide to Port Entry".

The old banana berth at Puerto Limon is no longer used and all banana loading takes place at Puerto Moin. The Pilot confirmed that there is a heavy surge at Limon/Moin and also that newcomers to the trade are boarded off Limon whilst regular traders are met by the Pilot off Moin fairway buoy.

The "German Berth" is not supplied with shore springs and there is a considerable surge alongside. We secured starboard side to using 4 lines and 1 spring at each end plus the 2 wires with nylon tails. It is considered that the latter are essential in this port as considerable chaffing of the polypropylene lines can be expected.

The berth is provided with very effective sprung fenders but these ensure that the ship is held several feet off the quay. No shore gangway is supplied and access was by way of the accommodation ladder which was landed on the quay at an angle of about 30° to the ship's side. To avoid damage to the ladder due to surge it is essential that particularly secure moorings be used.

A powerful tug is available at Limon and another at Moin.

AUTHORITY: Junta de Administracion Portuaria y de Desarrollo Economico de la Vertiente Atlantica (JAPDEVA), Administracion Portuaria, Apartado "T", Puerto Limon, Costa Rica, Central America. *Tel:* (506) 58-3229, 58-1041. *Telex:* 8518 (Port Operations Manager). *FAX:* (506) 58-3229. *Contact:* Captain Dennis G.Cavallini, Chief - Marine Operations Department.

PUERTO MOIN: 10.00 N. 83.05 W. (See Plan)

PORT LIMITS: See "Puerto Limon".

DOCUMENTS: Required by Port Authorities at Port Moin:

2 Certified copies of Clearance from last port (Zarpe original and dup).

Crew List: 1 original legalised copy, 5 copies not legalised.

Passenger List: 1 original, 1 copy, 5 additional copies; not legalised (if no passengers carried; this must be stated on the same document).

Maritime Health Certificate: 1 original, 1 copy.

Provisions List, not legalised: 7 copies.

Stowage Plan, not legalised: Total cargo on board, 4 copies.

Hatch List, not legalised: Total cargo on board, 4 copies.

Cargo Manifest, legalised (manifiestos de carga): From each calling port 1 original, 1 copy, 30 additional copies, not legalised.

Bills of Lading: 4 sets.

Local Agents or General Agents require the following documents urgently, by air mail (special delivery), from each calling port directly to address in San Jose, Costa Rica.

2 sets Cargo Manifests – copies.
2 sets Bills of Lading.
2 sets Ship's Declaration.

If there are Ocean Freight rates to be collected at destinations, please send Agent by air mail (registeres), the 3 originals and 2 copies, in order to get the payment of the freight rates in time.

Data in every document must be in Spanish or with proper translation.

PILOTAGE: Pilot boards vessel 1 mile North of Puerto Moin Sea Buoy (Fairway Buoy). Regular visitors take Pilot near Puerto Moin fairway buoy.

Also see "Puerto Limon" – Shipmaster's Report.

ANCHORAGES: One mile off piers.

MAX. SIZE: See "Berthing".

HEALTH: In the event of contagious disease or fever being suspected on board, Agency should be advised immediately.

RADIO: Call letters TIM, frequency 500 kHz and 8478 kHz; working hours: 0400 to 1300 GMT.

Notice of Arrival: Radio Agent at least 24 hours before arrival, advising date and time of arrival, number of passengers disembarking (if any), amount of cargo to discharge in metric tons, number of gangs required to work on board. This information is required by Port and Customs Authorities.

VHF: Port Authority on VHF Channel 16. All vessels anchoring in the port must communicate with the pilot office on Channel 16.

TUGS: 3 tugs available. It is compulsory to use tugs for berthing.

BERTHING:

Berth No.	Usage	Depth Fore (m.)	Depth Aft (m.)	Length (m.)
5/1	Oil Terminal	9.6	9.6	190
5/2	Ro-Ro	9.6	9.0	190
5/3	Banana Dock	9.0	9.0	160
5/4	Banana Dock	8.5	9.0	160

Note: Additional berth building in progress (Container/Banana Dock).

STEVEDORES: ETA should be sent to Agent in due time. There are 3 stevedoring companies who work throughout 24 hours.

MEDICAL: Complete medical attention and hospital facilities available.

TANKERS: Berth No. 5/1 (oil pier). Max. depth 9.6 m.

Shore Lines:

Black/White: 2×20 in. lines and
2×10 in. hoses
Av. gas: 1×6 in. line and 1×6 in. hose.
LPG: 1×6 in. line and 1×6 in. hose.
Bunkers: 1×8 in. line and 1×8 in. hose.

FRESH WATER: Obtained alongside.

FUEL: See "Puerto Limon".

CONSULS:

Colombia	58 – 02 – 21	Ecuador	58 – 01 – 60
Honduras	58 – 03 – 13	Nicaragua	58 – 01 – 83
France	58 – 02 – 21	Panama	58 – 09 – 65
Norway	58 – 01 – 83		

REPAIRS: Minor repairs only.

SURVEYORS: Lloyd's, ABS, Niveritas and German Lloyd.

GANGWAY/DECK WATCHMEN: Recommended.

OPENING/CLOSING HATCHES: Carried out by stevedores.

CUSTOMS ALLOWANCES: One packet of cigarettes may be taken ashore. No alcohol may be taken ashore.

REPATRIATION: Facilities available.

AIRPORT: 5 miles from city, 2 daily flghts (except Sundays), to San Jose International Airport. Also air-taxi service to the whole country.

TIME: Local time GMT minus 6 hours.

HOLIDAYS: Holidays and days on which the port will remain closed: From 0001 hrs. to 2400 hrs. 1st January, Holy Thursday and Good Friday; 1st May, 15th August, 15th September, 12th October, 25th December. The first Sunday in February every 4 years is a holiday for Presidential Elections.

POLICE/AMBULANCE/FIRE: Police tel. 117; Red Cross ambulance tel. 58 – 01 – 25; Fire tel. 118.

SHORE LEAVE: Crew members are allowed to go ashore.

IDENTIFICATION CARDS: They are needed and supplied by the Agent.

GARBAGE DISPOSAL: Service available on request through Agent, prior to arrival in port.

WASTE OIL DISPOSAL: No service available.

SEAMAN'S CLUBS: None.

GENERAL See "Puerto Limon".

SHIPMASTER'S REPORT: August 1993.

Approach: The port was approached from N.E. in the late afternoon. The land was picked-up around 25 miles. But the coast between Punta Blanca and Punta Limon and the island of Isla Uvita could only be identified distinctly when about 14 miles off. The peaks of Cerros Lomas and Matama can be identified visually from a distance on a clear day.

Anchorage: The vessel was instructed to anchor upon arrival. The designated anchorage as shown on the plan of the B.A. Chart No. 1799 is 1 mile North of the Fairway Buoy. The vessel approached the port at nearly right angle to the depth contour, which was displayed on the echo sounder paper as a ridge while crossing the closely spaced contours. The vessel anchored 1.5 miles N.E. of the Fairway Buoy in depth of 16 fathoms. The holding ground is good and comprises of mud, sand and ooze.

Draft: Maximum salt water draft of 9.6 m. was permitted.

Notable Feature: The vessel experienced deep, long swells from E.N.E. throughout the 5 days' stay at the anchorage. But it appeared from the talks of the port officials that it was quite a normal feature at this time of the year (mid-August), and more pronounced in the months of November, December and January. The vessel was rolling on an average of 7° – 8° while at anchor, in spite of the vessel being loaded (30,000 tonnes of cargo on board).

While at anchorage, a tropical revolting storm passed North of the port. As the port is sheltered from N.N.W. to S.W., winds of only 15 knots were experienced. But the swell was quite deep. There was no need to pick-up anchor and start moving, as the vessel maintained position and was safe.

Berthing: Pilot boards near the Fairway Buoy. The vessel was turned around in the channel which was dredged to 12.5 m., with the assistance of 3 tugs. There is no turning basin inside the port.

There is a permanent cross current of 1.5 knots setting East, caused by the numerous rivers flowing out.

Vessel berthed port side to the Recope Terminal and made fast with 17 ropes and wires from the vessel and 5 wires from the shore.

Throughout the time alongside, the vessel was surging 4.0 m. – 5.0 m. This berth was quite unsafe, in spite of the breakwater, but insufficient to quench the swell from coming inside. Surging is quite a normal feature of the port, as stated by the Pilots.

Unloading: Only 1×12 in. flexible connection was provided by the Terminal for discharge of crude. The shore pipeline was 20 in., however a 6 in. connection is available for Mogas and gasoline products.

An average rate of 2,000 cu.m./hr. was achieved by the vessel.

The tanker berth is also used for fruit export and fertiliser export. There are also 2 berths for banana and pineapple export.

AUTHORITY: JAPDEVA, P.O.Box T, Puerto Limon, Costa Rica, Central America. *Tel:* (506) 58-3229, 58-1041. *Telex:* Port Operations Manager - 8518. *FAX:* (506) 58-3229. *Contact:* Captain Denis G.Cavallini, Chief-Marine Operations Department.

PUNTARENAS: 09.58 N. 84.49 W. (See Plan)

DOCUMENTS: See "Caldera".

PILOTAGE: Pilots are available and compulsory, arranged by Agent. Signal for Port Captain and other officials is 2 long blasts.

ANCHORAGE: Vessels should keep Eastward of four submarine cables originating at Puntarenas where suitable anchorage may be found in 6 – 7 fathoms depth. Vessels should anchor as near the pier as safety permits to facilitate boarding by port officials.

RESTRICTIONS: Recommended that vessels not equipped with radar enter in daylight only.

HEALTH: Any vessel that enters this port has to be in possession of a Sanitary Manifest (Sanitary Maritime Declaration) signed by Master of vessel. In case of any suspected disease or fever aboard, Master to notify by radio to Port Authorities and vessel to wait outside the limit of territorial waters until clearance is given.

RADIO: Station call sign TIM, frequencies 8478 and 500 kHz. Working hours 0400-1300 GMT.

Notice of Arrival: Radio Agent at least 24 hours before arrival advising date and time of arrival, number passengers disembarking, if any, amount of cargo to discharge in metric tons, number of gangs to work on board. This information is required by Port and Customs Authorities.

TUGS: None available.

BERTHING: Vessels usually moor in daylight only. Unmooring night and day.

Muelle Nuevo: Pierhead runs East/West, connected to shore by 350 ft. gangway. One special heavy mooring line supplied from pier in addition to ship's ropes. Heavy surge experienced at the berth.

Berth No. 4 (outer berth): Length 140 m. Depth alongside 9.0 m. at LW.

Berth No. 5 (inner berth): Length 117 m. Depth alongside 7.5 m. at LW.

Berths No. 4 and 5 are out of service as they are in poor condition. All cargo operations handled at Caldera.

Also see "Caldera" – General.

There are lighters available for hire for vessels working cargo at the anchorage.

STEVEDORES: Available for work 24 hours a day.

MEDICAL: Facilities available at Puntarenas.

FRESH WATER: Available only from pier at Puntarenas.

FUEL: Not available.

TIME: GMT minus 6 hours.

TELEPHONES: No connection to vessels.

SHORE LEAVE: Allowed at Puntarenas.

IDENTIFICATION CARDS: Required.

SHIPMASTER'S REPORT: 1978.

Anchorage: Vessel originally anchored in the area marked (Pilots) on Chart B.A. 1931, but subsequently moved in to a position with the Light on the Pier bearing 332°(T) – 9 cables and lay to the starboard anchor, 3 shackles, in 6 fathoms of water. Other ships and draft permitting, it is safe to anchor 5 cables off the pier.

This is a quiet, safe anchorage. A Pilot is not used arriving and sailing from the anchorage, but is compulsory if berthing.

Berthing: There are two berths on the pier. As the port was very congested, we remained at anchor.

Communications: With the Charterer's Agents when at anchor, were by VHF, Channel 16. Long-range communication was by radio.

Documents: As per "Guide to Port Entry".

Cargo Work: Due to congestion, we waited 3.5 days to start work, although we only had a small quantity of cargo for discharge. When work did start, discharge was continuous and at a good rate.

I understand that ships loading export cargo receive preference for labour.

Pratique: Granted on arrival.

Provisions: Available, but great care is necessary with regard to price and quality.

Fresh Water: Normally available only when alongside the pier. As we were very short of water by the time we had been in port for a few days, we managed to obtain a minimum supply from a tug. This can only be obtained as an emergency measure.

Shore Leave: A launch service was arranged through the Agents for this purpose.

General: It was noted that the Light on the Pier was flashing letter "P" in the Morse Code and was not Gp. Occ. (4) as shown on the Chart.

AUTHORITY: Instituto Costarricense de Puertos del Pacifico, 001-5400 Puntarenas, Costa Rica. *Tel:* 61-06-28. *Telex:* 6045 Incop Cr. *Contact:* Lic. Rodrigo Arauz Bonilla, Executive President. Tom Winfield Lawrence, Operations Manager.

Also see "Caldera".

NOTES

Please also advise Shipping Guides Ltd.

Croatia

DUBROVNIK (Gruz Harbour): 42.38 N. 18.07 E. (See Plan)

DOCUMENTS/HEALTH/HOLIDAYS: Same as "Rijeka".
PILOTAGE: Compulsory. Pilot boards at a point situated approximately in centre of triangle formed by Kolocep Island, Daksa Island and Grebeni Rocks. Pilot boat is painted blue with large while "P" on hull, Length of boat about 13.0 m. Pilot boat may be contacted on VHF Channel 16, working on Channel 12.
ANCHORAGE: In about 22 fathoms in channel between Daksa Island and mainland. This anchorage is exposed to strong N.N.E. winds in Winter time.
Old Dubrovnik Harbour: Between Lokrum Island and the mainland. Depth in approaches 40 m. Diameter of anchorage 0.5 miles. Distance to the shore 0.5 miles.

The anchorage is used by large cruise ships only. It is exposed to strong Southerly winds in Winter time.
RESTRICTIONS: Only port of Gruz is open to commercial traffic, the old port of Dubrovnik (within the city walls) can accommodate only yachts and small craft drawing under 9 ft.
MAX. SIZE: Max. length 230 m., max. draft 37.7 ft. (11.5 m.), no limits on beam.
RADIO/VHF: Dubrovnik Radio, call sign 9AD, listens on Channel 16 throughout 24 hours, and works on Channels 7 and 63. Duplex channels available with connection to national and international telephone network.
TUGS: No permanently stationed tug boats, but can be ordered when necessary from other ports.
BERTHING:

Berth No.	*Length* (m.)	*Depth* (m.)
7	100	3.50
8	100	7.00
9	100	7.20
10	100	7.50
11	100	6.50
12	90	6.80
13	95	7.00
14	110	7.00
15	119	7.50
16	230	11.50
17	54	4.50

CARGO HANDLING FACILITIES: The port handles general cargo. 6 cranes with capacity 1.5 tons-25 tons.
STEVEDORES: The port enterprise "Luka Dubrovnik" is the sole stevedoring company. Work is done in 2 shifts: first 0600 – 1300 hrs., second 1400 – 2100 hrs.
MEDICAL: General hospital and medical facilities available.
FRESH WATER: Available from hydrants on quay, rate 25 t.p.h., and by barge with 250 tons capacity. Order through Agent.
FUEL: Not available. Only oil for diesel engines in limited quantities. Heavy fuel can be delivered by coastal tankers from Split.
CONSULS: Netherlands: 20000 Dubrovnik.

United Kingdom: 20000 Dubrovnik. Tel: 442-222, 412-916.
REPAIRS: Small repairs only.
SURVEYORS: Bureau Veritas, Rijeka. Tel: 051-37755.

Lloyd's Register Surveyor. Tel: 021-42773.
GANGWAY/DECK WATCHMEN: Available.
OPENING/CLOSING HATCHES: Performed by crew.
CUSTOMS ALLOWANCES: About 40 cigarettes and limited amount wine/spirits per man per day.
CARGO GEAR: Operations are usually performed with ship's gear. Shore cranes with 25 tons SWL are available at Quay No. 16 only.
AIRPORT: Airport "Cilipi" 25 km. from the Gruz Port. Served by regular airlines.
TIME: GMT plus 1 hour. Summertime. GMT plus 2 hours.
POLICE/AMBULANCE/FIRE: Dial 985 for all emergency matters.
TELEPHONES: Can be placed onboard. 72 hours' notice required.
BANKS: Dubrovacka Banka, Put Republike 5, 50000 Dubrovnik, Croatia. Tel: 431-366. Fax: 411-035. Four branch offices in town.

Privredna Banka Zagreb, Siroka Ulica 6, 50000 Dubrovnik, Croatia. Tel: 24847, 25938. Fax: 412-722. Two branch offices in town.

Exchange offices available.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Issued by local police.
GARBAGE DISPOSAL: Service compulsory. Drums/skips not available. A 7 tonne truck visits each berth collecting the garbage between 0600 hrs. and 2100 hrs. daily. Ships crew must move garbage off the ship. Daily charges as follows:

Cargo Ships g.r.t.	U.S.$	*Passenger Ships* g.r.t.	U.S.$
Up to 500	23	Upto 2,000	17
501 – 1,500	34	2,001 – 5,000	22
1,501 – 5,000	56	5,001 – 9,000	25
5,001 – 10,000	67	9,001 – 13,000	35
over 10,000	78	13,001 – 20,000	45
		20,001 – 40,000	55
		over 40,000	73

WASTE OIL DISPOSAL: Not available.
SEAMAN'S CLUBS: None.
CURRENCY: Kuna (Kn). U.S.$ 1.00 = 5.4566 Kn. (8.2.96).
SERVICES: *Agency:* Atlant Shipping & Travel Agency, Obala S.Radica 26, P.O.Box 192, 20000 Dubrovnik, Croatia. Tel: 020-411585, 411586. Telex: 27524 Apagnt Rh. Fax: 020-411588. Cables: Apagent Dubrovnik.
DEVELOPMENTS: A new berth is to be constructed on the site of Berth No. 16. The new berth will have a 25 ton multi-purpose crane and a depth of 12.0 m.

Reconstruction of war damage will commence in 1996.
AUTHORITY: Lucka Kapetanija Dubrovnik, (Harbour Master's Office), Ulica Stjepana Radica 37, 20000 Dubrovnik, Croatia. *Tel:* 020-23386. *FAX:* 24726. *Contact:* Captain Ivo Filipi, Harbour Master.

Poduzece "Luka" Dubrovnik. *Tel:* 23350 (Manager), 23351 (Operations Department). *FAX:* 23352.
AGENT: Jadroagent – Dubrovnik, Obala Stjepana Radica 32, 50000 Dubrovnik, Croatia. Cable: Jadroagent Dubrovnik. Tel. 23464 and 24464. Telex: 27514 Rh Jadrag. Fax: 28595.

PLOCE: 43.03 N. 17.26 E. (See Plan)

LOCATION: The port of Ploce is a port of the Central Mediterranean at the position of 43° 03' N., 17° 26' E. It is a very suitable natural harbour situated in a bay; three kilometers from the mouth of the River Neretva in the Northwest direction. The bay is protected from the South and Southwest by the peninsula of Peljesac, which forms a natural breakwater for the port.
PORT LIMITS: Boundaries of the port anchorage (See "Anchorage").
DOCUMENTS/HEALTH/HOLIDAYS: Same as "Rijeka".
PILOTAGE: (a) Port Pilotage compulsory for vessels over 500 g.r.t. Pilot boards vessel at entrance of the channel, about 3 miles Westward from Point Visnjica. Pilot station on VHF Channels 16 and 9.
(b) Coastal Pilotage compulsory for gas carriers (LPG, LNG) and chemical tankers with noxious liquid substances onboard.

Notice of ETA and request for Pilot must be made to the Pilots at least 4 hours before arrival at pilot's boarding position: Lat. 43° 05.0' N., Long. 17° 00.0' E. If no answer on VHF Channel 16, contact Pilots on landline (Tel: 020/678 846) via radio station (See "Radio").
ANCHORAGES: The area within the following points:
(a) Lat. 43° 02.5' N., Long. 17° 23.7' E.
(b) Lat. 43° 00.8' N., Long. 17° 22.7' E.
(c) Lat. 43° 03.2' N., Long. 17° 18.9' E.
(d) Lat. 43° 04.7' N., Long. 17° 21.0' E.
Also see "General".
RESTRICTIONS: Ships entering channel between Visnjica Point and embankment of right hand bank must keep in middle, leaving buoys to starboard. Recommended speed 5 – 8 knots. Also see "Tankers".
MAX. SIZE: Draft limited to max. 34 ft. 6 in., length limited to 220 m., maximum beam 30 m., max. airdraft 10.0 m.
RADIO: Nearest Radio Station Split Radio 9AS – 2182 kHz and 518 kHz (Navtex). Radio station Dubrovnik Radio 9AD – 2182 kHz and 2615 kHz and VHF Channel 16.
VHF: Channel 16 (156.8 MHz), Pilots VHF Channel 9, Harbour Master's Office VHF Channel 10 (156.500 MHz).
RADAR: No Port Radar service.
TUGS: 3 tugs available to assist with berthing. To request tugs, contact the Pilots on VHF Channels 16 and 9.
BERTHING: Bosanska Obala (Berths No. 7 and 8): Length 227 m., drafts up to 31 ft. – no shore cranes.

Biokovska Obala No. 1 and 2 (Berths No. 4, 5 and 6): Length 368 m., drafts up to 32 ft., 7×5 ton cranes.

Gat Oslobodenja: North Side No. 3 (Berths No. 1, 2 and 3): Length 410 m., drafts up to 32 ft., 1×7 ton crane and 3×5 ton cranes. Head: Length 250 m. South Side No. 5 (Berths No. 11, 12 and 13): Length 507 m., drafts up to 34.5 ft., 5×10 ton cranes.

One floating crane up to 100 tons capacity.
BULK CARGO FACILITIES: Grain, ores and minerals by shore cranes equipped for grab discharge at Quays No. 3 and 5. Grain through feeders to railcars. Alumina silo (capacity 20,000 tons) at Quay No. 1 – length 140 m., draft 30 ft., with loading facilities.

Coal handled by 5×10 ton travelling cranes, average discharge rate 250 tonnes p.h.

Loose load terminal, Berth No. 6, is used in reloading, storing and packing of cereals, oil crops (single full up capacity 45,000 tons, reloading capacity 400 t.p.h., bagging line capacity 1,000 bags/hr.).
SPECIALISED CARGO HANDLING FACILITIES: No berth specially equipped for handling containers, only by floating crane.
BRIDGES: No bridges to pass through.
STEVEDORES: Port Enterprise "Luka Ploce" is the sole stevedoring company. The recognised working hours of port are from 0600 hrs. until 1400 hrs. and from 1400 hrs. until 2130 hrs. Sundays and holidays excepted. Overtime possible. ETA advices required 2 hours in advance in order to arrange gangs (See "Authority").
MEDICAL: Medical service available. Nearest hospital at Dubrovnik (110 km.) and Split (110 km.). Dentists available during normal working hours. Inoculations and vaccinations can be carried out.
TANKERS: Oil Terminal – Channel Vlaska: one berth: vessel's length – no restriction, max. vessel's beam – 27 m., max. draft – 10.50 m. No slop/deballast facilities. When wind blowing over 10 knots direction North-South, and over 14 knots East-West, vessels are not allowed to sail through Channel Vlaska to oil terminal. Navigation through Channel Vlaska is allowed only during daylight with assistance of 2 tug boats. It is not allowed to berth or anchor vessels less than 41 m. out of marked line, while other vessels sailing through the channel.
DENSITY: 1010 – 1030.
FRESH WATER: Fresh water delivered to vessels at wharves by pipeline. Hoses can be supplied by port per tariff charges with prior arrangement through vessel's Agent.
FUEL: Gas oil only. "Energopetrol Ploce", 20340 Ploce, Neretvanskih Gusara. Tel: 020/679 942. Fax: 020/679 902. Telex: 26295 Epeplo Rh.

Request for fuel must be made at least 12 hours in advance. Delivery by tank trucks.
REPAIRS: Only small repairs by prior arrangement through vessel's Agent.
DRY DOCKS: None.
FIRE PRECAUTIONS: No specific precautions.

CONSULS: None.
SURVEYORS:
1. Cargo Superintendence Corporation "Adriainspekt Rijeka", Branch Office Ploce, 20340 Ploce, Trg Kralja Tomislava 22. Tel: 020/679 201. Fax: 020/679 974. Telex: 26464.
2. Lloyd's Register, 21000 Split, Kasiceva 21, P.O.Box No. 255. Cables: Regiser Split. Tel: 021/342-773. Fax: 021/591-595. Telex: 26151 RH Lloyds.
GANGWAY/DECK WATCHMEN: No requirement for watchmen, except for special security reasons as determined by Port Authority.
OPENING/CLOSING HATCHES: Normally by crew, otherwise by stevedores with extra payment.
CUSTOMS ALLOWANCES: 200 pieces cigarettes, 1 bottle of spirits and reasonable amount of wine and beer.
CARGO GEAR: Although the port is equipped with shore cranes and a floating crane of 100 tons capacity, ships must have efficient cargo gear and relative certificates.
REPATRIATION: Possible by bus. By plane from nearest airports, Split (110 km.) and Dubrovnik (110 km.).
TIME: GMT plus 1 hour. Summertime (from last Sunday in March till last Sunday in September) GMT plus 2 hours.
POLICE/AMBULANCE/FIRE: Police, Tel: 020/679-006, 020/679-278; Ambulance, 020/679-702; Fire, 020/679-143.
EMERGENCY CO-ORDINATION CENTRE: Harbour Master's Office (Lucka Kapetanija Ploce), 20340 Ploce, Trg Kralja Tomislava 24, Croatia. Tel: 020/679-008, 020/678-621. Fax: 020/679-008. Cables: Kapetanija Ploce. Contact: Captain Ivo Matkovic.

VHF Channel 16 (156.800 MHz) and VHF Channel 10 (156.500 MHz). Contact is also possible through Radio Station (See "Radio").
TELEPHONES: Not possible to place telephones onboard.
SERVICES: Special services available by prior arrangement through vessel's Agent.
BANKS: Neretvanska Gospodarska Banka d.d Ploce, Trg Kralja Tomislava 21, 20340 Ploce, Croatia. Tel: 020/679-109. Fax: 020/679-838. Telex: 26394.
STORING: Vessel can be stored by truck alongside at berth.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Shore pass issued by local Immigration Office.
GARBAGE DISPOSAL: Collection service is available using barges operated by the stevedoring company (See "Stevedores"). One collection is compulsory. Charges vary with g.r.t. from U.S.$ 36.00 to U.S.$ 493.00. Collection time is within the recognised working hours of port.
WASTE OIL DISPOSAL: Service available at oil terminal operated by Energopetrol, Ploce (See "Fuel"). Tanker trucks utilised for collection and removal. Maximum capacity of shore tanks 300 cu.m. Charges negotiated by agreement.
SEAMAN'S CLUBS: None.
CURRENCY: Hrvatska Kuna (KN). U.S.$ 1.00 = 5.5 KN (4.3.96).
REGULATIONS: According to State Rules and Regulations, prior to departure of ships carrying timber deck cargoes and ships carrying solid bulk cargoes, Harbour Master's Office must receive a copy of calculation for the ship's stability.
DELAYS: Only occasionally for bulk carriers.
GENERAL: Vessels are not allowed to anchor East of the line which connects Kunova Cove on Peninsula Peljesac with point Lat. 43° 03' N., Long. 17° 24' E. on the coast.
DEVELOPMENTS: See "Development Plan" in "Plan Section".

AGENT'S REPORT: October 1994.
The following is Agent's reply to questions from a vessel operator.
Terminal: Terminal Tekucih Tereta.
(1) Berth Operator/User: "Energopetrol Ploce" D.O.O., Ploce Neretvanskih Gusara BB.
(2) LOA: Unlimited.
(3) Max. Beam: 27.0 m.
(4) Max. d.w.t.: As much as possible within given parameters.
(5) Max. Draft: 10.50 m.
(6) Port Authority do no specify under-keel Clearance: Bottom is mud.
(7) Min. Depth in Approaches: 15.0 m.
(8) Water Density: Brackish water, density 1013 – 1023.
(9) Berthing allowed in daylight only from sunrise to sunset.
(10) Bunkers not available. Fresh water available at the oil berth.
(11) No limitations on freeboard, but limited by above given parameters.
(12) Concrete Quay: Length 120 m. Rubber fenders at intervals. Vessels' mooring lines to bollards ashore.
(13) —
(14) Lighterage not available.
(15) Cargo Handling: Fuel oil, all grades of diesel oil. All grades of gasolene.
(16) Dirty ballast facilities available, capacity 300 cu.m.
(17) Slops are not accepted.
(18) 3 tugs available, 1,350 h.p. each.
As per Harbour Master's rules, all types and sizes of tankers for mooring/unmooring are obliged to use 2 tugs.
(19) —
(20) Pilot Boarding Position: Lat. 43° 01' N., Long. 17° 23' E., about 1.5 miles Westward of Rt. Visnjica.

AUTHORITY: Port of Ploce, Trg Kralja Tomislava 21, 20340 Ploce, Croatia. *Tel:* 020/679-220, 020/679-601, 020/679-223, 020/679-806. *FAX:* 020/679-836. *Contact:* Captain Ivica Pavlovic, Port Director. Zdenko Jelavic, Deputy Port Director.

AGENT: Jadroagent – Ploce, Trg Kralja Tomislava 20, P.O.Box 111, 20340 Ploce, Croatia. Cables: Jadroagent Ploce. Telex: 26239 Rh Jadrag. Tel: 020/679-964. Fax: 020/679-118.

PULA: 44.52 N. 13.50 E.

DOCUMENTS/HEALTH/HOLIDAYS: Same as Rijeka.
PILOTAGE: 48 and 24 hours' notice of ETA must be given to Agent. Pilot boards vessel off the breakwater.
ANCHORAGES: Vessels waiting for berth or Free Pratique can anchor in the outer harbour at about 0.4 miles West of the island S. Andrija.
RADIO: Coastal station Rijeka-Radio (call sign "YUR").
VHF: Communications with Agents and Port Authority through VHF on Channel 16.
TUGS: Up to 600 h.p. available from shipyard "Uljanik", otherwise from Rijeka.
BERTHING:

Gat Rijeka: North side length: 138 m., depth 20 ft.
South side length: 150 m., depth 17 ft.

Obala Ugljen: Length 140 m., depth 26 ft.

Gat Ugljen: East side length: 160 m., depth 31 ft.
West side length: 140 m., depth 28 ft.

Obala Tv.Cementa: Length 146 m., depth 20 ft.

Obala Uljanik: Length 160 m., depth 22 ft., used only for discharge of steel plates.
CRANES: No shore cranes except one of 5 tons at Obala Tv.Cementa and one of 75 tons at Obala Uljanik.

A floating crane of 100 tons at shipyard "Uljanik".

Two mobile cranes of 17 tons and 20 tons respectively.
STEVEDORES: Port Enterprise "Luka" is the sole stevedoring company. Working 2 shifts: from 0700 to 1500 hrs. and 1500 to 2300 hrs. Saturdays, Sundays and holidays may be worked on overtime.
MEDICAL: Hospital and all kinds of medical assistance available.
FRESH WATER: Available from quay.
FUEL: Available by barge from Rijeka – advance notice required.
REPAIRS: Available from local shipyard "Uljanik" and "Pula".
SURVEYORS: Lloyd's Register and Norske Veritas.
GANGWAY/DECK WATCHMAN: Service available.
OPENING/CLOSING HATCHES: May be carried out by crew otherwise by stevedores on extra payment.
CUSTOMS ALLOWANCES: About 40 cigarettes and reasonable amount of wine/spirits per man per day.
CARGO GEAR: Loading/discharging by ship's own gear.
REPATRIATION: Possible by train, bus and air.
AIRPORT: At Pula.
TIME: GMT plus 1 hour. Summertime kept.
POLICE/AMBULANCE/FIRE: Police tel. 92; Ambulance tel. 94; Fire tel. 93.
IDENTIFICATION CARDS: Shore passes issued.
REGULATIONS: Speed limit: Within a line joining Prostina Point (Point Kristo) and Kumpar Point vessels must proceed at a speed not exceeding 8 knots and within a line joining Andrija Island and Sv. Petar Peninsula at a speed not exceeding 5 knots.
GENERAL: Lloyd's Agents: Jadroagent-Rijeka.
AUTHORITY: Lucka Kapetanija Pula, Obala 18, 52000 Pula, Croatia. *Tel:* 385-52-22037, 27646. *Cables:* Luckap Pula. *FAX:* 385-52-27646. *Contact:* Captain Lazaric Josip, Harbour Master.

AGENT: Jadroagent – Pula, Obala Marsala Tita 14, 52000 Pula, Croatia. Tel: 225-68-221878 Cables: Jadroagent Pula. Telex: 24710 Rh Jadrag. Fax: 211799.

RIJEKA (including Bakar, Omisalj, Urinj, Sepen and Rasa): 45.19 N. 14.26 E. (See Plan)

PORT LIMITS: Outer line of Anchorage area.
DOCUMENTS:
5 Crew Lists
5 Passenger Lists
3 Manifest of Dangerous Cargo (send cable before arrival with description)
3 Stores Lists
2 Private Declaration
2 Narcotics Lists
9 Cargo Manifests
3 Freight Manifests
2 Transit Manifests
2 Cargo Plans
2 Copies of Bill of Lading

Cargo and Freight Manifests and Cargo Plan with Hatch List if possible should be mailed to Agent from loading port.
APPROACHES: The access entrance to the Rijeka Port Basin is 270 m. wide and that of the Susak Port Basin is 45 m. wide.
PILOTAGE: Compulsory for vessels over 500 g.r.t. Pilot boards in the roads within anchorage area limit. Pilot on VHF Channels 8, 12 and 16.

For oil terminal at Omisalj, Pilot boards 5 miles south of Rijeka Main Light. On request, Pilot will board tankers over 200,000 d.w.t. in the Northern part of Kvarner at Lat. 45° 02' N., Long. 14° 14' E. approx.

Pilot available 24 hours. ETA to be sent 72 hours, 48 hours and 24 hours prior to arrival
ANCHORAGES: All vessels with exception of those loaded with dangerous or hazardous cargoes, must anchor in the zone enclosed by the following points:
(a) Lat. 45° 20.0' N., Long. 14° 22.7' E.
(c) Lat. 45° 15.1' N., Long. 14° 27.1' E.
(b) Lat. 45° 17.5' N., Long. 14° 20.0' E.
(d) Lat. 45° 18.4' N., Long. 14° 28.5' E.

Tankers and vessels with dangerous cargoes must anchor in the following zone:

(a) Lat. 45° 17.8' N., Long. 14° 28.0' E.
(c) Lat. 45° 14.1' N., Long. 14° 29.4' E.
(b) Lat. 45° 15.1' N., Long. 14° 27.1' E.
(d) Lat. 45° 16.1' N., Long. 14° 31.8' E.

HEALTH: To obtain Free Pratique 24 hours before arrival advise following details: number of crew and passengers, health conditions and possible infectious diseases. No person allowed to leave vessel until Free Pratique obtained.

RADIO: Rijeka Radio, call sign 9AR 500 kHz, Radio telephone on 2 metre band covering area of North Adriatic or by VHF Channel 16.

VHF: Port Authority on Channels 16 and 10. Tugs on Channels 16 and 9. Pilot on Channels 16 and 9.

TUGS: 1,400 h.p. to 3,000 h.p. available.

BERTHING: General Cargo Facilities:

Rijeka Basin:

De Franceschiev Gat (The De Franceschi Pier):

East: Length 150 m.
Depth alongside 7.30 m.
Head: Length 80 m.
Depth alongside 6 m.
West: Length 135 m.
Depth alongside 6.30 m.

The 32 ton crane has been installed for loading/unloading heavy lifts with the possibility of using grab for loading/unloading smaller quantities of bulk cargo in direct operation.

Equipment: 1×32 ton "Ganz" crane (east side)
1× 3 ton "Ganz" crane (west side)
for handling small lots of general cargo.

Becko Pristaniste (The Wien Quay):

Length 246 m.
Depth alongside 9.60 m. (31 ft. 6 in.)

By fitting appropriate quay fendering, this quay can accommodate vessels with maximum length of 200 m. and maximum draft 32 ft. 10 in.

It is mainly used for direct or indirect loading/discharge operations of larger lots of general cargo.

Equipment: 7 × 3 ton dockside cranes.

Orlandov Gat (The Orlando Pier):

East: Length 195 m.
Depth alongside 8.50 m.

This quay is mainly used for direct or indirect loading/discharge operations of larger lots of bulk or general cargo.

By fitting appropriate fendering vessels of max. length 195 m. and max. draft 31 ft. 6 in. can be accommodated.

Equipment: 3×5 ton dockside cranes.

Pier Head: Length 84 m.
Depth alongside 7.5 m.
West: Length 169 m.
Depth alongside 8 m.

This quay is mainly used for direct or indirect loading/discharge operations of general cargo and perishable goods by means of ship's cargo gear.

Visinov Gat (The Visin Pier):

East: Length 120 m.
Depth alongside 7.30 m.
Head: Length 79 m.
Depth alongside 7.20 m.
West: Length 120 m.
Depth alongside 7.30 m.

The Pier is mainly used for direct or indirect loading/discharge operations of general cargo.

Prasko Pristaniste (The Praha Quay):

East: Length 161 m.
Depth alongside 7.30 m.

This quay is mainly used for direct or indirect operations of general or bulk cargo lots.

West: Length 200 m.
Depth alongside 7.50 m.

This quay is normally used for loading/discharge of larger lots of general or small lots of bulk cargo by grabs (2×6 ton cranes). By fitting appropriate fendering a ship with max. length 180 m. and max. draft 31 ft. 6 in. can be accommodated.

Equipment: 4×3 ton and 2×6 ton "Ganz" dockside cranes.

Zagrebacko Pristaniste (The Zagreb Quay):

Length 158 m.
Depth alongside 6.25 m.

This quay is mainly used for direct or indirect/discharge operations of smaller lots of general cargo.

"Adamicev Gat" and "Gat Karoline Rijecke" (The "Adamich Pier" and the "Caroline of Rijeka Pier"): These two piers within the Rijeka Port Basin, with the total quay length 450 m. and max. depth about 6 m., are used for the accommodation of passenger ships, car-ferries, fishing vessels and other smaller craft.

Riva Boduli (The Boduli Quay):

Length 189 m.
Depth alongside 6.50 m.

This quay is mainly used for loading/unloading smaller volumes of general cargo, and is used occasionally for berthing and handling smaller Roll-on/Roll-off vessels.

Lukobran Rijeka (The Rijeka Breakwater):

Length 1,768 m.
Depth alongside 5.50 m. – 7.20 m.

A 10,000 d.w.t. floating dock is berthed along the breakwater quay. On the quay there is a port control centre with Pilot Station. The operational part of the quay is 700 m. long and is used for loading/unloading smaller lots of general cargo and for direct operations with bulk cargo and timber. A part of the quay is used for ship derat and for occasional minor repairs on ships.

Equipment: 4 × 5 ton dockside cranes.

Note: Almost all the quays and breakwaters are rail and road connected.

Susak Basin:

Senjsko Pristaniste (The Senj Quay):

Length 240 m.
Depth alongside 6.50 m.

This quay is mainly used for direct or indirect operations of general cargo and timber.

Equipment: 7× 3 ton dockside cranes.

Vinodolsko Pristaniste (The Vinodol Quay):

Length 132 m.
Depth alongside 7.50 m.

Mainly used for loading timber by means of the ship's own cargo gear.

Ruzicev Gat (The Ruzic Pier):

North: Length 106 m.
Depth alongside 8 m.
South: Length 106 m.
Depth alongside 6.70 m.

This pier is mainly used for the loading/discharge of smaller lots of general cargo or timber and for unloading smaller volumes of liquid cargo (wine, latex, etc.).

CRANES: Shore cranes with lifting capacities from 1.5 to 5 tons available at respective berths except at The Orlando Pier – West side, Visin Pier, Zagreb Quay, Boduli Quay, Vinodol Quay and Ruzic Pier, where vessel's own gear must be used. Floating cranes of 30 and 100 tons. At shipyard "3.Maj" berth (20 ft.) 1 bridge crane of 300 tons.

CONTAINER FACILITIES: *Kontejnerski Terminal (The Container Terminal):* The Container Terminal is located in the Eastern part of the Susak Port Basin at the mouth of the river Rjecina. It includes a quay with 2 berths, The Kostrena Quay (South and West), (244 m. and 163 m.) with depth alongside 12 m. and 10 m. respectively and a 60 m. wide Ro-Ro ramp at Riva Galioti. Max. draft 11.0 m.

Equipment: 2×40 ton container cranes, straddle carrier, side loader, trailers, tugmasters, fork lift trucks, etc.

The terminal has about 100,000 sq.m. stacking area and a special container repair workshop.

Total annual capacity of the terminal is 100,000 TEUs. The terminal area is being constantly extended.

Ro/Ro vessels handled at Bakar.

BULK CARGO FACILITIES:

Rijeka Basin:

Budimpestansko Pristaniste (The Budapest Quay):

East: Length 110 m.
Depth alongside 7.8 m.

The quay is mainly used for working vessels carrying general cargo.

West: Length 257 m.
Depth alongside 12.95 m.
Max. draft 42 ft. 6 in. (even keel).

The silo located on this quay has a 57,000 tons storage capacity for grain and oleiferous seeds and is equipped with 2 ship loaders/unloaders with a total capacity of 600 t.p.h.

Vessels of maximum length of 250 m. can be accommodated, provided that the ship lies 8 m.–10 m. distant from the quay, berthed by dropping port bow anchor, stern line being moored to the buoy.

Bratislavsko Pristaniste (The Bratislava Pier):

Length 160 m.
Depth alongside 7.90 m.

This pier includes a covered storage for fertilisers, single storage capacity 15,000 tons, and is equipped with the handling and bagging facilities for all types of fertilisers.

By fitting appropriate fendering vessels with max. length 180 m. and max. draft 32 ft. can be accommodated.

Susak Basin:

Lukobran Susak (The Susak Breakwater):

Length 320 m.
Depth alongside 6.50 m.

The breakwater quay is mainly used for loading/discharge of dry bulk cargoes and ships with max. length 180 m. and max. draft 31 ft. 6 in. can be accommodated. The ship must be berthed at a distance of 5 m. – 6 m. from the quay by dropping the port anchor with stern line moored to the breakwater.

Equipment: 6 × 5 ton dockside cranes.

Bakar:

Obala Podbok (The Podbok Quay):

Length 400 m.
Depth alongside 18.50 m.

Vessels with max. length 300 m. and max. draft 17.50 m. can be accommodated (170,000 d.w.t.). The quay is used for loading/discharging bulk cargoes such as iron ore, bauxite, coal, etc., rate up to 2,000 t.p.h. Max air draft 16.0 m.

Equipment: 3 ship unloaders (1 × 45 ton and 2 × 16 ton capacity). The stockyard storage capacity is 400,000 tons. An additional area for 200,000 tons has been reclaimed from the sea. A special conveyor system connects the bulk cargo terminal with the nearby Coke Plant on the West coast of the Bay of Bakar for unloading and delivery of coal to the Coke Plant.

Obala Goran (The Goran Quay):

Length 84 m.
Depth alongside 9 m.

This quay is used for loading coke into smaller vessels and for loading/unloading operations with general cargo stored in the Back-up Storage Facility "Skrljevo".

Ships of 160 m. length and max. draft 29 ft. 9 in. can be accommodated. To the West of the quay a new Roll-on/Roll-off berth is being constructed.

Equipment: 2 × 5 ton dockside cranes.

Also see "Shipmaster's Report" dated November 1979.

SPECIALISED CARGO HANDLING FACILITIES:

Sepen:

New terminal for gas and liquid chemicals carriers at Sepen-Krk Island (about 8 nautical miles S.S.E.'ly from Rijeka port) operated by Dina – Petrokemija. It consists of three berths: 2 "T" concrete jetties and one concrete multi-purpose berth. Jetty "A" is for gas carriers up to 15,000 cu.m., max. draft 10.5 m. Jetty "B" is for chemical tankers up to 60,000 d.w.t., max. draft 15 m. Length of multi-purpose quay is 90 m., max. draft 6 m., no shore cranes. Loading arms (8 in.) for ethylene liquid, ethylene vapour, VCM liquid and VCM vapour are on Berth "A". Loading arms (8 in.) for fuel oil, caustic soda solution and EDC liquid (plus EDC vapour 3 in.) are on Berth "B".

Srsica: Near Urinj tanker terminal. At Srsica there is a berth for loading LPG. Length of berth 68 m., depth alongside 10.0 m. Max. size 4,500 d.w.t. Loading rate 200 t.p.h. through 1×6 in. flexible hose.

Rasa: *Bazen Rasa (The Rasa Port Basin):* The Rasa Port Basin is located some 30 nautical miles S.W. of Rijeka in the naturally protected bay of Rasa which is 5 km. long, with the navigable channel about 40 m. deep.

The port facilities in the Bay include:

165 m. long quay, with 11 m. depth alongside, used mainly for loading/unloading sawn timber. The quay area includes about 150,000 sq.m. of open space and 40,000 sq.m. of covered storage space for timber.

Equipment: 3 × 5 ton dockside cranes.

Separate pier with a berth, 25 m. long and 7 m. deep enabling the accommodation of ships up to 100 m. in length; it is exclusively used for loading livestock. The livestock terminal also includes a stable for the acceptance of about 1,400 head of cattle at a time.

STEVEDORES: Port Enterprise "Luka" Rijeka is the sole stevedoring company. Working 2 shifts: 1st from 0630 to 1430 hrs., 2nd shift from 1430 to 2230 hrs. Saturdays, Sundays and holidays may be worked on overtime. Unloading of bulk cargo at the basin of Bakar during the first shift on Saturday is considered to be an ordinary working shift. Timber operations normally performed during first shift only.

MEDICAL: Three hospitals and all kinds of medical assistance.

TANKERS: At Bakar Basin, berths for tankers up to 80,000 d.w.t. stern to shore and up to 40,000 d.w.t. alongside quay (draft 32 ft.) loading refined oil products.

At Urinj – 5 miles East of Rijeka – 1 berth for tankers up to 200,000 d.w.t. discharging crude oil. Also used for loading of virgin naphtha shipments. Tankers moor stern to quay using both anchors. Depths of 17 m. marked by 2 buoys. Cargo hoses: 1 flexible floating hose of 20 in. with 2 ends of 12 in. each. For connecting hoses on ship's manifold a derrick or crane of minimum 5 tons S.W.L. required. Also see "Shipmaster's Report" dated February 1980.

At Omisalj (Krk Island) (Lat. 45° 13.4' N., Long. 14° 32.2' E.) – 7 miles S.E. of Rijeka – new oil terminal for tankers up to 350,000 d.w.t. (minimum size 40,000 d.w.t.) and with draft up to 27 m. Two "T" shape piers (steel platforms) for alongside berthing. Each berth is equipped with four unloading arms of 16 in. for crude oil discharge and 2 arms of 12 in. for bunker delivery. Fresh water available, rate 25 t.p.h.

DENSITY: 1020 to 1025 depending on place, season and weather.

FRESH WATER: Available from quay in any quantity.

FUEL: All grades of bunker available by barge – advance notice required.

FIRE PRECAUTIONS: If 2 tankers moored side by side in Bakar, tug required to stand-by. Tankers moored stern to quay must have towing line ready.

CONSULS: Austria, Denmark, Italy, Netherlands and Sweden.

REPAIRS: All kinds available.

DRY DOCKS: 3 Floating Docks: 5,600 tons, 12,000 tons and 25,000 tons lifting capacities.

SURVEYORS: Lloyd's Register, Bureau Veritas, American Bureau, Croatian Register of Shipping.

GANGWAY/DECK WATCHMEN: Service available.

OPENING/CLOSING HATCHES: May be carried out by crew, otherwise by stevedores for extra payment.

CUSTOMS ALLOWANCES: About 40 cigarettes and 0.5 litre wine and a reasonable amount of spirits daily per man.

CARGO GEAR: Although operations usually by shore cranes, ship must have efficient cargo gear and relative certificates.

REPATRIATION: Possible by train, bus and air.

AIRPORT: At Krk Island (28 km. from Rijeka).

TIME: GMT plus 1 hour. Summertime is GMT plus 2 hours.

HOLIDAYS: January 1st; May 1st; May 30th; June 22nd; August 15th; December 25th and 26th. Work can usually be arranged on Saturdays and Sundays from 0700 hrs. to 1400 hrs. on extra payment.

TELEPHONES: Connection possible upon special request.

SERVICES: Facilities for discharge of tank-washings at Bakar, compass adjusting.

IDENTIFICATION CARDS: Shore passes issued.

GARBAGE DISPOSAL: Collection of garbage is performed, in principle, every second day of vessel's stay in port. Charges: up to 500 g.r.t. U.S.$ 64, 501 – 1,500 g.r.t. U.S.$ 84, 1,501 – 5,000 g.r.t. U.S.$ 136, 5,001 – 10,000 g.r.t. U.S.$ 154, over 10,000 g.r.t. U.S.$ 158. Garbage services are provided by Cistoca, Tel: 39899.

WASTE OIL DISPOSAL: Collection of liquid wastes available by m/t "Ecomar", capacity 1,000 tonnes, managed by Adriatic Maritime Service, Rijeka, Tel: 214229, Telex: 24612, Fax: 31403. Charges for a single use U.S.$ 840.00 plus additional charge for each cu.m. of waste, 1 – 100 cu.m. U.S.$ 15, 101 – 200 cu.m. U.S.$ 13.20, 201 – 400 cu.m. U.S.$ 10.80, 401 – 600 cu.m. U.S.$ 9.60, 601 – 1,000 cu.m. U.S.$ 8.40.

SEAMAN'S CLUBS: None.

CURRENCY: Kuna (K). U.S.$ 1.00 = K 5.46 (8.3.96). Local currency restrictions on arrival/departure: 2,000 K.

DELAYS: Waiting for some specialised berth occasionally experienced.

GENERAL: Lloyd's Agents, Jadroagent – Rijeka.

SHIPMASTER'S REPORT: Bakar: November 1979.

Approaches: Entry to Rijeka Bay is made between mainland (Istra) and the island of Otok Cres. A small ferry runs between the two from a landing stage just North of Rt. Prestenice and another connects with Rijeka. A very conspicuous, red and white horizontal striped 700 ft. high chimney is situated about 1.5 miles West of Bakarski Zaliv and makes a good steering guide for the run across as the actual entrance is difficult to pick out being very narrow and blending in with the hills behind.

Anchorage: Initially we were ordered, by Port Authorities, to anchor 1 mile S.W. of the chimney but later requested to move closer to Rijeka for convenience in servicing vessel. Second anchorage 1.5 miles South of main breakwater. Depth of water both places 32 fathoms and we used 10 shackles cable on port anchor. Bottom is glutinous mud and despite Force 8, gusting 9 winds we held our position although many cargo ships dragged quite alarmingly. The normal winds for this time of the year (November) are the "bora", a cold strong N.E. wind which funnels down the mountains and can develop suddenly to gale force. We had unusually strong and prevalent S.E. winds during 10 days at anchor.

Communications: Pilot station listens on VHF Channel 16 and works Channel 8. Rijeka Radio was very easily contacted on VHF and proved of great help in connecting with Agents, Owners and Charterers. Rijeka Radio not quite as good for contact on W/T as does not seem to follow the times for listening as laid down. R/T proved difficult as well, due to his frequencies being same as other main radio stations.

Port Officials: Agent and boarding party boarded morning after arrival and cleared ship with very little difficulty, only normal representation required. Shore passes, made out by Agent, sent on board later same day. Permission to immobilise engines and lower lifeboats given by Harbour Master on arrival although this later cancelled due to approach of storm after 24 hours.

Shore Leave: It is possible to arrange for shore launches while at anchor to give shore leave but the service can be curtailed due to bad weather and in Winter could result in crew being stranded ashore. Last boat from the port being 2200 hrs. At the berth, no restriction on shore leave exists and there is an excellent bus service into Rijeka from the village of Bakar. Prices are comparable with U.K. and quality of goods similar. In Bakar itself is an excellent restaurant, family owned, which serves first class food in very nice surroundings. The Owner speaks perfect English.

Fresh Water: At anchor, limited water is available by tug but very expensive. On the berth, good quality water is readily available in any quantity required.

Bunkers: Both intermediate and diesel oil is available by barge, price unknown but thought to be above average. Normally ships taking large quantities of bunkers would bunker at Augusta, Sicily.

Stores: Storing poses a problem due to several points. The access to the ship on the berth is difficult for large lorries as the extension to the wharf carried out over the past 3 years has wrecked the approach road to the face of the wharf and also the lorries if they make it to the wharf cannot get close alongside due to the conveyor belt and rails.

Storing at the anchorage also poses problems as there are no barges suitable for carrying large amounts and launches were used to bring the stores out to the ship but these can only carry a small quantity at a time. We had to load some large and heavy pieces of engine spares which had been sent from UK by lorry and these were transferred to a pontoon barge for delivery to the ship.

Crew Changes: Personnel were routed through Zagreb* mainly and this entailed a 4 hour drive from the airport to the ship, although it is possible to send people via Trieste which is a bit nearer. On arrival at Rijeka they have to see Immigration and are issued with shore passes. Wives and children should be entered on a passenger list and not included on the crew list as they get a special pass for 90 day entry.

*Whether this is normal routeing or was Company's choice is not known.

Cargo Handling: Berth has been extended and depth alongside increased to allow vessels drawing 17.5 m. to safely lie alongside although the 48 ft. 6 in. rock which was found previously at the Eastern end of the berth is still there according to the Pilot. (Approximate position of rock about 50 ft. off wharf and about 250 ft. from Eastern end). Berth is left in a very broken down looking state and lacks decent mooring posts at the Western end. Cargo is handled by 3 grabs (although only 2 were in use this call) 1 very large and the other 2 much smaller. Discharge rate on this call was averaging 30,000 t.p.d. with the major share being done by the larger grab which is at the Western end of the wharf. Cargo is either taken directly away by ore trains (if iron ore) or dumped onto back of wharf, or, if coke is taken direct to a coking factory on the other side of the bay by a covered conveyor belt. Storage or dumping facilities are very limited and this has a controlling effect on the discharge. When discharging iron ore, if insufficient trucks arrive and the stockpile is full, then discharge is on a stop/go basis and slow and also fully dependent on the trucks arriving regularly. This ship discharged 149,320 tonnes in 6 days as against a previous call experienced when 118,100 tonnes were discharged in 6.7 days. Maximum air draft 16.5 m. on berth.

Stevedores were good and co-operation was good. Any damage caused was repaired before departure without causing any delay to the ship and the standard of repair was good.

Repairs: Besides the "3 MAJ" shipyard, there are quite a few smaller yards and workshops where repair work can be arranged.

Medical: There is a special clinic for seamen which opens at 1200 hrs. In attendance at that time is a general doctor who refers patients to the different specialists and usually entailed a visit next day to see those people.

Customs Allowances: On arrival, each man allowed 200 cigarettes and 0.5 litre wine/spirits during stay. Customs would allow an issue every 5 days of 200 cigarettes per man and 8 bottles of spirits for the ship.

SHIPMASTER'S REPORT: Urinj: February, 1980.

INA Petroleum Co. Berth: See "Plan".

Office: The Port of Urinj, telephone 761.011 ext. 250. Can be contacted via Rijeka Radio at any time.

Berth: The petroleum berth of Urinj (Lat. 45° 17' N., Long. 14° 31.7' E.) is situated 5 miles E.S.E. from the Port of Rijeka. Its position is marked by a buoy whose characteristic is Fl.W. 3 sec. It is open 24 hours a day for commercial activities. The depth of water at this berth varies from 45 m. to 20 m. below the level of mean tides. The bottom is mud. Because of this it can accept tankers up to 200,000 d.w.t.

Documents on Arrival: The following documents are required on arrival:
5 copies of a Crew List (full personal data, including birth place, date of birth, etc., are necessary).
5 copies of Passenger List – if any
2 copies of List of Ship's Stores
2 copies of Manifest of Dangerous Goods – if any
2 copies of Customs Declaration List
2 copies of Transit Cargo Manifest
1 Cargo Manifest with extra copy for Customs.

Notice of Arrival: Vessels should give notice of arrival to their Agents via Rijeka Radio 48 hours and 24 hours in advance.

Approaching Directions: After passing Cape Jablanac a course of 060° leads safely to the tanker anchorage. The Pilot will board at anchorage area from a tug if the vessel is to proceed to the berth immediately.

VHF: Vessels equipped with VHF radio telephone should contact "Rijeka Pilot" on Channel 8 or "Rijeka Radio" on Channel 16 for berthing instructions.

Tugs: For berthing of a vessel the use of tugs is obligatory.

Gangway: Vessels should use their own port side gangway.

Manoeuvring: When the Pilot boards the vessel and forward tug is secured, both anchors (with one shackle in the water) should be ready for use. The stern mooring lines are carried toward the shore by a mooring boat. Usually 9 to 10 lines are used (6 from the vessel, and 4 from shore).

Connecting Hoses: After mooring operations have been completed, the connecting hoses will be brought alongside the starboard side of the vessel by a workboat. There are 2×12 in. hoses available, one for crude oil and one for products. Connecting and disconnecting of the hoses will be done by INA personnel, supervised by the Port Captain. The assistance of the ship's crew in operating windlasses, winches, etc. is required.

Note:
(a) A minimum S.W.L. of 5 tons is required for the 12 in. hoses.
(b) The vessel is responsible for good condition and effectiveness of the equipment.
(c) Vessels are required to keep main engine on stand-by all the time during their stay in berth, therefore no repairs to the main engine of the vessel may be undertaken during berthing. Power must be kept on for possible adjustments of mooring lines, anchors, and derricks.

Discharging: When the connecting of the hoses is completed, and the Ullage Report completed, Chief Officer will report the readiness of the vessel for discharging operations. The vessel is required to discharge the cargo as quickly as possible. Max. discharging rate is about 6,000 t.p.h.

Sailing: After the discharging operation is completed, the vessel should leave the berth as soon as possible. The Master should keep in touch with the Port Captain who will despatch a Pilot and Authorities on time.

Deballasting: After arrival at anchorage or berth and Free Pratique has been granted, the Loading Master will take samples of the ballast water for quality checks. Permission to discharge ballast water overboard will be granted by the Port Captain only. If laboratory analysis is not accepted by the Port Captain, vessel must shift to the slop-discharging installation at Bakar. The "not accepted ballast water" must be discharged there through stern discharge line only. After tank cleaning and line-flushing, vessel will be returned to Urinj with or without ballast at Master's option.

Loading: INA Refinery produces several kinds of products.

Cargo Loaded: Clean unleaded virgin naphtha.
Density at 15° Centigrade −0.74.
Loading rate – average 1,500 cu.m.p.h.

Documents on Sailing: The following documents are required on sailing:
4 copies of Crew List.
4 copies of Passenger List.
2 copies of List of Ship's Stores.

Free Pratique: To obtain Free Pratique by radio, vessels should send the following information to their Agent 48 hours in advance via Rijeka Radio:
The number of crew and passengers,
Health conditions and possible infectious diseases.

Note: No one is allowed to leave the vessel until Free Pratique is granted.

Medical: There are 3 well equipped hospitals in Rijeka whose medical staff is capable of giving full medical protection.

Fresh Water: There is an unlimited supply of fresh water available. It is supplied by a floating pipeline attached to the Eastern signal buoy.

Fuel: All grades of bunker are available. Order must be placed 48 hours in advance.

Laundry: Laundry service has to be ordered immediately after arrival in order to ensure delivery of the clean laundry in time.

General: All kinds of repairs available by shipyard "Viktor Lenac".
There is a floating crane capacity up to 100 tons.
Dry docks accepting ships up to 60,000 d.w.t. also available.

Ship Supplies: In order to ensure timely supply of food and groceries vessel should place an order through the authorised stores (ship chandlers) immediately after or before arrival by radio.

Shore Passes: Shore passes are required for personal identification and serve as an entry permit to the terminal. Shore passes must be returned to the Immigration Office before sailing.

Transportation: During the time at the berth transportation of the crew and passengers from the vessel to the terminal is arranged by a shore launch from 0800 hrs. – 2400 hrs.

Lights: Manifold and poop mooring areas should be adequately lit to enable night mooring and discharging operations to be carried out with safety. Sea area around the ship also has to be properly illuminated.

Deck Watch: Deck watch must be maintained at all times while the vessel is in berth. In addition to its normal duties, the watch must inspect the hose connections and area around the ship against oil spillage, pollution, and to prevent unauthorised persons from boarding the vessel.

Action in Case of Emergency: In the event of a fire, oil spillage, or other emergency on the vessel, the emergency signal is 3 or more blasts of not less than 10 seconds duration each on whistle or siren supplemented by a continuous ringing of the general alarm bells.

SHIPMASTER'S REPORT: Rasa: October 1984.

Location: Lat. 45° 01.6' N., Long. 14° 03.2' E.

Documents: Same as Rijeka.

Pilotage: 48 and 24 hours' notice of ETA must be given to Agent. Pilot boards vessel off Traget Point (Lat. 45° 01' N., Long. 14° 03.5' E.). Sometimes Pilot boards off Ubas Point (Lat. 44° 56' N., Long. 14° 04' E.) by special arrangement. Pilot on VHF Channel 16.

Approaches: For obtaining Pilot off Traget Point, necessary to navigate through Zaliv Rasa Strait. This passage is easy during daytime, using the middle of the channel.

Anchorages: Off Traget Point with good sandy bottom and depths from 10 m. to 12 m.

Tugs: Not available.

Berthing: For berthing Pilot uses the starboard anchor for turning the vessel. There are 2 berths, 1 for loading livestock and 1 for loading general cargoes and special lumber from Austria. This berth is about 200 m. long with a depth of 10 m.

Cranes: 3 shore cranes of 5 tons and other equipment is available.

Stevedores: Port Enterprise "Luka" is the sole stevedoring company. Working 2 shifts from 0730 – 1400 hrs. and 1500 – 1900 hrs. Saturdays, Sundays may be worked on overtime. Loading rate 2,500 cu.m. of lumber per day. (approx.)

Fresh Water: Available from quay.

Cargo Gear: Stevedores use shore cranes and ship's gear together.

Repatriation: Possible by bus to Rijeka or Pula and then by air or train.

Airport: Nearest airport at Pula.

Time: GMT plus 1 hour.

Identification Cards: Shore passes issued.

Telephones: Near to the berth through telephone centre.

SHIPMASTER'S REPORT: Sepen: August 1987.

Port: Omisalj Products Terminal, Port Dina, Sepen Bay.

Chart: B.A. Chart No. 2719.

Location: The Terminal is located at Pt. Zaglau in Sepen Bay on Krk Island (near Rijeka).

Documents:
6 copies Crew List.
2 copies Crew Declaration.
2 copies Manifest.
1 copy Health Declaration.
1 copy Arms and Ammunition List.
1 copy Drugs and Narcotics List.
1 copy Passenger List.
3 copies Cargo Manifest.
All passports.

Shore passes are issued and have to be returned before departure. The Stores Declaration is required on departure showing stores used during vessels stay in port. The bond is sealed.

Anchorage: Vessel anchored in the pilot boarding area in a depth of 20 fathoms.

Pilotage: Pilotage is compulsory and available throughout 24 hours. Pilotage outward is optional but has to be paid for even if not used. Terminal personnel advised us that pilotage is rarely used outward as vessel has to wait a long time.

Pilot boards from a mooring boat in approximate position Lat. 45° 12.4' N., Long. 14° 31.6' E. Pilot may be contacted on VHF Channel 8.

Approaches: Two red buoys mark the shallow water to the South of Omisalj Peninsular.

Two green buoys are positioned about 3 cables to the South of the red buoy marking a 13.0 m. shoal.

Approach is made between the 2 sets of buoys. Departure can be made between the berths and the green buoys.

Tugs: Tugs available from Rijeka, but not normally used.

Berthing: There are 2 product berths. Berth A handles gases, maximum draft 11.5 m. (12.5 m. CD) and Berth B handles products, maximum draft 15.0 m. This berth being the most Southerly.

There is also 1 general cargo berth with a depth of 6.0 m. Length of quay 90.0 m.

Berth A has a total flat face length of 60.0 m., being made up 45.0 m. of pier face and 1 dolphin. The pier is of concrete construction and has good fendering. The mooring arrangements are good with dolphins each side of the pier. Moorings consisted of 2 head lines/stern lines and 2 springs each end. Mooring boats are used to run the lines. The pier is some 10.0 m. above the water level so the gangway is steep.

Vessel always berths port side to at both berths. Ship's gangway used.

There is a shore hydraulic crane with 2 tonnes capacity which is available for handling stores, etc.

Berth A is about 2 years old and is an extension of Omisalj Tanker Terminal and can handle vessels up to 20,000 d.w.t. and a length of 110 m.

The berth is very exposed to Northerly winds.

Cargo: Vinyl Chloride Monomer (VCM) is exported. Two arms (most Northerly) are available (8 in. 300 ASA) for liquid and vapour. Arms are nitrogen purged on completion. Storage consists of 3 tanks with a total capacity of 10,000 tonnes. 2 pumps are available to load at a rate of 120 tonnes per hour.

VCM is produced on site in a new plant. Ethylene is mixed with chloride to produce ethylene dichloride, this is then used to produce VCM. Production is about 450 tonnes per day.

Ethylene is imported. The 2 arms for vapour and liquid (8 in. 300 ASA) are located to the South of the VCM arms. Arms are nitrogen purged on completion. Storage capacity is 16,000 tonnes in 2 tanks. The plant requires 1,000 tonnes every 2 days. Most ethylene comes from Porto Maguerra.

Vapour recovery is by 2 old compressors.

At present they require discharge temperature of −101° C. Vapour is also returned to the vessel for recovery on board.

Two new compressors are being installed which will enable plant to handle at around −98° C to −99° C.

First foot samples taken when loading VCM. Samples take at least 3 hours to analyse.

On completion of loading VCM it is normal to allow 5 hours before sailing.

Fresh Water: Fresh water is available at both piers. They can supply at 9 Bar pressure if required.

Stores: The State ship chandler in Rijeka has a good range of stores at moderate prices.

General: The airport at Rijeka is about 5 miles away. The village of Omisalj is about 30 minutes walk from the Terminal main gate (transport is compulsory to the gate from the pier). There is a bank in the village which is open late in the Summer. European currencies and dollars may be exchanged.

AUTHORITY: Lucka Kapetanija (Harbour Master's Office), Senjsko Pristaniste 3, Rujna 3, 51000 Rijeka, Croatia. *Tel:* 214113. *FAX:* (051) 211660. *Cables:* Kapetanija Rijeka. *Contact:* Mr. Ivica Simic, Operations Security Chief. *Tel:* 214031. *Telex:* 24634 kapri.

Luka Rijeka (Port of Rijeka), Riva 1, P.O.Box 146, 51000 Rijeka, Croatia. *Tel:* (051) 213222 (Central), 211379 (Director General), 213302 (Commercial Director). *Telex:* 24165 Lukari RH. *Cables:* Luka Rijeka. *Contact:* Deputy Director General or Operations Manager.

AGENT: Jadroagent – Rijeka, P.O.B. 120, 51000 Rijeka, Croatia. Cable: Jadroagent Rijeka. Tel: (051) 214-444. Telex: 24153, 24189, 24354 Jadrag Rh. Fax: (051) 213-616.

SIBENIK: 43.44 N. 15.53 E.

DOCUMENTS/HEALTH/HOLIDAYS: Same as "Rijeka".

PILOTAGE: Compulsory for vessels over 500 g.r.t. Pilot Station located in position Lat. 43° 41.5' N., Long. 15° 52.3' E.

Pilot Station for vessels with dangerous cargo is in position Lat. 43° 38.7' N., Long. 15° 52.5' E.

ANCHORAGE: Small vessels coming from the West can anchor between Prvic Island and the shore.

Anchorage for Sibenik Port is within the following area:

(a)	Lat. 43° 40' 30" N.	Long. 15° 52' 45" E.
(b)	Lat. 43° 41' 25" N.	Long. 15° 52' 45" E.
(c)	Lat. 43° 40' 40" N.	Long. 15° 53' 30" E.
(d)	Lat. 43° 40' 00" N.	Long. 15° 53' 30" E.

RESTRICTIONS: All vessels over 50 g.r.t. must apply for permission to enter St. Ante Channel by using International Code Signal "Z" by flag during daylight hours and a white light above a red light visible 2 miles all round or a sound signal (letter "Z" of morse code) during night hours. Vessels may enter channel only when authorised by a signal, 2 black balls vertically disposed by day or 2 green lights vertically displayed by night, made by the signalling station at Jadrija. Signal Station on VHF Channel 71.

MAX. SIZE: Only draft limited. 33 ft. alongside in deepest berth.

VHF: Pilot has VHF available and maintains listening watch on Channel 14. Harbour Office on Channels 10, 16 and 84.

RADIO: None. Vessel may call Agent through Split Radio and Rijeka Radio.

TUGS: 1 of 750 h.p. Additional tugs ordered from Split.

All vessels over 2,500 d.w.t. have to use tug for berthing and unberthing, and all vessels over 20,000 d.w.t. transitting the St. Ante Channel require tug assistance.

BERTHING:

Obala RM: Length 274 m., draft up to 7 m. – no shore cranes.

Gat Vrulje: East side length 132 m., head 114 m., West side length 90 m. – Ferry Berth max. draft 7.0 m. – no shore crane. Equipped with conveyor belt for loading bulk fertilisers.

Obala Dobrika: Phosphate Terminal, length 225 m., depth 10 m.

Obala Rogac: Length 432 m., depth 10 m. Cranes: 2×7 tons, 3×5 tons.

Obala Sipad: Length 294 m., draft up to 7 m. – no shore cranes.

Obala Crnica: Length 120 m., draft 7.5 m. – 1 shore crane – 8 tons.

BULK CARGO FACILITIES: Ores and minerals (phosphate) at quays Rogac and Dobrika.

Obala Dobrika: Phosphate handling, capacity 400 t.p.h., storage capacity 120,000 tons.

STEVEDORES: Port Enterprise: "Luka" – Sibenik and timber stevedoring company "Sipad".

Port works in two shifts: 0700 – 1500 hrs. and 1500 – 2300 hrs. Overtime possible 2300 – 0700 hrs.

Timber operations normally performed during first shift only.

MEDICAL: Medical service available including hospitalisation.

DENSITY: 1005 – 1025, depending on place and weather.

FRESH WATER: Available from quay.

FUEL: Diesel and Gas oil in small quantities.

REPAIRS: Small repairs only.

GANGWAY/DECK WATCHMEN: Available.

OPENING/CLOSING HATCHES: If not performed by crew, can be done by stevedores at additional charge.

CUSTOMS ALLOWANCES: About 40 cigarettes and 0.5 litre of wine/spirits per man per day.

CARGO GEAR: General cargo and timber are handled using ship's gear. Ore and minerals by shore cranes fitted with grabs.

REPATRIATION: By train or bus and by air from Split Airport nearby, or from Zagreb or Zadar.

TIME: GMT plus 1 hour. Summertime – GMT plus 2 hours (March-September).

POLICE/AMBULANCE/FIRE: Police, 92; Ambulance, 94; Fire, 93.

TELEPHONES: No facilities for placing telephone on board.

IDENTIFICATION CARDS: Shore passes given by local police.

GARBAGE DISPOSAL: Compulsory service provided daily by stevedores. Daily charges based on g.r.t., up to 500 g.r.t. U.S.$ 29, 501 – 1,500 g.r.t. U.S.$ 38, 1,501 – 5,000 g.r.t. U.S.$ 63, 5,001 – 10,000 g.r.t. U.S.$ 72 and over 10,000 g.r.t. U.S.$ 84.

WASTE OIL DISPOSAL: Can be facilitated by tanker truck.

SEAMAN'S CLUBS: None.

CURRENCY: Kuna (KN). U.S.$ 1.00 = 5,4551 KN (13.2.96).

GENERAL: Lloyd's Sub-Agents – Jadrcagent Sibenik.

SHIPMASTER'S REPORT: July 1986 (Updated 1992).

Pilotage is compulsory and available day and night. Pilot boards the vessel in the vicinity of red pillar light buoy (RF. 12s. 4M.) in approximate position Lat. 43° 42.8' N., Long. 15° 51.1' E. Pilots operate on VHF Channels 16 and 14.

The best anchorage is inside the South part of Sibenski Canal. We anchored in approximate position Lat. 43° 40.7' N., Long. 15° 53.1' E. The bottom is gravel, sand and algae.

There is a phosphate pier with silos on the quay (only one pipe available at present, plans to build another pipe during the next year) whose capacity is 6,500 tonnes per day. Maximum permissible draft for this pier is 32 ft. but it is especially important for Master and Chief Officer to know that on this pier, owing to insufficient depth, a vessel even with a draft of 30 ft., cannot be berthed alongside. Vessel normally 2.0 m. – 3.0 m. from the quay. Berthed vessel is partly aground so draft survey will show signifiantly less cargo than that actually loaded. It is therefore recommended that draft is checked before Pilot boards and thereby check the actual quantity of cargo on board. Also Masters and Chief Officers must bear in mind that water is very brackish and density varies, so during draft survey density must be checked at various depths (recommended to check the density at depths 2.0 m., 6.0 m. and 9.0 m.) and at different locations.

Draft survey is made by official control house (Adriainspekt or Isco or Zik) on arrival and on departure.

Fresh water is available at the pier.

AUTHORITY: Lucka Kapetanija Sibenik, Obala Oslobodjenja 8, 22000 Sibenik, Croatia. *Tel:* 022-24261 (Harbour Master), 36667 (Traffic), 37837, 37838. *Telex:* 27395. *FAX:* 27378. *Cables:* Kapetanija Sibenik. *Contact:* Captain Janes Lakos, Harbour Master.

AGENT: Jadroagent – Sibenik, Obala Oslobodjenja 9, 22000 Sibenik, Croatia. Cables: Jadroagent Sibenik. Telex: 27323 RH Jadrag. Tel: (022) 22570, 22571, 22789, 22789 (After hours). Fax: 22682.

SPLIT: 43.31 N. 16.26 E. (See Plan)

DOCUMENTS:

5 Crew Lists.
5 Passenger Lists.
2 Stores Lists.
3 Personal Effects Lists.
3 Cargo Manifests.
3 Bills of Lading.
1 Health Declaration.

PILOTAGE: Compulsory for vessels over 500 g.r.t. If vessel bound for Split, Dugi Rat or Trogir, Pilot will normally meet vessel 0.5 miles off the City Port Entrance, day or night, but on request Pilot will board a vessel S.W. of Razanj Lighthouse (Lat. 43° 19' N., Long. 16° 25' E.).

A vessel bound for Trogir may also take a Pilot 0.5 miles off Galera Light (Lat. 43° 28.4' N., Long. 16° 11.5' E.).

It is advisable to contact Pilot Station on VHF Channel 12, or via Split Radio on Channel 16, prior to arrival.

A vessel awaiting a Pilot can anchor South of City Port Breakwater.

ANCHORAGES: Vessels can anchor S.E. of City Port Entrance, 0.5 miles off the breakwater, in 40 m. depth, muddy bottom.

In case of very strong S.E. wind it is recommended to anchor in Southern part of Luka Milna (Lat. 43° 20' N., Long. 16° 26' E.) in 25 m. to 30 m. depth, sandy bottom.

RESTRICTIONS: Large tankers are handled in and out of the harbour during day time only. LPG carriers also enter port in day time only.

MAX. SIZE: No restrictions except draft. Maximum permitted draft for passenger ships in City Port (Southern Basin) 8.8 m.; in Northern Port for general/bulk cargoes 10.6 m. but for grain (Silo Quay) 11.3 m. and for oil tankers 11.9 m.

HEALTH: To obtain Pratique, Health Declaration required. In event of any disease or fever contact Agents.

RADIO: All messages to Agent via Rijeka Radio (on HF), or via other Coast Stations on MF radio telephony or MF radio telegraphy and VHF.

Answers to messages via Rijeka Radio only.

VHF: Split Radio on Channel 16 (permanent watch). Pilot station on Channel 12 (listening watch from 0700 hrs. to 2000 hrs. local time), Port Authority on Channel 10, tugboats on Channel 14.

TUGS: Only low power tugs available (500 KW declared by owner). Normally ship's lines used. If tug's lines used 10% extra is charged.

BERTHING:

Northern Basin:

Northern Port: Continuous quay of total length 870 m. divided into 5 berths with the following permissible ship drafts: Berth No. 1, 8.5 m., Berth No. 2, 9.7 m., Berth No. 3, 7.3 m., Berths No. 4 and 5, 10.3 m., where general and bulk cargoes handled, mostly by shore equipment.

Cement factory "Partizan", Kastel Sucurac, length of quay 222 m., draft 9.7 m., cement in bulk mostly loaded.

Cement factory "Prvoborac" Sv. Kajo, quay length 274 m., draft 8.2 m., cement in bags only loaded.

"Jugovinil" factory Kastel Sucurac, quay length (dolphins) 80 m., draft 9.7 m., for LPG carriers only.

Silo Quay, Vranjic, length 110 m., draft 11.3 m., discharging/loading grain by multiport.

A. Vucicic factory, Vranjic, quay length 262 m., draft 7.3 m., where discharging asbestos and loading asbestos products. Shore crane and ship's gear used.

Southern Basin (City Port):

Breakwater Quay, length 230 m., draft up to 8.3 m. Ro–Ro ramp available.

Gat Spanjolskih Boraca (ex-Sv. Duje), total quay length 465 m., draft up to 7.9 m.

Gat Proleterskih Brigada, total quay length 350 m., drafts from 3.9 m. to 7.0 m.

City Port serves passenger ships and car ferries only.

CRANES: *Northern Port:* 2×7 tonne bridge cranes and 4×5 tonne gantry cranes. Floating crane of 60 tonne lifting capacity also available.

BULK CARGO FACILITIES: One quay (Silo Quay, Vranjic), length 110 m., draft 11.3 m. Max. height of discharging gear above sea level is 8.0 m. Max. loading/discharging rates 3,000 – 5,000 tonnes.

SPECIALISED CARGO HANDLING FACILITIES: One berth for LPG carriers (Jugovinil Factory Berth).

STEVEDORES: "Lucki prekrcaj i skladista" is the sole stevedoring company. Work in two shifts from 0600 – 1300 hrs. and from 1300 – 2000 hrs.

MEDICAL: No advance notice except in case of serious illness to be included in arrival cable. Hospital facilities available.

TANKERS: Two discharging berths alongside the quay. Discharge lines 6 in., 8 in. and 10 in.

Berth for small tankers, length 80 m., draft up to 7.0 m.

The other quay, length 150 m. (dolphins) and permitted draft 11.9 m.

Depending on type of cargo, average load/discharge rate is from 300 – 600 tonnes per hour.

DENSITY: Average density 1025.

FRESH WATER: Available at all berths. Order through Agent.

FUEL: Obtainable. Advance notice required.

CONSULS: Denmark, Finland, Italy, Netherlands and United Kingdom.

REPAIRS: All types of deck and engine repairs possible.

DRY DOCKS: One floating dock at Trogir, length 180 m. and one at Northern Basin, length 116 m.

SURVEYORS: Jugokontrola, Jugoinspekt, Jadroinspekt (Cargo Inspectors).

Lloyd's Register, American Bureau, Bureau Veritas and Jugoregister representing DNV, NKK and GL, Panama, etc.

GANGWAY/DECK WATCHMEN: Not necessary.

OPENING/CLOSING HATCHES: Normally by ship's crew.

CUSTOMS ALLOWANCES: About 40 cigarettes and reasonable amount of wine/spirits for each crew member daily.

CARGO GEAR: Load/discharge mostly effected by shore gear.

REPATRIATION: All facilities available for crew changes.

AIRPORT: City centre to airport 23 km. 5 flights daily to Zagreb and 3 to Belgrade. Also direct flights to Rome, Paris, London, Munich, Hamburg and Zurich.

TIME: GMT plus 1 hour. Last Sunday in March clocks advanced 1 hour. Last Sunday in September clocks retarded 1 hour.

HOLIDAYS: January 1st, 2nd; May 1st, 2nd; July 4th and 27th; November 29th, 30th.

POLICE/AMBULANCE/FIRE: Police, 92; Ambulance, 94; Fire, 93.

SERVICES: Compass adjusting, radio/radar services and calibration of DF, divers for surveys/repairs, Lloyd's Sub-Agents (Jadroagent-Split), ship's laundries.

SHORE LEAVE: No restrictions.

IDENTIFICATION CARDS: Shore passes issued.

AUTHORITY: Lucka Kapetanija, Obala Lazareta 1, 58000 Split. *Tel:* Split 48-062. *Telex:* 26496 (Yu Kap St).

"Luka Split", Gat Spanjolskih Boraca, 58000 Split, Croatia. *Tel:* Split 589-299.

ZADAR: 44.07 N. 15.14 E. (See Plan)

PORT LIMITS: A vessel is considered to be an "arrived ship" when arrived at one of the anchorages (see below).

DOCUMENTS:

7 copies Crew List.
7 copies Passenger List.
2 copies Manifest of Dangerous Cargo.
2 copies Dangerous Cargo Plan.
2 copies Stores List.
2 copies Private Declaration.
2 copies Cargo Manifest.
2 copies Transit Cargo Manifest.
2 copies Narcotics List.
2 copies Firearms List.
1 copy Health Declaration.

PILOTAGE: Compulsory for all vessels over 500 g.r.t. Pilot boards approaching vessels at the anchorage, about 0.5 miles West of the green port light on the North part of Zadar peninsula, or at separate anchorage allocated to tankers carrying dangerous cargoes. Pilot available on VHF Channels 12 or 16.

Coastal pilotage is compulsory for tankers carrying dangerous cargoes and pilot boards/disembarks from vessel in position Lat. 44° 23' 18" N., Long. 14° 34' 36" E., near Grujica Lighthouse, where anchoring not possible. 24 hours notice of ETA at Pilot Station is requested together with confirmation of ETA not later than 12 hours in advance. Coastal pilot available on VHF Channel 12 or 16.

ANCHORAGES: Anchorage (for all vessels except for tankers carrying dangerous cargoes) 0.5 miles × 245° from green port light on the North part of Zadar peninsula, in a depth of about 40 m.

Separate anchorage for tankers carrying dangerous cargoes in the area between the following positions: Lat. 44° 07' 12" N. to 44° 08' 36" N., and Long. 15° 08' 24" E. to 15° 10' 24" E.

RESTRICTIONS: Tankers with dangerous cargoes berth in daylight only.

MAX. SIZE: *Gazenica Cargo Port:*

Berth No. 1: Draft limit 6.6 m. forward, 11.0 m. aft.
Berth No. 2: Draft limit 8.5 m.
Soya Bean Berth: Draft limit 11.60 m.
Tanker Berth: Draft limit 8.7 m. forward, 10.7 m. aft.

Old Zadar Passenger Port: Max. draft allowed 6.4 m.

HEALTH: See "Rijeka".

RADIO: Rijeka Radio "9AR", or Split Radio "9AS".

VHF: Split Radio and Zadar Radio on Channel 16. Port Captain on Channels 16 and 10. Pilot on Channels 16 or 12.

TUGS: Two tugs, 1,200 h.p. and 710 h.p., available from shipyard at Lamjana. Additional tugs, if needed, available from Split with 10 hours notice.

BERTHING:

Berth No. 1: Length 160 m. Cargoes handled (by ship's gear): General cargo and fruit.

Berth No. 2: Length 145 m. Cargoes handled (by ship's gear): General cargo and timber.

Soya Bean Berth: 150 m. berthing face. Cargoes handled (by shore elevator): Soya beans, soya bean meal, grain and vegoil.

Tanker Berth: 60 m. berthing face. Cargoes handled: VCM, petroleum products, liquid chemicals, mineral and vegoil.

Also see "Max. Size".

CRANES: Generally, vessel is required to use her own gear, except at Soya Bean Berth. Several mobile cranes ranging from 7 tons – 100 tons capacity are available.

BULK CARGO FACILITIES: The Soya Bean Terminal on the North side of the Southern Basin has a marginal wharf with 150 m. berthing face and approximately 15.0 m. depth alongside with 11.6 m. max. draft allowed. Discharging is performed by means of shore elevator. Max. discharge capacity up to 400 t.p.h., but acceptable daily rate of discharge being 3,500 tons.

Loading capacity is slightly lower than for discharge.

Present storage capacity for soya beans is about 75,000 tons. Grains, maize, and other similar cargoes can also be handled as well as soya bean meal.

In the same berth, tankers with a draft up to 11.5 m. can be accommodated for discharge of vegoil only. Discharging rate 150 t.p.h. Storage capacity 36,000 tons.

SPECIALISED CARGO HANDLING FACILITIES: Liquified Gas Terminal facilities at the Tanker Berth. Four ASA connections with a discharging rate of 250 – 300 t.p.h. Storage capacity 9,000 cu.m. for vinyl chloride monomer.

The port is not specially equipped for handling containers or Roll-on/Roll-off traffic.

The Gazenica Basin is the main base for offshore drilling operations.

STEVEDORES: Number of gangs required to be stated in usual notice of ETA.

MEDICAL: Advance notice not necessary, hospital facilities available.

TANKERS: The Tanker Berth on the South side of the Southern Basin has a berthing face of 60 m. and depths of between 11.0 m. and 15.0 m. alongside. Tankers drawing up to 8.7 m. forward and 10.7 m. aft can berth alongside.

All tankers carrying dangerous cargoes up to about 10,000 d.w.t. are moored with the bow pointing seaward. If not, a fire fighting tug is compulsory while vessel alongside.

Floating barriers/booms compulsory for vessels loading/discharging liquid chemicals, mineral and vegoil.

The storage capacity is 25,000 cu.m. for vegetable oil, 20,000 cu.m. for fuel oil, 15,000 cu.m. for oil derivates and 12,000 cu.m. for chemicals.

The discharging rate is 100 t.p.h. – 300 t.p.h.

DENSITY: Average density in the port is 1,026.

FRESH WATER: Connections on piers, rate of delivery 8 t.p.h. – 15 t.p.h. Cost U.S.$ 2.10 per ton.

FUEL: Not available.

CONSULS: None.

REPAIRS: Deck and engine repairs possible.

DRY DOCKS: Brodoremont Zadar – Kali, Ugljan Island. Tel: 023/86422. Telex: 27180. Two floating docks with lifting capacity 8,600 tons and 2,600 tons respectively.

SURVEYORS: Cargo inspectors available.

Following surveyors available: Lloyd's Register from Split, American Bureau of Shipping from Split, Bureau Veritas from Rijeka.

GANGWAY/DECK WATCHMEN: Not compulsory.

OPENING/CLOSING HATCHES: Normally, but not compulsory, carried out by stevedores.

CUSTOMS ALLOWANCES: 200 cigarettes per person. Tobacco and liquor sealed in bond.

REPATRIATION: Facilities exist for effecting crew changes and arranging necesary repatriation.

AIRPORT: Zadar Airport served by regular daily flights to Zagreb, with connections for international flights.

TIME: GMT plus 1 hour. Summertime kept.

HOLIDAYS: Same as Rijeka.

POLICE/AMBULANCE/FIRE: Police 92; Ambulance 94; Fire 93.

TELEPHONES: No telephones placed on board.

BANKS: Dalmatinska Banka, Trg sv. Stosije 3, 23000 Zadar. Telex: 27141, 27224. Tel: 023/436888.

SHIP SUPPLY SERVICE: Tankerkomerc – Zadar. Tel: 023/436888. Fax: 023/436756. Telex: 27251.

SHORE LEAVE: Crew members are allowed ashore.

IDENTIFICATION CARDS: Shore passes are issued by Immigration Office, and have to be returned before departure.

GARBAGE DISPOSAL: Garbage container of 5 cu.m. capacity available. Collection of garbage from ship and transport of container costs U.S.$. 130 per container. Service available on request through agent.

WASTE OIL DISPOSAL: Shore tank of 100 cu.m. capacity, 800 m. from tanker berth connected by pipeline. Cost U.S.$ 50 per tonne of waste oil received. Contact Tankerkomerc, Zadar. Tel: 023/312065. Telex: 27164.

SEAMAN'S CLUBS: None.

CURRENCY: Croatian Kuna (HRK). U.S.$ 1.00 = HRK. 5.4551. (4/96).

SHIPMASTER'S REPORT: September 1987 (Updated 1996).

Port: Gazenica

Charts: B.A. Charts No. 2775 and 2771.

Documents:

6 copies Crew List.
2 copies Crew Declaration.
2 copies Manifest.
1 copy Health Declaration.
3 copies Cargo Manifest.

Shore passes are issued and have to be returned before departure.

A Stores Declaration is required prior to departure showing stores used whilst in port.

Approaches: Approaches are through deep water down Zadar Kanal.

Most of the island passages are well charted and the navigation aids are good. The depths are as shown on the chart.

There is a shallow bank off the North Breakwater Buoy off Zadar/Gazenica cargo port.

Anchorage: Vessels bound for the industrial port of Gazenica (2 miles South of Zadar City) normally anchor and wait for clearance or berth off the old city as per anchorage indicated on B.A. Chart No. 2775 (position Lat. 44° 0.6' N., Long.15° 12.6' E.) in about 20 fathoms with mud bottom.

An alternative anchorage is off Gazenica in position Lat. 44° 05.2' N., Long. 15° 15' E.

Pilotage: Berthing is carried out in daylight hours only. Unberthing takes place between 0600 hrs. and 2400 hrs., depending on wind. Berthing does not take place if there is a southerly wind in excess of Force 5 blowing.

Pilot normally boards off the town from a launch. Pilot may be contacted on Channels 16 and 12, however VHF is not continously monitored.

Rimini in Italy also use VHF Channel 12 so some confusion can arise.

Tugs: Normally 1 tug is used for berthing using a ship's line from the stern. One tug comes from Lamjana Shipyard on Ugljanisl Island. Additional tugs if required come from Split. Pilot advises that use of tugs is costly.

No tugs used on departure.

Berthing: Vessel berthed on No. 3 Berth in Gazenica which is on the South side of the harbour. Oil and VCM handled at the berth.

Vessel berths stern first with the aid of a tug. Occasionally anchor is required when berthing port side to. If it is very windy the starboard anchor is dredged along the bottom.

Berth No. 2, the most Northern berth in the port, is for grain handling. The hulk indicated on B.A. Chart No. 2775 is for storing soya bean oil. The products berth, Berth No. 3, and a small berth for oil rig supply vessels, Berth No. 4, are both on the South side.

Berth No. 3 (for VCM) has a flat face of 60 m. The fendering is fair but widely spaced. Maximum draft permitted if berthing head out, which is normal, is 38 ft. or 42 ft. if berthing head in. It is normal to berth port side to. The water depth shoals to 29 ft. on Berth No. 4. Moorings at No. 3 Berth consist of 2 head/stern lines, 2 breast lines and 2 springs forward and aft. The pilot boat assists with running of moorings.

Berth No. 3 is very exposed to southerly winds but pilot reports that the berth is fairly sheltered from Northerly winds (Bora).

Cargo: Vinyl Chloride Monomer (VCM): No discharge takes place between 2200 hrs. and 0500 hrs. due to Port Fire Regulations.

3 × 4 in. rubber hoses are used from the shore manifold to the "pig" bolted on to the ship's manifold. Rate of discharge about 250 tonnes per hour to 300 tonnes per hour. Generally speaking, the shore authorities do not allow the vessel to "hot gas" to shore upon completion of cargo.

There are 2 shore tanks numbered R301 with capacity of 4,038 cu.m. and R302 of 5,225 cu.m. The tank working pressure is −10° C to +50° C at 2 to 3 kg/sq.cm. Maximum pressure 4.9 kg./sq.cm.

Samples take 45 minutes per sample to analyse.

Shore personnel connect and disconnect hoses.

Fresh Water: Fresh water available from shore hydrant at a rate of about 30 t.p.h. Shore hose and meter are used. Cost of water is U.S.$ 2.10 per tonne. The water man is ordered by the shore watchman and he attends quite quickly. Quality of water is good.

Ship Chandlers: The national chandler JTP Tankerkomerc gives good service at reasonable prices. Tel: 057-436888. Telex: 27251. Fax: 057-436756.

General: The old passenger port is a picturesque tourist town. All commercial ships except ferries use this port.

There is a new berth/basin at Gazenica for timber and oil rig vessels (position Lat. 44° 05.4' N., Long. 15° 16' E.). There is a new yacht/fishing harbour at Uvala Kalovare (position Lat. 44° 05.8' N., Long. 15° 15' E.).

The red buoy near Rt. Vitrenjak has been moved to position Lat. 44° 07.48' N.,Long. 15° 12.69' E.

AUTHORITY: Lucka Kapetanija – Zadar, Liburnska Obala 8, 23000 Zadar, P.P.182, Croatia. *Tel:* (023) 223-44, 433-778, 433-758. *Telex:* 27163 KAP ZD RH. *FAX:* (023) 437-825. *Cables:* Lucka Kapetanija Zadar. *Contact:* Captain Milivoj Maricic, Harbour Master.

Port of Zadar, Biogradska b.b., 23000 Zadar, Croatia. *Tel:* (023) 22961, 436900. *Telex:* 27172 LUKAZD RH. *FAX:* (023) 25435. *Contact:* Neven Jurin, General Manager.

AGENT: Jadroagent, N. Nodila b.b., 23000 Zadar. Tel. (023) 23210, 23215. Telex: 27129 RH Jadrag. Telegrams: Jadroagent Zadar. Fax: (023) 430-464.

NOTES

Please also advise Shipping Guides Ltd.

Cuba

GENERAL: (See Plan)

NOTE: Comments are made throughout the text by the Master who supplied us with an earlier booklet – such comments are reproduced in *italics.*

ARRIVAL ADVICE: ETA messages should be sent to Mambisa Havana when Havana is the first port of call, or to Mambisa (at port of call) and Mambisa Havana simultaneously, when the first port is other than Havana.

Mambisa Agency at the port where vessel was nominated for operation or call will advise Port Authorities and concerned parties, but this in no way relieves Masters from any specific obligation to advise other parties according to Charter Party, or orders received from Owners, Managers, Charterers, etc., to such effect.

The following list of Agencies is in geographical order, starting from the Westernmost port Head Agency on the North coast (Mariel) in an Easterly direction, and from East to West on the South coast, ending at the sub-Agency of Nueva Gerona.

Mariel:	(including Santa Lucia and Bahia Honda): Mambisa Mariel.
Havana:	Mambisa Havana.
Matanzas:	Mambisa Matanzas.
Cardenas:	Mambisa Cardenas.
Isabela de Sagua:	Mambisa Sagua la Grande.
Caibarien	Mambisa Caibarien.
Nuevitas:	(including Jucaro): Mambisa Nuevitas.
Puerto Padre:	(including Manati): Mambisa Puerto Padre.
Antilla:	(including Banes, Felton, Preston, Nicaro, Tanamo and Vita): Mambisa Antilla.
Moa/Punta Gorda:	(including Baracoa): Mambisas Moa.
Guantanamo:	Mambisa Caimanera.
Santiago de Cuba:	Mambisa Santiago de Cuba.
Manzanillo:	(including Pilon, Niquero, Media Luna and Ceiba Hueca): Mambisa Manzanillo.
Guayabal:	Mambisa Santa Cruz Del Sur.
Cienfuegos:	(including Casilda): Mambisa Cienfuegos.
Nueva Gerona:	Mambisa Nueva Gerona.

DOCUMENTS: Required on arrival at *every* port:

Sanitary Authorities:

1 Bill of Health.
1 Crew List.
2 Passenger Lists (if any).

Vaccination cards and Derat Certificate will be inspected by Authorities.

Immigration Authorities:

3 Crew Lists.
3 Passenger Lists (if any).

Customs Authorities:

3 Crew Lists.
3 Passenger Lists, including baggage (if any).
3 Crew Personal Effects Lists.
2 Provisions Lists.
2 Spares and Stores Lists.
3 Cargo Manifests (if any cargo on board).
3 In-Ballast Manifests (if no cargo on board).
3 Manifests of Cargo in care of the Master (if any).
1 Copy of Clearance from Last Port.

Agents:

4 Crew Lists.
3 Cargo Manifests
2 copies each Bill of Lading.
3 Manifests of cargo in care of the Master.
6 Hatch Lists.
6 Stowage Plans.

Shipmaster's Comment: One Crew List returned to vessel stamped by Customs/Immigration for next port.

Certificates Required:

Ship's Register.
Safety Equipment.
Load Line.
Safety Radio.
Safety Construction.
Derat.

Instructions for Master of Vessel: How to process Custom's Model Dirad-7, in connection with crew's money control and personal effects.

Custom's inspector when boarding the vessel besides carrying out their usual duties, should deliver to the Master duly legalized, as many of these forms as members of the crew are reported on Crew List.

Legalization of these forms consists of Customs Inspector's signature, Customs stamps and consecutive numbering which indicates quantity of forms delivered to Master.

2. Ship's Master or Officer in charge should fill in only those spaces of the form as: crew member's name, number of passport, as well as ship's name and date of arrival in port, on the first page of the card.

Besides amount of money delivered to the crew member, date of delivery and signature must be shown as evidence that the crew member has been provided with the money, with signature of the Master alongside, all of this information appears on page 2 of the form (card).

In case crew member requires additional amount during vessel's stay in port, notation should be entered following the first, in same way.

3. No crew members, except the Master, are allowed to come in or leave the Custom House premises without presenting this form to the Custom's Inspector at the gate, who will enter therein the pertinent notations.

All these forms legalized by Customs must be carefully kept for subsequent delivery to Customs upon vessel's departure, even those that might become useless.

Should a crew member require more than 1 form because of that previously delivered having been filled up, or become useless, Master will give a new one which the crew member will present, together with the previous one, to Custom's Inspector at the gate. Thereafter, notations should be entered in the new form, the previous one must be returned to Master for subsequent delivery to Customs.

If at any time more forms are required because those previously delivered have become exhausted, they should be requested from Ship Clearance Department of the Custom House, phone 61-8572. After 1800 hrs. these should be requested from Guard Room, phone 6-9698.

4. Upon ship's sailing, Master will gather all the forms from the crew, delivering same to Custom's Inspector who boards the vessel and will perform the following verifications:

(a) To see that none of the legalisation forms are missing.
(b) To verify that such forms have no alterations, erasures, etc.
(c) To add up total spent by all crew members and to verify it with amount settled with ship's Agents Consignatarias Mambisa.

5. Non-compliance with above instructions will subject the violator to corresponding penalty.

Director of Customs.

PILOTAGE: Pilotage is compulsory for all foreign and Cuban vessels at all Cuban ports.

LOCAL TIME: Official local time in all Cuban territory is that for the 75th West Greenwich Meridian and there is a difference of 5 hours compared to GMT, that is, 1200 hrs. GMT is equivalent to 0700 hrs. local time.

Approximately from March to October, Summer Daylight Saving Time is in effect and the difference then is only of 4 hours, that is, 1200 hrs. GMT is equivalent to 0800 hrs. local time.

HEALTH AND SANITARY REQUIREMENTS: Free Pratique is automatic for vessels coming direct from another Cuban port; from foreign countries, usual procedure of Sanitary Inspection applies.

In case of suspected disease or fever on board, Master must radio Mambisa Agency in order to advise the Health Office.

Vessels coming from countries affected by aphthous fever or bovine plague are subject to fumigation, including crew members'/passengers' clothes and shoes. Therefore, it is advisable to have clothes/shoes gathered in an appropriate space or cabin, in order to speed up fumigation.

Vegetable or animal products are subject to inspection before cargo is allowed to be discharged.

All crew members and passengers must have vaccination cards up to date.

Below is copy of warning sent to us by a Ship's Master. The words in italics are the Master's comments.

National Veterinary Medicine Institute
Warning
Master:

You are kindly requested to comply with and acknowledge this warning regarding veterinary sanitary regulations and also to inform your crew members of same.

One Green Vet. Form given to ship to take to next Cuban port, one copy for ship also.

1. Refrigerators of vessels which contain in their victuals meat and meat products originated in countries declared as being affected with foot-and-mouth disease, Rinderpest, Vesicular stomatitis, African swine fever and other diseases non existent in the Republic of Cuba, shall be sealed while remaining in our territorial waters.

Sealed.

2. Milk, butter, cheese, fish and poultry products, as well as canned meat, and meat and meat products from Australia, New Zealand and Canada, are not subject to this procedure for the time being.

All victuals of animal origin must be declared to the Frontier Veterinary Services Officer.

3. Prohibitions:

(a) Arriving in port with live food animals (cattle, swine, poultry, etc.) on board, unless duly authorised by the Animal Health Authorities of the Republic of Cuba;

If pets on board – not allowed ashore.

(b) Unloading or releasing of any species of pet animals. These animals (birds included) are subject to quarantine control on board;

(c) Unloading of victuals of whatsoever origin, including those not subject to sealing procedures;

(d) Arriving in port with compartments or receptacles containing garbage;

Dump rubbish at sea 6 miles out from Cuba.

(e) Scattering of garbage containing food scraps, portions or other wastes of animal origin, or throwing them overboard into the sea or onto shore.

Cover garbage drums.

4. Ratguards must be placed once the vessel has docked.

Fines if not done or if they fall off!

5. Footwear and clothing of the crew members of ship coming from countries known to be affected with diseases dangerous to the fauna of the Republic of Cuba shall be subject to fumigation with formaldehyde gas.

6. Non-compliance of the sanitary regulations, or any action aimed to prejudice or evade them, shall be regarded as an offence liable to a fine of not less than $500.00 (Cuban Official Currency), or to the implementation, at the expense of the transgressor, of appropriate quarantine measures intended to minimise the consequences resulting therefrom.

The following is reproduced from a booklet given to Masters of arriving vessels. The booklet is produced by the Ships' Agent and dated 1983.

PORT REGULATIONS: In order that you may be properly informed, on not only Port and Cuban Government Regulations, but also on various matters related to the loading and/or discharging operations of your vessel, we wish to bring to your attention the following:

1. Crew Regulations (Important Notice to Masters)

(a) The Customs Authorities have put into effect new Regulations which the Masters of all vessels arriving at Cuban ports are under obligation to observe. The regulations in question are as follows:

First: The Master must advise vessel's ETA at least 24 hours in advance and is obliged to deliver to the Customs Authorities at the port of arrival the complementary documents to the Cargo and Passenger Manifest, which comprise:

(a) Hatch List, Hazardous Cargo List, Stowage Plan, Provisions, Accessories and Spare Parts List, Narcotics List (crew's usage). Firearms List and Clearance Certificate (from previous Cuban port). Ship's Register must be exhibited.

(b) List of crew belongings including objects, property of each crew member which he maintains on board for his use, such as, for instance, electric shaving machines, watches, radios, soaps, etc. *(4 copies required at every port – Declare everything in personal possession).* See "Shipmaster's Report".

(c) Detailed list of all articles transported by crew members free of charge, including those which are for his use on board, or that may be destined to other persons (men, women or children), such as for instance perfume, umbrellas, dresses, ladies stockings and lingerie, cloth to make dresses, etc. *(4 copies every port – declare everything and place in bond.)*

(d) Foreign currency whether convertible or not, must be declared on a crew list. *(4 copies required every port – placed in ship's safe).*
Narcotics List – 4 copies morphine only. Provisions List – not listed but requested.

(e) Upon vessel's arrival the Master will be provided with money control cards for each crew member which must be carried by them when going ashore and shown to Custom House Inspector whenever requested.

(f) Each crew member must declare the articles referred to in paragraphs (b), (c) and (d) immediately upon vessel's arrival, since Harbour Officers may search the vessel at any time they should deem convenient.

Second: Each crew member may keep in his cabin up to 200 cigarettes and a bottle of spirits.

Third: The importation into, and the exportation from the Republic of Cuba of Cuban currency is forbidden, and no crew member may have in his possession any amount in excess of that delivered to him by Master from the cash advanced by the agency.
(Collected and sealed in safe).

Fourth: Each crew member is allowed to have in his cabin, only those articles which are for his use on board. Any article in excess (more than 1 radio, 1 shaver, etc.) should be kept in the bond store.

Fifth: Any article not declared, or possessed by the crew member in excess of the amount allowed, also Cuban and foreign currency not properly accounted for, will be confiscated and should circumstances warrant, the courts of law will be informed, the latter having the right to impose penalties, or fines, depending on the value of the objects found in the crew member's possession.
Immediately following the arrival of the vessel, the Master is under obligation to make these regulations known to each and every crew member, as the Customs Authorities will consider that the Master and the crew have been put on notice as to what is herein provided at the moment the vessel has been cleared through Customs, insofar as concerns any violation of the above referred to regulations.
Masters are likewise required to provide a place or space sufficiently ample to deposit the articles transported by the crew free of charge or, in other words, those articles referred to in paragraph (c) above.

Sixth:

(a) Crew members are not allowed to buy personal effects on shore, except in the sailors' or tourists' shops and the articles so obtained can not be sold to any other person.

(b) Except for the Pilots and the Public Health Officials, no other person can go on board and no crew member or passenger of vessels arriving at Cuban ports from abroad is allowed to disembark until the vessel has been cleared by the Immigration and Customs Authorities.

(c) Crew members, including Officers and Master, in addition to their standing Passports or Seaman's Books, must be provided with immigration passes (landing cards) to go ashore.

(d) Depending upon the characteristics and circumstances of the different ports there might be certain limitations in the hours the crew may remain ashore. Port Authorities, through the Agent will advise the Master accordingly.

(e) Shore passes are confined to the city limits of the port where the ship is lying and whenever a crew member requires to move away from the said area, the corresponding permit must be obtained from the immigration port authorities through the agent. Each territorial infringement is subject to a fine.

(f) Upon arrival at Cuban port of any vessel proceeding from foreign country, the Immigration Authorities will deliver to Master the Entrance Certificate which is valid for all Cuban ports and will be under custody and preservation of the Master until final sailing.

(g) If a vessel enters into or sails from any Cuban port without having fulfilled all requisites or procedures of clearance and inspection of the Immigration Authorities it will be subject to a fine.

(h) To take away or to violate the seals or straps fixed by the Customs Authorities means vessel will be subject to sanction or fine.

2. Sanitary Regulations

(a) Following docking, crew members are not allowed to go down to the pier to fix the ratguards or the gangway until the Sanitary Inspection (Free Pratique) has been completed and for non fulfilment of this regulation a fine of 2,000 pesos will be imposed on the Master.

(b) Thereafter, ratguards are to be kept in proper place otherwise the Master shall be liable to as many fines as there are ratguards missing.

(c) If any crew member should go down to the pier from a vessel which is under sanitary observation, the vessel will be penalised with a 5,000 pesos fine.

(d) Vessels proceeding from countries affected by animal diseases which do not exist in Cuba, are subject to full disinfection at the time when the sanitary veterinarian authorities of the Republic of Cuba deem it convenient.

Phytosanitary Regulations

(a) The Master has to deliver to the Phytosanitary inspectors the following documents:
– Phytosanitary Certificate of all vegetable origin or regulated cargo carried by the vessel.
– Fumigation Certificate, if said cargo was fumigated before arriving at Cuban port.
– Copy of cargo plan.
– Copy of Provisions List.

(b) It is forbidden to withdraw from the vessel while at Cuban ports, products of vegetable origin (fruits, fresh vegetables, plants, parts of plants and seeds), soil or organic materials, origin, of micro-organisms, insects, acarus and threadworm in any state of their biological cycle.

(c) The waste of vegetable origin must be hermetically packed in plastic bags and treated as instructed for garbage in Article 7 here below.

Veterinary Sanitary Control – Complete sealing of ships' refrigerators which contain dangerous victuals.

(a) It is hereby instructed that the refrigerators of Cuban and foreign flag vessels which contain in their victuals meats and cattle products originating in countries affected by bovine pest, vesicular stomatitis, African pork pest and other animal diseases not existent in Cuba, must be completely sealed.

Exempt from the above are cattle products industrially canned, salted butter and cured cheese destined to be consumed only aboard ship.

(b) Only ships' refrigerators which contain victuals of animal origin shall be sealed. Compartments where vegetables and other victuals are kept, will not be sealed.

(c) Ships' refrigerators will be opened under Veterinary supervision. *(U.S. $5.00 each time).*

(d) Meats and other animal products purchased in Cuba must be so placed in the refrigerator that they will not enter into contact with similar products purchased abroad.

(e) Sealing of ships' refrigerators will apply to vessels at berth as well as to vessels at anchorage.

(f) Sealing must be performed in an effective manner. To this end, it is necessary to verify that it was done correctly; a sufficient enough depression of the seal which makes it impossible to withdraw the wire.

(g) It is forbidden to have on board live animals for consumption and to fish using baits of animal origin.

(h) Any pets carried by the ship will be placed in quarantine aboard.

(i) For the breaking of the seal or the violation of any of these dispositions the Master will be brought to Court where according to the Law the corresponding penalty or fine will be imposed.

3. Labour Regulations

In accordance with Resolution of the Cuban Labour Ministry, it is forbidden for vessels' crews, during their stay in port, to do work that should be performed by port labourers, such as loading or discharging, rigging booms, driving winches, opening and closing hatches, (except MacGregor type or any other type of special mechanical system), laying wood or paper dunnage, construction of stalls, etc. Therefore you should apply to us in writing, so that arrangements can be made for the necessary port labour to perform such work.

Please note that if any of the work described were to be done by ship's crew, port labourers must be paid as if they had actually performed the services.

4. Bunkers

Should your vessel be bunkering at this port, it is necessary that we be notified in advance, so that appropriate arrangements can be made not only with the local suppliers, but also to comply with government regulations, which provide that funds to cover the cost of bunkers be received from the Owners *or Charterers* prior to delivery. Since this procedure takes a few days, it is suggested that any request for bunkers be made with due anticipation.

When delivery of bunkers is to be made in the port of Havana, the order or requisition must be sent to the suppliers at least 2 days in advance of the desired date of delivery, and 3 days in advance when delivery is to be made at a port other than Havana.

5. Galley Oil or Coal

The above requirements for bunkers do not, of course, apply to galley oil or coal as this item, if needed, is to be purchased directly by the ship from a shipchandler.

6. Cleaning

In accordance with Port Regulations, this work must be performed by local shore labour. The cleaning work done by shore labour is limited to only the sweeping of cargo compartments.

7. Garbage: *(Vessel needed 10 drums).*

Port and Customs Regulations forbid the throwing of garbage on to the pier or into the sea while the vessel is within the harbour limits.

According to Sanitary Regulations vessels must arrive at each Cuban port of call with the garbage deposits or tanks empty.

Garbage cannot be thrown into the sea inside Cuban territorial waters. While in port the garbage must be hermetically packed in plastic bags and kept in drums with fitted covers.

Drums, in clean and hygienic condition, are to be placed in a properly selected place in the vessel until the bags are delivered to the garbage collector.

The services of the garbage collector must be requested by the Master, who can apply for it through the Agent.

For the non compliance of this regulation the ship will be subject to a fine.

8. Cash to Master *(Owners must remit cash in advance).*

Cash advances authorised by Owners or Charterers will be supplied to the Master upon request. Such request is to be made during office hours and the money will be delivered at the Agent's place of business.

Upon completion of loading and/or discharging operations, any unused funds of Cuban Currency must be handed over to the Local Agent; in other words, Cuban Currency left over from a cash advance drawn at one port cannot be returned or used at any other port.

However, further cash advances may be requested at the next Cuban port of call.

9. Damage to Cargo

As you undoubtedly realise, it is necessary to establish with the utmost degree of accuracy possible with whom the responsibility for damage to cargo lies, whether for vessel's or stevedores' account.

To ascertain this, the Terminals in Cuba employ Damage Inspectors to take note of all cargo that is found on board in damaged condition prior to its discharge from the ship, and the Master or Chief Officer is asked to sign an acknowledgement. Therefore, we suggest that in order to avoid unnecessary discrepancies between the vessel and the Terminal, and to properly protect the Owners' interests, you please instruct your cargo officer to coordinate his work in this connection with that of the Terminal Damage Inspector. Upon completion of discharge operations, the Terminal will submit to the Master for signature the relevant Survey Report.

Should you Note Protest owing to bad weather on the voyage or any other reason whatsoever, since the note must be presented to Harbour Master within 24 hours after ships' arrival, it must be handed to the Agent with time enough to prepare translation. One copy of the Note of Protest should be delivered to the Agent for record purposes.

10. Stevedore Damage to the Ship *(Stevedores usually repair damage).*

Any damage caused to the vessel during the loading and/or discharging operation, should be reported immediately to the Head Discharging Foreman on the Terminal, followed by a written notice to us in duplicate. Such notice should be made out within 24 hours following the incident, otherwise the Terminal will not accept any claim.

11. Repairs for Vessel's Account

Any repair work to be done for vessel's account must be requested in writing, sufficiently in advance of vessel's estimated departure in order to obtain from the repair shop the budget for the work, in the event of course, that the job can be done locally.

12. Engine Repairs or Engine Overhaul while in port

In the event vessel requires engine repairs or an engine overhaul (usually performed by the ship's crew) even if berthed at a pier or dock in port, it is necessary that the Master so informs his Agents before undertaking such work in order that his Agents may, in turn, notify all parties concerned, and obtain necessary authorisation from Harbour Master.

Read Charter Party/"Baltime" usually 24 hours' notice for engine cleaning.

The reason for this is that it may be necessary to shift the vessel from one berth to another, for any reason whatsoever, and it is necessary to know in advance if the vessel can move with her own engines or whether tugboats will be required for the movement. In the latter case it is of course understood that the cost of tugboats will be for vessel's account.

13. Hull Repairs and Maintenance

It is forbidden to perform any repairs or welding work in the hull, without obtaining, through the Agent, the previous authorisation of the Maritime Safety Office.

14. Redelivery

If your vessel is to be re-delivered at this port, this should be made known to us as soon as possible after arrival here, for although we may be aware of this fact, there is a possibility we might be lacking the necessary details concerning the terms of re-delivery.

15. Lowering Boats *(Apply in writing).*

Port Regulations prohibit the lowering of boats except for fire drill or to do maintenance work of the ship (painting, etc.). For either of these purposes, a permit is required from the Harbour Master, and the crews of such boats are not allowed to land on any pier or board any vessel in the harbour. Please be informed that our Ministry of the Interior has issued the following instructions to be strictly observed by the Masters of all foreign vessels during their stay at Cuban ports:

(a) When a vessel is carrying out paint work or similar tasks while in port, at the end of the day's work the craft or boat used to perform the work should under no circumstances remain in the water, but must be hoisted aboard to be again lowered the following day or whenever the work is resumed.

16. Radio Communications

Vessels within harbour limits are not allowed to transmit messages by radio.

17. Port Expenses

The bills covering port expenses will be submitted for your approval and signature, prior to vessel's departure from this port, regardless of the fact that such expenses might be for Owner's or Charterer's account, as this can subsequently be easily determined by examination of the Charter Party. However, if we are to obtain reimbursement for the amounts expended to cover port expenses, it is necessary that your approval and signature be secured.

Mark Owner's account or Charterers' account.

18. Stowaways

(a) In the event of vessels arriving from foreign countries, carrying stowaways or persons without documents, the Master or the Shipowner must advise the Immigration Control of the port immediately, who in turn, will advise them of the respective regulations in force.

(b) Masters are kindly requested to instruct all ships' officers that every possible precaution should be taken to prevent stowaways.

(c) Whenever the Master of a vessel finds a stowaway on board, either in port or outside the port's limits but within Cuban territorial waters, he is under obligation to deliver same to the Port Unit and Harbour Master's Authorities of the Frontier Guard Troops. If the stowaway is found outside the port, the Master must report this by radio so that the stowaway may be picked up by Port Unit and Harbour Master's Authorities of the Frontier Guard Troops.

(d) At no time are the Masters of vessels allowed to lower rope ladders or ropes on the vessel opposite the dock where the ship is berthed.

19. Paper and Dunnage: (very important).

In the event that your vessel is scheduled to load sugar in bags, citrus fruits, cement, etc., in Cuba and should you require paper and/or wood dunnage, you must make known to us your needs in writing as soon as possible, bearing in mind that the suppliers require at least five (5) days for delivery.

20. Loading Sugar

Whenever your vessel is assigned to load sugar the following precautions are to be taken:

(a) Cleaning and Dunnaging of Hatches: You must be extremely careful to have the vessel's hatches thoroughly dry, clean and without odour, as well as properly dunnaged to the satisfaction of the shippers, before starting loading.

(b) Cleaning Holds: In order to avoid damage to the sugar cargo during the voyage, please make proper arrangements for the closing of holds before starting loading in 'tweendecks.

(c) Tally: With respect to the dispute that occasionally arises between the vessel and the shippers during the course of loading sugar shipments regarding the number of bags delivered on board, we wish to inform you that the only document with official validity is the tally sheet prepared by the shore tallyman assigned to each loading hatch, and that if you wish to verify the accuracy of said tallying you could hire a tallyman's service, through the Agency, in those ports where we have this service available, to count the cargo jointly with the shore tallyman, as this is the only possible way of avoiding discrepancies in the checking of the bags actually delivered on board.

Consequently, we request that you please keep the above in mind, as this will tend to reduce if not completely eliminate, the problems which are now being confronted.

21. Agency Office Hours

We list hereunder our office hours:

From Monday to Friday: 0800 to 1200, 1300 to 1700.

Saturday: 0800 to 1200.

Our representatives will call on the ship as regularly as possible to discuss with the Master any matter or problem he may have in connection with the operations of his vessel and to deliver the crew's mail; however, such calls are contingent upon the volume of work, for which reason we suggest that the Master calls at our office when any matter arises which requires immediate attention.

22. VHF Communication System

The VHF (150 MHz) communication system is officially established between most of our Agencies and ships in port or close to port. Normally, service will be provided during the Agency's regular office hours only, but this work schedule will be expanded in the near future, as is now at our Havana Agency, where service is granted 24 hours a day.

Havana Pilot Channel 16. Agent's Channel 12.

23. Medical and Dental Services

Any man requiring medical or dental attention should be sent to our office whenever possible, with a letter from Master containing full name and rank, at 0800 or 1300 hrs. from Monday to Friday, and we will see to it that he is promptly sent in a car to the hospital and back to the ship afterwards.

In the event of an accident or serious illness, please contact Mambisa Agency on the telephone, and an ambulance will be sent immediately to transport the man to the hospital.

24. Safety Measures

(a) Vessels are obliged to have on-board the manoeuvre and safety elements indicated in the International rules and regulations. Any vessel lacking or having in bad condition any of these elements (defective derricks, lack of electricity, etc.) will not be brought to pier and if berthed will be removed at vessel's expense.

(b) The Master must remove anything protruding from the vessel, like boats, anchors, booms, etc., or overhanging, like tackles and riggings whenever they constitute a risk or danger for the workers, port installations, other vessels, etc., or whenever they interfere with the operations.

25. Other Regulations

(a) Any exchange of provisions, films, spare parts or any kind of object, etc., between vessels in any port, requires the previous authorisation of the Customs House. Therefore, in order to apply for this permit, Masters are kindly requested to give a letter to the Agent detailing all articles that are to be transferred.

(b) It is forbidden, unless previously authorised by Customs House:
  to bring ashore any article or merchandise.
  to allow any boat, launch, tugboat or any other type of craft, to approach to the vessel at a distance of less than 25 m. except for the purpose of transferring passengers or to perform any service duly authorised.
  to lower ladders on any side of the vessel.

(c) All provisions, belongings and spare parts not declared in the corresponding documents, or found on board in excess of those declared, will be confiscated. This is valid also for the commercial stores of passenger vessels.

(d) Any mistake in the manifest must be amended within 48 hours after arrival of the vessel.

(e) All articles carried on board and destined for Cuban territory, must be declared in the cargo manifest or in the complementary documents.

1. Crew Regulations (Important Notice to Masters)

(a) The Customs Authorities have put into effect new Regulations which the Masters of all vessels arriving at Cuban ports are under obligation to observe. The regulations in question are as follows:

First: The Master must advise vessel's ETA at least 24 hours in advance and is obliged to deliver to the Customs Authorities at the port of arrival the complementary documents to the Cargo and Passenger Manifest, which comprise:

(a) Hatch List, Hazardous Cargo List, Stowage Plan, Provisions, Accessories and Spare Parts List, Narcotics List (crew's usage). Firearms List and Clearance Certificate (from previous Cuban port). Ship's Register must be exhibited.

(b) List of crew belongings including objects, property of each crew member which he maintains on board for his use, such as, for instance, electric shaving machines, watches, radios, soaps, etc. *(4 copies required at every port – Declare everything in personal possession).* See "Shipmaster's Report".

(c) Detailed list of all articles transported by crew members free of charge, including those which are for his use on board, or that may be destined to other persons (men, women or children), such as for instance perfume, umbrellas, dresses, ladies stockings and lingerie, cloth to make dresses, etc. *(4 copies every port – declare everything and place in bond.)*

(d) Foreign currency whether convertible or not, must be declared on a crew list. *(4 copies required every port – placed in ship's safe).*

Narcotics List – 4 copies morphine only. Provisions List – not listed but requested.

(e) Upon vessel's arrival the Master will be provided with money control cards for each crew member which must be carried by them when going ashore and shown to Custom House Inspector whenever requested.

(f) Each crew member must declare the articles referred to in paragraphs (b), (c) and (d) immediately upon vessel's arrival, since Harbour Officers may search the vessel at any time they should deem convenient.

Second: Each crew member may keep in his cabin up to 200 cigarettes and a bottle of spirits.

Third: The importation into, and the exportation from the Republic of Cuba of Cuban currency is forbidden, and no crew member may have in his possession any amount in excess of that delivered to him by Master from the cash advanced by the agency. *(Collected and sealed in safe).*

Fourth: Each crew member is allowed to have in his cabin, only those articles which are for his use on board. Any article in excess (more than 1 radio, 1 shaver, etc.) should be kept in the bond store.

Fifth: Any article not declared, or possessed by the crew member in excess of the amount allowed, also Cuban and foreign currency not properly accounted for, will be confiscated and should circumstances warrant, the courts of law will be informed, the latter having the right to impose penalties, or fines, depending on the value of the objects found in the crew member's possession. Immediately following the arrival of the vessel, the Master is under obligation to make these regulations known to each and every crew member, as the Customs Authorities will consider that the Master and the crew have been put on notice as to what is herein provided at the moment the vessel has been cleared through Customs, insofar as concerns any violation of the above referred to regulations.

Masters are likewise required to provide a place or space sufficiently ample to deposit the articles transported by the crew free of charge or, in other words, those articles referred to in paragraph (c) above.

Sixth:

(a) Crew members are not allowed to buy personal effects on shore, except in the sailors' or tourists' shops and the articles so obtained can not be sold to any other person.

(b) Except for the Pilots and the Public Health Officials, no other person can go on board and no crew member or passenger of vessels arriving at Cuban ports from abroad is allowed to disembark until the vessel has been cleared by the Immigration and Customs Authorities.

(c) Crew members, including Officers and Master, in addition to their standing Passports or Seaman's Books, must be provided with immigration passes (landing cards) to go ashore.

(d) Depending upon the characteristics and circumstances of the different ports there might be certain limitations in the hours the crew may remain ashore. Port Authorities, through the Agent will advise the Master accordingly.

(e) Shore passes are confined to the city limits of the port where the ship is lying and whenever a crew member requires to move away from the said area, the corresponding permit must be obtained from the immigration port authorities through the agent. Each territorial infringement is subject to a fine.

(f) Upon arrival at Cuban port of any vessel proceeding from foreign country, the Immigration Authorities will deliver to Master the Entrance Certificate which is valid for all Cuban ports and will be under custody and preservation of the Master until final sailing.

(g) If a vessel enters into or sails from any Cuban port without having fulfilled all requisites or procedures of clearance and inspection of the Immigration Authorities it will be subject to a fine.

(h) To take away or to violate the seals or straps fixed by the Customs Authorities means vessel will be subject to sanction or fine.

2. Sanitary Regulations

(a) Following docking, crew members are not allowed to go down to the pier to fix the ratguards or the gangway until the Sanitary Inspection (Free Pratique) has been completed and for non fulfilment of this regulation a fine of 2,000 pesos will be imposed on the Master.

(b) Thereafter, ratguards are to be kept in proper place otherwise the Master shall be liable to as many fines as there are ratguards missing.

(c) If any crew member should go down to the pier from a vessel which is under sanitary observation, the vessel will be penalised with a 5,000 pesos fine.

(d) Vessels proceeding from countries affected by animal diseases which do not exist in Cuba, are subject to full disinfection at the time when the sanitary veterinarian authorities of the Republic of Cuba deem it convenient.

Phytosanitary Regulations

(a) The Master has to deliver to the Phytosanitary inspectors the following documents:

– Phytosanitary Certificate of all vegetable origin or regulated cargo carried by the vessel.

– Fumigation Certificate, if said cargo was fumigated before arriving at Cuban port.

– Copy of cargo plan.

– Copy of Provisions List.

(b) It is forbidden to withdraw from the vessel while at Cuban ports, products of vegetable origin (fruits, fresh vegetables, plants, parts of plants and seeds), soil or organic materials, origin, of micro-organisms, insects, acarus and threadworm in any state of their biological cycle.

(c) The waste of vegetable origin must be hermetically packed in plastic bags and treated as instructed for garbage in Article 7 here below.

Veterinary Sanitary Control – Complete sealing of ships' refrigerators which contain dangerous victuals.

(a) It is hereby instructed that the refrigerators of Cuban and foreign flag vessels which contain in their victuals meats and cattle products originating in countries affected by bovine pest, vesicular stomatitis, African pork pest and other animal diseases not existent in Cuba, must be completely sealed.

Exempt from the above are cattle products industrially canned, salted butter and cured cheese destined to be consumed only aboard ship.

(b) Only ships' refrigerators which contain victuals of animal origin shall be sealed. Compartments where vegetables and other victuals are kept, will not be sealed.

(c) Ships' refrigerators will be opened under Veterinary supervision. *(U.S. $5.00 each time).*

(d) Meats and other animal products purchased in Cuba must be so placed in the refrigerator that they will not enter into contact with similar products purchased abroad.

(e) Sealing of ships' refrigerators will apply to vessels at berth as well as to vessels at anchorage.

(f) Sealing must be performed in an effective manner. To this end, it is necessary to verify that it was done correctly; a sufficient enough depression of the seal which makes it impossible to withdraw the wire.

(g) It is forbidden to have on board live animals for consumption and to fish using baits of animal origin.

(h) Any pets carried by the ship will be placed in quarantine aboard.

(i) For the breaking of the seal or the violation of any of these dispositions the Master will be brought to Court where according to the Law the corresponding penalty or fine will be imposed.

3. Labour Regulations

In accordance with Resolution of the Cuban Labour Ministry, it is forbidden for vessels' crews, during their stay in port, to do work that should be performed by port labourers, such as loading or discharging, rigging booms, driving winches, opening and closing hatches, (except MacGregor type or any other type of special mechanical system), laying wood or paper dunnage, construction of stalls, etc. Therefore you should apply to us in writing, so that arrangements can be made for the necessary port labour to perform such work.

Please note that if any of the work described were to be done by ship's crew, port labourers must be paid as if they had actually performed the services.

4. Bunkers

Should your vessel be bunkering at this port, it is necessary that we be notified in advance, so that appropriate arrangements can be made not only with the local suppliers, but also to comply with government regulations, which provide that funds to cover the cost of bunkers be received from the Owners *or Charterers* prior to delivery. Since this procedure takes a few days, it is suggested that any request for bunkers be made with due anticipation.

When delivery of bunkers is to be made in the port of Havana, the order or requisition must be sent to the suppliers at least 2 days in advance of the desired date of delivery, and 3 days in advance when delivery is to be made at a port other than Havana.

5. Galley Oil or Coal

The above requirements for bunkers do not, of course, apply to galley oil or coal as this item, if needed, is to be purchased directly by the ship from a shipchandler.

6. Cleaning

In accordance with Port Regulations, this work must be performed by local shore labour. The cleaning work done by shore labour is limited to only the sweeping of cargo compartments.

7. Garbage: *(Vessel needed 10 drums).*

Port and Customs Regulations forbid the throwing of garbage on to the pier or into the sea while the vessel is within the harbour limits.

According to Sanitary Regulations vessels must arrive at each Cuban port of call with the garbage deposits or tanks empty.

Garbage cannot be thrown into the sea inside Cuban territorial waters.

While in port the garbage must be hermetically packed in plastic bags and kept in drums with fitted covers.

Drums, in clean and hygienic condition, are to be placed in a properly selected place in the vessel until the bags are delivered to the garbage collector.

The services of the garbage collector must be requested by the Master, who can apply for it through the Agent.

For the non compliance of this regulation the ship will be subject to a fine.

8. Cash to Master *(Owners must remit cash in advance).*

Cash advances authorised by Owners or Charterers will be supplied to the Master upon request. Such request is to be made during office hours and the money will be delivered at the Agent's place of business.

Upon completion of loading and/or discharging operations, any unused funds of Cuban Currency must be handed over to the Local Agent; in other words, Cuban Currency left over from a cash advance drawn at one port cannot be returned or used at any other port.

However, further cash advances may be requested at the next Cuban port of call.

9. Damage to Cargo

As you undoubtedly realise, it is necessary to establish with the utmost degree of accuracy possible with whom the responsibility for damage to cargo lies, whether for vessel's or stevedores' account.

To ascertain this, the Terminals in Cuba employ Damage Inspectors to take note of all cargo that is found on board in damaged condition prior to its discharge from the ship, and the Master or Chief Officer is asked to sign an acknowledgement. Therefore, we suggest that in order to avoid unnecessary discrepancies between the vessel and the Terminal, and to properly protect the Owners' interests, you please instruct your cargo officer to coordinate his work in this connection with that of the Terminal Damage Inspector. Upon completion of discharge operations, the Terminal will submit to the Master for signature the relevant Survey Report.

Should you Note Protest owing to bad weather on the voyage or any other reason whatsoever, since the note must be presented to Harbour Master within 24 hours after ships' arrival, it must be handed to the Agent with time enough to prepare translation. One copy of the Note of Protest should be delivered to the Agent for record purposes.

10. Stevedore Damage to the Ship *(Stevedores usually repair damage).*

Any damage caused to the vessel during the loading and/or discharging operation, should be reported immediately to the Head Discharging Foreman on the Terminal, followed by a written notice to us in duplicate. Such notice should be made out within 24 hours following the incident, otherwise the Terminal will not accept any claim.

11. Repairs for Vessel's Account

Any repair work to be done for vessel's account must be requested in writing, sufficiently in advance of vessel's estimated departure in order to obtain from the repair shop the budget for the work, in the event of course, that the job can be done locally.

12. Engine Repairs or Engine Overhaul while in port

In the event vessel requires engine repairs or an engine overhaul (usually performed by the ship's crew) even if berthed at a pier or dock in port, it is necessary that the Master so informs his Agents before undertaking such work in order that his Agents may, in turn, notify all parties concerned, and obtain necessary authorisation from Harbour Master.

Read Charter Party/"Baltime" usually 24 hours' notice for engine cleaning.

The reason for this is that it may be necessary to shift the vessel from one berth to another, for any reason whatsoever, and it is necessary to know in advance if the vessel can move with her own engines or whether tugboats will be required for the movement. In the latter case it is of course understood that the cost of tugboats will be for vessel's account.

13. Hull Repairs and Maintenance

It is forbidden to perform any repairs or welding work in the hull, without obtaining, through the Agent, the previous authorisation of the Maritime Safety Office.

14. Redelivery

If your vessel is to be re-delivered at this port, this should be made known to us as soon as possible after arrival here, for although we may be aware of this fact, there is a possibility we might be lacking the necessary details concerning the terms of re-delivery.

15. Lowering Boats *(Apply in writing).*

Port Regulations prohibit the lowering of boats except for fire drill or to do maintenance work of the ship (painting, etc.). For either of these purposes, a permit is required from the Harbour Master, and the crews of such boats are not allowed to land on any pier or board any vessel in the harbour. Please be informed that our Ministry of the Interior has issued the following instructions to be strictly observed by the Masters of all foreign vessels during their stay at Cuban ports:

(a) When a vessel is carrying out paint work or similar tasks while in port, at the end of the day's work the craft or boat used to perform the work should under no circumstances remain in the water, but must be hoisted aboard to be again lowered the following day or whenever the work is resumed.

16. Radio Communications

Vessels within harbour limits are not allowed to transmit messages by radio.

17. Port Expenses

The bills covering port expenses will be submitted for your approval and signature, prior to vessel's departure from this port, regardless of the fact that such expenses might be for Owner's or Charterer's account, as this can subsequently be easily determined by examination of the Charter Party. However, if we are to obtain reimbursement for the amounts expended to cover port expenses, it is necessary that your approval and signature be secured.

Mark Owner's account or Charterers' account.

18. Stowaways

(a) In the event of vessels arriving from foreign countries, carrying stowaways or persons without documents, the Master or the Shipowner must advise the Immigration Control of the port immediately, who in turn, will advise them of the respective regulations in force.

(b) Masters are kindly requested to instruct all ships' officers that every possible precaution should be taken to prevent stowaways.

(c) Whenever the Master of a vessel finds a stowaway on board, either in port or outside the port's limits but within Cuban territorial waters, he is under obligation to deliver same to the Port Unit and Harbour Master's Authorities of the Frontier Guard Troops. If the stowaway is found outside the port, the Master must report this by radio so that the stowaway may be picked up by Port Unit and Harbour Master's Authorities of the Frontier Guard Troops.

(d) At no time are the Masters of vessels allowed to lower rope ladders or ropes on the vessel opposite the dock where the ship is berthed.

19. Paper and Dunnage: (very important).

In the event that your vessel is scheduled to load sugar in bags, citrus fruits, cement, etc., in Cuba and should you require paper and/or wood dunnage, you must make known to us your needs in writing as soon as possible, bearing in mind that the suppliers require at least five (5) days for delivery.

20. Loading Sugar

Whenever your vessel is assigned to load sugar the following precautions are to be taken:

(a) Cleaning and Dunnaging of Hatches: You must be extremely careful to have the vessel's hatches thoroughly dry, clean and without odour, as well as properly dunnaged to the satisfaction of the shippers, before starting loading.

(b) Cleaning Holds: In order to avoid damage to the sugar cargo during the voyage, please make proper arrangements for the closing of holds before starting loading in 'tweendecks.

(c) Tally: With respect to the dispute that occasionally arises between the vessel and the shippers during the course of loading sugar shipments regarding the number of bags delivered on board, we wish to inform you that the only document with official validity is the tally sheet prepared by the shore tallyman assigned to each loading hatch, and that if you wish to verify the accuracy of said tallying you could hire a tallyman's service, through the Agency, in those ports where we have this service available, to count the cargo jointly with the shore tallyman, as this is the only possible way of avoiding discrepancies in the checking of the bags actually delivered on board.

Consequently, we request that you please keep the above in mind, as this will tend to reduce if not completely eliminate, the problems which are now being confronted.

21. Agency Office Hours

We list hereunder our office hours:

From Monday to Friday: 0800 to 1200, 1300 to 1700.

Saturday: 0800 to 1200.

Our representatives will call on the ship as regularly as possible to discuss with the Master any matter or problem he may have in connection with the operations of his vessel and to deliver the crew's mail; however, such calls are contingent upon the volume of work, for which reason we suggest that the Master calls at our office when any matter arises which requires immediate attention.

22. VHF Communication System

The VHF (150 MHz) communication system is officially established between most of our Agencies and ships in port or close to port. Normally, service will be provided during the Agency's regular office hours only, but this work schedule will be expanded in the near future, as is now at our Havana Agency, where service is granted 24 hours a day.

Havana Pilot Channel 16. Agent's Channel 12.

23. Medical and Dental Services

Any man requiring medical or dental attention should be sent to our office whenever possible, with a letter from Master containing full name and rank, at 0800 or 1300 hrs. from Monday to Friday, and we will see to it that he is promptly sent in a car to the hospital and back to the ship afterwards.

In the event of an accident or serious illness, please contact Mambisa Agency on the telephone, and an ambulance will be sent immediately to transport the man to the hospital.

24. Safety Measures

(a) Vessels are obliged to have on-board the manoeuvre and safety elements indicated in the International rules and regulations. Any vessel lacking or having in bad condition any of these elements (defective derricks, lack of electricity, etc.) will not be brought to pier and if berthed will be removed at vessel's expense.

(b) The Master must remove anything protruding from the vessel, like boats, anchors, booms, etc., or overhanging, like tackles and riggings whenever they constitute a risk or danger for the workers, port installations, other vessels, etc., or whenever they interfere with the operations.

25. Other Regulations

(a) Any exchange of provisions, films, spare parts or any kind of object, etc., between vessels in any port, requires the previous authorisation of the Customs House. Therefore, in order to apply for this permit, Masters are kindly requested to give a letter to the Agent detailing all articles that are to be transferred.

(b) It is forbidden, unless previously authorised by Customs House:
  to bring ashore any article or merchandise.
  to allow any boat, launch, tugboat or any other type of craft, to approach to the vessel at a distance of less than 25 m. except for the purpose of transferring passengers or to perform any service duly authorised.
  to lower ladders on any side of the vessel.

(c) All provisions, belongings and spare parts not declared in the corresponding documents, or found on board in excess of those declared, will be confiscated. This is valid also for the commercial stores of passenger vessels.

(d) Any mistake in the manifest must be amended within 48 hours after arrival of the vessel.

(e) All articles carried on board and destined for Cuban territory, must be declared in the cargo manifest or in the complementary documents.

26. Important Notice

Pollution: Very strict regulations are in force and Port Authorities keep a close watch on this matter. It is absolutely forbidden to pump or throw out of the ship, oil, dirty water, wastes of animal origin, dunnage wood, or any kind of Liquid or substance into the sea, whether inside or outside the ports and any infringement will bring the Master to Court.

SHIPMASTER'S REPORT: April 1989.

1. The radio room is no longer sealed.
2. The restrictions on shore leave no longer exist. Crew may go ashore day and night.
3. Foreign currency still has to be declared but may be spent without restriction.
4. It is not recommended that mail be forwarded to vessels.

Other rules and regulations are still as outlined in "Port Regulations".

FROM INFORMATION BOOKLET COMPILED BY MAMBISA AGENCIES

USE OF SOUND SIGNALS IN PORT: It is prohibited to use sound signals except those internationally known for safe navigation, fire or emergency.

DRY DOCK: There is a dry dock at the port of Havana with berthing capacity of 440 ft. length and 91 ft. width which can accommodate vessels up to 23 ft. draft.

SURVEYORS: Following surveyors are established in Cuba:

Cuban Ship's Register, Cuban Maritime Regulation Surveyors, Bureau Veritas, Lloyd's Register, German Lloyd and Russian Ship's Register.

Above listed surveyors should be contacted through the Consignataria Mambisa main office.

EIGHT HOURS DAILY WORK: We wish to call attention to the fact that although the working periods observed at the various Cuban Ports vary considerably, as for example, the port of Jucaro where the period is from 0600 – 1000 hrs., 1200 – 1600 hrs.; Caibarien 0700 – 1100 hrs., 1200 – 1600 hrs.; Havana 0700 – 1300 hrs., 1300 – 1900 hrs. etc., and others from 0700 – 1100 hrs., 1300 – 1700 hrs.

Labour Legislation presently in force provides that the number of hours to be worked is 8 hours daily, from Monday to Friday, and 4 hours on Saturday, for a total of 44 hours weekly.

HOLIDAYS:

National Anniversaries	*Holidays*
January 1st.	July 25th.
May 1st.	July 27th.
July 26th.	Sundays
October 10th.	

REPATRIATION: There are good facilities and repatriation can be arranged through Mambisa Agency.

SHIPMASTER'S COMMENTS: Also see "Shipmaster's Report" for Nuevitas dated February 1984.

Fresh Water: Always take full fresh water. Water barges available at Havana and Santiago. No fresh water at Jucaro or Boca Grande.

Documents: Sample Crew Manifest to avoid confiscation: 2 Radios, packet of paints, tape recorder (Akai), gloves, speakers, star plotter, cassette tapes, set of ship plans, earphones, plastic mac, 3 prs. sunglasses, dress uniform, calculator, battle dress uniform, matchstick model ship, brown suit, plastic battleship model, blue coat, bridge coat, 10 packs glue, grey trousers, 1 pk. razor blades, 3 khaki shirts, 1 Fernox medicine, 1 Savlon cream, 3 khaki shorts, 3 balsa cement, 5 uniform shirts, 1 stop watch, 1 briefcase, 2 coloured shirts, 1 tee shirt, 1 knapsack, 6 uniform white shirts, 1 photographic bag, 3 white shorts, assorted films, 4 ties, 2 cravats, 1 brown cardigan, 1 pullover, 1 dressing gown, 1 pair longjohns, 1 pr. sandals, 2 alarm clocks, 1 sextant, 4 watches, 1 boiler suit, 3 plastic trays, 2 beakers, 1 belt, 2 toy engines, cellotape, 14 wagons, gold braid, 8 points, keys, 8 curved rails, tape recorder cords, 4 vests, swimming trunks, 5 pants, 1 blue socks, 5 brown socks, 6 white socks, 1 cap cover, 1 pr. pyjamas, 1 silk scarf, 1 pr. black shoes, 1 pr. brown shoes, toilet articles, 1 copy stand, 1 enlarger, assorted chemicals, powersaw, typewriter, calculator, adding machine, 4 packs tea, 4 cameras, 1 lens, 1 light meter, 3M duplicator, binoculars, Sanyo tape cassette, assorted perfumes and curios. 1 kitbag, 1 flip-flops.

200 cigarettes, 1 spirits, number cans of beer, number of bottles of wine.

If in doubt – put it in a suitcase and lock it in the bonded store!

SHIPMASTER'S REPORT: December 1983.

All foreign currencies must be declared and may be used freely ashore.

A landing pass and foreign currency pass is issued to each member of the crew and they are to be accompanied by Seaman's ID Card or Discharge Book when going ashore.

A cabin is to be set aside and marked Transit Room. Would advise that anything and everything that is not required during your stay in Cuba be put in a suitcase and lodged in the Transit Room which is sealed on arrival and then left alone. All cameras must be placed under seal on arrival (i.e. in the Transit Room). Permission is granted to use them in Havana but was not allowed in Nuevitas.

A strict Customs search usually follows arrival with every cabin and compartment thoroughly searched. This vessel was not searched by Customs at Havana but was at Nuevitas.

Prior to departure from each Cuban port the vessel is searched by Harbour Master Guards.

On the whole relationship between ship and Authorities was good. The Agents proved very helpful and telex communication was satisfactory.

Only meats of origin U.S.A., Australia and New Zealand are permitted to be used whilst vessel is at a Cuban port.

The Port Authorities are very strict regarding rat guards which must be checked at frequent intervals, also garbage which must be placed in sealed bags ready for collection by shore labour.

SHIP'S OFFICER'S REPORT: November 1991.

Documents:

14 copies Crew List.
4 copies Provisions List (Cuban Form).
3 copies Personal Effects List (Cuban Form).
1 copy Vaccination List.
1 copy Maritime Declaration of Health.
8 copies Passenger List.

Officials: Customs, Immigration, Port Doctor, Harbour Master, Police Security and Rummaging gang normally board on arrival.

Customs/Rummaging gang check all cabins and offices, etc. All the drawers, closets, wardrobes and fridges are checked thoroughly. A drug squad with dogs also boards and checks for drugs.

It is advisable to keep all new clothes, gift articles, cameras, electronic equipment and magazines in a locker which is sealed by Customs. It is also advisable to keep a bare minimum of personal items in the cabin, remainder should be put in a suitcase and locked in locker. All foreign currency should be properly counted and declared on Personal Effects List. It is advisable to keep money in Master's safe.

U.S. Dollars can be taken ashore but all have to be shown at gate and entered on money card. Any items not declared are liable to confiscation. All cabins to be kept locked at all times. All passports are stamped on arrival and prior to departure.

Repatriation: Crew changes are possible but should be avoided if possible, due to customs/immigration problems. Flights from Havana to Madrid by Iberia every alternate day and Havana to Canada every day.

Medical: Facilities available, arranged through "Mambisa Havana". Agent insists on cash payments in U.S. Dollars for launch service, postal charges, doctors charges, etc.

General: U.S. Dollars can be freely used ashore. Shopping can be done in seaman's club near pier (Havana) or in Havana Libre (hotel).

Cigars, whiskey and beer are very cheap.

Customs/immigration board again prior to departure, all passports stamped and all cabins checked again for stowaways, etc.

Gifts are often requested by authorities while checking cabins.

ANTILLA: 20.50 N. 75.44 W. (See Plan)
(and sub-ports of Felton, Nicaro and Preston)

LOCATION: The Port of Antilla is located on the North side of Nipe Bay, on the North Coast of Cuba: Lat. 20° 50' N., Long. 75° 44' W.

Nipe is the largest bay in Cuba and is considered among the biggest in the world.

Within Nipe Bay there are 3 ports: Felton, Preston and Antilla, Antilla being the head port of a region, and very important because of its natural resources in agriculture, mining, etc., as well as for sugar industries close to the port.

The Antilla Agency of Mambisa attends also at the following ports: Preston, Felton, Nicaro, Banes, Tanamo and Vita.

Nipe Bay is suitable for large vessels with maximum draft up to 22.86 m. and a length of 400 m.

Nipe Anchorage has a draft of 22.86 m.

ENTRANCE TO PORT: Entrance to Nipe Bay is safe and free of risks. Limitations as to length and draft of vessels are only those imposed by the places of operations or ports.

Entrance channel is ample (0.75 miles wide at its head and 0.33 miles at its narrowest point, located South of Pt. Caimanes), having a minimum depth of 45.72 m. up to Saetia Anchorage.

From Saetia up to Antilla piers the distance is 10 miles.

Navigating toward Western Nipe Bay, in the direction of Antilla, after Saetia is past, to the South can be seen: Cayagima Cove, Point Cobos, the mouth of Mayari River and the Port of Preston.

To the North can be seen after departing from Saetia: the town of Ramon, located on high lands at the back of Melilla Cove, Pt. Berraco, Pt. Las Chivas, Honda Cove, Pt. Salinita, Hermenegildo Cove, Pt. Negra, Felipe Cove, Pt. Carbonera and Pt. Salina.

From the latter onward, Antilla's piers channel is navigated, and to the North can be seen Pt. Barrancones, Marbella Cay and finally the town and port of Antilla.

PILOT: *Where Pilot should be taken and distance to place of operation:* The place where Pilots board the vessels nominated to perform operations at Antilla, Preston, Felton, Banes or Nicaro, is located at 1 mile N.E. of Point Mayari, that is in an East/West line from Pt. Mayari lighthouse on the course of the bearings indicated by the port chart.

The exact position where Pilots board vessels is: Lat. 20° 47' 46" N., Long. 75° 32' 15" W.

From this point the distances to the ports are:

	Miles to pier
Antilla	13
Preston	6.5
Felton	5
Nicaro	13
Banes	17
Saetia Anchorage	2.5

Point Mayari Lighthouse consists of a conical/cylindrical steel tower, painted aluminium, 12.19 m. tall and its light is visible up to 10 miles away.

As the Pilot Station is located in Antilla, upon receipt of an ETA message from an incoming vessel, Mambisa Agency immediately informs the Pilots who depart accordingly to Saetia to await the vessel.

When a vessel arrives to Point Mayari, it should contact Mambisa Agency and Pilot by VHF.

ANCHORAGES: Anchorages at Nipe Bay are used only when waiting for berth, or at Saetia, to await favourable tide to enter Banes.

Saetia Anchorage: Located about 1,000 m. West of Pt. Carenero (Saetia).

Limitations: Draft 15 m., Length: 170 m. Swinging area: About 300 m. 7 vessels (170 m. in length) can be accommodated at this anchorage.

The bottom is soft mud but anchors hold well, ships usually anchor with 4 or 5 shackles of chain.

In front of this anchorage is the small town and beach of Saetia.

Usually this anchorage is used by vessels destined for Felton or to await favourable tide to enter the ports of Banes or Nicaro.

La Chiva Anchorage: Located at about 1.25 miles from Pt. Berraco, to the North on the Melilla Heights, the small town of Ramon can be seen.

Limitations: Draft 18 m., Length: 300 m. Swinging area: About 438 m. The anchorage can accommodate one vessel.

The bottom is hard sandy mud with loose stones and anchor holding is good. It is sheltered from the winds by Melilla Heights.

This anchorage is used for similar reasons as Saetia.

Cajimaya Anchorage: Located just in front of the port of Felton.

Limitations: Draft 7.0 m. – 12.0 m., Length up to 170 m. Swinging area: About 300 m.

6 vessels can be accommodated at anchorage.

The bottom is soft mud but anchors hold well.

Sheltered from winds by Saetia mountains, ships usually anchor with 3 or 4 shackles of chain.

This anchorage is used by vessels awaiting berth at Felton.

Pt. Salinas Anchorage: Located about 500 m. S.S.W. of buoy marking Salina Grande Shoal; Antilla Town is about 3 miles to the N.W. and at a similar distance is Preston to the S.S.W.

Limitations: Draft 9.1 m. – 17.0 m., Length: Up to 170 m. Swinging area: About 300 m.

About 9 vessels can be accommodated at this anchorage with the above limitations.

The bottom is soft mud but anchors hold well.

It is not sheltered from winds, being located in a spot where, when there is bad weather, the sea becomes rough.

Usually vessels anchor with 3 shackles of chain.

This anchorage is used by vessels awaiting berth at Antilla.

Preston Anchorage: Located about 1,200 m. N.N.W. of the head of Preston pier.

Limitations: Draft 10.0 m., Length: 170 m. Swinging area: About 300 m.

8 vessels can be accommodated at this anchorage with the above limitations.

The bottom is soft mud but anchors hold well, anchorage is open to the winds.

Usually vessels anchor with 3 shackles of chain, depending on wind force.

This anchorage is used by vessels awaiting berth at Preston.

Corojal Anchorage: Located about 320 m. N.W. from Antilla pier head, just in front of Antilla town.

Limitations: Draft 6.09 m., Length 145 m. Swinging area: 300 m.

Anchorage can accommodate 3 vessels with above limitations.

Bottom is soft mud but anchors hold well.

Anchorage is open to the winds and vessels anchor with 2 shackles of chain, depending on wind force.

This anchorage is used to wait for Port Doctor visit in cases of incoming vessels from foreign countries and also to await berth at Antilla.

There is a launch service to and from all anchorages for crew members, if requested by Master.

Antilla Anchorage No. 2: Located about 700 m. from Antilla pier head.

Limitations: Draft 7.10 m., Length 152 m. Swinging area: About 300 m.

Anchorage can accommodate 1 vessel only.

Bottom is soft mud but anchors hold well.

It is open to the winds and vessels anchor with 3 or 4 shackles of chain. If strong winds do blow, then vessels drop another anchor to reduce the swinging action.

This anchorage has the same use as Corojal Anchorage.

MAX. SIZE: Vessels' maximum official draft and length allowed to enter or sail from Antilla are: Length 186 m., draft 6.71 m.

Tankers having a length of 185.9 m. have called at this port to load molasses.

Entrance to or sailing from Nipe Bay and Antilla can be effected either during day or night-time.

CLEARANCE: All Port Authorities, Port Doctor, Customs, Immigration and Captain of the Port have their offices at Antilla. Vessels may proceed directly to sub-ports without entering Antilla for clearance. Port Authorities clear ships at sub-port when necessary.

Launch service is the preferable means of transportation used by the Port Authorities to the various sub-ports under Antilla jurisdiction.

There are Custom House Delegations at sub-ports of Preston, Nicaro, but no Immigration. The Custom House Delegate at the sub-port of Nicaro also acts as Delegate for the Captain of the Port.

Although there is no Port Doctor Delegate at the sub-ports, the General Hospital Doctors may act as such, if requested, in order to give a quick entry to the ship.

Notwithstanding the above, in those cases when a ship is coming from a Cuban or foreign port, destined to Nicaro, and happens to lose the slack water tide, it will be necessary for the ship to anchor at Saetia (Antilla) and to wait the next tide. In these particular cases the Port Authorities give entry to the ship at Saetia anchorage, and it is not necessary for another Port Authority visit at the sub-port of Nicaro.

RADIO: At Antilla, means of communications are: Telephone, telex and Post Office.

The Antilla Agency is connected to the National Telex System, which is the quickest means of communication.

Vessels proceeding to Cuba can communicate with Mambisa Antilla Agency through "CLA" Havana Radio Station which immediately relays the messages to Antilla by telex.

Masters must send their ETA messages simultaneously on VHF Channel 16 to Mambisa Antilla and Mambisa Havana.

TUGS: Name, *Macabi;* length, 81 ft. 1 in.; width, 24 ft. 0 in.; gross tonnage, 183.53; net tonnage, 86.00; motor, one diesel; h.p., 750; speed, 8.5 knots. Also available is tug "Ruski" of 1,200 h.p.

BERTHING: The 3 berthing spaces of this port have standard gauge railroad tracks.

Each pier is connected with 1 railway which is independent of the others, but with no car outlet at end of piers, consequently, to perform any movement, it is necessary to take out the remaining cars. For that reason, there is no road connecting the piers, and since piers are not paved, trucking operations cannot be performed.

Pier No. 4

North Side: Maximum length vessel allowed 170 m., draft 4.88 m. at base and 6.71 m. at head.

South Side: Maximum length vessel allowed 170 m., draft 6.10 m. at base and 6.71 m. at head.

Both berth places of this port have a standard railroad track for each side, which make it possible for trains to enter with sugar directly alongside ship.

The construction of this pier is concrete, that is the platform and the piling. It is protected by hard wood fenders and has a fixed red light at the S.W. end.

Each pier is connected with one railway which is independent of the other, but with no car outlet at end of piers, consequently, to perform any movement, it its necessary to take out the remaining cars. For that reason, there is no road connecting the piers, and since piers are not paved, trucking operations can not be performed.

Operations which are performed by this pier, are loading of bagged raw sugar, molasses and discharge and general cargo.

Coast Pier: Length 136 m., draft 6.10 m. even keel.

This dock is only used for discharging oil, cereals and loading of molasses.

Bacaladera Dock:

(a) Draft: 3.05 m. (bow)
3.66 m. (stern).
(b) Length: 170 m.

Dock is used for discharging liquid asphalt. The deposit is located at 20 m. from the dock.

STEVEDORES: *Port Operational Capacity:* Presently the port has only 7 gangs for working two vessels simultaneously, one at each side of the dock.

Average rate for loading raw sugar in bags is about 1,200 tons in two working periods of 8 hours each, one per hatch vessel.

Cargoes handled by the Port:

Imports: General cargo, diesel oil and gasoline.

Exports: Sugar and molasses.

Coastal Trade: General cargo, diesel oil, gasoline and kerosene.

MEDICAL: There is a hospital where crew members may be hospitalised.

TANKERS: Average discharging rate for gasoline, kerosene and diesel oil is about 300 t.p.h. Connections: 1×4 in., 1×6 in. and 1×8 in.

Molasses pumping rate is at an average of 35,000 gallons per hour. Two connections – 1×8 in., 1×12 in. diameter.

WATER: *(Potable or for boilers):* Available at berth or anchorage from barge with 400 tons capacity.

FUEL: Available by truck or rail-car.

PAPER/WOOD DUNNAGE: It is advisable that vessels nominated for operations at Antilla, or any of the ports listed as attended by Antilla Agency, arrive with enough wood dunnage.

Wood dunnage, although not impossible to obtain, sometimes is hard to secure, and to avoid delays it is better to have the vessel supplied at a prior port of call.

Paper is supplied if ordered at least 3 days in advance.

REPAIRS: No repairs can be performed.

AGENT: Attending the port of Antilla, and the sub-ports of Preston, Nicaro and Felton, also the port of Banes.

Agency Address: Empresa Consignataria Mambisa, Agencia de Antilla, Avenida 28 de Enero No. 65, Apartado No. 33, Antilla, Prov. de Holguin. Telephone: 88248 and 88225 (office); 88586 and 88347 (night). Telex: 021124. Cables: Mambisa Antilla.

Agency VHF works on Channel 16.

Mail and Parcels: Should be sent to the Main Office at Havana from where it will be sent to Antilla by the quickest means possible.

SUB-PORTS:

Distance from Antilla to:

Preston (Guatemala) 7 miles.
Felton 11 miles.
Nicaro 14 miles.

To the port of Banes, which is attended by Antilla Agency, 50 km. Highway transportation is used from Antilla to Banes.

Time from Antilla to:

Sub-port	*Launch*	*Highway*
Preston	1 hour	1 hour 45 minutes
Felton	1 hour 30 minutes	2 hours 15 minutes
Nicaro	2 hours	3 hours

There is only a regular launch service from Antilla to Nicaro, leaving daily from coastal pier Antilla at 0900 hrs., arriving Nicaro at 1100 hrs.

(a) SUB-PORT OF PRESTON:

LOCATION: This port is located on the North coast of Cuba: Lat. 20° 46′ N., Long. 75° 40′ W.

Preston is one of the 3 ports located within Nipe Bay and is situated on the South coast of said bay, on a peninsula named "Punta Tabaco", S.E. of Antilla.

Traditionally this port has shipped the production of "Guatemala" sugar mill (formerly "Preston") which ranks among the biggest in the sugar industry.

Mayari River flows to the East and close to the port, and maintenance dredging is necessary alongside pier to preserve the depth required.

Dredging is effected at the West side of pier as the East side is not used.

PILOT: From the place where Pilots board the vessels to Preston pier the distance is 6.5 miles.

ENTRANCE TO PORT/CONDITIONS/LIMITATIONS: As is described under Antilla, up to Pt. Carenero (Saetia), the channel is common to the 3 ports located in Nipe Bay.

On reaching Pt. Carenero, vessels take a course Northwestward in the direction of the buoy marking "La Estrella" Shoal and then take a course W.S.W. up to Preston pier.

On the North side can be seen: Pt. Piedra, Melilla Cove and on the hills the town of Ramon. Pt. Las Chivas and the rest of coast of the bay up to Antilla port and town, which is clearly visible.

On the South side can be seen: The entrance to Cajimaya Cove and Felton town, Pt. Cobos, light buoy No. 5 marking "La Estrella" Shoal, the mouth of Mayari River and lastly the town and port of Preston.

Maximum draft and length allowed for vessels to enter/sail from Preston: Max. length 146 m., max. draft 6.10 m.

Entrance to or sailing from Preston can be effected during day or night-time.

TIDAL VARIATION: Tidal variation at this port averages from 2.25 ft. to 2.5 ft.

CLEARANCE: See "Antilla". Port Doctor, Immigration and Port Captain travel from Antilla to Preston to give ship's entry. Custom Delegation at this sub-port only occasionally, and in order to avoid delay Preston Hospital Doctor clears the ship.

Vessel can proceed directly to this sub-port, since Port Authorities come from Antilla to give ship's entry.

RADIO: See "Antilla".

TUGS: See "Antilla". No tug available, but can be obtained from Antilla.

BERTHING: *Preston Pier:* The pier (Length 170 m.) is located at the Northern extremity of Punta Tabaco. Its construction is entirely of hardwood, including its piling, and at the moment it is not in good condition and requires rebuilding.

Along the pier run double standard railroad tracks but there is no outlet at pier's end.

Manoeuvers are carried out during slack water with assistance of a tug, and wind Force 2 (maximum).

Operations handled by this port:

Exports: Bagged raw sugar and molasses.

Imports: General cargo and occasionally fuel oil.

Coastal Trade: Discharging of fuel oil.

MEDICAL: There is a hospital at Preston which offers very good service to ship's crew. In cases requiring special attention, patients can be taken to Holguin, where there are reliable specialists.

TANKERS: Molasses pumping rate average of 75,000 gallons per hour.

Fuel Oil: 2 connections – 1×8 in., 1×10 in. diameter.

Molasses: 2 connections – 1×8 in., 1×10 in. diameter.

WATER: *(Potable or for Boilers):* Delivered by pipeline to ships while docked to Preston Pier.

FUEL: Not available.

REPAIRS: No repairs can be performed at Preston.

TRANSPORTATION: Usually transportation between Preston and Antilla (and other nearby ports) is performed by launch and also by road.

From Preston there are the following distances and travelling time to:

	by launch	*by road*
Antilla	7 miles – 1 hour	1 hour 45 minutes
Nicaro	8 miles – 1 hour	1 hour 15 minutes
Felton	5 miles – 45 minutes	45 minutes

COMMUNICATIONS: Vessels cannot communicate directly with Preston. Means of communications between Felton and Antilla (and other nearby ports) is only by telephone.

Telephone communications are rather irregular.

PORT AUXILIARY EQUIPMENT: This port has no auxiliary equipment.

AGENT: See "Antilla".

(b) SUB-PORT OF NICARO (LENGUA DE PAJARO), LEVISA BAY:

LOCATION: Lat. 20° 43' N., Long. 75° 33' W. **(See Plan)**

The port of Nicaro is situated inside Levisa Bay, on a small peninsula named "Lengua de Pajaro", located at the Southwestern part of the bay.

Levisa Bay is landlocked, sheltered and moderately ample. Its shores are rather irregular due to numerous points, creeks, coves and inlets. The centre of the bay is free of cays, but close to the coast and around it, there are several cays.

Ample zones of shoals almost entirely cover its extension, except the channels and the anchorage zones.

Nicaro region is very rich in mineral fields and the port is used principally to export the production of the mining enterprise located there.

At the West side and next to Levisa Bay, Nipe Bay is located, and to the East, having a common entrance, which is divided as a fork by Pt. Dos Bahias, is Cabonico Bay.

PILOT: Distance from the place where Pilots board the vessels to Nicaro anchorage is 12 miles, to Nicaro pier 13 miles.

ENTRANCE TO PORT/CONDITIONS/LIMITATIONS: The entrance channel for the port of Nicaro is difficult for vessels over 107 m. length, due to its narrowness and because of having sharp turns, some of them forming angles of almost 90°. Also, its bottom and banks are rock and coral. Regarding draft it offers no obstacles as there are about 53 m. and 14.3 m. depths max./min. respectively.

To minimise all risks and perform a fairly safe crossing of the entrance channel, while entering to or sailing from this port, the following measures must be accomplished:

(i) Entrance or sailing to be effected only during daylight hours, at slack water.

(ii) Tug assistance is required for vessels exceeding 107 m. in length.

(iii) Vessel's length should not exceed 152.4 m., the extreme max. length allowed, if really necessary, being 156.37 m.

(iv) Simultaneous entrance or sailing of 2 or more vessels is not permitted.

Channel is navigable by only one course.

Max. draft allowed to vessels operating at Nicaro Pier is 28 ft. forward and 29 ft. aft. (at low tide).

The restrictions for vessels to sail or enter this port during night-time are due to the port conditions such as: lack of light buoys in the bay and the channel, as well as the inherent dangers in the channel due to its narrowness and its winding shape.

ANCHORAGES: There are two anchorages at Nicaro:

Anchorage No. 1: Located at about 1,200 m. S.W. of Pt. Gorda and 1,500 m. N.N.E. of Raton Cay.

Limitations: Draft: 9.14 m. – Vessel's length: 156 m.

Swinging area: About 200 m.

Can accommodate 1 vessel only.

Soft mud bottom but anchors hold well.

It is open to the winds. Usually vessels anchor with 2 or 3 shackles of chain.

Anchorage No. 2: Located at about 1,000 m. N.E. of pier's head.

Limitations: Draft: 9.14 m. Vessel's length: 156 m.

Swinging area: About 200 m.

Can accommodate 1 vessel only.

Soft mud bottom but anchors hold well.

It is open to the winds, usually vessels anchor with 2 or 3 shackles of chain.

At both anchorages launch service is available at Master's request.

RESTRICTIONS: Entry and sailing during daylight only. Port can handle two vessels at one time. One dry cargo vessel loading or discharging and one tanker.

MAX. SIZE: LOA 156 m. Max. draft 9.14 m.

TIDAL VARIATION: Tidal variation averages from 2.25 ft. to 2.5 ft.

CLEARANCE: Although Nicaro, under Cuban Customs Laws and Regulations, is a sub-port of Antilla, all Authorities are located at Nicaro (delegations).

RADIO: Vessels proceeding to Cuba can communicate with Antilla Agency through "CLA" Havana Radio Station which promptly relays the message to Antilla.

Vessels cannot communicate directly with the port of Nicaro.

Masters must send their ETA messages simultaneously to Mambisa Antilla and Mambisa Havana.

Means of communications at Nicaro are long distance telephone and telegraph.

Telephone communications are rather irregular and difficult, therefore any instruction or sudden change in previous instruction to vessels operating at Nicaro may not be delivered in time.

TUGS: Obtained from port of Antilla. Therefore it is recommended that when vessels are assigned to this sub-port, advice of their ETA be given with sufficient time prior to vessels' arrival. Particulars of tugboats are shown under "Antilla" information.

BERTHING: *Nicaro Pier:*

North side:

(a) Max. draft: 9.14 m. (b) Max. length: 156 m.

On this side are performed operations of general cargo, fuel oil, diesel oil and liquid ammonia.

South side:

(a) Max. draft: Base 6.71 m. (b) Max. length: 156 m.
Head 9.14 m.

On this side are performed operations of Anthracite coal, Nickel and general cargo.

At the South side, there is less water due to coal falling in water during discharge, which prevents vessels docking at the head with a draft over 5.71 m.

This pier was built of reinforced concrete, 210.31 m. long, of which, counting from the head of pier, 137.16 m. correspond to the berthing area, and the remaining 73.15 m. are the narrow part of the pier connecting with the shore, not used for operations.

Along both sides of pier runs a railroad track of standard gauge, and also trucks can operate.

At the South side of pier, mounted on rails, is a gantry crane.

The boom of the crane is about 15.24 m. long, and although mounted on the South side, can operate also at the North side, which is not often done, because it looses much of its efficiency and speed.

The crane is electrically powered, and it is equipped with a grab 1.5 tons and another of 3 tons capacity, steel slings, special slings for loading nickel, etc.

The above equipment, excluding ship's tackle, is the only equipment available for loading or discharging at this port.

Cargoes handled by the Port:

Imports: Anthracite coal, liquid ammonia, general cargo and occasionally diesel oil.

Exports: Nickel oxide, nickel sinter.

Coastal Trade: Fuel oil, diesel oil and general cargo.

STEVEDORES: Loading or unloading of general cargo, nickel, mineral coal, etc., is performed by port workmen of sub-port of Nicaro.

Raw sugar-loading rate. At present, average loading rate in a period of 4 hours per gang, is about 1,330 bags.

Bags per sling (Guatemala sugar): 6 bags of raw sugar (of 220 pound type) per sling. Nicaragua sugar: 6 bags of raw sugar (of 220 pound type) per sling. Sugar bags from sugar mills Guatemala and Nicaragua are transported from respective mills to Nicaro in railroad flat cars, already slung.

Refined sugar. No refined sugar is exported.

General cargo discharging rate. General cargo of a fragile nature and careful handling: about 5 tons per gang hour. General cargo of sturdy nature and easy handling about 20 tons per gang hour.

Bagged cargo: about 30 tons per gang hour.
Mineral coal: at present the shore crane is averaging 110 t.p.h.
Nickel: at an average of 800 bags (26 tons) per gang hour.
Bulk sugar: no bulk sugar equipment available. In those cases when bulk sugar operations are performed, the necessary equipment is obtained from sub-port of Preston.

Working Hours: Sugar: Monday to Friday: 0700 – 1100 hrs., 1300 – 1700 hrs. Saturday: 0700 – 1100 hrs.

Nickel loading and other cargoes: Monday to Friday: 0800 – 1130 hrs.,1230 – 1700 hrs. Saturday: Same periods.

On Sundays the port does not perform any work, except discharging of tanker vessels.

Labour legislation presently in force provides that the numbers of hours to be worked is 8 hours daily, from Monday to Friday, and 4 hours on Saturday, for a total of 44 hours weekly.

MEDICAL: Hospital at Nicaro offers good service to ships' crew members. In case of special attention, the patient can be taken to Holguin, where there are reliable specialists.

Dental care is available at Levisa, 6 km. distant.

TANKERS: Liquid Ammonia: 2×6 in. Fuel oil: 2×8 in. Diesel oil: 1×6 in.

WATER: *(Potable or for boilers):* It is supplied to vessels while docked to Nicaro Pier (both sides). Average delivery rate: 30 t.p.h.

FUEL: Not available.

REPAIRS: There is no repair shop at this port.

DISTANCES: The nautical distance between Nicaro and Antilla for vessels drawing over 6 ft. draft is 24 miles. For small craft drawing less than 6 ft. the distance is 14 miles. By highway, 130 km. from Nicaro to Antilla.

Sea transportation takes 1 hour 45 minutes, and highway 2 hours 30 minutes. There is a daily launch service between Nicaro and Antilla. Launch leaves Antilla 0930 hrs. arriving at Nicaro at 1130 hrs. and a launch leaves Nicaro at 0930 hrs. arriving at Antilla at 1130 hrs.

DEVELOPMENTS: Pier of 225 m. with berthing for 2 vessels and depth of 10.0 m. nearing completion.

SHIPMASTER'S REPORT: September 1990.

Documents:

12 copies Crew List.
3 copies Stores List (including narcotics, ship's cash, bonded stores and ship's stores).
3 copies Crew Declaration (including jewellery, cameras, electronic equipment, video and radio cassettes, cash and sun glasses).
1 copy Health Declaration.

Pilotage: Pilot boards about 1 mile N.E. of Pta. Mayari.

Restrictions: Vessels can only enter at slack water because of the current, twice a day. Sailing possible at any time.

Tugs: Use of tugs not compulsory.

General: The Authorities came on board as soon as the vessel berthed.

Crew members are issued with shore passes, and a form on which watches, cameras and money are entered, when crew member goes on shore leave.

Crew members are not allowed to take Cuban money back to the ship, or change it ashore with the local people.

The Master has to sign many bills for the Agent before departure, all should be inspected carefully.

Before entering port, vessel should check that it has sufficient dunnage and lashing materials, as it is in short supply, expensive and takes a long time to arrive. Dunnage costs U.S.$ 116.00 per cu.m. Wire clamps and steel wire are difficult to obtain, and vessel may only receive half the amount requested.

AUTHORITY: Sub-port of Nicaro is under Antilla Custom House jurisdiction. There is a Custom House Delegate at this sub-port, who acts as a Delegate of the Captain of the Port.

Vessels at Nicaro are handled by personnel of Antilla offices who visit Nicaro, and are located at Oficina de la Marina, Tel. 216. In case this office is closed, these personnel could also be contacted through Customs House telephone of Nicaro.

AGENT: Antilla Agency personnel attend. Agent has a small office, close to the pier, telephone number 96220.

(c) SUB-PORT OF FELTON:

LOCATION: Lat. 20° 44' 45" N., Long. 75° 35' 40" W. **(See Plan)**

Felton, as are Antilla and Preston, is located in Nipe Bay and is the closest port to the Bay entrance.

It is located 1.75 miles to the S.W. of Saetia, just in Cajimaya Cove and 3 miles East of Preston.

At the present time this port mainly handles the importations of raw materials for the fertiliser plant in the vicinity of the port.

PILOT: From the place where Pilot boards the vessel to Felton Pier there is a distance of 5 miles.

ENTRANCE TO PORT/CONDITIONS/LIMITATIONS: As described under Antilla, up to Pt. Carenero (Saetia), the channel is common to the three ports located in Nipe Bay.

On reaching Pt. Carenero, vessels alter course Southward towards Felton Channel and after four changes in the pilotage route the port is seen.

The most remarkable points of visual orientation after Pt. Carenero is sailed past, are:

On the East side: Saetia Cay, Points Campeador No. 1, 2 and 3; light buoys Nos. 1-A and 3-A (green light) and the unlit buoys indicating the port channel.

On the West side: Pt. Cobos, Pt. Largo, the town of Felton and the unlit buoys marking the channel.

Entrance to the port up to Cajimaya Anchorage can be effected either in day or night-time, but docking or undocking is performed only during daylight hours, if it is not windy.

Anchorage for this port is Cajimaya Anchorage, but Saetia Anchorage can also be used.

RESTRICTIONS: Manoeuvers are limited to daylight hours and with wind of Force 3 or less.

Vessels with LOA less than 153 m. can operate with draft up to 8.53 m.

MAX. SIZE: LOA 170 m. Max. draft 7.92 m.

TIDAL VARIATION: Tidal variation at this port averages from 2.25 ft. to 2.5 ft.

CLEARANCE: Vessels can proceed directly to Felton, as Port Authorities from Antilla are taken by launch to visit vessel at Felton Pier, or at sea in Cagimaya Anchorage.

RADIO: It is recommended that ETA messages be given to Mambisa Antilla and Mambisa Havana simultaneously.

The means of communication between Felton and Antilla are telephone and telegraph.

TUGS: 1×1,200 h.p. Use of tug is compulsory.

BERTHING: The place of operation of Felton is a solid coastal-pier built of concrete, although vessels are not docked directly at it.

Vessels are berthed to 4 solid steel dolphins, 20 m. apart.

Dolphins are located at about 15.24 m. from the side of the pier and therefore vessels are 15.24 m. off the pier.

Pier is located at the East side of that portion of land on Nipe Bay and runs from North to South.

Besides the four solid dolphins, vessels are secured also to two mooring buoys located 250 m. to the West, in front of and parallel to the pier.

There is an electric shore crane mounted on rails that runs along the pier, which is used mainly for the discharge of bulk raw materials for fertilisers, with a 4 ton grab. If the grab is removed the crane is capable of lifting up to 40 tons, and can be used for the discharging of heavy equipment, such as tractors, bulldozers, etc. This crane has a wide field of operation.

Also in operation at this port is a device called "Unicular", a kind of hopper-car, which runs on rails from the hatch of the vessel to the pier, and is loaded by ship's gear to its full capacity of 3 tons.

Cargoes handled by the Port:

Imports: Fertiliser raw materials in bulk, occasionally general cargo.
Coastal Trade: Discharge of fuel oil, occasionally general cargo.
Exports: None.

MEDICAL: There is a small hospital at Felton where crew members requiring medical and dental care are attended.

Cases requiring surgical or specialised treatment, are sent either to Mayari Hospital or Lenin Hospital, at Holguin.

TANKERS: 1×8 in. line for fuel oil.

FRESH WATER: Temporarily no water available at Felton.

FUEL: Not available.

REPAIRS: Cannot be performed at this port.

TRANSPORTATION: Usual means of transportation between Felton and Antilla, and other nearby ports, is by launch and also by road.

From Felton there are the following distances and travelling time to:

	By launch	By road
Antilla	11 miles – 1 hr. 30 min.	2 hrs. 30 min.
Nicaro	3 miles – 30 min.	50 min.
Preston	4 miles – 40 min.	1 hr.

DEVELOPMENTS: Mole for 6 vessels to be constructed.

AUTHORITY: The Port Authorities are located at Antilla and visit Felton as necessary.

AGENT: See "Antilla". Mail should be sent through Antilla's main office by registered mail. Spares by railway express to Antilla.

BANES: 20.54 N. 75.41 W.

LOCATION: Banes is located on the North coast of Cuba: Lat. 20° 53' N., Long. 75° 40' W.

Banes is a sheltered, land-locked port located next and to the West of Nipe Bay.

Traditionally this port used to ship raw sugar and molasses, that is, the production of "Nicaragua" sugar mill, formerly "Boston".

Due to limitations imposed by the characteristics of this port to the length of vessels, and the constant increase in size and tonnage of vessels operating currently in Cuba, gradually the port lost its use and importance, and nowadays is only used for coastal trade.

While approaching Banes, the points of visual orientation are:

Banes Bay Light, shown from a red iron skeleton structure, 9.14 m. above sea level, situated about 365 m. Southward of Pt. Fuerte; a small house located on the Southern side of the entrance to bay, and the port entrance itself, cliffs at both sides and forming a remarkable canyon.

Banes Lighthouse is located on the Western extremity of Caracolillo Beach, between Pt. Fuerte and Pt. Penasco.

At the extremity of Pt. Penasco there is a masonry house, visible up to 2 or 3 miles away.

PILOTAGE: Vessels should pick up Pilot at 20° 53' N., 75° 29' W.,1 mile N.E. of Banes Canyon Lighthouse. Pilot station located at Embarcadero (Banes). Agent informs Pilot of ship's arrival by means of local telephone. Distance from point where Pilot boards vessel to pier is about 6 miles.

ANCHORAGES: *Macabi Anchorage:* Located S.S.W. of Nicaragua Pier.

Limitations: Max. draft 9.45 m., max. length 109 m. Swinging area: About 620 m.

Anchorage can accommodate 2 or 3 vessels.

Bottom is soft mud but anchors hold well and vessels anchor with 3 or 4 shackles of chain.

RESTRICTIONS: Entrance is through narrow channel with sharp turns where there is a strong current. For this reason vessels can only enter and sail on slack water tide and during daylight. Assistance of tug necessary for entering and sailing. Bottom and banks are rock and coral. Depth about 18.29 m.

MAX. SIZE: Max. length due to characteristic of channel is of 106 m. Due to insufficient water at pier, and in bay, ships are limited to draft of 5.79 m.

Average of about 2 ft. 4 in. between high and low tides.

RADIO: Ships can communicate with port by wireless via CLA, but recommended that ETA message be sent to Antilla Agency, simultaneously advising Mambisa Havana.

TUGS: At present no tug available, but when needed same is requested from Antilla. Particulars of tug shown under Antilla information.

BERTHING: *Nicaragua Pier:* (formerly Banes Pier): Max. length allowed to vessels 106 m., draft 5.18 m. at base and 5.79 m. at head.

The pier is in very bad condition and is out of service.

TANKERS: Fuel oil: 1×8 in. diameter. No cargo operations performed at anchorage.

MEDICAL: There is a hospital where sick crew members may be hospitalised. Dental care is also available.

STEVEDORES: *Working Periods:* For discharge of fuel oil: 24 hours a day, 7 days a week.

Dry cargo vessels operate Monday to Friday: 0700 – 1100 hrs., 1300–1700 hrs. Saturday: 0700 – 1100 hrs. Sunday: No work performed.

Labour legislation presently in force provides that the number of hours to be worked is 8 hours daily, from Monday to Friday; and 4 hours on Saturday, for a total of 44 hours weekly.

FRESH WATER: Fresh water supplied, delivered by 3 in. diameter pipeline.

FUEL: Not available.

REPAIRS: No repairs can be effected at this port.

TRANSPORTATION: Transportation between Nicaragua Pier and Antilla or Banes is by road. From the pier to Banes there is a distance of 15 km. and to Antilla 50 km.

COMMUNICATIONS: Only means of communications between Antilla and Banes are telephone and telegraph.

PORT AUTHORITIES: All Port Authorities are located at Antilla except Port Captaincy which is located at Banes.

Authorities travel from Antilla to clear vessels at Banes.

AGENT: See "Antilla".

For information regarding ship's operations, Antilla Agency should be contacted. Antilla office personnel travel to Banes to attend vessels operating there. Any mail should be addressed to Antilla Agency. Spare parts by railway express.

CAIBARIEN: 22.32 N. 79.28 W.

LOCATION: This port is located on the North coast of Cuba: Lat. 22° 32' N., Long. 79° 28' W.

Port operations are effected at Cay Frances Anchorage, 16 miles from the City of Caibarien.

In rough weather, operations are generally suspended, because it is not possible for the lighters to remain alongside ship.

In spite of the fact that all cargo operations are effected by lighterage, this port is most efficient and very often surpasses the cargo rates of other ports.

PILOTAGE: Pilots board vessels 0.5 mile from Catalina buoy (entrance) of Cay Frances Anchorage. Pilot station is located at Caibarien. Usual means of communication is radio-telephone, which is available at Port Captain's Office in Cay Frances. Advice also given by motor-launch.

Distance from point where Pilots board vessels to:

Inner anchorage (La Caldera)	–	2 miles
Outer anchorage (La Poza)	–	0.5 mile
Outer anchorage (Port Buoy)	–	at same place where Pilots board vessels.

ENTRANCE TO PORT/CONDITIONS/LIMITATIONS: The port is entered directly from open sea, and there is no entrance channel. Vessels must proceed to the first buoy of Outer Anchorage (Catalina Buoy), and at that point pick up the pilot.

Vessels can enter or sail from Frances Cay Anchorage with 200 m. length and with a maximum draft of 10.67 m.

When vessels draw less than 6.09 m., they proceed to the Inner Anchorage (La Caldera). When vessels draw 6.09 m. up to 7.92 m., they proceed to the Outer Anchorage (La Poza), and those drawing over 7.92 m. proceed to the third anchorage (Port Buoy).

The following regulations must be observed during vessel's stay at Caibarien Roads:

Vessels arriving with a draft of 5.94 m. or less:

(a) All ships arriving with a draft of 5.94 m. or less must proceed to the Inner Anchorage for loading or unloading, being compulsory to remain in this anchorage until reaching a draft of 6.10 m. even keel.

(b) If Master refuses to proceed to this Inner Anchorage with a draft of 5.94 m. or less, he incurs a penalty of extra charge of about seven cents on each bag of sugar to be delivered in this port, payable to the crew of the sugar barges employed in the transportation of cargo from shore warehouse to the anchorage of Frances Cay.

Shifting or changes of anchorage:

(a) Vessels must remain at the same place where the official pilot of the port anchored the vessel.

(b) It is not allowed, by the Port Authorities, to shift or change the vessel's place indicated by the official pilot of the port, without authorisation from Customs House official in charge on board the vessel. Also all shiftings and changes of anchorages will have to be done under the supervision and command of the local pilot.

(c) The Master of the vessel will notify the Customs House officer on board, when shiftings or changes of anchorages are required, then the Customs House officer will notify the pilot accordingly in proper time, as they are the official pilots and the only ones authorised to perform the shifting or change of anchorage places.

Please also note that in case the aforementioned orders are not followed or observed by the ship's Master and/or ship's officers, a penalty or fine of minimum $ 500.00 (five hundred dollars) will be charged to the vessel, which fine will have to be paid by Master prior to departure from the port. Besides the penalty, no cargo will be delivered to the ship if she is anchored in any place other than that indicated by the local pilot.

Careful attention should be paid to these important notices in order to avoid unnecessary expenses, responsibilities and loss of time during stay loading vessel in this port.

Frances Cay lights are visible at a distance of 8 miles away, and stand on a concrete square pyramid tower, painted white, in the following position: Lat. 22° 38' 21" N., Long. 79° 15' 12" W.

RESTRICTIONS: Entry and departure only possible during daylight hours.

MAX. SIZE: *Entering and Leaving Caibarien:* LOA 200 m. Draft 10.67 m.
Inner Anchorage – La Caldera: LOA 150 m. Draft 6.10 m.
Outer Anchorage – La Poza: LOA 170 m. Draft 7.92 m.
Outer Anchorage – Port Buoy: LOA 200 m. Draft 10.67 m.
Ponton San Pascual: LOA 150 m. Draft 5.10 m.

RADIO: Means of communications between Caibarien and Cay Frances is radiotelephony.

Several tugs operating at this port are also equipped with radiotelephony; likewise stevedores enterprise, Port Captaincy and the molasses reservoir (Ponton San Pascual).

The official radiotelephony hours of communication are: 0800 – 0900, 1100 – 1400 and 1600 hrs., but after these hours, other communications can be established, upon request.

At Caibarien there are the following means of communication: National wireless telegraphy, telegrams, long distance telephone and Post Office.

Mambisa Caibarien Agency is connected with the National Telex System and this is the best means of communication with this port.

Vessels navigating to Cuba can send their messages to Caibarien through "CLA" Havana Radio Station which relays the messages promptly to Caibarien.

Masters must send their ETA messages simultaneously to Mambisa Caibarien and Mambisa Havana.

Pilot VHF works on Channel 16.

TUGS/BARGES: The port has several barges and 3 tugs for towing the barges.

STEVEDORES: Sugar working periods: Monday to Friday 0700 to 1100 hrs. and 1300 to 1700 hrs. Saturdays 0700 to 1100 hrs. Sunday, no work is performed unless urgent.

Although bagged raw sugar is reported as an exportation product of the port, for the last 2 years no sugar has been exported through Caibarien.

Loading rate: About 1,000 bags of raw sugar per gang-period. For each gang, not less than 1,950 bags are placed alongside vessel for each 8 hours working period.

For vessel able to make faster reception, it is possible some days for about 3,000 bags to be loaded.

Bags per sling: 5 bags per sling loaded.

Work capacity: 2 vessels can be operated simultaneously.

General cargo: Only empty jute bags imported and discharging rate approx. 20 tons per gang hour.

MEDICAL: There is a hospital at Caibarien for sick crew members.

TANKERS: Only blackstrap molasses exported by this port. When tankers arrive drawing less than 6.10 m. or in ballast, they dock at Pontoon or Hulk *San Pascual,* which is located in 6.10 m. of water, proceeding then to complete at another port, or are shifted from this place to La Poza or Port Buoy Anchorages, where they complete the cargo, which is delivered by barges.

Average pumping rate 55,000 gallons per hour.

FUEL: No bunkers available.

FRESH WATER: Available.

DUNNAGE: No wood available, paper available if requested well in advance.

REPAIRS: Minor repairs only. Repair shops at Caibarien, but due to distance from Caibarien to Cay Frances, it is difficult and expensive to perform repairs.

TRANSPORTATION: Transportation means to and from Caibarien are poor, although railroad and bus services are available.

Best means of transportation is by train or bus to Santa Clara and from there transportation is available to any place or city.

AUTHORITY: All port authorities located at Caibarien 16 miles from Cay Frances anchorage, where they travel by launch or motor-boat to clear vessels.

AGENT: Empresa Consignataria Mambisa, Agency Caibarien, Avenida 9 No. 601, Apartado No. 72, Caibarien, Prov. de Las Vilas. Telephone: 3-3706 (office). Telex: 041224. Cable: Mambisa Caibarien.

As Caibarien has no air mail or air express service, all mail and parcels should be sent to the Havana main offices from where it will be relayed by the quickest means to Caibarien.

CARDENAS: 23.03 N. 81.12 W. (See Plan)

Cardenas is the Northernmost port of Cuba being in a large bay 9 miles wide N.W. to S.W. and from 6 to 10 miles long from West to East.

It is a shallow bay with muddy bottom.

PILOTAGE: Pilots board vessels in vicinity of Cayo Piedras.

Pilot station at Cardenas. Distance from where Pilot boards to the pier is 16 miles, and to Cayo Diana 7 miles.

APPROACHES: Entrance to port is effected between Monitos Cay and Piedras Cay or between Piedras Cay and Mono Cay.

The channel head is located at a point almost equidistant to Blanco Cay and the end of Hicacos peninsula, but closer to the latter.

It is an artificial channel but it has no narrowness and no turns.

Its bottom is rock, sandy at the head and for the first mile, and muddy all the rest of its course.

In front of the pier the channel opens in the shape of a funnel forming around it the inner harbour or basin.

Approaching Cardenas, the most conspicuous points of visual orientation are:

Piedras Cay lighthouse which stands 24 m. above high tide, a stone cylindrical construction on a white building, its white light visible up to a distance of 14 miles.

Southwestward of Piedras Cay the long ribbon of white sands of Varadero Beach can be seen, and in the background the hotels and buildings.

To the S.E. Diana Cay lighthouse, a 38 ft. high metal tower and the string of cays such as: Chalupa, Romero, Blanco, etc.

RESTRICTIONS: Considering that from the place where Pilots board the vessels up to the pier or vice-versa takes about 4 hours, including manoeuvres, vessels must commence manoeuvres to enter or sail from this port at least 3 hours before dusk. Vessels are allowed a maximum length of 170 m., max. draft of 5.2 m. Tidal variation averages 2 ft.

In case of large vessels, it is necessary to wait for slack water for crossing the channel stretch known as Buba Channel, about 2 miles long, between Buba and Diana Cays.

ANCHORAGES: *Quarantine Anchorage No. 1:* Located 0.5 miles E.S.E. of Mono Cay, draft allowed 8.0 m.

Triangulo Anchorage No. 2: Located between Piedras Cay, Mono Cay and Buoy No. 1, draft allowed 7.0 m.

Diana Cay Anchorage No. 3: Located about 7 miles from pier, draft allowed 6.24 m.

Bay Anchorage No. 4: Located 2 miles from pier, draft allowed 4.27 m.

Cayo Piedra Anchorage: Located 16 miles from pier in the open sea, swinging area unlimited, draft allowed 12.19 m.

MAX. SIZE: LOA 170 m. Draft 5.2 m.

RADIO: Vessels navigating to Cuba can communicate with Mambisa Cardenas through "CLA" Havana Radio Station which immediately relays the messages to Cardenas.

While navigating in Cuban waters approaching Cardenas, vessels can communicate by radiotelephone with "CLW" Cardenas Radio Station on 2760 kHz.

Masters must send their ETA messages simultaneously to Mambisa Cardenas and Mambisa Havana.

TUGS: Normally tug not required to assist berthing, but when vessels have to berth head to shore, assistance of tug is necessary.

BERTHING: The only place of operation at Cardenas is its pier.

It is of solid reinforced concrete construction having double standard railroad tracks along the length of pier, on each side. It is also well paved and trucking operations can be performed alone or in combination with railroad operation.

Railroad cars do not interfere with cargo operations, as once emptied they can be carried out by shifting them to the second track or by going around the pier by the opposite side.

Tankers discharging fuel can be operated at either side or at the pier head.

There are 3 fresh water intakes on each side and one at the head of the pier.

Pier is capable of operating 5 vessels at a time, that is: 4 regular size vessels, 2 at each side, and a tanker at the head.

Both sides of pier are of equal length and have same facilities, being at the N.W. and the S.W. sides.

Cardenas Pier:

Length 290 m., width 80 m. (262 ft.). Max. draft allowed for vessels' operations 5.2 m.

The dock has space to dock 4 vessels (2 at each side) (South side out of service), and a small size vessel at the head of pier, but personnel available at present time is enough for working only 1 dry cargo vessel and a tanker vessel loading national crude oil or discharging fuel oil. Dredging of the port has recently been completed and there is a plan to increase port personnel

No operations at bay or anchorage performed at this port.

Cargoes handled by the Port: Imports: General cargo, bagged fertilisers, flour, lumber and wood pulp, etc.

Exports: Bagged refined sugar.

Coastal trade: Loading national crude oil and discharging of fuel oil.

STEVEDORES: Export of refined sugar and alcohol. Port has the following auxiliary equipment: 1 shore crane, 3 fork lift trucks, 4 conventional tractors, 3 rail tractors.

Working periods: loading sugar from Monday to Friday 0700 – 1100 hrs., 1300 – 1700 hrs.; Saturday 0700 – 1100 hrs.; Sunday: no work performed.

When vessel does not achieve daily rate during regular hours, work is carried out from 1900 to 2300 hrs.

Raw sugar loading rate: about 1,138 bags (of the 220-pound type) loaded per 4 hours per gang. This is not a fixed rate but when exceeded stevedores to be paid extra. Bags per sling: 4 bags of raw sugar (of the 220-pound type) loaded per sling.

Refined sugar: about 2,500 bags (of the 100-pound type) or 2,272 bags of 50 kilos, loaded per 4 hours per gang period. This is not a fixed rate, but when it is exceeded an additional payment must be made. Bags per sling: 12 bags (of the 50-kilo type and 100-pound type) loaded per sling.

Bulk: Only grates are available for loading bulk sugar.

Equipment: One shore crane, 6 forklift trucks, 4 tractors and 3 rail tractors.

MEDICAL: Cardenas General Hospital and a clinic.

TANKERS: Discharge of fuel oil: There are 2 intakes at the pier: One at North side and 1 at South side.

Pipelines 8 in. and all connections 6 in. in diameter.

FRESH WATER: Pier has 7 water intakes connected to a water reservoir which is supplied by tank-trucks and/or railroad tank-cars.

Delivery rate: 20 t.p.h.

Daily delivery rate dependent upon transportation available.

FUEL: Not available.

REPAIRS: No repair shop at this port.

DUNNAGE: Wood, paper and cardboard available. Paper available if requested well in advance.

TRANSPORTATION: Transportation to and from Cardenas is good.

To Havana there are scheduled bus departures each hour, to Varadero every 30 minutes, and also several departures to Sagua la Grande, Isabela and other nearby cities.

AUTHORITY: All port authorities located at Custom House building.

AGENT: Consignataria Mambisa, Agencia Cardenas, Calle 2 entre Cespedes y Ave. 2da., Apartado No. 2847, Cardenas, Prov. de Matanzas. Telephone: 306 (office); 4840 (night). Telex: 052168. Cables: Mambisa Cardenas.

All urgent mail and parcels should be sent to our main offices at Havana from where it will be relayed to Cardenas by the quickest means possible to ensure prompt delivery.

Ordinary and non-urgent mail or parcels can be sent directly to Mambisa's Cardenas Office.

CIENFUEGOS: 22.09 N. 80.27 W. (See Plan) (including sub-ports of Casilda (Port Trinidad) and Tunas de Zaza)

LOCATION: Cienfuegos Bay, by its natural characteristics, offers ample protection for vessels within port premises. It is about 10 miles long, from North to South and 3 miles wide, from East to West, surrounded by high ground and mountains.

The Coastal outline is rugged inside the bay, due to numerous points and creeks and at the widest part of the bay, to the N.W., is the city of Cienfuegos and some of the port's installations, and further, to the North of the city, the remainder and most modern of the port installations.

PILOTAGE: The Pilot boards the vessel at 1 mile S.W. of Los Colorados lighthouse at the following geographical position:

Lat. 22° 01' 33" N., Long. 80° 26' 53" W.

Vessels head 350° when sea force does not exceed Force 3, over Force 3 the heading should be 080°, and the ladder should be placed on the Leeward side.

From this place to the different places of operation of the port there is a distance of 7 to 8 miles.

Pilot station is located at Jagua Castle, on the West coast of the bay, just in front of and to the West of Pasa Caballos Point.

Pilot service is available 24 hours daily and they have a 24 hours watch, and advice of arriving or sailing ships is announced by a semaphore station.

Pilotage service is stopped when the following meteorological conditions prevail. For entering/sailing: Over Force 4 and winds over Force 5 from the 2nd/3rd quadrant.

In the inner harbour, docking and undocking manoeuvers are stopped when there is Force 5 from 1st quadrant (for docking) and Force 6 from 2nd and 3rd quadrant (for undocking).

ENTRANCE TO PORT/CONDITIONS: Entrance to port is by a channel which begins between the points of Los Colorados and Sabanilla and runs for 3 miles up to La Milpa Point. From La Milpa the channel continues toward the interior of the bay firstly by the South and afterwards by the West of Carenas Cay up to the General Anchorage.

From the General Anchorage vessels can proceed either to the piers at the South of the port or to the North anchorage and the installations of the North Zone.

The bottom of the channel is muddy and its various depths are as follows:

From the head of the channel up to Las Milpas max. depth is 62.4 m. at lighted buoy No. 3 and minimum of 20.72 m. at the West of Pasa Caballos Point.

From La Milpa up to General Anchorage minimum is 14.6 m. and from then on up to the North Anchorage minimum of 12.2 m.

The channel has 2 sharp turns only, but adequate precautions must be taken when entering Cienfuegos harbour, always with Pilot on board, which is compulsory at all ports. The first turn of 68° is at Pasa Caballos Point and because this is the narrowest part of the channel where Tidal currents flow strongly, it is here where precautions should be exerted.

The second turn of 98° is at West of Carenas Cay, but due to the width of the channel at this point and the fact that tidal currents have no great effect, manoeuvres are easier at this turn.

The port of Cienfuegos can be entered at day or night time.

At the entrance to the port, at Los Colorados Point, there is a lighthouse also named Los Colorados which rises 25.33 m. above high tide, located at Lat. 22° 02' 04" N., Long. 80° 26' 29" W.

The lighthouse is painted in a white-yellowish shade and flashes white light every 5 seconds visible 21.8 miles away.

ANCHORAGES: The Bay of Cienfuegos has ample anchorage zones.

The most important are: General anchorage at about the middle of the bay and North anchorage, at the North part of the bay.

Regarding the capacity and conditions of Cienfuegos anchorages it can be said that they meet the requirements of the largest vessel which presently or in future could enter this port.

North Anchorage: Located on the North part of the bay, at the Zone N.W. of the city and South of Tricontinental Pier and Ramirez Cove.

This zone is located between: Lat. 22° 09' and 22° 09' 30" N. and Long. 80° 28' and 80° 28' 30" West.

Although the bottom is soft mud the anchors hold perfectly well and securely.

Minimum depth of anchorage is 12.19 m. and it can accommodate several large vessels with sufficient swinging area. Vessels anchor with 3 shackles of chain.

At this place vessels await berth, bunkers or water, etc. and also can discharge or load by means of barges.

General Anchorage: Located in the middle of the bay and covers a square space limited by Pt. Gorda and Jaragua Cove at the South and Pt. Majagua and Pt. Salinas at the North:

(Lat. 22° 07' N. – 22° 08' 15" N., Long. 80° 27' 15" W. – 80° 28' W.).

Maximum draft is 10.97 m. Bottom is soft mud but in spite of this anchors hold well and securely.

Usually vessels anchor with 3 shackles of chain.

At this anchorage vessels await berth, bunker, water, provisions, etc. and also can discharge or load by means of barges.

Quarantine and Explosives Anchorage: Located at 0.5 mile off Pt. Barril.

As indicated by its name, this anchorage is used in case of quarantine to vessel or when carrying explosive cargo. The bottom is soft mud having a depth of 15.25 m. Vessels anchor at this anchorage with 3 shackles of chain.

RESTRICTIONS/MAX. SIZE: Maximum length for entering or sailing from this port is 207 m. and maximum draft is 11.55 m.

Vessels up to 207 m., entering or sailing from Cienfuegos should take the following measures:

Only during daylight hours, during slack water and the assistance of 2 suitable tugs.

For entering/sailing up to 187 m. with slack water, for sailing with ebb tide and entering with flood tide with assistance of a tug, of not less than 1,200 h.p. Over 187 m., entrance daylight only, maximum draft is 11.55 m.

The entrance channel, from landfall buoy up to Buoy No. 15, allows one vessel to navigate at one time, preference given to the incoming vessel.

Also see "Berthing".

RADIO: Vessels navigating toward Cuba can communicate with Mambisa Cienfuegos Agency through "CLA" Havana radio station which relays the message to Cienfuegos immediately.

When navigating in Cuban waters and nearing Cienfuegos, vessels can communicate directly through "CLC" Cienfuegos radio station which immediately informs Mambisa Cienfuegos Agency of any message received and the Agency can answer through "CLC", which also have radiotelephony system.

Masters must send their ETA messages simultaneously on VHF Channel 16 to Mambisa Cienfuegos and Mambisa Havana.

There is complete telephone service: Local, long distance and International.

RCA System radiograms have national and international service.

There are also the Wireless Service, Government Public Telegraph Service and Post Office.

The Agency can communicate with Havana and the rest of the ports by telex, this service being the most reliable and quickest of the means of communication.

Cienfuegos telex number is 042118, 042109.

TUGS: 2×1,200 h.p., 1×168 h.p., 1×230 h.p. and 1×175 h.p.

BERTHING:

	Max. Draft (m.)	Max. Length (m.)
Tricontinental Pier:		
East Side (Bulk sugar)	10.52	207
West Side (Cereal)	10.52	207
Berth No. 3 (Portico crane) (Citric)	9.75	140
Berth No. 4 (Portico crane) (Citric/ General cargo)	9.45	140
Berth No. 5 (Portico crane) (Citric/General cargo)		
Pablo E.Guzman Pier (West Side) (bow)	8.84	186
(stern)	9.14	
Molasses Terminal (East Side out service)	9.75	
ICP Submarine Pipeline	11.58	207
Olimpia Medina Pier		
No. 1 General cargo	7.92	170
No. 2 General cargo and container		
East End	7.62	170
West End	7.92	
No. 3 Cement and General cargo	5.79	170
Fertiliser Plant Submarine Pipeline	9.45	162
Thermoelectric Plant Submarine Pipeline	10.97	207
North Anchorage	12.19	
General Anchorage	10.97	
Quarantine/Explosives Anchorage	15.24	

Tricontinental Pier: Located S.E. of Ramirez Cove.

In order to load to maximum draft, vessels have to move about 5.5 m. of berth.

It is a solid construction of reinforced concrete, 207 m. long and 43 m. wide. The East side of the pier is specially conditioned for loading bulk raw sugar and has 2 cranes, mounted on rails, that run along the length of pier, each capable of loading 600 tonnes/p.h.

Although the length of the pier is 207 m., at the East side, the berthing length is only 165 m., because at the shore end there are 2 resting bases for the cranes, where they remain when idle.

In direct line with the pier is the parabolical warehouse, which is capable of holding 90,000 tonnes of bulk raw sugar. Next to it is the receiving station of the plant, where a continuous flow of railroad hopper cars discharge the sugar coming from many sugar mills in Las Villas and Matanzas provinces.

The West side of the pier is presently used for discharging cereal. Fresh water available by pipeline.

Docking to this pier can be effected either in day or night-time because it is well lit.

All operations, except loading bulk raw sugar, must be effected by means of trucks because although railroad tracks reach the shore end of pier, there are no tracks alongside.

Vessels nominated to load bulk raw sugar at Cienfuegos, must arrive at Tricontinental Pier clean and ready to load and any undesirable dunnage material must be discharged at other ports, due to the fact that it has only sufficient personnel to attend the mechanical loading and there are no stevedores available.

Olimpia Medina Pier (Formerly Cacicedo Pier): Located on the South side of the city at Marsillan Cove.

There is settling in the dock line of Berths No. 1 and 2. Berth No. 3 shows landslide in dock which limits the draft.

Also see "Berthing".

STEVEDORES: Mondays to Fridays: 0700 – 1100 hrs., 1300 – 1700 hrs. Saturdays: 0700 – 1100 hrs.

Although the above are the official working hours of the port of Cienfuegos, frequently 3 shifts of 8 hours each are worked, commencing at 0640 hrs. Also on Sundays a shift is worked from 0640 to 1100 hrs. This is done whenever all conditions, including personnel and weather, are favourable.

The port can operate 12 ships simultaneously as follows:

1 Loading bulk raw sugar.
2 Loading or discharging general cargo (docked).
1 Loading or discharging general cargo (on anchorage).
1 Loading molasses.
4 Tanker vessels discharging petroleum products.
3 Operating at Citric Docks.

Through this port all kinds of cargoes are imported.

Exports: Bulk raw sugar, molasses and occasionally general cargo.

Coastal trade: Discharge of petroleum products, and other kinds of coastal trade cargoes are seldom handled by this port.

The following equipment is owned and operated by the port:

9 Cargo Barges, 300 tons each.
2 Fuel Barges: 300 tons each.
1 Water Barge: 400 tons.
1 Floating Crane: 35 tons.
23 Shore Cranes: Capacity 6 tons – 80 tons.
27 Forklifts.

All bulk raw sugar is shipped by the Bulk Raw Sugar Shipping Plant by means of modern mechanical equipment and bulk raw sugar ex-bags is not shipped through this port.

MEDICAL: Sick crew members can be hospitalised at the General Hospital.

TANKERS: *Pablo E. Guzman Pier* (Formerly Ferrocarril Pier): Located on the N.W. side of the city, between Pt. Arenas and Pt. Verde. Berthing during daylight only.

It is only used to discharge clean petroleum products and for supplying diesel oil bunker to vessels.

West Side:

Cargo handled by this side: Discharge of diesel oil, kerosene and gasoline*. Connection diameter: 8 in.

Discharging rate: About 400 t.p.h.

*Although three different products are discharged, only one can be discharged at a time, as there is only one pipe-line to shore tanks.

East Side: Out of use.

Molasses Terminal Berth (Formerly Naticorp Pier): Located on the West coast of Pt. Majagua, this installation consists of a wooden narrow passage 549 m. long ending at a steel platform along which runs the pipelines, one 16 in. and other 12 in., and a catwalk.

Loading of molasses is performed through three connections, diameter 8 in. each.

Docking can be effected only during daylight hours.

Vessels berth to 4 solid dolphins, 2 mooring buoys aft, and 2 fore, across the head of the installation (they are not in good condition).

Loading rate: 350 t.p.h.

Water and bunkers not available by pipeline.

ICP Submarine Pipeline Anchorage (Formerly Standard Anchorage):

Located East of Point Majagua.

Orientation of moored ship: North – South.

Buoys are lacking maintenance.

The Submarine Pipeline is 12 in. × 884 m. long from the intake up to the deposit tanks. The connection is 8 in. in diameter.

Vessels berth to 3 mooring buoys aft and use both anchors.

The only product handled is fuel oil, at a rate of discharge of 420 t.p.h.

No water or bunkers available by pipeline.

Berthing operation performed only during daylight hours.

Fertilisers Plant Submarine Pipeline:

Located West of Buoy No. 3D.

Orientation of moored ship: E.N.E. – W.S.W.

According to the new pipeline installations for Naphtha and fuel oil, there is no capacity on the berth for ship with a length over 162 m.

It has been recommended that the stern mooring buoys be relocated further to the West, in order to operate vessels up to 207 m. length and the need to replace the missing bow buoy.

The fuel oil pipeline has a length of 2,310 m. and 16 in. diameter, with a 10 in. connection.

The Naphtha pipeline is 10 in. diameter and has a 10 in. connection.

Vessels berth to 3 mooring buoys aft and use the starboard anchor of the ship.

The bottom is soft mud.

Vessels discharging Naphtha must pump, after discharging same, about 200 tons of fresh water, and this must be taken at a port prior of call, as delay may result to vessel if Cienfuegos water barge is not able to supply the water.

Average rate of discharging:
Naphtha: 400 tons per hour.
Fuel Oil: 450 tons per hour.

Berthing operation to this place is performed during daylight only.

No water or bunkers available by pipeline.

Thermoelectric Plant Submarine Pipeline Anchorage:

Located S.E. of the Bifurcation Buoy.

Orientation of moored ship: N.W. – S.E.

The hooks of the mooring buoys are inverted. The bow mooring buoy has sank, and no buoy rope has been placed to mark it, and therefore to perform manoeuvre of casting port side anchor is difficult.

Pipeline is 14 in. in diameter and connection is 6 in. diameter.

Vessels berth to 3 mooring buoys aft, and to another mooring buoy at the port side forward, and use the starboard anchor.

Only product handled is fuel oil, which can be discharged at an average rate of 500 tons per hour.

Berthing operations can be performed only during daylight hours.

No water or bunkers available by pipeline.

FRESH WATER: *(Potable or for Boilers):* Delivered by means of barge, capacity 200 tons.

Water can be obtained at either side of Tricontinental Pier at an average rate of 10 t.p.h.

FUEL: Regular bunkers can be obtained at this port (whatever type of diesel oil or fuel oil may be stored in the shore tanks at the time of delivery).

Fuel oil is supplied to vessels by means of barge, capacity 325 tons which is towed to the place where ship is operating or berthed.

Diesel oil is supplied by docking at pier, by pipeline.

If any tanker vessel is operating at "Pablo E. Guzman" Pier, delivery must wait until tanker finishes operations and leaves pier.

Mixtures of fuel and diesel oil, IFO, (Intermediate fuel oil), cannot be obtained at this port.

DUNNAGE: This port has conditions and facilities to supply dunnage materials, but specially in the case of wood dunnage, requisition must be placed at least 5 days before delivery date.

REPAIRS: Minor repairs possible, advance notice required.

SHIPMASTER'S REPORT: May 1979.

Documents:

1 Copy Maritime Declaration of Health.
1 Copy Clearance from Previous Port.
Derat Certificate or Exemption.
1 Copy Cargo or Ballast Manifest.
10 Copies Crew Lists.
5 Copies Personal Effects (including new clothing). All individual Crew Lists must have Christian names as well as Surnames – initials not sufficient.
3 Copies Provisions Lists. Meats and weights to be separated by countries i.e. Beef (Argentina) 200 lbs., Beef (U.K.) 400 lbs., etc.
4 Copies Stores Lists.
1 Copy Vaccination List. Apparently no vaccination necessary for Cuba.
4 Copies Currency Lists. All currency placed in Master's safe together with jewellery, valuables etc., and sealed.

N.B. Crew only allowed: 1 watch, 1 radio, 1 tape-recorder and 6 cassettes, remainder to be bonded.

Officials: On arrival ship is boarded by Doctor who gives pratique, after which ship is boarded and sealed by Customs and Immigration. After this the Customs Control Board, and the ship is searched from stem to stern.

There is also a search when the ship sails although the search is not so thorough and they only seem to be looking for stowaways.

Meat and fish room are sealed throughout stay but sanitary inspectors board every day (and charge 5 pesos per visit) to take out sufficient selected stores for the day.

Pilotage: Compulsory.

Anchorage: Safe anchorage inside the bay only. Outside the entrance the water is too deep. There is sufficient room for anchorage of 15 vessels. Depth 8 fathoms. The bottom is soft mud which gives very good holding ground.

Restrictions: There is a whirlpool in the entrance at "Pasa Caballos Turn" at various states of the tide when navigation is not possible during a rising tide. Sailing is only possible between HW and LW when the tide is ebbing.

Max. Size: Max. permissible draft 38 ft., tidal range about 1.5 ft., max. LOA 207 m.

Radio: The radio room is sealed throughout the stay.

VHF: VHF Radio in Pilots and Agents office. The Pilots all seem to speak English. There is no VHF on pilot launches, they were expecting new sets.

Tugs: One tug available, 1,200 h.p.

Berthing: Tricontinental East Pier: Max. draft 31 ft. forward, 33 ft. aft. However the berth is being dredged to 38 ft. Max. LOA 200 m. Length of pier 555 ft. Tidal range approximately 1.5 ft. Density 1022.

Vessel loaded bulk sugar and with full ballast (except No. 3 deep tank) vessel had 5 ft. clearance at the ship's side rail.

Bulk sugar loaded from conveyor belt on the shore which is said to have a very accurate weightometer incorporated.

Loading rate with one loader 400 tonnes p.h. and with two loaders 1,000 tonnes p.h.

The warehouse on the quay is said to hold 30,000 tonnes.

Work carried out throughout 24 hours.

The stowage factor of the bulk raw sugar was 43.8 cu. ft./metric tonne.

The berth is very well fendered, however the after mooring points were poor.

Fuel: Available. Grade not known.

Fresh Water: Available. Rate 10 t.p.h. Also available by water barge.

Medical: Two hospitals and doctor available. Vaccinations by the port doctor were said to be free but ship was charged by the Agents.

Repairs: Engine work can be done with permission for immobilisation.

Repatriation: Possible.

Shore Leave: Shore pass not to be in any way defaced or shore leave for that person will be stopped. Ship's pass and Seaman's Discharge Book is handed to guard at bottom of gangway who issues another pass. This has to be exchanged for another pass further up the dock where all money is counted, all valuables are written on pass, time ashore is entered on pass and then one is free to proceed to the town by bus. There is no seaman's mission or any places of recreation, etc.

The same procedure has to be gone through on the return to the vessel.

General: The spare propeller must be sighted before loading can commence.

Flags: Courtesy flag must be higher than house flag.

Lifeboat: Lifeboats can be swung out.

Painting: Punt can be used for shipside painting.

Stores: Fruit and eggs very cheap and plentiful and of good quality.

Refuse: Garbage must be in covered containers which are sprayed together with the ship's fridges, storerooms, galley and pantries on vessel's arrival.

Ratguards: Ratguards must be on all ropes throughout vessel's stay and must not be allowed to fall or blow off or vessel is fined. Many rats were seen in the dock area.

AUTHORITIES: All port authorities are located at port of Cienfuegos.

From Cienfuegos to Casilda and Tunas de Zaza, following transportation can be used: railroad, trucks, barges.

It takes from 2 to 5 hours, according to transport conditions, to travel from Cienfuegos to Casilda or Tunas de Zaza.

Distance, by sea, from Cienfuegos to Casilda 45 miles; to Tunas de Zaza 80 miles. Suggested that railroad or highway be used to travel from Cienfuegos to Casilda or Tunas de Zaza. There is daily omnibus and auto service from Cienfuegos to Casilda and Tunas de Zaza.

There is a daily flight Havana – Cienfuegos which arrives at Cienfuegos around 1130 hrs. and departs for Havana at about 1200 hrs.

Also a daily departure of passenger railroad service Cienfuegos – Havana.

Bus line Cienfuegos – Havana has scheduled departures every 2 hours. Other bus lines have excellent service to Camaguey, Santa Clara and other cities.

Taxi service is available to any point within city limits or to any place or city and should be requested to our Cienfuegos Agency.

AGENT: Empresa Consignatarias Mambisa, Agencia Cienfuegos, Avenida 50 No. 2712, POB 420. *Tel.* 5718, 6422 and 5632 (Night: 6715 and 5332). *Telex:* 042118, 042109. *Cables:* "Mambisa Cienfuegos".

Recommended that all correspondence or instructions be sent through Havana main office. Cienfuegos Agency attends ships that operate at Casilda and Tunas de Zaza. For any information concerning vessels operating at these sub-ports, Cienfuegos Agency should be contacted.

Mail should be sent by airmail, parcels and spare parts by air express.

Any mail or parcels received at Havana by our Main Office, destination Cienfuegos, are sent daily by air express to Cienfuegos Agency, which use the same method from Cienfuegos to Havana.

(a) SUB-PORT OF CASILDA: 21.45 N. 79.59 W. (See Plan)

LOCATION: The Port of Casilda is located on the South coast of Cuba. Lat. 21° 45' N., Long. 79° 59' W.

This is the shipping port for Trinidad, distance 3 miles from Casilda.

The town of Casilda and the port are situated on the North shore of a safe, landlocked small bay, shoal over its greater part.

PILOTAGE: Pilot boards the vessel in position Lat. 21° 37' 36" N., Long. 79° 52' 32" W., that is, one mile Southwest of the lighthouse of Blanco Cay of Casilda, and from this place to Casilda Pier, the distance is 9 miles.

Blanco Cay is a small islet of 6.71 m. above sea level, having numerous palms and trees, and a lagoon in the centre.

Blanco Cay is located in position Lat. 21° 38' 28" N. – 21° 38' 14" N., Long. 79° 52' 53" W. – 79° 53' 29" W.

At the Eastern end of Blanco Cay, there is a lighthouse consisting of a metal structure 13 m. high with flashing white light.

During daytime, the tall palm trees are more conspicuous than the lighthouse.

ENTRANCE TO PORT/CONDITIONS/LIMITATIONS: Jobabo Channel is the main entrance to this port and runs East of Blanco Cay.

Channel bottom is soft mud and on its course has a difficult "S" shape turn where precautions should be taken, nevertheless a tug is not required for entering or sailing manoeuvres.

Entrance to and sailing from port can be effected only during daylight hours and Masters must take notice that if vessel arrives before daybreak and Pilot is required in order to anchor and wait for daylight, an extra charge will be incurred.

In the same manner, if vessel arrives at dusk, it is likely that she cannot enter port, because docking must take place during daylight hours.

ANCHORAGES: The port has several anchorages, such as: "La Poza", located at bay, 5.18 m. draft; "Bajo del Medio", an area 2.5 square miles, minimum depth 9.1 m. and length 170 m. "Jobabo" minimum depth: 11 m. and length 170 m.

Also N.E. of Blanco Cay there are anchorage areas, having 12.0 m. draft, and more.

MAX. SIZE: Vessels can enter and sail with max. draft of 7.62 m. and length up to 170 m. Tidal variation about 2 ft.

RADIO: Vessels navigating to Cuba can send their messages via "CLA" Havana Radio Station, which immediately relays the message to Mambisa Cienfuegos Agency.

While navigating in Cuban waters, Masters can contact "CLC" Cienfuegos Radio Coastal Network, which also relays the messages promptly to Cienfuegos Agency, and can answer them by the same system.

Station "CLC" also has radiotelephony.

Masters must send their ETA messages simultaneously to Mambisa Cienfuegos and Mambisa Havana.

TUGS: None.
BERTHING: *Casilda Pier:*
Berth No. 1 (West side):
(a) Draft: 7.62 m.
(b) Length: 170 m.
Cargoes handled by this side:
Imports: General cargo, wood pulp and caustic soda.
Exports: Bagged refined and raw sugar.
Berth No. 2 (South side):
(a) Draft: (bow) 7.01 m.
(stern) 7.32 m.
(b) Length: 170 m.
Only tankers operate on this side.
Cargoes handled by this side:
Imports: Fuel oil, crude oil and occasionally diesel oil.
Exports: Alcohol.
Coastal Trade: Fuel oil, crude oil and occasionally diesel oil.

Casilda Pier is built in the shape of a "L", the upright part of the "L" being the West side (158 m. length) and the inferior part, the South side (118 m. length).

The "L" shape of pier accounts for the West side being longer than the South side.

Railroad tracks are laid along its length and, at the paved West side, trucking operations can be effected.

South side is not paved, and is mostly used for operation of tankers.

Two vessels can operate simultaneously at Casilda, one at the West side of the pier loading sugar or discharging dry cargo, and another at the South side discharging petroleum products or loading alcohol.

STEVEDORES: Working periods:
Monday to Friday 0600-1000 hrs., 1200-1600 hrs.; Saturday 0600-1000 hrs., 1200-1600 hrs.; Sunday when necessary, same periods.

Raw sugar loading rate: 1,200 sugar bags, loaded per gang per day. Bags per sling: 6 sugar bags per sling. Operation capacity: only one vessel can operate.

Refined sugar loading rate: 1,500 bags per gang per day. Bags per sling: 12 bags loaded per sling.

Shore crane: No shore crane available.

Bulk sugar equipment: no bulk sugar equipment available.

Warehouses: 2 warehouses with capacity for storage of 70,000 bags of sugar. No. 1 (at the pier) 40,000 bags (250 lb.). No. 2 (at the Real Street) 30,000 bags.

TANKERS: Fuel/Crude Oil: 1×8 in. diameter.
Diesel Oil: 1×6 in. diameter.
Alcohol: 1×5 in. diameter.
Also see "Berthing".

MEDICAL: Sick crew members can be sent to Trinidad City Hospital.
FRESH WATER: Available by pipeline in limited quantities.
FUEL: Not available.
REPAIRS: Not available.
DUNNAGE: Wood dunnage is not available at Casilda. Paper dunnage is available if requested well in advance as there is a small stock in the port, and if vessel's requisition exceeds port's stock, difference can be brought from the paper mill nearby.

TRANSPORTATION: Transportation to or from Casilda is difficult.

Railroad system connects Casilda with Trinidad continuing to Cumbre, where it joins the Central railroad system, or to the city of Placetas, located on the Central highway system. From Cumbre railroad travel is available to any place in Cuba, likewise at Placetas by road.

There are also roads to Cienfuegos and Sancti Spiritus.

AUTHORITIES: Port Captain, Custom Authorities and Port Doctor travel from Trinidad to Casilda.

AGENT: If any information required regarding ships operating at Casilda, Cienfuegos Agency should be contacted. Agent in the port available, but difficult to contact. Telephone number 2077.

Crew mail or any other mail should be sent to Havana main office, from where it is sent to Cienfuegos.

(b) SUB-PORT OF TUNAS DE ZAZA: 21.37 N. 79.32 W. (See Plan)

LOCATION: Seaport of Sancti Spiritus. Port lies about 1.25 miles North of Point Ladrillo.

PILOTAGE: Pilot may board vessels either at Breton Channel or Tunas Channel.

Distance from point where Pilot boards vessel entering through Breton Channel to Tunas de Zaza anchorage is 8 miles. From place where Pilot boards vessel entering through Tunas Channel is 1.5 miles. Pilot station for Tunas Channel, located at Cayo Zaza de Fuera. For Breton Channel, entrance of Breton, that is, 8 miles from anchorage.

MAX. SIZE: Two channel entrances for this port; one through Breton Channel, which is with turns, but not dangerous. Vessels can enter or sail through this channel drawing up to 29 ft. The other one through Tunas Channel, has no turns. Vessels can enter and sail through this channel, drawing up to 22 ft. No length restrictions.

Tidal variation 1 ft. 6 in. Vessels can enter day and night.

RADIO: Via Radio Havana, for relay through Cienfuegos Agency.
TUGS: 3 tugs: *Arturo, Don Juan,* and *Tuinicu*, which tow up to 6 barges.
BERTHING: All operations are effected at anchorages.

Inner Anchorage: Located about 1.25 miles South-Westward of the town. Draft: From 24 ft. to 27 ft. Soft mud bottom.

Outer Anchorage: Located South of Pt. Ladrillos. Draft: 30 ft. (load only up to 29 ft.). Soft mud bottom.

Only one vessel at a time can be handled.

There are 9 barges available for loading sugar with total loading capacity of 7,500 bags. Sugar loading rate: 1,500 bags per gang daily. Bags per sling: 6 sugar bags loaded per sling.

Bulk sugar equipment: None.

STEVEDORES: Working periods – loading sugar: Monday to Friday 0600-1000 hrs., 1200-1600 hrs.; Saturday 0600-1100 hrs., 1200-1600 hrs.; Sunday: when necessary.

MEDICAL: For sick crew members, there is a general hospital at Sancti Spiritus.
FUEL/REPAIRS: None.
FRESH WATER: No water available.
DUNNAGE: None.
TRANSPORTATION: There are two daily car services, and also road transportation is possible by bus but car service is preferable.

AUTHORITIES: There are Custom House and Captain of the Port Delegations at this sub-port. Customs also acts for Immigration. Port Doctor located at Zaza del Medio.

Vessels can proceed directly to this sub-port where they are visited by port authorities. Means of transportation used by port authorities to give entry is by launch service.

At this sub-port Custom House and Captain of the Port have delegations, but not port Doctor.

AGENT: Vessels operating at this sub-port are attended by personnel from Cienfuegos Agency.

Mail should be sent to Havana for forwarding to Tunas de Zaza.

GUANTANAMO: 19.59 N. 75.10 W. (See Plan)

LOCATION: Guantanamo is an ample, sheltered, landlocked bay of an approximate extension of 11 miles.

The mouth of the port is formed by 2 points: Point Leeward on the West side and Point Windward on the East side. Point Windward is round shaped, drab olive coloured and with arid cliffs, where, on a grey painted building is located a lighthouse, the white light of which flashes twice every 20 seconds and is visible up to a distance of 26 miles. Point Leeward is low, having a landing field.

For description purposes, Guantanamo Bay may be divided into what could be considered outer harbour and inner harbour. The outer harbour is rugged having a number of creeks with several cays, mostly in the centre. This outer harbour is almost entirely occupied by the United States of America Naval Base and it is convenient to make clear that the merchant vessels nominated for operations at Boqueron, located in the inner harbour, do not need any permit or authorisation of said Naval Base.

The inner harbour is most ample, practically free of cays and widening out forms 2 bays, separated by Point Manati. The bay located at the N.E. is known as Joa Bay.

Guantanamo City is located at a distance of 23 km. inland, in the most important coffee-growing district of Cuba.

Guaso River flows into the Northwestern extreme of Guantanamo Bay and Guantanamo River at St. Nicolas Point.

APPROACHES: Wide entrance channel with mud bottom and free from navigational hazards.

PILOTAGE: Pilots board vessels at distance of 1 mile from Buoy No. 1 at port entrance.

Distance from where Pilots board vessels to: General anchorage: 7.5 miles. "Boqueron" Pier: 7 miles.

ANCHORAGES: Max. draft 25 ft. to 27 ft. Swinging area 400 m.
MAX. SIZE: Vessels can enter with max. draft up to 19 ft. and length 610 ft. (tankers), 558 ft. (cargo vessels). Tidal variation is from 1.5 ft. to 2.5 ft. depending on season.

RADIO: Vessels navigating toward Cuba can communicate with Mambisa Caimanera Agency through "CLA" Station at Havana and "CLN" Station in Havana, "CLM" Station in Santiago de Cuba, where message will be relayed to Caimanera by telegraph service or directly to the Agency, also through radio by the 6,810.0 kHz on U.S.B. calling "C.O.D. 81 Mambisa Guantanamo".

Masters must send their ETA messages simultaneously to Mambisa Caimanera and Mambisa Havana.

At Caimanera there are the following services:

Telephone, local and long distance, telegraph and Post Office.

There is also available telephone communication between Caimanera and Boqueron.

VHF: Caimanera Mambisa office works on Channels 16 (international call channel), 12, 13, 74 (as working channels) and 10, 11, 14, 71, 73, 68 and 9 (as coordination channels).

Harbour Master can be contacted by telephone No. 99-164 and by VHF through Channel 16. In Caimanera, where Pilot Office is located, they can be contacted by telephone No. 99-345 or by VHF on Channel 16.

Port of Boqueron: Terminales Mambisa del Oriente can be contacted by telephone No. 35085 or 91-186/187 and by VHF through Channel 16.

Bulk Maritime Terminal can be contacted by telephone No. 91-196/218 and 33512. No VHF available.

Customs House can be contacted by telephone No. 91-197.

TUGS: There are 2 tugs available for manoeuvring in the port, "Polar 7" – 750 h.p. and "Tercer Frente Oriental" – 1,340 h.p.

BERTHING: The pier is a solid concrete construction 504 ft. long and 60 ft. wide.

Along the pier and after construction of new bulk terminal for raw sugar, there will be 2 standard gauge railway tracks.

Molasses is loaded at the South side (operational side) due to construction of bulk terminal on North side.

Although the draft at either side of pier is 22 ft., vessels load only up to 19 ft., owing to the draft of the port channel.

Boqueron Pier:
(a) North Side:
Length: 504 ft. Draft: 22 ft.
Under development.

(b) South Side:
Length: 504 ft. Draft 22 ft.

Only one vessel can operate at present.

One vessel can load raw sugar by means of the bulk terminal crane (rate of cargo approximately 700 tonnes per hour) which runs alongside the pier or if a self-sustained vessel, by its own gear.

Also see "Shipmaster's Report" dated March 1993.

STEVEDORES: Sugar and molasses loading operations are carried out at this port.

Working periods at Terminales Mambisa for loading or unloading operations are: 0700 hrs. – 1100 hrs., 1300 hrs. – 1700 hrs. from Monday to Friday, and 0700 hrs. – 1100 hrs. on Saturday. Sunday work whenever necessary.

Working periods for Maritime Bulk Terminal are continuous since they load vessel until finished every day of the week during crop/exportation season.

MEDICAL: At Caimanera there is a modern hospital equipped for both medical and dental services, where crew members are attended when required.

In serious cases or when highly specialised medical care is required, the patients are sent by ambulance to Guantanamo Provincial Hospital.

TANKERS: Molasses pumping rate average of about 35,000 gallons per hour.

FRESH WATER: Can only be supplied by Boqueron Pier through 2.5 in. pipe-line. Delivery rate is 10 t.p.h. Vessel must furnish hoses.

FUEL/REPAIRS: Not available.

TRANSPORTATION: Transportation between Caimanera and Boqueron is effected only by means of launches.

Distance between Caimanera and Boqueron is 1.5 miles.

From Caimanera to Guantanamo, travelling could be effected either by railroad or paved highway and for both routes the distance is 23 km.

There are 3 daily scheduled trains, 2 bus departures and Agency car can also be used, travelling time being approximately 40 minutes.

From Guantanamo to Havana there is a scheduled bus service with several departures daily. Travelling time from Guantanamo to Havana by bus is 16 hours. Also there is a daily departure at 0830 hrs. of an airway service between Guatanamo and Havana.

There is a very efficient service of minibuses for the transportation of travellers to and from the airport.

From Guantanamo to Santiago de Cuba there is also bus service with limited departures daily, travelling time being 2 hours.

DUNNAGE: Although dunnage materials can be obtained at Guantanamo, if possible, it is preferable that vessel arrives supplied with same, because sometimes the requisition of the vessel may be higher than the port stock, and that could mean delays.

Whenever necessary to request dunnage materials at this port, the requisition should be made not less than 5 days in advance of vessel's arrival.

GARBAGE DISPOSAL: Service not available.

WASTE OIL DISPOSAL: Serivce not available.

SEAMAN'S CLUBS: None.

CURRENCY: Cuban Peso.

SHIPMASTER'S REPORT: March 1993.

Vessel:
Deadweight: 14,970 tons.
Arrival Draft: 19 ft. 00 in. (maximum).
Sailing Draft: 19 ft. 00 in. (even keel).
Cargo Loaded: Bulk raw sugar (6,357 tonnes).

Berth: Boqueron Terminal.

Location: The port is located on the East coast of the bay in approximate position Lat. 19° 58' N., Long. 75° 07' W.

Documents:
12 copies Crew List.
3 copies Crew Effects List (Cuban forms).
3 copies Ship's Stores List (Cuban forms).
3 copies Foreign Money List.
1 copy Health Declaration (Cuban form).
4 copies Stowage Plan.

Pilotage: Pilots board vessels at the entrance of the channel near Buoy No. 1 (red). To avoid delays/fines, vessels must report ETA to "Mambisas Caimanera", not less than 24 hours prior to arrival. Two hours prior to arrival, vessels can contact Agents and Pilots by VHF Channel 16.

Approaches: The main channel is well marked, but not wide. No difficulties in navigation or manoeuvres were experienced.

Restrictions: Vessels can enter and sail with max. draft up to 19 ft. Entry and departure is performed during daytime only, from 0600 hrs. to 1730 hrs.

Anchorages: The general anchorage is located South of Joa Bay, near and West of Boqueron Pier in depths of between 21 ft. – 24 ft.

Berthing: Boqueron Terminal: Only one vessel can operate at Boqueron port.

North Side: Draft 19 ft., length 500 ft.

Cargo handled: Presently none, but mostly molasses.

South Side: Draft 19 ft., length 500 ft.

Cargo handled: Bulk raw sugar. Mechanical loading at 600 tonnes per hour (approx.). Bagged raw sugar can also be loaded.

Tugs: One tug available at Boqueron Pier, assisting only.

Fresh Water: Available at both sides of the pier, rate approximately 5 t.p.h. – 6 t.p.h.

Transportation: From Boqueron to Caimanera, only launches can be used. Price about U.S.$ 40.00.

Communications: At Caimanera, there are telephone services for local calls at Mambisas office, and for international calls without difficulties at Caimanera Hotel.

Health: Free Pratique given by radio (procedure may be requested via local Agents), otherwise on arrival at general anchorage.

Authorities: All authorities located at Caimanera. Harbour Master, Police, Customs, Port Doctor and Agent boarded at general anchorage. Prior to sailing, vessels are normally searched by the authorities for any stowaways.

Shore Leave: Crew members are allowed to go ashore. Shore leave passes are not required.

AUTHORITY: Port Authorities are located in Guantanamo City and Caimanera where Mambisa Agency Office also is located. Caimanera lies across the bay, just in front of Boqueron Pier, at a distance of 1.5 miles.

The Harbour Master can be contacted by VHF Channel 16 or telephone No. 99-164.

AGENT: Empresa Consignataria Mambisa, Agency No. 11, Guantanamo, Linea No. 19, Entre Marina y Correos, Apartado No. 5, Caimanera, Provincia Guantanamo, Post Code 97-800. Telephone: 99-186 (Agency), 99-135/204 (Night). Telex: 062138. Cables: Mambisa Guantanamo/Caimanera or Boqueron.

Agency VHF works on Channel 16.

Mail and Parcels: Must be sent to the Main Office at Havana, because vessels loading sugar at Guantanamo usually load their cargo in a very short time and all mail and parcels received would be sent to Guantanamo or a second loading port, whichever is deemed to ensure delivery.

GUAYABAL: 20.42 N. 77.36 W. (See Plan)

PILOTAGE: The pilot boards the vessel at the entrance of Cuatro Reales Channel, in position Lat. 20° 27' 00" N., Long. 78° 00' 30" W.

At this place, the vessel is one and a half miles East of Carapacho Cay, where the lighthouse of the same name is located.

From this point to Guayabal Pier, there is a distance of 28.2 miles.

ENTRANCE TO PORT/CONDITIONS/LIMITATIONS: The entrance to the port is effected through Cuatro Reales Channel, which in its lower part is 13.72 m. deep and 310 m. wide.

In this narrowest part of the channel, there is a turn of about 20°, where precautions must be taken.

Transit of the channel may be performed during day, and there is no limitation as to the length or draft of the vessel, but the conditions and limitations of Guayabal Pier and Inner Harbour must be taken into consideration, and are fully explained under "Max. Size".

Tug assistance is required for mooring/unmooring.

From Guayabal Pier to the South, there is a dredged channel 2,474 m. in length and 60 m. wide. At about 80 m. from the pier head, the channel opens in the shape of a funnel and from Guayabal's Inner Harbour which is 255 m. wide.

The above mentioned channel was never racked, and due to that fact, its bottom is irregular, with loose stones and deep caves, which causes anchors to foul and affects the vessel's manoeuvers, but in the inner harbour there is no such problem.

ANCHORAGES: There is an ample anchorage area of hard mud bottom from the South of the buoys, marking the entrance to the dredged channel, which leads to the dock, up to about 3 miles to the Southwest. The average depth is 12.27 m. No length limitations for entering/sailing from anchorage.

RESTRICTIONS: Daylight only entering and sailing whilst repairs underway.

MAX. SIZE: Official draft for the port is 10.67 m., but Pilots advise max. draft with which vessels may sail from the berth is 9.9 m. at HW. There is no length limitation.

COMMUNICATIONS: All radiograms must be sent to Mambisa – Santa Cruz del Sur. All telephone communications between Santa Cruz del Sur and Guayabal, as well as with any port of the country are affected through the new automatic telephone system.

Master's ETA messages should be sent simultaneously to Mambisa Santa Cruz del Sur and Mambisa Havana. Mail should be sent to Mambisa main office Havana, from where it is forwarded to Santa Cruz del Sur.

TUGS: 1×1,480 h.p. and 2×150 h.p.

BERTHING: The West side of the pier is specially designed for loading bulk raw sugar mechanically and is the deepest side where vessels can be loaded up to 9.45 m. for sailing at high tide or up to 8.84 m. to sail at any time.

It must be understood that such draft of 9.45 m. is given only for sailing loaded, but does not indicate that an arriving vessel with 9.45 m. draft can dock, even at high tide.

This situation is originated by the dimensions of the manoeuvring area around the pier.

Max. draft allowable for vessels arriving to complete cargo at Guayabal (molasses, alcohol, or sugar) at the West side of pier is 7.62 m.

A tanker nominated for discharging fuel oil at Guayabal must arrive with a max. draft of 9.14 m. to be docked at the West side, bow facing shore, and must discharge until a draft of 7.62 m. or less is attained, in order to turn around and sail out.

At the East side of the pier vessels can dock bow facing shore, with max. draft of 7.32 m. forward and 8.23 m. aft.

Vessels nominated to load bulk raw sugar at Guayabal must arrive clean and ready to load.

Any undesirable material or any remaining dunnage materials, must be discharged at a previous port, because at Guayabal the only available personnel are those operating the equipment of the Bulk Raw Sugar Terminal and no stevedores are available.

Guayabal Pier: Some repairs are underway at the installation, official draft has been reduced to 9.45 m. (31 ft.), due to obstruction in the channel.

East side: Draft: 7.32 m. forward, 7.62 m. aft. Maximum length: 169 m. Maximum length will not exceed 169 m. until repairs are finished, when original length (190 m.) is returned to.

Usually docking manoeuver is bow facing shore, in which conditions vessels are permitted with a maximum draft of 8.23 m., provided that when undocking, maximum draft does not exceed 7.62 m.

Fuel oil, molasses and alcohol are handled by this side.

West side: Draft 9.45 m., length 170 m., breadth 25.0 m. Over 25.0 m. breadth, draft 8.84 m. For sailing only in high tide.

Usually docking manoeuver is bow facing sea, since vessels enter port to load bulk sugar, and a shallow of 7.62 m. limits the necessary swinging for vessels to sail, which compels vessels to enter the inner harbour in ballast. Vessels with a length up to 150 m. can dock with a draft of 9.14 m. Vessels with length 150 m. – 170 m. cannot exceed 7.62 m. draft.

Vessels with a length over 170 m., cannot enter with a draft exceeding 7.32 m.

While works of enlargements and repairs take place, manoeuvers for entering/sailing must be carried out during daylight, when meteorological conditions permit it, with special caution and 1st quadrant winds. In cases of 3rd and 4th quadrant winds (pushing), docking manoeuvers will not be carried out.

Manoeuvers must be supported by a 1,200 h.p. tug as minimum. On this side, the equipment for loading bulk sugar operates. The boom of the equipment can reach out up to 10.36 m. from the outer edge of pier.

Cargoes handled at this side: Bulk raw sugar, molasses and alcohol and oocasionally fuel oil, jute bales and spare parts for sugar mills.

Port Operational Capacity: Two vessels can operate simultaneously, one at the West side of the pier loading sugar, and another at the East side loading molasses or alcohol or discharging fuel oil.

Cargoes handled by the Port:

Exports: Raw bulk sugar, molasses or alcohol.

Imports: Fuel oil and occasionally empty jute bags or spare parts for the sugar mill of the vicinity.

Coastal trade: Fuel oil (discharge).

STEVEDORES: Sugar loading in bulk. Loading of molasses and alcohol takes place frequently. Fuel oil and general cargo discharge.

Working Hours: Monday to Friday: 0600–0800 hrs., 0830–1100 hrs.,1200–1530 hrs.

Saturday: 0600–0800 hrs., 0830–1030 hrs.

Sunday: When it has been necessary, work has been performed.

Sugar in bulk – at pier there is an installation operated by electric motor control which moves a convex-shaped conveyor and transports the bulk sugar from warehouse to the vessel. 2 thrower machines, 600 and 400 t.p.h. respectively. Average loading rate about 250 t.p.h. although occasionally average of 400 tons has been obtained. There is some time lost on account of shifting the crane. Occasionally shovellers are required, and work continues 24 hours a day.

General cargo – it is not customary to receive general cargo at this sub-port, although on occasion bales of empty jute bags have been received, destined to neighbouring sugar mills. At present there are no facilities for discharge of general cargo, and no shore cranes available.

TANKERS: Shipment of molasses and alcohol is quite frequent. Vessels discharging fuel oil may berth with max. draft of 27 ft. without touching bottom, which is of soft mud.

MEDICAL: Medical services can be rendered by medical consulting office at Guayabal. For X-rays or dental care, patients are sent to "Amancio Rodriguez".

In cases requiring a specialist, surgical attention, etc., or for hospital treatment, patients are sent by ambulance to Camaguey Hospital, 135 km. from Guayabal.

FUEL/REPAIRS: Not available.

FRESH WATER: Supplied at pier by pipeline.

TRANSPORTATION: Transportation to and from Guayabal is not difficult.

From Havana there is one daily bus to "Amancio Rodriguez" Sugar Mill. From "Amancio Rodriguez" to Guayabal Port, there are daily bus services from 0500 hrs. to 2030 hrs.

From Camaguey, there are 3 daily departures to "Amancio Rodriguez". Also there are railroad services between "Amancio Rodriguez" Sugar Mill and Guayabal Port, as well as taxi service.

A new highway has been constructed from "Amancio Rodriguez" Sugar Mill to Guayabal Port.

SHIPMASTER'S REPORT: 1978.

Pilotage: Pilots are arranged by the Agent at Santa Cruz del Sur, (Mambisas). The boarding station shown on charts and mentioned in Pilot Books is now non-existent. Instead the Pilot comes direct from Santa Cruz when a ship is expected and boards the vessel between No. 2 Buoy and No. 4 Buoy South of the entrance to Cuatro Reales Channel. Vessel then proceeds to Guayabal, where it is necessary to anchor off the port for clearance.

Approaches: The navigable width of the approach channel, is at present 50 m., the buoys being moved accordingly, with an average depth of 32 ft. The centre alignment of the approach channel is 011.5° T. This is indicated by two fixed leading marks. The forward one, a metal pole with a yellow triangle mark, apex up, at night a fixed red light. The rear mark is a yellow triangle apex up, attached to the top of a water tank (on a framework tower) at night a fixed green light. This leading line leads "down" the Eastern side of the one and only jetty, along the top of the elevated (roofed-over) conveyor belt.

Documents/Customs:

Crew Declaration (Manifest)	6 copies
Steward's Store List	6 copies
Deck/Engine Store List	6 copies
Maritime Declaration of Health	3 copies
Dangerous Drugs List	6 copies
Slop chest/Bonded stores	6 copies
Explosives List (Distress Rockets, etc.)	6 copies
List of foreign currency	5 copies
List of ship's equipment, i.e. films, binoculars, T.V.s, sextant, etc.	4 copies

All foreign currency, cameras, dangerous drugs, and crew presents to take home were all sealed up in the bond locker along with its contents. Meat room sealed up. Although all our meat is of Australian or New Zealand origin, some of the lamb had a USA wrapper on it which made it American meat and this is not acceptable in Cuba. As far as I can understand the meat from Australia, New Zealand, Japan, and Russia only is acceptable in Cuba.

SHIPMASTER'S REPORT: April 1984.

Vessel loaded raw sugar in bulk:

Documents:

9 copies Crew List.*
3 copies Animal List.
2 copies List of Ports.
4 copies Narcotics.
4 copies Arms and Ammunition.
5 copies Provisions.
3 copies Store List.
3 copies Bonded List.
1 copy Vaccination.
4 copies Crew Currency.†
4 copies Total Currency.‡
2 copies Crew's Effects .§

Notes:

*On sailing they requested another 6 Crew Lists.

†Crew Currency List – With all paper money that every crew has in his possession also the coins.

‡Total Currency List – With the total amounts of foreign currency held by crew and vessel. i.e. U.S. Dollar 4,525.00; German Mark 150.00; Greek Drachmas 25,500; Japanese Yen 15,000, etc., including total coins.

§Crew's Effects – Vessel is provided with special forms. Each form in duplicate is to be filled for each crew member.

Pilots: Pilot comes aboard at Canal de Cuatro Reales. Same Pilot berths the vessel and remains on board until loading completed to unberth and sail the ship.

Approaches: Dredged channel. Vessels can sail at high water with draft up to 32 ft. No night sailing, berthing or unberthing.

Max. Size: Vessels of about 210 m. length are handled.

Berth: Works in progress to lengthen the berth by about 40 m. Up until now the first 20 m. are in preparation.

Max. draft alongside West side of Pier, 35 ft. aft and 33 ft. for'd.

Equipment: 1 convex-shaped conveyor with trimmer machine. Average loading rate 600/650 tonnes/p.h. 24 hours continuous working. The boom extends about 35 ft. and is about 30 ft. – 32 ft. above sea level.

Sugar in bulk loading at about 300,000 tonnes per month. No sugar loaded in bags.

Fresh Water: Available ex-wharf, rate about 3 t.p.h. at a cost of about U.S.$2.70 per ton.

Doctor: Crew must go to another town, but usually no transportation, except emergencies.

Repatriation: Possible. Crew will travel by boat to Santa Cruz del Sur (about 3 hours), and then by car to Havana (about 12 hours), where the International Airport is located.

Ship Chandler: Comes from another port, charging about U.S.$100.00 for transportation.

Population: Population of this port about 1,500.

SHIPMASTER'S REPORT: March 1993.

Sub-Port of Santa Cruz del Sur.

Vessel:

Arrival Draft: 19 ft. (even keel).

Sailing Draft: 29 ft. 08 in. (even keel).

Cargo Loaded: 7,643 tonnes (bulk raw sugar).

Total Cargo Loaded: 14,000 tons (includes 6,357 tonnes loaded at previous port, Guantanamo Bay).

Documents: See Guantanamo Bay – Shipmaster's Report dated March 1993.

Pilotage: Pilot boards vessel at the entrance of Cuatro Reales Channel, 1.0 miles – 1.5 miles East of Carapacho Cay (position Lat. 20° 27' N., Long. 78° 00' W.).

Approaches: Precautions must be taken when approaching Cuatro Reales Channel with heavy rain, strong winds and poor shore radar targets.

Restrictions: Transit of the channel performed in daytime only.

Anchorages: Good and safe anchorages.

(1) At Cuatro Reales Channel in position Lat. 20° 28' N., Long. 77° 59.5' W. (approx.).

(2) At Guayabal area, South of the buoys marking entrance of the channel, depths 42 ft. (approx.).

Berthing:

East Side: Docking bow facing to shore. Max. length 199 m. (650 ft.).

Max. length of vessels: 179 m. (580 ft. – 590 ft.).

Max. berthing/sailing draft: 11.5 m. (37 ft. – 38 ft.).

Cargo handled: Fuel oil, molasses and alcohol.

West Side: Docking bow facing the sea. Max. length 199 m. (650 m.).

Max. length of vessels: 179 m. (580 ft. – 590 ft.).

Max. berthing draft: 7.30 m. – 7.40 m. (24 ft. – 25 ft.).

Max. sailing draft: 10.2 m. (33 ft. – 33 ft. 06 in.).

Cargo handled: Bulk raw sugar, molasses and alcohol.

Loading capacity of bulk raw sugar: Max. 700 t.p.h. at present, 2,500 tons per day, due to lack of cargo.

Tugs: One tug of 800 h.p. One boat of 200 h.p. (approx.), normally used for boat service to the anchorage.

Fresh Water: Can be supplied at both sides of the pier. Rate 6 t.p.h. – 8 t.p.h. Ship's hoses used.

Transportation: Boat service can be arranged from anchorage to shore. Prices: From 0700 hrs. to 1700 hrs., Monday to Friday, approximate U.S.$40.00 one way only. Saturday and Sunday, plus 50%. From 1700 hrs. to 0700 hrs. Monday to Friday, plus 50%.

Medical: In case of emergency, crew members sent to Camaguey Hospital 135 km. from Guayabal. In non-emergency cases, crew members sent to medical office at Guayabal or Amancio.

Health: See Guantanamo Bay – Shipmaster's Report dated March 1993.

Communications: ETA messages should be sent to "Mambisas Santa Cruz del Sur".

Local telephone services can be arranged at Mambisas office.

International calls, which must be paid for in cash, can be arranged from a private house near the port.

Bunkers/Repairs: Not available.

Fresh Provisions: Limited seasonal fresh provisions only can be supplied.

Shore Leave: Crew members are allowed to go ashore. No time limitation, and shore leave passes not required.

AUTHORITIES: Port Captain and Immigration's Delegations at Guayabal. Customs delegate travels from Santa Cruz to Guayabal to conduct clearance. Distance 24 miles (by sea) from Guayabal to Santa Cruz. By road 60 km. Time 3 hours by sea and 2 hours by road.

AGENT: Postal Address; Empresa Consignataria Mambisa, Agencia de Guayabal, Apartado No. 49, Santa Cruz del Sur, Prov. de Camaguey. Tel: 2547 (office), 2244, 2141 (night).

Office Address: Guayabal Bulk Sugar Terminal, 3rd Floor, Tel: Las Tunas 29 (office), 46 (night). Telex: 031285. Cables: Mambisa Santa Cruz del Sur.

HAVANA: 23.09 N. 82.21 W. (See Plan)

PILOTAGE: Compulsory. For requesting Pilot, in daytime or at night, ships shall use signals established in International Signal Code, also they can direct light signal to Morro semaphore and make sound signals at intervals.

Pilot service is compulsory for all foreign ships more than 40 gross tons.

Master must inform Pilot: Port of origin, illness of any person on board, or if ship is carrying explosive or easily inflammable materials, in which case the ship shall be anchored in special berths and shall be under control of port authorities.

Any ship in port requiring immediate Pilot services should either call telephone numbers: 62–3602 or 62–2896; or hoist "G" Flag, sound 2 prolonged blasts.

Pilots board vessels approximately 1 mile from port mouth, although in some cases, especially at night-time, they will go out about 3 miles to meet incoming vessels.

Distance from where Pilots board vessels up to port anchorage or wharves is about 1.25 miles.

APPROACHES: The port is entered through a straight channel with Morro Castle to the East and La Punta Castle to the West.

The bottom is muddy, with no narrowness, but at the entrance there is a strong current which is to be taken into consideration in the entry manoeuvres of any vessel.

Port can be entered to or sailed from, either in day or night time and it is not necessary to wait for slack or favourable tide, except tankers drawing 11.43 m. which can enter only at high tide.

While approaching Havana the most remarkable points of visual orientation are its tall buildings and Morro Castle, located on the East side of the entrance.

ANCHORAGES: There is an ample anchorage zone area where loading and discharging operations are performed.

MAX. SIZE: Max. LOA 230 m. Max. draft 11.43 m. Max. draft in channel at low tide is 12.8 m. Max. draft in main anchorage is 10.06 m., minimum depth throughout the bay (except the refinery) is 10.06 m. Tankers can enter drawing up to 11.43 m., as they take special course up to the Refinery Piers, once they are inside bay. Tidal variation about 45 cm.

RADIO: Vessels navigating to Cuba can communicate with Mambisa Havana through "CLA" Havana Radiotelegraphy Station which relays messages immediately by telex.

While approaching Havana vessels can communicate by VHF radiotelephony with:

Mambisa Agency: Channel 12.

Pilots: Channel 13.

Both, Agency and Pilots, are on the air 24 hours of the day.

Masters must send their ETA messages to Mambisa Havana.

The following means of communication are available at Havana:

Cable: C.L.A. International, Western Union.

Telephone: Local, long distance and international.

Telex: Local, National telex system and international.

Airmail and Air Express: National and international.

At the main office in Havana there are the following Telex Nos. 051-1197, 051-1148, 051-1890, 051-1829, and Telex No. 051-1668 for advance funds matters, and No. 051-2178 for control of ship's position, which is the quickest means of communication available.

TUGS: Supplied by Port Authority. 7×300 h.p. – 1,500 h.p.

BERTHING: The port is divided into numerous docks, which are detailed below.

Andres Gonzalez Lines Dock: This coastal dock is used for the discharge of fertilisers in bulk and coal. It is 332.2 m. long with drafts that vary from 6.8 m. to 9.0 m. There are railway connections and an overhead discharge crane.

Tallapiedra Dock: This dock used in discharge of lighters, has a length of 138.1 m., depth alongside 4.27 m. at N.E. end, 5.73 m. at centre and 4.57 m. at the S.W. end.

Sierra Maestra Terminal:

Pier	*Length of Pier* (m.)	*Max. draft with which vessels may perform operations* (m.)
Pier No. 1 (North Side)	201.8	8.84 – 9.75
Pier No. 1 (South Side)	201.8	9.14 – 9.75
Pier No. 2 (North Side)	201.8	9.14 – 9.75
Pier No. 2 (South Side)	183.5	9.14 – 9.75
Pier No. 3 (North Side)	190.5	9.14 – 9.75
Pier No. 3 (South Side)	171.3	8.23 – 9.75

There is one warehouse at each of these piers and all have rail connections. The terminal is used for loading and discharging general cargo.

Margarito Iglesias Terminal:

This Terminal consists of 3 concrete piers, which are in bad condition and are used exclusively by units of each owner.

Margarito Iglesias No. 4 (Havana Central Pier): This pier is used for discharge and loading of general cargo. It has a railroad siding connecting to the main tracks, and trucking operations can also be performed.

North side: Length 132 m., width 61 m. and depth 4.57 m. – 9.14 m.

South side: Length 146 m., width 61 m. and depth 7.3 m. – 9.75 m.

It is forbidden to dock vessels over 100 m. length, when there are vessels docked at South side of Margarito Iglesias No. 3 Pier, unless those vessels do not exceed 80 m. length.

Aracelio Iglesias Terminal: This terminal used in the discharge and loading of general cargo, consists of a dock and a pier. The dock is 174.6 m. long and 13.41 m. wide and depth alongside ranges from 6.70 m. to 8.53 m. Dock has one sheltered warehouse with capacity of 110,463 cu.m. Pier (North side), length 157.8 m., width 36 m., depth 8.23 m. – 10.05 m.

Pier (South side), length 137 m., width 32 m. with depth alongside 8.23 m. – 10.36 m.

Pier has a sheltered warehouse with a capacity of 30,880 cu.m.

Both dock and pier have railroad siding connecting with the main track.

Juan Manuel Diaz Terminal: The terminal used in discharge and loading of general cargo consists of two docks and one pier. Dock No. 3: Length 158.8 m., width 17.07 m. with depth alongside of 6.40 m. at the N.E. end, 6.70 m. at the centre and 7.92 m. at S.W. end. Dock has a sheltered warehouse with a capacity of 50,230 cu.m. Pier (North side) length 152.4 m., width 38.10 m., depth alongside 6.1 m. – 7.01 m. Pier (South side), length 161.5 m., width 38.10 m. with depth alongside 7.31 m. – 10.25 m. Dock No. 2: Length 146.6 m., width 9.45 m. and depth alongside 5.79 m. – 7.32 m. Pier has sheltered warehouse with capacity of 39,821 cu.m. while Dock No. 2 has a sheltered warehouse with capacity of 112,471 cu.m. Both docks and pier have railroad sidings connecting with main track.

Antonio Guiterras Dock: This dock, used in the discharge of lighters of heavy lifts, from vessels performing operations in Bay, is 258.1 m. long, depths alongside (from Tallapiedra Pier No. 2) 7.92 m., 6.40 m., 5.49 m. and 3.35 m. If no lighter is used, vessels drawing up to 7.01 m. only can berth at this dock.

Osvaldo Sanchez Docks: These docks used chiefly in discharge of lumber. Dock No. 1 (formerly Atares), is 130.5 m. in length, 9.14 m. wide. Max. draft on even keel is 4.88 m. Dock No. 2 (formerly Vaccaro) is 155.7 m. long, 9.14 m. wide. Max. draft on even keel is 5.49 m. Berth presently under repair. These docks have sheltered warehouses. There are no sidings.

Melones Dock: This dock has installation for discharge of fuel oil as well as an overhead crane for discharge of fertilisers and coal. Dock length 218.8 m., width 10.67 m. Depth alongside 5.49 m. at the N.E. end, 3.96 m. in centre, 3.05 m. at the S.E. end. Not in operation at present due to shallow draft. No sidings. Storage in open.

Puerto Pesquero de la Habana (Havana Fishing Port): This is a new installation owned and operated by the Cuban Fisheries Ministry and has modern and efficient facilities, including large refrigerated warehouse.

By coordinating with operators, these facilities are frequently used to handle import and export of refrigerated cargoes, other than fish.

Berth No.	*Length* (m.)	*Max. Draft** (m.)
1	260	7.92
1-A	137	7.92
2	130	7.92
3	200	7.92
3-A	89	7.92
4	160	7.32
Floating Dock		
East Side	127	6.71
West Side	128	6.70
5	137	7.92
6	137	4.79

* Max. draft on even keel.

Haiphong Terminal: (Formerly Maritima). This dock is used for the discharge and loading of general cargo. Length of dock 850 m. Max. draft 9.75 m. at Berths No. 1, 2, 3 and 4; 8.08 m. – 8.6 m. at Berth No. 5; 8.23 m. near Berth No. 2, due to shallow patch. This dock has 2 large warehouses and sidings, although at present only trucking operations are performed. It has 12 gantry cranes with lifting capacity of 5 tons – 8 tons and berthing space for 5 average sized vessels. Ro/Ro vessels dock at Berth No. 4.

Jose Antonio Echeverria Pier (Formerly Burrus Silos Pier): Dock used for discharge of bulk shipments of grain. Equipped with elevator and silos having storage capacity of approximately 20,000 tons. Permitted discharge rate of approximately 1,200 tons per day. Length of dock, 152 m., width 79 m. and depths alongside 8.84 m. – 9.75 m.

Manuel Porto Pena No. 1: This dock used in discharge and loading of general cargo, lumber, refrigerated cargoes, etc. There are also installations for the discharge of used lubricating oil and petroleum products. Length of berth 140 m., max. draft on even keel 7.62 m.

Also see "Shipmaster's Report" dated April 1993.

Manuel Porto Pena No. 2: This dock is used for loading and discharging sugar and general cargo. Length 165 m., max. draft on even keel 9.39 m. No warehouse, but is equipped with railroad sidings and has installations for discharge of fuel oil.

Turcios Lima (Grain Silo Dock). Installation for discharge of bulk shipments of grain. There are 36 grain silos and 18 part silos with a total capacity of 30,000 tons. Unloading rate 100 t.p.h. This dock has 1 sheltered warehouse and railroad sidings, and installations for the discharge of fuel oil and gasoline.

Extractora de Aceite Berth: This dock is not in use at present.

Quinto de Regla Pier: This pier used mainly for loading of sugar. Pier (South side) 189.6 m. long, 10.36 m. wide with depth alongside 8.23 m. at S.W. or Bay end, 7.62 m. at the centre and 5.18 m. at the S.E. end. Pier (North side), length 104.5 m. width 16.46 m., depth alongside 8.53 m. at N.W. or Bay end, 7.92 m. at centre and 6.70 m. at the N.E. end. Pier has railroad sidings.

Fresser Pier: This pier has installations for loading molasses. Pier (South side), 141.7 m. in length, 9.14 m. in width with depth alongside 8.23 m. at S.W. or Bay end, 7.62 m. at the centre and 7.01 m. at S.E. end. Pier (North side), 124.1 m. in length, 9.14 m. in width with depths alongside of 6.70 m. at N.W. or Bay end, 7.92 m. at the centre and 7.62 m. at West end. This side of pier used only for docking purposes.

Edificios No. 1 and No. 2: These docks used in discharge of fertilisers also have installations for loading/unloading molasses.

Edificio No. 1 Dock: Length of dock 157.2 m., width 7.62 m. with depths alongside 6.40 m. – 6.70 m. of water throughout whole dock.

Edificio No. 2 Dock: Length 115.8 m., with 32.91 m. with depth alongside 5.79 m. at N.E. end, 4.27 m. at the centre and 4.27 m. at S.W. end. No operations are performed at this dock due to its shallow draft. Sheltered warehouses with a total capacity of 64,645 cu.m.

Fertiliser processing plant.

Facilidades Maritimas Dock: This dock used chiefly for loading of molasses and discharge of tallow and chemical products, has lengtn of 248 m., width 7.92 m. and depth alongside 8.2 m. – 8.84 m. Dock has railroad sidings and is suitable for docking.

CONTAINER/RO-RO FACILITIES: Available.

EQUIPMENT: As the Port of Havana owns and operates a large number of auxiliary equipment, only the most important of those are listed here:

Four floating cranes: (1×100 tons) (3×35 tons) lifting capacity.

40 shore cranes: Ranging from 30 tons to 5 tons lifting capacity.

Six cargo barges: 125/150 tons cargo capacity.

STEVEDORES: Monday to Friday: working periods 0700 – 1300 hrs. and 1300 – 1900 hrs., although if necessary, 2 additional periods of 6 hours each may be worked. Saturday: Same as above. Sundays: No work performed.

Raw Sugar: Approximately 1,400 bags of raw sugar loaded per gang period. Six raw sugar bags loaded per sling. Loading raw sugar on 3 vessels simultaneously.

Refined Sugar: Approximately 3,800 bags of refined sugar (of 50 kg.) loaded per gang period. 12–15 bags loaded per sling.

General cargo: Approximate average discharging rate per gang hour:

General cargo about		10.0 tons
Bagged merchandise	up to 51 kg.	16.0 tons
Bagged merchandise	up to 92 kg.	17.0 tons
Bagged merchandise	more than 92 kg.	19.0 tons
Wood		8.4 tons
Fertilisers:		
Superphosphate		9.9 tons
Simple Superphosphate		8.1 tons
Ammonium		9.0 tons
Potash		9.9 tons
Muriate (Chloride)		10.5 tons
Sulphur		10.3 tons
Phosphoric Rock		11.9 tons
Triple Phosphate		8.0 tons
Sodium Silicate		9.0 tons
Ferromanganese		9.0 tons

Floating Cranes:

Pablo Sandoval	100 tons – boom 51 m.
Frank Pais	25 tons – boom 10 m.
Matilde	6 tons– boom 9 m.

MEDICAL: Crew members requiring medical attention are treated at "Cira Garcia" Hospital where they can be hospitalised if necessary.

Those cases requiring dental care are treated at "Enrique Saiz" Dental Clinic.

TANKERS: Average pumping rate of molasses is about 60,000 gallons per hour. Average pumping rate of fuel variable, from 3,000 up to 15,000 b.p.h. Also see "Berthing".

Nico Lopez Oil Terminal:

This Terminal is used exclusively for the discharge of crude oil and petroleum by-products and loading by coastal trade vessels of petroleum products for the outports.

Nico Lopez Pier No. 1 (Formerly Standard Oil Pier):
North side:
Length: 313 m.
(a) Draft even keel: 10.67 m.
(b) LOA: 200 m.
South side:
Length: 302 m.
(a) Draft even keel: 11.40 m.
(b) LOA: 245 m.

Although the pier admits vessels with length up to 245 m., the port only admits 230 m. LOA.

At the centre of the pier, there is a loading and discharging platform measuring 24 m. × 12 m. wide.

Nico Lopez Pier No. 2 (Formerly Shell Oil Pier):
North side:
Length: 302 m.
(a) Draft even keel: 11.43 m.
(b) LOA: 230 m.
South side:
Length: 302 m.
(a) Draft even keel: 11.43 m.
(b) LOA: 230 m.

At the centre of the pier, there is a loading and discharging platform measuring 24 m. × 12 m. wide.

Muelle Nico Lopez No. 3:
(a) Draft even keel: 4.0 m.
(b) LOA: 100 m.
- Connections at Pier No. 1: 10 in. and 6 in.
Connections at Pier No. 2: 8 in. and 6 in.
Reductors are available.

TELEPHONES: May be installed on board at Master's request.

FRESH WATER: Vessels can be supplied with fresh water alongside and by barge in the bay. Six barges available with capacities of 80 tons – 400 tons. Average rate of delivery about 100 t.p.h.

FUEL: Vessels can be supplied with bunkers at Havana, and following types are available:

Regular diesel oil, regular fuel oil, I.F.O. mixtures (intermediate fuel oil).

Diesel oil is supplied by a 350 ton capacity barge, and fuel oil by a 1,500 ton capacity vessel which is towed to piers or anchorage in order to fulfill deliveries. This vessel also delivers the I.F.O. mixtures and is named 'Playa Colorada'.

I.F.O. mixtures are prepared at the following viscosity degrees: 50 – 200 – 400 – 600 – 800 – 1,000 and 1,500 maximum. (Redwood International Scale, at 100°F).

I.F.O. mixtures are only available at the Port of Havana.

In addition, there are 3 barges with 500 tons, 465 tons and 80 tons capacity.

Note to Chief Engineers: It is advisable when ordering I.F.O. mixtures to specify always maximum and minimum allowable viscosity of the product.

REPAIRS: Reliable repair shop (Tel: 62.0009).

DRY DOCK: Dry dock operated by Empresa de Talleres Maritimos, an operating unit of Empresa de Navegacion Mambisa. Berthing capacity 134 m. in length and 27.73 m. width, and can handle vessels up to 7.01 m. draft.

East Lateral: Length 194.4 m., width 11.58 m., depth alongside 10.06 m. at Bay end, 8.84 m. at centre and 5.49 m. at shore end.

West Lateral: Length 225.5 m., width 11.58 m., draft 7.01 m. at Bay end, 7.62 m. at centre and 6.10 m. at shore end.

DUNNAGE: Dunnage materials are available at this port but must be requested 3 days in advance of intended delivery.

FIRE PRECAUTIONS: Port of Havana has a fire extinguishing ship, kept on permanent watch duty by Safety Corp. who can be reached through telephone number 6–0777.

AIRPORT: Jose Marti International Airport is 15 km. from the port.

HOLIDAYS: Liberation Day (January 1st), Labour Day (May 1st), Day of National Rebellion (July 26th), Commemoration of Wars of Independence (October 10th). July 25th and 27th are also holidays.

GENERAL: (1) The Port of Havana is approachable 24 hours a day, and dock Pilots keep permanent watch duty on their stations located in surroundings of harbour channel, very close to beacon marker of Pila de Neptuno.

(2) Any ship approaching port in daytime shall hoist national flag, merchant flag, and quarantine flag, not lowering the latter until granted "pratique" by doctors in charge of sanitary inspection. At night she shall show only quarantine lights as prescribed by International Sanitary Regulation.

(3) In case of emergency, ships at anchor shall immediately contact land through Official Radiophone Station CLT, available 24 hours a day, through 2260 kHz. In very urgent cases, CLT can be contacted through 2182 kHz CLT services are free of charge.

(4) Ships moored to piers standing off pier heads at night must keep visible red light at the ship's extremity facing the sea.

(5) Every moored ship must strengthen its lines on first warning from Port Authorities when deemed necessary due to bad weather.

(6) Small boats belonging to ships are not authorised to be used for crew or passengers' service within port limits unless otherwise duly authorised by Harbour Master.

(7) When berthing, ratguards must be placed on all mooring ropes.

(8) Port provides boats to dispose of ship's wastes. Services provided free of charge and can be requested through ship's Agent.

DEVELOPMENTS: There is a plan to build a new terminal for discharge of bulk cargoes such as fertilisers, coal, etc. between the area comprised by the piers Quinto de Regla and Facilida des Maritimas (Aguilera).

Under this plan, Quinto pier and Chemical dock will cease to operate, and Facilidades Maritimas (Aguilera) dock will be shortened in its actual length (814 ft.).

Construction of container terminal to be completed.

SHIPMASTER'S REPORT: November 1978.

Pilotage: Compulsory. Advise Agent of vessel's ETA. Pilot boards 1 to 0.5 miles N.W. of Pta. Barloventa.

Restrictions: Vessel is able to enter and leave during hours of darkness and at any stage of the tide.

Max. Size: Max. draft for cargo vessel 33 ft. and for tankers 37 ft.

Tugs: There are 3 large tugs and 7 small tugs available (145–860 h.p.). Vessel is able to dock and undock without the assistance of tugs.

Radio: Havana Radio "CLA".

VHF: Port Authority and Pilot operate on Channel 13. Agent on Channel 12.

Fresh Water: Available.

Fuel: Bunker fuel oil and diesel oil available.

Repairs: Facilities available.

Medical: Doctor and hospital available.

Facilities: Laundry services available, telex available but unreliable. Groceries and meat available but in limited quantity.

Berthing: Terminal Sierra Naestra Berth No. 3 South:

Position of berth: Lat. 23° 08' 25" N., Long. 82° 20' 42" W. Distance from entrance 1 mile. Max. size of vessel that can berth LOA 520 ft., beam no restriction. Max. draft 29 ft. Least depth of water in channel from sea to berth 40 ft. Range of tide 1.5 ft. Vessel is able to dock and undock at any stage of the tide day or night.

Bulk Handling Facilities: Two grain silos available.

Cranes: 1 quay equipped with 12 cranes, capacity unknown. 4 floating cranes available, 1×100 tons, 3×75 tons capacity.

Special Cargo Handling Facilities: Ro/Ro facilities available. There are facilities for handling palletised cargo and containers, also there is a reasonable amount of storage space for containers.

Stevedores: Stevedores are allocated by Port Authority and the vessel has no say in the number of gangs supplied. There are a limited amount of steel barges.

Density: 1014.

General: On arrival, vessel waited 2 hours outside for a Pilot then entered harbour where we waited another two and a half hours for a ship to sail, no ship sailed and no other reason given for delay.

Docked starboard side to Sierra Maestra No. 3 South, depth 24 ft. forward, 37 ft. aft, 1 tug pushing. Pilots good.

Officials boarded shortly after arrival, following documents required:

Port Health:	1 Health Declaration. 3 Crew Lists. 1 Vaccination List. All Vaccination Books.
Immigration:	All Discharge Books. (To be inspected) 5 Crew Lists.
Customs:	3 Personal Declarations. (In detail) Cargo Plan. 5 Crew Lists. Cargo Manifests. Pornography in bond.
Agriculture:	2 Crew Lists. 1 Provisions List. (Comprehensive) Cargo Plan.

Personal declaration must include watches, cameras, radios, tape recorders, presents, new clothes and money all of which must be placed under seal. One watch and 1 radio allowed to be retained by each Crew member and 1 camera by Master. Advisable to have all above collected prior to arrival.

Vessels normally searched by police and anything found, i.e., watch, radio, money, new clothes and cameras, etc., confiscated whether declared or not. To the surprise of officials this vessel was not searched.

All crew are issued with a shore pass with the exception of the Master. Shore leave extends from 0800 hrs. to 2400 hrs., extension may be obtained but only on special request to the Agent. Shore passes must show the money issued and must be signed by the Master.

On going ashore money and other articles are checked together with watches, jewellery and lighters, etc., and entered on the pass. Should any shortage or excess be found on return a fine will be imposed. On return money remaining is entered on the pass and anyone taking ashore more than the amount shown on the pass will have it confiscated (this actually happened in Isobela).

Communications outside Cuba are difficult, telexes are accepted by Agents but certainly not always sent the day handed in.

Incoming telexes can be delayed up to 6 days. Telephone calls may be made but usually take 3 to 5 hours by which time offices in Europe are closed. In an emergency British Embassy will transmit urgent messages via direct radio link. Embassy most pleasant and helpful. As will be seen by foregoing, it is essential that schedule made with Portishead and Charterers informed to send all messages via this station.

Stevedores very co-operative but due to uncertainty of transport and information on number of gangs, time of completion was uncertain until last day. All discharge was direct to trucks.

Agriculture Department demand that all garbage be placed in plastic bags with neck tied (they supply bags if none on board and charge vessel). Bags collected twice weekly and shore labour do all handling. All meats except New Zealand and Australian sealed. Daily issue of New Zealand and Australian meats given and fridges resealed, any other meats required must be purchased ashore.

Fuel oil, diesel oil and fresh water available by barge but time of delivery uncertain therefore water must be ordered well in advance of requirement. Agents advised fuel would arrive Thursday morning, eventually arrived Monday night. Diesel oil had arrived prior to the fuel with no advice given to the vessel that vessel was bunkering at all.

Fresh vegetables in very limited supply, though Chandler seemed keen to sell meats.

Repair firm and dock exist but after being promised labour for 3 days and none arriving repairs cancelled.

SHIPMASTER'S REPORT: April 1979.

Documents:

12 Crew Lists
3 Store Lists
3 Declarations
3 Currency Declarations
3 Vaccination Lists

Points of note:

(a) Anchorage is very close to coast and in cable area, recommend drifting about 5 miles from coast.
(b) Contact made via Morro Signal Station, VHF Channel 16.
(c) Pilot boards about 1 mile from entrance and they do not appear to work at night.
(d) The port is heavily polluted.
(e) When we sailed we had to wait for 5 hours till a tug was available.
(f) The vessel may lower its gangway for the Pilot to leave but it then must be raised until Port Officials arrive.
(g) All crew must be sighted by Immigration and are handed their discharge books.
(h) All cameras, gifts, items purchased during voyage and not in use, extra radios, watches, etc., and "magazines" must be placed in bond. All except the "magazines" should be declared.
(i) All currency must be declared and placed in safe and sealed. If cash purchases made from Chandler, e.g. Cigars, they must be paid for with Canadian or U.S. dollars. The Customs attend with Chandler and open safe for correct amount to be removed.
(j) Cuban pesos issued by Agent and any not used must be returned. Each person is issued with a card and the amount drawn is entered, then each time they return from shore the Immigration guard enters the amount remaining.
(k) Immigration guard issues passes. He is always on duty, crew member hands his Discharge Book to him and he gives him a pass. This pass has the time that he must be back onboard by, normally 2400 hrs., extensions may be obtained by advising Agent 24 hours in advance. Fines may be imposed for returning late. On return the guard takes the pass and Discharge Book is returned.
(l) Port Health insist that all rubbish be put in polythene bags and these bags put in bins with lids. The port maintains a garbage disposal service which attends on request.
(m) All meat, if not of New Zealand, Australian, Canadian or American origin must be placed under seal.
(n) The Agent can be contacted by VHF. Call "Mambisa" on Channel 12, office hours only.
(o) Postal service not recommended as very slow.
(p) Berthed at Turcios Lima. 33 ft. alongside. The discharger has two heads and moves the length of the berth. Wheat was discharged at an average of 60 tonnes per hour. Work was on a 24 hour basis.
(q) All hatches were inspected even though only one was to be discharged.
(r) The vessel was not searched but we were told that it could happen at anytime during our stay.
(s) The Officials who attended this vessel were all very friendly and helpful.

SHIPMASTER'S REPORT: December 1983.

Documents:

10 copies Crew List.
3 copies Stores List.
2 copies Deck and Engine Stores.
Personal Declaration Forms (1 copy plus 1 per individual crew member.)
Currency Declaration List.
Drugs List.

Accommodation ladder required for boarding officials.

Pilotage: Compulsory. ETAs should be sent via Agent 72, 48 and 24 hours prior to arrival. Pilot boards at entrance to harbour.

Anchorages: Only available inside harbour.

Vessels await entrance instructions 5 miles North of Morro Light.

Restrictions: Vessels may dock/undock day or night, at any stage of tide.

Max. Size: Max. length 280 m., draft 32 ft.

Radio: Havana Radio.

VHF: Havana Radio – Channels 16, 13 and 11. Pilots – Channels 16 and 11. Port Authority – Channel 16. Agents – Channel 16 and 10.

Tugs: 7 tugs of various sizes available.

Berthing: Vessel loading potatoes; berth 2.1 miles from Harbour entrance. Max. LOA 575 ft., max. beam 80 ft. Max. draft – for'd 22 ft., aft 32 ft. Nature of bottom at berth was mud. Depth in channel 33 ft.

There are no fenders on the quays at Havana. Ensure that there are ample fenders on board.

Cranes: No cranes at cargo quay. 1 floating crane available, capacity 175 tons.

Bulk Cargo Facilities: Silos available for grain. Grabs available for handling coal/coke.

Specialised Cargo Handling Facilities: Facilities available for Ro/Ro vessels.

Equipment to handle palletised/break bulk/20 ft. – 40 ft. containers available. Ample storage areas for containers, etc.

Steel lighters available for work at anchorage.

Stevedores: Satisfactory work carried out by stevedores.

Medical: Doctor and hospital facilities available.

Fresh Water: Available.

Fuel: Bunker fuel oil, diesel and lubricating oils are available.

Consuls: Majority of nations are represented.

Repairs: Can be undertaken.

Surveyors: Lloyds' and Salvage Surveyors available.

Services: Laundry service, telex, limited supply of fresh provisions, groceries and meats available.

All international telephone calls had to be made through the Merchant Seaman's Club.

SHIPMASTER'S REPORT: October 1987.

Vessel (34,000 d.w.t. bulk carrier) called at Havana and Santiago de Cuba to discharge 28,000 tons of wheat. Arrival draft Havana 32 ft. salt water even keel.

Havana was our first discharge port and one day prior to arrival at Havana, vessel was instructed by Agents to anchor at Caibarien Anchorage (BA. Chart No. 425; Lat. 22° 39' N., Long. 79° 14' W.) and await our turn to discharge in Havana.

This anchorage, so I understand, is increasingly used as a waiting anchorage for vessels bound to Havana. We anchored without a Pilot with Cayo Frances Lt. 140° at a distance of 0.9 miles from the same light and depth of water was 67 ft. – 75 ft. good holding ground, mud.

Total distance Havana to Caibarien 190 miles. Due to drafts available, this anchorage can only accommodate very few deep drafted vessels.

Consuls: Greek Embassy resides at the "Commodoro Hotel" in Havana. Tel. 225551 (room 422).

Customs Formalities; On arrival at Havana, Customs handed to us Customs Forms to be filled in by each crew member in duplicate. Original was kept by them and the second copy was handed back to us on sailing, in order to be given to the Customs at second port (Santiago de Cuba). Apparently no extra copy was required in Santiago de Cuba.

SHIPMASTER'S REPORT: March 1989.

Documents: As per "Guide to Port Entry".

Port Health officials were the first of the authorities to come on board and once the Quarantine Clearance was given, the Agent and the other officials came aboard.

The Veterinary inspection was thorough.

A timely warning was given by one of the officials and most of the crew valuables were locked in the "transit room" before the rummage gang boarded.

Although fully itemised Personal Effects Lists had been prepared prior to arrival, these were not accepted as they were not on official forms, so the Radio Officer spent all night typing the crew's effects on to proper forms.

When the rummage gang came on board an officer was required to accompany them to all cabins, where the Currency List and Crew Effects Declaration was consulted and items checked. Any discrepancies led to confiscation on the spot.

The Bond Locker was checked. Transit room was not checked.

A handler and his dog came aboard.

It took about 6 hours to clear the ship, during which time the whole crew were prevented from going about their normal business.

Regarding personal effects – EVERYTHING must be itemised on the proper form. To save loss, everything except the bare essential requirements should be put in a suitcase and locked in the transit room. This includes currency.

Charts: BA. Chart No. 414, Puerto de Habana, and BA. Chart No. 3867, Cuba – Western Sheet.

American charts give better coverage of the whole of Cuba – especially useful if contemplating passage through Old Bahama Channel.

Sailing Directions: NP. 70, West Indies Pilot Volume 1, page 182.

Approaches: The coast gives good radar echoes. There are plenty of visual marks to identify. The latest Cuban Radio Navigation Warnings are useful to plot naval exercises and firing areas. Normal approach from Florida Straits passes through one of these areas just to the East of Havana.

There were no problems in the approach. Pilots or Port Control were contacted at a range of about 35 miles. There was some confusion as to whether we were talking to Pilots, Port Control or Agents, and this was never really clarified. The Pilot boarded 1 mile North of the entrance from a large launch with orange hull and white superstructure.

Berthing: Passage through the harbour was taken very very slowly and berthing was assisted by 3 tugs which were poorly handled.

The berth is very poorly fendered and it would be advisable to put vessel's fenders out.

The harbour is extremely heavily polluted. The fuel oil floating around is only just visible against the water.

Berth: The berth is poorly maintained and with evidence of spills and burst joints. The berth appears to be set up to handle gasoline, gas oil and fuel oil. We took 200 tonnes of heavy oil which was blended to our requirement according to our company bunker specification. We await analysis to see if this was the case.

Berth Information:

Berth: Oil Berth No. 2 North.
Operator: State Oil Company.
Density: Salt.
Distance from Pilot to Berth: 3 miles.
Bridges: None.
Max. draft: Approaches 38 ft.
Berth 38 ft.
Restrictions: Berthing day and night.
Fresh Water: Available, rate not known.
Fuel: Available by pipeline and barge, also see "Berth" above.
Hoses: 1 × 8 in. for gas oil, pressure 8 kg./sq.m.

Surveyors: They accept the Mate's figures without question.

Departure: Two tugs used. Tugs accompany vessel out to sea.

SHIPMASTER'S REPORT: April 1993.

Also see Matanzas Report (first port of discharge).

Vessel arrived off Havana at 2000 hrs. and communications had been established through Morro Signal Station, which is situated at the Eastern Harbour Entrance in the old fortress. I was advised to remain in a position of about 2 miles N.W. of the Signal Station. Both wind and current resulted in a Westerly set of about 1 knot, and engines had to be used at minimum pitch to hold the position. Pilot should be boarding after 20 minutes, however from the conversation on VHF, it was obvious that no arrangements for berth or tugs had been made. The pilot finally boarded at 0030 hrs. next morning, and on making the approach, requested us to prepare the usual fendering which, of course, the ship did not have available. I was also advised that, although the B.A.Chart indicated only 23 ft. of water, the actual depth was considerably more. It was decided to defer the entry till daylight, and after confirmation had been received that at least some makeshift fendering would be available between the vessel and the mooring pontoon, which was to be situated between the pier and the vessel. This pontoon was necessary, as there would not be sufficient water to accommodate the vessel directly alongside.

In the morning, fendering was arranged by shore, and together with some additional materials from the ship, vessel proceeded to the berth. Entry into the port is straightforward, and no difficulties were encountered. The water in the port is completely covered with a thin oil slick that has also covered quays, craft and jetties with a black layer. This proof of some oil spills was however less in the part of the port where our assigned jetty was situated. At sea it was discovered, that in the dirty ballast tanks there was a slight clingage of blackish substance on the bulkheads. We did not experience any fouling of condensors or coolers with the extensive marine growth as is mentioned in "Guide to Port Entry".

In adverse weather, some of the ships anchored in the harbour may restrict room for navigation.

We were assisted by 2 tugs of 2,400 h.p. and 3,600 h.p. respectively, which like in Matanzas do not have any equipment, and ship's lines were used to secure them from the starboard main deck.

The assigned berth for this particular trade is situated in the deep Southern part of the port, and is actually a quay of the Container Terminal "Porto Pena", and is the last part of the quay next to the obsolete grain elevator facilities. This part of the harbour, like other parts, is occupied by a number of stern trawlers lying idle at anchor. However they do not hamper the manoeuvring of vessels. One 20 m. × 10 m. flat deck pontoon had been moored alongside the quay and medium size car tyres had been fitted as fenders. Prior to coming alongside this facilitiy, the pontoon had to be shifted some 30 m. forward, in order to clear the vessel moored astern of us and also to take the weight of the vessel approximately amidships. Vessel was secured with 2 head lines, 4 breast lines, 2 springs and 2 stern lines. Ship's gangway had to be used leading onto the pontoon. During the approaches, the least depth encountered was 10.2 m., which was at the stern just prior to berthing.

Formalities were identical to those described at Matanzas, but a full crew muster was not necessary. Gratuities again were very minor, and the few bottles and cartons of cigarettes were just as much appreciated as a few boxes of matches and bars of soap. Again the ship's meat room was sealed and all pertaining regulations extensively explained.

There is a protected area where a recessed manifold is located. This looked well maintained.

Sampling and lab testing was elaborate, and only after about 5 hours did discharge commence through 1×8 in. hose into 1×8 in. line. Bulk discharge rate achieved was 380 cu.m./hr. Knowledge of English was rather poor although workable. As indicated earlier, telecommunications are a problem, and the nearest telephone was at the Terminal gate some 500 m. away. Most external communications will be conducted via ship's VHF Channel 12.

Both in Matanzas and Havana, ship's copying machines were used for making enormous quantities of copies of each and every cargo document due to paper shortage in Cuba. Quite a number of documents are the old blue alcohol type of copies which after a while start to fade, and are not suitable for archiving purposes. It is recommended to make Xerox copies for ship's use. Most documents will be legal/foolscap size, and it is helpful if copying machines can handle this size of paper to reduce it to A4.

Identical to the Matanzas experience were the frequent visits by authorities, which are mainly Customs officials who invariably fail to make clear the true purpose of their visit, and a soft drink or cup of coffee sets them on their way again. The Veterinary Inspector will call daily to check the seal on the meat room and to supervise any withdrawal of frozen goods that might be required to prepare meals. Invariably these visitors will indicate, although not ask, for basic commodities like soap, washing powder, shampoo or a bit of rice.

No restrictions are imposed on shore leave, and although Passports should be carried, I do not know of any request that these be shown. Although tourist taxis are on call, it should be noted that this only means of transport is not readily available between midnight and 0900 hrs. A number of crew members had to walk considerable distances involuntarily through mainly unlit areas to return to their ship. Without exception, the people were friendly, well disciplined and extremely helpful in every respect. I do not have any indication that even the smallest of items were stolen from the ship.

On completion of cargo operations, the Outward Clearance Formalities were extremely thorough. Firstly, all Cuban nationals remaining on board must leave the vessel, and only then is a crew muster held. Passports are to be taken by each crew member, and crew must adjourn to their cabins, except those who are on duty. The vessel is inspected from top to bottom by Frontier Guards accompanied by a German shepherd dog. All stores, engine room and even chain lockers were searched. After this is completed, all cabins will be searched. Even drawers are opened as they are possible hideouts for stowaways. Having concluded this search, a certificate is issued and clearance given. Finally the pilot is ordered by the same officials, and he arrived after 2 hours.

The Agents had promised to obtain a chart of the port of Havana for me, but nothing arrived. Finally I spent most of an afternoon at the Instituto Hidrografico in Havana to learn on the arrival from the person responsible for sales that we had to go to the printers to have a new copy printed and collected.

I would like to mention that without the assistance of Petrometal, the Sitco representative in Cuba, all this would not have been possible.

We also discussed and suggested alternative arrangements for subsequent visits of the vessel:

1. Contemplate the use of a second product line and hose to increase the discharge rate, as precious money is lost on demurrage.
2. The use of 2 pontoons rather than one to improve the safe berthing of the vessel, as the load would be shared and facilitate access, since the use of the accommodation ladder would then be possible.
3. To investigate the possibility to equip the vessel with 2 small Yokohama type fenders, to enhance the safe mooring of the ship at this berth, which is to be used for this operation throughout the present contract.
4. Although gratuities in the form of cigarettes and whisky are accepted as they are in most ports, it may be considered to have a certain supply of the other above mentioned commodities at hand.

AUTHORITIES: Ministry of Transport.

All port authorities located at Custom House building. Means of transportation used by authorities to clear vessel is launch. Each authority has its own launch for these services.

AGENT: Empresa Consignataria Mambisa, Agencia Havana, Lamparilla No. 2, P.O. Box No. 1785, Havana, Cuba. Telephone: 61-6706, 62-3969, 61-3994. Cable: Mambisa Habana. Telex: 051-1577.

Agency VHF works on Channel 12.

ISABELA DE SAGUA: 22.52 N. 80.00 W. (See Plan)

Although the Port of Isabela is not located in a bay and lies on a small peninsula oriented S.W./N.E., it is a fairly protected harbour because a barrier of cays, lined from N.W. to S.E., forms a protective levee against the roughness of the sea and the force of the winds.

Behind the port and town of Isabela, to the S.E., and as if splitting the small peninsula in two, Sagua La Grande river flows into the sea.

Isabela is mostly a sugar shipping port but also handles a rather important amount of import cargoes.

In the vicinity of Isabela, besides several sugar mills, there is an Electro-Chemical Industry and a very important foundry.

PILOTAGE: Pilots board vessels about 1 or 2 miles out from Buoys No. 1 and 2. Pilot station located at Custom House building, Isabela de Sagua. Distance from place where Pilots board vessels to anchorage is 7 miles.

From seaward by stages, the bottom is sandy, coral reef and hard rock, mud and rock under mud, mud and clay.

Turns in channel are not dangerous but there are narrows with dangerous currents.

ANCHORAGES: *Inner Anchorage No. 1:* This anchorage is located about 300 m. N.W. from the piers and can be considered part of the manoeuvring basin.

Bottom is soft mud but anchors hold well with 3 shackles of chain.

Draft allowed: 7.31 m. – 7.62 m. depending upon vessel's length.

Swinging area: About 250 m.

Vessels load or discharge at this anchorage by means of barges.

Inner Anchorage No. 2: This anchorage is located close to and South of Palomo Cay.

Bottom is soft and mud but anchors hold well with 3 shackles of chain.

Draft allowed: 4.57 m.

Swinging area: Unlimited.

Several vessels can be accommodated.

Vessels load or discharge at this anchorage by means of barges, but it is chiefly used for vessels awaiting berth.

Outer Anchorage: Located East of Del Cristo Cay and about 8 miles from the port of Isabela, and also known as Ingles Anchorage.

Bottom is mud and coral reefs but anchors hold well with 5 shackles of chain.

This anchorage is marked with a well lighted buoy.

Vessels can load safely up to 10.06 m. draft with LOA 190 m.

Loading or discharging is effected by means of barges.

Operations can be performed at this anchorage when there are good weather conditions.

RESTRICTIONS: Entry and sailing only during daylight due to lack of lights in channel.

MAX. SIZE: Max. draft 7.62 m. Max. LOA 180 m. Tidal variation about 2.5 ft.

COMMUNICATIONS: Means of communications available at Isabela are local and long distance telephone and telex, the latter being the quickest for communication with the port.

Vessels navigating to Cuba can communicate with Mambisa Isabela Agency through "CLA" Havana Radio Station, which relays promptly the message to Isabela.

Vessels cannot communicate directly with Isabela de Sagua.

Masters must send their ETA messages simultaneously to Mambisa Sagua la Grande and Mambisa Havana.

The ship can communicate with the Agency during stay in port by VHF system.

TUGS: 2×250 h.p., 1×300 h.p. and 1×80 h.p.

BERTHING: Isabela operation places (piers) are located on the North coast of the peninsula previously mentioned.

Formerly 4 piers were operated by the port but due to shallowness alongside Begueristain Pier, nowadays the latter is used only for small craft and barges drawing 10 ft. maximum. Another berth, Garcia Pier, is out of service undergoing repairs, the date of completion of which has not yet been determined.

Amezaga Pier: N.E. side: Out of service.

S.W. side:

(a) Draft even keel: 6.71 m.

(b) LOA: 140 m.

Cargo handled: General cargo, bagged cargoes, bagged raw and refined sugar.

Alfert Pier: East side: Length 137 m. Draft allowed 5.49 m. – 6.1 m. Ship's max. length 170 m.

This pier consists of an all-hardwood construction not in good condition.

It has standard gauge railroad tracks connecting with the main tracks and is not suitable for trucking operations.

Tanker information: Molasses: 2 × 8 in. diameter connections.

Loading rate: 200 t.p.h.

Cargoes handled by this side: General cargo, molassses, bagged sugar.

West Side: Out of service.

Beguiristain Pier: Max. vessel's length 90 m. Draft (West side) 4.88 m. Length 165 m., width 9.0 m.

The pier is out of service due to shallowness alongside.

STEVEDORES: Raw Sugar loading rate: 1,300 bags of raw sugar (of 250-lb. type) loaded per 4 hour-gang period, or 1,490 (of 220-lb. type). From 4 to 5 bags loaded per sling. From lighters, 5 bags.

Refined Sugar: 2,360 bags of refined sugar (50 kg.) are loaded per 4 hour-gang period. 12 bags loaded per sling.

Operational capacity: Three vessels can be operated simultaneously.

Equipment for bulk sugar: Twelve grates available but trimming performed with shovellers.

Loading Raw Sugar – Working periods: From Monday to Friday 0700–1100 hrs., 1300–1700 hrs. Saturday 0700–1100 hrs.

General cargo operations occasionally performed at this port, for which above periods apply.

Barges: 6×200 tons and 3×400 tons capacity.

MEDICAL: Crew members requiring medical or dental care are treated at Sagua La Grande Hospital, where they can be hospitalised if necessary. At Isabela there is only a Polyclinic.

TANKERS: No fuel oil or ammonium discharging operations performed.

FRESH WATER: Fresh water can be supplied by means of 400 tons capacity barge. Water is delivered to vessels docked or at anchorages (Inner or/and Outer). Daily delivery quantity will be subject to the vessel's stay in port, and the quantity received at the shore tanks, since said tanks receive small quantity from the main line (Sagua la Grande).

FUEL: Small quantities of gas oil available by truck when vessel docked at Amezaga Dock.

REPAIRS: Minor repairs can be effected at Isabela de Sagua, larger repairs to be effected at Sagua la Grande, where two repair shops available: Fundicion Marfarlane Nacionalizada and Talleres Esponda Nacionalizado.

DUNNAGE: Dunnage material can be supplied if requested in advance by Master.

Paper dunnage can be obtained if ordered well in advance.

TRANSPORTATION: Means of transportation to and from Isabela are: train, bus or car.

From Isabela to Sagua La Grande is a distance of about 17 km. by road or train.

From Sagua La Grande to Santa Clara is a distance of about 50 km. by road.

From Santa Clara there are numerous means of communications to any place or city in Cuba.

There are bus lines Sagua/Cardenas, Sagua/Havana, Sagua/Santa Clara, Sagua/Isabela.

SHIPMASTER'S REPORT: November, 1978.

Pilotage: Pilot boards 1.5 miles N.E. Cayo Cristo lighthouse in position Lat. 23° 02' N., Long. 79° 59.4' W. Pilotage is compulsory. ETA should be sent to vessel's Agent.

Max. Size: Max. LOA 606 ft. Max. beam 75 ft. Max. draft 23 ft. I would suggest the max. size as being 520 ft. LOA, 70 ft. beam and 22 ft. max. draft. Tidal range 2 ft.

Tugs: 3 tugs available each approx. 140 h.p.

Radio: Havana Radio "CLA".

VHF: Not available.

Documents: 8 Crew Lists. 1 Vaccination List, Health Declaration, 4 Currency Lists (crew and ships). (Also see "General").

Consuls: Nearest are in Havana.

Medical: Doctor and hospital available in Sagua La Grande at a distance of 10 miles from the port.

Berthing: Espg. De Amezuga Berth: Position Lat. 22° 56' 54" N., Long. 80° 00' 40" W. Distance from berth to entrance 7 miles. Max. size of vessel that can be safely berthed, LOA 520 ft., beam 70 ft. and deepest draft 22 ft. Least depth of water in channel from sea to berth 25 ft. Vessel able to dock and undock at any stage of the tide also vessel able to dock and undock during hours of darkness at times. Special bulk facilities handled at the port include Molasses. There are no quay cranes, Ro/Ro facilities or floating cranes.

Stevedores: Believe there are a total of 8 gangs available for working of general cargo. There are steel and wooden dumb barges available (length 75 ft., beam 30 ft.).

Density: 1004.

General: Documents required: 3 Manifests (Crew Declarations); 8 Crew Lists; 4 Bonded Stores Lists; 4 Provision and Meats Lists; 4 Currency Lists (Crew and Ship's); Certificate of Sanitary/Veterinary Inspection (from last Cuban port); 1 Stowage Plan; Cargo Manifest.

Seals may be opened coastwise but advise not to, with exception of meats.

All conditions as Havana except shore leave only 1800 – 2200 hrs., except Master, extension granted for officers to 2400 hrs. if requested via Agent.

Only chandler 70 miles away.

Fresh water available at 8 t.p.h. (amount may be limited) but must be ordered immediately on arrival if required. We did not order until the last day as we believed we were bound for a U.S.A. Gulf Port, it took 8 hours to hook up and a lot of pressure on Agent.

Berth unsuitable for this size of vessel though using mooring buoys vessel lay securely moored. Concrete pier with wooden fendering slightly dilapidated in places but quite adequate. Pier 320 ft. long and 4 ft. high. Stern secured to 2 mooring buoys, one each quarter, distance approx. 200 ft., but buoy moorings are believed to be suspect. No cargo can be worked at No. 5 except by lighters. Harbour Master states largest vessel suitable for this berth 120 m. LOA. Depth alongside by soundings 22 ft. Forward, 26 ft. aft. Pilots good.

Gangway must be used, as companion ladder will not reach quay.

Channel requires local knowledge but it is well buoyed.

Cargo discharge depends on supply of trucks. Can only work one truck at each hatch therefore to speed up discharge last day two gangs No. 4 discharged into lighter offshore.

AUTHORITY: All port authorities located at port of Isabela de Sagua.

When vessels at anchorage awaiting berthing, authorities transported by tug-boat for clearing purposes.

AGENT: Empresa Consignataria Mambisa, Agencia Isabela de Sagua, P.O.Box 18, Isabela de Sagua, Prov. de Las Villas. Tel: 698122 (office) 698130 (night). Telex: 041222. Cable: Mambisa Sagua La Grande.

Cables, messages should be addressed "Mambisa Sagua la Grande", but recommended be sent through main office "Mambisa Havana". ETAs should be sent simultaneously to both.

JUCARO: 21.37 N. 78.51 W.
(including the sub-ports of Boca Grande, Palo Alto and Santa Maria)

DOCUMENTS:

10 Crew Lists.
10 Passenger Lists (if passengers on board only).
10 Manifests of Cargo (or ballast).
4 Customs Crew Declaration (including currency).
4 Ship's Provision Stores, including bonded and narcotics.
1 Health Declaration,
1 Vaccination List.
Clearance from Last Port.
Derat Certificate.

APPROACHES: Vessels proceeding to Jucaro sub-ports must call first at Jucaro for Port Authority's clearance.

Tidal variation 1 ft. 6 in. It is not necessary to await slack water before entering. Recommended that *(a)* vessels arriving from Cuban ports situated to the East of Jucaro, such as Caibarien, Puerto Padre, Manati, Vita, Banes, Antilla, Sagua de Tanamo, Moa, Baracoa, etc., or from foreign ports, should enter Jucaro Port through Breton Channel, and *(b)* all vessels not exceeding 22 ft. draft proceeding from those Cuban ports situated to the West of Jucaro, such as Havana, Mariel, Matanzas, Cardenas, Isabela de Sagua and Cienfuegos, should enter Jucaro port through Tunas Channel.

PILOTAGE: Pilots board vessels which enter through Breton Channel at Buoy No. 2, which is situated to East of channel entrance, 21° 08' 18" N. 79° 30' 24" W. with water depth 33 ft. Through this channel vessels can enter drawing up to 29 ft. with max. length 800 ft. Bottom is coral reef. There are dangerous turns at "pasa" of Baandra until Ana Maria Cays have been passed.

For vessels which enter through Tunas Channel, Pilots board at No. 2 Buoy which is situated to East of Channel entrance, Lat. 21° 31' N., Long. 79° 41' 21" W. Through this channel vessels can enter drawing up to 22 ft.

No Pilot Station. Pilots are to be notified of vessel's arrival 24 hours in advance. Distance from place where Pilots board vessels to Jucaro anchorage is 50 miles.

From Jucaro Anchorage to:

Boca Grande Sub-port	– 14 miles
Palo Alto Sub-port	– 5 miles
Santa Maria Sub-port	– 24 miles

ANCHORAGES: Loading places, ex-lighters. Three anchorages (very good holding ground), namely, No. 1 Anchorage – 6 miles from the port at South of Obispo Cay, depth 24 ft. No. 2 Anchorage – 7 miles from the port at S.E. of Obsipo Cay, depth 27 ft. No. 3 Anchorage: Anchorage 8 miles from the port and 1 mile to Eastward of No. 2 anchorage, depth 30 ft.

RESTRICTIONS: Vessels can enter and sail through both channels day and night.

RADIO: Call "Jucaro Radio" on 2182 kHz, will answer on 2760 kHz.

VHF: Pilot boat, Port Captain and Agency equipped with VHF and work on Channel 16.

LOADING: This port only exports bagged refined sugar in 100 kilos jute bags or 50 kilos cotton bags, molasses and fresh fruits.

Fuel oil is discharged either imported or by coastal trade.

Working periods: Monday to Friday 0600 – 1000 hrs., 1200 – 1600 hrs.; Saturday 0600 – 1000 hrs., 1200 – 1600 hrs. It is possible to work overtime, also possible to work Sundays and holidays, if required.

Work carried out on a piece-work basis, and at an average of 2,000 bags per gang-period. 6 sugar bags loaded per sling.

Refined sugar: Work is carried out on a piece-work basis and loading rate averaged about 4,000 bags of the 50 kilo type and 2,000 of the 100 kilo type per gang-period.

Sugar in bulk: Venezuela and Ecuador sugar mills have 5 thrower machines each for distributing sugar in vessels' hatches. Loading carried out by cutting sugar bags through grates placed on vessels' hatches.

Shore cranes: None.

MEDICAL: There are two hospitals at Ciego de Avila where sick crew members can receive attention. Distance between Jucaro and Ciego de Avila is 27 km.

TANKERS: Average pumping rate of molasses 20,000 g.p.h.

FRESH WATER: No water available.

FUEL/REPAIRS: Not available.

OPENING/CLOSING HATCHES: By crew.

PROVISIONS: Available, but expensive.

TRANSPORTATION: Distance between Jucaro Port and its sub-ports:

To Santa Maria	– 31 miles
To Boca Grande	– 15 miles
To Palo Alto	– 9 miles

Motor launches are used between port and sub-ports, and take 4.5 hours, 2.5 hours and 1.25 hours between Jucaro and Santa Maria, Boca Grande, and Palo Alto respectively.

By automobile, 3.5 hours to Santa Maria and 2 hours to Boca Grande. No highway from Jucaro to Palo Alto.

SHIPMASTER'S REPORT: 1977.

Lines to the barges to be provided with rat-guards.

Very strict regulations concerning crew declaration of effects, currency and pornography.

All personal effects of crew members will be sealed by Customs, even their used clothes, allowing them out only a couple of clothes changes, one carton of cigarettes and one bottle of spirits.

Advisable to instruct crew members to declare all currency and not to try to take any money ashore. They could not use or change it and could run into a great deal of trouble.

Vessel's deck, engine and accommodation will be searched by Port Authority party.

Cholera vaccination available on request.

Shore leave for crew allowed only from 1800 to 2200 hrs.

No kind of restrictions for the Master, whose shore leave is unlimited. Strict Customs regulations do not affect him.

No amenities available ashore.

Loading of oranges fast if available. About 200 tons per gang shift.

Pre-cooling of cargo chambers is not required. Oranges stowed in two tiers of four cartons with battens in between. Maximum height of eight cartons. Stowage factor about 95.

AUTHORITY: Custom House, Captain of the Port and Immigration, located at Jucaro. Port doctor located at Ciego de Avila.

AGENT: Empresa Consignataria Mambisa,
Agencia Nuevitas,
P.O. Box No. 350,
Puerto Tarafa, Nuevitas,
Prov. de Camaguey.
Telephone: 2779, 2107 (office),
3190 (night).
Telex: 3190.
Cable: Mambisas Nuevitas.

Mambisas Nuevitas Agency also attends at the port of Nuevitas.

Jucaro and Boca Grande are attended by Nuevitas Agency personnel.

Any information about vessels operating at Jucaro or Boca Grande should be requested from our main offices at Havana or to Nuevitas Agency because it is extremely difficult to communicate directly with the Agent attending the vessel. Agents at Jucaro and Boca Grande communicate periodically with Nuevitas Agency which relays the information to our main office.

SUB-PORT OF BOCA GRANDE:

SHIPMASTER'S REPORT: Port will not be operational after 1977.

LOCATION: About 15 miles East of Jucaro.

APPROACHES: See "Jucaro".

PILOTAGE: See "Jucaro". Distance from place where Pilots board vessels to Boca Grande is 64 miles. Entrance channel: same as for Jucaro. Tidal variation 1 ft. 6 in.

ANCHORAGES: Anchorage No. 1: Located 3 miles off Boca Grande Firth. Depth 24 ft. Anchorage No. 2: Located 5 miles off Boca Grande Firth. Depth 30 ft. Both these anchorages have soft mud bottom.

Kind of cargoes handled. Importation, fuel oil. Exportation, bagged refined sugar, molasses. Coastal trade, discharge of fuel oil.

LOADING: At present only refined sugar is exported. All sugar-loading operations are carried out at anchorage by means of lighters. Following lighters available:

Barges	*Capacity* (50 kg. bags)	*Capacity* (100 kg. bags)
Ana	4,900	2,500
Loretto	4,400	2,100
Mascot	4,400	2,100
F 55	4,400	2,100
Trusco 89	5,100	2,980
Angel	3,440	1,700

Working Periods: Monday to Friday 0600/1000 hrs., 1200/1600 hrs.; Saturday 0600/1000 hrs., 1200/1600 hrs. When working is performed on Sundays, same periods apply.

Work is performed on a piece-work basis, and average loading rate is about 2,000 bags, basis 6 bags per sling, and 100 kilo bags. Only one vessel can be worked at a time.

TUGS: Three tugs available.

TANKERS: Discharging operations at No. 1 or No. 2 anchorages. Discharging rate approximately 20,000 g.p.h.

There are also steel barges for transportation of molasses and/or sugar:

Guanales:	100 ft.×30 ft.×7 ft. Sugar capacity: 1,600 bags. Molasses capacity: 65,000 gallons.
Loreto:	100 ft.×30 ft.×7 ft. Sugar capacity: 1,600 bags. Molasses capacity: 65,000 gallons.

Each of these barges has 4 tanks measuring 15 ft.×36 ft.×7 ft. Capacity: 3,780 cu.ft. or 28,274 gallons each tank. Total capacity: 113,100 gallons. Each barge can load a max. of 400 tons of molasses and each is equipped with steam pump.

COMMUNICATIONS: Launch transportation. It takes 2.5 hours for travelling from Boca Grande to Jucaro or Santa Maria. Captain of the Port's radio-telephone is used as means of communication.

All communication and instructions for vessels operating at this sub-port must be given to Nuevitas Agency.

MANZANILLO: 20.20 N. 77.12 W. (See Plan) (and sub-ports of Ceiba Hueca, Media Luna, Niquero and Pilon (Ensenada de Mora).)

ENTRANCE TO PORT/CONDITIONS/LIMITATIONS: The entrance to the port can be accomplished by two different routes, depending on vessel's draft.

Madrona Channel: This channel has some turns and some of them are sharp and narrow. In the South Channel's mouth is where precautions should be taken, because "windward shoals" have a marked inclination to the Channel.

The bottom is soft mud and sand.

Minimum depth of the Channel is 10.67 m., precisely at the South Channel's mouth, and customarily the draft for entering/sailing is 9.14 m., being maximum draft for entering/sailing 9.14 m., although vessels drawing up to 10.06 m. have entered/sailed from this port, leaving in those cases 0.61 m. as a safety margin.

Palomino Channel: This is an intermediate channel which leads either to Madrona Channel or Coloradas de Afuera Channel.

This channel also has turns, but some are less sharp because the channel is wider than Madrona Channel and manoeuvering is easier. The average depth is 22/25 fathoms (40/46 m.), but draft of vessels is limited by depth of Madrona or Coloradas de Afuera Channels.

The bottom is rocky.

Coloradas de Afuera Channel: This channel reduces the distance to Manzanillo to only 55 miles, but can only be crossed by vessels drawing 6.1 m. or less.

Presently, due to lack of navigational signals and marks, this channel is temporarily out of use.

The transit of above described channels can be performed without tug assistance.

There is another channel in this port which is listed as a matter of information.

Balandras Channel: This is an intermediate channel leading to Coloradas de Afuera Channel, but can only be crossed by vessels drawing maximum 4.26 m.

Because of the large tonnage of vessels presently operating in Cuba, and also due to lack of proper navigational signals, this channel is not used.

Entrance to the Port of Manzanillo: From Cay Perla, vessels drawing 7.31 m. or less enter the Gua Passage (between Cay Perla and Gua Cays), and those drawing more than 7.31 m. enter outside of Cay Perla.

For both routes the string of Manzanillo Cays, about 6 miles long, can be used as a visual orientation point.

PILOTAGE: The pilot boards vessel at Cabo Cruz, located at Lat. 19° 50' 33" N., Long. 77° 43' 33" W. On the cape there is a small town, the Pilot Station and a lighthouse.

The lighthouse rises to 34 m. above sea level, and its light is visible up to a distance of 17 miles.

The Pilot Station communicates with Manzanillo by radiotelephony.

The distance from where the pilot boards the vessel to Manzanillo is 68 miles through Madrona Channel, or 55 miles through Coloradas de Afuera Channel, first and next Palomino Channel.

The exact place where pilot should be taken is Lat. 19° 49' 12" N., Long. 77° 45' 12" W. In this position, vessel is about one mile off the crown of reefs of Cape Cruz.

All vessels calling at Manzanillo or any of its sub-ports (including Pilon), should take pilot at this place.

ANCHORAGES: *Inner Anchorage No. 1:*

This anchorage is located at Lat. 20° 21' 54" N., Long. 77° 08' 24" W. Max. LOA 180 m., max. draft 6.4 m.

Distance from shore is about one mile, and the transportation means are the tugs of stevedore enterprise "Terminales Mambisa".

The cargoes handled are:

Imports: General cargo.

Exports: Bagged raw sugar.

Outer Anchorage No. 2:

This anchorage is located at Lat. 20° 22' 36" N., Long. 77° 08' 40" W. Max. LOA 180 m., max. draft 8.53 m.

Distance from shore is about 2 miles, and the transportation means are the tugs of stevedore enterprise "Terminales Mambisa".

The cargoes handled are:

Imports: General cargo.

Exports: Bagged raw sugar.

Outer Anchorage No. 3:

This anchorage is located at Lat. 20° 23' 30" N., Long. 77° 09' 18" W. Max. LOA 180 m., max. draft 10.06 m.

Distance from shore is about 3.5 miles, and the transportation means are the tugs of stevedore enterprise "Terminales Mambisa".

The cargoes handled are:

Imports: General cargo.

Exports: Bagged raw sugar.

RESTRICTIONS: Due to present conditions of channel lights and distance, vessels enter and sail only during daylight.

MAX. SIZE: LOA 180 m., draft 9.14 m.

EQUIPMENT: The port has 6 barges of 200 tons cargo capacity, 2 of 140 tons and 1 of 100 tons, this last one having a derrick capable of lifting up to 2 tons.

There are 3 tugboats servicing the port:

"Punta Morrillo" the biggest and most powerful, capable of towing 5 barges, "Aracelio Iglesias" and "Cdte. Turcios Lima" which can tow 3 barges each.

These tugboats are also used to transport shore/vessel personnel from shore to anchorage or vice versa.

There are no cranes or pay loaders in the port.

LOADING: Sugar-loading operations performed at anchorage by lighters.

At sugar mill "La Demajagua", town of Calicito, at a distance of 2 km. from the sugar mill, there is a small pier with a draft of 3.05 m. where the barges are loaded with bagged raw sugar for vessels operating at Manzanillo.

At sugar mill "Francisco Castro Ceruto", town of Campechuela, at 500 m. from the sugar mill there is a pier with a draft of 6.6 m. where barges are loaded with bagged raw sugar for vessels operating at Manzanillo.

For the discharge of barges with import cargoes the coastal pier of Manzanillo Fishing Port is used, about 3 km. distance from the city.

Bulk cargoes are not handled by this port except the discharge of petroleum products.

Docks are suitable for reception and handling of import and export cargo (bulk cargo excepted). They have railroad tracks of non-standard gauge, which connect with warehouses.

Sugar and general cargo: Working periods: Monday to Friday 0700 – 1100 hrs., 1300 – 1700 hrs.; Saturday 0700 – 1100 hrs.

2,000 raw-sugar bags loaded per gang per day of 8 hours.

DISCHARGING: Rates:

Bagged cargo (of 100 lb.)	approx. 25 t.p.h.
Bagged cargo (of 200 lb.)	approx. 35 t.p.h.
Iron	approx. 7 t.p.h.
Wood	approx. 8 t.p.h.
Jute bags	approx. 15 t.p.h.

TANKERS: *ICP Submarine PipeLine Anchorage:* The submarine pipeline anchorage is located as follows:

Lat. 20° 21' 12" N., Long. 77° 10' 21" W.

Max. LOA 147 m., max. draft 8.53 m.

Distance from shore is about 2 miles and the means of transportation are the tugs of the stevedore enterprise "Terminales Mambisa".

The vessel is secured to 4 buoys and the mooring is performed by Terminales Mambisa tugs and personnel.

The pipeline is 8 in. (203 mm.) in diameter and connection is 6 in. (152 mm.).

The cargo handled is: Discharge of kerosene, gasoline and diesel oil.

The prevailing winds are those of the first quadrant.

FUEL/FRESH WATER: Not available.

REPAIRS: Mechanic and foundry shop under control of Industry Ministry, where light repairs of machine parts can be performed.

TRANSPORTATION: Distance from Manzanillo to:

Ceiba Hueca: 15 miles by sea, 32 km. by highway

Media Luna: 23 miles by sea, 45 km. by highway

Niquero: 45 miles by sea, 79 km. by highway

Pilon: 90 miles by sea, 130 km. by paved highway, which reaches up to 15 km. from Niquero whereafter a dirt road must be used to reach Pilon. Dirt road distance of 40 km. During rain season a jeep is used to travel by this road.

Car is used to travel from Manzanillo to above sub-ports, and takes: to Ceiba Hueca 1 hour; to Media Luna 1 hour; to Niquero 2 hours and to Pilon 3 hours (in rainy season about 5 hours).

Daily car services from Manzanillo to Niquero; to Pilon there are trucks specially prepared for this service.

COMMUNICATIONS: There is direct communication between Manzanillo and its sub-ports by telephone or telegraph.

In Manzanillo there is a long distance telephone service, radiograms, telegrams and Post Office.

Vessels navigating to Cuba can communicate with the Agency by radiotelegraphy, contacting "CLA Havana" station, which relays the messages to Manzanillo by telex.

Vessels navigating in Cuban waters can communicate any message to Manzanillo Agency by means of radiotelephony, contacting "CLM Coastal Network", Manzanillo. CLM station relays the messages to Manzanillo Agency by direct telephone call.

The Manzanillo Agency is connected to the National Telex System and the Manzanillo number is 063121. This is the quickest method of communication with Manzanillo Agency.

ETA messages should be given simultaneously to "Mambisa Manzanillo" and "Mambisa Havana".

MEDICAL: There is a hospital at Manzanillo where sick crew members can receive attention.

DUNNAGE: Vessels nominated for loading sugar in Manzanillo or any of its sub-ports must arrive supplied with wood dunnage because in the Manzanillo area it is extremely difficult to obtain wood dunnage.

Dunnage paper can be supplied if requested in advance.

AUTHORITIES: All Port Authorities, Custom House, Immigration Port Doctor, Port Captain are located at Manzanillo.

Vessels can proceed directly to any of the sub-ports, where Manzanillo Port Authorities travel to give clearance, but advance information must be given to these Authorities for the corresponding permit, as Manzanillo regulations provide that vessels must enter Manzanillo as Custom Official Port.

AGENT: Empresa Consignataria Mambisa, Calle Bateria No. 2, Manzanillo, Province Granma. Cable Address: Mambisa Manzanillo. Telex: 063121. Tel: 2533, 2535.

(a) SUB-PORT OF CEIBA HUECA: (See Plan)

Vessels may proceed direct to sub-ports (see Manzanillo under "Authorities").

LOCATION: This port is located on the South coast of Cuba, at a distance of 15 miles Southwest of Manzanillo in position Lat. 20° 13' 24" N., Long. 77° 19' 26" W.

Through this port, the production of three sugar mills is exported ("Indio Diaz", "Francisco Castro Ceruto" and "La Demajagua").

Distance to Manzanillo by road is 32 km.

APPROACHES: See Manzanillo information. For operations at Ceiba Hueca it should be noted that the pier has a depth of only 19 ft. towards the sea end for loading. Tidal variation about 1 ft. 6 in.

PILOTAGE: Pilots board vessels in the vicinity of Cape Cruz at following position Lat. 19° 49' 12" N., Long. 77° 45' 12" W.

Also see "Manzanillo".

From the place where pilots board vessels to Ceiba Hueca Pier, there is a distance of 46 miles through Madrona Channel.

ANCHORAGE: *Ceiba Hueca Anchorage:* Located one mile to the Northwest of the pier. Maximum draft allowed is 10.05 m. Bottom is soft mud.

ENTRANCE TO PORT/CONDITIONS/LIMITATIONS: Entrance to port is effected through Madrona Channel. After passing Fustete Bank, Point Martillo and the sugar mill stack are the best reference points.

Limitations to vessels are in keeping with the operations to be performed.

Vessels loading sugar have no other limitations than those imposed by Madrona Channel, which are LOA 170 m. and max. draft 9.45 m.

RESTRICTIONS: Entering and sailing only possible during daylight hours.

BERTHING: *Sugar Pier:* Max. LOA 170 m. Max. draft 9.45 m.

Cargoes handled by the Port:

Exports: Raw bulk sugar and molasses.

Coastal Trade: Discharge of fuel oil.

MEDICAL: Crew members requiring medical attention are treated at the Polyclinic of the nearby town of Campechuela.

When hospitalisation or specialised medical care is required, patients are sent to Manzanillo Hospital.

TANKERS: Vessels are loaded with molasses at Ceiba Hueca Pier and average pumping rate is 25,000/30,000 g.p.h. Tankers with fuel oil are also operated.

FRESH WATER: Only small quantities available due to low pressure.

FUEL/REPAIRS: Not available.

COMMUNICATIONS: Government telegraph communication between Manzanillo and Ceiba Hueca up to 1800 hrs. however, there is a telephone line which communicates by means of relay with "La Demajagua" sugar mill, which has direct telephone communication with Manzanillo. This communication is only during sugar-mill office hours, and it is very poor due to above relay.

SHIPMASTER'S REPORT: October, 1984. (See Plan).

Vessel loaded sugar in Bulk.

A new berth (constructed 1981) consisting of the following:

1. A long passage way from land to seaward having a length of about 500 m. containing the belt which carries the sugar.

2. Seven square dolphins 5 m.×5 m. constructed of cement with rubber fenders and 1 bollard on each. Distance between the first and seventh dolphins is about 250 m.

3. One semi-circle cement construction about 40 m. length containing the movable conveyor.

The conveyor has a capacity of about 500 tonnes p.h. – 600 tonnes p.h. Loading operations can be done only into 3 cargo holds and then vessel has to shift by means of warping. No tug available or shore mooring men. It is best to leave a seaman ashore for any rope moving.

The berth is affected by strong Northeasterly – Southeasterly winds and precautions must be taken during vessel's shifting.

Max. sailing draft allowed 32 ft. The channel is marked with 3 pairs of buoys. No night mooring or unmooring. All other details as per "Guide to Port Entry".

AGENT: Vessels operating at this sub-port attended by Manzanillo Agency Personnel.

(b) SUB-PORT OF MEDIA LUNA: (See Plan)

Vessels may proceed direct. (See Manzanillo under "Authorities").

LOCATION: The port is located on the South coast of Cuba, about 23 miles S.W. of Manzanillo in position Latitude 20° 10' 30" N., Longitude 77° 26' 25" W.

For description purposes, Media Luna ia located between the port of Niquero at the Southwest and Ceiba Hueca to the Northwest and loading at anchorage is effected at about 1.75 miles off Point Cocal.

It is an open bay and sometimes the winds and swells interrupt the loading operation, especially in the afternoon, when there are scanty tropical storms.

Through this port is exported the production of the sugar mill "Juan Manuel Marquez", the largest in the Manzanillo region.

Also, on occasions, sugar mills "Indio Diaz" and "Francisco Castro Ceruto" ship some of their production through Media Luna.

APPROACHES: See "Manzanillo".

PILOTAGE: Pilots board vessels at Cabo Cruz. Distance from place where Pilots board vessels to Media Luna via the Madrona Channel is 40 miles.

ANCHORAGE: *Media Luna Anchorage:* Max. LOA 170 m., max. draft 9.45 m.

The anchorage is located between Point Cocal and Point Manacal, but closer to the former and about 1.25 miles from the shore.

Transportation means from anchorage to the shore and vice-versa is by launches and tugs of the stevedores enterprise.

Sugar is loaded on railroad car (non standard gauge) at the sugar mill, which is less than 1 km. distant from the barge pier, located at Point Cocal.

RESTRICTIONS: Entrance to or sailing from Media Luna port is only effected during daylight.

MAX. SIZE: Max. draft for vessels to enter and carry out loading operations at this sub-port is 10.05 m. Tidal variation 1 ft. 6 in.

LOADING: Loading operations are carried out at anchorage. Only one vessel can be operated because the sugar mills which ship through this port are able to transport to Media Luna only 800 to 900 tons daily (600/650 tons from "Juan Manuel Marquez" and balance from sugar mills "Indio Diaz" and/or "Francisco Castro Ceruto").

Cargoes handled: Only bagged raw sugar in 100 kilo bags.

MEDICAL: There is a hospital and also a polyclinic at Media Luna where sick crew members receive medical or dental care.

Whenever hospitalisation or specialised medical care is required, patients are sent to Manzanillo Hospital.

TANKERS: No facilities.

FUEL/FRESH WATER/REPAIRS: Not available.

COMMUNICATIONS: There is direct telephone service with Manzanillo, also telegraph and post office.

AUTHORITIES: See "Manzanillo".

(c) SUB-PORT OF NIQUERO: (See Plan)

Vessels may proceed direct. (See Manzanillo under "Authorities").

LOCATION: The port is located on the South coast of Cuba, about 45 miles southwest of Manzanillo.

The port lies 5 km. S.W. of the town of Niquero and the pier is located at Point Cachones.

From the pier to the sugar mill "Roberto Ramirez Delgado", 5 km. inland, runs a non-standard railroad track by which flows all the sugar cargo to the pier.

Although Niquero mainly ships the sugar produced by sugar mill "Roberto Ramirez Delgado", occasionally some import cargoes are handled.

PILOTAGE: Pilot boards the vessel in the vicinity of Cape Cruz at position: Latitude 19° 49' 12" N., Longitude 77° 45' 12" W.

From this place to Niquero there is a distance of 36 miles (through Madrona Channel).

Vessels can enter and sail during daylight hours only.

LOA 147 m., max. draft 6.83 m.

Niquero Pier: Max. LOA 147 m., max. draft 6.83 m.

Berth is out of service at present. The ship's length which operates there is limited to 147 m., due to the present condition of the installation. Previously ships with a length up to 170 m. used to perform operations there.

The pier is geographically oriented from East to West, and vessels berth on the North and South sides.

Although Niquero Pier is capable of working 2 vessels, one docked on each side, the sugar delivery capacity of the sugar mill is only sufficient to operate one vessel, unless overtime is worked, both at the sugar warehouse and at the pier.

The port personnel consists of 3 gangs, but when required extra personnel are sent from Manzanillo.

Cargoes Handled: Mostly raw bagged sugar (100 kilo jute bags) and on some occasions import cargo, such as bagged fertiliser, jute bales, railroad sleepers, etc.

FRESH WATER: Can be delivered at pier by means of tank cars at an average of 40/50 tons daily.

As water delivery sometimes interfers with loading operations, delivery must be arranged to take place at times when vessel is not working.

FUEL/REPAIRS: Not available.

TANKERS: No facilities.

MEDICAL: All crew members requiring medical or dental attention are treated at Niquero Hospital, where they can be hospitalised if necessary.

COMMUNICATIONS: Long-distance telephone communication between Manzanillo and Niquero sugar-mill office. Distance from sugar-mill office to pier is about 5 km.

AGENT/AUTHORITIES: See "Manzanillo".

(d) SUB-PORT OF PILON (ENSENADA DE MORA): (See Plan)

Vessels may proceed direct to sub-ports (See Manzanillo under "Authorities").

LOCATION: The port is located on the South coast of Cuba in position Latitude 19° 54' 28" N., Longitude 77° 18' 58" W.

This port is located at Ensenada de Mora and is known by either name but mostly as Pilon.

The port is used for the export of the production of sugar mill "Luis Enrique Carracedo", formerly known as Cabo Cruz or Pilon.

APPROACHES: From Cabo Cruz to Pilon mouth entrance is open sea. From Pilon mouth to the pier is through channel, with rocky bottom and turns.

PILOTAGE: Pilot boards vessel at Cabo Cruz (Lat. 19° 49' 12" N., Long. 77° 45' 12" W.) Distance to Pilon Pier is 34 miles.

ANCHORAGE: *Pilon Anchorage:* Located 0.5 miles from Pilon Pier. Max. Draft 7.01 m.

Loading operations are performed by means of barges.

Vessels can enter and sail from Pilon only during daylight hours.

Max. LOA 137 m. – 143 m. Max. draft 6.10 m.

Tankers: LOA 152 m.

Operations at this port are performed at the pier and occasionally at anchorage.

The pier is of wood construction, (out of service since February 1984, due to its condition).

Vessels docking alongside the pier cannot work all their hatches at one time, and it is necessary to turn the vessel around to complete the loading to an allowable draft.

It has double non-standard gauge railroad tracks which run up to the sugar mill, located less than 0.5 miles from the pier.

The docking capacity of the pier is about 91 m., so vessels overhang and moor to a solid dolphin and a mooring buoy.

Maximum length for tankers is 152 m. and they effect the loading operations at the head of the pier.

MEDICAL: Medical attention and dental care rendered at Pilon Hospital.
TANKERS: Molasses average pumping rate is 25,000 – 30,000 g.p.h. One connection 8 in. diameter, 12 in. pipeline.
FRESH WATER: Can be delivered at berth by pipeline. Average delivery rate about 1 t.p.h.
FUEL: Not available. No facilities.
COMMUNICATIONS: There is a telegraph service and telephone service, local and long distance.

ETA messages should be given simultaneously to Mambisa Manzanillo and Mambisa Havana.
AGENT/AUTHORITY: See "Manzanillo".

MARIEL: 23.01 N. 82.46 W. (See Plan)
(and sub-ports of Cabanas, Bahia Honda and Santa Lucia)

PILOTAGE: Pilots board vessels about 1 mile off Buoy No.1 which marks the entrance of the port.

Vessels nominated for operations at Bahia Honda and Cabanas must pick up pilot at this location.

Pilot station is located at Cayo Lenin (former Cayo Mason), No. 6911, Mariel.

Pilots telephone 9-2419.(Manager: 9-2131).

Distance from position where pilots board the vessel up to the places of operation are 1.25 miles to 2.75 miles.

Pilot works on VHF Channel 16.

ANCHORAGES: General anchorage – swing area 450 m., depth 29 ft.

Punta Gorda anchorage – swing area 340 m., depth 36 ft.

Cargo operations do not take place at anchorages.

ENTRANCE TO PORT/CONDITIONS/LIMITATIONS: The entrance channel, where Buoy No.1 is situated, is over a sand bank with 15.24 m., 16.76 m. and 18.25 m. depths and vessels steer with only one course continuing up to Buoy No.3, which is situated in 9.14 m. of water on rocky bottom, but having close by a depth of 28.88 m. This channel is 60 m. wide, approximately. Maximum draft with which vessels can enter/sail through channel is 9.45 m. and length 177 m.

It is not necessary to wait for slack or favourable tide to enter or sail from port.

No tug is required, except in case of tankers measuring between 162 m. – 186 m., in which event tug is required.

RESTRICTIONS: Vessels can enter and sail during day and night hours, but this should be checked in each case prior to vessel's arrival as on occasions the buoys are missing.

MAX. SIZE: Max. draft with which vessels can enter and sail through channel is 30 ft. and max. length of 610 ft. Tidal variation 16 in. Also see "Berthing".

BERTHING: All places of operation at this port are located on the East coast of the bay: Unit No. 1 close to the port entrance; Cement Plant pier located just in front of Pt. Gorda and Unit No. 2 located at the North of the town of Mariel.

All operations at Mariel piers are effected by means of trucks.

(a) Unit No. 1, Berth No. 2 (N.W.): Length 134 ft., max. draft allowed 22 ft. Used mostly for general cargo and bulk fertiliser.

(b) Cement Plant Pier: Length: 544 ft. Draft: Vessels with a length under 500 ft. can dock with a draft of 29 ft. even keel.

This pier is used only to discharge fuel oil destined either for the Cement or the Thermoelectric Plants.

Vessels over 500 ft. and up to 610 ft. can enter with a draft of 27 ft. fore and 29 ft. aft. Assistance of a large tugboat (850 h.p.) or 2 smaller ones is necessary for vessels exceeding 532 ft. and up to 610 ft. length. Tanker information: Fuel Oil: 1×8 in. diameter.

(c) Unit No. 2: This installation is located at the North side of the town of Mariel.

It consists of 3 berthing spaces, that is, a pier 607 ft. long by 267 ft. wide, built of concrete, but earth filled and not properly paved.

Berth No. 5 (N.E.): Draft: 21 ft. fore and 23 ft. aft. Length: 607 ft.
Berth No. 6 (N.W.): Draft: 25 ft. fore and 27 ft. aft. Length 267 ft.
Berth No. 7 (S.E.): Draft 29 ft. even keel – Length: 607 ft.

Cargo handled by this unit: Bulk fertilisers, general cargo and lumber. Water available by tank-truck.

(d) A new plant for shipping bulk raw sugar is operating at new pier, draft 30 ft.

STEVEDORES: Working periods: Monday to Saturday 0700 – 1300 hrs., 1300 – 1900 hrs., 1900 – 0100 hrs.

Raw sugar: 845 bags loaded per gang-period. 9 bags per sling. Only one sugar vessel can operate at a time.

General cargo: discharging rate: from 6 to 9 tons per gang hour.
Bagged merchandise: about 13 tons (100 lb. bag type).
Iron: about 18 tons (fluctuates according to type of iron).
Wood: 12 tons (approx.).
Fertilisers: Muriate of potash: 10 to 13 tons.
Sulphate of ammonia: 8 to 10 tons.
Superphosphate simple: 15 to 18 tons.

Shore cranes: There is one caterpillar (PH movable crane with boom of 80 ft. length, and which can lift 12 tons).

FRESH WATER: Can be supplied at Unit No. 2 berth by means of tank-truck with capacity of 5 tons. In dry season supplied only during night time.

FUEL/REPAIRS: Not available.

MEDICAL: No hospital. Crew members requiring medical attention are sent to Havana.

TRANSPORTATION: Distance from Mariel to:

Cabanas (anchorage):	25 km.	45 minutes by car.
Cabanas (pier):	57 km.	1 hour 47 minutes by car.
Bahia Honda:	73 km.	2 hours by car.
Santa Lucia:	250 km.	4 hours by car.

Car is hired for transportation to above sub-ports. There is daily transportation only between Mariel and Cabanas anchorage.

AUTHORITIES: Located at Mariel as follows:

Customs House and Immigration: Ave. 65. 126 Street and 128 Street.
Captain of the Port: Playa "La Boca" at the entrance of the port.
Port Doctor: 128 Street. Ave. 67. and Litoral.

AGENT: Consignataria, Mambisa, Agencia Mariel, Ave. 65 No. 12411 entre 124 y 126, Apartado No. 5, Mariel. *Tel:* 92305, 92183 (office), 922326 (night). *Telex:* 05740. *Cable:* "Mambisa Mariel".

Mariel Agency also attends the ports of Bahia Honda, Cabanas and Santa Lucia.

(a) SUB-PORT OF CABANAS: (See Plan)

Vessels assigned to Cabanas do not have to enter Mariel for clearance, but must pick up Pilot at Mariel port entrance.

APPROACHES: Entrance channel has sandy bottom on Eastern side, and rocky bottom on Western. It is about 70 m. wide.

PILOTAGE: See "Mariel".

Distance from position where Pilots board vessels to Cabanas is 12 miles.

ANCHORAGES: Excellent anchorage is available about 620 m. S.E. of Pt. Mangle, with draft well above port's operations draft.

This is a very desirable anchorage as it offers protection in all weathers.

There is another anchorage about 4.5 miles distant from Gloria Rock.

RESTRICTIONS: Vessels should enter and sail only during daylight.

MAX. SIZE: Max. draft permitted for entry and sailing is 19 ft., and max. length 574 ft. Tidal variation 1 ft. 4 in.

BERTHING: Present name: ECA "Pablo de la Torriente Brau". Former name: "Almacenes de Cabanas". Length 360 ft. (max. length permitted 450 ft.), depth 20 ft.

This dock is commonly known as "Orozo Dock", which is used in shipments of raw sugar. There are railroad tracks of standard gauge.

If for any reason a tugboat is required, tugboat 'Caharata' is available, if requested in advance.

LOADING: Working periods: raw sugar: Monday to Friday 0700 – 1100 hrs., 1300 – 1700 hrs.; Saturday 0700 – 1100 hrs.

845 bags are loaded per gang-period. 6 bags loaded per sling.

FUEL/FRESH WATER/REPAIRS: Not available.

MEDICAL: Crew members requiring medical care are attended at Cabanas Polyclinic. In those cases requiring hospitalisation or specialised medical treatment, they are sent to Havana.

AGENT/AUTHORITIES: See "Mariel". There is a Port Captain and Immigration at Cabanas.

(b) SUB-PORT OF BAHIA HONDA: (See Plan)

Vessels assigned to load at Bahia Honda do not have to enter Mariel for clearance, but must pick up Pilot at Mariel port entrance.

APPROACHES: The entrance channel has sandy bottom on Eastern side, and rocky bottom on Western and is approximately 150 m. wide up to Corojal Anchorage.

PILOTAGE: See "Mariel". Distance from position where Pilots board vessels to Bahia Honda is 21 miles.

ANCHORAGES: Draft 28 ft. Swing area 300 m. Max. length permitted 623 ft. Anchorage used for completion of sugar loading by means of barges that are brought from Havana.

RESTRICTIONS: Entry and sailing only during daylight and necessary to await favourable tide.

MAX. SIZE: Length 450 ft. and max. ship draft for proceeding up to Corojal anchorage is 28 ft. Tidal variation 1 ft. 4 in.

BERTHING: Dock: "Central Harlem" (formerly "Bahia Honda"):

Length 260 ft., draft 19 ft. Dock is commonly known as Sugar Dock of Harlem Sugar Mill. It has railroad track of standard gauge.

LOADING: Sugar working periods: Monday to Friday 0700 – 1100 hrs., 1300 – 1700 hrs.; Saturday 0700 – 1100 hrs.

845 bags of raw sugar are loaded per gang-period as minimum (more than the above stipulated amount is always loaded). Only one vessel can load at a time.

BUNKERS/WATER/DUNNAGE/REPAIRS: No facilities.

MEDICAL: Crew members requiring medical care are attended at Bahia Honda Polyclinic. Those cases requiring hospitalisation or specialised medical treatment are sent to Havana.

AGENT/AUTHORITY: See "Mariel".

(c) SUB-PORT OF SANTA LUCIA: 22° 44' N. 83° 59' W.

Vessels assigned to Santa Lucia do not have to enter Mariel for clearance, nor to pick up Pilot.

APPROACHES: Channel approximately 200 m. width, rocky bottom. It has two turns with dangerous narrows. Tidal variation averages 18 in.

PILOTAGE: Pilots board vessels at Pasa Honda, 2 miles off the phosphorescent buoy. No Pilot Station. Advice of ships' arrival is given to Custom House Delegation by cable. Distance from place where Pilots board vessels up to first anchorage is 4 miles.

LOADING: There are the following anchorages:

1st Anchorage: Has depth of 30 ft., but vessels are limited for sailing to max. draft of 15 ft., and length 500 ft.

2nd Anchorage: Has depth of 20 ft., but vessels are limited for sailing to max. draft of 18 ft.

3rd Anchorage: Open sea without draft limitation.

Working periods: Work is performed all day (during daylight) including Saturday and Sunday.

Average loading rate is about 900 tons daily, but rate might be improved in the following cases:

1. Vessels with more than 3 hatches available.
2. Vessels with booms (not of the crane type) since loading is performed by grabs which are to be rigged in order to perform quick loading.
3. Provided only one vessel performs operations (2 vessels may be loaded simultaneously but above rate cannot be complied with).

Loading at this sub-port is by means of grabs rigged to vessel's boom. In cases where vessel has no booms, but cranes, the loading is carried out very slowly as buckets are used in such cases, and having to shovel mineral into buckets delays loading operations.

There are 6 barges for loading mineral with a capacity of 150 tons each.

TUGS: 2 tugs, *Adis* and *Julita* which can tow 2 barges each.

FUEL/FRESH WATER/REPAIRS: Not available.

MEDICAL: Crew members requiring medical care are attended at Santa Lucia Polyclinic. Those cases requiring hospitalisation or specialised medical treatment are sent to Pinar del Rio Hospital, distance 80 km. from Santa Lucia.

AGENT/AUTHORITIES: See "Mariel".

Port Authorities use launches for clearing vessels. Agents use a car to travel from Mariel to Santa Lucia which takes 4 hours.

There are Custom House and Port Captain Delegations at the sub-port of Santa Lucia.

MATANZAS: 23.03 N. 81.34 W. (See Plan)

Matanzas Bay is open and most ample, being about 5 miles long and 2.75 miles wide.

Its waters are deep and only start losing depth at about 150 yds. from shore; for this reason it is most suitable to accommodate large vessels, regardless of length or draft.

Occasionally the prevailing winds affect and interfere with docking and undocking manoeuvres.

Within bay limits, 3 rivers flow:

San Juan and Yumuri Rivers, which empty into the South-Western extreme of the bay, after crossing the city of Matanzas; and Canimar which drains into the S.E. of the bay.

APPROACHES: There are three entrance channels:

(i) North Channel: 50 ft. minimum depth with muddy bottom.

(ii) South Channel: 80 ft. minimum depth with rocky bottom.

(iii) Middle Channel: 22 ft. maximum draft. Because of the limited draft of this channel, it is seldom used.

The most remarkable points of visual orientation while approaching Matanzas are:

Point Maya Lighthouse, which rises 58 ft. above high tide, flashing white light visible up to 13 miles away, located on the East side of the port mouth.

To the West the Pan de Matanzas mountain and to the East the mountain range known as Tetas de Camarioca, 7 miles inland, with three distinct summits.

While entering the port at night-time, on the West side of the entrance, there is a huge brightly illuminated building of a tannery which can be used as a landmark to determine where to pick up Pilot, as the location is 700 m. after sailing past the building.

Tidal variation at this port averages 1 ft. 6 in.

PILOTAGE: Pilots board vessels about 3 miles after passing the port entrance, in front of Electrical Plant and close to Empresa Consolidada del Petroleo Pier (Texas). Pilot station located at Reynold Garcia Pier (Terminal Maritima). Tel. number 2688.

Pilots board tankers in position Lat. 23° 05.6' N., Long. 81° 30.2' W.

ANCHORAGES:

Indio Anchorage:	depth 17 ft.; swing area 120 m.
South Anchorage:	depth 30 ft.; swing area 230 m.
Del Medio Anchorage:	depth 27 ft.; swing area 200 m.
West Anchorage:	depth 21 ft.; swing area 150 m.
North Anchorage:	depth 25 ft.; swing area 150 m.
Casacajales Anchorage:	depth over 30 ft.

RESTRICTIONS: Vessels can enter or sail at night but Port Authorities should be advised in advance.

BERTHING: At Matanzas Port there are 5 separate berthing installations of which Jesus Menendez Pier, formerly known as Texas Pier, has been out of use for some time.

All port installations are located on the N.W. shore of the bay.

Jose Luis Dubrocq Pier was enlarged and rebuilt in 1970 and all piers and the bay have been recently dredged, these works having been completed at the beginning of 1973.

Jesus Menendez Pier (formerly Texas Pier): Length 794 ft., draft 28 ft. Used to discharge fuel oil.

Presently no operations are performed at this pier due to the bad condition of its solid dolphins. Pier itself is in good condition and may be used as soon as solid dolphins are replaced.

Frank Pais Pier (formerly Armour Pier): It is a solid construction of concrete and stones.

Although it has two sides, only the West side is used, the East side being out of use. Length 350 ft., draft 22 ft.

Cargo handled by this pier: Only coastal trade discharge of: Fuel oil, diesel oil, gasoline, kerosene and occasionally cement or general cargo.

Reynold Garcia Pier (formerly Terminal Maritima Pier): The pier is of solid concrete construction at the entrance of which the Pilot Station and the stevedores' office are located.

North Side: Length 450 ft., draft 32 ft. Cargo handled by this side: Exportation: Bagged refined sugar, dextrana, rayon, liqueurs, etc. Import: Occasionally dry cargo (general cargo), liquid ammonia.

South Side: At this side of pier are the mechanical installations of the bulk raw sugar shipping plant. Length 529 ft., draft 32 ft.

Cargo handled by this side: Exportation: Bulk raw sugar, occasionally bagged refined sugar, dextrana, rayon, liqueurs, etc. Importation: Can be used if no sugar is scheduled to be shipped.

Morales Bayona Pier (formerly Cubadist Pier): It is a steel and concrete construction, consisting of a long narrow passage along which run the molasses and water pipelines, and a catwalk.

At this installation tankers berth to 2 solid dolphins and 2 mooring buoys fore and aft. Max. length permitted to vessels 615 ft., draft 32 ft.

Cargo handled by this pier: Exportation of molasses and alcohol.

Jose Luis Dubrocq Pier (formerly Fomento Maritimo Pier):

Section No. 1: Recently enlarged and rebuilt; at this time 2 heavy overhead cranes are being installed for discharging of bulk fertilisers. This installation is a coastal pier. Length 600 ft., draft 32 ft.

Cargo handled by this Section: Import: General cargo, bulk fertilisers, bagged cargoes, lumber, etc. Export: General cargo.

Section No. 2: Length 532 ft., draft 27 ft.

Cargo handled by this Section: Similar to Section No. 1.

Trucking operations are usual at this pier.

STEVEDORES: Monday to Friday: 0700 – 1100 hrs., 1300 – 1700 hrs. Saturday: 0700 – 1100 hrs. Sundays: No work performed unless in special cases.

Raw sugar: 855 raw-sugar bags loaded per gang-period. 5 bags loaded per sling.

Refined sugar: 2,004 refined-sugar bags (50 kg. type) are loaded per gang-period (797 of 100 kg. type).

12 bags of 50 kg. type per sling; 6 bags of 100 kg. type.

General cargo: average rate of discharge of other kinds of cargo varies depending on the type.

Average rate of fertiliser discharge about 11 tons per gang-hour.

Crane: one steam crane with a boom of 60 ft. which can lift about 40 tons. Crane is mounted on railroad tracks and is used only at Jose Luis Dubrocq Pier.

Bulk sugar: The installation of bulk sugar throwers operated by Empresa Consolidada del Azucar, at Reynold Garcia Pier, is by system of conveyor and distribution crane which runs from Parabolicos warehouses up to the end of the pier. A special structure protects the conveyor.

The crane runs on special rail throughout the pier (fore and aft) stopping at each vessel's hold. In cases where the vessel has projecting superstructure, she has to be separated from the pier.

Average loading rate is about 350 t.p.h., depending on the type of vessel. On vessels without tweendecks, an average of 43 t.p.h. has been attained.

Weights of shipment estimated on draft and information provided by Master. Notations are entered in Bill of Lading declaring quantity as subject to amount discharged at destination, which is supervised by Cuban Producers' Representative.

MEDICAL: Following hospitals where sick crew members can receive attention: Civil Hospital, Army Hospital, Clinica Moderna, Clinica Villar, Clinica Matanzas.

TANKERS: Discharge of fuel oil: 1 connection 6 in. diameter.

Discharge of gasoline/kerosene/diesel oil: 1 connection 6 in. diameter.

Alcohol: Pipe-lines 10 in. diameter, 2 connections 8 in. diameter.

Molasses: Pipe-lines 12 in. diameter, 4 connections 8 in. in diameter.

Also see "Shipmaster's Report" dated April 1993.

FRESH WATER: Water available by pipeline only while docked to the underlisted piers:

Reynold Garcia: Delivery rate: From 7 to 10 t.p.h.

Morales Bayona: Delivery rate: From 10 to 12 t.p.h.

Jose Luis Dubrocq: Delivery rate: From 5 to 7 t.p.h.

FUEL: No bunkers available.

REPAIRS: Can be performed by Cearra y Trabazo.

COMMUNICATIONS: Long-distance telephone, Corporacion Inalambrica Cubana, Press wireless, Government telegraph, postal communication, railroad and buses.

Vessels can communicate through CLA via Cardenas and/or Havana.

DEVELOPMENTS: Specialised fertiliser unloading equipment to be introduced at the port.

SHIPMASTER'S REPORT: April 1993.

Vessel loaded 25,000 tonnes of jet fuel at Punta Cardon for discharge at Matanzas and Havana.

Although frequent attempts were made to get in contact with the Agents, Mambisa, no acknowledgement of communications was obtained at any time during the passage.

I was given to understand that Cuba is not a signatory to Inmarsat, and for that reason I was unable to communicate with telex or telephone via the Satcom. Finally we were able to get in contact with another company vessel who called at Cuban ports earlier, and the information obtained was rather alarming, especially with respect to rummaging and personal effects. We prepared the entry documents as stipulated in the "Guide" and were prepared for the worst. Only at 1.5 hours prior to arrival was the first contact obtained with Matanzas Port Control, who did not communicate more than one sentence "Berthing on arrival".

The Pilot Station for Matanzas is not as charted, but about 3 miles more North in accordance with the ALRS.

The 2 pilots boarded in the indicated position, and vessel approached the old but still fully operational T-head jetty "Muelle Juan Bayona" very cautiously.

Assistance of 2×3,600 h.p. tugs with 80 tons bollard pull was obtained. Ship's lines were used to secure tugs, as they have no other equipment than mooring lines for their own use. The pilots apologised for this situation. Finally the vessel was secured with 3 head lines, 2 springs forward and 3 stern lines, 2 springs aft. There is no facility for breast lines. Head and stern lines run at about 45° to two large dolphins for about 100 m.

During mooring, the first two officals boarded the vessel (the Port Health Official and the Port Control Officer). They inspected the vessel thoroughly and checked Log Books and Oil Record Books. All were found in order and Free Pratique was given. Only when vessel completed berthing could gangway be lowered and the remainder of the officials (Medical Officer, Veterinary Inspector, Customs, Immigration officials, etc.), Agent and Cargo Receivers Representative were allowed to board. The formalities were conducted in an utterly friendly atmosphere and took about 1.5 hours. A full crew muster was held but only to compare faces with the Passport pictures. All cargo overboard valves and sea suctions are sealed and a document of this is presented. On every inspection a document is made out and presented for signature and ship's stamp.

The total amount of gratuities is minor compared to some other ports. We were also advised that the extensive Personal Effects List was not necessary at all, and a simple list stating only the luxury goods like watches, radios, cigarettes, spirits, etc., required entry on the form. Customs officers enquired a number of times whether we would like to withdraw some extras from the bond for our own use prior to sealing. Subsequent withdrawals are easily arranged at their frequent visits without any problems.

Veterinary inspection is strict, and only meats from the U.S.A., Australia and New Zealand may be used during the stay in port. The meat room is then sealed. We were at an advantage to have a large domestic freezer in the lobby of the domestic fridges, so we could store the withdrawn food there. Finally the vessel was cleared and other interests were allowed to board and conduct their business.

After about 2 hours another party of Customs officers boarded the vessel and requested to be shown around the crew's quarters. Only cabins of crew that were on board and not sleeping or working required inspection.

Agents were found to be extremely polite and helpful in every respect. Foreign currency may be freely spent, and no restrictions on shore leave are imposed. Public transport however is virtually non-existent, and the "Tourist taxi" is not readily available in this area. Walking is the only alternative.

Because of the poor communication facilities in Cuba, a number of telephone calls were made on the ship's Satcom by the Cargo Receivers and SWS Representative to facilitate matters and generally expedite procedures.

Documents required:

3 Personal Effects Lists (only luxury goods).
12 Crew Lists.
3 Foreign Currency Lists.
3 Provisions Lists.
2 Narcotics Lists.
1 Maritime Declaration of Health.
1 Vaccination List (only if available).
Cargo Documentation.

All documents are made out on plain paper, and except Crew Lists, are not studied but merely collected. Paper in Cuba is still a very scarce commodity, and the amount of copies made on ship's copying machines is enormous.

Discharge was commenced through 1×8 in. hose after lab tests had been completed. Average discharge rate achieved was 600 cu.m./hr.

Although the jetty is fitted with an old sprinkler system along the pipelines, I am not sure whether this is operational. Certainly there is no possibility to connect the shore fire main to the ship's main in case of emergency.

We found that the people visiting the ship were all very pleased with minor attentions like a soft drink and some sandwiches, although complete meals were also greatly appreciated.

After completion of cargo operations, the exit procedures again took about 2 hours to complete. All Passports are now inspected against Crew List, and Exit Passes issued and put into Passports.

After departure, all stores may be opened even if the next port is in Cuba.

AUTHORITIES: Located as follows:

Port Doctor:	Milanes St. No. 2. Tel. 2672 (home tel. 2338).
Immigration:	Santa Teresa St. No. 19. Tel. 2695.
Port Captain:	Muelle del Real. Tel. 2469.
Custom House:	Versalles St. e/Navia and Riech St. Tel. 2269 (home tel. 2339). (Chief of Custom House watching services.)

AGENT: Empresa Consignataria Mambisa, Agencia Matanzas, Milanes No. 28002, Apartado No. 245, Matanzas. Telephone: 2519 and 3079 (office), 3081 (night). Telex: 52132. Cable: Mambisa Matanzas.

Ocean going vessels navigating to Cuba can communicate with the Matanzas Agency by radiotelegraphy, contacting "CLA" Havana Station, which relays the messages immediately to Matanzas.

The Matanzas Agency is connected to the National Telex System and its number is 05232. This is the quickest method of communication with Matanzas Agency.

Masters must send their ETA messages simultaneously to Mambisa Matanzas and Mambisa Havana.

Matanzas Agency VHF works on Channel 16 during office hours.

MOA: 20.41 N. 74.52 W. (See Plan)
(And Sub-Ports of Baracoa and Punta Gorda)

LOCATION: The port of Moa is situated in the rear part of Yaguasey Bay, where in an artificial inner harbour lies the pier of Moa, and at the entrance of the inner harbour a small coastal trade pier.

Both the port of Moa and the sub-port of Punta Gorda mainly handle the imports and exports of the huge mining enterprise, Major Pedro Soto Alba.

PILOTAGE: Pilots board vessels at Moa Port mouth which is distant about 2 miles from entrance. Pilot station located at Punta Gorda at distance of about 5 miles from port entrance. Distance from point where Pilot boards vessel to Darsena de Moa (pier) is about 4 miles; to Moa Anchorage about 2 miles.

ENTRANCE TO PORT/CONDITIONS/LIMITATIONS: Entrance channel to Moa is almost straight having two very slight turns, minimum depth on its course is 40 ft. and length and draft limitations to enter to or sail from this port are those imposed by Moa pier and inner harbour:

Draft: Vessels drawing 28 ft. 6 in. can enter/sail at any tide, those drawing more than 28 ft. 6 in. up to 30 ft. only at high tide.

Length: 500 ft.

Channel bottom from its head up to the pier is as follows: From the head to Grande or Del Medio Shoal, coral and rocks; then up to Yaguasey Bay, coral and mud; and on its final stretch to the pier, hard red mud.

Length of channel: 1,560 m.; minimum width 200 m. and maximum 720 m.

For both, Moa and Punta Gorda, entrance to or sailing from, can only be performed during daylight.

As tidal currents average only 1.25 knots, and since the inner harbour is almost devoid of currents, it is not necessary to wait for slack water for entering, sailing or crossing the channels.

Approaching the port of Moa, at both sides of port entrance, strings of breakwaters can be seen.

Behind the Western side breakwater, Moa Grande Cay is conspicuous and a lighthouse rises at about the middle of its North coast.

ANCHORAGES: Moa: *Anchorage No. 1:* Located Northward of Fabrica River and S.E. of Pt. Pajaros: Lat. 20° 40' 38" N., Long. 74° 53' 10" W.

Minimum depth: 38 ft. Swinging area: 250 m.

Anchorage No. 2: Located Northward of Fabrica River and South of the Eastern extreme of Moa Grande Cay: Lat. 20° 40' 35" N., Long. 74° 53' 28" W.

Minimum depth: 37 ft. Swinging area: 250 m.

Anchorage No. 3: Located N.W. of Del Medio Shoal: Lat. 20° 40' 32" N., Long. 74° 54' 04" W.

Minimum depth: 68 ft. Swinging area: 300 m.

Anchorage No. 4: Located Northward of Del Medio Shoal: Lat. 20° 40' 43" N., Long. 74° 52' 30" W.

Minimum depth: 41 ft. Swinging area: 250 m.

Although above anchorages are listed under the port of Moa, they can be used if necessary, for shipping or unloading cargoes destined to Punta Gorda.

TIDAL VARIATION: Tidal variation at these ports averages 30 in.

RADIO: There is a Government Radio Station at Moa.

Vessels navigating to Cuba can communicate with Mambisa Moa through "CLA" Havana Radio Station and the message will be relayed to Moa by telegraph or telex.

Masters must send their ETA messages to Moa or Punta Gorda, simultaneously to Mambisa Moa and Mambisa Habana.

TUGS: Tug used at Moa for docking. Tug operated by Mining Enterprises.

BERTHING: *(a) Moa Pier* (Also known as Moa Darsena): It is a solid concrete construction in an artificial inner harbour. Berthing length: 308 ft. Max. length permitted to vessels: 500 ft. Draft: Vessels drawing 28 ft. 6 in. can enter/sail at any tide, those drawing more than 28 ft. 6 in. up to 30 ft. only at high tide.

Due to pier dimensions, only 4 hatches can be worked at a time, but despite above limitations, occasionally larger vessels have been operated.

Cargo handled by this pier: Importation: Bulk sulphur, empty ore containers, occasionally general cargo.

Exportation: Nickel and cobalt concentrate in containers and drums.

Coastal trade: Discharge of fuel oil, diesel oil, kerosene, gasoline, sulphuric acid.

Tanker Information: Mining Enterprise: Gasoline/kerosene: one connection 6 in. diameter. Fuel oil: 4 connections 8 in. diameter.

ICP: Gasoline/kerosene/diesel oil: one connection 6 in. diameter.

(b) Coastal Trade Pier: It is a small coastal pier for small vessels, located at the entrance of the inner harbour. Constructed of piles and filled with earth.

Cargo handled by this pier: Coastal trade, general cargo.

No cargo operations in the bay.

STEVEDORES: *Working Hours:* Monday to Friday 0700 – 1100 hrs., 1300 – 1700 hrs. Saturdays 0700 – 1100 hrs.

EQUIPMENT: 1 shore crane 30 tons with 3 ton grab; 4 contact grabs; 2 trucks 30 tons capacity each; 1 pay loader; 2 fork lift trucks; 1 stationary crane; 1 steel barge 500 tons capacity; 1 tugboat (2 diesel engines 180 h.p. each).

Loading/discharging operations: Raw material for the nickel plant is imported as well as fuel oil. Nickel concentrate is exported.

Loading/discharging rate – Nickel (in containers): loaded at a rate of approximately 30 tons per hour-gang.

MEDICAL: Industrial Hospital where crew members can be hospitalised. General Hospital at Baracoa.

FRESH WATER: Delivery at rate of about 10 t.p.h.

FUEL: Not available.

REPAIRS: There are machine shops at nickel plant where small emergency repairs can be performed.

SHIPMASTER'S REPORT: September 1990.

Documents:

12 copies Crew List.

3 copies Stores List (including narcotics, ship's cash, bonded stores and ship's stores).

3 copies Crew Declaration (including jewellery, cameras, electronic equipment, video and radio cassettes, cash and sun glasses).

1 copy Health Declaration.

Pilotage: Pilot boards 0.75 miles off Buoy No. 1.

It is difficult to make contact with the Pilot Station at night.

Approaches: On entering, keep Buoy No. 1 close on the port side and approach on a heading of 211°.

Restrictions: Daylight navigation only.

Officials: Vessel goes to anchorage and is visited firstly by the doctor, after which all other officials board. The ship and crew cabins are searched.

Meat is sealed in freezers, if produce is from Argentina, Brazil or Uruguay. Fish and chicken is not sealed.

General: According to the Pilot, a tug is compulsory but it is a waste of money. On some occasions, vessel will need a tug, especially if turning when empty. If possible, refuse a tug when not needed, because the cost is high (500 h.p. tug – U.S.$ 259.00, 501 h.p. – 1,000 h.p. tug – U.S.$ 447.00 and 1,000 h.p. – 1,500 h.p. tug – U.S.$ 755.00). There was only one tug of over 500 h.p., and we had to pay U.S. 447.00 for about 10 – 15 minutes service. The Agents will bill every single move, and great care should be taken before signing the bills, which the Master has to sign before sailing. Ship and cabins will be searched before departure in case of possible stowaways.

Before entering port, vessel should check that it has sufficient dunnage and lashing materials, as it is in short supply, expensive and takes a long time to arrive. Dunnage costs U.S.$ 116.00 per cu.m. Wire clamps and steel wire are difficult to obtain, and vessel may only receive half the amount requested.

AUTHORITY: Port Doctor, Customs and Port Captain Delegations at this sub-port. Immigration Delegate is the same one who attends vessels at Baracoa and other sub-ports. Vessels can proceed directly to Moa where they are cleared by Port Authorities. Means of transportation from Baracoa to Moa or other sub-ports are: air, launch and overland (jeep). Customs House inspectors travel from Moa to Baracoa.

Baracoa to Moa about 32 miles distant. Following services used: by plane, 20 minutes; by launch, 6 hours; by jeep, 5 hours. Daily flights and regular bus services.

AGENT: Empresa Consignataria Mambisa, Agencia Moa, Reparto "Rolo Monterrey" No. 163, Moa, Prov. de Oriente. Telephone: 7527 (day) 7105 (night). Telex: 021123. Cable: Mambisas Moa.

(a) SUB-PORT of BARACOA: 20.21 N. 74.30 W. (See Plan)

LOCATION: This port is located on the North coast of the extreme Eastern portion of Cuba in Oriente Province:

Lat: 20° 21' N., Long: 74° 30' W.

Its bay is fan shaped and is almost in its entirety sand and mud bottom, 297 m. in width at its entrance, and opens out to 1,051 m. in a N.W. and S.W. direction, and 732 m. in breadth.

Its shores are bordered by sand banks.

"Buren", an isolated rock visible only at low tide, lies about 30 yds. North-Westward of Pt. Barlovento; the sea always breaks on it; it is steep-to and constitutes the only danger.

S.W. of the town is Miel Bay where excellent anchorage is available.

PILOTAGE: Pilots board vessels 2 miles off Moa. Pilot station located Moa port. Distance from point where Pilots board vessels to operation place (anchorage) is about 2 miles.

RESTRICTIONS: Vessels can enter port only during daylight.

MAX. SIZE: Entrance channel straight – without turns. Vessels up to 100 m. length and 6.10 m. draft can enter through Channel. 2 ft. to 3 ft. rise of tide.

TUGS: One tug available.

RADIO: Vessels navigating to Baracoa can communicate with the Port Agency through "CLA" Havana Radio Station which relays the messages promptly to Moa.

Masters must send their ETA messages simultaneously to Moa Agency and Mambisa Havana.

STEVEDORES: No pier at this port. Vessels anchor in bay for operations. Several barges, capacity 100 tons.

Only one vessel can be handled at a time.

Working periods: Monday to Friday 0700 – 1100 hrs., 1300 – 1700 hrs.; Saturday 0700 – 1100 hrs.

Labour legislation presently in force provides that the number of hours to be worked is 8 hours daily, from Monday to Friday, and 4 hours on Saturday, for a total of 44 hours weekly.

Discharge rate: about 80 tons daily per gang.

MEDICAL: There is a general hospital for sick crew.

FUEL/FRESH WATER/REPAIRS: Not available.

TRANSPORTATION: Transportation to and from Baracoa is difficult.

There is daily air service and also bus service to Moa, but best advisable means of travel is by car.

AUTHORITY: Port Authorities located at Baracoa. They have Delegation at Sub-port of Moa.

AGENT: See "Moa".

(b) SUB-PORT OF PUNTA GORDA: 20.38.30 N. 74.51.15 W. (See Plan)

LOCATION: Punta Gorda is located at about 3.5 miles East of Moa and consists of an anchorage where loading is effected by means of barges.

APPROACHES: Entrance channel to Punta Gorda is the same as for Moa, and once the first stretch of it up to Del Medio Shoal is sailed past, it turns to the East, following a winding course, having four turns. The turns themselves are difficult but what makes them really dangerous is the lack of proper buoying and navigational signals.

Maximum width of channel is 300 m. and minimum 200 m. Maximum length and draft to enter to or sail from Punta Gorda are as follows: Length: 442 ft.; Draft: 28 ft.

PILOTAGE: Pilots board vessels at Moa port mouth. Pilot station located at Punta Gorda at a distance of about 5 miles from port mouth.

Distance from point where Pilot boards vessels to the anchorage (loading place) is about 4.5 miles.

ANCHORAGES: Located North of Punta Gorda and East of Pt. Yagrumage.

RESTRICTIONS: Vessels can enter only during daylight.

TUGS: One tug which tows 1 or 2 barges as necessary. Work performed day and night.

LOADING: *Punta Gorda Anchorage:* Located North of Punta Gorda and East of Pt. Yagrumage: Lat. 20° 38' 55" N., Long. 74° 51' 13" W.

Minimum depth: 31 ft. Max. draft allowed to vessels: 28 ft. Max. length allowed to vessels: 442 ft. Swinging area: 300 m.

Vessels operating at Punta Gorda load their cargo by means of barges.

Only cargo handled at this anchorage is loading of bulk refractory chromium.

RADIO: Through Simon – Baracoa by Inalambrica (cable).

STEVEDORES: Chrome, at average loading rate of 1,000 tons (approx.) per day of 24 hours. Loading operations carried out at anchorage. There are 2 wooden barges 130 tons capacity each; 1 tugboat; 2 trucks 10 tons capacity each; 1 pay loader; 1 shore crane.

MEDICAL: No hospital at Punta Gorda. Crew members can be attended to at Moa or Baracoa Hospital.

FUEL/REPAIRS: Not available.

FRESH WATER: No water available at anchorage but can be supplied at Moa Pier (Darsena).

AUTHORITY: Customs Delegation at this sub-port. Vessels can proceed directly to Punta Gorda. Port Authorities from Baracoa travel to Punta Gorda for clearance. Moa Port Doctor clears vessels at Punta Gorda. From Baracoa to Punta Gorda, following ways of transportation used: air, launch and overland, which takes 20 minutes, 5 hours and 4.5 hours respectively. No regular transportation.

AGENT: See "Moa".

NUEVA GERONA (Isla de Pinos): 21.58 N. 82.56 W. (See Plan)

Isla de Pinos is the largest island of Los Canarreos Archipelago, located on the South coast of Cuba, just in front of Batabano Gulf and the boundary between Pinar del Rio and Havana provinces.

Isla de Pinos is 54 km. long from North to South and 58 km. from East to West. (2,200 sq. km.). The North coast is 229 km. long and the South coast 98 km.

Nueva Gerona Anchorage lies in front of the mouth of Las Casas River.

APPROACHES: Entrance channel or passage from the Gulf to the bank is about 2 miles wide. Bottom throughout the 34 miles is mud (from entrance to anchorage in front of Las Casa River). No dangerous turns or narrows.

PILOTAGE: Pilots board vessels at Punta Frances. Distance from place where Pilots board vessels to loading berth is about 34 miles. No Pilot Station. Chief Pilot is located at No. 3 St. Mo. 612 e/ 6 and 8 Streets, Nueva Gerona, Isla de Pinos.

ANCHORAGES: Gerona Anchorage: Located just in front and close to the mouth of Las Casas river. Draft 19 ft. No limitations regarding length. Swing area is 600 ft.

Loading of fruits at anchorage is performed only when shipment is effected in vessels whose draft does not permit them to enter through the river.

Auxiliary equipment for exportation of fruits: 2 barges, 1 tugboat.

Working periods: Monday to Friday 0700–1100 hrs., 1300–1700 hrs.; Saturday 0700–1100 hrs.

Whenever sufficient cargo is supplied by the packing plant, the loading rates should be about 120 tons per gang in 8 hours.

RESTRICTIONS: Entry and sailing only during daylight.

MAX. SIZE: Max. draft up to which vessels can load out of the river is 19 ft. Tidal variation 1 ft.

BERTHING: Nueva Gerona Pier: Located about 2 miles up river. Length 200 ft. Max. length allowed to vessels, 90 m. (295 ft.). Draft 14 ft. 6 in.

FRESH WATER: Available only at berth.

FUEL/REPAIRS: Not available.

MEDICAL: General hospital "Heroes de Baire", where sick crew members can receive attention.

COMMUNICATIONS: There are telephone, telegraph and cable (Inalambrica) communications, also air postal service.

AUTHORITIES: Port Authorities are located at Nueva Gerona.

It is strongly recommended that when vessels are assigned to this port, all measures be taken for perfect co-ordination between Agents, Pilots and Port Authorities, and Masters should give ETAs in advance.

SUB-AGENT: Empresas Nacional de Cabotaje, Calle 31 y 22 (Terminal Maritime), Nueva Gerona, Isla de Pinos. Tel.: 2467, 3300. Telex: 054118. Cable: Mambisa – Nueva Gerona.

NUEVITAS: 21.33 N. 77.16 W. (including sub-ports of Pastelillo, Puerto Tarafa, and Bufadero): (See Plan)

The port lies on a peninsula orientated from West to East, and all port installations are located on the North of said peninsula: Tarafa on the Western extreme, Bufadero and Cement Pier at about 0.5 miles East of Tarafa, and Pastelillo at the Eastern extreme.

The city of Nuevitas is located about 4.5 km. to the S.W. of Tarafa. The city spreads widely from the shores of Guincho Bay.

Neuvitas Bay has an extension of 57 square miles, but despite its extension, owing to its geographical configuration, is fairly well sheltered and can accommodate vessels of large tonnage. Bottom of the bay is mostly hard mud, but there are areas of sand and others where it is sandy/muddy.

(a) SUB-PORT OF PASTELILLO: (See Plan)

APPROACHES: Entrance to or sailing from this port is only effected at slack water in order to avoid tidal currents.

Usually entrance or sailing from port is performed during daylight hours but incoming vessels, which have advised their ETA well in advance and draw 30 ft. or less can enter during night-time at slack water, if all the navigational signals and marks are in good order. If any lighted buoy is out of service, night entrance or sailing are not performed.

Channel bottom is rocky/sandy along most of its entire course but if crossing the channel with official draft allowed to vessels, there are no difficulties regarding draft as there is ample depth.

Limitations as to draft and length to enter to or sail from Nuevitas are as follows: Draft 33 ft., length 650 ft.

Limitations as to draft for crossing the bay interior channels are:

Entrance channel up to Botijuela Anchorage: 35 ft.
La Estrella Channel up to Pastelillo: 33 ft.
Channel between Pastelillo and Tarafa: 26 ft. 6 in.

PILOTAGE: Pilots board vessels at Punta Practicos, 1 mile from Buoy No. 1.

The following are the distances from the place where Pilot boards the vessel up to: Pastelillo: 8 miles; Bufadero: 10 miles; Tarafa: 10.75 miles.

Pilot Station is located at Nuevitas and usual means of communications with it are telephone or car.

ANCHORAGES: *La Poza Anchorage:* Located near Pt. Practicos. Geographical position: Lat. 21° 36' 46" N., Long. 77° 05' 11" W. Limitations: Draft 38 ft., length none. Swinging area: Unlimited. Can accommodate one vessel. Distance from shore: 400 m.

Botijuela Anchorage: Located S.E. of Ballenato Grande Cay. Geographical position: Lat. 21° 31' 34" N., Long. 77° 10' 39" W. Limitations: Draft 35 ft., length 650 ft. Swinging area: 400 m. Can accommodate 15 average type vessels. Distance from shore: 2 miles.

Pastelillo Anchorage: Located East of Pastelillo. Geographical Position: Lat. 21° 32' 34" N., Long. 77° 12' 38" W. Limitations: Draft 20 ft., length 500 ft. Swinging area: 200 m. Can accommodate 2 vessels. Distance from shore: 0.25 miles.

Guincho Anchorage: Located East of Pt. Guincho. Geographical Position: Lat. 21° 31' 57" N., Long. 77° 14' 00" W. Limitations: Draft 16 ft., length 250 ft. Swinging area: 100 m. Can accommodate 1 small vessel. Distance from shore: 1.25 miles.

Tarafa Anchorage: Located to the N.W. of "D" Pier. Geographical position: Lat. 21° 34' 30" N. Long. 77° 14' 45" W. Limitations: Draft 22 ft., length 525 ft. Can accommodate 1 vessel. Distance from shore: 400 m.

MAX. SIZE: Up to 575 ft. length – 33 ft. draft. Up to 610 ft. length – 31 ft. draft. Tidal variation 1 ft. 6 in.

BERTHING: *Pastelillo Pier:* North Side: Length 458 ft., width 55 ft., max. draft 33 ft.

Depths alongside from shore end to pier head: 31 – 35 – 37 – 37 – 37 – 36 – 37 ft.

Cargo handled by this side: General cargo, equipment, machinery, bagged raw and refined sugar, molasses, etc.

South Side: Length 458 ft., width 55 ft., max. draft 33 ft.

Depths alongside from shore end to pier head: 24 – 33 – 34 – 33 – 36 ft.

It is well cared for and recently underwent complete repairs, being the topping-off berth for sugar and molasses loading of the port, as well as the deep draft berth for vessels with import cargoes.

Petroleum products (fuel oil, diesel oil, gasoline and kerosene) for the use of the whole Camaguey Province, are discharged at this pier.

The pier has railroad sidings connecting with the main tracks but is not suitable for trucking operations.

STEVEDORES: Working periods: Monday to Friday, 0700–1300 hrs., 1300–1900 hrs.; Saturday, 0700–1300 hrs., 1300–1900 hrs.; Sunday, no work is performed.

Raw Sugar: loading rate: max. 1,800 bags per gang in 6 hours. Minimum fixed rate 975 bags in 4 hours or equivalent in 6 hours. 6 bags loaded per sling.

Loading Capacity: 2 sugar vessels can perform sugar loading operations simultaneously.

Refined Sugar: this type of shipment is not regularly performed.

Loading rate: 3,300 bags of 100 lb. each are loaded per gang in a 6 hour period.

General Cargo: discharging rate is about 11 to 12 t.p.h.

EQUIPMENT: The port owns and operates the following equipment: 6 fork lift trucks; 7 tractors; 3 trailers; 6 tow motors; 5 shore cranes (from 5 to 20 tons lifting capacity); 2×300 ton capacity cargo barges; 1 (1,200 h.p.) tugboat.

MEDICAL: There is a municipal hospital where sick crew members can receive attention.

TANKERS: Molasses pumping rate about 85,000 g.p.h.

FUEL: Currently the only bunkers available at Nuevitas are Regular Fuel Oil, which is the type of fuel oil stored at shore tanks.

Deliveries are effected only at Pastelillo Pier by pipe-line gravity from the deposit tanks and due to the method used, are slow.

Bunkers must be requested well in advance.

FRESH WATER: Can be supplied at No. 4 pier. Delivered by means of railroad tank cars, each with capacity of approximately 34 tons. Delivery rate about 20 t.p.h.

REPAIRS: Repair Shop "Boga" incorporated in the Industry Ministry.

COMMUNICATIONS: Vessels navigating to Cuba can communicate with Mambisa Nuevitas Agency through "CLA" Havana Radio Station which relays the message promptly to Nuevitas.

When navigating in Cuban Waters nearing Nuevitas, vessels can communicate directly with "CLK" Coastal Radio Network Nuevitas by radiotelegraphy at 500 kHz, general call, 446 kHz, for working. Radiotelephony frequency 2760 or 2182 kHz.

This Coastal Network Station rapidly relays any message to Mambisa Nuevitas Agency.

Masters must send their ETA messages simultaneously on VHF Channel 16 to Mambisa Nuevitas and Mambisa Havana.

SHIPMASTER'S REPORT: August 1985.

See "Sub-port of Tarafa".

SHIPMASTER'S REPORT: March 1989.

Charts: BA. Chart No. 3197, Bahia Nuevitas. BA. Chart No. 3865, Cuba – Eastern Sheet.

Sailing Directions: NP. 70, West Indies Pilot, Volume 1.

Officials: This was second port in Cuba, so no difficulties were expected, however after the Agent and Veterinary Inspector had boarded and sealed the meat room a squad of 14 customs officials arrived and searched the accommodation and store rooms. Bond had been sealed in Havana but was opened just in case and then resealed.

If the officials asked to see something on the Crew Effects Declaration they seemed satisfied if told that it had been put in the "transit room", so that it would appear that the safest course is to pack everything except the essentials into a suitcase and place it in the transit room.

When alongside, Customs officials carry out an inspection and require a signature on their check sheet every day.

As noted in "Guide to Port Entry", the meat room is sealed, but they seem to be fairly pragmatic about this and allow reasonable stocks to be removed each day.

Approaches: From the West, Pta. Maternillos Lt. is easily visible and there are no difficulties. Pilot was contacted at about 35 miles on VHF Channel 16 and gave clear instructions. Passage through the narrow winding channel into the bay has to be done at slack HW, although there was still some flood running as we entered. Larger heavier ships are taken through in daylight and have a tug escort (this vessel 171 m. LOA with 27 ft. draft.)

Pilot: The Pilot boards from a launch (black hull, white superstructure), 1 mile North of Buoy No. 1.

Anchorage: In a quiet area S.S.W. of Cayo Ballenato Grande, inside the bay, holding ground is good.

Tugs: There are 4 tugs available and the port regulations require 2 tugs for berthing. One seems to be on permanent water barge duties, one in dry dock in Havana, one was away on salvage duty and the remaining tug assisted with berthing and was well handled.

The tugs are registered in Malta and are on long term charter.

The regulations also require large deep draft vessels to be escorted in and out of the entrance. This can interfere with berthing schedules.

Berth: The oil berth is fairly new and is close to the old molasses berth at Puerto Pastelillo. It is well fendered and sheltered. It has lines for gasoline, gas oil, kerosene and fuel oil. A new loading arm and line for LPG is being fitted to serve 2 tanks about 2.5 km. away on the North shore of Peninsula del Guincho.

Gas oil and kerosene tanks are 50 m. above sea level and are about 1.5 km. away.

Berth Information:

Berth Operator: State Oil Company.

Density: Salt.

Distance from Pilot to Berth: 11 miles.

Bridges: None.

Restrictions: Night time berthing/unberthing permissible but passage to sea is dependent upon length of vessel and draft.

Fresh water: Available by barge.

Hoses: 4×8 in., also see "Berth" above. Max. pressure 8 kg./sq.cm.

Slop facilities: None.

Repair facilities: None.

Surveyors: None.

Shore Leave: Passports, shore passes and currency reports were needed. Launch took crew to Puerto Tarafa. No taxis or buses available at Nuevitas. Small Seamen's Club available.

Telephones: Telephone calls to Norway at 2000 hrs. GMT on a weekday took about an hour to arrange. The delay appears to be due to lack of lines between Nuevitas and Havana.

AUTHORITIES: Located at Nuevitas.

Authorities travel from Nuevitas to clear the vessels for whichever of the 3 berths they may have been assigned, i.e. Pastelillo, Tarafa or Bufadero.

Means of transportation for port authorities from Nuevitas to the loading/discharging berths is automobile or launches.

AGENT: Empresa Consignataria Mambisa, Agency Nuevitas, P.O.Box No. 350, Puerto Tarafa, Nuevitas, Prov. de Camaguey. Telephone: 2779, 2107 (office), 3109 (night). Telex: 031151. Cable: Mambisa Nuevitas.

Mambisa Nuevitas Agency also attends the port of Jucaro and sub-port of Boca Grande.

(b) SUB-PORT OF TARAFA: (See Plan)

APPROACHES: See "Pastelillo".

PILOTAGE: See "Pastelillo". Distance from place where Pilots board vessels to Tarafa is about 10.75 miles.

RESTRICTIONS: Vessels can enter or sail only during daylight and should wait for slack water.

BERTHING: *Tarafa Terminal:* This terminal consists of 3 solid concrete piers, each with railroad sidings connecting with the main tracks and also suitable for trucking operations.

It is capable of operating 7 vessels simultaneously: 6 average size vessels and 1 medium or small.

Cargo handled at Tarafa Terminal: General cargo, equipment, machinery, bagged cargoes, fresh and canned fruits, sugar, etc.

Tarafa Pier "B": North Side: Length 480 ft., width 65 ft., max. draft 19 ft.

Depths alongside from shore end to pier head: 19 – 23 – 25 – 25 – 25 – 28 ft.

South Side: Length 480 ft., width 65 ft., max. draft 19 ft.

Depths alongside from shore end to pier head: 14 – 21 – 20 – 22 – 22 – 24 – 25 ft.

Tarafa Pier "C": North Side: Length 437 ft., width 61 ft., max. draft 26 ft.

Depths alongside from shore end to pier head: 26 – 25 – 26 – 29 – 31 ft.

South Side: Length 437 ft., width 61 ft., max. draft 26 ft.

Depths alongside from shore end to pier head: 23 – 23 – 25 – 25 – 25 – 26 – 27 ft.

Tarafa Pier "D": North Side: Length 768 ft., width 65 ft., max. draft 27 ft.

Depths alongside from shore end to pier head: 28 – 29 – 31 – 32 – 33 – 34 – 33 – 34 ft.

South Side: Length 477 ft., width 65 ft., max. draft 26 ft.

Depths alongside from shore end to pier head: 19 – 27 – 29 – 29 – 30 – 30 – 29 – 28 ft.

STEVEDORES: Working periods – raw sugar, loading rate, refined sugar, general cargo, etc., same as for Pastelillo. 6 sugar vessels can operate simultaneously. No crane available.

FRESH WATER: Can be supplied at Pier "B", "C", and "D".

FUEL: No bunkers usually supplied at this terminal, but in special cases bunkers have been supplied at Pier "B".

SHIPMASTER'S REPORT: March 1980.

General Cargo: There are 3 piers for handling general cargo, all in the same place at Tarafa. All about the same length, and ships can moor both sides.

Fresh Water: Fresh water can be supplied at anchorage and at all piers by barges (about 200 tons).

Agent: The Agent "Mambisa" has an office just outside the gate (large green house) and listens on VHF Channel 12 from 0900 – 1100 hrs. and 1500 – 1700 hrs.

SHIPMASTER'S REPORT: November 1981.

Pilotage: Compulsory. 12 hours' notice required.

Restrictions: Vessel can enter and leave port during hours of darkness. Vessel can only enter and leave at slack water due to narrow entrance.

Max. Size: Length 511 ft., beam 70 ft., max. draft 24 ft.

Tugs: Available and should be used.

Radio: CLK.

VHF: Pilot on Channels 16 and 13. Port Authority on Channel 13. Agent on Channel 12.

Berthing: Location: Lat. 21° 34' N., Long. 76° 14.5' W.

Vessel berthed at Berth B. Distance from entrance to berth 12 miles. Least depth of water in channel from sea to berth 8.0 m. Max. tidal range at berth 1 m. Nature of bottom mud. Density 1025.

Facilities Available: Limited bulk handling facilities, no Ro-Ro, no floating cranes. Equipment available for handling palletised cargoes. No facilities for handling containers.

Anchorage: The anchorage is 6 miles from the berth. Vessels with draft of over 20 ft. have to anchor in channel.

Barges: Fresh water barge available.

Tankers: Tanker terminal available.

Consuls: None.

Services: The following services are available: Fresh water, fresh provisions in small quantities, laundry service, telex, bunker fuel oil, diesel oil, lubricating oil, doctor and hospital.

Agents: Nearest Agent in Havana.

SHIPMASTER'S REPORT: December 1983.

Documents: See Havana "Shipmaster's Report: December 1983".

Pilotage: Compulsory. 24 hours' notice should be given via Agent. Pilot boards at No. 1 Buoy (entrance to bay).

Distance from entrance to berth is 12 miles through a very narrow channel with sharp bends. This channel may only be transited at slack water during daylight.

Charted depth in channel was 4 fathoms but we found at least 30 ft. Tidal range 0.5 m. Currents of 2 – 4 knots are experienced 2 hours after HW or LW.

Anchorages: Available in centre of bay at Lat. 21° 31' N. Long. 77° 11.5' W.

Restrictions: See "Pilotage".

Max. Size: Max. LOA 650 ft., max. draft in channel 33 ft.

Radio: Neuvitas.

VHF: Pilot and Port Authority use Channel 16.

Tugs: At least 3 tugs available.

Berthing: Vessel berthed at Tarafa "B" Pier (Lat. 21° 34.2' N., Long. 77° 14.7' W.). This vessel (length 575 ft.) was very much the maximum size for this pier. Max. draft at East end – 19 ft. Mean tidal range at berth was 18 in.

Nuevitas has 3 piers for receiving and exporting general cargoes. The 3 piers are "B", "C", "D", with berths on North and South sides of each. Lengths of piers are said to be "B" 480 ft., "C" 437 ft. and "D" 766 ft. The South side of "B" Pier is silted up limiting the draft to about 17 ft.

We were offered "C" Berth 437 ft. which I rejected as being unsafe for this size of vessel. The Pilot and Port Officials agreed with me.

The vessel berthed North side of "B" Pier. Only 470 ft. of pier was usable as heavy boulders and mud extended from the East end of the berth consequently 110 ft. of the vessel overlapped the jetty into the stream where a current of from 1 to 2 knots can be experienced. Every use was made of bollards and horn cleats on the quay, some of which were very dubiously secured to the wharf. All available leads on the vessel were used, even so there are no means or facilities for breasting the stern in. During a heavy squall the ship was about 12 ft. off the jetty.

"D" Berth is the only suitable berth for this size of vessel. Unfortunately it is used only for receiving bulk fertiliser.

Other berths off the Port are only used for the export of sugar and cargoes moved by rail trucks.

Vessel must depart berth 2 hours prior to slack water in order to transit channel at slack water.

Bulk Cargo Facilities: "D" Pier is for discharge of bulk fertiliser; ship's gear used.

Stevedores: Available and satisfactory.

Medical: Doctor and hospital facilities available.

Fresh Water: Available.

Fuel: Limited quantities of bunker fuel, diesel and lubricating oils available.

Consuls: Nearest at Havana.

Surveyors: Salvage Surveyor available.

Airport: Local airport.

Services: Telex facilities. Limited supplies of fresh provisions, groceries and meats.

SHIPMASTER'S REPORT: February 1984.

We recently loaded a cargo of bagged sugar in Nuevitas, Cuba. Thanks to your publication, all crew had made out complete Personal Effects lists, and most of their valuables had been placed in cases and placed in the bond.

On berthing, I was presented with a set of Customs Regulations which stated what had to be placed in bond during the ship's stay in Cuba. This says (in English) Quote: "On arrival Cuban port all Masters of any ships must put under transit room that not be of personal use such as toys, guns, ammunitions, spirits, cigarettes, narcotics and kinds of pornographic pictures". No mention is made of cameras.

The day after berthing, the ship was searched by the Port Captain, who confiscated two cameras belonging to crew members, even though these had been declared. According to the Agent in Cuba, these people had no right to take these articles, and he was certain he would get them back. However, despite numerous requests and letters, they were not returned on sailing.

The above may prove of assistance to other ships.

See "Shipmaster's Comments" in "General" before first port.

SHIPMASTER'S REPORT: August 1985.

Notices: The required notices and ETA messages were sent to "Mambisa – Havana" and once the loading port was declared contact was established with "Mambisa – Nuevitas" – the local Agents, all messages were then directed through them.

Response of Havana Radio (CLA) on HF was poor, all messages had to be sent through U.S. coast stations, however, once the vessel was in MF range all traffic was directed through Havana Radio and the local station Nuevitas Radio (CLK).

Approaches: 2 hours prior to time of arrival the vessel was informed by the Pilots (on VHF) that the Pilot would board at 1130 hrs. which meant a delay of 2 hours. We went up close to the Pilot Boarding Ground to register and report the time of arrival and then went out to drift. We then sent message to Agents to tender Notice of Readiness on Master's behalf with time to be stated as 0930 hrs. (it was a Saturday).

All entrances to the bay are made when tide is slack at No. 1 Buoy, ETA to be timed accordingly. Pilots prefer to enter between Slack Water and Flood Tide. All sailings are timed for 1 hour before Slack Water, the idea is to be at No. 1 Buoy at Slack Water.

Limitations: If draft less than 30 ft. then vessel can enter and leave the port by day or night provided the above conditions are met. If draft is more than 30 ft. then the vessel can enter and leave the port at HW – Slack Tide by day only. Max. draft 33 ft. There is a strong currrent in the channel and at the neck of the bay of up to 4 – 5 knots.

Anchorages: No safe anchorage with good holding ground is available outside the bay near the entrance, so it is advisable to drift. Vessel must be well out as there is a strong set. Pilots advise that if it is necessary to anchor then the vessel can anchor in a position bearing 000° (T) × 4 cables from Pta-de-Cos Practicos, but for an hour or so only.

We understand that if a vessel has to anchor for longer periods then one can anchor on the Great Bahama Bank as shown (See "Plan"). Vessels have been known to anchor here for hatch cleaning, etc. I personally feel it is not a very good proposition. Inside the bay there are good and safe anchorages available. There is no safe anchorage off Pastelillo Pier. Off Tarafa there is an anchorage to the N.W., max. draft 22 ft., it is used only as a temporary holding ground during manoeuvres.

Pilotage: Pilots board 1 mile North of No. 1 Buoy. Pilots and tugs communicate – using walkie-talkie. If wind is more than Force 4, the Master has to issue a letter before Pilots undertake any docking/undocking operations, especially if in light draft and with high windage area.

Tugs: This port has experienced many tug breakdowns and delays. We were given to understand that on one occasion (March 1985) all docking and undocking operations were delayed for 6 days, all for the want of one tug. At some berths Pilots require 2 tugs.

For our departure from Pastelillo Pier, we were also delayed due to tug breakdown. Master had to request the Port Officials for special permission and only after overnight consultation and delay did they permit undocking with one tug, provided the Master issued a written request. This was done and the vessel undocked.

Density: We observed a dock water density of 1027 at both Tarafa and Pastelillo. This high figure is due to the fact that the area had experienced an unusually long dry season. As per the Surveyors average figure is 1023 – 1024.

Berths at sub-port of Tarafa: There are 3 piers 'B', 'C' and 'D' with berths on each side designated North and South berths.

Pier 'B' is generally used for reefer and smaller general cargo vessels.

Pier 'C' is used for sugar and general cargo.

Pier 'D' is used for fertiliser and other bulk cargoes.

Official drafts and depths are not to be relied upon as there is heavy silting at all berths mainly attributed to the bulk operations.

We berthed at Pier 'C' – South berth, starboard side to, head in, with the stern protruding well out beyond the pier. This is due to the progressive silting at the forward end. Depths at this pier were sounded and are as per plan (See "Plan"). Max. draft at Pier 'C' – South berth as per the Pilots is 24 ft. forward and 26 ft. aft. Vessel can load up to 25 ft. 03 in. max. (aft) and sail at any state of tide. If over this draft vessel must sail at HW only.

If draft exceeds 25 ft. 03 in. when transiting the Tarafa-Pastelillo Channel one tug is required to assist the vessel to round the bend at No. 41 Buoy.

Max. draft allowed in the Tarafa-Pastelillo Channel is 27 ft. at HW. For docking/undocking Pilots require 2 tugs but use only one. This is mainly due to the lack of manoeuvring space when there is a vessel at the adjacent berth.

Berths at sub-port of Pastelillo: The berths at this pier are considered the topping-up berths. Generally vessels load part cargo at Tarafa and then shift to Pastelillo.

There are 2 berths at this pier designated North and South. The North Berth is for tankers and the South Berth is for sugar loaders. Cargo to this berth is fed by rail road.

The knuckle on the Southern side has been badly damaged and has some irregular blocks of concrete and steel jutting out, necessitating extreme caution during the approach and positioning of the vessel.

We berthed at Pastelillo – South Berth, starboard side to, head in. The berthing operation can be a little tricky, especially if there is a slight wind, this is made more so by the channel which turns sharply at the head of the pier.

The official maximum draft allowed at this berth is 33 ft. Hand lead soundings showed depths in excess of 36 ft., on the off-shore side and 33 ft. on the in-shore side.

With a draft of 30 ft. a vessel can undock at any state of tide, by day or night. However, with a draft in excess of 30 ft. undocking is during the day only, with the max. draft of 33 ft. only during the daytime and at high tide.

Tidal restrictions for departure from the bay still apply, so the vessel may be required to anchor in the bay to await tidal conditions. Pilots and Port Officials require 2 tugs for all docking/undocking operations at Pastelillo.

Documents:

Crew List	9 copies	Any format.
List of Ports of Call	4 copies	Any format.
Declaration of Health	1 copy	Special format.
Vaccination List	4 copies	Any format.
Foreign Currency Declaration	4 copies	Any format.
Narcotics List	4 copies	Any format.
Firearms & Weapons List	4 copies	Any format.
Cargo/Ballast Manifest	4 copies	Any format.
Stores List, Deck, Eng., Radio, Catering	5 copies	Any format.
Provisions List	6 copies	Any format.
Bonded Stores List	6 copies	Any format.
Personal Property Declaration	2 copies	Special format.
Currency Card	1 copy	Special format.
Shore Pass	2 copies	Special format.

Vessel should make a fairly detailed declaration of ship stores with special attention to electrical, electronic equipment and new (unused) items.

Crew Personal Property Declaration has to be *very detailed* with all items listed. All new items and those not in use should be packed up in a bag and put away in a spare cabin. This spare cabin is sealed by the Customs.

Each crew member is allowed: 1 bottle of alcohol, 1 carton of cigarettes, 1 watch, 1 radio. Beer is not considered a bonded item. No cameras allowed for the crew.

The Master is permitted to keep: 5 bottles of alcohol, 5 cartons of cigarettes and 1 camera. (We had kept the Polaroid camera out of bond to use during cargo operations).

The Customs seal can be opened upon request every 5 days for a fresh issue to the crew.

Inspections: Pratique, Veterinary, Agriculture, Sanitary, Harbour Master (Ministry of Interior – Guards), Customs:

Pratique: Doctor and assistant board the vessel with the Pilot when inward bound. They clear the vessel and issue the Free Pratique chit.

Veterinary: A veterinarian from the Institute of Veterinary Medicine will inspect the holds and dunnage wood and see if spaces are fit to load sugar. Also if the wood is free of termites. He will then issue a "Fit to Load Sugar" Certificate. The Veterinary Inspector will also check the meat room to see if all the meat onboard is clean and fit for consumption. He will be looking out for the stamp of approval. Chinese sausages are not permitted. If any non-approved items are found then the meat room will be sealed and they will board every day to enable removal of rations for 24 hours. The charge for this service is CPeso 5/– per visit.

Agriculture: An Inspector from the Department of Agriculture will board the vessel to check the dry provisions and the vegetable room. They will take samples of fruit, garlic, some vegetables away for testing and they may recommend some items to be sealed up in plastic bags. It is advisable to keep dry-fish 'ikkan billis' and preserved Chinese vegetables well out of sight.

Sanitary: Inspector from the Department of Public Hygiene will check the galley, all cabin stores in the accommodation and on deck, also check the garbage drums, etc. They are mainly looking out for mosquitoes, as there was a very severe epidemic of malaria resulting in a large number of deaths. The Sanitary Inspector will board every 5 days.

Harbour Master (Ministry of Interior Guards): They can search the vessel at any time, for any reason, any number of times. They searched our vessel twice on arrival and prior to departure. The shore passes are issued by them. Everyone is expected to stand-by their cabins during the initial and final search. They appeared to be looking out for 'literature', objectionable to the government, and stowaways. This Department will issue a "Permission to Sail" Certificate.

Customs: The Customs Officials are mainly looking for U.S.$ and Cuban Pesos in excess of the declared amount. Any *news items* or any item they *feel* is in excess of personal requirement will be confiscated whether declared or not, if found in the cabin. All crew should be advised to keep only the bare minimum and all other items should be put away to be sealed. Currency Declaration cards for all crew are given by them. Customs will, prior to departure, issue a "Clearance".

Agents: Empresa Cosignataria Mambisa – Nuevitas are the local Agents with the main office in Havana. The Agents board the vessel on arrival and thereafter every day. They can be contacted on VHF (call – Mambisa) Channel 12 and 16 between 0800–1130 hrs. and 1400–2100 hrs. The office is located very close to the main gate at Tarafa. Working hours are up to 1700 hrs. However, there is an Agent on duty until 2100 hrs. All telex messages are sent through Havana. International telephone calls can be made from the Agent's office. Even with 24 hours prior notice there are delays. Agents are attentive and helpful.

Shipchandler: There is one company, arranged through the Agents. The chandler supplies fresh and dry provisions and dunnage material. The chandler claimed to have fresh vegetables, fresh fruit, meats, etc. Prices of seasonal local fruits and vegetables are very reasonable. When the order was placed they were able to supply only one or two items as all fresh vegetables and fruits were out of stock.

Medical: Arranged through the Agent. The Protocol Officer will take the crew member to the local hospital, for medical attention. Cost Cuban Pesos 20/– per consultation, transport and medication extra.

Fresh Water: Available by barge. We did not take water at this port.

Shore Leave: The crew is permitted to go ashore any time. There is no curfew in force. While at Tarafa the most convenient mode of transportation to and from town is by bus. Taxis are available but difficult to come by. From Pastelillo the crew is not allowed to go ashore, by road transport. Boat service has to be arranged. Pastelillo-Tarafa is a 40 minute ride one way, cost per round trip is C. Peso 46/–. However, if anyone is to go to the doctor then the Agent will arrange a car and boat service is not required.

General: The crew should be warned against Black Market transactions in U.S. Dollars as there are plain clothes policemen on the look-out. Crew are permitted to take U.S.$ ashore but they must be changed at a bank. Apparently the incidence of STD (sexually transmitted diseases) is quite high and the crew should be warned accordingly. There were some indications that drugs are quite freely available and in use, so one must be more vigilant as some of the crew may be tempted or misled. At the time when the vessel called the exchange rate was U.S.$ 1.00 = 0.96 Cuban Peso.

Stevedores: The regular working periods at this port are:

Monday to Friday	0630 hrs. to 1350 hrs.	1st shift.
	1420 hrs. to 2140 hrs.	2nd shift.
Saturday	0630 hrs. to 1350 hrs.	1st shift only.
Sunday and Holidays	No work.	

The above are the times of regular work. However, cargo can be worked on Saturday 2nd shift and Sunday if required. Stevedore Supervisor will enquire, as to the number of gangs vessel requires to work. Vessel must ensure that at no time to commit less than 4 workable hooks as per Charter Party. Sometimes they bring less gangs to suit the availability of cargo. Ship's crew are to rig derricks but stevedores will assist. Opening and closing hatches by ship's crew. Stevedores are fast and efficient, did not experience any problems.

The 2 areas to be wary are:

(a) Stacking of bags when the head room decreases, in the under coaming spaces.

(b) Covering up all the steel work, and the top tier with kraft paper.

At Tarafa sugar in bags is fed to the wharf by covered wagons and also on trucks.

The average weight of cargo per wagon is 57 tonnes. Usually there are 12 bags per sling and 1 sling per lift. If there is sufficient supply of cargo and wagons, one gang can average 2,400 – 3,000 bags per shift. Provided the rate is maintained, on a 4 gang/2 shift basis the total lifting per day can be in the region of 19,000 – 24,000 bags which is 1,880 tonnes – 2,300 tonnes per day.

At Pastelillo the sugar is fed to the wharf by rail wagons only. Here the normal system is 6 bags per sling and 2 slings per lift. Due to the height of the wharf and the positioning of the rail tracks the production at this pier is much greater than at Tarafa.

The above figures are on the basis of regular supply of sugar and wagons. During our stay there were times when cargo had to be stopped or slowed down and the number of gangs reduced due to non-availability of cargo. The production figures for our port stay are as follows:

	Tarafa	*Pastelillo*
Time alongside	4 days 22 hrs. 18 min.	5 days 20 hrs. 36 m.
Time workable as per port working hours after berthing (Sundays & Holidays inc. if worked)	3 days 23 hrs. 50 min. (10 shifts)	3 days 13 hrs. 14 min. (12 shifts)
Deductions from workable time		
– Rain	00 hrs. 35 min.	—
– Preparing for loading	01 hr. 30 min.	—
– Waiting for cargo	—	11 hrs. 50 min.
– Waiting for shifting/sailing	—	16 hrs. 00 min.

	Tarafa	*Pastelillo*
Time actually worked	2 days 21 hrs. 45 min.	2 days 09 hrs. 24 min.
Total cargo lifted	81,530 bags	60,167 bags
Total gangs worked	35	24
Cargo/gang/shift	2,329 bags	2,507 bags
Average cargo/day of 24 hours (basic time alongside)	1,620 tonnes/day	1,006 tonnes/day

Tally: Tally by shore personnel quite accurate and in addition independent tally by ship's staff (used deck cadets, and crew when more than 4 working gangs). Did not experience any serious discrepancy.

Vessel must instruct ship's tally cadet and shore tally clerk to compare figures at the end of each wagon or truck, and note any discrepancy before commencing the next wagon or truck. This way there is no squabbling at the end of the day when the figures are presented to the Chief Officer and there appears some large and mysterious discrepancy. Due to the presence of the ship's staff the shore tally personnel are more attentive.

Cargo Condition: The general cargo condition was satisfactory as could be judged from the appearance of the bags and by feel. Some of the bags were wet and or stained. There were also some bags which were hard when touched. All wet, stained, torn, seeping and hard bags were rejected. The rejected bags were re-loaded onto the wagons. Ship's staff on tally duty checked and rejected the bags. There is an organisation called Empressa Cubana de Control short 'Cubacontrol' Surveyors/checkers from Cubacontrol check the cargo quantity and quality. They have one representative per gang and in addition there is one person who collects samples at random. From experience gained on the voyage, we noted that this cargo is prone to heavy sweating. There is considerable amount of inherent moisture and heat in the sugar crystals/granules.

Cargo Weight: The cargo of granulated raw brown sugar in bags is fed to this port from 5 factories. In spite of standardisation there is a difference in bag weight and condition. The rail wagons are weighed, at random, before and after handling to obtain the cargo weight and thus the average bag weight. This average is used to compute the cargo quantity being loaded. The averages range from as low as 94.1 kg./bag to 101.9 kg./bag. For our shipment the general average bag weight worked out at 98.993 kg./bag. The shippers Cubazucar (local representative Marcos Allen) advised that from past experience *all* sugar ships to China have experienced a shortfall per the receivers. To safeguard their interest the shippers request a Draft Survey on Shipper's Account. The Draft Survey was carried out by Cubacontrol.

By shore tally cargo quantity worked out to 14,020.072 tonnes gross, 13,879.755 tonnes net.

By draft survey cargo quantity worked out to be 13,903.395 tonnes gross.

B/L was signed on basis of shore tally weight, gross and net. Freight basis net weight. Master had requisitioned/nominated for 14,020 tonnes of cargo. Issued Letter of Protest and Right to Claim Deadfreight.

Dunnaging Material: Laying of dunnage done by stevedore gangs, separate dunnage men employed per working hatch.

Flat dunnage wood is very difficult to obtain and when available, is very expensive. It is customary to use cardboard cartons and kraft paper. Transportation charges are unreasonably high so it is advisable to order your requirement in large amounts. However, returning is not permitted.

Flat dunnage wood at CPeso 110.2/cu.m. + 18% and transport
– None ordered

Cardboard cartons 122 cm.×61 cm.×0.35 cm. at CPeso 350 per bundle of 100 pieces
– Total used 12 bundles

Kraft paper 122 cm. wide ×100 m. per roll at CPeso 16 per roll
– Total used 107 rolls

We had 12 cu.m. of flat dunnage left over from the previous voyage, this was used in the lower holds – double dunnage, i.e. fore and aft and athwartships, this was then covered with kraft paper. Where no wooden dunnage was used cartons were placed which were then covered with kraft paper before cargo was loaded. All steel surfaces were covered with kraft paper to prevent contact with the bags. The top tier was covered with kraft paper. In the square of the hatch the top tier was covered with kraft paper and then with cardboard cartons.

Stowage Factor: The smaller holds (1 & 3) gave a stowage factor of 48 – 48.5 cu.ft./long ton whereas the larger holds had a stowage factor of 46.7 – 47.7 cu.ft./long ton. The average stowage factor for the full load worked out to be 47.5 cu.ft./long ton.

No. 3 Hold – Tween deck had some empty space – 13,457 cu.ft. (i.e. additional 284 tonnes).

No. 4 Hold – Tween deck had empty space – 3,200 cu.ft. (i.e. additional 68 tonnes) which with the stowage factor obtained gives a possible full load of 14,372 tonnes after making due allowances for bunkers, etc.

Sealing of Hatches: On completion of loading each hatch was sealed in the presence of the Ministry of Interior Guards and Customs. The sealing was carried out by Cubacontrol the locally based recognised company, in the absence of a P&I correspondent. The services of Cubacontrol for the sealing were ordered through the Agents on Owner's Account.

All hatch covers, hatchways and ventilators were closed and sealed using copper wire and snap-on seals. In all 24 seals were used. The Surveyors issued a Certificate and Plan on completion of sealing with all the seal locations and numbers.

AUTHORITIES: See "Pastelillo".

(c) SUB-PORT OF BUFADERO:

APPROACHES: See "Pastelillo".

PILOTAGE: See "Pastelillo". Distance from place where Pilots board vessels to Bufadero is 10 miles.

RESTRICTIONS: Vessels drawing over 25 ft. 3 in. should await high tide for shifting to anchorage.

For entering/sailing, vessels should wait for slack water and only during daylight.

MAX. SIZE: Max. draft with which vessels can enter/sail to/from Bufadero is officially up to 25 ft. 3 in. but actually up to 25 ft. 6 in. Length 600 ft. Tidal variation 1 ft. 6 in.

BERTHING: Pier, length 557 ft.; draft, North side, 25 ft.; draft, South side, 25 ft.

This pier is only used for molasses and fuel oil. Average pumping rate of molasses is 70,000 g.p.h. Only South side is in operation.

Cement Dock: This is a concrete coastal dock where bulk cement is shipped by means of silo-trucks. It is located West and close to Bufadero Pier. Length 275 ft., width 31 ft. Depths alongside from East to West: 14 – 16 – 18 – 16 – 16 ft.

FUEL/FRESH WATER/REPAIRS: Not available.

AUTHORITIES: See "Pastelillo".

PUERTO PADRE-Cayo Juan Claro: 21.17 N. 76.32 W. (and sub-port of Manati) **(See Plan)**

It is a safe, sheltered and ample port, situated at one of the richest and important sugar cane zones of the nation.

In the neighbourhood of the port there are 2 sugar producing colossus: Antonio Guiteras sugar mill, 8 km. away and Jesus Menendez sugar mill, distance 18 km. Both of these mills are among the biggest and most modern in Cuba.

The port itself is located on the West coast of Cayo Juan Claro and is named Puerto Carupano.

Cayo Juan Claro is connected with the mainland at its extreme Southern tip by a narrow gauge railroad and parallel to the tracks runs a road recently built.

Both the railroad and the road communicates with the city of Puerto Padre, sugar mills of Antonio Guiteras and Jesus Menendez.

Cayo Juan Claro and Cayo Puerco, divide the bay into two parts. The part located at the West is Puerto Padre bay and that at the East is known as Chaparra Bay.

APPROACHES: Funnel-shaped at entry. 2 turns, but the one to take into consideration when manoeuvring vessels over 525 ft. is "Careneoro" turn. Vessels with a length of 565 ft. have entered this port. Bottom is rocky in entrance channel and muddy in bay.

PILOTAGE: Pilots board vessels at entrance, not less than 1 mile from mouth of port. Distance from place where Pilots board vessels to pier is about 2.5 miles.

RESTRICTIONS: Vessels can enter only during daylight and must wait for slack water for entering/sailing due to current in the channel.

ANCHORAGES: *Official Anchorage:* Located at Puerto Padre Bay at following position: Lat. 21° 14' 46" N., Long. 76° 33' 34" W.

Max. length permitted 170 m.

Vessels usually anchor by 3 or 4 shackles of chain but there is enough swinging area for 8 or 9 shackles.

Draft allowed to vessels 25 ft. Anchorage bottom is mud and shells.

Quarantine Anchorage: Located East of Cayo Juan Claro at Chaparra Bay, about 2 miles from the piers.

Max. length permitted is 170 m. and depth is over the port official draft.

Vessels usually anchor by 3 or 4 shackles of chain, but there is enough swinging area for 10 shackles. Anchorage bottom is mud and shells.

MAX. SIZE: Vessels can sail with max. draft of 25 ft. up to length of 500 ft. Over 500 ft. length with draft up to 24 ft. Max. length permitted 557 ft. Tidal variation 2 ft. 3 in.

BERTHING: Pier Nos. 1 and 2 are located on the West side of Cayo Juan Claro.

Salt Mill Pier is located on the East coast of the entrance channel, just in front of Pt. Gracia, and about 1.75 miles from Pier Nos. 1 and 2.

(a) Pier No. 1 (Formerly known as Sugar Pier): It is a coastal pier built entirely of hard wood.

Two narrow gauge railroad tracks run along the length of the pier.

Loaded cars enter by the North end of pier and after discharging are taken out by the South end.

Trucks can operate at this pier, but are not used for sugar cargoes.

Length 523 ft., max. length permitted to vessels 557 ft. Width 32 ft.

Draft 27 ft. – 28 ft.

Cargo handled by this pier:

Importation: Occasionally general cargo or jute bales.

Coastal trade: Occasionally general cargo.

Water available by railroad tank-cars.

Berthing operation performed only during daylight hours.

(b) Pier No. 2 (Formerly known as Molasses and Oil Pier): It is a steel and hard wood construction 271 ft. long, of which 235 ft. corresponds to a passage 7 ft. wide along which run the pipelines and a catwalk, ending in a platform 36 ft.×36 ft.

Vessels operating at this pier, berth across it, forming a "T" shape.

Length 271 ft., max. length permitted 557 ft. Draft 26 ft. – 28 ft. Width 7 ft.

Platform 36 ft.×36 ft.

Cargo handled by this pier:

Export: Molasses.

Coastal trade: Discharge of fuel oil.

Berthing operation performed only during daylight hours.

(c) La Salina Pier: Located at the entrance channel East coast, just in front of Pt. Gracia.

It is a small coastal pier built to ship coastal trade cargo of salt.

Berthing length 44 ft. Width 22 ft. Max. length allowed 192 ft.-200 ft. Draft 12 ft.

STEVEDORES: Working periods: Monday to Friday 0700 – 1100 hrs., 1300 – 1700 hrs.; Saturday 0700 – 1100 hrs.

Raw sugar: loading rate max. 1,430 raw sugar bags loaded per gang period. Minimum is 650 bags. 5 bags loaded per sling. Only one vessel can operate at a time. Empty jute bags have been discharged and average discharge rate is about 45 metric tons per gang period. No crane available.

Sugar in bulk: 5 thrower machines for loading sugar in bulk.

MEDICAL: General Hospital at Puerto Padre where sick crew members can receive attention.

TANKERS: Molasses average pumping rate 50,000 g.p.h. Fuel oil, discharging rate 45,000 g.p.h. Gas oil discharging rate 35,000 g.p.h.

Puerto Padre Pier No. 2: Fuel Oil: One connection 8 in. diameter. Diesel Oil: One connection 8 in. diameter. Molasses: Two connections 8 in. diameter.

FRESH WATER: Can be supplied at No. 1 pier by pipeline. Delivery rate 17 t.p.h.

FUEL: Not available.

REPAIRS: Port has no repair shop, but in event winch damage or any other light repairs, this work can be carried out at the Sugar Mill "Central Antonio Guiteras" Repair Shop.

IMPROVEMENT OF PORT FACILITIES: At the present time new deposit tanks for petroleum products are being built to increase greatly the port storage.

Also a water reservoir and an above ground tank will be built, and in the future it will be possible to supply water by pipeline to vessels docked at Pier No. 2.

TRANSPORTATION: Distance from Cayo Juan Claro where all cargo operations are performed to Puerto Padre is 3 miles. Means of transportation between Puerto Padre and Cayo Juan Claro: motor-boat, railroad, and automobile.

From Puerto Padre to Cayo Juan Claro it takes: by motor boat 30 minutes; by automobile 5 minutes; railroad 20 minutes.

COMMUNICATIONS: Means of communications available at Puerto Padre: telephone, cable (Inalambrica), telegraph and postal service. Vessels can communicate with Puerto Padre via CLA Havana.

AUTHORITIES: Port Doctor and Custom House are located at Puerto Padre. Immigration at Chaparra. Port Captain at Cayo Juan Claro.

AGENT: Office Address: Calle 3 No. 12, Cayo Juan Claro, P.O.Box 38, Central "Antonio Guteras, Tel.: 52565 (Puerto Padre), 210-2 (office), 108-2 (night). Cable: Mambisa Puerto Padre. Telex: 024118.

Agency works VHF on Channel 16.

Postal Address: Empresa Consignataria Mambisa, Agencia Puerto Padre, Apartado No. 38, Central Antonio Guiteras, Delicias, Prov. de Oriente.

Puerto Padre Agency personnel also attends the Port of Manati.

SUB-PORT OF MANATI: 21.24 N. 76.48 W. (See Plan)

The Port of Manati lies on an arm in the sea, through the centre of which runs a narrow and deep channel, leading to the shallow bay of Sabanalamar or Manati.

This arm in the sea is about 3 miles long and 800 m. wide at the entrance mouth, between Pt. Roma and Pt. Jesus, and 700 m. at its end, when it reaches Sabanalamar Bay.

Manati is located on the West coast of the arm in the sea, at about 2.5 miles from Pt. Roma and 0.5 miles from the end of it.

The Port of Manati exports the production of sugar mill Argelia Libre formerly known as Manati.

APPROACHES: Narrow channel, very deep (minimum depth 38 ft.) Bottom is irregular, parts where it is sandy and others rocky.

PILOTAGE: Pilots board vessels about 1 mile from entrance. No Pilot Station. Pilots located at Manati and ETA notice to be given to them well in advance. Distance from place where Pilots board vessels to pier is about 3 miles.

RESTRICTIONS: Not necessary to await slack water for entry/sailing; but considering large tonnage of vessels presently entering port for topping-off, if there is a strong current Pilots wait until current loses strength in order to avoid accidents. Vessels can enter and sail only during daylight.

ANCHORAGES: Swing area 600 ft. (approx.). Owing to reduced space, this anchorage is not safe for anchoring vessels drawing over 26 ft.

MAX. SIZE: Incoming vessels draft limitations:

	Vessel length	*Max. draft*
Vessels up to	500 ft.	26 ft.
Vessels up to	525 ft.	20 ft.
Vessels up to	560 ft.	17 ft.

In some exceptional cases 560 ft. length vessels have entered this port but it is advisable to nominate this type of vessel to operate at any other suitable port because at Manati the max. advisable length allowed to vessels is 525 ft.

Tidal variation, 2 ft. 6 in.

BERTHING: Manati Pier has the shape of an "L" and projects from the West coast of the arm of sea toward the centre of it seeking the border of the deep channel.

It goes straight out and then turns Northward in a 90° angle.

The 90° angle constitutes its South end, and from there to the head of pier, or North end, it is 465 ft. long, having at this end a fixed red light.

As is clear by the above description, pier has an East and a West side, but only the East side is used because the West side does not have enough water to operate vessels.

It is a hard wood construction supported by concrete piles. Bottom alongside pier is soft (mud and sand) along three-quarters of its length from North to South except at the South end where it becomes shallow, hard and rocky, which renders worthless about 70 ft. of docking space.

Pier has double standard railroad tracks and a single narrow gauge track. It is not possible to operate trucks at this pier.

Manati Pier (Also known as La Gloria Pier): Length 465 ft. Max. length allowed 525 ft. Max. draft 30 ft. 6 in.

Tanker Information: Molasses: 2 connections 8 in. in diameter. Fuel Oil: 1 connection 8 in. in diameter.

STEVEDORES: Loading sugar: working periods: Monday to Friday 0700–1100 hrs., 1300–1700 hrs.; Saturday 0700–1100 hrs., 1300–1700 hrs. When necessary, work is performed at night. Sunday is also worked when required. 1,040 sugar bags loaded per gang period; 6 sugar bags loaded per sling. Only one vessel can operate at a time. No refined sugar operations performed. No shore crane available. Sugar mill has 5 grates and 3 machines for spreading sugar in hatches.

MEDICAL: Crew members requiring medical attention are treated at Manati Polyclinic, but the majority of cases are treated at Argelia Libre Hospital, where there is also a Dental Clinic.

Cases requiring surgical or specialised treatments are sent to Lenin Hospital at Holguin.

TANKERS: Molasses pumping rate 25-30,000 g.p.h. Fuel oil pumping rate at average of 1,700 b.p.h.

FRESH WATER: Supplied by pipeline at pier. Pipe-line 2 in. in diameter and delivery at an average rate of 15 – 16 t.p.h. Amount that can be delivered depends on supply at sugar mill. Supply not to be depended upon.

FUEL: Not available.

REPAIRS: Sugar mill repair shop for minor repairs. Welder available.

COMMUNICATIONS: Long-distance telephone communication between Manati and Puerto Padre; although difficult owing to fact that there are only two lines from Manati and they are almost always congested. There are some occasions when an entire day is spent trying to obtain communication without result. Victoria de las Tunas telephone operator serves on occasions as "relay".

Vessels cannot communicate by radio with this port.

AUTHORITIES: Under Cuban Custom laws and regulations, Manati is a sub-port of Puerto Padre, therefore all Authorities are located at Puerto Padre, nevertheless vessels nominated for operations at Manati can proceed directly to the port, where authorities clear the vessels.

AGENT: Manati is attended by Mambisa Puerto Padre Agency personnel and there is no office at Manati, however, the Agent attending a vessel at Manati can be reached at Minaz office, tel. 146. At night and for urgent matters he can be reached at Manati Chief Pilot tel. 144-15.

SANTIAGO DE CUBA: 19.50 N. 75.52 W. (See Plan)

APPROACHES: The entrance, up to a distance of 0.5 mile, has a rock bottom. Thereafter, for a distance of 1 mile muddy bottom, and remaining 2.5 miles is soft mud. There are some turns, and the channel and entrance to the port are narrow.

PILOTAGE: Pilots board vessels 1 mile from mouth of port. Pilot station located in small Cay at entrance of bay known as Gramma Cay (formerly Smith Cay). Launch service is only means of communication available between Santiago de Cuba and Gramma Cay. Pilots also have office located at Custom House building with telephone communication. Distance from place where Pilots board vessels to: Piers 5 miles; Anchorage 4.5 miles; Refinery Pier 2.5 miles.

RESTRICTIONS: Vessels can enter and sail only during daylight from 0600 to 1800 hrs.

ANCHORAGES: *Inner Anchorage:* Located from the North of Ratones Cay up to the West of Buoy No. 20. Can accommodate several vessels.

Limitations to vessels: Draft 30 ft., length 702 ft.

Outer Anchorage: Located West of Pt. Gorda and just in front of refinery piers. Can accommodate 1 or 2 vessels and is used mainly by tankers. Max. draft: 36 ft. Max. length allowed 702 ft.

Also see "Shipmasters' Reports".

MAX. SIZE: Vessels with a length of 702 ft. and a draft of 36 ft. can enter up to the refinery, provided they arrive during early morning hours. Tidal variation 1 ft. 3 in.

VHF: Santiago Servicios Maritimos, Channels 16, 11 and 71.

Santiago Consignataria Mambisa (Agent), Channels 16 and 12.

Santiago Terminales Mambisa, Channels 16 and 71.

BERTHING:

Luis F. Mena Gil Dock (Formerly Malecon): This installation comprises the whole zone known as Malecon del Puerto and consists, mainly, of a docking area 1,345 ft. long, which, being able to operate three vessels, are regarded as West, Centre, and East berths, but there is no mark or boundary between any of the berths.

West of the Western berth is under construction, but already in operation, a new berth, temporarily known as Western extreme berth and, East of the Eastern berth is a berthing space for barges.

This dock is built of concrete, and was rebuilt and paved recently. As standard gauge railroad tracks run along the length of dock, operations can be performed either by railroad or trucks, or a combination of both.

The particulars of each berth are:

Western Extreme Berth: (New Berth): (Known as Malecon Extremo Oeste):

Max. length allowed: 100 m. Draft: 18 ft.

Cargo handled at this berth: General cargo, cement, etc.

Western Berth: (Known as Malecon Oeste):

Draft allowed: 24 ft. fore, 25 ft. aft.

Cargo handled at this berth: Bagged raw sugar, general cargo and occasionally lubricating oil.

Centre Berth: (Known as Malecon Centro):

Draft allowed: For Loading: 28 ft., leaving pier at high tide. Under these conditions, vessels rest in 1 ft. of almost liquid mud but this does not interfere with sailing manoeuvres.

For Docking Loaded: 27 ft. even keel. Cargo handled at this berth: bagged raw sugar, general and heavy cargoes.

Eastern Berth: (Known as Malecon Este):

Draft allowed: 23 ft. fore, 26 ft. aft.

Cargo handled at this berth: light general cargo, molasses and petroleum products.

Ferrocarril Pier: This pier out of use since 1972 but rebuilt recently. It is a concrete construction ending in a small platform but vessels do not moor directly to the dock but to 4 solid dolphins; first and last dolphins being 400 ft. apart. Vessels are also secured to belaying cleats situated on shore.

This installation is used for shipping molasses but there is a possibility that pipelines for petroleum by-products will be installed, although this has not been confirmed.

Length: 240 ft. Draft allowed: 26 ft.

Rolando Roca Pacheco Pier (Formerly La Maritima): This pier is a complete concrete construction, (both platform and pilings) rebuilding of which was finished in 1973; the installation is in very good condition in all respects, permitting truck and trailer operations alongside vessel, as well as railroad operations, because tracks cross just in front of the pier shore entrance.

North Side: Length: 650 ft. Max. length allowed: 600 ft.

Draft allowed: 25 ft. fore, 26 ft. aft.

Cargo handled at this side: General cargo.

South Side: Length: 650 ft. Max. length allowed: 600 ft.

Draft allowed: 26 ft. fore, 27 ft. aft.

Cargo handled at this side: General cargo.

Romero Pier: This pier is a concrete construction, and although in rather fair condition, needs repairs.

All cargo handled at this pier is on the basis of a trucking operation only.

It is used chiefly for coastal trade vessels but also by medium size vessels, such as refrigerated ships.

East Side: Length: 492 ft. Max. length allowed: 400 ft.

Draft allowed: 14 ft. fore, 19 ft aft.

Cargo handled at this side: general cargo, bagged cement, etc.

West Side: Length 492 ft. Max. length allowed: 400 ft.

Draft allowed: 20 ft. fore, 23 ft. aft.

Cargo handled at this side: General cargo, bagged cement, refrigerated cargo such as lard, butter, frozen fish, etc.

Frank Pais Pier (Formerly La Molinera): This installation consists of a long narrow passage, at the end of which the vessel is berthed across the installation to 4 solid dolphins. It is used for the discharge of bulk grain (wheat and maize) by mechanical means through conveyors and pipelines.

There is no limitation as to length of vessels. Draft allowed: 30 ft.

Cement Plant Pier (Known as Muelle del Cemento): This berth is a coastal pier that can accommodate one vessel.

It is used only for loading cement, either by silos/truck depending upon whether bulk or bagged cement is involved. This installation is well paved and all operations are performed by means of trucks.

As the pier is not long enough, there are solid dolphins at each end of pier, in order to berth securely vessels up to 460 ft. long.

Length: 290 ft. Max. length allowed: 460 ft.

Draft allowed: 22 ft. fore, 23 aft.

Refinery Pier: This pier is located at a small peninsula on the West coast of the bay, its orientation being from North to South and therefore its sides are West and East.

It is a solid, well cared for, concrete construction, having similar facilities at both sides.

Length: 789 ft. Max. length allowed: 702 ft.

Depth: 40 ft. Max. draft allowed: 36 ft.

STEVEDORES: Working periods: Monday to Friday 0700–1300 hrs., 1300–1900 hrs.; Saturday the same; Sunday worked only if vessel completing cargo.

Raw Sugar: Loading rate about 1,200 bags loaded per gang period; 6 bags loaded per sling. 2 vessels can load sugar simultaneously.

General Cargo – approximate discharging rates:

General cargo	7–8 tons per gang hour
Bagged cargo	15 tons per gang hour
Iron	7 tons per gang hour
Wood	3 standards
Fertilisers	15 tons per gang hour

Shore Crane – there is movable crane with boom of 75 ft. length and lifting capacity about 19 tons.

Bulk sugar – 5 thrower machines available.

EQUIPMENT: One floating crane: 35 tons lifting capacity; 10 shore cranes: ranging from 16 to 5 tons lifting capacity; 40 tractors; 21 fork lift trucks: 70 h.p.; 13 trucks.

Besides, there are several tugs ranging from 1,200 to 150 h.p., also several cargo barges and other minor port auxiliary equipment not listed.

MEDICAL: Sick crew members can be attended at Santiago Provincial Hospital.

TANKERS: Average pumping rate: Molasses 30,000 g.p.h. Fuel oil 13,000 b.p.h.

COMMUNICATIONS: Radio telegrams, radiotelephony, telegraph and telephones. R.C.A., Inalambrica. All-American, Prewi, radio and Government telegraph. Also air, railroad and bus services.

Vessels can communicate with Santiago de Cuba through CLM and RCA.

FRESH WATER: Can be supplied docked/anchored.

FUEL: Fuel oil and diesel oil available. Delivery rate about 7,000 b.p.h.

REPAIRS: Following repair shops: Joaquin Lamas, Giron.

DEVELOPMENTS: Since 1973 all port facilities admitting repair or rebuilding are included in a plan in order to improve port facilities.

Through this plan several installations have already been rebuilt and others are undergoing repairs.

This plan also includes the installation of water pipelines to all piers where possible, in order to supply the vessels while operating.

Luis F. Mena Gil Wharf will be the first to have water installation to supply vessels.

There is a plan for the dredging of the port in the very near future.

SHIPMASTER'S REPORT: April 1979.

Also see "Shipmaster's Report" from Havana dated April 1979.

Documents:

12 Crew Lists.
5 Store Lists.
5 Declarations.
5 Currency Declarations.
5 Vaccination Lists.

These were all required even though the vessel had only come from Havana. Also a large number of transit documents were issued in Havana for entry here. Bond and safe seals may be opened whilst vessel at sea.

Points of Note:

a. No anchorage, recommend drifting about 5 miles from coast.
b. See Havana Report.
c. See Havana Report.
d. Port reasonably free of pollution, but large amount of constructionin progress in harbour area.
e. No tugs appeared when we berthed.
f. At grain elevator shore gangway used.
g. No crew inspection.
h. See Havana Report.
i. See Havana Report.
j. See Havana Report.
k. Same system as Havana but shore leave from 1800 to 2200 hrs.and travel to town by launch. Also only allowed in area shown on pass. In this port fines are imposed for being late back or going outside area of pass. First time 25 peso, second time 50 peso and third time pass revoked. Only ten persons allowed ashore at any one time and a list of those going ashore must be presented to the Immigration guard before 1000 hrs. that day.
   On Saturday and Sunday 16 persons are allowed ashore till 2400 hrs. and 2300 hrs. respectively.
l. See Havana Report.
m. See Havana Report.
n. As Havana, except Channel 16.
o. See Havana Report.
p. Berthed at grain elevator. 30 ft. alongside. The discharger has2 heads and is fixed, the ship has to be warped up and down the quay. Wheat discharged at average 50 tonnes p.h. Work on a 24 hour basis.
q. All hatches again inspected.
r. As Havana, vessel was searched here 4 days after arrival. The search was carried out by the police and was very thorough. It included checks on money and goods declared and under seal. The radio room was sealed at the time.
s. See Havana Report.
t. Customs issue may be obtained every 3 days if required. I believethis applies in Havana as well.
u. In light of this vessel's experience I would advise any vesselproceeding to Cuba to carry at least one month's reserve provisions.

SHIPMASTER'S REPORT: April 1981.

VHF: Santiago Pilots and the Agents "Mambisa Santiago" are both available on VHF Channel 16 at all hours.

Restrictions: There are no restrictions as to the times for entry and departure of vessels. Pilots are available 24 hours and I believe it has been so for the last two years.

Awaiting Pilot: Owing to the large depths, bad holding ground (rocky bottom) and frequent fresh winds, it is not advisable to anchor outside the harbour entrance. This was my opinion which the local Pilots have confirmed and have definitely advised against anchoring. If there is any delay in embarking the Pilot, the vessel should keep steaming.

SHIPMASTER'S REPORT: October 1987.

Vessel called at Santiago de Cuba after call at Havana (See "Havana – Shipmaster's Report" dated October 1987).

Vessel berthed alongside "Frank Pais" Silo. Crew can only go ashore by either motor launch or bus. Both services have to be arranged by Agent. No walking in the premises of the silo is allowed which is guarded by army units. There are no restrictions regarding the times crew can go ashore.

Fire/Boat Drills: Port Authorities did not allow us to carry out routine drills.

Berth "under construction" at Pta. Duany: This berth is now fully operational for refrigerated cargoes. No drafts were available, however I understand extensive dredging was done on both sides of the pier for berthing/turning.

Presently there is a shortage of water both at Havana and Santiago due to very prolonged dry years (last 5 years). No fresh provisions were available at both ports except limited amounts of pineapples.

AUTHORITIES: Located at Custom House building.

AGENT: Empresa Consignataria Mambisa, Agencia Santiago de Cuba, Avenida Jesus Menendez No. 658, Apartado No. 522, Santiago de Cuba, Prov. de Oriente. Tel: 22834 – Night: 4524. Telex: 061120, 061238. Cable: Mambisa Santiago de Cuba.

Agency VHF works on Channel 16.

TANAMO: 20.44 N. 75.20 W. (See Plan)

LOCATION: Tanamo Bay is moderately ample, landlocked, having numerous cays dispersed within. High ground surrounds the bay, except by the East and S.E. It is 3.5 miles long by 1.25 miles wide.

Tanamo is mainly a sugar shipping port, but also exports molasses and receives coastal trade shipments of fuel oil.

Tanamo exports the production of Frank Pais sugar mill, formerly Tanamo. At about 12 km. from the port are the town of Cayo Mambi and Frank Pais sugar mill.

PILOTAGE: Pilots board the vessel at about 1 mile off the port entrance. From this place to Punta Corda Pier, where vessels operate, there is a distance of 5 miles and to Cay Mambi Pier, 7 miles.

ENTRANCE TO PORT/CONDITIONS/LIMITATIONS: Entrance to port is effected through a channel in the form of an "S" with turns up to 90°.

The bottom is rock and sand, its maximum width being 175 m., located between the shoals at both sides of the entrance, and its minimum width 160 m., located in the vicinity of Pt. Gitana.

Channel tends to narrow in the middle of its course and it is here where precautions should be exerted, because it is considered dangerous. In its deepest part the channel is 49 m. deep, and its minimum depth is 20.12 m.

Limitations as to length and draft of vessels to enter to or sail from this port are those imposed by the place of operation.

ANCHORAGES: Del Medio Cay Anchorage:

Located at about 500 m. West of Bruja Cay.
Draft 8.53 m., max. length allowed 163 m.
Swinging area: About 350 m.
Soft mud bottom but anchors hold well.
It is sheltered from the winds, except those from the S.E.
In the rainy season, when rivers overflow, currents can be felt.

RESTRICTIONS: Due to the strong tidal currents it is necessary to wait for slack water, to enter to or sail from this port, which can be effected only in daylight.

MAX. SIZE: Max. size for entering/leaving Tamano: LOA 180 m., draft 10.67 m.

Max. size at Punta Gorda Pier: "See Berthing".

TUGS: Vessels over 157 m. require tug assistance.

BERTHING: *Punta Gorda Pier:*

North side:
(a) Max. draft: Base 4.17 m.
Head 6.10 m.
(b) Max. length: 157 m.
South side:
(a) Max. draft: Base 5.79 m.
Head 6.71 m.
(b) Max. length: 157 m.

Operational Capacity: There is berthing space for two vessels, but due to lack of port personnel, it is advisable to operate only one vessel at a time.

Cargoes handled at the Port:

Exports: Bagged raw sugar, refined sugar and molasses.
Imports: None at the present time.
Coastal Trade: Discharge of fuel oil.

STEVEDORES: Working periods: Monday to Friday 0700–1100 hrs., 1300–1700 hrs.; Saturday 0700–1100 hrs.; Sunday no work performed.

Raw sugar: 975 sugar bags loaded per gang period. 6 sugar bags loaded per sling.

Refined sugar: 1,875 bags of 100 lb., loaded per gang period. 12 bags of 100-lb. type loaded per sling.

General Cargo: Working periods same as for sugar.

MEDICAL: Crew members requiring medical care are treated at Cayo Mambi. If specialised treatment or hospitalisation is required, patients are sent to Mayari Hospital or Lenin Hospital at Holguin.

TANKERS: Molasses average pumping rate: 20,000 g.p.h. Fuel oil average pumping rate: 11,750 b.p.h.

Tanker vessels up to 163.07 m. can enter and operate at pier.
Fuel oil: 1 connection 12 in. in diameter.
Molasses: 1 connection 8 in. in diameter.

COMMUNICATIONS: Only means of communication at Tanamo is telephone service. However this service is not to be depended upon and it is advisable to notify Antilla Agency well in advance of any instructions or changes pertaining to vessel's operations.

TRANSPORTATION: Transportation means to and from Tanamo are rather poor. Transportation between Tanamo and Antilla (and other nearby ports) is performed by car.

Last 4 km. of road to reach Tanamo are embankment roads in very bad condition which can be transited only by jeep or truck.

There is a rail car service up to Cayo Mambi.

Best advisable means of travelling is to travel to Nicaro by road and from there fly to Santiago or Havana.

FRESH WATER: Can be supplied at Punta Gorda, delivery by pipeline by gravity.

FUEL/REPAIRS: Not available.

AUTHORITIES: Under Cuban Customs laws and regulations, Tanamo is a sub-port of Antilla. Some of the Authorities have delegations at Cayo Mambi, others are located outside of Tanamo, but if ETA message is given sufficiently in advance, all Authorities travel to Tanamo, where they wait to clear the vessel.

AGENT: Tanamo is attended by Antilla Agency personnel.

VITA (sub-port of Gibara – Oriente Province): 21.05 N. 75.57 W. (See Plan)

LOCATION: Vita is a small, sheltered, landlocked bay on the North coast of Oriente province.

Vessels within its premises are well protected against all kinds of weather.

This port handles the export of the production of Rafael Freyre sugar mill, formerly Santa Lucia. As it is close to the town of Santa Lucia and due to the former name of the sugar mill, this port is also known as Santa Lucia, Oriente.

APPROACHES: The entrance channel is narrow, with some turns which become risky due to the narrowness of the channel, and precautions must be taken for the crossing of all its course.

While approaching Vita, on the East side of port entrance, Pt. Barlovento lighthouse can be seen, located: Lat. 21° 06' 01.1" N., Long. 75° 57' 39.4" W., 13.72 m. high, above high tide, white light which flashes twice every 6 secs., visible up to 10 miles away.

PILOTAGE: Pilots board vessels 3 miles from entrance channel. Distance from place where Pilots board vessels to dock is 5 miles.

ANCHORAGES: Vita anchorage is located at about 190 m. from the pier, but as there is insufficient swinging area, it is only recommended as suitable for medium sized vessels.

RESTRICTIONS: Entry and sailing only during daylight.

MAX. SIZE: Max. draft with which vessels can enter/sail is 7.92 m. Tidal variation averages 2.9 ft. Max. length 150 m.

BERTHING: The pier is located at a village named Vita on a peninsula which projects from the South shore of Vita Bay.

The pier lies across the end of the mentioned peninsula, orientated from East to West; the berthing space is the North side since the South side is partially attached to shore.

Along the length of the pier and connected to Rafael Freyre sugar mill, runs single narrow gauge railroad tracks.

Vita Pier: (North side): Length 300 ft. Max. length allowed: 150 m. Draft allowed: 7.92 m.

Imports: Jute bales, bagged fertilisers.
Exports: Bagged raw sugar, molasses.
Coastal Trade: Discharge of fuel oil.
Only 1 vessel can be operated.

South side of pier is for small craft. All cargo handling takes place directly ship/truck as there is no warehouse in port.

STEVEDORES: Working periods: Monday to Friday 0700–1100 hrs., 1300–1700 hrs.; Saturday 0700–1100 hrs.

800–1,100 sugar bags loaded per gang period. Four sugar bags are loaded per sling.

MEDICAL: Crew members requiring medical attention are treated at Santa Lucia Hospital or Lenin Hospital at Holguin.

TANKERS: Average pumping rate (molasses) 25,000 g.p.h.

COMMUNICATIONS: Means of communication of Vita are telephone and telegraph.

Vessels navigating to Cuba can communicate with Antilla Agency through "CLA" Havana Radio Station which relays the message promptly to Antilla.

Once vessels have arrived in front of the port, they can communicate with the port by means of VHF.

Masters must send their ETA messages simultaneously to Mambisa Antilla and Mambisa Habana.

FRESH WATER: Can only be supplied in exceptional cases and in limited quantities by tanker truck of 4.5 tons capacity.

FUEL/REPAIRS/DUNNAGE: Not available.

TRANSPORTATION: There is no transportation difficulty since the port is connected with the highway for travelling to any place.

At distance of 16 km., there is a beautiful tourist beach where crew members can go, once proper arrangements have been accomplished.

AUTHORITIES: All Port Authorities are located at nearby towns, but travel to Vita in order to clear vessels.

Under Cuban Custom laws and regulations, Vita is a sub-port of Gibara.

AGENT: The port of Vita is temporarily attended by Mambisa Antilla Agency personnel.

Cyprus

AKROTIRI: 34.34 N. 33.02 E. (See Plan)

SHIPMASTER'S REPORT: January 1994.

CHART: B.A. Chart No. 849 – Ports in Western Cyprus.
DOCUMENTS: Vessels are to proceed to the anchorage 1.5 miles off the old port at Limassol for clearance by Cypriot authorities.

The following documents are required:
6 copies Crew List.
1 copy Crew Declaration.
2 copies Bonded Stores List.
1 copy Cargo Manifest.

PILOTAGE: On completion of formalities, vessel proceeded to Akrotiri with Limassol Pilot on board.
VHF: Pilot on Channel 10.
BERTHING: Vessel approached the mooring from North. A boatman in a mooring boat drops a rubber balloon into the water to indicate exact position for dropping of port anchor. A tug will assist by pushing on the port side. When in moored position, vessel has 6-8 shackles out on port anchor, headline to buoy on starboard bow and lines to 3 mooring buoys aft.
CARGO OPERATIONS: Cargo to be discharged was 8,000 cu.m. of Jet A1 for the R.A.F. at the Sovereign Base Area at Akrotiri.

Cargo was discharged through 2×8 in. sealines at 800 – 850 cu.m./hr. at 100 p.s.i.

6 – 8 R.A.F. personnel assist with sampling and hose connection. Three mooring boatmen remain on board to assist with vessel's requirements.

DEPARTURE: Vessel left berth without Pilot and tug.

Mooring launch in attendance to let go lines.

A Customs officer from Akrotiri comes on board to check seal on bonded store.

AUTHORITY: The Commander, R.A.F. Akrotiri, Sovereign Base Areas (Cyprus), Akrotiri, Cyprus.

DHEKELIA "B": 34.58 N. 33.45 E. (See Plan)

Sovereign Base Area
DOCUMENTS:
3 Crew Lists.
4 Passenger Lists.
1 Arrival Declaration.
1 Crew Declaration.
1 Store List (for cigarettes, spirits, etc.).
2 Manifests (Customs forms).

PILOTAGE: Compulsory for berthing. The tanker berth is situated in open roadstead. Pilot available through Harbour Master at Larnaca (5 miles).
RESTRICTIONS: Vessels may dock in daylight only.
MAX. SIZE: Tankers up to 735 ft. length with max. draft 41 ft.
HEALTH: Pratique granted by Health Authorities after boarding on arrival. No Pratique necessary when vessel arrives from another port in Cyprus.
RADIO: Walkie-talkie.
TUGS: Available and necessary for docking. Not required for undocking.
BERTHING: Three conventional buoy moorings for tanker discharging fuel oil to Dhekelia "B" Power Station. Connection made amidships on the port side. No slop facilities available. Terminal crew connect and disconnect hoses. Ship's gangway required. Diameter of line 12 in. Distance to tanks 2,136 ft. Max. pressure 140-145 p.s.i. Depth of water 15.85 m.
MEDICAL: Necessary for Agent to receive advance notice of medical attention required. Hospital facilities available.
DENSITY: 1025.
FRESH WATER: Not available.
FUEL: Not available.
REPAIRS: Light machine shop.
CUSTOMS ALLOWANCES: See "Limassol".
TIME: GMT plus 2 hours. GMT plus 3 hours from last Sunday in March until last Sunday in September.
IDENTIFICATION CARDS: When on shore leave, Seamen's Books required.
AUTHORITY: Electricity Authority of Cyprus, 15 Photis Pittas Street, P.O. Box 4506, Nicosia. *Tel:* (02) 462001. *Telex:* 2432 Grid Cy. *Cables:* Grid, Nicosia. *FAX:* (02) 457658. *Contact:* The General Manager.

FAMAGUSTA: 35.07 N. 33.57 E. (See Plan)

DOCUMENTS:
1 Arrival Declaration Form.
1 Maritime Declaration of Health.
4 Crew Lists.
4 Passenger Lists.
1 List of Ship's Stores.
1 Personal Declaration of Crew (wines, spirits, tobacco, cigarettes, cigars, jewellery, cameras, watches, arms and ammunition, etc.)
1 Appointment of Agent Form.
1 Cargo Manifest (If not forwarded by airmail).
1 Dangerous Cargo List.

PILOTAGE: Masters to cable ETA 24 hours before arrival to Agents so as to enable them to arrange berthing and pilotage. Pilotage is compulsory for ships in excess of 300 g.r.t.

In normal weather conditions Pilot boards vessel at Turning Buoy or at anchorage. In rough weather conditions, Pilot may advise Master to proceed to entrance of Outer Harbour, where Pilot will board the vessel. Communications between Pilot Stations and vessels approaching port and/or anchored at roadstead by VHF Channel 16.

Pilot Boat: Open motor launches, light grey colour, flying Pilot's flag, light and sound signals for Pilot.

Requirements: International signals apply.

ANCHORAGES: Vessels not berthing on arrival, to anchor at roadstead; East of flashing buoy (Lat. 35° 08′ 55″ N., Long. 33° 56′ 06″ E.) which marks the entrance to the channel.

Exposed to: N.E., E. and S.E. winds. In case of very bad weather, a safe anchorage to be sought further North, near Boghaz area.

Small vessels may anchor within the breakwater in depth of 5.5 m. to 7.3 m.

RESTRICTIONS: Passenger vessels (Vessels built to carry more than 12 passengers) allowed to enter port up to 2300 hrs., provided such vessels will be at Turning Buoy by that time and also if berth space is available.

Cargo vessels allowed to berth until sunset provided berth space is available.

No tide restrictions, but for vessels entering Inner Basin max. draft 22 ft. and for Outer Basin max. draft 30 ft.

MAX. SIZE:

Inner Harbour:	Max. permissible draft 6.7 m. (22 ft.) Max. permissible LOA 131 m. (430 ft.)
Outer Harbour:	Max. permissible draft 9.15 m. (30 ft.) Max. permissible LOA 220 m. (722 ft.)

Height of quay above sea level is 1.8 m.

The approach channel to the Outer Harbour is 10.30 m. deep and mean width of entrance 183 m. Range of tide: 0.45 m.

HEALTH: Pratique is required only at first port of call in Northern Cyprus. Pratique is granted either before or after berthing as appropriate.
RADIO/VHF: "Northern Cyprus Radio" R/T 2182, VHF Channel 16. Famagusta Pilots equipped with VHF radio-telephone operating on Channel 16 and 14 during office hours.
TUGS: 3 tugs, 150 h.p., 650 h.p. and 1,300 h.p. available. Ship's lines are used. Tugs join vessel at entrance of Outer Basin and ship's lines are used. Use of tugs is at the discretion of Pilot. No charges made for the use of first tug. If more than one tug is required they may be hired on hourly basis.
BERTHING: According to rotation of ships with exception of passenger and citrus ships. Vessels may berth alongside between 0600 hrs. and sunset, unberthing of ships between 0600 hrs. and midnight including weekends and official holidays.

Inner Harbour Quay: Length: 540 m.
Outer Harbour Quay: Length: 655 m.

Ro-Ro vessels may berth either bows on or stern to the quay.

CRANES: A floating crane lifting 60 tons at 20 m. 1 Tower crane 36 tons. 21 mobile cranes of different lifting capacities.
BULK CARGO FACILITIES: Vessels up to 3,000 d.w.t. discharged with mobile grab cranes.

Average discharge rate for ore and bulk cargoes is 450 tonnes per day.

Two pneumatic conveyors of 60 t.p.h. capacity also available.

STEVEDORES: Gangs to be ordered by 1500 hrs. previous day. For Saturday and Sunday work, gangs to be ordered by 1500 hrs. Friday. It is also possible to apply for gangs during the weekdays a.m. and/or p.m. subject to gangs available.

Average rate of discharge: General cargo, 10 – 15 tons, bagged cargo, 15 – 20 t.p.h. per gang.

Working hours weekdays 0800 – 1200 hrs., 1300 – 1700 hrs., overtime work until 2300 hrs. is possible, but with extra charge.

MEDICAL: Advisable for Masters to include in ETA message to Agents if any medical attention required; hospital and private clinic facilities available. Inoculations or vaccinations according to prevailing circumstances.
DENSITY/TIDE: Mediterranean salt sea water. Difference of 1 ft. – 2 ft. between low and high water.
FRESH WATER: Water hydrants installed alongside quay, both at Inner and Outer Basins and delivery through hoses; rate of delivery 10 tonnes – 15 tonnes per hydrant per hour.

Note: Certain limitations to quantities deliverable can be possible during Summer months (June-September) owing to general shortage of water.

FUEL: No bunkering facilities alongside quay. Limited fuel deliveries to vessels alongside quay can be made by lorry tankers of 8 – 10 tons each.
REPAIRS: Repairs possible at the shipyard. Divers available.
DRY DOCKS: No dry docks. 2 slipways operate at South end of port, and can take vessels up to 1,000 tons light displacement and LOA up to 80 m.

SURVEYORS:
(1) Cargo surveyors available.
(2) Refet L. Egemen & Co., Nicosia. Sub-Agent of Catoni Agents, Mersin, Turkey, who are the representative of Lloyd's in Mersin, Turkey (for insurance purposes but not for classification).

GANGWAY/DECK WATCHMEN: Not obligatory, but may be used if Master requires.

OPENING/CLOSING HATCHES: Carried out by ship's crew; stevedores on board are sometimes willing to assist but they are not obliged to do so.

CUSTOMS ALLOWANCES: 200 cigarettes or 250 grams tobacco, and 0.75 cl. spirits, 0.75 cl. wine per man per week.

For reasons of administrative convenience, issues of high duty goods for use by crew on board is being made every week.

The Master, Chief Officer and the Chief Steward of ocean going vessels may be granted more quantities of the above high duty goods as may be considered reasonable by Customs Authorities, on request.

The above allowances are in force in all Northern Cyprus ports.

CARGO GEAR: Mostly supplied by shore stevedores or other contractors against payment. Any gear supplied by the vessel should be certified to the effect that it is tested and found to be suitable for the purpose used.

AIRPORT: Ercan Airport, 30 miles from Famagusta. Connections to U.K. and Middle East countries via Turkish airports.

TIME: GMT plus 2 hours.

HOLIDAYS: Recurrent official port and Customs holidays:

First weekday of January, 23rd April, 1st May, 19th May, 20th July, 1st August, 30th August, 29th October, 15th November, Ramazan Bairam (1st, 2nd and 3rd days), Kourban Bairam (1st, 2nd, 3rd and 4th days), Birthday of Prophet.

All ports closed for work with the exception of shipping traffic on New Year's Day and on 1st May.

POLICE/AMBULANCE/FIRE: Police Headquarters Tel: 036-65310, 036-65321. Ambulance Tel: 036-65328, 036-62876. Fire Brigade Tel: 036-65389.

EMERGENCY CO-ORDINATION CENTRE: Not specially available, but Famagusta Pilot Station Tel: 036-65388, 036-64790 and/or Port Headquarters Tel: 036-62626, 036-62627, 036-62951 may be of assistance.

TELEPHONES: Public telephone boxes available on the quayside.

SERVICES: Compass adjusting; radar repairs; scraping and painting ship's sides.

BANKS: Messrs., Midland Bank (Overseas Branch) Ltd., in the U.K. is the official correspondent of the following local Banks:

Name	*Address*	*Telex:*
Turkish Bank Ltd.	Famagusta	57138 Trba Tk 57103 Otaf Tk
Is Bank (A.S.)	Famagusta	57179 Isbm Tk
Credit Bank Ltd.	Famagusta	57246 Kklb Tk

STORING: See "Prelims".
1. Vessel can be stored by barge or truck.
2. No regulations concerning barge storing. Customs Stores Regulations applicable.
3. Trucks can proceed alongside at the berth from a close distance of 2 ft. from the edge of the quay walls.
4. Fork lift trucks can be used on the jetty to handle storing.
5. Customs storage charges in force.
6. Local Riggers can be employed to assist with storing.

SHORE LEAVE: All crew members allowed ashore after Free Pratique granted. Each crew member to carry Landing Card.

IDENTIFICATION CARDS: Passports and/or Seaman's Books are accepted by the Police and Immigration Authorities.

On ship's arrival, Passports and/or Seaman's Books are retained by the Immigration Authorities against the issue of Landing Cards which are used until the ship's departure when the passports and/or Seaman's Books are returned to the Master.

GARBAGE DISPOSAL: Plastic bags are supplied to all vessels on arrival and garbage is collected each day between 1200 hrs. and 1300 hrs..

Drums are also provided on the quayside. For large quantities a truck must be hired. Contact the Harbour Master, Tel: 65388/64790.

WASTE OIL DISPOSAL: Can be arranged by the agent.

SEAMAN'S CLUBS: None, but Harbour Master will assist where possible.

CURRENCY: Turkish Lira (TL).

REGULATIONS: Authority is required from Harbour Master: for immobilising engine for cleaning or repairs whilst vessel alongside quay; for lowering lifeboats; for using ship's radio; for sailing (Port and Customs Clearances are required).

Ships berth by rotation according to time of arrival. However, passenger and cruising vessels as well as ferryboats can berth (maximum 2 berths) on priority.

DELAYS: Delays in berthing are very seldom. Slight congestion of 1 or 2 days during citrus export season.

GENERAL: Flag of Northern Cyprus to be hoisted on mast from 0800 hrs. to Sunset.

Landing of dogs or other animals not allowed. Disposal of garbage and waste strictly prohibited both in port and territorial waters. Garbage and waste are collected by the municipality against a nominal fee, through Agents.

Charts: Relevant Admiralty Publications: B.A. Chart 847, 851, List of Lights Vol. E., Mediterranean Pilot Vol. V., Tide Tables Vol. I. (European Waters).

Free Port: Part of the Outer Harbour is being used as a Free Port, adjacent to which is the Industrial Free Zone with a maximum development area of 554,964 sq.m.

The Free Port and Zone is managed by the Free Port Manager who is responsible to the Board of Directors and function under the auspices of the Ministry of Trade and Industry.

Directorate: Tel: 392-36-66164, 392-36-64775. Telex: 57140 Mslb Tk.

AUTHORITY: Ministry of Communications & Works, Department of Ports, Famagusta, Northern Cyprus.

Postal Address: The Director of the Department of Ports, Famagusta (Gazi Magusa) via Mersin 10, Turkey. *Tel:* 392-36-62626, 392-36-62627, 392-36-62951. *FAX:* 392-36-66465. *Contact:* Davut Izkan, Director of Ports.

Harbour Master's Office: *Tel:* 392-36-65388, 392-36-64790.

Also see "General".

GEMIKONAGI (Morphu Bay): 35.08 N. 32.50 E. (See Plan)

DOCUMENTS: See "Famagusta".

PILOTAGE: Government pilot available from Kyrenia Tourism Harbour.

ANCHORAGES: Anchorage point Lat. 35° 09.2' N., Long. 32° 49.8' E. Anchorage exposed to W. and N.W. winds.

RESTRICTIONS: Karavostassi Jetty established for loading minerals, discharging operations not available.

HEALTH: Pratique is required only at first port of call in Northern Cyprus. Pratique is granted either before or after berthing as appropriate.

RADIO/VHF: "Northern Cyprus Radio" R/T 2182 kHz. and VHF Channels 16, 26 and 27.

Kyrenia Tourism Harbour Pilots maintain VHF watch on Channel 16, during working hours.

BERTHING:

Karavostassi: One jetty berth with depth alongside 18 m. for loading minerals by conveyor belt. Average capacity 1,000 t.p.h. Vessels moor to buoys.

Xeros Pier: 132 m. long with depth of 4.3 m. at outer end. Pier only used by small coasters, weather permitting, as it is exposed to North winds. One crane of 5 tons capacity is available.

MEDICAL: Government hospital in Lefka area.

DENSITY: 1027.

FRESH WATER: Not available.

FUEL: Not available.

CUSTOMS ALLOWANCES: See "Famagusta".

REPAIRS: Minor repairs for deck and engine can be carried out at local workshop.

AIRPORT: 70 km. to Ercan Airport.

TIME: GMT plus 2 hours in Winter. GMT plus 3 hours in Summer.

SHORE LEAVE: All crew members allowed ashore after Free Pratique granted. Each crew member to carry a Landing Card.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

GENERAL: *Tides:* Max. tide 0.45 m.

Stores: Available.

AUTHORITY: Ministry of Communications & Works, Department of Ports, Famagusta.

Postal Address: The Director of the Department of Ports, Famagusta, 6 Magusa Trnc, via Mersin 10. *Tel:* 392-36-62626, 392-36-62627, 392-36-62951. *FAX:* 392-36-66465. *Contact:* Davut Izkan, Director of Ports.

Official at Gemikonagi: Mehmet Umur, Officer in Charge:Tel: 07717-340/334.

KALECIK (Gastria Bay): 35.19 N. 33.59 E. (See Plan)

DOCUMENTS: See "Famagusta".

PILOTAGE: Not compulsory. If required, supplied from Famagusta.

ANCHORAGES: Anywhere within the limits of Gastria Bay. Occasional storms mainly from North, N.E. and N.W. directions. No hazards or sandbars exist. Vessels can approach from any direction as there is no approach channel.

NAVIGATION AIDS:

Name: Cape Elia Lighthouse.
Place: 10 nautical miles N.E. of Famagusta.
Position: Lat. 35° 19.5' N., Long. 34° 02.8' E.
Characteristics of Light: Fl. 10 secs.
Range of Light: 15 nautical miles.
Period and Phase: Fl. 1 sec., ev. 9 secs.
Arc of Visibility: 360°.
Colour and Peculiarity of Lighthouse: Concrete tower with horizontal black and white stripes.
Height in metres of building from base to vane: 11 m.
Height in metres of centre of lantern above MHWS: 31 m.

RESTRICTIONS: None, but advance notice should be given by cable.

HEALTH: See "Famagusta".

RADIO/VHF: No radio or VHF facilities at this port. Ships calling at Kalecik should communicate with Northern Cyprus Radio or Famagusta Pilot Station.

TUGS: Not required. Private mooring boats available to assist in the mooring operations.

BERTHING: Concrete pier with a conveyor belt and crane operated by Boghaz Industry & Mining Co. Ltd. and solely used for exportation of cement, etc. Lat. 35° 19' N., Long. 34° 00.1' E.

Length of the pier 42 m. At a distance of 44 m. from the far end of the pier there is a dolphin used for mooring purposes. Ships of 100 m. LOA may have a safe berth alongside. Depth of the water alongside the pier is 6.0 m. Installation suitable for unloading and/or loading of bulk and bagged cargoes with a maximum hourly rate of 250 tons.

STEVEDORES: Privately arranged by the Shippers.

MEDICAL: See "Famagusta".

TANKERS: Tanker terminal with underwater pipelines extending 410 m. into the sea. Operated by Cyprus Turkish Petroleum Products Co. Ltd. Lat. 35° 19.1' N., Long. 33° 59.4' E.

Ships moored between two buoys which have a distance of 160 m. from one to the other, also using anchors. Max. depth 9.0 m.

DENSITY: 1028.

FRESH WATER: Not available.

FUEL: Not available.

CUSTOMS ALLOWANCES: See "Famagusta".

CARGO GEAR: Ship's gear.

REPAIRS: Minor deck and engine repairs may be carried out by local workshops.

DRY DOCKS: No dry docks.

AIRPORT: Ercan Airport 80 km. from port.

TIME: GMT plus 2 hours.

HOLIDAYS: See "Famagusta".

POLICE/AMBULANCE/FIRE: See "Famagusta".

TELEPHONES: Available at the nearby installations.

SERVICES: See "Famagusta".

SHORE LEAVE: All crew members allowed ashore after Free Pratique granted.

IDENTIFICATION CARDS: See "Famagusta."

GARBAGE DISPOSAL: Mooring boat can be used for garbage disposal.

WASTE OIL DISPOSAL: No facilities available.

SEAMAN'S CLUBS: None.

CURRENCY: Currency is Turkish Lira (TL).

REGULATIONS: Authority is required from the Harbour Master Famagusta for using ship's radio. For sailing, Port and Customs Clearances are required.

DELAYS: No delays.

GENERAL: Flag of Northern Cyprus to be hoisted on mast from 0800 hrs. to sunset.

AUTHORITY: Harbour Master and Senior Pilot – Famagusta.
Tel: 392-36-65388, 392-36-64790.

Also see "Famagusta".

KYRENIA: 35.20 N. 33.19 E. (See Plan)

LOCATION:
Kyrenia Tourism Harbour: 35° 20.5' N., 33° 19.8' E.
Kyrenia Yacht Harbour: 35° 20' N., 33° 19' E.

DOCUMENTS: See "Famagusta".

APPROACHES: Sea approach is unobstructed with deep water and Tourism Harbour entrance has a 180.0 m. width.

PILOTAGE: Pilotage is compulsory for vessels over 300 g.r.t. Harbour Pilot maintains VHF watch on Channel 16, during working hours.

Pilot Boat: Open motor launch, orange colour, flying Pilot's flag, light and sound signals for Pilot.

Requirements: International signals apply.

ANCHORAGE: 0.8 miles N.W. of Yacht Harbour Entrance light, in depths 22 m. to 24 m.

RESTRICTIONS/MAX. SIZE:

(a) Kyrenia Tourism Harbour: This harbour used only by passenger vessels (passenger ferries, hydrofoils, etc.).
Max. LOA: 110 m.
Max. draft: 7.0 m.

(b) Kyrenia Yacht Harbour: This harbour used only by pleasure craft and yachts.
Max. LOA: 30 m.
Max. draft: 2.6 m.

HEALTH: Pratique is required only at first port of call in Northern Cyprus. Pratique is granted either before or after berthing as appropriate.

RADIO/VHF: Northern Cyprus Radio. Radio Telephone 2182 kHz. VHF Channels 16, 26 and 27.

TUGS: 1 × 150 h.p. and 1 × 225 h.p.

BERTHING: Berthing and unberthing of vessels carried out between 0600 hrs. and midnight, including weekends and official holidays.

Kyrenia Tourism Harbour: 6 quays with depths of 3.0 m. – 8.0 m. and various quay levels above LWOST from 1.25 m. – 1.75 m.

Kyrenia Yacht Harbour: Depth in basin 3.2 m. Depth alongside 3.0 m.

MEDICAL: State hospitals and private clinics available.

DENSITY: Mediterranean salt sea water (1027).

FRESH WATER: Available. U.S.$ 5.0 per tonne.

FUEL: No bunkering facilities alongside quay. Limited fuel deliveries to vessels alongside quay can be made by lorry tankers of 8–10 tons each.

REPAIRS: Minor repairs for deck and engine can be carried out at local workshop.

CUSTOM ALLOWANCES: Same as Famagusta.

AIRPORT: 40 km. to Ercan Airport from Kyrenia.

TIME: GMT plus 2 hours in Winter. GMT plus 3 hours in Summer (May–September).

HOLIDAYS: Same as Famagusta.

POLICE/AMBULANCE/FIRE:

Police Tel.:	8152014 – 8152125.
Ambulance Tel.:	8152266 – 8152254.
Fire Tel.:	81199.

BANKS:

Name	*Telex*	*FAX*
Turkish Bank Ltd., Kyrenia.	57560	8151363
Is Bank A.S., Kyrenia.	57615	8151090
Credit Bank Ltd., Kyrenia.	57334	8151192

Midland Bank (Overseas Branch) Ltd. in the U.K. is the official correspondent of the above banks.

SHORE LEAVE: All crew members allowed ashore after Free Pratique granted. Each crew member has to carry a Landing Card.

GARBAGE DISPOSAL: Drums are provided on the quayside. Contact Kyrenia Tourism Harbour, Tel: 8154987/8, or Kyrenia Yacht Harbour, Tel: 8152145.

WASTE OIL DISPOSAL: Can be arranged by the ships agent.

SEAMAN'S CLUBS: None.

CURRENCY: Turkish Lira (TL).

REGULATIONS: Same as Famagusta.

GENERAL: Flag of Northern Cyprus to be hoisted on mast from 0800 hrs. to sunset.

Landing of dogs or other animals not allowed. Disposal of garbage and waste strictly prohibited both in port and territorial waters. Garbage and waste are collected by the municipality against a nominal fee, through Agents.

Relevant Admiralty publications: B.A. Charts 2632, 237, 2074, 2606. Mediterranean Pilot: Vol. V. List of Lights: Vol. E.

Weather: Harbour exposed to N., N.E., N.W. and E. occasional storms.

Tide: Max. tide 0.45 m.

Provisions: Plentiful.

AUTHORITY: Harbour Master and Pilot: Mr Davut Izkan. Tel: 8154987 – 8154988.

Also see "Famagusta".

LARNACA: 34.55 N. 33.39 E. (See Plan)

PORT LIMITS: The port limits are: That part of the coastline and the territorial waters of Cyprus contained within a line drawn 089° to the high seas from Livadhia Church Belfry and a line drawn 089° from Mosque (Hala Sultan Tekke) on Admiralty Chart No. 851 of 8th August, 1941.

DOCUMENTS:
1 Arrival Declaration.
5 Crew Lists.
5 Passenger Lists.
5 Transit Passenger Lists for passenger ships only.
1 Crew Declaration for dutiable goods.
2 Ship's Stores List Declarations.
2 Firearms Declarations.
1 Maritime Declaration of Health.
2 Entry Outward and Clearances.
1 Port Marine Police Form.
1 Mail List.
1 Form of Appointment of Agent.
1 Dangerous Cargo List (IMO).

PILOTAGE: Ships are not allowed to enter the port or berth at the mooring buoys outside the breakwater port without Pilot, unless permission is granted by the Port Authority. Pilot boards vessel at roadstead. Master must give 24 hours notice of ETA to vessel's Agents to enable them inform the Port Manager in time. Pilot boats are off-white in colour with words "Larnaca Pilots" written on the sides in blue letters. Pilot may be contacted on VHF Channels 16/14 during office hours 0730 – 1430 hrs. and Channel 14 at any other time during port operations. Pilot's telegraphic address is "Port Manager, Larnaca Cyprus". Tel: 04-635405.

ANCHORAGES: Open roadstead.

Prohibited Anchorage:

Positions of Prohibited Anchorage:
1. Lat. 34° 54' 39" N., Long. 33° 38' E.
2. Lat. 34° 54' 16.8" N., Long. 33° 41' E.
3. Lat. 34° 52' 48" N., Long. 33° 38' E.
4. Lat. 34° 52' 48" N., Long. 33° 41' E.

Positions of Prohibited Anchorage obstruction of the Port Entrance:
1. Lat. 34° 55' 21" N., Long. 33° 37' 49" E.
2. Lat. 34° 55' 21" N., Long. 33° 40' 18" E.
3. Lat. 34° 55' 55" N., Long. 33° 39' 03" E.
4. Lat. 34° 55' 55" N., Long. 33° 40' 37" E.

RESTRICTIONS: See "Max. Size" and "Berthing".

Rise of tide up to 0.6 m.

MAX. SIZE: For berthing in the port, vessels must not exceed LOA 272 m. However, vessels in excess may receive berthing permission if vessel's manoeuvrability and prevailing weather conditions permit.

The port is dredged to 12.0 m., and the approach channel is dredged to 13.0 m. Max. draft allowed 11.4 m. The height of the quay above sea level is 2.30 m.

Tankers discharge outside port at mooring buoys. Draft up to 41 ft. Max. LOA 730 ft.

HEALTH: Pratique is required at Cyprus first port of call only. Pratique is granted either before or after berthing as appropriate.

RADIO: Cables sent through "Cyprus Radio", call sign: 5BA.

VHF: Port Manager Larnaca and Pilot service on VHF Channels 16 and 14.

RADAR: No port radar service.

TUGS: Port Authority tugs join vessels outside breakwater using ship's lines. 4 tugs available.

BERTHING: Vessels may berth or unberth between 0600 hrs. and midnight. Cargo vessels are allowed to berth during night-time provided berth space is available and vessel will immediately operate with at least 1 gang. Mother vessels may unberth later.

Quay length: (a) Main quay 666 m. and (b) Floating pontoon quay 200 m.

Ro-Ro ramp available in Northwestern basin of the port.

Warehouse Space: 18,000 sq.m.

Container and General Cargo paved Stacking Areas: 150,000 sq.m.

Equipment: 1×45 tonne heavy duty crane on rails with articulated jib, especially designed and equipped to handle containers. Two container gantry cranes in operation. 1×35 ton level luffing crane. 1×36 ton heavy harbour mobile crane for containers. 8×5 – 16 ton mobile cranes. 4×15 – 40 ton fork-lift trucks for container handling. 17×2 – 8 ton forklift trucks. 36×10 – 40 ton trailers and 5 tractors.
BRIDGES: None.
STEVEDORES: 24 hours notice of ETA to Agent is required to enable him arrange gangs.
MEDICAL: It is necessary for Agents to receive advance notice of at least 2 – 3 hours before vessel's arrival. Hospital facilities constantly available. Inoculations or vaccinations are required according to prevailing circumstances.
TANKERS: Diameter of discharge lines up to 12 in. Max. draft 32 ft. Discharging takes place at mooring buoys outside port. Position of buoys Lat. 34° 54.75' N., Long. 33° 39' E. No slop discharge facilities.
Buoy berths outside port:
Oil Tankers Berths:
Cyprus Petroleum Refinery: Berth: LOA 214 m. Max. draft 11.6 m. Depth of water 13.7 m.
Petrolina: Stern discharge facilities only. LOA 214 m. Max. draft 11 m. Depth of water 13 m. Slop tank 2,000 tonnes.
Gas Tankers Berths:
Mobil: Pipe diameters: 3 in. for liquid, 2 in. for vapour. Depth of water 13 m. LOA 110 m.
Synergas: Pipe diameters: 4 in. for liquid, 2 in. for vapour. LOA 110 m. Depth of water 9 m. Draft 8.5 m.
Central Gas: Pipe diameters: 3 in. for liquid, 2 in. for vapour. LOA 110 m. Depth of water 6.5 m. Draft 6 m.
DENSITY: 1025.
FRESH WATER: Facilities available on quay. Delivery by hoses at about 50 t.p.h.
FUEL: All types provided by special bunkering vessels at berths and roadstead and by tanker lorries at the quay.
FIRE PRECAUTIONS: No tankers are allowed in the port. Vessels and operators must comply with internationally applicable regulations concerning explosives and dangerous goods.
CONSULS: Italy, Sweden, Denmark, Portugal, Finland and many other countries.
REPAIRS: Minor repairs and overhauls may be carried out.
DRY DOCKS: Not available.
SURVEYORS: Lloyd's, Bureau Veritas, Registro Italiano Navale, Germanischer Lloyd.
GANGWAY/DECK WATCHMEN: Not necessary but available.
HATCHES: Opened and closed by crew.
CUSTOMS ALLOWANCES: 50 grams tobacco or 40 cigarettes, and 0.25 litres spirits, 0.25 litres wines, per man per day.

For reasons of administrative convenience, issues of high duty goods for use by Crew on board will be made every 3 days, beginning with the first day of the ship's arrival in Cyprus waters. For each member of the Crew (other than the Master, the Chief Officer and the Chief Steward) each issue will consist of, 120 cigarettes or an equivalent quantity of other tobacco goods. 1 bottle of spirits, and 3 bottles of wine.

Each issue for the Master, the Chief Officer and the Chief Steward of ocean-going vessels will consist of: 200 cigarettes, 2 bottles of spirits and reasonable quantity of wine they may request.

Concessions to Crew landing from ship. On coming ashore, for a short period, 50 grams of tobacco, or 40 cigarettes per day or part thereof.

The above allowances are in force for all Cyprus ports.
CARGO GEAR: Load or discharge may be effected either by ship's or shore gear. Heavy lifts up to 90 tons.
REPATRIATION: Facilities are available.
AIRPORT: Larnaca International Airport 3 miles from Larnaca Port. Daily flights to Europe and Middle East.
TIME: GMT plus 2 hours. Summertime – GMT plus 3 hours.
HOLIDAYS: 1996: 1st January; 6th January; 26th February; 25th March; 1st April; 12th – 15th April; 1st May; 3rd June; 15th August; 1st October; 28th October; 25th December; 26th December.

Port workers will abstain from work on 1st January, 14th April and 25th December, but they may normally work on overtime basis during the rest of the holidays.
POLICE/AMBULANCE/FIRE: Dial 199.
EMERGENCY CO-ORDINATION CENTRE: Port Manager Tel: 635563. Res. Tel: 657043/638779. Marine Police Tel: 630200.
TELEPHONES: Line available for placing telephone on board.
BANKS: Bank of Cyprus, 71 Archbishop Makarios III Avenue, Port Area, Larnaca. Tel: 04-656182. Fax: 04-620769.

Popular Bank of Cyprus, 69 Archbishop Makarios III Avenue, Port Area, Larnaca. Tel: 04-655345.

Hellenic Bank, Archbishop Makarios III Avenue, Port Area, Filanda Court, Larnaca. Tel: 04-634970.
STORING: Trucks come alongside berth. Forklifts available on the quay. Port of Larnaca is a free trade zone. Local riggers can be employed.
SERVICES: Compass adjusting; Radar; Radio telephones; Gyro compass repairs; hull scraping and engine repairs.
SHORE LEAVE: Crew members are allowed ashore.
IDENTIFICATION CARDS: Shore leave passes are issued. Seaman's Book or Passport required whilst ashore.
GARBAGE DISPOSAL; A daily collection of garbage is available between 0800 hrs. and 1300 hrs.. Plastic bags are supplied by the Port Authority. Charges:

Conventional Vessel	CY£12.50
Container Vessel	CY£11.25
Passenger Vessel	CY£37.50
Tanker/Bulk Carrier	CY£10.00

WASTE OIL DISPOSAL: Not available.
SEAMAN'S CLUBS: SEK and PEO Seaman's Clubs. Facilities include library, telephone, services and restaurant. Contact SEK, Tel: 351766, and PEO, Tel: 371532.
CURRENCY: Cypriot Pound (CY£).
REGULATIONS: Port Manager's permission is required for: immobilising engine, cleaning or repairs whilst vessel alongside quay, lowering lifeboats and use of ship's radio. Port and Customs clearance required before departure. Cyprus flag to be hoisted on mast from 0800 hrs. to sunset. Landing of dogs or other animals not allowed; also discharging of fruits, vegetables and eggs unless authorised by Produce Inspection Office. Disposal of garbage and waste strictly prohibited both in port and Cyprus waters.
DELAYS: According to prevailing circumstances but normally no delays.
GENERAL: Weather conditions permit entrance and working of ships all the year round.
AUTHORITY: Cyprus Ports Authority, 23 Crete Street, P.O. Box 2007, Nicosia, Cyprus. *Tel:* (02) 450100. *Telex:* 2833 CYPA CY. *FAX:* (02) 365420. *Cables:* Cyports. *Contact:* The General Manager.

Larnaca Port, P.O.Box 290, Larnaca, Cyprus. *Tel:* 04-635405. *Telex:* 2833 Cypa. *FAX:* 04-635630. *Cables:* Port Manager, Larnaca. *Contact:* Port Manager.

AGENT: Gulf Agency Co. (Cyprus) Ltd., P.O.Box 546, Larnaca, Cyprus. Tel: (357-4) 631005/6. Telex: 3967 Gaship Cy. Cables: Gacship, Larnaca. Fax: (357-4) 631007.

LATCHI: 35.03 N. 32.27 E.

DOCUMENTS:
- 1 Arrival Declaration.
- 5 Crew Lists.
- 5 Passenger Lists.
- 5 Transit Passenger Lists.
- 2 Firearms Declarations.
- 1 Dangerous Cargo List (IMO).
- 2 Ship's Stores List Declarations.
- 1 Declaration signed by each member of crew stating dutiable goods in their possession.
- 1 Form of Appointment of Agent.
- 1 Maritime Declaration of Health.
- 2 Entry Outward and Clearances.
- 1 Port Marine Police Form.
- 1 Mail List.

ANCHORAGE: 0.5 miles North of Mavroli Pier, depth 10 fathoms, or for pleasure craft 0.5 miles North of Latchi Port (fishing sheds).
MAX. SIZE: No restrictions on size.
HEALTH: All necessary action to obtain Pratique made by Agent in the event of any suspected disease on board, necessary action and precautions taken by Health Authorities.
RADIO: Cyprus Radio – call sign 5BA on 500 or radio telephone 2182.
TUGS: None available.
BERTHING: Mavroli Pier in Chrysochou Bay, in position 35° 03' 15" N., 32° 27' 10" E., bearing 072° approximately 3.2 miles from Latchi. Necessary to have Cyprus flag, and to have gangway and not a rope ladder for Authorities and stevedores to board.
STEVEDORES: ETA advice required in order to arrange gangs at least 24 hours prior to arrival. Loading rate 2,000 tons per day. Loading from 6 barges, average capacity 45 tons each.
MEDICAL: Agent to receive 24 hours notice. Hospital facilities available at Polis Chrysochou (4 km.) from Latchi and at Ktima (40 km.), 38 km. from Terminal at Limni. Each member of crew to possess valid vaccination certificate.
DENSITY: 1025.
FRESH WATER: Not available.
FUEL: Not available.
CONSULS: None.
REPAIRS: No repairs can be carried out.
GANGWAY/DECK WATCHMEN: Unnecessary.
OPENING/CLOSING HATCHES: By the crew.
CUSTOMS ALLOWANCES: See "Limassol".
REPATRIATION: Can be arranged through Larnaca International Airport or Paphos Airport.
AIRPORT: Larnaca Airport 112 km. away, served by regular airlines. Paphos Airport (50 km.).
TIME: GMT plus 2 hours. GMT plus 3 hours in Summer.
HOLIDAYS: 1996: 1st January; 6th January; 26th February; 25th March, 1st April; 12th – 15th April, 1st May; 3rd June; 15th August; 1st October; 28th October; 25th December, 26th December.

Port workers will abstain from work on 1st January, 14th April and 25th December, but they may normally work on overtime basis during the rest of the holidays.
POLICE/AMBULANCE/FIRE: Such services arranged through Agent.
TELEPHONES: No arrangements exist for placing on board.
SHORE LEAVE: Landing permits obtainable from local Police Authorities by lodging passports or Seamen's Books.
IDENTIFICATION CARDS: Required.
AUTHORITY: Cyprus Ports Authority, P.O. Box 2007, Nicosia, Cyprus. *Tel:* (02) 450100. *Telex:* 2833 CYPA CY. *FAX:* (02) 365420. *Contact:* The General Manager.

LIMASSOL: 34.39 N. 33.01 E. (See Plan)

DOCUMENTS:
1 Arrival Declaration.
5 Crew Lists.
5 Passenger Lists.
5 Transit Passenger Lists.
2 Firearms Declarations.
1 Dangerous Cargo List (IMO).
2 Ship's Stores List Declarations.
1 Declaration signed by each member of crew stating dutiable goods in their possession.
1 Form of Appointment of Agent.
1 Maritime Declaration of Health.
2 Entry Outward and Clearances.
1 Port Marine Police Form.
1 Mail List.

Also see "Radio Officer's Report" dated September 1990.

PILOTAGE: Ships are not allowed to enter the port or to berth at the mooring buoys outside the breakwater port without Pilot, unless permission is granted by the Port Authority. Pilot boards vessel at roadstead. Master must give 24 hour's notice of ETA to vessel's Agents to enable them inform the Port Manager in time. Pilot's Telegraphic Address is Port Manager, Limassol, Cyprus. Tel: 365246. Fax: 5-365597.

ANCHORAGE: No specific boundary but ships usually anchor about 0.5 mile S.E. of lighter basin entrance but not eastwards from basin entrance lights, bearing 315°T (See "Plan"), where depth is 8 fathoms or S.S.E. of the entrance to the new breakwater port.

RESTRICTIONS: See "Max. Size" and "Berthing". Rise of tide up to 0.6 m.

MAX. SIZE: *New Breakwater Port:* Depth alongside 11 m. – 14 m. Max. draft 10.5 m. – 13.5 m. No LOA limit on ships entering and berthing. The height of quay above sea level is 2.30 m.

HEALTH: Pratique is required at first Cyprus port of call only. Pratique is granted either before or after berthing as appropriate.

RADIO: Cables sent through "Cyprus Radio", call sign: 5BA.

VHF: Port Manager and Pilots equipped with VHF radiotelephone operating on Channel 10 during office hours only.

RADAR: No port radar service.

TUGS: Port Authority tugs join vessels outside breakwater using ships' lines. 4 tugs available with bollard pull up to 35 tons.

BERTHING: Vessels may berth inside port between 0600 hrs. and sunset, but may unberth and sail until midnight. Cargo vessels are allowed to berth during night-time provided berth space is available and vessels will immediately operate with at least 1 gang.

Quay Length: 1,980 m. Ro-Ro vessels can discharge/load on the quays, but a 50 m. long Ro-Ro berth also available.

Warehousing Space: 39,760 sq.m.

Paved Yard for Containers (full and empty): 342,500 sq.m.

Paved Stacking Area for General Cargo: 57,000 sq.m.

Grain Silo: Modern, (recently built) with a 30,000 tonnes storage capacity, connected with the quay via an overhead conveyor belt.

Equipment: 35 ton level luffing crane. 4×40 ton and 2×45 ton gantry cranes for container handling. 1×20 ton and 1×40 ton mobile cranes. There are also 7 private mobile cranes with capacity of 20 tons – 112 tons available on demand. Four 7 tons – 15 tons forklifts and 7×32 ton van carriers for container handling. Eighty-eight 3 ton – 60 ton forklifts for general cargo handling. One hundred and fourteen 3 ton – 25 ton trailers, 15 tractors and other auxiliary equipment.

STEVEDORES: 24 hours notice of ETA to Agent is required to enable him arrange gangs.

MEDICAL: It is necessary for Agent to receive advance notice of at least 2–3 hours before vessel's arrival. Hospital facilities constantly available. Inoculations or vaccinations are required according to prevailing circumstances.

TANKERS: Not allowed to berth in the port. No slop discharge facilities. 1026.

FRESH WATER: Facilities available on quay.

FUEL: All types provided by special bunkering vessels at berths and roadstead and by tanker lorries at the quay.

FIRE PRECAUTIONS: No tankers are allowed in the port. Vessels and operations must comply with internationally applicable regulations concerning explosives and dangerous goods.

CONSULS: Belgium, Colombia, France, Greece, Italy, Malta, Mexico, Norway, Netherlands, Panama and Sierra Leone.

REPAIRS: A floating dock 63 m. long and 18.3 m. wide capable of lifting a 1,360 ton ship up to 75 m. LOA.

SURVEYORS: Lloyd's, Bureau Veritas, Registro Italiano Navale, Germanischer Lloyd.

GANGWAY/DECK WATCHMEN: Not necessary.

OPENING/CLOSING HATCHES: By crew or stevedores.

CUSTOMS ALLOWANCES: 50 grams tobacco or 40 cigarettes, and 0.25 litres spirits, 0.25 litres wines, per man per day.

For reasons of administrative convenience, issues of high duty goods for use by crew on board will be made every 3 days, beginning with the first day of the ship's arrival in Cyprus waters. For each member of the crew (other than the Master, the chief officer and the chief steward) each issue will consist of, 120 cigarettes or an equivalent quantity of other tobacco goods, 1 bottle of spirits and 3 bottles of wine. Each issue for the Master, the chief officer and the chief steward of ocean-going vessels will consist of: 200 cigarettes, 2 bottles of spirits and reasonable quantity of wine they may request. Concessions to crew landing from ship. On coming ashore, for a short period, 50 grams of tobacco, or 40 cigarettes per day or part thereof.

CARGO GEAR: Load or discharge may be effected either by ship or shore gear.

REPATRIATION: Facilities available for effecting crew changes and arranging any necessary repatriations. Usually arranged with Agent.

AIRPORT: Larnaca International Airport served by regular lines, situated 43 miles from Limassol.

TIME: GMT plus 2 hours. Summertime GMT plus 3 hours.

HOLIDAYS: 1996: 1st January; 6th January; 26th February; 25th March; 1st April; 12th – 15th April; 1st May; 3rd June; 15th August; 1st October; 28th October; 25th December; 26th December.

Port workers will abstain from work on 1st January, 14th April and 25th December, but they may normally work on overtime basis during the rest of the holidays.

POLICE/AMBULANCE/FIRE: Tel: Police 330134/330411; Ambulance 330333, Fire Brigade 330166 or 199. Emergency Dial 199.

TELEPHONES: Available on request, for placing on board.

Bank of Cyprus, Franklin Roosevelt and Omonia Avenue, Limassol. Tel: 05-352040. Fax: 05-352148.

Popular Bank of Cyprus, Franklin Roosevelt and Omonia Avenue, Limassol. Tel: 05-369050. Fax: 05-376717.

Hellenic Bank, Franklin Roosevelt, Limassol. Tel: 05-350244.

Barclays Bank Plc., 47 Omonia Avenue. Tel: 05-341777. Fax: 05-341965. Telex: 4821 Baromo Cy.

SERVICES: Compass adjusting, servicing of radar, R/T, echo sounders.

SHIP SUPPLY SERVICES:
1. A. Lamaris & Co.Ltd., P.O.Box 37, Limassol. Tel: 05-362625. Fax: 05-359857. Telex: 3319 Lamaris Cy. VHF: Channel 6.
2. Messrs. Thesseas Savva, 118 Franklin Roosevelt Avenue, P.O.Box 114, Limassol.
3. Brasal Off-Shore Services Limited, P.O.Box 1518, Limassol. Tel: 373086. VHF: Channels 74 or 86.
4. Vasos Aivaliotis Limited, 4 Ermou Street, P.O.Box 110, Limassol.
5. Mercury Divers Company Limited, P.O.Box 114, Limassol.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Shore leave passes only needed when staying overnight, otherwise Seaman's Book or Passport required whilst ashore.

A collection service is available by the Cyprus Ports Authority at New Limassol Port. Tel: 5-365246. Fax: 5-365597. Skips are provided alongside on request. Collection is carried out daily, usually during working hours and charges vary according to ships' type.

Conventional Vessel	C £ 12.50
Container Vessel	C £ 11.25
Passenger Vessel	C £ 37.50
Tanker/Bulk Carrier	C £ 10.00

A collection service is available by a private contractor (Mr. Andreas Tsoulloftas. Tel: 5-335421/382594. Fax: 5-337647) by tanker trucks of capacity 12 cu.m. and 25 cu.m. and charges are accordingly C £ 50 and C £ 100 per visit. No restriction on shore capacity, as entire quantity is received and consumed by a nearby cement factory.

SEK - Tel: 5-342772 and PEO - Tel: 5-377228. Both are at the old port. Facilities include restaurant, library and telephone service.

"Flying Angel", Missions to Seamen, located within port limits. Tel: 05-365246, 04-651327, 05-747211.

Several duty free shops are located in the New Port Passenger Terminal and a great variety of items can be purchased either in most foreign or local currency.

International telephone service for seafarers is available through public telephone booths by automatic connection, inside and outside the terminal, either using local currency coins or telephone cards purchased locally.

Cyprus Pound (C £).

REGULATIONS: Port Manager's permission is required for: immobilising engine, cleaning or repairs whilst vessel alongside quay, lowering lifeboats and use of ship's radio. Port and Customs clearance required before departure. Cyprus flag to be hoisted on mast from 0800 hrs. to sunset. Landing of dogs or other animals not allowed; also discharging of fruits, vegetables and eggs unless authorised by Produce Inspection Office. Disposal of garbage and waste strictly prohibited both in port and Cyprus waters.

DELAYS: According to prevailing circumstances but normally no delays.

GENERAL: Weather conditions permit entrance and working of ships all the year round.

DEVELOPMENTS: Grain silo extension in progress to double storage capacity to 70,000 tons by 1997/98. West Basin Container Terminal to be further developed to reach 2,000 m. of quay space by the year 2010.

RADIO OFFICER'S REPORT: September 1990 (Updated 1992).

Documents:

Customs:
3 copies Entry Outwards and Clearance for Vessels (only fill in upper half).
3 copies Ships Stores Declaration.
1 copy Crew Personal Declaration ("Magazines" should be placed under seal).

Quarantine:
1 copy Maritime Declaration of Health.

Port Authority:
1 copy Arrival Declaration.
1 copy Crew List.
1 copy Passenger List.
1 copy Dangerous Cargo List(IMO).

Agent:
1 copy Arrival Condition.
1 copy Crew List.
1 copy Mail List.
1 copy Port and Marine Police Form.

Immigration: Shore passes only needed when staying overnight, otherwise passport is sufficient.

Customs Allowances: 120 cigarettes or 150 gr. of tobacco, 1 bottle of spirits and 3 bottles of wine.

AUTHORITY: Cyprus Ports Authority, Headquarters, 23 Crete Street, P.O.Box 2007, Nicosia, Cyprus. *Tel:* (02) 450100. *Telex:* 2833 CYPA CY. *FAX:* (02) 365420. *Cables:* Cyports. *Contact:* The General Manager.
Limassol New Port, P.O.Box 3331, Limassol, Cyprus. *Tel:* 5-365246, 5-343355 (Limassol). *Cables:* Port Manager, Limassol. *FAX:* 5-365597. *Contact:* Petros Avgousti, Port Manager.

AGENT: Gulf Agency Co. (Cyprus) Ltd., P.O.Box 1141, Limassol, Cyprus. Tel: (357-5) 341950. Telex: 2817 and 2744 ("Gacship Cy"). Fax: (357-5) 372932. Cables: "Gacship", Limassol.

MONI: 34.42 N. 33.11 E. (See Plan)

DOCUMENTS:
3 Crew Lists.
4 Passenger Lists.
1 Arrival Declaration.
1 Crew Declaration.
1 Store List (for cigarettes, spirits, etc).
2 Manifests.(Custom forms).

PILOTAGE: Compulsory for berthing. The tanker berth is situated in open roadstead. Pilot available through Harbour Master at Limassol (8.5 miles).

RESTRICTIONS: Docking in daylight only. Sailing possible at any time.

MAX. SIZE: Tankers up to 750 ft. length with max. draft 40 ft.

HEALTH: Pratique granted by Health Authorities after boarding on arrival. No Pratique necessary when vessel arrives from another port in Cyprus.

RADIO: Communication by Walkie-talkie

TUGS: None available or required.

BERTHING: Electricity Authority of Cyprus. Three conventional buoy mooring for tanker discharging fuel oil to Moni Power Station. Depth of water 18.20 m. – 30.48 m.

MEDICAL: Necessary for agent to receive advance notice of medical attention required. Hospital facilities available.

TANKERS: Flange at end of flexible line is ASA 300 – 15 in. OD. (12×1 in. holes. 13 in. P.C.D.). Hose connection made on port side. No slop facilities available. Terminal crew connect and disconnect hoses. Ship's gangway required. Distance to shore tanks 3,950 ft. Max. pressure 135 p.s.i. Minimum receiving rate 500 tonnes per hour, 1500 sec. Redwood No. 1.

Loading signals – 1 blast, stop pumping. 2 blasts, start pumping.

DENSITY: 1025

FRESH WATER: Not available.

FUEL: Not available.

REPAIRS: Light machine shop.

CUSTOMS ALLOWANCES: See "Limassol".

TIME: GMT plus 2 hours. GMT plus 3 hours from last Sunday in March until last Sunday in September.

SHIP SUPPLY SERVICES:
1. Brasal Off-Shore Services Limited, P.O.Box 1518, Limassol.
2. Vasos Aivaliotis Limited, 4 Ermou Street, P.O.Box 110, Limassol.
3. Messrs. Thesseas Savva, 118 Franklin Roosvelt Avenue, P.O.Box 114, Limassol.
4. Mercury Divers Company Limited, P.O.Box 114, Limassol.
5. A.Y. Steel and Marine Construction Co. Ltd., P.O.Box 4035, Limassol.

IDENTIFICATION CARDS: When on shore leave, Seamen's Books required.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Cyprus Pound.

AUTHORITY: Electricity Authority of Cyprus (Headquarters), P.O.Box 4506, Nicosia, Cyprus. *Tel:* (02) 462001 (Nicosia). *Telex:* 2432 Grid Cy. *Cables:* Grid Nicosia. *FAX:* (02) 457658. *Contact:* The General Manager.
Moni Power Station, Electricity Authority of Cyprus, P.O.Box 471, Limassol, Cyprus. *Tel:* 05-322032. *FAX:* 05-310416. *Contact:* A. Philippou, Power Station Manager.
Cyprus Ports Authority, 23 Kritis Street, Nicosia, Cyprus. *Tel:* (02) 450100. *FAX:* (02) 365420.

VASSILIKO BAY: 34.43 N. 33.19 E.

LOCATION: 13.5 miles due East of Limassol and 1.5 miles West of Zyghi (Lat. 34° 42' 46" N., Long. 33° 18' 37" E.)

DOCUMENTS:
1 Arrival Declaration.
5 Crew Lists.
5 Passenger Lists.
5 Transit Passenger Lists.
2 Firearms Declarations.
1 Dangerous Cargo List (IMO).
2 Ship's Stores List Declarations.
1 Declaration signed by each member of crew stating dutiable goods in their possession.
1 Form of Appointment of Agent.
1 Maritime Declaration of Health.
2 Entry Outward and Clearances.
1 Port Marine Police Form.
1 Mail List.

PILOTAGE: Pilots available for berthing and shifting operations. Can be contacted on VHF Channel 16, working Channel 8. Owners or Master of vessel must give by cable/radio ("Helco Nicosia" or "Vascem Nicosia" 48) notice of vessel's ETA 24 hours in advance. Message of ETA must also include:
(a) Name/call sign of vessel.
(b) Nationality.
(c) Length, draft, d.w.t. and n.r.t.

MAX. SIZE: Vessel's LOA 175 m. (approx.); Breadth, no restriction; Draft 8.50 m.

HEALTH: For Pratique, vessel must cable name and nationality, last port of call, number of crew and passengers, and condition of health on board. For vessels calling first at another port in Cyprus, Pratique is automatic.

RADIO: "Cyprus Radio".

TUGS: Tugs available from Larnaca port. 12 hours' notice in advance is required.

BERTHING: Length of quay, 540 m. Depth at LW, 9 m.

LOAD/DISCHARGE: Can be effected by shore equipment and/or ship's own gear.

Bulk cargoes (i.e. Pyrites, Cement, Copper, Chrome, Ore, Gypsum Rock, Phosphate Rocks, Coal, Clinker, etc.), fuel oil and liquid chemical cargoes (i.e. Liquid Ammonia, Sulphuric Acid).

CRANES: 3 mobile cranes of 30 tonnes SWL capacity each are constantly available. Services of an 100 tonne mobile crane can be also secured on request.

SPECIALISED CARGO-HANDLING FACILITIES: Facilities for Roll-on/Roll-off traffic and for handling liquid chemicals are available.

TANKERS: No special facilities.

DENSITY: 1027.

FRESH WATER: Available.

FUEL: Full bunkering facilities available.

OPENING/CLOSING HATCHES: Ship's crew.

REPATRIATION: Crew changes and repatriation facilities available.

AIRPORT: Distance 35 miles; served by regular operators. Larnaca 49.6 km. and Paphos 101 km.

TIME: GMT plus 2 hours. GMT plus 3 hours in Summer.

HOLIDAYS: 1996: 1st January, 6th January, 26th February; 25th March, 1st April, 12th – 15th April, 1st May, 3rd June, 15th August, 1st October, 28th October, 25th December, 26th December.

Port workers will abstain from work on 1st January, 14th April and 25th December, but they may normally work on overtime basis during the rest of the holidays.

AUTHORITY: Cyprus Ports Authority, P.O.Box 2007, Nicosia, Cyprus. *Tel:* (02) 450100. *Telex:* 2833 Cypa Cy. *Cables:* Cyports. *FAX:* (02) 365420. *Contact:* General Manager.
Operator: Vassiliko Cement Works Ltd., Headquarters, P.O.Box 2281, Nicosia, Cyprus. *Tel:* 42005-10. *Telex:* 2039 Vascem Cy. *Cables:* Vascem, Nicosia.
At Vassiliko Bay: Tel: 4-333001. Fax: 4-332651. Telex: 5000 Vascem Cy.

NOTES

Please also advise Shipping Guides Ltd.

Denmark

GENERAL (See Plan)

CUSTOMS ALLOWANCES: For use on board during the stay in Denmark a total of 40 cigarettes or 40 grammes of tobacco, 0.25 litres of alcoholic liquors and 0.25 litres of wine can be released per member of the crew a day.

Tobacco may be released for 5 days' consumption at a time, i.e. 200 cigarettes, alcoholic liquors and wine may be released for 3 or 4 days' consumption, i.e. 1 bottle containing 0.25 or 1.0 litres.

ROUTEING: A routeing system has been established, so ships with a draft up to 17 m. (55.77 ft.) can pass the Great Belt. Ships bound for the Baltic are restricted to a draft of 15 m. (49.21 ft.) owing to shallow waters N.E. of Gedser.

For the passage through Danish waters by ships with a d.w.t. of more than 40,000 tons or with a draft of 13 m. or more, we would like to draw your attention to the "IMO–recommendation of Nov. '75 on navigation through the entrances to the Baltic Sea", and to the radio reporting system established by the Danish Ministry of Commerce.

ROUTE "T" (17 metres Transitroute) – THE SOUND – RADIO REPORTING SERVICE (Shippos): With the object of ensuring the safety of navigation of large ships passing through Danish waters and also of reducing the risk of oil pollution resulting from the grounding and collision of tankers, the Danish Government has established a transitroute between Skagen and the area N.E. of Gedser with a minimum depth of water of 17 m. The route is named "Route T".

The route is marked by light buoys and lights, the Decca coverage is good and Danish Pilot assistance is available. Portable Decca equipment can be hired for use during the passage through Danish waters and can be taken on board at the Pilot Stations Skagen or Allinge (Bornholm). Under ice conditions Danish icebreakers, as far as possible, render free assistance to shipping.

In spite of the good buoyage, navigation through Danish waters presents, however, in certain areas difficulties to large ships on account of narrow waters, sharp bends, strong currents and shallow depths. Furthermore there is an intensive East and Westbound ferry traffic in Store Baelt, particularly in the area immediately South of Sprogo.

Therefore a radio reporting service (SHIPPOS) has been established the rules of which are given in the following.

The International Maritime Organisation (IMO) has adopted a recommendation on navigation through the entrances to the Baltic Sea according to which ships with a deadweight-tonnage of over 40,000 tons or with a draft of 13 m. or more shall fulfil certain conditions about equipment, navigation, etc.

IMO has furthermore adopted a recommendation (which see) according to which certain ships shall use a Pilot when navigating in the Sound.

The Commission of the European Communities has adopted a directive which makes it compulsory for tankers of 1,600 gross tonnage and more en route to a community port to transmit a Sailing Plan and to complete a "Tanker Check List". The directive has been put into force by Order No. 306 of 4th June 1981 concerning minimum requirements for certain tankers entering or leaving a Danish port.

Rules concerning radio reporting service in Danish waters – SHIPPOS:

1. With the objects of ensuring the safety of navigation and of reducing the risk of pollution of Danish coasts and waters as may result from grounding or collision of oil tankers, gas carriers and chemical tankers, a reporting service has been established for the purposes mentioned below:
   a. To inform shipping about large ships' movements, so that smaller ships can take into account the limited manoeuvrability of those and in order to avoid the risk of large ships meeting one another in areas difficult to pass.
   b. To inform ships about navigational hazards en route and deviations from normal conditions of current, water level, and wave height.
   c. To notify the ferry traffic South of Sprogo about the passage of large ships.
   d. To facilitate the authorities early and effective pollution combatting action in case of an accident.
   e. To notify the authorities immediately about any deficiency which could affect safe navigation and the marine and coastal environment, and about ships' observation of considerable pollution.

2. The reporting service applies to:
   a. all ships of 20,000 tons gross tonnage and above,
   b. all ships with a draft of 13 m. and more,
   c. all loaded oil-, gas- and chemical tankers of 1,600 tons gross tonnage and above, and
   d. all ships carrying radio active cargoes.

3. Messages to the reporting service shall be sent over a Danish coast radio station as telegrams addressed to "SHIPPOS Aarhus".

The transmission of reports from ships is free of charge.

Information about position of large ships, mentioned under 2, a. or b., participating in the radio reporting service will be broadcast over VHF as "SHIPPOS INFORMATION" by the coast radio stations Lyngby Radio and Skagen Radio.

The broadcast will include information about actual water levels and serial numbers of Navigational Warnings in force for the SHIPPOS – area.

The broadcast will be preceded by an announcement over Channel 16, informing about the Channel used for the broadcast.

The information will be broadcast every third hour according to the table below, preferably by using the mentioned Channels. Other Channels might be used, which – if occasion should arise – will appear from the preceding announcement on Channel 16.

Position of VHF-station	*VHF-Channel*	*Time UTC*	*Serviced by*
Skagen	4	0220, 0520, 0820, etc.	Skagen Radio
Laeso	64		
Arnholt	7		
Fornaes	5	0220, 0520, 0820, etc.	Lyngby Radio
Rosnaes	2		
Karleby	63		
Mon	2		

4. In the SHIPPOS-system the following reporting lines are established (See "Plans"):
   a. Skaw.
   b. Hatter.
   c. Baltic W.
   d. Sound N.
   e. Sound S.
   f. Moen.

5. Ships which are **inward bound** en route to a Danish port or to the Baltic Sea shall when passing the reporting line SKAW send a *Sailing Plan* (SP) (See "Drafting of Messages") to "SHIPPOS Aarhus".

During their voyage ships shall send *Position Reports* (PR) (See "Drafting of Messages") when passing the reporting lines SOUND N. or HATTER and BALTIC W.

Ships **outward bound** (from the Baltic) shall when passing the reporting line MOEN or SOUND S. send a *Sailing Plan* and during their voyage send *Position Reports* when passing the reporting lines BALTIC W. and HATTER or SOUND N..

6. Ships which en route to or through Danish waters do not pass the reporting line SKAW, MOEN or SOUND S. shall in sufficient time before passing first reporting line during the voyage send a *Sailing Plan* to "SHIPPOS Aarhus".

7. About 2 hours before **departure** from a Danish port, ships shall send a *Sailing Plan* to "SHIPPOS Aarhus".

8. Upon **arrival** at a Danish port, when passing the reporting line SKAW outward bound or when passing the reporting lines MOEN or SOUND S. inward bound a *Final Report* (FR) (See "Drafting of Messages") shall be sent to "SHIPPOS Aarhus".

9. If destination is changed, or if after transmission of a report **changes** occur which result in a time difference of more than 30 minutes from the estimated time of passing the next reporting line, or – for ships en route to a Danish port – the estimated time of arrival, the ship shall as soon as possible send a *Deviation Report* (DR) (See "Drafting of Messages") to "SHIPPOS Aarhus".

10. If during the voyage through Danish waters deficiencies occur, which might reduce the normal and safe manoeuvring capabilities of the ship, or a situation arises, which can endanger the marine environment and the adjacent areas, ships shall as soon as possible send an *Incident Report* (IR) (See "Drafting of Messages") to "SHIPPOS Aarhus". An Incident Report shall also be sent when observing an oil pollution or a pollution by any other substance, which is considered to be harmful to the marine and coastal environment.

11. Due to the intense East- and Westbound ferry traffic in Store-Baelt South of Sprogo the following special rules apply for ships of 20,000 tons gross tonnage and above and for ships with a draft of 13 m. and more when navigating in this area:

About one hour before passing the ferry route the ferries shall if possible be informed thereof on VHF, using the call sign "Ferry Leader". The call shall be made on Channel 16 and the information should be sent on Channel 10 or another available Channel (See "Drafting of Messages").

Ships which cannot operate VHF are requested to inform "SHIPPOS Aarhus" 2 hours before passing the ferry route about the estimated time of the passing.

Upon receipt of such information the ferries will endeavour to navigate so that risk of collision does not arise. If, nevertheless, risk of collision does arise, the International Regulations for Preventing Collisions at Sea must always be applied.

This special rule can also apply for ships with a draft of 10 m. and more regardless of tonnage.

Drafting of messages:

1. Messages transmitted in accordance with the Rules concerning radio reporting service in Danish waters shall be sent over a Danish coast radio station as telegrams addressed to "SHIPPOS Aarhus".

To ensure brevity of messages and to reduce the possibilities of mistakes the following designations shall be used for reporting lines (See "Plans"):

Latitude 57° 45' N.: SKAW
Latitude 56° 00' N.: HATTER
Latitude 54° 40' N.: BALTIC W.
The line Nakkehoved – Kullen: SOUND N.
The line Stevns – Falsterb: SOUND S.
Position of Mon SE. Lightvessel: MOEN

Positions, other than the above mentioned, shall be given in latitude and longitude or by stating name of port.

2. All messages shall begin with the word SHIPPOS as the first word in the text.
The messages shall be drafted according to the following format:

Designator	*Function*	*Information Required*
	System identifier	"SHIPPOS"
	Type of report	One of the following 2-letters identifier. "SP" (Sailing Plan) "RP" (Position Report) "FR" (Final Report) "DR" (Deviation Report) "IR" (Incident Report)
A	Ship	Name and call sign
B	Date and time of event	A 6 digit group giving date of month (first two digits), hours and minutes (last four digits). The digit group to be followed by the letter "Z" indicating time in UTC. (e.g. 041330Z).
C	Position	Geographical position by two 4 digit groups giving latitude in degrees and minutes suffixed with N (North) and longitutde in degrees and minutes suffixed with E (East). (e.g. 5610N 1230E).
D	Position	Reporting line, port of departure or port of arrival
E	True Course	A 3 digit group
F	Speed in knots	A 2 digit group
G	Port of departure	Name of last port of call
I	Destination and expected time of arrival	Name of port and date time group expressed as in B
J	Pilot	State whether a pilot is on board (e.g. PILOT EMBARKED)
L	Route information	Intended route (e.g. 1. Route T – The Sound) (e.g. 2. Route T – Great Belt)
N	Expected time of passing next reporting line and its identification	Date time group as in B and reporting line (e.g. 071500Z HATTER)
O	Maximum present draft in metres	A 4 digit group giving metres and centimetres
P	Cargo	Type and amount of cargo including whether cargo included in the International Maritime Dangerous Goods Code is carried
Q	Defects/Damage/ Deficiencies/other limitations	Brief details of defects, damage, deficiencies or other limitations
R	Description of pollution incident or observation	Brief details including type of pollution (oil, chemical, etc.)
U	Ship size and type	Gross registered tonnage and type
X	Miscellaneous	Any other information – give brief details

3. The different types of reports shall contain information according to the following table:

Designator	*Type of Report*				
	SP	PR	FR	DR	IR
A	M	M	M	M	M
B	M	M	M	M	M
C/D	M	M	M	M	M
E	O	M	–	O	–
F	O	M	–	O	–
G	O	–	–	–	–
I	M	–	–	O	–
J	O	O	O	O	O
L	M	–	–	O	–
N	M	M	–	O	–
O	M	–	–	–	–
P	M	–	–	–	O
Q	O	O	O	–	O
R	O	O	O	–	O
U	M	–	–	–	–
X	O	O	O	O	O

M = "Mandatory" (always to be included).
O = "Optional" (to be included if appropriate).

4. *Sailing Plan* ("SP") shall be sent
(a) when passing reporting line SKAW inward bound,
(b) when passing reporting line MOEN outward bound,
(c) when passing reporting line SOUND S. outward bound,
(d) in sufficient time before passing the first reporting line during the voyage if passage has not taken place as mentioned under (a),(b), or (c),and
(e) about 2 hours before departure from a Danish port.

Specimen Message 1:
SHIPPOS AARHUS =
SHIPPOS
SP
A. NONSUCH/MBCD
B. 041800Z
D. SKAW
E. 135
F. 15
G. ROTTERDAM
I. STOCKHOLM 061400Z
J. PILOT EMBARKED
L. ROUTE T – NORTH OF BORNHOLM
N. 050600Z – HATTER
O. 1450
P. CRUDEOIL 60000 TONS
U. 32.000 BRT TANKER =

Speciman Message 2:
SHIPPOS AARHUS =
SHIPPOS
SP
A. NOBODY/DLAN
B. 171000Z
D. VEJLE
I. BERGEN NORWAY 190600Z
J. PILOT EMBARKED IN FJORD
L. GREAT BELT – W. OF LAESOE
N. 171600Z – HATTER
O. 0650
P. CAUSTIC SODA 600 TONS
U. 1600 BRT CHEMTANKER =

5. *Position Report* ("PR") shall be sent
(a) when passing reporting line HATTER
(b) when passing reporting line BALTIC W., and
(c) when passing reporting line SOUND N.

Specimen Message 3: (Same ship as in Specimen Message No. 1)
SHIPPOS AARHUS
SHIPPOS
PR
A. NONSUCH/MBCD
B. 050615Z
D. HATTER
E. 215
F. 10
N. 051600Z – BALTIC W. =

Specimen Message 4: (Same ship as in Specimen Message No. 2)
SHIPPOS AARHUS =
SHIPPOS
PR
A. NOBODY/DLAN
B. 171600Z
D. HATTER
E. 350
F. 12
N. 180400Z – SKAW
Q. GYRO BREAKDOWN =

6. *Final Report* ("FR") shall be sent
(a) when passing reporting line SKAW outward bound,
(b) when passing reporting line MOEN inward bound,
(c) when passing reporting line SOUND S, inward bound, and
(d) on arrival to a Danish port.

Specimen Message 5: (Same ship as in Specimen Message No. 2)
SHIPPOS AARHUS =
SHIPPOS
FR
A. NOBODY/DLAN
B. 180415Z
D. SKAW

7. *Deviation Report* ("DR") shall be sent if the destination or the earlier given intended route is changed and if earlier given times are changed more than 30 minutes.
Specimen Message 6: (The ship in Specimen Message No. 3 will arrive at reporting line BALTIC W. later than expected)
SHIPPOS AARHUS =
SHIPPOS
DR
A. NONSUCH/MBCD
B. 051500Z
C. 5510N 1105E
N. 051900Z – BALTIC W. =

8. *Incident Report* ("IR") shall be sent as soon as possible.
(a) when deficiencies occur which might reduce the normal and safe manoeuvring capabilities of the ship, e.g. break-down in the main propulsion engine, steering gear or defect in radar or gyro,
(b) when an accident (e.g. grounding) occurs, which might cause pollution,
(c) in case of spill of oil or other harmful substance, and
(d) when observing pollution, which does not come from own ship.
Specimen Message 7:
SHIPPOS AARHUS =
SHIPPOS
IR
A. NONSUCH/MBDC.
B. 042110Z
C. 5712N 1131E
R. MAJOR OILSLICK 2 MILES WEST OF ME
X. WIND N.W. 8 M/S CURRENT N. 1.8 KNOTS =

9. *Passage of the Ferry Route South of Sprogo* shall be reported on VHF to the ferries, call sign FERRYLEADER, about 1 hour before passing. The call shall be made on Channel 16 and the report shall be transmitted on Channel 10 or on another available Channel.
Specimen Message 8:
FERRYLEADER THIS IS NONSUCH = EXPECT TO PASS SPROGO AT 1300 =

Pilotage within Route T: Pilotage through Route T from Skagen to Bornholm can be ordered from "DANPILOT", Skagen, via a coast radio station.

Pilotage through Route T from Bornholm to Skagen can be ordered from "SOUNDPILOT", Copenhagen, via a coast radio station.

When ordering a pilot the following information is required:
1. Name and call sign.
2. Estimated time of arrival (ETA) at the position from where pilotage is required.
3. Gross tonnage and draft.
4. Sea speed.
5. To where pilotage is required.

The order should be given at least 12 hours before ETA and should be confirmed or corrrected 3 hours before ETA. The Pilot Stations at Skagen and at Bornholm keep a continuous watch on VHF Channel 16.

Anchorages: If anchoring is considered necessary the following anchorages are recommended:
(a) Off Skagen.
(b) Off Sjaellands Rev.
(c) N.W. of Rosnaes.
(d) Off Romso.
(e) Off Keldsnor.

Furthermore anchoring is possible in most places along the route depending on the draft of the ship.

It must be emphasized, that for ships with a draft of 13 m. or more anchoring may be necessary owing to the weather and sea conditions in relation to the size and draft of the ship and to the sea level.

Electronic position-fixing equipment: IMO recommends that ships with a draft of 13 m. (42 ft. 7 in.) or more when navigating through the entrances to the Baltic Sea should have on board suitable electronic position-fixing equipment.

With proper notice (a minimum of 24 hours) ships not fitted with such equipment can rent a portable Decca receiver on application to Racal-Decca Navigator Aktieselskab, Kalvebod Brygge 20, 1560 Kobenhavn V., Denmark. Tel: (01) 12 83 10. Telegram: DECCAMAR.

The Decca receiver can be installed when passing Skagen or Bornholm.

The installation time is about 1 hour and the receiver can be installed by day and night.

The Pilot Station will assist with the arrangement and will also on request give information about fees for hire.

The Decca receiver can be delivered fitted for one of the following voltages:
DC: 24 v./32 v., 110 v. and 220 v.; AC: 85-260 v., 40-440 Hz.

It is quite important when requesting rent of Decca receiver to state the voltage available on board.

The receiver can remain on board until the ship again leaves Danish waters at Skagen, or it can be dismounted in a port in Denmark, Sweden, Finland or Germany.

Payment for rent and installation is to be settled through Racal-Decca Navigator Aktieselskab.

Order on the Calling of a Pilot:
(Royal Danish Administration of Navigation and Hydrography, Order No. 29 of 30th January 1985 as amended by Order No. 795 of 11th November 1986).

Pursuant to section 7(4) of the Danish Pilotage Act and under the authority of the Minister of Defence it is hereby laid down:

1. (i) Ordering of a pilot from Danish Pilot Stations shall be made to the Pilot Station in question subject to the notices stipulated in section 2 hereof. The order shall contain information as to:
   (1) Name and call sign of the ship,
   (2) estimated time of arrival at the place from which pilotage is requested,
   (3) gross registered tonnage and draft of the ship,
   (4) speed of the ship, and
   (5) place to which pilotage is requested.
   (ii) In connection with arrival of the ship at the place from which pilotage is requested, the international signal "G" should be used and be displayed by flag or flashlight.
2. (i) With respect to ships coming from the sea the order shall be given at least 6 hours before estimated arrival at the place from which pilotage is requested, and this shall be confirmed or corrected 1 hour before the estimated time of arrival, see also subsection 2 of this section.
   (ii) Where transit pilotage takes place via Route "T" from the waters off Skagen to the waters around Bornholm, or conversely, the order must, however, be given at least 12 hours before estimated time of arrival and shall be confirmed or corrected 3 hours before estimated time of arrival.
   (iii) With respect to ships requesting pilotage from harbour, anchorage or the like the order shall be given at least 4 hours before the pilotage is requested to commence. Confirmation and possible changes shall be given at least 1 hour before estimated time of departure.
3. (i) The ship's Master shall manoeuvre the ship in such a way that the pilot can embark or disembark the ship in the safest and fastest manner.
   (ii) If due to special circumstances the Pilot is prevented from boarding the ship, pilotage can take place from the pilot boat or from shore.
4. Unless prevented by special circumstances, the Master of the ship shall during pilotage be obliged to take the pilot boat in tow upon the Pilot's request.
5. During pilotage the Master of the ship furthermore has a duty to provide the Pilot with all information of importance to the pilotage.
6. Apart from the lights prescribed in accordance with the International Regulations for Preventing Collisions at Sea, a vessel performing pilotage duty shall fly a flag the upper half of which is white and the lower red. In addition the vessel shall fly the national flag.
7. Any contravention of Sections 3-6 shall in pursuance of Section 23(2) of the Pilotage Act be punished by a fine.
8. (i) This Executive Order shall come into force on the 15th February 1985.
   (ii) With effect as from same date Executive Order No. 120 of 21st March 1979, of the Royal Danish Administration of Navigation and Hydrography as amended by Executive Order No. 643 of 16th December 1983, on the Calling of a Pilot, etc., shall be repealed.

Notice about Passage to the Harbour of Enstedvaerket, the Harbours of Stigsnaesvaerket and Gulfhavn, Stigsnaes, of Ships with a Draft of 13 metres or more: (Ministry of Industry, Notice of 7th January 1987).

1. The maximum draft for entering the harbour of Enstedvaerket and the harbours of Stigsnaesvaerket is 17.0 m. and for Gulfhavn, Stigsnaes, 15.5 m.
2. With reference to IMO Resolution A. 339 about navigation through the entrances to the Baltic Sea it is recommended that ships with a draft of 13 m. or more comply with the following:
   a. A pilot shall be used during the entire passage within the Skaw.
   b. The ship shall be equipped with a VHF fitted with appropriate frequencies.
   c. The ship shall have on board suitable electronic position-fixing equipment to make use of hyperbolic systems which will provide sufficient fixing accuracy for navigating in this area.
   d. The ship shall be equipped with a 3 cm. and a 10 cm. radar both able to function.
   e. The ship shall participate in the ship reporting system operated by the Government of Denmark (SHIPPOS).
   f. When constrained by its draft the ship shall show the signal prescribed in Rule 28 in the International Regulations for Preventing Collisions at Sea.
   g. The Master must be aware that temporary anchoring may be necessary owing to the weather and sea conditions in relation to the size and draft of the ship and to the sea level.
3. Attention is drawn to the fact that under ice conditions, when the buoyage cannot be expected to be in position and in order, there exists a greater risk of grounding than under normal conditions.
   3.1. If the passage takes place under ice conditions, when the buoyage cannot be expected to be in position and in order, it is recommended that ships furthermore comply with the following:
   When navigating South of the Latitude 56° North (Sjaellands Odde) ships shall use 2 tugs, which both are equipped with Decca and with a pilot on board, and the navigation should, when considered necessary, take place in daylight and in good visibility.
   3.2. For ships equipped with operational Channel Navigation System the use of the tugs mentioned in 3.1. can be limited for the passage between Keldsnor and Enstedvaerket.

4. Pilot stations and "SHIPPOS Aarhus", when being aware of the fact that ships with destination to one of the harbours concerned does not comply with the recommendation herein, are requested to report such to the Ministry of Industry.

PILOTAGE:

The Baltic Pilotage Authorities Commission Recommendation:

The Baltic Pilotage Authorities Commission, recognising that Deep-Sea Pilotage helps to enhance safety of navigation and prevention of pollution of the marine environment, in particular to reduce the risks resulting from the high density of ships carrying dangerous or noxious cargoes and that the presence of a Deep-Sea Pilot on board would strengthen a vessel's navigational team and improve emergency measures in case of incidents and having considered the necessity to establish a certain order in Deep-Sea Pilotage in the Baltic Sea,

recommends

A. Masters of ships which are constrained by their draft and
B. Masters of ships other than registered in one of the Baltic states, infrequently sailing in the respective area

coming from or being bound for ports in the Baltic Sea to avail themselves of Deep-Sea Pilots, certified by a competent authority of a Baltic coastal state.

Also see "Baltic Deep-Sea Pilotage".

The Royal Danish Pilotage Service – Danpilot:

As of 1st January 1995, the former independent pilot stations at The Skaw, Grenaa and Great Belt united under one pilot station named "Danpilot".

Principal Boarding Stations:

Region Skagen:
Telex: 67 550 PILOT DK
Fax: +45 98 44 59 63
Cable: DANPILOT
VHF: Channel 16
Skagen (The Skaw): Lat. 57° 47' N., Long. 10° 42' E.
Tel: +45 98 44 55 66
Grenaa: Lat. 56° 25' N., Long. 11° 05' E.
Tel: +45 86 32 05 50
Fax: +45 86 32 05 99

The above mentioned pilot stations serve Frederikshavn, Mariager, Randers and Grenaa.

Region Great Belt:
Telex: 50 391 PILOT DK
Fax: +45 62 50 15 28
Cable: DANPILOT
VHF: Channel 16
Sprogoe NE: Lat. 55° 23' 05" N., Long. 11° 00' E.
Tel: +45 62 50 15 35
Great Belt South:
Tel: +45 62 50 15 35
Route "T" (Tango): Lat. 54° 46' N., Long. 10° 49' E.
Route "H" (Hotel): Lat. 54° 47' 05" N., Long. 10° 52' 05" E.

The above mentioned stations serve Stigsnaes, Korsoer, Nyborg, Svendborg, Nakskov and Faaborg.

When having decided to make use of a Danpilot:

Notices: The following important notices must be given:

At the 12 hours notice or more: Please state the following:

A: ETA.
B: Destination.
C: Sea speed.
E: Whereto pilotage is required.
F: Bunkering requirement . . . . . ts. If operation will take place.
G: Stores and provisions. If operation will take place.
H: All information having influence on your coming transit.

At the 3 hours notice: Please verify your ETA on VHF Channel 16 and from this hour keep a constant listening on Channel 16.

At the 1 hours notice: Please confirm your final ETA. Please note: On certain weather and ice conditions boarding can take place at another position given by the pilot station.

Draft: Route "T" (Tango) to the Baltic Sea: 15.0 m.
The Sound Transit to the Baltic Sea: 7.5 m.

Additional Information:

1. Deep-Sea Pilotage Service in the Baltic Sea:
   Danpilot have licensed pilots available for any port in the Baltic Sea. Therefore, please state your requirements in your 12 hours notice to Danpilot.
2. Deep-Sea Pilotage Service in the North Sea:
   Danpilot will order a licensed North Sea pilot through any of the competent companies in Great Britain, Netherlands and France, as you may wish. Therefore please state your requirements to Danpilot in a 24 hours notice when outwardbound from the Baltic Sea.
3. Bunkering:
   If your ship is about to bunker when passing through the Danish waters, the pilot will assist you in communciation with your bunkering company, as well as finding a safe place to anchor for the bunkering operation. Therefore please state your requirements in your 12 hours notice to Danpilot.
4. Stores and Provisions:
   Same procedure as above. Danpilot will assist you.
5. Crew Change: Can be arranged through Danpilot at the individual pilot stations.

Note: For protection and preservation of the environment, the International Maritime Organisation (IMO) recommend in their Resolution 620 A(15) that ships with a draft of 13.0 m. or more should, for the passage which at several places will be difficult to navigate, make use of the pilotage services locally established by the Danish Government.

GARBAGE/WASTE OIL DISPOSAL: In the majority of Danish ports the reception facilities are based on an agreement between the port authorities and the technical department of the local council or with a local company using trucks. 24 hrs. notice is required in all Danish ports. A "No-special-fee-system" operates under the following conditions:-

The delivery of residues shall normally take place within the normal working hours of the port. If however the ship is calling only outside of these hours, the delivery shall be free of charge to the ship.

The amount of residues to be delivered should be in reasonable proportion to the size and type of the ship and the duration of the voyage.

The ship should be equipped with standard connections on deck and must be able to deliver the necessary pumping capacity.

The ship must pay harbour dues.

In the event that a vessel encounters any inadequacies in the system, they should be reported to Ministry of the Environment, National Agency of Environmental Protection, Strandgade 29, DK-1401 Copenhagen K, Tel: 31578310. Telex: 31209 Miljoe DK. Fax: 31572449.

To obtain further information contact the local port authorities.

DEVELOPMENTS: There is a bridge under construction in Store Belt (Great Belt) from Sjaelland via Sprogo to Fyn.

SHIPMASTER'S REPORT: July 1994.

Simplified information on pilotage and participation in "Shippos" in Danish waters:

The Administration of Navigation and Hydrography has issued the publication "Route T, 17 Meter Transit Route – the Sound – Radio Reporting Service, 1987 Edition".

PILOTAGE

Ships to and from Danish Ports: Legislation regarding compulsory pilotage in Danish waters came into force 1st July 1989.

Vessels concerned:
(a) Oil tankers loaded or in ballast with tanks not secured (inert gas).
(b) Chemical tankers loaded or in ballast with tanks not secured.
(c) Gas tankers.
(d) Vessels carrying radioactive cargoes (IMO Class 7).

Exemptions for Pilotage:
(a) Below 1,500 d.w.t. (loaded or ballast).
(a)(b)(c)(d) Same Master and ship more than 5 times within 6 months.

Transit Passage: Skagen Baltic. IMO 1985/1987, Resolution A.339 (IX).

Vessels concerned:
(a) 40,000 d.w.t. or more (loaded or in ballast).
(b) Draft 13.00 m. or more.
(c) Vessels carrying radioactive cargoes.

These vessels are recommended to use Pilot between the Skagen/Vinga line and the Baltic to reporting line "Moen Se".

The Sound. IMO 1975, Resolution A.578 (14).

Vessels concerned:
(a) Oil tankers, loaded, draft 7.00 m. and above.
(b) Chemical tankers, loaded, any draft.
(c) Gas tankers, loaded, any draft.
(d) Vessels carrying radioactive materials.

These vessels are recommended to use Pilot between Svinbada Light/"MI" Buoy and Drogden Light.

Shippos: Participants in the "Shippos" Reporting System:
All vessels over 20,000 g.r.t.
All vessels over 13.00 m. draft.
All tankers over 1,600 g.r.t. loaded with oil, gas or chemicals.
All vessels carrying radioactive cargoes.

AABENRAA: 55.02 N. 09.26 E. (See Plan)

LOCATION: Aabenraa is situated on the East Coast of Jylland (Jutland) in the Aabenraa Fjord.

DOCUMENTS: Crew List, Passenger List, Tobacco List, Stores List, Load Line Certificate (all vessels above 150 g.r.t.), Safety Equipment (all cargo vessels of 500 g.r.t. and over), Derat, Tonnage and Nationality, Clearance from last port of call, cargo documents.

PILOTAGE: Telegraphic address: "Pilot – Aabenraa". Short notice about 2–4 hours – VHF Channel 16. Small red motor-boat flying international pilot flag. Normally located middle of Aabenraa Fjord.

Larger ships usually take Pilot by Skaw L/V or at Kiel. Pilots to be ordered by ETA-telegrams to "Danpilot, Region Skagen", at least 12 hours in advance when passage via the Skaw. "Danpilot" listening on VHF Channel 16.

ANCHORAGES: Aabenraa Fjord or Road. Depths: about 75 ft. – 80 ft.

RESTRICTIONS: See "General" before first port.

MAX. SIZE: Depth of water in the Channel, at the Sonderjyllandskajen and at Oil Jetty I is 11.0 m. and at Oil Jetty II is 7.0 m. Max. length at the Oil Jetty I is 200 m. and Oil Jetty II is 100 m. No restriction on beam. Max. length at Sonderjyllandskajen 250 m. No breadth restriction.

Depth of water in dry cargo basins from 4.0 m. to 8.5 m. Max. length 200 m. No breadth restrictions. No tide – occasionally low water of 3 ft. – 5 ft. in heavy gales from West. Entry day or night.

HEALTH: In event of disease or fever on board, vessel's Agent to be informed before arrival.

RADIO: Blavand Radio or Lyngby Radio.

VHF: The port is equipped with Channels 12, 13 and 16.

TUGS: There are no tugs stationed in the port, however, tugs of 1,400 h.p. – 3,600 h.p. available at 24 hours notice.

BERTHING: There are 3 basins, a dry cargo pier and 2 tanker berths.
Sydhavn: 340 m. quay, depth 4.0 m.
Gammelhavn: 680 m. quay, depth 7.5 m.
Nyhavn: 600 m. quay, depth: First 160 m., 8.5 m. Next 140 m., 7.5 m. Remaining 300 m., 6.5 m. – 6.75 m.
Sonderjyllandskajen: 250 m. quay, depth 11 m.

New Ro-Ro berth under construction. Length 140 m., width 55 m., depth 11.00 m. Max. LOA 130 m.
Oil Jetty I: "T"-head with breasting dolphins, depth 11 m.
Oil Jetty II: "T"-head with dolphins, depth 7.0 m.

For the port the mean water-level is 0.0. Extreme high water level is plus 1.5 m. and extreme low water is minus 1.4 m. due to strong North/Easterly gales and strong South/Westerly gales. There are no currents except in connection with the mentioned high and low water. The port can be entered day and night, and is generally open for navigation throughout the year and in case of ice-difficulties during Winter, state-owned icebreakers will keep the port open for navigation.
DENSITY: Average water density in port area 1015.
CRANES: 1 mobile crane – lifting capacity 36 tons.
1 mobile crane – lifting capacity 30 tons.
1 mobile crane – lifting capacity 23 tons.
2 front loaders.
1 fork lift – 4 tons capacity.
Tractors and similar modern machinery also available.
STEVEDORES: Stevedores arranged by Agent.
MEDICAL: 12 hours notice required to arrange for doctor to come on board. Hospital in Aabenraa.
TANKERS: Load/discharge connection 6 in. or 8 in. Also see "Berthing". Facilities for dirty ballast available.
FRESH WATER: Day and night from shore line, 25 t.p.h. – 30 t.p.h.
FUEL: All grades available by barge or truck. Minimum 24 hours notice.
CONSULS: German; Finnish; Norwegian; Swedish; British.
REPAIRS: All types of deck and engine repair are possible.
DRY DOCK: Shipyard with floating dock of 600 tons lifting capacity. Max LOA 53 m.
SURVEYORS: Lloyd's and N.V. available.
GANGWAY/DECK WATCHMAN: Can be arranged.
OPENING/CLOSING HATCHES: By crew.
CUSTOMS ALLOWANCES: See "General" before first port.
REPATRIATION: Facilities exist for effecting crew changes.
AIRPORT: Skrydstrup. Distance from airport is 25 km. Airport is served by regular airlines.
TIME: Local time is GMT plus 1 hour.
POLICE/AMBULANCE/FIRE: Dial "112".
TELEPHONES: Available for placing on board at the Sonderjyllandskajen.
SHORE LEAVE: Crew members allowed ashore.
IDENTIFICATION CARDS: Not needed.
GARBAGE DISPOSAL: Garbage disposal arranged with agent and port.
WASTE OIL DISPOSAL: Waste oil disposal by tanker truck, arranged with agent and port.
SEAMAN'S CLUBS: Aabenraa Somandshjem, Skibberoen 28, 6200 Aabenraa, Tel: 7462 7062. Facilities include restaurant, t.v. room, newspapers, pool, shop, telephone, currency exchange, library and laundry.
CURRENCY: Danish Kroner.
DELAYS: Normally no delay except during severe Winters due to ice between mid December and end March.
AUTHORITY: Aabenraa Port Authority, Havnekontoret, 25 Mellemvej, 6200 Aabenraa. *Tel:* (National) 74 622514, (International) 4574 622514. *FAX:* (National) 74 623143, (International) 4574 623143.
Contact: N.K. Kristiansen, Harbour Master.

AALBORG: 57.03 N. 09.55 E. (See Plan)

DOCUMENTS:
Ship's Register.
Load Line Certificate. (All vessels over 150 g.r.t.)
Road Safety Certificate.
Safety Equipment Certificate.
Derat Certificate or Exemption.
1 Crew List.
Stores List.
Crew Personal Effects List.
Cargo Manifest or Bills of Lading.
Oil Liability Insurance Certificate.
PILOTAGE: Pilotage is compulsory for the following:
(a) All tankers of 1,500 d.w.t. or more.
(b) Tankers of less than 1,500 d.w.t. which carry or having uncleaned tanks last containing ammonia or other hazardous liquid chemicals as listed in the Pilot Act of 4th August 1989.
(c) All LNG and LPG carriers.
(d) Vessels drawing 6.0 m. or more which pass through the dredged channel over Hals Bar.

Pilot may board at Hals Bar Roads in one of 4 different positions. Pilot station and Pilot boat equipped with VHF Channel 16.

The Western entrance at Logstor is only navigable in daylight for vessels under 3.8 m. draft.
ANCHORAGE: Anchoring inside the port area can only take place when permission has been granted by the Port Authorities. Permission can be requested on VHF Channel 16 or on Tel: 99301500.

RESTRICTIONS: The port is situated in the Limfjorden, 10 – 16 miles from entrance at Hals. Controlling factor is depth at Hals Bar of 10.4 m. at MLW.
MAX. SIZE: Max. draft for crossing Hals Bar 9.3 m.
Largest Vessel: 102,000 d.w.t., LOA 250 m. and max. draft 9.3 m.
HEALTH: Pratique granted by Customs Officers who bring Health Declaration for Masters to complete. In event of suspected disease or fever on board radio details to Agent before arrival.
RADIO: Radio stations to be used: Skagen and Lyngby, Port Authority, Pilot Station. Tugs and Bridges can be contacted on VHF Channel 16.
TUGS: Four tugs available from 250 h.p. to 2,000 h.p. Not compulsory.
BERTHING: There are both public and private quays in the port, with total length of public quayage of approximately 12 km. and private quayage approximately 1,100 m.

On the South side of the fjord are the private quays of Aalborg Portland Cement factory (APCF).

In the harbour basin (Quays No. 4010 – 4020) between the bridges, berths are for visiting pleasure craft.

Quays No. 4030 and 4040 are used for minor shipments of general cargo, and for calls by naval, cruise and other types of vessels.

Quay No. 4050 is used for naval, cruise and other types of vessels. It is also used as a waiting berth.

Part of Quay No. 4061 is used for discharging coal to the Nordjyllandsvaerket Aalborg Power Station. Quay No. 4062 and Quays No. 4070 – 4080 are used for grain and feedstuff.

Quays No. 4110, 4111, 4112 and 4113 are used for general cargo and bulk cargo.

Quay No. 4120 covers the Oil Harbour.

Also situated on the South side of the fjord, West of the railway bridge, are 2 yachting basins, and close by in Skudehavnen is a coaster basin. West of Skudehavnen, a small ferry connects the Isle of Egholm with the South side.

Situated on the North side of the fjord in the central port are Quays No. 3012, 3013, 3014, 3015, 3016 and 3017.

Quays No. 3012 and 3013 mainly used as waiting berths, whilst Quays No. 3014 – 3017 mainly used for handling grain, feedstuff and fertilisers.

At Lindholm, West of railway bridge, is a minor harbour, mainly used for small tankers.

Situated East of the central port, on the North side of the fjord, is a private quay used for vessels calling at the power plant Nordjyllandsvaerket Vendsyssel, accommodating vessels of 260 m. LOA with 33 m. beam. Water depth of 10.0 m. available.
East Harbour: The Port of Aalborg is currently being enlarged and developed in order to fulfill the requirements of a modern port. Most developments are taking place in the East Harbour, approximately 6 nautical miles East of the central port. The development plans involve an expansion from the present 2,200 m. of quay to quayage of more than 5,000 m.

Piers No. 1 and 2 are developed, each pier covering an area of around 500,000 sq.m.

Piers No. 3, 4 and 5 have been approved in the regional and municipal plans, and the development has commenced. Pier No. 3 is also approved in a local plan, which is the last stage in the planning procedures before actual establishment of the pier. Pier No. 3 is specially prepared to accommodate factories which are a long distance from its nearest neighbours.

The East Harbour has 620 m. of quayage for engineering and construction (the Great Belt East Bridge construction), for handling bulk cargo and for shipbuilding and repair (Danyard). A further 600 m. of quayage for Greenland trade and 850 m. for handling containers, frozen food and bulk.

The NTC (Nordjysk Transport Centre) is situated at Pier No. 2. The Centre offers the following facilities: Cargo storage, container freight station, reefer facilities, cool store, combi-terminal, rail centre, administration centre, transport logistics, hotel facilities and bunkering by truck.
Norresundby: Situated on the North side of the fjord is a yachting harbour, on the West side of the Limfjordsbridge. To the East side of the bridge is a general cargo quay, and quays for handling grain and feedstuffs, as well as quays for handling raw materials and fertiliser.

At Lindholm, West of Norresundby, is a small harbour, mainly used for small tankers.
Hals: At Hals, in the East entrance of the fjord, is a harbour mainly used for fishing vessels, coastal vessels and yachts, with a quayage of 1,080 m. The Limfjord East Pilot Station is situated at Hals.
Cruise Terminal: Berth for cruise vessels in the town centre, max. draft 8.0 m.
Container and Ro/Ro Facilities: The container terminal, covering approximately 55,000 sq.m., of which 40,000 sq.m. is paved and used for heavy loads. The terminal has 430 m. of quayage, and is equipped with 2 mobile cranes, with spreaders for container handling, of 52 tons and 45 tons respectively. Within the terminal area is a 1,000 sq.m. warehouse and a Ro/Ro ramp.

The Pier II, multi-terminal, in which the container terminal is situated, is additionally equipped with a 30 m. Ro/Ro ramp.
Bulk Cargo Facilities: All private piers and installations alongside quays are capable of loading and discharging bulk cargoes. Equipment includes a 19 ton capacity crane for bulk and general cargo.

The 620 m. long Bulk Terminal in the East Port, has a maximum discharging capacity of 8,000 tons/day.
Cranes and Elevators: Cargo handling facilities include 9 public cranes, of which 3 are mobile cranes with a lifting capacity of 52 tons, 45 tons and 18 tons. They operate in the East harbour area in addition to 6 private cranes. There are 3 private pneumatic elevators (60-150 t.p.h.) and 3 private grain loading pipes. Public cranes and operating crews may be hired, but loading and discharging is undertaken by private stevedoring companies, which have modern equipment, including a number of forklifts for handling containers.
Storage: Warehouse floor space of 110,000 sq.m.; silo capacity of 161,000 tons; cold storage of 84,000 sq.m.; oil tanks of approximately 900,000 cu.m. and coal storage of 473,000 tons.

BRIDGES: Two bascule bridges cross Western end of Aalborg harbour. Horizontal opening 30 m. Only vessels bound for Lindholm Pier are affected. The railway bridge can only be passed by ships over 800 g.r.t. or 80 m. in length with pilot on board.

Close South East of the power station is an overhead power cable (vertical clearance 47 m.) which spans the fjord.

STEVEDORES: *Working Hours:* Monday to Thursday 0700 hrs. – 0830 hrs., 0900 hrs. – 1200 hrs., 1230 hrs. – 1530 hrs. Friday 0700 hrs. – 0830 hrs., 0900 hrs. – 1200 hrs., 1230 hrs. – 1500 hrs. Overtime possible.

MEDICAL: Doctors, hospital facilities available.

TANKERS: 13 berths with lengths from 125 m. – 235 m. Maximum draft 9.3 m. Night berthing possible. Water, bunkers and slop tank facilities available.

FRESH WATER: Available at all berths.

FUEL: All grades available.

CONSULS:

Brazil	Tel.	(98)	13 12 33
Finland	″	″	13 30 33
France	″	″	18 16 66
Germany	″	″	12 56 33
Greece	″	″	13 31 00
Iceland	″	″	16 33 39
Netherlands	″	″	12 44 22
Norway	″	″	17 00 88
Spain	″	″	18 50 99
Sweden	″	″	13 36 66
United Kingdom	″	″	18 16 00

REPAIRS: Machinery repairs can be effected.

DRY DOCKS: One dry dock operated by Danyard.

DECK WATCHMEN: Available but not compulsory.

OPENING/CLOSING HATCHES: Normally by crew with assistance of stevedores.

CUSTOMS ALLOWANCES: See "General" before first port.

REPATRIATION: Aalborg Soefarts Service (Seamen's Service).

AIRPORT: Situated 3 miles from town centre.

TIME: GMT plus 1 hour in Winter. GMT plus 2 hours (April – September).

HOLIDAYS: New Year's Day; Maundy Thursday; Good Friday; Easter Monday; Prayer Day; Ascension Day; Whit Monday; Christmas Day; Boxing Day. Half-holidays; May 1st, June 5th and December 24th.

POLICE/AMBULANCE/FIRE: Tel: 112

TELEPHONES: Installed by request at certain quays.

SHORE LEAVE: No restrictions.

IDENTIFICATION CARDS: Not required.

GARBAGE DISPOSAL: When port fees paid, collection service is free of charge for small quantities, otherwise actual costs will be charged.

WASTE OIL DISPOSAL: When port fees paid, collection service is free of charge for small quantities (less than 8 cu.m.). When standard connection available on ship, otherwise actual costs will be charged. Notice to be given at least 24 hours before collection to be made.

SEAMAN'S CLUBS: Aalborg Sofartsservice, Snekkerstenvej 101, DK-9270 Klarup. Tel: 98317722.

CURRENCY: Danish Kroner.

GENERAL: *Weather:* During the Winter months, ice may occur, especially in the fjord, but even in severe Winters, the port is always kept open by local ice-breakers and powerful state ice-breakers.

Tides: Navigation conditions are good. The normal tidal range is 0.3 m., but Westerly gales may raise the water level by up to 1.3 m. above MSL, and prevailing strong Easterly winds may set level to 0.7 m. below MSL. Currents in the fjord are irregular.

DEVELOPMENTS: Aalborg has considerable areas under development for industry. In connection with this, preparations are being made for the building of new public harbour facilities. On the South bank of the fjord the Port Authority has available a 3.2 km stretch of coast with an area of approx. 206 hectares. This area is in connection with a new industrial and residential district of approx. 400 hectares. According to present plans approx. 7,000 m. of new quayage can be built here. Investments are estimated at 350 mill. Kr. Factories within the electronic and textile sectors are already established here and a continuous expansion goes on. On the site a special harbour with a quayage of 660 m. and depth 8.5 m. with facilities for unit load ships as well as conventional cargo ships, with warehouses and administration blocks, etc. was constructed as base port for the Royal Greenland Trade Department's routes calling at all ports in Greenland. Enterprises undertaking construction, repairs and maintenance of oil rigs etc., for offshore activities have also settled on this site. (See "Plan" – East Harbour).

Also see "Berthing" – "East Harbour".

AUTHORITY: Port of Aalborg Authority, Langerak 19, DK-9220 Aalborg Ost, Denmark. *Tel:* 0045-99301500. *Telex:* 69933. *FAX:* 0045-99301515. *Contact:* Svend Christensen, General Manager. Peter Petersen, Harbour Master.

AARHUS: 56.09 N. 10.13 E. (See Plan)

DOCUMENTS:

Ship's Register.
Derat Certificate.
Load Line Certificate (all vessels above 150 g.r.t.).
Radio and Equipment Safety Certificates.
Customs Clearance from last port.
Spirits and Tobacco List for ship and crew.

PILOTAGE: Harbour Pilotage only compulsory for:

(a) Tankers of 1,500 d.w.t. or above.
(b) Tankers loaded with inflammable liquids with flash point below 23°C.
(c) Tankers loaded with, or have unclean tanks which have recently contained, dangerous liquid chemicals listed in IMO's "Code for the construction and equipment of ships carrying dangerous chemicals in bulk", and
(d) Non gas-free gas tankers.

Exceptions for frequent callers.

Harbour Pilot boards 1-2 miles outside port.

Larger vessels usually take Pilot by Skaw L/V. Pilots to be ordered by ETA-telegrams to "Danpilot, Region Skagen", at least 12 hours in advance. Skawpilot listening on VHF Channel 16.

Vessels leaving harbour or changing berth should report at least 15 minutes in advance, to the Pilot Station on Channel 16. If the movement is delayed, a further report should be sent 10 minutes in advance.

ANCHORAGE: Anchorage in roads – good holding ground. Nature of bottom: clay.

RESTRICTIONS: No restrictions. Night entry permitted. Also see "General" before first port.

MAX. SIZE: *Draft:* Oil port 10.5 m. General cargo port up to 9.5 m. Container terminal up to 10.5 m. Eastern Division 13.0 m. Bulk Terminal 13.0 m. No tide.

HEALTH: Necessary formalities carried out by Customs on arrival.

RADIO: Radio stations to be used: Skagen and Lyngby. Pilot station and tugs can be contacted on VHF Channel 16.

TUGS: 2 Tugs stationed at the port. Additional tugs available from outside.

CARGO HANDLING FACILITIES: 7 cranes for coal, fertilisers, sulphur, ore, etc., and 6 cranes up to 5 tons.

Container Terminal: Max. depth of water 11 m. Total quay length 816 m. 4 gantry container cranes up to 40 tons. Fork lifts up to 40 tons.

Multi-Terminal: Quay length 1,000 m., depth 13.5 m. Facilities for bulk, break bulk, container and Ro/Ro cargoes. 1×50 tonne crane. 5 multi-purpose cranes (35 tonnes on hook and 12 tonnes on grab).

Roll-on/Roll-off: 1 movable and 4 solid Roll-on/Roll-off berths. Forklifts up to 40 tons. Several berths for liquid chemicals and LPG carriers.

Bulk Cranes: Bulk Terminal: Length 450 m., depth 13.5 m. 2 gantry cranes, combined capacity 1,000 t.p.h.

Private Suction Plants, etc.: 4 grain suction plants, capacities of 60 – 100 t.p.h. 1 grain elevator, capacity of 35 t.p.h. 4 grain loading pipes. 6 cup elevators for copra and soya beans (80 t.p.h. each). 4 suction elevators for copra and soya beans (125 t.p.h. each). 1 loading pipe for copra and soya beans.

STEVEDORES:

Aarhus Stevedore Company: Stevedoring is carried out by cooperation between the individual brokers/agents and Aarhus Stevedore Company.

Round-the-clock service is available every day including Saturdays, Sundays and most holidays.

Standard hours:

Mondays	0700 - 1630
Tuesdays-Fridays	0700 - 1600

Container Terminal:

Mondays-Fridays	0700 - 1730

Work outside standard hours may be carried out against overtime pay. (The basis of the above information is a 37-hour standard working week.)

Aarhus Stevedore Company has all kinds of modern equipment at its disposal, including:

17 front loaders, } All equipped with automatic spreaders for
2 container stackers. } full and empty containers.
21 tugmasters with 11 goose-necks.
56 terminal vans, 9×20 ft. and 47×40 ft.
22 fork lift trucks, capacity from 2.5 tons to 30 tons.
7 loaders.

Special gear for handling different kinds of cargo, e.g. bulk cargo, paper, timber, project cargo and cars, etc. also available.

Thor Jorgensen A/S: Situated at Pier No. 4, Quay 85.

There is a 5,000 sq.m. warehouse/CFS in the area, also 96 reefer sockets and cleaning facilities, etc., are available and a total loading/discharging service is offered in connection with containers and break-bulk cargo. Terminal chassis, tugmasters, contchamps, forklifts available for handling cargo, etc.

MEDICAL: All medical services possible. Call Pilots if medical attendance required on board.

TANKERS: Discharge lines: 4 in., 6 in., 8 in., 10 in. and 12 in. Quay 201 – 203, max. oil discharging 1,200 cu.m./hr. Quay 202 and 124, 1,000 cu.m./hr., and Quay 120, 800 cu.m./hr. Berth 313 depth 12.0 m.

FRESH WATER: Shore installations at most berths.

FUEL: All grades available.

FIRE PRECAUTIONS: Tankers discharging: Fire watch. Special harbour fire fighting on tugs.

REPAIRS: Most repairs and overhauls possible.

DRY DOCKS: Aarhus Dry Dock. The shipyard possesses a large repair section and specialises, among other things, in extending ships and in undertaking comprehensive re-building. But all kinds of ships' repairs and overhauls of machinery are performed in its modern workshops. It employs a staff of 500–600, and it has recently invested in new cranes, floating docks, and workshops.

Dock No. 1 has a lifting capacity of 19,000 tons. Dock size – 190 m. × 25 m.

Dock No. 2 has a lifting capacity of 4,000 tons. Dock size – 110 m.×22.8 m.

There is also one minor slipway in the Port of Aarhus, and the city has numerous service workshops.

CONSULS:

Belgium	Tel: 86.19.15.00	Japan	Tel: 86.12.58.55
Brazil	86.11.79.11	Netherlands	86.13.18.55
Finland	86.29.21.00	Norway	86.14.59.40
France	86.18.31.00	Spain	86.12.46.44
Germany	86.12.32.11	Sweden	86.12.50.00
Greece	86.12.27.00	United Kingdom	86.12.88.88
Iceland	86.78.40.00		

DECK WATCHMEN: Available, but not compulsory.

OPENING/CLOSING HATCHES: Normally by crew with assistance of stevedores.

REPATRIATION: Aarhus Sofarts Service. Tel: 86.19.13.33.

AIRPORT: 32 km. from port.

TIME: GMT plus 1 hour in Winter. GMT plus 2 hours in Summertime (April to October).

HOLIDAYS: New Year's Day, Maundy Thursday, Good Friday, Easter Monday, Prayer Day (fourth Friday after Easter), Ascencion Day, Whit Monday, Constitution Day, Christmas Day, Boxing Day.

POLICE/AMBULANCE/FIRE: Tel: 112.

TELEPHONES: At several piers.

SHORE LEAVE: No restrictions.

IDENTIFICATION CARDS: Not required.

GARBAGE DISPOSAL: Ordinary garbage from ships may be disposed of free of charge in garbage containers placed throughout the harbour. Harmful or dangerous waste must not be placed in these containers. Disposal of such waste and of large quantities of garbage must be arranged with the Vessel Traffic Service, VHF Channel 16, Tel: 86.133266.

WASTE OIL DISPOSAL: Large quantities are received at Berth No.122, shore tank capacity 2,000 cu.m. Small and reasonable quantities are collected at ship's berths free of charge. Contact Vessel Traffic Service, VHF Channel 16, Tel: 86.133266.

SEAMAN'S CLUBS: International Seaman's Club, Sverigesgade 1, 8000 Aarhus. Tel: 86.121599. Fax: 86.131652.

Facilities include international telephone service, postage, church services, football matches and other sports.

CURRENCY: Danish Kroner (DKr.). No currency restrictions.

AUTHORITY: Port of Aarhus Authority, P.O. Box 130, Mindet 2, DK-8100 Aarhus C, Denmark. *Tel:* 45.86.133266. International + 45.86.13.32.66. *FAX:* 45.86.127662. *Contact:* Harbour Master.

AEROSKOBING: 54.54 N. 10.25 E. (See Plan)

DOCUMENTS: See "Copenhagen".

PILOTAGE: Contact using VHF Channel 16, Tel: (62) 521253.

MAX. SIZE: Length 80 m., beam 17 m., draft 4.5 m.

HEALTH: See "Copenhagen".

RADIO: Lyngby Radio OXZ.

VHF: Harbour Master/Pilot on Channels 16 and 12.

TUGS: Not compulsory, pilot boat assists if necessary. Larger tugs can be ordered on request.

BERTHING: 3 berths available.

CRANES: 1 mobile crane available.

STEVEDORES: Ordered by Agents.

MEDICAL: Doctors and hospital facilities available.

FRESH WATER: Available.

FUEL: Available.

FIRE PRECAUTIONS: Normal fire precautions.

CONSULS: None.

REPAIRS: All repairs possible.

DRY DOCKS: None, however there is one slipway for vessels up to 50 m. × 10 m.

GANGWAY/DECK WATCHMEN: Not necessary.

HATCHES: Opening/closing carried out by crew.

AIRPORT: Local airport 9 km. away, with private connections to Copenhagen. Nearest commercial airport at Odense.

TIME: GMT plus 1 hour; Summertime (March – September) GMT plus 2 hours.

HOLIDAYS: Normal Danish holidays.

POLICE/AMBULANCE/FIRE: Dial 112.

BANKS: Den Danske Bank.

STORING: By truck alongside.

SHORE LEAVE: Permitted.

IDENTIFICATION CARDS: Not required.

AUTHORITY: L. Andersen, Harbour Master. *Tel:* 45-62-521253.

AGENT: W. Nielsen & Co., P.O.Box 20, DK-5970 Aeroskobing, Denmark. Tel: 45-62-521150. Telex: 50583. Fax: 45-62-521120. Cables: Williamco.

ASNAES (Asnaes Power Station, Kalundborg): 55.40 N. 11.05 E. (See Plan)

PORT LIMITS: When boarded by Harbour Pilot at the Firth of Kalundborg; or when at anchorage at the Firth waiting for berth.

DOCUMENTS:

Ship's Register.
Load Line Certificate.
Safety Radio and Safety Equipment Certificates.
Safety Equipment Certificate.
Derat or Exemption Certificate.
Construction Certificate.
Certificate of Insurance or other financial security in respect of civil liability for oil pollution damage.
2 Crew Lists.
Certificate of Origin (T2L. EUR).
Tobacco and Spirit List covering all goods on board belonging to crew, officers, Master, ship's bar or passengers.
Cargo Manifest or Bill of Lading.

PILOTAGE: A Harbour Pilot must be used for ships calling at the pier, except ships less than 5,000 d.w.t. on which the Master has called at the pier 5 times on the same vessel within the last 6 months. Harbour Pilot boards at entrance of Kalundborg Firth; bigger ships usually take Pilot at Skaw Pilot Station about 130 miles from Kalundborg. Skaw Pilot ("Danpilot") as well as Harbour Pilots listening on VHF Channel 16. Kalundborg Pilot Station Tel: 53510200.

Pilots to be ordered by ETA–telegram to Agents at least 24 hours in advance.

ANCHORAGE: Anchorage is 4-5 miles W.N.W. of oil pier.

Lightening: According to Order No. 472 of 21st September 1978 by the Ministry of Commerce, lightening of tankers and bulk carriers must only take place at position Lat. 55° 42' N., Long. 10° 59.8' E., and within a radius of 300 m. When tankers lighten in Kalundborg Fiord, other vessels must pass the area with caution and at slow speed.

RESTRICTIONS: No entry restrictions; arrival day and night and no tide with normal winds. Also see "General" before first port.

Navigation Restrictions: The harbour is closed to traffic when the wind speed exceeds 20 m./sec., or the visibility does not exceed one ship's length.

When the wind speed is between 15 m./sec. and 20 m./sec., and the wind direction is between S.W. and North, the Inspector together with the Master/Pilot will every time evaluate whether arrival/departure can take place safely, if more tugs shall be used or the ship must wait for an improvement in the weather.

MAX. SIZE: Oil Berth: Depth alongside: 9.5 m.

Old Coal Berth: Depth alongside: 9.5 m. Length of quay: 285 m. New Coal Berth: Depth alongside: 13 m. Length of quay: 216 m. However, vessels with length of 290 m. acceptable as there are dolphins between the Oil Berth and the New Coal Berth.

Ash Berth: Depth alongside: 7.7 m.

HEALTH: No special restrictions as to Free Pratique, which will be granted by authorities on arrival.

RADIO: Lyngby Radio.

Pre-Arrival Information: For all ships, the Master is requested via the ship's Agent to inform Asnaes Power Station of ETA according to Charter Party or contract.

For all ships the ETA shall contain the following information:

Name of the ship and call sign.
Flag.
D.w.t. and g.r.t. of the ship.
Arrival draft (fore and aft).
Departure draft (fore and aft).
Quantity of ballast/slops to be discharged and expected time for discharging.
Quantity of cargo.
Names of the loading ports.

VHF: Channel 16 to Pilot Station (also Skaw Pilot).

Vessel to call Agent when 5 miles from the port to confirm ETA.

BERTHING:

Pier/Berth		*Coal Pier*	*Oil*	*Coal*	*Ash*	*Gypsum*
Water depth	(m.)	13.5	9.5 **	9.5	7.7	9.5
Tide max./min.	(m.)	±0.5	±0.5	±0.5	±0.5	±0.5
LOA	(m.)	290	300	200	120	200
Beam	(m.)	45	50	35	20	20
Maximum draft	(m.)	13.2	9.2	9.2	7.2	9.2
Pan maximum	(m.)	13.2				
Cape size	(m.)	13.0				
Air draft	(m.)	17.0*	24.0		10.0	7.5
Cranes	tons	2×20	1 mobile	1×5		
Hoses with ASA 150 flange	(in.)	4×8 in.	3×8 in.			
Water density (minimum)		1005	1005	1005	1005	1005
Water density (maximum)		1021	1021	1021	1021	1021
Loading capacity (oil)	max. t.p.h.	1,000	1,500			
Loading capacity (coal)	max. t.p.h.			300		
Loading capacity (other)	max. t.p.h.			150	700	600
Discharge capacity (oil)	max. t.p.h.	2,800	2,800			
Discharge capacity (coal)	max. t.p.h.	2,800		300		
Loading capacity (oil) av.max.	t.p.h.	1,000	1,500			
Loading capacity (coal) av. max.	t.p.h.			175		
Loading capacity (other) av. max.	t.p.h.			150	600	500
Discharge capacity (oil) av. max.	t.p.h.	2,300	2,300			
Discharge capacity (coal) av. max.	t.p.h.	1,500		175		
Branch pipe inlet		2×16 in.	1×16 in.			
Branch pipe outlet		4×8 in.	2×8 in.			
Max. pressure manifold	bar	10.5	10.5			

* Only when discharging coal.

** Check with Harbour Pilot.

RADAR: No radar installations.

TUGS: At Firth of Kalundborg – 2/3 miles from port – ships' lines to be used. Pilot decides number and size of tugs.

BULK HANDLINGFACILITIES: Also see "Berthing".
Product types: All types of coal, fly ash and gypsum.

Before receipt of cargo, a complete calculation will be made. The Asnaes Power Station normally use an independent survey company to do the draft survey and sampling. For smaller vessels, the internal inspectors from Asnaes Power Station do the surveys. If the loss of cargo is more than 0.5%, the internal inspector will call an independent surveyor.

Before discharge/loading, the Officer-in-charge must sign a document with the following regulations:

Grab damage must be reported when possible to the discharge foreman.
Air draft (See "Plan").
Always keep discharge foreman informed about any irregularities.

STEVEDORES: Private stevedores to be ordered through receivers – coal discharge rate: about 700 t.p.h.

New Coal Berth: Discharge rate about 1,500 t.p.h. (average).

MEDICAL: All medical and hospital facilities available. No advance notice necessary.

TANKERS: 2 discharge hoses (a possibility of 3) of 8 in. each. Average discharge rate 3,000 t.p.h., max. back pressure 10 kg./sq.cm. Loading rate 60 t.p.h. – 1,000 t.p.h. Discharge of dirty ballast from fuel oil and gas oil tankers. Oil spills to be handled by Fire Brigade and Police. Also see "Berthing".
Cargo Handling (Oil Products): Product types: Heavy fuel oil and orimulsion (emulsion of bitumen and 30% water).

Before receipt of cargo, a complete calculation of the cargo will be made. An average sampling of all cargo tanks will be made.

Measurement of ullage will be made to the nearest mm.

Temperature measurement will be made electronically. Top, middle and bottom temperatures shall be recorded for all cargo tanks and an average for each cargo tank has to be reported to Asnaes Power Station.

Any tank or hatch measurements shall be corrected for trim.

If the increase in ROB is more than 0.1% of the Bill of Lading, samples will be taken of the tanks that contain the greatest proportion of ROB for later reference. The ship is expected to do its utmost to drain ship tanks and pipe system satisfactorily.

Ships experience factors will be calculated. This factor will be used to calculate the final outturn (Only for Orimulsion cargoes).

Asnaes Power Station normally uses an independent inspector for sampling, gauging and tank inspection.

Before discharging Orimulsion, doing some lab tests is necessary. Time used for lab tests is usually 3-4 hours.

The following documents are to be handed over to Asnaes Power Station before discharging:

Tank Inspection Certificate, after discharge/before loading.
Bill of Lading.
Certificate of Quantity.
Certificate of Analysis.
Ullage Report from loading port.
Ullage Report upon arrival.
Sealed samples from loading port.
Copy of any Protest issued to Loading Terminal.

The following documents will be handed over after loading:

Bill of Lading.
Certificate of Analysis.
Statements of Facts.

Discharging/Loading Regulations: Procedures for an emergency stop shall be agreed before any operation. The manning needed is at least one man in the control room near the emergency stop buttons, and one man near the manifold. For communications, they shall use the vessel's internal radio system (VHF). For small ships with stop buttons on deck, the manning can be reduced to one man.

It is not allowed to operate across another vessel.

It is not allowed to load through tank hatches. The discharging/loading system must always be used.

All tank hatches must be kept closed and all bearing holes must be protected by metal wire screens. Hatches and screens must only be removed for bearing and sampling.

Loading rates must be in accordance with the tank venting system.

All flange connection systems must be equipped with the correct size and full number of bolts, exceptions from this rule can only be granted by the inspector.

Drip trays shall be placed under all hose connections.

Always keep the discharge foreman informed about any irregularities.

Tank Inspection: Before loading, vessel's cargo tanks are to be inspected for water, impurities and foreign matter by the pier personnel or an independent inspection company.

All valves in the cargo system must be open during the inspection to check the lines are empty.

The inspection shall be made from the deck through hatches or sounding holes by using torches or mirrors.

Pier personnel are not allowed to enter the ship's tanks without special permission from the inspector or his deputy.

Entry Permit: When an independent surveyor wishes to enter a ship's cargo tanks for approval of these, it is the duty of the responsible ship's officer and the inspector to ensure that the appropriate procedures are followed, to ensure the safety of the personnel concerned. An entry permit must be issued.

Tank Cleaning and Gas Freeing: Tank cleaning and gas freeing are not permitted at the pier.

Loading Speed: If the ship is gas-free on arrival, the loading speed will normally be about 600-1,300 cu.m./hr. Initial loading rates to each tank must not exceed 1 m./sec. to avoid turbulence and splashing.

BALLAST: *Ballast and Slop Handling:* Ballast shall be discharged to ballast tanks ashore, except clean ballast water from segregated tanks. Ballast water from Sigsnaes Power Station and from other places with fish farms is not allowed to be discharged to the sea at Asnaes Power Station.

The ballast tank ashore can hold 2×3,800 cu.m., usually there is about 1,500 cu.m. available.

During the ship's stay at the pier, all sea and overboard valves that have connections to the loading system must be closed and sealed. The seal must only be broken in concert with the inspector.

When loading ballast at the pier, the sea valves must not be opened before the pumps are running.

The danger by ballasting in non-gas-free tanks is important. Look out for gas concentrations as well on the ship as on the pier and reduce the ballast loading if necessary.

It is important that all ships, which are to pump ballast water ashore, inform the inspector via the ship's Agent of the quantity of ballast/cleaning water to be pumped ashore and the expected pumping time, and type of last cargo.

Ballast/cleaning water will only be accepted from ships calling at the pier for loading/discharging. Exceptions from this rule can only be obtained from the management of Asnaes Power Station.

Asnaes Power Station cannot accept ballast/cleaning water containing chemicals, coal tar oil or similar products that may contain phenol.
Sampling of Ballast Water: Samples will be taken from all ballast/tank cleaning water being pumped to the ballast tank at Asnaes Power Station. The sample will be taken before discharging. The sample will be marked with the name of the ship, arrival number and quantity discharged.

When taking a sample, a visual check will be made. If the sample appears red toned, the water can be contaminated with phenol, and all operations should be stopped until analysis has determined that is was not phenol contamination.

DENSITY: Brackish 1006 – 1021. Normal about 1011.
FRESH WATER: Available by pipeline at the berth. Rate 7 t.p.h.
FUEL: Available by barge or truck.
CONSULS: Swedish and Norwegian at Kalundborg. Others at Copenhagen.
REPAIRS: All types of smaller repairs can be carried out.
DRY DOCKS: No dry dock available.
SURVEYORS: Caleb Brett and SGS have local offices in Kalundborg. Saybolt have an office in Copenhagen.
GANGWAY/DECK WATCHMEN: Recommended.
HATCHES: Opening/closing hatches to be carried out by crew.
CUSTOMS ALLOWANCES: See "General" before first port.
REPATRIATION: All repatriation can be arranged normally via Copenhagen 100 km. from Kalundborg.
AIRPORT: Nearest at Copenhagen (100 Km.).
TIME: GMT plus 1 hour (from Late September – Late March). GMT plus 2 hours (from Late March – Late September).
HOLIDAYS: Saturday/Sunday normally no work, also no work on holidays declared as official Danish holidays.
POLICE/AMBULANCE/FIRE: 1-1-2 all alarms.
EMERGENCY CO-ORDINATION CENTRE:
Radio: VHF Channel 16 Lyngby Radio – will contact the Authorities involved.
TELEPHONES: A pay-telephone for international calls is installed at the main gate.
SERVICES: No tank-cleaning facilities; all other services to ships can be arranged via Agent. Discharge of dirty water/oil can be arranged.
BANKS: Unibank A/S, DK-1786 Copenhagen K. Telex: 27543 UNIB DK.

A/S Den Danske Bank, Holmens Kanal 12, 1092 Copenhagen K. Telex: 15880 DDBFX DK.

Privatbanken A/S, Boersgade 4, 1215 Copenhagen K. Telex: 27196 PRIVCO DK.

STORING: See "Prelims".
1. Vessel can be stored from barge and truck.
2. No restrictions – can be stored during discharging.
3. Trucks can proceed alongside.
4. Fork lift trucks can be used on the Jetty.
5. No special customs' regulations except: spirits and tobacco, and other goods under bond to be declared to Customs before unloading/loading.
6. Local riggers can be employed.

SHORE LEAVE: No restrictions for shore leave.
OIL/WASTE DISPOSAL: Special waste containers are placed on the Coal Pier/Oil Pier and the Oil Wharf. Chemical and oily waste must be placed in the yellow container or in drums and deposited next to the waste container. If the ship wants to dispose of a larger amount of oily or chemical waste, a request must be given in advance through the Agent who can advise the cost.

Ships that do not respect the separation of waste will be charged for the expense of separation.
Sanitary Measures: If the ship wants to pump sewage ashore, it must contact the ship's Agent, as ships are not allowed to flush out toilets or bathing water.
IDENTIFICATION CARDS: Shore passes necessary.
AUTHORITY: *Owners of the Port:* SK Power, Strandvejen 102, DK-2900 Hellerup, Denmark. *Tel:* 39473947. *Telex:* 35158. *FAX:* 31-612888.
Port Authority: Asnaes Power Station, Asnaesvej 16, DK-4400 Kalundborg, Denmark. *Tel:* 53-511500. *FAX:* 53-515004. *Contact:* Arne Krogh.

ASSENS: 55.15 N. 09.53 E. (See Plan)

LOCATION: On West side of Funen in Little Belt. Open all year except in severe weather when Little Belt may be frozen.

DOCUMENTS:

Customs Declaration for Ships, Form G25.
Maritime Declaration of Health, Z2 Ln 00-146.
Master's Declaration, Arrival, P650-010 (3/79).
Ice-Breaker Dues, Form G92 (only from 15th December – 31st March).
Crew List.

All Forms can be obtained from the Agent.

PILOTAGE: Not compulsory. Pilot requires 4 hours' notice. Pilot boarding points are 1 – 2 miles North or South of Assens. If necessary, Pilot can board in Little Belt.

ANCHORAGES: In the Roads North of Assens and S.W. of Assens.

MAX. SIZE: Vessels up to 130 m. LOA, max. draft 7 m. and max. beam 20 m. No tides.

RADIO: Lyngby Radio (OXZ).

VHF: There is a VHF station at the Pilot Station, Channel 16.

RADAR: There is radar in the tug used by the Pilot.

TUGS: There is a small tug, for larger tugs 6 hours' notice to be given. Ship's lines are used.

BERTHING: Loading/discharging normally takes place in the Northern Basin, depth 7 m., which is served by railway. The total length of quays is 400 m., made up of 100 m. on the North side, 170 m. on the East side and 130 m. on the South Side.

CRANES: 2 mobile cranes 32 tons, 1 mobile crane 24 tons and 1 mobile crane 8 tons capacity.

STEVEDORES: Working hours 0700 – 1530, Monday to Friday. Overtime by arrangement.

MEDICAL: Full hospital facilities available without prior notice.

FRESH WATER: Good quality potable water available in unlimited quantities.

FUEL: Can be delivered, if sufficient notice given.

REPAIRS: Most types of repairs can be undertaken at the shipyard.

DRY DOCKS: One floating dock for ships up to 1,350 tons, max. length 80 m. and 15 m. beam. and 1 dock for ships up to 1,200 tons, max. length 80 m. and 15 m. beam.

GANGWAY/DECK WATCHMEN: Not necessary.

HATCHES: Opening/closing done by crew.

CUSTOMS ALLOWANCES: See "General" before first port.

AIRPORT: Odense, 50 km. away. Daily connections to Copenhagen.

TIME: GMT plus 1 hour; Summertime GMT plus 2 hours from March to September.

HOLIDAYS: Usual Danish holidays.

POLICE/AMBULANCE/FIRE: Dial 112.

TELEPHONES: Available aboard vessels.

STORING: See "Prelims".

1. Vessels can be stored by truck.
3. Yes.
4. Yes.

SHORE LEAVE: Permitted.

DELAYS: Normally no delays.

AUTHORITY: Assens Havn, Harbour Office, Ndr. Havnevej 21, DK-5610 Assens, Denmark. *Tel:* (64) 713165-713580. *Contact:* N. Hald-Andersen, Harbour Master.

AGENT: A. Fage-Pedersen A/S, Ndr. Havnevej 12, DK-5610 Assens, Denmark. Tel: 64-711200. Telex: 50301 (Fage DK). Cables: Shipping. Fax: (45) 64-711255.

BANDHOLM: 54.50 N. 11.30 E. (See Plan)

DOCUMENTS:

1 Crew List.
1 Passenger List.
1 Stores List.
1 Manifest or Bill of Lading.

PILOTAGE: Not compulsory. Pilot boards vessel at Sea Buoy off Vejroe from pilot vessel, hull painted orange and "Pilot" on each side of the hull. Pilot ordered through Agent, telephone 53888011 four hours prior arrival at Sea Buoy. VHF Channel 16. Telephone number of Pilot Station 54704975/54704152 day/night.

ANCHORAGE: Near Sea Buoy off Vejroe.

RESTRICTIONS: See "General" before first port.

MAX. SIZE: Length 120 m. (approx.) depending on draft. Depth of water 5.5 m.

HEALTH: Normal quarantine rules.

RADIO: Lyngby Radio or Kiel Radio.

TUGS: None.

BERTHING: Sheltered harbour with 570 m. of stone quays available and easily accessible. Depth of water at entrance 5.50 m. Depth at West quays, 4.4 m. At East quay 232 m. there is 5.8 m. average depth. Mobile crane to discharge 100 – 125 t.p.h. with grab. Average daily rates: Coal and coke 800 – 1,000 tons. Grain elevator at East quay, loading capacity 120 t.p.h. storage capacity 25,000 tons. Grain elevator at West quay, loading capacity approximately 140 t.p.h. Storage capacity 20,000 tons.

At North Quay, length 102.8 m., depth 4.4 m., there is a new warehouse available for grain, fertilisers, etc. with a capacity of about 10,000 tons.

STEVEDORES: Ordered by Agent. Working hours Monday to Thursday from 0700 hrs. daily to 1530 hrs., Friday 0700 hrs. – 1500 hrs. Saturday no work.

MEDICAL: Doctors, hospital facilities available.

FRESH WATER: Supplied from quay installations.

FUEL: Available.

REPAIRS: Small deck and engine repairs possible.

OPENING/CLOSING HATCHES: Carried out by crew.

GANGWAY/DECK WATCHMEN: Not necessary.

CUSTOMS ALLOWANCES: See "General" before first port.

AIRPORT: Maribo Airport, 15 km. away. Copenhagen Airport 150 km. away.

TIME: GMT plus 1 hour.

HOLIDAYS: See "Copenhagen".

POLICE/AMBULANCE/FIRE: Dial 112 and ask for Police, Ambulance or Fire Brigade.

TELEPHONE: Not available on board vessels.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Not required.

GARBAGE DISPOSAL: Service available through Agent.

WASTE OIL DISPOSAL: No facilities available.

SEAMAN'S CLUBS: None.

CURRENCY: Danish Kroner (DKr.).

GENERAL: Tide normally 1 ft.

AUTHORITY: Knuthenborg Godskontor, Birketvej 1, DK-4941 Bandholm, Denmark. *Tel:* (45) 53-88 80 89. *Telex:* 40256 hoban dk. *FAX:* (45) 53 88 84 58.

AGENT: Alfr. Hovmand, Shipbroker, Havnepladsen 6, DK-4941 Bandholm, Denmark. Tel: +45-53888011. Telex: 40256 Hoban Dk. Fax: +45-54763611. Cables: "Hovmandship, Bandholm".

COPENHAGEN: 55.42 N. 12.37 E. (See Plan)

DOCUMENTS:

1 Crew List.
2 Passenger Lists.
1 List giving stock of stores and provisions.

Customs Officers bring form to be signed by Master indicating that no epidemic diseases are on board. Formal Bill of Health signed by Danish Consul in port of departure is not necessary.

ARRIVAL: Before a vessel enters the port, its national flag shall be hoisted and the anchors shall be ready to drop. If the vessel is to pass any of the bridges or the lock, outboard davits, etc. shall be taken in.

All vessels shall notify their entry, departure or shifting (of berth) in advance and in ample time to the Port of Copenhagen's Traffic Control Centre by telephone 45 33 47 99 99 or by calling via VHF, Channels 12 or 16. When making such notification, the vessel's name, port of registration and the location from which it is to come or to which it is to sail shall be declared.

Passage through the Port of Copenhagen is forbidden, under the penalty of a fine – cf. Section 70 of these Regulations – to vessels which are not to discharge and load in the port, unless the vessels can pass under both Knippelsbro and Langebro without opening (i.e. raising) of these bridges.

PILOTAGE: Telegr. address: Soundpilot-Copenhagen. Fax: 35431017. Tel: 31386700. Pilotage not compulsory. ETA minimum 6 hours and confirm 1 hour before arrival. VHF Channel 16. Pilot boats painted red. "Pilot" painted in white on side. Pilot flag "G" (white light) – VHF. Pilot comes on board at Middelgrund Fort (Pilot for Drogden at the same place). Pilot boards by ship's ladder.

Bigger ships usually take Pilot by Skaw L/V. Pilots to be ordered by ETA-telegrams to Danpilot, Region Skagen, at least 12 hours in advance. Danpilot listening on VHF Channel 16.

ANCHORAGE: Depth 11 m., 1 mile North of Middelgrund Fort.

RESTRICTIONS: See "General" before first port.

MAX. SIZE: Limited by draft only. Depths in the port, 10 m.; in the Oil Harbour, 10.5 m.; at the Oil Pier (Berths No.842, 843 and 844), 12.0 m.

HEALTH: See "Documents". If fear of suspected disease or fever: yellow flag – VHF.

RADIO: Lyngby Radio: OXZ. VHF Channel 16 to all installations. ETA cables to Agents and receivers, preferably by Lyngby Radio.

RADAR/VHF: No port radar. VHF Channel 16.

TUGS: Towage not compulsory. Tugs join ships at entrance to port. Ship's hawsers only.

BERTHING:

Harbour	*Quay* No.	*Lengths** (m.)	*Depths** (m.)
Fiskerhavnen	1 – 9	80 – 178	2.5 – 3
Sluseholmen	14 – 19	50 – 155	7
Teglvaerkshavnen	23 – 34	42 – 166	2 – 7
Teglholmen	38 – 52	73 – 144	2 – 7
Teglgadeomradet	59 – 60	22 – 28	4
Frederiksholmslobet	71 – 76	29 – 183	4
Enghave Brygge	81 – 87	80 – 135	4.4 – 6.3
Tommergraven	88 – 94	61 – 120	2.5 – 5
Gasvaerkshavnen	97	140	3.7
Kalvebod Brygge	102 – 113	73 – 150	4 – 6.9
Christians Brygge	114 – 122	26 – 90	3.1 – 6.9
Havnegade	139 – 143	100 – 120	6.9
Nyhavn	144 – 152	29 – 114	2.5 – 5
Kvaesthusbroen	153 – 159	45 – 125	6.2 – 8
Kvaesthusgraven	160 – 161	78 – 119	6.2 – 7.5
Amaliehaven	162 – 164	100 – 158	7.5 – 8.1
Sondre Toldbod	165 – 168	92 – 95	6.9 – 8.1
Nordre Toldbod	171 – 179	25 – 77	2.5 – 7.5
Lystbadehavnen	183 – 187	57 – 118	3
Langeliniekaj	190 – 199	27 – 131	4 – 10

Harbour	*Quay* No.	*Lengths** (m.)	*Depths** (m.)
Sondre Frihavn	200 – 219	38 – 230	7 – 9.1
Mellembassin	220 – 228	115 – 145	3.5 – 7.5
Nordbassin	230 – 239	50 – 240	3 – 9
Redmolen	240	183	9.1 – 10
Kronlobsbassin	241 – 249	63 – 180	9.5
Orientbassin	250 – 266	72 – 165	7 – 10
Skudehavnen	317 – 320	80 – 110	2.5 – 2.8
Faergehavn Nord	390 – 398	15 – 177	6 – 6.7
Kalkbraenderihavnen	400 – 428	35 – 115	2.8 – 6.7
Svanemollehavnen	429 – 437	30 – 150	1 – 4
Sjaellandsbroen	508 – 509	100 – 130	3.7
Slusehavnen	510 – 514	63 – 80	3.7
Islands Brygge	550 – 564	50 – 140	6.2 – 9.5
Christianshavn	570 – 572	110 – 120	3.1 – 6.2
Christianshavns Kanal	573 – 602	60 – 135	1 – 6.2
Christianshavn	603 – 636	29 – 127	1 – 7.5
Christiansholm	640 – 650	65 – 145	1– 10
Refshaleoen,vest	662 – 683	45 – 210	1 – 8.1
Lynettehavnen	684 – 688	95 – 125	1 – 5
Amagervaerket	835 – 838	40 – 140	6.0 – 10.5
Provestenshavnen	840 – 861	35 – 145	5 – 12

Also see "Tankers".

*Please note that the minimum and maximum lengths of the quays are not directly related to the depths shown. The depths are the minimum and maximum depths in the relevant harbours.

BRIDGES: Larger ships must take Pilot and tugs to pass the bridges down to the South Harbour.

The Knippelsbro and Langebro will be closed for passage as follows:

	Knippelsbro/Langebro
Monday – Friday	0000 – 0550 hrs.
	0615 – 0655 hrs.
	0735 – 0900 hrs.
	1500 – 1800 hrs.
Saturday	0000 – 0655 hrs.
	0735 – 0900 hrs.
	1200 – 1230 hrs.
	1300 – 1330 hrs.
	1800 – 2400 hrs.
Sundays and Holidays	0000 – 0800 hrs.
	1200 – 1800 hrs.
	2000 – 2400 hrs.
Constitution Day 5th June	1200 – 1300 hrs.
Christmas Eve 24th December and New Year's Eve 31st December	1800 – 2400 hrs.

CONTAINER TERMINAL: At the Levant Quay in the free port. Quay length 500 m., depth alongside 10 m. 2 Container cranes capacity 32 tons. Horizontal handling by straddle carriers and a number of front loaders.

STEVEDORES: ETA earliest possible by VHF and not later than noon on the day before loading or discharging is intended to be commenced.

MEDICAL: No advance notice necessary. Hospitals available.

TANKERS: 10/12 berths according to size.

Provestens Oil Harbour:

Depth at Quay 1:	10.5 m.
Quay 2:	9.1 – 10.5 m.
Quay 3:	6.0 – 9.1 m.
Quay 4:	9.1 – 10.5 m.
Quay 5:	10.5 m.
Oil Pier North:	6.0 m.
Oil Pier East:	12.0 m.

Length and beam unimportant. Slop barge available.

FRESH WATER: From quay or water boat.

FUEL: All grades available. At bunker station, no notice required, delivery 24 hours a day. By lighter in port or in roads; 10 hours notice preferred.

FIRE PRECAUTIONS: Ready hawsers fore and aft. No engine repairs.

CONSULS: The following countries are represented.

Argentina
Australia
Austria
Belgium
Bolivia
Brazil
Bulgaria
Burkina Faso
Canada
Chile
China
Colombia
Costa Rica
Cuba
Cyprus
Ecuador
Egypt
Finland
France
Germany
Ghana
Greece
Guatemala
Honduras
Hungary
Iceland
India
Indonesia
Iran
Iraq
Ireland
Israel
Italy
Ivory Coast
Japan
Korea
Kuwait
Lesotho
Liberia
Libya
Luxembourg
Malaysia
Malawi
Malta
Morocco
Mexico
Monaco
Nepal
Netherlands
Norway
Pakistan
Panama
Paraguay
Peru
Philippines
Poland
Portugal
Romania
Russia
Rwanda
Saudi Arabia
Senegal
Sierra Leone
Slovakia
Somalia
South Africa
Spain
Swaziland
Sweden
Switzerland
Thailand
Tunisia
Turkey
Uganda
Ukraine
United Kingdom
United States
Venezuela
Yugoslavia

REPAIRS: All types of repairs possible.

GANGWAY/DECK WATCHMEN: Deemed unnecessary.

OPENING/CLOSING HATCHES: To be opened by ship's crew.

CERTIFICATES: To be on board:

Ship's Register.
Radio Safety Certificate.
Safety Equipment Certificate.
International Load Line Certificate.
Derat Certificate.

CUSTOMS ALLOWANCES: See "General" before first port.

REPATRIATION: Facilities exist for changing crew and arranging any necessary repatriation.

AIRPORT: 6 miles from centre. Direct lines for all parts of the world.

TIME: GMT plus 1 hour.

HOLIDAYS: New Year's Day (January 1st); Maundy Thursday; Good Friday; Easter Monday; Prayer Day; Ascension Day; Whit Monday; Christmas Day (December 25th); Boxing Day (December 26th).

Half Holidays: Labour Day (May 1st); Constitution Day (June 5th); Christmas Eve (December 24th).

Working Hours: 0700 – 1630 with 2 half-hour meal breaks.

Overtime work on Saturday and Sunday should be ordered by 1130 hrs. on Friday.

The working hours vary slightly from port to port as some start at 0730 and others at 0800 hrs., but a 42.5 hour week is common to all.

POLICE/AMBULANCE/FIRE: Call "112".

TELEPHONES: In many berths telephones can be placed on board ships.

SERVICES: All services available (tank cleaning, discharge of tank washings, compass adjusting etc.).

SHORE LEAVE: No restrictions.

IDENTIFICATION CARDS: Not necessary except in Oil Harbour, where the Port Authority deliver the cards.

GENERAL: Customs Authorities supervision of ship's provisions and bonded stores is carried out in the Free Port in the same way as in Customs Port. In this connection the Free Port is not a Free Port.

AUTHORITY: Port of Copenhagen Authority, P.O.Box 2083, Nordre Toldbod 7, DK-1013 Copenhagen K, Denmark. *Tel:* 45 33 14 43 40. *Telex:* 15439. *FAX:* 45 33 93 23 40. *Cables:* "Copenport". *Contact:* Erik Schafer, General Manager. Erik Lober, Port Captain.

ENSTED: 55.01 N. 09.26 E. (See Plan)

Also refer to "Aabenraa".

DOCUMENTS: See "Aabenraa".

PILOTAGE: See "Aabenraa".

ANCHORAGES: See "Aabenraa".

HEALTH: In event of disease or fever on board, vessel's Agent to be informed before arrival.

RADIO: Blaavand or Lyngby Radio.

TUGS: Large vessels may require towage assistance on entering and leaving Ensted Harbour. 24 hours notice is required to call a Svitzer tug.

VHF: Pilot on Channels 12 and 16.

BERTHING:

Oil Terminal:

Oil Pier (Berth No. 1):

Length overall	350 m.
Beam	No limits
Water depth	18 m.
Bow/centre	165 m.
Max. height water-level/manifold	26.5 m.
Load/discharge line	2×16 in.
Capacity (each line)	2,500 cu.m./hr.

Oil Pier (Berth No. 2):

Length overall	350 m.
Beam	No limits
Water depth	15.5 m.
Bow/centre	165 m.
Max. height water-level/manifold	17.0 m.
Load/discharge line	2×12 in.
Capacity (each line)	1,000 cu.m./hr.

Coal Terminal: Largest vessels which can be accommodated at the Deep Sea Coal Berth:

Max. Length Overall	350 m.
Max. Beam	No restriction.
Water Depth	18 m.
Discharging facilities for coal	1×40 ton unloading crane and 1× continuous unloader (1,550 cu.m./hour)
Total outturn/24 hours	40,000 tonnes
Height from water level to hatch coaming	20 m.
Outlay of cranes from quay side to centre grab	38 m.
Max. distance between centre of cranes (grabs)	285 m.

STEVEDORES: To be informed by Agent.

DENSITY: 1015.

MEDICAL: A few hours notice required to arrange for doctor to come on board. Hospital in Aabenraa.

TANKERS: See "Berthing".

TIDE: No tide – arriving and sailing day and night.

FRESH WATER: Fresh water from shore line 5 t.p.h.
FUEL: Available by barge or truck.
CONSULS: Norway, Germany, Finland, Sweden and United Kingdom.
REPAIRS: All types of deck and engine repairs are possible.
OPENING/CLOSING HATCHES: By crew.
REPATRIATION: Facilities exist for effecting crew changes.
AIRPORT: Skrydstrup. The distance from airport is 25 km. Airport is served by regular airlines via Copenhagen.
POLICE/AMBULANCE/FIRE: Telephone number 112.
SHORE LEAVE: Crew members are allowed ashore.
TELEPHONES: Available for placing on board.
GARBAGE DISPOSAL: A garbage container will be placed alongside by harbour officials if requested to do so.
WASTE OIL DISPOSAL: On request to Port Authorities, it is possible to have tanker trucks come alongside vessel to receive slops. These must be pumped by the vessel and providing the quantity is reasonable (residues from last voyage) this service is free.
SEAMAN'S CLUBS: See "Aabenraa".
CURRENCY: Danish Kroner (DKK).
AUTHORITY: Soenderjyllands Hoejspaendingsvaek, Flensborgvej 185, DK-6200 Aabenraa. *Tel:* International +45 74 314141. *Telex:* 52140 SHDK. *FAX:* International +45 74 314151. *Contact:* N.E. Pedersen, Harbour Master.

AGENT: Aabenraa Shipping Agency Ltd. (Aabenraa Skibsagentur ApS). Kilen 29 (P.O.Box 31), DK-6200 Aabenraa. Tel: (International +45) 4 627700 (day and night). Telex: 52160 AGENCY DK. Cables: Shipagency Aabenraa.

ESBJERG: 55.28 N. 08.26 E. (See Plan)

DOCUMENTS:
Tonnage Certificate.
Derat or Exemption Certificate.
1 Crew List.
1 Crew Personal Effects List.
1 Master's Declaration.
1 Stores List.
Cargo Manifest or Bill of Lading.
Dangerous Cargo List.

PILOTAGE: Advance notice of 12 hours prior to ETA Pilot Station at "Graadyb Barre" is required. This ETA to be confirmed/altered 3 hours prior to actual time of arrival.

Message can be given via coast radio station "Blaavand Radio" (OXB) or via Port Authority's VHF – watch is kept on Channel 16. (Tel: +45-75129200).

Cable address: "Pilotstation Esbjerg".

Telephone: +45-70208100.

Two pilot vessels, painted orange, with "Pilot" painted in white on sides stationed in the Port of Esbjerg. One is a 78 g.r.t. vessel and one is a fast launch.

Both vessels equipped with VHF Channel 16 and carrying signals as prescribed. Pilot boards outside Graadyb Barre, at Buoy No. 2. Vessels awaiting Pilot or high tide should anchor approximately 1 mile West of buoy No. 2. Large vessels wait 2 miles from buoy No. 2.

Pilot is not compulsory except for tankers over 500 d.w.t. and when tugs are assisting in berthing.

ANCHORAGES: There are anchorage areas West of Buoy No. 2 (depth 35 ft. at MLWST).
RESTRICTIONS: No ice to impede navigation. No ice dues charged. Also see "General" before first port.
MAX. SIZE: Pilot Restrictions: Max. draft accepted: 10.5 m.

Entry to port is through a dredged channel over Graadyb Barre, width 200 m., depth 10.3 m. at MLWST.

Tide: Difference between normal high water and normal low water is 4 ft. (approx.). Max. current 2.5 knots – 3 knots.

RADIO: Lyngby Radio.
TUGS: Tugs join vessel at Esbjerg Roads. Ship's own hawsers must always be used. 3 tugs available of 800 h.p., 2,500 h.p. and 4,000 h.p.
BERTHING:

	Approach at MLWST	*Berth at MLWST*
Trafikhavn	33 ft. 9 in.	24 ft. 7 in. – 37 ft. 9 in.
Australienkaj	35 ft.	35 ft.
Foergehavn	28 ft.	15 ft.
Outer Foergehavn for Roll-on/Roll-off vessels	31 ft.	22 ft. – 28 ft.
Dokhavn	22 ft.	22 ft.
Englandskaj	31 ft.	25 ft.
Osterhavn	31 ft.	22 ft. – 35 ft.
Osterhavn – New Berth (when entering max. draft 31 ft., LOA 705 ft.)	31 ft.	35 ft.
Sonderhavn	31 ft.	35 ft.
Tauruskaj	17 ft.	20.6 ft.
Fishery Harbour – Consumption	15 ft.	15 ft. – 17 ft.
Fishery Harbour – Industrial Fish	22 ft.	17 ft. – 22 ft.

For berthing in Trafikhavn with vessels of (approx.) 5,000 g.r.t. or more and for berthing in Sonderhavn with vessels of 10,000 g.r.t. or more. The Pilots require "Slack Water" – i.e. high or low water.

Max. draft for berthing on high water: 10.5 m. (34 ft. 5 in.).

Max. draft for berthing on low water: 8.9 m. (29 ft. 3 in.).

CARGO HANDLING: The Port of Esbjerg has no specially equipped berths besides the tanker berths, and container terminals for lift-on/lift-off equipped with one travelling gantry crane 32 tons, but private companies own suction plants for discharge/loading of feeding stuffs. Furthermore, mobile cranes also with grabs and stationary coal cranes are available. Container terminals for Roll-on/Roll-off. Vessels with own gear can however be handled successfully, at different berths. 12 mobile cranes, capacity up to max. 120 tons, 86 trucks, capacity up to 45 tons, 4 bobcats, 1,200 trailers 20 ft. and 40 ft., and 30 tugmasters.
STEVEDORES: Gangs are mustered daily at 0700, and 1000 hrs. ETA should be given to above hours to ensure that gang(s) are available on arrival. Working hours are from 0700 to 1630 and meal hours are 0830-0900 and 1200-1300. No work on Saturdays. Overtime can be arranged.
MEDICAL: Medical attention can be arranged at any time. Modern hospital facilities available.
TANKERS:
Trafikhavn: Depth in approaches to oil berths in Trafikhavn MLWST 33 ft. 9 in. (MHWST 38 ft. 1 in.).

New Oil Berth No. 101: Depth alongside old oil berth No. 101 MLWST 35 ft. (MHWST 40 ft.)

Old Oil Berth No. 102: Depth alongside new oil berth No. 102 MLWST 25 ft. (MHWST 30 ft.)

The length between the outer point of Berth No. 101 and the opposite outer point of Berth No. 102 is 1,200 ft.

Osterhavn: Depth in approaches to oil berth in Osterhavn MLWST 31 ft. (MHWST 36 ft.). Max. draft 31 ft. 2 in.

Powerstation Vestkraft No. 506: Depth alongside MLWST 35 ft. (MHWST 40 ft.).

Under normal weather conditions Pilot states to be able to berth tankers with a LOA of max. 735 ft.

FRESH WATER: Can be delivered at all berths. Rate 20 t.p.h.
FUEL: All viscosities available by road tanker. Marine Gas Oil also by tanker vessel. 4 hours should be given, always during office hours.
FIRE PRECAUTIONS: A fire watch is necessary when loading/discharging oil and petrol, if flash point is under 50°C.
CONSULS:

Belgium	tel. (75) 13 26 00
Finland	tel. (75) 12 22 66
France	tel. (75) 12 31 33
Germany	tel. (75) 12 31 33
Iceland	tel. (75) 12 51 00
Netherlands	tel. (75) 14 33 11
Norway	tel. (75) 18 04 11
Sweden	tel. (75) 14 42 22
United Kingdom	tel. (75) 13 08 11

REPAIRS: All types of deck and engine repairs can be effected.
DRY DOCKS: No dry docks, but slipways: Slipway No. 1 for trawlers, with weight max. 125 tons; Slipway No. 2 for vessels, with weight max. 250 tons; No. 3 – 500 tons; No. 4 – 750 tons.
GANGWAY/DECK WATCHMEN: Watchman is not essential, but advisable.
OPENING/CLOSING HATCHES: This can be done by members of ship's crew, or by stevedores at an additional charge of 8%.
CUSTOMS ALLOWANCES: See "General" before first port.
REPATRIATION: Ample facilities for effecting crew changes and arranging repatriations.
AIRPORT: 8 km. from centre of town. Daily flights to Copenhagen Stavanger and Humberside.
TIME: GMT plus 1 hour in Winter. GMT plus 2 hours in Summer (6th April – 28th September).
HOLIDAYS: New Year's Day (Jan. 1); Maundy Thursday; Good Friday; Easter Day; Day after Easter Day; the 4th Friday after Easter; Ascension Day; Whit Sunday and Whit Monday; Christmas Day and Boxing Day. Permission to load/discharge on these days obtainable.
POLICE/AMBULANCE/FIRE: In case of emergency, dial "112" and ask for: Brand (fire), Politi (police), or Ambulance. Regular Tel. numbers are: Police 75 12 46 66; Ambulance and Fire Dept. (Falck) (75) 15 82 22.
TELEPHONES: Possible to have telephones installed on board.
SERVICES: No tank-cleaning equipment available. For discharge of tank washings apply to Port Master's Office Tel. 75 12 92 00. Compass adjusting can be effected.
SHORE LEAVE: Normally granted.
IDENTIFICATION CARDS: Not necessary.
GARBAGE DISPOSAL: Service available through local private firms. Contact Gunnar Lunds Olieservice AS, Tel: (75) 138600 or EAR Disposal Service, Tel: (75) 141011.
WASTE OIL DISPOSAL: Service available. Contact Gunnar Lunds Olieservice AS, Tel: (75) 138600 or notify the port through your Agent.
SEAMAN'S CLUBS: No seaman's clubs. Cinemas, restaurants and entertainment available in town.
CURRENCY: Danish Kroner (DKr.).
DEVELOPMENTS Extension of the Harbour towards the East, and modernisation of Trafikhavn, Sonderhavn and Fishery Harbour. Extension of Lo-Lo Terminal.
AUTHORITY: Port of Esbjerg Authority, Hulvejen, P.O. Box 2, DK-6701 Esbjerg, Denmark. *Tel:* (75) 129200. *FAX:* (75) 133167 (Harbour Master's Office). *Contact:* V.V.Leisner, General Manager. Paul Press Nielsen, Harbour Master.

FREDERICIA: 55.33 N. 09.45 E. **(See Plan)**

DOCUMENTS:

1 copy Bill of Lading for all cargo (manifests are not required).
1 copy Manifests for Dangerous Cargo.
2 copies Crew List.
2 copies List of Dutiable Goods.
2 copies Stores Lists.

PILOTAGE: Eight Pilots available for docking purposes and for through traffic to any place in Denmark or the Baltic. Pilots have a 24-hour watch and are located in the West Harbour. Can be contacted day or night over VHF radio Channel 16, working 12, 13 and 71, or Tel. 75-920959 and 75-920888. Pilotage is compulsory for all ships for Quay No. 23 and for tankers carrying chemicals or LPG and for all other tankers above 1,500 d.w.t.

Bigger ships usually take Pilot by Skaw L/V. Pilots to be ordered by ETA-telegrams to "Danpilot, Region Skagen", at least 12 hours in advance. Danpilot listening on VHF Channel 16.

Shipmaster's Report: June 1985.

Pilot may be taken onboard near buoy in position Lat. 55° 34.8' N., Long. 9° 50.8' E.

ANCHORAGE: To avoid hindrances to docking or undocking ships, ships of over or about 4,000 d.w.t. are requested to anchor off Trellenes. Smaller ships will find good anchoring conditions in Strib Bugt.

RESTRICTIONS: Day and night entry possible, least depth in the approach channel is 15.0 m. Also see "General" before first port.

MAX. SIZE:

	Max. draft acceptable
Kastels Harbour	11.70 m.
Old Harbour	5.3 m. to 7.20 m.
Fishing and Shipyard Harbour	2.80 m.
Dock Entrance	4.60 m.
West Harbour	6.70 m. – 8.70 m. – 9.70 m.
Mollebugt Harbour	8.70 m. – 13.25 m.
Centre Harbour	14.70 m.

Also see "Tankers".

HEALTH: See "Copenhagen".

VHF: Radio communication for ship movements through "Fredericia Harbour", Channels 16, 13, 12 and 71. Advise "Fredericia Port" prior to arrival, shifting and departure (Day and night).

Agents, receivers, etc., can be called through usual coastal radio stations ("Lyngby Radio" when in Danish waters).

TUGS: Tugboats from Svitzer's Salvage Enterprise is stationed in Fredericia, but any amount of tugs are available, when ordered previously.

BERTHING:

Mollebugt Harbour: Quays Nos. 24, 25, 26, 27 and 28. Length 750 m., depth 9.0 m. – 13.5 m.

Facilities for container traffic and Ro/Ro traffic. 40 ton gantry crane and 3×25 ton gantry crane with hook and grab, max. capacity 300 t.p.h. and grain conveyor with max.capacity 600 t.p.h. 2 mobile cranes, capacity 52 tons and 60 tons with hook and grab. Rail tracks. Facilities for temporary storage of goods. Modern quayside warehouses.

Centre Harbour: Quay No. 21-22, length 175 m. + 250 m., depth 15 m., 3×25 ton gantry cranes with hook and grab, max. capacity 450 t.p.h. 60 ton and 52 ton mobile cranes with hook and grab.

Facilities for temporary storage. Quayside warehouses.

Gas, Oil & Chemicals Harbour: Quays Nos. 20, 23, 41 and 42 for tankers.

Quay No. 20, 15 m. depth in berth. Hydraulically operated hose handling gear for discharging petrol and oil products. 10 in. and 12 in. ASA. Connection range between + 0.4 and 18.5 m. above MWL.

Quay No. 23, 7.5 m. depth in berth. Equipped for discharging oil products, liquid chemical products in 4 in. DIN hoses, liquid carbon dioxide.

Quay No. 41, 10 m. depth in berth. Equipped for loading and discharging petrol and oil products.

Quay No. 42, 15 m. depth in berth. Equipped for loading and discharging petrol, oil products and crude oil.

West Harbour: Quays Nos. 13 to 18, length 590 m., 7 m. – 10 m. depth in berth.

Facilities for container traffic, Ro/Ro traffic. 25 ton gantry crane with hook and grab, max. capacity: 300 t.p.h. 6 ton gantry crane with hook and grab, max. capacity: 150 t.p.h. 2 mobile cranes, capacity 60 tons and 52 tons. Suction plant* available for discharging feedstuffs – max. capacity: 80 t.p.h. Rail tracks. Facilities for temporary storage of goods. Bulk terminal for loading feedstuff max. capacity 300 t.p.h.

Modern quayside freezing and storage facilities.

Shipyard Harbour: Quays Nos. 8 to 12, length 500 m., 5.0 m. – 6.5 m. depth in berth. Modern repair and equipment piers with workshops. Slipways available for 75 ton and 1,000 ton light displacement. Floating dock 227 m. × 35 m. max. capacity: 22,000 ton light displacement. Floating dock 150 m. × 23.05 m. max. capacity: 8,000 tons light displacement. Dry dock facilities 110 m. × 22 m., 5.1 m. access depth. Average docking/sailing time: 45 mins.

Old Harbour: Quays Nos. 6 & 7, length 200 m., 5.6 m. – 7.5 m. depth in berth. Mobile crane, capacity 60 tons. Suction plant* available for discharging grain – max. capacity 60 t.p.h. Facilities for loading liquid chemical products. Rail tracks. Facilities for temporary storage of goods.

Kastels Harbour: Quays Nos. 1, 2 and 3, length 450 m., 12 m. depth in berth. Mobile crane, capacity 60 tons. Loading facilities for bulk fertiliser* – max. capacity: 400 t.p.h. Grab crane* – max. capacity: 300 t.p.h. Siwertell worm conveyor – max. capacity: 600 t.p.h. Facilities for loading and discharging liquid chemical products and ammonia. Rail tracks. Facilities for temporary storage of goods. Preference for vessels destined for the Kemira Company.

* Private.

CARGO HANDLING FACILITIES: The Port possesses all types of modern facilities for loading and discharging. Crane facilities include a 40 ton gantry crane, 7 grab cranes with a max. capacity of 300 – 450 t.p.h. and a number of grab and hook cranes and mobile cranes with capacities ranging from 52 tons to 60 tons. There are ample facilities for container and Ro/Ro traffic. The suction plant* is capable of handling up to 80 t.p.h. and the Siwertell worm conveyor equipment* has a max. capacity of 600 t.p.h. In addition, there are modern facilities for handling liquid chemicals, gas, petrol and oil products and bitumen. There are also facilities for handling fertiliser* – max. 400 t.p.h. The Port has a rail network freeze/cold stores*, approximately 6,000 sq.m. modern warehouse space and ample facilities for temporary quayside storage.

* Private.

STEVEDORES: Ordinary working hours Monday to Thursday: 0700 – 0830 hrs., 0900 – 1200 hrs., 1230 – 1530 hrs. Night gangs on week days must be ordered no later than 1230 hrs. the same day. Working overtime weekends is possible, but gangs must be ordered no later than Friday 1230 hrs. Average output per 8-hour day, loading or unloading mixed general cargo, is 200 tons per gang.

MEDICAL: Hospitals available.

TANKERS:

	Berth 20	*Berth 23 (Chemicals)*
Max length acceptable (approx.)	275 m.	150 m.
Max. beam acceptable	no limit	no limit
Max. draft acceptable	13.00 m.	7.20 m.
Depth in berth	15.00 m.	7.50 m.
Water Density (approx.)	1015	1015
Type of berth	T-Head/Quay	T-Head
Nature of bottom	Sand	Sand
Hose connections	Amidships	Amidships

	Berth 41	*Berth 42*
Max. length acceptable (approx.)	190 m.	274 m.
Max. beam acceptable	No limit	No limit
Max. draft acceptable	10.00 m.	13.25 m.
Depth in berth	10.30 m.	15.00 m.
Density of water (approx.)	1015	1015
Type of berth	Quay	T-head
Nature of bottom	Sand	Sand
Hose connections	Amidships	Amidships

Jetty I/Berth 41 – Chicksan arms – for vessels discharging bitumen and other special products, and for loading fuel-oil, gas-oil, gasoline, diesel fuel, and LPG.

Jetty II/Berth 42 – Curacao hosehandling gear – for vessels discharging and loading crude, fuel-oil-handling subject to size of vessel.

Pilotage: Pilotage is compulsory for all ships for Quay No. 23 and for tankers carrying chemicals or LPG, and for all other tankers above 1,500 d.w.t.

Dirty Ballast Reception: Oily ballast reception facilities available – maximum quantity 5,500 cu.m.

Restrictions: Height from normal water level to hose connections must not exceed 14.80 m. during discharging and ballasting.

Communication: The port is equipped with VHF station – Channels 16, 12, 13 and 71.

FRESH WATER: Available ex wharf. Rate 10–50 t.p.h.

FUEL: Available.

CONSULS: Finland, France, Great Britain, Iceland, Netherlands, Norway and Sweden.

REPAIRS: All repairs undertaken with modern equipment. Also see "Berthing – Shipyard Harbour".

DRY DOCKS: Length 110 m., breadth 22 m. Access depth 5.1 m. Slipway available for ships up to 1,000 tons, light displacement (divers available). Also see "Berthing – Shipyard Harbour".

GANGWAY/DECK WATCHMEN: Available upon request.

OPENING/CLOSING HATCHES: Stevedores or crew.

CERTIFICATES:

Ship's Register.
International Tonnage Certificate.
Load Line Certificate.
Radio Safety Certificate.
International Safety Certificate.
Derat Certificate.

CUSTOMS ALLOWANCES: See "General" before first port.

AIRPORT: At Billund and Beldringe 35 miles from Fredericia.

REPATRIATION: All facilities exist.

TIME: GMT plus 1 hour in Winter and GMT plus 2 hours in Summer (late March – late September).

HOLIDAYS: See "Copenhagen".

POLICE/FIRE/AMBULANCE: Police 75912300; Ambulance 75822244; Fire 75921166; Emergency 112.

TELEPHONES: Both oil piers have telephones in the watchmen's room but for local calls only.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Required.

GARBAGE DISPOSAL: Galley garbage containers located on the piers. Can also be arranged through the Harbour Master's office. Galley garbage in larger quantities can be collected.

WASTE OIL DISPOSAL: With 24 hours notice to the Harbour Master's office, ships loading/discharging are entitled to free disposal of waste oil in reasonable quantities.

SEAMAN'S CLUBS: Somandshjemmet (Missions to Seamen), Gothers Gate 40, Fredericia. Tel: 75-920190. Facilities: Beds, meals, snacks, football, money exchange and international telephone.

CURRENCY: Danish Kroner.

AUTHORITY: Port of Fredericia, Vesthavnsvej 33, Post Box 242, DK-7000 Fredericia, Denmark. *Tel:* 75-920255. *FAX:* 75-925104. *Contact:* P.E. Skoett, Port Director. Bo T. Nielsen, Harbour Master.

FREDERIKSHAVN: 57.28 N. 10.33 E. (See Plan)

PORT LIMITS: See "Plan".

DOCUMENTS: Ship's papers, 2 Crew Lists, 1 Passenger List, 2 Bills of Lading, 1 Manifest, 1 Customs Declaration of tobacco and spirits for Officers and crew, 1 Customs Declaration (TOLDPAS) if arrived from port in EEC or Scandinavia.

PILOTAGE: Call the Pilot through Lyngby Radio (Call Sign OXZ), or Skaw Pilot Station (VHF Channel 16 or Tel: 98445566). Pilot boards outside the harbour at the buoy 1.7 miles S.E. of the harbour entrance. ETA required as soon as possible.

ANCHORAGE: In the roads South of the red leading lights in 10 m. water depth. Good holding ground.

Anchoring is prohibited within 20 m. of ferry berth (Quay No. 2 and 3).

RESTRICTIONS: Vessels coming from or entering the naval base and the fishing harbour must wait for ships entering or leaving the commercial harbour. Maximum speed Frederikshavn L/B – to harbour 12 knots, in outer basin – 7 knots, Harbour – 3 knots. Entering the Naval Base without special permission prohibited. Ships entering the harbour must if necessary wait outside for ships leaving the harbour. Also see "General" before first port.

MAX. SIZE: Max. length about 200 m., depth in harbour 8 m. Tide about 0.3 m.

HEALTH: Use international quarantine signals. If suspected disease or fever on board cable the Agent to arrange everything to obtain pratique as soon as possible.

RADIO: Lyngby Radio.

VHF: The harbour office is fitted with VHF Channels 16, 12 and 13. Watch kept day and night. Vessels must call the Harbour Office before entry and leaving.

TUGS: Tugs join vessel outside the harbour between the buoy and the harbour entrance. Only the ship's line to be used.

BERTHING: No special requirement for berthing in the harbour, but several big ferries are running in and out during day and night and sailing after a time schedule. Vessels must call the harbour office, VHF Channel 16, for permission to enter and before leaving the berth.

BULK HANDLING FACILITIES: Ferry berths in Harbour, depth 6.4 m. to 8 m., equipped for handling containers and Roll-on/Roll-off traffic.

STEVEDORES: ETA advices are required before 0900 hrs. in order to arrange gangs for discharge/loading the same day.

MEDICAL: No special requirement is necessary for medical attention. The town has all ordinary medical and hospital facilities.

TANKERS: Oil quay max. depth 8 m., Hoses 8 in. diameter. Reducing pieces may be necessary. Slop water discharging and cleaning can be done by oil-separator. Tankers max. draft 8 m.

DENSITY: 1,020 (approx.).

FRESH WATER: Supplied by water hydrants on all quays.

FUEL: All kinds of fuel are available and no advance notice is necessary.

FIRE PRECAUTIONS: No smoking and no open fire if discharging oil.

Fire watchman from the Harbour Authority required if loading/discharging gas, dangerous chemicals and ammunition, or if not gas-free. Besides the watchman, the Harbour Authority will require restricted access to vessel.

CONSULS:

Finland	Tel. 98 421488	Norway	Tel. 99 204060
France	" 98 422155	Sweden	" 96 200200
Germany	" 98 125633	Iceland	" 98 429111

REPAIRS: Two steel shipyards and one wood shipyard doing all types of repairs.

SURVEYORS: Cargo Inspector – B. K. Mortensen, Ahaven 17. Tel: 98-425064.

DRY DOCKS: Two dry docks, two floating docks and two small slips. Dimensions of largest dry dock: length 212 m., breadth 32.2 m. and depth 7 m. Largest floating dock: length 129 m., breadth 28 m., depth 6.5 m., capacity 7,500 tons.

GANGWAY/DECK WATCHMEN: Not compulsory but available if required.

OPENING/CLOSING HATCHES: Ship's crew open and close the hatches. If necessary the longshoremen can do it for extra pay.

CUSTOMS ALLOWANCES: See "General" before first port.

REPATRIATION: Agent will arrange repatriation. All facilities for changing crew.

AIRPORT: Aalborg Airport, 60 km. from port, several daily flights to Copenhagen.

TIME: Local time GMT plus 1 hour.

HOLIDAYS: Weekends, Easter, Whitsun, Christmas, New Year and two Danish holidays in the Spring.

POLICE/AMBULANCE/FIRE: Police, Tel: 98-421444; Ambulance, Tel: 70-102030; Fire, Tel: 98-420801; in emergency dial 112.

SERVICES: Separating of slop water, compass adjusting, oil bunkering, repairing all kinds of navigation instruments and provisions.

BANKS: National and local.

STORING: (See "Prelims"). All stores available. Fork lift trucks can assist. Trucks can proceed alongside at berth. Local riggers can be employed. No difficulties with paperwork (Customs).

SHORE LEAVE: After clearing inwards, crew members are allowed ashore without special permission.

GARBAGE DISPOSAL: Containers alongside. No charge if harbour dues are paid. Otherwise on ship's account. Collection on request. Telephone: 98421988.

WASTE OIL DISPOSAL: Collection alongside with tanker trucks. Charges as mentioned above. All requests through the Harbour Office (Tel: 98421988. Fax: 96200988).

SEAMAN'S CLUBS: Somandshjemmet, Tordenskjoldsgade 15B. Tel: 98420977. Fax: 98431899.

The Danish Seamen's Home is run by the Domestic Seamen's Mission, within the Danish National Church. The reception desk at the Seamen's Home is at your service around the clock with telephone service, both local calls and calls out of the country, dispatch of post, and safekeeping of money and valuables.

Good restaurant with really good and well-prepared meals at reasonable prices.

Lounge with colour TV – also billiards and table tennis for your enjoyment.

42 comfortable rooms, most of them with private bath and toilet, telephone and colour TV.

Frederikshavn Somandshjem is centrally situated only 200 m. from the railway station and bus terminal, and just 100 m. from the town's charming pedestrian street.

From the large ferry harbour there are daily departures to Sweden and Norway, and there is a direct bus connection by Fly-Bus Nord to the airport at Aalborg.

CURRENCY: Danish Kroner.

RULES/REGULATIONS: *Harbour Area:* The harbour area is shown on plan (See "Harbour Limits" Plan).

(a) To the North, the area is bounded by the everyday waterline for the filled-up area.

(b) South of this and until 300 m. North of the green outer jetty lighthouse, the area is limited by the everyday waterline for the outside of the outer jetty.

(c) The harbour's sea area is to the North bounded by a line radiating from a point on the outer jetty 300 m. North of the green outer jetty lighthouse and to the South by a line starting 110 m. S.W. of the red outer jetty lighthouse.

(d) The location of the endpoints of the lines mentioned under (c) are shown on the plan.

(e) From a point 110 m. S.W. of the red outer jetty lighthouse, the limit of the area is the everyday waterline for the Northern side of the jetty goes between the outer harbour and the naval station via the approach to the naval station to the fence S.E. of Ferry Berth IV.

(f) From here on, the area is bounded by the naval station fence.

From the outer harbour, there is an approach to the ferry harbour/freight harbour, to the fishing harbour and to the naval station.

The rules and regulations below do not apply to the naval station, apart from the section – Navigation Rules.

For the harbour area, the Ministry of Public Works has today laid down the following Rules and Regulations pursuant to Act No. 239 of 12th May 1976 on Public Harbours:

Navigation Rules: Regarded as the harbour's main thoroughfare is the section from the Frederikshavn Light Buoy to the mouth of the harbour, and from there onwards through the outer harbour up to and including the approachway between Ferry Berth III and the Northern cross pier.

Traffic from the Fishing Harbour, Ferry Berth IV and the naval station shall in the outer harbour yield to traffic taking place in the longitudinal direction of the harbour's main thoroughfare.

For navigation inside the harbour area, the special rules valid at any time for navigation in certain Danish waters shall apply.

Regulations: For the maintenance of law and order, the "Standard Rules and Regulations Governing Law and Order, etc. in (at) Danish Harbours (Bridges)" shall apply.

Maximum speeds are the following:

Within the harbour's sea area	12 knots
In the outer harbour	7 knots
In the remaining harbour	3 knots

In adverse weather, greater speeds may be used, if considered necessary for safe manoeuvring of the vessel.

Calls may not be made by pleasure craft and small boats without previous permission from the Harbour Superintendency.

The present Rules and Regulations will enter into force on 1st December 1985.

The "Rules and Regulations Governing the Maintenance of Law and Order in Frederikshavn Harbour" confirmed by the Ministry of Public Works on 13th December 1977 will at the same time be rescinded.

Signed: Ministry of Public Works, 31st October 1985.

AUTHORITY: Havnekontoret, Oliepieren 7, Postbox 129, DK-9900 Frederikshavn, Denmark. *Tel:* 98-421988. *FAX:* 96-200988. *Contact:* Captain B.K. Mortensen, Port Manager. J.G. Thomsen, Harbour Master.

GEDSER: 54.34 N. 11.56 E. (See Plan)

LOCATION: Gedser is situated on the Southern extremity of the island of Falster.

PORT LIMITS: A line drawn between the two outer pier heads defines the limit of the harbour.

DOCUMENTS: Customs Declaration, Crew Lists, Passenger Lists, Ship's Log and Safety Certificates.

APPROACHES: Three entrance channels lead to the harbour, the main channel (Rodsand Rende) has a width of 150 m. and a depth of 6.2 m. (20.3 ft.). The harbour can be entered by day and night.

PILOTAGE: It is recommended that all vessels over 500 tons use a Pilot. Requests for a Pilot must be made at least 6 hours before arrival to Guldborgsund Pilot Office in Nykobing (Falster) over Lyngby Radio or VHF Channel 16.

RADIO: Lyngby Radio.

BERTHING: Gedser Harbour is considered a ferry harbour where De Danske Statsbaner (Danish State Railways) and Deutsche Bundesbahn (German Railways), have first priority to the harbour and Rodsand Rende.

MEDICAL: Full hospital facilities in Nykobing (Falster). Doctor in Gedser. Tel: (38) 53879440.

DENSITY: 1010 – 1014.

FRESH WATER: Available.

CUSTOMS ALLOWANCES: EEC Rules apply.

REPATRIATION: Hourly bus connections to Nykobing (Falster) with daily train connections from Nykobing (Falster) to Copenhagen.
AIRPORT: Kastrup Airport at Copenhagen.
TIME: GMT plus 1 hour.
POLICE/AMBULANCE/FIRE: Police in Gedser. Tel: (46) 53879021. Ambulance and Fire Brigade in Nykobing (Falster). Tel: (47) 54851744.
TELEPHONES: There are no arrangements for placing telephones on board.There is a post and telegraph office close by the harbour.
SHORE LEAVE: Possible for crew members with valid passport or visa. There is no need for identity cards.
GARBAGE DISPOSAL: Service available using containers, max. capacity 20 cu.m.. Charges are 400DKK per container. Contact Tel: 53877244 for further information.
WASTE OIL DISPOSAL: Tanker truck available, capacity 13 cu.m.. Charges 600DKK per hour. Contact Tel: 53877614 for further information.
SEAMAN'S CLUBS: None.
CURRENCY: Danish Kroner(DKK).
GENERAL: *Tides and Currents:* Tidal range 0.3 m. Winds from N.E. can raise water level by 1.8 m.; winds from S.W. can lower water level by 1.5 m.
Lifeboat Station: A lifeboat is stationed by the harbour.
AUTHORITY: Havnekontoret Gedser, Postbox 16, 4874 Gedser, Denmark. *Contact:* Tel: Gedser (57) 53879145, ext. 130.

GRENAA: 56.25 N. 10.56 E. (See Plan)

PORT LIMITS: A Line drawn between the outer breakwater heads.
DOCUMENTS:

2 Crew Lists.
2 Passenger Lists.
1 Crew Personal Effects List.
1 Ship's Bonded Stores List.
1 Stores List.
1 Animal/Pets List.
1 Health Certificate.
Ship's Log.
Last Port Clearance.
1 Bill of Lading.
1 Cargo Manifest.

Safety Certificates: Construction, Equipment, Load Line, Radio and Oil Pollution Prevention.
PILOTAGE: Pilotage is not compulsory except for laden tankers with hazardous liquid chemicals or tankers with uncleaned tanks which have carried hazardous liquid chemicals.

The pilotage regulations do not apply to Masters who have been to Grenaa Harbour at least 5 times in the last 6 months.

Ships approaching Grenaa Harbour should be aware of the "Kalkgrunden", a limestone reef just outside the harbour entrance, stretching Easterly for approximately 7 cables and with 1 m. depth.

Notice of ETA and request for Pilot must be made to the Agent and/or to the Pilot Station with 24 hours and 12 hours notice.

There are telex facilities. VHF Channel 16 is continuously watched and ETA may be confirmed or adjusted on this frequency.

Pilot boat is 8 m. LOA, orange upperwork and orange hull with the word "Pilot" on each side.

The usual international signals may be displayed by vessels requiring a Pilot.

The usual pilot boarding point is 2.3 miles E.N.E. of harbour entrance.
BUOYAGE: IALA "System A".
ANCHORAGE: Anchorage is best North of the harbour with depth of 7 m. to 9 m. The holding ground is fine hard sand.
RESTRICTIONS: No restrictions, except that larger vessels should not approach the Easterly breakwater head closer than 80 m. in the area East and Southeast of this.

Also be aware of the "Kalkgrunden" (See "Pilotage").
MAX. SIZE: Vessels up to 165 m. LOA, 23 m. breadth and draft 9.0 m.
HEALTH: Normally Free Radio Pratique will be granted.
RADIO: Lyngby Radio (OXZ) is the long range area station.
VHF: At the harbour office, open for communications on Channel 16 from 0800 hrs. – 1600 hrs. (Monday to Wednesday) and 0800 hrs. – 1500 hrs. (Thursday and Friday).

A continuous watch is maintained at the Pilot Station on Channel 16.
RADAR: There is no Port Radar but the pilot boats are radar equipped.
TUGS: One tug available.
BERTHING: There are 7 general cargo berths.

Nos. 31, 32 and 33: Length 210 m., depth 6.5 m.
No. 34: Length 110 m., depth 6.5 m.
No. 41: Length 80 m., depth 7.2 m.
No. 42, 43 and 44: Length 308 m., depth 7.2 m.
No. 45: Length 180 m., depth 7.1 m.
No. 51: Length 210 m., depth 10.1 m.
Sydhamn: Length 176 m., depth 4.5 m.

Bulk and general cargo is handled at Nos. 31, 32, 33, 41, 42, 43 and 51, whereas container and Ro-Ro handled at No. 34, 44 and 45.
CRANES: There are 2 mobile cranes of 32 tonnes and 63 tonnes respectively and 2 container forklifts of 25 tonnes and 42 tonnes.
BRIDGES: There are no bridges or other restrictions to prevent access to the port.
STEVEDORES: Working hours from 0700 – 1600 hrs., Monday to Friday. Evening and night shift as well as week-end labour can be arranged.
MEDICAL: Full hospital facilities available without prior notice.
TANKERS: *Oil Pier:*

North Side: Length 140 m., depth 6.50 m.
South Side: Length 140 m., depth 6.50 m.
Slop discharge facilities in accordance with the Helsinki Convention.

DENSITY: 1018 (average).
FRESH WATER: Good potable water available in unlimited quantities at a rate of 10 t.p.h.
FUEL: All kinds of fuel can be delivered by road. Longest possible notice is desirable.
CONSULS: Vice-Consulates for Norway and Sweden.
REPAIRS: There is one shipyard as well as an engine building factory with repair facilities.
DRY DOCKS: No dry docks, but 4 slipways, where up to 500 tonnes deadweight is available.
SURVEYORS: Lloyd's sub-agent. Agents from other Classification Societies and Surveyors can be brought from Aarhus at short notice.
GANGWAY/DECK WATCHMEN: Gangway and deck watchmen not necessary, but can be arranged.
OPENING/CLOSING HATCHES: Normally handled by ship's crew.
CUSTOMS ALLOWANCES: See "General" before first port.
CARGO GEAR: Ship's gear or mobile cranes/conveyors from shore.
REPATRIATION: 25 km. to Tirstrup Airport with international flights to London, Oslo and Stavanger (Norway) and domestic scheduled flights to Copenhagen with international connections.

Railway connection to Aarhus.

Ferry connection to Zealand (Hundested) and Sweden (Varberg and Halmstad).

All facilities exist for changing of crew and repatriation of seamen.

Repatriation and change of crew can be arranged on the Roads for ships passing Grenaa en route to and from the Baltic. See "Ship Supply Service".
TIME: Local time is European Standard Time, GMT plus 1 hour. Summertime is used.
HOLIDAYS: *Official Holidays:* New Year's Eve (half day), New Year's Day, Maundy Day, Good Friday, Easter, Whitsun, Labour Day (half day), Ascension Day, Constitution Day (5th June, half day), Christmas Eve (half day) Christmas Day.

Work can be arranged except Christmas Day and Good Friday.
POLICE/AMBULANCE/FIRE: Emergency 112; Police 86-321011; Ambulance 86-322222; Fire 86-320812.
EMERGENCY CO-ORDINATION CENTRE: Danish Coast Guard, S.O.K. Kystvaernsvej, Aarhus. *Tel:* 86-131822. Outside office hours – 123099.
TELEPHONES: No arrangements for placing telephones on board.
SERVICES: A Compass Adjuster resides at the Port. Decca and Radio repairs possible.

Facilities for reception of Oil, oily mixtures, sewage, garbage, etc., exist in accordance with the Helsinki Convention.
BANKS: All major Danish banks are present in Grenaa.
STORING: Vessel can be stored by truck alongside. Local Riggers can be employed to assist with storing.
SHIP SUPPLY SERVICES: Storing possible on Roads at Buoy No. 4 in position: Lat. 56° 25' N., Long. 11° 06' E. Contact: Shipbroker G. Ostergaard I/S. Telex: 63489 Broker Dk. Tel: (86) 32.02.44. *FAX:* (86) 320026.
SHORE LEAVE: No restrictions.
IDENTIFICATION CARDS: No identification cards required.
GARBAGE DISPOSAL: 24 hours advance notice to Harbour Office.

Normal working hours for reception facilities are 0700 – 1600 (Monday – Wednesday) and 0700 – 1500 (Thursday and Friday).

Ensure that garbage is properly packed and secured in bags or similar. Galley garbage is to be placed in closed containers. Ensure that there are no spills.
WASTE OIL DISPOSAL: See above for hours of reception. Ships using reception facilities should be prepared to provide information on:

(a) Oily wastes:
- The type of oily waste.
- Whether the waste contains contaminants (e.g. solvents, detergent, lube oil, etc.).
- The quantity of each type of oily waste to be discharged.
- The ship's minimum and maximum pumping rate for waste to be discharged.

(b) Ensure that drums or other forms of portable containers being landed from the ship are free from defects that may cause leakage, are tightly closed and clearly marked to indicate contents and ship's name.

Capacity: 40 cu.m. – 100 cu.m., depending on type of waste. Receiving rate: 10 cu.m./hr. – 25 cu.m./hr.
Services are free of charge when:
1. Harbour dues have been paid.
2. Delivery takes place during normal working hours of reception facilities – except vessels with short calls.
3. Advanced notice of 24 hours before arrival/delivery.
4. Only reasonable quantities of garbage and oily wastes are delivered compared with the vessel's size and normal trading.
5. Oily wastes only contain water and oil.

SEAMAN'S CLUBS: The Seamen's Club at Grenaa has been closed. Various services to seamen (football, etc.) can be arranged through the Harbour Master's Office or the Tourist Office at Grenaa.
CURRENCY: Danish Kroner. No restrictions to seamen.
REGULATIONS: No unusual regulations for the port.
DELAYS: No delays can normally be expected.
DEVELOPMENT: An extension of Quay No. 51 will commence in 1998. The quay will be extended by 140 m., with a depth of 10.0 m.
AUTHORITY: Harbour Master, Grenaa Harbour, Nordhavnsvej 1, DK-8500 Grenaa, Denmark. *Tel:* 86-321204, 86-324766. *Cables:* Harbourmaster, Grenaa. *FAX:* 86-324371. *Contact:* D.Y. Christensen, Chief Executive. E. Stein Laursen, Harbour Master.

GULFHAVN: 55.12 N. 11.16 E. (See Plan)

DOCUMENTS:

Ship's Register.
Load Line Certificate.
Safety Radio-telephone Certificate.
Derat Certificate or Exemption Certificate.
Exact list of tobacco, cigarettes and spirits showing the vessel's and the crew's supply on arrival.
Bill of Lading (if vessel is carrying cargo).
Copy of the Crew List is required by Kuwait Petroleum Refining (Denmark) A/S.

PILOTAGE: 3 Pilots and pilot vessel available. Pilotage is compulsory for all vessels over 4,500 b.r.t. Pilot acts as Berthing Master. The Pilot may be requested to board vessels at any place in the proximity of Gulfhavn.

Pilot vessel equipped with VHF Channels 6, 10, 12, 16 of which Channel No. 6 used for ship-to-ship communication. Pilot station also equipped with VHF Channels 12, 13 and 16. Pilot can be contacted at the station on Channel 16.

A vessel's ETA should be communicated by Master to Agent, 48 and 24 hours prior to arrival. Agent will keep Refinery advised and make necessary arrangement with Pilot.

Bigger ships usually take Pilot by Skaw L/V. Pilots to be ordered by ETA-telegrams to "Danpilot, Region Skagen", at least 12 hours in advance. Danpilot listening on VHF Channel 16.

ANCHORAGES: Korsor Roads: Depth 20 m. (65.6 ft.). Bottom sand, good holding ground. Width of area about 2 square nautical miles. Gulfhavn Roads: Depth 30 m. (98.4 ft.). Bottom clay. Good holding ground. Width 0.5 nautical miles. Length 1.5 nautical miles.

Power cables running between Zealand and Agersoe Island (marked on charts) must be avoided.

RESTRICTIONS: See "General" before first port.

MAX. SIZE: See "Berthing".

RADIO: *Arrival Advice:* A vessel's ETA should be communicated by the Master to his Agent 48 hours and 24 hours prior to the arrival, and as soon as possible if changes in ETA are foreseen. The Agent will keep the Refinery informed and make the necessary arrangements for the attendance of tug(s) for berthing operations.

VHF: Call sign "Gulfhavn" Channels 12, 14 and 16. Port on Channel 16, 24 hours a day.

The ferries crossing the Great Belt from Korsor to Nyborg can be contacted on Channel 10.

TUGS: None available locally. If required 12 hours' notice must be given. Pilot will advise if weather conditions demand use of tugs (in good time).

BERTHING: The port of Gulfhavn is a "T" shaped structure, situated in position Lat. 55° 12.1' N., Long. 11° 15.9' E., at the Cape of Stigsnaes, and comprises an approach which extends 306 m. from shore, and a pier head which is 500 m. long, including the outer mooring caisson.

Depths alongside:		
	Berth 1	16.0 m. (52.5 ft.)
	Berth 2	12.0 m. (39.4 ft.)
	Berth 3	7.5 m. (24.6 ft.)
	Berth 4	4.5 m. (14.8 ft.)

Berth No. 1:

Max. Draft : 15.5 m.
Max. LOA: 280 m.
Max. Displacement: 144,000 tonnes.
Min. Vessel Size: 10,000 d.w.t.
Max. Speed of Approach: 10 cm./sec.

Berth No. 1 can accommodate fully laden ships having a capacity up to 120,000 d.w.t.

Berth No. 1 can also accommodate partially loaded ships up to 170,000 d.w.t., subject to a maximum displacement of 144,000 metric tons. Such ships always require special approval by Gulfhavn and more restrictive berthing regulations may be dictated.

Berth No. 1 is equipped with mechanically operated Woodfield hose-handling structure. The booms are 12.2 m. (40 ft.) long. Berth is primarily equipped for handling incoming crude, but can be used for other purposes (gasoils, intermediate and heavy fuels) when not being occupied by crude vessels.

The booms are arranged in the following sequence of product handling:

Boom No.	*Size of booms and contents*
1	10 in. Mogas Blendstock/Jet Fuel
2	12 in. Crude/Gasoil Blendstock
3	12 in. Mogas Blendstock/Jet Fuel
4	12 in. Crude/Gasoil Blendstock Crude
5	8 in. Heavy fuel oil

The sequence is from South to North or from right to left as you face the shore.

The max. distance from Danish Mean Sea Level to the highest position of centre line of manifold is 17.0 m. (55.8 ft.).

In addition to the oil products handled on Berth No. 1 there are the following other connections on the pier:

Size of connection	*Contents*
6 in.	Ballast water
6 in.	Gas oil
6 in.	Intermediate and heavy fuel
4 in.	Tetra methyl lead

Berth No. 2:

Max. Draft: 11.5 m.
Max. LOA: 180 m.
Max. Speed of Approach: 10 cm./sec.
Max. Size (arrival – fully laden): 18,000 d.w.t.
(arrival – partly laden): 30,000 d.w.t.
Max. Displacement (arrival – fully laden): 23,000 tonnes
(arrival – partly laden): 22,000 tonnes.
Max. d.w.t. (departure – fully laden): 30,000 d.w.t.

Berth No. 2 is equipped with mechanically operated hose-handling structure (Woodfield). The booms are 9.1 m. (30 ft.) long.

The booms are arranged in the following sequence of product handling:

Boom No.	*Size of booms and contents*
1	10 in. Ballast water
2	10 in. Fuels
3	12 in. Fuels
4	10 in. Gas Oil/Jet Fuel
5	10 in. Gas Oil
6	10 in. Gasoline
7	10 in. Gasoline

The sequence is similar to Berth No. 1, i.e., South to North.

The max. distance from Danish Mean Sea Level to the highest position of centre line of manifold is 15 m. (49.2 ft.).

In addition to the oil products handled on Berth No. 2, there are the following other connections on the pier:

Size of connection	*Contents*
6 in.	Intermediate and heavy fuel
6 in.	Gas oil
6 in.	Ballast water
6 in.	Kero and Jet fuel
6 in.	Naphtha
6 in.	Light virgin naphtha
6 in.	Gasoline
6 in.	Gasoline – MTBE

Berth No. 3:

Max. Draft: 7.0 m.
Max. LOA: 135 m.
Max. Size: 7,000 d.w.t. (approx.)

There are the following connections on the pier:

Size of connection	*Contents*
6 in.	Intermediate and heavy fuel
6 in.	Gas oil
6 in.	Ballast water
6 in.	Kero and Jet fuel
6 in.	Naphtha
6 in.	LVN
6 in.	Gasoline
6 in.	MTBE/Naphtha

In addition the berth also handles LPG.

Berth No. 4:

Max. Draft: 4.0 m.
Max. LOA: 75 m.
Max. Size: 700 d.w.t.

The berth cannot be used for any deliveries or receipts of hydrocarbons or water.

Mooring: If wires are used for mooring, polypropylene tails are required.

General: On arrival, the vessel will be boarded by one of the Refinery's representatives, who will discuss the discharging/loading operation with the Master or his delegate, acquaint him with up to date information concerning the cargo, and verify that the vessel is ready in all respects for the discharging/loading operation.

Adequate lifting facilities to assist in hose connecting and handling of necessary hose equipment should be ready on arrival. Ships crews are expected to assist with hose handling.

A Safety Check List must be completed and signed for all vessels calling at Gulthavn, prior to commencement of cargo operations. Additionally, product vessels must complete a Vessel Information Sheet before loading.

It is essential for the vessels to use their own gangways, and to arrange them in such a way that there is a safe passage from ship to shore. A lifebuoy with not less than 30 m. of lifeline attached shall be positioned on the vessel near the gangway.

The hydraulically operated gangway installed on Berth No. 1 must be used when berthing alongside Berth No. 1.

Safe mooring is the responsibility of the vessel's Master. KPRD will, if mooring of vessels is considered unsatisfactory, have the right to request improvement. For large vessels on Berth No. 1 and Berth No. 2, the Refinery requires a mooring pattern as shown in the "Plan Section".

BALLAST: Ballast containing chemicals or lube oils will not be received, and ballast will only be received if the vessel has other business at Gulfhavn.

MEDICAL: Hospital at Slagelse. Tel: Slagelse (03) 52 19 00.

DENSITY: Ranges between 1023 and 1007, dependent on season and weather conditions.

FRESH WATER: Available at all 4 berths. Supplied at a pumping rate of 15 t.p.h. Requests for fresh water to be made 24 hours in advance.

FUEL: Bunker fuel available at all 4 berths. 24 hours' notice required.

FIRE PRECAUTIONS: The harbour is not equipped with fire-fighting vessel. Fire-fighting equipment is stationed on quay.

CONSULS:

Finnish Consulate: (Mr. Sv. Mogensen) 10 Oernumvej, DK-4220 Korsoer, Tel. (53) 57 00 13.

Norwegian Consulate: (Mr. Sulow Rasmussen) Caspar Brandsplads 9, DK-4220 Korsoer, Tel. (53) 57 15 15.

German Consulate: (Mrs. K. Poulsen) Batterivej 7, Korsoer, DK-4220. Tel. (53) 57 05 86.

All other consulates are situated in the Copenhagen area.

REPAIRS: Small deck and engine repairs can be carried out on request with permission.

GANGWAY/DECK WATCHMEN: Available if required.

REPATRIATION: Facilities exist via Agent.

AIRPORT: Copenhagen 120 km. away.

TIME: GMT plus 1 hour.

POLICE/AMBULANCE/FIRE: Police (Scagelse) 53 52 14 48; Ambulance 53 53 22 22; Fire Refinery 222.

TELEPHONES: A public telephone box situated at the foot of the jetty.

SHORE LEAVE: Passes for ship's personnel leaving and entering the Refinery area will be placed on board by the Agent, and issued as authorised by the Master of the vessel. At the Refinery's entrance gate, all passes must be shown to the guard. Ship's personnel will not be allowed to walk through the Refinery area. Transportation between ships and the Refinery's entrance gate should be arranged by the ship's Agent, or as otherwise specified.
IDENTIFICATION CARDS: Required by crew.
WEATHER: *Wind/Tide/Current:* Prevailing winds are from South West to North West. Wind velocities exceeding 15 m./sec. occur on an average of about 18 hours per year from South West, 15 hours from West and 39 hours from North West.

The pier is protected by the island of Agerso against swells coming from West and North West and the mean wave height, for a wind velocity of 15 m./sec. from these directions, will only be about 0.15 m.

The greatest waves will come from South West as per following data:

Wind Velocity (m./sec.)	5	10	15	20
Mean Wave Height H (m.)	0.17	0.35	0.50	0.60
Wave Length (m.)	10	20	30	35
Wave Period (sec.)	2.5	3.7	4.5	5

The mean water level is 0.0 m. The average tidal range is 0.30 m. Extreme high water level is plus 1.2 m., whereas the extreme low water level is minus 1.2 m.

The current is a maximum of 2 knots (1 m./sec.).
GENERAL: No ship's stores or provisions can be supplied by the Refinery. Such requirements, as well as other matters pertaining to the husbanding of a vessel, such as inward and outward clearance, medical assistance, transportation of ship's personnel, etc., should be arranged with the ship's Agent.

Facilities for disposal of ordinary household rubbish are provided. Other wastes, such as empty drums, etc., will not be received.
AUTHORITY: Korsoer Toldkontrol.

Kuwait Petroleum Refining (Danmark) A/S, Gulfhavn, Post Box 49, 4230 Skaelskor, Denmark. *Tel:* (53) 59 49 00. *Telex:* 40033. *FAX:* (53) 59 09 59. *Cables:* Kupdanref. *Contact:* Leif von Gersdorff, Refinery Manager.

HADERSLEV: 55.15 N. 09.29 E. (See Plan)

DOCUMENTS: See "Copenhagen".
PILOTAGE: Aarosund Pilot station.
ANCHORAGES: Aarosund.
RESTRICTIONS: No lights in the fjord or harbour. Also see "General" before first port.
MAX. SIZE: Length 110 m.; width 17 m.; depth 6.0 m.
HEALTH: See "Copenhagen".
RADIO: Lyngby Radio.
VHF: Haderslev Harbour Office. Channels 16, 12 and 13.
TUGS: No tugs available at the port. Tugs can be arranged from a nearby port.
MEDICAL: Hospital facilities available.
FRESH WATER: Fresh water from quay.
FUEL: Available by truck.
CONSULS: Swedish, French, Belgian.
REPAIRS: Small repairs available.
GANGWAY/DECK WATCHMEN: Not required.
OPENING/CLOSING HATCHES: Carried out by the crew.
CUSTOMS ALLOWANCES: See "General" before first port.
REPATRIATION: No facilities.
AIRPORT: 15 km. from Haderslev.
TIME: GMT plus 1 hour.
HOLIDAYS: Discharging/loading can be arranged on holidays.
POLICE/AMBULANCE/FIRE: Police, 74522525; Ambulance, 112; Fire, 112.
TELEPHONES: No facilities.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Not needed.
GARBAGE DISPOSAL: Container provided on the quay.
WASTE OIL DISPOSAL: Can be arranged through the Harbour Office.
SEAMAN'S CLUBS: None.
CURRENCY: Danish Kroner(DKK).
AUTHORITY: J. C. Hansen, Honnorkajen 3, Box 11, 6100 Haderslev, Denmark. *Tel:* (74) 522404/522405. *Telex:* 51596. *Cables:* Maltsand. *FAX:* (74) 525639. *Contact:* F. Guldbrandt, Harbour Master.

HADSUND: 56.42 N. 10.06 E.

PILOTAGE: Available. Tel: +45-98-541955.
MAX. SIZE: LOA 120 m., beam 14 m. and draft 5.10 m.
TUGS: Available.
CRANES: Mobile cranes and conveyor belts available.
FRESH WATER: Available.
FUEL: Available.
AUTHORITY: Harbour Master. Tel: +45-98-57-1558.
AGENT: P. Rudbeck Larsen's Eftf. ApS., Daniavej 19, DK-9550 Mariager, Denmark. *Tel:* +8-58-31-88.

HANSTHOLM: 57.07 N. 08.36 E. (See Plan)

PILOTAGE: The pilotage duty at the Hanstholm Harbour is attended to by a local Harbour Pilot. According to Provision No. 301 of 10th May 1991 by "Sofartsstyrelsen" (the Danish Maritime Authority), vessels of more than 450 g.r.t. must carry a Pilot upon arrival and departure from Hanstholm Harbour. Vessels registered locally are, however, exempted from this provision.

Skippers of vessels of less than 450 g.r.t. who are not familiar with the conditions, are recommended to carry a Pilot or, before arrival or departure, to collect information from the port guard about the immediate conditions.

Masters should be especially aware that East-going winds can cause up to 1.5 m. low tide, and therefore it is very important under such weather conditions to carry a Pilot, or to collect information from the harbour guard about the immediate conditions.

Such requests can be made by calling the port guard either on the VHF Channel 16 or via Skagen Radio.

An order for pilotage should be given to the Pilot Office 6 hours before expected arrival.
RESTRICTIONS: Max. speed in port is 3 knots.
MAX. SIZE: LOA 130 m., beam 25 m. and draft 6.5 m.
BERTHING: See "Plan".
Harbour Area: The harbour area consists of the harbour itself, the Roshagemolen Jetty East of the harbour, and the adjoining land West, South and East of the harbour.

Furthermore, the following areas belong to the harbour area:
(a) The expanse of water inside the outer jetties of the harbour.
(b) A 200 m. wide expanse of water outside the outer jetties of the harbour.
(c) A 200 m. expanse of water around the Roshagemolen Jetty.
(d) A 200 m. expanse of water off the harbour's land area.
CRANES: Mobile cranes available.
FRESH WATER: Available.
FUEL: Available by tanker truck at certain berths.
REPAIRS: Facilities available.
DRY DOCK: Floating dock for vessels up to 1,500 tons.
GENERAL: It is prohibited to place a vessel anywhere except at those stretches of quay allocated for the particular size and type of the vessel. Vessels not registered locally are obliged to contact the port guard to have a berth assigned to them.
Rules for Sailing: "Regler for sejlads m.m. i visse danske farvande" (Rules for Sailing, etc. in Certain Danish Waters) apply to sailing within the harbour area, with the exceptions that;
the outward bound ship should wait;
in the dock, the maximum speed is 3 knots.
Regulations: To maintain law and order, the "Standardreglement for overholdelse at orden m.v. i (ved) danske havne (broer)" (Standard Rules for the Observation of Order etc. in Danish Harbours (Bridges)) is in force, including the following amendments:

Delivery of fuel from a tank lorry to a vessel in the harbour may only take place along certain quays pointed out by the harbour officials.

A vessel which is moored on the outer side of another vessel must use fenders between the two vessels.
AUTHORITY: Port of Hanstholm, Harbour Office, Auktionsgade 39, DK-7730 Hanstholm, Denmark. *Tel:* +45 97 96 1833. *FAX:* +45 97 96 2494.

HELSINGOR (Elsinore): 56.02 N. 12.37 E. (See Plan)

DOCUMENTS:
1 Cargo Manifest.
2 Crew and Passenger Lists.
2 Tobacco Lists.
2 Stores Lists.
Measurement Certificate or Registry Certificate.
PILOTAGE: Cable address: "Soundpilot". Telex: 27515 Sundet Dk. Tel: 31-386700. VHF: Channels 16, 13 and 12. Address: The Sound Pilot Station, Marmorvej 1, Frihavnen, DK-2100 Copenhagen, Denmark.

For vessels entering The Sound from Kattegat, Pilots can be ordered from "Soundpilot" via coast radio.

The following details are to be given:
1. Name and call sign.
2. ETA position from where pilotage is required.
3. Gross tonnage and draft.
4. Sea speed.
5. Pilotage requirements.

Pilots perform pilotage duties to all ports in The Sound, through The Sound and to any Baltic port. There are some exceptions to ports of Russia.

Pilots should be ordered 6 hours prior to ETA Buoy "M1" and the message should be confirmed or corrected 1 hour prior to ETA "M1".

Pilot cutter, orange hull and superstructure, "Pilot" painted on superstructure.

Boarding by Buoy "M1".
ANCHORAGE: South of the port, in the roads of Helsingor, depths from 19 m. to 25 m. with sand or loose clay bottom.
RESTRICTIONS: The Port Authority must be informed 15 minutes before arrival/departure/shifting on VHF Channel 16. Ship departing waits for ship entering. When a vessel gives signal to enter (1 long whistle or blast) it is regarded as an entering vessel.
MAX. SIZE: Up to 21 ft. 06 in. draft. Also see "General" before first port.
VHF: Harbour Office of Helsingor call VHF Channel 12.
TUGS: Tugs come from Copenhagen at 2-3 hours notice or Helsingborg in Sweden.
BERTHING: Vessels berthed in order of arrival.
MEDICAL: Hospital and medical facilities available.

FRESH WATER: Approx. 15 tons of fresh water per hour delivered through 1.5 in. hoses at the berths.
FUEL: Available by lorry or barge from Copenhagen.
WATCHMEN: Not required.
CUSTOMS ALLOWANCES: See "General" before first port.
DRY DOCKS: No facilities available.
AIRPORT: 1 hour by car to Copenhagen International Airport.
TIME: GMT plus 1 hour.
HOLIDAYS: Work can be performed all the year round.
POLICE/FIRE/AMBULANCE: Police Tel: 49.211448; Ambulance/Fire Tel: 112.
TELEPHONES: Telephones are only available on board in particular circumstances.
SHORE LEAVE: Crew are free to go ashore.
IDENTIFICATION CARDS: Crew need passports.
GARBAGE DISPOSAL: There are drums and containers provided alongside ships, and charges are included in the port charges according to Baltic Convention. Service is available every morning, except Saturday and Sunday. Telephone 49210515 for service.
WASTE OIL DISPOSAL: Waste oil disposal is available by mobile truck. Koster Enterprise, Roskildevej 167, 3400 Hillerod. Tel: 42260200.
SEAMAN'S CLUBS: None.
CURRENCY: Danish Kroner. Banks available.
AUTHORITY: Helsingor Havnekontor, Sophie Brahesgade 1, DK-3000 Helsingor, Denmark. *Tel:* 49-210515. *FAX:* 49-217299. *Contact:* John Christensen, Harbour Master.

HIRTSHALS: 57.35 N. 09.57 E. (See Plan)

DOCUMENTS:
1 copy Crew List.
1 copy General Declaration.
1 copy Ship Stores.
1 copy Crew Declaration.
1 copy Cargo Manifest.
1 copy Dangerous Cargo List.
PILOTAGE: Not compulsory, but available through Harbour Office.
ANCHORAGES: No anchorage in the vicinity.
MAX. SIZE: LOA 150 m., beam 25 m., max. draft 7.5 m.
HEALTH: Free Pratique on arrival.
RADIO/VHF: Lyngby Radio – 2181 kHz or VHF Channel 16. Hirtshals Harbour Radio VHF Channel 16.
TUGS: 1×7 ton bollard pull tug available to assist with berthing.
BERTHING: 5,000 m. of wharves with depth up to 7.5 m.
CRANES: Mobile cranes can be hired.
SPECIALISED CARGO HANDLING FACILITIES: One Ro/Ro ramp. Two ferry berths. 70,300 cu.m. storage for refrigerated and frozen cargo.
STEVEDORES: Firm ETA to Agent required, if possible before 1200 hrs. on day before arrival.
MEDICAL: No advance notice necessary for medical treatment, as doctors and hospital facilities are available.
TANKERS: No facilities.
DENSITY: 1025.
FRESH WATER: Available at all berths by hose.
FUEL: All grades available.
CONSULS: Iceland and Sweden.
REPAIRS: Shipyard facilities, machine shops, slips for vessels up to 1,200 tons.
DRY DOCKS: Floating dock for vessels up to 1,500 tons and 1 covered dock for vessels up to 2,300 tons.
SURVEYORS: Classification society and cargo surveyors available.
GANGWAY/DECK WATCHMEN: The employment of watchmen from shore is not compulsory.
HATCHES: Normally opened and closed by ship's crew.
REPATRIATION: All facilities exist for dealing with crew and passenger repatriation.
AIRPORT: Alborg Airport (60 km.) served by regular airlines to Copenhagen.
TIME: GMT plus 1 hour. Summertime GMT plus 2 hours.
HOLIDAYS: New Year's Day; Maundy Thursday; Good Friday; Easter Monday; Prayer Day; Ascension Day; Whit Monday; Christmas Day; Boxing Day.
POLICE/AMBULANCE/FIRE: Police Tel: 98941922; Medical Services Tel: 98941177; Emergency Tel: 112.
TELEPHONES: Public telephones available.
BANKS: All major Danish banks have branches in the area.
GARBAGE DISPOSAL: In dock, collection service available alongside vessel for galley waste. Contact Harbour Office.
WASTE OIL DISPOSAL: In dock, connection service to vessel alongside by tanker trucks. Contact Harbour Office.
CURRENCY: Danske Kroner (DKK).
AUTHORITY: Hirtshals Havn, Norgeskajen 11, (P. O. Box 3), 9850 Hirtshals, Denmark. *Tel:* 98941422. *FAX:* 98944293. *Contact:* E. Sondrup, Port Manager. F. Brinch Hansen, Harbour Master.

HOLBAEK: 55.43 N., 11.43 E. (See Plan)

PILOTAGE: Pilot boards at Hundested. Sound Pilot Station on VHF Channel 13.
MAX. SIZE: Max. draft at present when passing Hundested 6.30 m. Port dredged to 6.60 m.
VHF: Channel 16.
TUGS: Available.
CRANES: 1×140 ton and 1×40 ton SWL cranes available.
STEVEDORES: Working hours: 0700 1530 Monday to Friday. Overtime possible if required.
MEDICAL: Services available.
FRESH WATER: Available.
FUEL: Available.
CONSULS: At Copenhagen.
REPAIRS: Possible.
DRY DOCKS: No facilities.
CUSTOMS ALLOWANCES: Kalundborg Custom House is the authority.
REPATRIATION: Facilities available.
AIRPORT: Nearest airport at Copenhagen (Kastrup) – 70 km.
GARBAGE DISPOSAL: Reasonable amounts are collected free of charge, during normal working hours, if normal ship's dues are paid. Otherwise ship is to pay actual cost. Notice to Port Authority.
WASTE OIL DISPOSAL: Reasonable amounts are collected by truck free of charge, provided proper notice to port and during normal working hours. Normal ship's dues to be paid otherwise ship is to pay actual cost.
SEAMAN'S CLUBS: None.
CURRENCY: No restrictions. Money can be changed at local banks.
AUTHORITY: Holbaek Port Authority, P.O. Box 120, 4300 Holbaek, Denmark. *Tel:* 53-430161. *FAX:* 53-433913. *Contact:* Lenart Andersson, Harbour Master (After hours Tel: 59-443028).

HORSENS: 55.52 N. 09.52 E. (See Plan)

DOCUMENTS:
Crew List
List of Tobacco.
Manifest (for Agents and Stevedores).
Bills of Lading (for Agent's use).
Ship's papers:
International Load Line Certificate.
Certificate of Register (international letter of measurement).
Derat Certificate.
Radio Safety Certificate.
PILOTAGE: Pilot station is situated at Juelsminde. Normally pilot boat will be located South of Lillegrund.
VHF: Channels 6, 12 and 16. Advance notice of 2 hours required.
ANCHORAGE: No special anchorages at the firth; vessels may anchor where safe navigation permits – attention is called to cable area at Hjarno Sound.
RESTRICTIONS: See "General" before first port.
MAX. SIZE: Max. length, approx. 500 ft.; max. breadth, approx. 70 ft.; max. draft, approx. 22 ft. A dredged channel 32 m. wide and 6.9 m. deep leads to the harbour.
HEALTH: Inform Agent or Port Authorities in advance in event of any suspected disease or fever on board. Normally no necessary procedure to obtain pratique. Pratique is automatic after calling at another Danish port.
RADIO: VHF at Harbour office, Channels 9, 12, 13 and 16.
TUGS: Tug "Vitus", 1,000 h.p., stationed in the harbour.
STEVEDORES: For working Monday morning ETA must be given Friday during office hours. Otherwise ETA must be given the day before work to commence. One suction apparatus for discharging grain. Normally the cargo is handled by shore cranes. There are 6 piece-goods cranes available.
MEDICAL: No advance notice required. Hospital facilities available.
TANKERS: Discharge lines diameter: 6 in. and 8 in. Four berths for tankers, 1 at Gropa with 5.6 m. of water alongside, 1 at DAK with 6.9 m. of water, 1 at KH with 6.9 m. of water and 1 at Nynas Johnson.
FRESH WATER: Delivered alongside from shore connections.
FUEL: All types of light fuel available.
CONSULS: Finland, 75-623433; Norway, 75-624666; Iceland 75-624811.
REPAIRS: No shipyard – only small repairs can be carried out.
GANGWAY/DECK WATCHMEN: No service of watchmen necessary.
OPENING/CLOSING HATCHES: Normally carried out by crew, but can be done by stevedores.
CUSTOMS ALLOWANCES: See "General" before first port.
REPATRIATION: No special facilities for effecting crew changes exist.
AIRPORT: Distance from airport about 50 km., with regular airlines.
TIME: GMT plus 1 hour. GMT plus 2 hours in Summertime from last Sunday in March to last Sunday in September.
POLICE/AMBULANCE/FIRE: Dial 112. Fire alarms placed around the port.
TELEPHONES: Not available on board vessels.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Not needed.
DELAYS: No delays can normally be expected. Larger ships with big draft may expect delay during nights with poor visibility. They have to wait for daylight in order to enter port through dredged channel.
AUTHORITY: Havnemesteren, Havnen 5, 8700 Horsens. *Tel:* 75-621014, 75-621433. *FAX:* 75-621457. *Contact:* Jorgen M. Olsen, Harbour Master.

KALUNDBORG: 55.41 N. 11.06 E. (See Plan)

Also see Port of Asnaes.

(A) KALUNDBORG HARBOUR.
(B) STATOIL A/S OIL TERMINAL.

(A) KALUNDBORG HARBOUR.

DOCUMENTS:
Ship's Register.
Load Line Certificate.
Safety Radio Certificate.
Safety Equipment Certificate.
Safety Construction Certificate.
Derat Certificate or exemption.
Bill of Lading (if cargo).
Crew List.

Customs need a Tobacco and Spirit List, showing the vessel's and the crew's supply by arrival.

PILOTAGE: Not compulsory. Pilot station situated at Kalundborg, telegram: Kalundborg Pilot, Tel: Kalundborg 5351-0200. Green vessel carrying international signal flag or lights for Pilot. Contact by VHF Channels 16, 12 and 6. Pilot is taken on board at the entrance of Kalundborg Fjord.

Bigger ships usually take Pilot by Skaw L/V. Pilots to be ordered by ETA-telegrams to "Danpilot, Region Skagen", at least 12 hours in advance, Danpilot listening on VHF Channel 16.

ANCHORAGE: Large vessels anchor in 42 ft. of water outside between Rosnaes and Asnaes; S.W. to N.W. winds cause swell but holding ground is good. Small vessels anchor between Gisselore Point and Harbour, from where channel leads to harbour.

Tankers: The anchorage is approximately 4 – 5 miles W.N.W. of the Oil Pier. Particulars regarding the anchorage will be given by the Pilot.

RESTRICTIONS: *Tankers:* Depth in channel and at entrance 39 ft. 4 in., entrance width 131 ft. Also see "General" before first port and "Section B".

Kalundborg Harbour: Depth of Entrance Canal: 12.0 m. Bottom width of Entrance Canal: 100 m.

MAX. SIZE: See "Berthing" and "Section B".

HEALTH: Pratique granted by Customs Officers who bring Health Declaration for Masters to complete. In event of suspected disease or fever on board radio details to Agent before arrival.

RADIO: *Arrival Message:* The Masters of deep-sea vessels are requested to advise their Agents of their ETA 72 hours in advance, and again 24 hours before ETA. For other vessels operating in Scandinavian waters, a 24 hours ETA notice will be required. For coastal traffic in Danish waters, ETA is required when departing for Kalundborg. If there should be any significant change in the ETA over 2 hours, additional advice is required.

VHF: Harbour office on Channel 16 (0700 – 1600 hrs.).

TUGS: Available, normally join vessel off harbour, often using vessel's lines. If tug's lines are used, an extra charge will be made.

Tankers: See "Section B".

BERTHING:

Kalundborg Harbour:

West Harbour: Length 400 m., width 60 m., depth 6 m. Quay I: Length 250 m., depth 6.0 m. Quay II: Length 125 m., depth 6.0 m. Quay III: Length 80 m., depth 6.0 m.

East Harbour: Length 260 m., width 130 m., depth 7 m. – 8 m. Quay VI: Length 240 m., depth 8.0 m. Quay VII: Length 170 m., depth 10.0 m. Quay VIII: Length 70 m., depth 7.0 m. Quay IX: Length 280 m., depth 7.0 m. Quay X: Length 245 m., depth 8.0 m.

South Harbour: Oil Quay: Length 170 m., depth 8.5 m. Quay XII: Oil and General Cargo, length 450 m., depth 10 m. – 12 m.

Quay Nos. II-X and XII equipped with ramps.

Railway on quays in the East and the South Harbour.

STEVEDORES: Available, ordered by Agent, no ETA to stevedores necessary.

CRANES: The following cranes are available from the Port Authorities:

1. One mobile crane (lattice crane).
   Capacity: Radius 11 m. – 25 tons – lift height 25 m.
   Radius 29 m. – 12 tons – lift height 25 m.
   The crane can be mounted with a 5,500 litre prehensile scoop to unload grain, gravel, fertiliser, etc.
2. One P.P.M. 23.09 mobile crane (telescope).
   Carrying capacity with 4 m. jib: 15.2 tons. Lift height 14.5 m.
   Carrying capacity with 6 m. jib: 8.7 tons. Lift height 20.0 m.
   Carrying capacity with 15 m. jib: 2.3 tons. Lift height 21.5 m.
3. One 12-ton 14/25 tons gantry rocker crane.
   Lift height above trails 25 m. in hook operation.
   Carrying capacity with 28 m. jib (18.5 m. from quayside): 14 tons.
   Carrying capacity with 18 m. jib (14.5 m. from quayside): 25 tons.
   Mounted with 6,000 litre prehensile scoop: 7 tons excluding weight of scoop with 28 m. jib (18.5 m. from quayside).

Also see "Berthing".

MEDICAL: Hospital and doctors available.

TANKERS: See "Section B".

DENSITY: 1011.

FRESH WATER: Available, supplied from shore by hose, about 15 t.p.h. 25 t.p.h. in Oil Harbour.

FUEL: All grades available, 24 hours ETA required by truck or barge (Statoil, BP).

FIRE PRECAUTIONS: No smoking allowed.

CONSULS: Norway: Mr. Jorgen Moller, Consul. Tel: (53) 51.19.01.
Sweden: Mr. H. Meredin Petersen, Vice-Consul. Tel: (53) 51.00.51.

REPAIRS: All types of repairs available.

DRY DOCKS: None.

GANGWAY/DECK WATCHMEN: Not necessary.

OPENING/CLOSING HATCHES: Carried out by crew.

CUSTOMS ALLOWANCES: See "General" before first port.

REPATRIATION: All facilities exist.

AIRPORT: Nearest at Copenhagen about 80 miles from Kalundborg. Served by regular airlines.

TIME: GMT plus 1 hour. GMT plus 2 hours in Summer.

HOLIDAYS: New Year's Day; Easter Thursday; Good Friday; Easter Monday; Ascension Day; 1st May; Whit Monday; Prayer Day; 5th June; Christmas Day; 2nd Christmas Day. No work can be carried out.

POLICE/AMBULANCE/FIRE: Police (53) 51.14.48. Hospital: (53) 51.10.01.

BANK: Den Danske Bank, Kordilgade 18, DK – 4400 Kalundborg. Tel: (53) 51.08.00. Open 9.30 a.m. – 4.00 p.m. (closed Saturday and Sunday).

SHORE LEAVE: Allowed.

SHIP SUPPLY SERVICES: Schierbeck's Supply Service, Njalsgade 21, 2300 Copenhagen S. Tel: (31) 57.00.66 (day and night). Cables: Schierbeck Copenhagen. Telex: 31143. Maximum cargo 8 and 40 tons. Maximum 12 passengers.

Kalundborg Supply Service, Ulshojvej 25, 4400 Kalundborg. Tel: (53) 51.20.42 and 51.69.17. Maximum cargo 10 tons. Maximum 12 passengers.

Service: 24 hours.
Rendezvous position for deep draft vessels:
Lat. 55° 43.5' N. Long. 10° 47.8' E.
Notice: 6 hours' notice required through Agent.

Supply vessel: "Kalundborg Supply" is an ultra modern supply boat equipped to the standards approved by the Danish Government Inspection of Ships.

She was built and delivered in 1982 and has 2×150 h.p. engines with twin screw which delivers a service speed of 16.5 knots. Her loading capacity is 10 tons with a deck space of 5 m.× 3 m.

Wulff's Eftf. I/S Skibshandel, 8 Skibbrogade, DK-4400 Kalundborg. *Tel:* (53) 510345. After office hours (53) 513706 and (53) 508720. *Telex:* 44359. *Cable Address:* Wulffsef Kalundborg Territory: Kalundborg, Kalundborg Roads, Great Belt and Stigsnaes. Can also deliver provision, bonded stores, deck and engine stores.

IDENTIFICATION CARDS: Not required.

DELAYS: Due to ice between 15th December and 31st March.

GARBAGE DISPOSAL: Skip provided free of charge on pier for disposal of garbage from last sea passage. For garbage collected during stay, skips can be ordered through agent at a cost of approx U.S.$200.

WASTE OIL DISPOSAL: Mineral oil, *free of chemical additives,* is received free of charge by the refinery. Used lub oil, either in drums or up to 10 cu.m. by tanker truck, is also received free of charge. Contact ship's agent for information.

SEAMAN'S CLUBS: None.

CURRENCY: Danish Kroner.

AUTHORITY: Kalundborg Port Authority, P.O. Box 50, Vester Havneplads 7, DK-4400 Kalundborg, Denmark. *Tel:* Harbour Board (51) 51.01.88. Harbour Master (53) 51.01.88. *FAX:* (53) 510089.

(B) STATOIL A/S OIL TERMINAL:

LOCATION: Statoil A/S's refinery is situated at the bottom of Kalundborg Fjord in the island of Zealand, at Lat. 55° 40.6' N., Long. 11° 5.5' E. Largest chart of Kalundborg Fjord: B.A. No. 2596/D.A. No. 145.

DOCUMENTS: The following documents are required on arrival and for clearance:
Ship's Registration.
Load Line Certificate.
Safety, Radio and Telephony Certificates.
Safety Equipment Certificate.
Derat Certificate.
Crew List.
Construction Certificate.
Tobacco and Spirits List.
Oil Pollution Certificate.
B/L (if carrying cargo).
Certificate of Origin (T2L.EUR1).

In addition, a list of tobacco and spirits must be presented to the Customs service, showing the ship's and crew's supply on arrival.

PILOTAGE: For vessels over 5,000 d.w.t., a Harbour Pilot must always be used. In case of special reasons, an exemption from this rule can be granted by the Pier Master.

A Harbour Pilot must be used for vessels under 5,000 d.w.t. unless the Master has called at the port with the same ship for more than 5 times within the last 6 month.

Pilot Office: Tel: 53510200, 59565300. Fax: 59561700.

ANCHORAGE: The anchorage is 4 – 5 nautical miles W.N.W. of the Oil Pier. Closer information concerning the anchorage will be given by the Pilot.

RESTRICTIONS: The pier is open to navigation day and night, apart from restrictions under special weather conditions.

Navigation Restrictions: The harbour is closed to traffic when the wind force exceeds 23 m./sec. (Force 9), or when the visibility is less than one ship's length.

Pier A and B: If the wind direction is between S.W. and N.N.W., and the wind force is between 15 m./sec. (Force 7) and 23 m./sec. (Force 9), the Loading Master together with the Master/Pilot will in every case evaluate whether arrival/departure can take place safely, if tugs shall be used or vessel must wait for an improvement in the weather conditions.

Pier C: If the wind direction is between S.W. and North, and the speed is between 15 m./sec. (Force 7) and 23 m./sec. (Force 9), the Loading Master together with the Master/Pilot will in every case evaluate whether arrival/departure can take place safely, if tugs shall be used or vessel must wait for an improvement in the weather conditions.

MAX. SIZE: See "Berthing".

HEALTH: See "Section A".

RADIO: *Arrival Advice:* For crude and ocean-going vessels the Master is requested, through the ship's Agent, to inform the Refinery of the ETA 72 hours before arrival, and again 24 hours before arrival.

For vessels which operate in Northern waters, ETA is to be given 24 hours before arrival. For local traffic, ETA is to be given on departure for Kalundborg. If there should be changes in ETA, in excess of 2 hours, this has to be reported to the Refinery via the Agent or over VHF and mobile telephone.

VHF: Calls to the pier are made on VHF Channel 16. The working frequencies of the pier are Channels 9, 10, 12 and 14.

About 5 nautical miles before arrival, the pier is called on VHF, and the vessel informs the Pier Foreman of the precise time of arrival.

TUGS: Tugs are to be ordered through the Agent according to the scheme below. The minimum requirements for tug assistance under normal weather conditions (wind force below 10 m./sec.) are as follows:

	Vessel's Size (k.d.w.t.)	*Number of Tugs*	*Total Min. h.p.*	*Min. Bollard Pull* (tonnes)
Pier A	16-26	2	3,500	36
Arrival	26-56	3	5,000	75
	56-70	3	7,500	85
	70-90	4	9,500	120
	90-120	4	11,000	130
Pier A	10-16	1	1,800	17
Departure	16-56	2	3,500	36
	56-120	2	5,000	60
Pier B	16-	2	3,500	36
Arr./Dep.				

For vessels over 16 k.d.w.t. equipped with bow thruster the number of tugs is reduced by 1, however, by not more than 1,500 h.p.

If the wind force exceeds 10 m./sec. then with due regard to the expected weather situation for the area, the Shipmaster, the Pilot of the watch and the Refinery must come to an agreement on whether the vessel shall wait for a weather improvement, or whether the tugboat capacity shall be increased.

Mooring Boats: Mooring boats and men must be used, and are available from Kalundborg Boat Service.

Speed: Ships, which call at the pier without tugboat assistance, must reduce their speed to an absolute minimum before passing the outer dolphins. Prior to this, a realistic astern movement must have been made in order to ensure that the reversing functions satisfactorily.

BERTHING:

PIER A:

Max.vessel size 130,000 d.w.t.

Max.vessel LOA – 262 m. (870 ft.).

Max.freeboard 46 ft.

Max.draft for vessels up to 70,000 d.w.t. 12.50 m. (41 ft.) in brackish water (1010) at normal water level.

Max. draft for vessels over 70,000 d.w.t. 12.19 m. (40 ft.) in brackish water (1010) at normal water level.

Discharge of crude oil takes place via 2×12 in. cargo hoses fitted with 12 in. ASA flanges for a 30 in. pipeline to the Refinery. The 30 in. crude oil line to the Refinery is about 2 km. long. Discharge rate for crude oil is about 5,500 cu.m.p.h. at maximum pressure. Max. loading/discharge pressure on the product and crude oil line is 7 bar.

During discharging through the crude oil line, the line pressure will be monitored at the Pier Office.

The following products are available at Pier A:

JP1, JP8	loading/discharge	6 in. ASA flange
Naphtha	loading/discharge	6 in. ASA flange
Gasoline	loading	2×6 in. ASA flange
Gasoline	loading	2×6 in. ASA flange
Autodiesel	loading/discharge	2×6 in. ASA flange
Gas oil	loading/discharge	2×6 in. ASA flange
Marine gas oil/motor gas oil	bunkering	
Various fuel oil grades	loading/discharge	2×6 in. ASA flange
Crude oil	discharging	6 in. ASA flange

PIER B:

Max.vessel size 16,000 d.w.t.

Max.vessel LOA 171 m. (560 ft.).

Max.draft 10.50 m. in brackish water (1010) at normal water level.

Max.loading/discharge pressure on crude oil and product lines is 7 bar.

The following products are available at Pier B:

JP1, JP8	loading/discharge	6 in. ASA flange
Naphtha	loading/discharge	6 in. ASA flange
Gasoline	loading	2×6 in. ASA flange
Gasoline	loading	2×6 in. ASA flange
Autodiesel	loading/discharge	2×6 in. ASA flange
Gas oil	loading/discharge	2×6 in. ASA flange
Marine gas oil/motor gas oil	bunkering	
Various fuel grades	loading/discharge	6 in. ASA flange
Crude oil	discharge	6 in. ASA flange

PIER C:

Max.vessel size 5,000 d.w.t.

Max.vessel LOA 110 m. (360 ft.).

Max.draft 7.5 m. in brackish water (1010) at normal water level.

Max.loading/discharge pressure on the product line is 7 bar, however, max. pressure on the LPG system is 19 bar.

The following products are available at Pier C:

Gasoline	loading	2×6 in. ASA flange
Gasoline	loading	2×6 in. ASA flange
Autodiesel	loading/discharge	2×6 in. ASA flange
Gas oil	loading/discharge	2×6 in. ASA flange
Marine diesel	bunkering	
Marine gas oil/motor gas oil	bunkering	
HFO	loading	6 in. ASA flange
LPG	loading	6 in. ASA flange
Crude oil	discharge	6 in. ASA flange
JP 1, JP 8	loading	6 in. ASA flange

CARGO HANDLING: On any receipt of cargo, a representative of Statoil A/S will come on board on arrival of the ship, and together with the ship's Chief Officer make a complete cargo calculation, and also take out an average sample of all the ship's tanks intended for Statoil A/S.

Any measurement of free water on arrival, and also Remaining On Board (ROB) after discharging, will be corrected for possible trim.

If the quantity of ROB is more than 0.1% of the B/L, samples will be taken of the ship's tanks that contain relatively large ROB, for later reference, but in this connection it is important to point out that Statoil expect that the ship does its utmost to drain both ship's tanks and pipe systems satisfactorily.

If the ship is not furnished with a satisfactory "Vessel Experience Factor", then this is calculated in concert with a Representative of Statoil A/S, and this factor is used for cargo calculation. About 1 hour after finishing the discharge, a Representative of Statoil A/S will come on board and present a preliminary statement of the discharged quantity, as compared with B/L and sea transport.

The following shipping documents are to be handed over to Statoil A/S:

Tank Condition Certificate – Prior Loading.
Bill of Lading.
Quantity Certificate.
Quality Certificate (Laboratory Report of Tests).
Copy of any Protest issued to Loading Terminal.
Vessel Ullage Report – Loading/Discharging.
Dry Certificate or Post Discharge Vessel Ullage Report.
Sealed Samples from Loading Port, if available.

Working Procedure for LPG-Arm:

1. On arrival, attempts are to be made to position the ship in such a way that the Loading Arm gets the greatest possible freedom of motion when mounted on the manifold.
2. During cargo handling, the ship shall always lie within the operating range of the Loading Arm.
3. If one of the Loading Arm's limits is reached, an alarm consisting of a yellow quick flash signal, on a mast behind the Loading Arm will be activated. At the same time, an alarm will be activated at the pier office.
4. When the loading operation is complete, and the Loading Arm is drained empty, this is purged with nitrogen from ashore.
5. In case of a critical situation, the shore valve and pump are closed by using the yellow actuator box placed onboard.

There is no danger connected with the closing of this valve, as there are expansion systems at the pier.

IMPORTANT: The Loading Arm must only be operated when it is empty of liquid, as otherwise it will be out of balance.

BALLAST: Ballast shall be discharged to a ballast tank ashore, with the exception of pure ballast water from clean permanent ballast tanks.

The ballast tank ashore can hold 4,500 cu.m.; there is usually about 2,000 cu.m. available.

It is important that all ships, which are to pump ballast water, as early as possible inform the Pier Foreman over VHF about the quantity of ballast water to be pumped ashore. Tankers of 7,000 d.w.t. and more, that wish to use the ballast facilities, shall as early as possible advise the pier via the ship's Agent of the quantity of ballast/purified water, which can be expected on arrival, as well as of the last cargo type.

The Refinery will only accept ballast water from ship's tanks, which on the previous voyage have contained mineral oil products. Ballast water, containing any kind of chemicals, cannot be accepted. While the ship is alongside the pier, all sea and overboard discharge valves in connection with the cargo system, must be kept closed and sealed. The sealing must only be broken in concert with the Pier Foreman.

On taking in ballast alongside the pier, sea valves must not be opened until the pump is working, and the other valves are open. Ballast tanks must not be filled higher than ullage 7 ft.

It is important in this connection to emphasise the danger of ballasting in tanks not free from gas. Watch out for gas concentrations both on the ship and at the pier, and reduce the ballast intake, if necessary.

Tank Inspection: Prior to loading, the tanks are to be inspected for water, impurities, and foreign matter by the pier personnel.

During the inspection, the loading valves must remain open so that there is no liquid in the pipes.

The inspection is to be done from the deck through the hatches or sounding holes by using torches or mirror.

The pier personnel are not allowed to enter ship's tanks without special permission.

Before entering a ship's tank, a permit must be obtained from the Pier Foreman, and only after having made sure personally and in concert with the Ship's Officer on duty that the situation is such that entering the tank is justifiable.

Inert Gas System and Tank Cleaning with Crude Oil: The Refinery does not make additional demands on Inert Gas Systems and tank cleaning with crude oil than those described in international regulations (IMO) and VIM 020-040-005.

It is the Master's direct responsibility to ensure that the inert gas plant is operated according to instructions, and that tank cleaning with crude oil is carried out safely and efficiently, and that the officers, who are responsible for the cargo handling, are familiar with all rules and procedures for controlling the system.

The Refinery will normally require a 100% COW of all cargo tanks designated for discharging in Kalundborg, for crude oil with a density higher than 0.8600.

If the ship is unable to maintain a positive pressure in the cargo tanks, or cannot maintain less than 8% oxygen in the tank atmosphere, the Shipmaster will be requested to shift to anchor until the inert gas plant is operative again, allowing for the risk of self-ignitable iron sulphides.

Prior to cargo handling, the responsible officer will be requested in concert with the Pier Foreman, to fill in Safety Check Lists and a Check List for COW so that the ship as well as the Refinery may be sure that cargo handling can be commenced within the existing minimum safety regulations for the operation.

MEDICAL: Medical and dental treatment are arranged by the ship's Agent.

FRESH WATER: The ship can be provided with fresh water at a delivery rate of approximately 25 t.p.h. Cost U.S.$ 3.00 per ton.

FUEL: Bunkers and lubricating oils can be supplied through the Agent. Orders should be given in good time through the Agent before arrival.

CONSULS: Norway and Sweden.

SURVEYORS: Marine Surveyors representing Lloyd's, Caleb Brett, S.G.S. and Saybolt available at the port. Further information can be obtained from the ship's Agent.

POLICE/AMBULANCE/FIRE: Tel: 53511448 or 112.

TELEPHONE: A pay phone for international calls is installed in the Pier Office building.

BANKS: Unibank. Tel: 53511111. Fax: 53512311.

Den Danske Bank. Tel: 53510063. Fax: 53515776.

SHIP SUPPLY SERVICE: Kalundborg Boat Service. Tel: 53510200. Fax: 59561700.

The company operates a craft on Kalundborg Roads for transfer of crew, stores, etc. Charge rate is U.S.$ 140.00 per hour.

GARBAGE DISPOSAL: Skip provided on pier, where garbage collected from last port can be placed, free of charge.

Skip can be ordered in advance through Agent. Charge: About U.S.$ 200.00.

WASTE OIL DISPOSAL: Mineral oil without chemicals is received free of charge by the Refinery. Collection service is available for waste oil containing lub oil and chemicals. The charge is about U.S.$ 60.00 per ton. The ship's Agent has to be notified in advance to make arrangements with the contractor and the Port Captain.

SAFETY: *Mooring:* The ship shall be moored satisfactorily, and the ropes held taut during the entire stay at the pier. Steel wires must not be used for mooring unless they have rope tails and these are fastened on quick-release hooks. Wires and fibre ropes shall not be used together in the same direction.

Anchors not being used shall be secured.

Fire Wires: Fire wires shall be placed correctly fore and aft. Wire eyes shall be placed directly below the waterline, and adjusted regularly during cargo handling. The ends shall be properly secured to the ship's bollards, and have sufficient slack on deck. The slack of these wires shall be so secured that it can easily be broken by tugboats.

Access between Ship and Pier: Immediately after completing mooring, the ship shall land a gangway ashore. The landing may consist of an adequately mounted gangway or accommodation ladder.

At Pier A, larger ships have a gangway from the shore. Special consideration has to be given to the difference in height between ship and pier which may grow large.

Emergency escape: In connection with the normal gangway/accommodation ladder described above, a safe and fast emergency escape possibility shall be readily accessible on both ship and pier.

On the ship, this can consist of a lifeboat ready for immediate use, placed aft.

GENERAL: *Duc d'Alba:* Ships must only moor at the pier, and not at the duc d'Alba.

Traffic at the pier: There is lively ferry traffic in the harbour. About 15 times in 24 hours, a ferry passes by the pier at a distance of 100 m. – 300 m. from the pier head.

Dry cargo ships up to 60,000 d.w.t. call at Kalundborg Harbour at a distance of approximately 500 m. from the pier head. Sailing is done at reduced speed. Tankers and bulk carriers call at Asnaesvaerket in varying sizes up to about 160,000 d.w.t.

Sailing: As soon as loading/discharge is finished, all ships have to leave the pier on request.

Lightening: According to Order No. 472 of 21st September, 1978, by the Ministry of Commerce, lightening of tankers must only take place in position 55° 42.0' N., 10° 59.8' E., and within a radius of 0.3 nautical miles. When tankers lighten in Kalundborg Fjord, other vessels must pass the area with caution and at slow speed.

Lay-time: To expedite the turn-round of vessels, the Master is requested to co-operate with the personnel ashore in order to minimise the lay-time. Any delay arising, and which can be expected to drag on, must be reported to the Pier Office so that it can contribute to solving possible problems.

Portable Receiver: On arrival of the ship, the Officer on duty is handed a portable receiver. This radio must be turned on, and be carried during the entire stay at the pier. The radio is to be tested at regular intervals.

Storing: Barges and boats are not permitted alongside any ships berthed at the piers.

Trucks with supplies are only granted permission to go alongside if no cargo handling of Class 1 products is underway.

It may be possible to unload heavy loads at the berth before the vessel arrives. Also, trucks can unload at the gate, approx. 150 m. from berth. Hand trollies are available.

Tide and Current: The difference between the average high tide and average low tide is about 0.3 m. A gale from N.W. can give a rise of 1.3 m. above the daily level, while a gale from S.E. can give a fall of 0.9 m. below the daily level. There is almost no current at the pier.

Winds: The predominant wind direction is West, but most of the gales come from N.W. Wind velocities which exceed 15 m./sec. (force 7) usually occur for about 20 hours a year from S.W., about 15 hours from West, 40 hours from N.W. and 25 hours from North.

Repair of Nautical Equipment and Instruments: Repairs can be arranged through the Agent. It is recommended that the Agent receives such requests in good time.

Sanitary Measures: Standard regulations for Danish harbours regarding sanitary conditions apply at the Oil Pier. Waste must not be thrown overboard. Special waste containers are placed at the pier. Special consideration to avoid pollution of the pier from flushing of toilet, bathroom, etc., must be taken. If the ship wishes to pump sewage ashore, facilities are available at the pier, but a minimum notice of 6 hours is required. This is given via the Agent.

Mail: The Agent delivers and receives mail from the ship.

Visitors to the Ships: Only persons doing business may come to the pier. Visitors, such as guests of the Master, can get permission to come on board, on condition that the Master has made a request to the Pier Office. Further details on permission for visitors are available on application to the Pier Office.

On arrival of the ship, magnetic cards are handed out which give access to the gate into the pier area. It is the Master's responsibility together with the ship's Agent to ensure that cards are handed out to relevant members of the crew.

Oil Spillage: Attention is drawn to the fact that there have been bad experiences with regard to oil spillage, caused by opening sea valves before having started the ballast pumps, and by tanks overflowing during loading. Very small quantities of oil that get into the water have to be removed and this can become rather costly.

In order to spare the shipping company unnecessary expenses, the responsible persons are enjoined to have their attention directed to all conditions that can cause even small oil spillages. Oil spillage comes under the authorities' sphere, and that matters of dispute as to guilt can be referred to the police.

Air Pollution: The Master must take precautions against emitting large quantities of smoke from the funnel. Use of soot blowers whilst the ship is in port is not allowed.

Inspection: The Pier Master or his deputy must at any time be admitted to all ships to see that all directions are complied with.

Agent: Immediately after arrival of the ship, the ship's Agent goes on board so that the Master can inform him of the ship's necessities. Ships which are requested to anchor outside the harbour to wait for mooring space can possibly get an Agent on board at the anchorage.

OPERATOR: Statoil A/S, Refinery, DK-4400 Kalundborg, Denmark. *Tel:* (59) 574521. *Telex:* 44343. *Cables:* Stara. *FAX:* (53) 516298, 517081. *Contact:* M.H. Thyssen, Pier Master.

KOGE: 55.27 N. 12.12 E. (See Plan)

DOCUMENTS: For Customs, vessels require:

Vessels of 150 ton and upwards, Load Line Cert.

Vessels of 300 ton and upwards, Load Line Cert., Radio Safety Cert.

Vessels of 500 ton and upwards, Load Line Cert., Radio Safety Cert., Equipment Safety Cert.

For all passenger vessels also Safety Cert.

For stevedores vessel shall have Bills of Lading, Manifests and Loading plans.

PILOTAGE: Pilotage compulsory for all tankers and vessels over 1,000 d.w.t. Vessel to call Pilot 2 hours before arrival. VHF on Pilot Station and pilot boat. Watch on Channel 16. Normal international light and sound signals used. Pilot boat located about 2 nautical miles East of port. No difference in bad weather.

ANCHORAGES: 1–2 nautical miles East of port with good bottom conditions.

RESTRICTIONS: See "General" before first port.

MAX. SIZE: Max.permissible length 150 m. Depth in harbour is 7.0 m. at datum.

HEALTH: Normal quarantine rules.

RADIO: Lyngby Radio or any other radio station in Denmark.

TUGS: 1 tug of 300 h.p. Additional tugs can be obtained from Copenhagen.

CRANES: *Port Authority:* 1 × 25 ton and 1 × 36 ton mobile cranes with hook, grab and container equipment.

Private: 1 × 12 ton mobile crane and 2 coal cranes.

STEVEDORES: Normal ETA and description of vessel required.

MEDICAL: Doctor and hospital assistance available; other facilities to be obtained from Copenhagen.

TANKERS: One tanker berth, no specific requirements. LPG also handled.

FRESH WATER: Water from wharf.

FUEL: Products are delivered in Koge, others from Copenhagen.

FIRE PRECAUTIONS: Normal fire precautions. Tankers cannot request to go to berth before loading/discharging. 2 fire watchmen from the fire department.

CONSULS: Nearest at Copenhagen.

REPAIRS: Small repairs.

DRY DOCKS: 2 small slipways for vessels up to 200 tons.

GANGWAY/DECK WATCHMEN: Not necessary.

OPENING/CLOSING HATCHES: Normally carried out by crew.

CUSTOMS ALLOWANCES: See "General" before first port.

REPATRIATION: No facilities exist.

AIRPORT: Nearest in Kastrup Lufthavn; Copenhagen about 40 km. away.

TIME: GMT plus 1 hour.

HOLIDAYS: Normal Danish holidays, change from year to year. Normally work can be arranged.

POLICE/AMBULANCE/FIRE: Ambulance and Fire (46) 322222; Police 112 or use alarm 112.

TELEPHONE: No arrangements exist for placing on board.

WIND: Wind between N.E. and S.E. can give up to 1.6 m. HW and West wind up to 0.9 m. LW.

SERVICES: Pilot makes compass adjustments.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Not needed.
GARBAGE DISPOSAL: Garbage containers on all quays, free of charge.
WASTE OIL DISPOSAL: Waste oil is collected by tanker truck, according to MARPOL Convention.
SEAMAN'S CLUBS: None.
CURRENCY: Danish Kroner (DKr.).
GENERAL: The North Port of Koge, "Nordhavn", Lat. 55° 27' 4" N., Long. 12° 11' 7" E. Length of quayage 300 m. Depth 5.5 m.
DEVELOPMENT: Extensive developments underway. See "Plan".
AUTHORITY: Koge Havnekontor, Havnen 39, 4600 Koege, Denmark. *Tel:* 56-636113. *FAX:* 56-637400. *Contact:* Torben Jensen, Harbour Master.

KOLDING: 55.29 N. 09.30 E. (See Plan)

DOCUMENTS:

3 copies Crew List.
3 copies Crew Declaration (Tobacco, Spirits, etc.).
1 copy Tobacco List.
1 copy Stores List.

PILOTAGE: Not compulsory. Pilot station (Call: Little Belt Pilot Station – VHF Channel 16, 24 hours) at Fredericia. Serving all ports in the area of Little Belt. Tel: 75920888/75920959. Fax: 75928822.

Harbour Office to be advised of ETA/ETD one hour in advance during office hours.
ANCHORAGES: At Skaerbaek.
RESTRICTIONS: See "General" before first port. Max. speed in port is 4 knots.
MAX. SIZE: Maximum permissible length 200 m. Max. beam 25 m. Max. depth in channel is 7.0 m. at mean water.
RADIO: Lyngby Radio.
VHF: During office hours the Harbour Office is on Channel 16, working on Channels 12 and 13.
TUGS: Available (Icebreaker, 7 tons bollard pull).
BERTHING:

Berth No.	*Depth* (m.)	*Facilities*
1	3.0 – 5.0	
2	7.0	
3	7.0	
4	7.0	
5	6.0	
6	6.0	
7	5.0	
8	5.0	
9	5.0	
10	5.0	Bitumen
11	6.0	
12	6.0	
13	6.0	5 ton portal crane (grab/hook)
14	6.0	
15	6.0	Grain and feedstuff.
16	7.0	Suction/loading rate 350 t.p.h.
17	7.0	Cement
18	7.0	7 ton slewing crane (private)
19	7.0	
20	7.0	
21	7.0	
22	7.0	25 ton portal crane (grab/hook)
23	—	
24	—	

CRANES:
Mobile Cranes: 1 × 36 tons with grab/hook at Berths No. 19 – 22. 1 × 7.5 tons with hook at Berths No. 1 – 22. 2 × 24 tons with grab/hook at Berths No. 1 – 22.

Also see "Berthing".
Hoppers: 1 × 65 tons, with discharge funnel, at Berth No. 22. 1 × 45 tons, with discharge funnel, at Berths No. 11 – 22.
STEVEDORES: Obtained through Agents.
Normal Working Hours:

Monday – Thursday	0700 – 0830
	0900 – 1200
	1230 – 1530
Friday	0700 – 0830
	0900 – 1200
	1230 – 1500

MEDICAL: Hospital facilities available.
FRESH WATER: Available from quay.
FUEL: Available.
CONSULS:

Finland: J. Borum, Haderslevvej 25, Kolding. Tel. (75) 521233.
Malta: Chr. Hindkjoer, Fabriksvej 27, Kolding. Tel. (75) 525533.
Peru: M. Ohmeyer, Hobbelskoven 29, Kolding. Tel. (75) 528981.
Sweden: Ove Gronborg, Osterbrogade 14, Kolding. Tel. (75) 522711

REPAIRS: Only small repairs can be carried out.
GANGWAY/DECK WATCHMEN: Gangway watchman not required.
OPENING/CLOSING HATCHES: Normally carried out by crew.
CUSTOMS ALLOWANCES: See "General" before first port.
AIRPORT: Distance from Billund Airport 40 km. Billund Airport is served by regular airlines.
TIME: GMT plus 1 hour in Winter. GMT plus 2 hours in Summer (March – September).
HOLIDAYS: See "Copenhagen".
POLICE/AMBULANCE/FIRE: Police, Tel. (75) 522800; Ambulance, Tel. (75) 522222; Fire, Tel. (75) 522222, Help, Tel. 112; Emergency, Tel: 112.
TELEPHONES: Telephones obtainable on board.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Not needed.
GARBAGE DISPOSAL: Small containers for ship's galley-waste only are placed along the piers. The port will collect drums containing waste oil, rags, etc. from ships. All kinds of waste must be sealed.
WASTE OIL DISPOSAL: The port will only accept the quantity of waste oil produced on the voyage from the last port of call, and only if the vessel is able to pump by own gear to tanker truck alongside berth. 24 hours notice is required. Above must be advised in advance to ship's local Agent.
SEAMAN'S CLUBS: Located in Fredericia (bus obtainable).
CURRENCY: Danish Kroner.
GENERAL: *Charts:* Danish Charts No. 156 and 158. British Admiralty Chart No. 3465.
Garbage: All waste to be placed in containers on the quay.
Cleaning: The discharge of any kind of garbage, waste water or rubbish from deck, holds or tanks into the harbour is forbidden.
AUTHORITY: Kolding Havn, Jens Holmsvej 1, DK-6000 Kolding, Denmark. *Tel:* 75-502066 (24 hour service). *FAX:* (75) 502058. *Contact:* Per Bendix Jensen, Harbour Master. Office hours: 0800-1530 (Monday to Thursday) and 0800-1500 (Friday). VHF: Channel 16 (12/13).

KORSOR: 55.20 N. 11.08 E. (See Plan)

DOCUMENTS: See "Copenhagen".
PILOTAGE: Not compulsory. ETA and request for Pilot must be made to Belt Pilot 4 hours before arrival via VHF Channel 16.
ANCHORAGES: 0.5 miles S.W. of buoy "Nygrund". It is prohibited to anchor inside the outer pier.
MAX. SIZE: LOA 225 m., and 7.5 m. draft. Tidal variation 0.3 m.
RADIO: Lyngby Radio OXZ.
VHF: Korsor Harbour on Channels 16, 13 and 12. Tugs are worked on Channel 12.
RADAR: Pilot boats are radar equipped. There is no Port Control Radar.
TUGS: Available. 24 hours notice to Agents, via Lyngby Radio, must be given.
CRANES: 1 mobile crane of 24 tons, 4 cranes with grabs. Further equipment may be obtained at short notice.
BULK CARGO FACILITIES: Grain elevator with three pneumatic dischargers.
SPECIALISED CARGO-HANDLING FACILITIES: At present, 2 berths for Ro/Ro traffic.
BRIDGES: There are bridges between Gl.Havn and Inderhavn. Max. LOA 100 m., beam 25 m., draft 5.7 m., allowed to pass under these bridges.
STEVEDORES: Working hours 0700 – 1600 hrs. (1 shift), Monday to Friday. Night shifts by arrangement.
MEDICAL: Hospital at Slagelse, 15 km. away.
FRESH WATER: Available.
FUEL: Available by tank truck, if sufficient notice given.
CONSULS: Norwegian, German, Swedish and Finnish.
DRY DOCKS: None. One slipway of 600 tons displacement.
SERVICES: Compass adjuster available.
GANGWAY/DECK WATCHMEN: Not necessary.
HATCHES: Opening/closing normally done by ship's crew.
AIRPORT: Nearest at Copenhagen, 1 hour 10 minutes by rail.
TIME: GMT plus 1 hour. Summertime GMT plus 2 hours from March to September.
HOLIDAYS: Usual Danish holidays.
GENERAL:

Chart: Danish Chart No. 143, Storebaelt between Langeland – Sprogoe, covers this port, which lies 3 miles East of Route T.

Ferry Traffic: Attention is drawn to the intense ferry traffic between Korsor and Nyborg.
GARBAGE DISPOSAL: Service is available alongside from 0700 hrs. to 1530 hrs. There are no charges made for this service. Tel: 53-570085.
WASTE OIL DISPOSAL: Tanker trucks of 10 cu.m. capacity available. Standard Danish regulations apply.
SEAMAN'S CLUBS: None.
CURRENCY: Danish Kroner (DKr.).
AUTHORITY: Havnemesteren, Korsor Havn, Amerikakajen 2, DK-4220 Korsor, Denmark. *Tel:* 53-570085. *FAX:* 53-571485. *Contact:* A. Skjold Hansen, Harbour Master.

KYNDBY (Kyndby Power Station): 55.49 N. 11.53 E. (See Plan)

PORT LIMITS: Vessel is considered to be an "arrived ship" when alongside the quay or at anchorage waiting for berth.

DOCUMENTS:
Ship's Register.
Load Line Certificate.
Radio Safety Certificate.
Safety Equipment Certificate.
Derat Certificate or exemption.
2 Crew Lists.
Cargo Manifest or Bills of Lading.
Construction Certificate.
Certificate of Insurance or other financial security in respect of civil liabilities for oil pollution damage.
Tobacco and Spirit List, covering all goods on board belonging to crew, officers, Master, ship's bar or passengers.

PILOTAGE: Pilotage not compulsory. Pilot boards at the entrance of Isefjord and takes the vessel to the port and berths her. Pilots listening on VHF Channel 16.

Pilots to be ordered by ETA telegram to Agent at least 24 hours in advance.

ANCHORAGES: Larger vessels anchor in 15 m. – 20 m. of water either in the Isefjord or outside the entrance to the Isefjord. Holding ground good.

RESTRICTIONS: Arrival only by daylight. No tide under normal conditions. Vessel's draft entering Isefjord not to exceed 22 ft.

Also see "General" before first port.

HEALTH: No special restrictions as to Free Pratique, which will be granted by authorities on arrival. Suspected disease or fever must be telegraphed to Agents before arrival.

RADIO: Lyngby Radio.

VHF: Channel 16 to Pilot Station (also Skaw Pilot).

RADAR: No installation.

TUGS: Available. Join at Isefjord, outside the entrance to the Port of Kyndby, ship's lines to be used.

BERTHING: One oil berth: Length 570 ft., draft 21 ft. 6 in.

One coal berth: 530 ft. long, draft 22 ft. Water brackish.

CRANES: No cranes available.

STEVEDORES: Private stevedores to be ordered through receivers.

MEDICAL: All medical and hospital facilities available, no advance notice necessary.

TANKERS: 2 discharge hoses, one of 12 in. and one of 16 in.

No slop facilities.

One tanker berth, safe arrival draft: 21 ft. 6 in. Average discharge rate: 1,000 t.p.h.

DENSITY: Brackish.

FRESH WATER: By hose from quay – 10 t.p.h., D. Kr. 2.50 per ton.

FUEL: Available from all bigger companies by trucks or barge from Copenhagen – about 40 miles from Kyndby.

FIRE PRECAUTIONS: No specific precautions.

CONSULS: Nearest Copenhagen about 40 miles from Kyndby.

REPAIRS: All types of smaller repairs can be carried out.

DRY DOCKS: No dry dock available.

SURVEYORS: All large Classification Societies represented in Copenhagen about 40 miles from Kyndby.

GANGWAY/DECK WATCHMEN: Watchmen not necessary but available.

OPENING/CLOSING HATCHES: To be carried out by crew.

CUSTOMS ALLOWANCES: See "General" before first port.

REPATRIATION: Can be arranged normally via Copenhagen about 40 miles from Kyndby.

AIRPORT: About 40 miles to Airport in Copenhagen.

TIME: GMT plus 1 hour (from late September – late March). GMT plus 2 hours (from late March – late September).

HOLIDAYS: Saturday/Sunday normally no work, and further no work on holidays declared as official Danish holidays.

POLICE/AMBULANCE/FIRE: 112 all alarms.

TELEPHONES: No telephone connection on board.

SERVICES: No tank-cleaning facilities; all other services to ships can be arranged through specialists from Copenhagen.

SHORE LEAVE: No restrictions.

IDENTIFICATION: No shore passes necessary.

REGULATIONS: None.

DELAYS: None.

DEVELOPMENTS: None at the present time.

AUTHORITY: Private port owned by: Sjaellandske Kraftvaerker I/S, Strandvejen 102, 2900 Hellerup, Denmark. *Tel:* 39473947. *Telex:* 35158. *FAX:* 39473529.

Local office: Kyndby Power Station, DK-3630 Jaegerspris, Denmark. *Tel:* 45-42-321101. *FAX:* 45-42-321166. *Contact:* Poul Elmerkjaer.

LEMVIG: 56.33 N. 08.19 E. (See Plan)

PILOTAGE: Compulsory for vessels over 200 g.r.t. Pilot available day and night.

ANCHORAGES: Available off the harbour in a depth of 4.0 m.

RESTRICTIONS: *Entrance Channel:* Length 2.5 miles, depth 4.0 m.

MAX. SIZE: LOA 90 m., draft 4.0 m.

TUGS: None available. Fishing boats will assist.

BERTHING:

Berth	*Berthing Length* (m.)	*Depth* (m.)	*Remarks*
East Harbour	100	4.2	Cargo vessels.
West Harbour	350	3.0 – 3.5	Fishing vessels.
Middle Harbour	200	3.0	Small craft.

CRANES: 1×5 tons, 2×3.5 tonnes (mobile), 1×15 tons and 1×30 tons.

STEVEDORES: *Working Hours:* 0700 hrs. – 1630 hrs. Overtime can be arranged.

MEDICAL: Hospital, doctors and dentist available.

FRESH WATER: Available.

FUEL: Available.

REPAIRS: All types of repairs possible.

AIRPORT: Small airport at Rom for private planes. Call 97-88-88-88 for airport taxi service.

POLICE/AMBULANCE/FIRE: Emergency: Dial 112. Emergency medical assistance: Dial 97-84-18-00. Police: Dial 97-82-14-44.

AUTHORITY: Lemvig Havn, Havnegade 14, 7620 Lemvig, Denmark. *Tel:* 97-82-01-06.

MASNEDOEVAERKET: 55.00 N. 11.53 E.

LOCATION: Masnedoevaerket is situated on the island of Masnedoe, which is connected to Sjaelland by a bridge 150 m. East of the harbour.

DOCUMENTS:
Ship's Register.
Load Line Certificate.
Safety Radio Certificate.
Safety Equipment Certificate.
Safety Construction Certificate.
Derat Certificate or Exemption.
Bill of Lading.
Crew List.

Customs need a Tobacco and Spirit List, showing the vessel's and the crew's supply on arrival. Nearest Customs at Naestved.

APPROACHES: From West via Smalandsfarvandet depth of water 24 ft. From South East via Gronsund, max. draft permitted 16 ft. 6 in. From Pilot boarding ground, there is a buoyed channel, dredged to 7 m., with leading lights.

PILOTAGE: Pilot boarding ground off Masnedo N.W. flak. Sea Pilots available from Spodsbjerg, Korsor or Gronsund.

ANCHORAGES: Off the entrance channel.

MAX. SIZE: LOA 100 m., beam 17 m. and draft 6.7 m.

TUGS: Available on request, not normally used by vessels less than 4,500 d.w.t.

BERTHING: Power Station Quay 270 m. long, depth alongside 7 m.

CRANES: None.

BRIDGES: Storstromsbroen has a vertical clearance of 26 m. A new bridge was opened in 1985 across the Storstrom with a vertical clearance of 21 m. Power lines with 36 m. vertical clearance lie to the West of the harbour.

FRESH WATER: Available from hose on the quay.

FUEL: Available by tank truck.

REPAIRS: Minor repairs can be carried out at nearby machine shops.

AIRPORT: Copenhagen, 60 miles distant.

AUTHORITY: Sjaellandske Kraftvaerker, Masnedoevaerket, 4760 Vordingborg, Denmark. *Tel:* 45-53770777. *FAX:* 45-53777474. *Contact:* Leif Holst Hansen.

MIDDELFART: 55.30 N. 09.44 E. (See Plan)

DOCUMENTS: See "Copenhagen".

PILOTAGE: Not compulsory. Middelfart Pilot Station operates on Channel 16.

MAX. SIZE: 5,000 d.w.t. – 6,000 d.w.t., 6.5 m. draft.

TUGS: Available at short notice.

BERTHING: New Harbour: 2 quays, one of 190 m. length, depth 6.5 m., the other of 100 m. length, depth 5.7 m.

Old Harbour: 2 quays, one of 100 m. length, the other of 80 m. length, depth 6.5 m. at both quays. Ro-Ro ramp.

Private Wharves: A. C. Hansens Quay, length 65 m. max., draft 4.6 m. Open to public traffic.

Nordiske Kabel & Trpdfabrikkers Quay, max. length 100 m., depth 7 m.

CRANES: One 3 tonne crane at A.C.Hansens Quay. Mobile cranes of all sizes available at short notice.

BULK CARGO FACILITIES: Cranes and forklifts of 2 – 15 tonnes. Crane at A.C.Hansens Quay for bulk stores.

STEVEDORES: Working hours: 0700 – 1530 (overtime possible). *Rates of Work:* Bulk Cargo: 200 t.p.h. Iron, etc.: 180 t.ph.
MEDICAL: Local hospital available.
FRESH WATER: Available.
FUEL: All grades of fuels and lubricants available at short notice.
DRY DOCKS: One slip for vessels up to 100 tonnes.
CUSTOMS REGULATIONS: See "General" before first port.
AIRPORT: At Billund and Beldringe, 45 km. and 45 km. away respectively.
TELEPHONES: This service is available aboard ships at all berths by prior arrangement through the Agent. Standard rates apply.
AUTHORITY: Middelfart Havnekontor, Havnegade 79, DK-5550 Middelfart, Denmark. *Tel:* 64-410253. *FAX:* 64-410253. *Contact:* Bent Ostergaard-Poulsen, Harbour Master. Office hours 1100 – 1200 hrs.
AGENT: Middelfart Shipping, Havnegade 18, DK-5500 Middelfart. Tel: 64-410072. Telex: 58240 "Miship DK". Cable: Midship.

NAESTVED: 55.13 N. 11.45 E. (See Plan)

DOCUMENTS:
1 copy Passenger List.
1 copy Crew List.
1 copy Stowaway List.
1 copy Crew Personal Effects List.
1 copy Stores List.
1 copy Arms and Ammunition List.
Vessel's Certificates.

PILOTAGE: Compulsory between the entrance to Karrebaeksminde and Naestved for all ships over 500 d.w.t. VHF Channel 16. Tel. 53-727366 and 55-442397. Pilot boards 0.5 miles S.W. of breakwater heads.
ANCHORAGES: 1.5 miles S.W. of Karrebaeksminde Light in 8 m. 11 m. depth. Holding ground is good, but anchorage is exposed to strong winds from S.W.
APPROACHES: *Entrance:* An artificial channel, dredged to a depth of 6.0 m. (19 ft. 09 in.) over a bottom width of maximum 20.0 m. and minimum 16.0 m. (52 ft. 6 in.), marked by spar buoys, perches and leading beacons, leads from the entrance at Karrebaeksminde to the harbour.

Regulations for narrow channels in Danish waters are in force, with certain exceptions as stated in a Government Notice of 30th May 1980 which, among other things, includes a speed limit of 6 knots in the buoyed channel and prescribes that a vessel proceeding against the stream must give way to a vessel proceeding with the stream.

Also see "Bridges".
RESTRICTIONS: Only navigable from half hour before sunrise to half hour after sunset, and according to tides. Also see "General" before first port.
MAX. SIZE: Max. length 116 m. Max. draft 5.60 m. with breadth 12.20 m. or max. breadth 14.40 m. with draft 4.80 m.
HEALTH: Pratique granted on arrival by boarding Customs Officers.
See "Kalundborg".
RADIO: Lyngby Radio (OXZ).
ETA: Send ETA message to Agent as early as possible.
VHF: Pilot Station and Bridge Control at Karrebaeksminde are equipped with VHF.
TUGS: The port operates an icebreaking harbour tug of 350 h.p. Vessels over 5.0 m. draft may not pass through the bridge without tug assistance. Some exemptions can be made by the Harbour Master, in accordance to ship's draft, beam and length.
BERTHING: No berthing in Karrebaeksminde.

There is 1,100 m. of quays with depth of 6.0 m., of which 370 m. is occupied by the paper mill.

There are 2 berths with a depth of 5.2 m.
Bulk Handling Facilities: 1×35 t.p.h. grain suction unit and 1×60 t.p.h. loading pipe.
CRANES: Paper Mill: 1×8 tons.
West Quay: 2×4 tons.
East Quay: 1×3 tons (fixed).
Mobile cranes also available.
BRIDGES: A bascule road bridge spans the canal 650 m. above the breakwater heads. The navigable width of the passage is 22.0 m., and there is a vertical free side height of 20 m. with the opening span in raised position. Passage through the bridge is free from 30 minutes before to 30 minutes after sunset within the period from 0500 hrs. to 2100 hrs., 7 days a week.

A power cable with 33.0 m. (108 ft.) headroom spans the canal 1.5 miles below Naestved Harbour.
MEDICAL: Hospital available.
FRESH WATER: Available from quay, 10 t.p.h.
FUEL: All grades. Deliveries by lorry only.
REPAIRS: Minor repairs possible.
AIRPORT: Kastrup Airport, Copenhagen 100 km. away.
TIME: GMT plus 1 hour.
SHORE LEAVE: No restrictions.
GARBAGE DISPOSAL: Garbage collected daily by Port Authority from alongside vessel. No extra charges made.
WASTE OIL DISPOSAL: Oily water mix and waste oil collected free of charge by tanker truck, up to a maximum of one tonne per day's steaming from last port of call.
SEAMAN'S CLUBS: None.
CURRENCY: Danish Kroner (DKr.).
AUTHORITY: Naestved Havnekontor, Toldbodgade 4, 4700 Naestved, Denmark. *Tel:* 53-720056. *FAX:* 53-720026. *Contact:* E. Andersen, Harbour Master.

NAKSKOV: 54.50 N. 11.08 E. (See Plan)

DOCUMENTS:
Tonnage Certificate.
Load Line Certificate.
Valid Derat Certificate.
Crew Declaration.
3 Crew Lists.

PILOTAGE: At Albuen at the entrance of the firth. The Pilot Station named "Belt Pilot". VHF Channel 16. Notice of ETA to be given as early as possible and not later than 4 hours before arrival.
ANCHORAGES: Safe anchorage in port area for smaller vessels or outside on the Roads in Langelandsbaelt. The Pilot Station will advise best position depending on wind and current.
RESTRICTIONS: Sailing to and in the harbour at night-time with help of projector and with good visibility only. Also see "General" before first port.
MAX. SIZE: D.w.t.: Approx. 3,500 tons. Draft: 19 ft. Length: 660 ft. Breadth: 70 ft. Height: None – no bridges to pass.
RADIO: Lyngby Radio.
VHF: Operated by Harbour Office during daytime only on Channel 16.
Also communication via the Pilot Station on VHF Channel 16.
All movements to be reported to the Agent only.
TUGS: Tug available with 24 hours notice.
BERTHING: Protected from all winds. Depth up to 20 ft. 6 in. (6.3 m.) 7,500 ft. of quay. In the fairway leading up to the harbour there is a depth of 20 ft. 6 in. (6.3 m.), distance about 6 miles. Max. draft in Fairway 19 ft.
CARGO HANDLING FACILITIES: Tracks along the quays in connection with the railway station and all Danish Railways. Also good road connections.

3 grain silos: 4,000, 12,000 and 15,000 tons. 3 grain elevators loading rate 120 t.p.h., 80 t.p.h. and 50 t.p.h. respectively. 1 grain elevator discharging rate 40 t.p.h.

4 mobile belt conveyors loading up to 110 t.p.h.
1 mobile crane (32 tons capacity) – also grab and polygrab.
3 forklifts 2.0 – 3.5 tons available. Up to 4.5 tons on request.
3 mini-loaders (Bobcats) for discharging of bulk cargoes.
BRIDGES: No bridges to pass. Airdraft unlimited.
STEVEDORES: Arranging gangs for work after noon, notice to be given to the stevedores latest 0900 hrs. For work in the morning, notice to be given to the stevedores the day before latest noon.
MEDICAL: Treatment all kinds possible, including hospital. Medical attention at dentist, eye and ear specialist normally requires 24 hours notice if possible.
DENSITY: Fresh water.
FRESH WATER: Available from quay or by truck.
FUEL: Available.
CONSULS: Dutch, Finnish, French, Norwegian and Swedish.
REPAIRS: Blacksmith and electrical workshops available to carry out some repairs on deck and engine.
DRY DOCKS: Shipyard provided with 2 dry docks up to 32,000 d.w.t., building slips up to 35,000 d.w.t. Cranes to lift up to 100 tons.
SURVEYORS: At present no surveyors at Nakskov. Must be ordered from Copenhagen.
GANGWAY/DECK WATCHMEN: Not necessary.
OPENING/CLOSING HATCHES: Always carried out by crew.
CUSTOMS ALLOWANCES: 40 cigarettes or 40 grams tobacco, 0.25 litre spirits and 0.25 litre wine per man per day.
CARGO GEAR: Loading/discharging always effected by shore gear, unless otherwise agreed in C/P.
REPATRIATION: Facilities available.
AIRPORT: Small airport for taxi flights close to the port. About 160 km. to the nearest airport served by regular world-wide airlines.
TIME: GMT plus 1 hour. March-September, Summertime GMT plus 2 hours.
POLICE/AMBULANCE/FIRE: Police Tel: 921448. Ambulance Tel: 921744. Fire Tel: 923041. Emergency Tel: 112.
EMERGENCY CO-ORDINATION CENTRE: Soevaernets Operative Kommando (SOK), Aarhus. Call via Radio Stations Lyngby, Roenne, Skaw or Blaavand.
BANKS:
Lollands Bank A/S, DK-4900 Nakskov. Telex: 47542.
Den Danske Bank A/S, DK-4900 Nakskov. No telex.
STORING: See "Prelims".
1. Vessel can be stored by truck.
2. Trucks can proceed alongside ship.
3. Forklift can be used.
4. Customs documents from supplier to be shown at the Customs House before loading the stores. In case of bonded stores the loading will be supervised by Customs Officer.

SHORE LEAVE: The crew are allowed ashore, but depending of nationality not allowed to leave the town without permission.
IDENTIFICATION CARDS: Seaman's Book is sufficient.
GENERAL: Provisions to be supplied from a supermarket. If bonded stores are required this has to be delivered by a ship Chandler at another port – transportation fee then to be paid – usually about DKR 300 – depending on distance and order given.
AUTHORITY: Nakskov Havn, Havnegade 2, DK-4900 Nakskov, Denmark. *Tel:* 53-920313. *FAX:* 53-925113. *Contact:* Peter Norre, Harbour-Master.

NYBORG: 55.19 N. 10.49 E. (See Plan)

DOCUMENTS:
2 copies Crew List.
2 copies Ship's Declaration.
1 copy Health Declaration.
1 copy Customs Declaration.
Bills of Lading.

PILOTAGE: Required notice ETA 6 hours. Pilot boat VHF Channel 16. Belt Pilot Station, Spodsbjerg Tel: (62)-501535, Office Nyborg (62)-310089. Pilot compulsory for loaded tankers over 1,500 tonnes d.w.t.

ANCHORAGE: South of Knudshoved Lighthouse. Depth 16 m. (52 ft.). Small vessels anchor S.W. of Avernakke Pynt.

RESTRICTIONS: See "General" before first port.

MAX. SIZE: Avernakke Pynt Bro (Oilpier) draft 32 ft. length about 600 ft. Vesterhavn draft 24 ft., length about 650 ft. Lindholm draft 23 ft., length 1,575 ft.

RADIO: Lyngby Radio.

VHF: Harbour office of Nyborg, call Channel 16, shift to Channels 12 or 13 for working.

TUGS: One tugboat normally stationed in the port. Tugs required notice of 6 hours.

BERTHING: *Lindholm Terminal:* The Terminal totals 31 ha. (77 acres) and has 580 m. (1,903 ft.) of quay space. Depth at the Terminal ranges from 5.0 m. (16 ft.) to 11.0 m. (36 ft.). The Terminal has facilities for general cargo, including warehouse capacity of 14,000 sq.m. The Terminal is equipped with a bulk terminal with 2 conveyor belts, each with a capacity of 650 tons/hr. The Terminal has 2 Ro-Ro berths.

Quay	*Length*	*Depth*
No. 20	250 m. (820 ft.)	8.5 m. (28 ft.)
No. 21	90 m. (295 ft.)	5.0 m. (16 ft.)
No. 25	240 m. (787 ft.)	11.0 m. (36 ft.)

Nyborg Harbour: Also referred to as the inner harbour, it is divided into the East and the West Harbour. The East Harbour connects directly with the outer Lindholm Terminal. The quays of the West Harbour total 550 m. (1,800 ft.) with depths of 7.5 m. (25 ft.). There are 2 Ro-Ro berths, each with 5,000 sq.m. of storage space.

Quay	*Length*	*Depth*
No. 4	100 m. (328 ft.)	7 m. (23 ft.)
No. 5	90 m. (295 ft.)	7 m. (23 ft.)
No. 6	120 m. (394 ft.)	7.5 m. (25 ft.)
No. 7	180 m. (591 ft.)	7.5 m. (25 ft.)

Avernakke Pier: This Terminal is located between Nyborg Harbour and the Lindholm Terminal and is mainly used for handling of tankers with tar products and additives for lubricants, and has 3 quays.

Quay	*Length*	*Depth*
No. 14	100 m. (328 ft.)	5.3 m. (17 ft.)
No. 15	65 m. (213 ft.)	10.0 m. (33 ft.)
No. 16	65 m. (213 ft.)	5.3 m. (17 ft.)

Vessels up to 170 m. (558 ft.) can be handled at Quay No. 15.

Facilities: The port is capable of handling bulk, general cargo and containers. The port has 4 Ro-Ro berths. The port also has adequate, modern terminal equipment. There are 17 cold stores totalling 162,000 cu.m.

CRANES: 6 mobile cranes with capacity up to 32 tons with grab.

STEVEDORES: Ordered by Agent.
Working Hours: Monday to Friday 0700 hrs. – 1600 hrs., or any time upon request.

MEDICAL: Hospital facilities available.

TANKERS: Discharge at Avernakke. Discharge lines 8 in. and 10 in.

DENSITY: About 1005.

FRESH WATER: Supply by pipeline to berths.

FUEL: All grades available.

CONSULS: Finland 65-311646, Sweden 65-310106.
In Odense (near Nyborg);

France	66-115515	Iceland	66-131809
Germany	66-141414	Spain	66-136644
Netherlands	66-119060	U.K.	66-132301

REPAIRS: Most repairs possible.

DRY DOCKS: None.

SURVEYORS: Independent Hull, Machinery, Cargo and P & I Surveyors. Contact: Fyn Besigt, Tel. (65) 311200 (day and night).

GANGWAY/DECK WATCHMEN: Not compulsory.

OPENING/CLOSING HATCHES: Crew allowed open and close, otherwise according Charter Party.

CUSTOMS ALLOWANCES: See "General" before first port.

REPATRIATION: Possible.

AIRPORT: Nearest airport, Beldringe, Odense (50 km.). Copenhagen International Airport (130 km.).

TIME: GMT plus 1 hour.

HOLIDAYS: New Year's Day; Maundy Thursday; Good Friday; Easter Monday; Prayer Day, Ascension Day; Whit Monday; Christmas Day; Boxing Day.

POLICE/AMBULANCE/FIRE: Police 65-311448; Ambulance 000; Fire 000.

TELEPHONES: Available at Vesterhavn.

BANKS: Den Danske Bank, Nyborg. Tel: 65-313334.
Jyske Bank, Nyborg. Tel: 65-315022.

SHIP SUPPLY SERVICE: Supplies/crew changes, etc., for ships passing Great Belt. Contact: Thomas Wang A/S. Tel.: (65) 310057. Telex: 50304. Fax: (65) 310016. Cables: Wang.

SHORE LEAVE: No restrictions.

IDENTIFICATION CARDS: Not required.

GARBAGE DISPOSAL: Garbage containers available alongside. No charges if reasonable quantities.

WASTE OIL DISPOSAL: Collection by tanker trucks. Operators: Kommune Kemi. Tel: 65313001. Fax: 65317182. Charges depend on products.

SEAMAN'S CLUBS: None.

CURRENCY: Danish Kroner.

AUTHORITY: Nyborg Havn, Lindholm Havnevej 27, DK-5800 Nyborg, Denmark. *Tel:* (65) 310587. *FAX:* (65) 311580. *Contact:* Poul Kildelund Poulsen, Port Manager. Henning Mortensen, Port Captain. Ole Haugsted Jorgensen, Sales and Marketing Manager.

NYKOBING (Falster): 54.46 N. 11.52 E. (See Plan)

DOCUMENTS:
Ship's Register.
Load Line Certificate.
Derat Certificate.
Crew List stating quantity of cigarettes, cigars, tobacco, cigarette paper, spirits, wine and guns.
Cargo List.

PILOTAGE: Pilot ordered through Agents or VHF Channel 16 (Guldborg Pilot) and will board at Skellerev or Argus Ground (both outside Guldborg Bridge).

ANCHORAGE: (Sand) By Skellerev, S.E. of Argus is safe ground.

RESTRICTIONS: Port only accessible by daylight, max. draft 19 ft. 6 in., max. breadth for passing Guldborg Bridge 25 m. Entrance from South (Gedser) not recommended, as depth of water in the Southern part of Guldborgsund only amounts to 8 ft. Also see "General" before first port.

RADIO: For vessels coming through the Kiel Canal, Kiel Radio could be used, otherwise nearest station Lyngby Radio.

TUGS: Available on request.

BRIDGES: Vessels calling Nykobing Falster have to pass Guldborg Bridge about 8 miles North of harbour. Bridge, breadth 25 m., opens by request after sunrise and half an hour after sunset (from 1st Nov. to 1st March from half an hour before sunrise). When requesting passage use international flag "N" on half foremast and give one long and one short blast.

STEVEDORES: Ordered by Agents on receiving vessel's ETA.

MEDICAL: No advance notice required for medical attention.

FRESH WATER: Supplied from quay installations.

FUEL: All grades obtainable – delivered by tank lorry.

CONSULS: Finland, Germany, Netherlands, Norway and Sweden.

REPAIRS: Small deck and engine repairs possible.

GANGWAY/DECK WATCHMEN: Not necessary.

OPENING/CLOSING HATCHES: Carried out by crew.

CUSTOMS ALLOWANCES: See "General" before first port.

AIRPORT: Nearest at Copenhagen (2 hours by train).

TIME: GMT plus 1 hour.

HOLIDAYS: New Year; Maundy Thursday; Good Friday; Easter Monday; Prayer Day; 1st May (Labour Day, half only); Ascension Day; Whit Monday; Constitution Day (5th June, half only); Christmas and Second Christmas Day.

POLICE/AMBULANCE/FIRE: Dial 112 and ask for police, ambulance or fire service.

SHORE LEAVE: Crew members may go ashore without any restrictions.

IDENTIFICATION CARDS: Not necessary.

GARBAGE DISPOSAL: Solid waste should be put in sacks on the quay or in the containers provided. Ship's sewage system waste can be pumped directly into pipeline on quay or into shore tank. Contact Harbour Office for details.

WASTE OIL DISPOSAL: This can be made either using closed drums, or in the case of oily water mixture, into tanker trucks. Other waste disposal should be arranged through Harbour Office.

SEAMAN'S CLUBS: None.

CURRENCY: Danish Kroner.

AUTHORITY: Nykobing Falster Havn, Havnekontoret, Toldbodgade 29, DK-4800 Nykobing Falster, Denmark. *Tel:* (54) 850563. *FAX:* (54) 820564. *Contact:* L. Mortensen, Harbour Master.

NYKOBING (Mors): 56.48 N. 08.52 E.

PORT LIMITS: A line drawn between Orodde Point in a S.W.'ly direction to Refshammer Point defines the seaward limits of the port.

DOCUMENTS: See "Copenhagen".

PILOTAGE: Pilotage is compulsory for vessels more than 200 b.r.t. when passing the Oddesund-bridge, and for vessels with a draft more than 2.8 m. when passing Logstor. Vessels arriving from the West (North Sea) shall contact Thyboron Pilot 3 hours before arrival Thyboron Canal. Vessels arriving from the East (Kattegat) shall contact Hals Barre Pilot 3 hours before arrival Hals Barre Lighthouse. Both stations listen on VHF Channels 16 and 12. When passing Logstor, the Pilots there will take over; also working Channels 16 and 12.

ANCHORAGES: Anchoring is prohibited in the buoyed channel to Nykobing (Mors) Harbour and in the white sector from Glyngoere Lighthouse. Good sand holding ground North and East of Orodde Pt.

RESTRICTIONS: None, tankers can be moved during the hours of darkness.

MAX. SIZE: Vessels up to LOA 105 m., beam 25 m. and 4.3 m. draft (SW).

HEALTH: Danish rules apply.

RADIO: Blaavand, Skagen or Lyngby Radio are working on VHF, MF and HF.

VHF: See "Pilotage" and "Radio".

RADAR: None.
TUGS: Available if necessary.
BERTHING: General and bulk cargo can be handled at two berths. The East Pier is 70 m. long but vessels up to 105 m. LOA can be berthed. The South Pier is 57 m. long. Least depth at the inside berth is 4.3 m.
CRANES: 1 mobile crane 25 tonnes without advance notice and 1 mobile crane 15 tonnes with short notice.
BRIDGES: (a) "Sallingsundbroen" connecting the island of Mors to Salling is situated 1 nautical mile S.E. of Nykobing Mors Harbour. Max. vertical clearance is 26 m.

(b) "Oddesundbroen" connecting Thyholm and Struer is situated between Nykobing and Thyboron.

(c) When coming from Kattegat 2 bridges are to be passed. Firstly "Limfjordsbroen" connecting Aalborg and Norresundby, then "Aggersundbroen" N.E. of Logstor.
STEVEDORES: Working hours Monday-Friday 0700 – 1630.
MEDICAL: Full hospital facilities available without prior notice.
TANKERS: No facilities – pipeline dismantled.
DENSITY: 1027.
FRESH WATER: Available, rate 2.5 t.p.h.
FUEL: Available, delivered by trucks.
CONSULS: None.
REPAIRS/DRY DOCKS: Soeren Larsen & Soenner Shipyard, 7900 Nykobing Mors. Tel: 97-721544. Telex: 66698 SLS – DK. Cables: SLS – Yard. Patent slipway up to 350 t., light ship. All kinds of deck and engine repairs. Shipbuilding up to 499 b.r.t.
SURVEYORS: Lloyd's Agents, P. H. Hoejgaard Jensen Aps., 8 Asmusvaenget, DK 8530 Hjortshoej, Aarhus. Tel: 06-196500. Aalborg Survey Association, 4 Vesteraa, DK 9000, Aalborg. Tel: 08-166022.
GANGWAY/DECK WATCHMEN: Not necessary.
HATCHES: Opening/closing carried out by crew.
CARGO GEAR: Loading/discharging normally done by shore gear.
REPATRIATION: All facilities exist for crew changes and repatriation.
AIRPORT: At Thisted (45 km.) and Karup (70 km.). Several departures daily to Copenhagen.
TIME: GMT plus 1 hour. Summertime from March to September (GMT plus 2 hours).
HOLIDAYS: No cargo work on all Danish local holidays.
POLICE/FIRE/AMBULANCE: In emergency dial 000. Otherwise Police: 721800, Ambulance and Fire: Falck 721222.
TELEPHONES: Available onboard for naval vessels only.
SERVICES: Compass adjusting.
SHORE LEAVE: No restrictions.
IDENTIFICATION CARDS: Not necessary.
DELAYS: Normally no berthing delays.
DEVELOPMENTS: None.
AUTHORITY: Morsoe Kommune, Jernbanevej 7, 7900 Nykobing Mors. *Tel:* 97-721488. *Contact:* B. F. Nielsen, Harbour Master, Havnekontoret, 7900 Nykobing Mors. Tel: 97-720049. Fax: 97-722918.

ODENSE: 55.25 N. 10.23 E. (See Plan)

DOCUMENTS:
Ship's Register.
Load Line Certificate.
Radio Safety Certificate.
Safety Equipment Certificate.
Derat Certificate or Exemption.
1 Crew List.
1 Passenger List.
1 Stowaway List.
1 Arms and Ammunition List.
1 Stores List.
1 Crew Personal Effects List.
1 Cargo Manifest or Bills of Lading.

PILOTAGE: Compulsory for merchant vessels as follows:
1. Vessels of and over 1,500 d.w.t.
2. All tankers carrying oil, petrol, LPG or dangerous liquid chemicals or with uncleaned tanks, which have last carried such cargoes.
3. Vessels of and over 100 d.w.t. which are not equipped with VHF.

Odense Pilot boards just North of light-buoy 2A outside of Gabet. In bad weather the Pilot will board inside of Gabet between light-buoys No. 2 and No. 4.

ETA: Send ETA message to Agent earliest possible and request for Pilot at least 6 hours in advance. Confirm ETA at the Fairway Buoy 1 hour prior to arrival.
ANCHORAGE: Vessels with a draft of 6.0 m. or more should anchor about 3 miles North of Gabet in depths of 10 m. – 14 m. (6 – 8 fathoms). The holding ground is good. Sheltered anchorage obtainable inside Gabet in depths of 4.0 m. – 7.5 m. (2 – 4 fathoms).
RESTRICTIONS: A 12 mile long entrance channel, maintained at a depth of 7.5 m. (24 ft. 06 in.) MSL over a bottom width of minimum 35 m. and marked by light buoys, spar-buoys, and light-beacons, leads through the shallow Odense Fjord. The lower part consists of a winding, narrow, natural channel and the upper part passes through the 4 mile long Odense Canal.

The Lindoe Terminal situated 3 miles from the entrance. Depth of water is 9.2 m. Minimum width of bottom 60 m.

Maximum speed in Odense Canal is 6 knots.

Regulations for narrow channels in Danish water are enforced, both in the channel through the fjord and in Odense Canal with the addition that any ship of and over 100 d.w.t. intending to transit the channel, should contact the Pilot Station at Gabet from a position 5 miles North of Odense Fjord light and whistle buoy or, if outward bound, 30 minutes before departure.

Ice: Under normal conditions the port is open all the year round. During the period January – March, ice may occur in the fjord, but an ice-breaking tug and transitting ships will maintain an open ice-channel.

Obstructions: Odense Canal is spanned by overhead power cables with vertical clearances of minimum 45 m. (147 ft.).

Tides and Currents: The tidal range is 0.4 m. (15 ft.). Gales from between East and S.W. may lower the water level by up to 1.5 m. (5 ft.), and those from between West and N.E. may raise it by up to 1.8 m. (6 ft.).
MAX. SIZE: Inner Port: 6,000 d.w.t. Max. draft 7.0 m. fresh water, max. length 160 m., controlled by swinging basin and draft. Permissible draft for vessels over 100 m. in length to be obtained from Agent.

Lindoe Terminal: Max. draft 8.4 m.
HEALTH: Pratique granted by Customs Officers who bring Health Declaration for Masters to complete. In event of suspected disease or fever on board radio details to Agent before arrival.
RADIO: Lyngby Radio. Also see "Pilotage".
VHF: Port Authority and tug communicate on Channel 12. Odense Pilot on Channels 16 and 12.

Reporting system compulsory. All ships have to call the Pilot Station 30 minutes before entry or departure and comply with instructions from the Pilot Station to ensure safe navigation.
TUGS: Tug is available (600 h.p.). Not compulsory but necessary for large vessels. Tug normally joins vessels in port. Large vessels at Gabet. Ship's line.
BERTHING: Inner Port: Three harbour basins including 4,200 m. of quays with depth of 7.5 m. alongside. Coal quays at Fynsvaerket, depth 7.5 m. alongside.

The Lindoe Terminal: 280 m. quay, depth alongside 9.2 m.
CARGO HANDLING FACILITIES: All principal wharves are rail served and have road access. There are 34,000 sq.m. of open asphalted storage areas, warehouses of 70,000 sq.m. floor space, cold storage of 55,000 cu.m. and a tank storage capacity of 67,000 cu.m. Three grain suction units with capacities of 50 t.p.h. – 120 t.p.h.
Inner Port: The port operates 4 electric cranes of 3.5 tons to 15 tons with hooks and 3.5 tons to 6 tons with grabs. The port operates a grain loading terminal with a capacity up to 320 cu.m./hr. There is one private grab crane and a number of fork-lift trucks up to 16 ton lifting capacity.

Lindoe Terminal: The port operates 2 electric portal cranes of 14 tons to 34 tons with hooks and 12 tons with grabs. 2 warehouses of 1,000 sq.m. each, one for general cargo and one for bulk cargo.

Fyensvaerket Power Station has 2 continuous unloaders and 2 cranes.
Cargo Handling Capacity:
Bulk cargo 120 t.p.h. – 270 t.p.h.
General cargo 100 t.p.h. – 230 t.p.h.

Trade and Shipping: Export of agricultural produce, general cargo, machinery, meal and flour.

Imports include cereals, coal, feeding stuffs, fertilisers, general cargo, gravel, iron, kaolin, LPG, paper reels, petroleum products, salt and timber.
SPECIAL CARGO FACILITIES: Berths available for handling of containers and Ro/Ro traffic. 1 × 16 ton truck.
BRIDGES: See "Restrictions" – "Obstructions".
STEVEDORES: To be arranged through Agent.
MEDICAL: Doctors and hospital facilities anytime. Arrange through Agent.
TANKERS: One berth length 160 m., depth 7.5 m., also one jetty, depth 6 m.
DENSITY: 1010.
FRESH WATER: Available by pipeline at all berths. Rate: 10 cu.m./hr. – 15 cu.m./hr.
FUEL: All grades available by road transport.
FIRE PRECAUTIONS: In addition to the usual precautions a firefighter is posted at the vessel while in the port when the cargo is petrol, kerosene, etc.
CONSULS: All European countries represented.
REPAIRS: Local workshops can undertake various kinds of repairs to boilers, machinery and electrical installations. The shipyard at Lindoe has three building docks, of which the largest is suitable for vessels up to 500,000 d.w.t.
DRY DOCKS: One 500,000 d.w.t. and two 100,000 d.w.t. dry docks in Lindoe Shipyard. Vessels up to 400 m. × 70 m. × 6.5 m. draft can be accommodated.
SURVEYORS: N.V. and Lloyd's.
HATCHES: Normally opened by ship's crew.
CUSTOMS ALLOWANCES: See "General" before first port.
REPATRIATION: Can be arranged.
AIRPORT: Beldringe Domestic Airport, 9 km. to the North, has scheduled daily flights to and from Copenhagen International Airport.
TIME: GMT plus 1 hour. Summertime GMT plus 2 hours.
HOLIDAYS: New Year's Day; Maundy Thursday; Good Friday; Easter Monday; Prayer Day; Ascension Day; Whit Monday; Christmas Day; Boxing Day.

Half-holidays: May 1st, June 5th and December 24th. Work can be arranged.
POLICE/FIRE/AMBULANCE: Dial 000 and ask for service required.
TELEPHONES: No telephones on board.
SERVICES: Compass adjustment can be arranged.
SHORE LEAVE: No restrictions.
IDENTIFICATION CARDS: Not necessary.
GARBAGE DISPOSAL: Garbage containers available at all piers. Contact Port Authority for service.
WASTE OIL DISPOSAL: Service available by tanker truck. Contact Port Authority 24 hours in advance for service.
SEAMAN'S CLUBS: None.
CURRENCY: Danish Kroner.
REGULATIONS: Nothing unusual.
DELAYS: None.
AUTHORITY: Odense Port Authority, Londongade 1, DK-5000 Odense C, Denmark. *Tel:* 66-120792. *FAX:* 65-914774. *Contact:* Finn Vinther, Harbour Master. Tel: 66-120025. Fax: 65-914774.

OREHOVED: 54.57 N. 11.51 E. (See Plan)

PILOTAGE: Pilots may be ordered through Masnedo Pilot on VHF Channel 16 or through the Harbour Authorities.

ANCHORAGE: West of Bredegrund with depths of 9.0 m. – 10.0 m.

MAX. SIZE: Max. LOA 150 m., Max. draft 6.5 m.

VHF: Harbour Office on Channel 16 during office hours and when vessel expected. Working on Channels 13 and 12.

TUGS: To be ordered 12 hours in advance.

BERTHING: Length of quay 165 m. Depth alongside 5.0 m. – 7.0 m. Depth in basin 7.0 m.

CRANES: 1×20 ton travelling crane.

FRESH WATER: Available

GARBAGE DISPOSAL: Contact Orehoved Shipping and Stevedoring ApS.

WASTE OIL DISPOSAL: Contact Orehoved Shipping and Stevedoring ApS.

CURRENCY: Danish Kroner (DKr.).

AUTHORITY: Orehoved Shipping and Stevedoring Aps., Orehoved Havn, DK-4840 Noerre Alslev, Denmark. *Tel:* (53) 84 61 58. After Hours: (53) 84 63 61, (53) 83 47 42. *Telex:* 40104. *FAX:* (53) 846447. *Cables:* Shipohoj. *Contact:* M. Stang, Harbour Master/General Manager.

RANDERS: 56.29 N. 10.04 E. (See Plan)

DOCUMENTS:

2 Crew Lists.
2 Lists with statement of each crew member's cigarettes, tobacco and spirits.

PILOTAGE: Apply for Pilot 6 hours before arrival. Call on VHF Channel 16 one hour before at pilot station.

ANCHORAGE: Outside Entrance buoy in 8 m.

RESTRICTIONS: Vessels with good searchlights can enter at night.

MAX. SIZE: Max. length, 475 ft.; breadth, 57 ft.; draft, 19 ft.

HEALTH: No special requirements.

RADIO: Lyngby Radio and Skaw Radio.

VHF: VHF service from Harbour Office, Channel 16, icebreaking 16.

TUGS: 900 h.p. tugs available – use ship's lines.

BERTHING: 80 berths available. Depth alongside 5 m. – 7 m.

STEVEDORES: Ordered by Agents. Working periods: Monday to Friday 0730 – 1130 hrs., 1200 – 1530 hrs. Saturday no work.

MEDICAL: Hospital facilities available.

TANKERS: Molasses only.

DENSITY: Brackish in port area. No tide.

FRESH WATER: Shore installations.

FUEL: All grades. Deliveries by lorry only.

CONSULS: Norway (86) 42 61 00, Finland (86) 42 77 11, France (86) 42 35 83, Sweden (86) 43 46 74, Iceland (86) 42 55 55.

GANGWAY/DECK WATCHMEN: Available but not compulsory.

OPENING/CLOSING HATCHES: By crew.

CERTIFICATES: Tonnage Certificate, Derat Certificate, Load Line Certificate.

CUSTOMS ALLOWANCES: See "General" before first port.

REPATRIATION: Several hotels available.

REPAIRS: Engine repairs and minor repairs.

SURVEYORS: Arranged by Agent.

AIRPORT: Tirstrup Airport 40 km. from Randers, 5 – 7 daily connections with Copenhagen.

TIME: GMT plus 1 hour in Winter. Summertime from March-September.

HOLIDAYS: 1st January (New Year); Maundy Thursday, Good Friday, Easter Monday; 1st May from 1200 hrs. (Labour Day); Whit Monday from 1200 hrs.; 24th December from 1200 hrs.; 25-26th December (Christmas).

POLICE/AMBULANCE/FIRE: Tel. 112.

IDENTIFICATION CARDS: Not required.

GARBAGE DISPOSAL: Available.

WASTE OIL DISPOSAL: Available.

CURRENCY: Danish Kroner.

AUTHORITY: Randers Havn, Kulholmsvej 1, 8900 Randers, Denmark. *Tel:* 86421057, 30817586. *FAX:* 86407181. *Contact:* J. Morgen, Harbour Master.

RODBY: 54.42 N. 11.24 E. (See Plan)

DOCUMENTS:

1 Crew List.
1 Passenger List.
1 Stores List.
1 Manifest or Bill of Lading.

PILOTAGE: As the harbour is so easily accessible there is no Pilot. A person with local knowledge may be engaged by calling ferry "Danmark" VHF 16.

ANCHORAGES: At a distance of 1.5 – 2 miles, bearing S.E. – S.S.E. of approaching buoy, depth of water 10 m.

RESTRICTIONS: See "General" before first port.

REGULATIONS: Ferries owned by D.S.B. or D.B. (Train ferries) have priority using the entrance.

MAX. SIZE: Largest vessel: Length 80 m. Draft 4.5 m. Depth of water in North and West Basin: 5 m. N.E. Storm can give rise of up to 1.5 m. S.W. Storm can give fall of 1.2 m. on daily depth.

HEALTH: No Certificates required.

RADIO/VHF: All messages via "Lyngby Radio" and Port Radio, VHF Channel 16, working Channels, 8, 10 and 11. Harbour office and ferry station listen on Channel 74. Ferries listen on Channels 16 and 74.

TUGS: None.

BERTHING: Quay length 518 m. equipped with 1 mobile crane 32 tons capacity. Two grain silos, loading capacity 60 – 90 t.p.h.

STEVEDORES: Provided by "LF Shipping" Tel: 54605522. Telex: 40022; Shipbroker A. Hovmand, Tel: 53888011, Telex: 40256; Shipbroker H. Kristiansens Eftf, Sakskobing, Tel: 54702000.

MEDICAL: 2 hospitals available.

FRESH WATER: Can be supplied alongside the quay.

FUEL: Obtainable alongside the quay.

OPENING/CLOSING HATCHES: By crew or stevedores, ship's option.

CERTIFICATES: On arrival, ship's register only.

CUSTOMS ALLOWANCES: See "General" before first port.

AIRPORT: Maribo Airport, 14 km.

SHORE LEAVE: After clearing inwards, Crew members are allowed to go ashore without special permission.

IDENTIFICATION CARDS: Not required.

AUTHORITY: DSB Havnekontoret, Ostre Kaj 3, 4970 Rodby, Denmark. *Tel:* 54605722. *FAX:* 54605722. *Contact:* Captain J.H. Roer, Port Captain, Tel: 54605322.

RONNE: 55.06 N. 14.42 E. (See Plan)

DOCUMENTS:

1 Crew List.
1 Passenger List.
1 Customs Declaration.
1 Declaration for crew's tobacco, spirits, etc.
1 Declaration of Health.
1 Declaration to Police, number of crew, passengers, etc.
1 Bill of Lading (or Manifest).

PILOTAGE: Apply for Pilot via Ronne or Lyngby Radio, advance notice not less than 2 hours. Pilot listens continuously on VHF. Call Ronne Pilot or Ronne Harbour. Area where Pilot to be taken on board is by Ronne Light Buoy, 2 miles S.W. of the harbour; if weather bad pilot boat guides the ship inside the breakwater and then Pilot boards.

ANCHORAGE: No safe anchorages outside the harbour.

RESTRICTIONS: See "General" before first port.

MAX. SIZE: Max. length 600 ft. – 650 ft., draft 26 ft. There is no tide.

HEALTH: No special procedure necessary, but if there is suspected disease or fever on board or ship comes from area with fever, etc., call for quarantine doctor. If ship's last call was Danish port Pratique automatic.

RADIO: Ronne Radio, call-sign OYE; or Lyngby Radio, call-sign OXZ.

VHF: Listens on Channel 16. Working Channels 12 and 13. Same in tug and Pilot boat. Mainly traffic concerning pilotage and harbour operations.

RADAR: Located at Pilot Station, mostly look-out aid, but advice on entering can be given.

TUGS: Normally join the vessel inside breakwater; ship's lines to be used.

BERTHING: 3 berths equipped with hydraulic ramps for Roll-on/Roll-off traffic via stern or head only, one of which is suitable for ships up to 550 ft. length, 70 ft. beam, draft 22 ft.

1 berth for sand loading 400 – 600 t.p.h., for vessels up to 350 ft. length, 21 ft. draft.

2 berths for macadam loading 400 t.p.h., for vessels up to 300 ft. length, 21 ft. draft.

3 mobile cranes with capacities up to 60 tons are available for both hook and grab operations.

Also berths for handling coal and grain.

STEVEDORES: To arrange gangs Monday morning, advices have to be given Friday before 1100 hrs. To arrange work other days, notice must be given before 1700 hrs. the day before.

MEDICAL: Hospital facilities are available. It is not necessary to give advance notice.

TANKERS: One berth for coastal tankers, draft up to 22 ft., length up to 300 ft. For tankers of 1,500 d.w.t. and upwards, Pilot is compulsory when entering and leaving the port.

DENSITY: 1005.

FRESH WATER: Available alongside, rate 10 t.p.h.– 12 t.p.h.

FUEL: Light fuel, Redwood 200 sec. Heavy fuel 3500 sec., also 1000 and 1500 sec. Notice 6 hours ETA.

CONSULS: The following countries are represented in Ronne: Germany, Finland, France, Latvia, Netherlands, Norway, Poland, Sweden and United Kingdom.

REPAIRS: All kinds of repairs can be carried out.

SURVEYORS: Available from Copenhagen. The Harbour Master has from time to time been appointed by insurance companies and surveyors to carry out hull and cargo surveys.

DRY DOCKS: Only small ships up to 350 tons.

GANGWAY/DECK WATCHMEN: Not necessary.

OPENING/CLOSING HATCHES: Carried out by crew.

CERTIFICATES: Nationality Certificate, Derat Certificate, Load Line Certificate, Radio Certificate. (Safety Certificate for passenger ships only).

CUSTOMS ALLOWANCES: see "General" before first port.

REPATRIATION: Possible.

AIRPORT: 3 miles, served 3 – 5 times per day by Maersk to Copenhagen.
TIME: GMT plus 1 hour. Summertime GMT plus 2 hours from last Sunday in March to last Sunday in September.
HOLIDAYS: New Year's Day; Easter, 3 days: Thursday, Friday, Easter Day (Monday); May 1st; Whit Monday; June 5th; Christmas Eve; Christmas Day; 2nd Christmas Day. Cargo work only possible for foodstuff, etc.
POLICE/AMBULANCE/FIRE: In emergency cases dial 112 or call by Ronne Radio.

In ordinary cases: Police 56951448. Ambulance 56951808. Fire 56951247.
EMERGENCY CO-ORDINATION CENTRE: Emergency operations in Danish waters are co-ordinated by the Royal Danish Navy. Emergency operations in the area around Bornholm are co-ordinated and guided by the Royal Danish Navy Surface Rescue Centre. Tel: 56952011. No telex number is available, but on request by telephone the rescue centre can answer by telex.
SERVICES: Supply of charts, nautical publications, sounding paper, etc. Radio and Radar repairs carried out. Compass adjustment is carried out by means of transportable Gyro compass.
BANKS: No American or European banks in this area, most Danish banks have connections with the major international banks.

Den Danske Bank. Tel: 56952211. Fax: 56954211.
Bikuben, Ronne. Tel: 56950061. Fax: 56950570.
Unibank. Tel: 56951420. Fax: 56957381.

STORING: See "Prelims".

1. Vessels can be stored both by truck and by barge, but as all loading and discharging is taking place alongside piers, barges are never used for storing ships. Furthermore, no special barges are available for that purpose.
2. There are no special regulations concerning the storing of ships.
3. Trucks can proceed alongside ships on all piers except on Pier 12 (oil pier), where the truck must remain about 80 yards from the ship.
4. Likewise fork lifts can be used on all piers except Pier 12.
5. Customs regulations regarding bonded stores only.
6. Normally only the ship's crew employed.

SHIP SUPPLY SERVICE: None. Pilot boat is normally used for transferring stores, crew and sick personnel. Ships are normally served in the roadstead outside the harbour.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Not needed.
DELAYS: None.
GARBAGE DISPOSAL: Contact Harbour Office.
WASTE OIL DISPOSAL: Contact Harbour Office. Tanker trucks available.
SEAMAN'S CLUBS: None.
CURRENCY: Danish Kroner.
AUTHORITY: Ronne Havnevaesen, Havnekontoret, Munch-Petersensvej 2, 3700 Ronne, Denmark. *Tel:* 56950678. *FAX:* 56950631. *Contact:* Hans Kumler, Harbour Master. Niels Lundberg, Assistant Harbour Master.
Harbour Board (Municipal): Ronne Kommunes Havneudvalg, Landemaerket 26, 3700 Ronne, Denmark.

SKAELSKOR: 55.15 N. 11.18 E. (See Plan)

Admiralty Charts 2597 and 2118 cover the approaches to and the port of Skaelskor. Depth at the entrance to port is 4.5 m.
DOCUMENTS: See "Copenhagen".
PILOTAGE: Not compulsory. Pilot to be ordered via Agents with minimum 6 hrs. notice. Pilot vessel is equipped with VHF; Channels 16, 12, 10 and 6.
ANCHORAGES: Available outside Skaelskor Fjord.
RESTRICTIONS: Entering the port at night is permitted only by vessels equipped with a searchlight.
MAX. SIZE: Max. draft 4.2 m., max. length 60 m., max. beam 10 m.
HEALTH: Usual Danish regulations apply.
RADIO: Lyngby Radio.
VHF: See "Pilotage".
TUGS: None.
BERTHING: Outer harbour: Depth 4.5 m., 200 m. quayage. Inner Harbour: Depth 3.8 m., 120 m. quayage.
CRANES: 1 mobile crane with 7 tons lifting capacity.
BULK CARGO FACILITIES: 1 belt conveyor available for loading grain.
MEDICAL: Facilities available.
TANKERS: No dirty ballast facilities available.
DENSITY: Varies from 1007 to 1023.
FRESH WATER: Available.
FUEL: Available.
REPAIRS: Can be undertaken.
DRY DOCKS: None.
SURVEYORS: Available.
REPATRIATION: Can be arranged.
AIRPORT: Nearest at Copenhagen.
TIME: GMT plus 1 hour; Summertime (March – September) GMT plus 2 hours.
TELEPHONES: No facilities for placing telephones on board vessels exist.
GARBAGE DISPOSAL: Available.
WASTE OIL DISPOSAL: Not available.
SEAMAN'S CLUBS: None.
CURRENCY: Danish Kroner.
AUTHORITY: Skaelskor Havnekontoret, Naestvedvej 15, DK-4230, Skaelskor. *Tel:* (53) 590100. *FAX:* (53) 590357. *Contact:* F. Christensen.
AGENT: Aage C. Frederiksen I/S, P.O.Box 4, DK. 4230 Skaelskor. Tel: 453 594002. Cables: "Shipbroker". Telex: 40222 (ACF DK). Fax: 453-590544.

SKAERBAEK: 55.31 N. 09.37 E. (See Plan)

DOCUMENTS:
Ship's Register.
Load Line Certificate.
Radio Safety Certificate.
Safety Equipment Certificate.
Derat Certificate or Exemption.
Crew List.
Stores List.
Crew Personal Effects List.
Cargo Manifest or Bills of Lading.

PILOTAGE: Not compulsory. Pilot joins at mouth of Kolding Fjord. Can be contacted by VHF Channel 16.

Bigger ships usually take Pilot by Skaw L/V. Pilots to be ordered by ETA-telegrams to "Danpilot, Region Skagen", at least 12 hours in advance. "Danpilot" listening on VHF Channel 16.
ANCHORAGE: Off Skaerbaek in depths of 39 ft.

A dredged channel, 200 m. long, 49 m. (160 ft.) wide and 7.0 m. (23 ft.) deep leads to the Coal Harbour. Another channel, 500 m. long, 80 m. (262 ft.) wide and 11.9 m. (39 ft.) deep leads to the Oil Berth.
RESTRICTIONS: See "Tankers" and "General" before first port.
MAX. SIZE: LOA 250 m. Max. draft 38 ft.
RADIO: Lyngby Radio.
TUGS: Tugs of 1,400 h.p. – 4,500 h.p. available at short notice.
BERTHING: Power Station Wharf: 253 m. length; depth 7.0 m.
Oil Jetty: Depth 39 ft.
CRANES: 2×15 ton coal cranes.
BRIDGES: 2 road bridges span the North Lillebaelt. Vertical clearance 33 m. (108 ft.).
STEVEDORES: Working hours: Monday to Friday 0700 – 1530 hrs.
MEDICAL: Medical attention available, nearest hospitals at Kolding and Fredericia.
TANKERS: One berth, depth 39 ft. (11.9 m.). Max. length between bow/stern and manifold 127 m. (417 ft.). 3×12 in. discharge arms, rate 4,000 t.p.h.
DENSITY: 1017 (approx.).
CONSULS: Nearest at Kolding. Distance 15 km.
REPAIRS: Local machine shops can manage small repair jobs.
DRY DOCKS: None.
FRESH WATER: Obtainable from quay.
FUEL: Available by barge from Fredericia.
REPATRIATION: Possible.
CUSTOMS ALLOWANCES: See "General" before first port.
AIRPORT: Billund or Odense, both approximately 50 km. distant, and with daily flights to Copenhagen.
TIME: GMT plus 1 hour.
HOLIDAYS: New Year's Day; Maundy Thursday; Good Friday; Easter Monday; Prayer Day; Ascension Day; Whit Monday; Christmas Day; Boxing Day. Half holidays: May 1st, June 5th and December 24th.
AIRPORT: Billund Airport, 40 km. distant.
AUTHORITY: I/S Skaerbaekvaerket, DK-7000 Fredericia, Denmark. *Tel:* 75562466 or 75924805. *Telex:* 51116. *Cables:* Mortensen Fredericia. *FAX:* 75924272.

SKAGEN: 57.43 N. 10.36 E. (See Plan)

DOCUMENTS: Crew List, Tobacco List, Stores List, Derat Certificate, Health, Tonnage, Nationality and Cargo documents.
APPROACHES: The entrance between the outer moleheads is 75 m. wide and facing S.E. Approaching vessels should – when 400 m. from the entrance – keep the leading lights in line bearing 334°. Entering vessels have right of way over departing vessels. Maximum speed inside the outer harbour is 3 knots.
Tides and Current: Tidal range 0.3 m. Gale from W. may raise the sea level by 1.4 m. and from E. lower it by 0.9 m. Winds from S.S.W. – W. cause N.E. going current and those from N. – E. – S.E. cause S.W. going current. The prevailing current runs N.E., up to 2 knots.
PILOTAGE: Local Harbour Pilot available on request to the Harbour Office. Sea Pilot ("Danpilot") may take vessels to all harbours on the East coast of Jutland, to the Sound, and through the Great Belt to the Baltic Sea. Tel: 98445566 or VHF Channel 16.
ANCHORAGES: Off the harbour entrance.
MAX. SIZE: Largest vessels which can enter Skagen Harbour: Length 125 m., beam 18 m., draft 6.7 m.
VHF: Day and night watch on Channel 16 by Port Captain's Office.
BERTHING: The harbour consists of 6 basins. Depths: Outer Harbour 7.0 m.; East Basins I & II 6.5 m. – 7.0 m.; Auction Basin 5.0 m. – 7.0 m.; Middle Basin 5.0 m.; West Basin 5.0 m.; Pound Net Basin 3.5 m.
FRESH WATER: Available.
FUEL: Available by barge.

DRY DOCKS: Yards with slips for vessels up to 50 m. length and 600 tonnes displacement.
GARBAGE DISPOSAL: For service call 98-441346. No charge for service.
WASTE OIL DISPOSAL: Trucks of 3,000 ltr. available. Call 98-441346 for service.
SEAMAN'S CLUBS: None.
CURRENCY: Danish Kroner (DKr.).
GENERAL: Imports: Oil. Exports: Fishmeal and other fish products.
AUTHORITY: Skagen Havn, Havnekontoret, P.O.Box 140, Havnevagtsvej 30, DK-9990 Skagen, Denmark. *Tel:* No. 98-441060, 98-441466, 98-441346. *FAX:* 98-450338. *Contact:* B.Christensen, Harbour Master.

SONDERBORG: 54.55 N. 09.47 E. (See Plan)

DOCUMENTS:
Ship's Register.
Crew List.
Radio Safety Certificate.
Load Line Certificate.
Safety Equipment Certificate.
Customs Declaration.

PILOTAGE: Vessels exceeding 6.5 m. in draft or 4,000 gross tonnage use Northern entrance where Pilot boards vessels North of Snogbaek Hage, or further North if required.

Vessels coming from South, Pilot boards off the Middelgrund.

RESTRICTIONS: No restrictions on night entry. No tide. Current mostly North-going with a maximum speed of 3 knots. N.E. to Easterly winds raise water level up to 1 m. West to North-Westerly winds lower the water level by the same amount.

MAX. SIZE: From South passing through the harbour bridge, 4,000 g.r.t., draft 6.5 m.

From North 30,000 g.r.t., draft 9.5 m., air draft 33 m., LOA 200 m.

VHF: Radio on Pilot Station, Channel 16, 12 and 13. For Pilot and Harbour Master tel: 74-422765.
TUGS: Small harbour tug available; larger tugs available at 6 hours' notice.
BERTHING: *South Harbour:* Mainly used by passenger vessels and fishing boats. Concrete quay about 500 m. long, max. depth alongside 8.0 m.

North Harbour: Concrete quay about 800 m. long, depth alongside 7.5 m. Plywood factory, dolphin moorings with depth of 9.0 m.

Mooring facilities at heavy dolphins over 650 m., 25 m. from shore and along paved road, water depth 9.0 m. Generally used for laying up.

CARGO GEAR: Discharging and loading by ship's own gear or by mobile cranes of which the harbour have three, with a max. lifting capacity of 30 tons (60 ton crane).
BRIDGES: King Chr. X's Bridge divides Sonderborg port into South Harbour and North Harbour. The bridge is a double wing bascule bridge with an opening width of 30 m. For passage call "Sonderborg Bridge" on VHF Channel 16 regarding opening times.

North of the harbour, the Alssundbridge crosses the sound. The bridge has a horizontal clearance of 150 m., and a vertical clearance of 33 m.

MEDICAL: Full hospital facilities available without prior notice.
FRESH WATER: Supplied by pipeline to berths.
FUEL: Available day and night.
CONSULS: Finland, Netherlands and Norway.
REPAIRS: Routine maintenance and smaller engine repairs can be carried out.
AIRPORT: In Sonderborg, with regular flights to Copenhagen.
TIME: GMT plus 1 hour.
STORING: Vessel may be stored by truck or barge. Trucks may proceed alongside, fork lift trucks and riggers may be used.
AUTHORITY: Sonderborg Havnekontor, Norrebro 1, 6400 – Sonderborg, Denmark. *Tel:* 74-422765. *FAX:* 74-433019. *Contact:* Lass Andersen, Harbour Master and Pilot.

STEGE: 54.59 N. 12.17 E. (See Plan)

LOCATION: Stege is situated in a sheltered bay on the N.W. coast of Moen.
DOCUMENTS:
Ship's Register.
Load Line Certificate.
Safety Radio Certificate.
Safety Equipment Certificate.
Safety Construction Certificate.
Derat Certificate or Exemption.
Bill of Lading (if cargo).
Crew List.

Customs need a Tobacco and Spirit List, showing the vessel's and the crew's supply on arrival. Customs clearance effected at Naestved.

APPROACHES: From the West, Stege is approached via Masnedsund. From the Baltic via Bogestrom Channel (2.1 m. depth). There is an entrance channel, 5 miles long and dredged to 4.1 m., leading to the port.
PILOTAGE: Local Pilots from Masnedoe, meet the vessel off the entrance channel. Sea Pilots can be taken from Spodsbjerg, Korsor or Gronsund.
ANCHORAGES: In Ulvsund, off the entrance channel.
RESTRICTIONS: Daylight navigation only. During winter, harbour may close due to ice.
MAX. SIZE: LOA 80 m. and 3.8 m. draft. Tidal range 0.3m.
VHF: Pilots can be contacted by VHF.
BERTHING: 800 m. of quayage in a series of basins.
Depths: (i) N. Harbour 3.7 m. – 4.2 m.
(ii) Outer Harbour up to 4.3 m.
(iii) Sugar Factory Harbour 4.0 m.
(iv) Inner Harbour 3.7 m.

CRANES: 1 × 5.0 ton stationary crane at the Outer Harbour.
BRIDGES: Storstromsbroen has a vertical clearance of 26 m. A new bridge has been constructed across the Storstrom with a vertical clearance of 21 m. Power lines with 36 m. vertical clearance lie to the West of Masnedoevaerket. To the East of Masnedoevaerket, there is a bascule bridge with 25 m. horizontal clearance. Dronning Alexandrines Bridge has a vertical clearance of 26 m. across Ulvsund.
STEVEDORES: Working hours: 0700 – 1600.
MEDICAL: Local hospital available.
FRESH WATER: Available.
FUEL: Available.
REPAIRS: Machine shop available.
DRY DOCKS: None. 1 slip for vessels up to 150 tons.
AIRPORT: Copenhagen, 110 km. distant.
AUTHORITY: Stege Havn, Langelinie 1, DK-4780 Stege, Denmark. *Tel:* 55-815525. *Contact:* Harbour Master.

STIGNAESVAERKETS: 55.12 N. 11.15 E. (See Plan)

DOCUMENTS:
3 Crew Lists.
2 Crew Declarations.
2 Ship's Stores Lists.
Usual Ship's Documents.

PILOTAGE: Vessels to apply for a Pilot through their Agent. ETA to be given 48, 24 and 12 hours prior to arrival.

Pilot boat equipped with VHF Channels 16, 13 and 12. It is painted orange on hull and wheelhouse and is stationed at Agersoe.

For vessels coming from the North, Pilots board at Korsoer. For vessels coming from the South, Pilots board at Egholm Flak.

ANCHORAGES: Korsoer Roads, depth 20 m., bottom sand, good holding ground. With area of about 2 nautical square miles.

Gulfhavn Roads, depth 30 m., bottom clay, good holding ground. Area – 1.5 nautical miles long and 0.5 nautical miles wide.

RESTRICTIONS: None.
MAX. SIZE: Coal Berth: Length 300 m. Max. beam 43 m. Max. draft 17 m.
Oil Pier: Draft 15 m.
Ash Berth: Max. draft 7.5 m.
Discharge Berth: Max. draft 8.5 m.

HEALTH: Usual regulations.
RADIO: Skagen Radio or Lyngby Radio.
VHF: Stigsnaesvaerkets Havn, Channels 16, 14 and 12.
RADAR: None.
TUGS: No tugs stationed at Stigsnaes, ship's lines to be used. Minimum of 12 hours to arrange tugs.
BERTHING: Coal Berth: Length 300 m., depth 18 m., max. draft 17 m. – discharging by shore equipment.

Oil Pier: Length no restrictions, depth 16 m., max. draft 15 m., discharge by shore equipment.

Ash Berth: Depth 8.0 m.

Discharge Berth: Length 135 m., max. beam 16.5 m., max. draft 8.5 m. Discharge rate 2,000 t.p.h.

CRANES: 2×20 tonne cranes at coal berth, travel 245 m., height from water 22 m. Outlay 31.5 m. Designed average discharging about 850 tonnes/p.h.
BULK CARGO FACILITIES: See "Berthing" and "Cranes".
SPECIALISED CARGO/HANDLING FACILITIES: None.
BRIDGES: None.
STEVEDORES: None.
MEDICAL: If not urgent, no notice required. Doctor, dentist and hospital available.
TANKERS: 1 Berth, depth 16 m., max. draft 15 m. Average discharge 60,000 tonnes/24 hour.

1×12 in. and 2×16 in. booms. The 12 in. boom can hydraulically connect to 8 in., 10 in. and 12 in. flanges, all standards. The 16 in. boom can hydraulically connect 12 in., 14 in. and 16 in. flanges, all standards.

DENSITY: 1007 – 1023.
FRESH WATER: By hose, 15 tonnes/p.h. 10 dkr/tonne.
FUEL: Not available.
FIRE PRECAUTIONS: No special precautions.
CONSULS: Norwegian and Finnish Consuls nearby, others in Copenhagen (120 km.).
REPAIRS: Small repairs can be carried out.
DRY DOCK: None.
SURVEYORS: 1. Caleb Brett and S.G.S. have local representatives.

2. Lloyd's Register, American Bureau and Bureau Veritas must be requested from Copenhagen (120 km.).

GANGWAY/DECK WATCHMAN: None.
OPENING/CLOSING HATCHES: By crew.
CUSTOMS ALLOWANCES: 1 bottle of spirits, 1 bottle of wine, 200 gm. tobacco or 200 cigarettes.
CARGO GEAR: Coal Berth, Oil Pier and Ash Berth, all by shore gear.
REPATRIATION: Possible.
AIRPORT: Distance to Copenhagen airport 120 km. Served regularly by all international airlines.
TIME: GMT plus 1 hour. Summertime (from end March to end September) GMT plus 2 hours.

HOLIDAYS: Depending on situation.
POLICE/AMBULANCE/FIRE: Tel: 000.
EMERGENCY CO-ORDINATION CENTRE: None.
TELEPHONES: None.
SERVICES: Most services can be ordered through Agent.
BANKS: Skaelskoer Bank a/s. Tel: (03) 596070. Telex: 40139.
STORING: See "Prelims".

1. By truck.
2. Yes.
3. Yes.
4. Yes.
5. None.
6. Yes.

SHIP SUPPLY SERVICE: See "Kalundborg".
SHORE LEAVE: Crew can always leave vessel and go ashore.
IDENTIFICATION CARDS: Seaman's Book sufficient.
REGULATIONS: None.
DELAYS: None.
AUTHORITY: S.K.Energi, Sjaellandske Kraftvaerker, Stigsnaesvaerket, DK-4230 Skaelskoer, Denmark. *Tel:* (53) 596011. *FAX:* (53) 595940. *Contact:* John Slangerup.

STUDSTRUP: 56.15 N. 10.21 E. (See Plan)

LOCATION: The harbour is located in Aarhus Bay in Kalo Inlet.

The harbour of Studstrupvaerket is a private harbour owned by I/S Midtkraft, Aarhus, and is run by Studstrupvaerket.

APPROACHES:
Leading Marks: On the harbour territory: 2 red fixed lights on bearing 304° 45' 40" (T). lead into the harbour.
Rear Light: On boilerhouse: Red triangle with down-turned apex.
Front Light: On the berth: Trellis mast with triangle with upturned apex.
PILOTAGE: Pilot assistance is imperative for navigation through the prohibited zone on entering Kalo Vig (inlet).

Pilot station: State Pilot Station, Udbyhoj. Tel: 86 48 50 24.

ANCHORAGE: Ships can anchor in the inlet outside the channel.
RESTRICTIONS: The harbour is not accessible without special permission from the works management, and it must only be used for purposes concerning operation of the power stations under I/S Midtkraft, and, for the delivery and shipping of fuel to or from the power stations of the companies within Elsam, co-operating with I/S Midtkraft.

The harbour is navigable day and night. The anchor can be used on arrival as well as on departure.

Depth of Water: On entering: 11.3 m. (37 ft.). At the Eastern 405 m. of the quay: 11.3 m. (37 ft.). At the innermost 90 m. of the quay: 7.7 m. (25 ft.).
Water Level: The difference between MHW and MLW is 0.15 m.

Western and Northwestern wind may give HW up to 1.25 m.

Eastern and Southeastern wind may give LW up to 0.9 m.

MAX. SIZE: *Largest Vessels:* Coal: LOA 245 m., beam 33 m. and draft 36 ft. Tankers: LOA 245 m., beam 33 m. and draft 33 ft.
TUGS: Tugs not available locally. An agreement on tug assistance has been made with Svitzer to whom applications can be made. Cable address: Svitzersalvage. Tel: 33-155195. Telex: 15983.

Tug assistance is normally not required for vessels up to 16,000 d.w.t. capacity.

The harbour supplies a mooring boat for assistance on entering.

BERTHING: Length of quay 495 m. Depth alongside 7.7 m. – 11.3 m.
CRANES: *Discharging of Coal:* 3 travelling cranes with a capacity of 12 tons.
MEDICAL: First-Aid Station: Falck, Hornslet.

Nearest Hospital: Aarhus K/H (Municipal Hospital).

Nearest Doctor: Laegehuset, Skoodstrup.

TANKERS: 1×12 in. discharge line for oil. Capacity 1,500 t.p.h. (approx.).

Connections available for 8 in., 10 in. and 12 in. hoses.

FRESH WATER: Available. Rate 14 cu.m.p.h.
FUEL: The port has no stock of bunker oil. If ordered through a broker, bunker oil may be loaded from a tank truck alongside the quay.
REPAIRS: No facilities, however, assistance can be ordered from the repair shop of the power station.
TELEPHONES: See "General".
IDENTIFICATION CARDS: For passing through the main gate a harbour pass is required.

Blank harbour passes for filling in by the ship's personel will be handed over by plant representative upon arrival.

GARBAGE DISPOSAL: Service available.
WASTE OIL DISPOSAL: Service available.
SEAMAN'S CLUBS: None.
GENERAL: *Clearance:* Nearest Custom House at Aarhus.
Supplies: The nearest towns are Skoodstrup (3 km.) and Logten (4 km.).
Telephone: Telephone calls can be made from the main gate. Payment will be collected by the gatekeeper.

The telephone on quay is for plant purposes and emergency calls only.

Special Regulations: Traffic to and from the port takes place through the gate of the main driveway of the plant by using the direct route from the quay.

Traffic is not permitted to stay or drive in the port.

Instructions from the gatekeeper or from factory employees must be obeyed.

Relatives of ship's crew are permitted to visit the ship provided that the above regulations are observed.

Dealing in commodities of any kind is prohibited in the area of the power station.

Safety Precautions: The port has no special personnel or equipment for fire fighting or life-saving. There is, however, a plant protection unit who handle limited fire fighting and life-saving equipment. There are a number of men trained in first-aid.
In Case of Fire or Accidents: Use the quay telephone. Dial extension 52 (Control Room of the station) and make your report. The Control Room is the alarm centre of the station, and can send for fire fighting assistance, ambulances, and medical attention along with first-aid.
AUTHORITY: I/S Midtkraft – Studstrupvaerket, DK-8541 Skoodstrup, Denmark. *Tel:* 86-991700. *FAX:* 86-993720. *Contact:* Flemming Plovmand.

SVENDBORG: 55.03 N. 10.38 E. (See Plan)

DOCUMENTS:

- 1 copy Crew List.
- 1 copy Passenger List.
- 1 copy Stowaway List.
- 1 copy Crew Personal Effects List.
- 1 copy Stores List.
- 1 copy Arms and Ammunition List.
- All vessel's certificates and documents.

PILOTAGE: Telegraphic address, "Belt Pilot, Rudkoebing". For contacting pilot boat on VHF, use Channel 16. International signals for Pilot. In Eastern entrance Pilot boards at Thuro Rev. In Western entrance Pilot boards at Lehnskov, or if ordered at, Skrams Flak.
ANCHORAGES: At Lunkebugt (Eastern entrance) and by Lehnskov (Western entrance).
RESTRICTIONS: See "General" before first port.
MAX. SIZE: Max. LOA 180 m. Max. draft for passage through the Sound is 22 ft. 4 in.
HEALTH: Pratique granted on arrival by Customs Officers.
RADIO: All Danish coast stations can be used. (See "Horsens".)
TUGS: Normally tugs stationed in Svendborg, ships wanting tugs order through Agent before arrival.
BERTHING: The total length of quays is about 1,900 m., and depth alongside ranges from 4.3 m. to 7.5 m.

There are 3 cruise ship berths with lengths 250 m., 110 m. and 100 m. Max. draft 6.8 m.

BRIDGES: 1 mile West of harbour a bridge crosses the sound. Free height 33 m.
STEVEDORES: Ordered by Agent.
MEDICAL: Doctors and hospital service always available.
DENSITY: Approx. 1016.
FRESH WATER: Available at all piers. 20 t.p.h.
FUEL: No bunker lines. Diesel can be delivered by tank lorries.
CONSULS: Vice-Consulates: Norway, Tel: 62213117; Sweden, Tel: 62211410; Finland, Tel: 62212221; Germany, Tel: 62211515; Iceland, Tel: 62131800.
REPAIRS: All repairs to deck and machinery carried out by shipyard.
DRY DOCKS: Floating docks for ships up to 10,000 tons weight.
GANGWAY/DECK WATCHMEN: Available, but not compulsory.
OPENING/CLOSING HATCHES: Normally carried out by crew.
CUSTOMS ALLOWANCES: See "General" before first port.
REPATRIATION: Facilities exist.
AIRPORT: Beldringe Airport (domestic flights), 50 km. by road.
TIME: GMT plus 1 hour.
HOLIDAYS: New Year's Day; the day before Good Friday; Good Friday; Easter Monday; May 1st; Ascension Day; May 5th; Prayer Day; Whit Monday; June 5th; 25th and 26th of December.
FIRE/AMBULANCE/POLICE: Call 112.
TELEPHONE: No telephone for ships.
SERVICES: Compass adjusting.
SHORE LEAVE: No restrictions concerning shore leave for crew.
IDENTIFICATION CARDS: Not needed.
GARBAGE DISPOSAL: All garbage is collected from the wharf without charge.
WASTE OIL DISPOSAL: Waste oil is collected from the wharf without charge, capacity 3 tons to 20 tons, 24 hours notice required. For service telephone Harbour Office 62210657.
SEAMAN'S CLUBS: There is no Seaman's Club, but football matches can be arranged.
CURRENCY: Danish Kroner.
AUTHORITY: Port Authority of Svendborg, Jessens Mole 9, 5700 Svendborg, Denmark. *Tel:* 62210657. *FAX:* 62220679. *Contact:* Kurt Hansen, Harbour Master.

TUBORG HAVN: 55.44 N. 12.35 E. (See Plan)

DOCUMENTS: Same as Copenhagen.
PILOTAGE: Not compulsory except for tankers loading with petrol. For Pilot call Copenhagen Pilot (See Pilot Information for Copenhagen).
ANCHORAGES: See "Copenhagen".
MAX. SIZE: Max. draft 6.0 m., 4,000 d.w.t.
HEALTH: See "Copenhagen".
RADIO: Lyngby Radio: OXZ. VHF Channel 16 to all installations. ETA cables to Agents and receivers preferably by Lyngby Radio.
TUGS: Can be obtained from Copenhagen.

CRANES: Mobile cranes up to 110 tons can be obtained from Copenhagen.
SPECIALISED CARGO-HANDLING FACILITIES: Shore ramp for Ro-Ro traffic. Modern container-handling equipment available.
MEDICAL: No advance notice necessary. Hospitals available.
FRESH WATER: From water boat.
FUEL: All grades available by lighter. 10 hours notice preferred.
CONSULS: See "Copenhagen".
REPAIRS: All forms of deck and engine repairs can be effected.
GANGWAY/DECK WATCHMEN: Not necessary.
HATCHES: Opening and closing carried out by ship's crew.
CUSTOMS ALLOWANCES: 200 cigarettes. 1 bottle wine, 1 bottle spirits.
REPATRIATION: See "Copenhagen".
AIRPORT: Copenhagen airport 14 miles (23 km.) from Tuborg port. Connections to all parts of the world.
TIME: GMT plus 1 hour. Summertime is kept.
HOLIDAYS: See "Copenhagen".
POLICE/AMBULANCE/FIRE: Dial 000.
TELEPHONES: Not available on board.
SERVICES: Services available for compass adjusting, radio and radar repairs.
SHORE LEAVE: No restrictions.
AUTHORITY: Tuborg Harbour, Tuborg Havnevej 11, DK-2900 Hellerup, Denmark. *Tel:* (1) 29 59 25. *Telex:* 16347 Tuborg DK. *Cables:* Tuborg Copenhagen. *Contact:* K. Guldberg Mikkelsen, Harbour Master – Tuborg Havn.

VEJLE: 55.42 N. 09.33 E. (See Plan)

DOCUMENTS: Required on arrival:
2 Crew Lists.
2 Passenger Lists.
1 Tobacco List.
1 National Reg. Certificate.
1 Load Line Certificate.
1 Tonnage Certificate.
1 Manifest.
1 Bill of Lading.
1 Derat Certificate.
1 Radio Safety Certificate.
1 Clearance inward and outward.
1 Safety Certificate.
PILOTAGE: Pilot station now at Juelsminde, radio Pilot Vejle VHF Channel 16 – 3 hours notice of ETA. The Pilot will embark and disembark at Rosenvold Hage on the N-side of the fjord.
ANCHORAGES: (1) At Rosenvold Hage, (2) at Traeskohage.
RESTRICTIONS: See "General" before first port.
MAX. SIZE: Max. length 550 ft., max. draft 22 ft. 4 in.
HEALTH: Pratique procedure is carried out by Customs dept.
RADIO: Lyngby Radio, OXZ, Blaavand Radio OXB.
TUGS: Available inside port, ship's lines.
BERTHING: 18 berths. Total quayside in excess of 1,600 m. Depth 5.0 m. – 7.0 m.

Facilities include grain silos and a grain elevator, oil storage, 5 quay cranes and 1×35 ton mobile crane.
BRIDGES: A highway-bridge has been built over the fjord over the entrance-channel about 1 mile outside the harbour entrance.

Max. height over the channel is 40 m.
STEVEDORES: Available. 0700 hrs. start must be informed 24 hours in advance.
MEDICAL: Hospital facilities available day and night with doctors available 24 hours per day.
TANKERS: 2 tanker berths, max. draft 23 ft. No slop tank available. Diameter of discharge lines 8 in. and 6 in.
DENSITY: Average density 1020.
FRESH WATER: Delivered from lines on piers. Rate 14 t.p.h. Cost 16.00 Kr./ton.
FUEL: All grades available. No advance notice required.
CONSULS: Vice-Consuls: Greece, 821929; Norway, 829122; Spain, 820233; Germany, 820011.
REPAIRS: Deck and engine repairs can be undertaken.
DRY DOCKS: None.
GANGWAY/DECK WATCHMEN: Not required.
OPENING/CLOSING HATCHES: Carried out by crew.
CUSTOMS ALLOWANCES: See "General" before first port.
REPATRIATION: No facilities.
AIRPORT: Billund 32 km.
TIME: GMT plus 1 hour.
HOLIDAYS: New Year's Day; Easter; 1st May, Whit Sunday, Christmas holidays. Cargo work can be done on overtime except 1st May (Labour Day).
POLICE/AMBULANCE/FIRE: Police, tel. 821744; Ambulance, 822244; Fire, 822244.
TELEPHONES: No arrangements exist for placing on board.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Not needed.
GARBAGE DISPOSAL: Drums provided alongside and arranged by Agent.
WASTE OIL DISPOSAL: Service available by tanker trucks, to be arranged through Agent.
SEAMAN'S CLUBS: None.
AUTHORITY: Vejle Havn, Havnepladsen 5, 7100 Vejle, Denmark. *Tel:* 75-820466. *FAX:* 75-838754. *Contact:* Peter Barsoee Bohsen, Harbour Master.

VORDINGBORG (South Harbour – formerly Masnedsund): 54.59 N. 11.54 E. (See Plan)

DOCUMENTS: See "Copenhagen".
PILOTAGE: Available from Masnedoe Pilot Station, Tel: 03-772170.
ANCHORAGE: Vordingborg Roads.
RESTRICTIONS: See "General" before first port.
MAX. SIZE: Draft 19 ft. max., breadth 25 m. (depending on vessel's height) owing to passage of bridge before entering harbour. Width of bridge opening 25 m. At a height of 25 m., width of opening 22 m. due to angle of raised bridge.
RADIO: Lyngby Radio.
VHF: Port on Channel 16.
TUGS: Available from Nakskov, Korsoer, Copenhagen. Notice for towage about 6 – 8 hours.
BERTHING: Berths equipped for handling grain, ore, coal and LPG carriers.
Masnedoe Power Station: See "Port of Masnedoevaerket."
BRIDGES: Passage of bridge 25 m. wide, with height of 18.0 m. over waterline, decreasing to width 20.5 m. with height of 33 m. over waterline, opening day and night. Bridge normally in radio contact with Pilot Station. Fully lighted. Approach to power station from the West – pier situated just to the West of opening bridge, and therefore no passage.

In the approach to Vordingborg and power station passage are overhead power cables, max. air draft 36 m.
STEVEDORES: Local stevedores ordered by Agent.

Working hours: 0700 hrs. – 1600 hrs.
MEDICAL: Hospital available.
FRESH WATER: Supplied by pipeline to berths.
FUEL: All common fuels available.
CONSULS: At Copenhagen.
REPAIRS: Most repairs, engine and equipment available. Electronic service only available from Copenhagen.
DRY DOCK: No local dry dock. Nakskov/Copenhagen nearest.
GANGWAY/DECK WATCHMEN: Available but not compulsory.
OPENING/CLOSING HATCHES: Crew allowed to open and close, otherwise as per C/P.
CERTIFICATES:
Registered Certificate of Tonnage.
Derat Certificate.
Construction Certificate.
Load Line, and Equipment Certificate on first call.
CUSTOMS ALLOWANCES: See "General" before first port.
CARGO GEAR: One mobile crane, one grain elevator.
AIRPORT: Kastrup, 96 km.
HOLIDAYS: See "Copenhagen".
POLICE/AMBULANCE/FIRE: Police 03-771448; Ambulance, Fire Brigade 0-0-0.
IDENTIFICATION CARDS: Not required.
AUTHORITY: Vordingborg Havnevesen, Sydhavnsuy 19, 4760 Vordingborg, Denmark. *Tel:* 53-770425. *FAX:* 53-773743. *Contact:* Arne Martins, Harbour Master.

NOTES

Please also advise Shipping Guides Ltd.

Republic of Djibouti

DJIBOUTI: 11.36 N. 43.08 E. (See Plan)

PORT LIMITS: *Maritime Limits:* The reference data for the delimitation of the maritime zone coming under the Port of Djibouti are as follows:

Point A:	Lat. 11° 35.70' N.,	Long. 43° 04.35' E.
Point B:	Lat. 11° 41.00' N.,	Long. 43° 04.35' E.
Point C:	Lat. 11° 41.00' N.,	Long. 43° 14.00' E.
Point D:	Lat. 11° 38.00' N.,	Long. 43° 14.00' E.
Point E:	Lat. 11° 37.39' N.,	Long. 43° 09.00' E.

DOCUMENTS: Crew List for ship's Agent. Crew Manifests and Manifests of Passengers in Transit or for disembarkation, for whom disembarkation cards are to be completed. Presentation of Health Declaration and verification of compulsory immunisations by the health representative.

The following documents are required, preferably prior to the arrival of the vessel.

	Cargo Manifest	*Freight Manifest*	*Danger-ous Cargo List*	*Stowage Plan*	*Hatch List*
For Djibouti Port Authorities	6	—	2	—	1
For Stevedores	3	—	—	1	1
For Agent	1	2	—	—	—
If transhipment, additional	2	—	—	—	—
To be despatched by airmail or airfreight in due time, prior ship's arrival at Djibouti	3	1	1	1	1
On board vessel and if impossible by airmail or airfreight	7	1	1	—	—

Derat Certificate: At the present time Derat cannot be carried out at Djibouti, but the Port Health Authority, after inspection, are empowered to extend expired certificates by one month.

APPROACHES: Djibouti Bay can be reached from 2 channels – North and East. Only the Northern one is marked.

The Traditional Channel – The "North" Pass: The port, which has easy access by day or night, is normally entered by the North Channel, vessel after rounding Ras Bir, passing to the Northwards of Musha and Maskali Islands until the transit towers situated to the Westward of the town are sighted. The two transit towers, when in line, bear 184° (T) from seaward. Both towers exhibit quick flashing lights which at night time may be easily seen at a distance of 9 miles. In daytime the two towers may be located by first sighting Mount Direction, a distinctive conical hill to the Southward. The nearest transit tower is a white rectangular building with a single wide vertical black stripe while the further tower is a white rectangular building with two broad horizontal stripes.

When on the leading line proceed to Buoy No. 2 on the Heron Bank, where the Pilot will board; the Master is advised to await the Pilot slightly North of Buoy No. 2.

The "South" or "East" Channel: The Southern or Eastern approach for vessels entering passes South of Musha and the Maskali Islands after clearing the Arab Bank. Vessels using this approach must keep at least 1 mile North of the Heron Bank until they reach the transit line described above. The Pinqouin Bank Buoy situated West of the transit line makes a good check point.

The Northern channel is usually used for vessels proceeding in a N.N.E. direction.

The Eastern channel is not marked, and is not recommended for vessels approaching the port. Approaching from the East of the island of Musha by day can be dangerous if visibility is poor.

PILOTAGE: Pilotage is compulsory for all vessels with a nett tonnage in excess of 300 tons and is available 24 hours a day, throughout the year.

Pilots board inward bound vessels between No. 1 Buoy and No. 2 Buoy. Outward bound vessels normally disembark their Pilot between No. 2 Buoy and No. 4 Buoy. Pilot boats are painted white and carry the flag "H" by day and the usual lights by night.

An internationally approved pilot ladder on the lee side with man-ropes, and suitably illuminated at night time, must be available.

Vessels calling for Pilots at departure if unable to contact the Pilot Station on VHF should sound 3 long blasts on whistle or siren half an hour prior to sailing, this signal also calls the tug and mooring gang.

ANCHORAGE: Anchorage zone is within following limits:

1. Eastern limit: a line parallel to and 0.25 miles West of the North passage.
2. Southern limit: Latitude 11° 37' N.
3. Western limit: a bearing with the Western extremities of Penguin and Ambouli Banks in alignment.

It is forbidden to anchor 1.5 cables on each side of the alignment of Ambouli and d'Ayabele Lights.

Average depth is of 15 m. to 20 m. Anchor holding is excellent, even with a strong S.W. monsoon when there is often a heavy swell.

It should be noted that anchorages within a quarter of a mile of either side of the entry transit line is strictly prohibited.

RESTRICTIONS: Entry during the day or night. Highest tide 2.90 m. Mean tide is approximately 1.60 m., and lowest are 0.20 m. Tidal currents are very weak in bay and rarely exceed 1 knot.

MAX. SIZE: Entrance to inner roads dredged to 11 m. depth.

Max. Draft: Cargo vessels 10.3 m. Container vessels 11.3 m. Vessels bunkering and Tankers 12.0 m.

HEALTH: Generally Free Pratique by radio can be granted to all ships applying through Coast Station Djibouti Radio. Ships must radio in plain or international code, a maximum of 12 hours and a minimum of 4 hours prior to arrival in port. In all cases, when Pilot boards vessel he gives Master a copy of Maritime Health Declaration which must be filled in by Master and countersigned by ship's doctor, if the crew includes one. An examining official comes on board when vessel arrives to receive the Maritime Health Declaration. Cholera and Yellow Fever Certificates required from all travellers coming from an infected area, excepting children of under 6 months of age.

RADIO: *Via the Harbour Master's Office:* For short distance communications, ships can link up with the Harbour Master's Office, by VHF radio-phone: the Harbour Master's traffic unit is equipped with a VHF station for broadcasting and receiving on Channel 12 (156.6 MHz) and Channel 16 (156.8 MHz). These links are solely for the exchange of nautical information between the Harbour Master's Office and vessels (confirmation of ETA; ship's draft; and orders concerning the boarding time of the Pilot and dropping the anchor to wait for Pilot.)

Via Djibouti Coastal Station: For medium or long distance communications, ships can link up with the shore through the coast station at Djibouti, by radio telephone or telegraph. This station can meet all requirements from ships using the port of Djibouti. It handles official and private communications and is permanently on watch.

Call sign J2A maintains a continuous 24 hours listening watch on 500 kHz and replies on 464 kHz.

For long distance communication using the call sign "J2A8", the station maintains listening watches between 0400 hrs. and 1000 hrs. GMT and 1200 hrs. to 1715 hrs. GMT on 8682 kHz. Traffic lists are transmitted at 0400 hrs., 0600 hrs., 0800 hrs., 1200 hrs., 1400 hrs. and 1600 hrs. GMT.

In the 12 megacycle band using the call sign "J2A9", the station works on the frequency 12,782 kHz between 1000 hrs. and 1200 hrs. GMT. Traffic lists are transmitted at 1000 hrs. and 1100 hrs. GMT.

Radio-telephony: Djibouti Radio (J2A) service covers the following:

(a) The station can cover medium distances through radio-telephone, from 1605 kHz to 2850 kHz.

Call sign: Djibouti Radio/J2A.
Call frequency: 2182 kHz.
Working frequency: 2586 kHz.
Power: 1 Kw.
It is open for the international calls (2182 kHz) at the following times: From 0500 – 0900 hrs., and from 1300 – 1500 hrs. GMT.

(b) VHF

Listening Channel 16 (156.8 MHz).
Working Channel 20 and 24 (24 hours).

Vessels can link up with subscribers of the automatic telephone system in Djibouti.

Radio telegrams sent to ships at sea must be delivered to the telegraphic section at the post office, Ave. de la Republique, during office hours.

TUGS: In Winter (slight Easterly monsoon), a single tug is generally sufficient for manoeuvring. In Summer during the Khamsin period, berthing or sailing often requires 2 tugs. There is a 1,500 h.p. diesel tug *Aboubaker Pacha;* a 1,800 h.p. tug, *A. Rimbaud;* a 1,400 h.p. diesel tug *Henri Lambert;* a 2,200 h.p. tug *Bab-El-Mandeb* and 1 auxiliary 600 h.p. tug. All tugs equipped with fire fighting equipment.

BERTHING:

Quay	*Length* (m.)	*Depth* (m.)	*Usage**
No. 1	180	9.50	L, D, B, Containers.
No. 2	220	12.00	L, D, B, Containers.
No. 5	230	7.30	L, D
No. 6	180	7.90	L, D, Ro-Ro.
No. 7	250	7.90	L, D, B
No. 8	208	9.45	L, D, B
No. 9 (dolphins)	200	9.00	L, D, B, Refrig.
No. 10 (dolphins)	270	11.00	B, Lay-by Berth.
No. 11	170	11.00	B, Discharge Black and White Oils.
No. 12	270	12.00	B, Discharging Black and White Products.
No. 13	210	9.45	L, D, B, Discharge of Liquid Gas and Loading of Molasses in bulk.
No. 14	290	12.00	L, D, B
No. 15	106	12.00	L, D, B

*KEY: L = Loading D = Discharging B = Bunkering

CRANES: There are no cranes on quays, but the port has 2 mobile cranes of 15 tons and 40 tons capacity plus a floating crane for the handling of heavy-lifts of 80 tons capacity.

BULK CARGO FACILITIES: Molasses can be handled. Flour storage facilities (Private) with capacity of 4,000 tons.

SPECIALISED CARGO HANDLING FACILITIES: Open ground and shedded areas for containers, Roll-on/Roll-off traffic and Quay for the traffic of lighters.

Container Terminal: 2×35 ton Paceco gantry cranes, 4×40 ton Hyster lift trucks, 2×12 ton Hyster lift trucks, 8 Mafi tractors and 12 Gaussin low trailers. 24 × 220 volt reefer points.

BRIDGES: None.

STEVEDORES: Four companies available, office hours from 0700 to 1730 hrs. Stevedoring 24 hours.

Working Hours: Normal working hours are 0700 – 1200 hrs. and 1300 – 1800 hrs. Overtime can be worked between 1900 – 2400 hrs., and if necessary to finish a vessel, between 0100 – 0600 hrs. It should be noted that Friday is the normal day of rest and all work on this day is at overtime rates.

MEDICAL: Port Medical Service directed by medical practitioner specialised in industrial medicine is situated in a building neighbouring the port offices. It operates a dispensary. Passengers and sailors in transit are treated by private doctors from town who may visit the ships. Serious cases can be hospitalised in Djibouti's civil or military hospitals.

TANKERS: Reception lines: Berth Nos. 12 to 13 specially equipped for reception of bunkering products are linked with installations of the petroleum companies by a 16 in. dock-line and 12 in. (FO) and another of 12 in. (DO). Pier No. 10 is connected to the installation with a dock-line of 12 in. Rate of discharging can reach between 2,000 and 2,500 t.p.h. Reception of white products is assured from Quay No. 13 by an 8 in. line; for gas there is a 4 in. line.

Max. draft for loaded tankers is 12.0 m.

FRESH WATER: Each quay provided with 3 – 5 (200 mm.) water-hydrants. Delivery of 40 cu.m. of water per hour. Regardless of the season, there is never any shortage of fresh water.

FUEL: Available at oil berths and commercial berths (not Berths No. 5 and 6). A complete range of different viscosities and products is available. Meets all the usual requirement of bunkering vessels. Ample supplies of fuel and diesel oil are always available. Normal rate 200 – 300 t.p.h.

Suppliers: Mobil, Shell and Total.

CONSULS:

Bangladesh
Belgium
Canada
China
Egypt
Ethiopia
France
Germany

India
Iraq
Italy
Japan
Kuwait
Libya
Oman

Russia
Saudi Arabia
Somalia
Sweden
Yemen
United Kingdom
U.S.A.

REPAIRS: Small repairs available.

SURVEYORS: Agent of the American Bureau of Shipping: Gellatly Hankey, BP 81, Djibouti. Tel: 35 56 68.

Agent of Lloyd's Register: Gellatly Hankey, BP 81, Djibouti. Tel: 35 56 68.

Insurance Companies:

L'Union des Assurances de Paris (CMAO), BP 2650. Tel: 35 54 70.

Lloyd's Assurances (Gellatly Hankey), BP 81. Tel: 35 56 68.

Salvage Association (Gellatly Hankey), BP 81. Tel: 35 56 68.

Groupement Francaise d'Assurances (MARILL), BP 57, Djibouti. Tel: 35 16 50.

GANGWAY/DECK WATCHMEN: Available.

OPENING/CLOSING HATCHES: Normally carried out by stevedores.

REPATRIATION: Good facilities exist.

AIRPORT: International airport at Ambouli (7 km.), with international and regional flights every day of the week.

TIME: GMT plus 3 hours.

HOLIDAYS: New Year's Day (1st January); Aid Seghir (El Fithir) and the following day; Labour Day (1st May); Aid El Kebir and the following day; Muslim New Year (1st Mouharam); National Holiday (27th June); Mouloud El Nabi; Al yarah wal Mirage.

Dates referring to religious holidays vary every year, particularly where Muslim holidays are concerned. Loading and discharging operations as well as bunkering can be carried out during all of above holidays when other services are also available.

POLICE/AMBULANCE/FIRE: In emergency Tel: 17 and 18. A detachment of the fire brigade is on permanent duty in the port area.

Fire Brigade – 35 05 22, Police 37 07 80.

EMERGENCY CO-ORDINATION CENTRE: Being formed.

TELEPHONES: Available on every berth, international calls on request.

BANKS: Indo Suez Mer Rouge, Banque de l'Indochine et de Suez – Mer Rouge. Registered Office: 10 Place Lagarde – Djibouti B.P.88. Tel: 35 30 16. Telex: 6829 DJ. Telegrams: "Indomer Djibouti".

Banque pour le Commerce et l'Industrie – Mer Rouge BCIMR (Branch of the Banque Nationale de Paris) B.P.2122. Tel: 35 08 57, 35 08 58, 35 08 59. Telex: 5821 DJ. Telegraphic Address: "Mericomi Djibouti".

Banque de Djibouti et du Moyen-Orient S.A., Head Office, 6 rue de Marseille, Djibouti B.P.1471, Rep. of Djibouti. Tel: 351178, 351190. Telex: 5943 Banco Djib. Branch of the Middle East Bank Ltd., Dubai, U.A.E.

Commercial Bank of Ethiopia, Head Office, Addis Ababa (Ethiopia), Djibouti Branch: rue de Marseille, Djibouti B.P.187. Tel: 352101, 352102. Telex: Ethio Bank 5835 DJ.

Commercial and Savings Bank of Somalia, Head Office, B.P.203 Mogadisho. Branch of the Commercial and Savings Bank of Somalia. Office: Place Lagarde, Tel: 353666, 351282. Telex: Savcom 5879 DJ.

STORING: In the Port of Djibouti, vessels are bunkered at all the quays, and are supplied with fresh water (without limitation as to the amount requested), whilst they are carrying out their commercial operations of loading or discharge of cargo).

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Required.

GENERAL:

Tides: The highest tides reach 2.9 m., the average tide is around 1.6 m., and the lowest drop to 0.20 m.

Tidal currents are very weak in the bay, only rarely exceeding one knot. They usually move Eastwards during the ebb tide, and Westwards during the flood tide.

Winds: From October to the beginning of May moderate Easterly winds dominate. During the S.W. monsoon, from the middle of June to early September, there are frequent gales from the West (Khamsin), when the sea becomes rough or very rough. There is little or no wind in May and September.

Swell: The sea is usually very calm in the outside roadstead, in the anchoring zone protected in the East by the Heron Bank. In normal weather the swell does not exceed 1 m. During the Khamsin period, it can reach 2.0 m. – 2.5 m. However, there is no undertow inside the port.

DEVELOPMENTS: The Port of Djibouti will undertake a 2nd development project.

1. Storage shed No. 1 and 2 to be dismantled.
2. Construction of maintenance facilities in the vicinity of the C.F.S.
3. Container yard modifications and extension of the Free Trade Area.
4. Extension of the container terminal area.
5. Rehabilitation of Berth No. 10.
6. Quay No.1 to be dredged to 12.0 m.

SHIPMASTER'S REPORT: September, 1979.

Approaches: After passing Muskali Beacon on approaching, the leading lights, during daytime (183.5° True) are often not visible due to the sun's glare. At night these make an excellent approach.

Pilotage: Do not proceed beyond No. 2 Heron Bank Buoy. Pilot boat 12 m., blue hull, white top and displaying Pilot signals.

Radar/VHF: Channel 12 for calling and operations. No Port radar.

Hatches: Opening/Closing normally carried out by ship's crew.

General: Provisions both fresh and dry available, but expensive.

AUTHORITY: Port Autonome International de Djibouti, P.O.Box 2107, Djibouti, Republique de Djibouti. *Tel:* 35 23 31, 35 10 31; 35 32 66 (Container terminal). *Telex:* 5836 DJ; 5853 DJ (Container terminal). *FAX:* 356187. *Cables:* Dirport Djibouti and Comport Djibouti. *Contact:* Aden Ahmed Douale, Port Director. Mohamed Moussa Abar, Harbour Master.

NOTES

Please also advise Shipping Guides Ltd.

Commonwealth of Dominica

PORTSMOUTH: 15.32 N. 61.29 W. (See Plan)

DOCUMENTS: See "Roseau".
PILOTAGE: Pilotage is not compulsory, and if required must be obtained at the Roseau Pilot Station.
ANCHORAGE: With lighter jetty bearing 100° at a distance of 4 cables, the depth of water is 70 ft.
BERTHING: Portsmouth is an anchorage port principally engaged in the export of agricultural produce by small inter-island vessels.

No alongside facilities. 1×3 tonne forklift is available.

A steel piled/concrete decked "L" shaped pier 225 ft. long, 40 ft. wide with 12 ft. of water at the head provides lighterage berthing and accommodates inter-island sloops, schooners and motor vessels. One transit shed available.

Cabrits Cruise Ship Berth: The Cabrits Cruise Ship Berth is a dedicated cruise facility uniquely situated within the Cabrits National Park Area, Portsmouth, in a non-commercial environment and close to the restored ruins of the historic Fort Shirley.

The Cabrits Cruise Ship Berth is located 32 road miles North of Roseau, at Lat. 15° 34.95' N., and Long. 61° 28' W.

This dedicated cruise ship facility was opened in 1992, to accommodate cruise ships arriving in the North of the island, and is a timber wharf running parallel to the coast with a pedestrian walkway in a "T" configuration.

The facility also includes a 12,000 sq.ft. passenger reception centre constructed to provide passengers with modern conveniences, including an auditorium where passengers can watch live entertainment and/or professionally prepared videos on Dominica, offices, craft shop and cafeteria.

Length of Timber Wharf	300 ft. (91.44 m.).
Width of Wharf	16 ft. (4.88 m.).
Length of Walkway from Wharf to Reception Centre	156 ft. (47.55 m.).
Width of Walkway	16 ft. (4.88 m.).
Depth of Water alongside Wharf	35-49 ft. (10.67-14.94 m.).
Height of Wharf above Mean Water Level	8 ft. (2.44 m.).
Tidal Range	1.6 ft. (0.49 m.).
Maximum Swell (October to April)	3 ft. (0.91 m.).

All enquiries in the respect of the use of the port of Portsmouth should be addressed to the Port Authority, Roseau.
MEDICAL: A cottage hospital and doctor are available.
FRESH WATER: Available at Cabrits Cruise Ship Berth.
FUEL: Not available.
SURVEYORS: See "Roseau".
AIRPORT: Available.
POLICE/AMBULANCE/FIRE: Police Tel. 5222. Ambulance Tel. 5237 (Hospital). Fire Tel. 5215. Custom House Tel. 5255.
EMERGENCY CO-ORDINATION CENTRE: See "Roseau".
BANKS: See "Roseau".
STORING: See "Roseau".
GARBAGE DISPOSAL: Collection service is available. Skips can be provided alongside upon request by Agent. Tel: (809) 448-2401, Ext. 466, for service. Charges and collection time can be arranged by Agent.
WASTE OIL DISPOSAL: No facilities available.
SEAMAN'S CLUBS: None.
CURRENCY: Eastern Caribbean Dollar. Exchange rate against the U.S.$ 2.7169 (fixed).
AUTHORITY: Dominica Port Authority, Woodbridge Bay, P.O.Box 243, Fond Cole, Commonwealth of Dominica. *Tel:* (809-44) 84431/2/3. *Cables:* Domport. *FAX:* (809-44) 86131. *Contact:* M.A. Green, Office Manager (Home Tel: (809-44) 84500).

ROSEAU: 15.17 N. 61.24 W. (See Plan)

PORT LIMITS:
Lat. 15° 19' 00" N., Long. 61° 24' 29" W.;
Lat. 15° 21' 00" N., Long. 61° 24' 29" W.;
Lat. 15° 21' 00" N., Long. 61° 23' 09" W.
DOCUMENTS: Port Authority requires before commencement of discharge, 2 copies of the vessel's manifest, and 1 stowage plan or hatch block sheet. Masters are advised that these should be airmailed ahead of the arrival. On arrival, documents required are:

Port Authority:
- Ship's Register to sight.
- International Health Declaration.
- 1 Crew List.
- 1 Passenger List.
- 1 Hazardous Cargo List.

Customs:
- Clearance from last port.
- 1 Stores List.
- 2 Personal Effects Declaration.
- 1 Manifest.
- 1 Crew List.
- 1 Passenger List.
- 1 Arms and Ammunition List.
- 1 Narcotics List.

Immigration:
- 1 Crew List.
- 1 Passenger List.

PILOTAGE: Pilotage is compulsory for berthing all vessels in excess of 100 g.r.t. Pilotage is available for anchorage on request. Pilots will board in approx. position Lat. 15° 17' 54" N., Long. 61° 24' 50" W. The pilot boat will display International code "H" by day and a white light over red light by night. Requests for Pilots should be made 24 hours in advance either through the vessel's Agent or by cable to "Domport". Vessels may contact the Port Authority through Dominica Port Radio on VHF Channel 16 from 0800 – 1600 hrs., and for 2 hours in advance of the vessel's ETA.
ANCHORAGES: A restricted area exists in Woodbridge Bay between:
Lat. 15° 19' 00" N., Long. 61° 24' 15" W.,
Lat. 15° 18' 00" N., Long. 61° 24' 15" W.,
Lat. 15° 18' 00" N., Long. 61° 24' 00" W.
and vessels may not anchor therein, except under General Manager's instructions. Anchorage may be taken South of this area and in Roseau Roadstead 1.5 – 2 cables offshore in 15 – 30 fathoms depending on the vessel's size. All anchorages are steep-to and care should be exercised so as not to drag off the bank when anchoring.
MAX. SIZE: See "Berthing".
HEALTH: International Declaration of Health. In addition any death, fever or suspected contagious disease should be notified in advance to Agents or Port Authority by cable or radio.
RADIO: HF/SSB. 8281.2 – Monday – Friday 1200 – 2000 hrs. Also see "Pilotage".
TUGS: None.
BERTHING: *Woodbridge Bay:* The Woodbridge Bay Port is located on the South West coastline of the island, 1 mile North of the capital Roseau, at Lat. 15° 19' N., Long. 61° 24' W.

Main Wharf:

Length:	800 ft. (243.86 m.).
Minimum depth alongside:	32 ft. (10 m.).
Wharf level:	10 ft. (3.1 m.).
Width of Wharf:	60 ft. (18.3 m.) up to 300 ft. (91.44 m.) and 40 ft. (12 m.) up to 500 ft. (152.4 m.).

The Wharf is constructed on open-ended 18 in. seamless piles designed for an allowable load of 100 tons in compression and 70 tons for the approach trestle.

Roseau Ferry Terminal: The Roseau Ferry Terminal is situated in Roseau, at Lat. 15° 18' 28" N., Long. 61° 23' 56" W.

The facility was constructed in 1995 to accommodate ferry passengers from Guadeloupe and Martinique. At the Terminal, there are offices for Customs, Port Authority, Ship Agents and Immigration.

Depth alongside is 12 ft. (3.66 m.).

Roseau Cruise Ship Berth:

The Roseau Cruise Ship Berth is situated in Roseau, at Lat. 15° 17' 25" N., Long. 61° 23' 32" W., within walking distance of the business and shopping areas in Roseau.

The facility was constructed to berth large cruise ships, and in the future small cruise ships when appropriate fenders are placed against the concrete portion of the platform.

Length of the Platform	160 ft. (49 m.).
Width of the Platform	37 ft. (11.30 m.).
Access Walkway	28 ft.×11 ft. (8.8 m.×3.3 m.).
Depth of Water alongside	40 ft. (12.2 m.).

The highest level of the sea along the berthing line is 31.66 ft. (9.65 m.) C.D.

Ships with a draft between 28 ft. and 30 ft. could call at the Roseau Cruise Ship Berth with no swell condition, with care.

Traction on bollard: 80 tons.

Berthing dolphins: There are 3 berthing dolphins.

Mooring dolphins: Thre are 4 mooring dolphins.

CARGO HANDLING FACILITIES:
Mechanised Cargo Handling: Breakbulk cargo is handled palletised on ships/shippers/port pallets. Adequate forklift trucks, trailers, and tractors are available to work all berths, Small inter-island vessels can be discharged by 15 ton Lorain crane. One 55 ton American crane and one 27.5 ton Lorain crane are also available. 1×27 tonne and 1×40 tonne container lifter available. Containers up to 40 d.w.t. can be handled ashore if placed on port trailers by ship's gear. Ro-Ro barges capable of trimming to ramp height of +10 ft. are accommodated on the South end of Woodbridge Bay Pier.
STEVEDORES: Stevedores and longshoremen arranged by Dominica Stevedores Ltd.
MEDICAL: One Government general hospital, one private group medical clinic and one private dental clinic are available.

On board visits by a doctor can be arranged.

Where possible advance notice should be given.

TANKERS: Petroleum products are presently handled at 5 different anchorages on the West coast.
L.P.G.: Woodbridge Bay (2) max. draft 12 ft. Floating hose from vessel.
Mogas – Gasoil (Dieselene), Kerosene, Spray oils:
Rockaway (2), 1 mile North of Woodbridge Bay, draft 18 ft., 800/900 ft. floating hose from ship.
Boiler Fuel (Bunker C): Belfast, 2 miles North of Rockaway, max. draft 18 ft. (up to 25 ft., if vessel equipped for stern discharge) 4 in. submarine line.
Bulk Edible Oils and Soap Chemicals: Belfast, max. draft 14 ft., 4 in. floating hose (200 ft.) from shore.

The above are single anchor, stern-to berths with stern lines to shore posts. Vessels should have at least 4 ropes available aft and provision to bend 2 lines together.

The above are private facilities but pilotage is available. In the case of Woodbridge Bay (L.P.G.) pilotage is compulsory. Tankers in their ETA advice should include their cargo by products and their draft.

Also see "Developments".

DENSITY: Approx. 1025.
FRESH WATER: Available alongside all berths at a cost of EC $ 30.00 for 1,000 gals.
FUEL: Dieselene (Gas oil) available in limited quantities ex-tank wagon at all berths. Other grades not available.

GANGWAY/DECKWATCHMEN: Available if required.
OPENING/CLOSING HATCHES: Beam and board hatches, crew or stevedores; Ship's option. Patent Hatches; ship's crew.
CERTIFICATES: Previous Port Clearance; Ship's Register, to sight.
CUSTOMS ALLOWANCES: 200 cigarettes, or 0.5 lb. tobacco or 25 cigars, 26 ounces of spirits per crew member.
CONSULS: (Or Consular Agents).

		Business	*Residence*
France	C. A. Butler	Tel. 2033	Tel. 1146
Netherlands	W. A. Astaphan	3221	2524
Belgium	Achille L. Pinard	2781	2756

REPAIRS: Minor and emergency repairs can be arranged. Engines and deck gear cannot be put out of service without permission of the Port Manager.
SURVEYORS: Lloyd's Agent available for cargo survey. A non- assigned Hull Surveyor is available.
REPATRIATION: Limited inter-island flight capacity to nearest international airports – Guadeloupe, Martinique, Antigua, Barbados.
AIRPORT: Melville Hall 37 miles. Inter-island services only. Canefield Airstrip 2 miles – Charter aircraft and Air Guadaloupe.
TIME: GMT minus 4 hours.
HOLIDAYS: New Year's Day, Carnival (Mardi Gras) 2 days. Good Friday, Easter Monday, Labour Day, Whit Monday, August Monday, National Day (Nov. 3rd – 4th), Union Conference Day (A Sunday in November), Christmas Day, Boxing Day.
Minimum working: Can be arranged on these days, but it is not advised over the Carnival or National Day Holidays.
POLICE/AMBULANCE/FIRE: Police Tel. 2222 or call on 2182 kHz., Fire Tel. 2888, Ambulance Tel. 2321.

At anchor or away from a telephone, blow 3 short and 1 prolonged blast at frequent intervals until acknowledged on VHF Channel 16 or by lamp.
EMERGENCY CO-ORDINATION CENTRE: Port Authority connected with other Regional Port Authorities and U.S.C.G. VHF Channel 16, HF, S.S.B. Standby 2182 and 8281.2. Working 4136.3, 4139.5, 8284.4, 12421.0, 12424.5, 16565.0 and 16568.5.
TELEPHONES: On board service can be provided at the Ocean Wharf, Woodbridge Bay (discontinued at present due to hurricane damage).
SERVICES: Assistance can be given for emergency repairs to electronic equipment, compass adjusting and D/F calibration subject to advance notice. Provisions can be obtained, but advance notice should be given especially for fruit and vegetables of high quality.
BANKS: Barclays Bank International Ltd., Royal Bank of Canada, Bank of Nova Scotia, Banque Antilles Francais. The National Commercial & Development Bank of Dominica has international correspondents.
STORING: Vessel can store by truck. No facilities to store by barge. Trucks may proceed alongside for direct delivery/discharge, subject to Port Authority agreement. Fork lift trucks may be used. Vessels must be cleared outward for duty free concessions. Riggers available to assist with storing.
SHORE LEAVE: After Inward Clearance, there are no restrictions on shore leave. Masters are advised to note that immigration law holds the vessel/owner/agent, financially reponsible for any crew member or intransit passenger left behind (for whatever cause). Vessel's having no accredited Agent will be required to satisfy Immigration Authorities before outward clearance is granted.
IDENTIFICATION CARDS: Dock passes for crew members will be issued through the vessel's Agents.
GARBAGE DISPOSAL: Collection service is available. Skips can be provided alongside upon request by Agent. Tel: (809) 448-2401, Ext. 466, for service. Charges and collection time can be arranged by Agent.
WASTE OIL DISPOSAL: No facilities available.
SEAMAN'S CLUBS: None.
CURRENCY: Eastern Caribbean Dollar. Exchange rate against the U.S.$ 2.7169 (fixed).
DEVELOPMENTS: A new oil terminal is in operation at Rockaway Bay. It is operated by Trinidad National Petroleum and has a mooring buoy for tankers mooring stern to the shore with floating hoses.

SHIPMASTER'S REPORT: 1979 (Updated 1996).
Pilotage: Compulsory. Pilot boards 0.5 miles off the quay and requires two hours notice of vessel's arrival.
Restrictions: Vessel is able to enter or leave at any stage of the tide day or night.
Max. Size: M.V. "Oriana". LOA – 804 ft., draft 30 ft.
VHF: Channel 16.
Tugs: Not available. Vessels able to dock and undock without the aid of tugs.
Berthing: One berth only available with wooden fenders. A heavy swell may be experienced whilst alongside berth as it is very exposed. Loading rate for bananas is 16 t.p.h. per gang. There is ample mechanised equipment for loading palletised cargoes. There is also storage space for breakbulk and palletised cargoes. The quality of the labour was good. Containers can be handled ex- ship's gear at about 10 units per hour. Accommodation ladder required.
Services Available: Fresh water, fresh provisions, airport, hospital and doctor (no fuel, repair facilities or other services available).

SHIPMASTER'S REPORT: November 1989.
Chart: BA. Charts No. 728 and 697.
Berth: Woodbridge Bay/Fond Cole.
Location: Lat. 15° 18.6' N., Long. 61° 23.95' W.
Documents:
1 copy Dominica General Declaration (hand to pilot).
3 copies Crew List.
2 copies Crew Manifest.
1 copy Ship's Bonded Stores List.
1 copy Unmanifested Cargo.
2 copies Customs Boarding Form.

The Agent and a Customs Officer board on arrival. The bond was not sealed.

Clearance on departure is given by Shell.
Pilotage: Pilotage is not compulsory but it is usual to take a Pilot inwards. Pilot not normally taken outward. Pilot is arranged by the Agent and the first contact made was through the Coast Guard Radio Station on VHF Channels 16 and 6.

The Pilot boards from the blue hulled launch with "Pilot" on the side in white letters or from a fast semi-inflatable owned by the Coast Guard. The Pilot boards just South of the General Cargo Wharf.

It is possible to sail at night without a Pilot.
Approaches: The berth at Woodbridge Bay is 8 cables North of the town of Roseau.

From the South, pass abeam of the town and make for the General Cargo Wharf.

When approaching from the North, the berth is about 1.5 miles South of the silo, which is conspicuous and is 2 miles South of the airfield.

The Island of Dominica is very conspicuous by its mountains.
Anchorage: The best anchorage can be found N.W. of the town in a depth of 60 fathoms with the General Cargo Wharf bearing 030° at a distance of 0.6 miles. Occasionally, there is a swell at the anchorage, but it is generally sheltered. When approaching the anchorage keep a careful lookout for fishermen's pots.
Berthing: The Shell Berth is 100 m. North of the General Cargo Wharf. The vessel approaches from the South West, passing very close to the wharf, before turning to port and mooring to one head buoy with 2 lines through the centre fairlead and one line from each quarter to bollards on the shore. The port quarter bollard is painted silver and the starboard quarter bollard is painted yellow. When in the correctly moored position the vessel is 70 m. from the shore line. The distance from the stern to the bollards, when in the moored position, is approximately 120 m., so 2 lines will have to be joined together for each quarter rope. Also when in the moored position the vessel must be close to the head buoy, otherwise there will be very little water under the stern. Our vessel went astern a few metres when moored and only had 0.5 m. under the rudder. The nature of the bottom is soft shingle.

The mooring/hose boat is in constant attendance and runs personnel ashore from the stern when required.
Cargo Operations: The connection on the shore can be seen between black and yellow railings beside the main road. The ship's floating hose of approximately 100 m. length is run to the shore and connected with a quick release coupling.

A Surveyor attends at the commencement and completion of operations and accepts the ship's figures. The shore facility provides the vessel with a Motorola radio.

On previous occasions the pumping rate to the shore was 160 bbls. per hour with a back pressure of 13 Bar. On this visit the shore tanks were nearly empty and we discharged an LPG mix at 300 bbls. per hour. The total storage capacity ashore is 100 tonnes (2 cylinders of 50 tonnes each). The hoses can be rigged on either side of the vessel. We rigged our hoses on the starboard side. Night pumping is not permitted at the berth. On completion, the usual vapour plug is required.
General: Fresh water is available from the General Cargo Wharf, which also handles cruise vessels.

A catamaran ferry also uses the wharf and provides a service to Martinique and Guadeloupe.

The islanders are very pleasant people and there is very little crime.

The island airport is situated at the South end of Rockaway Bay, in position Lat. 15° 20' N., Long. 61° 19.3' W., and is served by LIAT with an Islander sized aircraft. An international airport is planned.

AUTHORITY: Dominica Port Authority, Woodbridge Bay, P.O. Box 243, Fond Cole, Commonwealth of Dominica. *Tel:* (809-44) 84431/2/3. *FAX:* (809-44) 86131. *Cables:* Domport. *Contact:* M.A. Green, Office Manager (Home Tel. (809-44) 84500).

Dominican Republic

GENERAL (See Plan)

DOCUMENTS:

As per Dominican law, vessels calling at Dominican ports require a complete Dominican consular despatch from each loading port, as well as from the last foreign port of call. In theory, these documents should be at the discharging port before the arrival of the vessel, as they are required for inbound Customs Clearance. In practice, this is not the case, and it does not present any problem for the vessel if the consularised documents are not received prior to the ship's arrival. If there is no Dominican Consulate at the loading port, the Agent should give a certificate to this effect, and the Agent in the Dominican Republic will attend to all the local formalities. The consular fees charged by the Dominican Consulates are sometimes quite steep and will depend on the quantity and value of the cargo loaded. Contact Agent if you have any questions.

The following are the papers required for the Port Authorities which the Master should have ready on arrival for Inward Clearance:

Port Doctor:
1 copy Derat Certificate.
1 copy Crew Vaccination List.
1 copy Health Declaration.
1 copy Crew List.
1 copy Landing/Transit Passenger List.

Harbour Master/Port Authority:
Port clearance from last port of call.
4 copies Crew List.
4 copies Landing/Transit Passenger List.
4 copies Negative Passenger List (if none landing).
4 copies Arms List.
6 copies Cargo Manifest.
5 copies Bills of Lading.
2 copies Stowage Plan.

Customs:
2 copies Crew List.
2 copies Arms List.
2 copies Landing/Transit Passenger List.
2 copies Negative Passenger List (if none landing).
2 copies Stores List.
2 copies Crew Personal Effects List.
4 copies Cargo Manifest.

Immigration:
2 copies Crew List.
2 copies Landing/Transit Passenger List.

Police:
1 copy Crew List.
1 copy Landing/Transit Passenger List.

Department of Agriculture:
1 copy Stores List.
2 copies Crew Personal Effects List.
2 copies Cargo Manifest.

Agency:
1 copy Crew List.
1 copy Landing/Transit Passenger List.
4 copies Manifest (if not couriered or faxed).
2 copies each B/L (if not couriered or faxed).
1 copy Crew Personal Effects List.
2 copies Stowage Plan.
Additional required for distribution by the agent:
10 Crew Lists.
10 Landing/Transit Passenger Lists.
5 Negative Passenger Lists (if none landing).
5 Arms Lists.
3 Stores Lists.
9 tallybooks.
4 copies Cargo Manifest (if not previously airmailed).
2 copies B/L (if not previously airmailed).

Boarding Party: The boarding party that meets the vessel once alongside is usually quite numerous and includes two or three armed Dominican Navy men. Once Free Pratique and Customs Clearance are granted, one or two uniformed Customs guards are posted onboard near the vessel's gangway, and they are rotated until the vessel sails. They are responsible for making sure nothing that is not authorised comes off or goes on board. Usually these Customs guards eat their meals onboard the vessel.

HOLIDAYS: New Year's Day (January 1st); Epiphany (January 6th); Our Lady of High Grace (January 21st); Duarte's Day (January 26th); Independence Day (February 27th); Good Friday (Variable); Labour Day (May 1st); Corpus Christi (Variable); Restoration of Independence (August 16th); Our Lady of Mercy (September 24th); Christmas Day (December 25th).

Note: Holidays falling on a Sunday are not observed on the following Monday as in other countries. Saturday is officially half a working day, unless an official holiday falls on a Saturday, in which case Saturday is observed as a full holiday. Although December 24th, December 31st and the Thursday before Good Friday are not legal holidays, there are frequent Government decrees declaring these days as non-working days, and offices are usually closed at least in the afternoons.

Usually, however, stevedores will work until 1800 hrs. on these days.

Overtime on holidays is 100% over straight time rates, whereas overtime after regular working hours on normal days is 50% over straight time.

CURRENCY: The Dominican Peso (RD$) is the legal currency of the Dominican Republic. The Central Bank of the Dominican Republic issues and controls the currency, and establishes the rate of convertibility of the Dominican Peso against the major foreign currencies. The Central Bank frequently uses multiple exchange rates for different commercial transactions, generally giving the most favourable rate to the tourist industry. The rate of exchange for foreign vessel expenses in Dominican ports is also set by the Central Bank.

Because of these controls, Shipowners' requests for deliveries of cash to Master in United States Dollars should be consulted with the Agency on a case-by-case basis, as it is not always possible to arrange for such deliveries when the amounts requested are very large. Cash to Master in local currency is not limited, however. Crew members should only exchange currency at official bank outlets, as dealings on the black market are punishable by law.

BILLS OF LADING: According to Dominican Republic law, all cargo is discharged from a vessel into the custody of Customs. Original Bills of Lading (or in lieu thereof an adequate bank guarantee) are required by Customs from the consignee before the cargo may be removed from the Customs controlled port areas. Hence, neither the Master nor the Agent may demand presentation of the Original Bills of Lading prior to discharging, as the ultimate destination of the Original Bills of Lading is the Dominican Customs office. As this is frequently a source of confusion, it is of great importance to clear up this matter prior to the vessel's arrival, in order to avoid costly delays and/or disputes.

PILOTAGE: Pilotage is compulsory in all Dominican ports. Pilots are ordered for the vessel from the respective Harbour Master's office based on the vessel's ETA at the pilot station. Refer to each port for more specific information on the matter.

TOWAGE: Towage is compulsory for all vessels in those ports where tugs are available. Vessels will be billed for towage according to the tariff, even if tugs are not required or used. In many Dominican ports, the tugs available are not very powerful, and sometimes, due to breakdowns, may not be available. Refer to the information on the specific port in question and for the most updated information, contact Agent.

SHIFTING: Vessels are sometimes forced to shift to another berth within the port or to anchorage, giving preference to other vessels. With a few exceptions, the costs for these shiftings are paid by the vessel given preference.

HARBOUR DUES: Most Dominican ports are subject to basically the same charges, with the notable exception of Cabo Rojo and Punta Palenque, which are exempt from harbour fees. The vessel and Agents are always responsible for payment to the Port Authority and adequate arrangements should be made to avoid misunderstandings.

STEVEDORES: Basically all ships are discharged by ship's gear. In all Dominican ports, stevedore gangs are hired from the Union Hall (Sindicato de Estibadores) and the first gang consists of 13 men plus 4 additionals (time keeper, water carrier, foreman, tally man). The second and subsequent gangs consist of 13 men plus 2 additionals (foreman, tally man).

There has never been any shortage of gangs in Dominican ports.

The "Sindicato de Estibadores" is not covered by liability insurance, and stevedore damage claims are all but impossible to collect. Owners, Charterers and Operators should cover this potential liability through P&I Club.

The stevedores' wages depend on the type of commodity and work method. Some cargoes are paid for with hourly wages and others on a per metric ton basis. Social security, Christmas fund and accident insurance is also included. Overtime compensation depends also on commodity and work method. Contact Agent for rates and further details.

INSPECTIONS: *Phytosanitary Inspections:* Cargoes consisting of agricultural commodities such as grain and grain products, forest products, etc., are subject to strict phytosanitary inspections by the local agricultural authorities, often resulting in the requirement to have the cargo fumigated in the holds prior to discharging. One step, recommended in order to try to avoid this problem, is to have available copies of the phytosanitary inspection and/or fumigation certificates, if any, on hand at the time the cargo is inspected. These can be sent by telefax to Agent if not available on board the vessel.

STOWAWAYS: One of the greatest problems that has intensified greatly in recent times in all Dominican ports is the growing number of people stowing away on cargo vessels thought to be sailing to Puerto Rico or the United States. Although Agents try in every way to induce the Harbour Master's office and the Port Authority to tighten security measures, there has been little improvement in the situation. A search is conducted by a party of Dominican Navy officers and enlisted men, prior to sailing which may sometimes take several hours, yet after the vessel has sailed sometimes large numbers of stowaways are discovered onboard. Warning is hereby given to all Masters to take the appropriate security measures onboard to avoid this costly problem.

SPARES: Spares may be shipped in transit to the vessel and are thereby exempted from heavy Customs duties levied on imports into the Dominican Republic. Clearance for "Spares-in-Transit" can usually be arranged within 24 – 48 working hours after arrival, if previously notified. Airway Bill and the shipping documents should be consigned c/o Agent and clearly labelled "Ships Spares in Transit". Please contact Agent for any further information including preferable routing, etc.

CREW REPATRIATION/JOINING: Agent can arrange for arriving/departing crew members of most nationalities to join the vessel without a Dominican Republic visa, given proper pre-advice and all the information about the crew members. If the vessel is not in port when the crew member arrives, however, an Immigration officer must be in attendance, increasing the expenses. For specific information regarding distances from the airports to the different ports and other details, please refer to the individual ports or contact Agent.

OPENING/CLOSING HATCHES: The crew is allowed by local regulations to open and close the hatchcovers, and it is customary for the crew to do so.

TIME: GMT minus 4 hours all year round.

SPARES: Same can be withdrawn same day of arrival via air express. No Customs duties assessed as brought under Customs custody on board vessel. Airwaybill should be addressed to Agent, with clear indication that it covers spares for such and such a vessel.
SECURITY: Stevedores board vessel with special passes issued for vessel in question. Any other visitors must obtain pass from Harbour Master's Office. Nevertheless it is definitely recommended that all cabins be kept locked. This also applies to hatches that are not being worked.
POLLUTION: No garbage, refuse, etc., can be thrown overboard. Vessels liable to heavy fines for oil pollution, etc.
PLAGUE CONTROL: All lines leading to shore must be protected by ratguards. Non-compliance subject to Customs fines.
AGENCY: Maritima Dominicana, S.A., P.O.Box 1301, Carretera Sanchez Km. 12 1/2, Santo Domingo, Dominican Republic. Tel: (809) 539-6000. Telex: ITT 3460323, 3460701 Maritim. RCA: 3264244 Mardom DR. Fax: (809) 539-7200, 539-7300. Cables: Maritima.

AZUA (Puerto Viejo): 18.30 N. 70.40 W.

See "General" before first port.

The port of Azua is also known as Puerto Viejo de Azua and is located about 15 km. S.W. of the town of Azua. It was built in the 1950's, but has rarely been used. However, recently a large, modern LPG terminal was completed.
PILOTAGE: Contact can be established with the Pilot and Harbour Master on VHF Channel 16. The Pilot will board the vessel about 0.5 miles from the seabuoy. Pilot Tel: (809) 521-3246.
ANCHORAGES: Deep water anchorage available off the port.
RESTRICTIONS: Berthing and departure strictly during daylight hours.
MAX. SIZE: LOA 500 ft., beam 80 ft. and draft 30 ft.
HEALTH: Pratique is obtained by Agent. In case of infectious illness the whole crew is put in quarantine.
TUGS: Not available.
BERTHING: There is a concrete finger pier 185 m. (600 ft.) long and 38 m. (125 ft.) wide, which has a ramp for Ro-Ro vessels on the Western side. This port is almost exclusively used by LPG tankers, hence there is no congestion.
Storage facilities: There are 2 sheds which have not been used in the recent time, and hence may require repairs. There is a new (1988-1989) LPG terminal with complete storage facilities for several thousand tons.
STEVEDORES: *Working Hours:* Straight time working hours are 0800 – 1200 hrs. and 1400 – 1800 hrs. Mondays through Fridays, and Saturdays 0800 – 1200 hrs. Except on major holidays (New Year, Easter and Christmas), overtime may be ordered around the clock and on weekends.
MEDICAL: Emergency and minor medical care available in Azua, about 15 km. from the port.

Hospitalisation and more complex cases must be treated at Santo Domingo, about 130 km. East of the port.
DENSITY: 1025.
FRESH WATER: Sometimes available by pipeline at LPG pier.
FUEL: Available by truck from Santo Domingo.
CONSULS: All consular affairs for this port are handled at Santo Domingo.
REPAIRS: Only available in Santo Domingo.
GANGWAY/DECK WATCHMEN: Required.
OPENING/CLOSING HATCHES: Carried out by crew.
CUSTOMS ALLOWANCES: Bonded stores are sealed.
REPATRIATION: Facilities available.
AIRPORT: Very inconvenient for repatriation, as Las Americas International Airport (Santo Domingo) is more than 120 km. away and more than 3 hours drive by car.
POLICE/AMBULANCE/FIRE: Tel: 175.
TELEPHONES: None available on board.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Not required.
AUTHORITY: Harbour Master – Tel: (809) 521-3283.
Operator: Opuvisa. Tel: (809) 567-6510.
AGENT: See "General" before first port.

BARAHONA: 18.10 N. 71.10 W.

See "General" before first port.

The port of Barahona is mainly used as a port for loading bulk cargoes. The two main exports are sugar in bulk, which is loaded manually in bags onto the vessels where they are bled through the ship's hatches into the cargo holds, and gypsum, which is loaded mechanically by conveyor belt. Of the 4 berths in the port, only the sugar and gypsum facilities are used regularly to handle cargo; the other two are used mainly as lay-berths for vessels undergoing repairs or fishing vessels awaiting orders. The sugar mill also exports some bulk molasses from its facilities.
PILOTAGE: Pilot arranged by Agent on basis of Master's advance notice of ETA. Pilot and Harbour Master can be contacted by radio-telephone on 2738 kHz., as well as on VHF Channel 16. The Pilot boards approximately 1.5 miles outside the port. There is only one buoy left marking the channel (an old drum), and there are no lights.
ANCHORAGES: Deep water anchorage available just outside port entrance. Pilot will indicate best location on request.
RESTRICTIONS: No entry or departure at night. Sometimes in the late afternoon, strong winds make docking of large vessels in ballast very difficult.
MAX. SIZE: LOA 600 ft., beam 100 ft., draft 27 ft.
HEALTH: Pratique granted after Health Authorities have boarded and cleared vessel. In case of disease aboard notify Agents before arrival. Pratique is automatic when proceeding from another port in the same country.
RADIO: When within range, Santo Domingo Radio may be contacted on VHF Channel 16.
TUGS: There is one small tug, "Tanac V", which is owned by the local sugar mill, and has a nominal 350 h.p. Towage is compulsory. Ship's lines used.
BERTHING:
Berth No. 1: This berth, consisting of the Northern side of a 12 m. (40 ft.) wide finger pier, is 216 m. (710 ft.) long and about 1.0 m. above the waterline at high tide. The berth was previously used to load sugar in bags, and in theory could still be used for this purpose because there are railroad tracks connecting it to the sugar mill. However, due to the slowdown in sugar exports, this berth is no longer used for cargo handling, and is usually occupied by small Dominican Navy vessels and fishing vessels.

Storage Facilities: None available.
Equipment: None available.
Berth No. 2: This berth, consisting of the Southern side of a 12.0 m. wide finger pier, is 137 m. (450 ft.) long and is about 1.0 m. above the waterline. It is not very frequently used, except sometimes as a lay-bye berth, and it is mostly occupied by Dominican Navy vessels and small fishing boats.

Maximum Draft: 27 ft. (salt water).
Storage Facilities: None.
Equipment: None available.
Berth No. 3: This berth is 160 m. (525 ft.) long and is about 1.0 m. above the water level at high tide. This berth is the most frequently used in Barahona, because alongside are the mechanical installations for loading gypsum in bulk.

Maximum Draft: 27 ft. (salt water).

Storage: The Salt and Gypsum Mines Co. maintains a gypsum export terminal at this pier, and they usually have about 20,000 tons of rock gypsum on site awaiting shipment.

Equipment: The system for loading gypsum in bulk consists of a large crane which feeds a hopper and conveyor belt system to load the vessel. No ship's gear is required. This equipment loads gypsum at an average rate of approximately 400 – 500 tonnes/hr.
Berth No. 4: This berth is 146 m. (479 ft.) long and about 1.5 m. above the waterline at high tide. However, this berth frequently accommodates vessels of up to 550 ft. LOA, because vessels are turned in the basin and docked with the bridge beyond the pier. This berth is used exclusively by the sugar mill for exports of sugar and blackstrap molasses.

Maximum Draft: 27 ft. (salt water).

Storage Facilities: The sugar mill has large warehouses for storing sugar in bulk and in bags and also tanks for molasses.

Equipment: Rail flatbed trucks are used to bring the sugar in bags alongside the vessel. Ship's gear is used to load the bags with slings into the vessel. These are then "bled" into the ship's holds and the empty bags returned ashore. The usual loading rate is about 15 – 20 tons per gang per hour. Pipeline and accessories available for loading blackstrap molasses in bulk.
Note: The finger pier (Berths No. 1 and 2) and the gypsum berth (No. 3) have deteriorated to the point where trucks are no longer permitted to enter, as the concrete top can no longer support their weight.
STEVEDORES: ETA's required 24 and 12 hours before arrival to arrange gangs.
Working Hours: Berths No. 1, 2 and 4: Normal working hours for stevedores are 0800 – 1200 hrs. and 1400 – 1800 hrs. Mondays through Fridays, and 0800 – 1200 hrs. on Saturdays. Some overtime may be worked according to the availability of sugar and other factors. Please contact Agent for further details.

Berth No. 3: At this installation, the shippers usually work 24 hours around the clock, on weekends and holidays (except New Year, Christmas, Easter) at their own expense.
MEDICAL: Medical attention can be arranged after vessel is cleared, preferably ashore. Minor cases are dealt with locally, more serious cases are transported to Santo Domingo.
TANKERS: Discharge at Berth No. 4.
DENSITY: Salt water inside harbour.
FRESH WATER: *Berths No. 1, 2 and 3:* There is a 3 in. pipeline at the head of the pier, but it requires a long hose, and usually there is very little pressure. The local fire department has a tank truck which can be hired in case of an emergency requirement.
Berth No. 4: There is a pipeline available alongside, but due to low pressure, a portable pump is required. Otherwise, potable water must be delivered by tank truck.
FUEL: By truck from Santo Domingo.
CONSULS: All Consuls at Santo Domingo.
REPAIRS: Minor repairs only.
GANGWAY/DECK WATCHMEN: Compulsory gangway watch kept by Customs guards.
OPENING/CLOSING HATCHES: Can be performed by crew or stevedores.
CUSTOMS ALLOWANCES: Bond is sealed, but can be opened at Master's request.
REPATRIATION: Can be arranged.
AIRPORT: Las Americas International Airport is approximately 150 km. from Barahona or 3.5 hours by car.
POLICE/FIRE/AMBULANCE: Police, Tel: 417; Ambulance, Tel: 441; Fire, Tel: 348 or 398.

TELEPHONES: Shore telephone alongside ship connected to Sugar Mill.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Shore passes are provided by Immigration Authorities.
GENERAL: No boats to be lowered without official permission.
AUTHORITY: Harbour Master. Tel: (809) 524-2384.

AGENT: See "General" before first port.

BOCA CHICA: 18.27 N. 69.35 W.

See "General" before first port.

The port of Boca Chica is one of three ports serving the capital city of Santo Domingo, and is situated about 20 miles East of the city, but scarcely 5 miles East of the international airport. Although this port was built in the 1950's to serve the Boca Chica sugar mill, and was meant to be used to export sugar, it is now almost exclusively used for import cargoes, mainly trailers, containers and some lumber, newsprint, and homogeneous cargoes.
PILOTAGE: Pilot arranged by Agent on basis of Master's advance notice of ETA. Pilot and Harbour Master can be contacted by radio telephone on 2738 kHz. Contact may also be established on VHF Channel 16. Pilot will board about 1 mile outside the first seabuoy.
ANCHORAGES: Deep water anchorage available outside port. Pilot will advise best location.
RESTRICTIONS: No entry or departure at night.
MAX. SIZE: LOA 400 ft., beam 70 ft., draft 25 ft. (S.W.).
HEALTH: Pratique granted after Health Authorities have boarded and cleared vessel. In case of disease aboard notify Agents before arrival. Pratique is automatic when proceeding from another port in the same country.
RADIO: When within range, Santo Domingo Radio can be contacted on VHF Channel 16.
TUGS: Not available locally. Small boat available to run lines.
BERTHING: L-shaped pier 615 m. (2,018 ft.) in length and 12.0 m. (39 ft.) width, about 1.0 m. above the water level at high tide. Two or more vessels may occupy the berth, depending on their size and characteristics; but not more than 400 ft. LOA.

Maximum Draft: 25 ft. (S.W.).

Storage Facilities: One enclosed shed 240 m. × 35 m. with approximately 2,200 sq.m. storage capacity for general cargo. Also container and trailer yard, and open space available for lumber, etc.

Equipment: Forklifts of 4.5 tons, 6 tons and 10 tons available on site. Motor cranes, if required, must be transported from Santo Domingo.
STEVEDORES: ETA's required 24 and 12 hours before arrival to arrange gangs.
Working Hours: Straight time working hours are 0800 – 1200 hrs. and 1400 – 1800 hrs. Mondays through Fridays, and Saturdays 0800 – 1200 hrs. Except on major holidays (New Year, Easter and Christmas), overtime may be ordered on all days, and work may be done around the clock and on weekends.
MEDICAL: Minor cases are dealt with locally, more serious cases are transported to Santo Domingo.
TANKERS: Only small propane gas tankers can be accommodated.
DENSITY: Salt water inside harbour.
FRESH WATER: Pipeline alongside has very low pressure. Potable water can also be supplied by tank truck, which is more expensive, but more dependable.
FUEL: Fuel and diesel oil are available by tank truck from Santo Domingo. Arrangements to be made in advance through the Agent. Trucks carry either 5,000 or 10,000 American gallons.
CONSULS: All Consuls at Santo Domingo.
REPAIRS: Minor repairs only. Major repair shops in Santo Domingo.
GANGWAY/DECK WATCHMEN: Compulsory gangway watch kept by Customs guards.
OPENING/CLOSING HATCHES: Can be performed by crew or stevedores.
CUSTOMS ALLOWANCES: Bond is sealed, but can be opened at Master's request.
REPATRIATION: Can be arranged.
AIRPORT: Las Americas International, the major airport in the Dominican Republic, is about 5 miles away and may be conveniently used for repatriation and crew joining a vessel at Boca Chica.
POLICE/FIRE/AMBULANCE: At Santo Domingo.
TELEPHONES: No connection to vessels.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Shore passes are provided by Immigration Authorities.
AUTHORITY: Harbour Master. Tel: (809) 523-4262.
Port Manager. Tel: (809) 523-4669.

AGENT: See "General" before first port.

CABO ROJO: 17.55 N. 71.39 W.

See "General" before first port.

The port of Cabo Rojo is a one berth private installation, built by the Alcoa Exploration Co. for its bauxite and limestone mining operations near the Haitian border in the S.W. corner of the Dominican Republic. This mining operation is now controlled by another company, Ideal Dominicana S.A., and the port facilities are still used for the shipments of limestone and bauxite.
PILOTAGE: Pilot arranged by Agent on basis of Master's advance notice of ETA. Pilot and Harbour Master can be contacted by radio telephone on 2738 kHz. Contact may also be established on VHF Channel 16. The Pilot boards about 2 miles off the port. Accurate ETA is important, as Pilot must come from Barahona (about 2 hours away by car).
ANCHORAGES: Deep water anchorage available immediately outside port. Pilot will advise best location.
RESTRICTIONS: Entry and departure permitted daylight only.
MAX. SIZE: LOA 700 ft., beam 120 ft. and draft 36 ft.
HEALTH: Pratique granted after Health Authorities have boarded and cleared vessel. In case of disease aboard notify Agents before arrival. Pratique is automatic when proceeding from another port in the same country.
RADIO: When within range, Santo Domingo Radio can be contacted on VHF Channel 16.
TUGS: No tugs available.
BERTHING: *Ideal Dominicana:* This berth is about 100 m. long and the apron is about 8.0 m. wide. There are 2 mooring dolphins, which allow vessels of up to 700 ft. LOA to dock safely alongside. A mechanical conveyor belt and spout system is used for loading limestone and bauxite into the vessel's cargo holds, one at a time. This equipment is in a fixed position and can only shift sufficiently to trim the holds. Hence, the vessel must be warped with her own lines to position each hold to be loaded. On arrival, the vessel's No. 2 hatch coaming must be no more than 36 ft. above the waterline, in order to be able to commence loading.

Storage Facilities: The shippers keep several tens of thousands of tonnes of bauxite and limestone in storage at the loading facilities, in order to expedite the loading of vessels. Ideal Dominicana has other storage facilities for their occasional import cargoes.

Equipment: Ideal Dominicana has all the shore equipment necessary for loading gearless vessels with limestone and/or bauxite in bulk at a rate of about 15,000 tons/day. Exact loading rate will depend on vessel's size, configuration, cargo to be loaded, etc.

Working Hours: The shippers load cargo 24 hours around the clock, including Saturday, Sundays and holidays. Accurate updates of ETA are important at this berth, in order to arrange for the required loading personnel, particularly when arriving on a weekend or holiday.
MEDICAL: Minor cases are dealt with locally, more serious cases are transported to Santo Domingo.
TANKERS: One tanker at a time could be accommodated.
DENSITY: Salt water inside harbour.
FRESH WATER: Only in case of emergency, fresh water can sometimes be arranged for locally. Please consult Agent.
FUEL: Not available.
CONSULS: All Consuls at Santo Domingo.
REPAIRS: Not possible.
GANGWAY/DECK WATCHMEN: Compulsory gangway watch kept by Customs guards.
OPENING/CLOSING HATCHES: Performed by crew.
CUSTOMS ALLOWANCES: Bond is sealed, but can be opened at Master's request.
REPATRIATION: See "Airport".
AIRPORT: Las Americas International is a very long and difficult drive (360 km.) from Cabo Rojo. For crews to join or be repatriated is very inconvenient and expensive, therefore not recommended, but feasible in case of emergency.
POLICE/FIRE/AMBULANCE: Contact Port Authority.
TELEPHONES: Telephone on dock connected to Alcoa office.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Shore passes are provided by Immigration Authorities.
GENERAL: This port is exempt from most harbour fees and dues, because it is privately operated. Hence, port expenses are very low. Please contact Agent for further details.
AUTHORITY: *Operator:* Ideal Dominicana S.A.

AGENT: See "General" before first port.

LA ROMANA: 18.27 N. 69.01 W. (See Plan)

See "General" before first port.

The port of La Romana is situated on the Romana River and is primarily a sugar and molasses (also furfural) loading port for the Central Romana sugar mill. It is also used for handling various import cargoes (fuel, lumber, steel and general cargo) for the sugar mill, and more recently some containers are handled in and out for the industrial free zone manufacturers established in La Romana.
PILOTAGE: Compulsory. Ordered by Agents on receipt of vessel's ETA, 72, 48 and 24 hours before arrival. Pilot and Harbour Master can be contacted on 2638 kHz and 2738 kHz. Contact may also be established on VHF Channel 16. Pilot will board vessel from white launch marked "LP-24" on its sides. Pilot boards about 1.5 miles from port entrance (N.E. of Catalina Island). Pilots: Tel. (809) 550-1494.
ANCHORAGES: Best anchorage is West of Catalina Island in depths of 15 to 18 fathoms. There is no protected anchorage immediately outside the port. Authorisation to anchor must be applied for to the Harbour Master through the Agent.
RESTRICTIONS: No entry or sailing in hours of darkness.
MAX. SIZE: LOA 600 ft., beam 90 ft., draft 28 ft. on sailing, but only 26 ft. for arrival.

Maximum draft is strictly enforced by Pilot and other authorities, as a greater draft is dangerous because of obstructions at the entrance channel.

HEALTH: Pratique granted after Health Authorities have boarded and cleared vessel. In case of disease aboard notify Agents before arrival. Pratique is automatic when proceeding from another port in the same country.
RADIO: Santo Domingo Radio, HIX2, frequency 2738 kHz. Near the port, use Centromana Radio on same frequency.
TUGS: One tug of 620 h.p. available and compulsory. Extra charge for use of tugs line.
BERTHING: The pier is 220 m. (720 ft.) long and the apron is approximately 20 m. (65 ft.) wide; the wharf is about 2.5 m. above the water line.
Storage Facilities: The only storage facilities at this port are those of the Central Romana sugar mill, which has warehouses for bulk sugar, and tanks for molasses and furfural.
Cargo Handling Equipment: Sugar is loaded mechanically by conveyor belts directly from the warehouse to the ship using 3 spouts. Average loading rate 400 – 500 tons/hr., depending on vessel size and configuration. There are no forklifts available for general cargo. Small motor cranes may be hired for handling general cargo, which must be loaded directly onto railroad flat cars and be removed from ship's side.
STEVEDORES: *Working Hours:* General cargo is worked on straight time 0800 – 1200 hrs. and 1400 – 1800 hrs. Mondays through Fridays, and 0800 – 1200 hrs. on Saturdays. Overtime rates for all other times and holidays may be ordered, except major holidays (New Year, Easter, Christmas, etc.).

Sugar is always loaded around the clock and on holidays, as well as with the liquid bulk operations, the shippers usually paying any additional expenses for overtime.
MEDICAL: Doctors and hospital facilities available.
TANKERS: See "Berthing".

2×10 in. connections for discharge of fuel and diesel oil.
DENSITY: 1025.
FRESH WATER: Available from 2 in. pipeline on pier at 8 t.p.h. – 10 t.p.h.
FUEL: Fuel and diesel are available by truck only, and in limited quantities, due to the logistics of delivering from the Refinery in Haina in trucks of either 5,000 or 10,000 gallons. Delivery is also subject to permission from the Central Romana. Contact Agent for further information.
CONSULS: All consuls in Santo Domingo.
REPAIRS: Only minor repairs can be effected.
WATCHMEN: To be provided by vessel. Compulsory gangway watch kept by Customs Guards.
OPENING/CLOSING HATCHES: Generally by ship's crew.
CUSTOMS ALLOWANCES: Seamen may take ashore only 2 packets of cigarettes and no alcohol.
REPATRIATION: Arranged via Santo Domingo.
AIRPORT: La Romana has a small airport, but the only commercial flights are to San Juan, Puerto Rico, from where connections to all the world; however, more frequent flights from Las Americas International Airport, which is only about 45 miles away or about an hour by car.
POLICE/FIRE/AMBULANCE: Police, 235; Ambulance, 455; Fire, 455.
TELEPHONES: In dock office, ask Sugar Mill for number required.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Shore passes issued by Immigration Officer.

SHIPMASTER'S REPORT: March 1989.
Chart: BA. Chart No. 467 – Bayajibe to Haina and La Romana – Plan.
Sailing Directions: No. 70. West Indies Pilot, Volume 1, page 120.
Approaches: No difficulties. La Romana is easily identified by large quantities of black and white smoke issuing from the Central Romana Corporation plant close to the West of the dock.

No berthing or unberthing is attempted at night and no response is received to calls on the VHF until about 0630 hrs. As Santo Domingo, Haina and La Romana start at that time and all use Channel 16 exclusively, it is a little noisy for a while.

Agent and Pilot were contacted on VHF Channel 16 and instructions given.
Berthing: Pilot boarded less than 1 mile off from a 15 ft. boat with a small outboard. Ship is best stopped altogether.

As a shoal patch extends Eastwards from the West side of Rio Romana there is a dog-leg in the short channel immediately before the entrance, and as the port is little more than a 100 m. wide slot in the coast, there is no room for mistakes or uncertain engine starts.

Ship is swung to starboard as the entrance is passed and then the starboard anchor is let go and held at 1 shackle just off the berth. Judged correctly, vessel can be stopped just off the berth and pushed alongside by the tug.

On departure, the tug is made fast on a bridle aft and the ship is towed out stern-first, using engines for steering.

There is deep water within 2 cables of the shore so ship can be swung very soon after leaving the channel.

Two buoys mark the channel, both are still to be changed to the IALA system.
Berth: (See "Plan"). Wharf is solid and well fendered. Length of wharf is 720 ft., with 3 sugar loading arms at the North end and several liquid cargo loading points set into the dock for molasses (blackstrap and edible) and furfural. Wharf is kept tidy and clean.
Loading: 4,200 tonnes of furfural loaded in 19 hours (221 tonnes/hr.) through a 6 in. hose. Hose was connected to a 4 in. line on dock so this was a respectable rate.

On completion of loading, shore labour disconnected the hose after a sloppy line blow. They did not bother putting a blank on the hose so furfural was spilled all over the deck; after which they tossed the hose over the side where it drained down the ship's side and into the dock.
Port/Berth Information:
Density: Salt water.
Distance from Pilot to berth: 1 mile.
Bridges: None.
Controlling depth in approaches: 33 ft.
Max. draft in approaches and alongside: 28 ft.
Max. LOA: Vessels with greater length than this vessel (LOA 170 m.) would have difficulty entering.
Fresh water: Available.
Fuel: Not available.
Tugs: One tug available and should be used.
Anchorage: None.
Loading/discharge hoses: 1 × 6 in. furfural.
1× 10 in. molasses.
Other points available.
Slop facilities: None.
Repair facilities: None.
Officials: Cabins searched on arrival and before departure. Berth was well guarded, so ship was free of unwelcome visitors.
Agent/Berth Operator: Central Romana Corporation. Office on the wharf. Helpful and efficient. Telephone communication with outside world easy and quick.
General: Many tourists in evidence. Passenger ships moored further upriver and charter boats entering and leaving throughout the day.

AUTHORITY: Harbour Master. Tel: (809) 556-3285.
Operator: Central Romana Corp. Tel: (809) 556-4534.
AGENT: See "General" before first port.

MANZANILLO: 19.43 N. 71.45 W.

See "General" before first port.

Manzanillo was built by an American banana exporting company in the 1950's, but was abandoned many years ago. The pier has undergone extensive repairs, completed 1994. This port has about 5 sailings per month for export of fresh fruit, mainly bananas.
APPROACHES: Coast Guard Service recommend that a ship, entering Manzanillo Bay from the East, should stay well out until it has rounded shoals surrounding Seven Brothers Islands. At approximately Lat. 19° 58′ N. a course of 127° will bring it into the bay near the wharf. A ship arriving from the West should stay about 6 miles off Cape Haitian Light. When abreast the light a course of 111° will lead into the Bay a short distance North of the pier.
PILOTAGE: Compulsory. Pilot boards incoming vessels about 1 mile from the dock. Pilot and Harbour Master's office can be contacted on radiotelephone 2638 kHz and 2738 kHz as well as on VHF Channel 16. The Pilot must come from Puerto Plata, about 2 hours drive away, hence adequate advance notice is required.
ANCHORAGES: Vessels that cannot be docked on arrival will find safe anchorage to the East of the dock where there is plenty of swinging room, in about 20 fathoms of water, with good holding ground of mud and sand.
RESTRICTIONS: Entry and departure during daylight only.
MAX. SIZE: LOA 700 ft., beam 120 m. and draft 35 ft.
RADIO: Radio Station HIL31.

Vessels bound for Manzanillo, should radio their ETA to Santo Domingo Pilot Station and Agent daily, from 0600 hrs. to 1800 hrs.

Vessels having single sideband equipment may also contact Radio Instituto Agriario Dominicano at Manzanillo, at wavelength 2670 and 2638 kHz from 0700 to 1200 hrs. and 1400 to 1700 hrs. EST.
TUGS: No tugs available.
BERTHING: Prevailing winds are Easterly and sometimes interfere with docking or undocking. On the East side vessels should dock bow in, since there is not enough room to swing vessels safely around for a port docking.

On the West side vessels can dock either side to the pier, depending on the direction and force of the wind.

In general, banana vessels will be docked on West side of the pier and cargo vessels on the East side. Pier has a concrete deck 750 ft. long, 88 ft. wide. Both sides of the pier are protected with a pine fender system. The water depth at land end of pier is 18 ft. and at the seaward end 38 ft.
Storage Facilities: The banana company has its own facilities for packing and storing fruit ready for shipment.
Equipment: Conveyor belt loaders for loading bananas. No other equipment available.
STEVEDORES: *Working Hours:* Straight time working hours are 0800 – 1200 hrs. and 1400 – 1800 hrs. Mondays through Fridays, and 0800 – 1200 hrs. on Saturdays. Overtime may be worked at overtime rates at night, on weekends and on most holidays.
MEDICAL: Emergency first aid only. The town of Montecristi is 30 km. away, where further medical attention is available und full hospitalisation in Santiago, approximately 100 km. away.
DENSITY: 1025.
FRESH WATER: Sometimes available by pipeline in limited quantities and at varying pressures. Contact Agent.
FUEL: Available by tank truck from Santo Domingo. Contact Agent for further details.
CONSULS: At Santo Domingo.
REPAIRS: No facilities.
GANGWAY/DECK WATCHMEN: Carried out by crew.
OPENING/CLOSING HATCHES: Crew or stevedores.
CUSTOMS ALLOWANCES: Each crew member will be allowed to take ashore one only opened package of cigarettes.

REPATRIATION: Facilities available.
AIRPORT: La Union International Airport is about 130 km. away, near Puerto Plata, with regularly scheduled flights to Puerto Rico and the United States.
SHORE LEAVE: Members of crew are allowed to go ashore at this port, but Masters should caution them not to take on their persons any dutiable articles, as the Customs will search such men upon landing and should any such articles be found on their persons, this will be treated as an attempt to smuggle; severely punishable offence.
CREW IDENTIFICATION CARDS: Required.
AUTHORITY: Harbour Master. Tel: (809) 579-9410. Port Manager. Tel: (809) 579-9615.

AGENT: See "General" before first port.

PALENQUE: 18.12 N. 70.11 W.

SHIPMASTER'S REPORT (1976). Updated 1988.

The vessel called at Punta Palenque to discharge a cargo of feedstock from Venezuela. SBM is located in position 18° 12.2' N., 70° 11.3' W. and operated by Refineria Dominicana de Petroleo, S.A.

DOCUMENTS:
- 7 Crew Lists.
- 2 Stores Lists.
- 1 Crew Effects List.
- 2 Passenger Lists.
- 2 Lists of Arms & Ammunition.
- 2 Lists of Narcotics.
- 1 Health Declaration.
- Clearance last Port.

PILOTAGE: Pilotage is compulsory. Mooring and unmooring 24 hours a day. Pilot boards about 1 mile Southwest of SBM.

Pilot boat, a small tug with black hull and white superstructure, is equipped with VHF Channels 16 & 14, call sign Punta Palenque Pilot. Pilot moors the vessel with the assistance of the Loading Master who gives directions on the focs'le. The tug delivers the mooring gear consisting of 2 nylon tails put on vessel's bits and shackles. The nylon tail will be shackled to SBM mooring lines. These mooring lines consist of about 100 ft. nylon rope and 10 ft. chain. The chain is heaved inboards by means of 1 wire and 1 nylon or polyprop messenger and connected to nylon tails on vessel's bits.
MAX. SIZE: Vessels up to 260 m. in length with max. draft of 14.6 m. A circle of 2,000 ft. around the buoy with a min. depth of 50 ft.
HEALTH: Radio Pratique not available.
RADIO: Crude predominantly supplied from Pemex (Pajaritos,Mexico) and Maraven (Cardon/Miranda,Venezuela). Masters to send ETA Punta Palenque before sailing from loading ports, handing the message to local agents.

Messages should include draft on arrival, number of crew, whether any sickness on board. Messages to be sent to Refidomsa, Santo Domingo and copy to Agent (B & R, S.A., see "General" – "Agency").
TUGS: Not available for mooring. Messengers to and from SBM are handled by a small work boat.
BERTHING: Single Buoy Mooring, property of Refineria Dominicana S.A. (Telegraphic Address: Refidomsa), located about 2,500 m. offshore, or 2.5 miles S.W. of Punta Palenque light. Nature of bottom: sand over coral. Buoy fitted with Radar Reflector and flashing red light.

Loading Master plus 3 men remain on board.

Connection amidships, port side.

LOADING: Shore Line System: From shore to ship:
- 1×28 in. line from tank farm to shore 750 m.
- 1×28 in. submarine line 2,550 m.
- 2×16 in. underwater hose systems from seabed to buoy.
- 2×16 in. floating hoses, about 165 m. long.
- 2×12 in. hoses to ship's manifold 27.5 m. long.
- Maximum rate of discharge: 4,800 cu.m./hr.
- Maximum back pressure: 150 p.s.i.
- Product: Crude oil discharge.
- Storage: 525,000 barrels.

REPAIRS: None available.
GENERAL: No navigational hazards approaching Punta Palenque from the South. SBM shows on radar at a distance of about 11 miles.
Reference: B.A. charts 3689, 471; West Indies Pilot Volume 1, Supplement No. 3 1975.
Weather: Wind: N.E. Trades
Current: Predominating from East to West but sometimes shifting to opposite direction for short periods. Velocity about 1.5 knots.
Services: Fresh water, provisions, fuel oil and diesel oil not available. No medical assistance. Shore leave not permitted, repatriation not possible.
Master's Remarks: When approaching from the South, the coast of Dominican Republic gives a good radar target. SBM could be picked up at about 11 miles distance. Punta Palenque Pilot could be contacted at a distance of 30 miles.
Authorities: After vessel is moored Pilot acts as Agent together with a senior Custom Officer who came on board with the Pilot. Two junior Custom Officers will stay on board during the stay in port, also Loading Master and/or his assistant. Pilot delivers Outward Clearance.

SHIPMASTER'S REPORT: (1977). Updated 1988.

DOCUMENTS: Last Port Clearance.
- 8 Crew Lists.
- 6 Passenger Lists (nil).
- 3 Stores Lists.
- 5 Firearms Declarations.
- 1 Vaccination List.

To be legitimised by Dominican Consulate if possible, otherwise notarised by the Chamber of Commerce at sailing port or pay local requirements fee.
PILOTAGE: Pilotage compulsory. Pilot boards 1 mile S.W. of S.B.M. which is the waiting area. ETA required by Pilot at least 6 hours before arrival. The vessel cannot under any circumstances dock without the Pilot as the Loading Master is stationed on the forecastle head and advises Pilot of helm and engine requirements when approaching S.B.M.
ANCHORAGES: Temporary anchorage on the coastal bank to the West of S.B.M. to suit vessel's draft.
RESTRICTIONS: A vessel may enter and leave the port during hours of darkness and at any stage of the tide.
MAX. SIZE: Max. length 854 ft. Max. draft 48 ft.
TUGS: No tug assistance required. Mooring launch attends on arrival and departure bringing to and removing from the vessel all the gear required for mooring (Snotters, Strops, etc.). At night the launch also illuminates the hose string.
RADAR: The radar reflector on the S.B.M. is excellent and gives out a good echo at 10 miles.
BERTHING: Position of S.B.M. 18° 12' N., 70° 11.4' W.
Terminal Operator: Refineria Dominicana De Petroleo S.A. (Refidom SA).

At the time of berthing depth of water under the keel by echo sounder was 45 ft., the nature of the bottom at the berth was sand and coral.

As stated above the vessel is able to dock and un-dock at any stage of the tide day or night.

When 1 mile from the S.B.M. (waiting area) vessel approaches the buoy on a N.E. heading parallel to the hose strings and then turns the vessel to stem the current flow.
Moorings: Plaited ropes with cable chafing lengths shackled between the two plaited ropes. Snotters to the bitts from the central Panama lead.

The port derrick to be rigged in advance to accept mooring gear from the tug and lift hoses (2×12 in. string).
Hoses: S.B.M. hoses connected to the ship's manifold (2×12 in.). Distance from the S.B.M. to the shore tanks is 1.5 miles. Shore booster pump not available, steam jacket or similar facilities not available. Max. pressure on line 125 p.s.i., max. weight to be lifted 5 tons.
Product Handled: Crude Oil. Ship's accommodation ladder not required.
DENSITY: 1025.
SERVICES: None of the following are available; fresh water, provisions, repairs, airport, fuel oil, doctor, hospital, laundry.

All cargo handling surveyed by independent inspector nominated by Refidomsa. Slop discharge possible upon request and after agreement. Under no condition is pure water to be discharged via the hoses.
TIME: Pilot advises time is GMT minus 4 hours (throughout the year).
SHORE LEAVE: Not possible.
GENERAL: Vessel's ETA by telex to be given to Santo Domingo from the last port of call, any changes should be passed to the Agent through 'Curacao Radio' as at no time whilst on passage from Punta Cardon could traffic be passed through 'Santo Domingo Radio'. The Pilot acts for Agent. Customs and Immigration are in attendance, leaving with papers, cables and telex, consignees documents etc., after the vessel is all fast. The ship's official documents were not examined. 2 Customs guards and the Loading Master remain on board and should be provided with cabins and meals.

Cargo surveying is carried out by an independent surveyor, he also maintains VHF contact with the Agent in Santo Domingo through the refinery.

The Loading Master, Berthing Master and Sailing Pilot all speak English. VHF contact made with the refinery when 45 miles from the S.B.M. who then passed our amended ETA to the Pilot.
AUTHORITY: Refineria Dominicana de Petroleo, S.A., Apartado 1439, Santo Domingo, Republica Dominicana. *Tel:* (809) 542-2700. *Telex:* 3460342 (ITT), 3264320 (RCA). *Cables:* Refidom. *Contact:* Ronald Storrer, Superintendent.

AGENT'S REPORT: May 1996.

Palenque or Punta Palenque is a Single Buoy Mooring facility, located at Lat. 18° 12.2' N., Long. 70° 11.3' W., and is operated by the Refineria Dominicana de Petroleo. They receive reconstituted crude oil, mostly from Venezuela and Mexico, at this facaility, and it is pumped by pipeline to the Refinery in Haina (Itabo). This facility is about 2.5 miles off Punta Palenque, and a small tug is used for transportation to/from shore.
PILOTAGE: Pilotage is compulsory and can be arranged 24 hours a day. Pilot boards about 1 mile S.W. of SBM from a small tug with black hull and white superstructure. Pilot can be contacted on VHF Channel 16 and 14.
RESTRICTIONS: None, except in the case of extreme weather conditions.
MAX. SIZE: LOA 1,000 ft., draft 45 ft.
VHF: See "Pilotage".
TUGS: Available and compulsory. Also a small tug carries crew and gear required, etc.
MEDICAL: Not available, except for extreme emergencies, which must be taken to Santo Domingo.
CONSULS: All consular affairs must be handled at Santo Domingo.
REPAIRS: Not available.
AIRPORT: Las Americas International Airport is about 100 km. away, and has frequent flights to the United States, Europe, Caribbean and South America.
GENERAL: Because of the nature of this installation, there are no facilities for supplying bunkers, fresh water or other services.

PUERTO PLATA: 19.49 N. 70.41 W.

See "General" before first port.

The port of Puerto Plata is the main commercial port on the North coast of the Dominican Republic, and is the only one in this area receiving both general and bulk cargoes, and also exporting tobacco, agricultural commodities, etc.

PILOTAGE: Pilot arranged by Agent on basis of Master's advance notice of ETA. Pilot and Harbour Master can be contacted by radio telephone, frequency 2738 and 2638. Pilot boards 0.5 miles from the sea buoy. Pilot also on VHF Channel 16.

ANCHORAGE: Deep water anchorage available outside port. Pilot will advise best location. In rough weather, the anchorage is dangerous.

RESTRICTIONS: No entry or departure at night.

Depth at entrance 42 ft., depth on bar 37 ft. HW and 34 ft. LW, depth in harbour 30 ft.

MAX. SIZE: LOA 700 ft., beam 100 ft. and draft 30 ft. (S.W.).

HEALTH: Pratique granted after Health Authorities have boarded and cleared vessel. In case of disease aboard notify Agents before arrival. Pratique is automatic when proceeding from another port in the same country.

RADIO: When within range, Santo Domingo Radio.

TUGS: Tugs not available.

BERTHING:

Berth No. 1 (New): This berth is the Eastern side of the "New" finger pier, built in the 1970's, and which is 984 ft. (300 m.) long and 144 ft. (44 m.) wide. Two or more vessels may occupy this berth, which is usually very busy with deep-draft vessels, including cruise ships which have preferential berthing rights. The pier is approximately 10 ft. above the water line.

Maximum Draft: 29 ft. (outer), 20 ft. (inner), (S.W.).

Storage Facilities: There is a shed managed by the Port Authority with 6,000 sq.m. capacity, and which is divided into 3 sections for different import and export cargoes.

Equipment: Forklifts of various capacities are available for the handling of general cargoes. For the handling of bulk cargoes, there are hoppers, grab buckets and payloaders, but the ship's gear is used in most cases. There is also pneumatic discharging equipment or vacuvator available for heavy grain, but its capacity is only about 40 – 50 tonnes/hr.

Berth No. 2 (New): This berth is on the Western side of the "New" finger pier, built in the 1970's, and which is 984 ft. (300 m.) long and 144 ft. (44 m.) wide. Two or more vessels may occupy this berth, depending on their length. This berth is used by several container vessels with regular service to the U.S.A. ports.

Maximum Draft: 24 ft. (S.W.) (outer), 16 ft. (S.W.) (inner), shallow away from dock to as little as 14 ft. – 15 ft. at about 100 ft. from and parallel to the dock.

Storage Facilities: See Berth No. 1 (New).

Equipment: See Berth No. 1 (New).

Berth No. 3 (New): This berth is located at the tip of the "New" finger pier, built in the 1970's, and can accommodate a vessel of up to 250 ft. LOA.

Maximum Draft: 24 ft. (S.W.).

Storage Facilities: See Berth No. 1 (New).

Equipment: See Berth No. 1 (New).

Berth No. 1 (Old): This berth is on the Western side of the "Old" finger pier. It is about 360 ft. (110 m.) long. The pier is about 2.75 m. above the water line at high tide. It is not presently being used except as a lay-by berth, due to its state of disrepair.

Maximum Draft: 26 ft. (S.W.).

Storage Facilities: There is a small shed of approximately 2,000 sq.m., operated by the Port Authority. There is also a pipeline for fuel and diesel oil that leads to the utility company's shore tank nearby.

Equipment: See Berth No. 1 (New) for information. However, please note that this berth is not presently being used for general and bulk cargo operations, due to its poor condition.

Berth No. 2 (Old): This berth is located on the Eastern side of the "Old" finger pier and is about 360 ft. (110 m.) long. The pier is about 2.75 m. above the water line at high tide. Because the pier is in poor structural condition, it is rarely used, except by tankers discharging fuel and diesel oil for the local utility company, and as a lay-by berth.

Maximum Draft: Depth alongside 29 ft. 6 in. (S.W.).

Storage Facilities: See Berth No. 1 (Old).

Equipment: See Berth No. 1 (Old).

CRANES: Not available.

STEVEDORES: ETAs required 24 hours and 12 hours before arrival to arrange gangs.

Working Hours: Straight time working hours are 0800 – 1200 hrs. and 1400 – 1800 hrs. Mondays through Fridays, and Saturdays 0800 – 1200 hrs. Except on major holidays (New Year, Easter and Christmas), work may be ordered at overtime rates around the clock and on weekends.

MEDICAL: Full medical attention is available in Puerto Plata, and further facilities available in Santiago and Santo Domingo.

TANKERS: Berth at molasses/petroleum berth.

DENSITY: Salt water inside harbour.

FRESH WATER: Pipeline at wharves. Ship's hoses used.

FUEL: Diesel and fuel oil available by truck from Santo Domingo.

CONSULS: All consular affairs for this port are generally handled in Santo Domingo.

REPAIRS: Minor repairs only.

GANGWAY/DECK WATCHMEN: Compulsory gangway watch kept by Customs guards.

OPENING/CLOSING HATCHES: Can be performed by crew or stevedores.

CUSTOMS ALLOWANCES: Bond is sealed, but can be opened at Master's request.

REPATRIATION: Can be arranged.

AIRPORT: La Union International Airport is located about 20 km. East of Puerto Plata and has daily flights to/from San Juan, Miami and New York.

POLICE/FIRE/AMBULANCE: At Santo Domingo.

TELEPHONES: Nearest in Customs House alongside wharves.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Shore passes are provided by Immigration Authorities.

GENERAL: No boats to be lowered without official permission.

SHIPMASTER'S REPORT: March 1989.

Approaches: BA. Chart 463.

Owen Rock and the wreck, partly above water, are conspicuous, also the chimney S.E. of Punta Fortaleza which has a conspicuous plume of smoke giving a good indication of wind direction and strength.

The light S.E. of Pta. Fortaleza is sometimes working but is very weak.

The leading lights are fixed red and are conspicuous on the leading line and appear to be in the charted positions. They are displayed from white square towers with red tops.

These lights are unreliable and although usually on throughout the day are often out at night.

The buoys are not as charted, Buoy No. 1 and Buoy No. 6 are missing, Buoy No. 3 is close to its charted position, Buoy No. 2 has been moved closer in shore and Buoy No. 4 into the harbour.

Approximate positions of the buoys obtained by radar (bearings and distances from Pta. Fortaleza light):

No. 2	352°	0.465 miles
No. 3	334°	0.265 miles.
No. 4	328°	0.355 miles.

None of the buoys are lit and all are of the same rust colour.

The chart shows the shelf off Pta. Fortaleza extending into the buoyed channel but with the movement of the buoys this is no longer the case.

The leading lights give a line slightly to the East of the centre of the buoyed channel.

Pilots: The ETA will be passed to the Pilots by the Agents.

There is VHF communication with the pilot office but once he leaves the office to come to the vessel there is no further communication.

Channel 16 is used exclusively for communications.

There have been a number of changes recently in the pilots and in March 1989 Pilot Domingo proved competent both entering and leaving.

The Pilot boards from a small fibreglass boat as close to the buoys as the vessel is willing to come.

Wait until the boat is seen crossing the harbour before approaching too close as it can take a long time from the Pilot advising that he is on his way until the boat reaches the channel buoys.

Tugs: There is no tug available at this port.

Current: There is usually a strong set to the West when approaching on to the wreck and Owen Rock but on occasions this can be reversed and an Easterly or Southerly set experienced.

Entry and Departure at Night: Not recommended, none of the lights are reliable and the buoys are often not clear on radar due to clutter.

There are no lights on the old pier and vessels berthed there are usually in darkness.

The lights on the new pier are confined to the walls of the cargo shed which is at the landward end of the pier.

There were 2 floodlight towers on the new pier, both are damaged and not working, the closest one to the end has now been demolished.

The Pilot advised that entry and departure is in daylight only.

Berths: The Eastern, "Old Pier", is in poor condition with the end corner bollards either missing or damaged.

The length of this pier is approximately 115 m.

The Eastern side of this pier has a line of steel pilings approximately 2 m. from the side of the pier, these pilings are in very poor condition due to corrosion and damage. An attempt has been made to fender the tops of the pilings with tyres but most have slipped and afford little protection.

The chart shows some 5.1 m. alongside this pier but the Pilot has advised that there is 29 ft. (8.8 m.) there, and no problems were experienced berthing there with a draft of 7.75 m. on one occasion.

The Western, "New Pier", is in fairly good condition with fendering on the East and West sides.

The usual grain and feed berth is the outer end of the East side of this pier, but on Mondays this is reserved for the passenger vessel 'Caribe' which arrives at about 0800 hrs. and sails around 1700 hrs. Any vessels on this berth are moved off either to another berth if available or out to sea.

There is about 31 ft. 6 in. of water alongside at this berth (9.6 m.) as a vessel of this draft was seen struggling to get alongside and eventually managed.

The alternative berth is the West side of the New Pier, and the Pilot reports that there is 23 ft. of water alongside (7.01 m.), this was the berth used on this occasion and no problems were experienced berthing with drafts of 5.01 m. forward and 6.12 m. aft, the echo sounder showing clearance under the keel.

There is much less water at the landward end of this pier.

The outer 30 m. of this berth is used by small container vessels and there is timber strengthening for their mobile crane over this area, making it useless for any other discharging operations.

Depths: The depths are not as charted and the water gets shallow to the West of the leading line. The bottom is soft mud and the harbour appears to be silting up from the Rio San Marcos. Depths, particularly to the West side of the harbour, are doubtful.

General Weather: Early morning it is usually calm with the wind increasing from the East throughout the morning becoming strongest in the late afternoon.

There is sometimes a swell in the port, but this usually doesn't affect vessels berthed alongside.

Expect rain at all seasons, usually in very heavy downpours.

Fresh Water: This is available from the dock, although sometimes difficult to get, especially at weekends, even though the hydrants on the dock are continuously running and stevedores open up the hydrants to wash.

Provisions: Available and of reasonable quality and price.

General chandlery and working stores are almost impossible to obtain.

Courtesy Flag: This must be the plain flag, not defaced with the Coat of Arms.

Load Line Zone: Puerto Plata is just inside the Tropical Zone but from 16th July to 31st October the Summer Zone is entered after 16 miles (Northbound).

Port Authorities: The authorities will board on arrival with the Agent, usually 7 to 10 people. A search of the vessel and accommodation is carried out for contraband and stowaways before the vessel is cleared inwards.

A further search is carried out before departure and before the clearance is issued. These searches are usually only formalities at this port.

Documents: Ship's standard forms are accepted.

1 copy Maritime Declaration of Health.
8 copies Crew List.
8 copies Passenger List (Nil declaration required).
8 copies Arms and Ammunition List (Nil declaration required).
5 copies Stores List.
5 copies Crew Effects List.
8 copies of a Stowaway List are required if vessel has any on board.

Stowaways: Stowaways are a problem in spite of the patrolling guards. The port security fence has been removed over a distance of a few hundred metres, although the gate is always closed and guarded, potential stowaways will swim out to ships from the beaches.

Communications: All arrival messages are sent to Santo Domingo office and relayed whether by telephone or public telex to Puerto Plata.

The telex and telephone system in the Dominican Republic is often out of order.

Casual Labour: Available at negotiable rates, about U S.$12.00 per day, but before any work is started permission must be obtained from the Comandante del Puerto. The request for permission must contain the names of the prospective employees and is stamped by the Official and issued to the dock guard.

Syndicate employees are charged at about U.S.$25.00 per day.

Search the vessel well after they finish work and before sailing as casual workers could be potential stowaways.

Cargo Work: Discharging of ground nut pellets is by grabs on ship's cranes into hoppers on the dock and taken away by lorries.

The holdups are all due to lorries and although it is possible to work around the clock there are usually no lorries available and work ceases about 2100 hrs. each night, starting again at around 0800 hrs.

The tonnage discharged is checked by truck weights.

Total discharged 3,300 tonnes.

Gross gang hours	155.75	Gross rate	21.19 t.p.h.
Net gang hours	66.6	Net rate	49.55 t.p.h.

Time lost:	Lack of trucks	49.5 hours
	Rain	37.8 hours
	Breakdown	1.8 hours

The trucks used are small general purpose vehicles carrying about 15 – 20 tonnes each and on some occasions only one truck was available to serve the two gangs working. The Agents are the stevedores but they do not supply the trucks.

Shore Passes: Shore passes are issued by Immigration on arrival and should be carried, but generally they are not asked for by the gate guards.

Repatriation: There is an international airport close to Puerto Plata used mainly to fly tourists into the hotel complex some 20 km. out of town.

Baggage and personal effects are cleared by Customs at the dock and it can take up to 8 hours to complete formalities.

Local agents have difficulty in obtaining flights, and on one occasion a Chief Engineer after waiting for 5 days caught the next managed vessel back to the U.S.A. for repatriation. On another occasion, a crane engineer discharged here was lost to his Company for two days.

AUTHORITY: Harbour Master. Tel: (809) 586-2576.
Port Manager. Tel: (809) 586-6566.

AGENT: See "General" before first port.

RIO HAINA: 18.25 N. 70.01 W. (See Plan)

See "General" before first port.

PILOTAGE: Pilot boards from small boat flying a flag with a white "P" on a black background, about 1.0 mile from harbour entrance. Contact Pilot on 2738 or 2638 and Channel 16 VHF. Tel: (809) 542-3550.

ANCHORAGE: It is suggested that vessels anchor off the port of Santo Domingo, which is only 4 miles away. Anchorage at Haina is considered unsafe and only to be used in case of emergency.

RESTRICTIONS: Night-time entry and sailing is restricted, but depending on circumstances, weather conditions and vessel characteristics, the Pilot can be induced to move the vessel at night.

MAX. SIZE: LOA 700 ft., beam 100 ft. and draft 32 ft.

TUGS: 2 tugs, 1,200 h.p. and 850 h.p. Use of tugs is compulsory.

BERTHING: 12 berths available. Vessels going to load sugar swing inside the harbour with the aid of a tug, and berth starboard side to the quay. Ship's gangway is recommended. There is sometimes quite a swell running inside the harbour. The port anchor is used for berthing and unberthing.

Berth No. 1 West (Sugar Berth): This is the berth nearest to the breakwater. It is 190 m. (623 ft.) long. This berth has a mechanical bulk sugar loading facility, consisting of a continuous conveyor belt system from the Rio Haina Sugar Mill directly to the spout-thrower that loads and trims the cargo. This berth is also frequently used by tankers discharging fuel and/or diesel oil to shore tanks.

Maximum draft: 30 ft. (brackish water).

Storage facilities: The sugar mill has 2 bulk sugar warehouses with a total capacity of more than 150,000 tons.

Equipment: The mechanical bulk sugar loading system loads at about 200-250 tonnes/hr.

Bunkers: Fuel and diesel oil are available by tank trucks of either 5,000 or 10,000 American gallons.

Note: Presently there are no bunkers available for ships because of a local shortage of fuels.

Fresh water: Fresh water must be delivered by tank truck only, as there is no pipeline alongside.

Working hours: Sugar is usually loaded 24 hours around the clock by the sugar mill, as well as on Saturdays, Sundays and holidays with all overtime for the shippers' account. The average loading rate is 4,000 – 5,000 tons during 24 hours.

Berth No. 2 West: This berth is 113 m. (370 ft.) long, and is used for the discharge of general breakbulk and containerised cargo. Liquid petroleum tankers also use this berth to discharge distillate to shore tanks belonging to the local Refinery, and have preferential berthing rights. This berth is not very well protected, and hence may be dangerous when there is a heavy swell.

Maximum draft: 30 ft. (brackish water).

Storage facilities: There are 2 sheds, each with 2,100 sq.m. storage space available. These sheds were originally built to store bagged sugar awaiting shipment, but are now primarily used for various import cargoes requiring covered storage.

Equipment: Forklifts of 4.5, 6 and 10 ton capacity are available for handling cargo. Motor cranes if required may be used at this berth.

Bunkers: See "Berth No. 1 West".

Fresh water: See "Berth No. 1 West".

Working hours: Straight time working hours for general breakbulk and containerised cargoes are 0800 hrs. – 1200 hrs. and 1400 hrs. – 1800 hrs. Mondays through Fridays, and 0800 hrs. – 1200 hrs. on Saturdays. Overtime may be worked around the clock and on weekends, excepting major holidays. Please contact Agent for further information.

Berth No. 3 West: This berth is 181 m. (593 ft.) long, of which only 110 m. can presently be used for berthing, due to the state of disrepair; the apron is also in a damaged condition; the pavement is cracked and the supporting structure weak. Hence, this berth is presently used by small general cargo vessels handling light cargoes such as plywood, lumber, etc., and only rarely for containers directly onto flatbeds.

Maximum draft: 24 ft. (brackish water).

Storage facilities: See "Berth No. 1 West".

Equipment: See "Berth No. 1 West".

Bunkers: See "Berth No. 1 West".

Fresh water: See "Berth No. 1 West".

Working hours: See "Berth No. 1 West".

Berth No. 4 West (Molasses Berth): This berth is 264 m. (866 ft.) long, and is used by molasses tankers loading from the shore storage tanks belonging to the Rio Haina Sugar Mill, and is therefore frequently referred to as the Molasses Berth. Since 1983/1984, this berth has also been used for discharging coal in bulk for the electric utility Company into hoppers owned by Maritima Dominicana. Early 1994, Sealand installed a new container (gantry) crane, and was granted preference at this dock. When not occupied by these vessels, the berth is used for other bulk cargoes (soda ash, bulk fertilisers, mineral sand, etc.) and for homogeneous breakbulk and containers.

Maximum draft: Maximum draft alongside is 30 ft. (brackish water).

Storage facilities: Molasses storage tanks connected by pipeline hold approximately 5 million gallons and are used for exporting molasses; there is no shed available for cargo, and limited space for lumber and other homogeneous breakbulk cargoes. Coal and other bulk cargoes must be hauled away immediately by trucks.

Equipment: Forklifts of 4.5, 6 and 10 tons are available to handle general breakbulk. Coal is usually discharged by ship's gear into hoppers, and front-end loaders are used in the ship's holds.

Bunkers: See "Berth No. 1 West".

Fresh water: See "Berth No. 1 West".

Working hours: See "Berth No. 1 West".

Berth No. 5 West (Sealand): This berth is called the Sealand Berth, because this company has a portainer crane and leases a 3,800 sq.m. warehouse and open container terminal from the Port Authority, and by contract has preferential berthing at this pier for its own vessels. Because of the volume of its operations, this berth is rarely used by any other vessels. The berth is 171 m. (580 ft.) long.

Maximum draft: 26 ft. (brackish water).

Storage facilities: 3,800 sq.m. container stripping terminal warehouse and open storage for containers.

Equipment: Sealand has a private portainer and ancillary container handling equipment for its operations.

Bunkers: See "Berth No. 1 West".

Fresh water: See "Berth No. 1 West".

Working hours: See "Berth No. 2 West".

Berth No. 6 West: This berth is 177 m. (580 ft.) long, and is used by tankers for discharging LPG, lubricants and liquid paraffin to shore tanks. However, LPG operations are increasingly rare at this berth, because the local Refinery has completed an off-shore buoy installation for receiving LPG by pipeline which is used by most vessels.

Maximum draft: 22 ft. (brackish water).

Storage facilities: Storage tanks are available for lubricants, liquid chemicals, LPG and liquid paraffin. No other storage facilities available at this berth.

Equipment: Only shore facilities are pipelines for above-mentioned liquid cargoes from the vessel to the storage tanks.

Bunkers: See "Berth No. 1 West".
Fresh water: See "Berth No. 1 West".
Working hours: See "Berth No. 2 West".

Berth No. 1 East (Proteinas): This berth is privately owned by Sociedad Industrial Dominicana (S.I.D.), a large importer of corn and soybeans in bulk, and is used to discharge feed grain and meal in bulk as well as vegetable oils and fats in bulk. The berth consists of a central platform supporting a shore crane on rails and hoppers for discharging and three dolphins for securing the vessel's lines.

Two of the hoppers feed directly into trucks and the third onto a conveyor leading to the silos. Each dolphin has one bollard at its centre and the central platform has 3 bollards over a distance of about 28 m. The total length of the berth, between the outer dolphins, is 153 m. (500 ft.). Vessels normally berth starboard side alongside utilising the bollard at the end of Berth No. 2 (Fersan) for its head lines. There is a bollard on the breakwater, about 100 m. from the Southern dolphin, and 180 m. from the central platform, which cannot presently be used due to the on-going works restoring and rebuilding the breakwater.

As vessels have to shift back and forth in order to position the hatch openings within reach of the crane, it is advisable for larger vessels to place a mooring line, leading astern, from its spring or breast fairlead to the Southern dolphin.

Maximum LOA permissible is about 700 ft.

Maximum draft: 31 ft. (salt water).

Storage facilities: S.I.D. has 6 silos, each with a capacity for approximately 1,200 tonnes of heavy grain. There are also 6 storage tanks for vegetable oils and fats, with a total capacity for 6,000 tonnes.

Equipment: Grain is discharged with a shore crane into hoppers at an average rate of 150-200 tonnes/hr., depending on the type of vessel and cargo. Meal is slower, averaging about 100-125 tonnes/hr. Stevedores also use a large front-end loader to clean the holds. Actual discharging rate is sometimes slower than capacity, due to the slow take-away by trucks.

Bunkers: Fuel and diesel oil are delivered by tank truck. Arrangements must be made in advance of arrival through the Agent, in order to coordinate timely delivery, because delivery cannot be made during the discharging operations. Trucks carry either 5,000 or 10,000 American gallons.

Fresh water: See "Berth No. 1 West".

Working hours: See "Berth No. 2 West". However, receivers frequently work overtime at this berth for their own account, usually at night on weekdays, during weekends and on most holidays. Otherwise for overtime rates please contact Agent.

Berth No. 2 East (Fersan): This facility is called the Fersan Berth, because it is controlled by the fertiliser company Fertilizantes Santo Domingo (Fersan) and used primarily for their own bulk discharging operations, exporting fertilisers in bags, and also for bulk liquid chemicals. Occasionally, the berth is used for discharging bulk grain. This pier is 185 m. (600 ft.) long.

Maximum draft: 30 ft. (brackish water).

Storage facilities: The fertiliser company has storage space available for both bulk and bagged fertilisers. Total capacity exceeds 30,000 tons.

Equipment: Fersan has one crane mounted on rails which is used for all bulk discharging, and occasionally for assisting in the loading of bagged fertiliser for export. This crane discharges fertiliser at about 100-125 tons/hr. on average, directly into a stationary hopper which feeds a conveyor to the Fersan mixing plant. Fersan also has front-end loaders for the cleaning of ship's holds, and forklifts for handling bagged cargoes. When bulk grain is discharged at this berth, small hoppers are used and the cargo is hauled away in trucks. This limits the discharge rate to about 80 tons/hr. for this type of cargo.

Bunkers: See "Berth No. East (Proteinas)".
Fresh water: See "Berth No. 1 East".
Working hours: See "Berth No. 1 East".

Berth No. 3 East (Falconbridge): This berth is 215 m. (700 ft.) long. The Falconbridge Dominicana Terminal is located alongside, and vessels carrying cargo for this company have preference in the use of this berth. Falconbridge receives fuel oil in bulk frequently; exports ferro-nickel products on pallets and in crates as well as in containers, and imports general breakbulk and containerised cargoes on a regular basis. This berth may also be used by other vessels, when Falconbridge vessels are not occupying it.

Maximum draft: 30 ft. (brackish water).

Storage facilities: Falconbridge has a Terminal, which is basically an open yard for containers, palletised ferro-nickel ingots, ferro-nickel cones in wooden crates and import cargoes such as electrodes, lumber, etc.

Equipment: Forklifts are available for handling the cargo on the pier and in the vessel's holds. Motor cranes can be hired if required due to breakdown of vessel's gear or for gearless ships.

Bunkers: See "Berth No. 1 East (Proteinas)".
Fresh water: See "Berth No. 1 East".
Working hours: See "Berth No. 2 West".

Berth No. 4 East: This berth is 215 m. (700 ft.) long, and is used frequently by Ro-Ro vessels. There are ramps available, one at each end and one in the centre. When not in use by one of the regularly scheduled Ro-Ro liner services, the berth is used to discharge general breakbulk or homogeneous cargoes.

Maximum draft: 27 ft. (brackish water).

Storage facilities: The Port Authority's Shed No. 4 with approximately 3,600 sq.m. is available nearby for general cargo requiring enclosed storage. The open yard is available for trailers, containers and breakbulk cargo not requiring covered storage.

Equipment: 3 ramps allow Ro-Ro vessels to discharge at this berth. Forklifts of various capacities are available, and the stevedoring companies have other equipment (mules, etc.).

Bunkers: See "Berth No. 1 East (Proteinas)".
Fresh water: See "Berth No. 1 East".
Working hours: See "Berth No. 2 West".

Berth No. 5 East: This berth is 214 m. (702 ft.) long, and is used primarily fo the handling of containers and general breakbulk cargo.

Maximum draft: 31 ft. (brackish water).

Storage facilities: The Port Authority's Shed No. 1 with 2,855 sq.m. capacity is located nearby and can accommodate general cargo, and is used for stripping containers, etc. Open yard can accommodate containers and trailers.

Equipment: Motor cranes, spreaders, forklifts and other equipment may be hired for operations, although most vessels using this berth are self-sustaining.

Bunkers: See "Berth No. 1 East (Proteinas)".
Fresh water: See "Berth No. 1 East".
Working hours: See "Berth No. 2 West".

Berth No. 6 East (Container Terminal): This berth is 765 m. (3,280 ft.) long, and was intended for handling containers, but due to the frequent congestion of other berths, this pier is sometimes used for bulk cargoes, steel, scrap, etc., and almost any other vessels with deep drafts, including passenger cruise ships. Due to its length, the pier is divided into sections A, B, C and D.

Maximum draft: Section A of the pier (down-river), the end nearest to the port entrance, has a draft of 29 ft. (brackish water). This draft gradually diminishes as you go up-river, and Section D, which measures about 150 m., only has a maximum draft of 14 ft.

Storage facilities: A large open yard for containers and trailers with modern lighting and other facilities is presently nearing completion of construction. The nearest warehouse is the Port Authority's Shed No. 1, with 2,855 sq.m. storage capacity.

Equipment: The Port Authority owns and the Shipping Association operates a large overhead gantry crane on rails that can handle containers. However, many vessels use their own gear. There are also several large hoppers on the pier which are used to discharge bulk cargoes (coal, clinker and grain) into trucks. Other equipment, such as payloaders, forklifts, motor cranes, etc., are also available for hire.

Bunkers: See "Berth No. 1 West".
Fresh water: See "Berth No. 1 East".
Working hours: See "Berth No. 2 West".

SPECIALISED CARGO HANDLING FACILITIES: See "Berthing".

STEVEDORES: See individual berths.

MEDICAL: All facilities in Santo Domingo.

TANKERS: CBM operated by Refineria Dominicana de Petroleo, S.A.

Before Boarding the Tanker: An inspection of the berth area must be made from the mooring launch for wind and swell conditions. If these conditions exceed the working limitations of the mooring launch, then the operation must be delayed until the weather improves.

A decision to abort the berthing operation can be made under the following circumstances:

(a) When swell measured on the graduations of the PLEM marker is estimated to be in excess of 2.0 m.
(b) When wind speed is in excess of 25 knots.
(c) When the approach to the berth is likely to be hindered by poor visibility caused by an approaching rain front or by the onset of darkness. It is estimated that a normal approach will take 45 minutes to 1 hour, and that visibility towards the shore is drastically reduced within a few minutes after sunset. As a general rule, approaches to the berth should not be considered after 1730 hrs.
(d) If the draft of the tanker is in excess of 9.5 m.

The Approach to the Berth: The tanker should be instructed to proceed to a point 1 nautical mile South of the CBM, and have a lee prepared for boarding the Pilot on the portside and with all way taken off the ship.

The initial approach is in a Northwesterly direction with a gradual turn to starboard (See "Plan"). Speed must not be allowed to build up to an extent where engines have to be used to reduce it to a safe entry into the buoy area. Speed should therefore be kept to a minimum, consistent with steerage.

At no point during the approach must the vessel be allowed to cross the 10 m. contour, and on the final approach, the PLEM marker must always be on the port bow. To assist in these requirements, the Power Station chimney and the Refidomsa flare must never be allowed to close, and Buoy No. 2 should be used as a point of reference when entering the berth.

As an additional precaution, speed at entering the berth should be as low as possible. With minimum way on the vessel, the starboard anchor can be dropped and the engines used to assist in turning the vessel into the berth. Excessive speed at this point may require the use of stern movements to reduce headway, and this may impart a sideways drift into the berth and the possibility of running over the hose and PLEM markers.

The Mooring Operation: The starboard anchor should be dropped when the bow of the tanker is just within the boundaries of the buoys and run out to 2 shackles. The vessel should at this stage be turning to starboard under engines and rudder. By holding on to the starboard anchor, this swing will be accelerated and allowed to continue until the bow has cleared Buoy No. 5. When the bow is clear of Buoy No. 5, and to seaward of it, the port anchor should be dropped and allowed to run out whilst a stern movement is instigated.

At this point, the tug should be ordered to push on the starboard quarter, if so required. With an offshore wind, the assistance of this tug is essential and attempts at mooring without it should be avoided. At the same time, the mooring launch should be instructed to run mooring lines to Buoy No. 4. When these lines are secure and slack taken up, the tug should be instructed to stand-by whilst the remainder of the lines are run out, with the weather lines having priority. If conditions permit, it is better to manoeuvre the ship to the PLEM marker, using the ship's mooring lines rather than the tug.

When lines to the weather buoys have been secured, the starboard anchor should be recovered and the port anchor allowed to run out until the vessel is in position. On no account should the port anchor be recovered whilst the vessel is in the berth, as it provides the only security, should the vessel break out of the moorings.

Provisions: Available and of reasonable quality and price.

General chandlery and working stores are almost impossible to obtain.

Courtesy Flag: This must be the plain flag, not defaced with the Coat of Arms.

Load Line Zone: Puerto Plata is just inside the Tropical Zone but from 16th July to 31st October the Summer Zone is entered after 16 miles (Northbound).

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RESTRICTIONS: Night-time entry and sailing is restricted, but depending on circumstances, weather conditions and vessel characteristics, the Pilot can be induced to move the vessel at night.

MAX. SIZE: LOA 700 ft., beam 100 ft. and draft 32 ft.

TUGS: 2 tugs, 1,200 h.p. and 850 h.p. Use of tugs is compulsory.

BERTHING: 12 berths available. Vessels going to load sugar swing inside the harbour with the aid of a tug, and berth starboard side to the quay. Ship's gangway is recommended. There is sometimes quite a swell running inside the harbour. The port anchor is used for berthing and unberthing.

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Maximum draft: 30 ft. (brackish water).

Storage facilities: The sugar mill has 2 bulk sugar warehouses with a total capacity of more than 150,000 tons.

Equipment: The mechanical bulk sugar loading system loads at about 200-250 tonnes/hr.

Bunkers: Fuel and diesel oil are available by tank trucks of either 5,000 or 10,000 American gallons.

Note: Presently there are no bunkers available for ships because of a local shortage of fuels.

Fresh water: Fresh water must be delivered by tank truck only, as there is no pipeline alongside.

Working hours: Sugar is usually loaded 24 hours around the clock by the sugar mill, as well as on Saturdays, Sundays and holidays with all overtime for the shippers' account. The average loading rate is 4,000 – 5,000 tons during 24 hours.

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Maximum draft: 30 ft. (brackish water).

Storage facilities: There are 2 sheds, each with 2,100 sq.m. storage space available. These sheds were originally built to store bagged sugar awaiting shipment, but are now primarily used for various import cargoes requiring covered storage.

Equipment: Forklifts of 4.5, 6 and 10 ton capacity are available for handling cargo. Motor cranes if required may be used at this berth.

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Fresh water: See "Berth No. 1 West".

Working hours: Straight time working hours for general breakbulk and containerised cargoes are 0800 hrs. – 1200 hrs. and 1400 hrs. – 1800 hrs. Mondays through Fridays, and 0800 hrs. – 1200 hrs. on Saturdays. Overtime may be worked around the clock and on weekends, excepting major holidays. Please contact Agent for further information.

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Maximum draft: Maximum draft alongside is 30 ft. (brackish water).

Storage facilities: Molasses storage tanks connected by pipeline hold approximately 5 million gallons and are used for exporting molasses; there is no shed available for cargo, and limited space for lumber and other homogeneous breakbulk cargoes. Coal and other bulk cargoes must be hauled away immediately by trucks.

Equipment: Forklifts of 4.5, 6 and 10 tons are available to handle general breakbulk. Coal is usually discharged by ship's gear into hoppers, and front-end loaders are used in the ship's holds.

Bunkers: See "Berth No. 1 West".

Fresh water: See "Berth No. 1 West".

Working hours: See "Berth No. 1 West".

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Maximum draft: 26 ft. (brackish water).

Storage facilities: 3,800 sq.m. container stripping terminal warehouse and open storage for containers.

Equipment: Sealand has a private portainer and ancillary container handling equipment for its operations.

Bunkers: See "Berth No. 1 West".

Fresh water: See "Berth No. 1 West".

Working hours: See "Berth No. 2 West".

Berth No. 6 West: This berth is 177 m. (580 ft.) long, and is used by tankers for discharging LPG, lubricants and liquid paraffin to shore tanks. However, LPG operations are increasingly rare at this berth, because the local Refinery has completed an off-shore buoy installation for receiving LPG by pipeline which is used by most vessels.

Maximum draft: 22 ft. (brackish water).

Storage facilities: Storage tanks are available for lubricants, liquid chemicals, LPG and liquid paraffin. No other storage facilities available at this berth.

Equipment: Only shore facilities are pipelines for above-mentioned liquid cargoes from the vessel to the storage tanks.

Bunkers: See "Berth No. 1 West".
Fresh water: See "Berth No. 1 West".
Working hours: See "Berth No. 2 West".

Berth No. 1 East (Proteinas): This berth is privately owned by Sociedad Industrial Dominicana (S.I.D.), a large importer of corn and soybeans in bulk, and is used to discharge feed grain and meal in bulk as well as vegetable oils and fats in bulk. The berth consists of a central platform supporting a shore crane on rails and hoppers for discharging and three dolphins for securing the vessel's lines.

Two of the hoppers feed directly into trucks and the third onto a conveyor leading to the silos. Each dolphin has one bollard at its centre and the central platform has 3 bollards over a distance of about 28 m. The total length of the berth, between the outer dolphins, is 153 m. (500 ft.). Vessels normally berth starboard side alongside utilising the bollard at the end of Berth No. 2 (Fersan) for its head lines. There is a bollard on the breakwater, about 100 m. from the Southern dolphin, and 180 m. from the central platform, which cannot presently be used due to the on-going works restoring and rebuilding the breakwater.

As vessels have to shift back and forth in order to position the hatch openings within reach of the crane, it is advisable for larger vessels to place a mooring line, leading astern, from its spring or breast fairlead to the Southern dolphin.

Maximum LOA permissible is about 700 ft.

Maximum draft: 31 ft. (salt water).

Storage facilities: S.I.D. has 6 silos, each with a capacity for approximately 1,200 tonnes of heavy grain. There are also 6 storage tanks for vegetable oils and fats, with a total capacity for 6,000 tonnes.

Equipment: Grain is discharged with a shore crane into hoppers at an average rate of 150-200 tonnes/hr., depending on the type of vessel and cargo. Meal is slower, averaging about 100-125 tonnes/hr. Stevedores also use a large front-end loader to clean the holds. Actual discharging rate is sometimes slower than capacity, due to the slow take-away by trucks.

Bunkers: Fuel and diesel oil are delivered by tank truck. Arrangements must be made in advance of arrival through the Agent, in order to coordinate timely delivery, because delivery cannot be made during the discharging operations. Trucks carry either 5,000 or 10,000 American gallons.

Fresh water: See "Berth No. 1 West".

Working hours: See "Berth No. 2 West". However, receivers frequently work overtime at this berth for their own account, usually at night on weekdays, during weekends and on most holidays. Otherwise for overtime rates please contact Agent.

Berth No. 2 East (Fersan): This facility is called the Fersan Berth, because it is controlled by the fertiliser company Fertilizantes Santo Domingo (Fersan) and used primarily for their own bulk discharging operations, exporting fertilisers in bags, and also for bulk liquid chemicals. Occasionally, the berth is used for discharging bulk grain. This pier is 185 m. (600 ft.) long.

Maximum draft: 30 ft. (brackish water).

Storage facilities: The fertiliser company has storage space available for both bulk and bagged fertilisers. Total capacity exceeds 30,000 tons.

Equipment: Fersan has one crane mounted on rails which is used for all bulk discharging, and occasionally for assisting in the loading of bagged fertiliser for export. This crane discharges fertiliser at about 100-125 tons/hr. on average, directly into a stationary hopper which feeds a conveyor to the Fersan mixing plant. Fersan also has front-end loaders for the cleaning of ship's holds, and forklifts for handling bagged cargoes. When bulk grain is discharged at this berth, small hoppers are used and the cargo is hauled away in trucks. This limits the discharge rate to about 80 tons/hr. for this type of cargo.

Bunkers: See "Berth No. East (Proteinas)".
Fresh water: See "Berth No. 1 East".
Working hours: See "Berth No. 1 East".

Berth No. 3 East (Falconbridge): This berth is 215 m. (700 ft.) long. The Falconbridge Dominicana Terminal is located alongside, and vessels carrying cargo for this company have preference in the use of this berth. Falconbridge receives fuel oil in bulk frequently; exports ferro-nickel products on pallets and in crates as well as in containers, and imports general breakbulk and containerised cargoes on a regular basis. This berth may also be used by other vessels, when Falconbridge vessels are not occupying it.

Maximum draft: 30 ft. (brackish water).

Storage facilities: Falconbridge has a Terminal, which is basically an open yard for containers, palletised ferro-nickel ingots, ferro-nickel cones in wooden crates and import cargoes such as electrodes, lumber, etc.

Equipment: Forklifts are available for handling the cargo on the pier and in the vessel's holds. Motor cranes can be hired if required due to breakdown of vessel's gear or for gearless ships.

Bunkers: See "Berth No. 1 East (Proteinas)".
Fresh water: See "Berth No. 1 East".
Working hours: See "Berth No. 2 West".

Berth No. 4 East: This berth is 215 m. (700 ft.) long, and is used frequently by Ro-Ro vessels. There are ramps available, one at each end and one in the centre. When not in use by one of the regularly scheduled Ro-Ro liner services, the berth is used to discharge general breakbulk or homogeneous cargoes.

Maximum draft: 27 ft. (brackish water).

Storage facilities: The Port Authority's Shed No. 4 with approximately 3,600 sq.m. is available nearby for general cargo requiring enclosed storage. The open yard is available for trailers, containers and breakbulk cargo not requiring covered storage.

Equipment: 3 ramps allow Ro-Ro vessels to discharge at this berth. Forklifts of various capacities are available, and the stevedoring companies have other equipment (mules, etc.).

Bunkers: See "Berth No. 1 East (Proteinas)".
Fresh water: See "Berth No. 1 East".
Working hours: See "Berth No. 2 West".

Berth No. 5 East: This berth is 214 m. (702 ft.) long, and is used primarily fo the handling of containers and general breakbulk cargo.

Maximum draft: 31 ft. (brackish water).

Storage facilities: The Port Authority's Shed No. 1 with 2,855 sq.m. capacity is located nearby and can accommodate general cargo, and is used for stripping containers, etc. Open yard can accommodate containers and trailers.

Equipment: Motor cranes, spreaders, forklifts and other equipment may be hired for operations, although most vessels using this berth are self-sustaining.

Bunkers: See "Berth No. 1 East (Proteinas)".
Fresh water: See "Berth No. 1 East".
Working hours: See "Berth No. 2 West".

Berth No. 6 East (Container Terminal): This berth is 765 m. (3,280 ft.) long, and was intended for handling containers, but due to the frequent congestion of other berths, this pier is sometimes used for bulk cargoes, steel, scrap, etc., and almost any other vessels with deep drafts, including passenger cruise ships. Due to its length, the pier is divided into sections A, B, C and D.

Maximum draft: Section A of the pier (down-river), the end nearest to the port entrance, has a draft of 29 ft. (brackish water). This draft gradually diminishes as you go up-river, and Section D, which measures about 150 m., only has a maximum draft of 14 ft.

Storage facilities: A large open yard for containers and trailers with modern lighting and other facilities is presently nearing completion of construction. The nearest warehouse is the Port Authority's Shed No. 1, with 2,855 sq.m. storage capacity.

Equipment: The Port Authority owns and the Shipping Association operates a large overhead gantry crane on rails that can handle containers. However, many vessels use their own gear. There are also several large hoppers on the pier which are used to discharge bulk cargoes (coal, clinker and grain) into trucks. Other equipment, such as payloaders, forklifts, motor cranes, etc., are also available for hire.

Bunkers: See "Berth No. 1 West".
Fresh water: See "Berth No. 1 East".
Working hours: See "Berth No. 2 West".

SPECIALISED CARGO HANDLING FACILITIES: See "Berthing".

STEVEDORES: See individual berths.

MEDICAL: All facilities in Santo Domingo.

TANKERS: CBM operated by Refineria Dominicana de Petroleo, S.A.

Before Boarding the Tanker: An inspection of the berth area must be made from the mooring launch for wind and swell conditions. If these conditions exceed the working limitations of the mooring launch, then the operation must be delayed until the weather improves.

A decision to abort the berthing operation can be made under the following circumstances:

(a) When swell measured on the graduations of the PLEM marker is estimated to be in excess of 2.0 m.
(b) When wind speed is in excess of 25 knots.
(c) When the approach to the berth is likely to be hindered by poor visibility caused by an approaching rain front or by the onset of darkness. It is estimated that a normal approach will take 45 minutes to 1 hour, and that visibility towards the shore is drastically reduced within a few minutes after sunset. As a general rule, approaches to the berth should not be considered after 1730 hrs.
(d) If the draft of the tanker is in excess of 9.5 m.

The Approach to the Berth: The tanker should be instructed to proceed to a point 1 nautical mile South of the CBM, and have a lee prepared for boarding the Pilot on the portside and with all way taken off the ship.

The initial approach is in a Northwesterly direction with a gradual turn to starboard (See "Plan"). Speed must not be allowed to build up to an extent where engines have to be used to reduce it to a safe entry into the buoy area. Speed should therefore be kept to a minimum, consistent with steerage.

At no point during the approach must the vessel be allowed to cross the 10 m. contour, and on the final approach, the PLEM marker must always be on the port bow. To assist in these requirements, the Power Station chimney and the Refidomsa flare must never be allowed to close, and Buoy No. 2 should be used as a point of reference when entering the berth.

As an additional precaution, speed at entering the berth should be as low as possible. With minimum way on the vessel, the starboard anchor can be dropped and the engines used to assist in turning the vessel into the berth. Excessive speed at this point may require the use of stern movements to reduce headway, and this may impart a sideways drift into the berth and the possibility of running over the hose and PLEM markers.

The Mooring Operation: The starboard anchor should be dropped when the bow of the tanker is just within the boundaries of the buoys and run out to 2 shackles. The vessel should at this stage be turning to starboard under engines and rudder. By holding on to the starboard anchor, this swing will be accelerated and allowed to continue until the bow has cleared Buoy No. 5. When the bow is clear of Buoy No. 5, and to seaward of it, the port anchor should be dropped and allowed to run out whilst a stern movement is instigated.

At this point, the tug should be ordered to push on the starboard quarter, if so required. With an offshore wind, the assistance of this tug is essential and attempts at mooring without it should be avoided. At the same time, the mooring launch should be instructed to run mooring lines to Buoy No. 4. When these lines are secure and slack taken up, the tug should be instructed to stand-by whilst the remainder of the lines are run out, with the weather lines having priority. If conditions permit, it is better to manoeuvre the ship to the PLEM marker, using the ship's mooring lines rather than the tug.

When lines to the weather buoys have been secured, the starboard anchor should be recovered and the port anchor allowed to run out until the vessel is in position. On no account should the port anchor be recovered whilst the vessel is in the berth, as it provides the only security, should the vessel break out of the moorings.

On completion of mooring, it is essential that all mooring lines are taut and that the winch brakes are fully secure.

The Unmooring Operation: The vessel should single up to either one or two lines to Buoy No. 4 and the remainder let go in the following order: No. 1, No. 2, No. 5 and finally the remaining lines on Buoy No. 4. After the lines from Buoy No. 5 have been recovered, the port anchor should be put in gear and heaving commenced as soon as the lines from Buoy No. 4 have been released. It may be necessary to use the rudder and engines to keep the vessel clear of the seaward buoys whilst the anchor is being recovered, but care should be exercised so that the vessel does not over-run the anchor. If necessary, the mooring launch could be used to nudge the buoys clear of the vessel's stern.

Also see "Shipmaster's Report" dated September 1994 and "Berthing".

Operator's Report: November 1995.

Berth	*LOA* (m.)	*Beam* (m.)	*Draft* (m.)	*Product Handled/ Remarks*
CDE Wharf	180	27.4	7.31	Black, fuel, LPG.
Falconbridge	180	26.2	8.53	Fuel oil.
Refidomsa (CBM)	170	–	9.50	White, LPG. Max. size 32,000 d.w.t. No vapour return.
Sugar Terminal	182	27.4	8.53	Black, Gas oil, Mogas.
Lubridom/CDE	170	26.0	8.83*	Lube oil.

* Draft if 15 ft. – 20 ft. off Quay. If alongside, max. draft is 21 ft.

Report: March 1996.

Refidomsa Buoy Moorings: The approximate position of this facility is Lat. 18° 24' N., Long. 70° 01.5' W.

This installation, consisting of 4 mooring buoys and 2 cargo hose pick-up buoys, off the port of Haina, is used for discharging LPG and refined petroleum products such as gasoline, diesel fuel, etc., to the shore installations of the Refineria Dominicana de Petroleo. Vessels must have a boom to handle a hose weighing about 3 tons. The moorings can accommodate vessels up to 570 ft. LOA. Vessels are docked during daylight hours only, and pilotage and mooring crew are compulsory. The Pilot boards about 1 mile South of the moorings. A tug assists on arrival, mooring vessels bow pointing towards the sea. Departure is normally without tug assistance.

Maximum draft: 31 ft. (9.5 m.) S.W.

Equipment: For discharging there is one hose to the port side, 8 in. diameter, 300 ASA for LPG. For discharging clean petroleum products, the diameter of the hose is 8 in. Ship's port crane or boom to be ready on arrival and manifold reducer fitted. Ship's crew performs connection with supervision from Terminal personnel.

Storage facilities: The storage tanks of the Refineria Dominicana de Petroleo hold LPG, gasoline and diesel oil pumped ashore by vessels from the Refidomsa Mooring Buoy.

Note: Because of the nature of this installation, there are no facilities for supplying bunkers, fresh water and other port services. Five persons from the shore remain on board for the duration of the discharge operations, and accommodation for them should be provided by the vessel.

FRESH WATER: Fresh water available by truck.

FUEL: Fuel oil, diesel and intermediate fuels available by truck. Also see "Berthing".

CONSULS: In Santo Domingo.

REPAIRS: Minor repairs in Santo Domingo.

AIRPORT: Las Americas International Airport in Santo Domingo is only 25 miles away and is served by major international airlines.

REPATRIATION: Possible.

DEVELOPMENTS: Berth under construction. On completion there will be 750 m. of berthing space for 3 Ro/Ro vessels.

Container berth under construction, length 520 m.

SHIPMASTER'S REPORT: March 1984.

Four Buoys have been installed in front of the entrance to the port and are not in line with the leading lights when entering. On the starboard side there are 2 red buoys (Fl. red) and on the port side 2 black buoys (Fl. green).

SHIPMASTER'S REPORT: March 1989.

Approaches: BA. Chart No. 471.

The approaches are as shown on the chart and in the sailing directions.

Both breakwaters are in ruins.

The buoys are unlit white drums, 3 to the East side of the channel and 3 and one half to the West side (the inner buoy on the West side has been partly destroyed), the buoy positions are not as charted.

Vessel approaches from the South on a course of 349°, with a group of 4 chimneys just to the port side of the mast. With the wind in the right direction, the smoke from these chimneys will hide the buoys until quite close.

The leading lights are in position but are difficult to see, especially the rear one, it is just as well not to use these as the leading line they give goes over the end of the Easterly breakwater.

When the buoys can be clearly seen, adjust course to line them up on each bow.

Pilots: Pilot boards from a large launch as close to the buoys as vessel is willing to come. They have VHF with working on Channel 12 and will advise when to approach. The pilots employed on this occasion were efficient.

Night Navigation: The port is closed from 1900 hrs. to 0700 hrs. as most of the lights are not working, also the buoys are unlit and are very poor radar targets.

Delays: Movements start at 0700 hrs., and depending on the number of vessels arriving and sailing, delays of 3 to 4 hours can be experienced awaiting turn for pilot.

The Agent seemed either unable or unwilling to say how vessels are given priority for movements.

Tugs: There are good tugs available in the port and the Pilot will advise on their use.

Berth: The berth used on this occasion was just inside the breakwaters on the East side and consists of 2 piers and 3 dolphins, overall length approximately 160 m. There is good fendering on all except one of the dolphins (See "Plan").

Vessel berthed starboard side to and worked Hatch No. 1 first, so it was necessary to run lines from the stern to a bollard on the breakwater.

The breakwater is in poor condition along its inside face and the bollard is hidden behind a jumble of boulders but on inspection appears to be well secured although displaced.

Long lines are needed to reach this bollard and it is possible that 2 lines may have to be joined, although they can remain in place when working Hatch No. 3 it is better to move them up to the Southern dolphin.

A dredger is working in the harbour with a floating pipeline going ashore just to the North of the Northern dolphin (See "Plan"), this pipeline and dredger seem to be a permanent fixture and to work Hatch No. 4 starboard side to, the pipeline would have to be moved.

Working Hatches No. 1, 2 and 3 starboard side to, causes no problems if the headlines are taken to the bollard ashore when working No. 3, but working Hatch No. 4 would require good weather conditions as all head lines would be leading astern.

Port side to working Hatches No. 3 and 4 would not be difficult but to work Hatches No. 1 and 2 the pipeline would have to be removed for safety of the rudder.

Preferable if using this berth to use Hatches No. 1, 2 and 3 only, although No. 4 can be worked with the vessel starboard side to.

When working Hatch No. 3 starboard side to, have fenders rigged for the fenderless dolphin.

The crane works from the dolphin at the end of the curved pier but is left in the charted position when not working.

Crane S.W.L. is 6.3 tons at 25 m. radius.

Vessel is positioned alongside with the Southern edge of the crane dolphin about 2 m. forward of the aft hatch coaming. Instructions from the dock are only that the vessel is required ahead or astern, no estimate of distance is ever given. Work is in progress on the corner of the dock, breaking down the face to insert new piles and reface the dock, if the dockside bollard is removed only Hatches No. 1 and 2 could be worked starboard side to and the vessel turned round for Hatches No. 3 and 4.

Cargo Working: The shore crane discharges using clamshell grabs into a hopper situated on the other pier. This is a three section hopper, two sections for trucks and one direct to a conveyor belt to the grain silo.

Discharging rate is good, provided trucks are available and a net rate of 177.42 t.p.h. was achieved for 3,300 tonnes of ground nut pellets discharged from 2 hatches.

Fresh Water: Available. Delivered alongside in tank trucks.

Port Officials: See "Puerto Plata".

The bond locker is not sealed.

On the first evening after berthing, a gentleman appeared requesting the Vaccination List, as one hadn't been prepared he was asked to return next day. The lists were prepared but he never returned.

Departure Clearance: A search of the vessel, including accommodation and engine room is made by 6 port guards, each of which requires a crewman to accompany him.

This search is thorough and worthwhile as stowaways can easily get on board from the beach without having to enter the docks through the gate.

When the search is complete, clearance is issued.

SHIPMASTER'S REPORT: September 1994.

Vessel (On arrival):

LOA: 226.25 m.
Breadth: 32.2 m.
Depth: 19.6 m.
Cargo onboard: 24,995 tonnes of fuel oil.
D.w.t.: 31,749 tonnes.
Displacement: 45,905 tonnes.
Draft: Forward 26 ft. 9 in., aft 27 ft. 2 in.

Restrictions for Rio Haina:

(AA) Max. draft: 29 ft. Fresh water and even-keel.
(BB) No max. length given. When asked, Pilots/Port did not have a dedicated figure. Pilots/Port said vessel was OK for berthing.
(CC) Tankers only berth/unberth in daylight.

Vessel arrived on 1st September at 0230 hrs. Pre-arrival ETA's and messages to Agents had not been acknowledged by them. Called Pilots/Port on VHF prior to arrival, and after arrival, but no reply until 0530 hrs., when we were advised that the Pilot would board at 0700 hrs. at the Pilot Station, which is about 3 nautical miles South of the port.

Pilot boarded at 0724 hrs. His knowledge of English was limited, but sufficient.

We entered the harbour through the entrance (buoyed channel), came astern on the engines, dropped starboard anchor, and the tugs manoeuvred vessel alongside.

As per plan, our berth was just inside the entrance. Sufficient speed is required to pass through the narrow entrance channel (the tugs wait inside for the ship) followed by the need to stop as quickly as possible (There was about 10 m. clearance either side of the ship when passing the entrance buoys). Therefore as soon as we were inside the harbour, it was engines up to full astern and drop the starboard anchor. The 2 tugs (3,000 h.p. each) then attended to assist in working us alongside, although neither made fast. Ship's engines and anchor were utilised in conjunction with the tugs to bring the ship alongside.

The jetty was of solid concrete construction, fitted with large tyre fenders only. It was important to bring the vessel slowly and squarely in to the jetty to prevent any part of the ship falling in between the fenders and contacting the jetty.

Approaching the berth, a mooring boat attended to assist in running lines. The first lines were head lines.

Final moorings were as per plan.

Once in position, the forward part of the vessel was ahead of the forward end of the jetty, and the head lines really were more like breast lines. All line handling ashore was by "hand power", but there was sufficient manpower to enable the job to be done in a reasonable time.

Once alongside, the anchor was slacked until there was no weight on the cable. At this time, there were 4 shackles on deck. We expressed our concern that the anchor itself was stuck out in the middle of the harbour with ships passing over it. Pilot said all was OK and no other deep draft vessels would be passing over it during our stay.

Wind was N.N.E. to East during our stay, which kept vessel nicely alongside in conjunction with the moorings.

1×8 in. hose was connected.

The ship's accommodation ladder was lowered to the jetty for access.

Ratguards were fitted to all moorings, and hawse pipe guards were in place.

Agents, Authorities, surveyors, etc., were all friendly, and no problems were encountered.

The Agents advised they could be contacted via VHF, or could be telephoned from the Pilot's office, which was about 200 m. from the ship.

Two shore police officers were arranged by the Agent for security. These turned out to be useful, as during the first night alongside there were 2 separate instances of thieves climbing the mooring ropes and gaining access to the main deck. Fortunately on both occasions they were spotted by ship's staff and shore security, and they quickly fled, once they realised they had been discovered.

Shore maximum back pressure allowed was 10 kg. Average discharge rate was 4,800 bbls./hr. The shore line was 10 in. and discharge was into 2 shore tanks. The tanks were 0.6 km. away and at a height of 42 ft. above sea level. Communications with the shore were verbally across the dock.

Prior to departure, shore police boarded the vessel to carry out a stowaway search. The Pilot did not board until they had completed this search and cleared the ship. Ship's staff also carried out their own search.

On departure, all lines were let go and the anchor heaved in, which pulled the ship off the berth. The Pilot taking us out was the son of the Pilot who had brought us in. His English was very good. To prevent the stern swinging in to the jetty, engines and rudder were also used. The two 3,000 h.p. tugs attended but did not make fast. The vessel went ahead to the widest part of the harbour (See "Plan") and turned to port, with one tug forward and one tug aft pushing. Engines were utilised to keep the vessel positioned during the turn. The bow of the ship passed approximately 20 m. clear of the adjacent jetty, although there was some more room to play with aft. Once turned around, the tugs stood-off and the ship gathered speed to transit the channel. Once clear, the Pilot disembarked.

AUTHORITY: Autoridad Portuaria Dominicana, Margen Oriental, Puerto de Haina. *Tel:* (809) 537-7201. *FAX:* (809) 535-8926. *Contact:* Port Manager.

AGENT: See "General" before first port.

SAMANA (Puerto Duarte or Arroyo Barril): 19.12 N. 69.26 W.

See "General" before first port.

The port Samana is known by several other names. It is sometimes called Puerto Duarte, at other times El Botado, and occasionally Arroyo Barril, because there is a landing strip of this name nearby.

PILOTAGE: The Pilot and Harbour Master can be contacted by VHF Channel 16. The Pilot will board at Punta Balandra. The entrance channel is marked with 8 buoys. Pilot Tel: (809) 538-2283.

ANCHORAGE: Deep water anchorage is available at several places in Samana Bay, but it is highly recommended that the local Pilot be consulted before anchoring.

RESTRICTIONS: Day and night entry is possible.

MAX. SIZE: LOA 700 ft., beam 120 ft. and draft 34 ft.

TUGS: None available locally. Tugs must come from Puerto Plata or Santo Domingo, if required.

BERTHING: *Arroyo Barril Berth:* This finger pier is 230 m. (755 ft.) long and approximately 25.5 m. (84 ft.) wide and was built in the mid-1970's, primarily as a passenger terminal for the development of Samana Bay as a tourist destination. The pier can accommodate vessels on each side. Access ramp connecting the pier to the shore is 350 m. long and 13.5 m. wide. Mostly refrigerated and dry cargo containers handled now at this facility, although occasionally some palletised and loose cargo moved.

Maximum draft: 34 ft. (salt water).

Storage facilities: An enclosed shed of 2,200 sq.m.

Equipment available: Forklifts, mobile crane and some other equipment available. Contact Agent for details.

STEVEDORES: *Working Hours:* Straight time working hours are 0800 – 1200 hrs. and 1400 – 1800 hrs. Mondays through Fridays, and 0800 – 1200 hrs. on Saturdays, except official holidays. Work may be ordered at overtime rates on holidays and around the clock, except on major holidays (New Year, Easter, Christmas, etc.). For ordering of gangs and stevedoring rates, contact Agent.

MEDICAL: First aid and emergency treatment only. Further treatment available in San Francisco de Macoris, about 1 hour's drive by car.

DENSITY: 1025.

FRESH WATER: Available on pier. Rate 6 t.p.h.

FUEL: Available by tank truck from Santo Domingo. For prices and conditions, contact Agent.

CONSULS: At Santo Domingo.

REPAIRS: No facilities for repairs.

AIRPORT/REPATRIATION: Las Americas International and La Union International in Santo Domingo and Puerto Plata respectively are approximately a 4-5 hours' drive by car.

GENERAL: *Chart:* No. 917.

AUTHORITY: Harbour Master. *Tel:* (809) 538-2214.

Port Manager. *Tel:* (809) 223-0071.

SAN PEDRO DE MACORIS: 18.26 N. 69.18 W.

See "General" before first port.

PILOTAGE: ETA required 24 hours before arrival. Pilot meets vessels 0.5 miles from buoy. Pilot Radio Station frequency is 2738 and 2638 also VHF Channel 16. In the event of bad weather vessel should remain 3 miles South of the buoy. Pilot boards from small unmarked motor boat.

ANCHORAGES: One mile South of the lighthouse; depth 60 ft. Pilot will advise best location if requested.

RESTRICTIONS: Channel depth 28 ft. Up to 480 ft. length, no restrictions. Arrival and departure in daylight hours only.

MAX. SIZE: LOA 650 ft., beam 100 ft. and draft 24 ft.

Larger vessels leaving port after loading may require to use port anchor to manoeuvre around sharp bend in buoyed channels just inside harbour entrance.

HEALTH: In case of illness or death on board, send a cable before arrival; doctors available.

RADIO: Radio Station, frequency 2738, call Radio Pilot de San Pedro de Macoris.

TUGS: Compulsory. Tug joins vessel inside the port – 150 ft. from the quay. One tug 500 hp.

BERTHING: *Berth No. 1:* This pier is 260 m. (850 ft.) long. However, about 100 m. – 150 m. of its length is occupied by a floating dry dock, Dominican Navy vessels and other equipment. This pier can accommodate several vessels simultaneously, and is used primarily to load sugar for export; it is also used by vessels loading molasses in bulk and for discharging bulk liquid petroleum products.

Maximum draft: 25 ft. (brackish water) about 6.0 m. from the pier, and 23 ft., about 3.0 m., from the pier. Alongside there is 18 ft. of water only, due to sedimentation by the river.

Storage facilities: There is a general cargo shed alongside, but it is not presently in use.

Equipment: Because of the limited operations at this port, most equipment must be transported from other ports.

Berth No. 2: This berth is 183 m. (600 ft.) long, and is used to export molasses, but primarily bulk clinker and coal are discharged into 2 movable hoppers by self-discharging vessels. The berth can also be used for general cargoes.

Maximum draft: Recently dredged to 26 ft. (brackish water). However, experience shows maximum safe draft to be about 24 ft.

Storage facilities: None, except the pier itself is used for discharging bulk coal and clinkers as described above.

Equipment: See "Berth No. 1".

Berth No. 3 (Ferquido): This berth is 262 m. (860 ft.) long. Ferquido has 4 small hoppers on the pier for discharging bulk fertiliser, and these are connected by conveyor belts to their fertiliser mixing and bagging plant. This berth is almost exclusively used for discharging bulk fertiliser and loading in bags, although it can be used for general cargoes.

Maximum draft: 22 ft. (brackish water). Bottom is soft mud.

Storage facilities: Ferquido has its own large warehouse for both bulk and bagged fertilisers.

Equipment: Ferquido uses small grabs at the end of ship's gear, and can work up to 4 gangs. Depending on the number and capacity of the vessel's gear, they achieve an average discharging rate of between 1,000 – 2,000 tonnes/day.

Large vessels arriving to load swing inside the harbour using starboard anchor and berth port side to quay. At a later date barges are placed between the ship and quay, to permit greater draft, and Pilot receives extra payment for doing so. Use of gangway is recommended.

LOADING: Vessels loading sugar use ship's gear and ship has to supply rope slings. The chains on the centre sections of MacGregor hatches are broken, and a gap of about 2 ft. made, through which the bags of sugar are bled into the holds at the rate of about 220 tons per gang per day. Only 6 bags per sling are lifted at a time. Stevedores cover hatch openings with tarpaulins when loading is completed for the day. They will make up any extra slings that are required if ship supplies rope.

STEVEDORES: *Working Hours:* Straight time working hours are 0800 hrs. – 1200 hrs. and 1400 hrs. – 1800 hrs. Mondays through Fridays. On Saturdays, half-day is worked from 0800 hrs. – 1200 hrs. Except on major holidays (New Year's, Easter and Christmas), overtime may be ordered on all days and work can be done around the clock and on weekends.

MEDICAL: Full medical facilities available.

TANKERS: Oil line diameter 8 in. Max. pressure 60 p.s.i.

FRESH WATER: Due to low water pressure and limited extension of pipeline, a pump and long water hose are required. This can sometimes be hired locally. Alternatively, fresh water can be supplied by tank truck.

FUEL: Fuel and diesel oil must be transported by tank truck from Santo Domingo. The trucks carry either 5,000 or 10,000 American gallons. For information and prices contact Agent.

Note: Presently not available for ships, due to local shortage.

CONSULS: In Santo Domingo.

REPAIRS: Minor repairs only.

GANGWAY/DECK WATCHMEN: Available.

OPENING/CLOSING HATCHES: Crew.

CUSTOMS ALLOWANCES: Only sufficient for port consumption. Allowed take only 2 open packets cigarettes ashore.

REPATRIATION: Can be arranged.
AIRPORT: Las Americas International Airport (Santo Domingo) 30 km. (30 minutes by car).
TELEPHONES: No telephones on board.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Required.
REGULATIONS: Rat guards to be fitted on all ropes. No boats to be lowered without official permission.
AUTHORITY: Comandante de Puerto. Tel: (809) 529-3383.
Port Manager. Tel: (809) 529-2093.

AGENT: See "General" before first port.

SANTO DOMINGO: 18.28 N. 69.53 W. (See Plan)

See "General" before first port.
PILOTAGE: Pilot arranged by Agent on basis of Master's advance notice of ETA. Pilot and Agents can be contacted by radio telephone, frequency 2738, 2182, and 2638 kHz. Pilot boards 1.5 miles off breakwaters. Pilot also on VHF Channels 12 and 16.
ANCHORAGES: Deep water anchorage available outside port. Pilot will advise best location.
RESTRICTIONS: Limited entry and departure during night-time at Pilot's discretion and usually requiring bonus to Pilot. Vessels with deep draft or other special conditions usually not handled after dark.
MAX. SIZE: LOA 750 ft., beam 100 ft., draft 29 ft.
Also see "Berthing".
HEALTH: Pratique granted after Health Authorities have boarded and cleared vessel. In case of disease aboard notify Agents before arrival. Pratique is automatic when proceeding from another port in the same country.
RADIO: When within range, Santo Domingo Radio.
TUGS: Tugs are available and compulsory for docking und undocking inside the harbour. They will also join vessel outside for an additional fee, if required. Two tugs are usually available with maximum 1,200 h.p. A tug of 2,000 h.p. can be brought from Rio Haina, upon request and minimum 36 hours prior notice.
BERTHING: *General Cargo Berth No. 1:* 280 m. (910 ft.) in length. Containers, trailers and general cargo are mostly discharged at this berth.
Maximum draft: 27 ft. (bracking water, but nearly salt water).
Storage facilities: Enclosed Shed No. 1, operated by the Port Authority, 243 m. × 37 m. with approximately 9,000 sq.m. storage capacity. Also open container and trailer yard and space for motor vehicles.
Equipment: Forklifts of 4.5 tons, 6 tons and 10 tons. Motor cranes and other heavy equipment may not be used at this berth, due to the poor structural condition of the pier.
General Cargo Berth No. 2: 77 m. (253 ft.) in length. Containers and general cargo are handled at this berth.
Maximum draft: 16 ft. (brackish water about 1020).
Storage facilities: Enclosed Shed No. 2, operated by the Port Authority, is 140 m. × 24 m. with approximately 3,360 sq.m. storage capacity. Limited space in open yard for containers.
Equipment: See "Berth No. 1".
General Cargo Berth No. 3: The berth is 167 m. (548 ft.) long. This berth is used for loading and discharging containers and breakbulk general cargo.
Maximum draft: 19 ft. (brackish water).
Storage facilities: Shed No. 3, operated by the Port Authority, is 155 m. × 19 m. with approximately 2,900 sq.m. storage capacity. Open yard for containers, trailers, vehicles and breakbulk cargo not requiring warehousing.
Equipment: Motor cranes may be used for cargo handling.
Forklifts of 4.5, 6 and 10 tons capacity are available.
General Cargo Berth No. 4: This berth is 290 m. (951 ft.) long. The berth is used for trailers, containers and general breakbulk cargo.
Maximum draft: 19 ft. (brackish water).
Storage facilities: No shed available at this berth. At additional cost and with some delays, one of the nearby sheds may be used for covered storage. Open storage available for trailers, containers, etc.
Equipment: See "General Cargo Berth No. 3".
General Cargo Berth No. 5: This berth is 379 m. (1,243 ft.) long, and is being converted for passenger cruise vessels only, and is not available for any cargo vessels.
Maximum draft: 13 ft. (brackish water).
General Cargo Berth No. 6: This berth is 125 m. (410 ft.) long, and is used by tankers to discharge petroleum products for the electric utility company.
Maximum draft: 19 ft. (brackish water).
Storage facilities: None.
Equipment: See "General Cargo Berth No. 3".
General Cargo Berth No. 7: This berth is 150 m. (492 ft.) long, and is used by yachts and other small craft.
Maximum draft: 16 ft. (brackish water).
Sans Souci Passenger Terminal: This berth is 300 m. (984 ft.) long. It is located on the Eastern bank of the Ozama River, and passengers are transported by bus or taxi to the Colonial Centre of Santo Domingo, which is about 3 km. from Sans Souci.
Maximum draft: 28 ft. (brackish water).
Facilities: The Sans Souci Terminal was built in the mid-1970's and is operated by the Port Authority. Arrangements can be made for arriving/departing passengers.

BULK HANDLING FACILITIES: *Molinos Dominicanos:* A private berth belonging to the local flour mill of the same name located on the Eastern bank of the Ozama River. It is a berth used exclusively for bulk cargoes, mostly wheat, but occasionally corn and other grain and grain products. Maximum vessel size is about 700 ft. LOA and 100 ft. beam. This berth consists of dolphins with the stationary pneumatic discharging equipment and conveyor system in the middle on a tower platform.
Maximum draft: 27 ft. (brackish water).
Storage facilities: Molinos Dominicanos has silo storage for about 90,000 tonnes of grain which are fed by a conveyor belt directly from the vessel alongside.
Discharging Equipment: Vessels are discharged with stationary pneumatic equipment (3 suckers), and the ship must be warped by the crew to position each hoid which must be discharged. Average discharging between 75-88 tonnes per hour worked, depending on configuration of the vessel, etc. Ship's gear is not used, nor any other equipment. Power failures frequently affect the number of hours worked, and hence the discharging rate.
Bunkers: No delivery of bunkers at this berth, because tank trucks cannot reach the vessel alongside. If emergency bunkers are required, an appropriate layberth must be arranged.
Working hours: The flour mill works 24 hours a day, on weekends and most holidays (excepting New Year's, Easter, Christmas) receivers paying for all overtime expenses. Most common interruptions are power failures and when shifting (warping by ship's lines) from one hold to another.
Pronalba Bulk Cargo Berth: This facility is a private installation owned by the Lavador Group of companies, and used for discharging their own dry and liquid bulk cargoes. It is used for handling tallow, caustic soda, liquid fat, etc., as well as feed grain ingredients such as corn, soybeans, soybean meal, peanut meal, etc. The berth is designed to accommodate vessels of up to 400 ft. LOA, and has a small central pier of approximately 25 m. length and 12 m. width and 3 dolphins for tying up the vessel. The vessel is warped alongside in order to shift discharging from one hold to another. This berth is on the Eastern bank of the Ozama River, about 2 miles from the entrance to the port. There is an air draft restriction of 100 ft. due to bridges en-route upriver.
Maximum draft: 16 ft. (fresh water).
Storage facilities: Pronalba and Industrias Lavador have their own silos, warehouses and tanks for about 10,000 tonnes of dry bulk cargoes, and 5,000 tonnes of liquid bulk cargoes on the premises.
Equipment: Pipeline from the berth to the tanks for the liquid bulk cargoes. Dry bulk cargoes are discharged with a portable SKT conveyor which is attached either to the ship's gear (if of sufficient capacity, i.e. 10 tons) or handled by a motor crane hired for the purpose. Average rate of discharge with this equipment from 20-50 tonnes/hr., depending on the type of grain or meal being handled.
Working hours: Tankers may pump 24 hours around the clock, including Sundays and holidays without restrictions. Dry bulk cargoes are usually worked 24 hours around the clock including Sunday and holidays, with receivers paying the overtime differential.
Granja Mora Bulk Cargo Berth: This private installation is located on the East bank of the Ozama River, a little over one mile from the entrance to the port. The berth is 130 m. long, composed of a central platform 15 m. × 12 m., and 2 dolphins. Maximum LOA 350 ft. and beam of 60 ft. is permissible. The channel has about 20 ft. depth, brackish water. Air draft restricton is 100 ft. due to bridges encounted en-route.
Maximum draft: 16 ft. (brackish water).
Storage facilities: Granja Mora has grain silos on the premises holding approximately 6,000 tonnes of corn; these, however, must be fed by trucks, as there is no conveyor belt system from ship's side to the silos. There is also a tank farm for bulk liquids. Vessel needs about 60 ft. of hose. Granja Mora's intake is 4 in. diameter.
Equipment: Due to the difficulty of access, it is very difficult to bring motor cranes or other large equipment to this berth. Discharging is ideally with ship's gear. Small grab buckets may be hired for this purpose as well as small payloaders. There is no hopper available at this facility.
Working hours: See "Pronalba Bulk Cargo Berth".
Agrotech Bulk Cargo Berth: This private facility is located on the Isabela River (a tributary of the Ozama) about 4 miles from the entrance to the port of Santo Domingo. It is used for the discharging of bulk cargoes only. The berth has a central platform of about 10 m. in length with dolphins used to tie up the vessel. Maximum LOA is 300 ft. and beam 50 ft. Air draft restriction is 100 ft. due to bridges en-route to the berth.
Maximum draft: 12 ft. (fresh water).
Storage facilities: Small private silos for storage of corn and soybean meal holding about 6,000 tonnes.
Equipment: Receivers hire a small motor crane with grab bucket for discharging, as well as small payloaders for handling the cargo in the vesssel's holds. Discharging is into a hopper on the pier, which feeds a conveyor belt to the silos.
Working hours: See "Pronalba Bulk Cargo Berth".
General: This berth is not being used very frequently due to the draft restriction and difficulty of access. Usually no tugs are available here. This berth is sometimes used, as well as several others nearby, either for topside repairs to small vessels or for cutting up hulls.

BRIDGES: Vessels proceeding up river, height limited to 95 ft. above waterline.

STEVEDORES: ETA's required 24 and 12 hours before arrival to arrange gangs.
Working Hours: Straight time working hours are 0800 hrs. – 1200 hrs. and 1400 hrs. – 1800 hrs. Mondays through Fridays, and 0800 hrs. – 1200 hrs. on Saturdays, excepting official holidays. Work may be ordered at overtime rates on holidays and around the clock, except on major holidays (New Year's, Easter, Christmas). For ordering gangs contact Agent.

MEDICAL: Medical attention can be arranged after vessel is cleared, preferably ashore.

TANKERS: *Sans Souci Liquid Bulk Cargo Berth:* This berth, sometimes referred to as Punta Torrecilla, is located in Sans Souci on the Eastern bank of the Ozama River nearest to the harbour entrance. It is approximately 300 m. (984 ft.) long and fendered by 3 floating (10 m. × 10 m.) pontoons. This berth is used exclusively for discharging liquid bulk cargoes to several tank farms located at Punta Torrecilla, about 1 km. East. Mostly tankers call here to discharge petroleum products, including fuel and diesel oil, lubricating oils, asphalt products, etc. Access to this area is restricted, because a small Dominican Naval Base and officers' club are located at the Eastern tip, and all traffic must pass through these installations.

Maximum draft: 29 ft. (brackish water).

Storage facilities: Tanks for petroleum products located at Punta Torrecilla owned by the major oil companies with various capacities.

Equipment: 5 in. pipeline with connecting valves and accessories is used by tankers to pump liquid petroleum products ashore to Punta Torrecilla. No other shore equipment available.

Also see "Bulk Handling Facilities".

DENSITY: Brackish inside harbour. Effect of tide negligible.

FRESH WATER: Available by pipeline or trucks.

FUEL: Available by truck at most berths.

CONSULS: All Consuls at Santo Domingo.

REPAIRS: Minor repairs only.

DRY DOCK: Can accept vessels up to 400 ft. long, 50 ft. beam and 20 ft. draft.

GANGWAY/DECK WATCHMEN: Compulsory gangway watch kept by Customs guards.

OPENING/CLOSING HATCHES: Performed by crew or stevedores.

CUSTOMS ALLOWANCES: Bond stores are sealed.

REPATRIATION: Can be arranged.

AIRPORT: Las Americas International Airport is 18 miles from port; served by regular airlines with numerous flights daily.

POLICE/FIRE/AMBULANCE: Police, San Domingo 682-3000; Ambulance, San Domingo 682-4288; Fire, San Domingo 682-2000.

TELEPHONES: No connection to vessels.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Shore passes are provided by Immigration Authorities.

GENERAL: No boats to be lowered without official permission.

DEVELOPMENTS: Santo Domingo's Sans Souci Tourism Wharf, phase 1, is now under construction on the Eastern side of Santo Domingo harbour.

Phase 1 of the project comprises the construction of a dock with a platform measuring 250 m. in length by 31.40 m. in width. Totally made out of precast prestressed concrete members, it is designed to accommodate simultaneously two 20,000 metric ton displacement passenger ships or one of 50,000 metric tons. Besides the dock itself, there is a 20,000 sq. ft. passenger terminal building to be built which will be equipped with all the services and facilities necessary to allow cruises to originate in the new port.

Also under construction is a 1,000 metric ton potable water reservoir with a 50,000 g.p.h. pumping station.

The site selected, the Eastern shore of Ozama River, is 15 minutes by car from Santo Domingo's Las Americas International Airport.

The entire harbour will be dredged to a minimum depth of 35 ft. below mean sea level.

The Sans Souci Tourism Wharf completed. Depth 28 ft.

Phase 2 and Phase 3 consist of berthing facilities for one 20,000 metric ton displacement passenger ship each; construction of these additional berths has not yet been ordered by the Government.

AUTHORITY: Capitania de Puertos. Tel: (809) 593-5904.
Port Commandant. Tel: (809) 682-5260.
Port Manager. Tel: (809) 682-8792.

AGENT: See "General" before first port.

NOTES

Please also advise Shipping Guides Ltd.

Ecuador

GENERAL (See Plan)

REPORTING:

Shipmaster's Report: January 1989.

The following telex was received whilst on passage to Ecuador.

REPORTING SYSTEM IN ECUADORIAN WATERS

Re: Resolution 088-87 – Comando de Guardacostas (COGUAR).

As per 1st July 1987, all vessels have to comply with Resolution 088-87, published Registro Oficial 8/6, i.e.:

– to report to Coast Guard (COGUAR) via coastal station "Guayaquil Radio" (HCG) on international frequencies MF and HF:

Arrival (FR), Position (PR), Sailing (SP), Passing (Paso Inocente) (WP) with following formats:

ARRIVAL:

Shiprep

(a) FR (for arrival).
(b) Vessel's Name/Flag/Call Sign.
(c) Date + Local Hour. (6 figures)
(d) Last port.
(e) ——
(f) Actual course. (3 figures)
(g) Speed in knots. (2 figures)
(h) Next port. (Ecuador)
(i) ETA Ecuadorian Port. (Day/Hour/Min. – 6 figures)

SAILING:

Shiprep

(a) SP. (for sailing)
(b) Vessel's Name/Flag/Call Sign.
(c) Date + Local Hour. (6 figures)
(d) Next port.
(e) 4 figures for Lat. (N or S) + 5 figures for Long. (E or W).
(f) Actual course. (3 figures)
(g) Speed in knots. (2 figures)
(h) Last port.
(i) ETA next port.

POSITION:

Shiprep

(a) PR. (for position)
(b) Vessel's Name/Flag/Call Sign.
(c) Date + Local Hour (6 figures)
(d)
(e) 4 figures for Lat. (N or S) + 5 figures for Long. (E or W).
(f) Actual course. (3 figures)
(g) Speed in knots. 2 figures)
(h)
(i)

PASO INOCENTE:

Shiprep

(a) WP. (for paso inocente)
(b) Vessel's Name/Flag/Call Sign.
(c) Date + Local Hour. (6 figures)
(d) Last port.
(e) 4 figures for Lat. (N or S) + 5 figures for Long. (E or W).
(f) Actual course. (3 figures)
(g) Speed in knots. (2 figures)
(h) Next port.
(i) ETA next port.

The timing for the messages has to be done as follows:

FR – Entering the national waters, latest 12 hours before arrival at the port.
SP – Immediately after sailing.
PR – Twice daily, at 0800 hrs. and 2000 hrs.
WP – 3 hours before entering and 3 hours before leaving Ecuadorian waters.

Scope/area involved according Resolution 088-87:

Entering the 200 miles of territorial seas and the waters between the mainland and the Galapagos Islands.

Shipmaster's Report: June 1995.

Ecuador has a compulsory Ship Reporting Scheme, details as per A.L.R.S. Vol. 1, Part 2 (NP281(2)). Reports required 3 hours before entry, and departure from Ecuador waters, boundaries are Lat. 01° 25' N., and Lat. 03° 25' S. All messages addressed to "Coastguard (COGUAR)" via telex No. 00 308 43325. All messages went through first time.

NON-COMPLIANCE WILL PROVOKE FINES

DOCUMENTS:

Consular Documents:

In the port of origin of the voyage to Ecuador or in the last foreign port where there is a Consulate before the vessel's arrival in the country, the following documents are to be submitted to the Consul for approval on model forms DIMERC 100 to 107, in 5 copies:

(a) Cargo Manifest.
(b) Crew List.
(c) Passenger List or "No Passenger" Declaration.
(d) In-transit Passenger List or "No In-Transit Passenger" Declaration.
(e) Ship's Stores List.
(f) Crew's Effects Declaration.
(g) Maritime Health Declaration.
(h) Mail List.

The original set of these documents remains on board the vessel, the duplicate and triplicate are submitted to the Customs Administration, if they refer to cargo, and to the Captain of the Port, if they refer to the crew or passengers. The quadruplicate is sent to the Ministry of Foreign Affairs, and the quintuplicate remains in the Consul's files.

Prior to Arrival:

Arrival Notice: 72 hours before the vessel's arrival in the pilot waiting area, the shipping agency shall submit to the Port Authority the arrival notice form, on a special port format or its own format, containing basic data on the vessel and the request for services (pilotage, towage, berthing, etc.).

The vessel's arrival time should be communicated to the following authorities 24 hours in advance: Captain of the Port, Customs, Customs Police, Migration and Maritime Health.

Information on cargo for the port: The agency shall submit to the Port Authority the following documents by the deadlines indicated:

(a) General Import Cargo Manifest, in triplicate	24 hours before start of operations
(b) Import Bill of Lading, complete set	At the time operations start
(c) Cargo Stowage Plan by hatch	24 hours before start of operations
(d) Cargo List (breakdown of cargo)	24 hours before start of operations
(e) Container Contents List	24 hours before start of operations
(f) Dangerous Cargo List	48 hours before vessel's arrival in the pilot waiting area
(g) Tally books, 15 copies (must be true copy of Bills of Lading and have an alphabetical index)	6 hours before start of operations.

On Arrival:

On entrance of the vessel, the following documents should be submitted on DIMERC forms 100 to 107, which, although they follow LAFTA/OAS forms 1 to 6, differ from them in that they bear the seal of Ecuador and must satisfy the following requirements:

Type of Documents	*Number and Distribution of Documents*					
Basic Forms:	*Captain of Port*	*Customs Police*	*DIMERC*	*Migration*	*Maritime Health*	*Total*
1. General Declaration	1	1	–	–	–	2
2. Cargo Manifest	1	2	1	–	–	4
3. Crew Roll	1	2	–	1	1	5
4. Passenger List (a)	1	2	–	1	1	5
5. Ship's Stores (b)	1	2	–	–	–	3
6. Crew's Effects Declaration (c)	–	2	–	–	–	2
7. Maritime Health Declaration (e)	–	–	–	–	1	1
8. Mail List	–	2(d)	–	–	–	2
Additional Documents:						
9. Clearance Permit from Last Port	1	–	–	–	–	1
10. In-transit Cargo Manifest	1	1	1	–	–	3
11. "No Passenger" Declaration	1	2	–	1	1	5
12. "No Passenger" Declaration or In-transit Passenger List	1	2	–	1	1	5
13. Cargo Manifest (e)	–	2	–	–	–	2
14. Crew List (e)	2	–	–	–	–	2
15. Passenger List (e)	2	–	–	–	–	2
16. Ship's Stores (b)	–	2	–	–	–	2
17. Crew's Effects Declaration (c)	–	2	–	–	–	2
18. Maritime Health Declaration	–	2	–	–	–	2
19. Mail List (e)	–	2	–	–	–	2
20. Cargo Bill of Lading	–	–	1 set	–	–	1 set
21. Passengers' Baggage List	1	2	–	–	–	3
22. List of Unaccompanied Baggage or "no baggage list"	1	2	–	–	–	3

(a) Does not indicate sex.
(b) Has additional column for storage place.
(c) Omit crew signature column.
(d) One copy for the Postal Service.
(e) With Consular visa.

Prior to Departure:

Before departure, a complete set of the general export cargo manifests and a complete set of the export loading bills of lading are submitted to the Port Authority.

Clearance of vessel shall be requested from the Captain of the Port on a special form, which is submitted in 2 copies, each of which is to be accompanied by the following documents:

General Declaration	1
Crew List	1
List of Passengers or "No Passenger" Declaration	1
Stores List	1

The Captain of the Port returns to the ship the original clearance permit, duly certified, and retains one copy for his file.

In addition, 2 hours before departure, a clearance form must be submitted to the Customs Police, and a list of embarked passengers or a "No Passenger" declaration and a list of crew changes is to be submitted to Migration.

PRATIQUE: Radio Pratique is not normally granted. Notice of arrival should be given at least 24 hours prior to arrival to Radio Naval Guayaquil, call sign HCG. Listens on 500 kHz, 8,385 kHz and 8,320 kHz. Answers back on 8,472 kHz and 8,475 kHz.

The message should read as follows:

CAPUERTO
MEDICO SANIDAD
ADMINISTRADOR ADUANA followed by name of port
IMMIGRATION

"vapor . . . 1 . . . 2 . . . procedente . . . 3 . . . no enfermos abordo, no explosivos, no pasajeros para . . . 4 . . . pasajeros en transito . . . 5 . . . tons carga para descargar . . . 6 . . . sacos correo para descargar eta boya . . . 7 . . . agencia . . . 8 . . . 9 . . . Capitan. or in translation (original must be sent in Spanish).

SS . . . 1 . . . 2 . . . from . . . 3 . . . no sick on board, no explosives, no passengers for Guayaquil (or name of port) . . . 4 . . . passengers in transit . . . 5 . . . tons cargo to discharge . . . 6 . . . bags of mail to unload ETA Sea Buoy . . . 7 . . . Agency . . . 8 . . . 9 . . . Captain.

1. Name of the vessel.
2. Nationality of the vessel.
3. Last port and port of call.
4. Number of passengers in transit (logically, if there are passengers for the port call, instead of saying (no pasajeros para . . . the correct number would be indicated).
5. Number of weight tons of cargo for the port.
6. Number of bags of mail.
7. Estimated hour of arrival at Sea Buoy, or Buoy No. 1 off Data.
8. Agent's name.
9. Master's name.

The same message should be sent to the ship's Agent.

When quoting arrival times use GMT or Ecuadorian Time (GMT minus 5 hours). Summer time is not kept.

The boarding party usually arrives on berthing.

The Vaccination Certificates should be ready in the same order as the Crew Lists.

FLAG: The national flag has yellow, blue and red horizontal stripes. The yellow is twice the width of the others. Government vessels show the National Arms in the centre of the flag.

All foreign vessels will fly the flag from the highest mast.

PILOTAGE: Pilotage is compulsory for all vessels over 500 tons gross. Vessels should await the Pilot off the Sea Buoy at all ports unless instructed to the contrary. The Pilot must be requested by the Agent at least 12 hours in advance. They are available 24 hours a day, every day of the year.

STEVEDORES: The stevedores are drawn from the 4 respective unions in rota. The foremen are generally selected by the Agent. The same gang will work the ship until completion, working around the clock if necessary. Gangs will start work at virtually any hour.

Opening and closing of ship's hatches is undertaken by the stevedores and also the rigging of gear. Even though the stevedores receive payment for rigging anyway, it is advisable to use the ship's crew.

Cold fresh water and lavatories must be made available to the stevedores.

Tally clerks are selected in a similiar way to the stevedores.

WATCHMEN: 1 or 2 Customs guards will remain on duty, nevertheless the use of watchmen is advised.

GARBAGE: Before docking all vessels should cover all discharge points to prevent material or water being deposited on the quayside. The dumping of any waste is strictly forbidden except in an emergency. No oil may be dumped within 50 miles of the coast, and Ecuador strictly enforces the Anti-Pollution laws.

RAT GUARDS: These must be placed on all mooring lines while the vessel is in port. This rule is strictly enforced.

FIRE DRILL: Periodical fire drills are held. The signal is 6 short blasts. Smoking on dock is prohibited, and cigarettes must not be thrown through port holes.

CREW: Shore leave is permitted except at the tanker berths. Each man must carry an identity card. It is difficult to sign on a foreign crew member in Ecuador, unless he has been left behind by another company vessel. A visa is not required for replacements arriving from abroad, but the crew member must have a Passport or Seaman's Book, together with a letter from the ship operator stating name of vessel to be joined.

In declaring personal effects, all new purchases must be listed, as well as electrical devices, typewriters, sextants, etc.

The Master has the right to issue or annul boarding passes if he has the approval of the Port Authority.

As a rule visitors are not allowed entry to the Port Area, although special permits are given to certain vendors. They may come on board solely at the discretion of the Master.

PIRACY: Acts of piracy have taken place on vessels alongside in the Port of Quayaquil.

BALAO TERMINAL : 01.02 N. 79.44 W. (See Plan)

LOCATION: The Terminal Petrolero de Balao is comprised of the area between the following geographical co-ordinates:

Lat. 00° 55' 00" N, Long. 79° 40' 00" W.
Lat. 01° 04' 00" N, Long. 79° 40' 00" W.
Lat. 00° 55' 00" N, Long. 79° 46' 00" W.
Lat. 01° 04' 00" N, Long. 79° 46' 00" W.

The Terminal Petrolero de Balao consists of 2 mooring areas: The SBM area for loading crude oil; and the TEPRE area for loading refined products.

The terminal has a storage area for crude oil situated on a hill 180 m. above sea level made up of 9 storage tanks that constitute the final leg of the Trans-Ecuadorian Oil pipeline.

Each of the tanks has a 332,000 barrel capacity (or 13,524,000 gallons, 42 gallons per barrel). The tanks are 18 m. high and 60 m. in diameter.

Manifolded to each tank are 2 pipes that gravity feed the SBM's. One is 42 in. in diameter and the other 36 in.

The Offshore Terminal at Balao is made up of 2 SBMs nominated "X" and "Y" Buoys and a terminal for refined products (TEPRE).

Relative Location: "X" Buoy (SBM – West) designed for ships up to 100,000 d.w.t., is located 4.5 miles N.W. of the mouth of the Esmeraldas River (Rio Esmeraldas). "Y" Buoy (SBM – East), designed for ships up to 100,000 d.w.t., is situated 3.3 miles from the coast at its closest point and 1 mile on True bearing 081° from "X" Buoy. Both are at a minimum depth of 120 ft. LWS.

Tankers with a maximum of 1,000 ft. between perpendiculars, a maximum beam of 135 ft., and a maximum draft of 52 ft., can moor at the buoys. There should be between 400 ft. and 525 ft. between the bow of the tanker and the underwater manifold.

The TEPRE area is composed of a Conventional Buoy Mooring System (CBM), and forms a parallelogram with an East-West axis.

The mooring facility can receive ships between 6,000 d.w.t. and 40,000 d.w.t. A tolerance of 10% less for ships in the lower range is provided for. The minimum depth of available water is 16 m. DLWS and the greatest admissible draft that will not cause damage to the underwater installations is 12 m.

Geographical Location:

SBMs:
Buoy "X" (SBM – West) Lat. 01° 02' 03" N., Long. 79° 42' 57" W.
Buoy "Y" (SBM – East) Lat. 01° 02' 12" N., Long. 79° 41' 52" W.

Terminal for Refined Products (CBM):
Buoy A – Lat. 01° 01' 5" N., Long. 79° 40' 7" W.
Buoy B – Lat. 01° 01' 5" N., Long. 79° 40' 5" W.
Buoy C – Lat. 01° 01' 3" N., Long. 79° 40' 5" W.
Buoy D – Lat. 01° 01' 3" N., Long. 79° 40' 5" W.

DOCUMENTS: For the official reception of the vessel, the Port Authorities, presided over by the Superintendent and Shipping Agent, will come aboard immediately upon arrival of the ship. In order to be declared in Free Pratique, the tanker must have the following documents ready:

Sailing documents from the last port of call.
Crew List (4 copies).
Declaration of Stores.
Declaration of Personal Effects of Crew Members (2 copies).
List of Passengers (6 copies).
Cargo Manifest (4 copies).
Bill of Lading (2 copies).
General Declaration (5 copies).
Ship's Register.
TOVALOP or P&I Insurance.

PILOTAGE: Pilotage is compulsory. The ship will approach to a distance of 1.5 miles North of Buoy "X".

According to Ecuadorian law pilotage is mandatory and Masters must obey all Statutory Laws and Regulations such as: The Code of Maritime Police; the Pilotage Regulations; and the Operations Regulations for Oil Terminals.

The following dispositions must also be followed:

(a) The officer responsible for boarding and putting ashore the Pilot is the officer on duty.
(b) The vessel must have an accommodation ladder and/or a pilot ladder.
(c) The length of the ladder must not exceed 30 ft. If the distance between the water level and the access point to the main deck is greater than 30 ft., a combination of one section of pilot ladder and another of accommodation ladder must be used.
(d) The pilot ladder must be properly secured and placed on both sides of the vessel.
(e) At night the pilot ladder and its immediate vicinity must be adequately illuminated.
(f) The top of the ladder must be so arranged that the Pilot can safely pass on to the deck of the vessel.
(g) The ladder must be maintained in good condition and its rungs must remain horizontal upon boarding and going ashore. The surface of the rungs must be rough.
(h) The ladder must be stable in such a way that each step rests on the side of the vessel and with spacers placed at least every 10 ft. in order to prevent the ladder from turning.
(i) Nylon ladders must not be used.

Pilotage Area: This area is within the following co-ordinates:

(a) Lat. 01° 00' 00" N., Long. 79° 40' 00" W.
(b) Lat. 01° 00' 00" N., Long. 79° 46' 00" W.
(c) Lat. 01° 04' 00" N., Long. 79° 40' 00" W.
(d) Lat. 01° 04' 00" N., Long. 79° 46' 00" W.

The waiting area, the anchorage area and the berthing area are included in this zone.

The Waiting Area: The area to wait for the Pilot is 1 mile North of Buoy "X".

The Anchorage Area: The vessels that must anchor upon arrival will proceed to the waiting area 1.5 miles North of Buoy "X" (SBM – West) and with the Pilot on board will navigate to the anchorage area between:

(a) Lat. 01° 00' 30" N., Long. 79° 44' 00" W.
(b) Lat. 01° 00' 30" N., Long. 79° 46' 00" W.
(c) Lat. 01° 02' 00" N., Long. 79° 44' 00" W.
(d) Lat. 01° 02' 00" N., Long. 79° 46' 00" W.

Operation Area for Tankers: This area, where mooring Buoys "X" and "Y" are found, is located between:

(a) Lat. 01° 00' 00" N., Long. 79° 40' 00" W.
(b) Lat. 01° 00' 00" N., Long. 79° 44' 00" W.
(c) Lat. 01° 03' 00" N., Long. 79° 40' 00" W.
(d) Lat. 01° 03' 00" N., Long. 79° 44' 00" W.

LIGHTS: *SBM Lights:*

Characteristics:

Buoy "X" (SBM – West)		Buoy "Y" (SBM – East)	
Light	Amber	Light	Amber
Flash	1.2 secs.	Flash	0.7 secs.
Dark	6.8 secs.	Dark	0.3 secs.
Period	8.0 secs.	Period	1.0 sec.
Range	5.3 miles	Range	5.3 miles

Lights at the terminal for refined products:

Light	Yellow
Flash	1 sec.
Dark	3 secs.
Period	4 secs.
Range	5 miles

APPROACHING: The most outstanding sights approaching Balao are: The Coquito Lighthouse, located 2 miles West of Punta Este (entrance of Rio Esmeraldas); the crude storage tanks in Balao on a hill (186 m. above sea level) visible from approximately 20 miles; and Punta Gorda, a craggy rise situated approximately 4.4 miles S.W. of Punta Coquito. The prominent points are easily detected by radar.

From Punta Las Palmas to Punta Gorda the coast consists of cliffs and small valleys for about 5 miles in a West by S.W. direction.

Punta Gorda, a craggy rise with nearby cliffs, has a reef that extends half a mile offshore North of the point. From Punta Gorda to Punta Sua, about 9.5 miles East by S.E., the coastline is low except for the cliffs close to Punta Gorda.

ANCHORAGE: While awaiting berthing at the offshore terminal ships can anchor in the following area:

(1) Lat. 1° 00' 30" N., Long. 79° 44' 00" W.
(2) Lat. 1° 00' 30" N., Long. 79° 46' 00" W.
(3) Lat. 1° 02' 00" N., Long. 79° 44' 00" W.
(4) Lat. 1° 02' 00" N., Long. 79° 46' 00" W.

MAX. SIZE: Maximum 100,000 d.w.t., max. load 100,000 tons/730,000 bbls., max. LOA 274.3 m., max. beam 39.6 m., max. draft 15.2 m., and max. distance aft/manifold 137.1 m.

Therefore tankers up to a maximum of 100,000 d.w.t. will be moored. Acceptance of tankers' dimensions and d.w.t. must be obtained in advance.

RADIO/VHF: Vessels bound for Balao must advise their ETA to the Superintendencia and their Agents, 72 hours and 24 hours before arrival. The message must contain vessel's name, ETA, Master's name.

The Pilots listen on Channel 16 (VHF) then change to Channel 14 once contact has been established.

The Terminal maintains a 24 hour watch on VHF-FM frequency 156.800 MHz, Channel 16, with an approximate range of 40 – 60 miles, and HF radio from 0800 hrs. – 1200 hrs. on 8,291.1 kHz and from 1200 hrs. – 1800 hrs. on 12,432.1 kHz. Once contact has been made with the tanker, either Channel 14 or any other channel designated by the radio operator will be used.

TUGS: 5 tugs available, all radio equipped.

MOORINGS: *(SBM's):* The SBMs "X" and "Y" have rotating tables on which the oil handling and mooring devices are mounted. These can turn in the direction of the tanker.

The mooring ropes: Each buoy has 2 mooring ropes for securing to the bow and these are permanently attached to the buoy. Each rope is 185 ft. long and 15 in. thick and is connected to 30 ft. of 2 in. chain that is secured to the bitts of the ship with cable grommets and mooring shackles provided by the Terminal.

TEPRE CBM: The underwater manifold is located 2.3 miles from shore at the end of the product pipeline. Its function is to distribute the products from the dispatch lines to the tanker or to the product re-cycling lines, whatever the case may be. The underwater manifold does not have a deballasting line.

The tankers are loaded by underwater hoses connected to the product loading outlets on the underwater manifold. The hoses are hoisted onboard the tanker once it is properly moored to the buoy field.

How the buoy field is secured: Stud Link grade U2 0.5 in. chain.
Rupture Tension 223 tons.
Working Tension 159 tons.

Anchors: Conventional, according to design specifications recommended by R.I.N.A. (Italian National Register).

Each buoy is secured by a chain to the anchor in order to avoid displacement by wind, current, or the tension of the ship. They are anchored with enough weight to avoid drifting.

BERTHING: Mooring operations will take place during daylight hours under normal weather conditions.

The unmooring operations will take place 24 hours a day.

Mooring Turn (Arrival): Priority for tying up is determined by the ship's time of arrival in port. In any case, those that arrive first have priority if and when they have received authorisation from the Direccion General de la Marina Mercante y del Litoral to operate freely.

The port derrick must be rigged and ready for use on arrival and vessels should be warned that the weight of each hose is at least of 5 tons under favourable conditions. This will be used to lift the floating deballasting/loading hoses as well as crates of materials that will be delivered by a terminal tugboat at the anchorage before the mooring operations begin.

For the mooring operations the ship must provide the following personnel and materials, which must be ready on the foredeck:

Personnel:
- Chief Officer on deck
- Boatswain
- 2 winch operators
- 2 seamen to handle the ropes.

Materials:
- 2 winches that work
- 2 mooring lines 2.5 in. in diameter; 600 ft. long
- 2 nylon mooring lines 1 in. × 10 ft.
- 2 manila heaving lines 0.25 in. diameter × 30 ft.
- 1 nylon or polypropylene mooring line 2.5 in. in diameter and 300 ft. long centre astern.

Mooring: The approach and mooring of the tanker will take place with the aid of the Pilot from Balao and the Loading/Mooring Master from Petroecuador in accordance with the Operation and Tariff Regulations for Oil Terminals.

When the vessel is at a reasonable distance from the berth, the mooring tugboat will take 2 of the ship's warping lines. Tie these to the mooring lines which are attached to the buoy and bring them on board. As the buoy ropes come clear of the water, it will be noted that chains are attached to them. These chains are to be secured to the bitts in such a manner that the nylon is outside of the external length of the ship so the chains absorb any chafing if the buoy lines cross the bow. There are 2 buoy lines. Power must be available at all times on all deck winches and windlass while the vessel is at the berth.

A mooring line must be available aft, secured to the bitt and of sufficient length to enable a tug boat to pick up the eye and tow it off to re-position the vessel if necessary.

Mean Time For Operations At The Terminal: Subject to the differences of each ship, the following times can serve as a guide:

1. Approach to the buoy from anchorage	50 minutes
2. Approach from waiting area	30 minutes
3. Loading the equipment used for mooring and connecting the hoses	20 minutes
4. Mooring	30 minutes
5. Lifting and connecting the hoses	80 minutes
6. Disconnecting the hoses	40 minutes
7. Casting off from buoys	10 minutes
8. Unloading personnel and equipment	25 minutes

HOSES: *Buoys "X" and "Y":* Lifting, connecting, disconnecting, lowering and other operations will be performed by a special team from shore under the Loading/Mooring Master's orders with assistance of the ship's deck officer. Port derrick must be rigged and ready for use before mooring operation begins.

Members of the ship's crew will be required to operate the winch or winches. Particular care should be taken during the hose handling operation in order to avoid serious damage to the hoses, the plastic floats and buoys on the plate edges, rails, etc.

BALLAST: *Deballasting:* The Terminal is not able to receive slops on shore, therefore its discharge is prohibited at present. Tankers can deballast by "Y" Buoy.

Vessels are to be equipped with clean segregated systems which are reserved for ballast only. Vessels so equipped will be permitted to pump segregated ballast overboard after being accepted and approved by shore inspectors.

After the tanks have been inspected and approved by the Terminal, deballasting will commence under the supervision of the Loading/Mooring Master. Upon completion the tanks will be inspected again and if ready for loading, a certificate will be signed by a representative of Petroecuador.

For the water processing of ballasted tankers, the Balao Terminal has an adequate system that starts in the hoses of the buoys and passes through a submarine pipe going to a pre-separator, where it hits and separates: first the water of the hydrocarbons, then goes to a decantation pool, where it stays 48 hours and after goes to a final separator in which are collected the last traces of hydrocarbons and finally the clean water is drained to the sea.

LOADING: Loading is through SBM's which are 49.5 ft. in diameter and held, each one in position by fixed chains secured to piles sunk into the sea bed.

Buoy "X" is equipped with a 750 ft. length and 20 in. self float loading hose which is manifolded to two 105 ft. length and 12 in. tail hoses. Buoy "Y" is equipped with a 20 in. hose and is manifolded in the same fashion as Buoy "X".

1. Loading ratio. Not withstanding greater capacity, currently the loading rate has been reduced to 32,000 bbls.p.h. at both buoys with a minimum of 10,000 bbls.p.h. and maximum pressure of 100 p.s.i. on land.

2. Under no circumstances will the vessel be loaded at a rate greater than that requested by the Master. It is the Terminal's responsibility to maintain the requested loading rate.

3. The load-on-top system is accepted at this terminal and vessels are requested to arrive with slop tanks "settled out".

UNMOORING: The Loading Master will advise Balao Control the estimated time for the completion of loading and will ask for Official Pilot. Then, hose disconnecting operation is undertaken aboard ship. After the unmooring takes place, the tug boat comes alongside the ship to transfer all materials and personnel that have been used during the operation. Then the vessel will proceed to the anchorage area where anchored it will await loading and sailing documents.

TEPRE OPERATIONS: *Mooring and Unmooring at the Terminal for Refined Products:* The Pilot on duty will be in charge of mooring and this will take place according to the wind and current conditions.

Loading: Once the vessel is secured, loading will be directed by Petroecuador. For this, 1 Mooring and Loading Master, 2 divers and 3 hosemen will come to the vessel and together with the ship's crew, connect the hoses.

Description of the Operation: Once the tanker's derrick is ready, a diver will dive to the ocean floor with a hook that will be attached to the hose of the product to be loaded. Once on deck, the hose will be connected to the ship's manifold.

Loading Rates:

Product	*Designed Rate* cu.m.p.h.	*Admissable Rate* cu.m.p.h.
Gasoline	636	700
Kerosene/Diesel	477	650
Fuel Oil	800	1,400
Discharging ashore with 1 or 2 Pumps	(d.w.t.)	
Tanker	6,000	300
Tanker	12,000	400
Tanker	20,000	600

Diameter of Flexible Product Hoses:

	(in.)
Fuel Oil	10
Gasoline	10
Kerex/Diesel	10

Products: The products that are currently being loaded at the TEPRE terminal are: Gasoline, diesel, kerex and fuel oil.

MEDICAL: The city has two hospitals: Hospital Delfina Torres de Concha and Hospital Franlin Tello Mercado.

FRESH WATER: Available in limited quantities. If more than 200 tons are needed, this must be requested 72 hours in advance.

FUEL: Limited availability and only in emergencies.

CONSULS: Colombia: Calle Sucre s/n entre Piedrahita y Manuela Canizarez. Tel: 713-661.

Chile: Calle Colon y 10 de Agosto. Tel: 710-045.

France: Av. Eloy Alfaro y Salinas.

Panama: Av. Kennedy 1100, Las Palmas. Tel: 710-370 and 711-180.

REPAIRS: Only minor repairs can be carried out and this is with the exclusive authorisation of the Superintendencia. These must not jeopardise the safety of the vessel or the installations.

REPATRIATION: Only if the person has all the necessary documents (passport, certificates, etc.).

TIME: GMT minus 5 hours.

SERVICES: Yagua General Services Ltd., Semarf Cia. Ltda. and Comapac can offer the following services:

Launch services.
Water supply.
Hospital medical attention.
Shipchandler.
Crewmember exchange, etc.

They could also be appointed as protecting Agent of any particular vessel.

SHORE LEAVE: Considering local operating conditions, permission to come ashore is subject to the approval of Migracion y Extranjeria (Immigration) and must be requested by the vessel's Agent. Transportation must be provided by the Agent and subject to the rates established by the respective authorities.

REGULATIONS: (Not all Regulations printed). Due to the fact that Balao is very close to Las Palmas, Atacames, Sua, etc., any pollution will cause serious damage to the beaches and fishing grounds. Therefore, ships are obliged to avoid any possible pollution of local waters that would be caused by pumping crude oil, diesel, or other fuels or oily mixtures from the engine room bilges.

In the piloting area the traffic of small craft such as fishing vessels, coasting vessels engaged in cabotage is absolutely prohibited with the sole exception of small craft used in the reception and mooring of tankers and these must be authorised by the Superintendencia.

Masters Responsibility: While the ship is at this Terminal, the Master will continue to be responsible for the security of the vessel.

While the ship remains at the buoys, its main engines must be ready for any emergency. If they are turbines they must be in reverse.

Vessel's Obligations in Port:

1. It is the obligation of the Master of the ship, or his representative, to receive the Pilot and the Loading/Mooring Master at the gangway, and provide them with all the information they may need.
2. The Master will delegate the Chief Officer or another responsible officer to receive the Port Authorities at the gangway and provide them with the documents and other information they may request while on board.
3. The Master must present the Superintendencia with a Certificate of Pollution Insurance issued by TOVALOP, the Ship's Register and any other document that may be required.
4. Meals must be provided for Superintendencia personnel and Customs, Police, etc. that are on duty.
5. A cabin and meals must be provided for the Loading/Mooring Master on duty during the loading operation.
6. The ship must provide meals for the 4 hosemen on board.
7. Meals and cabins must be provided for the Superintendencia's Safety and Pollution Control Inspectors when necessary.
8. Meals and a cabin must be provided for the Pilot if on board at mealtime.
9. All required materials and personnel must be placed at the disposition of the Terminal's Representative so that he can adequately carry out his job especially for easy and safe access of personnel on board.
10. The ship must provide personal assistance and other facilities required by the Ministry of Natural Resources Engineers on duty, so that they can efficiently control and inspect the oil being loaded and the tanks used.

Reports to the Superintendencia: During their stay in Port, the Master of the tanker must report any problem on board concerning:

1. Breaches in safety measures during mooring, deballasting, loading and unmooring operation.
2. Oil spills produced by bad hose connections, breaks in the hoses, filtration due to improper plugging of scupper holes, or any other reason.
3. Pollution caused by bilge pumping, tank washing, or any other operation that is not permitted.
4. Any abnormal situation that might affect the operating safety of the tanks.
5. Personnel accidents during work.
6. Theft on board or discovery of commercial transactions between crew members and Terminal workers etc. (contraband)
7. A copy of the measurements on board once the vessel is loaded.

Safety Regulations: The deck officer on duty must check the list of questions one by one to make sure the vessel's safety measures are in order. Some of the points that must be observed are as follows:

11. Are the mooring lines in good condition? (TEPRE – 12 nylon or polypropylene lines according to the tonnage of the tanker. SBM – 2 nylon or polypropylene lines, 600 ft. long.)
12. Are the short lines in good condition? (TEPRE: 12 short nylon lines, 1 in. thick and 10 ft. long each one.)
13. Is the derrick in good condition and has capacity for at least 5 tons?
24. Is the hydrocarbon log up-to-date? Check it!
25. Is the Master aware of the port regulations?

Safety Precautions for Ships:

1. Verify that mooring conditions are in accordance with Terminal requirements.
2. As a safety measure during operations, ships headed for Balao to load crude oil must arrive with enough ballast to correspond to 25% to 30% of its cargo capacity and down no more than 10 ft. by the stern.
9. The red flag, BRAVO, must be raised during the day and a red light must shine at night.
10. Ashtrays in the smoking room must contain water.
11. Due to the underwater chains, pipes and hoses, it is absolutely forbidden to use anchors close to the buoys.
12. All of these rules will be enforced by the Safety and Pollution Control Inspectors, along with the Loading and Mooring Masters.

GENERAL: *Flags:* The quarantine flag must be flown by the vessel when approaching the Balao Terminal. It must be lowered once the ship has been declared in Free Pratique.

The National Flag of Ecuador will be permanently flown while the ship is at the Terminal.

Contraband: Ecuadorian Law is rigorous in reference to contraband. The Master must instruct his subordinates to avoid taking cigarettes, cigars, tobacco, alcoholic beverages, drugs, etc. to the shore.

These articles must be reported before arriving at the Terminal and with their respective lists put under the Master's custody during the ship's stay.

In no way will commercial transactions between crew members and Terminal employees or third parties be tolerated.

Visitors: With the exception of Terminal personnel and other employees whose duties require them to board (Port Authorities, Ministry of Natural Resources Inspectors etc.), all visitors are strictly forbidden. Exceptions to this rule will require the authorisation of the Superintendencia.

Watches: Permanent watches must be maintained on board; on deck as well as in the engine room. These watches must have sufficient crew members to move the ship in case of emergency.

Charts: National charts: I.O.A. 1002 Port of Esmeraldas. Ed. December 20, 1982. Foreign charts: N. 021033 (HO-1176).

Wind and Currents: The predominant wind and marine currents throughout the year are S.W. During the rainy season (December – May), however, the wind and current suffer a slight change and at times come from the N.E. and North.

In the berthing area the currents often vary and will oppose the direction of the wind and cause the ship to yaw strongly.

Tide: The tide in syzygy comes up 13 ft., in quadrature 11.5 ft. The tidal currents have been reported (1956) at a rate of 1.5 knots, a little stronger during low tide.

AUTHORITY: Superintendencia del Terminal Petrolero de Balao, Casilla 286, Esmeraldas, Ecuador. *Tel:* 711-100, 712-200. *Telex:* 7579. *FAX:* 711100, 712200. *Contact:* Dr. Vinicio Reyes E., Superintendent, Captain Victor H. Morales P., Chief of Operations.

AGENT: *Main Office:* Yagua Ltd., Shipping Agency, P.O.Box No. 69, Quito, Ecuador. Victor Hugo 114e, Isla Pinzon, (Jipijapa), Quito, (Ecuador). Cable: Yagua Quito (Ecuador). Telex: 022220 Yagua Ed (Monday through Friday. See Operations Office for Saturdays and Sundays). Tel: 554-484, 554-485, 543-429.

Operations Office: Avenida Kennedy 1100 (Las Palmas). Cable: Yagua Esmeraldas (Ecuador). Tel: 710-370, 711-180 (available 24 hours a day). Telex: 7589 Yagua Ed.

Also on VHF Channels 16, 6, 12 and 71.

ESMERALDAS: 01.00 N. 79.39 W. (See Plan)

PORT LIMITS: Between the meridians 79° 38' W. and 79° 39' W. and the parallels 00° 59' N. and 01° 02' N.

NAVIGATION AIDS: The port complex of Esmeraldas has navigational aids consisting of the installation of 6 lighted buoys which mark the access channel to the port; 1 landfall buoy in the waiting area for Pilots; 4 lights located at the head of quays, 2 on the 2 breakwaters (principal and secondary) which limit the commercial quay and in the accesses to the dock of the Fishing Port and 2 pairs of leading lights – one pair at the top of Coquito Hill to the S.W. of the port and another pair near to the residential area of Tachina towards the S.E. of the port.

DOCUMENTS: The documents required by the Port Authorities on arrival of vessels are as follows:

Clearance From Last Port.
4 General Declarations.
1 Health Declaration.
5 Lists of Crew Members.
5 Lists of Passengers.
6 Sets of Cargo Manifests.
4 Sets of Bills of Lading.
1 Stevedoring Plan.
Certificates of Tonnage and Radio to be checked.

PILOTAGE: Pilotage is compulsory.

Prior to commencement of manoeuvring and navigation, the Pilot will require from the Master the following information: conditions of steering, conditions of ship machinery, condition of the aids to navigation, conditions which may limit the manoeuvres which are about to be effected, the draft forward and aft, nature of the cargo, availability of mooring lines and the system of anchorage.

The Pilot will require the presence of the Master of the vessel on the bridge at all times during manoeuvres.

ANCHORAGE: The area for awaiting the Pilot and quarantine is located between meridians 79° 39' 15" W. and 79° 40' 00" W. and the parallels 01° 01' 00" N. and 01° 01' 50" N.

MAX. SIZE: The port is limited to receiving vessels not greater than 200 m. LOA and 35 ft. max. draft.

RADIO: The Port of Esmeraldas currently has no radio service, but the Terminal of Balao: Lat. 01° 02' N., Long. 79° 44' W., which is relatively close, has a radio service.

To communicate through Balao, vessels arriving at Esmeraldas must advise or communicate their ETA to the Naval Superintendency of Esmeraldas, 72 and 24 hours prior to arrival. Messages must contain the names of the vessel, ETA and name of the Master.

24 hours listening out is maintained on HF-SSB-2182 – 2136.3 kHz call-up frequency and 4139 – 6210 kHz working frequency and on Channel 16. Generally vessels will have contact with this channel at a distance of 20 to 30 miles from the port. Channel 14 will be used for contact between the vessel and the Naval Superintendency before arrival in port.

BERTHING: All systems of maritime transport of general cargo (Ro/Ro LASH, USO multiple and containers with own crane equipment) can be used in the Port of Esmeraldas, since there is:

An ample dock of some 35 hectares with direct access. The port is not affected by winds, tides or undertow.

A marginal quay, 350 m. long and 26 m. wide at its forward part, giving facilities for handling and transfer of any kind of cargo.

Areas of free spaces for the storage of containers, semi-trailers and other types of cargo with an area of 66,000 sq.m. A closed warehouse of some 6,000 sq.m. area, and areas reserved for future usage of 110,000 sq.m.

A ramp for Ro/Ro vessels whose position is perpendicular to the quay designed so that vessels operating in loading and unloading are not interrupted by tidal differences.

Equipment for handling containers, semi-trailers, palletised cargo and others. Mobile cranes 2×60 tons, 2×35 tons, 2×15 tons, 20 loaders of 7.5, 6 and 3 tons and 8 trucks with platforms.

STEVEDORES: The port offers services to vessels without any restrictions and uninterrupted during all days of the year, 24 hours a day, with the exception of the 24th December when work is interrupted from 1700 hrs. until 0800 hrs. on the 26th December and the 31st December from 1700 hrs. until 0800 hrs. on the 2nd January.

MEDICAL: Doctors available.

FRESH WATER: Available.

FUEL: Available.

DEVELOPMENTS: The second stage of port works which have been projected, comprise:

Construction of a container quay 210 m. long with a storage area of 8 hectares.

A marginal quay 140 m. long with the same characteristics as the quay of 350 m. long and is a continuation of it, which will permit the berthing of 3 deep-sea vessels at one time.

Two additional warehouses of 6,000 sq.m. each.

Open air storage surface areas covering 3.5 hectares.

Extension of electric and sanitary services to the new areas.

SHIPMASTER'S REPORT: June 1979.

Navigation: Two orange coloured beacons on the land to the East side of the river, act as leading marks (bearing 166°T) from approx. 4 miles to seaward, right up to the entrance of the port. They are not lit. Depths along this line were not less than 100 m.

Off the entrance to the port, two orange coloured beacons on the West side near Coquitos Point Lighthouse, are the leading marks into the harbour. They are not lit. Entering the harbour, the deep water shoals rapidly to about 12 m., but at no time were echo soundings of less than 11.5 m. MLWS encountered either in the entrance, or in the manoeuvring area inside, or alongside. Beacons mark the extremities of the breakwaters but they are not lit.

Two buoys mark the East and West edges of the deep water channel outside of the breakwater. They are lit. Further buoyage is planned to mark the deep water area.

Pilots: 2 Pilots on board, 1 to communicate with each tug. Only 1 Pilot and 1 tug equipped with 'walkie-talkie' radios.

Tugs: 2 square bowed American type river-barge pusher tugs are available and they have adequate power to assist in manoeuvring on and off the berths. Unfortunately, the 2 vertical posts on their bows are likely to cause sharp indentations in vessels' bow and stern plating when the tugs are used for pushing. They should only push against the flat vertical surfaces of the hull.

Berthing/Facilities: There are 2 berths and a Ro/Ro facility, but only 2 large vessels can be accommodated alongside at any one time. A large cargo shed is under construction opposite Berth No. 2, and the container and open cargo areas have been surfaced. Both berths are to be supplied with bunkering and fresh water facilities, but these are not operative at present time. No actual assessment of cargo handling equipment could be made, but it was noted that there were 2×30 ton mobile cranes and 5×7.5 ton forklift vehicles in the parking area in the compound. The Agent reported that low-loaders and trailers were available for the movement of containers and that forklifts could be hired for use in the hatches.

The loading of bundles of balsawood was carried out directly from lorries which brought the cargo alongside and the rate of loading was about 165 bundles (20,600 board feet) per gang hour.

At present the harbour is somewhat obstructed by anchored fishing boats and small craft, but these are to be shifted to the new fishing port being constructed to the South of the main harbour.

AUTHORITY: Autoridad Portuaria de Esmeraldas, Casilla 280, Avda. Jaime Roldos Aguilera, Las Palmas-Esmeraldas, Ecuador. *Tel:* 711-910, 710-800, 711-996, 711-450. *Telex:* 7586 Aupesm-Ed. *FAX:* (593-2) 714-500. *Cables:* Aupesm. *Contact:* Ing. Alfredo Estupinan Ortiz, Manager.

AGENT: See "Guayaquil".

GUAYAQUIL: 02.12 S. 79.52 W. (See Plan)

DOCUMENTS:

Port Doctor:

Derat Certificate.

Maritime Declaration of Health.

Crew Roll.

Passenger List.

Passenger List in Transit.

Harbour Master's Office:

Voyage Report.

Clearance from last port.

Crew Roll with original visa from Ecuador Consul in first port of voyage (3 copies).

Passenger List with original visa from Ecuador Consul in embarking port, or declaration that they have no visa, signed by Master (2 copies).

Passenger List in transit signed by Master or declaration that they have no passengers in transit (2 copies).

Provisions List, Stock and Medicines on ship (3 copies).

Cargo Manifest in transit (1 copy).

Combustible or inflammable Cargo (1 copy).

Customs:

8 copies of Manifest.

Sealed envelope of Manifests, consular and commercial invoices and non negotiable vouchers.

Cargo index and copy of Cargo Manifest in direct transit (8 copies).

A Register (8 copies) of spare parts for vessel and provisions.

Crew Roll and detailed list (8 copies) of personal belongings of officers and crew.

Passenger List, with indication of their suitcases and list of suitcases that travel without their owners; in this case should be specified the port where they were put on board and personal declaration of each passenger (8 copies).

If the vessel with ballast, Master will be obliged to produce (besides the ballast certificate) documents already mentioned in each respect. Master or Maritime Agency will produce a written statement to Customs within 12 hours from arrival of vessel whether they decide to take any cargo for exporting. If not loading vessel must leave within the following 24 hours.

Immigration:

Crew List signed by Master.

Passenger List of those who disembark there or a declaration of none for this port, signed by Master.

Passenger List in transit, or a negative declaration signed by Master.

In case of having passengers to disembark in this port, Master should produce passports and visas.

Crew identification cards or similar documents.

Inspection of ship by Authorities will be done (compulsory) within 3 hours of arrival, usually as soon as ship berths, or in quarantine.

PILOTAGE: Vessels approaching port to notify their arrival by Naval Radio Station HCG, 24-hour service, frequency 8476 kHz and 500 kHz. Traffic list broadcast every hour on 8476 kHz.

Advance notice of not less than 12 hours required, addressed to Capuerto Aportuaria Agencia in either English or Spanish with the following details: date, and time of ETA, destination (whether Buoy No. 1 or Puna), maximum draft, cargo details, details of passengers or mail, and if Pilot required.

Pilot Station for Puerto Maritime: Situated in position Lat. 02° 43' 18" S., Long. 80° 17' 30" W. Pilot boat needs 1 hour to go from Pilot Station to Buoy No. 1. Contact by VHF Channel 16, 24-hour service. Pilot boat is wooden, 45 ft. long, black hull, white cabin, with letter "P" on sides. During day carries blue flag with letter "P" and by night has regulation pilot lights.

Pilot Station for River Guayas: Situated in village of Puna. Pilot boat requires a minimum of 30 minutes to move from Pilot Station to vessel. Vessels requiring Pilot signal Morse letter "X" by lamp or sound.

Pilot boat has grey iron hull, white cabin with Lancha de Practicos written on both sides. By day carries blue flag with letter "P". By night regulation pilot lights.

ANCHORAGES: *Puerto Maritime:* 1 mile South and 2 miles West of Sea Buoy in position Lat. 2° 44' 26" S., Long. 80° 24' 44" W. Min. depth in the area is 35 ft.

Guayas River: Inside area between bearings 180° and 135° from the lighthouse of Punta Mandinga at Puna, 1 mile from the lighthouse.

MAX. SIZE: Max. length for ships entering Puerto Maritimo is 650 ft., with a max. draft of 32 ft. at H.W. Springs. Vessels of deepest draft should begin to enter 1 hour before high tide. For Guayas River max. length 600 ft., max. draft 23 ft. 6 in.

Chief Pilot's Report: May 1993.

With a draft of less than 27 ft., vessels can enter at any state of tide. With a draft between 27 ft. and 29 ft., vessels require a half tide. From 29 ft. to 32 ft., vessels require at least one high tide when entering (your information about entering one hour before high water is correct). However, when sailing vessel requires two tides, which necessitates anchoring by the Posorja fishing village, near to Buoy No. 17.

HEALTH: Procedure to obtain Free Pratique is to produce health certificates to port doctor upon arrival. To get Free Pratique by radio, ship must radio to port doctor any changes in health situation on board since leaving last port.

TUGS: Normally join vessel beyond Buoy No. 80. Tugs are compulsory, also use of their lines is compulsory. Cost of both services is included in total cost of port duties.

BRIDGES: No bridges that restrict traffic either in Estero Salado nor in Guayas River, but ships that are to berth in village of Eloy Alfaro (Duran) should take into consideration height of telephone lines between Guayaquil and El Islote, minimum height 48 ft.

STEVEDORES: Radio message to ship's Agent will give agency enough data to make all arrangements required for operations of loading/discharging. In Maritime Terminal an average discharge/loading rate of 25 tonnes/p.h. per hook.

BERTHING:

Berth	*Length* (m.)	*Depth* (ft.)	*Remarks*
Marginal Pier	960	31	5 berths
New Port			
Berth 1A	185	33	Bananas,
1B	185	33	General,
1C	185	33	Containers.
1D	151	33	Bulk, sugar, grain, vegetable oil.

MEDICAL: If ship requires medical attention, a notice of 12 hours should be given to Agents. Guayaquil Hospital and clinics are available.
TANKERS: Discharge asphalt in Guayas River at a special quay, max. draft 23 ft. 6 in. Discharge of petrol for aviation in Puerto Maritime is to lighters, max. draft permitted is 33 ft.
DENSITY: 1012.
FRESH WATER: Available. Three pipes at each berth delivering at a rate of about 20 tonnes/p.h. each.
FUEL: Not available.
CONSULS:
Argentina, Belgium, Bolivia, Brazil, Chile, Colombia, Costa Rica, Denmark, Dominican Republic, Finland, France, Germany, Greece, Guatemala, Haiti, Honduras, Israel, Italy, Japan, Lebanon, Mexico, Netherlands, Nicaragua, Norway, Panama, Paraguay, Peru, Philippines, Portugal, Salvador, Spain, Sweden, Taiwan, United Kingdom, U.S.A., Uruguay, Venezuela.
REPAIRS: All types of deck and engine repairs are possible.
DRY DOCKS: Dry dock with capacity of 3,600 tonnes.
GANGWAY/DECK WATCHMEN: Capitania del Puerto provides members of the Policia Maritima. Ships to supply watchmen with food.
Piracy: Acts of piracy have taken place alongside. The pirates boarded from a speedboat and threatened crew with knives.

In May 1992 and June 1992 armed gangs boarded vessels as they were leaving the port and stole cargo from containers.
OPENING/CLOSING HATCHES: Carried out by crew.
CERTIFICATES: All ship's certificates required.
CUSTOMS ALLOWANCES: Each member of crew allowed 600 cigarettes. Each Crew member or passenger allowed 1 litre of wine and 1 litre of spirits.
REPATRIATION: Facilities for effecting crew changes and arranging any necessary repatriation.
AIRPORT: Airport is 8 miles from Maritime Terminal and has scheduled international flights.
TIME: Local time is GMT minus 5 hours. There are no alterations during year.
HOLIDAYS: 1st January; Good Friday, 1st and 24th May; 24th and 25th July; 10th August; 9th and 12th October; 2nd and 3rd November; 25th December. Only on the 1st January and 25th December is there no working in port.
POLICE/AMBULANCE/FIRE: For any of these services call 211 (interno del Puerto).
TELEPHONES: Arrangements for placing telephone on board ships on request.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Not required.

PURSER'S REPORT: (March 1975)
The government have now issued their own set of papers. These must be made out in sets of 7 i.e.: 7 Crew Lists. 7 Passenger Lists, 7 Crew Customs Declaration Forms, 7 Cargo Manifests, 7 Dangerous Cargo Manifests (if carried), 7 Lists of Mail (if none – nil returns on sheet), 7 General Declarations, 1 Maritime Health Form, 7 Stores Lists.

All Forms should be certified by Ecuadorian Consul or friendly Nation at Port of departure.

AUTHORITY: Capitan del Puerto de Guayaquil, Puerto Maritimo.
AGENT: Ian Taylor - Ecuador, Edificio Absalon Guevara, Of.201, Calle Los Rios 810 y. Av. 9 de Octobre, Guayaquil, Ecuador. Tel: 593-4-690310. Telex: 43221 A Taylo. Fax: 593-4-451114.

LA LIBERTAD: 02.12 S. 80.55 W. (See Plan)

DOCUMENTS: Port clearance is effected at La Libertad.
The following papers must be ready for presentation to the authorities on arrival:

1 Bill of Health signed by the Master and visaed by the Ecuadorian Consul at port of departure.
1 Ballast Certificate visaed by Ecuadorian Consul at port of departure.
6 copies of Cargo Manifest (if any cargo for the port).
6 copies Bills of Lading.
9 Crew Lists (original visaed by Ecuadorian Consul at port of departure).
9 Passenger Lists for the port (if no passengers state "without passengers"). If applicable, the list should show names, sex, age, nationality, port of embarkation, occupation and whether married or single. Passengers must make a declaration of their luggage on Ecuadorian Form No. 94.
9 Stores Lists.
5 Lists of Crew's Personal Effects (new articles only).
4 Lists of Unaccompanied Baggage (if none, state "without them").
4 Lists of Encomiendas (list of small private parcels to be landed in Ecuador – if none, state "without them").
4 Lists of Mail (if none, state "without them").

If there is no Ecuadorian Consul at the port of departure, the documents must be visaed by the Consul of a friendly nation.

PILOTAGE: Compulsory. Pilots boarding in position Lat. 2° 08' S. – Lat. 2° 10' S. and Long. 80° 55' W. – Long. 80° 56' W. ETA should be given to port 12 hours before arrival. Open roadstead.
ANCHORAGE: No limitations except depth 36 ft.

Vessels proceeding to oil terminal should anchor about 1 mile N.N.E. of the mooring buoys (which are about 15,000 ft. off-shore) where the Port Authorities and Mooring Master board. The anchorage is an open roadstead with sandy bottom.
RESTRICTIONS: *Tankers:* Daylight berthing only.
MAX. SIZE: *Tankers* – LOA 650 ft.
Beam 84 ft.
Max. loaded draft 34 ft. 6 in.
Depth MLWS at mooring is 43 ft.
HEALTH: Vessels arriving from foreign ports should fly appropriate International Code signals to advise state of health and request Free Pratique. Vessels put in quarantine required to fly signal "QL" all the time they are in port until Port Health Authority advises to the contrary.
RADIO: ETA messages may be sent by radio to Radio Naval, HCG Guayaquil Radio, 8476 kHz, 500 kHz. Radio Naval would then repeat the message to the Naval Station in Salinas, or to the Telegraph Office. Radio Naval has VHF/RT and Telex.
TUGS: Only tankers require tugs to berth at the buoys. Other vessels work cargo at anchor.
BERTHING: No wharves for large vessels, only for coasters.
STEVEDORES: Arranged by Agent; separate ETA not required.
MEDICAL: If urgent medical attention required, Master should radio details in advance. All facilities available.
TANKERS: The Anglo-Ecuadorian Oil Fields Terminal is located in Santa Elena Bay. Four small marker buoys indicate the seaward end of the submarine pipeline. An Easterly current usually prevails, rate being from 0.5 to 1.5 knots. There is 1×14 in. submarine pipeline fitted with 2×10 in. flexible hoses for connecting to ship. Max. loading rate is about 450 t.p.h, and max. pressure is about 150 p.s.i.

Mooring Master assists in berthing vessels. Vessels are moored port side to, using starboard anchor off the starboard bow and mooring buoys for lines to the port bow and astern. Vessels moored during daylight hours only; however, they may unmoor at any hour of the day or night. Recommended that at least 1 tank of clean ballast be retained on board vessels until mooring has been completed. Ballast will then be pumped overboard. Vessels should be equipped with three 9.5 in. or 10 in. (circ.) – 200 fathom hawsers for use in mooring and 7 rope stoppers each at least 3 fathoms long. The following signals are used in connection with the loading of cargo.
By Day: Start loading 2 long blasts of vessel's whistle or siren, 1 red flag hoisted; stop loading 4 long blasts of vessel's whistle or siren, flag hauled down.
By Night: Start loading, 2 long blasts of vessel's whistle or siren, 1 red light hoisted; stop loading, 4 long blasts of vessel's whistle or siren, 1 red light hauled down.

To summon the launch, 3 long blasts are to be blown on the vessel's whistle.
DENSITY: 1028
FRESH WATER: Not available.
FUEL: Bunkers available, but have to be requested 72 hours prior to arrival in order to make transport arrangements.
CONSULS: There is no consular representation of any country at La Libertad. The nearest are at Guayaquil.
REPAIRS: Anglo-Ecuadorian Oil Fields Company can effect small repairs.
GANGWAY/DECK WATCHMEN: Available, but not compulsory.
OPENING/CLOSING HATCHES: Can be done by the crew or stevedores.
CUSTOMS ALLOWANCES: 200 cigarettes and 1 bottle wine/spirits per man.
REPATRIATION: Can be effected from port of Guayaquil.
AIRPORT: At Guayaquil, 130 km. away, served by regular airlines.
TIME: GMT minus 5 hours.
HOLIDAYS: January 1st; Carnival; Good Thursday; Good Friday; May 1st; May 24th; July 24th; August 10th; October 9th; October 12th; November 2nd; November 3rd; December 25th.
TELEPHONES: No connections to vessels possible, except at tanker moorings which is direct to loading installation only.
SHORE LEAVE: Permitted.
IDENTIFICATION CARDS: Required.
GENERAL: Dirty ballast or slops not admissible at La Libertad.
AUTHORITY: Terminal Superintendence La Libertad.
AGENT: See "Guayaquil".

MANTA: 00.56 S. 80.43 W. (See Plan)

DOCUMENTS:
A. List of Documents, 1 copy.
B. Sailing Permit from last port. Original to Captain of Port.
C. General Declaration, 5 copies – Health Department 1, Captain of Port 1, Immigration 1, Custom House 1, and Port Authority 1. (See Note No. 2 below):
  1. Health Declaration.
  2. Stores Declaration.
D. List of Passengers destination Manta, including list of their baggage, 2 copies – Customs 1, Immigration 1.
E. List of Passengers in transit, 2 copies – Immigration 1, Port Authority 1.
F. Crew List (including and indicating any members leaving vessel at Manta), 4 copies – Customs 1, Immigration 1, Captain of Port 1, Port Authority 1.

G. Manifest of Cargo for discharge at Manta including transhipment 4 copies – Customs original and copy, Port Authority 2.
H. Checking Books, 5 copies, plus 1 copy for each point of possible discharge of cargo from vessels for Port Authority.
I. Bills of Lading, 1 complete set for Port Authority.
J. List of vessel supplies including liquors, cigars, cigarettes, other tobacco products, matches, lighters, clothes, novelties, and provisions will be maintained in Purser's Office for review by Custom House.
K. Tissue Manifest, Hatch List and Cargo Plan. 1 copy of each for Port Authority prior to arrival of vessels. These papers to be sent by air mail as per regulations.
M. General Manifest. This manifest will include all cargo loaded during voyage which will include all cargo in transit – 1 copy. General manifest will be maintained in Purser's Office for review by Custom House, and be accessible for Customs at all times.

Note No. 1: Port Authority reserves the right to refuse berthing facilities until all documents received. Of course, this authority will be handled with discretion to avoid unnecessary or unwarranted delay to vessels, passengers, and cargo.

Note No. 2: General Declaration should contain the following:
A. Name of vessel, length and registered tonnage.
B. Owners.
C. Voyage number and ports of call on voyage.
D. Total number of passengers aboard.
E. Total tonnage (of 1,000 kilos) of cargo aboard.
F. Total number of passengers for Manta.
G. Total tonnage (of 1,000 kilos) of cargo for Manta.
N. Health Declaration.
O. Stores Declaration that ship's consumable foodstuffs and consumable supplies are under lock and key; that the slop chest, shop, and store-rooms containing liquors, cigars, cigarettes, other tobaccos, matches, lighters, clothes, novelties, sports material, toilet articles, cosmetics, medicines, etc. have been locked and sealed with metallic non re-usable seals with serial numbers. The seals are identifiable by their non-repeat numbers.

All vessels should have these seals aboard and should equip doors and door frames with suitable secure hardware through which seals can be passed. (Model of the form for the above document may be obtained from the Port Authority).

PILOTAGE: Compulsory. Pilot boat by day will show Pilot flag at mast head; by night red light 2 ft. 6 in. below mast head light, both visible around the horizon.

Pilot will board at point located at distance of 1 mile, 000° from Manta Breakwater Light (Lat. 00° 56' 20" S., Long. 80° 43' 02" W.). He will immediately proceed to conduct ship to inner harbour and dock at assigned pier or anchor in assigned anchorage.

Vessels will not have to anchor, but will reduce speed to steerageway and stop propeller. Lower pilot ladder so Pilot may board safely on port side of vessel. Pilot will act as Representative of Port Authority. Other Officials and Representative of steamship Agency will embark once ship has tied up.

Pilotage compulsory for all foreign vessels over 500 tons, with following exceptions:

(1) Fishing craft, yachts, tugs, barges and other craft of less than 500 tons total displacement whose handlers are suitably licensed by Captain of the Port of Manta.

(2) Vessels of the Ecuadorian Navy.

Note: Masters of large vessels and handlers of small craft who do not follow all rules of safety, including Rules of the Road may lose their right to navigate within jurisdiction of the Port Authority and may be subject to additional sanctions.

ANCHORAGES: Free anchorage area located around a point 1 mile from Manta Lighthouse (Lat. 00° 56' 03" S., Long. 80° 43' 01" W.). Depth 45 ft. Anchorage inside breakwater will be assigned by Pilot.

RESTRICTIONS: No restrictions upon entry. Vessels up to 33 ft. draft may enter at any time of day or night.

MAX. SIZE: Max. permissible length 600 ft., breadth 60 ft., draft 33 ft.

HEALTH: Radio Pratique granted all ships in accordance with International Sanitary Regulations. Health documents will be delivered to boarding officer of Port Authority. When Pratique granted by radio, not necessary for port doctor to board vessel.

In request by radio for Pratique, vessels should give following data 12 to 24 hours before arrival.
A. Date and hour of expected arrival.
B. Number of Ecuadorian Passengers.
C. Number of Alien Passengers.
D. Statement regarding existence or non-existence of communicable diseases aboard.

RADIO/VHF: Manta HCM 8372 kHz. Radio telephone 2182 kHz. VHF Channels 10 and 16 (Costera Manta).

TUGS: 2 tugs. 1×1,300 h.p. and 1×1,800 h.p. Tugs join vessel in vicinity of pier. Ship's lines usually used. Use of tug for docking and undocking is at discretion of Port Authority.

BERTHING: Berth will be assigned by Pilot at boarding time.

Berthing Facilities:

2 Piers Length 200 m. for vessels with draft up to 10 m. 2 Roll-on/Roll-off ramps, facilities at 2 piers., depth 22 ft.
Marginal Quay, length 150 m., for vessels with draft up to 7.5 m.
Marginal Quay, length 150 m., for vessels with draft up to 5.7 m.
Marginal Quay, length 150 m., for vessels with draft up to 3.8 m.

Cranes: Mobiles cranes with capacity 12 – 35 tons.

Storage Area: 100,000 sq.m. of open storage available.

STEVEDORES: Arrangement for stevedores made by ship's Agent prior arrival.

FRESH WATER: Fresh water available in small quantities.

FUEL: Diesel oil available in small quantities by truck.

FIRE PRECAUTIONS: Regular fire precautions should be taken by all ships. Smoking should be prohibited in any section of the ship used for cargo. No smoking on the weather deck, cargo decks, and the ship's holds, whether cargo being worked or not. Smoking around hatches or at cargo winches must be prevented.

Smoking should be restricted to the passenger section of vessels, and to officers' and crew's quarters where suitable receptacles are available.

Persons including officials can be fined or refused entrance to terminal at discretion of Port Authority for careless or intentional disregard of reasonable fire prevention precautions.

Port Authority reserves right to inspect cargo working sections of vessel, to check precautions against fire, and to determine whether there are any undue accumulations of combustible materials.

Pumps and other fire fighting equipment aboard should be maintained in a state of readiness as long as vessels are in the terminal.

CONSULS:
Panama: Mr. Jorge Alava, Banco del Pichincha, Tel: 612411 – 611089.
Germany: Mr. Wolf Harten, Tel: 610740.
Spain: Mrs. Pilar Quilez de De Genna, Tel: 613548.

REPAIRS: Minor repair facilities available.

GANGWAY/DECK WATCHMEN: Custom police keep watch at the gangway.

OPENING/CLOSING HATCHES: Normally carried out by stevedores.

CUSTOMS ALLOWANCES: Tobacco, small amounts for personal use while in port. Wine and/or Spirits, wines and liquors by the glass for consumption on board while in port.

CARGO GEAR: Ship should have cargo nets, but Port Authority can provide cargo nets at extra cost.

REPATRIATION: Repatriation of crew members through Port of Guayaquil.

AIRPORT: Airport with 2,500 m. runway. Flights to Quito at 0915 hrs. on Monday to Saturday. From Portoviejo (36 km.) flights to Quito on Monday to Friday at 1700 hrs. Air taxis on request.

TIME: Local time GMT minus 5 hours.

HOLIDAYS: No movement of cargo within the terminal on 1st May, Christmas Day, or after 2000 hrs. on the 31st December, or on New Year's Day.

POLICE/AMBULANCE/FIRE: Police 610900; Ambulance 612014; Fire 610100.

TELEPHONES: Telephone service can be obtained at Terminal Office, at same rate as public telephones.

SHORE LEAVE: Crew members are welcome ashore.

IDENTIFICATION CARDS: Crew members should have identification cards while ashore at all times.

DELAYS: In rainy season, from January to April, irregular swell is present in the Manta Bay (3 days before and after full moon), also at new moon tides.

AUTHORITY: Autoridad Portuaria de Manta, Apartado 4768, Manta, Manabi, Ecuador. *Tel:* 613111, 620993. *Cables:* Aportuaria. *FAX:* 621861. *Contact:* Hugo Almeida Gonzalez, General Manager. Captain Maruricio Saona, Port Captain.

AGENT: See "Guayaquil".

PUERTO BOLIVAR: 03.14 S. 80.01 W.

DOCUMENTS:
3 Voyage Memorandums.
2 Maritime Health Declarations.
1 Consular Despatch.
1 Port of Origin Certificate.
10 Crew Lists.
8 Stores Lists.
3 Individual Declaration List for each member of the crew.
8 Lists Passengers Disembarking at this port.
8 Lists Passengers in transit.
4 Luggage, Mail and Commissions Lists.
4 Manifest of Cargo Lists.

Documents for Port's Authority should be supplied by Agents:
1. General Cargo Manifest in complete sets (Importation in triplicate, Exportation one set).
2. Bill of Lading, complete sets: Importation (one set), Exportation (one set) at time of sailing.
3. Export Customs House Clearance Document (one set). This document is replaced by the Bill of Lading.
4. Certificate of Ballasting.
5. Request for Mooring Berth.
6. Stevedore's cargo plan per hatch.
7. Muster-roll of cargo.
8. Tally books: 15 copies in Spanish. These must be in accordance with the current Tally Law.

PILOTAGE: Send ETA through Radio Naval of Guayaquil 24 hours before arrival. Pilot will board vessel on the port side 1 mile from the Sea Buoy on arrival and disembark on the starboard side. In case Pilot not available it is recommended to anchor 1 mile from "Punta Jambeli" between the buoy and the lighthouse of Lambeli. Pilot boat is steel, black hull and white cabin, it carries pilot signals in accordance with International Regulations. Service available 24 hours a day. Pilotage is compulsory.

ANCHORAGES: Pilot will indicate recommended anchorage.

RESTRICTIONS: Depths 30 ft. at LW, from 0600 hrs. to 1800 hrs. draft allowable 30 ft. From 1800 hrs. to 0600 hrs. draft allowable 27 ft.

MAX. SIZE: At Espigon Quay depths alongside 30 ft. inner end to 36 ft. at quay head.

HEALTH: On the arrival of vessel the authorities come on board. If there are no illnesses aboard, the doctor gives Free Pratique. In case of any illness, Master should advise by radio and the vessel waits in quarantine for the visit of Port Health Doctor.

RADIO: Radio Naval of Guayaquil, Radio Naval of Puerto Bolivar VHF available call Pilot Station on Channel 16, effective reception 30 miles.
TUGS: 2 tugs available one at 1,200 h.p. and one of 500 h.p. Usually, ship's lines are used. This service is free.
BERTHING: At Espigon Quay should be carried out within 1 hour before or after slack water. Tidal currents of 1 – 3 knots in dry season and 3 – 5 knots in Winter are at right angles to berthing face of the quay.
Wind: From 000° in the morning, speed 3 – 5 knots. From 210° in the afternoon and night, speed 3 – 5 knots.
STEVEDORES: Agents take charge of gangs.
MEDICAL: Hospitals, clinics and dental surgery in Machala, 6 km. from the port. There is also a medical service for vaccination.
DENSITY: Salt water.
FRESH WATER: Only available by tanker truck, capacity 7 tons.
FUEL: No fuel in this port. In case required one has to contact Guayaquil and they send it by small tankers.
CONSULS: Consul of Peru, Tel: 920608.
REPAIRS: There are no facilities in this port.
GANGWAY/DECK WATCHMEN: The Agent names 1 or 2 watchmen for the vessel besides the Maritime Police and Coast Guard.
OPENING/CLOSING HATCHES: Carried out by shore gang supervised by someone on board.
CERTIFICATES: Vessel's Register and Tonnage Declaration required.
CUSTOMS ALLOWANCES: 100 cigarettes per person and 1 bottle wine or spirits per person.
REPATRIATIONS: The Immigration Office can arrange.
AIRPORT: Distance to the airport is 6 km. It has 6 daily flights in connection with Guayaquil.
TIME: GMT minus 5 hours; there is no change.
HOLIDAYS: No work from 1700 hrs. on 24th December till 0800 hrs. on 26th December, and 1700 hrs. on 31st December till 0800 hrs. on 2nd January; Carnival; Maundy Thursday; Good Friday and Saturday; 1st May; 24th and 25th July; 9th October.
POLICE/AMBULANCE/FIRE: There are services.
TELEPHONES: Can be connected to the vessel.
IDENTIFICATION CARDS: Not necessary.
SHORE LEAVE: Passengers or crew do not need any special permit to land.
GENERAL: When the vessel is anchored, landing service is done by launches. They are called by 1 long whistle and 2 short ones. This service works 24 hours a day.
At Night: A flashing light is to be used to call launches and not the whistle.
DEVELOPMENTS: A marginal pier for general cargo is being built. Length of pier 360 m.

SHIPMASTER'S REPORT: 1978
Fresh Water: Water is available at anchorage by a barge of 48 ton capacity. For ships berthed alongside, water is delivered by modern trucks of 7 or 8 ton capacity.
Surveyor: A non-exclusive surveyor acting for Lloyd's, Det Norske Veritas, and the Japanese Classification Society, is based at Guayaquil. Loadline survey and engine survey work done. He travels by air from Guayaquil (45 minutes).
Watchmen: One Customs and one Naval guard are obligatory, and should be fed and provided with room to sleep. Ship's crew should be employed day and night, one as accommodation watchman and one as deck watchman. Store-rooms should be locked up, and all loose equipment and lifeboat equipment stowed in lockers or accommodation. Only one accommodation door should be left unlocked, and a ship's watchman posted there, day and night.
Banana Cargoes: Loaded through side doors from the quay or from barges, or both together. No cranes, derricks or mechanised equipment used. About 400 men employed at one time. Very fast.
Casual Labour: This is freely available for painting hull, cleaning engine room, etc.

PURSER'S REPORT: See "Guayaquil".

AUTHORITY: Port Captain.

NOTES

Please also advise Shipping Guides Ltd.

Arab Republic of Egypt

GENERAL (See Plan)

NAVIGATION REGULATIONS:

The following rules for ships navigating in the Gulf of Suez have been approved by IMO.

1.1 Ships should take into account that crossing traffic may be encountered in the traffic junction Eastward of Ain Sukhna and in the precautionary area off Ras Shukheir, and should be in a high state of readiness to manoeuvre in these areas.

1.2 Exceptional care is needed, when overtaking another ship within a lane, not to enter the separation zone or force the overtaken ship to do so.

1.3 Ships navigating in the Gulf of Suez are requested to keep continuous listening watch on the Suez Gulf Traffic Information Broadcasts and report any aids to navigation which are malfunctioning or are out of position and which are not already included in the Suez Gulf Traffic Information Broadcasts.

2.1 All ocean-going ships should have their radar in effective use by day and night throughout the passage between Shaker Island and Suez Port as an aid to achieving maximum feasible lane conformity and avoiding risk of collision. Particular care is required for strict adherence to the confines of relevant traffic lanes.

2.2 Ships proceeding South from Suez should be alert for tankers heading for the Sumed Oil Terminal off Ain Sukhna.

2.3 Northbound tankers heading for Sumed Oil Terminal should report their intention of using the traffic junction off Ain Sukhna on the appropriate frequencies.

2.4 All ships North and Southbound when navigating through the precautionary area off Ras Shukheir or in the vicinity of the July Oilfield should avoid overtaking in the traffic lanes in these areas.

2.5 All ships including service and supply craft serving the oil workings in July, Ramadan and Morgan Oilfields proceeding in and out of Ras Shukheir Oil Terminal, should only cross the South and Northbound traffic flow through the precautionary area off Ras Shukheir. Within the precautionary area local rules relating to crossing traffic apply.

2.6 Tankers leaving the Ras Shukheir Oil Terminal and intending to join the Northbound traffic lane should only do so when no through Southbound traffic is in the vicinity and should always report their movements to other ships beforehand on VHF.

2.7 Ships anchored in the designated waiting area for Ras Shukheir should ensure that they are never less than 0.25 miles from the edge of the Southbound traffic lane and should pay special regard to their correct light signals for ships at anchor. They should also show their deck lights.

TIME: GMT plus 2 hours. GMT plus 3 hours in Summer from 1st May till late September.

AIN SUKHNA: 29.32 N. 32.24 E. (See Plan)

Also see "General" before first Port.

LOCATION: Ain Sukhna Sea Terminal is situated in the Northern end of the Gulf of Suez.

The position of the sea terminal is: Lat. 29° 32' N., Long. 32° 24' E. Ain Sukhna Lighthouse position: Lat. 29° 35.9' N., Long. 32° 20.3' E. The Lighthouse Specifications are: A white daymark on framework tower 44 m. high over sea level, flashing white every 5 seconds. Range 22 miles. The lighthouse also covers the approaching and departure sectors at 40 m. height and 15 miles range. OC. Green from 260° to 273°. OC. White from 273° to 298°. OC. Red from 298° to 306°.

As a reference point, there is a light which is exhibited from a metal structure standing close to the seaward side of an old abandoned lighthouse on Ras Abou Daraq, flashing white every 2 seconds.

DOCUMENTS: All vessels calling at Ain Sukhna have to deliver directly their official documents, as indicated below, to SUMED's Port Authority:

Certificate of Registry.
Load Line Certificate.
Safety Certificate.
Derat Certificate.
Radio Certificate.
Suez Canal Tonnage Certificate when applicable.
Panama Canal Tonnage Certificate when applicable.

Vessel's official documents, after being reviewed, will be handed to the vessel's Master after discharging and before vessel departs from SUMED's port.

LOCATION OF BUOYS: (SBMs)

S1: Lat. 29° 35' 16" N., Long. 32° 23' 35" E.
S2: Lat. 29° 34' 12" N., Long. 32° 22' 42" E.
S3: Lat. 29° 35' 17" N., Long. 32° 22' 16" E.
S4: Lat. 29° 34' 12" N., Long. 32° 24' 24" E.

The 4 SBMs are painted orange and have the following characteristics:

Lights: A flashing light, activated by an electric photo-cell switch.

Light frequencies are as follows:

SBM No. 1	Morse Code A
SBM No. 2	Morse Code B
SBM No. 3	Morse Code C
SBM No. 4	Morse Code D

Fog Horn: An acoustic signal with an approximate range of 2 miles.

Radar Reflector: Each buoy is provided with an octahedral radar reflector constructed in stainless steel with a diameter of 0.5 m. installed on top of the rope guard.

PILOTAGE: SUMED's Mooring Master and his assistant board the tanker 2 miles S.E. of Buoy "S4".

Notifications: ETA messages should be sent by cable via Alexandria/Port Said Radio on leaving previous port. Cables should be prefixed "For urgent delivery send via Telex 54108 or 54033 SUMED UN" and be confirmed 72, 48 and 24 hours prior to arrival. (Day and Night berthing and operation). Arrival draft should be indicated.

ANCHORAGES: Tankers can anchor to the S.E. of the buoyfield, 2 miles S.E. from Buoy No. 4.

RESTRICTIONS: *Maximum Weather Conditions for Occupying SBMs:*

The SBMs are designed to accommodate tankers up to the following weather conditions.

Wind velocity (knots)	35 (65 km./hr.)
Maximum tidal range	2.0 m.
Maximum wave height	3.4 m.
Maximum surge/seiche conditions	0.5 m.
Current: Surface	2.0 knots.
Seabed	1.0 knot.

The above conditions are not relevant to the safety of the ship but to the safety of the buoys. Consequently the Mooring Master shall have the authority to decide whether the ship should remain moored or vacate the buoy due to adverse weather conditions.

MAX. SIZE: The four berths are spaced one from the other so that each has:

Mooring Area Radius: 410 m. for S1 and S2 (accommodates vessels up to 350,000 d.w.t.); 320 m. for S3 (accommodates vessels up to 150,000 d.w.t.); 410 m. for S4 (accommodates vessels up to 500,000 d.w.t.). Manoeuvring Area Radius: For S1, S2 and S4, 1,220 m.; for S3, 915 m.

Water Depth and Draft Limitations:

For S1 and S2:	85 ft. minimum water depth 75 ft. maximum draft
For S3:	65 ft. minimum water depth 55 ft. maximum draft
For S4:	135 ft. (40.9 m.) minimum water depth. Maximum acceptable draft unlimited.

Minimum Size: 70,000 d.w.t. ±5% with minimum cargo discharge of 50,000 metric tons of any one type of crude oil.

HEALTH: Vessels proceeding to Ain Sukhna must be in possession of the following documents:

(a) International Maritime Declaration of Health.
(b) Valid Derat or Derat Exemption Certificate.
(c) Valid Vaccination Certificates for all passengers and crew members.
(d) Certificates of inoculation against any communicable diseases prevailing at the Ports of departure.

Masters are required to immediately notify SUMED by cable in the manner outlined in "Radio – ETA" in case of any epidemic diseases or illness onboard while the vessel is bound for Ain Sukhna. The same message is to be conveyed to the terminal as soon as an HF or VHF contact is established, at least 6 hours before arrival.

RADIO: *ETA:* In order to avoid undue delays it is essential that Masters of vessels proceeding to Ain Sukhna Terminal cable their ETAs to "SUMED" Alexandria.

The cable to be prefixed quote "to be conveyed via telex (54108) or (54033) SUMED UN Operations Office-Oil Movement" unquote.

ETA notifications to be sent as follows:

Immediately upon sailing from loading port/s
In case of a change in ETA exceeding 6 hours
72, 48 and 24 hours prior to arrival.

Confirmation of ETA: An additional contact can be made with the Ain Sukhna Terminal on HF 2182 kHz and 4139.5 kHz, 24 hours before arrival.

Moreover, Masters are required to contact the terminal on VHF 6 hours before arrival on Channel 16 (or preferably Channels 78 and 79 if available).

Information from the Vessel: All vessels proceeding to unload their cargoes at Ain Sukhna are required to convey the following information to SUMED.

(a) Immediately upon sailing from loading port/s vessel is to cable, in the manner outlined in "Radio – ETA" the following information:

(i) ETA (in GMT) and expected arrival draft at Ain Sukhna, vessels are requested to arrive even keel.
(ii) All B/L data and ship's figures at loading port/s, stating quantity of free water on board after loading.
(iii) Whether the vessel loaded on top of slops stating grades of crude that were commingled with residues, quantity and API of contents of slop tank/s.
(iv) If the vessel is loaded with more than one grade of oil, Master is requested to confirm ability to unload according to the sequence agreed upon with the shipper (vessel's owner or charterer as the case may be).
(v) SUMED is to be immediately notified in the case any repairs are required that could delay commencement of discharging.
(vi) Estimated time for unloading the cargo if no restrictions are imposed by shore.

(b) On arrival at Ain Sukhna the following written information is to be handed to SUMED's Mooring Master:

(i) Whether vessel equipped with inert gas system. Vessels arriving with gas inerting blankets should, on arrival, depressurise their system sufficiently to allow visual sampling and ullaging of cargo tanks. Upon completion of ullaging, pressurisation of inerting system shall be resumed and maintained throughout discharge.
(ii) Whether the vessel has external impressed cathodic protection.
(iii) Vessel's readiness to connect 2×16 in. hoses ASA 150.
(iv) The pressure which the vessel expects to maintain at the ship's rail and which is required to be a minimum of 100 p.s.i. unless otherwise specifically requested in writing by shore.
(v) Whether vessel requests to perform crude washing and in the affirmative the relevant check list should be filled in by the Master. See "Crude Oil Washing" under "Discharging".

(vi) Full names and addresses of Owners, Managers and Charterers of the vessel and their Agents in Egypt if any.
(vii) Whether the tanker's Owners/Bareboat Charterers are members of a P & I Club stating name and address of such club, if available.

Information from Terminal:

The following information will be given to the vessel upon arrival at the anchorage area or when SUMED's Pilot boards the vessel:
(i) Any expected pre-mooring delays and their likely duration.
(ii) Any special mooring instructions.
(iii) Details of any restrictions on discharging rate.

All such restrictions and their duration will be confirmed in writing by SUMED.

VHF: Channels 16, 78 and 79.

TUGS: Tug "Sukhna" 3,200 h.p. with fire fighting and with anti-pollution equipment is available as required.

Supply Vessels and Tugs: "Sukhna (2)" 6,000 h.p. with firefighting and anti-pollution equipment available as required.

Mooring Launches: 6×500 h.p. mooring launches assist in mooring and hose operations with firefighting and anti-pollution equipment are available as required.

BERTHING: Ain Sukhna Sea Terminal consists of 4 sea berths all of which are single point mooring buoys (SBMs).

2 buoys for vessels up to 350,000 d.w.t., 1 large buoy for vessels up to 500,000 d.w.t. and one small buoy for vessels up to 150,000 d.w.t..

Subject to SUMED's prior approval and acceptance in each case, the buoys can accommodate vessels larger than those specified above within the following limits:

Buoy (S2) up to 400,000 d.w.t.
Buoy (S3) up to 200,000 d.w.t.
Maintaining all other length and draft limitations.

Each of the 2 buoys (S1 and S2) are connected to shore by a submarine line 48 in. (1.22 m.) in diameter and approximately 8 km. in length.

The small buoy is connected to shore by a submarine line 42 in. (1.067 m.) in diameter and approximately 5 km. in length.

Buoy S4 is connected to the shore by a submarine line of 52 in. (1.2458 m.) diameter and approximately 9 km. in length.

Ropes: Buoys S1 and S2 are equipped with twin 18 in. circumference nylon ropes each 180 ft. long ending with a 20 ft. chafing chain 2.75 in. diameter. A support buoy is connected to the chain.

The port side mooring rope has a 350 ft. polypropylene 10 in. pick-up rope with a 3 ft. soft eye at the end.

The starboard side is the same but the pick-up rope is only 150 ft.

Buoy S3 is equipped with a 15 in. diameter grommet 180 ft. long, ending with 20 ft. chafing chain 2.75 in. A support buoy is connected to the chain, the mooring rope is 350 ft. long polypropylene, 10 in. diameter, with a 3 ft. soft eye at the end.

Buoy S4 is equipped with a 16 in. diameter grommet 180 ft. long, ending with a 20 ft. chafing chain 3.1875 in. A support buoy is connected to the chain. The mooring rope has 350 ft. long polypropylene, 10 in. diameter with a 3 ft. soft eye at the end.

In case the ship is not equipped with chain stopper, a pair of 12 ft. or 20 ft. snotters with shackles will be supplied for connecting the chafing chain to ship's bollards.

Mooring Master Duties: When the Mooring Master boards he will advise the ship's Master or officer in charge of the bridge on the approach to the berth, arrangements for mooring and unmooring, connecting and disconnecting of the hoses, and all other operations within the berthing area. The Mooring Master will submit and receive from the Master all forms, documents and papers required, to be filled and signed or received by the Master.

Adequate Lighting: There must be adequate search lights rigged on both wings of the bridge when mooring at night to facilitate running lines to the buoys.

VHF: The Mooring Master will be in direct charge of the portable VHF ship to shore radio telephone communications on Channels 78 and 79.

Mooring: Pick-up from the mooring boat:

2 wire rope snotters of 12 ft. or 20 ft. length (to suit tanker bollard location).

Weight of 12 ft. – 80 kg	23 in. diameter
Weight of 20 ft. – 135 kg.	23.8 in. diameter

2 bow shackles 55 tons SWL (weight of shackle = 43 kg.) or 2 bow shackles 75 tons SWL (weight of shackle = 68 kg.) for tankers over 130,000 d.w.t.

Move these items to bow.

Tool box.

Slip the soft eye of the snotter onto bollard having a good lead to forward fairlead. The forward winches should be tested, drained and be in good working order.

Ensure that both anchors are secured by stoppers in the hawse pipe. Anchors must not be dropped at the berth.

Prepare messenger line, (about 10 in. circumference × 500 ft. length polypropylene), and pass through the forward fairlead or chain stopper and lower as directed by Mooring Master, starting at the port side.

The mooring boat will fasten this messenger to the 10 in. × 350 ft. polypropylene pick-up line on the buoy mooring system.

Upon the Mooring Master's signal, heave away until the chafing chain is in the fairlead or Panama lead with the support buoy close outside.

Shackle the free end of the wire snotter to the open end link of the chafing chain.

Ease back on the pick-up line until the weight falls on the bollard wire snotter.

Should the vessel have a "Smit" type towing bracket, release the pin, install the open link and lead the pick-up so that the end link of chain is directly fastened to the open link with the bow shackle. If the ship is equipped with chain stopper, pass the ship's messenger and buoy pick-up rope through the chain stopper and heave away until you can lock one of the big opened links (the vertical one).

Same procedure will be adopted to the starboard polypropylene pick-up rope of 150 ft. length connected to the buoy mooring system.

Mooring Sequence:

Prompt Berthing: SUMED will make every effort to moor ships arriving according to agreed schedules as promptly as operational circumstances permit.

Notice of Readiness: To be tendered when vessel arrives at Ain Sukhna anchorage area provided that vessel is ready in all respects to unload her cargo. NOR will be accepted according to SUMED's agreement with the relevant shipper.

Arrival Time: Arrival time will be considered at the time the vessel anchors.

Cargo Operations: Vessel moored to the SBMs must limit their stay to the allowed berth occupancy time stipulated in the transportation agreement between SUMED and the relevant shipper.

Unless vessel sizes are otherwise classified in the said agreement, the allowed berth occupancy time is as follows:

D.W.T. tonnes	*Buoy Occupancy* hours	*Lay Time* hours
More than 320,000	52	62
250,000 to 320,000	42	52
200,000 to 250,000	36	46
Less than 200,000	28	38

Delay due to weather: In the event that berthing delayed on account of adverse weather conditions the vessels will maintain their position in line.

Port Closure: Should vessels be requested to vacate the berth on account of adverse weather conditions closing the port, they shall keep in contact by VHF with the terminal in order to be readily available for re-entry as soon as the terminal so requires, after weather conditions permit.

Port Re-opening: When the port is re-opened discharging will recommence according to the firm schedules agreed upon with SUMED's shippers.

Vessel refusal: SUMED reserves the right to decline to berth a specific vessel should it consider that such vessel's condition or facilities are unsafe.

Unmooring: Take the weight of the moorings on the pick-up starting with the starboard side first, using windlass. Unshackle the wire snotter (or unpin the "Smit" Brackets) or unlock the chain stopper.

Slack the pick-up until the support buoy is in the water. Pay out the pick-up line (as ship clears from the berth). Return the wire snotters, bow shackles and tool box to mooring boat prior to Mooring Master's departure.

The tug and mooring launches will be in attendance.

HOSES: SBMs No. 1, 2 and 4 contain twin crude floating hose strings each 307.2 m. (1,008 ft.) in overall length consisting of:

22 hoses	24 in. × 35 ft.
1 hose	24 in./20 in. × 35 ft.
1 hose	20 in./16 in. × 35 ft.
3 hoses	16 in. × 35 ft.
1 hose	16 in. × 30 ft.

SBM No. 3 contains twin crude floating hose strings each 274.25 m. (905 ft.) in overall length.

Each consists of:

21 hoses	20 in. × 35 ft.
1 hose	20/16 in. × 35 ft.
3 hoses	16 in. × 35 ft.
1 hose	16 in. × 30 ft.

All tail hoses are 16 in. in diameter and the gear attached to each of the 16 in. crude oil hose tails consists of a lifting eye, butterfly valve, spool piece with camlock and light weight blind flange.

The camlock is suitable only for connections with tanker manifold flange of 16 in. ASA 150.

Quick Release Safety Couplings: Quick couplings (Camlock) are connected at each hose end and they will be used as follows:

In case of emergency the butterfly valve shall be immediately closed and the quick coupling immediately disconnected.

Safety breakaway coupling: To part the hose and block each part to avoid leaking into cases:

1. Excessive pulling stress on the hoses.
2. Excessive back pressure in the hoses.

Hose Connecting and Disconnecting: The connecting and disconnecting of cargo hoses shall be performed by the crew of the vessel under instructions from SUMED's Mooring Master.

Preparations: The tanker crew are required to lift 2×16 in. crude hose strings and connect them to the vessel's port side manifold.

To avoid delays the following items should be prepared prior to berthing, otherwise the vessel will not be considered ready to discharge.

2×16 in. standard 150 ASA flange connections in position on selected lines for discharging crude oil.

Port derrick with a minimum 10 ton SWL rigged for maximum height and load lifting. The derrick shall be guyed to plumb the vessel's rail-hose bolster bar at the vessel's manifold.

If possible, the topping lift of the boom shall be on its own winch. All winches shall be tested, drained and in ready running condition.

Drip trays, sand bags, dispersant and fire fighting equipment in position.

Tools, gaskets, nylon lifting slings and other equipment will be supplied on board from the mooring boat.

Equipment to be Onboard Before Berthing: In order to expedite the connection of the hoses the following equipment must be available.

2 polypropylene messenger lines
(about 10 in. circumference 500 ft. long).
Sledge hammer.
Large crowbar.
Large marlin spike.
Large flashlight.
Bags of sand.

Manifold on the port side must be used as follows:
All manifolds to be ready with 16 in. flange ASA 150.
Hose derrick rigged.
Derrick fall fitted with cargo hook 10 ton SWL.
Heaving line.
2 × 1-1-2 ton pullers.
Copper hammer.
Nylon lifting slings.

DISCHARGING:
Terminal Design: The design of the discharging terminal is based on the following flow rates with crude oil characteristics as follows:

Viscosity		= 17 cst
Specific gravity		= 0.867 kg/cu.cm.
SBMs No. 1, 2 & 4	Max.	12,500 tonnes/p.h. 200 p.s.i.
	Min.	7,400 tonnes/p.h. 100 p.s.i.
SBMs No. 3	Max.	7,400 tonnes/p.h. 120 p.s.i.
	Min.	5,900 tonnes/p.h. 100 p.s.i.

Inert Gas System: Vessels equipped with inert gas system are to depressurise tanks before berthing in order to allow for sampling and ullaging upon arrival and after completion of discharge to check remainders on board. Pressurisation of inerting system should be resumed as soon as ullaging and sampling are completed and throughout the discharge.

Crude Oil Washing: COW is usually acceptable if the ship can maintain an average flow rate of no less than 7,400 tonnes/p.h. (100 p.s.i. at ship's rail throughout discharging). However, COW is subject to the terminal's approval depending on both operational circumstance and if this operation has been previously carried out by the vessel.

When vessel requests permission to perform COW the Master must respond in writing to the "Crude Oil Wash Check-off List".

COW of slop tank is prohibited.

Crude Oil Wash (COW) – Check-off List: Vessels requesting permission to perform crude oil wash while unloading at Ain Sukhna, are requested to respond to the following check-off list:

Inert gas system is fully operational and tested.

Each tank will be positively pressurised and method of recording pressure will be available.

Each tank will be kept below 8% oxygen before and during operation.

Inert gas system flue gas oxygen content will be continuously monitored and maintained below 8% oxygen.

Oxygen alarm in cargo control room set to give visual indication when to abort crude washing.

Pressures in cargo tanks are available to vessel's control room personnel.

Washing systems have permanent steel pipework and will be pressure tested to 10 to 15 p.s.i. above expected working pressure but to minimum of 150 p.s.i. prior to use.

All tank openings are sealed and remote tank gauging system is operational.

All necessary throttling of discharge for crude spraying will be done on vessel's valves.

There is a responsible designate person in charge of operation. (Give name.)

Effective communication will be maintained between vessel and shore.

Water will not intrude into the crude wash cycle.

Washing to be commingled and discharged at the same time with the rest of the cargo.

Previous crude wash exprience of key personnel is (list).

Tanks crude washed last 2 voyages are (list).

Any additional vessel requirements or comments.

Emergency Communication: If ship-to-shore communication fails the ship's whistle shall be sounded continuously. Discharging shall be immediately stopped and will not be resumed until communications have been re-established.

Overside Lighting: During night discharging sufficient overside lighting must be provided to readily detect any oil spill so that immediate appropriate action may be taken.

International Code of Signals: During discharging operations the following signals shall be displayed:

By Day : The International Code flag "B".
By Night : A red light visible all round the horizon for distance of at least 2 miles.

Unloading Procedures: Upon being informed by the vessel's Master or responsible officer that the vessel is ready to start discharging, the Mooring Master will contact the Terminal Control Room to co-ordinate the commencement of unloading in accordance with the terminal's instructions.

The control room operator will normally give a "standby warning" by VHF approximately 10 minutes before the shore tanks are ready to receive cargo.

When the request to commence discharging is received the Mooring Master will ensure that discharging commences at slow speed. This starting procedure will always be adhered to.

Discharging will commence utilising 1 pump only with circulating system and when it has been confirmed that there is no significant rise in pressure on the discharging line which could indicate a blocked or closed valve on the shore or ship's discharging system, the crude oil will be discharged at the steady operating flow previously agreed upon.

Should there be any significant rise in pressure, discharging must be immediately stopped. The ship will be advised to check the on-board systems, take any necessary remedial steps and inform the terminal's control room.

At the same time the underwater and floating hoses should be checked to ensure that there are no obstructions.

Should the Master be requested to increase or decrease the cargo discharging rate this should be promptly implemented provided the vessel's pumps are capable of an increased rate.

SUMED may allow vessels to simultaneously ballast while unloading provided they are equipped to properly segregate the ballast and avoid any possible commingling with the cargo. Pumping ballast water into the sealine is strictly prohibited.

Any suspension and subsequent resumption of discharging of cargo must be logged both ashore and in the "Tanker Time Sheet".

All events regarding mooring, commencement, termination of unloading, stoppages, if any, and unmooring are both logged and recorded ashore at the terminal's control room as and when they are received from the Mooring Master.

These events shall jointly be logged in the Tanker Time Sheet by the vessel's Master and SUMED's Mooring Master.

Vacating Berth: Vessels shall vacate berth immediately after disconnection of hoses.

Emergency Shut-Down: In case of emergency such as fire, sudden deterioration of sea and weather conditions, failure in ship to shore communications, etc, the discharging operations must be immediately suspended at the request of the Mooring Master. The ship's discharging pumps must be stopped immediately, the butterfly valves of the floating hoses and the manifold valves must be closed.

Depending upon the reasons causing the emergency, the ship's Master and Mooring Master will decide whether or not to disconnect the hoses and vacate the berth. In case of dispute the final decision will be taken by the Mooring Master.

Sampling: Representative samples of the cargo will be taken either from the vessel's cargo tanks or from the online automatic samplers.

The samples will be divided into 3 equal portions of about 1 gallon each, one portion will be handed to the quality control laboratory, the second to the ship's Master (sealed by SUMED) and the third retained by SUMED for 60 days (sealed by the Master).

The ship's Master will sign a receipt on receiving the ship's sealed and stamped container of the sample.

MEDICAL: Neither medical nor hospital facilities are provided by SUMED. In case urgent medical assistance is required the vessel should contact SUMED's Harbour Master by VHF radio. Private doctors and facilities are available at Suez via Government Agents.

CONSULS: Consular or diplomatic representatives for most maritime nations are in Cairo.

REPAIRS: Masters of vessels discharging at Ain Sukhna Terminal are instructed that under no circumstances may engines be shutdown for repairs whilst their vessel is moored to the SBMs. There are no facilities at Ain Sukhna Terminal for repairs. Repair facilities are available at Suez.

It is emphasised that all vessels at the SBMs must be prepared to clear immediately on instructions from the Mooring Master.

REPATRIATION: Crew changes are only permitted via Government Agent.

SHORE LEAVE: There is no shore leave for personnel of vessels whilst at Terminal.

GARBAGE DISPOSAL: Not available at present, but will be available during 1993 and will be carried out by Sumed.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Egyptian Pound (LE.).

WEATHER:
Climate: The climate in the Ain Sukhna area is generally good. Summers are hot and dry and winters are relatively cool.

The visibility is usually excellent with few sand storms and infrequent fog. Sub-zero temperatures are unknown and there are very few rain squalls.

Summary of Weather Statistics (1884 – 1967):

Average rainfall year	0.8 in.
Mean maximum temperature	84°F (29°C)
Mean minimum temperature	62°F (16.7°C)
Extreme maximum temperature	111°F (44°C)
Extreme minimum temperature	35°F (1.7°C)
Average relative humidity	60%

Winds: The prevailing winds at Ain Sukhna are from the N.W. throughout the year.

Tides: The tidal range is up to a maximum of 7.4 ft.

Waves: The estimated characteristics of the 100 year extreme waves are:

Maximum height	12.0 ft. (3.7 m.)
Maximum crest elevation	11.0 ft. (3.3 m.)
Period	7.5 secs.
Length	280 ft. (85 m.)
Speed	22 knots (41 km./hr.)
Direction from	North

Tidal Streams: At Ain Sukhna the tidal streams set parallel to the coast line Northwards on the flood tide and parallel to the coast Southwards on the ebb tide. Maximum rate is 0.5 knots (0.9 km./hr.) at the surface.

Currents: There is no fixed current in this area and any flow is caused entirely by the prevailing tidal stream and winds.

Sea Salinity: The Red Sea and Gulf are extremely saline and salinity is around 40,000/50,000 parts per million.

Sea Temperature: The surface temperature of the sea ranges between 66°F (19°C) in February and 80°F (26.7°C) in August.

GENERAL:
Navigation: When entering, manoeuvering or leaving the Port Limits of Ain Sukhna, the Master has to conform with the conditions setforth in this Manual and has to adhere to the 1972 International Regulations for preventing Collisions at Sea which will be complied with at all times.

The Master guarantees that his vessel fulfils all navigational and worthiness conditions in particular those required for vessels carrying dangerous cargo, (crude oil) in accordance with the provisions setforth in the Appendix for vessels carrying Dangerous cargo annexed to Rules of Navigation of the Suez Canal Authority to the extent that such provisions are applicable.

Master should submit the respective certificates and declarations whenever required in this respect.

Helicopters (available in emergencies): Should the services of a helicopter be required by SUMED for any purposes whatsoever the vessel will be given a minimum of 30 minutes warning notice before the helicopter's approach in order that cargo operations can be stopped and all tanks and vents closed.

A responsible officer should be on deck to assist the helicopter in making the approach to the vessel. Although the safety of the helicopter remains at all times the responsibility of its pilot, helicopter services shall not be employed in any event without the express prior consent of Shipper and vessel's Master.

Supplies: Stores and supplies are available through an Agent and can be delivered from Suez to Ain Sukhna anchorage area after unloading but entirely at the vessel's own risk.

Government Officials: A.R.E. officials, such as Customs Director, Quarantine Officer and Immigration Officer are stationed at Ain Sukhna. Should Customs guards be stationed on board vessels whilst moored it is expected that vessels will extend all courtesies to them and/or other officials while on board.

Ship's Readiness: This terminal is an open roadstead and therefore, during the time a ship is moored, the engines must be ready with full power for immediate use.

Vessels at berths must clear immediately upon advice of the Mooring Master or as directed by SUMED's terminal superintendent. Ship's personnel should be at their respective stations at all times during mooring, unmooring and cargo transfer operations.

Courtesy Flag: All vessels are required to fly A.R.E. Ensign on the foremast during daylight hours.

Quarantine Regulations: The rules governing quarantine regulations are the same as for Suez.

Unauthorised Craft: The presence of unauthorised craft alongside is extremely hazardous.

SUMED prohibits the boarding of individuals other than those authorised to do so in the bona fide conduct of the vessel's operation. No unauthorised person is allowed to board the vessel whether at anchorage or while moored.

Contraband: SUMED prohibits unauthorised craft from coming alongside vessels. To avoid the possibility of undesirable items getting aboard vessels, it is requested that Masters discourage craft coming alongside whilst the vessel is in the terminal.

AGENCY SERVICES: Not required under normal circumstances.

AUTHORITY: Arab Petroleum Pipeline Company (Sumed), 431 El-Guish Avenue, Loran, Alexandria, Egypt. Postal Address: P.O.Box 158, El-Saray, Alexandria, Egypt. *Tel:* 5866723, 5866711, 5866712. *Telex:* 54033, 54108 Sumed Un. *Contact:* Captain A.Sultan, Sumed Marine Manager.

Port Authority: Ain Sukhna Terminal, Postal Address: Sumed – Suez. *Tel:* (062) 221918 – Suez. *Telex:* Headquarters Alexandria. *Contact:* Captain M.Badawi, Ain Sukhna Marine Manager.

ALEXANDRIA (Including El Dekheila): 31.09 N. 29.53 E. (See Plan)

DOCUMENTS:

4 copies of Crew List.

Complete set of Manifests covering all cargo on board showing names of Shippers and Consignees.

4 copies List of Passengers in Transit.

Landing cards for passengers landing finally in A.R.E. and for those landing in A.R.E. in transit.

4 copies List of passengers finally landing in A.R.E. (if any) together with their addresses in A.R.E.

Deck log books showing date of last call at a A.R.E. port, completed up to the time of arrival.

For Quarantine: Quarantine Questionnaire in duplicate (Form No. 15 Q.A.) showing all ports of call, as well as dates of sailings for the last 30 days, nature of cargo on board, destination, as well as sickness among crew or passengers, if any, specially when it is presumed that the sick will be hospitalised. These forms can be filled on arrival if not available on board before arrival.

1 Crew List and 1 Passenger List.

Derat Certificate should be handy for inspection.

Clearance from Last Port.

For Immigration Officer:

Arrival Immigration Form, duly completed.

1 Passenger List.

List of Passengers Finally Landing, in duplicate.

Crew List.

Valid passport with entry visa is required for landing in A.R.E. for passengers landing. Emergency visa can be granted on arrival if so required.

For Customs Use:

Bonded Stores List, in duplicate.

Crew List and Passenger List in duplicate.

PILOTAGE: Compulsory. Pilot boards off harbour entrance. International code signals used.

Vessels are not to proceed from the waiting area (Lat. 31° 12.6' N., Long. 29° 44.5' E. with radius of 1.5 miles) without a Pilot onboard.

RESTRICTIONS: Entrance channels 13.0 m. depth × 220 m. width and 9.14 m. depth × 91.4 m. width. Arriving vessels should keep 50 miles offshore between sunset and sunrise.

MAX. SIZE: Up to 32 ft. draft at general cargo berths in Alexandria.

Anchorage: Alexandria Inner Anchorage in Western port can accommodate vessels up to:

Length: 229 m. (750 ft.).

Draft: 38 ft.

Such vessels can discharge into barges on condition that kind of cargo is allowed to be unloaded into barges instead of at berth.

Vessels with length/draft exceeding the above can be accommodated at Dekheila Harbour.

HEALTH: On entering, vessels must hoist the International Quarantine Signal for compulsory quarantine. Any sickness must be reported to the doctor. The Quarantine Doctor meets ships whilst entering the port and ships are boarded in turn.

In the event of a vessel arriving from a port that has been internationally declared infectious and the incubation period has not yet expired at the time of the ship's arrival at an A.R.E. port, the vessel is put under compulsory quarantine, moored at an isolated berth and no shore contact is allowed. Nevertheless the ship can still carry out her normal operations on condition that all shore personnel are holding valid vaccination and/or inoculation certificates issued by the Quarantine Administration. The ship's personnel should also carry International Vaccination and/or Inoculation Certificates. Final landing passengers, not carrying such certificates, will be landed under quarantine supervision and will be kept isolated at the lazarette until incubation period is over.

Pratique may be granted prior to ship's arrival provided the following conditions are adhered to:

1. The vessel must be a regular liner known to the Quarantine Authorities and have a doctor on board.
2. Details shown on the Quarantine Statement should be wirelessed to the Quarantine Authorities 24 hours prior to ship's arrival.
3. Masters of vessels must declare before their arrival any accidents, which might have taken place on board prior to the arrival in port.
4. The ship must not have called at any infected port.

RADIO: Alexandria Radio, call sign SUH, operating 24 hours daily on 444, 500 and 8578 kHz and between 0600 to 1800 GMT on 12,974 kHz. Also harbour VHF Channel 16.

TUGS: 5 tugs available up to 1,200 h.p.

BERTHING: Alongside quays in depths up to 39 ft.

Refrigerated store with capacity of 6,000 tons.

Ro/Ro facilities available.

Cement to silos and bagged in heavy cloth (no paper bags permitted).

Coal: Discharged at Berths No. 63 and 64. Max. draft 33 ft. 4×25 ton cranes. Rate 10,000 tonnes per day.

Cranes: Capacity 5 tons-50 tons. Floating cranes of 70 tons, 100 tons and 120 tons capacity.

Fertiliser Terminal: Length of quay 447 m. Depth alongside 10.0 m.

Timber: Handled at 3 quays. Depths 7.0 m. – 9.0 m.

Grain: 2 silos, 1×48,000 tonnes and 1×100,000 tonnes. Depth alongside 10.0 m. Max. size 40,000 d.w.t.

El Dekheila: Located 7 km. West of Alexandria and managed by Alexandria Port Authority.

Industrial Port: Access channel: Length 3.5 km. and depth 20.0 m. Turning circle: 750 m. diameter and 20.0 depth. Approach channel: Width 250 m., depth 20.0 m. One jetty (2 berths). Length 640 m. Depth alongside: Inner Berth 16.0 m. Outer Berth 20.0 m. Max. Size: 60,000 d.w.t. and 160,000 d.w.t. respectively, max.draft 18.0 m. An additional berth to handle vessels up to 250,000 d.w.t. may be constructed later. 2×30 ton capacity grab cranes and 2 belt conveyors for handling iron ore pellet at 1,000 t.p.h. each (average daily 11,000 tons)(900 t.p.h. for coal).

Commercial Port: Access channel 1.2 km. in length is a branch off the access channel to the industrial port. Depth of channel 14.0 m. Width 210 m. – 150 m. Commercial port will have over 1,500 m. of berthing space with 15.0 m. of water alongside. Cargoes to be handled will include containers, general cargo, timber, chemicals and Ro/Ro vessels. Available: 300 m. of berthing space with depth 15.0 m. and max.draft 13.0 m.

CONTAINER FACILITIES: Length 700 m., depth alongside 14.0 m. 3×32 tonne container gantry cranes, 2×32 tonne transtainers and 4×42 tonne forklifts.

MEDICAL: All facilities available. International Vaccination Certificates required.

TANKERS: Petroleum Basin: in West part of Outer Harbour, Berth Nos. 3 and 4, depth alongside 38 ft., max. length 700 ft., draft 35 ft. Berth Nos. 3 and 4: in East part of Outer Harbour. Stern to moorings.

It has been reported that tankers are required to take on ballast in excess of that deemed to be necessary by the Master, even in fine weather. One Master was ordered to bring his forward draft to 21 ft. Once the vessel was alongside a charge was made for deballasting the vessel.

LNG/LPG: Max. LOA 122 m. Max. draft 28 ft.

FRESH WATER: Available by barge, and alongside most quays.

FUEL: Available by barge.

REPAIRS:

Alexandria Shipyard: Builds vessels up to 40,000 tons. One drydock capacity 85,000 d.w.t., cranes with up to 30 tons capacity. One drydock capacity 20,000 d.w.t., cranes with capacity up to 30 tons. Fully equipped engineering workshops capable of carrying out extensive repairs alongside quays length 1,200 m. Depth alongside 11 m.

Alexandria Ship Repair Co.: Ship repairs including engine repairs and boiler repair. Fully equipped workshops.

The Egyptian Shipbuilding and Repairs Co.: Floating dock for ships up to 12,000 d.w.t. 100 ton floating crane. All types of hull and machinery repairs possible.

HOLIDAYS: See "Suez Canal".

GARBAGE DISPOSAL: Drums are provided alongside and are collected every morning by Port Authority. Contact Alexandria Port Authority. Tel: 800100.

WASTE OIL DISPOSAL: Three barges are available for waste oil disposal of 4 tons, 25 tons, and 250 tons capacity. Charges are U.S.$ 10/ton. Contact Marine Services Department of Alexandria Port Authority. Tel: 800100/807335.

SEAMAN'S CLUBS: Seaman's Club situated at Sidi-el-Metwally.

DEVELOPMENTS: Control tower with radar and VHF being constructed.

SHIPMASTER'S REPORT: October 1987.

Documents:

12 copies Crew List.

2 copies Crew Declaration.

2 copies Manifest (Ship's Stores, Bonded Stores, Currency, etc.).

1 copy Health Declaration.

8 copies Cargo Manifest.

All Passports.

Vaccination Certificates.

Port Health Officials board on arrival.

Immigration boarded with the Security Police about 3 hours after arrival. They require all passports and issue shore passes. Prior to departure they again check all passports and collect all shore passes. The Security Police seal the radio room.

Customs Officers boarded 24 hours after arrival. They sealed the bond and left the beer room open.

Clearance on departure is given by Agent and endorsed by Immigration. Pilot sights Clearance before departure.

Pilotage: Vessels always take 2 pilots. One for Great Pass and one for Inner Harbour (Berthing). Great Pass Pilot boards about 1 mile W.N.W. of Great Pass Beacon from large launch with blue hull and white superstructure (ex-naval craft).

Berthing Pilot boards inside Outer Breakwater near the Petroleum Harbour, or off New El Dekheila Mineral Jetty. On departure, Pilot leaves at the same position.

The Quarantine Flag (Q) and Pilot Flag (H) must be displayed.

Great Pass Pilot leaves at Great Pass Beacon. No night pilotage for tankers. Pilots operate in winds up to about Force 6, although swell is the important criteria.

Approaches: The coast is low and featureless. Ras El Tin Lt. observed at 20 miles. El Agami Island and El Atta Fort observed on radar at 30 miles.

Channel: Depths are as charted. The navigation marks are poor, buoys either out of position or unlit, Great Pass Beacon destroyed.

The new channel of 20 m. depth to El Dekheila Mineral Berth is reported by pilots to lie 153°, commencing just West of Great Pass Beacon to 31° 09.20' N., 29° 48.85' E.

Anchorage: As per BA. Chart No. 243 Waiting Area. Very exposed, in Winter months, can be untenable due to wind and heavy swells.

Dependent on density of ships, most small vessels anchor in S.W. corner of Waiting Area. Vessels can approach coast at night, no restrictions advised.

We tried to contact Port Control on VHF Channel 16 at 0300 hrs. without success, so sent telex on anchoring. We had previously advised Port Authority by telex of approach course and speed and ETA at Waiting Area. Only 2 ships waiting at anchor on this visit.

VHF: Channel 16 seems to be used for all Pilot and Port operations. It is difficult to raise Pilots/Port Control at night or before 0600 hrs. Port Authority has telex which is useful - 54310 APA UN.

Tugs: 8 tugs of 2,500 h.p. available.

Port Regulations: Up to 270 ft. no tugs required. 270 ft. to 400 ft., 1 tug required. Over 400 ft., 2 tugs required.

For Petroleum Harbour we had one tug fast forward, using ship's line, entering and leaving. Tugs are well handled.

Berthing: Butane for E.G.C.P. discharged at Berths No. 1 and 2 on Quarantine Breakwater in Petroleum Harbour.

Both berths in a poor state of repair, fendering also poor. Vessel berthed port side alongside. Starboard anchor let go to 2 shackles approaching berth which keeps bow off forward landing (See BA. Chart No. 3119).

Moorings: 3 head lines, 2 stern lines, 2 stern back springs and 2 head back springs from after end of main deck. This seems to work with no hull contact with unfendered concrete.

Berths exposed to N.W. winds. Ship's gangway used. Petroleum Harbour can take up to 750 ft. length and 11 m. draft. (Re-checked several times as Echo sounder and chart indicate considerably more water. With Easterly wind depth can fall about 1.0 m.)

Berths as per BA. Chart No. 3119, Berth No. 3 (Product Pier), vessels berth head in. Berths Nos. 4 and 5 (Crude Oil), vessels berth head out. Berths Nos. 85, 86 & 87 now flat faced to make stockyard for cattle ships, also used to load oil products from road tankers.

In Outer Harbour area 10 m. is generally the maximum draft, and Pilots report channel dredged to 13.4 m. and water as charted elsewhere. Pilots report greater draft handled at Container Quay (31° 10.3' N., 29° 51.9' E.)

New LPG (Ethylene) Sea Island in position 31° 08.9' N., 29° 49.13'E. Berthing on West side of Island, head out starboardside to.

One Pilot stays onboard throughout stay at Island with 1 tug on standby nearby.

Mineral Pier at El Dekheila now in full operation with berthing on west face, port side too, head in. Pilots report 20 m. depth alongside. So far, vessels up to 110,000 d.w.t. handled, for iron ore and coal serving new steel mill nearby.

Cargo Handling: Ambient temperature. Butane discharged for domestic use at Berths Nos. 1 and 2 into 3 × 3,600 cu.m. and 4 × 1,000 cu.m. pressure tanks situated 4 km. from berths. 6 in. line – 300 ASA coupling. Rubber hose, ship's derrick required.

Maximum back pressure of 10 Bar allowed. With 5 pumps we reached 8.5 Bar. With 2 pumps and a booster pump we again reached 8.5 Bar.

No Surveyor as such, Receiver's Representative is very particular over gauge readings and checking sample cocks for liquid on completion. Density in air differed substantially when compared with Bill of Lading in vacuum.

Generally maximum size of vessel handled is 3,000 cu.m. LPG imports for domestic use will probably stop next year when natural gas comes on stream. At present, there is one shipment every 10 days, mainly from Augusta, Sicily. VHF Channel 6 used to contact E.G.C.P. and Channel 74 for "Petrogas", both are butane receivers.

One Receiver's Representative onboard throughout, cabin required.

At LPG (Ethylene) Sea Island the maximum size of vessel so far handled is 2,600 cu.m. Believe product heated to minus 60°C. on platform before pumping to Chemical Plant about 1.5 km. onshore, through undersea pipeline. Sea Island opened in June 1987. I believe it is taking in feedstock over 1 year then maybe exporting.

Fresh Water: By barge at berths and inner anchorage, and in calm weather at El Dekheila area and Waiting Anchorage.

General: Difficult to contact agent in port.

Make sure "everything" locked and sealed. We kept just one door unlocked. Lifeboats half out and all fire hoses charged and 2 ship's crew on duty at night.

Not necessary to employ watchman or use garbage boat, however you will be encouraged to do so.

Rat guards are required on all lines.

Development/Changes:

1. El Dekheila Mineral Jetty now open, berthing on West face, two large grab gantries in use.
2. Container Quay under construction just south of El Agami Island.
3. Area to West of New Mineral Jetty all built up with flats and houses. Believe El Dekheila Airport no longer exists.
4. Petroleum Harbour Berths Nos. 85,86 and 87 formed into Livestock quay by extending Quarantine breakwater inshore face line 150° to shore line and infilling.
5. Signal Station Tower (Conspic.) in position 31° 09.65' N., 29° 51.10' E. just behind livestock jetty, although of modern construction with microwave dishes, Pilots report not used.
6. New Port Authority Control Tower (Conspic) with Radar Scanner on top at Coal Quay (31° 11.25' N., 29° 52.10' E.).
7. Outer breakwater S.W. Lt. in position 31° 09.92' N., 29° 50.68' E. Fl. R. 4 secs.
8. Quarantine breakwater lighthouse in position 31° 09.93' N., 29° 50.95' E. Qk. fl. 2 G. ev 3 secs.
9. Kamaria Port (works in progress 1984) completed with 2 moving discharge suckers associated with adjacent grain silo.
10. Expunge hulk in position 31° 10.12' N., 29° 51.22' E.
11. Floating Dock located in position 31° 09.10' N., 29° 48.18' E.
12. LPG Terminal located in position 31° 08.90' N., 29° 49.13' E.
13. Expunge Approach Buoy in position 31° 10.95' N., 29° 47.55' E.
14. Fairway Buoy in position 31° 10.25' N., 29° 48.15' E. is unlit.
15. Great Pass Beacon partly destroyed and unlit has been replaced by light in position 31° 10.00' N., 29° 48.45' E.
16. No. 8 Buoy in position 31° 09.70' N., 29° 49.65' E. is unlit.
17. There is a new light at Head of New Mineral Jetty (Fl. G.) in position 31° 08.38' N., 29° 48.48' E.
18. There are 2 new unlit pillar buoys (Green) in position 31° 09.40' N., 29° 49.75' E. and 31° 09.20' N., 29° 48.18' E.
19. Naval Base in position 31° 11.20' N., 29° 51.50' E. is a prohibited area.

AUTHORITY: Alexandria Port Authority, 106 El Horreya Avenue, Alexandria, Egypt. *Tel:* 4834321/24 (4 lines). *Telex:* 54310 APA UN. *Contact:* Rear-Admiral Medhat Ghanem, Chairman. Admiral Hamdy, General Manager. Admiral Mahmoud Yousef, Harbour Master.

DAMIETTA: 31.29 N. 31.45 E. (See Plan)

LOCATION: Damietta Port is located on the estuary of the River Nile, approximately 70 km. West of Port Said and 250 km. East of Alexandria. Access is via an entrance channel from the North which is 11 km. long and 300 m. wide, reducing to 250 m. when approaching the breakwaters. This channel is marked by 18 buoys. Depth is 15 m. The port is linked to the River Nile by a navigational channel which is 4.5 km. long, 90 m. wide and 5.0 m. deep.

The East breakwater extends for 540 m. and the West breakwater for 1,500 m.

DOCUMENTS:

Arrival Declaration.

Crew List.

Cargo Manifest.

Cargo Plan.

Health Certificate.

IMO Cargo.

Bills of Lading (To be presented with copies of the Manifest at time of report).

Berthing Request.

Letter illustrating vessel's ETA.

Vessel Travel Letter.

Letter from Customs Department.

Letter from Quarantine Department.

Travel Licence sealed by Marine Inspection and Control Department.

PILOTAGE: Compulsory for all vessels over 300 g.r.t. Vessels proceeding to Damietta Port are to inform Damietta Port Authority by cable 7 days and 24 hours before their arrival. On arriving at the waiting area, the Master must call the Pilot Station by VHF Channel 16 and advise time of arrival, draft, length, cargo, etc. Vessels are advised to approach through the Northwestern side of the waiting area. Vessels are not allowed to approach the Access Channel without a Pilot on board.

ANCHORAGE: The Waiting Area is located about 11 km. North of the port entrance and is marked by 5 light buoys.

APPROACHES: The Entrance Channel is 11 km. in length, 250 m. – 300 m. wide and has a depth of 15.0 m.

MAX. SIZE: The port can receive vessels up to 250 m. LOA, with draft 12.5 m. for bulk and container vessels, and draft 11.0 m. for general cargo vessels.

HEALTH: Usual international health regulations are to be observed.

RADIO/VHF: Port Authority on VHF Channel 16 throughout 24 hours, working on Channel 14.

TUGS: 4 tugs of 1,500 h.p. – 2,200 h.p. available.

Tug Requirements:

Vessels up to 122 m. require 1 tug.

Vessels over 122 m. require 2 tugs.

A third tug is available at Master's request.

Ship's lines used on departure.

BERTHING:

Berths No. 1 – 4: For container vessels – Length 250 m. each and depth 14.5 m.

Berths No. 5 – 8: For dry bulk and general cargo vessels – Length 200 m. each and depth 12 m.

Berths No. 9 – 12: For general cargo – Length 200 m. each and depth 12.5 m.

Berths No. 13 – 14: For bulk grain carriers – Length 300 m. each and depth 14.5 m.

Ro-Ro berths: At Berth No. 1 and Berth No. 8.

Loading and discharging at bulk berths by shore equipment.

For general cargo, by shore equipment or ship's own gear.

For container berths by terminal equipment.

CRANES/EQUIPMENT:

4 gantry cranes for containers of 40 tons each operated by Damietta Container and Cargo Handling Co. (DCHC).

1 × 30 ton telescopic crane.

4 × 40 ton mobile cranes.

Cargo Gear owned by DPA: 33 forklifts 3-5 tonnes capacity and one lift and transport loader. Cargo gear owned by DCHC: 13 trucks (180-210 h.p.), 19 top-lifters ranging form 15-40 tonnes and 9 forklifts 3-10 tonnes.

96 Reefer points.

BULK HANDLING FACILITIES:

Silo with total capacity of 100,000 tons of grains.

Two berths are devoted to serve the silo and can accommodate vessels up to 80,000 d.w.t.

Two automated, mobile extractors with a capacity of 700 tons/hr. each.

Means of extracting grains from the silo by trucks, cargo trains, and river barges.

5,000 sq.m. shed to pack grain in sacks at a capacity of 3,000 tons/day.

Computerised and remote control for all loading, transport, and extracting operations.

Electronic and ground scales for outgoing and incoming grains.

BRIDGES: None.

STEVEDORES: Stevedoring undertaken by Load and Discharge Co. which is affiliated to DCHC.

MEDICAL: Hospitals available at Ras el Barr (6 km.) and Damietta (8 km.). Inoculations and vaccinations can be carried out. Advance notice only required in an emergency.

DENSITY: 1015.

FRESH WATER: Available at berths.

FUEL: All grades available by barge.

CONSULS: At Port Said.

DRY DOCKS: Shiplift for up to 450 tons.

REPAIRS: Minor repairs undertaken by Damietta Port Authority.

SURVEYORS: Lloyd's and ABS.

CUSTOMS ALLOWANCES: 200 gms. tobacco or 200 cigarettes and one litre of spirits permitted for each crew member to be held out of bond per week.

AIRPORT: Port Said 60 km., Cairo International 180 km.

TIME: GMT plus 2 hours.

HOLIDAYS: Mouled el-Naby, Sham el-Nessim, Labour Day, Revolution Day, Ramadan Bairam, Armed Forces Day (October 6th), Courban Bairam, Hejra New Year.

All holidays can be worked as overtime.

POLICE/AMBULANCE/FIRE: Police 057-325934; Ambulance 057-322217; Fire 057-325967.

EMERGENCY CO-ORDINATION CENTRE: Contact Pilot Station at Damietta Port Tower by VHF Channel 16, or telephone 057-325964.

SERVICES: Firefighting tugs and trucks are available, also international telephone, post and telex services.

BANKS: The Port Authority deals with following banks: National Bank of Egypt, Damietta branch; National Investment Bank and Central Bank of Egypt, Cairo main branches.

STORING: See "Prelims".

1. Ships can be stored by trucks or barges.
2. Yes.
3. Yes.
4. Yes.
5. Yes.
6. Yes.

SHIP SUPPLY SERVICES: Available by boat in the Waiting Area or by shore facilities alongside the berths.

SHORE LEAVE: Crew members are allowed ashore within range of Damietta Town. Short/quick visits to adjacent cities can be arranged through Agent.

IDENTIFICATION CARDS: Seamen's Passports are sufficient.

GARBAGE/WASTE DISPOSAL: Following facilities available:

(1) For dirty ballast – 700 tonnes capacity sea tanker.
(2) For oily bilge water – 700 tonnes capacity sea tanker.
(3) For food waste and cargo associated waste – Garbage vehicle with 10 cu.m. capacity.
(4) For maintenance and other types of waste, two floating units for waste disposal and sediment collection.

OIL POLLUTION: Following equipment used:

(1) Purification boat for oily spots removal.
(2) Self-propelled unit for oil/waste collection.
(3) Static skimmers.
(4) Flammable gas detection devices.
(5) Disperser for unposinous chemicals.
(6) Floating oil booms to encircle oil slicks.

CURRENCY: Egyptian Pound (LE.). Approximate exchange rate in May 1996:

Currency	Exchange Rate
U.S.Dollar	3.39
Pound Sterling	5.34
French Franc	0.69
German Mark	2.40
Italian Lira (100)	22.00
Japanese Yen (100)	3.15
Australian Dollar	2.70

DELAYS: None.

DEVELOPMENTS: Following developments executed:

Establishment of 50,000 tonnes capacity grain bulk warehouse, raising total handling capacity of grain bulk at the port to 150,000 tonnes.

Construction of a new warehouse totalling 5,000 sq.m. Completion of a similar warehouse is underway.

Public utilities networks increased and upgraded to serve new areas used by investors.

Marine pollution facilities modernised and capacities boosted.

A new pilot boat purchased, also another tug is under construction and scheduled for delivery late 1996.

A Free Industrial Zone to the West of the port area inaugurated, totalling 195 acres.

Following projects are underway:

Container yard totalling 214,000 sq.m. to enhance container storing capacities, especially transit containers.

The 4 gantries are being upgrades to match Post-Panamax container motherships.

Preparation of a Commercial Free Zone to the East of the port area of 500 acres.

Extension of silo's berth by 850 m. to reach 1,450 m. in length with draft of 14.5 m.

AUTHORITY: Damietta Port Authority (DPA), P.O. Box 13, Damietta 34511, Egypt. *Tel:* 057-325940/41/42/45. *Telex:* 63024 Dampa UN. *FAX:* 057-325930. *Contact:* Rear-Admiral Ossama Kamel, Chairman. Commodore Hasan Rashid, Vice-Chairman.

EAST ZEIT TERMINAL: 27.51 N. 33.36 E.

LOCATION: The C.A.L.M. is located in position Lat. 27° 51' N., Long. 33° 36' E. and is approximately 85 km. North of Hughada.

ANCHORAGE: Tanker should call East Zeit Terminal before approaching and enquire if necessary to drop anchor in the anchorage area.

Vessel is not permitted to anchor outside the anchorage area.

Waiting Area: South of C.A.L.M. The Southern half of a circle of 1 mile radius around position: Lat. 27° 48.5' N., Long. 33° 37.0' E., depth 20 m. – 44 m. with 39 m. at centre.

RESTRICTIONS: No night berthing. Unberthing at any time.

MAX. SIZE:

Max. 85,000 tons d.w.t. fully loaded.

Min. d.w.t. of tanker 35,000 tons

Max. length 838 ft., but distance bow to manifold not greater than 450 ft.

Max. draft 60 ft. (depth 95 ft.).

Also see "Notice".

RADIO/VHF: Tankers calling at East Zeit Bay must send ETA message 72, 48 and 24 hours before arrival at the terminal to "Esso Suez Inc.", office Telex No. 21148 Esosz Un, addressed to "Exploresso" for East Zeit Terminal attention Marine Supervisor, via any coastal radio station: Port Said (Suez and Kosseir). The Notices must also be sent to the Egyptian General Petroleum Co. (Supply Sector).

ETA messages to Esso Suez Inc. should give the best estimates of ship's arrival time at the terminal. This ETA message should also include a definite statement of details of any equipment required from shore for connecting 12 in. floating hoses. Bearing in mind that such hose needs tanker to be equipped with crane classed/certified up to 10 tons capacity.

Master must call East Zeit Terminal 4 hours prior to arrival on VHF Channel 13 which is considered the calling (by the vessel's side only) and working channel, Channel 16 may be used in an emergency.

BERTHING: *Terminal Facilities:*

C.A.L.M. (Catenary Anchor Leg Mooring).

Cargo hose 16 in. type, with camlocks.

Max. loading rate for crude oil 3,000 tonnes/p.h.

Loading from port side.

Tankers must be equipped with a derrick with minimum 10 tons capacity.

If cargo hose or connection is different, Master should contact "Esso Suez Terminal Office" 72 hours prior to his arrival at East Zeit stating the tanker hose and connection type.

Mooring facilities on tankers's bow should be ready prior arrival. Tanker must be trimmed about 4 ft. by the stern and have adequate ballast for manoeuvring.

Vessels not fitted with either a Smit Bracket or chain stopper must have one set of bitts on the foc'sle head certified to S.W.L. of 100 tons.

BALLAST: *Deballasting Facilities:* Available at East Zeit Terminal. Shore facilities can accept up to 75,000 bbls. over 12 in. floating hose connected for this purpose. If Master will require deballasting of clean cargo tanks ballast while loading in operation, letter should be submitted to the terminal that all bulkheads are fully tight and no leakage to avoid any contamination. Master on behalf of Owners and/or Charterers will bear all costs and expenses for cleaning operations required to remove any pollution which might occur due to pumping ballast overboard as well as a fine of U.S.$15,000.

Note: Master advised that ballast facilities were not available in November 1992.

NOTICE: S.B.M. can accommodate tankers up to 128,000 tons d.w.t. under the following restrictions:

(a) 7 – 10 days advance notice for lifting.

(b) During loading operation, tankers to maintain 35% of its deadweight, subject to ensuring that ship's propeller is fully submerged.

(c) Maximum wind 25 knots.

(d) Tanker trim upon arrival is 4 ft. – 6 ft. by stern.

(e) Maximum wave height 6 ft.

(f) Maximum current 1.0 knots.

(g) Tanker to keep 30 ft. draft limitation during loading.

(h) Mooring shall be attempted during North to South current conditions only.

(i) Tanker shall approach the S.B.M. from South only.

(j) No mooring attempts shall be made when the prevailing wind is from S.E. and S.W. directions and is stronger than the effective current.

SHIPMASTER'S REPORT: August 1989.

Vessel: 89,000 tons d.w.t.

The Pilot for the Esso SBM prefers vessel to arrive at about 0400 hrs. (i.e. berthing at daylight), so it is not necessary to delay vessel to arrive at 0600 hrs.

Pilot will board between the 2 SBMs. The N'ly SBM (red) is for Esso cargoes, and the S'ly SBM (yellow) for SUCO cargoes.

While mooring to SBM, 2 seamen are required to standby aft with a heaving line, ready to give a mooring line to towing tender if necessary.

Papers arrive on board about 4 hours after completion of loading. Once loading finished, ullages taken and ship's figure obtained. Vessel can unmoor and anchor in waiting area, where cargo sampling may be carried out.

OPERATOR: Esso Suez Inc.

GEISUM MARINE TERMINAL: 27.38 N. 33.43 E.

NOTE: Terminal closed in July 1993.

The loading point for Geisum Crude is the Suco SBM at Zeit Bay (27° 50' N., 33° 36' E.).

HAMRAWEIN: 26.15 N. 34.12 E. (See Plan)

APPROACHES: *Daytime Leading Marks:*

Front mark: Lat. 26° 15' 05.984" N., Long. 34° 12' 01.622" E.

Rear mark: Lat. 26° 15' 01.46" N., Long. 34° 11' 54.95" E.

BERTHING: Length of quay 67 m. Max. draft 33 ft. Conveyor belt and mechanical apparatus available. Daily average loading rate 4,000 tons. In addition to mooring bollard on the quay there are 4 mooring buoys.

SHIPMASTER'S REPORT: April 1988.

As berthing is carried out during daylight hours only, vessel should adjust ETA accordingly. The nearest anchorage is at Quseir, about 8 miles to the South, where good anchorage is obtained about 2 miles offshore (See B.A. Chart No. 3043).

Radio: Quseir Radio – SUK.

Health: Quarantine inspection for Pratique can be done at berth or at anchorage at Quseir.

Pilotage: Arranged by Agent or Misr Phosphate Co. There is no VHF communication with berth or pilot boat. Pilot boards about one mile East of the breakwater by a motor launch displaying flag 'H'. Vessel may give a few blasts on the whistle to attract attention. Pilot is unlicensed and does not speak English. It is advisable to discuss mooring plans with him prior to approaching the berth. It is further recommended that the Master should con the vessel himself to avoid confusion due to difficulty in communication. Vessel should have good long ropes ready to be sent out to the mooring buoys from quite a distance away. There are no tugs available and the vessel is turned around by warping. Vessel should be prepared to join 2 ropes together if length of one is insufficient. Extreme care is advised as windshifts can be quite abrupt and this vessel had to abandon attempts to berth mid-way through approach and put to sea and wait for the wind to subside.

Tugs: No tugs available.

Berth Facilities: The berth is exclusively operated by the Misr Phosphate Co. for loading rock phosphate in bulk. There is a mechanical loader with 2 loading chutes about 50 m. apart. They are stationary and only one is used at a time. The vessel has to be warped forward and aft to bring the appropriate hatch under the chute.

General: Limited quantities of fresh provisions are available. Watchmen and garbage disposal services were provided by the same supplier. Masters are advised to scrutinise all bills thoroughly prior to signing as attempts are made to obtain signature on blank bills on the pretext that they are requisition slips.

SHIPMASTER'S REPORT: January 1989.

Location: Lat. 26° 15.5' N., Long. 34° 12.2' E.

Hamrawein Phosphate Terminal has a single jetty of 67 m. length and belongs to Misr Phosphate Company, Hamrawein. There are 2 mooring buoys. There are no leading beacons as mentioned in NP.64. All mooring operations and pilot are arranged by the shippers (Misr Phosphate).

Port Limits: 4 nautical miles off the coast.

Documents: Register, Safety Construction Certificate, Load Line Certificate, I.O.P.P., Safety Equipment and Safety Radio Certificates. 4 copies Crew List. 2 copies Stores List. 2 copies Crew Declaration. 2 copies Currency Declaration.

Free Pratique is usually granted after berthing when vessel boarded by Quarantine Officials.

Pilotage: Pilot is compulsory and boards 2-3 cables North of the North Mooring Buoy. The vessel is then turned around and re-approaches the North Mooring Buoy.

Approaches: Vessel should approach from sea, heading for the North Mooring Buoy. Vessel sets South towards the dangerous reefs which can be visually seen or picked-up on radar when at close range. The reefs are not marked by buoys, etc., but can be recognised by change in water colour.

Anchorage: The only anchorage available is one mile East of Kossier, as marked on B.A. Chart 3043.

Maximum Size: Vessels drawing 33 ft. can be accommodated.

Radio: Kossier Radio, call sign SUK, is recommended for all communications with agents, shippers, etc.

There is no VHF or WT station at the Terminal. There is no contact with pilot as pilot boat is not equipped with a radio. The pilot boarded from a rowing mooring boat with the pilot flag hoisted. The pilot boat was out of order.

Tugs: Not available.

Berthing: Vessel heads for the North end of the breakwater, keeping close to the North Mooring Buoy on the starboard side. When 30 m. off the breakwater, starboard anchor is let go to 4 shackles in water and vessel is swung around to make fast port side alongside. Mooring boat is used for sending lines ashore. A line is also made fast to the South Mooring Buoy. This assists when leaving the berth.

Loading: Two chutes are available with a good outreach, but only one can be used at a time. Vessel has to be shifted fore and aft frequently to place holds in position for the fore and aft chutes. Loading rate is high and a maximum rate of 7,000 tonnes per day can easily be achieved.

Medical: Seamen can be sent to doctor at Kossier or Safaga, after special permission granted by Immigration. Advance notice required.

Density: Average 1029.

Fresh Water: Not available at berth. Water has to be ordered from Safaga by barge. Rate U.S.$22.00 per tonne, with minimum supply of 200 tonnes.

Fuel: Not available locally. Any requirements to be obtained from Safaga.

Repairs: No facilities available.

Customs Allowance: 200 cigarettes. Beer allowed. No liquor except wines allowed.

Watches, clocks, radios, cassette recorders, cameras, T.V. and videos are placed under seal by Customs.

Repatriation: Facilities exist for repatriation and for crew changes.

Airport: Nearest airport at Hurghada, which has regular flights to Cairo.

Shore Leave: Generally no shore leave allowed. If permitted, shore passes required.

Provisions: Fresh provisions and meat available and supplied by ship chandler from Kossier. No bonded items available.

Authority: Misr Phosphate Company, Hamrawein (Red Sea), Egypt. Tel: (Kossier) 39. Cables: Hamerpho, Kossier.

Agent: Damanhour, Safaga. Cables: Canal Shipping Safaga.

MARSA AL HAMRA (El Alamein): 30.59 N. 28.52 E.

WEPCO Terminal:

The Mono Mooring Buoy is in an open and unsheltered roadstead. The mooring buoy is located at Lat. 30° 58' 07.5" N., Long. 28° 52.2' E. It is 53 miles on a bearing of 255° from Ras-el-Tin Lighthouse, Alexandria, and 3 miles offshore in approximately 66 ft. of water.

DOCUMENTS:

4 copies Crew List.

Deck log books showing date of last call at a A.R.E. port, completed up to the time of arrival.

Quarantine Questionnaire in duplicate (Form No. 15 Q.A.) showing all ports of call, as well as dates of sailings for the last 30 days, nature of cargo on board, destination, as well as sickness among crew or passengers, if any, specially when it is presumed that the sick will be hospitalised. These forms can be filled on arrival if not available on board before arrival.

Derat Certificate should be handy for inspection.

Clearance from Last Port.

Bonded Store List, in duplicate.

Crew List and Passenger List in duplicate.

PILOTAGE: The S.-S.W.-W. quadrant from the buoy is a Prohibited Anchorage Area. Gebisa Reef is at Lat. 30° 58' 30" N., Long. 28° 49' 10" E., at 2.7 miles on a bearing of 260° from the buoy.

The mooring buoy carries a light, flashing red 6 times per minute, and visible all round to a distance of 4.5 – 5 miles in clear tropical weather. It also has a fog horn, sounding "U" and a radar reflector.

Surface current sets East at 10 miles offshore at the rate of 1 knot. Maximum rise and fall of tide in the mooring area is 2 ft.

Vessel arriving should approach to within 2 miles North of the buoy, where they will be met by the Harbour Master or Pilot who will advise the ship's Master on approaches to the mooring buoy, mooring and unmooring.

ANCHORAGE: 15 miles N.E. of SBM.

RESTRICTIONS: Normally vessels are moored during daylight hours only, but permission can be obtained to sail at night.

MAX. SIZE: 100,000 d.w.t. Max. draft 38 ft.

HEALTH: Hoist International Code Quarantine Signals when entering. Any sickness must be reported to local authorities.

RADIO: The commercial radio station at Alexandria will handle WEPCO radio traffic. Alexandria Coast Radio Station (call sign SUH) operates 24 hours a day on 444, 500 and 8,578 kHz, and between 0600 hrs. and 1800 hrs. GMT on 12,974 kHz.

Ships nearing Al Hamra Terminal may contact the terminal by FM/VHF radio on 156.70 MHz or 2182 kHz.

While at the mooring, ship-to-shore communication is by portable VHF radio-telephone units, under the direct charge of the Mooring Master. The terminal uses Channel 10 VHF for all communications.

TUGS: Not available and not required.

BERTHING: 2 good lines must be ready on the forecastle to be sent to the buoy plus a further 2 lines for use as messengers. Ship's lifting gear must be ready near the port manifold for lifting and connecting 2×12 in. hoses, with proper reducers if the manifold does not fit 12 in. hose with 150 ASA standard flanges. The total weight per hose assembly is approximately 5 tons. Maximum loading rate is 3,700 t.p.h.

A pilot ladder must be safely rigged for immediate use and long enough to reach the Mooring Master's launch. At night adequate lighting must be rigged overside to enable the Mooring Master to approach and board the ship safely, and searchlights should be rigged on both sides of the bridge to assist in running lines to the buoy.

BALLAST: No dirty ballast may be pumped overboard, and it is the ship's Master's responsibility to ensure that no oil – whether crude, diesel, bunker or bilge – is pumped or spilled into the waters of and surrounding the Terminal. Ballast can be pumped ashore through one or both of the floating hoses direct to disposal facilities on shore.

MEDICAL: Nearest hospital facilities are at Alexandria, at least 90 minutes drive from the terminal.

First Aid could be provided and if necessary, transportation to hospital in Alexandria.

CUSTOMS ALLOWANCES: Present regulations at El Alamein allow each seaman to retain in his possession a maximum of 50 cigarettes or 1 ounce of tobacco or 5 cigars. All other smoking items must be collected and listed before arrival. The list will be checked by Customs before sealing the locker, and any discrepancies will be subject to fines.

FRESH WATER: Not available.

FUEL: Not available.

AUTHORITY: Western Desert Operating Petroleum Company – (WEPCO), Borg El Saghr Building, Safia Zaghloul Street, P.O.Box 412, Alexandria, Egypt. *Tel:* 28710/17/18/19. *Telex:* 54075 Un. *FAX:* 4934016. *Cables:* Wepoil Alexandria. *Contact:* A. Abou Ouf, Operations Manager.

RAS BUDRAN: 28.56 N. 33.08 E. (See Plan)

Ras Budran is an open area, unsheltered roadstead. There are presently 5 large storage tanks with a total capacity of 120,000 cu.m., painted a pale yellow colour. To the North of the tank farm is the production area with ballast receiving and treatment facilities. There is a flare structure S.E. of the storage tanks and another small flare on the production platform in position: Lat. 28° 58.2' N., Long. 33° 07.8' E. located 2.3 miles North of SBM.

Vessel will moor to a single mooring buoy located 2.3 miles off Ras Budran Lighthouse on a bearing of 260°.

The yellow painted SBM is located in a water depth 34 m. in position: Lat. 28° 56' 05" N., Long. 33° 07' 49" E.

The SBM has an orange light, visible 5 miles.

Cargo vessels can be loaded and/or discharged alongside the jetty at Ras Budran. The length of the jetty is 120 m. and the depth of the water is 6 m.

PILOTAGE: SUCO (Suez Oil Company) Pilot/Mooring Master boards approximately 2.5 miles S.S.W. of SBM with mooring gangs. Pilot will normally meet and embark incoming vessels at Lat. 28° 51' N., Long. 33° 06' E. Vessel provides leeside on a course away from the shore.

Pilot ladder and/or accommodation ladder should be kept in good order, cleaned and should be of adequate length and strength. Ladder should be provided with a safety line. A light shall be provided at night so that the pilot ladder is adquately lit.

When Mooring Master boards, he will advise the Ship's Master, on the approach to the SBM, arrangements for mooring and unmooring, connecting of the hoses and all other operations within the mooring area. The Mooring Master will submit and receive from the Master all forms, documents and papers required, to be filled in and signed or received by the Master.

ANCHORAGES: SUCO will make every effort to moor ships arriving according to the agreed schedules as promptly as operational circumstances permit.

If mooring is not possible, vessel will anchor in Anchorage Area in position: Lat. 28° 52.5' N., Long. 33° 06.9' E.,

Area within 1 mile radius of this area has been surveyed and is considered clear of any obstruction. Anchoring outside the area is strictly prohibited.

The ground at Anchorage Area is sandy mud.

RESTRICTIONS: Weather conditions may prevent berthing. This is the case when wind speed exceeds 25 knots. Vessel will then remain in the anchorage until weather improves. Daylight berthing only. Unberthing anytime.

MAX. SIZE: 35,000 tons (s.d.w.t) to 250,000 tons (s.d.w.t) with a max. permissible draft up to 18.0 m. and LOA 500 ft. – 1,130 ft.

HEALTH: Masters are to indicate in their ETA, notification of any sickness on board. SUCO will arrange with Health Authorities if so required.

RADIO/VHF: Advise E.G.P.C. (Supply Sector) and terminal of ETA, 72 hours, 48 hours and 24 hours prior to arrival.

SUCO installation is to be supplied with relevant information on lifting gear, connections, ballast/segregated/dirty and quantity.

On the berth (SBM) communications by VHF Channels 12 (24 hours listening) and 74 (Marine Office, 0700 – 1800 hrs.). SSB 2638 kHz to be used during office hours.

TUGS: 2 mooring boats (1×500 h.p. and 1×1,100 h.p.), available to assist with mooring and hose connection. The boats are equipped for anti-pollution operations.

1 fire fighting tug is available on a standby basis whilst loading operations are in progress.

BERTHING: All mooring equipment is available and will be placed onboard the vessel when Mooring Master boards.

A vessel can make the final approach and moor to buoy from any direction bearing in mind prevailing weather and tidal conditions. The approach shall be made from the direction which is consistent with a safe approach and speed shall be subject to the prevailing forces (i.e. wind, current and tidal stream) at the location at the time of berthing with the assistance from mooring boats stationed at the buoy.

Once moored the vessel is free to turn through 360° under the influence of the prevailing forces.

HOSE CONNECTION: 16 in. standard 150 ASA flange connection for crude oil and ballast hoses. Port derrick with minimum 10 tons SWL rigged for max. height and load lifting.

Ship's crew shall be responsible for connecting and disconnecting hoses, with assistance of shore crew.

A quick release coupling (camlock) is connected to each hose end and is to be used as follows:

1. In case of emergency the butterfly valve shall be immediately closed and quick release coupling immediately disconnected.
2. Do not hammer but try to use the camlock wrench supplied or use copper hammer only.
3. Tanker should be ready with reducer if it's manifold is not 16 in.
4. Bags of sand to be available.
5. Weight of the hose is approximately 6 tons.

LOADING: Upon being informed by the vessel's responsible officer that vessel is ready to start loading, Mooring Master will normally advise the Control Room and ensure that the loading commences at a low rate (by gravity).

When it has been confirmed that there is no significant rise in pressure on the loading line, the crude oil will be loaded, pumping with a maximum rate of 6,000 tonnes/p.h.

Crude oil is delivered through the submarine pipeline to the buoy and thence via a floating hose to the vessel's port side midship manifold. Hose diameter is generally 24 in., changing at the ship's end to 16 in.

It is forbidden to close any valve onboard the tanker against the flow of the crude oil until the butterfly valve of the loading hose has been closed.

If ship-to-shore communications fail during loading operations the emergency whistle signal is a continuous blast on the tanker's whistle.

Loading shall immediately be stopped and will not be resumed until communications have been re-established.

Before loading, cargo tanks are dipped by an independent Inspector and a Terminal Inspector. If dirty ballast is retained on board until the next discharge port then amount of water and oil on top will be checked.

Density of Ras Budran Crude is approximately 0.900/15°C. Temperature when received on board approximately 31°C.

Immobilisation of engines at SBM not permitted.

BALLAST/POLLUTION: *Deballasting System:* It is preferable that vessels load crude oil while discharging ballast, but Master or officer-in-charge must be sure that no contamination or pollution takes place.

If the vessel is not equipped with 2 lines in order to load and deballast at the same time, a quantity of crude should be loaded prior to deballasting to ensure proper segregation.

Dirty ballast must not be in the emulsion form and is not to contain chemicals or detergents.

Deballasting will be effected by ship's pumps delivering the ballast water to the dedicated submarine ballast line.

The floating hose is normally 20 in. diameter, and the ship's end connection is 16 in. diameter. Deballasting rate 3,000 t.p.h.

It is strictly forbidden to discharge dirty ballast overboard.

Pollution: The Master has to comply with all regulations and instructions prohibiting pollution under A.R.E. laws and under any pertinent instructions issued by SUCO when conveyed to Master.

Also the provisions for International Convention for Prevention of Pollution from Vessels 1973 and the Protocol of 1978, relating to this connection will be applied to the extent that such Convention and Protocol are in force in A.R.E. Owner/operator shall be liable for any damage resulting from the pollution caused by the vessel and shall pay for all the expenses incurred for its removal and elimination.

Oil Spill: In the event of a spill or its detection, SUCO Mooring Master must be notified instantly for the necessary action to be taken.

MEDICAL: In case urgent medical assistance is required the vessel should contact SUCO Marine Manager by VHF radio. A doctor and facilities are available but no hospital in the area.

DENSITY: 1030.

FRESH WATER: Not available.

FUEL: Not available.

REPAIRS: Not available.

REPATRIATION: Possible in an emergency only.

HOLIDAYS: Ras Budran Terminal will never be closed due to religious holidays.

SHORE LEAVE: There is no shore leave for personnel of vessels whilst at the terminal.

HELICOPTER: Should the services of a helicopter be required in emergency or for any purpose whatsoever, the vessel will be given a minimum of 30 minutes' notice.

WEATHER: Gales can be expected from a North-Westerly direction from October through May.

Maximum weather condition for keeping the vessel on SBM is 40 knots.

The above conditions are only for guidance and are not relevant to the safety of the vessel but the safety of the buoy.

The Mooring Master shall have the authority to decide whether the ship should remain or vacate the buoy.

Climate: The climate in the Gulf of Suez is generally good. The visibility is usually excellent with few dust storms and infrequent fog. There are a few rain squalls.

Winds: The general flow of the wind over this part of the Gulf of Suez is predominatly from the N.N.W. Winds are steadier in the Summer months (May-October) and almost nil from June to September. Gales can mainly be expected from a North-Westerly direction from October through May.

The maximum velocity is approximately 45 knots, whilst the mean wind speed is approximately 20 knots and is prevalent for some 98% of the year. There are occasional light Southerly winds.

Tides: The tidal range is between 3 ft and 4 ft.

Sea Condition: The surface temperature of the sea ranges from 18°C to 27°C depending on the season.

Seas and swells are usually from the N.N.W. and wave height can reach 18 ft. but average is about 6 ft. During the Summer months (May/August) there are many day's of 12 ft. – 15 ft. seas.

Currents are generally located in mid-channel and set North when the tide is rising in Suez and South when the tide is falling. The rate is about 1.5 knots at Springs and 0.5 knots at Neaps.

AUTHORITY: Suez Oil Company (SUCO), 21 Ahmad Orabi Street, El Mohandessin, P.O.Box 2622, Cairo, Arab Republic of Egypt. *Tel:* 650723, 650544, 807922, 813554, 807854. *Telex:* 93455 Suco Un, 92300 Suco Un. *Cables:* Dexgulf. *FAX:* 3422734. *Contact:* A. Nassef, Planning and Follow-up Manager.

RAS GHARIB: 28.21 N. 33.06 E. (See Plan)

A natural port at the Western side of Suez Gulf sheltered by the Cape and a chain of reefs.

DOCUMENTS:

4 copies Crew List.

Derat Certificate should be handy for inspection.

Clearance from Last Port.

Bonded Store List, in duplicate.

Crew List and Passengers' List in duplicate.

Quarantine Questionnaire in duplicate (Form No. 15 Q.A.) showing all ports of call, as well as dates of sailings for the last 30 days, nature of cargo on board, destination, as well as sickness among crew or passengers, if any, specially when it is presumed that the sick will be hospitalised. These forms can be filled on arrival if not available on board before arrival.

PILOTAGE: Compulsory. International Pilot flag must be hoisted and Pilot will board vessel on arrival. Vessels should approach the anchorage from South-eastward and wait Southward of the Prohibited Anchorage until boarded by the Harbour Master who will pilot them either to moorings or to an anchorage clear of the prohibited area of the pipelines.

2 pairs of leading beacons stand about 4 and 5.5 cables, beside 3 others that stand about 12 cables Southward of Ras Gharib light-structure. About 2 cables further Southward are 2 leading beacons. All the above beacons are difficult to identify until close inshore.

Waiting Area: Within 1 miles radius of Lat. 28° 20' N., Long. 33° 08' E.

ANCHORAGES: Ras Gharib Anchorage, South-westward of the Cape, affords some shelter, but a moderate swell round the Cape is experienced on most days. Vessels can obtain anchorage in depths of about 5 fathoms.

During most of the year there are Northerly winds, Force 3 – 5, but in December and January there are occasionally calms. On very rare occasions, there are Southerly gales of short duration which make the anchorage untenable.

The Northerly wind causes some swell in the anchorage, but it is not normally severe enough to interfere with the working of lighters or boats of moderate size. It is, however, unpleasant for small boats, except alongside the piers, which are well protected.

N.N.W. winds of 20 m./sec (40 knots) are experienced in Summer but it is mostly calm in Winter. Care should be taken if wind changes to West and even more care should be taken if wind shifts to South.

Except in the vicinity of the piers, there is usually some swell on the beaches. There is practically no rainfall and sand storms occur only very occasionally and they do not interfere with work in the anchorage.

Anchorage is prohibited, owing to the existence of pipelines, within an area indicated by pecked lines on the chart.

RESTRICTIONS: Berthing and unberthing in daylight only.

HEALTH: On entering, vessels must hoist the International Quarantine Signal for compulsory quarantine. Any sickness must be reported to the doctor, specially when it is presumed that the sick will be hospitalised.

The vessel's personnel should carry international vaccination and/or inoculation certificates.

RADIO: E.G.P.C. (Supply Sector) and terminal require 72 hours, 48 hours and 24 hours notice of arrival.

VHF: General Petroleum Co. on Channel 16.

TUGS: 2 tugs, 400 h.p. and 80 h.p. available.

BERTHING: There is an ore pier where vessels may berth with max. draft of 11 ft. without any restrictions in length. Vessels with deeper draft may discharge whilst at anchorage on to supply boats.

Two cranes are available with capacities of 30 tons and 35 tons. Towage is also available.

TANKERS:

	Sea Berth No. 1	*Sea Berth No. 2*	*Sea Berth No. 3*
Depth at the berth	27 ft.	36 ft.	78 ft.
Max. permissible draft	20 ft.	27 ft.	55 ft.
Max. length for tanker	400 ft.	500 ft.	980 ft.
Min. length for tanker	350 ft.	500 ft.	600 ft.
Diameter of crude hose	8 in.	10 in.	12 in.
Diameter of water hose	8 in.	10 in.	12 in.
Min. capacity of tanker's derrick	5 tons	5 tons	5 tons
Loading capacity (t.p.h.)	650	1,200	2,000
Max. permissible load (tons)	8,000	20,000	130,000

Cargo: Ras Gharib Blend: API 21.0. Loading temperature 92°F/33°C.

Moorings: Vessels require 20 mooring ropes of 220 m. length for sending to 6 buoys, and 4 spare ropes.

Ballast: Discharge rate 1,500 t.p.h. through 12 in. hose and 16 in. line.

SUPPLIES: Transit and fresh provisions as well as deck and engine stores provided by the United Arab Contracting and Marine Supply Company (Cunsup).

FRESH WATER: Not available.

FUEL: Not available.

CUSTOMS ALLOWANCES: Present regulations allow each seaman to retain in his possession a max. of 50 cigarettes or 1 ounce of tobacco or 5 cigars. All other smoking items must be collected and listed before arrival. The list will be checked by Customs before sealing the locker, and any discrepancies will be subject to fines.

AGENCY: See "Suez Canal"

AUTHORITY: Egyptian General Petroleum Company, Ras Gharib, Egypt. *Tel:* 20-65-446315. *Telex:* 92998 Petgn Un. *Cables:* Petrogen. *Contact:* Captain Mohamed El Sayed Fattoutt.

RAS SHUKHEIR: 28.08 N. 33.17 E. (See Plan)

Also see "General" before first Port.

ADVICE OF ARRIVAL: It is important that ships establish radio contact with "GUPCO" (Gulf of Suez Petroleum Co.) when 3 days distant from Terminal and maintain this contact until just previous to arrival at the Terminal. All ships should send a 72 hour ETA message to "Panintoil Cairo" giving the best estimate of ship's arrival time at the Terminal. This ETA message should also include a definite statement of the details of any equipment required from shore for connecting submarine hoses to ship's manifold. All ETA messages should be sent to appointed Suez Agent (with copies to "Gupco Cairo") when the vessel is 24 hours and 12 hours distant from Ras Shukheir and at any other time any appreciable change occurs in the original ETA or those subsequent thereto. The 12 hour ETA should include a positive statement regarding ship's readiness to load on arrival and the number of hours that will be required to discharge ballast after ship is berthed in mooring.

–6 hours before arrival, tankers should call Ras Shukheir on VHF Channel 16 to be advised if berthing is available or not, also to be advised of the approximate time for berthing.

DOCUMENTS:
4 copies Crew List.
List of Ports of Call.
Derat Certificate should be handy for inspection.
Clearance from Last Port.
Bonded Store List, in duplicate.
Crew List and Passenger List in duplicate.

Quarantine Questionnaire in duplicate (Form No. 15 Q.A.) showing all ports of call, as well as dates of sailings for the last 30 days, nature of cargo on board, destination, as well as sickness among crew or passengers, if any, specially when it is presumed that the sick will be hospitalised. These forms can be filled on arrival if not available on board before arrival. Quarantine officials board with Agent. No Customs formalities. Bond not sealed.

ESSENTIAL REQUIREMENTS: *Most Essential Requirements to be met by Tankers Lifting Oil at Ras Shukheir Terminal:*

1. Disposal of Ballast: No dirty ballast will be pumped overboard. Separate ballast disposal lines are available at Terminal to pump ballast to pit onshore, where oil and water can be separated and disposal made (24 in. at Berth No. 1 and 18 in. at Berth No. 2). The maximum pressure allowed on the ballast line is 150 p.s.i., which should not be exceeded.
2. Notice of Arrival: Incoming tankers must send ETA at least 72 hours before arrival at Ras Shukheir. Local time is Greenwich Mean Time plus 2 hours. All time reports must be stated in local time.
3. Anchorage: All vessels are prohibited to anchor outside the anchorage area and if necessary anchor inside it. The anchorage area is a circle one mile diameter. The centre is 4.4 miles from El Tor Lighthouse on a bearing of N.W. from it.
Anchorage co-ordinates are Lat. 28° 16' 25" N., Long. 33° 33' 00" E.
4. Tankers to have ready:
(a) Windlass and both power anchors, each with not less than 150 fathoms of chain.
(b) At least 10 good nylon, synthetic, or wire mooring lines, each not less than 200 fathoms in length with efficient stoppers for each line.
(c) On port side opposite ship's manifold, there must be equipment capable of lifting submarine hoses safely and efficiently. Weight of lift is 5 tons per hose.
(d) Pumps for deballasting prior to or simultaneously with taking on oil. Pressure drop in ballast line is approximately 150 p.s.i. at flow rate of 12,000 barrels per hour.
5. Crew Duties: The tanker's crew will perform all operations aboard tanker under supervision of Gupco's crew.
6. Tanker's Valves: Tanker's valves must not be closed against incoming oil stream. Rate should be reduced by half, at least 15 minutes before stop loading. At least 3 minutes are required to close shore valves to stop flow of oil.
7. Emergency Communications: If ship-to-shore communications fail, the emergency whistle signal is a continuous blast on tanker's whistle. Steam or air should never be shut off from the whistle during loading.
8. Responsibility: The tanker's Master is responsible at all times for the safety of all the ship's operations. The Company Mooring Master will advise the Master in respect to loading pressure and hazard, but will not direct the loading except as may be necessary to protect the Terminal facilities. Ras Shukheir Terminal rules and regulations do not contravene International Safety Rules such as SOLAS (Safety of Life at Sea) or other maritime regulations, such as those of appropriate classification societies. In case of any conflict, the latter shall apply.

PILOTAGE: Compulsory. International Pilot Flag must be hoisted and Pilot will board vessel on arrival. Ras Shukheir Lighthouse is located in Lat. 28° 08' 15" N., Long. 33° 16' 20" E. It is a white flashing light, flashing every 3 seconds and visible for 10 miles.

Gebal Gharib, situated about 18 miles South-westward, 5,742 ft. high. It makes a nearly perfect equilateral triangle with Ras Shukheir and Ras Gharib Lighthouse. Ras Gharib Lighthouse is an excellent landmark whether by day or night for vessels approaching from North, but caution should be exercised since this Light is obscured from 308° to the Westward. The sea-berth buoys are unlit.

The Company's Mooring Master will meet all incoming tankers about 2 miles from Ras Shukheir Terminal on a bearing of 290/300° from Ras Shukheir Lighthouse and will advise ship's personnel in mooring and unmooring, raising and lowering of hoses.

Vessels are requested to have a pilot ladder safely and securely rigged, ready for immediate use, and long enough to reach the Mooring Master's launch. If at night, adequate lighting must be rigged overside for the Mooring Master to approach the side and climb the ladder safely.

Shipmaster's Report: February 1993.

The Pilot/Mooring Master boarded 1.5 miles abeam of berth. He remains on board until the vessel leaves the berth.

ANCHORAGES: There are a number of oil well installations, structures and submarine pipelines located in the Gulf of Suez opposite Ras Shukheir Terminal and approaching vessels are warned of these obstacles in manoeuvring and anchoring.

Never anchor North of the sea berth.

Shipmaster's Report: March 1991.

Tankers should only anchor in Ras Shukheir Anchorage Area, 4.4 miles N.W. of El Lighthouse (See B.A.Chart No. 2374), in position Lat. 28° 16' 25" N., Long. 33° 30' E.

RESTRICTIONS: The Ras Shukheir Terminal operates 24 hours per day, 7 days a week. Ships are loaded and unmoored at any hour, weather and other circumstances permitting. Vessels are moored during daylight hours only, however, an exception may be made at the discretion of the Terminal.

MAX. SIZE: See "Berthing".

HEALTH: The vessel's personnel should carry international vaccination and/or inoculation certificates.

RADIO: E.G.P.C. (Supply Sector) require 72 hours, 48 hours and 24 hours notice of arrival.

The Alexandria or Port Said coast radio stations will handle GUPCO radio traffic. Ships may contact GUPCO through their cable address "Gupcoil Cairo". The message will be received on their Cairo Radio Telegraph Office local teleprinter circuit, tape perforated and relayed to the Ras Shukheir Terminal.

Cables from Ras Shukheir Terminal to the ships would be handled in the same manner. The Alexandria or Port Said coast radio stations transmit traffic lists at regular intervals listing the call signs of all ships for which they have traffic on hand. Thus any ship hearing its call sign in the traffic list of the coast station would call the coast station immediately after the traffic list.

VHF: When ships are near Ras Shukheir Terminal, they may use their FM/VHF radios to contact the Terminal using Channel 16.

BERTHING: One pier where vessels with max. length of 76 m. are alllowed to berth alongside with a max. draft of 16.5 ft. Vessels may discharge whilst at anchorage and propeller type lighters are available for such cargo operations.

Four cranes with capacities of 15, 30, 40 and 50 tons respectively are available together with floating crane with capacity up to 200 tons. Towage is also available.

TANKERS:

	Seaberth No. 1	*Seaberth No. 2*
Depth	95 ft.	95 ft.
Max. permissible draft	64 ft.	56 ft.
Max. length for Tankers	1,000 ft.	1,000 ft.
Min. length for Tankers	750 ft.	750 ft.
Numbers of Crude hoses	3	3
Diameter of Crude hoses	12 in.	12 in.
Diameter of Ballast hose	12 in.	12 in.
Min. capacity of –Tanker's derrick	5 tons	5 tons
Loading capacity (t.p.h.)	6,000	4,000
Max. permissible load (tons)	150,000	270,000

Cargo: Gulf of Suez Mix Crude Oil is approximately 0.875/15°C. Temperature when received on board is approximately 32°C (March).

LPG: In addition to the 2 Sea Berths, there is Sea Berth No. 4 for loading L.P.G. tankers which is located 6 miles South of Ras Shukheir lighthouse.

The specifications are as follows:-

The Channel Entrance is marked by one radar reflecting (turning buoy), 6 pontoon guiding light buoys with radar reflectors, 3 green lights located on the starboard side of the channel, and 3 red lights on the port side of the channel. Flashing characteristic of the signal is "U" with 3.6 second intervals. The max. water depth in the channel and the berth is 24 ft. The berth consists of 4 mooring buoys, 8 loading hoses and 6 vapour hoses.

The max. capacity of vessels using this berth is 1,600 tons with a length no greater than 330 ft. Max. draft after loading is 17 ft.

SUPPLIES: Transit and fresh provisions as well as deck and engine stores provided by United Arab Contracting and Marine Supply Co.

SUBMARINE HOSE LOADING BERTH: Tanker is loaded by means of submarine pipelines to which are attached 2 or 3 hoses for loading and 1 hose for discharging ballast. A 36 in. pipeline transports the oil and a 24 in. line in No. 1 Seaberth, or 16 in. line in No. 2 Seaberth transports the dirty ballast to a ballast pit ashore. The loading berths are located approximately 3,580 ft. offshore in a water depth of approximately 95 ft. The loading and ballast lines are laid in the same trench and run in a direction 055°. The mooring buoys are numbered 1, 2, 3, 4, 5, 6, 7 and 8 (on the port bow) and running consecutively in a clockwise direction.

LOADING READINESS AND ARRIVAL TIME: The company will make every effort to load vessels upon arrival or as promptly as berth is available, weather permitting. Notice of Readiness will not be accepted as at time of arrival unless the vessel is in all respects ready to load. Arrival time will be considered as the time the Mooring Master boards the vessel or the time that vessel anchors, whichever occurs first.

FRESH WATER: Not available.

FUEL: Not available.

REPATRIATION: Not recommended.

HOLIDAYS: The Terminal will never be closed due to Religious Holidays.

SHIPMASTER'S REPORT: February 1993.

Anchorage: Ras Shukheir Anchorage Area is designated on B.A. Chart No. 2374 (Lat. 28° 16' 25" N., Long. 33° 33' 00" E.).

The holding ground is mud and very good.

The anchorage can be approached from North of Morgan Oilfield or from South past Felix Jones Patches and between the oilfield and the shore.

Tankers: Seaberth No. 1: Max. draft 19.5 m.
Seaberth No. 2: Max. draft 19.2 m.

Ballast: All ballast from cargo oil tanks must be discharged ashore through the ballast line at a cost of U.S.$ 0.25 per metric ton.

Moorings: All wires to have rope tails. The winch serving Buoy No. 1 should have an extra wire married on. The winch serving Buoy No. 7 should have a mooring rope married on.

Supplies: Fresh provisions are brought from Suez at a transportation charge of U.S.$ 50.00. They are of good quality.

Shipchandler: The Egyptian Marine Supply and Contracting Co. Telex: 66132 Consup Un.

AUTHORITY: *Operator:* Gulf of Suez Petroleum Co. – GUPCO, (P.O. Box 2400) Palestine Street, 4th Sector, New Maadi, Cairo, Egypt. *Tel:* 3522846, 3521365. *Telex:* 92248 Gupco Un. *Cables:* Gupcooil, Cairo. *Contact:* Captain Hassan Hafez, Marine Division Manager.

AGENCY: See "Suez Canal".

BALLAST/POLLUTION: *Deballasting System:* It is preferable that vessels load crude oil while discharging ballast, but Master or officer-in-charge must be sure that no contamination or pollution takes place.

If the vessel is not equipped with 2 lines in order to load and deballast at the same time, a quantity of crude should be loaded prior to deballasting to ensure proper segregation.

Dirty ballast must not be in the emulsion form and is not to contain chemicals or detergents.

Deballasting will be effected by ship's pumps delivering the ballast water to the dedicated submarine ballast line.

The floating hose is normally 20 in. diameter, and the ship's end connection is 16 in. diameter. Deballasting rate 3,000 t.p.h.

It is strictly forbidden to discharge dirty ballast overboard.

Pollution: The Master has to comply with all regulations and instructions prohibiting pollution under A.R.E. laws and under any pertinent instructions issued by SUCO when conveyed to Master.

Also the provisions for International Convention for Prevention of Pollution from Vessels 1973 and the Protocol of 1978 relating to this connection will be applied to the extent that such Convention and Protocol are in force in A.R.E. Owner/operator shall be liable for any damage resulting from the pollution caused by the vessel and shall pay for all the expenses incurred for its removal and elimination.

Oil Spill: In the event of a spill or its detection, SUCO Mooring Master must be notified instantly for the necessary action to be taken.

MEDICAL: In case urgent medical assistance is required the vessel should contact SUCO Marine Manager by VHF radio. A doctor and facilities are available but no hospital in the area.

DENSITY: 1030.

FRESH WATER: Not available.

FUEL: Not available.

REPAIRS: Not available.

REPATRIATION: Possible in an emergency only.

HOLIDAYS: Ras Budran Terminal will never be closed due to religious holidays.

SHORE LEAVE: There is no shore leave for personnel of vessels whilst at the terminal.

HELICOPTER: Should the services of a helicopter be required in emergency or for any purpose whatsoever, the vessel will be given a minimum of 30 minutes' notice.

WEATHER: Gales can be expected from a North-Westerly direction from October through May.

Maximum weather condition for keeping the vessel on SBM is 40 knots.

The above conditions are only for guidance and are not relevant to the safety of the vessel but the safety of the buoy.

The Mooring Master shall have the authority to decide whether the ship should remain or vacate the buoy.

Climate: The climate in the Gulf of Suez is generally good. The visibility is usually excellent with few dust storms and infrequent fog. There are a few rain squalls.

Winds: The general flow of the wind over this part of the Gulf of Suez is predominatly from the N.N.W. Winds are steadier in the Summer months (May-October) and almost nil from June to September. Gales can mainly be expected from a North-Westerly direction from October through May.

The maximum velocity is approximately 45 knots, whilst the mean wind speed is approximately 20 knots and is prevalent for some 98% of the year. There are occasional light Southerly winds.

Tides: The tidal range is between 3 ft and 4 ft.

Sea Condition: The surface temperature of the sea ranges from 18°C to 27°C depending on the season.

Seas and swells are usually from the N.N.W. and wave height can reach 18 ft. but average is about 6 ft. During the Summer months (May/August) there are many day's of 12 ft. – 15 ft. seas.

Currents are generally located in mid-channel and set North when the tide is rising in Suez and South when the tide is falling, The rate is about 1.5 knots at Springs and 0.5 knots at Neaps.

AUTHORITY: Suez Oil Company (SUCO), 21 Ahmad Orabi Street, El Mohandessin, P.O.Box 2622, Cairo, Arab Republic of Egypt. *Tel:* 650723, 650544, 807922, 813554, 807854. *Telex:* 93455 Suco Un, 92300 Suco Un. *Cables:* Dexgulf. *FAX:* 3422734. *Contact:* A. Nassef, Planning and Follow-up Manager.

RAS GHARIB: 28.21 N. 33.06 E. (See Plan)

A natural port at the Western side of Suez Gulf sheltered by the Cape and a chain of reefs.

DOCUMENTS:

4 copies Crew List.
Derat Certificate should be handy for inspection.
Clearance from Last Port.
Bonded Store List, in duplicate.
Crew List and Passengers' List in duplicate.

Quarantine Questionnaire in duplicate (Form No. 15 Q.A.) showing all ports of call, as well as dates of sailings for the last 30 days, nature of cargo on board, destination, as well as sickness among crew or passengers, if any, specially when it is presumed that the sick will be hospitalised. These forms can be filled on arrival if not available on board before arrival.

PILOTAGE: Compulsory. International Pilot flag must be hoisted and Pilot will board vessel on arrival. Vessels should approach the anchorage from South-eastward and wait Southward of the Prohibited Anchorage until boarded by the Harbour Master who will pilot them either to moorings or to an anchorage clear of the prohibited area of the pipelines.

2 pairs of leading beacons stand about 4 and 5.5 cables, beside 3 others that stand about 12 cables Southward of Ras Gharib light-structure. About 2 cables further Southward are 2 leading beacons. All the above beacons are difficult to identify until close inshore.

Waiting Area: Within 1 miles radius of Lat. 28° 20' N., Long. 33° 08' E.

ANCHORAGES: Ras Gharib Anchorage, South-westward of the Cape, affords some shelter, but a moderate swell round the Cape is experienced on most days. Vessels can obtain anchorage in depths of about 5 fathoms.

During most of the year there are Northerly winds, Force 3 – 5, but in December and January there are occasionally calms. On very rare occasions, there are Southerly gales of short duration which make the anchorage untenable.

The Northerly wind causes some swell in the anchorage, but it is not normally severe enough to interfere with the working of lighters or boats of moderate size. It is, however, unpleasant for small boats, except alongside the piers, which are well protected.

N.N.W. winds of 20 m./sec (40 knots) are experienced in Summer but it is mostly calm in Winter. Care should be taken if wind changes to West and even more care should be taken if wind shifts to South.

Except in the vicinity of the piers, there is usually some swell on the beaches. There is practically no rainfall and sand storms occur only very occasionally and they do not interfere with work in the anchorage.

Anchorage is prohibited, owing to the existence of pipelines, within an area indicated by pecked lines on the chart.

RESTRICTIONS: Berthing and unberthing in daylight only.

HEALTH: On entering, vessels must hoist the International Quarantine Signal for compulsory quarantine. Any sickness must be reported to the doctor, specially when it is presumed that the sick will be hospitalised.

The vessel's personnel should carry international vaccination and/or inoculation certificates.

RADIO: E.G.P.C. (Supply Sector) and terminal require 72 hours, 48 hours and 24 hours notice of arrival.

VHF: General Petroleum Co. on Channel 16.

TUGS: 2 tugs, 400 h.p. and 80 h.p. available.

BERTHING: There is an ore pier where vessels may berth with max. draft of 11 ft. without any restrictions in length. Vessels with deeper draft may discharge whilst at anchorage on to supply boats.

Two cranes are available with capacities of 30 tons and 35 tons. Towage is also available.

TANKERS:

	Sea Berth No. 1	*Sea Berth No. 2*	*Sea Berth No. 3*
Depth at the berth	27 ft.	36 ft.	78 ft.
Max. permissible draft	20 ft.	27 ft.	55 ft.
Max. length for tanker	400 ft.	500 ft.	980 ft.
Min. length for tanker	350 ft.	500 ft.	600 ft.
Diameter of crude hose	8 in.	10 in.	12 in.
Diameter of water hose	8 in.	10 in.	12 in.
Min. capacity of tanker's derrick	5 tons	5 tons	5 tons
Loading capacity (t.p.h.)	650	1,200	2,000
Max. permissible load (tons)	8,000	20,000	130,000

Cargo: Ras Gharib Blend: API 21.0. Loading temperature 92°F/33°C.

Moorings: Vessels require 20 mooring ropes of 220 m. length for sending to 6 buoys, and 4 spare ropes.

Ballast: Discharge rate 1,500 t.p.h. through 12 in. hose and 16 in. line.

SUPPLIES: Transit and fresh provisions as well as deck and engine stores provided by the United Arab Contracting and Marine Supply Company (Cunsup).

FRESH WATER: Not available.

FUEL: Not available.

CUSTOMS ALLOWANCES: Present regulations allow each seaman to retain in his possession a max. of 50 cigarettes or 1 ounce of tobacco or 5 cigars. All other smoking items must be collected and listed before arrival. The list will be checked by Customs before sealing the locker, and any discrepancies will be subject to fines.

AGENCY: See "Suez Canal".

AUTHORITY: Egyptian General Petroleum Company, Ras Gharib, Egypt. *Tel:* 20-65-446315. *Telex:* 92998 Petgn Un. *Cables:* Petrogen. *Contact:* Captain Mohamed El Sayed Fattoutt.

RAS SHUKHEIR: 28.08 N. 33.17 E. (See Plan)

Also see "General" before first Port.

ADVICE OF ARRIVAL: It is important that ships establish radio contact with "GUPCO" (Gulf of Suez Petroleum Co.) when 3 days distant from Terminal and maintain this contact until just previous to arrival at the Terminal. All ships should send a 72 hour ETA message to "Panintoil Cairo" giving the best estimate of ship's arrival time at the Terminal. This ETA message should also include a definite statement of the details of any equipment required from shore for connecting submarine hoses to ship's manifold. All ETA messages should be sent to appointed Suez Agent (with copies to "Gupco Cairo") when the vessel is 24 hours and 12 hours distant from Ras Shukheir and at any other time any appreciable change occurs in the original ETA or those subsequent thereto. The 12 hour ETA should include a positive statement regarding ship's readiness to load on arrival and the number of hours that will be required to discharge ballast after ship is berthed in mooring.

–6 hours before arrival, tankers should call Ras Shukheir on VHF Channel 16 to be advised if berthing is available or not, also to be advised of the approximate time for berthing.

DOCUMENTS:
4 copies Crew List.
List of Ports of Call.
Derat Certificate should be handy for inspection.
Clearance from Last Port.
Bonded Store List, in duplicate.
Crew List and Passenger List in duplicate.

Quarantine Questionnaire in duplicate (Form No. 15 Q.A.) showing all ports of call, as well as dates of sailings for the last 30 days, nature of cargo on board, destination, as well as sickness among crew or passengers, if any, specially when it is presumed that the sick will be hospitalised. These forms can be filled on arrival if not available on board before arrival. Quarantine officials board with Agent. No Customs formalities. Bond not sealed.

ESSENTIAL REQUIREMENTS: *Most Essential Requirements to be met by Tankers Lifting Oil at Ras Shukheir Terminal:*

1. Disposal of Ballast: No dirty ballast will be pumped overboard. Separate ballast disposal lines are available at Terminal to pump ballast to pit onshore, where oil and water can be separated and disposal made (24 in. at Berth No. 1 and 18 in. at Berth No. 2). The maximum pressure allowed on the ballast line is 150 p.s.i., which should not be exceeded.
2. Notice of Arrival: Incoming tankers must send ETA at least 72 hours before arrival at Ras Shukheir. Local time is Greenwich Mean Time plus 2 hours. All time reports must be stated in local time.
3. Anchorage: All vessels are prohibited to anchor outside the anchorage area and if necessary anchor inside it. The anchorage area is a circle one mile diameter. The centre is 4.4 miles from El Tor Lighthouse on a bearing of N.W. from it. Anchorage co-ordinates are Lat. 28° 16' 25" N., Long. 33° 33' 00" E.

4. Tankers to have ready:
(a) Windlass and both power anchors, each with not less than 150 fathoms of chain.
(b) At least 10 good nylon, synthetic, or wire mooring lines, each not less than 200 fathoms in length with efficient stoppers for each line.
(c) On port side opposite ship's manifold, there must be equipment capable of lifting submarine hoses safely and efficiently. Weight of lift is 5 tons per hose.
(d) Pumps for deballasting prior to or simultaneously with taking on oil. Pressure drop in ballast line is approximately 150 p.s.i. at flow rate of 12,000 barrels per hour.

5. Crew Duties: The tanker's crew will perform all operations aboard tanker under supervision of Gupco's crew.
6. Tanker's Valves: Tanker's valves must not be closed against incoming oil stream. Rate should be reduced by half, at least 15 minutes before stop loading. At least 3 minutes are required to close shore valves to stop flow of oil.
7. Emergency Communications: If ship-to-shore communications fail, the emergency whistle signal is a continuous blast on tanker's whistle. Steam or air should never be shut off from the whistle during loading.
8. Responsibility: The tanker's Master is responsible at all times for the safety of all the ship's operations. The Company Mooring Master will advise the Master in respect to loading pressure and hazard, but will not direct the loading except as may be necessary to protect the Terminal facilities. Ras Shukheir Terminal rules and regulations do not contravene International Safety Rules such as SOLAS (Safety of Life at Sea) or other maritime regulations, such as those of appropriate classification societies. In case of any conflict, the latter shall apply.

PILOTAGE: Compulsory. International Pilot Flag must be hoisted and Pilot will board vessel on arrival. Ras Shukheir Lighthouse is located in Lat. 28° 08' 15" N., Long. 33° 16' 20" E. It is a white flashing light, flashing every 3 seconds and visible for 10 miles.

Gebal Gharib, situated about 18 miles South-westward, 5,742 ft. high. It makes a nearly perfect equilateral triangle with Ras Shukheir and Ras Gharib Lighthouse. Ras Gharib Lighthouse is an excellent landmark whether by day or night for vessels approaching from North, but caution should be exercised since this Light is obscured from 308° to the Westward. The sea-berth buoys are unlit.

The Company's Mooring Master will meet all incoming tankers about 2 miles from Ras Shukheir Terminal on a bearing of 290/300° from Ras Shukheir Lighthouse and will advise ship's personnel in mooring and unmooring, raising and lowering of hoses.

Vessels are requested to have a pilot ladder safely and securely rigged, ready for immediate use, and long enough to reach the Mooring Master's launch. If at night, adequate lighting must be rigged overside for the Mooring Master to approach the side and climb the ladder safely.

Shipmaster's Report: February 1993.

The Pilot/Mooring Master boarded 1.5 miles abeam of berth. He remains on board until the vessel leaves the berth.

ANCHORAGES: There are a number of oil well installations, structures and submarine pipelines located in the Gulf of Suez opposite Ras Shukheir Terminal and approaching vessels are warned of these obstacles in manoeuvring and anchoring.

Never anchor North of the sea berth.

Shipmaster's Report: March 1991.

Tankers should only anchor in Ras Shukheir Anchorage Area, 4.4 miles N.W. of El Lighthouse (See B.A.Chart No. 2374), in position Lat. 28° 16' 25" N., Long. 33° 30' E.

RESTRICTIONS: The Ras Shukheir Terminal operates 24 hours per day, 7 days a week. Ships are loaded and unmoored at any hour, weather and other circumstances permitting. Vessels are moored during daylight hours only, however, an exception may be made at the discretion of the Terminal.

MAX. SIZE: See "Berthing".

HEALTH: The vessel's personnel should carry international vaccination and/or inoculation certificates.

RADIO: E.G.P.C. (Supply Sector) require 72 hours, 48 hours and 24 hours notice of arrival.

The Alexandria or Port Said coast radio stations will handle GUPCO radio traffic. Ships may contact GUPCO through their cable address "Gupcoil Cairo". The message will be received on their Cairo Radio Telegraph Office local teleprinter circuit, tape perforated and relayed to the Ras Shukheir Terminal.

Cables from Ras Shukheir Terminal to the ships would be handled in the same manner. The Alexandria or Port Said coast radio stations transmit traffic lists at regular intervals listing the call signs of all ships for which they have traffic on hand. Thus any ship hearing its call sign in the traffic list of the coast station would call the coast station immediately after the traffic list.

VHF: When ships are near Ras Shukheir Terminal, they may use their FM/VHF radios to contact the Terminal using Channel 16.

BERTHING: One pier where vessels with max. length of 76 m. are alllowed to berth alongside with a max. draft of 16.5 ft. Vessels may discharge whilst at anchorage and propeller type lighters are available for such cargo operations.

Four cranes with capacities of 15, 30, 40 and 50 tons respectively are available together with floating crane with capacity up to 200 tons. Towage is also available.

TANKERS:

	Seaberth No. 1	*Seaberth No. 2*
Depth	95 ft.	95 ft.
Max. permissible draft	64 ft.	56 ft.
Max. length for Tankers	1,000 ft.	1,000 ft.
Min. length for Tankers	750 ft.	750 ft.
Numbers of Crude hoses	3	3
Diameter of Crude hoses	12 in.	12 in.
Diameter of Ballast hose	12 in.	12 in.
Min. capacity of –Tanker's derrick	5 tons	5 tons
Loading capacity (t.p.h.)	6,000	4,000
Max. permissible load (tons)	150,000	270,000

Cargo: Gulf of Suez Mix Crude Oil is approximately 0.875/15°C. Temperature when received on board is approximately 32°C (March).

LPG: In addition to the 2 Sea Berths, there is Sea Berth No. 4 for loading L.P.G. tankers which is located 6 miles South of Ras Shukheir lighthouse.

The specifications are as follows:-

The Channel Entrance is marked by one radar reflecting (turning buoy), 6 pontoon guiding light buoys with radar reflectors, 3 green lights located on the starboard side of the channel, and 3 red lights on the port side of the channel. Flashing characteristic of the signal is "U" with 3.6 second intervals. The max. water depth in the channel and the berth is 24 ft. The berth consists of 4 mooring buoys, 8 loading hoses and 6 vapour hoses.

The max. capacity of vessels using this berth is 1,600 tons with a length no greater than 330 ft. Max. draft after loading is 17 ft.

SUPPLIES: Transit and fresh provisions as well as deck and engine stores provided by United Arab Contracting and Marine Supply Co.

SUBMARINE HOSE LOADING BERTH: Tanker is loaded by means of submarine pipelines to which are attached 2 or 3 hoses for loading and 1 hose for discharging ballast. A 36 in. pipeline transports the oil and a 24 in. line in No. 1 Seaberth, or 16 in. line in No. 2 Seaberth transports the dirty ballast to a ballast pit ashore. The loading berths are located approximately 3,580 ft. offshore in a water depth of approximately 95 ft. The loading and ballast lines are laid in the same trench and run in a direction 055°. The mooring buoys are numbered 1, 2, 3, 4, 5, 6, 7 and 8 (on the port bow) and running consecutively in a clockwise direction.

LOADING READINESS AND ARRIVAL TIME: The company will make every effort to load vessels upon arrival or as promptly as berth is available, weather permitting. Notice of Readiness will not be accepted as at time of arrival unless the vessel is in all respects ready to load. Arrival time will be considered as the time the Mooring Master boards the vessel or the time that vessel anchors, whichever occurs first.

FRESH WATER: Not available.

FUEL: Not available.

REPATRIATION: Not recommended.

HOLIDAYS: The Terminal will never be closed due to Religious Holidays.

SHIPMASTER'S REPORT: February 1993.

Anchorage: Ras Shukheir Anchorage Area is designated on B.A. Chart No. 2374 (Lat. 28° 16' 25" N., Long. 33° 33' 00" E.).

The holding ground is mud and very good.

The anchorage can be approached from North of Morgan Oilfield or from South past Felix Jones Patches and between the oilfield and the shore.

Tankers: Seaberth No. 1: Max. draft 19.5 m.
Seaberth No. 2: Max. draft 19.2 m.

Ballast: All ballast from cargo oil tanks must be discharged ashore through the ballast line at a cost of U.S.$ 0.25 per metric ton.

Moorings: All wires to have rope tails. The winch serving Buoy No. 1 should have an extra wire married on. The winch serving Buoy No. 7 should have a mooring rope married on.

Supplies: Fresh provisions are brought from Suez at a transportation charge of U.S.$ 50.00. They are of good quality.

Shipchandler: The Egyptian Marine Supply and Contracting Co. Telex: 66132 Consup Un.

AUTHORITY: *Operator:* Gulf of Suez Petroleum Co. – GUPCO, (P.O. Box 2400) Palestine Street, 4th Sector, New Maadi, Cairo, Egypt. *Tel:* 3522846, 3521365. *Telex:* 92248 Gupco Un. *Cables:* Gupcooil, Cairo. *Contact:* Captain Hassan Hafez, Marine Division Manager.

AGENCY: See "Suez Canal".

SAFAGA: 26.46 N. 34.00 E. (See Plan)

DOCUMENTS: The following documents are required on arrival:

Quarantine Questionnaire in duplicate (Form No. 15 Q.A.) showing all ports of call, as well as dates of sailings for the last 30 days, nature of cargo on board, destination, as well as sickness among crew or passengers, if any, specially when it is presumed that the sick will be hospitalised. These forms can be filled on arrival if not available on board before arrival.

1 Crew List and 1 Passenger List.

Derat Certificate should be handy for inspection.

Clearance from Last Port.

Complete set of Manifests covering all cargo on board showing names of shippers and consignees.

4 copies List of Passengers in Transit.

4 copies Crew List.

Deck log books showing date of last call at an A.R.E. port, completed up to the time of arrival at Port Said or Suez.

PILOTAGE: Compulsory. International pilot flag must be hoisted and Pilot will board vessel on arrival. Vessel should endeavour to arrive at the N. end of the island by sunrise, at Safaga Port by early morning; the light behind them will show up the reefs clearly. Wind, light in the morning, gains strength during the day, making tying-up more difficult. A beacon (Morewood Beacon), visible a mile off, is erected on the Southern spit of the island. After rounding the spit, Masters keep 5 cables clear of visible reefs and enter the harbour keeping the 2 large beacons to the North of the pier in line. The Manager, or his representative, of the Safaga Phosphate Company will meet ships in launch with instructions on berthing.

MAX. SIZE: See "Berthing".

HEALTH: On entering, vessels must hoist the International Quarantine Signal for compulsory quarantine. Any sickness must be reported to the doctor especially when it is presumed that the sick will be hospitalised.

The vessel's personnel should carry international vaccination and/or inoculation certificates.

BERTHING: *Phosphate:* There are 2 mooring buoys marked B and C and 2 mooring posts marked A and D.

(1) The anchor position is marked by a small red or white flag. When mooring, manila ropes only should be used, as wire ropes can be run out afterwards when ship is alongside.

(2) Due to rocky nature of sea bottom, it is very desirable that ship in coming into berth, does not override her anchor, as, if this happens, chain is apt to foul coral bottom and cause trouble later on.

(3) Endeavour to have all way off ship when anchor position is reached. Drop anchor as close to flag as convenient and go astern. If necessary check cable when 2 shackles have been paid out.

(4) Run rope to Buoy C, run rope to Buoy B, run rope to Post D, then run rope to Post A. Run Spring to S1, S2, S3, and pull alongside. Company's launches will run all ropes.

(5) If wind is blowing strongly off shore, a Spring may be run to S3, immediately a good rope to Buoy B is made fast.

(6) The best way to reach the anchor position is to steer straight for same, keeping Buoy C on port side. This will keep vessel clear of Buoy C and when anchor is dropped, the stern should swing clear of this Buoy. If it does not, a rope can be run to S3 and the stern pulled in before falling back on pier.

(7) With anchor dropped as shown, 6 shackles should see No. 1 hatch at the pier, but if chain is slackened carelessly, it may foul bottom and be insufficient to reach pier.

If visibility is very good, a course can be made between the Hyndman and Cannon Reefs, and altered to bring the beacons referred to into line.

Rock phosphate and ground phosphate are loaded at this port for shipment all over the world. The mines are situated some 30 km. away and are connected by company's own railway. Rock phosphate loaded (1,000 metric tons per day) from elevator and phosphate in bags by ship's gear. Max LOA 70 m. Max. draft 27 ft.

General Cargo: Cargo vessels can berth alongside a quay of 443 m. with a draft of 30 ft. – 32 ft. Quay used for loading and discharging general cargo. It can accommodate 2 medium size vessels and one large vessel.

Grain: LOA 220 m. Max. draft 36 ft. 06 in., however vessels can berth with draft 42 ft. Discharge rate 8,000 - 10,000 tons per day

Aluminium: Max. LOA 285 m. Max. draft 33 ft. Discharge rate 8,000 - 9,000 tons.

STEVEDORES: Canal Stevedoring Co.

SERVICES: Water, deck and engine stores and provisions provided by Egyptian Contracting and Marine Supply Co.

HOLIDAYS: See "Suez Canal".

SHIPMASTER'S REPORT: January 1981.

Pilotage: Pilotage for berthing is compulsory, and the Harbour Master acts as Pilot.

Entry or departure at night is forbidden, without special permission from the Naval Authorities.

Anchorages: Vessels are allocated an anchor berth in the inner harbour by the Harbour Master. Vessel anchored in the Northern part of the anchorage, with Morewood Beacon bearing 135.5° × 2.8 miles, in 30 m. of water, with 6 shackles of cable out, and no difficulties were experienced, despite a period when wind from the North of Force 5, gusting 6, occurred when the ship had a 3,000 tonne coaster alongside.

Approaches: Vessel arrived off Safaga Island at approximately 2130 hrs. and no difficulty was experienced in anchoring with Morewood Beacon bearing 334° × 11 cables. The N.E. point of Safaga Island, and the headland near Bir Safaga showed up well on radar, as did Morewood Beacon, once identified.

Upon entering harbour the next morning at first light, a little difficulty was experienced in locating the leading beacons. From outside the harbour, the most prominent object visible is the alumina silo and elevator, and this uncharted feature being mistaken initially for the charted phosphate transporter, we were looking in the wrong place. Once sighted, however, the beacons were found to show up well in the early morning light. (These leading beacons are fitted with Fixed Red lights, but these are only turned on when Naval Vessels are entering or leaving port by night). A can shaped mooring buoy situated in the middle of the inner anchorage just North of the leading line is of assistance, but the buoys marking the dredged channel are non-existent. This mooring buoy is a handy turning point for ships proceeding to the Northern part of the anchorage.

A partly ruined beacon is visible on the sand spit at the Southern end of Safaga Island approximately 3 cables from Morewood Beacon.

Of the two stranded wrecks charted on the S.W. shore of the inner anchorage, the Northern one (marked PA) has been salvaged. The Southern one is conspicuous, and afloat at high water. It is reported that this one may well be salvaged soon.

There appeared to be little or no tidal stream or current to speak of in the inner anchorage, vessel lying to the wind most of the time.

Max. Size: The largest size of ship handled is about 50,000 tonnes d.w.t., with a max. draft of about 11 m.

Radio: There is no radio station at Safaga, and telephone/telex links are minimal. Harbour authorities wishing to communicate with ships entering use VHF sets of ships alongside. We maintained a normal sea watch (1 Radio Officer) both at anchor and alongside, and good communications were obtained with Portishead Radio.

Tugs: There are no tugs available.

Berthing: Commercial Wharf: Approximately 500 m. in length.

This has 3 berths at present. No. 1 Berth is the one at the N.E. end, Berth No. 2 in the middle, and the alumina berth at the S.W. end.

Berths No. 1 and 2 are kept exclusively for the discharge of wheat; cement ships use the alumina berth by private arrangement. Depth alongside Berth No. 2 is officially 9.1 m., but reported deeper. (We berthed drawing 9.6 m.) and at Berth No. 1 the depth is stated to be 9.7 m. alongside, but 11.0 m. if barges are placed between the ship and the quay. Works are in progress to extend the commercial wharf Northeastwards from Berth No. 1 almost up to the Naval Wharf, which extends as marked on the chart.

The Oil Jetty charted to the South of the town is reported to be part of the Naval Base.

Cargo Handling: Bulk wheat is discharged by portable pneumatic conveyors (vac-u-vators) into hoppers on the quay, where it is bagged and taken away by lorry. (Discharge rate for this vessel approximately 1,900 tonnes/day).

Alumina is discharged direct to the silo by fixed elevator.

Cranes: There are no cranes on the wharves. It was reported that there is a mobile floating crane, of 15 tonnes SWL at 35 m. radius, although this was not seen by us. A small floating crane is in use for the extension works.

Medical: A doctor is available, and will visit ships at the inner anchorage. Cholera Vaccination Certificates are required, and the doctor will do vaccinations.

Density: 1030.

Fresh Water: There is a limited supply of fresh water, the quota being 500 tonnes a month for all ships, but this is expensive.

Fuel: No fuel oil of any kind available.

Consuls: None locally.

Repairs: The nearest repair facilities are at Suez.

Gangway/Deck Watchmen: Employment by the ship of shore watchmen is compulsory, and they have to be accommodated on board both alongside and at the inner anchorage. Whilst shore labour is onboard, a policeman is placed on board to guard the ship's accommodation.

Shore Leave: Permitted, passes being issued when ships are alongside, although apart from one hotel there is very little to do in Safaga. Agents can arrange trips to the River Nile, Valley of the Kings, etc., but special passes are required.

General: Provisions: Fresh provisions are available in season, and a chandler will visit ships without prior appointment.

Cargo Handled:

The principal activities of the port are:

(i) Import of wheat: approximately 100,000 tonnes/month.

(ii) Import of alumina: 60 – 75,000 tonnes/month. (3 – 4 ships).

(iii) Import of cement: 13 – 15,000 tonnes/month. (1 – 2 ships).

(iv) Export of phosphates: approximately 20,000 tonnes/month. (1 – 2 ships).

(i), (ii) and (iv) are all under the control of the Egyptian Government, (iii) is carried out privately.

SHIPMASTER'S REPORT: September 1982

1. Pilot does not board on arrival.

There are very good visible leading markers (red and white), also 5 buoys have been laid out marking the dredged canal. They are ordinary unlit mooring buoys. Pass between these buoys with the leading beacons 310° True and vessel is clear of dangers. On the 5th buoy, which is (single) on vessel's starboard side vessel can turn out of the channel and proceed to any place outside the 310° lead.

2. Discharging grain, draft limit 36 ft. 6 in. With 30 ft., vessel shifts to Berth No. 2 to finish. Daily rate of discharge is about 3,600 tonnes.

3. Water comes by pipeline from Nile River not by barge from Suez.

4. Berthing: Use starboard anchor. A motorboat takes first 2 headropes then 2 stern ropes ashore and then heave the ship alongside. Pilots are careful.

Mooring: Have 3 headropes, 2 breastlines and 1 spring ready (same aft).

When shifting from Berth No. 1 to No. 2 ship does not shift along the berth but makes a new berthing due to anchor.

SHIPMASTER'S REPORT: January 1983.

Pilotage: The Harbour Master has ceased allocating anchorage and ships now anchor wherever they like inside bay. Our vessel is 610 ft. long and drawing 36 ft. 6 in. and like your earlier report arrived and anchored half a mile South of Morewood Beacon at 2140 hrs. and moved up to anchor four cables from grain berth in the morning. Passage over reef crossing bay (apart from clearly shown leads) is now marked by four mooring buoys and channel is 13 m. depth.

Berthing: There is now a 900 h.p. tug to assist. The new berth towards the Naval Wharf is nearing completion. We berthed at No. 1 drawing 11.13 m. with barges between ship and quay.

Fresh Water: Service is prompt when needed.

SHIPMASTER'S REPORT: March 1988.

Approaches: (B.A. Chart 3043). Vessels approaching from the South should keep on Ras Abu Soma which shows up well on Radar at about 24 miles. Panorama Reef Beacon shows up well on Radar at about 10 miles. Safaga Beacon bearing 265° gives a good echo on Radar at 24 miles.

After coming abeam of Panorama Reef Beacon at a distance of 2 miles to the North, steer 211° passing abeam of Morewood Beacon at a distance of about 9 cables. Morewood Beacon shows up well on Radar at about 14 miles. Cnsult soundings continuously as vessel has to anchor 1 mile South of Morewood Beacon. This is on the instructions of the Pilot (VHF Channel 16), who always boards in the roads from a tug. Entering the harbour with Pilot is compulsory. There are no difficulties and no significant current was experienced. The tide is considerable. The roads have good holding ground.

Weather conditions are mostly good. Visibility also good. No rain, drizzle on no more than a few days a year.

If approach is adjusted for dawn the reefs show up clearly. A conspicuous white cubiform building lies to the South of Safaga Island at approximate position 26° 42.7' N., 33° 59.7' E.

Entering and leaving the Harbour is only possible during daylight hours.

The 4 buoys marking the dredged channel of about 14 m. depth, found to be in the charted position. They are "can-shaped" unlit mooring buoys with the colour of rust (unpainted). There is another (fifth) buoy on the North side, of same characteristics (uncharted), at approximate position 25° 43.32' N., 33° 57.55' E. The tug is usually made fast to the buoy.

The leading beacons can easily be located. There is a conspicuous sharp mountain summit far behind (see picture in Pilot Book), in line with the leading beacons. Vessels sailing from the Harbour disembark the Pilot inside the Harbour, West of the fifth buoy. Pilot is picked up by a pilot boat. Accommodation ladder is usually used.

Anchoring inside the Harbour (7 shackles in the water), is always with the assistance of the Pilot. Good holding ground.

Restrictions: Vessels have to arrive with a max. draft of 36 ft. 6 in. (11.13 m.) which is the maximum according to local regulations. However,
1.0 cm. – 2.0 cm. by head or by stern is not a problem, but if over 2 cm. vessel is in trouble. If she is not covered by Charterer's orders and instructions, a big problem could arise against the vessel. Receivers will not accept N.O.R. and Charterer puts vessel "off-hire" for the time she takes to discharge the quantity corresponding to the said 2 cm. overdraft and the vessel has also to pay about U.S.$ 10.0 per tonne of the quantity discharged up to 11.13 m. alongside berth. This happened to us, but as vessel proved that it was not responsible, the Egyptian Charterers accepted the entire liability for time and expenses. Since both Charterers and Receivers are government companies, I did not understand the problem.

Grain Berth: The new grain berth, close to the Naval Wharf, was completed in March 1987. Depth alongside berth is 39 ft., and 36 ft. reported at the South West end of the berth. Vessels of 225 m. in length are warped ahead when the draft reaches 10.0 m. or less. Berthing is as described in "Shipmaster's Report" September 1982, paragraph No. 4.

One tug assists when berthing.

The grain silo has 100,000 tonnes capacity. Trucks continuously load from the silo. The 2 movable modern "Buhler Miag" unloaders with two pipes each, work continuously from 0730 hrs. to 2345 hrs., 7 days a week. When other ships are waiting at the anchorage they may work overtime up to 0200 hrs. next morning. Discharging is fast, average rate about 8,800 t.p.d.

There is a plan to accommodate a special 100,000 tonne grain vessel.

Repatriation: Possible by air from Luxor or Harghada Airport via Cairo or by car to Cairo via Suez (10 to 12 hours). Repatriation can only be arranged through state agents' head office in Suez.

Density: 1030.

Fuel: Not available in Safaga but large quantities can be arranged and come from Suez by bunker barge (small tanker). Fuel and gasoil of very good quality.

Fresh Water: Limited supply and expensive. Quality may be poor.

Provisions: Fish available in Safaga. Other provisions could also be supplied from Suez, transportation cost is U.S.$125.00, including Customs formalities.

Communications: Harbour Master/Pilot and Agent have VHF. There is a telephone station in Safaga. It is easier to call overseas in the afternoon. From Luxor it is very easy and clear with automatic telephone in telephone station or in hotels.

Telexes: For vessels with INMARSAT telex on board, the following telex numbers are very useful as Egyptian Charterers do not provide telex numbers.

Martrans Cairo: 00 91 92909/92243; Arabnavi Alex: 00 91 54131/54509/54311; Estram Cairo: 00 91 93472/92062; Egyptalum Alex: 00 91 94131; Silo Cairo: 00 91 23154; Maramon Alex: 00 91 54507/54127; Minship Port Said 00 91 63263/63034; Minship Suez: 00 91 66042; Memship Alex: 00 91 54162/54502; Mishipco Alex: 00 91 54193.

General: Pilot Book No. 64S/1986 shows phosphate silo.

In addition fo cargo ships (phosphate, grain, cement), cruise ships call at Safaga and anchor in the inner anchorage and passengers visit Luxor which is 3 hours away from Safaga (about 220 km.). Crew are able to visit River Nile, ancient Kings' and Queens' tombs and the museum in Luxor. Permission from Immigration is required but could easily be arranged by state Agent who also arranges the transportation. A visit to the nearby tourist village of Harghada is also possible (20 minutes from Safaga by car) where there are very good hotels and tourist shops. Permission can again be obtained through state Agent. Crew interested in diving can hire divers suits, etc. from special companies (Rate 80 Egyptian pounds for 2 hours, including transportation).

AUTHORITY: Ports and Lights Administration.
AGENCY: See "Suez Canal".

SIDI KERIR: 31.06 N. 29.37 E. (See Plan)

LOCATION: Sidi Kerir Sea Terminal is situated about 27 km. West of Alexandria.

The position of the Sea Terminal is Lat. 31° 06' N., Long. 29° 37' E.

As a reference point, there is a conspicuous pylon 4.5 miles S.W. of Fort Abbassia. A tall radio mast, marked by red lights, stands near a large tank farm, 4.5 miles W.S.W. of the above-mentioned pylon. The tank farm shows up well on radar at 20 miles.

The Terminal operates day and night.

Charts: Vessel's Master should keep on board Admiralty Chart No. 3325 "Approaches to Mersa El-Hamra and Sidi Kerir".

DOCUMENTS: Free zone area, no entry documents to the offshore terminal are required.

PILOTAGE: SUMED's Mooring Master and his assistant board the tanker 2 miles North of Buoy A1.

Notifications: ETA messages should be sent by cable via Alexandria/Port Said Radio on leaving previous port. Cables should be prefixed "For urgent delivery send via Telex 54108 or 54033 SUMED UN" and be confirmed 72, 48 and 24 hours prior to arrival. (Day and night berthing and operation). Arrival draft should be indicated. Vessels should arrive with a trim of 8 ft. by the stern and appropriate ballast to ensure that propeller is completely submerged.

LOCATION OF BUOYFIELD: (SBMs)

A1: Lat. 31° 06' 26" N., Long. 29° 36' 46" E.
A2: Lat. 31° 05' 32" N., Long. 29° 35' 38" E.
A3: Lat. 31° 04' 24" N., Long. 29° 35' 37" E.
A4: Lat. 31° 04' 54" N., Long. 29° 37' 39" E.
A5: Lat. 31° 05' 40" N., Long. 29° 38' 24" E.
A6: Lat. 31° 07' 30.4" N., Long. 29° 37' 58.3" E.

ANCHORAGES: Tankers can anchor to the North and N.W. of the buoyfield.

MAX. SIZE: The six berths are spaced one from the other so that each has:

Mooring Area Radius: 410 m. for A1, A2 and A6 (accommodate vessels up to 350,000 d.w.t., 400,000 d.w.t. with Sumed's prior approval); 320 m. for A3, A4 and A5 (accommodate vessels up to 250,000 d.w.t.); Manoeuvring Area Radius: For A1, A2 and A6, 1,220 m.; For A3, A4 and A5, 915 m.

Water Depth and Draft Limitations:

For A1, A2 and A6:	85 ft. maximum water depth
	75 ft. maximum draft
For A3, A4 and A5:	60 ft. mimimum water depth
	54 ft. maximum draft

Minimum Size: 50,000 d.w.t. ±5%. Minimum cargo loading is 40,000 metric tons of any one type of crude oil.

TUGS: 2 tugs × 2,200 h.p. and 2 supply boats × 4,000 h.p. with fire fighting and anti-pollution equipment is available as required.

Mooring Launches: 500 h.p. mooring launches assist in mooring and hose operations.

RADIO: All messages to be sent via Alexandria/Port Said Radio. Sidi Kerir has a HF long range radio working on 2182 kHz and 4142.5 kHz.

VHF: Channels 16, 78 and 3.

BERTHING: *Ship's Derrick:* The ship's derrick should be capable of lifting 10 tons and rigged on the port side ready on arrival to take the gear on board for berthing the ship and connecting the hoses.

Mooring: Buoys A1, A2 and A6 are equipped with twin nylon ropes of 18 in. circumference and 180 ft. long, ending with a 26 in. chafing chain 2.75 in. diameter. A support buoy is connected to the chain.

The port side mooring rope has a 350 ft. polypropylene pick-up rope of 10 in. circumference. The starboard side is the same but the pick-up rope is only 180 ft. in length. Two bow stoppers are required.

Buoys A3, A4 and A5 are equipped with one gromet rope of 15 in. circumference and 180 ft. long, ending with a 26 ft. chafing chain. One bow stopper is required.

Hoses: Each berth has two cargo hoses with a 16 in. connection (ASA 150). There is a ballast unloading facility with 16 in. connection. Connection of hoses to be performed by the vessel under the supervision of SUMED's Mooring Master.

Loading/Deballasting Rates:

Buoys A1, A2 & A6	Loading	Max. 12,000 tonnes per hour
	Deballasting	5,000 tonnes per hour
Buoys A3, A4 & A5	Loading	Max. 10,000 tonnes per hour
	Deballasting	3,000 tonnes per hour

Shipmaster's Report: January 1986.

Dirty ballast reception: 1×16 in. floating hose. Hose to be connected by ship's crew together with cargo hoses. Maximum discharge pressure 100 p.s.i. according to Loading Master there is no limit on quantity.

SUPPLIES: No bunkers or supplies are available or permitted.

MEDICAL: Private doctors and hospitals are available in Alexandria.

SHORE LEAVE: There is no shore leave for personnel of vessels loading at Sidi Kerir Terminal (disembarkment from vessels is strictly forbidden except in emergencies).

GARBAGE DISPOSAL: Collection service available. Plastic bags are provided.

WASTE OIL DISPOSAL: Collection service not available. All buoys are equipped with deballasting sealines.
SEAMAN'S CLUBS: No shore leave from Sidi Kerir.
CURRENCY: Egyptian Pound.
AGENCY SERVICES: Not required under normal circumstances.

SHIPMASTER'S REPORT: *General:* Sidi Kerir is the Northern end of the pipeline from Ain Sukhna in the Gulf of Suez. The pipeline is owned by the Arab Petroleum Pipeline Co. and operated by SUMED Co. (Suez – Mediterranean).

The Sidi Kerir Terminal (Tank farm) position is at Lat. 31° 03' N., Long. 29° 40' E. There are at the moment 5 SBMs for loading vessels, more are planned for the future. The buoy field is marked by the following points: "A" Lat. 31° 08' N., Long. 29° 37' E., "B" Lat. 31° 04' N., Long. 29° 31' E., "C" Lat. 31° 01' N., Long. 29° 35' E., "D" Lat. 31° 05' N., Long. 29° 41' E.

The area within ABCD is a prohibited anchorage area and may not be entered without a Pilot.

The position of the 5 SBMs is within the area:

1. Lat. 31° 06.7' N., Long. 29° 35.7' E. For loading Arabian Light & Kirkuk Crude.
2. Lat. 31° 05.9' N., Long. 29° 36.9' E. For loading Arabian Light & Kirkuk Crude.
3. Lat. 31° 04.6' N., Long. 29° 36.9' E. For loading Arabian Light & Kirkuk Crude.
4. Lat. 31° 05.0' N., Long. 29° 37.9' E. For loading Arabian Light & Kirkuk Crude.
5. Lat. 31° 05.1' N., Long. 29° 38.6' E. For loading Basrah Crude.

(a) The current sets usually from N.W. at about 0.5 knots but may increase during Summer to 1 knot; there is no considerable tide.

(b) References: BA Chart 3356; BA Pilot Book 49, 6th edition 1976.

Documents: One crew list, one ship's stores list and clearance from last port.

Pilotage: Pilot also acts as Loading Master and boards vessel at the anchorage. A pilot ladder/accommodation ladder combination is to be rigged on the starboard side. Vessels must give a lee for the pilot launch. Pilots work preferably during daylight hours.

Anchorage: The anchorage is one to two miles North of the buoyfield in 20 to 40 fathoms of water. There is good holding ground on sandy bottom; no shelter during Northerly winds or swell. The port closes during strong winds and swell. An open sea approach; no dangers on the way to the anchorage. The coastline is low desert and gives a poor echo, the best radar echo during the approach was the tankfarm and the pipeline.

Max. Size: Max. draft 75 ft. Max.size 400,000 d.w.t.

Radio: ETA information to be given preferably via Alexandria Radio to telex number 54108 attention "SUMED operations – Alexandria" at 72, 48, 24 hours prior to arrival. Initial message should give call sign; Summer deadweight; Summer draft; cargo requirements with name of crude and approximate quantity required in cubic metres and long tons, also maximum loading rate required in cubic metres; last port; whether vessel carries 2 × 16 in. reducers.

Health: Free Pratique is given by the Pilot/Loading Master.

Tugs: One tugboat, 2,200 h.p., is on standby at the buoyfield and will assist on request.

Berthing: The vessel moors to a SBM. The mooring equipment, 2 wire slings, 2 shackles and a toolbox, are taken from the launch.

SBM Loading Berth: The hoses are connected by the ship's crew under the supervision of the Loading Master. The (2×16 in.) hoses are of a floatable type with a Camlock connection.

The maximum loading rate is given as 15,000 cu.m./h. or as requested by vessel. Before completion of cargo the pumps are stopped and the balance loaded by gravity. At the present time the dirty ballast facilities are under construction.

Repairs/Drydocks: At Alexandria about 12 miles to the East. No facilities at Sidi Kerir.

Density: 1026.

Supplies/Services: None.

Authority: The Pilot/Mooring Master acts as Government Representative.

SHIPMASTER'S REPORT: November 1987.

Pilotage: The Pilot/Loading Master and the surveyor boarded by helicopter. No Notice of Arrival was given.

Documents: The pilot takes the vessel's Register, Load Line Certificate, Safety Construction Certificate, Derat Certificate and Safety Radio Certificate for clearance. Various local forms are supplied by the pilot for completion.

Anchorage: Vessel used B.A. Chart No. 3356 (New edition March 1976).

Vessel anchored with the radio mast bearing 113° (True) and the water tower bearing 141.5° (True). The distance from the stern to the shore by radar was 2.6 miles and the distance from the stern to the buoy was 1.2 cables.

Notice: The following notice was handed to the Master on arrival:
QUOTE

Ship's Alertness.

This Terminal is on an open roadstead, therefore, during the time a ship is moored at the Terminal, the ship's engines and gear must be ready with full power for immediate use.

A vessel in a submarine berth must be able to clear and shall clear immediately upon advice of the Mooring Master or as directed by Sumed's Terminal Superintendent.

Ship's personnel should be at their stations and alert at all times during mooring, unmooring, and during cargo transfer operations.

Watchman must be stationed forward to watch the buoy, ropes and floating hoses.

Watchman must be stationed beside the manifold to watch the connection.

The vessel must stand-by on the VHF (Channel 78) at all times during the loading operations.
UNQUOTE

SHIPMASTER'S REPORT: September 1989.

Vessel: VLCC, 268,000 d.w.t.

Charts: BA. Chart No. 3323 is somewhat out of date in the information it contains, according to local sources. This is probably because the Admiralty has not been advised of the latest information by local officials. It appears that the strictures about old surveys no longer apply to the area of approach, but which parts have been surveyed, and when, I was not able to discover. Suffice it to say that about 50 vessels per month use the terminal, ranging from fairly small ships up to and including those of the same size or larger than this vessel, having a loaded draft in the region of 21.0 m., and all have managed to arrive and leave without mishaps.

The Pilot Station and Waiting Area to the S.W. and West of the SBMs is the original one which was in use when terminal was first started. Nowadays this is only used by vessels which arrive for the first time and have no alternative information.

The preferred waiting area is now to the N.E. of the SBMs and this is used by the majority of vessels, especially those which trade regularly to the terminal.

Pilots: Pilots now prefer to board by a small helicopter and if possible during daylight hours only. If movements are performed after dark, the more conventional method of boarding from a launch is used.

The Pilot boats come from a depot near Alexandria, which is another reason why the area N.E. of the terminal is preferred, being that much nearer.

Pilot Boarding Position: We were requested to come to a position 1.5 miles East of the buoy, to which we were to moor, and similar instructions were heard being given to other vessels which were berthed, although the helicopter can go to any position.

Helicopter prefers vessel to be heading into wind for landing.

Cargo documents are delivered by helicopter and pilot leaves in same way, except as stated above, when night-time movements are made and a launch is used.

Documents: The SUMED Loading Master/Pilot acts on behalf of the relevant Government Departments and requires 4 copies of Crew List, 2 copies of Vaccination List and 2 copies of Stores List. Also required, were the following Ship's Documents, which are taken ashore for verification and returned with cargo documents prior to sailing:

Certificate of Registry.
Load Line Certificate.
Safety Equipment Certificate.
Derat Certificate.
Safety Radio Certificate.
Suez Canal Tonnage Certificate (if applicable).
Panama Canal Tonnage Certificate (if applicable).

Communications: We used telex communication throughout without problem, the numbers for the SUMED office are 54108 and 54033. No information was received from them, and on arrival, the same information was requested on VHF Channel 78.

Ballast: Vessels are preferred with clean ballast, but reception facilities, for which a charge is made, do exist. Another hose is connected for dirty ballast discharge to reception ashore. This can sometimes be a slow process if the system has been heavily used and is near the limit of its capacity.

Loading: This vessel loaded 2 grades, a maximum rate of 10,000 cu.m.p.h. being available on each. The grades were loaded one after another, two hoses being used. A "short stop" of 10,000 cu.m. was necessary, as the second grade then follows the first down the pipeline.

AUTHORITY: Arab Petroleum Pipeline Company (Sumed), 431 El-Guish Avenue, Loran, Alexandria, Egypt. Postal Address: P.O.Box 158, Alsaraya, Alexandria, Egypt. *Tel:* 5864138, 5864139, 5877818. *Telex:* 54108 Sumed Un. *FAX:* 5866713, 5878397, 5871295, 5871297. *Contact:* Moussa Abdel Motagaly, Sidi Kerir Terminal – General Manager.

SUEZ CANAL (including Port Said and Suez): (See Plan)

Also see "Rules of Navigation".

DOCUMENTS:

The following documents are required on arrival:
The last Classification Certificate issued.
Information concerning a vessel transiting the canal.
4 copies Crew List.
*Ship's Register and Suez Canal Special Tonnage Certificate.
General arrangement and capacity plans of the vessel, if transiting the Suez Canal for the first time, or, undergone any alterations.
Suez Canal Authority's double bottom tanks capacity form.
Navigability form.
Complete set of Manifests covering all cargo on board showing names of shippers and consignees.
4 copies List of Passengers in Transit.
Landing cards for passengers landing finally in the A.R.E. and for those landing in the A.R.E. in transit.
4 copies List of Passengers finally landing in the A.R.E. (if any) together with their addresses in the A.R.E.
Deck Log Books showing date of last call at an A.R.E. port, completed up to the time of arrival at Port Said or Suez.
Mail Waybills for ports beyond Suez Canal ports and alternatively, a document from the Master is required (cargo and passenger ships only).
Quantity of bunkers, water and cargo on board.
Free Pratique Certificates issued by the local Quarantine Doctor.

In case of a Northbound vessel loading or discharging alongside quay staying more than 24 hours in Suez, the following documents should also be presented.

(1) Load Line Certificate.
(2) Safety Equipment Certificate.
(3) Radio Safety Certificate.
(4) Documents covering names and ratings of ship's officers and their certificates.

* It is essential, to have amongst ship's documents, on board the vessel valid National Ship's Registry Certificate showing latest ship's name and her present Owners.

The above procedure is requested by the Suez Canal Authority, Traffic Control, to avoid delay for ships in joining the first convoy, or being liable to be stopped in the Canal in case of direct transit from Roads.

Advance notice to both Suez Canal Authority's Traffic Control and Measurage, with minimum period of 48 hours prior arrival.

For Pilot's Use:

(1) Arrival form of the Suez Canal Authority.
(2) Declaration "E" form for dangerous cargo on board in transit.
(3) Any other documents relating to shipments of dangerous cargo, radio-active or fissile.

N.B. Plain Suez Canal Forms are normally handed to Master by Pilots or ship's Agents, to be filled on arrival and also for use on consequent voyages.

Quarantine Authorities:

Quarantine Questionnaire in duplicate (Form No. 15 Q.A.) showing all ports of call, as well as dates of sailings for the last 30 days, nature of cargo on board, destination, as well as sickness among crew or passengers, if any, specially when it is presumed that the sick will be hospitalised. These forms can be filled on arrival if not available on board before arrival.

1 Crew List
1 Passenger List.
Derat Certificate should be handy for inspection.
Clearance from last port.

Passports:

For Immigration Officer the following documents are required on arrival:

Arrival Immigration form, duly completed.
1 Passenger List.
List of Passengers finally landing, in duplicate.
Crew List.
Valid passport with entry visa is required for landing in A.R.E. for passengers landing. Emergency visa can be granted on arrival if so required.

For Customs Use:

(1) Bonded Store List, in duplicate.
(2) Crew List and Passenger List in duplicate, showing rate of consumption of each.

Arrival Formalities - Documentation:

Upon arrival at Port Said or Suez for transiting the Suez Canal, Master will be presented with the following documents by the local authorities:

1. Maritime Declaration of Health	4 pages
2. Ship's Report	1 page
3. Notice for Port Officer	1 page
4. Declaration for Ships in Ballast	1 page
5. Statistical Declaration	1 page
6. Information Concerning a Ship	1 page
7. Information Concerning a Vessel Transiting the Canal	1 page
8. Declaration of State of Navigability	1 page
9. Declaration Concerning Use of Double Bottom Tanks and Lower Parts of High Tanks	2 pages
10 Passport Control Office Declaration on Arrival	2 pages
11. Requisition for Canal Projector Apparatus	1 page
12. Canal Mooring and Lights Co. (receipt)	1 page
13. Passport Control Office - Declaration on Arrival and Departure	1 page
14. Declaration on Departure	1 page

Note: Shipmasters should pay special attention to Document No. 9, being the Declaration Concerning Use of Double Bottom Tanks and Lower Parts of High Tanks, which document will assist the Suez Canal Authorities in assessing the Canal tolls. The schedule on the reverse side of the form must be filled thus avoiding any over-assessment of the Canal tolls.

Moreover, and when Shipmasters are requested to sign 2 copies or more of the same document, they should ensure that the first page is marked/stamped as "original" and all other copies to be marked/stamped as "copy".

Shipmaster's Report: January 1984.

Crew Personal Effects Declaration, Bonded Stores Declaration and Stores List are not required.

The Bonded Store is not sealed.

The Ship's Log Books are not taken ashore but the Certificate of Registry is taken in Port Said and returned at Suez.

Shipmaster's Report: October 1988.

The following documents are required for Suez Canal transit:

Agent: 1 copy Crew List.
State Agent: 1 copy Vessel Information Form.
5 copies Crew List.
1 copy Navigability Form.
1 copy Cargo List.
1 copy Shipping Agency Inward/Outward Form.
1 copy Liferaft Certificate.
1 copy CO2 Certificates.
Vessel's Safety Certificates.
Customs: Free Zone Certificate.
Quarantine: Quarantine Questionnaire.
1 copy Crew List.
1 copy Clearance from Last Port.
1 copy Vaccination List.
Suez Canal Authority: 1 copy Crew List.
1 copy Vessel Information Form.
1 copy Double Bottoms Tank Capacity Form.

The following documents are required for vessels berthing at Port Said:

Agent: 1 copy Crew List.
Immigration: 2 copies Crew List. (Shore passes and Passports obligatory).
Quarantine: 1 copy Clearance from Last Port.
1 copy Quarantine Questionnaire.

Circulars: Issued by Canal Shipping Agencies Company, Port Said:

Also see "Radio Officer's Report".

Circular No. 42/81: To all Shipowners and Masters.

We append hereunder free translation of Circular No. 2004/T81 received from the Deputy Manager, Transit Section, Suez Canal Authority, Port Said:

"It has been noticed that the necessary notification which should be given before the ship's entry in harbour in case of carrying dangerous cargo on board is neglected by Masters who also fail to fulfil the relative declarations, as stipulated in the Suez Canal Authority's Rules of Navigation Appendix for Vessels Carrying Dangerous Cargo (Edition 1977), which may expose both the vessel and the port to risks arising from the goods in question.

Kindly, therefore, draw the attention of Owners and Masters to the necessity of adhering to the said rules, noting that the Master will be entirely responsible navigably and criminally for any occurrence which may arise from failure to give the required notification, inaccuracy of details or omitting to take the necessary precautions on board".

Circular No. 23/82: To all Shipowners and Masters.

We once again should like to draw your kind attention to the fact that some Owners abroad do not provide the Protection Centre, Nuclear Research Centre of the Atomic Energy Establishment, Cairo with sufficient information in respect of such shipment on board their vessels.

In this connection, we would refer to our Circular No. 3/79 dated 6th January, 1979, text of which is quoted hereunder for your easy reference.

"According to Circular No. 4/3BA-406012, dated 1st September, 1964 and the amending Circulars issued by the Transit Section of the Suez Canal Authority and also the Suez Canal Authority's Rules of Navigation Appendix for Vessels Carrying Dangerous Cargo, the transport of radioactive substances carried by vessels transiting the canal are subject to protective conditions concerning transportation and transit, as specified therein, with the object of ensuring the safety of the said water channel and its environment.

However, it has lately been noticed that due attention is not given by Shipowners and Shippers abroad to forwarding the relative complete data which must reach the Atomic Energy Establishment before each shipment with regard to substances of Group 1 or on shipment with regard to substances of Group 2, this being in accordance with Item 3 of the aforesaid circulars and also Chapter 3 of the Appendix in question.

Kindly, therefore, advise Shipowners and Shippers that all the said conditions should be fulfilled, especially regarding the complete information relating to radioactive substances which should be sent immediately upon its receipt to: Head of the Protection Section, Nuclear Research Centre, Atomic Energy Establishment, Atomic Energy Post Office, Cairo.

This will enable us to take the necessary action to safeguard public interest.

We add that it is of vital importance that you also supply your Agents with all the required relative information and documents sufficiently in advance, to enable them to take the necessary action with both the Suez Canal Authority and the Atomic Energy Establishment in Cairo.

MAX. SIZE: 1st April 1996: LOA – No restriction. Max. beam 245 m. (aft draft 36 ft.) but in ballast. Max. draft 58 ft. (beam 158 ft.) or max. draft 41 ft. 09 in. (beam 200 ft.).

Also see "Suez Canal – Rules of Navigation" – Article 52.

HEALTH: On entering, vessels must hoist the International Quarantine Signal for compulsory quarantine. Any sickness must be reported to the doctor specially when it is presumed that the sick will be hospitalised. The Quarantine doctor meets the ships whilst entering the port and the ships are boarded in turn. To get a quick clearance and not to be left for later attendance, Masters are requested to receive the doctors as soon as they board and to have the following documents ready:

Quarantine Forms in Duplicate: When inserting the ship's register net tonnage special care should be taken in indicating same on the 2 quarantine forms (Form No. 15 Q.A.) as the dues are calculated on that tonnage, as incorrect information may cause complications.

Derat Certificate should be handy for inspection.
Clearance from Last Port should also be handy.
All ports at which the vessel has called as well as dates of sailings for the last 30 days should be inserted in the form.

Quarantine Signals:

By day: "Q" flag (signifying vessel healthy). *"Q" Over first substitute (QQ).* (Vessels have cases of infectious diseases more than 5 days ago, and there have been unusual mortality among the ratings or crew on board.) *"Q" over L flag (QL)* signifying (vessel is infected and has cases of infectious diseases less than 5 days ago.)

By night: red light over white: The flags and lights must remain hoisted until Free Pratique is granted. Ships in transit under Quarantine through the Suez Canal will use the same signals until they clear the other end of the Canal.

Important: In the event of a vessel arriving from a port that has been internationally declared infectious and the incubation period has not yet expired at the time of the ship's arrival at an A.R.E. port the vessel is put under compulsory Quarantine, moored at an isolated berth and no shore contact is allowed. Nevertheless, the ship can still carry out her normal operations on condition that all shore personnel are holding valid vaccination and/or inoculation certificates issued by the Quarantine Administration. The ship's personnel should also carry International Vaccination and/or Inoculation Certificates. Final landing passengers, not carrying such certificates, will be landed under Quarantine supervision and will be kept isolated at the lazarette until incubation period is over.

Pratique Granted by Radio: Pratique may be granted prior to ship's arrival provided the following conditions are adhered to:

(1) The vessel must be a regular liner known to the Quarantine Authorities and has a doctor on board.
(2) Details shown on the Quarantine Statement should be radioed to the Quarantine Authorities 24 hours prior to ship's arrival.
(3) Masters of vessels must declare before their arrival any accidents which might have taken place on board prior to the arrival in port.
(4) The ship must not have called at any infected port.

RADIO: *Authorised Personnel Checks:* Masters of vessels are requested to contact the Suez Canal Authority via its wireless station "SUQ" (watch frequencies 425 kHz, 454 kHz and 468 kHz) whenever they want to make sure of the identity of any Suez Canal personnel embarking their vessels, either in the approaches or in the harbours or in the Canal waters. Also in case of any urgent complaints which may need quick investigation.

Radio Officer's Report: May 1990.

"SUQ" receives on 425 kHz, 454 kHz, 468 kHz and transmits on 421 kHz. The station comes on watch at 0900 hrs. (L.T.), with CQ general call, till 1300 hrs., only for messages regarding convoy. It will not accept public correspondence, but will accept messages for Port Authorities regarding joining or missing convoy, etc.

General messages are sent and accepted at 1500 hrs. (L.T.).

VTS: Vessel Traffic Management System in operation.

TUGS: Highly qualified crew are available on board several tugs owned by the Suez Canal Authority in Port Said, Suez and in all Suez Canal stations. These tugs assist vessels to berth in Port Said harbour as well as in Canal if a case arises. It is left solely to the Canal Authority to decide whether more than 1 tug is needed (free of charge) to assist any ship to moor in the Port Said harbour, but if a Master of a vessel finds it necessary to employ an extra tug for berthing or if he needs a tug for any other reason, such an operation will then be charged to the vessel.

Salvage Tug Boats:

(1) 3,200 h.p. *Mounir, Moawen 1, Moawen 2.*
(2) From 3,500 to 5,000 h.p. *Antar, Bassel, Barei, Fahd.*
(3) 6,400 h.p. *Mared, Shahm.*

Harbour Tug Boats:

1,600 h.p. *Bori, Wakar, Chadid, Hout, Kirsh, Morgan, Shabar.*

BERTHING:

Port Said:

Places or Names	*No. of Berths*	*No.*	*Length of Berth* (m.)	(ft.)	*Length of Vessel* (m.)	(ft.)	*Remarks*
Isolated Berths*	3	1	280	919	232	761	
		2	250	820	202	662	
		3	314	1,030	266	872	
Outer Harbour Basin	10	1 A	245	803	197	646	
		2 A	300	984	252	827	
		3 A	without limitation				Vessel heading 270°
		4 A					
		5 A					
		6 A					
		7 A					
		8 A					
		9 A.N.					
		9 A.S.					
	5	4 A.E.	.....		107	350	Vessel heading 090°
		5 A.E.					
		6 A.E.					
		8 A.E.					
		9 A.E.					
Red Berths*	7	0 R	140	459	92	301	On the Western side of channel
		1 R	245	804	197	646	
		2 R	290	951	242	794	
		3 R	238	780	190	623	
		4 R	295	968	297	975	
		5 R	162	532	114	374	
		6 R	280	919	232	761	
Black Berths*	7	1 N	270	886	193	633	On the Eastern side of channel
		2 N	170	558	122	400	
		3 N	270	886	222	728	
		4 N	205	672	157	515	
		5 N	220	721	172	563	
		6 N	225	738	177	580	
		7 N	230	754	182	596	
Navy House	6	1			61	200	
		2			61	200	
		3			101	330	
		4			168	550	
		5			168	550	
		6			168	550	
Cherif Quay			Alongside				
Abbas Quay			Alongside				
Hussein Basin	17				91	300	South of the inflection point
					to	to	
					180	620	North of the inflection point
E Berths*	4	1 E	325	1,066	277	879	Depth 28 ft.
		2 E	280	919	232	742	Depth 31 ft.
		3 E	250	820	202	662	Depth 32 ft.
		4 E	220	721	172	563	Depth 32 ft.

Quays at Port Said: The Suez Canal Authority has quays to enable vessels to berth alongside at Cheriff and Abbas Basins. Length about 1,300 m. Height about 2 m. from sea level. Also 14 cranes of 3 tons lifting capacity each, running on rails have been installed. Maximum draft allowed is 27 ft. The best part of these quays is ready and vessels with full cargo for discharge are now berthing alongside. Vessels drawing more than 27 ft. have to lighten their cargo into lighters to that draft before berthing.

The distance between Bollards 23 and 24 South of deep Abbas Quay (30 m.) has been reserved for the berthing of one Ro/Ro vessel by the stern, within the present allowed draft (27 ft.).

Height of quay from sea level: 2 m.
Average tide all year: from 40 to 50 cm.
Thickness of fender: about 50 cm.
Breadth of quay edge: from 50 to 60 cm.

Containers: Container quay with length 350 m. and depth 45 ft. 2×45 ton cranes are installed. An additional 250 m. multi-purpose quay has been built adjacent to it. Maximum draft at Container Quay and Multi-Purpose Quay is 42 ft.

Grain: Grain vessels of 45,000 d.w.t. (Draft 38 ft. – 42 ft.) can berth alongside a 100 m. length hulk with 2 barges as spacers. Rate of discharge 400 t.p.h. (7,000 – 8,000 tons per day). Storage capacity: 10×400 ton silos and 1×20,000 silo.

Suez:

Port Ibrahim: Port Ibrahim is the Port of Suez. It consists of North and South Basins. Depth 26 ft.

North Quay: The North Basin has, on the North side, a quay length of 2,415 ft. a total breadth of 975 ft. and depth of 26 ft. at high tide. Quay can accommodate 4 large ships.

Berths 4 and 5, where stores are available, are suitable for general cargo.

Khedivial Quay: Berths No. 9, 10 and 11, length 119 ft., depth 24 ft. at high tide.

Mobile cranes available; 5 tons, 15 tons and 30 tons capacity.

Pilgrim's Quay: (Pontoon Berth) No. 6, 1 berth, length 1,000 ft., draft 26 ft.

Adabiya Port: This port is situated on the Western shore of the Suez Bay, and is under the control of the Naval Authorities.

Berth	*Length* (ft.)	*Depth* (ft.)
Main Quay	1,400	38 - 40
	470	24 - 27
	450	36
Grain Quay	650	40
Cement Quay		33

Discharge Rate at Cement Quay (Budr Jetty) is 6,000 - 8,000 tons daily.

Marakib Quay: Situated at the entrance of the Canal depth 28 ft.; can accommodate passenger and cargo vessels.

Storage Capacity at Suez:

North Quay	40,150 sq.ft.
Pilgrims Quay	20,952 sq.ft.
Khedivial Quay	8,448 sq.ft.
	69,550 sq. ft.

While stacking spaces on the quays are: 332,050 sq.ft.

STEVEDORES: As stated in the ETA messages, Masters are advised to include in their messages details of cargo to be discharged in either Port Said or Suez, hatch by hatch and gangways required, if possible. All loading and discharging operations in Port Said Harbour and Suez Roads are effected by lighters. There are steel lighters, and self-propelled barges available for this purpose that will allow rapid work to be carried out. At Port Said several reefer ships are provided with flat floating pontoons to facilitate discharge of cargo. At Port Said the draft of water does not allow ships to be berthed alongside quays to carry out cargo operations except in Cherif and Abbas Quays which accommodate vessels up to 27 ft. and consequently same are carried out also from and into lighters which are brought alongside the vessels whilst at anchor.

MEDICAL: It is very essential for Agent to receive advance notice of required medical attendance at least 24 hours prior to ship's arrival. All ordinary medical supplies are available and prescriptions are executed at any time at moderate prices and delivered during ship's stay in port. Medical assistance at Port Said and Suez is available. Consultations on board could be arranged through ship's Agent at any time by day or night. Reliable dentists are available at Port Said and could be consulted on board, if necessary, and during the following period at their clinics: From 0900 to 1300 hrs. and from 1600 to 1900 hrs.

Oculists are available for consultations at town clinics in Port Said during usual working hours. Opticians are also available at Port Said. The following hospitals are available with ample first, second and third class accommodation, accepting patients irrespective of nationality at reasonable charges:

At Port Said	*At Suez*
Al Mabarra Hospital	Al Mabarra Hospital
Notre Dame de la Deliverande Hospital	Abou El-Azayem Hospital
Two General Government Hospitals	General Government Hospital
T.B. Hospital	Isolation Hospital
Isolation Hospital	Ophthalmic Hospital
Ophthalmic Hospital	

Ship's personnel should carry international vaccination and/or inoculation certificates if a vessel is arriving from a port that has been internationally declared infectious and the incubation period has not yet expired at the time of arrival.

Note: In good weather the length on buoys may be increased from 3 m. to 9 m. according to the length of the berth and height of the vessel.

TANKERS: There is a bunkering station at Port Said harbour which can accommodate 4 tankers with not more than 38 ft. draft for the purpose of discharging their cargo of fuel or diesel oil to the different oil bunkering companies.

Tankers in Suez discharging bunkers and changing crew do so in the New Suez Terminal or the Suez Petroleum Basin. Tankers in Port Said discharge bunkers only.

Oil Storage: There is ample tank storage for bulk petroleum products.

New Suez Terminal: The terminal is situated in Suez Roads.

(1) Presently one berth has been reconstructed and is used by tankers chartered by EGPC.
(2) Minimum depth of water at LWOST in the approach Channel is 38 ft.
(3) Minimum depth of water at LWOST alongside each berth is 38 ft.
(4) Maximum safe length of tanker applicable 750 ft.
(5) Six pipe lines each berth:–
4 lines × 20 in.
2 lines × 16 in.
1 line × 4 in. (fresh water)
(6) All types of oil products can be handled at this berth.
(7) Facilities are available for reception of ballast. There is a charge for the service.

Suez Petroleum Basin:

Jetty No. 4 can take tanker length 500 ft. with 26 ft.draft.
Jetty No. 5 Max. length 530 ft. Max. draft 26 ft.
Jetty No. 7 Max. length 570 ft. Max. draft 26 ft.

There are sufficient pipes for discharge.

FRESH WATER: Available for supply ex self-propelled barges to any quantities required at all times with minimum supply of 50 tonnes for vessels exceeding 500 tonnes gross provided vessels inside the harbours, vessels at anchorage areas minimum supply quantity is 200 tonnes.

Canal Shipping Agencies Company – Circular No. 123/84:

Fresh water supply for Southbound vessels in Bitter Lakes and Ballah West Branch:

Owners and Masters are hereby notified that Southbound vessels entering the Canal direct from sea, will be able to have their fresh water supply while at anchor in the Bitter Lakes or in Ballah berths as from 20th November, 1984.

The Suez Canal Authority has its lightening vessel "Nagda I" stationed at Ismailia and ready for this purpose.

The vessel "Nagda I" is 3,200 d.w.t., 85 m. long, 15 m. breadth and her fresh water tanks capacity is 1,200 tons.

Demands for fresh water should be made through the Agent representing the vessel, 24 hours pre-arrival, to Port Said Harbour, price per ton of fresh water is the same as in Port Said harbour against receipts signed by Masters for the quantities received (minimum quantity is 200 tons).

FUEL: Different grades of fuel oil are available from different firms. It is customary that the Master should advise in his ETA message of the vessel's requirements, fuel or diesel oil, at least 24 hours prior to ship's arrival into port. Bunkering is by contract between the Owners and the different bunkering firms, and nominations should be arranged for each vessel separately between the Owners and Head Office of the bunkering firm abroad, and for which payment is also effected abroad. Only the Compagnie Orientale des Petroles accepts payment in cash out of Shipping Account No. 2 for supplies effected by them and in which case a nomination is not required. Vessels can be berthed in the oil installation and thus can effect their bunkering requirements through pipelines. Tankers which are not gas-free, cargo vessels carrying dangerous materials and passenger vessels, which are moored opposite the town, can be supplied with requirements of fuel and diesel oil ex self-propelled barges with max. capacity of 700 tons.

Port Said: Vessels can also be supplied at the anchorage areas and in Port Berths by means of supply tankers and self-propelled barges respectively.

Suez: Bunkering always done ex-barges.

FIRE PRECAUTIONS: In accordance with the Suez Canal Authority's regulations, tankers and vessels carrying dangerous materials must comply with their requirements, concerning fire regulations.

CONSULS: The following countries have Consulates or Consular Agencies in Port Said:

China (Rep. of)
Denmark
Finland
France
Germany
Greece
India
Italy
Netherlands
Norway
Panama
Russia
Spain
Sweden
U.K.
U.S.A.

The following countries have Consular Agencies in Suez:

Denmark
Finland
Norway
Sweden

REPAIRS: Most types of repairs whether temporary or permanent can be carried out here by the Suez Canal Authority's shipyard or its subsidiary companies, under the supervision of the appropriate surveyors, if necessary. Suez workshops are well equipped for undertaking all kinds of marine repairs to hull, main and auxiliary engines, boilers, navigation aids, radar and cooling, and installations.

Vessels carrying explosives are not allowed to carry out repairs. Tankers loaded or in ballast but not gas free are not allowed to carry out repairs, except in cases of force majeure of which the Canal Authority is sole judge. Gas-free tankers must present Gas-free Certificate before they are allowed to carry out any repairs. If unavailable, a chemist approved by the Suez Canal Authority can be appointed for testing the tanks and issuing the Gas-free Certificate. The aforementioned restrictions are applicable at Port Said only and not at Suez where vessels anchor at roads and are of no danger.

Other Repair Facilities: Exist at Port Said for air conditioning, wireless telegraphy, radar, course and rudder recorder, refrigerators, and refrigerating units.

All kinds of repairs to echo sounding devices are carried out at Port Said and Suez by experienced specialists at reasonable charge. In Port Said different types are dealt with by the Port Said Engineering Works and Eastern Electronics. The electrical repair workshop in Suez is operated by Suez Electronics.

DRY DOCKS: A floating dock of 25,000 tons, capable of docking vessels up to 50,000 d.w.t., is available at Port Said as well as a dry dock at Suez. Sufficient notice is required to book the date for either the floating or the dry dock.

Repair facilities are available at Suez, where a dry dock is suitable to accommodate vessels up to 8,000 d.w.t.

Dimensions:

Extreme length to inner sill	464 ft.
Breadth at entrance	73 ft.
Height of water over keel blocks:	
at Spring tide	22 ft. fore, 26 ft. 3 in. aft
at Neap tide	19 ft. fore, 23 ft. 3 in. aft

The max. draft at which a vessel can use the dry dock is 17 ft. fore and 20 ft. aft. Deeper drafts may be arranged with the management.

The Suez Canal Authority's Floating Dock and Shipyard is situated at the Northern entrance of the Suez Canal, opposite to Port Said lighthouse.

Ships up to 50,000 d.w.t. may undergo all kind of repairs in the shortest possible time. Tankers, by gas-freeing during their voyage from their home harbour to Port Said, will save at least 4 days if they carry out their repairs in our dock.

Port Said Shipyard has 3 floating cranes, 1×40 ton, 1×100 ton and 1×200 ton capacity available for hire.

GANGWAY/DECK WATCHMEN: In both basins Cherif and Abbas at Port Said, where cargo vessels are normally berthed, ships' gangways can be used for disembarkation and embarkation. Passenger vessels are moored in special berths, i.e. Red Buoys, opposite the town, and can be supplied with 1 or 2 floating bridges (snake pontoon) which can connect the ship with the shore to enable the transit passengers and members of crew to proceed ashore. Cargo ships and other vessels mooring at the different buoys must lower their gangway to facilitate disembarkation and embarkation of ship's personnel as well as different officials. As far as Suez is concerned, all vessels must lower their gangway for the same purpose stated above. A deck watchman is recommended.

Also see "Police/Ambulance/Fire".

Circular No. 1/87:

1. Each vessel, tanker and/or floating unit of any type which berths in Port Said and/or Suez either to transit the Suez Canal and/or to carry out operations has to engage watchmen in the following procedure:

Gross Tonnage of Floating Unit	*Minimum No. of Watchmen to be engaged per Unit*
(a) up to 999 tons	1 watchman
(b) from 1,000 tons to 2,999 tons	2 watchmen
(c) from 3,000 tons and over	3 watchmen
(d) passenger ships	According to Master's requirements with a minimum of 3 watchmen.
(e) Large cargo ships	

2. Each Contractor has to submit to the Master a list showing names of watchmen engaged and their serial numbers.

3. The vessel has to ascertain that each watchman is in possession of an identity card and/or badge bearing a serial number, photo and name of the marine contractor through whom he has been engaged.

4. Masters are kindly requested not to sign blank receipts as it is recommended to keep a copy of same onboard for perusal in case of need.

5. Any incident concerning watchman's attitude on board has to be reported immediately to the Agents so that necessary steps can be accomplished on the spot for the safeguard of ship's interests.

Circular No. 86/84:

On the occasion of the current security precaution measures adopted at present, kindly advise Owners and Masters to the following steps:

1. Upon ship's arrival in Canal waters, security personnel may board vessels with at least two persons with certified identity cards issued by the Suez Canal Security Directorate. The above procedure is a part of security plan to safeguard ships' transit in the Canal due to the prevailing circumstances.

2. Utmost care and accuracy to be taken in relaying information about ship's tonnage and all particulars concerning cargoes onboard, thus complying with manifests, avoiding ship's delay or checking.

3. Special attention to be given on passing information for expected vessels either from the North or the South, and immediate notice for any alteration to be relayed to concerned parties with a minimum period of 6 hours before arrival at Anchorage Area to avoid being delayed.

OPENING/CLOSING HATCHES: In accordance with Charter Parties, the opening and closing of hatches are dealt with as instructed in this Agreement, but for vessels carrying out minor cargo operations, it is customary that stevedores open and close ships' hatches against ships' account. To expedite vessel's transit, it is always recommended that ship's crew, during vessel's entering into the harbour should open the hatches and rig ship's derricks in order that they may be ready for cargo operations immediately upon ship's arrival at either Port Said or Suez.

CUSTOMS ALLOWANCES: Every member of crew is entitled to have 1 carton of cigarettes, 8 ounces of tobacco, and 1 bottle of spirits for his own consumption during ship's stay in Port Said, Suez Canal transit, until vessel exits the Canal or vice-versa. Same applies to passengers, and a limited quantity of bonded stores can be permitted in public rooms and bars on passenger ships. Crew and passenger list, in duplicate, showing the amount in possession of each must be ready on vessel's arrival for submission to the Customs Representatives who normally proceed on board on arrival to seal up the Bonded Stores.

CARGO GEAR: These are normally supplied by the stevedores to comply with the nature of cargo discharged or loaded from cargo ships. Rope lengths and other cargo gear may be additionally required to expedite ship's discharge.

CREW CHANGES:

By law, only the official State Agents are permitted to handle reception or repatriation of crew in Egypt.

Crew members arriving at Cairo Airport to join a vessel must have a letter of introduction addressed to the Manager of Cairo Shipping Agency, 7 Abdel Khalek Tharwat Street, P.O.Box 468, Cairo, telephone number 745755 or 745863. This introductory letter is to be produced immediately upon arrival to the representative attending at the airport. *Note:* A representative is usually in attendance when the crew member steps off the bus and passes through the doors at the entrance hall. Distance from the bus about 20 m. – 25 m. – just in front of the banks.

Visas can be obtained at the airport.

The Suez Canal Authorities have also stipulated the following requirements for arriving crew members:

(a) Be of same nationality as the vessel's flag.

(b) Be in possession of a contract signed and stamped by the shipowners.

(c) Be holding a valid Seaman's Book.

Note: Crew members joining vessels at Suez Canal are not permitted to bring with them spare parts, equipment, electrical apparatus, etc., for vessels unless the goods in question are accompanied by an air waybill which must indicate the words "in transit", together with an invoice from the suppliers stating description and value of the goods.

Principals are requested to telex their Agent giving full details of crew changes including names, flight numbers, dates and times of arrival.

Agent's Notice: This is to bring to your kind attention due to the fact that Owners are sending the return tickets for repatriation of crew members by PTA which procedure entails delay in reserving a place on board the aircraft in addition to the delay that results in tracing the whereabouts of the PTA. This in turn causes extra hotel expenses and we are therefore requesting that Owners leave the ticketing to us in order to cut hotel expenses. Please note the usual crew discount is obtained.

AIRFREIGHT: The Official State Agents are the only Agents legally entitled to handle airfreighted consignments such as parcels, spares, etc. and the following procedure should always be followed:

All parcels should indicate:

(a) Name of vessel to which consignment is intended and port of delivery.

(b) Name of Official State Agent.

(c) The wording . . . . "delivery at Cairo Airport to Cairo Shipping Agency only, on behalf of (insert name of Official State Agent)".

(d) All parcels to be encircled with a wide self-adhesive tape, coloured red. In addition a self-adhesive label to be affixed bearing the name of Cairo Shipping Agency and also the name of the Official State Agent in large capital letters.

(e) The parcel and air waybill must indicate the words "In Transit for M/V......".

(f) Suppliers of the spare parts must always be instructed to enclose with the parcel, copy of their invoice stating description of the contents and value and to ensure that the commodity of the cargo can be indicated precisely on the relative Bill of Lading.

Note: Crew members joining vessels at Suez Canal are not permitted to bring with them spare parts, equipment, electrical apparatus, etc., for vessels unless they are accompanied by an air waybill and an invoice duly completed as instructed above. Please note that any goods for vessels arriving with embarking crew members must also follow precisely points (e) and (f) as indicated above otherwise the Customs Authorities will refuse to release such goods "In Transit".

In order to enable check upon airfreighted consignments, Principals are requested to telex advise their Agent giving full details of flight number, date, air waybill number, etc.

Circular No. 19/83: Dated 8th February, 1983.

Parcels of spare parts, equipment and electrical apparatus arriving care of crew members without transit shipping documents.

Reference is made to our previous circulars, dealing with the above subject, ending with No. 101/82, dated 31st October, 1982, requesting you to kindly ascertain that the air waybill covering a parcel of spare parts must show that same is "In Transit for M/V......".

The object of the present circular is to bring to your kind attention that, considering that, according to Regulations, a crew member is allowed to be accompanied only by his personal effects, the Customs Authorities refuse to release "In Transit" other goods, such as spare parts, various equipment, electric apparatus of high value (T.V., video etc.) arriving care of crew members. As already explained, the goods in question should be accompanied by an air waybill and an invoice duly completed as described previously.

Kindly, therefore, arrange for parcels of spare parts, equipment, apparatus etc. not to be forwarded care of crew members unless they are accompanied with complete shipping documents, otherwise it will not be possible to have them released "In Transit".

Circular No. 114/1983:

We would refer to our various Circulars ending with No. 19/1983 (see above), dated 8.2.1983, dealing with the necessity of instructing Suppliers of spare parts to ensure that:

(a) the parcels be accompanied by copies of invoices showing description of their contents and its value.

(b) that the relative Bills of Lading should point out the commodity of the cargo precisely.

Moreover, you are also kindly requested to make certain that the respective Air Waybill should clearly show that the parcel is "In Transit for M/V......", indicating the vessel's name to enable the Customs to avoid dealing with the parcels as "Import Cargo", which irregularity causes much complication and delay.

In this respect, it is also recommended that parcels be airfreighted to Cairo four days before ship's arrival, taking into consideration the weekends and official holidays.

Circular No. 121/84: Arrival of ship's stores consignments by airfreight to Cairo Airport: Notice is hereby drawn to the urgency of notifying all concerned as regards the arrival of airfreighted ship's stores consignments in ample time before reaching Cairo Airport, prior ship's arrival at one of the Suez Canal ports, with a minimum period of four days before ship's arrival. This will enable our Cairo branch to complete the necessary Customs formalities, and ensuring delivery to respective vessels.

Kindly be guided accordingly.

AIRPORT: The distance between the international airport at Cairo and Port Said or Suez is normally 2.5 hours. International airlines serve this airport. Cairo Shipping Agency is on constant contact with Agent for the necessary instructions.

In the interest of all and in order not to lose any time and to avoid any restrictions when sending crew members by plane to join their respective vessels, it is essential that the Agent concerned should notify by cable in good time the flight number as well as the time and date of the arrival in Cairo, thus enabling the Agent to notify Cairo Shipping Agency for the necessary clearance and as to whether they should be sent to join their vessels.

HOLIDAYS: *General Holidays.*

February 22nd	Unity Day
May 1st	Labour Day
May 9th	Sham El Nessim (Spring Holiday)
June 18th	Evacuation Day
July 10th – 13th	Ramadan Bairam (End Of Ramadan)*
July 23rd	Revolution Day (National Day)
September 16th – 20th	Courban Bairam (Pilgrimage Feast)**
October 6th	Armed Forces Day
October 7th	Islamic New Year***
October 24th	Suez Day
December 16th	Mouled El Nabi (Birth of the Prophet)

*Possibly observed July 11th – 14th

**Possibly observed September 17th – 21st

***Possibly observed following day.

The Dates of the Islamic holidays are stated approximately. Working hours: 0600–1800 hrs. Overtime: 1800–0600 hrs. Friday is the weekly day of rest but it does not affect labour.

If a holiday falls on a Friday it is possible that the following working day will be decreed a holiday also.

Ramadan: Thirty days' fast and how it affects labour; Cargo operations can be carried out at night and on Fridays and General Holidays against payment of overtime rates. Arrangements should be made on the previous working day to enable Customs to delegate the necessary personnel in time.

Local Holiday

Port Said:

December 23rd – Port Said Day

POLICE/AMBULANCE/FIRE: Vessels which are moored in the harbour either in Port Said or Suez requiring assistance from the Port Police, should hoist the International Code Signal (YM). There is always a police guard appointed by these Authorities on each ship in either Port Said or Suez harbour. First-aid assistance can provide ambulances at a request through the Agent. In case of fire on board when in port, the Master must inform the Port Authorities (the Suez Canal Authority) immediately and at the same time give a general warning by means of a long blast of whistle or siren and be prepared to move his ship to another berth if so required. The Suez Canal Authority own 7 tugs and other craft distributed in various points of the Canal with individual output from 10 t.p.h. to 950 t.p.h. well equipped with fire-fighting appliances, ready for use at any moment.

Police guards are placed onboard vessels in Suez Roads for vessels' protection.

TELEPHONES: There are no telephone facilities available in Port Said except at Berth No. 4 Red where passenger ships are normally berthed, and this can be connected when snake pontoon is fixed with ship's gangway.

SERVICES: Port Said and Suez being situated at a middle point between the East and the West, have become an ideal centre for replenishing stores and provisions which can be obtained in bond or from town.

Delivery of provisions and stores is effected 24 hours a day at Port Said and Suez.

It is recommended that Masters should order their requirements prior to their arrival with a view to avoiding any delay specially for ships joining the 0700 hrs. convoy Southbound.

Deck and engine stores are ample and are also available and sold at (in bond) prices.

Paints: All kinds (bottom, boot-top, topside, enamel, engine ready mixed, heat resisting, varnishes) are also available at "in bond" prices. Painting of ships or undertaking any maintenance work on board is permitted while ship is in port waiting to join the North or the Southbound convoys as well as while transiting the Suez Canal.

The following companies are represented here:

International Marine Paint	Sole agent in Egypt: International Shipping Enterprise.
Hemples Marine Paint Camrex Marine Paint	Represented by The Egyptian Marine Supply and Contracting Co. (cable address: "Consup")

Chemicals: The following chemical firms are represented in Port Said and Suez:

Gamlen & Co.	Represented by The Egyptian Marine Supply and Contracting Co. (cable address: "Consup")
Bird Archer/Norus (Tommons & Chartes) Chemicals.	Represented by The International Marine Services Co. (cable address: "Marinco")
Drew Chemicals Cameroid Products.	
Paroline Chemicals Cameroid Products.	
Walker Bow.	
Houseman Marine Chemicals	International Shipping Enterprise

Grease and lubrication oils. Available from:

Esso Petroleum Co.
Misr Petroleum Co. (ex Shell)
Mobil Oil Co.
Caltex Oil Co.
Ocean Oil Co.
Wisure Oil Co.
Fina Oil Co.
Gulf Oil Co.
Castrol Oil.

An advance notice of 48 hours is necessary to arrange for lubricating oils and/or bunkers required.

Charts: Admiralty Charts are available at Port Said from the Egyptian Marine Supply and Contracting Co. If any order has to be supplied at Suez, arrangements can be made for the required charts to be sent there.

Defense Mapping Agency, Washington and British Admiralty Charts available from International Shipping Enterprise, who also act as distributor for Pains-Wessex Marine distress signals and line-throwing equipment.

Cigarettes: American and British cigarettes are available "in bond".

Technical Gases: Technical gases are also available at Port Said and Suez, and empty containers can be exchanged.

Fish: Bream, prawns, crab, rock fish available throughout the year; Mullet available June/February; Slip soles available November/March.

Vegetables: Beans, beetroots, cauliflower, cabbages, carrots, eggplant, endive, garlic, herbs, lettuce, marrows, parsley, radishes, spinach, tomatoes, turnips, escarole, onions, potatoes: *Available throughout the year.*

Green peas, celery, pumpkins: *Available January/March.*
Artichokes: *Available October/April.*
Parsnips, spring onions: *Available November/May.*
Green pepper, mint, lady's finger: *Available June/September.*
Capsicum: *Available May/December.*
Cucumber: *Available February/December.*
Lemons, limes: *Available throughout the year.*
Fresh figs, fresh dates: *Available August/October.*
Bananas: *Available October/June.*
Grapefruits, oranges, tangerines: *Available October/May.* (When out of season import citrus are Available).
Apricots: *Available May/June.*
Water melons, sweet melons: *Available May/October.*
Grapes: *Available June/October.*
Plums, peaches: *Available June/October.*
Mangoes: *Available August/September.*
Pears: *Available August/October.*
Apples: *Available November/February* (also imported the whole year).

Eggs: Eggs are available throughout the year.

Meat: Fresh meat is only supplied to vessels having a Mohammedan Crew after permission is obtained from the Customs. Other vessels are supplied with "frozen" in bond.

Laundry: Well equipped, reliable and fast services are available at Port Said, through the ship's contractor. Ship's laundry is usually delivered within 24 hours. For vessels remaining a few hours in Port Said and transiting the Canal, their laundry could be collected, washed and ironed and then transported to Suez by special car or lorry for delivery to them there.

Garbage: No refuse or ashes are allowed to be thrown whilst ships are moored in Port Said, transiting the Canal or in Suez Roads. Small barges are available in Port Said and Suez for disposal of garbage or ashes, which craft can be obtained at a reasonable hire.

Divers: Suez Canal Authority's Divers as well as other Contractors' experienced divers are available, capable of carrying out any kind of underwater repairs including welding and fees are subject to the kind of job to be performed. Anchors and other articles left behind by any ship in Canal waters are retrieved on no cure no pay basis.

SHORE LEAVE: Crew members are allowed ashore provided that they obtain a shore leave pass issued by the Immigration Authorities through the local Agent. They can proceed ashore by means of motor launches or rowing boats at their own expense. For vessels mooring opposite the town and connected with the shore by snake pontoon, crew, together with passengers, can proceed ashore free of charge.

IDENTIFICATION CARDS: Every member of crew must have a Seaman's Book deposited with the Officer in charge for inspection, if so required by the Immigration Authorities. If a vessel is stopping in Port Said or Suez for a lengthy time, these Seamen's Books are normally taken off the ship by the said Authorities and kept in their departing office pending ship's sailing day when they are placed on board by the proper officer on a previous advice. Identity cards are also needed if a crew member wishes to proceed ashore for a short visit to the town or for proceeding to any excursion inland.

DEVELOPMENTS: There is a modernisation plan underway at Suez.

When the modernisation is complete, cargo handling will be largely mechanised, resulting in a great increase in the port's capacity. The first stage of the expansion will provide 3 multi-purpose berths, shoreside installation, container-handling facilities, and grain storage facilities. An offshore grain pier connected to onshore storage silos is expected to be built during the next phase.

Plans for draft 68 ft. – 70 ft. are being studied.

Also see "Berthing – Port Said".

RADIO OFFICER'S REPORT: September 1990.

Documents: When vessel Southbound:
State Agent:
1 copy Information concerning a vessel transiting the Canal.
1 copy Navigability Form.
1 copy Information concerning a ship extracted from its official documents.
1 copy Double Bottom Tank Form.
1 copy Statistical Declaration.
4 copies Crew List.
4 copies Shipping Agency out/home.
Register and Suez Canal Tonnage Certificate (returned at Suez).
Protecting Agent:
1 copy Crew List.
Quarantine:
1 copy Maritime Declaration of Health.
1 copy Vaccination List.
1 copy Port Clearance.
Suez Canal Authorities:
2 copies Information concerning a vessel transiting the Canal.
2 copies Double Bottom Tank Forms.
1 copy Crew List.
When on the buoys at Port Said, Immigration require one copy of Crew List.
When vessel Northbound:
Same documents required as Southbound.
Port Said Loading/Discharging:
Immigration:
2 copies Crew List.
1 copy Declaration of Arrival and Departure.
Passports for Shore Leave Passes.
List of People going ashore.
Shore Leave Passes (leave one half with policeman on board and take the other half together with your Passport ashore).

Radio: During transit, listen to SUQ on 421 kHz, and reply on 425, 454, or 468 kHz. Pilot will advise you when.

SHIPMASTER'S REPORT: February 1992.
NORTHBOUND:

1. As per Admiralty List of Lights and Radio Signals (ALRS), vessels should book convoy time 4 days in advance through telex to SUCANAL (Telex No. 63543/63238 or 63528).
2. Call Suez Harbour Office on VHF Channel 16 and change to Channel 11 on reaching Lat. 29° 35′ N. (North AS Buoy) for anchoring instructions.

   Information is required as per ALRS.
3. Vessels anchor in marked "Waiting Area", North of Conry Rock. This anchorage is for all vessels under 38 ft. draft. When in the waiting area, use VHF Channel 14.

   Vessels over 38 ft. draft anchor in 'V' areas, South of Conry Rock.
4. Vessel's arrival time is the actual time of letting go the anchor, North of line Conry Rock to Buoy No. 2 (unless over 38 ft.) If time is of great importance, authorities advise vessel to drop anchor anywhere North of the line, even if vessel has to leave the anchor again immediately and move to a new location.
5. Vessels proceed to Inner Anchorage in Suez Bay to marked areas once a pilot is available. Vessels do not generally proceed inwards from the Waiting Area whilst Southbound convoy is transitting the Newport Rock Channel, so between the hours of 1800 and 2400, the waiting area can become full.
6. Latest arrival times for same day transit:

   0100 hrs.: Tankers (All types carrying dangerous cargoes) and large container ships. 0300 hrs. on payment of a surcharge and with prior arrival information.

   0300 hrs.: General cargo and tankers carrying non-dangerous cargoes. No extra time allowed.
7. Convoy times and turn numbers are given out on the radio (VHF Channel 14) at approximately 0300 hrs., so listen carefully.
8. Northbound Times: Large tankers start at 0600 hrs., they leave the Waiting Area at 0530 hrs. from North or South of Conry Rock, depending on size. The last ship generally gets underway at approximately 1000 hrs.
9. Convoy Notes: The average convoy consists of 26 vessels. The first vessels are large tankers with tug escort and 2 pilots. The next vessels are container ships and LPG ships. They are followed by small tankers. The last part of the convoy is made up of cargo vessels, Ro/Ro vessels, tankers in ballast and tankers carrying non-dangerous products.

   Depending on the size of the Southbound convoy, Northbound vessels can go straight through to Bitter Lake without anchoring.

   Transit speed is about 7.5 knots.

   Northbound vessels do not go through Port Said Harbour unless stopping for cargo or bunkers. They usually use the Eastern Cut.

   Our vessel carrying vegetable oils and latex got under way twice at 0930 hrs. and left the Canal at Port Said through the Eastern Cut at 2030 hrs.

   The searchlight is not always now used and it is suggested that it be removed as early as possible, especially during the Winter months, due to possible weather damage outside of Port Said.

   Pilots change when both North and Southbound at Ismalia. There is now no Port Said sea pilot outward-bound. The Canal pilot leaves at Beacon KM 4.

   Boats: If vessel only has one crane, one Canal boat will suffice as long as ship's lifeboats are open.

   The vessel still carried 4 boatmen and an electrician. A cabin is required for the electrician.

   When passing through the Port Said area, the boat is lowered, the pilot departs and the Agent conducts any business. This can cause a bunching up of vessels.

   Vessels should be aware of the strong East going cross currents when leaving the Canal at Port Said.
10. Signals: The black ball over 'G' or the 3 white vertical lights which indicate that the vessel requires a pilot must be shown on anchoring outside and inside.

    'Q' Flag (Not 'ZS') or the red over white lights to be shown until Pratique has been granted.
11. Formalities: The Agent boards in the Waiting Area and requires:
    3 copies Crew List.
    1 copy Customs Declaration.
    1 copy Effects List.
    Register (Takes Register away, it is returned at Port Said).
    1 copy Canal Ship Information.

CREW CHANGES:

By law, only the official State Agents are permitted to handle reception or repatriation of crew in Egypt.

Crew members arriving at Cairo Airport to join a vessel must have a letter of introduction addressed to the Manager of Cairo Shipping Agency, 7 Abdel Khalek Tharwat Street, P.O.Box 468, Cairo, telephone number 745755 or 745863. This introductory letter is to be produced immediately upon arrival to the representative attending at the airport.

Note: A representative is usually in attendance when the crew member steps off the bus and passes through the doors at the entrance hall. Distance from the bus about 20 m. – 25 m. – just in front of the banks.

Visas can be obtained at the airport.

The Suez Canal Authorities have also stipulated the following requirements for arriving crew members:

(a) Be of same nationality as the vessel's flag.

(b) Be in possession of a contract signed and stamped by the shipowners.

(c) Be holding a valid Seaman's Book.

Note: Crew members joining vessels at Suez Canal are not permitted to bring with them spare parts, equipment, electrical apparatus, etc., for vessels unless the goods in question are accompanied by an air waybill which must indicate the words "in transit", together with an invoice from the suppliers stating description and value of the goods.

Principals are requested to telex their Agent giving full details of crew changes including names, flight numbers, dates and times of arrival.

Agent's Notice: This is to bring to your kind attention due to the fact that Owners are sending the return tickets for repatriation of crew members by PTA which procedure entails delay in reserving a place on board the aircraft in addition to the delay that results in tracing the whereabouts of the PTA. This in turn causes extra hotel expenses and we are therefore requesting that Owners leave the ticketing to us in order to cut hotel expenses. Please note the usual crew discount is obtained.

AIRFREIGHT: The Official State Agents are the only Agents legally entitled to handle airfreighted consignments such as parcels, spares, etc., and the following procedure should always be followed:

All parcels should indicate:

(a) Name of vessel to which consignment is intended and port of delivery.

(b) Name of Official State Agent.

(c) The wording . . . . "delivery at Cairo Airport to Cairo Shipping Agency only, on behalf of (insert name of Official State Agent)".

(d) All parcels to be encircled with a wide self-adhesive tape, coloured red. In addition a self-adhesive label to be affixed bearing the name of Cairo Shipping Agency and also the name of the Official State Agent in large capital letters.

(e) The parcel and air waybill must indicate the words "In Transit for M/V......".

(f) Suppliers of the spare parts must always be instructed to enclose with the parcel, copy of their invoice stating description of the contents and value and to ensure that the commodity of the cargo can be indicated precisely on the relative Bill of Lading.

Note: Crew members joining vessels at Suez Canal are not permitted to bring with them spare parts, equipment, electrical apparatus, etc., for vessels unless they are accompanied by an air waybill and an invoice duly completed as instructed above. Please note that any goods for vessels arriving with embarking crew members must also follow precisely points (e) and (f) as indicated above otherwise the Customs Authorities will refuse to release such goods "In Transit".

In order to enable check upon airfreighted consignments, Principals are requested to telex advise their Agent giving full details of flight number, date, air waybill number, etc.

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Parcels of spare parts, equipment and electrical apparatus arriving care of crew members without transit shipping documents.

Reference is made to our previous circulars, dealing with the above subject, ending with No. 101/82, dated 31st October, 1982, requesting you to kindly ascertain that the air waybill covering a parcel of spare parts must show that same is "In Transit for M/V......".

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(b) that the relative Bills of Lading should point out the commodity of the cargo precisely.

Moreover, you are also kindly requested to make certain that the respective Air Waybill should clearly show that the parcel is "In Transit for M/V......", indicating the vessel's name to enable the Customs to avoid dealing with the parcels as "Import Cargo", which irregularity causes much complication and delay.

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Laundry: Well equipped, reliable and fast services are available at Port Said, through the ship's contractor. Ship's laundry is usually delivered within 24 hours. For vessels remaining a few hours in Port Said and transiting the Canal, their laundry could be collected, washed and ironed and then transported to Suez by special car or lorry for delivery to them there.

Garbage: No refuse or ashes are allowed to be thrown whilst ships are moored in Port Said, transiting the Canal or in Suez Roads. Small barges are available in Port Said and Suez for disposal of garbage or ashes, which craft can be obtained at a reasonable hire.

Divers: Suez Canal Authority's Divers as well as other Contractors' experienced divers are available, capable of carrying out any kind of underwater repairs including welding and fees are subject to the kind of job to be performed. Anchors and other articles left behind by any ship in Canal waters are retrieved on no cure no pay basis.

SHORE LEAVE: Crew members are allowed ashore provided that they obtain a shore leave pass issued by the Immigration Authorities through the local Agent. They can proceed ashore by means of motor launches or rowing boats at their own expense. For vessels mooring opposite the town and connected with the shore by snake pontoon, crew, together with passengers, can proceed ashore free of charge.

IDENTIFICATION CARDS: Every member of crew must have a Seaman's Book deposited with the Officer in charge for inspection, if so required by the Immigration Authorities. If a vessel is stopping in Port Said or Suez for a lengthy time, these Seamen's Books are normally taken off the ship by the said Authorities and kept in their departing office pending ship's sailing day when they are placed on board by the proper officer on a previous advice. Identity cards are also needed if a crew member wishes to proceed ashore for a short visit to the town or for proceeding to any excursion inland.

DEVELOPMENTS: There is a modernisation plan underway at Suez.

When the modernisation is complete, cargo handling will be largely mechanised, resulting in a great increase in the port's capacity. The first stage of the expansion will provide 3 multi-purpose berths, shoreside installation, container-handling facilities, and grain storage facilities. An offshore grain pier connected to onshore storage silos is expected to be built during the next phase.

Plans for draft 68 ft. – 70 ft. are being studied.

Also see "Berthing – Port Said".

RADIO OFFICER'S REPORT: September 1990.

Documents: When vessel Southbound:

State Agent:
1 copy Information concerning a vessel transiting the Canal.
1 copy Navigability Form.
1 copy Information concerning a ship extracted from its official documents.
1 copy Double Bottom Tank Form.
1 copy Statistical Declaration.
4 copies Crew List.
4 copies Shipping Agency out/home.
Register and Suez Canal Tonnage Certificate (returned at Suez).

Protecting Agent:
1 copy Crew List.

Quarantine:
1 copy Maritime Declaration of Health.
1 copy Vaccination List.
1 copy Port Clearance.

Suez Canal Authorities:
2 copies Information concerning a vessel transiting the Canal.
2 copies Double Bottom Tank Forms.
1 copy Crew List.

When on the buoys at Port Said, Immigration require one copy of Crew List.

When vessel Northbound:
Same documents required as Southbound.

Port Said Loading/Discharging:

Immigration:
2 copies Crew List.
1 copy Declaration of Arrival and Departure.
Passports for Shore Leave Passes.
List of People going ashore.
Shore Leave Passes (leave one half with policeman on board and take the other half together with your Passport ashore).

Radio: During transit, listen to SUQ on 421 kHz, and reply on 425, 454, or 468 kHz. Pilot will advise you when.

SHIPMASTER'S REPORT: February 1992.

NORTHBOUND:

1. As per Admiralty List of Lights and Radio Signals (ALRS), vessels should book convoy time 4 days in advance through telex to SUCANAL (Telex No. 63543/63238 or 63528).
2. Call Suez Harbour Office on VHF Channel 16 and change to Channel 11 on reaching Lat. 29° 35' N. (North AS Buoy) for anchoring instructions.

   Information is required as per ALRS.
3. Vessels anchor in marked "Waiting Area", North of Conry Rock. This anchorage is for all vessels under 38 ft. draft. When in the waiting area, use VHF Channel 14.

   Vessels over 38 ft. draft anchor in 'V' areas, South of Conry Rock.
4. Vessel's arrival time is the actual time of letting go the anchor, North of line Conry Rock to Buoy No. 2 (unless over 38 ft.) If time is of great importance, authorities advise vessel to drop anchor anywhere North of the line, even if vessel has to leave the anchor again immediately and move to a new location.
5. Vessels proceed to Inner Anchorage in Suez Bay to marked areas once a pilot is available. Vessels do not generally proceed inwards from the Waiting Area whilst Southbound convoy is transitting the Newport Rock Channel, so between the hours of 1800 and 2400, the waiting area can become full.
6. Latest arrival times for same day transit:

   0100 hrs.: Tankers (All types carrying dangerous cargoes) and large container ships. 0300 hrs. on payment of a surcharge and with prior arrival information.

   0300 hrs.: General cargo and tankers carrying non-dangerous cargoes. No extra time allowed.
7. Convoy times and turn numbers are given out on the radio (VHF Channel 14) at approximately 0300 hrs., so listen carefully.
8. Northbound Times: Large tankers start at 0600 hrs., they leave the Waiting Area at 0530 hrs. from North or South of Conry Rock, depending on size. The last ship generally gets underway at approximately 1000 hrs.
9. Convoy Notes: The average convoy consists of 26 vessels. The first vessels are large tankers with tug escort and 2 pilots. The next vessels are container ships and LPG ships. They are followed by small tankers. The last part of the convoy is made up of cargo vessels, Ro/Ro vessels, tankers in ballast and tankers carrying non-dangerous products.

   Depending on the size of the Southbound convoy, Northbound vessels can go straight through to Bitter Lake without anchoring.

   Transit speed is about 7.5 knots.

   Northbound vessels do not go through Port Said Harbour unless stopping for cargo or bunkers. They usually use the Eastern Cut.

   Our vessel carrying vegetable oils and latex got under way twice at 0930 hrs. and left the Canal at Port Said through the Eastern Cut at 2030 hrs.

   The searchlight is not always now used and it is suggested that it be removed as early as possible, especially during the Winter months, due to possible weather damage outside of Port Said.

   Pilots change when both North and Southbound at Ismalia. There is now no Port Said sea pilot outward-bound. The Canal pilot leaves at Beacon KM 4.

   Boats: If vessel only has one crane, one Canal boat will suffice as long as ship's lifeboats are open.

   The vessel still carried 4 boatmen and an electrician. A cabin is required for the electrician.

   When passing through the Port Said area, the boat is lowered, the pilot departs and the Agent conducts any business. This can cause a bunching up of vessels.

   Vessels should be aware of the strong East going cross currents when leaving the Canal at Port Said.
10. Signals: The black ball over 'G' or the 3 white vertical lights which indicate that the vessel requires a pilot must be shown on anchoring outside and inside.

    'Q' Flag (Not 'ZS') or the red over white lights to be shown until Pratique has been granted.
11. Formalities: The Agent boards in the Waiting Area and requires:

    3 copies Crew List.
    1 copy Customs Declaration.
    1 copy Effects List.
    Register (Takes Register away, it is returned at Port Said).
    1 copy Canal Ship Information.

Quarantine: Officer boards at Inner Anchorage and requires:
1 copy Health Declaration.
1 copy Vaccination List.
The Canal Inspector requires:
1 copy Suez Canal Tonnage Certificate.
1 copy Double Bottom Tank Declaration Form.
1 copy Transit Form.
The Searchlight Inspector requires:
1 copy Original Manufacturers Certificate.
3 Searchlight bulbs (2 in the light, and 1 spare) to be sighted.

12. Suez Anchorage:
Bunkers: Available. Amounts supplied should be checked carefully on completion.
Water: Available by barge.
Doctor: A doctor is available to come on board the vessel if the Agent receives prior notice. We obtained a doctor's visit without any difficulties.
Mail: In most cases it is delivered in Port Said.
Chandlers: There are many chandlers touting for business.
Garbage Collectors: This is a new innovation at Suez, but collection is not required, and Masters should not sign any forms.
Watchmen: The hiring of watchmen is a 'grey' area, and we could not find out if it is compulsory or not. The Agent would not commit himself on the matter. On 3 recent visits we have hired one watchman and he was efficient with regard to sorting out those persons who were bona fide traders.

13. Weather: There are often sand storms in April and this may cause delays to convoys.
Developments: There is a buoy mooring in Suez Bay in position Lat. 29° 55.24' N., Long. 32° 29.4' E., for the discharge of vegetable oils.
There are bulk berths for grain and phosphates in Adabiya Bay with cranes.

SOUTHBOUND:

1. The new Racon Beacon 0.5 miles East of West Port Said Breakwater is useful for obtaining positions.
2. Vessel must drop anchor in the recognised Port Said anchorage by 1800 hrs. to qualify for the next day transit.
An allowance of 2 hours (2000 hrs.) is granted on payment of an extra transit fee, if information has been sent in 4 days in advance.
3. General cargo vessels and small tankers not carrying dangerous cargo are taken into Port Said Harbour (not optional) to Buoy Berth as marked on B.A. Chart No. 234.
4. Ships in Port Said Harbour form the first part of the Southbound convoy as far as the Bitter Lakes. The Southbound convoy commences when the last Northbound ship has left the Main Canal to Port Said Cut Off, which is at approximately 2100 hrs. – 2200 hrs.
5. Large tankers and container vessels enter direct from the anchorage through the Port Said Cut Off at approximately 2400 hrs.
6. When the convoy has reached the Bitter Lakes, ith is usual for the container vessels and large tankers to leave for Suez before the general cargo vessels and the small tankers not carrying dangerous cargoes.
7. The Radio Officer is to keep watch on "SUQ" in accordance with ALRS.
8. When going into the Buoy Berth in Port Said Harbour, it is very important that a good watchman is obtained as thieving is rife.
Tying up to the buoys can be difficult in high winds. The vessel should have plenty of lashings available for securing to the buoys.
9. All services are available in Port Said Harbour.
10. Formalities are same as those for the vessels Northbound.
11. The Southbound convoy starts leaving Suez between 1630 hrs. and 1700 hrs.

SHIPMASTER'S REPORT: October 1992.
Kindly effect the following changes to "Authorities":
Suez Canal Authority: Telex: 63238 and 63543 SUCAN UN. Fax: 0020-64-220785 and 0020-64-220787.
Vessel Traffic Management System:
Ismailia Radio (SUQ): Telex: 63528 SUQSC UN. Fax: 0020-64-393517.
Radio Communications: Transmits 421 kHz. Receives 425 kHz A1A A2A. Transmits 1612 kHz. Receives 2147 kHz F1B (radiotelex).
NOTE: If unable to contact by radiotelex (F1B), call may be established by a request on MF morse.
Agent: Please correct in the Branches (Suez Office – Port Tewfik) section: Damanhour Shipping Agency – Telex: 66022 AGENCY UN.
Radio: The following message was received by the vessel:
Quote:
To all ships transiting Suez Canal.
Notice to Masters of vessels transiting the Suez Canal regarding persons boarding their vessels.
The Suez Canal Authority advises you to allow only persons carrying Identity Cards issued from Suez Canal Authority to embark your vessel. These cards show the name and serial number of the person. If any of those persons ill-behaves, you have to contact Suez Canal Authority Officials, referring to the card number and the person's name through the following means:
Telex: 63238 or 63543 SUCAN UN.
Fax: 002-064-220787 or 002-064-220785.
International Telex: 63528 SUQSC UN.
Radio Telex Selective Call 20001 frequency 1612 Tx 2147 Rx.
Fax: 002-064-393517.
In addition to radio telegraphy with SUQ Station.
Regards.
Sucanal Transit via Ismailia Radio/SUQ.
Unquote.

SHIPMASTER'S REPORT: October 1993.
NORTHBOUND:

1. As per ALRS, vessels should, if possible, book Convoy Time 4 days in advance, or as soon as possible if coming from nearby port, by Telex to SUCANAL 63543/63238/63528 with copy to appointed Government Agent.

2. Two days notice of ETA required and thereafter any change in ETA. Call Suez Pilot on VHF Channel 16, working on Channel 17, when 30 minutes South of No. 2 Light-Float (Racon), for instructions. Information required as per ALRS.

3. Pilot and tug patrols attend in Waiting Area Anchorage between Conry Rock and Newport Rock. We arrived on last call at 2200 hrs. and Waiting Area was fairly clear.
Waiting Area North of Conry Rock is for all vessels under 38 ft. draft. When North of No. 2 Light-Float, Suez Pilot uses VHF Channel 14.

4. Vessel's arrival time in Waiting Area is actual time of dropping the anchor North of line Conry Rock to No. 2 Light-Float. Authorities advise vessel to drop anchor anywhere North of this line, even if vessel has to immediately heave-up and proceed further inwards.

5. Vessels proceed to Inner Anchorage in Suez Bay (as per circled areas on B.A. Chart) once Pilot available. Vessels do not generally proceed inwards from Waiting Area whilst Southbound convoy is transiting Newport Rock Channel, so between 1800 hrs. to 2300 hrs. Waiting Area Anchorage can become crowded.
We arrived for our Northbound transit at 2200 hrs. and vessels were still coming Southbound out of Newport Rock Channel, but ships from Waiting Area were being taken into Inner Anchorage between South movements. We actually waited for 2 hours to proceed into Inner Anchorage.

6. Latest arrival times for same day transit:
0100 hrs. – Tankers (all types carrying dangerous cargo and not gas free) and large container ships.
0300 hrs. – Above group on payment of extra fee and re-arrival information sent in.
0300 hrs. – General cargo ships, small container ships and small tankers carrying non-dangerous cargoes. No extension for this group.

7. Convoy Times and Turn numbers are given out on VHF Channel 14 between 0300 hrs. and 0400 hrs. (listen carefully). Vessels often have to call up Suez Pilot for information.

8. Northbound transit in two parts. Firstly large tankers and container ships leave waiting area at about 0530 hrs., then LPG ships and other tankers. After the First Group, there is a gap of about 75 minutes before Second Group, comprising general cargo vessels, bulk carriers, tankers carrying non-dangerous substances and ships with deficiencies and tows.
The last ship generally gets under way at about 1000 hrs.

9. Convoy Notes: The average convoy consists of 20 vessels.
The First Group of large tankers and container ships starts leaving Port Said through the Eastern Cut-Off Channel at about 1700 hrs. Large tankers require a tug escort and 2 Pilots. Tug rules have been relaxed for other classes of vessels, notably LPG vessels.
The last general cargo vessel presently clears the Canal around 2200 hrs. NO Northbound vessels now go through Port Said Harbour, unless calling for cargo work.
Radio Officer is still required to monitor "SUQ" when South of Bitter Lakes, as required by Pilot. Ships without a Radio Officer have to monitor VHF.
Transit speed is 13 km./hr. for large tankers/container ships and 16 km./hr. for general cargo ships (around 7.5 knots).
Our vessel, carrying vegetable oils and latex, got under way from Suez at 0930 hrs. and left the Canal at 2100 hrs., being No. 13 of a 17 ship convoy.
Searchlight rarely used nowadays, although canal electrician still carried. Twice recently we were able to stow the light before Port Said, which is helpful in Winter to avoid damage.
Pilots change once at Ismailia. First Pilot from Suez Anchorage to Ismailia and second Pilot from Ismailia to Port Said (km. 4).
Boats: If vessel has only one crane/derrick, only one boat required, this should be declared well in advance.
When passing outbound near Port Said in the Eastern Cut-Off, the boat is lowered, Agent boards with Clearance and Register, and Pilot departs at Km. 4. A somewhat chaotic situation can occur with ships bunching together.
Vessels should be aware of the strong East-going cross current, sometimes encountered across the channel outside Port Said.
A number of dredgers are now working in the Canal to deepen channel to 68 ft. (20.5 m.), which is now a third of the way through a 3 year programme.

10. Signals: "Q" flag or "red over white light" for Quarantine Clearance to be shown until vessel cleared.
"Black ball over G" or "3 vertical white lights" for Pilot, both at Waiting Area and inside Suez Bay.

11. Formalities: Agent boards in Waiting Area, and Quarantine and Canal Inspector board in Suez Bay Anchorage Area.
Agent requires:
6 copies Crew List (plus a further 3 copies at Port Said).
Register – Returned at Port Said.
3 copies Canal Information on Agent's Form.
Quarantine:
2 copies Crew List.
3 copies Vaccination List.
1 copy Canal Health Declaration.

Canal Inspector:
- 1 copy Crew List.
- 1 copy Statistical Declaration.
- 1 copy State of Navigability Form.
- 1 copy Ship in Ballast Form or "Nil".
- 1 copy Transit Form.
- 1 copy Double Bottom Tank Declaration (most important that it is compiled with correctly).

Suez Tonnage Certificate and Official General Arrangement Plan are sighted.

Pilot:
- 1 copy Quarantine Clearance.
- 1 copy Pilot Particulars.
- 1 copy North/South (or vice versa) Cargo Declaration.

Searchlight Inspection: Sometimes inspectors board at Suez Anchorage to sight 3 Suez Searchlight Bulbs (2 in searchlight) and manufacturers original certificate.

12. Suez Anchorage Facilities:

Bunkers: Normally taken on West side of Newport Rock Channel.

Water: Available in Inner or Outer Anchorages and arranged by Agent.

Doctor: Boards vessel at Inner Suez Bay Anchorage.

Stores: Many shipchandlers are looking for business – so be careful.

Garbage: Take great care – possibility of confidence tricksters who quote Marpol.

Watchmen: A grey area – sometimes they can be helpful and useful.

Repatriation: Through Cairo. Suez is nearer to Cairo than Port Said. Try to avoid staying at Suez, ask for direct transit to Cairo Hotel.

Weather: Winter weather prevails between December and April. March and April bring many sand storms.

Mail: Normally delivered to vessel by Port Said Agent with the Register and Clearance.

SHIPMASTER'S REPORT: November 1995.
NORTHBOUND:

We anchored in Suez Bay at 2000 hrs. to await the morning Northbound Convoy.

Up until 2400 hrs., Agents/Authorities came on board. Two watchmen were provided by the Agent, as compulsory during vessel's stay in port, but they showed up for only one hour and then they left (probably going to another ship and thus registering themselves on 2-3 ships for the same night).

AUTHORITIES: The Suez Canal Authority, Ismalia, Egypt. *Tel:* Ismailia (064) 20000 - 20009. *Cables:* Sucanal Ismailia. *Telex:* Sucan 92153 and 63238 (Ismailia), Scaps Un 63256 (Port Said) and 63543 Sucan. *Contact:* Director of Transit or Control of Navigation.

Port Said Port Authority.

Suez Port Authority.

Also see "Shipmaster's Report" October 1992.

AGENCY: Canal Shipping Agencies Company is responsible for shipping agencies in the Canal, Suez Gulf and Egyptian Red Sea ports, through 4 branches at Port Said for each of which there is a branch at Suez and 1 in Cairo. Their names are:

Port Said Head Office: 26 Palestine Street, P.O.Box 262. Tel: 20662/20666. Telegrams: Canaship. Telex: 63075 Agen Un.

Suez Office – Port Tewfik: Canal Shipping Agencies Co. Bldg., Canal Street. Tel: 2639 (02) 773561. Telegrams: Canaship. Telex: 63055 Agency Un.

Branches (Port Said):

Assiut Shipping Agency, Port Said. 9 Mostafa Kamel Street, P.O. Box 128, Telegrams: Assiuship. Telex: 63262 Asut Un and 63138 Assiu Un. Tel: 20522 20523.

Asswan Shipping Agency, Port Said, 8 El Goumhouria Street, P.O. Bag. Telegrams: Swana. Telex: 63261 Swan Un or 63291 Swana Un. Tel: 20790/20793.

Damanhour Shipping Agency, 40 El Goumhouria Street, P.O.Box 126. Telegrams: Damanship. Telex: 63264 and 63146 Daman Un. Tel: 20351/20356.

El Menia Shipping Agency, Port Said, 31 El Goumhouria Street, P.O.Box 328 and 130. Telegrams: Minship. Telex: 63263 or 63034 Meni Un. Tel: 20675/20677.

Branches (Suez Offices – Port Tewfik):

Assiut Shipping Agency, Canal Shipping Agencies Co. Bldg., Canal Street. Telegrams: Assiuship. Telex: 63108 Asuez Un. Tel: 2790 and 3025.

Asswan Shipping Agency, Canal Shipping Agencies Co. Bldg., Canal Street. P.O.Box 4. Telegrams: Swana. Telex: 63104 Ssuez Un. Tel: 3216.

Damanhour Shipping Agency, Canal Shipping Agencies Co. Bldg., Canal Street. P.O.Box 4. Telegrams: Damanship. Telex: 63055 Agency Un. Tel: 3176 and 3009.

El Menia Shipping Agency, Canal Shipping Agencies Co. Bldg., Canal Street. P.O.Box 4. Telegrams: Minship. Telex: 63106 Msuez Un. Tel: 3018 and 3085.

Cairo Branch:

Cairo Shipping Agency, Cairo. 7 Abdel Khalek Tharwat Street, P.O. Box 468. Telegrams: Maragent. Telex: 92673 Marg Un. Tel: 745755, 745836.

Offices at Safaga, Kosseir and Ras Gharib:

Telegrams: Canaship. Telephones: Safaga 10, Kosseir 14, Ras Gharib 71.

N.B.: Safaga, Kosseir and Ras Gharib to be contacted via Kosseir Radio around the clock.

Port Said offices to be contacted via Alexandria or Port Said Radio around the clock.

Suez offices to be contacted via Alexandria or Port Said Radio around the clock.

TRANSIT SERVICE: Gulf Agency Company operate a Suez Canal Transit Service the purpose of which is to assist Owners and Shipmasters with the numerous formalities applicable to transit of the Canal including supervising the pre-payment of Canal Dues and ensuring no delay in entering or clearing the Canal. Full details of the service are obtainable from Gulf Agency Co. Ltd., P.O.B. 61033, GR-15110 Amaroussion, Greece. Tel: (30-1) 6807070. Telex: 214548, 216344, 218687 ("GAC GR"). Fax: 6807068. Cables: "Gulf Agency" Athens.

NOTES

Please also advise Shipping Guides Ltd.

SUEZ CANAL – RULES OF NAVIGATION*

FEBRUARY 1995*

* Corrected up to Notice No. 15 of 1995 which came into effect on 1st April 1996.

Part I Navigation
Part II Canal and Lakes (Characteristics)
Part III Communications – Signals

*Not all the Rules of Navigation are printed herein. Part IV is concerned with tonnage and dues and Part V with carriage of dangerous goods.
NOTE: The present Rules are applied to normal cases. Special cases, each to be studied case by case.

GENERAL

Article 1: Transit Through the Suez Canal

(1) Transit through the Suez Canal is open to vessels of all nations, subject to their complying with the conditions stated in the present Rules of Navigation. All references and circulars which shall be issued by the Suez Canal Authority will constitute an integral part of these rules. Vessels also have to comply with the provisions of the International Regulations for Safety Of Life At Sea, and its amendments, MARPOL 73/78, as well as the provisions of the International Regulations for Preventing Collision at Sea, and all laws, orders and regulations issued by the Egyptian Government.

(2) The Suez Canal Authority reserves the right to refuse access to the Canal Waters, or order the towage or convoying of vessels considered dangerous or troublesome to navigation in the Canal (Non or erroneous declaration of dangerous cargo – See "Article 47 Bis").

(3) By the sole fact of using the Canal Waters, Masters and Owners of vessels bind themselves to accept all the conditions of the present Rules of Navigation, with which they acknowledge being acquainted, to conform with these conditions in every respect, to comply with any requisition made with a view to their being duly carried out, and to adhere to the Canal Authority's private Code of Signals as shown in Part III of these Rules.

Article 2: Agents

(1) Every vessel(1) other than navy ships intending to transit the Suez Canal or staying at Port Said or Port of Suez, or in the Suez Canal Basins or docks must have a recognised Shipping Agent.

(2) Suez Canal Authority confirms that she has no agents or representatives abroad.

(3) The Egyptian Authorities are to be notified of intended transit of navy ships in the Suez Canal : *Viz* : Ministry of Foreign Affairs, Ministry of Defence as well as Ports and Lights Administration.

(1) Vessels up to 400 g.r.t. may have a recognised private agent.

Article 3: Canal Waters

(1) Canal Waters mean the Canal proper, and the access channels thereto,(2) the waters within the Canal Authority's Concession adjacent to the Canal proper and Port Said Harbour and Port of Suez.

(2) The Canal proper, as to its length, is reckoned to run from Km. 3.710 West Branch for vessels entering from Port Said Harbour and from Km. 1.333 East Branch for vessels entering through the East Approach Channel, to Hm. 3 at Suez, including the 2 channels of the Great Bitter Lake and all Canal by-passes.

(3) As to its width the Canal is bounded by the banks when they are above water; when the banks are submerged, the width of the Canal is limited to the perpendiculars at the point of intersection of the sub-marine bank with the horizontal plane corresponding to the max. draft authorised including squat.

(2) Port Said Eastern and Western Entrance Channels, Suez Entrance Channel which includes the Port of Suez Eastern Channel leading to the Canal entrance.

Article 4: Responsibilities(1)

(1) When in Canal Waters, or at its ports or roads, any vessel or floating structure of any description is responsible for any damage and consequential loss it may cause either directly or indirectly to herself or to the Canal Authority properties or personnel or to third party.

(2) The vessel's or floating structure's Owners and/or Operators are responsible without option to release themselves from responsibility by limited liability.

(3) The words "Owners and/or Operators" for the purpose of the present article, shall be considered to mean person/persons or corporate body responsible for the vessel at the time of the navigational accident or incident.

(4) Moreover, the vessel guarantees to indemnify the Canal Authority in respect of any claim against the latter by reason of any damage whatsoever she may cause either directly or indirectly to third parties.

(5) The vessel waives the right to claim against the Suez Canal Authority for any damages caused by third parties that she may sustain while in Canal Waters.

(1) See also Art. 11 para. D, (art.16 para. A), (art.55 para. 5), (art.59 para. 3), (art.60 para 4,5) and (art.62 para. 4).

Article 5: Temporary Delaying of Vessels

(1) The Canal Authority may delay a vessel for the purpose of investigating any claim or dispute that may arise, or any formal or informal complaint, or allegation of violation of the laws of the Canal or for security reasons.

(2) A vessel may be delayed until in the opinion of the Canal Authority, its tenderness, trim, list, cargo, hull, machinery have been put into such condition as will make the vessel reasonably safe for her passage through the Canal.

(3) No claim for damages is accepted or considered because of any such temporary delaying of vessels.

Article 6: Pilotage

(1) Pilotage is compulsory for all vessels whatever their tonnage,(1) when entering, leaving, moving, changing berth or shifting in Canal Waters or Port Said and Port of Suez harbours.

(2) Any exemption must be explicitly authorised by the Suez Canal Authority (See Art. 11(d)).

(1) Except Egyptian vessels under 300 tons Suez Canal Gross Tons authorised to work in Canal Ports and Accesses, also Egyptian fishing vessels under 300 tons Suez Canal Gross Tons (At Port of Suez: 300 tons Suez Canal Gross Tons). However, if transiting Canal, the above is not applied.

Article 7: Changing Berth in Road Anchorages

Vessels in Port Said Anchorages Areas (Northern and Southern Anchorages), Suez Roads, the Bitter Lakes or Timsah Lake are not authorised to change berth or anchorage, or make fast alongside other vessels, or carry out any cargo operations without explicit authorisation from the Suez Canal Authority.

PART I – NAVIGATION

CHAPTER I: SUEZ CANAL NAVIGATION FEATURES

SECTION I: Approaches

Article 8: Port Said (See "Plan")

General: Fifteen miles before arrival to Fairway Buoy,(1)(2) all vessels arriving from seaward should contact the Harbour Office by VHF (Channel 16). If not able to, by R/T (2182 kHz) or by W/T or by radio telex and Inmarsat via Suez Canal Marine Communications Centre SUQ for instructions (See Part III – Articles 86 and 87).

Fairway Buoy: Position: Lat. 31° 21.32' N., Long. 32° 20.81' E.
Characteristic: V.Q.W.

(1) See "Plan".
(2) All buoys in the Canal and access channels may be replaced temporarily by others of smaller size.

(A) ANCHORAGE AREAS(3):

The incoming vessels have two anchorages.

(3) All vessels arriving from sea have to anchor in the berth allocated to them by the Suez Canal Port Authority.

(1) The Northern Area

Comprises two zones:

(a) Zone One: For vessels with draft over 42 ft. This zone is limited as follows:

North Limit	Latitude	31° 28.50' North
South Limit	Latitude	31° 27.00' North
East Limit	Longitude	32° 20.00' East
West Limit	Longitude	32° 18.00' East

Vessels at anchor in this area, when entering the Eastern Channel will proceed between the East and West buoys at Hm. 195 (course 194°)(1).

Hm. 195:

East:		West:	
Lat.	31° 25.06' N.	Lat.	31° 25.16' N.
Long.	32° 24.30' E.	Long.	32° 23.85' E.

Isophase (2 sec. on, 2 sec. off) (See "Plans").

(1) All buoys in the Suez Canal and its approaches are fitted with radar reflectors.

(b) Zone Two: For VLCCs, 4th Generation Container Ships, 3rd Generation Container Ships and vessels over 39 ft. draft up to 42 ft.

This zone is limited as follows:

North Limit	Latitude	31° 25.00' N.
South Limit	Latitude	31° 23.20' N.
East Limit	Longitude	32° 20.00' E.
West Limit	Longitude	32° 16.00' E.

Vessels at anchor in this area, when entering the Eastern Channel, will proceed between the East and West buoys at Hm. 135.

Hm. 135:
Lat. 31° 21.95' N., Long. 32° 23.10' E.
Characteristics: See "Plan".

The berths of this zone are called (V) berths and comprise the following:

Centre of circle (Radius 750 m.).

Berth	*Latitude*	*Longitude*
V1	31° 23.70' North	32° 19.50' East
V2	31° 24.50' North	32° 19.50' East
V3	31° 23.70' North	32° 18.50' East
V4	31° 24.50' North	32° 18.50' East
V5	31° 23.70' North	32° 17.50' East
V6	31° 24.50' North	32° 17.50' East
V7	31° 23.70' North	32° 16.50' East
V8	31° 24.50' North	32° 16.50' East

(2) The Southern Area

For all other vessels, area is limited as follows:

North Limit	Latitude	31° 23.05' North
South Limit	Latitude	31° 21.25' North
East Limit	Longitude	32° 20.50' East
West Limit	Longitude	32° 16.70' East

Vessels at anchor in this area, when entering the Port of Port Said through the West Approach Channel proceed:

(i) Take on their starboard "Fairway Buoy", No. 8, No. 7 and No. 6 Buoys.
(ii) On the port there are 3 yellow buoys showing yellow lights.
(iii) On reaching No. 5 pair of buoys at Hm. 80, showing F. Gr. and R., they will proceed through the old channel to Port (Course 217.5°).

Berths in Southern area called (C):
Centre of Circle (radius 500 m.)

Berth	*Latitude*	*Longitude*
C1	31° 21.50' North	32° 20.00' East
C2	31° 22.10' North	32° 20.10' East
C3	31° 22.70' North	32° 20.10' East
C4	31° 21.50' North	32° 19.40' East
C5	31° 22.10' North	32° 19.40' East
C6	31° 22.70' North	32° 19.40' East
C7	31° 21.50' North	32° 18.70' East
C8	31° 21.10' North	32° 18.70' East
C9	31° 22.70' North	32° 18.70' East
C10	31° 21.50' North	32° 18.00' East
C11	31° 22.10' North	32° 18.00' East
C12	31° 22.70' North	32° 18.00' East
C13	31° 21.50' North	32° 17.30' East
C14	31° 21.10' North	32° 17.30' East
C15	31° 22.70' North	32° 17.30' East

(3) **Prohibited Area for Anchorage**

The area between the East limit of the 2 anchorage areas and the approach channels is prohibited for anchorage to all vessels and floating units.

(4) **Anchorage Area for Trans-shipment Operations:**

(a) Vessels up to 60 ft. draft:

North Limit	Latitude	31° 25.00' N.
South Limit	Latitude	31° 24.00' N.
East Limit	Longitude	32° 27.00' E.
West Limit	Longitude	32° 26.00' E.

(b) Vessels over 60 ft. draft:

North Limit	Latitude	31° 27.00' N.
South Limit	Latitude	31° 26.00' N.
East Limit	Longitude	32° 28.00' E.
West Limit	Longitude	32° 27.00' E.

(5) **Dangerous Areas**

(a) Wreck: A wreck buoy is situated on the Western side of a sunken ship at Hm. 195, West of the approach channel:

Lat. 31° 25.24' North. Long. 32° 22.98' East.

Height 5 m., painted black and red horizontal bands, with day mark 2 black balls. Showing group flashing white (2) every 10 seconds. (See "Plan").

(b) Dumping Areas: The hopper dredgers, dredge underway for several months every year in the entrance channels and dump in the following areas.

3,140 m. East of the axis of the East channel at Hm. 140.

Lat. 31° 20.80' North Long. 32° 25.80' East.

4,000 m. East of the axis of the East channel at Hm. 80 approximately.

Lat. 31° 18.70' North Long. 32° 24.70' East.

(B) PORT SAID APPROACH CHANNELS

(1) **Buoyage** (See "Plan" – "Suez Canal North Entrance").

The Port Said West Approach Channel extends from the port of Port Said till Hm. 80 where it joins the East Approach Channel. Height of buoy at Hm. 80 is 10 m.

The Port Said East Approach Channel extends from the land boundary, East of Port Said, till Hm. 195.

The 2 channels are marked, on each side, by light buoys of 5 m. height (except from Hm. 195 to Hm. 135 East Channel, the height of the buoys is 10 m.). The light is red on the Eastern side and green on the Western.

(a) **East Approach Channel** (See "Plan").

The East Approach Channel is buoyed as follows:

In the West: Green. Daymark: Cone point up. Fl. Gr. Lights.

In the East: Red. Daymark: Can Fl. R. Lights.

The 2 buoys indicating the Northern end of the channel, at Hm. 195, are Isophase (2 sec. on, 2 sec. off). The distance between them is 745 m.

(b) **Junction of East and West Approach Channels**

Three yellow buoys mark the junction of the East and West Approach Channels. They are placed at Hm. 83, Hm. 95 and Hm. 105.

(i) Buoy at Hm. 83: Yellow and black in colour, is fitted with North Cardinal (2 cones point up) daymark and shows by night Q. Fl. W. (5) every 20 sec.

(ii) Buoy at Hm. 95: Yellow in colour, shows a fixed yellow light.

(iii) Buoy at Hm. 105: Yellow in colour, is fitted with a yellow St. Andrew's cross daymark and shows by night group flashing yellow (4) every 15 seconds.

(c) **West Approach Channel**

The buoyage of the West Approach Channel of Port Said Harbour, is as follows:

(i) Port Said Fairway Buoy (See "Plan").

Off Port Said, a fairway light buoy, height 10 m., painted black with yellow vertical stripes, surmounted by a daymark 2 cones point out, and showing V.Q. light.

Lat. 31° 21.32' North Long. 32° 20.81' East.

Buoy No. 8 Green. Daymark: Cone point up. F. Gr. Light.

Lat. 31° 21.13' North Long. 32° 21.04' East.

Buoy No. 7 Green. Daymark: Cone point up. F. Gr. Light.

Lat. 31° 20.52' North Long. 32° 21.31' East.

Buoy No. 6 Green. Daymark: Cone point up. F. Gr. Light.

Lat. 31° 19.09' North Long. 32° 21.58' East.

(ii) The West Approach Channel is buoyed as follows:

In the West: Green. Daymark: Cone point up. F. Gr. Light.

In the East: Red. Daymark: Can F. R. Light.

Buoy No. 5 of Hm. 80 East: Red: Daymark: Can F. R.

Lat. 31° 19.13' North Long. 32° 22.11' East.

Buoy No. 5 of Hm. 80 West: Green: Daymark: Cone F. G.

Lat. 31° 19.30' North Long. 32° 22.85' East.

(d) **El Bahar Tower**

A guidance tower in position between the East and West Approach Channels:

Lat. 31° 18.16' North Long. 32° 21.58' East.

Height 42 m., painted white with red horizontal stripes.

Characteristics:

Racon call sign Q "– – · –" range 15 miles.

Beacon light Iso. W (2) sec., range 15 miles.

(2) **Navigation**

(a) **Northbound Vessels:** (i) All Northbound vessels use the East Approach Channel. The end of the navigable channel is marked by the pair of buoys at Hm. 195. (course 014°). From Hm. 195, vessels are to steer North (000°) for 5 miles before altering to destination.

(ii) Vessels leaving Port Said harbour to sea, use the West Approach Channel (course 037.5°) till Hm. 80 (Buoys No. 5), then steer North (000°) to 5 miles North of Buoy at Hm. 195 West. (Lat. 31° 25.16' N., Long. 32° 23.85' E.) before altering to destination.

(iii) Vessels of the Northbound convoys wishing to enter Port Said Harbour may proceed through the West Channel, direct to their allocated berth in Port Said Harbour, *only if the situation of traffic permits.* Otherwise they have to proceed through the East Approach Channel till Hm. 195, then steer North (000°) for 5 miles and head for the anchorage berth allocated by the Harbour Office(1).

(1)This is to avoid crossing incoming vessels to the Northern Anchorage Area.

(b) **Southbound Vessels:** The maximum draft authorised for Southbound vessels is limited to 42 ft.(2) in accordance with the tables giving the maximum draft according to the vessel's breadth.

(2)Southbound vessels may be authorised to transit with draft from 42 ft. up to 56 ft. with special arrangement.

(i) VLCCs, in ballast or partially loaded, 4th Generation Container Ships and 3rd Generation Container Ships, LASH vessels over 35,000 Suez Canal Gross Tons, LPG and LNG (Loaded or not gas free) and vessels having a draft of more than 42 ft. and up to 56 ft. maximum, have to use the East Approach Channel, course 194°. The said vessels enter the channel between flashing green buoys of Hm. 165 and Hm. 135.

(ii) All other vessels, transiting the Canal or berthing at Port Said, have to enter through the West Approach Channel, course 180°, from the entrance, passing between the West green buoys and the East yellow buoys till Hm. 80, then alter course to 217.5°, passing between green and red buoys, till Port Said Harbour.

A fixed red light on a pylon on the North Quay of Abbas Basin in line with an occulting red light on a pylon West of the fuel oil tanks at Raswa, indicates the axis of the entrance channel to the harbour.

(D) **BREAKWATERS:**

(1) The West Approach Channel is protected by two breakwaters:

(a) The Western Breakwater protecting the West Approach Channel is situated to the West of the channel and extends from land boundary till Hm. 73 with a submerged part from Hm. 50. This part is marked by cigar shaped unlit buoys.

(b) The Eastern breakwater extends from land boundary till Hm. 21.2, and has an occulting red light at its Northern End.

(2) Two breakwaters protect the East Approach Channel. The Eastern extends 2 km. from the land boundary, and the Western extends for 0.53 km. from the land boundary. Each breakwater has a small fixed white light on its end.

Article 9: Suez (See "Plan")

Five miles before arrival at the First Separation Zone Buoy, all vessels coming from sea should contact the Suez Canal Harbour Office by VHF Channel 16. If not able to, contact by R/T (2,182 kHz) or by W/T or radio telex and Inmarsat via S.U.Q. for instructions. (See Part III, Articles 86 and 87).

(A) Separation Zone

A Separation Zone has been established. Extending 0.3 miles on each side of the line connecting the two Separation Buoys mentioned hereafter. All vessels arriving or leaving have to pass the Separation Zone Buoys(1) on their Port side.

(1)See "Plan".

The Separation Zone Buoys are:

(1) Separation Zone Buoy No. 1 (Southern Buoy):

Lat. 29° 39.49' North Long. 32° 32.12' East

Height 6 m., R. W. colour, with top mark red ball, and a foghorn. Showing L. Fl. 10 sec. and fitted with 5 mile Racon (O) 3 cm. and 10 cm.

(2) Separation Zone Buoy No. 2 (Northern Buoy):

Lat. 29° 48.55' North Long. 32° 32.12' East

Height 6 m., R. W. with top mark red ball, showing Iso. 6 sec. with 5 mile Racon (D) 3 cm. and 10 cm. Horn.

(B) Anchorage Area

The incoming vessels have two anchorages:

(1) "V" Area:

For VLCC's, 4th Generation Container Ships, 3rd Generation Container Ships, LASH ships over 35,000 Suez Canal Gross Tons, vessels over 38 ft. draft, LPG and LNG vessels (loaded or not gas free), this area is indicated by:

(a) The Conry Rock Buoy:

Lat. 29° 48.11' North Long. 32° 34.22' East.

Height 5 m., Y.B.Y. West mark, showing Q (9) 15 sec.

(b) South Shoal Buoy:

Lat. 29° 38.87' North Long. 32° 35.98' East.

Black, cone point up, showing Gr. Isophase (2 sec. on, 2 sec. off).

Berths of this area are called "V" Berths. Center of circle (radius 833 m.).

Berth	*Latitude*	*Longitude*
V1	29° 46.50' North	32° 35.00' East
V2	29° 45.50' North	32° 35.00' East
V3	29° 45.50' North	32° 36.00' East
V4	29° 45.00' North	32° 37.00' East
V5	29° 44.50' North	32° 36.00' East
V6	29° 44.50' North	32° 35.00' East
V7	29° 44.00' North	32° 37.00' East
V8	29° 43.50' North	32° 36.00' East
V9	29° 43.50' North	32° 35.00' East

(2) Waiting Area:

For other vessels:

This area is limited by the following buoys:

(a) Conry Rock:

Lat. 29° 48.11' North Long. 32° 34.22' East.

Height 5 m. Y.B.Y. West mark, showing Q (9) 15 sec.

(b) Buoy "M":

Lat. 29° 50.00' North Long. 32° 35.29' East.

Height 5 m., yellow cross, showing F.Y.

(c) Buoy "N":

Lat. 29° 50.63' North Long. 32° 35.29' East.

Height 5 m., yellow cross, showing Qk. F.Y.

(d) Buoy "D":

Lat. 29° 51.28' North Long. 32° 35.29' East.

Height 5 m., yellow cross, showing F.Y.

(e) Buoy "C":

Lat. 29° 51.93' North Long. 32° 35.29' East.

Height 5 m., yellow cross, showing Fl. Y.

(f) Buoy "B":

Lat. 29° 52.06' North Long. 32° 34.54' East.

Height 5 m., yellow cross, showing F.Y.

(g) Buoy "A":

Lat. 29° 52.17' North Long. 32° 33.86' East.

Height 5 m., yellow cross, showing F.Y.

(h) Buoy Hm. 60.00 East:

Lat. 29° 52.27' North Long. 32° 33.16' East.

Height 5 m., green, cone point up and showing Fl. Gr.

Buoy Hm. 60.00 West:

Lat. 29° 52.26' North Long. 32° 32.96' East.

Height 5 m., red can, showing Fl. R.

(i) Buoy Hm. 70.50 East:

Lat. 29° 51.70' North Long. 32° 33.26' East.

Height 5 m., green, cone point up and showing Fl. Gr.

Buoy Hm. 70.50 West:

Lat. 29° 51.69' North Long. 32° 33.05' East.

Height 5 m., red can, showing Fl. R.

(j) Buoy Hm. 80.50 East:

Lat. 29° 51.16' North Long. 32° 33.33' East.

Height 5 m. green, cone point up and showing Occ. Gr. (1) 4 sec.

(k) Position "R":

Lat. 29° 48.52' North Long. 32° 33.18' East.

(C) Anchorage Area for Trans-shipment Operations "S.T.S":

(1) "A" Area:

Lat. 29° 43' North	Long. 32° 37' East
Lat. 29° 43' North	Long. 32° 38' East
Lat. 29° 42' North	Long. 32° 37' East
Lat. 29° 42' North	Long. 32° 38' East

(2) "B" Area:

Lat. 29° 37' North	Long. 32° 37' East
Lat. 29° 37' North	Long. 32° 38' East
Lat. 29° 36' North	Long. 32° 37' East
Lat. 29° 36' North	Long. 32° 38' East

(D) – Arrival to Suez of Northbound Vessels

Vessels coming from sea to transit the Suez Canal or enter the Port of Suez, have to pass East of the Separation Zone. VLCC's, 4th Generation Container Ships, 3rd Generation Container Ships and vessels over 38 ft. draft have to anchor in the anchorage area specified for these vessels (V Berths) in the berth allocated to each vessel by the Suez Canal Authority. Other vessels have to pass East of the Separation Zone and anchor in the Waiting Area as previously indicated.

(E) – Prohibited Area for Anchorage

It is strictly forbidden for all vessels Northbound to anchor in the area limited as follows:

(1) In the North:

Two buoys marking the dredged channel position:

Western Buoy: Lat. 29° 51.15' N., Long. 32° 33.13' E.

Eastern Buoy: Lat. 29° 51.16' N., Long. 32° 33.33' E.

(2) In the West:

By the line joining the West Buoy and position "P":

"P": Lat. 29° 48.52' N., Long. 32° 30.90' E.

(3) In the East:

By the line joining the East Buoy and position "R":

"R": Lat. 29° 48.52' N., Long. 32° 33.18' E.

(4) In the South:

By the line joining position "P" and position "R".

(F) – Suez Entrance Channel

(Including the Eastern Channel leading to the Canal Entrance).

This channel is used for vessels entering or leaving Suez Canal and also by those entering Port of Suez and using its anchorages (1)

(1)The max. draft authorised for vessels using Ibrahim Basin, the Petroleum Basin or El Adabya Basin must not exceed 26 ft. at HW.

This channel is buoyed as follows:

(1) A pair of light buoys at Hm. 80.5 (entrance buoys):

(a) The Eastern Buoy, height 5 m., green, cone point up showing Oc. G. 4 sec.

(b) The Western Buoy, height 5 m., red, can daymark showing Oc. R. 4 sec.

The distance between the Eastern and Western Buoys is 340 m.

(2) Proceeding Northward, the channel is marked on both sides by light buoys, height 5 m.

(a) On the Eastern side of the channel: The buoys are green, cone point up, showing Fl. G.

They are placed in the following locations:

Hm. 70.50
Hm. 60.00
Hm. 44.40
Hm. 24.00
Hm. 14.00
Hm. 7.00
Km. 162.150 (Occ. green light)

(b) On the Western side, the buoys are red, can daymark and showing Fl. R.

They are placed in the following locations:

Hm. 70.50
Hm. 60.00
Hm. 44.40
Hm. 21.00
Hm. 17.20
Hm. 1.00 (Occ. red)

Course: From the entrance buoys (Hm. 80.50) (New Port Rock Channel) to the green light buoy of Hm. 24.00.

Northbound: 352.5°
Southbound: 172.5°

(G) – Canal South Entrance

The Canal South entrance is marked by 2 light buoys, height 7 m.

(1) The Eastern Buoy at Km. 162.150 is green, cone point up, showing occulting green light (1) every 4 seconds.

(2) The Western Buoy at Hm. 1.00 is red, can daymark and showing occulting red light (1) every 4 seconds.

(H) Port of Suez: Port of Suez is delimited by the imaginary line which extends from Ras Adabeya to Eyoun Moussa and comprises the coastal zone North of this line, up to Suez Canal entrance.

(1) Navigation:

(a) General Rules:

(i) All vessels shall conform to the International Regulations for Preventing Collision at Sea.

(ii) Navigation in the port is limited to approved channels only.

(iii) Crossing or overtaking in the channels is strictly forbidden.

(iv) Vessels must proceed in the port with caution and at reduced speed.

(v) Vessels must not let go their anchors except in the anchorage.

(b) Traffic Regulation:

(i) Vessels entering or leaving the Port:

For vessels entering the port from sea and vessels leaving the port for sea, all movements shall be effected through the Western Channel, *except* for vessels anchored in 1C, 2C, 3C, 4C, 5C, which should use the Eastern Channel.

(ii) Vessels entering the Canal:

From the Port and Zone N.W. of Green Island, they must comply with the following:

Anchorages 8C to 16C and Anchorage Groups A and B (See "Plan"):

Vessels shall pass through the Western Channel, then South of Green Island to join the Eastern Channel and then proceed to the entrance of the Canal.

From Zone North East of Green Island:

Anchorage 1C to 7C:

Vessels shall proceed directly from their anchorages to the entrance of the Canal. If the number of vessels exceeds the number of anchorages, vessels in excess shall anchor South of the Western Channel, parallel to Anchorages 2A, 4A, 6A, 4B and 7B, making sure to leave the Western Channel clear for navigation at all times.

From Zone South of Green Island:

Anchorages 1D to 6D (See "Plan"):

Vessels shall proceed directly from the anchorages to the Canal or to sea through the Eastern Channel.

(iii) Vessels leaving the Canal:

Direct to Sea:

They shall proceed through the Eastern Channel.

Anchoring in the Port:

Anchorage Groups A and B, Zone N.W. of Green Island 8C to 16C:

They shall proceed through the Eastern Channel, then the Western Channel and shall follow it till the place fixed for their anchorage.

Zone N.E. of Green Island from 1C to 7C:

Vessels shall come out of the Canal and proceed directly to this area.

(c) Priority of Movement in the port:

Priority of movement in the port shall be as follows:

(i) Vessels leaving the Canal.

(ii) Vessels proceeding to the Canal.

(iii) Vessels coming from sea must wait outside the port until the Eastern Channel is clear.

(iv) Vessels leaving the anchorages of the Port of Suez.

(v) Vessels coming out of the Basins (Ibrahim Basin – Adabeya – Petroleum Basin).

(vi) Vessels using the New Petroleum Jetty.

(d) Priority of Passage in the Eastern Channel:

(i) Vessels leaving the Canal.

(ii) Vessels in anchorages of Port of Suez, and proceeding Southward to sea, have to pass through the Eastern Channel.

Ships approaching Port of Suez from sea should wait outside until the channel is clear.

(e) When Harbour is closed for Bad Weather:

(i) Vessels coming from sea:

It is recommended not to enter the Port of Suez when it is closed due to foul weather which prevents the pilots from boarding the vessels.

However, any vessel who would like to enter on her own responsibility will have to contact the wireless station (SUQ) and ask permission for doing so, giving her draft and length in feet, by the following cable:

"I wish to enter Suez Anchorage on my own responsibility. Length ..... Draft ..... feet".

If permission is granted, the Master will receive the following cable:

"Port is closed. Entering on your own responsibility. Available anchorage ...".

(ii) Vessels leaving the Suez Canal:

In case, when the embarkation of the Roads pilot is not possible, the following cable will be sent to the ship:

"Owing to bad weather Roads pilot will not board your ship".

The following will be added in case the vessel would ask for an anchorage:

"Available anchorage ...".

(iii) Vessels anchored in the Port of Suez leaving for sea:

Vessels who would like to sail on their responsibility, will have to hoist the signal for pilot, send the following cable to SUQ and wait for orders.

"I wish to go to sea on my own responsibility. Please confirm".

They may proceed if they receive the cable:

"You may proceed to sea on your own responsibility".

(2) Buoyage of Port of Suez:

(a) Buoy 2A – 281.5° – 20.9 cables from New Port Rock Light.

(b) Buoy 3A – 278.5° – 26.9 cables from New Port Rock Light. These buoys show flashing red (1) every 5 seconds.

(c) Buoyage of Port of Suez – Position of Green Island Light:
Lat. 29° 54.59' N., Long. 32° 31.80' E.

(i) Eastern Channel (East of Green Island) is limited by the following buoys:

In the East:

Buoy	*From Green Island Light*	*Distance (m.)*
Hm. 7.00 East	062°	2440
Hm. 14.00 East	080°	1820
Hm. 24.00 East	111°	1720
Hm. 44.40 East	144°	3300
Hm. 60.00 East	153°	4720
Hm. 70.50 East	166°	5720
Hm. 80.50 East	159°	6680

In the West:

Buoy	*From Green Island Light*	*Distance (m.)*
Hm. 1.00 West	050°	2600
Hm. 17.20 West	082°	1390
Hm. 21.00 West	108°	1260
Hm. 44.40 West	150°	3110
Hm. 60.00 West	157°	4640
Hm. 70.50 West	160°	5630
Hm. 80.50 West	162°	6630

(ii) Shallow water in the Green Island Zone is limited as follows:

North Buoy bearing 000° at a distance of 1,490 m. from Green Island Light, showing flashing green light (1) every 2 seconds.

Red Buoy of Hm. 17.20.

Red Buoy of Hm. 21.00.

South-West Buoy bearing 239.5° at a distance of 780 m. from Green Island Light, showing group flashing green (3) every 7 seconds.

West Buoy bearing 308° at a distance of 820 m. from Green Island Light, showing group flashing green (2) every 5 seconds.

Oil Jetty quick flashing white light.

(3) Anchorages of Port of Suez:

Anchorage	*Bearing of Green Island Light*	*Distance from Green Island Light (cables)*
(a) Group "A":		
1A	306.5°	6.1
2A	330.0°	7.2
3A	331.5°	4.1
4A	357.0°	6.3
5A	018.0°	3.8
6A	023.0°	6.8
7A	050.0°	5.8
8A	042.0°	8.7
9A	062.5°	8.1
10A	084.0°	7.2
(b) Group "B":		
1B	102.5°	14.3
2B	093.0°	12.0
3B	079.0°	12.5
4B	064.5°	13.8
5B	090.5°	15.1
6B	098.5°	17.3
7B	075.0°	16.8
8B	095.5°	20.2
9B	086.0°	20.3
10B	080.0°	15.0
11B	090.0°	17.8
12B	091.0°	22.0
13B	079.0°	19.2
(c) Group "C":		
1C	218.5°	11.8
2C	208.5°	11.6
3C	188.0°	11.4
4C	234.5°	8.6
5C	213.5°	8.1
6C	170.5°	9.6
7C	161.0°	10.8
8C	159.0°	9.0
9C	143.0°	9.4
10C	143.5°	12.4
11C	134.0°	12.0
12C	145.0°	6.58
13C	123.0°	6.5
14C	105.5°	6.7
15C	100.0°	4.7
16C	075.0°	4.8
(d) Group "D":		
1D	345.5°	12.7
2D	004.0°	12.4
3D	021.0°	13.1
4D	033.0°	14.7
5D	043.0°	16.0
6D	047.0°	18.3
(e) Group "H":		
1H	296.5°	12.5
2H	306.0°	14.8
(f) Adabeya Anchorage:		
1	059.0°	28.3
2	054.5°	28.8

Article 10: Roads and Harbour Pilot Signals:

Vessels requiring a Pilot for:

(1) Entering from sea
(2) Sailing out to sea
(3) Changing berth
(4) Entering the Canal

should hoist a black ball over G by day and 3 white lights by night in a vertical line. These signals are to be hoisted where can best be seen.

SECTION II

Article 11: Pilotage

(A) General:

All vessels entering or leaving Canal waters, must take a Pilot (Pilotage is compulsory).

However, the Suez Canal Authority reserves the right to assign a tug Master on board vessels under 1,500 tons gross and under 800 tons gross, a coxswain, instead of a Pilot.

Navy ships and any vessel carrying dangerous cargo must have a Pilot regardless of their tonnage.

Roads Pilots, on boarding vessels arriving from sea, hand over to the Master, the Declaration of State of Navigability and the Pilotage Form.

Masters are held solely responsible for all damage or accidents of whatever kind resulting from the navigation or handling of their vessels directly or indirectly by day and night.

The Pilot must inform the Movement Control Office or the Port Office immediately by W/T, and radio telex, Inmarsat and/or VHF or UHF, if his advice regarding the safety of navigation is not accepted or not respected by the vessel.

(B) Port Said:

(1) *Southbound Vessels:*

(a) VLCCs, 4th Generation Container Ships, 3rd Generation Container Ships, LASH vessels over 35,000 Suez Canal Gross tons, LPG and LNG and vessels over 42 ft. draft are piloted from Northern Anchorage Area for Canal transit through the East Approach Channel.

(b) Other vessels, either for local trade or intending to transit the Canal, are piloted from Fairway Buoy to berths in the harbour through the West Channel.

(c) Vessels are piloted between Port Said Harbour and Port of Suez by Canal Pilots who are relieved at Ismailia.

(2) *Northbound Vessels:*

(a) Through East Branch, vessels are piloted to Km. 3.000. However, on Master's request, pilotage may extend to Hm. 80.

(b) Through West Branch, vessels are piloted to Hm. 80 if weather permits. However, on Master's request, pilotage may end at Hm. 22 on Master's responsibility.

(C) Port of Suez:

(1) Northbound Vessels:

(a) VLCCs, large bulk carriers, 4th Generation Container Ships, 3rd Generation Container Ships, LASH vessels over 35,000 Suez Canal Gross tons, LPG and LNG (Loaded or not gas free) and vessels over 38 ft. draft are piloted from anchorage area South of Conry Rock for Canal transit.

(b) Other vessels are piloted from waiting area to anchorage area in the Port of Suez.

(c) Vessels are piloted from Port of Suez and Port Said Harbour by Canal Pilots who are relieved at Ismailia.

(2) Southbound Vessels:

(a) Southbound convoy and vessels in Port of Suez Anchorages sailing South are piloted to Hm. 80.50. However, on Master's request, piloting may end at Hm. 44.40 (New Port Rock).

(b) Vessels have to maintain course through the channel till the last pair of buoys, keeping the Separation Zone on the port side.

(D) Master and Pilot:

(1) Master:

When a vessel is transiting the Canal, the Master or his qualified representative should be present at all times on the bridge; he has to keep the Pilot informed concerning any individual peculiarities in the handling of the vessel so that the Pilot might be in a position to give better advice to control the navigation and movement of the vessel.

(2) Pilot:

The duties of Pilots commence and cease at the entrance buoys of Port Said and Port of Suez. He only gives advice on manoeuvring the vessel, courses to steer, etc. He puts at the disposal of the Master his experience and practical knowledge of the Canal, but as he cannot know the defects or difficulties of manoeuvring every vessel, the responsibility falls completely upon the Master. The Pilot has to ensure the execution by the vessel of:

(a) The Articles of Rules of Navigation.

(b) The orders of transit given by Movement Control.

The manoeuvre and orders are carried out under the direction of the Master who is solely responsible for the ship.

It is therefore for the Master, taking into account the indications given by the Pilot, to give the necessary orders to the helm, to the engines, and tugs. If, in the interest of quick manoeuvres the Master thinks it preferable to allow the Pilot to give orders direct, manoeuvres carried out in these circumstances shall be considered as having been carried out on the order of the Master and on his sole responsibility.

(E) Moving in Suez Canal Waters without Pilot's assistance:

(1) Unless explicitly authorised by the Suez Canal Authority, the following must be considered:

(a) Whenever a vessel moves in Canal Waters or Port Said Harbour without having a Pilot on board, she shall be charged an additional due of U.S.$21,500 (1).

(b) An additional due of U.S.$3,200 shall be charged to vessels moving in Port of Suez Anchorages, or entering or leaving Basins at Port of Suez without having a Pilot on board(2).

(c) These dispositions do not apply in the event of the Pilot being suddenly unable to carry on with his duties owing to sickness or death. In this case, the Master must:

(i) Warn the vessels astern of his intended manoeuvre by means of the visual and sound signals as well as UHF or VHF and W/T, or radio telex and/or Inmarsat via SUQ.

(ii) Reduce speed and contact Movement Office to have advice for making fast if in the Canal, or the entrance channels; or droping anchor if in the Lakes.

(iii) The Movement Office at Ismailia is to be informed at all times by UHF or VHF and confirmed by W/T or radio telex and/or Inmarsat via SUQ.

(1) Vessels under 300 Suez Canal Gross Tons are subject to Rules of Navigation for small craft.

(2)Vessels under 300 Suez Canal Gross Tons are exempted as per Law 161/59.

(2) Exceptions:

In case of bad weather to the extent of not allowing pilotage in Canal Approach channels, Masters will be authorised by notice from the Suez Canal Port Office, to sail with their vessels on their own responsibility at the following positions:

(a) For Southbound convoy, from Km. 162 to sea.

(b) For Northbound convoy, from Km. 3.000 in East Port Said Channel Northward to sea.

(c) For vessels leaving Port Said Harbour through West Approach Channel, from Hm. 22 Northward.

(d) For vessels anchoring in Port of Suez Anchorages wishing to head to sea, also for vessels in Waiting Area wishing to enter Port of Suez Anchorage Area.

(e) For vessels entering Port Said Harbour either for transiting Canal or for trade, through West Approach Channel till Hm. 50 approximately where Roads Pilot will board vessels.

(f) For vessels entering Port Said East Approach Channel, between Hm. 165 and Hm. 135 from VLCCs Anchorage Area to join Southbound convoy, Canal Pilot will board vessels at Km. 0 of East Port Said Channel.

(g) For VLCCs and other large vessels joining Northbound convoy from new anchorage area South of Conry Rock, Canal Pilots will board vessels at Km. 161 approximately.

(h) For other vessels joining Northbound convoy from Port of Suez anchorages, Canal Pilots will board vessels at Km. 161 approx.

N.B.: (1) For items c, d, e, f, g and h, the time of proceeding will be fixed by Suez Canal Port Authority.

(i) An extra pilot, for assisting the pilot in charge, may be assigned on Master's request or by the Canal Authority if deemed necessary.

(ii) A due of U.S.$300 for every additional Canal Pilot and U.S.$150 for every additional Roads Pilot is charged.

(iii) In all cases, advice will be given if necessary by shore radars to vessel's Master.

(F) Calling Pilots unnecessarily:

When a vessel signals for Pilot, and it is found when boarding that she is not ready to get underway in the limited time, the vessel is liable to be delayed and Pilot disembarked. The vessel will pay extra pilotage dues for the new Pilot as mentioned before.

(G) Extra Pilots:

(1) Extra pilots shall be assigned in the following cases:

(a) Vessels over 80,000 Suez Canal Gross Tons.

(b) 4th Generation Container Ships, 3rd Generation Container Ships and LASH vessels of 35,000 Suez Canal Gross Tons and over.

(c) Vessels having cargoes or installations impeding visibility from inside the wheelhouse (bad view).

(d) If a Pilot is disembarked and relieved by another Pilot, in case of slow speed vessels, vessels having troubles which prevent continuation of transit with same convoy, or vessels that have to transit by daylight only.

(e) If vessel has no accommodation for the Pilot to rest while anchored in Bitter Lakes or making fast in mooring places for a long period.

(f) On Master's request or by Suez Canal Authority if deemed necessary.

CHAPTER II: ARRIVAL AND PREPARATION FOR TRANSIT

SECTION I: Pre-Arrival of Vessels

Article 12: Booking for transit

(1) Vessels may book for transiting the Canal. The booking notice shall reach the Suez Canal Authority Offices not later than 4 days prior to the transit date. It must contain the name, nationality of the vessel, her type (container, Ro-Ro, etc. . . .) her draft, Suez Canal Gross Tonnage and deadweight tonnage.

(2) Vessels booking for fixed date will have priority to catch the convoy on that date, if they arrive within the time limit defined by the present Rules.

(3) Booking can be cancelled or altered by notice to the Suez Canal Authority offices at least 24 hours before the date booked for, otherwise the vessel shall be charged U.S.$100.00.

(4) In case of VLCCs and similar vessels, this charge will be U.S.$1,500.00 on account of the special arrangements made by the Suez Canal Authority.

(5) Vessels arriving without previous booking will catch the convoy if capacity of movement in the Canal permits, otherwise they may catch the following convoy.

Article 13: Notice of Arrival

Masters of vessels fitted with wireless apparatus are requested to transmit the following information to their Agents, 48 hours prior to the vessel's arrival and to the Suez Canal Authority via SUQ.

(1) The name and nationality of the vessel, her ex-name if any.

(2) Suez Canal gross tonnage and deadweight tonnage, draft and beam.

(3) Whether they intend transiting or merely stopping in the harbours and, in this case, mention the duration of stay required.

(4) The ETA.

(5) Whether they carry dangerous cargo, stating quantity(1) and class according to IMO's regulations.

(1)In case dangerous cargo is not declared or erroneous declaration, see Article 47bis.

Article 14: Contacting Port Offices on Arrival

(a) Vessels have to contact the harbour office by VHF(2).

(2)Port Said and Port of Suez on Channel 16.

(1) 15 miles before arrival at Fairway Buoy off Port Said.

(2) Five miles before arrival at Separation Zone Buoy No. 1 off Port of Suez.

(b) When in touch, give the following information:

(1) Latitude and longitude.

(2) Vessel's name and call sign.

(3) Suez Canal official number and code number.

(4) Suez Canal gross tonnage and deadweight tonnage.

(5) Draft.

(6) Loaded or not.

(7) Kind of cargo.

(8) Any defects affecting the safety of navigation.

(9) If transiting the Canal for the first time she has to send:

(a) Date of building.
Suez Canal Tonnage Certificate, if available.

(b) Call sign or official number.

(c) Length overall.

(d) Beam.

(e) Type of engines.

(f) In all cases, the Master must inform if aiming to transit the Canal or just stay in the harbour.

This information will assist the Harbour Master to identify the vessel through his radar, acquire and assign her identification "ID" tag which will follow her path until the other end.

(c) If failing to contact by the assigned Channels, Masters may use, with the consent of the Harbour Master through the International R/T (2182 kHz) or SUQ (W/T) or Radio Telex or Inmarsat and/or any of the following VHF frequencies:

(1) 156.650 (Channel 13) Port Said.

(2) 156.600 (Channel 12) Port Said.

(3) 156.550 (Channel 11) Port of Suez.

(4) 156.700 (Channel 14) Port of Suez.

(d) Any vessel who does not contact the Port offices during her approach is subject to delays in catching the convoys.

(e) When berthing, changing berth or sailing, the Master must handle the mooring ropes by mooring boats of a firm approved by the Suez Canal Authority.

Article 15: Documents and Requirements

A. Documents to be produced are:

(1) Suez Canal Special Tonnage Certificate and Calculation Sheets (3 copies if the first transit).

(2) Certificate of Registry and Ship's Drawings (Capacity Plan and General Arrangement Plan of Accommodation and Machinery).

(3) Statistical Declaration.

(4) Extract from the vessel's official documents and information concerning the vessel's type and her cargo (containers, barges etc.).

(5) Declaration concerning the use of double bottom tanks and the lower parts of the high tanks.
(6) Declaration concerning vessels in ballast.
(7) Declaration of State of Navigability.
(8) The last Classification Certificate issued.
(9) Any other information necessary for transiting the Canal.
(10) Piping Plan and General Arrangement Plan for LPG and LNG vessels.
(11) (I.O.P.P.) International Oil Pollution Prevention Certificate of Compliance and its supplement for the record of construction and equipment as amended for tanker vessels.

B. The Master of a vessel wishing to transit the Canal must register at the Canal Authority offices and pay the various dues.

He must furnish the Canal Authority's officials with all the particulars requested. He must also furnish the Canal Authority officials with all the particulars requested by her Agent.

C. The vessel must in addition comply with the requirements of the A.R.E. Government Authorities.

D. In case the Canal Authority deems it necessary to be supplied with a new Seaworthiness Certificate, the following Classification Societies are recognised to deliver same:
(1) Lloyd's Register of Shipping.
(2) Bureau Veritas Francais.
(3) American Bureau of Shipping.
(4) Registro Navale Italiano.
(5) Germanischer Lloyd.
(6) Norske Veritas.
(7) Russian Register.
(8) Nippon Kaiji Kyokai.
(9) China Classification Society.
(10) Korean Register of Shipping.

Seaworthiness Certificates are accepted by the Suez Canal Authority in Arabic or English. If written in any other language, it is to be translated in one of these two above mentioned languages and duly certified by the Embassy or Consulate of the Arab Republic of Egypt.

E. Navy ships transiting the Suez Canal Waters must be provided with a Suez Canal Special Tonnage Certificate showing the Suez Canal Gross and Net Tonnages.

If such document is not onboard, the Commanding Officer has to give, in writing, the following information:
(1) Name of Ship.
(2) Name of Commanding Officer.
(3) Call sign of the ship (Radio Call).
(4) LOA, beam overall and depth of the ship.

As long as the ship is not provided with the Suez Canal Special Tonnage Certificate, transit dues will be levied on the temporary Gross Tonnage product of the empirical formula without any allowance till the presentation of the documents required.

F. Erroneous Declarations:

If the Canal Authority Officials discover false information concerning the cargo carried(2) or the ship's situation ballast or loaded, resulting from the shipping clerk's or the Master's negligence, in documents held, the tolls difference will be doubled.

The tolls difference means the difference between the correct and the wrong amount of transit dues.

(2)e.g. The carriage of sweet water as cargo and declared as ship's water ballast; the omission of declaring the presence or quantity of containers on the weather deck or any cargo onboard, passengers, etc. . . .

Article 16: Stay in the Harbour

A. The Master is responsible for the mooring of his vessel in Port Said Harbour and Port of Suez.

B. Mooring Lashing Ropes: For the safety and quick berthing of vessels in Port Said Harbour, the only lashing ropes allowed to be used for fixing ship's ropes on the buoys are those provided by the Suez Canal Mooring and Light Company. For this purpose, the said company provides vessels making fast in the harbour with 2 in. Manilla or Sisal ropes. This service is against U.S.$ 40.00 per vessel to be added to the invoice of the Suez Canal Mooring and Light Company.

C. The Master is to pay attention to the instructions hereunder:

(1) When the vessel is moored to the buoys, the mooring ropes must be watched to ensure safe mooring. If two vessels are moored to the same buoy, when one leaves, the other must adjust her moorings.

(2) Masters must comply with the Harbour Master's advice regarding mooring ropes during the stay of their vessel in port; especially when, in case of expected bad weather, it is necessary to increase the moorings if required.

(3) When a vessel is moored with her stern to the bank, the Master must keep himself continuously informed of the depth of water aft, to avoid grounding on the submerged slope either as a result of the settling of the vessel as she loads, or her proximity to the bank.

(4) At night, the vessel, whether moored or manoeuvring, must show the lights prescribed by the International Regulations for Preventing Collisions at sea, in addition to the Suez Canal Light Signals.

(5) Unless authorised, barges alongside a vessel must not be more than two abreast.

(6) It is forbidden to try projectors, or to turn the propellers during the process of warming-up, in the absence of the Pilot, or without informing him when onboard.

(7) Vessels must not put their engines out of working order for any reason whatsoever without permission from the Canal Authority.

(8) The Master must always keep onboard sufficient crew to ensure efficient handling of the moorings, fire fighting and damage control.

(9) The Harbour Master or his delegate should have free access onboard to ensure the carrying out of the Regulations, to verify the vessel's seaworthiness, and to ascertain that dangerous cargo onboard complies with the Suez Canal Regulations.

(10) Vessels cancelling berth booking at Port Said for commercial operations, bunkering, etc., must do so 6 hours prior to arrival, otherwise, an additional due of U.S.$300.00 will be charged.

Article 17: Change of Berth

(1) If the Master wishes to change the berth of his vessel, he should notify the Harbour Office stating the desired time when the shift should take place. A tug or more will be imposed to assist in the manoeuvres.

The change of berth will take place at the time fixed by the Harbour Office. A Pilot will be sent to the vessel in due time.

(2) Shifting at the Master's request and the tugs used are charged for as per rates set down by the Suez Canal Authority.

(3) Charges for shifting due to erroneous or incomplete declarations by the Master must also be paid by the vessel.

(4) When necessary, the Harbour Master may order a vessel to shift; when so ordered, it should be made as quickly as possible. In such a case it is free of charge.

SECTION II: Preparations for Transiting the Canal

Article 18: Measures taken before entering the Canal

All vessels ready to enter the Canal must have their ladders and jib-booms run in, their boats swung in and any derricks or cranes obstructing the view forward, lowered.

Article 19: Mooring Ropes

(1) At least 6 flexible floating mooring ropes of appropriate size for the vessel, in good condition, fitted with spliced eyes, must be in readiness for any emergency, at suitable points on deck. All arrangements must be made for their quick handling.

(2) For vessels equipped with tension mooring wires, the number of floating ropes may be reduced to 4. It is to be noted, however, that any mooring lines, likely to produce sparks by their manipulation are absolutely forbidden on board petroleum tankers, LPG or LNG or any vessel carrying flammable substances.

(3) It is recommended that:

(a) One of the ropes which is selected as "first line ashore" must be of floating material to ensure quick securing to the shore.

(b) Wires should not exceed 5.5 in. circumference to facilitate handling.

(c) All vessels should have 2 fire ropes (wire) made fast, one forward and one aft, hung over the vessel's side ready for use in case of emergency.

Article 20: Mooring Boats

(1) Vessels transiting the Canal must have mooring boats as mentioned hereafter hired from the Suez Canal Mooring Company approved by the Suez Canal Authority.

In case no mooring boats from the said company are available, ship's boats if suitable for mooring (open type lifeboat) in the Canal can be used and must be manned by shore crew, hired from the Suez Canal Mooring Company. Each boat is to be manned by three men.

(2) One mooring boat or one motor boat for vessels under 2,500 tons gross, SCGT (SCGT = Suez Canal Gross Tonnage).

(3) One mooring boat for ships from 2,500 to 5,000 tons SCGT.

(4) Two motor boats or one motor boat and one mooring boat for vessels from 5,000 tons SCGT to 30,000 tons SCGT.

(5) Two motor boats for vessels over 30,000 tons SCGT.

(6) Ships may ask for additional motor boats or mooring boats according to Master's request. These mooring boats must be in constant readiness for lowering to run the ropes to the mooring posts without any delay during the transit of the vessel.

(7) Ships must be fitted with well maintained lifting appliances capable of lifting mooring boats of 4 tons weight (including crew members).

(8) Ships may carry extra mooring boats as passengers for the interest of navigation. However, LPG, LNG and Loaded Tankers are not allowed to carry any extra boats.

(9) The handling of mooring boats must be carried out well clear from the ship's propellers.

(10) Masters are requested to reduce speed during lifting or lowering operations of mooring boats. An officer must be in charge, to avoid accidents that may endanger the life of mooring men.

(11) If the vessel has no means for lifting mooring boats and ship's boats are not suitable for mooring (closed type lifeboat) in the Canal, the vessel shall not be allowed to transit the Canal.

Article 21: Spreaders (Slings)

Container ships are advised to have their own spreaders (slings) to assist unloading and reloading containers in case of necessity. Those carrying different sizes of containers must have their own spreaders.

Article 22: Indicators

There must be a rudder angle indicator and an engine RPM indicator in the wheelhouse so located and illuminated as to be easily visible by the Pilot (erroneous indicators are considered defective).

Article 23: Bow Anchors

1. Any transiting vessel must be equipped with 2 classed anchors forward of the collision bulkhead. Each anchor must be fitted with its own chain or wire cable, and be capable of being released, and raised independently by means of a windlass or capstan.
2. In lieu of 1, vessels of less than 1,000 SCGT must be equipped with one working anchor.

Article 24: Accommodation and Pilot Ladders

A. Pilot Ladder:

(1) In anchorage areas, outside the Canal, North or South, pilot ladders can be used to embark and disembark Pilots.

The ladder shall be secured in such position that each step rests firmly against the vessel's side and so that the Pilot can have safe access to the vessel. Whenever the distance from sea level to the point of access to the vessel is more than 12 ft. (or 3.65 m.), access from the pilot ladder to the vessel shall be by means of an accommodation ladder or other equally safe and convenient means.

(2) The treads of the pilot ladder shall not be less than 19 in. long, 4.5 in. wide and 1 in. in thickness. Steps shall be joined in such a manner as will provide a ladder of adequate strength with treads maintained in a horizontal position and not less than 12 in. or more than 15 in. apart.

(3) A man-rope properly secured, and a safety line shall be available and ready for use if required.

(4) Handholds are to be provided to assist the Pilot to pass safely and conveniently from the head of the ladder into the vessel or on to the vessel's deck and vice versa.

(5) If necessary, spreaders shall be provided at such distance as will prevent the ladder from twisting.

(6) Arrangements shall be such as:

(a) The rigging of the ladder, the embarkation and disembarkation of the Pilot is supervised by a responsible officer of the vessel.

(b) A self igniting life buoy is to be available at hand.

B. Accommodation Ladders

(1) Accommodation ladders are to be used in the Canal, harbours and lakes to embark and disembark Pilots.

(2) In case no accommodation ladder is available, or difficult to rig, the vessel has to inform S.C.A. before entering harbour or Canal. The change of Pilot which is originally carried out at Ismailia, will take place in the Bitter Lakes after anchoring. In such case, the vessel will be charged an extra U.S.$300.00 as pilotage dues for each relieving Pilot.

(3) Ships with freeboard of less than 10 ft. may use pilot ladder.

Article 25: Efficiency of Vessel's Equipment

(1) Before entering the Canal it must be ascertained that main engines, compasses, steering gear, engine room, telegraph, rudder angle and r.p.m. indicators, W/T, VHF and radar are in good working order.

(2) Every vessel navigating in the Suez Canal Waters under the advice of the Suez Canal Pilot, should maintain bridge and engine bell books.

(3) In the bridge bell book, each engine movement and the time of its transmission from the bridge to the engine room is to be recorded as well as in the engine room bell book.

(4) No vessel is required to maintain any bell books if equipped with an automatic device which produces a permanent legible record of every engine movement.

(5) The bell books and the automatic records must be handed, upon request, to the Suez Canal Officials for the purpose of investigation if necessary.

Article 26: Deck Cargo

(1) Deck cargo is to be stowed in a way so as to provide a clear view from the navigating bridge while transiting the Canal, as well as not to affect the vessel's stability.

(2) The deck cargo should not protrude more than half the vessel's breadth on any side, with a maximum of 15 m. on each side if breadth exceeds 30 m. (1) (2)

(3) If the protrusion exceeds the maximum allowed, each case is to be studied separately, and an additional due of 2% of the transit dues is levied on each foot or fraction of foot in excess.

Article 27: Water Ballast

Vessels in ballast must fill spaces intended to be used for carrying water ballast in such proportion as the Officials of the Suez Canal Authority may direct.

Article 28: Searchlight

Before transiting the Canal, the vessel should be provided with a searchlight (projector) complying with the following conditions and specifications.

(1) It should be placed on the bow in the axis of the vessel and show the Canal clearly.

(2) Specifications are as follows:

(a) Minimum range of radiation of single beam 1,800 m. ahead (brightness of 1 Lux approximately, at the atmospheric transmission factor T = 0.85).

(b) The power of the lamp must give a luminous intensity of single light beam not less than 3 million candela, which is equivalent to high efficiency incandescent lamp of:

(i) 2,000 Watts for vessels up to 30,000 S.C. gross tons.

(ii) 3,000 Watts for vessels over 30,000 S.C. gross tons.

(c) The drum and stand should be of high corrosion resisting material and can be operated both horizontally and vertically.

(d) The front glass must be of hardened type and can stand rapid cooling.

(e) The reflector must be in two halves of precise ground glass mirror of highest quality or of polished aluminium having at least 95% the reflective capacity of the glass mirror.

(f) The two halves of the reflector can be brought together (zero position) to make a single reflector light beam and can be parted to give two separate light beams each of 5° at least, on the horizontal level with adjustable dark sector from 0 to 10°.

(g) The searchlight drum must be watertight (presssure test 0.25 kg./sq.cm.) and gastight (according to the classification rules for the vessel's electric appliances within dangerous areas) and provided with a vent-out to which a flexible hose can be fitted on the drum to dissipate the heated air out of the searchlight in addition to a safety vent.

On vessels carrying petroleum products, LPG or LNG or inflammable substances, or vessels Not Gas Free, exit of hot air must be effectuated in a place devoid of inflammable gas.

(h) The searchlight must be equipped with 2 lamps carrier that can be turned into position to let the lamp exactly in the focus of the reflector, and the current must be switched on automatically.

(i) The electric system (switches, plug, socket and cables) must be of first class marine type. The degree of protection IP 55 or similar standards.

(j) The searchlights must have a certificate for the "Type Test" issued by one of the Classification Societies (Lloyd's Register, etc.). The original to be submitted to Suez Canal officials and thereby after test by S.C.A. inspection, the searchlight can be accepted.

(3) On all vessels of whatever type, electric cable installations for searchlight and all electrical connections leading to it must be permanently fixed, insulated and gastight.

At the end of the cables a fixed and gastight socket should be installed close to the searchlight.

(4) On board vessels electrically propelled or having electrically driven gear (steering, winches, etc.), the number of generators and their individual power output must be sufficient to ensure uninterrupted functioning of the searchlight in the event of stoppage of one of the generators.

No exception to this rule will be allowed except when there is an independent generator and circuit on board specifically set apart for the searchlight.

(5) The portable projector can be hired locally from the Canal Mooring and Light Company and weighs about 22 kg.

(6) For vessels fitted with their own projector, 2 shore electricians should operate it during the transit.

(7) Vessels with special cases:

(a) LPG and LNG vessels, without any exception, must be provided with their own searchlight.

(b) Vessels entering the Canal, direct from sea, must also be provided with their own searchlight.

(8) If electrical connections and/or searchlight do not conform, the vessel is liable to transit only in daylight and therefore subject to delay.

An additional due of U.S.$4,300 will be imposed when the searchlight and/or electrical connections do not conform for the 3rd and each following transit.

Article 29: Overhead Lights (Deck Lights)

Overhead lights visible all round the horizon with a minimum range of 200 m. (roughly 650 ft.).

Article 30: Bridge Wing Projectors

Bridge wing projectors on either side of the bridge must be fitted to show the Canal banks clearly during the transit and mooring operations, and must have the following characteristics:

Power about 4 LUX at an atmospheric transmission factor (T = 0.74) and minimum range 200 m.

Article 31: Funnels

Funnels must be lit to facilitate the identification of the vessel by night.

Article 32: Bridge and Engine Room Communications

Communication system between engine room and bridge must be in good working condition.

Article 33: Pumping – Draining Arrangements

The pumps and pumping arrangements including valves, pipes and strainers from holds as well as from the engine and boiler spaces must be in good working condition.

Article 34: Watertight Bulkheads and Doors

All watertight bulkheads and doors are required to be in good efficient condition.

Article 35: Draft Marks

All vessels shall have the draft plainly marked and painted upon the stem, amidships (including Plimsoll Mark and Deck Line) and stern post or rudder post, according to Load Line Convention.

Article 36: Whistles and/or Sirens

Whistles and sirens must be always ready for use, as prescribed in Part III, Art. 92.

Article 37: Fire Fighting Equipment on Vessels

(1) Vessels transiting the Canal should be equipped with the fire fighting equipment in accordance with the requirements of S.O.L.A.S. and its amendments. All equipment should be in a good and efficient condition.

(2) Fire hoses with suitable nozzles attached shall be connection to the outlets of fire lines at all times while in Canal waters. Sufficient hoses shall be connected to reach all parts of the vessel.

(3) When approaching Canal waters, as precautionary measures, all vessels must have fire wires hanging over the side ready for use fore and aft, before entering Canal waters.

Article 38: Side Doors

When side doors are used for boarding, and the minimum vertical distance between the waterline and the bottom of the side door is less than 6 ft., they should be closed immediately after embarking and disembarking of Pilot and during transit through the Canal.

Article 39: Manning Vessels

The crew of vessels intending to transit the Canal should have efficient and good knowledge of their vessel and be sufficient in number to permit safe handling of the vessel during transit.

Article 40: Deck Watch & Engine Room

When underway in Canal Waters the vessels shall keep a full watch on the bridge and in the engine room, as well as anchor watch.

Article 41: Special Arrangements for VLCCs

(See Article 58).

Article 42: Accommodation

(1) A suitable (Officer Class) accommodation is to be put at the Pilot's disposal while anchoring in the Bitter Lakes or made fast in mooring places alongside the Canal. In case of no suitable accommodation available, the vessel will pay extra dues of U.S.$.300.00 for each relieving Pilot. She may be delayed if no relieving Pilot is available.

(2) A sheltered place is to be provided for the mooring boatmen (3 to 6 men according to the size of the vessel) and 2 shore electricians for the projector, during transit.

Article 43: Vessels Carrying Timber

(1) The timber deck cargo shall be compactly stowed, lashed and secured in a way that it shall not hinder navigation and allow safe access on deck.

(2) The loading must not exceed the Tropical Timber Load Line (LT). The height of the deck cargo above the weather deck shall not exceed one third of the extreme breadth of the vessel.

Article 44: Life Saving Appliances

Life saving appliances for vessels navigating in the Canal Waters should meet with the requirements of SOLAS and amendments.

Article 45: Anchor Watch

An anchor watch is to be established during bad weather or poor visibility and when advised by the Pilot.

Article 46: Stoppage in Canal

When anchored in the Bitter Lakes, Lake Timsah or stopped in the Canal, the engines should always be ready for use.

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(1) Containers on container ships are not considered as deck cargo.

(2) Specially built vessels and barges carrying drillers or bulky deck cargo to be studied each separately.

Note: In case of failure to comply with any of the previous requirements, a vessel may be delayed from joining the convoy and/or may be subject to special arrangements for her transit. This includes imposing convoying tug boats. Access to the Canal may also be refused.

SECTION III: Interdiction to Enter Canal

Article 47: Vessel not allowed to Transit

A vessel will not be allowed to transit the Canal in any of the following cases:

A. Any vessel whose Tropical Load Line is submerged, or Plimsoll Marks not plainly visible (Overloaded).

B. Any vessel considered by the Suez Canal Officials, dangerous for navigation.

C. If carrying dangerous cargo and not conforming to the Part V of these Rules or carrying prohibited cargoes.

D. If having a list more than 3 degrees.

E. If trimmed in a way causing bad manoeuvrability.

F. If having deck loads protruding from vessel's sides in a manner endangering the safety of transit (see Article 26).

G. If the vessel is so tender or loaded in a manner that dangerously affects her stability.

H. If her draft is in excess of the maximum permitted according to these Rules.

I. For VLCCs and ULCCs, if there is bad weather.

J. The Suez Canal Authority may consider delaying the entry to the Canal in cases of bad weather.

K. Any vessel without anchors.

Article 47 Bis:

(1) The Suez Canal Authority reserves the right to refuse access to Canal Waters to any vessel in case of carrying prohibited cargoes, and in case of non or erroneous declaration of the presence of dangerous cargo on board, such as ammunition, explosives, radioactive substances, etc.

(2) If the dangerous cargo mentioned in para (1) is discovered during the transit, the Suez Canal Authority reserves the right to refuse access to Canal Waters to this vessel for a period not exceeding two years. An additional due of U.S.$43,000 will be imposed for this violation.

SECTION IV: Proceeding to the Canal

Article 48: General

(1) Masters shall ask for Pilots by clearly displaying "G" flag by day and 3 white lights at night, at least two hours before the time they expect their vessel to be ready to get underway.

(2) Singling Up should not be before the Pilot is on board.

(3) When several vessels are ready to get underway at the same time, the order of their sailing will be fixed by the Canal Authority.

(4) All vessels must stop whenever the passage ahead is not clear.

(5) They must slow down passing collapsed or under repair banks, as well as when passing all vessels in sidings, hoppers, dredgers and other floating plants made fast.

(6) As soon as a vessel is made fast, she must hoist the signals pendant No. 2 by day and red light aft at night. The vessel must be ready to slack down ropes or cut them if need be. Engines must always be ready for manoeuvring.

CHAPTER III: CONVOY SYSTEM – Maximum Dimensions, Towage and Escorting

SECTION I: Convoy System

Article 49: Formation of Convoys

A 3 convoy system is applied in the Suez Canal.

(A) ***Northbound Convoy***

(1) Starts at 0600 hrs. at Km. 160 and consists of 2 groups of vessels (a third group may enter Canal from 0300 hrs. to 0430 hrs. according to traffic situation).

(a) *Group A*

(i) Navy ships, 4th Generation Container Ships, 3rd Generation Container Ships over 40,000 SCGT and similar, LASH vessels over 35,000 SCGT, LPG and LNG (Loaded or not gas free) and loaded chemical carriers (See Article 54).

(ii) Loaded VLCCs, conventional loaded tankers and heavy bulk carriers, (draft over 38 ft. or length over 950 ft. B.P.).

(b) *Group B*

Cargo and other vessels anchored in Suez Anchorages.

(2) The Northbound convoy has a free run from Port of Suez till Port Said. It passes through the East Kabrit Channel, the Eastern Dredged Channel in the Bitter Lakes, the Deversoir East Channel, the East Channel of Lake Timsah, the East Channel of Ballah Loop and the East Channel from Km. 17 Northward.

(3) In case the Northbound convoy has to stop in the Bitter Lakes due to traffic situation of Southbound convoy or any emergency, the following must be considered:

(a) Container vessels heading the convoy will drop anchor in the suitable East Anchorage Areas of the Bitter Lakes.

(b) VLCCs will anchor in the suitable East Anchorage according to their draft.

(c) All other vessels will anchor in the East Area corresponding to their draft.

(d) 3 berths are available in Kabrit East Branch, in case of emergency.

Note: For safety measures, LPG and LNG vessels in ballast or loaded, and loaded chemicals in bulk are included in the Tankers group.

(B) ***Southbound Convoy (N1)***

(1) Starts from 0000 hrs. to 0500 hrs. and consists of 3 groups of vessels:

(a) Group A: Vessels in Port Said Harbour.

(b) Group B: Vessels anchored in the Northern Anchorage Area consisting of 4th Generation Container Ships, 3rd Generation Container Ships, VLCCs in ballast, vessels over 42 ft. draft, LPG, LNG and not gas free vessels (LPG, LNG and vessels not gas free may join Group A) in ballast or loaded and LASH over 35,000 SCGT. This group will be headed by the Container Ships and the first vessel will enter through Port Said East Approach Channel in due time to join Group A at Km. 17.

(c) Group C: Vessels anchored in Southern Anchorage Area will enter through Port Said West Channel in due time to join Group B at Km. 17.

(2) This convoy has a free run to the Bitter Lakes, passes through the East Branch of Ballah By-Pass, the East Channel of Lake Timsah, the Deversoir West Channel (except for vessels with draft of more than 42 ft. will pass through East Channel), and anchors in the Western Anchorages in Bitter Lakes.

(3) The sequence of continued route from the Bitter Lakes will be warships, LPG, LNG vessels, the 4th Generation Container Ships and 3rd Generation Container Ships over 35,000 SCGT followed by VLCCs in ballast and then other vessels. The first ship of the Southbound convoy will regulate speed to cross the last Northbound vessel abeam of Kabrit Station.

(C) ***Southbound Second Convoy (N2)***

(1) Starts from 0630 hrs. to 0900 hrs. The forming and depth of this convoy is subject to situation of traffic and limit time.

(2) 3rd and 4th Generation Container Ships with more than one propeller astern shall be ahead of this convoy to anchor at Timsah Lake (maximum two vessels).

(3) Vessels will make fast in Ballah West Branch (Maximum capacity 15 vessels according to the number of berths at Ballah Loop), and continue route after the last Northbound vessel clears Km. 61.

(4) Dimensions of vessels that can make fast at Ballah West Branch should not exceed those indicated in the following table, excluding tankers over 90,000 SCGT (Subject to alteration according to Canal Developing Projects).

Beam			Draft	
(ft.)	(m.)	(cm.)	(ft.)	(in.)
135	41	15	42	–
136	41	45	41	8
137	41	76	41	5
138	42	06	41	1
139	42	37	40	9
140	42	67	40	6
141	42	98	40	3
142	43	28	39	11
143	43	59	39	8
144	43	89	39	5
145	44	20	39	1
146	44	50	38	10
147	44	80	38	7
148	45	11	38	4

(5) Vessels not allowed to join this convoy are the following:

(a) Loaded Tankers (or Bulk Carriers) carrying Petroleum Grade A or similar substances (flash point below 23°C or 73°F, ascertained by an open test or of any equal degree of accuracy).

(b) Liquified inflammable gas vessels (LPG, LNG, or similar loaded or ballasted not gas free vessels).

(c) Vessels not fitted with double bottoms carrying chemicals in bulk.

(d) Vessels carrying uncontainerised radioactive substance Group 1.

(e) Vessels carrying dangerous waste.

(f) Heavy lifters (semi-submersible) carrying heavy lift units with tonnage exceeding the lifting capacity of their individual cranes.

(g) Vessels carrying deck cargo protruding more than what is stated in Article 26 of these Rules.

(h) Vessels over 90,000 SCGT.

(i) Navy ships.

Article 50: Limit Time of Arrival to Join Convoys (Summertime may be kept)

(A) ***Southbound Convoy***

(1) 4th Generation Container Ships, 3rd Generation Container Ships, VLCCs in ballast and loaded vessels over 42 ft. draft who will anchor in the New Anchorage Area (V berths) N.W. of Port Said and declared by Agents ready for transit, have to reach the Anchorage Area within the limit time of 1900 hrs. (Ships arriving from 1900 hrs. to 2100 hrs. may join the first Southbound Convoy (N1) against an additional charge of 5% of transit dues. Ships arriving after 2100 hrs. until 2200 hrs. can also join the first Southbound Convoy (N1) against an additional charge of 10% of transit tolls).

(2) Other ships entering from Port Said harbour have to reach the Anchorage Area (C Berths) within the limit time of 1900 hrs.

(3) Ships arriving after the limit time of 1900 hrs. and not later than 0300 hrs. (Ships arriving from 0300 hrs. to 0400 hrs. may join the second Southbound Convoy (N2) against an additional charge of 5% of transit dues. Ships arriving after 0400 hrs. until 0500 hrs. can join the second Southbound Convoy (N2) against an additional charge of 10% of transit tolls), will join the second Southbound Convoy either from Port or direct from sea and be declared by Agents ready for transit, providing the capacity of the Canal permits (See Article 49 (C)).

(B) ***Northbound Convoy***

(1) Ships anchoring South of Conry Rock: 4th Generation Container Ships, 3rd Generation Container Ships, VLCCs, super tankers, heavy bulk carriers, LASH vessels over 35,000 S.C.G.T., LPG and LNG (Loaded or not gas free) and vessels over 38 ft. draft, have to reach the Anchorage Area (V Berths) and be declared by Agents ready for transit within the limit time of 0100 hrs. (Ships arriving from 0100 hrs. to 0300 hrs. may join Tanker Group against additional charge of 5% of transit dues. Ships arriving after 0300 hrs. but before 0330 hrs. can also join Tanker Group against additional charge of 10% of transit dues).

(2) Other vessels who will anchor North of Conry Rock have to reach the Waiting Area and be declared by Agents ready for transit within limit time of 0300 hrs. (Ships entitled to join the ordinary group, can arrive after 0300 hrs. up until 0330 hrs. against an additional charge of 5% of transit dues).

(C) In all cases, the documents required should be produced before the passage of the vessel to the Canal Office at Port Said or Port of Suez.

Suez Canal Authority, Circular No. 13/95: Issued by the Director of Transit.

Circular No. 3/94 is to be cancelled and replaced by the following:

In favourable navigational conditions, the limit time for arrivals from North and South is to be extended as shown below:

(1) First Southbound Convoy:

(a) Vessels arriving between 1900 hrs. and 2100 hrs. can join the first Southbound Convoy against the payment of a surcharge equal to 3% of the normal transit dues, with a maximum of SDR 7,000.

(b) Vessels arriving after 2100 hrs. and up to 2200 hrs. can join the first Southbound Convoy against the payment of a surcharge equal to 5% of the normal transit dues, with a maximum of SDR 10,500.

(2) Second Southbound Convoy:

(a) Vessels arriving between 0300 hrs. and 0400 hrs. can join the Second Southbound Convoy against the payment of a surcharge equal to 3% of the normal transit dues, with a maximum of SDR 7,000.

(b) Vessels arriving after 0400 hrs. and up to 0500 hrs. can still join the Second Southbound Convoy against the payment of a surcharge equal to 5% of the normal transit dues, with a maximum of SDR 10,500.

(3) Northbound Convoy:

1. Ships that are allowed to join the tanker group:
   (a) When arriving between 0100 hrs. and 0300 hrs. such ships can join the tanker group against the payment of a surcharge equal to 3% of the normal transit dues, with a maximum of SDR 7,000.
   (b) When arriving after 0300 hrs. and up to 0330 hrs. such ships can still join the tanker group against the payment of a surcharge equal to 5% of the normal transit dues, with a maximum of SDR 10,500.
2. Ships that are allowed to join the ordinary group can do so when arriving after 0300 hrs. and up to 0330 hrs. against the payment of a surcharge equal to 3% of the normal transit dues, with a maximum of SDR 7,000.

This Circular takes effect as of 1st January 1996.

Article 51: Courses to Keep on Leaving for Sea

(A) ***At Port Said***

Vessels of Northbound convoy have to maintain course through the East Approach Channel till Hm. 195 then alter course North (000°) for five miles before altering to destination.

(B) ***At Port of Suez***

Vessels proceeding to sea have to maintain course through the channel till the last pair of buoys, then keep the Separation Zone on the port side till the Separation Zone Buoy No. 1.

SECTION II: Maximum Dimensions (Vessel's Sizes and Drafts)

Article 52: Dimensions of Vessels Authorised to Transit

These dimensions are given hereunder: (For drilling and towed units – See Appendix).

(a) *Max. length:* No restrictions.

(b) *Max. beam:* 245 ft.

Note: (1) Vessels with beam over 210 ft. are allowed to transit in calm weather, i.e. beam wind not exceeding 10 knots.

(2) Vessels with beam over 245 ft. may transit Canal under special request.

(c) *Max. draft:* Tables I and II give the maximum draft authorised in relation to the beam of vessel according to the following:

(i) *Table "I":* For vessels in ballast transiting in either direction.

(ii) *Table "II":* For loaded vessels transiting in either direction.

See Tables below and on Page 675.

Article 53: Conditions of Transit

(1) The maximum draft for loaded vessels is according to Table II (must not exceed the Tropical Load Line). For vessels without Tropical Load Line indicated in the Load Line Certificate, the maximum draft allowed will be the Summer Load Line.

(2) Vessels allowed to transit at a draft of over 50 ft. up to 56 ft. must, for the first passage, effectuate a successful sea trial before entering the Canal either at Suez or Port Said Roads.

(3) Sisterships are not to get benefit of authorisation granted to a particular ship of the group.

(4) For safety measures, LPG, LNG in ballast or loaded, and loaded dangerous chemicals in bulk are included in the Tanker Group and they are placed ahead of the loaded tankers.

Article 54: Speed

Station	*Tanker's Group*	*Other Vessels*
Port Tewfik – Genefa, head current	11 km./hr.	13 km./hr.
Port Tewfik – Genefa, stern current	14 km./hr.	15 km./hr.
Genefa – Kabret	14 km./hr.	15 km./hr.
Kabret – Deversoir	15 km./hr.	16 km./hr.
Deversoir – Port Said	14 km./hr.	15 km./hr.

Table I

Draft for Vessels in Ballast Transiting North or Southbound (See "Notes")

Beam	*Maximum Draft* Forward	*Maximum Draft* Aft
Up to 245 ft. (74.67 m.)	32 ft. (9.75 m.)	36 ft. (11.00 m.)
Over 210 ft. (Over 64.0 m.)		

Notes: (1) Vessels of a beam over 210 ft. transit the Canal in a beam wind not exceeding 10 knots.

(2) Vessels of a beam over 245 ft. may be allowed to transit the Canal under special request.

Table II

Beam and Draft

Loaded Vessels (Southbound/Northbound):

Beam ft.	*Beam* in.	*Beam* m.	*Beam* cm.	*Draft* ft.	*Draft* in.	*Beam* ft.	*Beam* in.	*Beam* m.	*Beam* cm.	*Draft* ft.	*Draft* in.
158	00	48	16	58	00	165	00	50	29	55	07
	03		24	57	11		03		37		06
	06		31		10		06		44		05
	09		39		09		09		52		04
159	00		46		08	166	00		60	55	03
	03		54		07		03		67		02
	06		62		06		06		75		01
	09		69		05		09		83	55	00
160	00		77		04	167	00		90	54	11
	03		84		03		03	50	98		10
	06	48	92		02		06	51	05		09
	09	49	00		01		09		13		08
161	00		07	57	00	168	00		21		07
	03		15	56	11		03		28		06
	06		23		10		06		36		05
	09		30		09		09		44		04
162	00		38		08	169	00		51		03
	03		45		07		03		59		02
	06		53		06		06		66		01
	09		61		05		09		74	54	00
163	00		68		04	170	00		82	53	11
	03		76		03		03		89		10
	06		84		02		06	51	97		09
	09		91	56	01		09	52	05		08
164	00	49	99	55	11	171	00		12		07
	03	50	06		10		03		20		06
	06		14		09		06		27		05
164	09	50	22	55	08	171	09	52	35	53	04

Beam				Draft	
ft.	in.	m.	cm.	ft.	in.
172	00	52	43	53	03
	03		50		02
	06		58		01
	09		65		01
173	00		73	53	00
	03		81	52	11
	06		88		10
	09	52	96		09
174	00	53	04	52	08
	03		11		07
	06		19		06
	09		26		05
175	00		34		04
	03		42		03
	06		49		02
	09		57		02
176	00		65		01
	03		72	52	00
	06		80	51	11
	09		87		10
177	00	53	95		09
	03	54	03		08
	06		10		07
	09		18		06
178	00		25		05
	03		33		04
	06		41		03
	09		48		03
179	00		56		02
	03		64		01
	06		71		01
	09		79	51	00
180	00		86	50	11
	03	54	94		10
	06	55	02		09
	09	55	09		08
181	00	55	17	50	07
	03		25		06
	06		32		06
	09		40		05
182	00		47	50	04
	03		55		03
	06		63		02
	09		70		01
183	00		78		01
	03		86	50	00
	06	55	93	49	11
	09	56	01		10
184	00		08		09
	03		16		09
	06		24		08
	09		31		07
185	00		39		06
	03		46		06
	06		54		05
185	09	56	62	49	04
186	00	56	69	49	03
	03		77		02
	06		85		01
	09		92		01
187	00	56	99	49	00
	03	57	07	48	10
	06		15		08
	09		23		06
188	00		30		05
	03		38		03
	06		45		01
	09		53	48	00
189	00		61	47	10
	03		68		08
	06		76		07
	09		83		05
190	00		91	47	03
	03	57	99		02
	06	58	06	47	00
	09		14	46	10
191	00		22		09
	03		29		07
	06		37		05
	09		45		04
192	00		52		02
	03		60	46	00
	06		67	45	11
	09		75		09
193	00		83		07
	03		90		06
	06	58	98		04
	09	59	06		02
194	00		13		01
	03		21	45	00
	06		28	44	10
	09		36		08
195	00		44	44	07
	03		51		05
	06		59		03
	09		66		02
196	00		74	44	00
	03		82	43	10
	06		89		09
	09	59	97		07
197	00	60	05		05
	03		12		04
	06		20		02
	09		27	43	00
198	00		35	42	11
	03		43		09
	06		50		07
	09		58		06
199	00		66		04
	03		73		02
	06		81	42	01
	09		88	41	11
200	00	60	96	41	09

SECTION III: Towage and Escorting

Article 55: Canal Authority Tugs

(l) At Port Said Harbour, tugs may be placed at the disposal of Masters if the Canal Authority deems it necessary. No charge is made for the assistance given by these tugs to transiting vessels for mooring and getting underway. In all other cases, a charge is levied by the Suez Canal Authority.

Vessels manoeuvring in the harbour are required to provide their own ropes. Wire tow-ropes are prohibited (Wire tow-ropes should not be confused with the fire-wire ropes made fast onboard and fitted with an eye splice or connecting shackle hanging over the side as required (See Article 19).

(2) In other cases, tugs can be hired for mooring, towing or getting a vessel afloat. Charges paid by the vessel will be according to rates set by Suez Canal Authority.

(3) In accordance with the terms of Article 57 of the present Chapter, the Officials of the Canal Authority may impose on certain defective vessels, or vessels carrying dangerous cargo, a tug or more for towing or escorting during transit of the Canal.

In such cases, charges are paid according to rates set by Suez Canal Authority.

(4) The Master of a vessel using a tug placed at his disposal has the exclusive direction and control of the manoeuvres of both the vessel and the tug.

(5) Whatever may be the conditions or circumstances under which the Canal Authority tugs are made use of by a vessel, the Master of the vessel is responsible for any damage or accidents whatsoever resulting directly or indirectly from the use of the said tugs, including damage which may occur to the tugs themselves, and to equipment.

Article 56: Use of Private Tugs

(1) In case the SCA tugs are not available, shipping companies will be allowed to tow their "towed units" by tugs to be provided by them. Such tugs must be approved by the Suez Canal Authority, prior to transit.

(2) Apart from the special towage dues, tugs belonging to private owners are subject to the strict observance of all the parts of the rules relative to vessels manoeuvring, in transit or berthing.

(3) Towing arrangement must be supervised and approved by the Suez Canal Authority personnel.

Article 57: Cases of Imposed Tugs

Chargeable tugs shall be imposed during Canal transit, at the tariff hire rate, in the following cases:

(1) The Canal Authority may require any vessel to take a tug or tugs through the Canal, when in its judgement such action is necessary to ensure safety to the vessel or to the Canal.

(2) Any vessel without mechanical power, or the machinery of which is (or becomes) disabled, or steers badly, or which is liable to become unmanageable for any reason, shall be towed through the Canal.

(3) Vessels having engine or steering gear trouble for the second time during the same passage.

(4) Bad view vessels owing to deck cargo, containers, cranes or constructions impeding the view from the wheelhouse and wings.

(5) (a) Vessels unable to use one or both of their bow anchors (ref Art. 23).

(b) Vessels over 1,000 SCGT, built with one anchor.

(c) Vessels over 1,000 SCGT, built with more than one anchor, one of them on the bow.

(6) Drilling vessels.

(7) Vessels with two engines on one propeller of which one is out of order for any reason and cannot maintain speed of 10 knots at least without current after sea trial to assure the speed and valid Sea Worthiness Certificate.

(8) Vessels with two engines on two propellers of which one is out of order.

(9) On Master's request for one tug or more.

Article 58: Escorting

The escort of VLCCs, ULCCs, LPG, LNG, large bulk carriers and other vessels (See "Notes") will be as follows:

Notes: (a) Loaded heavy lift ships are to be escorted by one or more tugs according to decision of S.C.A. after survey.

(b) Integrated units are escorted by one tug on their first transit.

(1) Loaded vessels under 130,000 d.w.t. will be escorted by 1 tug if for technical reasons the Suez Canal Authority finds it necessary, or when the vessel's draft exceeds 47 ft.

(2) Loaded vessels from 130,000 d.w.t. to 170,000 d.w.t. will be escorted by one tug.

(3) Loaded vessels over 170,000 d.w.t. will be escorted by 2 tugs.

(4) Vessels in ballast over 250,000 d.w.t. will be escorted by one tug.

(5) LPG and LNG vessels over 25,000 S.C.G.T. (except gas free)(1) will be escorted by one tug(2).

(1) (a) LPG, LNG vessels contain (tank on deck) completely separated from cargo tank with maximum tonnage of 180 tons will be considered gas free;

(b) Gas free carriers are to be treated as tankers in ballast;

(2) Masters are kindly requested to maintain safety intervals, subject not to be less than 20 minutes, not more than 25 minutes for such vessels.

(6) Vessels in ballast with beam over 218 ft. up to 233 ft. will be escorted by one tug.

(7) Vessels in ballast with beam over 233 ft. will be escorted by two tugs.

(8) Towed scrapped vessels in ballast 150,000 d.w.t. and over will be escorted by one tug.

Note (1): Reference to Article 57 and Article 58:

(1) Any vessel escorted by one tug and the situation requires another imposed tug, same tug is considered imposed needless for a second tug.

(2) Any vessel escorted by 2 tugs and the situation requires a third imposed tug, one of the 2 escorting tugs will be for escort and the second is imposed needless for a third tug.

Note (2): The prementioned vessels in Article 57 and Article 58 have to prepare 2 polypropylene ropes 16 in. circumference (For vessels under 100,000 d.w.t., if their draft is over 47 ft.) to join the stern to the tug during stopping operations.

The ropes should be eye spliced to fit in the quick release hook on the tug and with adequate length to give distance between fore of the tug and stern of vessel at about 50 m.

On the vessels, these ropes will be made fast on stern bitts port and starboard. The eyes will be hanging over the stern about 2 m. above water and lashed with rope stoppers to break loose when necessary.

Responsibility in cases mentioned above: Either imposed or escorted tug, the Master is responsible for any damage that may happen to Suez Canal tugs, directly or indirectly during the voyage, whatever the reasons of the damage may be.

CHAPTER IV: ACCIDENTS AND SAFETY PRECAUTIONS AGAINST FIRE AND POLLUTION

Article 59: Accidents

(1) Whenever a vessel underway is accidently stopped, she must, if other vessels are following, attract their attention by giving 5 or 6 short blasts on the whistle or siren. This signal is to be repeated at short intervals. It means "I am reducing speed and may have to stop and make fast".

Vessels stopped accidentally at night, must in addition, immediately replace their white light astern with a red light.

(2) In case of grounding, the Master must immediately hoist the following:

	By Day	*By Night*
Passage clear for tugs	Black Ball Pendant No. 2	Red Light
Passage not clear for tugs	Black Ball; Pendant No. 2; International Code Flag "N".	2 Red Lights.

The Master must also send also a radio message stating whether a tug is required or not, whether or not passage is clear for the tug and whether lightening is necessary, etc.

(3) When a vessel runs aground, the Canal Authority Officials are alone empowered to order and direct all operations required to get the vessel afloat and if necessary, have her unloaded and towed. Neverthless, Masters remain responsible for all damages or accidents of any kind which may be the direct or indirect consequence of the grounding.

(4) All attempts on the part of other vessels to refloat a vessel aground are strictly prohibited.

(5) When a vessel stops in the Canal itself in consequence of an accident other than a collision, engine, auxiliary and steering gear troubles, the Canal Authority, in order to clear the way with all possible speed, and to get her underway, will assist with the necessary tugs to refloat her, free of charge.

(6) If, once afloat, and the Canal Officials find it necessary to tow or escort the vessel by one tug or more, she must from that moment, pay towage charges as set down by Suez Canal Authority, moreover, it is understood that the vessel bears all expenses necessary for repairs of any damage or breakdown which might interfere with her getting underway, regardless of the time when such damage or breakdown takes place.

(7) When a vessel grounds or stops outside the Canal itself or if the grounding or stoppage is due to a collision, all charges for getting the vessel afloat, towing, unloading, etc., are payable by the vessel and must be settled as per statement drawn up by the Canal Authority before the vessel leaves Port Said or Port of Suez.

(8) Whenever a collision appears probable, vessels must not hesitate to run aground should this be necessary to avoid it.

(9) When a vessel or floating structure of any description runs aground or strands or sinks or is left abandoned, either in the Canal itself or in one of its ports, Waiting or Anchorage Areas, and the Canal Authority deems it an obstruction or a menace to navigation in Canal Waters, the Authority has the right to take of its own accord such action as may be necessary for the purpose of removing or destroying the vessel or floating structure by whatever means the Canal Authority may select and at the risk and expense of the Owner of, or the person responsible for the vessel or the floating structure. The Suez Canal Authority has – in this case – the right to sell the vessel or the floating structure or the wreck salvaged or all of them together in public auctions with a view to covering all kinds of expenses.

Article 60: Leaks

(1) In the case of leaks, when the ship in approaching channel, sea waiting area and harbour, the Master must inform the Harbour Office at once.

(2) When in Canal or anchored in lakes, he must inform immediately the Movement Office. He must at the same time make the appropriate International Signal and call attention by sounding a prolonged blast on the whistle or siren; and take all necessary measures to stop the leakage and ensure the safety of the vessel and environment.

(3) The Suez Canal Authority Officials whose decision shall be final, may order any action deemed necessary in the best interest of all concerned; change of berth or mooring, beaching, taking the vessel out to sea.

(4) The Master, the Owners and/or operators of the vessel is nevertheless responsible for all damages or accidents arising directly or indirectly from the salvage operations.

(5) The Master, the Owner and/or operators of vessel shall be liable to indemnify any damage that may occur from pollution directly or indirectly to the environment and shall pay all expenses incurred for its removal, cleaning costs and all costs and compensation for any damage to the environment.

Article 61: Fire Fighting

(1) Vessels transiting the Canal should be equipped with the fire fighting equipment in accordance with the requirements of SOLAS. All equipment should be in a good and efficient condition.

(2) Fire hoses with suitable nozzles attached shall be connected to the outlets of fire lines at all times while in Canal Waters. Sufficient hoses shall be connected to reach all parts of the vessel.

(3) Approaching Canal Waters, as precautionary measures, all vessels must have a fire wire hanging over the side ready for use fore and aft, before entering Canal Waters.

Article 62: Fire Onboard

(1) In case of fire onboard, when in harbour, the Master must inform the Harbour Office at once.

(2) When underway or in the Canal or anchored in Lakes or made fast in Canal, he must inform the Movement Office.

He must at the same time make the appropriate International Signal and call attention by sounding a prolonged blast on the whistle or siren. Also, he must make ready to get underway if required to do so.

(3) Neighbouring vessels must in such cases also be ready to change berth.

(4) Masters are responsible for the use onboard their vessels of fire fighting appliances and installations and for the stability and safety of their vessel.

(5) The Suez Canal Officials will co-operate with the Master for the purpose of directing the fire fighting operations.

(6) If in the opinion of the Canal Authority Officials, whose decision shall be final – there is a risk of fire spreading, they may order any action deemed necessary in the best interest of all concerned (change of mooring, beaching, taking vessel out to sea); it is understood that Masters are nevertheless responsible for all damage or accidents arising directly or indirectly from outbreaks of fire or salvage operations.

Article 63: Fuelling

(1) A vessel at fuel berth, or while being supplied by fuel in Waiting Areas, shall at all times be ready for immediate fire fighting. She shall keep up steam and be ready to move on short notice.

(2) The Master, the owners and/or operators of the vessel shall be liable to indemnify any damage that may occur from pollution during fuelling operations.

Article 64: Pollution

(A) Discharge of Substances Polluting Waters

Vessels must not discharge or throw into the Canal Waters any polluted water ballast, heavy slops, engine or fire room polluted bilge water, oil or any other substances that will cause pollution.

The Egyptian Environmental Protection Act No. 4, 1994, prohibits the discharge of any polluting substances into waters. The Provisions of this Act will apply for any discharge of polluting substances.

(B) Oil Pollution Notification

Whenever a vessel observes an *oil slick* or oil mixture discharge in the sea waiting areas, approach channels, Port Said Harbour, Canal Waters and anchorage areas in the lakes, she must at once inform the Suez Canal Authority with the following information if possible.

(1) The time of observation.
(2) The location and place and area covered by the slick.
(3) The directions of movement of the slick.
(4) The approximate oil thickness, if possible.
(5) If known, the name of vessel causing the slick.
(6) The meteorological and oceanagraphic conditions, if possible.
(7) Any other information.

CHAPTER V: Prohibitions, Defects and Charges

General

When a vessel is in Canal Waters, either in anchorage areas or ports or during transit, the following is prohibited:

Article 65: Use of Anchors, Thrusters, Gyropilot, Whistle or Siren

(1) Masters must avoid anchoring and using the thrusters in the Canal, except in case of absolute necessity.

(2) The use of Gyropilot (automatic steering) in the Canal is absolutely forbidden.

(3) Vessel unable to use both anchors is prohibited to transit Canal on her own power. She may transit as a towed unit after survey (See "Appendix").

(4) The sounding of a whistle or siren is prohibited, except for giving any authorised or required signal, as mentioned in Part III, Article 92.

Article 66: Firing Shots

(1) Firing shots is not allowed.

(2) An additional due of U.S.$300.00 will be imposed for violation of this rule.

Article 67: Picking up Objects from Water

(1) Whenever any object or merchandise whatsoever falls overboard, it must be immediately reported to the Canal Authority. If it is considered that the picking up cannot be effected by the vessel without impeding transit, the Canal Authority will proceed to carry it out, at the expense of the vessel.

(2) An additional due of U.S.$300.00 will be imposed for violation of this rule.

Article 68: Riveting, Welding etc.

(1) Riveting, welding, burning, metal cutting or similar operations requiring the use of heat, are not allowed unless authorised by the Suez Canal Authority.

(2) An additional due of U.S.$750.00 will be imposed for violation of this rule.

Article 69: Pollution

(1) See Article 64.

(2) In case of leakage of any polluting material from a vessel, due to any reason, the Master, the Owners and/or Operators of the vessel shall be liable to indemnify any damage that may occur from the pollution directly or indirectly to the environment and shall pay all expenses incurred for its removal and all compensations. Moreover, she shall pay for all claims regarding cleaning costs and all environmental economic losses caused by the pollution.

Article 70: Direct Lights

Under no circumstances shall the rays of any blinding lights be directed to the bridge or any other direction which would interfere with the safe navigation of other vessels.

Article 71: Embarking and Disembarking of Persons

(1) Unless authorised by the Canal Authority or Port Officials, no person shall embark or disembark from a vessel while passing through the Canal or in Ballah, Timsah Lake or the Bitter Lakes.

(2) An additional due of U.S.$300.00 will be imposed for violation of this rule.

Article 72: Boats, other than the Canal Authority's own

Not allowed to come alongside vessels underway or manoeuvring except the following at their own risk.

(1) Quarantine and police boats.

(2) Mooring boats.

(3) The ship's Agent's boats.

Article 73: Vessel Overtaking Another

(1) Vessels proceeding in the same direction are not allowed to overtake one another while underway in the Canal Waters and ports unless authorised by the Suez Canal Control Office.

(2) An additional due of U.S.$750.00 will be imposed for violation of this rule.

Article 74: Boat Drills

(1) No boat drills are allowed except after authorisation.

(2) An additional due of U.S.$300.00 will be imposed for violation of this rule.

Article 75: Venting(1)

(Tank openings to be closed through the whole transit).

(1) Venting of toxic and explosive gases is prohibited in Canal Waters.

(2) An additional due of U.S.$ 20,000 will be imposed for violation of this rule.

(1) All tank opening should be closed through the whole transit.

Article 76: Long Stay

Unless due to conditions of traffic or incidents in the Canal, transiting vessels should not remain more than 24 hours in Port Said berths, anchorages in Port Said and Port of Suez roads, Timsah Lake or Bitter Lakes.

Article 77: Vessels Having Damaged Container With Dangerous Cargo

If upon arrival of a vessel in waiting areas or port or while transiting the Canal, it is found that a container of dangerous cargo has been damaged or is leaking, the Master of the vessel has to notify the Suez Canal Port Authority at once. In cases of dangerous situations, the vessel may be ordered to leave the port or waiting area for sea.

Article 78: Declaration of State of Navigability

The Master shall hand in duly filled and signed, the declaration of State of Navigability. The form will be handed to him by the pilot on his arrival on board.

DECLARATION FORM

I, the undersigned, Master of the...

(1) Certify that my ship satisfies the conditions laid down in Part I, Articles 18 and 45 of the Navigation Regulations and that, in particular, the engines and the steering gear are in good working order.

(2) Declare that my ship has, at the present time, the following defects in engines or steering gear.........

(3) I declare, also that the wireless installations of my ship permit to transmit on the frequencies hereafter, in kHz:

Telegraphy..............kHz. Telephony..............kHz.

(4) I state also that my ship is/is not fitted with a rudder angle indicator and engine r.p.m. indicator on the bridge in such a position that the Pilot may read both without having to move away from his station and that the rudder angle indicator/engine r.p.m. indicator* is/are in good working condition.

I undertake to bring to the notice of the Suez Canal Authority, before my ship enters the Canal, any defects, not specified above, which may appear.

Made at Port..................., the......................

Signature......................

* Delete where inapplicable.

APPENDIX:

SPECIAL CASES

Transit of:

A. Drilling Rigs.
B. Heavy Lift Ships carrying Drillers, floating units or large units.
C. Vessels carrying Floating Units.
D. Navy Ships.
E. Integrated Units.
F. Towed Units.
G. Special Requests.

A. Drilling Rigs "They consist of":

(1) *Drilling vessels:* To be convoyed by a Suez Canal tug.

(2) *Drilling rigs:*

(a) Self-steering or non self-steering.

(b) *Legs that can be lifted:* No extensions under the rig's keel. To be assisted by Suez Canal tugs:
One aft and another – or more – as escort. In addition, a powerful tug forward to maintain a minimum speed of 12 km./hr.over the ground. The rigs must be in stable condition.

(c) *Legs that cannot be lifted* and a part remains under the rig's keel:
Each case is to be studied separately to decide whether or not the unit is allowed to transit the Canal.

B. Heavy Lift Ships carrying Drillers, Floating Units or large Units(1), are submitted to the following conditions:

(1) Be able if needed, to reduce, easily and safely, the draft by 1.0 m. (3 ft. 03 in.) by way of discharging clean ballast water.

(2) Be escorted by one or more tugs according to the decision of the Suez Canal Representatives, after survey on arrival (6,600 SDR, per tug).

(3) The following additional dues are levied to cover special precautionary measures for the safety of navigation and vessels:

(a) 125% of the transit dues and in addition,

(b) 2% of the transit dues, for each foot, or fraction of a foot in excess of the maximum breadth prescribed by Article 26.

(1) "Large Units" refer to any one block unit of 250 metric tonnes or more carried by heavy lift ships whether individually or as part of the whole cargo.

C. Self Steering Vessels carrying Floating Units(1):

(1) Vessels carrying onboard floating units must within an adequate period, before vessels transit introduce the following documents of their floating units:

(a) S.C.T. Certificate and calculation sheets.

(b) Recommended plans.

(c) A detailed statement of the floating units loaded onboard.

(d) Cargo weight statement specifying its location on board and the way of its loading as per cargo manifest.

(2) In case of absence of the prementioned documents in Para. (1), the gross tonnage will be calculated according to Linear dimensions, length, beam and depth.

(3) Self steering vessels carrying onboard floating units of 300 tons or more S.C.G.T. are subject to the following additional dues:

(a) 300% of transit dues of the floating units S.C.G.T.

(b) 2% of transit dues for each foot or fraction of a foot in excess of the maximum breadth authorised by Article 26.

(4) Such vessels will be able to join the 2nd Southbound Convoy if their dimensions allow.

(1) Valid Lashing Certificate is required.

D. Navy Ships:

Navy and auxiliary ships belonging to different countries, an addition of 25% of transit dues is to be added owing to special arrangements.

E. Integrated Units:

Integrated units may transit Suez Canal and berth in its harbours on the following conditions:

(1) A valid Seaworthiness Certificate issued by one of the I.A.C.S. recognised by the Suez Canal Authority.

(2) Additional dues of 25% of the transit dues will be charged.

(3) Vessels to be escorted by a Suez Canal tug, on the first transit (experimental) against 6,600 SDR.

(4) If unable to maintain convoy's speed, additional dues for slow speed vessels are applied.

(5) If the integrated tug is disconnected and the unit towed by normal tugs, this unit will be considered as towed vessel and dues for towed vessels will be applied.

(6) *In Harbours:* Berthing, loading and discharging operations are possible, after getting Harbour Authority authorisation.

F. Towed Units:

(1) All enquiries concerning the possibility and/or approval of transit of towed units, drilling rigs, dredgers, etc., are to be submitted by the owners of the units or their officially recognised representatives in Egypt or one of the Suez Shipping Agency Companies accompanied by a General Arrangement Plan and all particulars of the unit: Name, LOA, beam, draft, height, self-steering, etc. The application must reach Suez Canal Authority (Transit Department, Ismailia, Egypt) not less than 2 weeks before the sailing of the unit from its base.

(2) Towed units are not allowed to transit the Suez Canal, unless they are towed by a tug suitable to the size of the unit, and powerful enough to maintain a speed in the Canal not less than 12 km./hr. over the ground, in addition to the assisting Suez Canal tugs, whenever found necessary by Suez Canal Officials.

(3) Any towed unit must be supplied with floating mooring ropes in good condition, and suitable in number (more than six) and size according to the dimensions of the unit.

(4) A responsible person and a crew of at least 10 persons must be on board the unit during the transit.

(5) A valid Seaworthiness Certificate for the towage through the Suez Canal must be available.

(6) The unit must comply with the Suez Canal Regulations.

(7) A survey of the unit shall be made on the arrival, in order to take the definite steps, and make the final arrangements for the transit, if it complies with the Suez Canal Authority Rules.

(8) The transit is subject to the circumstances of the Navigation in the Canal, and the weather conditions.

G. Special Requests:

Owing to the request of owners for the transit of vessels with beam over 245 ft., the Suez Canal Authority undertook careful studies to comply with the said request.

In this connection above mentioned, vessels may transit the Canal under the following conditions:

(1) A pre-approval to be obtained in good time prior to transit.

(2) Transit to be effectuated in good weather (wind not exceeding 10 knots).

(3) One escorting tug against 6,600 SDR. for vessels with beam up to 233 ft.

(5) Two escorting tugs against 6,600 SDR. per tug for vessels with beam over 233 ft.

PART II – CANAL AND LAKES

CHAPTER VI: CANAL AND LAKES

Article 79: Canal and Approaches

(A) Length of the Navigable Channel

(1) East Approach Channel (Port Said).

(a) Distance from outer pair of buoys (East Branch) at Hm. 195 to Hm. 94.90 where it joins the West Approach Channel is 10.010 km.

(b) Distance from Hm. 94.90 to the pair of revolving lights at Km. 2.738 E is 12.228 km.

(2) West Approach Channel (Port Said).

(a) Distance from Fairway Buoy to Port Said Lighthouse is 11.040 km. (bearing 017°).

(b) Distance from Port Said Lighthouse (Km. 0.000) or (Km. 3 East Branch) to Ismailia is 78.5 km.

(c) Distance from Ismailia to Port Tewfik (Km. 162.250) is 83.750 km.

(d) Distance from Port Tewfik (Km. 162.250) (HM.000) to the outer pair of buoys Hm. 80.50 is 8.500 km.

(e) Total length of the navigable channel is 192.548 km.

(B) Characteristics of the Navigable Channel (Canal and Approaches).

(1) North Approaches

(a) Port Said East Approach Channel from Hm. 195 to Km. 1.000 East.

(i) Depth of water 21.00 m.

(ii) Channel width measured at 21 m. depth:

HM. 195	745 m.
HM. 80.00 E	400 m.
HM. 1.000 E	130 m.

(iii) Side Slopes

Natural land side slopes, ranging from 5/1 near shore to about 15/1 in the off-shore part.

(b) Port Said West Approach Channel from Hm. 95.00 to Port Said

(i) Depth of water 16.50 m.

(ii) Channel width measured at 16.50 m. depth:

HM. 80.00	520 m.
HM. 25.00	230 m.

(2) Canal Cross Sections (See Plan)

(a) The Canal cross sections are trapezoidal in shape, having side slopes of 4/1 in the Northern part up to Km. 61.00 and of 3/1 in the Southern part.

Toussoum Zone is the only place where the Western slopes are 2.5/1.

(b) Tables of main dimensions of cross sections all through the Canal (See below).

(c) Both sides of the Canal are provided with mooring bollards.

(3) South Approach from Hm. 0.00 (Km. 162.250) to Hm. 80.50

(a) Depth of water 23.50 m.

(b) Channel width measured at 19 m. depth, Hm. 0.000 to Hm. 80.50 is 292.00 m.

(c) Side slopes 3/1.

(C) Depth and Width of Different Parts of the Canal:

See "Table" opposite.

(D) Bends in the Canal

The bends in the navigable channel have the following characteristics:

(1) Radius of navigation line = 5,000 m.

(2) Width of channel at −11.00 m., depth = 225 m. – 242 m.

(3) Width of channel at −19.00 m. depth, North of Km. 61.000 (side slopes 4/1) = 176 m.

(4) Width of channel at −19.00 m. depth, South of Km. 61.000 (side slopes 3/1) = 177 m. – 192 m.

(5) At the ends of two bends, there is usually a funnel made to allow increasing the width of the straight part to the width of the curves (at 11.00 m. depth).

(6) Locations of beginning and end of each bend are included in the following table:

Note: At the approaches of the by-passes, bends are made with radius more than 5,000 m.

Canal Bends	*Kilometric indication of beginning point*	*Kilometric indication of end point*
Km. 51	Km. 49.510	Km. 51.480 West Km. 51.790 East
Km. 53	Km. 52.050	Km. 53.520
Km. 57	Km. 56.870	Km. 58.800
Km. 61	Km. 60.310 W. Km. 59.940 E.	Km. 63.300
"S" Curves	Km. 71.960	Km. 75.300
Timsah Curve	Km. 76.520	Km. 81.700 East
Km. 85	Km. 85.030	Km. 87.400
Km. 103	Km. 102.600	Km. 105.030
Km. 122	Km. 121.940 E. Km. 122.500 W.	Km. 125.510
Km. 130	Km. 129.500	Km. 131.980
Km. 146	Km. 145.500	Km. 146.330
Km. 154	Km. 154.700	Km. 155.720
Km. 157	Km. 156.280	Km. 160.000

(E) By-Passes and Loops

(1) Port Said By-Pass (See "Plan").

A by-pass is dredged East of Port Fouad starting at Km. 17.000 and extending straight to join the existing Port Said Roadstead at Hm. 94.90 and continuing until Hm. 195. This channel (By-Pass) will be used for the exit of Northbound ships, the entry of VLCCs in ballast, 4th Generation Container Ships and 3rd Generation Container Ships, LASH ships over 35,000 S.C.G.T., LPG, LNG tankers, and vessels with draft over 42 ft. coming from North.

Characteristics and dimensions: The kilometric marks are followed by letter "E" to distinguish them from those of the West branch. The inland part (from Km. 1.500 E. to Km. 15.465 E.) width (at 19 m. depth) is 146 m. with side slopes 4/1 and theoretical depth 20.5 m., fitted with bollards on the Western side, spaced every 100 m.

The seaward part (from Km. 1.000 E. to Hm. 94.90 E.) with width (at −21 m. depth) ranging from 130 m. at Km. 1.000 E. to 400 m. at Hm. 80.00 E. with natural side slopes (average 5/1 – 15/1).

Two revolving lights, one on each bank to indicate the entrance of Canal from East Approach Channel at Km. 2.738 E.

(2) Ballah Loop (See "Plan").

Between Km. 51 and 61 the Canal is doubled in the East, by a branch. The zone comprising the 2 branches of the Canal limited by the North and South ends where the 2 branches meet, is called "Ballah Loop".

In the East Branch the kilometric marks are followed by letter "E". The length of the East Branch is 8.490 km.

	West Branch	*East Branch*
Kilometric marking of North end	51.477	51.449 E.
Kilometric marking of South end	60.333	59.943 E.

Slope of bank 4/1.

In the West branch 15 mooring posts are situated on the Eastern bank and numbered South to North.

(3) Timsah By-Pass (See "Plan").

Between Km. 76.580 and Km. 81.700 E.

Characteristics and dimensions:

The kilometric marks are followed by letter "E". Length: 5.110 km. counted at right angle from Km. 76.578 to Km. 81.700. Width: 182 m. at a depth of 19 m. Slope: The side slope is 3/1. The radius of its axis is 4905 m. The by-pass will be used by North and Southbound vessels.

(4) Deversoir By-Pass (See "Plan").

A new branch is dredged East of the existing channel at Deversoir zone. This branch begins at Km. 95.000 and joins the main East Channel in the Great Bitter Lake at Km. 104.160. The branch will be used by Northbound vessels.

Dimensions:

Width: 142 m. at 19 m. depth. Depths: 20.500 m. from Km. 95.000 to Km. 100.670; 20.00 m. from Km. 100.670 to Km. 102.600; 19.500 m. from Km. 102.600 to Km. 104.160. Side slope: 3/1.

(5) Kabrit By-Pass (See "Plan").

The By-Pass is situated to the East of the main Canal. It begins at Km. 114.957 and ends at Km. 122.100. It is 250 m. – 152 m. wide at a depth of 19 m., the bank slope is 3/1. The By-Pass is separated from the West Branch by a submerged island at a depth between 2 m. and 6 m. The width of the island varies between 200 m. in the North and 66 m. in the South. Some mooring bollards have been installed on the submerged island to be used in case of emergency. The two extremities of the submerged island are marked at Km. 115.025 and 122.150 by a light buoy painted horizontally black and yellow and showing a flashing white light. The by-pass (East Channel) is to be used by Northbound vessels. Southbound vessels use the West Channel.

Article 80: Lakes

(A) Lake Timsah (See "Plan").

Lake Timsah extends from Km. 76.500 to Km. 80.520. In the presence of the new Timsah By-Pass, Lake Timsah will be used mainly as an anchorage area.

(B) Great Bitter Lake (See "Plan").

There are 2 dredged channels in the Great Bitter Lake. The East is the main channel about 358 m. wide at 19.00 m. depth and dredged to 19.50 m. for Northbound vessels. The West Channel 232 m. wide at 14.00 m. and dredged to 14.50 m. depth for Southbound vessels.

These channels divide the Great Bitter Lake into two anchorage areas, one to the East for Northbound convoy, and the other to the West for Southbound convoy (See B.A. Chart No.233).

Each convoy is to keep strictly to its assigned channel.

Article 81: Floating Bridges

The fixed parts of floating bridges are outside the line of navigational buoys. The bridges may be rigged day or night. Position of floating bridges – Km. 88.200, Km. 67.550 and Km. 47.200.

(C) Depth and Width of Different Parts of the Canal:

(1) *Main Canal and Bitter Lake West Channel:*

Kilometric Position Origin point of Km.		*Designation of Different Parts of the Canal Axis of Port Said Lighthouse*	*Theoretical Depth (m.)*	*Width of Canal at 19 m. Depth (m.)*	*Remarks*
From Km.	To Km.				
2.400 E	3.400 E*	Junction	20.5	186 – 146	East Port Said Branch
3.400 E	15.190 E	Straight line	20.5	146	
15.190 E	15.540 E	Junction	20.5	Variable	
17.000	19.000	Southern entrance to Port Said By-Passes	20.5	Variable	
19.000	30.430	Straight line	20.5	161	
30.430	32.350	Northern approach to encoche (siding)	20.5	161 238	
32.350	32.950	East encoche of Km.32 (siding of Km.32)	20.5	238	
32.950	35.110	Southern approach to encoche (siding)	20.5	238 – 146	
35.110	49.512	Straight line	20.5	146	
49.512	51.477	Northern approach to Ballah Loop	20.5	Variable	
51.449 E	51.785 E	Curve of Km.51 East	20.5	146	
51.785 E	59.943 E	Straight line	20.5	146	
60.308	60.333	Curve of Km.61	18.5 – 20.5	Variable	
60.333	63.419	Curve of Km.61	20.5	Variable	
63.419	64.514	Approach to curve	20.5	187.96 – 162	
64.514	71.164	Straight line	20.5	162	
71.164	71.964	Approach to Curve	20.5	162 – 182	
71.964	75.311	"S" Curves	20.5	182	
75.311	76.033	Straight line	20.5	182	
76.033	76.519	Straight line	20.5	182	East Timsah By-Pass
76.519	78.900 E	Curve of Timsah	20.5	182	
78.900 E	80.949 E	Encoche of Km.80 (East)	20.5	Variable	
80.949 E	81.692 E	Curve of Timsah	20.5	182	
81.000	82.000	Junction	20.5	Variable	
82.000	85.027	Straight line	20.5	182	
85.027	87.414	Curve of Km.85	20.5	182	
87.414	88.814	Approach to curve	20.5	182 – 147	
88.814	92.950	Straight line	20.5	147	
92.950	93.050	Junction to Syphons Zone	20.5	147 – 192	
93.050	93.446	Syphons Zone	20.5	192	
93.446	95.000	Junction to Deversoir By-Pass	20.5	Variable	
95.000	95.250	Junction to East Branch	20.5	237.55 – 204.99	Deversoir East Branch
95.250	96.000	Junction to East Branch	20.5	204.99 – 142	
96.000 E	100.666 E	Straight line	20.5	142	
100.666 E	102.600 E	Straight line	20.0	142	
102.600	105.030	Curve	19.5	Variable	Bitter Lakes East Channel
105.030	112.860 E	Main Channel (Straight line)	19.5	358	
112.860 E	114.200	Junction	19.5	Variable	
114.200	114.957	Junction with Kabrit-Loop	20.0	Variable	
114.957	115.320 E	Junction	20.5	From Approx. 250 – 152	Kabrit Loop East Branch
115.320 E	121.937 E	Straight line	20.5	152	
121.937 E	122.100 E	Beginning of Km.122 curve	20.5	162	
122.100	125.507	Curve of Km.122	20.5	Variable	
125.507	129.499	Straight line	20.5	162	
129.499	131.975	Curve of Km.130	20.5	162	
131.975	133.175	Approach to curve	20.5	162 – 132	
133.175	144.714	Straight line	20.5	132	
144.714	147.146	Encoche of Km.146 (siding of Km.146)	20.5	204 – 132	
147.146	149.500	Straight line	20.5	132	
149.500	153.524	Straight line	25.0	157	
153.524	154.724	Approach to curve	25.0	157 – 187	
154.724	155.724	Curve of Km.154	25.0	187	
155.724	156.274	Straight line	25.0	187	
156.274	159.998	Curve of Km.157	25.0	187	
159.998	161.050	Straight line	25.0	187	
161.050	162.250	Southern approach of the Canal	25.0	187 – 348	
0.000	1.450	Ismailia Basin	15.5	Port	
1.450	3.650	Basins for Coal and Fuel oil vessels	15.5	Port	
3.729	4.890	Junction (1)	15.5	Variable	Port Said West Branch
4.890	6.000	Junction (2)	15.5	Variable	
6.000	16.500	Straight line	15.5	201	
16.500	16.663	Straight line	15.0 – 19.0	201	
16.663	17.000	Junction (siding of Km.17.000)	19.0	Variable	
51.477	51.800	Straight line (siding of Km.51.500)	18.5	118	(at 17.5 depth)
51.800	52.054	Straight line	15.5	146	West Branch Ballah Loop
52.054	53.298	Curve of Km.53	15.5	Variable	
53.298	54.098	Approach to curve	15.5	160.64 – 146	
54.098	56.397	Straight line	15.5	146	
56.397	56.871	Approach to curve Km.57	15.5	Variable	West Branch Ballah Loop
56.871	58.797	Curve of Km.57	15.5	Variable	
58.797	59.269	Approach to curve	15.5	157.82 – 146	
59.269	59.900	Straight line	15.5	146	
59.900	60.308	Straight line (siding of Km.60.000)	18.5	118	(at 17.5 depth)
76.033	77.371	Curve (centre on West Bank)	15.5	102 – 173	West Branch Timsah Lake
77.371	77.672	Junction	15.5	173 – 226	
77.672	77.912	Junction	15.5	226 – 259	
77.912	79.800	Curve of Lake Timsah (Centre on East Bank)	15.5	259	
79.800	81.000	Straight line (siding of Km.80.000)	19.0	118	(at 18.0 depth)
95.000	95.500	Junction to West Bank (siding of Km.95.000)	18.0	170 – 159	(at 17.0 depth) Deversoir West Branch
95.500	100.200	Straight line	15.0	177	
100.200	101.050	Junction	14.5	177 – 411.43	
101.050	103.759	Straight line	14.5	411.43	Bitter Lake West Channel
103.759	103.957 W. 104.160 E.	Junction	14.5	411.43 – 232	
104.160	114.200	West Channel	14.5	232	
114.200	115.603	Junction	15.5	400 – 152	Kabrit Loop West Branch
115.603	122.100	Straight line	15.5	152	

* E : East kilometric Base line.

CHAPTER VII: BUOYAGE SYSTEM IN THE CANAL

Article 82: Buoyage

The navigable channel is marked by pairs of light buoys. On the East side green buoys showing Green lights. On the West side Red buoys showing Red lights.

In the straight parts, the distance between each pair is 1.5 km. in the North Section, and 1.0 km. in the South Section. In the curves the distances will be less than 1.0 km. All buoys in the Canal and its approaches are fitted with radar reflector.

Article 83: Position and Characteristics of Buoys in the Suez Canal.

See "Plan".

CHAPTER VIII: NATURAL CONDITIONS

Article 84: Tides and Currents in Suez Canal

The Suez Canal is divided in three main sectors according to the nature of tide in each.

The characteristics of each can be summarised as follows:

(A) The Northern Sector

This part is located between Port Said and the Great Bitter Lake.

(1) The height of tide at Port Said co-oscillates with the tides of the Mediterranean sea with 0.50 m. extreme tidal range (difference between highest and lowest levels) at Spring tides. This tidal range decreases gradually going South, to be about 0.20 m. at the entrance of Lake Timsah.

(2) In this sector, the peak tidal current may reach 1.0 knot (in case of no wind).

(3) Currents can be doubled by strong prevailing winds.

(4) Peak currents occur about 50 minutes after predicted HW and LW at Port Said.

(5) The duration and velocity of currents in this sector are greatly affected by the relative mean sea levels between the Mediterranean sea, the Bitter Lakes and the Red Sea as follows:

(a) *In Summer:* Between July and October, the mean sea level at Port Said is slightly higher than that of the Bitter Lakes. This difference (which reaches its maximum about 0.20 m. in September), due to the great evaporation at the Bitter Lakes, causes the *predominance of the Southward* current in duration and velocity.

(b) *In Winter:* Between December and May, the mean sea level at the Bitter Lakes is slightly higher than that of Port Said. This difference which reaches its maximum of about 0.30 m. in January, causes the *predominance of the Northward* current in duration and velocity.

(B) The Lakes (Timsah and Bitter Lakes)

(1) The Lakes along the Canal have an important role in dampening the effects of sudden meteorological changes.

(2) The Bitter Lakes with a surface of about 250 sq.km. reduce the vertical movement of the tide to a minimum between Km. 100 and Km. 130.

(3) The high Spring tidal range (MHWS) in the Great Bitter Lake may reach 0.25 m.

(4) The phase of the vertical tide in the Great Bitter Lake is about 3 hours later than that of Port Tewfik.

(5) The vertical tide in Lake Timsah is almost in phase with the tide in the Great Bitter Lake.

(C) The Southern Region

This part is located between Port of Suez and the Bitter Lakes.

(1) The height of tide at Suez co-oscillates with the tides of the Red Sea with extreme tidal range of about 1.90 m. at Spring tides. This range decreases gradually going North till the Bitter Lakes entrance where it is 0.15 m. at Genefa.

(2) The tidal volume of the Bitter Lakes is very large compared to the tidal volume of the Southern section. Consequently the currents are relatively strong and almost uniform between Port Tewfik and Genefa.

(3) In this region the Northward current is called *Flood* and the Southward current is called *Ebb*.

(4) Peak currents about 50 minutes after predicted HW and LW at Port Tewfik.

(5) At the entrance of the Canal, Km. 159, the *Flood* tide starts at an average of 3 hours after the LW at Suez. The *Ebb* tide 3 hours after HW in Suez.

(6) Generally in Summer, the duration of the *Ebb* exceeds the average of 6 hours. In Winter, the *Flood* is the predominant. The *Ebb* is prolonged by "Strong Northerly Winds". The *Flood* is prolonged by "Strong Southerly Winds".

(7) In this region the average peak current is about 1.5 knots. In Spring tides, current may reach 2.5 knots.

(8) The change of current occurs 5 to 10 minutes later on the bottom of the Canal, than on its surface.

(C) Current Buoys

In the Canal, there are current buoys indicating the direction of the current:

Head Current: Red and white horizontal bands or 1 reflector at night.
Stern Current: Black and white vertical stripes or 2 reflectors at night.

These buoys are laid in the following positions:

El Raswa	Km.	3.710 East
Port Fouad	Km.	2.750 East
Ras El Ech (E)	Km.	12.800 East
Ras El Ech (W)	Km.	14.304 East
Tineh	Km.	24.775 East
Cap	Km.	35.420 East
Kantara	Km.	45.130 East
Ballah (E & W)	Km.	54.770 East
Ferdan	Km.	64.894 East
Ismailia (E)	Km.	76.127 East
Toussom	Km.	86.780 East
Deversoir (E & W)	Km.	97.845 East
Kabrit (E & W)	Km.	120.827 East
Genefa	Km.	133.950 East
Chaloufa	Km.	146.125 East
Port Tewfik	Km.	160.300 East

Article 85: Weather Forecast

Six meteorological stations are installed on the Canal area. Information about local weather will be passed to vessels through Pilots, Ismailia Radio Station.

PART III – COMMUNICATIONS – SIGNALS.

CHAPTER IX: RADIO COMMUNICATIONS

Article 86: Wireless and Inmarsat Service

(1) General: Vessels must have their W/T and/or Radio Telephony apparatus in good working order before entering the Canal.

They must also be fitted with a VHF set easily operated from the bridge. It will have the working frequency range of the marine band (156 to 174 MHz), especially Channels 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 71, 73 and 74.

If not, they will rent one from the Suez Canal Authority for the transit.

(2) SCA Marine Communication Centre (SUQ): Suez Canal Wireless Station SUQ (Marine Communication Centre) has different communication facilities to contact vessels in the open sea or approaching areas and while transiting the Canal.

All these communication facilities are in compliance with the latest GMDSS Regulations:

I – Radio Telex:

(a) Frequency allocated to contact with vessels by Radio Telex from open sea to inform Suez Canal Authority of their expected time of arrival (ETA) to Port Said or Port Tewfik harbours.

ID No. 4820 / Hours of service: 24 hours.

Transmits	Receives	Mode	Watch hours
4250	6310 4205	FIB	H 24

Vessels are requested to send the following data 48 hours and 24 hours before arrival and when arriving in the approaches.

Vessel's name	Call sign	SCID	ETA	Draft	SCGT
....	......	....	...	.....	....

Cargo	Dangerous Cargo and Flash point
....	....

Origin	Destination	Agent's name
....	.....	......

(b) Frequencies allocated to contact vessels by Radio Telex while transiting Suez Canal or from waiting areas.

ID No. 4820 / Hours of service: 24 hours.

Transmits	Receives	Channel	Mode	Watch hours
1612	2147	211	FIB	H 24

R/T and broadcast facilities are available on the same frequencies.

II – W/T Morse:

W/T Morse will continue to contact vessels transiting the Canal and from waiting areas:

W/T (MF) Hours of service: 24 hours.

Call sign	Transmits	Receives	Channel	Mode	Watch hours
SUQ	520.5	469.5 and 454	109	A1A-A2A	H 24

III – Inmarsat Communication:

Vessels having on board Inmarsat station to contact Suez Canal Authority (SES) at Suez Canal Marine Communication Centre SUQ to send their ETA 48 hours and 24 hours before arrival and when arriving in the approaches.

The Suez Canal Authority (SES) identification numbers (ID) are as follows:

(a) Telex: 581-1622570.
(b) Voice: 871-1622570.
(c) Fax: 871-1622574.
Answerback: Suez.

IV – International Land Telex and Fax:

Suez Canal Marine Communication Centre SUQ has international Telex No. 63528 SUQ SC UN.

Also international Fax No. 002-064-393517.

V – Weather Reports:

SUQ broadcasts daily weather reports and navigational warnings (if exist) to vessels transiting the Canal or in the approaches.

Article 87: VHF – UHF Radiotelephony

(A) VHF Radiotelephony for vessels from sea

(1) *At Port Said*

(a) Port Management (listening): Call Sign: "Port Said 16" (HP-1) 156.800 MHz.

(b) Pilot Vessel and Radar Guidance:

(i) Outside the Harbour: Call Sign: "Port Said 12" (HP-2) 156.600 MHz.

(ii) Inside the Harbour: Call Sign: "Port Said 13" (HP-3) 156.650 MHz.

(c) Admeasurement Office: Call Sign: "Port Said 73" (M) 156.675 MHz.

(2) *At Port of Suez*

(a) Port Management (listening): Call Sign: "Suez 16" (HP-1) 156.800 MHz.

(b) Pilot Vessel and Radar Guidance:

(i) Outside the Harbour: Call Sign: "Suez 11" (HP-2) 156.550 MHz.

(ii) Inside the Harbour: Call Sign: "Suez 14" (HP-3) 156.700 MHz.

(c) Admeasurement Office: Call Sign: "Suez 74" (M) 156.675 MHz

(B) UHF/Radiotelephony in the Canal

(1) UHF voice communications system was built to cover all the Canal and its approaches to facilitate communication between pilots and the main Movement Office at Ismailia and the Port Management Offices.

The Canal pilot uses a special portable UHF personal transceiver which have the following frequencies.

Channel No.	Transmission Frequency MHz	Reception Frequency MHz	Function
1	415.350	412.850	V/Ls from North (SB)
2	415.600	413.100	V/Ls from South (NB)
3	415.850	413.350	Emergency (EM)
4	416.600	414.100	In Port of Suez Harbour HP (T)
5	416.350	413.850	In Port Said Harbour HP (S)
6	416.125	413.600	Emercency Critical (EMC) Critical V/Ls (out of convoy)

(2) Escort tugs-towing tugs will use special portable UHF transceiver sets which have the following frequencies.

(3) Channel 1 414.750 MHz.
Channel 2 414.775 MHz.
Channel 3 414.800 MHz.

CHAPTER X: THE SUEZ CANAL VESSEL TRAFFIC MANAGEMENT SYSTEM (SCVTMS)

Article 88: Overview

Suez Canal has upgraded its VTMS installed in 1978 to readjust some of the planning movement concepts to the new generation of vessels and technology. The new system will provide complete surveillance and tracking by radar coverage of vessels throughout the Canal and its approaches at Port Said and Port Tewfik harbours, tracking by Loran-C will be used as a back-up for the radar surveillance. The newly developed VTMS system will provide the following services:

(1) Automatic surveillance and tracking of vessels arriving at Suez Canal approaches (15 miles away) until anchorage in the waiting areas.

(2) Automatic determination of arrival times at ports.

(3) Automatic continuous tracking and monitoring of vessel's position, speed and separation distances for all vessels transiting the Suez Canal.

(4) Provide the Port Management Centres at Port Said and Port Tewfik, as well as Ismailia Main Traffic Management Centre, with sufficient instantaneous information about vessels transiting the Canal by means of displaying complete televised radar pictures of the whole Canal and very powerful information system.

(5) Provide automatic displaying system for Pilots at all signal stations (signal state board) which display his arrival time, meteorological data, and emergency information.

(6) Provide integral data base for vessel information, transit regulations, traffic flow transit pattern, Pilot assignment, vessel billing and navigation reports.

(7) Provide an efficient and quick means of communication with vessels arriving at ports and with Pilots on board of vessels transiting the Canal.

This system will add more safety values for vessels and cargo during passage through the Suez Canal. The newly adopted computerised ideal/real transit pattern will ensure optimum and safety transit passage for the benefit of her world users, Owners of vessels and the international trade.

Article 89: System Operation

(1) Transit Request: In order to assign a vessel in the system informatically, a transit request must be received from the vessel's Owners or Agent at one of the Port Management Offices.

Vessel Transit Request usually takes one of the following forms:

Booking in advance; usually 3 or 4 days prior to arrival at port.

Suez Canal Authority informed by telex or Agent that ship will arrive within 48 hours.

Suez Canal Authority advised that ship will arrive at any time.

A vessel that has previously transited the Canal will have a unique Suez Canal file number (Suez Canal Authority ID).

It is required that this ID must be provided when the request for transit is made.

If the vessel is not currently in the system information and data base, the Port Management Operator will create vessel particulars and automatically assign a unique Suez Canal Authority ID.

(2) Vessel Arrivals: A vessel approaching the Canal at either end is requested to call the Port Management Office on one of the frequencies listed in Article 88.

The vessel is requested to declare her position, her international call sign and Suez Canal Authority ID.

The vessel will be tracked automatically by the radar sub-system and displayed on the graphic display, so that the Port Management Operator will be able to infolink it with the information on the arrival list.

(3) Vessel Reaching the Anchorage Area: At both Port Said and Port Tewfik, anchorage areas are indicated on radar graphic displays.

Whenever a linked vessel reaches an anchorage area, the information will record the time the vessel reaches an anchorage area.

(4) Vessel Berth List: The Port Management Office will continue tracking the vessel until entering the assigned berth location and stop and vessel berth list is created in the information.

Each berth location will be indicated on the Port Management graphic displays, as well as Ismailia graphic displays.

The vessel berth list will be updated periodically to reflect any changes to the Port Operators.

(5) Creation of the Transit Pattern: The Main Management Centre at Ismailia will generate the optimal convoy pattern based on the vessels currently in the waiting areas or estimated to be in the waiting areas by the limit times.

The transit pattern will determine each convoy's start time and maximum time width.

(6) Convoy Creation: At Port Said and Port Tewfik, the Harbour Master will order the vessels in the convoy patterns that were generated by the Main Management Centre at Ismailia.

The official convoy list will only be comprised of vessels that have marked as eligible for transit (paid the transit fees, Performance Certificate, etc.).

(7) Assign Pilot to Vessels: The Port Management Office will assign the Roads and Canal Transit Pilots. Pilot list and pilot convoy list will be printed.

(8) Pilot Boarding Order: After the official convoy list is created, the convoy list report will be printed. After Pilot(s) have been assigned, boarding order reports will be printed.

These reports will be given to each Transit and Roads Pilot as part of their pilot boarding orders.

(9) Vessels enter the Canal: As vessels leave their berths at the port, the Port Management Office will follow and track them until entering the Canal.

As the vessel enters into the Canal, their identifiers will be automatically updated to add their ID and relative position within the convoy against their displayed picture on the display at Port Office and Main Management Office at Ismailia.

(10) Real Transit Pattern: As the convoy progresses along the Canal, the real time transit pattern is displayed and plotted.

The real time transit pattern screen will provide the capability of viewing real time information as X, Y positions, speed, kilometer positions and off-axis for each vessel, as well as the meteorological data of all signal stations, including the wind speed and direction, visibility, current speed and direction, and height of the tide.

(11) Vessel Passes Check Points: Check points are the inlets and outlets of by-passes, siding, each signal station, the Canal start and the Canal end.

The order of vessels within the convoy is re-checked at each check points. If the vessel has changed position within the convoy, this is automaticallly recorded in the transit history.

The information data base is updated to reflect the convoy and new convoy position displayed against the target.

(12) Information Displayed on the Signal Station Board: As each vessel passes a signal station, the information will then update the signal station boards to provide convoy progress, the following information (Table 1 to 5) for a vessel as it passes the station.

Information of vessels as vessel name, convoy position, Suez Canal Authority ID, call sign, speed, location and meteorological data will be displayed to the signal station operators on signal station PCs.

(13) Vessel Leaves the Canal: When vessels get out of range of radar, the information will close the vessel transit and is saved as a closed transit for historical reporting purposes.

(14) In case of emergency or radar failure, the Canal Pilot will board the vessel with Loran-C; it will be installed on board the vessel by Suez Canal Authority personnel.

By initialising command from the Canal Main Management Office at Ismailia, tracking by Loran-C chain is executed.

In some cases, tracking by both radar and Loran-C chain will be executed to monitor the progress of vessel during their transit through the Canal, in order to assure safety transit and increase Canal efficiency.

Article 90 – New Information for Vessels Transiting the Canal

(1) Each vessel has special Suez Canal Authority File number (SCA ID) in the new information system in Suez Canal.

Suez Canal Authority distributes free of charge special SCA ID card to be kept in the radio room, vessel must report SCA FILE NR on all arrival messages for transits or port calls.

Any change in vessel's characteristics should be reported to Suez Canal Authority officially, to be filled in SCA ID.

(2) Meteorological data will be displayed on signal state boards (2nd line) to inform vessels of the prevailing weather conditions, as they pass the signal station.

Also emergency or navigation instructions from the Main Management Office at Ismailia can be displayed on the same line alternatively.

(3) The CORT should be mounted on either of the two wings on entrance of the Canal, the area around should be clear of obstructions within 10 ft. radius.

A trained Suez Canal Authority technician will mount the CORT in place and operate before disembarking.

The vessel is asked to install electrical outlet 110/220 Volts AC (Hubbel socket type 2356 flanged receptacle nylon casing Hubbel catalogue No. 35-R-2B 37), on the two wings to supply the CORT with electrical power.

Before vessel exits the Canal at either end of the Canal, the CORT will be dismantled by a Suez Canal Authority technician.

CHAPTER XI: SIGNALS

Article 91: Generalities

(1) All signals used in Canal Waters are shown in the "Plan Section".

(2) All flags and pendants to be hoisted by vessels, as shown hereafter, should be those in the International Code of Signals.

(3) Night signals shall be hoisted where best seen by other vessels.

Article 92: Sound Signals

(A) Normal Manoeuvre

(1) The International Regulation for Preventing Collision at Sea Signals.

"One short blast": I am altering my course to starboard.
"Two short blasts": I am altering my course to port.
"Three short blasts": I am operating astern propulsion.

(2) The signal 5 or 6 short blasts repeated several times at short intervals to say: "I am reducing speed and may have to stop or make fast".

At night besides the blasts, four to five long flashes with the Aldis lamp or signal mast lamp.

(3) The signal one prolonged blast to attract attention.

The expression "short blast" means a blast of about 1 second duration.

The expression "prolonged blast" means a blast of 4 to 6 seconds duration.

CHAPTER VII: BUOYAGE SYSTEM IN THE CANAL

Article 82: Buoyage

The navigable channel is marked by pairs of light buoys. On the East side green buoys showing Green lights. On the West side Red buoys showing Red lights.

In the straight parts, the distance between each pair is 1.5 km. in the North Section, and 1.0 km. in the South Section. In the curves the distances will be less than 1.0 km. All buoys in the Canal and its approaches are fitted with radar reflector.

Article 83: Position and Characteristics of Buoys in the Suez Canal.

See "Plan".

CHAPTER VIII: NATURAL CONDITIONS

Article 84: Tides and Currents in Suez Canal

The Suez Canal is divided in three main sectors according to the nature of tide in each.

The characteristics of each can be summarised as follows:

(A) The Northern Sector

This part is located between Port Said and the Great Bitter Lake.

(1) The height of tide at Port Said co-oscillates with the tides of the Mediterranean sea with 0.50 m. extreme tidal range (difference between highest and lowest levels) at Spring tides. This tidal range decreases gradually going South, to be about 0.20 m. at the entrance of Lake Timsah.

(2) In this sector, the peak tidal current may reach 1.0 knot (in case of no wind).

(3) Currents can be doubled by strong prevailing winds.

(4) Peak currents occur about 50 minutes after predicted HW and LW at Port Said.

(5) The duration and velocity of currents in this sector are greatly affected by the relative mean sea levels between the Mediterranean sea, the Bitter Lakes and the Red Sea as follows:

(a) *In Summer:* Between July and October, the mean sea level at Port Said is slightly higher than that of the Bitter Lakes. This difference (which reaches its maximum about 0.20 m. in September), due to the great evaporation at the Bitter Lakes, causes the *predominance of the Southward* current in duration and velocity.

(b) *In Winter:* Between December and May, the mean sea level at the Bitter Lakes is slightly higher than that of Port Said. This difference which reaches its maximum of about 0.30 m. in January, causes the *predominance of the Northward* current in duration and velocity.

(B) The Lakes (Timsah and Bitter Lakes)

(1) The Lakes along the Canal have an important role in dampening the effects of sudden meteorological changes.

(2) The Bitter Lakes with a surface of about 250 sq.km. reduce the vertical movement of the tide to a minimum between Km. 100 and Km. 130.

(3) The high Spring tidal range (MHWS) in the Great Bitter Lake may reach 0.25 m.

(4) The phase of the vertical tide in the Great Bitter Lake is about 3 hours later than that of Port Tewfik.

(5) The vertical tide in Lake Timsah is almost in phase with the tide in the Great Bitter Lake.

(C) The Southern Region

This part is located between Port of Suez and the Bitter Lakes.

(1) The height of tide at Suez co-oscillates with the tides of the Red Sea with extreme tidal range of about 1.90 m. at Spring tides. This range decreases gradually going North till the Bitter Lakes entrance where it is 0.15 m. at Genefa.

(2) The tidal volume of the Bitter Lakes is very large compared to the tidal volume of the Southern section. Consequently the currents are relatively strong and almost uniform between Port Tewfik and Genefa.

(3) In this region the Northward current is called *Flood* and the Southward current is called *Ebb*.

(4) Peak currents about 50 minutes after predicted HW and LW at Port Tewfik.

(5) At the entrance of the Canal, Km. 159, the *Flood* tide starts at an average of 3 hours after the LW at Suez. The *Ebb* tide 3 hours after HW in Suez.

(6) Generally in Summer, the duration of the *Ebb* exceeds the average of 6 hours. In Winter, the *Flood* is the predominant. The *Ebb* is prolonged by "Strong Northerly Winds". The *Flood* is prolonged by "Strong Southerly Winds".

(7) In this region the average peak current is about 1.5 knots. In Spring tides, current may reach 2.5 knots.

(8) The change of current occurs 5 to 10 minutes later on the bottom of the Canal, than on its surface.

(C) Current Buoys

In the Canal, there are current buoys indicating the direction of the current:

Head Current: Red and white horizontal bands or 1 reflector at night.

Stern Current: Black and white vertical stripes or 2 reflectors at night.

These buoys are laid in the following positions:

El Raswa	Km.	3.710 East
Port Fouad	Km.	2.750 East
Ras El Ech (E)	Km.	12.800 East
Ras El Ech (W)	Km.	14.304 East
Tineh	Km.	24.775 East
Cap	Km.	35.420 East
Kantara	Km.	45.130 East
Ballah (E & W)	Km.	54.770 East
Ferdan	Km.	64.894 East
Ismailia (E)	Km.	76.127 East
Toussom	Km.	86.780 East
Deversoir (E & W)	Km.	97.845 East
Kabrit (E & W)	Km.	120.827 East
Genefa	Km.	133.950 East
Chaloufa	Km.	146.125 East
Port Tewfik	Km.	160.300 East

Article 85: Weather Forecast

Six meteorological stations are installed on the Canal area. Information about local weather will be passed to vessels through Pilots, Ismailia Radio Station.

PART III – COMMUNICATIONS – SIGNALS.

CHAPTER IX: RADIO COMMUNICATIONS

Article 86: Wireless and Inmarsat Service

(1) General: Vessels must have their W/T and/or Radio Telephony apparatus in good working order before entering the Canal.

They must also be fitted with a VHF set easily operated from the bridge. It will have the working frequency range of the marine band (156 to 174 MHz), especially Channels 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 71, 73 and 74.

If not, they will rent one from the Suez Canal Authority for the transit.

(2) SCA Marine Communication Centre (SUQ): Suez Canal Wireless Station SUQ (Marine Communication Centre) has different communication facilities to contact vessels in the open sea or approaching areas and while transiting the Canal.

All these communication facilities are in compliance with the latest GMDSS Regulations:

I – Radio Telex:

(a) Frequency allocated to contact with vessels by Radio Telex from open sea to inform Suez Canal Authority of their expected time of arrival (ETA) to Port Said or Port Tewfik harbours.

ID No. 4820 / Hours of service: 24 hours.

Transmits	Receives	Mode	Watch hours
4250	6310 4205	FIB	H 24

Vessels are requested to send the following data 48 hours and 24 hours before arrival and when arriving in the approaches.

Vessel's name Call sign SCID ETA Draft SCGT

....

Cargo Dangerous Cargo and Flash point

....

Origin Destination Agent's name

....

(b) Frequencies allocated to contact vessels by Radio Telex while transiting Suez Canal or from waiting areas.

ID No. 4820 / Hours of service: 24 hours.

Transmits	Receives	Channel	Mode	Watch hours
1612	2147	211	FIB	H 24

R/T and broadcast facilities are available on the same frequencies.

II – W/T Morse:

W/T Morse will continue to contact vessels transiting the Canal and from waiting areas:

W/T (MF) Hours of service: 24 hours.

Call sign	Transmits	Receives	Channel	Mode	Watch hours
SUQ	520.5	469.5 and 454	109	A1A-A2A	H 24

III – Inmarsat Communication:

Vessels having on board Inmarsat station to contact Suez Canal Authority (SES) at Suez Canal Marine Communication Centre SUQ to send their ETA 48 hours and 24 hours before arrival and when arriving in the approaches.

The Suez Canal Authority (SES) identification numbers (ID) are as follows:

(a) Telex: 581-1622570.

(b) Voice: 871-1622570.

(c) Fax: 871-1622574.

Answerback: Suez.

IV – International Land Telex and Fax:

Suez Canal Marine Communication Centre SUQ has international Telex No. 63528 SUQ SC UN.

Also international Fax No. 002-064-393517.

V – Weather Reports:

SUQ broadcasts daily weather reports and navigational warnings (if exist) to vessels transiting the Canal or in the approaches.

Article 87: VHF – UHF Radiotelephony

(A) VHF Radiotelephony for vessels from sea

(1) *At Port Said*

(a) Port Management (listening): Call Sign: "Port Said 16" (HP-1) 156.800 MHz.

(b) Pilot Vessel and Radar Guidance:

(i) Outside the Harbour: Call Sign: "Port Said 12" (HP-2) 156.600 MHz.

(ii) Inside the Harbour: Call Sign: "Port Said 13" (HP-3) 156.650 MHz.

(c) Admeasurement Office: Call Sign: "Port Said 73" (M) 156.675 MHz.

(2) *At Port of Suez*

(a) Port Management (listening): Call Sign: "Suez 16" (HP-1) 156.800 MHz.

(b) Pilot Vessel and Radar Guidance:

(i) Outside the Harbour: Call Sign: "Suez 11" (HP-2) 156.550 MHz.

(ii) Inside the Harbour: Call Sign: "Suez 14" (HP-3) 156.700 MHz.

(c) Admeasurement Office: Call Sign: "Suez 74" (M) 156.675 MHz.

(B) UHF/Radiotelephony in the Canal

(1) UHF voice communications system was built to cover all the Canal and its approaches to facilitate communication between pilots and the main Movement Office at Ismailia and the Port Management Offices.

The Canal pilot uses a special portable UHF personal transceiver which have the following frequencies.

Channel No.	*Transmission Frequency MHz*	*Reception Frequency MHz*	*Function*
1	415.350	412.850	V/Ls from North (SB)
2	415.600	413.100	V/Ls from South (NB)
3	415.850	413.350	Emergency (EM)
4	416.600	414.100	In Port of Suez Harbour HP (T)
5	416.350	413.850	In Port Said Harbour HP (S)
6	416.125	413.600	Emergency Critical (EMC) Critical V/Ls (out of convoy)

(2) Escort tugs-towing tugs will use special portable UHF transceiver sets which have the following frequencies.

(3) Channel 1 414.750 MHz.
Channel 2 414.775 MHz.
Channel 3 414.800 MHz.

CHAPTER X: THE SUEZ CANAL VESSEL TRAFFIC MANAGEMENT SYSTEM (SCVTMS)

Article 88: Overview

Suez Canal has upgraded its VTMS installed in 1978 to readjust some of the planning movement concepts to the new generation of vessels and technology. The new system will provide complete surveillance and tracking by radar coverage of vessels throughout the Canal and its approaches at Port Said and Port Tewfik harbours, tracking by Loran-C will be used as a back-up for the radar surveillance. The newly developed VTMS system will provide the following services:

(1) Automatic surveillance and tracking of vessels arriving at Suez Canal approaches (15 miles away) until anchorage in the waiting areas.

(2) Automatic determination of arrival times at ports.

(3) Automatic continuous tracking and monitoring of vessel's position, speed and separation distances for all vessels transiting the Suez Canal.

(4) Provide the Port Management Centres at Port Said and Port Tewfik, as well as Ismailia Main Traffic Management Centre, with sufficient instantaneous information about vessels transiting the Canal by means of displaying complete televised radar pictures of the whole Canal and very powerful information system.

(5) Provide automatic displaying system for Pilots at all signal stations (signal state board) which display his arrival time, meteorological data, and emergency information.

(6) Provide integral data base for vessel information, transit regulations, traffic flow transit pattern, Pilot assignment, vessel billing and navigation reports.

(7) Provide an efficient and quick means of communication with vessels arriving at ports and with Pilots on board of vessels transiting the Canal.

This system will add more safety values for vessels and cargo during passage through the Suez Canal. The newly adopted computerised ideal/real transit pattern will ensure optimum and safety transit passage for the benefit of her world users, Owners of vessels and the international trade.

Article 89: System Operation

(1) Transit Request: In order to assign a vessel in the system informatically, a transit request must be received from the vessel's Owners or Agent at one of the Port Management Offices.

Vessel Transit Request usually takes one of the following forms:

Booking in advance; usually 3 or 4 days prior to arrival at port.

Suez Canal Authority informed by telex or Agent that ship will arrive within 48 hours.

Suez Canal Authority advised that ship will arrive at any time.

A vessel that has previously transited the Canal will have a unique Suez Canal file number (Suez Canal Authority ID).

It is required that this ID must be provided when the request for transit is made.

If the vessel is not currently in the system information and data base, the Port Management Operator will create vessel particulars and automatically assign a unique Suez Canal Authority ID.

(2) Vessel Arrivals: A vessel approaching the Canal at either end is requested to call the Port Management Office on one of the frequencies listed in Article 88.

The vessel is requested to declare her position, her international call sign and Suez Canal Authority ID.

The vessel will be tracked automatically by the radar sub-system and displayed on the graphic display, so that the Port Management Operator will be able to infolink it with the information on the arrival list.

(3) Vessel Reaching the Anchorage Area: At both Port Said and Port Tewfik, anchorage areas are indicated on radar graphic displays.

Whenever a linked vessel reaches an anchorage area, the information will record the time the vessel reaches an anchorage area.

(4) Vessel Berth List: The Port Management Office will continue tracking the vessel until entering the assigned berth location and stop and vessel berth list is created in the information.

Each berth location will be indicated on the Port Management graphic displays, as well as Ismailia graphic displays.

The vessel berth list will be updated periodically to reflect any changes to the Port Operators.

(5) Creation of the Transit Pattern: The Main Management Centre at Ismailia will generate the optimal convoy pattern based on the vessels currently in the waiting areas or estimated to be in the waiting areas by the limit times.

The transit pattern will determine each convoy's start time and maximum time width.

(6) Convoy Creation: At Port Said and Port Tewfik, the Harbour Master will order the vessels in the convoy patterns that were generated by the Main Management Centre at Ismailia.

The official convoy list will only be comprised of vessels that have marked as eligible for transit (paid the transit fees, Performance Certificate, etc.).

(7) Assign Pilot to Vessels: The Port Management Office will assign the Roads and Canal Transit Pilots. Pilot list and pilot convoy list will be printed.

(8) Pilot Boarding Order: After the official convoy list is created, the convoy list report will be printed. After Pilot(s) have been assigned, boarding order reports will be printed.

These reports will be given to each Transit and Roads Pilot as part of their pilot boarding orders.

(9) Vessels enter the Canal: As vessels leave their berths at the port, the Port Management Office will follow and track them until entering the Canal.

As the vessel enters into the Canal, their identifiers will be automatically updated to add their ID and relative position within the convoy against their displayed picture on the display at Port Office and Main Management Office at Ismailia.

(10) Real Transit Pattern: As the convoy progresses along the Canal, the real time transit pattern is displayed and plotted.

The real time transit pattern screen will provide the capability of viewing real time information as X, Y positions, speed, kilometer positions and off-axis for each vessel, as well as the meteorological data of all signal stations, including the wind speed and direction, visibility, current speed and direction, and height of the tide.

(11) Vessel Passes Check Points: Check points are the inlets and outlets of by-passes, siding, each signal station, the Canal start and the Canal end.

The order of vessels within the convoy is re-checked at each check points. If the vessel has changed position within the convoy, this is automatically recorded in the transit history.

The information data base is updated to reflect the convoy and new convoy position displayed against the target.

(12) Information Displayed on the Signal Station Board: As each vessel passes a signal station, the information will then update the signal station boards to provide convoy progress, the following information (Table 1 to 5) for a vessel as it passes the station.

Information of vessels as vessel name, convoy position, Suez Canal Authority ID, call sign, speed, location and meteorological data will be displayed to the signal station operators on signal station PCs.

(13) Vessel Leaves the Canal: When vessels get out of range of radar, the information will close the vessel transit and is saved as a closed transit for historical reporting purposes.

(14) In case of emergency or radar failure, the Canal Pilot will board the vessel with Loran-C; it will be installed on board the vessel by Suez Canal Authority personnel.

By initialising command from the Canal Main Management Office at Ismailia, tracking by Loran-C chain is executed.

In some cases, tracking by both radar and Loran-C chain will be executed to monitor the progress of vessel during their transit through the Canal, in order to assure safety transit and increase Canal efficiency.

Article 90 – New Information for Vessels Transiting the Canal

(1) Each vessel has special Suez Canal Authority File number (SCA ID) in the new information system in Suez Canal.

Suez Canal Authority distributes free of charge special SCA ID card to be kept in the radio room, vessel must report SCA FILE NR on all arrival messages for transits or port calls.

Any change in vessel's characteristics should be reported to Suez Canal Authority officially, to be filled in SCA ID.

(2) Meteorological data will be displayed on signal state boards (2nd line) to inform vessels of the prevailing weather conditions, as they pass the signal station.

Also emergency or navigation instructions from the Main Management Office at Ismailia can be displayed on the same line alternatively.

(3) The CORT should be mounted on either of the two wings on entrance of the Canal, the area around should be clear of obstructions within 10 ft. radius.

A trained Suez Canal Authority technician will mount the CORT in place and operate before disembarking.

The vessel is asked to install electrical outlet 110/220 Volts AC (Hubbel socket type 2356 flanged receptacle nylon casing Hubbel catalogue No. 35-R-2B 37), on the two wings to supply the CORT with electrical power.

Before vessel exits the Canal at either end of the Canal, the CORT will be dismantled by a Suez Canal Authority technician.

CHAPTER XI: SIGNALS

Article 91: Generalities

(1) All signals used in Canal Waters are shown in the "Plan Section".

(2) All flags and pendants to be hoisted by vessels, as shown hereafter, should be those in the International Code of Signals.

(3) Night signals shall be hoisted where best seen by other vessels.

Article 92: Sound Signals

(A) Normal Manoeuvre

(1) The International Regulation for Preventing Collision at Sea Signals.

"One short blast": I am altering my course to starboard.

"Two short blasts": I am altering my course to port.

"Three short blasts": I am operating astern propulsion.

(2) The signal 5 or 6 short blasts repeated several times at short intervals to say: "I am reducing speed and may have to stop or make fast".

At night besides the blasts, four to five long flashes with the Aldis lamp or signal mast lamp.

(3) The signal one prolonged blast to attract attention.

The expression "short blast" means a blast of about 1 second duration.

The expression "prolonged blast" means a blast of 4 to 6 seconds duration.

CHAPTER VII: BUOYAGE SYSTEM IN THE CANAL

Article 82: Buoyage

The navigable channel is marked by pairs of light buoys. On the East side green buoys showing Green lights. On the West side Red buoys showing Red lights.

In the straight parts, the distance between each pair is 1.5 km. in the North Section, and 1.0 km. in the South Section. In the curves the distances will be less than 1.0 km. All buoys in the Canal and its approaches are fitted with radar reflector.

Article 83: Position and Characteristics of Buoys in the Suez Canal.

See "Plan".

CHAPTER VIII: NATURAL CONDITIONS

Article 84: Tides and Currents in Suez Canal

The Suez Canal is divided in three main sectors according to the nature of tide in each.

The characteristics of each can be summarised as follows:

(A) The Northern Sector

This part is located between Port Said and the Great Bitter Lake.

(1) The height of tide at Port Said co-oscillates with the tides of the Mediterranean sea with 0.50 m. extreme tidal range (difference between highest and lowest levels) at Spring tides. This tidal range decreases gradually going South, to be about 0.20 m. at the entrance of Lake Timsah.

(2) In this sector, the peak tidal current may reach 1.0 knot (in case of no wind).

(3) Currents can be doubled by strong prevailing winds.

(4) Peak currents occur about 50 minutes after predicted HW and LW at Port Said.

(5) The duration and velocity of currents in this sector are greatly affected by the relative mean sea levels between the Mediterranean sea, the Bitter Lakes and the Red Sea as follows:

(a) *In Summer:* Between July and October, the mean sea level at Port Said is slightly higher than that of the Bitter Lakes. This difference (which reaches its maximum about 0.20 m. in September), due to the great evaporation at the Bitter Lakes, causes the *predominance of the Southward* current in duration and velocity.

(b) *In Winter:* Between December and May, the mean sea level at the Bitter Lakes is slightly higher than that of Port Said. This difference which reaches its maximum of about 0.30 m. in January, causes the *predominance of the Northward* current in duration and velocity.

(B) The Lakes (Timsah and Bitter Lakes)

(1) The Lakes along the Canal have an important role in dampening the effects of sudden meteorological changes.

(2) The Bitter Lakes with a surface of about 250 sq.km. reduce the vertical movement of the tide to a minimum between Km. 100 and Km. 130.

(3) The high Spring tidal range (MHWS) in the Great Bitter Lake may reach 0.25 m.

(4) The phase of the vertical tide in the Great Bitter Lake is about 3 hours later than that of Port Tewfik.

(5) The vertical tide in Lake Timsah is almost in phase with the tide in the Great Bitter Lake.

(C) The Southern Region

This part is located between Port of Suez and the Bitter Lakes.

(1) The height of tide at Suez co-oscillates with the tides of the Red Sea with extreme tidal range of about 1.90 m. at Spring tides. This range decreases gradually going North till the Bitter Lakes entrance where it is 0.15 m. at Genefa.

(2) The tidal volume of the Bitter Lakes is very large compared to the tidal volume of the Southern section. Consequently the currents are relatively strong and almost uniform between Port Tewfik and Genefa.

(3) In this region the Northward current is called *Flood* and the Southward current is called *Ebb*.

(4) Peak currents about 50 minutes after predicted HW and LW at Port Tewfik.

(5) At the entrance of the Canal, Km. 159, the *Flood* tide starts at an average of 3 hours after the LW at Suez. The *Ebb* tide 3 hours after HW in Suez.

(6) Generally in Summer, the duration of the *Ebb* exceeds the average of 6 hours. In Winter, the *Flood* is the predominant. The *Ebb* is prolonged by "Strong Northerly Winds". The *Flood* is prolonged by "Strong Southerly Winds".

(7) In this region the average peak current is about 1.5 knots. In Spring tides, current may reach 2.5 knots.

(8) The change of current occurs 5 to 10 minutes later on the bottom of the Canal, than on its surface.

(C) Current Buoys

In the Canal, there are current buoys indicating the direction of the current:

Head Current: Red and white horizontal bands or 1 reflector at night.

Stern Current: Black and white vertical stripes or 2 reflectors at night.

These buoys are laid in the following positions:

El Raswa	Km.	3.710	East
Port Fouad	Km.	2.750	East
Ras El Ech (E)	Km.	12.800	East
Ras El Ech (W)	Km.	14.304	East
Tineh	Km.	24.775	East
Cap	Km.	35.420	East
Kantara	Km.	45.130	East
Ballah (E & W)	Km.	54.770	East
Ferdan	Km.	64.894	East
Ismailia (E)	Km.	76.127	East
Toussom	Km.	86.780	East
Deversoir (E & W)	Km.	97.845	East
Kabrit (E & W)	Km.	120.827	East
Genefa	Km.	133.950	East
Chaloufa	Km.	146.125	East
Port Tewfik	Km.	160.300	East

Article 85: Weather Forecast

Six meteorological stations are installed on the Canal area. Information about local weather will be passed to vessels through Pilots, Ismailia Radio Station.

PART III – COMMUNICATIONS – SIGNALS.

CHAPTER IX: RADIO COMMUNICATIONS

Article 86: Wireless and Inmarsat Service

(1) General: Vessels must have their W/T and/or Radio Telephony apparatus in good working order before entering the Canal.

They must also be fitted with a VHF set easily operated from the bridge. It will have the working frequency range of the marine band (156 to 174 MHz), especially Channels 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 71, 73 and 74.

If not, they will rent one from the Suez Canal Authority for the transit.

(2) SCA Marine Communication Centre (SUQ): Suez Canal Wireless Station SUQ (Marine Communication Centre) has different communication facilities to contact vessels in the open sea or approaching areas and while transiting the Canal.

All these communication facilities are in compliance with the latest GMDSS Regulations:

I – Radio Telex:

(a) Frequency allocated to contact with vessels by Radio Telex from open sea to inform Suez Canal Authority of their expected time of arrival (ETA) to Port Said or Port Tewfik harbours.

ID No. 4820 / Hours of service: 24 hours.

Transmits	Receives	Mode	Watch hours
4250	6310 4205	FIB	H 24

Vessels are requested to send the following data 48 hours and 24 hours before arrival and when arriving in the approaches.

Vessel's name	Call sign	SCID	ETA	Draft	SCGT
....	......	....	....	.....	....

Cargo	Dangerous Cargo and Flash point
....	....

Origin	Destination	Agent's name
....	.....	......

(b) Frequencies allocated to contact vessels by Radio Telex while transiting Suez Canal or from waiting areas.

ID No. 4820 / Hours of service: 24 hours.

Transmits	Receives	Channel	Mode	Watch hours
1612	2147	211	FIB	H 24

R/T and broadcast facilities are available on the same frequencies.

II – W/T Morse:

W/T Morse will continue to contact vessels transiting the Canal and from waiting areas:

W/T (MF) Hours of service: 24 hours.

Call sign	Transmits	Receives	Channel	Mode	Watch hours
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Vessels having on board Inmarsat station to contact Suez Canal Authority (SES) at Suez Canal Marine Communication Centre SUQ to send their ETA 48 hours and 24 hours before arrival and when arriving in the approaches.

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Answerback: Suez.

IV – International Land Telex and Fax:

Suez Canal Marine Communication Centre SUQ has international Telex No. 63528 SUQ SC UN.

Also international Fax No. 002-064-393517.

V – Weather Reports:

SUQ broadcasts daily weather reports and navigational warnings (if exist) to vessels transiting the Canal or in the approaches.

Article 87: VHF – UHF Radiotelephony

(A) VHF Radiotelephony for vessels from sea

(1) *At Port Said*

(a) Port Management (listening): Call Sign: "Port Said 16" (HP-1) 156.800 MHz.

(b) Pilot Vessel and Radar Guidance:

(i) Outside the Harbour: Call Sign: "Port Said 12" (HP-2) 156.600 MHz.

(ii) Inside the Harbour: Call Sign: "Port Said 13" (HP-3) 156.650 MHz.

(c) Admeasurement Office: Call Sign: "Port Said 73" (M) 156.675 MHz.

(2) *At Port of Suez*

(a) Port Management (listening): Call Sign: "Suez 16" (HP-1) 156.800 MHz.

(b) Pilot Vessel and Radar Guidance:

(i) Outside the Harbour: Call Sign: "Suez 11" (HP-2) 156.550 MHz.

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The Canal pilot uses a special portable UHF personal transceiver which have the following frequencies.

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3	415.850	413.350	Emergency (EM)
4	416.600	414.100	In Port of Suez Harbour HP (T)
5	416.350	413.850	In Port Said Harbour HP (S)
6	416.125	413.600	Emergency Critical (EMC) Critical V/Ls (out of convoy)

(2) Escort tugs-towing tugs will use special portable UHF transceiver sets which have the following frequencies.

(3) Channel 1 414.750 MHz.
Channel 2 414.775 MHz.
Channel 3 414.800 MHz.

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(5) Provide automatic displaying system for Pilots at all signal stations (signal state board) which display his arrival time, meteorological data, and emergency information.

(6) Provide integral data base for vessel information, transit regulations, traffic flow transit pattern, Pilot assignment, vessel billing and navigation reports.

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Booking in advance; usually 3 or 4 days prior to arrival at port.

Suez Canal Authority informed by telex or Agent that ship will arrive within 48 hours.

Suez Canal Authority advised that ship will arrive at any time.

A vessel that has previously transited the Canal will have a unique Suez Canal file number (Suez Canal Authority ID).

It is required that this ID must be provided when the request for transit is made.

If the vessel is not currently in the system information and data base, the Port Management Operator will create vessel particulars and automatically assign a unique Suez Canal Authority ID.

(2) Vessel Arrivals: A vessel approaching the Canal at either end is requested to call the Port Management Office on one of the frequencies listed in Article 88.

The vessel is requested to declare her position, her international call sign and Suez Canal Authority ID.

The vessel will be tracked automatically by the radar sub-system and displayed on the graphic display, so that the Port Management Operator will be able to infolink it with the information on the arrival list.

(3) Vessel Reaching the Anchorage Area: At both Port Said and Port Tewfik, anchorage areas are indicated on radar graphic displays.

Whenever a linked vessel reaches an anchorage area, the information will record the time the vessel reaches an anchorage area.

(4) Vessel Berth List: The Port Management Office will continue tracking the vessel until entering the assigned berth location and stop and vessel berth list is created in the information.

Each berth location will be indicated on the Port Management graphic displays, as well as Ismailia graphic displays.

The vessel berth list will be updated periodically to reflect any changes to the Port Operators.

(5) Creation of the Transit Pattern: The Main Management Centre at Ismailia will generate the optimal convoy pattern based on the vessels currently in the waiting areas or estimated to be in the waiting areas by the limit times.

The transit pattern will determine each convoy's start time and maximum time width.

(6) Convoy Creation: At Port Said and Port Tewfik, the Harbour Master will order the vessels in the convoy patterns that were generated by the Main Management Centre at Ismailia.

The official convoy list will only be comprised of vessels that have marked as eligible for transit (paid the transit fees, Performance Certificate, etc.).

(7) Assign Pilot to Vessels: The Port Management Office will assign the Roads and Canal Transit Pilots. Pilot list and pilot convoy list will be printed.

(8) Pilot Boarding Order: After the official convoy list is created, the convoy list report will be printed. After Pilot(s) have been assigned, boarding order reports will be printed.

These reports will be given to each Transit and Roads Pilot as part of their pilot boarding orders.

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As the vessel enters into the Canal, their identifiers will be automatically updated to add their ID and relative position within the convoy against their displayed picture on the display at Port Office and Main Management Office at Ismailia.

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The real time transit pattern screen will provide the capability of viewing real time information as X, Y positions, speed, kilometer positions and off-axis for each vessel, as well as the meteorological data of all signal stations, including the wind speed and direction, visibility, current speed and direction, and height of the tide.

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"One short blast": I am altering my course to starboard.

"Two short blasts": I am altering my course to port.

"Three short blasts": I am operating astern propulsion.

(2) The signal 5 or 6 short blasts repeated several times at short intervals to say: "I am reducing speed and may have to stop or make fast".

At night besides the blasts, four to five long flashes with the Aldis lamp or signal mast lamp.

(3) The signal one prolonged blast to attract attention.

The expression "short blast" means a blast of about 1 second duration.

The expression "prolonged blast" means a blast of 4 to 6 seconds duration.

CHAPTER VII: BUOYAGE SYSTEM IN THE CANAL

Article 82: Buoyage

The navigable channel is marked by pairs of light buoys. On the East side green buoys showing Green lights. On the West side Red buoys showing Red lights.

In the straight parts, the distance between each pair is 1.5 km. in the North Section, and 1.0 km. in the South Section. In the curves the distances will be less than 1.0 km. All buoys in the Canal and its approaches are fitted with radar reflector.

Article 83: Position and Characteristics of Buoys in the Suez Canal.

See "Plan".

CHAPTER VIII: NATURAL CONDITIONS

Article 84: Tides and Currents in Suez Canal

The Suez Canal is divided in three main sectors according to the nature of tide in each.

The characteristics of each can be summarised as follows:

(A) The Northern Sector

This part is located between Port Said and the Great Bitter Lake.

(1) The height of tide at Port Said co-oscillates with the tides of the Mediterranean sea with 0.50 m. extreme tidal range (difference between highest and lowest levels) at Spring tides. This tidal range decreases gradually going South, to be about 0.20 m. at the entrance of Lake Timsah.

(2) In this sector, the peak tidal current may reach 1.0 knot (in case of no wind).

(3) Currents can be doubled by strong prevailing winds.

(4) Peak currents occur about 50 minutes after predicted HW and LW at Port Said.

(5) The duration and velocity of currents in this sector are greatly affected by the relative mean sea levels between the Mediterranean sea, the Bitter Lakes and the Red Sea as follows:

(a) *In Summer:* Between July and October, the mean sea level at Port Said is slightly higher than that of the Bitter Lakes. This difference (which reaches its maximum about 0.20 m. in September), due to the great evaporation at the Bitter Lakes, causes the *predominance of the Southward* current in duration and velocity.

(b) *In Winter:* Between December and May, the mean sea level at the Bitter Lakes is slightly higher than that of Port Said. This difference which reaches its maximum of about 0.30 m. in January, causes the *predominance of the Northward* current in duration and velocity.

(B) The Lakes (Timsah and Bitter Lakes)

(1) The Lakes along the Canal have an important role in dampening the effects of sudden meteorological changes.

(2) The Bitter Lakes with a surface of about 250 sq.km. reduce the vertical movement of the tide to a minimum between Km. 100 and Km. 130.

(3) The high Spring tidal range (MHWS) in the Great Bitter Lake may reach 0.25 m.

(4) The phase of the vertical tide in the Great Bitter Lake is about 3 hours later than that of Port Tewfik.

(5) The vertical tide in Lake Timsah is almost in phase with the tide in the Great Bitter Lake.

(C) The Southern Region

This part is located between Port of Suez and the Bitter Lakes.

(1) The height of tide at Suez co-oscillates with the tides of the Red Sea with extreme tidal range of about 1.90 m. at Spring tides. This range decreases gradually going North till the Bitter Lakes entrance where it is 0.15 m. at Genefa.

(2) The tidal volume of the Bitter Lakes is very large compared to the tidal volume of the Southern section. Consequently the currents are relatively strong and almost uniform between Port Tewfik and Genefa.

(3) In this region the Northward current is called *Flood* and the Southward current is called *Ebb*.

(4) Peak currents about 50 minutes after predicted HW and LW at Port Tewfik.

(5) At the entrance of the Canal, Km. 159, the *Flood* tide starts at an average of 3 hours after the LW at Suez. The *Ebb* tide 3 hours after HW in Suez.

(6) Generally in Summer, the duration of the *Ebb* exceeds the average of 6 hours. In Winter, the *Flood* is the predominant. The *Ebb* is prolonged by "Strong Northerly Winds". The *Flood* is prolonged by "Strong Southerly Winds".

(7) In this region the average peak current is about 1.5 knots. In Spring tides, current may reach 2.5 knots.

(8) The change of current occurs 5 to 10 minutes later on the bottom of the Canal, than on its surface.

(C) Current Buoys

In the Canal, there are current buoys indicating the direction of the current:

Head Current: Red and white horizontal bands or 1 reflector at night.

Stern Current: Black and white vertical stripes or 2 reflectors at night.

These buoys are laid in the following positions:

El Raswa	Km.	3.710 East
Port Fouad	Km.	2.750 East
Ras El Ech (E)	Km.	12.800 East
Ras El Ech (W)	Km.	14.304 East
Tineh	Km.	24.775 East
Cap	Km.	35.420 East
Kantara	Km.	45.130 East
Ballah (E & W)	Km.	54.770 East
Ferdan	Km.	64.894 East
Ismailia (E)	Km.	76.127 East
Toussom	Km.	86.780 East
Deversoir (E & W)	Km.	97.845 East
Kabrit (E & W)	Km.	120.827 East
Genefa	Km.	133.950 East
Chaloufa	Km.	146.125 East
Port Tewfik	Km.	160.300 East

Article 85: Weather Forecast

Six meteorological stations are installed on the Canal area. Information about local weather will be passed to vessels through Pilots, Ismailia Radio Station.

PART III – COMMUNICATIONS – SIGNALS.

CHAPTER IX: RADIO COMMUNICATIONS

Article 86: Wireless and Inmarsat Service

(1) General: Vessels must have their W/T and/or Radio Telephony apparatus in good working order before entering the Canal.

They must also be fitted with a VHF set easily operated from the bridge. It will have the working frequency range of the marine band (156 to 174 MHz), especially Channels 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 71, 73 and 74.

If not, they will rent one from the Suez Canal Authority for the transit.

(2) SCA Marine Communication Centre (SUQ): Suez Canal Wireless Station SUQ (Marine Communication Centre) has different communication facilities to contact vessels in the open sea or approaching areas and while transiting the Canal.

All these communication facilities are in compliance with the latest GMDSS Regulations:

I – Radio Telex:

(a) Frequency allocated to contact with vessels by Radio Telex from open sea to inform Suez Canal Authority of their expected time of arrival (ETA) to Port Said or Port Tewfik harbours.

ID No. 4820 / Hours of service: 24 hours.

Transmits	Receives	Mode	Watch hours
4250	6310 4205	FIB	H 24

Vessels are requested to send the following data 48 hours and 24 hours before arrival and when arriving in the approaches.

Vessel's name Call sign SCID ETA Draft SCGT

....

Cargo Dangerous Cargo and Flash point

....

Origin Destination Agent's name

....

(b) Frequencies allocated to contact vessels by Radio Telex while transiting Suez Canal or from waiting areas.

ID No. 4820 / Hours of service: 24 hours.

Transmits	Receives	Channel	Mode	Watch hours
1612	2147	211	FIB	H 24

R/T and broadcast facilities are available on the same frequencies.

II – W/T Morse:

W/T Morse will continue to contact vessels transiting the Canal and from waiting areas:

W/T (MF) Hours of service: 24 hours.

Call sign	Transmits	Receives	Channel	Mode	Watch hours
SUQ	520.5	469.5 and 454	109	A1A-A2A	H 24

III – Inmarsat Communication:

Vessels having on board Inmarsat station to contact Suez Canal Authority (SES) at Suez Canal Marine Communication Centre SUQ to send their ETA 48 hours and 24 hours before arrival and when arriving in the approaches.

The Suez Canal Authority (SES) identification numbers (ID) are as follows:

(a) Telex: 581-1622570.
(b) Voice: 871-1622570.
(c) Fax: 871-1622574.
Answerback: Suez.

IV – International Land Telex and Fax:

Suez Canal Marine Communication Centre SUQ has international Telex No. 63528 SUQ SC UN.

Also international Fax No. 002-064-393517.

V – Weather Reports:

SUQ broadcasts daily weather reports and navigational warnings (if exist) to vessels transiting the Canal or in the approaches.

Article 87: VHF – UHF Radiotelephony

(A) VHF Radiotelephony for vessels from sea

(1) *At Port Said*

(a) Port Management (listening): Call Sign: "Port Said 16" (HP-1) 156.800 MHz.

(b) Pilot Vessel and Radar Guidance:

(i) Outside the Harbour: Call Sign: "Port Said 12" (HP-2) 156.600 MHz.

(ii) Inside the Harbour: Call Sign: "Port Said 13" (HP-3) 156.650 MHz.

(c) Admeasurement Office: Call Sign: "Port Said 73" (M) 156.675 MHz.

(2) *At Port of Suez*

(a) Port Management (listening): Call Sign: "Suez 16" (HP-1) 156.800 MHz.

(b) Pilot Vessel and Radar Guidance:

(i) Outside the Harbour: Call Sign: "Suez 11" (HP-2) 156.550 MHz.

(ii) Inside the Harbour: Call Sign: "Suez 14" (HP-3) 156.700 MHz.

(c) Admeasurement Office: Call Sign: "Suez 74" (M) 156.675 MHz.

(B) UHF/Radiotelephony in the Canal

(1) UHF voice communications system was built to cover all the Canal and its approaches to facilitate communication between pilots and the main Movement Office at Ismailia and the Port Management Offices.

The Canal pilot uses a special portable UHF personal transceiver which have the following frequencies.

Channel No.	*Transmission Frequency MHz*	*Reception Frequency MHz*	*Function*
1	415.350	412.850	V/Ls from North (SB)
2	415.600	413.100	V/Ls from South (NB)
3	415.850	413.350	Emergency (EM)
4	416.600	414.100	In Port of Suez Harbour HP (T)
5	416.350	413.850	In Port Said Harbour HP (S)
6	416.125	413.600	Emergency Critical (EMC) Critical V/Ls (out of convoy)

(2) Escort tugs-towing tugs will use special portable UHF transceiver sets which have the following frequencies.

(3) Channel 1 414.750 MHz.
Channel 2 414.775 MHz.
Channel 3 414.800 MHz.

CHAPTER X: THE SUEZ CANAL VESSEL TRAFFIC MANAGEMENT SYSTEM (SCVTMS)

Article 88: Overview

Suez Canal has upgraded its VTMS installed in 1978 to readjust some of the planning movement concepts to the new generation of vessels and technology. The new system will provide complete surveillance and tracking by radar coverage of vessels throughout the Canal and its approaches at Port Said and Port Tewfik harbours, tracking by Loran-C will be used as a back-up for the radar surveillance. The newly developed VTMS system will provide the following services:

(1) Automatic surveillance and tracking of vessels arriving at Suez Canal approaches (15 miles away) until anchorage in the waiting areas.

(2) Automatic determination of arrival times at ports.

(3) Automatic continuous tracking and monitoring of vessel's position, speed and separation distances for all vessels transiting the Suez Canal.

(4) Provide the Port Management Centres at Port Said and Port Tewfik, as well as Ismailia Main Traffic Management Centre, with sufficient instantaneous information about vessels transiting the Canal by means of displaying complete televised radar pictures of the whole Canal and very powerful information system.

(5) Provide automatic displaying system for Pilots at all signal stations (signal state board) which display his arrival time, meteorological data, and emergency information.

(6) Provide integral data base for vessel information, transit regulations, traffic flow transit pattern, Pilot assignment, vessel billing and navigation reports.

(7) Provide an efficient and quick means of communication with vessels arriving at ports and with Pilots on board of vessels transiting the Canal.

This system will add more safety values for vessels and cargo during passage through the Suez Canal. The newly adopted computerised ideal/real transit pattern will ensure optimum and safety transit passage for the benefit of her world users, Owners of vessels and the international trade.

Article 89: System Operation

(1) Transit Request: In order to assign a vessel in the system informatically, a transit request must be received from the vessel's Owners or Agent at one of the Port Management Offices.

Vessel Transit Request usually takes one of the following forms:

Booking in advance; usually 3 or 4 days prior to arrival at port.

Suez Canal Authority informed by telex or Agent that ship will arrive within 48 hours.

Suez Canal Authority advised that ship will arrive at any time.

A vessel that has previously transited the Canal will have a unique Suez Canal file number (Suez Canal Authority ID).

It is required that this ID must be provided when the request for transit is made.

If the vessel is not currently in the system information and data base, the Port Management Operator will create vessel particulars and automatically assign a unique Suez Canal Authority ID.

(2) Vessel Arrivals: A vessel approaching the Canal at either end is requested to call the Port Management Office on one of the frequencies listed in Article 88.

The vessel is requested to declare her position, her international call sign and Suez Canal Authority ID.

The vessel will be tracked automatically by the radar sub-system and displayed on the graphic display, so that the Port Management Operator will be able to infolink it with the information on the arrival list.

(3) Vessel Reaching the Anchorage Area: At both Port Said and Port Tewfik, anchorage areas are indicated on radar graphic displays.

Whenever a linked vessel reaches an anchorage area, the information will record the time the vessel reaches an anchorage area.

(4) Vessel Berth List: The Port Management Office will continue tracking the vessel until entering the assigned berth location and stop and vessel berth list is created in the information.

Each berth location will be indicated on the Port Management graphic displays, as well as Ismailia graphic displays.

The vessel berth list will be updated periodically to reflect any changes to the Port Operators.

(5) Creation of the Transit Pattern: The Main Management Centre at Ismailia will generate the optimal convoy pattern based on the vessels currently in the waiting areas or estimated to be in the waiting areas by the limit times.

The transit pattern will determine each convoy's start time and maximum time width.

(6) Convoy Creation: At Port Said and Port Tewfik, the Harbour Master will order the vessels in the convoy patterns that were generated by the Main Management Centre at Ismailia.

The official convoy list will only be comprised of vessels that have marked as eligible for transit (paid the transit fees, Performance Certificate, etc.).

(7) Assign Pilot to Vessels: The Port Management Office will assign the Roads and Canal Transit Pilots. Pilot list and pilot convoy list will be printed.

(8) Pilot Boarding Order: After the official convoy list is created, the convoy list report will be printed. After Pilot(s) have been assigned, boarding order reports will be printed.

These reports will be given to each Transit and Roads Pilot as part of their pilot boarding orders.

(9) Vessels enter the Canal: As vessels leave their berths at the port, the Port Management Office will follow and track them until entering the Canal.

As the vessel enters into the Canal, their identifiers will be automatically updated to add their ID and relative position within the convoy against their displayed picture on the display at Port Office and Main Management Office at Ismailia.

(10) Real Transit Pattern: As the convoy progresses along the Canal, the real time transit pattern is displayed and plotted.

The real time transit pattern screen will provide the capability of viewing real time information as X, Y positions, speed, kilometer positions and off-axis for each vessel, as well as the meteorological data of all signal stations, including the wind speed and direction, visibility, current speed and direction, and height of the tide.

(11) Vessel Passes Check Points: Check points are the inlets and outlets of by-passes, siding, each signal station, the Canal start and the Canal end.

The order of vessels within the convoy is re-checked at each check points. If the vessel has changed position within the convoy, this is automaticallly recorded in the transit history.

The information data base is updated to reflect the convoy and new convoy position displayed against the target.

(12) Information Displayed on the Signal Station Board: As each vessel passes a signal station, the information will then update the signal station boards to provide convoy progress, the following information (Table 1 to 5) for a vessel as it passes the station.

Information of vessels as vessel name, convoy position, Suez Canal Authority ID, call sign, speed, location and meteorological data will be displayed to the signal station operators on signal station PCs.

(13) Vessel Leaves the Canal: When vessels get out of range of radar, the information will close the vessel transit and is saved as a closed transit for historical reporting purposes.

(14) In case of emergency or radar failure, the Canal Pilot will board the vessel with Loran-C; it will be installed on board the vessel by Suez Canal Authority personnel.

By initialising command from the Canal Main Management Office at Ismailia, tracking by Loran-C chain is executed.

In some cases, tracking by both radar and Loran-C chain will be executed to monitor the progress of vessel during their transit through the Canal, in order to assure safety transit and increase Canal efficiency.

Article 90 – New Information for Vessels Transiting the Canal

(1) Each vessel has special Suez Canal Authority File number (SCA ID) in the new information system in Suez Canal.

Suez Canal Authority distributes free of charge special SCA ID card to be kept in the radio room, vessel must report SCA FILE NR on all arrival messages for transits or port calls.

Any change in vessel's characteristics should be reported to Suez Canal Authority officially, to be filled in SCA ID.

(2) Meteorological data will be displayed on signal state boards (2nd line) to inform vessels of the prevailing weather conditions, as they pass the signal station.

Also emergency or navigation instructions from the Main Management Office at Ismailia can be displayed on the same line alternatively.

(3) The CORT should be mounted on either of the two wings on entrance of the Canal, the area around should be clear of obstructions within 10 ft. radius.

A trained Suez Canal Authority technician will mount the CORT in place and operate before disembarking.

The vessel is asked to install electrical outlet 110/220 Volts AC (Hubbel socket type 2356 flanged receptacle nylon casing Hubbel catalogue No. 35-R-2B 37), on the two wings to supply the CORT with electrical power.

Before vessel exits the Canal at either end of the Canal, the CORT will be dismantled by a Suez Canal Authority technician.

CHAPTER XI: SIGNALS

Article 91: Generalities

(1) All signals used in Canal Waters are shown in the "Plan Section".

(2) All flags and pendants to be hoisted by vessels, as shown hereafter, should be those in the International Code of Signals.

(3) Night signals shall be hoisted where best seen by other vessels.

Article 92: Sound Signals

(A) Normal Manoeuvre

(1) The International Regulation for Preventing Collision at Sea Signals.

"One short blast": I am altering my course to starboard.

"Two short blasts": I am altering my course to port.

"Three short blasts": I am operating astern propulsion.

(2) The signal 5 or 6 short blasts repeated several times at short intervals to say: "I am reducing speed and may have to stop or make fast".

At night besides the blasts, four to five long flashes with the Aldis lamp or signal mast lamp.

(3) The signal one prolonged blast to attract attention.

The expression "short blast" means a blast of about 1 second duration.

The expression "prolonged blast" means a blast of 4 to 6 seconds duration.

CHAPTER VII: BUOYAGE SYSTEM IN THE CANAL

Article 82: Buoyage

The navigable channel is marked by pairs of light buoys. On the East side green buoys showing Green lights. On the West side Red buoys showing Red lights.

In the straight parts, the distance between each pair is 1.5 km. in the North Section, and 1.0 km. in the South Section. In the curves the distances will be less than 1.0 km. All buoys in the Canal and its approaches are fitted with radar reflector.

Article 83: Position and Characteristics of Buoys in the Suez Canal.

See "Plan".

CHAPTER VIII: NATURAL CONDITIONS

Article 84: Tides and Currents in Suez Canal

The Suez Canal is divided in three main sectors according to the nature of tide in each.

The characteristics of each can be summarised as follows:

(A) The Northern Sector

This part is located between Port Said and the Great Bitter Lake.

(1) The height of tide at Port Said co-oscillates with the tides of the Mediterranean sea with 0.50 m. extreme tidal range (difference between highest and lowest levels) at Spring tides. This tidal range decreases gradually going South, to be about 0.20 m. at the entrance of Lake Timsah.

(2) In this sector, the peak tidal current may reach 1.0 knot (in case of no wind).

(3) Currents can be doubled by strong prevailing winds.

(4) Peak currents occur about 50 minutes after predicted HW and LW at Port Said.

(5) The duration and velocity of currents in this sector are greatly affected by the relative mean sea levels between the Mediterranean sea, the Bitter Lakes and the Red Sea as follows:

(a) *In Summer:* Between July and October, the mean sea level at Port Said is slightly higher than that of the Bitter Lakes. This difference (which reaches its maximum about 0.20 m. in September), due to the great evaporation at the Bitter Lakes, causes the *predominance of the Southward* current in duration and velocity.

(b) *In Winter:* Between December and May, the mean sea level at the Bitter Lakes is slightly higher than that of Port Said. This difference which reaches its maximum of about 0.30 m. in January, causes the *predominance of the Northward* current in duration and velocity.

(B) The Lakes (Timsah and Bitter Lakes)

(1) The Lakes along the Canal have an important role in dampening the effects of sudden meteorological changes.

(2) The Bitter Lakes with a surface of about 250 sq.km. reduce the vertical movement of the tide to a minimum between Km. 100 and Km. 130.

(3) The high Spring tidal range (MHWS) in the Great Bitter Lake may reach 0.25 m.

(4) The phase of the vertical tide in the Great Bitter Lake is about 3 hours later than that of Port Tewfik.

(5) The vertical tide in Lake Timsah is almost in phase with the tide in the Great Bitter Lake.

(C) The Southern Region

This part is located between Port of Suez and the Bitter Lakes.

(1) The height of tide at Suez co-oscillates with the tides of the Red Sea with extreme tidal range of about 1.90 m. at Spring tides. This range decreases gradually going North till the Bitter Lakes entrance where it is 0.15 m. at Genefa.

(2) The tidal volume of the Bitter Lakes is very large compared to the tidal volume of the Southern section. Consequently the currents are relatively strong and almost uniform between Port Tewfik and Genefa.

(3) In this region the Northward current is called *Flood* and the Southward current is called *Ebb*.

(4) Peak currents about 50 minutes after predicted HW and LW at Port Tewfik.

(5) At the entrance of the Canal, Km. 159, the *Flood* tide starts at an average of 3 hours after the LW at Suez. The *Ebb* tide 3 hours after HW in Suez.

(6) Generally in Summer, the duration of the *Ebb* exceeds the average of 6 hours. In Winter, the *Flood* is the predominant. The *Ebb* is prolonged by "Strong Northerly Winds". The *Flood* is prolonged by "Strong Southerly Winds".

(7) In this region the average peak current is about 1.5 knots. In Spring tides, current may reach 2.5 knots.

(8) The change of current occurs 5 to 10 minutes later on the bottom of the Canal, than on its surface.

(C) Current Buoys

In the Canal, there are current buoys indicating the direction of the current:

Head Current: Red and white horizontal bands or 1 reflector at night.

Stern Current: Black and white vertical stripes or 2 reflectors at night.

These buoys are laid in the following positions:

El Raswa	Km.	3.710 East
Port Fouad	Km.	2.750 East
Ras El Ech (E)	Km.	12.800 East
Ras El Ech (W)	Km.	14.304 East
Tineh	Km.	24.775 East
Cap	Km.	35.420 East
Kantara	Km.	45.130 East
Ballah (E & W)	Km.	54.770 East
Ferdan	Km.	64.894 East
Ismailia (E)	Km.	76.127 East
Toussom	Km.	86.780 East
Deversoir (E & W)	Km.	97.845 East
Kabrit (E & W)	Km.	120.827 East
Genefa	Km.	133.950 East
Chaloufa	Km.	146.125 East
Port Tewfik	Km.	160.300 East

Article 85: Weather Forecast

Six meteorological stations are installed on the Canal area. Information about local weather will be passed to vessels through Pilots, Ismailia Radio Station.

PART III – COMMUNICATIONS – SIGNALS.

CHAPTER IX: RADIO COMMUNICATIONS

Article 86: Wireless and Inmarsat Service

(1) General: Vessels must have their W/T and/or Radio Telephony apparatus in good working order before entering the Canal.

They must also be fitted with a VHF set easily operated from the bridge. It will have the working frequency range of the marine band (156 to 174 MHz), especially Channels 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 71, 73 and 74.

If not, they will rent one from the Suez Canal Authority for the transit.

(2) SCA Marine Communication Centre (SUQ): Suez Canal Wireless Station SUQ (Marine Communication Centre) has different communication facilities to contact vessels in the open sea or approaching areas and while transiting the Canal.

All these communication facilities are in compliance with the latest GMDSS Regulations:

I – Radio Telex:

(a) Frequency allocated to contact with vessels by Radio Telex from open sea to inform Suez Canal Authority of their expected time of arrival (ETA) to Port Said or Port Tewfik harbours.

ID No. 4820 / Hours of service: 24 hours.

Transmits	Receives	Mode	Watch hours
4250	6310 4205	FIB	H 24

Vessels are requested to send the following data 48 hours and 24 hours before arrival and when arriving in the approaches.

Vessel's name	Call sign	SCID	ETA	Draft	SCGT
....	......	....	...	.....	....

Cargo	Dangerous Cargo and Flash point
....	....

Origin	Destination	Agent's name
....	.....	......

(b) Frequencies allocated to contact vessels by Radio Telex while transiting Suez Canal or from waiting areas.

ID No. 4820 / Hours of service: 24 hours.

Transmits	Receives	Channel	Mode	Watch hours
1612	2147	211	FIB	H 24

R/T and broadcast facilities are available on the same frequencies.

II – W/T Morse:

W/T Morse will continue to contact vessels transiting the Canal and from waiting areas:

W/T (MF) Hours of service: 24 hours.

Call sign	Transmits	Receives	Channel	Mode	Watch hours
SUQ	520.5	469.5 and 454	109	A1A-A2A	H 24

III – Inmarsat Communication:

Vessels having on board Inmarsat station to contact Suez Canal Authority (SES) at Suez Canal Marine Communication Centre SUQ to send their ETA 48 hours and 24 hours before arrival and when arriving in the approaches.

The Suez Canal Authority (SES) identification numbers (ID) are as follows:

(a) Telex: 581-1622570.
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(c) Fax: 871-1622574.
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IV – International Land Telex and Fax:

Suez Canal Marine Communication Centre SUQ has international Telex No. 63528 SUQ SC UN.

Also international Fax No. 002-064-393517.

V – Weather Reports:

SUQ broadcasts daily weather reports and navigational warnings (if exist) to vessels transiting the Canal or in the approaches.

Article 87: VHF – UHF Radiotelephony

(A) VHF Radiotelephony for vessels from sea

(1) *At Port Said*

(a) Port Management (listening): Call Sign: "Port Said 16" (HP-1) 156.800 MHz.

(b) Pilot Vessel and Radar Guidance:

(i) Outside the Harbour: Call Sign: "Port Said 12" (HP-2) 156.600 MHz.

(ii) Inside the Harbour: Call Sign: "Port Said 13" (HP-3) 156.650 MHz.

(c) Admeasurement Office: Call Sign: "Port Said 73" (M) 156.675 MHz.

(2) *At Port of Suez*

(a) Port Management (listening): Call Sign: "Suez 16" (HP-1) 156.800 MHz.

(b) Pilot Vessel and Radar Guidance:

(i) Outside the Harbour: Call Sign: "Suez 11" (HP-2) 156.550 MHz.

(ii) Inside the Harbour: Call Sign: "Suez 14" (HP-3) 156.700 MHz.

(c) Admeasurement Office: Call Sign: "Suez 74" (M) 156.675 MHz.

(B) UHF/Radiotelephony in the Canal

(1) UHF voice communications system was built to cover all the Canal and its approaches to facilitate communication between pilots and the main Movement Office at Ismailia and the Port Management Offices.

The Canal pilot uses a special portable UHF personal transceiver which have the following frequencies.

Channel No.	Transmission Frequency MHz	Reception Frequency MHz	Function
1	415.350	412.850	V/Ls from North (SB)
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4	416.600	414.100	In Port of Suez Harbour HP (T)
5	416.350	413.850	In Port Said Harbour HP (S)
6	416.125	413.600	Emergency Critical (EMC) Critical V/Ls (out of convoy)

(2) Escort tugs-towing tugs will use special portable UHF transceiver sets which have the following frequencies.

(3) Channel 1 414.750 MHz.
Channel 2 414.775 MHz.
Channel 3 414.800 MHz.

CHAPTER X: THE SUEZ CANAL VESSEL TRAFFIC MANAGEMENT SYSTEM (SCVTMS)

Article 88: Overview

Suez Canal has upgraded its VTMS installed in 1978 to readjust some of the planning movement concepts to the new generation of vessels and technology. The new system will provide complete surveillance and tracking by radar coverage of vessels throughout the Canal and its approaches at Port Said and Port Tewfik harbours, tracking by Loran-C will be used as a back-up for the radar surveillance. The newly developed VTMS system will provide the following services:

(1) Automatic surveillance and tracking of vessels arriving at Suez Canal approaches (15 miles away) until anchorage in the waiting areas.

(2) Automatic determination of arrival times at ports.

(3) Automatic continuous tracking and monitoring of vessel's position, speed and separation distances for all vessels transiting the Suez Canal.

(4) Provide the Port Management Centres at Port Said and Port Tewfik, as well as Ismailia Main Traffic Management Centre, with sufficient instantaneous information about vessels transiting the Canal by means of displaying complete televised radar pictures of the whole Canal and very powerful information system.

(5) Provide automatic displaying system for Pilots at all signal stations (signal state board) which display his arrival time, meteorological data, and emergency information.

(6) Provide integral data base for vessel information, transit regulations, traffic flow transit pattern, Pilot assignment, vessel billing and navigation reports.

(7) Provide an efficient and quick means of communication with vessels arriving at ports and with Pilots on board of vessels transiting the Canal.

This system will add more safety values for vessels and cargo during passage through the Suez Canal. The newly adopted computerised ideal/real transit pattern will ensure optimum and safety transit passage for the benefit of her world users, Owners of vessels and the international trade.

Article 89: System Operation

(1) Transit Request: In order to assign a vessel in the system informatically, a transit request must be received from the vessel's Owners or Agent at one of the Port Management Offices.

Vessel Transit Request usually takes one of the following forms:

Booking in advance; usually 3 or 4 days prior to arrival at port.

Suez Canal Authority informed by telex or Agent that ship will arrive within 48 hours.

Suez Canal Authority advised that ship will arrive at any time.

A vessel that has previously transited the Canal will have a unique Suez Canal file number (Suez Canal Authority ID).

It is required that this ID must be provided when the request for transit is made.

If the vessel is not currently in the system information and data base, the Port Management Operator will create vessel particulars and automatically assign a unique Suez Canal Authority ID.

(2) Vessel Arrivals: A vessel approaching the Canal at either end is requested to call the Port Management Office on one of the frequencies listed in Article 88.

The vessel is requested to declare her position, her international call sign and Suez Canal Authority ID.

The vessel will be tracked automatically by the radar sub-system and displayed on the graphic display, so that the Port Management Operator will be able to infolink it with the information on the arrival list.

(3) Vessel Reaching the Anchorage Area: At both Port Said and Port Tewfik, anchorage areas are indicated on radar graphic displays.

Whenever a linked vessel reaches an anchorage area, the information will record the time the vessel reaches an anchorage area.

(4) Vessel Berth List: The Port Management Office will continue tracking the vessel until entering the assigned berth location and stop and vessel berth list is created in the information.

Each berth location will be indicated on the Port Management graphic displays, as well as Ismailia graphic displays.

The vessel berth list will be updated periodically to reflect any changes to the Port Operators.

(5) Creation of the Transit Pattern: The Main Management Centre at Ismailia will generate the optimal convoy pattern based on the vessels currently in the waiting areas or estimated to be in the waiting areas by the limit times.

The transit pattern will determine each convoy's start time and maximum time width.

(6) Convoy Creation: At Port Said and Port Tewfik, the Harbour Master will order the vessels in the convoy patterns that were generated by the Main Management Centre at Ismailia.

The official convoy list will only be comprised of vessels that have marked as eligible for transit (paid the transit fees, Performance Certificate, etc.).

(7) Assign Pilot to Vessels: The Port Management Office will assign the Roads and Canal Transit Pilots. Pilot list and pilot convoy list will be printed.

(8) Pilot Boarding Order: After the official convoy list is created, the convoy list report will be printed. After Pilot(s) have been assigned, boarding order reports will be printed.

These reports will be given to each Transit and Roads Pilot as part of their pilot boarding orders.

(9) Vessels enter the Canal: As vessels leave their berths at the port, the Port Management Office will follow and track them until entering the Canal.

As the vessel enters into the Canal, their identifiers will be automatically updated to add their ID and relative position within the convoy against their displayed picture on the display at Port Office and Main Management Office at Ismailia.

(10) Real Transit Pattern: As the convoy progresses along the Canal, the real time transit pattern is displayed and plotted.

The real time transit pattern screen will provide the capability of viewing real time information as X, Y positions, speed, kilometer positions and off-axis for each vessel, as well as the meteorological data of all signal stations, including the wind speed and direction, visibility, current speed and direction, and height of the tide.

(11) Vessel Passes Check Points: Check points are the inlets and outlets of by-passes, siding, each signal station, the Canal start and the Canal end.

The order of vessels within the convoy is re-checked at each check points. If the vessel has changed position within the convoy, this is automaticallly recorded in the transit history.

The information data base is updated to reflect the convoy and new convoy position displayed against the target.

(12) Information Displayed on the Signal Station Board: As each vessel passes a signal station, the information will then update the signal station boards to provide convoy progress, the following information (Table 1 to 5) for a vessel as it passes the station.

Information of vessels as vessel name, convoy position, Suez Canal Authority ID, call sign, speed, location and meteorological data will be displayed to the signal station operators on signal station PCs.

(13) Vessel Leaves the Canal: When vessels get out of range of radar, the information will close the vessel transit and is saved as a closed transit for historical reporting purposes.

(14) In case of emergency or radar failure, the Canal Pilot will board the vessel with Loran-C; it will be installed on board the vessel by Suez Canal Authority personnel.

By initialising command from the Canal Main Management Office at Ismailia, tracking by Loran-C chain is executed.

In some cases, tracking by both radar and Loran-C chain will be executed to monitor the progress of vessel during their transit through the Canal, in order to assure safety transit and increase Canal efficiency.

Article 90 – New Information for Vessels Transiting the Canal

(1) Each vessel has special Suez Canal Authority File number (SCA ID) in the new information system in Suez Canal.

Suez Canal Authority distributes free of charge special SCA ID card to be kept in the radio room, vessel must report SCA FILE NR on all arrival messages for transits or port calls.

Any change in vessel's characteristics should be reported to Suez Canal Authority officially, to be filled in SCA ID.

(2) Meteorological data will be displayed on signal state boards (2nd line) to inform vessels of the prevailing weather conditions, as they pass the signal station.

Also emergency or navigation instructions from the Main Management Office at Ismailia can be displayed on the same line alternatively.

(3) The CORT should be mounted on either of the two wings on entrance of the Canal, the area around should be clear of obstructions within 10 ft. radius.

A trained Suez Canal Authority technician will mount the CORT in place and operate before disembarking.

The vessel is asked to install electrical outlet 110/220 Volts AC (Hubbel socket type 2356 flanged receptacle nylon casing Hubbel catalogue No. 35-R-2B 37), on the two wings to supply the CORT with electrical power.

Before vessel exits the Canal at either end of the Canal, the CORT will be dismantled by a Suez Canal Authority technician.

CHAPTER XI: SIGNALS

Article 91: Generalities

(1) All signals used in Canal Waters are shown in the "Plan Section".

(2) All flags and pendants to be hoisted by vessels, as shown hereafter, should be those in the International Code of Signals.

(3) Night signals shall be hoisted where best seen by other vessels.

Article 92: Sound Signals

(A) Normal Manoeuvre

(1) The International Regulation for Preventing Collision at Sea Signals.

"One short blast": I am altering my course to starboard.

"Two short blasts": I am altering my course to port.

"Three short blasts": I am operating astern propulsion.

(2) The signal 5 or 6 short blasts repeated several times at short intervals to say: "I am reducing speed and may have to stop or make fast".

At night besides the blasts, four to five long flashes with the Aldis lamp or signal mast lamp.

(3) The signal one prolonged blast to attract attention.

The expression "short blast" means a blast of about 1 second duration.

The expression "prolonged blast" means a blast of 4 to 6 seconds duration.

(B) Obstruction in Channel in all Circumstances

A vessel which under any circumstances causes or finds obstruction in the channel must immediately warn the vessels in the vicinity.

That warning is given by whistle or siren:

4 long blasts meaning: "The channel is not free".

That warning must be repeated every 3 minutes until vessels concerned have answered in the same manner. As soon as they hear the signal mentioned above, the vessels take steps to stop and instruct a Radio Watch, to receive full details of the alert given by the vessel that sent the said signal. The vessel should maintain Radio Watch until otherwise advised.

(C) Ship Failure (To Dredgers)

In case of engine or steering failure making the vessel not under command, while approaching a dredger, the vessel has to give the signal one long blast followed by two short blasts (– · ·).

(D) Vessel Mooring Voluntarily for Fog or Sand Storm

During the mooring manoeuvre, the vessel sounds every 2 minutes a series of 6 short blasts.

Once made fast (Signal No. 16 "G.V." is hoisted), the vessel must rapidly ring the bell for 5 seconds at intervals not exceeding one minute. For vessels of 100 m. and over, they will have to ring the bell forward and in addition a gong aft, at intervals not exceeding one minute, (a gong or any other instrument which tone and sound will be different to that of the bell forward).

These signals are stopped when the vessel is told that all vessels concerned have been notified of her mooring.

(E) Vessel Aground or Across Canal

See Article 92 (B) Obstruction in Channel.

(F) Between Vessels and Tugs

(1) Vessel Aground in the Canal

Signals between a vessel aground in the Canal and a tug.

These signals are for manoeuvre of refloating, as long as the vessel has one of the grounding signals.

Pull slowly	(– ·)
Increase	(– · ·)
Stop	(– –)
Slack the line	(– – ·)
I am to let go	(– – · ·)

These signals are to be repeated by the tug.

(2) Vessel Towed in the Canal

Signals between a vessel towed in the Canal and a tug.

Radiotelephony is used as communication between ship and tug, besides the following signals.

		By Day (Flag)	*At Night (Sound)*
Slow speed	:	"A" hoisted above bridge	(– ·)
Half speed	:	"A" hoisted half way	(– · ·)
Normal Tow	:	"A" hoisted right up	(– · · ·)
Steady	:	"A" lowered	(– –)

(Or sound signals if considered surer).

The sound signals are to be repeated by the tug.

The flag signal remains flying as long as the tug is to give the signalled speed.

By day, every change of flag signals is followed by a long blast.

(G) Signals Between VLCCs and Escort Tugs

(1) Attention to Start Manoeuvre

Prolonged blasts given by the ship.

(2) Stern Tug

Bring my stern to starboard	(·)
Bring my stern to port	(· ·)
Keep my stern in the axis	(· · ·)
Pull my stern aft slowly	(· · · ·)
Increase pulling my stern up to half speed astern	(· · · · –) (· · · · ·)
Increase pulling my stern up to full speed astern	(· · · · · –) (· · · · · ·)
Stop pulling (very long blast)	(——)

(3) Forward Tug

Give me a push on starboard bow	(–)
Give me a push on port bow	(– –)
Stop pushing	(– – –)

Article 93: See "Plans".

WADI FIRAN: 28.44 N. 33.13 E. (See Plan)

An open anchorage on Sinai coast in the Gulf of Suez about 85 nautical miles South of Suez.

There are 12 large and conspicuous storage tanks in 2 parallel rows of 6 tanks each lined on shore near the pumping station and painted with aluminium.

DOCUMENTS:

4 Crew Lists.
2 Stores Lists.
2 Vaccination Lists.

PILOTAGE: Pilot boards each tanker at anchorage.

ANCHORAGE: Lat. 28° 44.5' N., Long. 33° 09.5' E.

RESTRICTIONS: Mooring and unmooring during daylight only.

Vessels must have 150 fathoms of chain on each anchor.

MAX. SIZE: 105,000 d.w.t. Max. draft 75 ft. at Berth No. 1.

RADIO: It is essential that vessels bound for Wadi Firan give 72 hours, 48 hours and 24 hours notice to both "Petmisr Cairo 92049 UN" and "Petbel 92449 UN", to be accepted on the berth without delay. Contact Abu Rudeis on VHF Channel 16 when in range. There is no radio station at Abu Rudeis. Pilots working on Channel 14.

VHF: VHF Channels 16 and 14 are used for communication between tanker and pumping station.

TUGS: 1×3,080 h.p. and 1×4,080 h.p. available for mooring and unmooring.

BERTHING: Tankers must approach berth from West, never from North, and must follow same track on their departure to be entirely clear of shallow water. Tankers at berth will be connected to shore pumping station by submarine hoses for pumping crude oil (12 in. hose from the starboard side).

Two mooring launches available. Both ship's anchors are used, the port anchor first, normally 9-10 shackles in the water on each. At the stern 4 wire ropes from buoys are taken on board. Special care should be taken when mooring in Southerly winds. If blowing strong, berthing may be delayed.

	Berth No. 1	*Berth No. 2*
Position:	Lat. 28° 45' N.	Lat. 28° 43.5' N.
	Long. 33° 11.5' E.	Long. 33° 11.5' E.
LOA:	900 ft.	800 ft.
Water Depth:	75 ft.	58 ft.
Max. Draft:	53 ft.	40 ft.
Max. D.W.T.	105,000	50,000
Sea Line (Crude):	24 in.	18 in.
Sea Line (Ballast):	18 in.	18 in.
Tanker's Length:	900 ft.	700 ft.
Max. loading rate:	4,000 t.p.h.	2,500 t.p.h.

Reception facilities for 30,000 cu.m. of dirty ballast.

Two tankers can moor simultaneously but only one may load.

DENSITY: 1032.

FRESH WATER: Not available.

FUEL: Not available.

AUTHORITY: Belayim Petroleum Co., 5 El Mokhayam El Dayem Street, Nasr City, Cairo, Egypt. (P.O. Box No. 7074). *Tel:* 2621738, 2621739, 2621740, 2621742, 2621743, 2621744. *Telex:* 21003 Petbl UN, 92373 Petbl UN, 92449 Petbl UN. *FAX:* 2609792 Cairo. *Contact:* Ibrahim El Shafie, Operations General Manager.

ZAAFARANA TERMINAL: 29.10 N. 32.41 E.

LOCATION: The Floating Production Storage and Offloading tanker (FPSO) "Al-Zaafarana" is located in position Lat. 29° 10' 27.93" N., Long. 32° 41' 28.56" E.

MAX. SIZE: 130,000 tonnes Summer d.w.t., LOA 850 ft. and max. draft 55 ft.

RADIO: Master to give E.G.P.C. (Supply Section) and Terminal 72 hours, 48 hours and 24 hours Notice of Arrival.

VHF: Tankers can call "Al Zaafarana" on Channels 16 and 8.

BERTHING: Vessel moors alongside the FPSO.

LOADING: Tankers must be equipped with inert gas system, have a derrick with minimum 5 tons capacity and be S.B.T. or C.B.T.

Loading rate is 3,000 t.p.h. through 3×12 in. lines with Camlock couplings.

BALLAST: Tankers are permitted to discharge clean ballast to sea as per current Marpol Regulations.

ZEIT BAY: 27.50 N. 33.36 E. (See Plan)

(A) SBM.

(B) LPG BERTH.

(A) SBM.

LOCATION: Zeit Bay Terminal is approximately 60 km. North of Hurgada.

ANCHORAGES: Waiting area centred on Lat. 27° 48.5' N., Long. 33° 37.0' E. Radius 1 mile. Depth ranges from 22 m. to 38 m., with 31 m. at centre.

Vessel is not permitted to anchor outside the anchorage area.

RESTRICTIONS: Weather conditions may prevent berthing. This is the case when wind speed exceeds 25 knots. Vessel will then remain in the anchorage until weather improves. Daylight berthing only. Unberthing any time.

MAX. SIZE: 35,000 tons (SDWT) to 250,000 tons (SDWT) with permissible max. draft up to 18.0 m. and LOA 500 ft. – 1,130 ft.

HEALTH: Masters are to indicate any sickness on board in their ETA notification. SUCO will arrange with Health Authorities if so required.

RADIO: Tankers calling at Zeit Bay must send ETA message 72, 48, 24, and 12 hours distant from the terminal to SUCO Head Office, via any coastal radio station: Alexandria, Port Said, Suez and Kosseir.

ETA messages to SUCO should give the best estimates of ship's arrival time at the terminal and relevant information on lifting gear, connections, ballast/segregated/dirty and quantity. This ETA message should also include a definite statement of details of any equipment required from shore for connecting 16 in. floating hose, bearing in mind that such hose needs tanker to be equipped with crane, classed and certified to at least 10 tons capacity.

VHF: Master must call "Zeit Bay" 4 hours prior arrival on VHF Channel 16, working Channel 12.

TUGS: Two mooring line boats, 1×500 h.p. and 1×1,000 h.p. are available to assist with mooring and hose connection. The boats are equipped for anti-pollution operations.

One fire fighting tug available on a standby basis whilst loading operations are in progress.

BERTHING: All mooring equipment is available and will be placed on board the vessel when Mooring Master boards.

A vessel can make the final approach and moor to buoy from any direction, bearing in mind prevailing weather and tidal conditions. The approach shall be made from the direction which is consistent with a safe approach, and speed shall be subject to the prevailing forces (i.e. wind, current and tidal stream) at the location at the time of berthing with assistance of mooring boats stationed at the buoy.

Once moored the vessel is free to turn through 360° under the influence of the prevailing forces.

HOSE CONNECTION: 16 in. standard 150 ASA flange connection for crude oil and ballast hoses. Port derrick with minimum 10 tons SWL to be rigged for max. height and load lifting.

Ship's crew shall be responsible for connecting and disconnecting hoses with assistance of shore crew.

A quick release coupling (Camlock) is connected to each hose end and is to be used as follows:

1. In case of emergency, the butterfly valve shall be immediately closed and quick release coupling immediately disconnected.
2. Do not hammer but try to use the Camlock wrench supplied or use copper hammer only.
3. Tanker should be ready with reducer if its manifold is not 16 in.
4. Bags of sand to be available.
5. Weight of the hose is approximately 8 tons.

LOADING: Upon being informed by the vessel's responsible officer that vessel is ready to start loading, Mooring Master will normally advise the Control Room and ensure that the loading commences at a low rate (by gravity).

When it has been confirmed that there is no significant rise in pressure on the loading line, the crude oil will be loaded, pumping with a maximum rate of 6,000 tonnes/p.h.

Crude oil is delivered through the submarine pipeline to the buoy and thence via a floating hose to the vessel's port side midship manifold. Hose diameter is generally 24 in., reducing to 16 in. at the ship's end.

It is forbidden to close any valve onboard the tanker against the flow of the crude oil until the butterfly valve of the loading hose has been closed.

If ship-to-shore communications fail during loading operations, the emergency whistle signal is a continuous blast on the tanker's whistle.

Loading shall immediately be stopped and will not be resumed until communications have been re-established.

Before loading, cargo tanks are dipped by an independent inspector and at Terminal Inspector. If dirty ballast is retained on board until the next discharge port, then the amount of water and oil on top will be checked.

Density of Zeit Bay Crude is approx. (0.854/15°C.). Temperature when received on board is approximately 34°C.

Immobilisation of engines at SBM is strictly prohibited.

BALLAST/POLLUTION: *Deballasting System:* It is preferable that vessels load crude oil while discharging ballast, but Master or officer-in-charge must be sure that no contamination or pollution takes place.

If the vessel is not equipped with 2 lines in order to load and deballast at the same time, a quantity of crude should be loaded prior to deballasting to ensure proper segregation.

Dirty ballast must not be in the emulsion form and is not to contain chemicals or detergents.

The floating hose is normally 20 in. diameter, and the ship's end connection 16 in. diameter.

It is strictly forbidden to discharge dirty ballast overboard.

Pollution: The Master has to comply with all regulations and instructions prohibiting pollution under A.R.E. laws and under any pertinent instructions issued by SUCO when conveyed to Master.

Also, the provisions for International Convention for Prevention of Pollution from vessels 1973 and the Protocol of 1978 relating to this connection will be applied to the extent that such Convention and Protocol are in force in A.R.E. Owner/operator shall be liable for any damage resulting from the pollution caused by the vessel and shall pay for all the expenses incurred for its removal and elimination.

Oil Spill: In the event of a spill or its detection, SUCO Mooring Master must be notified instantly for the necessary action to be taken.

MEDICAL: In case urgent medical assistance is required, the vessel should contact SUCO Marine Manager by VHF radio. A doctor and facilities are available but there is no hospital in the area.

FRESH WATER: Not available.

FUEL: Not available.

REPAIRS: No facilities.

REPATRIATION: Possible in emergency only.

HOLIDAYS: Zeit Bay Terminal never closes on religious holidays.

SHORE LEAVE: There is no shore leave for personnel of vessels whilst at the SBM.

GENERAL:

Helicopter: Should the services of a helicopter be required in emergency or for any purpose whatsoever, the vessel will be given a minimum of 30 minutes notice.

Weather: Gales can be expected from a North Westerly direction from October through May.

The above conditions are only for guidance and are not relevant to the safety of the vessel but to the safety of the buoy.

The Mooring Master shall have the authority to decide whether the ship should remain or vacate the buoy.

Climate: The climate in the Gulf of Suez is generally good. The visibility is usually excellent, with few dust storms and infrequent fog. There are a few rain squalls.

Winds: The general flow of the wind over this part of the Gulf of Suez is predominantly from the N.N.W. Winds are steadier in the Summer months (May/October) and almost nil from June to September. Gales can mainly be expected from a North-Westerly direction from October to May.

The maximum velocity is approximately 45 knots, whilst the mean wind speed is approximately 20 knots and is prevalent for some 98% of the year. There are occasional light Southerly winds.

Tides: The tidal range is between 4 ft. and 5 ft.

Sea Condition: The surface temperature of the sea ranges from 18°C. to 30°C., depending on the season.

Seas and swells are usually from the N.N.W. and wave height can reach 18 ft., but average is about 6 ft. During the Summer months (May/August) there are many days of 12 ft. – 15 ft. seas.

Currents are generally located in mid-channel and set North when the tide is rising in Suez, and South when the tide is falling. The rate is about 2.5 knots at Spring tides and 0.5 knots at Neap tides.

(B) LPG BERTH.

LOCATION: Zeit Bay is an open area and unsheltered.

LPG tankers will moor alongside a pier which is perpendicular to the shore. The pier length is 50 m. and water depth is 8 m.

Pier position: Lat. 27° 48.1' N.
Long. 33° 33.7' E.

There are 2 mooring buoys, located North and South of the pier and about 50 m. off pier's edges, to secure the tanker in its proper position while undertaking operations.

DOCUMENTS: Masters are requested to hand the following original documents to "SUCO" Mooring Master upon arrival. These documents will be returned when cargo documents are signed on departure.

Certificate of Registry.
Load Line Certificate.
Safety Certificates.

APPROACHES: *Approaching the Anchorage Area:* When an LPG vessel arrives at position Lat. 27° 50.2' N., Long. 33° 37.2' E., Master can alter vessel's course to 172°(T) for heading towards anchorage area, a sailing distance of about 2.9 nautical miles.

Below are 4 objects that can be seen by day or night that will be of assistance to vessels.

A. Two grounded ships on North of Saab's Ashrafi:
 First position: Lat. 27° 49.5' N., Long. 33° 38.7' E.
 Second position: Lat. 27° 49.3' N., Long. 33° 39.2' E.
B. On marine chart No. 2375, East Zeit Bay Terminal SBM flashing Mo(U) 15 sec.
C. Zeit Bay Terminal, located one mile S.S.E. of East Zeit Bay Terminal flashing Mo(D) 30.5 sec.
D. Lighthouse in position Lat. 27° 49.6' N., Long. 33° 34.9' E. Black and white colour with approximate height of 30 m., flashing white every 10 seconds.

Approaching Zeit Bay Channel and Shipping Lane: The vessel under her Master's command and Mooring Master's advice will navigate on a course of 155°(T) from anchorage area for about 1.5 miles.

When Ashrafi Lighthouse is observed abeam, course is to be altered to 195°(T). This course will lead toward entrance of Zeit Bay Channel. While passing through Zeit Bay Channel, true course to be 270°/090°.

Due to relationship between a vessel traversing the channel and the prevailing N.N.W.'ly wind and current, there is the possibility of a sideways drift.

When vessel arrives at the end of the West entrance of the channel, course will be altered to 335°(T). After sailing for about 2.5 miles, vessel will alter course to 310°(T) for about 1.1 miles.

Final approach to L.P.G. Pier will be on a course of 010°(T), for about 1.5 miles.

Use of anchor is forbidden from the time the vessel reaches the Western entrance of Zeit Bay until final approach to pier, because of pipelines.

Outside the shipping lane on the port side, there are 4 yellow platforms provided with navigation aids. Vessels navigating in the shipping lane will pass near Platform "C" at a safe distance.

Zeit Bay Channel and Shipping Lane: Channel is guaranteed to be 6.0 m. below L.A.T.

Channel length is about 2 nautical miles and about 200 m. width.

Channel is marked by lighted buoys, each equipped with a radar reflector. When ship is heading Westerly (270°(T)), there will be 3 green buoys on the starboard side and 3 red buoys on the port side.

The shipping lane between Ghanim and Ras Elbahar Islands is marked by red marker buoys, showing the end of shoals and reefs.

Buoys coordinates: (a) Lat. 27° 45' 39" N., Long. 33° 34' 10" E.
(b) Lat. 27° 46' 18" N., Long. 33° 33' 22" E.

All vessels should keep at least 30 m. from the buoys as a safety measure.

All marker buoys can be seen from any direction and in poor visibility, according to international specifications and regulations of port navigational aids.

PILOTAGE: SUCO Mooring Master will board the vessel in the LPG waiting area. Pilot ladder should be kept in good order, clean and should be adequate in length and strength.

When Mooring Master boards the vessel, he will advise the Master on the approaching, berthing operations and provide him with all necessary information.

Mooring Master will check all original Certificates and receive them from the Master.

ANCHORAGE: SUCO will make every effort to moor ships arriving according to the agreed schedule. If not berthing, vessel will drop anchor at the Anchorage Area in position: Lat. 27° 47.3' N., Long. 33° 37.6' E. This position is located South of the Crude Oil Carrier Waiting Area.

LPG anchorage area is half mile radius with 18 m. depth. The area is considered clear of obstructions.

Anchoring outside the waiting area or in Crude Oil Carrier Area is strictly prohibited.

(B) Obstruction in Channel in all Circumstances

A vessel which under any circumstances causes or finds obstruction in the channel must immediately warn the vessels in the vicinity.

That warning is given by whistle or siren:

4 long blasts meaning: "The channel is not free".

That warning must be repeated every 3 minutes until vessels concerned have answered in the same manner. As soon as they hear the signal mentioned above, the vessels take steps to stop and instruct a Radio Watch, to receive full details of the alert given by the vessel that sent the said signal. The vessel should maintain Radio Watch until otherwise advised.

(C) Ship Failure (To Dredgers)

In case of engine or steering failure making the vessel not under command, while approaching a dredger, the vessel has to give the signal one long blast followed by two short blasts (– · ·).

(D) Vessel Mooring Voluntarily for Fog or Sand Storm

During the mooring manoeuvre, the vessel sounds every 2 minutes a series of 6 short blasts.

Once made fast (Signal No. 16 "G.V." is hoisted), the vessel must rapidly ring the bell for 5 seconds at intervals not exceeding one minute. For vessels of 100 m. and over, they will have to ring the bell forward and in addition a gong aft, at intervals not exceeding one minute, (a gong or any other instrument which tone and sound will be different to that of the bell forward).

These signals are stopped when the vessel is told that all vessels concerned have been notified of her mooring.

(E) Vessel Aground or Across Canal

See Article 92 (B) Obstruction in Channel.

(F) Between Vessels and Tugs

(1) Vessel Aground in the Canal

Signals between a vessel aground in the Canal and a tug.

These signals are for manoeuvre of refloating, as long as the vessel has one of the grounding signals.

Pull slowly	(– ·)
Increase	(– · ·)
Stop	(– –)
Slack the line	(– – ·)
I am to let go	(– – · ·)

These signals are to be repeated by the tug.

(2) Vessel Towed in the Canal

Signals between a vessel towed in the Canal and a tug.

Radiotelephony is used as communication between ship and tug, besides the following signals.

	By Day (Flag)	*At Night (Sound)*
Slow speed	: "A" hoisted above bridge	(– ·)
Half speed	: "A" hoisted half way	(– · ·)
Normal Tow	: "A" hoisted right up	(– · · ·)
Steady	: "A" lowered	(– –)

(Or sound signals if considered surer).

The sound signals are to be repeated by the tug.

The flag signal remains flying as long as the tug is to give the signalled speed.

By day, every change of flag signals is followed by a long blast.

(G) Signals Between VLCCs and Escort Tugs

(1) Attention to Start Manoeuvre

Prolonged blasts given by the ship.

(2) Stern Tug

Bring my stern to starboard	(·)
Bring my stern to port	(· ·)
Keep my stern in the axis	(· · ·)
Pull my stern aft slowly	(· · · ·)
Increase pulling my stern up to half speed astern	(· · · · –) (· · · · ·)
Increase pulling my stern up to full speed astern	(· · · · · –) (· · · · · ·)
Stop pulling (very long blast)	(——)

(3) Forward Tug

Give me a push on starboard bow	(–)
Give me a push on port bow	(– –)
Stop pushing	(– – –)

Article 93: See "Plans".

WADI FIRAN: 28.44 N. 33.13 E. (See Plan)

An open anchorage on Sinai coast in the Gulf of Suez about 85 nautical miles South of Suez.

There are 12 large and conspicuous storage tanks in 2 parallel rows of 6 tanks each lined on shore near the pumping station and painted with aluminium.

DOCUMENTS:

4 Crew Lists.
2 Stores Lists.
2 Vaccination Lists.

PILOTAGE: Pilot boards each tanker at anchorage.

ANCHORAGE: Lat. 28° 44.5' N., Long. 33° 09.5' E.

RESTRICTIONS: Mooring and unmooring during daylight only.

Vessels must have 150 fathoms of chain on each anchor.

MAX. SIZE: 105,000 d.w.t. Max. draft 75 ft. at Berth No. 1.

RADIO: It is essential that vessels bound for Wadi Firan give 72 hours, 48 hours and 24 hours notice to both "Petmisr Cairo 92049 UN" and "Petbel 92449 UN", to be accepted on the berth without delay. Contact Abu Rudeis on VHF Channel 16 when in range. There is no radio station at Abu Rudeis. Pilots working on Channel 14.

VHF: VHF Channels 16 and 14 are used for communication between tanker and pumping station.

TUGS: 1×3,080 h.p. and 1×4,080 h.p. available for mooring and unmooring.

BERTHING: Tankers must approach berth from West, never from North, and must follow same track on their departure to be entirely clear of shallow water. Tankers at berth will be connected to shore pumping station by submarine hoses for pumping crude oil (12 in. hose from the starboard side).

Two mooring launches available. Both ship's anchors are used, the port anchor first, normally 9-10 shackles in the water on each. At the stern 4 wire ropes from buoys are taken on board. Special care should be taken when mooring in Southerly winds. If blowing strong, berthing may be delayed.

	Berth No. 1	*Berth No. 2*
Position:	Lat. 28° 45' N. Long. 33° 11.5' E.	Lat. 28° 43.5' N. Long. 33° 11.5' E.
LOA:	900 ft.	800 ft.
Water Depth:	75 ft.	58 ft.
Max. Draft:	53 ft.	40 ft.
Max. D.W.T.	105,000	50,000
Sea Line (Crude):	24 in.	18 in.
Sea Line (Ballast):	18 in.	18 in.
Tanker's Length:	900 ft.	700 ft.
Max. loading rate:	4,000 t.p.h.	2,500 t.p.h.

Reception facilities for 30,000 cu.m. of dirty ballast.

Two tankers can moor simultaneously but only one may load.

DENSITY: 1032.

FRESH WATER: Not available.

FUEL: Not available.

AUTHORITY: Belayim Petroleum Co., 5 El Mokhayam El Dayem Street, Nasr City, Cairo, Egypt. (P.O. Box No. 7074). *Tel:* 2621738, 2621739, 2621740, 2621742, 2621743, 2621744. *Telex:* 21003 Petbl UN, 92373 Petbl UN, 92449 Petbl UN. *FAX:* 2609792 Cairo. *Contact:* Ibrahim El Shafie, Operations General Manager.

ZAAFARANA TERMINAL: 29.10 N. 32.41 E.

LOCATION: The Floating Production Storage and Offloading tanker (FPSO) "Al-Zaafarana" is located in position Lat. 29° 10' 27.93" N., Long. 32° 41' 28.56" E.

MAX. SIZE: 130,000 tonnes Summer d.w.t., LOA 850 ft. and max. draft 55 ft.

RADIO: Master to give E.G.P.C. (Supply Section) and Terminal 72 hours, 48 hours and 24 hours Notice of Arrival.

VHF: Tankers can call "Al Zaafarana" on Channels 16 and 8.

BERTHING: Vessel moors alongside the FPSO.

LOADING: Tankers must be equipped with inert gas system, have a derrick with minimum 5 tons capacity and be S.B.T. or C.B.T.

Loading rate is 3,000 t.p.h. through 3×12 in. lines with Camlock couplings.

BALLAST: Tankers are permitted to discharge clean ballast to sea as per current Marpol Regulations.

ZEIT BAY: 27.50 N. 33.36 E. (See Plan)

(A) SBM.
(B) LPG BERTH.

(A) SBM.

LOCATION: Zeit Bay Terminal is approximately 60 km. North of Hurgada.

ANCHORAGES: Waiting area centred on Lat. 27° 48.5' N., Long. 33° 37.0' E. Radius 1 mile. Depth ranges from 22 m. to 38 m., with 31 m. at centre.

Vessel is not permitted to anchor outside the anchorage area.

RESTRICTIONS: Weather conditions may prevent berthing. This is the case when wind speed exceeds 25 knots. Vessel will then remain in the anchorage until weather improves. Daylight berthing only. Unberthing any time.

MAX. SIZE: 35,000 tons (SDWT) to 250,000 tons (SDWT) with permissible max. draft up to 18.0 m. and LOA 500 ft. – 1,130 ft.

HEALTH: Masters are to indicate any sickness on board in their ETA notification. SUCO will arrange with Health Authorities if so required.

RADIO: Tankers calling at Zeit Bay must send ETA message 72, 48, 24, and 12 hours distant from the terminal to SUCO Head Office, via any coastal radio station: Alexandria, Port Said, Suez and Kosseir.

ETA messages to SUCO should give the best estimates of ship's arrival time at the terminal and relevant information on lifting gear, connections, ballast/segregated/dirty and quantity. This ETA message should also include a definite statement of details of any equipment required from shore for connecting 16 in. floating hose, bearing in mind that such hose needs tanker to be equipped with crane, classed and certified to at least 10 tons capacity.

VHF: Master must call "Zeit Bay" 4 hours prior arrival on VHF Channel 16, working Channel 12.

TUGS: Two mooring line boats, 1×500 h.p. and 1×1,000 h.p. are available to assist with mooring and hose connection. The boats are equipped for anti-pollution operations.

One fire fighting tug available on a standby basis whilst loading operations are in progress.

BERTHING: All mooring equipment is available and will be placed on board the vessel when Mooring Master boards.

A vessel can make the final approach and moor to buoy from any direction, bearing in mind prevailing weather and tidal conditions. The approach shall be made from the direction which is consistent with a safe approach, and speed shall be subject to the prevailing forces (i.e. wind, current and tidal stream) at the location at the time of berthing with assistance of mooring boats stationed at the buoy.

Once moored the vessel is free to turn through 360° under the influence of the prevailing forces.

HOSE CONNECTION: 16 in. standard 150 ASA flange connection for crude oil and ballast hoses. Port derrick with minimum 10 tons SWL to be rigged for max. height and load lifting.

Ship's crew shall be responsible for connecting and disconnecting hoses with assistance of shore crew.

A quick release coupling (Camlock) is connected to each hose end and is to be used as follows:

1. In case of emergency, the butterfly valve shall be immediately closed and quick release coupling immediately disconnected.
2. Do not hammer but try to use the Camlock wrench supplied or use copper hammer only.
3. Tanker should be ready with reducer if its manifold is not 16 in.
4. Bags of sand to be available.
5. Weight of the hose is approximately 8 tons.

LOADING: Upon being informed by the vessel's responsible officer that vessel is ready to start loading, Mooring Master will normally advise the Control Room and ensure that the loading commences at a low rate (by gravity).

When it has been confirmed that there is no significant rise in pressure on the loading line, the crude oil will be loaded, pumping with a maximum rate of 6,000 tonnes/p.h.

Crude oil is delivered through the submarine pipeline to the buoy and thence via a floating hose to the vessel's port side midship manifold. Hose diameter is generally 24 in., reducing to 16 in. at the ship's end.

It is forbidden to close any valve onboard the tanker against the flow of the crude oil until the butterfly valve of the loading hose has been closed.

If ship-to-shore communications fail during loading operations, the emergency whistle signal is a continuous blast on the tanker's whistle.

Loading shall immediately be stopped and will not be resumed until communications have been re-established.

Before loading, cargo tanks are dipped by an independent inspector and at Terminal Inspector. If dirty ballast is retained on board until the next discharge port, then the amount of water and oil on top will be checked.

Density of Zeit Bay Crude is approx. (0.854/15°C.). Temperature when received on board is approximately 34°C.

Immobilisation of engines at SBM is strictly prohibited.

BALLAST/POLLUTION: *Deballasting System:* It is preferable that vessels load crude oil while discharging ballast, but Master or officer-in-charge must be sure that no contamination or pollution takes place.

If the vessel is not equipped with 2 lines in order to load and deballast at the same time, a quantity of crude should be loaded prior to deballasting to ensure proper segregation.

Dirty ballast must not be in the emulsion form and is not to contain chemicals or detergents.

The floating hose is normally 20 in. diameter, and the ship's end connection 16 in. diameter.

It is strictly forbidden to discharge dirty ballast overboard.

Pollution: The Master has to comply with all regulations and instructions prohibiting pollution under A.R.E. laws and under any pertinent instructions issued by SUCO when conveyed to Master.

Also, the provisions for International Convention for Prevention of Pollution from vessels 1973 and the Protocol of 1978 relating to this connection will be applied to the extent that such Convention and Protocol are in force in A.R.E. Owner/operator shall be liable for any damage resulting from the pollution caused by the vessel and shall pay for all the expenses incurred for its removal and elimination.

Oil Spill: In the event of a spill or its detection, SUCO Mooring Master must be notified instantly for the necessary action to be taken.

MEDICAL: In case urgent medical assistance is required, the vessel should contact SUCO Marine Manager by VHF radio. A doctor and facilities are available but there is no hospital in the area.

FRESH WATER: Not available.

FUEL: Not available.

REPAIRS: No facilities.

REPATRIATION: Possible in emergency only.

HOLIDAYS: Zeit Bay Terminal never closes on religious holidays.

SHORE LEAVE: There is no shore leave for personnel of vessels whilst at the SBM.

GENERAL:

Helicopter: Should the services of a helicopter be required in emergency or for any purpose whatsoever, the vessel will be given a minimum of 30 minutes notice.

Weather: Gales can be expected from a North Westerly direction from October through May.

The above conditions are only for guidance and are not relevant to the safety of the vessel but to the safety of the buoy.

The Mooring Master shall have the authority to decide whether the ship should remain or vacate the buoy.

Climate: The climate in the Gulf of Suez is generally good. The visibility is usually excellent, with few dust storms and infrequent fog. There are a few rain squalls.

Winds: The general flow of the wind over this part of the Gulf of Suez is predominantly from the N.N.W. Winds are steadier in the Summer months (May/October) and almost nil from June to September. Gales can mainly be expected from a North-Westerly direction from October to May.

The maximum velocity is approximately 45 knots, whilst the mean wind speed is approximately 20 knots and is prevalent for some 98% of the year. There are occasional light Southerly winds.

Tides: The tidal range is between 4 ft. and 5 ft.

Sea Condition: The surface temperature of the sea ranges from 18°C. to 30°C., depending on the season.

Seas and swells are usually from the N.N.W. and wave height can reach 18 ft., but average is about 6 ft. During the Summer months (May/August) there are many days of 12 ft. – 15 ft. seas.

Currents are generally located in mid-channel and set North when the tide is rising in Suez, and South when the tide is falling. The rate is about 2.5 knots at Spring tides and 0.5 knots at Neap tides.

(B) LPG BERTH.

LOCATION: Zeit Bay is an open area and unsheltered.

LPG tankers will moor alongside a pier which is perpendicular to the shore. The pier length is 50 m. and water depth is 8 m.

Pier position: Lat. 27° 48.1' N.
Long. 33° 33.7' E.

There are 2 mooring buoys, located North and South of the pier and about 50 m. off pier's edges, to secure the tanker in its proper position while undertaking operations.

DOCUMENTS: Masters are requested to hand the following original documents to "SUCO" Mooring Master upon arrival. These documents will be returned when cargo documents are signed on departure.

Certificate of Registry.
Load Line Certificate.
Safety Certificates.

APPROACHES: *Approaching the Anchorage Area:* When an LPG vessel arrives at position Lat. 27° 50.2' N., Long. 33° 37.2' E., Master can alter vessel's course to 172°(T) for heading towards anchorage area, a sailing distance of about 2.9 nautical miles.

Below are 4 objects that can be seen by day or night that will be of assistance to vessels.

A. Two grounded ships on North of Saab's Ashrafi:
First position: Lat. 27° 49.5' N., Long. 33° 38.7' E.
Second position: Lat. 27° 49.3' N., Long. 33° 39.2' E.

B. On marine chart No. 2375, East Zeit Bay Terminal SBM flashing Mo(U) 15 sec.

C. Zeit Bay Terminal, located one mile S.S.E. of East Zeit Bay Terminal flashing Mo(D) 30.5 sec.

D. Lighthouse in position Lat. 27° 49.6' N., Long. 33° 34.9' E. Black and white colour with approximate height of 30 m., flashing white every 10 seconds.

Approaching Zeit Bay Channel and Shipping Lane: The vessel under her Master's command and Mooring Master's advice will navigate on a course of 155°(T) from anchorage area for about 1.5 miles.

When Ashrafi Lighthouse is observed abeam, course is to be altered to 195°(T). This course will lead toward entrance of Zeit Bay Channel. While passing through Zeit Bay Channel, true course to be 270°/090°.

Due to relationship between a vessel traversing the channel and the prevailing N.N.W.'ly wind and current, there is the possibility of a sideways drift.

When vessel arrives at the end of the West entrance of the channel, course will be altered to 335°(T). After sailing for about 2.5 miles, vessel will alter course to 310°(T) for about 1.1 miles.

Final approach to L.P.G. Pier will be on a course of 010°(T), for about 1.5 miles.

Use of anchor is forbidden from the time the vessel reaches the Western entrance of Zeit Bay until final approach to pier, because of pipelines.

Outside the shipping lane on the port side, there are 4 yellow platforms provided with navigation aids. Vessels navigating in the shipping lane will pass near Platform "C" at a safe distance.

Zeit Bay Channel and Shipping Lane: Channel is guaranteed to be 6.0 m. below L.A.T.

Channel length is about 2 nautical miles and about 200 m. width.

Channel is marked by lighted buoys, each equipped with a radar reflector. When ship is heading Westerly (270°(T)), there will be 3 green buoys on the starboard side and 3 red buoys on the port side.

The shipping lane between Ghanim and Ras Elbahar Islands is marked by red marker buoys, showing the end of shoals and reefs.

Buoys coordinates: (a) Lat. 27° 45' 39" N., Long. 33° 34' 10" E.
(b) Lat. 27° 46' 18" N., Long. 33° 33' 22" E.

All vessels should keep at least 30 m. from the buoys as a safety measure.

All marker buoys can be seen from any direction and in poor visibility, according to international specifications and regulations of port navigational aids.

PILOTAGE: SUCO Mooring Master will board the vessel in the LPG waiting area. Pilot ladder should be kept in good order, clean and should be adequate in length and strength.

When Mooring Master boards the vessel, he will advise the Master on the approaching, berthing operations and provide him with all necessary information.

Mooring Master will check all original Certificates and receive them from the Master.

ANCHORAGE: SUCO will make every effort to moor ships arriving according to the agreed schedule. If not berthing, vessel will drop anchor at the Anchorage Area in position: Lat. 27° 47.3' N., Long. 33° 37.6' E. This position is located South of the Crude Oil Carrier Waiting Area.

LPG anchorage area is half mile radius with 18 m. depth. The area is considered clear of obstructions.

Anchoring outside the waiting area or in Crude Oil Carrier Area is strictly prohibited.

RESTRICTIONS: Weather conditions may prevent berthing. This is the case when wind speed exceeds 18 m.p.h. The vessel will then remain in the anchorage area until weather improves.

The decision of acceptance is subject to Master's and SUCO Mooring Master's approval.

Berthing/unberthing during daylight hours only.

Also see "Berthing".

READINESS: Arrival time will be considered to be the time the vessel arrives at the Anchorage Area.

Notice of Readiness will be accepted when vessel is in all respects ready to receive her cargo, usually after loading arms are connected.

RADIO: Incoming tankers must advise ETA 48 hours prior to arrival.

VHF: Zeit Bay radio room maintains a 24 hour listening watch on Channel 12.

Fully detailed instructions for berthing, loading, etc., will be given to vessel's Master while approaching the waiting area.

TUGS: *Mooring Boats:* Two mooring line boats are available at all times, (500 h.p. and 1,000 h.p.) The vessel will be assisted by the mooring line boats, which are deemed essential for safe operations.

BERTHING: The pier is equipped with 2 positive hydraulic fenders, in addition there are 4 bitts for mooring ropes.

Vessel's ropes will be used, and handled by the pier crew.

When vessel is completely moored and secured alongside pier, vessel's heading will be 330°/150°, depending on which side is alongside.

Mooring and Unmooring: All berthing operations and passage of the channel inward and outward, should be executed with adequate daylight. Final approach shall be made from the direction which is consistent with a safe approach. Speed shall be subject to the prevailing forces (current, tide, stream).

Mooring line boats will assist during approach to prevent drifting on to the pier. Ship's anchor can be used in case of necessity.

When ship is finally moored and properly secured, ship's crew have to hang off the towing wires (fire towing wires), forward and aft, for line boats in case of emergency.

Jetty details:

Max. Size:	Max. draft: 5.0 m.
	Max. length: 108 m.
	Max. beam: No limit.
	Max. deadweight: 2,500 tons.
Product:	LPG (butane and propane mixtures).
Loading arms:	Two. Designed for connection to 6 in. Camlock quick coupling and 3 in. vapour return line.
Loading rates:	Up to 280 t.p.h.
Nitrogen:	Available for line purging only. Vessel's tank purging only with previous agreement.
Atmospheric vent:	Not available.
Flare line:	Yes.
Fire line:	2.5 in. hose available.

LOADING: Before loading commences the LPG Check List is to be completed. Emphasis is placed on close cooperation and good communications between mutually interested parties to achieve safe operations.

Operations Meeting and Inspection: The following will take place before any operations commence:

(a) Complete the Safety Check List.
(b) Complete the LPG safety and observed Check Lists.
(c) Discuss any additional precautions required.
(d) Ensure that tanks are in a fit condition to receive cargo without any hazards or contamination.
(e) Discuss and agree tanks inspection and samples required.
(f) Discuss and agree loading programme, including quantity, loading rate, pressure, temperature, connecting and disconnecting hoses, purging requirements and any other necessary requests.

Pressure, Temperature and Loading Rates for LPG:

Product: LPG.
Pressure: Up to 10.3 bar.
Temperature: Ambient to 60°C.
Loading rate: Up to 280 t.p.h.

Recommended maximum vapour concentration in ship's tanks before loading LPG:

Previous cargo in vessel	*Recommended Maximum Concentration*
Ammonia	100 ppm.
Ethylene oxide	30 ppm.
Propylene oxide	50 ppm.
Vinyl chloride	30 ppm.
Acrylonitride	30 ppm.

The above concentrations refer to vapour concentrations considered safe for venting. They do not infer that these concentrations are acceptable from a cargo contamination point of view.

Operational Procedures: Loading will not commence until all the safety checks have been carried out to the satisfaction of the Company.

I. The Company Operators will connect the shore boom/hose to the correct ship's manifold as indicated by the Master. Under no circumstances will a ship be connected to a vapour return/vent system if oxygen content of any tank is above 0.5% volume. If any of the ship's tanks are under vacuum the ship will be connected only if prior agreement has been reached.

The boom/hose will be purged to shore vent line and pressure tested to approximately 100 p.s.i. with nitrogen. The nitrogen will then be vented and the vent closed.

II. The Jetty Supervisor and Master will agree that systems are correctly lined up for operations to begin.

Loading must now commence slowly to avoid rapid pressure build up.

Ships must check that pull-off does not cause cargo temperature to drop below tank minimum operating temperature.

III. During loading the ship's tank pressures must be checked every 30 minutes and the information logged by the Jetty Operator. The Master must inform the Jetty Supervisor of any deviation from the agreed cargo handling plan.

IV. Company Operator will remain on the jetty at all times during loading.

V. A crew member with a good command of the English language must remain on deck at all times during loading.

VI. The ship must not shut valves against the shore pumps while loading.

VII. The ship must give at least 10 minutes' notice of the requirement to stop or start pumping, except under emergency conditions.

VIII. The Company Operators will clear the boom/hose with nitrogen. A watch on ship's pressure must be maintained during this time if hose contents are cleared to ship.

IX. The ship's valves will then be shut and Company Operators will purge and depressure the boom/hose.

X. The cargo loaded will be calculated from shore dips.

XI. The Jetty Supervisor will witness ship's dips/ullage and obtain from the Master the quantity loaded according to ship's figures. The quantity entered on cargo documents will be calculated from shore figures.

Cargo Handling Requirements:

I. Chemist's Certificate: The Company reserves the right to require an independent chemist to check the condition of ship's tanks or the quality of cargo before commencing to load. Reasonable notice of this requirement will be given.

II. Emergency shutdown systems: When ship is loading and it is necessary to manually initiate an emergency shutdown, the jetty system must be used.

III. Nitrogen: Nitrogen is available at approximately 7 bars and the berth nitrogen is available for line purging only.

IV. Portable instruments: The Company reserves the right to require intrinsically safe portable instruments to be placed on board ship during loading operations.

Reasonable notice of this requirement will be given.

V. Purging: Purging from ship's tanks to atmosphere is not permitted at the jetty. The Master must ensure the ship's tanks are in a fit condition to load cargo before arrival.

VI. Third party Independent Surveyor: The Company reserves the right to instruct a third party Independent Surveyor for the sampling and measuring of cargo. Reasonable notice of this requirement will be given.

VII. Vapour return line: Vapour return lines are provided to enable ships to return compatible vapour to storage tanks to be pressured up with vapour from storage. Oxygen content of returned vapour must be less than 0.3% volume.

Under no circumstances may nitrogen or other uncondensible gases be returned along the vapour line to storage tanks.

VIII. Vent line: Vent lines are provided to enable uncondensible vapours to be vented to flare system. Permission to use the flare system will only be granted if oxygen content of ship's tanks as determined by Company analysis is less than 0.5% volume.

The ship's intention to use the vent system must be clearly specified to the Jetty Supervisor at the pre-operations meeting.

Use of ship's mast vent is not permitted without Company Authorisation.

All operations shall, in general, be conducted in accordance with the requirements of the International Chamber of Shipping Tanker Safety Guides for Liquid Petroleum Gases and the International Maritime Dangerous Goods Code.

Communications on Loading Pier:

1. The jetty will be continuously manned by company personnel while a ship is loading. All normal communications should be passed through the Jetty Operator. In emergency situations, ship's personnel may use the jetty head telephone.
2. A responsible English speaking crew member must be on duty at all times and must remain on deck during loading/discharging.

FRESH WATER: Not available at berth.

FUEL: Not available at berth.

POLICE/AMBULANCE/FIRE: Fire 3333.

GENERAL: The following should be taken into consideration when vessel is alongside:

(a) Visiting is not permitted.
(b) Smoking and/or usage of naked lights is forbidden.

In emergency cases, a special permit is to be issued by authorised SUCO personnel to cover situation.

Vessel refusal: Owing to special hazards associated with LPG and the degree of expertise required during its handling and carriage, SUCO reserves the right to refuse to load any vessel where in the Mooring Master's opinion, the condition of the ship or the conduct of her operations give rise to concern over the safety of ship, personnel, company premises, or the environment.

Fire Fighting Vessel: There is a vessel fully equipped with fire fighting equipment. The vessel will be available at all times during operations. It has 4 monitors installed on the main and upper deck, each 12,200 cu.m.p.h. and able to reach 120 m. and a height of 45 m., foam compound is available.

Towing of Ships to Hazardous Waiting Area in Inner Bay: In the event of an emergency, Jetty Superintendent will immediately stop the loading operation and will inform SUCO Mooring Master whether to wait alongside or pull the ship away with the assistance of the mooring line boats.

The following position already surveyed, with a water depth of 8.0 m. and co-ordinates Lat. 27° 47.7' N., Long. 33° 32.2' E. is reserved as a waiting area.

Climate: The climate in the area is generally good and the visibility is usually excellent, except for occasional sandy storms during Summer time. Fog can be seen in Winter time. Occasional rain during Winter time.

Wind: The direction of the wind in Summer is from N. or N.W., occasionally wind reaches 40 m.p.h.

During Winter, average wind speed is about 15 m.p.h. – 20 m.p.h.

Southerly winds are encountered occasionally, but are usually light airs and accompanied by calm sea.

Tide, Current and Sea Swell: The tidal range is between 3 ft. and 4 ft.

Current reaches 2 knots to 3 knots.

Sea swell is from N. or N.W. and/or S. or S.E., with a maximum height of 4 ft.

AUTHORITY: Suez Oil Co. (SUCO), 21 Ahmed Orabi St., El Mohandessien, P.O. 2622, Cairo, A.R.E. *Tel:* 650723, 650544, 807922, 813554, 807854. *Telex:* 93455 SUCO UN or 92300 SUCO UN. *Cables:* Dexgulf. *FAX:* 3422734. *Contact:* A. Nassef, Planning and Follow-up Manager.

NOTES

Please also advise Shipping Guides Ltd.

El Salvador

ACAJUTLA: 13.35 N. 89.50 W. (See Plan)

PORT LIMITS: Not determined.

DOCUMENTS:

Consular Documents:

Only the requirement for visa of shipments of firearms and narcotics, which must be carried out at the port of embarkation, remains in force.

Prior to Arrival:

Arrival Notice:

24 hours before the vessel's arrival, notification is submitted in writing to the Autonomous Port Executive Committee (CEPA) on the time of arrival and the number of stevedores that will be needed. The CEPA serves as a kind of single shipping agency. In that capacity, it arranges for entrance and clearance of vessels, payment to other Official Agencies and draws up the port account for the ship's Agent.

Information on Cargo for the Port:

Prior to the vessel's arrival, the following documents are to be submitted to CEPA:

16 copies of the Cargo Manifest.
1 set of the Shipper's Manifest.
1 Mail Guide.
4 copies of the cargo distribution for each hold.
1 Stowage Plan.
1 List of Container Contents.
14 to 16 Cargo Tally Books, depending on the number of stevedores.

If this information is not available before the vessel's arrival, it may be submitted at the time of the reception visit (boarding party).

On Arrival:

Type of Documents	*Number and Distribution of Documents*				
Basic Forms	*Captain of Port*	*Customs*	*Plant Health*	*CEPA*	*Total*
General Declaration	1	1	1	1	4
Cargo Manifest	1	2	1	16	20
Crew List	2	1	1	1	5
Passenger List	2	1	1	1	5
Ship's Stores List	1	1	1	1	4
Crew's Effects Declaration	–	–	–	–	–
Maritime Health Declaration	1	–	–	–	1
Mail List	–	–	–	1	1
Additional Documents:					
Clearance from Last Port	1	–	–	–	1
Consular Manifest	–	1	–	–	1
Set of Bills of Lading	–	–	–	1	1
Cargo Distribution	–	–	–	4	4
Contents of Containers	–	–	–	1	1
Stowage Plan	–	–	–	1	1
Cargo Tally Books	–	–	–	14/16	14/16

Prior to Departure: The CEPA draws up the clearance permit and has it signed by Customs before submitting it to the Captain of the Port. When loading and unloading is completed, a representative of the Captain of the Port delivers the clearance permit on board.

PILOTAGE: Compulsory. *(a)* Vessels should apply for Pilots calling VHF radio station through Channel 27 which operates on 157.36 MHz to receive and 161.95 MHz to transmit. Channel 16 operates on 156.8 MHz ships calling and safety.

Notice of ETA must be made to Port Manager not less than 48 hours before arrival at the port limits. Confirmation of ETA is required 10 hours before arrival. VHF radio station is on service 24 hours a day, so vessels may call at any time. *(b)* Pilot boards vessel between one or two km. before arrival at the port limit; where vessels should stay with engine running, Pilot ladder ready. Gangways should be raised and folded. Derricks and cranes inboard and anchors ready for berthing. Pilot is equipped with walkie talkie for communicating with tugs. *(c)* Inform radio station if cargo manifests are carried on board or if they were air mailed to vessel's Agent.

ANCHORAGE: There is no specific anchorage area. Water depth is over 15 m. Bottom nature: Sand laying over volcanic tuff.

RESTRICTIONS: Vessels can berth any time day or night. Main engines should always be on short notice, due to swell as mooring lines often break. Vessels are advised to make use of extra shore mooring lines which may be provided if Agent makes request. The least depth in the berths is 30 ft.

MAX. SIZE: "C" Pier (breakwater berth) has 12 m. of water alongside and can berth vessels of up to 40,000 d.w.t. It is well fendered. Containerised, general and bulk cargoes can be handled at this pier.

Also see "Tankers".

HEALTH: On arrival, vessel should always fly a yellow flag. If there is any suspicion of illness aboard, Master has to inform by radio 24 hours in advance, indicating nature of disease and all details.

Free Pratique will not be granted to vessels at anchor. It will be granted to tankers discharging at buoys and in emergency cases.

RADIO: Advise ETA to Agents at San Salvador 96, 48, 24 and 12 hours before arrival. Telex available at Port Facilities. Area Code 301. Telex No. 27000. Fax: 524001, 524068.

VHF: There is no special time for calling. VHF service is open 24 hours a day. Contact through Channels 16 and 27.

Business operations: Channel 27 receives on 157.36 MHz and transmits at 161.95 MHz.

Channel 16 for ship calling and safety.

RADAR: There is no port radar service.

TUGS: Tug lines are not used. If required, the tug's line will be used and the charge is included in the docking and undocking services. There are four tugs available with the following capacities: 800, 1,200, 1,400 and 1,800 h.p. Tugs meet vessels off the docks at all times.

SPECIALISED CARGO HANDLING FACILITIES: Pier "A" with liquid cargo facilities for vegetable, animal and mineral oil, as well as chemical liquids.

BERTHING: Vessels can berth in safety at any time during day or night.

In the case of cargo vessels it should be stressed that the swell experienced alongside is sometimes a serious problem and Masters would be well advised to make use of the shore lines offered on hire to save undue wear and tear on their moorings.

Berth	*Max. Draft* (m.)	*Depth at MLW* (m.)	*Vessel Length* (m.)
A–1	9	10	140
A–2	10	12	160
B–3	9	10	140
B–4	10	12	195
B–5	9	10	180
B–6	10	10	180
C–7	12	13.7	128
C–8	12	13.7	128

There are three piers. The first one "A" consists of a breakwater mole 760 m. long. The access mole in its first section from land side to pier "B" has a width of 10.50 m. and is 260 m. long. The second section from Pier "B" to Pier "A" has a width of 7 m. and is 180 m. long. The overall length of access is 450 m.

Pier "A" is 37 m. wide and 310 m. long, it consists of a mooring dock with two berths called "A–1" and "A–2", for general bulk and liquid cargoes and has a transit shed of 4,500 sq.m. At the end of Pier "A" is constructed another breakwater section in a N.W. direction, in line with the existing Pier "A", connecting this pier with the Pier "C" with a length of 35 m. Then direction of Pier "C" is changed to the North, with an angle of 30° and extended over 270 m. with a width of 18 m. This breakwater offers two berths, "C–7" and "C–8", capable of handling containerised, general and bulk cargoes.

The third pier called "B", with four berths is 348 m. long and has a free width of 28 m. This pier handles containerised (max. gross weight 20 tonnes), general and bulk cargoes.

CRANES: Two semi-portic cranes of 3 tonnes capacity are available at Pier "A". At Pier "B" there is a 25 tonnes crane for general bulk and containerised cargoes. Pier "B", berths "B–5" and "B–6" as well as Pier "C", berths "C–7" and "C–8", have no cranes available and vessels are required to use their own cranes or derricks.

BULK CARGO FACILITIES: For berthing length of quays and max. permissible draft in salt water at MLW see "Berthing".

Cargoes handled: Importation: Grains, fertiliser, soda ash, phosphoric rock sulphur, soya flour, etc.

Exportation: Raw sugar cane, cotton seed meal and flour, grains, etc.

Berth Equipment: 25 tonne cranes which operates for imports at Berth "B–3" and "B–4" and unloads vessels with clamshells of different capacities ranging from 5 cu.m. to 9 cu.m., and feeds the conveyor systems through a hopper of 85 tonnes. Maximum height of discharging gear above MWL: 19 m.

Conveyor System: Two belt conveyor systems exist for importation and exportation. Both systems interconnected with port warehouses as well as private silos and warehouse facilities. Loading/discharge rates: 500 tonnes/p.h. (Rates depend on grain thickness).

BRIDGES: None.

STEVEDORES: ETA advice required to arrange gangs, should be made 12 hours before vessel's arrival. A line handling gang is always standing by and also attends gangways without charge. Stevedores are available for nightwork.

Average load and discharge rates:

General cargo	35 tonnes/p.h.
Bulk cargo	190 tonnes/p.h.
Liquid cargo	110 tonnes/p.h.

MEDICAL: There are doctors in the port who attend normal cases and specialists and hospitals in Sonsonate City (20 km. by road) and at San Salvador, capital of the Republic, 85 km. from the port.

TANKERS: Mooring at RASA (Refineria de Acajutla Sociedad Anonima). This refinery is the property of Esso Standard Oil and Shell Petroleum Co.

Buoy berth: Depth of water is about 15 m. Diameter of buoy hoses: 2×25 cm. for clean products and one of 75 cm. for crude and fuel oil. There are no facilities for residue discharge.

DENSITY: 1027.

FRESH WATER: Delivered by hoses. Rate approximately 40 t.p.h., cost U.S.$1.60 per metric ton.

FUEL: Available from private companies.

FIRE PRECAUTIONS: Inspection of hoses; no smoking; not allowed to weld or light any kind of fire; isolation of the place of loading and discharging operations; fire equipment to be ready to use at all times.

CONSULS: Most countries have Consular representatives in San Salvador City, Capital City, at 85 km. from the port.

REPAIRS: Possible to make minor engine and deck repairs. Other repairs can be carried out at Capital City, San Salvador. Any repairs that will delay sailing of vessel cannot be made without previous and specific authorisation of the Port Manager.

DRY DOCKS: None.

SURVEYORS: At the port there is P & I representative and surveyor and independent marine surveyors. G.L. Surveyor at San Salvador City.

GANGWAY/DECK WATCHMEN: Gangway is watched by Customs Police and marine members without charge. Deck watchmen available on request.

HATCHES: The opening and closing of hatches is carried out by stevedore gangs, and its costs are included in the loading or discharging tariff rate. Whenever vessel's Master decides to carry out these operations with his crew, a stand-by charge will be debited.

CUSTOMS ALLOWANCES: Customs only allow tobacco for personal use to be taken out of the vessel. Not allowed to take any wine or spirits out of the vessel.

CARGO GEAR: Ship's gear has to be used on request. Semi-portic cranes for general cargo may be used at Berths "A-1" and "A-2". Heavy lift crane at Berths "B-3" and "B-4". This crane is also used to unload bulk cargoes to a conveyor belt system.

REPATRIATION: There are facilities for repatriation, it is also possible to effect crew changes.

AIRPORT: The "El Salvador International Airport" is 134 km. from the port (by road), which is served by regular airlines.

TIME: No alterations in time during the year; local time is GMT minus 6 hours.

HOLIDAYS: The port has the following official holidays:

(*)1st January; 2nd February; (b) Wednesday, Thursday, Friday and Saturday before Easter Sunday; (*)1st May; (c) 10th May; 3rd and 6th August; 15th September; (*)2nd November; (a) 24th; (*)25th and (a) 31st December.

(*) No work.
(a) Port operations cease at 0700 hrs.
(b) Port operations cease at 1700 hrs. on Thursday until 2300 hrs. on Saturday (Easter Week).
(c) 10th of May port operates only from 0700 hrs. until 1500 hrs.

POLICE/AMBULANCE/FIRE: National Police (Sonsonate) Tel: 51-0838; Ambulance (Sonsonate) Tel: 51-0374 – 51-0200; Fire Department (CEPA, Acajutla) Tel: 52-3200. Red Cross ambulance also available.

TELEPHONES: No possibilities of installing telephones aboard, but there are public telephones in the port and calls can also be made through the CEPA Operator.

SERVICES: No facilities to discharge tank-washings. No equipment for tank cleaning or facilities to adjust compasses. Minor electronic repairs at Agent's request.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Port Authority issue cards for going ashore in Acajutla. Passports required when going outside Acajutla.

GARBAGE DISPOSAL: Ship's agent will arrange collection by truck as required. Charges for ship's account.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Colones (C).

REGULATIONS: Port regulations only.

DELAYS: Normally there are no delays to be expected during berthing, loading, discharging or bunkering. Bunkering operates at a slower rate than normal loading and discharging.

GENERAL: Quarantine Authorities pay strict attention to garbage and any residue must be kept aboard properly covered. It is forbidden to drop garbage or any residue in the sea whilst vessel is in the port area.

In the case of swell, special hawsers and wires can be requested on hire at U.S.$ 1.50 on every 1,000 g.r.t. per day or part of a day.

SHIPMASTER'S REPORT: 1979 (Updated 1992).

Port Limits: No port limits stated.

Documents:

Clearance from last port.
5 Crew Lists.
4 Voyage Memorandums.
4 Store Lists.
4 Passenger Lists, (negative required).
1 Ship's Health Declaration.

Manifests prepared by the Agent:

2 copies for the Customs.
1 copy for the Port Captain.
1 copy for Quarantine Inspector.
16 copies for the Stevedores.

Customs seal the spirits and tobacco, but not the beer. No private declarations required.

Boarding party of about 8 persons board the vessel with the Agent who will attend to documents and other needs of Officials.

Pilotage: Pilotage is compulsory, Pilot boards vessel up to 3 miles from "A" Pier.

Restrictions: Vessels can berth any time day or night, main engines should always be on short notice, due to swell at berths, as moorings often part. Vessels are advised to make use of extra shore moorings provided, these can be requested via the Agent.

The least depth at the berths is 30 ft.

Max. Size: "C" Pier (outer berth) has 46 ft. of water alongside and can take vessels of up to 40,000 d.w.t., it is well fendered. General cargo and liquid cargo can be handled at this berth.

Health: Standard Health message to be sent to Agents who will make the necessary arrangements, every vessel coming in should fly the "Q" flag, this is to avoid fines.

Radio: Advise ETA to Agents at San Salvador 96, 48, 24 and 12 hours before arrival. For Telex messages use "WLO" Mobile. For W/T messages use "KSF" San Francisco.

For Port Control use VHF Channels 16 and 27. (Range 40 miles). Hours of operation 24 hours. Call sign: "Acajutla Tower" also R/T on 2182, 2163 and 2169 kHz. Tugs work on 2182, 2163, 2196, 2638 and 2738 kHz.

Radar: There is no Port Radar service.

Tugs: There are three tugs available with the following power: 800 h.p., 1,200 h.p. and 1,800 h.p. Tug's lines are used at no extra charge.

Berthing:

Pier	*Berth* No.	*Depth* (m.)	*Remarks*
"A"	1	9.0	General Cargo, 2×3 ton cranes. Liquid cargo (Berth No. 1)
	2	10.0	
"B"	3	9.1	General cargo, bulk cargo. 25 ton crane on Pier "B".
	4	10.0	
	5	9.1	
	6	10.0	
"C"	7	14.0	General cargo, liquid cargo. No cranes available.
	8	14.0	

Stevedores: Arranged by the Agents, and based on information passed in ETA advise, vessels arriving from New Zealand may well be at the port before the cargo plans arrive. Stevedores work round the clock.

Medical: Doctor available but nearest hospital 13 miles away, Doctor will board the vessel, advise the Agents before arrival.

Tankers: One mooring buoy for tankers.

Density: Observed density 1025.

Fresh Water: Available at about 20 t.p.h.

Fuel: Only available in emergency.

Provisions: Limited quantity available, 24 hours notice required.

Fire Precautions: Tugs have fire fighting equipment on board. As no phones on board, contact can be made on VHF with "Acajutla Tower".

Consuls: British Vice-Consul at Sansonate 14 miles away from the port.

Repairs: Minor repairs only possible.

Dry Dock: No dry dock available.

Surveyors: Arie Van-Helden (Lloyd's Agents only), San Miguel, Cutuco, La Union.

Gangway/Deck Watchmen: Shore gangway available and recommended due to swell at the port, full deck patrol necessary during night time.

Hatches: For safety it is better to open and close the hatches with the ship's crew, which is allowed at this port.

Cargo Gear: Ship's gear and shore cranes used depending on which berth the vessel at.

There are 24 Reefer points in the stacking yard. There are no tower units ashore. Containers can be landed on flats. Forklift trucks are well maintained.

Repatriation: Not advisable from this port.

Airport: El Salvador International Airport is 25 minutes from San Salvador. Daily flights to U.S.A. and other countries.

Holidays: December 25th, January 1st, also Special Holiday for this region being August 5th and 6th. (From 1500 hrs. 5th to 1900 hrs. on the 6th).

Police/Ambulance/Fire: This is covered by the Agent who remains on board all the time the vessel is in port, the Agent will require a room to live in whilst he remains on board.

Services: No special services available.

Shore Leave: Permitted.

Identification Cards: Not required, but Crew Members are advised to carry some means of identification.

Regulations: No unusual regulations.

Delays: Vessels have to leave the berth due to swell, this decision is left to the Master of the ship.

General: Vessels alongside the berth, move quite a lot, but the shore fenders are well maintained. Stevedores will unpack containers on board the vessel.

SHIPMASTER'S REPORT: August 1993.

Charts: B.A. 660 and 1049. Note: See NP 8 (1.11) for remarks on chart limitations.

Pilot Books: NP 8. (4.64, 4.67).

Approaches: Cement factory building is a conspicuous white structure visible from a great distance. Tanks to the South also conspicuous. Contact made at 45 miles on VHF Channels 16 and 10. Information promptly given.

Berthing: Pilot boarded 1 mile West of breakwater end from slow but well maintained launch with black hull, white and silver deckhouse. Ship was scheduled to berth at Berth No. 1. Approach taken very carefully, as there were ships at Berths No. 2 and 4, as well as one on the newer breakwater extension, and a swell was evident as we approached the berth.

Two tugs assisted, well handled, but of moderate power.

Ship was held in position as moorings were run and set up, initially 5 and 3 both ends.

Shore gangway was rigged immediately.

Clearance: Quick and without problems.

Swell: The swell was a constant problem. First line parted within an hour of berthing, and things became rapidly worse. Four shore moorings were requested on arrival, but because of other ship movements, it was some 5 hours before they could be set up. In the meantime, another seven breakages of mooring lines took place, and it became necessary to recall the Pilot and tugs to re-secure the ship. Order was eventually restored, but as the ship was alongside for 4 days, with serious surging all the time, chafing was a serious problem, and moorings had to be constantly attended and repaired. Shore moorings parted at regular intervals, but were replaced immediately by the shore gang who were very good. Recommendations to use shore moorings should be taken seriously, even if it appears that there is no swell, and should be arranged beforehand and set up on arrival. Cost is U.S.$ 15.00 per rope per day. A sensible order would be for one spring and one head/stern line each end. Moorings consist of heavy wires shackled onto substantial nylon or polyprop tails.

Harbours: Artificial structure, the original part (Pier A and the causeway connecting it to shore) made of large circular cross-section steel cased caissons filled with concrete and rubble. In the section between Pier A and Pier B, one of the walls of the caissons has failed, and the filling has been washed away by the constant swell breaking on the seaward side. This was not detected until the road collapsed into the caisson, and now there is a Bailey Bridge over the defective road surface, and the seaward side is being augmented with a rock and concrete protection.

The pier extension, to the North of the Berth No. 2, is an all-concrete construction. Pier B is an open pier with conveyor belt cargo handling gear. Berths are well fendered.

Lines for liquid cargo are built into Pier A and its extension. They include lines for diesel and fuel oil, edible oils and a clean line for chemicals. This was being used for receiving a cargo of alcohol and butanol.

One line is marked "Gas under pressure". I have not yet found out where this connection is, but there is a portable Chicksan-type loading arm on a wheeled trolley parked at the North end of the pier, presumably for gas.

Cargo Discharge: Our cargo of diesel oil was discharged through 1×8 in. flexible hose. Tanks were 2.5 km. away. Shore line was a mixture of different sized pipelines, the smallest being 6 in., so discharge was slow, 200 cu.m./hr. with a manifold pressure of 7.5 kg./sq.cm. 250 tonnes of fresh water was loaded into a stripped tank for providing a water plug at the end of discharge.

General: A local travel firm provided an all-day bus tour at reasonable cost for seven of the crew, which was enjoyed.

Fresh fish is plentiful and prices are reasonable. Prawns and lobsters can be obtained.

Security was no problem, and all shore people dealt with were civilised and pleasant.

Old pier is destroyed – only a few piles remain above water.

There appears to be a small stone breakwater just North of the lighthouse.

SHIPMASTER'S REPORT: September 1994.

The "Chubasco" season runs from about May to October, and is a local, very violent wind/squall which can attain 80 knots. It blows up with little warning in 15-20 minutes, and apparently rarely lasts for much more than 30 minutes. It is accompanied by heavy rain and extensive lightning. The locals are extremely wary of it, and we were required to maintain full radar watches by a deck officer for 24 hours a day. A Pilot boarded the vessel at evening twilight and departed after breakfast. Additionally, a Loading Master was on duty at all times, maintaining walkie-talkie communications with the shore. When the O.O.W. detected a squall approaching by radar, Pilot and Loading Master were informed. Discharging ceased when wind speed reached 8 knots, and hose was disconnected if wind speed reached 15 knots. A squad of 5 labourers remained on board for this period.

Due to the ferocity and abrupt arrival of "Chubascos", mooring ropes must be used as in an emergency, they may have to be cast-off to enable the vessel to vacate the berth rapidly. Mooring wires are not permitted. 3 tugs available for mooring.

Minimum depth of water (by echo-sounder) at berth and on approach is 15.0 m. There was a heavy swell running the whole time.

Due to a recent accident (June 1994), discharging was by way of 1×8 in. hose on the port side, rate about 5,000 bbls./hr., the normal crude line being damaged.

Facilities exist for repatriation.

Circular Letter:

To: Master.

From: Refineria Petrolera Acajutla, S.A. de C.V., RASA Marine Terminal, Acajutla.

Subject: Precautions against bad weather conditions at Acajutla, during "Chubasco" Season.

Dear Sir:

We would like to ensure the safe and efficient turnaround of your vessel at our Marine Terminal. There are no weather forecast facilities at or near the Acajutla Port to provide you/us with this important service. However, a local storm called "Chubasco" requires special precautions to be taken, in order to avoid the possibility of damage to the ship or to RASA's all-buoy Marine Terminal facilities, or the Ecology, and related clean-up costs.

As a result of past experience of sudden violent rainstorms called "Chubascos", which are highly likely to reach your berthing area during the rainy season, from May to October, we strongly recommend the following precautionary measures be strictly followed during your tanker operation while at our Marine Terminal.

1. Request the Pilot from the local Port Authority to remain onboard your vessel at all times during the "Chubasco" season.
2. A radar weather watch should be maintained continuously from about 2 hours before sundown to sunrise, in order to detect and plot "Chubascos".
3. During the same period, your deck crew should be prepared to run out the mooring lines off the winches or bitts, and leave the berth without tugs or mooring launches. Your engines should be ready for immediate use.
4. In case of emergency evacuation of berth unassisted by tugs, we suggest the use of your starboard anchor to aid you in leaving the berth.
5. For the safety of our Terminal underwater facilities, it is of utmost importance to have the ship moorings in good condition and well tended at all times.
6. If a storm, that may be a "Chubasco", appears at a distance of 25 miles, all cargo operations should be stopped. Our Loading Master will drop hoses as is required in his procedures.
7. In such an event, all personnel involved should be immediately advised of the change in weather conditions so that emergency procedures can be timely put into effect. RASA's shore personnel must be advised by radio immediately.
8. Radio communications should be maintained open with the Refinery Process Control Room at all times. "Chubascos" are known to interfere with radio communications. Timely advice is most important for our shore personnel to co-ordinate emergency activities.
9. In order to avoid the possibility of damage to the ship or to RASA's all-buoy Marine Terminal facilities, we hereby request you maintain a *minimum midships draft of 20 ft. at all times* during your berthing and crude discharge.
10. Kindly confirm with our Loading Master the time at which you will commence your ballasting operation. Also advise our Loading Master if the vessel cannot comply with any of the above precautionary measures.

Please sign the attached copy and return it to our representative in acknowledgement of the contents of this letter.

Signed: Process Manager.

AUTHORITY: Comision Ejecutiva Portuaria Autonoma (CEPA), Boulevard de Los Heroes, Torre Roble, Apartado Postal 2667, San Salvador, El Salvador. *Tel:* (503) 241133, Acajutla (503) 523200 or 523145 directly to the Port Manager. *Telex:* (301) 20194, Acajutla 27000. *FAX:* (503) 524101, (503) 524068. *Cables:* CEPA. *Contact:* Francisco Eduardo Portillo, Port Manager, Acajutla.

LA LIBERTAD: 13.29 N. 89.19 W.

CLOSED TO CARGO VESSELS SINCE MAY 1976.

LA UNION (Cutuco): 13.20 N. 87.50 W. (See Plan)

DOCUMENTS: *Consular Documents:*

Only the requirement for visa of shipments of firearms and narcotics, which must be carried out at the port of embarkation, remains in force.

Prior to Arrival:

Arrival Notice:

24 hours before the vessel's arrival, notification is submitted in writing to the Autonomous Port Executive Committee (CEPA) on the time of arrival and the number of stevedores that will be needed. The CEPA serves as a kind of single shipping agency. In that capacity, it arranges for entrance and clearance of vessels, payment to other Official Agencies and draws up the port account for the ship's Agent.

Information on Cargo for the Port:

Prior to the vessel's arrival, the following documents are to be submitted to CEPA:

16 copies of the Cargo Manifest.

1 set of the Shipper's Manifest.

1 Mail Guide.

4 copies of the cargo distribution for each hold.

1 Stowage Plan.

1 List of Container Contents.

14 to 16 Cargo Tally Books, depending on the number of stevedores.

If this information is not available before the vessel's arrival, it may be submitted at the time of the reception visit (boarding party).

On Arrival:

Type of Documents	*Number and Distribution of Documents*				
Basic Forms	*Captain of Port*	*Customs*	*Plant Health*	*CEPA*	*Total*
General Declaration	1	1	1	1	4
Cargo Manifest	1	2	1	16	20
Crew List	2	1	1	1	5
Passenger List	2	1	1	1	5
Ship's Stores List	1	1	1	1	4
Crew's Effects Declaration	–	–	–	–	–
Maritime Health Declaration	1	–	–	–	1
Mail List	–	–	–	1	1
Additional Documents:					
Clearance from Last Port	1	–	–	–	1
Consular Manifest	–	1	–	–	1
Set of Bills of Lading	–	–	–	1	1
Cargo Distribution	–	–	–	4	4
Contents of Containers	–	–	–	1	1
Stowage Plan	–	–	–	1	1
Cargo Tally Books	–	–	–	14/16	14/16

Prior to Departure: The CEPA draws up the clearance permit and has it signed by Customs before submitting it to the Captain of the Port. When loading and unloading is completed, a representative of the Captain of the Port delivers the clearance permit on board.

PILOTAGE: Pilot is on the staff of FENADESAL and can be requested from Port Manager at Cutuco.

ANCHORAGE: La Union Bay – up to 34 ft. Approximately 14 Class II and a large number of Class III anchorage berths are available in the harbour. 5 Class II berths are in the vicinity of the pier in depths of 33 ft. to 30 ft., and approximately 9 more, in depths of 70 ft. to 30 ft., are just Westward of Isla Zacatillo. The first area has a mud bottom; the second is sandy and rocky. The large number of Class III berths are in an area Northward of the pier and in the area between the 2 anchorages providing Class II berths. The least depth in each of the areas is 25 ft. A large number of relatively unsheltered anchorage berths of all classes are available outside the harbour in the Gulf of Fonseca.

RESTRICTIONS: Enter any time – preferable on flood tide with draft over 24 ft.

MAX. SIZE: Largest vessel that can be accommodated in harbour would occupy an anchorage berth with a min. depth of 43 ft. and a diameter of 3,300 ft. Largest vessel that can be accommodated alongside wharf would occupy a berth with least depth of 25 ft.; length is not a limiting factor, although a max. 550 ft. is recommended due to strong currents, 3 – 4 knots, and pressure on part of any vessel extending for any greater distance beyond length of wharf.

HEALTH: Disease should be reported. Pratique necessary on each occasion.

RADIO: Direct to Agents or Fenadesal, Telex: 20-194, Area 301, San Salvador. Fax: 71-5650.

TUGS: No tugs required.

BERTHING: Berthing usually carried out on slack tides due to cross currents, up to 3 – 4 knots. The estimated military port capacity is 1,800 tons of general cargo per day. Port can accommodate 2 standard-type ocean-going cargo vessels, and possibly one alternative class T/C (small ocean-type tanker under favourable conditions) alongside berths, and approximately 14 ocean-type cargo vessels, and a large number of Class III (coaster-type cargo vessels) at anchorage berths. Ro/Ro pier, depth alongside 16 ft. LW.

STEVEDORES: Prior advice preferable. Stevedore force consists of 9 gangs of up to 16 men per gang for on-board work. Similar gangs are available on pier, and up to 300 labourers, crane and fork-lift operators comprise shore gangs.

MEDICAL: Services available – no special restrictions.

TANKERS: Drafts 25/34 ft. fore and aft. Tankers of up to 550 ft. in length can be accommodated at either side of pier, where adequate connections of 6 in. – 8 in. and 10 in. pipelines are located. Largest vessel that can be accommodated alongside would occupy a berth with a least depth of 25 ft.; length is not a limiting factor, except as noted previously.

FRESH WATER: Four 2 in. connections on each side; volume estimated at 10 t.p.h

FUEL: Bunkers and diesel – can be delivered when berthed.

CONSULS: Only Honduras is represented.

REPAIRS: No facilities.

GANGWAY/DECK WATCHMEN: Not required – National Marines on guard.

OPENING/CLOSING HATCHES: Carried out by stevedores.

CUSTOMS ALLOWANCES: Not controlled, but restricted ashore.

REPATRIATION: Can be arranged.

AIRPORT: "El Salvador", 102 miles away in the "Comalapa's Valley".

TIME: GMT minus 6 hours. No alterations.

HOLIDAYS: Easter Thursday, Good Friday. Port not worked only on those dates.

POLICE/AMBULANCE/FIRE: In La Union – Close to the Port.

TELEPHONES: Available.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Passes for leaving ship to have Master's signature.

GARBAGE DISPOSAL: Garbage disposal not available. Garbage to be retained in drums on board.

WASTE OIL DISPOSAL: Service not available.

SEAMAN'S CLUBS: None.

CURRENCY: Local currencies are "Legos", "La Moneda", "Argoz" and "Corfinge".

AUTHORITY: Ferrocarriles Nacionales de El Salvador (FENADESAL), Cutuco-La Union, El Salvador. *Tel:* 64-4200, 64-4055. *Telex:* (301) 20-194. *Cables:* Fenadesal. *FAX:* 64-4055. *Contact:* Rafael Paniagua Santos, Port Manager.

Ferrocarriles Nacionales de El Salvador, Apartado Postal 2292, San Salvador, El Salvador C.A. *Tel:* 715632, 22-9000. *Telex:* (301) 20-194. *FAX:* 24-13-55. *Cables:* Fenadesal.

Comision Ejecutiva Portuaria Autonoma, Apartado Postal 2667, San Salvador, El Salvador. *Tel:* 98-5477. *Telex:* 20194. *FAX:* 24-13-55. *Cables:* Cepa. *Contact:* Arturo German Martinez, Manager.

NOTES

Please also advise Shipping Guides Ltd.

Equatorial Guinea

GENERAL

PIRACY/TERRITORIAL WATERS: *Shipmaster's Report:* Whilst steaming from Lagos towards Douala (passing North of the island Fernando Poo which is considered the normal route) the vessel was hailed at 0640 GMT by Equatorial Guinean Patrol Boat "LP 009" with two 20 mm. double automatic guns pointed at vessel. The vessel's position was Lat. 03° 48.4' N., Long. 09° 03.0' E. (about 10 nautical miles from the island).

An Officer with the rank of Lieutenant and 2 men boarded the vessel. They claimed that the vessel had violated Equatorial Guinean territorial waters having passed inside the 12 nautical mile limit. The Officer wished to take a crew member ashore to prove that the vessel had been boarded, but when the vessel's Master protested, the Officer claimed cases of whisky as proof. Having no alternative, the vessel's Master was forced to accept and the patrol boat departed 0745 GMT.

BATA (Including Puerto Nuevo): 01.52 N. 09.46 E.

(See Plan)

(A) BATA
(B) PUERTO NUEVO

(A) BATA

SHIPMASTER'S REPORT:

Roadstead with single point mooring buoy connected to the shore with 6 in. pipeline, 6 in. hose: (everything in a deplorable state). No tugs or Pilots available. Master should have local knowledge when approaching berth in hours of darkness. Vessels are moored with 2 anchors forward and 2 ship's lines (plus two 8 in. shore lines) to the single point mooring buoy. 5 lengths of 15 m. hose available. Preferable stern discharge connection to be used. Max. pressure: 4 kg./sq.cm. All grades through this line. Linewash of water in between the different grades. There is rubber ball for cargo separation.

ADVICE: 1. In view of the deplorable state of buoy, lines and hose, Master should be very careful in mooring his vessel – which has to be done by himself – in order not to damage same.

2. Master should have ship's motorboat ready to run ship's lines to the buoy because motor launch, which is supposed to do this is very old and liable to breakdown at a crucial moment.

3. Anchors should be dropped in a position S.W. of the buoy in order to stay well clear of the unmarked wrecks, in good holding ground with 4 to 5 lengths of chain.

4. Tidal currents move the ship relative to the mooring buoy – so it is necessary to heave anchors tight – bearing in mind that the construction, etc. of the buoy is very weak.

5. The buoy carries a light but the light does not work. Anyway mooring after dark is not advisable.

DOCUMENTS: Only a small Customs Post available here:
1 Cargo Manifest.
1 Store Manifest.
1 Crew List.

CUSTOMS ALLOWANCES: No restrictions – no sealing of bonded stores.

SHORE LEAVE: Allowed by ship's boat.

RADIO COMMUNICATION: None. Though there are officially coast radio stations in this country, they do not operate on schedule. Telegrams should be sent via coastal radio stations of other countries. No VHF.

Also see "Purser's Report", Malabo.

SUPERINTENDENT'S REPORT: August 1993.

Vessels over 150 m. LOA should utilise the outer buoy.

Vessels can berth port or starboard side to, but should proceed slowly and carefully. The Pilot only speaks Spanish.

The anchor (7 shackles) and mooring buoy are used when berthing. Prepare 2 mooring lines (minimum length 150 m.) aft to run to the buoy.

After dropping the anchor, the mooring boat (launch) runs lines to the buoy. The launch then runs a line aft to the shore. When line is ashore, slack lines on buoy and anchor chain until vessel is 3.0 m. from the wharf.

Final moorings consist of 3 head/stern lines and 2 breast lines fore and aft.

No fenders available.

Shore gangway used.

Swell makes vessel roll up to 4°, especially in late afternoon.

(B) PUERTO NUEVO: 01.49 N. 09.44 E.

Situated about 1 mile South of the mouth of the Rio Ekuku. This is quite a new jetty – developed in 1973 – shaped like the letter "L", where the long leg of this "L" is connected to the shore and 4 dry cargo vessels can moor alongside the short leg in about 14 m. of water. Every vessel has on her off-shore side 2 mooring buoys to assist in mooring and unmooring. No tugs available. Though it is stated that a Pilot is available, this information should be treated as unreliable. The pier is used for the discharge of general cargo and the loading of logs and sawn wood. According to information received this jetty will be made available to tankers for discharge of oil products.

DOCUMENTS: See "Part – A". This new jetty falls under the jurisdiction of Bata Authorities.

RADIO COMMUNICATION: See "Part – A".

SHIPMASTER'S REPORT: October 1979.

Documents:

Crew List	6 copies	(vessel's care)
Passenger List	6 copies	(vessel's care)
List of Ports of Call	6 copies	(vessel's care)
Crew Declaration	6 copies	(vessel's care)
Stores List	6 copies	(vessel's care)
Cargo Declaration	2 copies	(vessel's care)
Arms & Ammunition	2 copies	(vessel's care)
List of Narcotics	2 copies	(vessel's care)
List of Animals on Board	2 copies	(vessel's care)
Vaccination List	2 copies	(vessel's care)
Cargo Manifest for discharge cargo	6 copies	(vessel's and loading port Agent's care)

Authorities boarded the ship on the Roads.

Pilotage: Pilot is available, native, has knowledge of local currents and winds, otherwise is not skilled. Speaks only Spanish.

Anchorage: Half a mile West of the breakwater or further in depths from 12 to 25 m., sand, the holding ground is good but swell can be heavy.

Restrictions: Berthing possible only during daylight.

Berthing: The jetty can accommodate four ships, two on each side but at present all mooring buoys are removed, except Buoy No. 8. For this reason only ships equipped with stern anchor could be moored outside, to keep herself (with anchor) clear from the breakwater owing to swell, current and wind from S.W. Also the inner berth is not protected against the swell, because the breakwater was constructed of concrete piles. According to information the mooring buoys will be replaced in near future.

Loading/discharging with ship's gear, no shore cranes available. Oil products can be discharged by pipeline connected with shore storage tanks.

Stevedores: Available, arranged through Agent of shippers/receivers.

Medical: Hospital facilities available, but there is total shortage of drugs.

Fresh Water: Available from quay.

Opening/Closing Hatches: Normally done by crew.

Customs Allowance: No limit. No sealing of bonded stores.

Airport: There is an airport close to Bata with flights to the capital (Malabo) and Douala.

Time: GMT plus 1 hour.

Currency: Ekuela.

Stores: Not available.

Shore Leave: No restrictions. Identification cards not needed.

SHIPMASTER'S REPORT: June 1990.

Buoys: See "Plan".
Buoy No. 1: Missing.
Buoy No. 2: Estimated displaced 15 m. North, 120 m. off wharf.
Buoy No. 3: Estimated displaced 50 m. North.
Buoy No. 4: Missing.
Buoy No. 5: Estimated 110 m. off. Hook collapsed on a vessel's sailing manoeuvre this year.
Buoy No. 6: Missing.
Buoy No. 7: Estimated 100 m. off and 50 m. South of Jetty Head.
Buoy No. 8: Partially sunk.

General: Pilot has an assistant who boards and speaks some English.

Customs seal Bond.

Currency is C.F.A.

There are 2×25 tonne mobile cranes for working vessels and 3×23 tonne cranes with short jibs for working in the stacking area.

SHIPMASTER'S REPORT: February 1991.

Approaches: Jetty shows up well on radar, being identified some 16 miles to seaward. There is a solar powered light on the pierhead operating with a range of about 5 miles. Shoal water off the river mouth is extending and there are 2 conspicuous wrecks also off the river mouth.

Buoyage: All buoys are being landed for overhaul. The following buoys were found to be on station and have been overhauled:
No. 2 – 200 m. off wharf.
No. 5 – 200 m. off wharf.
No. 7 – 100 m. off wharf and 50 m. South of jetty head.

Jetty: Fendering in poor condition. Most wood piles are missing or have broken off under the jetty. Bollards are in good order.

Tankers berth starboard side alongside at South outer, pipelines have now been repaired and are in use.

Berthing: Outer berths: Drop offshore anchor, usually 6 shackles, and send stern line to buoy. Recommended moorings are 4 head lines and 4 stern lines with 2 backsprings each end. Two lines to buoy aft with as long a drift as possible on shore lines as the surge is sometimes considerable, especially May to September.

Inner berth: At present only the Northern one is in use. One line from both bow and stern to buoy, otherwise same as outer berths.

It must be emphasised that the mooring boat is poorly handled and sometimes takes a long time to land ropes. Early morning is the best time for berthing, before the wind gets up.

Pilotage and normal cargo hours start at 0700 hrs.

SUPERINTENDENT'S REPORT: August 1993.

Chart: B.A. Chart No. 1428.

New Port – Position: 01° 49.5' N., 09° 44.5' E.

Safe Anchorage: 01° 49.5' N., 09° 43.5' E.

Berth: A new L-shaped wharf of 320 m. length was constructed in 1990.

Pilot: Local Spanish speaking guide.

Tugs: No tugs available. One mooring launch available.

Fresh Water: Not available.

Fuel: Not available.

Provisions: Not available.
Repairs: Small workshop, but no repair facilities.
Containers: No facilities. Geared vessels only are handled.
Cargo Handled: Logs and sawn timber.
Stevedores: 4 experienced gangs available. Working hours: 0700 hrs. – 1200 hrs., 1300 hrs. – 1800 hrs. and 1800 hrs. – 2200 hrs. (overtime).

Sundays and holidays are worked at overtime rates.
Inward Clearance: National flag and "Q" flag to be flown.

Documents to include Crew List, Stores List, Arms and Ammunition List and Drugs List (6 copies of each).

All Seaman's Books are held by the Port Authorities.

At the time of Outward Clearance, all shore passes are collected and if any are lost, there is a fine of U.S.$ 60.00 for each one lost.
Medical: Poor facilities in Bata (7 km.).

Yellow Fever and Cholera Vaccination Certificates required for all crew members.
Airport: Small aeroplanes fly to Douala, Malabo and Libreville. Distance to airport 12 km.
Communications: Telegraph office in Bata. Telex, telephone and Fax available in Agent's office, but not reliable due to power cuts. Sometimes there is no means of communicating for weeks.
Loading Rates: If only one ship in port, cargo is ready, ship has good cranes, and stowage is not a problem, the rate can be 2,000 cbm (working 0800 hrs. – 2200 hrs.). On an average day, with more than one ship in port, etc., the rate is 800 cbm – 1,000 cbm.

Cargo is not usually ready, as shippers wait until vessel arrives to pay export taxes, and the documents require 19 different Government Departments' approvals.
Port Authority: Promoport. Joint venture of private Italian company and the Government, Italian manager. Promoport can be contacted on VHF Channel 16.
Agents: Promomar. Joint venture of above companies. Office in port area on VHF Channel 16 throughout 24 hours.

MALABO (formerly Santa Isabel): 03.46 N. 08.48 E.

Situated on the Island of Bioko (formerly Fernando Poo), Capital of the Republic of Equatorial Guinea.
DOCUMENTS:
9 Crew Lists.
3 Stores Manifests.
3 Crew Declarations.
2 Lists of Arms and Ammunition.
4 Lists of Ports of Call.
2 Passenger Lists or negative.
GENERAL: No tugs.
PILOTS: Effectively none. Only a locally informed inhabitant of this port comes on board to inform the Master, he is equipped with a large scale Spanish chart of this bay, but he has no nautical knowledge and he does not know how to handle a ship.
Note: 1. Masters should bear in mind that they have to manoeuvre and moor the vessel themselves.

2. In view of the continuous breakdowns (and insufficient power) of the mooring-launch it is absolutely necessary to have the ship's motor boat at stand by to run the ship's mooring-lines ashore.
ARRIVAL/DEPARTURE: Between 0600 hrs. and 1800 hrs.
TANKERS: See "Punta Europa Marine Terminal".
DRY CARGO VESSELS: Berth at a new jetty on the West side of the bay. No cranes available.
ADVICE: 1. Masters should be very careful when dropping their anchors as some vessels (Men of war) moor with their sterns to the dry cargo jetty and have their anchors in the middle of the bay. These anchors are very easily fouled by incoming vessel's anchors. A useful suggestion might be to put anchor buoys on the anchors in order to show another incoming ship their position.

2. Because it is quite difficult to manoeuvre a tanker around in this bay without any tug assistance, it should be borne in mind that when the wind is over Force 2 manoeuvring with a sizeable vessel is apt to falter, and no assistance can be expected from any quarter.
DEPARTURE: Vessels are free to leave within mentioned hours without Pilot.
RADIO COMMUNICATION: See "Bata".
CUSTOMS ALLOWANCE: No limit – no sealing of bonded stores.
SHORE LEAVE: No restrictions, but with own motor boat.
Currency: Equatorial Guinea Peseta = Spanish Peseta.
SERVICES: M.A.C. Guinea S.A. offer the following services: Agency, stevedoring, bunkering, chartering, heavy lift and liner parcel facilities, ship management and freight forwarding.

PURSER'S REPORT:
Documents:
9 Crew Lists.
9 Passenger Lists (Marked "none" if no passengers on board).
3 Customs Declarations.
3 Stores and Provisions.
4 Arms and Ammunition.
1 Vaccination List (Cholera and Yellow Fever).
9 Cargo Manifests.
Stores: No stores were purchased at this port, advise top up prior to calling at this port.
Mail: Advisable to send to next big port.

SHIPMASTER'S REPORT: May 1984.
Pilotage: There are no Pilots at Malabo. Masters are expected to berth the vessel themselves on receiving instructions from Agents via VHF to proceed to the berth. If requested an Agents' representative may board the vessel but they are not persons with nautical knowledge and can be helpful only in communicating with the mooring boat.
Berth: The general cargo berth on the S.E. side of the bay is 200 m. long and fitted with good fenders. Depths alongside vary from 6.0 m. at the extreme S.E. end to about 7.0 m. one third of the length from the end and nearly 9.0 m. at the N.W. end of the pier.

There is no definite draft restriction but a vessel with a maximum after draft of 24 ft. can safely berth alongside. Off the pier the water is deep with depths of 14 m. to 17 m.
Berthing Procedure: Vessels berth starboard to without using anchor. After passing the red buoy about 20 m. off to port swing to starboard to bring vessel as close to and as parallel to the pier as possible. Mooring boat takes the ship's lines ashore.
Unberthing Procedure: Using headline and forward springs swing vessel off pier sufficiently to drop astern to the centre of the bay. Then swing using engines to proceed out. (Note: It is advisable not to attempt berthing or unberthing if the wind is unfavourable, particularly with large vessels. There are no other craft in the port other than two mooring boats).
Cargo Handling: Vessels discharge cargo using their own gear. There is one small wooden barge fitted with outboard motor for handling small consignments. There are no lighters or towing boats or tugs in Malabo.
Radio Communications: All the radio stations in Equatorial Guinea are unreliable and mostly not operating. Messages should be sent via Douala or some other major coastal station.
Lights: None of the lights shown on the chart were functioning. At night only vessels with radar should approach close. There has been a complete breakdown of the power supply to the town of Malabo for 8 weeks. It is uncertain when the power supply will resume.
Consulates: Spanish, Belgian, French, American, Russia and Cameroon.
Fresh Water: Available, laid on to the pier, good pressure.

SHIPMASTER'S REPORT: June 1990.

Anchorage offshore: At least 7 cables clearance reduces considerably the number of sand flies at night.

All navigational lights working as per Light List, Volume "D".

Leading beacons for entrance now painted red with white bands. The Easternmost of the two prominent white advertising boards lies nearly between the two beacons.

The Pilot was competent and cautious, usually only berths vessels, normally starboard side alongside using port anchor, he speaks good English.

Fresh water available, but should always be treated.

No difficulty sailing, except if wind is strong, stern sprung off, and vessel turned round in bay. Strong winds usually moderate quickly, and less effect is felt in the bay.

The two buoys formerly marking the shoals, either side of the entrance, are stowed on the wharf. There are said to be plans to replace them.

SHIPMASTER'S REPORT: February 1991.
Entrance: When entering the port vessels should avoid going to starboard of the leading line as deeper water will be found slightly to port of the line. There is sometimes a moderate set across the entrance and the direction could be either Easterly or Westerly.

The upper leading light is not particularly distinguishable at night due to background lights, however, using a radar bearing on the mole presents no difficulties.
Pilotage: Pilot will board from 0700 hours until nightfall.
Berthing: Pilot prefers to berth starboard side to, however port side to presents no difficulties and in some cases is preferable.

Sometimes there is a moderate set out of Ensada da Venus which can render berthing at the seaward end of the wharf difficult if the vessel's bow extends beyond the end of the wharf.

The Pilot/mooring boat is reasonably reliable and efficient and can be used to push or tow, having reasonable power for the calm conditions normally found inside the bay.
Facilities: There is a 25 tonne forklift with a 20 ft. container frame for moving containers. A mobile crane, said to be of 100 tonnes capacity, should be operational early in 1991.
Departure: This is comparatively easy, however observing the trend of the current around the bay shortly before letting go is advisable as it sometimes reverses due to prevailing conditions outside the entrance.

PUNTA EUROPA MARINE TERMINAL (Isla de Bioko): 03.47 N. 08.43 E. **(See Plan)**

DOCUMENTS:
4 copies Crew List.
4 copies Passenger List.
4 copies Arms and Ammunition List.
4 copies Narcotics List.
4 copies Animals and Livestock List.
4 copies Stores List.
4 copies Ports of Call List.
4 copies Vaccination List.
4 copies Crew Declaration.
4 copies Maritime Declaration of Health.
4 copies Clearance from Last Port.

PILOTAGE: CMS Nomeco International Equatorial Guinea Inc. (N.I.E.G.) presently provides a European Pilot/Mooring Master, to assist and advise the ship's Master with the berthing and unberthing of the vessel at this Terminal. The services of this Pilot/Mooring Master are provided with the express understanding, and on the condition that, while onboard for the purpose of assisting the vessel, the Mooring Master becomes, for such purposes, the servant of the Owners and/or Charterers of the vessel, and that the ship's Master shall remain solely responsible for the safety and proper manoeuvering of the vessel. CMS Nomeco International Equatorial Inc. (N.I.E.G.) shall not be responsible for any damage or injury resulting from the advice and assistance given by such Mooring Master.

ANCHORAGE: No designated anchorage exists at present, but due to the presence of a high pressure gas pipeline in the vicinity of the berth, and due to the fact that shoal water has been reported in the bay between the berth and the port of Malabo, Masters are recommended to anchor to the North of Latitude 03° 47' N., and to the East of Longitude 08° 44' E. The bottom consists of mud and black volcanic sand with good holding in 135 ft. of water.

NAVIGATION: A 10 in. diameter 3,500 p.s.i. high pressure gas pipeline runs from a position on the shore at 03° 47.083' N., 08° 43.166' E., thence in a curve through position 03° 48.0' N., 08° 43.4' E. to an offshore production platform in position 03° 58.7' N., 08° 32.9' E. Anchoring in the vicinity of this high pressure gas line is extremely dangerous and is prohibited. This line is marked in the vicinity of the berth by a lighted red/yellow horizontal striped spar buoy, located to the Eastward of the pipeline. A 24 in. diameter export pipeline and a 6 in. diameter LPG pipeline run from the shore at 03° 47.083' N., 08° 43.166' E., thence in a straight line to a position 03° 47.1584' N., 08° 43.6288' E. The pipeline end manifold (PLEM) is marked by a yellow spar buoy close to the Westward of the manifold.

A conspicuous flare is located 260°(T) × 660 ft. from the Punta Europa Lighthouse.

RESTRICTIONS: Vessels will only be berthed and unberthed at this Terminal during daylight.

MAX. SIZE: Presently 60,000 tons d.w.t. (LOA 700 ft.), although larger vessels may be handled in the future. No restrictions on draft or beam.

HEALTH: *Malaria Precautions:* Bioko Island has a high incident of Chloroquine resistant Malaria, and full preventative measures should be taken. Mefloquine (Larium) is the prophylaxis of choice.

RADIO/VHF: *Communication Prior to Arrival:* A vessel nominated to load at this Terminal should advise its local Agent of its ETA upon sailing from its last port of call, then again 72, 48 and 24 hours prior to arrival. The Agent will keep N.I.E.G. informed accordingly. When the vessel is within about 20 miles of the Terminal, contact should be attempted on VHF Channel 16. When initial contact has been made, the Terminal will designate another secondary channel for further communication. The Terminal Gas Plant can be contacted on VHF Channel 66.

TUGS: 1×1,200 h.p. line handling tug with a 12 ton bollard pull is used for running and tripping the mooring lines from the mooring buoys. This tug will assists in the mooring of the vessel as directed by the Mooring Master, and will remain on location in close proximity to assist as required whilst the vessel is in the berth.

BERTHING: The berth consists of a Four Point Buoy Mooring located 1,500 ft. offshore in 130 ft. of water that allows vessels to be berthed heading in either a N.W'ly (295° heading), or a S.E'ly (115° heading) direction, depending upon the weather/tidal condition prevailing at the time of berthing. The vessel will be secured to 4 mooring buoys with one buoy located on each bow, and one buoy located on each quarter. These mooring buoys are designated P1, P2, S1 and S2.

The number of mooring lines/wires used to secure the vessel to each buoy will be dependent upon the size of the vessel, the prevailing weather/tidal conditions, and the type/size of mooring lines that are available onboard. Typically, 3 ship's lines will be used in securing the vessel to each buoy. All mooring wires should have synthetic tails attached to each wire, otherwise they will not be acceptable.

The vessel's offshore bower anchor may, or may not, be used in berthing. On completion of mooring, the vessel's main engines and steering gear should be kept available on standby, for use if required. No repairs to the vessel's engineering plant will be permitted, if such repairs limit the power availability in any way.

LOADING: *Responsibility:* The ship's Master shall be responsible for the vessel at all times. The Mooring Master will advise with respect to the hose connection/disconnection, loading pressures, loading rates, A.P.I. and cargo temperature. Other than this he will not direct the vessel's operation in any way, except to protect the Terminal's facilities. The Mooring Master will prohibit or suspend cargo loading operations should any danger appear to exist, or should there be any breach of the Terminal, ISGOTT or IMO Regulations.

Hose Handling: The hose may be handled on either side of the vessel, depending upon the heading of the ship in the berth. As the heading will be unknown until just prior to berthing, the vessel should arrive with both midships hose handling derricks/cranes rigged, and be prepared to handle the hose on either side. The actual heading will be advised by the Mooring Master, just prior to boarding. The vessel should be prepared to present 1×12 in. 150 ASA hose connection for mating with the Terminal's submarine hose.

The cargo derricks/cranes with associated equipment and fittings should have a S.W.L. of 7 tons or greater for handling these hoses.

The cargo is loaded through 1×12 in. submarine hose that is lifted from the sea bed, and is connected to the vessel's manifold connection by the ship's crew under the guidance of the Mooring Master. The hose tail is marked by an orange pick-up buoy, which is in turn connected to the submarine hose by 135 ft. of 1.25 in. diameter chain. The hose has a gross weight of approximately 9,000 lbs. when suspended 20 ft. above the ship's rail, and a variety of miscellaneous rigging items, such as assorted wire strops, shackles, rope slings, chain falls, etc., of suitable S.W.L. should be made available for use in connecting the hose.

Ballast: No dirty ballast reception facilities exist at this Terminal. All vessels nominated to load should arrive with clean or segregated ballast onboard that may be discharged overboard. The vessel should have sufficient deadweight, and be in a suitable trim for safe manoeuvering, given the prevailing conditions.

Cargo Specifications: "Alba Condensate", API at 60° (typical) – 52.3, density at 15°C – 0.7654, loading temperature 80° – 90°F.

Loading: The cargo will be loaded by gravity from the Terminal's storage facilities via the 1×12 in. submarine hose at a maximum rate of approximately 15,000 bbls./hr. Prior to commencing loading, the Mooring Master will advise the ship's Master of the exact product API, the approximate loading temperature, and the nominated quantity the vessel is to load. It will be the vessel's responsibility to determine when this quantity has been lifted and to tell the Mooring Master to inform the Terminal to stop loading.

Important: Do not, under any circumstances, close the ship's valves, or the submarine hose tail valve against the incoming flow of product.

On completion of loading, the Terminal will close their valves first, and then advise the Mooring Master when to tell the ship to close their valves.

Ship/Shore Communication during Loading: This will be carried out on a VHF channel that will be designated by the Mooring Master, and the vessel's main VHF units should be readily available and accessible for this purpose if required. In the event of a communications failure with the Terminal, loading may be suspended by blowing a series of short rapid blasts on the ship's whistle, to alert the Terminal staff of the failure.

Cargo Inspection: Two Government Petroleum Ministry Officials, two Customs Inspectors and a Cargo Surveyor will inspect the cargo tanks and determine the OBQ quantity prior to commencing loading. These officials will stay onboard throughout the loading, gauge the tanks upon completion of loading, and will require food and accommodation. The ship's measurements, barrels, cubic meters, long tons and metric tons will be used for Bill of Lading purposes, and all the commercial documentation will be completed by the Mooring Master prior to him leaving the vessel.

FRESH WATER: Not available.

FUEL: Not available.

REPAIRS: Not available.

STORES: Very limited.

REPATRIATION: Possible. The Malabo Airport is served by an Iberia jet service once a week, with a flight directly to Madrid. This flight arrives at 1500 hrs. on Sundays, and departs again at 1600 hrs.

Alternative travel to Europe is possible through Douala, which is served by four local flights a week. A departure tax of CFA Franc 5,000 (U.S.$ 10.00) is required at Malabo and CFA Franc 10,000 ($20.00) at Douala Airport.

TIME: GMT plus 1 hour.

GENERAL: *Weather:* There are two distinct seasons, the rainy season, where it rains a lot, which extends from about May through to September, and the dry season, where it does not rain quite as much and extends from December through to February. The variable season between the wet and dry seasons occupies the rest of the year.

Currents: Offshore, the current generally sets from the West towards the East at variable rates throughout the year. Inshore, in the vicinity of the berth, a strong counter current flows from the East towards the West at rates in excess of 2 knots. This counter current is more pronounced during the rainy season, and becomes weak and variable during the dry season.

DEVELOPMENTS: It is planned to export LPG through this berth in the near future.

AUTHORITY: *Operators:* CMS Nomeco International Equatorial Guinea, B.P. 742, Malabo, Equatorial Guinea. *Tel:* (240) 9-2736. Inmarsat 874-1515245. *FAX:* (240) 9-2746. Inmarsat: 874-1515246 (Telephone or Fax). *Contact:* Captain A. Cumpstey, Marine Manager.

Eritrea

ASSAB: 13.01 N. 42.44 E. (See Plan)

PORT LIMITS: A line drawn from Ras Gombo to the Northern point of Umm al Baher (Islands) to Southern point of Umm al Baher, then to Ras Marcanah.

DOCUMENTS:

5 Manifests for Transit Passengers and passports.
5 Manifests for Landing Passengers and passports.
5 Crew Lists.
1 Complete Crew Provisions List.
1 Crew Personal Effects List.
1 Store List.
6 Cargo Manifests.

PILOTAGE: Compulsory. Pilots take tankers in and out of oil harbour only during daytime. Pilots embark about 0.5 miles N.N.E. from Northern extremity of breakwater. Commercial harbour gives 24 hour service. Vessels calling Assab must advise Agent through Assab Coastal Radio Station by call sign ETC. Assab Radio Signal Station is available, but it is preferable to contact the Agent through Satcom A (See "Agency").

ANCHORAGES: Assab Bay provides good anchorage in 42 ft. to 48 ft. of sand and coral bottom, good holding ground. Generally weather in Assab can be divided into two: Summer time and Winter time weather, during Summer (May–September) Northerly wind blows with a maximum force of 3/4 BS. During Winter time (October-April) South-easterly local monsoon winds blow usually 5/6 BS but reaching Force 7/8 BS during daytime and generally drop at night. This 7/8 BS force is mainly experienced about December to February.

RESTRICTIONS: There are 2 entrances, the North and the South entrance, the depth at the entrances is 38 ft. Least width 1,300 ft.

Vessels of any size enter or leave port during hours of darkness except tankers, and vessels carrying dangerous cargo. In these cases, where vessels are carrying explosives or other dangerous cargoes, Agents of calling vessels must notify the Port Office in advance of discharging and/or loading of explosives. Inflammable and other highly dangerous cargoes in commercial harbour are permitted from 0600 hrs. to 1800 hrs. local time. Firefighting truck attendance is compulsory.

MAX. SIZE: Largest vessels which can enter:

	LOA (m.)	*Beam* (m.)	*Draft* (m.)
Commercial Harbour	200	any	11.0
Sea Berth (for tankers)	185	29	11.0
Shell Berth (for tankers)	183	any	8.5
Refinery Berth (for tankers)	110	any	8.0

HEALTH: Quarantine and sanitation services available. Quarantine officer boards arriving vessels and necessary medical clearance given.

RADIO: Coastal radio station available:

(a) Position Lat. 13° 01' 24" N., Long. 42° 44' 38" E.

(b) Coastal radio station in service for 13 hours per day 0700 hrs. to 2200 hrs. Call sign ETC. Transmits traffic lists on 489 kHz after a preliminary announcement on 500 kHz, 30 minutes past each odd hour starting at 0500 and ending 1700 hrs. (0530, 0730, 0930, hrs. etc.).

(c) Transmits traffic lists on 6,509 kHz at 0500, 0900 and 1300 hrs. and searches 6,265.5 kHz – 6,280.5 kHz between 0515 – 0600, 0915 – 1000, and 1315 – 1400 hrs.

(d) Transmits traffic lists on 8,618 kHz at 0700, 1100 and 1500 hrs. and searches 8,354 kHz – 8,374 kHz between 0715 – 0800, 1115 – 1200 and 1515 – 1600 hrs.

(e) Rates shall include station charges and charge of transmission over telecommunication network within Eritrea.

(f) Accepts ship letter telegrams (SLT) from ships for delivery in Assab.

(g) For radio telephone service, Station keeps watch and replaces on 2,182 kHz for radio telephone service at 0615 – 0700, 0815 – 0900, 1015 – 1100, 1215 – 1300, 1415 – 1500, 1615 – 1700 hrs. and transmits traffic same hours on 4,379.3 kHz. Service hours will be extended to 24 hours.

VHF: VHF system is in operation in the port area and in Agent's office.

TUGS: Tug service compulsory for all ships. Two tugs of 1,400 h.p. and 1,600 h.p. attend ships on arrival and departure.

BERTHING:

		Depth
North half jetty	495 m. length	
Berth No. 1		10.97 m.
Berth No. 2		10.97 m.
Berth No. 3		10.06 m.
South half jetty	529 m. length	
Berth No. 4		5.48 m.
Berth No. 5		8.20 m.
Berth No. 6		9.00 m.
Berth No. 7		10.06 m.
Berth No. 7A		8.00 m.

In addition, stern ramp Ro-Ro vessels with LOA 133 m. and draft 8.0 m. can be accommodated at Berth No. 7A. There is a similar Ro-Ro berth at the end of Berth No. 1, namely No. 1A presently not in use.

Fenders are good and protect ships from impact; harbour is modern and has modern breakwater 711 m. length. 8 large vessels can be accommodated at a time.

Salt Loading Terminal: Located 1.7 miles from the Commercial Harbour, salt loading ships drawing up to 33 ft. are berthed at this terminal using 2 anchors and mooring to buoys and dolphins. Not in use at present time.

Cargo Handling Equipment:

Type of Equipment	*No.*	*Capacity*
Rail mounted quay cranes	4	20 tons
Rail mounted quay cranes	14	6 tons
Mobile cranes	6	15-50 tons
Container lift trucks	4	25-35 tons
Forklifts	62	4-10 tons
Tug Masters	4	40 tons
Tractors	56	70 h.p.
Trailers	187	20-40 tons
Bagging machines	12	75 kg.

STEVEDORES: Stevedoring activity is performed solely by the Port Administration. The port provides skilled labourers, equipment and materials, and organises and supervises the activity.

Loading and discharging rates as follows:

	Output per gang shift (tons)	*Output per gang shift* (tons)
Bulk cargo fertiliser	15	455
Wheat	21	575
Bagged cargo	19	525
General cargo	15	195
Containers	5 boxes	45 boxes

Working Hours:

1st shift:	0600 hrs. – 1400 hrs.
2nd shift:	1400 hrs. – 2200 hrs.
3rd shift:	2200 hrs. – 0600 hrs.

MEDICAL: One hospital in town and clinic in port. When sick person on board, hoist (by day) International code flag "W", (by night) 3 lights in vertical line upper one red, and middle and lower, white lights. Doctor may be called on board at any time to attend sick crew or passengers by arrangement with Agents.

TANKERS: Oil harbour located about 1.5 miles S.E. of commercial harbour with depth 12.0 m. Crude oil discharging terminal 500 m. from Southern end of breakwater open sea buoy berth – tankers of 185 m. length, and 11.0 m. draft can be accommodated. Diameter of pipeline for loading and discharging black and white products is 12 in.

There is also a coastal tanker jetty, known as the Refinery Jetty, with length 110 m. and depth 9.5 m. Vessels loading and discharging refined products with LOA 110 m. and draft 8.0 m. can be accommodated at this berth.

(1) By dropping port anchor, passing starboard head line to the buoy and

(2) Four lines together, one from starboard side dolphin and another from port side dolphin.

Tankers at the Shell Berth are moored by dropping 2 anchors and tying up 2 ropes from stern to the buoys, and 2 ropes from each quarter to the dolphins. All grades of oil in bulk discharged into shore storage tanks from this harbour.

In Assab, the petroleum installations are of Shell Eritrea Co. and Mobil Oil East Africa (Eritrea) Co.

DENSITY: At berths is 1030, while the tides are negligible for all seasons; max. 1 ft.

FRESH WATER: The best fresh water in the Red Sea and East African ports, available any time requested with no restriction on the amount.

FUEL: All grades available, at commercial harbour. Advance notice necessary. Rate of 300 t.p.h.

FIRE PRECAUTIONS: Modern fire brigade and tugs available.

CONSULS: Only Ethiopian Consulate in Assab.

REPAIRS: Minor repairs can be carried out at Port Administration workshop.

GANGWAY/DECK WATCHMEN: Watchmen on deck necessary, rate as per tariff.

OPENING/CLOSING HATCHES: Normally carried out by stevedores.

CERTIFICATES: All ship's International Certificates should be on board.

CUSTOMS ALLOWANCES: Tobacco, 400 cigarettes. Wine and/or spirits: 1 litre or bottle of spirit.

REPATRIATION: Possible.

AIRPORT: 15 km. from Assab.

TIME: GMT plus 3 hours.

POLICE/AMBULANCE/FIRE: Port Police Tel: 660425; Hospital Tel: 660396; Port Office Fire Brigade Tel: 660102.

GENERAL: 3 modern hotels, namely Ras Gombo Hotel, Zeray Deres Hotel and Kebal International Hotel (ex-Star Lite Hotel) are available in town.

SHORE LEAVE: Crew allowed ashore, with Immigration Boarding Passes.

IDENTIFICATION CARDS: Required.

DEVELOPMENTS: Berths No. 13 and 14 to be constructed and dredged down to 12.0 m. from the current 10.0 m.

Deepwater berth with length of 500 m. to be constructed. It will have heavy duty paving and will be used for handling containers. No cranes on order at present.

For 1996 and 1997, there will be procurement of ship-to-shore container mobile crane, container lifting trucks, tug masters, forklifts, trailers and tug, which will substantially improve efficiency.

SHIPMASTER'S REPORT: January 1983 (Updated 1996).

VHF: VHF system is installed. Call sign "Assab Signal Station". Working Channel 12.

Medical: No dentist available in city.

Fresh Water: Available. No restriction on amount.

Repairs: Not possible. No oxygen or acetylene available.

General: No spares of any description available. Provisions can be supplied in small quantities.

SHIPMASTER'S REPORT: February 1985 (Updated 1996).
Documents: No cargo documents whatsoever were received by Agent prior to ship's arrival. The day after arrival at the roads, the Agent came on board to collect a full set of cargo documents. This procedure seemed to be a fairly normal practice on ships other than regular liner ships and tankers arriving at Assab. (Port Manager's Remarks (1996): If DHL used, documents can reach in time prior to vessel's arrival. But, we recommend Master to have cargo documents onboard for submission to the Agent and Customs Officer on arrival before berthing.)

After having berthed, Authorities came on board to collect 5 Crew Lists, 3 Stores' Declarations and 3 Crew's Effect Declarations. Ship's Certificates were not examined. Ship's lockers with tobacco and spirits were sealed by Customs. Beer-store not sealed. No search of crew cabins.

Pilotage: Signal station working VHF Channels 16 and 14, giving berthing instructions and other information. Also signal station is most willing to pass any messages to Agents, etc.

Pilot boards ships on the roads approx. 0.5 miles off the breakwater. 2 Pilots and 2 Apprentice Pilots are serving the port. This ship was handled by the Chief Pilot, who is very skilled in handling ships, making effective use of wind when berthing/unberthing/shifting ships in port.

Anchorages: Ship arrived on the roads 14th January, 1985 and was at anchor for 18 days. In that period the wind blew during the night with Force 4/5 from S.E., shifting E.S.E. Force 6/7 during daytime – often reaching Force 8. Holding ground good.

Restrictions: Draft restriction should comply strictly with the Port Regulations (See "Max. Size"). The problem is not the depth alongside the pier but a small patch of sand close to the breakwater, with a minimum depth over it of 35 ft. Ships with the deepest draft are berthed at Pier No.1 (The outer end of the Northern Pier).

Health: After arrival in roads, ships are called by a Quarantine Officer on VHF Channels 16/14, who asks relevant questions such as last port, crew members on board, if any sickness, gross/net tonnage. If satisfied with answers ship is granted Free Pratique.

Radio: Assab Radio (ETC) was impossible to use during voyage to Assab, and all messages were passed via Aden Radio (7OA). After having anchored at Assab Roads, Assab Radio did answer and arrival message and Notice of Readiness were sent via ETC.

Tugs: Tugs meet ships inside the breakwater. 1 tug built 1981 and 1 built 1987, respectively 1,400 and 1,600 h.p. Both of them are working very effectively. Large ships are normally berthed at Pier 1 or 2 – the outer ends of piers – bow heading out. An anchor is used to hold the ship's bow while tugs are pushing the ship into position. 1 larger tug and 1 smaller tug were seen in the port, but they were not in use during our visit.

Cranes: On the Northern pier there are 9 cranes, and on the Southern pier 9 cranes. All were electric cranes working well and well maintained. 2 of the cranes on each pier are 20 ton capacity and the others 6 ton. At least 3 mobile cranes were seen, one with capacity up to 60 tons.

Bulk Cargo Facilities: Bulk grain is discharged by grab to portable bag filling equipment on the pier. Capacity unknown. 2 cranes are normally used and an outturn of 575 tons (grain) per shift is obtainable.

Stevedores: Agents arrange gangs. Shifts worked: 0600 hrs. – 1400 hrs., 1400 hrs. – 2200 hrs., 2200 hrs. – 0600 hrs. It seems normal practice that all ships work around the clock with maximum possible gangs.

Density: 1023.5.

Fresh Water: Available. No restriction on amount.

Watchmen: Gangway watchman compulsory. One watchman works from 0600 hrs. to 1800 hrs. The other from 1800 hrs. to 0600 hrs. Meals are to be supplied by ship.

Customs Allowances: Each crew member had 200 cigarettes and some had a bottle of spirits on arrival. No comments were made to this quantity.

Repatriation: Said to be possible.

Shore Leave: Immigration Department issue a special shore pass, which is shown when passing the gate to and from the port.

Supplies: Ships should not rely on any supplies. At a local market, some supplies of fresh vegetables can be obtained, but most are of poor quality.

Delays: Depending on type of cargo. Berths No. 1 and 2 are said to have been promised to ships with food aid.

Notice:

TO:
THE MASTER
M/V "………………"
ASSAB

Assab Port Authorities: General Instructions to be followed:

1. No curfrew.
2. Any crew member going ashore should hold his Passport or Seaman's Book together with a shore pass given by the Immigration Officer. Misuse or loss of a shore pass card will not only lead to payment of U.S.$10.00 per card but also strong measures will be taken upon the individual crew member who involves himself in such misuses.
3. Attempts to exchange foreign currency on black market leads to serious prosecution. Official bank exchanges are authorised (Rate of exchange 1 U.S.$ = 6.30 Birr (1996)).
4. No restriction on movements of ship's crew in town.
5. All crew's personal belongings should be shown in Crew Declaration. The Customs Authorities will inspect all individual cabins upon arrival and departure.
6. Rat guards should be fitted to all mooring ropes immediately after berthing. Contravention of this will incur a penalty as decided by the Port Administration.
7. Anchoring in Territorial Waters and generally from "T10" to "Ras Damera" is strictly prohibited. When entering territorial waters you must open your VHF Channel 16 and inform Naval Base of your identity.
8. Two hours before departure, "G" flag should be hoisted by day and vertical "Red White Red" should be lit by night, for Pilot.
9. Before sailing from our port you must institute a thorough search of your vessel to ensure that no unauthorised persons or stowaways are on board at the time of departure.
10. No restriction for anchoring in territorial waters.
11. Any crew member found in illegal possession of harmful and toxic drugs or found circulating same directly or indirectly shall be seriously dealt with according to the penal code.
12. Diving, swimming and fishing within and or near by the premises of the harbour is strictly prohibited.
13. Photography within the port or around the town is strictly prohibited.
14. Smoking inside port area is strictly prohibited.

SIGNED:……………………
MASTER

SHIPMASTER'S REPORT: July 1987.
Fresh Water: Available, no limits. We received 200 tons in 7 hours.
Shore Leave: Allowed. Crew must take U.S. Dollars ashore to change to local currency. No other currency accepted.

AGENCY: Eritrean Shipping and Transit Service Agency (Sole Shipping Agent in Eritrea), P.O.Box 64, Assab, Eritrea. Tel: 873-1445562. Fax: 873-1445563. Telex: 583-1445562. Contact: Asfaha Tekeste, General Manager. Mohammed Ali Sherif, Shipping Manager.
AUTHORITY: Assab Port Administration, P.O.Box 58, Assab, Eritrea. *Tel:* 660710. *FAX:* 873-1445563. *Contact:* Mohammed Said Jassir, Port Manager. Captain Yohannes Asfaw, Harbour Master. Tesfay Tekle, Operations Manager.

MASSAWA: 15.37 N. 39.28 E.

PORT LIMITS: The coastline of Gurgussum Peninsula, at Lat. 15° 39' N. to a point Lat. 15° 39' N., Long. 39° 30' E. to Lat. 15° 35' N., Long. 39° 30' E. to the coastline at Lat. 15° 35' N., Long. 39° 26' 50" E.
DOCUMENTS:
2 sets Manifests.
2 sets Bills of Lading.
5 Crew Lists.
5 Passenger Lists.
2 Stores Lists.
APPROACHES: Through North Channel and South Channel. In channel, in direction of leading lights 243°, max. depth 31 ft. (but alongside 30 ft.) Marker buoy showing a wreck in position approximately 200 m. S.E. of North Breakwater.
PILOTAGE: Pilotage is compulsory for all vessels over 100 n.r.t. Pilot section headed by a Chief Pilot and 2 other Pilots.

There is 1 pilot boat. ETA should be given to Agent who will inform Pilot 72 hours prior to arrival. Signal tower located in port area contacts vessel on arrival informing Agent and Pilot, and receiving or transmitting by Morse lamp messages to and from vessel.

ANCHORAGES: 8 cables East of main lighthouse. Anchorage North of leading light not recommended.
Tides: Normally the range of tide varies between 1.5 and 2.0 m., but during spring tide season the range varies up to 3 m.
MAX. SIZE: Length 180 m., draft 29 ft.
HEALTH: Doctor normally boards with Pilot, but can be asked to board together with Customs and Immigration while vessel on roads. All crew members must be vaccinated against yellow fever, and possess necessary certificates. Derat and other health certificates required. Derat cannot be effected at Massawa, but exemption certificate can be obtained.
RADIO: Assab Radio, call sign ETC, Djibouti Radio, or Aden Radio may be used. Asmara Radio, call sign ETC 2, working hours 0500 to 1700 GMT. Radio-telegraphy and radio-telephone services.
TUGS: Compulsory. Join vessel in port.

3 tugboats are available, two of 350 h.p. and the third 1,000 h.p. The smaller motor tugboats used for assistance mainly within the port limits, and the deep-sea salvage motor tugboat, for salvage operations, but whenever conditions demand, is also employed for assistance within the port.

BERTHING: Vessels normally drop anchor before berthing.
Commercial Harbour: 6 berths, namely 1 to 6, and the overall distance from Berth No. 1 to Berth No. 6 is 907 m. These berths normally used by vessels handling general cargo, bagged cargo and livestocks. Depth of water at mean low water springs (MLWS) is shown below:

Berth No. 1 – 16 ft. 6 in.
Berth No. 2 – 24 ft. 6 in.
Berth No. 3 – 28 ft. 6 in.
Berth No. 4 – 28 ft. 0 in.
Berth No. 5 – 27 ft. 0 in.
Berth No. 6 – 30 ft. 0 in.

Salt Berth: This is a single berth where vessels load salt in bulk. The depth at the berth is 32 ft. Max. draft 29 ft. Loading with the help of conveyor belt at the rate of about 300 t.p.h.
Cement Berth: Depth 18 ft.
American Jetty: Depth 18 ft.

However, dredging will be carried out to accommodate vessels of a greater draft in the future.

STEVEDORES: Radio 24 hours' notice of ETA stating number of gangs required. Loading discharging rates 5 t.p.h. on general, 10 – 15 t.p.h. on bagged cargo.
DENSITY: 1025.

MEDICAL: Notice should be given to Agent only when specialist needed. Hospital treatment available. Dental facilities available at Asmara, 110 km. away.

TANKERS: AGIP, Arkiko Oil Station Terminal: Max. draft for entering channel 29 ft.

Total Pier, depth alongside 36 ft., max. draft 30 ft.

FRESH WATER: Supplied alongside, Max. rate 600 tons per day or by barge of 50 tons on roads. Barge can be loaded/discharged in 8 hours.

FUEL: Can be obtained alongside oil terminals and at Berth Nos. 5 and 6 for heavy fuel only. Diesel can be supplied by lorries alongside. No bunker barge available.

CONSULS: Italian Vice-consulate, Box 62. Tel: 52214.

REPAIRS: Good workshops for minor engine repairs. Slipway for vessel up to 600 g.r.t.

GANGWAY/DECK WATCHMEN: Compulsory when alongside.

OPENING/CLOSING HATCHES: Normally by labourers, but can be done by crew.

CUSTOMS ALLOWANCES: Tobacco, 200 cigarettes per man. New allowance can be delivered after 1 week. Wine/Spirits: 1 bottle of wine/spirits (opened). Wine and beer quantity necessary for the stay in port allowed upon reasonable request on arrival.

REPATRIATION: Via Asmara by chartered air-taxi, then by international flights. Or Massawa-Asmara by road, 110 km., asphalt road (daily convoy).

TIME: GMT plus 3 hours.

POLICE/AMBULANCE/FIRE: Police, Tel: 52425; Ambulance, Tel: 52234-5-6; Fire Brigade, Tel: 52220.

TELEPHONES: Possible to place telephones on board. Arranged by Agent.

SERVICES: Radar and gyro compass technician available, but special spare parts not available.

SHORE LEAVE: Crew cannot leave vicinity of Massawa without special immigration permit.

IDENTIFICATION CARDS: Not needed. Immigration gives port entry card (without crew member's name) which must be given back prior to departure. In case of loss a fine is likely.

AUTHORITY: Department of Maritime Transport, P.O.Box 6, Massawa, Eritrea. *Tel:* 552931. *FAX:* 552157. *Contact:* Mr.Mekonen Habtezion, General Manager.

NOTES

Please also advise Shipping Guides Ltd.

Estonia

GENERAL:

Republic of Estonia
Ministry of Transport and Communication

NOTE: The following is a translation into English.
Appendix 1. Navigation Safety Rules in Tallinn Port and Archipelago Small Ports (Roomassaare, Virtsu, Kuivastu, Rohukula, Heltermaa, Sviby (dated 1992)).

A. *General Clauses:*

1. The Appendix 1. of the Code of Customs of the Port applies equally to all vessels, irrespective of a flag, calling at Kesklinna Port, Muuga and Kopli Ports, Archipelago Small Ports, or to companies and private persons, performing their activities in the Port and Archipelago Small Ports territory.

2. The Tallinn Port Aquatorium includes:

The City Port water area, that is the basin area of the Old Harbour and outer routes in the Tallinn Bay, limited in the North by a geographical parallel, passing through the Northernmost point of the Old Harbour North-Western Mole head, in the East by the Tallinn Lighthouses leading line and by the coastline in the South.

The Kopli Port water is a basin area within the bounds of Sectors 1, 2, 3, 4, in the South, and Sectors 5, 6, 7, 8, 9, 10, in the North. The aquatic area bounds near Sector 4 docks and Sector 11 are equal remote of opposite coast territories.

The Muuga Port water area is a basin area from C.Tahkumagi, alongside coastline, up to the Western Basin Mole head extremity. From the sea side, the water area is limited by lines, connecting C.Tahkumagi (Lat. 59° 30' 04" N., Long. 25° 00' 04" E.) with the points (Lat. 59° 31' 04" N., Long. 24° 58' 01" E.) and with the Western Mole base (Lat. 59° 31' 04" N., Long. 24° 56' 06" E.).

B. *Vessels entering and leaving the Port:*

1.1 Vessels navigation in the approaches and within the Tallinn Port Aquatorium is controlled by the Traffic Control Service, further TCS, call sign "Tallinn Radio 5" on VHF Channel 14 ("Port Control").

In the Kopli Port water area, TCS call sign "Tallinn Radio 32" on VHF Channel 11.

In the Muuga Port and the Viimsi Reach, TCS call sign "Muuga Radio 5" on VHF Channel 67.

1.2 Information on a vessel approach should be sent to the Port Operator by the Master or his Agent 48 hours and 24 hours prior to the approach.

Information must contain following data:
Time of approach to the Pilot Station.
Draft forward and aft.
Reason for call.

1.3 The Master should contact TCS in advance on the VHF and adjust the time of approach. While entering Kesklinna Port, Kopli Port or Tallinn Bay, vessels' communication is maintained on VHF Channel 14, call sign "Traffic Control" or "Tallinn Radio 17". While entering Muuga Port, Muuga Bay on VHF Channel 67, call sign "Muuga Radio 5".

1.4 Vessel entering or leaving the Port should receive TCS permission.

1.5 Vessel's arrival and departure is registered by the Agent or vessel's administration representative at the Port Inspection.

1.6 The Master of a vessel departing should seek consent, via the Agency, from the Port Authority, during working hours.

Vessel's departure for a coastwise passage is registered in the same manner.

Vessels engaged in foreign traffic must receive a Customs' permission prior to a departure registration.

1.7 The Master of a vessel, arriving to an Archipelago Small Port, should send information about arrival to the Port Operator, who reports it to an Archipelago Small Port by special services.

1.8 When within VHF range of a small port, the Master should contact the Archipelago Small Port's administration, and receive its permission to enter.

1.9 The vessel's arrival at the Tallinn roadsteads for Customs' formalities processing, for deviation operations and other aims, and also for repair, technical works in harbours, plants and aquatic areas, not belonging to the Tallinn Port, should register an arrival at the port.

1.10 An arrival registration in the Port Inspection is performed within 8 hours from the moment of the arrival.

1.11 Auxiliary, port and technical fleet vessels register a navigation permission in the Port Inspection.

2. Pilotage.

2.1 Pilotage is compulsory in Tallinn, Muuga and Kopli Bays for all the vessels over 300 g.r.t., and for Estonian vessels over 20,000 g.r.t. Technical, port and dredging fleet vessels are free of pilotage.

2.2 Pilotage is performed 24 hours a day.

There are 3 Pilot Stations.
"Suurupi" in the place of Buoy N2 "Suurupi",
(Lat. 59° 29' 04" N., Long. 24° 30' 08" E.).
"Tallinn" in the place of Buoy N1 "Tallinn",
(Lat. 59° 37' 05" N., Long. 24° 38' 00" E.).
"Aksi" near the island Aksi,
(Lat. 59° 37' 03" N., Long. 24° 38' 00" E.).

2.3 Before the approach to the Pilot Station, the Master should contact radio station "Tallinn Radio 17" by radiotelephone on VHF Channel 14 ("Traffic Control") or "Muuga Radio 5" on VHF Channel 67, and confirm the final time of arrival.

2.4 While entering or leaving the Port, pilotage is compulsory for all vessels.

2.5 Vessels shifting in the Port is arranged with a Pilot aboard.

2.6 An application for pilotage should be sent by the Master or Agent, 4 hours prior to a vessel's approach to the Pilot Station. The vessels in Port apply for a Pilot to the Port Inspection 2 hours in advance, and re-confirm within 30 minutes of unberthing or shifting.

2.7 Vessels' pilotage is provided in sequence of vessels' arrival and when their applications are presented, except emergency and liner vessels. The pilotage order, if necessary, is settled by the Port Operator with the Port Inspection consent.

2.8 The Port bears no responsibility for a possible delay in the following cases:

A vessel's arrival notice not sent or not in due time.
No free Pilots in the port, because all are engaged in pilotage.
Unfavourable weather preventing Pilots boarding vessels.

2.9 In absence of a Pilot or for other reasons, a vessel should anchor in places recommended for this.

3. Vessel Traffic Regulations.

3.1 Vessels' traffic on approach to the Port and anchoring changes is controlled by the TCS.

3.2 Vessels are not allowed to enter or leave the Harbour, to shift alongside a berth without TCS permission.

3.3 In case of need, the TCS may impose speed restrictions for vessels, or one-way traffic in the regulation zone.

4. Navigation in Ice.

4.1 The Tallinn Bay, Muuga and Kopli Bays freeze some years. The beginning of the icebreaker-assisted navigation period is announced by the Harbour Master's office.

4.2 Icebreaker operations and convoy forming is performed according to icebreaker operations daily schedule.

4.3 In cases where another shipping company intends to conduct vessel in ice to the Port and outward, it should hand over an application to the Harbour Master 48 hours in advance.

4.4 An application may be amended or cancelled, but no later than 12 hours before the date declared.

4.5 A vessel's departure time from the Port or time of convoy forming alongside the edge of the ice is decided and is announced to a company or the Master.

4.6 The Master of a vessel, calling at the port, informs the Harbour Master or an Agent about an estimated time of approach to a meridian (C.Ristna) 12 hours in advance.

4.7 The Master is informed on his request about ice situation, ice edge location, approximate ice pilotage start and icebreaker departure time.

C. *Kesklinna Port:*

1.1 A vessel should not approach the Northern Gates of the Old Harbour, nearer than one mile, without the TCS' permission ("Tallinn Radio 5") for entering the Old Harbour.

1.2 The vessels, excluding tugs and icebreakers, may call at the Port and leave if visibility is no less than 5 cables.

The tugs and icebreakers may call at the Port and leave if visibility is no less than 2 cables.

Visibility for Passenger carriers calling and leaving is determined by the Master.

1.3 When vessels shift in the port, her main engine, steering gear, anchor and mooring devices should be in working order.

1.4 Vessels are prohibited to let go or dredge anchor in the passage from the Basin N1 to the Basin N2 (a submarine cable and a water pipe pass from the Berth N6 to the Eastern Mole extremity).

1.5 The vessel passage to the Admiral Basin is permitted when a crossing bridge is completely raised.

The bridge raising is arranged on the vessel's demand (one long blast).

1.6 A vessel's speed should not exceed 3 knots in the Port Aquatorium.

1.7 Vessels that may call at the Port:

The Port Area	*Maximum Vessels' Measurements* *Length* (m.)	 *Breadth* (m.)	 *Draft* (m.)
Basin N1:			
Berth 1	100	15	4.5
2	135	20	6.6
3	135	18	6.8
4	30	8	5.0
5	135	20	6.7
6	100	15	4.5

Comment: Mooring with tugs near Berths N3 and N5 for vessels over 15 m. in breadth is impossible if another vessel is alongside indicated berths with the same breadth.

Basin N2:			
Berth 7	160	25	7.7
8	140	20	7.0
9	30	8	4.8
10	160	18	7.3
12	180	25	7.8
Basin N3:			
Berth 13	160	25	7.7
14	160	25	8.2
15	180	25	8.3
16	160	25	8.0
17	140	18	7.8

1.8 The call at the Port through the Northern Gates is possible for vessels with draft under 8.6 m. and length under 180 m. Through the Southern Gates, with draft under 7.0 m., length under 140 m.

1.9 Water level in the Port depends on the wind force and direction (wind tide phenomena). Real water level data can be received in the Port Inspection.

2. Vessels Towing.

2.1 During towing operations in the Port Aquatorium vessels' communication is maintained through radiotelephone on VHF Channels 9 and 6.

2.2 The number of tugs and type required for mooring, unmooring and swinging operations is decided by the Master with a Pilot consent.

2.3 The Master should apply for tugs required while entering the Harbour, via the Agent or the Port Operator, 45 minutes prior to arrival at the Port.

2.4 The Master's order for tugs required while shifting in the Port or for vessel's departure, should be sent to the Agent 2 hours in advance.

2.5 If the wind velocity exceeds 16 m./sec., mooring operations are arranged with a Pilot and the Master's consent only.

2.6 Shifting of vessels in the Port Aquatorium if visibility is less than 2 cables, except passenger ship shifting.

2.7 Vouchers for towing vessels, leaving the Harbour, should be registered before departure. Vouchers for towing vessels while entering and shifting may be registered after the end of the works.

3. Vessels staying at Berths.

3.1 It is prohibited to turn a third vessel broadside on to another two vessels, turned broadside at the berth earlier.

3.2 Vessels berthed alongside must raise anchors, if used during berthing.

3.3 Vessels staying broadside at the berths is permitted by the Harbour Master.

3.4 Berth-side cranes, providing safety mooring, should be installed no later than 30 minutes prior to vessels' arrival (departure).

3.5 In Winter time, the berth, inshore part pile-moorings and approaches must be cleared of ice and snow and covered with sand.

3.6 While mooring, all the other works on a berth or any transport movement is prohibited. Non-participants in mooring operations are not allowed to stay in a mooring zone.

3.7 In case of extra dangerous phenomena warning, the Master and his Mate must be on duty on a vessel.

A vessel's electric power supply should be cut off from the shore mains.

3.8 A stevedore company's representative should be present on the berth while mooring. A vessel's stem position relative to a berth is determined by the above mentioned representative.

3.9 Vessels, staying at a berth, are prohibited to turn propellers, except small vessels' preparing for a departure or shifting.

3.10 A hull or a deck erection of a vessel, staying at the Berth N1, should not obscure the Southern Gates red light zone.

3.11 Diving operations should receive a permission for work from the Port Operator on duty after a report about supposed work duration.

3.12 A vessel lowering divers must have continuous radiotelephone communication with the Port Inspection.

3.13 Repairs, painting and other operations of vessels and berths must be arranged from special rafts with consent of cargo loading areas' supervisors and the Port Inspection's permission.

3.14 A vessel's hull painting operation near a berth may be permitted by the Port Inspection, only with absolute water pollution prevention.

3.15 Vessels staying at berths must have:
(a) Rat guards on mooring ends.
(b) Nets to prevent cargo dropping overboard. After loading operations are finished, they must be taken away.

4. Passenger Operations.

4.1 The Head of the Passenger Terminal should be held responsible for passengers embarkation/disembarkation.

4.2 Passengers embarkation/disembarkation on the roadsteads is performed by the Port craft or local companies' passenger carriers. The craft should have radiotelephone VHF communication with TCS. The Agent co-ordinates these operations with other services involved.

4.3 Passengers embarkation/disembarkation over a vessel, staying alongside a berth, is prohibited.

5. Radio and Telephone Aids Usage.

5.1 VHF radio station with call sign "Tallinn Radio 1" works 24 hours a day, and provides communication between vessels and all coastal services. It is linked to the Port ATE (automatic telephone exchange) and the telephone network of Tallinn, VHF calling Channel 16, working Channels 1, 3, 26, 27.

"Tallinn Radio 17" ("Traffic Control") – Traffic Control Service regulates vessels navigation in Tallinn Bay and performs radio pilotage, Channel 14 calling, Channel 20 working.

"Tallinn Radio 5" ("Port Control") – Traffic Control Service regulates navigation in the Port Aquatorium, Channel 14 calling, Channel 9 working.

5.2 The ATE of the Port provides telephone communication between vessels at the berths and coastal services. Connection to the town network is performed by dialling 9, from town to the Port ATE dialling 428.

5.3 The Port main services telephone numbers:

Subscriber	*ATE*	*Town*
Fire Station	206	9-01
Emergency First Aid		9-03
Police	612	9-02
Dispensary	510	
Telephone Repair Service	211	
Port Operator on Duty	363	
Port Inspection	588	
Sanitary Quarantine Department	520	
Customs	332	
Electrician on Duty	589, 545	
TCS, SRS (Shore Radar Station)	495	

D. *Kopli Port:*

1.1 Vessels entering and leaving the Harbour use a channel connecting the roadsteads with the Port. The channel length is 800 m., width 90 m. – 150 m. Vessels' admissible draft in the channel is 8.6 m.

Extreme draft of vessels, staying at berths must not exceed:

The Southern Side	1 Sector (Berth N1)	3.9 m.
	2 Sector (Berth N2)	6.0 m.
	3 Sector (Berth N3)	8.2 m.
	4 Sector (Berth N4)	6.0 m.
	11 Sector (Berths N11)	6.0 m.
The Northern Side	5 Sector (Berth N5)	8.6 m.
	6 Sector (Berth N6)	6.0 m.
	7 Sector (Berth N7)	4.5 m.
	8 Sector (Berth N8)	4.5 m.
	9 Sector (Berth N9)	4.0 m.
	10 Sector (Berth N10)	4.0 m.

The mooring to the Sectors 7, 8, 9 and 10 is permitted for two vessels with draft under 6.5 m. turned broadside at the berth.

1.2 Any shifting in the Port is planned by the Port Operator with consent of the Port Inspection.

1.3 Vessels over 150 m. in length enter/leave the Harbour if wind less than 10 m./sec. Vessels moving to a dock and outwards is permitted if wind less than 10 m./sec., and a side wind of 8 m./sec.

2. Vessels towing in the Port.

2.1 Vessels towing operations should be requested from the Port Operator 24 hours a day by radio telephone VHF Channel 11, call sign "Tallinn Radio 33", or via Agent. A request should be made no later than 45 minutes prior to a vessel's arrival and 2 hours before a vessel's departure.

2.2 Communication between tugs and towed ships is maintained through radiotelephone on VHF Channel 11.

2.3 During mooring, unmooring and swinging operations, the tugs usage and their number is decided by the Master, with a Pilot's consent.

2.4 Mooring operations are performed only with a Pilot and the Master's consent, if wind velocity over 11 m./sec.

2.5 Towing operations for vessels with main engine, anchors and steering gear out of action, or other non-self-propelled vessels, in case of a wind over 11 m./sec. may be permitted only with Harbour Master's consent.

2.6 In case of a disagreement between a Pilot and the Master, tugs necessity, number and capacity is determined by the Harbour Master.

2.7 Towing and shifting in the Port Aquatorium should be ceased:
(a) When visibility is less than 2 cables.
(b) When wind is over 14 m./sec.

3. Vessels staying in the Port.

3.1 The Port Authorities and passenger delivery to vessels, riding at anchor, is performed by the Port fleet vessels at the Master's request if the sea state is less than 3.

3.2 Vessels staying at berths is permitted:
(a) Over 150 m. in length, for one vessel turned broadside on to a berth.
(b) Within 75 m. – 150 m. in length, for second vessel turned broadside on to another vessel at a berth.
(c) Under 75 m. in length, for third vessel turned broadside on to another two vessels turned broadside at a berth earlier.
(d) Small-tonnage vessels at the Port Inspection's judgement.

3.3 In case of favourable weather (wind force 6 in directions safe for joint staying at a berth), a small-tonnage vessel can be placed alongside a vessel over 150 m. in length.

3.4 The salvage boats launching and testing is performed only with the Port Inspection's consent.

3.5 After storm warning and wind strengthening up to 18 m./sec., the Port Operator assigns the most high-power tugboat on duty.

3.6 The 4th Sector (Berth N59) is an oil terminal. Repair works with an open fire on vessels staying within 100 m. from oil terminal is prohibited.

3.7 The simultaneous oil products discharging (bunkering) of two vessels, turned broadside to each other, is permitted at the oil terminal upon following conditions:
(a) Agreement of two vessels' Masters.
(b) 1st and 2nd class oil products, explosive and highly inflammable goods absence.
(c) Oil products discharging (bunkering) with a flash point no lower than 65°, should be reported to the Port Inspection.

3.8 Sound signals should be sent only while manoeuvring in the Port Aquatorium.

3.9 While bunkering at the berth, a tanker and a bunkering vessel should be surrounded by booms, and oil waste collector must be ready alongside.

3.10 In the Port Aquatorium, only segregated clean ballast waters can be discharged.

3.11 Scrap and oil products dropping overboard should be reported to the Port Inspection.

3.12 If while loading or bunkering oil products spill on board or overboard, then loading and bunkering operations should be ceased immediately until spill is cleaned up.

3.13 Before undocking operations, a dock floor must be carefully cleaned up (scrap and oil products).

3.14 Sailing from the Port is prohibited for vessels, having on board accumulated sewage, oily waste waters, scrap and oil residues.

3.15 The Port Inspection is situated in the cold storage building at the 4th floor (5 Sector, Berth N70). The Customs, Sanitary Quarantine Department, Fire Inspection are also in the same building.

E. *Muuga Port:*

1.1 Extreme drafts of vessels, calling at the Port or staying at the berths, should not exceed following values, in cases of datum water level and wave height less than 1 m.:

	Draft (m.)	*Length* (m.)	*Breadth* (m.)
In Channel	16.8		
Near Buoyant Berth	5.5		
Berth N3	5.5	under 90	
Berth N4	5.6	under 260	
Berth N5	6.2		
Berth N6	9.0	under 140	
Berth N8	13.0	under 260	33
Berth N9	16.5	under 280	40
Berth N10	16.5	under 280	40
Berth N11	9.9		25
Berth N12	8.5		25
Berth N13	9.9		25
Berth N14	7.6		

Ramp measurements for Ro/Ro vessels:
Berth N5, breadth 16 m., rise upon sea level 1 m.
Berth N14, breadth 11 m., rise upon sea level 2 m.

1.2 Mooring operations for vessels over 25,000 g.r.t. are performed only when wind velocity less than 12 m./sec.

1.3 Vessels in the Port Aquatorium should maintain the slowest possible speed.

2. Vessels Towing.

2.1 When mooring and unmooring, number of tugs is decided by the Master with consent of a Pilot, tugs usage is obligatory for vessels over 20,000 g.r.t.

2.2 Tugs and towed vessels communication is maintained through radiotelephone VHF Channels 71 and 6.

3. Large Tonnage Vessels Placement Regulations.

3.1 Large tonnage vessels mooring to the grain terminal is permitted if wind under 12 m./sec., and at Berth N8 if there is a favourable weather forecast for a next day.

3.2 Large tonnage vessels mooring to the Berth N8 is performed portside to, and to Berths N9 and N10 bow to seaward.

These rules may be changed for some reasons, but only with the Harbour Master's consent.

3.3 Large tonnage vessels swinging for mooring at Berths N9 and N10, is arranged on the roadsteads outside 20 m. depth. These vessels' towing along the channel is performed stern first.

3.4 Vessels swinging for mooring at the Berth N8 is permitted in a basin between Berths N8 and N9.

4. Dredging Operations Regulations.

4.1 A dredging operations area is settled by the Harbour Master. Dredge Master should hand over to the Port Inspection a work quota, navigation safety instructions and dredgers anchor plan before work starts.

4.2 Dredgers and vessels should maintain communication with TCS by radio station on VHF Channel 67, and provide Port Operator and cargo vessels with dredging area deviation. Communication should be maintained 24 hours a day.

4.3 Dredge Master should be held responsible for dredgers safety, even in case of an unjustified weather forecast and ill-timed storm warning.

5. Vessel Mooring.

5.1 Passengers and Port Authorities delivery to vessels in the roadsteads is arranged by the port fleet vessels. Passengers embarkation/disembarkation is permitted only on the Berth N14 ramp of the ferry boat terminal or near grain terminal head.

5.2 The vessels' Masters should take into account that the Port Aquatorium and Muuga Bay are not protected from the winds from N., N.W., N.E. and E. directions.

In case of these directions with winds velocity over 17 m./sec. especially N.E. direction, staying at berths becomes unsafe, whereas near Berths N8 – N11 it is dangerous for the reason of very rough sea.

Tug operations are restricted by seaways. In case wave height over 1.5 m. tugs work becomes ineffective and it is dangerous for tugs themselves, Master's decision on sailing to the roadsteads should be agreed with the Harbour Master.

The Harbour Master's decision for sailing to the roadsteads should be executed implicitly. In case of an extraordinary sailing order in case of a storm warning, pilotage and towing operations sequence is settled by TCS.

5.3 A weather forecast and storm warning for the Western part of the Gulf of Finland and the Port Aquatorium are broadcasted regularly from 0730 hrs. to 1400 hrs. daily over VHF Channel 67 by TCS. Current weather and weather forecast information may be received in the Port Inspection on telephone number 532, or via TCS on VHF Channel 67, 24 hours a day, free of charge. In working time, weather data can be received from a weather chart maker on duty in meteorological service on Tel: 440-833.

5.4 The Master is responsible for vessel and crew safety even in case of unjustified weather forecast and ill-timed storm warning.

5.5 When wind comes from a dangerous direction, the Master should prepare a vessel for immediate sailing to the sea and report to the TCS. The TCS settles vessels' sailing order.

5.6 An extraordinary sailing from Berth N4 and N5 in case of storm phenomena can be performed without Pilot, with TCS consent.

5.7 The Western basin, protected by the mole, serves as a shelter for port and technical fleet vessels in case of strong North winds.

5.8 Duty Officer of the Port Inspection and a terminal representative control mooring and unmooring operations. A mooring team obeys a terminal representative. Auxiliary fleet mooring is controlled by the Port Inspection.

5.9 Mooring broadside to another vessel is prohibited (except port fleet vessels). Cargo vessels staying near berths except for loading/discharging is prohibited.

5.10 For extraordinary sailing to the roadsteads, crew members must remain on board a vessel.

Main engines, steering gear and anchor devices should be in good working order.

5.11 Any repair or preventive operations, resulting in vessels' sailing readiness, may only be arranged with the Harbour Master's written permit, and confirmed by the Port Operator.

5.12 All the vessels, staying at berths, should connect to the port telephone mains, after a request to the Port Operator (call sign "Muuga Radio 2", VHF Channel 35), or must maintain regular radio watch on VHF Channel 67.

5.13 Requests for port services of any kind should be made by Agent to the Port Operator on telephone 523 or by VHF radio telephone in advance, 2 hours prior to a desired time.

5.14 All vessels should discharge oily waste, fecal waters and scrap before departure registration.

5.15 The Port Inspection is sited in the Port Administration building on the 7th floor, Room 712.

6. The Port ATE telephone numbers:

Head of the Port – Office	503
Main Port Operator	530
Harbour Master	521
Port Inspection – Duty Officer	532
Pilots	621
Port Operator on Duty	523
Central Cargo Handling Area Operator	543
Harbour Fleet Operator	676
Tug on Duty	254
Water Supply	337
Emigration Service – Supervisor	559/228
Emigration Service – Duty Officer	556
Sanitary Quarantine Department	682
Dispensary	241/245/525
Police	284
Fire Station Inspector	239
ATE	211/522/525

Connection to the town ATE by dialling "1".

Agencies telephone numbers (through the town ATE):

TRANSFLOT	425-685
INFLOT	430-508
ESTMA	601-723
NOVOTRANS	236-731
TALLINK	215-708

7. Vessels Bunkering.

7.1 Oil and fuel bunkering is permitted on the roadstead and ex-berth. Bunkering is provided by self-propelled tanker.

7.2 Vessel approach initial information should contain a bunker request.

At the same time, a vessel's readiness for bunkering, estimated bunkering time should be reported to the Port Operator.

7.3 Bunkering on the roadstead is possible if wind less than Force 3. While bunkering ex-berth, a vessel and a tanker must be surrounded by booms, and oil waste collector must be ready alongside.

7.4 Bunkering ex-berth ceases in case a wind strengthening to over 12 m./sec.

7.5 Bunkering is flatly prohibited for vessels operating with dangerous goods.

7.6 While bunkering from refuelling trucks, vessel should take all precautions against oil products spillage on to a berth or overboard.

F. *Archipelago Small Ports:*

1. Ferry boat navigation is prohibited in passages in case of South direction winds over 15 m./sec. and North direction winds over 18 m./sec., and mooring operations in case of rough sea near working berths over 1 m. wave height.

2. A vessel may call at an Archipelago Small Port after a permission receipt.

3. Vessels that may call at the Archipelago Small Ports:

Archipelago Small Ports	*Vessels' Measurements* *Length* (m.)	*Breadth* (m.)	*Draft* (m.)	*VHF Communication Channel* *Calling*	*Working*
Roomassaare	96	14	3.9	16	14
Virtsu	60	12	3.9	16	14
Kuivastu	80	14	4.5	16	14
Heltermaa	70	12	3.3	16	30
Rohukula	60	12	3.3	16	30
Sviby					

Comment: VHF monitoring is maintained constantly in working time and at any other time, 2 hours before vessel's arrival.

4. Mooring is permitted for vessels, calling at an Archipelago Small Port for loading and passenger operations. Other departments vessels' mooring is permitted by the Head of an Archipelago Small Port.

KESKLINNA: 59.27 N. 24.46 E. (See Plan)

LOCATION: The port is located in Tallinn Bay on the S.W. coast of the Gulf of Finland.
PORT LIMITS: Dockage charges commence when vessel is made fast to quay.
DOCUMENTS: Basic documents for entry:
3 copies Cargo Declaration.
3 copies Notice of Readiness.
5 copies Crew List.
1 copy Maritime Declaration of Health.
2 copies Ship's Stores Declaration.
2 copies Crew's Effects Declaration.
PILOTAGE: Compulsory. Provided by Pilots' Estonian National Maritime Board (Tel: (+372) 6 339 222, 6 339 223. VHF Channels 13 and 73). Pilot should be ordered through the agencies at least 24 hours in advance. Pilot boards vessel coming into Kesklinna from West at position Lat. 59° 29.4' N., Long. 24° 32.8' E. and from East and North at position Lat. 59° 37.5' N., Long. 24° 38.0' E. Vessels should establish contact with Tallinn Traffic Control Station for permission to enter the area. VHF call sign "Tallinn Traffic Control" Channel 13. Pilot boat also on Channel 13, call sign "Tallinn Pilot".
ANCHORAGES: The anchorages are located in Tallinn Bay with depths up to 30 m. Anchoring position will be advised by "Traffic Control" VHF Channel 13.
RESTRICTIONS: Vessels can enter and leave the port at any time of day and night. Vessel entry/departure to/from the port, except tugs and icebreakers, ceases when the visibility is 3 cables and less. The possibility of a passenger vessel entering/leaving the port in any visibility is determined by her Master.
MAX. SIZE: Max. length 200 m., breadth 30 m.
HEALTH: Via agency (Vessels entering after calling at another port in Estonia, Pratique is automatic).
RADIO: Port has no communication equipment.
VHF: General station, call sign "Tallinn Radio-1", Channels 16, 13, 26 and 27.
"Traffic Control" on Channel 13.
"Port Control" on Channel 14.
RADAR: No port radar service.
Radar service only in Tallinn Bay, call sign "Traffic Control" (VHF Channel 13).
Initial message should include the following:
(a) Type and name of vessel.
(b) Nationality.
(c) Time of approach.
(d) N.r.t., LOA and max. draft.
(e) Type of cargo.
TUGS: 1,200 h.p. – 2,500 h.p. Icebreakers of 7,000 kW and 9,000 kW also available. Tug's assistance available for berthing, subject to Pilot's advice. Tugs can be ordered through Agents. Ship's lines normally used. Privately-owned tugs are ready at any time round the clock.
BERTHING: Ro-Ro vessels, 6 berths with ramps; 5 quays for cruise ships. 8 quays for ore and bulk cargo facilities. All berths equipped with cranes.

Kesklinna:

Quay	*Length* (m.)	*Depth* (m.)
Basin 1:		
No. 1	100	4.4 – 4.7
No. 2	150	6.2
No. 3	150	7.0
No. 4	59	6.0
No. 5	146	7.5
No. 6	88	6.0
Basin 2:		
No. 7	247	8.2
No. 7A	42.5	7.8
No. 8	213	7.1
No. 9	55	5.2
No. 10	127	8.3
No. 11	127	7.5
Basin 3:		
No. 12	274	7.3 – 8.4
No. 13	191.5	8.0
No. 14	193.1	10.7
No. 15	193	10.7
No. 16	144	10.7

Admiralty Basin: 5 quays with depth 5.5 m.
Kesklinna Port has 2 Gates (Locks). The depth in the North is 11.0 m., the passage of vessel up to 200 m. LOA is possible. Depth in South Gate is 7.0 m., passage of vessel under 140 m. LOA is possible.
CRANES: 6 tons up to 40 tons portal cranes and 2 private floating cranes of 100 tons capacity.
BULK CARGO FACILITIES: 8 quays. Depth alongside 7.0 m. – 10.7 m.
SPECIALISED CARGO HANDLING FACILITIES: Berth No. 1 is specialised in container handling with portable cranes. Depth alongside 4.4 m. – 4.7 m. Ramps for Ro-Ro vessel: 6 berths, depth alongside 6.0 m. – 8.0 m.
BRIDGES: None.
STEVEDORES: *Port Labour Working Hours:* Mondays to Fridays 0730 hrs. – 1930 hrs. with break at 1200 hrs. – 1300 hrs. Saturdays 0730 hrs. – 1200 hrs. Overtime is possible.
MEDICAL: Full hospital facilities available without prior notice. Dentists available during normal working hours.
TANKERS: No facilities.
DENSITY: Fresh water (1000).
FUEL: Bunkering by lighters at any quay and at anchorages. Arrange through Agent.
FIRE PRECAUTIONS: Smoking is prohibited in any areas of the port.
CONSULS: Canada, China, Denmark, Finland, France, Germany, Italy, Japan, Latvia, Lithuania, Norway, Philippines, Poland, Russia, Sweden, Ukraine, U.K., U.S.A. and Vatican.
REPAIRS: All kinds of repairs are possible. Arrange through Agent.
DRY DOCKS: No major facilities at port, but Balti Laevaremonditehas has 3 floating docks for hull and engine repairs. Tel: (+372) 479 425. Fax: (+372) 473 791.
SURVEYORS:
Marine Surveyors: Becmann & Jorgensen AS, 21 Sadama Street, EE 0102 Tallinnn, Estonia. Tel: (+372) 446 024. Telex: 173046. Fax: (+372) 6 313 169.
Classification Societies: Bureau Veritas. Tel: (+372) 2 529 277. Fax: (+372) 542 524.
Register of Shipping Inspectorate in Estonia, 52 Tuukri Street, EE 0010 Tallinn, Estonia. Tel: (+372) 426 089. Fax: (+372) 426 089.
GANGWAY/DECK WATCHMEN: No requirement for watchmen.
HATCHES: Normally opened and closed by ship's crew.
CUSTOMS ALLOWANCES: 200 cigarettes and 1 litre spirits.
CARGO GEAR: Load/discharge effected by shore gear.
REPATRIATION: Available through Agent.
AIRPORT: Nearest airport 7 km.
TIME: GMT plus 2 hours. GMT plus 3 hours in Summer.
HOLIDAYS: All holidays are worked by stevedores.
POLICE/AMBULANCE/FIRE:
Police. Tel: 002, (+372) 6 318 614, 6 318 612. Fax: (+372) 6 318 613.
Ambulance. Tel: 6 318 620.
Fire Brigade. Tel: 001, (+372) 663 990.
EMERGENCY CO-ORDINATION CENTRE: Estonian Maritime Rescue Coordination Centre. Tel: (+372) 6 399 500. Fax: (+372) 6 399 501.
TELEPHONES: Telephones can be ordered in advance from shipping Agents or shipbrokers. Nearly all quays have facilities for ship-to-shore telephone connections.
SERVICES: Compass adjusting, radio and radar repairs, supply of charts, nautical publications, sounding paper, course recorder paper, Notice to Mariners, safety equipment, extension of certificates available.
BANKS: Many banks in Tallinn.
STORING: See "Prelims".
1. Vessel stored by truck.
2. None.
3. Alongside at the berth.
4. Available.
5. Via local riggers.
6. Available.
SHORE LEAVE: No restrictions.
IDENTIFICATION CARDS: Seaman's Book is sufficient.
GARBAGE DISPOSAL: Special sacks available, contact Agent.
WASTE OIL DISPOSAL: Private tankers and trucks, contact Agent.
SEAMAN'S CLUBS: None.
CURRENCY: Estonian Kroon. Approximate exchange rate to U.S.Dollar is 11.5 EEK. Money exchange in every bank.
REGULATIONS: The port's rules apply.
GENERAL: Year-round navigation is possible. In severe Winters, navigation is possible with icebreaker's assistance.
Variations in water level: There are no tidal variations as such in the port, but the differences noted are the result of weather or climatic conditions.
MHW + 0.80 m.
MLW − 0.80 m.
DEVELOPMENTS: New Passenger Terminal. Quay No. 8 will be completed in May 1996.
Rebuilding of Quay No. 17 will be completed in 1997.
New gate between Basin No. 2 and Admiralty Basin will be completed in May 1996.
AUTHORITY: Kesklinna Port, 25 Sadama Street, EE 0100 Tallinn, Estonia. *Tel:* (+372) 6 318 002, 6 318 084. *Telex:* 173167 Port EE. *FAX:* (+372) 6 313 060. *Contact:* Harbour Master, Tel: (+372) 6 318 329.

PALDISKI: 59.24 N. 24.05 E. (See Plan)

PORT LIMITS: Ship is considered to be an "arrived ship" alongside quay after clearance.
DOCUMENTS:
5 copies General Declaration.
4 copies Crew List.
4 copies Cargo Manifest.
2 copies Crew Effects Declaration.
2 copies Ship's Stores Declaration.
5 copies Passenger List.
PILOTAGE: Compulsory. Pilot boards vessels coming to Port of Paldiski at position Lat. 59° 23' N., Long. 24° 00' E. Pilot should be ordered through Agent 4 hours before arriving at pilot station and 2 hours before departure.
ANCHORAGES:
(1) Lat. 59° 21.5' N., Long. 24° 01.6' E. with depth 30 m.
(2) Lat. 59° 20' N., Long. 24° 02.8' E. with depth 18 m.
RESTRICTIONS: Vessels can enter or leave the port during daylight.
MAX. SIZE: Maximum permissible size: LOA 140 m., draft 8.4 m.
HEALTH: Free Pratique through ship's Agent. If entering after calling at another port in Estonia, Pratique is automatic.
RADIO: Port has no communication equipment.
VHF: Channels 16 and 9.
RADAR: No radar service available.

TUGS: Ordered through Agent.
BERTHING: There are 3 berths with overall length 470 m. with depth alongside 4.0 m. – 9.5 m.
CRANES: Two portal cranes with lifting capacity 6 tons each on Berth No. 2. There are no cranes on Berths No. 1 and No. 3.
BULK CARGO FACILITIES: None.
SPECIALISED CARGO HANDLING FACILITIES: None.
BRIDGES: None.
STEVEDORES: *Handling Rates:* Loading 1,000 tons/24 hours, discharging 500 tons/24 hours.
MEDICAL: Full hospital facilities available without prior notice. Dentists available during normal working hours.
TANKERS: No facilities.
DENSITY: 1018.
FRESH WATER: Available.
FUEL: Limited supply available.
FIRE PRECAUTIONS: No specific precautions.
CONSULS: No local presentation.
REPAIRS: No facilities.
DRY DOCKS: None.
SURVEYORS: Cargo survey and draft survey available 24 hours by Esteve Ltd.
GANGWAY/DECK WATCHMEN: Not necessary.
OPENING/CLOSING HATCHES: By crew.
CUSTOMS ALLOWANCES: 200 cigarettes, 1 litre of spirits and 2 litres of wine for each crew member to be held out of Bond.
CARGO GEAR: Load/discharge is to be effected by shore gear and by ship's gear. No heavy lift cranes.
AIRPORT: Tallinn Airport 50 km.
TIME: GMT plus 3 hours, GMT plus 4 hours in Summer.
HOLIDAYS: All holidays are worked by stevedores, except 1st January, 24th February, Good Friday, Easter, 1st May, 23rd and 24th June, 25th and 26th December.
POLICE/AMBULANCE/FIRE: Police 741-335. Ambulance 741-352, 741-338. Fire 745-132.
EMERGENCY CO-ORDINATION CENTRE: Nearest at Keila. Tel: 745-132.
TELEPHONES: Not available for placing onboard ship.
SERVICES: Special services available in Tallinn, to be ordered through Agent.
BANKS: Savings Bank, Rae Street 17, EE-3074 Paldiski. Tel: 741-318.
Virumaa Kommertspank, Peetri Street 9, EE-3074 Paldiski. Tel: 741-356.
STORING: See "Prelims".
(1) Truck.
(2) No.
(3) Yes.
(4) No.
(5) Customs regulations in force.
(6) Yes.
SHIP SUPPLY SERVICE: Available through Agent.
SHORE LEAVE: Permitted.
IDENTIFICATION CARDS: Seaman's Book is sufficient.
GARBAGE DISPOSAL: Collection service not available.
WASTE OIL DISPOSAL: Not available.
SEAMAN'S CLUBS: No seaman's club in Paldiski.
CURRENCY: EEK (Estonian Crown). U.S.$1.00 = 11.5 EEK (July 1996).
REGULATIONS: No particular regulations.
DELAYS: Delays in berthing, loading and discharging are not normally expected.
DEVELOPMENTS: Widening of Berth No. 2 and dredging works inside port underway.
AUTHORITY: Port of Paldiski South, Rae Street 15, EE-3074 Paldiski, Estonia. *Tel:* (372) 6391-241. *FAX:* (372) 6391-240. *Contact:* Valdo Heinla, Director. Ulo Kikas, Harbour Master.

PYARNU: 58.23 N. 24.29 E. (See Plan)

GENERAL: The Port of Pyarnu, a sea fishing port, is situated in the N.E. part of the Riga Bay, at the estuary of the Pyarnu River falling into the Pyarnu Lakht.

Vessels, with a draft of 4.0 m. can reach the port by the channel about 2.5 mile long and about 60 m. wide.

At the estuary of the Pyarnu River, the channel is protected by two moles extending S.W. from the shore. Depths at the berths are up to 5 m. Changes of the water level within the port aquatorium are due to tides caused by winds.

Vessels proceeding to the port by the channel are recommended to have sufficient keel clearance bearing in mind requirements of good sea practice. The pilotage is carried out with due regard to the existing water level compared usually with the mean water level at the Kronstadt tide-gauge. Data of the exact depth of the channel can be obtained from the Harbour Master's Office. The harbour of the port is usually frozen over from November till April.

PILOTAGE: Compulsory. The Port of Pyarnu has no special Pilot service. In view of this, Pilots for entry or leaving should be ordered through maritime Agency "Inflot" at the Port of Tallinn. Pilots embark at the port of Pyarnu roadstead.

ANCHORAGES: The Port of Pyarnu roadstead occupies the whole of the middle part of the head of the Pyarnu Lakht limited by the 5 m. line.

When in the roadstead vessels may anchor on both sides of the Pyarnu-Morskoi leading line, beyond the boundaries of the fishing areas. The holding ground is good. The roadstead is sheltered from winds of all directions, except those blowing from the South and S.W.

Masters should bear in mind that there are a lot of fishing nets laid in the Pyarnu Lakht. The boundaries of the fishing net prohibited areas for navigation of merchant vessels are marked on the charts.

RESTRICTIONS: All traffic of vessels, both in the harbour and in the approaches to the port, is controlled by the Harbour Master's Office, by a Master on duty.

Navigation in the approaching channel is allowed day and night, in turn, but only in one direction at one time.

It is prohibited for vessels to pass by each other and pass by vessels keeping the leading marks of the approaching channel in line as well as to cross the channel.

The priority to navigate in the channel is given to vessels leaving the harbour. In this case vessels proceeding to the port must give way to outgoing vessel not preventing her manoeuvring. The turn of movement in the channel is stipulated by the Port Controller but the traffic of vessels itself is controlled by the Harbour Master's Office.

Vessels navigating both in the channel and in the harbour must proceed at a moderate speed to avoid the possibility of causing waves.

If winds over Force 6 Beaufort Scale entry to the port, leaving the port and shifting berths is allowed by the Harbour Master or a person in charge only.

RADIO: Radio communication can be effected through the radio stations:

Call Sign	*Frequencies (kHz)* *Working*	*Calling*	*Type of trans-mission*	*Time of work Remarks*
RKD/F	487	500	AZJ	H24
"Pyarnu-31"	156.8*(16)	156.8*(16)	F3E	H24
Harbour Master	156.55*(11)	156.55(11)	F3E	HX
"Pyarnu-33" Port Controller	156.50*(10)	156.50*(10)	F3E	HX (Operates during navigation)

*Frequencies in MHz

Notice of Arrival: All vessels proceeding to the port from the seaward should advise their ETA to the Port Controller. Masters should also advise vessels' particulars and the purpose of visit.

VHF: Vessel in the Roads or within port area can contact Harbour Master's Office on Channel 16 by radio-telephone (call sign "Pyarnu-31") all round the clock; Port Dispatcher (call sign Pyarnu-33) on Channel 10 around the clock.
TUGS: Tugs should be ordered through the Port Controller's service. Towage of vessels within the port is prohibited if wind over Force 6.
RADAR: Radar station not available.
BERTHING: Vessels having draft over 4.0 m. cannot berth. During S.W'ly and Westerly winds Force 8 and over, when in the port, the Master or his Chief Officer must be on board and have sufficient number of the crew on board in order to secure the vessel safely.

Berths of the port are equipped to handle vessels loaded with fish and fish products, salt, timber, rod metal and some other cargoes. There is a portal crane with 5 tons capacity and a closed warehouse. The Port Authority plans to build a new warehouse and an administrative building.
FRESH WATER: Available alongside.
FUEL: Available alongside and by barge.
OPENING/CLOSING HATCHES: By crew.
REPAIRS: Small repairs possible.
TIME: GMT plus 3 hours from October 1st – March 31st. GMT plus 4 hours from April 1st – September 30th.
AUTHORITY: The Port of Pyarnu Authority, 2 Kalda Street, 203600 Port of Pyarna, Estonia. *Tel:* 41-893, 40-164, 40-442. *Cables:* Pyarnu Morrybport. *Contact:* Harbour Master, Tel: 40-164.

TALLINN, including Muuga and Kopli: 59.27 N. 24.46 E. (See Plan)

Also see "Kesklinna".

LOCATION: A Baltic seaport situated in Tallinn Bay and Bay of Muuga on the S.W. coast of the Gulf of Finland. Year-round navigation is possible. In severe Winters, navigation is possible with ice-breaker assistance.

Kopli: Kopli is a Baltic seaport situated in Tallinn Bay on the S.W. coast of the Gulf of Finland. The port is situated at the stem of Paljassaare Peninsula on Tallinn Bay between the Cabotage port and Southern part of Paljassaare shallow. It operates all year round as the harbour basin is covered with ice only in very cold Winters. Navigation is possible with icebreaker assistance. The connection with the sea is by an 800 m. channel, which has a marked width of 90 m. – 150 m. and depth of 8.6 m.

GENERAL: Port of Tallinn consists of Kesklinna Port (See separate listing), Port of Muuga and Port of Kopli. Kesklinna Port and Port of Kopli are situated in Tallinn Bay, Port of Muuga is situated in Muuga Bay. Tallinn and Muuga Bays are frozen over in severe Winters only in Winter months (February and March). Streams in the Bays are inconsiderable. The difference of the water level is due solely to the effects of the wind, and is about ±0.8 m.

DOCUMENTS: The following documents are requested for Clearance:
4 copies Crew List.
2 copies Ship's Stores List.
2 copies Crew Effects List.
2 copies Crew Foreign Currency Declaration.
2 copies Ship's Foreign Currency Declaration.
1 copy Health Declaration.
DEEP SEA PILOTAGE: See "Baltic Deep Sea Pilotage".

PILOTAGE: Compulsory. Pilot boards vessels coming into Kesklinna Port and Port of Kopli from West at position Lat. 59° 29.4' N., Long. 24° 30.8' E., coming from the East and North at position Lat. 59° 37.5' N., Long. 24° 38.0' E. Pilot boards vessels coming to Port of Muuga at position Lat. 59° 37.5' N., Long. 25° 09.5' E. or Lat. 59° 37.5' N., Long. 24° 38.0' E. Pilot service is available throughout 24 hours. Pilot should be ordered through Agencies. Deep Sea Pilots are also available in the port.

APPROACHES: Depth of water in Tallinn Bay ranges from 14.0 m. to 80.0 m. and in Muuga Bay up to 90.0 m. The approach to port is marked by leading lights and beacons. Vessels can enter the harbour of Kesklinna Port through either the Northern or Southern Entrances.

ANCHORAGES: The anchorage areas are situated in Tallinn Bay and Muuga Bay with depths up to 30.0 m.

RESTRICTIONS: Vessels can enter or leave the port at any time of day and night.

MAX. SIZE: Maximum permissible dimensions for Tallinn are 180 m. LOA, 8.6 m. draft and 140 m. LOA, 7.0 m. draft respectively for the Northern and Southern Entrances. Maximum permissible dimensions for the Port of Muuga are 280 m. LOA, 40.0 m. beam, 16.5 m. draft. Maximum dimensions of vessels for Port Kopli are 185 m. LOA and 8.6 m. draft.

HEALTH: International quarantine signals to be used on arrival. No later than 6 hours before arrival at the inner area Master should radio Agents giving full details of state of health on board, and requesting Pratique which will be given on arrival.

RADIO/VHF: Tallinn Radio on 500 kHz and 2182 kHz.

Station	*Call Sign*	*VHF Channel*
Port of Muuga Gen.	Muuga Radio 1	16, 7, 83
Traffic Control	Muuga Radio 5	67
Port Operator	Muuga Radio 2	37
Port Control Kopli	Tallinn Radio 32	11
Kopli Port Operator	Tallinn Radio 33	11
Operator	Tallinn Radio 33	11
Traffic Control	Tallinn Radio 17	13, 16, 20
Harbour Master	Tallinn Radio 32	11

Note: Vessels should establish contact with the Traffic Control Station for permission to enter the area.

Arrival Advice: Request Pilot at least 4 hours in advance of ETA and 2 hours in advance of ETD. Radar pilotage, available 24 hours, is provided in reduced visibility or on request.

Vessels should establish contact with the Traffic Control Service (VTS) for permission to enter the area.

Initial message should include the following:
(a) Type and name of vessel.
(b) Nationality.
(c) Time of approach (to area of operation of VTS).
(d) N.r.t., LOA and maximum draft.
(e) Type of cargo.

All vessels should maintain a continuous listening watch on an agreed working channel whilst underway within the area, and on Channel 16 whilst at anchor. Vessels leaving port must establish VHF contact with VTS on an agreed working channel before leaving berth or anchorage.

All movements within the operating area require permission from VTS. Such permission expires after 15 minutes and should be renewed.

In case of radio failure, vessels should leave the leading line or recommended route and anchor, drift or proceed with due caution whilst trying to re-establish radio contact.

TUGS: 1,200 h.p. – 2,500 h.p. Ice-breakers of 7,000 kW. and 9,000 kW. also available. Tug's assistance available for berthing subject to Pilot's advice. Tugs can be ordered through Agents. Ship's lines normally used. When tugs are ordered in advance the cost will be charged to the vessel whether tugs are used or not.

BERTHING: Vessel will not be allowed to berth unless main engines and steering mechanism are in good working order. All vessels in port are required to fly their national flags between 0700 hrs. and sunset. On holidays and special occasions vessels may be expected to dress their ships if requested by Port Authorities.

Tallinn: There are 17 berths with overall length of 2.8 km. in the Kesklinna Port. Berths are equipped with portal cranes and with a floating crane of 100 tons capacity. Port handles general and bulk cargoes, timber, containers and Ro/Ro cargoes. There is also a Passenger Terminal.

Kopli: There are 11 berths, equipped with portal cranes. Berths No. 35, 36, 37, 38, 40 and 41 in the Northern part of the port are used to handling the cargo. Refrigeration unit and four-storey warehouse are located in this part of the port.

The oil terminal in the Southern part of the port can receive single tankers up to 120 m. in length and 6.0 m. draft. Berths No. 32 and 33 in the Southern part of the port are a coal terminal.

Berth		*Length* (m.)	*Depth* (m.)
South Side:			
31		100	3.4 – 5.4
32	Coal Terminal	266	5.4 – 6.5
33	Coal Terminal	186	7.8
34	Oil Terminal	100	5.9 – 6.4
North Side:			
35	General cargoes, fish, Ro-Ro	400	9.0
36		288	6.4
37	Timber	90	4.5
38		140	4.1 – 4.7
39		51	4.5
40		88	4.2 – 6.0
41		102	5.3

Muuga: There are 15 berths with overall length of 2,790 m. in the Port of Muuga. The port handles general and bulk cargoes, timber and Ro/Ro cargoes. The Grain Terminal can handle vessels up to 280 m. LOA, 40 m. beam and 16.5 m. draft. There is also a refrigeration complex with overall length of 609 m., it can accept vessels with 9.0 m. draft. The port is equipped with portal cranes.

CRANES: Loading and unloading is usually done by shore portal cranes of up to 40 tons capacity, by floating cranes of up to 100 tons capacity and by other cargo handling equipment.

Also see "Cargo Gear".

STEVEDORES: Arranged by Agent on basis of Master's ETA. Loading and unloading is carried on throughout 24 hours a day including holidays.

MEDICAL: Facilities available.

DENSITY: 1025.

TANKERS: *Report:* September 1994.

Terminal	Scantrans ("Old Port")	Pakterminal ("Muuga")	Motalis ("Old Shipyard")
Tel:	(0142) 498082	(372) 6319820	
Fax:		(372) 6319790	
Shoretanks:	15 tanks varying from 200 cu.m. to 3,100 cu.m. (Total 20,000 cu.m.)	5×10,000 cu.m. for fuel oil. 1×5,700 cu.m. for fuel oil. 2×1,000 cu.m. for lubrizol.	5×5,000 cu.m. 1 tank for gas oil. 3 tanks for K3. 1 tank for F5.
Shorelines (Length and diameter):	500 m. × 6 in.	500 m. × 8 in.	500 m. × 6 in.
No. of Berths:	1	1	1
Loading Rates (Approx.):	300 cu.m./hr.	950 cu.m./hr.	450 cu.m./hr.
Berth:			
Length (approx.):	150 m.	200 m.	150 m.
Max. Draft:	5.9 m.	9.2 m.	7.0 m.
Products handled:	Fuel oil Shale oil Artic gas oil	Fuel oil Lubrizol	K3 Fuel oil F5 Shale oil
Connections:	2×5 in.	1×8 in.	2×5 in.

Also see "Berthing" – "Kopli".

FRESH WATER: Supplied by pipelines at all berths and by water tanker at Muuga.

FUEL: All kinds of fuel available.

CONSULS: Argentina, Australia, Austria, Belgium, China, Denmark, Finland, France, Germany, Hungary, Italy, Japan, Korea, Latvia, Lithuania, Norway, Poland, Russia, Sweden, Ukraine, U.K., U.S.A.

REPAIRS: Repairs may be effected.

DRY DOCKS: Floating dock with lifting capacity of 12,000 tons.

SURVEYORS: Survey companies for cargo inspection: LMT – Tel: 6 318 631. ISI – Tel: 6 313 864. Marine Register – Tel: 426-089, 425-692, 433-608.

Lloyd's Register, Bureau Veritas and others also available.

GANGWAY/DECK WATCHMEN: No requirements for watchmen.

OPENING/CLOSING HATCHES: Normally opened and closed by ship's crew.

CUSTOMS ALLOWANCES: No restrictions on crew's consumption of tobacco and alcohol on board. It is forbidden to take these items ashore.

CARGO GEAR: *Kopli:* Cranes (lifting capacity) – 7×5 tons, 6×6 tons, 2×10 tons and 8×16/20 tons.

Forklift trucks – 38×1 tons, 30×1.5 tons, 31×2 tons and 3×3 tons.

Self-propelled trucks – 7×5 tons.

Diesel trucks – 5×1.5 tons, 1×2.5 tons, 6×3 tons, 2×4.5 tons and 2×10 tons.

Trailers – 10×20 tons and 15×40 tons.

2 port tractors.

8 tractors.

REPATRIATION: No facilities.

AIRPORT: Tallinn, 7 km. International flights to Helsinki and Stockholm.

TIME: GMT plus 2 hours. GMT plus 3 hours in Summer.

HOLIDAYS: 1996: New Year's Day (1st January); Sovereignty Day (24th February); Good Friday (5th April); Easter Sunday (7th April); May Day (1st May); Whitsun (26th May); Victory Day (23rd June); Midsummer Day (24th June); Christmas Day (24th December).

POLICE/AMBULANCE/FIRE:

Police in Port, Tel: 6 318 612; in the City, Tel: 002.
Ambulance in City, Tel: 003.
Fire Brigade in City, Tel: 001.

EMERGENCY CO-ORDINATION CENTRE: Telephone for emergency matters: In Tallinn call Frontier Guard by radio VHF Channel 9, call sign "Aster".

TELEPHONES: Connection on board vessels can be made in Tallinn.

No facilities for placing telephones on board vessels in Kopli.

SERVICES: Special services: Compass, radio and radar repair, supply of nautical publications, course recorder paper, Notice to Mariners and other services available through Agent.

BANKS: Hansapank, Livalaia 12, Tallinn EE0100, Estonia. Tel: 6 310 310. Telex: 173005 HABA EE.

STORING: See "Prelims", page viii.
(1) Not available.
(2) Not available.
(3) Trucks can be used at berth and in port territory.
(4) Trucks can be used in warehouses and holds.
(5) There is no Customs warehouse in the port.
(6) It is possible to employ local dockers.

SHORE LEAVE: No restrictions.

IDENTIFICATION CARDS: Not required.
GARBAGE DISPOSAL: Available.
WASTE OIL DISPOSAL: Not available.
CURRENCY: Estonian Crowns (EEK). U.S.$1.00 = 12 EEK.
DEVELOPMENTS: New Port of Muuga under construction in the Bay of Muuga, 20 km. N.E. of Tallinn, for handling grain cargoes in vessels of 100,000 d.w.t. The Port will also handle perishable cargo and Ro-Ro vessels. Grain silo capacity 300,000 tons.

SHIPMASTER'S REPORT: March 1993 (Updated 1996).
For clearance, the following documents were requested:
4 copies Crew List.
2 copies Ship's Stores List.
2 copies Crew Effects List.
1 copy Narcotics List.
1 copy Health Declaration.

REPORT: June 1995 (Updated 1996).
The following are extracts from "Code of Customs – Port Muuga", effective April 1995.

2.9. In the Port of Muuga, the Coastal Radar Station is not available. The Masters of vessels approaching the Port should rely only on the vessel's navigational aids.

2.10. In the Muuga Bay, pilotage is compulsory for all vessels, with the exception of those under the flag of Estonia, with tonnage less than 20 tons, and harbour, technical and dredging vessels.

2.11. Pilotage is compulsory for all vessels entering and leaving the Port, except harbour, technical and dredging vessels. The shifting of vessels in the Port, as well as shifting for a distance of over 100 m., is carried out with a Pilot on board the vessel.

2.12. Pilotage is provided by the Estonian Waterways Department round-the-clock. A Pilot meets vessel sailing in the N.W. passage at the distance of 3 miles to the South of the "Tallinn" Lighthouse, in the N.E. passage in the area of the Aksi Island. To enter the Port, a Pilot meets vessel in the area of the entrance buoys.

2.13. The order for a Pilot should be sent through an Agent to the Harbour Master of the Port of Muuga, 4 hours prior to a vessel's approach to the pilot station. Vessels in the Port order Pilots through an Agent 2 hours prior to departure, verifying the exact time 30 minutes in advance.

2.14. Pilotage is performed according to order of arrival. Average and passenger vessels, as well as vessels sailing on schedules, are piloted on a priority basis.

3. Vessel Navigation in the Port Waters:

3.1. The maximum permitted draft of vessels entering the Port of Muuga or berthing alongside quays should not exceed, with the "zero" sea level and waves under 1.0 m., the following values:

Berth No.	*Max. Draft* (m.)
Approach Channel	– 16.8
Floating Jetty	– 5.5
1 A (Pakterminal)	– 11.0
2 A (Pakterminal)	– 6.6
3	– 7.5
4	– 6.5
5	– 6.2
6	– 8.9
8 (Grain Terminal)	– 13.0
9 (Grain Terminal)	– 16.0
10 (Grain Terminal)	– 16.0
11	– 10.5
12	– 10.3
13	– 10.7
14 (Ferry Terminal)	– 8.9
15 (Ferry)	– 8.0

In connection with the dredging in the basin for the Port development, the permitted drafts may be altered.

3.2. Restrictions with regard to vessel maximum measurements alongside the berth.

Berth No.	*Max. LOA* (m.)
1 A	240
2 A	116
3	120
4	120
5	100
6	140
8	260
9, 10	280 (Breadth under 40 m.)
11	250
12	165
13	165

Ramps for Ro-Ro vessels:
Berth No. 5: Width 16.0 m., elevation above sea level is 1.0 m.
Berth No. 13: Width 11.0 m., elevation above sea level is 2.0 m.

3.3. Vessels with drafts and measurements over those specified in Clause 3.1 and 3.2 could be berthed only if the Harbour Master gives permission to do so, in each particular case.

3.4. Mooring/unmooring operations with vessels over 25,000 g.t. are performed at the wind velocity under 12 m./sec.

3.5. The speed of vessels in the Port waters should not exceed the minimum permitted speed for steering.

3.6. Anchoring in the approach channels and in the entrance channel is prohibited.

3.7. Anchorage is in the areas limited by the coordinates:
3.7.1. In the Ihasalu Bay (Anchoage 27A)
Lat. 59° 31' N., Long. 25° 05.3' E.
Lat. 59° 31.3' N., Long. 25° 06.3' E.
Lat. 49° 30.2' N., Long. 25° 08.1' E.
Lat. 59° 30' N., Long. 25° 07.2' E.
3.7.2. In the outer road, the Viimsi Reach (Anchorage 27B)
Lat. 59° 35' N., Long. 25° 03' E.
Lat. 59° 36.1' N., Long. 25° 03' E.
Lat. 59° 35.7' N., Long. 25° 00' E.
Lat. 59° 35' N., Long. 25° 00' E.
3.7.3. In the inner road, the Muuga Bay (Anchorage 27C)
Lat. 59° 30.6' N., Long. 24° 59.3' E.
Lat. 59° 31.4' N., Long. 25° 00.5' E.
Lat. 59° 31.4' N., Long. 24° 59.6' E.
Lat. 59° 30.6' N., Long. 24° 58.5' E.

Tanker Facilities:

Berth No.	*Depth* (m.)	
Sonmarine Oilproduct Terminal:		
3	7.0	The berth is linked with the Terminal by 4 pipelines; max. vessel loading rate 500 cu.m./hr. There is a railway flyover with two railway tracks leading to it, as well as an elevated runway for loading fuel trucks.
Pakterminal Oil Terminal:		
1A	10.8	There are 13 separate storage tanks with heating, capacity of 100,000 cu.m., 5 heated isolated pipelines, which can be cleaned, leading to 2 berths. 26 wagon discharging points and 23 wagon loading points; max. rate of tanker loading is 1,500 cu.m./hr.
2A	7.2	
Nybit Bitumen and Special Lubrication Terminal:		
3	7.0	Bitumen storage tanks, capacity 3,000 cu.m. and 5,000 cu.m. One tank for storing lubricants, 2,400 cu.m. capacity, and 3 tanks with 1,400 cu.m. capacity. There is an elevated runway for loading bitumen and lubricants into road transport. In 1995, an elevated runway for loading bitumen and lubricants into railway wagons will be put into operation.
Estonian Transoil Oilproducts Terminal:		
3	7.0	Handles gasoline and diesel fuel. It has storage tanks with capacity of 14,100 cu.m.

AUTHORITY: The Port of Tallinn Authority, 25 Sadama Street, EE0102 Tallinn, Estonia. *Tel:* (372-2) 427009. *Telex:* 173167. *FAX:* (372-2) 422950. *Contact:* E. Hunt, Harbour Master.

Kopli Port, 28 Paljassaare Street, Tallinn EE003, Estonia. *Tel:* (3722) 497720. *Telex:* 808202 SADAM. *FAX:* (3722) 497936. *Contact:* A. Skokov, Port Director. S. Horohonov, Harbour Master.

AGENT: The Port of Tallinn Shipping Agency "Inflot". 54-a Tuukri Street, EE0106 Tallinn, Estonia. Cables: "Inflot", Tallinn. Tel: 430508, 430518, 432720, 428339. Telex: 173273.

EUROPEAN UNION

Tanker Check List

(For oil, gas and chemical tankers of 1,600 g.r.t. and over – whether fully or partly laden – including those empty but not yet degassed or purged of hazardous residues entering European Economic Community ports).

A. Vessel identification

Name of vessel	Owner	
Flag	Call sign	Year built
Port of registry	Length overall	Gross tonnage
Classification society		
Class notation	Hull	Machinery
Propulsion machinery	Output	
Agent		
Draft: forward	amidships	aft
Kind of cargo loaded (according to tank loading plan)		Volume of cargo loaded

B. Safety installations aboard

	In good working order Yes	In good working order No	Deficiences
1. Construction and technical equipment			
Main and auxiliary engines	☐	☐	
Main steering gear	☐	☐	
Auxiliary steering gear	☐	☐	
Anchor gear	☐	☐	
Fixed fire-extinguishing system	☐	☐	
2. Navigational equipment			
Manoeuvring characteristics available	☐	☐	
First radar installation	☐	☐	
Second radar installation	☐	☐	
Gyro compass	☐	☐	
Standard magnetic compass	☐	☐	
Radio direction-finding apparatus	☐	☐	
Echo-sounding device	☐	☐	
Other electronic position fixing aids	☐	☐	
3. Radio equipment			
Radiotelegraphy installation	☐	☐	
Radiotelephony installation (VHF)	☐	☐	

C. Safety certificates and other documents

	Certificates/documents valid on board Yes	Certificates/documents valid on board No
Cargo ship safety construction certificate	☐	☐
Cargo ship safety equipment certificate	☐	☐
Cargo ship safety radiotelegraphy certificate	☐	☐
Ship safety radiotelephony certificate	☐	☐
Load line certificate	☐	☐
Classification certificate	☐	☐
Oil liability certificate	☐	☐
Oil record book filled in	☐	☐

D. Officers and ratings

		Yes	No
Master			
Chief mate		☐	☐
Second mate		☐	☐
Third mate		☐	☐
Chief engineer		☐	☐
First engineer officer		☐	☐
Second engineer officer		☐	☐
Third engineer officer		☐	☐
Radio officer		☐	☐
Total number of ratings	Deck	Engine room	
Deep-sea Pilot taken aboard		☐	☐

Date

Signature of the Master or, if he is indisposed, of the deputy

Falkland Islands

PORT STANLEY: 51.42 S. 57.51 W. (See Plan)

PORT LIMITS: West of the line joining Mengeary Point and Cape Pembroke.
DOCUMENTS:

- 2 copies Crew Lists.
- 2 copies Passenger Lists.
- 2 copies Customs Documents.
- Health Document.
- Manifest and Bills of Lading.
- Ship's Papers.
- Ship's Certificates.

PILOTAGE: Pilotage not available.
ANCHORAGES: For large vessels, the anchorage is somewhat confined; except South of Navy Point, where there is good swinging room in depths of from 8.2 m. to 10.4 m. (27 ft. to 34 ft.). There is good anchorage N.N.E. of the cathedral, but, owing to the prevailing strong Westerly winds, a vessel may have some difficulty in turning, when leaving this position. The best time to leave is after 1800 hrs. or before 0800 hrs. as, unless there is a widespread area of bad weather over the islands, the wind, which is local, is seldom strong between these hours. The holding ground is good, and vessels have not dragged during winds of up to Force 8, though a second anchor is often necessary.

The bottom of the harbour is stiff mud, which is very noisome and sticky; it is necessary to allow plenty of time for cable washing when weighing.

Several small boats, none of which exhibit a riding light at night are moored at the South side of the harbour.
RESTRICTIONS: No restrictions on night berthing, but advance warning should be given via Agent.
MAX. SIZE: Max. LOA 130 m.
RADIO: Cable & Wireless Ltd.
VHF: Port Radio, call sign "Port Control", listening on Channels 16 and 10 throughout 24 hours.
RADAR: No port radar service.
TUGS: No harbour tugs.
BERTHING: Falkland Islands Company jetty with a depth of 1.5 m. at its "T" shaped Head.
Flexiport: Tel. 22671.

3 berths, each 91 m. in length and a Ro-Ro facility. Depth at West End 6.5 m., shoaling to 6.1 m. at Eastern End. Discharge is by ship's gear, 20 ft. containers accepted with a maximum weight of 18 tons. Working hours are 0800 hrs. – 1200 hrs. and 1300 hrs. – 1700 hrs., overtime to vessel's account.
CRANES: 1×25 ton crane.
BULK CARGO FACILITIES: None. Drummed cargoes only are handled.
STEVEDORES: No notice required at Flexiport for stevedores.

If Falkland Islands Company charter vessel (4 voyages a year) is being worked then stevedores will not be available until work on the charter vessel has been completed.
MEDICAL: Advance notice required.
TANKERS: Advance information should be sought.
Mare Harbour: Tanker mooring buoy and pipeline in position: Lat. 51° 54.11' S., Long. 58° 29.87' W.
DENSITY: Full salt water.
FRESH WATER: Available from jetty, cost £3.75 per ton.
FUEL: Fuel is available by special arrangement with Stanley Services Ltd. Grade 47 Cetane (viscosity cSt 100° F – 1.8; s.g. at 15° C – 0.840). Delivery by lighter and pump. Fuel also available at the Flexiport.
FIRE PRECAUTIONS: Normal safety requirements.
CONSULS: Norwegian.
REPAIRS: Minor repairs to machinery.
DRY DOCKS: None.
SURVEYORS: Lloyd's and B.V.
GANGWAY/DECK WATCHMEN: Recommended.
OPENING/CLOSING HATCHES: By ship's crew.
CUSTOMS ALLOWANCES: Quantity permitted by crew is one bottle of spirits, 200 cigarettes or 1 lb. of tobacco, 6 bottles of wine, 1 case (24 cans) beer.
CARGO GEAR: Ship's gear may be used.
AIRPORT: 32 miles from Port.
TIME: GMT minus 4 hours. Summer time from October to end of March.
HOLIDAYS: Cargo may be handled on the 10 public holidays.
POLICE/AMBULANCE/FIRE: Dial 999.
TELEPHONES: Available in East warehouse (card only).
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Seaman's Book sufficient.
REGULATIONS: No particular or unusual regulations.
DELAYS: Delays may be experienced if berthing alongside the only commercial jetty if firms charter vessel is being handled. Four voyages a year: – turn around 1 week.
AUTHORITY: Harbour Master, c/o F.I.F.D., P.O. Box 122, Port Stanley, Falkland Is. *Tel:* 27260. *Telex:* 2426. *FAX:* 27265. *Contact:* J. Clark, Harbour Master.

NOTES

Please also advise Shipping Guides Ltd.

Faroe Islands

KLAKKSVIK: 62.14 N. 06.35. W. (See Plan)

DOCUMENTS:
One copy of Each:
Crew List.
Passenger List.
Custom Documents (one list crew's quantity of tobacco and spirits).
Health Document.
Manifest.
Bill of Lading.

PILOTAGE: Not compulsory but available. Give ETA via Torshavn Radio, OXJ, 1 or 2 hours before arrival, and Pilot will meet vessel in Roads. International signals can always be used. VHF Channels 16, 12, and 6 in use.

ANCHORAGE: In Roads in 12 to 20 fathoms; good anchorage.

RESTRICTIONS: No restrictions upon entry.

MAX. SIZE: Up to 560 ft. length and 25 ft. draft.

HEALTH: Pratique usually automatic.

RADIO: Torshavn Radio, OXJ, is only coast station in Faroe Isles.

TUGS: No tugs available.

BERTHING: Ships will be berthed on arrival, if ETA announced 12 hours before arrival.

New quay with depth 7.0 m. – 8.5 m. available.

STEVEDORES: Ship's Agent will arrange stevedores.

MEDICAL: Inform doctors before arrival. Hospital facilities available.

TANKERS: Only small tankers, up to 2,000 – 3,000 tons can be handled.

FRESH WATER: Available from quay. 30 t.p.h.

FUEL: Diesel oil available, usually without notice (or short notice).

CONSULS: British, Tel: 55109 and 55489; Norwegian, Tel: 55018 and 55353.

REPAIRS: All types of deck and engine repairs possible. Slipways for ships up to 200 ft. length.

GANGWAY/DECK WATCHMEN: Watchmen usually unnecessary, but available if desired.

OPENING/CLOSING HATCHES: Normally done by crew.

CUSTOMS ALLOWANCES: 200 cigarettes and 1 litre of spirits.

REPATRIATION: Small changes in crew can usually be arranged and, for example, sick seamen/fishermen are often sent home, when recovered.

AIRPORT: Nearest airport on Vagoy, about 6 hours travelling. Regular flights, 6 times a week.

TIME: GMT. GMT plus 1 hour (Summertime) from last Sunday in March until last Sunday in Spetember.

HOLIDAYS: Cargo work can be arranged on holidays.

POLICE/AMBULANCE/FIRE: Police 55348; Ambulance 55464; Fire 000.

TELEPHONES: Can be arranged on board at one berthing place, at about 50.00 kr plus dues for conversations.

SERVICES: Compass adjusting, day and night.

SHORE LEAVE: Crew members allowed ashore.

IDENTIFICATION CARDS: Not needed.

GARBAGE DISPOSAL: Container of 12 cu.m. available. It is also possible to obtain a container from garbage service, please contact Harbour Office.

WASTE OIL DISPOSAL: Shore tank capacity 2,500 litres.

SEAMAN'S CLUBS: No seaman's clubs. One seaman's hotel available.

CURRENCY: Danish Kroner. Banks available.

DELAYS: Normally there are none.

AUTHORITY: Klakksvikar Havn, P.O.Box 26, FR-700 Klakksvik, Faroe Islands. *Tel:* 55081, 55101 and 84081. *FAX:* 57340.

AGENT: Christen Joensen Stengavegur, P.O.Box 179, FR-700 Klaksvik, Faroe Islands. Cables Christen Joensen. Tel: Klaksvik 55922. Fax: (298) 57922.

SOERVAAG: 62.04 N. 07.18 W.

DOCUMENTS:
Bill of Lading.
Customs Documents (including Crew List).
Ship's Certificate (stating size of ship).

PILOTAGE: Ships can call Pilot via Torshavn Radio. Pilot has good knowledge of local conditions.

ANCHORAGES: Danish Chart No. 82 (B.A. Chart No. 85) – on Soervaag Fjord – can be recommended as good. Bottom gravel.

RESTRICTIONS: Difference between high and low water up to 2 m. on Spring tide and up to 1 m. on Neap tide.

MAX. SIZE: Largest vessel reported in Soervaag was 12,000 d.w.t. tanker. Harbour about 150 m. long and formed with one long pier and another one stretching from it. Depth at pier 8 m. Pier runs N.E./S.W. Max. draft permissible 26 ft.

HEALTH: Ships coming from countries having epidemic-disease have to fly the flag "Q". No persons allowed connection with shore, before official doctor given Free Pratique.

RADIO: Only civilian radio on Faroe Islands is Torshavn-Radio (Int. call sig.: OXJ) via this radio ships can call for medical assistance and weather forecast. These 2 services are free. All traffic to Faroe Islands via Torshavn-Radio.

VHF: Port Office on Channels 16 and 12 during working hours (0800–1700).

TUGS: No actual tugs can be obtained, but many small vessels which can be used as tugs.

BERTHING: Masters should take care when berthing not to come on to East side of pier – owing to very low water.

CRANES: 1×30 ton mobile crane available.

STEVEDORES: Arranged through Agent.

MEDICAL: Hospital in Torshavn with all facilities. There is a doctor in Soervaag.

TANKERS: Ordinary pier also used by tankers, size of load/discharge-lines: 3 in. and 6 in.

FRESH WATER: Ships can obtain fresh water direct from pier.

FUEL: Marine diesel fuel; turbo-jet A1–100; gasoline-petroleum.

CONSULS: Belgium, Finland, Greece, Iceland, Norway, Spain, U.K., Germany, Brazil, France, Netherlands, Italy, Portugal, Sweden.

REPAIRS: Small deck and engine repairs carried out.

DRY DOCKS: On Skaalefiord, dry dock up to 1,500 d.w.t.

GANGWAY/DECK WATCHMEN: Not required.

OPENING/CLOSING HATCHES: By crew.

CUSTOMS ALLOWANCES: Tobacco, each crew member is allowed to have 200 cigarettes or 250 gm. of tobacco. Wine and/or Spirit, 1 litre spirits and 1 litre wine.

REPATRIATION: Can be arranged.

AIRPORT: Faroe Island has 1 airport – only 3 km. from Soervaag. Flights 12 times a week to Copenhagen, and 3 times a week to Iceland.

TIME: GMT. Summertime from last Sunday in March to last Sunday in September.

HOLIDAYS: Same as Denmark. Cargo work can be arranged on holidays.

POLICE/AMBULANCE/FIRE: Police Tel: 33448; Ambulance Tel: 326011. Fire Tel: 000.

TELEPHONE: Telephones can be placed on board.

SHORE LEAVE: Crew members are allowed ashore.

IDENTIFICATION CARDS: Not required.

GARBAGE DISPOSAL: Available. Contact Port Authority.

WASTE OIL DISPOSAL: Contact Statoil in Torshavn. Tel: 11133. Fax: 11378.

SEAMAN'S CLUBS: None.

CURRENCY: Same as Denmark.

REGULATIONS: Per ordinary regulations in Danish Ports. Harbour dues to be paid before ship's departure.

DELAYS: Usually none.

AUTHORITY: Harbour Master, Soervaag 380, Faroe Islands. *Tel:* Office 32046. Residence 32283.

TORSHAVN: 62.00 N. 06.45 W. (See Plan)

DOCUMENTS: See "Klakksvik".

PILOTAGE: Not compulsory. Can be obtained through Torshavn Radio 2182 kHz or Channel 16 VHF (Harbour Office).

ANCHORAGES: 5 cables S.E. of breakwater in a depth of about 30 m.

MAX. SIZE: LOA 220 m., draft 8.3 m.

HEALTH: Pratique usually automatic.

RADIO: Torshavn Radio, OXJ.

TUGS: One small tug available.

BERTHING: 1 slip and 3 Ro-Ro ramps.

Berth	*Length* (m.)	*Depth* (m.)
East Breakwater	420	5.8 – 8.3
Main East Quay	230	6.8
Pier Outer Harbour	60	10.0
Main West Quay	168	8.1
West Pier	90	8.3
West Pier	80	8.0

STEVEDORES: Must be arranged with the Agent.

FRESH WATER: 50 t.p.h., by pipeline. Cost 12 DKR./ton.

FUEL: All kinds of fuel at 100 t.p.h.

REPAIRS: All kinds are possible.

DRY DOCKS: 2 hydraulic slipways (1×1,000 d.w.t. and 1×2,500 d.w.t.).

GANGWAY/DECK WATCHMEN: Not necessary.

OPENING/CLOSING HATCHES: By crew.

CUSTOMS ALLOWANCES: Tobacco (1 carton); 1 litre of spirits or 2 litres of wine.

REPATRIATION: Can be arranged.

AIRPORT: Regular airlines, 2 hours by car from Airport.

TIME: GMT. Summertime GMT plus 1 hour (late March – late September).

HOLIDAYS: Cargo work can be arranged on holidays.

POLICE/AMBULANCE/FIRE: Police, 11448; Ambulance, 13540; Fire, 000.

TELEPHONES: No facilities.

SERVICES: Compass adjusting, radio and radar repairs.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Not required.

GARBAGE DISPOSAL: Garbage container provided alongside the vessel on ship's account. Telephone 11655 for garbage service.

WASTE OIL DISPOSAL: 2 waste oil tanks (each 1,200 cu.m.) available on a truck. For service telephone 11762 or fax 19059.

SEAMAN'S CLUBS: Torshavn Seaman's Home. Tel: 13515.

CURRENCY: Danish Kroner.

AUTHORITY: Torshavnar Havn, Eystara Bryggja, P. O. Box 103, FR-100 Torshavn, Faroe Islands. *Tel:* 298-11762. *FAX:* 298-19059. *Contact:* Jonsvein Lamhauge, Harbour Master.

TRANGISVAAG: 61.33 N. 06.50 W.

DOCUMENTS:
3 Crew Lists.
1 Passenger List.
1 Bill of Lading.
1 Bonded Store List.

PILOTAGE: When Pilot required pre-arrange with Agent by telegram or telephone, 2 hours notice of ETA required. Pilot boat is local fishing-boat, usually boarding vessel at harbour entrance.

ANCHORAGES: Safe sheltered harbour up to 30 fathoms deep along the entrance transit bearing. Vessels anchor 1 cable offshore in 8 fathoms, clay bottom.

RESTRICTIONS: Vessels may enter harbour day and night.

MAX. SIZE: Vessels may berth with draft up to 7 m.

HEALTH: Pratique granted if no contagious illnesses aboard and all arrival formalities accomplished by the boarding officials.

RADIO: Torshavn Radio, call signal OXJ, 24 hours service, listens 2482 kHz, replies and transmits traffic on 1778 kHz, traffic lists on 1778 kHz 35 minutes past each even hour. VHF service: Channel 16 (156.80 MHz) Channel 26 (161.90 MHz). All ETA messages, etc. must be routed through Torshavn Radio.

TUGS: None; if required local fishing-boats are capable to act as tugs.

BERTHING: Tveraa at Northern side of fjord. Outer side of quay 280 m. length and 20/21 ft. alongside. Inner side length 170 m. and 15 ft. alongside. Quay is for general cargo, fish and salt.
Harbour basin length 58 m., depths 7 ft. to 18 ft. alongside.
Drelnes on South side of fjord. Quay length 89 m. Depth alongside outer side 23 ft.; inner side length 43 m., depth 22 ft.

STEVEDORES: In order to enable Agent to arrange gang important obtain in good time accurate ETA from vessel. Work normally not carried out on Sundays.

MEDICAL: Advance notice to Agent preferable, good hospital facilities for both surgery and medicine.

DENSITY: 1024.

FRESH WATER: Water available at main quay, rate 50 t.p.h.

FUEL: Diesel gas oil available, 50 t.p.h., no advance notice required.

CONSULS: Spanish Vice-Consul.

REPAIRS: Local marine repair companies can undertake all repairs of general nature to deck, engines, hull, electric and radio equipment, etc. Slipway available for small vessels.

GANGWAY/DECK WATCHMEN: Available, but not compulsory.

OPENING/CLOSING HATCHES: Crew allowed to open and close hatches.

CUSTOMS ALLOWANCES: Each crew member allowed 200 cigarettes or 200 grams tobacco out of Bond. Limited quantity wine and spirits.

REPATRIATION: May be arranged by sea or air.

AIRPORT: (Vagar) Served by regular airlines, located 50 miles from Trangisvaag.

TIME: GMT. Summertime (GMT plus 1 hour) from last Sunday in March to last Sunday in September.

HOLIDAYS: New Year's Day; Good Friday; Easter Monday; Labour Day; Ascension Day; Whit Monday; Christmas Day; Second Christmas Day; work not carried out these days.

POLICE/AMBULANCE/FIRE: Police Tel: 71448; Ambulance 71133; Fire 000.

TELEPHONES: Usually not placed aboard, but can be arranged.

SHIP SUPPLY SERVICE: Contact Vaktar-OE Bjargin-Gartenastan, Torshavn, Faroe Islands.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Not needed.

GARBAGE DISPOSAL: Garbage trucks available (Tel: 71976) or call Harbour Office on VHF Channel 16. Cost: DKr.120/cu.m.

WASTE OIL DISPOSAL: One tank with capacity 10 cu.m. Cost: DKr.1000/cu.m. For service call Harbour Office on VHF Channel 16.

SEAMAN'S CLUBS: None.

CURRENCY: Danish Crown.

DEVELOPMENTS: New quay under construction as extension of existing quay.

AUTHORITY: Tvoroyrar Havn, P.O.Box 20, FR-800 Tvoroyri, Faroe Islands. *Tel:* 71055 (after hours 71801). *FAX:* 71418. *Contact:* O. Mortensen, Harbour Master.

TVOROYRI: 61.33 N. 06.50 W.

DOCUMENTS:
1 copies Crew List.
1 copy Passenger List.
1 copy Bill of Lading.
1 copy Bonded Stores List.

PILOTAGE: When a Pilot is required, the vessel should advise Agent 24 hours prior to arrival by telephone or telegram. The pilot boat is a local fishing boat. The Pilot usually boards at the harbour entrance.

ANCHORAGES: Vessels anchor 1 cable offshore in depth of 15 m. The bottom is clay. The Harbour Office will advise Master on best location.

RESTRICTIONS: Vessels may enter day and night.

MAX. SIZE: Max. draft 7.0 m.

HEALTH: Pratique granted if no contagious illness aboard. All arrival formalities accomplished by the boarding officials.

RADIO: Torshavn Radio, call sign "OXY". 24 hour service. Station listens on 2182 kHz.

VHF: Harbour Office on Channel 16. Vessels should make contact one hour prior to arrival and one hour prior to departure.

RADAR: No facilities.

TUGS: No tugs. Fishing boats will assist if required.

BERTHING: North side of Fjord: Outer side of quay – length 280 m., depth 7.0 m. Inner side of quay – length 170 m., depth 4.5 m.
Drelnes on South side of Fjord: 2 berths, each length 89 m. and depth 7.0 m.

CRANES: None.

BULK CARGO FACILITIES: None.

STEVEDORES: It is important that vessel gives Agent accurate ETA in order to arrange gangs.

MEDICAL: Hospital and doctor available. Give Agent advance notice if treatment required.

DENSITY: 1024.

FRESH WATER: Available. Rate 30 t.p.h. Cost DKR 2.0/cu.m.

FUEL: Diesel gas oil available at 50 t.p.h., no advance notice required.

CONSULS: None locally.

REPAIRS: All deck, engine and hull repairs of a general nature can be undertaken.

DRY DOCKS: None.

SURVEYORS: Bureau Veritas.

GANGWAY/DECK WATCHMEN: Not compulsory but available.

OPENING/CLOSING HATCHES: By crew.

CUSTOMS ALLOWANCES: 200 cigarettes and 1 bottle of spirits for each member of crew.

CARGO GEAR: Ship's gear.

REPATRIATION: Possible.

AIRPORT: Vagar, 50 miles from the port, served by regular airlines.

TIME: GMT. GMT plus 1 hour (Summertime) from last Sunday in March until last Sunday in September.

HOLIDAYS: New Year's Day, Good Friday, Easter Monday, Labour Day, Ascension Day, Whit Monday, Christmas Day and second Christmas Day.

POLICE/AMBULANCE/FIRE: Police Tel: 71448. Ambulance Tel: 71133. Fire Tel: 000.

EMERGENCY CO-ORDINATION CENTRE: Tel: 11065.

TELEPHONES: Not available.

SERVICES: Radio and radar repairs. Supply of local charts.

BANKS: Foroya Bank. Tel: 71032.
Foroya Sparikassi. Tel: 71040.

STORING: See "Prelims".
(1) Trucks.
(2) –
(3) Yes.
(4) Yes.
(5)
(6) Yes.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Not required.

GARBAGE DISPOSAL: Garbage trucks available (Tel: 71976).

WASTE OIL DISPOSAL: 2×10 cu.m. tanks available.

CURRENCY: Danish Crown.

AUTHORITY: Tvoroyri Havn, FR-800 Tvoroyri, Faroe Islands. *Tel:* 71055 (After hours 71801). *FAX:* 71418 (After hours 72689). *Contact:* Ossur Mortensen, Harbour Master.

NOTES

Please also advise Shipping Guides Ltd.

Fiji Islands

LABASA: 16.26 S. 179.22 E.

SHIPMASTER'S REPORT: January 1983 (Updated 1996).

PORT LIMITS: Port limit is up to the entrance of Mali Passage.

DOCUMENTS:

1 Crew Personal Property Declaration.
8 Crew Lists.
5 Passenger Lists.
4 Stores Lists.
3 Parcels Lists.
4 Maritime Declarations.
3 Form 'D' Regulation 46.
Maritime Declaration of Health.
1 Vaccination List.
1 Copy Fiji Quarantine Ordinance Cap-92.

PILOTAGE: Compulsory. Agent arranges booking for Pilot. Pilot boards at entrance to Mali Passage from 30 ft. long, white hulled boat (no flag). Docking/undocking carried out during daylight hours only. Pilotage is also available for inshore passages to Suva, Lautoka, etc. Reef navigation is carried out by Pilots during daylight hours only.

ANCHORAGES: Safe anchorage is available only after passing Mali Passage, about 6 miles to the S.E.

If vessel arrives early, she can drift safely about 20 miles N.N.W. of Mali Passage.

RESTRICTIONS: Docking/undocking only during daylight hours. Max. draft 10.5 m.

MAX. SIZE: LOA 174 m., draft 10.5 m. Max. shipment available 27,000 tonnes, as this is the max. storage capacity at Labasa.

HEALTH: Anti-malarial squad boards vessel with Pilot. They inspect and spray the vessel, only then is Pratique granted.

If vessel is coming from a "Malaria infested" region, spraying is done twice daily during the vessel's stay in port.

TUGS: None available. 2 mooring boats are used for taking lines ashore.

BERTHING: *Malau Wharf:* Length 150 m., depth alongside 11 m. Vessel berthed starboard side to, using 1 head/sternline, 2 breastlines and 1 spring at each end.

As the sugar loader is fixed, this mooring system enabled vessel to shift fairly easily when loading in different hatches.

Caution must be exercised while docking, undocking and shifting to avoid contacting the middle piled dolphins of the wharf, as they are unfendered and non-loadbearing.

No tidal restrictions for wharf or port.

BULK HANDLING FACILITIES: Raw bulk sugar: 400 t.p.h./hr., 24 hours a day.

MEDICAL: Facilities available in local hospital and from private practitioners.

DENSITY: 1024.5.

FRESH WATER: Not available.

FUEL: Available at Suva only. Reasonable prices are negotiable.

SURVEYORS: Pilot carries out hatch inspection prior to loading. Also see "Suva".

GANGWAY/DECK WATCHMEN: None.

HATCHES: Attended to by crew.

AIRPORT: Local airport with connections to Suva and Lautoka.

HOLIDAYS: Most of the population is of Indian descent, hence some Indian holidays observed.

TELEPHONES: No telephone provided for berth.

DELAYS: Normally 12 hours documentation time (non-laytime) after completion is provided for in the Charter Party; which may not be necessary.

GENERAL: *Communications:* Well connected via Suva. Telexes can be sent via Suva or Lautoka, by telephoning Agent's office there.

Formalities, Clearance, etc.: Labasa is not a 'Port of Entry' (about 2 vessels per month call here). Pilot, Agent, Surveyor, Customs, Immigration, Agricultural Inspector, Malaria Prevention Squad, etc., all have to come from Suva or Lautoka. Customs Officer *only* stays on board the vessel until departure.

Pilferage: None reported.

Bonded Stores: Not available.

Provisions: No shipchandler. Fresh fruit, vegetables, etc., are available at reasonable prices from the local market, about 8 miles from the wharf.

AUTHORITY: See "Suva".

LAUTOKA, (Vuda Point): 17.36 S. 177.26 E. (See Plan)

DOCUMENTS/HEALTH: Refer to "Suva".

PILOTAGE: Compulsory. Pilot boards at Navula Passage, 20 miles South of Lautoka. Masters should telegraph to their Agents ship's ETA at Navula and indicate whether they require a Pilot or not at least 24 hours in advance.

Note: Radio communications with Fiji can be difficult and Masters are advised that telephone or telex messages worked via New Zealand or Australia direct to their Agents are far more reliable.

The Pilot normally boards from a 60 ft. fibreglass hull launch with white superstructure. The pilot vessel can be contacted on VHF 16. Listening watch only when vessels are expected. Pilot normally boards 1 mile seaward of the passage on the leads. In heavy weather it may be necessary for a vessel to enter the passage to embark the Pilot. There is no anchorage outside the passage.

Vessels requiring Pratique should anchor approximately 1 mile to the Westward of Vio Island in Lautoka Harbour. If prior arrangements have been made through Agent, Health Officers may board inside Navula (The Health Officers inspect vessels only from 1 hour after sunrise to 1 hour prior to sunset).

ANCHORAGES: The whole of the area enclosed by a circle of diameter approximately 1 mile between Vio Island and Pinder Reefs is an acceptable anchorage with depths ranging from 9 to 13 fathoms.

MAX. SIZE: Minimum depth in approaches to wharf 32 ft., depth alongside 36 ft. Generally speaking, any vessel not exceeding 32 ft. draft can be accommodated. Main wharf is only 457 ft. long but overhangs are allowable, ("Canberra", berthed at Main Wharf), dolphins for mooring lines being situated off each end of the wharf. Range of tide approximately 5.5 ft. at Springs and 3 ft. at Neaps, but state of tide does not affect the foregoing.

At Vuda Point, the tanker berth of Lautoka, tankers in the 18,000 to 24,000 d.w.t. class can be handled. This is a submarine pipeline installation, the ship mooring to 4 buoys, available depth being about 36 ft.

VHF: Port Control on Channel 16 throughout 24 hours.

TUGS: 2×2,000 b.h.p. (33 ton B.P.) available. Use of 2 tugs is required if berthing at Vuda Point at night.

BERTHING: Berthing and unberthing at Vuda Point throughout 24 hours. Berthing at Lautoka is at discretion of Pilot, but in normal conditions is effected at any hour of day or night.

Berthing in Lautoka is generally effected port side to.

Wharf	*Length*	*Depth*
Queens West	457 ft.	36 ft.
Queens North	257 ft.	24 ft.
Queens East	423 ft.	12 ft.
*F.S.C.	577 ft.	32 ft.

*Bulk sugar loading installation for Fiji Sugar Corporation Ltd. (Woodchip also loaded).

TANKERS: See "Max. Size". No slop discharge facilities. Discharge line 8 in. diameter.

FRESH WATER: Fresh water is available at all berths, there may be some restrictions in the dry season.

FUEL: Diesel fuel is available at the North and East berths on Queens Wharf.

DENSITY: 1025.

CONSULS: None.

REPAIRS: Only comparatively minor repairs can be effected such as welding jobs and repairs to pumps and other auxiliaries.

SURVEYORS: Cargo and Marine Survey Ltd., 117 Vitogo Parade, Lautoka. Tel: 663922, 663504. Fax: 665866.

REPATRIATION: Repatriation can be effected through vessel's Agents.

AIRPORT: Nandi International Airport is 16 miles from Lautoka. Frequent flights to all parts of the world by several major airlines operating through Nandi.

TIME: GMT plus 12 hours. No alterations to clocks.

HOLIDAYS: *Public holidays:* New Year's Day, Good Friday, Easter Saturday, Easter Monday, Queen's Birthday, Bank Holiday, Fiji Day, Deepwali, Prince Charles' Birthday, Prophet Mohammed's Birthday, Christmas Day, Boxing Day.

POLICE/AMBULANCE/FIRE: Dial 000 in emergency. Police, 60222; Ambulance, 60399; Fire, 60211.

SERVICES: Tank-cleaning labour and labour for painting, chipping, etc. can be provided, but no equipment. No facilities for discharge of slop tanks etc. Compass adjustments can be arranged.

Telephone connection on wharf (3 lines). Police post on wharf.

AUTHORITY: Ports Authority of Fiji, G.P.O. Box 780, Suva, Fiji. *FAX:* 312700 (Director General), 304187 (Port Master). *Cables:* Pafiji Suva. *Contact:* A. Savu, Director General.

Ports Authority of Fiji, Lautoka. *Tel:* 662944. *Contact:* Captain George Macomber, Port Master. Lasarusa Tuimanu, Wharf Manager.

LEVUKA: 17.41 S. 178.51 E. (See Plan)

DOCUMENTS:

Goods carried in Unregistered Space (C.E. 148) (1 only).
List of articles in possession of Crew, Officers and Master (1 only).
Crew List (8 only).
Passenger List (8 only).
Parcel List (2 only).
Primary Health Report (1 only).
Special Malaria Forms (1 only).
Vaccination Certificates (1 for each person).
Derat Certificates (1 only).

PILOTAGE: Compulsory. Pilots are arranged through Agents. Pilot boards in position – Lat. 17° 40.64'S., Long. 178° 52'E.

MAX. SIZE: Length 560 ft. Max. draft 25 ft.

HEALTH: Radio Pratique may be granted when any vessel has not visited any malarious port and Master declares that crew and passengers are healthy and vessel has not come from any area where internationally quarantinable diseases are endemic or in epidemic. Vessel may then enter port by day or night. On berthing, Master must immediately deliver to Quarantine Officer fully completed Primary Health Report and Derat or Derat Exemption Certificate. If there is any suspected case of disease or fever on board, vessel must be anchored at Quarantine Anchorage until cleared by Port Medical Authority. Pratique is automatic if a vessel has been granted Pratique at another port in Fiji.

TUGS: No tug service available, but tugs can be ordered from Suva.

BERTHING: Only 1 vessel berthing at a time.

Berthing in Levuka is generally effected starboard side to, outside Queens Wharf. Both dry cargo vessels and tankers use the one berth available for overseas shipping at Levuka.

Wharf	*Length*	*Depth Alongside*
Outer Face	255 m. (837 ft.)	7.9 m. (26 ft.)
Inner Face	No longer used due to new reclamation.	

STEVEDORES: Estimated time of arrival of any vessel and tonnage of cargo to be discharged should be received at least 24 hours from time of arrival.

MEDICAL: Normal hospital facilities are available. Specialist services not available but can be arranged for within 24 hours. Cholera and yellow fever valid Vaccination Certificates are required to be held by ship's crew and passengers, except those coming from New Zealand, Australia, Kiribati, Tuvalu, Tonga or Samoa.

TANKERS: Load and discharge lines 8 in. steel pipe. 1 berth only.

DENSITY: 1025.

FRESH WATER: Available only during normal working hours, which is from 0600 to 1600 from Monday to Thursday, and Friday up to 1500. Rate of delivery of water is about 15 t.p.h.

FUEL: Light marine diesel only – viscosity kin. at 100°F. = 3.4.

FIRE PRECAUTIONS: Bunkering only permitted during period between sunrise and sunset.

CONSULS: None.

REPAIRS: Minor engine repairs are possible, but deck and major engine repairs could be carried out at Port of Suva, which is about 57 miles away.

SURVEYORS: See "Suva".

GANGWAY/DECK WATCHMEN: Services of watchman highly recommended to stop unauthorised persons from going on board.

OPENING/CLOSING HATCHES: Normally carried out by stevedores.

CUSTOMS ALLOWANCES: All crew and Officers will be issued with 25 cigarettes per day. A maximum of 4 days' allowance may be given at any one time. Cigars or tobacco may be taken in lieu of cigarettes. Masters and other Officers may be allowed to keep in their possession small quantities of liquor.

Daily allowances: Spirits, 1 reputed quart to Master; 0.25 reputed quart to other Officers; Beer, 2 reputed quarts to Master; 2 reputed quarts to other Officers.

REPATRIATION: Facilities exist for repatriation.

AIRPORT: Situated on island of Viti Levu and the distance is about 200 miles. It is served by regular airlines (international). Connections twice daily from local airport, 12 miles from port.

TIME: GMT plus 12 hours.

HOLIDAYS: Working of cargo is not permitted on Sundays, Good Friday and Christmas Day. Application to work on Sundays to be made to the Ports Authority of Fiji at Levuka.

Public Holidays: See "Lautoka".

POLICE/AMBULANCE/FIRE: Police, 44222; Ambulance, 44015; Fire, 44014.

TELEPHONES: Arrangements may be made with Postmaster for installing telephone on board.

SHORE LEAVE: All crew members are allowed shore leave unless there is a special restriction from any Government authorities.

IDENTIFICATION CARDS: Not compulsory.

DELAYS: No berthing at night (lines cleared by Quarantine Authorities). Bunkering from sunrise to sunset. No loading or discharge during rain.

GENERAL: Rat guards must be affixed to all shore moorings or cables greased when alongside to prevent the advent of rats.

AUTHORITY: Port Authority of Fiji, G.P.O.Box 780, Suva, Fiji. *Tel:* 312700. *Telex:* 2203 PAF FJ. *Cables:* Pafiji Suva. *Contact:* Akuila Savu, Director General.

SUVA: 18.08 S. 178.26 E. (See Plan)

PORT LIMITS: A vessel is considered to be an "arrived vessel" having passed the West Reef Beacon at the entrance to Suva Harbour.

DOCUMENTS:

1 Last Port of Clearance Certificate.
2 Declaration of Nett and Unregistered Tonnage form.
8 Passenger Lists.
8 Crew Lists.
6 Stores Lists (for high duty goods).
Passenger liners are required to submit Transit Passenger Lists and also a Letter of Guarantee from Master.
Vaccination Certificates for Passengers and Crew.
Derat Certificates.

PILOTAGE: Arranged through vessel's Agents. 24 hours notice of ETA with confirmation 12 hours before arrival. Suva Harbour Control should be contacted on VHF Channel 16 when within range. Pilot vessel is a white clipper bow launch with word "Pilot" in black on each side and will leave wharf 30 minutes before signalled ETA of vessel. Pilots board on leads 5 miles from front lead. Vessels may stand in on leads to meet pilot vessel. Vessels are advised to provide 2 manropes for pilot ladder which will usually be required on the port side. No anchorage for vessels awaiting a Pilot.

ANCHORAGES: Safe anchorage may be found in depths of 10 to 20 fathoms within the harbour. Holding is good, mud bottom.

RESTRICTIONS: Vessels may enter at any time of day or night.

MAX. SIZE: No length or draft limitation for conventional vessels entering port. Largest vessel regularly entering is 42,000 tons.

HEALTH: Health authorities require that vessels cable details of ports visited within 50 days of ETA. Radio Pratique will be granted to vessels which are healthy and have not visited a port in a malarial area within 50 days. Health authorities board and inspect any vessel which has visited a malarial port within 50 days and will spray any vessel which has visited a malarial port. Vessels arriving from malarial areas are not permitted to berth during hours of darkness. Authorities board from a launch as vessel enters harbour. Quarantine Officer will sight Maritime Declaration of Health and Derat Certificate on boarding. No further Pratique formalities are required in Fiji ports other than first port of entry.

RADIO: Suva Radio, call sign 3 DP. 500 kHz., 24 hours listening watch.

VHF: Port Control maintains a 24-hour port radio control watch at Suva on VHF Channel 16. The call sign is "Suva Port Control".

TUGS: One tug available – 2,000 h.p. (33 ton B.P.). Compulsory for vessels of 3,000 g.r.t. and upwards. 2×12 ton B.P. tugs also available if required.

BERTHING: Vessels berth port or starboard side to King's Wharf or port or starboard side to Walu Bay Wharf as may be necessary. King's Wharf is 495.0 m. in length, having a least depth alongside of 11.6 m. at MLWS at the North end and 10.6 m. at the South end, whilst Walu Bay Wharf is 183.0 m. in length, having a least depth alongside of 9.0 m. MLWS. Ro/Ro cargoes handled.

Vegetable Oil: Vessels loading vegetable oils berth at Walu Bay or North King's Wharf.

LPG Carriers: Berth North King's Wharf or Walu Bay.

Equipment: Forklift trucks 2.5 tonnes – 25 tonnes capacity.

Out Ports of Suva: Customs and Pilot are embarked at Suva or Lautoka.

Ellington: Lat. 17.20° S., Long. 178.14° E. private wharf for loading sugar and molasses from Raki Raki Mill.

Savu Savu: Lat. 16.47° S., Long. 179.21° E. Government wharf for local coast trade and anchorage for cruise vessels.

Vatia Point: Lat. 17.25° S., Long. 177.46° E. Private wharf for discharging explosives and fuel to gold mines.

STEVEDORES: Arranged by ship's Agents.

Working Hours:

Day Shift:	0800 – 1300 hrs.	:	5 hours
	1300 – 1400 hrs.	:	unpaid meal break
	1400 – 1600 hrs.	:	2 hours
			7 hours
Afternoon Shift:	1600 – 2100 hrs.	:	5 hours
	2100 – 2200 hrs.	:	unpaid meal break
	2200 – 2400 hrs.	:	2 hours
			7 hours
Night shift:	2400 – 0500 hrs.	:	5 hours
	0500 – 0600 hrs.	:	unpaid meal break
	0600 – 0800 hrs.	:	2 hours
			7 hours

MEDICAL: Advance notice of medical assistance is desirable. Hospital facilities available. Current international vaccination certificates required.

TANKERS: Discharge lines 8 in. diameter. Tankers discharge at King's Wharf, North and South Berths. Depths alongside 42 ft. No residue discharge facilities.

DENSITY: Salt water, density 1025 approx. No tide effect on density.

FRESH WATER: Available at all berths. Delivery rate 30 t.p.h. per hose. Hose diameter 75 mm.

FUEL: Furnace fuel oil, diesel fuel oil, gas oil available by prior arrangement through oil company.

CONSULS: *Diplomatic Heads of Missions Resident in Fiji:*

Australian High Commissioner
British High Commissioner
French Ambassador
Indian High Commissioner
Japanese Ambassador
New Zealand High Commissioner
Papua New Guinea High Commissioner
Ambassador for the People's Republic of China
Tuvalu High Commissioner
United States Ambassador
Malaysian Ambassador
South Korean Ambassador

Consular Representatives in Fiji:

Denmark
Finland
Italy
Nauru
Netherlands
Norway
Pakistan
Philippines
Sweden

REPAIRS: Engine and deck repairs may be carried out at local machine shops. 3 slipways for vessels up to 1,000 tonnes.

SURVEYORS: *Non-Exclusive Classification:*

Lloyd's Register of Shipping
Panama Bureau of Shipping Inc.
Det Norske Veritas
Nippon Kaiji Kyokai
Germanischer Lloyd
Korean Register of Shipping
China Corporation Register of Shipping
Bureau Veritas
American Bureau of Shipping

The resident Surveyor Mr. D. Sunderland of Billett, Wright & Associates Ltd. is based in Suva, however attendance in other Fiji ports is possible providing adequate notice is given. Surveyor may be arranged by contacting Ship's Agents.

Cargo Surveys:

Cargo & Marine Survey Ltd. of Lautoka (See "Lautoka") provide all manner of services including draft surveys and damaged cargo inspection.

Resident Surveyor Captain D.E. Worthington is also available to attend at Malau Labasa. Surveys may be arranged through Ship's Agents.

GANGWAY/DECK WATCHMEN: Employment of deck/gangway watchmen is recommended and normally provided by ship's Agents.

OPENING/CLOSING HATCHES: Normally opened and closed by stevedore labour but crew may be employed at Master's discretion.

CERTIFICATES:

Load Line.
Certificate of Registry.
Safety Equipment Certificate.
Radio Certificate.
Derat Certificate.
Maritime Declaration of Health.

CUSTOMS ALLOWANCES: 1 oz. tobacco per man per day. No alcohol.

REPATRIATION: Facilities exist for crew changes and repatriation.

AIRPORT: 15 miles to Nausori (Suva) Airport, serving Pacific Islands on weekly basis. Numerous daily flights to Nandi International Airport.

TIME: Local time is 12 hours ahead of GMT.

HOLIDAYS: See "Lautoka".

Cargo is not worked on Public Holidays.

POLICE/AMBULANCE/FIRE: Police, 311222; Hospital, 313444; Ambulance, 312439; Fire, 22688; Emergency, 000 for any of the above services.

TELEPHONES: Telephone connections to ships are provided.

SERVICES: Compass adjusting may be carried out.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Not compulsory.

GARBAGE DISPOSAL: The port has its own incinerator for wet and dry waste from ships. Charges for burning waste are based on an hourly rate.

WASTE OIL DISPOSAL: Waste oil and sludge can be discharged after prior arrangement.

SEAMAN'S CLUBS: Flying Angel - Missions to Seamen, Tel: 300911.

CURRENCY: Fiji Dollar.

DELAYS: Delays are not usual except for rain during hurricane season from November to April.

AUTHORITY: Ports Authority of Fiji. G.P.O.Box 780, Suva, Fiji. *Tel:* 315399. *Telex:* 2203 PAF FJ. *Cables:* Pafiji Suva. *FAX:* (679) 300064. *Contact:* Akuila Savu, Director General. Captain Malcolm Peckham, Port Master.

NOTES

Please also advise Shipping Guides Ltd.

Finland

GENERAL:

DEEP-SEA PILOTAGE: See "Baltic Deep-Sea Pilotage".

EKENAS / TAMMISAARI (Including Skogby): 59.58 N. 23.26 E. (See Plan)

DOCUMENTS:
International or Finnish Measurements Certificate.
1 Personal Effects List.
1 Ship's Provisions List.
2 Crew Lists (passengers to be included).
1 Customs Declaration (official forms supplied by the Customs Authorities).
4 Manifests.
2 Bills of Lading.

PILOTAGE: Pilots for Ekenas / Tammisaari applied for at Hango Pilot Station by approaching Pilot Station outside Hango/Hanko, where pilot boat will meet vessel right outside Pilot Station.
Telegram address: Hango Pilot.

MAX. SIZE: Max. draft 15.1 ft. (4.6 m.). No other restrictions. At Skogby, draft up to 24 ft. – No tide.

RADIO: Helsinki Radio, Call sign OHG.

VHF: Helsinki Radio, Channels 5, 28 and 85. When in the Hanko/Ekenas area use Channels 86, 03 and 25.

TUGS: Normally no tugs stationed at Ekenas but can be arranged from Koverhar or Hanko (12 nautical miles and 20 nautical miles from Ekenas respectively).

BERTHING: Two quays at Ekenas: "Trakajen", length about 160 ft.; "Stenkajen", length about 500 ft.
3 mobile cranes, capacities 27, 36 and 56 tons are available. Two of the mobile cranes are equipped with grabs suitable for discharging of bulk cargoes such as coal, coke, china clay, ball clay, salt and grain.

STEVEDORES: ETA to be given to Agent 1400 hrs. Finnish time on the day before arrival in order to prepare loading/discharging (Stevedore: J. A. Westerlund).
Working Hours: Normal working hours are Monday to Friday 0700 – 1600. Daily overtime can normally be arranged for up to 4 hours (1600 – 2000). All overtime is, however, voluntary.

MEDICAL: Hospital treatment can be arranged when needed.

DENSITY: 1001.

FRESH WATER: Fresh water is delivered to the ship's side by means of hose in Summertime.

FUEL: Bunkering available at Ekenas by means of tank trucks.

REPAIRS: Minor electrical and deck repairs may be carried out.

OPENING/CLOSING HATCHES: Normally carried out by crew.

CUSTOMS ALLOWANCES: 200 cigarettes permitted for each crew member. 1 open bottle of 1 litre wine or spirit is allowed for each crew member over 18 years of age.

AIRPORT: Nearest airport is Helsinki Airport, situated about 100 km. from Ekenas.

HOLIDAYS: On Saturdays and days preceding Church holidays, the eve of Independence Day, the day preceding May Day, on Whitsun Eve and on New Year's Eve the working day consists of four working hours, starting from 0700 hrs. or 0800 hrs. and lasting to 1100 hrs., or 1200 hrs. respectively without break for meals. May Day, Independence Day, (6th December), Easter Saturday, Midsummer Eve and Christmas Eve are considered as labour free days.

POLICE/AMBULANCE/FIRE: Police, Tel: 112 and 2414000; Ambulance, Tel: 112; Fire, Tel: 112.

TELEPHONES: There are no arrangements for placing telephones on board the vessel but telephone calls can be made from the Harbour Constable's Office.

SUPPLIES: Ship stores and provisions can be ordered from Hango through Agent.

SHORE LEAVE: Shore leave allowed for crew members.

IDENTIFICATION CARDS: Not needed.

GARBAGE DISPOSAL: Available at 2 hours notice. Tel: 911-2486713.

WASTE OIL DISPOSAL: Available. Tel: 911-2486713.

SEAMAN'S CLUBS: None.

CURRENCY: Finnish Mark. U.S.$1.00 = FIM 4.60 (2/96).

AUTHORITY: Hamnkontoret i Ekenas, Postbox 75, SF-10601 Ekenas, Finland. *Tel:* 911-263111, 949-471663 or 911-43374. *FAX:* 911-2632050. *Contact:* Svante Rosin, Harbour Master.

HAMINA: 60.34 N. 27.11 E. (See Plan)

PORT LIMITS: A vessel is considered to be an "arrived vessel" subject to Charter Party Terms, when arrived at roads.

DOCUMENTS: Normally required:
1 Crew List.
1 Passenger List.
3 Manifests.
1 Bill of Lading of each consignment.
Customs Documents:
1 Special List (personal effects).
1 Provision List (Ship's Articles).
Ship's Papers Required:
Safety Equipment Certificate.
Radio Safety Certificate.
Construction Certificate.
International Tonnage Certificate.
International Load Line Certificate.
Certificate of Registry.
Tonnage Dues and Ice Dues Certificates if vessel called previously.

PILOTAGE: Sea Pilot boards at Orrengrund. Fairway 33 miles from Orrengrund to Hamina, depth 9.0 m. New Fairway 38 miles long, depth 10.0 m. VHF radio telephone Channel 16; pilot boat: hull red, superstructure yellow. Vessels coming from Eastward can take Pilot at Haapasaari (Aspo), but must order Pilot by radio via Coast Radio Station at least 6 hours before ETA Haapasaari.
Harbour Pilotage: Harbour Pilot takes over at Roads. Harbour pilot boat: hull black, superstructure yellow, word "Pilot" painted with black letters. Harbour pilotage optional. VHF Channel 12.

ANCHORAGES: 2 anchorages with good holding grounds at Roads.

RESTRICTIONS: Usually no restrictions. Max. draft 10.0 m. Port open throughout year.

MAX. SIZE: Draft is governing factor. No tide but prolonged Easterly winds can cause lower water level, which must be checked before entering berths.

HEALTH: Bill of Health not required. In case suspected disease or fever on board, doctor to be contacted, preferably via Agent, by radio before arrival.

RADIO: Vessels in Baltic Sea usually contact Helsinki Radio/OHC, A1 and OHG, A3. VHF Channels 16 and 26.

RADAR/VHF: There is no land radar service. Harbour is equipped with VHF radio telephone, Channel 12. Also see "Radio".

TUGS: Join vessels at Roads. Ship's lines usually used.

BERTHING:

Quay	*No.*	*Depth* (m.)	*Length* (m.)
Coal Quay		6.9	345
Lakulahti (L)	L1 – 2	8.6	216
	L3 – 8	7.9	591
L5 – Ro/Ro		7.9	
Hiirenkari	1 – 2	7.9	158
	3	8.4	110 also Ro/Ro
	4 – 5	8.6	200
HK6 – Ro/Ro		8.6	
Palokangas	PK1	10.0	176 also Ro/Ro
	PK2	10.0	224
	PK3	10.0	190
	PK4	10.0	to be built
Oil Pier	1	9.0	
	2	10.0	
	3	10.0	
LPG Terminal	—	9.0	170
Roads		8.6	
Outer Roads		10.0	

CRANES:

	No.	*Capacity/Tons*	*Type*
Coal Quay	3	5	
	2	6.5	
	6	36 – 55	mobile

STEVEDORES: ETA is expected in good time before arrival.

MEDICAL: Advance notice helpful but not compulsory. Hospital facilities available at town.

TANKERS: Possibility to discharge oily water ballast.
Also see "Berthing".

DENSITY: 1003.

FRESH WATER: Available at majority of quays; elsewhere supplied by boat.

FUEL: Fuel and diesel oils available by tank truck at short notice.

CONSULS: Denmark, Netherlands, Norway, Sweden, United Kingdom.

REPAIRS: Minor repairs effected.

GANGWAY/DECK WATCHMEN: Shore watchmen available, Sundays and holidays 100% extra.

OPENING/CLOSING HATCHES: Crew close automatic hatch covers. Hatches to be covered manually are usually covered by stevedores.

CUSTOMS ALLOWANCES: Tobacco: Master 200 cigarettes or 200 grams tobacco. Others, 100 cigarettes or 100 grams tobacco. Wine and/or Spirit: Master, 3 bottles wine or spirits. Others, 1 bottle.

REPATRIATION: There are facilities for repatriation.

AIRPORT: Helsinki Airport, distance 145 km. Regular flights.

TIME: Local time is GMT plus 2 hours. GMT plus 3 hours in Summer.

HOLIDAYS: New Year's Day (Jan. 1); Epiphany (Jan. 6); Good Friday; Easter Monday; Labour Day (May 1); Ascension Day; Whit Monday; Midsummer Day; All Saints' Day; Independence Day (Dec. 6); Christmas (Dec. 25 and 26); Midsummer's Eve.

POLICE/AMBULANCE/FIRE: Police 002; Ambulance 000; Fire 000.

REGULATIONS: Regular vessels have preference at certain berths.

AUTHORITY: Port of Hamina Authority, PL 14, SF-49401 Hamina, Finland. *Tel:* 358-52-7495400. *FAX:* 358-52-7495419. *Contact:* M. Koskinen, Harbour Master. H. Heikkila, Port Director.

HANKO: 59.49 N. 22.56 E. (See Plan)

DOCUMENTS:
Ship's Register.
Crew List.
Manifests.
Bills of Lading.
Provisions List.
Health Certificate.

PILOTAGE: Compulsory, distance from sea to port is 6 miles. Pilot boat painted red, arriving outside Russaro called by radio via Helsinki Radio or by flag, sound or Morse: "G".
Pilot Station: Tel: (911) 2482246. Fax: (911) 2482251. VHF Channels 16 and 13.
ANCHORAGES: Inside Gustavsvarn.
RESTRICTIONS: Draft 26.5 ft., length/breadth no restriction; no tide.
RADIO: Cable Agents giving ETA via Hanko or Helsinki Radio.
RADAR: At Pilot Station; service for ships entering port, contact by ship's radio.
TUGS: In Winter harbour tug assists ships to and from the quay.
BERTHING: Quay height about 6 ft. above sea level. Shore fenders keep vessel about 2 ft. off quay. Special quays for Ro/Ro traffic.

Quay	*Permitted draft* ft. in.	*Length of quays* (m.)
Germany	19	105
Great Mole	22 04	704
Notholms	24 00 - 25 11	310
	26	125
Outer Harbour	25	350
Kone Oy	20	125 (railway connection and shore cranes).
Deep Quay	43	300

CRANES:

	No.	*Capacity/tons*	*Type*
Great Mole	1	6	Movable
	2	3	"
Notholms quay	2	5	"
	1	40	
Deep Quay	1	45	Universal container crane

Free Harbour: One mobile crane, lifting capacity 40 tons. 21 forklift trucks available.
STEVEDORES: Ordered by Agents.
FRESH WATER: Delivered from shore installations during day and night. Rate of delivery about 20 t.p.h.
FUEL: Delivered by rail cars only.
DENSITY: 1005.
WATCHMEN: Available but not compulsory.
HATCHES: Crew allowed to open and close hatches.
CUSTOMS ALLOWANCES: No restrictions in the Free Port, outside about 200 cigarettes and limited amount spirits per man.
CONSULS: Denmark, Iceland, Netherlands, Norway, Spain, Sweden.
REPAIRS: Small repairs possible.
SURVEYORS: Surveyors and cargo inspectors available.
TIME: Local time GMT plus 2 hours. GMT plus 3 hours in Summer.
POLICE/AMBULANCE/FIRE: Police 10022; Fire and Ambulance 112.
STORING: Storing possible by barge or truck. Forklift trucks and riggers available.
IDENTIFICATION CARDS: Not required.
GARBAGE DISPOSAL: Garbage containers available on quay. Garbage fee: Fim 0.20/n.t. Minimum Fim 250.0, Maximum Fim 500.
WASTE OIL DISPOSAL: Tanker trucks available. Contact Hangon Lokakuljetus Oy. Tel: (911) 2486713, 2482211. Fax: (911) 2484079.
SEAMAN'S CLUBS: None.
CURRENCY: Fim.
AUTHORITY: Port of Hanko, Western Harbour, P.O. Box 11, 10901 Hanko, Finland. *Tel:* (911) 2203803. *FAX:* (911) 2203802. *Contact:* Tom Luoma, Port Director, Tel: (911) 2203800. Tom Widenas, Harbour Master, Tel: (911) 2203801.

HELSINKI: 60.10 N. 24.57 E. (See Plan)

DOCUMENTS:
2 Crew Lists.
2 Passenger Lists.
Customs Documents.
2 Crew Bond Declarations.
2 Ship's Bond-Stores Lists.
Derat Certificate.
4 Manifests.
2 Bills of Lading.
Ship's Register, Certificate of tonnage.

APPROACHES: *Directions for arrival in the port:* Vessels using the main approach to the port from Helsinki Lighthouse should keep the Harmaja Lighthouse Beacon in line with the church tower on the island of Suomenlinna. The light from Harmaja is visible at a distance of 37 km. (20 nautical miles), and the approach channel has a bearing of 007°. The islet of Harmaja is left on the Western side of the fairway. In the event that the Master of the vessel is not thoroughly acquainted with the fairway and its markings, he is strongly advised not to proceed without the assistance of a Pilot any closer than 3.7 km. (2 nautical miles) to Harmaja, where the channel veers to a bearing of 010°.

PILOTAGE: Compulsory. ETA required 24 hours prior arrival. At present there are 5 different channels available for vessels approaching Helsinki.
1. *Helsinki Lighthouse-Harmaja-Helsinki:*
The main approach to Helsinki, this channel starts from East of the Helsinki Lighthouse, a caisson beacon on the shoals South of Helsinki, at a distance of around 22 km. from the port. It proceeds via the Harmaja Pilot Station and the Kustaanmiekka Strait between the islands of Suomenlinna and Vallisaari, to the open area of water beyond, known as Kruunuvuorenselka. To this point the channel is navigable by vessels drawing up to 9.6 m. The fairway branching off North of the Harmaja Pilot Station and leading to the West Harbour has a depth of 8.9 m. Pilots are taken on board from the station at Harmaja.
2. *Helsinki Lighthouse-Melkki-Helsinki:*
This 11 m. channel leads from the Helsinki Lighthouse to the East of the Graskarbadan Light and then between the islands of Pihlajasaari and Melkki to the West Harbour. Pilots are taken on board from the Helsinki Pilot Station.
3. *Porkkala-Helsinki:* (Southern Finland Winter Fairway).
The Winter fairway into Helsinki begins from roughly 8 km. West of the Porkkala Lighthouse. The channel is 10 m. deep from Sommaro, decreasing to 9 m. from Ronngrund. The fairway joins the 11 m. channel (see above) leading to the West Harbour S.W. of Katajaluoto, and joins the 9.6 m. lead to Helsinki, North of Harmaja.
During the Winter months, when the passage from the Helsinki Lighthouse to Harmaja is closed owing to ice conditions, all vessel traffic into Helsinki is directed via the route above. Pilots are taken onboard from the Porkkala Pilot Station.
4. *Porkkala-Helsinki:*
In addition to the above channel, there is a 7.9 m. fairway leading from Porkkala to Helsinki, which begins from about 1 km. West of the Porkkala Lighthouse and joins S.E. of Pihlajasaari with the 8.9 m. channel leading to the West Harbour. Pilots are taken onboard from the Porkkala Pilot Station.
5. *Emasalo-Vuosaari-Helsinki:*
From the East there is a 9 m. channel leading to Helsinki through the outer islands, which joins with the main approaches to Helsinki North of Harmaja. Pilots are taken onboard from the Emasalo Pilot Station. Leading from this 9 m. channel, there is a 7.5 m. approach to the former shipyard area of Vuosaari.
Services to Vessels entering and leaving the Port: In order to improve vessel safety for ships entering and leaving the Port of Helsinki, a "Control Zone" is enforced in the approaches to the port. Vessels in this area (exceeding 12 m.) should listen for instructions on VHF Channel 71. Traffic announcements and warnings to navigation will be issued via this channel. Notification of position should be given by vessels over 20 m. in length on entry to this zone, and a further report should be made at least 15 minutes prior to arrival at Sarkansalmi or Kustaanmiekansalmi.
On departure from the port, vessels should notify their intention to leave and course prior to casting off.
Vessels in local harbour traffic (waterbuses, tugs, escort vessels, etc.) are required to give notification of their course and whereabouts only in the case of poor visibility.
Pilots are obtainable from:

Emasalo Pilot Station	VHF Channels 16 or 13.	Tel. (358) 15542710.
Helsinki Pilot Station	VHF Channels 13, 16 or 71.	Tel. (358) 0668123.
Port of Helsinki	VHF Channels 13, 16 or 71.	Tel. (358) 017333280.

DIRECTION FINDING: Harmaja Radio Beacon (frequency 298.8 kHz. Signal "HA") transmits:
Non-directional radio signals, with a modulation frequency of 395 kHz. By listening to these signals with a direction finding receiver, equipped with frame aerial, a ship can determine her bearing to the beacon.
Harmaja Lighthouse and Helsinki Lighthouse fitted with "Racon" for 3 cm. radar (X-area).
ANCHORAGES: Good anchorage available outside harbour, depth 26 ft. – 32 ft. clay bottom.
MAX. SIZE: Draft 31 ft., length no limit.
HEALTH: See "Oulu".
DEPTH OF CHANNELS:
From Helsinki to East 9 m.
From Helsinki Lighthouse to Helsinki 9.6 m. and 11.0 m.
From sea South via Porkkala 9.0 m.
Variations in water level: There are no tidal variations as such in the port, but rather the differences noted are the result of weather or climatic conditions.

Max.	+1.30 m.
MHW	+0.85 m.
MLW	−0.65 m.
Min.	−0.90 m.

VHF: Harmaja Pilots, Porkkala Pilots and Port Authority call VHF Channel 16 or 13.
TUGS: Several available. Charges based upon time when tug leaves station berth until moment of return to same station.
BERTHING: Port and equipment owned by Municipality of Helsinki. 5 principal parts of port are South Harbour and West Harbour, North Harbour, and Herttoniemi and Laajasalo Oil Harbours.
Foreign passenger traffic is concentrated on the South Harbour.
West Harbour handles main part of transoceanic traffic; heavy goods and container terminal in West Harbour fitted with 3 container cranes and 1 multi-purpose crane (lifting capacity of each 40 tons), also silos of 2 flour-milling plants (Vaasanmylly Oy and State Granary), into which grain discharged by suction. On silo quay pneumatic grain unloader owned by State Granary travels along 71 m. long bridge alongside ship to be unloaded. Equipment is 30 m. above quay level and range of suction pipe 11 m. from edge of quay. Unloading equipment can handle 100 t.p.h. Mass export articles such as cellulose, paper and wood goods, loaded chiefly in this harbour. In West Harbour is free-zone warehouse, which offers same privileges as free port.
The North Harbour operates mainly as a North Sea general cargo harbour. The area contains a coal harbour.
Herttoniemi and Laajasalo form the oil harbour, where the leading oil companies have oil storage tanks and their own piers.

South Harbour:

					Lifting cranes and ramps		
Quay	*Ramp*	*Length* (m.)	*Depth in Fairway* (m.)	*Depths*[1] *alongside* (m.)	*Number and type of crane*	*Lifting capacity* tons	*Radius* (m.)
Olympia Quay	EO1	150	7.9	7.5			
" "	EO2	220	7.9	8.8			
Makasiini Quay	EM3	140	7.9	7.0			
" "	EM4	130	6.9	7.0			
Pakkahuone Quay	EPL	135		6.0			
Lubeck Quay	ELY	95	3.5	3.8			
Keisarinluoto Quay	EKE	80		3.0			
Linna Quay	ELL	96		3.5 – 4.5			
Katajanokka Quay	EKA	70		4.5			
" "	EK5	180	7.9	8.8			
" "	EKL	120	7.9	8.9			
" "	EK6	220	7.9	8.9			
" "	EK7	220	7.9	8.9			
Passenger Cruise Liners	ERA	280	9.6	10.0			
" "	ERB	ramp +dolphin	9.6	10.0			

[1]Minimum depth from mean water mark to bottom.

Ramp details

Quay	*Ramp*	*Height above mean water* (m.)	*Width* (m.)	*Centre line from quay side* (m.)	*Max. axle load (Max. bogie load)* tons
Olympia Quay					
Bridge ramp	EO1	1.8 – 3.35	12.0	9.5	30 (60)
Bridge ramp	EO2	1.4 – 3.5	22.0	14.0	
Makasiini Quay					
Shore ramps	EM3 and EM4	1.65 – 2.2	16.5	8.2	
Katajanokka Quay					
Shore ramp	EK5	2.3 – 2.7	15.0	10.8	
Shore ramp	EK6	1.85 – 2.65	23.5	14.0	
Bridge ramp	EK7	1.5 – 3.2	13.0	11.0	

West Harbour:

					Lifting cranes and ramps		
Quay	*Ramp*	*Length* (m.)	*Depth in Fairway* (m.)	*Depths*[1] *alongside* (m.)	*Number and type of crane*	*Lifting capacity* tons	*Radius* (m.)[3]
Tammasaari Quay	LTA	135	6.9	7.8			
Energy Board Fuel Quay	LEL	137	8.9	10.0			
Saukonpassi Quay (private)		20	8.9	4.5			
Saukko Quay	LS8	253	8.9	9.0	1 Container crane for 20 ft. – 40 ft. containers	30.5/40	24.0
	LSA		8.9	9.0			
	LSB		8.9	9.0	1 Container crane for 20 ft. and 40 ft. containers	35/45	30.0
Jatkasaari Quay	LJA	1,335	8.9	3.4	1 container crane	40/50	30.0
	LJB						
	LJC		8.9	6.8			
	LJD		8.9	7.3			
	LJ3		8.9	8.7	1 container crane for 20 ft. – 40 ft.	40/55	32.5
	LJ4		8.9	9.7			
	LJ5		8.9	9.3	6 cranes	3.0/5.0	20.5/12.5
	LJ6		8.9	9.4			
	LJE		8.9	9.4			
Sampo Quay	LSL	187	8.9	5.5			
Valtameri Quay	LV7	210	11.0	11.0			
Melkki Quay	LM9	400	11.0	12.1	1 universal crane		
	LMA		11.0	12.1	container hook	30/40	23.3
	LMB		11.0	12.4	hook	10	25.8
Silli Quay	LS1	177		3.4 – 5.0			
Masa Yards	LMY		8.9	9.0			
Munkkisaari Quay	LHA	196	8.9	7.4	Pneumatic grain unloader[2]		
	LHB	162	8.9	7.5			
	LHC	276	8.9	8.0			
	LHD		8.9	7.3			

Ramp details

Quay	*Ramp*	*Height above mean water* (m.)	*Width* (m.)	*Centre line from quay side* (m.)	*Max. axle load Max. bogie load* tons
Jatkasaari Quay					
Shore ramp	LJ5	2.00 – 3.00	20.5	10.30	50
Bridge ramp	LJ6	1.15 – 4.25	17.0	11.00	50
Valtameri Quay					
Bridge ramp	LV7	1.85 – 4.15	17.0	11.00	52
Melkki Quay					
Shore ramp	LM9	1.30 – 2.60	31.0	17.50	
Slaukko Quay					
Shore ramp	LS8	1.30 – 2.60	28.5	14.25	

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[1]Minimum depth from mean water mark to bottom. [2]Owned by the state granary. [3]Outreach from quay/fender seaward.

North Harbour:

					Lifting cranes and ramps		
Quay	Ramp	Length (m.)	Depth in Fairway (m.)	Depths[1] alongside (m.)	Number and type of crane	Lifting capacity tons	Radius (m.)[2]
Oy Partek Quay	SPK	100	5.5	6.0			
Hanasaari Quay	SHB	250	9.0	9.6	2 cranes	6.2	16.6
	SHA	180	9.0	8.9	1 stationary crane	150.0	10.0
						50.0	18.0
						30.0	20.0
					4 cranes	6.0	16.6
Sompasaari Quay	SS6	200	9.0	9.3	double deck ramp		
	SS1		9.0	8.5			
	SS2	600	9.0	9.0	4 cranes	3.0/5.0	22.8/14.8
	SSA		9.0	9.0	1 universal crane		
	SSB		9.0	9.3	container/hook	30.5/40.0	24.3
	SS3		9.0	8.4	hook	10.0	26.8
	SS4	140		7.0			
	SS5	140		7.3			
Sornainen Quay	SIT	399	6.1	5.5	2 cranes	3.0/5.0	22.3/14.3
Fishing Harbour Quay	SKS	210		5.0			

[1] Minimum depth from mean water mark to bottom. [2] Outreach from quay fender seaward.

Ramp details

Ferry berths	Width (m.)	Height above mean water (m.)	Centre line from edge of quay (m.)	Max. axle load (Max. bogie load) (tons)
Parru Quay				
SS1 Bridge ramp	17.00	0.70 – 3.80	11.00	50
Sompasaari Quay				
SS2 Bridge ramp	19.00	1.20 – 3.95	12.50	35 (70)
SS3 Shore ramp	30.00	1.35 – 2.45	15.00	100
SS4 Shore ramp	17.00	1.50 – 2.60	10.00	
SS5 Bridge ramp	15.00	1.40 – 4.30	13.00	50
Hanasaari Quay	lower 2.5	lower 2.45-3.20	lower 14.50	lower (67) +25 (67)
SS6 doubledeck ramp	upper 13.0	upper 9.20-9.70	upper 12.0	upper 25 (67) +25 (67)

BULK HANDLING FACILITIES: Specially equipped berths for handling bulk cargoes in North Harbour. Berths equipped for containers or Roll-on/Roll-off traffic in West Harbour (40-ton container cranes and multi-purpose crane) and North Harbour (40 ton multi-purpose crane).

Also see "Tables".

STEVEDORES: 24 hours ETA required. Companies available of which 1 specialises in discharging timber and coal.

Working hours: Weekdays, 0700 – 1600 hrs. and 1600 – 2230 hrs. Saturdays, 0700 – 1500 hrs. Lunch break weekdays and Saturdays 1100 – 1130 hrs.

MEDICAL: Agents to be informed by radio if fever suspected.

TANKERS: Max. draft 9.6 m.

Herttoniemi and Laajasalo form together the oil harbour of Helsinki, where the leading oil companies have oil tanks and their own piers.

Harbour	Quay length (m.)	Depth alongside (m.)	Depth of channel (m.)
Herttoniemi Oil Harbour:			8.0
Suomen	100	8.8	
	24	8.1	
Rescue Dept. Pier	60	3.0	
Laajasalo Oil Harbour:			9.6
Shell Co's pier	32	10.0	
Esso Co's pier	30	10.6	
Neste Co's pier	58	10.2	

DENSITY: 1004 – 1005.

FRESH WATER: Unlimited amount available by hoses from hydrants at quays.

FUEL: All grades available; any amount at short notice.

CONSULS: All maritime countries are represented in Helsinki.

REPAIRS: All types available.

DRY DOCKS: *Kvaerner-Masa Yards, Hietalahti:*

Dock	Extreme length (m.)	Breadth at entrance (m.)	Depth on sill (m.)
Dry dock 1	142	20	6.6
Dry dock 2	208	34	9.6

SURVEYORS: Lloyd's Register of Shipping, Bureau Veritas, Germanischer Lloyd, Det Norske Veritas, American Bureau of Shipping, Korean Register of Shipping, N.K.K. and other private companies.

GANGWAY/DECK WATCHMEN: Recommended but not necessary.

OPENING/CLOSING HATCHES: Crew/Stevedores.

CUSTOMS ALLOWANCES: 200 cigarettes, 1 litre wine and 1 litre spirits each man.

REPATRIATION: Available.

AIRPORT: Distance to airport 25 km. Flights every day all over Europe.

TIME: GMT plus 2 hours. GMT plus 3 hours in Summer.

HOLIDAYS: New Year's Day (1st January); Epiphany (6th January); Good Friday; Easter Monday; 1st May; Ascension; Whitsun; Midsummer's Eve and Day; All Saints' Day; Independence Day (6th December); Christmas Eve; Christmas Day (25th December); Boxing Day (26th December).

POLICE/AMBULANCE/FIRE: Police 10002; Ambulance 112; Fire 112. General alarm 112.

EMERGENCY COORDINATION CENTRE: Helsinki Maritime Rescue Coordination Centre (MRCC). Tel: 667766. VHF Channel 16.

Privately owned tugs are ready at any time round the clock to put to sea for towing or sea rescue tasks.

Oil Pollution Control: In the event of an oil spill or accident involving the risk of oil pollution, contact should be made immediately with the City of Helsinki Rescue Department, Emergency, Tel: 112, and with the Port of Helsinki Port Control, Tel: 1733 3280 (24 hours).

TELEPHONES: Nearly all quays have facilities for ship-to-shore telephone connections. Telephone receivers are available from the Port Control personnel, who also inform ships of the telephone number. Telephones can be ordered in advance from shipping agents.

SERVICES: Compasses are adjusted by competent adjusters approved by the Board of Navigation. For compass adjustment the port has constructed piles or buoys with direction markings. These appliances can be used also for radio direction-finders.

Vessels using the compass-adjustment facilities must have on board a Harbour Pilot, who is entitled to the same compensation as for harbour pilotage.

IDENTIFICATION CARDS: Required.

GARBAGE DISPOSAL: In accordance with the terms of the Convention on the Protection of the Marine Environment of the Baltic Sea Area, the discharge or jettisoning of solid or liquid waste into the sea is, with certain exceptions, prohibited throughout the Baltic Sea Area.

On their arrival at the quay, vessels are provided with numbered special waste sacks (yellow), intended for the reception of all special waste carried by vessels arriving from a foreign port. This category of special waste includes raw meat from mammals or birds or poultry, raw offal, meat packaging materials and wrappings, and bones. Vessels are specifically required to take the filled, sealed sacks only to the yellow special waste storage bins on the quay, which bears the same text and markings as on the sacks.

Normal waste and refuse should be deposited in the transparent refuse sacks which are also delivered to vessels on arrival in the port, and the filled sacks are to be taken to the grey storage bins provided for the purpose on the quayside.

Port Authority duty personnel and shipping agents can provide more detailed directions on the reception of waste in the port.

WASTE OIL DISPOSAL: The Port of Helsinki is obliged to accept up to 30 cu.m. of oily mixtures per vessel stay. Collection is by tanker truck and charges, which vary, are for ship's account. Contact Port of Helsinki Authority or SERVI, the company which operates the service, Tel: 90-7571433.

SEAMAN'S CLUBS: Finnish Seamen's Service, MEPA, operate the Helsinki Seamen's Club and Hotel, Tel: 625233. Facilities include TV, pool, refreshments, sauna and gymnasium, sightseeing tours, football and athletics can also be arranged.

CURRENCY: Finnish Mark (FIM).

ICEBREAKERS: Icebreaking work within the harbour area is carried out by privately-owned tugs.

During the Winter months, government ice-breakers are assigned to assist vessels from the open sea to the harbour area and vice versa.

POLLUTION: In the event of an oil spill or accident involving the risk of oil pollution, contact should be made immediately with the City of Helsinki Rescue Department, emergency Tel: 112, and with the Port Authority (Duty Officer) on Tel: 173-33-3280 (24 hours).

AUTHORITY: Port of Helsinki Authority, Olympiaranta 3, 00140 Helsinki. Mailing Address: P.O.Box 193, 00141 Helsinki. *Tel:* 358-0-173331. *Telex:* 124913. *FAX:* 358-0-17333232. *Contact:* Mr.Eljas Muurinen, Managing Director (*Tel:* 17333201.) Mr. Kari Wallin, Harbour Master (*Tel:* 17333270).

INKOO: 60.01 N. 23.55 E. **(See Plan)**

APPROACHES: Max. draft 13 m.
PILOTAGE: Pilot station is Porkkala Pilot Station. Pilotage service 24 hours a day, VHF watch on Channels 16 and 13, 24 hours a day. Notice must be given 2 hours before arrival at boarding place (Lat. 59° 54' N., Long. 24° 12' E.). Distance from boarding place to harbour area about 14 miles. Pilot may also be ordered by telephoning Helsinki 2984112.
MAX. SIZE: See "Berthing".
ANCHORAGES: 5 miles S.W. of Sommaroe Island.
TUGS: Tugs are available at any time, notice required is same as Pilot. If the vessel is over 200 m. LOA tug joins at Fageroe Island about 5 miles before harbour area, otherwise tugs join at the turning place 1 mile before harbour area. Tugs use ship's lines.
BERTHING: Max. draft 7.8 m.

Coal Quay: Length 175 m., 2 cranes, 10 tons and 6 tons by hook and half the capacity by grab.

Paper Quay: Length 140 m.

IVO Generation Services: Total length of quay 410 m. Max. draft 13 m. at the East part of the quay (240 m.), and max. draft 10 m. at the West part of the quay (170 m.). 4 cranes, 3 cranes capable of lifting 10 tons hook or 6 tons by grab and 1 crane capable of lifting 20 tons by hook or 12 tons by grab.
FRESH WATER: Available.
DENSITY: 1004.
REPAIRS: Possible.
TELEPHONES: Available.
AUTHORITY: Inkoo Shipping Oy AB, 10210 Inkoo, Finland. *Tel:* 358-0-2218121. *Telex:* 1418 Lkin Fi. *FAX:* 358-0-2218115. *Cables:* Elcoy. *Contact:* Mari Korhonen. Tom Bjorklof (After hours 358-49-475353). Tomas Damen (After hours 358-49-471053).

IVO Generation Services, 10210 Inkoo, Finland. *Tel:* 358-0-856441. *Telex:* 1422 Ivoin Fi. *FAX:* 358-0-85644402. *Cables:* Imatranvoima Inkoo. *Contact:* Erik Aberg.

JAKOBSTAD (Pietarsaari): 63.42 N. 22.42 E. **(See Plan)**

DOCUMENTS:
International Measurement Certificate.
3 Manifests.
2 Bills of Lading of each consignment.
Customs Documents:
1 Crew List.
1 Special List (personal effects).
1 Provision List (ship's articles).
Important: If the vessel is calling at two or more Finnish ports, 2 of each of these lists are to be produced at the first port of call.
PILOTAGE: VHF Channel 16, MF 2182 kHz. Anchorage for vessel awaiting a Pilot: outside the lighthouse "Kallan". Pilot boat equipped with radar.
ANCHORAGES: On inner roads called "Ado Roads", depth 8 m.
MAX. SIZE: Max. draft in the inner harbour 9.0 m. No tide.
HEALTH: See "Oulu".
RADIO: Helsinki Radio Station. Gamlakarleby/Kokkola VHF Channels 16/28.
TUGS: Tugs (1,300 h.p.) are normally stationed in the harbour. Ship's lines to be used.
BERTHING: Southern Quay: Length 200 m., depth 7.4 m.
Old Quay: Length 180 m., depth 4.9 m. (inside), 6.0 m. (outside).
Busko Quay (Ro/Ro Berth): Length 160 m., depth 7.4 m.
Laucko Quay: Length 150 m., depth 9 m.
Elevator Quay: Depth 6 m.
CRANES: 3 Harbour cranes and 1 mobile crane.
STEVEDORES: 1st shift Monday to Saturday 0700 – 1600 hrs. (meal hours 1100 – 1200 hrs.); 2nd shift Monday to Friday 1600 – 2400 hrs. To commence loading at 0700 hrs. notice must be given latest at 1600 hrs. the day before, or before 1200 hrs. if commencing at 1600 hrs.
MEDICAL: Advance notice not required. All facilities available.
TANKERS: Vessel's draft must not exceed 9.0 m.
DENSITY: Fresh water.
FRESH WATER: From pipeline alongside quay.
FUEL: Light Fuel Oil and Heavy Fuel Oil available.
CONSULS:
Denmark. Tel: 7247456, 7232234.
Sweden. Tel: 7862102.
REPAIRS: All types of repairs possible.
GANGWAY/DECK WATCHMEN: Watchmen recommended.
OPENING/CLOSING HATCHES: Normally carried out by crew.
CERTIFICATES: Derat Certificate to be kept on board.
CUSTOMS ALLOWANCES: Tobacco: 200 cigarettes per 6 days for each crew member. Wine and/or Spirits: 1 bottle of each per 6 days for each man over 20 years of age.
REPATRIATION: Crew changes can be effected.
AIRPORT: Kronoby Airport about 30 km. from Jakobstad. 4 flights daily.
TIME: GMT plus 2 hours. GMT plus 3 hours in Summer.
HOLIDAYS: 1st and 6th January; Good Friday; Easter Eve; Easter Monday; Labour Day (1st May); Ascension Day; Midsummer Eve; Whit Monday; 6th December (Independence Day); 25/26th December; All Saints' Day.
POLICE/AMBULANCE/FIRE: Police 10022; Ambulance and Fire 112.
TELEPHONES: Connection for telephone on board available.
IDENTIFICATION CARDS: Not needed.
AUTHORITY: Port of Pietarsaari Authority, FIN-68600 Pietarsaari, Finland. *Tel:* +358 (9) 67-7236128. *FAX:* +358 (9) 67-7230034. *Contact:* Hakan V. Sundqvist, Harbour Master.

KASKINEN (Kasko): 62.23 N. 21.13 E. **(See Plan)**

DOCUMENTS:
2 Crew Lists.
2 Customs Lists.
2 Passenger Lists.
Manifest, Bill of Lading, etc.
Between 1st December – 30th April (Winter) ice breaker available. The Finnish Ice Class Certificate, (required since 1984) can be obtained in Kaskinen.
PILOTAGE: Kaskinen Pilot boards 4–5 miles outside Pilot Station. Pilot boat or station can be called by VHF Channel 16 or 13. Tel: +358-62-2227296.
ANCHORAGES: Safe areas of anchorages, 3 miles W.S.W. of Salgrund, depths 10 m. – 20 m.
MAX. SIZE: Max. draft 8 m.
HEALTH: In case of sickness onboard, contact the Agent.
RADIO: Helsinki Radio.
RADAR/VHF: Radar service/VHF Channel 13 (Kaskinen Pilot).
TUGS: 1×1,015 kW. Tug available during Winter.
BERTHING:
Pier 250 m. length, 8.0 m. – 10.0 m. depth
Pier 35 m. length, 7.0 m. depth
Pier 160 m. length, 6.0 m. – 7.0 m. depth
CRANES: Mobile cranes with capacity 8 tons – 24 tons.
DENSITY: 1004.
STEVEDORES: Available; rates about 250 – 300 tons pulp per work gang.
MEDICAL: Hospital available.
FRESH WATER: Available at berths. Charge 15 Fmk. per ton.
FUEL: Available by tank truck.
CONSULS: None.
REPAIRS: Only small repairs.
GANGWAY/DECK WATCHMEN: Not necessary.
OPENING/CLOSING HATCHES: Normally carried out by crew.
CUSTOMS ALLOWANCES: Tobacco: 200 cigarettes. Wine/Spirit: 1 bottle spirit.
AIRPORT: Distance to Vasa Airport 100 km. Served by regular airlines.
TIME: GMT plus 2 hours.
HOLIDAYS: See "Oulu".
POLICE/AMBULANCE/FIRE: Police 10022; Ambulance and Fire 112.
TELEPHONE: Can be connected. Cost for connection is 60 Fmk.
SHORE LEAVE: Allowed.
GARBAGE DISPOSAL: Drums available alongside. Charges: 0.12 Fmk./nrt. Minimum charge 145 Fmk, maximum charge 350 Fmk.
WASTE OIL DISPOSAL: Collection can abe arranged by tanker trucks. Contact Kasko Shipbroker Oy. Tel: +358-62-2227651. Telex: 73138 Kasko Sf. Fax: +358-62-28064.
SEAMAN'S CLUBS: None.
CURRENCY: Finnish Mark.
GENERAL: Port is open throughout Winter.
AUTHORITY: Kasko Hamnkontor (Harbour Office), 64260 Kaskinen, Finland. *Tel:* +358-62-2227201. *FAX:* +358-62-2227235. *Contact:* Jukka Inkio, Harbour Master.

KEMI (Ajos): 65.40 N. 24.31 E. **(See Plan)**

LOCATION: Ajos harbour is a municipal port owned and managed by the city of Kemi. It is located at Ajos, about 10 km. (6 nautical miles) South of Kemi, Lat. 65° 40' N., Long. 24° 31' E. The area is shown on Finnish Charts Number 275 and Number 59.
DOCUMENTS: Documents to be handed over after berthing:
2 Crew Lists.
1 Provision List.
1 Special List (Customs).
Tonnage Certificate.
Cargo Documents.
APPROACHES: The distance from Kemi lighthouse to the harbour is about 21 nautical miles (39 km.). The minimum width of the channel is 100 m. (328 ft.), and approved depth up to the oil harbour is 10 m. (32.8 ft.).

The water level varies between +1.5 m. and −0.75 m. (+5 ft. and −2.5 ft.) depending on winds (water level rises during Southerly and falls rapidly during Northerly winds). There are no tides in the area.

During normal winters the harbour is frozen from the beginning of December to the end of May. Over this period the channel from the open sea to the harbour area is kept navigable by state-owned ice-breakers. The Finnish Board of Navigation determines the restrictions and requirements for vessels allowed to enter the harbour during this period. The port has been kept open throughout the year since 1971.
PILOTAGE: Pilot boards from "Kemi I" Lighthouse or "Kemi 2" Lighthouse. VHF and radio telephone watch maintained.
RESTRICTIONS: Ships can enter and leave Ajos harbour 24 hours a day.

MAX. SIZE: Sea to Fairway at Ajos. Max. draft 10 m. Sea to Fairway at Veitsiluoto. Max. draft 7.1 m. Also see "Berthing".
RADIO: *Entering the Harbour:* Time passing Kiel/Holtenau/Copenhagen is to be given via Harnosand Radio, Mariehamn Radio or Stockholm Radio.

ETA to be given 12 hours before the calculated time of arrival.

Notice is to be given to the Pilot Station, which is situated at the S.W.-end of Ajos Island via VHF Channels 16/13 two hours before ETA at the pilot embarking point, which is between Kemi lighthouse and lighthouse Nukkujanmatala depending on the weather.

The notice is to include the name, call sign and the nationality of the vessel, n.r.t., the draft and length of the vessel, time of arrival (at the Pilot's boarding site) and tugs needed for berthing.
TUGS: Icebreaker tugs of 3,500 h.p. and 1,300 h.p. Ship's lines used.
BERTHING:

Quays:	*Length* (m.)	*Depth* (m.)	*Permitted draft* (m.)
Oil Quay	90	11.4	10
No. 1	420	7.3-8.3	7.6-10.0
No. 2	315	9.3	8.6
No. 3	185	5.8	5.0
No. 4	168	5.8	5.0
2 Ro/Ro Berths	—	11.4 and 9.3	10.0 and 8.6

CRANES: Mobile cranes. 2×6 tons capacity; 2×55 tons capacity; 18×5 tons – 25 tons capacity.
FRESH WATER: Available at Quay Nos. 1 and 2.
FUEL: Available.
DENSITY: 1001.
AIRPORT: At Lautiosaari, Tel: 53519.
TIME: GMT plus 2 hours.
TELEPHONES: Lines on the quays at Berths No. 1 and 2 and the Ro/Ro Berth.
POLICE/AMBULANCE/FIRE: Police Tel: 112. First Aid Tel: 112.
GARBAGE DISPOSAL: Garbage disposal fee is collected from every ship, FIM 0.15/net reg.ton. Minimum fee FIM 180.0, maximum fee FIM 460.0/vessel.
WASTE OIL DISPOSAL: Waste oil disposal by tanker trucks. 6 hours advance notification to the ship's agent is required. Disposal costs are charged to the ship in accordance with current agreement.
Notice to Masters: Instructions concerning waste disposal.

Kemi Harbour Master informs you hereby that in Kemi harbours, the Rules and Regulations concerning the protection of the marine environment of the Baltic Sea Area as stated in the Helsinki Convention have to be followed by all vessels.

On the strength of this convention, no wastes shall be discharged into the water while the ship is in the port area. Violation of these rules cannot be accepted. The port staff will check that the instructions are followed without exception.

While your vessel is in the port a necessary amount of bags for your waste disposal will be delivered to the vessel. Your waste is to be stowed to these bags, and before departure, be moved by your crew to waste container on the quay in vessel's vicinity.

In case you want to get rid of oily residues, you are to inform Harbour staff directly or through your agent of your intention. Kemi City and Ekokem Oy have an agreement about taking care of oily residues. The costs hereby will be charged to the vessel in accordance with current agreement. The same applies to cargo or repair residues which need special treatment, i.e. oil drums, chemical wastes, etc.

All questions concerning waste disposal service will be answered by Kemi Harbour Office, Ajos. Tel: 282017.
SEAMAN'S CLUBS: Kemi Seaman's Mission. Tel: 9698-282074. Facilities: Canteen, souvenirs, telephone (international and local), T.V., radio, magazines, newspapers. Hours: Monday – Friday, 1800 – 2200.

Finnish Seaman's Service, Ajos Harbour. Tel: 282180. Hours: 0800 – 1500. Services: Sight-seeing tours, football, volleyball, swimming, transport for shopping tour.
CURRENCY: Finnish Mark.
AUTHORITY: Port of Kemi Authority, Ajoksentie, FIN-94900 Kemi, Finland. *Tel:* 358-698-282017. *FAX:* 358-698-282003. *Contact:* Captain Markku Toivonen, Harbour Master (Tel. 358-698-282017).

KOKKOLA (Yxpila): 63.50 N. 23.08 E. **(See Plan)**

DOCUMENTS:
2 Crew Lists.
2 Customs Lists.
2 Passenger Lists.
Manifest, Bill of Lading.
PILOTAGE: Pilot boards 2 miles North of Tankar Pilot Station. Pilot on VHF Channel 16. Distance to port 12 miles.

The vessel's ETA must be given at least 6 hours in advance of arrival to Pilot Station.
ANCHORAGES: 1 mile North of the breakwater.
RESTRICTIONS: *Winter Navigation:* The port is open throughout the year. Ice class restrictions apply in Winter.
MAX. SIZE: No restrictions except draft 11.0 m. Also see "Developments".
VHF: Vaasa Radio VHF Channel 28. Kokkola Harbour Office Channel 16.
TUGS: 2 tugs available, 2,460 h.p. and 1,500 h.p. Normally ship's lines used.
BERTHING:

	Length	*Max. draft*
Deep Quay	400 m.	11.0 m.
Shore Quay (South side)	323 m.	9.5 m.
Shore Quay (North side)	100 m.	7.1 m.
Stone Pier	137 m.	7.1 m.
Outokumpu Quay	390 m.	9.5 m.
Kemira Quay	160 m.	9.5 m.
Packhouse Quay	126 m.	4.0 m.
Oil Quay	83 m.	9.5 m.
Ro-Ro Quay	85 m.	6.0 m.

CRANES: 2×8 ton cranes at Shore Quay. 2×40 ton cranes and 1×10 ton crane at Outokumpu Deep Quay. 1×8 ton crane at Kemira Quay. Mobile cranes up to 45 tons available privately.
BULK CARGO FACILITIES: Discharging belt for zinc concentrate at Outokumpu Quay. Loading and discharging facilities for fertilisers at Shore and Kemira Quays. Loading conveyor from railway to storage or quayside. Loading rate 1,000 t.p.h. Pneumatic unloader for bulk cargoes at Shore Quay.
SPECIAL CARGO-HANDLING FACILITIES: Discharging lines for phosphorus, nitric acid and ammoniak at Kemira Quay.

Discharging lines for oil at Outokumpu and Oil Quay.
STEVEDORES: Normally working Monday-Friday 0700 hrs. – 2400 hrs. On Saturday 0700 hrs. – 1600 hrs.
MEDICAL: 6 km. to hospital in Kokkola.
TANKERS: Discharging lines for oil at Outokumpu and Oil Quay.
DENSITY: 1002.
FRESH WATER: Available at berths.
FUEL: Available.
CONSULS (Vice-Consuls): Sweden Tel: 358-6-8311-442; Norway Tel: 358-6-8313-791; Denmark Tel: 358-6-8311-048.
REPAIRS: Small deck and engine repairs can be carried out.
SURVEYORS: Cargo inspectors and draft surveyor available.
GANGWAY/DECK WATCHMEN: Usually ship's crew. Ship's gangway used.
OPENING/CLOSING HATCHES: Usually ship's crew.
CUSTOMS ALLOWANCES: Tobacco: Each man 200 cigarettes per week. Spirits: Each man a bottle per week.
AIRPORT: Kokkola Airport 19 km.
REPATRIATION: Crew changes and repatriation can be carried out.
TIME: GMT plus 2 hours. GMT plus 3 hours late March to late September.
HOLIDAYS: Official holidays of Finland.
POLICE/AMBULANCE/FIRE: Police Tel: 112, Ambulance Tel: 112, Fire Tel. 112.
SHORE LEAVE: No restrictions.
CREW IDENTIFICATION CARDS: Not required.
GARBAGE DISPOSAL: Drums for garbage are available alongside. The charges are included in the harbour dues.
WASTE OIL DISPOSAL: A waste oil service is available by the company Sailio-Puts, Raukko & Wiitala. Wasa. Tel: 358-6-3440210. The waste oil will be loaded into the tanker trucks.
SEAMAN'S CLUBS: Finnish Seaman's Mission, Satamakatu. Tel: 358-6-8226-219.
CURRENCY: Finnish Mark. No restrictions placed upon seafarers.
DEVELOPMENTS: The fairway and harbour will be dredged from maximum allowed draft of 11.0 m. to 13.0 m. during 1997.

The Deep Quay will be lengthened by 200 m. during 1996.
AUTHORITY: Kokkola Harbour Office, Satamakatu 53, SF-67900 Kokkola, Finland. *Tel:* 358-6-8226-295. *FAX:* 358-6-8221-438. *Contact:* Eero Maki, Harbour Director. Hans Biskop, Harbour Master.

KOTKA: 60.28 N. 26.57 E. **(See Plan)**

DOCUMENTS:
Crew List.
Passenger List.
1 copy of Cargo Manifest.
1 copy of every Bill of Lading.
Ship's Register.
Ice Certificate.
Customs Manifest for Stores, for ship and individual.
PILOTAGE: On arrival off Orrengrund, contact Orrengrund Pilot by VHF. On arrival off Kotka, contact Harbour Pilot Kotka, VHF Channel 11. Depth in approaches 15.3 m.
ANCHORAGES: Havouri Roads, Kukouri Roads and at the entry to the harbour. Max. draft 15.3 m.
MAX. SIZE: Max. draft 15.3 m.
HEALTH: In case of sickness on board, contact the Agents before entering the port.
BERTHING:

Quay	*Permitted Draft* (ft.)	*Length* (m.)
Hietanen Terminal	26-33	740
Central Port	16-33	1,600
Bulk Quay (Poland Quay)	27.5 (air draft 37 m.)	360
Sunila Quay	22-26	400
Deep Water Terminal	50	460
Inner Roads	12-24	
Outer Roads	25-29	
Halla Quay	14-23	250
Oil Harbour	29-33	
Power Plant (Mussalo) Coal Quay	26	200
Oil Quay	33	

RADIO: Kotka Radio call sign OHF.
VHF: See "Pilotage".
TUGS: Tugs normally join the vessel in the harbour entrance. Ship's lines are to be used. 3 tugs available, 4,000 h.p., 1,650 h.p., and 630 h.p.
CRANES: 26 shore cranes with capacity of 3-60 tons.
SPECIALISED CARGO-HANDLING FACILITIES: Hietanen Terminal, consisting of 4 Ro/Ro berths and 3 conventional berths and is equipped with 3 container cranes (1×37 tonnes, 1×50 tonnes and 1×40 tonnes).
Deep Water Terminal: The Main Quay of the Deep Water Terminal is for loading, unloading and intermediate storing of dry bulk goods, but the occasional handling of other goods is also possible.

The depth of the 590 m. long quay is 15.3 m. at the outer end for 415 m., and 13.5 m. at the inner end.

The quay has 1×8 tonne crane and 2×20/40 tonnes cranes, one of which has automatic container spreaders for 20 ft. and 40 ft. containers. The storage area extends over an area of 12 hectares, 2.5 hectares of which is used for short-term storing beside the quay.
MEDICAL: Master to advise by Radio Kotka on arrival if medical attendance required aboard.
TANKERS: *Deep Water Terminal:* Quay No. 1 – depth 13.5 m. Quay No. 2 – depth 10.0 m. The quays are equipped with hydraulic hose cranes.

There are 3 chemical terminals in the area, owned by Sonmarin Oy, Transkem Oy and Neftefinn Oy. These have a total of 46 tanks for various products. The total volume of the tanks is 160,000 cu.m.
Oil Harbour: South Quay – depth 10.0 m. North Quay – depth 9.0 m. Two companies, Transkem Oy and Sonmarin Oy, have their terminals in Oil Harbour, which serve mainly transit traffic. The total volume of the tanks in the area is approximately 400,000 cu.m. The Oil Harbour has a plant, owned by the Port Authority of Kotka, for receiving ballast water containing oil. The receiving pipe of the plant is at the Southern Quay. Also see "Notice".
DENSITY: 1003.
FRESH WATER: All berths are equipped with water pipelines, but in Sunila port only supplied by tugs.
FUEL: All grades of fuel available.
CONSULS:

Belgium	Tel. 195920	Iceland	Tel. 604447
Denmark	Tel. 2283300	Netherlands	Tel. 74951
Germany	Tel. 190111	Norway	Tel. 2295270
Great Britain	Tel. 2274281	Sweden	Tel. 190111

REPAIRS: All types of repairs can be carried out.
DRY DOCKS: Kotkan Telakka Oy: 3 floating docks. Docking dimensions for vessels:
Length 165 m., beam 28 m., draft 7.8 m./12,000 tons.
Length 127.2 m., beam 20.1 m., draft 6.8 m./5,000 tons.
Length 96 m., beam 16.5 m., draft 4.5 m./2,500 tons.
GANGWAY/DECK WATCHMEN: Not necessary.
OPENING/CLOSING HATCHES: Normally by the crew.
SHIP CERTIFICATES: List of Certificates to be on board:
Passenger Ship Safety Certificate.
Cargo Ship Safety Construction Certificate.
Cargo Ship Safety Equipment Certificate.
Cargo Ship Safety Radio-telephony Certificate.
Cargo Ship Safety Radio-telegraphy Certificate.
Exemption Certificate.
Nuclear Passenger Ship Safety Certificate.
Nuclear Cargo Ship Safety Certificate.
Derat Certificate.
CUSTOMS ALLOWANCES: For passengers: Tobacco: 200 cigarettes or 0.2 lb. of other manufactured tobacco. Wine and Spirits: 1 litre.
REPATRIATION: Facilities exist.
AIRPORT: Nearest Helsinki-Vantaa, 140 km.
TIME: GMT plus 2 hours. GMT plus 3 hours in Summer.
HOLIDAYS: New Year's Day (Jan. 1st); Epiphany (Jan. 6th); Movable Holidays; Easter Holiday, 4 days (Sunday included); Ascension Day, 1 day; Whitsunday, 2 days (Sunday included); Midsummer Day, 3 days (Sunday included); All Saints' Day, 1 day (first Saturday of Nov.); Christmas Holidays (Dec. 24th-26th). Other free days: May 1st; Dec. 6th (Independence Day). Cargo work can be done on all above holidays.
POLICE/AMBULANCE/FIRE: Police 10022; Ambulance 112; Fire 112.
TELEPHONES: On some berths telephones placed on board.
SERVICES: Compass adjusting service available.
SHORE LEAVE: No restrictions.
IDENTIFICATION CARDS: Not required.
GARBAGE DISPOSAL: There are orange coloured garbage containers on the quays which can be used by paying a special Garbage Disposal Fee. More information is available from ship's agent.
WASTE OIL DISPOSAL: Bilge water collection is handled by Ekokem Oy, orders through the ship's agent. Oily ballast water is received in Oil Port. See "Tankers".
SEAMAN'S CLUBS: Seamen's Club, Kirkkokatu 18A, 48100 Kotka. Tel: 358-52-213093. Hours: 0800 – 2400. Facilities: Sauna, swimming pool, poolroom, table tennis, gym, T.V. room, snacks, magazines, newspapers.
CURRENCY: Local currency is Finnish Mark FIM. Money exchange possible in all banks.
DEVELOPMENTS: The second phase in the construction of infrastructure for the Deep Water Terminal will be carried out during 1996-1999. Like the first phase, this new extension will primarily serve transit traffic.

The second phase in the construction of the Kotka Deep Water Terminal will be carried out as dry work. This solution is mainly affected by the location of the site, general arrangements and the terrain.

The extension will mean the construction of a new basin with a total of 1,000 m. of quay with a depth of 13.5 m. The quay can later be extended by another 400 m. The ground work for these will be done during the dry work period, but the actual quay construction will be built as required by the increase in traffic. The present area of this port area is 62 hectares, and the extension of the second phase is approximately 40 hectares. The reserved areas allow an expansion of another 50 hectares later. The quay construction will comprise an edge wall fixed to the bedrock, and a support wall in deeper locations.

It is estimated that the work will take 3 years.

Also see "Plan".
NOTICE: Port Authority Notice to Masters.
Instructions Concerning Waste Disposal:

The Port Authority of Kotka informs you hereby that in the Port of Kotka the rules and regulations concerning the protection of the marine environment of the Baltic Sea Area as stated in the Helsinki Convention have to be followed by all ships.

On the strength of this convention no waste shall be discharged into the water while the ship is in the port area. Breaking of these rules cannot be accepted. The Port Authority will check that the instructions are observed without exception.

While your ship is in the port an amount of sacks for waste disposal will be delivered to the ship. The waste emanating from your ship shall be put into these sacks and before the departure of your ship the sacks shall be delivered *by your crew* to the waste container in the vicinity of the berth of your ship.

In case you want to get rid of oily residues please inform the Harbour Master either through your Agent or directly. For the reception of these wastes the Port Authority does not charge you separately as the cost of this service is included in the general waste disposal fee.

In case your ship is a tanker loading oil products and you wish to dispose of oily water such as tank washing water or ballast water it has to be agreed separately with the Port Authority.

All questions in connection with the waste disposal service will be answered by the Harbour Master (Tel: 2274283).

Signed: Port Director.
GENERAL: It is prohibited to let or throw any substance or refuse causing pollution or shoaling in the harbour area.
AUTHORITY: Port Authority of Kotka, Laivurinkatu 7, FIN-48100 Kotka 10, Finland. *Tel:* 358-52-2274280. *Telex:* 53144 Portk Sf. *FAX:* 358-52-181375. *Cables:* Port Authority of Kotka. *Contact:* Lassi Arminen, Port Director.

KOVERHAR: 59.52 N. 23.13 E.

DOCUMENTS:
Ship's Register.
Crew List.
Manifests.
Bills of Lading.
Provisions List.
Health Certificate.
PILOTAGE: Compulsory. There are 2 approaches: (1) Via Ajax, max. draft in fairway 33 ft. Pilot arrives from Pilot Station at Hanko. Distance to port 11 miles.

(2) Via Hanko, max. draft in fairway is 28 ft. Pilot arrives from Pilot Station at Hanko, Tulludden (Tel. Hanko 82246, radio-telephone, VHF). Station has radar. Distance to port 23 miles.
MAX. SIZE: Max. draft alongside quay 30 ft. Max. LOA 200 m. Max. breadth 30 m. No tide.
RADIO: Cable Agents giving ETA via Hanko and Helsinki Radio.
TUGS: Available, 1,800 h.p. – 3,000 h.p.
BERTHING: Length 250 m., depth 30 ft. Quay 6 ft. above sea level.
New berth, length 120 m., depth 30 ft. Quay 6 ft. above sea level.
CRANES: Two of 13 tons and one of 12.5 tons capacity.
STEVEDORES: Ordered by Agent.
FRESH WATER: Available rate 20 cu.m./hr.
REPAIRS: Small repairs possible.
OPENING/CLOSING HATCHES: By crew.
CUSTOMS ALLOWANCES: 200 cigarettes and 1 bottle of spirits per man.
TIME: GMT plus 2 hours. GMT plus 3 hours in Summer.
POLICE/AMBULANCE/FIRE: Police 002; Ambulance 000; Fire 000.
IDENTIFICATION CARDS: Not required.
AUTHORITY: Dalsbruk Oy AB., Koverhar, SF-10820 Lappvik. *Tel:* 911-43100. *Telex:* 13152 Kovsh Sf. *Cables:* Koverhar Ekenas. *FAX:* 911-43121. *Contact:* Rainer Sandberg, Harbour Master.

KRISTINESTAD: 62.16 N. 21.23 E.

DOCUMENTS:
Ship's Measurement Certificate.
2 Crew Lists.
Cargo Manifest.
Copy Bill of Lading.
2 Provision Lists and Tobacco Lists for Customs.
Ice Certificate.
PILOTAGE: Pilot boards at Hojerstein Light Buoy. At least 2 hours ETA required. Pilot boat has red painted hull, white marking "L" on bow, and deck house yellow. Pilot station situated South of Kasko (see Kasko Pilot), International pilot call signals to be used, also radio telephone 2182 and VHF Channel 16.
ANCHORAGES: Good safe holding ground off Adgrund. Depth 10 m.

MAX. SIZE: For general cargo and timber, 20 ft. draft in old port. For tankers, 33 ft. in the oil port. Depth at new coal harbour 40 ft. (12.0 m.).

See also "Tankers".

RADIO: Messages through coastal stations. Also Kristinestad VHF Channel 24. Also see "Pilotage".

TUGS: 1 tug available 240 h.p. Additional powerful tugs available with sufficient notice.

BERTHING: No special requirements. Pilot gives orders for berthing.

Inner Wooden Quay. Length 75 m., depth alongside 15 ft.

Outer Stone Quay. Length 250 m., depth alongside 20 ft.

There are 3 mobile cranes of 10 tons capacity.

SPECIALISED CARGO HANDLING FACILITIES: Bulk cargoes can be discharged at quay, 4 portable cranes available. There is 1 ramp for Ro/Ro ships in oil harbour at Bjorno.

New coal harbour at Bjorno Power Station, depth alongside 12 m. Berth is equipped with 1 conveyor for handling self-discharging vessels.

STEVEDORES: Advise ETA and gangs required as stipulated in charter-party. Also when laytime will commence to count. Only timber cargoes loaded.

Normal working hours 0700 – 1600 hrs. all weekdays.

DENSITY: 1004.

MEDICAL: Hospital facilities available.

TANKERS: Oil harbour at Pohjolan Voima Oy, power station at Bjorno. Depth 33 ft. (10 m.) alongside the oil pier. One berth for tankers. Discharge capacity with 2×10 in. pipelines 2,500 t.p.h. Fresh water supply to tankers available from shore installation rate 30 t.p.h.

FRESH WATER: Fresh water supply by shore installation. Any amount available.

FUEL: Fuel available by tank cars of about 20 tons capacity at short notice.

CONSULS: Danish, Tel: 962-12350.

REPAIRS: No shipyards, but welding pipeline electric repairs possible.

SURVEYORS: Surveyors and Cargo Inspectors available.

GANGWAY/DECK WATCHMEN: Not compulsory at Timber Pier. Compulsory in oil harbour, according to rules of Board of Navigation.

OPENING/CLOSING HATCHES: Normally carried out by crew, but on request may be handled by stevedores.

CUSTOMS ALLOWANCES: 200 cigarettes per 6 days, per man. Wine/Spirit allowance: 1 bottle per man.

CARGO GEAR: BOT Certificates. No additional requirements.

AIRPORT: Nearest airports in Vaasa and Pori within 100 km., several flights per day.

TIME: Local time GMT plus 2 hours. GMT plus 3 hours in Summer.

HOLIDAYS: See "Oulu".

POLICE/AMBULANCE/FIRE: Police Station of Kristinestad 12055 or 002; Ambulance 11626; Fire Brigade 005.

EMERGENCY CO-ORDINATION CENTRE: Kummalgrund Coast Guard Station: Tel: 962-29142 (Kristinestad) or VHF Channel 16.

TELEPHONE: Public telephones on the pier.

STORING: Vessels may be stored by truck which may proceed alongside. No special Customs regulations in force. Riggers and fork lift trucks available.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Not required.

GARBAGE DISPOSAL: Containers provided on quay. Contact agent for information.

WASTE OIL DISPOSAL: Ekokem Oy. Tel: 914-7151. Telex: 15305. Fax: 914-715300.

SEAMAN'S CLUBS: Available. Facilities: Shop, international telephone service, church services, football matches and postal facilities.

CURRENCY: Finnish Mark (FIM).

GENERAL: Timber pier in Port of Kristinestad closed from the end of December to the middle of April owing to ice. Oil port will be kept open according to the general ice situation of Gulf of Bothnia.

AUTHORITY: Kristinestad Harbour Office, 64100 Kristinestad, Finland. *Tel:* 962-2216291. *FAX:* 962-2212275. *Contact:* Sakari Laipio, Harbour Master.

LOVISA (Valkom): 60.25 N. 26.16 E. (See Plan)

APPROACHES: Depth in fairway (Orrengrund – Valko) – 8.5 m.

PILOTAGE: Pilot arrives from Pilot Station at Orrengrund (Tel. 358-52-213081, radio telephone). Station equipped with radar. Distance to port 12 miles.

TUGS: 1 tug available, 1,250 h.p., between December and April.

BERTHING: *Coal Quay:* Length 141 m., depth 8.5 m.

Middle Quay: Length 280 m., depth 7.30 m.

Connection Quay: Length 115 m., depth 7.30 m.

Roll-on/Roll-off Berth: Length 20 m., depth 7.30 m.

South Pier (East Side): Length 130 m., depth 8.50 m.

Inner Harbour: Length 80 m., depth 4.20 m.

CRANES: 6 mobile cranes, lifting capacity 6 – 36 tons. 2 shore cranes, lifting capacity 6 tons. 1 shore crane lifting capacity 6 – 28.5 tons.

DENSITY: 1003.

GARBAGE DISPOSAL: Garbage may be left any time in skips provided alongside. Charges: 0.16 FMK/NRT. Minimum charge 160 FMK/vessel, maximum charge 400 FMK/vessel.

WASTE OIL DISPOSAL: Collection service available. Contact: Ekokem Oy AB. Tel: 914-7151. Telex: 15305 SUOJE SF. Fax: 358-14-715300.

SEAMAN'S CLUBS: None.

CURRENCY: Finnish Mark.

AUTHORITY: Lovisa Port, 07910 Valkom, Finland. *Tel:* 358-15-515163. *FAX:* 358-15-515055. *Contact:* Harbour Master.

MARIEHAMN: 60.06 N. 19.56 E. (See Plan)

PORT LIMITS: The Southern boundary of the port is on a line between Lat. 60° 03.5' N., Long. 19° 56.1' E. and Lat. 60° 04.2' N., Long. 19° 55' E.

DOCUMENTS:

1 Crew List.

1 Passenger List.

3 Provision Lists.

2 Special Lists (in possession each crew member – cigarettes, tobacco, spirit, radios, etc.).

2 Bills of Lading.

Registered Tonnage Certificate.

PILOTAGE: Pilot arrives from station at Hamngatan 4, in Westerhamn harbour, and meets entering vessels about 2 nautical miles S.W. of Marhallan lighthouse. 24 hours and 6 hours notice of ETA is required. Pilot station and cutter are fitted with VHF radio and keep watch on Channel 16, 24 hours a day. Working Channel is 13. Pilot can also be ordered by cable via Mariehamn Radio.

ANCHORAGES: Good anchorages North of Grano Island in 10 m. to 20 m. water.

MAX. SIZE: Ships of 220 m. length and 8.2 m. draft can enter the port, but require twin screw and bow thruster for safe manoeuvring.

RADIO: Mariehamn Radio, call sign OHM on telegraphy and OFH for telephony. Connected to the public telegraph and telephone service.

VHF: Following stations keep watch on VHF Channel 16: Mariehamn Radio (working 7 and 25), Mariehamns Pilot, Mariehamns Hamn (Harbour Office – working 12), Sjobevakningen Mariehamn (working 10). (The Coast Guard at Mariehamn.)

TUGS: 1 tug of 320 h.p. available. The m/s *Gustaf Erikson* belongs to the Alands Lifeboat Society. Usually ships' lines are used.

BERTHING: *Quays for Passenger Vessels:*

Berth No.	*Length* (m.)	*Depth* (m.)	*Remarks*
1	100	7.6	
2	150	7.6	
3	190	7.7	Ro/Ro
4	120	7.8	Ro/Ro
5	140	7.7	Ro/Ro

Power Station Pier: Depth 5.0 m.

CRANES: 7 mobile cranes can be rented. Maximum lift, 2 cranes of 25 tons and 5 of 16 tons on the shortest radius.

SPECIALISED CARGO-HANDLING FACILITIES: 3 berths for Roll-on/Roll-off traffic, used by car ferries.

STEVEDORES: Ordered by Agents. ETA in good time to obtain gangs.

DENSITY: 1005.

TANKERS: Max. LOA 100 m. Depth alongside 6.0 m.

MEDICAL: All services available.

FRESH WATER: Most berths supplied by shore installations about 15 t.p.h., otherwise by truck.

FUEL: Only diesel oil, no heavy products.

CONSULS: Denmark 11 454, Netherlands 12 070, Iceland 21 849, Norway 12 050, Sweden 11 624, Russia 11 524, Germany 16 270. France 13 931

REPAIRS: Most repairs possible.

DRY DOCKS: Slipway for small vessels, max. about 300 d.w.t.-400 d.w.t.

SURVEYORS: No permanent surveyors at Mariehamn.

GANGWAY/DECK WATCHMEN: Available but not necessary.

OPENING/CLOSING HATCHES: Normally done by crew.

CERTIFICATES: International Tonnage Certificate or National Tonnage Certificate.

CUSTOMS ALLOWANCES: 200 cigarettes and limited amount spirits for each crew member.

REPATRIATION: Mariehamn is a good place for repatriation, with many connections to Sweden and to the Finnish mainland every day, with car-ferries and aeroplanes. About 1 million tourists visit Aland Island every year.

AIRPORT: About 5 km. from town, daily traffic to Stockholm and Abo/Turku.

TIME: GMT plus 2 hours. Summertime GMT plus 3 hours.

HOLIDAYS: See "Oulu".

POLICE/AMBULANCE/FIRE: Police 112 or 15 444; Ambulance and Fire 112.

TELEPHONES: Available at berths for passenger ships.

IDENTIFICATION CARDS: Not needed for Scandinavian citizens. Passports for all others.

AUTHORITY: Port of Mariehamn, Harbour Office, Box 5, 22101 Mariehamn, Finland. *Tel:* (9) 28-531470. *FAX:* (9) 28-531479. *Contact:* Jan Sundstrom, Port Director (After hours Tel: (9) 28-13626).

NAANTALI: 60.28 N. 22.01 E. (See Plan)

DOCUMENTS:

Health Certificate.

Crew List.

Passenger List.

Dangerous Cargo List.

Ship's Register.

PILOTAGE: Pilot compulsory at Uto Pilot Station. When approaching Uto communicate via VHF Channel 16 – ETA, name of vessel, destination, draft. Harbour Pilots available at the port. Distance Uto-Lohm – Naantali, 53 miles, depth 10.0 m. Uto-Houtskar-Naantali, 62 miles, depth 13.0 m.

ANCHORAGES: Good safe anchorage in harbour area. Max. draft for vessels 10 m. Anchorage for vessels with draft 13.0 m. at Airisto.

HEALTH: International Quarantine flag required in case of suspected disease or fever including preliminary report by VHF, otherwise ask Agent.
RADIO: Helsinki Radio.
VHF: Communication on Channel 16, own working Channel 11.
Radio Stations: Turku – Channel 2; Mariehamn – Channels 23 and 26; Uto – Channel 24 and Hanko – Channels 3, 25 and 26.
RADAR: When Radar Service needed, contact Agent.
TUGS: Harbour icebreaker tug available. Use ship's lines. Additional tugs on application from Turku.
BERTHING: No special requirements. Harbour/Drafts: No tide. Main quay, length 370 m., draft 13 m. Timber quay, length 110 m., draft 8.0 m. 2 car-ferry piers, length 85 m./172 m., drafts 8.4 m./6.9 m. Lubricating Oil pier/Car Ferry pier, length 90 m., draft 6.0 m. Sugar quay, length 32 m., draft 4.5 m.
CRANES: 2 cranes owned by electric powerplant of 6 tons each.
BULK CARGO FACILITIES: Grain handled by two pneumatic elevators and belt conveyor, Loading/Discharging 500 t.p.h., maximum reach for outlet/inlet 15 m. and 18.7 m., maximum height above quay level 9.0 m. and 16.0 m. when loading, discharging limits are 11.6 m. and 18.6 m., 200 m. of main quay intended to be for handling of grain, 170 m. for coal, which is handled by 2 cranes of 6 tons each and belt conveyor, discharging rate about 2,000 t.p.h.
SPECIALISED CARGO-HANDLING FACILITIES: Ro/Ro traffic possibility.
STEVEDORES: Available, ordered by Agent.
MEDICAL: Advise by radio prior arrival if medical attendance required aboard.
TANKERS: Oil Harbour, Neste Oy. Discharge lines ashore 10 in., 12 in., 18 in., Diameter of cargo hoses and respective depth of tanker berths:
Berth No. 1, 6 in., 5.7 m.
Berth No. 2, 10 in., 10.0 m.
Berth No. 3, 8 in., 10 in., 12 in., 13.0 m.
DENSITY: 1007.
FRESH WATER: Supplied by shore installations at most berths.
FUEL: All grades available.
FIRE PRECAUTIONS: Usual precautions.
CONSULS: In Turku 17 km. away.

Austria	Tel: 603111	Iceland	Tel: 3433370
Belgium	Tel: 393666	Italy	Tel: 2515000
France	Tel: 860400	Netherlands	Tel: 2512200
Germany	Tel: 642215	Russia	Tel: 2336441
Greece	Tel: 394940	Sweden	Tel: 2331310
Honduras	Tel: 2337181	U.K.	Tel: 2501440

REPAIRS: Small repairs can be carried out, ask Agent.
DRY DOCKS: None, see Turku. Naantali shipyard owned by Turun Korjaustelakka Oy, Tel: (21) 638711, main dimension of dry dock 220 m. × 70 m., outfitting dock 180 m. × 125 m., sill depth 8.2 m.
SURVEYORS: Contact Agent.
GANGWAY/DECK WATCHMEN: Available. Tankers compulsory.
OPENING/CLOSING HATCHES: Normally carried out by crew.
CUSTOMS ALLOWANCES: 200 cigarettes/200 gm. tobacco and 1 bottle spirits/wine.
REPATRIATION: Good connections.
AIRPORT: 20 km. distant. Regular service.
TIME: GMT plus 2 hours. GMT plus 3 hours in Summer.
HOLIDAYS: New Year's Day, Epiphany, Good Friday, Easter Monday, Labour Day, Whit Monday, Midsummer, All Saints' Day, Independence Day, (6th December), Christmas.
POLICE/AMBULANCE/FIRE: General alarm 112.
TELEPHONES: A telephone connection available at Main Quay and Quay No. 22.
SHORE LEAVE: No restrictions for crew members.
IDENTIFICATION CARDS: Not required.
GARBAGE DISPOSAL/WASTE OIL DISPOSAL: *Regulations concerning Wastes from Vessels in the Port of Naantali:* The handling of vessel's waste is subject to such regulations as those embodied in the Convention on the Protection of the Marine Environment of the Baltic Sea Area 12/1980:
Regulations applying to the Treatment of Special Wastes:
Special wastes are raw mammal and bird, poultry, meat, raw offal, meat packaging materials and wrappings, and bones, brought by vessels arriving from a foreign port. Frozen raw meat is also included in this category.
In the case of an epidemic, a kind of waste not specifically mentioned above may be included under this heading.
Upon arrival at the port, vessels will be supplied with numbered special waste sacks (yellow), intended for the reception of all the special wastes carried by each vessel.
However, care must be taken to ensure that normal dry waste is not put into special waste sacks.
A vessel shall take the filled, sealed only to one of the special waste storage bins (yellow), bearing the same text as that appearing on the sacks.
Infringement of Regulations:
Should a vessel violate these regulations by, for example, leaving special wastes in storage bins intended fro dry wastes, the entire contents of the affected bin are required to be taken to the waste incineration plant for treatment, in which case the vessel/shippers shall bear the cost of the municipal health authority's order and the expenses entailed by this.
At 1991 rates, the incineration of one ton of waste cost FIM 6,000.
Regulations applying to Dry Wastes/Refuse:
Dry waste/refuse is taken to mean domestic type kitchen waste, excluding bottles, rubbish from packaging, cargo waste, etc.
Instruction for Treatment of Wastes:
Refuse sacks must not be jettisoned into the sea, but when full, should be taken to one of the special bins provided for the purpose on the quayside.
Additional refuse sacks may be obtained during normal office hours from the Port Traffic Department, Tel: 4351662.
Refuse, which cannot be transferred to sacks, should be disposed of in one of the bins provided for the reception of refuse sacks.
Regulations applying to Oil-Containing Mixtures:
An oil-containing mixture is, for instance, oily bilge waters and waste oil.
The emptying of oil-containing mixtures from vessels can be handled by a company which has a transport agreement with the Port Authority.
The Master or Agent of a vessel shall contact the Port Traffic Department, or the company having a transportation agreement with the Port Authority, at the latest 24 hours before such a facility is required.
Emptying is carried out during normal working hours.
The vessel/shipping company is responsible for the costs of receiving oil-containing mixtures.
Regulations applying to Sewage:
The Master or Agent of a vessel requiring a sewage removal service shall arrange for this service either through the Port Authority or by contacting the company carrying out such work.
Emptying will be carried out during normal working hours.
Wastes which are not handled by the Port of Naantali Wastes Facility:
Chemical wastes.
Tanker ballast waters and tank cleaning waters.
Wastes having IMO classification.
General Regulations:
A wastes handling fee will be levied in accordance with the current rates of all vessels making use of the Port Authority's wastes facility.
Those vessels which have made an agreement with the Port Authority respecting the waiving of the wastes facility fee are responsible for handling all their wastes themselves. This type of vessel may not forward or deliver any kind of waste to the port wastes facility.
Vessel wastes must be left in the bins provided for the purpose and nowhere else in the port. Bins intended for the reception of vessel wastes are indicated by a special sign.
The port wastes facility does not apply to vessels lying in the roads.
Further informations can be obtained from the Port Traffic Department, Tel: 751662.
SEAMAN'S CLUBS: None.
CURRENCY: Finnish Mark (FMK.). U.S.$ 1.00 = FMK.4.6438 (1.7.96).
REGULATIONS: Oil pollution strictly prohibited. Dumping of waste, refuse, etc., also prohibited.
DELAYS: Usually no delays.
AUTHORITY: Naantalin Satamalaitos, Satamatie 13, 21100 Naantali, Finland. *Tel:* (21) 4345111. *FAX:* (21) 4351727. *Contact:* Kari Rahsa, Port Director (Tel: 4345377).

OULU: 65.00 N. 25.25 E. (See Plan)

PORT LIMITS: The seaward boundary of the port is drawn West of Oulu Roads. The arriving vessel passing the line Hermanni Island – Kyrokari Ice Buoy is inside the boundaries and if necessary to anchor on the roads, is considered to be an "arrived vessel".
Port consists of four separate parts: Toppila, Nuottasaari, Oritkari and Vihreasaari harbours.
DOCUMENTS:
2 Crew Lists.
2 Passenger Lists.
Customs Documents.
2 Crew Bond Declarations.
2 Ship's Bond-store Lists.
Derat Certificate.
4 Manifests.
2 Bills of Lading.
Ship's Register, Certificate of tonnage.
PILOTAGE: Vessel requiring Pilot applies from Marjaniemi. Pilot station, Lat. 65° 02' 4" N., Long. 24° 34' E., near West point of Hailuoto Island. Pilots require 12 hours' notice of ETA to Peltinmatala lightbuoy (Pilots) or to alternative position 3 miles North of Kelmi lightbuoy. Pilot boat red coloured displaying usual international pilot signs. Pilot station equipped with MF (2182) and VHF, listening on Channels 16 and 13, radar and RC. Morse signalling by light. No specific requirements on part of Pilots boarding, only safe pilot ladder according to rules. Anchorage near lightbuoy Peltinmatala, when awaiting for Pilot in fine weather; in bad weather advisable to ride against weather and wind. Pilot for Oulu can also be obtained near the "Kemi 1" light-tower. Vessels with a draft more than 8.0 m. can use both fairways, depth 10.0 m. Pilot either from Marjaniemi or "Kemi 1" Pilot Station, VHF Channels 16 and 13.
ANCHORAGES: Safe anchorage on Oulu roads. There are no safe anchorages West of Hailuoto Island.
RESTRICTIONS: Day and night service, no tides. Winter season, contact ice-breaker 24 hours in advance on MF (2182), or VHF Channels 16 and 6.
MAX. SIZE: *Marjaniemi Fairway:* 10.0 m.
Kemi Fairway: 10.0 m.
Toppila Harbour: Toppila Quay depth 6.1 m., Hietasaari Quay, depth 6.1 m.
Oritkari Harbour: Main Quay, depth 9.0 m. Stern Door Quay, depth 7.0 m. North Quay, depth 10.0 m.
Nuottasaari Harbour: Main Quay, depth 6.40 m. Chemical Quay, depth 7.50 m.
Vihreasaari Harbour: Oil Quay, length 72 m., depth 10.0 m. Bulk Quay, length 150 m., depth 10.0 m.
Also see "Berthing".

HEALTH: No special rules existing in obtaining pratique. If disease or fever is suspected on board report to ship's Agent; will contact the Health Authority for necessary arrangements.

RADIO: Helsinki Radio (North Quarken). Close to Hailuoto Island call "Helsinki Radio" VHF Channel 27 or Channel 24.

RADAR/VHF: At Marjaniemi Pilot station, radar range 30 miles. Contact on VHF (Channel 16). All ice-breakers keep watch on frequency 2182 and VHF (Channel 16).

TUGS: Tug optional, but for vessels over 140 m. long use is advisable. Tug ("Tuura", 3,600 h.p.) will meet on Oulu Roads according to agreement; customary to use ship's lines in open water and lines from tug during ice operations.

BERTHING: *Toppila Harbour:* Depth 5.0 – 6.1 m. Toppila Quay length 992 m. Hietasaari Quay length 600 m.

Nuottasaari Harbour: Main Quay, length 320 m. Chemical Quay, length 125 m.

Oritkari Harbour: Main Quay, length 270 m. Stern Door Quay, length 85 m. North Quay, length 170 m. Facility for Ro/Ro service.

Vihreasaari Harbour: Oil Quay, length 72 m. Bulk Quay, length 150 m.

CRANES:

	No.	Capacity (tons)	Reach of arm (m.)	Type
Nuottasaari Harbour	2	5 and 8	12	Movable
Toppila	2	3 and 5	12	"
Vihreasaari	1	6	22	"
Oritkari Harbour	1	50	36	Movable

CARGO HANDLING FACILITIES: Toppila Harbour is equipped with 2 cranes, Vihreasaari Harbour with 2 cranes, Nuottasaari Harbour with 1 crane to load and discharge bulk cargoes and general cargoes with hook and Oritkari Harbour is equipped with one crane to handle general cargoes with hook and containers with spreader. 10 mobile cranes available from stevedores in all ports.

2 Ro/Ro berths are adjacent to the Oritkari Harbour.

Oritkari Harbour is built to mechanically handle paper cargoes.

Free zone warehouse in Toppila (2,100 sq.m.) and free zone area in Oritkari (18,000 sq.m.). Warehouses in Toppila and Oritkari of 50,100 sq.m. There is a large amount of open storage in all harbours.

BRIDGES: No bridges.

STEVEDORES: 24 hours' notice of ETA to be given to Agent who arranges necessary gangs.

MEDICAL: Medical attention arranged through Agent, 2 – 4 hours' notice required. Good hospital facilities available.

TANKERS: One principal tanker berth in Vihreasaari Oil Harbour, depth 10.0 m. Discharge lines of 12, 14 and 18 in. Pressure 10 kg./sq.cm.

DENSITY: Fresh water.

FRESH WATER: Available at main berths and Oil Harbour from pipeline, cost about 17.00 Fmk/ton. Elsewhere water is delivered by boat, cost about 17.00 Fmk/ton plus standard charge.

FUEL: Small quantities of all grades available, delivered by lorries.

CONSULS: Sweden, Norway, Denmark, Netherlands and United Kingdom.

REPAIRS: Minor deck and engine repairs carried out. Docking only for small tug boats.

DRY DOCKS: One small slipway. Max. vessels of 25 m. length and 8 ft. draft.

GANGWAY/DECK WATCHMEN: Watchmen recommended.

OPENING/CLOSING HATCHES: Normally carried out by crew. Stevedores will do it by order of Master and will charge as shipwork.

CERTIFICATES:
- Nationality Certificate.
- Measuring Certificate.
- Load-line Certificate.
- Classification Certificate.
- Safety Equipment Certificate.
- Radio Safety Certificate.
- Derat Certificate.

CUSTOMS ALLOWANCES: Tobacco: 200 cigarettes or 200 gm. pipe tobacco or equal amount of cigars allowed to each member of crew. Wine and/or Spirit: One bottle wine or spirit allowed for each member of the crew.

CARGO GEAR: Tested cargo gear to international safety regulations. Test certificates to be on board vessel.

REPATRIATION: Good facilities for effecting crew changes and to arrange necessary repatriation.

AIRPORT: Oulu Airport 15 km. from harbour served by regular airlines. 10 daily flights to Helsinki (worldwide connections) and 10 flights from Helsinki to Oulu with continuous connection to Kemi and Rovaniemi.

TIME: Local time GMT plus 2 hours. GMT plus 3 hours in Summer.

HOLIDAYS: General holidays in Finland: New Year's Day (January 1st); Good Friday; Easter Monday; Labour Day (May 1st); Independence Day (December 6th); Christmas Day (December 25th); Boxing Day (December 26th).

POLICE/AMBULANCE/FIRE: Fire 112, Reserve 3112987; Ambulance 112, Reserve 3112987; Police 10022, Reserve 3112001.

TELEPHONES: A telephone connection available in all harbours.

SHIP SUPPLY SERVICE: English speaking Pilots keep watch round the clock at Oulu Pilot Station on VHF Channels 13 and 16. The have pilot boats for ship-to-shore transport in emergency cases. In other cases Oulu Harbour Radio keeps English speaking watch in office hours VHF Channels 13 and 16. At other times the Pilots help to translate messages to tugowners. Oulu Harbour and a few private Owners have tugboats for service around the clock. Helsinki Coastal Radio has watch around the clock on Channels 16 and 27. They can arrange a helicopter in emergency cases for service in whole Bay of Bothnia area.

SERVICES: Compass adjusters and ship's cleaning.

IDENTIFICATION CARDS: Not needed.

GARBAGE DISPOSAL: The garbage containers are placed on the quay at 200 m. intervals. The local agent makes contact with the collectors when required. The charge for every ship is 0.15 FMK/N.R.T., the minimum is FMK 150.00 and the maximum is FMK 380.00.

WASTE OIL DISPOSAL: The capacity for waste oil is 250 tons. There are many collecting companies. All collecting is by tanker trucks. Local agent orders the tanker truck when needed. The charge for truck is 270 FMK/hour and handling about 300 FMK/ton.

SEAMAN'S CLUBS: The Finnish Seamen's Mission operates in the Oritkari Harbour. They have telephone for visitors for calling home, postage facilities. The address of the Seamen's Mission is Merimieslahetys Jaasalontie, SF-90400 Oulu. The Harbour Office will help with arranging football matches between ships or clubs on shore. Harbour Office Tel: 358-8-344266.

CURRENCY: Finnish Mark (FMK).

U.S.$1.00 = FMK 4.53.
U.K.£1.00 = FMK 6.97.
French Franc 1.00 = FMK 0.89.
German Mark 1.00 = FMK 3.08.
(8.2.96).

DEVELOPMENTS: A new warehouse of 12,000 sq.m. will be available at Oritkari by 1997.

AUTHORITY: Port of Oulu Authority, Harbour Office of Oulu, P.O. Box 48, FIN-90501 Oulu, Finland. *Tel:* 358-8-344266. *Cables:* Satama. *FAX:* 358-8-344580. *Contact:* Kari Himanen, Port Director. Tel: 358-8-344266.

PARGAS: 60.18 N. 22.18 E. (See Plan)

DOCUMENTS:
- 3 Crew Lists.
- 2 Customs Provisions Lists.
- 2 Customs Special Lists.
- 2 Passenger Lists.
- 2 Copies each Bill of Lading.

Tonnage Certificate and in special instances other regular documents.

PILOTAGE: On arrival at Pargas, from Gulf of Finland, from Baltic via Uto, from Gulf of Bothnia via Enskar, information of ETA to be given in good time to respective Pilot Stations. VHF Channel 16 for calling, 13 for further communication. Charge for pilotage in accordance with official Finnish tariff. Harbour Pilot available, but not compulsory, and can be ordered through Sea Pilot.

ANCHORAGES: Well sheltered and safe anchorage, immediately outside harbour area.

MAX. SIZE: Maximum depth both in channel and along quay 6.70 m. As regards length of quay and possibilities for a quick dispatch, it is desirable (though not an absolute stipulation) that discharging vessel be a bulk carrier with the engines aft.

HEALTH: Free Pratique automatic for all vessels, but temporary exceptions in and according to regulations issued by WHO and Authorities may occur.

RADIO: Radio-telephone contact with Agent and consignee/shipper is obtained via Mariehamn, radio-call 2196 kHz, reply 1852 OHF; or via Hango, radio-call 1967 kHz, reply 2649 OFO. Contact with VHF is made via Abo, Channel 26.

TUGS: A small motor tug of 200 h.p. available.

BERTHING: Directions to berth via nearest Pilot Station. Quay level above water 1 – 2 m., dependent on berth.

Length of quays, 800 m. 2 electric coal-discharging bucket cranes and one electric conveyor belt.

STEVEDORES: Arrangements will be made by Agent, who must be advised of ETA previous day to enable arrange men, trucks, etc.

MEDICAL: Medical Officer available locally. Necessary examination and taking of tests usually done in Abo. Regular appointment with local physician can be arranged by telephone with Agent or doctor.

DENSITY: Brackish water 1002.

FRESH WATER: Delivery from installation on quay.

FUEL: No local supply. In case of need delivery by truck from Abo.

CONSULS: See "Turku".

REPAIRS: Facilities for arranging small repairs on deck and engine in Pargas, but usually carried out by reliable companies in Abo.

DRY DOCKS: No local docking facilities. See "Turku".

GANGWAY/DECK WATCHMEN: Available but not necessary.

OPENING/CLOSING HATCHES: Must always be performed by crew.

CERTIFICATES: Normally Tonnage Certificate only but in special instances other regular ship's documents may also be needed.

CUSTOMS ALLOWANCES: Tobacco, Wine and/or Spirits. In accordance with the decision of Customs Authorities.

AIRPORT: Nearest airport in Abo. Distance about 25 km.

HOLIDAYS: Whit Monday, Midsummer (2 days), All Saints' Day, Independence Day (6th December), Christmas (25th December). Work in harbour carried out during these days only under very pressing circumstances.

POLICE/AMBULANCE/FIRE: Police 744048; Ambulance 744064; Fire 005; Life-saving Corps 356595.

TELEPHONE: No facilities for placing telephone on board. Telephone available on quayside.

SHORE LEAVE: No restrictions for crew members.

IDENTIFICATION CARDS: Not required.

GARBAGE DISPOSAL: Garbage facilities on the quay alongside ship. Separate drums available for oil waste. For service Tel: 358-21-742216. Charges: 0.13 FIM/N.R.T. (Minimum charge 130 FIM, maximum charge 390 FIM).

WASTE OIL DISPOSAL: Waste oil collection capacity is 20 cu.m. This is included in the normal harbour charges. Charges as above. For service Tel: 358-21-742216.

SEAMAN'S CLUBS: None available.
DELAYS: Vessels dispatched in order of arrival. Usually no delays occur as work has generally been carried out within the time limit stipulated in C/P. Port activity aimed at good dispatch of vessels, and consequently work in 2 shifts has been arranged.
AUTHORITY: Partek Cement Ab., SF-21600 Pargas, Finland. *Tel:* 358-21-742277. *Telex:* 62220. *Cables:* Partek. *FAX:* 358-21-742148. *Contact:* Karl-Erik Lindholm, Port Director/General Manager.

PORI, (including Mantyluoto, Reposaari and Tahkoluoto): 61.36 N. 21.29 E. (See Plan)

PORT LIMITS: The line between the lighthouses on Mantyluoto and Reposaari.
DOCUMENTS:
Ship's Register.
Crew List.
Passenger List.
Customs Documents.
Manifests.
Bills of Lading.
PILOTAGE: Pilot compulsory. Cable address: Luotsiasema, Mantyluoto (Pilot Station Mantyluoto), VHF Channel 16 or frequency 2182. 24 hour service by pilot boats from Mantyluoto Pilot Station, boats red-painted, international light or sound signals. Pilot to be taken 4 miles off Mantyluoto. In heavy fog, if required, Pilot Station able to navigate vessels into harbour by radar, provided vessel has corresponding equipment.
ANCHORAGES: Reposaari Roads and outside the breakwater.
RESTRICTIONS: Depth in the channel 8.6 m.
MAX. SIZE: *Tahkoluoto Oil Harbour:* Max. draft: 10.0 m.
Tahkoluoto Bulk Harbour: Max. draft: 10.0 m. Length of the quay 145 m.
Deep Water Harbour: (Berth Nos. 23-24). Length of quay 450 m., max. draft 15.3 m.
Mantyluoto: Max. draft 10.0 m. Length of quay 2,418 m.
Reposaari: Max. draft 3.9 m.
RADIO: Inform Agents giving ETA via Helsinki Radio, Hanko Radio, or Mariehamn Radio, or VHF Channel 26, Pori.
TUGS: 5 tugs available from 200 h.p. up to 3,520 h.p. Tugs normally join the vessel near the quays. Tugs use ship's lines.
BERTHING:

Quay	*Quay Section*	*Depth of water (at normal water) (m.)*
Kivilaituri	1	6.3
	2	5.5
Betonilaiturin lansipaa	3, 4, 5	7.0
Betonilaiturin itapaa	6, 7, 8	6.5
	9	3.9
Vasikkaniemen etelalaituri	10	3.9
	11, 12	6.5
Vasikkaniemen paalaituri	13	7.0
Vasikkaniemen pohjoislaituri	14-18	8.1
Kirrisannan laituri	19	8.1
Kallonlahti	20, 21, 22	11.2
Deep water harbour	23, 24	17.5
Tahkoluodon laituri	25, 26	11.5
Reposaaren laituri	27	4.2

CRANES:

Quay	*Quay Section*	*Cranes Number*	*Cranes Capacity*
Betonilaiturin lansipaa	3, 4, 5	2	3 tons
		4	5 tons
Vasikkaniemen paalaituri	13	1	25 tons
Vasikkaniemen pohjoislaituri	14-18	3	6 tons
		1	15/30 tons
		1	16/40 tons
Kirrisannan laituri	19	1	200 tons
Kallonlahti	20, 21,	2	2×6 tons
	22	1	40 tons
Deep water harbour	23, 24	1	1,500 t.p.h. (unloader)
		2	20/40 tons

CARGO HANDLING FACILITIES: Four Ro/Ro berths (Berths No. 2, 18, 19 and 20)., 200 tons, 30 tons and 2×40 ton cranes able to handle containers.
Deep Water Harbour: Unloading capacity at new Deep Water Harbour is 1,000 t.p.h. – 1,400 t.p.h. by Siwertell travelling ship unloader and 2×40 ton cranes.
STEVEDORES: The vessels receive workers in the order in which they enter the harbour. ETA advices appreciated in order to facilitate arranging gangs.
MEDICAL: No advance notice for medical attention required. Hospital facilities available.
TANKERS: Berth No. 26. Depth 11.5 m. Max. draft 10.0 m.
DENSITY: 1004.5.
FRESH WATER: Supply by shore installation.
FUEL: All grades available.
CONSULS: Vice-Consuls: Britain, Tel: 939/823007; Denmark, Tel: 939/342111; France, Tel: 939/6333500; Italy, Tel: 939/823222; Netherlands, Tel: 939/341000; Norway, Tel: 939/823000; Spain, Tel: 939/6326162; Sweden, Tel: 939/823000.
REPAIRS: Most repairs possible.
GANGWAY/DECK WATCHMEN: Available but not compulsory.
OPENING/CLOSING HATCHES: This work normally carried out by crew.
CERTIFICATES: Load Line Certificate; and during Winter season Ice Dues Certificate which issued by authorities for each season.
AIRPORT: Distance from airport 22 km. Served regularly by Finnair.
TIME: Local time 2 hours ahead of GMT. 3 hours ahead in Summer. (end March – end September.)
GENERAL: Harbour icebreaker "Porin Karhu", 3,500 h.p. available.
AUTHORITY: Port of Pori Authority, 28880 Pori, Finland. *Tel:* (35839) 6383700. *FAX:* (35839) 6383911. *Contact:* Simo Hermonen, Port Manager.

PORKKALA (Kantvik): 60.05 N. 24.23 E. (See Plan)

Documents and all general information, refer to "Helsinki".
APPROACHES: There are four official ship routes leading to the port of Porkkala (Kantvik) of Suomen Sokeri Osakeyhtio. The deepest one is 9.2 m. (30 ft.) and the shallowest one is 5.5 m. (18 ft.). The port does not have an ice-breaker of its own and the fairway is kept open by means of the State's ice-breakers.
PILOTAGE: A Pilot can be obtained from the Pilot Station of Porkkala, Tel. 90–2984 112 or VHF Channels 13 and 16. Distance to port about 14 miles. Pilotage in the harbour area may be carried out only by State-appointed Pilots. Pilotage in the harbour is not obligatory.
MAX. SIZE: Maximum draft 30 ft. 2 in. (9.2 m.).
CLEARANCE: The Customs formalities of the port are attended to by the Custom House of Inkoo.
TUGS: A tug is available.
BERTHING: The Port of Porkkala (Kantvik) is owned by Stromsby Invest and it is located at Kantvik. Directly in the vicinity of the port there is the factory of Suomen Sokeri Osakeyhtio (sugar mill). The port basin has 3 quays:
The outer quay is 110 m. long, draft 9.2 m. (30 ft. 2 in.).
The inner quay is 50 m. long, draft 5.3 m. (17 ft. 4 in.).
The fairway of the port basin is 120 m. wide, narrowing up at its end to 76.5 m. South quay (at the South bank of Kantvik Bay) is 60 m. long, draft 8.5 m. (27 ft. 7 in.).
DENSITY: 1004.
CRANES: Two cranes, capacity 8 tons. One crane is on the outer quay and one on the South quay.
FRESH WATER: Available at quays.
CONSULS: Nearest in Helsinki.
GANGWAY/DECK WATCHMEN: Not necessary.
OPENING/CLOSING HATCHES: Normally by the crew.
AIRPORT: Nearest Helsinki, distance 45 km.
TIME: Local time is GMT plus 2 hrs. GMT plus 3 hours in Summer.
HOLIDAYS: On Saturdays, Sundays and General Holidays in Finland no cargo work is done.
POLICE/AMBULANCE/FIRE: Contact the Gatehouse of Factory.
TELEPHONES: Can be arranged on board. Telephone calls can be made from the Harbour Office during day-time.
SHORE LEAVE: No restrictions.
IDENTIFICATION CARDS: Not needed.

SHIPMASTER'S REPORT: The sugar discharging berth for Porkkala is at Kantvik, situated in Lat. 60° 05' N., Long. 24° 23.25' E., about 21 miles West of Helsinki.

The Pilot for the port is embarked at the position indicated on British Admiralty Chart No. 2331, 115°×3.5 miles from Porkkala Lighthouse. From there to the berth is 12 miles and the passage presents no difficulties. It is well lit, and there is ample water. The least depth recorded was 31 ft. and that was alongside the berth. There is a powerful tug for assisting in berthing and unberthing.

The discharging berth, alongside which vessels lie port side to, is modern and well fendered. It is sheltered from most directions. Unfortunately, the berth is short for a 500 ft. vessel, and additional moorings have to be placed from amidships.

There is only 1 crane on the berth and to work either of the end hatches a shift would be necessary. Work was continuous while the vessel discharged her part cargo at Kantvik, and an out-turn rate of 100 t.p.h. was achieved.

Fresh water is readily available from the Jetty, and presumably, fuel could be obtained from Helsinki. Telephones in the dock offices are available for official use.

There is a bus service to and from Helsinki, the journey taking about 40 minutes.

AUTHORITY: Finnsteve Oy AB, Sankonkuja 5, 00180 Helsinki, Finland. *Tel:* 0-2985166. *FAX:* 0-2985163. *Contact:* K. Alhojoki, Port Director.

PORVOO (Skoldvik): 60.18 N. 25.33 E. **(See Plan)**

The harbour is a private oil harbour owned and managed by Neste Oy.

The harbour is located at Skoldvik in the municipal area of Porvoo about 45 km. (28 miles) East of Helsinki, Lat. 60° 18' N., Long. 25° 33' E. The area is shown on Finnish Marine Chart Nos. 17 and 902.

The distance from the Kallbadagrund Lighthouse to the harbour is 20.5 nautical miles (38 km.). The minimum width of the harbour channel is 270 m. (885 ft.) and the approved depth is 15.3 m. (50 ft.).

The water level varies between +1.5 m. and −0.75 m. (+5 ft. and −2.5 ft.) depending on the wind. There are no tides in the area.

The Winter period is from January to the end of April. During this time the channel from the open sea to the harbour is kept open by icebreakers owned by the State. The Finnish Board of Navigation determines the requirements for vessels allowed to enter various ports during this period.

DOCUMENTS: The following documents shall be handed over after berthing:

4 Crew Lists.
2 Lists of Visitors.
3 Passenger Lists.
1 Provision List.
1 Special List (Customs).
Ship's Register.
Certificate of Tonnage.
Cargo Documents.

PILOTAGE: Pilotage is compulsory. The Pilots are Sea Pilots employed by the State. They also perform the pilotage inside the port area.

The Pilot Station is at the outer end of Emsalo Island. Vessels entering from the sea are boarded by the Pilot at Kallbadagrund, Lat. 59° 59.1' N., Long. 25° 36.1' E.

The Pilot shall be called by using the international code, VHF Channels are 13 and 16.

The Sea Pilots serve as Docking Masters berthing the vessel with the help of 2 tugs when the vessel is over 15,000 tons.

RESTRICTIONS: Vessels can enter and leave the harbour 24 hours a day. However, vessels whose keel clearance is minimal are not allowed to berth in darkness or under unfavourable wind conditions.

In Winter, port kept open by ice-breakers.

MAX. SIZE: Up to about 260,000 d.w.t. Max. draft 15.3 m.

HEALTH: Bill of Health not required. In case suspected disease or fever on board, radio Agent full details before arrival to advise Port Health Officer in advance.

RADIO: Notice of arrival shall be given 12 hours before the calculated time of arrival by the ship's Agent (Helsinki Radio). Two hours before arrival at the boarding site for the Pilot, the same notice shall be sent, including

(1) The name and the nationality of the vessel
(2) Nett registered tonnage
(3) The time and date of the notice
(4) The draft of the vessel
(5) Time of arrival at the boarding site for the Pilot.

VHF: The harbour office is open 24 hours a day. It is provided with the VHF station "Neste". The following Channels are available: 6, 9, 13, 15, 16, 17 and 21. Telex connection is 12467159.

TUGS: The harbour tugs "Esta" and "Esko" owned by Neste are available to handle vessels. Respective capacities are:
"Esta" 1,000 kW (1,330 h.p.) "Esko" 2,352 kW (3,200 h.p.)

Vessels over 80,000 d.w.t. need additional tugs, which the ship's Agent shall order from Helsinki.

The ship's own lines shall be used for towing.

Tug to stand-by whilst vessel discharging if vessel over 130,000 d.w.t.

BERTHING: There are 5 berths available for discharging crude oil and loading of oil products. 2 additional berths are available for handling of petrochemical products.

Loading and discharging is possible around the clock. During the icefree period all berths are surrounded by oil booms.

Berth 1:
Face direction 023° 42'
Water depth 12.6 m. (41 ft.)
Maximum vessel size about 50,000 d.w.t.

Berth 2:
Face direction 128° 42'
Water depth 17.6 m. (57 ft.)
Maximum vessel length 330 m. (1,082 ft.) without special permission
N.B.
Vessel to be moored starboard side alongside
Shore gangway
Maximum reach of loading arms +21.5 m. (+70 ft.) from sea level

Berth 3:
Face direction 128° 42'
Water depth 17.6 m. (57 ft.)
Maximum vessel length 280 m. (918 ft.)
N.B.
Vessel to be moored starboard side alongside
Shore gangway
Maximum reach of loading arms +19.5 m. (+64 ft.) from sea level

Berth 4:
Face direction 017° 56'
Water depth 15.3 m. (50 ft.)
Maximum vessel size about 150,000 d.w.t.

Berth 5:
Face direction 002° 58'
Water depth 8 m. (26 ft.)
Maximum vessel size about 8,000 d.w.t.

Berth 8:
Face direction 004° 42'
Water depth 13.5 m. (44 ft.)
Maximum vessel size about 40,000 d.w.t.

Berth 9:
Face direction 333° 18'
Water depth 7.3 m.
Maximum vessel size about 7,000 d.w.t.

The water depths correspond to the normal water level.

All loading arm flanges are ANSI 150 lb. RF. For tugs and cargo vessels there are separate berths in the harbour.

DISCHARGING/LOADING: The usual methods are applied in discharging and loading. While discharging and loading the safety rules for Neste tank vessels and oil harbours shall be followed.

Crude oil can be discharged simultaneously at a maximum of three berths. However, at Berths 2 and 3 only one ship at a time can be discharged because of a common pipeline.

Berth 8 is used for benzene loading, capacity 500 cu.m./hr. and propylene loading, capacity 400 cu.m./hr.

During cargo handling adequate crew shall be on board. A gangway watchman is not required.

Loading and Discharging Facilities:

Berth 1: Discharging rate 4,000 cu.m./hr., shore line 24 in. diameter, arms No. 12 and No. 13, 2×12 in. diameter.

Loading rate for heavy fuel oil 3,500 cu.m./hr., shore line 20 in. diameter, arms No. 12 and No. 13, 2×12 in. diameter.

Loading rate for diesel oil 2,000 cu.m./hr., shore line 14 in. diameter, arm No. 14, 1×12 in. diameter.

Loading rate for gasoline 2,000 cu.m./hr., arm No. 15, 1×12 in. diameter.

Loading rate for jet fuel 500 cu.m./hr., arm No. 16, 1×8 in. diameter.
Deballasting 1,000 cu.m./hr., arm No. 12, 1×12 in. diameter.
Bunkering rate 600 cu.m./hr., arm No. 11, 1×8 in. diameter.
All flanges ANSI 150 lb., RF.
LPG loading rate 80 cu.m./hr., hose 1×4 in. diameter, flanges ANSI 300 lb., RF.

Berth 2: Discharging rate 11,000 cu.m./hr., main shore line 40 in. diameter, arms No. 22, No. 23 and No. 24, 3×16 in. diameter.

Loading rate for heavy fuel oil 5,000 cu.m./hr., arm No. 22, 1×16 in. diameter.

Deballasting 1,000 cu.m./hr., arm No. 22, 1×16 in. diameter.
Bunkering rate 600 cu.m./hr., arm No. 21, 1×10 in. diameter.
All flanges ANSI 150 lb., RF.

Berth 3: Discharging rate 6,000 cu.m./hr., main shore line 40 in. diameter, arms No. 34 and No. 35, 2×12 in. diameter.

Loading rate for heavy fuel oil 5,000 cu.m./hr., arms No. 34 and No. 35, 2×12 in. diameter.

Loading rate for diesel oil 2,500 cu.m./hr., arm No. 33, 1×12 in. diameter.

Deballasting 1,000 cu.m./hr., arm No. 35, 1×12 in. diameter.
Bunkering rate 600 cu.m./hr., arm No. 37, 1×8 in. diameter.
All flanges ANSI 150 lb., RF.

Berth 4: Discharging rate 6,000 cu.m./hr., shore line 24 in. diameter, arms No. 42 and No. 43, 2×12 in. diameter.

Loading rate for heavy fuel oil 4,000 cu.m./hr., shore line 20 in. or 24 in. diameter, arms No. 42 and No. 43 or No. 43 and No. 44, 2×12 in. diameter.

Loading rate for diesel oil, cat cracked spirit and unleaded gasoline 2,000 cu.m./hr., arm No. 44, 1×12 in. diameter.

Loading rate for gasoline 2,000 cu.m./hr., arm No. 45, 1×12 in. diameter.

Loading rate for straight-run naphtha 1,500 cu.m./hr., arm No. 44, 1×12 in. diameter.

Loading rate for bitumen 1,000 cu.m./hr., arm No. 40 1×8 in. diameter.

Deballasting 1,000 cu.m./hr., arm No. 42 and No. 44, 2×12 in. diameter.

Bunkering rate 600 cu.m./hr., arm No. 41, 1×8 in. diameter.
All flanges ANSI 150 lb., RF.
Discharge rate for coal: 11,000 tons per 24 hours.

Berth 5: Discharging rate 1,000 cu.m./hr., arm No. 51, 1×8 in. diameter.

Loading rate for heavy fuel oil 1,000 cu.m./hr., arm No. 51, 1×8 in. diameter.

Loading rate for diesel oil 1,000 cu.m./hr., arm No. 52, 1×8 in. diameter.

Loading rate for gasoline 1,000 cu.m./hr., arm No. 53, 1×8 in. diameter.

Deballasting 1,000 cu.m./hr., arm No. 51, 1×8 in. diameter.

Bunkering rate for heavy fuel oil 600 cu.m./hr., arm No. 51, 1×8 in. diameter.

Bunkering rate for diesel oil 40 to 1,000 cu.m./hr., arm No. 52, 1×8 in. diameter and hose 1×2 in. diameter.

All flanges ANSI 150 lb., RF.

LPG loading rate 80 cu.m./hr., hose 1×4 in. diameter, flanges ANSI 300 lb., RF.

Berth 8: Loading rate for benzene 500 cu.m./hr., arm No. 81, 1×8 in. diameter.

Loading rate for phenol 100 cu.m./hr., hose 1×6 in. diameter.
Loading rate for propylene 400 cu.m./hr., hose 1×8 in. diameter.
Loading rate for oily water 100 cu.m./hr., hose 1×4 in. diameter
Loading rate for acetone 300 cu.m./hr., arm 1×8 in.
Flanges for propylene loading ANSI 300 lb., RF.
All other flanges ANSI 150 lb., RF.

Berth 9:

Discharging rates for:

Styrenemonomer	500 cu.m./hr.
Ortoksylene	500 cu.m./hr.
Hexanol	500 cu.m./hr.
Glykol	60 cu.m./hr.
Oktanol	500 cu.m./hr.
VCM	45-200 cu.m./hr.
Isobutene	270 cu.m./hr.
Ethylene	270 cu.m./hr.
Vinylasetate	200 cu.m./hr.
Alfol-610	500 cu.m./hr.
Butadiene (loading)	270 cu.m./hr.

BALLAST: There are facilities for discharging ballast at oil berths. However, discharging can be effected simultaneously only from 2 berths.

The capacity of the ballast handling system of the refinery is 30,000 cu.m. and the maximum discharging rate at each berth is 1,000 cu.m./hr. Ballast over 5,000 cu.m. must be reported 48 hours prior to arrival.

The harbour office collects a charge to cover treatment costs for receiving ballast.

Berth No. 8: Flushing water for the tanks can be discharged provided that the pollutants can be handled in the Neste waste water treatment system. In that case the capacity is 100 cu.m./hr.

MEDICAL: In emergency a doctor can be called on board. To call ambulance, dial 69-2222. The nearest hospitals are in Porvoo and in Helsinki. Ship's Agent helps in other medical problems, such as providing medicines.

DENSITY: 1006.

FRESH WATER: Drinking water can be supplied from:

Berths 1, 4 and 5	25 cu.m./hr.
Berths 2 and 3	50 cu.m./hr.(2 connections)
Berths 8 and 9	20 cu.m./hr.

FUEL: Bunkering facilities are installed at oil berths. Two grades are available, marine fuel oil and marine diesel oil.

The bunkering capacities:

Marine fuel oil	600 cu.m./hr.
Marine diesel oil	up to 1,000 cu.m./hr.

The diesel oil can be delivered through product lines. Bunkers must be ordered with 72 hours' notice addressed to Neste Marine Product Sales, Telex: Hki 12-4641.

Bunkering at Berths No. 8 and 9 is by truck only.

REPAIRS: Only minor repairs can be effected following the safety rules and with the permission of the harbour office.

GANGWAY/DECK WATCHMAN: Not required.

CUSTOMS ALLOWANCES: 200 cigarettes and 1 bottle wine or spirits for each man.

REPATRIATION: Disembarking is possible. A foreigner needs a passport. Distance to Porvoo is 20 km. (12.5 miles) and to Helsinki 45 km. (28 miles).

AIRPORT: There are daily flights from Helsinki – Vantaa Airport with good connections all over the world. Distance to the airport is about 50 km. (30 miles).

TIME: GMT plus 2 hours. GMT plus 3 hours in Summer.

TELEPHONE NUMBERS: After berthing a telephone connected to the local automatic exchange will be placed on board all vessels, the respective dial numbers being:

Berth 1	23333
Berth 2	23334
Berth 3	23335
Berth 4	23336
Berth 5	23337
Berth 8	23341
Berth 9	(90) 224304

Important Numbers:

Harbour Office	23339 693115 and 693117
Customs	23293
"Esta"	23423 or 693134
"Esko"	23423 or 693134
Fire Alarm/ Ambulance	69-2222

Bus Connections, Taxi:

Bus connection daily to Porvoo from 0700 hrs. to 2300 hrs.

Taxi 24 hours

	Tel.
Neste Oy Taxi Station	23245
Pekema Oy Taxi Station	23390
K-O Johansson	22252

REGULATIONS: In addition to the existing Finnish laws, statutes and other regulations the Port Regulations of Neste Harbours must be followed.

Some excerpts:

Entering the Harbour: Vessels carrying explosives or flammable liquids or gases shall observe what has been separately laid down concerning such cargo. The vessel shall show the prescribed caution sign in the harbour area.

Traffic in the Port Area: In the port area the speed of the vessel shall be according to the circumstances, so that no harm or danger shall be caused to anyone. Oil booms, underwater jobsites etc. shall be passed with special care. The maximum speed allowed in the port area is 6 knots, unless otherwise stated by the Harbour Office.

Berthing of the Vessel: Without urgent need, anchorage is prohibited in the marked fairway, in the vicinity of the submarine pipelines or cables or in any place where the vessel may disturb the traffic.

The vessel shall be moored alongside the berth appointed by the Harbour Authorities and it shall not be removed without permission.

While berthing or unberthing or whilst moored at the berths the relevant safety precautions shall be taken to avoid any damage to the berths.

All ships' scuppers must be plugged or closed by mechanical means so that no water, steam or dirt comes into contact with the berth or its immediate vicinity.

A sufficient crew shall be maintained on board to ensure that the ship can be removed, if necessary.

Prevention of Shallowing and Contamination of the Harbour: In the port area it is prohibited to discharge oil or oil-emulsified water. In the Baltic Sea the existing restrictions must be observed.

The jettisoning of garbage and refuse is prohibited in the port area. The blowing of tubes and boilers of the ship while at the berth is prohibited.

GENERAL: *Inspections:*

To avoid oil accidents, an inspection based on the checking list is carried out before loading/discharging to find out the preparedness of the vessel to act in an emergency.

Vessels loading/discharging oil products are surrounded by oil booms. Inspections are carried out and loading/discharging is supervised by the Loading Master, whose instructions must be followed. If he is not on board, he can be contacted by telephone, No. 23339 or 693115 or 693117.

AUTHORITY: Neste Oy, Porvoo Works, Harbour Office, 06850 Kulloo, Finland. *Tel:* 693106. *Telex:* 12464159. *Contact:* Harbour Master.

RAAHE (Rautaruukki Oy): 64.41 N. 24.29 E. (See Plan)

PORT LIMITS: Vessel is considered to be an "arrived vessel" subject to Charter Party Terms, when passing breakwaters if not ordered to anchor near Raahe Lighthouse by Port Authority.

DOCUMENTS:

Crew Lists.
Passenger List.
Ship's Register.
Custom List.
Provisions List.

PILOTAGE: Compulsory. To avoid delay in obtaining a Pilot the Owners, Master or Agent of the ship bound for Raahe must report vessel's ETA 6 hours in advance of ETA. ETAs must be confirmed or corrected not less than 2 hours prior to ETA by VHF contact with Pilot Station on Channel 16. Departing vessels must also give 2 hours' notice.

Pilots board and disembark by pilot cutter (red) near Raahe Lighthouse (Lat. 64° 39' N., Long. 24° 13' 5" E.). Day and night service. Distance from lighthouse to port is 6 miles.

ANCHORAGES: Vessels can anchor outside Raahe Lighthouse, depth 15 m. – 20 m. No anchorages inside breakwaters.

RESTRICTIONS: No restrictions night entry.

MAX. SIZE: Max. sailing draft at MLW from Port of Rautaruuki Oy is 8.0 m.

RADIO: Helsinki Radio, 2182 kHz, call sign OHG, Mariehamn Radio, 2182 kHz, call sign OFH; Vaasa Radio VHF Channels 16, 24 and 27, call sign OFW.

RADAR/VHF: No port radar services. Pilot station. Radio, 2182 kHz, VHF Channel 16. Rautaruukki Oy Harbour Office, VHF Channel 16 and 9 (0600 hrs. – 2200 hrs.) and tugs on VHF Channel 16.

TUGS: 2 tugs, 600 h.p. and 1,500 h.p. Tug assistance not compulsory but recommended. Ship's lines used.

BERTHING:

Pier	*Berth* No.	*Length* (m.)	*Depth at MLW* (m.)
Import Pier	1,2,3	370	9.05 (280 m.) 7.40 (90 m.)
Export Pier	4,5	270	9.05 (180 m.) 7.40 (90 m.)
Oil Pier	6,7	200	9.05
Lapaluoto	8	100	8.0

STEVEDORES: Rautaruukki Oy, in Steelworks Harbour; August Lindberg Oy at Lapaluoto.

SPECIALISED CARGO – HANDLING FACILITIES: Lapaluoto Harbour, no shore cranes. Rautaruukki Oy Harbour, import quay equipped with 3×12.5 ton shore cranes and conveyor; export quay equipped with 1×12.5 ton and 1×40 ton shore crane, straddle carriers, forklifts, payloaders, lorries and equipment for handling steel, bulk and general goods.

LIFEBOAT STATION: Lifeboat cutter "Niilo Saarinen", 360 h.p., 10 knots. Radio 2182 kHz, VHF Channel 16, Radar, fire and suctionpump 4,000 litres/minute. Alarm through Helsinki Coastal Radio Station on 500 kHz, 2182 kHz and VHF Channels 16, 24 and 27. Raahe Pilot Station, Kalajoki Coast Guard Station and Rautaruukki Harbour office on VHF Channel 16.

DENSITY: Average density 1003.

FRESH WATER: Available at all berths in Rautaruukki's harbour.

FUEL: Small quantities available, one day's notice required.

FIRE PRECAUTIONS: No special precautions in Lapaluoto Harbour.

CONSULS:
Denmark 31146 – 37269
Norway 31146 – 37269
Sweden 37300 – 37007

REPAIRS: Mechanical workshops available. Slip for small ships.

DRY DOCKS: None.

SURVEYORS: Lloyd's and Norske Veritas.

GANGWAY/DECK WATCHMEN: Available but not compulsory.

OPENING/CLOSING HATCHES: Normally by the crew.

CUSTOMS ALLOWANCES: About 200 cigarettes and limited amount spirits per man.

REPATRIATION: Crew changes and repatriation can be carried out without difficulties.

AIRPORT: Oulu Airport, about 70 km. from Raahe.

TIME: Local time is GMT plus 2 hours. GMT plus 3 hours in Summer, (early April – late September).

HOLIDAYS: New Year's Day; Twelfth Night; Good Friday; Easter Monday; Labour Day (1st May) holiday when no work takes place; Ascension Day; Whitsun Monday; Midsummer Day; All Saints' Day; Independence Day (6th December); Christmas Day and Boxing Day.

POLICE/AMBULANCE/FIRE: Police 10022; Ambulance; Fire and First Aid 112.

TELEPHONES: Telephones may be placed on board at a charge.

SHORE LEAVE: No restrictions.

IDENTIFICATION CARDS: Not required.
GARBAGE DISPOSAL: Collection is available. Containers for garbage are situated at 100 m. intervals on the quays. Charge 0.13 FIM/N.R.T. Minimum charge FIM 130, maximum charge FIM 500.
WASTE OIL DISPOSAL: Collection service for waste oil is available. Maximum quantity per vessel is 30 tons, as per Baltic Agreement. Orders via agent. Charges as per Tariff.
SEAMAN'S CLUBS: None.
CURRENCY: Local currency is FIM (Finnish Mark).
GENERAL: *Shipping Season:* Normal shipping season for non-ice strengthened vessels is May – December. During the rest of the year icebreaker assistance is normally necessary and given only to ice strengthened vessels.

Harbour basin stays free of ice throughout the year because of factory's warm cooling water.

The installations of the harbour are operated throughout the year.

Services: Lub. oil, drinking water, boiler water, provisions, stores, launches, facilities to receive garbage and oily water and minor repairs.

Consult Rautaruukki Oy Harbour Office for further information.

Litter: Littering is forbidden. In such cases, harbour authorities will activate the cleaning process and charge the ship for expenditure. All garbage must be sent ashore.

Spirits: Selling of alcohol on board a cargo vessel is forbidden by the law. Penalties in such cases are high.

Drunken workers will be relieved of their duties immediately.

Cameras: The steelworks area is private property. Photographing is forbidden in the whole area. Exceptions may only be made by the owner.

Safety: All necessary precautions must be taken for the safety of the workers.

A protective net must be placed under the gangway stretching about 2.0 m. over its lower part in order to prevent any falls.

Safety inspection is undertaken on ship's arrival by stevedores.

Visitors: Visitors will be allowed into the harbour area if they have a pass card signed by the ship's Master and the security service of the factory.
AUTHORITY: Rautaruukki Oy, Raahe Steel Works, Harbour Office, Box 93, 92101 Raahe, Finland. *Tel:* 358-82-221580. *Telex:* 32181 Steel SF. *FAX:* 358-82-2237155. *Cables:* Rautaruukki, Raahe. *Contact:* Captain R. Rahja, Port Captain. Tel: 982-302304.

RAUMA: 61.08 N. 21.30 E. (See Plan)

PORT LIMITS: Southern entrance port limit when passing Tankkarit, northern entrance port limit when passing Riskonpoella.
DOCUMENTS: 2 Crew Lists and 1 Passenger List. Ship's Register, Customs Documents, Ship's Papers, etc. (Ship's Agent will give the necessary advice).
PILOTAGE: Pilot station at Kylmapihlaja-island, Lat. 61° 08' 7" N., Long. 21° 18' 4" E. Pilot boards vessels East of Rauman Majakka light. International Pilot signals, VHF Channels 16 and 13. Fairways: Valkeakari 6.5 m.; deep passage 9.0 m.
ANCHORAGES: Ample area for anchorage in Archipelago.
RESTRICTIONS: Entrance: North Channel 7.2 m., South Channel 10.0 m., max. draft 10.0 m. Harbour open all year round.
MAX. SIZE: Draft limit only.
HEALTH: In the event of any suspect contagious disease ask for orders by wireless. Port Regulations do not allow such a ship to come alongside or closer than 350 yards. Pilot must not leave ship before allowed by the Doctor. Pilot does not board an infected ship but ship piloted to safe anchorage by pilot boat.
RADIO: Helsinki Radio, Hanko Radio, Mariehamn Radio and nearest station Vaasa Radio.
VHF: Vaasa VHF, intermittent watch on Channels 16, 26 and 28. Channel 16 used for calling Pilot, tug etc. Channels 13 and 12 for further operations.
RADAR: When required Pilot Station radar used for advising Pilot onboard.
TUGS: 3 ice-breaker tugs available (up to 3,500 b.h.p.) 24 hours per day. 2 hours' notice recommended.
BERTHING:

Quay	*Length* (m.)	*Depth Alongside* (m.)	*Remarks*
Petajas	320	11.5	Bulk Cargo
Hakuni	250	6.7 – 7.5	General Cargo
Central	410	6.7 – 7.3	General Cargo
Laitsaari	285	9.05	General Cargo
Suoja	110	5.7	General Cargo
Chemical I	100	5.5	Liquid Cargo
Chemical II	110	7.25	Liquid Cargo
Oil	125	9.15	Oil Carriers
Ro-Ro No.1	—	6.7 – 6.8	—
No.2	250	6.7 – 7.5	—
No.3	120	11.5	—
No.4	110	11.5	—
No.5	110	11.5	—
No.6	150	11.5	—

CRANES: 2×6 tons; 2 mobile cranes 15 – 42 tons available. 2 jib cranes of 40 tons for containers and 30 tons for bulk. 1 gantry crane, 50 tons.
STEVEDORES: 24 hours' notice to Agent recommended.
BULK CARGO FACILITIES: Part of Central Quay for bulk carriers, shore cranes, max. draft 7.0 m.

Petajas Quay for bulk carriers, max. draft 10.0 m. (depth alongside 11.5 m.).

Facilities for grain cargo (storage capacity 150,000 tons).
SPECIALISED CARGO-HANDLING FACILITIES: Containers can be handled by harbour cranes and mobile cranes.

Good berths for Roll-on/Roll-off traffic.

Different kinds of liquid chemicals can be handled in special berths.
MEDICAL: Advance notice recommended if possible. Hospital available.
TANKERS: See "Berthing".
Storage:

Oy Teboil Ab. 200,000 cu.m.
Rauma-Repola Oy. 280,000 cu.m.

Both storage facilities are underground.

Ballast: Facilities available for dirty ballast.
DENSITY: 1004 – 1003.
FRESH WATER: Fresh water available on any quay. Charges depending on amount taken. An extra fee is charged if tug is used.
FUEL: Fuel brought by tank-trucks.
CONSULS: Denmark, Norway and Sweden.
REPAIRS: All types available.
DRY DOCKS: Finnyards Ltd.: Dry dock 260 m. × 85 m. × 10.0/9.0 m. Movable electric cranes: 3×150 tons and 1×80 tons. Building slipways: 190 m.×31 m., 150 m.×32 m. and 160 m.×35 m.
SURVEYORS: SGS Inspection Services Oy. (chemical surveys). Tel: 358-2-241177. Fax: 358-2-222332.
GANGWAY/DECK WATCHMEN: Available if wanted. Watchmen supplied by private company.
OPENING/CLOSING HATCHES: Performed by ship's crew or by Stevedores at request of ship.
CUSTOMS ALLOWANCES: Tobacco: 6 day's ration (about 200 cigarettes or 200 gm. tobacco). Wine and/or Spirits: 1 opened bottle of wine or liquor, subject to Customs Regulations.
CARGO GEAR: At Central Quay and Petajas Quay shore gear available. Other quays mobile gear or ship's gear.
REPATRIATION: Repatriation and signing on or off.
AIRPORT: Pori Airport 50 km. away. Regular connections.
TIME: Local time is 2 hours ahead of Greenwich (Long. 30° E.). GMT plus 3 hours in Summer.
HOLIDAYS: See "Turku".
POLICE/AMBULANCE/FIRE: Public emergency (Ambulance, Police, and Fire alarm) 112, spare: 8220522, Police also 10022.
TELEPHONES: Oil quay, Laitsaari Quay and Iso-Hakuni Quay.
SERVICES: Compass adjusting facilities and compass adjusters.
SHORE LEAVE: No restrictions.
IDENTIFICATION CARDS: Normally no identification card needed but Passport or Seaman's Book preferable.
GARBAGE DISPOSAL: Garbage disposal services are provided by the mooring men and their use is compulsory. Garbage bins for large amounts of rubbish are to be found on the quays and marked with "garbage".

Charge FIM 0.15/n.r.t., minimum charge FIM 160/vessel. Bins available throughout 24 hours.
WASTE OIL DISPOSAL: Oily ballast, tank washing water, bilge water. Operating companies: Call your Agent.
SEAMAN'S CLUBS: Seamen's Club is near Ro/Ro Berth No. 2. Tel: 358-2-8227308, open on workdays 1700 hrs. – 2100 hrs. and on Saturdays between 1400 hrs. – 1700 hrs. Following services available: Canteen, international telephone, reading room, information, billiards, etc.
CURRENCY: Finnish Mark (FIM). U.S.$ 1.00 = FIM 4.90 (May 1996).

No restrictions placed upon seafarers.
DELAYS: No delays in berthing, loading and discharging weather permitting.
DEVELOPMENTS: New warehouses and storage fields under construction.
AUTHORITY: Port of Rauma Authority, Hakunintie 19, 26100 Rauma, Finland. *Tel:* 358-2-83411. *FAX:* 358-2-8226369. *Contact:* Heikki Honkaheimo, Port Director.

SAIMAA CANAL AND PORTS IN LAKE AREA OF SAIMAA (See Plan)

APPROACH CHANNELS: The canal can be reached from the international waters of the Gulf of Finland through an approach channel South of Someri. The channel passes the Island of Vihrevoi and continues, at the Island of Malyj Vysotski, as the Vysotski-Viipuri Channel, from which the approach channel departs at a distance of 10 km. from Malyj Vysotski. The length of the approach channel from the point of departure to the Brusnitchnoe Lock is 14 km. The distance from the international water area to the Island of Vihrevoi is 94.5 km. and the length of the section Vihrevoi-Malyj Vysotski 12 km. The total length of the channel from the territorial waters of Russia to the Brusnitchnoe Lock is thus 131 km.

From the territorial waters of Finland the canal may be reached through the so-called coastal channel starting from the Finnish border at the island of Santio and joining the above sea channel at the Island of Vihrevoi. The length of the channel from the border to Vihrevoi is 49 km. and the overall length to the Brusnitchnoe Lock is 85.5 km. The channel and its refuge harbours have been marked on the Russian sea charts Nos. 1131 and 1132 and on Finnish charts Nos. 11 and 12. The coastal channel may also be used by vessels of other nationalities.

Canal: The length of the canal on the Finnish side of the border is 23.3 km. and that of the part on the Russian side 19.6 km. The overall length of the Saimaa Canal is thus 42.9 km. The average difference in the height between Lake Saimaa and the Gulf of Finland is 75.6 m. The canal has 8 locks, the heights of fall of which range between 5.54 m. and 12.69 m. Earth transports will use the 7 moving bascule bridges and the 6 stationary bridges across the canal.

NAVIGATION SEASON: The natural open water season of the Saimaa Canal lasts on average 211 days. Since most vessels navigating in the Canal have been strengthened and inspected for navigation in ice, a season of navigation of ten months has lately been reached, the season beginning in early April and ending in January.

The opening and closing of the season of navigation on the Canal is decided each year by the Finnish and Russian Saimaa Canal Delegates. The opening will be announced not later than 1 day before the opening day and the closing not later than 7 days before the closing day.

During the season of navigation the Saimaa Canal and the other deep channels are kept open 24 hours a day.

PILOTAGE: *Use of Pilot is compulsory in Russian territory:* Pilotage in the Russian water area is carried out by the Russian Pilot Service. Pilotage is needed when using the channel between Vihrevoi – Brusnitchnoe. All vessels must use Pilot on this channel section.

Pilotage on the Saimaa Canal: Pilotage on the section Brusnitchnoe – the lock of Malkia is carried out by canal pilots subordinated to the Inland Waterways District. All vessels, excluding small Finnish vessels less than 25 m. in length, shall use a Pilot when proceeding through the Canal. The Inland Waterways District may grant upon application to a Master of a vessel the right to navigate a certain vessel on the Canal without a Pilot provided that the Master of the vessel has passed an examination required for the purpose.

Pilot must be ordered 12 hours in advance of point of receipt of Pilot: In navigation from the Gulf of Finland the Pilot must be ordered from the Viipuri Section of Inflot 12 hours before the arrival at the Vihrevou Pilot Station. The order must be checked 4 hours before the start of the pilotage. To avoid excessive work by the Pilot Service and to eliminate delays special attention is to be paid to the accuracy of the time the pilotage is to be started, particularly in the last notifications.

In navigation from the Lake Saimaa the Pilot must be ordered from the Canal Office 6 hours before entrance into the Canal. The order must be checked two hours before the pilotage is to be started.

In navigation from the Gulf of Finland a Canal Pilot need not be ordered separately. Similarly, a Russian Pilot for the approach channel need not be ordered separately when the vessel proceeds from Lake Saimaa.

Pilotage in the water system of Saimaa: Pilotage in the water system of Saimaa is carried out by Pilots of the Inland Waterways District. The order for Pilots shall be made 6 hours before the start of the pilotage to the Pilot Stations of Lake Saimaa.

MAX. SIZE: The canal can be used by vessels with dimensions not exceeding the following:

Length	82.0 m.
Beam	12.2 m.
Draft	4.35 m.
Height of mast	24.5 m.

The draft of a vessel in tow, however, shall not exceed 4.5 m. For vessels larger than those mentioned above, a permit for navigation on the canal may be granted upon application to the Inland Waterways District.

The permit may contain regulations concerning the structure or equipment of the vessel or special provisions pertaining to navigation of the vessel on the canal such as good manoeuvrability, liability to wait or speed restrictions.

The Inland Waterways District may also grant a vessel or equipment with slightly larger dimensions, carrying exceptional cargo, a Trip Let Pass for one passage through the canal.

The Rules and Regulations for Traffic on the Saimaa Canal also contain more detailed directions – among others on the permissible dimensions of vessels in tow and timber rafts using the open canal sections.

NEW VESSELS: When designing new vessels, to be used also in traffic through the Saimaa Canal, the designers are advised to consult the main dimensions and the structure of the vessels with the Inland Waterways District. The conditions of navigation in the canal depend, first of all, on manoeuvrability, though certain other factors are also important.

MAXIMUM PERMISSIBLE SPEED AND TIME OF PASSAGE: The highest permissible speed on the actual channel of the Saimaa Canal is 9 km./hr. for vessels with a draft greater than 3.9 m. For vessels navigating on lesser drafts the speed is graduated within the limits of 9–15 km./hr. depending on the draft. In the lake parts of the Canal the highest permissible speed varies between 15–18 km./hr. depending on the size of the vessel. Detailed regulations available from the Canal Office. The time of passage through the part of the Canal provided with locks (mouth of the Canal on Lake Saimaa–Lock of Brusnitchnoe) is 5 – 8 hours depending on waiting time at locks caused by heavy traffic volumes, and on size of vessels.

SIGNS AND SIGNAL LIGHTS: The sign system of the approach channel of the Saimaa Canal, the canal and the channels on Lake Saimaa is adequate to ensure safe navigation throughout the day, also at night and in poor visibility.

The approach channel is provided with beacons, light buoys and signs in accordance with the Lateral System. The signs have been erected by Russian authorities. The illumination and the signalisation systems of the Saimaa Canal are based on the same principles with beacons and signs, but in the signal system of the canal, sign lanterns, signboards, line markers, water traffic signs and radar reflectors have been used. The colour of sign lanterns is orange on the West bank and green on the East bank of the canal. In marking of the lake channels of Saimaa according to the Cardinal and Lateral System, leading and warning lights, light buoys, range beacons, landmarks and signs have been used.

RADIO: There are two radiotelephone networks for marine use in the sphere of influence of the Saimaa Canal. On the frequency of 160 MHz reserved for actual marine radio communications there is also the Pilot radiotelephone network.

The Pilot radiotelephone network covers all stationary radiotelephone equipment at all locks, at Pilot Stations and in the Traffic Office at Mustola as well as portable radiotelephone apparatus used by canal Pilots. The radiotelephone equipment of the canal Pilots operate on Channel 11 of the international marine radio. The telephone of the Brusnitchnoe Lock and the Lock of Malkia and the radio telephone in the Traffic Office of the canal are also provided with a general calling and safety Channel 16.

When approaching from the sea the vessel makes a radio contact with the Brusnitchnoe Lock by using Channel 11. After this all radio communications required by navigation on the canal also use Channel 11. On Lake Saimaa, radio communications move over to Channel 13 on which the traffic office of the Saimaa Canal and the Pilot Station of Lauritsala are also able to operate.

BERTHING: *PORTS OF LAKE SAIMAA:*

Lappeenranta: Located at the Northern end of the Saimaa Canal. Authority: City of Lappeenranta Harbour Authority, Valtakatu 25, FIN-53100 Lappeenranta. Tel: +358-5-616-2575. Fax: +358-5-415-2387.

Port of Mustola: Located 1.0 km. from Mustola Lock to the South. Room for 7 ships; max. size of the Canal. Railway connection. Terminal stores of 28,000 sq.m., paved storage yard of 65,000 sq.m. and unpaved storage yard of 40,000 sq.m. Electricity, fresh water, services, etc., available.

Port of Rapasaari: Located 6 km. from the entrance of the Canal to the West. Room for one ship; max. size of the Canal. Railway connection. Paved storage yard of 3,000 sq.m. and unpaved storage yard of 3,000 sq.m. Pilotage distance from the Canal 6 miles. Mobile cranes.

Stevedores: Working hours (Monday to Friday) 0700 hrs. – 2300 hrs.

Port of Kaukas: Located 1.5 km. from the entrance of the Canal to the West.

Authority: Kaukas Oy, FIN-53200 Lappeenranta. Tel: +358-5-67-1411. Fax: +358-5-67-14263.

Room for 2 ships; max. size of the Canal. Pilotage distance from the Canal 3 miles.

Joutseno: Located 20 km. from the entrance of the Canal to the East.

Port of Honkalahti: Authority: Honkalahden Teollisuuslaituri Oy, c/o Oy Saimaa Terminals AB, Lastaajanvayla 1, FIN-53420 Lappeenranta. Tel: +358-5-612-5451. Fax: +358-5-612-5459.

Room for one ship; max. size of the Canal. Paved storage yard of 3,000 sq.m. Pilotage distance from the Canal 14 miles.

Port of Pulp: Authority: Yhtyneet Paperitehtaat Oy, Joutseno Pulp, FIN-54120 Pulp. Tel: +358-5-630711. Fax: +358-5-630-7403.

Room for one ship; max. size of the Canal. Paved storage yard of 9,000 sq.m. Pilotage distance from the Canal 13 miles. Mobile cranes.

Stevedores: Working hours (Monday to Friday) 0700 hrs. – 2300 hrs.

Imatra: Located 44 km. from the entrance of the Canal to the East.

Port of Vuoksi: Authority: Enso-Gutzeit Oy, FIN-55800 Imatra, c/o Oy Saimaa Terminals AB, Lastaajanvayla 1, FIN-53420 Lappeenranta. Tel: +358-5-612-5451. Fax: +358-5-612-5459.

Room for 3 ships; max. size of the Canal. Terminal stores of 37,000 sq.m. Paved storage yard of 30,000 sq.m. Railway connection. Fresh water, services, etc., available. Pilotage distance from the Canal 24 miles. Mobile cranes.

Stevedores: Working hours (Monday to Friday) 0700 hrs. – 2300 hrs.

Ristiina: Located 91 km. from the entrance of the Canal to Northwest.

Port of Ristiina: Authority: Schauman Wood Oy, Pellos Mills, FIN-52300 Ristiina. Tel: +358-15-740011. Fax: +358-15-740.

Room for one ship; max. size of the Canal. Paved storage yard of 5,000 sq.m. Pilotage distance from the Canal 49 miles. Mobile cranes.

Stevedores: Working hours (Monday to Friday) 0700 hrs. – 2300 hrs.

Savonlinna: Located 155 km. from the entrance of the Canal to the North.

Port of Savonlinna: Authority: The City of Savonlinna, Olavinkatu 40, FIN-57130 Savonlinna. Tel: +358-15-5711. Fax: +358-15-571-579.

Room for one ship; max. size of the Canal. Paved storage yard of 6,000 sq.m. and unpaved storage yard of 5,000 sq.m. Railway connection. Water, services, etc., available. Pilotage distance from the Canal 84 miles. Mobile cranes.

Stevedores: Working hours (Monday to Friday) 0700 hrs. – 2300 hrs.

Joensuu: Located 348 km. from the entrance of the Canal to the North.

Port of Joensuu: Authority: The City of Joensuu, Harbour Office, Ukonniemen Syvasatama, FIN-80220 Joensuu. Tel: +358-13-267-3545. Fax: +358-13-267-3548.

Room for 5 ships; max. size of the Canal. Terminal stores of 18,000 sq.m. Paved storage yard of 20,000 sq.m. and unpaved storage yard of 60,000 sq.m. Water, services, etc., available. Railway connection. Pilotage distance from the entrance of the Canal 166 miles. Mobile cranes.

Stevedores: Working hours (Monday to Friday) 0700 hrs. – 2300 hrs.

Kitee: Located 270 km. from the entrance of the Canal to the North.

Port of Puhos: Authority: Puhoksen Satama Oy, FIN-82430 Puhos. Tel: +358-13-421151. Fax: +358-13-4211195.

Room for one ship; max. size of the Canal. Terminal store of 3,200 sq.m. and paved storage yard of 5,000 sq.m. Water, services, etc., available. Pilotage distance from the Canal 147 miles. Mobile cranes.

Stevedores: Working hours (Monday to Friday) 0700 hrs. – 2300 hrs.

Varkaus: Located 221 km. from the entrance of the Canal to the North. Authority: City of Varkaus, Harbour Office, P.O.Box 208, FIN-78201 Varkaus. Tel: +358-17-579411. Fax: +358-17-5794641.

Port of Akonniemi: Room for 2 ships; max. size of the Canal. Railway connection. Paved storage yard of 4,000 sq.m. and unpaved storage yard of 5,600 sq.m. Water, services, etc., available. Pilotage distance from the entrance of the Canal 123 miles.

Port of Taipale: Room for 2 ships; max. size of the Canal. Terminal store of 600 sq.m. and paved storage yard of 3,000 sq.m. Water, services, etc., available. Pilotage distance from the Canal 125 miles.

Port of Kosulanniemi: Authority: Enso-Gutzeit Oy, P.O.Box 185, FIN-78261 Varkaus. Tel: +358-17-57711. Fax: +358-17-577-5812.

Room for 3 ships (one quay for raw timber); max. size of the Canal. Railway connection. Terminal store of 3,000 sq.m. and paved storage yard of 5,000 sq.m. Pilotage distance from the Canal 126 miles. Mobile cranes.

Stevedores: Working hours (Monday to Friday) 0700 hrs. – 2300 hrs.

Kuopio: Located 300 km. from the entrance of the Canal to the North. Authority: City of Kuopio, Harbour Office, Tulliportinkatu 52, FIN-70100 Kuopio. Tel: +358-17-185191. Fax: +358-17-185196.

Port of Kumpusalmi: Room for 3 ships (one quay for tankers); max. size of the Canal. Railway connection. Terminal store of 2,500 sq.m., sawn goods shed of 800 sq.m. Paved storage yard of 23,000 sq.m. and unpaved storage yard of 34,000 sq.m. Water, services, etc., availble. Pilotage distance from the Canal 168 miles. Mobile cranes.

Stevedores: Working hours (Monday to Friday) 0700 hrs. – 2300 hrs.

Port of Kelloniemi: Authority: Oy Esso AB, Kelloniemi, FIN-70460 Kuopio. Room for one tanker; max. size of the Canal.

Siilinjarvi: Located 333 km. from the entrance of the Canal to the North. Two small quays owned by Kemira Oy. Tel: +358-17-400111, Fax: +358-17-400218, and Oy Partek Industrials Minerals AB. Tel: +358-17-4643200. Fax: +358-17-4643162.

Ships can be max. size of the Canal, but draft can be 4.2 m.

AUTHORITIES: Finnish Maritime Administration, Inland Waterways District, SF-53420 Lappeenranta, Finland. *Tel:* +358-5-62591. *FAX:* +358-53-6259210.

Finnish Maritime Administration, P.O. Box 158, 00141 Helsinki, Finland. *Tel:* +358-9-18081. *FAX:* +358-9-1808355.

The Viipuri Section of Inflot. *Tel:* Viipuri 52-01. *Telex:* 64121521. *Cables:* Inflot, Viipuri.

TOLKKINEN (Tolkis): 60.20 N. 25.35 E.

APPROACHES: Max. draft of fairway from sea to roads 15.0 m., and from Roads to quay 7.0 m.
PILOTAGE: Pilot arrives from port station at Emsalo (tel. 915-542710). Station equipped with VHF, radiotelephone and radar. Pilot boards between Kalbadagrund and Porvoo Lighthouse. Pilotage distance to port 22 miles.
TUGS: Several tugs available from oil harbour.
BERTHING: Tolkis North Quay, depth 6.5 m. Tolkis South Quay, depth 5.2 m. Oil Harbour (See "Porvoo").
CRANES: Tolkis South Quay equipped with 1 movable crane. Lifting capacity 2.5 tons with grab and 5 tons with hook. Several mobile cranes up to 70 tons available for hire.
STEVEDORES: Working hours from 0700 – 1600 hrs. 3 gangs available Monday to Friday. On Saturday only 1 gang on overtime.
FRESH WATER: Fresh water available. Rate 8 t.p.h.
FUEL: Small quantity available by tank-car.
DENSITY: 1004.
GARBAGE DISPOSAL: Garbage containers are provided alongside the vessel.
WASTE OIL DISPOSAL: Possible by tanker trucks if ordered in advance through the Agent.
SEAMAN'S CLUBS: None.
CURRENCY: Finnish Mark.
AUTHORITY/AGENT: Oy Borga Stuveri Ab., P.O.Box 40, 06101 Borga, Finland. *Tel:* 915-577530. After office hours: *Tel:* 915-5243952. *Telex:* 1758 Clear sf. *FAX:* 915-577285. *Cables:* Stevedore. *Contact:* Captain Christer Lindstrom. (Car Telephone No. 949-555811).

TORNIO: 65.51 N. 24.09 E. (See Plan)

The harbour of Tornio in Roytta is situated about 6 miles S.W. of Tornio. The port is a public port.
DOCUMENTS:
2 Crew Lists.
2 Provisions Lists.
Passenger List.
One set of Bills of Lading, Ship's Papers, Health Documents.
PILOTAGE: Ajos Pilot Station VHF Channels 16 and 13. Pilot to be taken on board by lighthouse "Kemi 2" in position 65° 30.3' N., 24° 22.5' E., 10 miles from Ajos.
ANCHORAGES: See "Kemi".
MAX. SIZE: At same time there can be 2 vessels of 90 m. – 160 m. length, draft 8.0 m. alongside the main quay.
RADIO: Helsinki Radio/OHX or Harnosand Radio, Sweden/SAH.
TUGS: Tugs are only available during Winter. If they are needed in Summer, they can be ordered from Kemi (12 hours before arrival).
BERTHING: Depths alongside 7.10 m. – 8.00 m.
CRANES: 36 ton crane with container facilities; mobile crane of 200 tons; 5×80 tons and 5×40 tons quay cranes.
STEVEDORES: Ordered by Agent (Telex 35 – 12 Kandi Fi). Agent must be given 24 hours ETA. Normal working time 0700 – 1100 hrs., 1200 – 1600 hrs. and 1600 – 2400 hrs. (Two shifts).
DENSITY: Fresh water.
FRESH WATER: Available by pipeline.
FUEL: Ordinary fuel by lorries from Kemi.
CONSULS: Sweden Tel. (9) 698-433700.
REPAIRS: No docks but accommodation for small repairs.
OPENING/CLOSING HATCHES: By the ship's crew.
CUSTOMS ALLOWANCES: 1 litre spirits, 1 litre wine, 2 litres beer and 200 cigarettes.
AIRPORT: At Kemi, 20 km. from Tornio; served by Finnair.
TIME: GMT plus 2 hours. GMT plus 3 hours in Summer.
GARBAGE DISPOSAL: Normal garbage service available.
WASTE OIL DISPOSAL: Service available.
POLICE/AMBULANCE/FIRE: Tel: 112. Salvage Tel: (0) 16-82074.
AUTHORITY: Tornion Satamakonttori, City Hall, 95400 Tornio, Finland. *Tel:* (0) 16-447419. *FAX:* (0) 16-447436. *Contact:* M. Pajunen, Harbour Master.

TURKU (Abo): 60.27 N. 22.15 E. (See Plan)

DOCUMENTS: See "Oulu".
PILOTAGE: Telegram to Agent with 24 hours ETA to sea Pilot Station.
There are 4 entrances:
Uto: Fairway 10 m., Radio Beacon, VHF, coastal radar, telephone via Hanko or Mariehamn Radio. A 13.0 m. channel is to be established between Uto and Turku.
Nyhamn: 8.2 m. on Rodhamn, radio beacon.
Isokari-Enskar: 7.1 m., radio beacon, VHF radio.
Hanko: 7.3 m., radio beacon, telephone via Hanko Radio.
Lighthouse and Pilot at each.
All fairways sheltered. No tide. Channel to main harbour 10 m.
When approaching port ETA by VHF to Port Information Centre, international VHF Channel 12 for Harbour Pilot. Cutter whilst in action, same Channel, but takes orders from Port Traffic Control Centre only. Pilot cutters painted red with white circular field marked "L" on the bows. Flying flag in daylight, showing red and white lights vertically at night. Coming out when required to Pilot Station 0.75 miles from Main Harbour.
All ships arriving from sea will get necessary information from Sea Pilot, whose service is compulsory. Harbour Pilot not compulsory.
ANCHORAGES: Outer anchorage at Bay of Airisto, 2 miles from Port, 15 m. – 18 m.
MAX. SIZE: Maximum draft in Commercial Harbour 11.0 m. fresh water. In Oil Harbour 9.0 m. in fresh water. Max. length 230 m. and breadth of minor importance. No tides.
HEALTH: International Quarantine flag required in case of suspected disease or fever including preliminary report by VHF, otherwise, ask Agent.
RADIO: Hanko Radio and Mariehamn Radio. In addition these have telephone and VHF service. Local telephone network on VHF, Mariehamn on Channels 26 or 23 and Hanko on Channel 2.
TUGS: Advisable to apply for tugs in advance. 6 tugs available.
BERTHING: Priority given to arriving and departing passenger ships on regular lines. 11 Roll-on/Roll-off berths. One berth for train ferry.
Total length of quays 5,145 m.
Berth depths 6.5 m. – 11.0 m.
The container terminal in West Harbour, quay length 500 m.
CRANES:

No.	*Capacity* (tons)	*Type*
9	5	Movable
9	6	Movable
1	60	Movable
1	40	Multipurpose, movable.

STEVEDORES: Agent should be well informed about ETA and Master's Requirements. Normal working hours: 0630 – 1030, 1100 – 1500, 1500 – 2300. Saturdays and days preceding public holidays 0700 – 1530 hrs. The Port Office: 0900–1700 hrs. Saturdays and days preceding public holidays closed.
MEDICAL: All medical and hospital facilities available. No special requirements regarding inoculations, etc.
TANKERS: No special requirements. Small slop discharge facilities. 1 berth, depth 9.0 m. for larger ships.
DENSITY: 1004.
FRESH WATER: From pipelines along berths. Approx. 12.00 fim. per ton.
FUEL: Most grades available. No advance notice necessary if from motor vehicles. In case of greater quantities, from Oil Harbour only. This requires advance notice to Agent.
CONSULS: The following countries are represented by Consuls or Vice-Consuls in Turku: Austria, Belgium, Denmark, France, Germany, Great Britain, Greece, Honduras, Iceland, Italy, Norway, Portugal, Russia, Spain, and Sweden.
REPAIRS: All types of repairs possible.
DRY DOCKS: Graving dock: Length 183 m.×25.6 m.×8.3 m.
Floating dock: 155 m.×23.5 m.×7.0 m. with lifting capacity of 8,500 tons. Owner: Turku Repair Yard Ltd. Tel: (21) 638711. Telex: 62484 Try SF. Fax: (21) 6387250.
GANGWAY/DECK WATCHMEN: Gangways to be rigged out so that they do not obstruct quay crane movements. Watchmen customary, but not necessarily hired.
OPENING/CLOSING HATCHES: Normally carried out by stevedores.
REPATRIATION: Good connections everywhere.
AIRPORT: 10 km. from port, regular lines.
TIME: GMT plus 2 hours.

HOLIDAYS: New Year's Day (January 1st); Good Friday; Easter Bank Holiday; May 1st; Midsummer Day; All Saints' Day; Independence Day (December 6th); Christmas Day; (December 25th); Boxing Day (December 26th).
POLICE/AMBULANCE/FIRE: Dial 112.
TELEPHONES: Ships' telephones available.
IDENTIFICATION CARDS: Not needed.
GARBAGE DISPOSAL: Service available. Charges: Minimum U.S.$ 32.50 – maximum U.S.$ 78.50, or U.S.$ 0.04 per net register ton.
WASTE OIL DISPOSAL: All Finnish ports have a special agreement with Ekokem Oy for waste oil disposal or similar service. Charges as per Ekokem Tariff.
SEAMAN'S CLUBS: Finnish Seaman's Service. Tel: 21-304995.
CURRENCY: Finnish Mark.
GENERAL: Ice-breakers maintain Winter traffic.
DEVELOPMENTS: New container crane will be available December 1996.
AUTHORITY: Port of Turku Authority, Linnankatu 90, FIN-20100 Turku, Finland. *Tel:* 358-21-267411. *Teletex:* 244-1021502 tuport. *FAX:* 358-21-2674125. *Contact:* Captain Tom Joutsia, Harbour Master.

UUSIKAUPUNKI: 60.48 N. 21.24 E.

DOCUMENTS:
Agent will prepare during clearance:
2 Ship's Report.
1 Declaration List, Arrival (Board of Navigation).
1 Declaration List, Departure (Board of Navigation).
To be prepared before Arrival:
2 Provision Lists (own provision of the ship).
2 Special Lists (must be signed by each member of the crew).
2 Crew Lists.
Bill of Admeasurement.
Certificate of Registry.
Ice-class Certificate (during Winter, 1st December – 30th April, issued by hull surveyor).
Bill of Lights (issued by Customs).
APPROACHES: 3 fairways lead to harbour through sheltering archipelago; Uto-Uusikaupunki, 78 miles; Isokari-Uusikaupunki, 13 miles; Kylmapihlaja-Uusikaupunki, 24 miles.

Good sheltered anchorage in the roads. Depth of fairways 10.0 m.
PILOTAGE: Embark Pilot at Isokari or Uto Pilot Stations. Distance through archipelago Isokari-Uusikaupunki 13 miles, Uto-Uusikaupunki 78 miles. Under normal circumstances first fairway recommended. During Winter months, if ice-situation difficult in Gulf of Bothnia, traffic goes via Uto.

Both Pilot Stations equipped with radio 2182 kHz, Channels 16 and 24, VHF duplex-Channels 18, 20 or 22 and radar. Pilot-boat red, with letter "L" and fitted with VHF Channels 13 and 16. Pilot boards usually between Sandback-Isokari, to where "Hauteri" light leads in line 134.5° – 314.5° (T). Notice of ETA at least 4 hours prior reaching station.
ANCHORAGES: Many areas of safe anchorages in Archipelago. Pilot advises.
RESTRICTIONS: No entry restrictions. No tide. During North and East winds sea-level can fall about 40 cm. below normal, which may sometimes delay deep loaded vessels reaching port.
HEALTH: Pratique not necessary. In the event of any disease/fever on board or in last port of departure, vessel has to inform before arrival, hoist quarantine-flags, or in darkness 2 lights, red light above white, showing all round horizon.
RADIO: Mariehamn Radio OFH; Helsinki Radio OHG.
TUGS: 2 available; normally tugs join vessel at port, ship's lines used.
BERTHING: *Kemira Quay:* 340 m. long, owned by fertiliser factory Kemira Oy, has depth 10 m. alongside, two 8 ton cranes, two discharging pipes, one for discharging ammonia at minus 32°C and one for sulphur acid. Discharging capacity depending material 140-170 tons/hour/crane and loading/discharging bags 45-50 tons/hour/crane.

Esso Quay: 40 m. long, owned by Oy Esso AB, depth in channel and alongside 5 m. Terminal is used for discharging LP gas.

Telakka Quay: 140 m. long, owned by Uudenkaupungin Telakka Oy, has depth alongside 5 m. There is also a floating dock with 5,000 ton capacity.

Hepokari Pier: 80 m. long and 18 m. breadth, owned by town. Channel and alongside depth 7 m. There is terminal on South side for Ro-Ro traffic.
STEVEDORES: Available. Contact Agent.
MEDICAL: Hospital facilities, vaccination, certificates, etc., available. Contact Agent.
TANKERS: For discharging and loading liquid ammonia – Marine Loading arm "Luceat/Chicksan, Type RCMA" 8 in., ASA 300.
DENSITY: No tide, density 1004.
FRESH WATER: Water-hoses, about 20 t.p.h.
FUEL: Fuel available, contact Agent.
CONSULS: None.
REPAIRS: All types of deck and engine repairs possible.
DRY DOCKS: Uudenkaupungin Telakka Oy has a floating dock, lifting power 5,000 tons, draft 6.1 m., breadth 19.6 m., and length 130 m.
GANGWAY/DECK WATCHMEN: Not necessary.
OPENING/CLOSING HATCHES: Normally carried out by crew.
CERTIFICATES: All certificates according to International Convention for the Safety of Life at Sea, Class Certificate, etc.
CUSTOMS ALLOWANCES: Tobacco: 200 cigarettes per each member of the crew. Wine and/or Spirit: 1 bottle wine or spirit per each member of the crew.
CARGO GEAR: No additional requirements.
REPATRIATION: Facilities exist for effecting crew changes and arranging any necessary repatriations.
AIRPORT: Distance to Turku Airport about 90 km. Airport is served by regular Airlines.
TIME: GMT plus 2 hours. GMT plus 3 hours in Summer.
HOLIDAYS: Official Holidays are: New Year's Day (January 1st); May 1st; Midsummer Day (Saturday between June 20th and June 26th); Independence Day (December 6th). Usually no work on those days.
POLICE/AMBULANCE/FIRE: Police 10022; Ambulance 112; Fire 112.
TELEPHONES: Available.
SHORE LEAVE: Crew members are allowed ashore.
IDENTIFICATION CARDS: Not needed.
AUTHORITY: Uusikaupunki Harbour Office, Satamantie 9, FIN-23500 Uusikaupunki, Finland. *Tel:* +358 (2) 84515299. *FAX:* 358 (2) 84515294. *Contact:* Esa Soini, Acting Harbour Master.

VAASA: 63.06 N. 21.36 E. (See Plan)

DOCUMENTS:
3 Crew Lists.
3 Passenger Lists.
2 Customs Documents.
2 Health Documents.
5 Manifests.
5 Bills of Lading.
PILOTAGE: Pilot vessel not cruising in open sea. Pilot meets vessels at boarding ground (63° 09.8' N., 20° 45.0' E.).

Pilot signals: Letter "G" as flag, light or sound. Radio telephone call: Pilots watching 24 hours on VHF Channels 16 and 13.

Pilot vessel: 30 ft. motor yacht with wheelhouse and radar. Hull red all over with letter "L" painted on bow.

Harbour Pilot available from Vaasa Pilot Station Tel. 527725.
ANCHORAGES: To Pilot's advice.
RESTRICTIONS: No locks. Fairway lit all the way. Depth of Channel 9.0 m.

No tide, but water level may be reduced by up to 30 cm. in Spring and early Summer, or increased by 30 cm. in Autumn.
MAX. SIZE: Depth alongside piers up to 9.0 m. At the Oil Harbour, max. recommended LOA is 185 m., depth 9.0 m.
HEALTH: See "Documents" – no restrictions. Hospital and Doctor for any purpose available.
RADIO: Helsinki Radio – 2803 kHz.
RADAR/VHF: No radar service in port area. Pilot vessels at sea Pilot Stations equipped with radar. VHF radios on Pilot Stations, harbour tug-boat and Harbour Office. Channels 16, 13 and 12.
TUGS: Harbour tug boat and icebreaker "Hercules" 1,200 h.p., 750 kW. available 24 hours. Radio telephone/VHF available. Charge according to size.
BERTHING: 2 piers of 180 m. length and the Reins Quay of 240 m. length. Depth 5.0 m. to 9.0 m. New Coal Quay length 145.9 m., depth 9.0 m. There are 3×5 ton cranes on the South Pier.

The Ferry Pier, 130 m. and 145 m. length, depth alongside 5.5 m. – 6.5 m. with berths for Ro/Ro traffic (4 Ro/Ro ramps).
CRANES: 3×5 tons and mobile cranes up to 200 tons.
STEVEDORES: ETA as usual according to C/P to Agent, etc.
MEDICAL: If serious illness advance notice to Agent necessary.
TANKERS: The Oil Harbour is at Vasklot. Depth alongside 9.0 m. Tankers discharge through three arms of 500 mm. and 400 mm. diameter. Storage capacity 500,000 cu.m.
DENSITY: 1004-1006. No tide.
FRESH WATER: Available, no limit. Direct from quay-side, through pipes, rate about 25 t.p.h.
FUEL: All grades of bunker fuel available – direct from oil jetty or by lorries to berth.
FIRE PRECAUTIONS: Dry cargo ships; no smoking in holds. Tankers: usual restrictions. Tankers with petrol cargo not allowed to berth at dry cargo piers.
CONSULS:
Belgium
Denmark
France
Iceland
Netherlands
Norway
Sweden
United Kingdom
REPAIRS: Nearest dry dock at Rauma.
GANGWAY/DECK WATCHMEN: Not compulsory, ship's own crew can be used.
OPENING/CLOSING HATCHES: Normally carried out by crew.
CERTIFICATES:
Safety Equipment Certificate.
Stability Certificate.
Load Line Certificate.
Derrick and Hoisting Gear Test Certificate.
Derat Certificate.
Nationality Certificate.
Measurement Certificate.
Ice-class Bill.
CUSTOMS ALLOWANCES: Tobacco: Max. 200 cigarettes per man or 50 gm. of tobacco. Wine/Spirit: Maximum 1 bottle of each per man to be opened and used on board only.
CARGO GEAR: Cargo gear test book to be in order – all gear to be tested within a year otherwise risks for breaks in discharging/loading.
REPATRIATION: Can be carried out easily.
AIRPORT: Vaasa Airport (about 8 miles from town) served by regular airlines, domestic and abroad, Stockholm, U.K., Continent, etc.
TIME: Local time GMT plus 2 hours. GMT plus 3 hours in Summer.

HOLIDAYS: Working hours in port: 0700 – 1100 hrs., 1200 – 1600 hrs. Monday to Friday, Saturday: 0700 – 1100 hrs. Sunday free. Working days in port: Monday to Saturday. Working days ashore: Usually Monday to Friday. All banks closed on Saturday. Shops open all weekdays. Other holidays: 6th December – Independence Day – Christmas, etc., as usual.
TELEPHONES: Can be arranged on board.
SERVICES: Compass adjusting available.
POLICE/AMBULANCE/FIRE: Police 10022; General Emergency No. 112.
IDENTIFICATION CARDS: Not needed.
GARBAGE DISPOSAL: Garbage can be disposed of into dustbins which are provided on every quay. Plastic bags for this purpose can be provided. Charges are 0.18 FIM/NRT. Minimum charge 180 FIM, max. 480 FIM.
WASTE OIL DISPOSAL: Collection service available. Charges depend on amount of oil in water. Contact Sailio Cistern Puts Raukko & Wiitala, Tel: 440210.
SEAMAN'S CLUBS: None.
CURRENCY: Finnish Mark (FIM).
DELAYS: Only Winter time when Government icebreaker is arranging, waiting or assisting in outbound convoys of ships.
GENERAL: Ships approaching port of Vaasa in Winter time (January-May) when sea area icebound, have to call any of Government icebreakers operating in area or to inform Harbour Authorities of exact ETA – engine power, size and nationality, and whether strengthened for ice or not. Call signs, etc., for Government icebreaker can be obtained from nearest coast radio station.
AUTHORITY: Vaasa Harbour Office, P.O. Box 2, SF-65101 Vaasa, Finland. *Tel:* 358-61-3251111. *FAX:* 358-61-3254514. *Contact:* Captain Lars Holmqvist, Port Director. Osmo K. Kivilehto, Harbour Master (Tel: 358-61-3254505).

VEITSILUOTO: 65.42 N. 24.37 E. (See Plan)

DOCUMENTS: Usual documents for Finnish ports. In addition the Harbour Master requires a copy of the Crew List.
PILOTAGE: Inwards compulsory for vessel in foreign trade. Boarding about 8 miles before Ajos. Ajos Pilot Station may be contacted on VHF Channel 16/13.
ANCHORAGES: Good holding ground about 1 mile from Rautakallio and by Koivuhauta 2 miles from harbour entrance.
RESTRICTIONS: No tide. Entry by day or night. Approach Channel, depth 7.1 m. It is recommended that vessels longer than 150 m. and with a minimal keel clearance avoid berthing under unfavourable weather conditions.
MAX. SIZE: See "Berthing".
VHF: Make initial contact on Channel 16/13.
HEALTH: See "Oulu".
TUGS: Available when required, charges according to net tonnage. Use ship's lines.
BERTHING: Total length of Quays 574.5 m.
Berth No. 1: Length 135.5 m. Depth 7.1 m.
Berth Nos. 2 and 3: Total length 209 m. Depth 7.1 m.
Berth Nos. 4 and 5: Total length 230 m. Depth 7.1 m.
Berth No. 6: Length 120 m. Depth 7.1 m.
Berth No. 7: Length 130 m. Depth 7.1 m.
Max. draft at all berths 7.1 m.
CRANES: Load/discharge by ship's gear or mobile cranes.
SPECIALISED CARGO HANDLING FACILITIES: 4 Ro/Ro berths, no special equipment.
STEVEDORES: Ordered by Agent.
MEDICAL: Hospital at Kemi. Masters to advise if medical attendance required aboard.
FRESH WATER: Available at short notice.
FUEL: Ordinary fuel, diesel and gas oil. Deliveries by lorries only.
FIRE PRECAUTIONS: No special precautions. Company's fire-fighting corps.
CONSULS: At Kemi.
REPAIRS: Available at Kemi.
GANGWAY/DECK WATCHMEN: Available, ordered by Agent.
OPENING/CLOSING HATCHES: By crew.
AIRPORT: At Kemi, approx. 15 km. from port.
POLICE/AMBULANCE/FIRE: The nearest emergency services are available through the Alarm Centre of the Veitsiluoto Company, telephone number 22. If you phone outside the Company, call first 8141 (the number of the Company), and then ask for number 22.
SERVICES: Radar repairs possible in Kemi.
SHORE LEAVE: Crew members allowed ashore.
IDENTIFICATION CARDS: Not required.
REGULATIONS: Port regulations delivered to ship on arrival on request.
DELAYS: Not normally expected.
AUTHORITY: Port of Kemi Authority, Ajoksentie, FIN-94900 Kemi, Finland. *Tel:* 358-698-282017. *Telex:* 3614 Vto Sf. *FAX:* 358-698-282003. *Contact:* Captain Markku Toivonen, Harbour Master.

NOTES

Please also advise Shipping Guides Ltd.

France

GENERAL

NOTICE TO MARINERS: No. 2005/81

Regulations concerning vessels laden with hydrocarbons (including oil) or other dangerous cargoes approaching French ports.

Regulations have been promulgated by the French Authorities concerning vessels laden with hydrocarbons (including oil) or other dangerous cargoes in the approaches to French Mediterranean ports and the ports in Corse.

Any such vessel intending to enter French territorial waters (including Corse) from seaward, or to sail from a French port or anchorage, is required to signal certain details to the Prefet Maritime de la Mediterranee at Toulon, 6 hours beforehand. Should there be any subsequent change in the vessel's intended movements, or in her material state, a further signal should be made. All such vessels are required, throughout their stay in French territorial waters, except when lying alongside in port, to maintain radio watch on Channel 16 or the local frequency, if applicable.

Any such vessel which suffers significant damage at sea, or the threat of damage, from whatever cause, while within 50 miles of the French coasts, is required to signal certain details to the Prefet Maritime at Toulon. Subsequent developments must be reported, including the time of requesting assistance, the expected time of its arrival and the actual time of arrival. Any ship joining the damaged vessel to render assistance is required to signal details to the Prefet Maritime, and to render reports on the casualty on arrival. These signals are informative and do not constitute a request for rescue or assistance.

For details of all signals required above see *Admiralty List of Radio Signals, Vol. 6.*

Vessels exceeding 1,600 gross tons laden with hydrocarbons (including oil) or other dangerous cargoes must not approach the French coasts within 7 miles, unless instructed to do so by the French authorities or within the port approach channels listed below. Exceptions to this rule are made in the channel between Corse and Capraia, where the minimum distance is reduced to 5 miles, and in the Bonifacio Strait.

Such vessels approaching, or departing from, the ports of Port-la-Nouvelle, Sete, l'Espiguette, Golfe de Fos, Marseille, Toulon, Ajaccio, Porto Vecchio, Solenzara, Lucciana and Bastia are required to use the charted port approach channels. When in these channels such vessels are priority vessels and must display Flag "B" of the International Code by day, and exhibit one red light, visible all round, at night. The provisions of Rule 9 of the *International Regulations for Preventing Collisions at Sea (1972)* explicitly apply.

NOTICE TO MARINERS: No. 2379/81.

Regulations concerning tankers laden with hydrocarbons and vessels carrying dangerous cargoes navigating in the approaches to the N. and W. coasts of France.

The French authorities have issued the following regulations concerning the above mentioned vessels.

(a) **Laden vessels exceeding 1,600 tons gross** must keep at least 7 nautical miles from the French coast, unless otherwise instructed by a Prefet Maritime, except within:–

The N.E.-bound lane of the Dover Strait traffic separation scheme.

Race of Alderney.

The access channels to the following ports:

Dunkerque, Calais, Boulogne, Dieppe, Fecamp, Le Havre-Antifer, Rouen, and the ports of the lower Seine, Caen/Ouistreham, Cherbourg, Granville, Val de Saire transhipment area, Saint-Malo, Saint-Brieuc, Roscoff, Brest, Douarnenez, Concarneau, Lorient, ports of the Loire, Les Sables-d'Olonne, La Rochelle/La Pallice, Ports of the Gironde, Bayonne.

(b) **Vessels intending to enter French territorial waters (12 miles) or to sail from a French port or anchorage,** are required to inform Prefet Maritime de la Manche et de la Mer du Nord (for North Sea coast and English Channel – East of a line joining positions 48° 53' N., 02° 20' W. and 50° 02' N., 05° 40' W.) or Prefet Maritime de l'Atlantique (for Atlantic Coast and English Channel West of the above mentioned line) 6 hours beforehand, either by radio or through the port authority, giving the following details:–

Prefix	SURNAV FRANCE
A	Name, nationality and call sign.
B	Date and time (GMT) suffixed "Z".
C	Position.
E	Course.
F	Speed.
I	Destination.
J	Date, time (GMT) and position of entering French territorial waters or of getting underway.
K	Date, time (GMT) and position of leaving French territorial waters, or of arriving at destination in French waters.
N	RT watch being maintained.
P	Draft.
Q	Cargo: type (as defined in MARPOL 73) and quantity.
R	Whether manoeuvring ability is normal or impaired by defects in propulsion, steering or anchoring equipment.
S	Whether operational fitness is normal or impaired by defects in radar, radio, safety or ballasting equipment.

Any subsequent changes should be reported immediately.

Constant listening watch must be maintained on Channel 16, or a frequency specified for this purpose by a local authority throughout the period the vessel is in French territorial waters, except when lying alongside in a port.

(c) **Vessels within French territorial waters suffering from an impairment of normal navigational or manoeuvring capability,** are required to take such an action as the Prefet Maritime may require to ensure, the safety of navigation and to avoid the threat of pollution.

(d) **Vessels within 50 nautical miles of the French coast suffering damage or having defects,** are required to report to Marine Brest and Marine Cherbourg any occurrence (collision, stranding, incident on board or external) which could result in damage to the vessel or cargo.

Any vessel going to the assistance of the damaged vessel is also required to make a report.

These reports are informative and do not constitute a request for rescue or assistance.

Requests for assistance, if required, should be made in accordance with international regulations, keeping Marine Brest and Marine Cherbourg informed.

The damaged and the assisting vessel are required to take such action as the Prefet Maritime may direct with a view to avoiding danger to navigation and threat of pollution, whether they are in French territorial waters or international waters.

Form of signalled report to be made by the damaged vessel:–

Prefix	SURNAV AVARIES
A	Name, nationality and call sign.
B	Date and time (GMT) suffixed "Z".
C	Position.
E	Course.
F	Speed.
I	Destination.
J	Time (GMT) and nature of a call for assistance or towage.
K	Name of assisting vessel, if present, or ETA (GMT).
M	Name and telegraphic address of Owner, Charterer and any French consignee.
N	Radio watch being maintained.
P	Draft.
Q	Cargo: type (as defined in MARPOL 73) and quantity.
R	Nature of damage or development of the situation.
T	Any other information.

Subsequent developments are also to be reported.

Form of signalled report to be made by the assisting vessel:–

Prefix and A to I as above, but details applicable to the assisting vessel.

J	Date, time (GMT) and position of casualty.
K	Name, nationality and call sign of casualty.
L	Course of casualty, or destination, if known.
M	Speed of casualty, if known.
N	Radio watch being maintained.
Q	Cargo of casualty if known.
R	Damage of casualty.
T	Any other information.

Further reports on the casualty are required after arrival.

(e) **Laden vessels exceeding 1,600 tons approaching or departing from the following French ports:–**

Saint-Malo, Saint-Brieuc, Roscoff, Brest, Douarnenez, Concarneau, Lorient, ports of the Loire, Les Sables-d'Olonne, La Rochelle/La Pallice, ports of the Gironde, Bayonne are required to comply with the following regulations:–

To use the authorised approach and entry channels and waiting areas.

Inform the Port Authority on entering the approach channel.

When in these channels and waiting areas, display Flag B of the International Code of Signals by day and exhibit one red light at night, clearly visible all round.

Anchoring or waiting in the approach and entry channels is not permitted except in emergency, in which event the Port Authority must be informed as soon as possible.

Vessels crossing approach or entry channels should do so as nearly as possible at right angles to the channel and well clear of vessels in the channel.

These regulations do not in any way absolve Masters and Pilots from the requirement to comply with the International Regulations for Preventing Collisions at Sea (1972).

For further details of signals required by the above regulations see *Admiralty List of Radio Signals Vol. 6.*

Similar messages must be sent to Marine Toulon by vessels in the Mediterranean.

Navigation in French Territorial Waters:

Any ship as specified above must keep permanently 7 nautical miles off the French Coast, except:

1. When entering a French harbour, in the specified channel leading to this harbour;
2. In the N.E. lane of the Dover Straits Separation Scheme;
3. In the Channel of Corsica between the Italian island of Capraia and the Corsican shore, where the limit is reduced to 5 nautical miles.

DISTRESS, SEARCH AND RESCUE:

Search and Rescue operations are controlled by the following Centres:

Re: (1) – (2) – (3) – See "Notes" below.

1. Cross Gris-Nez (50° 52' N., 01° 35' E.) covers the North coast of France from the Belgian border to Cap d'Antifer (49° 41' N., 00° 10' E.). The following stations maintain a continuous watch:
   Dunkerque (51° 03' N., 02° 21' E.) (2)
   Gris-Nez (2) (3)
   Saint-Frieux (50° 37' N., 01° 36' E.) (2)
   Ailly (49° 55' N., 00° 58' E.) (2).

2. Cross Jobourg (49° 41' N., 01° 54' W.) covers the Northwest coast of France from Cap d'Antifer to Mont-Saint-Michel (48° 38' N., 01° 31' W.). The following stations maintain a continuous watch:
    - Antifer (49° 41' N., 00° 09' E.) (2)
    - Ver-sur-Mer (49° 20' N., 00° 34' W.) (2)
    - Gatteville (49° 24' N., 01° 16' W.) (2)
    - Jobourg (2) (3)
    - Granville (48° 52' N., 01° 35' W.) (2)
    - Roches-Douvres (49° 06' N., 02° 49' W.) (2).
3. Cross Corsen (48° 24' N., 04° 47' W.) covers the Northwest coast of France from Mont-Saint-Michel to Pointe du Raz (48° 02' N., 04° 44' W.). The following stations maintain a continuous watch:
    - Cap Frehel (48° 41' N., 02° 19' W.) (2)
    - Ile de Batz (48° 54' N., 04° 02' W.) (2)
    - Le Stiff (48° 28' N., 05° 03' W.) (2)
    - Corsen (2) (3)
    - Ile de Sein (48° 03' N., 04° 52' W.) (2).
4. Cross Etel (47° 40' N., 03° 12' W.) covers the West coast of France from Pointe du Raz to the Spanish border. The following stations maintain a continous watch:
    - Penmarch (47° 48' N., 04° 22' W.) (2)
    - Etel (2)
    - Belle Ile (47° 19' N., 03° 14' W.) (2)
    - Kerrouault (47° 30' N., 02° 21' W.) (2)
    - Armandeche (46° 29' N., 01° 48' W.) (2)
    - Ile d'Yeu (46° 43' N., 02° 23' W.) (2)
    - Chassiron (46° 03' N., 01° 25' W.) (2) (see also Sous-Cross-Soulac).

    The coast Radio Station Le Conquet watches 2182 kHz J3E for Etel. This Cross is associated with the Cospas/Sarsat Mission Control Centre at Toulouse. It also receives distress messages sent through Immarsat-A/C.
5. Sous-Cross Soulac (45° 31' N., 01° 07' W.), operating under the authority of Cross Etel, covers the Southwest coast of France from Lat. 46° 20' N. to the Spanish border. The following stations maintain a continuous watch from June 15th to September 15th (out of this period they are remotely controlled by Cross Etel):
    - Soulac (2)
    - Cap Ferret (44° 39' N., 01° 15' W.) (2)
    - Contis (44° 06' N., 01° 19' W.) (2)
    - Biarritz (43° 30' N., 01° 33' W.).
6. Sous Cross Agde (43° 18' N., 03° 30' E.), operating under the authority of Cross La Garde, covers the Mediterranean coast of France from the Spanish border to Long. 04° 20' E. The following stations maintain a continuous watch from the end of June to the beginning of September (out of this period they are remotely controlled by Cross La Garde):
    - Pic Neoulos (42° 29' N., 02° 56' E.) (2)
    - Agde (2).

    The Coast Radio Station Marseille watches 2182 kHz J3E for Sous-Cross Agde.
7. Cross La Garde (43° 06' N., 05° 59' E.) covers the Mediterranean coast of France from the Spanish border to the Italian border. The following stations maintain a continuous watch:
    - Planier (43° 12' N., 05° 14' E.)
    - La Garde (2) (3)
    - Mont Coudon (43° 09' N., 06° 00' E.) (2)
    - Pic de l'Ours (43° 28' N., 06° 54' E.) (2) (see also Sous-Cross Agde and Sous-Cross Corse). This Cross is associated with the Cospas/Sarsat Mission Control Centre at Toulouse.
8. Sous-Cross Corse (41° 55' N., 08° 46' E.), operating under the authority of Cross La Garde, covers the coast of Corse. The following stations maintain a continous watch:
    - La Punta (47° 57' N., 08° 42' E.) (2)
    - Serra di Pigno (42° 41' N., 09° 24' E.) (2)
    - Antisanti (42° 10' N., 09° 20' E.) (2)
    - Aspretto (41° 55' N., 08° 46' E.) (2) (3).

Notes:
(1) Cross: Centre Regional Operationnel de Surveillance et de Sauvetage (MRCC).
Sous-Cross: Sub Cross (MRSC).
(2) Watch on VHF Channel 16.
(3) Watch on 2182 kHz J3E.

VISAS: Foreign visitors (except EEC nationals and Swiss nationals) are required to be in possession of visas before arrival in France.

Companies sending foreign crewmen to join vessels in French ports should arrange visas through French Consulates.

GARBAGE/WASTE OIL DISPOSAL: The MARPOL Convention rules apply to all reception facilities. Advance notice to the reception facilities is not mandatory, but is highly recommended. Charges depend on the quantity and quality of substances to be delivered. Further information on reception facilities should be requested if required from the relevant port authorities. Should any deficiencies/ inadequacies be observed in the system they should be reported to Direction des Ports et de la Navigation Maritimes, 3 Place de Fontenoy, 75700 Paris.

CUSTOMS: *Shipmaster's Report:* September 1994.

The French Customs Regulations have been changed as follows:

> The Stores and Provisions List now has to be made out in triplicate.
> The attached Crew Declaration (on the new form on the backside of the Stores and Provisions List) also to be made out in triplicate.

Vessels may open the bonded store between French ports (as in our case between Dunkirk and Port Jerome), but the above mentioned lists have to be submitted in both the first and the following port(s).

AJACCIO, Corsica: 41.55 N. 08.44 E. (See Plan)

DOCUMENTS:
Cargo Vessels:
1 Stores List.
1 Personal Effects List.
1 Crew List.
1 Passenger List.
2 Manifests.
Safety Certificates.
Ship's Register.
Passenger Vessels:
1 Stores List.
1 Personal Effects List.
3 Crew Lists.
3 Passenger Lists.
Ship's Register.
2 Manifests.
Safety Certificates.

PILOTAGE: No advance notice required for regular ships. Vessels call Pilot with 3 blasts on ship's siren. Pilot boat flies usual Pilot flag. Pilot joins approaching vessel at a line Isolella/Chapelle des Grecs. Available 24 hours a day. Pilot boat has VHF Channel 6.

ANCHORAGES: Several safe anchorages in harbour which can be indicated by Pilot.

MAX. SIZE: Length 200 m., draft 8.5 m. At anchor, no limit.

HEALTH: Health Officer boards on arrival. Pratique automatic unless suspected contagious disease on board, when it is necessary to notify Agent or Health authorities in advance by cable.

RADIO: ETA cables, etc., via Grasse Radio, Marseilles Radio or Ajaccio Radio. VHF Channel 24.

VHF: Port Captain on Channel 6. Call Sign "Ajaccio Port".

TUGS: None available.

BERTHING: Regular vessels have priority at all berths. 6 Ro/Ro berths.

CRANES: Up to 20 tons.

STEVEDORES: Advice should be sent 24 hours prior to arrival. French vessels have priority of labour.

MEDICAL: Advance notice required Tel: 95.51.40.40. All hospital facilities available. Except in the case of an epidemic in any country from which the vessel has sailed, no inoculations or vaccinations are necessary.

TANKERS: Max. draft 6 m., length 110 m. Preferably with bow thrust unit. Gas tankers also preferable with bow thrust unit.

FRESH WATER: Available at all berths, except Gas Berth.

FUEL: Ordinary grades only, 48 hours notice required. Delivered by tanker trucks to quay side.

CONSULS: Sweden and Austria.

REPAIRS: Minor repairs can be carried out.

GANGWAY/DECK WATCHMEN: Not necessary.

OPENING/CLOSING HATCHES: Normally carried out by crew.

CERTIFICATES: Ship's Register and Safety Certificates.

CUSTOMS ALLOWANCES: Tobacco, 250 gm. or 200 cigarettes per member of crew. Wine, 2 litres. Spirits, 1 litre.

SURVEYORS: None.

DRY DOCKS: None.

REPATRIATION: Can be arranged by ship's Agents.

AIRPORT: 8 km. from port. Served by daily flights (4 flights to Nice by C.C.M., 4 flights to Marseille by C.C.M. and 2 flights to Paris by Air France).

TIME: GMT plus 1 hour in Winter. GMT plus 2 hours in Summer.

HOLIDAYS: 1st January; Easter Monday; Whit Monday; 1st May; 8th May; 14th July; 15th August; 1st November; 11th November; 25th December. Cargo work can be arranged on all dates except 1st November.

POLICE/AMBULANCE/FIRE: Police 17; Ambulance 95.21.50.50 (SAMU); Fire 18.

EMERGENCY CO-ORDINATION CENTRE: Crosscorse Ajaccio. Tel: 95.20.13.63. Telex: 460187.

Affaires Maritimes, Tel: 95.50.90.00. Telex: Afmar Ajacc 460690.

TELEPHONES: Can be placed on board warships only.

BANKS: Banque de France, Tel: 95.21.00.05. Telex: Banfra Ajacc 460083; Banque Worms, Tel: 95.21.00.13. Telex: BWOR 460032; Banque Nationale de Paris, Tel: 95.21.54.90. Telex: 460894 BNP; Credit Agricole, Tel: 95.29.34.11. Telex: 460808 Creagri; Credit Lyonnais, Tel: 95.23.37.42 and 95.21.51.26. Telex: 460824 Credion Ajacc; Societe Generale, Tel: 95.21.41.30. Telex: 460757 Sogener Ajacc.

STORING: Stores and bunkers by truck only. Trucks may go alongside except at gas berth and tanker berth. Fork lift trucks available. Dockers available to assist.

IDENTIFICATION CARDS: Required.

GARBAGE DISPOSAL: Garbage disposal service available through ship's Agent, 24 hours notice required. Charges: Container alongside (65 F. per container).

WASTE OIL DISPOSAL: Collection service available through ship's Agent, 24 hours notice required. Tanker trucks come alongside.

SEAMAN'S CLUBS: None.

CURRENCY: French Franc (F.F.).

GENERAL: Galley waste, etc., must not be discharged inside the bay, but put into plastic bags and sealed before putting into special containers at berth.

AUTHORITY: Direction Departementale de l'Equipement de la Corse du Sud, Terre-Plein de la Gare, B.P. 408, 20302 Ajaccio Cedex, France. *Tel:* 95.29.09.09. *Telex:* 460943. *FAX:* 95.29.09.94.

Service Maritime et des Phares & Balises, 15 bis Boulevard Sampiero, 20000 Ajaccio, France. *Tel:* 95.29.08.86. *FAX:* 95.29.09.58.

Chambre de Commerce et d'Industrie d'Ajaccio et de la Corse du Sud, Hotel Consulaire, Boulevard du Roi Jerome, B.P. 253, 20179 Ajaccio Cedex, France. *Tel:* 95.21.34.65. *Telex:* 460084 Chamco Ajaccio. *FAX:* 95.21.23.89.

ANTIBES: 43.35 N. 07.08 E. (See Plan)

DOCUMENTS:
(a) For Harbour Master:
Ships Papers.
Declaration of Exit and Entry.
Crew List.
Passenger List.
(b) For Customs:
Health Declaration.
Provision List.

PILOTAGE: Not obligatory for yachts. Port cannot receive pleasure boats longer than 40 m. Ensure pilotage authorities advised of ETA. VHF Channel 9 day and night.

ANCHORAGE: In winds of N.E. to S.E. anchorage in front of Antibes not advised. Recommended anchor in Bay de Golfe-Juan, in shelter of Cap d'Antibes, in direction of Juan-les-Pins. In winds from N.W. to S.W., good anchorages on East face of Cap d'Antibes, Bay of Garoupe, Bay of La Salis, Bay of Ilette.

RESTRICTIONS: None.

MAX. SIZE: For yachts length 50 m., width 6 m., draft 3.5 m.

VHF: Port Captain on VHF Channel 9 throughout 24 hours.

TUGS: None.

FUEL: For pleasure boats only.

CONSULS: None.

REPAIRS: For pleasure boats only. 2 travelifts for boats of max. weight 45 tonnes and 120 tonnes.

REPATRIATION: Must be arranged through Consulates at Nice or Marseilles.

AIRPORT: Nice, Cote d'Azur. 15 km.

TIME: GMT plus 1 hour in Winter. GMT plus 2 hours in Summer.

POLICE/AMBULANCE/FIRE: Tel. Police 93.33.58.58 and 17; Ambulance 18; Fire 18.

SERVICES: Water and electricity on each pier.

AUTHORITY: Capitainerie du Port d'Antibes, Port Vauban, S.A.E.M. de Gestion, Port Vauban, 06600 Antibes. *Tel:* 93.34.74.00. *Telex:* 970480 F. *Contact:* J. Pluym, Le Commandant du Port.

BASTIA, Corsica: 42.41 N. 09.27 E. (See Plan)

DOCUMENTS: See "Ajaccio".

PILOTAGE: Address, Hangar No. 1, Nouveau Port, Bastia. Tel: 95.31.50.95 and 95.31.07.15. VHF Channel 16. Pilot boats, 12 m. long, black and white with navigation and pilotage lights. Previous advice to Pilots necessary before arrival. Pilot boards in bay of Porto Vecchio, North of the citadel. Vessels should call "Bastia Port" or Bastia "Bastia Pilot" one hour before arrival in the anchorage area.

ANCHORAGE: Anchoring not recommended in Easterly winds. Depth 15 m. to 30 m. in Porto Vecchio Bay. Bastia harbour: up to 4.50 m. deep.

RESTRICTIONS: Ships may enter harbour any time, weather permitting. It is very difficult to enter if a West wind (Libecciu) of over 25 knots is blowing.

MAX. SIZE: Max. length: 160 m.; draft 7 m.

TUGS: None available.

BERTHING: Ships berth in order of arrival.

Accommodation available for 8 vessels:

3 berths with length 100 m. to 120 m., max. draft 6.50 m. (cement, wine, liquefied gas).

1 berth, length 160 m., max. draft 7.50 m. (Ro/Ro cargo).

2 berths, length 150 m. to 160 m., max. draft 6.50 m. (car-ferries).

2 berths, length 120 m., max. draft 6.00 m. (car-ferries).

Mooring carried out by watermen. Same address as Pilots.

CRANES: One mobile crane with max. lifting capacity 7.5 tons.

MEDICAL: Medical controls made by Customs officer. Doctor available.

FRESH WATER: Supplied ashore.

FUEL: Not available.

FIRE PRECAUTIONS: General rules. One wharf reserved for tankers.

CONSULS: Nearest at Ajaccio.

GANGWAY/DECK WATCHMEN: Night watchman supplied by Agent.

OPENING/CLOSING HATCHES: Carried out by stevedores.

CUSTOMS ALLOWANCES: None on entry. 10 packets cigarettes when leaving. Wine/spirits unlimited when leaving.

REPATRIATION: No facilities exist.

AIRPORT: Bastia 20 km. from ports. Departures every day to continent.

TIME: GMT plus 1 hour in Winter. GMT plus 2 hours in Summer.

POLICE/AMBULANCE/FIRE: Police, 17; Ambulance, 15; Firemen, 18.

TELEPHONES: As a rule telephone is put only on naval ships.

SHORE LEAVE: Crew may go ashore.

IDENTIFICATION CARDS: Required.

GARBAGE DISPOSAL: Service available. Contact: Corse Hygiene, Tel: 95.31.50.45.

WASTE OIL DISPOSAL: No facilities available.

SEAMAN'S CLUBS: None.

AUTHORITY: Direction Departementale de l'Equipment de la Haute-Corse, B.P. 214, 20200 Bastia, France. *Tel:* 95.31.99.66. *Telex:* 460680 F. *Contact:* M. Gavini, Port Captain, Hanger No. 1, Rue de Nouveau Port, Bastia. Tel: 95.31.07.15 and 95.31.61.50.

BAYONNE: 43.30 N. 01.28 W. (See Plan)

DOCUMENTS:
3 Crew Lists.
3 Passenger Lists.
3 Lists of Provisions on Board.
3 Individual Lists of Tobacco and Spirits.
3 Manifests of Cargo.
1 Set Bills of Lading.

PILOTAGE: Station extends 3 miles between the parallel of Ondres to the North and the limit of French territorial waters to the South. When weather permits, the pilot boat comes out of l'Adour and comes alongside ships near the light buoy situated W.N.W. of the port entrance. Contact Pilot at least 12 hours before arrival relaying through Bordeaux Arcachon Radio and stay on radio watch in the pilot zone. VHF Channel 12.

ANCHORAGE: Ships must not anchor in the river.

RESTRICTIONS: In bad weather ships are led to take the Pilot at the pilot boat which is based on St. Jean-de-Luz and are led either towards l'Adour or to the anchorage of St. Jean-de-Luz.

When alongside, even in fine weather, a swell may be experienced causing lines to part.

MAX. SIZE: The Adour is accessible to ships of 160 m. length (15,000 – 20,000 tonnes). Depth at the mouth varies with the seasons and are maintained by dredging. They are never less than 7 m. during Summer but during Winter can be reduced following Westerly storms. The height of the tide has to be added to these depths but the draft can never exceed 8.0 m.

HEALTH: A Declaration of Health Form is lodged by the Customs Service on arrival; it must be completed by the Master. In case of a suspect illness, advise Agent 24 hours in advance.

RADIO: Bordeaux – Arcachon Radio. The signal tower on the South side of the mouth, and the Harbour Master's Office, in the tower, has a VHF radio station, Channel 12.

TUGS: 1 tug available, 1,250 h.p., 10 tons bollard pull. Request for tug through the Agent. Tug waits at the entrance to the Adour.

BERTHING: When working berth is occupied, vessel is directed to a waiting berth. Large ships or those carrying dangerous cargo can be requested to wait outside the entrance.

Berth	*Max. Length Vessel*	*Recommended Draft*
Socadour	150 m.	29.5 ft.
Cement Wharf	160 m.	24 ft.
Satec Wharf	160 m.	24 ft.
Grain Silo	130 m.	23 ft.
SNPA Sulphur Quay	150 m.	25 ft.
Other berths	120 m.	22 ft.

BULK HANDLING FACILITIES: Silos with capacity 60,000 tonnes (maize). Rate 450 t.p.h.

3 silos, total capacity 10,000 tonnes at Armand Gommes Quay.

Phosphate handled at Boucau Quay with 3 cranes of 10 tonnes capacity, feeding conveyor belts with capacity 350 t.p.h. – 400 t.p.h.

CRANES: Edmond Foy Quay: 3×3 ton and 2×6 ton cranes.
Pierre Le Roy Quay: 4×3 – 4 tonne cranes.
Boucau Quay (Socadour): 2×10 tonne cranes.
Marcel Forgues Quay: 1×10 tonne and 1×8 tonne crane.
Jean Letellier Quay (private): 1×10 tonne crane.
Armand Gommes Quay: 2×3 – 4 tonne cranes.

STEVEDORES: Arrival must be notified to Agent 24 hours in advance.

MEDICAL: Medical attendance can be organised by the Agent without advance notice, Hospital and private clinic available. However, if medical attendance required as soon as the ship arrives, particularly at night, it is advisable to send a radio message 12–15 hours before the arrival of the ship.

TANKERS: No installation to receive residues. Two berths for unloading of refined products. Refinery de Midi: Max. length 120 m., max. draft 6 m. Saint Gobain, length 150 m. max. draft. 24 ft.

FRESH WATER: Available at each berth, minimum supply 3 cu.m.

FUEL: Available by arrangements in advance through Agent or suppliers.

CONSULS:
Belgium
Brazil
Chile
Finland
Norway
Peru
Portugal
Spain
Sweden
United Kingdom
Uruguay

REPAIRS: Running repairs to hull, machinery, radio and radar can be effected.

SURVEYORS: Bureau Veritas. Tel: 59.25.20.44.

DRY DOCK: Usable length 98 m. Length on stocks 94.1 m. Width of entry 15 m. Depth above sill, neap tides 4.5 m., spring tides 6 m.

GANGWAY/DECK WATCHMEN: Not obligatory except for ships with dangerous merchandise on board.

OPENING/CLOSING HATCHES: Generally carried out by the crew.

CUSTOMS ALLOWANCES: 200 grammes or 250 grammes of tobacco for each crew member and for 8 days (must without fail be declared in the individual list of provisions). 1 bottle of wine or spirits (must without fail be declared in the individual list of provisions).

REPATRIATION: Possible for all countries as well as crew changes.

AIRPORT: At Biarritz: 7 km. away. Regular service with Paris. Two services per week to and from London.

TIME: European Standard Time: GMT plus 1 hour and GMT plus 2 hours from 2nd April to 1st October.

HOLIDAYS: 1st January; Easter Sunday/Monday; 1st May; Ascension Day; Whit Sunday/Monday; 14th July; 15th August; 1st November; 25th December.

POLICE/AMBULANCE/FIRE: Police, telephone 17 or 59.55.84.09. Anglet: 17 or 59.03.76.10 Boucau: 17 or 59.55.29.53. St. Leon Hospital: 59.63.50.50. Fire Station: 18 or 59.59.21.84.

TELEPHONES: Telephones on board not possible.

SHORE LEAVE: Crew are authorised to go ashore.
IDENTIFICATION CARDS: Not necessary – Seaman's Identity Card sufficient.
AUTHORITY: Direction Departementale de l'Equipement Alles Maritimes, 64109 Bayonne. *Tel:* 59.63.08.40. *Contact:* A. Lage, L'Ingenieur Des T.P.E.

Capitainerie du Port, 128 Av. de L'Adour, Anglet. *Tel:* 59.63.11.57. *Telex:* Porbayo 55 04 57.

BORDEAUX (inc. Verdon, Bassens, Ambes, Pauillac, Blaye): 44.50 N. 00.34 W. **(See Plan)**

DOCUMENTS:
Tonnage Certificate.
2 copies Provisions List.
2 copies Personal Effects List.
2 copies Crew List.
Customs Clearance.
Crew Manifests.
Check List.

APPROACHES:
Report: 1986 (Updated 1994).

Of primary concern in approaching or leaving the berths is the difficulty of the channel between Le Verdon and Ambes, especially for inbound/outbound tankers at the maximum draft.

When loading full cargo at Bordeaux/Ambes, Masters have to pay careful attention to the maximum permissible draft alongside at LW and to the maximum draft (fresh water) allowed for transitting channel outbound, owing to the many shelves especially around the Buoys 20 and 28.

Port Approaches: There is no special navigation difficulty for approaching 'BXA' Light buoy, though there is no noticeable landmark by daytime, but the 'BXA' Racon is efficient and the buoys of the entrance channel Passe de l'Ouest are detected early on the radar. The soundings may also give useful information.

Anchoring outside is *not* recommended during bad weather owing to the heavy swell. Ships have to use the tide to transit the River Channel which takes about 4 hours. They need about 2 hours for taking the Pilot and proceed to the Le Verdon Roads where they enter the river.

Best arrival time at 'BXA' Light buoy is between 4 to 6 hours before the HW of Pointe de Grave; this will avoid anchoring, leaving sufficient time for Master/Pilot exchange on the soundings in the channels which are the major problem during the transit for deep drafted tankers, especially in the river. Movements are carried out on a round the clock basis.

Heights of water are given on VHF Channel 17, every 5 minutes, for many places in the river corresponding to the main shoal areas (given in metres in the French language).

A monthly recommended maximum draft for vessels proceeding to and sailing from Ambes A.P. and E.D.F. is issued and always calculated based on fresh water. This sheet is given to the Agent and may be given to the Master when the Pilot boards.

The Under Keel Clearance considered in this draft calculation is mainly subject to local atmospheric and hydrological conditions but never less than 0.80 m. for the river transit. Meanwhile, in the River Channel, siltation and moving soft mud patches may reduce the deep draft passage width between the buoys. The Pilot must know these latest limitations as the Port Authority cannot give a complete safe sounding statement to Masters.

PILOTAGE: To embark and disembark at sea from ships entering or leaving the Gironde Estuary, Pilots use either a 17 m. fast launch or a twin-turbine helicopter Ecureuil AS355F1.

With the helicopter, winching is the normal procedure to transfer Pilots.

The service at sea extends from 1 hour before to 5 hours after Cordouan LW.

For container ships, special arrangements can be made through the Agent.

When weather conditions do not permit service to ships at sea, the Pilot boards as soon as possible, after the ship has crossed the bar. In that case and after Master's agreement, a Pilot gives navigation assistance from Verdon shore-based radar station, until Pilot's boarding point or for outward ships, from Pilot's disembarking point to sea.

Vessels should announce their arrival at 'BXA' Fairway Buoy at least 24 hours in advance to the Commandant du Port de Bordeaux through Coast Station "Bordeaux-Arcachon Radio". Masters must confirm to the Harbour Master's Office, Channel 12 and the Pilot Station at least 12 hours before arrival their ETA, ship's draft and speed, and give their agreement for an eventual helicopter operation. *Three hours before arrival at 'BXA',* Masters may contact Gironde Pilot Station on Channel 14, but must contact "Radar Verdon" on Channel 12 and communicate on Channel 14 or 12. Ships can also call Verdon Pilot Station by Telephone No. 56.09.63.85 or by Telex PILVDON550167F.

Ships leaving ports located between Santander and Lorient, must send the above mentioned message on departure. In case of any change of more than 3 hours of the initial ETA, Masters must send a correcting message.

Helicopter Service: The helicopter is red and white, and "PILOTE BX" is painted in black. The VHF call sign is "PAPA GOLF" or "Gironde Pilot Helicopter". During the flight, VHF contact between the ship and helicopter must be maintained on Channels 6 or 12.

The Pilot is boarding in the vicinity of 'BXA' Fairway Buoy and winching is the normal procedure. Depending on weather conditions, the Master may be requested to alter the course or speed of the ship for safe boarding of the Pilot.

The helicopter is working in accordance with International regulations and particularly with the rules of the International Chamber of Shipping.

Masters are asked to watch very carefully the following points:
– check that there are no horizontal aerials or wires above the helicopter's manoeuvring zone
– check that no loose object, in the proximity of the manoeuvring zone, could be swept up by the effects of the wind created by the rotor blades
– at night, the manoeuvring zone must be well illuminated but in such a way that the helicopter Pilot is not dazzled
– if necessary, provide for washing the area to avoid dust being blown around by the effects of the rotor.

No extra charge for the Pilot boarding by helicopter.

Pilot Launch Service: When operating with a fast launch, the Pilot boards between 'BXA' Fairway Buoy and the entrance to Grande Passe de l'Ouest. Masters are requested to maintain a speed of about 5 knots. The pilot ladder should be rigged well amidships and the bottom of the ladder should be 1.50 m. above the water level. No line or rope shall be attached to the bottom of the pilot ladder.

The pilot launch keeps watch on VHF Channel 14.

Vessels less than 70. m. long, for which pilotage from the sea to Verdon is not compulsory, may embark River Pilot at Le Verdon providing Masters have advised the Pilot Station accordingly.

ANCHORAGE: The normal waiting anchorage area is the Roadstead of Le Verdon, depth 10 m. to 12 m. and sand silt bottom. Tankers find a good anchoring area in the Saintonge Roadstead with a depth of 15 m. to 20 m. (sand silt bottom).

RESTRICTIONS: The great entrance to the Gironde estuary (Western entrance) is dredged to a depth of 13.50 m. under the zero of French sea charts.

MAX. SIZE: Verdon: Vessels up to 12.5 m. draft, 290 m. length.
Bec d'Ambes: Tankers up to 32 ft. 6 in. draft, 210 m. length.
Pauillac: Tankers up to 34 ft. draft, 240 m. length.
Bassens: Vessels up to 9.40 m. – 11.00 m. draft, 250 m. length.
Blaye: Vessels up to 30 ft. draft.

HEALTH: Vessel should ask for Free Pratique by radio at least 12 hours before arriving at port. Message should be addressed to Saniport – Bordeaux routed via Bordeaux/Arcachon Radio. Otherwise, Pratique given by Customs Officers who board on arrival. If any case of suspected disease on board or any reason why vessel should not receive Free Pratique, Master should radio Agent before arrival, advising full details.

Health Control: Hospital Saint Andre, 1me Jean Burguet, Bordeaux. Tel: 56.50.64.52.

RADIO: Arcachon Bordeaux Port Radio: Radiotelephony 1,862 kHz. Radiotelegraphy 421 kHz.

Port Authority by VHF: Calling band 156.8 MHz Channel 16. Traffic band 156.6 MHz Channel 12 (port). Traffic and 156.7 MHz Channel 14 (radar).

Pilots: Telegraphy: Watch on 500 kHz at the prescribed hours. Telephony: continuous watch on 2,182 kHz. VHF: Continuous watch on Channel 14.

Every vessel fitted with HF radio equipment shall keep a constant watch and be in contact with "Arcachon-Bordeaux-Port-Radio" Station when navigating in the area between the landing buoy and her berth, or at least watch at the sending times of this station, when moored and awaiting orders.

Every vessel fitted with VHF radio equipment, shall also keep permanent watch and maintain contact with the Port Operations Station on 156.6 MHz (Channel 12) when navigating in the zones indicated below, or when moored and awaiting orders.
Le Verdon zone: Call "Radar-Verdon".
Bordeaux zone: Call "Port-Bordeaux".

RADAR/VHF: Port radar is in operation in the Gironde estuary and approaches. Vessels must contact this station for navigation information by calling Verdon Port Radio on VHF Channel 12.

TUGS: Tug assistance is available as advised by the Pilot. Tugs will join vessels at the following places: In Verdon Roads for vessels mooring at Verdon. In Pauillac Roads for vessels mooring at Pauillac. At Buoy BA1 for vessels mooring at Ambes.

As a rule ship's tow-lines are used; when a tug line is required there will be an additional charge.

BERTHING: *Le Verdon Deep Water Terminal:* 2 containership berths, length 600 m., depth alongside 12.5 m. at LW; slip for quarter ramp Ro/Ro handling. Operations carried out 24 hours a day 7 days a week. 100 power points for reefer containers. 3 container gantry cranes (1×32 ton and 2×40 tons capacity below spreader). One is multi-purpose and can work with a 30 ton grab for bulk unloading.

Riverside Quays: 18 berths, depth alongside 5.0 m. – 8.5 m. at LW. Now available only for cruise ships and naval vessels.

Enclosed Docks: 2 basins joined by a lock 25 m. wide. Entrance effected by locks. Large lock 146 m. long 22 m. wide. Depth of water in the basins is maintained at 5.0 m. These are now used only for repairs and yachting.

Queyries: 250 m. long, depths offered are 7 m. alongside. 2×6 ton cranes.

Bassens-Amont: 850 m. long, depth alongside at LW up to 9.0 m. – 11.0 m (5 berths). The quay caters for general trade. Equipped with 2 Wellman cranes of 6 tons, 2 Mague cranes 8/10.5 tons, 2 Mague cranes 8/12 tons, 2 Caillard cranes 15/24 tons.

The heavy bulk storage zone has a capacity of 128,000 cu.m. It is served by two railway sidings with road/rail weighbridges for re-dispatch.

Two of the berths at Bassens-Amont are equipped to cater for molasses which can be stored in 3 reservoirs.

Bassens-Amont is also the centre of the ports phosphate traffic, bound for neighbouring industries and stocked in a silo depot, which is linked to the quay by a conveyor belt network.

During the last quarter of 1982, the bulk trades received at Bassens-Amont ceded their place to general cargo. In the context of this redevelopment, which enables better throughput rates and more flexibility, a 6,000 sq.m. shed has been built.

Letigo: The grain silos behind the quays are linked by an overhead continuous conveyor to a quayside gantry loader (throughput 1,200 t.p.h.) at Berth No. 417.

Bassens-Aval: 10 berths, total length 1,474 m. Depth alongside 11.0 m. at LW. 2 Mague cranes 8/10.5 tons, 2 Mague cranes 8/12 tons, 2 Caillard cranes 15/24 tons, 5 Cereti cranes 15/25 tons, 1 Duro crane 15/25 tons, 1 Mague crane 15/25/28 tons.

A bulk terminal is available with discharge capacity 2,000 t.p.h. Max. size: 120,000 d.w.t. and 250 m. LOA.

In addition there are facilities for heavy bulk goods, Ro-Ro; coal; forest products terminal; grain conveyors of 150 t.p.h., 400 t.p.h., 600 t.p.h. and 900 t.p.h.

Bulk Liquid Berth: Berth No.436 is a dedicated bulk liquid berth and caters for tankers carrying butadiene, methanol, phosphoric acid, turpentine and vegetable oil.

The environment of the berth meets the safety requirements for each of these commodities and a security company carries out surveillance and ensures safety and security.

Blaye: Main commodities at Blaye: Grain, liquid bulk and dry bulk.

Total quay length 390 m.

Dimensions of the largest vessel capable of being accommodated (tidal coefficient 45 at low water):

Deadweight tonnage: 15,000 tons (with a half load).
Overall length: 190 m.
Draft: 9.0 m.

Cranage: 1 Wellman crane of 2.5/6 tons (grab or hook, outreach 18 m.).

Dedicated handling gear:

Public Wharf (Berth 601): Liquid bulk unloader. Continuous dry bulk loader with conveyor belt network.

Grain Wharf (Berth 602): Bulk grain loading gantry and a conveyor to the SEMABLA silo, (throughput 12,000 tons per day). 2 suction unloaders (throughput 150 t.p.h.) for barges. 1 bagging and shore-to-ship bag loading unit (throughput 2,400 tons per day).

Weighbridges: 1 × road/rail and 1 × road.

Storage:
Sheds: 80,000 tons
Silos: 40,000 tons
Tanks: 13,000 cu.m.

The port has been deepened to provide access for vessels of 20,000 d.w.t. – 25,000 d.w.t.

Pauillac: Public berth for vessels drawing up to 10.35 m.

Left Bank Quays: 3 quays (No. 121, 122 and 123), have been developed to accommodate cruise liners. Max. LOA 210 m., max. draft 8.50 m. "Espace Maritime" at Shed No. 5 have been developed with all amenities for cruise liners.

Also see "General".

MEDICAL: All facilities available. Malaria and cholera vaccinations can be performed at the Military Hospital or at the Port Vaccination Centre (Shed 14).

TANKERS: *Pauillac:* Oil installation operated by Shell, 33 ft. alongside. *Ambes:* Terminal for tankers up to 210 m. length, 32 ft. 6 in. draft. Operated by Societe DPA and Esso. Also see "Shipmaster's Report" – dated June 1981.

There is a new private wharf at Ambes, catering for liquified gas tankers. Length, 125 m. Maximum ship's length 145 m. Max. draft 7.70 m.

Unloading by articulated arm which connects to ship's manifold. This manifold should be as close to the central perpendicular as possible.

Standard security measures for handling propane and butane. This berth belongs to Cobogal and has been allotted Berth No. 515.

Berth 501: Hydro Azote are currently building a plant for processing amonitrates. A jetty (Berth 501) is available in front of the plant, catering for tankers bringing supplies of liquid ammonia. Max. LOA 240 m. and max. draft 10.0 m.

Bassens: See "Report" dated March 1981.

DENSITY: Verdon 1023 to 1015. Pauillac 1026 to 1000. Ambes approximately 1000. Bordeaux approximately 1000.

FUEL: Vessels wishing to bunker during their call at Bordeaux-Le Verdon, shall make known their needs of quantity and quality to their Agents or consignees before arrival in port. Requests must be forwarded, 48 hours in advance (at least), to one of the bunkering Agents of the following companies:

Shell – Bassens. Tel: 56.06.29.20.
Esso – Worms. Tel: 56.31.69.85.
ELF/SIMA. Tel: 56.90.49.00.
B.P. Floirac. Tel: 56.32.97.01.
Total C.F.R. Tel: 56.06.40.62.

A very large proportion of the bunkering fuels comes from the Shell refinery at Pauillac. These fuel-oils are mainly intermediate oils made by viscosity mixing between 80 and 460 centistocks (at 50°). Orders must therefore be for a quantity of at least 400 tons.

The quality control of mixtures is carried out by the Shell refinery laboratory, whose opening hours are: Monday: from 0400 to 1630 hrs. Tuesday, Wednesday, Thursday, Friday & Saturday: from 0400 to 2000 hrs.

REPAIRS: ARMI, Face au 81 Rue Des Etrangers, 33300 Bordeaux. Tel: 56.50.35.73.

Ateliers et Chantiers Auroux, 7 boulevard Chanzy, Arcachon. Tel: 56.83.32.62.

Service de Travaux et d'Etudes Maritimes et Industrielles, 110 Rue Achard, BP 115, 33028 Bordeaux Cedex. Tel: 56.50.40.35.

DRY DOCKS: There are 2 dry docks and 5 small covered docks. Dimensions of the largest graving dock are 247 m. length 34 m. width 13.40 m. depth.

CUSTOMS ALLOWANCES: 200 cigarettes and 1 bottle of alcohol per man.

AIRPORT: Situated 10 km. from Bordeaux. Frequent and Daily flights to most parts of Europe and North Africa. Good internal service.

TIME: GMT plus 1 hour in Winter. GMT plus 2 hours in Summer.

CONSULS:

Algeria	56 98 44 90	Ivory Coast	56 52 30 86
Austria	56 48 57 57	Liberia	56 50 84 34
Belgium	56 52 32 39	Madagascar	56 44 78 81
Benin	56 52 32 69	Mauritius	56 24 17 50
Bolivia	56 52 68 17	Mexico	56 50 84 34
Brazil	56 52 83 57	Monaco	56 44 16 55
Cambodia	56 44 27 41	Morocco	56 52 34 34
Chile	56 48 56 17	Netherlands	56 52 16 75
Colombia	56 44 78 37	Norway	56 52 52 40
Denmark	56 81 24 10	Peru	56 08 25 35
Dominican Rep.	56 08 43 63	Portugal	56 52 19 50
El Salvador	56 23 06 78	Senegal	56 81 19 90
Finland	56 44 94 45	Spain	56 52 80 20
Germany	56 08 60 20	Sweden	56 39 33 33
Greece	56 52 26 17	Switzerland	56 52 18 65
Guatemala	56 08 23 92	Togo	58 71 00 81
Honduras	56 40 00 88	United Kingdom	56 52 28 35
Iceland	56 48 22 39	United States	56 52 65 95
Italy	56 52 24 89		

HOLIDAYS: New Year (1st January, no labour available); Easter Sunday (possibility of labour with overtime); Easter Monday (no labour available); Labour Day (1st May, no labour available); 8th May, Victory Day (possibility of labour with overtime); Ascension Day (possibility of labour with overtime); Whit Sunday (possibility of labour with overtime); Whit Monday (no labour available); National Day (14th July, no labour available); Assumption Day (15th August, no labour available); All Saints' Day (1st November, no labour available); Armistice Day (11th November, possibility of labour with overtime); Christmas Day (25th December, no labour available). N.B. Every Sunday and day marked "possibility of labour with overtime" can be worked at the rate of 100%.

Le Verdon Container Terminal: Operational 24 hours per day, 365 days per year.

POLICE/FIRE/AMBULANCE: Police 17; Ambulance 17; Fire 18.

BANKS:

Le Verdon:
B.N.P., 17 rue Plage Soulac. Tel: 56.59.86.11.
Credit Agricole, Le Verdon. Tel: 56.09.61.25.
Credit Maritime, 41 rue de la Plage, Soulac. Tel: 56.09.88.76.

Pauillac:
B.N.P., 10 rue Albert 1er. Tel: 56.59.05.71.
Credit Agricole Mutuel, rue Ferdinand Buisson. Tel: 56.59.00.25.
Credit Lyonnais, place de Lattre-de-Tassigny. Tel: 56.59.18.20.
Societe Bordelaise de C.I.C., rue Albert 1er. Tel: 56.59.06.49.
Societe Generale, place Michel-Montaigne. Tel: 56.59.08.60.

Blaye:
B.N.P., 27 cours de la Republique. Tel: 57.42.29.10.
Credit Agricole Mutuel, rue Paul Tardy. Tel: 57.42.29.54.
Credit Commercial de France, 13 cours du Port. Tel: 57.42.00.37.
Credit Mutuel, 6 place Rabotte. Tel: 57.42.27.13.
Credit de Nord, 1 rue Andre Lamande. Tel: 57.42.00.45.
Societe Bordelaise de CIC, 31 ter. cours de la Republique. Tel: 57.42.00.33.

Ambes:
Credit Agricole Mutuel, place du 11 Novembre. Tel: 56.20.10.90.
Societe Generale, rue Mal Leclerc. Tel: 56.20.10.62.

Bassens:
Credit Agricole Mutuel, 12 avenue St. Exupery. Tel: 56.06.27.96.
Societe Centrale de Banque, avenue St. Exupery. Tel: 56.06.14.69.

Bordeaux:
Banque de l'Aquitaine, 2 Pl. Comedie. Tel: 56.48.03.88.
Banque de France, 15 rue Esprit-des-Lois. Tel: 56.81.56.66.
Banque de l'Indochine et de Suez, 15 allees de Chartres. Tel: 56.44.07.67.
Banque Internationale pour l'Afrique Occidentale, 17 Allee de Tourny. Tel: 56.44.08.14.
Banque Nationale de Paris, 40 cours du Chapeau-Rouge. Tel: 56.90.92.96. – 75 quai des Chartrons. Tel: 56.81.42.22.
Banque de Paris et des Pays-Bas, 50 cours du Chapeau-Rouge. Tel: 56.44.80.05.
Banque Populaire du Sud-Ouest, 5 place Jean-Jaures. Tel: 56.44.84.26.
Banque Rothschild, 5 pl. des Quinconces. Tel: 56.52.79.90.
Banque Worms, 14 allees de Tourny. Tel: 56.44.51.20.
Barclays-Bank S.A., 4 rue Esprit-des-Lois. Tel: 56.52.64.61.
Credit Commercial de France, 10 allees d'Orleans. Tel: 56.90.93.25.
Credit Lyonnais, 13 cours de l'Intendance. Tel: 56.48.91.23.
Credit du Nord, 2 cours du XXX-Juillet. Tel: 56.90.93.90.
International Westminster Bank Ltd., 32 allees d'Orleans. Tel: 56.48.10.43.
Societe Bordelaise de Credit Industriel et Commercial, 42 cours du Chapeau-Rouge. Tel: 56.52.49.25.
Societe Centrale de Banque, 60 cours de l'Intendance. Tel: 56.44.73.56.
Societe Generale, 28 cours de l'Intendance. Tel: 56.90.91.74.

TELEPHONES: Can be connected on board vessels moored at quays in Bordeaux, Bassens, Ambes, Pauillac, and Verdon.

IDENTIFICATION CARDS: Crew men going ashore should carry passport or identity card.

GARBAGE DISPOSAL: Skips are available alongside for galley waste.

Industrial waste collection is available from local company by containers of various sizes, contact Agent.

WASTE OIL DISPOSAL: Companies available locally, contact Agent.

GENERAL:

Mooring Regulations: Vessels fitted with radio equipment, which, for any accidental cause, (engine damage, fog, etc.) are obliged to moor or ground at any point in the area between the landing buoy "BXA" and the "Ponts de Pierre" (Stone Bridges) at Bordeaux and Libourne, must immediately indicate their mooring or grounding position, by cable or VHF Channel 12 to the Harbour Master, Bordeaux. In all cases, the text of the message must specify whether the moored or grounded vessels interferes or not with shipping.

Berthing: Berthing is carried out on the advice of the Pilot, following instructions from the Harbour Officers.

Special precautions are recommended during Spring Tide periods to ensure that vessels in the river are held fast to the quay.

The following instructions apply:

Special Instructions for Securing Vessels at the Quay During Spring Tide Periods (K > 90).

Given the disturbances caused by the strong currents of tides with a K of over 90, the securing of vessels on the quay must receive unremitting attention.

Pilots shall pay close attention to the mooring lines, for which the Master remains constantly responsible.

Masters shall follow Pilot's instructions and provide all means asked for in terms of both manpower and equipment.

A strict surveillance is necessary to ensure that lines remain correctly secured by adjusting them according to the height of the tides.

A sufficient number of crew shall be kept on board, to carry out any handling which might eventually be ordered by the Harbour Officers.

Fire Fighting: 1. All vessels berthed in the Port of Bordeaux, be they loading, discharging, or under repair, must have permanently on board a sufficient watch to keep effective surveillance, to take all preventive measures and to fight any fire on board.

2. It falls to the Master or the watch, and this under their sole responsibility, to use the signalling equipment at their disposal.

3. Communication and signalling equipment. Telephones and fire hydrants available on all quays.

4. Fire fighting is carried out under the direction of the Master, but gangs intervening, especially the fire brigade, remain under the command of their respective officers.

The ship's crew must be able to guide the rescue teams. A plan of the ship and her loading plans, in particular those showing the location of dangerous goods on board, shall be put at their disposal on arrival. Where there is a risk of the fire spreading, for which the Harbour Master is the sole judge, he shall lead operations and order all necessary steps to be taken to safeguard public interests.

REPORT: The following report was received from a Ship Operator in March 1981.

Michelins Reception Facilities at Bassens:

1. The equipment consists of 2 pipes: One 10 in. diameter with a normal capacity of 500 cu.m./hr. and the other 6 in. diameter. These capacity limits result from the meter which is fitted. Either pipe can be used independently according to conditions and features of the ship's pumps and equipment.

The absolute maximum pressure allowed in whole system is 10 bars.

Length of pipes:

2,315 m. for 10 in. pipe.

2,274 m. for the 6 in. pipe.

The equipment incorporates a meter post consisting of a Smith LB 250 volumeter normal temperature – 3 degrees normal pressure, 8 bars accuracy, 0.2 outputs of between 110 and 570 cu.m./hr. The equipment does not include a vapour return line.

2. Deliveries must be made by tanker vessels specifically designed and fully equipped for carriage and refrigerated liquid gases. The liquid must be delivered at a temperature of between −2° and −5° Celcius when measured at the ship's discharge connection.

The ship must be fitted with suitable pumping equipment, in full working order and of a capacity sufficient to maintain throughout the whole unloading operation and under the condition of temperature and pressure already specified, an hourly delivery rate at least equal 1/16th the total shipment and in any case not less than 100 cu.m./h. As indicating the pumps must be specifically designed for the movement of butadiene in the order that any premature failure, or suction of gas, be avoided. A further reason for the pumps and compressors being in perfect condition is that the quay is public and any delay prejudicial to the movement of vessels requiring to use it. The ship's discharge equipment must include a security device capable ensuring at all times, both under normal conditions and in the event of accidental or unforeseen mishandling that the delivery pressure at the connection point for the hose never exceeds 10 bars.

The ship must have lifting gear (derrick, hoist, etc.) with a minimum 2 tons capacity and sufficient reach to maintain the flexible hose at right height, even at low tide. The ship must be capable of completely emptying each tank and the systematic use of nitrogen must be avoided, as it is detrimental to the manufacturing process.

To enable receivers to prepare for cargo, following information required at least one week prior arrival of vessel.

1. The position of discharge outlets in relation to central axis of vessel and to the level of the deck.

2. Type and diameter and thread dimensions of the sampling connection.

3. Diameter and details of the ship's outlet union.

4. The details of the discharging equipment for each pump or compressor.

5. The normal and maximum rates of discharge and pressure of delivery should be given.

The vessel is equipped with 2 sampling positions in the middle and lower positions of each tank.

Notice of Arrival: Either the seller or the carrier must give to the Bordeaux Authorities (Port Autonome de Bordeaux) notice of the estimated arrival of the vessel at Bassens either 7 days advance of the tanker getting under way at the previous port of call should this be less than 7 days before arrival. Confirmation of the arrival of the vessel off the Gironde Fairway/Buoy (BXA) must be given to the Bordeaux Port Authorities by cable, telex or other means at least 24 hours in advance.

If the vessel is likely to arrive during a weekend, Michelin Bassens must be informed by Friday mid-day at the latest, otherwise operations will not be able to commence before 0800 hrs. on Monday.

Discharge: The ship's crew must scrupulously observe all general security regulations, together with any particular ones laid down by the officials appointed by the Bordeaux Port Authority to supervise the safety of discharging operations.

Receivers cannot be held responsible for any mishandling, excessive pressure or untimely purging that may occur during the discharge operation due to the vessel, or for the consequences of any failure to observe the security regulations by any person not employed by Michelin.

On arrival of the ship, Michelin, assisted by the crew, will connect up the shore line to the ship's outlets union by means of flexible hose. The ship's crew will be responsible for the use of their own lifting equipment (crane and derricks) for the raising of the flexible pipe to a sufficient level above the quay so as to take into account the tide. Jointly with representatives of the ship and the sellers, Michelin will proceed with, the drawing of samples from each tank (for quality control).

The Liaison of Discharging Procedures: Michelin's representatives are to be introduced to the crew members appointed to the discharging operation.

Throughout the duration of the discharging operations the rate and pressure of the output must remain constant and within the agreed limits in order that the metering equipment shall function correctly. On having completed discharge of the liquid from the last tank, the ship must cease pumping to permit:

The meter post personnel to by-pass the meters.

Michelin in conjunction with the representatives of the seller and the ship, to check the remaining cargo (the weight of liquid butadiene discharged thus being determined).

The gas can then be pumped out – the quantity being determined by measuring the difference in pressure and temperature of the ship's tanks, on the assumption that it contains only gas both before and after pumping out.

Unloading Completion: On the representatives of the sellers and the ship agreeing that the discharge of the butadiene has been satisfactorily completed, the receiver's personnel and the ship's crew will uncouple the flexible hose.

In the event that after complete discharge of all liquid, it is agreed between the ship and the seller to pump out the gas, the quantity involved will be calculated by measuring the difference in pressure and temperature of the ship's tanks, on the assumption that they held only gas both before and after pumping.

SHIPMASTER'S REPORT: June 1981.

Bordeaux – Bec d'Ambes: If proceeding further up river then Sea Pilot leaves at Le Verdon and River Pilot boards. Pilot gives an Inwards Declaration which (different from EEC check list) is to be completed and handed to Port Officer after boarding.

Reference Admiralty List of Radio Signals, Volume 6, 1980, Part 1, Page 205, paragraph (2), vessels wishing to enter La Gironde should address the 24 hour message to "Capiport Bordeaux" and 3 hours before entering French Territorial Waters should request, via 'Capiport' permission to enter La Gironde. These messages are free of charge.

Port regulations require the berthing (River Pilot) Pilot to stand-by, together with 1 tug, until a loaded vessel has lightened to 28 ft. fresh water maximum draft.

When berthing starboard side to then one tug on port bow and second tug just for pushing.

Usually, first ropes on board are one shore head wire and one shore head breast. Final moorings usually 2 shore heads, 2 shore breast, (fore and aft) and 2 shore stern lines, and 2 springs each end from ship.

The shore moorings consist of a chain cable connected to the shore, this is connected to a 57 mm. wire which is made fast on board. The wires are hove on board by means of a messenger (ship) which is attached to a small size, long length pennant attached to the 57 mm. wire. The shore end of the 57 mm. wire is attached to a chain cable thus creating a 'catenary effect' which proves very good in keeping the vessel alongside. For berthing there is one shore rigger each end to advise and assist.

For unberthing one rigger boards to assist in singling up to 1 shore wire and one back spring each end. He then goes ashore by pilot ladder. Vessels berth day and night depending on tide.

Agent requires in advance the distances from bow and stern to centre of manifold.

AUTHORITY: Port Autonome de Bordeaux-Le Verdon, Palais de la Bourse, 2 Place Gabriel, 33075 Bordeaux-Cedex. *Tel:* 56.90.58.00. *Telex:* 570617 Pablv. *FAX:* 56.90.58.77. *Cables:* Poronom – Bordeaux. *Contact:* A. Combeau, Port Director. Commandant Bozec, Harbour Master – 56.90.59.31 (32, 33, 34).

BOULOGNE SUR MER: 50.43 N. 01.35 E. (See Plan)

PORT LIMITS: *Seaward Boundaries:* 4 nautical miles from the piers (e.g. Limits of Pilotage Area).

DOCUMENTS: As for "Calais".

PILOTAGE: Compulsory for vessels over 50 m. length. Vessels can communicate with Pilot Station, tel. 21.31.36.08, through Boulogne Radio. When pilot launch is at sea, contact by VHF Channel 12.

The most favourable boarding point is between the sea buoy "Approaches Boulogne" and the wreck buoy situated 1.5 miles to the South, or slightly nearer the land if there are strong Westerly winds. In any event, the surf created by the Carnot breakwater must be avoided by keeping at least 1 mile off shore. If Pilot is not immediately available, vessel must wait in Outer Roads, if necessary at anchor, until further instructions received. On no account should vessel attempt to enter Carnot Roads without Pilot.

ANCHORAGE: The outer anchorage for large vessels is midway between Ophelie Buoy and the Carnot Breakwater. Anchorage prohibited in the main approach channel.

RESTRICTIONS: Entrance depends on tidal conditions. For larger vessels best to enter the breakwaters at slack water which occurs 2 hours before time of high tide. Arriving vessels are obliged to contact Harbour Master's Office immediately by radio, or VHF Channel 12.

MAX. SIZE: For outer harbour: Length, 230 m.; draft, 10.67 m. springs, 11.00 m. neaps. Max. d.w.t., 35,000 (approx.). Bassin Loubet: Length, 130 m.; draft, 7.5 m. springs, 7.75 m. neaps.

HEALTH: Pratique given by Customs Officers who board on arrival. In case of suspected disease on board, Master should radio Agents prior arrival advising details.

RADIO: Boulogne Radio, call sign FFB, also on VHF Channel 25.

VHF: Harbour Master's Office: Call "Boulogne Port" on Channel 12.
Pilotage: Channel 12.
Tugs: Channel 12.
CROSSMA Gris Nez: Channel 16.

RADAR: No Port radar service at present.

TUGS: 2×14 ton tugs (1,200 h.p.). One tug is fitted for firefighting.

The tugs meet vessels as requested by Master on Pilot's advice.

BERTHING:
Sarraz-Bournet Dock: Europe Quay, 775 m., depth 11 m.; Ore Quay, 240 m., depth 11 m. max. rate 12,000 tonnes per day.
Carnot Basin: Mooring on dolphins for Ro-Ro vessels up to 146 m. long, beam 14 m. – 32 m., depth 5.0 m. Connection to the open area by ramp capable of taking up to 175 tons.
Loubet Basin: (Closed by a lock, depth 5.50 m.) Huguet Quay, 240 m. for Ro-Ro/Lo-Lo vessels up to 132 m. LOA; Voisin Quay, 700 m. (for refrigerated fishing vessels up to 135 m. LOA).
Fore-Port and Tidal Port: Cross-channel terminal with 3 ramps (one of which is dual level/double lane for new generation car ferries), capacity 40/175/144-228 tons. Can accept car ferries up to a length of 145 m. and a draft of 4.50 m.

Direct connection by railway with Paris.

The port offers 70,000 sq.m. of warehouses and 150,000 sq.m of open storage area. 250,100 sq.m. of cold storage space.

A silo enables 42,500 tons of clinker to be stored for loading directly on to vessels at a rate of 1,200 t.p.h.

CRANES/EQUIPMENT:
Quai de l'Europe:
- 2×3 tonne cranes.
- 1×6 tonne crane.
- 3×12.5 tonne cranes.
- 2×30 tonne cranes.
- 1×35 tonne covered gantry crane.
- 1×1,000 t.p.h. conveyor belt for clinker and ore.

Ore Quay:
- 2×25 tonne gantry cranes.

Carnot Berth (Ro-Ro):
- Single lane, single deck ramp.
- Length: 70 m.
- Lane width: 4.50 m.
- Pontoon at end of ramp of 28 m.×28 m.
- Max. Load: One lane for 38 tonne trucks.

Quai Amiral Huguet:
- Ro-Ro berth for bow, stern or side ramps.

Quai Jean Voisin:
- 3×6 tonne cranes.

DENSITY: 1026.

FRESH WATER: Supplied by pipeline to all berths.

FUEL: SMCL quay can supply marine fuel. Quay is limited to vessels less than 100 m. length and 5 m. draft, otherwise fuel obtainable by tanker lorry from Dunkirk.

CONSULS:

Denmark	21.33.92.22.
Finland	21.30.44.55.
Germany	21.33.92.33
Greece	21.30.31.11.
Norway	21.33.92.22.
United Kingdom	21.87.16.80.

REPAIRS: Only quick repairs may be effected because of congestion at the quays. Slipway for vessels up to 2,500 tons.

SURVEYORS: Soemari, 52 Rue Blanzy – Pourre, 62200, Boulogne-sur-Mer. Tel: 21922200. Telex: 110013.

Bureau Veritas, Building A, Boulevard Gambetta, 62200 Boulogne-sur-Mer. Tel: 21315240.

GANGWAY/DECK WATCHMEN: By crew.

OPENING/CLOSING HATCHES: Performed by crew.

CARGO GEAR: Load/discharge effected by shore gear or ship's gear.

REPATRIATION: Facilities available.

AIRPORT: Le Touquet, 50 km. from Boulogne.

TIME: GMT plus 1 hour in Winter and GMT plus 2 hours in Summer.

HOLIDAYS: No work Sundays and legal holidays.

POLICE/AMBULANCE/FIRE: Police, Tel: 21.83.12.34 or in case of Emergency Tel: 17. Ambulance/Fire, Tel: 18.

EMERGENCY CO-ORDINATION CENTRE: At Sea: Crossma, Gris Nez. Tel: 21872187. Telex: 130680. In Port: Port Directorate and Harbour Master's office.

TELEPHONES: Can be connected on board vessels at Quay de l'Europe.

SERVICES: There are several private companies which carry out repairs, whether for sheet-metal, mechanical or electronics.

Supply of charts, nautical publications, sounding paper, availability of Notice to Mariners etc., contact shipping agents or Harbour Master's Office.

BANKS: Banque de France, 1 place d'Angleterre. Telex: 110902.
Banque Nationale de Paris, 14 rue Victor Hugo. Telex: 110016.
Banque Populaire du Nord, 87 rue Thiers.
Banque Scalbert Dupont, 32 place Dalton. Telex: 110018.
Barclays Bank (SA), 85 Grande Rue. Telex: 135886.
Compagnie Bancaire (Societe Cooperative d'Etudes et de Gestion du Groupe de la), 99 Grande Rue. Telex: 110999.
Credit Agricole, 85 Boulevard Mariette.
Credit Commercial de France, 50bis rue Thiers. Telex: 160184.
Credit Lyonnais, 45 rue Victor Hugo. Telex: 110048.
Credit Maritime Mutuel, Quai Chanzy. Telex: 810756.
Credit Mutuel C.M.A.A., 24 rue des Pipots.
Credit du Nord, 37 rue Faidherbe. Telex: 110971.
Societe Generale, 60 rue Victor Hugo. Telex: 110044.
Union Francaise de Banques (U.F.B.). Telex: 110999.

STORING: See "Prelims".
1. Storing by lorries.
3. Lorries can proceed alongside at berth.
4. Ship's stores can be loaded by any means.
5. Fuel is free of taxes, the same applies to provisions (within proportions estimated by Customs with relation to the number of crew members).

SHORE LEAVE: Permitted, no restrictions.

SEAMAN'S CLUB: Quai Chanzy. Tel: 21.31.73.20.

AUTHORITY: Service Maritime des Ports de Boulogne-sur-Mer et Calais, 96 Boulevard Gambetta. Postal address: B.P. 689, 62321 Boulogne Sur Mer Cedex. *Tel:* 21103500. *Telex:* 110968 Sermar F. *FAX:* 21.83.42.76.

Capitainerie du Port, B.P. 756, Jetee Sud-Ouest, 62321 Boulogne-Sur-Mer Cedex, France. *Tel:* 21.80.72.00, 21.31.52.43. (24 hours). *FAX:* 21.87.28.79.

BREST: 48.24 N. 04.30 W. (See Plan)

DOCUMENTS: See "Dunkirk".

PILOTAGE: Pilots do not stay out at sea, but only go to meet ship at estimated time of arrival as sent by ship. Normally pilot boat positioned on the line Toulinguet lighthouse and Beuzec (or Charles Martel) buoy, about 2.5 miles N.W. Toulinguet lighthouse. If strong S.W. wind, pilot boat waits for ship at entrance of Camaret Bay, about 1.5 miles N.E. Toulinguet lighthouse. If sea too rough to allow pilot boat to sail out, boat waits for ship at entrance of Brest Roads, near Portzic lighthouse.

Ships proceeding Brest must send last message giving ETA Pilot station (stating if *local time or GMT*), about 5 hours before arrival. Message to be addressed *"Brest Pilot Office"* through Brest Le Conquet radio station (call sign FFU). Day and night watch at pilot office. Radio station phones message direct as soon as received. Any alteration in ETA should be passed pilot office immediately.

Pilot boat sails from Brest harbour about 1.5 hours before ship's ETA, and 0.5 hour later pilot boat takes radiotelephony watch on 2182 kHz, calling ship from time to time on same frequency. Ships fitted with radiotelephony should listen and call on 2182 kHz. Pilot boat also equipped VHF Channels 16, 9, 6, 12 and Pilot office Channel 9.

ANCHORAGE: At Pilot's discretion. Anchoring in main approaches restricted as indicated on charts.

RESTRICTIONS: Entry subject draft and height of tide on day in question. Two entrances to port, one dredged to 6 m. below zero of charts and the other 5.8 m. below zero. Depth at quays varies according berth from 6 m. to 11 m. below zero.

MAX. SIZE: Inside harbour, max. length 320 m. Draft up to 35 ft. subject to tide.

HEALTH: If from foreign port, cable Maritime Health Service 48 or 24 hours prior arrival requesting Free Pratique. If risk of contagious disease exists, vessel will be held in roads until cleared. If from another French port, Free Pratique automatic.

RADIO: Brest Le Conquet – FFU.

VHF: VTS in operation.
Also see "Pilotage".

TUGS: Two port tugs, 1,900 h.p. and 2,900 h.p. Tugs join vessel at main entrance to port. Marine National places tugs at ship's disposal for all port movements. Generally, tow rope supplied by tug at additional charge.

One French salvage tug belonging to the Abeille Company is stationed at the port, but only gives assistance for vessels requiring aid outside the port area.

BERTHING: According to draft, ships may have to wait in roads before berthing, depending on height of tide in fairways. Also see "Restrictions".

Commercial Harbour Facilities:

Dock	*Quay*	*Utilisation*	*Length (m.)*	*Depth (m.)*	*Equipment*
1	West	Wine, Other goods Railways	212	5.30	Mobile cranes
3	"Eperon"	Refrigerated goods, Potatoes, other goods.	140	9	2 cranes 3 ton at 22 m.
5	West	Refrigerated goods, Potatoes, Fruit, Other goods, Railways	174	7	2 cranes 6 ton at 22 m.
5	North	Refrigerated goods, Potatoes, Other goods, Railways	330	7	mobile cranes
5	East	Cereals, Wood, Refrigerated Goods, Other goods, Railways	440	10 – 8	1 crane 12 tons at 30 m. 2 cranes 6 ton at 22 m.
6	West	Hydrocarbons, Molasses.	150	8	
6	East	Cereals, Phosphate, Manioc, Soya Beans, Soya Meal, Soya Oil.	175	9	3 cranes 8 tons at 30 m. Conveyor belts (550 t.p.h., 1,000 t.p.h. in near future).
6	Coaster	Not in use.	110	6	
6	South	Containers, Railways, Soya Beans, Soya Meal and Manioc.	230	12	1 crane 40 ton at 24 m. 2 cranes 8 tons at 30 m. Conveyor belts (1,000 t.p.h.)

Complete area of the Port: 250 hectares.

Storage:

1. In open air 100 hectares (with the Industrial Zone near Dry Dock No. 3).
2. Covered sheds 35,750 sq.m.
3. 3 silos (87,000 tons) and 1 silo (20,000 tons).
4. Refrigerated shed 21,000 cu.m. and shortly 63,000 cu.m.

BULK HANDLING FACILITIES: See "Berthing".

STEVEDORES: Agent has responsibility of making all arrangements for unloading, and is in touch with stevedores who arrange necessary gangs.

MEDICAL: Hospitals and clinics available. In the case of ship needing medical assistance, request should be addressed to Maritime Health Service through Conquet Radio Station, advising ETA, where vessel coming from and state of patient.

TANKERS: One berth for receipt of refined products destined for local storage tanks. Berth length 142 m., dredged alongside to a depth of 10 m. below zero of charts over an area 250 m. long and 30 m. wide.

FRESH WATER: All berths have fresh water supply. Apply to Chamber of Commerce who make necessary arrangements. Loading rate 13-15 t.p.h.

FUEL: Delivered by Societe de Depot des Petroles Cotiers and by Societe Maritime des Petroles.

CONSULS: The following countries are represented by Consuls at Brest:

Belgium
Chile
Denmark
Finland
Germany
Netherlands
Norway
Portugal
Spain
Sweden

REPAIRS: Repair Quay No. 1 at the South of the dry dock No. 2. Length: 320 m.; Depth: 9 m. to 9.50 m.

Repair Quays Nos. 2 and 3. Length: 608 m.; Depth: 8.30 m. to 10.70 m. Can accommodate vessels up to 550,000 d.w.t.

Repair Quay No. 4. Length: 400 m.; Depth 11 m.

Repair Quay No. 5. Length: 400 m.; Depth: 12.5 m.

These two quays are situated to the North and to the South of the dry dock No. 3.

The 5 floating repair piers totalling 1,700 m. in length in water at a depth varying between 9 m. to 12.5 m. at the lowest tide, and connected to a tanker cleaning and bunkering station specially equipped to handle slop and residue from ship tanks.

Several modern lifting machines, among which:

1 crane of a capacity of 80 tons at 25 m.

1 crane of a capacity of 150 tons at 38 m.

Piers and dry docks equipped with electricity, steam, compressed air, oxygen, acetylene, telephone, potable water and fire fighting equipment.

DRY DOCKS: *No. 1:* Dimensions 225 m. by 26.77 m., entrance sill 4 m. below datum, situated at the Northeast angle of Basin No. 5. The entrance lock can receive 2 vessels simultaneously, 1 of 75 m. length and the other of 150 m. length, with some adjustments.

Max. draft, at Spring tides: 11.50 m.; at neap tides: 10 m.

No. 2: Dimensions 338 m. by 55 m. Can accept tankers of up to 280,000 d.w.t. Entrance sill 7.25 m. below datum. Dock situated in the Southeast of the Industrial Port Zone. Can accept vessels of the following dimensions.

At mean Spring tides: length 335 m.; beam 50 m.; draft 12.50 m.

At neap tides: length 335 m.; beam 50 m.; draft 10 m.

No. 3: Dimensions 420 m. by 80 m. Can accept vessels of 550,000 d.w.t. Entrance sill: 9 m.

TANK CLEANING: Station situated at the Southern extremity of the East Mole. Can operate 4 Victor Pyrate machines simultaneously. Equipped with 3 boilers to supply steam, 3 pumps, oily water separator and an extractor for solid residues.

The tank-cleaning station is connected by pipeline to Repair Quays No. 1, 2 and 3 where tankers of 550,000 d.w.t. may be accommodated.

The new tank-cleaning and bunkering station, situated behind the dry-docks No. 2 and 3 is operational.

This station is connected by pipelines to dry docks No. 2 and 3, all repair quays and so to the 6 South for bunkering facilities.

It includes four sections:

A tanker cleaning section with oil-water separator (2,000 cu.m.p.h.).

An oil-treatment section to transform the recovered oil into commercial products;

A bunkering section with tanks of 35,000 cu.m.

A section that is able to separate the solid residues of tankers.

WATCHMEN: Compulsory for ships carrying dangerous materials, non gas-free tankers, vessels with chemical products, munitions, etc.

CERTIFICATES:

Nationality.
Gross Tonnage.
Classification.
Derat.
Vaccination.

CUSTOMS ALLOWANCES: Tobacco, Wine/Spirit. Ship's provisions must be under seal.

AIRPORT: At Guipavas, 7 km. from Brest – 4 daily services to Paris for onward connections.

TIME: Local time GMT plus 1 hour in Winter. GMT plus 2 hours in Summer.

POLICE/AMBULANCE/FIRE: Police 98444850 and 98445861; Police Secours 17; Ambulance and Fire Brigade 18 or 98442766.

TELEPHONES: Can be placed aboard at certain berths.

SERVICES: Degassing station, tank-cleaning and slop discharge, adjustment of chronometers, chart and document department, weather forecasting, permanent daytime service for signing on crew, barometer adjustment. Also Compass and D/F adjusting.

Port Weather Service: Port Office, 30 bis, Quai Commandant Malbert.

Health Service: Quai Commandant Malbert.

DEVELOPMENTS: A new port industrial zone with an area of 100 hectares, and frontage of approx. 1,800 m. which will enable the construction of quays with depths of 10 m. – 12 m.

Furthermore, the Port is studying a vast plan to develop the commercial port, so that the latter may adapt itself to the requirements of modern maritime transport.

AUTHORITY: Port de Brest, Direction Departementale de l'Equipement, 2 rue Alderic Lecomte, 29200 Brest Cedex, France. *Tel:* 98.31.41.02 (12 lines). *Telex:* 940586. *FAX:* 98.31.41.14. *Contact:* M. Redoulez, Ingenieur des Ponts et Chaussees.

CAEN: 49.13 N. 00.21 W. (See Plan)

DOCUMENTS:

3 copies Crew List.
3 copies Provisions List.
3 copies Crew Personal Effects List.
Derat Certificate or Exemption.

PILOTAGE: Pilot boat is on station from 2.5 hours before HW until 3 hours after HW. Vessels can contact the Pilot on VHF Channels 12 and 16. The pilot boat is stationed in the outer port of Ouistreham and goes out to the roads on vessels approach. International code flag signals are used to call Pilot.

Caen Pilot boat has a black hull with white stripe. The words "Pilote Caen" are written in white letters on the hull. During the Summer months the pilot boat is replaced by a launch bearing the same markings. As soon as the Pilot boards he will hand the Master an Entry Declaration to be completed.

ANCHORAGE: While waiting for the tide vessels may anchor in the vicinity of the light-buoy in Ouistreham Roads. The position of this buoy is Lat. 49° 19' 50" N., Long. 00° 14' 18" W. The buoy is positioned in depth of 10 m. Anchorage is open to winds from West through North to East; good holding ground. Currents do not exceed 2 knots at spring tides.

RESTRICTIONS: Dimensions of locks – East Lock length 181 m., width 18 m. West Lock length 225 m., width 28.45 m.

The locks are open to navigation from 2 hours before HW to 3 hours after HW. The locks can be used up to a maximum of 1 hour before/after these times by special permission of the Harbour Master and payment of additional dues.

Maritime Canal, length 14 km. The canal is dredged to 9.89 m. depth up to Herouville Dock. Vessels proceeding to the docks at Herouville and Calix must pass 2 bridges: Colombelles 30 m. wide and Blainville (a new bridge under construction with a width of 40 m., completion expected June 1994).

Vessels proceeding to new dock must also pass the bridge at Calix, 21.76 m. wide. Maximum speed authorised in the Maritime Canal is 7 knots.

Maximum air draft for New Dock and St. Pierre Dock, 33 m.

MAX. SIZE: *Daytime:* Length 205 m., beam 23.5 m., draft 28.8 ft., sea water.

Night-time:

Blainville/Herouville	Length 160 m.	Beam 20 m.	Draft 25.9 ft. SW.
Calix	Length 150 m.	Beam 20 m.	Draft 25.9 ft. SW.
New Dock	Length 135 m.	Beam 16 m.	Draft 21.4 ft. SW.

HEALTH: Free Pratique is automatic for all ships. Health control is carried out by Customs Officers under the direction of the Havre Port Health Office. For ships coming from ports in Africa, Asia, or Pacific Islands a Maritime Declaration of Health is required.

In case of suspected epidemic or fever on board Master must advise the port authorities who will instruct him to proceed to an appropriate anchorage to be boarded by the Port Health Doctor.

RADIO: Nearest radio station Boulogne Radio, call sign FFB.

VHF: Vessels may communicate with the Harbour Master's Office by VHF Channels 12 and 68. This service only operates during the hours when the locks are operating.

TUGS: The use of 1 or 2 tugs is recommended for vessels over 16.50 m. beam.

BERTHING:

Dock	*Quay*	*Facilities*	*Length* (m.)	*Draft* (m.)(F.W.)
Saint Pierre	Vendeuvre	Reserved for pleasure boats	280	4.0
	Cafarelli		150	4.0
Nouveau Bassin	President	4 cranes 5 t	150	7.0
	Hippolyte Lefevre	Cereals machinery rate: one 200 t.p.h.		
	President Gaston Lamy	2 cranes 3 t	550	6.5
	De Normandie	2 cranes 5 t	375	5.8
De Calix	Calix	4 cranes 6 t	140	8.60
		Storage of Molasses: 13,500 t		
		Roll-on/Roll-off Berth	180	7.6
D'Herouville	President Delaunay	4 cranes 6 t	370	8.95
	Mole a Charbon	Private berth, 4 cranes 8 t	200	8.95
Blainville	Blainville	Cereals machinery 2 units, rate 1,000 t.p.h. 1 crane 26 t; 3 cranes 20 t; 2 cranes 26 t	560	8.95
Ouistreham	Fore Port	Car Ferry Berth No. 1	140	5.0 (SW) at LW
		Car Ferry Berth No. 2	170	7.0

Note: A second car ferry berth, fitted with a double level bridge, able to receive the new generation of ferries is available. The berth receives ships up to 165 m. LOA.

STEVEDORES: Arranged by Agent on basis of ETA provided by vessel before arrival.

MEDICAL: Doctors and hospital facilities available.

TANKERS: There is a tanker berth (D.P.C.) in Calix Dock, max. draft 8.60 m. Gas-freeing is prohibited.

FRESH WATER: Available at all berths, rate about 5 – 10 t.p.h.

FUEL: Can only be supplied by tanker lorries.

CONSULS: The following countries are represented locally:

Denmark Tel: 31.72.35.30 Norway Tel: 31.52.04.74
Finland Tel: 31.97.33.27 Sweden Tel: 31.82.21.76

REPAIRS: Deck and machinery repairs can be carried out by local workshops. Nearest dry docks at Le Havre or Cherbourg.

WATCHMEN: Not compulsory during daylight hours from 0600 hrs. to 1800 hrs.

OPENING/CLOSING HATCHES: This work is normally carried out by the crew.

CUSTOMS ALLOWANCES: Amount of tobacco and alcohol for crew consumption must be declared on the Stores List. Quantities held out of bond are at Customs discretion.

REPATRIATION: Can be arranged.

AIRPORT: Situated 12 km. from the port. There are no regular services, but an air taxi with 5 seats can arrange connections to international airports.

TIME: GMT plus 1 hour or GMT plus 2 hours in Summertime.

HOLIDAYS: Work is carried out on legal holidays. No work on "Jours de Fetes" and Sundays.

POLICE/FIRE/AMBULANCE: Police Tel: 17; Fire Tel: 18; Ambulance Tel: 18.

TELEPHONES: Can be connected on board ships. Quayside telephone situated in Blainville Dock.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Not required.

GARBAGE DISPOSAL: On request from the Agent, skips are provided at the ends of the quays, as near as possible to the ship.

WASTE OIL DISPOSAL: No facilities.

SEAMAN'S CLUBS: None.

AUTHORITY: Ingenieur des Ponts et Chaussees, Chef de l'Exploitation, Direction Departmentale de l'Equipment, B.P. No. 517, 14035 Caen Cedex. *Tel:* 31.45.30.90. *Telex:* 170213 FT.

Commandant du Port, Terre Plein des Ecluse, 14150 Ouistreham, France. *Tel:* 31.97.14.43. *Telex:* 772071 F *FAX:* 31.96.39.52. *Contact:* Harbour Master (Tel: 31.97.28.14).

CALAIS: 50.58 N. 01.50 E. (See Plan)

DOCUMENTS:

Ship's Register.
Inwards Declaration.
Manifest of Cargo.
Bill of Lading.
3 Lists of Provisions on board.
4 Lists of Articles held by Crew.
3 Lists of Crew.
List of open spaces.
Health Certificate, endorsed by Master on arrival.
Derat or Exemption.
For tankers, Certificate of Cargo Specification and Certificate of vessel's suitability to transport inflammable liquids in bulk.

PILOTAGE: Compulsory when entering or leaving harbour, except for ships less than 50 m. length. Pilotage area: 3 miles from piers. Ships required to give notice of their arrival 18 hours before, through Boulogne Radio. Pilot waits between buoys CA4 and CA6. Pilot boat: Black, white side stripe, bearing the inscription "Pilote Calais". She is equipped with VHF, Channel 6 and Channel 16.

ANCHORAGES: North of "CA4" Buoy, 25 m. deep, sand and gravel. Good anchorage. When bad weather from North, ships are advised to stand out to sea or anchor in the roads of Les Dunes (Near Goodwin Sands – English Coast). Ship will receive instructions from Pilots or Harbour Captain's Office when to enter roads of Calais.

RESTRICTIONS: Harbour channel 230 m. wide. In channel and outer harbour, depths are maintained at 9.0 m. MWL. Vessels should enter harbour preferably about 2.5 hours before high tide about 2.5 hours after high water.

MAX. SIZE: "Bassin Carnot", 150 m. max. length; "Bassin Ouest", (West Dock) 110 m. max. length; "Quai P. Devot", 190 m. max. length; "Bassin Carnot", 19 m. max. beam; "Bassin Ouest", 16 m. max. beam. 9.15 m. max. draft. Eastern Dock, 245 m. max. length, 11.50 m. max. draft. Port accessible to vessels of 45,000 d.w.t.

HEALTH: Sanitary Control can arrange Derat and Exemptions. Port Sanitary Control, 21-23 rue du Commandant Bonningue, 62100 Calais. Tel: 0321-977741. Telex: 160758 F.

RADIO: Messages through Boulogne Radio. ETA must reach pilotage station and Harbour Master's Offices 18 hours before arrival (Telex: 160758 F. Fax: 0321-340892).

VHF: When near Calais, 2 hours before arrival, ships equipped with VHF must call Harbour Master on Channel 12.

TUGS: Generally join ships at end of the piers. Towing ropes are generally ships own but can be supplied by tug.

BERTHING: Max. height of tide 7.30 m. Depth on dock sills 2 m. LWOST.

At West dock, entrance between 1.5 hours before and half an hour after high tide. In Bassin Carnot, entrance between 3 hours before and 1 hour after high tide.

There are 2 berths equipped for handling Roll-on/Roll-off traffic, situated in Bassin Carnot.

Eastern Dock: The new deep water dock has direct access to the sea and 3 multi-purpose berths. 4×40 tonne multi-purpose cranes are available.

Outer Harbour: One berth equipped for handling Ro-Ro traffic in the N.E. part of the harbour.

TANKERS: Oil tankers are not allowed to enter harbour. Small liquid sulphur and suphuric acid tankers are accepted at "Bassin Carnot". Tankers are allowed to enter harbour only by daytime. They must leave as soon as operations are finished. Hoses 10 in. and 12 in. in diameter. Barges discharged with a 10 in. hose.

CRANES:

Paul Devot Quay	Electric cranes – 15 tons with automatic scoop	2
Transit Station	A block of 2 gantries able to handle a load of 40 tons (containers)	
Carnot Basin		
Vistule Quay	Electric cranes – 6 tons	2
Loire Quay	Electric cranes – 6 tons with automatic scoops	3
	Electric cranes – 12 tons with automatic scoop	2
Crespin Quay*	Electric cranes – 6 tons with automatic scoops	4
Fournier Quay*	Electric cranes – 12 tons with automatic scoop	2
Volga Quay	Electric crane – 6 tons with automatic scoops	1
Tidal Basin	Electric cranes – 40 tons	4

*Possibility of using cranes at Paul Devot Quay.

Dry Dock: One electric crane – 15 tons, 2 mobile cranes "PPM" of 18 tons complete the lifting machinery of the Public Equipment of the Port and one crane of 30 tons.

BRIDGES: Swing bridges (West Dock) and draw bridges (Bassin Carnot) are situated on sluices.

STEVEDORES: Informed by Agent of tonnage, nature and condition of cargo.

MEDICAL: All facilities available.

DENSITY: Salt.

FRESH WATER: Supplied from hydrants on wharves.

FUEL: Any fuel can be supplied by tank lorry of large capacity.

CONSULS:

Netherlands, A. Ravisse, 12 Bd. des Allies. Tel: 0321-965503.
Denmark, M.Lasuen, Place de Suede. Tel: 0321-344400.
Finland, H. Ravisse, 12 Bd. des Allies. Tel: 0321-965503.
Greece; P. Foissey, 26 rue d'Ostende. Tel: 0321-972700.
Norway, Y. Lefebvre, 12 Bd. des Allies. Tel: 0321-965503.
Sweden, E. Pagniez, 198 Rue des Quatre Coins. Tel: 0321-347734.
United Kingdom, J-M.Inglis, 41 Place d'Armes, 62226 Calais Cedex. Tel: 0321-963376.

REPAIRS: Deck and engine repairs possible.

DRY DOCKS: One, 153 m. long, 21 m. wide. Depth at sill, 7.45 m.

GANGWAY/DECK WATCHMEN: Ships must be guarded.

OPENING/CLOSING HATCHES: As a rule hatches are opened/closed by crew.

CUSTOMS ALLOWANCES: Tobacco: No limit for foreign ships, but the quantity must be declared on the lists of articles held by crew.

REPATRIATION: Pilot boats and tugs may trans-ship equipment or hands in outer roads.

AIRPORT: Calais, Dunkirk (International), 7 km. away.

TIME: GMT plus 1 hour. Spring and Summer GMT plus 2 hours (Late March to late September).

HOLIDAYS: 1st January; Easter Monday; 1st May; Ascension Day; Whit Monday; Tuesday afternoon following 1st Sunday of July (local feast); 14th July; 15th August; 1st November; 11th November; afternoon of 24th December; 25th December; Sundays.

POLICE/AMBULANCE/FIRE: Police 17; Ambulance 15; Fire 18.

SHORE LEAVE: Crew are allowed ashore.

IDENTIFICATION CARDS: Identification Cards and Seamen's Books are required.

GARBAGE DISPOSAL: Skips available within the port. If a vessel requires a skip, Agent will arrange.
WASTE OIL DISPOSAL: No facilities available.
SEAMAN'S CLUBS: None.
CURRENCY: French Franc (F.).
AUTHORITY: Directeur de l'Exploitation du Port de Calais, S.M.B.C., Place de l'Europe, B.P. 451, 62226 Calais, Cedex. *Tel:* 0321-966300. *Telex:* Sermar 160758 F. *FAX:* 0321-347411. *Contact:* M. Neveu, Port Director.

Harbour Master's Office, Quai de Maree, 62100 Calais. *Tel:* 0321-963120. *Telex:* 160758 F. *FAX:* 0321-340892. *Contact:* G.Provoost, Harbour Master.

AGENT: Henri Ravisse, 12 Boulevard Des Allies (B.P. 817) 62225 Calais Cedex, France. Tel: 0321-965503. Fax: 0321-968415. Telex: 810713 Agent.

CALVI, Corsica: 42.34 N. 08.46 E. (See Plan)

DOCUMENTS:
- 3 Crew Lists.
- 3 Passenger Lists.
- 1 Provisions List
- 1 Cargo List.
- 1 List of Articles (new and Customs-barred) in possession each crew member – cameras, binoculars, radios, cigarettes, spirits, etc.
- 1 Health Declaration.

PILOTAGE: Not compulsory. If required, telephone Pilot Station at Bastia, Tel: 95.31.50.95.
ANCHORAGE: Outside port for cruise vessels.
MAX. SIZE: Draft 6.5 m.; length 140 m.
RADIO: Within 50 miles call Ajaccio Radio VHF Channel 16. Then connected over Channel 23 to telephone network.
TUGS: None available.
BERTHING: 3 wharves, the main wharf being the Corsica ferry berth.
STEVEDORES: 24 hours accurate ETA necessary for ordering gangs. No work on Sundays and official holidays.
CARGO GEAR: Only a few nets and slings available; all other gear must be supplied by ship. Ship's derricks used.
FRESH WATER: Available at very slow pumping rate.
FUEL: Diesel fuel available.
REPAIRS/CONSULS: None.
AIRPORT: Calvi (5 miles), regular flights to Nice.
TIME: GMT plus 1 hour in Winter. GMT plus 2 hours in Summer.
AUTHORITY: Capitainerie du Port, Quai Landry, 20260 Calvi, Corsica. *Tel:* 95.65.05.21.

Affaires Maritimes, Quai Landry, 20260 Calvi, Corsica. *Tel:* 95.65.01.71.

CANCALE: 48.40 N. 01.51 W.

Used by fishing and pleasure vessels only.
PILOTAGE: Pilot available from St. Malo. Tel: 99.81.63.59.
BERTHING: 2 public wharves, depths from 0.5 m. to 13 m. at Spring tides.
CRANES: One 3 ton crane available.
MEDICAL: Hospital facilities available at St. Malo, 15 km. distant. Tel: 99.81.60.40.
FRESH WATER: Available in small quantities.
FUEL: Diesel oil available by truck and by pipeline on wharf.
AIRPORT: Nearest at Dinard, 30 km. away.
AUTHORITY: Subdivision Maritime de l'Equipement, Quai du Pourquoi Pas., 35402 Saint Malo, France. *Tel:* 99.56.07.24. *Telex:* 950197. *FAX:* 99.40.11.70. *Contact:* Xavier La Prairie, Engineer.

CANNES: 43.33 N. 07.01 E. (See Plan)

DOCUMENTS:
To be sent on departure from previous port:
- 3 copies of Passenger List.
- 1 copy of Crew List.

Required on arrival:
- 4 copies of List of Passengers, showing Christian name, surname, age, date and place of birth, nationality.
- 2 Crew Lists.
- 5 copies of a Special Arrival form (supplied on arrival).

PILOTAGE: No Pilot station at Cannes. A tender with Company's flag on top of its mast will meet the vessel: *(a)* If ship is proceeding to anchorage No. 1, in Golfe de la Napoule, about half a mile South of the lighthouse at end of Cannes port Pier (Quai Lauboeuf); *(b)* If ship is proceeding to either anchorage No. 2 or 3, in Golfe-Juan, half a mile North of Ile Ste Marguerite.

The tender will lead to anchorage and will give 1 blast of the siren when correct position has been reached. At night, tender has a fixed white light at top of its mast, which replaces the flag. Should it not be possible to advise by wireless before arrival at anchorage and weather conditions making it necessary for ship to anchor at either position No. 2 or 3, boat will meet ship in Golfe de la Napoule, 2 miles South of Cannes port lighthouse. In this event, ship must proceed to anchorage No. 2 or 3 as appropriate, steaming to South of Ile St. Honorat, whilst tender will proceed by channel between Ile Ste Marguerite and the mainland.

ANCHORAGE: Advice of anchorage is passed to Master via Grasse Radio or Monaco Radio, VHF Channel 16 usually about 1 hour before arrival. There are 3 anchorages, any of which may be used according to the weather:

No. 1 off the port of Cannes, approximately half a mile South of end of breakwater, used by calm sea or by East or N.E. winds.

No. 2 is situated to North of Ile Ste Marguerite, used by S.E. or S.W. or South winds.

No. 3 to the East of Cap de la Croisette, used by West or N.W. winds.

It could happen during the call, winds may change direction and movement from anchorage No. 1 to No. 2 or No. 3 become necessary. Shift takes about 1 hour.
HEALTH: Port officials will embark immediately the ship anchors. Free Pratique may be granted by wireless telephone 1 hour before arrival at ship's surgeon request stating: "No illness on board".
VHF: Port Authority on Channel 12, call sign "Cannes Port".
FRESH WATER: One water barge (capacity 65 tons) and 2 water barges (capacity 20 tons) available.

12 hours notice required for orders up to and including 100 tons. 24 hours notice required for amounts in excess of 100 tons. Pumping rate 30 – 40 cu.m./hr. with one or two boats.
GANGWAY/DECK WATCHMEN: Watchmen for gangways should be provided by ship and passengers are requested to present their landing cards every time they use the gangways.
AIRPORT: Cannes Mandelieu, 5 km.
GARBAGE DISPOSAL: Available.

Cheyresy et Fastout. Tel: (33) 04.93.39.36.12. Fax: (33) 04.93.68.54.55.

Shema. Tel: (33) 04.93.49.24.39. Fax: (33) 04.92.97.67.28.
WASTE OIL DISPOSAL: Collection service available from companies mentioned above.
AUTHORITY: Capitainerie du Port Gare Maritime, 06400 Cannes, France. *Tel:* (33) 04.92.98.70.00. *FAX:* (33) 04.92.98.70.01. *Contact:* M. Mortreux, Port Director.

CHERBOURG: 49.38 N. 01.38 W. (See Plan)

DOCUMENTS:
- Declaration of Health.
- Manifest of Provisions on Board.
- Manifest of Crew's Possessions.
- Manifest of Cargo – in certain cases.
- Manifest of Equipment.

DEEP SEA PILOTAGE: Pilots board off "CH1" Buoy. Radio ETA to Deep Sea and Coastal Pilots Ltd., Telex 911847 Pilots G or "Cherbourg Pilots" Telex 170952 or "Pilotage Hauturier Cherbourg" Telex 171467 Pilhaut and others (48 and 6 hours notice.) On approaching Cherbourg contact Cherbourg Signal Station on VHF Channel 16 confirming ETA. Also see "Pilotage".
HELICOPTER SERVICE:

A French Navy helicopter is available for boarding of deep-sea pilots.

Description of Services: A 24 hours – 7 days per week service, within a radius of 150 nautical miles of Cherbourg, to and from ships without the necessity of reducing speed or changing course, in any sea conditions.

The positioning and pick-up of pilots are accomplished either by landing or by winching on all types of vessels, serving even small coasters and fishing boats.

Doctor and stretchers for injured personnel available within minutes of your call.

Note the possibility to put technicians and specialists on board if a deep-sea pilot is ordered.

Recommended Procedure:

(A)	48 hours before	Please cable through Saint Lys Radio (FFL) or any radio station to Cherbourg Pilot Telex 170952 PILCHER the following information: (a) ship's name (b) state you require Helicopter and reason for request (c) ETA rendezvous point requested (d) VHF in good order or not (e) Confirm full landing, restricted or winching area available.
(B)	24 hours before	With the same radio procedure confirm your ETA.
(C)	4 hours before	Call "Jobourg Traffic" (French Marine Traffic Centre) on VHF 16/11 to confirm your ETA.
(D)	When helicopter is flying, its pilot contacts you on VHF.	Give information about relative wind and start locked key homing signal on 410 kHz,

Services are assured 24 hours per day with 2 hours' notice, or immediately in case of emergency.

Rendezvous Points:
Standard Points

For normal operations, 4 rendezvous points are recommended.

Point A: 13 nautical miles North of Cap de la Hague.
Point B: 10 nautical miles North of Cap Levi.
Point C: 5 nautical miles North of Cap Levi (prohibited area for tankers).
Point D: 27 nautical miles North of Cap Levi (ships West bound).

PILOTAGE: Requests for pilotage must indicate arrival time at the buoy CH1. They may be addressed to Agent or direct to Pilot Station, telegraphic address "Pilotage Cherbourg" Telex: 170952, or through the Homet look-out station by means of the usual signals. To avoid delay it is well to warn the Pilot Station 4 hours in advance of arrival. As a general rule, the pilot boat always comes out, whatever the weather. In bad weather, the vessel follows the pilot boat and Pilot boards as soon as shelter permits.

Deep-Sea Pilots for Tankers: Deep-Sea Pilots for loaded tankers carrying hyrdrocarbons or other dangerous cargoes are embarked 7 miles North of Fort de l'Ouest Light, or at least 7 miles off the coast, the exact boarding place being given on each occasion by R/T from the Pilotage Service.

ANCHORAGES: Anchoring must be made strictly according to the instructions of the Pilot so as not to get in the way of movements and anchorage of steamers. Depths vary from 6 m. to 12 m. in safe anchorages.

RESTRICTIONS: In the wet dock, the bridge is opened 1 hour before until 1 hour after high water.

MAX. SIZE:

	Length (m.)	*Breadth* (m.)	*Depth Average Tide* *Spring* (m.)	*Neap* (m.)
In the Roads	No Limit	No Limit	11	12.50
Trans-Atlantic Dock	No Limit	No Limit	7.0–12.5	8.5–14.0
Mielles Dock	150		5.00	6.50
Ro/Ro No. 4	210	30	8.0	–
Berth Amiot	100		3.0	4.50
Ro/Ro No. 1	130	20	7.0	8.50
Ro/Ro No. 2	200	30	8.0	9.50
Ro/Ro No. 4	170	40	7.0	8.50
Ro/Ro No. 5	–	–	4.5	6.00

Ro/Ro No. 3: (Quai de France – South). Length: No limit. Width: 44 m. Depth: 12 m.

HEALTH: From French port to French port, no formalities. From foreign port to French port, request for Free Pratique (yellow flag). In case of sickness on board, warn the Agent in advance. No crew member may leave ship before consultation and agreement of Port Doctor.

RADIO: The stations which offer the best facilities are Boulogne Radio, Brest le Conquet Radio, and St. Lys for ships which are a long way off.

VHF: Deputy Harbour Master on Channel 12 throughout 24 hours.

TUGS: Tugs generally join vessel in the main approaches. With regard to the tow rope, a charge is made.

BRIDGES: Only the swing bridge at the entrance to the wet dock, which is opened on request from 1 hour before until 1 hour after high tide for the entry and exit of ships. Contact Lockman on VHF Channel 6, call sign "Pont Tournant".

STEVEDORES: Agent needs ETA, to arrange personnel and equipment to be used for handling cargo.

CRANES: 35 ton capacity gantry for road/rail container and kangaroo operations. 40 ton capacity mobile crane for container and kangaroo operations. 60 to 204 ton floating cranes. Various mobile cranes for light and heavy lifts. Fleet of tugmasters and fork-lift trucks.

Also see "Berthing".

MEDICAL: Advise Agent of any requirements at the same time as ETA. There are 2 hospitals, civil and military, both very well equipped.

TANKERS: Querqueville facility is temporarily closed for repairs to pontoons.

FRESH WATER: Water points on all quays.

FUEL: Available from local suppliers – Esso, Shell, etc.

CONSULS:

Belgium
Denmark
Finland
Greece
Haiti
Ireland
Norway
Portugal
Sweden
Venezuela
United Kingdom

REPAIRS: All types of hull and engine repairs are possible.

DRY DOCK: Commercial Port's dock: Length 75 m., width 14 m.

Dry Dock No.	*Sill Length* (m.)	*Max. dim. of vessel able to enter* *Length* (m.)	*Breadth* (m.)
N. Dry docks			
1*	90.00	97.85	18.50
4*	90.00	97.85	18.50
S. Dry docks			
5*	200.00	206.40	25.70
7*	69.30	75.75	17.30

* These dry docks are inside the Navy Yard. Special agreement from Navy Authority is required for civilian vessel use.

WATCHMEN: Every ship in port must have a watchman, usually a crew member.

OPENING/CLOSING HATCHES: At the discretion of Master, crew may perform this.

CUSTOMS ALLOWANCES: Free allowance for each crew member – 200 cigarettes or 50 cigars, and 1 litre of alcohol. Common Market Countries – Crew: 300 cigarettes, 75 cigars and 1.5 litres of alcohol.

AIRPORT: At Maupertus, 12 km. from Cherbourg, with services to Paris, Southampton and Guernsey. There are no regular services in the immediate vicinity.

REPATRIATION: Can be arranged.

TIME: GMT plus 1 hour in Winter. GMT plus 2 hours in Summer.

HOLIDAYS: January 1st; Easter Sunday/Monday; May 1st; Ascension; Whitsun Sunday/Monday; July 14th; Assumption; 15th August; November 1st; Victory Day, November 11th; Christmas Day, December 25th.

POLICE/AMBULANCE/FIRE: Police: 33.44.20.22 or 17. Ambulance: 33.53.13.29. Fire: 33.23.40.59 or 18.

TELEPHONE: Generally, ships do not request the installation of a telephone line, unless for a prolonged stay.

IDENTIFICATION CARDS: Each crew member must carry his Seaman's Card.

GARBAGE DISPOSAL: Drums available alongside, drums collected when full. For service, contact Chambre de Commerce et d'Industrie, Tel: 33.44.21.80.

WASTE OIL DISPOSAL: Collection by tanker truck, free of charge, capacity unlimited. Contact: Napoly, Tel: 33.65.33.03. Telex: 306022 (Napoly). Fax: 33.66.55.89.

SEAMAN'S CLUBS: None.

DEVELOPMENTS: Deep draft berths (13.0 m. depth), length 360 m. to be extended to 450 m.

A special linkspan for catamarans to be built.

BERTHING:

Name of Dock	*Name of Quay*	*Use*	*Number/type of lifting equipment* (H.d. = Heavy duty)	*Length of quays* (m.)	*Open storage area*	*Depth* (m.)	*Lock Nos.*
Trans-Atlantic	France	Cruises, general-cargo, passengers, various other services	2 cranes 7.5 t, 13 t in tandem	620	2 ha.	−13	None
Trans-Atlantic	Normandie	General-cargo, Ro/Ro, other services		500	5 ha.	−11	None
Car Ferry	Post No. 1	Ro/Ro freight and passenger	H.d. linkspan ramp for vehicles, passenger jetty and terminal Capacity 40 tonnes	120	20,000 sq.m.	−6	None
Freight Ferry	Post No. 2	Ro/Ro and passengers	H.d. linkspan 17 m. wide capacity 280 t	170	33,000 sq.m.	−8	None
Trans-Atlantic	Post No. 3	Ro/Ro	Capacity 65 t	620		−11	
Car Ferry	Post No. 4	Ro/Ro	Ro-Ro freight and passengers. H.D. double linkspan. Capacity 240 tons.	170		−8	None
Quai des Mielles	Post No. 5	Ro/Ro	Car Carriers	400		−4.5	None
Des Flamands		Ro/Ro and container freight storage cars	2 cranes 120 t 2 mobile cranes 40 t 1 gantry 140 t	360	50 ha. (10 ha. for containers)	−13	None
Querqueville	Oil dock	Bulk petroleum		200		−9	None
Commercial Basin	Alexandre III l'Entrepot	Fishing Coasters		800		−4	One
Navy Yard		Construction and repairs (dry docks)	Various				Seven
Commercial Dock		Dry dock		75			One

AUTHORITY: Capitainerie du Port, BP 108, Pont Tournant, 50.100 Cherbourg Cedex, France. *Tel:* 33.20.41.25. *FAX:* 33.20.69.29. *Contact:* Captain Claude Lievain, Commandant de Port.

Direction Departementale de l'Equipement, Allee Du President Leon Menut, 50100 Cherbourg. *Tel:* 33430133. *Telex:* 170011 Didello (Saint Lo).

Cherbourg Chamber of Commerce and Industry, B.P. 839, Hotel Atlantique, Boulevarde Felix Amiot, 50108 Cherbourg Cedex, France. *Tel:* 33.23.32.00. *FAX:* 33.23.32.28. *Telex:* 170849. *Contact:* J. Mesnildrey, Commercial Manager.

CONCARNEAU: 47.52 N. 03.55 W. (See Plan)

DOCUMENTS:

Ship's Registration Certificate.
Cargo Manifest.
Stores List.
Crew Personal Effects List.
List of Crew and Passengers with dates of Vaccinations.

PILOTAGE: The pilotage area is limited to the East by alignment of the sea marks of Point of Raguenes (Lat. 47° 47' N., Long. 03° 48' W.) and the Ile Verte (Lat. 47° 46' 40" N., Long. 03° 48' W.), to the South by the Parallel of the "La Jument Buoy" (Lat. 47° 39' N., Long. 04° 01' 20" W., to the South of the Glenan Islands), to the West by the meridian of the "Basse Rouge" Buoy.

Pilotage is not required for vessels with an overall length of less than 50 m., except for tankers carrying oil products or gas.

It is recommended to warn the Pilot 24 hours in advance, indicating the most accurate ETA (Tel: 98.50.89.03).

The pilot craft is not stationed at sea. The Pilot generally boards to the South of the Cochon Tower or, on request, between Cochon Tower and the Ile aux Moutons; the craft carries the "H" flag by day and white flashing lights at night.

If the state of the sea does not permit the Pilot to board, the pilot craft makes the signal "T" (by flag or morse code) signifying: "follow-me, the Pilot will board in the shelter of the Peneroff Breakwater". If the state of the sea does not allow the pilot craft to come out, it stations itself in the shelter of the Peneroff Breakwater and makes the signal "BT".

Access: It is not advisable for vessels of a certain size whose Masters do not know the channel well to proceed without a Pilot, at LW in particular, to the North of the line Beg-Meil – Trevignon Point.

ANCHORAGE: *Main Roads:* Vessels anchor in the bay, on request, on a muddy bottom, on the alignment at 028.5° from the Beuzec church tower through the la Croix lighthouse.

Small Roads: Vessels anchor in the small roads sheltered from the North to Southeast by East, in 8 m. of water and a bottom of sand and mud, on the access alignment or to the West of this alignment.

At night, when on the access alignment, as soon as the Lanriec Light appears, the alignment is opened so as to see the Beuzec Light to the left of the La Croix Light, and when the Lanriec Light disappears, the vessel anchors in 8 m. of water.

The recommended landing stage is on the La Croix Breakwater.

Kersos Cove (Lat. 47° 52' N., Long. 03° 55' W.): It is possible to anchor here sheltered from winds from North to South by East, but with a reduced turning area. Vessels anchor half way between the Kersos Tower and the coast to the N.E. in 3 m. – 5 m. water with a good holding ground of sand and mud.

MAX. SIZE: *Tankers:* LOA 105 m. – 106 m., beam 18.0 m. and max. draft 5.7 m.

Other vessels: By day: 115 m. – 116 m. overall; by night: 110 m. – 111 m. overall. Max. beam day and night 18.0 m.

RADIO: Contact Conquet Radio.

VHF: Tugs on Channel 12 on weekdays during working hours from 0800 – 1200 hrs. and 1400 – 1800 hrs.

TUGS: 2 tugs available on demand, meet vessels near Cochon Light, large vessels use a tug for berthing.

BERTHING: As Concarneau is essentially a fishing port, a commercial vessel of a certain size cannot enter without the authorisation of the port services, who must prepare a quay berth for her in advance.

The Port of Concarneau includes the Port of La Croix located to the West of the La Croix Lighthouse, a fore-port and a rear-port separated by the peninsula on which is Ville-Close. The Lanriec Passage connecting these two port areas is cleared at 3 m. depth and marked by 5 light towers.

Fore Port: In the middle of the fore port are 540 m. of pontoons enabling 265 pleasure craft with a draft of 2.5 m. approx. and length of 10 m. to berth.

Along the Peneroff Quay, deposits formed by a hard bottom covered by a thin layer of muddy water from 1 m. to 2 m. Along Ville-Close, the bottom dries from 2 m. to 5 m. Along the North face of the South Breakwater, a slipway permits careening of craft.

Rear Port: The Rear Port is comprised of 1,537 m. of mooring quay.

Aiguillon Quay: Depth 1 m., length 210 m.
Carnot Quay: Depth 2.80 m., length 250 m.
Lin Quay: Depth 5.00 m., length 263 m.
East Quay: Depth from 2.50 m. to 5 m., length 240 m.
Petrol Tanker Quay: Depth 5 m., length 95 m.
Right Bank Moros Quay: Depth 5 m., length 257 m.
Left Bank Moros Quay: Depth 5 m., length 220 m.
Ship's Lift Pier: Depth 5 m., length 90 m. (Duc d'Albe).

These quays receive fishing and commercial vessels and vessels under repair. The vessels are positioned according to their characteristics and the nature of the goods to be unloaded or taken on board.

CRANES: 6 × 8 tonnes (mobile).

MEDICAL: Municipal Hospital at Porzou. Tel: 98.50.30.30.

FRESH WATER: Available.

FUEL: Available.

DRY DOCKS: Synchrolift available. Max. capacity 2,000 tons; max. LOA 95 m.; max. keel length 76 m.; max. beam 14 m.; max. draft 5.50 m. Fresh water, electricity, compressed air and cranes available.

There is a slipway which can accommodate vessels of 350 tonnes.

AIRPORT: At Quimper – Pluguffan 30 km. from the town. Twice daily flights to Paris and flights to London during the Summer months.

CUSTOMS ALLOWANCES: *Tobacco:* Fixed at 30 grams per day, at sea, per person.

Alcohol: The equivalent of 5 centilitres of rum at 42° per day, at sea, per person.

These allowances are free of tax for use on board, but may not be landed.

POLICE/AMBULANCE/FIRE: Police Tel: 98.97.17.17; Ambulance and Fire Brigade Tel: 18.

IDENTIFICATION CARDS: Any National Identity Documentation will suffice.

GARBAGE DISPOSAL: Waste containers available on request to ship's Agent, Port Captain (Tel: 98.97.33.80) or Chamber of Commerce (Tel: 98.97.20.11).

Containers are collected on request.

WASTE OIL DISPOSAL: No facilities.

SEAMAN'S CLUBS: Seaman's Hostel, Rue de Port. Tel: 98.97.04.01. Rooms and meals only.

AUTHORITY: Direction Departementale de l'Equipement, Cite Administrative de Kerfeunteun, B.P.506, 29325 Quimper Cedex. *Tel:* 98.95.70.32. *Telex:* 940.424. *Contact:* The Director.

Chef du Service Maritime, Fluvial et Aeroportuaire, Direction Departementale de l'Equipement, B.P. 506, 29325 Quimper Cedex. *Tel:* 98.76.51.00. *FAX:* 98.76.50.24.

Capitanerie du Port, Quai Est, B.P. 231, 29182 Concarneau. *Tel:* 98.97.33.80. *FAX:* 98.97.88.02. *VHF:* On Channel 12 during working hours. *Contact:* L. Tanguy, Le Commandant de Port.

DIEPPE: 49.55 N. 01.04 E. (See Plan)

DOCUMENTS:

4 Crew Lists.
2 Lists of Stores.
1 Loading Manifest.
1 Passenger List.
1 Declaration (furnished by Agent) stating that ship possesses up-to-date Safety Certificates.
1 Health Declaration.

APPROACHES: Coming from the West, immediate landfall is Cap d'Ailly which is passed at 3 miles distance and then vessels proceed to the landfall buoy of Dieppe marked D.1. (East Cardinal, black yellow black, very quick flashing light, 3 flash every 5 seconds and a bell).

Location: Lat. 49° 57' 15" N., Long. 1° 01' 20" E., or 2.5 miles to the N.W. of the port entrance.

The cliffs which surround Dieppe give very good radar echoes.

PILOTAGE: Pilot boards 4 miles from breakwaters. Pilotage must be imposed by Harbour Master for the vessels of less than 50 m. for the first entry or departure of the Master if meteorological, time or other conditions are unfavourable. Pilot boat is ready to put to sea 2 hours before high tide. During this period maintains radio telephone watch. VHF Channel 12.

All vessels must send ETA to the pilotage authority of the Seine/Rouen/Dieppe at least 5 hours prior to arrival in the Dieppe Roads, any delay greater than 2 hours or where a tide is missed must be signalled at least 3 hours before the initially ETA. Vessels not obliged to take on a Pilot must indicate in their ETA whether or not a Pilot is needed.

Pilotage de la Seine, 21 Bd. du Mont Riboudet, 76723 Rouen. Tel: 35.71.68.50. Telex: 770575. Fax: 35.71.94.79.

ANCHORAGE: It is recommended to anchor in zone bounded by following points:

(a) Lat. 49° 56' 55" N., Long. 01° 04' E.;
(b) Lat. 49° 58' 40" N., Long. 01° 02' 45" E.;
(c) Lat. 49° 57' 42" N., Long. 00° 59' 20" E.;
(d) Lat. 49° 55' 50" N., Long. 01° 00' 30" E.

This anchorage area includes Buoy D.I and depths are from 6 m. to 12 m. with sand and broken shell bottom. Larger vessels anchor approximately 0.5 miles to North of Buoy D.I in depths of 10 m. to 12 m.

Submarine Telephone Cable: A submarine telephone cable crosses through the East part of the Anchorage Zone. It is better to anchor in the S.W. part of this zone. "Dieppe-Port" will indicate position for anchorage.

Forbidden Anchorage: It is forbidden to anchor in the area defined by the following points: Lat. 49° 56' 55" N., Long. 01° 05' 29" E. – Lat. 49° 56' 25" N., Long. 01° 03' 03" E. – Lat. 49° 56' 05" N., Long. 01° 04' 50" E.

RESTRICTIONS: The lock gates of the commercial basins are only open from 2 hours before to 1 hour after high tide. Vessels remain at anchorage in the roads until the gates are opened. Large vessels enter preferably at the time of high tide to benefit to the maximum from the level of water under the keel and the best conditions of navigation.

Entry and Leaving: Vessels entering must arrive in the roads at the latest

25 minutes after high tide, except for large vessels which must be in the roads at the latest at high tide. Vessels leaving must be ready at the latest 30 minutes after high tide.

Entry and Leaving Signals: Entry and leaving signals are exhibited on the signal post on the West jetty and on the repeater post of the fore port (signals in accordance with A.I.S.M.). At the Colbert Sluice and at the various locks the signals are simplified.

MAX. SIZE: Vessels LOA 155 m. and beam 21.6 m. can enter. In certain cases vessels of LOA 165 m. may be permitted to enter.

Colbert Lock (Dimensions of Lock): 230 m. length, 37 m. width, controls entrance to Inner harbour, where depth maintained at 5.00 m.

Canada Docks: Length 154 m.; width, 21 m.; draft 8 m.

Paris Dock: Length 154 m.; width 21 m.; draft 7 m.

Opening of Canada and Paris Basins: 2 hours before to 1 hour after full tide, night or day. The port is accessible to vessels up to 10,000 d.w.t. – 12,000 d.w.t.

HEALTH: Pratique given by Customs Officers who board on arrival. In case of suspected disease, Master required to radio details to Agent in advance.

RADIO: Boulogne Radio (FFB).

Arrival Advice: Masters of vessels must send to the Port Authority, 24 hours in advance, or at the latest when leaving the previous port where this is located less than 24 hours away, the expected time of arrival in the roads, indicating the name of the vessel, tonnage, length, beam, the date and time of arrival, maximum draft of the vessel on arrival, the nature and tonnage of various items of its cargo and hazardous cargo (in transit or to be landed), possible damage to the ship, its equipment or to the cargo. A rectifying message must be sent in the event of a change. Address: Port Captaincy: 1 Quai de la Cale, Dieppe. Tel: (35) 84 10 55. Telex: Mardiep 180414F.

VHF: Boulogne Radio maintains continuous watch on Channels 2 and 24. The Port Authority (Call sign "Dieppe Port", Tel: 35.82.23.85) maintains watch throughout 24 hours on Channels 16 and 12.

TUGS: 2 tugs available (1,400 h.p. and 1,500 h.p.). Requests for use must be made to the Port Captaincy. One tug in service at all times.

BERTHING:

Dock	*Quay*	*Facilities*	*Length (m.)*	*Sea level chart (m.)*
Paris	Norvege	1 Roll-on/Roll-off ramp (80 t.)	715	7.5/9
	Maroc	6 noria conveyors for banana handling	600	7.5/9
Canada	Indes	1 grain bagging funnel	150	7.5/9
	Quebec	grain silo (cap. 12,000 tons). Capacity 500 t.p.h.	160	7.5/9
Avant-Port	Henri IV	Pleasure craft	380	4.5/5 minimum
Arriere-Port	Quai Guynemer	1 Roll-on/Roll-off ramp (120 t.)		

Handling Capacities:

	Loading:
Colza oil	200 t.p.h. (from the quay)
Colza grains	60 tons/man hour
Grain and wheat	500 t.p.h. (silo)
Rough timber	23 to 28 cu.m./man hour

	Unloading:
Colza oil	(taken from quay)
Colza grains	50 tons/man hour
Sand and gravel	100 to 150 tons/man hour
Bananas	about 3,000 cartons/man hour
Citrus fruit on pallets	55 to 65 pallets/man hour
Citrus fruits not palletised (cases, cartons, crates)	16 to 21 tons/man hour
Pre-slung timber	about 80 cu.m./man hour
Bulk timber	about 25 cu.m./man hour
Iron and steel	50 to 60 tons/man hour

CRANES: One mobile crane, 40 ton and jib 40 m.

Quay Cranes: 6×3 ton, 2×3-6 ton, 2×6-12 tons and 6×2 ton gantry cranes.

BRIDGES: To request bridges to open, call "Dieppe Port" on VHF Channel 12.

Ships without VHF use whistle to request opening (3 long blasts for Colbert Bridge and Admiral Rolland Bridge, and 2 long blasts for Jehan Ango Bridge).

STEVEDORES: Normal hours are 0800–1200 and 1400–1800. Possible to work from 1800–2200 to complete operations. No work on Sundays or holidays.

MEDICAL: All medical facilities available.

FRESH WATER: Supplied by pipeline. There are a great number of outlets on the quay.

FUEL: Available in small quantities; delivered by tanker lorry.

CONSULS: Norway Denmark
Sweden Netherlands

REPAIRS: Good facilities exist, all types carried out.

DRY DOCKS: Dry dock in the inner harbour, dimensions 130 m.×18 m. It can receive ships 129×17 m. One lift of 300 tons and 7 repair sites.

SURVEYORS: Bureau Veritas at Dieppe; Lloyd's at Le Havre and Rouen; American Bureau of Shipping at Le Havre; Det Norske Veritas at Le Havre.

GANGWAY/DECK WATCHMEN: Available if required.

OPENING/CLOSING HATCHES: According to agreement, either by crew or stevedores.

CUSTOMS ALLOWANCES: Contact French Customs (Tel: 35.82.24.47) to verify allowances.

REPATRIATION: Good facilities.

AIRPORT: Dieppe Saint Aubin (3 km.) has two daily connections with Shoreham, England. The nearest main airport is Paris.

TIME: GMT plus 1 hour, but during the period from beginning April to end September (six months) the legal time is advanced by 1 hour (GMT plus 2 hours).

HOLIDAYS: 1st January; Good Friday; Easter Monday; Ascension Day; Whit Monday; 1st May; 14th July; 15th August; 1st November; 11th November; 25th December.

POLICE/AMBULANCE/FIRE: Police (Bd. Clemenceau) 35.84.87.32 or 17. Fire and Ambulance 18 or 35.84.33.00.

TELEPHONES: No connections on the quays.

SERVICES: Compass adjusting, etc. available.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Embarkation card or passport is sufficient.

GARBAGE DISPOSAL: Skips can be provided alongside. Tel: 35.84.70.07 for service.

WASTE OIL DISPOSAL: There are waste oil tanks for small quantities on Quay Duquesne in Basin Duquesne. Tanker trucks can be obtained from Sonolub. Tel: 35.81.07.88.

SEAMAN'S CLUBS: None.

AUTHORITY: Capitainerie du Port de Dieppe, Quai de la Cale, 76203 Dieppe, France. *Tel:* 35.84.10.55. *Telex:* Mardiep 180414 F. *FAX:* 35.06.12.56. *Contact:* Henri Follin, Commandant du Port.

DONGES: Refer to Nantes.

DUNKIRK: 51.03 N. 02.24 E. **(See Plan)**

PORT LIMITS: The seaward boundaries of the port within which a vessel is considered to be an "arrived ship" is the Dyck Lightbuoy or the Roads if the ship comes from the East.

DOCUMENTS:

Entry Bill (all information about ship), given by Pilot to Master, who fills it in and gives it to Harbour Officer.

To be given to Customs:

3 Crew Lists.
3 Passenger Lists.
3 Copies Stores/Bonded Stores List
Manifest or copy.
Form for increase of tonnage.
Declaration of open spaces.
3 Lists of objects held by crew.

APPROACHES: A new route, which allows vessels with draft 9.0 m. coming from the North Sea to reach Dunkirk more directly, has been buoyed. Vessels drawing 11.0 m. should adjust their course to round the Dunkirk Lanby (51° 03.0' N., 01° 51.8' E. approx.) after passing Ruytingen S.E. Buoy.

Buoys have been laid to mark the route.

It is recommended that this route should not be used by vessels not having a pilot on board.

The buoys marking Le Dyck and Haut-fond de Gravelines are liable to change.

PILOTAGE: Pilotage station limits – there are 2 pilotage zones.

1. The Outer Zone which is limited:
To the West by the meridian of Calais Lighthouse (Long. 01° 51' E.);
To the East, by the meridian of Long. 2° 27' E.;
To the North, by the line situated 3 miles seawards of the LW mark;
To the South, by the Calais Pilotage Zone, the coast and the Inner Zone defined below.
2. The Inner Zone limited:
To the West by meridian Long. 02° 08' E.;
To the North, by a continuous broken line constituted by the parallel Lat. 51° 03' N., the line of the coast, the meridian Long. 02° 20' E., the parallel Lat. 51° 04' 30" N.;
To the East by the meridian of Dunkirk Lighthouse (02° 22' E.);
To the South by the end of the water levels of the autonomous port of Dunkirk.

Pilotage is compulsory in Inner Zone for ships over 150 n.r.t. or ships of max. length 50 m., or with dangerous cargo.

Pilotage compulsory in Outer Zone for ships not fitted with VHF, or over 1,000 nett tons or max. length 100 m. or with dangerous cargo.

Vessels coming from the West should call Pilots 12 hours before arrival or when leaving the former harbour. This message must be confirmed by the vessel 4 hours before arrival at Dunkirk Lightbuoy or 2 hours before arrival on roads of Dunkirk East or Dunkirk West, at E12 Buoy or by VHF by calling "Pilot Dunkirk" on Channels 16 or 72 or by telephoning 28.66.74.14. ETA to state: ETA (at Pilot Station). Length of the ship. Draft. Place where the Pilot is requested: Dyck/Dunkirk Lightbuoy; Dunkirk Roads; Zuydcoote Pass.

ETA will be considered null and void if vessel does not arrive within 2 hours of stated ETA.

The Pilot Station is equipped with a watch tower with radar, a helicopter based at Calais-Dunkirk Airport, a pilot boat base at Calais port and a pilot boat base in Dunkirk East Harbour.

Ship's Departure: Sailings must be ordered at the Harbour Office, Pilot Station, towage office and linemen's office.

Pilots: For a sailing between 0800 and 2000 hrs. 1.5 hours' notice is necessary to Pilot for the ships moored in Dunkirk-East (Mardyck Bassin excepted) a 2 hours' notice for ships moored in Mardyck Bassin and Dunkirk-West.

For a sailing between 2000 hrs. and 0800 hrs. vessels are required to give notice to the pilot office before 1600 hrs. and to order the Pilot before 1800 hrs.

Report: July 1990.

Following received by Master from Agent:

ETA Dunkirk: Agent will advise all parties, but Pilot Station requires information directly from ship 12 hours, 6 hours (Telex: 820902); 3 hours, 2 hours (VHF); and permanent contact prior to arrival.

New pilot procedure: Boarding either by helicopter or fast launch.

ANCHORAGES: Large vessels waiting for entrance must anchor in the area West of Dyck Lightbuoy. In bad weather, ships may anchor off English coast, in the roads of Les Dunes, with good mooring ground of sand and mud 20 m. deep. On the Roads of Dunkirk, ships must anchor East of Buoy E.1 so as not to disturb the entrance of ships.

RESTRICTIONS/MAX. SIZE: Movement of vessels: Normal operating conditions. Exceptionally, dispensations may be given by port services after study of specific cases.

Eastern Port

VIA CHARLES DE GAULLE LOCK:

ENTRY: By day: Passage to breakwaters from sunrise to sunset.

Before HW (HW −3 hours). LOA 250 m. or less – max. draft 12 m. After high tide (HW +2 hours). Length 289 m. (tolerance 5 cm.) plus 1% or under if vessel is engine-driven and length 265 m. or under if vessel is turbine-driven – max. draft 14.20 m. Beam 45 m. (tolerance 5 cm.).

After agreement of Captaincy/Pilotage/Tugs is obtained, a second vessel can be taken at the entrance, up to 2 hours after high tide, providing its draft is 12.80 m. or under and beam 40 m. or under.

If tugs have to be changed during the entry manoeuvres of 2 large vessels, the Master of the vessel using the tugs must be warned in advance by a message from the Captaincy.

At Night:

Before high tide (HW −3 hours). Length 250 m. or under – max. draft 12 m. Beam 40 m. or under.

After high tide (HW +2 hours). Length 250 m. or under – max. draft 12.50 m. Beam 40 m. or under.

SAILING:

If length 251 m. or over and beam 39 m. or over, register for sailing between 1 hour before sunrise and 1 hour before sunset, except for Berth AP 1, and ships moored at West of this point where interval is brought to 1 hour 30 minutes before sunrise or sunset and 2 hours for ships moored at the Bulk Pier heading Westward.

From tide-coefficient 95 onwards (h=5.85 m.) no registration required between HW – 3.5 hours and HW – 0.5 hours.

If the length is between 250 m. – 251 m. and beam is under 39 m. sailing registration possible from 0500 to 2200 hrs. (Summer and Winter) except for tankers, where length is still limited to 250 m. and beam under 39 m.

If length is under 250 m. and beam is under 39 m. sailing registration day and night without restriction.

Draft on sailing: 14.00 m.

Conditions for sailing:

Beam 42 m. or less.

Sailing by day with registration of vessel between 1 hour 30 minutes before sunrise and 1 hour 30 minutes before sunset if the vessel is at Quai de Grande-Synthe or 1 hour before sunrise and 1 hour before sunset if the vessel is at the Grain Quay.

Registration of vessel: 5.30 hours before high water or 2 hours before high water if vessel at Quai de Grande-Synthe.

4.30 hours before high water or 1 hour before high water if vessel is at Grain Quay.

Navigation depth in the channel – 13.5 m. minimum.

VIA WATIER LOCK:

Passage prior to high tide: Max. draft 10.50 m. – beam 32 m. or under.
Passage after high tide: Max. draft 10.00 m. – beam 32 m. or under.
Max. length (before or after HW).

By Day: Length 230 m. or under with no vessel at Mole V. Length 220 m. or under with vessel at Mole V.

By Night: Length 220 m. or under with no vessel at Mole V. Length 210 m. or under with vessel at Mole V.

VIA TRYSTRAM LOCK:

Max. draft 8 m. – beam 22 m. Length 150 m. or under on leaving port, Tixier Lock pumps stopped on Pilot's request. Length 140 m. or under on entering port, Tixier Lock pumps stopped on Pilot's request.

CHANNEL – MARDYCK LOCK:

Usable length: 144 m.
Usable width: 11.40 m.
Draft: 3.20 m. for canal level of 0.66 m.
Air draft: 5.05 m. for basin level of 6.30 m.
Speed in channel: 10 km./hr. in ballast, 8 km./hr. loaded.

DUNES CHANNEL – DUNES LOCK:

Connects the East and West sections of the port.
Length of lock: 185 m.
Usable width: 11.40 m.
Max. Draft: 5.0 m.
Air clearance under bridge with 7.0 m. water height.
Bridge lowered – 5.25 m.
Bridge raised, dimensions of side wall – 15.0 m.
Theoretical depth of channel – 3.50 m.
Max. speed – 6 knots.

Note: Gas Carriers are not accepted in this lock.

BP BERTHS:

By day and by night, on direct entry or with tow relinquished: Length 250 m. or under. Draft 12.50 m. or under (this can be extended to 12.80 m. max. dependent on water level in basins).

DRY DOCK 6 – DOVER – PANAMA QUAYS:

Large vessels may manoeuvre in good visibility and wind less than Force 5 Beaufort.

Max. dimensions of vessels admitted to Dry Dock 6:

Length 289.05 m.×beam 45.05 m.×draft 6.50 m. Bow/8.5 m. Stern, through de Gaulle Lock.

On Relinquishing Tow: Entry and sailing registration on Dock 6:

By day, registration from sunrise less 1 hour to sunset less 2 hours for vessels length 251 m. or over or beam 39 m. or over.

Registration from 0500 hrs. to 2200 hrs. if length between 250 m. and 251 m. and beam under 39 m. No limit on registration time if length is 250 m. or under and beam is under 39 m.

Entry Direct of vessels length over 250 m. and/or beam over 39 m.: passage to jetties when daylight 2 hours after HW – latest time 2 hours before sunset.

Direct Sailing to Sea from Dock 6 of vessels length over 250 m. and/or beam over 39 m.: Registration from 1 hour before sunrise to 3 hours before sunset. Direct sailing to sea from Quai de Douvies on Quai de Panama if length over 250 m. and/or beam over 39 m., registration from 1 hour before sunrise to 2 hours 30 minutes before sunset.

Note: Mole V, Eastern section, must be clear for vessels of length over 250 m. swinging in front of Dry Dock 6 and Watier Amont Quay free for passage of vessels of length over 250 m. via Brocquaire Channel.

RECOMMENDED DRAFTS FOR SAILING OR TOW RELINQUISHING MOVEMENTS

Length	150 m.-180 m.	180 m.-205 m.	205 m.-230 m.	230 m.-280 m.
Draft	B 5 m.-S 6 m.	B 6 m.-S 7 m.	B 7m.-S 8 m.	B 9 m.-S 10 m.

B=Bow, S=Stern. (except for repairs)

Western Port:

FLANDERS TANKER BERTH:

In Normal conditions of Dredging – Entry: Passage to jetties from sunrise to 1 hour before sunset if length over 300 m.; entry by day and by night if length is equal to or less than 300 m.

Before high tide (3 hours before HW at Dunkirk East). Draft 19.50 m.

After high tide (HW at Dunkirk East plus 2.5 hours). All coefficients draft 20.50 m.

Tugs must be present at "DW 13/DW 14" 45 minutes before theoretical time of passage to berths of the tanker they are serving.

Theoretical Number of Tugs:

D.w.t.	D.w.t.	No. of tugs	
under	125,000	3	According to Pilot's request
125,000 –	175,000	4	According to Pilot's request
175,000 –	250,000	5	According to Pilot's request
250,000	and over	5 or 6	According to Pilot's request

Sailing: Sailing registration from 30 minutes before sunrise to 1 hour 30 minutes before sunset if length over 300 m.; sailing without restriction of length if equal to or less than 300 m.

If length is greater than 300 m.: With coefficient over 95, no sailing registration from HW – 3 hours to time of HW. The interval between registration time for sailing of a tanker from the Flanders Tanker Berth at the time of passage to the jetties of an incoming tanker must not be less than 3 hours.

Recommended draft on sailing:

Length 280 m. or under	Length over 280 m.
8 m. bow/9 m. stern	9 m. bow/10 m. stern

No. of tugs to be used:

D.w.t. under 150,000 tons – 3 according to Pilot's request.
D.w.t. over 150,000 tons – 4 according to Pilot's request.

Note: Wherever possible, between buoys DW 14 and DW 16, large vessels leaving Dunkirk East should not cross tankers entering Dunkirk West.

HEAVY LIFT QUAY: (Quai Pondereaux Ouest (Q.P.O.))

Entry: From sunrise to 1 hour before sunset if length over 300 m. and vessel's bow Southward.

Sailing: If vessel's bow Southward and LOA less than 289.05 m. – no restriction. If LOA over 289.05 m., registration from 30 minutes before sunrise to 1 hour 30 minutes before sunset.

On entry by day the vessel can be positioned with bow facing North if length equal to or less than 270 m. and draft equal to or less than 16.0 m.

Draft before and after high water 18.0 m.

Heaving off at Heavy Lift Quay/Eastern Port – length up to and including 289 m., beam up to and including 45 m., draft 14.20 m. and less.

Minimum registration for heaving off, 5 hours before passage to quays of Eastern port. Priority on entry if length greater than 250 m. and draft greater than 12.5 m.

OPERATION OF S.F. BP OIL BASIN BERTHS:

Middle BP Berth:

Max. draft 12.5 m. Length 245 m.
Max. distance stern/connection 122.5 m.

South BP Berth:

Max. draft 10.5 m. Length 230 m.
Max. distance stern/connection 120 m.

Coaster Berth – North Face: (No longer equipped for commercial operations).

(a) West Part, from Bollard 2.5 to Bollard 7 (quay length 80 m.) – Max. draft 6.5 m.

(b) East Part, to the East of Bollard 7 (length of quay 90 m.) – Max. draft 7.5 m.

Max. length of vessels admitted to coaster berth is 120 m. with a draft of 6.5 m.

Coaster Berth – South Face: Solely reserved for river traffic.

Bunker Berths: Reserved for bunkering craft.

Note: The drafts shown correspond to a minimum water depth in the basins of 5.3 m.

At all BP berths, vessels are positioned bow facing West.

Vessels of larger dimensions than those covered by this note can be admitted to the following berths only after prior study and subject to special conditions of draft, berthing and securing cables, etc.

Overflow rafts: See Article 412 of Permanent Instruction No. 57.

Max. length of vessels, with draft of 12.5 m. transiting Brocquaire Channel is fixed at 250 m.

HEALTH: For ships coming from *(a) All European Countries:* Declaration of Health is not obligatory but general International Certificates are controlled. *(b) Other Harbours:* Admission subject to Declaration of Health and usual controls of certificates. Admissions in Free Pratique only in daytime except special cases (intervention of a physician). Request for Free Pratique may be made to Sani-Port, Dunkirk, through Boulogne Radio. In case of necessity, health service can – on request – intervene at night.

RADIO: Dunkirk Harbour Station (FFF), VHF call sign "Dunkerque Port", for messages about port service through VHF Channels 73 and 16. Communications other than in VHF made through Boulogne Radio (FFB).

VHF: Dunkirk Port Station maintains continuous watch on VHF, Channels 73 and 16.

RADAR: There is radar at the control tower of harbour. It is not a guiding radar.

TUGS: Tugs normally join vessel between Buoys DW.28 to DW.30 and DW.16. Smaller vessels are joined by tugs in the outer port.

On departure tugs must be ordered with a 2 hour notice for Dunkirk-East and a 4 hour notice for Dunkirk-West. Moreover, for manoeuvring between 1900 hrs. and 0700 hrs. tugs must be reserved before 1600 hrs. and ordered before 1800 hrs.

It is possible to cancel or delay any order for tugs, without indemnity, provided this request is done with a 1 hour (daytime) and 2 hours' (night-time) notice for Dunkirk-East, with a 2 hours' (daytime) and 4 hours' (night-time) notice for Dunkirk-West.

Also see "Restrictions".

BERTHING: Berthing priority is decided by Port Captain's office. Vessel is informed by radio of the location and priority given to her.

Dock	*Quay*	*Length* (m.)	*Min. Depth of water* (m.)
1	Freycinet I (North Part)	196.7	6.90
	(South Part)	299.0	
1	Freycinet II (North Part)	95.6	7.30
	(South Part)	155.9	
1	Freycinet III	496.7	7.80
	Front du Mole 1	187.3	7.20
2	Freycinet IV	430.6	7.60
2	Freycinet V	630.0	7.40
	Front du Mole 2	146.0	7.70
3	Freycinet VI	528.4	9.10
3	Freycinet VII	516.8	9.40
	Front du Mole 3	114.3	9.40
4	Freycinet VIII	558.3	9.40
4	Freycinet IX	500.6	9.40
	Front du Mole 4	126.4	7.80
5	Freycinet X	484.5	11.20
5		120.2	10.10
5	Freycinet XI	446.8	11.00
	Front du Mole 5	406.6	10.30
6	Freycinet XII	715.9	12.80
6	Fond de Darse 6	177.6	12.50
6	Freycinet XIII	702.2	12.70
	Front du Mole 6	165.6	4.80
	Upstream West Watier Lock	104.0	4.80
	Quai des Monitors (Tidal Quay)	431.2	5.00-7.00
Oil Port	N. central station (1)	95.0*	13.50
Oil Port	S. central station	95.0*	11.20
Oil Port	N. coasting station	200.0	8.00
Oil Port	S. coasting station	200.0	3.50
Bassin Maritime	Grain berth	195.0	14.50
Bassin Maritime	Quai Usinor No. 5 & 6	703.5	17.30
Bassin Maritime	Quai Usinor No. 2, 3 & 4	649.1	14.30
Bassin Maritime	Quai Usinor No. 1	277.3	8.00
Bassin Maritime	Bulk Terminal Berths No. 1 & 2	507.5	17.00
Bassin Maritime	Berth No. 4	262.0	10.70
Bassin Maritime	Berths for general cargo (E. section for barges)	282.5	5.00
Bassin Maritime	General cargo berth	618.0	14.30
Bassin de Mardyck	Appt C.F.R. Poste Est	170.0*	12.40
Bassin de Mardyck	Appt C.F.R. Poste Quest (2)	65.0*	17.00
Bassin de Mardyck	Quais du Braek (3)	85.0	6.50
Bassin de Mardyck	Quai de l'Escaut	643.0	12.00
Fore-port – West	Appt petrolier C.F.R. (4)	105.0*	22.00
Dunkirk West			
Quai d'Alsace	Ferry berth	132	7.00
Quai de Ramsgate	Ro/Ro	180	8.00
Quai de Lorraine	Ro/Ro and Container berths	260	6.20
		500	12.70
Quai de Flandre	Container Berths	600	12.70
Quai Pondereux Ouest	Heavy Cargo, Bulk (5)	645	15.00-20.00
Quai Aluminium	Aluminium	225	13.00
Dunkerque	Aluminium (barges)	171.5	4.50

*platform

(1) Maximum length of vessels permitted: See "Tankers" – S.F.B.P. Oil Basin Berth.

(2) Maximum size of vessels permitted:
E. station of CFR berth 240 m. and 11.50 m. draft.
W. station of CFR berth 275 m. and 14.2 m. draft.

(3) Maximum length of vessels permitted: 105 m.

(4) Maximum length of vessels admitted: approx. 360 m.

(5) Max. size permitted: Without lightening.
Entry 3 hours before HW: Max. length 310 m. Max. draft 18.0 m.
Entry 2 hours after HW: Max. length 310 m. Max. draft 18.0 m.

CRANES:

Electric Cranes:	Cranes of 3 t	Cranes of 6 t	Cranes of 10 t	Cranes of 15 t	Cranes 7.5/10 t
Quai de reparations			1		
Quai a marchandises diverses				3	
Freycinet I					
Freycinet III					
Freycinet IV					
Freycinet V		2			
Freycinet VI			6		
Freycinet VII		2			
Freycinet VIII		4			
Freycinet IX					
Freycinet X			1		6
Freycinet XI			5		
Freycinet XII			3		5
Fond de Darse VI					
Freycinet XIII			2		1
Quai de Suez					
Quai de l'Escaut			2		

2 Sugar Loaders at Freycinet IX.
2×40 ton cranes at Freycinet XIII.
1×25 ton, 1×40 ton and
1×50 ton crane at Quai de l'Escaut.
4 Gottwald cranes on rubber wheels.

Floating Crane:

No. of cranes	Lifting power	Outreach measured from the pontoon max.	min.	Height under hook	Power agent	Type	Equipment hooks	tonnes
1 (bigue)	250	7.20	5.00	32.00	Steam	Construc-	2	125
	125	15.70	8.00	50.50		tion	2	62.5
						hollandaise	1	5

Mobile Cranes (Port Services): 1 at 6/10 tons and 2 at 17/36 tons. Possibility of mobile cranes from other yards.

BULK HANDLING FACILITIES: Bulk Quay No. 1, formerly known as the ore quay. Equipped with 2 gantry cranes. Principally used for iron ore destined for Usinor Dunkirk and Usinor Valenciennes. There is a loader for slag at the Western part of the Quay.

Bulk Quay No. 3, an extension of the Usinor Quay for iron ore cargo. Equipped with 3 gantries of 50 tons capacity. Permissible draft 14.20 m.

Quai de Grande-Synthe, situated West of Bulk Quay (Appontement Ponderеux). Berth is 600 m. long with a min. depth alongside of 14.8 m. Bulk carriers of 80,000 d.w.t. with a draft up to 14.2 m. can be accommodated.

Unloading equipment consists of 3 cranes with grabs, each with a max. discharge capacity of 565 t.p.h.

A new silo is situated at Quai de Grande Synthe. Capacity 150,000 tons. Permissible draft 14.0 m. 1×1,000 t.p.h. shiploader.

The second new silo, (Silonor), will have horizontal handling and storage under a shed of 140,000 tonnes.

Sugar is handled at Freycinet No. 9 and Freycinet No. 10 (North part), silo capacity 83,000 tonnes.

Dunkirk-West: The Western Bulk Terminal (Q.P.O.): For large bulk carriers (iron ore and coal) with 1 berth for vessels up to 220,000 d.w.t. (according to dredging conditions). Equipped with 2×50 ton grab gantry cranes linked to storage yard with a 600,000 cu.m. capacity.

Aluminium Dunkerque (Pechiney): Quay length 225 m., depth 13.00 m. Quay for barges length 171.5 m., depth 4.5 m.

Also see "Report – March 1996".

CONTAINER FACILITIES: *Dunkirk-West:* Quai de Lorraine and Quai de Flandre. Total length 1,200 m. equipped with 3 container gantry cranes capable of lifting 45 tons on spreaders for 20 ft. – 40 ft. units.

ROLL-ON/ROLL-OFF FACILITIES: *Dunkirk-West:* Quai d'Alsace is equipped for direct transhipment of vehicles, trailers and wagons. Quai de Lorraine is provided with movable steel ramps for direct transhipment of vehicles and trailers. A fixed quarter ramp has been installed at the West end of Quai de Lorraine. Quai de Ramsgate for shipment of vehicles.

Dunkirk-East: Quay Freycinet VII, the berth South of Freycinet VII, has been provided with a fixed ramp for roll-on/roll-off for ships up to 8 m. draft and 22 m. beam, and Quay Freycinet XIII, South part, is fitted with a fixed ramp for ships up to 12.50 m. draft.

BRIDGES: Bridges of locks and wet docks are closed to navigation for short periods to allow work hands to go. The maritime traffic is practically never disturbed.

OIL TANKERS: The following tanker berths are available:

West Port: Flanders Oil Berth: max. draft 20.50 m. Discharge lines to Total Refinery, and to the B.P. Refinery. The access channel has been dredged to a depth of 22 m. at L.W. The turning circle at the entrance to the Outer Port West has a diameter of 1,400 m. Max. discharge rate 20,000 cu.m./hr.

East Port: S.F.B.P. Oil Dock.

Middle wharf North, max. draft 12.50 m. Loading/discharging lines 2×22 in. and 3×16 in. lines, bunker line 16 in. diameter.

Middle wharf South, max. draft 12 m. Dimensions of lines as for Middle wharf North.

Coasters Wharf, max. draft 7.50 m. Loading/discharge lines 6 in.

Bassin de Mardyck Oil Port: Appt C.F.R. – Poste Est. Max. draft 11.70 m., Poste Ouest draft 14.20 m.

Facilities for discharge of dirty ballast are available at all main tanker berths.

Stocknord Pier: Pier of length 440 m. with 4 platforms.

P.1 – For barges only.

P.2 – For barges and coasters up to 100 m. length and 8.50 m. draft.

P.3 – Oil and Gas. For vessels up to 100,000 d.w.t., 280 m. length and 14.20 m. draft.

P.4 – Gas only. 10,000 d.w.t. Max. length 160 m. and draft 9.5 m.

C.P.A. Quay: Berth at Mole V. Mainly for Fuel and Vegetable Oil. For vessels up to 250 m. length and max. draft 9.60 m.

Also see "Reports" dated August 1990 and March 1996.

GAS TANKERS:

Appt. C.F.R.: Bassin de Mardyck: 1 berth for butane and propane. East side of pier for vessels up to 11.60 m. draft.

Stocknord: Bassin de Mardyck. The total length of the quay is 440 m. with a width of 30 m.

Alongside this quay, are berths or platforms P1, P2, P3 and P4.

P1: Oil only.

P2: Oil only.

P3: Coasters of 90 m. LOA and tankers of 280 m. LOA, d.w.t. 100,000 tonnes on East side of pier.

P4: Coasters LOA minimum 60 m. and gas-carriers of LOA max 160 m., max. d.w.t. 10,000 tonnes on West side of pier.

Products: LPG, ethylene, FR and PP.

P3 can take LPG products and chemical products: Vessels up to 280 m. length.

Distance from P3 to storage areas: Approx. 800 m. with a 10 in. line.

Nitrogen in gas-form available on site (2 in. and 3 in.).

P4 is for vessels of LOA 160 m. max. with a d.w.t. of 10,000 tonnes, and a max. draft of 9.5 m. Beam – no limits.

Products: LPG, derivates, propylene, ethylene, butadine. 10 in. lines and arm flanges of 8 in. ASA 300. Products can be refrigerated or at ambient temperature.

Connection with P3 and with the storage areas.

Nitrogen in gas-form on the quay (2 in. and 3 in.).

Length of platform: 25 m. Width of platform: 12 m. Height above water line: 5 m.

Loading and discharge by 8 in. Luceat arms.

Tidal movement at the quay is minimal: Approx. 1.0 m. min./max. Predominant winds from the West.

Transhipment from vessel to vessel can take place at Berths P3 and P4 by connection line between the two berths.

The possibility of transhipment with a first vessel berthed and a second connected to it is accepted. For this to happen:

1. Advise the authorities minimum of 24 hours before the operation.
2. A technician must be on hand.
3. The owner must supply hoses and defences.
4. Port rights and occupation of the quay is to be discussed with the owner.
5. A tug must be available for both vessels.
6. If the wind is blowing above Force 5, the operation must be stopped and the connected vessel must go out to the roads with Pilot and tug, if the quay which can accept the type of vessel is not free.
7. Transhipment from vessel to vessel via connection lines from Berth P4 and Berth P3. If during this operation a priority vessel must at all costs berth, the operation of transhipment must be stopped and one of the vessels must connect up to continue the operation or go out into the roads (Pilot and tug necessary).

Port Entry: It must be emphasised that the depth of water at the port entrance towards the Mardyck Basin at Charles de Gaulle Lock, foreport East is 14.20 m. max. with a beam of 45.05 m. maximum.

Storage facilities: At approx. 800 m. from the Stocknord quay. 2 LPG – Propylene storage points of around 3,500 cu.m. each take propane for the account of the company CDF Chimie. They have a service pressure of 15 kg/sq.cm. and a temperature of −10°C.

From these 2 facilities, it is possible to load/discharge to and from lorries (18 tonnes) or trucks (45 tonnes).

Consumption of vapocracker (set for between 300 tonnes and 500 tonnes per day) is with the use of propane and naphtha.

List of storage points at Stocknord:

2×3,500 cu.m.	Propane–butane–Btd–propylene operating pressure 15 kg./sq.cm. Minimum temperature −10°C.
1×17,000 cu.m.	C2
1×17,000 cu.m.	C3
1×9,000 cu.m.	C4
8×6,000 cu.m.	Essences
9×6,000 cu.m.	Pyrolised essences
6×20,000 cu.m.	Naphtha, gasoil, diesel and fuel oil
2×2,000 cu.m.	(drums) chemical products
1×1,000 cu.m.	(drums) chemical products

Trains–trucks: Stocknord can hire, load, discharge trucks or lorries.

By truck: convoys of 1,000 tonnes of all products and throughout France.

By lorry: 15–20 tonnes LPG–ethylene, etc.

By truck: 45–50 tonnes each, filling in groups of 6; for each group of trucks filling takes approx. 20 minutes for all liquid products.

Nitrogen: Possibility of degassing at Berths P3 and P4 (from 800 to 1,000 cu.m. per hour of nitrogen in gas-form).

Heater: Currently, there is a propylene land-based heater (350 cu.m./hour) of the steam type working from −47°C to +5°C.

This heater can be connected to the lines of the new propane storage facilities: time involved, approximately 1 month.

Also see "Report" dated March 1996.

STEVEDORES: Each Master will contact his consignee.

MEDICAL: Hospitals and all medical facilities.

DENSITY: Salt.

FRESH WATER: Available in unlimited quantities. Numerous hydrants on all wharves.

FUEL: Supplied by barges or tank lorries if no connection at wharf. Fuel, diesel and gas oil available. Requests for bunkers must be made 48 hours in advance to Agents.

FIRE PRECAUTIONS: The preventive measures are taken for tankers are those of the I.M.O. recommendations. Rounds of the port officers. Ship's Master is given instructions of the harbour concerning tankers if necessary when filling the I.M.O Check List. In case of storm, the Harbour Officer can stop loading or discharging.

CONSULS:

Belgium
Brazil
Denmark
Finland
Germany
Greece
Italy
Netherlands
Norway
Portugal
Spain
Sweden
United Kingdom

REPAIRS: All repairs possible.

DRY DOCKS:

	Usable at top (m.)	*length at bottom (m.)*	*Level sill (m.)*	*Admissable draft of ship (m.)*	*Max. length of ship (m.)*	*Max. beam of ship (m.)*
Dry Dock No. 5	112.72	108.05	2.05	6.30	107	13.5
Dry Dock No. 3	90.36	86.40	0.55	5.40	80	13
Dry Dock No. 4	192.98	190.77	1.85	7.05	160	20.5

Dry Dock No. 6: Length 310 m. Width 50 m. Max. length of vessel 289 m. Max. beam 45 m. Max. draft bow 6.50 m., Stern 8.50 m. Crane 1×25 tons capacity available.

Floating Docks:

Characteristics of the dock	*Dock 20,000 T*
Overall length	206.00 m.
Length on blocks	185.00 m.
Width	32.00 m.
Optimal characteristics of ships which can be docked	
Overall length	215.00 m.
Overall beam	30.00 m.
Maximum draft	8.30 m.
Variation of draft allowed	2 cm./m.
Cranes	2 of 7 t.

GANGWAY/DECK WATCHMEN: Guarding is strongly advised.

OPENING/CLOSING HATCHES: Carried out by crew.

CERTIFICATES:

Certificate of Nationality.
International Certificate of Tonnage.
Certificates from the Classification Office where ship is registered, especially:
Certificate of Freeboard.
Classification Certificate, engine and boiler.
Classification Certificate, hull.
Classification Certificate, electric equipment for tankers.
List of Hoisting Apparatus.
Derat Certificate.
TOVALOP Certificate or similar for tankers.

CUSTOMS ALLOWANCES: Tobacco: Amount allowed for each member of crew: 200 cigarettes or 200 gramme tobacco. Wine and/or Spirits: 1 bottle.

AIRPORT: Calais, Marck, 35 km.; International airport of Lille Lesquin, 80 km.

TIME: GMT plus 1 hour in Winter. GMT plus 2 hours in Summer.

HOLIDAYS: 1st January; Easter; Whitsuntide; 1st May; 14th July; 15th August; 1st November; 11th November; Christmas. On public holidays, handling operations can be carried out from 0600 hrs. to 1200 hrs.

POLICE/AMBULANCE/FIRE: Police 17; Ambulance 28646054; Firemen 18.

TELEPHONES: Connections possible at all berths.

SERVICES: No specific port equipment for gas-freeing. Dirty ballast can be received at all oil terminals and by barges of the Port Service. Compass adjustment, radio repairs.

SHORE LEAVE: Crew are allowed ashore.

IDENTIFICATION CARDS: An official identity certificate is compulsory ashore (Passport, Identification Card, Seaman's Book, etc.).

GARBAGE DISPOSAL: Under International agreements and port regulations, all vessels are required to evacuate, prior to departure, all wastes and garbage accumulated during their stay. For this purpose, garbage bags may be obtained from agent, which should be placed when full in the blue and white containers located on each quay. Disposal of industrial and liquid waste can only be effected through private companies.

WASTE OIL DISPOSAL: Various companies can facilitate the disposal of waste oil and oily water mixtures. Contact Port Authority for further details, Tel: 28.29.70.70.

SEAMAN'S CLUBS: The Seafarers Centre, 130 Rue de l'Ecole Maternelle, 59140 Dunkerque, France, Tel: 28.59.04.20. Facilities include shop, telephone, church office, football matches, minibus collection, postage, various games, TV lounge, newspapers, hospital visits to seamen.

CURRENCY: French Franc (FFR).

DEVELOPMENTS: Canal des Dunes (connects Dunkirk-West and Dunkirk-East) for barges with length 180 m., beam 11.4 m. and draft 5.00 m.

SHIPMASTER'S REPORT: December 1988 (Updated 1994).

Pilotage: The pilot boards from a small launch or helicopter. Alternatively the pilot can board at Calais. Pilot on VHF Channels 16, 6 and 72. Pilot Office Telex No. 820902.

If vessel wishes to order a pilot for leaving, a minimum of 2 hours notice is required.

The transit time, including lock time, from time of pilot boarding until alongside in Stocknord (Mardyck Basin) is about 3 hours. Only one pilot used.

Anchorage: The anchor is 1.2 miles N.W. of Dunkirk light-float. The anchorage is exposed and the holding ground is poor. Vessels are to report to Dunkirk Pilot before anchoring.

Approaches: The approaches to the East Port are well buoyed. For large vessels the entrance is narrow, especially when swinging to starboard to enter Charles de Gaulle Lock.

Maximum size for entering the Lock: LOA 289.05 m., beam 45.05 m. and max. draft 14.2 m.

Tugs: Number of tugs required depends on size of vessel. Tugs meet vessel outside the breakwaters. Tugs require 4 hours notice and 2 hours cancellation notice at night, otherwise a charge is made.

Berthing: Stocknord and C.R.D. Berths for handling LPG in Bassin de Mardyck.

Stocknord is the Western of the 2 piers. The berth is capable of accepting the largest gas and product carriers. Vessel berthed head in.

Ethylene is handled at Berth No. 4 at the North West end of Stocknord Pier. A mooring boat is available for running lines. Vessel berthed with 2 headlines and 2 springs, fore and aft.

Cargo: Ethylene storage 5,000 cu.m. C2, C3 and C4 are imported and exported. The shore liquid arm is 8 in. (150 ASA) with automatic disconnect coupling fitted with a 6 in. (300 ASA) reducer. The vapour return line is a 6 in. (150 ASA) flexible hose. Shore supply the reducer and connect/disconnect the lines. The rate of discharge varies according to what the plant is doing with production. Sometimes one pump is used and at other times 5 pumps are used.

The shore plant places a telephone on board for communication with the Loading Master.

The surveyor, who came from Terneuzen, stays on board most of the time.

Fresh Water: Available.

REPORT: The following telex was received by a vessel from Agent in August 1990:

Please find hereafter general information concerning your call at Dunkirk:

(1) Receivers: Messrs. Stocknord – Telex: 130065.
(2) Berth: Stocknord Terminal – Pier 3.
(3) Connections: 2×12 in.
(4) Discharge: Empty tank ashore – no back pressure. From experience, turnaround is about 24 hours, including analysis prior to discharge.
(5) Facilities: Shore gangway – no shore crane – no lorry access (only lub oil in bulk with lorry fitted with special safety equipment). Bunkering: only by barge (concurrently with discharge). Fresh water available.
(6) ETA France: Please kindly remember following telex numbers:
SURNAV Marine/Cherbourg 170495
France: Marine/Brest 940527
Cross/Gris-Nez 130680
Information directly from ship only is considered as official.
(7) ETA Dunkirk: Attention please to New Pilotage Procedure: Agent will advise all parties, but Pilot Station requires information directly from ship 12 hours, 6 hours (Telex 820902), 3 hours, 2 hours (VHF) and permanent contact prior arrival.
New procedure Pilot/Dunkerque – boarding either by helicopter or fast launch boat, please kindly update ship's book.
(8) Tugs Order: Pilot will arrange tugs order when on board, after meeting with Master.
(9) Prospects: Awaiting receivers instructions at this stage.
(10) Documents: Upon arrival, please kindly prepare following documents:
The Ship's Register.
5 Crew Lists, 3 Stores Lists, 3 Crew Declarations, Cargo Manifest/Sailing Clearance from Last Port, Original Bill of Lading to receiver and copy to Agent.
(11) Information: We need as soon as possible, when known, following information:
Best ETA please.
Draft on arrival fore/aft.
Ship's and B/L figures – kilos/liters/API.
Your requirements.
(12) Acknowledgement of this message is kindly required when received.
(13) Please kindly read carefully, especially No. 7 (New Pilotage Procedure).

REPORT: March 1996.
Eastern Port:
Max. Size: Maximum length: 289.05 m. Maximum beam: 45.05 m. Maximum draft: 14.20 m.

Restrictions: Docking:
Draft less than 10.0 m.: Day and night without restrictions.
Draft 10.0 m. – 12.0 m.: Passing breakwaters 3 hours before or 2 hours after HW, day and night.
Draft 12.0 m. – 12.5 m.: Passing breakwaters 2 hours after HW, day and night.
Draft over 12.5 m.: Passing breakwaters 2 hours after HW in daylight only.
Sailing: Maximum draft 13.75 m.
LOA less than 250 m.: Day and night (subject to vessel's draft).
LOA over 250 m.: In daylight only (subject to vessel's draft).

Berthing:

Name of berth:	BP (Coaster Berth)	BP (Milieu)
Operators:	BP and Elf France	BP and Elf France
Products:	Loading luboils, bitumen. Discharging clean petroleum products.	Petroleum products, chemical products.
Jetty restrictions:	LOA: 120 m. (max.). Draft: 7.50 m. (max.).	LOA: 245 m. (max.). Draft: 12.50 m. (max.).
Preferable side alongside:	Port side.	Port side.
Connections:	Deballasting: 1×6 in. Luboils: 2×4 in. Bitumen and products: 1×6 in.	Deballasting: 1×8 in. Products: 2×8 in. Chemicals: 1×6 in.
Loading rates:	Luboils: 200 cu.m./hr. Bitumen: 350 cu.m./hr.	
Discharging rates:	Max. 10 bars pressure at manifold.	Max. 10 bars pressure at manifold.
Distance shore-jetty:	1,000 m.	2,000 m. (BP) 3,000 m. (Unican and DPC)
Facilities:	Slops: Yes. Shore crane: No. Shore gangway: Yes. Fresh water: Yes, from jetty. Bunkers: By barge.	Slops: Yes. Shore crane: No. Shore gangway: No. Fresh water: Yes, from jetty. Bunkers: By barge.
Ship/shore telephone:	Direct line: 28607377. Foreman present on jetty. Telephone box on site.	Direct line: 28607371. Foreman present on jetty. Telephone box on site.
General:	Deballasting: Clean ballast only. Cost Frs. 0.60 per ton. Products discharged into independent installations: Unican or DPC. One shore heated line for loading luboils. Two unheaded lines for loading luboils.	Deballasting: Frs. 0.60 per ton. Ballast water and slops may not contain chemical residues. Products discharged into independent installation: Unican or DPC.

Name of berth:	BP (Sud)	C.P.A. (Mole No. 5)
Operators:	BP and Elf France	Compagnie Parisienne des Asphaltes.
Products:	Petroleum products, chemicals, unheated luboils, bitumen.	Petroleum products, chemicals, vegoils, molasses, tars, FO.
Jetty restrictions:	LOA: 230 m. (max.). Draft: 10.7 m. (max.).	LOA: 250 m. (max.). Draft: 9.5 m – 9.9 m. (max.). Contact Agent.
Preferable side alongside:	Starboard side	Master's option.
Connections:	Deballasting: 1×8 in. Products: 2×8 in. Chemicals/bitumen/luboil: 1×6 in.	Vegoils: 1×6 in., molasses: 2×8 in. Products: 1×8 in. and 1×12 in. Chemicals: 1×6 in. or 1×8 in.
Loading rates:	–	Vegoils: 150 t.p.h., tars: 250 t.p.h. FO and molasses: 500 t.p.h.
Discharging rates:	Max. 10 bars pressure at manifold.	Vegoils: 200 t.p.h. FO and molasses: 500 t.p.h.
Distance shore-jetty:	2,000 m. (BP) 3,000 m. (Unican and DPC)	Between 500 and 2,000 m.
Back pressure:	–	Vegoils: 6 bars max. at manifold. Petroleum products: 7 bars max. at manifold.
Facilities:	Slops: Yes. Shore Crane: No. Shore gangway: No. Fresh water: Yes, from jetty. Bunkers: By barge.	Slops: No. Shore Crane: No. Shore gangway: No. Fresh water: Yes, from jetty. Bunkers: By barge.
Ship/shore telephone:	Direct line: 28607373. Foreman present on jetty. Telephone box on site.	No telephone on board. Foreman present on jetty. Telephone box on site.
Miscellaneous:	Deballasting: Frs.0.60 per ton. Ballast water and slops may not contain chemical residues. Products discharged into independent installation: Unican or DPC.	Special Harbour Regulations for low flashpoint cargoes.

Name of berth:	TOTAL West	TOTAL East
Operators:	TOTAL France	TOTAL France
Products:	All petroleum products.	All petroleum products. Gas: Propane, butane, ethylene (loading only).
Jetty restrictions:	LOA : 275 m. (max.). Draft: 14.5 m. (max.).	LOA: 245 m. (max.). Draft: 11.7 m. (max.).
Preferable side alongside:	Master's option.	Master's option.
Connections:	Deballasting: 2×12 in. Bunkers: 2×8 in. Products: 4×12 in.	Deballasting: 1×10 in. Products: 3×12 in. Gas: 1×6 in.
Loading rates:	Gasoline: 1,400 cu.m./hr. Gasoil: 1,200 cu.m./hr.	Gas: 250 cu.m./hr. Gasoline: 1,400 cu.m./hr. Gasoil: 1,200 cu.m./hr. Max. 8 bars pressure at manifold.
Discharging rates:	Max. 8 bars pressure at manifold.	1,500 m.
Distance shore-jetty:	1,500 m.	1,500 m.
Facilities:	Slops: Yes. Shore crane: No. Shore gangway: Yes. Fresh water: Yes, from jetty. Bunkers: By barge or from jetty.	Slops: Yes. Shore crane: No. Shore gangway: No. Fresh water: Yes, from jetty. Bunkers: By barge or from jetty.
Ship/shore telephone:	28 21 41 77 and internal line ship/terminal.	28 27 41 32 and internal line ship/terminal.

Miscellaneous:	Deballasting: Frs.3.40 per ton. Garbage bins on jetty. 2 shore tanks with max. capacity. 20,000 cu.m. dirty ballast.	Deballasting: Frs.3.40 per ton. Gas loading at ambient temperature. No vapour return line when loading gas. Garbage bins on jetty. 2 shore tanks with max. capacity. 20,000 cu.m. dirty ballast.

Name of berth:	Stocknord Pier No. 2.	Stocknord Pier No. 3.
Operators:	Atochem and Sofrapo	Atochem and Sofrapo
Products:	Clean petroleum products. Chemicals.	Clean petroleum products. Unrefrigerated gas – Naphtha.
Jetty restrictions:	LOA: 85 m. (max.). Draft: 9.5 m. (max.).	LOA: 250 m. (max.). Draft: 14.2 m. (max.).
Preferable side alongside:	Port side.	Master's option.
Connections:	Clean petroleum products: 1×8 in. Chemicals and styrene: 1×6 in. Deballasting: 1×8 in.	Naphtha: 2×12 in. Gas: 1×8 in. Deballasting: 1×8 in.
Loading rates:	250 cu.m./hr.	300 t.p.h.
Discharging rates:	Max. 10 bars pressure at manifold.	Max. 10 bars pressure at manifold.
Distance shore-jetty:	1,000 m.	1,000 m.
Facilities:	Slops: Yes. Shore crane: No. Shore gangway: No. Fresh water: Yes, from jetty. Bunkers: By barge.	Slops: Yes. Shore crane: Yes. Shore gangway: Yes. Fresh water: Yes, from jetty. Bunkers: By barge.
Ship/shore telephone:	28 27 41 95 and internal line ship/ terminal.	28274192 and internal line ship/ terminal.
Miscellaneous:	Deballasting: Frs.15.00 per ton. Occupation of berth outside commercial operations: Frs.550 per hour plus 25% night and 50% Sundays. Supply of nitrogen: Frs.3.80 per cu.m.	Deballasting: Frs.15.00 per ton. Occupation of berth outside commercial operations: Frs.550 per hour plus 25% night and 50% Sundays. Supply of nitrogen: Frs.3.80 per cu.m. Vapour return line.

Name of berth:	Stocknord Pier No. 4.
Operators:	Atochem and Sofrapo
Products:	All gas from −103° to ambient temperature.
Jetty restrictions:	LOA: 160 m. (max.). Draft: 9.5 m. (max.).
Preferable side alongside:	Port side.
Connections:	Ambient: 1×8 in. return line: 1×4 in. Refrigerated gas: 1×8 in. return line : 1×4 in.
Loading rates:	250 t.p.h.
Discharging rates:	Max. 10 bars pressure at manifold.
Distance shore-jetty:	1,000 m.
Facilities:	Slops: Yes. Shore crane: Yes. Shore gangway: Yes. Fresh water: Yes, from jetty. Bunkers: By barge.
Ship/shore telephone:	28 27 41 96 and internal line ship/ terminal.
Miscellaneous:	Deballasting: Frs.15.00 per ton. Occupation of berth outside commercial operations: Frs.550 per hour plus 25% night and 50% Sundays. Supply of nitrogen: Frs.3.80 per cu.m.

Name of berth:	Sollac	Quai de Grande Synthe
Operators:	Sollac	Sicanor
Products:	Ore and coal in bulk.	Grain in bulk.
Jetty restrictions:	Draft: 14.2 m. (max.). Max. air draft during discharging: 13.7 m.	Draft: 14.5 m. (max.) alongside. 13.75 m. sailing draft.
Preferable side alongside:	Port side.	Starboard side.
Discharging rates:	Ore: 2,500 tonnes/hr. Coal: 1,000 tonnes/hr.	1,200 tonnes/hr. from 0600 hrs. to 1400 hrs. and 1400 hrs. to 2200 hrs.
Facilities:	Shore crane: On application. Shore gangway: No. Fresh water: Yes. Bunkers: By barge.	Shore crane: On application. Shore gangway: No. Fresh water: Yes. Bunkers: By barge.
Ship/shore telephone:	Yes.	Yes.
Remarks:		Loading from silo only. One loading shute only.

Western Port:
Max. Size: Maximum length: 380 m. Maximum draft: 20.5 m.
Restrictions: Docking:

LOA less than 300 m.:	Draft less than 13.50 m.: No restrictions. Draft between 13.50 m. and 16.0 m. passing breakwaters 3 hours before or 2 hours after HW, day and night. Draft over 16.0 m. passing breakwaters 2 hours after HW, day and night.
LOA over 300 m.:	Passing breakwaters 2 hours after HW in daylight only.
Sailing:	
LOA less than 300 m.:	Day and night. Subject to draft.
LOA over 300 m.:	In daylight only.

Name of berth:	Appontement Petrolier des Flandres.	QPO (Quai Pondereux Ouest)
Operators:	Total France	Public berth.
Products:	Crude oil and condensate.	Ore and coal in bulk.
Jetty restrictions:	LOA: 380 m. (max.). Draft: 20.5 m. (max.). D.w.t.: 400,000 tons.	Draft: 18.0 m. (max.). Max. air draft during discharging: 19.0 m.
Preferable side alongside:	Port side.	Starboard side.
Connections:	4×16 in.	Ore: 2,500 tonnes/hr. Coal: 1,500 tonnes/hr.
Loading rates:	Discharging only.	
Discharging rates:	5,000 cu.m./hr. per connection	
Distance shore-jetty:	2,500 m.	
Back pressure:	Max. 19 bars at ship's manifold.	
Facilities:	Slops: To be discharged. Shore crane: Yes, lifting capacity 820 kg. Shore gangway: Yes. Fresh water: Yes, from jetty. Bunkers: By barge or from jetty.	Shore crane: On application. Shore gangway: No. Fresh water: Yes. Bunkers: By barge.
Ship/shore telephone:	28023804 and internal line ship/ terminal.	Yes.
Miscellaneous:	Shore line 54 in. Compulsory taxi-shuttle at ship's expense. COW compulsory. Docking/sailing: No tide restrictons below 15.0 m. draft.	

AUTHORITY: Port Autonome de Dunkerque, Terre-Plein Guillain, B.P.6534, 59386 Dunkerque Cedex 1. *Tel:* (33)28.29.70.70. *Telex:* 820055 Poronom, Dunkq. *FAX:* (33)28.29.71.06. *Contact:* Mr. Vergobbi, Port Director.
Harbour Office: East Harbour 28.29.72.62. West Harbour 28.29.72.79. *Telex:* Capdk 130972 F. *FAX:* 28.29.72.75.

FECAMP: 49.46 N. 00.22 E. (See Plan)

DOCUMENTS:
2 Crew Lists.
2 Custom Lists.
1 Health Form.
Ship's Register.
Cargo Manifest.
Bills of Lading.

PILOTAGE: Pilots informed of arrivals by Agents. Pilots wait at port station 2 hours before HW each tide. Inform Harbour Master by VHF Channel 16.

ANCHORAGE: Half mile West of jetties.

MAX. SIZE:
Spring Tides: Length 105 m., beam 17.0 m., draft 7.25 m.
Neap Tides: Length 105 m., beam 17.0 m., draft 6.00 m.

HEALTH: Pratique obtained when Customs Officer boards few minutes after berthing.

RADIO: Boulogne Radio.

VHF: Harbour radio station keeps watch on Channel 16.

Vessel arriving at Fecamp, or waiting in roadstead must keep watch on Channel 16. The port also keeps watch on Channel 12 during the tide sessions.

TUGS: None. Pilot boat can assist ships with berthing.

BERTHING:

Berth	*Depth* (m.)	*Length* (m.)	*Remarks*
Outer Harbour			
Grand Quai	1.50	140	Heavy swell by W.N.W. wind.
		80	Moorings for local fish boats.
		60	Swell absorber (N.E. end)

Inner Harbour			
Quai de la Peche	−1.50	52	
Nouveau Quai du Commerce	−7.50	160	Ships with 6.50 m. draft can stay here during the lowest Spring tides.
Bassin Freycinet			
Quai de la Marne	−1.00	190	
Apppontement Quai de la Marne	−1.00	150	
Quai de Verdun Est	−1.50	150	
Quai de Verdun Ouest	−1.50	170	
Bassin Berigny			
Quai Berigny Est*	+0.25	200	Heavy swell during opening of watergates by W.N.W. wind.
Quay Sadi-Carnot	−1.50	300	
Quai de la Mature	−1.50	90	

* There is a new marina on the East side (See "Plan").

STEVEDORES: Informed by Agents (available).

CRANES:

Mobile Cranes: 1×4 tons (9 m.), 1×24 tons and 2×16 tons (8 m.).

Electric Cranes: 1×5/6 tons and 2×3 tons (18 m.).

MEDICAL: Notice not required for medical attention. Doctors and hospital always ready.

FRESH WATER: Available from shore (pipes each 50 m. on quay).

FUEL: Fuel station in Berigny Dock for fishing vessels. Other vessels are supplied by tanker truck.

CONSULS:

Consulate of Norway	Tel: 35.28.00.08.
Vice-Consulate of Denmark	Tel: 35.29.22.86.

REPAIRS: Possible.

DRY DOCKS: 1 slipway (out of order) for vessels of maximum 1,500 tons displacement, total available length 75.60 m.

Max. water height in dock: 7.50 m. dredged down to minus 2.50 m.
Max. forward draft for access: 1.80 m.

GANGWAY/DECK WATCHMEN: Not required.

OPENING/CLOSING HATCHES: By crew.

CERTIFICATES: In accordance with international regulations:
Load Line.
Radio Equipment.
Safety Equipment.
Derat, etc.

CUSTOMS ALLOWANCES: About 200 cigarettes per man; wine/spirits at Customs Officer's discretion.

REPATRIATION: Agents carry out these operations.

AIRPORT: Le Havre-Octeville, 35 km.

TIME: GMT plus 1 hour in Winter. GMT plus 2 hours in Summer.

HOLIDAYS: Arrangements for working during holidays can be made if necessary.

POLICE/AMBULANCE/FIRE: Police, Tel: 17 and 35.28.06.68; Ambulance, Tel: 15 or 35.10.62.62; Fire, Tel: 18 or 35.10.60.18.

TELEPHONES: No arrangements for placing telephone on board.

SERVICES: No possibilities for tank cleaning, etc. Compass adjusting available if necessary.

SHORE LEAVE: Always possible for crew members to go ashore.

IDENTIFICATION CARDS: Not required.

AUTHORITY: Chambre de Commerce et d'Industrie de Fecamp, Palais Consulaire. 8 Rue Bailly, B.P. 126, 76400 Fecamp, France. *Tel:* 35.10.38.38. *Telex:* 190452. *FAX:* 35.29.94.60. *Contact:* J. Saunier, Director General of Services. J. Duchemin, President.

Port Authority: Capitainerie du Port de Fecamp, 16 Grand Quai, B.P. 167, 76400 Fecamp, France. Tel: 35.28.23.76. Fax: 35.28.75.86. Contact: Mr.Y. Morel, Harbour Master.

Port Office: Passe Gayant, 76400 Fecamp, France. Tel: 35.28.25.53.

GRANVILLE: 48.50 N. 01.37 W. (See Plan)

DOCUMENTS: See "Calais".

PILOTAGE: Pilotage not compulsory for ships of less than 45 m. length, except for those carrying dangerous cargo. Pilots board from fishing boats carrying regulation marks of a pilot boat, and maintain position at Videcoq Buoy when a vessel is expected.

Limits of Granville pilotage are: 1. On entering, towards the West, the line joining "la Pierre d'Herpin", and Chausey lighthouse. To the North, alignment of Chausey lighthouse and "le Pignon". 2. On leaving, alignment of Mont. St. Michel through Champeaux Point. Ships bound Granville required notify ETA 18 hours in advance.

Telegraphic address: Telex 170002 SCAC Granville – Ship's Agency – Handling. Telex 170777.

1.5 hours before to 1.5 hours after high tide contact with Port Officer (Tel: 33.50.12.45 and 33.50.17.75 Granville) can be established by relay through "Coastal" Stations. During same hours contact can be made with pilot boat and with Port Office by VHF Channel 12 (port wave band 156.6).

ANCHORAGE: At landfall buoy of Le Videcoq.

RESTRICTIONS: Draft restrictions apply at neap tides. Width of Lock – 20 m. Length – 40 m.

MAX. SIZE: Vessels 115 m. long, 18 m. wide and with a max. draft of 7.50 m. may enter the tidal basin during 6 days, twice a month with effect from a tidal coefficient of about 80.

For a vessel of this size, it is recommended to give advance notice of arrival as far ahead as possible at the commencement of tides with a coefficient of 80.

Entry of a deep draft vessel may make it necessary to close the tidal basin more quickly after high tide.

Speed in the channel, the fore port and the tidal basin is limited to 5 knots.

HEALTH: Pratique arranged by Customs.

RADIO: Boulogne Radio for ships coming from the North. Brest-Le Conquet Radio for ships coming from the South.

TUGS: Port not equipped with tugs. Pilot boats used as "pushers" for port manoeuvres, or for carrying hawsers to tying-up points.

VHF: Port Authority on Channels 16 and 12 during working hours.

BERTHING: Determined according to nature of cargo.

Tidal Basin: 3 electric cranes (2×7 tons and 1×6 tons) serve the South quay, and 1×10 tons serves the North and East quays.

Open areas, warehouses and storage silo capable of receiving all goods in bulk, bags or packages.

Internal transport: rail and road.

Fore Port: Open area and mobile cradle capable of hauling up vessels up to 100 tons. 1×5 ton crane on cradle. Repair yards.

West Quay: Between tidal basin and fore-port – solely for fish discharge and auction. Quay to be lengthened by 110 m. and widened by 14 m.

STEVEDORES: Work hours 0800/1200, 1400/1800. Overtime possible.

MEDICAL: Hospital available. Tel: 33.50.11.37. Also Medical Centre.

TANKERS: 2 berths for unloading domestic fuels through 8 in. pipes.

DENSITY: 1025.

FRESH WATER: Available at all quays, international connections.

FUEL: Available from tanker lorry to commercial vessels at 48 hours notice.

CONSULS: None.

REPAIRS: Possible. Also radio repairs.

OPENING/CLOSING HATCHES: Carried out by crew.

GANGWAY/DECK WATCHMEN: Available on request.

CUSTOMS ALLOWANCES: Tobacco. 200 cigarettes. Wines and spirits. 1 bottle spirits.

REPATRIATION: Paris, 3.5 hours by train.

AIRPORT: 10 km. from the port at Breville. Air-taxi and commercial flights.

TIME: Local Time GMT plus 1 hour in Winter and GMT plus 2 hours in Summer (1st April – 1st October).

HOLIDAYS: See "Calais". Local holiday, Mardi Gras afternoon.

POLICE/AMBULANCE/FIRE: Police Tel: 33.50.11.16; Fire Service 18; Ambulance 33.50.11.37.

GENERAL: Marina with 1,050 berths at Herel. Max. length 15 m. Max. depth available 2.75 m.

AUTHORITY: Le Commandant de Port, Port de Granville, Terre-Plein de l'Ecluse, 50400 Granville, France. *Tel:* 33.50.17.75 or 33.50.12.45. *FAX:* 33.50.32.99. *Contact:* A. Beauvilain, Port Officer.

HONFLEUR: 49.25 N. 00.14 E. (See Plan)

DOCUMENTS: See "Rouen".

PILOTAGE: See "Rouen".

RESTRICTIONS: Access to port made through channel 100 m. wide, protected by 2 dykes about 500 m. long, which leads to outer harbour. Honfleur possesses 3 basins:

Dock	*Length*	*Width*	*Sluice width*
West Dock	128 m.	77 m.	10.50 m.
East Dock	295 m.	71 m.	16.50 m.
Carnot Dock	788 m.	108 m.	13.00 m.

East Dock joins outer harbour: ships of more than 70 m. long must anchor in Carnot Dock which spans from East.

Lock: Vessels proceeding to docks mentioned above have to pass through a lock (36 m. × 23 m.) (See "Plan"). Contact Harbour Master for opening times.

MAX. SIZE: Port can receive ships 100 m. long and 15.50 m. wide berthing in East Dock; but with Carnot Dock, only ships less than 12.50 m. wide can enter. Drafts vary according to tides: 5.00 m. with average spring tide and 3.5 m. in average slack water.

The "Quai en Seine" (2 berths) can receive ships of LOA 200 m. and over 8.0 m. draft, according to tides, without dredging difficulties.

HEALTH: Bill of Health is under the jurisdiction of Customs office of Honfleur. Hospital nearby.

RADIO: Boulogne Radio, Brest Radio or St. Lys Radio. A permanent watch is maintained by Rouen Port on Channels 16 and 73. Disengagement frequency after call on Channel 73 is Channel 17 for Honfleur Port.

TUGS: If necessary are provided by "La Societe des Abeilles" of Le Havre.

BERTHING:

Name	*No. of Berths*	*Depth Neaps (m.)*	*Depth Springs (m.)*	*Equipment*	*Remarks*
Bassin de l'Est Quai Nord	3	5.10	6.27	–	2 Berths equipped with pipeline.
Quai Tostain	3	5.10 4.60	6.27 5.77	–	–
Bassin Carnot Quai Nord	2	5.10	6.27	–	Various cargoes.
Quai S.W. and South Approach	7	5.10	6.27	–	1 berth for coasters.
Wharf	1	5.10	6.27	–	Fishing vessels and pleasure craft.
Bassin de L'Ouest	2	3.60	4.77		
Avant Port	1	5.10	6.27	–	Fishing vessels.
Quais en Seine	2	7.50	8.50	2×15 ton 1×30 ton cranes.	–

2 "Richier" cranes on tyred wheels available for use in the Port. Capacity: 30 tons at 3.50 m., 3.5 tons at 15 m.

TANKERS: Berth "Miroline" on dolphins in River Seine for tanker of 35,000 tons after lightening according to the depth conditions.
FRESH WATER: Available. Supplies arranged through Agent.
FUEL: Supplies arranged through Agent.
AIRPORT: Deauville – St. Gatien Airport, 12 km. from Port.
AUTHORITY: M. Pourcelle, Ingenieur des T.P.E., La Lieutenance, BP 45, 14603 Honfleur Cedex. *Tel:* 31.89.24.53. *Telex:* 170196. *FAX:* 31.89.92.10. *Contact:* J. Tocqueville, Harbour Master. Tel: 31.89.20.02. Fax: 31.89.42.10.

ILE ROUSSE: Corsica: 42.39 N. 08.56 E.

DOCUMENTS:
3 Crew Lists.
3 Passenger Lists.
1 Provisions List.
1 Cargo List.
1 List of Articles (new and Customs-barred) in possession each crew member – cameras, binoculars, radios, cigarettes, spirits, etc.
1 Health Declaration.
PILOTAGE: Not compulsory.
ANCHORAGES: Outside port for cruise vessels.
RESTRICTIONS: None.
MAX. SIZE: Draft 5 m., length 160 m.
RADIO: Within 50 miles call Ajaccio Radio VHF Channel 16. Then connected over Channel 23 to telephone network.
TUGS: None available.
BERTHING: Depths alongside 2.0 m. – 6.0 m. Only available when not occupied by ferry.
STEVEDORES: 24 hours accurate ETA necessary for ordering gangs. No work on Sundays and official holidays.
CARGO GEAR: Only a few nets and slings available; all other gear must be supplied by ship. Ship's derricks used.
FRESH WATER: Available at very slow pumping rate.
FUEL: Not available.
TIME: GMT plus 1 hour in Winter. GMT plus 2 hours in Summer.
AUTHORITY: Bureau du Port de Commerce, 20220 Ile Rousse, Corsica. *Tel:* 95.60.00.68 or 95.60.14.50.

IZON: 44.57 N. 00.22 W.

NO ACTIVITIES AT THE PORT SINCE 1990.

LA CIOTAT: 43.10 N. 05.36 E. (See Plan)

NOTE: THE PORT HAS CEASED RECEIVING CARGO SHIPS SINCE 1990. PORT STILL IN USE FOR FISHING VESSELS AND YACHTS.
APPROACHES: La Ciotat Bay is situated between Toulon and Marseilles. The bay is sheltered from North and N.W.'ly winds. The "Bec de L'Aigle", height 155 m., makes an easily recognisable landmark for the approach to the harbour.
The entrance channel to the harbour has a depth of 7 m.
PILOTAGE: Pilotage compulsory for vessels over 70 m. LOA. Chantiers Navals de La Ciotat (C.N.C.). have 2 Pilots.
ANCHORAGES: Good anchorages available in La Ciotat Bay. Anchoring in the harbour is forbidden.
MAX. SIZE: Largest vessel 380 m. long, 60 m. beam and 7.5 m. draft.
VHF: Signal station keeps watch on Channel 16 from 0630 – 2100 hrs.
TUGS: 2 tugs of 180 h.p. and 200 h.p.; tugs also available from Marseilles.
BERTHING: Harbour is formed by 6 moles. Depth in harbour varies from 1.32 m. to 7.62 m., vessels drawing up to 7.31 m. can enter. Total quayage 1,610 m. There are two basins near the main harbour specially equipped for pleasure craft.
CRANES: Electric cranes: 1×250 tonnes, 1×120 tonnes, 1×50 tonnes, 2×40 tonnes, 1×20 tonnes, 3×6 tonnes and 1×5 tonnes. One floating crane of 80 tonnes. All cranes belong to C.N.C.
MEDICAL: Private clinics and local hospital available.
FRESH WATER: Available from C.N.C.
FUEL: Available.
DRY DOCKS: Building Dry Dock: 360 m. × 60 m. × 9 m.
No. 1 Slipway: 228 m. × 39.30 m. with lifting apparatus for 7 – 150 tonnes.
No. 2 Slipway: 172 m. × 31 m. with lifting apparatus for 5 – 150 tonnes, one 660 tonne gantry crane and one 500 tonne gantry crane.
AIRPORT: Marseilles (Marignane) 55 km. away.
POLICE/AMBULANCE/FIRE: Police – Tel: 42.83.90.00. Fire – Tel: 18.
AUTHORITY: Port Authority of La Ciotat, Service Maritime Departmentale, 40 Bd. de Dunkerque, 13002 Marseille, France. *Tel:* 91.91.80.80. *FAX:* 91.56.61.49. *Contact:* M.Priere.
Harbour Office at La Ciotat, Tel: 42.08.62.90. *FAX:* 42.71.80.87. *Contact:* M.Font.

LA NOUVELLE: 43.01 N. 03.04 E. (See Plan)

DOCUMENTS:
1 Passenger List.
4 Crew Lists.
2 Stores Lists.
1 Cargo Manifest.
Bill of Health.
Safety Certificates.
I.O.P.P. for Tankers.
PILOTAGE: Pilotage is compulsory for all vessels over 45 m. LOA.
Send ETA with request for pilot 18 hours prior to arrival, by telex or cable via Marseille Radio.
Pilot boards 1.0 – 2.0 miles East of harbour entrance.
Pilots: Tel: 68 48 01 81.
Fax: 68 48 25 40.
Cables: Pilonov.
Telex: 505588.
VHF: Channel 12.
ANCHORAGE: Anchorage area is located 1.0 – 2.0 miles S.E. of South Breakwater.
MAX. SIZE: For port entry: Length 140 m., beam 22 m., draft 8.0 m. Tanker sea line: 40,000 d.w.t. LOA 200 m., max. draft 12 m.
HEALTH: Pratique is given by Customs Officers who board vessel on arrival. In case of suspected disease on board, Master should radio Agents advising details before arrival.
VHF: La Nouvelle Port Control on Channel 12.
TUGS: One tug of 900 h.p. available (bollard pull 11 tons). There are several launches to assist in mooring (200 h.p. – 400 h.p.).
BERTHING: Effected in the order in which vessels arrive. Specialised berth for Roll-on/Roll-off available.
STEVEDORES: Arranged by consignees.
MEDICAL: Doctors available at La Nouvelle. Nearest hospital is at Narbonne, 27 km. away.
TANKERS: 3 dolphin berths in the oil dock, max. draft 8.0 m. One of these berths is used for LPG cargoes. Slop disposal facilities available if requested 48 hours prior to arrival.
Tete Terminal: Buoy mooring, approximately 1.0 miles E.N.E. of harbour entrance, in position Lat. 43° 01' 05" N., Long. 03° 05' 19" E.
Masters of tankers berthing at the sea-line must advise their ETA and cargo on board by telex or fax to:
(a) Saram Manager - Telex: 500582 or Fax: 68.48.55.95.
(b) Pilot Station (See "Pilotage").
Vessels moor with two anchors forward, four buoys aft, and 2 swamped moorings from break of forecastle.
Tankers must be fitted with winches, drums and bollards and be able to receive 45 mm. diameter steel cables.
The vessel's derrick/crane must be rigged to a minimum 5 tons SWL. The pilot and 2 mooring crew remain onboard during the vessel's stay. The sea-line connection is 10 in. diameter.
DENSITY: 1025.
FRESH WATER: Supplied at all town berths.
FUEL: Available from several suppliers.
FIRE PRECAUTIONS: Usual safety regulations strictly applied. A barrage can be positioned across the channel to contain burning oil.
CONSULS: No local representation.
REPAIRS: Not possible ashore, except very minor ones.
OPENING/CLOSING HATCHES: Optional, performed by stevedores or crew.
CUSTOMS ALLOWANCES: Each crewman allowed to retain only sufficient for his own consumption while in port. It is forbidden to take alcohol ashore.
REPATRIATION: No difficulties.
AIRPORT: Perpignan (Internal and Charter flights). Marseille (International flights).
TIME: GMT plus 1 hour in Winter. GMT plus 2 hours in Summer.
HOLIDAYS: In principal, no work done on legal holidays.
POLICE/FIRE/AMBULANCE: Police, 68.48.00.11; Fire, 68.48.00.17; Ambulance, 68.48.10.13.
TELEPHONES: No connections can be made on board.
SHORE LEAVE: No restrictions.
IDENTIFICATION CARDS: Any person going ashore should carry a passport or identity card.
AUTHORITY: Service Maritime et de Navigation du Languedoc-Roussillon, 33 Rue Honore Daumier, 66006 Perpignan, France. *Tel:* 68.61.31.70. *FAX:* 68.61.30.04. *Contact:* Mr. Thureau, Port Director.
Capitainerie du Port, 229 Avenue de la Mer, B.P. 47, 11210 Port La Nouvelle. *Tel:* 68.48.17.64. *Telex:* 505586 F. *FAX:* 68.40.31.42. *Contact:* Captain Gilbert Guillaume, Harbour Master.

LA ROCHELLE/LA PALLICE: 46.10 N. 01.14 W. (See Plan)

DOCUMENTS:
3 Cargo Manifests, or Manifest of Ballast.
Certificate of Cargo Space.
2 Bills of Lading.
2 Stores Lists.
2 Personal Effects Lists.
6 Crew Lists.
3 Passenger Lists.
Health Declaration.
Derat Certificate or Exemption.

PILOTAGE: Access from sea is through Pertuis d'Antioche, the strait between Isle of Re and Isle of Oleron. Pilotage compulsory for all vessels over 55 m. length and available 24 hours. Pilot launch named *Armeria,* meets vessels at Chauveau Buoy in position Lat. 46° 06' 05" N., Long. 01° 16' W. Contact Pilot via VHF Channel 16, 2 hours before arrival. ETA must be given to Capiport 12 hours before arrival. In same message, Master must also advise if engine, rudder, winches, windlass, cargo pumps, radar, VHF and radio are in good working order. Master must also give the expiration date of the Oil Pollution Liability Certificate and state insurers name.

Vessels which do not receive berthing instructions on arrival should wait in the vicinity and South of Chauveau Buoy, keeping watch on VHF Channel 16.

Harbour Pilots: Tel: 46426305. Fax: 46422696.

ANCHORAGES: Vessels which do not receive berthing instructions on arrival should wait at anchor in the vicinity and 0.5–1.0 miles South of Chauveau Buoy. Keeping watch on VHF Channel 16.
Tanker Anchorage: Lat. 46° 05' N., Long. 01° 15' W.

RESTRICTIONS: Tankers usually berth at HW on the East side and either at HW or LW on the West side, providing their draft allows it.

Sailing possible at any time.

Vessels in excess of 140 m. length can enter Inner Basin only from 2 hours before to 1 hour after HW.
Lock: 168.5 m.×21.6 m.×4.0 m. (sill).

MAX. SIZE:

Location	*Max. LOA* (m.)	*Max. draft (dependent on tide)* (m.)	*Max. d.w.t.*
Basin	165	7.0 – 9.0	16,000
Fore Port			
(Quai Lombard)	165	8.5 – 10.0	20,000
Berth AP 02 Berth AP 01	200	8.5 – 10.0	40,000
Berth AP 00	290	12.5 – 14.0	80,000
Chef de Baie			
Berth CB 01	210	12.0 – 14.0	55,000
Mole d'Escale			
Berths ME 01 – ME 03	210	9.5 – 12.0	25,000 – 40,000
Berths ME 06 – ME 05	280	11.0 – 14.5	35,000 – 100,000
Repair Quay (ME 07)	180	6.5 – 8.0	—
Tanker Berths			
West Berth (AP WE)	280	14.5 – 16.0	130,000
East Berth (AP SE)	175	11.0 – 12.0	35,000

HEALTH: Pratique given by Customs Officers who board on arrival. In case suspected disease on board, radio Agent in advance advising details.

RADIO: Bordeaux-Arcachon Radio. Also see "Pilotage".

VHF: La Pallice Port on Channels 16 or 12. Bordeaux-Arcachon Radio on Channels 21 and 26.

TUGS: Join vessels either in outer roads or inner roads of La Pallice. Normally tugs' lines are used.

3 tugs are permanently based at La Pallice, 1×1,250 h.p. (22 tonnes B.P.), 1×1,800 h.p. (30 tonnes B.P.) and 1×2,050 h.p. (30 tonnes B.P.).

Port Regulations prescribe the number of tugs to be used depending on tanker's deadweight:
Outer Port:

Berthing			*Sailing*	
Without bow-thruster	*With bow-thruster*	*d.w.t.*	*Without bow-thruster*	*With bow-thruster*
1 (12 tons)	none	5,000–10,000	none	none
2 (30 tons)	1 (20 tons)	10,000–25,000	1 (20 tons)	1 (20 tons)
2 (40 tons)	1 (30 tons)	25,000–40,000	1 (30 tons)	1 (30 tons)
3 (60 tons)	2 (50 tons)	over 40,000	2 (50 tons)	2 (50 tons)

Inner Port:

Tankers over 5,000 d.w.t. require 1 tug (12 tons) for berthing and sailing.

BERTHING:

Location	*Berth No.*	*Length* (m.)	*Bottom Width* (m.)	*Average Depth* (m.)	*Remarks*
Basin	BF 01-BF 04	565	Usable Width of lock 21.3 m.	7.0 m. (8.0 m. with Raft.)	1 Ro/Ro Ramp 18 m. Width
	BF 09-BF 11	500			
	BF 13-BF 17	2×190		7.0	Submarine Base
Fore Port	AP 02	150	22	9.0	Cereals, 1 × 400 t.p.h. 1 × 1,000 t.p.h. Loading Gantries, Bulk Liquids
Quai Lombard	AP 01	150	27	9.0	
	AP 00	300	35	14.0	New extension
Chef de Baie	CB 01	180	40	14.5	
Mole D'Escale	ME 01-ME 03	540	45	10.5 – 12.0	
	ME 06-ME 05	380	45	12.0 – 13.0	1×400 t.p.h. Cereal Loading Gantry
Repair Quay	ME 07	215	30	6.0	
Tanker Berth					
West Berth	AP WE	350	40	16.0	
East Berth	AP ES	300	30	12.0	

CRANES: *Basin:* North Quay: 4×3-10 tons, 1×3-12 tons.
South Quay: 6×6 tons at 18 m.
Dry Dock: 1 Titan crane×20 tons at 25 m.
Fore Port: Chef de Baie: 3×33.5 tons at 22 m.
Mole D'Escale: East Side: 5×3-6 tons.
West Side: 2×15.5 tons, 1×33.5 tons.

STEVEDORES: Normal working hours for stevedoring are: 0800 – 1200 hrs. and 1400 – 1800 hrs. 2 hours overtime may be worked from 1800 – 2000 hrs. When a quick despatch must be given to a vessel, an 8-hour shift can be arranged, from 0500 – 1300 hrs. and 1400 – 2200 hrs. during the week, and 0500 – 1300 hrs. on Sundays and holidays.

MEDICAL: All facilities available. Advance notice should be given if assistance required on arrival.

TANKERS: Only refined products are discharged at La Pallice. Four installations can receive cargo at both berths (West or East). Petroles de l'Ouest, Total and Raffinerie du Midi use the same pipeline of 16 in. with a metal arm of 10 in. on each side. The Picoty installation has its own pipeline of 12 in. with a metal arm of 12 in. on West side and one of 10 in. on East side.

All shore tanks (total capacity 500,000 cu.m.) are 3 km. to 4 km. from oil jetty.

Also see "Berthing" and "Max. Size".

FRESH WATER: Available from all wharves. Loading rate 15 t.p.h. No barges available.

FUEL: Supplied by tank trucks only. Diesel oil available locally. Light fuel oils available with sufficient notice. Tankers must stop pumping during bunkering.

FIRE PRECAUTIONS: Smoking is prohibited on the oil jetty. Entrance to the oil jetty is controlled by watchmen.

CONSULS:

Denmark	Tel: 46.41.10.66	Netherlands	Tel: 46.42.61.94
Finland	Tel: 46.44.15.07	Panama	Tel: 46.42.13.44
Greece	Tel: 46.42.13.44	Spain	Tel: 46.41.17.25
Italy	Tel: 46.41.35.94	Sweden	Tel: 46.42.13.44

REPAIRS: All kinds of deck, hull and engine repairs can be carried out by Le Ponant.

Vessels not exceeding 21 m. beam may be repaired in the inner basin. Larger vessels are repaired at berths outside the inner basin.

DRY DOCKS: 2 dry docks in Inner Basin: 170 m.×21.8 m. and 100 m.×13.8 m.

OPENING/CLOSING HATCHES: Performed by ship's crew.

GANGWAY/DECK WATCHMEN: Available from shore if required. *Tankers:* An automatically–moving shore gangway is available providing that the ship's deck has a sufficient clear surface.

CUSTOMS ALLOWANCES: 200 cigarettes and bottle wine/spirits per man.

REPATRIATION: Can be arranged without difficulty.

AIRPORT: Airport, 3 km. Daily flights to Paris.

TIME: GMT plus 1 hour in Winter. GMT plus 2 hours in Summer. (April-September).

HOLIDAYS: New Year (1st January), no labour available; Easter Sunday, possibility of labour with overtime; Easter Monday, no labour available; Labour Day (1st May), no labour available; Ascension Day, possibility of labour with overtime; Whit Sunday, possibility of labour with overtime; Whit Monday, no labour available; National Day (14th July), no labour available; Assumption Day (15th August), no labour available; All Saints' Day (1st November), no labour available; Armistice Day (11th November), possibility of labour with overtime; Christmas Day (25th December), no labour available.

N.B. Every Sunday and day marked "possibility of labour with overtime" can be worked at the rate of 100% extra.

POLICE/AMBULANCE/FIRE: Police Secours 17; Commisariat Central 46.41.92.44; Ambulance 18; Fire Service 18.

TELEPHONES: Telephones are available at all berths at the mole.

SHORE LEAVE: Allowed, no restrictions.

IDENTIFICATION CARDS: Crewmen going ashore should carry passports or identity cards.

WASTE OIL DISPOSAL: Tanker trucks available from several companies.

GENERAL: Old harbour at La Rochelle is used only by fishing vessels and pleasure craft.

DEVELOPMENTS: Cereals quay to be lengthened and facilities to be upgraded. Vessels up to 100,000 d.w.t. will be able to be accommodated.

AUTHORITY: Capitainerie des Ports de La Rochelle, B.P. 2042, La Pallice, 17009 La Rochelle Cedex, France. *Contact:* Port Office: Tel: 46005630. Fax: 46423188. Duty Office: Tel: 46005656. Fax: 46005600.

Chambre de Commerce et d'Industrie de la Rochelle, BP 2057, 17009 La Rochelle Cedex, France. *Tel:* 46005360. *FAX:* 46431254. *Contact:* P. Brenuchot, President. O. Jousset, General Manager.

LE CHATEAU d'OLERON: 45.53 N. 01.11 W.

Very small fishing port on Ile d'Oleron. Entrance to port is 9 m. wide.

BERTHING: Tidal harbour with 350 m. of quayage. Depths alongside from 4.9 m. HW to zero at LW. Local fishing boats are the only vessels handled at the port.

CRANES: One 2.5 ton crane available.

REPAIRS: Minor repairs only.

AUTHORITY: Monsieur Le Maire de la Commune du Chateau d'Oleron, Boulevard Victor Hugo, 17480 Le Chateau d'Oleron. *Tel:* 46.75.53.00. *FAX:* 46.47.79.75.

AGENT: M. Le Boutillier, 106, Bd. Emile Delmas, P.O.Box 2038, 17009 La Rochelle Cedex, France. Tel: 46.421344. Telex: 790742 ("Ships 790742 F"). Cables: "Daylight – La Rochelle".

LE HAVRE (Including Antifer): 49.30 N. 00.07 W.

(See Plan)

DOCUMENTS: At arrival in-bound bill tendered by Pilot to be filled up and signed by Master specifying ship's data and dangerous cargo on board. After berthing: The Master must also complete the inwards declaration as soon as the Pilot comes onboard. Any abnormality must be reported to the Harbour Master (VHF Channel 12).

For Customs Officers

1 Crew List.
1 Crew Declaration List (personal effects, camera, radio set, cigarettes, cigars, tobacco, etc.).
1 Ship's Store List.
1 Passengers' Manifest (disembarking).
1 Passengers' Manifest (in transit).

For Health Officers

1 Crew List.
1 Health Declaration.
Derat Certificate.
1 Passengers' Manifest (disembarking).
1 Passengers' Manifest (in transit).
Individual International Certificates of Vaccination.

For Customs Broker

1 Crew List.
1 Crew Declaration List (personal effects, camera, radio set, cigarettes, cigars, tobacco, etc.).
1 Ship's Store List.
1 Certificate of open space occupied by cargo.
1 Passengers' Manifest (disembarking).
1 Baggage Manifest (unaccompanied).
Tonnage Certificate.

For Agents

1 Crew List.
2 Passengers' Manifests (disembarking).
2 Passengers' Manifests (in transit).
2 Baggage Manifests (accompanied).
2 Baggage Manifests (unaccompanied).
2 Dangerous Cargo Manifests and usual cargo documents.

For Immigration Office

1 Crew List.
1 Passengers' Manifest (disembarking).
1 Passengers' Manifest (in transit).

PILOTAGE: Pilotage is compulsory for all vessels over 70 m. in length and those vessels carrying dangerous cargoes or not equipped with VHF. Under certain conditions car ferries of less than 135 m. in length may be exempt from pilotage.

ETA and draft must be sent to Harbour Master by any means at least 24 hours prior to arrival, or if at sea or in a port less than 24 hours away as soon as possible.

New ETA must be sent if change is more than one hour. Failure to send amended ETA may lead to penalty.

Pilot boats have orange hull with "Pilote Havre" in black letters on both sides, green flag with white anchor on fore-mast.

Pilot boards in the vicinity of:

(a) The LHA Lt. buoy for deep draft vessels.
(b) The HP Lt. buoy for other vessels, including those carrying dangerous cargoes.
(c) The A5 Lt. buoy for vessels bound for Antifer.

Vessels may anchor near LHA Buoy, South of entry alignment in good weather and further off in bad weather.

Light or sound signal to be made by vessels requiring a Pilot, letter "G" in morse code.

Pilots also board by twin-screw helicopters. This method is most frequently used to bring the Pilot(s) to large tankers (only during the day), and Pilots are landed either by the craft landing on the deck or being winched down if the vessel has no landing area.

Pilots on VHF Channels 16, 12 and 20. Tel: 35.19.28.48.

Shipmaster's Report: June 1988.

Master, after having sent his ETA by telex or cable, has to contact Le Havre Port by VHF at least 4 hours before arrival and confirm his ETA.

Usually 3 hours before arrival is accepted, but, when coming from the North, it is very difficult or impossible due to distance to have contact by VHF with Le Havre Port. In good weather conditions, Master will be able to contact Le Havre 1 hour to 2 hours before Pilot Station.

To avoid difficulties with Le Havre Port and Pilot, Master can send a cable through Boulogne Radio giving and confirming his ETA.

ANCHORAGES: Anchoring forbidden in the channel between both parallels 100 m. South and North of channel and in a zone 1 nautical mile long and 500 m. wide in prolongation of channel.

RESTRICTIONS: Depth in main channel 15.5 m. LW. Depth in tidal basin 14.5 m. LW.

Main lock entrance to enclosed basins, length 400 m. width 67 m., depth 14.5 m.

Vessels berthing in tidal docks (Bassin Theophile Ducrocq) dependent on tide.

Quinette de Rochemont Lock open from 2 hours 20 minutes before high tide until 40 minutes after. During this period vessels of max. length 210 m. and max. breadth 26 m. may pass through. Otherwise max. length authorised is reduced to 180 m. In some circumstances some locks are completely closed around low tide.

CIM Berth No. 10 may receive tankers up to 280,000 d.w.t., depending upon tide. Such vessels enter only by daylight and must arrive at Le Havre Buoy at least 3 hours before HW.

MAX. SIZE: Tankers: Length 392 m., draft (approx.) 20 m. subject tide.

Berths of Compagnie Industrielle Maritime (C.I.M.): Max. draft recorded 20.73 m. Another vessel with following dimensions has also berthed – length 391.83 m., beam 68.05 m., 423,699 d.w.t.

Antifer (East and West Berths): Max. dimensions recorded: Length 458 m., beam 79 m., 564,760 d.w.t., draft 28.85 m., subject of tide.

Bulk Carriers: 194,226 d.w.t. (coal). draft 17.16 m.

HEALTH: Free Pratique automatic for vessels coming direct from Continent or Italy and "Q" flag not to be flown. From other countries including Spain and Portugal usual applies. Free Pratique may be obtained by radio message to Sanipor Le Havre specifying name of vessel – where coming from – total number of Crew members, number of Crew members vaccinated (yellow fever, cholera).

Tankers: For tankers it is advisable to ask Free Pratique by radio in order start operation as soon as vessel berths.

RADIO: Masters of ships are requested to send to Le Havre Harbour Master their expected time of arrival at Le Havre Light Buoy and maximum draft.

The message will be sent by any means and in particular through radio stations of: Boulogne-Radio/FFB (working frequencies 1771 kHz and 2747 kHz) or Brest le-Conquet Radio/FFU (1806/2726 kHz) for less than 24 hours before arrival and confirmed 3 hours before arrival

It will give the date and time GMT of ETA, and the maximum draft. Same stations of Boulogne and Brest to be used to contact Agent and in addition Saint Lys/FFL. This ETA must be confirmed to Le Havre Port by VHF, 3 hours before arrival in the roads.

Port Operations Radio Service: The "Havreportradio" station keeps a permanent watch on the following frequencies: 156.6 MHz (Channel 12); 156.8 MHz (Channel 16); 157.0-161.6 MHz (Channel 20 duplex). This station sends and receives all messages for the port operations control.

Ships call "Havreportradio" directly on Channels 12 or 20. Ships mooring, leaving or moored on roads *must keep watch on Channel 16.*

Ships with Pilot on board must keep watch on Channels 12 or 20 from Pilot on board until arrival at berth, and from departure of berth until disembarking Pilot. Havreportradio/FFY keeps watch on 2182 kHz. This frequency will be used only in a radius of 22 miles from Havre Light Buoy and only when it is not possible to use VHF.

Public Correspondence Service: Ships fitted with VHF sets can obtain telephone calls through the Le Havre Radio Station.

Telephone calls are admitted with ships on berth.

Ships must call "Le Havre Radio" directly on Channels 23, 26, 28 and 82. "Le Havre Radio" calls ships on Channel 16.

Identification of Vessels: Notice No. 33/95 dated 19.12.95.

Creation of an identification zone demarcated by a circular arc of 22 miles centred around the La Heve Lighthouse (49°30.8'N., 00°04.1'E.).

Any vessel over 50 m. in length, either arriving at or departing from the ports of Le Havre, Rouen or Caen, is asked to send a signal to the "Baie de Seine" Station on VHF Channel 22. Vessels keep double watch in the area on VHF Channel 16 of the port of origin or destination.

RADAR/VHF: Radar assistance may be obtained by calling Le-Havre-Radar on Channel 16 (156.80 MHz). Then working frequencies are Channels 14 and 22. Radar coverage is from 20 km. to the West of the Light-Buoy and 40 km. to the West of Antifer.

Le Havre Port on Channels 16, 12 and 20. Antifer Port on Channels 16 and 22. Also see "Radio".

TUGS: 10 tugs available, from 2,300 to 4,800 h.p. Normally join vessel inside the jetties in outer harbour. Ship's lines or tug's lines used at ship's option. Extra charge for use of tug's line. 2 tugs are equipped for fire fighting.

BERTHING: Agents generally inform Master by radio of berthing prospects, arrival time limits and any special requirements.

Dock	*Quay*	*Facilities*	*Length (m.)*
	Irlande France Terminal	1 crane 3-6 tons	dolphins
Bassin de la Manche	Terminal d'Angleterre	1 crane 3-6 tons	dolphins
	Roger Meunier	2 cranes 5-10 tons 2 cranes 6-10 tons	500
Theophile Ducrocq	Pierre Callet	4 cranes 6-10 tons 4 cranes 6-16 tons 1 crane 70 tons	598
	Joannes Couvert	5 cranes 5-10 tons 1 crane 20 tons	720
	Mazeline	2 cranes 5-10 tons	428
	Mole Central 3		120
	Mole Central 4	4×15 ton gantry cranes	194
	Mole Central 6	Coal 2 cranes 30 tons	240
	Methane		30
	C.I.M.1		84
	C.I.M.2		84
	C.I.M.3		85
	C.I.M.4		83
	C.I.M.5		152
	C.I.M.6		120
	C.I.M.7		120
	C.I.M.8		75
	C.I.M.10		56
Bassin Rene Coty	Atlantique	4 gantry cranes 40 tons	800
	Amenque	3 gantry cranes 40 tons	503
	ASIE	3 gantry cranes 40 tons	620
	Quai Osaka	2 gantry cranes 40 tons	
Bellot	Hermann du Pasquier	Grains (theoretical output) 1 gantry crane for loading cereals in bags 150 t.p.h. 5 cranes 10 tons	1,485
	Jean	4 cranes 3 tons 4 cranes 10 tons	486
	Reinhart	General cargo; wood; fruit (capacity 20,000 tons)	
	Tonkin	Ro-Ro	90
	Colombie	Ro-Ro	80
	Bresil	2 cranes 10 tons	525
Eure	Cameroun		224
	Marseille		135
	Malakoff	Bulk liquid – non oil	140
	Guinee	2 cranes 6 tons	317
Dixieme Bassin	Rochambeau		237
Citadelle	Norvege		360

Dock	*Quay*	*Facilities*	*Length (m.)*
Bassin	Antilles		555
Dock	Reunion		555
Vetillart	Gironde	5 cranes 6 tons	931
	Garonne		845
Marcel	Rhin	5 cranes 6 tons	628
Despujols	Moselle	2 cranes 6 tons; minerals	330
Lancement	Sepp	Refined oil	103
Canal Tancarville	Orcher	Refined oil	85
	HOC CFR		125 on dolphins
Canal Bossiere	Europe	5 gantry cranes 40 tons	250
			910
	Appontement Jonction I	Refined oil	9
	Appontement Jonction II	Refined oil	14
	Jonction III	Refined oil	15
Grand Canal de Havre	S.N.A.	Bulk fertilisers	140
	Sogestrol 1	Chemical	10
	Sogestrol 3	Products	
	Sogestrol 4	Chemicals	210
	Sogestrol 4 Bis	Chemicals	110
	Sogestrol 5	Chemical products	
	Atochem	Chemical products	40
	Lafarge	Cement	95
	Multivrac Bulk Centre	Ore and coal 1 gantry crane 30 tons output 1,200 t.p.h., 1 gantry crane 500 tons/hr.	250
	Multivrac 2W	Bulk	110
	Multivrac 2E	Barges	–
	Roll-on/Roll-off	Ro/Ro 1 dolphin " 2 dolphins " 3	238
	Multivrac 1	Fertiliser	250
	Multivrac 2	Liquids	15
Darse de L'Ocean	Bougainville	5 gantry cranes 40 tons 5 cranes 10 tons	1,625

*Access Conditions:

Mean level 4.57 m.

Unit of Height 3.45 m.

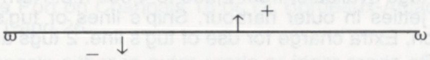
Width of the Outer Channel 300 m.

Depth of the Outer Channel under Chart Datum 15.5 m. on the shipping route.

Inner Channels and Swinging Areas, depths under Chart Datum 15 m.

Level Reading: The levels quoted represent those of the bottom or of a piece of work in comparison with the zero on marine charts.

The zero of the charts is the reference point defined by the level of the lowest possible sea.



Contrary to marine customs signs (+) correspond to a height above zero. Signs (–) correspond to a height below zero.

A quarterly timetable gives for each tide the maximum admissible draft for large ships calling at the port.

Calculation is Based on the Following Principle: The vessel must keep a keel clearance equal to 10% of the admissible draft.

As a guidance, in Spring Mean Tide:

Example:

Coefficient	95
High Water	7.7 m.
Depth of the Outer Channel under Chart Datum	15.5 m.
Depth of the Inner Channel under Chart Datum	15.0 m.
Water depth	22.7 m.
Maximum admitted draft	20.65 m.

BULK HANDLING FACILITIES: *Minerals:* 6 berths with cranes, outreach 15 m. – 37 m. Able to accept vessels up to 300 m. LOA and 150,000 d.w.t. Depths up to 16.0 m. Discharge rates up to 2,400 t.p.h.

Grain: Quai Hermann du Pasquier for ships up to 28,000 d.w.t. Grains (theoretical output) 2 gantry cranes for loading cereals in bags 150 t.p.h., 3 gantry cranes import/export 280 t.p.h., 1 gantry crane import 300 t.p.h. Max. LOA 210 m.

Quai Joannes-Couvert: For ships up to 60,000 d.w.t., 2 elevators (grains – export gantries) theoretical output 600 t.p.h.

Quai des Arachides: For ships up to 6,000 d.w.t. Max. LOA 130 m.

Cattle Feed: Multibulk terminal with length 300 m., max. draft 17.00 m. 1×15 ton and 1×30 ton gantry crane. Storage capacity 45,000 tons. Max. discharge rate 20,000 tons per day.

Sugar: Handled at "Silagro" Terminal at Quai Hermann du Pasquier. 2×15,000 ton silos. Bagged products can be loaded on vessels of 30,000 d.w.t. at the Northern end and bulk products can be loaded on vessels of 80,000 d.w.t. at the Southern end. Loading rate 700 t.p.h.

Fruit: 7 berths available (2 banana berths). Max. LOA 300 m.

Containers: Quai de l'Atlantique: Length 800 m., 3 berths for large vessels. Depth –12 m.

4 gantry cranes of 40 ton capacity with 35 m. extension, at quay's edge. 2 French Railway's gantries for handling on to wagons. 1×7,000 sq.m. shed under construction near to terminal for container groupage and breaking bulk. 16 hectares open air areas. Extensive parking facilities. LASH facilities also available.

Quai de l'Europe: Length 1,160 m. 4 berths for large vessels, 3 of which are equipped to handle Roll-on/Roll-off traffic.

5 gantry cranes of 40 tons with 40 m. extension, at quay's edge. 1 shed 10,108 sq. m., 1 shed of 7,023 sq. m., already used for groupage and break-bulk of containers and 1 shed of 10,000 sq.m. under construction.

2 S.N.C.F. gantry cranes for loading and unloading of wagons. 45 hectares of open air areas. Extensive parking facilities.

Quai de Bougainville: Actual length 1,580 m. Equipped with 5 gantries for containers of 40 tons and 5 cranes 6 – 10 tons.

Rapid Turnaround Port: Quai de l'Asie: Length 620 m. 3 Post-Panamax container gantry cranes.

Darse du Pacifique - Quai d'Osaka: Length 460 m. 2 Post-Panamax container gantry cranes.

Quai de l'Amerique: Length 503 m. 3 Post-Panamax container gantry cranes.

Roll-on/Roll-off: Four berthing places in the tidal basin, five berths in the wet dock, eight berthing places in the non-tidal docks.

Liquid Chemicals: At the berths of "Societe Normandie de L'Azote", "Sogestrol", and "Petrochimie" along the Grand Canal du Havre. 9 berths available, depths 0.5 m. – 5.0 m. For vessels of 80 m. – 240 m. LOA and 7,000 – 45,000 d.w.t.

LPG: 4 berths available, depths up to 9.0 m. For vessels up to 75,000 cu.m. and LOA of 240 m.

CRANES: Also see "Berthing".

71 wharf cranes of 2.5 tons – 10 tons.

3 floating cranes 8, 90, 200 tons.

24 electric gantry cranes 6 tons – 40 tons.

1 land sheer legs 650 tons.

4 grain elevators 280 t.p.h. – 300 t.p.h.

2 gantry cranes for loading cereals in bags 150 t.p.h.

BRIDGES: No special restrictions. Opened upon request. Master will be informed as above in case any bridge stopped for repairs.

STEVEDORES: Stevedores work in 4 working periods, Sundays and holidays included (except January 1st, May 1st and December 25th, which are never worked).

Working periods are 0500 hrs. to 1500 hrs. 1000 hrs. to 2000 hrs., 1300 hrs. to 2300 hrs. and 2000 hrs. to 0600 hrs.

Each of the first three periods are called "day periods" and no more than 9 hours of continuous working and 8 hours in the 4th (night period) with a minimum of 5 worked hours (day) and 4 hours (night).

There is no overtime but extra charges are applied in the 4th period (night) – 25% on weekdays, 50% on Sundays and holiday nights.

In a period, gang can successively work on several ships.

It is necessary to give agent and compulsory to give Harbour Master 24 hours notice of accurate ETA and hatch distribution in order to arrange gangs.

Work done with shore crane. Ship's derricks used only exceptionally.

It is compulsory to put a net under the gangway before starting work, for lack of which stevedores refuse to go on board.

MEDICAL: It is not necessary for Agent to receive advance notice of required medical attention except when Master requests a doctor on board. The Master must after berthing inform Agent of number of patients and nature of disease, name of patient, rank, in order Agent may arrange corresponding appointment with doctors, dentists, specialists, etc. Hospital facilities available provided admission ordered by local doctor.

Inoculation: Yellow fever – effected only at the hospital once per week on Thursdays 1400 to 1500 hrs. Other inoculations may be effected by local doctors (with appointment).

TANKERS: Diameter of connections at different berths of C.I.M.: No. 3, 4 and 5, 10 in.; 6 and 7, 12 in.; 8 and 10, 16 in.

9 additional berths available for refined products. Max. LOA 270 m. (50,000 tons), depth 6.0 m.

Tankers calling first time at Le Havre recommended to inform Agents of position of manifold connection. Slop reception facilities available up to 1,000 t.p.h.

Berth	*Max. LOA (m.)*	*Pumping rate t.p.h.*	*Max. d.w.t.*
C.I.M. 1	175	900 (petrol)	22,000
C.I.M. 2	198	1000 (petrol)	22,000
C.I.M. 3	242	2000 (crude)	50,000
C.I.M. 4	200	4000 (crude)	30,000
C.I.M. 5	230	4000 (crude)	40,000
C.I.M. 6	260	5000 (crude)	90,000
C.I.M. 7	278	7000 (crude)	100,000
C.I.M. 8	320	10/15,000 (crude)	230,000
C.I.M. 10	350	15/20,000 (crude)	250,000
Antifer W	500	15/20,000 (crude)	700,000
Antifer E	500	15/20,000 (crude)	540,000
Mazeline 1	350		
M.C. 3	220		45,000

Note: Minimum length Antifer West 320 m. and Antifer East 270 m.

Berth	*Admissible Length (m.)*	*Remarks*
Canal de Tancarville Orcher		
Berth for loading	100	Refined products
Waiting Berth	100	Refined products
4 Berths for barges	80	Refined products
Appt. Saint-Denis 1	85	Refined products
Appt. Saint-Denis 2	60	Berth for self-propelling barges
Waiting Berth in Garage de Tancarville	80	Bunkering only
Canal Bossiere		
Jonction 1	80	Accessible to 4,000 d.w.t. tankers
Jonction 2	150	Accessible to 12,000 d.w.t. tankers
Jonction 3	270	Accessible to 50,000 d.w.t. tankers

*Level: For explanation see "Berthing".

Report: *Port Approaches:* After having rounded the Barfleur Cape, at least 7 miles off the French coast for tankers carrying dangerous cargoes, vessels approaching Le Havre have to take care of the heavy traffic coming from this port or from the River Seine.

In Port: As the approach channel is tidal, attention must be paid to cross currents when transitting and especially outside the breakwater entrance (250 m. wide) where the setting effects can be very important. Drift allowance to counteract the current will vary from about 5° on Neap tides with no wind to 20° on Spring tides with strong cross winds. Inside the harbour there is practically no current from 2 hours before HW time up to 1 hour after. No vessel is permitted to anchor in any part of the port except in an emergency or for docking purposes.

Berthing: The Avant port is entered between two breakwaters about 860 ft. apart, and tankers bound for the CIM Berths proceed through a second set of breakwaters into the tidal basin Theophile Ducrocq, where those bound for CIM Berth Nos. 6, 7, 8 and for SHMPP Berth MCT 3 are swung, assisted by tugs, in the first turning basin, and those for CIM Berth 10 in second turning basin.

It is a difficult manoeuvre, particularly for VLCCs' to slow the vessel down and connect tugs within the time and space available from passing the breakwaters till the turning basin is reached. It is, therefore, important that engine response is prompt and that personnel and equipment are ready to connect up the tugs.

General: The CIM Berths are located on the South side of the tidal basin. Berth Nos. 1 to 7 are aligned at a 45° angle and the VLCC Berth Nos. 8 and 10 are parallel to the basin.

The SHMPP Berths, Junction 2 and 3 are located in the Constant Level Dock, facing the new Lock Francois Ier, which is at the Eastern extremity of the tidal basin.

Water density in the port averages 1024 – 1026.

Tugs:

Vessel	*Number usually used*				
(k.d.w.t.)	Up to 40	50/60	70/80	90/120	190/250
Berthing	2	3	3/4	4	4
Unberthing	2	2	2	2	2

4 tugs are recommended for mooring VLCCs. The 4 most powerful tugs available are used.

2 tugs are made fast on the hook forward and aft and 2 others are secured alongside.

Especially for VLCCs, it is recommended to use tug lines putting eye over bitt.

Berthing Procedure:

(a) CIM Berth Nos. 1, 2, 3, 4 and 5: Tankers bound for these berths are, after having made tugs fast, moved directly into berth, mooring head in. Starboard side alongside Berth Nos. 1, 3 and 5; and port side alongside Berth Nos. 2 and 4.

(b) CIM Berth Nos. 6, 7, 8: Tankers bound for these berths are swung in the first turning basin and towed stern first into the berth mooring head out with starboard side alongside Berth No. 7 and port side alongside Berth Nos. 6 and 8.

(c) CIM Berth No. 10: A tanker bound for this berth is, assisted by tugs, swung in the second turning basin just upstream of the berth, then moved into position parallel to the berth about 100 m. off and pushed alongside by the tugs, mooring with port side alongside.

Exceptionally, when 2 VLCC's have to be berthed during the same HW tide, they can be berthed at CIM No. 8 and 10 starboard side to, this saving 30 – 40 minutes corresponding to the swing.

(d) SHMPP Berths JON 2 and 3: Tugs (usually 1 forward and 1 aft) are made fast while vessels are proceeding through the tidal basins.

Locking time is about 45 minutes, port side or side under the wind alongside, with 1 head line and 1 spring line forward and aft. After leaving the lock, vessels are berthed port side alongside at Jonction 3 and starboard side alongside at Jonction 2.

Also see "Report" dated June 1982.

Antifer:

The Port of Le Havre – Antifer, attached to the Port of Le Havre which covers it administratively, is a port on the coast located 4 km. South of Cape Antifer, at Saint-Jouin-Bruneval.

It is an oil terminal, designed to accommodate vessels of 500,000 d.w.t. – 700,000 d.w.t. and of 28.6 m. draft, subject to tide (Also see "Max. Size").

The port comprises: A breakwater 3,500 m. long protecting the port in its Northern area and starting at Groin Point, 3 km. South of Cape Antifer. A manoeuvring zone. A dry-land area of 35 hectares at the foot of the cliffs intended for hydrocarbon storage and for port operation installations. A 8 hectare service port. A mooring installation with 2 positions for tankers. The oil discharged into storage tanks is pumped away to installations in Le Havre port, by means of a pipeline of 42 in. dia. and 25 km. long.

Tides and Currents: At Antifer, the influence of the Seine estuary is much less than at Le Havre. The tidal curve is of the sinusoid type, without, however, being perfectly symmetrical. Slack water only lasts a short while (about 20 minutes). With winds from the North to East, there is a drop of about 0.25 m. to 0.50 m. increasing with the amplitude of the swell.

With winds from the South to N.W., passing through a Westerly point, there is either a slight drop (0.15 m.) or a rise corresponding to the extent of swell and sometimes reaching 0.75 m.

Tidal currents are alternating in their direction and generally parallel to the coastline. With Spring tides they reach a speed of 3 knots.

The breakwater protects the port from the action of ebb currents.

A Waiting Area has the approach route on its Southern edge. It has the form of a trapezium 2 miles in length. The Western commencement of the large base of this area incorporates 2 anchoring areas: the N.W. area for vessels of more than 25 m. draft, and the S.E. area for vessels of less than 25 m. draft. The 2 areas are separated by Buoy "A5".

A Connecting Area trapezoidal in shape and 2.5 miles in length, connecting the approach route to the approach channel.

An Approach Channel, 1,000 m. wide, marked on its Northern edge by Buoys "A8", "A14", "A16", "A18", and on its Southern edge by Buoys "A7", "A9", "A17". This channel is orientated in the same direction as the approach route on a bearing of 118.5°. Buoys "A7", "A8" and "A9" form at the entry of the channel a triangle easily identifiable by radar.

An Access Channel 3.5 miles long, 700 m. and then 550 m. wide and on a bearing of 127.5°. It is marked by 4 pairs of buoys: "A19/A20", "A21/A22", "A23/A24", "A25/A26". Its depth is 25 m.

A Separation Area adjacent to and to the South of the access channel, allowing vessels on entering to make a half-turn to come out of the channel and then come if necessary to the waiting area. The centre of this area is marked by Buoy "DA".

A Swinging Area sheltered by the main breakwater, marked to the South by buoy "A27", and to the East by Buoy "A29".

The conditions of current (direction and force) and the height of the tide determine, in terms of the drafts of vessels, the periods during which the port may be entered, and which are somewhere between full and low tides.

Vessels must, therefore, on leaving the separation area, follow entry instructions given to Masters by the Pilots, with the agreement of the Port Captaincy of Havre-Antifer.

Pilotage: The Pilot is taken onboard in the waiting area in the disengagement area by means of a pilot boat, a launch or the helicopter allocated to the Le Havre pilotage service.

Port: To the North of the swinging area, is the mooring area dredged to 26 m. allowing access to 2 alongside berths which have depths of water of 27.5 m. – 28.0 m.

The service port is reserved for the mooring of tugs, pilot boats, anti-pollution equipment (booms) and servicing equipment.

Arrival Advice: Masters of vessels destined for Antifer, as well as those whose vessels may enter either Le Havre or Antifer, must send to the Harbour Master of Le Havre a message stating the date and time GMT of their arrival at the Antifer landfall buoys or at the Le Havre lightship and stating the draft of their vessel.

This message must be sent via a coastal station at least 12 hours in advance and confirmed by a VHF message 3 hours prior to arrival at the landfall buoys of Antifer or at the lightship. In return, the vessel will receive from the Havre Port station all information and necessary instructions.

Radio: The Antifer Port Control (call sign Havre-Antifer) listens out permanently on the following frequencies:

156.8 MHz (Channel 16)
157.10 – 161.7 MHz (Channel 22) VHF

If Channel 22 is not available on board the vessel, Channel 14 (156.7 MHz) can be used after having first called up on Channel 16.

Radio communications are used for: Port operations (movements of vessels) and guiding vessels during times of fog.

Radar Assistance: During times of fog, radar assistance is supplied to vessels by the radar located on La Heve lighthouse (guidance provided by the Semaphore Lookout of Le Havre) as well as by the radar of the Oil Terminal (guiding provided by the Captaincy of Antifer from the Buoy "A–16"). Vessels requiring radar guidance must start by requesting it on the call-up frequency (Channel 16). Only after an affirmative reply can they switch in to the connections affected by radar, taking necessary precautions (listening out in advance) not to disturb a guiding process already taking place. Assistance is given in strict rotation of requests. Information is supplied free of charge in French and in no way renders the Port Authority responsible. Such information covers the following: route clear or not, vessels anchored or under way in the vicinity, successive positions in relation to the landfall buoys, possible position of the pilot vessel, then guidance in the channel as far as the swinging area and mooring area.

Syledis: A system of aid to navigation and to manoeuvring, covering the receipt on board the vessels of parameters covering in particular the position, the speed, is in the course of being tried out. It requires the Pilot bringing on board a small transmitter/receiver.

Aids to Manoeuvring: In order to facilitate swinging manoeuvres and mooring of large tankers, the Port of Antifer has 3 lights of different colours, the positions and characteristics of which are as follows:

Access guiding light (on the open storage area at the foot of the cliffs) – light with red, white, green sectors, regularly flashing (4 secs.) the red sector to the North the green to the South.

Guiding lights for coming alongside (on the breakwater).

West light (position 3) – light of red, white, green sectors, regularly flashing (4 secs.) – Red sector to the East, green to the West.

East light (position 2), light of red, white, green sectors, flashing twice (6 secs.), red sector to the West, green to the East.

Each quay berth is equipped with aids for mooring comprising luminated panels showing the distance to the berthing point of the bow and the stern of the vessel; the speed (in cm./sec.) of approach or pulling away of the bow and stern of the vessel in relation to the berthing point.

Fuel: Supplied by pipelines on the berth (S.H.M.PP. depot).

Cranes: 2 cranes of 2.5 tons capacity on the berth (1 per position). Berth for heavy items in the service port – handling by mobile crane.

Floating Equipment: Pontoon for transporting heavy items.

Tugs: Stationed in the service port are 1 or 2 tugs of 4,000 h.p. or 4,900 h.p. Other tugs required for manoeuvring come from Le Havre.

Pollution: Barrages laid on pontoons in the service port can be very quickly placed into service.

General Information:

The Port Captaincy is situated on the open land area of the Service Port.

Tel: 35.21.74.00 Extension (92) 403 or (92) 404 or 35.20.71.70.

Pilot's office: At Le Havre Pilot's Office.

Towing: The Les Abeilles Company on the pontoon in the service port.

C.I.M. Depot: 35.26.51.05.

S.H.M.PP. Depot: 35.24.11.77.

Communications: By buses from Saint Jouin. The airport of Le Havre-Octeville is 16 km. to the South of Antifer.

DENSITY: In outer port and tidal docks: salt water. In inside docks brackish. Density depending upon season and amount of fresh water brought in by river Seine and Canal de Tancarville.

FRESH WATER: Most berths supplied by shore hydrants. Otherwise by barge minimum quantity invoiced then being 50 cu.m. Overtime charged in addition. Late cancellation of barge invoiced.

FUEL: All grades available, viscosities from 200 sec. to 3000 sec. Redwood. Minimum 48 hours advance notice required to prepare barges.

FIRE PRECAUTIONS: Dangerous cargo must be declared on "Inbound Bill" and Dangerous Cargo Manifest must be given to the Harbour Master's office 48 hours before arrival in order that Harbour Master's office can deliver instructions regarding safety.

Tankers: A "Notice to Master's of ships loading/unloading hydrocarbons" is handed to Master upon arrival. This notice specifies *inter alia:* repairs, ventilation/cleaning of tanks, handling of goods subject to Harbour Master's authorisation. All naked lights and fires prohibited, boiler furnaces and galley ranges excepted, such exception cancellable on simple order of Harbour Master or Depot Manager.

CONSULS: The following countries have representatives at Le Havre:

Argentina
Belgium
Brazil
Chile
Colombia
Costa Rica
Denmark
Dominica
Ecuador
Finland
Germany
Greece
Guatemala
Haiti
Honduras
Italy
Ivory Coast
Japan
Liberia
Madagascar
Mexico
Netherlands
Norway
Panama
Peru
Portugal
Salvador
South Africa
Spain
Sweden
Switzerland
United Kingdom
Uruguay
Venezuela

REPAIRS: 11 berths for vessels up to 350 m. Depths up to 10.0 m. 2 berths can accept vessels up to 550 m. LOA.

Societe Nouvelle des Ateliers et Chantiers du Havre (SNACH), 30 rue Jean-Jacques Rousseau, 76090 Le Havre. Tel: 35.26.81.77. Telex: 190 322 F.

Specialises in: Ship repairs (boilers, engineering, fitting out, electricity); Alterations and conversion; Jumboisation.

Siren – Route du Mole Central, B.P.1286, 76068 Le Havre Cedex. Tel: 35253543. Telex: 190964 F.

Also see "Dry docks".

DRY DOCKS:

Graving docks	*Overall length* (m.)	*Inside length at block level* (m.)	*Entrance width at block level* (m.)
International Ship Repair Centre			
Floating Dock	310.00	290.00	53.00
Dry Dock VII	319.00	313.00	38.00
Eure Dry Docks			
Dock IV	184.10	181.46	28.12
Dock V	168.75	163.70	19.05
Dock VI	131.00	127.33	14.20

High tides vary from (+5.80) to (+8.30).

New floating dock, capacity 220,000 tonnes. Lifting capacity 50,000 tons.

SURVEYORS:

Bureau Veritas, 71 bd. de Strasbourg, 76600 Le Havre. Tel: 35.22.69.23.

American Bureau of Shipping, 4 rue Andre Caplet, 76600 Le Havre. Tel: 35.42.39.83.

Det Norske Veritas, 19 quai George-V, 76600 Le Havre. Tel: 35.42.26.05.

Germanischer Lloyd, 110 rue Gustave Flaubert, 76600 Le Havre. Tel: 35.43.75.18.

Lloyd's Register of Shipping, 7 rue Pierre Brossolette, 76600 Le Havre. Tel: 35.42.42.15.

GANGWAY/DECK WATCHMEN: Compulsory, by ship's crew. Sworn watchmen in uniform and equipped with a VHF set may be obtained from the Port Authority per hour for day and night, working days and holidays. Some other companies may also supply watchmen (not sworn) at lower prices.

OPENING/CLOSING HATCHES: May be done by stevedores at the same price as shifting of cargo depending upon the type of cargo and consequent number of men included in the gang.

It is highly recommended to carry out opening by the crew before beginning of shift to avoid both loss of time and expensive charges and also risk of accident to stevedores who are sometimes not well aware of vessel's closing system.

It is emphasised that for reefer cargo stevedores wait for cold exhaust half an hour after opening hatches before getting down in the holds. Consequently it is strongly advised to stop ventilation and start opening hatches with crew about 1 hour before beginning of shift keeping in mind that for reefer cargo, the morning shift may commence at 0500 hrs.

CERTIFICATES:

Tonnage Certificate.
Safety Construction Certificate.
Loadline Certificate.
Safety Radio Certificate.
Safety Equipment Certificate.
Derat Certificate.
Cargo Gear Register.

(Fresh water analysis certificate may also be requested.)

CUSTOMS ALLOWANCES: 200 cigarettes or 200 grammes tobacco plus 1 bottle spirit (must be mentioned on Crew Declaration List). Crew members may obtain extra allowance but only after 5–6 days' call.

CARGO GEAR: Cargo handling usually carried out by means of shore cranes. Hatch-tents to be supplied by vessel.

REPATRIATION: Except if airplane chartered by Owners, all crew have to pass through Paris.

AIRPORT: Le Havre Airport 7 km. from the centre of the town, with a runway of 1,800 m. × 40 m. may receive chartered planes up to 40 tons total weight (50 tons with special authorisation). Regular flights from and to Orly (Paris Airport) twice a day, holidays excepted.

TIME: GMT plus 1 hour from last Sunday in September to last Sunday in March and GMT plus 2 hours last Sunday in March to last Sunday in September.

HOLIDAYS: New Year's Day (January 1st); Easter Monday; Labour Day (May 1st); Victory Day (May 8th); Ascension Day; Whit Monday; National Holiday (July 14th); Assumption B.V. Mary (August 15th); All Saint's Day (November 1st); Armistice Day (November 11th); Christmas Day (December 25th). No work possible except for passenger ships and tankers the latter being loaded/discharged round the clock every day.

POLICE/FIRE/AMBULANCE: Emergency (Fire) 18; Emergency (First Aid) and SAMU 15; Police 17 or 35.21.77.00.

TELEPHONE: Possible at most berths. Apply to ship's Agent prior to arrival.

SHORE LEAVE: Authorised within port and town area. Foreign seamen wishing to go further and more especially to Paris must obtain police authorisation and consequent pass.

CREW IDENTIFICATION CARDS: Not required. Recommended to have Passport or Seaman's Book to go ashore.

REGULATIONS: Vessels carrying dangerous cargo must when on roads or in the entrance channel, show the red flag by daylight or 1 red light by night-time. When leaving the port they must keep their Pilot up to the end of the channel.

Vessels arriving with hazardous cargoes must declare same to Port Control 48 hours prior to arrival.

General: When the Pilot comes on board, he hands to the Master a file containing:

A leaflet showing a map of the port, the position of the fire brigade points, call-up points in the event of fire, fire-fighting hydrants, a list of important telephone numbers, a list of VHF Channels monitored by the Captaincy.

One copy, with map, of the the Maritime Prefect's decrees covering the circulation of vessels in the roads and channel, and in particular oil tankers.

An entry declaration which the Master must complete and which enables a check to be made that the hazardous material transported has already been the subject of a prior declaration to the Captaincy.

On berthing, instructions are handed to vessels:

– either by the ship's Agent where conditioned goods are involved.

– or by the operator of the berth for bulk carriers (liquid or liquified hydrocarbons, chemical products).

Furthermore, for these vessels, a check-list in accordance with that recommended by the IMO must be completed and signed jointly by the vessel and the terminal, prior to commencement of commercial operations.

DEVELOPMENTS: *Rapid Turnaround Port:* Phase 1 in operation. Phase 2 under construction at new Quai de l'Pacifique with length 450 m. and depth 13.5 m. The quay will have 2 gantry cranes. The quay will be extended further at a later date.

REPORT: June 1982 (Updated 1988).

Requirements When Vessels Call to Load/Discharge LPG at Norgal:

Further to difficulties encountered for some months now in receipt or despatch of vessels, we would like the associates of NORGAL (or their customers) to let us know by telex, as soon as possible and for each operation, information of a general, technical and administrative kind, *those sections which are an obligatory nature being preceded by the sign* (+).

1. *General Information:*
 + Name of vessel and its ETA (expected date of arrival in the roads).
 + Nature of the operation (import, export, transit under Customs control).
 + Approximate quantity in tonnes and product and possibly the breakdown of capacity confirmed by a telex from the interested associate.
 Name of consignee (if possible).

2. *Technical Information:*
 + Temperature of product.
 On board pressure.
 Hourly pumping capacity.
 Height of manifold in relation to water level.
 Dimension and series of manifold flanges.
 Laydays and possibly demurrage.

Receiving Possibilities at NORGAL

Propane:

(a) If temperature = 42°C and max. pressure 30 mb. (with return of gas) : 1,000 tonnes per hour.
(b) If temperature = −10°C and max. pressure 3 bars : 300 tonnes per hour.
(c) If full pressure : 80 tonnes per hour.

Butane:

(a) If temperature = 10°C and max. pressure 30 mb. (with return of gas) : 1,000 tonnes per hour.
(b) If full pressure : 70 tonnes per hour.

Characteristics of vessels:

Maximum length : 240 m.
Total displacement : 67,000 tonnes.
Depth of water : 12.0 m (39 ft. 04 in.).

Quality if Product Admissible:

French commercial standards, for butane, the temperature must not be less than −8°C for a tv of 0 bar (effective).

3. *Administrative information (for Customs).*

(a) *Imports:*
 + Product origin.
 + Price per tonne and currency of invoicing.
 + Kind of contract (f.o.b., c. and f., c.i.f.). If contract is f.o.b. state the amount of freight and insurance per tonne. If contract c. and f. state amount of insurance.
 + Invoice weight (at level acceptable to Customs).
 + Bank domiciliation (name of bank, number of pay office, number of domiciliation file) or the bank domiciliation file.

Note: The invoice and possibly the original of the Certificate of Origin justifying exemption form Customs duty (T2L, Certificate type "A", Certificate EUR1) must be sent to us *as quickly as possible* to be attached to the Customs entry or to put right this entry as quickly as possible.

(b) *Exports:*

+ Consignee of the invoice and final destination.
+ Price per tonne and currency of invoicing.
+ Kind of contract (f.o.b., c. and f., c.i.f.). If contract is c. and f. or c.i.f., state f.o.b. value.
+ Invoice weight (as recognised and acceptable to Customs).
+ Name of domiciling bank and number of pay-office.

Note: The export invoice must be sent to us urgently for settlement at the end of the month.

(c) *Transit Under Customs Control:*

(i) *Receipt.*

+ Declaration of Transit A42, if it has not been able to be placed on board.
+ Amount of freight per tonne for payment of VAT, where a foreign vessel is involved.

(ii) *Despatch.*

+ Consignee and Customs Office of destination.
+ Number of derogation of flag monopoly if a foreign vessel is involved. This number is required by Customs before loading.

SHIPMASTER'S REPORT: June 1987.

Berth: Berth ATO 2 at Gonfreville.

Documents:

6 copies Crew List.
2 copies Crew Declaration.
2 copies Manifest (including bond, ship's stores, currency, etc.).
1 copy Health Declaration.
2 copies Cargo Manifest.

Pilotage: Le Havre Pilot boards in the vicinity of LH14 Buoy from a high speed launch. Helicopter can be used in poor weather.

Approaches: Vessels can cross Antifier Channel after obtaining clearance on VHF Channel 22.

Vessels cannot cross East of Buoys A21/22. Pilots advise just West of A17/18.

Tugs: Not required for our vessel inward or outward except if high winds blowing.

Locks: Vessel locked into canal system after passing through Francoise Premier Lock. Time in lock about 20 minutes. Vessels can be delayed up to 1 hour if other ships lock-in at the same time.

Berthing: Vessel berthed port side to Berth ATO 2 on the North side of Grand Canal du Havre, which is about 20 minutes from the lock.

For ethylene loading an 8 in. 150 ASA loading arm and a 6 in. 150 ASA vapour return line are provided. The vapour return line can only return on completion of loading. Chemical handling using Chicksan arms is also possible on the berth.

The shore tanks have 0.6 kg./sq. cm. pressure relief valves. Maximum loading rate 250 t.p.h.

If port side to, vessel can only use After liquid line/After vapour line. If starboard side to, use Forward liquid/vapour line.

Moorings at this berth consist of 2 head lines and 2 springs forward and aft.

Depth alongside 10.4 m. Maximum size vessel accepted at the berth is 30,000 cu.m.

Shore gangway provided.

Fresh Water: Available from the pier ex-hydrant.

Stores: Lorries delivering ship's stores may proceed to within 50 m. of the vessel.

Also see "Shipmaster's Report" dated December 1988.

SHIPMASTER'S REPORT: December 1988.

The following is an update of Shipmaster's Report, dated June 1987.

Anchorage: Waiting Area No. 1 is a small area for a port the size of Le Havre. The anchorage runs into Rouen Anchorage. Do not anchor within 1 mile of Le Havre Fairway which is radar controlled. The anchorage is exposed to all winds.

Pilotage: Small vessels without tugs are allowed to berth in very low visibility, dependent on Pilot/Master and vessel's radar. Vessels requiring tugs must have 250 m. visibility.

Tugs: Tugs not required in or out for smaller vessels, except if there are high winds. The tugs are powerful and the tug wire is used. One hour's notice required.

Locks: Vessels can also proceed to Gonfreville by way of the old locks at Rochemont/Vetillart (max. LOA 160 m., max. beam 22 m. and max. draft 8.0 m.) and Canal du Havre. The time taken from Buoy LH05 to Berth ATO2 via the old system is 3 hours.

Berthing: Vessels can also berth starboard side to at Berth AT02, but landing gangway is difficult.

Chemical Chicksans also available on berth. Max. loading rate 250 t.p.h.

General: Telephone: Nearest public telephone is at Sogestrol Office or at the car loading facility, about 1 mile down the road towards the lock. It is possible to telephone the agent or the chandler from the jetty office.

Airport: Le Havre Airport is about 30 minutes by road from the berth. There are daily flights to and from Gatwick.

Rail Link: There is a good rail link with Paris, time of journey about 90 minutes.

AUTHORITY: Port of Le Havre Authority, Terre-Plein de la Barre, B.P. 1413, 76067 Le Havre Cedex. *Tel:* 32.74.74.00. *Telex:* 190663 Port Havre. *FAX:* 32.74.74.29.

Harbour Master's Office: Boulevard Kennedy, 76600 Le Havre. *Tel:* 32.74.70.71. *Telex:* 190663. *FAX:* 32.74.70.69. *Cables:* Havreport.

LES SABLES D'OLONNE: 46.29 N. 01.47 W. (See Plan)

PORT LIMITS: Entrance to wet dock constitutes port limits.

DOCUMENTS:

2 copies Crew and Passenger Lists.
2 copies Personal Effects Lists.
2 copies Stores Lists.
1 copy Cargo Manifest from ship's papers for Customs Authorities and all Bills of Lading, Ship's Papers, etc.

PILOTAGE: Pilotage is compulsory for all vessels equal to or exceeding 50 m. in length and for all oil and gas tankers.

The compulsory pilot boarding points are two straight lines from "La Petite Barge" Buoy (Lat. 46° 28.9' N., Long. 01° 50.6' W.), to "Le Phare des Barges", and to "La Peruse" rock.

Confirmation of ETA can be given to the Agent or Pilot. Tel: 51-32-60-97.

Channel 12 VHF is continuously watched as soon as Pilot is on board. Pilot boat is 9 m. long (black and white hull).

ANCHORAGES: Vessels awaiting Pilot may anchor about one mile South of the West breakwater. They can use pilot services in bad weather.

MAX. SIZE: Vessels up to 110 m. LOA and beam 16 m. Draft 4.8 m. to 6.2 m., dependent on tides.

HEALTH: Customs take action against suspected diseases or fever on board when vessel arrives.

RADIO: Saint Nazaire & Arachon Radio. All ETA and other messages should be in local time.

VHF: Harbour Authorities keep watch on Channel 12 during opening of lock gates. At neap tides, the watch is kept for 1 hour 30 minutes before and after HW.; at Spring tides for 2 hours before and after HW.

RADAR: There is no Port Control Radar.

TUGS: None, pilot boat assists.

BERTHING: Max. beam 16 m. to allow passage through lock gates. Max. LOA 110 m.

BRIDGES: None.

CRANES: Mobile cranes 25 tons – 60 tons.

STEVEDORES: Working hours from 0700 – 1200 hrs. and 1400 – 1900 hrs. No work on Saturdays.

MEDICAL: Full hospital facilities available.

FRESH WATER: Available in unlimited quantities, with 6 to 12 hours prior notice.

FUEL: By lorry from Nantes or La Pallice.

REPAIRS: Small repairs carried out if sufficient spares available.

SURVEYORS: None.

HATCHES: Opening/closing carried out by vessel's crew.

CUSTOMS ALLOWANCES: 200 cigarettes and 2 litres of spirits per person.

REPATRIATION: Possible.

AIRPORT: At Nantes, 87 km. distant. 6 – 7 flights daily.

TIME: GMT plus 1 hour. Summertime GMT plus 2 hours (March to October).

HOLIDAYS: Port is open all year round.

POLICE/AMBULANCE/FIRE: Police, 17; Ambulance, 51 951953; Fire, 18.

SERVICES: Compass adjusting.

SHORE LEAVE: When Immigration and Customs requirements have been satisfied, there is no restriction on crew shore leave so long as they rejoin the vessel before departure.

DEVELOPMENTS: None.

GARBAGE DISPOSAL: Container in port area for small quantities.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: Seamens Catholic Mission, Tel: 51320637.

CURRENCY: French Franc (FFr).

AUTHORITY: Mr. le Ingenieur des Ponts et Chaussees, Service Maritime, 1 Quai Dingler, 85100 Les Sables d'Olonne, France. *Tel:* 51.21.02.61.

Bureau du Port, 1 Rue Colbert, 85100 Les Sables D'Olonne. *Tel:* (33) 51.95.11.79. *FAX:* (33) 51.21.40.04. *Contact:* Jean-Pierre Baret, Harbour Master.

AGENT: Pierre Lambot, Quai Archereau, B.P. 65, 85102 Les Sables d'Olonne Cedex. Tel: 51-951010. Telex: 710634. Fax: 51.21.23.11.

LIBOURNE: 44.55 N. 00.15 W.

Port closed. All vessels proceed to Izon.

LORIENT: 47.45 N. 03.21 W. (See Plan)

DOCUMENTS:

Cargo Manifest or Manifest of Ballast.
Certificate of Cargo Space.
Bills of Lading.
Ship's Register.
6 Crew Lists.
3 Passenger Lists.
Health Declaration.
Derat Certificate or Exemption.
Declaration of Crew Personal Effects.

PILOTAGE: Compulsory for all vessels over 60.0 m. LOA. Vessels must confirm their ETA to the Pilot Station (VHF Channels 16 or 12) and/or the Harbour Master's Office (VHF Channel 12) and/or Lorient Signal Station (VHF Channels 16 or 12) at least 2 hours prior to arrival on Lorient Roads. The Pilot boards from a launch 1 mile S.W. of the Fairway Buoy or in the anchorage area. Large vessels only proceed at slack tide. Pilot Station: Tel: 97.21.46.47. Fax: 97.64.67.86.

ANCHORAGES: The area centered around position Lat. 47° 40' N., Long. 03° 25' W. offers a fair waiting anchorage in depth of 15.0 m. – 20.0 m., sand and shell, good holding ground.

Mooring buoys are positioned off Port Tudy on the North coast of Ile de Groix. These buoys are reserved for the use of the French Navy. There are prohibited zones for anchoring due to presence of submarine cables, marked on chart (French Charts No. 5912 and 6470).

RESTRICTIONS: There are 2 entry channels to the port. The South Channel, depth 3.6 m. is used exclusively by local fishing boats. The West Channel is marked by the alignment of 057°. This channel is dredged at 8.0 m. below datum (March 1988). Both channels are very well marked.

Traffic signals are hoisted at Port Louis Citadel as follows: 3 red lights – Entry or Exit prohibited. 3 green lights – Entry or Exit allowed.

Tankers: Vessels carrying more than 500 cu.m. of hydrocarbons, or other dangerous cargoes in bulk, intending to enter Lorient Harbour, should report 6 hours in advance to "Marine Lorient" and Port Captain, giving details of cargo and of any defects which may affect manoeuvrability. Traffic of such vessels is regulated by Lorient Signal Station – 1 or 2 tugs are compulsory by law. Other vessels may obtain information about such movements on Channel 16.

HEALTH: Pratique given by Customs Officers who board on arrival. If any case of suspected disease on board or any reason why vessels should not receive Free Pratique, Master should radio Agent before arrival, advising full details.

RADIO: Use local station Radio Conquet or Radio Saint-Nazaire.

Regulations: All vessels have to confirm their ETA to the Harbour Master's Office 24 hours before arriving on the roads of Groix.

VHF: Port Captain keeps watch on Channel 12.

Lorient Signal Station keeps watch on Channel 16 throughout 24 hours.

TUGS: 1×2,556 h.p., 1×1,740 h.p. and 1×700 h.p. for the use of merchant and fishing ships. Several tugs from 1,200 h.p. to 250 h.p. belonging to French Navy can be requested if necessary.

BERTHING: Kergroise Quays, 568 m. Max. length of vessels 260 m. Depth of water 10.0 m. below datum.

One berth, length 150 m. Depth of water 8.0 m. below datum.

One Ro/Ro berth is available for ships of 150 m. length, depth of water is 8.0 m. below datum.

2 discharge gantries, 500 t.p.h. and 750 t.p.h., feeding a silo and road/rail transit station.

11 cranes. 6×10 tons at 30 m. and 5×6 tons at 22 m. Also 1 mobile crane of 6 tons and 1 Kangaroo crane of 22 tons at 40 m.

TANKERS: The Oil Jetty is 112 m. long and can accommodate tankers up to 180 m. length, the depth of water is 9.0 m. below datum. The diameter of the manifold is 8 in.

FRESH WATER: Can be supplied at all quays and at the Oil Jetty. Rate 10 t.p.h.

CONSULS: Norway, Denmark, Netherlands and Sweden.

REPAIRS: Minor deck and engine repairs can be carried out. Slipways can accommodate 6 fishing boats at the same time. There are 3 dry docks, the largest of which is 186.20 m. long×26.33 m. wide (Navy).

MEDICAL: All facilities available. Local maritime and civil hospitals.

AIRPORT: 10 km. from port. There are a minimum of 2 flights a day to and from Paris.

TIME: U.T. plus 1 hour in Winter. U.T. plus 2 hours in Summer.

HOLIDAYS: New Year (1st January, no labour available); Easter Sunday (possibility of labour with overtime); Easter Monday (no labour available); Labour Day (1st May, no labour available); Ascension Day (possibility of labour with overtime); Whit Sunday (possibility of labour with overtime); Whit Monday (no labour available); National Day (14th July, no labour available); Assumption Day (15th August, no labour available); All Saints' Day (1st November, no labour available); Armistice Day (11th November, possibility of labour with overtime); Christmas Day (25th December, no labour available). N.B. Every Sunday and day marked "possibility of labour with overtime" can be worked at the rate of 100%.

POLICE/FIRE/AMBULANCE: Police Tel: 97.21.19.16; First Aid Tel: 17; Ambulance Tel: (97) 65.33.44; Fire Tel: 18.

TELEPHONES: One portable telephone available on request. Only cost of calls are charged.

IDENTIFICATION CARDS: Crewmen going ashore should carry passport or identity card.

GARBAGE DISPOSAL: Skips are provided free of charge for domestic waste on all quays. A 600 ltr. container can be arranged through CCIM, Tel: 97.87.76.00.

For industrial garbage, contact Grandjouan, Tel: 97.76.00.22, in order to arrange for 6 cu.m. or 11 cu.m. skips. Charges are 745 FFR and 982 FFR per hour respectively.

WASTE OIL DISPOSAL: Waste oil can be collected free of charge for quantities of 200 ltr. or more. Contact HUMEAU, Tel: 98.59.61.08 or CHIMIREC, Tel: 99.99.15.38.

Oily water mixtures can be collected by tanker truck at a cost of 547 FFR per hour. Contact DESTEVE-LE TEUFF, Tel: 97.76.00.97 or SANIROISE, Tel: 97.86.06.61.

SEAMAN'S CLUBS: Marin' Accueil, 21 Bd. Jacques Cartier, 56100 Lorient. Tel: 97.83.80.20.

CURRENCY: French Franc (FFR).

AUTHORITY: D.D.E. Morbihan – Service Maritime et de Navigation, Boulevard Adolphe Pierre, 56321 Lorient, France. *Tel:* 97.64.11.36. *Telex:* Marilor 950 887 F. *Contact:* H.Quinquis, Port Director.

Harbour Master's Office: 3 bis Boulevard de la Rade, 56100 Lorient, France. *Tel:* 97.37.11.86 and 97.37.12.71. *Telex:* Capilor 951 566 F. *FAX:* 97.37.90.73. *Contact:* F. Le Priellec, Port Commandant.

MARANS: 46.18 N. 01.00 W.

No ships have called since 1984.

MARSEILLES: 43.18 N. 05.25 E. (See Plan)

(a) Old Port to Estaque
(b) Port de Bouc/Lavera/ Caronte/Etang-de-Berre/La Mede
(c) Fos

(a) OLD PORT TO ESTAQUE

DOCUMENTS:

Inward Declaration (Printed Form presented by Pilot on boarding).
Ships Register.
Declaration of Health.
3 Crew Lists.
2 Provisions Lists.
2 Lists of Passengers in Transit.
2 Lists of Passengers disembarking.
1 List of Ports where cargo is loaded for Marseilles.
Cargo Manifests and Bills of Lading.
1 List of Crew Personal Effects.

Entry Procedures: On arrival, French Authorities do not visit the ships systematically. However, as circumstances require, Police, Customs and Health may do inspection on board.

Free Pratique by radio is possible be sending cable to "Saniport Marseilles" through Marseilles Radio before arrival on roads.

Inward Declaration, duly filled in by Master must be delivered to Port Authority upon arrival.

Other formalities are completed by shipbrokers and consignees.

PILOTAGE: *Arrival:* Contact port authority by VHF on Channel 12 one hour before arrival ("Marseilles Port"). Compulsory. 21 pilot launches, mostly painted black, wooden hulls with white anchor insignia on the bow.

Contact Pilot Station and pilot boats by VHF Channel 8, one hour before arrival.

Southern Entrance: Pilot boards between "Le Frioul" and "Chateau d'If" island. Max. recommended draft 28 ft. 06 in. in good weather.

Northern Entrance: Pilot boards at Estaque roads. In case of strong N.W. winds or for all deeper draft vessels the Northern entrance is preferred.

Vessels anchoring in roads without a Pilot will still incur full pilotage fee.

On departure, 15 to 30 minutes notice sufficient to order Pilot and tugs.

ANCHORAGES: Marseilles North, Saint Marie and Endoume.

MAX. SIZE: Draft dependent on berth depth up to max. of 14.5 m.

HEALTH: Free Pratique automatic for vessels coming direct from continent or Italy and "Q" flag not to be flown. From other countries – including Spain and Portugal – usual procedure applies. Unless special arrangement for passenger liners, Free Pratique not given by radio, also practice of issuing Health or Customs Clearance on sailing now discontinued.

Free Pratique by Radio: Send cable to "Saniport Marseilles" through Marseilles Radio between 0700 hrs. and 1900 hrs., containing the following information:

Ship's Name, ETA Marseilles, from (last 3 ports in reversed order) number of crew.

Then "ZT" (my Maritime Declaration of Health has negative answers concerning the 6 health questions).

Date of Derat (exemption) Certificate.

Then "ZS" (my ship is healthy and ask for Free Pratique).

Example: Balder Antwerpen ETA 17/2300 Malaga, Hamburg, Bremen crew 25 stop ZT stop 06/07/81 stop ZS. Regards Master.

From 0700 hrs. to 1900 hrs., answer of Saniport will be: "ZY" (Free Pratique is granted).

If Free Pratique is requested and granted by radio, no sanitary officials will board the vessel, no declaration must be filled in, and crew members are granted shore leave without delay. Furthermore, the "Q" flag must not be flown on arrival.

The above information was supplied to a Ship's Master by the Port Health Officials.

RADIO: Within 150 miles Marseilles Radio/FFM – otherwise St. Lys/FFL.

VHF: Port Authority on Channel 12. Tugs on Channel 6.

RADAR: Port and approach radar station.

TUGS: About 3 tugs available, from 1,200 h.p. to over 3,000 h.p. Ship's lines normally used.

BERTHING: When specific side alongside berth required. Agents radio Master prior arrival also advise Pilot. Otherwise side alongside at discretion Master after conferring with Pilot.

Berth No.	*Usable Berthing Length* (m.)	*Max. Permissible Draft* (m.)	*Remarks*
96	105	7.70	Ro/Ro berth
95	104	7.70	Wine, Rate 150 t.p.h.
94	105	7.70	Ro/Ro berth
92	147	7.70	Ro/Ro berth
91	130	7.80	

Berth No.	Usable Berthing Length (m.)	Max. Permissible Draft (m.)	Remarks
90	130	7.80	Ro/Ro berth
88	155	8.00	Ro/Ro berth
87	130	8.00	
86	131	8.00	Ro/Ro berth
84	147	8.00	Ro/Ro berth
83	135	8.00	
82	135	7.75	Ro/Ro berth
81	140	7.60	Ro/Ro berth
80	130	9.00	Equipped with Ro/Ro pontoon
79	109	9.00	
78	109	9.00	
77	109	9.00	
76	109	9.20	
75	109	9.00	
74	109	9.00	Ro/Ro berth
70	132	9.60	Ro/Ro berth
69	131	8.50	
68	100	5.80	Equipped with Ro/Ro pontoon = 36 m.
67	120	6.35	
66	120	6.35	Ro/Ro berth
65A			Service berth
65	138	6.10	Ro/Ro berth
64	137	6.50	
63A	102	6.70	Waiting berth
63	127	7.00	Ro/Ro berth
60		8.80	
59	173	7.80	Ro/Ro berth
58	175	8.60	Banana Terminal – 4 unloaders
54	—	9.80	Ro/Ro berth
57	—	8.60	Ro/Ro berth
53	149	10.00	Air-Conditioned Shed
52	120	8.00	Waiting berth
51	115	7.50	
50	111	7.00	Ro/Ro berth
49			Service and marine fire brigade
48	135	8.00	Solid bulk cargoes
47	135	10.00	Solid bulk cargoes
46	106	8.50	Waiting berth
45	129	7.00	
44	130	7.50	Ro/Ro berth
43	151	8.00	Ro/Ro berth
42	150	7.00	Ro/Ro berth
41	150	7.00	Not available
40	171	10.00	Ro/Ro berth
32	200	10.70	Ro/Ro pontoon
31	200	10.70	Ro/Ro pontoon
30	196	10.70	
28	135	8.50	Ro/Ro berth
27	150	8.50	Specialist paper berth
26	150	8.50	Ro/Ro berth
25A	100	9.00	Service berth
25	152	11.00	Specialist cereal berth
24	154	11.00	Specialist cereal berth
23	134	8.70	Waiting berth
22	145	10.50	
21	145	10.50	
20	145	10.50	Sugar
19	145	10.00	
14	227	8.80	Ro/Ro and Alumina in bulk
13	171	10.00	Refrigerated store
12	171	10.50	
11	171	10.50	Cruise ship terminal
10	171	10.50	
9	—	11.50	Waiting berth
8	157	11.80	
7	157	11.60	
6	178	10.60	
5	178	10.60	
4	140	10.10	Banana terminal
3	140	11.10	
2	140	11.10	
186	162	14.50	
185	162	14.00	
184	162	12.00	
183	162	12.00	Marseille Fruit Terminal Berths No. 181, 182 and 183.
182	161	12.00	
181	162	12.00	Ro/Ro pontoon
163	no limit	13.50	Naval repair berth
161	50	2.50	Barges with heavy lifts
160	104	7.20	Naval repair berth
157	154	11.70	Ro/Ro berth
156	154	11.70	Container Terminal
155	154	11.70	2×40 ton gantry cranes
154	154	11.10	
153	154	11.00	Refrigerated Shed
152	155	11.00	Ro/Ro berth
151	137	11.50	MAVRAC quay Liquid bulk cargo
148	220	9.50	Ro/Ro berth
144	173	10.50	Ro/Ro berth
143	90	9.50	Bulk liquid cargoes
145	70	4.20	Vegetable oil Water (export)
146	105	4.20	
147	133	4.20	
170	132		
190	450	10.60	Floating repairs quay
131	215	11.00	Naval repairs (under inert gas)
130	215	11.00	
129	216	11.00	Naval repairs – engine testing
128	127	8.50	Waiting berth
127	170	8.50	Waiting berth
126	170	8.50	Naval repairs
125	170	8.80	
124	170	9.00	
123A	78		Service – lighthouses and buoys
123	150	11.00	Naval repairs
122	150	11.00	
121	151	11.00	
120	151	11.00	
119	151	11.00	
119A	100	7.20	Naval repairs
118	160	9.30	Naval repairs
117	160	9.30	
116	160	9.70	
115	160	9.70	
115A	85	5.50	Naval repairs Service
114	151	10.50	Naval repairs Clinker (5 cranes) Ro/Ro (Berth 109A)
113	151	10.50	
112	151	10.50	
111	151	11.60	
110	151	11.60	
109	152	11.60	
109A	68	12.00	
107	355		Service
106A	70	5.70	
106	120	5.50	
105	120	5.50	
104A	100	7.70	Bulk wine, 3 pumps (rate 1,000 hl/h.).
104	100	5.60	Bulk wine, 1,000 h/l. loading, 1,100 h/l. discharging also livestock
103	139	4.30	Service berth
102	139	4.70	
101	139	3.50	
100	139	3.50	Not available
99	139	3.50	Not available
98	450	8.00	
AVB	300	8.50	Naval repairs

CRANES:

Public Quay Cranes: 1×3 tonnes; 5×3 – 5 tonnes; 42×6 tonnes.
Public Mobile Cranes: 1×4 – 8 tonnes; 4×6 – 12 tonnes; 6×15 tonnes; 3×40 tonnes.

14 dry dock cranes, largest has a lifting capacity of 150 tonnes.

2 floating cranes for public use, owned by the Port Authority, capacities 90 tonnes and 150 tonnes and one floating derrick owned by the Port Authority, capacity 500/600 tonnes.

BULK HANDLING FACILITIES:Cereals:

President Wilson Dock: Berth Nos. 24/25. Storage: The Madrague Silo, owned by the Societe Fonciere et Commerciale du Silo de la Madrague, has a capacity of 30,000 tonnes in 143 cells. The silo is connected to the berth by covered conveyors. The silo is outside the port area. 1 suction unit, rate 600 t.p.h.

Grande Joilette Dock: Used for storage only. The silo, owned by the Marseilles Port Authority, is within the port area and has a capacity of 22,000 tonnes in 99 cells.

Minerals in Bulk:

National Dock: Berth Nos. 47 and 48. Specifically for bulk traffic, handled by bucket-cranes. Storage: 4,000 sq.m. (43,040 sq.ft.) in the open, beside the East Quay. 2 cranes, rate 300 t.p.h. or 150 t.p.h. per crane.

3 berths on the Seaward Breakwater, Berth Nos. 109, 110 and 111. Theoretical length 151 m. each, max. draft 12 m. Storage capacity 50,000 tonnes.

These berths are equipped with 5 bucket cranes of 7 tonnes and facilities for storing clinker.

President Wilson Dock: Berth No. 14. Allocated specifically for alumina. Storage: 2 silos, with a total capacity of 11,000 tonnes, constructed by and belonging to Pechiney Cie. and Ugine Cie., to facilitate the import/export of dehydrated alumina in bulk.

There is an additional warehouse with 1,000 sq.m. on Mole "D" which is used for hydrated alumina. Vessels are handled via Berth No. 47 (National Basin). Storage capacity 3,000 tonnes.

Leon-Gourret Dock: Berth No. 8. Allocated specifically for bulk traffic that can be handled by grab-bucket. Storage: An open area of 4,000 sq.m. (43,040 sq. ft.) at the quayside; suitable for import/export.

Liquids in Bulk:
Mourepiane Dock: Berth Nos. 151 and 148. For vegetable oils and chemicals. Storage: The private company, Marseilles Vrac, which operates this depot, has 32 vats of 125 to 1,640 cu.m. (4,412 to 57,892 cu.ft.), with a total capacity of 24,500 cu.m. (864,850 cu.ft.). There are pipelines to the quay for discharging tankers. Berth No. 143 operated by Mediaco Vrac has a maximum permitted draft of 9.50 m.

Import and Export: The major import is vegetable oil; export is chemical products in bulk.

Berth Nos. 104 and 104A for wine in bulk.

Sugar:
President Wilson Dock: Berth Nos. 19 and 20. Storage: The silo, which has a capacity of 24,000 tonnes is within the port area and is owned by the Port of Marseilles Authority. Sugar is discharged by bucket-crane into hoppers which feed the conveyor belts to the silo. The total conveyor capacity is 250 tonnes per hour.

SPECIALISED CARGO HANDLING FACILITIES:
Heavy Load Berths:
In Mirabeau Basin there is a special berth (No. 161) designed to receive barges loading and unloading heavy loads. This berth is located between Berth No. 160 and the Leon Gourret Mole and consists of a quay 80 m. long into which has been built a barge basin 50 m. long by 20 m. wide with a depth of 2.5 m.

Apart from this special berth, there are 29 Ro/Ro berths in operation in the Port of Marseilles which permit direct loading of heavy loads into Ro/Ro ships. There are also numerous conventional berths that can be used for vertical loading and unloading of heavy loads, with the assistance of the port's "Atlas" floating crane, which has a lifting capacity of 150 tonnes.

In addition to the floating crane, the following floating equipment is also available:

The Port Authority's floating derrick, "Protis", which has a lifting capacity of 500 to 600 tonnes.

Various types of private floating equipment with capacities ranging from 40 to 60 tonnes.

Various public or private heavy load barges.

The Port Authority's submersible seagoing barge.

This barge is designed for transporting heavy loads, or for putting them into the water in the case of floating loads (within the limits of its deadweight capacity of 1,800 tonnes; the loading and unloading of heavy floating loads of 1,800 to 2,000 tonnes must be carried out in dry docks). The barge can be loaded vertically, horizontally (Ro/Ro), or by floating the load into the hold in the case of a floating load.

Also see "Berthing".

CONTAINER HANDLING FACILITIES: Various quays are devoted to container traffic: At the Leon Gourret Mole (14.5 m. permitted draft, large open areas, railway tracks); at the Mourepiane quay, in the Mirabeau basin, where there is a new terminal:

6 public berths, Berths No. 152-157, each of which has a theoretical length of 154 m. and a max. draft of 11.7 m.

Container handling equipment: 2×40 tonne Caillard gantry cranes. 4×30 tonne at 30 m. mobile cranes.

Railed tracks: 2 railway tracks alongside the quay; 1 railway track behind warehouse 20; 2 railway tracks at the Eastern limit of the dense storage area behind warehouse 20.

Area alongside the quay 35 m. wide comprising: A working area 15 m. wide equipped with 2 railway tracks and a trailer movement area; a storage area for short periods, 17 m. wide (under the rear jib of the gantries).

Storage areas covering a total of 90,000 sq.m.

BRIDGES: Turning bridge near Southern end of port – Pont d'Arenc – opened on request.

Bridge further North – Pont de la Pinede – closed to navigation from 0700 hrs. – 0800 hrs., 1115 hrs. – 1345 hrs. and 1630 hrs. – 1800 hrs. It may be opened in cases of emergency.

STEVEDORES: Enable Agent order gangs important obtain in good time accurate ETA from vessels. No work New Year's Day or Labour Day (May 1st).

MEDICAL: Yellow fever inoculations only in hospital (Tuesdays and Friday). Masters to advise by radio prior arrival if medical attendance required aboard.

TANKERS: See "Port de Bouc" and "Fos".

DENSITY: About 1028.

FRESH WATER: Can be obtained from hydrants or quays or fromwater-boats. When delivered by barge, minimum quantity invoiced is 50 tons. Preferable order prior arrival to avoid delays. Minimum pumping rate 50 t.p.h.

FUEL: Ordinary fuel, also fuel oil max. 1000 secs., diesel and gas oil. Deliveries by barge only.

FIRE PRECAUTIONS: Special harbour fire-fighting corps, with two firefighting vessels.

CONSULS: The following countries are represented in Marseilles:

Algeria
Argentina
Austria
Belgium
Bolivia
Brazil
Canada
Colombia
Costa Rica
Cuba
Cyprus
Denmark
Dominica
Ecuador
Egypt
Finland
Germany
Greece
Guatemala
Haiti
Honduras
Iceland
Israel
Italy
Ivory Coast
Japan
Lebanon
Liberia
Madagascar
Mauritania
Mexico
Morocco
Netherlands
Nicaragua
Norway
Panama
Peru
Philippines
Portugal
Russia
Senegal
Spain
Sweden
Switzerland
Thailand
Tunisia
Turkey
United Kingdom
U.S.A.
Uruguay
Venezuela
Yugoslavia

REPAIRS: Most repairs and overhauls possible. Prior notice recommended.

DRY DOCKS:

No.	Usable Length (m.)	Usable Width (m.)	Depth (m.)	Cranes (tons)	Sea Water	Telephones
1	171	19.60	5.30	2×9	–	1 line
2	135	17.30	4.20	1×9 – 1×20	–	1 line
3	100	15.60	4.60	–	–	1 line
4	80	12.50	4.75	–	–	1 line
5	122	14.60	5.30	1×9	–	1 line
6	125	15.60	5.30	1×9	–	1 line
8	320	49.00	11.00	1×6 – 1×9 1×50	800t/h	2 lines
9	250	36.00	8.50	1×6 – 1×9 1×50	800t/h	2 lines
10	465	84.00	10.00	3×25 – 1×150	10,800t/h	12 lines possible

Fresh water and power available at all berths.

WATCHMEN: Available but not compulsory.

HATCHES: Crew allowed open and close.

SHIP CERTIFICATES: On first call Registered Tonnage Certificate; thereafter not required unless gross/net tonnages changed.

CUSTOMS ALLOWANCES: About 200 cigarettes and limited amount spirits per man.

CARGO GEAR: No additional requirements; all gear supplied by stevedores except rain tents.

AIRPORT: Marseilles-Provence is the second largest airport in France with 18 air companies serving 60 national and international destinations.

The international airport of Nimes-Garons (50 km. from Fos) serves the West region of the Marseilles district.

POLICE/FIRE/AMBULANCE: Police (disturbance of peace): Tel: 17. Marine Fire Brigade (fire, ambulance, injury, explosion, flooding, man overboard, etc.) Tel: 18. Police and Marine Fire Brigade can also be called through the Central Watch Tower (VHF Channel 12) or Telephone: 91.56.15.00 (Marseilles Port).

SERVICES: Deballasting and degassing services can be provided on request in the Ports of Fos and Lavera (only deballasting).

Vessels coming for repairs in Marseilles can discharge their slops, if any, under particular conditions.

IDENTIFICATION CARDS: Not required.

GARBAGE DISPOSAL: Collection services available. Drums can be provided alongside.

For garbage service contact the following companies:
T.E.A. – Tel: 91.02.99.58.
Silim – Tel: 91.03.47.47.
ONET – Tel: 91.62.53.90.
Transresious – Tel: 91.51.60.64.

WASTE OIL DISPOSAL: A collection service is available. Shore tanks: Capacity 15,000 tons. Contact PAM/GIP, Tel: 42.06.09.90.

Barges: Capacity 2,500 tons. Contact Citerna Maritima, Tel: 42.06.09.90.

Special services: Contact Gardella Coating, Tel: 91.61.50.70, and Somecal Coating, Tel: 91.02.60.60.

SEAMAN'S CLUBS: *Marseilles:* Maison des Gens de Mer, 25 Rue Forbin. Tel: 91.91.19.58. Rooms and international telephone.

Mission de la Mer, 26 Boulevard des Dames. Tel: 91.90.48.04. Church services.

Lavera: Hotel Restaurant des Gens de Mer, Port Petrolier de Lavera, Martigues. Tel: 42.81.24.00. Rooms, meals and international telephone.

Port de Bouc: Association les Amo des Marins, 35 Avenue Roger Salengro, Port de Bouc. Tel: 42.06.69.74.

CURRENCY: French Franc.

Money can be changed at: Charge de la Canebiere, 39 La Canebiere, Marseilles. Tel: 91.91.41.72.

Change du Port, 106 Boulevard des Dames, Marseilles. Tel: 91.56.13.31.

Comptoir de Change Mediterraneen, Gare Saint Charles, Marseilles. Tel: 91.84.68.88.

AUTHORITY: Port Autonome de Marseilles, B.P. 1965, 23 Place de la Joliette, 13226 Marseilles Cedex 02, France. *Tel:* 91.39.40.00. *Telex:* 440746 Portauto Marsl. *FAX:* 42.06.45.59. *Cables:* Portauto Marseilles. *Contact:* Mr. Nyer (Communications and Public Relations). Fax: 91.39.40.34. Commandant Alexandre, Port Captain. Mr. Lerdrizet, General Manager. Commandant Castagnera, Harbour Master – Eastern Area. Mr. Riou, Operations Director – Eastern Area.

(b) **PORT DE BOUC,** including Port de Lavera 43.23 N. 05.00 E., Port de Berre 43.27 N. 05.10 E., Port de la Mede 43.24 N. 05.07 E. Caronte 43.24 N. 05.02 E. **(See Plan)**

DOCUMENTS: On arrival:
Inward Declaration (presented by Pilot on boarding).
1 Cargo Manifest or manifest in ballast.
Bill of Lading.
Ship's Register (if required).
6 Crew Lists (8 if Spanish or Russian ship or ship bound for these countries).
3 Passenger Lists.
Health Declaration.
Derat Certificate.
Bunker's Supply (3 forms).
1 Crew Declaration of Personal effects – cameras, binoculars, radios, cigarettes, tobacco, etc. If on inspection articles or quantities not in conformity or in excess, Master held responsible, articles removed and heavy fines imposed.

PILOTAGE: Pilotage is compulsory for vessels over 50 m. LOA.

Call "Fos Port Control" direct on Channel 12 for traffic. Pilot must be taken to enter Port de Bouc, Fos and Port St. Louis du Rhone. Contact by Marseilles Radio or pilot boat VHF (Channel 14 for calling, Channel 14 for traffic). Pilot boards in the Roads between 2 miles and 2.5 miles South of Lavera Buoy or further out if required, for entering Port de Bouc and Fos. Motor launch black hull, white cabin, white anchor on bow, "H" flag.

ANCHORAGE: It is recommended to ask for Pilot before anchoring in Outer Roads to avoid forbidden places for ships bound for Port de Bouc and Fos. Permanent watch on VHF Channel 12 is compulsory.

RESTRICTIONS: No entry restrictions for Lavera. Night transit of Caronte Canal to Etang de Berre forbidden to tankers above 6,000 g.r.t. Transit of Caronte Canal to Etang de Berre is forbidden for vessels over 180 m. (598 ft.) overall and over 24 ft. draft.

Notice: *"Port Authorities instructions concerning Fos/Lavera Tanker Areas.* Special Notice No. 94/81.

Re: Berthing of Tankers Loaded with Naphtha or Gasoline.

Vessels concerned will only be allowed alongside providing that pump room is clean, gas free and that no product is leaking at ship's valves or pumps.

Should above conditions not be fulfilled vessels could not be accepted in above areas.

MAX. SIZE: Lavera: LOA 275 m., draft 12.80 m.

Caronte: LOA 190 m. – 200 m. - draft 8.23 m.
180 m. – 190 m. - draft 8.68 m.
Less than 180 m. – draft 9.14 m.

Berre: LOA 160 m., beam 24 m., draft 7.0 m.

La Mede: Draft 5.18 m.

HEALTH: Pratique given by Customs Officers who board on arrival. In case of suspected disease on board, notify Agents by radio before arrival. Also see "Marseilles".

RADIO: Within 150 miles traffic through Marseille Radio/FFM, otherwise St. Lys (FFL).

VHF: Port de Bouc Radio (Harbour Office) VHF used for navigation purposes only – Channel 12 for calling and traffic.

VTS: *Port Authorities and Vessels Traffic Services:* Vessels entering the Gulf of Fos, must contact Port Authorities (VTS), calling "Fos Port Control" 2 hours before arrival on VHF Channel 12.

RADAR: Port and approach radar station.

TUGS: 8 tugs available from 3,000 h.p. to 5,000 h.p. Normally join vessel in entrance channel off Port de Bouc. Tow lines furnished if required.

BERTHING: Lavera: 16 berths for public and private use. Permitted drafts: 4 berths of 3.6 m. to less than 5.5 m.; 1 berth of 5.5 m. to less than 6.1 m.; 5 berths of 10 m. to less than 11 m.; 3 berths of 11 m. to less than 12.5 m.; 3 berths of 9.9 m.

1×12 tonne public mobile crane.

Lavera Harbour has been specifically designed and equipped to handle refinery products and the discharge of oil tankers.

Each berth has flexible pipe connections, with articulated metal arms, supported by special cranes. The type of pipework depends on the product handled (crude or refined) and is connected to the storage tanks of:—

C.F.R. and Shell
S.F.P. – B.P. Refinery at Lavera
The maritime terminal of S.P.L.S.E., which supplies the Esso Refinery at Fos.

Berths A1, A4, H Bis, H and K1 have been designed to handle the loading and unloading of propane and chemical products.

Crude: 8 public berths in 4 basins.

Name of Berth	*No. of Berth*	*Max. Length* (m.)	*Max. Draft* (m.)
B	721	275	12.00
C	722	275	12.00
D	723	275	11.89
E	724	275	12.20
F	725	275	12.80

Refined Products: 12 public berths.

Name of Berth	*No. of Berth*	*Max. Length* (m.)	*Max. Draft* (m.)
A2	712	210	11.10
A4	714	240	12.20
B	721	275	12.00
C	722	275	12.00
D	723	275	11.89
E	724	275	12.20
F	725	275	12.80
K1	701	90	6.10
K5	705	100	5.80
K6	706	100	5.90

Liquid Gas: 6 public berths.

Name of Berth	*No. of Berth*	*Max. Length* (m.)	*Max. Draft* (m.)
A1	711	210	10.10
A4	714	210	12.20
F	725	325	12.80
G	726	275	12.80
H Bis	728	130*	11.00
K1	701	100	6.10

*Usable length 100 m.

Annual capacity of loading or discharge: 600,000 tons based on the 4 multi-purpose berths being exclusively used for discharge of vessels bringing propane gas.

Average output per quay 600 cu.m./h. (300 t.p.h.)

Storage capacity: The storage capacity of propane gas of the Societe GEOGAZ is 120,000 cu.m (60,000 tons).

Chemical Products (exclusively): 4 public berths.

Name of Berth	*No. of Berth*	*Berthing Length* (m.)	*Permitted Draft* (m.)
A1	711	210	10.10
A2	712	210	11.10
A4	714	240	12.20
H	727	200*	11.80
H Bis	—	130*	11.00

*Usable length 100 m.

Berth A4 is also equipped for refined oil products and for the importation of liquid gas.

Berths F, G and H Bis can also accept liquid gas.

Annual capacity of loading or discharge: 2,700,000 tonnes if these 2 berths are exclusively used for chemical product traffic.

Discharge rate using vessels' pumps: 150 t.p.h. Loading rate using land pumps 150 t.p.h. to 300 t.p.h.

Storage capacity: Societe NAPHTACHIMIE: factory. Societe MAVRAC: 53,000 cu.m. Density 0.80 – 1.62.

Report: Berthing Procedures: Tugs are made fast between the 2 buoys "Lavera" and "Les Tasques", using the "On the Hook" method. Tugs watch VHF Channel 6.

Loaded or ballasted tankers are berthed heading outwards. Ships are swung off the head of the pier and backed alongside stern first. On request (ship's manifold too far, only gangway available, weather conditions, etc.) they may be moored directly and swung on departure.

Anchors are only used in case of emergency or when the ship's bow overhangs the pier's end.

Port Authorities do not advise anchoring method for safety reasons (delay if emergency departure needed).

No shore gangway is available at this terminal. Vessels must use their own gangway with safety nets and lifebuoys.

Port de Bouc/Caronte: Quay berths reserved exclusively for commercial operation of sea-going vessels: Berth Nos. 780 to 786 and 2 berths for river barges.

Total length of quays: 763 m.; Usable berthing length: 1,000 m.; Permitted draft: 2 berths for barges with draft of less than 4 m.; 5 berths of 8 m. to less than 9.14 m.

Berths reserved for repairs afloat (Agglomerate Quay No. 787): Total length of quays: 250 m. Max. draft 3.0 m.

Equipment:

Quay cranes: 2 cranes of 5 tonnes
3 cranes of 8 tonnes
2 cranes of 12 tonnes

Seven cranes, private, forming part of the installations of the Etablissement Maritime de Caronte et de Fos (CARFOS)

Quay gantries: 2 gantries of 15 tonnes, private (CARFOS) used for ores, stacking and removal from stock. Lifting capacity of the most powerful: 15 tonnes.

1 phosphate reloading gantry (CARFOS) with a capacity of 200 t.p.h.

Cranes allocated to naval repairs afloat, at the Agglomerate Quay: 2 private cranes from 6 to less than 15 tonnes. Lifting capacity of the most powerful: 4–8 tonnes.

Floating cranes: 1 private crane, with a lifting capacity of 100 tonnes.

Storage:

Quay-side sheds	8,200 sq.m.	(private)
Other sheds or warehouses	5,200 sq.m.	"
Quay-side open areas	16,000 sq.m.	"
	10,000 sq.m.	(public)
Other open areas	8,000 sq.m.	(private)

Bulk Liquids: Vegetable or animal oils and chemical products:

1 public quay under private use (Favat installation) (Berth No. 780): Verminck Quay. Useful berthing length: 120 m. Permitted draft: 7.50 m.

Discharge of oils is effected by shipboard pumps and the relay pump of the land installations – rate 200 t.p.h.

Storage capacity: 10,000 tonnes.

The Favat storage installations located outside the port area, on private property, have a total capacity of 12,000 cu.m. These installations are connected by a network of 3 pipelines of 200,150 and 100 mm. to the discharge points at the quayside. Storage Shed: 4,000 sq.m.

Chemical products exclusively: 1 private berth (Berth No. 786): Kuhlman Quay. Useful berthing length: 120 m. Permitted draft: 6.80 m.

Bulk Solids: Ores, coal, heavy minerals:

5 berths at the Caronte Quay (Berths Nos. 781–785) private use granted to Etablissement Maritime de Caronte et de Fos (CARFOS).

Usable berthing length: 650 m. Permitted draft: 9.14 m.

1 quay berth for loading phosphate barges, located between berth No. 785 and berth No. 780. Berthing length: 80 m. Permitted draft: 3.50 m.

The Caronte Quay has a specialised installation comprising:

3 transporting units and weighing hoppers with a unit output of 135 t.p.h.

1 transporting unit and specialist weighing hopper specialised in wagon loading: output 150 t.p.h.

2 weighing hopper towers – unit capacity: 1,200 tons per day.

2 weighbridges (40 and 80 tonnes).

The 7 scoop cranes are emptied into weighing hoppers which in turn discharge on to conveyor belts which terminate either above wagons to be loaded, into sheds or open storage areas. Hourly capacity per crane 120 t.p.h. – 150 t.p.h.

The quay is also equipped with 2 gantry cranes of 10 to 20 tonnes used for stacking and reclaiming minerals and 1 gantry crane with a capacity of 400 t.p.h. used for reloading phosphate.

Storage capacity: 70,000 tonnes.

The CARFOS storage installations include:

2 phosphate sheds with capacity 33,000 tonnes.
1 ilmenite shed of 3,000 sq.m.
1 open area of 3,000 sq.m.

Oil seeds – oil cake: 2 berths (No. 784 and No. 785) at the Caronte Quay, private use granted to CARFOS

Available berthing length and permitted draft.

LOA	*Draft*
Less than 180 m.	9.14 m.
180 m. – 190 m.	8.68 m.
190 m. – 200 m.	8.23 m.

Storage capacity: 10,000 tonnes. These berths are also used for ores, coal and heavy minerals.

Installations and equipment: Identical to those on the quays for ores, coal and heavy minerals.

Etang de Berre/La Mede:

Available berthing length: La Mede – 70 m. Berre – 160 m.

La Mede: 1 berth. Berre: 4 berths.

Port of La Mede: Cie de Raffinage et de Distribution (C.R.D. Total France). Berth No. 744.

Name of Berth	*Berth* No.	*Type of Berth Installation*	*Available berthing length* (m.)	*Permitted draft* (m.)
4	744	Pier	70	5.18

The installations of the C.R.D. Total France permit loading or unloading of 100-600 cu.m./hr. according to product.

The installations of C.R.D. Total France are connected to tanks by pipelines of varying sizes under the waters of the Berre Lake and Canal from Marseilles to the Rhone.

Storage capacity: Depot of the Refinery of C.R.D. Total France – 1,700,000 cu.m. of refined products to which may be added 280,000 cu.m. of crude brought by pipeline from the berths at Lavera and Fos to the Refinery.

Port de La Pointe de Berre: Cie. de Raffinage Shell Francaise (Berths No. 751 to No. 754). Refined oil products. 4 private berths.

Berth Name	*Berth* No.	*Max. length* (m.)	*Permitted draft* (m.)
A	751	160	6.86
B	752	160	6.86
Salins Berth	754	160	6.86
South West (coasters)	753 (West side)	90	5.00
	(East side)	90	4.00

The berthing installations of the Cie. de Raffinage Shell Francaise S.A. have connections to its tanks by specialised pipelines for the various products. They provide loading and discharge outputs from 120 to 500 cu.m./hr. according to product.

Storage capacity: Depot of the Port de La Pointe de Berre 161,000 cu.m.

Storage area of the Shell Refinery 1,390,000 cu.m.

To the above capacities should be added 260,000 cu.m. of crude oil brought by pipeline to the Shell Refinery from the Lavera and Fos berths.

BRIDGES: 1 railway bridge and 1 road bridge across Caronte Canal each having special times for opening. Ships of less than 21 m. height clearance may pass below the railway bridge. Motorway bridge over Caronte Canal with 44.00 m. clearance.

STEVEDORES: To enable Agent order gangs important obtain accurate ETA between 24 hours and 48 hours in advance. 2 shifts 0500 to 1300 hrs. and 1300 to 2100 hrs. normally 6 days a week. Confirmation to be made at 0900 hrs. for afternoon shift, and 1700 hrs. for next morning.

MEDICAL: All hospital and medical facilities. Yellow fever inoculation made by appointed doctors. Masters to advise by radio prior arrival if medical attendance is required on board.

TANKERS: See "Berthing".

DENSITY: About 1028. Variable in Canal de Caronte and Etang de Berre owing to discharge of hydraulic plant of St. Chamas.

FRESH WATER: Available generally by pipes and hoses at the berths. Water barges available from Marseille.

FUEL: By barges for cargo ships and vessels in the Roads. Tankers at Lavera refuel by pipeline at the berths. All grades available.

FIRE PRECAUTIONS: Oil Harbour fitted with a system of 203 mm. (8 in.) or 254 mm. (10 in.) sea water pipes at 5 bars permanent pressure. It may be increased by pumping station up to 9 bars, and supply 500 cu.m./hr. Each wharf has 5 fire hydrants with first-aid equipment: fire hoses and spray nozzle, foam nozzle with powder cans. If fire breaks out on a ship, the hose handling gantries are protected by a screen of sprayed water. All fire equipment and installations are painted red.

There is a special fire-fighting Corps with fire vessel. Call for firemen on 42.06.21.29 in case of fire or call Fos Port Control on 42.40.60.60 or VHF Channel 16.

CONSULS: Norwegian, Swedish, Danish and Spanish consuls at Port de Bouc. Others at Marseille.

REPAIRS: Permission must be granted by Harbour Master only.

DRY DOCKS: Nearest at Marseille.

GANGWAY/DECK WATCHMEN: Available but not essential.

OPENING/CLOSING HATCHES: Always by crew.

CUSTOMS ALLOWANCES: Tobacco: 200 cigarettes every 5 days; wine/spirit: limited amount per man.

REPATRIATION: All facilities for crew change and repatriation by railway or planes.

AIRPORT: Marignane Airport 40 km. and Nice Airport 230 km. (Nice for SAS lines).

TIME: GMT plus 1 hour in Winter. GMT plus 2 hours in Summer.

HOLIDAYS: Same as "Marseille".

POLICE/AMBULANCE/FIRE: Police, 42.06.23.74 or 42.07.03.31; Fire, 42.06.21.29 or 42.06.28.37.

TELEPHONE: On application can be connected on board at Lavera. Telephone ashore in other places.

SHIP SUPPLY SERVICES: *Auxiliaire Maritime:* Monsieur Seguin Technical Manager – Tel: 42.06.09.89, 20 Cours Landrivon, 13110 Port de Bouc, France. Telex: 430 274. Regular and spot launches service.

Port Service: Monsieur Erick Ganaye, Operations and Technical Manager, Place de Narvik, Port Petrolier, 13117 Lavera, France. Tel: 42.81.62.30, Telex: 401 305. Shinc boat service, Interpreters, spot helicopter service, watching.

Societe Citerna: Anse Aubran 13110 Port de Bouc, France. Tel: 42.06.09.90, Telex: 420 730. Bunkering (with no limits of tonnage).

Societe Ouvrages Sous-Marins et Portuaires: Monsieur Boscolo – Director, Anse Aubran, 13110 Port de Bouc, France. Tel: 42.06.22.44, Telex: 400 035, SHinc diving operations – wet docking. Speaking English, German and Spanish.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Seamen going ashore should carry passport or identity card.

GARBAGE DISPOSAL: See Part (a).

WASTE OIL DISPOSAL: See Part (a).

SEAMAN'S CLUBS: See Part (a).

CURRENCY: See Part (a).

SHIPMASTER'S REPORT: October 1987.

Berth: Berth No. A1 at Lavera.

Documents:

6 copies Crew List.
2 copies Crew Declaration.
2 copies Manifest (including bond, ship's stores, currency,etc.).
1 copy Health Declaration.

The agent assisted with all formalities.

Anchorage: The vessel anchored in Fos Bay about 1 mile West of Lavera North Breakwater (Port de Bouc). Pilot now compulsory for anchoring. Under certain circumstances vessels can vent off gas at anchor if wind from North. Use West anchorage. Normally for venting have to go 12 miles off coast.

Pilotage: Pilot boards off Lavera Buoy from a fast launch.

Reporting: Report to "Couronne" Signal Station on VHF Channels 16 and 10 when inbound at Omega Buoy and when outbound leaving Lavera or Fos. They require details of vessel, cargo type and tonnage and destination.

Currents: There are strong currents in the Basin off Lavera piers due to outflow from Etang de Berre through Canal de Caronte. Eddies encountered in the vicinity of Berth A4. Vessels often experience strong cross current off Port de Bouc entrance.

Tugs: Tugs not normally required by small vessels, except in strong winds.

Berthing: Vessel berthed at Berth A1 for loading ethylene, this being the nearest pier inside the harbour. If vessel is loading vinyl chloride monomer (VCM) Berth A4 is used. This berth is just behind Berth A1. Butadiene and propylene are also loaded at Berth A1.

There are good fenders at both berths.

Moorings consisted of 3 head/stern lines and 2 springs forward and aft.

A shore telephone is connected and an English speaking deck watchman is compulsory whilst working cargo only.

Fresh water is available at both berths.

Storing: Lorries delivering stores to Berth A1 may proceed to within 60 m. of the ship's rail. However, at Berth A4 storing is difficult as lorries are not allowed within 200 m. of the vessel.

Cargo: Ethylene (Berth A1) and VCM (Berth A4) are handled through 8 in. liquid and vapour Chicksans.

The loading rate for ethylene is about 150 t.p.h. Digital temperature readout available.

VCM is loaded at an approximate rate of 230 t.p.h.

At Berth A1 vapour return up to a back pressure of 3 Bar was obtained with ship's compressors. However, if vessel is careful, 2 compressors can be used to facilitate loading rate/cool down.

At Berth A4 the shore stop was on the exact quantity. A tonnage check is given about 1 hour before completion. Anything in the 3 km. shore line must be taken on board. This was stated to be 140 tonnes but can be over or under by 10 tonnes.

The GECO Surveyor is in constant attendance at both berths and the office is close at hand. The surveyor speaks fairly good English.

Nitrogen can be taken from shore line at ambient temperature at both berths, rate about 500 cu.m.p.h.

There are no shore foremen.

The maximum venting to atmosphere that is allowed by Port Authority is 10% of lower explosive limit of Cargo Vapour in tanks.

General: The nearest airport is Marseilles Marinagne, which is about 8 miles away.

Berth A1 telephone number from UK is 010 33 42.81.55.70.
Berth A4 telephone number from UK is 010 33 42.81.56.36.

Nitrogen can also be taken at H Bis Berth at far side of harbour. No meter on tank volume. Telephone from UK 010 33 42.81.84.44.

Nitrogen also taken at "K1" Berth on the other side of pier from 'A4'. Again, no meter on tank volume. No telephone available.

No V.R.L./vent line at H Bis and K1 Berths, hence 100% LEL atmospheric venting.

Port side to both berths.
K1 Berth only for small vessels, stern protrudes.
Also see Shipmaster's Report dated December 1988.

SHIPMASTER'S REPORT: December 1988.

The following is an update on Shipmaster's Report, dated October 1987.

Berthing: Good fendering at both berths, except at Berth A1, one fender aft has a steel face which can cause damage.

At Berth A1 vessels berth head-in starboard side alongside. At A4 Berth vessels usually berth starboard side alongside.

Cargo: At Berth A1, the VRL for ethylene is now a 6 in. flexible steel hose.

Fuel: Gas Oil available from shore line at Berth A1. Bunkering not allowed during cargo operations, but may be allowed during cooling down, depends on Shift Supervisor.

AUTHORITY: Port Autonome de Marseille, Capitainerie des Bassins Ouest, B.P.200, 13528 Port de Bouc Cedex, France. *Tel:* 42.40.60.05. *Telex:* 440164 CAPOR. *Cables:* PORFOS. *FAX:* 42.40.60.40. *Contact:* Harbour Master.

(c) **FOS:** 43.24 N. 04.53 E. **(See Plan)**

DOCUMENTS:
Inward Declaration (Presented by Pilot on boarding).
1 Cargo Manifest or Manifest in Ballast.
Bill of Lading.
Ship's Register (if required).
6 Crew Lists (8 if Spanish or C.I.S. ship or ship bound for these countries).
3 Passenger Lists.
Health Declaration.
Derat Certificate.
3 Bunker Supply Forms.
Declaration of crew personal effects, cameras, binoculars, radios, cigarettes, tobacco, etc.

If on inspection, articles or quantities not in conformity or in excess, Master held responsible, articles removed and heavy fines imposed.

Shipmaster's Report: October 1988.
1 copy Inward Declaration.
1 copy Outward Declaration.
1 copy Cargo Manifest.
1 copy Ship's Register.
6 copies Crew List.
3 copies Passenger List.
1 copy Maritime Declaration of Health.
2 copies Personal Effects Declaration.
2 copies Stores List.
2 copies Transit Cargo List.

PILOTAGE: Compulsory. Contact by Marseilles Radio VHF Channel 14 for calling, Channel 9 for traffic. Pilot boards in the roads between 2 and 2.5 miles South of Lavera Buoy or farther out if required. Motor launch, black hull, white cabin, white anchor on bow, flying "H" flag. VTS: Fos Port Control, call on Channel 12, Channel 12 for traffic. Pilot boat on Channel 14 for traffic.

ANCHORAGE: It is recommended to ask for Pilot before anchoring in outer roads to avoid prohibited anchorages. Permanent watch on VHF Channel 12 compulsory.

RESTRICTIONS: When large tankers are proceeding in the Fos Channel, other vessels' entrance may be delayed.

Access channel for very large vessels dredged to 22 m. over a width of 250 m.

Notice: *Port Authorities Instructions Concerning Fos/Lavera Tanker Areas.*

Special Notice No. 94/81.

Re: Berthing of Tankers Loaded with Naphtha or Gasoline.

Vessels concerned will only be allowed alongside providing that pump room is clean, gas free and that no product is leaking at ship's valves or pumps.

Should above conditions not be fulfilled vessels could not be accepted in above areas.

MAX. SIZE: Max.draft at Oil Jetty 22.25 m.; Sollac in Dock No. 1 – 18.59 m.; Mineral Quay in Dock No. 1 – 17.37 m. Dock No. 2 - 13.00 m.; Dock No. 3 - 11.50 m.

HEALTH: Pratique given by Customs Officers who board on arrival. In case of suspected disease on board, notify Agent by radio before arrival. See also "Marseilles".

RADIO: Within 150 miles, traffic should be routed through Marseilles Radio, FFM, otherwise via St. Lys. FFL.

VHF: Channel 12 for calling and traffic.Channel 14 for pilot.

VTS: *Port Authorities and Vessels Traffic Services:* Vessels entering the Gulf of Fos, must contact Port Authorities (VTS). Calling "Fos Port Control" 2 hours before arrival on VHF Channel 12.

RADAR: Port and approach radar station.

TUGS: Tugs normally join vessel in the entrance channel. Ship's lines are used, or from tugs if required.

GENERAL CARGO FACILITIES: *End of the Mole between Docks 2 and 3:* 1 berth (No. 870). Serviceable length: 110 m. Max. draft: 6.50 m.

This berth permits sea-going barges to come alongside and is reserved for stern-loading Ro-Ro vessels.

Dock 3: The Brule Tabac Quay for miscellaneous traffic.
3 berths (Nos. 871-873).
Berth 871: Serviceable length: 221 m. Max. draft: 11.50 m.
It is equipped with a floating ramp for Ro/Ro traffic.
Berth 872: Serviceable length: 222 m. Max. draft: 11.50 m.
Berth 873: Serviceable length: 222 m. Max. draft: 11.50 m.

It is equipped with a floating pontoon, permitting access for stern-loading Ro/Ro vessels.

Equipment: 1 quayside railway for direct transhipment; 1×30-40 tonne mobile crane; 3×6 tonne bucket cranes and 1×20 tonne rail mounted crane; a storage area of 170,000 sq.m.; a transit shed of 9,000 sq.m.

In addition to the above equipment, the Port Authority's 500/600 tonnes floating derrick "Protis" is available for use in the harbour areas of Marseilles, Port Saint Louis du Rhone and Fos.

Gloria Quay:
Length: 250 m.
Maximum draft: 10.00 m.

A 220 m. long Ro/Ro berth to the South with a right-angled return quay of 50 m. width and one fixed inclined ramp.

Berths 821, 822, 823: Sollac finished products dispatch quay.

South Dock: Length 360 m. Max. draft: 11.89 m. Equipped with 2 cranes of 50 tonnes at 26 m.

Berth 859: Private berth at the end of Dock 2, serving the installations of the Compagnie Eiffel.

Length: 120 m. Max. draft: 5.0 m.

BULK HANDLING FACILITIES: Fuel, solid minerals, ores: 3 public berths and 2 private berths.

Public Berths:

3 berths Q1 (No.851), Q2 (No.852) and Q3 (No.853) in Dock 1, West Quay: Total length of quay: 884 m. Usable length of quay: 850 m. Max. depth of water at quay side berth: 17.37 m.

Largest admissible ship: Deadweight capacity: 140,000 d.w.t. (approx.). Length: about 300 m. Max. draft: 57 ft. (17.37 m.).

Equipment: Operations which can be performed:
Unloading and storage in addition to transshipment.
Unloading and simultaneous loading of cargo in two different places.

Terminal facilities from South to North:
Quayside handling equipment.

Unloading:
2 unloading gantries, with buckets, of 20 tonnes (P1 and P2) (peak output 2×800 t.p.h.).
2 tracked cranes, with buckets, of 15 tonnes at 30 m. and 12 tonnes at 35 m. (K1 and K2) (2×600 t.p.h.).
2 hoppers of 70 cu.m. which can be coupled to cranes (T1 and T2).
One continuous loader (P+) (2,200 t.p.h. peak rate, density 0.8).

Loading:
One conveyor belt loading gantry (C1) (1,500 t.p.h. peak rate) privately-owned (Aluminium Pechiney).
One conveyor belt loading gantry (C2) (peak output: 1,500 t.p.h.).
One barge loading berth (peak output: 800 t.p.h.).

Fixed conveyors:
One longitudinal conveyor supplying loading gantry (C1).
One reversible two-speed longitudinal conveyor (L1) (1,600 and 2,000 t.p.h.).
One reversible conveyor (T1) (1,600 t.p.h.).
One non-reversible two-speed transverse conveyor (T2) (1,600 and 3,400 t.p.h.).
One reversible two-speed longitudinal conveyor (L2) (1,600 and 3,400 t.p.h.).
One reversible longitudinal conveyor (L3) (output 1,600 t.p.h.).
One non-reversible transverse conveyor (T3) (1,600 t.p.h.).
One non-reversible longitudinal conveyor (L5) (2,400 t.p.h.) privately-owned (Stockfos).
One non-reversible transverse conveyor (T6) (1,600 t.p.h.) privately-owned (Carfos).
One non-reversible longitudinal conveyor (L6) (1,200 t.p.h.) privately-owned (Carfos).
Privately-owned equipment (Aluminium Pechiney) for reloading wagons (400 t.p.h.).

Mobile conveyors: One chain of mobile conveyors comprising:
1 elevated conveyor.
5 mobile conveyors.
1 self-propelled conveyor.

Rated output of the chain: 1,600 t.p.h.

A second identical mobile two-speed conveyor chain (1,600 and 2,000 t.p.h.) privately-owned (Carfos).

One assembly consisting of a wheeled belt-feeder and inclinable mobile conveyor (positioned downstream of the belt-feeder) with an output of 1,200 t.p.h. for loading small ships.

One assembly consisting of a wheeled belt-feeder and inclinable mobile conveyor (positioned downstream of the belt-feeder) with an output of 1,500 t.p.h. for loading small ships.

A wheeled belt-feeder 1,400 t.p.h. privately-owned (Carfos).

Storage equipment:
One wheeled stacker:
Jib: 18 m.
Stacking height: 8 m.
Orientation: 180°.
Throughput: 1,600 t.p.h.
One wheeled stacker:
Jib: 18 m.
Stacking height: 8 m.
Orientation: 180°.
Throughput: 1,600 to 2,000 t.p.h.
Privately-owned (Carfos).
One rail mounted stacker:
2×21 m. jibs.
Stacking height: 12 m.
Throughput: 2×600 t.p.h.
Privately-owned (Carfos).
One rail mounted stacker:
Jib: 30 m.
Stacking height: 14 m.
Orientation: 210°.
Throughput: 2,400 t.p.h.
Privately-owned (Stockfos).

Commercial throughput:

Varies with density and quality of the product, type of vessel, operating conditions, etc.

Daily commercial capacities with 3 shifts (19.5 hours of work) for products with a density of either 0.8 (coal) or 1.3 (bauxite).

Unloading:
With 2×20 tonne gantries: 12,000 to 18,000 tonnes/day.
With 2×15 tonne cranes: 7,000 to 10,000 tonnes/day.
With the continuous unloader plus a high throughput, yard capable of 25,000 to 32,000 tonnes/day.

Reshipment:
With gantry C1: 15,000 to 20,000 tonnes/day.
With gantry C2: 15,000 to 20,000 tonnes/day.
With river berth: 9,000 to 12,000 tonnes/day.

Storage:
One 6-hectare long-duration storage yard (Carfos).
One 6-hectare high-throughput yard (Stockfos).
One 15-hectare ordinary storage yard.
One 3,840 sq.m. shed (17,000 cu.m.).
25,000 tonnes alumina storage silo (Aluminium Pechiney).

Traffic capacity:
Between 6 and 7 million tonnes a year.
4 to 5 million tonnes of imports.
1 to 2 million tonnes of exports.

Technical data for gantries and unloaders:
Caillard gantries (P1 and P2).
Outreach beyond fenders: 23.50 m.
Free lift: 17.80 m.*
* Free lift limited to 15.00 m. while putting loader into hold.
Caillard cranes (K1 and K2).
Outreach beyond fenders:
15 tonne crane: 21.50 m.
12 tonne crane: 26.50 m.
Free lift: 17.00 m.
Continuous reloader (C2).
Outreach beyond fenders: 17.50 m.
Free lift: 13.50 m.
Continuous unloader (P+).
Outreach beyond fenders: 37.50 m.
Free lift: 19.00 m.

DRY BULK EQUIPMENT: P.M.A. equipment:
2×20 tonne bucket gantry cranes. 2 cranes of 15 tonnes at 30 m. 6 fixed conveyors. 10 public and 7 private mobile conveyors. 2 stackers on tyres. 3 feeders with a capacity of 1,500 t.p.h.; 1 of these is privately owned. 1 ship loader of 1,000 t.p.h. capacity. 1 continuous unloader with a capacity of 24,000 tonnes per day has also been brought into service.

Private equipment: 2×40 tonne discharging gantry cranes on the Sollac import quay. 2 cranes of 50 tonnes at 26 m. on the Sollac export quay. 1 loading gantry crane of 1,500 t.p.h. conceded to a private firm (Pechiney Co.) with the obligation to give public service on the ore quay.

Private Berths: Two private berths (Nos. 811 – 812) in Dock 1 – Eastern Quay. Sollac reception quay.
Available berthing length: 640 m. Permitted draft: 18.60 m.
Annual capacity of loading or discharge:
Solid minerals, fuels – Coal: 3,000,000 tons/year.
Ores: 4,000,000 tons/year.

The Sollac Quay is equipped with 2×40 ton gantries, each having an hourly rate of discharge of 2,000 tons.

Storage Capacity: Fuel, solid minerals, Coal: 350,000 tons.
Ores: 1,000,000 tons.

Sollac has a quayside open area of 360,000 sq.m. for the receipt and storage of coal and ores.

LNG FACILITIES:
At Dock No. 1. (Berth No. 830) (Owned by Gaz de France).
Length available for berthing 180 m. Max. draft 9.75 m.

2 storage tanks, for LNG in the liquid phase (−160°C.), each with a capacity of 35,000 cu. m. (1,235,500 cu. ft.) and 1×80,000 cu.m.

The pumps on the LNG Carrier discharge through articulated pipes of 300 mm. diameter (11.8 in.), 3 are specifically for discharge; one is to return the methane, in the vapour phase to the carrier.

After warming up from the liquid phase, with the addition of nitrogen to conform with the value in the French Gas Grid, the gas, in the vapour phase, is despatched by pipeline to the underground storage at Tersanne, 214 km. from Fos (134 miles), and to Marseilles and the Cote d'Azur.

LPG FACILITIES: *Propane:* Geogaz's underground storage of 120,000 cu.m. at Lavera is connected directly by pipeline to the oil refineries and the port

Butane: Underground storage of Geobutane at Lavera. Capacity of 170,000 cu.m. can now be raised to 230,000 cu.m. following a positive geological survey.

Reshipment Traffic: The port has established an international reputation for its technically delicate operations.

CHEMICAL PRODUCTS: 2 privately managed berths on the East quay of Dock 2.

Berth No. 858: The facilities of Atochem and of Ste. du Chlorure de Vinyle de Fos (SCVF):
Serviceable length: 35 m.; Max. draft: 11.30 m.

This berth is reserved for the export of chemical products such as vinyl monomer chloride and washing soda.

Arco-Chemie Terminal:
Serviceable length: 70 m. Max. draft 11.30 m.

This berth is reserved for the export of different products (MTBA, MTBE, Oxynol, Oxide Propylene, etc.).

CONTAINER HANDLING FACILITIES:
5 berths (Nos. 862–866) in Dock 2, Graveleau Quay.
Available berthing length: 1,130 m.
Depth alongside: 14.0 m.
Permitted draft: 13.00 m.

Annual loading or discharge capacity: 150,000 containers, i.e. 2,500,000 tonnes (approx.) (20 ft. and 40 ft.)

P.M.A. equipment: 5 Paceco quayside gantry cranes of 40 tonnes, capacity 20 – 25 containers p.h. and 1 Kone gantry crane of 70 tonnes.

Storage capacity: 15,000 containers i.e. 225,000 tonnes (approx.) (20 ft. and 40 ft.). Users have at their disposal a storage area with a total surface of 33 hectares. 112 reefer points available (220 Volts and 380 Volts 50 Hz. power supply).

Annual capacity of output or input: 150,000 containers (20 ft. and 40 ft.) i.e.: 2,000,000 tonnes (approx.) by lorries or railway. The French Railways Transcontainers terminal has 3 gantries on open areas with lifting capacity of 40 tonnes.

The terminal also has: A control centre of 2,000 sq.m.; 2 service areas of 200 m.×70 m.; a stuffing and unstuffing area of 3,200 sq.m. comprising 2 sheds of 25 m.×20 m. each.

Terminal Operators' ground equipment:
INTRAMAR:
1×60 tonne PPM crane, fitted with an automatic 20 ft./40 ft. spreader.
4×20 ft./40 ft. front forklifts.
5 front forklift trucks with 15/25 tonne lifting capacity.
12 yard tractors.
10×20 ft./40 ft. trailers.
2×12 tonne elevators, one fitted with a spreader for empty 20 ft. or 40 ft. containers.
2×3 tonne elevators and more if required.
Extra equipment is readily available in Marseilles.
EUROFOS:
7×40 tonne front elevators fitted with telescopic 20 ft./30 ft. and 40 ft. spreaders and three 42 tonne elevators.
3×11.5 tonne front elevators fitted with telescopic 20 ft./40 ft. spreaders for rapid handling of empty containers.
1×9.5 tonne front forklift truck.
2×2.5 tonne front elevators for minor operations and loading/unloading of containers.
6 Mafi-Douglas tractors with elevator ramp and 15 Plan 170 HD tractors.
A fleet of 32 frame trailers (no tailbard) and 3 swan-necked roll trailers, with a payload of 40 tonnes.
MAFOC:
7×38 to 42 tonne front elevators fitted with spreaders.
20 tractors.
23 trailers.
2 Belotti cranes for empty containers.
2 forklift trucks with 10/20 tonne lifting capacity.
6 forklift trucks with 5 tonne lifting capacity.
Special equipment is also available for handling non-standard containers.
Extra equipment is readily available in Marseilles.
Also see "Developments".

MEDICAL: All hospital and medical facilities. Yellow fever inoculation made by appointed doctors. Masters to advise by radio, prior arrival, if medical attendance required on board.

CONSULS: Norwegian, Swedish, Danish and Spanish Consuls at Port de Bouc. Others at Marseilles.

REPAIRS: Ore berth can be used as a repairs berth when not required for cargo operations. Permission must be obtained for tanker repairs. No tankers repairs if vessel is not gas free. Permission given by Harbour Master only.

TANKERS: Chicksan loading/discharge arms fitted at all berths. Ballast discharge ashore through pipeline. Tank cleaning slop or oil residue not accepted through shore line, but can be disposed of by barge from Marseilles. Possibility of crude cleaning for vessels with inert gas system if cleaning does not exceed time of discharging operations.

Crude: 6 public berths, of which one is multi-purpose 0 Bis (No. 807).

Designation	*Berth* No.	*Berthing Length* (m.)	*Max. Draft* (m.)
0	800	250	12.40
0 Bis	807	250	12.80
1	801	370	20.58
2	802	350	17.90
3	803	420	22.25
4	804	420	14.00

Berths 0 and 0 Bis (800 and 807) are equipped to handle either export or import of refined products, or chemical product traffic (Methanol and TBA), or the loading of crude oil from a tanker moored at one of the Berths 1, 2 or 3 (Nos. 801, 802, 803)

Berths 1, 2, 3 and 4 (Nos. 801, 802, 803 and 804) are for receiving crude oil only. Berth 2 (No. 802) is specially equipped to tranship, by using special pipelines, crude oil from vessels alongside at Berth 1 (No. 801) and No. 3 (No. 803).

Specialised lines, dependent upon the nature of the products, connect these berths to the oil depot of Fos, to the CRAU depot (Shell-Total-B.P.) to the Esso refinery and to the S.P.S.E. terminal, all located in Fos.

Shipmaster's Report: October 1986.

On Berth Nos. 1, 2 and 3 the outboard lifeboat is to be lowered down to the embarkation deck and rigged ready for immediate use.

Storage Capacity:

S.P.S.E. Terminal	2,660,000 cu.m.
CRAU Depot	1,910,000 cu.m.
Esso Refinery	840,000 cu.m.
Total:	5,010,000 cu.m.

Berth 4 (No. 804): Located at Mole No. 2 of the oil terminal, offers in a primary stage a depth of water of 15 m. The berth is intended for berthing in ballast of vessels of 550,000 d.w.t. for washing out tanks prior to repair.

It also permits the reception of crude oil imports and the transhipment of crude from tankers moored at Berths 801, 802 and 803.

The maximum permissible draft is at present 14 m.

The berth is connected to the new deballasting station by a 20 in. diameter pipeline. During the current first phase of development, this station treats only ballast of low oil content.

The berth can also be used for discharging crude from tankers with drafts up to 14.02 m., and is equipped with one 42 in. diameter discharge pipe and two 16 in. diameter discharge arms.

During the current first phase of development, this berth is not equipped with refuelling pipes or boarding towers.

This berth is also used for transhipment from ship to ship (alongside each other) for crude and gas operations.

Refined Products: 5 berths of which 3 are multi-purpose – 0, 0 Bis and 1(Nos. 800, 801 and 807).

Designation	Berth No.	Berthing Length (m.)	Max. Draft (m.)	Remarks
0	800	230	12.40	Public
0 Bis	807	200	12.80	Public
C.2	808	100	7.00	Public
Sollac	821A	100	5.50	Private
1	801	370	20.58	Public

Independently of the receipt of crude oil, berths 0 and 0 Bis are equipped to handle either refined product import or export traffic, or the loading of crude oil from tankers berthed at berths 1, 2 and 3 (801, 802, 803).

Berth C.2 (No. 808) specialises in loading refined products on coastal vessels and the Sollac berth (No. 821A) specialises in the receipt of fuel oil.

Storage capacity:

Fos Oil Depot		686,000 cu.m.
Esso Refinery		947,000 cu.m.
	Total:	1,633,000 cu.m.

Report:
Berthing Procedures: Tugs are secured in the dredged channel between Buoy Nos. 3 to 7, using the "On the Hook" method. Tugs watch VHF Channel 6.

Loaded or ballasted tankers are usually berthed starboard side to the berth and are swung on departure. But on request (ship's manifold too far displaced or only one gangway available) or in some weather conditions (S.E. winds), ships may be berthed port side alongside. The swing is always difficult and requires careful attention.

Usual parallel landing method is followed for Berths 0 – 0 Bis and 4, and ship's anchor may sometimes be used in special weather conditions.

When instructed to Berth at No. 1 or 2, Masters should be aware that the speed has to be carefully checked and agreed with the Pilots. When passing the last buoy of the channel (No. 11), the engine has to be put "full astern" and the effect of the propeller may bring the vessel approximately parallel to the jetty. The berth approach is then conducted at an angle of less than 30° with tugs' control.

Only Berth No. 4 is equipped with an approach velocity indicator which may be moved to No. 3 in the future.

For all the berths, ships' lines are taken ashore by mooring launches and lifted by hand on to the bollards or quick release hooks.

Spring lines are sent first, then breast lines and tugs will come alongside to push. Mooring boats make VHF contact on Channel 6.

Shore gangways are available only on Berth Nos. 1, 2 and 3, put on the ship's deck forward of the manifold (ships' lifebuoys used). On the other berth ships' gangways are needed with safety nets and lifebuoys.

Berths: Managed by the "Port Autonome de Marseilles", the berths consist of concrete platforms with rubber fenders. All are equipped with counter balanced hard arms, bolted connections. Shore personnel carry out connections/disconnections and a permanent watch is maintained on the berth. This watch may be made from a control room where video surveillance is carried out for the berths by one camera mounted on the arms and another one watching the entire berth.

The outside arms can be used for bunkering and for discharge of ballast.

Storage for ballast is up to 80,000 cu.m. and discharge rate to 5,000 cu.m.p.h.

Shore lines have *No Non-Return* valves, and ships are advised to carefully close their manifold gate valves during any stops.

Port Regulations give maximum cargo temperature allowed for discharging heated cargo using crude oil lines: in these special cases, 55°C (131°F) may not be exceeded.

BALLAST: *Deballasting Station:* This station is situated to the rear of the oil jetties. It treats ballast of only low oil content, but can receive slops of crude oil and refined petroleum products.

Its main characteristics are as follows:

Primary separation: 4,000 cu.m/hr., with apparatus for removing sediment and the oil recovered.

Intermediate storage in a basin of 80,000 cu.m., 320 m. long by 108 m. wide by 3.50 m. deep.

Secondary separation capable of rejecting water containing less than 5 p.p.m. of crude oil and petroleum products (by infra-red measurement) with a throughput of 250 cu.m/hr.

Storage of oil-rich mixtures (slops) 4×360 cu.m. and 1×4,950 cu.m.

Auxiliary installations (fire).

FRESH WATER: Available by pipeline at all berths.

FUEL: Available by barge only.

FIRE PRECAUTIONS: A special fire fighting corp. operates at Fos. Tel. 42.06.21.29 or call Fos Port Control on VHF Channel 12 or Telephone 42.40.60.60.

CUSTOMS ALLOWANCES: Tobacco: 200 cigarettes every 5 days. Wine/Spirits: limited amount allowed per man.

AIRPORT: Marseilles/Marignane Airport about 60 km. distance.

TIME: GMT plus 1 hour in Winter. GMT plus 2 hours in Summer.

TELEPHONES: On application, telephones can be connected on board.

GARBAGE DISPOSAL/WASTE OIL DISPOSAL: See Part (a).

SEAMAN'S CLUBS: See Part (a).

CURRENCY: See Part (a).

DEVELOPMENTS: In 1993, Fos Container Terminal will have an additional 250 m. of quays and an additional 2 new Post-Panamax gantries.

SHIPMASTER'S REPORT: August 1987 (Updated 1996).
Berth: ATOFOS Berth.
Documents:
6 copies Crew List.
2 copies Crew Declaration.
2 copies Manifest.
1 copy Health Declaration.

Pilotage: Pilot boards between 2 and 2.5 miles South of Lavera Buoy. The vessel is to call Fos Port Control 2 hours before arrival and on passing Omega Buoy.

Berthing: ATOFOS Berth is a private facility at the North East end of Dock 2. The depth alongside is 12 m. The berth is capable of handling 30,000 d.w.t. vessels. Products handled are vinyl chloride monomer (VCM) and caustic soda.

The berth has a 50 m. face with mooring/fender dolphins either side giving a flat fendering of about 100 m. The vessel berthed port side to, head out. The mooring dolphins are fitted with large rubber fenders.

Tugs: No tugs are required by small vessels, mooring to the dolphin and the shore is carried out by use of a launch.

Cargo: VCM is handled through an 8 in. Chicksan with a 6 in. vapour return line attached. Caustic soda is also handled through a Chicksan on the North end of the pier. The VCM Chicksan is in the centre of the pier.

Vapour is returned to the shore tanks.

VCM intake temperatures average −8°C and the loading rate is approximately 260 cu.m.p.h. VCM storage not inhibited. Inhibitor added to each ship's tank through loading arm, after first foot samples taken.

The ship makes the stops. After completion ship blows back ashore.

The plant/berth works in tandem with Berth A4 at Lavera. If Lavera berth is occupied and the ATOFOS berth free, ships berth at ATOFOS.

Storing: Diesel trucks are allowed to back-up to within 50 m. of the vessel. Fuel tankers and lub. oil tankers are not allowed near the vessel while the arm is connected.

General: Fresh water is available at the quay. There is no charge made.

Developments: A chemical complex and berth for ARCO Chemical Company is located 3 cables South East of ATOFOS. The berth can handle 1 vessel a day and average about 300 vessels per year (Berth No. 857 – max. LOA 200 m., max. draft 11.50 m.).

AUTHORITY: Port Autonome de Marseille, Capitainerie des Bassins Ouest, B.P. 200, 13528 Port de Bouc Cedex, France. *Tel:* 42.40.60.05. *Telex:* 44.01.64 CAPOR. *Cables:* Capor. *FAX:* 42.40.60.40.
Contact: Harbour Master.

Fos Facilities Management: *Tel:* 42.48.66.05. *FAX:* 42.48.66.00. *Telex:* 410789.

NANTES: 47.14 N. 01.34 W. (See Plan)
ST. NAZAIRE: 47.17 N. 02.12 W.
DONGES: 47.18 N. 02.04 W.
MONTOIR: 47.18 N. 02.08 W.

DOCUMENTS:
Cargo Manifest or Manifest of Ballast.
Certificate of Cargo Space.
Bills of Lading.
Ship's Register.
6 Crew Lists.
3 Passenger Lists.
Health Declaration.
Derat Certificate or Exemption.
Declaration of Crew Personal Effects.

PILOTAGE: Compulsory for vessels longer than 75 m. Pilotage is not compulsory for vessels under 75 m. LOA if they are equipped with radar and VHF and have no hazardons cargo onboard. Pilotage starts about 4 miles North of lighthouse of Le Pilier. Pilot boat on station day and night, if weather conditions permit, West of lightbuoy of "La Couronnee" about 2 miles. If Pilot unable to come aboard he may invite ship to follow his boat until they have reached better shelter. Ships heading for one of the Loire estuary ports should give ETA at least 24 hours before arrival to Port Captain of Saint-Nazaire. Approximate time of arrival at "La Couronnee" buoy, the onward destination and speed should be given. VHF contact can be made direct with St. Nazaire pilot boat or "Loire Pilot Station".

La Loire Pilots: Nantes - Tel: 02 40 69 29 00. Fax: 02 40 73 29 36.

St. Nazaire - Tel: 02 51 76 08 76. Fax: 02 51 76 08 75. Telex: 711251 F Pilore.

ANCHORAGE: Waiting Area is centred 6 miles West of Saint Gildas Point. In case of doubt contact pilot boat by VHF or telephone. Vessels are not allowed to anchor neither before Quay Emile Cormerais and Chevire Power Station Embankment (cables) nor in the vicinity of Power Station "Cordemais".

MAX. SIZE:
St. Nazaire: South Entrance Lock: Max. LOA 185 m. Max. draft 8.50 m. Max. beam 28 m.
Montoir: Length 300 m., max. draft 16.1 m.
Donges: Length 355 m., max. draft 16.1 m.
Nantes: Length up to 225 m., max. draft 10.05 m., minimum 8.55 m.

HEALTH: Pratique given by Customs Officers who board on arrival. If any case of suspected disease on board or any reason why vessel should not receive Free Pratique Master should radio Agent before arrival, advising full details.

RADIO: St. Nazaire Radio operates on 1687 MHz. It keeps a continuous watch on VHF Channel 16 and 2182 kHz.

VHF: VHF Radiotelephone must be used for giving information and obtaining clearance to navigate from the Harbour Master.

The following Channels and frequencies are used:

Channel 16	Frequency: 156.8 MHz
Channel 12	Frequency: 156.6 MHz

The Pilots can be contacted on VHF Channels 16 and 12.

A continuous watch is maintained on Channels 16 and 12.

Storage:
One 6-hectare long-duration storage yard (Carfos).
One 6-hectare high-throughput yard (Stockfos).
One 15-hectare ordinary storage yard.
One 3,840 sq.m. shed (17,000 cu.m.).
25,000 tonnes alumina storage silo (Aluminium Pechiney).

Traffic capacity:
Between 6 and 7 million tonnes a year.
4 to 5 million tonnes of imports.
1 to 2 million tonnes of exports.

Technical data for gantries and unloaders:
Caillard gantries (P1 and P2).
Outreach beyond fenders: 23.50 m.
Free lift: 17.80 m.*
* Free lift limited to 15.00 m. while putting loader into hold.
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Free lift: 17.00 m.
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2×20 tonne bucket gantry cranes. 2 cranes of 15 tonnes at 30 m. 6 fixed conveyors. 10 public and 7 private mobile conveyors. 2 stackers on tyres. 3 feeders with a capacity of 1,500 t.p.h.; 1 of these is privately owned. 1 ship loader of 1,000 t.p.h. capacity. 1 continuous unloader with a capacity of 24,000 tonnes per day has also been brought into service.

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Annual capacity of loading or discharge:
Solid minerals, fuels – Coal: 3,000,000 tons/year.
Ores: 4,000,000 tons/year.

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Storage Capacity: Fuel, solid minerals, Coal: 350,000 tons.
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At Dock No. 1. (Berth No. 830) (Owned by Gaz de France).
Length available for berthing 180 m. Max. draft 9.75 m.

2 storage tanks, for LNG in the liquid phase (–160°C.), each with a capacity of 35,000 cu. m. (1,235,500 cu. ft.) and 1×80,000 cu.m.

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Serviceable length: 35 m.; Max. draft: 11.30 m.

This berth is reserved for the export of chemical products such as vinyl monomer chloride and washing soda.

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Serviceable length: 70 m. Max. draft 11.30 m.

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Available berthing length: 1,130 m.
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10×20 ft./40 ft. trailers.
2×12 tonne elevators, one fitted with a spreader for empty 20 ft. or 40 ft. containers.
2×3 tonne elevators and more if required.
Extra equipment is readily available in Marseilles.

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A fleet of 32 frame trailers (no tailbard) and 3 swan-necked roll trailers, with a payload of 40 tonnes.

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Shipmaster's Report: October 1986.

On Berth Nos. 1, 2 and 3 the outboard lifeboat is to be lowered down to the embarkation deck and rigged ready for immediate use.

Storage Capacity:

S.P.S.E. Terminal	2,660,000 cu.m.
CRAU Depot	1,910,000 cu.m.
Esso Refinery	840,000 cu.m.
Total:	5,010,000 cu.m.

Berth 4 (No. 804): Located at Mole No. 2 of the oil terminal, offers in a primary stage a depth of water of 15 m. The berth is intended for berthing in ballast of vessels of 550,000 d.w.t. for washing out tanks prior to repair.

It also permits the reception of crude oil imports and the transhipment of crude from tankers moored at Berths 801, 802 and 803.

The maximum permissible draft is at present 14 m.

The berth is connected to the new deballasting station by a 20 in. diameter pipeline. During the current first phase of development, this station treats only ballast of low oil content.

The berth can also be used for discharging crude from tankers with drafts up to 14.02 m., and is equipped with one 42 in. diameter discharge pipe and two 16 in. diameter discharge arms.

During the current first phase of development, this berth is not equipped with refuelling pipes or boarding towers.

This berth is also used for transhipment from ship to ship (alongside each other) for crude and gas operations.

Refined Products: 5 berths of which 3 are multi-purpose – 0, 0 Bis and 1(Nos. 800, 801 and 807).

Designation	Berth No.	Berthing Length (m.)	Max. Draft (m.)	Remarks
0	800	230	12.40	Public
0 Bis	807	200	12.80	Public
C.2	808	100	7.00	Public
Sollac	821A	100	5.50	Private
1	801	370	20.58	Public

Independently of the receipt of crude oil, berths 0 and 0 Bis are equipped to handle either refined product import or export traffic, or the loading of crude oil from tankers berthed at berths 1, 2 and 3 (801, 802, 803).

Berth C.2 (No. 808) specialises in loading refined products on coastal vessels and the Sollac berth (No. 821A) specialises in the receipt of fuel oil.

Storage capacity:

Fos Oil Depot	686,000 cu.m.
Esso Refinery	947,000 cu.m.
Total:	1,633,000 cu.m.

Report:

Berthing Procedures: Tugs are secured in the dredged channel between Buoy Nos. 3 to 7, using the "On the Hook" method. Tugs watch VHF Channel 6.

Loaded or ballasted tankers are usually berthed starboard side to the berth and are swung on departure. But on request (ship's manifold too far displaced or only one gangway available) or in some weather conditions (S.E. winds), ships may be berthed port side alongside. The swing is always difficult and requires careful attention.

Usual parallel landing method is followed for Berths 0 – 0 Bis and 4, and ship's anchor may sometimes be used in special weather conditions.

When instructed to Berth at No. 1 or 2, Masters should be aware that the speed has to be carefully checked and agreed with the Pilots. When passing the last buoy of the channel (No. 11), the engine has to be put "full astern" and the effect of the propeller may bring the vessel approximately parallel to the jetty. The berth approach is then conducted at an angle of less than 30° with tugs' control.

Only Berth No. 4 is equipped with an approach velocity indicator which may be moved to No. 3 in the future.

For all the berths, ships' lines are taken ashore by mooring launches and lifted by hand on to the bollards or quick release hooks.

Spring lines are sent first, then breast lines and tugs will come alongside to push. Mooring boats make VHF contact on Channel 6.

Shore gangways are available only on Berth Nos. 1, 2 and 3, put on the ship's deck forward of the manifold (ships' lifebuoys used). On the other berth ships' gangways are needed with safety nets and lifebuoys.

Berths: Managed by the "Port Autonome de Marseilles", the berths consist of concrete platforms with rubber fenders. All are equipped with counter balanced hard arms, bolted connections. Shore personnel carry out connections/disconnections and a permanent watch is maintained on the berth. This watch may be made from a control room where video surveillance is carried out for the berths by one camera mounted on the arms and another one watching the entire berth.

The outside arms can be used for bunkering and for discharge of ballast.

Storage for ballast is up to 80,000 cu.m. and discharge rate to 5,000 cu.m.p.h.

Shore lines have *No Non-Return* valves, and ships are advised to carefully close their manifold gate valves during any stops.

Port Regulations give maximum cargo temperature allowed for discharging heated cargo using crude oil lines: in these special cases, 55°C (131°F) may not be exceeded.

BALLAST: *Deballasting Station:* This station is situated to the rear of the oil jetties. It treats ballast of only low oil content, but can receive slops of crude oil and refined petroleum products.

Its main characteristics are as follows:

Primary separation: 4,000 cu.m/hr., with apparatus for removing sediment and the oil recovered.

Intermediate storage in a basin of 80,000 cu.m., 320 m. long by 108 m. wide by 3.50 m. deep.

Secondary separation capable of rejecting water containing less than 5 p.p.m. of crude oil and petroleum products (by infra-red measurement) with a throughput of 250 cu.m/hr.

Storage of oil-rich mixtures (slops) 4×360 cu.m. and 1×4,950 cu.m.

Auxiliary installations (fire).

FRESH WATER: Available by pipeline at all berths.

FUEL: Available by barge only.

FIRE PRECAUTIONS: A special fire fighting corp. operates at Fos. Tel. 42.06.21.29 or call Fos Port Control on VHF Channel 12 or Telephone 42.40.60.60.

CUSTOMS ALLOWANCES: Tobacco: 200 cigarettes every 5 days. Wine/Spirits: limited amount allowed per man.

AIRPORT: Marseilles/Marignane Airport about 60 km. distance.

TIME: GMT plus 1 hour in Winter. GMT plus 2 hours in Summer.

TELEPHONES: On application, telephones can be connected on board.

GARBAGE DISPOSAL/WASTE OIL DISPOSAL: See Part (a).

SEAMAN'S CLUBS: See Part (a).

CURRENCY: See Part (a).

DEVELOPMENTS: In 1993, Fos Container Terminal will have an additional 250 m. of quays and an additional 2 new Post-Panamax gantries.

SHIPMASTER'S REPORT: August 1987 (Updated 1996).

Berth: ATOFOS Berth.

Documents:

6 copies Crew List.
2 copies Crew Declaration.
2 copies Manifest.
1 copy Health Declaration.

Pilotage: Pilot boards between 2 and 2.5 miles South of Lavera Buoy. The vessel is to call Fos Port Control 2 hours before arrival and on passing Omega Buoy.

Berthing: ATOFOS Berth is a private facility at the North East end of Dock 2. The depth alongside is 12 m. The berth is capable of handling 30,000 d.w.t. vessels. Products handled are vinyl chloride monomer (VCM) and caustic soda.

The berth has a 50 m. face with mooring/fender dolphins either side giving a flat fendering of about 100 m. The vessel berthed port side to, head out. The mooring dolphins are fitted with large rubber fenders.

Tugs: No tugs are required by small vessels, mooring to the dolphin and the shore is carried out by use of a launch.

Cargo: VCM is handled through an 8 in. Chicksan with a 6 in. vapour return line attached. Caustic soda is also handled through a Chicksan on the North end of the pier. The VCM Chicksan is in the centre of the pier.

Vapour is returned to the shore tanks.

VCM intake temperatures average −8°C and the loading rate is approximately 260 cu.m.p.h. VCM storage not inhibited. Inhibitor added to each ship's tank through loading arm, after first foot samples taken.

The ship makes the stops. After completion ship blows back ashore.

The plant/berth works in tandem with Berth A4 at Lavera. If Lavera berth is occupied and the ATOFOS berth free, ships berth at ATOFOS.

Storing: Diesel trucks are allowed to back-up to within 50 m. of the vessel. Fuel tankers and lub. oil tankers are not allowed near the vessel while the arm is connected.

General: Fresh water is available at the quay. There is no charge made.

Developments: A chemical complex and berth for ARCO Chemical Company is located 3 cables South East of ATOFOS. The berth can handle 1 vessel a day and average about 300 vessels per year (Berth No. 857 – max. LOA 200 m., max. draft 11.50 m.).

AUTHORITY: Port Autonome de Marseille, Capitainerie des Bassins Ouest, B.P. 200, 13528 Port de Bouc Cedex, France. *Tel:* 42.40.60.05. *Telex:* 44.01.64 CAPOR. *Cables:* Capor. *FAX:* 42.40.60.40. *Contact:* Harbour Master.

Fos Facilities Management: *Tel:* 42.48.66.05. *FAX:* 42.48.66.00. *Telex:* 410789.

NANTES: 47.14 N. 01.34 W. (See Plan)
ST. NAZAIRE: 47.17 N. 02.12 W.
DONGES: 47.18 N. 02.04 W.
MONTOIR: 47.18 N. 02.08 W.

DOCUMENTS:

Cargo Manifest or Manifest of Ballast.
Certificate of Cargo Space.
Bills of Lading.
Ship's Register.
6 Crew Lists.
3 Passenger Lists.
Health Declaration.
Derat Certificate or Exemption.
Declaration of Crew Personal Effects.

PILOTAGE: Compulsory for vessels longer than 75 m. Pilotage is not compulsory for vessels under 75 m. LOA if they are equipped with radar and VHF and have no hazardons cargo onboard. Pilotage starts about 4 miles North of lighthouse of Le Pilier. Pilot boat on station day and night, if weather conditions permit, West of lightbuoy of "La Couronnee" about 2 miles. If Pilot unable to come aboard he may invite ship to follow his boat until they have reached better shelter. Ships heading for one of the Loire estuary ports should give ETA at least 24 hours before arrival to Port Captain of Saint-Nazaire. Approximate time of arrival at "La Couronnee" buoy, the onward destination and speed should be given. VHF contact can be made direct with St. Nazaire pilot boat or "Loire Pilot Station".

La Loire Pilots: Nantes - Tel: 02 40 69 29 00. Fax: 02 40 73 29 36.
St. Nazaire - Tel: 02 51 76 08 76. Fax: 02 51 76 08 75. Telex: 711251 F Pilore.

ANCHORAGE: Waiting Area is centred 6 miles West of Saint Gildas Point. In case of doubt contact pilot boat by VHF or telephone. Vessels are not allowed to anchor neither before Quay Emile Cormerais and Chevire Power Station Embankment (cables) nor in the vicinity of Power Station "Cordemais".

MAX. SIZE:

St. Nazaire: South Entrance Lock: Max. LOA 185 m. Max. draft 8.50 m. Max. beam 28 m.

Montoir: Length 300 m., max. draft 16.1 m.

Donges: Length 355 m., max. draft 16.1 m.

Nantes: Length up to 225 m., max. draft 10.05 m., minimum 8.55 m.

HEALTH: Pratique given by Customs Officers who board on arrival. If any case of suspected disease on board or any reason why vessel should not receive Free Pratique Master should radio Agent before arrival, advising full details.

RADIO: St. Nazaire Radio operates on 1687 MHz. It keeps a continuous watch on VHF Channel 16 and 2182 kHz.

VHF: VHF Radiotelephone must be used for giving information and obtaining clearance to navigate from the Harbour Master.

The following Channels and frequencies are used:

Channel 16	Frequency: 156.8 MHz
Channel 12	Frequency: 156.6 MHz

The Pilots can be contacted on VHF Channels 16 and 12.

A continuous watch is maintained on Channels 16 and 12.

Storage:
One 6-hectare long-duration storage yard (Carfos).
One 6-hectare high-throughput yard (Stockfos).
One 15-hectare ordinary storage yard.
One 3,840 sq.m. shed (17,000 cu.m.).
25,000 tonnes alumina storage silo (Aluminium Pechiney).

Traffic capacity:
Between 6 and 7 million tonnes a year.
4 to 5 million tonnes of imports.
1 to 2 million tonnes of exports.

Technical data for gantries and unloaders:
Caillard gantries (P1 and P2).
Outreach beyond fenders: 23.50 m.
Free lift: 17.80 m.*
* Free lift limited to 15.00 m. while putting loader into hold.
Caillard cranes (K1 and K2).
Outreach beyond fenders:
15 tonne crane: 21.50 m.
12 tonne crane: 26.50 m.
Free lift: 17.00 m.
Continuous reloader (C2).
Outreach beyond fenders: 17.50 m.
Free lift: 13.50 m.
Continuous unloader (P+).
Outreach beyond fenders: 37.50 m.
Free lift: 19.00 m.

DRY BULK EQUIPMENT: P.M.A. equipment:

2×20 tonne bucket gantry cranes. 2 cranes of 15 tonnes at 30 m. 6 fixed conveyors. 10 public and 7 private mobile conveyors. 2 stackers on tyres. 3 feeders with a capacity of 1,500 t.p.h.; 1 of these is privately owned. 1 ship loader of 1,000 t.p.h. capacity. 1 continuous unloader with a capacity of 24,000 tonnes per day has also been brought into service.

Private equipment: 2×40 tonne discharging gantry cranes on the Sollac import quay. 2 cranes of 50 tonnes at 26 m. on the Sollac export quay. 1 loading gantry crane of 1,500 t.p.h. conceded to a private firm (Pechiney Co.) with the obligation to give public service on the ore quay.

Private Berths: Two private berths (Nos. 811 – 812) in Dock 1 – Eastern Quay. Sollac reception quay.

Available berthing length: 640 m. Permitted draft: 18.60 m.
Annual capacity of loading or discharge:
Solid minerals, fuels – Coal: 3,000,000 tons/year.
Ores: 4,000,000 tons/year.

The Sollac Quay is equipped with 2×40 ton gantries, each having an hourly rate of discharge of 2,000 tons.

Storage Capacity: Fuel, solid minerals, Coal: 350,000 tons.
Ores: 1,000,000 tons.

Sollac has a quayside open area of 360,000 sq.m. for the receipt and storage of coal and ores.

LNG FACILITIES:

At Dock No. 1. (Berth No. 830) (Owned by Gaz de France).

Length available for berthing 180 m. Max. draft 9.75 m.

2 storage tanks, for LNG in the liquid phase (–160°C.), each with a capacity of 35,000 cu. m. (1,235,500 cu. ft.) and 1×80,000 cu.m.

The pumps on the LNG Carrier discharge through articulated pipes of 300 mm. diameter (11.8 in.), 3 are specifically for discharge; one is to return the methane, in the vapour phase to the carrier.

After warming up from the liquid phase, with the addition of nitrogen to conform with the value in the French Gas Grid, the gas, in the vapour phase, is despatched by pipeline to the underground storage at Tersanne, 214 km. from Fos (134 miles), and to Marseilles and the Cote d'Azur.

LPG FACILITIES: *Propane:* Geogaz's underground storage of 120,000 cu.m. at Lavera is connected directly by pipeline to the oil refineries and the port

Butane: Underground storage of Geobutane at Lavera. Capacity of 170,000 cu.m. can now be raised to 230,000 cu.m. following a positive geological survey.

Reshipment Traffic: The port has established an international reputation for its technically delicate operations.

CHEMICAL PRODUCTS: 2 privately managed berths on the East quay of Dock 2.

Berth No. 858: The facilities of Atochem and of Ste. du Chlorure de Vinyle de Fos (SCVF):

Serviceable length: 35 m.; Max. draft: 11.30 m.

This berth is reserved for the export of chemical products such as vinyl monomer chloride and washing soda.

Arco-Chemie Terminal:
Serviceable length: 70 m. Max. draft 11.30 m.

This berth is reserved for the export of different products (MTBA, MTBE, Oxynol, Oxide Proplyene, etc.).

CONTAINER HANDLING FACILITIES:

5 berths (Nos. 862–866) in Dock 2, Graveleau Quay.
Available berthing length: 1,130 m.
Depth alongside: 14.0 m.
Permitted draft: 13.00 m.

Annual loading or discharge capacity: 150,000 containers, i.e. 2,500,000 tonnes (approx.) (20 ft. and 40 ft.)

P.M.A. equipment: 5 Paceco quayside gantry cranes of 40 tonnes, capacity 20 – 25 containers p.h. and 1 Kone gantry crane of 70 tonnes.

Storage capacity: 15,000 containers i.e. 225,000 tonnes (approx.) (20 ft. and 40 ft.). Users have at their disposal a storage area with a total surface of 33 hectares. 112 reefer points available (220 Volts and 380 Volts 50 Hz. power supply).

Annual capacity of output or input: 150,000 containers (20 ft. and 40 ft.) i.e.: 2,000,000 tonnes (approx.) by lorries or railway. The French Railways Transcontainers terminal has 3 gantries on open areas with lifting capacity of 40 tonnes.

The terminal also has: A control centre of 2,000 sq.m.; 2 service areas of 200 m.×70 m.; a stuffing and unstuffing area of 3,200 sq.m. comprising 2 sheds of 25 m.×20 m. each.

Terminal Operators' ground equipment:
INTRAMAR:

1×60 tonne PPM crane, fitted with an automatic 20 ft./40 ft. spreader.
4×20 ft./40 ft. front forklifts.
5 front forklift trucks with 15/25 tonne lifting capacity.
12 yard tractors.
10×20 ft./40 ft. trailers.

2×12 tonne elevators, one fitted with a spreader for empty 20 ft. or 40 ft. containers.

2×3 tonne elevators and more if required.

Extra equipment is readily available in Marseilles.

EUROFOS:

7×40 tonne front elevators fitted with telescopic 20 ft./30 ft. and 40 ft. spreaders and three 42 tonne elevators.

3×11.5 tonne front elevators fitted with telescopic 20 ft./40 ft. spreaders for rapid handling of empty containers.

1×9.5 tonne front forklift truck.

2×2.5 tonne front elevators for minor operations and loading/unloading of containers.

6 Mafi-Douglas tractors with elevator ramp and 15 Plan 170 HD tractors.

A fleet of 32 frame trailers (no tailbard) and 3 swan-necked roll trailers, with a payload of 40 tonnes.

MAFOC:

7×38 to 42 tonne front elevators fitted with spreaders.
20 tractors.
23 trailers.
2 Belotti cranes for empty containers.
2 forklift trucks with 10/20 tonne lifting capacity.
6 forklift trucks with 5 tonne lifting capacity.

Special equipment is also available for handling non-standard containers.

Extra equipment is readily available in Marseilles.

Also see "Developments".

MEDICAL: All hospital and medical facilities. Yellow fever inoculation made by appointed doctors. Masters to advise by radio, prior arrival, if medical attendance required on board.

CONSULS: Norwegian, Swedish, Danish and Spanish Consuls at Port de Bouc. Others at Marseilles.

REPAIRS: Ore berth can be used as a repairs berth when not required for cargo operations. Permission must be obtained for tanker repairs. No tankers repairs if vessel is not gas free. Permission given by Harbour Master only.

TANKERS: Chicksan loading/discharge arms fitted at all berths. Ballast discharge ashore through pipeline. Tank cleaning slop or oil residue not accepted through shore line, but can be disposed of by barge from Marseilles. Possibility of crude cleaning for vessels with inert gas system if cleaning does not exceed time of discharging operations.

Crude: 6 public berths, of which one is multi-purpose 0 Bis (No. 807).

Designation	*Berth* No.	*Berthing Length* (m.)	*Max. Draft* (m.)
0	800	250	12.40
0 Bis	807	250	12.80
1	801	370	20.58
2	802	350	17.90
3	803	420	22.25
4	804	420	14.00

Berths 0 and 0 Bis (800 and 807) are equipped to handle either export or import of refined products, or chemical product traffic (Methanol and TBA), or the loading of crude oil from a tanker moored at one of the Berths 1, 2 or 3 (Nos. 801, 802, 803)

Berths 1, 2, 3 and 4 (Nos. 801, 802, 803 and 804) are for receiving crude oil only. Berth 2 (No. 802) is specially equipped to tranship, by using special pipelines, crude oil from vessels alongside at Berth 1 (No. 801) and No. 3 (No. 803).

Specialised lines, dependent upon the nature of the products, connect these berths to the oil depot of Fos, to the CRAU depot (Shell-Total-B.P.) to the Esso refinery and to the S.P.S.E. terminal, all located in Fos.

Shipmaster's Report: October 1986.

On Berth Nos. 1, 2 and 3 the outboard lifeboat is to be lowered down to the embarkation deck and rigged ready for immediate use.

Storage Capacity:

S.P.S.E. Terminal	2,660,000 cu.m.
CRAU Depot	1,910,000 cu.m.
Esso Refinery	840,000 cu.m.
Total:	5,010,000 cu.m.

Berth 4 (No. 804): Located at Mole No. 2 of the oil terminal, offers in a primary stage a depth of water of 15 m. The berth is intended for berthing in ballast of vessels of 550,000 d.w.t. for washing out tanks prior to repair.

It also permits the reception of crude oil imports and the transhipment of crude from tankers moored at Berths 801, 802 and 803.

The maximum permissible draft is at present 14 m.

The berth is connected to the new deballasting station by a 20 in. diameter pipeline. During the current first phase of development, this station treats only ballast of low oil content.

The berth can also be used for discharging crude from tankers with drafts up to 14.02 m., and is equipped with one 42 in. diameter discharge pipe and two 16 in. diameter discharge arms.

During the current first phase of development, this berth is not equipped with refuelling pipes or boarding towers.

This berth is also used for transhipment from ship to ship (alongside each other) for crude and gas operations.

Refined Products: 5 berths of which 3 are multi-purpose – 0, 0 Bis and 1(Nos. 800, 801 and 807).

Designation	*Berth* No.	*Berthing Length* (m.)	*Max. Draft* (m.)	*Remarks*
0	800	230	12.40	Public
0 Bis	807	200	12.80	Public
C.2	808	100	7.00	Public
Sollac	821A	100	5.50	Private
1	801	370	20.58	Public

Independently of the receipt of crude oil, berths 0 and 0 Bis are equipped to handle either refined product import or export traffic, or the loading of crude oil from tankers berthed at berths 1, 2 and 3 (801, 802, 803).

Berth C.2 (No. 808) specialises in loading refined products on coastal vessels and the Sollac berth (No. 821A) specialises in the receipt of fuel oil.

Storage capacity:

Fos Oil Depot	686,000 cu.m.
Esso Refinery	947,000 cu.m.
Total:	1,633,000 cu.m.

Report:

Berthing Procedures: Tugs are secured in the dredged channel between Buoy Nos. 3 to 7, using the "On the Hook" method. Tugs watch VHF Channel 6.

Loaded or ballasted tankers are usually berthed starboard side to the berth and are swung on departure. But on request (ship's manifold too far displaced or only one gangway available) or in some weather conditions (S.E. winds), ships may be berthed port side alongside. The swing is always difficult and requires careful attention.

Usual parallel landing method is followed for Berths 0 – 0 Bis and 4, and ship's anchor may sometimes be used in special weather conditions.

When instructed to Berth at No. 1 or 2, Masters should be aware that the speed has to be carefully checked and agreed with the Pilots. When passing the last buoy of the channel (No. 11), the engine has to be put "full astern" and the effect of the propeller may bring the vessel approximately parallel to the jetty. The berth approach is then conducted at an angle of less than 30° with tugs' control.

Only Berth No. 4 is equipped with an approach velocity indicator which may be moved to No. 3 in the future.

For all the berths, ships' lines are taken ashore by mooring launches and lifted by hand on to the bollards or quick release hooks.

Spring lines are sent first, then breast lines and tugs will come alongside to push. Mooring boats make VHF contact on Channel 6.

Shore gangways are available only on Berth Nos. 1, 2 and 3, put on the ship's deck forward of the manifold (ships' lifebuoys used). On the other berth ships' gangways are needed with safety nets and lifebuoys.

Berths: Managed by the "Port Autonome de Marseilles", the berths consist of concrete platforms with rubber fenders. All are equipped with counter balanced hard arms, bolted connections. Shore personnel carry out connections/disconnections and a permanent watch is maintained on the berth. This watch may be made from a control room where video surveillance is carried out for the berths by one camera mounted on the arms and another one watching the entire berth.

The outside arms can be used for bunkering and for discharge of ballast.

Storage for ballast is up to 80,000 cu.m. and discharge rate to 5,000 cu.m.p.h.

Shore lines have *No Non-Return* valves, and ships are advised to carefully close their manifold gate valves during any stops.

Port Regulations give maximum cargo temperature allowed for discharging heated cargo using crude oil lines: in these special cases, 55°C (131°F) may not be exceeded.

BALLAST: *Deballasting Station:* This station is situated to the rear of the oil jetties. It treats ballast of only low oil content, but can receive slops of crude oil and refined petroleum products.

Its main characteristics are as follows:

Primary separation: 4,000 cu.m/hr., with apparatus for removing sediment and the oil recovered.

Intermediate storage in a basin of 80,000 cu.m., 320 m. long by 108 m. wide by 3.50 m. deep.

Secondary separation capable of rejecting water containing less than 5 p.p.m. of crude oil and petroleum products (by infra-red measurement) with a throughput of 250 cu.m/hr.

Storage of oil-rich mixtures (slops) 4×360 cu.m. and 1×4,950 cu.m.

Auxiliary installations (fire).

FRESH WATER: Available by pipeline at all berths.

FUEL: Available by barge only.

FIRE PRECAUTIONS: A special fire fighting corp. operates at Fos. Tel. 42.06.21.29 or call Fos Port Control on VHF Channel 12 or Telephone 42.40.60.60.

CUSTOMS ALLOWANCES: Tobacco: 200 cigarettes every 5 days. Wine/Spirits: limited amount allowed per man.

AIRPORT: Marseilles/Marignane Airport about 60 km. distance.

TIME: GMT plus 1 hour in Winter. GMT plus 2 hours in Summer.

TELEPHONES: On application, telephones can be connected on board.

GARBAGE DISPOSAL/WASTE OIL DISPOSAL: See Part (a).

SEAMAN'S CLUBS: See Part (a).

CURRENCY: See Part (a).

DEVELOPMENTS: In 1993, Fos Container Terminal will have an additional 250 m. of quays and an additional 2 new Post-Panamax gantries.

SHIPMASTER'S REPORT: August 1987 (Updated 1996).

Berth: ATOFOS Berth.

Documents:

6 copies Crew List.
2 copies Crew Declaration.
2 copies Manifest.
1 copy Health Declaration.

Pilotage: Pilot boards between 2 and 2.5 miles South of Lavera Buoy. The vessel is to call Fos Port Control 2 hours before arrival and on passing Omega Buoy.

Berthing: ATOFOS Berth is a private facility at the North East end of Dock 2. The depth alongside is 12 m. The berth is capable of handling 30,000 d.w.t. vessels. Products handled are vinyl chloride monomer (VCM) and caustic soda.

The berth has a 50 m. face with mooring/fender dolphins either side giving a flat fendering of about 100 m. The vessel berthed port side to, head out. The mooring dolphins are fitted with large rubber fenders.

Tugs: No tugs are required by small vessels, mooring to the dolphin and the shore is carried out by use of a launch.

Cargo: VCM is handled through an 8 in. Chicksan with a 6 in. vapour return line attached. Caustic soda is also handled through a Chicksan on the North end of the pier. The VCM Chicksan is in the centre of the pier.

Vapour is returned to the shore tanks.

VCM intake temperatures average −8°C and the loading rate is approximately 260 cu.m.p.h. VCM storage not inhibited. Inhibitor added to each ship's tank through loading arm, after first foot samples taken.

The ship makes the stops. After completion ship blows back ashore.

The plant/berth works in tandem with Berth A4 at Lavera. If Lavera berth is occupied and the ATOFOS berth free, ships berth at ATOFOS.

Storing: Diesel trucks are allowed to back-up to within 50 m. of the vessel. Fuel tankers and lub. oil tankers are not allowed near the vessel while the arm is connected.

General: Fresh water is available at the quay. There is no charge made.

Developments: A chemical complex and berth for ARCO Chemical Company is located 3 cables South East of ATOFOS. The berth can handle 1 vessel a day and average about 300 vessels per year (Berth No. 857 – max. LOA 200 m., max. draft 11.50 m.).

AUTHORITY: Port Autonome de Marseille, Capitainerie des Bassins Ouest, B.P. 200, 13528 Port de Bouc Cedex, France. *Tel:* 42.40.60.05. *Telex:* 44.01.64 CAPOR. *Cables:* Capor. *FAX:* 42.40.60.40. *Contact:* Harbour Master.

Fos Facilities Management: *Tel:* 42.48.66.05. *FAX:* 42.48.66.00. *Telex:* 410789.

NANTES: 47.14 N. 01.34 W. (See Plan)
ST. NAZAIRE: 47.17 N. 02.12 W.
DONGES: 47.18 N. 02.04 W.
MONTOIR: 47.18 N. 02.08 W.

DOCUMENTS:

Cargo Manifest or Manifest of Ballast.
Certificate of Cargo Space.
Bills of Lading.
Ship's Register.
6 Crew Lists.
3 Passenger Lists.
Health Declaration.
Derat Certificate or Exemption.
Declaration of Crew Personal Effects.

PILOTAGE: Compulsory for vessels longer than 75 m. Pilotage is not compulsory for vessels under 75 m. LOA if they are equipped with radar and VHF and have no hazardons cargo onboard. Pilotage starts about 4 miles North of lighthouse of Le Pilier. Pilot boat on station day and night, if weather conditions permit, West of lightbuoy of "La Couronnee" about 2 miles. If Pilot unable to come aboard he may invite ship to follow his boat until they have reached better shelter. Ships heading for one of the Loire estuary ports should give ETA at least 24 hours before arrival to Port Captain of Saint-Nazaire. Approximate time of arrival at "La Couronnee" buoy, the onward destination and speed should be given. VHF contact can be made direct with St. Nazaire pilot boat or "Loire Pilot Station".

La Loire Pilots: Nantes - Tel: 02 40 69 29 00. Fax: 02 40 73 29 36.

St. Nazaire - Tel: 02 51 76 08 76. Fax: 02 51 76 08 75. Telex: 711251 F Pilore.

ANCHORAGE: Waiting Area is centred 6 miles West of Saint Gildas Point. In case of doubt contact pilot boat by VHF or telephone. Vessels are not allowed to anchor neither before Quay Emile Cormerais and Chevire Power Station Embankment (cables) nor in the vicinity of Power Station "Cordemais".

MAX. SIZE:

St. Nazaire: South Entrance Lock: Max. LOA 185 m. Max. draft 8.50 m. Max. beam 28 m.

Montoir: Length 300 m., max. draft 16.1 m.

Donges: Length 355 m., max. draft 16.1 m.

Nantes: Length up to 225 m., max. draft 10.05 m., minimum 8.55 m.

HEALTH: Pratique given by Customs Officers who board on arrival. If any case of suspected disease on board or any reason why vessel should not receive Free Pratique Master should radio Agent before arrival, advising full details.

RADIO: St. Nazaire Radio operates on 1687 MHz. It keeps a continuous watch on VHF Channel 16 and 2182 kHz.

VHF: VHF Radiotelephone must be used for giving information and obtaining clearance to navigate from the Harbour Master.

The following Channels and frequencies are used:

Channel 16	Frequency: 156.8 MHz
Channel 12	Frequency: 156.6 MHz

The Pilots can be contacted on VHF Channels 16 and 12.

A continuous watch is maintained on Channels 16 and 12.

RADAR: The radar service can be contacted on VHF Channels 16 and 12 or through St. Nazaire Port Control.

TUGS: *Nantes:* 2×1,000 h.p.

Donges – Montoir – St. Nazaire: 6×1,500 h.p. – 3,000 h.p. They are provided by Abeilles Nantes St. Nazaire.

BERTHING: St. Nazaire: Is a port with locks. Max. draft: 28 ft. (vessels up to 20 – 25,000 d.w.t. in the best conditions of tides).

Dock Water Density: 1015.

Length of Quay: 2,700 m.

Number of Berths: 15.

Numerous cranes up to 12 tons and a 400 ton derrick.

Traffic: Timber, heavy loads, metallurgical products, refined products, fertilizers, grain (capacity of the grain silo: 10,000 tons. Loading rate 400 t.p.h.), oil seeds, phosphates. Tanker berth – Deballasting station. Ro/Ro operations can be carried out.

Montoir: Port Authority use own steel cables to supplement ship's ropes.

Dock Water Density: 1000 to 1020.

Specialised Facilities: Ro/Ro Berth No. 1 – Max. LOA 140 m. Warehousing and 36,960 sq.m. of back up land. Ro/Ro Berth No. 2 – Max. LOA 180 m.

LNG: 2 privately managed berths can receive gas-carriers up to 125,000 cu.m. Also see "Shipmasters Report" dated "June 1980".

Dry Bulk: Length of quay 818 m., cranes 1×15 tons and 5×15/30 tons. 2 continuous unloader. Total daily throughput 20,000 tons. Storage facilities and grain silo with gantry crane.

Traffic: Oil seeds, oil cakes, timber, coal, soya pellets, fertilisers and scrap iron.

Liquid Chemicals: Connections for ammonia gas, acids and liquids. Molasses average throughput: 600 t.p.h.

Container Terminal: Length of quay: 611 m., max. draft 12.0 m. Storage facilities, 1×40 tonne mobile crane, 1×32 ton quay crane and 2 Post-Panamax container gantries with capacity 70 tonnes. Ro/Ro vessels with side ramps also berth. 24 power points for refrigerated containers.

Coal: A coal berth is operational to receive ore carriers up to 140,000 d.w.t., rate 2,500 t.p.h.

Donges: Mooring of vessels to Dock No. 3 is performed with ship's ropes. On Dock Nos. 4, 5, 6 and 7, Port Authority use own steel cables to which ship is secured to supplement her own ropes.

Berth Nos. 5, 6 and 7: To reduce the time of mooring a special mooring gang can be put at Master's disposal for arrival and departure. Arrangements must be made 12 hours in advance of this service. Permanent watch on VHF Channel 16 is recommended.

Tanker Berths: Can receive fully loaded tankers of 120,000 – 140,000 d.w.t. or the 350,000 d.w.t. lightened. Number of berths 7.

4 berths are designed for handling refined products. Throughput: 1,500 to 5,000 cu.m./hr. Berths No. 3 and 4 can handle LPG.

3 berths are designed for discharging crude oil. Throughput: 10,000 cu.m./hr.

Crude Connections: No. 5 Berth 4×12 in. Chicksan arms, 12 holes type 150 lbs. No. 6 Berth 5×12 in. No. 7 Berth 5×16 in. Chicksan arms. 12 holes type 150 lbs. Reducers available, notice required prior to arrival.

Bunkering Lines: No. 5 Berth 8 in. Chicksan arm with 6 in. connection. No. 6 Berth, 6 in., 8 in., or 12 in. No. 7 Berth 16 in.

Le Carnet: Berth for chemical tankers up to 180 m. LOA.

Nantes: Vessels may be moored with bow facing up or downstream. During heavy flood periods, however, bow to face upstream.

Dock Water Density: 1000.

Quai Chevire: Traffic: Timber and containers. 3 berths. Cranes up to 25 tons. Two 15 to 25 ton cranes are able to operate together, providing a 25 ton to 45 ton lifting capacity. Spreader available for handling 20 ft. containers (about 20 containers per hour). Storage facilities.

Quai Wilson: Length 800 m., 8 berths. Traffic: Heavy loads and containers in the Eastern part.

Phosphates, coal, pyrites, sulphur, salt, scrap iron, molasses, sugar, fruits and vegetables. Storage facilities. Numerous cranes up to 60 tons capacity.

Quai Roche-Maurice: Length 747 m. 6 berths. Cranes up to 6 tons capacity.

Discharging: phosphates, grains (loading rate 700 t.p.h.), molasses, fertilizers. Storage capacity of the grain silo: 120,000 tons.

Additional facilities for discharging oil and coaltar, chemical products, wine and various cargoes, length of quays: 1,500 m.

CRANES: 60 ton heavy lift crane at Nantes. 400 ton derrick at St. Nazaire.

BRIDGES: Vessels coming up the river to Montoir, Donges and upstream pass underneath the St. Nazaire bridge: Clearance 61 m. at lowest water.

Clearance under Chevire Bridge is 56 m. at lowest tide.

STEVEDORES: Available.

MEDICAL: Facilities available at any time.

TANKERS: See "Berthing".

Degassing and deballasting operations possible at St. Nazaire, capacity 1,700 cu.m.p.h.

FRESH WATER: Available at docks.

FUEL: Available in any grade or viscosity. Advance notice of at least 2 days must be given if vessel has to bunker on Saturday or Sunday. Otherwise, delivery within 36 hours by barge.

FIRE PRECAUTIONS: Usual precautions for tankers in neighbourhood of refineries. No fire, no smoking, Ground wire for ship.

GANGWAY/DECK WATCHMEN: Not necessary.

OPENING/CLOSING HATCHES: Done by crew.

CONSULS:

Algeria	02.40.74.38.19	Netherlands	02.40.58.56.57
Belgium	02.40.12.96.77	Norway	02.40.73.85.59
Brazil	02.40.69.30.07	Portugal	02.40.73.05.04
	02.40.22.41.46	Spain	02.40.48.67.95
Denmark	02.40.71.89.13	Sweden	02.40.73.85.59
Finland	02.40.75.53.08	Switzerland	02.40.71.67.66
Germany	02.40.71.01.30	Tunisia	02.40.71.10.52
Greece	02.40.73.02.36	United Kingdom	02.40.63.16.02

REPAIRS/DRY DOCKS: Very good facilities exist for all types of repairs.

St. Nazaire: "L. Joubert" graving dock, length 350 m., width 50 m. Dock can accommodate ships up to 240,000 d.w.t.

Dry Docks: No. 1 Ships up to 40,000 d.w.t. No. 2 Ships up to 1,500 d.w.t. No. 3 Ships up to 6,000 d.w.t.

Nantes: One careening unit of 1,700 ton accommodating ships up to 100 m. long.

CUSTOMS ALLOWANCES: Tobacco: 300 cigarettes or 75 cigars. Wine; 7 pints. Spirits: up to 22° – 5.3 pints, beyond 22° – 2.7 pints. Coffee: 26 ozs. Tea: 5 ozs.

AIRPORT: *Nantes:* Good connections with French internal network (Air Inter) and also international, mainly with stop-over Paris. 5 daily flights to the capital. Direct flights to Bordeaux, Lorient, La Rochelle, Lyon, etc.

TIME: GMT plus 1 hour, seasonal alteration.

HOLIDAYS: New Year (1st January, no labour available); Easter Sunday (possibility of labour with overtime); Easter Monday (no labour available); Labour Day (1st May, no labour available); Ascension Day (possibility of labour with overtime); Whit Sunday (possibility of labour with overtime); Whit Monday (no labour available); Victory 1945 (8th May); National Day (14th July, no labour available); Assumption Day (15th August, no labour available); All Saints' Day (1st November, no labour available); Armistice Day (11th November, possibility of labour with overtime); Christmas Day (25th December, no labour available). N.B. Every Sunday and day marked "possibility of labour with overtime" can be worked at the rate of 100%.

POLICE/FIRE/AMBULANCE: Police 17; Fire 18; Ambulance 18.

TELEPHONE: Arrangements are possible.

SHORE LEAVE: No restrictions.

IDENTIFICATION CARDS: Not needed.

DEVELOPMENTS: Montoir: The Container Terminal is to be extended to 1,210 m.

SHIPMASTER'S REPORT: June 1980 (Updated 1994).

Montoir: (Discharging ammonia) – See "Plan".

Approaches: B.A. 3216, 2989 and 2647, outer coverage not very good. Arrived in good visibility so shore lights gave good positions. Ile de Yeu does not show up very well on the radar until only about 16 miles off. The light on Ile de Yeu is listed on different charts as having different characteristics and in fact agreed with that in the Light List. The mainland showed up for some considerable distance but no worthwhile details were identified until well up to "SN1" Buoy (Racon).

The light on "SN2" was seen about the same time as "SN1" and is much brighter. Both buoys were seen on radar at ten miles. As there are many fishing vessels, identification of these buoys in poor visibility would require a great deal of care.

Once in the "tanker channel" proceed to the Pilot Station as indicated on the chart.

NOTE: Remember the standard message to "Surnav France" for a tanker carrying hydrocarbons.

Pilotage: Contact made on Channel 16, working Channel 12. Good communications.

Pilot cutter is a large vessel which will come close alongside and send away a small boat. Pilot ladder 1.0 ft. above the water.

The cutter surprised us by steaming towards us at full speed and we eventually met some 3 miles West of the boarding area.

Vessel may only berth (and unberth) at slack water at Montoir. Being loaded means having to arrive at the top of the tide, although if in ballast one may sail at low slack water. Should any supertankers be moving at that time, presumably having booked their tide first, vessel will not be allowed to sail. The Pilot could not confirm whether incoming ships had priority.

NOTE: Unberthing tugs and Pilot to be booked by 1800 hrs. for the following morning. Vessel charged if unable to meet that particular slack water after ordering.

Three tugs used for berthing and unberthing; tugs lines, 1 forward, 1 aft and 1 pushing amidships. Backsprings sent away first.

When unberthing vessel moves upstream to turn.

Mooring boat to handle ropes.

NOTE: There were a lot of buoys which are not marked on the chart due, no doubt, to extensive dredging operations and spoil ground dumping.

Length of pilotage to first line ashore 1 hour 30 minutes.

Berth: Consists of a small "T" jetty with a line of dolphins standing proud of it by 1.5 m. These extend from just forward of the accommodation to No. 1 tank dome, 150 m. approx.

Mooring arrangements were adequate and the linesmen were reasonably adept.

Shore gangway must be used.

It is necessary to rig the low extension to the liquid manifold as the shore Chicksan has insufficient upreach. Invariably berthing port side alongside.

Storing: Prior to this call the berth operators allowed vessels to take on provisions and foodstuffs but port regulations forbid the loading of machinery items or heavy lifts during discharge.

The derrick only plumbs the after corner of the "T" jetty and all items have to be manhandled from the gate to the derrick hook.

If any items of machinery are to be landed or loaded, it is necessary to do this either before discharge or after completion; the port authorities insist on the Chicksan being disconnected, merely stopping discharge is not sufficient.

Similarly they will not allow a fork lift truck to operate on the berth during pumping operations.

Lube oils were taken at this call and we were able to continue this during discharge, simply because the lines were connected before the Chicksan and the lorry was still parked outside the jetty access.

However, after discharge, protest was made against the very low discharge rate and frequent stoppages; the berth operators were most upset by this and have sworn that NO STORING will be allowed there in future. This situation will obviously have to be checked very thoroughly in the event of having a large storing/lube oil programme. Barges are not allowed alongside during discharge.

Discharge: As already noted the low load/discharge line must be rigged on the port side prior to arrival.

There is no vapour return line. Ship supplied 10 in. reducer.

Storage capacity ashore is about 25,000 tonnes.

On arrival there was only a reported 2,000 tonnes in the shore tanks and they were therefore warm with consequent problems for the initial discharge. Apparently these tanks are loaded from the top, the liquid being allowed to free fall to the bottom. In the first 24 hours the discharge rate was little more than 80 t.p.h. and there was a total of 5 hours 29 minutes stoppages at shore request. We could not discover whether this was usual or if it was due to some uncommon machinery defect.

On boarding, the receivers quoted a maximum rate of no more than 400 t.p.h. and probably no more than 300 t.p.h. In fact, once the shore problems were resolved we rapidly increased to 550 t.p.h. and then up to 800 t.p.h. at times. At all times ship discharged to shore requirements, shore personnel at the Chicksan communicating with the officer of the watch, but only by coming on board. No telephone contact, no walkie-talkie. A telephone was put on board by the Agents.

Port Regulations require ship to maintain continuous VHF watch on Channels 16 and 12.

Receivers originally requested vessel to blow through lines on completion but this was not required.

Overall discharge rate 365 t.p.h.

Surveyor: Redwoods, figures taken on gauging of ship's tanks.

General: Fresh water available from quay, not costly.

Bunkers must come by barge, usual restrictions.

No film exchange possible unless with another vessel. If the depots at out ports have sufficient it may be possible to carry out an exchange if ample warning is given.

Chandler was quite good but closes over the weekend, plenty of warning should be given for unusual items.

Access to St. Nazaire by taxi, about 50 francs.

Papers: 2 Crew Declarations. 2 Stores and Bonded Stores Lists. Port Health Form; their own form, spares supplied. 1 Passenger Declaration, made up on board.

Applied for Radio Pratique but this was not granted prior to arrival.

Agents: Very good, very helpful with good representation on board. Local office in Donges, main office at Nantes.

Ballast: The river water is very dirty indeed, flood only being marginally less so than the ebb. High injection points only should be used.

If at all possible ballasting should only be carried out from about half flood to just beyond HW to minimise the amount of deposits within the ballast tanks. Even then an immediate programme of flushing tanks should be put into effect on clearing the river.

Density varied between 1025 and 1010.

SHIPMASTER'S REPORT: August 1989 (Updated 1994).

Donges. Berth No. 7. *Vessel:* 268,000 tonnes d.w.t.

We arrived at Donges after a part discharge elsewhere with a draft of 11.8 m. The pilots advised us that they take vessels up to 15.0 m. draft, and if conditions and tides permit, up to 16.0 m. draft at Donges. A VLCC of more than 300,000 tonnes d.w.t. has been handled in a lightened condition.

Approaches: The approaches are quite straightforward as the vessel can only be berthed at Donges at slack water.

The vessel anchored in the waiting area until the pilot boarded, which was 2.5 hours before high water at Donges.

Pilotage: The pilot boarded from a small launch from the cutter which comes close alongside in the waiting area. We were instructed to have the anchor aweigh and to provide a good lee. It was not necessary for the vessel to steam to the usual pilot boarding station.

Tugs: 5 tugs were used, they approached the vessel after passing under the bridge.

Moorings: The moorings were as per "plan" (See "Plan" Section), namely 2 head lines, 2 stern lines, 2 breast lines forward and aft and 2 spring lines forward and aft. Ship's lines are sent away first, after which mooring gang boards by the shore gangway to assist the ship's crew to take up the 6 shore wires.

Loading: The berth is equipped with 4 × 16 in. Chicksans for crude oil and 1 × 12 in. Chicksan for bunkers.

Departure: Unberthing is performed at slack water and is normally in daylight for vessels of this size as vessels are berthed port side alongside and have to be swung after unberthing. Slack high water is preferred for unberthing, but for vessels which can achieve a light draft it is sometimes possible to unberth at slack low water.

When we were ready to sail the tugs were not available as they were shifting a new ship at St. Nazaire Shipyard and the Port Authorities would not permit us to depart at night, so we had to wait nearly 24 hours after completion of discharge before sailing. This particular set of circumstances does not occur very often.

Repatriation: Easily undertaken via Nantes Airport which is about one hour by taxi from Donges. The local airport at St. Nazaire is visible from the berth, but was not convenient as there were no weekend flights, also crew members undertaking international flights would have to change at Paris.

Garbage: Garbage disposal can be arranged by the agent, we had a large skip (30 cu.m.) left on the quay during our stay.

Cranes: There is a small hydraulic crane on the jetty which is used for positioning of the shore gangway, it may also be used for loading small quantities of stores and laundry and off-loading of garbage, etc. The driver must be ordered from the Port Authority in advance and there is a charge for this service.

AUTHORITY: Port Autonome de Nantes – St. Nazaire, B.P. 3139, 44031 Nantes Cedex, France. *Telex:* 700425 F. *Contact:* Harbour Office.

Nantes (Upstream): 18 Quay Ernest Renaud, 44000 Nantes. *Tel:* 02.40.44.20.54 (Harbour Master), 02.40.44.20.53. *FAX:* 02.40.44.20.02.

Downstream: 3 bis, Boulevard de Verdun, B.P. 422, 44616 Saint-Nazaire. *Tel:* 02.40.00.45.18 (Harbour Master), 02.40.00.45.20, 02.40.00.45.19. *FAX:* 02.40.00.45.66. *Telex:* 700912 F.

NICE: 43.42 N. 07.17 E. (See Plan)

PORT LIMITS: The Port is situated in the N.E. part of the Baie des Anges (Bay of Angels) between the castle hill and the Boron Mount which form at the Nice Cape a rocky promontory towards the South.

DOCUMENTS: The Master of a vessel, when he arrives, is required to fill out an entry declaration, a copy of which is handed to him by his Agent or by the Port Captaincy.

A Crew List and a List of Passengers intended for the Port Commissariat must be drawn up before arrival at the port.

All documents required by marine regulations, i.e. health declaration, manifest, vessel's safety plan etc., . . . are required by the port services.

PILOTAGE: The Pilot Station operates 24 hours a day and is attended by 2 licensed Pilots. Pilotage is obligatory for vessels of LOA 50 m. and over. Pilotage is exempt for vessels of less than 50 m., and if they are equipped with VHF.

The pilotage area of Nice-Villefranche extends as far as 3 miles from the coast between the meridians of the left bank of the Var (07° 12' E.) and of Cap Ferrat (07° 20' E.). Vessels must, if possible, give warning of their arrival 24 hours in advance, particularly if they intend arriving during night-time hours.

Pilots may be called up by regulation signals during the day and night or by radiotelephone to Grasse Radio or Monaco Radio both stations on VHF Channel, telephone Nice Station (93.55.24.41) or to the Port Captaincy (Tel. 93 89 50 85).

ANCHORAGE: The coast being very rocky, does not allow anchorage close to the port. The Villefranche Roads, on the other hand, offers a sheltered zone, giving very good anchorage facilities. In the Villefranche Roads, 2 buoys can be used with the permission of the Nice Captaincy, by vessels merely calling at the port or waiting for a place on the quay at the Port of Nice. There is access for vessels of all dimensions.

RESTRICTIONS: The transport and handling of dangerous or infected materials, within the limits of the Nice Port, are subjected to the requirements of decree of the 1st February 1951 which controls the transport and handling of dangerous materials in maritime ports. There is no operation in this respect at night.

All operations, prescriptions, order and stipulations as laid down in the general regulations and the local regulation covering "Port Services" are governed by the Port Commandant.

MAX. SIZE: The commercial port is accessible to vessels of 145 m. in length and 7.0 m. draft.

HEALTH: Health control at the frontiers is subject to the measures prescribed by the international health conventions; the functions of health police and health guard are entrusted to an Agent in the service of Health. Urgent medical help can be obtained through the intermediary of the radio stations of Monaco and Grasse who establish contact directly with the department concerned.

VHF: Port Officer is on duty 24 hours a day and listens on Channel 16. Working on Channels 12 and 9.

There are two Channels, i.e. 9 and 12 for communication purposes. No communication of a private nature may be handled.

RADIO: Monaco Radio.

VHF: Port Captain on Channel 16.

RADAR: None.

TUGS: None.

BERTHING: Length of usable quays 1,600 m. having a depth of 5.0 m. – 7.50 m. and 10 berths available.

CRANES: Quai Infernet: 1×5 ton crane on rails (scoop and hook).

Commerce: (Commercial Quay) 2 cranes on rails of 6 tons capacity (scoop and hook).

Commerce: (Commercial Quay) 2 hoppers of 50 cu.m. capacity – on rails. 2 Nellen cranes on tyred wheels, capacity 4.2 tons at the end of the jib and 8 tons at 6 m. (with tackle block), and 1×10 ton capacity Gottwald crane with rubber tyred wheels.

CARGO HANDLING FACILITIES:

Material Handling Equipment: All the handling equipment is supplied by the stevedores. 1 forklift of 4 tons capacity and 11 forklifts between 4 and 8 tons capacity.

Storage Facilities: 45,000 sq. m. of open air areas. Specialised equipment for the discharge of bulk equipment (pyrite, clinker, mineral etc.)

Unloading or loading capacity – cement 1,400 tons per day; various: 400 tons to 700 tons per day and per gang; ores in bulk: 1,200 tons per day with 2 hoppers, 2 cranes and 2 gangs.

Facilities for Specialised Goods: 4 platforms for Ro-Ro traffic. Height of quays 1.23 m. and 3.06 m.

BRIDGES: None.

STEVEDORES: 67 professional dockers; 10 occasional dockers.

Employer – Bureau Central de la Main d'Oeuvre (B.C.M.O.) of the Port of Nice.

MEDICAL: Hospitals are situated in the town and give excellent treatment in the case of accidents or illnesses of any nature whatsoever.

Passengers coming from foreign countries are required to abide by the prescriptions of international agreements (vaccination certificates, health certificates, etc.).

TANKERS: No facilities.

DENSITY: *Salinity:* Varies between 34 gm. and 38 gm. per litre.

FRESH WATER: It is possible to take on fresh water at all quays by connection to the main supply. Average rate of supply 60 t.p.h. – price 9.60 Fr. per ton.

FUEL: All types available by truck.

FIRE PRECAUTIONS: The town provides fire fighting facilities. The fire station is close to the Port.

SURVEYORS: Lloyd's of London, The Coasting Mediterranean Company, The Venturer Company, Weir (S.A.), Societe Azureenne de transports et d'affretements Maritimes, Societe Nationale Maritime Corse, Mediterranee, Pittaluga & Co., Martini & Co., Cie Charles le Borgne, Cie Fabre, Cie Fraissinet, Cie Messageries Maritimes, Nautilus Line, Barry Rogliano et Cie.

CONSULS:

Algeria
Austria
Belgium
Benin, Rep. of
Brazil
Colombia
Denmark
Dominican Rep.
Finland
Gabon
Germany
Greece
Iceland
Ireland
Italy
Ivory Coast
Liberia
Luxembourg
Mauritania
Monaco
Niger
Norway
Netherlands
Peru
Philippines
St. Marino
Spain
Sweden
Switzerland
Tunisia
United Kingdom
U.S.A.

REPAIRS: All possible deck and engine repairs can be carried out. There is no dry dock. Hull careening is carried out by underwater procedure.

HATCHES: Hatches are opened and closed by crew.

CUSTOMS ALLOWANCES: 30 cigarettes per person per day; 1 litre of aperitif per 6 persons per day.

REPATRIATION: Airport and railway network in the town.

AIRPORT: International Airport 4 km. from the Port. Principal countries are served by international airlines.

TIME: GMT plus 1 hour (Winter). Summertime kept from April to October.

HOLIDAYS: These are staggered as far as dockers are concerned so that there is continuity of operation.

POLICE/AMBULANCE/FIRE: Police Tel: 17; Ambulance Tel: 18 or 93.92.55.55; Fire Brigade Tel. 18 or 93.86.16.11.

TELEPHONES: Telephones can be installed on board at Papacino Quay, Entrecasteaux Quay, Quai du Commerce, Quai de la Traverse, and Quai Ribotti.

SHORE LEAVE: Crew members may disembark after checking with Police.

IDENTIFICATION CARDS: For foreign seamen a permit to come ashore is issued by the Port Police.

GARBAGE DISPOSAL: Containers and boxes on quay. Daily collection made.

WASTE OIL DISPOSAL: Collection by trucks of 25 tons capacity each. Contact: Sud Est Assainissement, Tel: 93.26.32.19.

SEAMAN'S CLUBS: None.

GENERAL: There is a bus and taxi service very close to the port also there are coastal trading entities within the Port precincts.

AUTHORITY: Capitainerie du Port de Nice, 2 Quai d'Entrecasteaux, B.P 3, 06300 Nice. *Tel:* 93.89.50.85. *Contact:* Captain F. Guivarch, Port Captain.

PARIS: 48.51 N. 02.20 E. (See Plan)

GENERAL: The Port of Paris Authority is responsible for the following ports having maritime trade: Bonnieres, Mantes, Limay, Nanterre, Gennevilliers, Saint-Ouen, Evry and Montereau. They are described in individual entries under "Berthing".

General Description: The Port of Paris facilities are mainly situated on the River Seine, some 230 km. to 480 km. from the sea (English Channel).

The Port Autonome de Paris has under its control 300 port facilities over the 500 km. of navigable waterways of the Greater Paris region (Seine, Oise, Marne, Yonne, Loing). Many of them are attainable by sea-going vessels.

Vessels are generally berthed at the premises of the company receiving or sending goods, these premises being either private or rented from the Port of Paris Authority. Handling is carried out by such companies, using their own staff and materials, materials included in the rented warehouse, or with the assistance of private handling firms. Shipping Agents also perform this function when the sender or receiver is not established at the riverside.

There is 800 ha. of publicly owned riverside land with 30 km. of quays used for storage and distribution.

PORT LIMITS: Within 1 km. of loading or discharging berth or, if occupied by another vessel, where the Pilot will place the vessel in agreement with the consignees.

DOCUMENTS: As Rouen is considered as the frontier port for vessels entering or leaving the Seine above this port (estuary to Rouen is known as "Seine Maritime", Rouen to Paris and beyond as "Seine Fluviale"), documents relating to vessel, crew, passengers, cargo, health, etc., are exactly the same as for Rouen and must be presented to the Agent on arrival in this port or be available to concerned authorities.

PILOTAGE: As for Rouen, except that in spite of Rouen Agents being able to follow the vessel's progress through Rouen Port Information System, Masters should confirm by radiotelephone to Rouen Agents, before entry into Seine, of the final destination, so that "Seine Fluviale" Pilots are waiting to take the vessel from Rouen to inland destination. From Rouen to any place in the Greater Paris Area, pilotage is not compulsory, even if highly recommended for Masters with no experience of the river or under special conditions (floods, fog, etc.).

ANCHORAGE: See "Rouen".

RESTRICTIONS: Depending on place to be reached. Draft 3.5 m. – 2.8 m., airdraft 8.75 m. – 5.25 m., beam 15.5 m. – 11.4 m. Above Rouen, night navigation only possible on request to Rouen Agents.

MAX. SIZE: 120 m. length, 15.5 m. beam, 3.5 m. draft and 8.75 m. airdraft.

Largest vessel handled: 3,124 d.w.t.

HEALTH: See "Rouen".

RADIO/VHF: Contact Rouen Pilot Station as soon as possible. Vessels arriving in Seine Estuary are automatically registered by the Port of Rouen Information Centre, which data is accessible to Agents. Any special messages to inland Agents or Receivers should be made by radiotelephone direct or via Rouen Agents, or by VHF (Channels 16 and 73) to Rouen Agents when in "Seine Maritime". Pilot can always help Masters send these messages via Rouen Port Station (Channel 73). Normal communications to be sent via local coastal radio station (Rouen Radio, Channel 27). In the "Seine Fluviale" all locks have VHF and telephone by which messages can be relayed in case of accident, breakdown or delays. Pilot notifies inland Agents by telephone of such incidents.

RADAR: There is no radar service in the "Seine Fluviale". Bridge piles are equipped with radar reflectors.

TUGS: No offical tug service on "Seine Fluviale", but in case of breakdown, local tugs may be hired.

BERTHING:

Paris/Bonniere Sur Seine: Lat. 49° 02' N., Long. 01° 34' E.
Restrictions: Draft 3.5 m., beam 15.5 m., airdraft 8.75 m.
Private Berths: 1. Silos de Bonnieres, Quai de Seine, 78270 Bonnieres sur Seine. Tel: +33.1.30.93.04.37. Fax: +33.1.47.03.93.07 (Paris Offices). Grain silo with a 26,000 ton total capacity (24 cells).
2. Iton Seine, Quai de Seine, 78270 Bonnieres sur Seine. Tel: +33.1.30.98.20.80. Fax: +33.1.30.93.31.14. Mini steel plant with a 10 ton gantry crane.

Paris/Mantes: Lat. 48° 59' N., Long. 01° 43' E.
Restrictions: Draft 3.5 m., beam 15.5 m., airdraft 8.75 m.
Private Berth: Societe Cooperative Agricole de Magny, Mantes et Environs, 5 Rue Castor, BP 1050, 78202 Mantes la Jolie Cedex. Tel: +33.1.30.33.06.30. Fax: +33.1.30.94.53.71. Grain silo with a 14,000 ton total capacity (29 cells).

Paris/Limay: Lat. 48° 59' N., Long. 01° 45' E.
Restrictions: Draft 3.5 m., beam 15.5 m., airdraft 8.75 m.
General Description: 110 hectare industrial port zone with 1,700 m. of quay, 27,000 sq.m. of warehouses, including 3×20 ton travelling cranes, one heavy load Ro-Ro ramp.
Authority: Port Autonome de Paris (local office), 62 Route du Hazay, 78520 Limay. Tel: +33.1.30.92.56.00. Fax: +33.1.30.92.57.43.

Paris/Nanterre: Lat.48° 54' N., Long. 02° 11' E.
Restrictions: Draft 3.0 m. – 3.5 m., beam 11.5 m., airdraft 8.75 m.
Private Berth: Etablissements Metallurgique J. Champion, 12 Rue du Port, BP 329, 92003 Nanterre Cedex. Tel: +33.1.40.97.68.68. Fax: +33.1.47.24.10.79. Steel distribution centre specialised in girders.

Paris/Gennevilliers: Lat. 48° 57' N., Long. 02° 16' E.
Restrictions: Draft 3.5 m., beam 15.5 m., airdraft 8.75 m.
General: 330 hectare industrial port zone with 8,000 m. of quay, 148,000 sq.m. of publicly owned warehouses, a container centre offering a 35 ton travelling gantry crane and various lift trucks, Ro-Ro car facilities, a reinforced quay for heavy load handling, 430,000 cu.m. of petroleum products storage tanks, neighbouring specialised berths.
Authority: Port Autonome de Paris (local office), 62 Route Principale du Port, 92230 Gennevilliers. Tel: +33.1.46.13.98.98. Fax: +33.1.47.92.26.85.

Paris/Saint-Ouen: Lat. 48° 55' N., Long. 02° 20' E.
Restrictions: Draft 3.5 m., beam 15.5 m., airdraft 8.1 m.
Private Berth: GEC Alsthom, 25 Rue des Bateliers, BP 169, 93404 Saint-Ouen Cedex. Tel: +33.1.49.45.70.70. Fax: +33.1.49.45.71.34. Telex: 234238. Industrial plant producing heavy electrical equipment (transformers, turbines, generators) with a 400 ton gantry crane.

Paris/Evry: Lat. 48° 38' N., Long. 02° 27' E.
Restrictions: Draft 2.8 m., beam 11.4 m., airdraft 6.0 m.
General Description: 5 hectare industrial port zone with a 350 m. quay, including specialised heavy load berth (reinforced area, 530 ton crane at 6 m. from the quay, Ro-Ro ramp).
Authority: Port Autonome de Paris (local office), 22 bis Quai d'Austerlitz, 75013 Paris. Tel: +33.1.44.06.19.00. Fax: +33.1.45.85.10.98.

Paris/Montereau: Lat. 48° 23' N., Long. 02° 56' E.
Restrictions: Draft 2.8 m., beam 11.4 m., airdraft 5.5 m.
General Discription: 15 hectare industrial port zone, presently equipped with 2 wharves, one of them being privately used by a neighbouring mini steel plant.

STEVEDORES: *Working Hours:* Normally 0800 hrs. – 1200 hrs. and 1300 hrs. – 1700 hrs.

MEDICAL: Many hospitals available.

DENSITY: 1000 (River fresh water beyond the first lock).

FRESH WATER: Available at most quays and by barge.

FUEL: One barge delivers fuel.

CONSULS: Nearly all countries represented in Paris.

REPAIRS: *Main Yards:*

Chantiers Navals d'Acheres, La Croix d'Acheres 78260 Acheres. Tel: +33.1.39.11.02.27. Fax: +33.1.39.11.22.92.

Chantiers Navals de la Haute-Seine, rue des Voeux Saint-Georges, 94290 Villeneuve-le-Roi. Tel: +33.1.46.61.43.33. Fax: +33.1.49.61.43.30.

DRY DOCKS: Slips in the yards above. 1×1,100 ton synchrolift in Acheres (73 m.×13 m. platform).

SURVEYORS: Bureau Veritas, Lloyd's, American Bureau of Shipping and Norske Veritas have surveyors in Rouen or Paris.

GANGWAY/DECK WATCHMEN: Not normally considered necessary.

HATCHES: Normally opened by crew.

CUSTOMS ALLOWANCES: Same allocation per man per day as Rouen with allowance made for inland voyage.

AIRPORT: Paris "Charles de Gaulle" and "Orly".

TIME: GMT plus 1 hour (Winter), GMT plus 2 hours (Summer).

HOLIDAYS: Saturdays, Sundays and legal holidays (January 1st; Easter Monday; May 1st; May 8th; Ascension Thursday; Whit Monday; July 14th; Assumption Day; November 1st and 11th; Christmas Day).

TELEPHONES: Not available, but telephone always within short distance of quays.
SERVICES: Compass adjusting may be arranged by Rouen on outward trip.
SHORE LEAVE: Seamen's Book sufficient.
GARBAGE DISPOSAL: Various solutions available ranging from municipal collection system to private contractors. Ship's agent should be able to give details.
WASTE OIL DISPOSAL: The following are approved engine waste oil stations :

Station Rolleboise, kilometre mark 119.0 (Left Bank), 78270 Rolleboise. Tel: +33.1.30.93.21.47.

Station Fluviale Mobil, kilometre mark 70.8 (Left Bank), 78700 Conflans-Ste-Honorine. Tel: +33.1.39.72.65.75.

Firemen's Wharf, Port of Gennevilliers. Tel: +33.1.47.94.47.53.

CURRENCY: French Franc (FFr.). U.S.$1.00 = 5.02 (7.8.96).
AUTHORITY: Port Autonome de Paris, 2 Quai de Grenelle, 75732 Paris Cedex 15. *Tel:* +33.1.40.58.28.70. *Telex:* 204487 Poronom. *FAX:* +33.1.40.58.29.48. *Contact:* Bernard Chenevez, General Manager. Remi Loth, Head of Maritime Operations.

PORT-VENDRES: 42.31 N. 03.07 E. (See Plan)

DOCUMENTS:
3 Crew Lists.
5 Passenger Lists.
2 Store Lists.
1 Maritime Health Declaration.
4 Cargo Manifests.
2 Bills of Lading.
Ship's Papers: Nationality Act, International Tonnage Certificate.

PILOTAGE: Pilotage is compulsory for all vessels over 45 m. LOA. Request for pilot should be sent with ETA 18 hours prior to arrival by telex or cable via Marseille Radio.

Pilot boards 1.0 miles North of Mole Abri.

Pilots: Pilot Station – Port La Nouvelle/Port Vendres, 152 Avenue
de la Mer, 11210 Port La Nouvelle.
Tel: 68 48 01 81 or 68 82 00 75.
Fax: 68 48 25 40.
Telex: 505588.
Cables: PILONOV.
VHF: Channel 12.

MAX. SIZE: Max. length 150 m. max. draft 8.0 m.
HEALTH: Usually Customs give Free Pratique. In event of suspected disease or fever on board must advise naval doctor.
RADIO: Marseille Radio (or St. Lys Radio) or Perpignan Radio.
TUGS: 2×200 h.p. launches assist with mooring.
CRANES: 1 shore crane available only of 55 tons.
SPECIALISED CARGO-HANDLING FACILITIES: 2 Roll-on/Roll-off berths, 1 refrigerated warehouse 11,000 cu.m., and 1 warehouse of 1,200 sq.m. with temperatures regulated at 10° centigrade.
STEVEDORES: ETA to be given to Agent in order to arrange gangs (usual rate per day. 8 normal working hours). 200 tonnes per gang.
MEDICAL: Perpignan Hospital (30 km. away).
TANKERS: Berth for wine tankers with pipeline.
DENSITY: Salt water.
FRESH WATER: Supplied by Chambre de Commerce, Port-Vendres.
FUEL: For small craft only, otherwise delivery by trucks.
REPAIRS: Minor repairs only.
DRY DOCK: 1 travelift for craft up to 150 tons.
SURVEYORS: Available from Sete or Marseilles.
OPENING/CLOSING HATCHES: Normally to be carried out by crew (or as per charter party if any).
CARGO GEAR: Load/discharge effected by ship's gear.
GANGWAY/DECK WATCHMEN: Recommended if loading dangerous cargo.
CERTIFICATES:
Load Line Certificate.
International Tonnage Certificate.
Derat Certificate.
CUSTOMS ALLOWANCES: See "Calais".
AIRPORT: Perpignan Rivesaltes (30 km.)
TIME: GMT plus 1 hour in Winter. GMT plus 2 hours in Summer.
HOLIDAYS: As for whole France – cargo work can be arranged on those days as overtime.
POLICE/AMBULANCE/FIRE: Tel. 17 or 68.82.00.60 or five long blasts. Officier du Port: 68.82.12.00.
EMERGENCY CO-ORDINATION CENTRE: Crossmed Toulon.
SERVICES: Workshop for small repairs, radio/radar repairs available, ship chandler for bonded stores, laundry.
STORING: Vessels can be stored by truck only, which are able to proceed alongside the berth. Fork lift trucks available. Customs Regulations in force.
SHORE LEAVE: Crew members are allowed ashore.
IDENTIFICATION CARDS: Only Seaman's Book required.
AUTHORITY: Service Maritime-Capitainerie du Port, 66660 Port Vendres. *Tel:* 68.82.12.00.

PROPRIANO: Corsica, 41.40 N. 08.54 E. (See Plan)

DOCUMENTS:
3 Crew Lists.
3 Passenger Lists.
1 Provisions List.
1 Cargo List.
1 List of Articles (new and Customs-barred) in possession each crew member – cameras, binoculars, radios, cigarettes, spirits, etc.
1 Health Declaration.

PILOTAGE: Not compulsory.
ANCHORAGE: Outside port for cruise vessels.
MAX. SIZE: Draft 5 m.; length 160 m. (Ferry Berth).
RADIO: Within 50 miles call Ajaccio Radio VHF Channel 16. Then connected over Channel 23 to telephone network.
TUGS: None available.
BERTHING: 3 basins, depths 4.0 m., 6.0 m. and 3.7 m. New Marina with 370 berths. Facilities include fresh water, electricity, telephone. Crane (12 tonne) available for lifting pleasure craft. Engine repairs also possible.
STEVEDORES: 24 hours accurate ETA necessary for ordering gangs. No work on Sundays and official holidays.
CARGO GEAR: Only a few nets and slings available; all other gear must be supplied by ship. Ship's derricks used.
FRESH WATER: Available at very slow pumping rate.
FUEL: Available. Tel: 95.76.12.37.
REPAIRS/CONSULS: None.
TIME: GMT plus 1 hour in Winter. GMT plus 2 hours in Summer.
AIRPORT: Propriano Tavaria 6 km. Direct flights to Marseilles, Nice and Lyons in Summer. Daily connections Airport Campo del Oro/Ajaccio.
POLICE/AMBULANCE/FIRE: Tel. Gendarmerie Propriano 95.76.00.17.
AUTHORITY: Administration du Port de Propriano, Quai St. Erasme, Propriano. *Tel:* 95.76.10.40. *Contact:* Captain A. Duval, Port Captain.

QUIMPER: 47.58 N. 04.07 W. (See Plan)

LOCATION: Quimper Port is located 80 km. South of Brest, on the River Odet, downstream from the town of Quimper, 16 km. from the sea.
DOCUMENTS:
Crew List.
Passenger List.
Customs Documents.
Port Health Documents.
Manifest of Cargo.
Stores on Board.
Ship's Papers.

PILOTAGE: *Pilot Station – Notice of Arrival:* Pilotage for the ports of Loctudy and Odet, as well as Concarneau, is provided by the Brest Station which despatches a Pilot to Concarneau, where there is a permanent office and a pilot boat. Tel: 98.50.89.03.

The request for a Pilot must be received at least 18 hours in advance and should state, in addition to the vessel characteristics, the preferred time and place of embarkation.

Pilotage Areas and Requirements: Pilotage is compulsory for vessels over 50 m. LOA and all vessels carrying oil, gas or hazardous substances in the so-called "Concarneau-Odet" pilotage area which extends:

to the North of the parallel of the "Jument de Glenan Buoy", to the South of the Glenan Islands;
to the West of the alignmen at 013.7° of the sea marks of the Point de Raguenes and Ile Verte;
and to the East of the meridian of the Men ar Groas (Lesconil) Lighthouse.

Pilotage is also compulsory for sand carriers with a net tonnage of 100 tons in the area limited to the East by the line joining Beg-Meil to Ile aux Moutons and to the South by that joining this island to the Men ar Groas (Lesconil) Lighthouse.

Vessels, for which pilotage is not compulsory but which require the assistance of a Pilot, can take the Pilot onboard halfway between Ile aux Moutons and Beg-Meil. Those vessels which do not have a plan are advised to come close to the East cardinal light-buoy, "Karek Greiz", located 1.9 miles S.S.E. of Lesconil, where the Pilot embarks in fair weather.

APPROACHES: *Channels and Fairways:* Charts No. 7146 and 7313.

To gain access to Odet or the River Pont-l'Abbe, coming from West of the Glenan Islands, vessel either uses the Benodet Channel, or pass South or North of Ile aux Moutons to rejoin the Fairway from the East.

ANCHORAGE: Depths of 11 m. in position with the Taro Tower, bearing 245°; distance 0.8 miles.

Depths of 6 m. in position with the Point of Combrit bearing 000°; distance 0.5 miles.

Depth of 9 m., bottom sand and mud, in Du Trez Anchorage at the mouth of the Odet.

RESTRICTIONS: Vessels arriving at night must anchor outside the port entrance. It is dangerous to enter the river at night as there are no lights, and the channel is restricted by yachts at anchor.
MAX. SIZE: At spring tides: length 80 m.; breadth 12 m.; draft 5.3 m. At neap tides: length 80 m.; breadth 12 m.; draft 3.40 m.
RADIO: The Port Superintendent requires 24 hours notice of arrival.
TUGS: No tugs available.
BERTHING: At one quay there is 226 m. length for coasters. One quay of 120 m. length for discharging sand. No quay cranes, but cranes are available for hire.
MEDICAL: Hospitals nearby.
TANKERS: No facilities.

FRESH WATER: 5 drinking-water hydrants situated on the quay, loading rate 12 t.p.h.
FUEL: Can be supplied by various companies from tanker lorries.
AIRPORT: Airport of Pluguffan situated 4 km. from the port. 2 regular daily flights to Paris.
GARBAGE DISPOSAL: Not available.
WASTE OIL DISPOSAL: Not available.
SEAMAN'S CLUBS: None.
CURRENCY: French Franc.
AUTHORITY: Conseil General, Service Departmentale Maritime Sud, 23 Quai Pors Moro, B.P. 124, 29120 Pont L'Abbe, France. *Tel:* 98.82.84.00. *FAX:* 98.82.84.29. *Contact:* Jean Baptiste Huet, Commandant du Port.

ROCHEFORT SUR MER: 45.56 N. 00.57 W. (See Plan)

For all general information refer to Tonnay-Charente.
MAX. SIZE: Max. permissible length: 116 m; breadth: 16.5 m. (ships must pass through a lock of 18 m. width).
Max. draft is 5.6 m. at Neap tides, 6.3 m. at Spring tides.
Max. Size using Lock: LOA 100 m. Beam 16.5 m. Vessels enter 3 hours before to 3 hours after HW.
BERTHING: Lock Quay: Open storage area 1,900 sq.m.
South Quay: 2 berths, length 100 m. and 250 m. Public storage 4,200 sq.m. and private storage 9,200 sq.m.
West Quay: 2 berths, length 110 m. each. Public open storage 7,900 sq.m.
Bachelar Quay: 2 berths, 110 m. each. Public open storage 2,500 sq.m., private warehouse 4,000 sq.m. and public warehouse 2,900 sq.m.
CRANES: 1×5 ton electric crane on rails, 2×5 ton mobile cranes and 2×10 ton mobile cranes.
POLICE/AMBULANCE/FIRE: Police 17; Ambulance 46.87.10.33.
GARBAGE DISPOSAL: Possible. Consult agent.
WASTE OIL DISPOSAL: Possible. Consult agent.
SEAMAN'S CLUBS: Available at La Rochelle, 30 km.
CURRENCY: French Franc (FFr).
AUTHORITY: Direction de l'Amenagement du Department de la Charante-Maritime B.P. 125, Avenue William Ponty, 17306 Rochefort-Sur-Mer Cedex. *Tel:* 46.99.44.93. *FAX:* 46.99.44.93. *Contact:* M. Verbieze, Harbour Master.
Chambre de Commerce et d'Industrie de Rochefort, Corderie Royale, 17306 Rochefort, France. *Tel:* 46.87.34.56. *Telex:* 791 171 F. *FAX:* 46.99.13.28.

ROSCOFF: 48.43 N. 03.59 W. (See Plan)

PILOTAGE: Send ETA at least 24 hours in advance. Pilot and Harbour Master listen on VHF Channel 16, 0700 – 1100 hrs., 1300 – 2200 hrs. Pilotage compulsory for vessels over 150 n.r.t.
Pilot boards 0.5 miles East of Astan Buoy.
ANCHORAGE: Anchorage and laying-by can be carried out in an area sheltered from S.E. and N.W. winds, bounded on the East by the "Basse Bloscon" and on the West by the "Menk" and "Duons" Reefs.
MAX. SIZE: 5,000 d.w.t.
VHF: Pilot and tugs on VHF Channel 16 throughout 24 hours.
Signal Station on the Isle of Batz: Tel: 98.61.76.06 or VHF Channels 12 and 16.
Signal Station at Brignogan: Tel: 98.83.50.84 or VHF Channel 16.
Signal Station at Ploumanach: Tel: 98.23.21.50 or VHF Channel 16.
BERTHING: Safely accessible pier 240 m. long with 7 m. of water at lowest tides.
Quay 90 m. long with 3.5 m. of water at lowest tides.
Quay 120 m. long with 5.0 m. of water at lowest tides.
Storage warehouses (1,200 sq.m.).
Weighbridge (50 tonnes).
20 acres of parking facilities and other space.
Cranes available on request.
Electric power supply on all quays.
With strong N.E. winds, conditions in the harbour can be uncomfortable.
Minimum depths as per "Plan". Range of tide 9.6 m. maximum.
Cargoes Handled: Car Ferries – Inward: Fish and shellfish, milk, china clay, meat and cattle, steel, machine parts, paper, etc.
Car Ferries – Outward: Vegetables, fruit, meat, paper, machine parts, plastics, ship's stores, etc.
Freighters – Inward: Sand and marine aggregates, ammonia sulphate, fertilisers, seed potatoes, shellfish, etc.
Freighters – Outward: China clay, scrap iron.
CRANES: Mobile cranes of 25 tonnes and 72 tonnes.
FRESH WATER: Piped on to quays.
FUEL: By road tanker.
AIRPORT: Airport at Morlaix, 13 miles away. Airport at Brest, 35 miles away, flights to London and Paris.
TELEPHONES: Payphones available at the Ro/Ro terminal.
GARBAGE DISPOSAL: Galley rubbish is collected in dustbins on the quay or taken away directly by the Harbour Authority compacting skip, depending on the amount. This service is free of charge. Industrial rubbish must be collected in a special skip for which there is a charge of 700 FrF/ton. Contact the Harbour Master for details in all cases.
WASTE OIL DISPOSAL: Not available.
SEAMAN'S CLUBS: None.
CURRENCY: French Franc (FFr.).
There is an automatic currency changing machine in the ferry terminal.
SERVICES: Laundry available at Roscoff.
Chandler at Brest. The Agent can arrange for small quantities to be delivered from the hypermarket at St. Pol de Leon, 2 miles.
GENERAL: Customs are based at the Ro/Ro terminal.
Daily car ferry service to Plymouth, weekly to Cork and to Rosslare (June to September). Local train service.
AUTHORITY: Chambre de Commerce et d'Industrie de Morlaix, B.P. 43, Port de Bloscon, 29682 Roscoff, France. *Tel:* 98.62.39.39. *Telex:* 940696. *FAX:* 98.62.39.50. *Contact:* Jean-Pierre Addes, Port Manager. Roscoff Port Office. Tel: 98.61.27.85. Fax: 98.61.18.16.
Roscoff Harbour Master. *Tel:* 98.61.27.84. *FAX:* 98.61.11.81. *VHF:* Channels 16 and 12. *Contact:* Jean-Pierre Croguennec.

ROUEN: 49.28 N. 01.04 E. (See Plan)

DOCUMENTS:
Cargo Manifest or Manifest of Ballast.
Certificate of Cargo Space.
Bills of Lading.
Ship's Register.
6 Crew Lists.
3 Passenger Lists.
Health Declaration.
Derat Certificate or Exemption.
Declaration of Crew Personal Effects.
Certificate of Insurance for Oil Pollution Damages (tankers over 2,000 tons).
PILOTAGE: Vessels proceeding to the ports of Rouen and Honfleur are met by Pilot on La Carosse Roads (Rade de La Carosse). Pilotage is compulsory between the mouth of the Seine and Rouen. Vessels of 55 m. length and less can be exempt from the obligation for the lower sector of the river, and vessels of 45 m. and less for the upper sector, on condition that such vessels be equipped with suitable radar, with VHF sets and able to speak French, and that they are not carrying dangerous goods. Each vessel taking a Pilot for the downriver stage between La Carosse Roads and Caudebec, or vice-versa, and a Pilot for the upriver stage between Caudebec and Rouen, or vice-versa.
The following signals should be made for summoning a Pilot on La Carosse Roads: By Day: flag "G" of the International Code of Signals. By Night: in morse by signalling lamp. Failing this, the vessel should hoist her national ensign at the foremasthead.
The following additional signal can be made: 5 prolonged blasts (– – – – –) to call attention to Pilot.
The radio station "Rouen-Pilot", located in the radar tower at Honfleur keeps a permanent watch day and night on VHF Channels 16 and 73. Masters are requested to call this station when arriving on the Roads.
Vessels leaving harbour or shifting berth should apply for a Pilot to the Pilotage Office, 21 Avenue du Mont-Riboudet, Rouen (Tel: 32.10.24.01).
Helmsman: Masters and Owners are advised that temporary crew members including helmsmen for the river are available from the Boatmen Association of Rouen. In the case of an incoming ship, they should be requested by cable to Harbour Master at least 6 hours before arrival in roads.
ANCHORAGE: In the outer roads at La Carosse.
One waiting berth on buoys at Villequier and one on dolphins at Vatteville, for vessels going down the river and awaiting the tide.
RESTRICTIONS: The height of water above chart datum at Le Havre is broadcast by Honfleur VHF radar station on request.
MAX. SIZE: Vessels over 280 m. length have entered. Draft approximately 3.5 m. more than height of tide at Le Havre. Maximum about 37 ft. Port accessible to vessels of 40,000 d.w.t. fully laden and 110,000 d.w.t. partly laden.
HEALTH: Pratique given by Customs Officers who board on arrival. If any case of suspected disease on board or any reason why vessel should not receive Free Pratique, Master should radio Agent before arrival, advising full details.
RADIO/VHF: Vessels are obliged to give their ETA and draft in salt water at least 5 hours before arrival to Rouen Information Centre via Brest – Le Conquet Radio or Boulogne Radio. The Port of Rouen Authority has introduced a VHF network of frequency modulation for port needs working on the following frequencies: Channel 16 (156.800 MHz); international safety and watch frequency. A permanent watch is maintained on this frequency at the Information Centre of the Port of Rouen. All vessels entering the 22 mile circle centered on La Heve Lighthouse must contact "Baie de Seine Trafic" on Channel 22.
Channel 73 (156.675 MHz) compulsory frequency to be used by all ships, boats, ferries . . . in movement between the pilot boat station and Rouen. Call on Channel 73 in case of fire, injury, sickness, etc. (24 hours).
Channel 68 (156.425 MHz) upper part of river, Channel 15 (156.750 MHz) down part of river, secondary working frequencies.
Special Process for Tankers and Vessels Carrying Dangerous Goods in Bulk: For oil tankers it is compulsory, before entering the 12 miles limit, to have a VHF contact with Rouen-Pilot or with Rouen-Port, and to keep permanent VHF watch till the ship is back out of this limit.

Tankers over 250 m. length or 12 m. draft must wait for Pilot 7 miles from shore, others can come to La Carosse Roads, passing half mile South of Buoy LHA and remaining always South of a line marked by the buoys LHA and RN.

They have obligation to announce every fault in engines, anchors or windlass, steering gear, radar, mooring gear, and their Masters must sign an inquiry paper given by the Pilot when coming on board.

PORT RADAR: Two radar stations are located respectively at the East of Honfleur and on the right bank of the river 12 miles upstream at Radicatel.

Both stations are operated from Honfleur and work as navigational aids between the first buoys of the channel and Aizier, from 2 hours after until 8 hours after low water Le Havre.

To obtain information call on VHF Channel 16 (156.800 MHz) or 73 (156.675 MHz).

Information given by this radar, at ship's option, is considered as an aid only and implies no responsibility either to the Port Authority or its Agents in any subsequent recourse to such information, which is given free of charge.

TUGS: Permanently available in the Port of Rouen. Tug assistance in the River Seine is available on request.

MOORING: See "Notice".

BERTHING: The main Maritime Port of Rouen extends from the Guillaume le Conquerant Bridge as far as La Bouille over a distance of 11 miles. Quays and wharves cover the length of both banks of the Seine. There are also 5 basins in direct connection with the river without the interposition of any locks.

On the Right Bank: St-Gervais Docks; on the Left Bank: the Timber Dock, the Rouen-Quevilly Dock, the Floating Docks tidal basin, and the "Bassin aux Hydrocarbures" at Petit-Couronne.

The extent of quayage in the Maritime Port is about 38,000 ft., and in the river docks 5,900 ft.

Between the downstream limits of the Port of Rouen and the sea are a number of maritime establishments serving local requirements. The most important of these, all of them managed by the Port Authority of Rouen, being the petroleum terminal at Port Jerome and the quays of St. Wandrille (2,000 ft.) and Radicatel (1,380 ft.).

Containers: 2 berths at the Quai de l'Ouest (St.-Gervais Dock) with 1×25 ton crane.

2 berths at Grand Couronne Moulineaux with 2×35 ton gantry cranes.

One private berth at Radicatel Quay with a gantry crane.

Roll-on/Roll-off: 4 berths in service of which 2 Roll-on/Roll-off berths at Petit Couronne and Quai de Rouen – Quevilly able to load or unload rolling heavy lifts up to 400 tons (max. draft: 10 m.)

Dock	*Quay*	*Facilities*	*Length (m.)*	*Depth at low water (m.)*
Seine	Rive Droite Amont (RDA)	Waiting berth	2,636	6.3/9.0
St.-Gervais	Quai de L'Ouest (QW)	4 cranes 8 t 2 cranes 25 t – 1 crane 35 t	411	9.0/9.5
Seine Rive Droite (Aval)	Silo Skalli	1 unloading machine for hard corn 150 t/h. Grain shed capacity 32,000 t.		7.3
	Silo Levy	1 loading machine for grain in bulk 500 t/h. Grain shed capacity 30,000 t.		10.0
	Silo Soufflet	1 loading machine for grain in bulk 600 t/h. Grain shed capacity 170,000 t.		10.0
	Poste 13	Waiting berth max. length 190 m.		9.0
	Poste 15	Waiting berth max. length 280 m.		10.5
	Poste 19	Caustic soda max. length 110 m.		7.0
	Silo Lecureur	1 loading machine for grain in bulk 1,000 t/h. Grain shed capacity 120,000 t.		9.5
	Poste 23	Waiting berth max. length 120 m.		6.5
	Poste 25 (CPA)	Pipelines, vegetable oils, molasses. 79,000 cu.m. specialised tanks.		6.5
	Poste 27 (CPA)	Same use as Poste 25.		8.2
Seine	Rive Gauche	Cruise vessel berth.	582	7.5/9.0
	Amont	Waiting berth.	568	
	(RGA)	Open storage – Coal.	200	9.8
Bassin aux Bois	(Q.B.B.)	5 cranes 7.5 t; 1 crane 8 t 1 crane 25 t. 2 special gantries for loading bags.	723	6.0
		Sugar (Storage capacity 60,000 t).		9.3
Quai de la Presqu'Ile Elie	(Elie)	Cranes for grain in bulk. 2 cranes 1,200 t.p.h. 2 cranes 800 t.p.h. 1 crane 600 t.p.h. Grain shed capacity 250,000 t.	800	9.0/10.0
Bassin de Rouen-Quevilly	(Q.R.Q.) Rive Nord	6 berths with unloading grain 150 t.p.h. 2 Ro-Ro ramps capacity 400 t.	1,610	10.5
	Rive Sud	Specialised newsprint. Specialised forest products. 4 cranes 8 t – 2 cranes 7.5 t. 1 Ro-Ro ramp capacity 200 t.		
Seine Rive Gauche (Aval)	Maprochim Appontement (MPCA)	Phosphoric acid – Capacity 6,500 cu.m.		7.0
Seine Rive Gauche (Aval)	Maprochim Quay (MPC)	2 gantry cranes 7 t (phosphates). 1 gantry crane 10 t. 1 pipeline sulphur.	220	9.5
	CPA 1	Phosphoric acid.		6.0
	Charvet	1 gantry crane 120 t.p.h. Domestic coal.		5.3
	AGQ	Specialised liquified ammonia gas.		9.5
	CPA 2	Pipeline refined oil.		8.8
	CPA Quay	Refined oil, phosphoric acid, chemical products.	320	10.5
	CPA 3	Crude oil – gasoline (CPA storage capacity 563,000 cu.m.).		9.3
	Simarex	2 loading machines for grain 400 t.p.h. Grain shed capacity 180,000 t.		9.5
	Poste 14	Waiting berth.		7.0
	Quai de Petit-Couronne (QPC)	2 cranes 6 t – 3 cranes 35 t. 1 crane 25 t. Specialised flour. 1 ramp for Ro-Ro of 400 t.	625	9.0
Jupiter	BJ 1	Refined products.		8.0
	BJ 2	Refined products.		8.0
	BJ 3	Gas pipeline (Shell)		9.0
	NAJ	Refined products.		11.0
	PAJ	Refined products.		8.0
	Quai de la Papeterie (QPAP)	6 cranes 7.5 t. Fertiliser and wood.	390	8.5
	Quai Sogema (SGMA)	2 cranes 10 t at 48 m. 1 crane 15 t at 42 m. 2 cranes 8 t at 30 m. Specialised: Coal, all bulk and bags.	370	8.2/10.7
	Quai Carue (Caru)	2 cranes 25 t. Specialised: Solid bulk.	400	11.0
	Silo MRM	3 loading machines for grain 3×1,000 t.p.h. Grain shed capacity 385,000 t.		11.0
	Appontement Comexol (GCVL)	Oilseeds capacity 50,000 t.		9.5
	Quai de Grand-Couronne/ Moulineaux (QGCM)	2 gantry cranes 30 t. 1 crane 25 t. 2 cranes 8 t – 2 cranes 5 t. Specialised: Containers and general.	800	11.0
	Terminal Conteneurs et Marchandises Diverses (TCMD).	1 crane on tyres 40 t. 100 t for heavy lift.		
	Poste de Moulineaux Attente (MLXA)	Waiting berth.		11.0
Quai St.-Wandrill	(QSTW)	1 crane 8 t – Waiting berth. Specialised: Coils (SLD).	645	9.5
Quai de Radicatel	(RADI)	1 gantry crane for containers (Bell Lines). Waiting berth.	420	10.0
Quais de Honfleur	QSH 1	2 cranes 30 t.	122	9.0
	QSH 2	2 cranes 7.5 t.	122	9.0
	Miroline (Miro)	All refined oil – Chemical products and fertiliser. Storage capacity 480,000 cu.m.		9.0

STEVEDORES: From Monday to Friday 24 hours working. 0600 hrs. – 2200 hrs. (normal tariff) and 2200 hrs. – 0600 hrs. (overtime rates).

Saturday at overtime rates.

No work 1st May, 25th December and 1st January.

MEDICAL: All facilities available. Vaccination Certificates required if vessels coming from a North African port. Yellow fever inoculations required if vessel coming from South of parallel 30° N.

TANKERS: Petit Couronne, Shell, 5 berths. One berth for vessels up to 250 m. length and 11 m. draft. CPA, 4 berths for refined oil (one with 11.0 m. draft.)

Port Jerome, Esso and Mobil Oil, 2 berths for vessels up to 11 m. draft (7 berths total).

Honfleur, Miroline – 1 berth.

Deballasting facilities available at all berths (Except CPA 3).

Report: 1982.

Petit Couronne (Butane/Propane): Max. LOA 170 m. Bollards 40 m. downstream from loading arm and 30 m. upstream from loading arm. Vessels berth with bow to seaward. Max. draft 28 ft. (8.5 m.). Height of manifold above waterline 10.0 m. Max. distance between edge and manifold of ship 4.9 m. There is no special connection for the gas phase. Diameter of discharge arm 6 in. (300 ASA).

Report: 1985.

Port Approaches: Tankers carrying dangerous cargo, when approaching River Seine Ports need to be aware of the heavy traffic. When sailing inside the French Territorial Waters, these vessels have to follow special French Regulations as mentioned in Sailing Directions. For example, navigation is forbidden inside a 7 mile limit off the French coast without Pilot, except for anchoring in emergency or in some dedicated places; no crossing of Antifer, Le Havre entrance channels permitted within this 7 mile limit or during a VLCCs transit, etc.

In-Port: The Port Jerome berths' main short-comings are: The strong tide currents and the passing ships' effect when berthing/unberthing. VHF contact with Pilots of passing ships are very important as these can disturb the manoeuvre.

When berthed, moorings have to be strictly and frequently checked; they must be maintained tight as passing ships' effect is very significant, especially at LW. See "Notice" – "Special Regulation for tankers in Port Jerome".

Tidal Entry: The "River Seine Pilotage" issues a monthly recommended maximum draft for each HW for vessels proceeding to and sailing from River Seine ports.

Water heights may be influenced by atmospheric (winds) and Hydrologic perturbations (flow of the river).

Ships have to use the tide to enter the river taking into account ship's draft, tidal currents and the possibility to moor the tanker at Port Jerome starboard side to during the last hour of flood stream. Tide also to be used when leaving Port Jerome berths.

Vessels may proceed by day or night.

In consideration of all above conditions, Pilot will advise any modification of the permissible draft taking into account a 2 ft. underkeel clearance.

Also see "Notices".

DENSITY: Except at Honfleur, all berths are in fresh water.

FUEL: All grades available by barge.

CONSULS: The following countries are represented in Rouen: Algeria, Belgium, Denmark, Finland, Germany, Greece, Ireland, Italy, Ivory Coast, Korea, Morocco, Netherlands, Norway, Poland, Portugal, Russia, Senegal, Spain, Sweden, Turkey and U.K.

REPAIRS: All deck, engine and radio repairs can be effected.

DRY DOCKS: One floating dock, length 180 m., 25 m. wide for vessels up to 14,000 tons.

SURVEYORS: Bureau Veritas, Lloyd's Register, Registro Italiano, Det Norske Veritas, A.B.S. and Germanischer Lloyd.

WATCHMEN: Recommended to employ watchmen on board tankers and vessels handling dangerous cargo.

HATCHES: Opening/closing hatches always performed by ship's crew.

AIRPORT: Nearest Rouen-Boos. Le Havre – Octeville, 80 km. away. Paris – Orly or Paris – Roissy, 120 km. away.

TIME: GMT plus 1 hour in Winter. GMT plus 2 hours in Spring and Summer.

HOLIDAYS: No labour available on the following days; New Year (1st January); Easter Monday; Labour Day (1st May); 8th May; Ascension Day; Whit Monday; National Day (14th July); Assumption Day (15th August); All Saints' Day (1st November); Armistice Day (11th November); Christmas Day (25th December).

POLICE/FIRE/AMBULANCE: Police 17; Fire 18; Ambulance 15 or by VHF via Rouen-Port on Channel 73 (24 hours). Tel. 35.52.54.00.

TELEPHONES: Can be connected on board at some berths.

IDENTIFICATION CARDS: Crewmen going ashore should carry passport or identity card.

GARBAGE DISPOSAL: It is compulsory for all ships to send their domestic waste ashore in plastic bags supplied by agents. Full sealed bags should be placed at the special places which are marked with a "Garbage" sign.

WASTE OIL DISPOSAL: If vessel is alongside the tanker berth, hydrocarbon slops can be transferred to shore tank.

Chemical waste and slops from vessels at other berths in the port are discharged into road tankers. For road tanker service contact Ortec Environnement. (Tel: 35.72.25.22 or Telex 180973 or Fax: 35.72.12.83) or VIAM (Tel: 35.73.76.06 or Telex 771359).

SEAMAN'S CLUBS: International Seaman's Centre, 16 Rue Duguay Trouin, 76000 Rouen. Tel: 35.70.02.94. Facilities: Shop, international telephone, church services, postage facilities, money change, billiards, T.V. and bar.

CURRENCY: French Franc. U.S.$1.00 = 5.80 Francs (March 1994).

SHIP SUPPLY SERVICE: In case of emergency (sick crew members, exceptionally urgent stores) a liaison can be established by launch with a ship when passing off Port-Jerome or off Caudebec.

NOTICES:

Rules concerning the employment of tugs at Port-Jerome's ESSO S.A.F. Terminal as from 1st June 1992:

The rules apply, in normal manoeuvering, hydrological, meteorological and technical conditions in the area between the beacon downriver at Quillebeuf and the beacon upriver at Saint Leonard.

These rules are a minimum to be respected. They do not exempt the Master from all additional measures in order to insure the safety of the operations.

The tug expenses are for owner's account.

1. Rules for the LPG-Carriers (berthing and unberthing):
1.1. LOA under 80 m. with or without a bow thruster: No tugs.
1.2. LOA from 80 m. to 100 m.
    1.2.1. With bow thruster: No tugs.
    1.2.2. Without bow thruster: 1 tug.
1.3. LOA over 100 m. with or without bow thruster: 1 tug.
2. Rules for vessels other than LPG-Carriers:
2.1. LOA under 100 m. with or without bow thruster: No tugs required for berthing and unberthing.
2.2. LOA from 100 m. to 150 m.
    2.2.1. With bow thruster: No tug for berthing and unberthing.
    2.2.2. Without bow thruster: 1 tug for berthing and no tug for unberthing.
2.3. LOA from 150 m. to 165 m.
    2.3.1. With bow thruster: 1 tug for berthing and no tug for unberthing.
    2.3.2. Without bow thruster: 1 tug for berthing and 1 tug for unberthing.
2.4. LOA over 165 m. (Maximum 200 m.).
    2.4.1. With bow thruster: 1 tug for berthing and 1 tug for unberthing.
    2.4.2. Without bow thruster: 2 tugs for berthing and 1 tug for unberthing.
    2.4.3. With bow thruster and aft thruster: 1 tug for berthing, no tug for unberthing.

Note: Advance notice of 5 hours is compulsory if additional tugs are required.

Special Regulations for Tankers at Port Jerome (Esso S.A.F. Terminal):

Mooring: Due to weather / tide conditions and river traffic it is compulsory for each ship to provide moorings as follows:

L.O.A less 100 m.	2 head and 2 stern lines. 2 breast lines, fore and aft. 2 spring lines, fore and aft.
L.O.A. Between 100 m. and 160 m.	3 head and 3 stern lines. 2 breast lines, fore and aft. 2 spring lines, fore and aft.
L.O.A. Between 160 m. and 210 m.	3 head and 3 stern lines. 3 breast lines, fore and aft. 2 spring lines, fore and aft.

Lines having same purpose must be of same material.

All lines must be in good condition and kept tight at all times.

To avoid slipping of lines remaining on drum, winches must be on brakes, out of gear and never in automatic function.

Starboard side alongside is compulsory for ships of more than 110 m. length. Ships less than 110 m. length can be berthed port or starboard side alongside.

Ship/Shore Access: Ship's gangway is compulsory but shore gangway can be used under ship's watch and Master's responsibility.

Arm connection: Manifold to be ready for arm connection on arrival (one arm per product).

No adapter available on terminal.

Shore Flanges:

Berth 3:

Gas Liquid	6 in., Serial 300 ANSI Standard.
Gas Return	4 in., Serial 150 ANSI Standard.
Petroleum Products	12 in., Serial 150 ANSI Standard.
Bunkering IF 380	6 in., Serial 150 ANSI Standard.
Bunkering LDO	6 in., Serial 150 ANSI Standard.

Berth 2 (Upstream and downstream):

Petroleum Products	: 6 in., Serial 150 ANSI Standard.
Bunkering LDO	: Self Service-Flexible Hose: 10 cu.m/hr.

Berth 1 (Downstream):

Petroleum Products	: 6 in., Serial 150 ANSI Standard.
Gas Liquid	: 6 in., Serial 300 ANSI Standard.
Gas Return	: 2 in., Serial 300 ANSI Standard.
Bunkering LDO	: Self Service-Flexible Hose: 10 cu.m/hr.

Berth 1 (Upstream):

Petroleum Products	: 6 in., Serial 150 ANSI Standard.
Gas Liquid	: 6 in., Serial 300 ANSI Standard.
Gas Return	: 6 in., Serial 300 ANSI Standard.

If mooring regulations (above), which were agreed by Port of Rouen Authority, are not complied with, arms will not be connected and ship's operations will be delayed or stopped and expenses will be to ship's account until Port Jerome Regulations are complied with.

Notice to Masters:

General Instructions: Masters shall in all circumstances comply with Port Officer's orders either verbal, written, or given through the medium of Pilots and especially the orders regarding manoeuvring in the port, towage, berth, and mooring.

Mooring: The attention of Masters is particularly drawn to the provisions contained in Section 6-01 of the Police Regulation in the Port of Rouen and River Seine (issued June 26th 1974), which stipulates as follows:

1. Vessels can moor either bow upstream or downstream, unless particular orders are issued by the Port Officers.

2. Vessels must moor with a sufficient number of bow and stern ropes, breast ropes and springs according to their deadweights.

If possible each line must be fastened on a different fixed point.

3. The mooring must be homogeneous, this means that the lines having the same function must have the same mechanical qualities.

4. The lines must be in good condition.

5. Keep a permanent watch upon the lines and their slack must be hauled at any time if necessary, and especially before the Spring tide flow.

According to the position of the berth and to meteorological conditions, when the expected height of high water in Le Havre exceeds 750 cm. (approx. tide coeff. 90), risk of bore exists. In this case moorings must be heaved tight one half hour before the expected time of local low water and ship's main engines must be available for immediate use.

It is recommended that a Pilot be on board at this time.

Further information may be obtained from either Pilots of Port Officers.

6. According to the deadweight of their vessels, the situation of the berths, the height of high water in Le Havre, Masters must take all necessary precautions as the tide is arriving.

7. Vessels which, to make their berthing easier have dropped their anchor, must, unless contrary to Port Officer's orders, heave it up, if they are berthed in the basins.

8. Vessels must have adequate fenders along the quay, these fenders must have a sufficient diameter to prevent the vessel being in direct contact with the quays and the cranes.

9. A sufficient free space must exist near the hatch-coaming to allow easy access to the gangway.

Gangway Ladders, Foot-Bridges Giving Access to Dry Land: The link between shore and vessel must comply with the International Convention No. 32, signed in 1932 concerning the protection of people working on board ships.

Action in Case of Accident or Fire: Anyone discovering a fire, or seeing an accident, should immediately give the alarm:

to the Harbour Master on VHF Channels 73 or 16, call sign ROUEN-Port).

Measures to be Taken on Board Vessels: Fire-fighting will be under the direction of the Master, but the operating crews from shore, especially the fire-brigade, will be under the orders of their respective chiefs.

The vessel's crew should be able to guide the assistants from shore. Plans of the ship, the cargo plan, and stowage of hazardous cargo on board, should be available on their arrival.

The Harbour Master can decide upon the shifting of the vessel, or that of neighbouring vessels. No decision such as scuttling, beaching, overloading to upset the stability, nor in general any action which may have an effect on the working of the port equipment, can be taken without the consent of the Harbour Master.

Oil tankers, or vessels loaded with dangerous cargoes, should always have a hanging wire tow-line each end ready to be hooked by a tug boat.

Cleanliness: In order to preserve the River Seine and our shore cleanliness please use plastic bags for your ship's domestic wastes.

Full bags closely fastened should be laid at the place marked by "garbage" signal. These bags will be delivered on request to your Agent.

Injury or Sickness On Board: In case of serious injury, call the fire brigade in the same way as in case of fire or the Rouen Port Station (VHF Channel 73).

In case of sickness, a doctor can be obtained quickly by VHF Channel 73.

Radio Communications: Masters of vessels are advised that they can get communications by radio-telephone with telephone subscribers ashore on metric wave-lengths (VHF).

They must call:

when below Tancarville – LE HAVRE-Radio direct on Channels 26, 28, 82 or 23 Semi-duplex;

when above Tancarville – ROUEN-Radio direct on Channels 25, 27 duplex or 21 Semi-duplex.

Do not use Channel 16 for these communications.

These radio communications are authorised when alongside berth.

Furthermore it is useful to keep watch on Channels 16 or 73. LE HAVRE-Radio and ROUEN-Radio stations use Channels 16 or 73 when they call vessels.

Notice to Masters of Vessels Proceeding to Le Havre and to Rouen: The attention of Masters of vessels bound to or from the ports of Le Havre and Rouen is drawn to the regulations laid down in by-law No. 5 of the Marine Superintendant of the 1st District appertaining to anchorage and navigation of vessels in the Le Havre roadstead dated June 18th 1991.

BORE:

1. The bore is the name given to the phenomenon caused by the arrival of the tidal wave in the river at times of high tides. The current is reversed, going from ebb to flow.

The rise in water is then very rapid, and the level of the river can rise 1 m. in less than 10 minutes.

The greater the tidal coefficient and the lower the river flow, the greater the phenomenon.

Basically, it starts to be felt in the Seine when the full tide height at Le Havre reaches or exceeds 7.6 m., i.e. for tidal coefficients equal to or greater than 90.

It is generally stronger when the coefficients are falling than when they are rising, and it is greater in Summer than in Winter.

It is also stronger when atmospheric pressure drops and West winds produce tidal heights greater than normal.

In Winter, the Seine is in flood, and the very considerable river flow attenuates considerably the effect of the bore.

On the other hand, in Summer the relatively low level of the river favours the rise in water, and the bore is then much stronger.

The bore is experienced between Caudebec and downstream of the Port of Rouen. It then weakens by virtue of various structures in the river and some basins. Upstream of the port, it is no longer present except for high tidal co-efficient.

2. Vessels berthed at quays or discharge/loading points are subject to the effect of the bore all the more when they are heavy and loaded.

Downstream of the port, vessels are wherever possible positioned with their bows downstream. They can be assisted during the passage of the flood by a Seine Pilot and possibly tugs.

The arrival of the bore is announced on VHF by the Rouen Port Station giving the time when it will pass La Bouille, which is the downstream limit of the Port of Rouen, and where a recorder is installed. It is then easy to forecast the time of its passage at different points in the port, by knowing the time taken for the flood to go from La Bouille to different berths:

Moulineaux Roulier: 4 minutes.
MRM Silo: 8 minutes.
Sogema Quay: 10 minutes.
Petit-Couronne Quay: 15 minutes.

Rouen Port Station now also announces the time the bore passes Duclair, when normally occurs 36 minutes before passing La Bouille.

In principle, it occurs at the time of local low-tide, but according to circumstances, it can be advanced by almost half an hour over the theoretical expected time.

3. During very high tides, the measures to be taken before the passage of the flood are as follows:

To be well berthed and tied up and to ensure opportunely that all lines are working in the same way.

Take up the gangway.

Stop handling operations in order to disengage cranes or gantries, or disconnect tankers.

Have engines ready for manoeuvring (30 minutes before theoretical time). Engines must be started up before the flood arrives and manoeuvred so as to counter the effect of the bore during its passage. Once the bore has passed, no risks exist.

The Harbour Master's Office carries out continuous watch on VHF Channel 73, and can give at any time all information to vessels on the bore and its strength.

DEVELOPMENTS: Dredging operations in order to accommodate vessels of 60,000 d.w.t. at Port Jerome and Honfleur.

SHIPMASTER'S REPORT: June 1987 (Updated 1990).

Port: Port Jerome.

Anchorage: Vessel anchored in Rouen waiting area, just South of Le Havre fairway in a depth of 12 – 13 fathoms.

Documents:

6 copies Crew List.
2 copies Crew Declaration.
2 copies Manifest (including bond, ship's stores, currency, etc.).
1 copy Declaration of Health.
2 copies Cargo Manifest.

Customs Officers board after arrival.

Pilotage: Pilot boards in the anchorage area from a high speed launch.

Passage: It is about 2.5 hours from the anchorage to Port Jerome berth, which is just beyond Tancarville Bridge.

Inward transit is made from about 3 hours before to 3 hours after high water at Le Havre. Time of leaving the anchorage depends upon the vessel's draft.

The outward transit from Port Jerome is again from about 3 hours before to 3 hours after high water at Le Havre. Time of leaving Port Jerome depends upon the draft of the vessel.

The maximum draft to Rouen is 11.5 m. inwards and 10.0 m. outwards.

Berthing: Tugs not used for berthing. Vessel berthed starboard side to at Esso No. 1 to load ethylene. Vessel used starboard anchor to swing in river.

Moorings were made up of 2 head/stern line, 2 breast lines and 2 springs forward and aft. It is advisable to use long lines as the rise and fall is about 4.5 m. Fendering consists of large wooden buttresses with protruding bolts.

Ship's gangway constantly on the move due to tidal range and has to be constantly shifted.

Cargo: 6 in. liquid and vapour arms connected. Ship's reducer required for vapour arm.

The SGS surveyor attended.

A control box was placed onboard which regulates the loading valve at the base of the Chicksan arm.

Rate of loading is about 90 t.p.h. with 1 shore pump. A second pump can be used on the line to increase the rate to 120 t.p.h.

If necessary, the rate can be reduced to 20 t.p.h. Cargo can be stopped in about 12 seconds.

A dead man arm is incorporated in the control box. This stops cargo loading if it is not pressed every 12 minutes.

The manifold temperature during loading was −93°C. Two compressors were run returning vapour ashore throughout loading. The temperature on completion of loading was approximately −98°C after which one plant was put on internal cooling with one compressor still running ashore. This was maintained for 9 hours until temperature reached −101°C.

The terminal personnel were generally very helpful. If required, they would backload liquid after the vapour return but the initial plug would be hot after sitting in the line.

General: All services are provided from Le Havre.

AUTHORITY: Port Autonome de Rouen, Capitainerie du Port, 34 Boulevard de Boisguilbert, B.P. 4075, 76022 Rouen Cedex, France. *Tel:* (33) 35.52.54.00. *Telex:* 770865 Capipor. *Cables:* Poronom-Rouen. *FAX:* (33) 35.52.54.02. *Contact:* G. Vionnet, Le Commandant du Port.

ST. LOUIS DU RHONE: 43.23 N. 04.48 E. (See Plan)

DOCUMENTS:

1 Cargo Manifest or Manifest in Ballast.
Ship's Register.
Bills of Lading.
6 Crew Lists (8 if Spanish or Russian or ships bound to these countries).
3 Passenger Lists.
Health Declarations.
Derat Certificate.
3 Bunker Supply forms.
1 Declaration of Crew Personal Effects. If on inspection articles or quantities not in conformity or in excess, Master held responsible, articles removed and heavy fines imposed.

PILOTAGE: Compulsory for vessels exceeding 50 m. LOA. Contact Pilots by Marseilles Radio or by VHF Channel 12 for calling Fos Port Control. Pilot boards off Lavera Buoy.

River Pilot required by vessels loading salt in the Rhone river, boards at the locks entrance to Port St. Louis basin off Lavera Buoy.

ANCHORAGE: Suitable anchorage outside Port St. Louis keeping well clear of Fos channel.

RESTRICTIONS: The St. Louis Canal is 3,300 m. long and 63 m. wide, with a depth of 26 ft. 6 in. The lock has a length of 135 m., width 22 m., and depth 18 ft. Max. ship size: Length 95 m., beam 16 m.

No entrance allowed between 2100 hrs. and 0500 hrs. except in emergency, although entrance may be effected up to 2400 hrs. if ordered before 2100 hrs.

Entrance may be delayed when large tankers are proceeding in the Fos Channel.

HEALTH: Pratique given by Customs officers who board on arrival.

RADIO: Within 150 miles use Marseilles Radio FFM, otherwise St. Lys FFL.

TUGS: Two tugs available of 1,060 h.p. Ship's lines are normally used.

BERTHING:

Quays	*No. of Berths*	*Draft*
Quai Ouest	3	6.00 m.
Quai Nord*	2	6.00 m.
Quai East*	3	5.20 m.
Quai Hardon	1	5.50 m.
Quai de la Suisse	3	7.92 m.
Quai Charles	1	7.92 m.

* Berths allocated for pleasure craft.

CRANES: Also see "Berthing".

Quay cranes: 5×6 tonnes (Quay de la Suisse). One private crane at heavy lift berth, capacity 544 tonnes.

Floating crane: Marseilles Port Authority operate a floating derrick, capacity 500-600 tonnes.

Front Loaders: 1×30 tonnes for containers.

SPECIAL CARGO FACILITIES:

Company	*Berth* No.	*Length* (m.)	*Max. draft* (m.)	*Remarks*
C.R.E.A.	924	100	4.5	2 berths – Military, refined products.
Frahuil	925	80	6.7	Capacity 17,550 tons. Refined products.
Mavrac	919	100	6.5	Natural Gas – Loading and discharging. Berth also used by Medistock.
Sedipa	921	100	4.0	Public berth, storage capacity 9,000 tonnes. (Chemicals, vegetable and animal oils). (Not in use.)
Soterm	923	150	7.0	Private berth (destroyed 1982) used by Soterm, Mazout and Deleup. Storage Capacity (still available): Mazout 150,000 tons. Deleup and Soterm 30,000 tons.
Port Petrolier de Givors (PPG)	916	100	6.7	Private berth. Storage Capacity: 5,000 tonnes. (Liquid tar).

Basin	*Berth* No.	*Length* (m.)	*Max. draft* (m.)	*Remarks*
Port St. Louis/ Rhone	904	110	5.2	Ro-Ro
	909	130	6.0	Ro-Ro
Tellines	951	130	7.92	Ro-Ro.
"	952	147	7.92	Ro-Ro.
"	954	147	7.92	Ro-Ro, heavy lifts. (4 ton/sq.m. – 6 ton/sq.m.).
"	953	160	7.92	Heavy lifts (4 ton/sq.m.). Private crane, 544 tonnes capacity and Port Authority floating derrick 500/600 tonnes capacity, located at this berth.

STEVEDORES: *Working Hours:* 0600 – 1300, 1300 – 2000, 2000 – 0300, 0830 – 1200 and 1330 – 1700.

Saturday afternoon, Sunday and Holidays at overtime rates.

FRESH WATER: Available from hydrants on the quays at a rate of 10 t.p.h.

FUEL: Available only by barge or railcar.

AIRPORT: Marseille-Provence Airport distant 70 km.

AUTHORITY: Port Autonome de Marseille, 23 Place de la Joliette, 13002 Marseille, France. *Tel:* 91.39.40.00. *Telex:* 440746. *FAX:* 91.39.45.00.

Contact: Mr. Perdrizet, Port Director. Captain Alexandre, Harbour Master. Captain Balsen, Harbour Master – Western Area. Mr. Mahe, Operations Director – Western Area.

ST. MALO: 48.38 N. 02.02 W. (See Plan)

PORT LIMITS: A vessel is considered to have arrived within the Port limits, when it is within a radius of 3 miles to the North of the Grand Jardin lighthouse.

DOCUMENTS:

Ship's Register.
Store List in duplicate (ship's stores).
2 Crew Declarations of Bonded Stores.
Health Declaration.
Manifests and B/Ls.
3 Crew Lists.
3 Passenger Lists.

One Security Form (Inwards Declaration) with vessel's details to be handed to Port Captaincy when passing through the lock.

PILOTAGE: Compulsory for vessels over 45 m. LOA and over 150 n.r.t..

(1) During tidal hours, 2.5 hours before and after high water, vessels may enter into direct contact with the Pilots on VHF Channel 12. Call Sign "Pilot – St. Malo".

(2) Outside tidal hours and during working hours, vessels may call the Port Office on VHF Channel 12. Call sign "Port Control – St. Malo".

When waiting for the Pilot, vessels anchor near the "Shore Buoy" and report their arrival to the Port Office.

In good weather, the Pilot boards near the "Shore-buoy". In bad weather when the wind is from N.E. or N.W. the Pilot may guide the vessel as far as Dinard Roads, where the Pilot will come aboard.

Pilot Cutters: One cutter ("La Mauve" – length 10 m., speed 18 knots) fitted with radar, relief cutter ("Pilote Vayva" – length 10 m., speed 18 knots) both fitted with radio-telephone and VHF Channels 6, 12, 14, 16, 24 and 25.

ANCHORAGE: Large vessels with draft greater than 9.0 m. anchor by the land-buoy. Smaller vessels may anchor in St. Malo Roads, there is sufficient swinging room for vessels with draft of 7 m. It is recommended to use a Pilot to come into this anchorage.

RESTRICTIONS: Vessels are allowed to enter from 2.5 hours before to 2.5 hours after high water. To be certain of mooring, vessels should arrive at the lock (Naye Lock: Length 150 m., width 25 m.) at least 1 hour after high water.

Depth available 20 ft. to 22 ft. at Spring tides for the Bouvet and Duguay Trouin Basins.

No movements during foggy weather. Large vessels (length greater than 100 m.) approach the lock at high-tide. Tankers lock in by themselves (no other vessel allowed in the same lock) in daytime only. Movements are carried out day and night.

Vessels with hazardous cargo and large vessels (more than 135 m. LOA) enter in daytime only.

MAX. SIZE: The height of the tide, the length of the lock and width of the channel must be taken into account.

Cargo Vessels:

(a) Overall length 150 m., beam 20 m. or
(b) Overall length 135 m., beam 21.5 m.

Max. Draft: Spring tides 9 m. Neap Tides: Equal to the depth of water in the access channel according to the tide (height of water above zero of French charts) at the time when the vessel passes through the access channel to the lock (normally 8.5 m.), 2 tugs required.

Characteristics of the Channels: Permissible dimensions for vessels:

St. Malo Channel linking the Vauban Docks to Duguay Trouin and St. Servan Channel linking the Vauban Docks to Bouvet. Length 120 m., breadth 16.5 m. Depth in the docks 5 m. (sill of the channels: 5 m.)

Jacques Cartier Channel linking the Vauban Docks to Jacques Cartier, length 150 m., breadth 21 m. – at the moment – depth of the docks 3 m.

Tankers: Length 147.50 m. (443 ft.), beam 20 m. (65.6 ft.), draft see "Cargo Vessels" above. 2 tugs required if vessel not fitted with bow-thruster.

HEALTH: Customs Officers are appointed as Health Officers and deliver Pratique. In case of suspect disease, Masters must declare it at once by radio to their Agents who will contact authorities.

RADIO: Vessels coming from West use Brest le Conquest Radio, call letters FFU. Vessels coming from North should go through Boulogne Radio, call FFB.

Arrival Advice: The requirements on arrival of large vessels must be given to the Port Captaincy 8 days in advance.

For vessels with a length less than 100 m., 48 hours notice must be given.

The precise ETA mst be sent 24 hours before arrival in the Roads.

VHF:

(a) Port Office: Channels 12 and 16, 24 hours
(b) Pilot: Channels 6, 12 and 16, when awaiting a vessel.
(c) Tugs: Channels 6, 12 and 16, at the time of high tide.
(d) St. Nazaire Radio: Channels 1 or 2, for telephone communications.

Vessels call Pilot and tugs on 12 or 16 and change to Channels 6 or 8 for working.

TUGS: 2 tugs are available at St. Malo (600 h.p. and 1,800 h.p.). Usually joins vessel at the end of breakwater. Ship's lines are usually used.

Towing is obligatory on entering or leaving the docks for vessels which have a length greater than 100 m., as well as for oil tankers and vessels carrying hazardous cargo whatever their size.

BERTHING: Ro/Ro berth outside lock for car ferries.

Duguay Trouin Dock: Length 2,000 (commercial), 2 Ro/Ro ramps for vessels less than 120 m. (Berths No. 6 and 7).

1 wine store house (Berth No.13).
1 grain silo (Berth No. 10) 6,000 tons.

Vauban Docks: St. Louis Quay: 360 m. – marina: 700 berths.

Corsaires Quay: 385 m. comprising:
2 discharge points for caustic soda.
1 discharge point for hydrocarbons.
1 discharge point for phosphoric acid – (1,000 t.p.h.).
2 cranes on rails – 12 tons at 14 m.
1 dry dock: 120 m. × 15.5 m.
1 Ro/Ro ramp: In the North part of the Corsaires Quay.

Bouvet Dock: 641 m. for commercial trade.
260 m. for discharging fish.
850 m. for activities connected with fishing.
1 slipway – for vessels less than 350 tons.

Jacques Cartier Dock: Length 300 m., comprising:
1 dockyard (St. Malo Naval).
2 electrical cranes of 24 tons.
Numerous sheds – vats for caustic soda and acid (6,000 cu.m.)

Grain Silos: 1 of 6,000 tons capacity with loading possibilities of 130 t.p.h. and 2 of 6,500 tons capacity each with loading possibilities about 100 t.p.h. each are situated in Bassin "Duguay Trouin".

CRANES: 5 mobile cranes, 4 – 16 tons, 1 mobile crane 9/40 tons and 8 electric cranes (on rails) – 4×4/8 tons, 2×6/12 tons and 2×12/24 tons.

STEVEDORES: In order to have workers ready on arrival, Masters are kindly requested to give as accurate as possible ETA the day before arrival, especially if there are many ships discharging at same time.

Normal working hours 0800 – 1200 hrs., 1200 – 1800 hrs. and 2000 – 2400 hrs. from Monday to Saturday, except holidays. There is no night overtime. Dispensations may be made to finish a vessel so that she may catch the tide.

MEDICAL: Notice is required to obtain an appointment with doctors or dentists. Hospital is available in St. Malo.

TANKERS: Tanker quay, extension of Quai des Corsaires, length 130 m. Diameter of discharge pipe 200 mm., one mobile arm, vessels to supply reducers. Max. discharge rate, 650 cu.m./hour.

No deballasting facilities. Tankers wishing to effect repairs must leave port and wash out their tanks and obtain a gas-free certificate.

On completion of operations tankers must leave on the next tide. If a second tanker is waiting to berth she must wait in the roads.

Safety instructions are issued when the vessel passes through the locks.

BERTH ALLOCATION: Dependent upon goods to be discharged and characteristics of vessel. Bearing in mind the widths of the channels, their depth and dimensions at the foot of the quays, the height of the dock which varies on average between 11 m. and 12.5 m.

The largest vessels tie up at Quai des Corsaires.

It is recommended that an advance notice be sent via Agents to the Port Office 15 days prior to arrival, so that the vessel may be received under the best possible conditions.

BRIDGES: 3 bridges can be passed during tide vacation, otherwise, notice required to open.

DENSITY: Average density is 1022.

FRESH WATER: Can be delivered from quay. Rate 3 t.p.h. – 10 t.p.h.

FUEL: Bunkers delivered at St. Malo (with notice varying, depending on the Company – Shell 2 days, Esso 1 week, etc.) come from Donges by road lorries and cost of haulage is supported by the ship (expensive). D.O. can be obtained from local suppliers but out of contract.

FIRE PRECAUTIONS: Usual non-smoking precautions (a watchman is compulsory for tankers). In case of fire call Port Captain on VHF Channel 12.

CONSULS:

Belgium	(16-99) 56.07.21.
Denmark (Vice-consul)	(16-99) 56.07.21.
Netherlands	(16-99) 56.07.21.
Norway	(16-99) 56.07.21.

REPAIRS: Deck and engine repairs can be carried out by shipyard or workshops. Electricians are also available. RAMAC Agency can repair radars and radios, also Radio-Ocean agency.

DRY DOCKS: One dry dock. Max. length admissible 120 m., breadth 16.0 m. and draft 8.0 m. One slipway, 350 tons. Length admissible 30 m., breadth 9 m. With sufficient notice.

GANGWAY/DECK WATCHMEN: Watchmen are not compulsory except for tankers.

OPENING/CLOSING HATCHES: This work is normally carried out by crew. Stevedores' cranes may help for the beams, but dockers will not touch them.

CERTIFICATES: As per International Conventions, all Safety Certificates, Load line, Radio, etc.

Important: All vessels entering the port must be up to date with safety certificates as required by international conventions. An attestation must be handed in by the Master when he passes through the lock.

CUSTOMS ALLOWANCES: 200 cigarettes, or 200 grams of tobacco, and 1 bottle of spirit per crew member.

REPATRIATION: Can be effected from St. Malo by train or plane.

AIRPORT: Pleutuit/Dinard Airport 10 km. from port. Wintertime, services to Jersey (C.I.), with onward flights to England and Wales. Summertime, several times per day to Jersey, London, and to Paris except week-ends.

TIME: Local time is GMT plus 1 hour. From April till September GMT plus 2 hours. ETA messages must specify GMT or Summer Time.

HOLIDAYS: French legal holidays. Stevedores do not work on Sundays or public holidays.

POLICE/AMBULANCE/FIRE: Police, 40.85.80 and 17; Ambulance and Fire, 18. Port Captaincy, Tel: 56.23.86, or VHF Channel 12.

TELEPHONES: None.

SERVICES: Compass adjusting, radar or radio repairs can be carried out.

SHORE LEAVE: Crew members are allowed ashore.

IDENTIFICATION CARDS: Crew members must have an identification card or their Seaman's Book when going ashore.

DELAYS: Berthing delay will only be due to tide. For loading or discharging, it depends what kind of cargo is handled.

Deadlines: All vessels must leave the quay once unloading has terminated. They may be towed away to another waiting berth – if need be.

Vessels are admitted to port as soon as their berth is vacant, and providing nautical conditions permit.

Time limits for loading or unloading depend on the quantity of the nature of the goods. There is no special rule governing purely port operations.

It is rare for vessels to wait in the roads.

Special Cases: Vessels are not authorised to enter or to leave the port in fog.

In storms, starting at force 8 – Pilots cannot embark, nor disembark from vessels, without danger.

With strong N.W. winds (8 to 9) the port may be ordered to be closed to prevent damage to the lock gates and to structures (bridges).

AUTHORITY: L'Ingenieur Charge de l'Arrondissement de Saint Malo, 1 Rue de la Crosse, 35400 St. Malo, France. *Tel:* 56.55.45. *Telex:* Dde-Atm-950-197 F. *Contact:* J. Lannou, Port Commandant, Ecluse du Naye, 35400 St.Malo. *Tel:* 81.62.86.

Chambre de Commerce et Industrie de Saint Malo, 4 Avenue Louis Martin, B.P. 185, 35409 St. Malo-Cedex, France. *Tel:* 99.20.63.00. *Telex:* 950382. *FAX:* 99.56.61.48. *Contact:* M. Rondeau.

SETE: 43.24 N. 03.42 E. (See Plan)

PORT LIMITS: The seaward boundaries of the Port within which a vessel is considered to be an "Arrived Vessel" are indicated as follows: To the South by a line with the red light of Eastward end of breakwater bearing 257°; to the East by a line with the church tower of Frontignan bearing 005°; to the North by coastline.

A second zone is a circle of 1 mile radius centered on a point located on the bearing 310° and at 2.8 nautical miles from Eastward end (Red Light) of breakwater. This zone is connected from a landing buoy (Lat. 43° 14.9' N., Long. 03° 53.7' E.) by a channel 1 nautical mile wide steering 326°. This channel is compulsory for tankers and chemical carriers who must report to French Navy (Toulon) before entering or leaving.

DOCUMENTS:

Cargo Manifest or Manifest of Ballast.
Certificate of Cargo Space.
Bills of Lading.
Ship's Register.
3 Crew Lists.
4 Passenger Lists.
Health Declaration, eventually vaccination list.
Derat Certificate or Exemption.
Declaration of Crew Personal Effects.
2 Provision Lists.
IOPP Certificate – National Certificate of Insurance for Oil Pollution Damage for tankers and "Fitness Certificate" for chemical carriers.

PILOTAGE: The service is permanent.

Masters must inform Pilots of ETA 18 hours before arrival or when leaving previous port, through Telex: 499452, Fax: 67.74.89.95 or Tel: 67.74.34.06.

Vessels may request Pilot by VHF Channel 12 (Call "Sete Pilot") one hour before arrival or departure.

Description of pilot boats: Motor launches with black hull, white band, white anchor on hull at bow.

Pilot embarks between 1 mile and 2 miles South of breakwater. Vessels concerned by Marpol 73 embark Pilot between 4 miles and 6 miles S.E. of the Eastern extremity of the breakwater.

In rough weather, if Port Authority allows, Pilot may embark in the shelter of the breakwater.

ANCHORAGE: In roads from 0.5 miles to 3 miles South of breakwater, included in the compulsory pilotage area (limited by a circle of 6 miles radius centered on Epi Delon's East end).

RESTRICTIONS: *Commercial Harbour:* In the Canal Maritime, length max. 145 m., breadth 20 m., draft 7.0 m. (23 ft.).

MAX. SIZE: C.B.M.: Tankers up to 100,000 d.w.t., lightened draft 13.1 m. (43 ft.).

Bassin a Petrole: New Tanker Berth (P2) – 35,000 d.w.t., length 225 m., draft 11 m. (36 ft.) P1 – length 140 m., draft 33 ft. P3 – Barges.

Darse No. 2 for ore carriers 259 m. length; 13.18 m. draft (43 ft. 2 in.)

Commercial Harbour up to 11.0 m. draft (36 ft.).

Commercial Harbour in the Canal Maritime: max. length 140 m.; breadth 20 m., draft 6.85 m. (22 ft. 6 in.).

HEALTH: Pratique given by Health Officers or by Custom's Officers who board on arrival. If any case of suspected disease on board or any reason why vessel should not receive Free Pratique, Master should radio Agent before arrival, advising full details.

RADIO: Marseille Radio VHF Channel 19. Sete Port Traffic on VHF Channel 12. Port Authority Telex No. 480220, Fax No. 67.46.35.00.

TUGS: 3 tugs (2×1,200 h.p. and 1×2,200 h.p.) to be ordered from Compagnie Setoise de Remorguage. Tel: 67.74.64.49 or VHF Channel 12. Tow line to be furnished by ships. Vessels taken in tow near the breakwaters on the North side.

BERTHING: *Bassin du Midi:*

North Quay: Berths No. 16, 17, 18, 19 and 20
Repairs, fishing vessels and yachts.
Draft 6.50 m. (21 ft. 04 in.)
Cranes: 1 Fives Lille, 7.5 tons at 22 m. with scoop and hook.
All berths: Ore and chemical terminal.

South Quay: Berth No. 14 Draft 7 m.
15 Draft 6.10 m. Ro/Ro
Cranes: 1 Fives Lille, 7.5 tons at 22 m.
All berths: Livestock and general cargo.

Canal Maritime:

Quai Paul Riquet: Berth No. 10 Draft 5.50 m.
11 Draft 6.40 m.
12 Draft 6.40 m.
13 Draft 6.10 m.
All berths: Wine and general cargo.
Cranes: Nil.

Quai Vauban: Berth No. 24 Draft 3.70 m.
25 Draft 4.60 m.
26 Draft 4.10 m.
Berths No. 25 and 26: Wine.
Cranes: Nil.

Quai Francois Maillol: Berth No. 27 Draft 5.80 m.
28 Draft 5.20 m.
29 Draft 5.20 m.
All berths: Wine.
Cranes: Nil.

Quai d'Orient: Berth No. 7 Draft 5.50 m.
8 Draft 5.50 m.
9 Draft 5.50 m.
5 Draft 5.00 m.
6 Draft 4.60 m.
Restriction:
Berths No. 5 and 6: Breadth = 15 m.
All berths: Wine and general cargo.
Cranes: Nil.

Quai de la Republique: Berth No. 30A Draft 5.20 m.
30B Draft 4.30 m.
All berths: Wine.
Berths No. 31 and 32 – Tugs.
Cranes: Nil.

Quai d'Alger (Algier Quay): Berth No. 34 Draft 8.20 m.
35 Draft 8.20 m.
36 Draft 8.20 m.
All berths: Wine.
Passenger Quay: Cruising vessels.
Length 200 m., draft 8.20 m.
For example: M.V. "Statendam", 219 m.

Quai du Maroc (Morocco Quay): Berth No. 37 Draft 7.60 m.
(Ro/Ro) Length 130 m.
Passengers and wine.
Line: Morocco – Passenger terminal.

Bassin Orsetti: Max. Length: 180 m.
Berth B1 Draft 8.25 m.
B2 Draft 8.25 m. Ro/Ro
B1 and B2: Passengers
General cargo.
B2 Ro/Ro Gare Maritime Orsetti.
Line: Baleares (Spring and Summer).
Cranes: 1 Fives Lille, 6 tons at 22 m.
Berths: D1 Draft 8.55 m.
D2 Draft 8.55 m.
D3 Draft 8.25 m. Length 180 m. Ro/Ro.
All berths: General cargo.
Cranes: 4 Caillard 6 tons at 22 m.
Quay "B" – Length 303 m.
Quay "D" – Length 422 m.

Mole Masselin: Cereals
1 berth on 180 m. of quay.
Draft: 10.36 m.
1 loading gantry of a capacity of 550 t.p.h.
2 storage silos of 22,000 tons capacity. (annual 100,000 tonnes).

Dock No. 1 or Colbert Dock: Berth E3 Draft 10.40 m.
E2 Draft 10.40 m.
E1 Draft 11.00 m.
All berths: Containers – general cargo.
Wood pulp and sawn timbers.
Cranes: 2 Caillard, 9 tons at 19 m.
1 container gantry crane 35 tons at 35 m.
1 Peiner multi-use crane, 35 tons at 35 m., 40 tons at 28 m., spreader for 20 ft. and 40 ft. containers.
Berth G1 Draft 7.50 m. Ro/Ro (Dolphin).
G2 Draft 11.00 m.
G3 Draft 11.00 m. Ro/Ro.
All berths: Sawn timbers – logs and general cargo.
Cranes: 2 Callaird and 2 Peiner
7.5 tons at 22 m.; 8 tons at 30 m.

Dock No. 2 or New Dock: Berth H1 Cement storage berth – Draft 13.18 m. (Panamax).
Berth H2 Draft 13.18 m. Ro/Ro. No crane.
Berth I1 Ro-Ro – No crane.
Berth I3 Draft 13.18 m. Ro/Ro.
Named berth for all ponderous bulk cargoes.
Max. length 260 m. (Panamax).
Cranes: 1 Delattre Levivier 20 tons at 44 m., 2 Peiner 12 tons at 30 m. – all with scoop and hook.

Also see "Developments".

BRIDGES: To proceed to or leave, the Bassin du Midi bridges have to be opened. Request to be made to Capitainerie du Port (Tel: 67.46.34.97/67.46.00.81) before 1700 hrs. Friday, when arrival or departure is expected during weekends.

TANKERS: Frontignan Sea Line Terminal North Berth (C.B.M.) 1 berth for tankers up to 100,000 d.w.t. lightened draft 13.1 m. (43 ft.). 2×12 in. hoses for refined products only. Submarine pipeline 28 in. diameter.

Commercial Port: 1 berth (P2) for tankers up to 40,000 d.w.t. draft 11 m. (36 ft.). 3 loading/unloading arms for refined products, 1 unloading arm for methanol and 1 unloading arm for slops and dirty ballast. 1 old berth (P1) for tankers up to 140 m. length or 10,000 d.w.t., draft 10.1 m. (33 ft.) for handling oil, alcohol, molasses and coal tar. Slop disposal facilities available up to 1,000 cu.m.p.h. Also see "Max. Size" and "Shipmaster's Report - March 1985".

FRESH WATER: Available on most quays or by lighter of 140 tons capacity during working hours. Advance notice required for Saturdays and Sundays.

FUEL: All qualities available subject to advance notice given.

CONSULS:

Denmark	Tel: 67.74.30.20	Norway	Tel: 67.74.31.83
Finland	Tel: 67.48.63.16	Sweden	Tel: 67.48.63.16
Netherlands	Tel: 67.48.63.16		

Others at Marseilles.

REPAIRS: Claverie: Tel: 67.48.62.52 – Mechanical workshop for heavy repairs and boiler repairs.
Di Biase: Tel: 67.74.32.12 – general repairs.
C.R.M.: Tel: 67.74.06.83 – Electronic and radio aids to navigation repairs.
Touat: Tel: 67.48.62.37 – Electrical and generator repairs.
Farre: Tel: 67.53.41.28 – Under water work.

WATCHMEN: Service necessary for ships loading or unloading dangerous merchandise. Optional for other ships. (Tel: 67.80.22.02).

CUSTOMS ALLOWANCES: 40 grammes tobacco per day per man (calculated in accordance with the length of voyage undertaken by the ship). Amount of alcohol fixed by Customs in accordance with the crew, and length of ship's stay in port. It is a matter of tolerance and not of right.

REPATRIATION: Repatriation and crew changes are easily arranged.

AIRPORT: Airport (Class B) at Montpellier-Frejorgues, located 30 km. from Sete, (30 minutes by car on the motorway), and has services to Paris, Nice, Bordeaux, Clermont-Ferrand and London. The international airport of Marseilles-Marignane is 160 km.

TIME: GMT plus 1 hour – alteration from end of March to end of September to GMT plus 2 hours.

HOLIDAYS: No labour days: 1st May and St. Louis Day (late August).

Days with possibility of labour at overtime rates: 1st January, Easter Monday, Ascension Day, Whit Monday, National Day (14th July), Assumption Day (15th August), All Saints' Day (1st November), Armistice Day (11th November), Christmas Day (25th December).

N.B. Every Sunday and days with possibility of labour at overtime rates can be worked at the rate of 100%.

IDENTIFICATION CARDS: Crew men going ashore should carry passport or identity card.

SEAMAN'S CLUBS: Stella Maris, Rue Villaret Joyeuse, Sete. Hours: 1800 hrs. – 0100 hrs. daily.

DEVELOPMENTS: Timber Terminal extension of 5,500 sq.m. at Colbert Dock under construction. On completion, 13,000 sq.m. will be available.

The bulk carrier terminal (Berth I3) is to be upgraded with installation of a conveyor belt and weighing tower.

The Delattre-Laviver crane at the ore quay is to be upgraded.

SHIPMASTER'S REPORT: March 1985.

Berth: Vessel berthed at C.B.M. berth which is a multiple buoy mooring just outside the East Harbour Entrance in position: Lat. 43° 24.3' N., Long. 03° 44.6' E.

Pilot boards just S.E. of the yellow light buoy (Lat. 43° 22.2' N., Long. 03° 46.8' E.), together with Mobil Representative, Cargo Surveyor and a mooring gang of 7 men. At the same time, 3 slings of equipment are placed on board on the port side, including chain stoppers for mooring aft and discharge monitoring equipment.

One tug is used, through the centre lead aft; using ship's lines (2). Vessel approaches the berth on course of approximately 030°; ship's log was used for assessment of ship's speed, the Pilot preferring to drop the first anchor at a speed of between 1.0 – 1.5 knots.

Starboard anchor is dropped first and allowed to run to 10 shackles on deck as the vessel is canted to starboard to a heading of 045°. When about 10 shackles have run, the port anchor is let go and then engine and tug used to manoeuvre the stern towards a group of 3 mooring buoys. 3×42 mm. diameter wires are picked up from these buoys, then 2 further wires from submerged clumps and finally 2×42 mm. wires from submerged clumps are secured forward. Both anchors are then hove in to about 8.5 shackles each to tension the moorings aft, vessel's head being finally 135°. Moorings, distances and dimensions are as per the berth drawing in *Guide to Port Entry* – "Plans". Mooring was very competently accomplished, the anchors being very accurately placed close to 2 small marker buoys (not on chart).

Discharge: The berth has very recently been converted to clean products only. 2×12 in. hoses are connected to the port side manifolds. Each of these is fitted with a butterfly valve, however, a noticeable amount of the previous cargo ran into the drip trays while the hoses were being connected. Connection of hoses was made by the mooring gang.

The sea bed line is 28 in. and maximum pressure permitted is 9 bar. This line has previously received crude oil at rates of up to 5,000 tonnes/p.h. so it was not surprising when vessel did not make this pressure, even at full speed. Discharge of 30,000 tonnes took a total of 15.8 hours, giving a final rate of 1,900 tonnes/p.h. This included approximately 2 hours slow pumping at the start and all the stripping time.

A 30 minute water plug was requested before discharge commenced. Mobil normally expect a vessel to be ballasted within 6 hours of completion of discharge; on this occasion, extra ballast was taken as the vessel would be unmooring in a 30 knot wind.

The Mobil Representative, Cargo Surveyor, Pilot and the 7 man mooring gang all remain on board until after completion of unmooring. Meals and accommodation should be provided.

General: Charterer's Agent, Mobil Oil Francaise, is in Paris (Telex: 610417). Agent attended on berthing and for remainder of stay contact was maintained by portable VHF which proved to be quite satisfactory.

Up to 6 boats per day for shore leave, etc. can be provided; if all 6 boats are taken the cost is high – 7,000 francs. However, for vessel's requirements some boats were required in any case.

Port Health, Immigration and Customs did not attend at any time, all their paper work being carried out by the Agent.

AUTHORITY: Capitainerie du Port de Sete, Quai du Maroc, 34200 Sete, France. *Tel:* 67.46.34.97. *Telex:* 480220. *FAX:* 67.46.35.00. *Contact:* Commandant Joel Gary, Commandant du Port de Sete (Harbour Master).

STRASBOURG: 48.34 N. 07.42 E. (See Plan)

PORT LIMITS: In Strasbourg (Lat. 48° 34' N., Long. 7° 42' E.), the Port Autonome extends from the Km. 285 to the Km. 297 upon the Rhine, occupying an area of 1059 ha., of which 205 ha. are water areas including 15 docks (7 have a constant level, 8 a variable level), and 2 fore-harbours.

Out of these limits, the Port Autonome de Strasbourg includes 13 branches designed for the handling of building materials and cereals, and 2 ports, Marckolsheim (at Km. 242) and Lauterbourg (at Km. 349), all the branches and ports being on the left bank of the Rhine.

DOCUMENTS: The ships must hold some documents, which they have to keep at disposal of the administration or the inspection authority when required, as following:

Certificate of Survey.
Certificate of Tonnage.
Certificate of Registration.
Log-Book.
Booklet of Verification of the used oils.
Attestation for Equipments of liquified gases.
Customs Documents for the carriage of goods.
Fluvial Bill of Lading.
Rhine Manifest.
Certificate of Ability to steer the ship.
Police Regulation for the Navigation on Rhine.
A.D.N.R., regulation for carriage of dangerous goods.
the documents relating to the boilers and other tanks under pression.

PILOTAGE: Pilotage is not compulsory on the Rhine and usually Masters do not ask for a Pilot except for Gebirge and the Haut-Rhin. A Pilot can be obtained in the Port of Kehl by dialling 19-49.7851.20.70.

ANCHORAGES: The ships have at disposal an area of about 10 ha. in the North and South fore-harbours to take anchorage. Depth of water at least 5.20 m.

RESTRICTIONS: Restrictions to navigation are published by the Nautical Corporation of the Inland Water Transport.

MAX. SIZE: The max. sizes of ships allowed on the Rhine are as follows: Length: 110 m., – breadth: 11.4 m. Ships on the Rhine do not exceed a draft of 4.0 m.

Dimensions of the locks: – North lock: length 125 m., breadth: 13.5 m., South lock: length 125 m., breadth: 13.5 m.

In the constant level docks, the water depth is 3.2 m., but only along the North-South axis of the port; if not there, the water depth is 2.5 m.

In the variable level docks, which are the docks with a direct communication with the Rhine, the minimum depth is 4.00 m.

These depths are given, the Rhine being supposed at its lowest bench-mark: 135 m.

HEALTH: There is no Health Service for the Rhine.

RADIO: All communications on the Rhine are performed by radio-link and radiotelephony:

VHF Channels 10 and 13: used for ship to ship communications.

VHF Channels 20 and 22: used for transmitting of nautical advice in the way shore-ship and in the reverse order.

VHF Channels 24, 25, 26 and 27: used for public communications.

RADAR: There is no radar station on shore.

TUGS: The Port Autonome de Strasbourg put at disposal of customers 4 tugs and 2×600 C.V. pushers according to their needs.

BERTHING: 10 km. of quays can be used for mooring. Some of these quays are situated in the constant level docks (max. draft 2.5 m.), some are in the docks that link with the Rhine (max. draft 4.00 m.). Tankers berth only in the Oil Dock Harbour.

SPECIALISED CARGO-HANDLING FACILITIES: One container lifting bridge for containers up to 40 tonnes; heavy packages up to 350 tonnes. A second container lifting bridge will be in service in 1997.

The two operations are carried out at the container and heavy loads terminal at Adrien Weirich Dock and utilise a length of 300 m. of quay. Regular Rhine container lines to the North Sea ports.

A plurimodal international transport centre, "Eurofret Strasbourg" (110 ha.), is being developed in the Southern sector of the port, close to the container terminal and including a road transport centre, a warehousing area and an area grouping various activities (12 ha.). At the present time, it offers a 155,000 sq.m. covered warehouse surface.

BULK CARGO FACILITIES: Grain elevators: 2 berths for loading, and 2 berths for discharging.

Loading of gravel on the Rhine by belt-conveyors (11 facilities).

Loading and unloading of hydrocarbons in the Oil Dock Harbour by 15 facilities operating each at the rate of 300 cu.m./hr.

BRIDGES: The head room under the bridges reaches 8.8 m. in the constant level docks.

MEDICAL: Civil Hospital, 1, place de l'Hospital, 67000 Strasbourg, Tel: 88.11.67.68.

DENSITY: The density of water is about 1000.

FRESH WATER: Fresh water is supplied by Ets. Koejac, Tel: 88.61.26.78.

FUEL: Bunkering can be arranged with Ets. Koejac, Tel: 88.61.26.78.

CONSULS:

Austria	88.35.13.94
Belgium	88.76.61.15
Germany	88.32.61.86
Netherlands	88.61.00.29
Switzerland	88.35.00.70
U.S.A.	88.35.31.04

SURVEYORS: Surveyors of the Commission de Visite, named by the Commission Centrale pour la Navigation du Rhin, can be obtained by the Master.

WATCHMEN: Ship's crew, if required.

OPENING/CLOSING HATCHES: Opening and closing of the hatches are performed by the crew or by the staff of the company freighting the ship, as any other handling. Dockers do not exist in the port of Strasbourg.

REPATRIATION: All the facilities exist for effecting crew changes and arranging any necessary repatriation.

AIRPORTS: Distances from Strasbourg: Strasbourg-Entzheim: 15 km. Strasbourg-Mulhouse: 130 km. (airport Mulhouse Bale). Strasbourg-Francfort: 220 km.

HOLIDAYS: Work is stopped during the weekends and the statutory holidays. Labour can be obtained on these days if necessary.

POLICE/AMBULANCE/FIRE: Police: 17 – Ambulance: 15 – Firemen: 18.

TELEPHONES: Office of the P et T, 5, rue du Port du Rhin, 67000 Strasbourg. In case of emergency: La Capitainerie du Port, 5, rue du Port du Rhin – North Lock of the Port, quai Jacoutot, can be contacted at any time. Tel: 88.21.74.74. There is also a public call box at the disposal of anybody at any time.

SERVICES: For the ship: Tank cleaning: SITAL, 22, rue de Cherbourg, 67000 Strasbourg. Tel: 88.39.50.16.

Supplying of material: Koejac, quai des Belges, 67000 Strasbourg. Tel: 88.61.26.78.

Electronic repairs or supplies: Radio-Metzger, 7 Avenue d'Alsace, 67000 Strasbourg. Tel: 88.35.45.42.

For the crew and various formalities (customs): La Capitainerie du Port, 5 rue du Port-du-Rhin, 67000 Strasbourg. Tel: 88.21.74.74.

SHORE LEAVE: The Master must introduce himself, within the 2 hours following his arrival, to the Commissariat Special du Port, 5 rue du Port du Rhin, 67000 Strasbourg, and produce the passports of the crew. The passenger ships have to comply with the regular supervision of authority. Each member of crew must be holder of an identification card or a passport when he is ashore.

GARBAGE DISPOSAL: Skips are available at both the North and South locks. Contact Societe Sital, 22 rue de Cherbourg, 67026 Strasbourg, Tel: 88.39.50.16, for further details.

WASTE OIL DISPOSAL: Service available at Bassin Albert Auberger (Oil Dock). Contact Tredi, 74 quai Jacoutot, 67000 Strasbourg, Tel: 88.61.82.42, Fax: 88.61.16.82.

SEAMAN'S CLUBS: None.

CURRENCY: French Franc (FFr.). U.S.$1.00 = FFr.5.38 (15.2.96).

REGULATION: The Reglement Particulier de Police du Port is very helpful to the Master and will let him know the particulars of the Port of Strasbourg.

DELAYS: The commercial operations begin and finish at the dates and hours shown upon the fluvial bill of lading. Every delay is subject to the payment of penalties. Except for the passenger ships, ships do not give notice of their arrival to the authority, before they enter into the port.

AUTHORITY: Port Autonome de Strasbourg, BP 407 R/2, 67002 Strasbourg Cedex, France. *Tel:* 88.21.74.74. *Telex:* 880476 F Poronome Strbg. *FAX:* 88.23.56.57. *Contact:* Andre Bayle, Port Director.

TONNAY CHARENTE: 45.57 N. 00.53 W. (See Plan)

DOCUMENTS:

2 copies Crew List.
2 copies Ship's Stores Lists.
2 copies Crew Manifests (Tobacco List).
2 copies Passenger List (if any).
1 Declaration of Ballast.
Manifest form Last Port.
1 copy Bill of Lading (in case of any cargo to be landed).
Ship Register to be shown.
Derat Certificate or Exemption.

PILOTAGE/ANCHORAGE: Vessels have to proceed to about half a mile S.S.W. Isle of Aix Lighthouse and to drop anchor in the No. 115 alignment when safe anchorage is open (lowest tides; minimum depth of water 26 ft.).

River Pilot joins ships there, about 3 hours to 1 hour before HW, depending on draft and size of vessel concerned.

Pilot boat is equipped with VHF.

RESTRICTIONS: As the River Charente is unlit, movements are not possible at night. However, vessels may leave anchorage in dark and come up river at daybreak (anchorage area is about 5.5 miles from the mouth of the river). Sailing up river possible 0300 hrs. – 2100 hrs. and sailing down river possible 0400 hrs. – 2100 hrs.

MAX. SIZE: Max. permissible LOA 120 m.; max. permissible draft 5.7 m. at Neap tides, 6.4 m. for sailing at Spring tides and 6.6 m. for entering at Spring tides.

HEALTH: Free Pratique is to be obtained on arrival at port. Usual yellow flag signal to be raised.

RADIO: Ships coming from South: Bordeaux-Arcachon Radio Station. Ships coming from North: Saint-Nazaire or Brest le Conquet Radio Stations.

VHF: Vessels arriving in the roads must keep watch on Channel 16, and Channel 69 for Pilot.

TUGS: No tug is available. In case of need, tug may be obtained from La Rochelle-Pallice (about 20 miles). A launch is available to run lines.

BERTHING: 1 private berth for grain loading, which can take vessels up to 100 m. length. 1 berth 200 m. long for handling general cargo. 3 waiting berths. The central waiting berth can be used for handling small cargoes from 500 tonnes to 1,000 tonnes. Depth of water along the quays is an average of 6 m.

CRANES: 2×5 tonne cranes, 1×3 tonne crane, 2×5 tonne mobile cranes. All the cranes are capable of working with hooks or scoops.

BRIDGES: The Rochefort Bridge clearance over highest water is about 98 ft. (30 m.).

STEVEDORES: A 24-hour notice is required in order to arrange loading/unloading operations.

Discharge rates:	Coal – about 1,200 tons per day of 8 hours' work. Phosphates – about 1,500 tons per day Zinc concentrates – about 1,400 tons per day.
Loading rates:	Grain 2,000/2,500 tons per day.

MEDICAL: The nearest hospital is at Rochefort (about 4 miles).
FRESH WATER: Fresh water may be obtained alongside, from hydrants, at the rate of about 10 t.p.h.
FUEL: Must be obtained from La Pallice (about 20 miles) by lorries.
REPAIRS: Small repairs may be carried out by local workshops. Nearest shipyard is at La Pallice.
OPENING/CLOSING HATCHES: This is the responsibility of the crew.
REPATRIATION: Changing crew and necessary repatriation formalities may be effected.
AIRPORT: The nearest airport is La Rochelle (about 30 miles). Possible to reach Paris airports in a few hours by train.
POLICE/AMBULANCE/FIRE: Police: Rochefort H.Q. – Tel: 17; Tonnay-Charente Gendarmerie: Tel: 46.88.20.38; Ambulance: Tel: 46.99.30.69; Fire: Tel: 18 or 46.88.20.38.
AUTHORITY: Capitainerie du Port, Quai de la Liberation, 17430 Tonnay Charente, France. *Tel:* 46.88.70.67. *FAX:* 46.99.44.93. *Contact:* M. Chauvet, Surveillant de Port.

Direction des Infrustructures Departementale, B.P. 125, 17306 Rochefort Cedex, France.

Mairie de Tonnay-Charente, Rue Alsace-Lorraine, 17430 Tonnay-Charente, France. *Tel:* 46 88 78 11.

TOULON: 43.07 N. 05.55 E. (See Plan)

DOCUMENTS: Cargo Manifest or Manifest of Ballast.
Certificate of Cargo Space.
Bills of Lading.
Ship's Register.
6 Crew Lists.
3 Passenger Lists.
Health Declaration.
Derat Certificate or Exemption.
Declaration of Crew Personal Effects.

PILOTAGE: Pilot station is situated on Est Quay, address: B.P. 137, Toulon. Tel: 94.41.03.28. Pilotage compulsory for vessels over 150 g.r.t. and over 45 m. LOA. Pilot boards 100 m. North of the semaphore station at Cap Cepet.
ANCHORAGE: Large anchorage area available in Rade des Vignettes (depth 11.0 m. – 15.0 m.). Call Cepet Signal Station on VHF Channel 16 before anchoring.
RESTRICTIONS: Entry can be made by day and night except for vessels loading with refined petroleum or dangerous cargoes which are not allowed to enter between sunset and sunrise.
MAX. SIZE: The port is approached by a channel 125 m. wide. The docks can accommodate without tug assistance ships up to 250 m. length and 9.5 m. draft.
HEALTH: Pratique given by Customs Officers who board on arrival. If any case of suspected disease on board or any reason why vessel should not receive Free Pratique, Master should radio Agent before arrival, advising full details.
VHF: IMPORTANT – To get authorisation to enter Toulon Harbour, ships should call the Naval Signal Station "CEPET" on Channel 16, one hour before arrival at the Pilot Station.
TUGS: 3 tugs available, 1×500 h.p., 1×750 h.p. and 1×1,000 h.p. Ships should arrange tugs one hour before berthing. Number of tugs will depend on Pilot's requirements and weather.

Naval Tugs: There are many harbour tugs up to 1,000 h.p. and several deep sea tugs up to 2,000 h.p. controlled by the French Navy which may be called on for assistance by the Harbour Master or Pilots.
BERTHING: President Fournel Quay, 345 m. length, depth alongside 9.5 m.

Corsica Quay, 170 m. length, depth alongside 8.2 m.

Minerve Quay, length 128 m., depth alongside 7.4 m.

La Seyne – Bregaillon: One Ro/Ro Berth, depth 9.60 m. Ore quay (2 berths), length 215 m., depth 9.50 m., 2×26 tonne cranes.
TANKERS: No facilities.
STEVEDORES: There is a permanent working force of 14 dockers which can be increased by casual labour to 60 men if required. Shifts are available for 4 hours, 8 hours or 9 hours with possibilities for overtime.
FRESH WATER: Available from hydrants.
FUEL: Available by tanker lorries and by barges from Port de Bouc companies (Sanara or Citerna).
REPAIRS: Serra Fres: Floating dock 1,700 tons, length 85 m.

All types of repairs can be carried out at the Naval Dockyard.
DRY DOCKS: Several dry docks available in the Naval Dockyard, of which 3 can accommodate vessels in excess of 250 m. length.
AIRPORT: The Toulon-Hyeres Airport is 23 km. from the centre of Toulon. There are 4 flights daily to Paris where passengers may transfer to national or international flights. Marseille Airport 70 km. by motorway and Nice Airport 150 km. by motorway.
TIME: GMT plus 1 hour in Winter. GMT plus 2 hours in Summer.
HOLIDAYS: New Year (1st January, no labour available); Easter Sunday (possibility of labour with overtime); Easter Monday (no labour available); Labour Day (1st May, no labour available); Ascension Day (possibility of labour with overtime); Whit Sunday (possibility of labour with overtime); Whit Monday (no labour available); National Day (14th July, no labour available); Assumption Day (15th August, no labour available); All Saints' Day (1st November, no labour available); Armistice Day (11th November, possibility of labour with overtime); Christmas Day (25th December, no labour available). N.B. Every Sunday and day marked "possibility of labour with overtime" can be worked at the rate of 100%.
IDENTIFICATION CARDS: Crew men going ashore should carry passport or identity card.
GARBAGE DISPOSAL: Skips available alongside. Contact Agent for service.
WASTE OIL DISPOSAL: Collection service available by tanker trucks or barges. Contact Agent for service.
SEAMAN'S CLUBS: None.
AUTHORITY: Direction Departementale de l'Equipment, Capitainerie du Port de Toulon, 244 Avenue de l'Infanterie de Marine, (P.O.Box 501), 83041 Toulon Cedex 9, France. *Tel:* 94.03.27.60. *Telex:* 430742. *FAX:* 94.03.38.69. *Contact:* Captain Alain Dague, Harbour Master.

TROUVILLE-DEAUVILLE: 49.23 N. 00.05 E. (See Plan)

The port situated on mouth of River Touques, is composed of 2 parts: Trouville for small fishing vessels, and Deauville including 2 docks for cargo ships and pleasure boats.
DOCUMENTS:
1 Crew List.
1 Passenger List.
Tonnage Certificate.
2 Cargo Manifests.
Bills of Lading.
1 Crew Manifest.

PILOTAGE: Pilotage on entry and leaving is carried out by the Seine Pilots. Request for a Pilot must be made 12 hours in advance by radio or telephone, either to the Port Captaincy of Trouville-Deauville or to the Pilotage Office for the Seine at Le Havre or at Rouen. Vessels bound for Trouville/Deauville anchor in the "Rouen Waiting Area" Roads at Carosse where they take on the Pilot.

It is recommended to anchor near the pilot boat of Rouen and contact her by VHF for instructions.
ANCHORAGE: The best one is Rade de la Carosse (Lat. 49° 27' 30" N., Long. 0° 01' E.).
RESTRICTIONS: No restrictions at night time. Draft allowed 2.80 m. Neap tides, 4.0 m. Spring tides, Entrance is dangerous with wind from N.W. to N. over force 6.

Access channel has a depth of 2.80 m. and dries out (zero on French charts). Lock gates are opened about 2 hours before time of commencement of flood tide at Le Havre. Lock gates are closed 2.5 hours after time of commencement of flood tide at Le Havre. The fore port and river quays at Trouville are uncovered at low water. The Trouville fishing port is one where craft are beached.
MAX. SIZE: Length: 210 ft. (64 m. OA); breadth: 45 ft.
RADIO: Radio-Boulogne FFB.
TUGS: No tugs available.
STEVEDORES: Loading and discharge by shore crane.
MEDICAL: All hospital facilities available.
DENSITY: 1025.
FRESH WATER: Available from quay.
FUEL: Small quantity by tank-lorry on demand.
CONSULS: See "Caen" or "Le Havre".
REPAIRS: Small repairs only.
AIRPORT: Deauville St. Gaitien 3 miles away.
GARBAGE DISPOSAL: Available.
AUTHORITY: Direction de la Station, S.E.R. Port Deauville, Quai des Marchands, 14800 Deauville. *Tel:* 31.98.30.01. *Contact:* Mr. Meslay, Directeur du Port.

NOTES

Please also advise Shipping Guides Ltd.

Gabon

CAPE LOPEZ: 00.38 S. 08.43 E. (See Plan)

DOCUMENTS:
4 Crew Lists.
4 Passenger Lists.
4 Lists of Ports of Call.
4 Manifest of Ship's Stores.
Clearance from Previous Port.
4 Arms and Ammunition Lists.
4 Narcotics Lists.
4 Birds and Animals Lists.

PILOTAGE: No official radio station. Pilotage not necessary to approach Cape Lopez Roads.

Pilotage to Cape Lopez Terminal is assumed by Elf-Gabon Pilots, while pilotage to Pointe Clairette Terminal depends on Port Gentil Harbour Authority.

For the private tanker port at Cape Lopez, pilotage is compulsory. On Cape Lopez Roads Pilot will board vessel 1.5 miles offshore on a line with Cape Lopez Lighthouse bearing 255° True, distance 2.4 miles in a launch carrying proper Pilot signals. The Mooring Master will stay on board throughout the vessel's time in port to assist in mooring, hose handling and loading operations.

ANCHORAGES: The waiting anchorage position is 2 nautical miles in a 075° direction from Cape Lopez Lighthouse. Depth of water 55 m.

It is necessary to guard against violent tornadoes occurring between December and May coming from the East or the North. These tornadoes occur very suddenly and are extremely strong.

MAX. SIZE: Max. Summer d.w.t. 250,000 and LOA 340 m. Max. draft 20.50 m. (67 ft.).

The above may be increased with spot approval.

Minimum size of vessel: LOA: 215 m. (Approx. 35,000 d.w.t.).

Maximum arrival displacement 160,000 tonnes.

RESTRICTIONS: Berthing is effected day and night, however, certain vessels may be berthed in daylight only. Unberthing is effected by day or night. Vessels must arrive with sufficient ballast and correct trim in order to manoeuvre safely.

Ballast should not be less than 30% of deadweight (See "West Africa Ballast Clause" below). Fresh water and stores are not considered as ballast; draft on arrival should not be less than 50% of loaded draft. Elf Gabon reserve the right to leave vessels which do not comply with these regulations at anchor.

Berthing is not effected in rough weather. At the berth mooring lines must be in good condition and well tended. In case of storm or tornado loading operations must cease and vessel be prepared to leave the berth if so directed by the Terminal Superintendent or Pilot.

West Africa Ballast Clause: Vessel must be able to deballast and load cargo simultaneously (or load part cargo, deballast, and load balance of cargo), with 2 valve segregation, while maintaining 30% of Summer deadweight.

HEALTH: Formalities carried out on berthing by Police Forces. However, ships remaining at anchor may have Customs and health formalities carried out through their Agent.

RADIO: *Elf Gabon Terminal:* VHF watch on Channel 72. The working Channel of the terminal is Channel 72.

When a ship is expected, a permanent watch on VHF Channels 16 and 72 is kept by the Pilot, one hour before ETA if berthing on arrival, for short distance communications.

All ships must contact the terminal in advance of their arrival. Elf Gabon will inform the vessel whether berthing will take place on arrival or whether it should anchor.

Arrival Advice: Advise Agent 72 hours, 48 hours and 24 hours before arrival, also if any appreciable alteration thereafter.

VHF: Before vessel's arrival watch is kept on Channel 16. During loading and mooring, watch is kept on Channel 72.

TUGS: Compulsory. Owned by Elf-Gabon, can be contacted on VHF Channel 72. Ship tow lines are not required, 3 tugs are available up to 3,200 h.p. There are 2 launches for handling mooring lines.

BERTHING: Anchors are not required for mooring operations but must be ready for emergency case. Vessel berths port side alongside on 6 dolphins, heading 044° True. Depth of water along the berth is 25 m. Mooring ropes used as follows: fore and aft 3 head/sternlines, 3 breastlines, 2 springs. 2, 3, or 4 tugs are used for mooring operations, in accordance with the d.w.t. Vessel's engines must be ready for immediate operation all the time vessel is at the berth. 2 or 3 tugs will remain standing by. Ship's gangway is not required, an automatic one is supplied by Terminal.

Connecting Hoses: Connection and disconnection is carried out by Elf Gabon personnel with the assistance of the crew.

The vessel's cargo derricks are not used except in the case of absolute necessity or in the case of breakdown of the platform hoisting gear.

The 4 loading arms are 16 in. diameter, with hydraulic couplers for 16 in., 14 in. and 12 in. flanges. The arms are located on either side of the dolphins' centreline.

Reducers shall be provided by the ship for the other flange diameters.

Before connecting arms, the ship will be connected to the ship-shore bonding wire, and disconnected only after loading arm uncoupling.

Hose Handling: 5 arms. Crude: 4 × 16 in. arms. Loading rate: 12,000 cu.m./hr. Finished products (Diesel and Naphtha) are loaded by means of a 5th loading arm; 2 loading arms can be used for Fuel Oil.

Loading: Communication between ships and shore loading installations, in any case (loading, fire, etc.), will be effected on VHF Channel 72.

An Elf Gabon representative, responsible for loading and safety is on permanent watch at the berth. The Master must supply him with all relevant information and assistance required to ensure operations run smoothly.

The Master will be held entirely responsible for operating the valves and for safe loading on board his ship. If necessary, pumping speed can be reduced.

At least 10 minutes before loading is finished, the terminal should be notified of the moment pumping should be stopped.

When loading is completed, the tank ullages will be taken by a ship's officer in the presence of an Elf Gabon representative and surveyors, if any.

Average samples taken from each tank from which the crude was pumped will be furnished to the ship by the terminal.

These samples will be numbered, sealed and labelled showing the origin of the crude.

Notice of Readiness: To Elf Gabon Terminal.

MEDICAL: Doctors and hospital facilities available. All vaccinations can be arranged.

BALLAST: Vessels must arrive with clean ballast only. There are no facilities for discharging dirty ballast at the terminal. In no circumstances should dirty ballast be pumped overboard.

DENSITY: Varies between 1021 and 1025.

FRESH WATER: Fresh water supplies can be obtained within a few hours from a 120 ton barge. Apply to Port Gentil.

FUEL: 1,500 secs. and 3,500 secs. fuel can be supplied by barge or by the terminal, subject to 48 hours' notice. No barges allowed alongside during loading operations.

CONSULS: France, Germany, Netherlands (Honorary Consul) and United Kingdom.

REPAIRS: There are facilities for hull and engine repairs for barges and river craft. Slipway for vessels up to 300 tons.

Vessels are forbidden to turn propellers, carry out repairs, or handling operations on deck during stay alongside.

CUSTOMS ALLOWANCES: No restrictions for quantities tobacco and spirits held on board the ship. It is prohibited to allow dutiable articles to leave the ship.

REPATRIATION: Facilities available. Contact ship's Agent.

AIRPORT: Can be reached in 15 minutes by road. Regular services to Europe every day.

TIME: GMT plus 1 hour all the year round.

HOLIDAYS: Holidays do not affect tanker working.

POLICE/FIRE/AMBULANCE: Police tel. 17; Fire tel. 18; Ambulance tel. 23-33.

SHORE LEAVE: Crew members are allowed ashore, but walking through the installations of the terminal is forbidden. There is no regular immigration control but identification papers should be carried. Bathing alongside the ship and the berth is strictly prohibited.

GARBAGE DISPOSAL: No facilities available.

WASTE OIL DISPOSAL: No facilities available.

SEAMAN'S CLUBS: None.

CURRENCY: Francs CFA. 1,000 CFA = 10 French Francs.

SAFETY: During the whole time the ship remains at the loading berth, the Master shall:

Maintain on board sufficient number of crew members to carry out any manoeuvre without difficulty, and to enable first fire fighting measures to be taken; maintain engines ready for manoeuvring; ensure that mooring is satisfactory without undue wear on mooring lines.

Fire Precautions: It is forbidden: To smoke, use naked flame or tools likely to create sparks outside the zones generally authorised for tankers; to carry out repairs or handling operations on deck; to turn the propellers; to use in danger areas any equipment or tools not of a type approved by a competent organisation. Elf Gabon reserve the right to take any steps considered necessary in case of danger and, in particular, to suspend loading; loading of bunkers, supplies, water, etc., will be submitted for the approval of Elf Gabon.

During loading:

All hull valves should be shut, except for those required for water circulation; all scuppers of main deck should be sealed; two fire hoses will be connected and set up, one at the bow. the other at the stern of the ship. The fire main shall be maintained under pressure at all times; two long robust steel safety ropes should be placed on the starboard side of vessel, one at the bow and one at the stern. The eyes should be maintained at the right distance from the water so that tug boats can easily catch hold of them.

Movement Restrictions: It is forbidden to enter the zone of Elf Gabon installations without due authorisation. Smoking or use of lighters or matches are strictly prohibited.

In case of fire on board a ship moored to the loading berth, the Shipmaster shall give the alarm by sounding a series of short blasts on the siren and advise Terminal on VHF Channel 72. He is responsible for organising fire fighting and ensuring the stability and safety of his vessel, taking all the necessary steps in this respect.

Elf Gabon may order any safety measures to be taken in the general interest of everyone.

If considered necessary, during a storm, the Loading Operator may suspend loading and disconnect the loading arm.

Safety Look-out:

Elf Gabon have a permanent look-out on the loading platform under the orders of the Chief Loading Operator.

Equipment at disposal of ship:

Stand-by tugs (2×2,000 h.p. minimum); mooring launches 140 h.p.; equipment permanently available at berth (water screen, hoses, etc.).

A Kleber anti-pollution barrier 500 m. in length can be launched within a few minutes.

A "Vortex" device can be used to re-pump the crude oil spilt in the sea. This crude oil is then collected in plastic tanks.

When a ship pollutes the sea, the above action and use of these devices will be charged to the vessel.

WEATHER:

Meteorology: From June to September the prevailing wind comes from S.S.E. and can reach force 6. From October to end of May, and especially during February, March and April there is a risk of tornadoes. They can come from any direction and are always very dangerous.

Tide: Mean amplitude of Spring tide is 2.20 m.

Swell: The terminal is protected from ocean swell. Wave height created by tornadoes can reach 2.50 m.

Current: Generally less than 0.5 knots but can reach 1 knot. Average direction 040° and 215°.

GENERAL: *Ships spares:* Customs require originals of invoices for clearing spares. Copies are not acceptable.

SHIPMASTER'S REPORT: 1977. (Updated 1994).

This vessel is an OBO carrier of 159,250 d.w.t. and called for a part cargo of 85,000 tons of Mandji Crude.

Mandji Crude has an API of between 30.0 and 30.4 and was on this occasion loaded at 97°F.

It appears to be wax-free and has a slight suspended water content.

Vessel size: Accepts vessels from 35,000 d.w.t. to 250,000 d.w.t., max. sailing draft is 67 ft.

Berth: Berth face about 420 ft. long with connected mooring posts. "Floating" type fender piles. Pilots are cautious of impacts as berth is piled into very deep soft mud. Moorings on our visit were: Forward: 3 head lines, 3 breast ropes and 2 springs. Aft: 3 stern lines, 3 breast ropes, and 2 springs. (See "Plan").

The springs were sent ashore first, fore and aft.

All lines are run, 1 at a time, by mooring boat, and there is no problem running wire rope moorings.

There is a shore gangway mounted on a tower.

Load Rate: Total max. rate of 12,000 t.p.h. using 4 Chicksan loading arms. The connections are 16 in. and hydraulically coupled.

Berthing: Straight forward operation, no significant currents, vessels tie up bow out, port side to jetty.

Berthing Operations: From end of passage to all secure was accomplished in just over 3 hours, from Pilot aboard to secure took 2 hours. Connection of the loading arms used by this vessel took 1 hour.

From commencement of singling up to Pilot away took 1.5 hours.

Tugs: There are 2 modern 3,000 h.p. Kort Nozzle tugs and 1 older tug of 2,000 h.p. stationed in the port. The larger tugs made fast fore and aft, and the smaller pushed midships. On sailing only one of the larger and the smaller tug were used. The tugs normally use their own lines and remain fast until mooring is completed.

Weather: Mild and pleasant apart from tornadoes which occur from October to May, but especially February, March and April.

These spring up without notice to very violent winds in minutes, and though it is understood loading may be suspended, the tugs are used to assist vessel to remain on the berth if required.

Bunkers: A bunker line is being installed on the jetty, a barge is used temporarily, but it is understood that delays can be expected in taking bunkers, and they must be ordered beforehand from Elf Paris.

Fresh Water: Said to be available by barge from Port Gentil.

Usage: According to the Pilot, about 12 ships a month use the berth.

Slop Reception: There are no facilities, vessels must arrive with clean pumps and clean lines.

Radio: Tugs and Pilot are on VHF 16/72 and Marine and Terminal Operations are on VHF 72.

Repairs: Doubtful if any repairs could be undertaken, possibly in emergency the refinery workshops would assist.

Communications: There are regular daily flights to Libreville, and connections from there worldwide with minimal delay. Flight time Cape Lopez to Paris is said to be 7 hours.

Crew Changes: Could be carried out easily from a point of transportation, Port Gentil only has 2 hotels (Novotel and Meridien) and 3 guest houses.

Medical Service: Could not be obtained because vessel berthed on Saturday. However, there is a hospital.

Chandler: The port has a chandler, but there is no local produce whatsoever, all vegetables, etc., being airlifted from France and prohibitively expensive.

Cargo: Mandji Crude at loading temperature 95° to 100°F., API 30.25, has slight percentage suspended water.

Shore Leave: Permitted, but walking through the installation is forbidden for security reasons, and transportation is apparently difficult to obtain.

General: I understood no clearing or formalities are completed until vessel is berthed.

Pilotage: Pilot is on board for berthing and unberthing, and stays at the terminal for security all the time.

Loading Master performs all loading operations.

Accommodation: No longer required to provide accommodation for shore personnel.

SHIPMASTER'S REPORT: November 1981.

Agency listens on VHF Channel 16 during normal working hours and they also listen at 0900 and 1500 LMT on frequency 2506 kHz. Cargo papers usually take 2 hours after completion of loading. There was no problem with crew going ashore.

SHIPMASTER'S REPORT: January 1988.

This vessel calls frequently at the port.

The updates from Shipmasters are generally correct, but Pilots state that they do not berth vessels during darkness. Usual hours for berthing are from about 0700 hrs. until about 1800 hrs. The decision whether or not to berth any particular vessel outside those times is made by the Pilot, depending upon vessel's size, weather conditions, etc. It is considered highly unlikely that they would berth a large vessel after dark.

In addition to the latest papers required, we have also been asked for one copy of List of Vaccination Dates and one copy of Crew Personal Effects Manifest.

Customs and other formalities are usually only effected alongside after berthing. Usually two officials and Agent board. No problems encountered.

Documentation on completion of loading usually takes about 4 hours.

Fresh provisions are available from chandler in Port Gentil, but as they are mostly imported, prices are about three times those in Europe. They are of good quality and variety, cost being the only problem.

We have always found that mail posted in this port reaches its destination properly, (7–10 days to Europe).

SHIPMASTER'S REPORT: December 1995.

Vessel supplied with Port and Safety Regulations on arrival. We confirmed that the max. 160,000 tonnes arrival is displacement. Other restrictions – only daylight berthing for ships this size (269,880 d.w.t.), but can sail anytime. Max. draft 20.5 m. They gave us dispensation to load to 20.8 m. for full cargo. Max. Summer Deadweight is 250,000 tonnes. Dispensation given on this occasion.

Slow loading rate, due clearing tanks, end of year. Issued with 3 Bills of Lading to cover different suppliers and tanks.

Well organised port with modern facilities. Tugs double up as supply boats and appeared underpowered.

AUTHORITY: Elf Gabon, B.P. 525, Port Gentil, Gabon. *Tel:* (241) 556309, 556938. *Telex:* 8210 – 8216 Go Elferap. *FAX:* 556968, 556476. *Contact:* P. Jahan, Operations Manager.

Terminal: Cape Lopez Terminal, B.P. 524, Port Gentil, Gabon. *Tel:* 75.63.09. *Telex:* 8210, 8216. *Contact:* Mr. Jesberger, Terminal Manager.

AGENT: Socopao-Gabon, BP 560, Port Gentil. Tel: 552005, 552491. Cables: "Freight Portgentil". Telex: 8223. Fax: 550751.

GAMBA: 02.52 S. 09.58 E. **(See Plan)**

LOCATION: Gamba SBM acts as the export facility for oil which is produced onshore from the Gamba/Ivinga and Rabi/Kounga oilfields in Gabon.

The SBM is located in the following position:

Latitude 02° 51.6' S.
Longitude 09° 58.2' E.

DOCUMENTS:

Last Port Clearance.
3 Lists of Last Ports (during last 3 months).
3 Stores Lists.
4 Crew Lists.
3 Personnel Effects Lists.
3 Lists of Vaccinations.
2 Arms and Ammunitions Lists.
2 Animals Lists.
2 Narcotics Lists.
2 Passenger Lists.
1 Notice of Readiness.
Also see "Radio".

APPROACHES/AIDS TO NAVIGATION: Approaches to the berth are direct from the sea, stemming the predominant current which usually runs Northward parallel to the coast.

Occasionally the berth is subject to heavy swell delays and from October to May tornados can be experienced from any direction and can be particularly dangerous.

Gamba Lighthouse :	Lat. 02° 47.0' S., Long. 10° 01.4' E. Red and white lattice tower. Height 47.0 m. GP. FL. (2) W 10 seconds. 18 miles.
W. Cardinal Buoy :	Lat. 02° 51.6' S., Long. 09° 55.8' E. Height 6.0 m. GP. FL. (9) 15 seconds. 6 miles.
SBM :	Lat. 02° 51.6' S., Long. 09° 58.2' E. Yellow. FL. W 0.3 second every second. 5 miles.
Radio Beacon :	Lat. 02° 46.8' S., Long. 10° 02.3' E. An aircraft radio beacon is in operation at Gamba airfield. Signals are sent continuously. Frequency 359 kHz. Call sign GZ.
Old SBM : (Not in use)	Lat. 02° 50.0' S., Long. 10° 09.6' E. Yellow. Fl. W 0.3 second. 5 miles.

PILOTAGE: All tankers using the SBM must use the Shell Gabon pilotage service for both mooring and unmooring. The Berthing Master boards in a position approximately 2 miles N.W. of the SBM.

Pilot ladder should be rigged on the port side as per international requirements with the accommodation ladder 5.0 m. above the water and the pilot ladder 3.0 m. above the water.

Vessels should arrive with derrick rigged and topped on the port side (minimum SWL 10 tonnes) in order to lift on board the mooring equipment and for the floating hose connections. The maximum stern trim of the vessel should be 8 ft.

The Berthing Master and his assistant, who both remain on board throughout the loading, act as Loading Masters and maintain contact with the shore on VHF Channel 12.

The pilot boat/mooring launch will assist mooring/unmooring and will stand-by throughout loading. A buoyant mooring rope should be provided aft by the tanker. Ship's engines should be kept ready for use at any time at the Berthing Master's request.

ANCHORAGE: Vessels anchor without assistance. The recommended anchorage is in a location 2.0 miles N.W. of the SBM in a water depth of 82 ft. (25 m.). The sea bottom is sand and is good holding ground.

Anchoring is prohibited within port limits. Both anchors must be fully secured prior to berthing.

READINESS: Notice of Readiness will be accepted by the Berthing Master either:

(a) At the vessel anchoring time, if delayed at the request of the terminal, provided the vessel is within her date range.

(b) On completion of mooring if vessel is berthed on arrival.

(c) On commencement of the laydays if the vessel is berthed before the commencement of laydays.

MAX. SIZE: Max. ship size 150,000 tonnes d.w.t., weather permitting. Max. distance bow to manifold – 467 ft. (142.4 m.).

Draft:

Lowest Astronomical Tide	22.90 m.
Sub-Sea Structure Height	– 2.65 m.
	20.25 m.
Underkeel Clearance	– 3.00 m.
Max. draft	17.25 m.

HEALTH: When advising ETA include in message whether any sickness on board. In case of emergency, vessels should call before or after loading, at Port Gentil for medical attendance or for crew changes. For this purpose send separate message to "Marine Gamba" and to Agency.

RADIO/VHF: *Arrival Advice:* The initial ETA should be sent to "Gamba Marine" via Telex or Fax at least 4 days before arrival. Subsequent confirmatory ETA messages should be passed to Gamba Marine by Telex or Fax every 24 hours.

Information required by Terminal prior to Arrival:

A. ETA.
B. Cargo required in barrels.
C. Type and number of bow stoppers.
D. Oil Pollution Certificate details.
E. Last port of call.
F. Owner, Operator, Charterer, flag, port of registry.
G. S.d.w.t., g.r.t., n.r.t.
H. Master's full name.
I. Tel./Telex numbers of Owners and Operators, plus address if known.
J. Ship's call sign.
K. U.S.C.G. identifier for Bills of Lading, if required.
L. Arrival and departure drafts.
M. Power voltage available in Pilot's cabin.
N. Deballast concurrent with loading? (If not deballast time).
O. Vessel inerted and I.G. plant fully operational.

Telecommunications: Telexes can be sent to "Shell Gabon OLS/4/41". Shell Gabon's Telex No. is 8206-GO. If the matter is urgent please prefix the telex with "VERY URGENT".

Telephone communcation is also available with the following numbers: (Country code 241) Tel. No. 75 83 60 or 75 84 65. Fax No.75 85 77. Out of hours number: (241) 759114.

If no telex is available then all messages to be sent to Gamba Marine (OLS/4) through Gamba Radio "TRP 8", which is a private station operated free of charge by Shell Gabon.

Telegraphy: Telegraphy A1. Power 500 Watts. Frequency 500 kHz. Watch from 0700 hrs. to 0900 hrs. on request by Gamba Marine.

VHF: Power 25 watts. Call sign "Gamba Marine". Watch on Channel 6. Working Channels 12 and 6. Range about 30 nautical miles.

Watch in English language during office hours (0700 – 1200 and 1400 – 1700).

Pilot launch: Watch on Channel 6 (when at sea). Range about 20 nautical miles.

Note: Local time is GMT plus 1 hour.

BERTHING: *SBM Description:* The buoy is 11 m. in diameter, 5 m. high. A double 16 in. manifold is provided on the turntable 90° clockwise from the tanker securing point. The SBM is moored by means of 6 chains which are secured to the seabed by 200 tons holding power anchors.

MOORING: Vessels moor with 2×15 in. nylon ropes (length 45 m.) from SBM secured on board ship by 2×76 mm. stud link chain. Berthing Master will advise on mooring procedure.

Mooring Procedure: Prior to the vessel's approach to the buoy, the mooring launch will have carried out the following:

(i) All cargo valves on the SBM opened, i.e. 2 seabed pipeline valves, 2 submarine pipeline valves and 2 SPM valves.

(ii) Both floating hoses turned back and secured to the SPM.

(iii) Starboard mooring line turned back around the SPM.

The mooring launch will then connect a 150 m. long × 250 mm. circumference polypropylene messenger to the mooring chain pick-up rope by means of a special screw type shackle and then stand-by to receive the tanker at the end of the floating hose line. During night time operations the mooring launch can assist by illuminating the position of the floating hose.

When the tanker is within range, launch will connect the messenger to the ship's rope and the vessel will then be manoeuvred up towards the SPM until the mooring chain is on board and stoppered.

Vessel should use a fixed drum to heave in the messenger, if one is available. This may require removing a wire from the drum prior to arrival.

On no account should the vessel be warped up to the buoy by means of the winches and at no stage should excessive weight be allowed to come on to the messenger, especially during adverse swell conditions.

The use of OCIMF stoppers is *obligatory* at Gamba and, if only one is available, the starboard rope should be made fast clear of the water, but at a lesser tension.

LOADING: *Derrick/Crane:* Vessels should arrive with derrick rigged and topped on the port side (Min. SWL 15 tonnes), in order to lift on board the equipment for mooring and for the floating hose connections.

Shore Line System: SBM – 1×30 in. submarine pipeline (total length to Terminal 10.3 km. (33,790 ft.)). Reduced to 2×16 in.×120 ft. for connection to ship's manifold (total length of floating hoses: 830 ft. and 890 ft.).

Rabi Export Blend Crude Characteristics:

Density at 15° C	:	0.8535
A.P.I. at 60° F	:	34.0
B.S.W.	:	0.05
Salinity	:	20 – 30 PPM
Temperature	:	40° – 46° C
Loading Rate	:	4,600 cu.m/hr.

Deballasting: There are no facilities for discharging ballast or slops ashore. Vessels must therefore arrive at the loading terminal with clean ballast on board.

Clean ballast to be discharged concurrent with loading. If not possible, deballasting can commence once the vessel has loaded 25% of d.w.t. Loading will then be suspended for deballasting.

Connection/Disconnection of Hoses: Connection and disconnection is carried out by the ship's crew with advice from the Berthing Master or his assistant. The hoses are connected to the port side manifold using a 16 in. ASA 150 flanged connection. A proper secure mooring point for the hoses is required 1.0 m. to 3.0 m. from the rail.

Loading Procedure: During the loading, the Berthing Master remains on board and acts as Loading Master and maintains permanent contact with the terminal on VHF Channel 6.

If required, the loading rate can be adjusted for topping-off tanks and for completion of loading, or at any time if required. The minimum loading rate is 2,000 cu.m./hr. The Loading Master should be advised at least 1 hour before the completion of loading. A watchman must be stationed on the forecastle and in the manifold area throughout loading.

The normal loading rate is 4,000 cu.m./hr. and the maximum loading rate is 4,600 cu.m.p.h.

Documentation: All documentation will be completed by the Berthing/Loading Master after the completion of loading on receipt of the shore figures. Normally this is 3 hours – 4 hours.

Engines: Engine immobilisation is forbidden at the SBM. Engines should be kept ready for use at any time at the Berthing Master's request.

MEDICAL: No medical or dental facilities at Gamba (See "Health").

DENSITY: 1025.

FRESH WATER/FUEL: Not available.

CONSULS: None, French Consul in Port Gentil.

REPAIRS: No facilities available.

BALLAST: There are no facilities for discharging ballast ashore. Vessels must arrive at the loading terminal with clean ballast only, apart from contents of the slop tank. Clean ballast cannot be discharged prior to loading. See "Loading".

GANGWAY/DECK WATCHMEN: Not required.

CUSTOMS ALLOWANCES: No restrictions on Tobacco/Wine.

REPATRIATION: Not permitted.

AIRPORT: Gamba airport is local airstrip and is connected to Port Gentil by daily service (Except Sunday). Port Gentil airport is connected to Libreville International Airport by daily services. Mail reaches any European country within seven days.

TIME: GMT plus 1 hour throughout the year.

HOLIDAYS: None which affect the Terminal.

SHORE LEAVE: Not allowed.

IDENTIFICATION CARDS: Not required.

GARBAGE DISPOSAL: No facilities available.

WASTE OIL DISPOSAL: No facilities available.

DELAYS: Occasionally the berth is subject to heavy swell delays and from October to May tornadoes can be experienced from any direction and can be particularly dangerous.

GENERAL: *Deck Watch:* When on the SBM, a responsible officer must be present on deck and a permanent watch must be maintained on the forecastle.

Territorial Waters: The sovereignty of the Republic of Gabon extends up to 200 nautical miles from the lowest sea water mark along the coast.

Mail: Mail will reach any European country within one week.

Ship's Spares: Customs require originals of invoices for clearing spares. Copies are not acceptable.

Stores/Laundry: Not available.

AUTHORITY: Shell Gabon, Gamba Marine (OLS/4), B.P.146, Port Gentil, Republique du Gabon. *Tel:* (241) 558360. *Telex:* 8206 Go., 8214 Go., 8249 Go. and 8260 Go. *Cables:* Shell Gabon Port Gentil. *FAX:* (241) 558577. *Contact:* Captain R.A. Battye, Marine Superintendent.

AGENT: See "Port Gentil".

LIBREVILLE: 00.23 N. 09.26 E.

PORT LIMITS: The seaward boundaries of the port within which a vessel is considered to be an "arrived ship" and (subject to C/P terms) laytime will commence is 2 miles off shore at Libreville Harbour.

DOCUMENTS: See "Port Gentil".

PILOTAGE: None available.

ANCHORAGES: Bottom of roads in Libreville slopes very gently down towards open sea. The greater the vessel's draft, the further out it must moor. e.g., ship of 7 m. to 8 m. draft will be moored approx. 1,500 m. from Harbour Pier. Ship 5 m. – 6 m. draft will be able to approach the Harbour Pier as near as 500 m. to 600 m. For reasons of safety, forbidden to come nearer, particularly during tornado season – February to May and September to December.

RESTRICTIONS: No restriction imposed on entering or leaving the Estuary. Channel marked by 5 buoys provided with radar reflectors and flashing lights. Sixth buoy, called a "landing buoy" moored in roads, where vessels moor.

MAX. SIZE: *Shipmaster's Report:* March 1980. Max. draft 7.4 m.

HEALTH: If there is sickness on board, Health Service warned by Consignor of vessels. Health Service can go on board to check state of crew's health. Immigration Service can also board to check crew list and condition of passengers, if any.

RADIO: *Libreville Radio:* Radio-telephony from 0600 to 1800 hrs. GMT on 2182 kHz, Radio-telegraphy from 0600 to 1800 hrs. GMT on 500 kHz, call sign TRA 22; from 0800 to 0830 hrs.on 13101 kHz, call sign TRA 8; from 1630 to 1700 hrs. GMT on 8722 kHz, call sign TRA 8.

TUGS: Tugs intended only for towing lighters, horse power 150 to 250, unsuitable for any harbour towing.
BERTHING: Only for lighters and small coasters with a draft of less than 3 m. Crews working unloading or loading of vessels in roads supplied by Consignor of the ship. Harbour Services have no radio apparatus. Shipping companies all have radio-telephone extensions, which allows them to be in permanent contact with vessel moored in roads. Unloading or loading operations of goods carried out by lighters which, towed by small tugs, ensure rotation between vessel in operation and quay. All this equipment belongs to shipping companies dealing with consignment of vessels in the roads. Every vessel arriving in roads must have its consignor.
STEVEDORES: Available.
MEDICAL: Hospital available, and in case of necessity, patient or patients will be admitted.
FRESH WATER: Water supply real problem, as there is no tanker to transport it. Therefore strongly recommended that any ship touching Douala coming from the North or Pointe Noire coming from South, should fill up at one of these ports.
FUEL: There are fuel-tankers belonging to shipping companies. The tanker which provisions Libreville two or three times a week is brought alongside buoys in roads, (Position: Lat. 0° 23' 51" N., Long. 9° 25' 42" E.); fuel is transhipped by sea-line to tank on shore.
FIRE PRECAUTIONS: No special precautions.
CONSULS: None.
REPAIRS: Small repairs possible.
GANGWAY/DECK WATCHMEN: Carried out by crew.
OPENING/CLOSING HATCHES: This is done with the tacit agreement of the ship's Officer and the Consignor.
CARGO GEAR: Ship's own gear used.
DRY DOCKS: None.
REPATRIATION: No facilities.
AIRPORT: 9 km. from the harbour. Links with French-speaking Africa, Switzerland, and France, also Johannesburg.
TIME: GMT plus 1 hour.
HOLIDAYS: 17th August, Independence of Gabon; 1st May, Labour Day – these are the only holidays in force.
SERVICES: None.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Required.
DELAYS: First come, first served method.
GENERAL: *Ship's Spares:* Customs require originals of invoices for clearing spares. Copies are not acceptable.
AUTHORITY: Capitainerie du Port.

AGENT: Socopao-Gabon, B.P.4., Libreville. Tel: 70.26.35 and 70.21.53. Telex: 5212. Cables: "Freight Libreville". Fax: (241) 70.23.34.

LUCINA MARINE TERMINAL: 03.40 S. 10.46 E.

(See Plan)

LOCATION: Lucina offshore development consists of 6, four pile production platforms linked by submarine pipeline to the LP-1 production platform then to the Floating Storage Unit (FSU) "Banio", which itself is linked to an export SBM.

The production platforms are:

LD1	Lat. 03° 41.0' S.,	Long. 10° 44.3' E.
LD2	Lat. 03° 41.8' S.,	Long. 10° 45.0' E.
LD3	Lat. 03° 42.5' S.,	Long. 10° 46.0' E.
LD4	Lat. 03° 41.9' S.,	Long. 10° 44.6' E.
LD5	Lat. 03° 42.2' S.,	Long. 10° 45.8' E.
LWD1	Lat. 03° 41.4' S.,	Long. 10° 43.7' E.

The 85,000 tonnes FSU "Banio" (Ex-tanker "Sitala") is moored by means of 10 anchors in position Lat. 03° 40.0' S., Long. 10° 45.8' E.

The FSU is connected with the export SBM by a 20 in. × 1.0 km. submarine line.

DOCUMENTS:
Last Port Clearance.
3 Lists of Ports for last 3 months.
3 Stores Lists.
4 Crew Lists.
3 Vaccination Lists.
3 Personal Effects Lists.
4 Arms and Ammunition Lists.
2 Animals Lists.
2 Narcotics Lists.
2 Passenger Lists.
1 Notice of Readiness.

APPROACHES: *Navigation Aids:*

LD-1	:	Conspicuous flare, Morse "U" white 15 seconds.
LD-2,3,4,5.	:	2 lights Morse "U" white 15 seconds.
LWD-1	:	2 lights Morse "U" white 15 seconds.
SBM Buoy	:	QK. FL. White 2 seconds, 5 miles.
FSU "Banio"	:	Floating storage unit shows: (a) All deck lights operational at night. (b) 2 lights, Morse "U" 15 seconds, 1 forward and 1 aft.

PILOTAGE: All tankers using the SBM must use the Shell Gabon pilotage service for both mooring and unmooring. The Berthing Master boards in a position approximately 2 miles N.W. of the SBM. Berthing takes place both day and night; should the Master be unwilling to berth at night then delays will be for the vessel's account.

The pilot ladder should be rigged on the port side as per international requirements with the accommodation ladder 3.0 m. above the water.

Vessels should arrive with derrick rigged and topped on the port side (minimum SWL 10 tonnes) in order to lift on board the mooring equipment and for the floating hose connections. The maximum stern trim of the vessel should be 8 ft.

The Berthing Master and his assistant, who both remain on board throughout loading, also acts as the Ship's Agent and is the focal point for liaison with the shore, communications being by VHF.

The pilot boat/mooring launch will assist mooring/unmooring and will stand-by throughout loading. A buoyant mooring rope should be provided aft by the tanker. Ship's engines should be kept ready for use at any time at the Berthing Master's request.

ANCHORAGE: Vessels must anchor without assistance. The recommended anchorage is in a location 2.0 miles N.W. of the FSU in a water depth of 19 fathoms (34.0 m.).

READINESS: Notice of Readiness will be accepted by the Berthing Master either:
(a) At vessel anchoring time, if delayed at the request of the terminal, provided the vessel is within her date range.
(b) On completion of mooring if vessel is berthed on arrival.
(c) On commencement of lay-days if vessel berthed prior to commencement of lay-days.

RESTRICTIONS: No draft restrictions. Depth of water is 114 ft.
MAX. SIZE: Max. ship size 130,000 tonnes d.w.t., weather permitting; this is the absolute maximum. Max. distance bow to manifold – 465 ft.
RADIO/VHF: *Arrival Advice:* Initial ETA should be sent to "Gamba Marine" via Telex or Fax at least 4 days before arrival. Subsequent confirmatory ETA messages should be passed to Gamba Marine by Telex or Fax every 24 hours.

Telecommunications: Telexes can be sent to "Shell Gabon OSU/4/41". Shell Gabon's Telex No. is 8206-GO. If the matter is urgent please prefix the telex with "GETIM".

Telephone communication is also available with the following numbers: (Country code 241) Tel. No. 55 83 60 or 55 84 65. Fax No. 55 85 77. After hours telephone No. (241) 559114 or (241) 559071.

VHF: Power 25 watts. Call sign "Gamba Marine" or "Banio".

Watch on Channel 12. Working on Channels 12 and 6. Range about 30 nautical miles.

Watch in English language during office hours (0700 – 1200 and 1400 – 1700).

Pilot launch: Watch on Channel 12 (when at sea). Range about 20 miles.

HEALTH: Any sickness on board should be reported in the ETA. No facilities are available for medical or dental treatment at Lucina. Vessels should therefore call at Port-Gentil before or after loading.

BERTHING: *SBM Export Facility:*

Position	:	Lat. 03° 39.6' S., Long. 10° 46.2' E.
Moorings (to buoy)	:	2×16 in. nylons × 45.0 m.
Moorings (to ship)	:	2×76 mm. stud link chafe chain.
Buoy diameter	:	8.0 m.
Buoy height	:	4.0 m.
Buoy connection	:	Connection to submarine lines on free rotating centre swivel section.
Buoy mooring	:	Chains with 120 ton holding power anchors.
Floating hose	:	865 ft. × 16 in. diameter hose.
Submarine hose	:	2×150 ft. × 16 in.
Submarine line	:	1,100 m. × 20 in. diameter line from FSU.
Loading rate	:	Maximum 2,700 cu.m.p.h.

MOORING: *Mooring Procedure:* Prior to the vessel's approach to the buoy, the mooring launch will have carried out the following:
(i) All cargo valves on the SBM opened, i.e. 2 seabed pipeline valves, 2 submarine pipeline valves and SPM valve.
(ii) The floating hoses turned back and secured to the SPM.
(iii) Starboard mooring line turned back around the SPM.

The mooring launch will then connect a 150 m. long × 250 mm. circumference polypropylene messenger to the mooring chain pick-up rope by means of a special screw type shackle and then stand-by to receive the tanker at the end of the floating hose line. During night time operations the mooring launch can assist by illuminating the position of floating hose.

When the tanker is within range, launch will connect the messenger to the ship's rope and the vessel will then be manoeuvred up towards the SPM until the mooring chain is on board and stoppered.

On no account should the vessel be warped up to the buoy by means of the winches and at no stage should excessive weight be allowed to come on to the messenger, especially during adverse swell conditions.

The use of OCIMF stoppers is *obligatory* at Lucina and, if only one is available, the starboard rope should be made fast clear of the water, but at a lesser tension.

LOADING: *Lucina Crude Oil Characteristics:*

Density at 15° C	:	0.8300
A.P.I. at 60° F	:	39.06
B.S.W.	:	0.02
Salinity	:	40 PPM.
Loading Rate	:	2,700 cu.m/hr.

Deballasting: There are no facilities for discharging ballast or slops ashore. Vessels must therefore arrive at the loading terminal with clean ballast on board.

Connection/Disconnection of Hoses: Connection and disconnection is carried out by the ship's crew with advice from the Berthing Master or his assistant. The hose is connected to the port side manifold using a 16 in. ASA 150 flanged connection.

Loading Procedure: During the loading, the Berthing Master remains on board and acts as Loading Master and maintains permanent contact with the terminal on VHF Channel 12.

If required, the loading rate can be adjusted for topping-off tanks and for completion of loading, or at any time if required. The Loading Master should be advised at least 1 hour before the completion of loading. A watchman must be stationed on the forecastle and in the manifold area throughout loading.

Documentation: All documentation will be completed by the Berthing/Loading Master after the completion of loading, on receipt of the shore and ship's figures.

MEDICAL: See "Health".

FRESH WATER: Not available.

FUEL: Not available.

REPAIRS: No facilities. Engines not to be immobilised whilst at the SBM.

REPATRIATION: Not permitted.

TIME: GMT plus 1 hour throughout the year.

HOLIDAYS: None that effect operations.

SHORE LEAVE: Not allowed.

GARBAGE DISPOSAL/WASTE OIL DISPOSAL/SEAMAN'S CLUBS: S.B.M., so no facilities.

CURRENCY: Currency is C.F.A. Rate is fixed at 50 C.F.A. equal to 1 French Franc.

GENERAL: *Ship's Spares:* Customs require originals of invoices for clearing spares. Copies are not acceptable.

Territorial Waters: The sovereignty of the Republic of Gabon extends up to 200 nautical miles from the lowest sea water mark along the coast.

Mail: Mail will reach any European country within one week.

AUTHORITY: Shell Gabon, Gamba Marine (OSU/4), B.P. 146, Port Gentil, Republique du Gabon. *Tel:* (241) 558465. *Telex:* 8206 Go. *Cables:* Shell Gabon Port Gentil. *FAX:* (241) 55-8577. *Contact:* Marine Superintendent.

M'BYA TERMINAL (Mayumba): 03.53 S. 10.56 E.

LOCATION: The terminal is approximately 35 miles Southwest of Mayumba, in position Lat. 03° 53.4' S., Long. 10° 55.8' E.

PILOTAGE: All tankers mooring at the M'Bya loading buoy must use the Elf Gabon Pilot who should also be called upon in respect of all manoeuvres and unmooring operations.

ANCHORAGE: *Temporary Anchorage:* Situated 2,000 m. West of the loading buoy.

Ships shall come to anchor without the assistance of the Pilot. Depth of water 30 m. Nature of sea floor is sand and mud.

Under no circumstances shall vessels anchor in the prohibited zone.

MAX. SIZE: 150,000 d.w.t. Max. draft 18.0 m.

For tankers on second loading, the displacement shall not exceed 100,000 tons.

Depth of water at the loading buoy is 30 m. at mean lowest tide.

HEALTH: *Sanitary Inspection:* This is carried out on arrival. However, ships remaining at anchor may have Customs and Health formalities carried out through their Agent.

RADIO: *Notice of Arrival:* Tankers shall have their arrival at M'Bya notified by their agency representative 72 hours, 48 hours and 24 hours in advance.

Hereafter, they shall notify any appreciable change in the anticipated time of arrival.

Elf Gabon Terminal (Port Gentil):

Permanent watch by radiophone 2,182 kHz (400 watt).

(7,895 kHz information wavelength).

When a ship is expected, a permanent watch on VHF Channel 16 is kept by the Mayumba Terminal for short distance communications.

Ships must contact the Terminal in advance of their arrival. Elf Gabon will inform the vessel whether berthing will take place on arrival or whether it must anchor.

VHF: A permanent watch on Channel 6 is compulsory whilst at anchorage and at the loading buoy.

TUGS: All vessels coming to moor at M'Bya Terminal are obliged to use Elf Gabon tugs, the tugs supply their own towrope.

Elf Gabon also supply line handling boats.

LOADING BUOY: The CALM type buoy consists of a floating shell with a square cross section (side 8.50 m. × 8.50 m.) rotating freely around a central well equipped with 4 anchoring chains. This buoy was designed for loading ships of 30,000 d.w.t. to 150,000 d.w.t.

The crude is conveyed from the sealine to the buoy by 2 × 16 in. diameter subsea flexible lines and from the buoy to the tanker by 1 × 16 in. floating flexible line made up of 24 × 35 ft. sections and1 × 30 ft. tanker rail hose, i.e. a total length of 270 m. The maximum operating pressure of this flexible line is 10.5 bars. The connecting flange is equipped with a Camlock quick-connection system.

The tanker is moored with a "Samson" type system nylon hawser 150 ft. long with a SWL of 348 tonnes. The hawser is spliced and equipped with a galvanized thimble and with 5 m. of chafing chain at each end (438 tonnes SWL). The length of chain to be taken on board the tanker is equipped with a float which has a buoyancy of 5,000 lb.

Attached to this chain is a 150 m. long polypropylene hawser (diameter 100 mm.) and a 50 m. long inhaul (diameter 45 mm.).

One of the tanker's hawsers is used as a safety mooring line, i.e. as a back-up to the main mooring line.

The field personnel are responsible for line handling. A sufficiently long messenger line (minimum 150 m.) should be available on the tanker to enable the Elf Gabon personnel to work in complete safety.

MOORING: On board, mooring operations are carried out by the ship's crew which should comprise a sufficient number of competent hands to enable operations to be carried out quickly and safely.

The vessel shall be equipped with a boatrope at least 150 m. in length to enable Elf Gabon personnel to work in complete safety.

Notice of Readiness: Notice of Readiness shall be sent to Elf Gabon through the tanker's Agent.

Mooring Procedure: After having taken the Pilot on board in the temporary anchoring zone, the tanker shall approach the buoy at a reduced speed, following the instructions of the Elf Gabon Pilot.

The means provided for mooring are as follows:

1 supply boat (throughout the duration of the mooring period).

1 small boat and a crew of 3 line handlers.

1 Loading Master – Pilot who will remain on board the tanker throughout the mooring period.

When the tanker's bow is within 150 m. of the buoy, the tanker crew will hand to the line handling crew the end of a messenger line which is long enough (minimum length 150 m.) to be connected in complete safety by the Elf Gabon personnel to the inhaul of the main hawser. The tanker crew will then haul in the chafing chain of the main hawser by heaving on the floating inhauls. This manoeuvre requires the full attention of the crew. The Pilot shall be immediately notifed of any modification in the behaviour of the hawser. The distances between the bow of the tanker and the buoy shall be regularly communicated to the Pilot as well as the orientation of the hawser (the crew must be well trained in this manoeuvre). When the chafing chain has been heaved on to the forecastle, it will be connected as quickly as possible to another rope of the tanker as indicated by the Pilot.

During the entire operation, the supply boat will have the 16 in. flexible loading line in tow by its end and will keep it well away from the buoy so that it is not damaged during the manoeuvre.

Once the ship is moored, the supply boat will draw near the end of the flexible loading line under the cargo boom of the tanker (on the port side and rigged in advance) and the end of the flexible loading line shall be slung and heaved on board.

The ship shall be equipped with derricks and slings or straps required for stopping and securing the loading line at the tanker's rail. Once this is connected to the manifold on board, the supply boat shall be taken in tow by its stern. The supply boat will then be at the disposal of the tanker personnel who will keep a permanent watch on the buoy and, if necessary, increase the tension in the tow rope in order to avoid collision of the ship and the buoy. Once the ship is under tow, the loading operations may begin.

NOTE: For tankers on second loading, the mooring procedure may be modified according to the Pilot's instructions.

LOADING: An Elf Gabon representative, responsible for loading and safety is on permanent watch on board. The Master must supply him with all relevant information and assistance required to ensure operations run smoothly.

All exchanges of information on the site shall be on VHF Channel 6. Permanent watch on this channel is compulsory during the entire mooring period.

When the tanker is ready for loading, i.e. when the circuits have been set up and have been checked, the Chief Officer (i.e. the officer-in-charge of loading operations) will ask USF 1 to begin pumping.

Pumping rate 3,000 cu.m.p.h.

The Master will be held entirely responsible for operating the valves and for safe loading on board his ship.

If necessary, pumping speed can be reduced.

At least 10 minutes before loading is finished, the Terminal should be notified of the moment pumping should be stopped.

When loading is over, the tanks (ullages) will be inspected by a ship's officer in the presence of an Elf Gabon representative.

Average samples taken from each tank where the crude was loaded will be furnished to the ship by the Terminal.

These samples will be numbered and labelled showing the origin of the crude.

Handing Over of Documents: Generally speaking, handing over of documents takes place while on site. However, Elf Gabon reserves the right to order a ship to get underway immediately after loading and await documents at anchor.

BALLAST: *Ballast on Arrival:* Ships must arrive with clean and sufficient ballast and correct trim and be able to manoeuvre with complete safety.

Ballast on arrival shall be at least 30% of the deadweight capacity or must provide the vessel with an average draft of not less than 50% of the loaded draft.

Fuel tanks, fresh water tanks and miscellaneous supplies are not considered as ballast in the weight estimate.

Deballasting – Sea Pollution: Any vessel mooring with polluted ballast may be requested to leave the loading buoy. The cost of any resulting delay will be for the account of the vessel. Furthermore, Elf Gabon reseves the right to refuse to load the tanker.

Elf Gabon decline all responsibility in respect of any violation committed on board, in respect of the International Regulations for the prevention of sea pollution by hydrocarbons. Masters will be notified in writing each time any violation of these regulations is observed by the Elf Gabon representative.

Inspection of tanks after deballasting and before loading is carried out in the presence of the Elf Gabon representative.

GARBAGE DISPOSAL: No facilities available.

WASTE OIL DISPOSAL: No facilities available.

GENERAL: *Charts/Publications:* Masters will find the following particularly useful:

French Chart drawn up by the Marine Hydrographic Department No. 6666 SH.

French nautical instructions, Volume V – Series C, African West coast, 2nd volume.

Book of Lights and Fog Signals, Series C.

AUTHORITY: Elf Gabon, P.O. Box 525, Port Gentil, Gabon. *Tel:* 75 60 00. *Telex:* 8210-8216, 8262.

OGUENDJO TERMINAL: 01.27 S. 08.55 E. (See Plan)

LOCATION: Oguendjo Oil Terminal is located in the territorial waters of the Republic of Gabon and consists of:

1. Production Platform "B" located offshore in position Lat. 01° 26' 44.5" S., Long. 08° 57' 15" E. and Production Platform "C" located offshore in position Lat. 01° 28' 13.5" S., Long. 08° 54' 00" E.and Production Platform "Z" located offshore in position Lat. 01° 26' 1.04" S., Long. 08° 56' 43.27" E.
2. An offshore loading berth composed primarily of a floating storage vessel, "Bon Bateau", permanently affixed by a "wishbone" rigid mooring arm to a single point mooring buoy.
3. A submarine pipeline which runs from Production Platform "B" to the floating storage vessel, and a submarine pipeline which runs from Production Platform "C" to the floating storage vessel.

The floating storage vessel is located S.W. of Port Gentil in approximately 90 ft. of water and is situated in open and unsheltered waters approximately 9.5 miles off the coast in position Lat. 01° 27' 20.5" S., Long. 08° 55' 00" E. (See "Plan".)

The Company's administrative offices are located in Port Gentil. The Company's terminal offices, storage facilities and laboratory for testing stock are located onboard the floating storage vessel located at the loading berth.

DOCUMENTS: 4 copies each of the following documents are required when calling at Oguendjo Oil Terminal:

(a) Health Declaration and Vaccination Certificate for each crew member (vaccination against yellow fever is mandatory).
(b) Crew List.
(c) Derat Certificate/Derat Exemption.
(d) Crew Customs Declaration.
(e) Stores List.
(f) Animal List.
(g) Passenger List.
(h) Narcotics List.
(i) Clearance from Last Port.
(j) Arms and Ammunition List.
(k) Manifest.

The vessel's registry and the up-to-date oil record book shall also be made available to the Mooring Master and appropriate governmental officials.

APPROACHES: *Approaches, Navigational Aids and Landmarks to Oguendjo Oil Terminal:* Vessels are referred to the appropriate Hydrographic Office publications, Admiralty publications and official charts for the approaches, navigational aids and landmarks to Oguendjo Oil Terminal. Caution, however, is required when navigating near the Terminal since oil installations and marine activities may be encountered and mariners are recommended to pass to seaward of all such areas and are advised not to anchor or fish in the vicinity of such oil installations or their pipelines. Mariners are specifically cautioned that an oil well area exists S.S.W. of Port Gentil and all navigation is restricted in the area within a line joining the following positions: Lat. 00° 44' 30" S., Long. 08° 45' 00" E.; Lat. 00° 46' 40" S., Long. 08° 38' 26" E.; Lat. 01° 09' 22" S., Long. 08° 28' 36" E.; Lat. 01° 35' 54" S., Long. 08° 38' 03" E.; Lat. 01° 35' 54" S., Long. 09° 12' 35" E. (See "Plan").

Approach to Terminal:

Anchorage Area: The customary anchorage area for vessels awaiting the loading berth at the Terminal is a rectangular area with the following co-ordinates: Lat. 01° 36' S., Long. 08° 57' E.; Lat. 01° 36' S., Long. 09° 02' E.; Lat. 01° 40' S., Long. 08° 57' E.; Lat. 01° 40' S., Long. 09° 02' E. and with its centre located about 14 miles S.S.E. of the loading berth in position: Lat. 01° 38' S., Long. 08° 59.5' E. (See "Plan"). Anchorage within the restricted area referred to in Section above is prohibited unless otherwise designated by the Company or the Mooring Master.

Access Lane: The access lane from the customary anchorage to the Terminal is an area approximately 1.7 miles in width and with axis which runs from the anchorage area for approximately 12 miles in a direction of 325° true to the Mooring Master's pick-up zone. (See "Plan").

Mooring Master Pick-up Zone: The Mooring Master pick-up zone is a N.W. aligned semi-circle with a radius of 2.2 miles and with a centre position at Lat. 01° 27.5' S., Long. 08° 54" E. Following receipt of instructions from the Company or the Mooring Master, a lifting vessel should proceed from the anchorage area through the access lane to the Mooring Master's pick-up zone where the lifting vessel will be boarded by the Mooring Master for berthing or where the lifting vessel may be requested by the Company or the Mooring Master to temporarily anchor to await permission to enter the loading berth. (See "Plan").

Terminal Safety Zone: Lifting vessels are prohibited from navigating within the safety zone at the Oil Terminal at any time unless the Mooring Master is on board. The safety zone is bounded by lines connecting the following points:

Point	*Latitude (South)*	*Longitude (East)*
(a)	01° 28.75'	08° 54.10'
(b)	01° 26.85'	08° 57.82'
(c)	01° 26.32'	08° 57.27'
(d)	01° 26.32'	08° 55.66'
(e)	01° 27.96'	08° 53.52'

PILOTAGE: *Mooring Master:* Lifting vessels to be moored at the Loading berth will be boarded by a Mooring Master either at the customary anchorage or at the Mooring Master pick-up zone (See "Approaches"). The Mooring Master will be provided by the Company and will act as the Loading Master during loading operations. Lifting vessels will not be allowed to approach or depart from the loading berth without the assistance of the Company-designated Mooring Master. The Mooring Master will advise the lifting vessel personnel on the approaches to the loading berth; the operations of mooring and unmooring; the raising, connecting, disconnecting and lowering of the floating cargo hose, and in all other operations within the loading berth area. The Mooring Master will be in direct charge of the portable VHF radiotelephone and all the ship-to-tug and ship-to-launch communications will be by portable VHF radiotelephone. The lifting vessel's oil residue book shall be made available for inspection by the Mooring Master on his arrival at the lifting vessel. All manoeuvring of lifting vessels within the loading berth area shall be performed by the lifting vessel personnel as directed by the lifting vessel's officer in charge and in accordance with the procedure advised by the Mooring Master. the lifting vessel's Master or licensed deck officer must be on the bridge at all times while lifting vessels are manoeuvring.

Pilot Ladder: Lifting vessels are required to have a clean and efficient pilot ladder fitted with spreaders and manropes, safely and securely rigged, ready for the Mooring Master to embark and disembark on the port side of the lifting vessel and of sufficient length to reach the Mooring Master's launch. If at night, adequate lighting must be rigged overside for the Mooring Master to approach or depart from the port side of the lifting vessel and to use the pilot ladder safely. A lifebuoy with safety line and self-igniting light together with a rope messenger for the Mooring Master's bag shall also be available at the pilot ladder head. Lifting vessels shall afford a "Good Weather Lee" and shall reduce speed as directed by the Mooring Master in order to effect the safe embarking or disembarking of the Mooring Master.

Whenever, as in the case of large lifting vessels in light condition, the freeboard exceeds 30 ft., the accommodation ladder shall also be in use in conjunction with the pilot ladder and shall be lowered to about 12 ft. above the water with the pilot ladder rigged immediately adjacent to the bottom platform of the accommodation ladder. A mechanical hoist of an improved pattern shall be considered an acceptable alternative to a conventional pilot ladder for use in conjunction with the accommodation ladder, but a mechanical hoist whose operation relies upon a single wire shall not be considered of an approved pattern. The rigging of the pilot ladder for the embarkation and disembarkation of the Mooring Master shall be supervised by a licensed officer of the lifting vessel and shall be positioned so that the ladder is well clear of any overboard discharge and so that each step of the ladder rests securely against the lifting vessel's side. If, in the opinion of the Mooring Master, the pilot ladder is not safe, the Mooring Master may refuse to board the lifting vessel and any delay caused by such refusal shall be for the lifting vessel's account.

Lifting vessels shall provide food for the Mooring Master while on board the lifting vessel and shall accommodate the Mooring Master in the Pilot's cabin. Should the lifting vessel not be equipped with a pilot cabin, the Mooring Master shall be accommodated in a cabin equivalent to that required for an officer on the lifting vessel. The Mooring Master shall have access to the bridge and/or central area of the lifting vessel and such areas shall not be locked or otherwise arranged to prevent immediate entry at any time by the Mooring Master.

ANCHORAGES: See "Approaches".

RESTRICTIONS: The Terminal is operated 24 hours a day, 7 days a week, weather and other circumstances permitting. Vessels are loaded and unmoored at any hour, weather and other circumstances permitting. Vessels are moored during daylight hours only, weather and other circumstances permitting.

MAX. SIZE: Max. draft 60 ft. Max. d.w.t. 170,000. Max. displacement 200,000 tons.

The Mooring Master may allow lifting vessels in excess of 170,000 d.w.t. to moor at the loading berth provided the lifting vessel first obtains the written permission of the Company to moor at the facility.

RADIO/VHF: *Initial Radio Communications:* The radio station on the "Bon Bateau" will handle the initial radio communications between lifting vessels and the Company. The "Bon Bateau", call sign ELCT, is equipped with Mariset and maintains Mariset number SINGX 1241411.

Advice of Arrival: It is important that lifting vessels establish radio contact with the Company when 3 days' distance from Oguendjo Oil Terminal and maintain such contact until just prior to arrival at the Terminal. Lifting vessels should send an ETA message to the Company (Telex: 981-8268) not less than 72 hours prior to arrival at the Terminal, providing the following information:

1. The estimated time of arrival and name of local Agent.
2. The estimated draft, fore and aft, upon arrival.
3. The quality of crude oil to be loaded and the grade of such.
4. The estimated sailing draft.
5. The last port of call.
6. Whether the lifting vessel has a clean Bill of Health.
7. The distance from the bow to the centre of the lifting vessel's manifold.
8. Mooring equipment available on the bow of the lifting vessel (e.g.) Smit's Bracket, chain stoppers).
9. Confirmation that hose handling gear and mooring equipment, navigation equipment, radars, steering gear, and engine propulsion are in good order and condition, that the lifting vessel can accept a 20 in. (reducing to 16 in.) diameter floating hose fitted with a 150 ASA Camlock flange.
10. Whether the lifting vessel intends to load-on-top of existing slops and, if so, advise as to the quantity of slops in each tank on which cargo will be loaded-on-top.

This first ETA message should also include a definite statement of the details of any equipment required from the floating storage vessel for connecting the floating cargo hose to the lifting vessel's manifold. Further ETA messages should be sent to the Company when the vessel is 48 hours and 24 hours distance from Oguendjo Oil Terminal confirming or giving notice of any change in the 72 hour ETA and any other time after the 24 hour ETA message when a change by more than 2 hours occurs in the ETA. The 24 hour ETA message should include a positive statement regarding the lifting vessel's Readiness to Load on arrival and the number of hours that will be required by the lifting vessel to discharge clean ballast.

TUGS: The Company has a tug in the area equipped with fire fighting apparatus. Also see "Berthing – Mooring Operation".

BERTHING: *Loading Berth:* Lifting vessels are loaded by means of a floating cargo hose which runs from the floating storage vessel to the lifting vessel. The floating storage vessel is loaded by means of a submarine pipeline which runs from Production Platform "B" and a submarine pipeline which runs from Platform "C" to the single point mooring buoy to which the floating storage vessel is permanently affixed.
Mooring Facilities: The floating storage vessel is permanently affixed by a "wishbone" rigid mooring arm to the single point mooring buoy which has been secured to the seabed by 4 anchor legs. Lifting vessels are moored from their bow to the bow of the floating storage vessel by means of a terminal supplied 16 in. braided mooring hawser with a 20 ft. length of 3 in. chain attached to each end of the hawser. Upon completion of mooring, the mooring hawser will run from the bow of the floating storage vessel to the bow of the lifting vessel and will allow about 200 ft. of water to separate the bow of the two vessels. The loading berth will accept vessels up to 170,000 d.w.t. (Also see "Max. Size"), with displacement not to exceed 200,000 tons. The floating storage vessel is equipped with anchorage lights and a red (360°) displayed on its top mast.
Mooring Operation: The Company will provide a mooring launch to assist tug to assist in the mooring and unmooring of the lifting vessel. The mooring launch and assisting tug will be based at the loading berth and will operate under the direct control of the Mooring Master. When the lifting vessel proceeds to within a reasonable distance from the loading berth and upon advice from the Mooring Master, the messenger line of the lifting vessel will be lowered to the mooring launch and will be carried by the launch to a floating buoy where the messenger line will be secured to an 8 in. circumference pick-up rope. The Mooring Master will advise the lifting vessel to heave in the ropes until the chafing chain located at the end of the pick-up rope comes aboard. This chafing chain will be secured to the lifting vessel's bitts or Smit Bracket or chain stopper in such a manner that the Terminal-supplied 180 ft. long braided nylon hawser, which is affixed to the opposite end of the chafing chain, will remain outside the lifting vessel thereby allowing the chafing effect at the fairleads of the lifting vessel to be taken by the chafing chain. All mooring details in the sequence of movements shall be directed by the lifting vessel's officer in charge following consultation with the Mooring Master.

When the mooring operations have been completed, fire wires should be secured to the lifting vessel's bitts and one fire wire led out of the bow and one fire wire led out of the stern of the lifting vessel's port side. The fire wires should be of at least such a length that the eyes will be approximately 6 ft. above the surface of the water at all times so that they can be readily available to a tug in case of an emergency.
Vessel's Alertness: The loading berth is in open and unsheltered waters and the mooring is a flexible system; therefore, from the time the Mooring Master boards the lifting vessel until the lifting vessel has loaded her cargo and the Mooring Master has disembarked, full power must be available at all times on all deck winches and windlass and other gear of the lifting vessel. The lifting vessel's engines, steering machinery and other efficient manoeuvring equipment must likewise be maintained in constant readiness with full power for immediate use so as to allow the lifting vessel to manoeuvre in order to avoid a possible collision with the floating storage vessel or so as to allow the lifting vessel to depart from the loading berth at any time following a request by the Mooring Master or the Company to do so.

The lifting vessel's personnel should be at their stations and alert at all times during mooring, unmooring, hose handling and cargo loading operations. Where lifting vessels are equipped with an electric clutch control to the propeller shaft, such lifting vessels must disconnect the electrical clutch control and the manual clutch control so that there will be no possibility of the engine engaging the propeller shaft while the lifting vessel is moored. Where lifting vessels are turbine vessels are required to turn their propellers, such lifting vessel must turn such propellers in reverse motion. A constant watch in the engine room, control room, cargo control room and on the bridge shall be provided at all times aboard any lifting vessel while at/or in the vicinity of the loading berth.
Ship-to-Terminal Communications: The floating storage vessel is equipped with VHF radiotelephone using international frequencies and maintains a radio watch on the international VHF marine Channel 16. Not less than 12 hours prior to the lifting vessel's ETA at Oguendjo Oil Terminal, the lifting vessel is required to maintain a radio watch on R/T Frequency 2182 kHz and on VHF Channel 16. Masters are recommended to use this facility as soon as the lifting vessel is within range since such communications are the best means of avoiding delay in the mooring of the lifting vessel. While the Mooring Master is on board the lifting vessel, the Mooring Master will be in direct charge of the portable VHF ship-to-terminal radiotelephone and all ship-to-terminal, ship-to-tug and ship-to-launch communications will be by portable VHF radiotelephone. The Mooring Master will advise the Master and officers regarding the emergency whistle signals set up for use in the event the VHF radiotelephone units become inoperative. The use of the lifting vessel's radio station and/or battery charging equipment is prohibited during cargo loading operations.
Radio Watches: While at the anchorage awaiting the loading berth, lifting vessels should maintain a listening watch on R/T Frequency 2182 kHz and on VHF Channel 16 with the floating storage vessel.
LOADING: *Vessel's Gear:* Prior to the arrival of any lifting vessel at the loading berth, the derrick of the lifting vessel should be up and ready to lift the mooring and hose connection gear onboard the lifting vessel. The lifting vessel must be equipped on the forecastle head with all equipment recommended in the latest OCIMF publication on standards for equipment recommended for employment in the mooring of ships at single point moorings. The Smit Bracket or chain stopper shall be free, open and greased and a large coil of messenger line with sledgehammer and other necessary tools for mooring must be available. In the event that the lifting vessel is not equipped with Smit Brackets, snotter ropes shall be employed. The warping winches or windlass should be in good working order and condition at all times while at the loading berth and must be adequate to handle mooring lines under heavy strain and efficient stoppers must be readily available to "hang-off" the mooring lines and transfer same from the winch to the bitts.

On the starboard side opposite the lifting vessel's manifold, there must be equipment rated by an approved Classification Society and capable of lifting the floating cargo hose safely and efficiently (a 10 long ton lift) from the sea surface over the starboard rail to the lifting vessel's manifold. Lifting vessels must also have an adequate supply of nuts, bolts, gaskets and wrenches to connect the floating cargo hose. If, in the opinion of the Mooring Master, the lifting vessel is not equipped with adequate mooring or loading facilities or lines or gear, the Mooring Master must so inform the lifting vessel's Master and in such event the lifting vessel will not be bought into the loading berth until the facilities or lines or gear are deemed satisfactory by the Mooring Master.
Rate of Loading: The crude oil flow is by pump and the maximum crude oil loading rate for lifting vessels using 1×16 in. deck hose is approximately 30,000 bbls.p.h. or approximately 4,000 cu.m.p.h. In order to save vessel time and make the loading berth available for other lifting vessels, it is requested that clean ballast be pumped as fast as possible and that lifting vessels receive oil as fast as it can be delivered, with both operations having due regard for safety. It is also requested that any "Y" pieces, strainers or mud boxes restricting the flow of crude oil into the lifting vessel, be removed before the arrival of the lifting vessel at the loading berth.
Berthing: Tenders to load crude oil will normally be accepted and the loading berth will be assigned to a lifting vessel in the order of its arrival, provided the lifting vessel has a nomination for crude oil valid at the time and is in all respects equipped and ready to moor. In the event that mooring is delayed on account of weather, the lifting vessel will keep its position in line. Should the lifting vessel be required to leave the area on account of weather, the lifting vessel should keep in radio contact with the Terminal in order to make the lifting vessel available as soon as the weather moderates. The Company reserves the right to load lifting vessels "out of turn" following the return of good weather, to the extent that such loading "out of turn" does not materially delay the loading of other lifting vessels in line. For example, should weather make it necessary for a specific lifting vessel waiting at the loading berth or at the anchorage to vacate the area, the Company may load another lifting vessel which arrived at the anchorage after the specific lifting vessel but before the return of the specific lifting vessel which was waiting in line ahead of the other lifting vessel.
Connecting Hose: After the lifting vessel has been securely moored, the floating cargo hose will be hoisted to the lifting vessel's starboard side rail amidship by the lifting vessel's equipment. The floating cargo hose is a 20 in. (reducing to 16 in.) diameter floating hose, about 1,025 ft. in length, fitted with a 150 A.S.A. Camlock flange for connection to the vessel's manifold. The lifting vessel should have adapters and fittings onboard so as to enable such floating cargo hose to be connected to the lifting vessel's manifold. The raising, connecting, disconnecting and lowering of the floating cargo hose will be performed by the lifting vessel's crew as directed by the lifting vessel's officer-in-charge who must be present at all times during such operation and in accordance with the procedure advised by the Mooring Master who will remain on board as Loading Master during the entire time the lifting vessel is at the loading berth. Particular care should be taken during all such hose operations to avoid damage to the floating cargo hose and its fittings.
Loading Readiness and Arrival Time: Upon the arrival of the lifting vessel at the customary anchorage for the loading berth, the Master or his agent shall give the Company notice by letter, telegraph, wireless, or telephone that the lifting vessel is ready to load. Laytime shall commence upon the expiration of 6 hours following the acceptance of such notice by the Company provided that the lifting vessel has been nominated to load cargo and the Terminal holds such cargo nomination and further provided that the Mooring Master has deemed the lifting vessel to be in all respects ready to moor and load. The Notice of Readiness will be accepted only between 0600 hrs. and 1800 hrs. but will not be accepted at any time when Oguendjo Oil Terminal is closed. If, however, the lifting vessel is moved to the loading berth without delay after having arrived at any time and the lifting vessel is in all respects ready to moor and load in the opinion of the Mooring Master, the Notice of Readiness will be accepted at the time the Mooring Master boards the lifting vessel. Laytime shall continue until the floating cargo hose has been disconnected from the lifting vessel's manifold.
Responsibility: Prior to the commencement of any cargo loading operation, the Mooring Master and the officer-in-charge of the loading operations for the lifting vessel shall engage in a pre-loading conference to formulate a loading plan and to ensure that the lifting vessel is in all respects ready to load. No cargo loading shall take place without the permission of the Mooring Master which permission shall not be given until the pre-loading conference and the Lifting Vessel Safety Check List, have been completed. The lifting vessel's Master shall remain responsible for the safety of the lifting vessel and all operations on board the lifting vessel at all times. The Mooring Master will advise the officer-in-charge of the loading operations for the lifting vessel with respect to the loading pressures and hazards but the Mooring Master will not direct any aspect of the loading expect as may be necessary to protect the loading berth and related facilities and equipment. The manipulation of the lifting vessel's valves is the direct responsibility of lifting vessel's personnel. The Mooring Master shall have the right to suspend cargo loading operations or to require the lifting vessel to unmoor and depart from the loading berth at any time when the mooring plan, pre-loading plan or the safety requirements and regulations set forth herein are not being followed by the lifting vessel or at any time the Mooring Master believes or becomes aware of the existence of any other reason which in his opinion shall require the suspension of the mooring or the loading of the lifting vessel.
Oil Valve Control: The incoming oil stream is controlled on the floating storage vessel and the lifting vessel's valves must not be closed against the incoming oil stream. Such a procedure creates an excessive pressure which may damage the hose or other terminal facilities and

could result in a pollution incident. Lifting vessels will be held legally responsible for any damage resulting from the lifting vessel's failure to observe this precaution. Frequent checks of the cargo loading must be made by lifting vessel personnel during the loading operation so that a reduction in the loading rate, before topping-off the final tank or tanks, may be arranged through the Mooring Master by the officer-in-charge of the loading operations for the lifting vessel. A normal standby warning should be given about 20 minutes before the shutdown of the loading operations. Upon the request from a lifting vessel to shut down the loading operations, a minimum of 3 minutes will normally be required to stop the flow of crude oil. Lifting vessel's personnel shall be responsible for the call to stop the loading of the lifting vessel. When cargo has ceased to flow, the valves on the floating storage vessel will be closed and the lifting vessel's manifold valves may then be closed.

Emergency Signal: The emergency signal employed at Oguendjo Oil Terminal shall be the continuous blast on a vessel's whistle. Should normal ship-to-terminal communications fail, the emergency signal must be sounded by the lifting vessel. Steam or air should never be shut-off from the whistle of the lifting vessel during loading. Whenever the emergency whistle signal is used, the tug will be summoned to standby and all loading operations will be shut down until communications can be established with the vessel giving the signal. For this reason, it is requested that lifting vessels in the area refrain from using their whistles for other than essential purposes and that the use of the "continuous blast" whistle signal be reserved for emergency purposes only. All crew members who stand a deck watch during the transfer of crude oil are expected to know the emergency shutdown signal.

Code Flag: During all cargo loading operations, the International Code Flag "B" shall be displayed from a topmast signal halyard during daylight hours and a red light shall be displayed during the hours of darkness. The red light should be of a character as to be visible at a distance of at least 2 miles and show an unbroken light around the horizon.

Terminal Stops: Request for the terminal to stop the flow of crude oil at a predetermined tonnage must be made in writing to the Company and will be deemed to include the statement and understanding that the Company will not be responsible for (1) any errors, cost or claims arising from such request and (2) any crude oil loaded in excess of that requested will not be pumped back aboard the floating storage vessel. Some delays in stopping the flow of crude oil are always incurred when such a stop request is made.

BALLAST: *Precautions and Rules:* There are no facilities for the off-loading of dirty ballast but clean oil-free ballast may be discharged overboard from the lifting vessel. It is the responsibility of the Master of the lifting vessel to see that no oil (crude, bunker, diesel, bunker C, slops, residues, contaminated ballast water, or oily bilge water) is pumped or spilled overboard from the lifting vessel. All deck scuppers must be plugged tight and adequate drip pans with sand and sawdust must be provided where necessary on deck for use at all times, especially when disconnecting hoses, in order to prevent any such loss of oil overboard. The waters in and adjacent to the loading berth must not be polluted and only clean, oil-free, ballast may be discharged inside of a line running 50 miles from and parallel to the coastline of the Republic of Gabon.

The discharge of oil mixtures from lifting vessels while en route to Oguendjo Oil Terminal is prohibited except when the following conditions are all satisfied:

(1) The instantaneous rate of discharge of oil content of the oily mixture does not exceed 60 litres per mile.

(2) The total quantity of oil discharged on the ballast voyage does not exceed that quantity permitted by the International Convention for the Prevention of Pollution from ships 1973 as modified by the Protocol of 1978 related thereto, and

(3) The lifting vessel is more than 50 miles from the nearest point on the coastline of the Republic of Gabon.

Masters are warned that when disposing of dirty ballast or bilge water, (50 miles or more from the coastline of the Republic of Gabon), all pipelines, sea suctions, strainers and pumps which are later to used to discharged clean ballast, must be flushed clean, so that there will be no chance of even a small amount of pollution when the clean ballast is pumped overboard.

Lifting vessels must have sufficient ballast for safe manoeuvring and where practicable, should arrive at the loading berth with the propeller completely submerged amd properly trimmed. The Mooring Master may refuse to permit the mooring of any lifting vessel not in compliance with these requirements until the vessel takes on sufficient ballast and/or alters her trim to meet these requirements.

As soon as practicable after arrival, lifting vessel's tanks will be inspected for evidence of oil in ballast and during the discharge of ballast a similar inspection will take place. If evidence of oil appears at either of these inspections, the lifting vessel must vacate the loading berth and discharge such dirty ballast.

Any lifting vessel required to vacate the loading berth for the purpose of discharging dirty ballast, cleaning tanks or for any similar reason, automatically nullifies any Notice of Readiness already tendered and at the same time loses any priority held for loading. Lifting vessels must tender a new Notice of Readiness upon their return and lifting vessel will be entered for loading upon the Company's acceptance of the new Notice of Readiness.

Lifting vessels must keep a constant watch on the side of the lifting vessel from which clean ballast is being discharged for any indication of water discolouration or oil sheen. Discharge of ballast must be immediately suspended should there be any indication of discolouration or sheen and the Mooring Master shall be immediately informed of such. An investigation of any such discolouration or sheen shall be carried out by the lifting vessel and the findings reported to the Mooring Master. Discharging shall not resume without permission of the Mooring Master.

If, during any inspection or during the process of loading, it is revealed that a lifting vessel's tank is not oil-tight, the lifting vessel will be rejected by the Mooring Master and refused further loading until satisfactory evidence of effective repairs is submitted and the lifting vessel is duly certified by Lloyd's Register of Shipping, American Bureau of Shipping or another similarly recognised classification society.

In addition to the lights usually displayed, lifting vessels are required to illuminate the lifting vessel and the waters around the lifting vessel with all available and suitable searchlights and floodlights during the discharge of clean ballast and the loading of crude oil during the hours of darkness and restricted visibility. Such illumination must be to the satisfaction of the Mooring Master and must be undertaken so as to assist in the loading operations and in order that any oil on the surface of the sea may be readily detected and appropriate action taken. Lifting vessels unable to illuminate the sea satisfactorily may not discharge ballast or engage in the loading of crude oil during the hours of darkness and any such delay shall be for the account of the lifting vessel.

Loading and Deballasting Simultaneously: Lifting vessels equipped with a separate system of ballast tanks will be allowed to discharge clean ballast and load oil simultaneously, providing that the approval of the Mooring Master if first obtained.

MEDICAL: *Emergency Medical Assistance:* Lifting vessels requiring emergency assistance should contact Oguendjo Oil Terminal by VHF radio and supply the necessary pertinent information which will be passed on to the vessel's Agent. Neither medical nor hospital facilities are available at Oguendjo Oil Terminal, but private doctors and hospital facilities are available in the town of Port Gentil.

FRESH WATER: Not available.

FUEL: Not available.

CONSULS: Consular or diplomatic representatives for many nations maintain offices in the town of Port Gentil and Libreville.

REPAIRS: The Masters of lifting vessels loading at the loading berth are advised that the loading berth is located in open and unsheltered waters and under no circumstances may engines be shut down for repairs while the lifting vessel is at the loading berth or at the anchorage. There are no facilities for making repairs to a lifting vessel at the Terminal and no repairs will be allowed at the loading berth. However, arrangements can be made through the vessel's Agent to utilise the repair facilities at other ports.

SURVEYORS: *Marine Survey and Cargo Inspection Service:* No cargo inspectors or marine surveyors are based in the area, but inspectors and surveyors who reside at other ports can be arranged through the vessel's Agent.

REPATRIATION: No facilities available.

TIME: GMT plus 1 hour. Summer time not kept.

SHORE LEAVE: Lifting vessel personnel (other than medical emergency cases) are not allowed to embark or disembark from the lifting vessel at the loading berth.

WEATHER: *General:* The Company can advise of the following general environmental characteristics for the area off the coast of the Republic of Gabon, but the navigator is referred to the published sailing instructions and directions for the area for more detailed information on the climate, weather, wind, tide, current and sea.

Climate: The coast between Cape Lopez and the Congo River is dominated by the Basin of the Ogooue and is covered with a dense equatorial forest which is frequently subjected to heavy rainfall. The area exhibits a characteristic diurnal variation in cloudiness, and the climate along the coastline is heavily influenced by the heated continental interior, the extratropical storms, and the cool Benguela current. The average annual rainfall is 123 in. and ranges from a maximum of 19.9 in. in November to a minimum of 0.04 in. in July. Temperatures seldom exceed 95°F. and seldom fall below 65°F. and are moderately high throughout the year with an average yearly temperature of 79°F. and a mean maximum temperature of 86°F.

January is the stormiest month because thunder squalls (combined thunderstorms and squalls) are frequent. Summarised wind data does not indicate strong winds during this month, but gusty winds occur during the thunderstorms, these being brief and irregular. In February and March, the weather is unsettled with occasional rain. In April weather generally improves, becoming cooler and drier. In May the weather becomes fair, but by the end of the month it again becomes more settled and a breeze flows steadily from a Southeasterly direction. In June and July, the weather is very misty and gloomy, decreasing visibility significantly. In August, light breeze persist, generally cloudy and overcast conditions exists, by the end of the month, heavy mists clear away. In September, hotter weather and more Southwesterly wind develops with frequent light showers. Sea breezes become stronger to the end of the month, and thunder squalls moving from the S.E. occur. In October, the wind is still more Westerly with occasional small showers, and generally overcast skies till noon. In November and December, strong breezes move off the land sometimes with rain, thunder and lighting.

Average annual rainfall	123 in.
Average daily maximum air temperature	84°F.
Average daily minimum air temperature	74°F.
Extreme highest average monthly air temperature	99°F.
Extreme lowest average monthly air temperature	60°F.
Average relative humidity (0700 hrs.)	92%
Average relative humidity (1300 hrs.)	76%

Winds: The prevailing winds off the Republic of Gabon are characteristically light and Southerly the year around. Land and sea breezes dominate along the coast and generally blow between the S.W. and S.E. The highest offshore wind speeds occur during local thunder squalls (combined occurrences of thunderstorms and squalls) which may have brief wind gusts up to 60-70 knots. These thunder squalls may be violent, occur quickly and without warning, and are often accompanied by heavy winds, seas, swell, and rain which may reduce visibility substantially.

Tides: The tides can be predicted with reasonable accuracy, though use of the tide tables for Takoradi in Ghana, with the appropriate correction factor for Cape Lopez applied.

Currents: The Benguela Current flows North along the West coast of Africa from the vicinity of the Cape of Good Hope to the Gulf of Guinea. The general direction of the current off the Republic of Gabon is parallel to the coast, although in the vicinity of Cape Lopez the main body takes a more Westerly course. The current is generally stronger during December and January when the current flows Southward at 10 to 20 miles off Cape Lopez, but during the remaining months of the year, the current generally sets in a Northwesterly direction and sometimes attains a velocity of about 2 knots. The current is usually more rapid close to the coast than it is farther offshore, but its velocity is variable because of the effect of the winds.

Seas: The coast is influenced by swells from the South and S.W., but most of the higher waves occur in association with thunder squalls. The highest collection of waves can be expected during March and April and during October and December, but waves of 6 ft. or more do not occur more than 2.5 per cent of the time.

GENERAL: *Flag:* Lifting vessels are required to fly the flag of the Republic of Gabon on the foremast during daylight hours while in the territorial waters of the Republic of Gabon. The territorial waters extend 12 nautical miles seaward from the coastline of the Republic of Gabon.

Government Officials: Governmental officials such as the Customs Officer, Quarantine Officer, Immigration Officer, Captain of the Port and the Police, are stationed in the town of Port Gentil. Should Customs guards be stationed on board the lifting vessel while at the loading berth, it is expected that the lifting vessel will provide food for these guards and other governmental officials. Lifting vessels calling at the loading berth must provide an accommodation ladder rigged on the port side for such governmental officals.

Quarantine Regulations: The rules governing the quarantine of lifting vessels are the same as those found in other parts of the world.

Supplies: Commissary supplies, steward stores, laundry services, fresh water, marine lubricants and bunkers are not available through the Company and may not be loaded at the loading berth. Any questions concerning the availability of such items from other sources and the loading of such items elsewhere should be handled through the vessel's Agent.

Agency: The Company does not perform any vessel agency functions. Lifting vessels calling at Oguendjo Oil Terminal must arrange for their own Agents.

Contraband: The Company prohibits unauthorised craft from coming alongside lifting vessels while at the loading berth without the permission of the Mooring Master. To avoid the possibility of undesirable elements getting aboard lifting vessels, it is recommended that Masters discourage any such craft from coming alongside while lifting vessels are at or in the vicinity of the loading berth.

Garbage: The dumping of garbage, sewage, and refuse overboard is prohibited and there are no facilities for receiving such at the Terminal.

Visitors: Vistors are not allowed to embark or disembark from the lifting vessel at the loading berth.

AUTHORITY: Kelt Gabon, B.P. 780, Port Gentil, Republic of Gabon.
Tel: (241) 5500641/42/43. *Telex:* 981-8268. *FAX:* (241) 550647.
Contact: T. Botrel, Operations Manager.

OVENDO (Owendo): 00.17 N. 09.30 E. (See Plan)

SHIPMASTER'S REPORT 1978:

Vessel, length 156 m., breadth 22.0 m. Draft at the time, 30 ft.

APPROACHES: The channel buoys showed very well on radar on the 3 and 6 miles ranges, even during heavy rain, but the lights on the red buoys are poor and all buoys occasionally unlit.

PILOTAGE: There are 2 French Pilots who may be contacted on VHF Channel 16 when in range, they are ordered by the Agent to berth vessels only, although they will pass on advice to vessels regarding anchoring.

ANCHORAGES: Depths in the channel and river were found to be as stated during low water with a depth of 33 ft. over all the anchorage. Maximum draft allowed at this time was 30 ft.

The holding ground is good, 4 shackles were used for a total ship weight of 19,000 tons plus a small coaster alongside.

The tides are regular with only a very short slack water period, and run at between 4 and 6 knots.

TUGS: There is 1 tug of approximately 1,000 h.p. which assists in berthing, either towing or pushing.

BERTHING: Well fendered modern concrete quay, 450 m. in length, laid out as per "Plan" in the "Guide". The normal practice is for there to be 2 ships of around 150 m. and one smaller ship alongside at one time. The inshore side of this quay is for small craft only.

Depths alongside Berth No. 1, 23 ft.; No. 2, 18 ft. and No. 3, 22 ft.

FRESH WATER: This is obtainable while alongside the quay but only in a dire emergency at the anchorage from the tug which can supply up to 8 tons.

REPAIRS: Only very small repairs are possible and it is suggested that a receipt is obtained for any parts sent ashore.

REPATRIATION: There are 2 flights a week from Libreville to Paris and approximately 12 flights weekly to Abidjan.

SHIPCHANDLER: There is no chandler for any form of stores, the only possibility being self-purchase at the local (Libreville) supermarket. All goods are imported and therefore very expensive.

HOLIDAYS: 12th March, Gabonese Independence.

MARINE CLUB: There is a marine club about 1 km. from Ovendo in the Libreville direction (swimming pool, etc.).

SHIPMASTER'S REPORT: February 1979.

DOCUMENTS: Ship's Papers (sighted), Crew Lists (5), Passenger Lists (5), Port of Call (4), Crew's Custom Declaration (1), Marine Health (1), Arms and Ammunition (1).

APPROACHES: Gambia Lighthouse range 20 miles is easy to pick up, channel is well marked by buoys with good radar reflectors. No Pilot is available for the channel. After last buoy proceed directly to anchorage.

Soundings taken throughout channel showed a least depth of 20 m.

PILOTAGE: Pilot boards by tug which is compulsory for docking and undocking. Vessels berthed head out for sailing.

ANCHORAGES: Waiting anchorage is 0.5 to 1 mile West of the wharf.

RADIO: Agent keeps watch on VHF Channel 16.

BERTHING: A new port has been built about 4 miles South of old lighter jetties at Libreville, consisting of 1 wharf at right angles to the shore in 15 m. of water, capable of docking 2 ocean-going vessels.

STEVEDORES: Slow but efficient, about 6 tons per gang man hour.

REPATRIATION: Airport 12 miles from port, 6 flights per week direct to Paris.

TRANSPORT: Available by bus or taxi to the town.

SHORE LEAVE: Allowed.

SEAMEN'S CLUB: Within 1 mile of port with bar and swimming pool.

SHIPMASTER'S REPORT: March 1980.

PILOTAGE: Pilot compulsory. Pilot boards 1 mile S.W. of Ovendo Pier and requires 24 hours' and 12 hours' notice.

ANCHORAGE: One mile S.W. of the pier.

RESTRICTIONS: Pilot advises that vessels can only berth on slack water as a 5 – 6 knot (approx.) ebb tide runs. Vessels able to sail at any time, however, it is not advisable to manoeuvre during darkness as buoys are frequently unlit. Vessels are able to proceed from sea to anchorage at any time.

MAX. SIZE: Max. draft at Ovendo is 9.2 m. Mean tidal range 1.5 m.

TUGS: One tug available.

VHF: Pilot and Port Authority on Channel 16. Agent on Channel 9.

BERTHING: The berth at Ovendo is 20 miles from the entrance. There is one jetty 450 m. in length. The mean tidal range at the berth is 1.5 m. and the bottom in the vicinity of the berth is mud. Container vessels use the port and discharge using ship's gear. There is ample handling and storage space for containers. "Delmas" container vessels use the port frequently and they take preference over most other vessels.

SERVICES: The following are available:

Fresh water (rate 25 tonnes p.h.), airport, doctor and hospital.

The following are not available:

Fresh provisions, repair facilities, dry dock facilities, machine shop, surveyors, laundry service, fuel, lubricating oils, groceries, meats and slop facilities.

GENERAL: Arriving from a S.W. direction no difficulties were encountered, Point Gonbe was visible 18 miles on the radar and later the Fairway Buoy was visible at 10 miles. All the channel buoys showed up at 6 to 8 miles on radar.

The Fairway Buoy is very large, similar to the type used on the American coast. Chart used 1877 (Estuaire du Gabon).

Conspicuous wreck marked in position Lat. 0° 24.4' N., Long. 9° 17.2' E. is no longer visible.

On entering inward I checked the buoys' positions against the land and found:

Fairway Buoy Gp. Fl.(2) 6 secs. In position. Unlit.
(Course 090°×3.2 M) Fl. G. 4 secs. In position. Lit.
(Course 115°×2.1 M) Gp. Occ(2) G. 6 secs. In position. Unlit.
(Course 115°×2.1 M) Between { Occ. R. 4 secs. In position. Unlit.
Fl. G 4 secs. In position. Unlit.
(Course 137°×3.0 M) Fl. R. 4 secs. Out of position. Unlit.
(Course 137°×6.1 M) Occ. 6 secs. In position. Lit.

After passing the Fl. R. 4 sec. buoy, vessel was about to set a course to the anchorage off the port of Libreville but was told that vessels carrying cars were to proceed to the new port of "Ovendo" some 8.5 miles further up the river.

On arrival I was told to anchor 1 mile S.W. of the new pier.

Quite a modern port as described in the "Guide".

Laying alongside the berth is not very comfortable when the ebb tide starts to flow, anything up to 6 knots within half an hour of HW, getting its force from three rivers, River Egoume, River Ikoy and the main river Komo.

Vessels always berth on slack water with the aid of a tug to push. Vessels can leave at any time. Port employs two French Pilots.

REPORT: 1982.

SHIP SPARES: Customs require originals of invoices G11 for clearing spares. Copies are not acceptable.

SHIPMASTER'S REPORT: February 1989.

APPROACHES: All the buoys in the Channel, including the Fairway Buoy, are missing and they are unlikely to be replaced, according to the Pilot. During the transit to the berth all positions are by radar, due to lack of visual points. Arrival and departure should be in daylight.

Great care must be taken on arrival off the Fairway Buoy position as some of the points of land do not show up well.

The sailing draft of 10.4 m. is governed by the depth in the channel. There are several 9 m. patches and banks. The best plan is to leave the berth at LW, in order to avoid the 5 knot current during unberthing, then anchor off the berth until about 1 hour before HW, then proceed outward. This gives the vessel the benefit of 1.7 m. – 2.0 m. rise in tide.

PILOTAGE: 2 pilots (French) available for berthing and unberthing.

On arrival, Pilot boards at the Fairway Buoy position. This has to be arranged by the Charterer or Owner. Many ships, shallow draft or regular traders, do not take the Pilot at the Fairway Buoy position.

TUGS: One tug assists with berthing and unberthing.

BERTHING: *New Ore Berth:* This is a single "T" jetty with dolphins. We were the second vessel to berth here. There is a single loading arm that covers the whole 6 hatches, without ship having to shift. Loading rate is about 3,000 t.p.h. when in full operation. During our stay, technicians were still working on varous items. Manganese Ore is either supplied ex-stock or directly from wagons.

Vessel berths port or starboard side to, with one tug assisting. Moorings consisted of 3/2/2 each end and no wires if possible. One anchor is let go on approach.

The berth is situated just down river from the Port of Ovendo. The port itself handles large vessels and has a depth alongside of about 8.0 m.

FRESH WATER: Not available ex-berth.

FUEL: Not available ex-berth.

REPATRIATION: Possible. One crew member landed ashore for medical treatment and repatriation.

SHORE LEAVE: Difficult, as launches are required and they are expensive. The town of Libreville is some distance from the port.

GENERAL: *Officials:* Boarding party boarded on arrival. Usual paperwork required. The bond was not sealed.

Communications: The telephone and telex service to the Agent's office was good.

Draft Survey: This is undertaken by ship's staff. The shippers require a loading plan prior to arrival. The Bill of Lading figures were the same as the ship's figures.

Supplies: There is no ship chandler at the port. There is an excellent supermarket in Libreville which is of European standard but items are very expensive.

SHIPMASTER'S REPORT: February 1989.

I was in Owendo in February 1989, and I wish to advise you that an elevator for loading manganese ore has been completed (B.A. Chart No. 1877 – Works in progress – 1987).

The elevator has a maximum loading capacity of 3,000 tonnes per hour and is situated on dolphins. Berthing is also on dolphins with maximum draft of 12.5 m. Density is brackish. Pilot boards the vessel 1.77 nautical miles off the berth.

For information on the position of the buoys in the Passe de la Penelope, Masters should contact Owendo Pilot on VHF Channel 16, as the positions of buoys are unreliable.

SHIPOWNER'S REPORT: April 1989.

One of our vessels suffered propeller damage from underwater obstacles in Owendo in April 1989. We know of two other cases, both in 1984.

SHIPMASTER'S REPORT: May 1991.

Vessel: 10,300 g.r.t., 5,580 n.r.t., LOA 150 m., Summer draft 9.05 m.

Vessel anchored off Port Owendo in a position about 1.1 miles S.W. of the head of the Mangan Pier, in position Lat. 00° 16.15' N., Long. 09° 29.00' E.

The pilot requested the vessel to anchor in or near this position, which seems to be the normal anchorage requested. The bottom is heavy grey mud with good holding. Water depths are as according to Chart No. 1877.

At the anchorage, the flood tide starts 2 hours 30 minutes after L.W. Libreville, and runs at about 2.5 knots. The ebb tide starts about 2 hours after H.W. Libreville, and runs at about 3.25 knots. This velocity was confirmed by the local pilot as an average, only after extended heavy rains does the ebb tide attain a speed of over 4 knots.

The buoy in Passe de la Penelope lies about 1.5 cables further South. The buoy 2.7 miles North of Pt.Pongara is in position, but has been reported as being unreliable. Both buoys are properly lit, the buoy in Passe de Penelope was visible at night at 5.6 miles, the buoy North of Pt.Pongara at about 4.3 miles. The bell buoy 1.6 miles East of Pt.Pongara is missing, and according to the pilot, it is not intended to replace it. The buoy at the pilot boarding area is in position, but unlit.

One tug available for berthing, which for our vessel (no bow thruster) was quite sufficient.

Pilot usually boards from the tug, about one mile South of the Mangan Berth.

Pilot usually berths vessel just after L.W. (day and night, if requested by Agent) with starboard side alongside. For vessels with draft over 6.5 m., only Berth No. 3 is available., but even here the forward draft should not exceed 6.5 m. The aft draft can be up to 9.0 m. Berth No. 2 is presently not available, as heavy silting has occurred. Vessels up to 6.5 m. draft will be berthed at Berth No. 3 (See "Plan").

A small dredger is available, but progress is very limited, as the silting at Berth No. 2 is heavy.

At Berth No. 3, starboard side alongside, the vessel should moor very carefully, as it is possible, according to the pilot, that the ebb tide can run up to nearly 6 knots after long and heavy rain. We experienced a current of about 5 knots on the corner of the berth. As it is a pier on pilings, the water can run freely underneath the pier. At ebb tide, the current is setting off from the pier. Bollards on the berth are strong and sufficient.

Departure is possible at any time, but preferable just before L.W., when the current is not so strong and assists in getting the vessel off the berth.

SHIPMASTER'S REPORT: September 1994.

Circular Letters from Agent:

WARNING TO CAPTAINS OF ORE CARRIER
VESSELS BERTHING AT OWENDO TERMINAL

Captains of ore carrier vessels berthing at Owendo Manganese Terminal, are hereby advised by COMILOG, as Owner of the Terminal, that vessels are systematically submitted to strong currents when berthed at the Terminal, especially during the ebb period.

Therefore, they are kindly requested to stick to Pilot recommendations, to double mooring ropes and, when the current is becoming stronger, to keep a crew member on watch.

In case of damage to the Terminal caused by the vessel, COMILOG will keep the Owner, or disponant Owner of the vessel, fully responsible.

Dear Captain,

The characteristics of our ore port do not allow crew to move about freely from vessel on shore. For moving, it is necessary to take a shuttle boat and for this purpose, COMILOG envisages to put in its place a boat service. The tariff is as follows:

One Trip	Quay/vessel/quay, during working days (0700 hrs. – 1800 hrs.):	FF 1,113.00
One Trip	Quay/vessel/quay, Sunday/holidays:	FF 1,669.50

Editor's Note:
100 FCFA = 1 French Franc.
500 FCFA = U.S.$ 1.00.

SHIPMASTER'S REPORT: July 1995.

Pilotage: There is one Gabonese Pilot and 2 trainee Pilots. Pilot boards at Fairway Buoy (Pilot Buoy: Lat. 0° 17.46' N., Long. 9° 27.21' E.). Vessels berth and unberth at high water during daylight only. There is no night pilotage.

Approaches: The approach channel is marked by buoys:

(1) Themis Buoy (red): Lat. 0° 25.72' N., Long. 9° 13.57' E. Flashing red 4 seconds.
(2) Penelope Buoy (green): Lat. 0° 25.20' N., Long. 9° 16.73' E. Light not working.
(3) Caraibe Buoy (red): Lat. 0° 23.87' N., Long. 9° 20.83' E. Light not working.
(4) Papillon Buoy (green): Missing.
(5) South East Buoy (red): Lat. 0° 21.59' N., Long. 9° 23.01' E. Light not working.
(6) Pilot Buoy (red and white vertical stripes): Lat. 0° 17.46' N., Long. 9° 27.21' E. Light not working.

Arrival and departure should be undertaken during the daylight only as channel buoy lights are not working. All the buoys can be picked-up on radar at a distance of about 6 miles. Position plotting should be done by radar, using land contours, as lighthouses become obscured in the thick mangroves, and lights are not working.

Maximum draft in the channel is 11.0 m., which is at a bar near Pilot Buoy. Navigation in the channel should be done with caution, as during the flood tide current is about 3 knots, and during ebb tide current is about 5 knots. The strongest and most erratic current was experienced at Themis Buoy.

Anchorage: Anchoring position as advised by Pilot (Approximately 5 cables West of Pilot Buoy). There is also an inner anchorage, but it is mostly used by vessels loading logs at anchorage. Holding ground is good. Enough cable should be paid out, taking into account the strong current. Vessels anchor in a depth of 10 m. – 11 m. (We anchored with starboard anchor with 6 shackles on deck and experienced no difficulties).

Tugs: One tug assists during berthing and unberthing.

Berthing: Ore berth is "T" jetty with dolphins. There is about 5 knots current at the berth, hence strong mooring ropes are required. Usual mooring arrangement is 4-3-2 at each end. Care should always be taken to keep the vessel alongside, as parting of ropes is quite frequent during the change of tide. We berthed starboard side alongside, using port anchor with 4 shackles on deck.

Density: Dock water density was found to be 1022, and at times 1021.

VHF: Port Control on Channel 16 and pilot station on Channel 12.

Health: Free Pratique is granted only after vessel is berthed.

Loading: There is a single loader which can load Manganese Ore at a rate of 2,800 tonnes/hr., but during the vessel's stay an average rate of 2,200 tonnes/hr. was observed. Vessels can load without having to shift. An error of 0.8% was observed between shore figures and draft survey conducted by the ship's staff.

Identification Card: Required.

Shore Leave: Permitted.

Fresh Water: Fresh water is available at Commercial Wharf (Container Jetty) through pipeline. Cost of fresh water is about U.S.$1.00 per ton.

Fuel: All grades of fuel can be supplied by barge to any berth. Ample notice for fuel supply is required as fuel comes from Port Gentil.

Repatriation: There is an international airport at Libreville, which is about 20 km. from Owendo. International flights go via Paris.

Medical: Good medical facilities are available at Libreville.

Documents:

1 copy Crew List.
1 copy Stores List.
1 copy Personal Property List.
1 copy Health Declaration.
1 copy Vaccination List.
1 copy Ports of Call List.
1 copy Passenger List.
1 copy Arms and Ammunition List.
1 copy Dangerous Cargo List.

All the official work was handled by Agent. No Customs or Immigration Officer boarded the vessel. Bond was not sealed.

Draft Survey: Draft survey was carried out by the ship's staff.
Supplies: There is no shipchandler in the port. There is a very good supermarket in Libreville, but goods are very expensive. Even the general market is very expensive. All articles of general type can be purchased at the supermarket.

AGENT: See "Libreville".

PORT GENTIL: 00.43 S. 08.48 E. (See Plan)

LOCATION: The deep water port of Port Gentil is located between Point Clairette (Sogara Refinery) and the Alcyon Bank (CFG factory).
DOCUMENTS:
Cargo Manifest.
Stores List.
Crew's Personal Effects List.
Crew List.
List of Ports of Call (not compulsory).
Health Certificate.
Ship's Official Papers.
APPROACHES: Buoyed channel, no lights. Minimum depth 15 m.
PILOTAGE: Pilot service operates 24 hours a day. Vessels berth day and night, including Sogara Quay where small white products tankers berth.
ANCHORAGES: An anchorage area for timber vessels faces the old port. Access to the zone is with Pilot onboard. 5 anchorages available (See "Plan").

An anchorage area for waiting vessels intending to berth at the new port, or at the Sogara Refinery is 3 miles N.E. of Pointe Clairette.
RESTRICTIONS: See "Pilotage".

The water area in the port is clear with no obstructions apart from the Alcyon Bank to the CFG factory. Dredging carried out permits manoeuvring of vessels to Berth No. 2 of the Commercial Quay.
VHF: Port Control on VHF Channel 16, Working Channel 12.
TUGS: Not available.
BERTHING: *Commercial Quay:* 210 m. of quay with 11 m. depth, 180 m. with 9.0 m. depth, 30 m. with 6.5 m. depth and 75 m. of quay with a depth of 2.5 m. which constitutes the barge quay. The quay bollards are spaced 30 m. apart. This quay is able to accommodate 2 × 170 m. LOA vessels.
Fish Quay: The fish quay runs at right angles to the Commercial Quay (107° – 287°). 80 m. with 8 m. depth of water; 197 m. with 7 m. depth of water.

This quay is reserved as a priority for fishing vessels, but can be partially used for berthing vessels of a commercial nature. The quay bollards are spaced 20 m. apart.
Storage: 6,000 sq.m. of covered storage, divided into 6 bays of 1,000 sq.m. each. 3 bays leased to SDV (8 reefer points available). 3 bays leased to SAGA (1 reefer point available). 1 Customs warehouse located in the SDV and SAGA bays. 1 shed and 2 bays leased to Eagle with 12,657 sq.m. in 2nd Zone. 1 shed and 3 bays leased to SATRAM with 19,682 sq.m. in 2nd Zone.

Open storage area: Current paved surfaces of open storage areas – 14,000 sq.m. (All 1st Zone is paved).
40,000 sq.m. for large (heavy) logs.
STEVEDORES: Work in 3 shifts throughout 24 hours.
MEDICAL: The port infirmary is located in the SDV Building.
TANKERS: *Commercial Quay:* Two pipelines with own connection take vegetable oil to Agrogabon tanks.

One pipeline with connection takes industrial oil to Pizzolub tanks.
Fish Quay: One pipeline with 2 connections takes gas oil to Mobil tanks (available for small tankers).

Prince's Bay, point for unrefined petrol by sealine is available to North of Prince's Bay (See "Cape Lopez").
FRESH WATER: Available at commercial quay and fishing quay.
CONSULS:

France	BP. 511	Tel: 20.86
Netherlands	BP. 792	Tel: 28.09
Sweden	BP. 518	Tel: 21.71
Switzerland		Tel: 20.19

REPAIRS/DRY DOCKS: Not available.
WATCHMEN: Available.
HATCHES: Opened and closed by crew.
REPATRIATION: Obtainable on medical grounds. No facilities for crew changes.
AIRPORT: 4 km. distant. Regular services.
TIME: GMT plus 1 hour. No alterations.
HOLIDAYS: No work on Independence Day, 17th August.
SHORE LEAVE: Permitted with shore pass.
GENERAL: *Ships' Spares:* Customs require original of invoices for clearing spares. Copies are not acceptable.
AUTHORITY: Direction du Port de Port Gentil, B.P. 43, Port Gentil, Gabon. *Tel:* 55.50.53. *FAX:* 55.53.03. *Contact:* Le Directeur du Port (Tel: 55.38.11, 55.38.12). Capitainerie (Harbour Master) (Tel: 55.36.70, 55.27.11).

AGENT: Socopao-Gabon, B.P. 560, Port Gentil. Tel: 552491 and 552005. Telex: 8223. Cables: "Freight Portgentil". Fax: 550751.

NOTES

Please also advise Shipping Guides Ltd.

Republic of Gambia

BANJUL: 13.27 N. 16.34 W. (See Plan)

DOCUMENTS:
7 Crew Lists.
7 Passenger Lists.
7 Ports of Call Lists.
Health Documents.
Derat (or Exemption) Certificate.
Yellow Fever Innoculation Certificates.
Customs Crew Declaration.
2 signed copies of Manifest.
Bills of Lading (may be sent in advance of vessel).

PILOTAGE: ETA and draft to be communicated to "Harbour Master Banjul" 48 hours before ETA and confirmed 12 hours before. Vessel arriving Monday, ETA preferably not later than Saturday morning.

Pilot station situated in Harbour Master's Office has VHF station, calling Channel 16 (156.80 MHz) working Channels 12 (156.60 MHz) and 14 (156.70 MHz). Continuous listening watch kept 0800 – 1600 hrs. Monday – Thursday. 0800 – 1300 hrs. on Friday. Listening watch at weekends if vessels are expected. Reception generally good within 100 nautical miles radius. Pilot boat has blue hull and white superstructure, exhibiting usual signals.

Pilotage from any point inwards from Fairway Buoy by request, but compulsory from No. 5 Buoy inwards.

ANCHORAGES: Good and spacious anchorages to the East and S.E. of Government Wharf in depths of 8 to 15 fathoms.

RESTRICTIONS: Vessels may enter and proceed to anchorage at all times and states of tides. Minimum depth in sea approach channel is 8.54 m. LWOST. Average rise of Spring tides 1.83 m., Neap tides 1.22 m.

MAX. SIZE: Max. LOA 182.9 m., max. draft 8.5 m.

HEALTH: Vessels exhibit the appropriate International Code signals. Port Health Officer usually boards the vessel at the harbour anchorage or alongside between 0800 and 1700 hrs. daily, at all times in case of emergency.

RADIO: Coastal radio station on MF/HF for W/T and R/T.

VHF: Port VHF on Channels 16, 14 and 12.

TUGS: One ocean-going tug of 1,000 h.p. with VHF keeps watch on Channel 16 throughout 24 hours.

BERTHING: Maximum permissible draft alongside Banjul Old Wharf 8.2 m. Mooring bollards on foreshore. Banjul Wharf berthing face 122 m., breadth 29 m. Mooring dolphin each end, set back from wharf face. Inner berth of length 102 m. suitable for small vessels up to 5.3 m. draft. Public Jetty berthing face 60 m., maximum draft 3.3 m.

New Banjul Wharf: Length 123 m., width 29 m., depth alongside 10 m. (outer side) and 6.0 m. (inner side). Wharf is flanked by 2 mooring dolphins at each end at distance of 24 m.

Storage: The port has a total storage area of 36,220 sq.m., of which 29,700 sq.m. is uncovered for containers and breakbulk cargo and 6,520 sq.m. covered area comprising two transit sheds.

These figures do not include the new container terminal and bonded warehousing area.

Containers: Containers can be worked along the four Banjul Wharf berths. Ship's own gear to be used.

Cargo: Average rate per gang hour:
Bagged cargo: 48 tonnes.
General cargo: 25 tonnes.
Containers: 20.

BRIDGES: No bridges.

STEVEDORES: Normally 48 hours notice addressed to Agent. If arriving Monday preferable Agent notified requirements latest Friday. Normal working hours 0730 – 1900 hrs.

MEDICAL: Emergencies and cases requiring hospitalisation attended to at all times, giving as much advance notice and information as possible. Other cases attended to as convenient to ships after arrival. For certificates required see "Documents". Inoculation and vaccination for yellow fever given on request.

TANKERS: Tankers (discharging only) berth on Banjul Old Wharf. Maximum permissible draft 8.2 m. Discharge of residue and bilge prohibited. Ballasting by permission of Harbour Master. Ground nut oil can be loaded at New Banjul Wharf.

DENSITY: Normally salt water at Banjul, reducing to about 1020 ozs. per cu.ft. during River Gambia flood water period: August – February.

FRESH WATER: Fresh water available at Banjul wharves from hydrant. Notice of requirements should be sent with ETA. No water barge. Tug can supply up to 18 tons of fresh water to vessels at anchorage.

FUEL: Bunkering facilities available at Banjul Wharf by road tankers for reasonable quantities. Advance notification required for all bunkers.

FIRE PRECAUTIONS: For tankers and vessels carrying explosives Fire Brigade will be in attendance.

CONSULS: In Banjul: Belgium, Denmark, France, Germany, Ghana, Lebanon, Mali, Nigeria, Norway, Sierra Leone, Spain, Sweden. U.S.A. has resident Charge d' Affairs and U.K. has High Commissioner. Senegal has resident Ambassador.

REPAIRS: Minor hull, deck and engine repairs and welding undertaken by G.P.A. dockyard.

DRY DOCK: A slipway of capacity of 500 tons displacement is included in the dockyard facilities.

GANGWAY/DECK WATCHMEN: Recommended. By arrangement with Agent.

OPENING/CLOSING HATCHES: Opening of hatches is done by the stevedores upon request by the ship.

CERTIFICATES: Registry, Articles of Agreement, Load Line, Safety, Safety Equipment Radio Licence/Certificate.

CUSTOMS ALLOWANCES: Reasonable allowance of wine/spirits and tobacco/cigarettes out of bond, as per Master's request.

CARGO GEAR: In accordance with U.K. Factories Act. Ship's lifting gear for loading and discharging, also 4×6 ton and 1×30 ton mobile cranes available. Adequate plant for handling 20 ton and 40 ton containers.

REPATRIATION: Possible.

AIRPORT: Yundum Airport, 14 miles from Banjul. Regular services.

TIME: GMT kept throughout the year.

HOLIDAYS: New Year's Day (1st January); Independence Day (18th February); Good Friday; May 1st; August 15th; Christmas Day; Boxing Day; Islamic Festivals of Eid-El-Fitr (Ramadan) and Eid-El-Kabir. No cargo work on Islamic Holidays.

TELEPHONE: Telephones installed on board at ship's/Agent's request.

BANKS: Standard Chartered (Gambia) Ltd., Meridien BIAO (Gambia) Ltd., BICI, Continent Bank.

SHORE LEAVE: No restriction on normal shore leave.

IDENTIFICATION CARDS: Needed.

GARBAGE DISPOSAL: Skips available. Contact Harbour Master for service.

WASTE OIL DISPOSAL: There are private contractors who are willing to collect waste oil. Contact Harbour Master for service.

SEAMAN'S CLUBS: None.

CURRENCY: Local currency is the Dalisis. No restrictions and no problems with changing foreign currency.

GENERAL: The Gambia River Transport Company operates a limited fleet of lighters, mainly for transporting groundnuts from river ports to Banjul. Ships stores: fresh vegetables, beef and fish, fruit (in season) and bonded stores are available.

Other Ports: River Ports: Kaur and Kuntaur at 118 and 150 miles upriver respectively from Banjul. River Pilots available at Banjul. Max. loaded draft 5.0 m.

DEVELOPMENTS: The Third Banjul Port Project aims at safeguarding the international competitiveness of the Port of Banjul by providing adequate facilities for the efficient handling of cargoes, expanding the quay space, acquiring new floating craft, building bonded warehouses, a new container terminal and container freight station, and working towards making the port a free port. These developments will give the Port of Banjul the facilities and capability to handle all types of ships and cargoes, thus enhance its role as a service centre and enable it to fully assume its role as a facilitator in the development of trade and business activities in The Gambia and the sub-region.

REPORT: August 1990.
Message from agent to ship's Master:
Quote
Banjul buoys as follows:
No. 1 is about 7 cables S.E. of charted position and unlit.
No. 2 in position but superstructure missing.
No. 3 is about 8 cables south of charted position and superstructure missing.
No. 4 in position unlit.
No. 5 in position with flashing lights.
Please proceed straight into harbour. Pilot will board for berthing after passing buoy No. 5.
Unquote

AUTHORITY: The Republic of Gambia Ports Authority, Liberation Avenue, P.O.Box 617, Banjul, Republic of the Gambia. *Tel:* 227266 (Managing Director), 227267 and 227268 (Others). *Telex:* 2235 Gamport Gv. *Cables:* Gamports Banjul. *FAX:* 27267/68. *Contact:* Oliver C.T. Andrews, Managing Director. Abdou Rahman Bah, Harbour Master (Tel: 226370).

AGENT: The Gambia Shipping Agencies Limited, 14 Wellington Street, P.O. Box 257, Banjul, Gambia. Tel: (220)227432, 227518. Fax: (220)227929. Telex: 2202 Gamships GV. Cables: "Gamship Banjul".

Georgia

BATUMI: 41.39 N. 41.38 E. (See Plan)

PILOTAGE: Compulsory. Batumi situated in South of Black Sea Caucasian coast, at head of Batumi Bay. Navigation is year round. Navigational range marks to note when approaching port are: Batumi Beacon, Burun-Tabia Light, Batumi Light Buoy with siren and Batumi Leading Light Marks. When proceeding Batumi, Master should give 96 hours' notice prior arrival, advising Port Controller and "Inflot" Agency: time of arrival, description and quantity of cargo brought in, location, ship's draft and length, as well as declare services required. 4 hours' prior to approaching port, Master shall advise more precise time of arrival. Inflot will arrange Pilot. Pilot on VHF Channels 16 and 12.

Pilot boards vessel either at the Receiving Buoy or in the Outer Port Roads. Watch is kept by a pilot boat day and night.

ANCHORAGES: The port harbour is protected by a mole from the seaward and provides a safe anchorage except at times when S.W., West and N.W. winds blow and the "Tyagun", strong variable current with surge is formed.

At the time of "Tyagun" vessels are recommended to stop cargo handling operations and go out to sea.

During S.W. winds which are considered particularly dangerous and usually accompanied by heavy surge, Masters should observe special precautions and take all necessary measures to avoid impact with the mole.

The Outer Roads of the port with depths of about 9 m. – 20 m. and 0.5 cables in width, extend for a distance of about 1.5 miles to the E.N.E. from the Batumi Light Buoy along the edge of the shoal. The bottom is mud and sand.

The Inner Roads are situated between the Western coast of the Batumi Bay and the shoal extending from the Southern and S.E. coasts of the Bay. Depths in the Inner Roads are between 25 m. – 11.5 m.

The anchorage in the Inner Roads is exposed to North winds. However it is not safe during strong winds blowing from other directions.

Every vessel when in the inner roads must take necessary measures so as not to drag her anchors.

The recommended anchorage is in the Outer Roads at a distance of 7.8 cables to N.N.E. from the Eastern side of Batumi Point, depths 9 m. – 14.4 m.

In the Outer Roads vessels may anchor only after having obtained the Harbour Master's permission and according to Pilot's recommendation.

In the Inner Roads vessels may obtain anchorage only Eastward of the entrance leading line. It is strictly prohibited to lie at anchor both on the leading line and to the West of it.

BALLAST: In case of stormy weather, in Autumn and Winter particularly, vessels without cargo must enter the port with ballast water on board, having ensured fore draft not less then 1.5 m. – 1.8 m.

There are shore separators, where dirty ballast can be discharged.

RESTRICTIONS: Vessels may enter and leave the port at any time of day and night. All vessels when entering or leaving the port must have keel clearance of not less than 0.3 m. (1 ft.).

In the event of stormy weather vessels approaching the port at time of S.W. and N.W. winds particularly, should obtain Harbour Master's entry permit. Vessels coming to the port without cargo are obliged to enter the port with ballast water taken in such a way that bow draft should not be less than 1.5 m. – 1.8 m. Ballast water must be clean.If due to the "Tyagun" vessels are not allowed to enter the harbour, they should anchor either in the Outer or Inner Roads.

All necessary information as regard to changes of wind, possibility or turn of entry to the port for vessels at anchor in the Outer Roads, is given by the Harbour Master over the VHF radio-telephone or by the signal station by flags of the International Code of Signals, in Morse Code or by semaphore signals.

MAX. SIZE: For oil carriers: Berth No. 1, 175 m. LOA, 36.0 ft. draft; Berth No. 2, 165 m. LOA, 30.5 ft. draft; Berth No. 3 165 m. LOA, 30.5 ft. draft; Berth No. 4, 150 m. LOA, 29.5 ft. draft: Berth No. 5, not operational; Buoy Mooring, LOA 200 m. – 210 m., max. draft 12.0 m.

For Cargo ships: Three berths where vessels may discharge. Maximum draft 32.5 ft.

RADIO: Send ETA to "Inflot Batumi" 96 hours and 48 hours in advance and confirm 4 hours in advance.

All vessels when approaching the port of Batumi should establish radio contact via Batumi Radio port radio station operating 24 hours per day on the following frequencies:

Call Sign	*Frequencies (kHz) Working*	*Frequencies (kHz) Calling*	*Type of Transmission*	*Time*
UFA	500	500	A1A	H24
"Batumi-Radio"	2182	2182	H3E	H24
"Batumi-2" (Port Controller)	156.8*(16)	156.8*(16)	F3E	H24
"Batumi-1" (CPR)**	156.8*(16)	156.8*(16)	F3E	H24

Radio-telephone communication via VHF Channels is carried out in A1A type of transmission after preliminary arrangement.

*Frequencies are given in MHz.

**CPR – Central Port Radio Station.

Shore signal station is situated 1.6 cables W.N.W. from Batumi Point. International Code signals, and sometimes storm signals, are hoisted at the mast of the signal station.

VHF:

Station	*Call Sign*	*Channel*
Port Radio	Batumi 1	16, 27
Port Dispatcher	Batumi 2	16,14,13
Harbour Master/Pilot Station	Batumi 5	16,14

BERTHING: The berths of the port with depths alongside 8.0 m. – 13.0 m. are equipped to handle crude oil and oil products, bulks (coal, grain, ores) and general (machinery and mechanical equipment) as well as passenger shipping.

A vessel should lie at a berth with her bow directed to the port entrance and with her anchor dropped from the proper side. Berthing in the harbour may only be effected with tugs' assistance.

A vessel may be berthed at the outer side of the Oil Jetty after having obtained the Harbour Master's permission.

Vessels entering or leaving the harbour are not allowed to pass vessels loading at the outer (Northern) side of the Oil Jetty at a distance of less than 80 m.

The berths of the port are equipped with electric cranes of up to 20 tons capacity. There is also a floating crane of 100 tons capacity. Other cargo handling equipment, covered warehouses and concrete floor sheds are available. Rate of grain loaders 5 t.p.h. – 120 t.p.h.

MEDICAL: Medical attendance in local seamen's hospital. Masters to advise by radio prior arrival of medical attendance required on board.

TANKERS: Mooring buoys are placed to the North of the Oil Jetty and a pipeline for loading tankers of up to 40,000 d.w.t. (Max. LOA 200 m. – 210 m. Max. draft 12.0 m.) is led up to them. Mooring of such tankers is effected with tug assistance under control of the Senior Port Pilot. Vessels moored to these buoys should drop 2 anchors from the bow with 7 – 8 shackles of anchor chain and strong mooring lines should be lead to mooring buoys from the stern and made fast.

When lying at mooring buoys a vessel should keep a 24 hour VHF watch on receiving Channel and observe rules of the Port.

Products Handled: Light fuel oil, heavy fuel oil and gas oil.

Report: September 1994.

Name:	Batumi Oil Terminal.
Tel:	3-21-55.
Total Storage Capacity:	Fuel Oil 78,000 tonnes Gas Oil 70,500 tonnes Jet Fuel 8,000 tonnes Crude Oil 100,000 tonnes
Distance from Terminal to Berth:	Fuel Oil/Gas Oil and Jet Fuel – 2 km. Crude Oil – 5 km.

Berth No.		1	2	3	Offshore
Max. Draft	(m.)	10.20	9.00	9.00	12.00
Length	(m.)	200	140	165	
Diameter F.O.	(mm.)	500	500	500	500
Diameter G.O.	(mm.)	400	400	400	400
Diameter Jet Fuel	(mm.)	300	300	300	300
Diameter Hoses (all)	(mm.)	200	200	200	
Load Rate F.O.	(tonnes/hr.)	750	750	750	800
Load Rate G.O.	(tonnes/hr.)	1,000	1,000	1,000	1,000
Load Rate Jet Fuel	(tonnes/hr.)	300	300	300	

TIDE: The range of water level in the port area is small and is due to the effects of strong winds. The maximum range observed 0.6 m.

DENSITY: 1018.5.

FRESH WATER: Supplied ex-shore to ship directly. Maximum pressure 20 t.p.h. Also supplied ex-water barge. Maximum quantity delivered by barge is 650 tons. Rate about 60 – 80 t.p.h.

FUEL: Bunkers may be taken at the oil berths and can also be delivered by bunkering vessel to a ship handling non-dangerous cargo. In the latter case fire precautions must be strictly observed by the vessel taking bunkers.

FIRE PRECAUTIONS: No special precautions. There is 1 firefighting boat.

CONSULS: Turkey.

REPAIRS: Only minor repairs are possible.

OPENING/CLOSING HATCHES: According to Charter Party and contract.

CUSTOMS ALLOWANCES: Tobacco: No restrictions. Wine and/or spirits: No restrictions.

AIRPORT: Batumi Airport situated about 5 km. from port.

TIME: GMT plus 4 hours. GMT plus 5 hours in Summer.

SHORE LEAVE: Crew members allowed ashore throughout 24 hours.

IDENTIFICATION CARDS: Not required.

GARBAGE DISPOSAL: Service available.

WASTE OIL DISPOSAL: Collection facilities available.

SEAMAN'S CLUBS: Club available with all services.

SHIPMASTER'S REPORT: (Updated 1986). There is now a sea-loading berth at this port immediately outside the harbour, the vessel lying to 2 anchors and stern on close to the breakwater and close Eastward of the harbour entrance.

The stern is secured to 2 buoys, using ship's ropes, 5 to a port quarter buoy and 3 to a starboard quarter buoy.

The bow is in about 60 ft. of water and the stern in about 42 ft., and vessels of up to about 40,000 tons d.w.t. are loaded there, this vessel loading safely to a draft of 37 ft. 6 in. (40 ft. in 1986).

Two 10 in. pipelines are connected on the starboard side, 1 for discharging ballast ashore and 1 for loading at a rate of about 1,600 t.p.h. The charge for discharging ballast ashore is 0.25 rbls. per ton and it is not permitted to discharge any ballast into the harbour.

1 copy of a Money List was required.

AUTHORITY: The Port of Batumi Authority, 20 Gogebashvili Street, 384500 Batumi, Georgia. *Tel:* 3-29-59. *Cables:* Morport, Batumi.

AGENT: The Port of Batumi Main Maritime Agency "Inflot", Postal address: 20 Gogebashvili Street, Port of Batumi, Georgia. Cables: Inflot Batumi. Tel: 3-23-07, 2-54-19, 2-54-17. Telex: 412673.

POTI: 42.09 N. 41.39 E. (See Plan)

GENERAL: The Port of Poti is situated 1.5 miles North of the Rioni River mouth and on the S.E. coast of the Black Sea.

Port open for navigation all the year round.

Changes of the water level in the port area are caused by the winds and usually reach 0.6 m.

The max. range of the water level observed in the river is 0.9 m.

PILOTAGE: Compulsory. Radio 48 hours prior arrival to Port Controller and agent advising ETA, description and quantity of cargo, location and weight of heavy lifts, if any, number of passengers, ship's length and draft, as well as any services required. Confirmation of ETA required 4 hours prior arrival. Inflot will arrange Pilot basis above information.

Pilot will board vessel in the outer roads at 5 cables length from the Poti Light Buoy. (Lat. 42° 09' N., Long. 41° 38' E.).

The Harbour Master will give the Master of a vessel appropriate instructions if the Pilot is not able to disembark in the outer roads due to stormy weather or heavy waves.

ANCHORAGES: In outer port which is protected by Novy Severny, Yuzhny, and Zapadny Moles, and by Zapadny Breakwater. Safe anchorage for deep drafted vessels, except in periods when "Tyagun", a strong variable current with surge, occurs, with winds from N.W., W., and S.W.

The roads are open to winds blowing from the sea. Therefore, in the event of stormy weather vessels are recommended to leave anchorage in the outer roads for sea.

Protected by the New Northern, Southern and Western moles the port ensures a good anchorage for deep-drafted vessels, except periods when N.W., West and S.W. winds form a strong, variable current with surge ("Tyagun"). Strong Westerly, S.W. and Easterly winds make the entry to the port more difficult.

A good anchorage with depths of 10 m. to 30 m. can be obtained at a distance of 1.3 miles N.W. and 1.1 mile West of the head of the Western mole, in Anchorages No. 421 and No. 422 respectively on B.A.Chart No. 2263.

Vessels are prohibited from anchoring in the S.W. part of the Southern Harbour and in the centre of the Inner Basin.

Vessels at anchor must keep watch of VHF Channel 16.

RESTRICTIONS: Vessels are prohibited from entering the port when the entrance and the leading lights are covered with fog.

Vessel's speed shall not exceed 4 knots in the port areas marked by navigation marks.

There are no restrictions for night entry.

Least depth in approaches 7.0 m.

MAX. SIZE: The max. permitted draft for entry to the port is 9.4 m. and the length 190 m.

HEALTH: Free Pratique automatic for vessels from another Georgian port. Other vessels are boarded on arrival.

RADIO: Vessels can establish radio contact through the port radio station Poti Radio operating 24 hours on the following frequencies:

Call Sign	*Frequencies (kHz)*		*Type of trans- mission*	*Time of work*
	Working	*Calling*		
UFA	500/484	500/484	A1A	H24
"Poti-1" (CPR)**	156.8*(16)	156.8*(16)	F3E	H24
	156.45*(9)	156.45*(9)	F3E	H24
"Poti-2"	156.8*(16)	156.8*(16)	F3E	H24
Port (Controller)	156.6*(12)	156.6*(12)	F3E	H24
(Vessels' movement control post)	156.675*(73)	156.675*(73)	F3E	H24

*Frequencies are given in MHz.

**CPR – Central Port Radio Station.

Traffic signals for vessels entering and leaving the port are exhibited at the signal mast located at the head of the Northern mole.

BERTHING: Berthing can be effected with tug assistance only.

The berths of the port, with depth alongside up to 12.5 m., are equipped to handle general and bulk (ore, coal) cargoes, mineral oil products, metals, fruits, vegetables, etc., as well as passenger traffic.

Portal electric cranes of up to 16 tons capacity are operated on the quays. There are also floating cranes with lifting capacity of up to 100 tons.

STEVEDORES: Arranged by Agent.

MEDICAL: Qualified medical service is available free of charge, including dispensary and hospital treatment.

DENSITY: About 1015, variable with season.

FRESH WATER: Fresh water supplied ex-shore to ship directly or ex-water barge in boundaries of port.

FUEL: Bunkers in small quantities are available. Fuel in quantities over 500 tons will be supplied if an order is placed not less than 5 days prior to a vessel's bunkering. Bunkers are delivered by barges.

REPAIRS: Only minor repairs can be effected. There are no dry docks.

CUSTOMS ALLOWANCES: No restriction on quantities but nothing to be taken ashore.

AIRPORT: Nearest at Sukhumi/Batumi.

TIME: GMT plus 4 hours. GMT plus 5 hours in Summer.

POLICE/FIRE/AMBULANCE: Police service, Tel: 02; Ambulance, Tel: 03; Fire Service, Tel: 01.

SHORE LEAVE: Crew members allowed ashore up to midnight.

GARBAGE DISPOSAL: Service available.

WASTE OIL DISPOSAL: No service.

SEAMAN'S CLUBS: Club available with all services.

AUTHORITY: The Commercial Port of Poti, 52 Lenin Street, 384691 – Port of Poti, Georgia. *Cables:* Morflot Poti. *Tel:* 57201, 57204, 57205.

AGENT: Potimar Shipping Agency, 17 D. Agmashenebeli Str., Poti 384695, Republic of Georgia. Tel: 995-393-21262, 21527. Fax: 995-393-21265. Telex: (583) 1405632 Poti (Inmarsat).

SUKHUMI (Port Sukhum): 42.57 N. 41.00 E. (See Plan)

GENERAL: Port Sukhum is situated at the head of the Sukhum Bay, 2 miles E.N.E of the Sukhum Point. The port is open for navigation all the year round. Both the port itself and the Gulf are open to winds blowing from the sea.

Several berths of the port are equipped to handle passenger traffic.

The port area is bounded by the shore line and the imaginary line connecting the Sakhum Point and the mouth of the Kelasuri River.

The port is visited by regular and cruise passenger vessels.

PILOTAGE: Compulsory. Pilotage is available 24 hours. Pilot boards in the roadstead, along the leading line, in position 42° 58.5' N., 41° 01.7' E. When navigating in the port waters, a constant listening watch must be maintained on VHF Channel 16. During adverse weather conditions, vessels must, at the first request from Port Control (Port Control on VHF Channel 14), leave the quay and follow instructions.

ANCHORAGES: Anchorages are situated in the outer roads on the Northern coast of the Sukhum Bay, opposite the mouth of the Beslet River. Depths are from 12 m. to 50 m. The bottom is mud.

RESTRICTIONS: Vessels may enter or leave the port at any time of day or night.

MAX. SIZE: The max. permitted draft is 6.0 m., length 190 m.

RADIO/VHF: Ship-shore radio contact can be established via the port radio station Sukhum Radio operating 24 hours a day on the following frequencies:

Call Sign	*Frequencies (kHz)*		*Type of trans- mission*	*Time of work*
	Working	*Calling*		
UFF	500/450	500/454	A1A	H24
"Sukhum Radio"	2182	2182	H3E	H24
"Sukhum-1"	156.8*(16)	156.8*(16)	F3E	H24
(Port Controller)	156.45*(9)	156.45*.(9)	F3E	H24

*Frequencies are given in MHz.

Storm signals are exhibited at a signal mast located on the roof of the Port Authority's office.

TUGS: 1×300 h.p. and 1×800 h.p.

BERTHING: Vessels of up to 190.0 m. in length are allowed to moor at the passenger pier. The permitted draft is restricted by the depth of water (6.0 m.). Vessels are not allowed to moor to berths during dense fog and in restricted visibility when navigational lights and the current indicator on the passenger berth are not visible. In this event vessel should anchor and disembark passengers in the outer roads.

When mooring, Master should bear in mind the direction of the current and the effect on the mooring angle of vessel.

By day, the direction of the current indicated by a spar buoy located at the head of the passenger pier, and at night, by lights exhibited from the elevation of the front leading light.

A green light shown lower than the front leading light indicates Easterly current, and a red light, current of Westerly direction.

The rate of the current is usually determined by the Master himself.

Due to the constant influence of the current, mooring is usually effected without tug assistance.

Masters of vessels moored at the port berths should keep the main engines ready bearing in mind the fact that the outer roads of the port are not protected from the effect of winds.

CRANES: There is an 8 ton tower crane on the berth. Mobile cranes of 7 tons, 15 tons and 20 tons available. There is a 100 ton floating crane for heavy cargoes.

TANKERS: There is a berth for tankers 3 miles N.E. of Sukhum Port. Depth of water 5.0 m.

FRESH WATER: Supplied ex-shore. Cost U.S.$6.0/ton.

FUEL: Can be supplied by lighters.

REPAIRS: Not possible.

TIME: GMT plus 4 hours. GMT plus 5 hours in Summer.

GARBAGE DISPOSAL: No service available.

WASTE OIL DISPOSAL: No service available.

SEAMAN'S CLUBS: None.

AUTHORITY: The Port of Sukhumi Authority, 66 Naberezhnaya Makhadzhirov Street, 384900 Port Sukhum, Abkhazia, Georgia. *Tel:* (88122) 2-82-02, 2-34-03, 2-34-00. *FAX:* 7 (503) 232-91-03. *Cables:* Morport Sukhumi.

Federal Republic of Germany

GENERAL:

RIVER ELBE: **(See Plan)**

GENERAL INFORMATION ON ELBE PILOTAGE, DEEPSEA PILOTAGE, HELICOPTER AND RADAR SERVICE, ANCHORAGE ON THE RIVER ELBE.

Elbe Pilots for all ports on the River Elbe, Cuxhaven, Brunsbuttel, Butzfleth, Stadersand, HEW-Wedel and Hamburg.

Pilot Vessel: For inward bound vessels near Elbe Lightvessel, a 2-masted pilot vessel with black hull and yellow funnel and "Lotse" painted in white letters on both sides of hull is stationed in approx. position Lat. 53° 59.5' N., Long. 08° 09.0' E. (1.5 miles E.S.E. of Elbe Lightvessel).

In bad weather pilot vessels shift to Lightbuoy "9". Such shifting is reported by Norddeich Radio in a navigational warning.

Pilot vessel can be contacted on VHF Channel 16 or 8, by showing flag "G", by sound or morse light signals.

During the night pilot vessels show the lights mandatory for pilot craft according to Rule 29 of the International Regulations for Preventing Collisions at Sea.

The vessel used for embarking Pilots will, in addition, show white flares for 30 seconds at 2-minute intervals according to Rule 36 of the International Regulations for Preventing Collisions at Sea.

Traffic Separation Scheme in the "Approaches to River Elbe": The separation zone of this traffic separation scheme also constitutes a safety zone around Elbe Lightvessel. Ships are urged to give the Lightvessel a good berth when passing.

Masters are requested not to leave the traffic lane in question when taking a Pilot.

There is an anchorage lying 3 miles to the N.E. of the traffic separation scheme. Special care should be applied when approaching or leaving the anchorage. See "Anchorage".

Land-based radar contact can be requested through radar station "Elbe Approach Radar Radio", on VHF Channel 19 during bad weather conditions, e.g. when visibility drops below 3,000 m., when there are ice floes, when buoys have been removed from their respective positions or when pilot vessels are leaving their positions, for further particulars please see "Radar".

PILOTAGE: Vessels requiring Elbe Pilot must order same at least 12 hours prior to arrival at Elbe Lightvessel by radiotelegram to "Elbelotse Brunsbuttel".

Cable address:	"Elbelotse Brunsbuttel" via Norddeich Radio, call-sign DAN
Telex:	28343 Ellots D
Telephone:	(04852) 87295

Vessels coming from nearby ports should make the request on departure or as soon as possible.

If the ETA alters, a correction should be transmitted.

Message must include:

1. Name of vessel,
2. g.r.t,
3. ETA Elbe Lightvessel, date 2 figures and time of vessel's arrival 4 figures,
4. draft,
5. vessel's destination.

(For example: 1., Eleka, 2. 12854, 3. ETA Elbe 02 1030,4. 24 ft. 04 in., 5. Kiel Canal).

1 hour before arrival at Elbe Lightvessel, Masters are advised to contact the pilot vessel by VHF Channel 16 or 8.

Compulsory District Pilotage: Pilotage is compulsory on the River Elbe to and from Elbe Lightvessel for all sea-going vessels over 1,000 g.r.t., furthermore for all oil, gas and chemical tankers and, in addition, for all such tank-vessels over 10,000 g.r.t. on their way to and from Deutsche Bucht Lightvessel.

These tank-vessels over 10,000 g.r.t. have to use the Western Approach Traffic Separation Scheme Deutsche Bucht.

Pilots for these vessels will be embarked and disembarked only at the Deutsche Bucht Lightvessel by helicopter or pilot boat. See "Deutsche Bucht Pilot Service".

Furthermore, pilotage is compulsory for all bulk carriers of more than 35,000 g.r.t. and other vessels of more than 60,000 g.r.t. on the River Elbe and on their way to and from Deutsche Bucht Lightvessel; all these vessels can embark and disembark Pilots only at the Deutsche Bucht Lightvessel by helicopter or pilot boat, they have to use the Western Approach Traffic Separation Scheme Deutsche Bucht. See "Deutsche Bucht Pilot Service".

Compulsory pilotage exists for outward-bound sea-going vessels of more than 20,000 g.r.t. other than oil, gas, and chemical tankers as far as to the outer range of the pilot vessel position at Elbe Lightvessel even when, under bad weather conditions, the pilot vessel has been moved up-river.

The disembarkation of Pilots can take place by helicopter at Elbe Lightvessel, if ships of the last category (20,000 g.r.t. other than oil, gas, and chemical tankers) are equipped with a properly marked winching or landing area according to International Chamber of Shipping (ICS) Guide to Helicopter/Ship Operations.

See "Deck-markings and Dimensions Plan" in Plan Section.

Exemptions:

The compulsory district pilotage regulations do not apply to tankers of less than 300 g.r.t. and other sea-going vessels of less than 5,000 g.r.t., provided that:

- such vessels navigate a route which the Master of the vessel in question has navigated at least 6 times within the preceding 12 months in that same vessel;
- the Master of the vessel has an adequate knowledge of the German language;
- such vessels are equipped with an operational radar as well as with an operational VHF radiotelephone installation featuring the Channels specified for the pilotage district in question.

Nevertheless, it is most advisable for any vessel to take a Pilot not only because of his local navigational knowledge but also for his familiarity with the special provisions for the River Elbe, the quarantine and Customs regulations.

In principle all vessels have to take 1 Elbe Pilot.

Bulk carriers and tankers having a draft of more than 37 ft. in salt water (38 ft. in fresh water) - regardless of size – and all vessels exceeding 60,000 g.r.t. – regardless of draft – must take 2 Elbe Pilots.

Pilotage District divided into 3 areas:

1st District: From Elbe Lightvessel to Brunsbuttel (entrance of Kiel Canal) 40 miles (from Deutsche Bucht Lightvessel to Brunsbuttel 68 miles) – operated by Elbe Pilots;

2nd District: From Brunsbuttel to Hamburg Seemannshoft (entrance to Port of Hamburg) 40 miles – operated by Elbe Pilots;

3rd District: Covers the whole area of the Port of Hamburg – operated by Port Pilots.

First change of Pilots takes place at Brunsbuttel for either a Kiel Canal Pilot or a second River Pilot, the Harbour Pilot for Hamburg will embark at Hamburg – Seemannshoft.

Vessels expecting Pilot may wait in vicinity of Elbe Lightvessel or Deutsche Bucht Lightvessel.

Contact either the Elbe pilot vessel or the Heligoland Pilot Station on VHF Channel 8, 13 or 16.

No restriction imposed on night entry for any vessels on the River Elbe.

Current velocity 2-3 knots; mean tidal range at Outer Bar Light-buoy "9" 9 ft. 10 in.; Brunsbuttel 9 ft. 2 in. and Hamburg 10 ft. 4 in. nature of bottom, sand and mud.

River pilotage dues (Lotsabgaben) have to be paid by all vessels exceeding 300 g.r.t., irrespective of whether they have used a river Pilot or not.

Pilotage fee (Lotsgeld) will only be charged if a Pilot is employed.

Deutsche Bucht Pilot Service: A central pilot service has been established at Deutsche Bucht Lightvessel.

Elbe Pilots will be transferred: By helicopter stationed at Wilhelmshaven-Mariensiel and Brunsbuttel-St. Michaelisdonn or by pilot vessel operating from Heligoland. There is a Pilot Station on the island of Heligoland equipped with VHF operating on Channels 13 and 16 and which responds to calls addressed to "Heligoland Pilot".

Vessels expecting their Pilot at Deutsche Bucht Lightvessel should stand by on VHF Channel 13 or 16 on approaching the rendezvous position.

Vessels bound for the Jade or Weser ports and requesting the Weser Pilot at Deutsche Bucht Lightvessel should contact: By radio telegraph linked with the code word "ETA Deutsche Bucht Lightvessel" to the telegram address "Weser Pilot II Bremerhaven". Telex No. 0238605. Tel: 0471/42220. VHF Channel 16.

Procedure for ordering pilot and Compulsory District Pilotage Regulations are similar to the article about Elbe Pilotage.

During bad weather conditions the pilot cutter operates at an up-river position. Compulsory pilotage to the outer range and to the Weser Lanby exists for outward – bound vessels of more than 20,000 g.r.t., other than oil, gas and chemical tankers and for car carriers and Ro-Ro vessels of more than 10,000 g.r.t.

HELICOPTERS: Helicopter Pilot service is available for vessels exceeding 10,000 g.r.t. at Deutsche Bucht Lightvessel.

The service to embark or disembark Pilots onto or from ships "at anchor" or "underway" can be provided day and night.

A twin-turbine powered Bell 212 S and/or Sikorsky S-76 helicopter is available for this service. Only suitably equipped vessels may have a Pilot transferred by helicopter.

There must be a properly marked landing area or a marked winching area available according to International Chamber of Shipping (ICS) Guide to Helicopter/Ship Operation.

See "Deck-markings and Dimensions Plan" in Plan Section.

If such a marking is lacking, it will not be possible for the helicopter to touch down or drop a Pilot.

These vessels have to send aforementioned information together with their ETA.

(a) Pilots for the Elbe pilotage region are to be requested 24 hours prior to arrival at the helicopter rendezvous position in the vicinity of Deutsche Bucht Lightvessel by radiotelegram to "Elbelotse Brunsbuttel".

Cable address:	"Elblotse Brunsbuttel" via Norddeich Radio, call-sign DAN.
Telex:	28343 Ellots D
Telephone:	(04852) 87295

Vessels coming from nearby ports should make the request on departure or as soon as possible.

Message must include:

1. name of vessel,
2. g.r.t.,
3. ETA Deutsche Bucht Lightvessel with date 2 figures and time of vessel's arrival 4 figures,
4. draft,
5. vessel's destination,
6. whether a properly marked landing area or marked winching area is available,
7. if yes, whether to starboard or port and on which hatchway or which part of the ship.

(For example: 1. Terre, 2. 104468, 3. ETA Deutsche Bucht 11 1530, 4. 41 ft. 03 in., 5. Brunsbuttel Elbe-Terminal, 6. Landing area available, 7. on port side.)

(b) A corrected ETA should be sent to "Elblotse Brunsbuttel" 6 hours prior to the transfer operation at Deutsche Bucht Lightvessel.

(c) Send the exact time of arrival to "Elblotse Brunsbuttel" 2 hours before arrival at Deutsche Bucht Lightvessel.

In addition to this, vessels should keep watch on *VHF Channel 16, 30 minutes before arrival* so that the helicopter can contact the ship.

After radio contact is established (VHF Channel 9), the vessel shall advise the helicopter pilot of the vessel's position, heading, speed and the actual wind direction and speed over the deck.

It is essential that the vessel transmit direction finding signals on 410 kHz until the helicopter is over the ship. On request of helicopter pilot an uninterrupted (locked key) transmission should be given.

When transferring the Pilot, vessels are restricted in their ability to manoeuvre according to Rule 3(g) (iii) and (iv) and may exhibit the lights and shapes as under rule 27(b) of the International Regulations for Preventing Collisions at Sea. In addition, they may inform shipping of their manoeuvres by VHF.

In cases of defect of helicopter, poor visibility, icing conditions, inadequacy of construction of ships, or no landing or winching area markings, the Pilot will have to be embarked or disembarked by the Pilot boat at the same position.

A sea-going Pilot boat is operating from Heligoland in up to Beaufort Sea Disturbance Nos. 4 – 5 for embarking and disembarking the Pilots, if the helicopter is not available, or if the ship's construction is inadequate for helicopter transfer, or if the helicopter landing or winching area of the ship has no proper marking according to International Chamber of Shipping (ICS) Guide to Helicopter/Ship Operation. See "Deck-markings and Dimension Plan" in Plan Section.

If due to incomplete or misleading ETA information it is found at the attempted Pilot transfer by helicopter that the vessel is not properly marked and/or fitted for such transfer and the helicopter consequently has to return to base, it will be necessary to send a Pilot by boat from Heligoland, which may involve considerable delay plus the cost of the futile flight.

General: If helicopter operation cannot take place, the ship will be informed of the fact by radio telegraph via Norddeich Radio (DAN). For that purpose a permanent radio watch should be kept on 500 kHz (512 kHz if distress traffic is in progress on 500 kHz) during the approach, starting 2 hours before reaching rendezvous position at Deutsche Bucht Lightvessel.

The Master will receive further instructions by radio message or via VHF on how to proceed, if Pilot transfer is not possible.

The Heligoland Pilot Station can be called on VHF Channel 16 or 13 and should be addressed "Heligoland Pilot".

Vessels expecting a Pilot at Deutsche Bucht Lightvessel will be called on 500 kHz (512 kHz during distress working) or on VHF Channel 16 or 13 for information on transfer details.

RADAR: A continuous and co-ordinated chain of radar stations has been established to cover the traffic flow along the estuary of the River Elbe from a point 4 miles before passing Elbe Lightvessel as far as well into the port of Hamburg.

If visibility drops below 3,000 m. and/or if particular situations arise (e.g. ice floes, withdrawn buoys, pilot vessels leaving their positions, etc.). Masters of inward-bound vessels may request land-based radar monitoring assistance from a point *4 miles* before passing Elbe Lightvessel until receiving a Pilot. This service will be rendered by Elbe Pilots and is available by contacting Elbe Approach Radar Radio, VHFChannel 19.

The same service is extended to outward-bound vessels as far as *4 miles* West of Elbe Lightvessel.

Once the Elbe Pilot has come aboard he will be assisted by his land-based colleagues monitoring the shore-operated radar system.

Radar Stations along the River Elbe: Elbe Approach Radar Radio, VHF Channel 19; Neuwerk Radar Radio 1, VHF Channel 18; Neuwerk Radar Radio 2, VHF Channel 5; Cuxhaven Radar Radio, VHF Channel 21; Belum Radar Radio, VHF Channel 3; Brunsbuttel Radar Radio, VHF Channel 4; Freiburg Radar Radio 1, VHF Channel 18; Freiburg Radar Radio 2, VHF Channel 22; Steindeich Radar Radio, VHF Channel 5; Hetlingen Radar Radio, VHF Channel 21; Hamburg Radar Radio, VHF Channel 3 and 19.

Each station broadcasts periodical reports, in German and English, of visibility, ice, tide, alterations of seamarks, etc. See "Admiralty List of Radio Signals".

ANCHORAGE: A deep-water anchorage for deep-draft vessels, very large crude carriers (VLCC's), and ultra large crude carriers (ULCC's) is located South of "Deutsche Bucht" Lightvessel, approx. position Lat. 54° 05' N., Long. 07° 27' E. Depth of water from about 34 m. to 36 m.

In the vicinity of Elbe Lightvessel (3 miles to the N.E.) for large and deep-draft vessels, North of estuary, approx. position Lat. 54° 03' N., Long. 08° 09' E., depths from about 14 m. to 19 m. below chart zero.

Neuwerk Roadstead, approx. position 53° 58' N., 08° 30' E., depth of water from about 8 m. to 17 m. below chart zero;

Medem Roadstead, approx. position 53° 51' N., 08° 46.5' E., depth of water from about 5 m. to 13 m. below chart zero;

Neufeld Roadstead, approx. position 53° 51.7' N., 09° 00' E., depth of water from about 8 m. to 10 m. below chart zero;

N.E. Roadstead, off Brunsbuttel, permission only for 1 tide, approx. position 53° 53' N., 09° 12' E., depth of water from about 13 m. to 14 m. below chart zero;

Freiburg Roadstead, approx. position 53° 50.6' N., 09° 19.5' E., depth of water about 13 m. below chart zero;

There are further anchorages for small vessels at Sudreede (South anchorage) off Brunsbuttel, Wischhafen, Krautsand, Grauerort – and Twielenfleth Roadstead.

The bottom at all these anchorages consists of sand and mud.

DEEP-SEA PILOTAGE: Ships requiring the assistance of Deep-Sea Pilots in the North Sea, the English Channel, or the Skagerrak shall make use only of the service of Deep-Sea Pilots in possession of a Deep-Sea Pilot Card issued in accordance with the Rules and Regulations for the Good Government of Deep-Sea Pilotage in North Sea.

Ships requiring the assistance of a Deep-Sea Pilot in the North Sea or the English Channel may request the assistance of pilots licensed by the Federal Republic of Germany.

See "Baltic Deep-Sea Pilotage".

Request for Deep-Sea Pilots should be made for vessels berthed in

German North Sea ports	6 – 8 hours before ETD
Continental North Sea ports	24 hours before ETD
UK North Sea and Channel Ports	48 hours before ETD or before passing the local Pilot Station (as appropriate).

Vessels entering European waters through the English Channel usually take their pilots at Brixham 1.5 miles N.E. of Berry Head or at Cherbourg 1 mile North of CH 1 Buoy. Pilots of outward-bound vessels normally disembark at the same stations.

Deep-Sea Pilots (not authorised as dual capacity River Pilots) are not allowed to pilot any vessels (whether subject to compulsory pilotage or not) on the River Elbe from Deutsche Bucht Lightvessel as far as the Port of Hamburg, regardless of whether pilot vessels are on position or not during bad weather conditions or whether or not Pilots can be embarked or disembarked during bad weather at the normal transfer position.

Also see "Brixham"

Extra Service: Inward-bound vessels – especially container vessels – wishing to proceed without delay by gale or fog, etc., regardless of whether pilot vessels are in position or not during bad weather conditions, as may be caused when taking an Elbe Pilot at Elbe Lightvessel or Deutsche Bucht Lightvessel, can request the Elbe Pilot to come aboard at the first Channel or North Sea port of call for approaching the river Elbe and non-stop onward upstream pilotage.

In order to avoid all the disadvantages caused by the forementioned situation – if foreseeable – it is urgently advised to request an Elbe Pilot in time.

Advantages: Assistance of nautical staff in the heavily congested area of the German Bight – especially of the approach of the River Elbe – exact knowledge of local conditions, saving of time, reduced hazards.

Please observe these periods of notice:

Continental North Sea ports:	24 hours prior to ETD
UK North Sea and Channel ports:	48 hours prior to ETD or before passing local Pilot Station.

Coastal Pilotage: Coastal pilotage is available from a position near Lightvessel Borkumriff to the limits of the pilotage districts Ems, Weser II/Jade, and Elbe.

Telegrams: Emslotse Emden via Norddeich Radio/DAN
Telephone: 0492/24000
Telex: 27882 lotsen d

Baltic Pilot – Kiel: Ships requiring assistance of state-licensed Deep-Sea Pilots for the *Baltic Sea* to send their request to

German Deep-Sea Pilots Brake
Cable: "Germanpilots Brake"

or Baltic Pilots Kiel
Cable: Balticpilots Kiel".

or Deepseapilots Busum
Cable: "Contipilot Busum".

or German Deep-Sea Pilotage Joint Service
Cable: "Praconor Travemunde".
or "Praconor Bremerhaven".

or Captain Urmersbach, Brake
Cable: "Urmersbachpilot Radio Unterweser".

The Baltic Pilotage Authorities Commission Recommendation:

The Baltic Pilotage Authorities Commission, recognising that Deep-Sea Pilotage helps to enhace safety of navigation and prevention of pollution of the marine environment, in particular to reduce the risks resulting from the high density of ships carrying dangerous or noxious cargoes and that the presence of a Deep-Sea Pilot on board would strengthen a vessel's navigational team and improve emergency measures in case of incidents and having considered the necessity to establish a certain order in Deep-Sea Pilotage in the Baltic Sea, recommends

A. Masters of ships which are constrained by their draft and
B. Masters of ships other than registered in one of the Baltic states, infrequently sailing in the respective area

coming from or being bound for ports in the Baltic Sea to avail themselves of Deep-Sea Pilots, certified by a competent authority of a Baltic coastal state.

Notice to all Masters Entering the Baltic Sea concerning Deep-Sea Pilotage:

The IMO recommends that ships which wish to avail themselves of Deep-Sea Pilots in the area of the Baltic should only take Deep-Sea Pilots licensed by a Pilotage Authority of a Baltic coastal state, i.e. Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, Sweden and Russia (IMO-Resolution A.480 (XII).

Such licensed Deep-Sea pilots are in possession of a red identity card.

The Pilotage Authorities of the Baltic coastal states draw special attention to the following rule which came into force on 1st January, 1983, but only obligatory for licences issued after that date.

Deep-Sea Pilotage in the Baltic Sea Area shall be performed by Deep-Sea Pilots from the respective ports of departure of the Baltic coastal states only, including the Kiel-Holtenau Locks, the Sound and the Belts. A Deep-Sea Pilot shall disembark from a ship at the first port of call and shall return home as soon as possible.

If the ship wants further advice by a Deep-Sea Pilot it is the responsibility of the local Pilotage Authority of that port to supply such a Deep-Sea Pilot.

Also see "Baltic Deep-Sea Pilotage".

BRAKE: 53.20 N. 08.29 E. (See Plan)

PORT LIMITS: The government-owned piers are the commercial area of the port. A vessel is considered to be an "arrived ship" when she is moored alongside such piers, and the customs formalities are complete. Laytime will commence according to referring charter parties.

Port Authorities distribute the free berthing places in following the "Benutzungsordnung fur den Hafen Brake" which says briefly that a vessel will get a rank position in actual arriving times:

(a) for ships coming from sea: arrival "Weser Lanby" plus 5 hours.
(b) for ships coming from Bremerhaven North Roads and Blexen Roads: departure plus 2 hours.
(c) for ships coming from Bremen: departure plus 3 hours.

DOCUMENTS:
2 Lists Ship's Stores.
2 Crew Lists.
2 Passenger Lists.
Health Certificate (forms obtainable from Pilot).
Ship's Register.

DEEP SEA PILOTAGE: See "General" before first German port and "Baltic Deep-Sea Pilotage".

PILOTAGE: Carried out by Weser River Pilots. The river Pilots also act as docking Pilots. Also see "Bremen" and "Bremerhaven".

ANCHORAGES: No anchorage in vicinity of Harbour. Anchorage in "Blexen Roads". For further details see "Bremen".

RESTRICTIONS: Vessels proceeding to Brake with a draft in excess of 24 ft. will be restricted by the tide.

MAX. SIZE: Max. length 265 m. (869 ft.); no restriction on beam. Max. draft 37 ft. in fresh water.

PRATIQUE: Free Pratique is given by Health and Immigration Officer only. If a case of fever or disease is suspected on board radio the Agent with details before arrival.

RADIO: Cable Agent via Norddeich Radio (Call sign DAN) advising ETA and cash requirements.

RADAR/VHF: Stations from Weser Lanby to Bremerhaven. Radar service between Bremerhaven and Brake. Radar stations have day and night service. If no fog every odd hour radar stations give on VHF or Pilot walkie-talkie report of visibility, defective buoys, anchoring ships, obstructions to navigation, and special occurrences. Direct contact between port and ship is possible on VHF ("Brake Lock Radio" on VHF Channel 10).

TUGS: Available day and night in sufficient number. No extra charge for using tug's lines.

BERTHING: *Inner Harbour with tide-independent lock:* Dimensions: Length 95 m. (311 ft.), width 16 m. (52 ft.) Max. size of vessel to be handled will be a fully loaded vessel of 3,000 d.w.t. with a max. draft of 6.0 m.

Length of dock 1,070 m. (3,500 ft.), width 110 m. (360 ft.). Length of canal 228 m. (750 ft.), width of canal 46 m. (150 ft.), length of quay in canal 228 m. (750 ft.). Depth 4.3 m.

Riverside Berth: Total length 1,852 m. (6,075 ft.), depth at pier 13.6 m. at North end and 14.6 m. at South end at normal low water, tidal amplitude 11 ft. 6 in. Max. draft 37 ft. Max. length of ships not more than 265 m. (869 ft.).

This government-owned pier is divided into 2 areas. The Northern part is the crane-area with a length of 4,510 ft., the Southern part, 1,565 ft. long, is the grain-handling area.

Private Pier of the Fettraffinerie/Unimills has a length of 245 m. (804 ft.) depth 11.0 m.

SPECIALISED CARGO HANDLING FACILITIES:

Inner Harbour:
1 jib crane, capacity 32 ton. Working range 10 m. to 30 m.

South Pier:
3 grain elevators. Total discharging capacity 1,500 t.p.h.
4 lorry and railtruck unloading stations. Total capacity 1,000 t.p.h.
3 ship loading stations. Total loading capacity 1,800 t.p.h.
6 lorry and railtruck loading stations. Total loading capacity 2,600 t.p.h.

North and Middle Pier:
4 luffing jib cranes – 25 tons capacity – max. reach 46 m.
2 Bridge cranes – 80 tons capacity – max. reach 40 m.
Wagon loading station: capacity 300 cu.m.p.h.
Combined ship loader: capacity 1,000 cu.m.p.h.

Fettraffinerie Quay: Loading/discharge points for vegetable and animal oils/grease, mineral oil, molasses and other liquid products.
Discharge capacity: 1,500 t.p.h.

Storage:
Silo installation and storage shed for grain: 360,000 tonnes.
Storage sheds: 55,500 sq.m.
Free storage areas: 105,000 sq.m.
Tank storage for grease, refinery and the S.S. "Elbe" 110,000 tonnes.

The government-owned pier is equipped for containers, but not for Roll-on/Roll-off traffic. The berth does not handle liquid chemicals.

STEVEDORES: ETA has to be reported to the Agent to arrange gangs. Stevedores are working 3 shifts around the clock on working days (Monday to Saturday); on Sundays and holidays 4 shifts are worked around the clock.

MEDICAL: One hospital and several doctors available at Brake. Advance notice to Agent required if medical assistance necessary.

TANKERS: Fettraffinerie Pier: Max. draft 33 ft. Discharging lines: molasses 6 in., fuel oil 8 in., diesel 10 in. and vegetable oil from 4 in. to 8 in.

DENSITY: Brake Port, Fresh water: salinity = 1002–1004.

FRESH WATER: Available both at Riverside Berth and Inner Harbour. Pumping capacity from 18 t.p.h. to 20 t.p.h.

FUEL: All grades available by bunker barges.

FIRE PRECAUTIONS: No smoking in port area. For tankers at Fettraffinerie Pier smoking only in saloon and/or messroom.

CONSULS: Consuls at Bremen.

REPAIRS: All normal ship and engine repairs can be carried out during laytime on board.

DRY DOCKS: One dry dock at Petram Werft, Brake, for ships with a length not in excess of 85 m. (279 ft.), nor wider than 16 m. (52 ft. 6 in.), and a max. draft of (3.98 m./13 ft. 1 in.).

SURVEYORS: Classification Societies not represented but several surveyors available at Brake Port.

GANGWAY/DECK WATCHMEN: Crew's watchmen necessary – strong tides, current-speed 3 knots.

HATCHES: Depends on the different charter parties.

CUSTOMS ALLOWANCES: 200 cigarettes, 1 bottle of spirits and 2 bottles of wine.

CARGO GEAR: Load/discharge normally effected by shore-gear.

REPATRIATION: Any necessary repatriation and/or crew changes can be effected by Agents at Brake.

AIRPORT: International airport served by regular airlines at Bremen. Brake to Bremen, distance 57 km. (35 statute miles).

TIME: GMT plus 1 hour. GMT plus 2 hours (last weekend in March to last weekend in September).

HOLIDAYS: New Year, Good Friday, Easter Sunday and Monday; 1st May, Ascension Day; Whitsunday and Monday, Penitentiary Day, 2 Christmas Days. Cargo work can be arranged on those days, except on New Year, Easter Sunday (1st Easter day), 1st May, Whitsunday, 1st Christmas Day, and on the days before such days till 1200 and/or 1400 hours.

POLICE/AMBULANCE/FIRE: Police 110; Ambulance 19222; Fire 112.

TELEPHONES: No arrangements to place telephones on board.

SHORE LEAVE: Shore passes are required according to customs regulations.

IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.

Shore passes issued to passengers are chargeable.

GARBAGE DISPOSAL: Within the port area, several collection points have been established that may be used for normal ship's garbage, including victual and domestic waste generated during the normal operation of the ship.

After berthing, garbage bags will be delivered on board the ship. All garbage should be collected into these and brought to the container before leaving the port. Further bags can be supplied if needed. There are no charges for the bags or for use of the container.

This service does not include garbage that cannot be placed in the container because of its size. It is also strictly prohibited to place any special waste, such as chemicals, paints, oily residues or batteries, in these containers. The agent will know firms which are able to collect this special waste and remove it. Charges will be for ship's account. For free disposal of solid oily residues such as filters, drums or polishing clothes, a special container is available on the quay.

WASTE OIL DISPOSAL: Service available. Contact Port Authority for details.

SEAMAN'S CLUBS: Seemannsheim, Weserstrasse 1A, 2880 Brake. Tel: 04401-4490.

CURRENCY: Deutsche Mark (DM).

DEVELOPMENTS: Weser fairway depth will be increased to 12 m. (39 ft. 6 in.).

AUTHORITY: Niedersachsisches Hafenamt Brake, Brommstrasse 2, P.O.Box 1262, 26912 Brake, Germany. *Tel:* 04401/9250. *FAX:* 04401-3272. *Contact:* Captain Heiko Uflacker, Harbour Master.

BREMEN (Including Farge): 53.07 N. 08.45 E. (See Plan)

DOCUMENTS:
3 Crew Lists.
3 Passenger Lists.
Provision and Store Lists including fuel oil.
Dangerous Cargo Lists.
Health Declaration.
Ship's Register.
No Customs Papers if vessel laying in Freeports at Bremen.

DEEP SEA PILOTAGE: See "Brixham" or "Cherbourg" and "General" before first German port and "Baltic Deep-Sea Pilotage".

PILOTAGE: Compulsory for ships with an overall length of more than 90 m. or beam of 13.0 m. or more, and tankers of more than 300 g.r.t. and for all ships with dangerous goods in bulk and nuclear ships, exemptions possible.

Distance from Weser Lanby to Bremerhaven 36 miles. Distance from Bremerhaven to Bremen 32 miles.

At least 12 hours before arrival at Weser Lanby, Masters should cable messages to "Lotsenbruderschaft Weser zwei Bremerhaven" via Norddeich Radio. Message to include name and g.r.t. of vessel, place where Pilot required to board, day and hour of vessel's arrival, vessel's destination and fresh water draft in metres. Sea Pilots board at Weser seabuoy to Bremerhaven. River Pilots board at Bremerhaven to pilot vessels to Bremen.

Pilot station near Weser Lanby (54° 05' 16" N., 07° 50' 00" E.) black painted motor vessel, black topped funnel, white lettering "Lotse" on hull. In rough weather, pilot boat may be found inside near Buoys 77 and 79. Pilots may be contacted by Norddeich Radio, 2182 or 2614 kHz. or by VHF Channel 16.

River Pilots boarding at Bremerhaven also act as harbour Pilots to all ports above Bremerhaven.

ANCHORAGES:
1. About 1 mile S.W. of Weser Lanby.
2. Hoheweg Road between Buoys 17 and 19.
3. Tanker Road W. of Buoys 27–31.
4. Blexen Roads (South Roads) only for smaller ships.

RESTRICTIONS: Vessels proceeding to Bremen, with a draft in excess of 25 ft. will be restricted by the tide.

MAX. SIZE: Bremen: Length 190 m. with draft 10.7 m., longer ships with restricted draft.

Locks: At the entrance of the Industriehafen: Length 248 m., clear width 33.40 m.

Ships passing with max. length 230 m. and max. breadth 32.30 m. According to tide, docking is possible up to 9.45 m. (31 ft.).

HEALTH: Master has to fill and sign Maritime Declaration of Health which is handed to Health Officer on arrival at Bremerhaven and Bremen. In case suspected disease or fever on board radio details to Port Health Bremerhaven via Norddeich Radio before arrival.

RADIO: Cable Agent via Norddeich Radio, call sign DAN, advising ETA and cash requirements.

Bremen Port Radio VHF station on Channels 3 or 16 to be used for messages to all Port Authorities including Police and Fire Brigade and Port Health in case of emergency. Bremen Lock Radio on Channel 12.

RADAR/VHF: Stations from Weser Lanby to the port area of Bremen. If no fog, every odd hour radar station gives by VHF or Pilot walkie-talkie, report of visibility, defective buoys, anchoring ships, obstructions to navigation and special occurrences.

Ships ordered for Bremen Industriehafen should contact "Oslebshausen Lock" via Channel 12 VHF after passing Bremerhaven.

TUGS: Tugs available at all stations according to ships request. Tugs' lines used (only) without charge.

BERTHING: Berthing at Bremen: The following harbours can be reached:

Harbour name:	*Quay Length* (m.)	*Depth (above chart datum)* (m.)
Europahafen	2,730	3.20 – 8.60
Uberseehafen	2,960	3.20 – 10.20
Werfhafen	700	3.20 – 7.20
Holz–und Fabrikenhafen	2,600	4.20 – 8.50
Getreidehafen	570	4.00 – 11.50
Neustadter Hafen	3,100	4.00 – 11.50
Kap Horn Hafen	725	9.00
Industriehafen	3,060	3.20 – 6.20 (plus harbour water, about 3.80 m., only Industriehafen)

Max. draft is dependent on the prevailing winds

SPECIAL CARGO HANDLING FACILITIES:

Freeports: Neustadter Hafen, Uberseehafen and Europahafen, mainly general cargo.

Quay length: 7,960 m.
Max. draft: 11.50 m.
Shed storage: 532,000 sq.m.
Porterage company: Bremer Lagerhaus-Gesellschaft.

Facilities: Air-conditioned fruit storage, refrigerated storage, consolidated cargo centre, packing centres, Ro/Ro terminals, logistics and information processing on industrial plant transports and grain handling centre.

Container Handling Facilities: Neustadter Hafen Shed 24 is equipped with 3 container cranes, suitable for 40 ft. containers. Max. lifting capacity is 45 tons. The terminal has 116 connections for reefer containers.

Shed 21 is equipped with 2 container cranes, suitable for 40 ft. containers. Max. lifting capacity is 80 tons.

At the end of shed 24 Neustadter Hafen, 1 berth. Max. carrying capacity 60 tons, width 30 m., draft 32 ft.

LASH Terminal: At Bremerhaven. Lash-lighter places: Lankenauer Hoft and Europahaven.

Bulk handling facilities (Industriehafen):

Bulk cargoes such as steel, and steelware, coal, coke and coke breeze, timber, ore, oil, molasses, sand, stones, phosphate and further fertiliser and chemicals are handled by companies under private management.

For entering Industriehafen see "Max. Size – Locks".

Huttenhafen: Weserport Terminal 1 mainly handles ore, scrap, coke and coke breeze, sand, steel and steelware as slabs and coils of Bremer Stahlwerke.

Quay length: 520 m.
3 gantry cranes: 12.5, 15 and 55 tons.
Storage area: 80,000 sq.m.
Discharging capacity ore: 8,000 tons per 24 hours.
Loading capacity coils: 5,000 tons per 24 hours.
Loading capacity slabs: 6,000 tons per 24 hours.

Weserport Terminal 2: Mainly handles provender, coal, coke, minerals, wood products, stones, etc.

Quay length: 450 m.
4 cranes: 25 – 56 tons.
Storage area: 21,000 sq.m.
Loading capacity coils: 6,000 tons per 24 hours.
Loading capacity plates: 5,000 tons per 24 hours.
Loading capacity coal: 6,000 tons per 24 hours.
Quarrier and riddler: 500 tons per 24 hours.

Kohlenhafen: Mibau: Only minerals and self-unloading vessels; no cranes.

Quay length: 750 m.
Storage area: 30,000 sq.m.

Kraftwerk Hafen (Power Station): At this berth only coal cargoes for use by the power station are handled. Discharging rate (1 crane) 8,000 tons to 10,000 tons per 24 hours.

Kalihafen: Anker-Schiffahrt handles all kinds of cargo and is specialised in packing, decantation and sacking of chemical products.

Quay length: 500 m.
2 gantry cranes: 24 tons
4 special loaders
1 bridge for liquids
Storage area: 40,000 sq.m.

Tankfarm Defrol: Storage capacity 48,000 tons fuel.

Hafen E: Hansakai (Klembt) handles all kinds of cargoes and is specialised in coils, pipes, construction parts, heavy lifts, ore and containers.

Quay length: 285 m.
1 gantry crane: 15 tons.
4 cranes: up to 45 tons.
Storage area: 11,000 sq.m.

Wandel & Co: 60,000 sq..m. shed storage for grain and general cargo.

Hafen F: Krages: Timber specialists. No cranes available.

Baltus: Sand specialists.

Hafen A: H. Menke & Co.: Quay length: 250 m. 1 tank for molasses 15,000 tons. Specialises in wine import with storage area for 20 million litres.

Plump: Disposal company with 100 m. of quay space.

Other bulk handling facilities:

Granary (Getreidehafen) *near the Uberseehafen*

No locks, max. draft 35 ft. Lighterage is possible.

Bremer Lagerhaus-Gesellschaft:
Quay length: 300 m.
Storage area: 90,000 sq.m.

Berth "A" 3 elevators with a capacity of 400 t.p.h. max. length 275 m. Silo capacity 150,000 tons.

Kraftwerk Farge (Power Station)

Location: 10 miles downstream from Bremen. Only coal cargoes for the power station are handled.

Max. draft 29 ft. 6 in.
Max. length 200 m. = 656 ft.
Max. beam 25 m. = 82 ft.

3 cranes, total discharging capacity 200 t.p.h.

Rolandmuhle: Tidal basin Holz- und Fabrikenhafen. Grain facility with:

Max. draft 34 ft. at low water.
Max. length 180 m. (591 ft.).
2 stationary elevators 3,000 tons per day
1 conveyor for loading bags only.

J.H. Bachmann/J. Muller/Karl Gross (Holz- und Fabrikenhafen)

Facility for grain and occasionally, general cargo handling.

Max. draft 28 ft. at normal low water.
Quay length 710 m. (2,330 ft.).
Cranes 13 Grain/General cargo
Elevators 4×250 t.p.h. each

Klocknerhafen: Ore handled by Stahlwerke Bremen, Terminal 3.

Quay length 260 m.
Max. draft(Tidal) 37 ft.

General cargo loading installations (Kap Horn) with 2 quays, 1×320 m. long inside Industriehafen and the other 800 m. long (at the riverside). The storage area of 100,000 sq.m. is equipped with gantry crane for handling pipes, construction parts and general.

STEVEDORES: Ordered by Agent; no ETA advice to stevedores necessary.

Working hours:

Regular period: 0630–1430 resp.
0600-1400
Free Port
1st shift: 0600-1400
2nd shift: 1430-2230
3rd shift: 2300-0600 (overtime)
Industriehafen/Grain Pier
0630-1430
1430-2230 (overtime grain pier)
2230-0630 (overtime)

on Sundays: (overtime)
1st shift: 0600-1200
2nd shift: 1200-1800
3rd shift: 1800-2400
4th shift: 2400-0600
Industriehafen/Grain Pier
0630-1230
1230-1830
1830-2430
0030-0630

On Saturdays:
Free Port
1st shift: 0600-1400
2nd shift: 1430-2030 (overtime)
3rd shift: 2100-0300 (overtime)
Industriehafen/Grain Pier
0630-1430
1430-2030 (overtime)
2030-0230 (overtime)

CRANES: All piers are fitted with cranes 3/7 tons. Floating cranes up to 200 tons available.

MEDICAL: All medical facilities available. Advance notice to Agent required if medical assistance necessary.

TANKERS: Draft in fresh water.

Holzhafen	one berth, max. draft 28 ft. at LW
Osterort I	one berth, max. draft 34 ft. 6 in. at LW
Osterort IV	four berths, max. draft 37 ft. 8 in. at LW
Farge	two berths, max. draft 29 ft. 11 in. at LW

For the following tanker berths see restrictions of the entrance lock Industriehafen.

Huttenhafen:	three berths, max. draft 20 ft. to 30 ft.
Kalihafen	one berth, max. 31 ft. 3 in.

Fina Oil, Einswarden. Max. draft 36 ft. 6 in. Discharging lines crude oil 12 in., fuel oil 10 in., diesel 8 in.

Frisia (Gulf Oil), Einswarden. Berth for tankers up to 250 m. length, max. draft 36 ft. fresh water.

CONSULS:

	Tel:		Tel:
Austria	360 6221	Iceland	0471 71055
Bangladesh	1760 244	Indonesia	3320
Barbados	0471 49388	Ireland	32 13 73
Belgium	590 7134	Italy	702 030
Benin	17 630	Liberia	66 03 1
Bolivia	66 12 30	Netherlands	32 37 26
Brazil	66 38 16	Norway	12 015
Chile	32 37 31	Pakistan	323610
Colombia	15 707	Panama	3630014
Costa Rica	15 549	Paraguay	32 10 01
Denmark	17 680	Peru	15 629
Ecuador	34 20 75	Senegal	0471 73 041
El Salvador	38 95 349	Sweden	3592134
Finland	39 81	South Africa	4677081
France	30 53 115	Spain	34 40 90
Gambia	30 76 215	Togo	17 640
Ghana	36 5201	Turkey	17 10 26
Guatemala	30 21 07	United Kingdom	5909-0
Haiti	25 95 88	Uruguay	32 70 00
Honduras	3092560	Zaire	15820

DENSITY: Fresh water.

FRESH WATER: Available by hose and barge.

FUEL: All Grades available.

FIRE PRECAUTIONS: Smoking or use of open fire not allowed all over the Port area. No smoking on deck. Tankers, smoking in saloon or messroom only.

REPAIRS: All repairs possible.

DRY DOCKS: Vulkan-Gravity Dock: Up to 240,000 d.w.t.

Floating Dock: Up to 8,500 d.w.t.

SURVEYORS: All types of surveys possible (Germanischer Lloyd, Kalkstr. 4, D-28195 Bremen. Tel: (0421) 174540. Fax: (0421) 1745499)).

GANGWAY/DECK WATCHMEN: Not considered necessary. But available when ordered.

HATCHES: Opening and closing normally by crew with stevedores assisting.

CUSTOMS ALLOWANCES: Outside freeports: 200 cigarettes for 3 days or 50 grams tobacco and 1 bottle spirits. After 3 days further same quantities. Wine not restricted. Freeports in Bremen only Europahafen, Uberseehafen and Neustadter Hafen.

CARGO GEAR: No additional requirements. Preventers necessary.

REPATRIATION: Any time.

AIRPORT: Regular national and international flights.

HOLIDAYS: New Year's Day (no work performed); Good Friday; Easter Sunday (no work performed); Easter Monday; Labour Day (no work performed); Ascension Day; Whit Sunday (no work performed); Whit Monday; 3rd October; Prayer Day; Christmas Day (no work performed); Boxing Day.

POLICE/AMBULANCE/FIRE: Police help 110; Fire, First aid 112. Pilot Station Bremerhaven: Sea Pilots 4-22-20; River Pilots 4-22-89.

Pilot Station Bremen: 39-40-44.

Port Administration Bremen: 361-0.

Waterway Police: 38-20-31.

Port Medical Services: 361-0.

Immigration: Call Water Police.

Foreign Calls: 0010.

TELEPHONES: It is possible to rent a telephone box from mooring company.

IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.

Shore passes issued to passengers are chargeable.

GARBAGE DISPOSAL: All ships must deliver all garbage ashore before leaving port. The regulated collection service is operated by one contractor. Call Port Authority, Tel: 0421 361-8504, or contractor Nehlsen, Tel: 0421 391869. Bags and/or skips are provided.

WASTE OIL DISPOSAL: Collection service is available through several contractors. Call Port Authority, Tel: 0421 361-8504.

SEAMAN'S CLUBS: Deutsche Seemannsmission, Jippen 1, 2800 Bremen 1. Tel: 0421 18361.

Stella Maris/Club, Hafenkopf II, Nr. 2, 28217 Bremen 1. Tel: 0421 394789.

CURRENCY: Deutsche Mark (DM).

REGULATIONS: Usual Port Regulations. Special Regulations for dangerous goods and Tankers.

AUTHORITY: Hafenamt Bremen, Hafenstrasse 63, Ueberseehafen, 28217 Bremen, Germany. *Tel:* (0421) 361-8271 (Harbour Master). *FAX:* (0421) 361-8387 (Harbour Master), 361-8688 (Office). *Contact:* Harbour Master on duty. Tel. (0421) 361-8504.

BREMERHAVEN: 53.33 N. 08.35 E. (See Plan)

DOCUMENTS:

4 Crew Lists.
4 Passenger Lists.
3 Provision and Stores List, including fuel oil.
3 Dangerous Cargo List.
Maritime Declaration of Health.
Derat Certificate
Ship's Register.
No Customs Papers if vessel laying in Freeport at Bremerhaven.

DEEP SEA PILOTAGE: See "Brixham" or "Cherbourg" and "General" before first German Port and "Baltic Deep-Sea Pilotage".

PILOTAGE: See "Bremen".

Docking Pilots join vessels between Buoys 49 and 51A if bound for Uberseehafen or near entrance of Geeste River if bound for Fischereihafen. Docking Pilots can be requested via Bremerhaven Port Radio on VHF Channel 12.

ANCHORAGE: See "Bremen".

RESTRICTIONS: Vessels proceeding to Bremerhaven with draft in excess of 35 ft. will be restricted by tide.

MAX. SIZE: Length 340 m., draft 41 ft. in fresh water. Draft 42 ft. 8 in. in fresh water, special permission required.

HEALTH: See "Bremen".

RADIO: See "Bremen".

RADAR: See "Bremen".

VHF: "Bremerhaven Port Radio" on Channel 12.

TUGS: Tugs join vessel with docking Pilots. Tug's lines used at no extra charge.

BERTHING: There are two harbour-groups, Uberseehafen North of Geeste River and Fischereihafen South of it.

Uberseehafen:

Along Weser River:	*Depth below Chart Datum*
Columbus Quay	32 ft. – 38 ft. 08 in.
Stromkaje	40 ft. 04 in. – 44 ft. 03 in.
Dock Basins:	*Maintained Depth*
Neuer Hafen	21 ft.
Kaiserhafen I	29 ft. – 36 ft.
Kaiserhafen II	36 ft.
Kaiserhafen III	36 ft.
Verbindungshafen	36 ft.
Nordhafen	42 ft. 09 in.
Osthafen	46 ft.

The dock basins can be reached through 2 locks:

Kaiserschleuse: Length 732 ft., gate width 87 ft. 09 in. without fenders;
including fenders 83 ft. 7 in.
Depth 23 ft. at LW.

Nordschleuse: Length 1,220 ft., gate width 147 ft. without fenders;
including fenders 138 ft.
Depth 35 ft. 03 in. at LW. Max. size of vessel. length 265 m., beam 38 m. (124 ft. 07 in.). Draft 42 ft. 08 in.

With special permission of the port authorities the following maximum FW drafts are allowed.

42 ft. 8 in. = 13.0 m. – max. beam 38 m.
42 ft. = 12.8 m. – max. beam 39 m.
40 ft. = 12.5 m. – max. beam 40 m.
38 ft. = 11.58 m. – max. beam 41 m.

Fischereihafen:

Dock basins:	*Maintained Depth*
Fischereihafen I	25 ft.
Fischereihafen II	25 ft.
Handelshafen	23 ft.

Locks:

Fischereihafen-Doppelschleuse
Small lock: Length 349 ft., gate width 39 ft. without fenders;
including fenders 34 ft. 06 in.
Depth 20 ft. 06 in. at LW.
Large lock: Length 328 ft., gate width 98 ft. without fenders;
including fenders 94 ft.
Depth 20 ft. at LW.

SPECIAL CARGO HANDLING FACILITIES: The port is equipped with modern container, Ro/Ro and general cargo facilities.

4 floating cranes having lifting capacities of 100 tons – 500 tons.

Columbus Quay: Passenger and general cargo facilities.

Quay length 1,020 m. Depth 32 ft. – 38 ft. One shed of 33,000 sq.m. 9 cranes – 8 tons and one heavy lift bridge of 38 tons.

Car loading installations:

A car loading installation is situated in the Nordhafen. Quay length 620 m. Storage area 40,000 sq.m. for about 3,500 cars. The loading is done by ships' ramp.

The Car Terminal Bremerhaven, situated in the Kaiserhafen II, has a quay length of 1,075 m. and a storage area of about 526,000 sq.m.

The Car Terminal Bremerhaven, situated in the Kaiserhafen III, has a quay length of 700 m. and a storage area of 35,000 sq.m.

Container Terminals:

2 container terminals, 1 at Stromkaje and 1 in the Nordhafen, are equipped with 17 container cranes, capacity 41 tons – 75 tons.

Depth alongside in river 44 ft. 03 in. at LW. Depth at Nordhafen 42 ft. 09 in.

Kaiserhafen/Verbindungshafen offers 4 basins for general cargo and fruit handling. Quay length: 3,574 m. Five banana discharging installations have a capacity of over 500,000 tons per year.

LASH Carriers: Special facilities are available.

STEVEDORES: Ordered by Agent; no ETA advice to stevedores necessary.

Working hours: 1st shift: 0600–1400
2nd shift: 1400–2200
3rd shift: 2200–0500 (overtime)

on Saturdays:
1st shift: 0600–1400
2nd shift: 1400–2000 (overtime)
3rd shift: 2000–0200 (overtime)

on Sundays:
as Bremen Freeport.

MEDICAL: Hospital facilities at all Weser ports. No vaccination normally required.

TANKERS: Bominflot KG., Esso Kaje, Verbindungshafen. Max. draft 32 ft. 06 in.

There are several tank-cleaning boats available to receive slops at Bremerhaven.

DENSITY: 1008 – 1010.

FRESH WATER: Available by pipeline at all berths.

FUEL: All grades available.

FIRE PRECAUTIONS: No smoking on deck. Tankers smoking only saloon or messroom.

CONSULS: Barbados, Iceland, Sweden, Senegal, United Kingdom.

REPAIRS: All repairs possible.

DRY DOCKS: There are 2 graving docks and 10 floating docks with max. capacity 75,000 tons.

SURVEYORS: (1) Caleb Brett: In Hamburg. Neustadter Weg 6, 2000 Hamburg 11. Tel: (040) 366286.

(2) Lloyd's Register of Shipping: Am Wall 102, 2800 Bremen. Tel: (0421) 310611. Also at Buckingstrasse 10, 2850 Bremerhaven. Tel: (0471) 45006.

Bureau Veritas, District Hamburg: Spaldingsstrasse 1, 2000 Hamburg 1. Tel: (040) 230801. Telex: 02 154 26.

Germanischer Lloyd, Bartelstr. 1, D-27570 Bremerhaven. Tel: (0471) 92449-0. Fax: (0471) 9244930.

GANGWAY/DECK WATCHMEN: Not considered necessary.

OPENING/CLOSING HATCHES: Normally by crew with stevedores assistance.

CUSTOMS ALLOWANCES: Outside freeports: 200 cigarettes for 3 days or 50 grams tobacco and 1 bottle spirits. After 3 days, further same quantities. Wine not restricted. Freeports only at Bremen (Europa and Uberseehafen), and at Bremerhaven (Kaiserhafen, Columbus Kaje and Weserport).

CARGO GEAR: No additional requirements. Preventers necessary.

REPATRIATION: Any time.

AIRPORT: About 40 miles from Bremen. Regular airlines.

HOLIDAYS: New Year's Day (no work performed); Good Friday, Easter Sunday (no work performed), Easter Monday; Labour Day (no work performed); Ascension Day; Whit Sunday (no work performed); Whit Monday; 3rd October; Prayer Day; Christmas Day (no work performed); Boxing Day.

POLICE/AMBULANCE/FIRE: Accidents, Police 110; Fire 112; Sea Pilots 42220; River Pilots 42289; Waterway Police 9466-7; Port Medical Service 40031.

EMERGENCY CO-ORDINATION CENTRE: Flottenkommando SAR Leitstelle, Meyerweg, 2392 Glucksburg. Tel: (04631) 8625-511 (Ext. 575/6).

Deutsche Gesellschaft zur Rettung Schiffbruchiger, Seenotleitung, Werderstrasse 2, 2800 Bremen 1. Tel: (0421) 504393. Telex: 0244754.

BANKS: (In Hamburg): Bank of America, Barclay's Bank, Citibank, Lloyd's Bank, Bankers Trust.

STORING: See "Prelims".

1. Yes
2. Yes
3. Yes, jetties fitted with cranes, distance to remain approx. 20 ft.
4. Yes
5. Equal to European Community Regulations.
6. Yes.

IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.

Shore passes issued to passengers are chargeable.

GARBAGE DISPOSAL: Garbage disposal is compulsory for seagoing vessels. Containers provided on board 24 hours. Contact Nehlsen, Stadtische Reinigung, Steubenstrasse 7b, 2850 Bremerhaven. Tel: 0471 44030. The number of containers is calculated on the average number of crew in relation to ship size for two days stay in port, and charges are as follows:

(1)	Up to		300 g.r.t.	1 container	DM 13.90
(2)	301	up to	500 g.r.t.	1 container	DM 15.30
(3)	501	up to	1.000 g.r.t.	1 container	DM 25.20
(4)	1.001	up to	1.600 g.r.t.	2 containers	DM 50.40
(5)	1.601	up to	5.000 g.r.t.	4 containers	DM 100.80
(6)	more than		5.000 g.r.t.	6 containers	DM 151.20

Additional containers may be ordered as required, the charge being DM 12.50 each. The loaded containers will be collected before ship sails, or replaced, if stay is more than two days.

Port Regulations require that crewmembers assist when filled containers are collected.

As far as operational waste (residues of cargo, dunnage, protecting and separating material, etc.) is concerned, Port regulations require that these are delivered ashore before the ship leaves the port. The necessary arrangements have to be made with the assistance of the agent. There is a number of private companies available which have the necessary permit for such activities given by the Port Authority. Contact Port Duty Officer, Tel: 9474-635, with any questions.

WASTE OIL DISPOSAL: Service for collection of waste oil available, collection by barges and tanker trucks 24 hours. Disposal of sludge residues according to Marpol Annex II. During a pilot project ending December 1991, service is free of charge.

SEAMAN'S CLUBS: Deutsche Seemannsmission, Seemannsheim, Schifferstrasse 55, 2850 Bremerhaven, Tel: 0471 43013. Facilities available include telephone service, money exchange, minibus service, sightseeing, church services, coffee shop, bar, football matches, darts, billiards and table tennis. Annex available at Container Terminal Gatehouse.

CURRENCY: Deutsche Mark (DM).

AUTHORITY: Hansestadt Bremisches Amt Bremerhaven, Der Hafenkapitan, P.O.Box 100469, Steubenstrasse 7 A, 27568 Bremerhaven, Germany. *Tel:* (0471) 9474-600 Port Captain; (0471) 9474-635/6 Harbour Master. *Telex:* 238564 Hba Hk D. *FAX:* (0471) 9474-699. *Contact:* Port Captain/Harbour Master.

BRUNSBUTTEL: 53.53 N. 09.09 E. (See Plan)

(A) GENERAL/ELBEHAFEN/CANAL BERTH
(B) ELBE TERMINAL
(C) BRUNSBUTTEL OIL PORT
(D) OSTERMOOR

(A) GENERAL/ELBEHAFEN/CANAL BERTH

DOCUMENTS:

Health Certificate forms obtainable from River Pilot.
1 Crew List.
2 Personal Effects Lists.
3 Stores Lists.
Bill of Lading.
Ship's Register.

For ships entering locks of Brunsbuttel for transit traffic through Kiel Canal, only ship's register required.

DEEP SEA PILOTAGE: See "General" before first German port, and "Baltic Deep-Sea Pilotage".

PILOTAGE: *Anchorage River Elbe:* See "General" before first German port.

Pilotage Kiel Canal: Pilotage generally compulsory, vessels exceeding 100 m. LOA, 15.5 m. beam, 6.1 m. draft or 105 m. LOA, 15.0 m. beam, 6.1 m draft must employ 2 wheelmen.

Pilot station, Tel: 04852/8088, VHF Channel 9. Pilot is ordered automatically on passage (No cables necessary).

Brunsbuttel Canal Pilot: Pilot boats are painted black with "LOTSE" in white letters on hull. VHF Channel 9.

ANCHORAGES: Vessels waiting for entrance to the Canal may anchor in N.E. anchorage, South anchorage, or Neufeld anchorage. N.W. anchorage only for vessels bound for the next lock.

RESTRICTIONS: No restrictions imposed on night entry. If draft above 31 ft. 2 in. fresh water, vessels will be piloted to Brunsbuttel with flood-tide.

Dimensions of lock: Length 310 m., beam 42 m.

The Canal can be navigated by vessels up to 235 m. LOA and 32.5 m. beam and draft in accordance with table below.

Length (m.)	*Beam in metres* 20	21	22	23	24	25	26	27	28	29	30	31	32	32.5
	Draft in (m.)													
160	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.4	9.3	9.2	9.1	8.9	8.9
163	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.4	9.3	9.2	9.1	9.0	8.9	8.9
166	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.4	9.3	9.1	9.0	8.9	8.8	8.7
169	9.5	9.5	9.5	9.5	9.5	9.5	9.4	9.3	9.2	9.0	8.9	8.8	8.7	8.6
172	9.5	9.5	9.5	9.5	9.5	9.4	9.3	9.2	9.1	9.0	8.8	8.7	8.6	8.5
175	9.5	9.5	9.5	9.5	9.5	9.4	9.3	9.1	9.0	8.9	8.8	8.6	8.5	8.4
178	9.5	9.5	9.5	9.5	9.4	9.3	9.2	9.0	8.9	8.8	8.7	8.5	8.4	8.3
181	9.5	9.5	9.5	9.4	9.3	9.2	9.1	9.0	8.8	8.7	8.6	8.5	8.3	8.3
184	9.5	9.5	9.5	9.3	9.2	9.1	9.0	8.9	8.7	8.6	8.5	8.4	8.3	8.2
187	9.5	9.5	9.4	9.3	9.1	9.0	8.9	8.8	8.6	8.5	8.4	8.3	8.2	8.1
190	9.5	9.4	9.3	9.2	9.1	8.9	8.8	8.7	8.6	8.1	8.3	8.2	8.1	8.0
193	9.5	9.3	9.2	9.1	9.0	8.9	8.7	8.6	8.5	8.4	8.3	8.1	8.0	7.9
196	9.4	9.3	9.1	9.0	8.9	8.8	8.6	8.5	8.4	8.3	8.2	8.0	7.9	7.8
199	9.3	9.1	9.0	8.9	8.8	8.7	8.5	8.4	8.3	8.2	8.1	7.9	7.8	7.8
202	9.2	9.1	9.0	8.9	8.7	8.6	8.5	8.4	8.2	8.1	8.0	7.9	7.7	7.7
205	9.1	9.0	8.9	8.8	8.6	8.5	8.4	8.3	8.2	8.0	7.9	7.8	7.7	7.6
208	9.0	8.9	8.8	8.7	8.5	8.4	8.3	8.2	8.1	8.0	7.8	7.7	7.6	7.5
210	9.0	8.9	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.8	7.7	7.6	7.5
214	8.9	8.8	8.6	8.5	8.4	8.3	8.2	8.0	7.9	7.8	7.6	7.5	7.4	7.4
217	8.8	8.7	8.5	8.4	8.3	8.2	8.0	7.9	7.8	7.7	7.5	7.4	7.4	7.3
220	8.7	8.6	8.4	8.3	8.2	8.1	8.0	7.8	7.7	7.6	7.5	7.4	7.3	7.3
223	8.6	8.5	8.4	8.3	8.1	8.0	7.9	7.7	7.6	7.5	7.4	7.3	7.2	7.2
226	8.5	8.4	8.3	8.2	8.0	7.9	7.8	7.7	7.5	7.4	7.4	7.3	7.2	7.1
229	8.4	8.3	8.2	8.1	7.9	7.8	7.7	7.6	7.4	7.4	7.3	7.2	7.1	7.1
232	8.4	8.3	8.1	8.0	7.9	7.7	7.6	7.5	7.4	7.3	7.2	7.2	7.1	7.0
235	8.3	8.1	8.0	7.9	7.8	7.6	7.5	7.4	7.3	7.3	7.2	7.1	7.0	7.0

Height above water-line transiting Canal must not exceed 40 m.

For Binnenhafen, as far as km. 6.00, vessels not requiring to transit Canal may enter with draft up to 10.40 m.

HEALTH: Pratique automatic for vessels entering harbour for loading or discharging, and ships passing through Canal if required and if Health Certificate form does not show any infectious diseases.

RADIO: All messages to Agents and Pilots etc., through Norddeich Radio, call sign "DAN" on VHF Channels 28 and 61. Closer to port Elbe-Weser Radio can be contacted by VHF Channel 16.

Ships reporting station is on permanent duty at Brunsbuttel, VHF Channel 14, safety and calling Channel 16.

RADAR: Radar Service from Elbe 1 to Hamburg see "General" before first German port, but no special Port Radar Service for Brunsbuttel. Radar Service in the area of Brunsbuttel available, can be contacted through VHF Channel 4, "Brunsbuttel Radar I".

TUGS: 5 tugs available at Brunsbuttel. Vessel's lines used. Tugs normally join vessels bound for the Elbe Harbour on river in vicinity of Canal locks.

From the approach limit up to entry into the lock, tug assistance is mandatory for vessels in Group 6 and also such vessels which manoeuvre only with difficulty. Tugs assisting ships entering locks join vessels on canal-roads.

BERTHING: Ships lying at terminals situated on Canal bank in Inner Harbour should take into consideration that vessels must moor safely, as suction of passing ships may cause breaking of lines.

Binnenhafen: Comprises the area between lock entrance and km. 5.27.

BRIDGES: Ships transiting canal must have bridge clearance of 40 m. Otherwise no obstructions.

STEVEDORES: Ordered by Agents, no ETA to stevedores necessary.

MEDICAL: Port Medical Service by Harbour Doctors. Day and night service. Inoculations have to be ordered 24 hours prior arrival. Hospital available at Brunsbuttel.

TANKERS: Elbehafen – Oil Section:

Location: At the Elbe-River bank, about 0.5 nautical miles upstream from Brunsbuttel Canal Locks.

Depth of Water: Within the approaches, 13.50 m., alongside berth 14.70 m.

Max. Ships Dimension Acceptable: Length about 400 m. Beam unlimited. Draft 12.95 m. (Sea Water).

Dirty Ballast/Slop Disposal: By barges or tank truck.

Max. Slop Quantity Acceptable: Contact Agent.

Elbehafen for VLCC's: The safe mooring of vessels up to 250,000 d.w.t. has been proved and has become a matter of routine. Harbour Authorities have no objections to accept larger vessels but investigations have to be made with regard to safe mooring facilities ashore. Tankers with more than 37 ft. draft must arrive 2 hours prior to highwater at Elbe Lanby, in order to dock at Elbe Harbour with slack water or first ebb-tide. Vessels with draft not exceeding 37 ft. may dock during whole ebb-tide. Pilot vessels to be contacted via VHF radio Channels 13 and 16.

Canal Berth:

Location: Inside Kiel Canal Lock at South bank of the Inner Harbour of Brunsbuttel.

Depth of Water: Within the approaches 11.00 m.

Max. Ships Dimension Acceptable: Length 150 m. Beam unlimited. Draft 6.50 m.

BALLAST:

Dirty Ballast Disposal: By barges or tank truck. Contact Agent.

DENSITY: Brackish at Elbe Harbour and inside locks. Average density 1003.

FRESH WATER: Most berths supply by shore installations. Fresh water also available in the Canal locks.

FUEL: All grades available.

Bunker station on South side of Canal are:

Elf – 4 berths.

and on the North side of Canal:

KuBi – Bunker Station – 1 berth, gas oil only.

FIRE PRECAUTIONS: No specific precautions except in Kiel Canal.

CONSULS: All consulates available at Hamburg.

REPAIRS: Only minor repairs can be effected. Big yards and dry docks available at Hamburg.

SURVEYORS: H.Nickel, Theodor-Heuss-Ring 20, D-25541 Brunsbuttel. Tel: (04852) 6829. Fax: (04852) 54326.

GANGWAY/DECK WATCHMEN: Services of watchmen not necessary but available day and night if required.

OPENING/CLOSING HATCHES: Normally carried out by crew.

CERTIFICATES: Ships entering canal and using terminals must have international ship's register. All other certificates should be valid.

CUSTOMS ALLOWANCES: Tobacco, each crew member 200 cigarettes or 50 cigars or 250 grams of tobacco. Surplus will be sealed up by Customs. Wine and/or spirits 1 bottle of spirits and 1 bottle of wine permitted for each crew member. Beer unlimited. Ships transiting canal are not affected.

REPATRIATION: Crew changes can be arranged in connection with local Immigration Office.

AIRPORT: Nearest airport Hamburg, 90 km. away.

TIME: GMT plus 1 hour. GMT plus 2 hours (last weekend in March to last weekend in September).

HOLIDAYS: Cargo work can be arranged on every day.

POLICE/AMBULANCE/FIRE: Police Tel: 110 and 6024. Waterway Guard Police Tel: 900-0. Passport Control Tel: 87.262. Customs Tel: 8555. Hospital Tel: 3901. Fire Tel: 112.

TELEPHONES: Public telephones on locks (cards or coins).

IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.

Shore passes issued to passengers are chargeable.

DANGEROUS CARGO: Ships with dangerous cargo or tankers not gas free have to be reported to the Port Authority 48 hours before arrival.

GARBAGE DISPOSAL: Open and closed containers from 1.1 cu.m. – 26 cu.m. are available. Contact: Stadtereinigung Tiedemann GmbH and Co.KG. Tel: 2076, 2077.

WASTE OIL DISPOSAL: 2 waste oil barges (100 cu.m. – 400 cu.m.) and 2 road tankers (4 cu.m. – 6 cu.m.) available day and night at all berths. Contact: Hans Schramm GmbH and Co.KG. Tel: 8063, 8064. Fax: 87529.

SEAMAN'S CLUBS: The German Mission to Seamen, Kanalstrasse 8, 2212 Brunsbuttel. Tel: (04852) 87252. Fax: 8596. Accommodation, day trips, book exchange, shopping tours, newspapers.

CURRENCY: Deutsch Mark. No restrictions placed on seafarers.

AUTHORITY: Kiel Canal Authority – Wasser-und Schiffahrtsamt Brunsbuttel, Postfach, 25535 Brunsbuttel, Germany. *Tel:* (04852) 885-0. *FAX:* (04852) 885-407 or 885-408.

Harbour Authority: Hafenbehorde Brunsbuttel, Elbehafen, 25541 Brunsbuttel, Germany. *Tel:* (04852) 87044. *Contact:* Captain Tresselt, Port Captain.

(B) ELBE TERMINAL

LOCATION: Elbe Terminal situated outside of locks, quay length 1,100 m.

PILOTAGE: Elbe Pilots also act as docking Pilots at Elbe Terminal.

RESTRICTIONS: For vessels bound for Elbe Terminal, Brunsbuttel, there are no restrictions with regard to length, breadth and height or with regard to day or night entry. Vessels may berth and unberth day or night.

MAX. SIZE: As the fairway of the River Elbe is being dredged, it is not possible to publish any long-term draft values. The max. admissible drafts of the various sizes of vessels intending to navigate on the River Elbe must be enquired of the authorities. The Elbe Pilots will have updated information on the latest depth and draft values.

Depth of water: Oil section: 14.70 m. below chart zero; dry cargo section: 13.70 m. below chart zero. Minimum keel clearance of 3 ft. required. East Basin 4.70 m. below chart zero.

BERTHING: *Dry cargo section:* One gantry crane for handling of bulk cargoes with a capacity of 25 tons and outreach of 45 m.

3 level-luffing cranes for handling of bulk and general cargoes as well as containers. By means of syncronising 2 cranes, heavy pieces up to 45 tons can be handled.

Capacity of these cranes 12/24 tons with an outreach of 40/20 m.

1 mobile crane with a capacity of 20 tons for handling of general cargo.

4 warehouses with a total floor space of 11,800 sq.m. available.

TANKERS: 2 Mannesmann marine loading and discharging units 20 in. diameter with a capacity of 10,000 t.p.h.

The units are driven hydraulically. Connection to the tanker manifolds by hydraulically operated clamps.

One 30 in. pipeline to DEA Tank Storage. Pressure admissibility of the units up to 19 Atu and a temperature up to max. +50°C (Crude oil).

Liquified Gases (Propane): 1 loading/discharging arm 250 mm. diameter, 25 bar, −50°C. 1 vapour return line 100 mm. diameter.

Also see "Regulations".

Mooring:

1. Tankers must be moored with particular care on account of the current, as handling equipment will be engaged for discharging and loading operations and therefore vessels must be moored safely. All lines must be heaved tight and secured to ensure that vessels will be firmly secured at the pier at all times.
2. Tankers exceeding 35,000 g.r.t. must be moored as shown in *Mooring Plan* (See "Plan") it being understood that these are minimum requirements for normal weather conditions.
3. The cross lines (wire ropes with a breaking strength of 120 tonnes) will be provided from the shore and should be belayed on bollards.
4. If at all possible, an additional two cross lines should be provided by the vessel.
5. All lines must be in perfect condition.
6. The winches to be used must be in perfect working order and capable of holding the tensile forces for which they are rated.
7. The crew must be large enough for efficient handling of the lines according to the standards of good seamanship.
8. The Port Authority may insist on calling in additional personnel for vessels not having a large enough crew to handle lines safely and quickly.
9. The Mooring Plan is based on all line systems. If no cross lines are provided from the shore, at least 1 wire rope each must be provided fore and aft by the vessel.

Fire Warp: Once the mooring operations are completed, a sufficiently strong tow-line (wire rope) must be lowered from bow and stern on the offshore side as far down as to the water surface.

Berthing/Unberthing: Tankers may be berthed if the visibility is at least 1 nautical mile.

Tide: The mean range of the tide at the pier is about 2.66 m. (8 ft.). The max. ebb current is 1.75 m. per second, the max. flood current is 1.5 m. per second.

Important:

1. The shore-side loading/discharge swivel arms are equipped with an automatic drift alarms. Should the vessel drift beyond the safety limit, a loud signal will be sounded and all ship-side pumps must be stopped and the lines must be checked.
2. In case of fire the Ship Fire Alarm is as follows:

1 or more whistle blasts, each to be sounded for at least 10 seconds, in addition to sounding the General Alarm. All safety drills and precautions must be observed.

BALLAST: Ballasting of oil tankers during or after discharging into non-gas-free tanks is allowed only up to a volume of 50% of each tank concerned. This does not apply for inerted tanks.

DENSITY: 1003, brackish water.

FRESH WATER: Available at all berths.

FUEL: By barges. All grades available.

GANGWAYS: Shore gangways available; special gangway at hand for VLCCs.

MINIMUM STAFF: During crude oil transfer a minimum staff shall be assigned for safe handling of cargo transfer. For tankers of 3,000 g.r.t. and more, the minimum staff shall be assigned as follows:

1 Deck Officer, 1 Engineering Officer (both familiar with cargo handling).

2 deckhands.

For tankers of 70,000 g.r.t. and more, 2 additional deckhands are required.

TELEPHONE: Ship telephone connections are available at all berths.

IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.

Shore passes issued to passengers are chargeable.

REGULATIONS: *Special Regulations for Gas Tankers:*

1. Gas must only be imported in bulk in tankers, which are suitable for such traffic from the aspects of type of construction, equipment and operation. Gas tankers must conform at least to the stipulations of the Code for the Construction and Equipment of Vessels for carrying liquid gas in bulk (IMO-Res.A.328 (IX)) in the currently valid manner.
2. Gas tankers must carry a certificate issued by their national Ship Safety Authorities or a recognised classification society in which it must be stated that the vessel conforms to the stipulations in point (1) above. This certificate must be presented to the Port Authorities, if requested.

3. For import and discharge of liquid gas, only sea-going tankers are permitted. In this connection, the following quantity limitations per vessel and per individual tank must be respected:

(a) Gas tanker with deep frozen liquid cargo
(atmospheric tanker)
and
(b) Gas tanker with semi-frozen cargo
(semi-pressure tanker)
Max. load per ship = 15,000 cu. m.
Max. load per individual tank = 6,000 cu. m.
(c) Gas tanker with liquid cargo under pressure
(full pressure tanker)
Max. load per ship = 6,000 cu. m.
Max. load per individual tank = 1,000 cu. m.

4. The quantity limitations quoted in point (3) include amounts to be carried onwards for discharge at further ports. If the cargo volume of the vessel or of a loaded individual tank permits an amount of cargo to be carried which is greater than that stipulated in point (3), the port authority must be presented with a written declaration issued by an independent, sworn competent person of authority to the effect that the stipulation quantity limitations have been upheld.

5. The release of cargo vapours for the purpose of reducing pressures and/or temperature adjustment – except in emergency cases – is forbidden.

6. Whilst gas tankers are on the River Elbe no materials like alkine (acetylene), polyine (polyacetylene), allene, kumulene, MAPP gases, may be carried on board as cargo. ("Rules for the Protection of Nuclear Power Stations against Pressure Waves Resulting from Chemical Reactions" dated 1st August, 1976).

7. Vessels to dock against ebb tide with port side to. In case this requirement cannot be fulfilled due to an eventual delay during the river passage or any other unforeseeable reasons, a turning manoeuvre in a position East of the berth must be prevented (i.e. acceptance of additional tugs).

8. A wireless telephone connection is to be established between the security vessel and the personnel on the jetty, and the fire-fighting centre and the vessel. The wireless telephone connection must secure a duplex communication. Furthermore a wireless telephone communication must be established in good time prior to vessel's berthing.

9. Sufficient and suitable mooring personnel must be arranged for mooring and unmooring. The number of crew must be large enough to secure a quick and safe mooring manoeuvre. The local Harbour Authorities can order the acceptance of additional suitable personnel for this purpose.

10. The vessel must be tied up at the Elbe Harbour in such a way that a parting of the moorings (breaking, melting, burning) may not occur. At least 3 head lines, 3 stern lines, 1 fore spring and 1 after spring are to be made fast. At least 1 head line, 1 stern line and 1 spring MUST be of steel wire construction.

11. For berthing and unberthing at the Elbe Harbour Quay in way of the fire-fighting monitors at least two tugs must be accepted. The engine capacity of the tugs must be sufficient to assist the vessel in all wind, current and ice-conditions. The engine capacity of each tug must be at least 1,600 h.p. Vessels of less than 3,000 g.r.t., equipped with a working bow thruster may unberth with one tug less, weather permitting.

12. While discharging, the passing traffic is to be observed. In case a vessel comes too close, gas discharging/loading is to be stopped.

13. While handling gases, bunkering is not permitted.

14. LPG/Carriers may not be berthed at the Elbe Harbour together with laden or non-gas-free, non-inerted tankers, whose last cargo had a flash-point of below 61°C.

15. No vessels may make fast alongside a gas tanker while handling cargo.

16. During extreme meteorological circumstances (thunderstorms, hurricanes) the handling of liquid gas is to be stopped.

17. The vessel has to leave the berth immediately upon completion of cargo operations.

AUTHORITY: *Port Operator:* Hafengesellschaft Brunsbuttel GmbH, Dr. Pfeiffer Strasse, Elbehafen, 25541 Brunsbuttel, Germany. *Tel:* (04852) 8840. *FAX:* (04852) 88426. *Contact:* Carl Hagemann.
Port Authority: Hafenbehorde Brunsbuttel, Elbehafen, 25541 Brunsbuttel, Germany. *Tel:* (04852) 87044.

(C) BRUNSBUTTEL – Oil Port

LOCATION: Oil Port situated on North side of Kiel Canal at km. 3.5.
PILOTAGE: See Section (a). Canal Pilots also act as Docking Pilots.
ANCHORAGE: Anchoring near the compressed-air barrier is prohibited. The location of the barrier is indicated by rings with the inscription "Preβluftsperre".
MAX. SIZE: Max. allowed dimensions of vessel between the figure values (draft and beam) can be interpolated.

Max. Draft	*Max. Beam*
10.40 m. (34 ft. 2 in.)	27.00 m. (88 ft. 7 in.)
9.50 m. (31 ft. 2 in.)	29.00 m. (95 ft. 2 in.)
8.00 m. (26 ft. 3 in.)	32.50 m. (106 ft. 7 in.)

Max. LOA 235 m. (771 ft.)

Ships passing Kiel Canal: See "Restrictions" Kiel Canal.

BERTHING:
Berths: 3 berths (Nos. 6, 7 and 8) for tankers up to 10.40 m. (fresh water) draft.

2 berths (Nos. 4 and 5) for tankers up to 6 m. (fresh water) draft.
Oil Handling Facilties: Hoses of 6 in., 8 in. and 10 in. for handling of crude oil, diesel oil, gas oil, gasoline, tuluol, xylol and lub oil.
Mooring: Tankers are required to be moored at least by 1 steel wire fore and aft. The steel wire may be covered.
Restrictions: During loading and ballasting operations, it shall be ensured that a vapour/air mixture pressed out of the tanks is no longer flammable or toxic outside the port area. In order to achieve this without continuous checking, the pumping rate is fixed at 800 cu.m./hour maximum. Bridge 8 is equipped with vapour return line. In case of loading benzene, vapour return line must be connected to ship's manifold.
Minimum Staff: During cargo transfer a minimum staff shall be assigned for safe handling of cargo transfer. For tankers of 3,000 g.r.t. and more, the minimum staff shall be assigned as follows:
1 deck officer familiar with cargo handling.
1 engineer officer familar with cargo handling.
2 deck hands.
Fire Precautions: Fire hoses must be laid out and connected to fire line, which has to be under pressure during all cargo operations.

Fire wires must be paid out to the water level fore and aft.

1 lifeboat must be swung out into an embarkation position in order to provide an additional emergency escape.
Dirty Ballast Disposal: By barges or tank truck.
DENSITY: 1003.
FRESH WATER: Available at all berths.
FUEL: By barges. All grades available.
GANGWAYS: Shore gangways available.
IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.

Shore passes issued to passengers are chargeable.
AUTHORITY: Operator of cargo handling facilities:
DEAA Mineraloel AG, Ostermoorer Str., 25541 Brunsbuttel, Germany. *Tel:* 2011. *Telex:* 028314.

Port Operator: Hafengesellschaft Brunsbuttel GmbH, Elbehafen, 25541 Brunsbuttel, Germany. *Tel:* 8840. *Telex:* 028347 eport d.

Port Authority: Hafenbehorde Brunsbuttel, Elbehafen, 25541 Brunsbuttel, Germany. *Tel:* 87044.

(D) OSTERMOOR

LOCATION: Kiel Canal Km. 5.66 (South Side).
PILOTAGE: See Section (a). Canal Pilots also act as Docking Pilots.
RESTRICTIONS: If passing through Kiel Canal, see "Restrictions" in Section (a).
MAX. SIZE: LOA 235 m. (771 ft.).

Max. draft	*Max. beam*
10.40 m. (32 ft. 02 in.)	27.00 m. (88 ft. 07 in.)
9.50 m. (31 ft. 02 in.)	29.00 m. (95 ft. 02 in.)
8.00 m. (26 ft. 03 in.)	32.50 m. (106 ft. 07 in.)

BERTHING: Berth Nos. 1, 2 and 4: Also see "Table" opposite.
Port Operator: Hafengesellschaft Brunsbuttel (PO).
Operator of Cargo Handling: Norsk Hydro Agrar (NHA).
Immigration Clearance: Will be carried out on board.
Customs Clearance: No freeport. Customs clearance will be carried out on board.
Tug Assistance: According to assignment of Port Authority.
Mooring: The use of constant tension winches is prohibited (Berth Nos. 2 and 4 only). Port Authority will allocate berth where the exact position alongside berth will be advised by NHA. The Master is responsible for safe mooring. Additional mooring may be requested by Port Authority responsible (NHA).
Drinking Water: Available at Berth Nos. 1, 2 and 4 against payment (PO).
Steam and Nitrogen: Steam at No. 2 Berth and nitrogen at No. 4 Berth available from ashore.
Bunker Supply: By barges only. The Port safety regulation must be observed (Northern Basin).
Ship Repairs: Permission of NHA required.
Electricity Supply: No connections available.
Garbage Disposal: Available (PO).
Dirty Ballast Disposal: By barges or tank truck.
Navigating into the North Basin: (Direction by NHA) – only after stop of cargo operations at Berth No. 4.
Gangways: At Berth Nos. 2 and 4 gangways are at hand (NHA). At Berth No. 4 and at waiting place a lifeboat has to be ready at the accommodation ladder on the offside during cargo operations.
Stop of Cargo Operations in Case of Emergency: At the sound of the signal "stay away" (· –) and fire (– – –) by loudspeaker; at the instructions given by telephone or loudspeaker; when the flashing light is in operation; at the release of the disconnection couplings; in case of fire on board.
Fire on board: The Port Supervisor of NHA has to be informed immediately. Cargo operations have to be stopped immediately. Ship has to give usual whistle – Fire signal ("F").
Cargo Stop in Case of Bad Weather: Berth No. 1: rainfall, windspeed greater than 22 m./sec.; Berth Nos. 2 and 4: windspeed greater than26 m./sec. Disconnection at windspeed greater than 22 m./sec.
ETA Messages: 72 hours prior to arrival to NHA via Agent with the following information: (1) Ship's name and call sign; (2) Arrival time; (3) Cargo (product and quantity); (4) Tankers: number and diameter of cargo manifold connections; (5) Any damage to hull, tanks or overboard valves. Vessels are dispatched according to accepted ETA. In any case ETA has to be repeated 48 hours and 24 hours before arrival.
Dangerous Cargoes: Ships with dangerous cargoes or tankers which are not gas-free must be reported to the Port Authority 48 hrs. before arrival.

Ships requested to accomplish the Oil Liability Agreement (more than 2,000 tons oil onboard) must be in possession of a valid Oil Liability Certificate.

Brunsbuttel-Ostermoor *Loading and Discharging installations*	*Berth/Products* *Berth No. 1* *Urea bulk-bagged*	 *Berth No. 2* *Heavy Fuel Oil*	 *Berth No. 4* *Anhydrous Ammonia*
Loading/discharge rate with vapour return line (max.)	—	—	*800 t/h (at −33°C) 250 t/h (at ambient temp.)
Loading/discharge rate without vapour return line (max.)	—	800 t/h (‡)	*500 t/h (at −33°C) † (at ambient temp.)
Loading rate with ship loader	1,200 – 1,500 t/d, 3000 t/d (bagged) (bulk)	—	—
Loading arm flange (Number and size) (Loose flange with collar acc. DIN 2656, ND40)	—	1×200 mm.	1×200 mm. (Product) 1×100 mm. (Vapour)
Storage capacity	85,000 tons	3×20,000 cu.m., 1×10,000 cu.m. 1× 1,000 cu.m.	2×30,000 cu.m. (−33°C) 1× 3,000 m. (ambient temp.)
Working range of ship Height refers to normal water level upwards	−10.4 to +9.5 m. (bagged) −10.4 to +7.5 m. (bulk)	+0.2 to +16.0 m.	0.0 to +21.0 m.
Loader/unloader Outreach refers from dolphin vanishing line towards ship's offside.	1.0 to 26.0 m.	1.0 to 11.0 m.	1.0 to 11.0 m.
Further equipment at berths: Service limits of installed own gangways (Height refers to normal water level/top edge deck)	—	+1.0 to +12.5 m.	+1.5 to +14.5 m.
Public telephone connection against payment/number	§compulsory/87211	§compulsory/87212	§compulsory/87213
Public telephone of harbour: 8066, 8067, 8068, 8069 (PO)			
Branch line of NHA telephone system (free of charge)/telephone number of ship. Telephone No. Portmaster 2171.	—	compulsory/2180	compulsory/2181
Delivery of goods from ashore	by ship's gear	by ship's gear	with jetty-crane against payment

Remarks: *reduced discharge rate at higher cargo temperature; †only possible in exceptional cases (discharge); ‡at following conditions: P min=3 bar, T min=+55°C. Viscosity max.=35° E/+55°C; §Compulsory during loading/discharging at Berth No. 4

Regulation Covering the Transport of Ammonia through the Kiel Canal: In the North Sea – Baltic Canal, liquid ammonia (U.N.No. 1005) may be transported in such vehicles as fulfil the following maritime police stipulations:

1. For the vehicle, an IMO suitability certificate for the transport of ammonia must be issued in accordance with the IMO Code, Resolution 328-IX (new vessels), Resolution 329-IX or for existing vessels.
2. The loading system must be so dimensioned that at an outside air temperature of +25° Celsius and 20° Celsius for water the load can be maintained for an undetermined duration without ammonia vapour being blown out via the safety valves.
3. The re-liquefication plant of the vehicle must have available a reserve capacity of at least 50 per cent of the power normally required for ship's operation, in the event that ammonia is being transported, so that in the event of an accident, including damage to the insulation, heavily vapourised contents of a tank can be safely re-liquefied.
4. On vessels with tank insulation which is not of the water repellant kind (e.g. glass or mineral wool), watertight longitudinal bulkheads must be available at a distance of 760 mm. from the outer skin.
5. The loading tanks of available ships must have a clearance of at least 760 mm. from the outer skin side.
6. Vessels with a loading capacity of up to 12,000 cu.m. must be equipped in addition to the requirements of section 1 with independent loading tanks of type B or C (spherical or cylindrical). The adjustment pressure of the safety valves (MARVS) must amount to at least 0.7 bars over pressure.
7. The fulfilment of the stipulations set out in Section 1, numbers 2 to 5 and in Section 2, in so far as they are necessary, must be supported by a certificate issued by a recognised Classification Society.
8. The IMO – suitability indication in accordance with Section 1 and the certificate as per Section 7 must be kept on board the vessel.

Oil tankers of more than 2,000 d.w.t. must be in possession of a valid Oil Liability Certificate.

Cargo Handling at Berth Nos. 2 and 4: Before starting cargo operations following measures are to be taken:

Confirmation of Checklist by vessel's command.
Cargo tank inspection by NHA.
Referring to "Operation plan" by NHA.
Connection of ground-wire.
Emergency towing wires (steel) must be provided at water level (Berth No. 4 only).
Installation of telephones.
Gas detectors handed on board (Berth No. 4 only).
Fire hoses must be laid out and connected to fireline, which has to be under pressure during all cargo operations (Berth No. 4 only).

Connection and disconnection of loading arms will be done by NHA personnel.

Watchmen: During cargo operations a watchman has to be on standby at manifold. In case of an emergency, vessel's pumps and stop valves must be able to be shut down immediately.

Minimum Crew during Cargo Transfer Operation at Berth No. 4:
1 Deck Officer } fully qualified in
1 Ass. Eng. Officer } cargo transfer operations
2 Deckhands
1 Watch Officer for duties other than cargo transfer.

Berth No. 5: *Berth Operator:* Bayer AG.
25536 Brunsbuttel, Post Box 1310. Tel: (04852) 81-01. Telex: 28301. Fax: 813314.

Loading and unloading by day and by night.
Max. permitted draft 7.0 m.

ETA Messages: 48 hours prior to arrival at Bayer AG, the following information is to be reported via the Agent:

1. Ship's name and call sign.
2. Time of arrival.
3. Cargo (product and quantity).
4. Number and diameter of ship's hose connections.
5. Any existing damage to hull, tanks or pipelines.
6. Distance of ship's hose connections from bow and stern.

In each case, ETA must be repeated 24 hours prior to arrival.

Report: Vessels with hazardous cargo or tankers which are not gas-free must be reported 48 hours prior to arrival to the Port Authority in accordance with Sections 8 and 9 of the Port Safety Code (HSVO).

Certificates: Vessels which come under the Oil Liability Agreement (more than 2,000 tons of oil onboard) must carry on board a valid Oil Liability Certificate.

Discharge: Prior to discharge, the following measures are necessary:
Telephones to be handed over.
Inspection of holds and cargo by Bayer AG.
Instructions as to plan of operation by Bayer AG.
Connection of ground wire.
Emergency towing wires to be rigged to the water line, fore and aft.
Adequate firefighting hoses to be laid out on deck and maintained under pressure throughout the discharge operation.
Confirmation of the Check Lists by ship's officers.
Connection and disconnection of hose is carried out by Bayer personnel.

IMPORTANT

During discharge, the hoses at the ship's manifolds must be continuously monitored. In the event of an emergency, the ship's pumps and cut-off equipment must be able to be shut down immediately and closed. On board the vessel, adequate crew members must at all times be present to be able to combat a major accident.

Minimum Crew Required During Discharge (Tankers over 3,000 g.r.t.):
1 Deck Officer } fully qualified in
1 Eng. Officer } cargo transfer operations
2 Deckhands
1 Watch Officer for duties other than cargo transfer.

Port Details:

Passport control:	Carried out on board.
Customs:	No free port facilities. Customs clearance takes place on board.
Tug assistance:	In accordance with the Port Authority Regulations.
Berthing:	Port Authority indicates the berth to be used. Bayer AG indicates to vessels the precise discharge and loading positions. Masters are responsible for carrying out such instructions, and proper mooring. Bayer AG or the Port Authority may call for mooring lines to be strengthened. Where automatically working constant tension winches are concerned, brakes must be fitted.

Bunkers: Only available from bunker barge with due observance of Section 24 of HSVO.

Ship's repairs: Only with permission of Bayer AG and formal approval by the Port Authority (sections 23/2, 26 (1) of HSVO).

Electrical land connections: Not available.

Discharge of dirty ballast water: Not possible in the port.

Quay charges: To be paid by the ship, unless otherwise agreed in the charter party.

Shore leave: Available. Ship's officers are responsible for supervision.

Lifeboat: A lifeboat must be swung out ready for use (Section 25 HSVO)

Loading and Discharging Equipment:

Products: Aniline, formaline, sodium lye and sulphuric acid.

Discharge capacity: 4 × 200 cu.m/hr. (10 bar).

Hose connection: 4 hoses DN 150/PN 40/25-flange with union as per DIN 2556.

For receipt of loading slops/ MARPOL II: 1 hose DN 100/PN 40/25.

Working reach of hose crane: Height in relation to normal water level upwards. ±0 up to 10.0 m.

Crossways in relation to the fender main wall in the direction of water side. 0.0 up to 3.5 m.

Other berth equipment: 6.0 m. aluminium gangway.

Public telephone connection by payment of charges involved. Public call number of the Port Operator is 884 – 0.

Loading of ship's stores possible in accordance with arrangements to be made with Bayer AG using a pier derrick up to a max. of 500 kg. with the ship responsible for charges involved.

Berth No. 6:

Berth Operator: ELF-Bitumen-Werke GmbH & Co., 25541 Brunsbuttel-Ostermoor. Tel: (4852) 8880. Telex: 28313 elfbrb d.

ETA Messages: 72 hours prior to arrival to ELF via Agent with the following informations:

1. Ship's name and call sign.
2. Time of arrival.
3. Cargo (product and quantity).
4. Number and diameter of cargo manifold connections.
5. Any damage to hull, tanks or overboard valves.
6. Distance of manifold connections to bow and stern.

Vessels are dispatched according to accepted ETA.

ETA has to be repeated 48 hours and 24 hours before arrival.

Report: Ships with dangerous cargoes or tankers which are not gas free have to be reported to the Port Authority according to paragraph 8 and 9 of Port Safety Code (HSVO), 48 hours before arrival.

Certificates: Ships requested to accomplish the Oil Liability Agreement (more than 2,000 tons oil onboard) must be in possession of a valid Oil Liability Certificate.

Loading and Discharging Installations:	*Product*	*Crude*
Discharging Rate	—	2,000 cu.m./h. 16 bar
Loading Rate	400 cu.m./h. 16 bar	—
Loading Arm Flange (No. and size) (Loose flange with collar acc. DIN 2656/PN40)	1 hose DN 200/PN25	1 loading arm 3 hoses DN300/250/200 DN200/PN25 DN150/PN25
Working Range of Shiploader/Unloader (Height refers to normal water level upwards)	—	+00.30 m. to +17.00 m.
(Outreach refers from dolphin vanishing line towards ship's offside)	—	00.00 m. to 09.00 m.
Further Equipment at Berth: Service limits of installed gangways (Height refers to normal water level/top edge deck)	12 m. gangway	
Public telephone connection against payment	Public telephone No. (4852) 888 186	
Public telephone No. of harbour 884-0 (PO)		
Delivery of goods from shore possible after request to ELF	By ship's gear	

Depth: Depth alongside Berth No. 6 – 12.0 m.

Cargo handling: Before starting cargo operations following measures are to be taken:

Installation of telephone.

Confirmation of Check list by vessel's command.

Tank and cargo inspection by ELF.

Referring to "Operations Plan" by ELF.

Connection of ground wire.

Emergency towing wires (steel) must be provided at water level.

Fire hoses must be laid out and connected to fireline, which has to be under pressure during all cargo operations.

Connecting: Connection and disconnection of leading arm/hoses will be done by ELF personnel.

Watchman: During cargo operations a watchman has to be on stand-by at manifold. In case of emergency vessel's pumps and stop-valves must be ready for immediate shut down sufficient crew for warding off emergency must be onboard at all times.

Minimum Crew during Cargo Transfer Operation (Tankers 3,000 g.r.t.):

1 Deck Officer } fully qualified in
1 Ass. Eng. Officer } cargo transfer operations
2 Deckhands
1 Watch Officer for duties other than cargo transfer.

Gangways: Available. Supervision on behalf of Master. A lifeboat has to be ready at the accommodation ladder on the offshore side.

Stop of Cargo Operations in Case of Emergency: At the sound of the "emergency-stop" horn. At the instructions given by berth watchman. In case of fire onboard.

Fire Onboard: The berth watchman of ELF has to be informed immediately. Cargo operations have to be stopped immediately. Ship has to give usual whistle – Fire signal ("F").

Cargo stop in case of bad weather: Windspeed greater than 26 m./sec. (Connection and disconnection at windspeed greater than 22 m./sec.

AUTHORITY: Port Authority (PA): Hafenbehorde Brunsbuttel, 25541 Brunsbuttel, Elbehafen. *Tel:* 87044 – Area Code 4852.

Port Operator (PO): Hafengesellschaft Brunsbuttel mbH, 25541 Brunsbuttel, Elbehafen. *Tel:* 8840 – Area Code 4852. *Telex:* 28347 Eport D. *Fax:* 88426.

Operator of the Cargo Handling Facilities (NHA): Norsk Hydro Agrar, 25541 Brunsbuttel, P.O.Box 1268. *Tel:* 82-1 – Area Code 4852. *Telex:* 28360 nagb. *FAX:* 82400.

BUSUM: 54.08 N., 08.51 E.

PORTS LIMITS: The seaward boundary is a line between the Southern extension of the breakwaters.

DOCUMENTS:

1 copy Crew List.
1 copy Provisions and Bonded Stores List.
1 copy Personal Effects List.
1 copy Health Certificate.

APPROACHES: Entry is through "Suderpiep" Ship Channel, marked according to "IALA-Maritime Buoyage System" (Red to port).

The distance from the Fairway Buoy to Busum Port is 19 nautical miles.

The channel into the port is marked by leading lights (ISO, white, 4 sec.), bearing 355.1°.

PILOTAGE: Not compulsory but recommended. To obtain a Pilot, contact vessel's Agent at least 6 hours prior to arrival at Suderpiep entrance.

ANCHORAGES: Anchorage can be obtained in the roadstead South of port entrance.

RESTRICTIONS: Minimum keel clearance at anytime is 0.5 m.

In the port area, anchors are only allowed to be dropped for navigational reasons.

Note: Due to strong tidal streams, care must be taken on arrival when passing breakwater during rising tide. The Inner Harbour is closed by a flood barrier when water level reaches 0.30 m. above high water.

MAX. SIZE: Draft is not to exceed 6.70 m. at H.W. and 3.50 m. at L.W.

The beam of vessels entering the Inner Harbour is not to exceed 21.0 m.

HEALTH: Pratique automatic for vessels entering port if Health Certificate does not show any infectious diseases.

RADIO: Cable Agent via Norddeich Radio (Call sign DAN), and advise ETA 24 hours prior to arriving at port.

VHF: Busum Port Radio, situated at Lock Tower, operates on Channels 16 and 11.

TUGS: Available in Cuxhaven or Brunsbuttel, contact Agent if tug assistance is required.

BERTHING: No particular restrictions except vessels in distress, carrying explosives or not gas-free. In these cases, special permission of Port Authorities required before entering.

Outer Harbour: 175 m. length, 90 m. width and 6.0 m. depth at LW.

Inner Harbour:

Basin I: 160 m. length, 20 m. width and dry at LW.
Basin II: 420 m. length, 50 m. width and 3.0 m. depth at LW.
Basin III: 500 m. length, 80 m. width and 4.0 m. depth at LW.
Basin IV: Contains only a pleasure craft jetty with 150 berths.

CARGO HANDLING FACILITIES: Outer Harbour Basin: One concrete ramp (width 11.5 m. – 4.5 m.) and one movable Ro-Ro ramp (width 6.3 m. – 12.6 m., capacity 100 tons).

Basin II: One shiplift for ships up to 50 m. LOA, 9.0 m. beam, 4.0 m. draft and 400 tons total weight.

One slipway for pleasure craft and 3 coastal passenger berths.

Basin III: One floating dock for ships up to 100 m. LOA, 13.0 m. beam, 5.5 m. draft and a total weight of 2,200 tons.

One grain elevator, capacity 120 t.p.h. and another 200 t.p.h.

Several grain stores with 85,000 tons total capacity.

One icemaking plant for fishing vessels.

One cold store for fishing vessels.

One passenger berth for coastal vessels.

MEDICAL: Doctors and hospital available.

DENSITY: 1019.

FRESH WATER: Available.

FUEL: Fuel oil (MD only) and lub oil available.

REPAIRS: All types of ship and machinery repairs are possible.

All necessary surveys can be carried out.

CUSTOMS ALLOWANCES: The allowance for 3 days is 200 cigarettes and 1 litre of spirits.

REPATRIATION: Repatriation and/or crew changes can be effected.

AIRPORT: International airport at Hamburg is served by regular airlines. Distance 150 km. (80 miles).
SHORE LEAVE: Permitted.
GARBAGE DISPOSAL: Garbage from galley and pantry can be delivered into small containers.
WASTE OIL DISPOSAL: Slop delivery possible, arranged by vessel's Agent.
AUTHORITY: Amt fur Land- und Wasserwirtschaft, Berliner Strasse 19, Postfach 1640, 25736 Heide, Germany. *Tel:* 0481-921, after hours 04834-2183. *FAX:* 0481-92330.

Harbour Master's Office, Am Fischereihafen, 25761 Busum, Germany. *Tel:* 04834-3607, after hours 04834-2183. *FAX:* 04834-2068.

BUTZFLETH: 53.39 N. 09.31 E. (See Plan)

DOCUMENTS:
3 Crew Lists.
3 Bonded Stores Lists.
3 Crew Manifests.
Maritime Health Declaration.
Ship's Register.
Discharge Books.
Passports of Crew.
Gas Free Certificate (OBO-Carriers)

Butzfleth is not a free-port. Customs, Immigration and River Police board on arrival at berth.
DEEP SEA PILOTAGE: See "General" before first German Port, and "Baltic Deep-Sea Pilotage".
PILOTAGE – ANCHORAGE RIVER ELBE: See "General" before first German Port.
Pilotage River Terminal: Elbe Pilots also act as docking Pilots.
ANCHORAGE: Freiburg Anchorage, approx. position Lat. 53° 50.6' N., Long. 09° 19.5' E., depth of water up to 13 m. below chart zero; there are further anchorages for small vessels at Krautsand – and Twielenfleth Roads. (See "General" before first German Port.)
MAX. SIZE: Berth No. 1 (Inner): LOA 155 m. Max. draft 9.0 m.
Berth No. 1 (Outer): LOA 270 m. Max. draft 14.0 m.
Berth No. 3: LOA 160 m. Max. draft 9.0 m.
Also see "Berthing".
RADAR: River Radar Service from Elbe 1 to Hamburg, see "General" before first German port, but no special Port Radar Service for Butzfleth. Radar Service in the area of Butzfleth available, can be contacted through VHF Channel 21, "Hetlingen Radar Radio" and/or VHF Channel 5, "Steindeich Radar Radio".
RADIO/VHF: All messages to Agents and Pilots, etc., through Norddeich Radio, call sign DAN. Closer to port Elbe-Weser Radio can be contacted by VHF Channel 16.

Ships' reporting station is on permanent duty at Stadersand, VHF Channel 11, safety and calling Channel 16.

Pilot boat at Elbe Lanby can be contacted on VHF Channels 13 and 16.
TUGS: 4 tugs compulsory for mooring and unmooring. To be ordered from Hamburg and Brunsbuttel through Agent.

A fire fighting tug (1,760 hp) is available 24 hours and can be reached via VHF Channel 16, also available for assistance to vessels.
BERTHING:
Aluminium Oxid Stade GmbH. (AOS): This bauxite/oxide plant, situated on the Westbank of the River Elbe, can be reached by vessels with max. draft of 46 ft. 06 in. FW.

Quay length		*Depth at normal Low water*
Quay outside in total	325 m.	15 m. (49 ft.)
Within reach of crane	205 m.	
Quay inside	200 m.	7 m. (23 ft.)

The oxide produced at this plant, apart from being exported, is used for the mills of V.A.W. Elbewerk GmbH., Stade-Butzfleth and of Hamburger Aluminium Werk GmbH., Hamburg Finkenwerder.

Average discharging/loading rate	
West African bauxite	550–600 m.t.p.h.
Brazilian bauxite	600 m.t.p.h.
Australian bauxite:	
from Gove	550–600 m.t.p.h.
from Weipa	750 m.t.p.h.
Petcoke	100–400 m.t.p.h.
Oxide ("Spout" loading)	500 m.t.p.h.

Ship's telephone connection (4146-1453) at AOS pier.
Dow Deutschland Inc.: This industry, situated close to the AOS plant, offers 2 berths for gas and chemical tankers. The water depth at the outside quay is: 15 m. (49 ft.) and at the inside quay: 9 m. (29 ft. 6 in.), both at MLW.

Restrictions for ships	*Products*	
	Inflammable	*Non Inflammable*
Length at quay outside	270 m.	300 m.
Length at quay inside	155 m.	155 m.
Draft at quay inside (FW)	9.0 m.	9.0 m.
Beam at quay inside	25.0 m.	25.0 m.

No bunkering permitted at the DOW-berths.

Discharging rate liquid gas	approx 200 t.p.h.
Loading rate chemical products	100–800 t.p.h.

Max. Size: Vessels loading/discharging inflammable products: Max. length 270 m. Max. draft 14 m. Also see "Max. size".

Vessels loading/discharging non-flammable products: Length unlimited. Max. draft 14 m.

Vessels with liquid gas and flammable products: Berth 1: Max. length 155 m. Max. draft 9.0 m. Max. breadth 25 m. Berth III: Max. length 160 m. Max. draft 9.0 m. Max. breadth 28.0 m.

Restriction: Mooring prohibited for vessels having IMO Class 2 products (liquid and/or gaseous) on board.

Simultaneous handling of gases inside and flammable products outside not permissible.
Manifolds: Upriver to downriver.

Inside		Outside
Berth I	Berth III	Berth I
Methanol	NAOH	P.O.
Telon/Vidden	Formalin	Per
P.D.C.	Anilin	P.G.I.
P.O.	MDI	Tet
Propylene	Phenol	Chlorothene VG/NU
Ethylene	Tet	EDC
	Chloroform	NAOH
		Methylene Chloride
		Tricholoroethane
		Chloroform/ Methanol
		Beta-Tri (112 TCE)

Supplies: Nitrogen and potable water.
Technical requirements on ships discharging C2/C3:

Ethylene: For loading arm horizontal clearance ships manifold to the nearest structure 2.10 m., vertical clearance from centre of manifold up 0.50 m. and down 0.60 m., flange 6 in. (300 ASA) discharge-temperature of Ethylene minimum −103°C.

Propylene: For loading arm horizontal clearance 2.20 m., vertical up 0.50 m. and down 0.50 m., flange 6 in. (300 ASA), discharge-temperature of Propylene maximum −20°C.

Further on Propylene, vessels to be guaranteed, that the vessels in Summertime are suitable for pump against a back pressure of minimum 13 kg. but preferably it should be 15 kg./16 kg.
MEDICAL: Hospital and doctor available.
FRESH WATER: Available.
FUEL: Supplied by barge from Hamburg or local supplier.
REPAIRS: Minor repairs can be carried out.
SERVICES: Stevedores, hold cleaning, boatmen, mooring gangs, inspectors, fitters and launches.
IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.

Shore passes issued to passengers are chargeable.
GARBAGE DISPOSAL: Service available. Contact agent or Port Authority for details.
WASTE OIL DISPOSAL: Service available through Glusing Transport GmbH. Tel: 04721 24017. Fax: 04721 61924. Only by barge, capacity 800 tons, at anchorage.
SEAMAN'S CLUBS: Seaman's Club Oase, Tel: 04146 1233. Facilities include shop, telephone service, church service, games, postage facilities.
CURRENCY: Deutsche Mark (DM).
AUTHORITY: Niedersachsisches Hafenamt Cuxhafen, Aussenstelle Butzfleth, 21683 Stade, Germany. *Tel:* (04146) 1436. *Telex:* via 218158 clear d. *Cables:* NHC – A. Butzfleth. *FAX:* (04146) 1036.
Contact: F.W. Bork, Manager. Captain W. Schroeder, Harbour Master.

CUXHAVEN: 53.52 N. 08.42 E. (See Plan)

DOCUMENTS:
Stores List.
Crew List.
Customs Manifest.
Derat Certificate.

Amerikahafen is a Customs free port.
DEEP SEA PILOTAGE: See "General" before first German Port, and "Baltic Deep-Sea Pilotage".
BALTIC PILOTAGE – ANCHORAGE RIVER ELBE: See "General" before first German Port.
PILOTAGE: Pilot station situated in Old Harbour (Alten Hafen). To obtain Pilot call "Cuxhaven Port", VHF Channel 12. Pilot signal is flag "G" of International Code, or sound signal – 2 long and 1 short blasts.
ANCHORAGE: Available off Cuxhaven Medem Roads, approx. position Lat. 53° 51.5' N., Long. 08° 46.5' E., depth of water about 6 m. – 12 m. below chart zero; further anchorages see "General" before first German Port.
RESTRICTIONS: Vessels can enter by day or night. No tidal restrictions.
Depths: Max. depth of water: 13.5 m. (45 ft.). Mean tide HW: NN+1.40 m. Mean tide LW: NN−1.50 m. Tide range is 3.20 m. (from +1.55 m. to —1.65 m.) (NN = approx. mean sea level).

Water depth in the basins up to 8.5 m. below MTLW. Water depth at the river quays 12 m. and 8 m. below MTLW.
HEALTH: Quarantine clearance effected at Cuxhaven. Only vessels with suspected infectious disease on board are detained.
RADIO: For ETA, etc., use Norddeich Radio, call sign DAN. Closer to port Elbe–Weser Radio can be contacted by VHF Channel 16.

Ships reporting station is on permanent duty at Cuxhaven, VHF Channel 12, safety and calling Channel 16.

RADAR: River Radar Service from Elbe 1 to Hamburg see "General" before first German port, but no special Port Radar Service for Cuxhaven. Radar Service in the area of Cuxhaven available, can be contacted through VHF Channel 21, "Cuxhaven Radar Radio".

TUGS: Tugs available and used depending on ship size and weather conditions. Cost of tugs is Hamburg Tariff plus 20%.

BERTHING:

Fahrhafen and Neue Seebaderbrucke: Modern multi-purpose Ro/Ro terminal for passengers and for handling of motor vehicles and cargo direct at the Elbe River, 300 m. quay with 8 m. depth below MTLW.

Starting point of ferries for the North Sea and the Baltic Sea, for passenger ships to Helgoland.

Ro/Ro linkspans (one of them for axle-loads up to 50 tons and for stern-door width up to 18 m.). Hard-standing and storage area of approx. 60,000 sq.m.

Alter Hafen: Multi-purpose harbour for shipyards and for boats to the seaside resorts and islands.

Alter Fischereihafen: Multi-purpose harbour with transhipment and outfitting quays for fishing cutters, offshore base and emergency port. Fish auction and fish handling sheds, fish industry, equipment firms, deep freeze house for 5,000 tons of goods.

Neuer Fischereihafen: Multi-purpose harbour with transhipment and equipment quays for trawlers and luggers, offshore suppliers, Ro/Ro ships, for ships carrying general cargo and for minor bulk cargo ships. Fish auction and handling sheds, fish industry, equipment firms, deep freeze house for 25,000 tons, ice production, open storage space.

Entrance and exit any time by the sea-lock. Length of lock 190 m., width of lock 24 m. and depth of lock is 9 m. below MTLW.

Amerikahafen: Multi-purpose harbour with transhipment and equipment quays for ships carrying general cargo and for minor ships carrying bulk cargo, emergency port, floating docks, transit shed, deep freeze house, open storage spaces.

Steubenhoft: Multi-purpose facility for big ocean vessels with 400 m. long quay and 14 m. water depth below MTLW. Usable for cargo, repair, trial trip and passenger ships of all sizes.

CRANES:

8 portal cranes	1.5 – 10 tons capacity
1 loading bridge	8 tons capacity
1 crane for heavy loads	50 tons capacity
Various mobile cranes up to	20 tons capacity

Equipment also available to handle containers and Ro/Ro traffic.

MEDICAL: Doctors and hospitals obtainable day and night.

FRESH WATER: Available from shore pipeline up to 50 t.p.h. Small quantities up to 15 tons may be obtained in Roads from bunker barge. There are no water barges.

FUEL: Bunker and gas oil available. Small quantities, up to 150 tons, may be obtained anytime. Otherwise according to conditions of supplying oil company.

FIRE PRECAUTIONS: No special restrictions. Ships with explosive cargo and liquid cargoes of danger Class K1 and K2 not allowed in Cuxhaven Harbour.

CONSULS:

Denmark, Tel: 38021.
Iceland, Tel; 36036/37.
Others at Hamburg/Bremen.

REPAIRS: All deck and engine repairs possible.

DRY DOCKS: Floating dock for vessels up to 140 m. length.

SURVEYORS: Germanischer Lloyd, Leuchtturmweg 3, D-27472 Cuxhaven. Tel: (04721) 36018. Fax: (04721) 36019.

CARGO HANDLING: A harbour for overseas ferries up to 150 m. length with Ro/Ro and container equipment.

GANGWAY/DECK WATCHMEN: Not obligatory, at Master's discretion.

OPENING/CLOSING HATCHES: Normally performed by crew. Stevedores must be paid if required to do this work.

CUSTOMS ALLOWANCES: 40 cigarettes, 1 bottle spirits and 2 bottles wine.

REPATRIATION: All facilities available.

AIRPORT: Hamburg-Fuhlsbuttel, 130 km. away; Bremen, 110 km. away.

TIME: GMT plus 1 hour. GMT plus 2 hours (last weekend in March to last weekend in September).

HOLIDAYS: New Year's Day, Good Friday, Easter Sunday, Easter Monday, 1st May, Ascension Day, Whit Sunday, Whit Monday, 17th June, Atonement Day, Christmas Day, Boxing Day. Loading/unloading can be arranged on these holidays.

POLICE/FIRE/AMBULANCE: Police, Tel: 110; Harbour Police, Tel: 22072; Ambulance, tel 23125; Fire, Tel: 112.

TELEPHONES: At Steubenhoft and in the ferry harbour, telephones can be put on board.

SERVICES: Compass adjusting and radio repairs.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.

Shore passes issued to passengers are chargeable.

GARBAGE DISPOSAL: Machulez Transport GmbH, Baudirector Hahn Strasse, D-27472 Cuxhaven, Tel: (04721) 21300, 22095. Fax: (04721) 26131.

Peter Plambeck, Am Lagerfeld 1-3, D-27472 Cuxhaven, Tel: (04721) 21014, Fax: (04721) 25404.

WASTE OIL DISPOSAL: Cuxhavener Schiffs-Entsorgungs-GmbH, Kapitan-Alexander-Strasse 48, D-27472 Cuxhaven, Tel: (04721) 25076, Fax: (04721) 27370.

SEAMAN'S CLUBS: Deutsche Seemannsmission (German Seamen Mission), Gruner Weg 25, D-27472 Cuxhaven, Tel: (04721) 36122.

DEVELOPMENTS: A new multi-purpose terminal is to be available (3 berths for vessels up to 350 m. LOA and 48 ft. draft; 2 smaller berths with 200 tonne Ro/Ro ramps and cranes up to 50 tonnes).

AUTHORITY: Niedersachsisches Hafenamt Cuxhaven, Am Schleusenpriel 2, P.O.Box 526, D-27472 Cuxhaven. *Tel:* (04721) 50140. *Telex:* 232167 Hacux d. *FAX:* (04721) 501488/89.

DUISBURG-RUHRORT: 51.25 N. 06.46 E. (See Plan)

LOCATION: Duisburg-Ruhrort port area, together with Hochfeld, covers a total surface of 870 hectares on the right bank of the river between the Rhine km. 774 and 781, the Ruhr channel – 1 km., and the Rhine-Herne canal km. 1 to 2.

MAX. SIZE: Dimensions of vessels able to use the German inland waterways:

Type	*Length* (m.)	*Beam* (m.)	*Draft* (m.)	*Capacity* (tons)	*h.p.*
Motor dry cargo vessel	38.5 – 110	5 – 11.4	2 – 3.5	300 – 2,500	100 – 2,000
Tanker	50 – 110	6.6 – 11.4	2.2 – 3.5	400 – 3,200	250 – 2,000
Train (Pushing motor vessel and barge)	150 – 186.5	9.5 – 11.4	2.5 – 3	2,530 – 4,400	800 – 2,000
Pusher tug	10 – 35	7.6 – 13.2	1.4 – 2.2		1,000 – 6,000
Dumb barge for pushing	70 – 76.5	9.5 – 11.4	2.5 – 3.7	1,240 – 2,600	

The largest pusher tugs push six barges = 15,600 tons.

RADIO: Duisburg Port Radio, VHF Channel 13.

BERTHING:

Docks	*Theoretical Depth respectively zero level above normal zero*	*Loading Depths (approx. value) Actual water level at Ruhrort water gauge*
(a) Ruhrort. Water gauge zero.	16.09 m.	
Port Entrance, Vincke Canal, Bunker Dock, North Dock, South Dock, Kaiser Dock, Port Canal, Dock A, Dock B, Dock C and Railway Dock	15.40 m.	+ 40 cm.
Werft Dock	17.05 m.	−120 cm.
(b) Duisburg. Water gauge zero.	17.00 m.	
Parallel Dock, Outer Dock, Wood Dock and Inner Dock at Marientor up to km. 3.5	16.10 m.	+ 40 cm.
Inner Dock Eastwards km. 3.5	16.50 m.	± 0 cm.
(c) Hochfeld. Water gauge zero.	17.42 m.	
South and Kultus Dock.	16.45 m.	+ 40 cm.
(d) Canal Dock Meiderich		Loading depths as per inland
Ruhr Dock Neuenkamp		waterways traffic regulations

CRANES: 85 cranes and travelling bridges of up to 40 tonnes lifting capacity for bulk goods and general cargo, as well as for containers. 2 heavy lift cranes with 60 tonnes and 300 tonnes capacity and floating crane with 200 tons capacity.

BULK CARGO FACILITIES: 1 coal mixing and discharging plant with 2 car dumpers and 3 ship loaders, daily capacity up to 26,000 tonnes.

Grain warehouses and silos with approx. 130,000 tonnes capacity, 4 conveyor belts, and 22 discharging plants.

Tank storage 1,300,000 cu.m. Liquid gas tank storage 20,000 cu.m.

SPECIALISED CARGO HANDLING FACILITIES: 2 Container terminals with facilities for all means of transport Roll-on/Roll-off installation. 66 points for handling liquid gas.

Free Port Duisburg: The first inland Free Port for storage and treatment of high-grade export goods.

Handling site for heavy goods and extremely valuable general cargo.

Freight Traffic Centre: Logistic centres for compilation and distribution of all kinds of general cargo.

Combined Traffic Terminal: Parallel tracks for simultaneous despatch of unit trains with gantry cranes with a lifting capacity of 48.5 tons each.

BRIDGES:

Bridge	*Lowest Point of Upper Structure Respectively Zero Level above Normal Zero*	*Correction Value for Calculation of Passage Height*
(a) Ruhrort. Water gauge zero	16.09 m.	—
Bridge over Railway Dock	36.10 m.	19.70 m.
Bridge over Port Entrance	34.20 m.	17.80 m.
Vincke Canal Bridge	33.10 m.	16.70 m.
Kaiser Dock Bridge	32.60 m.	16.20 m.
Port Canal Bridge	33.80 m.	17.40 m.
Bridge over Dock C	38.20 m.	21.80 m.
(b) Duisburg. Water gauge zero	17.00 m.	
Cable Bridge over Outer Dock	37.80 m.	20.90 m.
Road Bridge over Outer Dock	37.00 m.	20.10 m.
Marientorbrudge (clearance between bridge counter bearings 15.80 m.):		
at rest	29.30 m.	12.40 m.
folded	Up to 33.9 m. height	Clear width 15.8 m
	Over 33.9 m. height	Clear width 13.8 m

Bridge	Lowest Point of Upper Structure Respectively Zero Level above Normal Zero	Correction Value for Calculation of Passage Height*
Schwanentor Bridge (clearance between bridge counter bearings 17.90 m.):		
at rest	26.80 m.	9.90 m.
lifted	34.90 m.	18.00 m.

*From the following values, the actual water level at the Ruhrort water gauge is to be deducted.

With water levels over 8.40 m. at the Ruhrort water gauge, the stop gate at the Marientor Lock is drawn in and therefore through passage to the Duisburg inner port/wood harbour is no longer possible.

STEVEDORES: Working hours: 0730 – 1600 hrs., Monday to Friday.

AIRPORT: Dusseldorf (20 km.).

IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.

Shore passes issued to passengers are chargeable.

GARBAGE DISPOSAL: Collection service available.

WASTE OIL DISPOSAL: Service available.

Bilgenentolungsges. mbH, Konigstrasse 88, Duisburg. Tel: 0 20 66/2 40.

SNW Shipcleaning, Hafenstrasse 67, Duisburg. Tel: 8 20 71.

SEAMAN'S CLUBS: German Seaman's Mission, Dammstrasse 1B, 4100 Duisburg Homberg. Tel; 02066-9918. Open daily, except Saturday.

Services: Telephone, newspapers, library and exchange service, billiards, table tennis, sauna, keep fit, disco (Wednesday 1930 hrs. – 2230 hrs.), rooms for one or two nights, sports games arranged.

AUTHORITY: Duisburg Ruhrorter Hafen A.G., Alte Ruhrorter Strasse 42-52, Postfach (Postbox) 13 02 60, D-47119 Duisburg, Germany. *Tel:* (0203) 8031. *FAX:* (0203) 803232. *Cables:* Hafag. *Contact:* Y. Klaus van Lith or Dr.-Ing. Jochen Muller, Directors.

ECKERNFORDE: 54.29 N. 09.51 E. (See Plan)

DOCUMENTS:

Stores List.
Customs Documents.
Cargo Documents.
Crew List.

Clearance: Customs clearance at any time subject prior notice given. If suspected diseases on board inform Health Authorities.

PILOTAGE: No Pilot Station. No tide. In East winds, water level can increase to 1.50 m. above normal.

ANCHORAGE: Good anchorage in the Roads between N.W. to N.W. by W. bearing from the port, distance 1 to 1.5 miles. Depths 18 m. – 21 m. Anchorage not allowed in harbour area.

MAX. SIZE. In Outer Harbour, up to 5 m. draft; in Inner Harbour up to 3 m. draft.

RADIO: Radio Kiel, call sign DAO, Tel: 39491.

TUGS: No tugs.

BRIDGES: Outer and Inner Harbours separated by bascule bridge, opening to 10.7 m. width at top of bridge.

MEDICAL: Doctors and hospitals available.

FRESH WATER: Available.

FUEL: Diesel oil available.

REPAIRS: No facilities.

WATCHMEN: Not available.

OPENING/CLOSING HATCHES: By ship's crew.

TIME: GMT plus 1 hour. GMT plus 2 hours (last weekend in March to last weekend in September).

HOLIDAYS: Work allowed on Sundays and official holidays subject to Harbour Master's permission.

POLICE/FIRE/AMBULANCE: Police Tel: 110. Hospital Tel: 9011. Fire Tel: 112.

TELEPHONES: Public telephones in harbour area. No installation on board.

SERVICES: Other services available from Kiel.

SHORE LEAVE: Permitted.

IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.

Shore passes issued to passengers are chargeable.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

AUTHORITY: Stadtwerke Eckernforde GmbH, Bornbrook 1-3, 24340 Eckernforde, Germany. *Tel:* (04351) 9050. *FAX:* (04351) 905199. *Contact:* Mr. Wegner, Harbour Master. Mr. Potzch, General Manager.

ELSFLETH: 53.14 N. 08.28 E.

PORT LIMITS: The seaward boundary of the port is the entrance of River Hunte, vessels are considered to be arrived when alongside the berth or waiting berth, and Customs formalities are completed.

DOCUMENTS:

2 Crew Lists.
2 Passenger Lists.
1 Health Certificate.
2 Provision and Store Lists.
1 Ship's Certificate.

DEEP SEA PILOTAGE: See "General" before first German port and "Baltic Deep-Sea Pilotage".

PILOTAGE: Pilotage is carried out by Weser River Pilots, no Harbour Pilot available.

ANCHORAGE: No anchorage in vicinity of the harbour, see Blexen Roads.

RESTRICTIONS: Max. draft in the entrance at LW is 3.20 m.

MAX. SIZE: Max. size in daytime, length 80 m. Max. size at night-time, length 60 m., draft depends on the tide.

PRATIQUE: Pratique is given on arrival by the Health Officer. If disease or fever is suspected on board it has to be reported to the Agent.

RADIO: Cable Norddeich (call sign DAN) advising ETA and cash requirements.

RADAR/VHF: No port radar service but river radar can be used for approaching port from Weser Lanby to Bremerhaven. VHF Channel 21 from Bremerhaven to Elsfleth. Channel 19 from Bremen to Elsfleth.

River radar can be used for approaching port from Bremerhaven to Elsfleth (entrance of River Hunte).

Bremen Port Radar Channel 12.

VHF Channel 10 from Elsfleth to Oldenburg.

The 2 railroad bridges over the River Hunte can be called on VHF Channel 19.

TUGS: Tugs have to be ordered from Bremen or Brake, they join the vessel at River Hunte Estuary. If tug lines are used there are no extra charges.

BERTHING: 1 quay with a length of 260 m., depth alongside 4.7 m. 1 waiting berth for small vessel 3 m., 1 private berth (Omni-Pac).

2 waiting berths for vessels in inland trade. 9 vessels with length from 80 m. can use these berths. One waiting berth is by the naval college (3 berths) and the other at km. 23 on the River Hunte.

SPECIALISED CARGO-HANDLING FACILITIES: 1 crane with 6.5 tons, 1 crane with 10.5 tons and 1 crane with 32 tons capacity. Bulk cargo can be handled with grabs, no other special facilities.

BRIDGES: No bridges to reach the port, but all ships bound for Oldenburg are waiting at Elsfleth for opening bridges.

A flood prevention barrier has to be passed to reach the harbour.

STEVEDORES: ETA has to be cabled to the Agents to arrange gangs. Port works 3 shifts around the clock, including Sunday and holidays.

MEDICAL: Medical service is available day and night. Hospital is available at Brake.

TANKERS: No tanker berth.

DENSITY: Fresh water.

FRESH WATER: Delivered from the quay by hose.

FUEL: Fuel is delivered by bunker barges stationed in port.

FIRE PRECAUTIONS: No fire precautions.

CONSUL: None.

REPAIRS: 1 dockyard, all ship and engine repairs can be carried out.

DRY DOCKS: 2 slipways can be used.

SURVEYORS: Classification Societies have to be ordered from Bremen, surveyors available at Elsfleth.

GANGWAY/DECK WATCHMEN: A crew watchman is necessary because of strong tidal streams, 2 – 3 knots.

HATCHES: Hatch-opening/closing to be carried out by crew.

CUSTOMS ALLOWANCES: Quantity permitted for each crew member: 100 cigarettes, 1 bottle of spirits.

CARGO GEAR: Loading/discharging is carried out by shore cranes.

REPATRIATION: Any time. Inform Agent.

AIRPORT: Airport at Bremen (50 km). Regular airlines.

TIME: GMT plus 1 hour. GMT plus 2 hours (last weekend in March to last weekend in September).

HOLIDAYS: Cargo work can be arranged on those days.

POLICE/AMBULANCE/FIRE: Police: Station 2263, River 2377. Ambulance: Brake Hospital 04401 – 4060. Fire 2333.

TELEPHONES: No ship-to-shore communications.

SHORE LEAVE: Crew members are allowed ashore with valid passports.

IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.

Shore passes issued to passengers are chargeable.

REGULATIONS: No unusual regulations for the port.

GENERAL: All ships bound for Oldenburg have to do clearance in port.

DEVELOPMENTS: A new private berth has been completed for the distillery "Pabst & Richards".

AUTHORITY: Niedersachsisches Hafenamt Brake – Hafenmeister Elsfleth, An der Straatskaje, 2887 Elsfleth. *Tel:* 04404-2202. *Contact:* H. Plaster, Harbour Master.

EMDEN: 53.21 N. 07.12 E. (See Plan)

PORT LIMITS: The vessel is to be considered an "arrived ship" upon having berthed at the designated waiting/loading/discharging berth, depending upon Charter-Party.

DOCUMENTS: Health Declaration (form from Sea-Pilot), Derat Exemption Certificate, Bill of Lading, Cargo Manifest, Certificate of Origin (for gas-tankers only), Certificate of Quality (for gas-tankers only), Certificate of Registry, 5 Crew Lists, 2 Crew Personal Effects Lists, 4 Slop-Chest Lists, Passports/Seamen's Books, 2 German Tanker Check Lists (for tankers and gas-tankers only).

DEEP SEA PILOTAGE: See "General" before first German Port and "Baltic Deep-Sea Pilotage".

PILOTAGE: Compulsory. At least 12 hours prior arrival at Pilot Station, vessel to radio "Emslotse Emden" indicating vessel's name, ETA, destination and draft. Contact pilot vessel on VHF Channels 16 or 9, or 2182 kHz. Tel (and Fax): 49 (0) 161-1416967.

Pilot vessel located near Wester Ems Light Buoy in approx. position Lat. 53° 37' N., Long. 06° 20' E.

Tankers and gas-tankers above 10,000 g.r.t. with dangerous cargo have to pick up the Pilot at the TW/DB Buoy in position: 53° 59' 18" N., 06° 21' 26" E.

During bad weather periods pilot boat is withdrawn and stationed in sheltered area near the Isle of Borkum.

ANCHORAGE: Vessels may anchor in vicinity of pilot vessel in depth of 9.5 fathoms. Sandy bottom.

Further anchorage possibilities in the Ems fairway half way up to Emden at "Moevensteert", 13.7 m. salt water at HW.

RESTRICTIONS: Vessels drawing in excess of 8.0 m. salt water have to wait for high tide to proceed to Emden proper. Tide rise about 3.0 m.

Vessels with LOA/beam over 255 m./35.5 m. respectively enter and leave in daylight only.

The "Great Sea Lock": The "Great Sea Lock" has a length of 260 m. (853 ft.) and a width of 40 m. (131 ft.) restricting vessels' size to 240 m. LOA and 33 m. beam, but upon special permission at about 250 m. LOA and 35 m. beam. Depending upon vessels' constructural shape even longer ships have been accepted in the past upon special application.

MAX. SIZE: Under normal tide conditions, vessels drawing 36 ft. can enter Emden directly.

Length and beam restrictions imposed by locks at Emden: Max. 240 m. length and 33 m. beam. Vessels exceeding these dimensions require prior permission.

HEALTH: Pratique granted immediately on arrival at locks by Doctor or Health Official.

RADIO: Cables should be despatched via Norddeich Radio (DAN).

Gas Tankers: Entry Permission: For each gas–tanker the agent – on behalf of vessel – has to apply for an entry permission with the Lower Saxony harbour office.

Following advanced information required: (1) GRT, (2) Volume cu.m. (3) LOA, (4) Beam, (5) Year of build, (6) ETA, (7) Draft, (8) Port of Departure, (9) Cargo Grade, Quantity, Temperature, (10) Possible Deficiencies of Ship and/or Cargo, (11) Confirmation vessel in accordance with IMO Rules A328 (9) or A 329 (9).

ETA–Notices: Master to keep agents closely advised about vessels ETA at either approach buoy and any change thereof. A 7–days 96–, 48–, 24–, 12–hours notice would facilitate preparational matters with authorities, receivers etc.

VHF: Norddeich Radio (DAN): VHF Channel 16 and all known communication facilities including ship/shore telex.

VTS "Ems Traffic": VHF Channels 18, 20 and 21.

Emden Pilot: VHF Channel 16.

RADAR: Radar service on the river "Ems" from approx. position: Lat. 53° 37.5' N., Long. 06° 23' E. (Westerems) or Lat. 53° 35' N., Long. 06° 23' E. (Hubertgat) up to port entrance. The other range (Borkumradar) works on VHF Channel 18. Further information on this Channel.

TUGS: Sufficient tugs available, stationed at Emden Locks, ranging from 790 h.p. to 3,900 h.p. Usually ship's lines used.

BERTHING: *Outer Harbour:* Quay length 1,539 m. – tidal harbour. Also see "Developments".

New Inner Harbour: Accessible through Sea Lock (260 m. × 40 m.) and Nesserlander Sea Lock (111 m. in length and 14.50 m. width).

INNER HARBOUR:

South Quay:

Commodity: Building materials and other dry-bulk cargoes, also wood, steel, general cargo, containers, etc.

Pier Length: 932 m.

Depth Alongside: 12 m. permanent (salinity about 1.005).

Draft Allowed: 10.67 m.

Number of Cranes: Five.

Lifting Capacity: 2×15 tons, 2×25 tons, 1×40 tons. 4,000 tons/day.

Daily Capacity: 10,000 – 30,000 tons, depending on material.

Outreach of Grabs: 34.5 m. (cranes).

Distance Waterline/Lower Edge Grab: 14 m. (cranes).

Storage Area: About 25,000 sq.m. concrete paved. About 76,000 sq.m. for bulk cargoes. About 4,000 sq.m. of covered storage for general and bulk cargoes.

Loading/Discharging: Ex-vessel onto rail cars, trucks, barges.

Working Period: Monday 0600 hrs. – Saturday 2200 hrs., overtime possible.

North Quay and Container Terminal:

Commodity: Containers, steel, wood and general cargo.

Pier Length: 520 m.

Depth Alongside: 11.5 m. permanent (salinity 1.005).

Draft Allowed: 10.67 m.

Number of Cranes: Two cranes and one container bridge.

Lifting Capacity: 53 tons (exceptionally 80 tons) to 15 tons.

Outreach of Grabs: 34.5 m.

Distance Waterline/Lower Edge Grab: 14 m.

Storage Area: About 13,000 sq.m. concrete paved. About 32,000 sq.m. unpaved area.

Loading/Discharging: Ex-vessel onto rail cars, trucks, barges.

Working Period: Monday 0600 hrs. – Saturday 2200 hrs., overtime possible. Container Terminal: 24 hours, 7 days a week.

Industrial Harbour:

Commodity: All kinds of dry-bulk commodities in smaller lots, iron and steel, livestock and all kinds of general cargo.

Pier Length: Total about 1,000 m.

Number of Berths: 3.

Draft: Between 23 ft. – 24 ft. permanent (salinity 1.005), depending on berth.

Number of Cranes: 4, and 1 mobile crane.

Lifting Capacity: 1×5 ton, 1×10 ton, 1×10-20 ton, 1×30 ton, 1 mobile crane 30 ton.

Outreach of Cranes: 16 m. – 40 m. depending upon weight of load to be handled.

Distance Waterline/Lower Edge Grab: 18 m. – 20 m.

Storage: About 5,500 sq.m. covered storage space. About 50,000 sq.m. open storage space.

Loading/Discharging: Ex-vessel onto rail cars, trucks, barges.

Working Period: Monday 0600 hrs. – Saturday 2200 hrs., overtime possible.

Ro-Ro Berths I and II:

Commodity: Automobiles, paper and other Ro-Ro commodities.

Berthing Length:	Terminal I 325 m.	Terminal II 300 m.
Draft Allowed:	Max. 7.0 m. permanent (salinity 1.005).	Max. 7.0 m. permanent (salinity 1.005).
Number of Ramps:	1 stern ramp. 1 stern or side ramp.	1 stern ramp.
Storage:	About 43,000 sq.m. storage space.	About 31,000 sq.m. storage space

Loading/Discharging: Ex vessel onto rail cars, trucks.

Working Period: Monday 0600 hrs. – Saturday 1400 hrs., overtime possible.

OUTER HARBOUR: This port basin has direct connection to the Ems Fairway, i.e. it is a tidal port area. There are no restrictions as to length or beam.

VW Berth:

Commodity: Mainly used for handling Volkswagen automobiles.

Berthing Length: About 420 m.

Depth Alongside: 9.0 m. at low water (Density 1002 – 1012).

Draft Allowed: 8.5 m. LW.

Tidal Range: About 3.0 m.

Number of Cranes: None.

Cargo Handling: Side door Roll-on/Roll-off or ship's own gear, ex-vessel onto storage, rail, truck.

Loading Rate: Max. 2,000 cars/day.

Granary I and II:

Commodity: All kinds of grain products, feed stuff, etc.

Berthing Length: 450 m.

Depth Alongside: 8.5 m. at LW (Density 1002 – 1012).

Draft Allowed: 8.0 m. fresh water at LW.

Tidal Range: About 3.0 m.

Number of Elevators: 3 shore elevators.

Outreach from Fenderline: 18 m.

Distance Waterline/Hatchcoaming: 11.5 m.

Daily Capacity: About 12,000 tons heavy grain. About 6,000 tons soya meals.

Storage Capacity: About 150,000 tons.

Working Period: Monday 0700 hrs. – Saturday 2200 hrs., overtime possible.

Ems Quay:

Commodity: General, wood, logs, containers, etc.

Pier Length: 271.7 m.

Draft Allowed: 8.5 m. salt water at LW.

Tidal Range: About 3.0 m.

Number of Cranes: None.

Number of Ramps: 1 quarter ramp, 1 stern ramp.

Storage Capacity: About 6,000 sq.m. of covered storage space and 25,000 sq.m. of concrete paved open storage space.

"Nesserland": One mobile, tide-independent, floating Ro/Ro bridge for stern ramps and Ro/Ro cargo up to 100 tons with approximate 5.5 m. breadth.

BULK HANDLING FACILITIES: See "Berthing".

BRIDGES: None.

STEVEDORES: Since main commodities consist of bulk cargoes, such as iron-ore, coal, coke, bauxite, no specific requirements.

MEDICAL: Advance notice only required in urgent cases; hospital available.

TANKERS: Olhafen situated in Inner Harbour. Max. draft 10.22 m.

Slops may only be discharged at the Tank Cleaning installation of Thyssen Nordseewerke GmbH.

Oil Harbour:

Commodity: LPG, chalk slurry, porcelain clay and small shipments of naphtha, condensates, fuel oil, gas oil.

Number of Berths: 4 (2 large and 2 smaller berths).

Docking Length:	No. 1 250 m.	No. 4 150 m.
Draft Permanent:	10.22 m. (salinity about 1.005)	10.22 m. (salinity about 1.005)
Loading Rate:	500 t.p.h. light fuel 750 t.p.h. heavy fuel	500 t.p.h. light fuel 750 t.p.h. heavy fuel
Discharging Rate:	2,500 t.p.h. crude oil	1,500 t.p.h. crude oil
Connections:	2×12 in. max.	1×8 in. max.

Working Period: Around the clock, SHinc.

LPG Terminal:

Commodity: Butane, propane and its mixtures.

Location: Emden oil harbour in the "Inner Harbour" – Oil Harbour separated from the Ems Fairway by the "Great Sea Lock"

Type of Berth: Concrete finger-pier with platform and with 5 dolphins abreast and sufficient mooring bollards ashore. Max. pull 100 tons.

Depth/Tidal Range: 10.36 m. brackish water (approx. 1007). No tidal range.

Restrictions:

LOA : 240.00 m.
Beam : 33.00 m.
Draft : 10.22 m. (dock density)
Distance waterline/manifold : 19.00 m. max.
Distance ship's rail/manifold : 5.50 m. max.
Free space to forward of manifold connection : 1.40 m. min.

Berthing: Vessels berthing with port-side to. Ships being towed backwards into basin. Day and night mooring/unmooring.

Cargo Handling Facilities for Ref. + Semi-Ref. Cargo: 1 free floating discharging-arm, type Wiese 4/350, with one 8 in. 300 ASA liquid connection and one 3 in. 300 ASA flexible vapour return line.

Shore Heat-Exchangers/Shore Booster Pumps: 2 heat-exchangers – able to heat-up from –42°C to minimum of 0°C. 3 booster pumps – max. liquid delivery head 445 m.

Discharging/Loading Rate: Max. 500 cu.m/hr. max. about 200 cu.m/hr.

Distance Berth/Tank Farm: About 4.5 km.

Size of Cargo Line: Average diameter 8 in.

Storage Facilities: 2 buffer tanks at berth – 4,000 cu.m. net. 9 storage tanks at tank farm – 23,000 cu.m. net.

Working Period: Around the clock, SHinc.

Special Vessel's Requirements:

(a) All gas-tankers have to be equipped with 2 VHF wireless stations at the bridge.
(b) All gas-tankers above 30,000 cu.m. cargo tank capacity have to be equipped additionally with:
  2 Radar units
  1 Decca navigator
  1 Electronic speed-recorder
  1 Rate of turn indicator

Required Valid Certificates:

(a) IMO-Certificate of Fitness according IMO-Resolution A 328 (9) or A 329 (9)/Certificate of Compliance.
(b) Cargo Ship Safety Construction Certificate.
(c) Cargo Ship Safety Equipment Certificate.
(d) Cargo Ship Safety Radiotelegraphy Certificate.
(e) Ship Safety Radiotelephony Certificate.
(f) Load Line Certificate.
(g) Classification Certificate.
(h) Oil Liability Certificate.
(i) Oil Record Book filled–in.
(j) Letter of Compliance where available.
(k) Ship's Loading and Stability Manual.
(l) Damage and Survival Stability–information.
(m) Certificate of Safe Manning according IMO A 481 (XII).
(n) Test Certificates for:
  Safety Relief Valves.
  Cargo Tanks.
  Cargo Pipe-lines.
  Instrument Calibration.

Documents for Clearing Purposes: The following documents are also required for clearing purposes:

(a) Health Declaration (form from Sea Pilot).
(b) Derat Exemption Certificate.
(c) Bill of Lading.
(d) Cargo Manifest.
(e) Certificate of Origin.
(f) Certificate of Quality.
(g) Certificate of Registry.
(h) 5 Crew Lists.
(i) 2 Crew's Personal Effects Lists.
(j) 4 Slop chest Lists.
(k) Passport/Seaman's Book.
(l) 2 German Tanker Check Lists

Supplies/Services:

(a) Purging/Gas Freeing	Not allowed within the port area
(b) Coolants (Propane)	Available (pressurised)
(c) Nitrogen, Oxygen, Freon	Available from local Unitor in Bottles/ Cylinders
(d) Bunkers	All grades available from majors and some outsiders ex-barge prior to or after cargo operations

Lightening of Tankers: There is also a tanker lightening/anchoring place at the "Dukegat" anchorage at the location of Buoys "A10" – "A12" with an allowable draft of 41 ft. SW, dimensions 1,200 m. long and 800 m. wide.

However, lightening of tankers is not customary and has not been performed recently.

DENSITY: Inner Harbour: 1003 – 1007. Outer Harbour: 1002 – 1012 (depending on tide).

FRESH WATER: Available.

FUEL: All grades available, delivered by barge by major oil companies and others.

FIRE PRECAUTIONS: All common fire precautions to be obeyed.

CONSULS: Finland (Vice-Consul), Tel: 28800, Norway, Tel: 8907-29, Sweden, Tel: 21904, Netherlands, Tel: 21404.

REPAIRS: All kinds of repairs possible.

DRY DOCKS: 1 dry dock 218 m. × 30 m., 1 floating dock 176 m. × 27 m., 1 floating dock 130 m. × 15.8 m., 1 floating dock 116.4 m. × 21.3 m., 2 floating docks 92 m. × 16.2 m.

SURVEYORS: German Lloyd, Lloyd's Register, Norske Veritas, Bureau Veritas, Panama Bureau of Shipping Inc.

Germanischer Lloyd, Schweckendieckplatz 3, D-26721 Emden. Tel: (04921) 23439, 23354. Fax: (04921) 33431.

GANGWAY/DECK WATCHMEN: Not compulsory.

OPENING/CLOSING HATCHES: To be performed by crew.

CUSTOMS ALLOWANCES: 40 cigarettes per day/person, 0.25 litre spirits per day/person (at "Outer Harbour" and "Old Inner Harbour").

REPATRIATION: Nearest airport to Emden is Bremen (about 150 km.). There are good train connections to and from Emden. Car transportation can also be arranged upon request to Agent. A small airport is available at Emden for domestic flights and charter flights.

AIRPORT: Nearest airports Bremen and Hamburg, about 2 – 3 hours drive from Emden. World-wide connections. Flight Emden to Bremen or Hamburg possible by air-taxi.

TIME: GMT plus 1 hour. GMT plus 2 hours (last weekend in March to last weekend in October).

HOLIDAYS: New Year's Day; Good Friday; Easter Monday; Labour Day (May 1st); Ascension Day; Whit Monday; October 3rd; Prayer Day; Christmas Day; Second Christmas Day (December 26th). No work on New Year's Day, Easter Sunday, Whit Sunday, May 1st and Christmas Day.

POLICE/AMBULANCE/FIRE: Police 110; Ambulance 22222; Fire 112.

EMERGENCY CO-ORDINATION CENTRE: Local Water Police, Tel: 04921-891558.

TELEPHONES: Telephones can be placed on board if vessel berthed at Outer Harbour, Northquay, Southquay or Thyssen Nordseewerke shipyard. Public telephone boxes are available close to the berths.

SERVICES: Tank cleaning installation for slop disposal available. Oil pollution service available.

BANKS: German banks, such as Deutsche Bank, Commerzbank.

STORING: See "Prelims".

1. Yes.
2. Throughout loading operations, except for gas tankers.
3. Mainly yes.
4. Mainly yes.
5. Stores have to be cleared through Customs.
6. Yes.

SHORE LEAVE: Shore leave possible.

IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.

Shore passes issued to passengers are chargeable.

GARBAGE DISPOSAL: Collection service available, for ship's account only. Contact agent or Port Authority for details. Smaller quantities may be disposed of in waste containers, distributed about port area, free of charge.

WASTE OIL DISPOSAL: Oil residues, etc., can be collected by tanker trucks, free of charge. If required, a special berth is available for this service. Contact Agent or Port Authority for details.

SEAMAN'S CLUBS: German Seamen's Mission Emden, Am Seemannsheim 1, 26723 Emden, Germany. Tel: (04921) 23551. Facilities include telephone and shopping, books, newspapers, T.V., billiards, table tennis, overnight stays for seamen and families, meals, port service, church services on Sundays, information and advice.

REGULATIONS: None unusual, but tankers and especially gas tankers have to apply for a special entry permission through the Agents.

DELAYS: Normally, none.

DEVELOPMENTS: In the Western part of the Northquay in the New Inner Harbour is the container terminal, enabling transhipment of up to 100,000 TEU per year. One berth with 1×53 ton container crane is already available in the first stage, and an additional berth with 1 crane will be available in the second stage.

AUTHORITY: Niedersachsisches Hafenamt Emden, Friedrich-Naumann Str. 7-9, 26725 Emden, Germany. *Tel:* (04921) 897-0. *Cables:* Hafenamt Emden. *FAX:* (04921)897-137. *Contact:* Port Manager: G. Frerichs, Tel: 897-100. Harbour Masters: Captain A. Brinkmann, Tel: 897-120. Captain F. Herbig, Tel: 897-119.

FLENSBURG: 54.48 N. 09.26 E. (See Plan)

PORT LIMITS: The seaward boundary is the line between two special boundary-stones on the West and East side of the port entrance.

DOCUMENTS: 2 Crew Lists, 2 Passenger Lists, 2 Stores Lists (bonded stores), Cargo Lists, Bills of Lading, General Declaration, Ship's Certificates.

PILOTAGE: Pilot Station Flensburg, Schiffbrucke 12, D-2390 Flensburg, Tel: (0431) 362858. Advance notice 5 hours before arriving Buoy "Flensburger Foerde" by Kiel Radio or Agent (5 hours before leaving port). Pilot boards at Buoy "Flensburger Foerde". Pilot will board in all weather if possible, otherwise pilot-boat will lead vessel to that position where Pilot can board. Not necessary to anchor. Pilot-boat is a fishing-boat with "Lotse" written in white letters on both sides. Boat will show lights prescribed by international regulations and is fitted out with VHF Channels 6, 10, 16, 25, 26, 27.

ANCHORAGES: Just outside harbour entrance, N.E. of Mittelgrund and West of Kielseng leading lights. Depths of water between 12 m. and 19 m. muddy ground; same position for Quarantine Anchorage.

The other anchorage is at Buoy "Flensburger Foerde", depth of water between 20 m. and 27 m. Bottom is mud and sand.

RESTRICTIONS: No specific restrictions; no tide, water-level variations depending only on the wind.

MAX. SIZE: Max. draft up to 7.0 m. at normal water-level.

HEALTH: Generally Free Pratique for ships in the North Sea and Baltic Sea trade, ships coming from overseas ports pratique granted on arrival. Inform Pilot if any suspected diseases on board. He will make necessary arrangements. A valid Derat Exemption Certificate has to be on board.
RADIO: Ruegen Radio.
VHF: Not available at Flensburg Port.
RADAR: There is no Port Radar Service.
TUGS: One harbour tug of 2,300 h.p. is available. If required, local shipping agency makes arrangements, provided at least 3 hours notice given in normal working hours, otherwise 24 hours.
BERTHING: Powerstation-Quay length 210 m. depth of water 7.30 m. Harnis Quay length 470 m. depth of water 6.00 m. Harnis Quay length 240 m., depth of water 7.0 m. Schiffbrucke Quay length 170 m. depth of water 6.50 m. Schiffbrucke Quay length 130 m., depth of water 5.0 m. Depths of water refer to normal water-level.
CRANES: Powerstation Quay: 1 crane 10 tons lifting capacity and 1 ship-unloader, max. discharging rate 600 t.p.h.

Harnis Quay: 4 cranes 3 – 5 tons lifting capacity. All cranes are usable for general and bulk cargo.
BULK CARGO FACILITIES: One elevator for feedstuff and 1 elevator for coal.
SPECIALISED CARGO-HANDLING FACILITIES: Not available.
BRIDGES: There are no bridges at Flensburg Port.
STEVEDORES: Agents make all arrangements. Unloading rates depend on type of cargo. Bulk cargo discharge up to 160 t.p.h. per gang.
MEDICAL: Doctors, hospitals, ambulances available day and night.
TANKERS: One berth for tankers up to 1,000 g.r.t. with depth of water 5.70 m.; diameter of discharge lines are NW 200; average discharge of fuel and gasoil 300 cu.m. per hour.
DENSITY: Winter-time 1015; Summer-time 1012.
FRESH WATER: Available at all berths, delivery rate about 20 cu.m./hr. from shore hydrants.
FUEL: Diesel available in any quantity. Fuel oil subject to 5 hours advance notice from tank lorries.
FIRE PRECAUTIONS: No specific precautions.
CONSULS: Denmark, Nordergraben 19; others at Hamburg.
REPAIRS: No facilities.
DRY DOCKS: None.
SURVEYORS: All main Classification Societies are present at Hamburg.
GANGWAY/DECK WATCHMEN: No watchman service available.
HATCHES: Opening/closing normally done by crew. Stevedores will perform this for additional payment.
CUSTOMS ALLOWANCES: For consumption on board merchant vessels for each crew member per day 40 cigarettes or 20 whiffs or 10 cigars or 50 grams tobacco *and* 0.25 litre spirits *and* 3 litres wine are duty-free. If the ship stays for 3 days or longer it is usual to allow threefold of the mentioned quantity. For shore leave 20 cigarettes are permitted for each person only. If a crew member leaves the ship for at least 3 days the regulations for tourists are applicable.
CARGO GEAR: All loading and discharging done by shore cranes, except elevator-work.
REPATRIATION: Possible at any time without difficulties.
AIRPORT: Hamburg-Fuhlsbuttel, 175 km. distant; 2.5 hours by train.
TIME: GMT plus 1 hour. GMT plus 2 hours (last weekend in March to last weekend in September).
HOLIDAYS: See "Hamburg". No work on official holidays.
POLICE/AMBULANCE/FIRE: Police Tel: 110, Fire/Ambulance Tel: 112.
TELEPHONES: Installation on board ships possible at Harnis Quay.
SERVICES: Tank cleaning and slop disposal services available. Compass adjusting possible, advance notice necessary.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.

Shore passes issued to passengers are chargeable.
GARBAGE DISPOSAL: Agent can arrange collection of garbage.
WASTE OIL DISPOSAL: Various collection services available. Contact agent for details.
SEAMAN'S CLUBS: None.
CURRENCY: Deutsche Mark (DM).
REGULATIONS: No particular or unusual regulations.
DELAYS: Normally no delays.
AUTHORITY: Stadt Flensburg Hafenamt, P.O.Box 2742, Batteriestrasse 48, D-24939 Flensburg, Germany. *Tel:* (0461) 4871301. *FAX:* 49-461-487660. *Contact:* T. Lauritzen, Harbour Master.

GLUCKSTADT: 53.45 N. 09.25 E.

PORT LIMITS: Line drawn between seaward ends of North and South moles.
DOCUMENTS:
Ship's Papers.
Cargo Papers.
Despatching Papers.
Crew Lists.
PILOTAGE: Pilot to be ordered via Agent.
MAX. SIZE: Outer Harbour: Max. length 150 m.; max.breadth 18.0 m.; max. draft at MTHW 6.0 m. (South side), 5.50 m. (North side).
Inner Harbour (Max. size to pass lock to inner harbour): Max. length 90 m.; max.breadth 12.5 m.; max.draft at MTHW 4.5 m. (recommended max. 4.2 m.).
BERTHING: Outer Harbour: South side 220 m. quayage, North side 250 m. quayage (110 m. crane area).
CRANES: 1×45 tons jib crane, 1×14 tons jib crane and 1×18 tons mobile crane.
STEVEDORES: Working Hours: Monday to Friday 0700 – 1200 hrs., 1230 – 1600 hrs. Overtime to be agreed.
DRY DOCKS: 1 slipway for inland waterway vessels up to 500 d.w.t.
AIRPORT: Hamburg.
IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.

Shore passes issued to passengers are chargeable.
GARBAGE DISPOSAL: Available, contact Hafengesellschaft for details. Tel: (04124) 3095.
WASTE OIL DISPOSAL: Available, contact Hafengesellschaft for details. Tel: (04124) 3095.
SEAMAN'S CLUBS: None.
CURRENCY: Deutsche Mark (DM).
AUTHORITY: Hafengesellschaft Gluckstadt mbH & Co.KG., Aussenhafen-Sud, D-25348 Gluckstadt, Germany. *Tel:* 04124-3095. *Telex:* 218322. *FAX:* 04124-3097. *Contact:* Harbour Master.

HAMBURG: 53.33 N. 09.59 E. (including Altona, Harburg and Wilhelmsburg) (See Plan)

DOCUMENTS:
6 Crew Lists.
6 Passenger Lists.
2 Provisions and Stores Lists, including Fuel Oil.
3 Dangerous Cargo Lists.
Health Certificates (forms obtainable from Pilot).
General Cargo Declaration.
Ship's Register.
Oil Liability Certificate for more than 2,000 tons of oil.
Shipmaster's Report: October 1988.
Customs: No documents required as port is a Free Port.
Water Police: 2 copies Crew List.
1 copy Maritime Declaration of Health.
Agent: 1 copy Crew List.
DEEP SEA PILOTAGE: See "Brixham" or "Cherbourg" and "General" before first German port and "Baltic Deep-Sea Pilotage".
PILOTAGE:
Pilotage-Anchorage River Elbe: See "General" before first German port.
Pilotage Port of Hamburg: Harbour Pilots board the ships close to the Seemannshoft Station. Harbour Pilots can be called by VHF, Channel 9, call "Hamburg Pilot", morse or sound signal "G" (2 long and 1 short) or flag "G". Pilotage is compulsory for vessels with dangerous cargo and vessels over 90 m. LOA or 13.0 m. beam.
Exceptions: Pilotage is not compulsory for vessels up to 120 m. LOA, if: (1) the Master has called at the Port of Hamburg with his ship 6 times within the last 12 months, and (2) he speaks German fluently. Advisable to use Pilots in port.
ANCHORAGE: Available at several places between Elbe Lightvessel and Hamburg. See "General" before first German port.
RESTRICTIONS: No restrictions imposed on night entry for any vessels.
MAX. SIZE: *Inward Bound:* Vessels allowed max. draft of 14.2 m. in salt water on arrival Elbe Lightvessel, may enter only on rising tide under normal weather and tide conditions.

Container ships exceeding 12.0 m. draft in salt water on arrival Elbe Lightvessel may enter only on rising tide.
Outward Bound: Vessels up to 12.0 m. draft in fresh water on departure from Hamburg may leave at any time.

Vessels exceeding 330 m. LOA or 45 m. beam on departure from Hamburg-Finkerwerder Port Pilot Station may not leave 3 hours before H.W. until following H.W., when a tide restricted vessel is inward bound on the river.

Container ships and LASH carriers up to 12.0 m. draft in fresh water on departure from Hamburg may leave at any time.

Container ships up to 12.3 m. (FW) draft may leave from Port Pilot Station from time of L.W. until 3 hours after L.W. (Up to 12.5 m. until 2 hours after L.W. and up to 12.8 m. until 0.5 hours after L.W.). No anchoring at Brunsbuttel is required.
Inward Bound: Vessels exceeding 330 m. – 340 m. length or 45 m. breadth allowed max. draft to 13.7 m. (340 m. – 350 m./13.2 m. and 350 m. – 360 m./12.7 m. draft) in salt water on arrival Elbe Lightvessel, may enter only on rising tide.
Outward Bound:
LOA 330 m. – 340 m., max. draft 12.0 m.
LOA 340 m. – 350 m., max. draft 11.5 m.
LOA 350 m. – 360 m., max. draft 11.0 m.
Underkeel clearance of 10% of draft required.

Vessels demanding the rising tide will proceed according to tidal conditions in order to reach Finkerwerder Pilot Station 1 – 1.5 hours before HW.

The following Harbours can be reached:
Note: All water depths refer to medium low water level. Water depths can change from berth to berth, and all Masters are advised to obtain the necessary information regarding their berth, either from their Agent or the Port Authority (Tel: 740.31.51 or VHF Channel 14 "Hamburg Port Traffic").

Harbour Name	*Max. draft subject to tide and berth (m.)	At any time up to (m.)
Dradenau Hafen	12.5	9.3
Petroleum Hafen	11.0	7.8
Waltershofer Hafen	11.5	12.0
Kuhwerder Hafen	14.3	11.9
Oderhafen	11.4	8.2
Rethe Neuhof NHG	14.3	11.6
Kattwyk Hafen	13.2	10.0
Neuhofer Hafen	13.0	9.8
Rethe Van Ommeren	13.2	10.0
Rethe Kruse	13.2	10.0
Rethe Mackprang	12.8	9.6
Rethe Stroh	12.4	9.2
Schluisgrove Hafen	11.2	8.0
Hansaport	14.5	12.0
Harburg Seehafen 4	11.9	8.7
Harburg Seehafen 3	10.4	7.2
Harburg Seehafen 2	12.5	9.3
Harburg Seehafen 1	9.2	6.0
Blumensandhafen	13.2	10.0

* Max. draft with 10% underkeel clearance.

The max. draft is dependent on the prevailing Easterly or Westerly winds.

Also see "Shipmaster's Report".

HEALTH: Master required complete health certificate when Pilot boards. Only vessels with infectious diseases are subject to detention.

RADIO: All messages to Agents, etc., through Norddeich Radio, call sign "DAN". Closer to port Elbe-Weser Radio can be contacted by VHF Channel 16.

Ships reporting stations are on permanent duty:

Cuxhaven: Call "Cuxhaven Elbe Port Radio" on VHF Channel 12, safety and calling Channel 16.

Brunsbuttel: Call "Brunsbuttel Elbe Port Radio" on VHF Channel 12, safety and calling Channel 16.

Stadersand: Call "Stadersand Elbe Port Radio" on VHF Channel 12, safety and calling Channel 16.

Hamburg: Call "Hamburg Elbe Port Radio" on VHF Channel 12, safety and calling Channel 16.

Hamburg Port Traffic (Port Authority): VHF Channels 14 and 16.

TUGS: Normally join incoming vessels at Harbour Pilot Station at Finkerwerder. Tugs lines used at no extra charge.

RADAR: River Radar Service from Elbe 1 to Hamburg, see "General" before first German port.

Hamburg Radar Service "Hamburg Radar Radio", VHF Channels 3 and 19 at the lower end of Seemannshoeft, VHF Channels 80 and 7 at the Western and Southern part of harbour, VHF Channels 63 and 5 at upper part East of Koehlbrand.

ETA: Master's telegrams via Norddeich Radio, call sign DAN, are passed on to Agent 24 hours a day, week-ends and holidays inclusive. For this reason it is advisable that Masters communicate with Agent via Norddeich Radio.

In order to avoid delay and extra charges Masters should cable their ETA at least 12 hours prior to arrival at Elbe Pilot Station to "Elbelotse Brunsbutelkoog" via Norddeich Radio, stating the following details:

1. Name of vessel.
2. Gross register tons.
3. Date (2 figures).
4. Time (4 figures).
5. Place where Pilot is required.
6. Place of destination.
7. Draft in metres (4 figures).

For example:

Eta Fjordaas	41079	12	1600	Elbeone	Hamburg	1214
(1)	(2)	(3)	(4)	(5)	(6)	(7)

1 hour before arrival at Elbe Lightvessel Masters are advised to contact the pilot cutter by VHF Channel 13 or 16.

CONTAINER HANDLING FACILITIES: See "Table" on Page 806.

BULK HANDLING FACILITIES:

Grain	*Maximum Draft*	*Maximum Length*	*Number of elevators*	*Capacity total/hour*
Hamburg-Kuhwerder Hafen	10.8 m.	180 m.	4	750 tons
Hamburg-Rethe/Stroh	12.4 m.	300 m.	3	1,000 tons
Hamburg-Rethe/Kruse	13.2 m.	272 m.	3	770 tons
Hamburg-Rethe/Makprang	12.8 m.	290 m.	11	1,200 tons
Hamburg-Neuhof	14.3 m.	272 m.	4	1,660 tons

	Quay length (m.)	*Max. safe draft (F.W.)*	*Max. height discharging gear above high water level (m.)*
Coal and Minerals:			
Hamburg-Harburg II	524	9.3 m.	20.1
Elbehafen Brunsbuttelkoog Gmbh	600	10.7 m.	29.8
Coal:			
Hamburg-Strand Quay	220	7.6 m.	No restriction
Hamburg-Wedel	320	13.9 m.	No restriction
Fertilisers:			
Neuhof-Kalikai	370	10.0 m.	18.3
Minerals:			
Hamburger-Stahlwerke	408	9.3 m.	25.0
Hansaport	563	14.3 m.	No restriction
Petcoke/Oxide:			
Hamburger Aluminium Werk Gmbh	183	9.0 m.	No restriction
Bauxite/Oxide:			
Aluminium Oxid Stad Gmbh (AOS)	329	12.5 m.	18.9

BRIDGES: To be passed by vessels bound for basins South of Kohlbrand.

Bridge	*Situated*	*Max. breadth* (ft.)	*Height above normal H.T.* (ft.)	*Depth at normal H.T.* (ft. in.)
Kohlbrand Brucke (a high-bridge)	across the Kohlbrand near Neuhof	558	167	55 04
Kattwyk Brucke (a drawbridge)	across the Suder Elbe, before Harburg	328	167	48 05
Rethe Brucke (a drawbridge)	across the Rethe, near Reiherstieg	164	167	50 03

STEVEDORES: Ordered by Agents, no additional ETA's required.

Working hours

Monday to Friday	First shift 0650 to 1500 hrs. Second shift 1500 to 2310 hrs. Third shift 2310 to 0650 hrs.
Saturdays, Sundays and holidays	First shift 0700 to 1300 hrs. Second shift 1300 to 1900 hrs. Third shift 1900 to 0100 hrs. Fourth shift 0100 to 0700 hrs.

Work performed after 1500 hrs. Monday to Friday, on Saturdays after 1300 hrs., on Sundays and holidays is at overtime rates.

TANKERS:

	No. of berths	*Max. Draft (FW)*
Kohlfleethafen (Esso/B.P.)	2	12.5 m.
Petroleumhafen (B.P.)	7	11.0 m.
Kattwyk Hafen (Shell)	2	13.2 m.
Kattwyk Hafen	1	12.7 m.
Blumensandshafen	1	13.2 m.
Neuhof (Van Ommeren)	4	13.2 m.
Neuhof (Oiltech)	1	13.0 m.
Harburg Seehafen 4 (Esso and Holborn)	1	11.9 m.
Tankerlager Moorburg	1	12.2 m.
Stadersand (Lower Elbe)	1	10.6 m.

Tanker cleaning and gas freeing facilities at Neuhof Van Ommeren, Kattwyk Hafen (Shell) and some dolphin berths by boats.

Koehlfleethafen Terminal: Cautionary Advice: Ships approach the berth at HW or shortly before. At any other time, it is very difficult to enter the harbour due to the current conditions at the entrance. The ship's speed at the entrance should be as low as possible.

Berthing Procedure: Tankers for the North Berth are berthed starboard side to and at the South Berth port side to. The ship's approach on a heading parallel to the berth. Usually the spring lines are run out first.

Moorings: All lines are secured on quick release hooks. Average tidal range at berth is about 3.4 m.

Harburg, Seehafen IV, Berth 6: Cautionary Advice – Approaches: All ships approaching or leaving Harburg IV have to transit the narrow Kohlbrand Fairway. The ship should manoeuvre at reduced speed. A good helmsman and quick response of the engine are important.

Cautionary Advice – Manifold Connections: Due to the design of the loading arms, care must be taken that the ship's lines are tight and the ship is not allowed to make any movements alongside the berth during cargo handling operations.

Restrictions: There is a lifting bridge crossing the Kohlbrand. This bridge will open for every ship which is tide bound. Other ships and all ships sailing from Harburg IV have to pass the bridge on scheduled opening times at all even hours from 0600 hrs. – 2200 hrs. and at 0530 hrs.

There are numerous berths at the banks which have to be passed at slow speed.

Tugs: 4 tugs will normally make fast after the Pilot has boarded. The tugs should be fast before entering into the Kohlbrand. They tow "on the hook." It is recommended to use tugs lines at no extra charge.

Berthing: Deep-drafted vessels berth at HW only. Caution should be exercised when turning from Kohlbrand into the Seehafen IV Basin.

Berth No. 6 is the first T-head jetty on the starborad side when entering Seehafen IV. Loading vessels berth port side alongside.

The berth has wooden breasting dolphins and care should be taken to land parallel to the fender face with minimum approach speed.

Kattwykhafen, Shell Terminal: Cautionary Advice – Approaches: All ships approaching or leaving Kattwykhafen transit the narrow Kohlbrand Fairway and have to pass through the Rethe Harbour. Ships should proceed with reduced speed. A good helmsman and quick engine response are of importance.

Restrictions: There are numerous berths in the Rethe Harbour which have to be passed at slow speed.

Tugs: 4 tugs will normally be made fast after Pilot has boarded. The tugs should be fast before entering into the Kohlbrand. The tugs, 2 forward and 2 aft are made fast "on the hook." It is recommended to use tugs lines at no extra cost.

Berthing: Deep-drafted vessels berth at HW only. Vessels should be almost stopped in the water when swinging into Kattwykhafen. Tugs will assist in controlling vessel's speed and swing.

When close to and parallel to the berth, the 2 inside tugs will let go and push on the outside until vessel is alongside. Maximum approach speed at impact is 10 cm./sec. for a 100,000 d.w.t. vessel landing on both breasting dolphins.

Moorings: The mooring lines are taken ashore by 2 mooring boats and lifted to the dolphins by hand. Only 2 head lines are secured on quick-release-hooks.

Van Ommeren, Berth Nos. 1, 2, 3 and 4: Cautionary Advice – Approaches: Ships approaching or leaving the Van Ommeren Berths have to transit Kohlbrand Fairway and have to pass through the Rethe Harbour. Ships should proceed at reduced speed. A good helmsman and quick engine response are of importance.

There are numerous berths in the Rethe Harbour which have to be passed at slow speeds.

CONTAINER HANDLING FACILITIES:

	Burchardkai	*Tollerort Terminal* *(SHED 90/91)*	*Africa Terminal*	*Euro-Kai KG aA*	*Terminal Kuhwerder* *(SHED 63/73)*	*Unikai-UCT. Container Terminal*
Length (m.)	1,800	1,225	860	2,600	2,046	1,645
Number of Berths	9 (2 Ro/Ro)	7	7	5	12	3
Depth (m.)	11.0 – 14.0	9.4 – 12.1	10.60	11.0 – 13.0	11.0	12.5
Open Storage Area (sq.m.)	1,500,000	230,000	114,700	858,000	119,000	
Shed Area (sq.m.)	100,000	24,000	35,300	40,000	88,000	
Cranes (Lifting capacities each)	15 bridges 45-70 tons 2 cranes 25 tons	4 bridges 48 tons 2 cargo-tainer twin-cranes up to 50 tons 5 cranes 15 tons 1 crane 3 – 5 tons 1 crane 45 tons	1 bridge 55 tons 7 cranes 33 tons 2 cranes 8 tons 2 cranes 5 tons 1 crane 3 tons 1 mobile crane 20 tons 1 bridge 45 tons	5 Kocks gantry 45/53/68 tons. 2 Kocks gantry 45/68 tons (Post Panamax). 1 Takraf 50 ton for container handling. 5 crane 15 tons (2 mobile cranes).	3 cranes 45 tons 2 cranes 40 tons 3 cranes 25 tons 1 crane 10 tons 1 crane 8 tons 2 cranes 6 tons 2 cranes 5 tons 19 cranes 3 tons 2 floating cranes 12 tons – 25 tons 2 grabs 5 tons – 10 tons.	4 cranes 50 tons
Other Facilities	3 railway transtainers 30 tons 67 van-carriers 8 trucks 250 forklifts (1.5 – 18 tons) 350 junctions for coltainers 3 weighing-machines 4 workshops for repairs computer (DEC 11/70 with online system)	10 van carriers 11 tugmasters 3 transtainers of 35 tons each 50 forklifts max. 28 tons 1 stacker of 40 tons.	55 forklifts 28 trailers, 10 – 35 tons 9 tugmasters	4 railmounted constacker cranes 45/55/68 tons. 3 straddle carriers (3 high) 40 tons. 8 Valmet straddle carriers (3 high) 40 tons. 5 Peiner straddle carriers (3 high) 35 tons. 4 forklifts 28 tons – 42 tons. 8 forklifts 11 tons – 21 tons. 11 forklifts 6 tons – 8 tons. 3 reachstackers up to 45 tons 38 tugmasters 125 trailers 60 ft. – 160 ft. 1 locomotive for shunting.	1 reachstacker 35 tons 1 forklift 29 tons 6 forklifts 16 tons 1 forklift 13.5 tons 7 forklifts 8 tons 31 forklifts 4 tons 10 forklifts 3.5 tons 55 forklifts 1 ton – 3 tons 5 Mafi trucks 16 electric forklifts 1.5 tons.	11 transtainers 44 tons 2 straddle carriers, 30.5 tons. 3 forklifts, 40 tons.

Tugs: The number of tugs used is according to the Master's request and Pilot's advice. The tugs should be fast before entering into the Kohlbrand. The tugs will be made fast "on the hook." It is recommended to use tugs lines at no extra charge.

3 tugs are normally used for vessels of less than 20,000 d.w.t., and 4 for all other vessel's except VLCCs.

Berthing: Berth No. 1 is located on the North bank of the Rethe. Ships are towed stern first into the berth. The spring lines will be run out first. Maximum draft ships should arrive with HW. Due to the narrow manoeuvring area at Berth No. 1, the approach speed of the ship should be minimal.

Berth No. 2 is located on the North bank of the Rethe. The ships are manoeuvred close to the berth, and the spring lines will be run out first. Max. draft ships should arrive with HW.

Berth No. 3 is located on the North bank of the Rethe. Ships up to 250,000 d.w.t. are berthed for tank cleaning purposes. The draft should be confirmed by the Pilots before arrival at the Sea Buoy. The ship manoeuvres close to the berth, and the spring lines will be run out first. Max. draft vessels should arrive with HW.

Berth No. 4 is located on the East side of the Neuhofer Harbour. Ships of up to 100,000 d.w.t. may berth with part cargo or for tank cleaning. Ships arriving for this berth will turn in the Rethe heading to the South and will then be towed stern first into the berth. Spring lines will be run out first. Max. draft vessels should arrive with HW.

DENSITY: Fresh water.

FRESH WATER: Available from shore at most berths. Also supplied by barge.

FUEL: All grades available from oil berths, or supplied by barge.

REPAIRS: All deck, hull and machinery repairs can be carried out by local shipyards at Hamburg. Underwater repairs and cleaning can be effected by divers with special equipment.

DRY DOCKS: *Blohm and Voss,* Tel: 31190: 4 floating docks with lifting capacities up to 52,000 tons. 1 dock up to 20,000 tons. Graving dock, capacity up to 320,000 d.w.t.

Norderwerft, tel. 311000: 2 docks, for vessels up to 5,700 d.w.t. and 12,000 d.w.t.

There are other shipyards providing floating docks with lifting capacities of up to 5,000 tons.

SURVEYORS: Cargo inspectors available, contact Agent.

Lloyd's Register, American Bureau, Bureau Veritas and Salvage Association are represented.

WATCHMEN: Available for all purposes. Normally arranged by Agent.

OPENING/CLOSING HATCHES: Normally by crew with the assistance of stevedores; otherwise, according to charter party.

CUSTOMS ALLOWANCES: No restrictions in the freeport area on board a ship. While not on board the ship in the freeport area or outside the freeport during shore leave or temporary leaving the ship up to 3 days, each Crew member allowed 20 cigarettes, 5 cigars and 50 grams tobacco. These quantities change when paying off – up to 200 cigarettes or 50 cigars or 250 grams tobacco.

CONSULS:

Consuls:

	Tel:		Tel:
Iran	5144060	Monaco	34960
Iceland	336696	Morocco	367003
Ivory Coast	362487	Senegal	31101200
Jamaica	30299232	Tunisia	2201756
Luxemburg	823032	Uruguay	4106542
Malaysia	372172	Western Samoa	234155
Malta	681010		

Consul Generals:

Argentina	4418460	Japan	3330170
Austria	446004	Korea	4102031
Belgium	417075	Liberia	249539
Bolivia	3589753	Malawi	363655
Brazil	440851	Mali	1278039
Chile	457585	Mexico	448774
Colombia	452812	Netherlands	324411
Congo	7523101	Norway	343455
Costa Rica	801395	Panama	340218
Denmark	4140056	Paraguay	474741
Dominican Rep.	474084	Peru	476745
Ecuador	443135	Philippines	442952
Egypt	4101031	Portugal	340047
El Salvador	221351	Russia	2295301
France	4141060	Sweden	4501450
Ghana	372266	Switzerland	321581
Greece	440772	Sierra Leone	4104072
Guatemala	4306051	Spain	443620
Honduras	2802205	Sri Lanka	4501200
India	338036	South Africa	4480320
Indonesia	512071	United Kingdom	411710
Ireland	44186213	U.S.A.	411710
Italy	4140070	Venezuela	4101241

SURVEYORS: Germanischer Lloyd, Rodingsmarkt 33, D-20459 Hamburg. Tel: (040) 36149302. Fax: (040) 378470. Telex: 212828 glhh d.

REPATRIATION: Crew changes and repatriation can be carried out without difficulty.

AIRPORT: Distance 15 km., served by Lufthansa with flights worldwide.

TIME: GMT plus 1 hour. GMT plus 2 hours (last weekend in March to last weekend in September).

HOLIDAYS: New Year's Day; Good Friday; Easter Monday; Labour Day (May 1st); Ascension Day; Whit Monday; National Day (October 3rd); Prayer Day; Christmas Day; Boxing Day. No work on New Year's Day, Easter Sunday, May 1st, Whit Sunday and Christmas Day.

POLICE/FIRE/AMBULANCE: Police 110; Fire 112; Ambulance 110; Port Medical Service 321021 (or call Hamburg Port Radio on VHF Channel 14).

TELEPHONES: Telephones can be placed onboard at some berths. No telephone connections for vessels at dolphins.

EMERGENCY CO-ORDINATION: Call Police (Tel: 110) or Hamburg Port Traffic on VHF Channel 14.

BANKS: Deutsche Bank, Adolphsplatz 7, 20457 Hamburg. Tel: 040-37011. Telegraphic Address: Deutbank Hamburg. Telex: 212535.

Commerz-Bank AG, Ness 7, 20457 Hamburg. Tel: 040-361311. Telegraphic Address: Commerzbank Hamburg. Telex: 212391.

Dresdner Bank AG, Jungfernstieg 22, 20354 Hamburg. Tel: 040-3581. Telegraphic Address: Dreba Hamburg. Telex: 212098.

And others.

STORING: See "Prelims".

1. Vessels can be stored by barge or truck.
2. Vessels can store from barge during loading or discharging, except on tanker berths.
3. The truck can proceed alongside at the berths.
4. Fork lift trucks can be used for handling stores.
5. No Customs regulations in the Freeport area, outside the Freeport arranged by Agent.
6. Local riggers can be employed, arranged by Agent or ship chandler.

SHORE LEAVE: No restriction.

IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.

Shore passes issued to passengers are chargeable.

GARBAGE DISPOSAL: Service is available from various local suppliers listed below using garbage launches, only during normal working hours.

Johannis M. Pahl, Hermann Blohm Str. 26, 20457 Hamburg, Tel: 312046.

Heinrich C.Vogler, Kugelfang 24, 22297 Hamburg, Tel: 5110249.

Carl Robert Eckelmann, Griesenwerder Damm 6, 2103 Hamburg 95, Tel: 74050.

Karl H.Meyrose, Poggenmuhle 4, 20457 Hamburg, Tel: 327136.

WASTE OIL DISPOSAL: Service is available from local facilities listed below.

Shore	Bominflot KG, Tanklager Petroleumhafen, Tel: 740007-0, Fax: 35093116.	LOA max. 200m.
Shore	Hamburger Olverwertungsges. mbH & Co., Kattvykstr. 20, 21107 Hamburg, Tel: 752462-0, Fax: 75246220.	BRT max. 3000T.
Shore	Van Ommeren Tank Terminal, Rethedamn 15, 21107 Hamburg, Tel: 751960, Fax: 75196204.	Ballast and tank washings.
Mobile	Cleanship Buss GmbH, Cremon 32, 20457 Hamburg, Tel: 31980.	Tanker trucks and barges.
Mobile	B.Dettmer Reederei GmbH, Lippelstrasse 1, 20097 Hamburg, Tel: 338007, Fax: 330787.	Barges.
Mobile	Carl Robert Eckelmann, Griesenwerder Damm 6, 21129 Hamburg, Tel: 74052830, Fax: 7402591.	Barges.
Mobile	Fuchslocher & Co., Muggenburger Strasse 20-24, 20539 Hamburg, Tel: 783314/5.	Trucks.
Mobile	Gareg, Riechert & Sohn, Offakamp 23, 22529 Hamburg, Tel: 5531006/5532053.	Tanker trucks.
Mobile	Hoyer Hamburg, Vendenstrasse 414-424, 2000 Hamburg 26, Tel: 21180.	Tanker trucks.
Mobile	Nautic-Schiffahrtsgesellschaft mbH, Heinstattenstrasse 5, 2874 Lenwerder, Tel: 04161-62655, 0421-67405.	Barges.
Mobile	Johannis M.Pahl, Hermann Blohm Str. 26, 20457 Hamburg, Tel: 312046/8.	Tanker trucks and barges.
Mobile	Rohr-o-matic, Nordring 6, 2087 Bonningstedt, Tel: 5500000.	Tanker trucks.
Mobile	TEREG, Reinigungs GmbH, Viesendamn 1, 20354 Hamburg, Tel: 2791086.	Tanker trucks.
Mobile	Wolfgang Empting GmbH, Kapitan Alexander Strasse 48, 2190 Cuxhaven, Tel: 0471-25076.	Only for vessels using Cuxhaven.
Shore	DUPEG Tank Terminal, Tankveg 4, 21129 Hamburg, Tel: 7401654, Fax: 7401703.	For disposal of chemicals.

SEAMAN'S CLUBS: Seemanns Club Duckdalben, Zellmannstr. 16, 20459 Hamburg, Tel: 7401661.

Seemannsheim, Krayenkamp 5, 20459 Hamburg.

Stella Maris, Reimarisstr. 12, 20459 Hamburg.

CURRENCY: Deutschemark(DM).

SHIPMASTER'S REPORT: 1978 (Updated 1996).

Vessel called at Hamburg to load a full load of steel beams for Iran under Time Charter. Originally charterers had asked me to calculate the full load with maximum S.W. draft of 38 ft. 00.875 in. with 10.5 in. F.W.A. and the weight came to more than 39,000 long tons. But later when we arrived at Hamburg, while checking with Port Authorities it was learnt that though vessels are allowed to come in with 42 ft. – 43 ft. (14.5 m. in 1996) drafts fresh water, no vessels excepting, at times fast container vessels are allowed draft more than 36 ft. (12.0 m. in 1996) fresh water. This is generally not known to many operators even in Hamburg.

Note: The above does not apply to large vessels over 330 m.

AUTHORITY: Freie und Hansestadt Hamburg, Amt fur Hafen, Schiffahrt und Verkehr Hafendirektion – Oberhafenamt, Baumwall 7, 20459 Hamburg, Germany. *Tel:* 3504-1327/1326 (office hours), and 740 3151 (day and night). *Telex:* 02174999 OHHH D. *Cables:* Mercurbehoerde Hamburg. *FAX:* (040) 3504-1859. *Contact:* Captain J. Pollmann, Harbour Master (Tel: 7403151. Fax: 7403179).

HOLTENAU, Kiel Canal: 54.22 N. 10.09 E. (See Plan)

For entrance from Baltic, refer to "Kiel".
For entrance from Elbe, refer to "Brunsbuttel".

LOCATION: Holtenau is a part of the town of Kiel, it is located on the Northern side of the entrance to the Kiel Canal.

BERTHING: The outer harbour of Kiel-Holtenau (Lat. 54° 22.2' N. Long. 10° 09.2' E.) in the N.E. part of the old lock fore port, with water depths of 3.5 to 4.5 m. and 280 m. long quay location serves vessels up to 3.5 m. draft, 85 m. long and 13 m. beam as a berthing point. At the quay not more than 3 ships with a total beam of 28 m. can lie next to each other. To the West of this, is a 125 m. long berthing pier, known as Kumobrucke, with 4.5 m. draft alongside for vessels up to 3 m. draft, 40 m. long and 8.5 m. beam. No more than 2 vessels may lie alongside each other.

Between this pier and the shore is a yacht harbour for pleasure craft.

The inner harbour, to the East of the Holtenau Road-bridge, can only be reached through the lock of the Kiel Canal. From the berths in the inner harbour, vessels may not enter the locks without a Pilot if they are obliged to take on a Pilot for the Kiel Canal.

The Gasworks quay, just to the West of the New Locks, has a length of approx. 210 m. and a nominal depth of 10.4 m. The quay has cranes with a lifting capacity up to 8.5 tons. Vessels up to 160 m. in length and up to 9.7 m. draft can tie up at the Gasworks quay (when coming from the Baltic, because of permitted draft in Kiel Canal, draft must not exceed 9.5 m.). To the West of it, is a landing place for Wik-Holtenau passenger ferries.

To the East of the Holtenau Road-bridge is an approx. 536 m. long quay belonging to Zerssen and Co. This location is used mainly for fitting out and bunkering of vessels. On the North side of the inner harbour ships with dimensions permissible for the Kiel Canal can tie up at the dolphins but only with special permission of the Kiel Canal Authority.

SERVICES: In Holtenau are a Service Station of the German Hydrographic Institute, a Pilot Station, a border police station, a water police station, Customs control, Port Doctor, Sailors' Central Control, Sailors' engagement office, and a sailors' hostel.

An office for marine charts and nautical publications is located at the lock; good facilities exist for the quick supply of ships' equipment, victuals and fuels. Repairs to machinery installations, radar and wireless apparatus, supply of spare parts, and also the exchange of crews can be arranged without long voyage delay virtually whilst a vessel is passing through the canal. Shipbrokers' services are available.

IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.

Shore passes issued to passengers are chargeable.

AUTHORITY: Wasser-und Schiffahrtsamt Kiel-Holtenau, Schleuseninsel 2, P.O.Box 8068, 2300 Kiel 17. *Tel:* (0431) 385-1. *Telex:* 02-92836. *FAX:* (0431) 385-414. *Contact:* Port Captain, Tel: (0431) 385-450.

ITZEHOE: 53.56 N. 09.33 E. (See Plan)

DOCUMENTS:
2 Bonded Stores Lists
2 Crew Manifests
2 Crew Lists

PILOTAGE: Pilot available. Pilot boards at the entrance to the River Stor.

RESTRICTIONS: Entering River Stor at HW only. Proceeding to Itzehoe during daylight only, or up to Pilot. Departure from Itzehoe about 1 hour prior to HW.

MAX. SIZE: Length: 80 m. due to bends in river. Beam 12 m. Airdraft 18.50 m. due to height of Stor bridges. Draft 3.80 m. – 4.0 m.

RADIO/VHF: Elbe-Weser Radio on VHF Channel 16.

RADAR: *Radar Chain River Elbe:*

From Elbe Lanby to entrance River Stor:
Elbe – Ansteuerung-Radar VHF Channel 19
Neuwerk – 1-Radar VHF Channel 18
Neuwerk – 2-Radar VHF Channel 5
Cuxhaven – Radar VHF Channel 21
Belum – Radar VHF Channel 3
Brunsbuttel – Radar VHF Channel 4
Freiburg – 1-Radar VHF Channel 18
Freiburg – 2-Radar VHF Channel 22

Also see "General" before first port.

BERTHING: Total length: 420 m.

Depth alongside: At HW 4m.; at LW 1.90 m. (tidal range 2.20 m.). Bottom consists of soft mud.

CRANES: 2×3.5 tons lifting capacity and about 13 m. outreach and 1×5 tons lifting capacity and 12.5 m. outreach are available.

BULK HANDLING FACILITIES: *Grain:*

Loading: By conveyor-belt about 40 – 50 t.p.h. for heavy grain.

Discharging: By suction with 1 elevator pipe about 35 – 40 t.p.h. heavy grain. By grab/conveyor-belt 50 – 60 t.p.h. heavy grain. 100 – 120 t.p.h. fertiliser.

Grain silos of 35,000 tons capacity.

STEVEDORES: Cargo service, 2212 Brunsbuttel. Tel: 04852-87077. Telex: 28383 HTKB D.

Ahlmann – Transport GmbH, 2370 Rendsburg. Tel: 04331-5311. Telex: 29447. Cables: Ahltraship.

MEDICAL: Medical, hospital and dental facilities available.

DENSITY: Fresh water.

FRESH WATER: Available.

FUEL: All grades available by road tanker.

REPAIRS: Radio, radar, nautical equipment, engine, electrical and minor hull repairs possible.

SURVEYORS: Caleb Brett and SGS available from Hamburg.

Independent Marine Surveyors available at Brunsbuttel and Hamburg.

CUSTOMS ALLOWANCES: Customs allow each crew member 200 cigarettes and 1 bottle of spirits for consumption onboard.

OPENING/CLOSING HATCHES: Usually by crew.

REPATRIATION: Possible.

AIRPORT: Nearest airport at Hamburg.

TIME: GMT plus 1 hour. GMT plus 2 hours (last weekend in March to last weekend in September).

HOLIDAYS: 1st January, Good Friday, Easter Monday, 1st May, Ascension Day, Whit Monday, 17th June, Prayers Day, 25/26th December.

POLICE/AMBULANCE/FIRE: Police Tel: 110. Fire and Ambulance Tel: 112.

SERVICES: Provisions, stores, nautical publications and charts available.

IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.

Shore passes issued to passengers are chargeable.

AUTHORITY: Stadthafen Itzehoe, Gasstr. 18, 25509 Itzehoe, Germany. *Tel:* 04821-774-409. *Telex:* 28107 SWIZ D. *FAX:* 75710. *Contact:* Mr. Besel.

KAPPELN: 54.40 N. 09.56 E.

PILOTAGE: Pilot station at Kiel Lighthouse.

RESTRICTIONS: Depth of water between Schleimunde and Kappeln from 4.5 m. to 14 m. at normal water level. Distance from Schleimunde to Kappeln about 3.5 nautical miles.

Passage width of the swing bridge is 22.5 m.

MAX. SIZE: *North Harbour:* Max. LOA 90 m., max. beam 18 m., max. draft 4.5 m.

South Harbour: Max. LOA 90 m., max. beam 18 m., max. draft 4.5 m.

BERTHING: *North Harbour:* There is 1 grain silo available with a storage capacity of 4,500 tons. The loading/discharging rate is 40 t.p.h. – 100 t.p.h. 1 quay for discharging/loading cargo.

South Harbour: One grain silo available with a storage capacity of 4,000 tons. Loading/discharging rate 40 t.p.h. – 100 t.p.h. One quay for loading/ discharging cargo.

CRANES: *North Harbour:* One hydraulic mobile crane available with capacity of 5 tons.

South Harbour: One hydraulic mobile crane available with capacity of 5 tons.

STEVEDORES: *Working Hours:* Monday to Friday 0700 – 1800 hrs. Saturday 0700 – 1200 hrs.

BULK HANDLING FACILITIES: See "Berthing" and "Cranes".

FRESH WATER: Available.

FUEL: Available.

REPAIRS: Possible. Contact Alfred Eberhardt, Langestr. 2341 Arnis.

IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.

Shore passes issued to passengers are chargeable.

AUTHORITY: Shipbroker Artur Koch, Dehnthof 21, P.O.Box 1131, 2340 Kappeln. *Tel:* (04642) 2354 and 4154. *Telex:* 22681 Koch D. *Cables:* Arturkoch Kappeln. *FAX:* 04642-3184. *Contact:* H.A. Koch, Harbour Master.

KIEL: 54.19 N. 10.10 E. (See Plan)

DOCUMENTS:

Stores List.
Bills of Lading.
Manifest.
Crew List.
Health Declaration.
Derat Certificate.
If loading/unloading cargo, following also required:
Ship's Stores List.
Crew Possessions List.
Cargo Manifest.
Bills of Lading.
Customs Declaration.
Local Agents will advise Master on board regarding these Clearance Documents.

DEEP-SEA PILOTAGE: See "Baltic Deep-Sea Pilotage".

PILOTAGE: Pilotage compulsory for vessels with LOA in excess of 90.0 m. or beam in excess of 13.0 m., oil, gas and chemical tankers.

Vessels proceeding in the approach area or through the Kiel Canal are obliged to take on a Pilot.

Vessels and push-type trains, as well as tug trains, having the greatest possible max. draft of 3.1 m. and belonging to traffic group 1 are exempted from the obligatory pilot service. Vessels with a breadth in excess of 15 m. or with a gross tonnage of over 2,500 tons (maximum tonnage) must take on recognised helmsmen (canal helmsmen) for the canal passage. Pilot station, tel. 362858. ETA required in advance. Pilot boat can be found near Kiel Lighthouse and also off the entrance to Kiel Canal. Pilot boats are white with red superstructure with "Lotse" painted on both sides. Signal for Pilot is flag "G" over numeral pennant 1. Pilots for Kiel Harbour also available and recommended if port is not familiar. Also see "Shipmaster's Report".

ANCHORAGE: Safe anchorages at Holtenau-Reede and at Heikendorf-Reede for vessels up to 9.7 m. draft.

RESTRICTIONS: Non gas-free tankers must give advance notice of arrival and will require chemist's certificate before entering harbour area. Max. LOA for Kiel port is 245 m. Special permission may be granted for greater lengths.

Speed limit 10 knots South of line Bulk/Ehrenmal Laboe. Also see "Shipmaster's Report".

MAX. SIZE: For Nordhafen and ships passing Canal, 235 m. length, 32.5 m. beam and 40 m. above the water level. For vessels up to 160 m. in length, the max. permitted draft is 9.5 m. In the case of vessels with length in excess of 160 m. and over 20 m. breadth, the max. permissible draft are shown in the following table (draft data in dm.).

Vessel Length (m.)	*Vessel's Breadth (m.)* *20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*	*32*	*32.5*
	Max. permissible draft (dm)													
160	95	95	95	95	95	95	95	95	94	93	92	91	89	89
163	95	95	95	95	95	95	95	94	93	92	91	90	89	88
166	95	95	95	95	95	95	95	94	93	92	91	90	89	88
169	95	95	95	95	95	95	94	93	92	90	89	88	87	86
172	95	95	95	95	95	94	93	92	91	90	88	87	86	85
175	95	95	95	95	95	94	93	91	90	89	88	86	85	84
178	95	95	95	95	94	93	92	90	89	88	87	85	84	83
181	95	95	95	94	93	92	91	99	88	87	86	85	83	83
184	95	95	95	93	92	91	90	89	87	86	85	84	83	82
187	95	95	94	93	91	90	89	88	86	85	84	83	82	81
190	95	94	93	92	91	89	88	87	86	84	83	82	81	80
193	95	93	92	91	90	89	87	86	85	84	83	81	80	79
196	94	93	91	90	89	88	86	85	84	83	82	80	79	78
199	93	91	90	89	88	87	85	84	83	82	81	79	78	78
202	92	91	90	89	87	86	85	84	82	81	80	79	77	77
205	91	90	89	88	86	85	84	83	82	80	79	78	77	76
208	90	89	88	87	85	84	83	82	81	80	78	77	76	75
210	90	89	87	86	85	84	83	81	80	79	77	76	75	74
214	89	88	86	85	84	83	82	80	79	78	76	75	74	74
217	88	87	85	84	83	82	80	79	78	77	75	74	74	73
220	87	86	84	83	82	81	80	78	77	76	75	74	73	73
223	86	85	84	83	81	80	79	77	76	75	74	73	72	72
226	85	84	83	82	80	79	78	77	75	74	74	73	72	71
229	84	83	82	81	79	78	77	76	74	74	73	72	71	71
232	84	83	81	80	79	77	76	75	74	73	72	72	71	70
235	83	81	80	79	78	76	75	74	73	73	72	71	70	70

Depth at harbour quays: Binnenhafen 10 m.; Scheerhafen, 10.00 m.

HEALTH: If suspected infectious disease on board, inform harbour authorities by radio in advance.

RADIO: Kiel Radio, call sign DAO. Tel. 39491.

VHF: Kiel Port radio on continuous watch during office hours on Channel 16, working on Channel 11.

Office hours are Monday to Thursday 0730 hrs. – 1600 hrs., and Friday 0730 hrs. – 1500 hrs. After office hours: Tel: 0171-6497373.

TUGS: If required tugs normally join vessel just off berth. Can be ordered by Kiel Radio or through Agents.

BERTHING: No particular restrictions except for vessels in distress, or carrying explosives or tankers not gas-free. In these cases special permission of Harbour Authorities required for berthing.

Commercial Harbour:

Depth of water up to 11.0 m.; quay lengths 4,080 m.; open storage areas of 176,950 sq.m.; covered shed space of 54,530 sq.m.; silos of 270,000 tons overall capacity; fuel depots; 16 cranes up to 45 tons lifting capacity; siding tracks; 12 Ro/Ro piers.

Binnenhafen Ports:

Osteseekai: The terminal is for the exclusive use of passenger and car ferries. Depth of water 7.5 m. Quay length 500 m. Ro/Ro Piers No. 3-6.

Sartorikai: Depth of water 7.0 m. (Southern part) and 5.5 m. (Northern part); quay length 200 m.; open storage areas of 1,000 sq.m.; covered shed space of 15,000 sq.m.; 2 cranes of up to 10 tons lifting capacity.

Schweden-Kai: The terminal is for exclusive use of passenger and car ferries. Depth of water 10.0 m.; quay length 180 m.; Ro/Ro Pier No. 7.

Bollhornkai Nord: Depth of water 10.0 m.; quay length 270 m.; 2 cranes of up to 24 tons lifting capacity; Ro/Ro Piers No. 8 and 9.

Bollhornkai Sud: Depth of water 10.0 m.; quay length 300 m.; open storage areas of 7,750 sq.m.; Ro/Ro Pier No. 10.

Bahnhofskai: Depth of water 6.0 m.; quay length 400 m.; open storage areas of 1,000 sq.m.

Scheerhafen: Depth of water 10.0 m.; quay length 300 m.; open storage areas of 8,000 sq.m.; covered shed space of 1,000 sq.m.; private fuel depots of 36,000 cu.m; private tanker discharging bridge and facilities for receiving dirty ballast; 2 cranes of 10 tons lifting capacity.

Nordhafen: Situated in the Kiel Canal. Depth of water 11.0 m.; max. draft 9.5 m.; quay length 1,030 m.; open storage areas of 15,550 sq.m.; covered shed space of 28,530 sq.m.; 77,000 ton silo with elevator of 200 t.p.h. loading/unloading performance; oil seed mill 6 cranes of 25 tons lifting capacity; 1 mobile crane of 45 tons capacity; Ro/Ro Pier No. 1.

Ostuferhafen: Depth of water up to 10.0 m.; quay length 1,300 m.; open storage areas of 150,000 sq.m.; covered shed space of 20,000 sq.m.; 177,000 ton silos; 2 cranes 40/45 tons lifting capacity; Ro/Ro Piers No. 11, 12, 13 and 14.

MEDICAL: Doctors, hospitals, ambulances available. Advance notice to Agents recommended if medical assistance required. Vessels coming from European ports need Derat Certificate. Vessels from other ports need in addition International Vaccination Certificates.

For all cases of poisoning needing special and urgent treatment telephone 597 4268, Medical University Clinic, Schittenhelmstrasse.

TANKERS: Unloading/Loading/Bunkering berths operated by private companies; slop discharge facilities available.

DENSITY: 1013 - 1015.

FRESH WATER: Available at all quays and in Holtenau Locks. Cost per ton: Up to 100 tons = DM 6.70; over 100 tons = DM 4.00.

FUEL: All grades available. Preferable to order in advance through Agents.

FIRE PRECAUTIONS: Tankers should be prepared to leave port at any time. To be berthed with bow heading seaward. A valid Gas-free Certificate given by chemist in Kiel district is required before entering harbour area.

CONSULS:

Austria	tel. 552505	Finland	tel. 9810
Belgium	tel. 95152	Norway	tel. 5921050
Chile	tel. 337879	Sweden	tel. 3017/221
Denmark	tel. 970102	U.K.	tel. 331971

Many Consulates in Hamburg.

REPAIRS: All types of repairs possible.

DRY DOCKS: Floating Dock. No. 2, 22,500 tons.

Dry Docks: No. 5, 794 ft. long, 95 ft. wide; No. 6, 661 ft. long, 95 ft. wide; No. 7, 1,018 ft. long, 164 ft. wide; No. 8, 951 ft. long, 144 ft. wide. No. 8A, 1,395 ft. long, 292 ft. wide.

SURVEYORS: Germanischer Lloyd, Sophienblatt 1, D-23103 Kiel. Tel: 0431-675066. Fax: 0431-673235.

Lloyd's Register of Shipping, Wikengerstrasse 11, Kiel 14. Tel: 0431-74050. Fax: 0431-734715.

Berufsgenossenschaft, Preusserstrasse 1, Kiel 1. Tel: 0431-561023.

GANGWAY/DECK WATCHMEN: Not required.

OPENING/CLOSING HATCHES: Normally by ship's crew. Can be arranged by stevedores if required.

CUSTOMS ALLOWANCES: 200 cigarettes (250 grams tobacco), 1 bottle of spirits and 1 bottle of wine.

REPATRIATION: No restrictions. Can also be arranged in the locks of Kiel Canal by local Agents. Valid passports required.

Bus and coach station: At Kiel, near Bollhornkai. Coaches to Hamburg Airport and other destinations.

Railway Station: Near bus and coach station. Trains to Hamburg, Lubeck, Berlin, Bremen, Hannover and other destinations.

AIRPORT: At Kiel, local flights to Berlin, Cologne and Frankfurt. Nearest international airport at Hamburg, about 90 km. away.

TIME: GMT plus 1 hour. GMT plus 2 hours (last weekend in March to last weekend in September).

HOLIDAYS: New Year's Day, Good Friday, Easter (2 days), Ascension Day, Whitsun (2 days), Atonement Day, May 1st, October 3rd, Christmas (2 days). Work can be arranged on above holidays.

POLICE/FIRE/AMBULANCE: Police, Tel: 110; Harbour Police 579320; Ambulance 112, alternative 19222; Fire, Tel: 112.

TELEPHONES: Installed at ferry terminals and available on board ships. Public phones near quays.

SERVICES: All services available.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.

Shore passes issued to passengers are chargeable.

GARBAGE DISPOSAL: Garbage service provided alongside. It is ordered from Hafen und Verkehr. Tel: 0431-9822-152.

Charges: 1.1 cu.m. container DM 135.70/provision. 5 cu.m. container DM 418.60/provision. Collection is arranged when necessary.

WASTE OIL DISPOSAL:

1. H.Stallzus GmbH, Kiel. Tel: 0431-30901. Fax: 0431-338161. Location Scheerhafen, Tankerloschbrucke. Barges and tanker trucks.
2. E.Nohren GmbH, Kiel. Tel: 0431-321032. Fax: 0431-321051. Tanker trucks with maximum capacity 200 cu.m.
3. Arge Schiffsentsortung. Tel: 0431-782030. Fax: 0431-787702. Barges and tanker trucks, maximum capacity 400 cu.m.

SEAMAN'S CLUBS: Seaman's Home and Mission: Kanalstr. 64, D-2300 Kiel 17. Tel: 361206. International telephone connections in every room, church services, books and games available.

IDENTIFICATION CARDS: Not required.

GENERAL: *Garbage/Sewage Removal:* No discharge overboard of black and/or grey water permitted. Shore facilities available at Schwedenkai, Bollhornkai Nord and Sud, and Ostuferhafen. For all other quays, mobile units (tanks lorries) available.

DEVELOPMENTS: New "3rd" Ferry Terminal "Norwegenkai" on East bank opposite Bollhornkai Sud under construction and be completed by early 1997, to be used by passenger ferries, Ro-Ro cargo ferries and cruise vessels. Two Ro-Ro piers available.

SHIPMASTER'S REPORT: 1980.

"KIEL PILOTS" can be contacted on VHF Channel 16 and Channel 14, 2 hours before arriving at Kiel Lighthouse, for a Pilot for Kiel Harbour.

For vessels intending to transit the canal, send a message at least 3 hours in advance to "FORDE LOTSE – KIEL" by radio giving ETA, draft, g.r.t. and destination. Any request to arrange a Pilot at the other end of the canal may also be included in the message.

The maximum air draft allowed in the canal is 40 m. (from water line to highest point of the ship).

AUTHORITY: Hafen und Seemannsamt der Landeshauptstadt Kiel, Bollhornkai I, P.O. Box 2367, 24103 Kiel, Germany. *Tel:* 0431-901 1073. *FAX:* 0431-94477. *Contact:* Captain J. Morgenroth, Harbour Master (radio telephone 01611403705).

Wasser-und Schiffahrtsamt Kiel-Holtenau, P.O.Box 8068, 24103 Kiel. *Tel:* 0431-36030. *Telex:* 02-92836. *FAX:* 0431-3603454.

KIEL CANAL: (See Plan)

For entrance from Baltic, refer to "Kiel".
For entrance from Elbe, refer to "Brunsbuttel".

DEEP SEA PILOTAGE: Baltic Pilots Kiel ("Uberseelotsen Ostsee Kiel-Holtenau e.V.") is the address for ships entering the Baltic Sea via Kiel-Canal or from ports of the Federal Republic of Germany which require a Deep Sea Pilot for the Baltic Sea

The Baltic Pilots Kiel have 48 members. All members carry the "Red Licence" of BPAC which is the only licence acknowledged by all Baltic Governments.

Baltic Pilots Kiel: Tel: 0431-36 28 58 (24 hours a day). 0431-3 68 68 (office hours). Cables: Balticpilots Kiel. Telex: 299 857 bwki d. Postal Address: Uberseelotsen Ostee e.V. Schleuseninsel 6 D-2300 Kiel 17.

Also see "General – Deep-Sea Pilotage" before first port and "Baltic Deep-Sea Pilotage".

RADIO: Advise ETA at Elbe Lanby (or Kiel Lighthouse). Confirm ETA 12 hours before arrival at Pilot Station.

VHF: Approaching from the Baltic Sea, Kiel Radio listens on Channel 16 VHF and will notify the Kiel Pilot.

IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.

Shore passes issued to passengers are chargeable.

GARBAGE DISPOSAL: Not available in the locks of Kiel Canal.

WASTE OIL DISPOSAL: Not available in the locks of Kiel Canal.

SEAMAN'S CLUBS: Seamans Mission, Kanalstrasse 64, 2300 Kiel. Tel: 0431/361206 or 331492. Accommodation available.

CURRENCY: Deutsche Mark (DM).

GENERAL:

Additional information required prior to Kiel Canal transit: As a result of security regulations which became effective in 1978, the following regulations issued by the competent Authorities must be complied with when transiting the Kiel Canal.

Vessels which are potentially dangerous, which include pushing and towing units, carrying material listed in the special material list in bulk (See "Wilhelmshaven"), or after discharging mineral oil or petroleum products with a flash point below 35°C and still not gas free or inert, including Reactor vessels, must report as follows:

1. Coming from the North Sea or from a port within the River Elbe District or when transiting the Kiel Canal.

24 hours before entering the River Elbe, in writing, at the latest after clearing the last port:

to the Wasser-und Schiffahrtsamt Cuxhaven,
Am Alten Hafen 2, 24472 Cuxhaven. Telex: 292836.

With the following information:

1. Name and Call Sign of vessel. Estimated arrival time at first reporting position (day, date, local time).
2. Nationality of vessel.
3. Overall length and draft of vessel.
4. Port of departure and destination port.
5. Details and quantity of cargo with particulars of the stated dangerous cargo according to the special material list.
6. If chemicals are carried, a declaration that the vessel is in possession of a certificate as required by the IMO code for Chemical Tankers as "New Ship".
7. A declaration of any known defect in the vessel or its cargo.
8. Name of the Owners of the vessel.

2. Coming from the Baltic Sea and transiting the Kiel Canal as well as the River Elbe

24 hours before entering Kiel Bay, in writing, at the latest after clearing the last port:

To the Wasser-und Schiffahrtsamt Kiel-Holtenau,
Schleuseninsel 2, 24159 Kiel. Telex 292836.

giving the same information as required in 1. (above) for vessels entering the River Elbe.

3. Coming from a port within the Kiel Canal Range

Reports as per 1 and 2 have to be given.

To conform with the pilotage regulations for Kiel Bay and the River Elbe, the above mentioned vessels which are potentially dangerous are obliged to engage the services of a Pilot.

Further instructions are in force for above mentioned vessels when navigating within the River Elbe and Kiel Bay, as well as when transiting the Kiel Canal, or passing certain points. Pilots will advise the Masters of vessels of the relevant regulations and assist.

The Port Authorities at Cuxhaven and Kiel will inform each other about arrival of vessels with dangerous cargoes.

Potentially dangerous sea-going vessels of up to 300 g.r.t. should contact the relative Port Authority.

AUTHORITY: Wasser-und Schiffahrtsamt Kiel-Holtenau, (P.O.Box 8068, 24154 Kiel) Schleuseninsel 2, 24159 Kiel, Germany. *Tel:* (0431) 3603-0. *Telex:* 02-292836. *FAX:* (0431) 3603-454. *Contact:* H. Meinert, Port Captain, Tel: (0431) 3603-450.

STEVEDORES: Cargo service, 2212 Brunsbuttel. Tel: 04852-87077. Telex: 28383 HTKB D.

Ahlmann – Transport GmbH, 2370 Rendsburg. Tel: 04331-5311. Telex: 29447. Cables: Ahltraship.

MEDICAL: Medical, hospital and dental facilities available.

DENSITY: Fresh water.

FRESH WATER: Available.

FUEL: All grades available by road tanker.

REPAIRS: Radio, radar, nautical equipment, engine, electrical and minor hull repairs possible.

SURVEYORS: Caleb Brett and SGS available from Hamburg.

Independent Marine Surveyors available at Brunsbuttel and Hamburg.

CUSTOMS ALLOWANCES: Customs allow each crew member 200 cigarettes and 1 bottle of spirits for consumption onboard.

OPENING/CLOSING HATCHES: Usually by crew.

REPATRIATION: Possible.

AIRPORT: Nearest airport at Hamburg.

TIME: GMT plus 1 hour. GMT plus 2 hours (last weekend in March to last weekend in September).

HOLIDAYS: 1st January, Good Friday, Easter Monday, 1st May, Ascension Day, Whit Monday, 17th June, Prayers Day, 25/26th December.

POLICE/AMBULANCE/FIRE: Police Tel: 110. Fire and Ambulance Tel: 112.

SERVICES: Provisions, stores, nautical publications and charts available.

IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.

Shore passes issued to passengers are chargeable.

AUTHORITY: Stadthafen Itzehoe, Gasstr. 18, 25509 Itzehoe, Germany. *Tel:* 04821-774-409. *Telex:* 28107 SWIZ D. *FAX:* 75710. *Contact:* Mr. Besel.

KAPPELN: 54.40 N. 09.56 E.

PILOTAGE: Pilot station at Kiel Lighthouse.

RESTRICTIONS: Depth of water between Schleimunde and Kappeln from 4.5 m. to 14 m. at normal water level. Distance from Schleimunde to Kappeln about 3.5 nautical miles.

Passage width of the swing bridge is 22.5 m.

MAX. SIZE: *North Harbour:* Max. LOA 90 m., max. beam 18 m., max. draft 4.5 m.

South Harbour: Max. LOA 90 m., max. beam 18 m., max. draft 4.5 m.

BERTHING: *North Harbour:* There is 1 grain silo available with a storage capacity of 4,500 tons. The loading/discharging rate is 40 t.p.h. – 100 t.p.h. 1 quay for discharging/loading cargo.

South Harbour: One grain silo available with a storage capacity of 4,000 tons. Loading/discharging rate 40 t.p.h. – 100 t.p.h. One quay for loading/ discharging cargo.

CRANES: *North Harbour:* One hydraulic mobile crane available with capacity of 5 tons.

South Harbour: One hydraulic mobile crane available with capacity of 5 tons.

STEVEDORES: *Working Hours:* Monday to Friday 0700 – 1800 hrs. Saturday 0700 – 1200 hrs.

BULK HANDLING FACILITIES: See "Berthing" and "Cranes".

FRESH WATER: Available.

FUEL: Available.

REPAIRS: Possible. Contact Alfred Eberhardt, Langestr. 2341 Arnis.

IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.

Shore passes issued to passengers are chargeable.

AUTHORITY: Shipbroker Artur Koch, Dehnthof 21, P.O.Box 1131, 2340 Kappeln. *Tel:* (04642) 2354 and 4154. *Telex:* 22681 Koch D. *Cables:* Arturkoch Kappeln. *FAX:* 04642-3184. *Contact:* H.A. Koch, Harbour Master.

KIEL: 54.19 N. 10.10 E. (See Plan)

DOCUMENTS:

Stores List.
Bills of Lading.
Manifest.
Crew List.
Health Declaration.
Derat Certificate.
If loading/unloading cargo, following also required:
Ship's Stores List.
Crew Possessions List.
Cargo Manifest.
Bills of Lading.
Customs Declaration.

Local Agents will advise Master on board regarding these Clearance Documents.

DEEP-SEA PILOTAGE: See "Baltic Deep-Sea Pilotage".

PILOTAGE: Pilotage compulsory for vessels with LOA in excess of 90.0 m. or beam in excess of 13.0 m., oil, gas and chemical tankers.

Vessels proceeding in the approach area or through the Kiel Canal are obliged to take on a Pilot.

Vessels and push-type trains, as well as tug trains, having the greatest possible max. draft of 3.1 m. and belonging to traffic group 1 are exempted from the obligatory pilot service. Vessels with a breadth in excess of 15 m. or with a gross tonnage of over 2,500 tons (maximum tonnage) must take on recognised helmsmen (canal helmsmen) for the canal passage. Pilot station, tel. 362858. ETA required in advance. Pilot boat can be found near Kiel Lighthouse and also off the entrance to Kiel Canal. Pilot boats are white with red superstructure with "Lotse" painted on both sides. Signal for Pilot is flag "G" over numeral pennant 1. Pilots for Kiel Harbour also available and recommended if port is not familiar. Also see "Shipmaster's Report".

ANCHORAGE: Safe anchorages at Holtenau-Reede and at Heikendorf-Reede for vessels up to 9.7 m. draft.

RESTRICTIONS: Non gas-free tankers must give advance notice of arrival and will require chemist's certificate before entering harbour area. Max. LOA for Kiel port is 245 m. Special permission may be granted for greater lengths.

Speed limit 10 knots South of line Bulk/Ehrenmal Laboe. Also see "Shipmaster's Report".

MAX. SIZE: For Nordhafen and ships passing Canal, 235 m. length, 32.5 m. beam and 40 m. above the water level. For vessels up to 160 m. in length, the max. permitted draft is 9.5 m. In the case of vessels with length in excess of 160 m. and over 20 m. breadth, the max. permissible draft are shown in the following table (draft data in dm.).

Vessel Length (m.)	*Vessel's Breadth (m.)*													
	20	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*	*32*	*32.5*
	Max. permissible draft (dm)													
160	95	95	95	95	95	95	95	95	94	93	92	91	89	89
163	95	95	95	95	95	95	95	94	93	92	91	90	89	88
166	95	95	95	95	95	95	95	94	93	92	91	90	89	88
169	95	95	95	95	95	95	94	93	92	90	89	88	87	86
172	95	95	95	95	95	94	93	92	91	90	88	87	86	85
175	95	95	95	95	95	94	93	91	90	89	88	86	85	84
178	95	95	95	95	94	93	92	90	89	88	87	85	84	83
181	95	95	95	94	93	92	91	99	88	87	86	85	83	83
184	95	95	95	93	92	91	90	89	87	86	85	84	83	82
187	95	95	94	93	91	90	89	88	86	85	84	83	82	81
190	95	94	93	92	91	89	88	87	86	84	83	82	81	80
193	95	93	92	91	90	89	87	86	85	84	83	81	80	79
196	94	93	91	90	89	88	86	85	84	83	82	80	79	78
199	93	91	90	89	88	87	85	84	83	82	81	79	78	78
202	92	91	90	89	87	86	85	84	82	81	80	79	77	77
205	91	90	89	88	86	85	84	83	82	80	79	78	77	76
208	90	89	88	87	85	84	83	82	81	80	78	77	76	75
210	90	89	87	86	85	84	83	81	80	79	77	76	75	74
214	89	88	86	85	84	83	82	80	79	78	76	75	74	74
217	88	87	85	84	83	82	80	79	78	77	75	74	74	73
220	87	86	84	83	82	81	80	78	77	76	75	74	73	73
223	86	85	84	83	81	80	79	77	76	75	74	73	72	72
226	85	84	83	82	80	79	78	77	75	74	74	73	72	71
229	84	83	82	81	79	78	77	76	74	74	73	72	71	71
232	84	83	81	80	79	77	76	75	74	73	72	72	71	70
235	83	81	80	79	78	76	75	74	73	73	72	71	70	70

Depth at harbour quays: Binnenhafen 10 m.; Scheerhafen, 10.00 m.

HEALTH: If suspected infectious disease on board, inform harbour authorities by radio in advance.

RADIO: Kiel Radio, call sign DAO. Tel. 39491.

VHF: Kiel Port radio on continuous watch during office hours on Channel 16, working on Channel 11.

Office hours are Monday to Thursday 0730 hrs. – 1600 hrs., and Friday 0730 hrs. – 1500 hrs. After office hours: Tel: 0171-6497373.

TUGS: If required tugs normally join vessel just off berth. Can be ordered by Kiel Radio or through Agents.

BERTHING: No particular restrictions except for vessels in distress, or carrying explosives or tankers not gas-free. In these cases special permission of Harbour Authorities required for berthing.

Commercial Harbour:

Depth of water up to 11.0 m.; quay lengths 4,080 m.; open storage areas of 176,950 sq.m.; covered shed space of 54,530 sq.m.; silos of 270,000 tons overall capacity; fuel depots; 16 cranes up to 45 tons lifting capacity; siding tracks; 12 Ro/Ro piers.

Binnenhafen Ports:

Osteseekai: The terminal is for the exclusive use of passenger and car ferries. Depth of water 7.5 m. Quay length 500 m. Ro/Ro Piers No. 3-6.

Sartorikai: Depth of water 7.0 m. (Southern part) and 5.5 m. (Northern part); quay length 200 m.; open storage areas of 1,000 sq.m.; covered shed space of 15,000 sq.m.; 2 cranes of up to 10 tons lifting capacity.

Schweden-Kai: The terminal is for exclusive use of passenger and car ferries. Depth of water 10.0 m.; quay length 180 m.; Ro/Ro Pier No. 7.

Bollhornkai Nord: Depth of water 10.0 m.; quay length 270 m.; 2 cranes of up to 24 tons lifting capacity; Ro/Ro Piers No. 8 and 9.

Bollhornkai Sud: Depth of water 10.0 m.; quay length 300 m.; open storage areas of 7,750 sq.m.; Ro/Ro Pier No. 10.

Bahnhofskai: Depth of water 6.0 m.; quay length 400 m.; open storage areas of 1,000 sq.m.

Scheerhafen: Depth of water 10.0 m.; quay length 300 m.; open storage areas of 8,000 sq.m.; covered shed space of 1,000 sq.m.; private fuel depots of 36,000 cu.m; private tanker discharging bridge and facilities for receiving dirty ballast; 2 cranes of 10 tons lifting capacity.

Nordhafen: Situated in the Kiel Canal. Depth of water 11.0 m.; max. draft 9.5 m.; quay length 1,030 m.; open storage areas of 15,550 sq.m.; covered shed space of 28,530 sq.m.; 77,000 ton silo with elevator of 200 t.p.h. loading/unloading performance; oil seed mill 6 cranes of 25 tons lifting capacity; 1 mobile crane of 45 tons capacity; Ro/Ro Pier No. 1.

Ostuferhafen: Depth of water up to 10.0 m.; quay length 1,300 m.; open storage areas of 150,000 sq.m.; covered shed space of 20,000 sq.m.; 177,000 ton silos; 2 cranes 40/45 tons lifting capacity; Ro/Ro Piers No. 11, 12, 13 and 14.

MEDICAL: Doctors, hospitals, ambulances available. Advance notice to Agents recommended if medical assistance required. Vessels coming from European ports need Derat Certificate. Vessels from other ports need in addition International Vaccination Certificates.

For all cases of poisoning needing special and urgent treatment telephone 597 4268, Medical University Clinic, Schittenhelmstrasse.

TANKERS: Unloading/Loading/Bunkering berths operated by private companies; slop discharge facilities available.

DENSITY: 1013 - 1015.

FRESH WATER: Available at all quays and in Holtenau Locks. Cost per ton: Up to 100 tons = DM 6.70; over 100 tons = DM 4.00.

FUEL: All grades available. Preferable to order in advance through Agents.

FIRE PRECAUTIONS: Tankers should be prepared to leave port at any time. To be berthed with bow heading seaward. A valid Gas-free Certificate given by chemist in Kiel district is required before entering harbour area.

CONSULS:

Austria	tel. 552505	Finland	tel. 9810
Belgium	tel. 95152	Norway	tel. 5921050
Chile	tel. 337879	Sweden	tel. 3017/221
Denmark	tel. 970102	U.K.	tel. 331971

Many Consulates in Hamburg.

REPAIRS: All types of repairs possible.

DRY DOCKS: Floating Dock. No. 2, 22,500 tons.

Dry Docks: No. 5, 794 ft. long, 95 ft. wide; No. 6, 661 ft. long, 95 ft. wide; No. 7, 1,018 ft. long, 164 ft. wide; No. 8, 951 ft. long, 144 ft. wide. No. 8A, 1,395 ft. long, 292 ft. wide.

SURVEYORS: Germanischer Lloyd, Sophienblatt 1, D-23103 Kiel. Tel: 0431-675066. Fax: 0431-673235.

Lloyd's Register of Shipping, Wikengerstrasse 11, Kiel 14. Tel: 0431-74050. Fax: 0431-734715.

Berufsgenossenschaft, Preusserstrasse 1, Kiel 1. Tel: 0431-561023.

GANGWAY/DECK WATCHMEN: Not required.

OPENING/CLOSING HATCHES: Normally by ship's crew. Can be arranged by stevedores if required.

CUSTOMS ALLOWANCES: 200 cigarettes (250 grams tobacco), 1 bottle of spirits and 1 bottle of wine.

REPATRIATION: No restrictions. Can also be arranged in the locks of Kiel Canal by local Agents. Valid passports required.

Bus and coach station: At Kiel, near Bollhornkai. Coaches to Hamburg Airport and other destinations.

Railway Station: Near bus and coach station. Trains to Hamburg, Lubeck, Berlin, Bremen, Hannover and other destinations.

AIRPORT: At Kiel, local flights to Berlin, Cologne and Frankfurt. Nearest international airport at Hamburg, about 90 km. away.

TIME: GMT plus 1 hour. GMT plus 2 hours (last weekend in March to last weekend in September).

HOLIDAYS: New Year's Day, Good Friday, Easter (2 days), Ascension Day, Whitsun (2 days), Atonement Day, May 1st, October 3rd, Christmas (2 days). Work can be arranged on above holidays.

POLICE/FIRE/AMBULANCE: Police, Tel: 110; Harbour Police 579320; Ambulance 112, alternative 19222; Fire, Tel: 112.

TELEPHONES: Installed at ferry terminals and available on board ships. Public phones near quays.

SERVICES: All services available.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.

Shore passes issued to passengers are chargeable.

GARBAGE DISPOSAL: Garbage service provided alongside. It is ordered from Hafen und Verkehr. Tel: 0431-9822-152.

Charges: 1.1 cu.m. container DM 135.70/provision. 5 cu.m. container DM 418.60/provision. Collection is arranged when necessary.

WASTE OIL DISPOSAL:

1. H.Stallzus GmbH, Kiel. Tel: 0431-30901. Fax: 0431-338161. Location Scheerhafen, Tankerloschbrucke. Barges and tanker trucks.
2. E.Nohren GmbH, Kiel. Tel: 0431-321032. Fax: 0431-321051. Tanker trucks with maximum capacity 200 cu.m.
3. Arge Schiffsentsortung. Tel: 0431-782030. Fax: 0431-787702. Barges and tanker trucks, maximum capacity 400 cu.m.

SEAMAN'S CLUBS: Seaman's Home and Mission: Kanalstr. 64, D-2300 Kiel 17. Tel: 361206. International telephone connections in every room, church services, books and games available.

IDENTIFICATION CARDS: Not required.

GENERAL: *Garbage/Sewage Removal:* No discharge overboard of black and/or grey water permitted. Shore facilities available at Schwedenkai, Bollhornkai Nord and Sud, and Ostuferhafen. For all other quays, mobile units (tanks lorries) available.

DEVELOPMENTS: New "3rd" Ferry Terminal "Norwegenkai" on East bank opposite Bollhornkai Sud under construction and be completed by early 1997, to be used by passenger ferries, Ro-Ro cargo ferries and cruise vessels. Two Ro-Ro piers available.

SHIPMASTER'S REPORT: 1980.

"KIEL PILOTS" can be contacted on VHF Channel 16 and Channel 14, 2 hours before arriving at Kiel Lighthouse, for a Pilot for Kiel Harbour.

For vessels intending to transit the canal, send a message at least 3 hours in advance to "FORDE LOTSE – KIEL" by radio giving ETA, draft, g.r.t. and destination. Any request to arrange a Pilot at the other end of the canal may also be included in the message.

The maximum air draft allowed in the canal is 40 m. (from water line to highest point of the ship).

AUTHORITY: Hafen und Seemannsamt der Landeshauptstadt Kiel, Bollhornkai I, P.O. Box 2367, 24103 Kiel, Germany. *Tel:* 0431-901 1073. *FAX:* 0431-94477. *Contact:* Captain J. Morgenroth, Harbour Master (radio telephone 01611403705).

Wasser-und Schiffahrtsamt Kiel-Holtenau, P.O.Box 8068, 24103 Kiel. *Tel:* 0431-36030. *Telex:* 02-92836. *FAX:* 0431-3603454.

KIEL CANAL: (See Plan)

For entrance from Baltic, refer to "Kiel".
For entrance from Elbe, refer to "Brunsbuttel".

DEEP SEA PILOTAGE: Baltic Pilots Kiel ("Uberseelotsen Ostsee Kiel-Holtenau e.V.") is the address for ships entering the Baltic Sea via Kiel-Canal or from ports of the Federal Republic of Germany which require a Deep Sea Pilot for the Baltic Sea

The Baltic Pilots Kiel have 48 members. All members carry the "Red Licence" of BPAC which is the only licence acknowledged by all Baltic Governments.

Baltic Pilots Kiel: Tel: 0431-36 28 58 (24 hours a day). 0431-3 68 68 (office hours). Cables: Balticpilots Kiel. Telex: 299 857 bwki d. Postal Address: Uberseelotsen Ostee e.V. Schleuseninsel 6 D-2300 Kiel 17.

Also see "General – Deep-Sea Pilotage" before first port and "Baltic Deep-Sea Pilotage".

RADIO: Advise ETA at Elbe Lanby (or Kiel Lighthouse). Confirm ETA 12 hours before arrival at Pilot Station.

VHF: Approaching from the Baltic Sea, Kiel Radio listens on Channel 16 VHF and will notify the Kiel Pilot.

IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.

Shore passes issued to passengers are chargeable.

GARBAGE DISPOSAL: Not available in the locks of Kiel Canal.

WASTE OIL DISPOSAL: Not available in the locks of Kiel Canal.

SEAMAN'S CLUBS: Seamans Mission, Kanalstrasse 64, 2300 Kiel. Tel: 0431/361206 or 331492. Accommodation available.

CURRENCY: Deutsche Mark (DM).

GENERAL:

Additional information required prior to Kiel Canal transit: As a result of security regulations which became effective in 1978, the following regulations issued by the competent Authorities must be complied with when transiting the Kiel Canal.

Vessels which are potentially dangerous, which include pushing and towing units, carrying material listed in the special material list in bulk (See "Wilhelmshaven"), or after discharging mineral oil or petroleum products with a flash point below 35°C and still not gas free or inert, including Reactor vessels, must report as follows:

1. Coming from the North Sea or from a port within the River Elbe District or when transiting the Kiel Canal.

24 hours before entering the River Elbe, in writing, at the latest after clearing the last port:

to the Wasser-und Schiffahrtsamt Cuxhaven,
Am Alten Hafen 2, 24472 Cuxhaven. Telex: 292836.

With the following information:

1. Name and Call Sign of vessel. Estimated arrival time at first reporting position (day, date, local time).
2. Nationality of vessel.
3. Overall length and draft of vessel.
4. Port of departure and destination port.
5. Details and quantity of cargo with particulars of the stated dangerous cargo according to the special material list.
6. If chemicals are carried, a declaration that the vessel is in possession of a certificate as required by the IMO code for Chemical Tankers as "New Ship".
7. A declaration of any known defect in the vessel or its cargo.
8. Name of the Owners of the vessel.

2. Coming from the Baltic Sea and transiting the Kiel Canal as well as the River Elbe

24 hours before entering Kiel Bay, in writing, at the latest after clearing the last port:

To the Wasser-und Schiffahrtsamt Kiel-Holtenau,
Schleuseninsel 2, 24159 Kiel. Telex 292836.

giving the same information as required in 1. (above) for vessels entering the River Elbe.

3. Coming from a port within the Kiel Canal Range

Reports as per 1 and 2 have to be given.

To conform with the pilotage regulations for Kiel Bay and the River Elbe, the above mentioned vessels which are potentially dangerous are obliged to engage the services of a Pilot.

Further instructions are in force for above mentioned vessels when navigating within the River Elbe and Kiel Bay, as well as when transiting the Kiel Canal, or passing certain points. Pilots will advise the Masters of vessels of the relevant regulations and assist.

The Port Authorities at Cuxhaven and Kiel will inform each other about arrival of vessels with dangerous cargoes.

Potentially dangerous sea-going vessels of up to 300 g.r.t. should contact the relative Port Authority.

AUTHORITY: Wasser-und Schiffahrtsamt Kiel-Holtenau, (P.O.Box 8068, 24154 Kiel) Schleuseninsel 2, 24159 Kiel, Germany. *Tel:* (0431) 3603-0. *Telex:* 02-292836. *FAX:* (0431) 3603-454. *Contact:* H. Meinert, Port Captain, Tel: (0431) 3603-450.

KREFELD: 51.20 N. 06.34 E.

BERTHING: Depth at entrance 4.0 m. at MLW. There is over 11 km. of quays.

CRANES: Port Authority: 4×3/6 tons electric cranes, 1×8/20 tons bridge crane.

Private: 2×6/12 tons bridge cranes. 1×200 tons crane for bulk goods. 3 electric cranes.

BULK CARGO FACILITIES: Facilities for handling dry bulk cargoes.

STEVEDORES: *Working Hours:* Monday – Thursday: 0730 hrs. – 1630 hrs. Fridays: 0730 hrs. – 1530 hrs.

TANKERS: Petroleum and bunkers handled.

FRESH WATER: Available.

FUEL: Available.

DRY DOCKS: None.

GANGWAY/DECK WATCHMEN: Not required.

AIRPORT: Dusseldorf 26 km.

TIME: GMT plus 1 hour. GMT plus 2 hours in Summer.

HOLIDAYS: New Year's Day, Easter Day, Labour Day (1st May), 3rd October, Christmas Day. In case of emergency, work can be performed on these days.

AUTHORITY: Hafen und Bahnbetriebe der Stadt Krefeld, Oberstrasse 13 (Postfach 268), 47829 Krefeld, Germany. *Tel:* 02151-492715. *Contact:* Mrs. Lehnen.

LUBECK (including Travemunde): 53.52 N. 10.40 E. (See Plan)

DOCUMENTS:

2 Crew Lists.
1 General Declaration for Arrival and Departure.
1 Health Declaration.
2 Cargo Manifests.
2 Stores Lists.
1 Ship's Particulars form.
Crew Manifest.
Bills of Lading.
Customs Declaration.
Derat Certificate.

PILOTAGE: Compulsory for vessels over 55 m. LOA or 8.0 m. beam. Pilot station situated at Travemunde, near foot of Nordermole. Pilots board vessels in anchorage area. International signals used by Pilots and by vessels requiring a Pilot. Contact by VHF Channel 13 and 20.

RESTRICTIONS: Channel from Lubeck "A" buoy to Stadthafen is well lit and navigable by vessels fitted with radar in all weathers.

Depths: from "A" buoy to Travemunde (Nordermole) 10.5 m.; from Nordermole to Siechenbucht, 10 m.; channel to NWK power station, 9.5 m.; channel to Stadthafen 9.5 m. The river Trave narrows from 130 m. at seaward end to 80 m. at Stadthafen.

MAX. SIZE: Dependent on berth depth and approaches. Vessels up to 15,000 d.w.t. can reach Stadthafen. Also see "Restrictions".

HEALTH: Radio Pratique possible. Pilot will ask Master to complete Health Declaration.

RADIO: Lubeck Radio, VHF Channel 27. Harbour Radio service used by Pilots, tugs, and other vessels.

TUGS: At Stadthafen vessels over 90 m. LOA require 1 tug and vessels over 100 m. LOA require 2 tugs.

BERTHING:

Travemunde: Passenger ferry harbour. North side river Berths I and II, 7.5 m. depth; Kaiserbrucke, 100 m. length, 8.0 m. depth; Ostpreussenkai, 190 m. length, 7.0 m. depth; Priwall (South side), 180 m. length, 5 m. depth. 8 berths for Roll-on/Roll-off and passenger traffic each 140 m. – 220 m. length, 7 m. – 9.5 m. depth.

2 berths with railway connection, (Berths No. 6 and 7).

Industriehafen: Depth alongside 7.8 m. – 9.5 m.

Stadthafen: 27 km. from sea. Total length of quays 7.6 km. The harbour depth is 6 m. – 9.5 m.

Elbe Lubeck Canal: Navigable by barges up to 1,200 tons.

CRANES: 1×200 ton floating crane, 1×40 ton, 1×25 ton, 1×12 ton, also 3 ton cranes.

BRIDGE: Herrenbrucke is 56 m. wide and 22 m. above water level. Can be opened for vessels requiring higher clearance.

MEDICAL: All facilities available. Hospital near docks at Travemunde, and at Lubeck (Medical University).

TANKERS: No facilities.

FRESH WATER: Available by barge at any location.

FUEL: Fuel available at berth at Scandinavia Kai in Travemunde and by barge from Hamburg.

CONSULS: Austria, Finland, Iceland, Norway and Sweden.

REPAIRS: Several shipyards available for deck and engine repairs.

DRY DOCKS: Floating docks for vessels up to 13,500 tons (45,000 tonnes d.w.t.).

SURVEYORS: Addresses of inspectors and classification society representatives can be obtained from the Chamber of Commerce and Industry at Breite Strasse 6 – 8, Lubeck.

Germanischer Lloyd, Unter der Herrenbrucke 2.

OPENING/CLOSING HATCHES: By crew.

REPATRIATION: All facilities available.

AIRPORT: Hamburg, 1 hour by bus or train.

TIME: GMT plus 1 hour. GMT plus 2 hours (last weekend in March to last weekend in September).

HOLIDAYS: 1st January, Good Friday, Easter Sunday, Easter Monday, 1st May, Ascension Day, Whit Sunday, Whit Monday, 3rd October, Atonement Day, Christmas Day, Boxing Day.

POLICE: Lubeck River Police, tel. 3 34 40; Travemunde River Police, tel. 74141.

BANKS: *Lubeck:* Commerzbank, Breite Strasse 52/54. Dresdner Bank, Breite Strasse 83/87. Deutsche Bank, Kohlmarkt 7 – 15.

Lubeck-Travemunde: Commerzbank, Vorderreihe 50. Deutsche Bank, Vorderreihe 35. Deutsche Bank, Vorderreihe 62.

STORING: See "Prelims".

1. Vessels can be provisioned by lighters and lorries at all berths.
2. No limitation of time for provisioning.
3. Lorries can go right alongside vessels, provided the loading and unloading operations permit.
4. At virtually all berths (with exception of the Wood Pier at Lubeck-Travemunde) fork lifts can be used.
5. Customs procedure as in all German ports.
6. There is always the possibility of obtaining riggers.

TELEPHONES: Ship telephone connections at Ro/Ro berths.

IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.

Shore passes issued to passengers are chargeable.

GARBAGE DISPOSAL: Service available. Containers of 1.1 cu.m. and 4.4 cu.m. capacity placed on board and alongside. Garbage collection on Fridays 0700 – 1500 hrs. Tel: 0451-12-27040 for details.

WASTE OIL DISPOSAL: Service available by tanker trucks or barge. Tel: 0451-401011 or 0451-2112 for details.

SEAMAN'S CLUBS: Deutsche Seemannsmission, Tel: 72991 for details.

CURRENCY: Deutsche Mark (DM).

SHORE LEAVE: Allowed.

AUTHORITY: Hafenkapitan, (Port Captain), Wielandstrasse 14, 23558 Lubeck, Germany. *Tel:* 0451-12-28600. *FAX:* 0451-12-28690.

NEUSS: 51.12 N. 06.41 E. (See Plan)

RESTRICTIONS: No restrictions, vessels may enter the harbour day or night.

MAX. SIZE: Inland waterway craft and sea-going ships (usual Rhine dimensions).

VHF: Channel 10.

BERTHING: 5 berths available.

Facilities: Waterway area 72 ha. with 17.5 km. of quayage.

Ro-Ro Terminal, container station, KLV Terminal, coastal traffic, hazardous cargoes, scrap metal.

Storage:

Open storage: 250,000 sq.m.
Covered storage: 140,000 sq.m.
Grain capacity: 160,000 tons.
Tank capacity: 120,000 tons.

CRANES: 36 electric cranes with 30 tons capacity. 1 electric crane with over 30 tons capacity.

BULK CARGO FACILITIES: The port handles chemical products, mineral oil and oil products, cement, coal, lime, general cargoes, grain.

MEDICAL: Full hospital facilities available in the city.

FRESH WATER: Available in every berth.

FUEL: All grades available.

REPAIRS: No facilities.

DRY DOCKS: None.

GANGWAY/DECK WATCHMEN: No requirement, except for special vessels as determined by the port.

AIRPORT: Dusseldorf (all international destinations), 10 km.

HOLIDAYS: New Year's Day, Easter Sunday, Easter Monday, Whit Sunday, 1st May and Christmas Day.

POLICE/AMBULANCE/FIRE: Police, Tel: 110. Ambulance, Tel: 112. Port, Tel: (02131) 908220.

TELEPHONES: Public telephones available.

BANKS: All major banks have branches in the city.

GARBAGE DISPOSAL: Garbage disposal available at every berth.

GENERAL: Railways and road transport in all directions.

AUTHORITY: Staedtische Hafenbetriebe Neuss, Hammer Landstrasse 3, D-41460 Neuss, Germany. *Tel:* (02131) 908200. *FAX:* (02131) 908282. *Contact:* Ludwig von Hartz, Harbour Director.

NORDENHAM: 53.29 N. 08.29 E. (See Plan)

(Also see Bremen and Bremerhaven)

DOCUMENTS:
Cargo Papers and Ship's Certificates.
1 Stores List.
3 Crew Lists.
2 Personal Manifests.
Derat Certificate.

DEEP SEA PILOTAGE: See "General" before first German port and "Baltic Deep-Sea Pilotage".

PILOTAGE: Pilot boards off the Weser Lanby. Docking Pilot will board off Bremerhaven.

ANCHORAGE: Sea anchorage off Weser Lanby or the Hoheweg Light for all types of vessels. River anchorage off Blexen, 1 mile above Bremerhaven for vessels up to 120 m. LOA.

RESTRICTIONS: No restriction except vessels with a length exceeding 260 m. and a draft of 38 ft. Vessels with a draft exceeding 30 ft. will be controlled by tidal conditions. Controlling depth in channel 11 m. MLW. In the port 9 m. to 12 m. at MLW (Midgard Pier).

MAX. SIZE: (The max. drafts are estimated).

Midgard Pier: (a) Bulk cargo berth, total length 1,068 m. Max. LOA 270 m. max. draft 42 ft. 08 in. (FW), to be increased to 44 ft.

(b) Oil Berth No. 1 (combined with Southern part of 'a'), max. length 850 ft., beam 120 ft., draft 42 ft. 08 in.

(c) Oil Berth No. 2, max. draft 42 ft. 08 in. (FW).

(d) Granary, quay length 188 m., draft 38 ft. – 40 ft. (FW) weather permitting.

Midgard Terminal (Blexen): Max. length 820 ft. (250 m.) up to a draft of 12.60 m. (FW).

Guanowerk, max. length 550 ft., max. draft 30 ft. (FW) (approx.).

Metaleurop, max. length 550 ft., draft 27 ft.

Also see "Tankers".

HEALTH: Pratique granted immediately on arrival in port by Health Official.

RADIO: Norddeich Radio (DAN) or Elbe-Weser Radio (VHF Channel 16).

RADAR: No port radar available. Radar for entrance see "Bremerhaven".

TUGS: Ample available from Bremerhaven. Tug's lines used.

BERTHING: The following industrial works and companies within the port area of Nordenham possess a berth each for sea-going vessels which serve only their private supplies and requirements. These berths are situated North of Midgard Pier.

1. Norddeutsche Seekabelwerke Aktiengesellschaft, (production of cables).
2. Felten & Guilleaume Schatanlagen GmbH (production of electric appliances, motors, etc.).
3. Metaleurop. Length of quay 230 m., depth of water 32 ft. 10 in. (approx.) 2 cranes of 10 and 5 tons. Capacity 200 t.p.h. and 90 t.p.h. respectively. Storage capacity, 50,000 tons (coal or ore). 10,000 tons (metal blocks), 5,000 cu.m. (sulphuric acid).
4. Erdolwerke Frisia Aktiengesellschaft (tanks for the storage of mineral oils).
5. DASA-Deutsche Aerospace (production of airplanes).
6. Weser Tanklager Gesellschaft GmbH (storage of mineral oils, bunker oil station of BP).
   Connections: Gas oil 2×8 in., fuel 1×8 in.
7. Titangesellschaft GmbH (production of titandioxide).

SPECIAL CARGO HANDLING FACILITIES:

Midgard Pier:

No. 1. Bulk cargo berth for discharging and loading. Length of quay 710 m. Depth 12 m. Four bridges with a lifting capacity up to 22 tons. Max. outreach 27 m. One jib crane up to 65 tons capacity, max. outreach 46 m. Capacity: 30,000 tons ore per 24 hours. 25,000 tons of coal per 24 hours. Connections for mineral oil and molasses.

No. 2. Oil berth. Length of quay 170 m. Depth 9.5 m. Three pipelines 10 in. to 12 in. diameter for fuel oil, diesel oil and gas oil. No shore steam or facilities for dirty ballast available.

No. 3. Granary. Length of quay 188 m. Depth 12 m. Two elevators with a total discharge capacity of 700 t.p.h. Loading rate to vessels 300 t.p.h. Storage capacity of 46,000 tons.

No. 4. Midgard Terminal (Blexen): Length 210 m. Extra mooring dolphins North and South of wharf 50 m. from each end of wharf. Depth alongside 12.5 m. at MLW. 2 mechanical unloaders for discharge. Special storage facilities for bulk cargoes. The berth can accept vessels up to 80,000 d.w.t. fully laden or up to 125,000 d.w.t. with a part cargo.

STEVEDORES: 24 hours' notice required. Notice required Friday morning for week-end work.

1st shift: 0600 – 1400 hrs.
2nd shift: 1400 – 2200 hrs.
3rd shift: 2200 – 0600 hrs. (overtime).

On Saturdays:
1st shift: 0600 – 1400 hrs.
2nd shift: 1400 – 2200 hrs. (overtime).
3rd shift: 2200 – 0600 hrs. (overtime).

On Sundays:
1st shift: 0600 – 1200 hrs. (overtime).
2nd shift: 1200 – 1800 hrs. (overtime).
3rd shift: 1800 – 2400 hrs. (overtime).
4th shift: 2400 – 0600 hrs. (overtime).

MEDICAL: Hospital available; advance notice only required if urgent cases.

TANKERS: Diameter of lines 8 in.

Shell Berth: Max. draft 34 ft.

Weser Tankerlager: Max. size 200 m., length 32 ft. draft at LW. T-shaped mooring lines attached to pontoons fore and aft, middle lines are attached to the shore. Length of lines 100 m.

Also see "Special Cargo Handling Facilities".

DENSITY: Average density of water 1005 – 1012.

FRESH WATER: Fresh water available at a rate of 15 t.p.h. per hose price DM 6.30 per ton.

FUEL: All grades available; delivery by barge; 2 days' notice required.

FIRE PRECAUTIONS: Special regulations for vessels loading or discharging explosives.

CONSULS: See "Bremerhaven".

REPAIRS: Minor repairs can be carried out. Ample facilities for major repairs at Bremerhaven.

DRY DOCKS/SURVEYORS: See "Bremerhaven" or "Bremen".

WATCHMEN: Not necessary but available if required by Master.

OPENING/CLOSING HATCHES: Normally by crew but if by stevedores extra charges will apply.

CUSTOMS ALLOWANCES: Each crew member 200 cigarettes or 30 cigars or 30 grammes of tobacco and 1 bottle of spirits for a running period of 3 days.

CARGO GEAR: In most cases loading and discharging is effected with shore gear. Special equipment can be ordered from Bremerhaven.

REPATRIATION: Possible by air via Bremen or Hamburg.

AIRPORT: Bremen, distance 70 km., 1 hour by car. Hamburg, 200 km., 2 hours by car.

POLICE/AMBULANCE/FIRE: Police 110; Ambulance 2052; Fire 112.

TELEPHONES: Available on request.

SHORE LEAVE: Permitted.

IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.

Shore passes issued to passengers are chargeable.

GARBAGE DISPOSAL: Available.

WASTE OIL DISPOSAL: Available.

REGULATIONS: Port regulations for the Midgard Pier including special regulations for handling of explosives.

DELAYS: None except waiting for high tide (See "Restrictions").

AUTHORITY: "Midgard" DSAG, Midgardstr. 50, 26954 Nordenham (Postal Address: P.O.Box 1452/1453, 26944 Nordenham), Germany. *Tel:* 4731/810. *Telex:* 238317. *FAX:* 4731/88564. *Cables:* Midgard Nordenham. *Contact:* Mr. Werner, Chairman. Mr. Gocht, Pier Inspector.

PAPENBURG: 53.06 N. 07.23 E. (See Plan)

LOCATION: Papenburg is 20 nautical miles above Emden on the Ems seaway at km. 0.0 and on the inland waterway Dortmund – Ems canal at km. 225.82.

PILOTAGE: The Sea Pilot is taken on board from the pilot cutter at Westerems and the district and Port Pilot at the Emden Pilot Station. All vessels over 1,000 g.r.t. (sea-going), and all oil, gas and chemical tankers require a Pilot.

RESTRICTIONS: *Lock operating times:* From 1st April to 30th September, Monday to Saturday, from 0600 to 2000 hrs.

From 1st October to 31st March, Monday to Saturday, from 0700 to 1800 hrs.

Lockings outside operating times, and on Sundays and Holidays must be promptly reported, at the latest half an hour prior to normal lock operating times, by telephone 04961/2640 or via VHF Channel 13.

Also see "Bridges".

MAX. SIZE: Vessels with a max. draft of 5.8 m. can reach the port during MHWST. Vessels with a greater draft must discharge at Leerort.

VHF: Communications with the lock-keeper are on Channel 13. Bridges are on Channel 15.

BERTHING: The port is connected to the Ems by a lock 26 m. wide and 152 m. long. Ships with a beam greater than 26 m. can reach the port by a lock 40 m. wide. The port has a foreport (300 m. long and 80 m. wide), the sluice canal (1,900 m. long and 65 – 90 m. wide), the Southern Industrial Port (500 m. long and 100 m. wide), the Northern Industrial Port (600 m. long – 80 m. wide), the Dever Port (450 m. long and 80 m. wide), the railway dock (300 m. long and 50 m. wide), the Werft Port 200 m. long and 100 m. wide), the Turm Canal (300 m. long and 35 m. – 60 m. wide, which can be reached through a 11.0 m. wide steel bridge), and the yacht marina. Depths vary from 3.5 m. to 6 m.

Of the 3,700 m. of the Spundwand Quay, 2,500 m. are devoted to cargo handling.1,200 m. of this is provided with railway lines. The total length of the port railway facility is 6,700 m. 40,000 cu.m. of open free storage space can be used for bulk cargo accommodation. Further open and covered storage areas, together with silo facilities, for approx. 11,000 tonnes cargo are available through companies operating within the port.

CRANES: In the port area there is one heavy lift crane up to 120 tons capacity, 1 heavy lift crane 140 tons, 1 heavy lift crane 50 tons, 7 jib cranes 3 – 15 tons, 1 gantry crane 6 tons with a 52 m. long traverse, 1 crane 6.5 tons, 1 crane 5 tons, 2 cranes 1 ton, 2 mobile cranes 11 tons and 40 tons, 1 floating crane 6 tons, 1 mobile conveyor belt 100 t.p.h., 2 grain handlers 30 t.p.h. and 40 t.p.h.

BRIDGES: At Ems km.15.02 the Leerort road bridge has to be passed; 44 m. passage width. Opening times from sunrise to sunset and after prior report by telephone 0491/2992 and VHF Channel 15.

At Ems km.6.9, the railway folding bridge has to be passed (Weener). The passage width is 24 m. Opening times are as per the current traffic plan. The bridge is manned daily, also Sundays and holidays, from 0400 to 2200 hrs. Telephone 04951/2065 and VHF Channel 15.

Both bridges have a passage height when closed of 3.50 m. at MHWST.

FRESH WATER: Available.
FUEL: Available.
REPAIRS: Vessels up to 30,000 tons, length 250 m. and width 35 m. can be repaired at the local shipyards.

Shipbuilding dock: A covered building dock with length 350 m. and width 39 m.

DRY DOCKS: A drydock of 250 m. length and 36 m. width is available.
POLICE/AMBULANCE/FIRE: Water Police Tel: 04961/4144 or 04961/72982 (After hours).
IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.

Shore passes issued to passengers are chargeable.

GARBAGE DISPOSAL: Garbage can be delivered to garbage-drum in the lock.
WASTE OIL DISPOSAL: Waste oil disposal is available by tanker trucks only.
SEAMAN'S CLUBS: None.
CURRENCY: Deutsche Mark (DM).
DEVELOPMENTS: The port installations are currently being extended by the Industry Port – North which will be approximately 1,000 m. long (300 m. finished) and 100 m. wide.
AUTHORITY: Hafenamt Papenburg-Ems, P.O.Box 1755, 26871 Papenburg, Germany. *Tel:* 04961-821.

Hafenamt Papenburg, An der Seeschleuse, 26871 Papenburg, Germany. *Tel:* 04961-2640. *FAX:* 04961-234. *Contact:* Captain W. Hermanns, Harbour Master. (A.O.H. *Tel:* 04961-3169).

RENDSBURG: 54.18 N. 09.40 E. (See Plan)

SHIPMASTER'S REPORT: June 1988.

DOCUMENTS:
2 copies Crew List.
1 copy Stores List (including tea, coffee, tobacco, spirits, cigarettes, wine).
1 copy Crew Personal Effects List (to be completed on special Customs form supplied by the Agent).

PILOTAGE: When coming from the Baltic, vessel takes a Lock Pilot and a Docking Pilot. If arriving from Brunsbuttel, Docking Pilot boards the vessel at Nubbel, a few miles from Kreishafen.
RESTRICTIONS: Maximum draft 9.5 m., air draft 40 m. The maximum draft is also controlled by Navigation Rules of the Kiel Canal and varies according to vessel's LOA and breadth.

There is no restriction on beam except when discharging into barges overside, when the maximum beam permitted is 15.0 m.

TUGS: 2×300 h.p. and 1×700 h.p.
BERTHING: The total length of Kreishafen Wharf is 750 m. The berth was rebuilt and dredged to 10.0 m. in 1986.
CARGO HANDLING FACILITIES: Daily discharge rate for fertiliser 700 tonnes – 2,500 tonnes, depending on quality of fertiliser.

Four bulldozers of 3 tons each are available to assist when discharging.

CRANES: 7×2 tons – 18 tons. Four of the cranes are suitable for grab discharge.
DENSITY: Brakish water.
STEVEDORES: ETA notice to stevedores should be sent through the vessel's Agent. Stevedores require 14 days, 10 days, 7 days, 5 days, 4 days, 2 days and 1 days notice.

Working hours are from 0600 hrs. – 1800 hrs. on Mondays to Fridays. Work carried out after 1800 hrs. weekdays and all weekend work is on overtime rates.

MEDICAL: There is a hospital available. Specialist doctors also available.
TANKERS: Esso Berth for handling chemicals, length 70 m., depth alongside 6.0 m. BP Berth for bunkering, length 80 m., depth alongside 8.0 m.
FRESH WATER: Available at the berth.
FUEL: Not easy to obtain and only available in small quantities by truck. Fuel is very expensive.
CONSULS: Nearest Consuls at Kiel and Hamburg.
REPAIRS: Facilities available.
DRY DOCKS: 2 dry docks available, Dry Dock No. 1: 155 m.×22.7 m.×5.80 m. Dry Dock No. 2: 193 m.×32 m.×6.3 m.

There is a floating dock with capacity 4,400 tons, length 120 m., breadth 22.0 m., maximum draft 5.5 m. (forward) and 5.8 m. (aft). The floating dock has one crane with capacity 10 tons.

SURVEYORS: Germanischer Lloyd based at Kiel. Lloyd's and ABS based at Hamburg.
GANGWAY/DECK WATCHMEN: Ship's crew are required to attend moorings as passing traffic sometimes not proceeding at low speed. Moorings should consist of 3 head and stern lines and 3 spring lines fore and aft.
OPENING/CLOSING HATCHES: Ship's crew open and close hatches.
CUSTOMS ALLOWANCES: 200 cigarettes and 1 bottles of spirit allowed every 4 days.
REPATRIATION: Possible via Hamburg.
TIME: GMT plus 1 hour. GMT plus 2 hours (last weekend in March to last weekend in September).
HOLIDAYS: All normal German holidays.
POLICE/AMBULANCE/FIRE: 110, 110 and 112 respectively.
IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.

Shore passes issued to passengers are chargeable.

ROSTOCK: 54.09 N. 12.08 E. (See Plan)

DOCUMENTS:
Health Declaration.
6 Crew Lists.
2 Passenger Lists.
2 Currency Lists.
Stores List.
Cargo Documents.
Ship's Certificates.

PILOTAGE: Compulsory. Contact by VHF Channel 16, working Channel 12. Pilot boards at Warnemunde Light Buoy. International code signals used. Also see "Baltic Deep-Sea Pilotage".
ANCHORAGES: In Warnemunde Roads, off port entrance, in depths of 48 ft.
RESTRICTIONS: Entrance channel from Warnemunde Light Buoy to Overseas Port at mouth of River Warnow, depth 13.0 m.
MAX. SIZE: For Overseas Port: length 230 m., beam 32 m., draft 11.58 m. (38 ft.). For City Docks: 142 m. length, 21 ft. draft. Also see "Tankers".

Berth No.	*Max. Draft* (m.)	(ft. in.)	*Remarks*
03	9.45	31 0	Max. LOA 215 m.
04	11.58	38 0	(37 ft. for turbine vessels)
05	11.58	38 0	Max. LOA 190 m.
07	9.02	29 7	
12	10.36	34 0	Max. LOA 210 m.
16	10.36	34 0	Max. LOA 180 m.
17	11.58	37 0	
18	11.20	36 9	
21 – 23	10.06	33 0	
24	11.28	38 0	
31, 32, 36	9.75	32 0	
33	10.06	33 0	
34, 35, 37	9.45	31 0	
41 – 46	9.75	32 0	
50	9.14	30 0	
51 – 54	9.75	32 0	
63	9.45	31 0	(Ro-Ro)
64	8.10	26 1	
65	9.45	31 0	(Ferry)
66	9.45	31 0	(Ferry)
67	10.36	34 0	(Ferry)

HEALTH: Pratique given on arrival. In case suspected disease or fever on board, radio details to Agent before arrival. Complete Declaration of Health required.
RADIO: Rugen Radio, call sign "Y5M".
TUGS: Available. Use of at least 1 tug is compulsory for vessels of more than 100 m. LOA berthing and unberthing.

Sufficient number of tugs available, from 300 h.p. to 1,200 h.p. Tugs normally join vessel in front of the mole.

BERTHING: *Overseas Port:* Situated in Lower Warnow River about 3.8 miles from Warnemunde Sea Buoy.

Pier No. 1: 13 berths. West: Ro-Ro and Ferry Terminal.
East: General goods, depth 30 ft. to 34 ft.
Pier No. 2: 13 berths. General goods, depth 30 ft. to 33 ft.
Pier No. 3: 4 berths. Bulk cargoes, depth 30 ft. to 38 ft.
Pier No. 4: 3 berths. Grain, Feedstuffs, Fish Meal. Depth 37 ft., berth Urea, Potash.
Oil Pier: 3 tanker berths, depth 34 ft. to 38 ft.

Chemical Port: 1 berth. Depth 29 ft. 7 in. Products Handled: Ammonia, Methanol and Butane.

Warnemunde: Port for passenger service. Quay length 270 m. Depth alongside 27 ft. 06 in.

Port Control to be contacted through VHF Channel 73.

Roll-on/Roll-off terminal with facilities for 20 ft. and 40 ft. containers. Max. draft 31 ft.

There are 4 ferry terminals (Berths No. 64 – 67).

CRANES: *Overseas Port:* 35 cranes and 5 crane-bridges with capacities from 3.2 – 63 tons. Container facilties and container gantry crane available.

City Docks: Crane capacities 2 – 10 tons.

BULK HANDLING FACILITIES: 18 berths, length of quay 2,000 m. 3 bridges with 20 tons capacity and outreach of 40 m. 2 unloaders 1×500 t.p.h. and 1×2,000 t.p.h. Storage area 270,000 sq.m. for bulk cargo.
MEDICAL: Doctors available. Advance notice to Agent required if medical assistance necessary.
TANKERS: 3 berths available. Max. size 50,000 d.w.t. Max. length 230 m., Max. draft 38 ft.

Berth No. 03, 31 ft. (max. LOA 215 m.)
Berth No. 04, 38 ft. (max. LOA 230 m.)
Berth No. 05, 30 ft. (max. LOA 215 m.)

Storage capacity of 260,000 cu.m. Max. discharge rate 2,900 cu.m.p.h.

FRESH WATER: Available ex-shore hydrants.
FUEL: Available all grades fuel and gas oil by barge. Vessels calling for bunkers only, pay no harbour dues, and other fees are reduced.
REPAIRS: All repairs possible. Neptun Shipyard and other repair shops situated at City Docks and Warnemunde.
Tank cleaning, boiler cleaning and repairs.
SURVEYORS: Germanischer Lloyd, Doberanerstr. 44-47, D-18057 Rostock. Tel: (0381) 492880. Fax: (0381) 4928830.
REPATRIATION: Can be arranged if identification papers in order.
TIME: GMT plus 1 hour. Summertime, GMT plus 2 hours (24th March – 26th October).
HOLIDAYS: New Year (1st January); Good Friday; Easter Sunday; 1st May; Whit Sunday; Whit Monday; Ascension Day; 3rd October; Christmas Day; 26th December.
AIRPORT: Berlin and Hamburg. Rostock-Laage (internal flights).
TELEPHONES: Ship-to-shore connections available.
POLICE/AMBULANCE/FIRE: Ambulance 0115; Police 0110; Fire 0112.
SHORE LEAVE: Crew members permitted ashore.
IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.
Shore passes issued to passengers are chargeable.
GARBAGE DISPOSAL: Contact Fa.Nehlsen, Port Service. Tel: Rostock 670074246.
WASTE OIL DISPOSAL: Service available for ballast water, slops and bilge water (capacity 10,000 cu.m.). Telephone 350-3600 for service.
SEAMAN'S CLUBS: German Seaman's Mission - Rostock (Near Ferry Terminal). Tel: (0381) 6700431. Fax: (0381) 6700432. Hours: 1700 – 2200. Facilities: Shop, refreshments, games, postal service, money exchange, minibus and church services.
CURRENCY: German Mark (DM).
DEVELOPMENTS: Direct connection motorway A19 to Ferry Terminals. A 6th tanker berth with depth 13.5 m. (44 ft.) and length 260 m. (in connection with deepening of entrance channel up to 14.5 m. by 1998).

SHIPMASTER'S REPORT: September 1980 (Updated 1996).
VHF: While the vessel is in port, telephone calls to anywhere inside or outside Germany can be made most conveniently through "Rostock Radio" on VHF Channel 16. The working Channel is 26.
Customs: The Customs only seal the cigarettes and coffee. Spirits are not sealed. Each crew member is allowed 200 cigarettes.
Immigration: Immigration formalities are in accordance with international regulations. On arrival, the Master has to present a Crew List as well as the Seaman's Books, for checking by Immigration Authorities for validity on board of the vessel.
Identity control will be affected on the spot.
Crew members will receive shore passes.
All supernumeries on board from countries with visa obligations have to obtain a visa against a fee of DM 20.00. On departure no control will be necessary except questioning of Master about any changes in Crew List.
Density: The density of the water at the berth varies from 1000 to 1010 ozs./cu.ft.

AUTHORITY: Seehafen Rostock, Amt fur Hafenwirtschaft und Verwaltung, Hafen und Seemannsamt, P.O.Box 481046, 18132 Rostock, Germany. *Tel:* 0381-6703103. *FAX:* 0381-6703101. *Contact:* Captain S. Rathmanner, Harbour Master. H. Werner, Port Director (Administration). W. Pinnow, Port Director (Cargo Handling).

STADERSAND: 53.37 N. 09.32 E.

Oil Terminal in Elbe River operated by PreussenElektra Aktiengesellschaft.
DOCUMENTS:
3 Crew Lists.
2 Personal Effects Lists.
1 Stores List.
1 Tobacco List.
Cargo Documents.
Ship's Register.
DEEP SEA PILOTAGE: See "General" before first German port and "Baltic Deep-Sea Pilotage".
PILOTAGE: See "General" before first German Port.
RESTRICTIONS: Draft calculated by adding 31 ft. to height of tide and allowing 3 ft. underkeel clearance.
MAX. SIZE: Max. LOA 230 m. Max. beam 32 m. Max. draft (M.H.W.) 11.50 m. Max. size 60,000 d.w.t.
HEALTH: Health Certificate brought on board by River Pilot for Master to complete.
RADIO: All messages to Agents, etc., through Norddeich Radio, call sign DAN. Closer to port Elbe-Weser Radio can be contacted by VHF Channel 16.
Ships' reporting station is on permanent duty at Stadersand, VHF Channel 11, safety and calling Channel 16.
RADAR: River Radar Service from Elbe 1 to Hamburg see "General" before first German Port, but no special Port Radar Service for Stadersand. Radar Service in the area of Stadersand available, can be contacted through VHF Channel 21, "Hetlingen Radar Radio".
TUGS: Available. Meets vessel off the berth.
BERTHING: 1 tanker berth at T-head jetty. 1 pipeline × 300 mm. diameter, 2 hoses × 200 mm. diameter, permissible pressure 12 bars. Max. discharge rate 1,200 t.p.h.
DENSITY: Brackish.
FRESH WATER: Only obtainable by barge from Hamburg. Minimum quantity supplied is 200 tons.
FUEL: Only obtainable by barge.
CUSTOMS ALLOWANCES: 100 cigarettes and 1 bottle wine/spirits per man.
CONSULS AND GENERAL INFORMATION: Refer to "Hamburg".
IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.
Shore passes issued to passengers are chargeable.
AUTHORITY: *Operator:* Preussen Elektra Aktiengesellschaft, Tanklager Stadersand, P.O.Box 1769, 21657 Stade, Germany. *Tel:* (04141) 7990. *FAX:* (04141) 799313, 799588. *Contact:* Mr. Ehlers.

STRALSUND: 54.19 N. 13.06 E. (See Plan)

DOCUMENTS:
2 Crew Lists.
2 Passenger Lists.
Stores List.
Cargo Documents.
Ship's Certificates.
PILOTAGE: Compulsory. Contact Pilot by VHF Channel 12. Pilot stations are at Barhoeft and Thiessow.
Pilot boarding positions:
1. "Gellen 1" – Lat. 54° 34.3' N., Long. 13° 03.5' E.
2. "Landtief B" – Lat. 54° 18' N., Long. 13° 47' E.
3. "Osttief 2" – Lat. 54° 12' N., Long. 13° 52' E.

Also see "Baltic Deep-Sea Pilotage".
ANCHORAGES: In the roads clear of the fairway, depths 26 ft. to 30 ft.
RESTRICTIONS: Northern entrance between breakwaters is 12 ft. depth, used by smaller vessels only. Eastern entrance, depth 17 ft. MLW passing railway bridge, which is opened about every 5 hours.
MAX. SIZE: Vessels up to 17 ft. draft.
RADIO: Rugen Radio, call sign "Y5M".
HEALTH: Pratique given on arrival. In case suspected disease or fever on board radio details to Agent before arrival.
TUGS: Available and compulsory for vessels of over 1,000 g.r.t. berthing and unberthing.
BERTHING: Depth alongside quays up to 17 ft. maximum. Length of quays 1,500 m.
CRANES:

4 cranes	10 tons capacity, reach 32 m. (heavy lifts up to 20 tons, reach 16 m.)
2 cranes	10 tons capacity; reach 20 m.
2 cranes	5 tons capacity; reach 22 m.
6 elevators	Capacity 75 t.p.h. each.

MEDICAL: Doctors, hospitals available. Advance notice to Agent required if medical assistance necessary.
FRESH WATER: Available from shore ex pipeline and by barge.
FUEL: Gas oil and lub oil available by barge.
REPAIRS: All deck, hull and machinery repairs by local shipyards.
SURVEYORS: Germanischer Lloyd, Philipp-Julius-Weg 1, D-18437 Stralsund. Tel: (03831) 47340. Fax: (03831) 4733412.
REPATRIATION: All facilities exist for changing crews.
AIRPORT: Berlin and Barth.
TIME: GMT plus 1 hour. Summertime, GMT plus 2 hours (Last Sunday in March – Last Sunday in September).
HOLIDAYS: New Year (1st January); Good Friday; Easter Sunday; Easter Monday; 1st May; Whit Sunday; Whit Monday; 3rd October; Christmas Day; 26th December.
SHORE LEAVE: Crew members permitted ashore.
IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.
Shore passes issued to passengers are chargeable.
GARBAGE DISPOSAL: Service available by barge. For service call Sundtank GmbH, Tel: 280380.
WASTE OIL DISPOSAL: Service available. See "Sundtank" above.
SEAMAN'S CLUBS: None at present.
AUTHORITY: Stralsunder Hafen und Lagerhaus GmbH, Hafenstrasse 20, D-18439 Stralsund, Germany. *Tel:* 0-3831-254215. *FAX:* 0-3831-254298. *Contact:* Wolfgang Ostenberg or Manfred Moller, Port Managers.

WILHELMSHAVEN: 53.31 N. 08.10 E. (See Plan)

DOCUMENTS: Tanker Check List with statement of vessel's deficiencies to be provided and delivered to the Sea Pilot before commencing pilotage.

Oil Port	2 Crew Lists. 1 Health Declaration (Form supplied by Pilot). Derat Exemption Certificate. Passports/Seamen's Books. Vaccination List. Tanker Check List
Harbour Docks	2 Crew Lists. 1 Health Declaration. 2 Cargo Manifests. 2 Stores Lists.

PILOTAGE: There is a central Pilot Station near "German Bight" Light Vessel, where certain large vessels (see below) embark or disembark Jade, Weser and Elbe Pilots from/to helicopter or, weather permitting, boat.

Jade (and Weser) Pilots are on board a 2-masted pilot vessel with yellow funnel with black top and white letters "LOTSE" (=Pilot) on black hull, flying the flag "H" of International Code.

Pilot vessel is usually stationed near Buoy "3/Jade 2".

To call Jade Pilot, following signals are to be used:

- By day: flag "1" below flag "G" of International Code;
- By night: the foregoing signals, given by morse lamp and/or whistle;
- In bad visibility signals by whistle;
- In all cases advance VHF contact is recommended.

(a) When the pilot vessel is moved up the River Weser due to bad weather, embarking or disembarking of sea pilots takes place
  - on the Weser in area between light buoys "17/4-Reede" and "19/H-Reede";
  - on the Jade in area "Minsener Oog" by pilot vessel operating from Wilhelmshaven.

(b) Pilots are to be ordered as follows:
Inward Bound Vessels:
24 hours prior arrival Pilot Station at "German Bight" Light Vessel or 12 hours prior arrival Pilot Station at Buoy "3/Jade 2".
Outward Bound Vessels:
1. At least 2 hours prior to ETD.
2. For departures between 1900 hrs. and 1000 hrs. the Pilot has to be ordered by 1700 hrs.

(c) Pilot order must contain following items:
1. Name and gross tonnage of vessel.
2. Intended embarking position.
3. Time of arrival at embarking position.

Short Extract from Pilot Ordinance Weser/Jade, dated 15th July 1994:

Type of Vessel: LOA = length overall Beam = max. breadth	PILOTAGE COMPULSORY		
	Pilot Vessel (PV) on boarding position (outer position of PV)		PV on inner position (Weser) due to bad weather.
	From outer position PV (buoy "3/Jade 2") Inward bound (Jade or Weser).	LV "German Bight" to outer position PV (e.g. Weser estuary).	From PV or from Minsener Oog (islet) to outer pos. PV.
1. Tankers according to 30 (1) SeeSchStrO (National Traffic Regulations)			
LOA < 130 m. Beam < 21 m.	Yes	No	No
LOA > 130 m. Beam > 21 m.	Yes	Yes	Yes
2. Sea-going vessels (above named tankers excluded – see above)			
LOA < 90 m. Beam < 13 m.	No	No	Omissible
LOA > 90 m. (-170 m.) Beam > 13 m. (-28 m.)	Yes	No	No
LOA > 170 m. Beam > 28 m.	Yes	No	Yes
LOA > 330 m. Beam > 45 m.	Yes	Yes	Yes
3. Bulk carriers			
LOA > 250 m. Beam > 40 m. Draft > 13.5 m.	Yes	Yes	Yes
4. Ro-Ro vessels and car carriers (special regulations when PV on inner position)			
LOA > 140 m. (-330 m.) Beam > 23 m. (-45 m.)	Yes (see 2.) Yes (see 2.)	(> 330 m.: yes, see 2.) (> 45 m.: yes, see 2.)	Yes (only outward)

Key: < = less than
> = more than

Vessels exceeding:
- Length 250 m. and/or beam 40 m. and/or draft 14 m. take Shore Based Pilotage (radar assistance).

Vessels exceeding
- Length 260 m. and/or beam 40 m. and/or draft 16 m. take Shore Based Pilotage and 2 sea pilots.

Helicopter pilot service is available for vessels above 50,000 g.r.t. at "German Bight" Light Vessel.

DEEP SEA PILOTAGE: See "General" before first German port and "Baltic Deep-Sea Pilotage".

ANCHORAGE:

1. Deep water Roads for deep draft vessels South of "German Bight" Lightvessel.
2. Roads for large and deep-draft vessels East of Buoy "3/Jade 2".
3. Tanker Road Schillig for tankers not exceeding 250,000 d.w.t. and/or 13.5 m. draft.
4. Schillig Roads for all vessels – tankers exempted – not exceeding 13.5 m. draft.
5. Quarantine anchorage for vessels under quarantine. Max. draft 13.5 m.
6. Explosives anchorage for vessels carrying more than 100 kg. of explosives or ammunition. Max. draft 13.5 m.
7. Tanker Roads–North, for tankers which are loaded or waiting for berth. A safety distance of at least 300 m. between vessels at anchor has to be maintained. Max. draft 13.5 m.
8. Tanker Roads–South, for tankers being unloaded and not yet gas free and not exceeding 280 m. length. Max. draft 13.5 m. When anchored vessels are turning with the tide, measures like tug assistance against covering the Arngast light sector or drifting to the West side of the fairway to diminish time and circle of turning are to be taken.
9. Wilhelmshaven Roads, usually for smaller vessels waiting for sea lock passage.
10. Road for small vessels up to 20 m. in length.
11. Actual sounding plans are to be observed because changes of depths are possible. (Contact "Jade Traffic" or pilot).

Transhipment of goods according to IMDG Code Nos. 1 (explosives), 2 (gases) and 3 (inflammable liquids) is prohibited on the Jade including Roads.

Request for bunkering permit is to be addressed to "Wasser- und Schiffahrtsamt Wilhelmshaven" (Waterways and Shipping Board) via radio station "Jade Traffic" on VHF Channels 16, 63 and 20.

RESTRICTIONS: No restrictions on night entry. Unless notified by waterway and shipping authority. Vessels draft exceeding 54 ft. 02 in. (16.5 m.), will be controlled by tidal conditions and vessels navigate according to specified schedule.

Also see "General".

Traffic Safety Measures for Large Vessels:

Vessels with draft exceeding 17 m. will be guided by police vessels showing quick flashing blue light when navigating the TSS Jade Approach Southward between Buoy "Jade-Weser" and the Jade entrance. All other vessels are requested to give way to these vessels restricted by their draft.

During the navigation of a vessel, restricted in her ability to manoeuvre due to her draft, in the TSS Jade Approach, the radio station "German Bight Traffic" transmits navigational warnings every 15 minutes on VHF Channel 80 in German and English language. Warnings will be announced on VHF Channel 16.

Compulsory Reporting System in the Inner German Bight: (Extract from Common Proclamation of the Waterways and Shipping Directorates Nord and Nordwest).

All vessels, towing and pushing units included, exceeding 50 m. in length must report as follows:

(A) Shipping Police Reports:

(1) Reports as detailed hereunder shall be made to VTS Centre specified for this purpose by competent Shipping Police Authority, such reporting duty applying to any person in command of a vessel or composite unit, whether pushed or towed, which exceeds the dimensions and tonnages specified by Competent Shipping Police Authority as well as to any person in command of a vessel of one of the categories listed in Section 30(1) (See "Bans and Restrictions Affecting Navigation") below.

1. In good time before entering any one of the navigable waterways specifically designated by the Competent Shipping Police Authority – provided that the particulars listed hereunder have not yet been reported under the provisions of Section 1(1) above in conjunction with Item 2.6 of the Annex to the Internal Waters (Entering Requirements) Ordinance of 23rd August 1994 (promulgated in the Federal Law Gazette I, p. 2246) as last amended by Article 6 of the pertinent Ordinance of 7th December 1994 (promulgated in the Federal Law Gazette I, p. 3744) – the following particulars shall be reported:
   (a) name, call sign and type of the vessel;
   (b) position of the vessel;
   (c) length, breadth and draft of vessel;
   (d) vessel's port of departure and port of destination;
   (e) a statement indicating whether vessel carries liquefied gases, chemicals or oil/petroleum products in bulk and, if so, specification of type and quantity (types and quantities) of any such bulk cargo (cargoes) including respective UN number (numbers), respectively, whether any such bulk cargo (cargoes) has (have) been carried and tank (tanks) has (have) not been cleaned and de-gassed or completely been inerted afterwards;
   (f) statement indicating whether there are any deficiencies with regard to the vessel or her cargo;
   (g) name(s) of the vessel's owner(s) or of his (their) authorised representative(s).
2. As vessel proceeds en route past the designated reporting positions, the following particulars shall be reported:
   (a) name and call sign of the vessel;
   (b) position of the vessel;
   (c) speed of vessel;
   (d) time of vessel's passage.
3. Any discontinuation and subsequent resumption of vessel's voyage shall be reported.

(2) Format of reports giving particulars mentioned in preceding paragraph shall conform to reporting format referred to in Appendix I to the Annex to Internal Waters (Entering Requirements) Ordinance, which relates to Item 1.9 of said Annex.

(3) Having transmitted Initial Report via VHF radiotelephone, the person in command of a vessel in terms of paragraph (1) above shall keep a continuous listening watch on the VHF channels specified for that purpose and, when technically feasible, also on VHF Channel 16, so that the Competent Shipping Police Authority can at all times address the vessel in question.

(B) The provisions of the German Ordinance on Particular Requirements for the Entry of Foreign Vessels into German Internal Waters are to be observed.

2. Reports to be made and listening watches to be kept:

2.1 The Operator of any vessel bound for the internal waters of the Federal Republic of Germany and carrying dangerous or polluting goods, whether in bulk or in packaged form, shall forward, by facsimile or similar electronic data transmission, the following particulars to the Central Reporting Point ("Zentrale Meldestelle") – address: Am Alten Hafen 2; D-27472 Cuxhaven, facsimile number +(4721) 106 393 or 106 394 – on such vessel's departure from a port located outside the European Union, provided that the vessel's first port of call, or her first mooring or anchoring site, will be located in the Federal Republic of Germany, or when the intention is to pass through the Kiel Canal:

(a) name, distinctive number or letters and type of the vessel;
(b) flag of the vessel;
(c) length, beam and draft of the vessel (in metres);
(d) port of destination of the vessel;
(e) estimated time of arrival at the port of destination/estimated time of departure;
(f) intended route;
(g) the correct technical names of the dangerous or polluting goods, complete with their UN Numbers and Classes in accordance with the IMDG, IBC and IGC Codes, as appropriate, the quantities of such goods and their location on board and, if in portable tanks or freight containers, their identification marks (e.g. the container's distinctive letters and number);
(h) confirmation that a list or manifest or appropriate loading plan, giving details of the dangerous or polluting goods carried and of their location on the vessel, is kept on the navigating bridge or in the vessel's operations centre.

The obligation to forward the particulars referred to in Item (g) above shall be deemed to have been fulfilled when these particulars have been made available to the competent port authority, or to the agency designated by such authority, and can be transmitted from there to the Central Reporting Point, upon the latter's request, at any time. (A list of such port authorities and designated agencies shall be made known to the public by the competent Waterways and Shipping Directorate). This exemption shall not apply when the intention is only to pass through the Kiel Canal.

2.2 The operator of any vessel carrying dangerous or polluting goods, whether in bulk or in packaged form, and leaving a German seaport shall, prior to leaving, forward the particulars referred to in Item 2.1 above tot he Central Reporting Point. The obligation to forward the particulars referred to in Item 2.1 (g) above shall be deemed to have been fulfilled when these particulars have been made available to the competent port authority, or to the agency designated by such authority, and can be transmitted from there to the Central Reporting Point, upon the latter's request, at any time. (A list of such port authorities and designated agencies shall be made known to the public by the competent Waterways and Shipping Directorate).

2.3 When a vessel bound for, or leaving, the internal waters of the Federal Republic of Germany is involved in a marine casualty or in any other incident or cicumstance from which actual damage to the German coastline or related interests arises or is threatening to arise, the vessel's Master, with a view to preventing pollution, shall forthwith forward the particulars of such marine casualty or other incident or circumstance, complete with the particulars referred to in Item 2.1 above, to the Central Reporting Point which, in turn, shall forward them directly to the competent VTS Centre. This provision shall apply, in particular, to cases involving

(a) the loss overboard of dangerous goods;
(b) the discharge (in terms of the MARPOL Convention) of polluting goods;
(c) the imminent threat of such loss overboard or discharge.

The obligation to forward the particulars referred to in Item 2.1 above shall be deemed to have been fulfilled when the Master discloses which authority of a Member State of the European Union is holding these particulars. In the event that such vessel's report is incomplete or unavailable, or that the vessel has been abandoned, the discharge, to the fullest extent possible, of the above obligation shall fall upon the vessel's operator.

2.4 Notification of the particulars referred to in Item 2.1 to 2.3 above shall be effected in the format set out in Appendix I to the present Ordinance. Reports made in accordance with the provisions of Items 2.1 and 2.2 above shall be made in writing and shall contain the operator's name, address, telephone and facsimile numbers.

2.5 Regular scheduled services with a crossing time not exceeding one hour shall be exempt from the obligations set out in Item 2.1 respectively 2.2 above. Regular scheduled services with a crossing time exceeding one hour may, upon application by the vessel's operator and following consent by the European Commission, be exempted by the competent Waterways and Shipping Office from the obligations set out in Item 2.1 respectively 2.2 above. In this event, the vessel's operator shall ensure that the particulars referred to in Item 2.1 above can be forwarded, upon request, to the Central Reporting Point in writing and in accordance with Appendix I to the present Ordinance.

2.6 The Master of a vessel or of a composite unit, whether pushed or towed, of more than 50 m. in length proceeding en route from a Westerly or Northerly direction and heading for the inner German Bight shall – in the case of navigating in the traffic separation scheme "German Bight Western Approach", when sailing past Lightbuoy "GW 7", or, in the case of proceeding en route from a Northerly direction and heading for a position to the West or to the East of Helgoland Lighthouse, prior to crossing the seaward delimitation of the German territorial sea – transmit by VHF radiotelephony to the VTS Centre a report giving the following particulars:

(a) vessel's name and distinctive letters or number;
(b) vessel's position;
(c) vessel's length, beam and draft (in metres);
(d) port of departure and port of destination;
(e) a statement to the effect whether liquefied gases, chemicals or petroleum/petroleum products are carried in bulk and, when this is the case, information on the type, the quantity and the UN Number of each cargo, respectively, a statement to the effect that such cargoes have been carried and the tanks have not been cleaned and de-gassed or completely been inerted afterwards;
(f) a statement to the effect whether there are any deficiencies with regard to the vessel or her cargo;
(g) names of the vessel's owners or of the latters' agents.

The format of reports giving the above particulars shall be in accordance with the reporting format reproduced at Appendix I to the present Ordinance.

Having transmitted such particulars, the vessel concerned shall keep a continuous listening watch on VHF Channel 79, 80 or 16. In addition, any vessel navigating in the traffic separation scheme "German Bight Western Approach" shall, when passing Lightbuoy "GW 9", transmit to the VTS Centre, her name and call sign, position and passing time.

Bans and Restrictions Affecting Navigation:

(1) Following categories of vessels shall not navigate on Rivers Jade, Weser, Hunte, Elbe and Trave, nor in Kiel Canal or Kiel Fjord, nor in approaches to ports of Wismar, Rostock (including Lower River Warnow), Stralsund and Wolgast, except upon fulfilling the preconditions listed in paragraph (2) below:
   1. tankers and composite units, whether pushed or towed, carrying any one or more of the substances listed in Annex III to the present Ordinance;
   2. empty tankers and composite units, whether pushed or towed, after discharging any one or more of the substances referred to in Items 2 and 3 of Annex III to the present Ordinance in any case where the flashpoint of the cargo last carried was below 35° C. and where the tanks have not been cleaned and de-gassed or completely inerted; however, this provision shall, not apply when only such residual quantities are left as cannot be pumped off any more, although the vessel's discharging arrangements function properly;
   3. empty tankers and composite units, whether pushed or towed, as referred to in sub-paragraph 2 above, in any case where the flashpoint of the cargo last carried was 35° C. or over whereas, before that cargo, some other cargo with a lower flashpoint had been carried and where the tanks have not been cleaned and de-gassed or completely inerted;
   4. nuclear ships.

(2) The preconditions to be fulfilled by any vessel wishing to navigate on the waterways referred to in paragraph (1) above shall be as follows:
   1. At the point of the vessel entering the waterway, respectively leaving a mooring site, the prevailing range of visibility exceeds 1,000 m.;
   2. an effective radar is in operation and a person conversant with radar observation observes the radar image at all times as long as visibility is restricted.
   3. the vessel's automatic pilot may only be used upon fulfilling the preconditions defined by the Competent Shipping Police Authority; however, the provisions of Section 42(5) and (6) below shall remain unaffected by the present provision;
   4. tank lids are kept closed.

The provisions of sub-paragraph 1 above shall not apply

(a) to vessels navigating on the Kiel Canal (except for vessels leaving berth in a port) nor to vessels directly entering or leaving the Kiel Canal;
(b) to vessels as referred to in sub-paragraphs 1 to 3 of paragraph (1) above navigating at a range of visibility exceeding 500 m. in waters designated by the Competent Shipping Police Authority, provided that such vessels – in addition to complying with the preconditions mentioned in sub-paragraphs 2 to 4 above – are fitted with a gyro-compass or with a tested and calibrated magnetic compass and, in the case of a vessel of a deadweight capacity of 2,000 tonnes or more, the Competent Shipping Police Authority, acting on the merits of the particular case in question, and bearing in mind the interests of the safety and easy flow of traffic, has permitted such vessel to proceed.

(3) The Competent Shipping Police Authority may impose upon vessels as referred to in paragraph (1) above, as well as upon other vessels, as it may specify, any preconditions to be fulfilled prior to being permitted to sail on a navigable waterway; such preconditions say, in particular, concern the use of tugs.

(4) Vessels of types or sizes designated by the Competent Shipping Police Authority may, in certain waters designated by the Competent Shipping Police Authority, navigate only upon prior reporting to such authority and upon compliance with such traffic control measures as may have been imposed.

(5) Navigating shall be prohibited in certain waters within such periods of time, at such water levels, or in such weather conditions as may be specified by the Competent Shipping Police Authority. This provision shall not apply to such categories of vessels as may be specified by the Competent Shipping Authority.

2. All vessels specified exceeding 50 m. in length have to report to radio station "Jade Traffic" on VHF Channel 16/63/20 when passing the following positions:

(a) Light buoy "JW5/Jade 1",
(b) before entering and when leaving the waterway Jade inward Light buoy "JW5/Jade 1",
(c) on arrival or departure from anchorage or jetty and when entering or leaving a harbour area.

Reports must contain ship's name, position, speed and passing time.

Lock Restrictions:

The sea lock opening times (normal service hours) for No. 4 Dock are announced in daily maritime bulletins. Coastal radio station "Wilhelmshaven Lock" working on Channels 16 and 13 VHF during official service hours.

Dimensions of lock: 390 m. long, 57 m. wide and depth of 11.47 m. MLW. However, only smaller vessels use dock harbour as bollards for mooring larger ships not yet available.

See "Annex No. 2" before "Authority".

MAX. SIZE: Max. size fixed for navigating the Jade:

(a) Draft, entering: 20 m. (65 ft. 07 in.)
leaving: 19 m. (62 ft. 04 in.)
(b) Length: 350 m.
(c) Beam: 52 m.

Vessel exceeding these dimensions must apply for a permit of navigation to "Wasser- und Schiffahrtsamt Wilhelmshaven".

See "Annex No. 3" before "Authority".

Keel clearance of at least 8.5% (See "Annex No. 3") of draft required. Also see "Tankers".

HEALTH: Radio Pratique possible. Sea Pilot will hand Health Declaration to Master. If one of the questions is answered "Yes", Pilot will advise Port Health Officer. A valid Derat Exemption must be produced.

RADIO: Norddeich Radio, call sign DAN. Elbe-Weser Radio can be contacted by VHF Channel 16.

Radio advice prior to arrival: Advise Agent 7 days before arrival:

1. Ship's name and call sign, ETA in GMT.
2. Nationality.
3. Draft forward and aft.
4. Cargo on board and slop information.
5. Number and diameter of cargo manifold connections.
6. Discharge rate per hour.
7. Loading rate per hour.
8. Quantity of ballast on board.
9. Ballasting rate per hour.
*10. Leaks in the hull or overboard valves, if any.
*11. Inert or non inert gas report.
*12. Request for crude wash.
*13. Request for repairs.
14. Valid oil liability certificate.
15. Heli-landing/winching area.
16. VHF Channel 20 in good working order.

*Details must be with Agent at least 48 hours before arrival.

ETA to be confirmed 72 hours before arrival, and whenever ETA changed by more than 30 minutes.

Notify Agents of tug requirements.

VESSEL TRAFFIC SYSTEM: Shore based Radar Assistance and shipping police:

VTS Centre Wilhelmshaven.

This Station of the Waterways and Shipping Administration is operated continuously and performs radar surveillance and information services as follows:

1. *Jade Radar Chain:*
(a) Extension from light buoy "TG19/Weser 2" to light buoy "58".
(b) Call names
"Jade Traffic",
"Jade Radar", concerning radar services.
(c) VHF Channels: 16/63/20.
(d) Shore based radar assistance is available to all vessels.
(e) Situation reports (traffic movements, dredging activities, disturbances, tidal and weather conditions, etc.) are broadcasted
every even hour (H + 11 minutes) on VHF Channels 63/20 (in German language),
on request (also in English language).
(f) Traffic information/traffic assistance/traffic instructions:
observation of traffic with concern to national and international traffic regulations;
information, advice and (binding) instructions addressed to vessels (shipping police);
navigational warnings (strategical assistance);
receiving of ships reports (initial and passage reports);
identification and recording of vessels.
(g) Handling of all other shipping affairs on the navigable waters of the Jade (e.g. casualties, distress situations, oil pollutions).

2. *German Bight Radar Surveillance Area (VTS):*
(a) Extension: Area within a radius of 48 km. around Heligoland Lighthouse.
(b) Call name: "German Bight Traffic".
(c) VHF Channels: 16/79/80.
(d) Shore based radar assistance is available.
(e) Situation reports (special traffic movements, disturbances, weather conditions, events important to navigators) are broadcasted in German and English language
every even hour (H + 00 minutes) on VHF Channels 80/79,
on request, and under certain conditions (No. 79-92).
(f) Special aims:
Observation of traffic with concern to national and international regulations,
information, advice, and (binding) instructions addressed to vessels (shipping police),
navigational warnings (strategical assistance),
receiving of ships reports (initial and passage reports),
identification and recording of vessels,
handling of all other shipping affairs on the navigable waters within the appropriate area.

All orders issued by this Shipping Police Authority Station must be observed (Remarks: Offences against international and national rules will be prosecuted. Inner German Bight is under surveillance by radar and patrol vessels).

TUGS: Compulsory. Tankers normally require at least 4 tugs of minimum 1,500 h.p. for berthing. Tugs meet tankers at anchorage near Buoy "43". Only tug lines are used, charge inclusive.

VLCCs meet the tugs at Buoy "41", when they are bound for NWO.

BERTHING: *Wilhelmshaven Inner Port:*

The following berths can be reached:

Harbour Name	*Max. draft*		*Quay length*
Handelshafen	16 ft. 05 in.		600 m.
Grosser Hafen	20 ft. – 26 ft.	Bontekai about	500 m.
Verbindungshafen	18 ft.	Sudwestkai	400 m.
Nordhafen			
Hannoverkai	38 ft. (11.6 m.)		312 m.
Luneburgkai	33 ft. (10.0 m.)		205 m.
Braunschweigkai	36 ft. (11.0 m.)		270 m.
Ausrustungshaven (Lay-up berth)	19 ft.		140 m.

2 lay-up berths (dolphins) for vessels up to 30,000 d.w.t.

CRANES:

Braunschweigkai	1×45 ton mobile crane
Sudwestkai:	1×45 ton mobile crane.
Luneburgkai:	2×15 tons – 18 tons portal cranes.
Handelshafen:	1×15 tons – 18 tons portal crane. 1 crane for scrap iron.

A floating crane of 100 tons capacity is available on request from the Navy yard.

SPECIAL CARGO HANDLING FACILITIES: There is no Container traffic at Wilhelmshaven. One Ro-Ro ramp available at Luneburgkai and one Ro-Ro ramp available at Nordwestkai.

BULK HANDLING FACILITIES: Figdor is the operator of cargo handling in the Handelshafen with its connection to railway, road and canal-system.

Equipment: One modern gantry crane of 8 – 15 tons and efficient mobile cranes. Storage facilities for bulk cargo to an amount of 70,000 tons, 1 silo with a capacity of 720 cu.m. and 2,000 sq.m.

Niedersachsenbrucke: The facility accommodates vessels up to 190,000 d.w.t. and 47 ft. draft at the outer berth. A bulk discharge unit with an hourly capacity of 1,200 tons delivers coal to a nearby power plant by a conveyor belt.

The inner berth has a depth of 12.0 m. There are discharging installations for fuel oil and loading installations for caustic soda solution.

Transhipment of bulk cargo is possible.

TANKERS: Nord-West Oelleitung Terminal: Position Lat. 53° 33' N., Long. 08° 08' E. Distance from Weser Pilot Station, 24 miles. Type of Berth, Finger Pier "T" head. Density 1025. Current velocity, 3-4 knots. Mean tidal range, 12 ft. 08 in. Nature of bottom, sand and mud.

1. Berthing Schedule:

Size	*From*	*To*
Up to 30,000 d.w.t.	Anytime	
30,001 – 50,000 d.w.t.	3 hours before LW	HW
50,001 – 85,000 d.w.t. or less than 43 ft. draft	6 hours before LW or HW	LW or HW
over 85,000 d.w.t. or over 43 ft. draft	2 hours or 1/2 hour before LW or HW	
over 55 ft. draft only with rising tide	2 hours or 1/2 hour before HW	

Notes: NWO Terminal is a port with strong tidal currents, running nearly parallel to the jetties.

The vessels are always berthed with the bow in the current.

Example: If a vessel is at the tug position, 2 hours before HW, the vessel has to turn in a safe distance off the jetty to berth with port side to, against the flood tide.

If a vessel is at the tug position 30 minutes before HW, the vessel will berth with starboard side to against the ebb tide which has just started.

Tug position:	At Buoy No. 41	for vessels bound for Jetty No. 4, or gross tonnage 60,000 tons and over.
	At Buoy No. 45	for all other vessels.
Distance:	Buoy No. 41 to Jetty No. 2: 4.7 nautical miles.	
	Buoy No. 45 to Jetty No. 2: 2.3 nautical miles.	

2. *Berth Dimensions:*

Berth (No.)	Max. D.W.T. (tonnes)	Max. Displacement (tonnes)	Max. Draft (m.)
1	130,000	140,000	15.40
2	130,000	142,500	15.40
4	260,000	350,000	20,00

Note: It is possible to berth tankers up to 400,000 tonnes d.w.t. with part cargo, but the actual displacement on arrival must not exceed 350,000 tonnes and max. draft not to exceed 20.0 m.

3. *Restrictions:*

Berth No. 1: Maximum height/elevation of vessel's manifold: 16.0 m.* all the time.

Berth No. 2: Maximum height/elevation of vessel's manifold: 19.0 m.* all the time.

Berth No. 4: Minimum draft at forward dolphin (approximately 55 m. ahead of centre of manifold) has to be 3.0 m.* all the time. Minimum BCM/SCM: 120 m./125 m.

* According to the height of tide under normal circumstances.

4. *Laser Docking System:*

A laser docking system is installed at each berth to indicate approach velocity and vessel's distance to the dolphins to Docking Pilots.

The rate of approach velocity is indicated by signal lamps:

slow flash green	0 – 3 cm./sec.
quick flash green	3 – 6 cm./sec.
slow flash yellow	6 – 7 cm./sec.
quick flash yellow	7 – 8 cm./sec.
slow flash red	8 – 10 cm./sec.
quick flash red	over 10 cm./sec.

The deflection of the dolphins is recorded on a chart.

5. *Pipelines Handling Rates, Hoses and Maximum Pressures:*

Berth No.	Grades handled	Pipelines (in.)	Length (ft.)	Discharge Rate (cu.m./hr.)	Maximum Pressure (Bar)	Hoses (in.)
No. 1	Crude Oil	1×30	4,920	10,000	15	4×12
No. 2	Crude Oil	1×30	4,595	9,000	15	3×12
No. 2	Gasoline	1×30	4,595	3,000	15	1×12
No. 4	Crude Oil	1×40	5,500	18,000	15	4×16

Maximum loading rate at each berth for all grades is 3,000 cu.m./hr.

Fuel Oil and Marine Diesel Oil is only available by barge and is arranged by ship's Owner or Agent.

6. *Radio:* All vessels bound for NWO Terminal should pass following information soonest:

AA ETA German Bight Lightvessel.
BB Arrival draft (m.).
CC Arrival displacement (tonnes).
DD Kind of cargo and Bill of Lading figures, if heated advise average temperature.
EE Free water below cargo after loading (Yes/No), quantity.
FF Any separate slop to discharge (Yes/No,) kind and quantity.
GG Estimated time for discharging, including COW.
HH COW (Yes/No).
II Ballast time (hours).
JJ Disposal of residues according to MARPOL I (Yes/No), kind and quantity, pumpable at normal temperature, estimated pumping rate.
KK Disposal of garbage according to MARPOL V (Yes/No), kind and quantity.

Terminal does not accept any mixture of residues according to MARPOL I and garbage according to MARPOL V.

Different kind of waste, like unpumpable residues, oily rags scrap or batteries, etc., have to be collected, each in separate bags, drums or containers. Each unit has to be labled with vessel's name and date of delivery.

Terminal does not accept any solvents, paints or chemicals. These kinds of special garbage must be discharged separately, arranged by Agent.

LL Confirm number, size and material of mooring-wires/ropes.

Tankers bound for NWO-Terminal must be equipped forward and aft at least with 2 breast wires and 2 spring wires, provided with corresponding synthetic tails. Four head and 4 stern ropes are accepted also in other approved material, but wires with tails are recommended.

Tankers above 100,000 d.w.t. must be equipped forward and aft at least with 4 breast wires and 2 spring wires provided with corresponding synthetic tails. Two head-and 2 stern ropes are accepted also in other approved material, but wires with tails are recommended.

MM Confirm all moorings, winches and winch brakes are in good condition according to OCIMF standard (Yes/No).
NN Vessel's hull and shell plating has to be smooth in order to avoid any damage at the terminal's dolphins.
OO Deficiencies on board (Yes/No).
PP Various.

7. *Dirty Ballast:* There are no shore facilities to receive dirty ballast.

8. *Services:* Fresh water is available, except during freezing periods. Bunkers and diesel are not available from NWO. It is necessary to order a bunker barge in advance, please contact Agent. A shore gangway is available.

Stores and luboil must be taken on board from a barge at vessel's seaside.

9. *Operator:* North-West Oelleitung GmbH, Postfach 2061, 26360 Wilhelmshaven, Germany. Tel: (04421) 620. Fax: (04421) 62381. Telex: 253348.

Beta Oil Terminal:

Berths No. 1 and No. 1A: Position Lat. 53° 37' 28" N., Long. 08° 08' 30" E. Distance from "Weser" Lanby, 20 miles.

Berths No. 2 and No. 3: Position Lat. 53° 37' 12" N., Long. 08° 07' 36" E. Distance from Weser Pilot Station, 20 miles.

Description of the Port Area: The jetty facilities consist of:

1. Two offshore terminals without permanent shore connection for handling of crude oil, gasoline, middle distillate and HFO.

Sizes of Ship – Jetty 1:
DWT: 20,000 to 250,000.
Length: 165 m. to 350 m.
Draft: 18.0 m. maximum (Also see "Water Depths and Ships Drafts" and "Arrival, Mooring and Unmooring – No. 1").

Sizes of Ship – Jetty 1A:
DWT: 5,000 to 45,000.
Length: 100 m. to 230 m.
Draft: 11.5 m. maximum.

2. Two onshore terminals for LPG, gasoline, middle distillate and HFO.

Sizes of Ship – Jetty 2:
DWT: 300 to 11,000.
Length: 50 m. to 135 m.
Draft: 6.5 m. maximum.

Sizes of Ship – Jetty 3:
DWT: 300 to 8,300.
Length: 50 m. to 120 m.
Draft: 6.5 m. maximum.

Notes: Ships for Jetty 1 with a draft greater than 17.0 m. (18.0 m. maximum) depend on the tide when using the entrance (Also see "Arrival, Mooring and Unmooring – No. 1").

Bunkering:	Possible at Jetty 1 and 1A only through the appropriate loading arms without viscosity blending. Possible at Jetty 2 and 3 only through the appropriate loading arms without viscosity blending.
Ballast Water:	Ballast water can be discharged at each jetty. The onshore ballast water unit has a capacity of 17,000 cu.m. The ballast water is not allowed to be contaminated with chemicals.

3. Water depths and ship drafts: The table "Water Depths and Ships Drafts" shows the water depths for each jetty related to chart datum and the maximum permissible ship drafts.

WATER DEPTHS AND SHIP DRAFTS:

Water depths in meters according to chart datum:

Jetty	Berth	Access	Jade
1	19.5	18.5	18.5
1A	12.5	12.5	18.5
2	7.5	7.5	18.5
3	7.5	7.5	18.5

Under-keel clearance in meters.

Jetty	Port Area	Mean Tidal Range	Maximum Draft
1	1.5	3.2	18.0
1A	1.5	3.2	11.5
2	1.0	3.2	6.5
3	1.0	3.2	6.5

4. Tidal currents and flow angles – Jetty 1 and 1A: The flood current runs at an offshore angle of 10° to 12° towards Jetty 1, and the ebb current has an angle of 3° to 4° (See "Plan").

The maximum tidal current velocity near Jetty 1/1A is 4 knots. In the vicinity of Jetty 2 and 3, it is 3.5 knots.

5. Loading and unloading rates on Jetty 1: Also see Plan "Schematic Diagram of the Loading Arm on Jetty 1".

Import:
Crude:
4 loading arms 16 in.
4,000 cu.m./hr. per loading arm.
15,900 cu.m./hr. maximum discharge rate.
Ballast water:
2 loading arms 16 in.
800 cu.m./hr. maximum ballast water rate.
Middle distillate:
1 loading arm 16 in.
1,200 cu.m./hr. discharge rate.
Export:
HFO:
2 loading arms 16 in.
3,200 cu.m./hr. maximum loading rate.
1 loading arm 10 in.
800 cu.m./hr. maximum loading rate.
Middle distillate:
1 loading arm 16 in.
2,400 cu.m./hr. maximum loading rate.
1 loading arm 10 in.
400 cu.m./hr. maximum loading rate.

6. Loading and unloading rates on Jetty 1A: Also see "Plan" "Schematic Diagram of the Loading Arms on Jetty 1A".

Import:
Ballast water:
1 loading arm 12 in.
800 cu.m./hr. maximum discharge rate.
Gasoline and Gasoline Components:
1 loading arm 10 in.
550 cu.m./hr. maximum discharge rate.
1 loading arm 12 in.
550 cu.m./hr. maximum discharge rate.
HFO:
1 loading arm 12 in.
2,600 cu.m./hr. maximum discharge rate.

Export:
- Middle distillate:
  - 2 loading arms 12 in.
  - 1,200 cu.m./hr. per loading arm.
  - 2,400 cu.m./hr. maximum loading rate.
  - 1 loading arm 8 in.
  - 300 cu.m./hr. maximum loading rate.
- HFO:
  - 2 loading arms 12 in.
  - 2,600 cu.m./hr. per loading arm.
  - 3,200 cu.m./hr. maximum loading rate.
  - 1 loading arm 8 in.
  - 300 cu.m./hr. maximum loading rate.
- Gasoline/Naphtha:
  - 1 loading arm 10 in.
  - 950 cu.m./hr. maximum loading rate.
  - 1 loading arm 12 in.
  - 1,200 cu.m./hr. maximum loading rate.

7. Loading and unloading rates on Jetty 2: Also see "Schematic Diagram of the Loading Arms on Jetty 2".

Import:
- Ballast water:
  - 1 loading arm 10 in.
  - 800 cu.m./hr. maximum discharge rate.
- Gasoline and Gasoline Components:
  - 1 loading arm 10 in.
  - 800 cu.m./hr. maximum discharge rate.

Export:
- Middle distillate:
  - 2 loading arms 10 in.
  - 1,200 cu.m./hr. per loading arm.
  - 2,400 cu.m./hr. maximum loading rate.
  - 1 loading arm 10 in.
  - 475 cu.m./hr. maximum loading rate.
- Gasoline Components:
  - 1 loading arm 10 in.
  - 550 cu.m./hr. maximum loading rate.
- HFO:
  - 2 loading arms 10 in.
  - 1,300 cu.m./hr. per loading arm.
  - 2,600 cu.m./hr. maximum loading rate.

8. Loading and unloading rates on Jetty 3: Also see "Schematic Diagram of the Loading Arms on Jetty 3".

Import:
- Ballast water:
  - 1 loading arm 8 in.
  - 500 cu.m./hr. maximum discharge rate.
- Gasoline Components:
  - 1 loading arm 8 in.
  - 550 cu.m./hr. maximum discharge rate.
- Middle distillate:
  - 1 loading arm 8 in.
  - 550 cu.m./hr. maximum discharge rate.

Export:
- Gasoline:
  - 1 loading arm 8 in.
  - 550 cu.m./hr. maximum loading rate.
  - 1 loading arm 10 in.
  - 950 cu.m./hr. maximum loading rate.
- LPG:
  - 1 loading arm 6 in.
  - 250 cu.m./hr. maximum loading rate.
- Middle distillate:
  - 2 loading arms 8 in.
  - 550 cu.m./hr. per loading arm.
  - 1 loading arm 10 in.
  - 950 cu.m./hr. maximum loading rate.
- HFO:
  - 1 loading arm 8 in.
  - 475 cu.m./hr. maximum loading rate.

Authority of BETA to Issue Instructions:

1. Access to the port area is permitted to authorised persons only.
2. Representatives of authorities in the exercise of their official duties are entitled to enter the jetties upon submission of their duty passes. They must observe the safety and security instructions.
3. Masters are obliged to comply with BETA's instructions as regards loading and unloading and safety regulations in the port area.
4. All persons entering the port area must follow BETA's instructions.

Transit of Persons:

1. All persons entering the port area whilst exercising their duties must wear safety helmets.
2 Crew members are not allowed to leave, and visitors are not allowed to enter the ship berthed at the BETA Jetty until it has been cleared by the authorities.
3. BETA employees and representatives have at all times access to the ship for the performance of their duties. The Master or his deputy shall give them all the information necessary for operations. They shall be allowed to inspect all safety equipment and all mooring and handling facilities.
4. Crew members and their relations with a valid permit are entitled to enter the jetty. The permit must be issued by the Master, the Agent or the gatekeeper.
5. Visitors and passengers with a valid BETA permit are allowed to enter the ship. The permit must be approved by the responsible Agent and issued by the gatekeeper at the access to the jetty.
6. All other persons who wish to enter the port area must possess a valid BETA permit, with the exception of persons under §5, para 2, with duty passes.
7. Transfer of persons between ship and shore is effected by BETA jetty bus or boat.
8. Only BETA vehicles are allowed to drive on the access jetty and to park in the marked parking areas. Any other vehicles may only drive on the access jetty with a valid BETA approval. Vehicles are not allowed to drive on the loading and unloading Jetties 2 and 3. All exceptions require the special BETA approval.
9. The maximum permissible speed on the access jetty is 30 km./hr. The regulations under the Road Traffic Act apply on the BETA jetty facilities.

Arrival, Mooring and Unmooring:

1. Entering the port area and mooring at the loading and unloading jetties and berths requires BETA approval. BETA will allocate an adequate berthing place with due consideration of safe and orderly handling of cargo.

   Ships for Jetty 1 with a draft greater than 17.0 m. (18.0 m. maximum) depend on the tide when using the entrance.

   Unless otherwise provided in the charter contract, BETA is not liable for any costs for lay-days in the roads.
2. Ships which have suffered damage during the voyage must be announced to BETA in good time before entering the port area.

   Ships which in the dutiful opinion of BETA are not suitable for cargo handling operations at the loading and unloading jetties must be refused even after commencement of loading or unloading, or may only be allowed for cargo handling operations under certain conditions.
3. Within the port area, ships may only be moved without tow lines with the navigational aid of a Pilot. All exceptions require the BETA approval.

   The individual conducting a ship is always obliged to use sufficient tug assistance when manoeuvring at the offshore terminal.
4. The number of tugs available are quoted under "Minimum Number of Tugs for Manoeuvring" (See below).
5. BETA is not responsible for mooring and unmooring or for towage operations of the ship.
6. In the presence of a gas tanker at Jetty 3, no other tank vessel, which has not been properly degassed and which is carrying or was carrying loads as under IMDG-Code 3.1 or 3.2, is allowed to moor at Jetty 2, unless the ship's tanks are fitted with quick acting ventilation valves. The loading pressure safety valves shall be activated before entering the BETA port area, in order to relieve the pressure in the ship's tanks to atmosphere level. When mooring and unmooring the ship, the gas loading respectively unloading at Jetty 3 shall be suspended and both the jetty's valves and the ship's valves shall be closed.

Minimum Number of Tugs for Manoeuvring:

Jetties 1 and 1A:

	Mooring		Unmooring	
d.w.t.	without MA	with MA	without MA	with MA
less than 15,000	2	1	2/1 *2	1
15,001 – 35,000	3	2 *1	3/2 *2	1
35,001 – 100,000	4	3 *1	3/2 *2	2
100,001 – 150,000	5	4 *1	4/3 *2	2
150,001 – 250,000	6	5 *1	5/4 *2	3

Requirement: Normal weather and current conditions.

Notes:

MA = Manoeuvring Aids (i.e. bow thruster and c-p propeller).

*1 If equipped with either bow and stern thruster and c-p propeller or bow thruster and 2 c-p propellers and Becker rudder, then the number of tugs may be reduced by 1.

*2 The stern position relative to the tide/current has been considered in the smaller number of tugs.

Jetty 2:

	Mooring		Unmooring	
d.w.t.	without MA	with MA	without MA	with MA
0 – 500	0	0	0/1	0
501 – 5,000	0	0	0/2	0
5,001 – 7,500	1	0	1/0 *1	0
7,501 – 11,000	2	1	2/1 *1	1

Notes:

MA = Manoeuvring Aids (i.e. bow thruster and c-p propeller).

*1 The stern position relative to the tide/current has been considered in the smaller number of tugs.

Jetty 3:

	Mooring		Unmooring	
d.w.t.	without MA	with MA	without MA	with MA
0 – 500	0	0	0	0
501 – 5,000	1	1	1	1
5,001 – 7,500	1 *1	1	1 *1	1
over 7,500	2	1	2 *2	1

Notes:

MA = Manoeuvring Aids (i.e. bow thruster and c-p propeller).

*1 Ships over 5,001 d.w.t. must accept the assistance of 2 tugs for the respective manoeuvre, in case they have to be turned in the flood tide current and if they are not equipped with manoeuvring aids.

*2 All ships moored with the starboard side at flood tide current – 1 tug.

These regulations are valid for all jetties:

The number of tugs must not fall short of the number shown in the respective category. The number of tugs may only be exceeded in exceptional cases upon the Master's and/or the Pilot's decision to ensure safe manoeuvring (e.g. wind).

The smaller number of tugs is only permitted if the ship is equipped with manoeuvring aids and
- (a) if the Pilot is well acquainted with the respective ship, and
- (b) if the Master/Agent prior to the arrival of the ship has expressly confirmed that the shipboard manoeuvring aids are in working order.

Mooring:

1. Mooring Advisor: Prior to mooring of the ship at Jetty 1, the BETA Mooring Advisor shall check both the winch assembly and the lines. BETA may refuse any ship which he considers not suitable for cargo handling operations.

   Spliced lines are not allowed. Exceptions need to be approved by BETA. In these cases, the ship has to accept a "Note of Protest" and alternative action.

   Because of the conditions prevailing at Jetty 1, the BETA Mooring Advisor is entitled to call tug assistance for the safe mooring of the ship at the ship's expenses.
2. Jetty 1:
   Four mooring posts serve to take fore lines, aft lines and breast lines. Every mooring post is fitted with 3 slip hooks with a tensile capacity of 125 tons each. Another 2 slip hooks with a tensile capacity of 100 tons, which take the spring lines, are available on each corner of the platform (See "Mooring plan for ships over 200 m." and "Mooring plan for ships under 200 m." in "Plan Section").

   The offshore terminal is additionally fitted with wire lines with polyprop tails to be fastened on the ship. The correct mooring and handling of these additional wire lines is the responsibility of the ship.

   Jetty 1 is fitted with an approach monitoring system. The approach speed of ships over 80,000 d.w.t. may not exceed 5 cm./sec.

   Panels on the Northern and Southern bollard mooring posts indicate the distance between ship and fender post (range 30 m. – 0 m.).

   The approach speed is indicated by lights in different colours as follows:

   Less than 5 cm./sec.: Green light = safe approach speed.
   Less than 10 cm./sec.: Orange light = unsafe approach speed.
   More than 10 cm./sec.: Red light = dangerous approach speed.
3. Jetty 1A: Four mooring posts serve to take fore lines, aft lines and breast lines. Every mooring post is fitted with 2 slip hooks with a tensile capacity of 75 tons each. Another 2 slip hooks, with a tensile capacity of 50 tons which take the spring lines, are available on each corner of the platform (See "Plan").
4. Jetty 2 and 3: Four mooring posts serve to take fore lines, aft lines and breast lines. Two mooring posts are fitted with slip hooks with a tensile capacity of 75 tons each. The other mooring posts are fitted with slip hooks with a tensile capacity of 50 tons (See "Plan").
5. BETA directs the ships to their loading and unloading positions.
6. Masters are responsible for the safe and proper mooring of their ships in accordance with BETA's instructions. They shall consider tidal range, wind and current conditions. Readjustment of lines is only permitted if wind and current conditions are favourable. Loading/unloading must be interrupted if the wind and/or current conditions are unfavourable. Under adverse weather conditions and floating ice, Masters are also responsible for safe and strengthened mooring.

   The cables shall only be made fast to the appropriate mooring facilities. Only those mooring facilities appropriate for the ship's size are to be used (See "Plan").

   Fore and aft lines, spring lines and breast lines with identical strain and direction must be made of the same material. Spring lines and breast lines shall preferably be made of steel cable. All exceptions require BETA's approval. Excluded is the landline material.

   Each ship lying alongside a BETA jetty shall bring out fire wires, fore and aft, on its seaward side, the eyes of which must be permanently on the water surface level. The fire wires must be properly fastened at the bitts.

   Besides that, the Master must ensure that the lines are always sufficiently tight and his ship is safely moored and that all measures are taken to keep his ship in its position.

   If the ship is fitted with automatic constant tension winches, automatic must be switched off and the brakes must be switched on. The Master is obliged to strictly follow the Mooring Advisors Instructions.
7. The access from the jetty to the ship is provided by the BETA gangway. In exceptional cases, a safe gangway may be provided by the ship. This must comply with the applicable international regulations and the regulations of the German Marine Employer's Liability Insurance Association, insofar as these are applicable to the ship.

   The ship shall be moored before the gangway is lowered. The connection between gangway and ship's deck must be secured on the ship's side.

Lay-Days at the Berths:

1. Unless otherwise provided in the freight contract, the lay-days start with mooring the first line and end with casting-off the last line.
2. The Master shall ensure that gasoline loading is to be reduced or suspended if the wind speed is too low and if
   (a) any other ship is mooring or unmooring at the parallel berth,
   (b) any other ship is lying within the danger zone of the parallel berth.

   BETA shall not be liable for any costs for lay-days as regards 2(a) and 2(b), unless otherwise provided in the freight contract.
3. When ballasting cargo tanks contain hydrocarbons, it is within the Master's responsibility to ensure that the following ballasting rates are strictly observed in due consideration of the respective wind speeds:

Top Ballast Rate (cu.m./hr.)	Minimum Wind Speed (m./sec.)	Beaufort Scale
1,500	0 – 1	0
3,000	2	1
4,000	3	2 – 12

The Master or his representative must use the wind speed indicator on the jetties for the determination of the wind speed.

Higher quantities of ballast water require the approval of BETA. The quantities depend on the wind direction, wind strength and loading/previous loading of the ship's tanks.

4. The entire fire fighting system must be kept on stand-by during lay-days of the ship, and a sufficient number of fire hoses must be uncoiled near the ship's manifold. Additionally, 2 hand fire extinguishers must be kept ready.

   The Master must ensure that there are always enough hands onboard to start firefighting in case of fire, and to unberth the ship in case of emergency.
5. After finishing of cargo handling or ballasting operations, the ship shall unberth and leave the port area. All exceptions require BETA's approval.

Areas exposed to the Wind and Freeboard Limits: In adverse weather conditions, special measures must be taken to ensure the safe mooring of the ship and to avoid damage to ship and to the jetty. Please ask for assistance of BETA's Mooring Advisor when mooring.

1. In addition to the ship's mooring cables and lines shore-side, breast lines are available to prevent the ship from moving off the jetty due to wind or current forces. The Master is responsible for the correct mooring and unmooring and handling of these wire lines during lay-days.
2. The breast wires from land have an extra safety function and are not an integral part of the ship's mooring.
3. Cargo handling operations will be suspended and the loading arms drained when the wind speed exceeds 8 on the Beaufort Scale (38 knots or 19 m./sec.) (Westerly directions of the wind: 350° through 270° to 155°).

Cargo and Ballast Handling, Tank Cleaning and Slop Discharge:

1. BETA will provide the connection between ship and jetty. The ship's crew is obliged to make the relevant preparations in good time and to offer usual assistance.
2. Manning of the jetty and additional TV-monitoring:

   One member of the BETA jetty personnel must always be on duty on the jetty which is being operated. One camera is focused on the platform, and transmits pictures on a monitor in the control room of the relevant jetty. The lighting conditions on the platform and in the jetty house must be sufficient to allow TV-monitoring. If the operating ability of the TV-system is limited due to fog or adverse weather conditions, the cargo handling operations either have to be suspended or have to be observed directly from the platform.
3. The number of crew provided for the cargo handling must be sufficient. In case of emergency or if instructed by BETA, the Master is obliged to ensure the immediate interruption of the ship's discharge pumps. In case of emergency, the BETA control pump room personnel are entitled to activate the pump emergency shut-down. Members of the crew shall be permanently stationed, both at the ship's manifold and in the pump control room. The Master shall ensure that the crew members on duty are furnished with operative BETA walkie-talkies. Cargo handling shall be suspended if the crew members on duty leave the visual range of the ship's manifold.
4. Prior to commencement of cargo handling operations, the Master or his deputy is obliged to fill in the Safety Check List for the ship and to return it to the BETA personnel responsible. Cargo handling operations may not be started without approval of the responsible BETA supervisor.
5. Prior to commencement of cargo handling operations, all sea valves connected with the loading and discharge system shall be shut and sealed, and shall be checked by the BETA personnel responsible after completion of the cargo handling operations.
6. In order to avoid pressure surges, all valves and gates on the ship and in the product lines shall be closed slowly. This applies in particular for the last part of the valve travel. Topping-off shall be reported timely to the responsible BETA pier operator. During cargo handling operations, the valves in the product lines shall only be closed in case of emergency, which must immediately be reported to the responsible BETA pier operator.
7. For the duration of cargo handling operations and ballasting, all venting and pressure surge valves, peepholes and tank dipping holes, must be fitted with flashover protectors.
8. All peepholes and tank dipping holes of tankers, which are carrying or have been carrying loads as under IMDG Code 3.1 and 3.2, shall remain open only for the duration of the tank dipping.
9. Other tank holes, which open to the atmosphere, must be securely closed. Any access between cargo deck and accommodation area must also remain securely closed.
10. Any cargo handling operations shall be stopped during thunderstorms, as agreed between BETA and the Master of the ship.
11. The grade and the amount of the product to be handled shall be announced to BETA prior to cargo handling operations. After completion of the cargo handling operations, BETA will only accept those quantities which have been taken from calibrated cargo tanks, or have been determined by means of calibrated meters.
12. Crude oil and ballast water must be discharged without interruption. During discharge operations of crude oil, the pressure in the 44 in. crude oil line on the offshore terminal shall not exceed 8 bar. All discharge operations shall be suspended in case of a tanker pump failure during the discharge of crude oil, and shall not be continued until BETA's representative grants permission.

    The product line must be filled and pressurised prior to commencement or continuation of discharge operations.

13. BETA will accept limited quantities of ballast water which must be free of lead and detergents. BETA will also accept tank washing water and bilge water. This must be biodegradable *lead free*. Detergent containing water may not be discharged into the Jade Bay. Masters are responsible for any subsequent damage ensuing from non-observance of these instructions. Prior to any discharge, the waters are subject to laboratory analyses.

    The pressure in the 20 in. ballast water line shall not exceed 8 bar.
14. Completion of the cargo handling operations shall be ascertained by BETA and the Master or his deputy.
15. Tankers which were carrying crude oil or product as under IMDG Code 3.1, and which are to be loaded with products as under IMDG Code 3.2 and 3.3, should arrive with cleaned tanks.
16. If slop oil must be discharged, the grade and the quantity must be announced to BETA prior to the arrival of the ship. BETA reserves the right to refuse poor grade slop oil.

Special Incidents during Lay-Days:

1. Special incidents like fire and major accidents which affect the safety of operations shall be immediately reported to BETA.

    Fire on board must be immediately reported to the pier operator by means of the ship's typhoon or walkie-talkie. The Master or his deputy are obliged to pass information concerning location and type of support required.
2. Masters shall ensure that the cargo handling operations are immediately suspended and the discharge pumps are stopped in the case of fire alarm in the port area, overflow of mineral oil from their ships or other ships, or in the case of any gas escape.
3. In case of emergency, BETA is entitled but not obliged to take suitable measures to prevent damage at the expense of Masters or Charterers.
4. In case of danger, or if the circumstances require to do so, BETA is also entitled to stop the cargo handling operations, and to order to arrange for the ship to clear the jetty respectively. In these cases, BETA shall not be liable for any compensation of damages.
5. On request, a practitioner is available for the medical treatment of the crew. The BETA first aid post is found in the main building of the refinery.
6. The special vehicles of the Wilhelmshaven fire brigade are available for ambulance services. In general, the ambulance shall arrive at Jetty 2 or 3, or at the house on the corner, within 20 minutes.
7. Telephone Jetty 1/1A: In case of emergency, a non-public telephone is available in the Jetty house. A ship's telephone is available on request and at the expense of the ship.
8. Telephone Jetty 2/3: In case of emergency, a non-public telephone is available in the Jetty house. A ship's telephone is available on request and at the expense of the ship.

    An international pay telephone is installed in the house on the corner of Jetty 2/3.

Prohibition of Pollution and Environmental Protection:

1. Pollution of the port area by oil, oil polluted bilge or ballast water, refuse, etc., is prohibited.

    The Agents are responsible for the disposal of oil polluted refuse. The amount of solid refuse shall be announced in good time. Solid refuse may not be oil polluted and must be dumped into the containers, which are provided on the jetty.
2. Soot emissions and every avoidable excessive emission from the funnels or exhaust lines are prohibited.
3. When discharging steam or water or when using the ship's lavatories, suitable measures must be taken to avoid pollution or damage of the jetty and ships and persons in the close vicinity.
4. All pipes, valves, connections, fittings, etc., used for cargo handling operations must be kept free from leakages.
5. Drip trays must be provided for all connections of product lines.
6. All oil leakages, whether onto the ship's deck or overboard, must immediately be reported to the BETA personnel, who will then notify the responsible department. All possible measures must be taken both on the ship and on the jetty to stop the leakage and to prevent it from spreading.

Safety Precautions:

1. Each jetty is equipped with remote controlled and hand-operated water/foam monitors. In addition, there is a dry powder system installed both at the Jetty 1 and 1A gangway tower.

    Water supply of the monitors is effected by 2 pumps with a capacity of 500 cu.m./hr. each and a 16 in. water main. In case of pump failure, there is a possibility that tugs are used to pump the water in the jetty pipeline system.

    In addition, there is a movable water/foam monitor provided on the access jetty.
2. Escape routes on Jetty 1/1A: The mooring post gangway serves as an escape route for Jetty 1 and 1A, firstly in Southern direction towards the jetty and, secondly in Northern direction to the lifeboat hanging on a swing-out davit at the end of the gangway. In addition, the mooring post gangway provides a number of descents for individuals to be picked-up by life boats.
3. Escape routes on Jetty 2/3: The access jetty serves as a main escape route for Jetty 2 and 3. In case this main escape route is impassable, the following escape routes may be used as alternatives:
    (a) Gangway at the house on the corner.
    (b) Mooring post gangway in the Northern direction to the lifeboat hanging on a swing-out davit at the end of the gangway.
    (c) Pipe bridge to the South of the building on the corner leading to the shelter.

    In addition, the mooring post gangway and the shelter provide a number of descents for individuals to be picked-up by lifeboats.
4. Emergency Shut-Down Systems: Prior to commencement of cargo handling operations, the following emergency shut-down systems will be explained to the responsible loading officer of every ship:
    (a) Automatic "tanker pump shut-down signal" via Redbox.
    (b) Automatic "tanker pump shut-down signal" via walkie-talkie.
    (c) Optical and acoustical alarm on the jetty.

    The HBTRO (BETA operating instructions for the port area) deals in detail with the safety interventions of BETA personnel.

Preventive Fire Protection:

1. Smoke and the use of smouldering and/or burning objects, as well as the use of open fire and detonating agents, is not permitted in the BETA port area. All exceptions require either BETA's approval or approval by the respective authorities.
2. Instruments which are likely to cause sparks, or parts of which heat up to such an extent that they may cause fire, shall not be used.
3. The ship's funnel and exhaust lines must be fitted with spark catchers to avoid emission of sparks and soot.

Stand-by Operation:

1. During the lay-days, the ship's main engines, rudder system and all accessory instruments necessary to maintain manoeuverability, must always be ready for operations.

Bunkering:

1. The BETA Jetty Regulations apply also to ships which are just mooring at the jetty for bunker operations or any other reasons.
2. Prior to commencement of bunker operations, all scuppers shall be closed and sealed in such a way that they are oil-tight.

Special Services: BETA's special services will be charged to the Agents.

Take-Over, Fresh Water and Bunkering:

1. If possible, onshore bunkering will be carried out by BETA in the course of the cargo handling operations.
2. Take-over of stores and provisions shall only be carried out from the seaward side of the ship by means of barges. Barges are not allowed to lay alongside during cargo operations of product as under IMDG Code 3.1, 3.2 and 3.3 and during ballasting operations. Should it become necessary for any reason whatsoever to take stores aboard during cargo handling or ballasting operations, these activities must be suspended for the duration of take-over.
3. The following provisions apply for the take-over of stores and goods:
    (a) BETA's permission must be procured by the Master or his deputy prior to taking any goods aboard.
    (b) Take-over at Jetty 1 and 1A is only possible from the seaward side. Shore side supply is possible at Jetty 2 and 3 as agreed with BETA.
    (c) All instruments which are likely to cause sparks may not be used on the ships and vehicles involved.
    (d) All tank holes must be kept closed while goods are being taken aboard.
    (e) All handling operations which may cause gas escapes must be suspended; this also includes stripping and repumping operations.
    (f) All instruments which are likely to cause sparks must be put down on rubber or other suitable mats.
    (g) All gas bottles whether filled or emptied must be carefully handled.
4. Fresh water is not available at the jetty; it must be supplied by the Wilhelmshaven water barge. Requests shall be timely submitted via the Agent.

Operator: BETA Raffineriegesellschaft Wilhelmshaven mbH.

Voslapper Groden Jetty (ICI-Jetty):

Position: Lat. 53° 37' 59" N., Long. 08° 05' 46" E.

Traffic Bridge of 1,346 m. length ends in L-shaped cargo handling pier of 675 m. length. Traffic bridge is fitted with two tracks of 5.5 m. and 3.5 m. width, all cables and pipes are led lengthwise upon the bridge to the pier connections.

Berth No. 1 at the seaward end is provided for 1 tanker of 20,000 d.w.t. – 60,000 d.w.t., but not yet in operation. Berths No. 2 and 3 (inner side) are provided for tankers of 400 d.w.t. – 12,000 d.w.t., limited by a maximum depth of 8.5 m. at MLW.

Use of Berth No. 2 is only allowed for transhipment of ethylene (class 2, UN No. 1038).

Use of Berth No. 3 is only allowed for transhipment of vinyl chloride monomer (class 2, UN No. 1068) and its residue LE and HE or ethylene dichloride (subclass 3.2, UN No. 1184).

Under following conditions Berths No. 2 and 3 can be used by ships from 7,000 – 12,000 d.w.t.:

Ship's length not more than 137 m.

Single tank size of ship:

(a) with Ethylene dichloride cargo not more than 3,100 cu. m.

(b) with vinyl chloride monomer cargo and ethylene not more than 2,900 cu. m.

Ships of more than 120 m. length must be berthed with 1 additional Atlas-spring line fore and aft. The lines are available from shore, if the ship does not have her own.

Berths may only be used by gas and chemical tankers which conform with IMO recommendations and which have a valid certificate to that effect as follows:

1. Resolution A 328 (IX) Code for the Construction and Equipment of Ships carrying liquefied Gases in Bulk,
2. Resolution A 329 (IX) Recommendations concerning Ships not covered by the Resolution 328 (IX),
3. Resolution A 212 (VII) Code for the Construction and Equipment of Ships carrying dangerous chemicals in Bulk.

All stores, fresh water exempted, must be taken onboard from seaward side. These activities are prohibited during cargo handling or taking ballast.

Also see under "General".

Harbour areas (NWO, BETA and ICI) may be exceptionally navigated by auxiliary and supply vessels if this is absolutely necessary for the transhipment or ship operations according to Port Regulations, providing these vessels comply with the safety requirements. All other vessels are excluded.

At the "Niedersachsen Bridge" it is necessary to order a bunker vessel in advance.

Also see "Developments".

Report: *Berth Approaches:* The main affect on ships approaching the berth results from the flood or ebb current setting South or North nearly parallel to the berth.

It is of extreme importance that a ship which has to turn before berthing reduces speed in ample time and does not commence turning until its speed over the ground is reduced to zero. Ships scheduled to berth port side to NWO Berth No. 4 should start the turning manoeuvre in the fairway about 800 m. North of the berth.

NWO-Terminal (Nordwest-Olleitung): Cautionary Advice: Due to the strong current at the berths of up to 4 knots, extreme care should always be taken to keep the ship moored safely alongside the berth with all mooring lines tight. Especially during off-setting strong winds and with the tide changing, the moorings must be watched carefully. Shore wires are available.

Berthing Procedures: Berth No. 4: All max. sized ships planned for this berth will run on a time schedule without anchoring from German Bight Lightvessel to the berth. Ships are normally scheduled to arrive at the turning position about 800 m. North of the berth 2 hours/30 minutes before Slack High Water, then turned if flood tide manoeuvre, then turned and backed up to the berth mooring port side to. It is emphasised that the ship should be stopped over the ground before commencing the turn and ships must not be turned off the berth itself. If the ship is behind schedule and the ebb current has started to run, the ship will then berth without turning and moor starboard side to.

The angle of approach should be as small as possible.

DENSITY: Brackish water.

BRIDGES: 3 swing bridges affect entering inner harbour; these are opened to coincide with lock opening times.

STEVEDORES: 24 hours' notice required. Bulk cargo discharge rate about 150 t.p.h.

MEDICAL: All medical facilities available.

FRESH WATER: Available by pipeline.

FUEL: All grades available. 2 days' notice required.

CONSULS: Denmark Tel: 41061. Sweden Tel: 26266. Finland Tel: 8021.

REPAIRS: Facilities available for all deck and engine repairs. Repairs affecting main engine or steering gear intended to be carried out at the berths or at Wilhelmshaven Anchorage, must be authorised by NWO, BETA and Port Authorities, when sufficient security tugs will be ordered to stand by. No additional charge for tugs if ordered before arrival. Permission for repairs depends on prevailing weather conditions and should be requested before arrival.

DRY DOCKS: One slipway at Neue Jade Werft, lifting capacity about 1,000 tons. Floating docks at Arsenal (navy yard), only for navy purposes.

GANGWAY/DECK WATCHMEN: Shore watchman recommended to attend telephone.

OPENING/CLOSING HATCHES: Usually by ship's crew.

CUSTOMS ALLOWANCES: Oil port is Customs free port. In dock harbour each man allowed 5 cigars or 40 cigarettes, or 50 grams tobacco and 50 pieces of cigarette paper; 1 unopened bottle wine/spirits.

REPATRIATION: All facilities available.

AIRPORT: Local airport at Wilhelmshaven-Mariensiel, available for helicopters and small aircrafts. Nearest international airport at Bremen, distance 102 km.

TIME: GMT plus 1 hour. GMT plus 2 hours (last weekend in March to last weekend in September).

HOLIDAYS: 1st January; Good Friday; Easter Sunday; Easter Monday; 1st May; Ascension Day; Whit Sunday; Whit Monday; 3rd October; Christmas Day; Boxing Day. Work may be arranged on all days.

Not observed in oil ports.

POLICE/AMBULANCE/FIRE:

Police: Tel: 110.
NWO Oil Port: Fire/Ambulance Tel: 621.
ICI: Jetty Operator Tel: 882 460.
Fire/Ambulance Tel: 882 310.
Niedersachsen Bridge: Fire/Ambulance Tel: 112.
Dock Harbour: Tel: 112 or 26121.

TELEPHONES: May be placed on board all tankers in oil port. At some locations in dock harbour, installation by Post Office, who require 2 days' notice.

SERVICES: All services available including tank-cleaning, diving, compass adjusting, etc.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.

Shore passes issued to passengers are chargeable.

GARBAGE DISPOSAL: All berths are fitted with garbage containers for the disposal of "normal" garbage; no charges. All garbage due to cargo handling or any special garbage such as paint drums, batteries etc., has to be removed on ship's request and account. For further detailed information contact Port Authority.

WASTE OIL DISPOSAL: All residues coming under Marpol 73/78, Annex I, may be delivered ashore free of charge. 24 hours advance notice to Port Authority is necessary. Wastes must not be mixed inadmissibly; available capacity approx. 800 cu.m. For further information contact Niedersachsisches Hafenamt Wilhelmshaven (Captain Boge or Captain Pape).

SEAMAN'S CLUBS: No Seamen's Club in the port of Wilhelmshaven. "Seemannsheim" (kind of hotel) offers bed and meals for seamen awaiting vessels. Church services, coach tours, etc., may be arranged on request. Address: Deutsche Seemannsmission, Hegelstrasse 11, 2940 Wilhelmshaven. Tel: (04421) 404610.

GENERAL: *Federal Republic of Germany – Jade.* On the River Jade from the sea to Wilhelmshaven all vessels are to observe the following regulations.

1. Absolute prohibition of head-on passage and overtaking for vessels confined to the dredged channel with each other.
2. Local prohibition of head-on passage for vessels amongst themselves with
   (a) draft exceeding 13.5 m.,
   (b) length exceeding 250 m.,
   (c) extraordinary pushing and towing units
   within following fairway areas:
   - between buoy pairs 15/16 and 19/20 (circumnavigation Minsener Oog)
   - course change areas at buoy pairs 3/4 (channel entrance), 33/34 and 45/46.
3. Vessels confined to the dredged channel may navigate with the same tide phase only when keeping a longitudinal distance of 5 nautical miles amongst each other within the channel.
4. Prohibition of head-on passing and over-taking for tankers carrying cargoes as per No. 1 of Annex 1 (list of subtances) i.e. gases, ethylene dichloride or vinyl chloride monomer with each other and with all other vessels exceeding 3,000 d.w.t. within following navigation stretches:– between buoy pairs 15/16 and 19/20.

4.1. Vessels confined to the dredged channel, i.e. constrained by their draft, have right of way on the above mentioned stretches.

5. The observance of these directions will be controlled and, if necessary, regulated by the VTS-Centre, whose instructions are to be followed.

Urgent shipping police measures may also be executed by Water Police (blue hulled vessels with inscription "WASSERSCHUTZPOLIZEI" within the Territorial waters of the Federal Republic of Germany).

6. Continuous radio contact with radio station "Jade Traffic" must be made
   - between buoy "JW5/Jade 1" or river entrance inward and buoy pairs 33/34 on VHF Channel 63;
   - between buoy pairs 33/34 and all waterway areas inward of this position on VHF Channel 20.
   Remark: Shore based radar assistance will be given on the respective VHF channels.
7. When vessels are meeting on reciprocal or nearly reciprocal courses each shall alter her course to starboard.
   During the passage of vessels carrying cargoes as per No. 1 of Annex 1 (list of substances) with each other or with other vessels the greatest possible lateral distance has to be kept.
8. Vessels proceeding within the fairway have right of way against vessels which
   (a) enter the fairway,
   (b) cross the fairway,
   (c) turn within the fairway,
   (d) leave their anchorages.
9. Particular attention is drawn to the observance of the instructions given by the shipping authorities prescribed as per Section A, Part II, No. 3 of the additional regulations to the traffic regulations for waterways navigable by seagoing vessels in the Federal Republic of Germany of the Wasser- und Schiffahrtsdirektion Nordwest.
10. Inward of Jade Buoy No. 33 (Turning area for large vessels), entering tankers with draft exceeding 16.50 m. must be escorted by tugs with total minimum bollard pull capacity of 45 tons.

Regulations Within the Entrance to the Sea Lock – New Outer Harbour – (Neuer Vorhafen) and the Sea Lock in Wilhelmshaven (extract of rules):

1. Areas within the Outer Harbour and the Sea Lock belong to the safety zone of Naval Base.
2. Port Authority within these areas is the Naval Port Captain. Port Captain is attainable on working days between 0700 hrs. – 1530 hrs. via Wilhelmshaven Naval Port Radio on VHF Channel 11.
3. Traffic direction inward and outward Sea Locks is performed by Wasser- und Schiffahrtsamt Officials (Lock Masters).
4. Use of port facilities may be restricted or refused in consequence of certain reasons if deemed necessary by Port Authorities.
5. Vessels with dangerous cargoes have to obtain special authorisation issued by Port Authorities and civil permission before entering.
6. Between breakwater (harbour entrance) and locks, non-military vessels have to navigate within a 100 m. wide sector to both sides of leading line.
7. Vessels exceeding 150 g.r.t. may be obliged to take a Harbour Pilot.
8. Vessels are obliged to give notice to the radio station "Wilhelmshaven-Lock" on VHF Channels 16/13 before entering. Naval radio station is operating on VHF Channels 16/11.
9. Lock signals and preliminary lock signals are to be observed. This applies also to signals given by Naval Authorities.
10. Military safety zones must be passed at reduced speed but without delays. Bow anchors must be kept ready to drop.
11. Sport vessels may not hamper other vessels.
12. Only in cases of distress is it allowed to go alongside within the Outer Harbour.
13. Bathing, diving and use of pyrotechnics are not allowed.
14. Pollution of water within harbour areas is prohibited.

DEVELOPMENTS: *Liquid Gas Berth:* To the North of Beta Oil Terminal.

The existing ICI Terminal (See "Tankers") is planned to be extended for transhipment of L.N.G.

"Lower Saxony Bridge" (Niedersachsen Bridge): The "Niedersachsen Bridge" is to be extended. It is planned to provide facilities for the loading and discharge of large vessels up to 250,000 d.w.t. with dry and liquid bulk cargoes.

Dredging: Maintenance dredging in progress.

ANNEX NO. 1:

(List of dangerous substances which have to be reported) Annex III to the traffic regulations for waterways navigable by seagoing vessels in the Federal Republic of Germany:

1. Liquified Gases	*IMDG Code No.*
Acetaldehyde	1089
Ammonia, anhydrous, liquified or ammonia	1005
Butadiene, inhibited	1010
Butane or butane mixtures	1011
Butylene	1012
Chlorine	1017
Dimethylamine, anhydrous	1032
Ethyl chloride	1037
Ethane, refrigerated liquid	1961
Ethylamine (monoethylamine)	1036
Ethylene, refrigerated liquid	1038
Ethylene oxide	1040
Methane, refrigerated liquid or Natural Gas, refrigerated liquid	1972
Methyl acetylene and propadiene mixtures, stabilized	1060
Methyl bromide	1062
Methyl chloride	1063
Propane	1978
Propylene	1077
Sulphur dioxide, liquified	1079
Vinyl chloride, inhibited	1086

2.Chemicals	*IMDG Code No.*
Absorbent A 1	1992**
Absorbent A 2	1993**
Absorbent A 3	1993**
Acetic acid, glacial or Acetic acid solution, more than 80% acid, by weight	2789
Acetic anhydride	1715
Acetone	1090*
Acetone cyanohydrin	1541
Acetonitrile	1648
Acrylic acid, inhibited	2218
Acrylonitrile, inhibited	1093
Adiponitrile	2205
Alcohol, denatured	1986/1987**
Alcohol, industrial	1986/1987**
Allyl alcohol	1098
Allyl chloride	1100
Aminoethylethanolamine	–
Aniline	1547
Benzene	1114
Benzyl chloride	1738
Isobutyl acrylate, inhibited	2527
Butyl acrylate, inhibited	2348
Butyl alcohol	1120*
Butyl ether	1149
Normal butyl methacrylate	2227
Isobutyraldehyde	2045
n–Buthyraldehyde	1129
Camphor oil	1130
Carbolic oil	–
Carbon disulphide	1131
Carbon tetrachloride	1846
Chlorobenzene	1134
Chloroform	1888
Chlorohydrines, crude	–
Chloroprene, inhibited	1991
Chlorosulfonic acid with or without sulphur trioxide	1754
Coal tar naphtha	2553
Cresols (ortho–, meta–, para)	2076
Crotonaldehyde, inhibited	1143
Cyclohexanone	1915
Cyclohexylamine	2357
Di–(normal – butyl)amine	2248
1.1–Dichloroethane	2362
1.2–Dichloroethane	1184
Dichloroethyl ether	1916
Dichloromethane (Methylene chloride)	1593*
1.1–Dichloropropane	**
1.2–Dichloropropane	1279
1.3–Dichloropropane	–
1.3–Dichloropropene	2047
2.3–Dichloropropene	2047**
Diethylamine	1154
Diethyl ether (Ethyl ether)	1155
Dimethylamine, solution	1160
Dimethyl ethanolamine	2051
Dimethylformamide	2265
1.4–Dioxane	1165
Diisopropylamine	1158
Epichlorohydrin	2023

2.Chemicals (continued)	*IMDG Code No.*
Ethyl acrylate, inhibited	1917
Ethyl alcohol	1170*
Ethyl benzene	1175*
Ethylene chlorohydrin	1135
Ethylmethacrylate, inhibited	2277
Ethylene cyanohydrin	–
Ethylene diamine	1604
Ethylene dibromide	1605
Ethylene glycol monoethyl ether acetate	1172**
Formaldehyde solutions (45 % or less)	1198
Formic acid	1779
Furfural	1199
Gascondensate	1993**
Heptane, and its isomers	1206*
Hexane, and its isomers	1208*
Isoprene, inhibited	1218
Lignite tars	1999**
Mesityl oxide	1229
Methylacrylate, inhibited	1919
Methylalcohol (methanol)	1230*
Methyl isocyanate or methylisocyanate solutions	2480**
Methyl methacrylate, monomer, inhibited	1247
Methylstyrene	2303
Monoethylamine solutions (72 % or less)	2270
Nerozene	1993**
Nitrobenzol	1662
Morpholine	2054
Motor fuel anti-knock mixtures	1649
Nitric acid (70% and over)	2031/2032
1– or 2–Nitropropane	2608
Nitrotoluenes (ortho–, meta–, para)	1664
Oleum	1831
Paraldehyde	1264
Pentachloroethane	1669
Phenol, molten	2312
Phenylisocyanate	2487**
Phosphorusoxychloride	1810**
Phosphorustrichloride	1809**
Phosphorus, white, molten	2447
Phosphoric acid, liquid	1805
Propionic acid, solution containing no less than 80 % acid	1848
iso–Propylalcohol	1219*
iso–Propylamine	1221
n–Propylamine	1277
iso–Propylbenzene (Cumene)	1918*
Propylene oxide	1280
Pyridine	1282
Pyrocondensate	1992**
Sodium hydroxide, solution	1824*
Sulphuric acid	1830
Styrene monomer, inhibited	2055
Turpentine	1299*
1.1.2.2–Tetrachloroethane	1702
Tetrachloroethylene (Perchloroethylene)	1897*
Tetrahydrofuran	2056
Toluene (Methylbenzol)	1294*
Toluene diisocyanate	2078
Trichloroethylene	1710
1.1.1–Trichloroethane	2831
Triethylamine	1296
n– and iso–Valeraldehyde	2058
Vinyl acetate, inhibited	1301
Vinyl ethyl ether, inhibited	1302
Vinylidene chloride, inhibited	1303
Vinyl toluenes, inhibited	2618
Xylenes (Dimethylbenzene)	1307*

3. *Mineral (crude) oil and mineral oil products.*
4. *Remarks:*
   - * Substances listed in IMO Code for Gas and Chemical Tanker for which the Code does not apply.
   - ** Substances not listed in IMO Code for Gas and Chemical Tankers.

ANNEX NO. 2: *Data of Wilhelmshaven Sea Lock:*

Operation hours of Wilhelmshaven Sea Lock:

Monday-Friday	0600 – 1830 hrs.
Saturdays	0630 – 1600 hrs.
Sundays and holidays	0800 – 1600 hrs.

Beyond these hours the lock will be operated only for commercial shipping when service is ordered to the Lock Master on VHF Channel 16/13 (call "Wilhelmshaven Lock") or telephone (04421) – 304084/26311 as follows:

1. Lockage between 0000 hrs. and commencement of normal operating hours to be ordered on the day before up to 1200 hrs.
2. Lockage between termination of normal operating hours and 2400 hrs. to be ordered on the same day until 2 hours before end of operations.

Dimensions of Wilhelmshaven Sea Lock:

Length between gates	390 m.
Length usable	360 m.
Breadth between lock-basin walls	60 m.
Breadth between fenders	57 m.
Depth (above mean high tide)	14.75 m.

(Vessels in ballast up to 250,000 d.w.t. have passed without difficulties.)

In case of doubt, German text of lock regulations is authoritative.

ANNEX NO. 3

Following events shall require a prior permit, which must have been granted by the Waterways and Shipping Office competent under the provisions of Section 55(2):

1. Navigation of extraordinarily large vessels as well as of air cushion vehicles and high-speed craft;
   (Jade: Vessels exceeding
   - length 350 m., beam 52 m. and/or
   - draft inward 20 m./outward 19 m.)
2. Navigation of extraordinary composite units, whether pushed or towed, and the towing of extraordinary floating objects.

SHIPMASTER'S REPORT: Beta Sea Island (Platform): (Updated 1996).

Position: Between Jade River Buoy Nos. 18 and 19.

Pilotage: Sea Pilots (2) board/leave at German Bight Lightvessel by helicopter.

Berthing Pilots (2) board/leave about 2 to 3 miles North of Sea Island by launch.

Pilotage straightforward to "Weser Pilot Station" where river passage begins.

Two bad bends here make strict attention to steering and helmsman necessary.

Passage Time:

Inward (VLCC – half cargo)	
Sea Pilotage	3 hours 50 minutes
Berth Pilotage	54 minutes
Mooring	57 minutes
Pilotage distance	41 miles
Outward (VLCC – Ballast)	
Berthing Pilotage	39 minutes
Sea Pilotage (to 8 miles South of Light Vessel)	2 hours 24 minutes
Pilotage distance	31 miles

Helicopters: Base for the 3 German rivers at Wilhelmshaven.

First contact 1 to 2 hours before arrival at Deutsche Bucht Light Vessel via Norddeich Radio Channel 16-27 when ETA confirmed and that vessel is familiar with helicopter procedures.

Thereafter continuous watch on Channel 16 VHF until helicopter contact will require continuous calling on 410 kHz and listening out on Channel 9 VHF until operation completed.

Berthing/Unberthing: Carried out at slack water only. Deep laden VLCCs on HW only. Ballast or half-loaded VLCCs on either slack water. Deep laden VLCCs can only proceed inward on flood tide.

River passage at Buoy No. 3 begins about 4 hours before local HW at Wilhelmshaven and is proceeding according to fixed tide schedule.

Minimum underkeel clearances to be observed:

1. Inward bound:
   (a) From Buoy No. "1b/Jade 1" to Buoy No. "23": 1.97 m.
   (b) From Buoy No. "23" to Buoy No. "45": 1.93 m.
   (c) From Buoy No. "45" to NWO Jetties: 1.75 m.
2. Outward bound:
   jetties to sea: 15%.

Tugs: Six tugs used for any VLCC movement, 1 forward, 1 aft and 4 "pushers". Additional tugs have to be ordered well in advance.

Moorings: Standard VLCC mooring arrangement. Springs run out first.

Cargo: 4×16 in. Chicksan booms available. Discharge rates compatible with modern VLCC facility. Official outturn figures average 1.5% less than ship figures.

Crude Oil Washing: Subject prior permission this is allowed.

Air Pollution: Monitoring of gas emission from tank venting system carried out during ballasting. If readings high, ballasting rate must be adjusted to keep readings within set parameters (parameters not known).

Documentation: As per "Guide". *Important that Certificate of Financial Responsibility is on board otherwise vessel fined (up to a maximum of D.M. 10,000).*

Shore Leave: Permitted. Ferry is on call when required from Island to mainland berth. Refinery jeep is then on call from Gate House. It is forbidden to walk in Refinery area. Taxis can be called from Gatehouse.

General: The Sea Island is in the "free port" area, therefore, no personal effects lists or other customs problems. Authorities inflexible if certification problems arise (Certificate of Financial Responsibility).

SHIPMASTER'S REPORT: April 1988 (updated 1990).

Chart: B.A. Chart No. 3669.

Pilotage: Pilot boards by motor boat from the seagoing Jade/Weser Pilot Cutter which is stationed about one mile S.E. of "Weser" Lanby. On boarding, the Pilot requires the Tanker Check List.

Pilots change just North of the berth on entering and leaving. Time from pilot vessel to ICI Berth is about 2 hours.

Tugs: Tugs are not used by small vessels but standby astern whilst vessel alongside.

Berth: The ICI Berth is 5 miles North of Wilhelmshaven and extends for approximately 0.75 miles. There are 3 berths (Nos. 1, 2 and 3), but only Berths No. 2 and No. 3 are used and these are inside of the 'L' shaped section. Maximum depth at Chart Datum on Berths No. 2 and No. 3 is 8.5 m.

Berth No. 2 (North) is for Ethylene and Berth No. 3 is for VCM and EDC. Vessels normally berth port side to heading South.

Mooring at each end consists of 7 lines (3 head/stern lines, 2 breast lines and 2 springs). Mooring and unmooring is carried out quickly with the use of a mooring boat.

Fire wires must be tended at all times and must be between 1.0 m. and 2.0 m. above the water.

Cargo: Berth No. 2 (Ethylene): Liquid and vapour return are 6 in. Chicksans. Vapour line not normally connected during discharge. Normally warmest temperature accepted is −101° C. Shore can accept vessels maximum pumping rate in the daytime but is reduced at night. We averaged 149 t.p.h. with the maximum being 175 t.p.h.

On completion the arms are cleared with ship's hot gas for about 20 minutes.

Berth No. 3 (VCM and EDC): Separate lines are provided for each product. The liquid loading line is 8 in. and the vapour return line is 4 in.

Due to shore power difficulties the pumping rate is reduced after dark when the shore lighting is on. This is due to Grid distribution which entails the shore booster pump being shut down. This in turn reduces the pumping rate by half. On occasions ships are not berthed at night as it is not worth accepting the low pumping rate.

In Winter discharge can be prolonged to 36 hours whereas in Summer it is normally 12 hours.

The surveyor handles most of the paper work, except Notice of Readiness, which is accepted by the Loading Master.

Documentation: The berth is within a free trade area, therefore no Crew Declaration or Stores Lists required. The Immigration Officer boards on arrival and on departure in order to check all non-EEC passport holders. Shore passes are issued to non-EEC passport holders and must be handed in prior to departure.

Facilities: Fresh water is available from the pier and is metered.

There is a telephone at the control pier which is metered.

Lorries delivering stores are permitted to within 100 m. of the ship's side. Berth crane available.

A shore gangway is available and is landed on the forecastle on small ships.

No barges allowed alongside during cargo operations.

The Water Police board the vessel on arrival and check all certificates and the Oil Record Book. The Oil Record Book must be completely up-to-date and carefully compiled and signed by both the Master and the Chief Engineer. For gas vessels Cargo Oil Record Book not required. The Water Police required a copy of the Tanker Check List.

AUTHORITY:

1. Waterway Authority: (Competent for nautical affairs and concerns of waterway maintenance, traffic directions and surveillance, aids to marine navigation, shipping police, marine casualties within or with effect to Federal Waterways):

Wasser- und Schiffahrtsamt (Waterways and Shipping Board) Wilhelmshaven.

Address: Mozartstrasse 32, 26382 Wilhelmshaven, Germany.

Tel: (04421) 186-0 (Operator), 186-335 (Nautical Office), 186-336 (Nautical Office). (04421) 489-381, 489-382 (VTS-Centre, day and night).

Telex: 253407 Wsa W. (VTS-Centre).

FAX: (04421) 186-308 (Office), 489-408 (VTS-Centre).

Contact: Captain K.J.Stockhorst (Office). Captain D.Szech (VTS).

2. Port Authority: Niedersachsisches Hafenamt Wilhelmshaven, Neckar Strasse 10, 26382 Wilhelmshaven. *Tel:* (04421) 4800-0. *FAX:* 04421-480099. *Contact:* Captain Boege or Captain Pape.

3. Municipal Port Authority: (Competent for harbour affairs within municipal harbour limits) Stadt Wilhelmshaven, Rathausplatz, 26382 Wilhelmshaven. *Tel:* (04421) 297256. *Contact:* Captain Arndt.

WISMAR: 53.54 N. 11.27 E. (See Plan)

DOCUMENTS:

Health Declaration.
3 Crew Lists.
3 Passenger Lists.
Bonded Stores List.
Crew Personal Effects List.
Cargo Documents.
Ship's Certificates.

On arrival Master to complete Master's Declaration and Master's Report.

PILOTAGE: Pilot Station at Timmendorf on West coast of Poel Island for pilotage to Fairway Buoy at Wismar. Call "Timmendorf Pilot" on VHF Channel 12, 2 hours before arrival at "Wismar" Buoy, and inform "Wismar Traffic" on VHF Channel 14 at the same time. Pilot is compulsory for all tankers with oil, gas or chemicals, and all other types of ships of 500 g.r.t. and more.

Also see "Baltic Deep-Sea Pilotage".

ANCHORAGES: Anchorage in Outer Roads, North of "Hannibal" Shoal in the following positions:

(a) 54° 06' 26" N., 11° 20' 54" E.
(b) 54° 06' 26" N., 11° 25' 24" E.
(c) 54° 04' 56" N., 11° 25' 24" E.
(d) 54° 04' 56" N., 11° 20' 54" E.

The depths are 10.0 m. – 16.8 m. The bottom is sand and stones.

Good anchorages and safe shelter can be obtained at the Inner Roads.

Anchorage at the Inner Roads, South of "Platte" and East of "Mittelgrund" Shoal in the following positions:

(a) 53° 59' 50" N., 11° 20' 36" E.
(b) 53° 59' 31" N., 11° 21' 45" E.
(c) 53° 59' 02" N., 11° 21' 47" E.
(d) 53° 58' 22" N., 11° 21' 00" E.
(e) 53° 58' 30" N., 11° 20' 42" E.

The depths are 6.0 m. – 9.0 m. The bottom is sand and stones.

RESTRICTIONS: The Bay is sheltered from all winds. From the Fairway Buoy "Wismar" to harbour entrance is about 16 miles (29.5 km.) and is well marked with buoys and landmarks.

IALA System "A" is used.

In brackish water and with normal water level (5.0 m. on the water gauge), vessels piloted by day and night with max. LOA 140 m., beam 21 m. and draft 8.0 m. can safely enter.

All ships with greater dimensions need permission for the Fairway from the Wasser- und Schiffahrtsamt Lubeck, and a permission for the Harbour from the Port Authority Wismar. Please request your Agent to make the application.

All ingoing ships bound for Wismar with an LOA of 17 m. and more have to call "Wismar Traffic" on VHF Channel 14, if passing Fairway Buoy "Wismar" or the Buoy "Offentief". Give the next report, if you passed the Buoy 9, and Buoy 21 if you go alongside the quay with the ship.

Between the Isle "Walfisch" and the harbour entrance at Wismar the max. speed is 8.1 knots. From the harbour entrance at Wismar to the quay, the max. speed is not more than 5 knots.

Note: The Fairway "Offentief" is for ships with max. draft 3.10 m., and the Fairway "Flaggtief" is for ships with max. draft 3.00 m.

MAX. SIZE: Length up to 205 m., breadth up to 28.0 m. and draft up to 7.65 m. with normal water level (5.0 m. on water gauge).

HEALTH: Pratique given on arrival. In case suspected disease or fever on board, radio details to Agent or Harbour Master before arrival (Tel: 03841-262423).

RADIO/VHF: Lubeck Radio and Rugen Radio Stations keep a constant watch on Channel 16.

VHF: "Timmendorf Pilot" on VHF Channel 12 (24 hours).

"Wismar Traffic" on VHF Channel 14 (24 hours).

"Wismar Port" on VHF Channel 11, Monday – Friday 0700 hrs. – 1530 hrs., Saturday watch only 0800 hrs. – 1200 hrs.

TUGS: 1 tug of 750 h.p. available in the port. However, it is possible to order more tugs through the Agent if sufficient notice given.

Tug requirements:

LOA up to 89.99 m.	none
90 m. – 119.99 m.	1 tug
120 m. – 169.99 m.	2 tugs
170 m. and more	3 tugs.

Exemptions are possible. Please contact Agent.

BERTHING: The harbour is on the East side at the inner end of the entrance channel.

Quay No.	*Length* (m.)	*Max. Draft* (m.)	(ft.)	*Cargo handled*
1	158	7.62	25	Dangerous goods, Timber, Pulpwood, Grab cargo.
2	146	7.62	25	
3	100	5.80	19	
4	172	8.23	27	General cargo.
5	179	8.23	27	
6	130	8.23	27	
7	160	8.23	27	General cargo.
8	182	8.23	27	
9	60	8.23	27	
10	127	8.23	27	Fertiliser, Potash
11	135	8.23	27	
12	92	8.23	27	
13	120	8.23	27	Tankers
14	169	8.23	27	Grain
15	149*	6.10	20	Waiting Berth
16	149*	6.70	22	No cargo operations
Baumhaus	88	4.88	16	Passenger ships
Querkai	67			
17	273	4.88	16	Sport boats
18	153	5.30	17 ft. 5 in.	Chemicals
19	116	8.23	27	Ro-Ro
20	132	8.23	27	Grain, grab cargo

* Max. length of the ship 135 m.

CARGO HANDLING FACILITIES: Shore cranes of 6, 12, 16 and 45 tons.

1 mobile crane of 50 tons.

3 mechanical loaders for potash with a capacity of 9,500 tons per day.

STEVEDORES: *Working Hours:*

Monday – Saturday (1st shift): 0600 hrs. – 1400 hrs.
Monday – Friday (2nd shift): 1400 hrs. – 2200 hrs.
Meal breaks: 1000 hrs. – 1030 hrs. and 1800 hrs. – 1830 hrs.
Overtime by agreement.

MEDICAL: Medical station with doctor in Old West Port and local hospital. Advance notice to Agent required if medical assistance necessary.

FRESH WATER: Available from shore hydrants at all berths.

FUEL: Diesel oil and fuel oil available by barge or truck.

REPAIRS: Repairs can be effected at Flottenservice Wismar GmbH, Kopenhagener Strasse, 23966 Wismar. Tel: 03841-250141. Fax: 03841-250142. One floating crane of 100 tons capacity, which is also employed for operations in the port.

SURVEYORS: Germanischen Lloyd, c/o MTW Schiffswerft GmbH Wismar, Wendorfer Weg 5, D-23966 Wismar. Tel: (03841) 704609. Fax: (03841) 704604. Telex: 318821 for dsrk.

TIME: GMT plus 1 hour. Summertime GMT plus 2 hours. (25th March – 30th September).

HOLIDAYS: New Year (1st January); Good Friday; Easter Sunday; Easter Monday; 1st May; Ascension Day; Whit Monday (May 23rd); Day of German Unity (October 3rd); Reformation Day (October 31st); Prayer Day (November 18th); Christmas Day (December 25th) and 2nd Christmas Day (December 26th).

AIRPORT: Lubeck (Blankensee) 50 km.; Hamburg (Fuhlsbuttel) 100 km.; Berlin-Schonefeldt 250 km. It is possible to arrange a helicopter service direct from Wismar.

TELEPHONES: No ship to shore communications.

SHORE LEAVE: Crew members permitted ashore.

IDENTIFICATION CARDS: Shore passes are only issued for crew members and passengers of those nationalities that normally require a Visa to enter the Federal Republic of Germany. No shore passes are issued for crew members and passengers who do not require a Visa to enter the Federal Republic of Germany, Seaman's Book or Passport is sufficient.

Shore passes issued to passengers are chargeable.

AUTHORITY: *Authority for the Wismar-Fairway:* Head Office: Wasser- und Schiffahrtsamt Lubeck, Moltkeplatz 17, 23566 Lubeck, Germany. *Tel:* 0451-6208-0. *FAX:* 0451-6208-190.

Local Office: Wasser- und Schiffahrtsamt Lubeck, Revierzentrale Wismar (Wismar Traffic VHF 16, 14), Alter Hafen/Baumhaus, 23966 Wismar, Germany. *Tel:* 03841-452490. *FAX:* 03841-214729.

Port Authority: Hafen- und Seemannsamt Wismar, Alter Hafen/Baumhaus (Wismar Port VHF 11), 23966 Wismar, Germany. *Tel:* 03841-250157 or 250158. *FAX:* 03841-250258. *Contact:* P. Neumann, Harbour Master.

AGENT: Schiffsmaklerei AG, Kopenhagenerstrasse, Wismar. Tel: 50118. Telex: 391301 smw.

NOTES

Please also advise Shipping Guides Ltd.

Ghana

GENERAL:

DOCUMENTS: On 15th November 1988 the Ghana Ports and Harbours Authority announced that all Cargo Manifests must be received by the GPHA 7 days prior to the arrival of vessel, failing which there will be no berthing for the vessel.

HEALTH: *Pratique Procedure:*

1. The Port Health Officer or authorised officer shall grant Pratique to a ship as soon as the following conditions shall have been properly complied with:
   (a) The Master shall complete accurately to the best of his knowledge and belief a Maritime Declaration of Health Form.
   The Declaration shall be countersigned by a ship's surgeon if one is carried and shall be delivered to the Port Health Officer or authorised officer.
   (b) The answers to the questions in the Declaration shall clearly indicate the absence of any infectious disease on board during the voyage or on arrival of the ship, and that the ship has not called at any infected area or had direct contact during the voyage with any ship from any infected area or having on board any case of infectious disease, and shall satisfy that Port Health Officer or authorised officer that the granting of Pratique shall not be attended by any danger.
   (c) The Master or any other person on board including a ship's surgeon, if one is carried, shall accurately and, completely answer any other questions put to him by the Port Health Officer or authorised officer in regard to the sanitary condition of the ship, the health of the passengers and crew or of any ship with which there has been direct contact during the voyage, and shall furnish any such officer with all such information and assistance as he may reasonably require.
2. In the event of any suspected disease or fever on board a ship before arrival at the port and any other circumstances requiring the attention of the Port Health Officer, the Master shall:
   (a) If the ship is equipped with a suitable radio transmitting apparatus and is due to arrive at a radio receiving port, send before arrival, either directly to the Port Health Officer or through an Agent approved by him, a radio message to that effect.
   (b) If the ship is not so equipped or is due to arrive elsewhere than at a radio receiving port, notify the Port Health Officer immediately on arrival of the presence on board of such infectious disease, or suspected conditions.
   Any radio message sent shall:
   (a) embody such of the items of information as are applicable;
   (b) be sent so as to reach the Port Health Officer not more than 12 hours, and not less than 4 hours, before the expected arrival of the ship;
   (c) if it is in code, conform with the section relating to standard quarantine messages of the International Code of Signals.
3. Any ship arriving at its first port of call in Ghana from a foreign port shall be deemed to have come from an infected local area, and shall be required to comply with the provisions as to flags and signal lights as prescribed until granted Free Pratique by the Port Health Officer or authorised officer.
   The following signals are to be shown on arrival within 3 miles of land, by vessels requiring or required to show their state of health:
   (a) in the daytime i.e. during the whole of the time between sunrise and sunset.
      (i) "Q" flag signifying "my ship is 'healthy' and I request free Pratique" or;
      (ii) "Q" flag over first substitute ("QQ") signifying "my ship is 'suspect', i.e. I have had a case or cases of infectious disease more than 5 days ago, or there has been unusual mortality among the rodents on board my ship" or;
      (iii) "Q" flag over "L" flag ("QL") signifying "my ship is infected" i.e. I have had a case or cases of infectious disease less than 5 days ago.
   (b) by night i.e. during the whole of the time between sunset and sunrise, a red light over a white light, the lights being not more than 6 ft. apart shown at the peak or where the signal can best be seen from the shore, and exhibited only when the ship is within the presence of a port signifying "I have not received Free Pratique".
   (c) Any ship displaying the appropriate signal in accordance with the provisions of paragraph (3) above shall, as soon as practicable, be visited by the Port Health Officer or authorised officer, who shall grant Pratique or take such other steps as may be necessary before granting Pratique.
4. A ship which has been granted Free Pratique at its first port of call in Ghana which has not been declared an infected area shall not be required to obtain further Pratique at another port in Ghana.

Vaccination requirements in respect of persons arriving in Ghana

All officers, crew and passengers of every ship arriving at any port in Ghana shall be in possession of valid Certificates of vaccinations against yellow fever and cholera.

Where a person arrives at any port in Ghana and is unable to produce a valid Certificate as required, the Port Health Officer or the authorised officer shall require such person to be vaccinated on the spot or to present himself at a place or places for the purposes of being vaccinated.

Under no circumstances should any officer, crew or passenger disembark if he is not in possession of any valid Certificate against yellow fever and cholera.

CUSTOMS REGULATIONS: *Pre-Entry System:*

Customs Authorities have introduced a 'Pre-Entry System' whereby importers are expected to process their Customs Bills of Entry in advance, at least 7 clear days prior to vessel's arrival, failing which a penalty is imposed by Customs on importer/consignee. To avoid a situation where importers will hold Agent/Owners responsible for refund of penalties for late submission of Manifest with Customs, it is essential that shipowners are requested to let Agent receive all cargo manifests at least 10 days prior to vessel's arrival in order for Agent to lodge with Customs Authorities advance manifest for the benefit of importers. Recently, most cargo documents have been received late and in some cases manifests have been received when vessel is in port. It is suggested that manifests are airfreighted to ensure early receipt.

SALTPOND (Bonsu): 05.05 N. 01.00 W.

LOCATION: 9 km. South of Saltpond village in position Lat. 05° 04' 47" N., Long. 01° 00' 25" W.

TUGS: One tug available to assist with berthing and connecting hoses.

BERTHING: Ship to ship transfer through 1,200 ft. floating hose. Depth of water 85 ft.

The platform "Agpi" is permanently moored. The storage vessel is named "Farmer". Loading time for 20,000 tons is 24 hours. Product is named "Saltpond Crude" or "Bonsu Crude".

OPERATOR: Agripetco Ghana Inc.

TAKORADI: 04.53 N. 01.45 W. (See Plan)

PORT LIMITS: Are shown on Admiralty Chart 3102 and covers an area of about 1.5 miles to 2 miles outside harbour entrance.

DOCUMENTS:

Customs:

2 Stores Lists.
2 Lists Crew Personal Effects.
1 Bill of Health.
6 Crew Lists with dates of yellow fever inoculations (use Ghanian Form No. 62 which is supplied by Agent).
6 Passengers Lists or 'Negative'.
6 Vessel's Itinerary Lists.
1 Freighted Cargo List.
1 Unfreighted Cargo List.
1 Set Bills of Lading.
1 Clearance from last Port.
1 List of Narcotics.
1 List of Stowaways (state 'Nil' if so).
1 List of Arms and Ammunition (state 'Nil' if so).
1 List of Mail (state 'nil' if so).
1 List of Animals on board (state 'Nil' if so).

Immigration Officer:

1 Crew List (Ghanian Form No. 62).
1 List Ports of Call.
1 List of Passengers, if any.
All crew and Passengers' Passports.
Advice to Immigration of any stowaway.

PILOTAGE: Pilotage compulsory. Pilot boards within port limits. International code signals used. Vessels to call "Takoradi Port Control" on VHF Channel 14 when about 30 miles off, to confirm ETA.

ANCHORAGES: Vessels may anchor outside the harbour without Pilot. Depth at moorings 22 ft. to 35 ft.

RESTRICTIONS: Depth at harbour entrance 35 ft. MLW.

MAX. SIZE: Up to 28 ft. draft for berthing alongside. Up to 33 ft. at buoys. Also see "Tankers".

HEALTH: See "General" before first Ghana port.

RADIO: Radio Takoradi. The station is a Coast Station and only operates on HF and MF equipment. The call sign for this station is 9GA.

VHF: Signal station Channel 14. 24 hour service for all information with regard to Pilots, berthing, etc.

RADAR: No radar services available.

TUGS: 3 tugs available. Tugs usually join the vessel outside port entrance. Tugs' assistance is compulsory. Usually one tug is assigned to vessels with a bow thruster.

BERTHING:

Berth	*Length of Berth* (m.)	*Max.Draft* (m.)	
Manganese	157 (Max.LOA)	8.6	
2 (Ro-Ro)	169	F=6.0	A=7.5
2	153	8.0	
3	153	8.0	
4	183	8.6	
5/6	225	9.5	
Oil	183 (Max.LOA)	8.9	
Buoys:		Forward	Aft
1	195 (Max.LOA 180 m.)	10.36	10.97
3	193	9.2	9.6
4	181	8.4	9.0
5	176	7.7	8.7
6	174	7.5	7.9
7	150	7.0	7.0
8	91	6.0	6.5

CRANES: There are 9 portal cranes at the Port after the restoration. Of these, 2 cranes of 15 tons each lifting capacity are at the main wharf for loading and discharging of vessels. 4 cranes of 3 tons each lifting capacity are placed at the West Wharf to cater for loading and discharging cocoa, cocoa products and other commodities. 3 cranes of 15 tons are available at the Log Wharf for discharging lorries and wagons of logs and sawn timber from the countryside and loading same on to pontoons and into lighters for vessels loading at the buoys. There are no cranes at the Cargo Platform. Instead, a mobile crane of 14 tons is used. Forklifts are used to load and discharge cargoes. In addition there are 20 gantries for loading and discharging sawn timber. There are no cranes at the buoy berths and ships are expected to use their own gear. Also there are no floating cranes at this Port.

BULK CARGO FACILITIES: There are 2 berths for the loading of dry-bulk cargo – manganese ore and bauxite. In the case of grain, coal, fertilisers, sulphurs, copra, etc., discharge can be done at any of the wharf berths. The loading rate of manganese ore is approximately 333 long tons per hour; and the loading rate of bauxite is 330 long tons per hour.

SPECIALISED CARGO HANDLING FACILITIES: Vessels usually use their own derricks for loading and discharging containers. The Port's Mafi trailers handle the containers on the quay.

Ro/Ro vessels with their own specialised cargo gear are handled.

BRIDGES: There are no bridges at the port.

STEVEDORES: Berthing meetings are held daily between the Port Authority and all Port Operators with the view to determining ETA and ETD of vessels to enable the stevedoring companies to arrange for gangs and determine the relevant rates and charges.

Normal working hours: weekdays 0700 hrs. to 1200 hrs. and 1400 hrs. to 1700 hrs. Saturdays 0700 hrs. to 1200 hrs.

Gangs required for Sunday work should be ordered before 1130 hrs. previous day. For weekday work, gangs should be ordered before 1500 hrs. previous day.

MEDICAL: It is absolutely necessary for the Agents to be notified in advance of the required medical attention so that necessary arrangements for medical exercise be carried out immediately on the vessel's arrival. Also see "General – Health".

TANKERS: Oil tankers moor on the North side of Lee breakwater. 1 berth suitable for ships of 183 m. length, draft 8.9 m.

Pipeline: 805 m. long, pipe size 8 in. for all grades of petroleum and Bitumen.

Discharge Rate:

Petroleum	–	Premium Mogas	150 t.p.h.
		Regular Mogas	150 t.p.h.
		A.G.O.	200 t.p.h.
		Kerosene	200 t.p.h.
Bitumen	–	80/110–142 cu.m./hr.	
		60/70 –154 cu.m./hr.	
		12/18 –337 cu.m./hr.	

DENSITY: Salt water.

FRESH WATER: Delivery at berths and buoys is by means of water barge of 448,000 gallons capacity. The rate of delivery is 11,000 g.p.h.

FUEL: 2 grades available, fuel and gas oil. Advance notice is necessary.

Fuel – supplied through pipelines.
Gas Oil – supplied by mobile tanker.

FIRE PRECAUTIONS: 6 firemen ordered to standby with fire engine. "No Smoking" notices are posted at considerable distances from the tankers.

CONSULS: Italian Consul only. High Commissioners and Ambassadors are in Accra.

REPAIRS: Minor repairs can be effected, slipway for vessels up to 500 tons. Small dry dock for vessels up to 100 ft. length.

DRY DOCK: There is no large dry dock in this port but there is 1 small dry dock capable of accommodating vessel of 100 ft. long, 25 ft. wide and 8.5 ft. draft.

SURVEYOR: Lloyd's, ABS, GL, BV, Panama Bureau of Shipping and Bureau of Maritime Affairs (Liberia) represented by Wiltex Ltd. (consulting engineers and marine surveyors).

GANGWAY/DECK WATCHMEN: Provision of Gangway, Deck and Hatch Watchmen is absolutely necessary to prevent stealing, pilferage and smuggling on board ships.

HATCHES: Hatches are normally opened and closed by the stevedoring gangs or, at times, by the ship's crew.

CUSTOMS ALLOWANCES: Quantity permitted for each member of the crew to be held Out of Bond is as follows: Tobacco 100 grammes; Spirits 0.75 litres; Wine 0.75 litres.

CARGO GEAR: Load/discharge is affected by the Port Authority's shore gear. There is 1 heavy lift crane of 15 tons capacity which is used for heavy lifts. Where the cargo exceeds the lifting capacity of the shore crane, the ship's jumbo derrick is sometimes used.

REPATRIATION: The Immigration Department is responsible for signing on and off on the advice of the shipping company.

AIRPORT: The airport, approximately 5 km. from the Port, is now exclusively used by Ghana Air Force. The commercial airport is located at the Capital city of Accra – some 232 km. from Takoradi.

TIME: The Greenwich Meridian Time is applied to this Port as the Greenwich Meridian passes through this country.

HOLIDAYS: The holidays at the Port are as follows; New Year's Day (1st January); Redemption Day (13th January); Independence Day(6th March); Good Friday (non-working day); Holy Saturday; Easter Monday; Republic Day (1st July); Christmas Day (25th December) (non-working day); Boxing Day (26th December).

POLICE/AMBULANCE/FIRE: Telephone 999 for all 3 services.

TELEPHONES: Presently no arrangements exist for installing telephone on board ships.

SERVICES: There is no special service for tank cleaning, tank-washing or compass adjustment.

SHORE LEAVE: Every member of the crew is free to go ashore at any time of the day or night after the Immigration Officer has issued shore passes.

IDENTIFICATION CARDS: Seamen's Book or Passport is sufficient to identify any seaman. Also see "Shore Leave".

GARBAGE DISPOSAL: Vessels must provide their own drums.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: Seafarer's Centre, P.O.Box 71, Takoradi, (adjacent to harbour entrance), Tel: 2228. Facilities include swimming, snooker, table tennis, bar, transport, mailing, darts and bowling alley.

CURRENCY: Cedi.

REGULATIONS: Ship's are not allowed to discharge on board explosives or petroleum without prior approval of the Port Manager. Ships are not allowed to berth after 1800 hrs.

DELAYS: None.

DEVELOPMENTS: Rehabilitation work which is underway includes paving, fender replacement, refurbishment of jetties and quayside buildings. Electrical systems are being brought up to date to allow for the installation of new port equipment, which includes a 35 tonne multi-purpose crane, a 15 tonne general cargo crane and a 15 tonne crane for log handling.

CARGO SUPERINTENDENT'S REPORT: September 1993.

Tugs: Only two tugs available.

Berthing: Harbour has been dredged in 1992, and maximum allowed draft at the buoys has to be increased by 3 feet.

Bulk Cargo Facilities: The portal cranes are being overhauled from September 1993 onward.

The logpond cranes are in poor state of maintenance, and are breaking down 30% of the time.

Working Hours: Round the clock work with exception of meal hours. Gangs to be ordered well in advance for Saturday and Sunday.

Water: Fresh water by 150 ton barge.

Bunkers: No supply on the buoys. Only available alongside.

Developments: Rehabilitation work is underway on jetties and buildings, financed by the World Bank. The progress is very slow.

Stevedoring: Allocated by Ghana Ports and Harbour Authority. Stevedores for log shipments are very good. Watchmen service is very poor.

Stowaways: Careful check-ups must be undertaken by Europe bound vessels.

Information to Crew: This port is a very safe place to go ashore. Port area and centre of the city can be walked safely at night. The local people are very friendly. The local current is the Cedi (U.S.$ 1.00 = 650 – 700 Cedis).

The launch service to and from the ships is very flexible. Well run by the Ghana Ports and Harbour Authority.

Taxis from the main gate are plentiful and cheap. Before entering the taxi, the price has to be negotiated. To town 800 Cedis, to Atlantic Hotel 500 Cedis and to Westline 800 Cedis. The taxi takes 4 adult passengers.

The Seaman's Mission is 100 m. from the main gate. Apart from a bar and a pool table, the Mission has a very good souvenir shop. A car can be arranged for church or round trip tours. The Padre will visit the vessel at any time upon request.

In the port area are good reasonable priced restaurants (Atlantic Hotel and Harbour View Hotel). European and Chinese restaurants also available.

A visit to Sekondi is worthwhile (20 minutes by car) or European Town. This is the old natural harbour. Now this port is the Ghana Navy Base and also serves as supply base for the offshore oil exploration. The fishing boats come on the beach in the morning and late afternoon. The fresh fish is sold on the beach. Many old colonial buildings can be seen in Sekondi. "Fort Orange" was built by the Dutch in the year 1840 and is worth visiting.

The Harbour View Hotel Terrace overlooks the whole harbour and all the hustle and bustle can be seen, photographed and painted (20 minutes walk from the main gate). Rooms in the Harbour View cost U.S.$ 30.00 per night, all overlooking the harbour. Other hotels charge from U.S.$ 10.00 – 80.00.

The market in Takoradi is a typical market, fish, vegetables, fruits and many shops. Everything is for sale in the market. Bargaining is essential.

Woodcarving shops are in the back alleys of the market. A Government-owned souvenir shop (Ghana Industries) at Liberation Road sells souvenirs (carvings, paintings) at fixed prices. International telephone calls can be made from the main post and telegraph office (open 24 hours). Cost to Far East is U.S.$ 13.00 for first 3 minutes and U.S.$ 3.00 for each additional minute.

The post office in the port area is open daily on weekdays from 0800 hrs. – 1700 hrs. (Mail to Far East takes 10 days).

Many courier services available (DHL).

Train station in the port area, train goes daily to Accra. Plenty of local buses inland to all destination.

AUTHORITY: Ghana Ports and Harbours Authority, P.O.Box 249, Takoradi, Ghana. *Tel:* (031) 22252, 24073. *Telex:* 22614. *Fax:* (031) 22814. *Cables:* Harbours Takoradi. *Contact:* Captain J. E. Quansah, Acting Port Director.

AGENT: Scanship (Ghana) Limited, Amanful Road, P.O.Box 329, Takoradi, Ghana. Tel: (233) 31223531/2/3. Fax: (233) 324164. Telex: 2182 Scanship. Cables: "Scanship Takoradi". Radio: Contact possible after leaving Tema on R/T 6,500 kHz and VHF all Channels.

TEMA: 05.38 N. 00.01 E. (See Plan)

PORT LIMITS: A vessel is considered "arrived" when it is within 2.4 km. distance of the port.

DOCUMENTS:

Port Health:

Maritime Declaration of Health.
Valid Certificates for Cholera and Yellow Fever.
Derat Certificate.
1 copy Crew List.
1 copy Ports of Call List.
1 copy Passenger List.

Immigration:

1 copy Passenger List.
1 copy Crew List.
1 copy Ports of Call List.

Customs:

2 copies Manifest.
Dangerous Cargo List.
1 copy Crew List.
1 copy Ports of Call List.
1 copy Passenger List.
Port clearance, visaed by Customs at last port of call.

Shipmaster's Report: April 1992.

Customs:

1 copy Personal Effects List.*
1 copy Stores List.
1 copy Crew List.
1 copy Passenger List.
1 copy Ports of Call List.**
1 copy Animal List.
1 copy Parcel List.
1 copy Arms and Ammunition List.

* Crews effects must be declared on Ghana Customs Form C62 obtainable from the Agent. They will not accept IMCO FAL Form 4.

** Must have arrival and departure dates.

Customs require original signature on all forms, i.e. no photocopies of Master's signature.

Immigration:

1 copy Crew List.
1 copy Stowaway List.
1 copy Ports of Call List.
1 copy Arms and Ammunition List.
1 copy Passenger List.

Port Health:

1 copy Maritime Declaration of Health.
1 copy Vaccination List.
1 copy Crew List.
1 copy Passenger List.
1 copy Ports of Call List.
Port Health did not examine the Vaccination Certificates.

Total Documents Required:

6 copies Crew List.
5 copies Passenger List.
5 copies Ports of Call List (Arrival and departure dates).
2 copies Arms and Ammunition List.
1 copy Maritime Declaration of Health.
1 copy Vaccination List.
1 copy Stores/Bonded Stores List.
1 copy Parcel List.
1 copy Stowaway List.
1 copy Animal List.
1 copy Personal Effects/Crew Declaration List (on Form C62).

PILOTAGE: For Main Harbour, pilotage is compulsory for all vessels of more than 60.9 net tonnes, when arriving or leaving harbour, or shifting berth, but for both Fishing Harbours obtainable on request.

Time of pilotage – Main Harbour:

(a) Dry cargo vessels: Arrivals 0600 – 1800 hrs. (up to 2000 hrs. on special request); departure 0600 – 2300 hrs.
(b) Tankers: Arrivals daylight only; sailings 0600 – 2300 hrs.
(c) Valco-Carriers: All handling, during daylight only.

Vessels arriving or wishing to enter harbour must await Pilot between E. and S.W. off Fairway Buoy, up to 2.4 km. distance. Ships embarked by Pilots from 0600 hrs., according to time of arrival Quarantine Anchorage.

ANCHORAGES: Safe anchorage, three-quarters to two miles from E.N.E. to S.W. off main entrance with depth 30 m. – 60 m., with good holding ground. Eastern area of anchorage is more comfortable, without additional swell reflected from main breakwater.

RESTRICTIONS: Entrance to main harbour is 240 m. wide. Approaches have a minimal depth of 10.6 m. Ships entering harbour may roll heavily, up to 8°, during some seasons when 2-3 cables before entrance.

Ships deeper than 9.1 m. enter only during high tide with maximum possible draft limit of 9.75 m. during neap tides.

Bottom of harbour consists of sand and mud with frequent hard rocky ground. Depth increases in direction of main breakwater.

Inside harbour alongside the breakwater are dolphins for tankers with depth of 10.3 m.

MAX. SIZE: Restricted to 198 m. length, 9.7 m. draft and 60,000 tonnes. Also see "Shipmaster's Report" dated April 1994.

HEALTH: All crew require valid certificates of vaccination against yellow fever which are inspected by Port Health Authorities. In case of any suspected disease or fever on board, agent of the vessel should be notified in advance by radio. Also see "General" before first Ghana Port.

VHF: The port is equipped with VHF radio Channels 14 and 16. Channel 16 is the international listening channel and Channel 14 is the port working channel.

Under certain conditions, vessels are able to contact the Signal Station at 200 miles.

TUGS: 4 tugs available with capacity of 1,320 h.p. Minimum of 2 tugs for berthing and unberthing. Tugs join vessels at entrance of harbour when berthing and join vessel alongside when leaving. Usual for ships' lines to be used.

BERTHING:

Berth No.	*Max. LOA* (m.)	*Max. Draft* (m.)
1	183	9.6
2	183	8.6
3	146	7.6
4	183	7.6
5	183	7.5
6	183	7.2
7	183	7.25
8	183	7.25
9	183	7.25
10	183	7.4
11	183	7.6
12	183	7.65
Valco	175	9.6
Oil	244	9.8

Usually ships moor starboard side to Berths No. 1, 2, 6-9 and portside to Berths No. 3, 4, 5, 10-12.

Buoy Berths:

Berth	*Max. LOA* (m.)	*Max. Draft* (m.)
1	46	4.3
2	91	6.4
3	131	9.8
4	153	9.8

CRANES: 2×40 tonne portal cranes at Quay No. 2.

SPECIALISED CARGO HANDLING FACILITIES: Valco Berth for handling bulk cargoes such as alumina, pitch/coke and aluminium.

Specialised facilities apart from the Valco Berth are the oil berth for handling oil and other petroleum products and grain conveyor belt, and grain conveyor belt serving the Ghana Agro Foods Company (GAFCO). These facilities serve specific industries.

STEVEDORES: Two private stevedoring companies and the GPHA perform shipboard stevedoring, while GPHA solely does shore operations.

Working Hours: The port is currently operating a two-shift system for cargo work, i.e. 0730 hrs. – 1700 hrs. and 1930 hrs. – 0700 hrs., including overtime. Marine operations are also round the clock.

MEDICAL: No advance notice except in cases of serious illness. Advice should be sent with arrival cable. Ample hospital facilities available. The Port Authority operate a 24 hour clinic.

TANKERS: Tankers always moored starboard side to dolphins, and ropes to breakwater. Distance between dolphins is 49 m. Distance between extreme bollards is 229 m. Crude oil pumped to refinery, by ship's pumps, a distance of 4,572 m.

	Pipeline Size (in.)	*Capacity* (cu.m.)	*Pumping Rate* (t.p.h.)
Crude oil	24 – 16	1,567,130	1,000
Fuel oil	14	51,400	600

DENSITY: 1025.

FRESH WATER: Available. Rate is between 20 t.p.h. and 45 t.p.h., depending on the local water pressure and the height of the vessel's water tanks.

At times a limited supply is available.

FUEL: Fuel and diesel-oil available by tanker-trucks only. No coal-bunkers available.

FIRE PRECAUTIONS: Oil tankers when moored alongside must have "Fire Wires" hanging over the bow and stern on the outboard side of the vessel. These must be lowered to the water's edge and securely made fast on board so that they can be used to tow the ship away if necessary in an emergency. Two large fire fighting pumps and "snorkels" are mounted at the oil wharf. A floating boom to prevent the spread of oil spillage must be put in position around tankers loading and discharging. The Master of the ship should be warned to lower the guy ropes securing the boom to the ship, so that the boom is afloat at all times and not lifted up as the vessel's draft changes.

REPAIRS: Marine workshop for deck and engine repairs.

DRY DOCKS: There are 2 drydocks.

Drydock No. 1: Serviced by 60 tonnes and 20 tonnes travelling cranes. Capacity: 100,000 d.w.t. Length: 277.4 m. Width (entrance): 45.4 m. Width (inside wall): 47.2 m. Depth: 8.2 m. on the sill. Flooding time: 4 hours (approx.). Dewatering time: 4 hours (approx.). Vessels with 6.5 m. draft can enter at HW.

Drydock No. 2: Serviced by 45 tonnes and 25 tonnes mobile cranes. Length: 350 ft. (106.7 m.). Width: 44 ft. (13.4 m.). Draft (entrance): 18 ft. (5.5 m.). Flooding time of empty dock: 4 hrs. (approx.). Dewatering time: 4 hrs. (approx.).

Fitting out quay: 182.9 m. Draft: 4.3 m. to be deepened. Crane: 15.2 tonnes travelling crane.

SURVEYORS: Lloyd's, NKK and Bureau Veritas are represented at the port.

GANGWAY/DECK WATCHMEN: Services of watchmen necessary and compulsory.

HATCHES: Opening/closing of hatches is carried out by stevedores or crew.

CUSTOMS ALLOWANCES: 200 cigarettes, 1 bottle of spirits and wine and beer in reasonable quantities.

CARGO GEAR: Apart from using 2 portal cranes at Berths No. 10 and 11, all other loading and discharging has to be done by ship's gears.

REPATRIATION: Facilities exist for effecting crew changes through the Shipping Master's Office and the Ministry of Transport and Communications.

AIRPORT: Situated 28.8 km. from the port.

TIME: GMT. No alterations during the year.

HOLIDAYS: New Year's Day (January 1st); Independence Day (March 6th); Good Friday; Holy Saturday; Easter Monday; Labour Day (May 1st); PNDC Government (June 4th); Republic Day (July 1st); Christmas Day (December 25th); Boxing Day (December 26th). Cargo work can be arranged, except for Christmas Day and Good Friday.

POLICE/AMBULANCE/FIRE: Tel. Nos: Police: 2936; Fire: 2822-12.

SHORE LEAVE: Every member of the crew is free to go ashore at any time of the day or night after the Immigration Officer has issued shore passes.

IDENTIFICATION CARDS: Shore passes issued are sufficient.

GARBAGE DISPOSAL: Service available upon request.

WASTE OIL DISPOSAL: Service available on request if drums are sealed.

SEAMAN'S CLUBS: Mariner's Club, P.O.Box 528, Tema. Tel: 0221/2452. Facilities: Games, hockey and table tennis, swimming pool, post cards and stamps available. Minibus collection available.

CURRENCY: Cedi (C).

REGULATIONS: No refuse or waste material of any description allowed to be pumped or thrown overboard from vessel into the sea.

No person shall load or discharge explosives without the consent of the Port Operations Manager.

It is strictly forbidden to undertake main engine work without prior permission of the Port Operations Manager.

DELAYS: Delays not expected for berthing, loading or discharging, except for natural occurrences such as heavy storm or heavy downpour of rain.

GENERAL: Recommended to send ETA message as early as possible in advance. Essential that ETA message reaches Agent's office before 1430 hrs. Monday-Thursday or before 1000 hrs. Friday for weekends because of booking of gangs. Ships from Abidjan should also send 48 hours ETA message.

Tides: Maximum tide rise 1.8 m., minimum tide rise 0.91 m.

Prevailing Winds: Light to fresh breeze from W. and S.W. during all year, except December to February when N.E. Harmathan is dominating with poor visibility. Dangerous winds are tornadoes from East, May to July, but occasionally isolated tornadoes are to be expected from January to December. There is a swell in harbour, especially after tornadoes, when lying alongside the berths.

DEVELOPMENTS: Rehabilitation of the port includes:

Repair and rehabilitation of existing infrastructure and facilities.

Removal of sunken vessels and other wrecks.

Provision of container and Ro/Ro facilities.

Provision of modern cargo handling equipment, communication and floating crafts.

SHIPMASTER'S REPORT: April 1994.

The maximum LOA is 230 m. not 198 m. This vessel has a length overall of 226.25 m., and we experienced no problems.

The tanker berth consists of 3 concrete dolphins faced with rubber fenders and handles crude oil, fuel oil and LPG. It is in good condition. Tankers are moored starboard side to, with ropes ashore to the breakwater. The vessel lay alongside very quietly, and the harbour appeared well protected from any swell. There are reportedly 4 tugs available at Tema. However, when we arrived there were only two, one of which had machinery problems, and we berthed with assistance from one tug only.

It was dark when we arrived, and we had to wait until approximately 0630 hrs. before the Pilot came to us, i.e. after daylight. There were numerous small open fishing boats and trawlers operating off the port, some of which had very poor lights and were quite difficult to detect either visually or on radar.

AUTHORITY: Ghana Ports and Harbour Authority, P.O.Box 150, Tema, Ghana. *Tel:* 2631-9. *Telex:* 2108 (Gh) Ports. *FAX:* 0221/2812, 021/772448. *Contact:* R.U. Kumedzro, Port Director. Captain E.D. Ziem, Harbour Master.

AGENT: Scanship (Ghana) Ltd., P.O.Box 64, Tema. Tel: (233) 2212651. Cables: "Scanship Tema". Fax: (233) 2212571. Telex: 2374 Scatma Gh.

NOTES

Please also advise Shipping Guides Ltd.

Gibraltar

GIBRALTAR: 36.08 N. 05.21 W. (See Plan)

DOCUMENTS:
5 Crew Lists.
5 Passenger Lists.
Arrival Report, to be completed when receiving Pratique.
International Maritime Declaration of Health.
Ship's Register.
Load Line Certificate.
Derat Certificate.
Certificate of Insurance in respect of Civil Liability for Oil Pollution Damage.
Stowaway Report.

PILOTAGE: Pilotage compulsory for all navigation (except direct *departure* from anchorage). Give notice of arrival through Agents 24 hours in advance furnishing maximum draft. Ships approach off Rosia Bay where Pilot (available day and night) boards vessel. Pilot boat painted black and flies international Pilot flag. To call Pilot: sound, and fly flag "G" or call Gibraltar Port on VHF Channel 16 and pass message on Channel 12.

ANCHORAGES: In open bay, good safe anchorage, depths vary from 5 to 40 fathoms. Vessels normally anchor in area West of Harbour Moles.

RESTRICTIONS: *Note:* British waters in the Bay of Gibraltar extend to the Median Line drawn in accordance with the 1958 Geneva Convention on the Territorial Sea and Contiguous Zone (see Admiralty Chart D 1448). However, part of those waters are considered by the Spanish Authorities to be within the limits of the Puerto Bahia de Algeciras (Spanish Notice to Mariners 49/1563/67 of 9 December 1967), and the Spanish Authorities have claimed Spanish port dues in respect of vessels anchoring Northwards of a line drawn Westwards of the British Lines (shown on B.A.Chart No. 1448).

The waters in dispute form only a small part of the anchorages available to shipping calling at Gibraltar.

MAX. SIZE: If anchoring in bay, any size. Max. draft alongside, 31 ft. 6 in.

HEALTH: Vessels are usually boarded by Port Authorities off the Southern end of the Detached Mole: if everything found satisfactory Pratique is granted immediately. Masters should advise Agents by radio before arrival of any illness on board so that Port Doctor may board vessel with Port Authorities.

RADIO: Gibraltar Radio (British Telecom), call sign ZDK.

VHF: Communicate with Port Authorities by VHF international calling Channel 16, pass message on Channel 12, many other channels available (24 hour service).

TUGS: 8 tugs, 500 h.p. – 2,600 h.p. When required for berthing alongside, tugs meet vessels off Mole. Ship's ropes sometimes used.

BERTHING: Cruise Liners and vessels calling for bunkers or water can be berthed on both sides of Western Arm. Outer side is 490 m. long with draft up to 9.60 m. The inner side is 450 m. long and max. draft is 8.53 m. Ships of deeper draft can be accommodated on half tide basis according to tide. Vessels calling for repairs or lay up can be berthed at the Detached Mole. There are also 3 berths of 100 m. in length available to vessels discharging general and bulk cargoes.

Masters required to advise ship's draft when giving ETA. Cruise ships are only charged 13.3% of normal berthing charge.

Ships calling for bunkers and/or fresh water and not conducting operations involving passengers or cargo are only required to pay 6.6% of the normal berthing charges. Such vessels may, at the discretion of the Captain of the Port, be allowed to be berthed for a period not exceeding 8 hours whilst such vessel is not bunkering or taking on supplies or fresh water.

Vessels coming in solely for bunkers are exempted from tonnage dues.

CARGO HANDLING: Container berth at No. 2 Jetty available for vessels up to 350 ft. in length, max. draft 24 ft. 6 in. Containers are also discharged at No. 1 Jetty.

STEVEDORES: Agents automatically advise stevedoring company on receipt of ETA from ship.

MEDICAL: Masters should advise Agents when giving ETA if medical attention is required on board. Adequate hospital facilities available.

TANKERS: Max. draft at discharging berths 31 ft. 06 in. Diameter of discharging lines 14 in. fuel oil, 10 in. diesel oil and gas oil.

DENSITY: 1025.

FRESH WATER: Available at Mole from pipelines, delivery rate 60/80 t.p.h. Water can also be delivered at anchorage from barge, delivery rate 40/50 t.p.h.

FUEL: A quick and efficient bunkering service is provided on a 24-hour basis at alongside and anchorage berths. Ships arriving at night are required to give prior notice before 1600 hrs. on the day of arrival. The requirement is the same on Sunday and weekdays.

Fuel of various grades is supplied to shipping throughout the year from piped installations at all alongside berths (with the exception of the Detached Mole) using the latest metered bunkering techniques. The grades include marine fuel, thin, fuel, marine diesel fuel and gas-oil. Ships at the Detached Mole and in the Commercial Anchorage are serviced by lighters. This supply to ships is handled as a joint venture by the Shell International, Mobil, Chevron, Texaco and B.P. oil companies and is managed by the Shell Company of Gibraltar Limited, who own the main share of the installations.

The bunkering installation at Gibraltar, which was the first in the world to provide metered deliveries at shipside, includes 2 Fisher-in-Line blending units to ensure rapid delivery of fuel oils of any viscosity. Oil bunkers are normally delivered at 200 – 250 t.p.h. per connection subject to the ship's acceptance capacity. Similar rapid bunkering is provided in the anchorage by a lighter of 880 tons fuel capacity and a total capacity of 1,000 tons including bulk lubricants.

CONSULS:

Belgium	Tel: 78353	Latvia	Tel: 78546
Denmark	" 72735	Liberia	" 78318
Finland	" 75149	Netherlands	" 78305
France	" 78830	Norway	" 74427
Greece	" 74600	Sweden	" 78456
Italy	" 78123	Thailand	" 78301
Israel	" 75955		

International Direct Dialling (I.D.D.) in operation.

REPAIRS: Deck and engine repairs possible. Underwater operations including repairs and cleaning of vessel's hull.

DRY DOCKS: 3 dry docks available. Largest 871 ft.×125 ft. Max. vessel size 245 m.×36 m. Dry docks operated by Gibraltar Shiprepair Ltd.

GANGWAY/DECK WATCHMAN: Not necessary but available if required.

OPENING/CLOSING HATCHES: Normally effected by stevedores.

CUSTOMS ALLOWANCES: No restriction whilst on board. Crew members may bring ashore small quantity for their immediate personal use.

REPATRIATION: Facilities exist for repatriating Crew members.

AIRPORT: Regular flights to London (Gatwick). Distance to airport about one mile.

TIME: GMT plus 1 hour in Winter, plus 2 hours in Summer.

HOLIDAYS: New Year's Day; Good Friday; Easter Monday; May Day; Commonwealth Day (24th May); Spring Bank Holiday; Summer Bank Holiday; Queen's Birthday; Christmas Day; Boxing Day. Cargo work can be effected at overtime rates on these holidays except on Good Friday and Christmas Day when no cargo work is carried out. Bunkering is effected on any of these holidays except on Good Friday and Christmas Day.

POLICE/AMBULANCE/FIRE: Police and Ambulance 199; Fire 190.

TELEPHONES: Telephone can be placed onboard at cruise ship berth. Telephones can also be placed on vessels under repair at the Detached Mole, through Admiralty Telephone Exchange, cost about £10.

IDENTIFICATION CARDS: Not required.

GENERAL: Advisable that vessels calling for bunkers and only stopping in port for few hours should radio their requirements prior to arrival to ensure avoiding delay.

SHIPMASTER'S REPORT: Offport Call. (Updated 1988).

VHF: Lloyd's on Channels 16 and 14. Port and Pilots on Channels 16 and 12.

Pratique: Cable for Free Pratique 18 hours ahead. Standard message. Do not expect reply.

Pilot: Boards from small black hulled motor boat off Rosia Bay. Good lee required. Contact when South of Europa Point.

Anchoring: Not necessary for offport call with under 1 hour's wait. One anchor required ready with forecastle party on stand-by.

Agent/Quarantine Officer: Board off South end of Detached Mole.

Procedure: Require 5 Crew Lists and 1 Health Declaration. They also look at Ship's Papers, Register and Derat Certificate.

For British crew joining and leaving ALC3 and ALC5 are required to be filled in, so joining members must sign on immediately.

Time: Depends on numbers and ranks joining and leaving, but in October 1980, 9 officers left and 6 joined, procedure took 30 minutes with total off hire of 1 hour and 32 minutes.

General: Money: Sterling easily available in all denominations but make sure you cable in for Agent to arrange during bank hours.

Films: Walport from 'Restano' films and Vidpak – 48 hours' notice.

Agent: Very efficient, on prior request supplied British newspapers and up-to-date Lloyd's Index.

Anchorage: Northern limit of tanker anchorage – East to West line 1 cable South of North End Detached Mole (Qk. Fl. G.), ("C" Head) – good anchorage 3–5 cables off mole – single anchor good holding.

For ships awaiting repairs or orders, North limit – East to West line North End South Mole (Fl. 2 sec.) – "A" Head.

Current: (From Pilot). Strong Southerly setting current up to 4 knots, with East wind, off moles.

Lloyd's signal station: Approaching Gibraltar, will pass all messages to Pilots and Agent.

Port expenses: Agent quoted total off port (including Pilot) £650.

AUTHORITY: Captain of the Port, Port Office, North Mole, Gibraltar. *Tel:* 77254/78134. *Telex:* 2130 Gibpor Gk. *FAX:* 77011. *Cables:* Gibport. *Contact:* Captain J.W. Prior, Captain of the Port.

Greece

ACHLADI: 38.53 N. 22.50 E. (See Plan)

DOCUMENTS: See "Stylis".
PILOTAGE: Compulsory for all vessels arriving at and leaving the berth. Pilots available through Volos Pilot Station.
ANCHORAGES: The waters which surround the port are free from dangers. Good holding ground with depths from 25 to 30 fathoms.
MAX. SIZE: Max. draft alongside is 15.0 m.
VHF: Port Authority on Channels 7 and 12.
TUGS: Tugs must be ordered from Volos or Chalkis.
BERTHING: Achladi port is a new construction belonging to the factory of Agroinvest S.A. It is a private berth about 200 m. in length standing about 3 m. above sea level and is well protected by rubber fenders. It was constructed in order to serve factory for loading and/or discharging their products, such as animal food, flour, wheat, maize, etc. Maximum permissible draft along the pier is 15.0 m.

The factory is visible just after passing Akra Tapia. It is a conspicuous building due to the height of silos and warehouses. Three fixed red lights (East) and 3 fixed green lights (West) show the ends of the berth.

Agroinvest S.A., 49 Vas. Sofias Avenue, 106 76 Athens, Greece. Tel: (1) 7214430. Fax: (1) 7249907. Telex: 210422 Agro GR. Contact: Captain George Siainis, Shipping and Port Manager.

Factory: Agroinvest S.A., Fthiotis 35103, Greece. Tel: (0238) 31313, 31532, 31602. Telex: 0296186 Agro GR. Fax: (0238) 31940.
CRANES: Loading/discharging by ship's gear for cargoes other than grain. 1×100 tonne mobile crane (factory property) available at the port.
STEVEDORES: Loading and unloading carried out throughout 24 hours.
BULK CARGO FACILITIES: There is a flat silo of 40,000 tonnes capacity and a grain silo of 100,000 tonnes capacity with a travelling shiploader/unloader of 500 t.p.h. for loading, and 600 t.p.h. for unloading.
TANKERS: Facilities available for loading and discharging oil seed tankers.
FRESH WATER: Available at the pier.
FUEL: Not available.
REPAIRS: Minor repairs can be carried out in Stylis or Lamia.
GENERAL: Stores or provisions available from Volos and/or Stylis.
AUTHORITY: Stylis Harbour Authority, Stylis, Greece. *Tel:* (0238) 22329.

AGHIOS NIKOLAOS (St. Nikolo-St. Nicholas), Crete: 35.12 N. 25.43 E.

DOCUMENTS:
4 Crew Lists.
2 Passenger Lists.
1 Cargo Manifest.
1 Spares List.
1 Stores List.
1 List Crew Personal Effects.
Maritime Health Declaration.
1 Provisions List.
PILOTAGE: Not compulsory. No Pilot station. Private Pilot who can be used if needed. However, not always available. Area of Pilot's boarding is N.E. or S.E. of Aghioi Pandes Islet, depending weather conditions. Anchorage waiting place in same area. Call Pilot with signal "G". Small fishing vessels (length 13.0 m.) fitted with VHF can indicate position of anchorage if advised by Agent.
ANCHORAGES: (a) Harbour of Aghios Nikolaos, depth 3 – 5 fathoms. (b) Usual anchorage for vessels over 500 tons gross, South or S.E. of Nikolo Islet (Admiralty Chart No. 2536 B) and at a distance of 0.5 – 1.0 miles from the mainland, depth 10 – 40 fathoms respectively. (c) Poros Bay for small and large vessels, only when North and N.W. fresh gales, depth 16 – 27 fathoms.
RESTRICTIONS: Care to be taken off North entrance to port owing to rocky shoals, depth 5 m. Entrance from the S.W. is free of obstructions.
MAX. SIZE: Vessels of up to 100 m. length and 9.0 m. draft can enter the port. At oil bunkering installation outside the port, vessels of any size can be accommodated.
HEALTH: If from another Greek port free pratique is automatic and access to and from vessel granted on permission of Port Authorities. Port doctor visits all other vessels.
RADIO: No local radio station. Cables to Agent or Port Authority through "Athinai Radio", "Heraklion Radio" or "Rhodes Radio".
TUGS: One tug available.
BERTHING: Berthing position designated by Port Authority.
STEVEDORES: 10 permanent port stevedores available, but further 5 men can be engaged. Cargo worked by vessel's own gear.
MEDICAL: No advance notice of medical attendance required. Medical attention by town doctors available. Government hospital with all facilities.
TANKERS: No tanker berths. Vessels moor to buoys. Oil line 6 in. diameter.
DENSITY: 1025.
FRESH WATER: At new pier 3 hydrants, hose diameter 2.5 in. for supplying water. At the bunkering installation at Katsini Bay there is water storage tank capacity 500 cu. m. for supply to deep-sea vessels. Loading rate about 49 t.p.h. Delivery by flexible hose connection from the mooring buoys. Fresh water not available at the present time at the bunkering installation as they have ceased operating.
FUEL: Small quantities transported by tank truck are available from the pier.
HATCHES: Opened/closed by stevedores.
CUSTOMS ALLOWANCES: 2 packets cigarettes per crew member per day.
CARGO GEAR: No shore facilities. All cargo worked with ship's own gear.
CONSULS: None.
REPAIRS: Only minor repairs.
SURVEYORS: None.
REPATRIATION: Crew replacement and repatriation available.
AIRPORT: At Iraklion distance 66 km. 2 or 3 flights per day to Athens.
TIME: GMT plus 2 hours. GMT plus 3 hours late March to late September.
HOLIDAYS: In addition to standard Greek holidays, local holidays are Ascension Day (date not fixed), and St. Nicholas Day (6th December).
POLICE/AMBULANCE/FIRE: St. Nicholas Police tel. 100. State Hospital, tel. 22369. Fire tel. 22674 or 28905. Port Police tel. 22312. Area code for St. Nicholas 0841.
TELEPHONES: Available for yachts only.
SERVICES: Tank cleaning and hold cleaning.
SHORE LEAVE: Permitted with Port Authority pass.
STORING: Possible by truck or barge. Trucks may proceed alongside. No fork lift trucks available. Riggers available.
REGULATIONS: *(a)* Vessels are not allowed to approach Aghioi Pandes (goat reserve). *(b)* No refuse or other waste matter of any description allowed to be thrown overboard from vessel. *(c)* No visitors permitted without Port Authority permission.
DEVELOPMENTS: During next 5 years *(a)* deepening of Port Basin, *(b)* Provision of 1 shore crane, *(c)* construction of breakwater – length 200 m.
AUTHORITY: Port Authority of Agios Nikolaos, Akti Coundourou, Agios Nikolaos, Crete, P.N. 72.100 Greece. *Tel:* 0841-22312. *Telex:* 026103. *Contact:* Ioannis Papadomichelakis, (Lieut-Commander), Harbour Master.

AGIA MARINA: 38.54 N. 22.36 E.

DOCUMENTS: See "Stylis".
PILOTAGE: Compulsory. Pilot can be boarded at Stylis Anchorage or Agia Marina. Pilot and pilot boat is the same as for the port of Stylis.
VHF: Stylis Port Authority on Channels 7 and 12.
TUGS: See "Stylis".
BERTHING: Agia Marina Port is an open port on the North side of Maliakos Kolpos. It is a private port belonging to Metalia Voxitou Elefsinos A.E. (Skalistiris Enterpr. S.A.).

The Port of Agia Marina is visible just after passing Akra Drepanon and is 2 miles West of the main port of Stylis. A red fixed light shows the head of the elevator.

The berth, consisting of poles only, can accommodate cargo vessels up to 30 ft. draft for loading bauxite and/or chrome ore in bulk, cargoes come from the mines of Mount Parnassos and Mount Iti. Vessels calling at Agia Marina have to make fast to poles and are secured alongside the poles. Communication with the shore is effected only by motor boat which can be hired through local Agents. The loading takes place using an electric elevator and the rate is about 1,000 tons daily.

The port is lee to the wind and it has been reported that even with a Force 8-9 wind, vessels can stay in position without any difficulty. The vessel has to drop anchor in order to facilitate shifting(s) as elevator is immovable, also for better securing. The waters around are clear, with good holding bottom, the depth of which varies from 7 to 13 fathoms.
STEVEDORES: Working hours – 24 hours daily.
FRESH WATER: Not available. Can be obtained at Stylis, where max. draft allowed is 18 ft. 6 in.
FUEL: Not available. See "Stylis".
REPAIRS: Minor repairs can be carried out at Stylis or Lamia.
GENERAL: Stores and provisions available in limited quantities.
AUTHORITY: Stylis Harbour Authority, Stylis, Greece. *Tel:* (0238) 22329.

AGIOI THEODOROI: 37.55 N. 23.05 E. (See Plan)

PORT LIMITS: At anchorage area North of Lat. 37° 54' N. and between Long. 23° 03' 24" E. and 23° 07' E.
DOCUMENTS:
7 copies Crew Lists (European and Asian) (IMO Standard Forms).
2 copies Dates of Vaccinations/Inoculations.
1 copy Cargo Manifest.
2 copies List of Provisions and Stores (these are supplied on forms issued by Agent printed in Greek/English).
2 copies Officers'/Crews' personal declaration, on forms supplied by Agent in Greek/English, covering all high duty items, radios cameras, etc.
1 copy Declaration of ships' cash on board, form supplied by Agent in Greek but made out in front of Master.
2 copies of Masters' Declaration that all high duty goods have not been put under seal, and that he is responsible for any loss or landing of same without proper authority.
All passports and/or Seamen's Books to be produced *if* requested by Immigration.

On completion of loading, documentation takes about 2 hours.

PILOTAGE: Compulsory. Pilot boards S.S.E. of port, about 1 mile off the outer jetty at Lat. 37° 54' N., Long. 23° 06' E. The Oil Company has its own private Pilots. There are 4 Pilots stationed at Terminal, of which one is on call 24 hours. Pilot comes out by tug. There is no direct radio contact between vessel and Pilot Station.
ANCHORAGES: There is a reasonable safe anchorage about 0.5 miles off the outer jetty, located North of Lat. 37° 54' N. and between Long. 23° 03' 24" N., and 23° 07' E. The depth is 15 – 100 fathoms with a sandy bottom. Waiting at anchorage without loading/discharging instructions is prohibited.
MAX. SIZE: Vessels with unlimited deadweight and max. draft 72 ft. are permitted. No length and beam limitation.
HEALTH: Normal procedure takes place on arrival at Terminal.
RADIO: Communications via "Athina Radio". Telex 232141 (Fax: 48973) available in Terminal and at Head Office Telex 21-8245/9.
VHF: At least 4 hours prior to arrival, vessels have to start calling "Motor Oil Refinery" on VHF Channel 14. Refinery will give any information available about berthing and/or anchoring.
TUGS: 4 tugs are available, and they are used according to the size of the vessel.
BERTHING:

Berth	*Max. D.W.T.* (tons)	*Max. Draft* (m.)	*Max. Length* (m.)	*Max. Beam* (m.)	*Max. Pressure* (p.s.i.)	*Normal Side Berthing*
A	unlimited	21.95	No limit	No limit	12.0	Port
B (N.W. side)	40,000	13.4	200	No limit	10.0	Port
B (S.E. side)	80,000	13.4	240	No limit	10.0	Starboard
C (N. side)	5,000	7.5	100	No limit	10.0	Port
C (S. side)	3,000	5.5	100	No limit	10.0	Starboard
Stern to	6,000	8.5	No limit	15.5	8.0	Stern

Nature of bottom is sand. Vessels can berth at any time day or night. Connections range from 6 in. to 16 in. Connection and disconnection is done by shore crew.
MOORINGS: Standard moorings on to dolphins which are well fendered and hold the vessel clear of the manifold complex. Vessels require their gangway and derricks to be available on arrival.
CRANES: Not available.
BALLAST: *Slops/Dirty Ballast Facilities:* 48 hours notice required for delivery up to a maximum of 5,000 tonnes, provided no lead content.
MEDICAL: Full hospital/medical facilities are available in Corinth, which is located about 15 km. from Refinery.
DENSITY: About 1028.
FRESH WATER: Fresh water is only available for delivery alongside by pipeline at about 30 cu.m./hr. Maximum quantity 200 cu.m., subject to relevant advance notice.
FUEL: All kinds of bunkers/lubricants are available, only supplied alongside.
REPAIRS: No repairs are permitted at berth or at anchorage. Nearest port for repairs is Piraeus.
SURVEYORS: All surveying firms are available.
CUSTOMS ALLOWANCES: Bond locker is sealed. Allowance 200 cigarettes or equivalent in tobacco or cigars per man (7 days) and a part bottle of wine and spirits is permitted per man (7 days). All Tobacco/cigars/ cigarettes placed under seal. Crew excess must be declared on Provision List in separate column for same.
REPATRIATION: Change of crew takes place via Athens Airport.
TIME: GMT plus 2 hours (Summer time plus 3 hours).
HOLIDAYS: Refinery works all days of the year.
STORING: All kinds of stores can be delivered to the vessel, but only by tug.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Passes are issued on arrival and must be handed in prior to sailing.
DELAYS: No delays anticipated.
GARBAGE DISPOSAL: Daily collection service by barge is available.
CURRENCY: Drachmas.
GENERAL: *Chart:* B.A. Chart No. 1657.
Visitors: Acceptable, provided 24 hours notice is given to the Refinery.
AUTHORITY: Motor Oil (Hellas) Refineries. *Tel:* 0741-48080. *Telex:* 232141. *FAX:* 0741-49001.

AGENT: Mylaki Shipping Agency Ltd., 43 Iroon Polytechniou Str., Piraeus 185 35, Greece. *Tel:* (01) 4296684, 094-320909 (Mobile), (01) 4522608 (after office hours). *Telex:* 212653 Mlki Gr. *Cables:* Mylanav - Piraeus/Greece. *FAX:* (01) 4296602.

ALEXANDROUPOLIS: 40.51 N. 25.54 E.

DOCUMENTS:
4 Crew Lists.
2 Ship's Stores Lists.
2 Crew Effects Declarations.
2 Master's Personal Declaration that all stores not held in bond will remain on board (Forms supplied by Agent).

All ship's certificates will remain at Port Authority from time of arrival until vessel sails.
PILOTAGE: Pilotage is compulsory for foreign vessels larger than 500 g.r.t. and vessels under Greek flag larger than 1,000 g.r.t.
The fully independent Pilot is "Neptun" Independent Pilot Services, 2 Philippoupoleos Street, 68100 Alexandroupolis, Greece. Tel: (551) 31015. Telex: 466177 Pesa. Fax: (551) 20449. VHF: Channel 12 (Call "Alexandroupolis Pilots").
Pilot boarding position is 0.5 miles South of the port entrance.
Pilotage is during daylight only.
ANCHORAGES: Depth inside port 18 ft. 06 in., mud bottom. Depth increases outside port to about 10 m. at distance of 1 nautical mile.
Area around port subject to strong S.E./S. winds especially during Winter. During strong winds vessels can seek shelter off Samothraki Island. In strong winds port is considered safe but because of occasional large waves loading is stopped. Winds from other directions do not affect port work.
MAX. SIZE: Vessels with draft not exceeding 19 ft. can enter safely.
Vessel with LOA up to 200 m. may berth for part loading, with good weather.
HEALTH: Vessels from foreign countries can enter harbour and obtain Free Pratique during the period from sunrise until 2200 hrs. Vessels having suspected contagious disease on board should remain outside harbour until visit of medical officer, and await further instructions.
TUGS: Compulsory. 1×700 h.p.
BERTHING: Port Authority allocates the berthing place.
At least 24 hours notice of ETA to be passed to Agent in order to organise loading/discharging.
STEVEDORES: Prior notice to be passed to Agent order arrange gangs. Rate of cargo working: General cargo about 100 tons per gang every 8 hours. Bagged cargo about 100 tons per gang every 8 hours. Coal about 80 tons per gang every 8 hours. Timber about 120 cu.m. per gang every 8 hours. Vessels must use own gear for loading/discharging, except bulk cargoes.
Bulk cargoes handled by screw pipes at the rate of 1,500 tonnes per day.
The new silo not delivered yet.
For heavy cargoes, there are 4 mobile cranes with lifting capacity of 10 tons – 80 tons.
MEDICAL: No advance notice required. 1 Government General Hospital, 3 clinics. Doctors' services readily available.
TANKERS: There is a floating pipeline. Tankers with a draft of 18 ft. can discharge diesel oil and gasoline.
FRESH WATER: 10 hydrants available. Delivery rate about 5 t.p.h. (each), but delivery rate reduced when 2 or more hydrants in use.
FUEL: No Bunker C fuel available. Supplies of diesel oil possible from road tankers.
FIRE PRECAUTIONS: No port fire brigade. In emergency fire brigades must be called from Alexandroupolis.
CONSULS: Consul-Agent of France Tel. 26–720. Consul-Agent of Italy Tel: 28–384.
REPAIRS: Only minor repairs available.
WATCHMEN: Not available, and if required must be supplied by vessel.
HATCHES: Opened and closed by crew.
CUSTOMS ALLOWANCES: 1 packet cigarettes allowed out of bond for each crew member, for each day in port. Wine/beer no restrictions. Spirits, Master allowed 1 bottle.
REPATRIATION: Facilities for crew changes and repatriation.
AIRPORT: 5 km. distant. 2 daily flights to and from Athens.
TIME: GMT plus 2 hours. Summertime GMT plus 3 hours.
HOLIDAYS: 1st January; 6th January; Whit Monday; 25th March; Good Friday; Easter Monday; 1st May; 14th May (local); 15th August; 28th October; 6th December; 25th December; 26th December, and all Sundays. Cargo work can be arranged on these days, subject to payment of additional charges.
POLICE/AMBULANCE/FIRE: Police station, 26352; Security Police, 26220; Ambulance, 25272; Fire, 26222. Port Police, 26468 (VHF 12).
TELEPHONES: No facilities for telephones on board.
SHORE LEAVE: Permitted.
IDENTIFICATION CARDS: Shore pass issued against Crew List and Seaman's Book. Passes obtainable from Port Authorities.
DEVELOPMENTS: (a) Supplementary works are being performed outside along the West breakwater.
(b) Dredging works has begun inside the port.
AUTHORITY: Port Authority of Alexandroupolis, 68100 Alexandroupolis, Greece. *Tel:* 26468 (VHF Channel 12). *Contact:* Commander N. Papanikolopulos, Harbour Master.

AGENT: Mylaki Shipping Agency Ltd., 7 Vizils Str., Alexandroupolis 681 00, Greece. Tel: (0551) 33935, 093-283882 (mobile). Telex: 212241 MLKI GR. Fax: (0551) 33936. Cables: Mylanav - Alexandroupolis - Greece.

ARGOSTOLI, Cephalonia: 38.12 N. 20.29 E.

DOCUMENTS:
3 Crew Lists.
3 Passenger Lists.
Customs Clearance.
2 Cargo Manifests.
Bills of Lading (copy).
4 Ship's Stores List.
4 Lists of Crew's Personal Effects.
Ship's Papers.
Crew Vaccination List.

PILOTAGE: No Pilot station.
ANCHORAGES: Vessels anchor in roads 0.5 miles N.N.W. from Entrance light. Max. channel draft 19 ft.
MAX. SIZE: Up to 19 ft. draft.
HEALTH: Free Pratique given by Port Health doctor.
RADIO: Patras Radio. No VHF.
TUGS: None available.
MEDICAL: Advance notice not required except in urgent cases. For vessels arriving from foreign countries crew require vaccination certificates.
TANKERS: Small tankers discharge at DEH Power Terminal.
FRESH WATER: Can be supplied from the pier using ship's hoses.

FUEL: Small quantities available, but only for yachts.
OPENING/CLOSING HATCHES: Performed by ship's crew.
CUSTOMS ALLOWANCES: 50 cigarettes allowed for each crew member.
CONSULS: No local representation.
REPAIRS: Only minor machinery repairs can be carried out.
REPATRIATION: By air to Athens (once daily) or by ferry-boat.
TIME: GMT plus 2 hours. GMT plus 3 hours in Summertime.
HOLIDAYS: Local holidays are 21st May, 16th August and 20th October, in addition to national holidays. Work may be arranged at double rates.
POLICE/FIRE/AMBULANCE: Police 22200; Ambulance 22515; Fire service available.
TELEPHONES: Can be connected on board vessels without charge.
SHORE LEAVE: Allowed.
AUTHORITY: Cephalonia Harbour Office.

ASPROPYRGOS: 38.02 N. 23.36 E. (See Plan)

DOCUMENTS: All usual certificates including Registry, Safety, Cargo Gear, Radio, Derat, Last Port Clearance and:
9 Crew Lists
2 Vaccination Certificates
Cargo Manifest
List of Spares
Maritime Declaration of Health
1 Vaccination List
4 Crew Effects Declarations
Passenger List
Cargo Documents
2 Special Customs Forms in triplicate
2 Stores Lists
PILOTAGE: Compulsory for vessels over 150 g.r.t. Piraeus pilots board one mile off the breakwater.
APPROACHES: Two approach channels lead to the Gulf of Eleusis. The "W" Entrance, Poros Megaron is dredged to 7.9 m. (26 ft.) over the bottom width of 180 m. and is passable for vessels up to 183 m. LOA (600 ft.). The "S.E." Entrance, through Strait of Salamis, is dredged to a depth of 10.89 m. (35 ft. 09 in.) over a width of 240 m., max. speed 6 knots. Both channels are buoyed and lighted, but there are some restrictions concerning night navigation in the "E" Channel.
ANCHORAGES: See "Eleusis" and "Piraeus".
RESTRICTIONS: Draft restriction for Poros Megaron Channel is 7.9 m. (26 ft.) and for Strait of Salamis Channel 10.89 m. (35 ft. 09 in.).
MAX. SIZE: See "Berthing".
HEALTH: No restrictions, except quarantine, Free Pratique according to international regulations. Free Pratique not required if arriving from another Greek port.
RADIO: Athens Radio (SVA).
VHF: Piraeus Pilot Station on Channels 16, 12 and 6. Station operates throughout 24 hours. Aspropyrgos Refinery on Channel 8.
RADAR: None.
TUGS: A large number of tugs are available. Tug escorts are compulsory in daytime for vessels over 120 m. (394 ft.) LOA, and during night for vessels over 75 m. (246 ft.), when passing through Strait of Salamis. Ship's lines always used.
Fire Fighting Tugs: The employment of fire fighting tugs or similar for tankers during loading/discharging is compulsory.
BERTHING: See "Tankers".
MEDICAL: Advance notice not required. Full hospital facilities available in town of Eleusis. Refinery provides ambulance in case of accident.
TANKERS: A jetty extends 170 m. West from the shore, near the refinery, and provides 2 berths with depth of 11.80 m. (38 ft. 09 in.) alongside (See "Restrictions" for max. draft passing through Strait of Salamis).

The Eastern Berth is equipped with 3×8 in. mechanically operating arms for crude oil and oil products.

The Western Berth is equipped with 4×8 in. mechanically operating arms for oil products.

Vessels always using their gangway rigged in the middle of the vessel. Jetty accepts vessels of no more than 220 m. LOA, and deadweight of no more than 60,000 metric tons.

At the same jetty, there is also a possibility of bunkering (fuel oil and gas oil). Permanent refinery's personnel keeping watch 24 hours near the vessel for safety and communications. Max. discharging pressure 9 kg./sq.cm. (127 psi).

Another jetty provides 2 berths with 7.2 m. and 7.9 m. depth alongside (LOA 100 m./5,000 d.w.t.). The berths are equipped with 6 in. hoses for small tankers (coasters) and shipment of refined products.

An LPG berth midway between the two oil jetties has a depth of 7.2 m. (LOA 115 m.) for loading LPG and refined products.

Ballast: All dirty ballast must be pumped ashore. Refinery has facilities to receive up to 8,000 cu.m. of contaminated ballast. Refinery requires notice of 24 hours before vessel's arrival.
DENSITY: 1025.
FRESH WATER: Available 24 hours a day. Quantity may be limited due to seasonal shortage in area.
FUEL: Available at all piers except LPG Pier.
FIRE PRECAUTIONS: Fire wires rigged fore and aft on outboard side of vessel. Deck scuppers plugged. Spark arresters to be fitted on tank openings. Earth connections made. Patrols made by Port Officers.

In the case of a storm, the Dock Master can stop discharge of vessels. The refinery fire fighting procedure is followed.
CONSULS: None locally. Consuls in Athens and Piraeus.
REPAIRS: While alongside, maintenance of any kind on board is strictly prohibited. In case of an emergency, the issuing of a special written "cold or hot work" permit is necessary.
DRY DOCKS: See "Eleusis".
GANGWAY/DECK WATCHMEN: Not required.
CUSTOMS ALLOWANCES: 200 cigarettes and 1 open bottle of wine/spirit allowed per crew member.
REPATRIATION: All facilities available for crew changes and repatriation.
AIRPORT: Direct overseas flights available via Athens Airport at Hellinicon (35 km.).
TIME: GMT plus 2 hours; Summertime (March to September) GMT plus 3 hours.
POLICE/AMBULANCE/FIRE: All emergency services are available through the terminal office. Fire alarms are installed throughout the jetty. Refinery's internal numbers: Fire Tel: 2300. Ambulance Tel: 2311, Police Tel: 2353, Terminal Office Tel: 2351.
TELEPHONES: Not supplied on board vessels.
SERVICES: Compass adjusting. Electronic equipment services.
SHORE LEAVE: Permitted.
IDENTIFICATION CARDS: Shore passes issued by Port Authority.
GARBAGE DISPOSAL: Not available from refinery. This facility can be arranged, with charges for ships account, with Limberis Group,Tel: 01-4127543/5545841, who are authorised by the Eleusis Harbour Master.
WASTE OIL DISPOSAL: Available direct from refinery installation. Shore tank capacity 8,000 cu.m.
SEAMAN'S CLUBS: No club but usual local facilities.
CURRENCY: Greek Drachma (GDR). U.S.$ 1.00 = 245.0 GDR (1.7.96).
AUTHORITY: *Port Authority:* Eleusis Port Authority, 10 Kanelopoulou, Eleusis 19200, Greece. *Tel:* 5543504.
Operators: Hellenic Aspropyrgos Refinery, 54 Leoforos Amalias Street, Athens 10558, Greece. *Tel:* 3236601, 3236974. *Contact:* Manolis Lembidakis.

Refinery: 170 km. National Road Athens – Korinthos, 19300 Aspropyrgos. *Tel:* 5578200. *Telex:* 215442, 215443, 215489 Ref Gr. *FAX:* 5570990, 5577901.

CHALKIS: 38.27 N. 23.35 E.

DOCUMENTS:
2 Crew Lists.
2 Passenger Lists.
2 Cargo Manifests.
2 Stores and Spares Lists.
2 Crew Personal Effects Lists.
Health Certificate.
PILOTAGE: Pilotage is compulsory for all foreign vessels and Greek vessels over 1,000 g.r.t.

Application for Pilot to be made by radio through Agent to Chalkis Port Authority. ETA required at least 24 hours before arrival. 2 hours notice of departure required.

Apply for Pilot through VHF Channel 12, or through radio/telephone on 2364 kHz calling Harbour Master, Chalkis.

Pilot boards from black motor-boat with white horizontal stripes, about 10 m. length, in a position about 1 mile – 1.5 miles North of the light buoys of the Northern Port.

The pilotage area extends from 1 mile North of red and green light buoys, North of Evripos Bridge, and to the South of Euboea, 2.5 miles from Bourtzi Point.

The anchorage for vessels coming from the North of Euboea and awaiting Pilot is at the centre of the Euboean coast off Lighthouse Kakokefali, North of the 2 light buoys and outside the bearing 020°/200° which is the axis of vessels passing in and out of Evripos Strait.

Safe anchorage for vessels coming from South of Euboea and awaiting Pilot is 1 nautical mile South of Bourtzi Point.
ANCHORAGES: Good anchorages in both harbours, well clear of the fairway, 2 miles S.S.W. of the green Fairway Buoy of the South entrance, and 1.5 miles North of the green and red buoy of the North entrance.
ENTRANCE: The South entrance has 2 narrow passages. The Southernmost is the 3 cable wide Dhiavlos Avlidos with 6.4 m. (21 ft.) depth, which leads to the outer harbour. Three miles further N.W., the one cable wide Dhiavlos Peramatos connects the outer and the inner harbours, depth 6.4 m. (21 ft.) over a width of 90 m.
RESTRICTIONS: Vessels with a draft of 18 ft. – 21 ft. and LOA 110 m. – 178 m. pass through Dhiavlos Steno in daytime only, and are to be accompanied by a tug.

Full details in Evripos Straits Operations Regulations.

There is also a restriction in Steno Straits, where there is an overhead cable 37 m. (121 ft.) above sea-level. Max. air draft 32 m.
Swing Bridge: Passage through swing bridge only possible from 2300 hrs. – 0500 hrs. Call Chalkis Port Control on VHF Channel 12. Max. LOA 105 m. and max. draft 5.5 m. (18 ft.). Width of channel 39 m.
Tides/Currents: In Avlidos Steno the tidal stream is normally up to 4 knots – 5 knots, North of the swing bridge. The spring range is about 0.8 m. (2.6 ft.) and neap range about 0.2 m. (0.6 ft.). South of the bridge the currents and tides are small. Moreover H.W. is 1 hour 12 minutes later in the North harbour than in the South harbour, which causes streams of 7 knots – 9 knots at Springs.
MAX. SIZE: Max. draft 21 ft. in daytime and 19 ft. at night for vessels entering port. For vessels navigating Evripos Strait, max. length 110 m., max. draft 19 ft., breadth 20 m. and subject to local regulations.
HEALTH: Pratique not required if coming from another Greek port. Otherwise International Pratique regulations are applied.
RADIO: No local radio, all messages should be passed through Athinai Radio.
TUGS: 3 tugs available, join vessel off the berth. Ship's tow lines used. Tug is compulsory for vessels over 1,000 g.r.t. Tug used only for berthing and unberthing.

BERTHING: *South Outer Harbour:*
(1) A pier of Interchem Chemicals factory with a channel with 18 ft. max. draft.
(2) Avlis Shipyard with 2 floating docks.
(3) A cement factory with docks, with max. draft 21 ft., with piers for loading cement and discharging coal (South Inner Harbour).

On the Eastern shore the old quay has a length of 150 m. and a depth of 6.0 m. (20 ft.) alongside. The new quay has a length of 430 m. and a depth of 5.0 m. – 7.0 m. (17 ft. – 24 ft.) alongside.

Berthing at slack water or when stream is South to North.

Also see "Ship's Officer's Report" dated August 1995.

BRIDGES: Passage above Evripos Bridge can only be effected at slack water or with following tide.

CRANES: Mobile cranes available.

STEVEDORES: Loading, discharging, carried out with ship's gear. Notice must be given by Agent to stevedores not less than 6 hours before vessel's arrival.

Cargo working rates: General cargo 80 tons – 100 tons every 8 hours. Bagged cargo 100 tons – 150 tons every 8 hours. Timber 70 cu.m. – 90 cu.m. every 8 hours.

MEDICAL: Agent should be advised beforehand if medical assistance required on arrival. Clinic facilities available. Vaccination certificates required.

DENSITY: Average 1025.

FRESH WATER: Drinking water can be supplied in small quantities by tanker lorry or water barge. Available alongside at the South Pier.

FUEL: Can be supplied in small quantities by tanker lorry.

CONSUL: France, Tel: 2574.

DRY DOCKS/REPAIRS: Avlis Shipyards S.A., P.O.Box 18, Chalkis, Greece. Tel: (0221) 31502, 31512. Telex: 272143, 272180.

Shipyard has 2 floating docks (max. size 48,000 d.w.t.) and a lay-by berth for major repairs.

WATCHMEN: Not compulsory.

HATCHES: Opening and closing hatches can be effected by ship's crew or by workers if requested.

CUSTOMS ALLOWANCES: Crew members each allowed 1 packet of cigarettes per day. Only the Master is allowed 1 or 2 bottles of alcohol while vessel in port.

REPATRIATION: No difficulties as there are excellent communications with Piraeus. Also see "Shipmaster's Report".

AIRPORT: Nearest is Athens International Airport (90 km.).

TIME: GMT plus 2 hours. GMT plus 3 hours in Summer.

HOLIDAYS: 1st January; 6th January; 25th March; 21st April; Good Friday; Easter Monday; Easter Sunday; 21st May; 15th August; 28th October; 6th December; 25th and 26th December. Local holidays: St. Paraskevi (July), St. Nicholas (6th December).

POLICE/FIRE/AMBULANCE: Port police 22580; Fire 23333; Ambulance 22282.

TELEPHONES: Cannot be connected on board.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Shore passes are issued by Port Authorities.

GARBAGE DISPOSAL: Service is available by barge both alongside and while at anchor. Garbage is collected each morning and charges vary with g.r.t. and distance from Chalkis Port.

WASTE OIL DISPOSAL: No slops reception facility exists but oil residue from vessels are disposed of using tanker trucks.

SEAMAN'S CLUBS: None.

CURRENCY: Greek Drachma (DRC).

DELAYS: Only waiting for suitable tides.

SHIPMASTER'S REPORT: June 1981.

The name appears to be pronounced Halkis but according to local people the spelling can be Chalkis, Khalkis, Halkis or Kalkis.

To repatriate Indian crew, Agent requires names of those persons leaving at least 48 hours in advance. Crew usually cleared through Immigration 48 hours beforehand and through Customs when they leave the vessel. Immigration office closes at 1300 hrs. and all day Sunday. For British personnel, Immigration can be arranged 24 hours beforehand. All personnel must ensure that anything declared on the manifest such as cameras, radios, etc., are crossed off on being taken ashore otherwise vessel will be fined if these items not sighted by Customs when vessel sails.

The bridge lowers and retracts under the road on the South side.

According to the Pilot the maximum tidal rate is 4 knots, although it does appear faster at times.

SHIP'S OFFICER'S REPORT: August 1995.

Berth: Psakhna Soya Terminal (See "Plan").

Pilots: Pilot boards from grey wooden motor-boat with white superstructure, length about 10 m., in a position about 0.5 – 1.0 miles S.W. of Soya Terminal.

Chalkis Pilot Station on VHF Channel 12.

Anchorage: Await berth (daytime) in a position with Ak. Mina bearing 313° at a distance of 2.2 miles.

VHF: Contact Psakhna Soya Terminal on VHF Channel 77.

Tugs: Two tugs used for berthing and unberthing.

Berthing: Daytime only. Contact Port Control after 0700 hrs. local time.

The head lines to mooring buoy will be run out first. An anchor must be used when approaching the berth. Berth has breasting dolphins.

Garbage: Service is available by barge. Garbage is collected each morning.

Telephones: Local telephone is available on berth (For shore operator only).

AUTHORITY: Chalkis Port Authority, 1 Athens Street, 34100 Chalkis, Greece. *Tel:* 28888, 28055. *Telex:* 272197. *Contact:* Commander George Papanicolaou, Harbour Master.

CORFU (including Kalifoka and Kefalomandouko): 39.37 N. 19.56 E.

DOCUMENTS:
3 Crew Lists.
3 Passenger Lists.
Maritime Declaration of Health.
3 Stores Lists.
3 Spares Lists.

PILOTAGE: At least 24 hours before arrival ETA should be passed to Port Authority on 2182 kHz, answering on 2830 kHz also VHF Channels 7 or 12 and Telex No. 33111. Vessels requiring Pilot during daytime should hoist letter "G" of international code, and sound letter "G" in the morse code on ship's whistle at intervals. Vessels should await Pilot in position Lat. 39° 38' N., Long. 19° 57' E. nearest to the coast of Ptychia Island (Vido) and Corfu, depending on weather conditions.

ANCHORAGES: Safe anchorages in the area between Vido Island and coasts of Corfu, depth about 30 m. During strong N.W. winds there is safe anchorage in the roadstead at Garitsa Bay at a distance of 0.5 miles from the shore where depth in excess of 20 m.

RESTRICTIONS: Only during unfavourable weather conditions or lack of berthing space.

MAX. SIZE: Draft 7.0 m.

HEALTH: Port Health Officer boards vessel on arrival and examines health declaration. In cases of suspected disease or fever on board the Health Officer will examine entire crew and passengers.

RADIO: Radio Kerkyra. 2182 and 2830 kHz.

VHF: Radio Kerkyra on Channel 26. Port Authority on Channels 7 and 12.

TUGS: One tug – "Hermes".

BERTHING: Vessels should prepare fenders prior going alongside berth.

STEVEDORES: At least 24 hours advance notice of ETA required order arrange gangs. There are 2 silos for the discharge of bulk grain at Mandouki.

MEDICAL: Agent should be advised in advance of any medical requirements. Medical clinics available.

DENSITY: 1025.

FRESH WATER: Available through 2 in. hoses.

FUEL: For yachts in the new harbour there is a diesel-oil tank, capacity 10 tons. Also available from road tanker for all vessels alongside.

FIRE PRECAUTIONS: Loading/discharging of inflammable liquids and explosives generally forbidden without permission of Port Police. The anchorage for vessels carrying inflammable liquids or explosives is between Lazareto Islet and N.W. of breakwater point.

CONSULS:
Belgium: S. Savanis, 44 Alexandras Av. Tel: 33788.
Brazil: K. Palatianos, 124 Kapodistriou St. Tel: 30767.
Denmark: V. Patras, 140 Xen. Stratigou St. Tel: 38712.
France: M. Paipetis, 22 Iak. Polyla St. Tel: 26312.
Germany: D. Zervos, 11 Alexandras Av. Tel. 31453, 32027.
Italy: Mic. Viegio, 10 Alexandras Av. Tel: 37351.
Netherlands: Aris Bogdanos, 2 Dimarchoy Manesi St. Tel: 38870.
Norway: K. Kondis, 5 Donzelot St. Tel: 32423.
Spain: Spiridon Pogiagos, Eygeniou Voulgareos St. Tel: 39620.
Sweden: Adam Bogdanos, 5 Donzelot St. Tel: 29469.
United Kingdom: I. Karidi-Patrikioy, 11 Alexandras Av. Tel: 30055.

REPAIRS: Facilities for minor repairs only.

DRY DOCK: Largest dry dock 20 m. length, 2 m. depth.

WATCHMEN: Required.

HATCHES: Opened and closed by stevedores. Hold cleaning service available.

CUSTOMS ALLOWANCES: Crew of Greek vessels are not allowed more than immediate requirements out of bond. Seamen signing off and passengers leaving the vessel are allowed 200 cigarettes.

REPATRIATION: Facilities for crew changes and repatriation available.

AIRPORT: 2 km. from port. During Winter 2 flights daily to Athens. During Summer frequent daily flights to Athens, Thessalonika and abroad.

TIME: GMT plus 2 hours. GMT plus 3 hours in Summer.

HOLIDAYS: Local holidays are 21st May, 11th August and 12th December. In addition Corfu observes standard Greek holidays.

POLICE/AMBULANCE/FIRE: Port Police, tel: 32655, 30481; Police, tel: 38661; Ambulance, tel: 39403, 30033, 30562; Fire, tel: 39533.

TELEPHONES: Telephones only available for placing onboard for special cases.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Required.

REGULATIONS: Forbidden to approach Lazareto Islet.

GENERAL: Prevailing wind is from the N.W. Anchorage in the new harbour unsatisfactory due to mud bottom.

AUTHORITY: Port Authority of Corfu, Xenofontos Stratigoy 2, GR 491 00 Corfu, Greece. *Tel:* 32655, 39513, 30481. *Telex:* 33111. *Contact:* Harbour Master.

ELEUSIS (including Skaramanga): 38.02 N. 23.33 E. (See Plan)

DOCUMENTS:
4 Crew Lists.
4 Passenger Lists.
Bill of Lading.
2 Lists of Stores and Provisions.

PILOTAGE: Piraeus Pilot Station regulations are operative.

ANCHORAGES: Port offers safe anchorage. Bottom mud and sand.

RESTRICTIONS: After sunset and for vessels intending to enter Eleusis port through Salamis Channel, it is imperative to give 6 hours notice of expected time of arrival to Port Authorities of Eleusis, in order to obtain special permission from the naval yard of Salamis.

MAX. SIZE: No limitations to length and breadth at the installations or at the main port. Max. permissible draft of vessel entering Eleusis Bay is 35 ft. Max. draft at berths is 33 ft. Also see "Tankers".

HEALTH: For vessels arriving from other Greek ports, Pratique is automatic. Vessels arriving from foreign ports boarded by Health Officer who grants Free Pratique.

RADIO: Athinai, 2182 kHz.

TUGS: Join vessel outside Piraeus Harbour and formalities much same as Piraeus.

BERTHING: Overall length of jetties and quay at Eleusis 715 m. Max. depth over 80 m. of jetty length is 33 ft. with depths of 26 ft. elsewhere.

SPECIALISED CARGO-HANDLING: Loading/discharging of iron ore is carried out by *(a)* Holivourgiki Co., (See "Shipmaster's Report" - August 1985) which owns a pier of 180 m. long and from 26 ft. to 36 ft. depth, equipped with 4 cranes with average discharge rate of 6,000 t.p.h., and *(b)* by Metallia Voxitou Elefsinos Co., which offer a special anchorage with buoys. Loading is effected by means of silo.

Loading/discharging of fluid chemicals or liquid gas are carried out by Petrogas Co. to their private pier of 35 m. long and 15 ft. depth.

MEDICAL: Advance notice not required. Clinic available in town of Eleusis if required.

TANKERS: Operating companies supply reducing pieces. No facilities for residue discharge. *(a)* Esso Pappas: length 160 m.; breadth 30 m.; depth at pier 30 ft. *(b)* Greek Refineries: length 93 m.; breadth 12.70 m.; depth 7 m. *(c)* Texaco: length 80 m.; breadth 6 m.; draft 4.50 m. *(d)* Mamidakis: length 40 m.; breadth 5 m.; draft 27 ft.

Shipmaster's Report: June 1981.

Petrola Petroleum Harbour just West of Elefsis town.

Petrola is owned by John Latsis Co. The terminal has their own VHF Channel 66 Alpha, also use Channel 12 but this usually congested.

Moorings: Normally 3, 2, 1. Normally 2 tugs. Pilots employed by Petrola and come on board after Sea Pilot has taken vessel through the Bay. Fresh water available from jetty.

FRESH WATER: Barge delivery available.

FUEL: Available ex-wharf at tanker installations subject advance notice. Can be supplied by barge at other locations.

FIRE PRECAUTIONS: The usual precautions applicable to oil installations. During operations of white liquid (petrol, spirits, etc.) regulations require a tug to be standing by.

HATCHES: Usually opened and closed by crew and subject additional payment by stevedores.

CUSTOMS ALLOWANCES: 200 cigarettes and 1 bottle wine/spirits allowed per Crew member out of bond.

CONSULS: None.

REPAIRS: All grades of repairs can be carried out at Eleusis Shipyard, and also at Skaramanga (See "Dry Docks").

DRY DOCKS:

Hellenic Shipyards Co.

Skaramanga Shipyard: Situated on the coast between the Port of Piraeus and Eleusis Bay. Shipyard is 8 miles by road from Athens and 7 miles from Piraeus; driving time 25 and 20 minutes respectively.

Mailing address: Hellenic Shipyards Co. Athens: 4 Academias St. Tel: 36.11.142. Cables: Shipyard, Athens. Telex: 215123.

Skaramanga: Tel: 55.73.351, 55.73.471. Cables: Shipyard, Athens. Telex: 215293, 215396.

Office hours at Skaramanga: 0815 hrs. to 1715 hrs. (weekdays), 0815 hrs. to 1345 hrs. (Saturdays).

Floating Docks

Main Particulars	*Dock No. 1*	*Dock No. 2*	*Dock No. 3*
Lifting capacity	30,000 tons	22,000 tons	25,500 tons
Docking capacity (d.w.t.)	72,000 tons	37,000 tons	60,000 tons
Length overall	826 ft.	673 ft.	760 ft.
Length on keel blocks	760 ft.	605 ft.	693 ft.
Breadth inside banks	121 ft.	105 ft.	111 ft.
Breadth outside banks	147 ft.	129 ft.	136 ft.
Ht. of WL above keel blocks	28 ft.	28 ft.	28 ft.

Skaramanga Yard's 3 floating docks have been designed in such a way as to eliminate delays of any kind in the raising of large vessels and to ensure that the work is carried out in minimum time and with the least possible inconvenience to the crew living on board.

The basic equipment of the docks is the following; 2×5 ton cranes, 2 fire extinguishing pumps 120 cu.m. per hour at 90 m. WC, DC current supply to ships 1200 A 220 V, AC current supply to ships 600 A 440 V 60 cycles, multipoint welding rectifier 2500 A, 2 oil pumps for supply of fuel oil from the dock to the vessel 60 cu.m. per hour at 50 m., 2 compressors 17 cu.m. per minute at 7 atu, emergency diesel generator set 200 KVA, foam fire extinguishing system, steam boiler and water distilling plants.

Shipmaster's Report: 1978.

Tankers may discharge residue at the deballasting station of Hellenic Shipyards, max. output 500 cu.m./hour.

Graving Docks

1. Capacity 500,000 tons. Length 420 m., breadth 75 m., depth 9.5 m.
2. Capacity 250,000 tons. Length 327 m., breadth 53.6 m., depth 9.25 m.

Ships are manoeuvred at the dock entrance with the assistance of 2×5-ton capstans situated on each side of the entrance gate. They are then shifted inside the docks by 2×15 ton auto-tensioning winches and hauling-in trolleys (mules) running on tracks on each side along the dock subway.

The dock floor is fitted with specially designed keel blocks for easy fitting and removal and with electrically operated side blocks.

The Graving Dock is served by 2×100 ton cranes, 1×50 ton crane and a small 5 ton crane.

A fleet of 5 powerful tugs is on hand at Skaramanga Yard to assist docking and undocking operations of all vessels calling at the yard.

Eleusis Shipyards S.A. is located 27 km. outside Athens. The site was chosen on account of the several advantages it presents. The bay is well protected from strong winds, sources of raw materials are available in the vicinity of the yard, and adequate transportation, power, and telecommunication facilities can service the needs of yard.

Athens Office: 67 Athinas Street, Athens 112. Tel. 349 053. Cables "Helnafel Athinia". Telex 215215 Esc Gr.

Yard: Eleusinia, Eleusis. Tel. (01) 5535111. Cables "Helnafel Eleusis". Telex 215684 Yard Gr and 215690 Yard Gr.

Floating Docks: Three floating docks are available with the following specifications:

	No. 1	*No. 2*	*No. 3*
Length	162 m.	227.5 m.	252 m.
Breadth at entrance	23 m.	33 m.	41 m.
Draft over keel blocks	6.30 m.	8 m.	9.40 m.
Lifting capacity	11,500 m. tons (20,000 d.w.t)	20,000 m. tons (60,000 d.w.t.)	30,000 m. tons (115,000 d.w.t)
Cranage	5 t at 15 m.	12 t at 20.6 m.	12 t at 20 m.

Quay Wall: The 640 m. long quay wall is equipped with 40 and 15 ton cranes, range 30 m.; power 220 volts DC 100 amp. – 42 volts DC 25 amp. – 280 volts AC 630 amp. Floating crane, 50 tons capacity.

Tugs: Available for manoeuvring purposes at all times.

AIRPORT: Athens Airport. Regular international flights.

HOLIDAYS: Cargo operations can be effected during usual Greek holidays, following submission of application to Harbour Workers' Union and subject cost increase of 75% above normal.

POLICE/AMBULANCE/FIRE: Eleusis Police Station 46674; Ambulance 46503; Fire Brigade 0199.

SPECIAL PRECAUTIONS: See "Piraeus".

GARBAGE DISPOSAL: Garbage reception barge "Dimitrios G II" owned by Hellenic Express M.C., Tel: 4127543, available from 0800 hrs. to 1500 hrs. Charges as follows (35% surcharge at weekends):

Foods/operational waste	up to	1 cu.m.	2732 Drs.
	over	1 cu.m.	2049 Drs./cu.m.
Dunnage/tank cleaning, etc.			4782 Drs./cu.m.
Sediments			1212 Drs./barrel.

WASTE OIL DISPOSAL: An O.W.S. barge "Alexia L" is available to receive oily/water mixtures. Operators are Hellenic Express M.C., Tel: 4127543. Charges as follows (35% surcharge at weekends):

Passenger and dry cargo vessels	up to	300 tonnes	27324 Drs.
	over	300 tonnes	27.5 Drs./tonne
Tankers	up to	600 tonnes	40986 Drs.
	over	600 tonnes	48 Drs./tonne.

Oil refineries operate their own service.

SEAMAN'S CLUBS: None

CURRENCY: Greek Drachma (Drs.).

SHIPMASTER'S REPORT: August 1985.

Berth of Chalivourgiki S.A.

Vessel: 20,500 d.w.t.

Max. Size: LOA 165 m. max. draft 39 ft.

Products Handled: Steel.

Anchorage: Eleusis Roads.

Pilotage: Pilot boards and disembarks at Piraeus.

Tugs: From Piraeus only.

Cranes: 2×20 tons.

Fresh Water: Available alongside.

SHIPMASTER'S REPORT: October 1987.

Documents:

9 copies Crew List.

2 copies Crew Declaration (to include radios, cameras,cassettes, etc.).

2 copies Manifest (including ship's stores, bond, ship's fixtures, etc.).

1 copy Health Declaration.

2 copies Drugs List.

6 copies Cargo Manifest.

Pilotage: The Pilot for Eleusis boards from a black and white launch off Piraeus Breakwater (Molos Themistokleous). There is deep water close into the breakwater.

The Pilot can be contacted by telex No. 00601-212187, answerback OLPGR.

Pilots should be contacted on VHF Channel 12, 2 hours before arrival off the breakwater and again when 3 miles from the breakwater. When berthing at Eleusis oil piers or quays, the Refinery Pilot boards and departs off the pier.

Normally only daylight transit and berthing and unberthing for tankers proceeding through Ormos Keratsiniou and Stenon Navstathmou Straits which lead to Kolopos Eleusinas Bay.

Under special circumstances and by prior arrangement with the Agent and authorities, transit is possible at night.

At the Western end of Eleusinas Bay, Prosmegaron Channel can be transitted without Pilot by prior arrangement through the Agent. If required, a pilot will board/depart from vessel South of Makronisos Island. At least 6 hours notice of arrival is required by the Agent and Piraeus Pilot Station by telex.

Passage: The channel into Eleusinas Bay from Piraeus is very crowded with repair yards, naval base, laid-up vessels and small craft.

The Pilot advised that the maximum draft allowed through Yeoryios Channel is 39 ft. 6 in. (BA. Chart No. 894 indicates 36 ft.). On the North and South bound transits using echo soundings, we found a depth of 38 ft. 6 in. This should therefore be closely checked beforehand if transitting in a deep draft vessel.

The Pilot advised that the maximum draft allowed through West passage of Prosmegaraon was 26 ft.

Anchorage: The vessel used Piraeus Anchorage Area No.1 (BA. Chart No. 894 and 1520) to the West of the line 232° from AK. Aminiou lighthouse. This is a slightly different anchorage area than that shown on BA. Charts.

The anchorage is often very crowded. No Pilot required.

Anchorage is also possible in Eleusinas Bay under Pilot's direction. This bay can also be very crowded with laid-up vessels.

Tugs: There are very many tugs available in the area. The refinery has special tugs of up to 5,000 h.p. available.

It is compulsory for small vessels to use at least 1 tug when berthing. Tugs secure alongside when berthing and unberthing.

Max. Size: Maximum size of the vessel is restricted by the size that can pass through Keratsiniou Passage.

Tanker Berths: 3 piers and 1 quay are used by the refinery.

The long pier in position 38° 09.95' N.,23° 30.55' E. (See B.A. Chart No. 1513) is used by crude carriers on the East side and by chemical carriers on the West side (Chicksan arms).

LPG is loaded at quay (38° 02.2' N., 23° 30.56' E.) to the East of the long pier. A depth of 38 ft. was found alongside the quay. Other products are also handled. The vessel moored with 2 head/stern lines, 2 breast lines and 1 spring forward and aft. Vessels can berth either side to at the LPG quay, depending on ship's requirements. Maximum length allowed at the LPG quay is 150 m.

Cargo: LPG storage at ambient temperature (very hot in Summer) in 4 spheres, 2 with capacity of 3,000 cu.m. and 2 with capacity of 4,000 cu.m. These spheres are situated close to the quay. A Butane and LPG mix is handled. The liquid Chicksan is 6 in. 300 ASA and the vapour return line which is attached to the liquid arm is 2 in. 300 ASA.

The maximum Butane loading rate is 250 cu.m.p.h. In October 1987 the average rate was 180 cu.m.p.h. at +30°C. The surveyor strongly advised us not to use the vapour return line due to the large difference between ship and shore figures in the past (vapour does not go back to the same tank).

There is no facility to flare cargo return vapours, or vent inert gas.

Butane density 0.582 at 15°C. Apparently maximum oxygen level allowed in ship's tanks is 1%, this was not checked.

The shore tank figures were used for Bill of Lading.

Fresh water supplied through shore hydrant and meter at a cost of U.S. $3.00 per cu.m. The ship's hoses were used and the rate of delivery was high. There is waterman available.

General: It is very difficult to take any stores or supplies over the quay through the terminal due to numerous Customs and Port Regulations. If possible it is best to take stores at Piraeus anchorage or before the Pilot boards. The charge for launch service at Eleusis is £100 per trip and at Piraeus £20 per trip.

For personnel leaving vessel, luggage is in bond until it reaches the airport.

Pilot advised that there is a large tanker sea-buoy discharge terminal at N. Revithousa Island in position 37° 57.8' N., 23° 23' E. (B.A. Chart No. 1513).

Public correspondence is through Hellas Radio but due to the amount of traffic the quality of the service/reception was poor.

AUTHORITY: Eleusis Port Authority.

AGENT: Mylaki Shipping Agency Ltd., 1 Kannelopoulu Str., Eleusis 192 00. Tel: (01) 5561654. Mobile 093-585122. Telex: 211048 MLKI GR. Fax: (01) 5561655. Cables: Mylanav - Eleusis/Greece.

IRAKLION (Heraklion), Crete: 35.20 N. 25.10 E. (See Plan)

DOCUMENTS:
4 Cargo Manifests.
4 Crew Lists.
4 Passenger Lists.
Declaration of Crew's Personal Effects.
List of Stores and Provisions.
Maritime Declaration of Health.
Vaccination Certificates.

PILOTAGE: Pilotage area extends 0.5 to 1 mile N.E. of breakwater. Advance notice of ETA should be passed to Agents order arrange Pilot. Contact may be made with Pilot station on VHF Channel 12 during daylight, also when within distance of 3 – 12 miles, and subject prior agreement of calling time, communication can be effected by radio-telephone via Radio Iraklion – Pilot station telephone 225326. International pilotage signals apply. Pilot boat is wooden boat 12 m. length, hull colour black, with white deckhouse, carrying black board with word "Pilot" in white letters. In bad weather vessels should proceed close to entrance of port for Pilots boarding.

A cement pillar has been installed on the end of the extension of the North breakwater. Fl. G. every 3 seconds, visible 9 miles. The pilot boat is equipped with VHF, range 50 miles.

ANCHORAGES: Anchorage East of port entrance is forbidden owing to numerous underwater cables. In good weather conditions anchorage to be found 0.75 mile Northwards of North breakwater with Enetic Castle bearing 180°. In bad weather conditions, best anchorage is at a distance of about 5 nautical miles to the W. of the North breakwater and at a distance of 3 miles from the coast (Linoperamata Bay); depth of water requires a big scope of anchor chain.

MAX. SIZE: Max. length 250 m., draft 29 ft. – 29 ft. 6 in. Usual rise and fall of tide 1 ft. but increasing with South winds and decreasing with North winds.

HEALTH: International regulations apply for obtaining Free Pratique. In the event of suspected disease vessel will remain under quarantine until cleared. Pratique is automatic if arriving from another Greek port.

RADIO/VHF: Iraklion Radio, call sign SVH, keeps watch on 2182 kHz and replies on 2799 kHz.

Iraklion Central Port Authority (Port Police) maintain 24 hour VHF watch on Channel 12.

TUGS: Two tugs available.
"Captain Gianis", 1,780 h.p., owned by Tsainis Kir (Tel. 081-222312).
"Minotavros", 960 h.p., owned by Minos Shipping Co. (Tel. 081-283180).

BERTHING: Pilot will advise Master of berthing position.

CRANES: 1 × 40 tonnes for containers, 2 × 12.5 tonnes and 4 × 6.5 tonnes.

STEVEDORES: Cargo operations usually conducted by use of ship's own gear. Discharge rates per gang in 8 hours: Bulk cargo 200 tons, bagged cargo 500 tons, timber 200 cu.m. and containers 2,000 tons.

MEDICAL: Advance notice should be passed to Agents if requiring medical attention. Clinics and medical treatment available.

TANKERS: Only very small tankers discharge in Iraklion Port and Linopermata Bay. At Iraklion, tankers discharging liquid fuel are required to berth at East breakwater (fuel pier), Pier No. 6 or North Breakwater. Attendance of fire brigade and 1 tug standing by is compulsory.

DENSITY: 1020.

FRESH WATER: Available ex-berth or ex-barge. Rate of delivery ex-berth about 500 tons per 24 hours.

CONSULS:

Austria	Tel. 223379, 222213, 222339 and 222902.
Belgium	Tel. 283820, 284820 and 285607.
Denmark	Tel. 229402, 280245 and 221228
Finland	Tel. 283860.
France	Tel. 227510, 225425, 284463 and 242352.
Germany	Tel. 226288, 287235 and 222227.
Italy	Tel. 224797, 821236, 285225 and 288126.
Netherlands	Tel. 283820, 222303 and 224130.
Norway	Tel. 288348, 220536 and 288289.
Sweden	Tel. 226254 and 233504.
U.K.	Tel. 224012 and 284425.

REPAIRS: Minor repairs available by machine shops in town of Iraklion. No facilities for deck repairs.

HATCHES: Opened and closed by crew.

CUSTOMS ALLOWANCES: 2 packets of cigarettes per day per crew member allowed out of bond, and one 500 ml. bottle wine/spirits for whole time of vessel's stay in port. Goods to the value of 7,500 dr. for E.E.C. citizens and 3,000 dr. for other countries.

AIRPORT: Distance 5 km. Now an international airport with numerous flights.

TIME: GMT plus 2 hours, GMT plus 3 hours end March – end September.

HOLIDAYS: Usual Greek holidays plus local holidays of 25th August and 11th November. Cargo work can be arranged on holidays subject additional costs.

POLICE/AMBULANCE/FIRE: Police, tel. 100, 282243, 282430, 282316; Ambulance, tel. 222222; Fire, tel. 225048, 282333.

IDENTIFICATION CARDS: Shore passes issued by Port Authorities.

DEVELOPMENTS: Dredging of some berths to 12.5 m. expected, from present depth of 10.0 m.

A jetty with length 300 m. and depth of 13.0 m. is to be constructed for use by 3rd Generation Container Vessels.

AUTHORITY: Iraklion Central Port Authority, 71110 Iraklion, Greece. *Tel:* 081-244912. *Contact:* Captain Bilias Savas, Harbour Master.

ISTHMIA, Corinth Canal (including Sousakion and Corinth): 37.55 N. 23.00 E. (See Plan)

DOCUMENTS: (For Sousakion only).
Port Authorities
Crew List.
Passenger List.
Ship's Certificates.
Health Certificates.
Certificate of Anchorage Dues.
Customs
Customs papers and declarations.
Cargo Papers.
List of Stores and Provisions.
List of Crew's Personal Effects.

PILOTAGE: There are 10 Pilots for the Corinth Canal. Cables: "Corinth Canal", tel: 0741-37372, telex: 232164 Dico Gr. Master of vessel must give at least 4 hours' notice of ETA in order to avoid delay. For Pilot signals, etc., see Article 7 of the New Company of the Corinth Canal "Regulation of Navigation and Tonnage".

ANCHORAGES: Open anchorage in Isthmia Bay.

RESTRICTIONS: Corinth Canal closed every Tuesday from 0600 hrs. to 1800 hrs. in order for maintenance work to be effected.

MAX. SIZE: The max. draft of ships negotiating the Canal, in relation to their width, is defined as below, assuming normal water level and normal weather conditions.

Width	*Maximum draft*
16.0 to 16.5 m.	6.2 m.
15.5 to 16.0 m.	6.2 m.
15.0 to 15.5 m.	6.6 m.
14.5 to 15.0 m.	6.8 m.
14.0 to 14.5 m.	7.0 m.

The max. draft for vessels of less than 14.0 m. width is 7.0 m. The max. width must not exceed 18.3 m. (60 ft.).

Special instances will be examined by the Master and the Canal Service in collaboration.

HEALTH: (For Sousakion only). Pratique effected by health department of the Port Authority assisted by temporarily engaged doctor. In cases of suspected contagious disease vessel will be held under quarantine and if necessary fumigation will be conducted at Piraeus.

VHF: Corinth Canal Pilots on VHF Channel 11. Harbour Master at Isthmia on Channel 19. Harbour Master at Corinth on Channels 19 and 12.
TUGS: Join vessel near Canal entrance at Isthmia and Possidonia. Ship's lines always used.
BERTHING: In Sousakion at private factory pier. No berths at Isthmia.
MEDICAL: Agent should be advised in advance of number of crew needing medical assistance, also information of any vaccination required.
FRESH WATER: Not available either at Sousakion or in the Canal.
FUEL: No fuel available at Corinth.
CUSTOMS ALLOWANCES: Each crew member allowed 200 cigarettes out of bond and 1 bottle wine/spirits.
CARGO GEAR: Loading/discharging by ship's gear.
AIRPORT: 100 km. distance.
TIME: GMT plus 2 hours. GMT plus 3 hours in Summer.
POLICE/FIRE/AMBULANCE: Telephone Harbour Master of Isthmia No. 37555, 37777.
GARBAGE DISPOSAL: No facilities.
WASTE OIL DISPOSAL: No facilities.
SEAMAN'S CLUBS: None.
CURRENCY: Drachma.
DELAYS: Possible delay up to 1.5 hours in transiting Canal if another vessel already transiting canal from opposite direction.
GENERAL: Passage via the Corinth Canal is a *Transit.*

SHIPMASTER'S REPORT: (Corinth) 1977.
Vessel: 5,700 g.r.t., 9,200 d.w.t., Summer draft 24 ft. 07 in., LOA 409 ft. 05 in.
Documents: No special entry papers required and if anchoring to await the berth Customs and Immigration will usually board at anchorage.
Port of Corinth: The port has no VHF communications but messages can be passed through the Corinth Canal Pilot Station on Channel 11. Pilot will then telephone Agents.

Anchoring off the port in the case of delay is possible but cannot be described as safe due to the close proximity of land or shoal water. Holding ground, however, is good. This vessel anchored with Corinth Breakwater light bearing 248° in about 16 fathoms of water using 6 shackles of cable. Vessel rode out a Force 7/8 gale from the North without dragging but with the cable fully stretched the bridge was only 2.3 cables from the breakwater and too close for comfort. A second anchorage was used with the breakwater light bearing 232° and the ship's bridge 5.6 cables from the breakwater in about 18 fathoms of water. Again with the cable fully stretched this gave a clearance off the nearest shoal water of 3 cables, 6 shackles of cable being used. This is a slightly more comfortable position and again gale force winds were experienced without dragging. The vessel did drag in this position but not until winds were gusting to Force 9 as a prelude to very severe storm conditions in which no anchorage of this nature would have been satisfactory. The bottom is stiff grey mud and care must be taken when anchoring not to impede the traffic approaching the canal entrance. Anchoring further to the Westward in order to increase the clearance from shoal water, etc., is not recommended as in addition to the much greater depth of water the holding ground deteriorates, becoming crumbly mud.

A boat can be provided by the Agents for use as a liberty boat when at anchor and there is no objection on the part of the Authorities to using the ship's boats for runs ashore.

A first examination of the chart (B.A. Chart No. 1600) will not indicate anywhere to berth a vessel of this size. However, dredging work has been carried out and the berth is on the S.E. side of the breakwater where there is room for a vessel of this size and for one small coaster in addition. The breakwater itself is slightly different in shape from that shown on the chart and building and dredging work are still in progress at its seaward end. The green flashing buoy shown on the chart is no longer in position but a light of similar characteristics is now shown from a structure on the breakwater end.

Maximum draft for berthing is 6.7 m. (22 ft.) and on this vessel's first call soundings between ship and quay when alongside indicated depths of between 24 ft. and 26 ft., depths outside the ship being some 5 ft. greater.

A Pilot is available, and is of great assistance. He is an experienced shipmaster and has very good local knowledge. A small tug is presently employed shifting barges and cranes employed in harbour works and it is sometimes possible to use his services. This is dependent upon the tugmaster. He is particularly useful when undocking to hold the stern off the quay.

Initial approach to the berth is bow on until the starboard anchor has been let go which should be done at such a distance from the berth so as to allow 4 shackles of cable in the water when the vessel is alongside. Vessel is gradually swung on the anchor, long head and stern ropes are run by boat, and vessel is so brought alongside port side to.

The undocking operation is straightforward, the bow being pulled off the quay by means of the anchor. The only danger is that of the propeller coming into contact with the quay and here the services of the tug are valuable.

Docking and undocking in strong winds from any direction would be hazardous and in many cases impossible. Docking is always done in daylight and I do not recommend undocking at night either although this would be possible under calm conditions. An added disadvantage of undocking in evening time would be that the vessel would arrive at the Narrows ferry crossing in the dark.

The Pilot agrees with this appraisal of the situation.

The quay itself is smooth concrete usually well fendered with rubber tyres and with good mooring posts. Vessel should be well secured as strong winds from a Northerly direction are experienced particularly in Winter.

There is a concrete apron some 3.0 m. wide alongside the ship and clear of this a considerable unsurfaced area on to which cargo is discharged. This area is very wet and dirty during rain.

Fresh water is available but 7 lengths of ship's hose are necessary to reach the outlet. A permanent water main is in the process of being laid alongside the ship.
Cargo operation: This is controlled by the 'Carton Pack' Plant Manager, there being no stevedore as such. Ship's gear is used and normally 3 gangs of stevedores.

The working day is from 0800 hrs. to 1700 hrs., evening overtime being unusual. Seven day working is possible but all overtime is subject to the plant working to receive the cargo.

Stevedores can discharge rapidly from the ship lifting 2 rolls of linerboard at a time but there are frequent stoppages due to congestion on the quay which reduces the overall discharge rate to about 25-27 rolls per gang hour. Although head and end clamps are provided by Charterers (carried on board) stevedores refuse to use these and all discharge is by rope sling. Rolls are landed on wooden platforms (timber supplied by Charterers) and then rolled by hand clear of the concrete apron. Two or possibly 3 fork lifts are used to load rolls from here onto lorries for transportation to the plant a short distance away.

Damage rate is high due to rolls becoming wet and dirty on the unsurfaced quay with bands being broken and outer layers torn. Further damage is caused by the fork lifts when loading the lorries.

No improvement in discharging conditions can be seen unless the quay is surfaced with proper drainage and unless Charterers are prepared to provide clamp machines for handling the rolls on the quay. Care should be taken when signing final outturn report as of course damages are written up to make it appear that they took place before discharge.

Weyerhaeuser are fully conversant with the situation.
Agents: Situated in Piraeus which is some 90 km. away. They use sub-Agents in Corinth.

The sub-Agents are not geared for handling a foreign-going ship. To obtain action on major items it is best to telephone Agent in Piraeus direct.
Bunkers: Basically not available but diesel oil has been taken, having been brought from Piraeus by road tanker and with ten days ordering notice.
Repairs: These cannot be carried out except by bringing repairers from Piraeus at very high cost.

Lloyds' Surveyor is obtainable from Piraeus, this being best arranged directly by the ship.
Provisions: These can be obtained locally and are of acceptable quality. There is no ship chandler as such and the system is for the Catering Officer to visit various suppliers with the Agents, pick his purchases and then leave Agents to collect and deliver to the ship.
Shore Leave: Passes are required and are renewed each visit. They should be available for return to Immigration on departure.
Corinth Canal: This vessel passed through the canal on the 4th November, 1977 on a draft of 3.6 m. forward and 4.74 m. aft.

Application should be made in advance to the Canal Authority quoting the minimum draft obtainable.

The transit presented no difficulties.

SHIPMASTER'S REPORT: (Corinth) December 1984.
Pilotage: One private Pilot.
Restrictions: Berthing daytime only. Unberthing anytime day or night.
Loading/Discharging: Vessel loaded iron pipes, rate 600 tons to 700 tons per gang, per 8 hour shift by ship's gear. Working only during daytime (never night-time).

Vessel discharged iron plate in coils, rate 600 tons per gang, per 8 hour shift by shore crane.
Cargo Handled: Vessel loaded iron pipes, porcelain in powder and fruit in boxes. Vessel discharged iron plate in coils and paper for boxes in rolls.

AUTHORITY: Port Authority of Isthmia, *Tel:* (0741) 37555 (Harbour Master).

Harbour Master at Corinth *Tel:* (0741) 24574.

Corinth Canal Co. S.A., Ippocratous 88, Athens. *Tel:* 36.32. 185/6/7. *Telex:* 210721. *Cables:* Didriko Athens.

Isthmia Office: *Tel:* (0741) 37372. *Telex:* 0232 164 Dico Gr. *Cables:* Dioriko Corinth. *Contact:* T. Grispos, Director.

ITEA: 38.26 N. 22.25 E.

DOCUMENTS:
6 Crew Lists.
4 Passenger Lists.
Cargo Manifest.
Bills of Lading.
2 Lists of Ship's Stores and Spares.
Health Declaration.
Ship's Certificates.

PILOTAGE: Vessel should advise ETA at least 24 hours before arrival through the telegraphic office of Itea. Pilots are called with the assistance of the Port Authority on VHF Channel 12.

Pilot boards 1 mile S.E. jetty lighthouse. Pilot boat painted black with white deckhouse, the word "Pilot" is painted in white letters on both sides. On the bow is painted "PY36".

In bad weather vessel should enter harbour without Pilot and anchor using both anchors.
ANCHORAGES: Available inside the harbour and in Aggolis Gulf. Safe anchorage in the vicinity of the jetty head in depths of 8 m. – 10 m.
RESTRICTIONS: Vessel may enter harbour day or night. Harbour anchorage suitable for vessels up to 60 ft. draft.

MAX. SIZE: Max. LOA 130 m., Max. draft 6.0 m. Also see "Berthing."
HEALTH: Pratique is given on arrival by the port medical officer.
RADIO: Contact possible through Hellas Coastal Radio.
VHF: Contact with Port Authority and Pilot made on Channel 12.
TUGS: None available.
BERTHING: One pier. East side can accommodate one vessel with max. LOA 83 m. and draft 6.0 m. West side can accommodate one vessel max. LOA 130 m. and draft 6.0 m.
Parnassos: Bauxite loading facility. Max. size 30,000 d.w.t. Loading by conveyor.
Elefsinos: Bauxite loading facility. Max. size 10,000 d.w.t. with tide of 25 cm. – 60 cm. Loading by conveyor.
STEVEDORES: Gangs should be ordered in advance by Agents on basis of Master's ETA. Loading and discharging is effected by ship's gear.
MEDICAL: 24 hours' notice preferred if any medical requirements. Vaccination can be arranged within 24 hours. Hospital in Amfissa, 13 km. from the port.
TANKERS: There are no special installations for loading/discharging tankers.
FIRE PRECAUTIONS: There are no specific precautions.
GANGWAY/DECK WATCHMEN: Required, Master to appoint crew member.
CARGO GEAR: Loading/unloading by ship's gear.
AIRPORT: Nearest airport at Athens, distance approximately 210 km.
DENSITY: 1025.
FRESH WATER: Available. Cost is 770 Dr./cu.m.
FUEL: Not available.
CONSULS: No local representation.
REPAIRS: No facilities for repairs.
HATCHES: Hatches are opened and closed by ship's crew.
CUSTOMS ALLOWANCES: As per Customs Regulations.
REPATRIATION: Can be arranged.
TIME: GMT plus 2 hours. End March to end September GMT plus 3 hours.
HOLIDAYS: Cargo work can be effected on all holidays on payment of overtime.
Official Holidays: January 1st; January 6th; Holy Monday; First Monday of Lent; Good Friday; Easter Sunday; Monday after Easter; 25th March; 1st May; Ascension Day; 6th August; (Local Holy Day); 15th August; 28th October; 6th December; 25th December; 26th December.
POLICE/AMBULANCE/FIRE: Police: Tel. 32222; Ambulance: Tel. 28400; Fire: Tel. 28199.
TELEPHONES: Not available.
BANKS: National Bank, Ionian and Popular Bank, Morgate Bank and Agricultural Bank. Hours: 0800 – 1400 Monday to Thursday, and 0800 – 1330 on Friday.
IDENTIFICATION CARDS: Needed for crew men going ashore.
REGULATIONS: There are general and specific regulations for the Port of Itea.
DELAYS: Delays in loading can seldom be expected.
DEVELOPMENTS: Extension and widening of the existing breakwater and the construction of a second breakwater.
AUTHORITY: Port Authority of Itea, Itea Harbour, Itea, Greece. *Tel:* 0265-32319, 32100. *Telex:* 299638. *FAX:* 0265-32100.

KALAMAKI: 37.52 N. 23.01 E. (See Plan)

SHIPMASTER'S REPORT:

DOCUMENTS: See "Piraeus".
PILOTAGE: Arranged by Agent.
MAX. SIZE: Max. draft 38 ft. (Additional 1 ft. of draft by arrangement).
TUGS: Berthed without tug. Agent can arrange small tug from Corinth Canal.
BERTHING: Berth for discharging soya beans at Kalamaki Soya Mills (Refinery).

Bulk Handling facility: Fixed steel tower with 2 suction pipes capable of a total of 250 tonnes/p.h. but generally slower. Vessel to shift from hatch to hatch. Outreach of arms about 16 m.

The berth is not marked on the chart – B.A. 1600 and U.S. D.M.A. 54289. It is situated on the North shore of the Sarnikos Kolpos near the Eastern entrance to the Corinth Canal (Dhiorix Korinthou). When alongside, the Canal Breakwater Lt. Ho. was bearing 253°×0.64 miles and Akra Sofia 195°×1.14 miles. Starboard side to.

Mooring bollards are adequate, there being 4 suitable for backsprings on the short face (about 64 m.) of the 'T' jetty and 1 on shore for the headlines. At the Eastern side of the berth there is a new berth set in from the line of the jetty consisting of 4 concrete dolphins each with a bollard and 3 of our sternlines were made fast to these. Between this new berth, which is for discharging logs, and the leg of the 'T' jetty there is a facility for loading the products of the Soya Oil refinery into coasters. Tyre fenders on the 'T' jetty are few.

On approaching the berth from Eastwards it is recognisable by the dark grey ribbed metal silos and the lattice steel tower of the discharging unit.

FRESH WATER: Obtainable by truck 15 tonne capacity or by barge from Piraeus. Pipe for loading water from trucks will have to be extended by ship's hoses particularly if working cargo in forward hatches. Cost per truck about 3,000.00 Drachmas. Agent says price for barge supply is comparable to truck if a large quantity is required.
STEVEDORES: *Working Hours:* Continuous – Workers supplied by plant.
AGENT: *Sub-Agents:* G. Karagiorgis of Corinth. Cables: "Kaskoutas Corinth".

SHIPMASTER'S REPORT: April 1988.

The Kalamaki Private Pier is 2 miles E.N.E. of Corinth Canal. This dock belongs to the Murikis Wood Factory which is 500 m. from the Dock. The Berth is used for small vessels of 2,000 d.w.t. loading plywood from the Murikis factory. Loading is by ship's gear or mobile cranes. Every sling of wood is from 800 kg. – 1,100 kg. Cargo is loaded by factory personnel. Small vessels lie alongside the pier where the depth is 16 ft. – 18 ft. Overall length 120 m.

Large vessels lie alongside blocks with depth of 30 ft. – 32 ft. Overall length 160 m. Discharging of logs is by ship's gear into the sea on the offside.

Repatriation is possible via Athens which is 80 km. away.

Berthing only possible during daylight hours. On arrival, contact the Isthmia Harbour Master or Corinth Canal on VHF Channel 16.

KALAMATA: 37.02 N. 22.07 E. (See Plan)

PORT LIMITS: The seaward boundaries of the port within which a vessel is considered to be an "arrived vessel" and (subject to Charter-Party Terms) laytime commences to count is 0.5 mile from the breakwater red light, where Pilot boards.
DOCUMENTS:
3 Crew Lists, plus 3 additional for passenger vessels.
3 Crew personal effects lists, plus 3 additional for passenger vessels.
3 Deck, Engine and Steward department Store Lists.
1 Cargo Manifest.
All ship's official documents.
2 Crew Vaccination Lists, plus 2 additional for passenger vessels.
1 Health declaration.

The above are not necessary for incoming vessels from Greek ports.
PILOTAGE: Notice of ETA required 48 hours before arrival. There is VHF listening and transmitting on Channel 12 on continuous basis. Range 30 miles.

Pilot boards 0.5 miles S.E. of the breakwater red light, weather permitting.
ANCHORAGES: Vessels awaiting Pilot may anchor 0.75 miles East of the breakwater red light.
MAX. SIZE: Vessels up to 250 m. LOA, 50 m. beam and 30 ft. draft may enter harbour, for berthing alongside.
HEALTH: Port Health doctor boards vessel on arrival or alongside the berth. Master required to produce Fumigation Certificate, vaccination list and Declaration of Health. Health visit not necessary for vessels coming from a Greek port or West European ports.
RADIO: Athens Radio, call sign SVA, on R/T which covers the Kalamata region also R/T stations of Patra Kerkyra and Hiraklion.
TUGS: No tugs available.
BERTHING: Agents require details of vessel's draft in advance to get berthing permission from Harbour Authorities. Total length of piers – 1,200 m. Covered storage: 2,000 sq.m. Open storage: 22,000 sq.m.
SPECIALISED CARGO-HANDLING FACILITIES: There is a silo for grain. 2 electric pumps for liquids; 2 mobile cranes, lifting capacity 40 tons and 200 tons; 3 forklifts.
STEVEDORES: Number of gangs required to be advised Agent in good time.
MEDICAL: Doctors and medical assistance available. Also private and public hospitals.
FRESH WATER: Available in any quantity at berths. No barges.
FUEL: Can only be supplied by road tankers and by bunker tankers from Piraeus.
CONSULS: France, Finland and Sweden.
REPAIRS: Minor repairs can be effected in shore machine shops. No dry docks.
DENSITY: 1025.
WATCHMEN: If required can be arranged from shore.
HATCHES: Can be opened and closed either by crew or by stevedores subject to regulation payments for this work.
CUSTOMS ALLOWANCES: 200 cigarettes and 1 bottle of spirits per man.
REPATRIATION: Can be arranged by car, train or air.
AIRPORT: Situated 6 miles away. Flights to Athens 1/2 times a day.
TIME: GMT plus 2 hours in Winter. GMT plus 3 hours in Summer (end March – end September).
HOLIDAYS: Additional local holidays are Ascension Day and St. Dionysio's Day.
POLICE/FIRE/AMBULANCE: Police tel. 22218 and 24720; Fire tel. 199; Ambulance tel. 25555/27420; Tourist Police tel. 23187. District Code Number 0721.
GARBAGE DISPOSAL: Drums are available and are collected by the city services without any extra charge. No special collection service is available.
WASTE OIL DISPOSAL: Not available.
SEAMAN'S CLUBS: None.
CURRENCY: Greek Drachma (DRC).
SHORE LEAVE: Allowed. Shore passes issued by Harbour Authorities.
DEVELOPMENTS: In the near future a Free Zone will exist.

Additional open storage to be available.
AUTHORITY: Port Authority of Kalamata, Port Office, Custom House Square, 24101 Kalamata, Greece. *Tel:* 0721/22-218. *Telex:* 2252211 Lcal Gr. *Cables:* "Kalamata Port Authority". *FAX::* 0791-96220. *Contact:* Commander N. Papanikolopoulos, Harbour Master.

KALI LIMENES, Crete: 34.56 N. 24.49 E. (See Plan)

DOCUMENTS: Vessels may arrive for bunkering without obtaining free pratique. However, if pratique is effected, vessels should have ship's papers ready for inspection, also 4 Crew Lists, 4 Passenger Lists, Cargo Manifest and a List of Stores and Provisions.
PILOTAGE: 1 private Pilot employed by the bunkering company SEKA who undertakes pilotage for vessels calling for bunkers. Pilot boat is a small boat equipped with signal lamp. Pilot boards about 1 to 2 miles S.S.E. of Aghios Pavlos (St. Paul) Islet. Vessels awaiting Pilot may anchor 1.5 miles East of Aghios Pavlos Islet.
ANCHORAGES: (See "Pilotage") Vessels may anchor in area between Aghios Pavlos Islet and Mavronissi, which is a safe anchorage.
MAX. SIZE: Vessels in ballast of up to 280,000 d.w.t. and max. draft 12.80 m. can enter port.
HEALTH: Vessels arriving from foreign ports wishing to obtain free pratique should cable Agents to arrange for boarding of Health Inspector. Free pratique automatic if arriving from another Greek port.
TUGS: There is 1 tug, but it is seldom used.
MEDICAL: Agent should be advised well in advance if medical assistance required. There are no hospitals or other local facilities and doctor has to be called from nearest town. Hospitals at Iraklion, 75 km. distant.
TANKERS: 3 berths North of Aghios Pavlos Islet (position Lat. 34° 55' 45" N., Long. 24° 48' 30" E.), max. draft 12.80 m.
FRESH WATER: Unlimited supplies available at 48 hours' notice.
FUEL: Unlimited supplies, all grades of fuel (1,000 cu.m.p.h.), diesel (200 cu.m.p.h.) and luboils available subject adequate advance notice. Supplied by Seka S.A. Telegraphic address: Seka Kalilimenes. Telex: 0262180 Vila GR.
Piraeus Address: Seka S.A., 53–55 Akti Miaouli, 18536 Piraeus, Greece. Tel: 4293160. Telex: 212172, 241717. Fax: 4293345. Contact: Costas Zacharopoulos, Managing Director.
FIRE PRECAUTIONS: Portable foam fire extinguishers.
CONSULS: None.
REPAIRS: None.
CUSTOMS ALLOWANCES: 200 cigarettes permitted to each crew member to be held out of bond, and 1 bottle of wine/spirits.
AIRPORT: At Iraklion, 75 km. distant.
TIME: GMT plus 2 hours. GMT plus 3 hours in Summer.
SHORE LEAVE: Permitted if Free Pratique requested and granted.
GARBAGE DISPOSAL: Not available.
WASTE OIL DISPOSAL: Not available.
SEAMAN'S CLUBS: None.
CURRENCY: Greek Drachma.

SHIPMASTER'S REPORT: 1976. (Updated 1984).
Pilotage: Pilot boards about 1 mile South of Aghios Pavlos.
Anchorage: Half a mile E.S.E. of Mavronissi, depth of water 30 ft.
Max. Size: According to Pilot; 300,000 d.w.t. in ballast and max. draft 42 ft.
Pumping Rate: Fuel 1,000 t.p.h., diesel – 200 t.p.h.
ETA: Send ETA 48 hours in advance through Radio Athens. The bunker station can be reached direct on VHF Channels 16 – 14.

KATAKOLON: 37.39 N. 21.20 E. (See Plan)

DOCUMENTS:
Maritime Health Declaration.
Usual Ship's Certificates.
3 Crew Lists.
3 Passenger Lists.
2 Lists of Stores and Provisions.
2 Lists of Crew's Personal Effects.
PILOTAGE: Not compulsory. Port has 1 private Pilot whom vessel may use provided sufficient advance notice passed through Agent.
ANCHORAGES: Vessels can anchor at a distance of 2 cables from the head of the breakwater (bearing 300°). Safe anchorage for vessels of up to 30 ft. draft between positions Lat. 37° 40' N., Long. 21° 19' E. and Lat. 37° 40' N., Long. 21° 20' E.
MAX. SIZE: Max. safe draft 24 ft.
BERTHING: One pier. Length 204 m. Depth alongside 26 ft. Berthing possible on both sides of the pier.
STEVEDORES: No advance notice required. No shore facilities. Vessels load/discharge with own gear.
MEDICAL: No medical assistance in Katakolon, but facilities exist at the town of Pyrgos 13 km. distant.
FRESH WATER: Available. Capacity 20 cu.m./hr.
FUEL: Not available ex-berth, but can be delivered by tank truck from Patras or Kalamata.
CONSULS: None.
REPAIRS: Not available in Katakolon. Small quantities of engine spares available in Pyrgos.
HATCHES: Usually opened and closed by crew but this work can be carried out by stevedores subject consent of Port Authority. Cost as agreed between Master and stevedores.
AIRPORT: Andravis Airport 26 km. distant. Flights to Athens twice weekly.
TIME: GMT plus 2 hours. GMT plus 3 hours in Summer.
HOLIDAYS: Usual Greek holidays plus local holidays of 6th December and 17th December.
POLICE/AMBULANCE/FIRE: Police and Immigration, Tel: 41202; Fire Brigade (Pyrgos), Tel: 22633; Ambulance (Pyrgos), Tel: 22344.
TELEPHONES: No facilities for placing on board.
SHORE LEAVE: Permitted.
IDENTIFICATION CARDS: Passes issued by Port Authority.
AUTHORITY: Port Authority of Katakolon.

KAVALLA: 40.55 N. 24.25 E.

DOCUMENTS:
5 Crew Lists.
2 Lists of Foreign Currency.
4 Passenger Lists.
2 Cargo Manifests.
2 Lists of Crew Personal Effects.
Copies of Bills of Lading and usual Ship's Certificates.
PILOTAGE: Compulsory. 24 hours' notice of ETA to be passed to Agents or direct to Port Authorities. Vessels requiring Pilot should contact Harbour Master/Pilot on VHF Channel 12 (24 hour service). Pilot usually boards about 0.5 mile from breakwater light from new 14 m. length pilot boat. If strong South or S.W. winds prevailing, vessels recommended take refuge Eleftheron Bay. Vessels awaiting a Pilot may anchor 0.5 mile South of Kavalla Lighthouse and stand-by on VHF Channel 12.
ANCHORAGES: 0.5 to 2 miles South of Kavalla Lighthouse, depth 30 m. to 40 m. Bottom sand and mud.
RESTRICTIONS: Berthing during daytime. Unberthing possible anytime.
MAX. SIZE: Max. length 200 m. with proportionate breadth. Max. draft 27 ft. 06 in. Tidal range 2 ft.
HEALTH: Doctor boards vessel with Port Officer. Maritime Declaration of Health and Derat Certificate required. In case suspected disease or fever on board, Master should radio Port Authorities in advance. Pratique is automatic if arriving from another Greek port.
RADIO: No local radio station. Cables may be routed through Athinai Radio.
VHF: Harbour Master's office equipped with VHF Channel 12 and 16 (24 hour service).
MEDICAL: Advance notice of medical requirements necessary. General hospital in Kavalla and numerous private clinics.
TANKERS: See "Prinos".
DENSITY: 1025.
FRESH WATER: Available at berth.
FUEL: Small quantities available by truck.
CONSULS:

France	Tel: 3163	Netherlands	Tel: 3265
Finland	Tel: 3467	Sweden	Tel: 3669

REPAIRS: Minor repairs available.
HATCHES: Opened and closed by crew.
CARGO GEAR: Vessel should have cargo gear ready on arrival in order to avoid delay.
AIRPORT: Distance 30 km. One or two flights daily to Athens.
TIME: GMT plus 2 hours. GMT plus 3 hours in Summer.
HOLIDAYS: Standard Greek holidays. Local holiday: 29th June.
POLICE/FIRE: Police, Tel: 3291; Fire, Tel: 1999.
AUTHORITY: Kavalla Port Authority, Kavalla, Greece. *Tel:* 051-223716. *Telex:* 045 2140 LIKA. *Contact:* P. Zachariou, Harbour Master.

KYMASSI: 38.49 N. 23.32 E. (See Plan)

LOCATION: Lat. 38° 48.6' N., Long. 23° 31.5' E.
The port is on the Northern part of Nissos Evvoia. Vessels load magnesite in bulk, and firebricks on pallets.
DOCUMENTS: Crew List and usual documents for Greece.
APPROACHES: See "Shipmaster's Report".
PILOTAGE: Pilot boards about 5 cables off the berth.
RESTRICTIONS: No berthing during night-time.
RADIO: ETA and other relevant information sent by radio to the Sub-Charterer's Agents, Financial Mining Industrial and Shipping Corp., in Athens. Cable Address: "Epichiris, Athens".
VHF: Approaching Kymassi VHF contact only with Harbour Master's Office on Channel 12 during working hours (and Channels 14 – 16).
TUGS: There are no tugs in the area, except pilot boat.
BERTHING: Safe draft alongside is 26 ft. 6 in., salt water. Ship berths alongside 2 dolphins which are very well fendered with numerous rubber tyres. On approach the port anchor is let go and as the ship snubs round to port an off-shore mooring line is run by the pilot boat aft to the off-shore mooring buoy, to which the ship's line is made fast. The next line is run to inshore mooring buoy the same way. Then vessel is made fast to strong bollards.
LOADING: Carried out via a sophisticated conveyor system, the main tower of which is on curved track, thus allowing flexibility in loading either forward or aft for all the length of the vessel without any shifting, this is necessary only when loading palletised cargo. Also see "Shipmaster's Report".
EMERGENCY CO-ORDINATION CENTRE: Nearest at Chalkis 60 km.
BANKS: National Bank of Greece in Mandoudi. Foreign banks in Chalkis.
STORING: See "Prelims".
1. Yes.
2. Yes, vessel can store from barges during loading.
3. Trucks can proceed alongside.
4. Yes.
5. Declaration to Customs.
6. No.

SURVEYORS: Cargo inspectors and surveyors come from Piraeus.
GARBAGE DISPOSAL: Not available.
WASTE OIL DISPOSAL: Not available.
SEAMAN'S CLUBS: None.

SHIPMASTER'S REPORT: March 1979.

The port is on the Island of Nissos Evvoia. Vessel loaded a cargo of bulk magnesite ore (deadburned).

Documents: Crew List. Usual documents for Greece. However, as the ship had already cleared into Greece at Corinth, the Bond had to remain sealed from that port to Kymassi. Leaving Corinth a photo-stat copy of all papers handed in at that port was placed on board duly stamped by Customs for production at Kymassi. Register and usual certificates were taken by Agent to authorities and returned with Pilot plus clearance before sailing.

Pilotage: Pilot boards about 5 cables off the berth. He gave advance advice about the time the other ship was to sail and when he expected to board.

Approaches: Although no large scale British Admiralty Chart of the area or port on board, the approach was made without any difficulty. The 100 fathom line runs approximately 1 to 1.5 miles off the land. The ore loading berth is on the South side of the Bay with fairly steep to land on the Northern side. As ship has to swing to lie head out to sea, it is better according to the Pilot to approach keeping towards the North side of the Bay. Anchoring is not advised unless very good weather due to depth of water and poor holding ground. The Pilot, via VHF, advised us to lie off as the berth was occupied when we arrived. The ship berthed was due to sail around 1200 hrs., we arrived at 0900 hrs.

Radio: ETA and other relevant information was sent by radio to the Sub-Charterer's Agents, Financial Mining & Industrial Corp., in Athens. Cable address 'Epichiris – Athens'. There were no problems clearing messages.

Approaching Kymassi there was no response on VHF until the ship was within 4 miles of the port, when the Pilot answered on Channel 16 and we worked on Channel 12.

Berthing: Ship heads towards the loading jetty, a high concrete structure of "Y" shape with the ship berthing against the two arms. Both these are well fendered with numerous rubber tyres. On approach the port anchor is let go and as the ship snubs round to port an off-shore mooring line is run by the boat aft to the off-shore mooring buoy. This buoy has a slip toggle arrangement to which the ship's line is made fast. The next line run is the inshore after line which is taken to a mooring buoy inside the line of the berth. A head rope was then run to the pier and to a strong bollard.

The anchor cable was slacked and ship hove alongside by the head and stern ropes, the offshore stern rope being slacked as required. Back-spring was led to a bollard on the jetty as was the spring from aft. A further headrope was run to the bollard on the pier and aft a second rope to the inshore buoy plus a bight to a bollard on the pier.

Loading: Carried out via a sophisticated conveyor system, the main tower of which is on a curved track, thus allowing flexibility in loading either forward of aft in a hatch. It is necessary to shift ship to load each hatch.

Two grades of magnesite were loaded. One grade in No. 2 hatch, (first loaded), then the other grade between No. 1 and No. 3 hatches. When No. 2 was completed it was necessary to warp the ship astern to load No. 1 and later warp ahead to load No. 3 hatch.

Loading commenced at 1540 hrs. on the 17th and was completed at 0650 hrs. on the 18th. Allowing for shift ship plus change of gangs ashore it averaged out at a loading rate of 556 tonnes per hour.

The loader has an adjustable spout which ensures that the cargo can be readily trimmed to ensure a good flat stow on completion of space without any need for trimmers. The loader is operated with regard to the spout and slewing from a control box situated on the draw-bridge section of the loader. A very dusty cargo.

General: Whilst the vessel was alongside a small ship berthed using a Mediterranean moor, two anchors down and stern moored to a buoy. This berth is further inside the Bay. The vessel loaded her cargo from lighters.

Agents: The Agent from the Financial, Mining and Industrial Corp. was most helpful and attentive to his duties. He appears to work long hours as he also supervises the loading and works continuously. He also attends to advising when it is necessary to shift ship.

AUTHORITY: Harbour Master of Kymassi, Mandoudi, Evia Island, Greece. *Tel:* 0227-22020. Also VHF Channels 12, 14 and 16. *Contact:* George Sakalis, Harbour Master.

LAVRION: 37.42 N. 24.04 E. (See Plan)

DOCUMENTS:

Maritime Declaration of Health with Crew's Vaccination Cards.

Cargo Manifests.

4 Crew Lists.

PILOTAGE: Pilotage is compulsory in the port of Lavrion, except for Greek ships not exceeding 500 g.r.t. Address of Pilot Station, Port Authority of Lavrion. Pilot boat is a motor launch 13.2 m. long, black hull, white superstructure, flying code flag "H".

It is necessary for all vessels to give 24 hours notice of ETA, by telex or telegraph. This is to be followed by a second notice, in case of change of ETA.

Pilot boards about 0.5 miles from white flashing light of Ak. Ergastiria. In the event of bad weather, boarding position should be arranged after communication with Pilot on VHF Channel 12.

ANCHORAGES: See "Pilotage".

MAX. SIZE: Max. length 130 m. (approx.), max. draft 21 ft.

HEALTH: Health Officer and Port Officer board vessel on arrival. Maritime Declaration of Health should be submitted to Health Officer who examines any sick crew. Free Pratique is not automatic.

VHF: Port Authority keeps watch on Channel 12 throughout 24 hours.

BERTHING: Harbour open to S.E. winds, but otherwise sheltered and safe. There are two quays: one 330 ft. length, depth alongside 20 ft., and one of 260 ft. length, depth alongside 13 ft.

Mining company owns bridge elevator with capacity of 700 tons per day.

CRANES: No shore cranes in the port, but 3 truck cranes are available in the area.

STEVEDORES: Advance notice required in order to arrange gangs.

MEDICAL: Medical assistance available.

FRESH WATER: Available to vessels alongside. Ships at anchor can be supplied by water barge.

FUEL: Available by tanker trucks from Piraeus or by fuel barges from Piraeus.

HATCHES: Opened and closed by crew.

CUSTOMS ALLOWANCES: 200 cigarettes and a bottle of spirits per crew member out of bond.

REPAIRS: Minor repairs only.

SURVEYORS: Available from Athens or Piraeus.

REPATRIATION: Facilities exist for repatriation of crew.

AIRPORT: Athens Airport, distance 45 km.

EMERGENCY CO-ORDINATION CENTRE: Maritime Rescue Co-ordination Centre of Hellenic Coast Guard on VHF Channel 16, 2182 kHz and 500 kHz.

SERVICES: All services are available from Piraeus.

BANKS: National Bank. Tel: 0292-25372. Fax: 210910.

Commercial Bank. Tel: 0292-25593. Fax: 210466.

STORING/SHIP SUPPLY SERVICE: Available from Piraeus.

SHORE LEAVE: Crew members are allowed ashore with dock pass, issued by Port Authority.

TIME: GMT plus 2 hours. GMT plus 3 hours in Summer.

POLICE/AMBULANCE/FIRE: Police, Tel: 22100; Ambulance, Tel: 22222; Fire, Tel: 22199.

HOLIDAYS: Local holiday: 26th July.

GARBAGE DISPOSAL: Drums provided alongside.

DEVELOPMENTS: Construction of South breakwater (260 m.) under way.

AUTHORITY: Port Authority of Lavrion, T.K. 19500 Lavrion, Greece. *Tel:* (0292) 25249-22188. *Telex:* 217669 Lila. *Contact:* Harbour Master.

AGENT: Mylaki Shipping Agency Ltd., Iroon Polytechniou Sq., Lavrion 195 00, Greece. Tel: (0292) 27175, 093-263190 (mobile), (0292) 25355 (after office hours). Telex: 241429 MLKI GR. Fax: (0292) 27164. Cables: Mylanav - Lavrion / Greece.

MEGARA (Agia Trias): 37.58 N. 23.24 E. (See Plan)

DOCUMENTS: See "Aspropyrgos".

PILOTAGE: Compulsory. Pilot boards S.W. of N.Pachi Island.

APPROACHES: From the passage between the East end of Revithousa Island and Cape Karas, the pier is approached on a N.W. course.

ANCHORAGE: S.W. of N.Pachi Island in a depth of about 30 fathoms.

RESTRICTIONS: No night time berthing or unberthing.

MAX. SIZE: With suitable fendering, the berth can accommodate vessels up to 75,000 d.w.t., and max. draft 40 ft. (12.19 m.).

HEALTH: Free Pratique according to international regulations.

RADIO: Athens Radio (SVA).

VHF: Pilots and traffic on Channels 6, 12, 14 and 16. Refinery working on Channels 14 and 8.

TUGS: Compulsory.

TANKERS: The pier projects 205 m. from the shore with berthing head 63 m. long (Agia Trias Berth). Depth 12.8 m. (42 ft.).

The pier is equipped with fenders. On reaching the pier, vessel drops port anchor and moors alongside starboard side to, assisted by tugs. Head and stern lines are sent to mooring buoys. The pier is equipped with 3×8 in. flexible hoses, which have to be lifted with vessel's derrick.

There are no facilities for discharging ballast.

MEDICAL: Facilities available at Megara Town (7 km.) and Eleusis.

FRESH WATER: Not available.

FUEL: Not available.

REPAIRS: See "Piraeus" and "Eleusis".

GANGWAY: Always use vessel's gangway rigged starboard side at the middle of the vessel.

AIRPORT: Athens International Airport (60 km.).

TIME: GMT plus 2 hours. Summertime (March to September) GMT plus 3 hours.

GENERAL: *Weather:* During Winter, prevailing winds are North and some times they are Force 7 – 8. During Summertime, prevailing winds are variable, and at other times wind is from the West.

Tide: Tidal range is about 0.3 m. (1 ft.).

GANGWAY: Ship's gangway to be rigged on starboard side.

GARBAGE DISPOSAL: Not available from refinery.

WASTE OIL DISPOSAL: Available direct from refinery installation. Shore tank capacity 8,000 cu.m.

SEAMAN'S CLUBS: No club but usual local facilities.

CURRENCY: Greek Drachma (GDR).

AUTHORITY: *Operator:* Hellenic Aspropyrgos Refinery S.A. See "Aspropyrgos".

MILAKI (Aliveri Bay): 38.22 N. 24.04 E **(See Plan)**

SHIP'S OFFICER'S REPORT: December 1985.

LOCATION: Aliveri Bay is about 2 km. N.N.E. of Karavos in position Lat. 38° 22' 30" N., Long. 24° 04' 10" E. Milaki is the name of the berthing facility.

PILOTAGE: Pilot boards 1 nautical mile S.W. of the berth. Pilot boat painted white. Call "Katerina" on VHF Channel 14 to make contact, also works on Channel 12.

ANCHORAGE: Vessels may anchor in Aliveri Bay.

MAX. SIZE: Vessels up to 120,000 d.w.t. and 240 m. LOA handled.

VHF: See "Pilotage".

TUGS: One tug "Achileus", 1,200 h.p. Additional tugs available from Khalkis (Chalkis).

BERTHING: Berthing instructions obtainable from "Katerina" on VHF Channels 14 or 12.

One pier, length 300 m. and width approximately 50 m.

Depths alongside: North side: 18 m. at seaward end and 14.9 m. at inner end.

South side: 23 m. at seaward end and 13 m. at inner end.

The North side is for unloading coal and slag and the South side for loading coal and cement.

Cargo discharged by grab (gantry) and loaded by pipe.

MEDICAL: There is a small hospital in Aliveri.

FRESH WATER: Available by truck.

REPAIRS: Facilities available at Khalkis.

AIRPORT: Athens International Airport.

GENERAL: *Publications and Charts:* B.A. Mediterranean Pilot Volume 4 and B.A. Chart No. 1597.

Note: The pier and light on N.W. corner (OQ(R)) of pier not marked on Chart No. 1597, edition 1983, with corrections done for 1983 and 1985.

SHIPMASTER'S REPORT: April 1987.

LOCATION: In Aliveri Bay, on the Western shore of the Island of Evia (Euboia).

DOCUMENTS:
2 copies Crew Effects Declaration.
2 copies Ship's Stores, including Narcotics.
2 copies Stores not Sealed in Bond (Master's Responsibility).
4 copies Crew List.
1 copy Maritime Declaration of Health.
2 copies Vaccination List.

PILOTAGE: Sea Pilot can be arranged by prior notice to Agents. Boarding position is off Dipsa Rock.

Harbour Pilot boards at the anchorage or close to the jetty.

ANCHORAGE: In position Lat. 38° 22' N., Long. 24° 02' E., about 1 mile West of the Jetty head in over 28 fathoms of water.

HEALTH: Radio Pratique not available.

Maritime Declaration of Health required. Pratique is granted after berthing.

VHF: Terminal Heracles II and agent maintain watch on Channel 14.

TUGS: 3 tugs available from Chalkis.

BERTHING: *Coal Discharging Berth – Heracles II:* Berth is located on the Northern side of a Jetty extending about 300 m. out in a 280° direction from the coast. The Jetty head is in position Lat. 38° 22.5' N., Long. 24° 03.1' E., about 5 cables South of Southern Breakwater light of Karavos Port.

The terminal is controlled by the cement factory, which is situated just across the road from the Jetty. The reported depths of water in this berth (See "Plan") were prepared by Gold Divers Underwater Services Co. of Piraeus in April 1986.

One travelling bridge crane serves the ships. The discharging rate is between 500 t.p.h. and 600 t.p.h. Permissible airdraft is 19.00 m. maximum. Recommended arrival draft is 15.20 m. forward and 17.70 m. aft.

With the above recommended draft the vessel can tie up starboard side alongside using about 200 m. length of the jetty with the remaining length of the vessel overhanging. All the after mooring ropes lead forward to the knuckle. Vessel can however, be warped ahead after lightening from forward holds.

MEDICAL: Facilities available at Aliveri.

DENSITY: 1028 – 1029.

REPATRIATION: Possible, but with difficulty.

AIRPORT: Nearest airport at Athens, 3 hours by road.

GENERAL: *Customs:* For issue of bonded stores contact Karavos.

For clearance of stores and spares contact Chalkis.

Immigration: At Chalkis.

Supplies: Provisions and stores are ordered from Piraeus/Athens.

AUTHORITY: Port Authority of Karavos. *Tel:* 0223-22318.

AGENT: Mylaki Shipping Agency Ltd., 18 A.Nika Str., Aliveri 345 00, Greece. Tel: (0223) 23692, 093-264402 (Mobile, (0221) 85373 (after office hours). Telex: 272253 Mlki Gr. Fax: (0223) 23789. Cables: Tsalaship - Aliveri/Greece.

MILOS ISLAND (Adamas, Voudia Bay): **(See Plan)**

LOCATION: Adamas Harbour: Lat. 36° 42.5' N., Long. 24° 26.5' E.

Voudia Bay: Lat. 36° 44.6' N., Long. 24° 32.8' E. (on the N.E. side of Milos Island).

A vessel is considered to be an "arrived ship", when at and/or anchored close to the above positions.

DOCUMENTS:
4 Crew Lists.
3 Passenger Lists.
3 Provisions Lists.
4 Personal Effects Declarations.
2 Cargo Manifests.
Ship's Gear Book.
Vaccination Certificates.
Derat Certificate.
Certificate of Registry.
Load Line Certificate.
Safety Equipment Certificate.
Radio-telegraphy Certificate.
Certificate of Measurement.

PILOTAGE: No Pilot Station. Vessels requiring a Pilot should make contact with Adamas Harbour Control by VHF Channel 12. Vessels calling at Voudia Bay can make contact on Channel 8 VHF during office hours (0700 – 1500 hrs.local time) for general information and Pilot arrangements. Pilot arrangements are generally done through Agent's who may contact Pilot in advance by telephone. Pilot boards from a small motor-boat.

ANCHORAGES: Safe anchorage in all parts of Milos Bay, where Adamas port is situated. Main anchorage in Milos Bay is on E.S.E. side of Bombarda Cape, which has a lighthouse showing a Fl. R. 4.5 secs. light.

The Voudia Bay Anchorage is located 6 cables S.E. of Voudia Light within a circle of 3 cables radius. Ship's calling to Voudia Bay should use this anchorage.

MAX. SIZE: Any size vessel may enter Adamas Port, but berthing alongside the Ore Loading Berth at Kanaba or the private Ore Loading Berth of Mycobar Ore Mining Co. is restricted for vessels of more than 26 ft. draft.

Ore loading berth at Voudia Bay (Privately owned by Messrs. Silver and Baryte Ore Mining Co.) is able to facilitate berthing of vessels of up to 185 m. long (610 ft.) and max. draft 33 ft. Restriction exists for this berth, also for the height of vessel's freeboard. (The highest point of the vessel's side along the deck including rails or any other fixed constructions, must not exceed the 10.9 m. (36 ft.) from the sea level).

Loading-discharging dock at Voudia Bay with installations for mechanical loading of cargo in bags. This dock has a length of approximately 75 m. and the max. draft of the vessel alongside cannot exceed more than 6 m. (20 ft.).

No facilities for tankers.

HEALTH: Authorities require 24 hours' notice of arrival in order to grant Free Pratique to vessels arriving from a non-infectious country. Free Pratique cannot be granted at Milos to vessels having disease on board nor to those arriving from an infected area. Such vessels are required to proceed to a main Greek port (Piraeus, Syros, etc.) to obtain health clearance.

RADIO: Athens Radio and Heraklion Radio.

TUGS: Not available.

STEVEDORES: Loading/discharging at Adamas Port (Kanaba) is by means of ship's gear, reaching a loading rate of 1,000 – 1,300 tonnes per working day. At the private berths of Mycobar Ore Co. in Adamas and Silver and Baryte Ore Co. at Voudia Bay the bulk ore is loaded by means of a conveyor belt at a rate of 500 tonnes p.h. maximum.

MEDICAL: One small public hospital. There are 3 doctors and 2 dentists resident on the Island. There is an airport on the Island with daily services to Athens. Also in case of illness, the possibility of an emergency service.

FRESH WATER: Available to vessels alongside using ship's hoses. Delivery alongside up to 30 cu.m. in 12 hours.

FUEL: Small quantities of lubricants available.

OPENING/CLOSING HATCHES: Opened and closed by crew.

CUSTOMS ALLOWANCES: Customs Office at Adamas Harbour. Tel: 0287-22.282.

(a) Vessel arriving from European Common Market Ports: 300 cigarettes, or 150 small cigars, or 75 big cigars, or 400 gm. tobacco. 1.5 litres of spirits of 22° vol. or more, or 4 litres of wines of less than 22° vol. Perfumes 75 gm.

(b) Vessel arriving from any other port: 200 cigarettes, or 100 small cigars, or 50 big cigars, or 250 gm. of tobacco. 1 litre of spirit of 22° vol. or more, or 2 litres of wines of less than 22° vol.

REPAIRS: Minor oxy-acetylene repairs possible.

TIME: GMT plus 2 hours. GMT plus 3 hours in Summer.

HOLIDAYS: Saturdays, Sundays and excluded holidays. Cargo work can be arranged on these days at 75% increase on tariff rates.

TELEPHONES: Police: 0287-21.204. Port Authority: 0287-22.100. Agent of Silver and Baryte Ores Co.: 0287-41.277. Pilot: 0287-22.265 or 22.086.

SHORE LEAVE: Permitted.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

DELAYS: Strong Southerly winds may delay berthing, or force vessel to leave loading berth at Voudia Bay.

DEVELOPMENTS: Intentions to construct a conveyor belt for ore cargo loading on the Kanaba Dock (Adamas).

SHIPMASTER'S REPORT No. 1: *Voudia Bay:* Fresh water is available using vessel's own hoses. Limited quantity of provisions are available. Hire of polypropylene ropes of 150 m. length is possible.

It is advisable to close ventilators before loading due to excessive dust.

Pilot remains on board during loading.
Cargo: Perlite.
Loading rate for bulk: 250 t.p.h.
Loading rate for bags: 18–20 t.p.h.

SHIPMASTER'S REPORT No. 2: *Voudia Bay and Milos Island:* Situated on the N.E. corner of the island of Milos. When approaching from the S.E. the most prominent features are the scarred terrain, the factory building and the silo which is situated just above the berth. The loading gantry has both fixed red and white lights on it and is conspicuous.

Anchorage: The vessel anchored in a position with the loader bearing 302° T. distance 7.5 cables in 48.5 m. of water using 5 shackles of cable, the holding appeared to be good. The recommended anchorage is in a position with the loader bearing 328° distance 5 cables where holding is reported to be good. There was another vessel in that position at the time.

Caution: This anchorage is not recommended in strong South to S.E. winds due to the seas that build up in the Bay. Vessels are recommended to go to the North of Pilonisi Island and anchor in a position N.W. of the North West point, a distance of not less than 3 cables. This island is now joined to the main island by rubble from the factory, this is not shown on the Chart (1832).

Method of Berthing: (See "Plans"). Approach to the berth is made heading in a N.W.'ly direction, keeping the Northernmost buoy (A) close to the starboard side and when the bow is passed about a third of the ship's length, the starboard anchor is let go and let run until about 4 shackles on deck, then it is checked, in the meantime a boat will take a breast rope from for'd, run from the port shoulder lead (1). Once this is ashore and the vessel begins to cant to starboard, the bow is worked into position by heaving on the breast rope and slacking the cable until there is about 6 shackles on the latter. Meanwhile, a line is run from the starboard quarter (2) to buoy (B). A word of caution here, the berth is designed to take vessels up to 23,000 tons, so for a small vessel it will be necessary to have 2 ropes joined together for moorings (2), (4) and (5). The next line sent away is one from the Port Quarter to ashore as a breast rope (3), the stern is then brought into position in a similar manner to the bow. As the prevailing wind is from ahead usually, the next rope sent away is the head line (4) and finally the stern line (5). The latter two are used for shifting the vessel under the loader. Directly under the loading gantry, there is a dolphin arrangement to keep the vessel off the cliff, but on completion of mooring, the vessel should end up about 6 ft. to 10 ft. off this.

Caution: In strong South to S.E. winds, the berth becomes dangerous and vessels have to leave and go to anchor and it is often necessary to leave the ropes on the buoys etc. as it is not possible to let them go. It is also advisable to retain some ballast on board for berthing.

There are 2 Pilots, both speaking English, the younger, an ex-Chief Officer has the better command of English and was the source of a lot of this information.

On leaving the berth, the last rope to be let go is (2) and with a smaller vessel, this can safely let go while weighing anchor. Vessel will then proceed to another anchorage close to, to secure, obtain clearance and clean up.

Loading Procedure: Loading is done by a chute and at an approximate rate of 300 tonnes per hour. The cargo is very dusty and everything should be securely battened down and it is strongly advisable to wear goggles and protective masks on deck as the dust is choking and if it gets in the eyes, they should not be rubbed as it is abrasive and can cause permanent damage. Eyes should be washed out. The ship will advise what weight she can take, and as the weighing procedure ashore is liable to break down after the first 500 tonnes, vessel is loaded according to draft, which has to be carefully checked, as when stipulating amounts required per hatch, they will not necessarily keep to this unless told. A boat is available for checking the draft, 1 blast on the whistle will summon it. Only method of getting ashore is by boat, so it is necessary to have the starboard gangway down. Both foreman and boatman have a fair knowledge of English, but foreman does not come aboard but stays on the loader, so it is necessary to shout instructions, etc. The foreman will advise on shifting for position required, this is done with the aid of frequent blasts on a pocket whistle. Only one man comes aboard and that is to tend the chute.

There appears to be a continual short swell which makes draft reading a little difficult.

Entry and Clearance: Agent, Doctor, Customs and Harbour Master boarded the vessel at anchor and entered her there. Forms on board were not acceptable, but they transferred them to their own. I understand that the only acceptable forms are the standard IMO forms, and if there are any of these on board they should be used.

Forms required:
2 Crew Declarations.
3 Crew Lists.
2 Bonded Stores List.
2 Stores Lists.
1 Vaccination list (Including Cholera).

There are various other forms to sign, but these are prepared by the Agent. The Health Declaration is made out by the doctor in his book. The Agent, who is from the Mining Company, spoke very good English.

Weather: Northerly winds predominate during the Summer and can become quite strong during September, mainly from midnight to noon.

AUTHORITY: Port Authority of Milos, Adamas Harbour, Milos Island, Greece. *Tel:* 0287-22100.

Silver & Baryte Ores Mining Co. S.A., 21a Amerikis Street, Athens 10672, Greece. *Tel:* 3690330 or 3690111. *Telex:* 215189 elio gr.

Local: Silver & Baryte Ores Mining Co., Voudia Bay, Cyclades, Milos 84800, Greece.

MITILENE (incl. Geras Bay and Pamfyllon): 39.06 N. 26.35 E. **(See Plan)**

PORT LIMITS: A vessel is considered to be an "arrived ship" and laytime will commence at the working hours that follow the delivery of the Master's Notice of Readiness.

DOCUMENTS:

Quarantine:
Maritime Declaration of Health.
Valid Derat Certificate.
International Vaccination Certificates.

Customs:
2 Crew's Effects Declarations.
2 Ship's Stores Declarations.
2 Bonded Goods Declarations.
2 Crew Lists.

Immigration:
1 Crew List.

Port Authority:
1 Crew List.
1 Passenger List.
Ship's Certificates or Memorandum.
Ship's Papers.

PILOTAGE: It is not compulsory, but, if required, the services of experienced Mercantile Marine officers, having knowledge of the port, can be obtained.

ANCHORAGES: Off the Outer Port, in depths of about 18 m.; extreme end East of Kastro Peninsula (or Fokiotrypa) light, bearing due North.

RESTRICTIONS: Entry is not allowed after sunset.

MAX. SIZE: Length 120 m. – draft 17 ft. at Inner Port; length 160 m. – draft 28 ft at Outer Port.

HEALTH: The Authorities must receive a 24 hour advance notice for the ETA of the vessel with information about the port of origin, the cargo, the number of crew and passengers and the port of destination; details of any suspected disease or fever on board must be included in that notice. Pratique is automatic only for vessels entering after calling at another Greek port.

RADIO: "Athinai (Athens) Radio", "Limnos Radio", "Chios Radio". Call signs SVA, SVL, SVX respectively.

VHF: Port Authority's VHF radiocommunication; Channel 12 for calling.

BERTHING: See "Plan". For drafts see "Max. Size".

STEVEDORES: At least 8 hours' advance notice for the number of stevedores required.

MEDICAL: In case of illness on board the Master should cable details prior to arrival. Hospital and dental facilities are available. Vaccination cards required.

TANKERS: At Geras Bay (Mamidakis) and Pamfila (Purfina).

FRESH WATER: Available from the quay through pipes. Cost per ton about 600 Drs.

FUEL: Supplied by tanker trucks only; advance notice required.

FIRE PRECAUTIONS: No more than the usual ones.

CONSULS:

Belgium	Tel. 28494
France	Tel. 28151
Netherlands	Tel. 28760
Sweden	Tel. 28494

REPAIRS: Local machine shops undertake very minor repairs.

SURVEYORS: Lloyd's Register and Hellenic Register of Shipping.

HATCHES: Opening and closing is normally carried out by crew.

CUSTOMS ALLOWANCES: For each member of the crew: tobacco, 50 grams; cigarettes, 40 pieces; small cigars, 20 pieces. Wines, 2 litres. Spirits, 0.75 litre.

CARGO GEAR: Load/discharge effected by ship's own gear.

REPATRIATION: There are facilities for effecting crew changes and arranging any necessary repatriation.

AIRPORT: Distance 8 km. It is regularly served by "Olympic". Flights to Athens and Thessaloniki.

TIME: GMT plus 2 hours. GMT plus 3 hours during Summertime from April to September.

HOLIDAYS: January 1st, New Year's Day; January 6th, Epiphany; Ash Monday; March 25th, National Holiday; Good Friday; Easter Monday; May 1st, Labour Day; Whit Monday; August 15th, Assumption; October 28th, National Holiday; December 25th, Christmas Day; December 26th, Boxing Day.

Cargo work can be arranged on these days after consultation with the union of stevedores.

POLICE/AMBULANCE/FIRE: Police, Tel. 100 and 22021; Hospital, Tel. 28412 and 22005; Fire Brigade, Tel. 199 and 22055.

EMERGENCY CO-ORDINATION CENTRE: Hellenic Coast Guard Emergency Co-ordination Centre (S.A.R. Chamber) in Piraeus. Telephones: 4112500 and 4173238. Telex: (021) 2022, 2273 and 2239 Yen Gr.

BANKS:
Bank of Greece, Prokymaia Telex: 297110 Bngr Gr.
National Bank of Greece, Prokymaia. Telex: 297106 Nbg Gr.
General Hellenic Bank, Prokymaia.
Commercial Bank of Greece, Prokymaia. Telex: 297103 Cbmy Gr.
Ionian & Popular Bank of Greece, P. Kountouriotou & Alkaiou. Telex: 297109 IPMY GR.
Agricultural Bank of Greece, Vournazon 2. Telex: 297108 Ate Gr.
Credit Bank, P. Kountouriotou 33. Telex: 297151 Ccb Gr.

STORING: Vessel can be stored by truck only. Trucks can proceed alongside at the berth.

SHIP SUPPLY SERVICE: Ant. Picoulos Shipping Agency, Prokymaia, Mitilene. Office Tel: 23720, 27000, 24933. Home Tel: 22341. Telex: 297120.

SHORE LEAVE: No restrictions.

IDENTIFICATION CARDS: Shore passes are issued.

DELAYS: Normally there are no delays.

AUTHORITY: Hellenic Coast Guard, Island of Lesbos Port Authority, Mitilene Port Authority, Prokymaia, Mitilene 81100, Greece. *Tel:* 28827, 28888, 24115. *Telex:* 297142 LXM GR. *Cables:* Limenarchio, Mytilene. *FAX:* 0251-28888. *Contact:* Commander Apostolakis Christos, Harbour Master.

MYKONOS: 37.26 N. 25.25 E.

Vessels in excess of 22,000 d.w.t. have been accommodated. Loading of Barytes ore at rates up to 5,000 tons per day. In Winter when North winds prevail conditions are satisfactory for loading: however, loading position considered unsafe when S.W. or West winds prevailing. When sufficient cargo is available vessels can load in 2 days.

PACHI: 37.58 N. 23.23 E. (See Plan)

DOCUMENTS: All usual certificates including Registry, Safety, Cargo Gear, Radio, Derat, Last Port of Clearance and:

9 copies Crew Lists.
2 copies Vaccination Certificates.
1 copy Cargo Manifest.
1 copy List of Spares.
1 copy Maritime Declaration of Health.
1 copy Vaccination List.
4 copies Crew Effects Declaration.
1 copy Passenger List.
1 copy Cargo Documents.
2 Special Customs Forms in triplicate.
2 copies Stores Lists.

PILOTAGE: Compulsory. Pilot boards S.W. of N.Pachi Island.
ANCHORAGES: S.W. of N.Pachi Island in depth of 30 fathoms.
RESTRICTIONS: The berths operate throughout 24 hours.
MAX. SIZE: Pachi Oil Terminal is able to accept vessels for discharging crude oil from 20,000 d.w.t. to 600,000 d.w.t., max. draft 29 m. The depth at the head of the pier is 31 m.
HEALTH: Pratique is in accordance with International Regulations. Pratique not required if arriving from another Greek port.
RADIO: Athens Radio (SVA).
VHF: Piraeus Pilots and Eleusis Coastguard operate a 24 hour service on Channels 16, 6, 12 and 14. Hellenic Refinery operates on Channels 14 and 8.
RADAR: None.
TUGS: Usually join vessel near anchorage. Ship's lines always used.
MEDICAL: Medical facilities available at Megara and Eleusis.
TANKERS: Location of berth: Lat. 37° 58' 25" N., Long. 23° 22' 50" E.

Pilot will advise Master of berthing place in accordance with Port Authority instructions. Always berthing with starboard side alongside with 3 head lines, 4 breasts, 2 springs, 3 stern lines, 4 breasts and 2 springs.

There is one berth with 4 unloading arms 16 in. diameter each. The maximum and minimum height of the manifolds to the ship is 35.5 m and 2 m. respectively above sea level.

The maximum accepted pressure is 11 bars (150 p.s.i.) and the maximum accepted flow rate through each unloading arm is 4,000 cu.m./hr.

Echo Distance Device: Available at the berth is a distance and speed device. Prior to berthing, but before approaching, obtain indications from terminal that device is in good order.

Ballast: No facilities for discharging ballast.
DENSITY: 1025.
FRESH WATER: Not available at present.
FUEL: Not available.
FIRE PRECAUTIONS: Fire wires rigged fore and aft on outboard side of vessel. Deck scuppers plugged. Spark arresters to be fitted on tank openings. Earth connections made. Safety Tug standing by during discharging, according to Port Authority instructions.

In the case of a storm, the Dock Master can stop discharge of vessels.
CONSULS: None locally. Consuls at Athens and Piraeus.
REPAIRS: While alongside, maintenance of any kind on board is strictly prohibited. In case of an emergency, the issuing of a special written "cold or hot work" permit is necessary from the Port Authorities.
DRY DOCKS: See "Eleusis".
GANGWAY/DECK WATCHMEN: Not required.
CUSTOMS ALLOWANCES: 200 cigarettes and 1 open bottle of wine/spirit allowed per crew member.
REPATRIATION: All facilities available for crew changes and repatriation.
AIRPORT: Athens International Airport at Hellinicon (60 km.).
TIME: GMT plus 2 hours. Summertime (March to September) GMT plus 3 hours.
HOLIDAYS: None affecting cargo operations.
POLICE/AMBULANCE/FIRE: All emergency services are available through the Terminal Office. Eleusis Coastguard (01) 5547711, 5546671.
TELEPHONES: This service is available aboard ship by prior arrangement through the Agents. Standard rates apply.
SERVICES: Compass adjusting. Electronic equipment services.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Shore passes issued by Port Authority.
GARBAGE DISPOSAL: Not available from refinery. Barges not allowed alongside vessel at the terminal.
SEAMAN'S CLUBS: No club but usual local facilities.
CURRENCY: Greek Drachma (GDR). U.S.$ 1.00 = 241.0 GDR (20.2.96).
AUTHORITY: *Operators:* Hellenic Aspropyrgos Refinery, S.A., 54 Leoforos Amalias Street, Athens 10558, Greece. *Tel:* 5578200, 5533229. *Telex:* 215489, 215443, 215442. *FAX:* 5570990. *Contact:* Manolis Lembidakis.

PATRAS (including Rio): 38.14 N. 21.45 E. (See Plan)

DOCUMENTS: Port Authorities: 2 Crew Lists, Customs: Declaration of Cargo and Passengers.
PILOTAGE: Compulsory. Advance notice of ETA to be passed to Agents who arrange Pilot. Vessels without Agents should advise authority of ETA through Athens Radio, or on arrival outside harbour make International Code sounds and signals for vessels requiring a Pilot. Pilot boat is small boat carrying pilot flag. Pilot usually boards less than 1 mile outside harbour entrance. VHF contact possible with Port Authority and Pilot on Channel 12.
ANCHORAGES: Patras Roads are usually safe; when very strong W./N.W. winds blow, vessels may anchor at Nafpaktos Roads.
RESTRICTIONS: Port entrance has depth of 34 ft. At main harbour vessels having draft in excess of 28 ft. cannot berth. The limit at the new berth is 34 ft. draft. There are 2 red buoys at the entrance to the port.
MAX. SIZE: Vessels of less than 34 ft. draft. No restrictions on length or breadth. Height of tide, max. 0.55 m., does not affect size of vessel.
HEALTH: Pratique in accordance with International Regulations.
RADIO: Athens Radio.
TUGS: Two tugs, 900 h.p. and 1,200 h.p. Use of tug compulsory for all vessels over 1,000 tons gross. Joins vessel at entrance to harbour. Ship's lines used.

Tugs also available on request to Nicolas E. Vernicos. Tel: Piraeus 4527812-4522337 (24 hours).
BERTHING: In accordance with allocation given by Port Authority. See "Plan" for lengths and depths.
STEVEDORES: Advance notice of ETA required in order to arrange berth and order number of gangs to commence work immediately. General cargo rate about 80 – 100 t.p.h./gang, bulk cargoes 75 – 90 tons. 7 mobile cranes, capacity up to 25 tons available. One mobile crane capacity 118 tonnes with container handling facilities.
TANKERS: No facilities at Patras, but Texaco-Restis Berth at Rio for vessels up to 18 ft. and 2,500 tons alongside. No residue discharge facilities.
FRESH WATER: Supply line connected to all berths. Rate 30 t.p.h.
FUEL: Deliveries by tank trucks at Patras. Available at Texaco-Restis Berth at Rio.
FIRE PRECAUTIONS: Vessels refuelling or discharging explosives or flammable materials must apply to Port Fire Brigade to stand by.
CONSULS:

Belgium	France	Netherlands
Denmark	Germany	Sweden
Finland	Italy	Switzerland

REPAIRS: Very minor repairs only.
WATCHMEN: Advisable to employ night-watchmen on large vessels.
HATCHES: Usually opened and closed by crew.
CUSTOMS ALLOWANCES: 200 cigarettes and 1 bottle wine/spirits allowed out of bond for each Crew member.
REPATRIATION: All facilities for crew changes and repatriation.
AIRPORT: None.
TIME: Summertime GMT plus 3 hours end March to end September, otherwise GMT plus 2 hours.
HOLIDAYS: In addition to general Greek holidays and Sundays, local holidays are 8th September, 30th November. Work can be arranged on these days subject to payment of additional charges.
POLICE/AMBULANCE/FIRE: Port Police, tel. 341–002; Patras Police Station, tel. 100; Ambulance, tel. 166; Fire Brigade, tel. 199. The port has a fireboat.
TELEPHONES: Facilities for connecting on board.
SHORE LEAVE: Permitted.
IDENTIFICATION CARDS: Crew are supplied with passes by Port Authority.
GARBAGE DISPOSAL: Service available. Garbage must be packed in bags. Contact Tel: 61-336700.
WASTE OIL DISPOSAL: Service available by tanker truck. Contact Tel: 1-4130027.
SEAMAN'S CLUBS: No club. Facilities for games and sea sports are available locally, as are Greek Orthodox and Catholic churches.
CURRENCY: Greek Drachma (DRC).
DEVELOPMENTS: *(a)* Outer breakwater has been extended by 90 m. at South end.

(b) New quay with length of 220 m. to the North of the main installation to be constructed.
AUTHORITY: Port Authority of Patras, Building of Port Authorities, Patras, Greece. *Tel:* 061-322024. *Telex:* 312120 LTPA GR. *FAX:* 061-331997, 061-344860. *Contact:* P. Bousbouras, Technical Manager.

PIRAEUS: 37.57 N. 23.38 E. (See Plan)

(Including AGHIOS GEORGIOS 37.57 N. 23.36 E.; DRAPETSONA 37.56 N. 23.37 E.; and PERAMA 37.58 N. 23.35 E.)

DOCUMENTS: All usual certificates including Registry, Measurement, Inspection, Load Line, Fumigation, Passenger Safety, Cargo Gear and Radio.

9 Crew Lists.
2 Vaccination Certificates.
Cargo Manifest.
List of Provisions and Stores.
List of Spares.
Maritime Declaration of Health.
1 List of Vaccination Dates.
1 Crew Effects Declaration.

Customs:
2 Special Forms in Triplicate.
1 Stores List.
Master's Declaration of typewriters and adding machines, etc.
Crew Passports, or Seamen's Books.
Passenger Passports.

PILOTAGE: Cable Agent well in advance advising ETA. Agent informs pilot office of vessel's arrival time.

Pilots can be contacted on VHF Channel 16 for calling, Channels 7 and 12 for communication. Pilot boat is a wooden vessel about 10 m. length with black-painted hull, word "Pilot" painted in white.

Vessels requiring Pilot should signal letter "G" by morse light or by ship's whistle. Pilot boards vessel about 1.5 miles off entrance to harbour, except when very strong South winds prevailing, in which case vessel advised by VHF or by signal light that conditions impossible for Pilot boarding, and whether vessel permitted enter harbour at Master's risk.

If awaiting Pilot, anchorage is possible inside pilotage area of Piraeus – Aghios Kosmas – Piraeus Anchorage – Perama Anchorage – Megara Anchorage (Pachi).

ANCHORAGES: As above. Depths between 8.0 m. and 16.0 m.

RESTRICTIONS: No restrictions for Aghios Georgios Harbour or Drapetsona excepting draft. Harbours open throughout 24 hours for entry and departure subject prevailing weather conditions. No tidal restrictions.

MAX. SIZE: Aghios Georgios: Max. draft 32 ft. Drapetsona: Max. draft 38 ft. Piraeus: Max. draft 36 ft. (Also see "Tankers")

RADIO: Athinai Radio – SVA.

TUGS: Use of tugs compulsory for vessels over 1,000 g.r.t. Usually join vessel outside harbour, always using ship's lines. Over 30 tugs available. 10 of less than 1,000 h.p. and remainder over 1,000 h.p.

Nicolas E. Vernicos Shipping Co. Ltd., operate 10 tugs, 500 – 4,000 h.p. Available for towage and salvage. Tel: 4527812, 4522337 (24 hours). Telex: 212450 Vern Gr. VHF Channel 6.

BERTHING: Agent must advise Piraeus Harbour Authorities in order to secure berth allocation. 20,000 m. of quay space. 9 Ro/Ro ramps available.

CRANES: 6 container cranes, lifting capacity 41 tons.

56 electric wharf cranes with capacities of 2 to 27 tons installed along the wharf of the main port and at the dry and floating docks.
51 mobile cranes with capacities of 3 to 20 tons.
40 Straddle-carriers for containers, capacity 30 tons each.
4 floating cranes with capacities of 15, 30 and 2×100 tons.
34 tractors.
20 forklifts.
280 reefer plugs.

BULK HANDLING FACILITIES: Silo suction-duct installations capable of moving grain at up to 130 t.p.h. and storage facility for 40,800 tons, as well as 2 mobile suction-duct units for bulk grain-cargoes.

One gantry crane lifting capacity 10 tons, used for coal and bulk cargoes installed at Hercules Port. Pier length 200 m., max. LOA 160 m., max. beam 17 m., max. draft 10 m. Average daily rate for coal 1,000 – 1,200 tonnes.

STEVEDORES: Agent must submit letter of application to Piraeus Port Authorities for number of gangs required also time required to commence cargo work. Discharge usually effected with ship's own gear.

Normal work on loading/discharge of goods in the port is carried out by 2 regular shifts, the morning shift (0800 – 1400 hrs.) and the afternoon shift (1500 – 2100 hrs.). Likewise, upon application of the interested parties (ship-owners, Agents, consignees, shippers, etc.), and provided approval of the competent P.P.A. Service is obtained, a third, night shift can be assigned to the job if the necessary workers and operators are available. This shift is again of 7 hour duration, from 2100 – 0330 hrs. or can be extended to the morning hours if necessary. Exceptionally in the case of work on refrigerator vessels, on which work during the Summer period is limited to the afternoon hours, the Service can assign workers and operators of loading/discharge machinery, starting from 1630 hrs., for a 7 hour period which can be extended, if conditions warrant, to the morning of the next day. Loading/discharge work may also be undertaken on Sundays and other non-working days (holidays) such work being considered as totally extra, being burdened with extra charges accordingly.

MEDICAL: All medical and hospital facilities available. No advance notice required except in special cases.

TANKERS: Discharging effected at private installations.

Shell	Max. draft 32 ft.	Petrolles	Max. draft 29 ft.
B.P.	Max. draft 36 ft.	Fina	Max. draft 28 ft.
Elvyn	Max. draft 26 ft.	Mobil	Max. draft 48 ft.

D.E.H. Max. draft 36 ft. (outside steam generator factory, no facilities for going alongside).

DENSITY: 1025.

FRESH WATER: Available alongside berths. For vessels at anchor, water can be delivered by barges (capacity 150 – 240 tons) belonging to Piraeus Harbour Authority at 50% additional cost.

FUEL: Gas oil, fuel oil and mixtures of both to a certain viscosity available. Advance notice of requirements should be sent to Agent order complete customer's requirements.

CONSULS:
Andorra
Belgium
Costa Rica
Cyprus
Denmark
Ecuador
Finland
Iceland
Italy
Liberia
Malta
Netherlands
Norway
Panama
Philippines
Senegal
Somalia
South Africa
Spain
Sweden

REPAIRS: Facilities available for all kinds of deck and engine repairs.

DRY DOCKS: (A) Two permanent dry docks at Piraeus (i) Length 136.4 m., depth 9.27 m.; (ii) Length 93.3 m., depth 8.0 m.

(B) Two floating docks at Perama. (i) Length 202 m., depth 40 m., capacity 15,000 tons. (ii) Length 113.8 m., depth 28 m., capacity 4,000 tons.

Also see "Eleusis" and "Syros".

SURVEYORS: American Bureau of Shipping, Filellinon 1-3, Piraeus. Tel: 4527611/4.
Bureau Veritas, 85 Akti Miaouli, Piraeus. Tel: 4173270, 4517124, 4120673.
Det Norske Veritas, 5-7 Filellinon Street, Piraeus. Tel: 4525333/4.
Germanischer Lloyd, Kanari 8 & Hatzikiriakou Street, Piraeus. Tel: 4513123.
Lloyd's Register of Shipping, 87 Akti Miaouli, Piraeus. Tel: 4523529, 4523942.
Nippon Kaiji Kyokai, 117 Notara Street, Piraeus. Tel: 4523529, 4525777.
Registro Italiano Navale, 35-39 Akti Miaouli, Piraeus. Tel: 4520011.
Panama Bureau of Shipping, 23 Akti Miaouli, Piraeus. Tel: 4110807.
Hellenic Register of Shipping, 23 Akti Miaouli, Piraeus. Tel: 4177632.

WATCHMEN: Required.

HATCHES: Opened and closed by stevedores.

CUSTOMS ALLOWANCES: Tobacco, 200 cigarettes per crew member allowed out of bond. Wine/spirits, 1 bottle.

CARGO GEAR: Before commencement of loading or discharge, cargo gear is examined by Piraeus Harbour Authorities.

REPATRIATION: All facilities for crew changes and repatriation.

AIRPORT: Athens Airport 14 km. distant from main harbour. Regular international flights.

TIME: GMT plus 2 hours. GMT plus 3 hours – end March to end September.

HOLIDAYS: In addition to Sundays, local holidays are: 1st January; Epiphany; Whit Monday; 25th March; Good Friday; Easter Monday; 1st May; Holy Trinity; 15th August; 28th October; 12th December; 25th December; Boxing Day.

Cargo work possible on these days subject extra payment of 75%.

POLICE/AMBULANCE/FIRE: In emergency telephone Harbour Office 188 or 4511-183. Subsidiary Harbour Department Tel: 4612-876. Harbour Guard Aghios Georgios Tel: 4612-876. Harbour Guard Drapetsona Tel: 4511-183. Police Tel: 100. Fire Service Tel: 199.

TELEPHONES: Telephone connection on board can be made.

SERVICES: Compass adjusting, tank cleaning. No facilities for discharge of tank residues.

SHORE LEAVE: Permitted.

IDENTIFICATION CARDS: Passes required for seamen going ashore.

BANKS: *Greek Banks in Piraeus:*
Bank of Attica S.A. Tel: 4124659.
Bank of Crete. Tel: 4522633.
Bank of Greece. Tel: 4121484.
Commercial Bank of Greece. Tel: 4174721.
Commercial Bank of Greece (Shipping Dept.). Tel: 4520370
Credit Bank of Greece. Tel: 4174392.
Ergobank S.A. Tel: 4130234. Shipping Branch Tel: 4115626.
Ionian & Popular Bank. Tel: 4174101. Shipping Branch Tel: 4522367.
National Bank of Greece. Tel: 4174101. Shipping Tel: 4522611.
Piraeus Bank S.A. Tel: 4122648.
Citibank. Tel: 4593001.
Chios Bank. Tel: 4220520.

Foreign Banks:
Algemene Bank Nederland NV. Tel: Piraeus 4522305.
American Express. Tel: Piraeus 4121665.
Arab Bank Ltd. Tel: Athens 3230818.
Arab Hellenic Bank. Tel: Athens 3250820.
Banca Commerciale Italiana. Tel: Athens 3246014.
Bank of America. Tel: Piraeus 4527251.
Bank of Nova Scotia. Tel: Piraeus 4118711.
Bank Saderat Iran. Tel: Athens 3249531.
*Bankers Trust Company. Tel: Athens 3229835.
Banque de Paris et des Pays Bas. Tel: Piraeus 4137202.
Barclays Bank International Ltd. Tel: Piraeus 4510207.
*Bayerische Vereinsbank. Tel: Athens 3639315.
Citibank NA. Tel: Piraeus 4523511.
Continental Bank. Tel: Piraeus 4112711.
Grindlays Bank Ltd. Tel: Piraeus 4111753.
*Hambros Bank Ltd. Tel: Athens 3227243.
Marine Midland Bank. Tel: Piraeus 4520350.
Midland Bank plc. Tel: Piraeus 4136403.
*Morgan Grenfell Co. Ltd. Tel: Athens 3606456.
National Westminster Bank Ltd. Tel: Piraeus 4529215.
*Nederlandse Scheepshypotheekbank. Tel: Piraeus 4523946.
Royal Bank of Scotland. Tel: 4537483.
*Schiffshypothekenbank zu Lubeck Aktiengesellsch. Tel: Piraeus 4523657.
Societe Generale. Tel: Athens 3255001.
The Chase Manhattan Bank. Tel: Piraeus 4113711.
The First National Bank of Chicago. Tel: Athens 3602311.
Williams & Glyn's Bank. Tel: Piraeus 4527483.
*Representative.

AUTHORITY: Hellenic Coast Guard, Island of Lesbos Port Authority, Mitilene Port Authority, Prokymaia, Mitilene 81100, Greece. *Tel:* 28827, 28888, 24115. *Telex:* 297142 LXM GR. *Cables:* Limenarchio, Mytilene. *FAX:* 0251-28888. *Contact:* Commander Apostolakis Christos, Harbour Master.

MYKONOS: 37.26 N. 25.25 E.

Vessels in excess of 22,000 d.w.t. have been accommodated. Loading of Barytes ore at rates up to 5,000 tons per day. In Winter when North winds prevail conditions are satisfactory for loading: however, loading position considered unsafe when S.W. or West winds prevailing. When sufficient cargo is available vessels can load in 2 days.

PACHI: 37.58 N. 23.23 E. (See Plan)

DOCUMENTS: All usual certificates including Registry, Safety, Cargo Gear, Radio, Derat, Last Port of Clearance and:

9 copies Crew Lists.
2 copies Vaccination Certificates.
1 copy Cargo Manifest.
1 copy List of Spares.
1 copy Maritime Declaration of Health.
1 copy Vaccination List.
4 copies Crew Effects Declaration.
1 copy Passenger List.
1 copy Cargo Documents.
2 Special Customs Forms in triplicate.
2 copies Stores Lists.

PILOTAGE: Compulsory. Pilot boards S.W. of N.Pachi Island.
ANCHORAGES: S.W. of N.Pachi Island in depth of 30 fathoms.
RESTRICTIONS: The berths operate throughout 24 hours.
MAX. SIZE: Pachi Oil Terminal is able to accept vessels for discharging crude oil from 20,000 d.w.t. to 600,000 d.w.t., max. draft 29 m. The depth at the head of the pier is 31 m.
HEALTH: Pratique is in accordance with International Regulations. Pratique not required if arriving from another Greek port.
RADIO: Athens Radio (SVA).
VHF: Piraeus Pilots and Eleusis Coastguard operate a 24 hour service on Channels 16, 6, 12 and 14. Hellenic Refinery operates on Channels 14 and 8.
RADAR: None.
TUGS: Usually join vessel near anchorage. Ship's lines always used.
MEDICAL: Medical facilities available at Megara and Eleusis.
TANKERS: Location of berth: Lat. 37° 58' 25" N., Long. 23° 22' 50" E.

Pilot will advise Master of berthing place in accordance with Port Authority instructions. Always berthing with starboard side alongside with 3 head lines, 4 breasts, 2 springs, 3 stern lines, 4 breasts and 2 springs.

There is one berth with 4 unloading arms 16 in. diameter each. The maximum and minimum height of the manifolds to the ship is 35.5 m and 2 m. respectively above sea level.

The maximum accepted pressure is 11 bars (150 p.s.i.) and the maximum accepted flow rate through each unloading arm is 4,000 cu.m./hr.

Echo Distance Device: Available at the berth is a distance and speed device. Prior to berthing, but before approaching, obtain indications from terminal that device is in good order.
Ballast: No facilities for discharging ballast.
DENSITY: 1025.
FRESH WATER: Not available at present.
FUEL: Not available.
FIRE PRECAUTIONS: Fire wires rigged fore and aft on outboard side of vessel. Deck scuppers plugged. Spark arresters to be fitted on tank openings. Earth connections made. Safety Tug standing by during discharging, according to Port Authority instructions.

In the case of a storm, the Dock Master can stop discharge of vessels.
CONSULS: None locally. Consuls at Athens and Piraeus.
REPAIRS: While alongside, maintenance of any kind on board is strictly prohibited. In case of an emergency, the issuing of a special written "cold or hot work" permit is necessary from the Port Authorities.
DRY DOCKS: See "Eleusis".
GANGWAY/DECK WATCHMEN: Not required.
CUSTOMS ALLOWANCES: 200 cigarettes and 1 open bottle of wine/spirit allowed per crew member.
REPATRIATION: All facilities available for crew changes and repatriation.
AIRPORT: Athens International Airport at Hellinicon (60 km.).
TIME: GMT plus 2 hours. Summertime (March to September) GMT plus 3 hours.
HOLIDAYS: None affecting cargo operations.
POLICE/AMBULANCE/FIRE: All emergency services are available through the Terminal Office. Eleusis Coastguard (01) 5547711, 5546671.
TELEPHONES: This service is available aboard ship by prior arrangement through the Agents. Standard rates apply.
SERVICES: Compass adjusting. Electronic equipment services.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Shore passes issued by Port Authority.
GARBAGE DISPOSAL: Not available from refinery. Barges not allowed alongside vessel at the terminal.
SEAMAN'S CLUBS: No club but usual local facilities.
CURRENCY: Greek Drachma (GDR). U.S.$ 1.00 = 241.0 GDR (20.2.96).
AUTHORITY: *Operators:* Hellenic Aspropyrgos Refinery, S.A., 54 Leoforos Amalias Street, Athens 10558, Greece. *Tel:* 5578200, 5533229. *Telex:* 215489, 215443, 215442. *FAX:* 5570990. *Contact:* Manolis Lembidakis.

PATRAS (including Rio): 38.14 N. 21.45 E. (See Plan)

DOCUMENTS: Port Authorities: 2 Crew Lists, Customs: Declaration of Cargo and Passengers.
PILOTAGE: Compulsory. Advance notice of ETA to be passed to Agents who arrange Pilot. Vessels without Agents should advise authority of ETA through Athens Radio, or on arrival outside harbour make International Code sounds and signals for vessels requiring a Pilot. Pilot boat is small boat carrying pilot flag. Pilot usually boards less than 1 mile outside harbour entrance. VHF contact possible with Port Authority and Pilot on Channel 12.
ANCHORAGES: Patras Roads are usually safe; when very strong W./N.W. winds blow, vessels may anchor at Nafpaktos Roads.
RESTRICTIONS: Port entrance has depth of 34 ft. At main harbour vessels having draft in excess of 28 ft. cannot berth. The limit at the new berth is 34 ft. draft. There are 2 red buoys at the entrance to the port.
MAX. SIZE: Vessels of less than 34 ft. draft. No restrictions on length or breadth. Height of tide, max. 0.55 m., does not affect size of vessel.
HEALTH: Pratique in accordance with International Regulations.
RADIO: Athens Radio.
TUGS: Two tugs, 900 h.p. and 1,200 h.p. Use of tug compulsory for all vessels over 1,000 tons gross. Joins vessel at entrance to harbour. Ship's lines used.

Tugs also available on request to Nicolas E. Vernicos. Tel: Piraeus 4527812-4522337 (24 hours).
BERTHING: In accordance with allocation given by Port Authority. See "Plan" for lengths and depths.
STEVEDORES: Advance notice of ETA required in order to arrange berth and order number of gangs to commence work immediately. General cargo rate about 80 – 100 t.p.h./gang, bulk cargoes 75 – 90 tons. 7 mobile cranes, capacity up to 25 tons available. One mobile crane capacity 118 tonnes with container handling facilities.
TANKERS: No facilities at Patras, but Texaco-Restis Berth at Rio for vessels up to 18 ft. and 2,500 tons alongside. No residue discharge facilities.
FRESH WATER: Supply line connected to all berths. Rate 30 t.p.h.
FUEL: Deliveries by tank trucks at Patras. Available at Texaco-Restis Berth at Rio.
FIRE PRECAUTIONS: Vessels refuelling or discharging explosives or flammable materials must apply to Port Fire Brigade to stand by.
CONSULS:

Belgium
Denmark
Finland
France
Germany
Italy
Netherlands
Sweden
Switzerland

REPAIRS: Very minor repairs only.
WATCHMEN: Advisable to employ night-watchmen on large vessels.
HATCHES: Usually opened and closed by crew.
CUSTOMS ALLOWANCES: 200 cigarettes and 1 bottle wine/spirits allowed out of bond for each Crew member.
REPATRIATION: All facilities for crew changes and repatriation.
AIRPORT: None.
TIME: Summertime GMT plus 3 hours end March to end September, otherwise GMT plus 2 hours.
HOLIDAYS: In addition to general Greek holidays and Sundays, local holidays are 8th September, 30th November. Work can be arranged on these days subject to payment of additional charges.
POLICE/AMBULANCE/FIRE: Port Police, tel. 341–002; Patras Police Station, tel. 100; Ambulance, tel. 166; Fire Brigade, tel. 199. The port has a fireboat.
TELEPHONES: Facilities for connecting on board.
SHORE LEAVE: Permitted.
IDENTIFICATION CARDS: Crew are supplied with passes by Port Authority.
GARBAGE DISPOSAL: Service available. Garbage must be packed in bags. Contact Tel: 61-336700.
WASTE OIL DISPOSAL: Service available by tanker truck. Contact Tel: 1-4130027.
SEAMAN'S CLUBS: No club. Facilities for games and sea sports are available locally, as are Greek Orthodox and Catholic churches.
CURRENCY: Greek Drachma (DRC).
DEVELOPMENTS: *(a)* Outer breakwater has been extended by 90 m. at South end.

(b) New quay with length of 220 m. to the North of the main installation to be constructed.
AUTHORITY: Port Authority of Patras, Building of Port Authorities, Patras, Greece. *Tel:* 061-322024. *Telex:* 312120 LTPA GR. *FAX:* 061-331997, 061-344860. *Contact:* P. Bousbouras, Technical Manager.

PIRAEUS: 37.57 N. 23.38 E. (See Plan)

(Including AGHIOS GEORGIOS 37.57 N. 23.36 E.; DRAPETSONA 37.56 N. 23.37 E.; and PERAMA 37.58 N. 23.35 E.)

DOCUMENTS: All usual certificates including Registry, Measurement, Inspection, Load Line, Fumigation, Passenger Safety, Cargo Gear and Radio.
9 Crew Lists.
2 Vaccination Certificates.
Cargo Manifest.
List of Provisions and Stores.
List of Spares.
Maritime Declaration of Health.
1 List of Vaccination Dates.
1 Crew Effects Declaration.
Customs:
2 Special Forms in Triplicate.
1 Stores List.
Master's Declaration of typewriters and adding machines, etc.
Crew Passports, or Seamen's Books.
Passenger Passports.

PILOTAGE: Cable Agent well in advance advising ETA. Agent informs pilot office of vessel's arrival time.

Pilots can be contacted on VHF Channel 16 for calling, Channels 7 and 12 for communication. Pilot boat is a wooden vessel about 10 m. length with black-painted hull, word "Pilot" painted in white.

Vessels requiring Pilot should signal letter "G" by morse light or by ship's whistle. Pilot boards vessel about 1.5 miles off entrance to harbour, except when very strong South winds prevailing, in which case vessel advised by VHF or by signal light that conditions impossible for Pilot boarding, and whether vessel permitted enter harbour at Master's risk.

If awaiting Pilot, anchorage is possible inside pilotage area of Piraeus – Aghios Kosmas – Piraeus Anchorage – Perama Anchorage – Megara Anchorage (Pachi).

ANCHORAGES: As above. Depths between 8.0 m. and 16.0 m.

RESTRICTIONS: No restrictions for Aghios Georgios Harbour or Drapetsona excepting draft. Harbours open throughout 24 hours for entry and departure subject prevailing weather conditions. No tidal restrictions.

MAX. SIZE: Aghios Georgios: Max. draft 32 ft. Drapetsona: Max. draft 38 ft. Piraeus: Max. draft 36 ft. (Also see "Tankers").

RADIO: Athinai Radio – SVA.

TUGS: Use of tugs compulsory for vessels over 1,000 g.r.t. Usually join vessel outside harbour, always using ship's lines. Over 30 tugs available. 10 of less than 1,000 h.p. and remainder over 1,000 h.p.

Nicolas E. Vernicos Shipping Co. Ltd., operate 10 tugs, 500 – 4,000 h.p. Available for towage and salvage. Tel: 4527812, 4522337 (24 hours). Telex: 212450 Vern Gr. VHF Channel 6.

BERTHING: Agent must advise Piraeus Harbour Authorities in order to secure berth allocation. 20,000 m. of quay space. 9 Ro/Ro ramps available.

CRANES: 6 container cranes, lifting capacity 41 tons.
56 electric wharf cranes with capacities of 2 to 27 tons installed along the wharf of the main port and at the dry and floating docks.
51 mobile cranes with capacities of 3 to 20 tons.
40 Straddle-carriers for containers, capacity 30 tons each.
4 floating cranes with capacities of 15, 30 and 2×100 tons.
34 tractors.
20 forklifts.
280 reefer plugs.

BULK HANDLING FACILITIES: Silo suction-duct installations capable of moving grain at up to 130 t.p.h. and storage facility for 40,800 tons, as well as 2 mobile suction-duct units for bulk grain-cargoes.

One gantry crane lifting capacity 10 tons, used for coal and bulk cargoes installed at Hercules Port. Pier length 200 m., max. LOA 160 m., max. beam 17 m., max. draft 10 m. Average daily rate for coal 1,000 – 1,200 tonnes.

STEVEDORES: Agent must submit letter of application to Piraeus Port Authorities for number of gangs required also time required to commence cargo work. Discharge usually effected with ship's own gear.

Normal work on loading/discharge of goods in the port is carried out by 2 regular shifts, the morning shift (0800 – 1400 hrs.) and the afternoon shift (1500 – 2100 hrs.). Likewise, upon application of the interested parties (ship-owners, Agents, consignees, shippers, etc.), and provided approval of the competent P.P.A. Service is obtained, a third, night shift can be assigned to the job if the necessary workers and operators are available. This shift is again of 7 hour duration, from 2100 – 0330 hrs. or can be extended to the morning hours if necessary. Exceptionally in the case of work on refrigerator vessels, on which work during the Summer period is limited to the afternoon hours, the Service can assign workers and operators of loading/discharge machinery, starting from 1630 hrs., for a 7 hour period which can be extended, if conditions warrant, to the morning of the next day. Loading/discharge work may also be undertaken on Sundays and other non-working days (holidays) such work being considered as totally extra, being burdened with extra charges accordingly.

MEDICAL: All medical and hospital facilities available. No advance notice required except in special cases.

TANKERS: Discharging effected at private installations.

Shell	Max. draft 32 ft.	Petrolles	Max. draft 29 ft.
B.P.	Max. draft 36 ft.	Fina	Max. draft 28 ft.
Elvyn	Max. draft 26 ft.	Mobil	Max. draft 48 ft.

D.E.H. Max. draft 36 ft. (outside steam generator factory, no facilities for going alongside).

DENSITY: 1025.

FRESH WATER: Available alongside berths. For vessels at anchor, water can be delivered by barges (capacity 150 – 240 tons) belonging to Piraeus Harbour Authority at 50% additional cost.

FUEL: Gas oil, fuel oil and mixtures of both to a certain viscosity available. Advance notice of requirements should be sent to Agent order complete customer's requirements.

CONSULS:
Andorra
Belgium
Costa Rica
Cyprus
Denmark
Ecuador
Finland
Iceland
Italy
Liberia
Malta
Netherlands
Norway
Panama
Philippines
Senegal
Somalia
South Africa
Spain
Sweden

REPAIRS: Facilities available for all kinds of deck and engine repairs.

DRY DOCKS: (A) Two permanent dry docks at Piraeus (i) Length 136.4 m., depth 9.27 m.; (ii) Length 93.3 m., depth 8.0 m.

(B) Two floating docks at Perama. (i) Length 202 m., depth 40 m., capacity 15,000 tons. (ii) Length 113.8 m., depth 28 m., capacity 4,000 tons.

Also see "Eleusis" and "Syros".

SURVEYORS: American Bureau of Shipping, Filellinon 1-3, Piraeus. Tel: 4527611/4.
Bureau Veritas, 85 Akti Miaouli, Piraeus. Tel: 4173270, 4517124, 4120673.
Det Norske Veritas, 5-7 Filellinon Street, Piraeus. Tel: 4525333/4.
Germanischer Lloyd, Kanari 8 & Hatzikiriakou Street, Piraeus. Tel: 4513123.
Lloyd's Register of Shipping, 87 Akti Miaouli, Piraeus. Tel: 4523529, 4523942.
Nippon Kaiji Kyokai, 117 Notara Street, Piraeus. Tel: 4523529, 4525777.
Registro Italiano Navale, 35-39 Akti Miaouli, Piraeus. Tel: 4520011.
Panama Bureau of Shipping, 23 Akti Miaouli, Piraeus. Tel: 4110807.
Hellenic Register of Shipping, 23 Akti Miaouli, Piraeus. Tel: 4177632.

WATCHMEN: Required.

HATCHES: Opened and closed by stevedores.

CUSTOMS ALLOWANCES: Tobacco, 200 cigarettes per crew member allowed out of bond. Wine/spirits, 1 bottle.

CARGO GEAR: Before commencement of loading or discharge, cargo gear is examined by Piraeus Harbour Authorities.

REPATRIATION: All facilities for crew changes and repatriation.

AIRPORT: Athens Airport 14 km. distant from main harbour. Regular international flights.

TIME: GMT plus 2 hours. GMT plus 3 hours – end March to end September.

HOLIDAYS: In addition to Sundays, local holidays are: 1st January; Epiphany; Whit Monday; 25th March; Good Friday; Easter Monday; 1st May; Holy Trinity; 15th August; 28th October; 12th December; 25th December; Boxing Day.

Cargo work possible on these days subject extra payment of 75%.

POLICE/AMBULANCE/FIRE: In emergency telephone Harbour Office 188 or 4511-183. Subsidiary Harbour Department Tel: 4612-876. Harbour Guard Aghios Georgios Tel: 4612-876. Harbour Guard Drapetsona Tel: 4511-183. Police Tel: 100. Fire Service Tel: 199.

TELEPHONES: Telephone connection on board can be made.

SERVICES: Compass adjusting, tank cleaning. No facilities for discharge of tank residues.

SHORE LEAVE: Permitted.

IDENTIFICATION CARDS: Passes required for seamen going ashore.

BANKS: *Greek Banks in Piraeus:*
Bank of Attica S.A. Tel: 4124659.
Bank of Crete. Tel: 4522633.
Bank of Greece. Tel: 4121484.
Commercial Bank of Greece. Tel: 4174721.
Commercial Bank of Greece (Shipping Dept.). Tel: 4520370
Credit Bank of Greece. Tel: 4174392.
Ergobank S.A. Tel: 4130234. Shipping Branch Tel: 4115626.
Ionian & Popular Bank. Tel: 4174101. Shipping Branch Tel: 4522367.
National Bank of Greece. Tel: 4174101. Shipping Tel: 4522611.
Piraeus Bank S.A. Tel: 4122648.
Citibank. Tel: 4593001.
Chios Bank. Tel: 4220520.
Foreign Banks:
Algemene Bank Nederland NV. Tel: Piraeus 4522305.
American Express. Tel: Piraeus 4121665.
Arab Bank Ltd. Tel: Athens 3230818.
Arab Hellenic Bank. Tel: Athens 3250820.
Banca Commerciale Italiana. Tel: Athens 3246014.
Bank of America. Tel: Piraeus 4527251.
Bank of Nova Scotia. Tel: Piraeus 4118711.
Bank Saderat Iran. Tel: Athens 3249531.
*Bankers Trust Company. Tel: Athens 3229835.
Banque de Paris et des Pays Bas. Tel: Piraeus 4137202.
Barclays Bank International Ltd. Tel: Piraeus 4510207.
*Bayerische Vereinsbank. Tel: Athens 3639315.
Citibank NA. Tel: Piraeus 4523511.
Continental Bank. Tel: Piraeus 4112711.
Grindlays Bank Ltd. Tel: Piraeus 4111753.
*Hambros Bank Ltd. Tel: Athens 3227243.
Marine Midland Bank. Tel: Piraeus 4520350.
Midland Bank plc. Tel: Piraeus 4136403.
*Morgan Grenfell Co. Ltd. Tel: Athens 3606456.
National Westminster Bank Ltd. Tel: Piraeus 4529215.
*Nederlandse Scheepshypotheekbank. Tel: Piraeus 4523946.
Royal Bank of Scotland. Tel: 4537483.
*Schiffshypothekenbank zu Lubeck Aktiengesellsch. Tel: Piraeus 4523657.
Societe Generale. Tel: Athens 3255001.
The Chase Manhattan Bank. Tel: Piraeus 4113711.
The First National Bank of Chicago. Tel: Athens 3602311.
Williams & Glyn's Bank. Tel: Piraeus 4527483.
*Representative.

SPECIAL PRECAUTIONS:
Ship's Speed in Port: Incoming or outgoing vessels must keep speed steady, provided weather conditions and vessel's manoeuvrability allow to do so, but never to exceed 5 knots.
Pollution in the Harbour: Throwing overboard of ballast, objects of any kind, oil, food rejects, and dirt in general is strictly prohibited. All such rejects can be jettisoned after ship's exit from the harbour and at a distance not less than 16 miles from the nearest coast. Alternatively, all such rubbish can be thrown in a special rubbish-collecting vessel in the port.
Sea Pollution by Bunker Oil or Sediments: The jettisoning of oil products generally in any port or roadsteads less than 50 miles from the coast is strictly prohibited. Similarly prohibited is the pollution of the sea by jettisoning of oil-sediments during dry-docking or repairs of vessels.
Pollution of the Air: Strictly forbidden is the de-sooting of boilers of all vessels at Greek ports. Similarly prohibited is the exit of gases in the form of smoke, which poisons the atmosphere and endangers public health.
Overloading: If upon arrival or sailing the Port Authorities ascertain overloading of the vessel, heavy fines are imposed.
DEVELOPMENTS: The project "Construction and Equipment of Pier II of the P.P.A. Container Terminal at N. Ikonio" forms part of the total Master Plan for the development of the Port of Piraeus which, in general, provides for:

1. Land planning, administrative and organisational segregation of the 3 port activities, namely commerical, passenger and ship-repairing.
2. Dedication of the Central Port to passenger and coastal traffic.
3. Concentration and augmentation of container service activity to N.Ikonio area.
4. Construction of a road axis, which will connect the port area with the national North – South road axis.
5. Railway link of N. Ikonio Container Terminal with the national railway network at Thriassio Pedio.

The above mentioned Master Plan is already underway, since the projects in No. 1, 2, 3 and 4 have, in their major part, been auctioned, while for the project in No. 5 the relevant studies are elaborated.

Among the numerous investments provided by the P.P.A. Master Plan, special emphasis is given to investment connected, directly or indirectly, with the N. Ikonio Container Terminal.
Completion of the Pier II of the Terminal at N. Ikonio: The project consists of the completion of the design, construction and putting into service of the Container Terminal Ikonion II in Piraeus Port.

The works comprise:

1. The construction of a quay wall in concrete 700 m. long to the West of the Ikonion II and 110 m. long to the South, to give a depth of water of up to 16.5 m. The construction of a further 120 m. of quay wall for Ro-Ro traffic with a depth of water of 14.0 m. to the N.W. of the Terminal.
2. Infilling, surfacing and the provision of essential services over an area of 7 ha. on the Container Terminal and infilling and surfacing of 6 ha. behind the quay for parking.
3. The purchase of:
   4×50 ton post-Panamax gantry cranes.
   40 straddle carriers, capacity 4 tons.
   30 tractors, capacity 1×40 ft. container or 2×20 ft. containers.
   8 forklift trucks, of which 6 capacity 7 tons lift and 2 capacity 25 tons lift.

The project is estimated to be completed by the end of 1998.
AUTHORITY: Port of Piraeus Authority, 10 Akti Miaouli (next to the Exhibition Centre), 185 38 Piraeus, Greece. *Tel:* 4520911-9. *Telex:* 212187 Olp Gr. *FAX:* 4520852. *Contacts:* George Prassianakis, President (Tel: 4520942); Spyros Stalias, General Manager (Tel: 4520944); Kyriakos Perimenis, Stevedoring Operations Manager (Tel: 4520928).

AGENT: G.A.C. Shipping S.A., P.O.B. 80418, GR-18510 Piraeus, Greece. Tel: (30-1) 4532914, 4518524, 4282851-9. Telex: 211425, 240135 GAC GR. Fax: (30-1) 4180367, 4282850. Cables: GACSHIP, Piraeus.

PRINOS: 40.56 N. 24.31 E.

SHIPMASTER'S REPORT: May 1984.

ANCHORAGE/PILOTAGE: Tankers using this terminal are required to anchor approximately 0.5 miles South of the breakwater at Kavalla town if a waiting period is involved but other than that vessels pick up the Pilot and Loading Master in the vicinity of the berth. Vessels which have had to anchor off Kavalla pick up the Pilot and Loading Master from Kavalla and proceed to the berth with them.
TUGS: Two tugs are available to assist with mooring operations.
BERTHING: B.A. chart No. 1086 shows a tanker mooring of superbuoy size which is incorrect. Actual berthing arrangement is an open sea moor using both anchors forward run out to about 9 shackles on each anchor and aft making fast to 3 buoys using 3 lines to each buoy. The buoys are orange in colour exhibiting an orange light flashing every 5 seconds.
LOADING: Product is stabilised crude. API 31.12. Average temperature 72°F. Loading rate approx. 1,700 t.p.h. Manifold connection 1×10 in. hose. There are no dirty ballast facilities. At the end of loading there may be a delay of up to 3 hours whilst waiting for cargo papers.

PYLOS (including Sfaktiria and Navarino Bay): 36.55 N. 21.42 E.

DOCUMENTS:
For Port Authorities
1. For ships under the Greek flag and foreign flag vessels of Greek ownership.
   Inspection of all Ship's Papers.
   7 Crew Lists with full details of crew members' home addresses.
   For passenger vessels – 6 Passenger Lists including passport details, that is, number, date of issue and nationality.
2. Foreign Flag Vessels.
   Inspection of all Ship's Papers.
   3 Crew Lists.

For Customs
Crew Personal Effects List.
1 Crew List.
Passenger List.
Lists of goods or effects to be sent ashore.
3 Lists of Stores and Spares.
Bills of Lading.
Cargo Manifest.

PILOTAGE: Pilot station established on 1st January 1991. Pilotage is compulsory and available around the clock. Master should advise Agent of vessel's ETA 24 hours prior arrival. On arrival vessel should call Pilot on VHF Channel 12.
ANCHORAGES: Safe anchorage may be made in all areas of Navarino Bay except within red sector of Helonaki Islet light.
MAX. SIZE: Any size vessel can enter and anchor in Navarino Bay. The small harbour of Pylos is only suitable for small vessels.
HEALTH: Doctor visits vessels that require Free Pratique, and those coming from infected ports. Master and Health Officer together sign Maritime Declaration of Health. Free Pratique continues when vessel arrives from another Greek port. A vessel in transit must have Free Pratique if remaining in port more than 24 hours. Infected vessels or suspected vessels remain under quarantine in accordance with existing health regulations.
RADIO: Athinai Radio.
TUGS: Tug "Nestor" 600 h.p. available, but only in an emergency.
BERTHING: Pylos Harbour Pier 215 m. length, 20 m. width, and 15 m. depth at head of pier. Depth inside pier to be 10 m.
STEVEDORES: Labour requirements passed by radio at least 24 hours prior arrival. No shore loading/discharging facilities and this work effected by ship's gear. Average rate load/discharge 100 tons per gang every 8 hours.
MEDICAL: Agent should be advised by cable prior arrival of medical and medicant requirements. There are two chemists and a Red Cross hospital. Yellow-fever and cholera vaccination certificates required.
TANKERS: At Pylos small harbour there is a jetty 100 m. length, the head of which is reserved for small tankers carrying wine and spirits, which moor stern to quay. At head of pier, depth of water about 4 m., but within short distance from pier, depth increases to 10 m. Only 1 vessel of 12 ft. to 15 ft., draft can moor stern to quay at any time. Loading/discharging is effected through flexible and portable pipelines belonging to Gialovi Wine Factory at Pylos, and cargo is transported by special tank trucks.
DENSITY: 1023 in harbour basin and whole of Navarino Bay.
FRESH WATER: Master or Agent must apply in writing to Customs Authority, and application is to include notice from water supplier giving quantity to be supplied and cost of supply. Water barge capacity 200 tons. Rate of supply 160 t.p.h. by canvas hoses. Barge belongs to Maritime Agency I. Vrettakos, Pylos. A second water barge with 100 tons capacity is owned by Maritime Agency G. Andreas Zervakis Ltd. Water also available alongside Pylos harbour quay.
FUEL: Bunker suppliers supply vessels with F.O. and D.O. by small tankers, coming from other ports.
FIRE PRECAUTIONS: No unusual fire precautions at Sfaktiria Installations, but at main port of Pylos authorities do not allow loading/discharging of 2 vessels at same time, as the only 2 berths available are very close to each other.
REPAIRS: 3 workshops for minor repairs. Major repair teams available from Piraeus shipyards.
WATCHMEN: Usually not necessary to employ watchmen, but if required, available.
HATCHES: Usually opened and closed by crew.
CUSTOMS ALLOWANCES: 2 packets of cigarettes per crew member/day allowed out of bond according to duration in port and this quantity to be declared on Stores List. Store orders for supply of additional quantities are allowed on the basis of the number of crew and the length of voyage, basis 2 packets per day per crew member. 1 opened bottle wine/spirits allowed out of bond.
REPATRIATION: Crew changes and repatriation facilities available.
AIRPORT: Kalamata Airport, 40 km. from Pylos. Kalamata/Athens flights every day at 17.50 hrs. Athens/Kalamata every day flights at 19.10 hrs.
TIME: GMT plus 2 hours. GMT plus 3 hours in Summer.
HOLIDAYS: *(a)* Standard Government Holidays; *(b)* Local holidays: 9th May (St. Nicholas) holiday for port workers; 24th September; 20th October (Anniversary of Battle of Navarino). During these holidays, cargo work can be arranged subject overtime payment.
POLICE/AMBULANCE/FIRE: Police (Pylos) 223-16; Greek Red Cross Hospital Pylos 223-15; Kalamata Fire Brigade 28373.
TELEPHONES: No facilities for placing on board.
SHORE LEAVE: Shore leave allowed if vessel has Free Pratique.
IDENTIFICATION CARDS: Shore passes issued against submission of seamen's books.
GARBAGE DISPOSAL: No special collection service available, however the local agents can arrange for garbage collection.
GENERAL: Very severe fines imposed on oil pollution.

SHIPMASTER'S REPORT: July 1981 (Updated 1992).

Time: GMT plus 2 hours Winter, plus 3 hours Summer as per A.L.R.S. Vol. No. 5.

Chart: Pilos/Navarine Bay – BA 211.

General: Pilos: A fairly busy port for ships taking stores and water and changing personnel.

Navarine Bay is well sheltered and generally deep.

Bay can be entered and left with safety as long as vessels keep well up to Pilos Island (Baba Island) off Cape Kypri, shoals exist on the Southern shore.

Pilot: Advise Agent 24 hours in advance. Pilot boards about 1 mile outside heads in calm weather, otherwise inside, from slow motorboat.

Pilot speaks English.

VHF: Pilos Port Authority and Pilot on Channel 12 when expecting vessels.

Anchorage: In area 8.5 cables N.W. of Pilos Jetty (5 shackles).

Bay: Navarine Bay is good and sheltered. An 8 fathom patch in centre as per BA Chart 211.

Agent says 300,000 d.w.t. tankers drawing up to 15 m. draft have anchored in Bay.

New jetty for small craft at Pilos.

Current: Outside Heads generally South going at rate of 0.5 knots.

Tug: 1 tug (1,000 h.p.) owned by principal Agency, called "Nestor", sometimes not at Pilos but at Karamata.

Services/Supplies: Pilos: Two cranes on jetty (30 tons – 4 tons).

Water: Fresh Water is plentiful at $4.00 per tonne minimum 20 tonnes in Navarine Bay.

Supplies: Generally good, although advance notice required. If frozen provisions required this must be stipulated.

Unitor Gas: Limited range held by Agents. Oxygen/acetylene, R22/12 has to come from Athens area (2 days' notice).

International Paint: From Piraeus full range (2 days' notice).

Lub Oil: Most brands including Chevron from Piraeus in drums (2 days' notice).

Repairs: Very limited at Karamata about one hour away, otherwise full range at Piraeus. Parts for repair can be sent by truck to Piraeus and return the next day if an emergency, but generally allow three days.

Fuel: Very limited supply H.O. and D.O. in Pilos but negotiations under way to expand local facility.

Walport Films: By arrangement with Agency in Skaramanga (2 days' notice).

Airport: At Karamata – local airport one hour away. Olympic Airways daily flight from and to Athens. Arrives at 1800 hrs. and leaves at 1900 hrs. (40 minute flight).

International flights from Athens. To catch internal flight to Karamata you must land in Athens not later than 1600 hours.

Communications: Roads poor, takes 4 hours to get to Athens. Telephone services reasonable.

Boat Service: From anchorage to town in Navarine Bay easily arranged at $5.00 per ship per trip.

Customs/Immigration: Customs available during working hours. Basic issue only allowed but best take out for all crew members. Immigration check all crew books inward and outward. Greek shore passes required with crew members photo attached. Forms: All on Greek Papers.

1 copy Ship's Particulars.
2 copies General Stores Declaration.
2 copies Bond Store Declaration.
1 copy Crew Declaration.
6 copies Crew List (U.S.A. style).

AUTHORITY: Port Authority of Pylos, 24001 Pylos, Greece. *Tel:* 0723-22225. *Telex:* 0252101. *Contact:* Theodoros Kakalis (Lieutenant Commander H.C.G.), Harbour Master.

RHODES (including Akantias): 36.25 N. 28.17 E.

DOCUMENTS:

3 Crew Lists.
3 Passenger Lists.
1 Cargo Manifest.
1 Stores and Provisions List.
Usual Ship's Documents.

PILOTAGE: 24 hours' notice required by Rhodes Port Authority. Pilot boards 1 mile from port.

ANCHORAGES: Suitable anchorage up to a distance of 300 m. from the port East of the pier extension.

RESTRICTIONS: Port entry can be difficult and sometimes impossible with strong North or N.E. winds.

MAX. SIZE: Up to 24 ft. draft.

RADIO: Rodos Radio, 2182 kHz.

BERTHING: Pilot will advise Master of berthing place in accordance with Port Authority instructions.

2 diesel motor-driven cranes capacity 2 tons and 3 tons available for discharging. No facilities for containers.

STEVEDORES: 24 hours advance notice required in order to arrange gangs.

MEDICAL: General hospital and private clinics available.

FRESH WATER: Available – supplied by canvas hoses.

FUEL: Deliveries only by tank trucks.

CONSULS:

France	Tel. 2318	Sweden	Tel. 3379
Germany	,, 7479	Turkey	,, 3362
Italy	,, 7432		

REPAIRS: Minor repairs only.

HATCHES: Opened and closed by crew.

CUSTOMS ALLOWANCES: 60 cigarettes per day per crew member and 1 bottle wine/spirits per crew member allowed out of bond.

AIRPORT: Distance 15 km. During Winter, flights twice daily to Athens, and during Summer, flights 5 times daily.

TIME: GMT plus 2 hours. GMT plus 3 hours in Summer.

HOLIDAYS: 1st January, 6th January, 7th March, 25th March, Good Friday, Easter Monday, 21st May, 15th August, 28th October, 8th November, Christmas Day, Boxing Day.

POLICE/AMBULANCE/FIRE: Police, tel. 7690 or 2220; Ambulance, tel. 2555; Fire Brigade, tel. 3333.

DELAYS: Sometimes necessary to remain outside harbour up to 3 hours to allow coastal passenger vessels to berth if other berths are full.

DEVELOPMENTS: Extension of the Merchant Port Pier by 110 m. to North and 140 m. to S.E. Also an extension of the new harbour (Akantias) pier, to the East of the Marine Harbour. Length to be 480 m. with a depth of 6.5 m. alongside.

AUTHORITY: Central Port Authority of Rhodes.

STYLIS: 38.55 N. 22.37 E.

DOCUMENTS: The usual Documents for all Greek Ports are required i.e. Cargo Manifest, Crew List, Stores Lists, Personal Effects, Ship's Certificates, Oil Book, Cargo Gear Book, Exchange Declaration.

PILOTAGE: Compulsory. Pilot can be boarded at Stylis anchorage which is half a mile South of the Island of Kaloyiros. Pilot is a practical seaman who has experience and knowledge of local waters.

Vessels entering Stylis port must pass through the channel of 2 flashing green and 2 flashing red sea buoys and be in the line with the main light situated on the pier, flashing orange.

There is a pilot boat painted white flying the international Pilot's letter "H". VHF is installed and the working frequency is Channel 12.

There are 4 white launches available for hire (capacity 10 – 20 passengers). VHF is installed and the working frequency is Channel 10. These are for Pilots and Crew Members of anchored vessels.

ANCHORAGES: See "Pilotage".

The Gulf of Maliakos is a safe anchorage for laid up vessels. Position should be given upon request to the Ministry of Merchant Marine, Piraeus.

MAX. SIZE: Max. draft 18 ft. 6 in.

VHF: Port Authority on Channels 7 and 12.

TUGS: No tugs are available. For large vessels being laid up at Maliakos Kolpos tugs and Pilot must be ordered from Volos.

BERTHING: Stylis port is an open port on the North side of Maliakos Kolpos and consists of berths on the North side and of shallow waters on the South side which break at low tide. The berths total about 450 m. in length, forming the Greek letter π. The draft varies along the 3 berths with a max. of 18 ft. 6 in. at HW and 17 ft. at LW.

CRANES: No crane railway system is installed. Loading and/or discharging operations take place only by ship's gear or by mobile cranes which can be hired through the local Agents from Stylis/Lamia and/or Volos.

STEVEDORES: Working hours: 0800 hrs. – 1700 hrs. daily.

FRESH WATER: Fresh water available 24 hours. Rate 30 cu.m.p.h. Vessels must use their own hoses.

FUEL: No bunkers available. Vessels can be supplied only by barge and/or trucks ordered from Volos/Athens/Salonica.

REPAIRS: Minor repairs can be carried out.

HOLIDAYS: Aghios Athanassios on January 18th, Aghios Nikolaos on December 6th.

STORING: A limited quantity of stores and provisions are available in Stylis. Transit stores are not available.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Greek Drachma (DRC).

GENERAL: No warehouses are available on the docks.

The main exported goods are olives and olive oil in tins/drums, reels of cables, cotton, etc. The imported goods are timber, machinery, paper, etc.

DEVELOPMENTS: A dredger is widening the channel and deepening the Harbour in order to accommodate vessels up to 20 ft. draft.

AUTHORITY: Stylis Harbour Authority, Stylis, Greece. *Tel:* (0238) 22329. *Telex:* 296803 YSI GR. *Contact:* Lieutenant Commander John Kioupis, Harbour Master.

SUDA BAY, Crete: 35.29 N. 24.09 E. (See Plan)

PORT LIMITS: Suda Bay.

DOCUMENTS:

3 copies Crew List.
Cargo Manifest.
Agency Manifest.
Transit Manifest.
Ship's Stores or Instruments Manifest.
Clearance from the last Port of Call.
All the necessary certificates according to International Laws and Conventions.

PILOTAGE: Pilots available, call Suda Port Control on VHF Channel 12.

ANCHORAGES: Safe anchorage area in the Port of Suda according to the Port Authority instructions.

RESTRICTIONS: Permission for departure or arrival after sunset is given by the Suda Navy Base.

Entry and departure only through existing channel in Suda Bay.

MAX. SIZE: Permissible length 200 m. for berthing. No restrictions for anchoring.

HEALTH: Pratique is compulsory for all ships coming from ports outside Greece, except EEC ports.

RADIO: Athens Radio, call sign SVA.

VHF: Suda Port Control on Channel 12.

TUGS: None.

BERTHING: Cargo pier, depth up to 32 ft. Grain silo with similar depth alongside. Also see "Plan".

CRANES: None.

BULK CARGO FACILITIES: Bulk cargo discharging gear available.

SPECIALISED CARGO-HANDLING FACILITIES: Fork lift trucks available.

BRIDGES: None.

STEVEDORES: Available.

MEDICAL: Hospital facilities available.

TANKERS: There are no oil discharging installations or facilities for tankers.

DENSITY: Salt water.

FRESH WATER: Installations for the supply of fresh water available.

FUEL: Available in limited quantities.

FIRE PRECAUTIONS: Fire brigade service at Chania.

CONSULS: Germany and France.

REPAIRS: Limited facilities.

DRY DOCKS: None.

SURVEYORS: Creta Shipcare Co., Marine Surveyors and Consultants (Cargo-Hull-Machinery). Cooperate with most P&I Clubs for Crete Island. Surveyors to Hellenic Register of Shipping and International Naval Surveys Bureau. Authorised to survey and issue ship's Certificates for many flags. Captain Ant. Tzagarakis, Mar. Ch. Eng., Emm. Michelioudakis 68 Dimokratias Street, 73100 Chania, Crete. Tel: 30-821-54580/97677/50770. Fax: 30-821-54580.

WATCHMEN: Services of watchmen are not necessary and are non existent.

HATCHES: Opening/closing is carried out by crew.

CUSTOMS ALLOWANCES: 200 cigarettes, 1 bottle of spirits.

CARGO GEAR: Only with ship's gear.

REPATRIATION: Two/three flights Winter/Summer and one passenger ship daily for Athens/Piraeus.

AIRPORT: Airport 15 km. from Suda Bay.

TIME: In Winter GMT plus 2 hours, in Summer GMT plus 3 hours.

HOLIDAYS: January 1st (New Year's Day); January 6th (Epiphany); Shrove Monday (variable); March 25th (Feast of the Annunciation/ Independence Day); May 1st (Labour Day); Orthodox Easter Monday (variable); August 15th (Assumption Day); October 28th (National Day); November 21st (Local Holiday (Chania)); December 6th (St.Nicholas/ Souda local port holiday/Seamen's Holiday); December 25th(Christmas Day); December 26th (Boxing Day).

POLICE/AMBULANCE/FIRE: Police 100 or 89316. Ambulance 166 or 22666. Fire 199 or 92410.

EMERGENCY CO-ORDINATION CENTRE: The Port Authority of Chania.

TELEPHONES: Arrangements do not exist for placing telephones on board.

BANKS: National Bank of Greece, Suda Square. Tel: 0821-89650. Fax: 0821-89650. Telex: 0291-240.

STORING: See "Prelims".

1. Yes.
2. Yes.
3. Yes.
4. Yes.
5. —
6. Yes.

SHORE LEAVE: Crew members are allowed ashore.

IDENTIFICATION CARDS: Shore passes are required.

SERVICES: Liferafts can be serviced by Safety First, Emm.Pimpli 5, 73134 Chania, Crete. Tel: 0821-90292, 0821-95477. Fax: 0821-95477. Contact: Captain Dimitrios Kasselakis.

Electronic Navigational Equipment "Posidon", 128 Chrisopigis Street, Chania, Crete. Tel: 0821-97934, 0821-76363. Fax: 0821-97934. Installations, repairs and services.

Ship's agency can be provided by Creta Shipcare Co. Tel: 30-821-97677/50770/54580. Fax: 30-821-54580. Also see "Surveyors".

GARBAGE DISPOSAL: Garbage is collected alongside.

WASTE OIL DISPOSAL: Can be collected by tanker trucks. Contact your local ship's Agent.

SEAMAN'S CLUB: None.

CURRENCY: Greek Drachma.

REGULATIONS: Taking photographs of Suda Bay is strictly prohibited.

DELAYS: None.

DEVELOPMENTS: See "Plan".

AUTHORITY: Port Authority of Chania, 21 Akti Tompazi, Chania, Crete, Greece. *Contact:* Chania Harbour Master, Tel: 0821-98888, Fax: 0821-45037.

Souda Port Authority. Tel: 0821-89240.

SYROS: 37.26 N. 24.56 E.

DOCUMENTS: *Ships under the Greek flag* – documents required are:

Ship's Register.
Seaworthiness Certificate.
Log Books and Ship's Papers.
Load Line Certificate.
Radio Station Licence.
Fumigation Certificate.
4 Crew Lists.
1 Passenger Lists.

Ships under foreign flag, Greek owned – documents required are:

Ship's Articles.
Load Line Certificate.
Seaworthiness Certificate.
Ship's Papers.
Radio Station Licence.
Fumigation Certificate.
4 Crew Lists.
1 Passenger List.

Ships under foreign flag – documents required are:

Seaworthiness Certificate.
Fumigation Certificate.
Load Line Certificate.
Radio Station Licence.
2 Crew Lists.
1 Passenger List.

PILOTAGE: Pilot to be ordered by ship's Agent at least 24 hours before arrival notifying approximate ETA. Pilot boards from private motor launch, about 0.5 miles off the port, weather permitting. In bad weather Pilot boards in harbour entrance.

ANCHORAGES: Vessels awaiting Pilot anchor outside the harbour South of a line between the green breakwater light and the North end of Gaidaros Island. Anchorage in the Southern part of the harbour in depths of 20 m. – 30 m.

MAX. SIZE: Length 200 m. Vessels of shallow draft may go alongside the Neorion Pier or moor stern to the pier. Deeper-draft vessels remain at anchor in the harbour.

HEALTH: Free Pratique is given when ship's declaration of health has been endorsed by a Health Officer.

RADIO: Loutsa Radio.

TUGS: 2 tugs available (no tugs available in March 1994). Tugs usually join vessel 1 mile from harbour entrance. Payment for use of tug's line is obligatory.

STEVEDORES: At least 1 day's notice required to arrange gangs.

MEDICAL: No advance notice required if medical assistance needed. Hospital and general clinic available.

TANKERS: Discharge alongside terminal of A. E. Seka at Lazareta, near the entrance to the harbour.

DENSITY: 1026.

FRESH WATER: Limited quantity can be supplied by private company. Delivered by barge.

FUEL: Can be supplied by A. E. Seka alongside concrete dolphins inside the harbour.

CONSULS: France – Tel: 3–62. Netherlands – Tel: 7–20.

REPAIRS/DRY DOCKS: Neorion Syros Shipyards (Privatisation underway) can undertake any kind of engine and hull repairs and alterations. Holds LTC licence for piston reconditioning.

	Floating Dock 1	*Floating Dock 2*
Capacity	75,000 d.w.t.	40,000 d.w.t.
Lifting Capacity	25,000 tons	15,000 tons
Length Overall	230 m.	195 m.
Width between sidewalls	35 m.	33.5 m.
Pumping Time	160 minutes	100 minutes
Cranes	2×10 tons	1×15 tons 1×10 tons
Quay Space	1,800 m.	
Floating Cranes	1×70 tons capacity and 1×200 tons capacity	
Travelling Cranes	Up to 40 tons capacity	

Tank cleaning station with storage capacity of 7,000 tons and separator capacity of 3,000 tons of dirty ballast and slops per hour.

4 tugs of which one is an ocean going salvage tug.

Machine shop, plate shop, foundry containing the most modern equipment.

Gritblasting.

Service Agency for Sulzer Bros. Ltd., Lister Ltd., B+W, Caterpillar SA, SKL Ltd., MWM, MAN.

Resident Classification Surveyors: Lloyd's Register of Shipping, American Bureau of Shipping.

Neorion Shipyards Syros Ltd., Syros, Greece. Telex: 0293123 Neorion Syros. Tel: 010-281 22001.

WATCHMEN: Not required.

HATCHES: Opened and closed by ship's crew.

CUSTOMS ALLOWANCES: Each man allowed 40 cigarettes per day for period not exceeding 5 days. Each man allowed 1 opened bottle of spirits. No restrictions for wine.

REPATRIATION: Can be arranged.

TIME: GMT plus 2 hours. GMT plus 3 hours in Summer.

HOLIDAYS: Work may be arranged on all holidays on payment of 75% additional to tariff.

POLICE/FIRE/AMBULANCE: Police 6-10; Fire 3-33; Ambulance 5-55.

TELEPHONES: Cannot be connected on board.

SHORE LEAVE: Crew may go ashore after pratique is given, carrying shore leave passes issued by Port Authority.

IDENTIFICATION CARDS: Shore passes are issued on production of Seamen's Books or Passports.

REGULATIONS: Port Captain should be contacted for any queries not covered by lists of regulations provided on arrival.

DEVELOPMENTS: Port being dredged to permit entry of larger vessels. Shipyard installing facilities for building vessels up to 15,000 tons.

SHIPMASTER'S REPORT: February 1983 (Updated 1994).

Vessel called for bunkers only.

Documents: Not required for bunker call.

Pilotage: Recommended, not known whether compulsory or not. Vessel could undock without Pilot, however, Pilot necessary for docking.

Pilot boards 1 mile East of harbour entrance.

Chart: B.A.1833 – Plans in the Kirkladhes.

Restrictions: No restrictions on night berthing at bunker dolphin. No tidal restrictions.

Radio: Limnos and Athens. Cable address "Sekavin Syros" for bunkers.

VHF: Pilot and Bunker Agent operate on Channel 12.

Tugs: One medium size tug used aft for mooring and unmooring. Vessel cannot moor/unmoor without aid of tugs.

Berthing: 'Seka' bunker dolphin 214°T×3 cables from Fl.G. 3s. breakwater light. Berth is 2.5 cables from harbour entrance.

Vessel berthed head 040°T, with 7 shackles out on each anchor. Bunker dolphin just forward of bridge, starboard side. 4 mooring lines run from main deck and 1 spring from poop. All short nips from main deck.

Berth appears unsafe but we found that vessel remained alongside in strong winds.

Soundings taken at stern when moored gave 13 m. of water.

Vessel is restricted by draft, and distance from manifolds to dolphin.

Density: 1025.

Fuel: Bunker fuel oil and diesel available. Rate 200 t.p.h.

Shore installation used 6 lengths of hose (6 in. diameter) which were lifted aboard by shore derrick from bunker dolphin. The hoses were manhandled forward to the vessel's midship manifold. Same hoses used for both products.

No lighters available for bunkering.

Repairs: Facilities available.

Dry Docks: Available.

Airport: Local airport available.

Authority: No authorities boarded.

Agent: No Agent in attendance for bunker call.

AUTHORITY: The Harbour Office of Syros. *Tel:* 0281-22690. *Telex:* 029-3119. *FAX:* 0281-22633.

THESSALONIKI (Salonica): 40.38 N. 22.56 E.

(See Plan)

PORT LIMITS: A vessel is considered as an "arrived vessel", when she has passed the line connecting the Small Kara Point and Paliomanna light buoy.

DOCUMENTS: The following documents should be available for Free Pratique:

10 copies Crew List.
2 copies Crew Effects Declaration.
2 copies Ship's Stores List.
2 copies Narcotics List.
4 copies Arms and Ammunition List.
2 copies Currency List.
1 copy Vaccination List.

Dry Cargo Vessels only:

Certificates of Nationality, Measurement, Construction, Load Line, Safety Equipment, Safety Radio, Cargo Gear, etc.

PILOTAGE: Apply for Pilot through VHF Channel 12 or by international code signals. Pilot meets vessel about 1,000 m. S.E. of breakwater light (white). Pilot boat is small motor-boat carrying pilot flag.

ANCHORAGES: The anchorage is 0.75 miles South of the East end of the breakwater in a depth of 8.5 fathoms.

RESTRICTIONS: Conventional vessels berth between 0700 hrs. and 2030 hrs. in Summer and between 0700 hrs. and 1800 hrs. in Winter.

Container vessels berth throughout 24 hours.

Unberthing of all vessels throughout 24 hours.

Vessels carrying explosives must advise the Port Authorities in advance, and are only allowed to load/discharge cargo from/to lighters at anchor outside the port.

MAX. SIZE: See "Berthing".

HEALTH: Health Officer boards vessels from foreign ports to grant Free Pratique.

RADIO: Athens Radio, or others in Greece. 24 hours notice of ETA required to obtain berth and stevedores.

VHF: Operative throughout 24 hours on Channel 12, Central Port Authority. Tugs on Channel 8. Pilots on Channels 12 and 7.

TUGS: 12 tugs from 375 h.p. – 3,120 h.p., owned by N. Vernicos, Gigilinis, Portolos and Zouros, also available for salvage and towage contracts.

BERTHING:

Pier No.	*Length* (m.)	*Depth* (m.)	*Remarks*
1	1,080	5.5 – 8.0	Pier area 30,000 sq.m.
2	800	8.0 – 10.45	Pier area 50,000 sq.m.
3	803	10.45	Pier area 30,000 sq.m.
4	1,034	10.45 – 12.0	Pier area 55,000 sq.m.
5	1,115	10.45 – 12.0	Pier area 60,000 sq.m.
6	1,312	12.0	Under construction. Container terminal. 400,000 sq.m. Pier area available, remainder under construction.

CRANES:

Electric cranes: 39×3 tons to 32 tons. 4×25 tons to 40 tons.

Mobile cranes: 2×60 tons to 90 tons. 14×11 tons to 32 tons.

Floating cranes: 1×60 tons capacity.

BULK CARGO FACILITIES: Grain Silos of capacity 20,000 tons at Pier No. 4. Loading – Unloading capacity 150 t.p.h.

AGET Installation: 1 berth for discharging cement in bulk by specially constructed ships equipped with automatic discharging gear. Max. draft 30 ft.

SPECIALISED CARGO HANDLING FACILITIES: *Container Terminal:* Located at Pier No. 6. Berth of 1,312 m. length and 12.0 m. depth with 1 railmounted transtainer of 50 tons capacity, 2 container bridge-cranes of 40 tonnes and 45 tonnes lifting capacity under spreader, 10 straddle-carriers of 35 tons capacity, 2 front lifts with 34 tons capacity under spreader, 3 fork lifts for empty containers, 4 tractors and 20 trailers. 100 reefer points. Two Ro/Ro ramps available.

Shifts: 0800 hrs. – 1530 hrs.
1600 hrs. – 2230 hrs.
0000 hrs. – 0730 hrs.

Terminal operates 365 days a year.

BRIDGES: No bridges.

MEDICAL: Advance notice not required. All facilities available.

TANKERS: *E.K.O. Installations:* (a) Sea Island berth capable of accommodating 2 vessels of 24,000 tons and 14,000 tons respectively. Max. draft 32 ft.; 8 lines, 1 × 16 in., 3 × 10 in., 3 × 4 in. and 1 × 6 in.

(b) 7 buoy mooring for vessels of up to 80,000 tons. Max. draft 44 ft. Submarine pipeline of 34 in. for crude oil discharge, 2 flexible discharge lines of 10 in. diameter. Also see "Shipmaster's Report".

Mamidakis Installation: Stern discharge berth. Max. draft 32 ft. 2 submarine lines enable 2 grades of cargo to be discharged through 8 in. line at 200 t.p.h. and 6 in. line at 160 t.p.h.

DENSITY: 1025.

FRESH WATER: Unlimited supplies available alongside berths. 2 water barges also available (150 cu.m. and 40 cum.).

FUEL: Unlimited quantities available. Usual notice required. Suppliers B.P., Shell, E.K.O. and Mamidakis.

FIRE PRECAUTIONS: One firefighting launch of 2 × 480 h.p. and one fire fighting station.

CONSULS:

Austria
Belgium
Bulgaria
Chile
Denmark
Finland
France
Germany
Italy
Japan
Mexico
Netherlands
Norway
Peru
Serbia
South Africa
Spain
Sweden
Switzerland
Turkey
U.K.
U.S.A.

REPAIRS: Only minor repairs.

DRY DOCKS: None.

WATCHMEN: If required, cost by private negotiation.

HATCHES: Opened/closed by crew.

CUSTOMS ALLOWANCES: 200 cigarettes and 1 bottle spirits allowed out of bond for each crew member.

CARGO GEAR: Adequate shore gear available.

SURVEYORS: Lloyd's Register, A.B.S., B.V., etc.

REPATRIATION: Facilities for crew changes and repatriation available.

AIRPORT: Distant 12 km. S.E. of town. 6 flights daily to Athens.

TIME: GMT plus 2 hours. GMT plus 3 hours in Summer.

HOLIDAYS: (National): 1st January, 6th January, 25th March, Good Friday, Easter Monday, 1st May, 15th August, 28th October, Christmas Day, Boxing Day. (Local): 26th October. Work may be arranged on holidays at double costs.

POLICE/AMBULANCE/FIRE: Port Police, tel. 531-502; Ambulance, tel. 531-531; Fire, tel. 111.

TELEPHONES: Facilities available for placing on board.

BANKS: National Bank of Greece, Bank Macedonia – Thraces, Citibank, etc.

SHORE LEAVE: Permitted without restriction. For tankers, the Master should arrange transport with Agent for seamen to the landing pier in Thessaloniki Harbour. Seamen will not be permitted to pass through refinery area.

IDENTIFICATION CARDS: Passes issued to crew of foreign vessels.

GARBAGE DISPOSAL: A full collection service for garbage disposal is operated by the Port Authority. Garbage is collected by truck or barge between 0800 hrs. and 1500 hrs. Charges: For ships alongside 2.80 Drachmas per day for every foot of length. For ships at anchorage 8.00 Drachmas per day for every foot of length.

WASTE OIL DISPOSAL: A collection service is operated by the Port Authority. It is collected by barge or road tankers.

SEAMAN'S CLUBS: There is no Seaman's club operating in the port. The town of Thessaloniki is next to the port and it has a full range of facilities (International telephone service, church services, postage facilities).

CURRENCY: Local currency is Drachma.

DEVELOPMENTS: 6th Pier under construction. An area of 350,000 sq.m. will be available with quay length of 1,860 m. and depth 12.0 m. A second gantry crane of 45 tons will also be available.

SHIPMASTER'S REPORT: August 1987.

Berth: Sea Island

Documents:

8 copies Crew List.
2 copies Crew Declaration.
3 copies Manifest (including ship's stores, bond, ship's fixtures, etc.).
1 copy Health Declaration.
2 copies Currency List.
1 copy Arms & Ammunition List.
1 copy Drugs List.
1 copy Passenger List.
3 copies Cargo Manifest.

Shore passes issued. They have to be returned before departure.

Ship's papers and Oil Record Book taken ashore for inspection.

List of Ship's fixtures - Radios, Computer, Photocopier, etc. is required.

Anchorages: The anchorage is 0.75 miles South of the East end of the breakwater in a depth of 8.5 fathoms.

Pilotage: The Pilot boards at the anchorage or 1 mile from the Sea Island. VHF Channel 12 is used for communications.

On departure we left without tugs and pilot, with the Terminal's approval, as the pilots were engaged elsewhere.

Restrictions: Berthing and unberthing at Sea Island is carried out in daylight hours only between 0700 hrs. and 2030 hrs. in Summer and between 0700 hrs. and 1800 hrs. in Winter.

Tugs: The use of 2 tugs is compulsory for berthing and unberthing. Ship's lines are used.

Berthing: Vinyl Chloride Monomer (VCM) is discharged at the Sea Island (Lat. 40° 38.1' N., Long. 22° 53.3' E.). Vessel berthed on the shore side of the Sea Island platform, port side to.

The platform handles vessels up to 20,000 d.w.t. Depth alongside 10.0 m.

Products are handled on the North side and crude oil is handled on the South side.

The platform used to be owned by Esso but Esso is now nationalised and the platform is falling into disrepair. However the fendering on the berth is good.

Pilots advise that great care should be taken when berthing and unberthing in order to avoid damage claims.

Moorings at the berth were 2 head/stern lines, 1 breast line and 2 springs fore and aft. It is advisable to have a good spread of moorings as the vessel overhangs the flat fendering aft at about half length.

Cargo is not worked if the wind speed is over 30 knots.

The pipelines from the shore are not buried, they lay on the seabed.

Ship's gangway used.

Cargo: The rate of discharge is about 140 t.p.h. with 10 Bar back pressure. The maximum line pressure allowed is 12 Bar.

The discharge temperature is usually 0°C. A heater may be required.

Time for sampling is about 3 hours.

The vessel used an 8 in. Chicksan (the most northerly one on the Sea Island).

Hot gas is blown through the cargo lines upon completion.

Shore personnel connect and disconnect lines.

General: No fresh water available on pier. By barge the cost is 260 Drachmas per ton for 50 tons. The quality of the water is good.

Stores are only available by launch.

There is a launch service to the city between 0800 hrs. and 2300 hrs. The cost of this service is 2,500 Drachmas on weekdays and 3,500 Drachmas on weekends. The Agent or the terminal can arrange this service.

The Customs Officers in the freight section at the airport work between 0800 hrs. and 1600 hrs. on Monday to Thursday and between 0800 hrs. and 1400 hrs. on Friday. There is no Saturday or Sunday work. Outside these hours no spares can be cleared.

The airport at Thessaloniki is about 30 minutes South of the city.

During late Summer and Autumn violent wind shifts and squalls suddenly occur and sometimes reach 60 knots. The squalls are generally from the North, funnelling down the mountains. If there is thunderstorm activity take great care.

Mount Oros Khortiatis is 8 miles East of the city and is very conspicuous with radar domes on top.

AUTHORITY: Port Authority of Thessaloniki, P.O.Box 10467, T.K.54110 Thessaloniki, Greece. *Tel:* 031-593911. *Telex:* 412536 Thpa Gr. *FAX:* 510500. *Contact:* Peter Papoutsidis, Director of Development. Demetrios Papadopoulos, Deputy General Manager. John Zovelakis, Director of Free Zone.

AGENT: G.A.C. Shipping S.A., 51 Politechniou Street, GR-54625 Thessaloniki, Greece. Tel: (30-31) 516395, 516941, 540202, 251684-6. Telex: 419369 GAC GR. Fax: (30-31) 516972, 254680. Cables: GACSHIP, Thessaloniki.

VOLOS: 39.21 N. 22.56 E. (See Plan)

DOCUMENTS:

Nationality Certificate.
Measurement Certificate.
Crew Lists (5 copies).
Derat Certificate.
Health Documents of Crew.
Cargo Gear Book.
Safety: (a) Passenger Ship Safety Certificate.
(b) Cargo Ship Safety Construction Certificate.
(c) Cargo Ship Safety Equipment Certificate.
(d) Cargo Ship Radiotelegraphy or Radiotelephony Certificate.
(e) Exemption Certificate.
(f) Nuclear Passenger Ship Safety Certificate.
(g) Nuclear Cargo Ship Safety Certificate.
International Load Line Certificate (1966).
Certificate for Inspection of Life Raft.
Oil Book and International Sewage Pollution Prevention Certificate (1973).
Shipboard Oil Pollution Emergency Plan (S.U.P.E.P.).

PILOTAGE: Compulsory. Pilot boards about 1 mile outside port. Pilot boat is small launch coloured grey and black.

ANCHORAGES: Suitable anchorage situated 1–2 miles outside harbour in depths of 14 m. to 20 m.

RESTRICTIONS: Vessels in excess of 10,000 tons unable enter at night.

MAX. SIZE: Max. draft 30 ft., no limitation on length or breadth.

HEALTH: Port Officer acts as Health Officer and Pratique effected on doctor's advice. If arriving from another Greek port, Pratique automatic.

VHF: Port Authority on Channel 12.

TUGS: Join vessel at entrance to harbour. 7 tugs, 280 h.p., 380 h.p., 465 h.p., 480 h.p., 640 h.p., 860 h.p. and 1,080 h.p.

BERTHING: Ro/Ro facilities available.

Dock	*Length*	*Depth*
K	600 m.	8.0 m.
1	1,000 m.	9.7 m.
2	980 m.	9.7 m. (under construction)
R	270 m.	7.0 m. (under construction)

CRANES:	1 Mobile crane (For containers)	—	Capacity 140 tons
	1 Mobile crane	—	Capacity 35 tons
	3 Mobile cranes	—	Capacity 10 tons
	3 Crawler cranes	—	Capacity 4 tons
	1 Rail mounted crane at Dock I	—	Capacity 27 tons at 17 m. and 16 tons at 30 m.
Dock I	6 Rail mounted cranes	—	Capacity 8 tons at 20 m. and 6 tons at 25 m.
Dock II	2 cranes	—	Same capacity as Dock 1
	1 crane	—	Capacity 25 tons at 20 m. and 16 tons at 32 m.
	1 crane	—	Capacity 40 tons at 25 m. and 32 tons at 32 m.

1 Straddle carrier for lifting 20 ft. and 40 ft. container 3 high.

BULK HANDLING FACILITIES: 2 silos, capacity 15,000 tons, loading ability 370 t.p.h. Discharging ability 250 t.p.h.

STEVEDORES: Advance notice required order arrange gangs. Cargo operations handled with ship's gear and with 14 shore cranes.

MEDICAL: Advance notice of required medical attention is necessary. Hospital and medical facilities available.

TANKERS: One berth, depth alongside 27 ft.

DENSITY: 1025.

FRESH WATER: Available at all the piers of the harbour. Also available from special barge (capacity 300 tons).

FUEL: Order through Agent. Oil delivered by small tanker "KEA" at all berths capacity 182 tons fuel.

CONSULS: Germany, Tel: 25379, France, Tel: 25070, Sweden, Tel: 22611, Italy Tel: 38565, Belgium Tel: 23318, Netherlands Tel: 24356.

REPAIRS: Minor repairs can be effected.

GANGWAY/DECK WATCHMEN: Ship's gangway used. Usually ship's crew.

HATCHES: Usually opened and closed by crew, but if by stevedores, additional costs apply.

CUSTOMS ALLOWANCES: 1 to 2 packets cigarettes allowed per crew member per day. 1 bottle wine/spirits allowed out of bond.

SURVEYORS: Cargo inspector: Hellenic Register of Shipping.

REPATRIATION: Crew changes and repatriation can be carried out.

AIRPORT: No airport locally.

TIME: GMT plus 2 hours, Winter. GMT plus 3 hours in Summer.

HOLIDAYS: Usual Greek holidays. Local holiday 6th December; cargo work can be arranged subject to additional cost with the exception of 6th December.

POLICE/AMBULANCE/FIRE: Police, Tel: 23652; Ambulance, Tel: 27531; Fire, Tel: 33191.

EMERGENCY CO-ORDINATION CENTRE: Ministry of Mercantile Marine (Piraeus) Tel: 1/4121211-19.

SERVICES: Divers available for surveys and underwater repairs.

SHORE LEAVE: No restrictions.

IDENTIFICATION CARDS: Shore passes are required.

GARBAGE DISPOSAL: There is a vehicle with a small crane, which collects the garbage in drums from the ship's stern. Telephone for service: 0421-22422. Collection time 0700 hrs. – 1900 hrs.

WASTE OIL DISPOSAL: A vehicle with hoses comes close to the ship to collect waste oil. There are various companies available.

SEAMAN'S CLUBS: None. There is only one cafeteria shop with international telephone.

CURRENCY: The local currency is Drachmas.

DEVELOPMENTS: Construction of a new dock at the grain silo.

SHIPMASTER'S REPORT: 1977. (Updated 1984).

Restrictions: Draft restrictions on new quays subject to maximum depth of water of 32 ft. and on the original town quays a maximum depth of water of 28 ft. East side, 26 ft. West side, 26 ft. Head. (Thus draft will have to be about 2 ft. less than depth.)

Stevedores: Working hours 0730 hrs. – 1400 hrs. and 1400 hrs. – 2100 hrs. on overtime.

Berths: Town quay (K) with approx. 800 ft. frontage on each side and cross berth approx. 385 ft. on end. No. 1 quay – "L" shaped berths with base to the shore with frontages approx. 600 ft. on North side, 1,570 ft. on East side, 505 ft. on head and 1,210 ft. on West side.

No. 2 quay – "L" shaped berths with base to the shore with frontages approx. 500 ft. on North side, 1,385 ft. on East side, 330 ft. of head and 1,520 ft. on West side (Not yet finished, see plan).

Pollution: Port regulations prohibit the scraping and scaling of ships side and the pollution of sea or port area by painting.

AUTHORITY: Volos Central Port Authority, Central Pier, 38001 Volos, Greece. *Tel:* 0421-28888, 38888, 24758. *Telex:* 282170. *FAX:* 0421-20115. *Contact:* D. Geogakopoylos, Harbour Master. T. Pissias, Port Director.

YALI ISLAND: 36.40 N. 27.08 E. (See Plan)

DOCUMENTS:
5 Crew Lists.
2 Passenger Lists.
Cargo Manifest.
Bills of Lading.
List of Ship's Stores and Spares.
Health Declaration.
Ship's Certificates.

PILOTAGE: A Mooring Master is available from Piraeus. Mooring Master boards at the anchorage.

ANCHORAGES: Safe anchorage in the roads (36° 39' N., 27° 09' 30" E.) except in strong Southerly winds.

Area to be Avoided for Anchoring: Power Cable – "See Plan".

West Portion of the Zone:
(1) 36° 40' 04" N. 27° 07' 30" E.
(2) 36° 39' 30" N. 27° 08' 24" E.
(3) 36° 37' 30" N. 27° 08' 24" E.
(4) 36° 36' 52" N. 27° 08' 37" E.

East Portion of the Zone: E.
(5) 36° 40' 07" N. 27° 07' 54" E.
(6) 36° 39' 36" N. 27° 09' 00" E.
(7) 36° 36' 50" N. 27° 08' 53" E.

MAX. SIZE: Max. LOA 190 m., max. beam 24 m., max. draft 33 ft.

HEALTH: Port Authorities will board by launch from Nissyros to arrange Free Pratique. Any sick crew members will be disembarked to Nissyros by the same launch.

VHF: Contact Yali Quarry on Channel 6 and Harbour Master's office on Channel 12.

TUGS: Available.

BERTHING: The vessel is moored at loading berth on 8 buoys in addition to port anchor. During loading operations vessels have to be shifted from hatch to hatch.

BULK CARGO FACILITIES: Loading Berth is located at the end of the conveyor belt shiploader. The shiploader is on a cement construction, about 500 m. offshore. The cargo is carried by conveyor belt to the spout. The raising and slewing of the spout is controlled by the operator from the control desk to allow trimming of the cargo.

STEVEDORES: Workers are employed by Lava Mining and Quarrying Co.

MEDICAL: Nearest medical and hospital facilities are at the island of Kos, 7 miles North of Yali.

DENSITY: 1028 – 1030.

FRESH WATER: None available.

FUEL: Not available.

CONSULS: No local representation.

REPAIRS: No facilities exist.

HATCHES: Opened and closed by ship's crew.

CUSTOMS ALLOWANCES: 200 cigarettes and 1 opened bottle of spirits are allowed for each man.

AIRPORT: Nearest at Kos with 2-3 flights daily to Athens during the Summer and a daily flight in Winter.

HOLIDAYS: Saturday, Sundays and Public Holidays.

SHORE LEAVE: Allowed.

GARBAGE DISPOSAL: No service available.

WASTE OIL DISPOSAL: No service available.

SEAMAN'S CLUBS: None.

GENERAL: *Pilots Recommendations for Mooring:*

1. Pilot's motorboat at position P1 (See "Plan").
2. Vessels are always berthed with starboard side towards the loading station.
3. Have ready following moorings:
   (a) Fore – Portside 1 × 200 fathoms manila or nylon ropes – Starboard side 2 × 200 fathoms manila or nylon rope and
   (b) Aft – Portside 2 manila or nylon ropes (should be 200 fathoms long) – Starboard side 2 × 200 fathoms manila or nylon rope.

Note: The 200 fathoms aft starboard side ropes are required only in the initial stage of mooring to bring the ship in her final position.

4. Secure lines as follows:
   (a) Nylon ropes to each of Buoy Nos. 3, 4, 5, 6, 7, 8.
   (b) Nylon rope(s) to either Buoy No. 1 or No. 2 according to ship's size.
5. Vessel to have portside anchor chain lowered (1.5 shackles) when vessel is about 400 yards away from anchoring point.
6. On arrival have portside gangway ready for immediate use.

Expedite Loading:

1. As a rule loading commences from midship holds. Vessel to be ready to shift back and forth at all hours of day and night for loading of other holds on 30 minutes' notice.
2. Have all hatches open.
3. Broom swept and washed clean holds, hold ladders and supporting beams.
4. Arrive at Yali fully ballasted.
5. An early morning arrival is recommended.
6. Shipper intends to work around the clock.
7. In case of tween decker, before arrival, remove all tweendeck hatch beams also 2 or 3 adjacent beams from the centre of Nos. 2, 3 and 4 main deck hatches.

AGENCY: *Main Agent:* Petros M. Nomikos Ltd., 17-19 Akti Miaouli, Tanpy Building, Piraeus 185 35, Greece. Tel: 4170895/9. Telex: 212397. Fax: 4171777. Contact: Mr. Michael Vazeos, Manager.

AUTHORITY: Harbour Master at Mandraki, Port of Nissyros, Nissyros Island, Dodekanissa (Dodecanese), Greece. *Tel:* (0242) 31222. *Telex:* 29-2195. *Cables:* Limenarchion, Nissyros, Greece. *FAX:* 0242-31426. *Contact:* Boutsis Evagelos, Harbour Master.

Operator: Lava Mining & Quarrying Co., 49-51 Sof., Venizelou St., Lycovrissis, Attica, Greece. Tel: (01) 2898530, 2898465, 2898462. Telex: (21) 5168-9. Fax: (01) 2817778. Contact: Mr. El. Fedros, General Manager or Mr. C. Cavafakis, Commercial Department.

Quarry: Yali Island, Nisyros Dodecanese. Tel: (0242) 31280 and 31426. Telex: (29) 2195. Fax: (0242) 31426. Contact: Mr. Eleftherios Christosforakis , General Manager of Quarry.

NOTES

Please also advise Shipping Guides Ltd.

Greenland

GENERAL:

CUSTOMS: The Master and the crew are not to distribute anything tax-free in a Greenland port.

DOCUMENTS: Following documents must be on board:
Speed Certificate.
Crew List.
Radio Station Certificate.
Safety Equipment Certificate.
Clearance Certificate.
Health Declaration.
Tonnage Certificate.
Certificate of Registry.
Derat Certificate.
Sailing Orders.

PILOTAGE: Attention is drawn to the fact that any person who is assigned to act in Greenland waters as "kendtmand" (i.e. a ship's guide with local knowledge) is not considered to be a Pilot in the sense of the word normally used in International shipping.

While serving on board he is to act exclusively in an advisory capacity, and the navigation of the vessel is at no time to be entrusted to him.

RESTRICTIONS: Foreign-flag vessels have access to Greenland ports. The crew may go ashore subject approval of Port Authorities.

All vessels arriving at ports must give a 24 hour ETA to Port Authority and Master should immediately after arrival make a presentation of Health Certificate and allow a medical check on board.

All ships have to pay harbour dues.

ICE INFORMATION: Ice Centre Narssarssuaq (Tel: 35244. Telex: 90332 iscent gd. Fax: 35344.) transmits daily at 1200 hrs. 1400 hrs. and 2200 hrs. GMT the latest information of the ice in Southern Greenland Waters. Information is transmitted in Facsimile (Mufax) on frequency 125.00 kHz, drum speed 120. Ships can, free of charge, request telegraphic ice information from following coastal radio stations:
OZL—Ammassalik
OXF—Qaqortoq

Ice information also transmitted in Facsimile (Mufax) on frequency/time (GMT) as follows:

9,360 kHz	0003-0025 GMT.
5,850 kHz	0028-0050 GMT.
5,850 kHz	0943-1005 GMT.
9,360 kHz	1008-1030 GMT.
13,855 kHz	1218-1240 GMT.
9,360 kHz	1243-1305 GMT.
13,855 kHz	1308-1330 GMT.
17,510 kHz	1333-1335 GMT.
13,855 kHz	1803-1825 GMT.
9,360 kHz	1828-1850 GMT.

RADIO: In ports where there is a local radio station, vessels are prohibited from using ship's station for sending messages.

HEALTH: Before commencing voyage to Greenland, at the port of departure, Master is required to obtain a Health Certificate from an authorised medical practitioner, stating that there are no dangerous or contagious diseases on board, such as pest, cholera, yellow-fever or typhus. The crew list is to be included in this certificate stating that there are no venereal or other contagious diseases amongst the crew members. The Health Certificate is only valid if it has the stamp and signature of the Royal Danish Consul or Vice-Consul of the district in which the port of departure is situated. On arrival at the first Greenland port, the Master is to present the Health Certificate to the Port Authorities. Health Certificate may also be issued by a doctor in the first Greenland port of call.

STEVEDORES: Contact Authority.

MEDICAL: Dental facilities available in all ports, but only in emergencies. Hospitals available in all ports, but only in emergencies. The only large hospital is in Nuuk/Godthaab.

FRESH WATER: Available in larger ports.

CONSULS: Iceland, Sweden, Norway, Canada and Great Britain have representations in Nuuk/Godthaab and Iceland has representation in Qaqortoq/Julianehaab.

WATCHMEN: Ship is required to appoint a crew member as ship's guard on board.

TIME: GMT minus 3 hours. Permanent. Except at Thule Air Base and N.E. Greenland.

HOLIDAYS: As applicable to Denmark.

WORKING HOURS: Normally from 0800 hrs. to 1700 hrs. with 2 meal breaks. Possible to increase the working hours if necessary.

REPORT: Immediately upon arrival of a vessel in Greenland, the Master must report to the Port Authorities.

WASTE DISPOSAL: It is forbidden to throw waste material of any description overboard into port waters.

AUTHORITY: Greenland Trade (KNI), P.O. Box 608, Dk-3900 Nuuk/Godthaab, Greenland. *Tel:* 25211. *FAX:* 25311. *Telex:* 90401 trasys gd. *Cables:* Trafikkontoret, Nuuk.

AASIAAT (Egedesminde): 68.43 N. 52.53 W.

(Also see "General Information" at beginning of Greenland Section)

DESCRIPTION: Roadstead, Inner Port (inside Bay), Anchorage, Boat Port, and Atlantic Quay.

DAYLIGHT: Polar darkness from 2nd December to 11th January, and midnight sun from 22nd May to 23rd July.

CONDITIONS: (a) Current: Flows Eastwards between the islands at Aasiaat from 3 hours before, to 3 hours after high water, following which, current flows Westwards for 6 hours. *(b)* Ice: Winter ice normally occurs from mid-December to early May, but can occur earlier, in November. New ice in the port can be up to 60 cm. thick; 1st January covering ice up to 30 cm and by 1st February about 45 cm. Icebergs sometimes enter port area and stop all shipping movement. *(c)* Tide: High tide height 2.6 m. (max. 3.1 m.). Low tide height 1.5 m. Direct West wind causes 0.3 m. rise above tidal height, and South or S.E. wind about 0.5 m. below.

PILOTAGE: No official port Pilot, but assistance arriving and sailing may be obtained from a local seafarer having good knowledge of the area. This local assistance should be ordered if required in ETA cable to Port Authority at least 24 hours prior arrival. The Port Manager usually acts as local expert as part of his normal duties.

There is VHF radio installation in office of Port Authority and it is usually possible to obtain VHF contact within 30 miles of Aasiaat.

Local area expert will board vessel from port boat at meeting place usually arranged just outside entrance to port.

No special pilotage regulations and no Outer Anchorage where Pilot may be taken on board. However, in waters North and N.E. of port entrance vessels may stop or proceed at very slow speed in order to embark local expert (Max. speed 3 knots).

ANCHORAGES: No special anchorages, and vessel is only allowed to anchor for a short period at the entrance to port subject permission of Port Authority.

MAX. SIZE: Largest vessel to berth alongside Atlantic Quay was length 136 m., breadth 20 m., draft 7.5 m.

ENTRY: Day or night.

RADIO: Local radio station "OYR". RDF station beacon East of the town. Radio link between Aasiaat and Transitoen, and between Transitoen and Roeveo.

BERTHING: Atlantic Quay: Length 103 m., depth alongside 9.4 m. at medium high tide. Height of quay at medium tide about 1.5 m., above w/l. 1×10 ton mobile crane and forklift trucks used in discharging.

MEDICAL: Hospital, doctor and dentist available.

FRESH WATER: Available at Atlantic Quay.

FUEL: Only gas-oil available for local fishing vessels from the tank-station and tanker lorries.

REPAIRS: Shipyard for repairs to steel fishing vessels. Machine shop also available. Slip for small vessels (250 tons).

AIRPORT: Heliport.

SALVAGE: Salvage-station in the area.

AUTHORITY: Royal Arctic Line A/S, P.O.Box 219, 3950 Aasiaat, Greenland. *Tel:* (299) 42033. *Cables:* Handelchefen Aasiaat. *FAX:* (299) 42132. *Contact:* Harbour Master.

FAERINGEHAVN (Polaroil): 63.41 N. 51.34 W.

(Also see "General Information" at beginning of Greenland Section).

DOCUMENTS: Bill of Health: Doctor's Certificate mentioning each member of crew by name to be free of contagious diseases. This document to be signed by Consulate in the port of delivery to be prepared by competent authority, passengers excluded. One Manifest with Bill of Lading. Ordinary Ship's Papers.

PILOTAGE: As a rule Pilot can be ordered in the months May-October, 12 hours' notice before arrival is required.

ANCHORAGE: Inside fjord area.

RESTRICTIONS: None.

MAX. SIZE: Oil-carriers about 26,000 d.w.t., draft 40 ft. General cargo-ships 20 ft.

HEALTH: Master to apply with documents at harbour office for Free Pratique.

RADIO: Nuuk Radio: OXI, connected Faeringehavn by Telex and Telephone.

VHF: Oil company and fishing company are listening on VHF during working hours.

TUGS: None. 1 harbour boat for assisting with mooring and taking lines.

BERTHING: Natural port, anchorage for the largest vessels. Wharf, 225 m. with 5 m. at L.W.

STEVEDORES: None.

MEDICAL: For medical service, apply to Nuuk.

TANKERS: Load/discharge lines 6 in. and 8 in. Smaller diameters for bunkering when necessary.

FRESH WATER: Not available.

FUEL: Available. Light fuel, gas oil, aviation turbine fuel A1, gas oil, oct. 97. But only with permission of Polaroil.

CONSULS: None.

REPAIRS: No facilities.

GANGWAY/DECK WATCHMEN: Not required (ship's crew).

OPENING/CLOSING HATCHES: Must be carried out by ship's crew.

REPATRIATION: Available, via Nuuk by air to Copenhagen.

AIRPORT: Nearest airport is Nuuk distance 35 miles regular airlines.

TIME: GMT minus 3 hours.

HOLIDAYS: Danish holidays and Greenland holidays.

POLICE/AMBULANCE/FIRE: Police tel. Nuuk 21448.

TELEPHONES: Not available on board.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Not required.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

DELAYS: Bunker station closes for arrivals between 2200 hrs. and 0600 hrs. local time.

GENERAL: Bunker station open all year; during Winter-time sometimes difficulties caused by ice.
AUTHORITY: Polaroil, 3900 Nuuk, Greenland. *Tel:* 009-299 22527. *Telex:* 90600 Polaroil. *FAX:* 009-299-23783. *Cables:* Polaroil.

ILULISSAT (Jakobshavn): 69.13 N. 51.06 W.

(See Plan)

(Also see "General Information" at beginning of Greenland Section)
DESCRIPTION: Port is a narrow open bay, entrance to the N.W., having outer port and inner port. In outer port is Atlantic Quay and bunkering station, and inner port has another quay and a fishing harbour.
CONDITIONS: *(a)* Tide: Height of average high tide 2.8 m. (max. 3.3 m.) low tide 1.6 m.
(b) Wind: Usually East to N.E. In Autumn winds are strong especially in the morning.
(c) Ice: Impression can be gained when approaching port that port is closed due to icebergs. On closer approach channels between icebergs will be found but if these openings appear too narrow a wider passage should always be found to the North.
(d) "Kanele": A natural phenomenon that occurs at this port causing regular and heavy swell, height up to 2 m. Wave characteristic, long and flat, frequency about 6 minutes. Pilot should be consulted for full information.
ENTRY: Port usually open day and night, from mid May to end November.
DAYLIGHT: Polar darkness between 1st December and 12th January and midnight sun between 21st May and 24th July.
PILOTAGE: A local Pilot (Kendtmand) should always be used by larger vessels and request made to Port Authority in ETA cable. Pilot boarding place to be agreed with Authority.
MAX. SIZE: Largest vessel to berth at Atlantic Quay was length 110 m., draft 6.8 m.
RADIO: Aasiaat Radio, call sign "OYR".
VHF: Port radio on Channels 16, 9 and 13.
TUGS: None. Port boats take lines and assist mooring.
BERTHING: Outer port depth 6.5/7 m., inner port 5.5/6 m. Atlantic Quay length 100 m. Depth alongside Atlantic Quay 8 m. at average low tide. Height of quay about 1.1 m. above w/l. Permission to enter port should be obtained prior arrival from Royal Arctic Lines. Fork-lift trucks available.
MEDICAL: Hospital, doctors and dentists available.
FRESH WATER: Obtainable alongside Atlantic Quay.
AIRPORT: STOL airstrip available for internal flights.
REPAIRS: Machine workshop. Crane for lifting small vessels, capacity 50 tons.
GENERAL: Police, Fire Brigade, Port and cable office.
AUTHORITY: Royal Arctic Line, P.O.Box 400. DK-3952 Ilulissat, Greenland. *Tel:* (299) 43533. *FAX:* (299) 44532. *Contact:* Harbour Master.

IVIGTUT: 61.12 N. 48.10 W.

Mining in the area has stopped. The Port has closed down.

(Also see "General Information" at beginning of Greenland Section)
CONDITIONS: *(a)* Current: Strongest about 3 hours before and 3 hours after high water, and vessels arriving and sailing should take this into consideration. *(b)* Tide: Height of average high tide 3 m. (max. 3.4 m.), low tide 1.6 m. *(c)* Wind: Calm for about half the year otherwise winds are usually from South or S.E. The dangerous winds for moored ships are the infrequent storms from North or N.E.; these storms seldom occur but if they do occur they do so in the Autumn. *(d)* Ice: Winter ice usually occurs from December onwards in the fjord outside Ivigtut and disappears in the beginning of April. Outside Ivigtut Winter ice always occurs, sometimes reaching a thickness of about 1 m. Information concerning ice conditions always obtainable on telegraphic request to GLK.
ENTRY: Day and night and usually all year round.
PILOTAGE: No official Pilot but an acting Pilot can be arranged through connection with Port Authority at least 24 hours prior arrival.
MAX. SIZE: Largest vessel to have berthed at Pier was length 102 m., breadth 14 m., draft 6.2 m.
RADIO: Qaqortoq Radio "OXF" or Gronnedal Radio "OVC".
VHF: Gronnedal Radio listens on VHF 24 hours (Channels 16 and 12).
TUGS: None. Motor-boat will assist mooring.
BERTHING: Depth alongside about 7 m. height of pier about 2 m. above w/l. Berthing during daylight only. Crane capacity 3 tons.
Note: Kryolitselskabet Oresund A/S ceased operating at the port in December 1987.
FRESH WATER: Available.
FUEL: Deliveries of small quantities of gas-oil for local vessels only.
REPAIRS: No facilities.
MEDICAL: Doctors available in Gronnedal.
AUTHORITY: Hjemmestyret for Gronland, P.O.Box 1015, 3900 Nuuk, Greenland.
Ivigtut Kommune, 3930 Gronnedal, Greenland. *Tel:* 10177. *FAX:* 10173. *Contact:* J. Pinnerup-Lauritzen, Port Director.

KANGERLUSSUAQ (Sondre Stromfjord): 66.58 N. 50.57 W.

(Also see "General Information" at beginning of Greenland Section)
DESCRIPTION: Port is used for the support of Greenland's International Airport and the community in connection with Kangerlussuaq Airport (Soendre Stroemfjord Airport).

The port operates as a normal port with a quay and a sea terminal for tankers. But the quay is only 20 m. long, so stevedore/discharging and loading of heavy cargo vessels will be operated on roads by military-landing crafts and barges.
DAYLIGHT: The port is situated South of the border for polar darkness but has a midnight sun from 15th June to 1st July.
CONDITIONS: *(a)* Current: The current at entrance and at the West of Sondre Stromfjord is N.E. at flood tide, and S.W. at ebb tide, and can reach a speed of 7 knots. *(b)* Tide: High water at Camp Lloyd is about 3 hours later than at the entrance of Sondre Stromfjord. Height of average high tide 3 m. (max. 3.6 m.). Low tide 1.6 m. *(c)* Ice: Sondre Stromfjord is frozen during winter throughout whole of inner harbour, but about 55 miles from Camp Lloyd, ice thickness varies from 5 cm. to 90 cm. *(d)* Winds: Strong winds can occur from East and S.E.
ENTRY: On account of ice, the fjord is closed from beginning of December to end-June, but can be used day or night from beginning of July to end-October.
PILOTAGE: No authorised Pilot, but Harbour Master will assist berthing.
ANCHORAGES: Good anchorages about 2 miles S.E. of Emmons Pynt in depth of about 40 m. Great care should be taken in anchoring, since sea bottom is shelving.
RADIO: ETA should be given well in advance to Kangerlussuaq Airport, Port Operations.

The arrival should be reported at least 24 hours in advance through Island Commander of Greenland G.L.K.

Port Master can be contacted on 2726 kHz., and contact should be established at least one hour prior to expected time of arrival.
VHF: Airport and Port Master's office on VHF Channel 16.
BERTHING: *(a)* A quay which is located North of Emmons Pynt, depth alongside only 3 m. *(b)* Tanker sea terminal about 700 m. S.S.E. of Emmons Pynt where there is mooring with discharge lines. Depth of water 24 m. – 26 m. on the South side of the mooring position; 15 m. at the mooring, and 10 m. on Northern side of mooring with rapid shelving to the North.

The Port Authorities should be contacted before mooring at the sea terminal. There are mobile cranes with lifting capacity up to 5 tons, and fork-lift trucks.
MEDICAL: Hospital and medical staff available. Dentist available, but not on a regular basis.
AIRPORT: The airport has international connections to Europe via Copenhagen, and to U.S.A. and Canada. Distance to airport 8 miles.

International Airport ICAO, Danish Civil Aviation Agency, Flight Information Centre, Heliport.
REGULATIONS: Kangerlussuaq Port is a civil Greenland Home Rule owned/administrated port with no restrictions except those given by the Port Operations and the Port Master.

Greenlandic and Danish supply ships have preference in mooring at all installations.
AUTHORITY: Greenland Home Rule, Kangerlussuaq Airport, Port Operations Department, P.O.Box 1006, 3910 Kangerlussuaq, Greenland. *Tel:* 299-11300 or 11244. *Telex:* 90838. *FAX:* 299-11039. *Contact:* Hans J. Schioldan, Airport-Operations Manager.

MANIITSOQ (Sukkertoppen): 65.25 N. 52.54 W.

(Also see "General Information" at beginning of Greenland Section)
LOCATION: Harbour situated on S.E. side of Maniitsoq Island, and has Atlantic Quay.
CONDITIONS: *(a)* Tide: Height of average high water 4.2 m. (max. 4.8 m.), low water 2 m. *(b)* Ice: Winter ice occurs from December to April. *(c)* Wind: Advisable not to enter harbour area if winds are strong. Most obstructive winds are storms from South or S.W.
ENTRY: Port open day and night, normally all year round.
PILOTAGE: Pilot is arranged by cable to Nuuk Radio when giving ETA, which should be sent well in advance. Pilot will meet vessel as arranged outside the harbour, or at Faltings Skoer.
MAX. SIZE: Largest vessel that can berth at Atlantic Quay is length 100 m., draft 6 m. Vessels up to 4,000 tons have used the port.
RADIO: Extended from Nuuk "OXI".
TUGS: None. Port motor-boats assist mooring.
BERTHING: Depth in harbour is about 27 m. and alongside Atlantic Quay. Length 60 m. with depth of about 8.2 m. Height of quay is about 2 m. above w/l. Cranes up to 5 tons capacity and fork-lift trucks.
MEDICAL: Hospitals, doctors and dentist available.
FRESH WATER: Available at quay.
REPAIRS: Repair workshop for repairs to wooden fishing vessels. Machine shop available. Slip for small vessels (225 tons).
AIRPORT: Heliport.
GENERAL: Telex, telephones, Police, Fire Brigade.
AUTHORITY: Kalaallit Niuerfiat, A. W. Nielsensvej, 3912 Maniitsoq, Greenland. *Tel:* 13244. *Telex:* 90701. *Cables:* Handelchefen Maniitsoq. *Contact:* Handelchefen.

Royal Arctic Line A/S, Box 288, 3919 Maniitsoq, Greenland. *Tel:* 13633. *FAX:* 13832. *Contact:* Pavia Biilmann.

MARMORILIK: 71.07 N. 51.17 W.

The mining operations ceased in December 1990.

NARSSARSSUAQ (Isrecognosceringsstation): 61.08 N. 45.26 W.

(Also see "General Information" at beginning of Greenland Section)
DESCRIPTION: Ice outlook station, with quay.
CONDITIONS: *(a)* Current: Occasional strong N.W. current.
(b) Tide: Average height of HW 3 m. (max. 3.6 m.) LW 1.6 m.
(c) Wind: S.E. wind sometimes reaches typhoon strength.
(d) Ice: In Winter ice thickness sometimes reaches 1 m. Ice breaker not available.
PILOTAGE: Not available. Base representative should be advised of ETA well in advance of arrival.
MAX. SIZE: Largest vessel to berth at quay was length 130 m., draft 8 m.
ENTRY: Open season from mid-May to mid-October. During season, port open day and night.
RADIO: Qaqortoq Radio "OXF".
VHF: Extended from Qaqortoq.
TUGS: None.
BERTHING: Quay length 140 m., depth alongside (West) 6 m. – 11 m. (East) 5 m. – 8 m. Height of pier 2 m. above w/l. 2 vessels may berth, 1 on either side of quay. Heavy mooring equipment on the quay, and should be used by larger vessels. Mobile cranes capacity up to 4 tons, and fork-lift trucks.
FRESH WATER: Obtainable at quay, about 80 tons per single off-take.
AIRPORT: Landing-strip for aircraft. Ice station usually uses Twin Otter aircraft and S61 Helicopter.
AUTHORITY: Greenland Homerule, Box 1015, 3900 Nuuk. *Tel:* 2-3000.
Station Manager, 3926 Narssarssuaq, Greenland. *Tel:* 35266.

NORTH STAR BUGT (Thule Air Force Base): 76.36 N. 68.52 W.

(Also see "General Information" at beginning of Greenland Section)
DESCRIPTION: Supply port for the Thule Air Force Base. Port is operated by and belongs to the U.S. Air Force.
DAYLIGHT: Polar darkness from 1st November to 10th February and midnight sun from 23rd April to 20th August.
CONDITIONS: *(a)* Ice: Port is frozen over from end October to beginning July. From beginning of November, large areas of compact ice appear, and these can sometimes be up to 20 miles wide. During May, compact ice areas commence breaking up; however, large quantities of drift ice remain along the coast until end July. Winter ice is normally about 180 cm. thick. *(b)* Temperature: In January and February average temperature is 29° below zero. In June, July and August, average temperature is usually above freezing-point, but for the rest of the year it is below freezing. *(c)* Tide: Mean Spring tide is 3 m. (max. 3.4 m.). Mean neaptide 1.7 m.
ENTRY: Normally, port is open early July depending upon ice situation.
PILOTAGE: No authorised Pilot, but American Port Authority assists in mooring and should be advised of ETA well in advance.
ANCHORAGE: Good holding ground in depth between 20 m. and 40 m., but anchoring should only be carried out following advice of Port Authority.
MAX. SIZE: Largest vessel to berth alongside quay was length 130 m., and draft 7 m.
MEDICAL: Hospital, doctor and dentist available.
TUGS: None. Port boats assist mooring.
BERTHING: 2 vessels may berth at the quay. Depth alongside about 7 m. Height of pier about 2 m. above MHW. Mobile cranes and forklift trucks; however, equipment varies from year to year and Port Authorities should be contacted well in advance. 3 amphibious craft for vessels discharging in the roadstead.
FRESH WATER: Available alongside quay.
AIRPORT: Two rescue helicopters stationed at this base.
REGULATIONS: The area is a Military Defence area and special permission is necessary to enter the port. Shore leave is prohibited.
AUTHORITY: U.S. Air Force, North Star Bugt, Greenland. *Tel:* 50091.

NUUK (Godthab): 64.10 N. 51.44 W.

(Also see "General Information" at beginning of Greenland Section)
DESCRIPTION: Narrow entry to port, but well protected, with good modern berths and anchorages.
CONDITIONS: *(a)* Current: Sometimes strong between anchorage and the berths. *(b)* Ice: Only very occasional large quantities of ice reach the port and into the fjord. If ice in area South of Nuuk, S.W. storms force drift ice into the fjord. In recent years the port has begun to freeze over in Winter, and small vessels have at times become icebound. *(c)* Wind: S. and S.W. storms spring up suddenly but only last for brief periods. *(d)* Tide: Height of high water 4.4 m. (max. 5.1 m.); low water 2.1 m.
ENTRY: Port open day and night all year round.
DAYLIGHT: Nuuk situated South of the border for midnight sun and Polar darkness.
PILOTAGE: Port Manager will arrange non-authorised Pilot. Pilotage may be arranged by VHF contact with Authority during normal working hours with 24 hours notice.
ANCHORAGES: Good anchorages available inside fjord. Larger vessels should anchor close to Rypeo and in Malene Bugt.
MAX. SIZE: Largest vessel to berth at Atlantic Quay was length 135 m., breadth 17 m., and draft 7 m.
RADIO: Local radio station "OXI". 24 hours notice of ETA should be passed to Authority, cable address "Havnechefen Nuuk". Radio beacon at Kookoerne.
TUGS: 2 tugs available. 1 port boat to take lines and assist mooring.
BERTHING: Larger vessels should contact Port Authority before approaching port at night-time. Atlantic Quay, length 170 m., has a depth alongside 7 m., approx. for the most Northerly 120 m., and between 4.5 m. – 5 m. at MLWS for the most Southerly 50 m.

Vessels normally berth port side alongside. Mobile cranes capacity 30 tons.

Schooner Quay is 50 m. long, with a depth of 4.0 m., approx. Vessels normally berth bow Westward.

On the Coastal Passenger Quay length 40 m., depth 5.4 m., vessels usually berth with bow to the North.

There are several other small quays for the use of trawlers, and cutters, and a sand discharging berth length 30 m., depth 5 m.
MEDICAL: Hospital, doctors and dentists available.
TANKERS: Tankers can anchor and stern moor out from the gas installations, using an oil pipeline connection. A mooring arrangement has been established for tankers of 25,000 – 30,000 d.w.t. below the tank and gas farm on the hillside.
FRESH WATER: Available at all berths.
FUEL: Small quantities gas-oil available at Atlantic Quay after receiving permission from Port Authority.
REPAIRS: Slip for small vessels (40 tons) and minor repairs. Slip for vessels up to 1,860 tons, repairs possible for steel and wooden ships.
AIRPORT: Runway 950 m. × 30 m.
GARBAGE DISPOSAL: Service available alongside.
WASTE OIL DISPOSAL: Service available only for small quantities by special arrangement with Port Authority.
SEAMAN'S CLUBS: No club in port. Local hotel provides telephone facilities and other services are available locally.
CURRENCY: Danish Kroner(DKr). U.S.$ 1.00=DKr 7.00 (approx.)
GENERAL: Police, Fire Brigade, radar and radio technicians, radio station post, and cable office.
AUTHORITY: Royal Arctic Line A/S, P.O.Box 1059, DK-3900 Nuuk, Greenland. *Tel:* 299-23833. *FAX:* 299-23332. *Contact:* John Rasmussen, Port Manager.

PAAMIUT (Frederikshab): 62.00 N. 49.41 W.

(Also see "General Information" at beginning of Greenland Section)
LOCATION: The port is in the inner part of a small bay.
DESCRIPTION: Atlantic Quay; fishing quay; anchorage.
CONDITIONS: (a) Current: None. *(b)* Ice: Big ice reaches to the North of the port; smaller ice reaches the port especially to the North, but South of the port it is usually ice-free. The best period of finding the port ice-free is between March/April and the end of August. *(c)* Tide: Height of average high water is 3.8 m., low water 2.0 m. (max. 2.4 m).
PILOTAGE: Pilot should be requested in ETA cable via Nuuk Radio. Pilot will meet vessel at Satuarssugssuaq (Fyroen).
ANCHORAGE: S.E. of Skarvo. Holding ground is not good and anchoring should be carried out at very slow speed and only in good weather conditions.
MAX. SIZE: Length 100 m., draft about 6 m.
ENTRY: Day or night.
RADIO: Radio station Nuuk "OXI". RDF station beacon East of the town.
TUGS: None. Port boats assist in mooring.
BERTHING: Atlantic Quay. Length 90 m., depth alongside at average low tide, 7 m., depth in harbour about 10 m. Cranes up to 5 tons capacity and fork-lifts trucks used in discharging.
MEDICAL: Hospital, doctor and dentist available.
FRESH WATER: Available alongside Atlantic Quay.
FUEL: Refuelling quay, depth about 5 m., Gas-oil and diesel oil available for small vessels.
REPAIRS: Workshop for repairs to wooden fishing vessels. Machine shop available. Slip for small vessels (250 tons).
AIRPORT: Heliport.
GENERAL: Police Station, Fire Brigade.
AUTHORITY: Kalaallit Niuerfiat, Poul Ibsensvej 1, P.O.Box 222, DK 3940 Paamiut, Greenland. *Tel:* 17244. *Telex:* 90503. *Cables:* Handelchefen Paamiut. *Contact:* Handelchefen.

QAQORTOQ (Julianehab): 60.43 N. 46.02 W.

(See Plan)

(Also see "General Information" at beginning of Greenland Section)
DESCRIPTION: Port is an open bay, facing South with Atlantic Quay.
CONDITIONS: *(a)* Current: Flows N.W., but in Southern part of port from little current effect. *(b)* Tide: Average height of high tide 2.8 m. (max 3.2 m.); low tide 1.4 m. *(c)* Ice: Drift ice between January and July occasionally fills whole port. *(d)* Wind: The most frequent wind is from East or N.E., normally occurring as storms during Winter months and as strong winds in Summer. Winds can be violent and cause rapid rise in temperature. Very secure moorings are advisable.

PILOTAGE: Port office is equipped with VHF which should always be used to contact Port Authorities before arrival, and to arrange Pilot's boarding position.
MAX. SIZE: Largest vessel to berth at Atlantic Quay was length 110 m. and draft 7 m.
ENTRY: Port open day and night normally throughout year.
RADIO: Local radio station (call sign OXF). Radio beacon station at Simiutaq about 10 miles West of entrance to Julianehab Fjord.
TUGS: None. Port boats take lines and assist mooring.
BERTHING: Atlantic Quay – length 100 m., depth alongside between 7/9 m. on average high tide and 1 quay, length 60 m., depth alongside 4.8 – 7.2 m. for small vessels. Height of quay is 1.3 m. above w/l. Mobile cranes, lifting capacity up to 5 tons.
MEDICAL: Hospital, doctor and dentist available.
FRESH WATER: Available at Atlantic Quay by tanker trucks.
FUEL: Gas-oil available at Atlantic Quay.
REPAIRS: At repair quay there is a stationary crane lifting capacity 35 tons. Slip for small vessels (250 tons) and minor repairs. Machine shop available.
AIRPORT: Heliport.
GARBAGE DISPOSAL: No regular garbage collection service possible. Make arrangements with the Harbour Master.
WASTE OIL DISPOSAL: Not possible.
SEAMAN'S CLUBS: In Greenland, seaman's hotels serve tourists, visitors and local people. Alcohol is forbidden in the hotel. In Qaqortoq, the seaman's hotel can be contacted on (299) 38678.
AUTHORITY: Kalaallit Niuerfiat, Torvevej, P.O.Box 500, 3920 Qaqortoq, Greenland. *Tel:* 38244. *FAX:* 38316. *Cables:* Handelschefen Qaqortoq. *Contact:* Isak Trolle or Claus J.Clausen.

QEQERTARSUAQ (Godhavn): 69.14 N. 53.32 W. (See Plan)

(Also see "General Information" at beginning of Greenland Section)
DESCRIPTION: Port consists of a mooring inside a bay and a 12 m. quay with depth 4 m.
DAYLIGHT: Polar darkness from 25th November to 15th January, and midnight sun between 19th May and 26th July.
CONDITIONS: Ice: Winter ice is fast from November–December until end May or beginning of June. Thickest observed Winter ice is about 100 cm.
ENTRY: Day or night. Port is open from May to November. Between mid-April until May the port can only be used by specialised tonnage.
PILOTAGE: Boarding point arranged with Port Authority in ETA advices.
ANCHORAGE: Good anchorage in the bay – outer port.
MAX. SIZE: Largest vessel to date length 100 m., draft 6.5 m. at quay with length 60 m. and depth 4 m.
RADIO: Extended from Aasiaat "OYR". RDF Station beacon.
TUGS: None. Port boats assist with mooring.
BERTHING: Quay length 12 m. depth alongside 4.0 m. at MLWS. Vessel moors to 2 anchors and stern-lines to the shore. Mobile cranes on shore capacity up to 5 tons. Depths in bay about 6.82 m.
MEDICAL: Hospital. Doctors and dentist available.
GENERAL: Arctic Scientific Station, Fire Brigade, Cable Office.
AUTHORITY: Kalaallit Niuerfiat, Holten Mollersvej 3/C, 3953 Qeqertarsuaq, Greenland. *Tel:* 47244. *Telex:* 91401. *FAX:* 47400. *Cables:* Handelchefen Qeqertarsuaq. *Contact:* Handelchefen.

SISIMIUT (Holsteinsborg): 66.56 N. 53.40 W.

(Also see "General Information" at beginning of Greenland Section)
LOCATION: Harbour is situated on Northern side of Tommermandsoen.
CONDITIONS: *(a)* Tide: Average height of high tide 3.5 m. (max. 4.4 m.) low tide 2 m. *(b)* Ice: Winter ice up to 1 m. thick. Ice normally occurs from December to March or April.
ENTRY: Port open day and night, and normally all year round.
PILOTAGE: Arrange with Authority through Aasiaat Radio, cable address "Director of Commerce Sisimiut". Pilot meets vessel at Jakobs Skaer, 2 miles S.W. of Mollersoe.
ANCHORAGE: Large vessels can anchor outside port and discharge into barges.
MAX. SIZE: Largest vessel that can berth alongside Atlantic Quay, length 136 m., breadth 20 m., draft 7.2 m.
RADIO/VHF: Radio station extended from Aasiaat "OYR". VHF connection in Port Director's office. Radio technicians available, cable address "Polar Radio".
TUGS: None. Port boats take lines and assist mooring.
BERTHING: Atlantic Quay, length 60 m., depth alongside 7.8 m., at average low water. Height of quay 2 m., above w/l. If berth occupied, loading/discharging of larger vessels at anchorage with barges. At Atlantic Quay there is a mobile crane with capacity of 10 tons and forklift trucks.
Offshore Quay: Length 20 m. with depth of 6 m. at LW.
MEDICAL: Hospital, doctors and dentists available.
FRESH WATER: Obtainable at Atlantic Quay.
FUEL: Arctic Grade obtainable at Atlantic Quay and Offshore Quay.
REPAIRS: Slip for small vessels (250 tons). Repairs possible to wooden ships. Machine shop available.
AIRPORT: Heliport.
GARBAGE DISPOSAL: Waste container available alongside. Emptying fee approx. DKr 538. Disposal arranged through Port Office.
WASTE OIL DISPOSAL: Not possible.
SEAMAN'S CLUBS: All seaman's homes in Greenland are open to seamen, tourists and local people alike. Alcohol is forbidden. The Sisimiut Seamen's Home can be contacted on Tel: 14150.
GENERAL: Post and cable offices. Telephones not normally available for connection on board, but vessels at anchor can call Port Director's office on VHF during daytime.
AUTHORITY: Kalaallit Niuerfiat, Frederiks den 9 Plads I, 3911 Sisimiut (Holsteinsborg), Greenland. *Tel:* 14044. *Cables:* Handelchefen Sisimiut. *FAX:* 14981. *Contact:* Handelchefen.

NOTES

Please also advise Shipping Guides Ltd.

Grenada

ST. GEORGE'S: 12.02 N. 61.46 W. (See Plan)

DOCUMENTS:

Port Authority: Arrival Report (Ship's Particulars).

Health Authority: Health Declaration, 1 Crew List.

Customs: Cargo Vessel:

Arrival Report.
Clearance from Last Port.
1 copy Crew List.
Crews Effects Declaration.
Ships Stores.
2 copies Cargo Manifest.

Passenger Vessel:

All of the above, except Cargo Manifest, plus Passenger List.

Immigration: Cargo Vessels:

2 copies Crew List.

Passenger Vessels:

2 copies Crew List.
2 copies Passenger List.
1 copy Nationality Breakdown List.
1 copy Information Sheet (Arrival Report).
2 copies Disembarkation List.

PILOTAGE: Compulsory for anchoring and berthing for vessels over 200 g.r.t. Notice must be given before 1500 hrs. for vessels requiring berthing between 1600 hrs. and 0800 hrs. the following day.

Pilot boards at Pilot Station 0.5 miles N.W. of the red flashing buoy.

ANCHORAGE: Vessels anchor in position 12° 03.3' N., 61° 46' W. or as designated by the Pilot/Port Authority.

RESTRICTIONS: Vessels are normally berthed between 0500 hrs. and 2300 hrs. Berthing and unberthing may be done in certain circumstances outside of the above hours.

MAX. SIZE: Single screw vessels up to 600 ft. LOA, approximately, depending on type and machinery equipment of the vessel, this size may be increased. Max. draft 28 ft.

VHF: 25 Watt base station – Grenada Ports Control (J3YA) Channel 16. Hours: 0800 – 1600 hrs., Monday to Friday.

Mobile station(J3YA) 5 Watt, Channel 16. Hours flexible but mainly limited from 0600 to 2200 hrs. Monitors Channel 16.

St. Georges Pilot (J3YB) Channel 16.

TUGS: Not available.

BERTHING: Length of berth 800 ft. Depth alongside 30 ft. (minimum). Berth owned by the Grenada Port Authority.

Berthing in hours of darkness is carried out if advice received before 1500 hrs. Palletised and container cargoes are loaded and unloaded by ship's gear.

CRANES: None.

STEVEDORES: Available.

MEDICAL: Doctor and general hospital available.

TANKERS: A tanker berth exists at the bulk storage terminal at Grand Mal, approximately 1.5 miles North of St. George's. Another terminal, Queens Park Terminal, exists 100 yards South of Green Bridge at the Northern limit of the town of St. George's. A minimum depth of 26 ft. exists between the mooring buoys at this Terminal.

Due to shallows, manoeuvring in the area of the Grand Mal Terminal is difficult and is not carried out during the hours of darkness. It is also not recommended to attempt berthing at the Queens Park Terminal during the hours of darkness due to lack of navigation ranges.

FRESH WATER: Available at an approximate cost of U.S.$5.0 per ton. Rate 10 t.p.h. (approx.).

FUEL: This can be arranged with sufficient notice (not less than 24 hours). Grade – Gas Oil 45 Cetane. Minimum supply 300 gallons.

SURVEYORS: Michael Forshaw and Allan C. Hooper, Windward Island Surveys, Tel: 440-2881 and 440-2444 respectively. Both act for Panama Bureau of Shipping.

AIRPORT: Air services provided by Leeward Island Air Transport (LIAT), British West Indian Airways (BWIA) and British Airways(BA). Daily flights by LIAT and BWIA and twice a week by British Airways and American Airlines to and from San Juan.

HOLIDAYS: New Year's Day, Corpus Christi, Independence Day (February 7th), Good Friday, Easter Monday, Labour Day (May 1st), Whit Monday, August Bank Holiday (Monday and Tuesday), Thanksgiving Day (October 25th), Christmas Day, Boxing Day.

TELEPHONES: Dock side telephone available on request from Grenada Telephone Company.

GARBAGE DISPOSAL: No facilities.

WASTE OIL DISPOSAL: No facilities.

SEAMAN'S CLUBS: None.

CURRENCY: Eastern Caribbean Dollar (E.C.Dollar).

GENERAL: *Charts:* B.A. Chart No. 2830 (B.A. 799, B.A. 797 (Metric)).

SHIPMASTER'S REPORT: December 1989 (Updated 1996).

Charts: BA. Charts No. 2830 and 2821.

Berths: Texaco and Shell Oil Terminals.

Documents:

2 copies Crew Manifest.
2 copies Bonded Stores List.
6 copies Crew List.
3 copies Cargo Manifest.
1 copy Maritime Declaration of Health.

The port officials and the Pilot boarded off Fort St. George and leave the vessel at the berth. Ship's own forms are accepted. We tried to obtain Grenada forms for next visit but these were not available. The bond was not sealed.

Pilotage: Pilotage is compulsory for berthing at all berths and all oil moorings. Vessels are allowed to unberth from the oil moorings without a Pilot.

Pilotage normally available between 0600 hrs. and 2000 hrs., however the Pilot will berth vessels at night at Grand Mal and Kings Bay by special arrangement, in which case an early booking should be made through the Agent in order to avoid delays. The Pilot boards off Fort St. George or at Fort St. George Anchorage, from a launch with a blue hull and white superstructure.

Anchorage: Vessels anchor off Fort St. George in a depth of 5 – 7 fathoms with Fort St. George bearing 118° at a distance of 0.5 miles. There is often a large swell in this area.

Approaches: There is a shoal patch of 8.0 m. at low water on the approach to the Grand Mal moorings in position Lat. 12° 04.4' N., Long. 61° 45.2' W. (See "Plan").

Max. Size:

Grand Mal Mooring: Max. LOA 300 ft. Max. draft 22 ft. The depth at the mooring is 24.0 m.

Berthing:

Grand Mal: At Grand Mal, vessels with cargo for Shell and Texaco moor using the port anchor and stern lines to 2 mooring buoys. When the vessel is in the correct position she will be equidistant between white marker buoys on the port beam and the starboard beam. When moored, the vessel had 4 shackles out on the port anchor and the ship's head was 250°. In this position the port quarter buoy is abeam of the stern and the starboard quarter buoy is astern of the vessel, both buoys being 15 m. from the stern.

It is recommended that the vessel is heaved into position as close to the buoys as possible in order to reduce the length of hose required to reach the ship. The shore connection is approximately 210 m. from the stern.

A blue hulled boat with a powerful outboard assists with mooring and when not in use is normally secured at the Texaco landing stage.

Kings Bay: Shell operate a terminal at Kings Bay. The mooring consists of 2 stern mooring buoys. The mooring is just South of St. John's River and has a minimum depth of 6 fathoms. Ship's hoses are used at this terminal.

Loading:

Grand Mal: Texaco have facilities for LPG and white oils. The Texaco LPG capacity at Grand Mal is 100 tonnes in 4 tanks (2 × 694 bbls. and 2 × 534 bbls.). There are also tanks for propane (100 tonnes) and butane (116 tonnes). Gas oil, kerosene, aviation jet fuel and motor spirit are also handled.

Shell handle white oils but have no facilities for LPG.

Kings Bay: Used by Shell for the handling of white oils only.

Hoses: There is one undersea hose for LPG. The undersea hose for white oils at Grand Mal Bay is not used.

The ship's hose, with a length of 280 m. is run ashore to the connection between the Texaco and Shell facilities.

For communications whilst loading, Texaco use Channel 12 and Shell use Channel 9.

The rate of discharge for products is governed by the maximum rate possible for the ship's hoses.

General: The boatman was very helpful with running of stores and personnel from ship to shore.

Most U.S. and European food products and goods are obtainable.

The Airport (Point Salines) at Saline Point, on the South West tip of the island, handles both international and inter-island traffic.

SHIPMASTER'S REPORT: March 1990 (Updated 1996).

Berth: Shell Oil Offshore mooring at Queen's Park, St. George's.

Chart: British Admiralty Chart No. 797 (Metric).

Pilotage: Compulsory. Pilot boards off St. George's and is available during daylight hours only. If the conditions are good and the vessel is a regular trader, night time berthing may be considered.

If vessel shifts from Grand Mal to Queen's Park or vice-versa a pilot is required by legal by-laws.

Mooring: The mooring is located in position Lat. 12° 03.48' N., Long. 61° 45.43' W., off the entrance to St. John's River.

The vessel moors to 2 buoys aft and uses the vessel's starboard anchor with 4 shackles in the water. The vessel should be as close as possible to the port quarter buoy (South buoy) as there is less water near the starboard quarter buoy on account of silt from the river. The depth of the water at the stern is approximately 6.5 m.

The vessel sends a line to each buoy but if a heavy swell is running an additional line may be required to each buoy.

Cargo Operations: The mooring is used exclusively by Shell to supply gas oil to the Power Station, which is located in position Lat. 12° 03.9' N., Long. 61° 45.2' W. The connection is on the road side just North of the river mouth near the road bridge. The ship's floating hose is used to make connection and the pumping rate is approximately 650 bbl./hr. The capacity of the tanks at the Power Station is 6,000 bbls.

If VHF Channel 9 is not available on the ship, vessel is to land 2 sets of walkie-talkies for communications whilst discharging. One set is used at the road side connection and the other at the Power Station.

A representative of Shell boards at commencement and completion of operations.

Launch: Shell have their own safety launch which also serves Shell at Grand Mal. The launch acts as a mooring boat and will run crew to the nearest point ashore but will not run crew into town.

AUTHORITY: Grenada Ports Authority, P.O.Box 494, St. George's, Grenada, West Indies. *Tel:* 440-3439 440-3013, 440-3015. *Telex:* 2132 Min. *Cables:* Grenada Port Authority. *FAX:* 440-3418. *Contact:* Ambrose Phillip, General Manager. Ian Evans, Port Manager.

Guadeloupe

BASSE TERRE, Basse Terre: 15.59 N. 61.44 W.

(See Plan)

PORT LIMITS: 1 mile from pier.
DOCUMENTS:
6 Crew Lists.
6 Manifests.
Health Declaration Form.
6 Lists of Stores on board.
Passenger List.
6 Inward Declarations.
Clearance from Last Port.

PILOTAGE: Compulsory for vessels over 120 m. for entry, and over 160 m. for entry and leaving.

No Pilot Station in Basse-Terre. Pilot will come from Pointe-a-Pitre, so when vessel arrives, call "Basse-Terre Port Control" on Channel 16 or 12, and the Port Officer will give you instructions to follow. Vessels must wait for a Pilot about 1 mile from the pier. Pilot usually comes on board on the port side.

ANCHORAGE: On an 18 fathom bank North of the pier, 2 cables from the shore.

RESTRICTIONS: Vessel can berth and unberth at any stage of the tide, but if vessel's first call, recommend berthing during daylight only.

MAX. SIZE: Max. LOA 300 m. Max. beam 30 m. There is 32 ft. – 36 ft. alongside but an allowance should be made for a 3 ft. swell, therefore would suggest max. draft approx. 29 ft.

HEALTH: Authorities require 24 hours notice of the vessel's arrival.

RADIO: Fort-de-France, call sign "FFP" (high frequency).

VHF: Port Authority on Channels 16 and 12.

TUGS: Not available, however a small boat will assist in running lines if the Port Authority is advised in sufficient time on VHF Channel 16.

BERTHING: The extension is in operation. The old S.E. arm of the quay and was badly damaged in a hurricane of 1979.

The new quay is solid-filled and extends to a reclaimed shore thus providing considerable container stacking area. The berth is approximately 300 m. long and is well fendered with rubber fenders. Depth alongside 8.6 m. – 11.1 m.

Ro-Ro berth: Length 48 m., depth 5.5 m. – 8.0 m.

CRANES: 30 ton mobile crane available.
BULK CARGO FACILITIES: None.
STEVEDORES: Working hours: 0700 – 1100 hrs. and 1300 – 1700 hrs. Extension possible.
MEDICAL: Doctors and hospital available.
DENSITY: 1025.
FRESH WATER: Available. Rate 15 cu.m./hr. Cost 12.15 F./cu.m.
CONSUL: None, nearest consuls at Pointe-a-Pitre.
SURVEYORS: Bureau Veritas at Pointe-a-Pitre.
HATCHES: Opened and closed by crew.
REPATRIATION: Arranged by Agent.
AIRPORT: 60 km. Daily flights to Paris.
TIME: GMT plus 4 hours.
BANKS:
Credit Agricole, Cours Nolivos, 97100 Basse-Terre. Tel: 81.68.68.
Banque Nationale de Paris, Rue Maurice Marie-Claire, 97100 Basse-Terre. Tel: 81.21.12.
Caisse D'Epargne, Rue Baudot, 97100 Basse-Terre. Tel: 81.14.47.
Banque Francaise Commerciale, Rue Docteur Caisre, 97100 Basse-Terre. Tel: 81.07.59.
Banque des Antilles Francaises, Cours Nolivos, 97100 Basse-Terre. Tel: 81.25.34.

SHORE LEAVE: Possible.
IDENTIFICATION CARDS: Passport required.
SERVICES: Fresh provisions, groceries and meats available. The following are not available: repair facilities, dry dock, machine shop, airport, surveyors, laundry services, bunker fuel oil, diesel oil, lubricating oil and slop tanks.
GARBAGE DISPOSAL: Only for small quantities.
WASTE OIL DISPOSAL: See "Pointe-a-Pitre".
SEAMAN'S CLUBS: See "Pointe-a-Pitre".
CURRENCY: See "Pointe-a-Pitre".
WEATHER: The swell is between 3 ft. and 4 ft. from a S.E. direction. The wind is mainly from an Easterly direction.
AUTHORITY: Basse-Terre Port Authority, B.P. 566, 97100 Basse-Terre, Guadeloupe. *Tel:* 81.11.21. *FAX:* 81.09.15. *Contact:* Mr. Claude Julienne, Port Director.

GUSTAVIA, St. Barthelemy: 17.54 N. 62.51 W.

(See Plan)

PORT LIMITS: See "Plan".
DOCUMENTS:
Ship's papers and Certificates.
Crew List.
Passenger List.
PILOTAGE: Available for cargo vessels. Contact Port Director on VHF Channel 16.
ANCHORAGE: See "Plan".
RESTRICTIONS: None.
MAX. SIZE: LOA 60 m.
VHF: Port on Channels 16 and 12. Call Port Authority on Channel 16 before entering the port.
TUGS: None available.
BERTHING: Vessels berth stern to at berths.

Berth	*Max.Length* (m.)	*Max.Depth* (m.)
Quai de Gaulle	60	4.5
Quai Republique	40	3.0
Quai Wall House	60	3.5

Ro-Ro facilities available.
CRANES: None available.
BRIDGES: None.
STEVEDORES: Agent requires notification 24 hours in advance. Working hours: 0600 hrs. – 1800 hrs.
MEDICAL: Hospital is 10 minutes by car. Doctor and dentist also available.
TANKERS: One tanker berth.
FRESH WATER: Available. Cost U.S.$ 0.10/gallon.
FUEL: Diesel and gasoline available.
CONSULS: None.
REPAIRS: No facilities.
DRY DOCKS: None.
SURVEYORS: None.
CARGO GEAR: No equipment available.
AIRPORT: 5 minutes by car.
HOLIDAYS: January 1st, Carnival, Easter, May 1st, August 15th, November 1st (All Saints Day), December 25th.
POLICE/AMBULANCE/FIRE: Police: 27-66-66. Fire: 27-62-31.
BANKS: Four banks in town (2 minutes walk).
STORING: See "Prelims".
(1) Yes.
(2) No.
(3) Yes.
(4) Yes.
(5) None.
(6) Yes.
SHIP SUPPLY SERVICE: Available.
SHORE LEAVE: Possible.
IDENTIFICATION CARDS: Passport.
GARBAGE DISPOSAL: Available.
WASTE OIL DISPOSAL: Available.
SEAMAN'S CLUBS: None.
CURRENCY: French Franc. U.S.$ 1.00 = 5 FF (March 1996).
REGULATIONS: Max. permissible speed in port is 5 knots.
DELAYS: A maximum of 24 hours.
AUTHORITY: Direction du Port of Gustavia, 97133 St. Barthelemy, Guadeloupe, French West Indies. *Tel:* (590) 27-66-97. *FAX:* (590) 27-81-54. *Contact:* Bruno Greaux, Port Director.

POINTE-A-PITRE, Grande Terre: 16.13 N. 61.32 W.

(See Plan)

DOCUMENTS:
6 Manifests. See (a).
6 Crew Lists.
3 Stores Lists.
3 Crew Declaration. See (b).
6 Passenger Lists.
4 Declaration of Health.
2 Bills of Lading.
1 Clearance from Last Port.
6 Entrance Declaration.

(a) In addition, 2 sets of Manifests must be airmailed to arrive 72 hours before arrival in Pointe-a-Pitre.

(b) This Declaration must indicate all new and used personal effects.

PILOTAGE: Pilot meets vessels at "Mouchoir Carre" buoys. Advance notice of ETA to be passed 24 hours, and VHF Channel 16, 1 hour before arrival.
ANCHORAGE: Consult charts.
RESTRICTIONS: Max. length 260 m. Max. draft 10.0 m.
MAX. SIZE: See "Restrictions".
HEALTH: Port Health board on arrival.
RADIO: Destrellan Radio, also on VHF.
TUGS: 1×18 ton bollard pull.
BERTHING: 10 berths available, 8 additional for petroleum, sugar, cement, flour mill, bananas, Ro/Ro and containers.

Tourist Port:
Quay No. 1: Length 150 m., depth 7.80 m.
Quay No. 2: Length 177 m., depth 9.00 m.
Quay No. 3: }
Quay No. 4: } Length 283 m. Depth 9.00 m.
Commercial Port:
Quay No. 5: } Length 320 m., depth 9.00 m. Ro-Ro, General
Quay No. 6: } Cargo
Quay No. 7: } Length 306 m.; No. 7, depth 8.50 m.; No. 8, depth
Quay No. 8: } 8.50 m. General cargo.
Industrial Port:
Quay No. 9: Length 135 m., depth 7.70 m. Mineral Berth.
Quay No. 10: Length 150 m., depth 7.50 m. Storage capacity 30,000 cu.m.
Quay No. 11-1: Length 150 m., depth 8.0 m. Sugar Berth. Storage capacity 70,000 cu.m. Loading rate 750 t.p.h.
Quay No. 11-2: Length 150 m., depth 9.0 m. Grain vessels, flour and feed, general cargo.
Quay No. 11 (Ro-Ro): Length 35 m., depth 4.20 m.
Quay No. 12: Length 188 m., depth 10.00 m.
Quay No. 13: Length 160 m., depth 10.0 m. General cargo, Containers.
Quay No. 14: Length 240 m., depth 10.00 m. Container Terminal.

Industrial Area: The industrial area of Jarry offers 40 hectares of open storage at the water's edge.

Container Terminal: Quay No. 14: The container terminal is equipped with 3 × 40 ton Paceco-ACB cranes.

STEVEDORES: 24 hours advance notice of ETA required (72 hours if vessel arrives on Monday).

Working Hours: The port has 2 timetables:

Continuous: 0630 – 1330, 1400 – 2100, 2200 – 0400.

Discontinuous: 0730 – 1100, 1400 – 1730, 1600 – 2130.

The shipper has a choice between the two timetables offered, according to the arrival time of his ship, the quantity of goods to be offloaded and loaded. He chooses the most appropriate timetable for his warehouse/handling operations. He can begin with the Continuous Timetable and finish with the Discontinuous Timetable.

MEDICAL: Clinics and Hospital facilities available. Hospital Tel: 82.88.88, 82.98.80.

TANKERS: Only tankers having less than 7.5 m. draft can enter the harbour.

FRESH WATER: Available day and night if requested in advance.

FUEL: Available F.O. 350 seconds Redwood, D.O. for gas oil. Delivered by road tankers.

CONSULS:

Belgium
Denmark
Ecuador
Haiti
Italy
Lebanon
Netherland
Norway
Spain
Sweden
United Kingdom
Venezuela

REPAIRS: Workshops available.

GANGWAY/DECK WATCHMEN: Available on request.

HATCHES: Usually opened and closed by crew. Stevedores will at Master's request but at ship's expense.

CUSTOMS ALLOWANCES: 200 cigarettes and 1 bottle per man.

CARGO GEAR: Ship's gear used.

REPATRIATION: All facilities available.

AIRPORT: 3 miles from the harbour with daily flights to Paris, Miami and New York.

TIME: GMT minus 4 hours. No alterations during the year.

HOLIDAYS: New Year's Day; Shrove Tuesday; Ash Wednesday; Carnival; Good Friday; Easter Monday; Labour Day (1st May); Ascension Day; Whit Monday; National Day (14th July); Souls' Day; Armistice; Christmas Day.

POLICE/AMBULANCE/FIRE: Police: 82.00.69 or 82.13.17 or 17; Ambulance and/or Fire Department: 83.00.28 or 18.

SHORE LEAVE: Permitted.

IDENTIFICATION CARDS: I/D or Passport required.

GARBAGE DISPOSAL: This service is provided by the Port Authority on request from the ship's agent. Drums are provided alongside the vessel during normal working hours. The average charge per drum load is FFr.400.

WASTE OIL DISPOSAL: A collection service is provided by G.C.O. Tel: (590) 834341. Fax: (590) 833828. Ship's agent must advise requirements 48 hours in advance. Collection is available from 0700 hrs. to 1800 hrs., Monday to Saturday. Collection is made by tanker trucks of 100 cu.m. capacity. Current minimum charge is FFr.860 per day.

SEAMAN'S CLUBS: Information can be obtained from B.D.A.M., Ancienne Capitanerie, Port de Pointe-a-Pitre 97110. Tel: (590) 901869.

CURRENCY: French Franc (FFr.).

REGULATIONS: No particular regulations.

AUTHORITY: Guadeloupe Port Authority, Gare Maritime, (P.O.Box 485), 97165 Pointe-a-Pitre Cedex, Guadeloupe, F.W.I. *Tel:* (590) 916313. *Telex:* 919710 GL PA GUAD. *FAX:* (590) 91 5679. *Contact:* Captain F. Morin, Harbour Master. J.C. Le Clech, General Manager.

NOTES

Please also advise Shipping Guides Ltd.

Guam

GUAM (Apra Harbour): 13.26 N. 144.39 E. (See Plan)

DOCUMENTS: Guam is a United States Territory in the Western Pacific and official documentation is as for mainland U.S. ports, including visaed Crew List completed at port of departure prior to Guam. Vessels should have a stock of American Crew Lists Form I-148 and Form I-95A. The American Alien Crewman Landing Permit is acceptable and preferred. This is the plastic identification card previously issued on the U.S. coast.

Required on arrival:

Vaccination Cards.
Visaed Immigration Crew List.
4 Crew Lists.
4 Passenger Lists.
1 Stores List.
Clearance from last port.
Cargo Papers.

Have ready Immigration Form I-94 for each passenger and Form I-95 for each alien unless they have I-184 plastic Identification Card. Shore Passes not required. Crew Customs Declaration not required.

APPROACHES: Make for the unmarked approach point designated "AH" (Alpha Hotel) 2 miles from entrance at 13° 26' 8" N., 144° 34' 09" E. where Pilot boards, weather permitting. From position AH, the entrance range line is 084° with the leading marks in line. Because of depths, anchoring outside the harbour is impossible. If vessel must wait for the Pilot cruise back and forth in this area.

Port entry: On occasions, weather and sea conditions are considered unsuitable for Pilots to board outside. Under such circumstances vessel may be requested to proceed inwards and pick up the Pilot in the harbour area. The Harbour Master's permission for vessel to enter is mainly based on the traffic situation and does not necessarily take into account whether it is actually safe for vessel to enter under such conditions.It is not advisable to enter without a Pilot due to strong cross currents.

Pilots are very willing to assist arriving tankers and whenever the weather situation at point AH is prohibitive for boarding, they may request the Master to proceed Southwards in Agat Bay to look for a more sheltered boarding ground.

Before entering, the Harbour Master and the Pilot should be consulted to ensure that no outgoing traffic will be encountered in the harbour entrance. It is also advisable to obtain from the Harbour Master the positions of vessels which may be anchored in the harbour area.

Under the influence of N.E. Trades the prevalent set of the current (reaching 3 knots) off the entrance is to the South or S.W. regardless of the tidal currents. During the Summer months, when Westerly winds prevail occasionally, a Northerly set may be experienced (reaching 1.5 knots). The current velocity fluctuates during a daily period under the influence of tidal currents. Entry should be made during periods when cross currents are expected to be at a minimum. The Pilot should be consulted on this matter.

Strong cross currents may require an approach speed of up to 8 knots. In view of the relatively short distance from the entrance to the berth, the speed must be substantially reduced as soon as the influence of the cross current has subsided. In relation to this, the manoeuvring characteristics of vessel should be carefully taken into consideration.

Notice:

Issued by: Commander, U.S.C.G., Marianas Section.
Dated: 17th October, 1986.
Subject: SECURITY ZONE.

The Coast Guard has directed Naval Prepositioning Ships mooring in Apra Harbour to use Buoy 702* in Outer Apra Harbour and is establishing a security zone around this buoy and Naval Prepositioning Vessels moored thereto effective 17th October, 1986.

A 100 yard security zone has been established in all directions around Buoy 702 and Naval vessels moored there. When no vessels are moored to Buoy 702, a 50 yard security zone will remain in effect around the buoy itself.

The zone is established to safeguard Naval Maritime Preposition Ships against any possible destruction from sabotage or other similar causes.

Entry into the security zone is prohibited unless authorised by the Captain of the Port. Any person or vessel that enters the security zone without the permission of the Captain of the Port is subject to boarding search and removal from the area. Criminal penalties can be pursued against those on board.

*Buoy 702 is approximately 3.3 cables N.E. of the General Anchorage.

PILOTAGE: It is advisable to have on board U.S. charts for Guam: C & GS 4197 Apra Harbour. 4196 Guam Approaches.

Pilots are available 24 hours and are required on all vessels over 500 g.r.t. Pilots will board and disembark 2 miles West of harbour entrance at Point "Alpha Hotel".

ANCHORAGE: Harbour – range 084° True, 2 green lights. Strong set across harbour entrance, Navy recommends 10 knots entering. Quarantine Anchorage at Middle Ground, Outer Harbour, depth 45 ft.

Inner Anchorage: Tidal range in the harbour is about 2 ft. Currents are weak. Deep drafted vessels should exercise caution as to the patch indicated as "Middle Ground" and the 42 ft. patch situated Westward of "Middle Ground". On rare occasions vessels may be requested to anchor. In these instances, deep drafted vessels may use the Naval Anchorage between and to the North of Buoys 951 and 704. Officially, this anchorage is reserved for Navy vessels, however, the Navy has not objected to commercial vessels using this anchorage occasionally. Smaller vessels should have no difficulties in finding anchorage. In each case, anchorage location is determined by the Harbour Master in consultation with the Pilots. The bottom is mainly coral and is not a good holding ground.

MAX. SIZE: Max. LOA 230 m. (Berths "F4", "F5" and "F6"). Depth alongside Berth "F5" – 10.97 m. at HW.

Berth "F3". Max. LOA 182.80 m. Depth 9.75 m. at HW.

Max. beam for container vessels is 33.55 m.

RESTRICTIONS: The Harbour Master of the Port Authority of Guam, is in complete control of the approaches to Guam and it is essential to obtain clearance and permission to enter Guam from "Harbour Master" Port Authority, call sign KUF-810 at least 24 hours prior to arrival. Permission is readily granted with the condition to request permission again 2 hours prior to arrival at Guam. This time from Guam Control, call sign KUF-810 and NRV (USCG).

HEALTH: If from suspect port, Inspector boards at anchorage or at pier for thorough check. Inspector grants Pratique.

RADIO: Harbour Master Radio Station, call sign KUF-810 ship/shore watching 24 hours. Use of USCG Station "NRV" for best service if unable to reach KUF-810 due to limitation of range.

Notice to Ship's Agents: (20th August, 1980)

The Harbour Master's Control Tower is operating on a 24 hour basis. The following VHF frequencies are guarded and monitored:

156.8 MHz – Channel 16
156.6 MHz – Channel 12
156.65 MHz – Channel 13

In addition, Control Tower personnel will be monitoring S.S.B. with the following procedure:

2182.0 kHz continually.

4143.6 kHz – (4B). Every hour on the half hour for a period of 5 minutes.

8291.1 kHz – (8A). Every hour at 35 minutes after the hour for a period of 5 minutes.

12432.3 kHz – (12B). Every hour at 40 minutes past the hour for a period of 5 minutes.

The Port Authority solicits your co-operation in the matter of keeping the Harbour Master advised of all arrivals, departures, and other pertinent information whereby we may best serve the maritime industry.

VHF: Masters of vessels approaching should keep watch on Channels 12, 13 and 16.

TUGS: 6 tugs (1,200 h.p.) from 2 private companies available throughout 24 hours. Tugs can be contacted direct on VHF Channels 16, 13 and 19.

BERTHING: Vessels may berth port or starboard side upon request of the Master or Agent at "F3", "F4", "F5" except "F6" port side to, 1 large tug and 1 small tug normally used. Ship's gangway is required. Local information from Pilots states that after completion of Berth F-1 (Shell Oil Berth), a submerged wreck was discovered, said to be a 500 ft. long cargo vessel, and lies across and below the vessel in this berth, on the Eastern side of the jetty. It is advisable not to drop anchors – should they have to be used – until vessel has passed over the wreck. There have been instances of forward springs or breastlines becoming fouled in this wreck during operations.

Restricted Area: 800 ft. of berth space is temporarily unavailable at the F-5 and F-6 Piers.

"No lines allowed in fenced-in area between Red Tie Downs. F-4 Pier is the only available berth for all container vessels".

Note: Damage sustained to these two berths resulted from the 9th August 1993 earthquake that reached 8.1 on the Richter Scale. Repairs are scheduled to start in Summer 1996.

CRANES: 1 (Grove) × 140 ton, 1 (Hitachi) gantry crane × 40 ton, 1 (P&H) × 40 ton and 1×35 ton.

2 Paceco rail mounted container gantry cranes for handling 20 ft., 27 ft., 40 ft. or 45 ft. containers. 30 forklifts, capacity 3 – 20 tons, including a Hystainer with special spreader for handling containers.

TANKERS: *Mobil Pier:* Berth "G". Depth alongside 39 ft.

The terminal consists of a T-head pier, with 2 breasting dolphins. Head and stern lines are secured to shore-based bitts. No breast lines can be used. Therefore, caution should be exercised when off-berth winds occur.

The pier is within the blast zone of the Navy ammunition pier. When a vessel is working ammunition, or when ammunition is on that dock, U.S. Coast Guard will not ordinarily permit a vessel to lie at the Mobil Pier. If U.S. Coast Guard does give permission, U.S. Navy authorities require a "Hold Harmless" agreement before permitting vessel to berth at the Mobil Pier. To this effect the Agent assists and offers guidance.

Berthing: Vessels usually berth on port side. There are no particular difficulties with berthing a vessel but approach speed and impact on the dolphins should be kept to a minimum. 2 mooring launches are utilised. There are no capstans for hauling mooring lines.

Beam winds may affect vessels when alongside. Because of the lack of breasting lines, Northerly winds tend to push the vessel off the berth. Southerly winds cause excessive pressure on breasting dolphins when the vessel is in a light condition. Ballasting while discharging should be considered and Terminal operators will advise the Master on this. In case ballasting is necessary prior to completion of discharge, U.S. Coast Guard permission must be obtained.

Cargo Handling: Only refined petroleum products are handled at this pier.

Flexible rubber cargo hoses are used. No shore crane is available. Ship's manifold is to be ready with blanks removed and reducers rigged if necessary. Cargo booms should be operational prior to arrival, in order to lower the ship's gangway as soon as the vessel is secured to the pier. Different grades can be discharged simultaneously.

Shell Berth: Berth "F1". Depth alongside 55 ft.

The terminal consists of a T-head pier with 2 breasting dolphins at each end and 2 mooring dolphins on the West side.

On the East side there are quick-release hooks along the shore line. All mooring points are provided with quick-release hooks and capstans for hauling the mooring lines.

Berthing: Ships always berth port side to. Vessel is to proceed at slow speed towards the berth passing North of Buoy No. 2 (on some charts designated as Buoy RB "A") and East of the patch of 57 ft. reported in 1970. Tugs are in attendance. 2 mooring boats strong enough to handle (100,000 d.w.t.) wire ropes are available. Some difficulties have been reported when running lines ashore at the Eastern side since the mooring launch, because of shallow water, cannot get close to shore and rope pick-up winches at times are malfunctioning. Additional messenger lines are normally required from the vessel. The use of wires as headlines should be avoided.

Cargo Handling: Both crude oil and petroleum products are handled at this pier. For crude discharge 4×10 in. ASA hoses are used. Distance to tanks 7 miles. Ship's port side manifold to be ready with blanks removed and adaptors fitted if necessary.

Ballast/slop facilities are available and consists of 1×12 in. line of about 1,000 ft. long with a tank capacity of 80,000 bbls. The maximum acceptable quantity, however, is restricted to 50,000 bbls.

IMMIGRATION:

1. *Prior to Departure for Guam:*
   A. Visaed Crew List: Prepare 1 Crew List on U.S. Form I-418 and have it visaed by a U.S. Consulate at a port prior to Guam. Without this, crew shore leave may be denied.
   B. Passengers must have a valid Passport and also must have an appropriate U.S. Visa whether landing or not on Guam.
   C. Intransit passengers do not need U.S. visa if the Owners of the vessel have signed a contract called "Immediate and Continuous Transit Agreement" with the Commissioner of Immigration at Washington, D.C.
2. *Prior to Arrival at Guam:*
   A. Passenger List, Form I-418 prepare 3 copies of Passenger List on U.S. Form I-418 (for Immigration, Customs and Agent).
   B. Passenger Landing Card: Form I-94. Prepare or have on hand, 1 U.S. Form I-95A for each alien crew member. Not required if crew member is a permanent resident with U.S. I-184 laminated "Crewman's Landing Card". Not required of U.S.A. Citizens. Please present form I-95A in appropriate Seaman's Passport or Identification Book. Form I-95A can be used repeatedly for future arrivals of same crewman on same ship at any United States Port.
3. *Upon Arrival at Guam:*
   A. U.S. Federal Immigration Inspector boards upon arrival at pier, must see all passengers with their Passport and Form I-94 and all crew members with their passport or Identification Books and Form I-94A or Form I-184.
   B. Passengers and crew are required to be ready for inspection immediately upon docking at Guam.
   C. No shore leave and no visitors or stevedores may board until this Immigration inspection is complete. The Inspector will advise Master when he has completed his inspection of passengers and of crew.
4. *Prior to Departure from Guam:*
   A. Intransit Passengers: Pick up from intransit passengers the Form I-94 and hand to Agent before departing from Guam. These must be returned by Agent to U.S. Immigration as passenger departure records.
   B. Alien crew member joining at Guam: Pick up from them the Form I-94 which they used to enter the U.S.A. These must be returned to U.S. Immigration by Agent as permanent records.

SECURITY: Guam Government Official usually boards at pier, examines vaccination cards and inspects Steward's stores and slop chest. Also represents U.S. Customs. Requires 1 Crew List, 1 Passenger List, 1 Stores List, Clearance from last port, later issues new clearance from Guam which Agents bring to ship. Normally does not seal stores or slop chest.

MARINE GUARD: Required when docked at Ammunition Pier, requires 1 Crew List.

MEDICAL: Foreign ships use Guam Memorial Hospital or other clinics in town. American ships use U.S. Naval Dispensary in Harbour area, or in emergency U.S. Naval Hospital near Agana, 10 miles distant. Certificates required signed by Master. Patient returns to vessel by taxi at vessel's expense. Dispensary hours for merchant seamen Monday to Friday 0800 – 1200 and 1300 – 1600 hrs. At other times, if emergency, use the U.S. Navy Hospital. Doctors will not normally visit ships.

Dentists: Private dentists only. Usual hours 0900 – 1700 hrs., Saturday to 1200 hrs.

FRESH WATER: Very good, available any quantity, meter service.

FUEL: Marine Diesel Oil available by truck at any pier and by pipeline at Berth "F3". Black oil available by pipeline at Berth "F6". Both products also available by pipeline at Berth "F1" (Shell Pier) and the Mobil Pier. The distribution companies are Exxon, Shell and Mobil. Infrequent fuel delivery restriction occurs when ammunition vessel working.

REPAIRS: Commercial Yard and Casamar Yard available. Navy Yard, repairs by U.S. Naval Ship Repair Facility (SRF), subject to prior Navy commitments, and requires cash deposit in advance. Payment to be made for work done successfully or not. "No Cure No Pay" does not apply.

STORES: Available but considered expensive. Produce from U.S.A.; meats from U.S.A. and N.Z.; milk is recombined in quart cartons, white, chocolate or buttermilk. Order milk day prior to delivery; tropical fruits seldom available; ice in blocks or cubes. Prices wholesale, except under 1 case lots when at retail. Delivered to ship's gangway or hook.

LAUNDRY: Also dry-cleaning available 3 days service at U.S.A. prices. 1-day service extra. Delivered to ship's gangway or hook.

TIME: GMT plus 10 hours.

POLICE/FIRE/AMBULANCE: Ambulance U.S. Naval Dispensary, Harbour Area, Tel: 344-9351. Guam Civilian Fire, Tel: 911. Police – Guam Civilian Police, Tel: 472-8911. Port Authority Police, Tel: 477-2683. Naval Station Security (U.S. Naval Detachment) Tel: 339-4283.

BANKS: Bank of Guam, Bank of Hawaii, Citibank, First Hawaiian Bank, Hong Kong and Shanghai Banking Corp., Oceanic Bank and Union Bank.

GARBAGE DISPOSAL: Commercial Sanitation Services, P.O.Box 7243, Tamuning, Guam 96931. Tel: 646-1925/8642. Fax: 646-0120.

Regulated waste containers/dipsy dumpster.

WASTE OIL DISPOSAL: Energy Recovery Corp., P.O.Box 1265, Agana, Guam 96910. Tel: 472-2845. Fax: 477-8706. Collection/testing/disposal.

Unitek Environmental Services, P.O.Box 24607 MPO, Barrigada, Guam 96921. Tel: 565-3151. Fax: 565-3391.

SEAMAN'S CLUBS: United Seaman's Service, 695 Cabras Highway, Piti, Guam 96910. Tel: 477-6858. Fax: 472-2370.

CURRENCY: United States Dollars.

WEATHER: *Tropical Typhoons:* The Navy Fleet Weather Centre of Guam broadcasts typhoon warnings. Weather forecasts are good and reliable; however, due to the particular geographical position of Guam it is impossible to definitely determine the track of approaching turbulence. These turbulences usually generate a few hundred miles South or S.E. and may easily divert when passing near Guam. There are four typhoon warning conditions.

Condition 4:
Typhoon winds possible within 72 hours;
Condition 3:
Typhoon winds possible within 48 hours;
Condition 2:
Typhoon winds possible within 24 hours;
Condition 1:
Typhoon winds possible within 12 hours.

Typhoon season is June – December, but Condition 4 exists year-round.

In case of a typhoon warning, (condition 2) the U.S. Navy invites all Masters for a meeting to discuss the action plan for evacuating the port.

It is considered very dangerous to remain alongside or anchored within the port when a typhoon is approaching Guam.

SHIPMASTER'S REPORT: April 1987.

I was advised that Agents can obtain permission to enter Guam on behalf of the Master. If a ship is fitted with telex this saves time and money over the U.S.C.G. Station NRV.

On this occasion, the vessel was unable to raise KUF-810 until within VHF range. It was also noted that the Agency offices are in the same building as the Harbour Master. This Port Services Building also houses the U.S.C.G. and the Customs.

I was also advised that Daylight Saving Time is not being used by the present Administration, however the situation may change when a new Governor is appointed.

The 3 tugs in use are diesel electric, built in 1944 and estimated to be about 800 h.p. maximum. A tug of 1,700 h.p. is being sought at present.

This vessel used all 3 tugs when laden on a draft of 11.02 m. at the Mobil Pier - Berth "G". This pier is being renewed. At present the berth consists of 2 breasting dolphins only. The vessel used 3 × 6 in. floating hoses to discharge. No crew boats were available and a ship's lifeboat was used as a liberty boat. The new jetty should be in use in June 1987 according to the U.S.C.G.

Agent's name & address: Ambyth Shipping & Trading Inc., 1026 Cabras Highway, Suite 205, Piti, Guam 96925. Telex: (721)6405 AMBYTH GM. Fax: (671) 472 1264.

SHIPMASTER'S REPORT: June 1992.

A standard U.S. port complete with normal U.S. Immigration formalities. Wives of crew members are excluded from the visaed Crew List dispatched from loadport, and are treated as passengers.

Vessel's T.V.E.L. was valid and Coast Guard did not pay a visit. If requested, the pilot boards 2 miles outside the harbour entrance via tug. This is recommended, as there are strong cross currents running past the entrance from North to South. No real problems inside, except that for Shell "E" class size ships, the main part of the jetty is too long, inhibiting the putting out of standard moorings. The position of the spring hooks is too close to the position of the winches on board. Therefore springs had to be run from the forecastle and poop. The aft maindeck ropes were virtually useless, as they could not be led aft to the next dolphin along, due to the walkway linking the dolphins being in the way. Thus extra soft lines had to be put out from the poop.

Vessel discharged 3 grades concurrently, using 10 in. connections for D.P. Avtur and Premium U.L.G., and 8 in. connection for gas oil. The shore lines were 16 in. for D.P. Avtur and Premium U.L.G., and 24 in. for gas oil, all 6.5 miles long. Overall discharge rates achieved were approx. 650 cu.m./hr. for D.P. Avtur, 600 cu.m./hr. for Premium U.L.G. and 900 cu.m./hr. for gas oil.

AUTHORITY: Port Authority of Guam, Government of Guam, 1026 Cabras Highway, Suite 201, Piti, Guam 96925. *Tel:* (671) 477-5931/35. *Telex:* (721) 6689 Paggum. *FAX:* (671) 477-2689. *Contact:* Eulogio C. Bermudes, General Manager. Frank G. Santos, Harbour Master.

Guatemala

GENERAL

DOCUMENTS:

Consular Documents:

Masters are required to:

1. Obtain a health and clearance permit, issued by the competent authority at the last port of call, and certified by the Guatemalan Consul, and;
2. Submit 5 copies of a general manifest of articles carried to each port of the country, approved by the Guatemalan Consul at the port of loading, and also, separate copies of the manifest for in-transit articles unloaded.

If no articles bound for the country are carried, a ballast manifest should be submitted.

Prior to Arrival:

Arrival Notice:

There is no minimum period for advance notice of the vessel's arrival, because Authorities exercise a degree of flexibility. However, it is recommended that notice be submitted in writing to the following sometime in advance: The Captain of the Port, Customs Administration and Customs Supervision of Unloading, Migration Delegate, Maritime Health, Plant Health Delegate and Port Watch. Notification must also be sent to the following agencies of the Port Authority: Port Administrator, Office of the Chief of Operations, Office of the Chief of Docks, Import Division, Export Division, Invoicing Division, Container Section (if any) and Pilots Division.

Information on Cargo for the Port:

If the vessel carries cargo to be discharged at the port, the following information will be submitted to the Port Authority:

Stowage Plan.
Cargo Distribution List.
Heavy Cargo List.
Amount of Exports.

If containers are carried to the port, 8 copies of the list of container contents and 8 copies of the list of complete shipments and of mixed shipments (for more than one consignee) are to be submitted to the Container Section.

This information may be submitted upon the vessel's arrival, so that no delays in the work will be experienced for that reason.

On Arrival:

Type of Documents	*Number and Distribution of Documents*						
Basic Forms	*Captain of Port*	*Customs*	*Security*	*Maritime Health*	*Immigration*	*Plant Health*	*Port Authority*
General Declaration	1	1	1	1	–	1	1
Cargo Manifests	1	7	–	–	–	1	12
Crew List	1	1	2	1	1	1	1
Passenger List	1	1	2	1	1	1	1
Ship's Stores List	1	1	1	–	–	1	1
Crew Effects Declaration	1	1	1	–	–	–	–
Maritime Declaration of Health	–	–	–	1	–	–	–
Mail List(a)	–	–	–	–	–	–	–
Additional Documents:							
Clearance from Last Port	1	–	–	–	–	–	–
Consular Manifests	–	1	–	–	–	–	–
Consular Manifests from each Port of Loading	–	1	–	–	–	–	–
Sets of Bills of Lading	–	–	–	–	–	–	2
"No Passengers" Declaration	1	1	2	1	1	1	1
List of In-Transit or "No In-Transit Passengers" Declaration	1	1	2	1	1	1	1
Tally Books	–	3(b)	–	–	–	–	3(b)

(a) Delivered to Post Office.
(b) According to the number of stevedores requested, more than 2 copies.

Other Requirements:

Requests for permission to load and unload are submitted to Customs, each on stamped paper and also, when appropriate, a request for overtime work.

Prior to Departure: The clearance permit is requested from the Captain of the Port 4 hours in advance, after obtaining clearance from Customs, on a clearance permit application, which is submitted on stamped paper.

UNIFORMS: Vessels have been fined when officers have not been wearing uniforms when boarded by officials for clearance inward.

CHAMPERICO: 14.17 N. 91.55 W.

DOCUMENTS:

Clearance from Last Port.
Travel Memorandum (original and 4 copies).
Declaration of Maritime Health.
Derat Exemption Certificate.
5 Crew Lists.
5 Passenger Lists or "No passengers" Declaration.
5 Provision Lists.
5 Dangerous Cargo, inflammable or explosives declaration.
5 Mail Lists or "No Mail" Declaration.
Manifests of Cargo from each port (original and 11 copies).
Bills of Lading from each port.
Vaccination Certificates for whole crew.
12 Ballast Manifests, if no cargo on board.

PILOTAGE: None.

ANCHORAGES: Without limit but recommended *not to anchor* less than 1 km. from beach.

MAX. SIZE: Vessels work cargo at anchorage in depth consistent with vessel's draft.

HEALTH: Give notice of any suspicious illness or fever on board when the doctor comes for official visit.

RADIO: ETA cables through Cristobal (Panama).

VHF: Channel 16.

TUGS: No tugs required.

STEVEDORES: No advance notice necessary. Possible to arrange gangs within an hour.

MEDICAL: Adequate advance notice required depending on gravity of case. Hospital 30 minutes away and possible to arrange transport for patient, also to arrange for doctor on board. Crew must have current International Vaccination Certificates.

TANKERS: No facilities for tankers.

DENSITY: Changes from 1022 in October to 1027 in April.

FRESH WATER: Free within port limits.

FUEL: No facilities.

CONSULS: None.

REPAIRS: Minor repairs only.

GANGWAY/DECK WATCHMEN: Available upon request.

OPENING/CLOSING HATCHES: Either by crew or by stevedores.

CUSTOMS ALLOWANCES: Without limit on board. Prohibited to take tobacco, wine or spirits ashore.

CARGO GEAR: Ship's gear used for loading/discharging.

REPATRIATION: All facilities available.

AIRPORT: International airport 3 hours distant with regular flights all over world.

TIME: GMT minus 6 hours. No alterations to clock during year.

HOLIDAYS: No work on 1st January, Maundy Thursday and Good Friday, 1st May and 25th December. The rest of the year work day and night.

POLICE/AMBULANCE/FIRE: All available.

TELEPHONES: Cannot be placed on the vessels.

SHORE LEAVE: No restrictions.

IDENTIFICATION CARDS: Not needed.

DELAYS: Some days in April and October the surge is very strong and work has to be suspended.

GENERAL: Possible to supply provisions, especially vegetables and shell-fish at good prices.

DEVELOPMENTS: Project to build a modern port with an entrance channel, artificial bay and capacity for 8 merchant vessels and facilities for fishing ships and tourist ships.

AUTHORITY: Empresa Portuaria Nacional de Champerico, 10A Calle 3-31, Zona 1, Guatemala City, Guatemala. *Tel:* 25-4-47, 85-2-16, 53-54-57. *Cables:* Epnac. *Contact:* Cnel. Antonio Batres Barreda, President. Gregorio Cifuentes, Administrator.

PUERTO BARRIOS: 15.44 N. 88.36 W.

DOCUMENTS:

Clearance from Last Port.
Crew List, 1 legalised and 9 copies.
Passenger List, 1 legalised and 7 copies or negatives.
Cargo Manifest, 1 legalised and 21 copies.
Stores/Provisions List, 3 copies.
Voyage Memorandum, 4 copies.
Bills of Lading, 2 sets.
Declaration of Health.

PILOTAGE: Pilot boards 2 miles off Puerto Barrios, from small unmarked launch. If awaiting Pilot, vessel may anchor about 3 miles North of Puerto Barrios, keeping port entrance clear. No VHF.

ANCHORAGE: In Santo Tomas Bay, depths up to 6 fathoms.

MAX. SIZE: Length 600 ft., draft 30 ft.

HEALTH: Advise Agent in advance if any fever or contagious disease suspected on board. Otherwise Pratique granted on arrival. Officials board only between 0600 hrs. and 1800 hrs.

RADIO: Coastal radio in Costa Rica, call sign TIM operating on 8485 kHz.

TUGS: No tugs available.

BERTHING: One pier owned by International Railway used to discharge fuel oil. 1,000 ft. berthing length on each side. A flag is shown on the pier to indicate where vessel will berth. Berthing recommended during daylight hours only. Tankers discharge on South side of the pier.

See "Shipmaster's Report" at Santo Tomas de Castilla.

MEDICAL: Doctor available. All crew require International Vaccination Certificates.

FRESH WATER: Available at the pier.

FUEL: Not available.

CUSTOMS ALLOWANCES: Normal daily consumption on board. No tobacco, wine or spirits to be taken ashore.

TIME: GMT minus 6 hours; no alterations during the year.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Required.

SHIPMASTER'S REPORT: March 1991.

Vessel: 27,500 d.w.t.

Pilotage: Pilot boards 4.5 miles off Puerto Barrios from a white pilot boat. Pilot ladder should be about 1.00 m. above water level. If awaiting Pilot, vessel may anchor about 5 miles North of Puerto Barrios, keeping port entrance clear.

Max. Size: Vessel touched bottom in the channel when proceeding to berth. Max. draft of the vessel was 27 ft. 11 in. in density 1014. Bottom was soft mud, and no apparent damage occured to vessel. Charterers had declared 28 ft. draft. Even while alongside, vessel was about 10 ft. off the jetty.

VHF: Santo Tomas Port Control on Channel 16.

Tugs: Two tugs available for berthing.

Berthing: At North and South Quay. White flags are still used to indicate berthing position. Vessels berth and unberth day and night, but with deep draft vessels, it is better in daytime only.

Fresh Water: Only available by trucks.
Density: Varies from 1000 – 1016.
Cargo Gear: No shore cranes available. Vessel had 22,000 tonnes of bulk fertiliser, and used her own cranes for discharge. Shore mechanical grabs were connected with cranes. Stevedores labour very careless in gear operation, so care should be taken.
Currency: U.S.$ 1.00 = 5 Quetzels.
Agents: Our Agent "Centrans" was very co-operative.

AUTHORITY: Commandante del Puerto.

PUERTO QUETZAL: 13.55 N. 90.47 W. (See Plan)

DOCUMENTS:

17 copies Cargo Manifest.
17 copies Cargo List.
17 copies Container List.
1 copy Clearance from Last Port.
7 copies Crew List.
6 copies Passenger List or "Nil".
5 copies Last 5 Foreign Ports of Call.
5 copies Stores List.
2 copies Arms and Ammunition List or "Nil".
5 copies Crew Effects Declaration.
2 copies Ship's Register.
2 copies International Displacement Certificate.
1 copy Health Certificate.
1 copy Vaccination List.
1 copy Derat Certificate.
1 copy Voyage Memorandum.
1 copy Notice of Arrival.

Also see "Regulations".

PILOTAGE: Pilotage is compulsory for all vessels berthing and sailing, but not for shifting.

Pilot Office: Tel: 0841-205. Fax: 0841-102.

ANCHORAGE: A vessel approaching from sea is permitted to anchor in front of the harbour not closer than 1 nautical mile without using a Pilot.

RESTRICTIONS: *Safe draft over the bar and channel:*

Maximum safe draft is 10.5 m. (34 ft.), the width of the channel is 210 m. (689 ft.).

Depth in channel and turning basin is 39 ft.

Docking of vessel at any time of the day: Docking is permitted by the Port Authority when the required documents have been presented and provided the vessel is to commence work. Vessels may dock at any time, but such movements are normally scheduled to fit in with time of granting of Free Pratique and of commencement of work.

Clearance of a vessel outward: This is normally signed by the Port Captain during hours prior to completion of work.

Restriction on sailing time: No restriction.

MAX. SIZE: LOA 210 m. Beam 32 m. Max. draft 10.5 m.

HEALTH: Free Pratique is normally granted all day, including Sundays and holidays.

Free Pratique at anchorage or at the wharf: Free Pratique is given either at the anchorage or after berthing. Where wharf space is available and vessels' documents have been presented, she would normally dock on arrival or at scheduled time for clearance, and receive Free Pratique at the wharf.

Free Pratique in Puerto Quetzal is granted when the party of officials visit the vessel to clear her inwards. These officials represent:

Port Captain
Customs Administrator
Port Health Authority
Quarantine Officer
Port Authority
Customs Guard (Guarda Hacienda).

A representative of the vessel's Agent is present and the offer of refreshments or soft drinks assists things along.

Where a vessel is cleared at anchorage, every effort should be made to lower a gangway, rather than expect the officials to use a pilot ladder.

In case the vessel does not have a Guatemala national flag aboard, a vessel would be well advised to cable his Agent to bring one to the vessel on arrival.

VHF: Channels 16 and 66 for Port Authority, Channel 16 for Pilots and Channel 8 for weather information.

TUGS: Tugs are compulsory for berthing and sailing, but not when vessel under 500 g.r.t. 1×650 h.p. and 1,260 h.p. tugs available.

BERTHING: Berthing facilities in Puerto Quetzal consist of one wharf of 800 m. (2,624 ft.) of length, 56 m. (184 ft.) width including a ramp of 30 m. (98 ft.) length and 25.5 m. (84 ft.) width for Ro-Ro vessels. Depth alongside 11 m.

Fenders: The 800 m. wharf has rubber fenders with approximately 2×1.2 m. (4 ft.) diameter, spaced at 20 m. (66 ft.)

CARGO OPERATIONS: Average outturn per hour based on modern type vessels with large hatches, good winches/cranes:

Containers 20 ft. or 40 ft.	12/15 units/hr.
Iron & Steel products	80 tonnes
Cement (bulk)	150 tonnes
Bagged sugar (conveyor belt)	430 tonnes
Grain	70/150 tonnes
General cargo	15 tonnes

These figures are subject to many variables, e.g. size of parcel, stowage, separation of marks, etc. Also when working iron and steel products pre-slinging would do much to assist.

Gear supply for handling cargo: The stevedore firms supply all necessary gear such as rope and wire slings, nets, forklifts of different sizes. Presently following forklifts in good condition exist: 14×2.5 tons, 11×5 tons, 1×10 tons, 1×14 tons, 1×36 tons, 1 for empty containers. 1×32 ton transtainer. 1×6 ton crane. 2×28 ton cranes (Caillard 400). 1×90 ton mobile crane. Many wagons and lorries also available.

STEVEDORES: Normal working hours 0600 – 1700.

Labour: Presently there are about 1,200 stevedores in the City of San Jose which is always sufficient.

The average gang has the following personnel:

General Cargo:		Containers:	
	14 stevedores		8 stevedores
	1 hatchman		1 hatchman
	1 winchman		1 winchman
	1 foreman		1 foreman

Change of gangs: The first shift of labour works from 0700 hrs. to 1430 hrs., the second shift from 1430 hrs. to 2130 hrs. and the third shift from 2130 hrs. to 0700 hrs. At midnight, there is a break of 30 minutes for meals (also 1200 hrs. – 1245 hrs. and 1800 hrs. – 1845 hrs.).

Advance notice to call a gang for commencement of work:

1. For the morning shift – Recommended to advise the night before, latest 2000 hrs.
2. During the day – 3 hours advance notice.
3. At night – Advise before 1700 hrs.

MEDICAL: Hospital facilities in Esquintla (54 km.) and Guatemala City (100 km.).

FRESH WATER: Available.

FUEL: Fuel oil, kerosene, diesel oil and gas oil available by road tanker from Esso and Texaco.

REPAIRS: Minor repairs possible.

DRY DOCKS: None.

SURVEYORS: Lloyd's Register: Franklin Ltda. 12 Calle "A" 2-34, Zona 1, Guatemala City. Tel: 8-32-33, 53-68-26.

General Superintendence Co.: Centrans S.A. 6a. Ave 20-25, Zona 9. Attention: Mr. H. Preuss. Tel: 370134/35.

P & I Club's Representation: Ing. Jack Sigal, Torre Professional No. 1, Guatemala City. Tel: 531452.

Ing. G. Alvarado, American Bureau of Shipping, 9 Av. 12-53 Zona 1, Guatemala City. Tel: (502) 2-414457, 534438.

GANGWAY/DECK WATCHMEN: Private watchmen are available but are not compulsory for either on board or ashore.

Uniformed guards of the Customs Police (Policia de Hacienda) are stationed at the gangway free of charge.

However, it is recommended to keep vigilance to prevent cabins and storerooms, etc., being entered.

Vessels at anchor (however, presently there is no port congestion nor is any expected in the near future) should also keep a strict watch for boarders.

No meals are required to be supplied by vessels in Puerto Quetzal to Customs, guards or any other persons.

AIRPORT: Distance to local airport 8 km. Distance to international airport La Aurora in Guatemala City is 98 km.

HOLIDAYS: *Legal and Local Holidays:*

New Year's Day, from December 31st, 1430 hrs. until January 2nd, 0700 hrs.

Easter, from Thursday, 2130 hrs. until Saturday, 0700 hrs.

Labour Day, from May 1st, 0000 hrs. until May 2nd, 0700 hrs.

Christmas, from December 24th, 1430 hrs. until December 26th, 0700 hrs.

Due to the present situation (being a new harbour), the port works 365 days per year, however, this could change later.

GARBAGE DISPOSAL: Private contractor may be arranged through ship's agent.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: No club but usual local facilities.

CURRENCY: Guatemalean Quetzales (Q).

GENERAL: *Charts:* B.A. Chart No. 659. Guatemala Charts No. 04 and 05.

REGULATIONS: The following is a translation from Spanish.

Operation Regulations for the Provision of Services in the Port of Quetzal:

Article 4: Programming Arrivals:

Eight (8) days prior to the end of the month, Ships' Agents must present in writing or by telex to the Commercial Department a programme with the approximate date of arrival of vessels for the coming month, and keep this programme up to date.

Article 5: Request for Guarantee Deposit:

Ships' Agents must request the Commercial Department for the amount of the guarantee deposit as established by Article 5 of the Government Agreement 469 – 90.

Article 6: Guarantee Deposit:

In exceptional cases, the guarantee deposit can be lodged at the Fiscal Treasury Office of the Port Services Division in Puerto Quetzal.

Article 7: Request for Services:

Ships' Agents must present to the Port Services Division the request for services 24 hours in advance of the arrival of the vessel, when she is coming from Acajutla or Champerico. When the vessel is coming from other ports, the Agent must comply with Article 6 of the Government Agreement 469-90, by means of the General Request for Services form. In both cases, Authority must be requested to contract a specific stevedoring concern.

Article 8: Authorisation of Request for Services:

The Request for Services will be authorised after it has been verified that the corresponding regulations have been complied with.

Article 9: Confirmation of Arrival:

Ships' Agents must submit in writing to the Port Services Division confirmation of arrival of their vessels 12 hours in advance, with the exception of vessels coming from Acajutla or Champerico, in respect of which confirmation may be given 6 hours in advance.

Article 10: Documents required prior to the provision of services:

Ships' Agents must provide in advance to the Port Services Division the following documents in an accurate and legible form:

(a) For imports of general cargo:
- 2 Stevedoring Stowage Plans
- 2 sets of Bills of Lading
- 2 Tally Books for each hold of the vessel to be worked and 2 for the office
- 5 sets of Cargo Manifests, 4 Lists of Direct Cargo.

(b) For imports of solid bulk cargo:
- 2 sets of Bills of Lading
- 5 sets of Cargo Manifests, 1 Stevedoring Plan, 2 sets of Tally Books per hold.

(c) For imports of containers and lorries:
- 2 Stowage Plans
- 2 sets of Bills of Lading
- 4 Container Listings (sequency lists)
- 1 Packing List per container
- 5 sets of Cargo Manifests

(d) Imports of Vehicles:
- 2 Stowage Plans
- 2 sets of Bills of Lading
- 4 Tally Books
- 5 sets of Cargo Manifests

(e) For exports:
- Complete Shipping Lists authorised by the Customs, 1 set per hold and 3 additional sets
- 4 sets of Export Manifests
- Container Lists – 1 set per hold and 3 additional sets.
- 1 Packing List per container.

Article 11: Period for delivery of documents:

Import documentation must be presented at least 3 days prior to the arrival of the vessel, the order for shipment and the list of containers to be loaded 12 hours prior to commencement of the operation, and the export manifest within 12 hours after sailing.

Article 12: Goods not covered by the manifest:

Discharge of goods which are not on the Manifest is not permitted without due written authorisation from Customs. Once discharge operations have been completed and not later than 12 hours afterwards, the Ship's Agent must present the corresponding additional manifest to the Port Services Division.

Article 13: Letter of Correction:

Where there are discrepancies between the Bill of Lading and the Cargo Manifests, the Ship's Agent must present to the Port Services Division a letter of correction within a period not longer than 24 hours after delivery of the documentation indicated in Article 10 of these regulations.

GENERAL: *Authorisation of lowering boat:* Lowering of boats requires permission which is normally granted by the Port Captain.

Regulations regarding explosives and ammunition at Puerto Quetzal:

Explosives and ammunition are only allowed to be discharged on a scheme whereby they leave the port area immediately and a notice of 24 hours should be given prior to arrival.

Cargoes remaining on board are not covered by any particular regulations.

Local guidance on stores and availability of items:

Deck Stores: The few available items are expensive.

Engine Room spare parts: Even well-known makes are almost non-available.

Lubricating Oils: The commonly used ones are available in small quantities, but special ones are not obtainable.

Stewards Department: Most dry stores are expensive with few exceptions and quantities are limited.

Fresh fruits, vegetables, seasonally available in moderate quantities, at reasonable prices, likewise fish, poultry, fresh beef and pork. (Beef bought in Guatemala is accepted as safe in the U.S.A., but not so the pork – confirm with respective Authorities.)

Laundry service: Available at a reasonable cost.

Radio/Navigational Aids: Spares are not generally available and service of a very limited nature only. Better service can be obtained in Guatemala City. (Each case should be investigated by Agent.)

Important: Ship's spare parts can be sent to a vessel calling at Puerto Quetzal by air – or by sea freight but care must be exercised in their addressing and marking, as otherwise local import duties may be imposed. All such items should be clearly addressed to the vessel, in care of the vessel's Agent, and must say the Spanish for "in transit", the phrase "EN TRANSITO". This ensures that the goods can be treated and may be exported on the receiving ship without problems.

Any such movement should always be co-ordinated with the local Agents, who should be kept fully advised of same.

SHIPMASTER'S REPORT: December 1984 (Updated 1996).

Limited operations commenced on 18th March, 1983.

Currently, services are provided with the following minimum organisation:

Port operations.

Maritime and Communication operations.

Financial and Administrative Services, and the additional personnel to provide other support services.

These offices operate in module buildings constructed for this purpose in the port area.

Services to Vessels:
- Right to berth.
- Aids to navigation.
- Service of pilot launch.
- Pilotage.
- Mooring, berthing, and vice versa.
- Stay in port.
- Anchorage.

Protection Works: The sheltered area is formed by a major (West) breakwater 1,140 m. long, the minor (East) breakwater 307 m. long, and a secondary North Dock with a length of 367 m. These works ensure a minimum of rough water inside the port and maximum safety for vessels.

Access Channel: The access channel to the dock provides safety and facilitates entry and leaving of vessels to and from the sheltered area. It has a minimum width of 210 m. and a depth of 12 m. at the lowest tide.

Manoeuvring Basin: This offers safety and facilitates manoeuvring of vessels. It is circular with a diameter of 400 m., and a depth of 12 m. at the lowest tide.

Berthing: The main quay, situated in the Eastern part, was planned as a multi-purpose terminal. It has a length of 800 m., and a free platform of 56 m. width. It includes a ramp 30 m. long and 25.5 m. wide, provided with two mooring devices at the sides with capacity of 100 tonnes, and with a predominant slope of one in ten for serving Ro/Ro vessels. It is located at the Northern extremity.

The whole quay is provided with rubber defences and bitts for mooring vessels. Its crown dimension is +4.5 m., and a depth of −11 m., giving a total of 15.5 m.

The South Quay has a length of 170 m., for berthing smaller ships. Its crown dimension is +4.5 m. and its depth is −5.2 m., giving a total of 9.7 m.

The Service Quay is 50 m. long and is for servicing small craft. Its crown dimension is +4.5 m. and its depth is −5 m.

Types of vessels handled:
- General cargo.
- Solid bulk cargo.
- Containers.
- Ro/Ro.
- Barges.
- Tourist passenger vessels.

Stevedores: Cargo handling services are provided by private concerns duly authorised by the Port Authority.

Ship's Agents and brokers arrange cargo handling with the stevedoring companies who in turn are authorised to provide such services.

The following services and direct cargo handling are available:
- Receipt and clearance.
- Loading and unloading.
- Handling on quay.
- Storage in the open.

Storage: It has been planned to place at the disposal of users a multiple use warehouse 90 m. long and 80 m. wide. This warehouse will have an area covered by metal structures and concrete walls, and fitted with fire-fighting equipment.

Attached to the warehouse will be a module housing the warehouse guard, Customs inspection, port checkers and wharfingers.

Airport: There is an airport with capacity to receive any type of commercial aircraft 8 km. away.

There is also the runway of the Aeroclub de Guatemala and the installations of the Tourist Complex of Likin.

General: Puerto Quetzal is a terminal of the system of inter-ocean communication with the ports of the Atlantic, which are 406 km. distant by road and 443 km. by rail.

The new port is reached by land via the asphalted highway CA9 at a distance of 110 km. from the capital. There is also rail connection, and both means of communication connect with the country's network of roads and railways. The motorway from Escuinta to Puerto San Jose has yet to be built.

SHIPMASTER'S REPORT: November 1990 (Updated 1994).

Tugs: There are 2 tugs. The "Santa Rosa" 800 h.p. and the "Contigo II" 600 h.p. They are included in the port charges. In effect, you pay for them even if you do not use them.

Fresh Water: Available alongside the pier at 25 t.p.h. (Cost U.S.$ 0.87 per ton). The connections are 2.5 in.

AUTHORITY: Empresa Portuaria Quetzal, 7A Avenida 3-74, Zona 9 (6o. Nivel), Ap. Postal 206-A , Guatemala City, Guatemala, C.A. *Tel:* 347101, 348133, 344859, 344860. *Telex:* UNECPU-GU 6134 Cuidad Guatemala. UNECPU-GU 6315 San Jose, Escuintla. *FAX:* 348152. *Contact:* Captain Mario Garcia Regas, General Manager.

SAN JOSE: 13.55 N. 90.50 W. (See Plan)

NOTE: Very little cargo handled. Vessels now proceeding to Puerto Quetzal.

DOCUMENTS:
- Clearance from Last Port.
- Crew List, 1 legalised and 4 copies.
- Passenger List, 1 legalised and 7 copies.
- Passengers in Transit List, 4 copies.
- Cargo Manifest, 1 legalised and 19 copies.
- Stores/Provisions List, 3 copies.
- Voyage Memorandum, 4 copies.
- Cargo Check Lists, 18 copies.
- Mail List, 7 copies.
- Bills of Lading, 2 sets.
- Baggage Declaration, per passenger, 4 copies.
- Declaration of Health.

PILOTAGE: Not required and no resident Pilots available, except for Tankers where services of a Pilot could be made available upon request.

ANCHORAGE: San Jose is a lighter port (open roadstead). Vessels anchor about 0.25 mile from pierhead in 8–9 fathoms of water.

RESTRICTIONS: Normally no pratique granted after 1900 hrs., although in some instances and if prior arrangements made, vessels could be received by Port Authorities up to 2300 hrs. Tankers moor in daylight only.

MAX. SIZE: Size immaterial since no docking facilities. Cargo transported from vessel to pier and vice-versa by means of steel lighters or barges of 35 tons capacity each. This applies to dry cargo only. Bulk, liquid cargo at respective terminals (oil and oil by-products, imports, and molasses export), where vessels proceed after pratique.

HEALTH: Pratique automatic (0700 hrs. to 1900 hrs.), irrespective of previous port of call. Master's obligation to notify Authorities on arrival of any suspected disease and/or fever on board, in order that adequate precautions taken.

RADIO: Messages should be routed via Guatel.

TUGS: None available or required for manoeuvring vessels.

BERTHING: New port 2 miles East of San Jose Pier (See "Puerto Quetzal.")

STEVEDORES: No gangs available after 2100 hrs., unless another vessel is working in port. Rate of discharge/loading – Dry cargo: 15-20 tons per gang hour. Max. gangs available: 3. Bulk cargo handled ten times faster.

MEDICAL: Hospital available. No vaccination/fever certificates required.

TANKERS: 2 buoy berths for tankers. Discharging lines 8 in. diameter. Esso Terminal: Mooring Master assists berthing. IRCA Terminal: Stern discharge. Also see "Shipmaster's Reports".

FRESH WATER: None available.

FUEL: None available.

CONSULS: All Consulates located in Guatemala City, where vessels' Agents, when and if required, have special documents legalised. Normally, however, Agents can take care of regular certifications required, through port officials, who are authorised to certify documents in absence of a consul of a particular nation.

REPAIRS: No facilities available.

GANGWAY/DECK WATCHMEN: None required or necessary.

OPENING/CLOSING HATCHES: By stevedores.

CUSTOMS ALLOWANCES: On board, no restrictions; no crew member allowed to bring ashore more than amount required for personal use.

CARGO GEAR: Ship's gear used for loading and discharging dry cargo. Vessels must bring own lines to tie lighters alongside.

REPATRIATION: Possible. Usually arranged by Agents in cooperation with vessel's Agent in Guatemala City.

AIRPORT: Nearest airport Guatemala City, 108 km. due North of San Jose. Daily flights to and from all parts of world.

TIME: Central Standard Time, GMT minus 6 hours. No changes during year.

HOLIDAYS: January 1st; Holy Thursday; Good Friday; Easter Saturday; March 19th; May 1st; June 30th; July 25th; September 15th; October 20th; November 1st; December 24th; December 25th; December 31st.

POLICE/AMBULANCE/FIRE: These can be contacted through Agent at San Jose and/or Guatemala City.

TELEPHONES: No facilities for placing telephones on board.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Necessary for those on shore leave.

DELAYS: Only 2 dry-cargo vessels can work simultaneously. A third vessel must await departure of 1 of the first 2. Only 1 tanker can work at each bulk liquid cargo terminal.

SHIPMASTER'S REPORT: September, 1978.

Approach was direct from the Pacific. A good landfall was made. San Jose main Light was observed to be Isophase, rather than Occulting, every 20 seconds.

Anchorage: Vessel anchored in a position with the head of the Iron Wharf bearing 011°(T) – 8 cables. We lay to 4 shackles of cable on the starboard anchor, in 13 fathoms of water. Despite a considerable swell at times, the vessel did not drag her anchor. If anchoring, vessels do not take a Pilot.

Berthing: Ocean-going vessels and at times, due to the swell, almost any vessel, cannot berth alongside the wharf. While we were at San Jose a tanker of about 20,000 d.w.t. berthed stern-on with both anchors down, to load molasses.

I understand that, if no tanker is expected, general cargo ships are sometimes berthed in this manner. The tanker employed a Pilot.

Communications; If at anchor, it is best to keep radio watches and maintain long-range communications in this way. When working cargo, the Supervisor is in VHF communication with the Agents, but this facility is not available outside of working days.

Documents: As per "Guide to Port Entry". It was not possible to get any documents legalised prior to arrival, but this was arranged by Agents, as also was legalisation of documents for subsequent Central American ports.

Cargo Work: Continuous, weather and the supply of lighters permitting. There are only 3 general cargo gangs in the port and only 2 ships can be worked at a time. The first ship gets 2 gangs, the second ship 1 gang.

Many delays were experienced waiting for lighters, and 2 full days discharging time were lost due to the size of the swell.

This is not a very serious problem alongside the ship, but makes discharge of the lighters at the wharf impossible.

Rate of discharge of coiled steel rods was 55 tons per gang-hour, net of delays awaiting barges.

Pratique: Granted on arrival.

Provisions: Not purchased.

Fresh Water: Unobtainable at the anchorage.

Shore Leave: Permitted, but one has to take one's chances of getting a ride to and fro on the lighters. Not many people went ashore and fortunately none were stranded when work was suspended.

SHIPMASTER'S REPORT: February 1995.

Charts: B.A. Charts No. 659 and 1050.

Sailing Directions: NP 8, 4.73 et seq. and Guide to Port Entry 93/94, Page 784 and Plan P542.

Light List: NP 80 (3390).

Radio Signals: NP 286(3) (G1505).

Approaches: Straightforward. New harbour at Puerto Quetzal shows well on radar and tank farm (Shared by Texaco and Exxon) about 2 miles West of Puerto Quetzal is conspicuous. On this visit, none of the hills behind the coast were visible.

Agents advised by telex that the Pilot would board 1 mile off Puerto Quetzal.

Pilot was contacted on VHF at 30 miles.

On arrival, ship was boarded by a 9 men official party for clearance, which was accomplished in about 20 minutes. As the officials left, the Pilot boarded from a fast, new outboard motor launch, painted grey.

Pilotage: Straightforward. Molasses berth (Melazas Esquintla) is the one described in "Guide to Port Entry" and this description needs no additions. Ship was moored with 6 to 7 shackles on each anchor cable with 3 lines to each quarter buoy and one to the centre buoy.

Ship's crew connected hose.

4,000 tons of molasses was loaded at a rate of 745 tonnes/hr.

On departure, the Pilot was willing to leave the berth while cargo calculation was underway, which saved a little time.

Agent met the ship with documents during unberthing, and surveyors left while ship moved slowly towards Puerto Quetzal.

There are three other buoy berths one or two miles along the coast. One owned by Texaco, using 3 buoys; one by Exxon, using 5 buoys for larger ships; and one by Melasses de Pacifico. All are operated and equipped in a similar manner.

Additional Information: New port breakwater has disturbed the current along the coast and a development of new appartments (to the East) has been undermined by severe erosion of the beach and they are toppling into the sea.

There are occasional shipments of molasses out of Puerto Quetzal, loaded from trucks, with a consequent low load rate.

Operations were efficient and quick.

SANTO TOMAS DE CASTILLA: 15.42 N. 88.37 W.

(See Plan)

APPROACHES: As aids to navigation, there is a lighthouse at Cabo Tres Puntas, Ox-Tongue Lighthouse, Heredia Lighthouse, Villedo Lighthouse, the access channel together with the manoeuvring basin being marked by light buoys, driven by batteries recharged by solar energy.

Note: The channel buoys have been changed to the International Rules (Inbound starboard - green) with radar-reflectors placed on them (7 buoys).

Lighthouse: A radio-tower is located in Pto. Barrios with a visibility of approximately 20 miles (Fl. 10 sec.), well marked on the chart.

Chart: Approach to Santo Tomas de Castilla – U.S. Chart GUA 03 28165. 1st Ed. Jan. 84.

DOCUMENTS:

The following are the documents required from each port at which cargo is loaded for discharge in Guatemala, all to be in the Spanish language.

	In Advance	*On Board*	*Consularised*
Consular Clearance	—	—	—
Cargo Manifests, copy	—	35	1
Cargo Manifests, freighted	—	1	—
Copy Bills of Lading (not freighted)	—	3	—
Cargo Plans	—	3	—
Hatch List	—	3	—
Crew List	—	8	1
Stores Lists	—	8	1
Passenger Declaration*	—	8	1
Arms Declaration*	—	8	1
Mail Declaration*	—	8	1
Clearance from Last Port	—	1	—
Maritime Declaration of Health	—	1	—
Crews Personal Effects Lists	—	4	—

* Where these are negative, may be combined in one form.

Consularised documents may be put aboard the vessel, or sent with advanced documents. Above requirements do not include the Agents need such as distribution of Bills of Lading to customers and his own needs for accounting and files purposes. *Consularised documents are not necessary as the fine imposed locally consists of maximum quezales 40.00 per port,* as Guatemalen Consulates may not be at a specific port of loading or their offices are closed.

PILOTAGE: Compulsory for all vessels arriving, leaving and manoeuvring within the port limits and available 24 hours a day. Pilot is taken on board 3 miles off the quay.

The Pilot Station and the Control Office of Maritime Traffic of the Navy maintains listening on R.T. frequencies 2738 kHz, and Channel 16 VHF.

The pilot craft are painted white, flying a red and white flag by day, and red and white lights by night, they have VHF radio, but no radar.

The pilot craft base is the Santo Tomas de Castilla Quay, as well as the Pilot Station, and they will proceed to provide service once requested by the Ship's Agents.

The ladder for the Pilot to board must be positioned on the lee side of the vessel 1 m. above the water, but any alternative may be agreed between the Pilot and the Master of the vessel.

ANCHORAGE: Vessels with a draft up to 24 ft. can anchor about 1 mile to the North of Villedo Lighthouse, leaving the main channel free, but vessels drawing more water should anchor a little further away from the lighthouse.

The Pilots will anchor vessels with less than 24 ft. draft in the inner bay, i.e. nearer to the port, depending on the position of vessels anchored.

RESTRICTIONS: The channel has a depth of 30 ft., at the marginal quay there is a depth of 33 ft.

Docking/Undocking: Docking is permitted by the Port Authority when the required documents have been presented and provided the vessel is to commence work. Vessel may dock at any time, but such movements are normally scheduled to fit in with time of granting of Free Pratique and of commencement of work.

Once docked a vessel can stay at the wharf waiting for cargo during a longer period of time, for example overnight. However if space is needed to work another vessel with cargo available then the vessel losses its dock space.

There is no restriction on time of sailing.

Clearance is normally signed by the Port Captain during hours prior to completion of work.

MAX. SIZE: Max. draft 27 ft. – 30 ft. Max. LOA 750 ft.

HEALTH: Free Pratique is normally granted all day, including Sundays and Holidays.

Free Pratique is given either at the anchorage or after berthing. Where wharf space is available and vessels' documents have been presented, she would normally dock on arrival or at scheduled time for clearance and receive Free Pratique at the wharf.

Free Pratique in Santo Tomas is granted when the party of officials visit the vessel to clear her inwards. These officials represent:

Port Captain
Customs Administrator
Port Health Authority
Quarantine Officer
Port Authority
Customs Guard (Guardia Hacienda)

A representative of the vessel's agent is present and the offer of refreshments or soft drinks assist things along.

Where a vessel is cleared at anchorage, every effort should be made to lower a gangway, rather than expect the officials to use a pilot ladder.

In case the vessel does not have a Guatemala national flag aboard, a vessel would be well advised to ask his Agent to bring one to the vessel on arrival.

RADIO: ETA cables to Agent and Receiver made through Lantana Radio, Florida (WDE) in the U.S.A.

VHF: The distance at which VHF communication can be established with the Santo Tomas de Castilla Pilot Station is 16 nautical miles, i.e. the distance at which Cabo Tres Puntas (Cape Three Points) is from the port.

When the Pilot is manoeuvring, communication with the tugs is via Channel 12 VHF.

TUGS: It is compulsory to use at least 1 tug for any type of manoeuvre; depending on the size, structure, location where the manoeuvre is being executed, and the state of the weather, the Pilot will decide upon the use of a second tug. The port currently has available 3 tugs - 1×1,200 h.p., 1×1,100 h.p. and 1×700 h.p.

BERTHING: The quay is marginal with a length of 914.51 m., being divided into 6 berths of 152.40 m. (approx.) each. The depth of water alongside the quay is 33 ft., the water is saline, and for discharge and loading of goods, facilities are available for day and night work. The vessel's own gear and equipment is used, and in special cases shore equipment. It is necessary that prior to the arrival of the vessel's relevant and general information be provided regarding the cargo carried by the vessel, so as to allocate the corresponding berth, as well as equipment and storage warehouses.

CRANES: The port currently has 3 mechanical scoops (type P&H), 2 with a lifting capacity of 35 tons and 1 with a capacity of 7.5 tons. A mobile jib crane on rails capable of covering a distance of 400 m. approx., and with a lifting capacity of 30 tons. There is also a fixed crane with a lifting capacity of 50 tons. The Authority has no floating cranes.

The port can work conventional vessels, container and Ro/Ro ships, solid and liquid bulk carriers, and for operating solid bulk carriers, the Authority has a Buhler unit with a capacity of 100 t.p.h. discharge and mechanical scoops with grabs. Liquid bulk carriers visiting the port discharge and load products via tubes and hoses, conveniently installed along the quay.

SPECIALISED CARGO HANDLING FACILITIES: There are 4 berths for Ro/Ro vessels operation.

For handling container ships there is 2 Straddler carriers with a lifting capacity of 40 tons and stowage at 3 high, 2 Raygo-Wagner fork-lifts with 40 tons lifting capacity and stacking height to 3 high, 2 spreaders, 1 for 40 ft. and 1 for 20 ft. containers, 9 winches and 8×40 ft. platforms. 79 forklift trucks up to 8,000 lb. capacity. 15 reefer points available.

STEVEDORES: The Port Authority provides the stevedoring service in accordance with the applications for service submitted by port agents.

Labour:

(a) Amount of gangs available to work:
Presently there are about 2,000 stevedores in the City of Puerto Barrios (5 km. from Santo Tomas) which is always sufficient.

(b) Amount of stevedores employed in a ship's gang:

General Cargo:	14 stevedores
	1 hatchman
	2 winchman (even if only one is required)
	1 foreman

Container and Trailer vessels:
Same amount of men per gang, which can be used for different cranes/hatches at the same time.

(c) Change of gangs:
The first shift of labour works from 0700 to 1700 hours, the second shift from 1800 until 0600 hours.

Breaks for meals are as follow:

Breakfast	0600 - 0700 hrs.
Lunch	1200 - 1400 hrs.
Supper	1700 - 1800 hrs.
Break	0000 - 0100 hrs.

(d) Advance notice to call a gang for commencement of work:
1. For the morning shift - the day before lastest 1700 hrs.
2. During the day - 3 hours advance notice
3. At night - advise before 1530 hrs.

(e) Average outturn per hour based on modern type vessels with large hatches, good winches/cranes:

Containers 20 ft. or 40 ft.	8 units/hr.
Iron & Steel products	25-30 tonnes/p.h.
Iron & Steel Products pre-slung	60 tonnes/p.h.
Bagged cargo	20-25 tonnes/p.h.
Drums	20-25 tonnes/p.h.
General cargo	15 tonnes/p.h.

These figures are subject to many variables, e.g. size of parcel, stowage, separation of marks, etc. Also when working iron and steel products pre-slinging would assist.

MEDICAL: No advance notice necessary. Hospital facilities and ambulance service available. International vaccination certificate required.

TANKERS: Diameter of pipelines 16 in. and load/discharge lines 14 in. No slop discharge facilities. Only 1 mooring berth for tankers and max. draft permitted 30 ft. Also see "Shipmaster's Report".

DENSITY: 1015.

FRESH WATER: Pipe-lines alongside quay. Delivered by hoses belonging to port. Rate 15 t.p.h.

FUEL: Available by lorry no advance notice required. Products available: Fuel oil, kerosene, diesel and gas oil.

FIRE PRECAUTIONS: No specific precautions for tankers. Hydrants and fire brigade available to combat fires, besides tug's services and Coast Guard ships of Navy. Dangerous areas to be clearly signposted.

CONSULS: El Salvador, Germany, Honduras, Italy, Mexico, Netherlands and Sweden.

REPAIRS: Only minor deck and engine repairs.

SURVEYORS: Lloyd's Register in Guatemala City. Tel: 8-32-33, 53-68-26.

General Superintendence Co. Tel: 370134/35.

Jack Sigal (P&I Representative) Tel: 531452 in Guatemala City.

GANGWAY/DECK WATCHMEN: Private watchmen are available but are not compulsory. The cost is approximately Quetz. 1.50/hr. during the day and Quetz. 2.25/hr. at night.

Uniformed guards of the Customs Police (Policia de Hacienda) are stationed at the gangway free of charge.

However it is recommended to keep vigilance to prevent cabins and storerooms etc. being entered.

Vessels at anchor should also keep a strict watch for boarders.

No meals are required to be supplied by vessels in Santo Tomas for Customs, guards or any other persons.

OPENING/CLOSING HATCHES: Normally by crew.

CUSTOMS ALLOWANCES: Tobacco, Wine and/or Spirits: No definite quantity and usually regulated by the Master.

REPATRIATION: Possible.

AIRPORT: In Puerto Santo Tomas de Castilla there is no airport. There is an airport at Puerto Barrios 8 km. away, and flying time from there to the capital, Guatemala City, is 45 minutes. There is no regular airline, but it is possible to hire air taxis.

TIME: GMT minus 6 hours.

HOLIDAYS: *Legal and local holidays:*
December 31st 1800 hrs. until January 2nd 0700 hrs. (New Year's Day); March 23rd 0000 hrs. until March 24th 0700 hrs. (Dignidad Nacional); Wednesday 1200 hrs. until Saturday 0600 hrs. (Easter); May 1st 0000 hrs. until May 2nd 0700 hrs. (Labour Day); June 30th 0000 hrs. until July 1st 0700 hrs. (Revolution 1871); September 15th 0000 hrs. until September 16th 0700 hrs. (Independence Day); October 20th 0000 hrs. until October 21st 0700 hrs. (Revolution 1944); November 1st 0000 hrs. until November 2nd 0700 hrs. (Saints Day); December 24th 1200 hrs. until December 26th 0700 hrs. (Christmas).

No work on Good Friday from 0600 hrs. until Saturday 0700 hrs. and December 24th from 1200 hrs. until December 26th 0700 hrs. with exception of perishible goods when the port can work on December 24th until 1800 hrs.

On all other holidays work can usually be arranged, with advance notice, and at overtime rates.

TELEPHONES: No facilities for placing telephones on board.

BANKS: Central Bank of Guatemala.

SHORE LEAVE: Possible.

IDENTIFICATION CARDS: Passes issued to each crew member.

DELAYS: Maximum delays 3-4 days could occur at most 5 times during a year. Container vessels and reefer vessels have preference if they carry perishible cargo, same as vessels which carry coffee or load coffee with limitations in their sales-terms (L/C) such as 15th and end of a month.

GENERAL: *Dunnage Wood:* Dunnage wood is not available in the port however with enough advance notice it can be brought from Zacapa, approximately 150 km. (94 miles).

Local guidance on stores and availability of items:

Deck stores: The few available items are expensive.

Engine room spare parts: Even well-known makes are almost non-available.

Lubricating oils: The commonly used ones are available in small quantities, but special ones are not obtainable.

Stewards department: Most dry stores are expensive with few exceptions and quantities are limited.

Fresh fruits, vegetables: Seasonally available in moderate quantities, at reasonable prices, likewise fish, poultry, fresh beef and pork. (Beef bought in Guatemala is accepted as safe in the U.S.A., but not so the pork – confirm with respective authorities).

Laundry service: Available at a reasonable cost.

Radio/Navigational aids: Spares are not generally available and service of a very limited nature only. Better service can be obtained in Guatemala-City. (Each case should be investigated first by Agent).

IMPORTANT: Ships spare parts can be sent to a vessel calling at Santo Tomas de Castilla by air or sea freight but care must be exercised in their addressing and marking, as otherwise local import duties may be imposed. All such items should be clearly addressed to the vessel, in care of the vessel's Agent, and important to state the Spanish for "in transit" the phrase "EN TRANSITO". This ensures that the goods can be treated and may be exported on the receiving ship without problems.

Any such movement should always be co-ordinated with the local Agents, who should be kept fully advised on same.

Regulations ruling explosives and ammunition at port:

Explosives and ammunition are only allowed to be discharged on a scheme whereby they leave the port area immediately and a notice of 48 hours should be given prior to arrival.

Cargoes remaining on board are not covered by any particular regulations.

Before working a vessel the Port Authority requests a deposit from the Agent, based on a Proforma. This is calculated by the manifest of inbound cargo and the expected exports. Without this deposit the vessel is not allowed to work.

SHIPMASTER'S REPORT: 1976

Approaches: No difficulty once position is ascertained approaching the Gulf of Honduras. The Pilot boarded 3 miles North of the Villedo Shoal Beacon. Pilots have VHF Channel 16 call Porto Barrios Pilots. Only 1 pilot speaks English so if he is on duty there is no difficulty in communications.

The lights on the approach beacons are said to be unreliable but all were found to be good radar targets.

At the present time a dredger is working on a new approach channel to give a 32 ft. buoyed channel past Puerto Barrios up to Santo Tomas de Castilla.

General: The area is still recovering from the severe earthquake some 8 months ago in which the finger pier at Puerto Barrios was destroyed. This now constitutes a submerged hazard while in the channel on the approaches to Santo Tomas de Castilla. The channel is poorly marked and at present there are numerous survey buoys which can be confusing.

The berth is stern to at the Eastern end of the cargo jetty at Santo Tomas using 2 anchors and backing up to 10 ft. off the jetty from where the hose is passed up to the stern line by a mobile crane. The connection is made by the ship's crew. There is a 1 × 8 in. hose for all grades into a 10 in. shore line which is approximately 5 km. long. The requested back pressure of 8.5 kg. was easily maintained using 2 pumps.

AUTHORITY: Empresa Portuaria Nacional – Santo Tomas de Castilla, *Tel:* 0480060, 0480611, 0480588, 539098. *Telex:* Stomas GU 719. *Contact:* Dollfus O. Sagastume, Director – Port Administration.

NOTES

Please also advise Shipping Guides Ltd.

Republic of Guinea

CONAKRY: 09.31 N. 13.43 W. (See Plan)

DOCUMENTS:
6 copies Crew List.
6 copies Passenger List.
2 copies Stores List.
2 copies List of Medicines and Drugs.
2 copies List Crew Declaration (personal effects).
7 copies Manifest of Cargo (if any).
Port Clearance from last port of call.
2 copies List of Dangerous Cargoes (if any).
3 copies of Bills of Lading for LCL - Containers.
2 copies of Loading Plan.
1 copy Derat Certificate.
3 copies List of Weapons and Ammunition (if any).

Documents to be presented on request:
Log Book
International Health Certificate.
Seamen's Books.
References for Port State Control.

PILOTAGE: Compulsory for all vessels over 20 m. in length. Pilot meets vessels at Conakry Buoy (Lat. 9° 27.3' N., Long. 13° 44.05' W.).
Advise Port Captain of ETA by Telex No. 22276 PAC GE.

ANCHORAGE: Safe deep anchorage in inner and outer roads.

RESTRICTIONS: Tankers taken in/out during daytime only. Exceptions during night-time are considered on special application, to be rendered to Port Captain.
The entrance channel is 150 m. wide and has a depth of 9.5 m. (LLW).

MAX. SIZE:

Bulk carriers for alumina:	518 ft. length.
Bulk carriers for bauxite:	655 ft. length.
Tanker for crude oil:	655 ft. length.
Tankers for light fuel:	518 ft. length.
Other vessels (Ro/Ro, Container, Conventional, etc.):	655 ft. length.

HEALTH: Valid yellow fever inoculation certificates.

RADIO/VHF: Conakry Radio 2182 kHz and 2586 kHz and VHF Channel 16.

TUGS: 2×1,400 kW. tugs (27 tons bollard pull). Tugs are compulsory for all vessels over 50 m. LOA. Tugs normally connect to starboard side. Ship's lines used.

BERTHING:

Berth No.	Length (m.)	Dredged Depth (m.)	Priority Use
Container Terminal	269	10.5	Container Vessels
00-01	350	10.0	Alumina/Refrig.
02-05	480	8.0 - 8.5	Commercial Piers
06	155	7.0	Barge Landing
07	160	8.0	Fish Jetty
08-09	300	11.0	Bauxite (OBK)
10	190	10.0	Oil Jetty

Note: Depths refer to Port Zero (lowest low water).

STEVEDORES: *Working Hours:*
1st shift: 0800 hrs. to 1800 hrs.
2nd shift: 2000 hrs. to 0600 hrs.
Overtime: Any work on Saturdays, Sundays and Holidays are subject to following overtime surcharges:
1st shift: 0800 hrs. to 1800 hrs. + 60%.
2nd shift: 2000 hrs. to 0600 hrs. + 100%.

MEDICAL: Advance notice recommended. Medical service and hospital facilities available.

TANKERS: Berth No. 10: Length 190 m. Depth 10.0 m. Berth is being equipped with new shore connections.

DENSITY: 1016 in the port with particular relation to state of tide.

FRESH WATER: Available.

FUEL: Light diesel available, subject to prior arrangement.

FIRE PRECAUTIONS: Special fire service for tankers and ships carrying IMDG – goods..

CONSULS:
Embassies:
Algeria
Bulgaria
Canada
China
Cuba
Czech Republic
Egypt
France
Gabon
Germany
Ghana
Guinea Bissau
Iran
Italy
Japan
Korea
Liberia
Libya
Mali
Morocco
Nigeria
Romania
Senegal
Sierra Leone
Saudi Arabia
Switzerland
Syria
U.S.A.
Yugoslavia
Zaire

Consulates:
Belgium
Brazil
Cape Verde
Denmark
Greece
Haiti
Lebanon
Netherlands
Norway
Spain
Sweden
Togo
Tunisia
United Kingdom

REPAIRS: Minor repairs possible.

DRY DOCKS: One floating dock with lifting capacity of 700 tons.

GANGWAY/DECK WATCHMEN: Compulsory and arranged by vessel's Agent.
Note: The port employs a large number of trained security personnel which is partly uniformed. In case of need Master may contact the Co-ordinator of the "C.U.S.P.".
Piracy: Despite efforts undertaken by the Port Authority and other local authorities to eliminate piracy, Masters are well advised to protect their vessels and cargoes against attempted theft.

OPENING/CLOSING HATCHES: Normally by crew. Stevedores if requested by Master.

CERTIFICATES: Derat Certificate, Log Book, International Health Certificates of Crew.

CUSTOMS ALLOWANCES: Tobacco, 200 cigarettes out of bond. Wine and/or Spirit, 1 litre of spirit and 1 litre of wine per day out of bond.

REPATRIATION: All facilities exist for effecting crew changes and arranging repatriation to Europe and other places.

AIRPORT: International airport Gbessia about 15 km. distance from port. International connections via Air Afrique, Aeroflot, KLM, Sabena and UTA. Local connections are offered by Air Guinee and others.

TIME: GMT.

POLICE/AMBULANCE/FIRE: Contact Harbour Master.

TELEPHONES: Not possible to place telephones on board except at Berth No. 9.

SERVICES: None.

HOLIDAYS: New Year's Day (1st January); Easter Monday; Labour Day (1st May); Anniversary of 2nd Republic (3rd April); Liberation Day (25th May); Assumption (15th August); Independence Day (2nd October); Christmas (25th December).

Varying holidays which depend on the position of moon: Ramadan – End of fasting; Tabaski – Pilgrimage Day at Mecca; Mahouloud – Day after Prophet Mahomed's Birthday.

Work during holidays available, but subject to negotiation with stevedores.

SHORE LEAVE: Crew allowed ashore.

IDENTIFICATION CARDS: Seaman's Book necessary.

CURRENCY: Franc Guineen.

SHIPMASTER'S REPORT: February/March 1992.
Agent: Office hours: 0800 – 1200 and 1300 – 1630.

The Agents will occasionally use the Port Control VHF to contact vessels at anchor.

Weekends: From 3rd February 1992 official weekends are from 1200 hrs. on Friday to 0800 hrs. the following Monday.

Currency: The Guinee Franc, exchange rate in February 1992 was quoted by the Agent as 800 = U.S.$ 1.00. Rates of between 750 and 900 can be obtained ashore, and the U.S. Dollars are generally acceptable.

U.S. Dollars were obtainable from the Agents, but were a long time in coming forth.

Communications: Generally poor. The local coast radio station operates infrequently. The vessel was answered by Port Kamsar Radio, but they will accept messages for that port only. VHF communication with the Port Control is possible, but often it takes a long time to get a reply. The Port Control and Pilots will often request vessels at anchor to contact vessels approaching the port for ETA.

The Pilots work on VHF Channels 10 and 12, but do not have a very good transmitter, and messages may be relayed through the Port Control.

Approaches: B.A. Charts No. 601 and 395.

Approaching from the South, Iles de Loos are easily identified on radar, and in clear weather Boulbinet Lighthouse, white tower with red top, is conspicuous by day, but at night is not easily seen against the background lights when close to the 014° bearing, and it was noted as occulting 20 seconds in early February and occulting (2) 10 seconds in late February and March. Except for the 014° bearing, the red and white sectors were not verified.

Ile Tamara Light was as charted.

The beacon on Pte. du Tonnelier was not seen.

The light fl. 6 short and 1 long has been re-sited on the end of the South Breakwater, and has a period of 15 seconds. This light is shown from a lattice tower with topmark 2 cones point down and a yellow and black square at half height of the tower.

The works in progress at the South Breakwater head do not seem to have progressed, except for re-siting the light, and if anything has been done, it is all below water.

Buoys: The buoys were found to be generally within one cable of the charted positions and all are fitted with lights, the characteristics were not verified.

On berthing, Buoy No. 8 was missing, but had been replaced out of position, closer to mid-channel.

Buoy No. 5 was towed in damaged and replaced by an unlit float.

By departure in mid-March, Buoys No. 5 and 8 had been replaced in position, but the Fairway Buoy had been towed in for repair and was replaced by the unlit float.

The Southerly BYB Buoy in the harbour was unlit.

All buoys are pillar buoys, red to port and green to starboard inbound.

The work of replacing the buoys was carried out by the contractors who are carrying out works in the port.

Anchorage: Vessel anchored with Pte. du Tonnelier bearing 340°×2.25 miles, in company with other vessels in the general vicinity and lay comfortably with 5 shackles in 17.0 m.

Anchorage was changed at the request of the Port Control, shortly before berthing to be ready for the Pilot, and a position 3 cables S.W. of the Fairway Buoy was chosen. In this position, there was 4.0 m. underkeel clearance at low water with a draft of 8.8 m.

Later the vessel was anchored by the Pilots, 3 to 4 cables S.W. of Buoy No. 4 and had 2.0 m. underkeel at 7.3 m. draft, although there would appear to be more water to the West of the buoyed channel than charted, it is not recommended to anchor here without local knowledge.

Pilotage: The Pilot boards from a large launch in the vicinity of the Fairway Buoy, and will board at anchor if the vessel is close to the buoy.

Communications are not the best, and the vessel was advised that we would take the Pilot after a ship had sailed. However two vessels sailed before the Pilot boarded, and a third vessel sailed before we were able to pick-up the anchor. It is as well to remain anchored until the Pilot boards, as there is not room to pass in the channel.

Pilotage is on a 24 hour basis and not restricted to daylight hours. The Pilot will leave on departure at a convenient position in the channel.

The Pilots request meals.

Depths: The Pilot confirmed that the depth was as charted, and a minimum sounding, at high water on a 3.3 m. tide with a draft of 8.8 m., of 3.0 m. was obtained in the buoyed channel.

Berths: The area noted on the chart as being reclaimed has almost been completed as a container berth, some work remains to complete the paving at the landward side. This new berth has good fendering on the face and a bollard spacing of approximately 15.0 m., except at the Southern end, where there is a large gap in the bollards after the first two for Ro/Ro stern ramp.

This berth was due for completion in March 1992 and is not yet in use although to all appearances is completed.

Berth No. O is reserved for loading alumina. The dust from this berth, when a vessel is loading, is very heavy, and with the wind off shore will obscure the port entrance. When this vessel berthed with a Southerly wind blowing, it was not possible to see the forecastle from the bridge at 147.8 m. Alumina pollution covers the dock in a decreasing quantitiy up to Berth No. 4, as it indeed also covers most of the city, including the tourist hotel and Government buildings.

Berth No. 1 is used for discharging bulk cargoes, mainly cement clinker, and also for general cargo and containers. There is a conveyor system on this berth for carrying cement clinker direct to the storage shed, and cement vessels take priority.

Berths No. 2 to 4 are for general cargo and containers, on this occasion Berth No. 4 was occupied by the mission vessel "Anastasis".

Berths No. 5 to 7 are for small crafts, fishing vessels, etc. with a small area reserved for naval gun boats and repairs with a small floating dock for fishing vessels.

Berth No. 8 is for loading bauxite, and Berth No. 9 for tankers.

Bollard spacing on Berths No. 0 to 4 is approximately 24.0 m. with some removed for Ro/Ro ramps. Fendering is poor with an occasional old tyre hanging from the odd bollard.

There are no cranes on the berths and no provision for cranes on the new berth.

Berth numbers are taken from the B.A. Chart and may not be the same numbers as used by the Port Authority.

Port Congestion: Of a total of approximately 1,550 m. of deep water berth, 320 m. are not due for use until March 1992, 200 m. are reserved for alumina loading and the amount of alumina on the dockside makes this berth unsuitable for any other cargo. 180 m. are given priority for cement clinker discharge and 300 m. are reserved for bauxite and tankers. The remaining 370 m. are available for other cargo vessels, with container vessels taking priority, and vessels already on the berth are required to move off to accommodate them.

Inevitably there is a considerable amount of delay time involved for general cargo working.

Port Officials: Customs, Immigration, Port Health and Port Authority (10 or more persons) board the vessel on berthing. Soft drinks and beer are required by all.

Formalities are generally easy going and informal provided the entertainment is acceptable, and searches were not carried out.

It is as well to have a supply of cigarettes on hand for Port Officials, Port State Inspectors and Radio Inspectors, who will board the vessel during the first working period after berthing.

Port State Inspectors require all certificates including Officers Certificates of Competancy and query any minor differences in documents.

The Radio Inspector requires all publications to be up to date including the I.T.U. Manuals.

Pirates: Whilst at anchor, a number of traders approached during daylight, but did not attempt to board, and went away when given no encouragement to do business.

At night two of the occupants of a canoe boarded by climbing the anchor cable and unscrewing the hawse pipe cover, but left empty handed when challenged by the ship's watchmen, and a second canoe left when ship's staff appeared above them.

Storerooms were welded up on arrival, and after the first boarding, hawse pipe covers were welded in place.

Alongside the Berth: During cargo working of any vessel and particularly rice vessels, a large amount of traders gather round the discharged cargo and in spite of watchmen employed by the stevedores and port police, a good quantity is spirited away. It is not uncommon for the police and watchmen to be mobbed by the crowd and even man-handled when they attempt to stop some of the thieves.

Theft in the docks is considerable and especially when the small local ferries, which attract an even larger crowd than other vessels, are alongside, it is not safe to walk on the dock if one is carrying anything worth stealing.

At night when no cargo is being worked, it is fairly safe to go ashore to the gate to take a taxi into town, but there will always be some risk.

It is also unsafe to walk in town, even in daylight.

Shore Passes: The practice is for crew members to take their passports ashore and exchange them with the officials at the gate for shore passes.

This was not explained to the vessel on arrival, as when passes were requested we were told that they were unnecessary. This appeared to be the case until after a month in the port, with crew members regularly going ashore without being stopped, a group of four seamen were stopped returning to the vessel, and when requested, handed over their passports to the Officials who then refused to give them back until some money had changed hands.

This is the practice for most minor infringements of regulations with always the threat of long delays if the official channels are followed.

Fresh Water: Available from the dock, but the pressure is very low and, I feel, that only the threat, that the vessels would be unable to move off the berth if required, provided any water at all.

Deep sea vessels provided with fresh water were supplied through a meter, whilst regular small fishing vessels and ferries were supplied direct from a stand-pipe which would indicate that if water is required, some money should change hands. No guidance was given on this point by the Agents. Quality is poor and not recommended.

Garbage Disposal: This service is available and generally unofficial. At a cost of U.S.$200.00, the vessel was kept garbage-free and sanitary for the 39 days stay by the same man who was able to supply only a small quantity of fresh water.

Pollution: During the dry season all berths are subject to a considerable quantity of dust from the alumina berth and the cement clinker berth.

Throughout the vessel's stay there was a continuous heavy oil slick on the surface of the water.

This oil slick may have come from a vessel which was reported to be a fishing vessel, which was lifted from the water on the corner of Berths No.7/8 in the hours of darkness, by an extremely large floating crane, as after this had left, the quantity of oil seemed to be reduced.

No attempt had been made to contain or clean up the slick.

Cargo Working: Discharging 10,900 metric tonnes of bagged rice was intermittent as vessel had to wait for Bill of Lading to be produced.

Normal working hours are from 0800 – 1800, and on a good day it would be possible to obtain 37.5 tonnes per gang hour. In practice a rate of 25.34 tonnes per gang hour was achieved.

Rice is an important commodity in Conakry and everyone considers it their right to take some.

In spite of port watchmen and watchmen employed by the stevedores, a considerable quantity is lost, and it would appear that there is a well organised system for stealing loose rice. Every endeavour was made to stop the theft of complete bags and mostly only loose rice was lost.

General cargo and bulk vessels do not appear to be worked during the hours of darkness, but container vessels are worked round the clock.

Ship Chandlers: There are 2 chandlers in the port and although the price list for the one used was lower than the other, service was not particularly good.

Prices of all stores and provisions are high and quality is not very good.

Deck and engine stores are available but prices are very high for these items and should be avoided.

SHIPMASTER'S REPORT: December 1994.

Anchorage: The anchorage is near the Fairway Buoy. At night-time, vessel should weigh anchor and proceed 20 miles offshore and drift with only navigation lights on.

Watchmen: When alongside, vessel should employ 10 watchmen. All doors should be locked and welded where possible. All lifeboat equipment and electric plugs and anything else that is moveable should be locked away.

Berthing: No fenders at Alumina Berth (Berth No. 0-1).

Radio: No communication with Conakry Radio. Only the Pilot's VHF is operating (occasionally).

Cargo: Discharged 15,000 tonnes of caustic soda at maximum pressure of 3 kg. – 4 kg. The hose was in bad condition.

Note: The shore personnel have to be very careful because if the caustic soda comes into contact with their skin it will bleach it.

AUTHORITY: Port Autonome de Conakry, B.P. 805, Conakry, Republic of Guinea. *Tel:* (224) 44.27.37. *Telex:* (0995) 22276 PAC GE. *FAX:* (224) 44.45.64. *Contact:* Bangaly Camara, Director General. Captain Sayon Oulare, Port Captain.

AGENT: Socopao Guinee, Immeuble Zeidan, Boulevard du Commerce, Quartier Almanya, B.P. 3339, Conakry 1, Guinea. Tel: (224) 444233, 414313, 413401. Telex: (0995) 22131 Freight. Fax: (224) 412803, 413764. Cables: Freight Conakry.

PORT KAMSAR: 10.39 N. 14.37 W. (See Plan)

DOCUMENTS:

2 copies Narcotics List.
1 copy Vaccination List.
6 copies Crew List.
6 copies Passenger List.
1 copy Crew Declaration (Personal effects) List.
1 copy Stores List.
3 copies Last Ports of Call List (Inward cargo vessels only).
12 copies Manifest of Cargo (Inward cargo vessels only).
2 copies Bill of Lading (Inward cargo vessel only).
Notice of Readiness (Ore Carriers only).

To ensure the best possible turn-round for general cargo vessels complete sets of the required cargo documents should be made available to the authorities by hand of the Master. Delays have been occasioned by the late arrival of documents sent by post. It would be of help for the Master to send hatch distribution and the amount of refrigerated cargo if any, at the same time as ETA.

Quarantine, Immigration and Customs: Representatives of the departments board after the vessel has been made fast alongside. The Quarantine Flag "Q" should be flown by arriving vessels.

ARRIVAL ADVICE: Masters are required to send ship's ETA, addressed to Port Kamsar Agent and/or Shipping Superintendent C.B.G., through Port Kamsar Satellite Station, 7 days, 5 days, 3 days and 1 day before arrival at Port Kamsar.

APPROACHES:

Approaches to Rio Nunez: Port Kamsar formerly known as Kakande is located on the East bank of the Rio Nunez river and is approximately 17 km. from the sea.

Vessels bound for Port Kamsar will find there are few natural features to aid a landfall. The most prominent feature is Cape Verga situated to the Eastward of the Rio Nunez entrance. This cape can be observed by radar at a distance of approximately 30 miles. At present the light on Cape Verga is unreliable.

To the Westward of the Rio Nunez entrance are the Company Shoals and Conflict Reef. These are screened by a series of light buoys and vessels approaching from the West should keep them well on the port hand. (See "Buoyage System" below and "Plan Section").

Another prominent feature is Gonzales Rock on the starboard side close to the entrance to Rio Nunez. A light buoy is positioned screening the rocks and is identified as Buoy No. VII.

Vessels proceeding to Port Kamsar should anchor and await the arrival of the Pilot in the area bounded by Latitudes 10° 26' N. and 10° 28' N. and Longitudes 14° 44' W. and 14° 46' W.

Kamsar Buoyage System: Approaches to Rio Nunez – Sea Buoys

No.	*Shape–Colour*	*Position* *N.*	*Position* *W.*	*Characteristic*	*Visibility (miles)*
II	Red cylindrical	10° 12.3'	15° 25.5'	FL. 10 secs	5
III	Black Platform	10° 09.4'	15° 12.1'	GP. FL 4 Ev. 15 secs	7
IV	Red cylindrical	10° 13.5'	15° 01.5'	GP. FL. 2 Ev. 10 secs	5
V	Red cylindrical	10° 19.2'	14° 52.5'	GP. FL. 3 Ev. 10 secs	5
VI	Red cylindrical	10° 25.5'	14° 47.5'	FL. 5 secs	5
VII	Green conical	10° 23.5'	14° 44.5'	GP. FL. G 4 Ev. 10 secs	2.6
VIII	Red cylindrical	10° 29.5'	14° 43.9'	FL. 10 secs	5

Charts of the area are as follows:

British Admiralty:
600 Cacheo River to Iles des Los.
1560 Approaches to Rio Nunez.
1562 Port Kamsar and Approaches.
United States Naval Oceanographic Office:
51580 Ponta Caio to Cap Verga.
Service Hydrographique de la Marine:
5931 Du Rio Grande Aux Iles des Los.
6148 Embouchure du Rio Nunez.
6228 Acces au Rio Nunez.
6288 Rio Nunez abords de Port Kamsar.

Rio Nunez Transit: The channel from the mouth of Rio Nunez to the bauxite loading wharf at Port Kamsar is 17 km. in length and 120 m. wide and is well marked by 23 light buoys. The channel is subdivided into an inner and outer channel, the bottom of which consists of mud and sand.

The outer channel which extends from Buoys No. 1 and 2 up to Buoys No. 8 and 9, has a depth from 9.0 m. below reference datum level (R.D.L.) which is defined at + 0.15 m. above the lowest water registered (British Admiralty Tables LLWS = 0.00).

The inner channel extends from Buoys No. 8 and 9, to the bauxite loading wharf and is dredged to 8.25 m. and 8.50 m. below Reference Datum Level (R.D.L.).

The turning, waiting basin for inbound vessels is dredged to a minimum of 7.00 m. below R.D.L. and extends Westward, 360 m. from the bauxite loading wharf. The bottom is mainly mud and has good holding ground.

PILOTAGE: Pilotage service is compulsory for all vessels over 150 ft. LOA. Vessels under 150 ft. LOA will also be required to have a Pilot aboard on their first calls, but may be exempt thereafter by consent of the Harbour Master and approval of the Port Director.

Pilots are supplied from the Director's Office. Pilots board vessels in the designated waiting area (See "Approaches"). When conditions are unfavourable for a Pilot to board the vessel at the designated area, the Pilot will pass instructions by VHF radio, and the vessel will follow the pilot boat in until conditions are suitable for boarding.

Pilot boats are fitted with VHF radio and can be contacted on Channel 16.

ANCHORAGE: See "Approaches".

RESTRICTIONS: Pilots are now berthing ore carriers of any size (up to 229 m. LOA, which is the largest size of ship calling at Port Kamsar) during flood tide.

MAX. SIZE: Max. LOA 229 m. Max. draft 10.0 m. for entering.
Note: Departure with maximum draft is one hour before H.W.

HEALTH: Authorities board when vessel is alongside the berth. Yellow fever and Cholera vaccination certificates required.

RADIO: Contact Port by Fax: (871) 1632117 or Telex: (581) 1632116.
Note: The port radio station is no longer working.

VHF: Pilot station on VHF Channels 16 and 12. Watchkeeping hours: 0800 – 1200 and 1330 – 1730 on working days.

TUGS: Two tugs in service (1×2,896 h.p., 1×2,850 h.p.).

BERTHING: Located 17 km. from the channel entrance is the bauxite loading wharf.

The area alongside the wharf has been dredged to a depth of 13.5 m. below R.D.L. Fendering is separate from the wharf proper, and consists of a number of single and double flexible steel dolphins which protrude 4 m. from the face of the wharf.

A vessel proceeding to the bauxite wharf will normally swing off the berth and make fast port side to, heading seaward, during the flood tide. If the berth is occupied the vessel will be anchored in the turning basin to await the berth.

There is a single loading berth at the wharf. The longest vessel berthed had a LOA of 229 m., which is considered to be the maximum length permissible.

The mobile shiploader has a travel of 165 m., and an outreach of 21 m. from the outside face of the fendering. It is rated at about 4,000 tonnes/hour.

A vessel's air draft, i.e. distance from the waterline to the top of the hatch coaming, must not exceed 19.52 m. minus height of H.W. for the day.

Weight of bauxite is determined at Port Kamsar:

1. By the ship deadweight only, if:
(a) there is no weightometer available or,
(b) there is material on the ship loading conveyor before or after loading; or
2. If a weightometer available:
(a) By the weightometer reading if it differs by less than 0.5% from the ship deadweight survey;
(b) By the average between ship's deadweight survey and weightometer reading if the difference is between 0.5% and 2% or,
(c) By the ship's deadweight survey if the difference is more than 2%.

Stowage factor of the bauxite is about 28 cu.ft./long ton or 0.79 cu.m./tonne.

Bauxite vessels sail from Port Kamsar during the flood tide. Maximum departure draft is regulated according to tidal conditions.

There are 2 small general cargo wharves located at the entrance to the Dougoufissa Creek. One, called "Quai Francais", where vessels of up to 100 m. LOA with a maximum draft of 6 m. may berth. As there is only 3.5 m. at Lowest Low Water, these vessels will be aground at low water periods.

"Quai Francais" is equipped with a heavy lift crane/derrick with a maximum S.W.L. of 110 tonnes.

Safe Working Loads are as follows:

Radius of derrick	*Lifting capacity*	*Height under hook*
18 m.	110 tonnes	27 m.
26 m.	75 tonnes	23 m.
32 m. maximum	45 tonnes	11 m.

The derrick is also equipped with a secondary hook with a capacity of 20 tonnes.

One 200 ton barge is available for loading and discharging in midstream.

MEDICAL: Hospital facilities at Port Kamsar are available only on an emergency basis.

TANKERS: Facilities for the discharge of petroleum products are also available on the bauxite wharf.

This operation is done with sets (4 sections of 8 m. long) of removable 8 in. flexible hoses. For the unloading of the 3 products (Bunker "C", Diesel Oil and Gasoline), 4 sets of hoses are foreseen and of the four, two are used only for the unloading of the Bunker "C", one for the unloading of the Diesel Oil, and the other for Gasoline.

The Bunker "C" hoses feed a 16 in. line, the Diesel Oil hoses an 8 in. line and the Gasoline hoses a 6 in. line. Back pressure on the above lines 10 bars for the bunker "C" and 9 bar for the others..

Storage facilities on site: 1×7,000 cu.m. and 3×10,000 cu.m. Bunker "C" tanks.
3×3,000 cu.m. Diesel Oil tanks.
2×1,400 cu.m. Gasoline (petrol) tanks.

DENSITY: 1007 – 1028, depending on season.

FRESH WATER: Available in limited quantity on an emergency basis.

BALLAST: For any vessel, only clean ballast to be discharged. No tank cleaning or pumping of bilges whilst the vessel is in port or its approaches, all the way from Sea Buoy No. 2 to berth.

CONSULS: See "Conakry".

AIRPORT: Conakry Airport is about 280 km. from Kamsar (about 3 hours by road).

There are daily services to/from Europe.

TIME: GMT.

HOLIDAYS: New Year's Day (1st January); Second Republic Day (3rd April); Labour Day (1st May); Assumption Day (15th August); Independence Day (2nd October); Christmas Day (25th December); Easter Monday (variable date); Tabaski (variable date); Ramadan (Id il Fitri) (variable date); Maouloud (variable date).

All Sundays are also declared Public Holidays. The President may also, at his discretion, declare any other day to be a Public Holiday.

The loading of bauxite is generally continued without stoppage for Public Holidays.

General cargo will not, except in special circumstances, be worked on any of the above named Public Holidays. All other Public Holidays are normally worked.

SHORE LEAVE: Crew members are granted shore leave. Shore leave passes are issued by Immigration Officer on ship's arrival.

PIRACY: Acts of piracy have taken place at Conakry.

GARBAGE/WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Guinean Franc (GF).

WIND/WEATHER/TIDE: In the Rio Nunez approach area waves up to 4 m. can be encountered. At the entrance to the fairway or channel they are generally less than 1 m. high during the rainy season, and less than 0.5 m. high in the dry season. Waves and swell in the inner channel and harbour area are generally very moderate.

The tide, in the the proximity of the buoyed channel, runs N.N.E. and S.S.W. at 2.5 knots under normal conditions, but can reach 4.5 knots during Spring tides in the rainy season.

The flood tide runs parallel with the line of the bauxite loading wharf at a speed of up to 4 knots. The ebb tide, augmented by water coming out of the Dougoufissa Creek, runs through the bauxite wharf at an angle of approximately 20° at a speed of up to 7 knots on spring tides in the rainy season, tending to set the vessel off the wharf. It is therefore absolutely essential to tend moorings to an even tension, particularly on the stern of a loading vessel.

The density of the Rio Nunez at the bauxite loading wharf varies between 1007 (rainy season) and 1028 (dry season) at high water.

Port Kamsar has a typical tropical climate, which is characterised by two separate seasons.

Rainy season from June to October

Maximum rainfall	is during July and August, mainly at night.
Relative humidity	is 70% to 80% during the day and 90% to 95% at night.
Temperatures	range from 17°C to 38°C, with an average of between 22°C to 28°C.
Wind conditions	Variable from between South and West, Force 3 to 6 Beaufort Scale. Possible tornadoes from between North and N.E. with wind reaching Force 10 Beaufort Scale for short periods.

Dry season from November to May

Little rainfall.	
Relative humidity	is 30% to 50% during the day, and 80% to 90% at night. There is often coastal fog in the mornings.
Temperatures	range from 15°C to 42°C, with an average of between 20°C to 35°C.
Wind conditions	Light breezes from the Southwest to West, Force 1 to 3 Beaufort Scale.

GENERAL: Stores: Provisions are scarce and therefore not available to calling vessels.

Gangways: Every vessel alongside any wharf must provide and tend a safe gangway provided with guide ropes and safety net. Such gangway should be effectively illuminated during the hours of darkness. At the top of the gangway a lifebuoy with a rescue line must be available.

For vessels berthing at the bauxite loading quay, the gangway must be swung out and ready to lower on the jetty as soon as the ship is fast alongside, so as to be clear of the loader rails and to allow unrestricted travel of the loader.

Port Director's Office: The office of the Port Director is solely responsible for the operation of Port Kamsar, which includes the provision of Pilotage, tugs and launches.

The Office acts as sole Agent for all vessels calling at Port Kamsar, including the normal ships business functions performed by Agents.

NOTICE: From Port Management, Port Kamsar.
To: All Masters.
Date: December 1994.

Dear Captain,

In order to help you understand the various formalities and Government Officals boarding your vessel, please find the following information:

On your berthing at Kamsar, the following Officials will come onboard:

(A) 2 Agents from OFAB Agency (Port Authority)	They are your Agent, acting to protect your interest. They are identified by an OFAB badge with their names, number and photograph.
(B) 1 Policeman (Immigration)	Identified by his dark blue uniform, no badge. He checks Passports and Crew List. Crewmen leaving to go ashore will leave their Passports with the policeman, who will give them a shore pass. Crew members must have their shore passes in their possession when ashore.
(C) 1 Gendarme	Identified by his khaki uniform. He does the same job as the police, but also checks for firearms. The gendarmerie is generally responsible for port security, as well as installations and personal safety.
(D) Quarantine:	Dr. Macauley issues Free Pratique Certificate.
(E) Coast Guard:	Identified by a khaki uniform. He inspects engine room cleanliness, oil debris and issues a certificate.
(F) Customs (2 persons)	Identified by a khaki uniform. They inspect provisions, bonded stores and ship's accommodation.
(G) CBG Shipping Department	He wears a CBG badge. He handles loading program and N.O.R. acceptance.

After this group, at boarding, you will also receive the following Officials:

(H) 2 Merchant Marine Inspectors (ANAM)	They will be identified to you by your OFAB Agent. They inspect ship's certificates (including liferafts) and will deliver an inspection certificate.
(I) Telecommunication Inspector (PTT)	He inspects telecommunication equipment and certificates. He will give you a permit, allowing you to use your Radio/Satcom station during your stay in port.

After the first group of Officials leaves your ship, they will appoint 3 representatives (One Customs Official, one Police Official and one Gendarme), who will stay on board, at the gangway, until departure.

For these 3 Officials only, you are kindly requested to furnish a clean cabin, where they can have their meals and rest during time off.

Should you receive anybody after that, who claims to be Government Officials, please call your Agent immediately on Channel 16, or the Harbour Master or the Port Management. We are all on Channel 16, and we will send you somebody to help clarify the purpose of the Official's visit.

In any case, if you are in doubt of anything or you receive any demand which you do not like, please call us on VHF Channel 16, we are here to serve you.

Stowaways: With the refugee situation, and to help the local authorities and Government departments, we are asking your cooperation in the following manner:

1. Whether at anchor or at berth, do not leave your pilot ladder or any rope hanging over the side. We have noted some stowaways climbing on board on the anchor chain.
2. Do not allow fishermen, visitors or salesmen on board, have a crew member as guard at your gangway all the time.
3. Make regular inspections of your ship, by your crew.
4. Your Agent will delivery a Register to the policeman, the Customs office and Gendarme at the gangway. In this Register, please verify that the names of the Officials on duty are clearly identified, if they are relieved, have the fact recorded and new names written down. If they are absent, please inform your Agent, so he can record this absence in the Register. All visitors onboard must register their names and functions.
5. Before sailing time, please have one of your officers conduct a search inspection of your ship with one or two of those Officials, and record this fact in the Register, as well as the result of this inspection.

We hope that these recommendations and explanations help you, and we wish you a pleasant stay at our port.

Signed: Port Technical Director Port Director

SHIPMASTER'S REPORT: August 1983 (Updated 1986).

Documents:

1 Vaccination List.
1 Maritime Declaration of Health.
6 Crew Lists.
1 Crew Declaration.
6 Passenger Lists (If any onboard).
6 Ports of Call Lists.
12 Manifests of Cargo (Cargo ships only).
2 copies Bills of Lading (Cargo ships only).
1 Stores List.

Agent, Doctor, Customs, Immigration, Navy Officer and Shipper's Representative board on arrival alongside to clear vessel. Later during office hours a gentleman from the Maritime Inspection Department will board to inspect vessel's certificates etc. On ship's first visit he will issue a numbered chit which should be *retained* for future visits. A shippers' representative will board on arrival to carry out a deadweight survey. He usually accepts Chief Officer's figures for ballast, bunkers, fresh water, etc., which he should have ready. 2 Immigration and 1 Customs Officer live on board for the duration of vessel's stay alongside.

Approaches: Are fairly straightforward following the pecked line route on Charts B.A. 600 and 1560, however this with the benefit of a 'Satnav'. Currents in that area were found over several voyages to be unpredictable and at times quite strong. No. III Buoy is equipped with a Racon which can be detected at distances of between 13 and 18 miles and should be passed keeping it to the South, thence inwards keeping to the South likewise of Nos. IV and V Buoys (also pecked line route) proceeding to the anchorage after passing Buoy V, or if entering port directly from sea to the Pilot Station usually about 1 mile South of No. 8 Buoy. Here the pecked line (Charts B.A. 1560 & 1562) should be adhered to in order to avoid the shoal patch S.S.W. of No. 8 Buoy.

Buoy III appears to be about 3 miles South of charted position and Buoy IV even further out of position. At the time of writing the light on Buoy III is extinguished, however the Racon is working well. Ile Binari and Ile Gonzales show up well on the radar. Rocher Gonzales upon which lies a conspicuous wreck, shows on the radar as a double blip and has been found most useful for obtaining fixes. Unfortunately neither the light or Racon on the reef work. Most of the buoys show up well on the radar and are visible for about 6 miles (conditions allowing). Off the river mouth flood tide sets Northeasterly and the ebb Southwesterly.

Pilotage: 3 pilots available. Pilots should be called on VHF Channel 16 about one and a half hours before arrival, they are supposed to keep a 24 hour watch, however if many vessels are waiting at anchor this is not always the case.

If berth is unoccupied, Pilot will meet vessel 1 mile South of No. 8 Buoy and conduct vessel through an 8.25 mile channel, well buoyed, 120 m. in width with a least depth of 8.25 m. to the inner anchorage and turning basin dredged to 10.0 m. Both anchors should be run out ready and a man standing by them for the channel passage. If entering on the flood tide (on which vessels must berth) immediately on entering the basin, vessel is swung to port and port anchor let go to one shackle (in water) until vessel has swung to flood, she is then dredged astern to a position N.W. of and handy to the berth, when anchor is weighed and vessel proceeds to berth. An adequately powerful tug assists in the operation. On weighing port anchor the starboard anchor must be ready in case of need on berthing.

If berth is occupied but no other ships waiting, vessel will enter as above, but when in position pay out cable and come to anchor. Holding ground is reputed good. As vessels of or near this size must sail one hour before high water Pilot rejoins about 1.5 hours before high water, cable is shortened and vessel dredged astern as above to await the sailing of berthed ship.

Anchorages: As will be seen on the charts the anchorage and Pilot Station area indicated is close to shoal water. I therefore found it preferable to anchor about 5 miles West of Rocher Gonzales. The holding ground is reputed to be good though I have never had opportunity to put this to the test.

Radio: Early ETAs have to be sent via Portishead Radio, however as these have to pass through Conakry and overland communications are poor, it is not unusual for these to be lost or badly delayed. It is therefore important to establish communication via Kamsar Radio as early as possible. Our earliest has been about 3 days from the port, when I have considered it worthwhile to repeat the 3 day ETA direct. The evening watch hours seem to be the best. Agents do not reply to requests for 'prospects'. First advice therefore is from the Pilots.

VHF: See "Pilotage".

Tugs: See "Berthing".

Berthing: If more than one vessel, waiting turn, order is: Vessel berthed next on turn at inner anchorage, the rest anchored outside awaiting turn. Turns are not necessarily in order of arrival. If a ship is without laydays she must wait until laydays are allotted or until ships within laydays have loaded even though may have arrived later.

Bauxite Berth: An L shaped jetty extending about 6.25 cables from shore it is well fendered with modern sprung fenders, depth alongside 13 m. Vessel berths port side to the quay head to flood. Tie up, forward 6 head ropes and 2 springs, aft 6 stern/breast ropes and 2 springs. On Spring tides and particularly during the rainy season, a very strong ebb sets at an angle across vessel's stern setting it off the quay. If need be the tug 'Dougoufissa' can be called on VHF Channel 16, either direct or via Pilots (depending on one's French) to stand by and/or assist by pushing vessel to quay.

There is no shore gangway. Ship's gantry must be landed on quay. As usual the space for it to run is restricted and it must be carefully kept out of the way of the loader.

Berth is equipped with a travelling loader with an outreach of 21 m. Max. airdraft to coamings (hatchcovers for siderollers) is 45 ft. Loading rate is up to 60,000 tons per day working around the clock. However during the rainy season and particularly if there is a run of ships, loading rate is limited by the capacity of the driers, about 1,500 t.p.h. for ships loading dry ore.

Max. sailing draft varies with height of tide and river, and will be calculated by the Pilot before he leaves the ship on berthing.

On sailing, Pilot will board 1.5 hours before high water (day or night) at which time vessel should be ready to single up as she must leave the berth promptly 1 hour before high water.

Fresh Water: Available in limited quantities and on an emergency basis only.

Repairs: No facilities for repairs.

Shore Leave: Permitted.

Crew Mail: Mail left with Agents is forwarded to Brussels direct by air every Monday.

SHIPMASTER'S REPORT: July 1991.

Approaches: When the vessel is in the River Nunez approaches care should be taken as the Racon on Gonzalez Rock does not work at night.

Vessels enter on the flood tide until 1 hour before H.W.

Pilotage: There are 3 pilots available and in our case the same pilot was used for entering and sailing. The pilot was very competent and spoke good English.

Once the vessel is berthed the pilot will determine the sailing draft.

Berthing: When the vessel arrives at the turning basin it is turned to port and the port anchor is let go. The vessel is berthed port side alongside (head out) with the assistance of a powerful tug.

When mooring, it is necessary to use many lines, especially aft, due to the strong ebb tide (5 knots) during the rainy season (June to November).

The tide sets at an angle across the vessel's stern, thereby setting the vessel off the quay.

Due to tide changes, mooring lines must be tended carefully at all times. The pilot advised that a vessel broke her lines and drifted to the middle of the river because they were not tended properly.

Loading: There is one bauxite berth with good fenders.

Due to the fast rate of loading (about 3,000 tonnes/hr.), it is necessary for the vessel to deballast quickly. Vessels must enter with maximum ballast onboard and airdraft must not exceed 13.5 m.

Vessels sail one hour before H.W.

In addition to the bauxite berth there is a small commercial berth with a crane of 125 tonnes capacity.

Quantity loaded is determined as follows if a weightometer is available:

(1) By weightometer reading if the ship's figures and shore figures differ by less than 0.5% from the ship's deadweight survey.

(2) By the average between ship's deadweight survey and weightometer if the difference is between 0.5% and 2%.

(3) By the ship's deadweight survey if the difference is more than 2% (in our case the difference was 4.5%).

Fresh Water: Fresh water is not available.

Stores: It is possible to obtain fresh tropical fruits, vegetables and fish.

AUTHORITY: Direction du Port, OFAB - Port Kamsar, P.O.Box 820, Conakry, Guinea. Via Satellite: *Tel:* (871) 1632116. *Telex:* (581) 1632116. *FAX:* (871) 1632117. *Cables:* OFAB-Kamsar. *Contact:* Captain M.L. Cisse, Port Director. Captain D. Hassib, Port Technical Director. Captain Aliou Thaim, Harbour Master.

Europe Contact: OFAB-Direction du Port Kamsar, c/o Boke Service Co., 100 Boulevard du Souverain, 1170 Bruxelles, Belgium. Tel: 674-7711. Fax: 660.02.03. Telex: 846-26549.

U.S.A. Contact: OFAB-Direction du Port Kamsar, c/o Halco (Mining) Inc., 900 Two Allegheny Center, Pittsburgh, PA. 15212, U.S.A. Tel: (412) 323-8400. Fax: (412) 237-3255. Telex: 6848055.

NOTES

Please also advise Shipping Guides Ltd.

Republic of Guinea-Bissau

BISSAU: 11.51 N. 15.34 W.

DOCUMENTS:
Entrance Declaration.
Clearance from the last Port of Call.
List of all Passengers on Board, either in transit or disembarking in Bissau.
Provisions List.
List of the Crew Members' Effects.
2 Lists of Passengers' Baggage.
List of Cargo to disembark in Bissau, Baldeade (Bolama) or otherwise in transit to be disembarked in another port.
List of Cargo (inside sealed envelope).

PILOTAGE: Pilot's base and radio beacon located at Caio Point, (small island at the entrance of Geba's Channel). To call the Pilots and/or the radio beacon, send telegram to Servicosmarguine, informing of the ETA at Caio; pilotage is compulsory.

ANCHORAGE: Between Bissau and the Ilheu do Rei.

MAX. SIZE: Draft 26 ft.

HEALTH: Visit of Port Doctor compulsory if ship has no doctor, or if permission for exemption has not been requested; permission can be requested by radio. When needed, the health services in Bissau can be used by passengers or crew members. Yellow fever vaccinations required.

RADIO: Station call sign CQF weekdays on at 0900, 1300, 1600, 1800 hrs. GMT. Sundays 0900 and 1100 hrs. GMT. Frequency 500 kHz, CW.

TUGS: 1 tug of 320 h.p. and 1 of 800 h.p. available.

BERTHING: Ponte, Cais de Bissau, length 131 m., width 25 m., depth 8 m.

Equipment: 4×6 ton cranes; 2×12 ton stacker trucks; 2×4 ton stacker trucks; 4×2 ton stacker trucks; 2×6 ton towing tractors 16×6 ton trucks; 1×35 ton towing tractor; 1×25 ton platform; 1×50 ton towing tractor; 1×50 ton platform; 2 suction machines for 80 t.p.h.; 2×35 m. conveyor belts; 1×40 m. conveyor belt.

STEVEDORES: 1,500 stevedores available for loading and unloading cargo.

FRESH WATER: Available; pumping rate, 10 t.p.h.

FUEL: Diesel available; pumping rate, 6 t.p.h.

CONSULS: Algeria, Brazil, China, Cuba, Egypt, France, Germany, Democratic Republic of Korea, Lebanon, Libya, Netherlands, Nigeria, Portugal, Russia, Sweden, U.S.A.

REPAIRS: Small repairing work can be done on machinery or ship's hull.

AIRPORT: 7 km. from Bissau; 2 flights to Lisbon per week, 1 flight per week to Moscow, 1 flight per week to Algiers and 4 flights per week to Conakry.

TIME: GMT minus 1 hour all year round.

HOLIDAYS: *National Holidays:* 1st January; 20th January; 8th March; 1st May; 3rd August; 24th September; 14th November; 25th December, Days of Ramadan and Tabasky.

POLICE/AMBULANCE/FIRE: Police, tel. 213957; Fire, tel. 118.

TELEPHONES: Line connection land-ship, if requested to the Post Office Authorities.

DEVELOPMENTS: "T" shaped general cargo pier length 290 m. with head length 260 m. under construction.

SHIPMASTER'S REPORT: November 1979.
Vessel from Dakar; bound for Bissau. Speed 14 knots, draft 6.10 m.
Report on the River Entrance to Bissau:
The vessel was proceeding on course 172° (T) and positions taken at various intervals as follows:

0920 hrs.: Cabo Roxo Lt. Ho. Brg. 054° (T) × 20.5 miles
0930 hrs.: Cabo Roxo Lt. Ho. Brg. 047° (T) × 22.0 miles

At 0920 hrs. minimum sounding was taken at 4.0 m. under the keel and Westerly set was applied.

At 0930 hrs. the vessel altered course to 137° (T).

1025 hrs.: Pta. Cabaceira Pt. Brg. 081° (T) × 31 miles
1145 hrs.: Pta. Cabaceira Pt. Brg. 057° (T) × 26.1 miles
1210 hrs.: Pta. Cabaceira Pt. Brg. 048° (T) × 21.5 miles

From 0930 hrs. onwards, poor fixes due to poor radar targets of land points.

From 1020 hrs. the vessel steered various courses to the Fairway Buoy at Lat. 11° 47.3' N., Long. 16° 41.8' W., due to strong currents.

At 1145 hrs. Fairway Buoy was found not in position and the vessel altered course and steered heading for Pilot Station at Caio Island. Caio Island Western Point was picked up on radar at about 16 nautical miles.

Visibility throughout was hazy and poor, about 3-4 nautical miles due to sand dust. Radio beacon at Caio Island was not working. Aero Radio Beacon at Bissau appeared to be unreliable.

1345 hrs.: Vessel anchored South of Caio Island awaiting Pilot.
1415 hrs.: Pilot onboard.

Pilot station at Caio Island had no VHF or other possible means for communication with the vessel. Vessel had to anchor and await Pilot. The Pilot boat is small with a weak engine and at times not working. The Pilot may have to be picked up by own lifeboat. The River Pilot did not speak any English, only Portuguese and was unable to give proper orders to the helmsman. Navigation in River Geba to Bissau was mostly done by the vessel's officers. Entrance and departure from Bissau cannot be done during the night, as most lights and buoys are unlit. On arrival at Bissau the vessel has to anchor 4 cables N.E. of the jetty and await Harbour Pilot.

1808 hrs.: Vessel anchored at Bissau, 4 cables N.E. of jetty.
1900 hrs.: Vessel berthed at Bissau, starboard side alongside the jetty.

The Harbour Pilot was able to communicate in English. Berthing and unberthing is preferred on flood tide. Current alongside berth up to 3.5 knots. Maximum depth alongside at low water was 20 ft. 3 soundings were taken at low water alongside the wharf: West end: 7.40 m., middle: 6.10 m., East end: 9.30 m., length of wharf 131 m.

Discharging was slow. The vessel stayed 4 days in port to discharge 1,364 tonnes flour in bags of 50 kg. Cargo worked from 0800 hrs. to 2300 hrs. daily. No cargo work at night due to heavy pilferage from the cargoes, ship's watchmen were kept in all hatches during discharging.

Day of Departure:
0715 hrs.: Vessel left berth.
1210 hrs.: Vessel anchored at Caio Island.
1220 hrs.: Pilot disembarked by ship's lifeboat.
1305 hrs.: Vessel continued voyage.

On departure the pilot boat at Caio Island was not working and the vessel had to use her own lifeboat to disembark the Pilot.

Max. Size: LOA 131 m.
Anchorage: Good anchorage 4 cables N.E. of the wharf. Depth 6 – 7 fathoms, holding ground was good.
Pilotage: Pilot station on Caio Island which is 50 nautical miles West of Bissau. Request for pilotage is compulsory, via Agent.
Restrictions: Entry by night is difficult as most lights are unlit and the current rises at up to 3.5 knots on the flood and ebb tides, also the navigation aids are poor.
Tugs: Not available.
Berthing: Length of wharf 131 m., depth alongside at LW 20 ft. (FW).
Cargo Handling Facilities: General cargo only handled, there are no lighters, container or Ro/Ro facilities.
Cranes: 2 mobile cranes, maximum capacity 15 tonnes.
Repairs: Not possible.
Fuel: Not available.
Fresh Water: Supply to the wharf is unreliable.
General: Provisions not available.
Medical: No services available.
Airport: There is a twice weekly air service from Bissau to Europe. Distance to airport 7 km.

SHIPMASTER'S REPORT: December 1988.
Vessel proceeded from Las Palmas to Bissau. Speed 13 knots. Draft 5.8 m.
Report on the River Entrance to Bissau: Steer true course 177° until vessel crosses the 100 fathom line at position Lat. 12° 26' N., Long. 17° 30' W. From this point steer true course 148° until the vessel again crosses the 100 fathom line at position Lat. 12° 11' N., Long. 17° 20' W. From this position steer true course 124° to Buoy Geba-A (Fairway Buoy).

From position Lat. 12° 11' N., Long. 17° 20' W. vessel's position was ascertained by radar, using Cabo Roxo which was visible on the radar up to 40 miles; the Baixos do Rio Grande light, which was visible on radar up to 30 miles; Ilha da Jeta which was visible up to 30 miles and the Buoy Geba-A (Fairway Buoy) which was visible on radar at 12 miles.

On reaching the Fairway Buoy, vessel alters course towards the Pilot Station at Caio Island. The minimum depth by echo sounder under the keel was 4.5 m. Strong currents of up to 5.5 knots were experienced.

The Pilot Station at Caio Island has no means of communication with either the vessel or the Port of Bissau. River Pilots are therefore never advised of vessel's arrival in advance.

When the vessel arrives at the Pilot Station, the vessel's lifeboat/rescue boat, is to be used to pick-up the pilot as the pilot boat has frequent engine breakdowns. The approach to Caio Island is very dangerous due to many breakers, wrecks and strong currents.

The River Pilot only speaks "Crioulo" (Creole), which is a local dialect, and a very few words of Portuguese. He is therefore unable to give proper orders to the helmsmen.

All navigation in the Canal do Geba has to be done by the ship's Master. The pilot does not assist in any way.

Entry and departure from Bissau is dangerous, especially at night, as the East Cardinal buoy off Banco do Meio is missing and most other buoys are unlit.

On arrival, vessels anchor at Bissau Inner Roads, which are 4 cables Northeast of the jetty, and await the harbour pilot.

The harbour pilot was able to communicate in English but was unable to show on the chart where the vessel was to berth.

Berthing/unberthing is preferred on the flood tide.

Vessel anchored in the Roads at 1930 hrs. and berthed alongside at 2300 hrs.

All jetties are unlit, so vessel had to use Suez Canal searchlight when approaching the berth.

Minimum depth under the keel when approaching the berth was 2.0 m. Currents alongside the berth are up to 3.5 knots and range of tide up to 5.0 m.

The vessel has to provide a cabin for the River Pilot as he stays on board the vessel during the whole time alongside.

When vessel was due to leave, the Harbour Pilot was standing-by on another vessel so we left port without a Harbour Pilot. On approaching Caio Island we again had to use our lifeboat/rescue boat to land the River Pilot.

Pilotage: Compulsory. Request for pilot to be made to the vessel's local agent. The Pilot Station is located at Ilheu do Caio which is about 50 nautical miles West of Bissau.
Anchorage: The Canal do Geba has good holding ground and plenty of room.
Restrictions: Night navigation is not recommended as most of the lights are either missing or unlit.
Tugs: None available.
Berthing: The old cargo jetty is 131 m. in length and has a minimum depth alongside of 6.3 m.

The new cargo jetty, which is soon to be operational, has a length of approximately 280 m.

Cargo Handling Facilities: Ship's cranes or derricks are to be used. 1 forklift of low capacity available. General cargo can be loaded on t the quay but all containers must be loaded direct on to trucks.

NOTES

Please also advise Shipping Guides Ltd.

Stevedores: The working hours are from 0800 hrs. to 2300 hrs. Night work is possible, but pilferage increases considerably during night time.
Repairs: Not possible.
Agent: Messrs. Guinemar S.A., Rua Guerra Mendes 4/4a, Bissau. Tel: 213022/3. Telex: 0969-276.
Note: Only the agent has VHF in Bissau (range up to 30 nautical miles).

SHIPMASTER'S REPORT: September 1994.
Pilotage: Pilot has to be arranged by Agent.

The Pilot Station on Caio Island has no means of communication with vessel. No pilot boat available.

Vessel's lifeboat has to be used to pick-up Pilot on East side of Caio Island.

Great care has to be taken due to many breakers and strong current. It is not recommended to try it in bad weather.

Pilot speaks no English.

All navigation has to be done by ship's Master.
Radio/VHF: Bissau Radio only equipped with VHF Channel 16.
Tugs: No tugs available.
Berthing: New cargo pier (length 290 m.) completed and in use.
Holidays: August 3rd is also a national holiday.
Telephones: No ship-to-shore telephone available.

AUTHORITY: Junta Autonoma dos Portos da Guine-Bissau, P.O.Box 382, Bissau, Guinea-Bissau. *Tel:* 2797 (Administrator's Office), 2783 (Secretariat). *Cables:* Porto, Bissau. *Contact:* Port Director.

Secretario de Estade dos Transportes, C.P. 306, Bissau, Guinea-Bissau. *Tel:* 212583. *Telex:* 263 MTT BI.

Guyana

ESSEQUIBO RIVER (Bartica): 06.24 N. 58.37 W.

DOCUMENTS: See "Georgetown".
PILOTAGE: Pilots are stationed at Georgetown. ETA to be given 24 hours in advance to Pilot Station. Pilotage compulsory. Pilot boards from black cutter 5 cables N.W. of the Outer Georgetown Light.

Essequibo Light (steel framework tower with red and white horizontal bands) marks seaward end of Essequibo Main Ship Channel. Vessels in vicinity of Demerara Pilot Station should listen for pilot boat on VHF Channel 16.
RESTRICTIONS: The Essequibo Bar is composed of hard mud and sand. The least depth of water is 3 ft. less than for Demerara Bar. Vessels should not attempt to cross the Essequibo Bar drawing more than 3 ft. less than that predicted for the Demerara Bar.
MAX. SIZE: Controlled by Bar draft predictions.
HEALTH: Pratique given at Georgetown when Pilot boards. If vessel is suspect or infected, Master to advise Harbour Authority by radio before arrival.
RADIO: Demerara Radio call sign 8RB operating on 2182 kHz. Georgetown Lighthouse operates VHF Channel 16 and HF 2738 kHz 24 hours a day. Also SSB 8281.2 kHz.
TUGS: Not available.
MEDICAL: Hospital at Georgetown and Bartica.
DENSITY: 1000, fresh water.
FRESH WATER: Not available.
FUEL: Not available.
CONSULS: At Georgetown.
REPAIRS: Government dry dock situated at Mazaruni, approximately 40 miles up river at junction of Essequibo and Mazaruni Rivers. Extreme dimensions: 160 ft. by 35 ft.
OPENING/CLOSING HATCHES: By ship's crew.
CUSTOMS ALLOWANCES: Up to 200 cigarettes and 1 bottle wine or spirits per man. Only 40 cigarettes may be taken ashore at any time.
AUTHORITY: Transport and Harbours Department, Battery Road, Kingston, Georgetown, Guyana. *Tel:* 02-59350. *FAX:* 02-78545. *Contact:* I. English, General Manager.

GEORGETOWN: 06.49 N. 58.10 W. (See Plan)

PORT LIMITS: Seaward by an arc of a circle with radius 1 nautical mile, with the Georgetown Lighthouse as centre.
DOCUMENTS:
Certificate of Registry.
8 Crew Lists.
8 Provisions and Stores Lists.
4 Passenger Lists.
Customs Documents:
2 Reports of Ship's Stores (Form C1).
2 Lists of Crew Personal Effects (Form C2).
1 List of Unmanifested Cargo (Form C3).
12 Health Declaration Forms (W.H.O.2)
Health Documents for Crew (1 copy for each crew member).
5 Cargo Manifests.
5 Bills of Lading.
PILOTAGE: Vessels apply for Pilots through local Agents or direct to Chief Pilot, Georgetown, through "Demerara Radio, 8 Romeo Bravo", 12 hours in advance of ETA at Pilot Station when vessel is proceeding in to Georgetown Harbour. Pilot boarding ground is in Northwestern quadrant of circle with radius 5 cables and centre the Outer Georgetown Light. Normal international day or night signals for "I require a Pilot" are used. All pilot cutters are painted black (hull) and white (superstructure) with the word "Pilot" painted in white on black ground. Cutters are approximately 60 ft. in length.
ANCHORAGES: There are 5 with a least depth of approximately 20 ft. MLWS named A to E from North to South. Vessels are safely anchored at any of the above anchorages 1.5 cables to 2 cables from Georgetown park line. Bottom is soft mud and provides good holding ground.
RESTRICTIONS: No entry restrictions except those on draft imposed by the bar at estuaries.
MAX. SIZE: Draft 30 ft. 08 in.
HEALTH: Radio Pratique is not given, and Pratique is only given at Georgetown. This normally involves a visit from the Health Authorities if the vessel is clear. If a vessel is "suspect" or "infected", Master should advise Harbour Authority by special message through Demerara Radio or Georgetown Lighthouse and await advice of Port Health Officers; meanwhile, if in the vicinity of Georgetown, vessel may anchor at the specified quarantine anchorage near the Outer Georgetown Buoy as entry into the limits of the port without the authority of the Ministry of Health is prohibited if the vessel is suspect or infected.
RADIO: Name of radio station "Demerara Radio", call sign "8RB", always standing by on 2182 kHz., will give latest weather report or RDF bearings on request. Georgetown Lighthouse operates VHF Channel 16, HF 2738 and SSB 8281.2 kHz.
RADAR: No service available.
TUGS: At present, vessels dock stem on to the tide without aid of tugs. However, tugs could be provided if urgently required.
BERTHING: There are 6 main wharves privately and government owned, situated along the river frontage at Georgetown and varying in length from 210 ft. to 730 ft. Depths alongside range from 16 ft. to 20 ft. at LWS, but as the bottom is soft mud vessels may safely lie aground alongside. Ships work cargo with their own appliances.
CRANES: Heavy lift cranes of 25 tons available. Ship's gear has to be used. No floating cranes.
BULK HANDLING FACILITIES: The sugar berth is 416 ft. in length with least depth alongside of 18 ft. MLWS and can accommodate vessels up to 530 ft. in length. Loading rate is 500 t.p.h. using 2 chutes. Vessels should not be more than 63 ft. beam.
BRIDGES: Demerara Harbour Bridge: Floating bridge with retractor span situated 4.2 miles from mouth of river. Arrangements for passing are made by Agents. Bridge operators keep radio watch on VHF Channel 16.
STEVEDORES: Ship's Agent normally arranges for gangs in accordance with cargo plans or Master's cable advice. Gangs are unionised. Stevedores work around the clock every day of the week though they are paid overtime between hours of 1600 and 1900 and they earn time-and-a-half or double time on public holidays according to which one of the 12 public holidays they work.
MEDICAL: No special advance notice of required medical attention is necessary, and hospital facilities are always available.
TANKERS: There are no residue discharge facilities at this port. There are 4 tanker berths in the Georgetown area.
Rome Terminal (Shell) – depth alongside 18.5 ft.
Ramsburg Terminal (Esso) – depth alongside 16 ft.
Ramsburg Terminal (Texaco) – depth alongside 18 ft.
Providence (Guyoil) – depth alongside 8.5 ft.
Size of pipelines: 6 in.
DENSITY: Average density in port is 1015, though during the rainy season (March-May; October-December) density of water may be as low as 1000 at LW in the harbour.
FRESH WATER: Fresh water is available, and is delivered alongside. The ship is required to pay for labour, overtime, etc., involved in the delivery.
FUEL: In case of emergency, providing advance notice is given by Master, vessels may be partially bunkered at any of Shell, Texaco or Esso installations. Vessels may be required to go alongside 2 hours before HW and leave not later than 1 hour after HW at the above-mentioned installations. Grades of fuel available are "Bunker C" and diesel fuel.
FIRE PRECAUTIONS: There are no stated precautions other than regulations against pumping out residual heavy oil (e.g. "Bunker C"). Ships having cargoes of ammunition, high explosives, dynamite, etc., are required by Harbour Regulations to anchor North of Georgetown Lighthouse prior to proceeding alongside wharf to unload and/or proceeding up river.
CONSULS: (and Embassies)
Belgium
Brazil
Canada
China
Colombia
Costa Rica
Cuba
Denmark
Egypt
France
Germany
India
Italy
Jamaica
Japan
Korea
Libya
Mexico
Netherlands
Norway
Panama
Sweden
Trinidad & Tobago
United Kingdom
U.S.A.
Venezuela
Yugoslavia
REPAIRS: Every type of deck or engine repair is undertaken at Guyana National Engineering Corporation (GNEC) Dry Dock. Above waterline and engine-room repairs of any type are undertaken on vessels exceeding the dimensions mentioned below while vessel is anchored in the stream. Also see "Dry Docks".
DRY DOCKS: GNEC Dry Dock: A graving dock 210 ft. × 37 ft. 9 in. at entrance situated South of GNEC No. 2 Wharf, which is State owned and operated on normal commercial lines. 198 ft. length of dry dock is on blocks. Breadth: top 46 ft. 4 in., bottom 40 ft. 9 in., depth on sill at HWOST 92 ft.

Government Dry Dock: Situated at Mazaruni approx. 40 miles upriver at junction of Essequibo and Mazaruni rivers is a graving dock and has extreme dimensions of approx. 160 ft. × 35 ft.
SURVEYORS: Lloyd's and Bureau Veritas. No cargo inspectors available.
GANGWAY/DECK WATCHMEN: Services of watchmen are compulsory and are obtained through a watchman's pool by ships' Agent.
PIRACY: Armed gangs of robbers have boarded vessels from shore and from canoes and stolen quantities of ship's stores.
OPENING/CLOSING HATCHES: Normally carried out by ship's crew.
CUSTOMS ALLOWANCES: Each crew member is permitted up to 200 cigarettes aboard held out of bond, but is only allowed to take ashore 40 at any time. Only on a *final discharge* would a member of crew be permitted a tobacco allowance of half-a-pound. Each crew member is allowed to keep out of Bond, 1 (one) bottle of wine or spirits, but is prohibited from taking any of it ashore. Each member of crew is allowed tax-free only one-sixth gallon wine and one-sixth gallon spirits *when he is finally discharged.*
CARGO GEAR: Ship's gear.
REPATRIATION: Arrangements normally made through ship's Agents.
AIRPORT: Timehri International Airport is situated approx. 30 miles South of Georgetown with highway connection and is served by many intercontinental airlines.
TIME: 3 hours behind GMT. No alterations made to clocks during the year.
HOLIDAYS: New Year (January 1st); *Eid-ul-Ahza; *Phagwah; Republic Day (February 23rd); Good Friday; Easter Monday; Labour Day (May 1st); *Youman Naubi; Caribbean Day (July 5th); Commonwealth Day (First Monday in August); *Deepavali; Christmas Day (December 25th); Boxing Day (December 26th). *Religious holidays are variable.
POLICE/AMBULANCE/FIRE: Tel. 999. There are Police/Ambulance Fire Stations on the waterfront.
TELEPHONES: Could be arranged through Coast Station 8RB.
BANKS: Chase Manhattan Bank N.A., Bank of Guyana Building, Church Street, Georgetown, P.O.Box 101080, Telex: Chase Bk, GY 2222.

Barclays Bank Int. Ltd., 48 Water Street, Georgetown, Telex: Barclay GY 2248.

STORING: See "Prelims".
(1) Yes.
(2) Yes.
(3) Yes.
(4) Yes.
(5) Yes.
(6) Yes.

SHORE LEAVE: Granted by Immigration Boarding Officer.

IDENTIFICATION CARDS: Not required.

DELAYS: Only when berths are occupied.

SHIP'S OFFICER'S REPORT: September 1988.

During vessel's stay in Georgetown I was able to gather the following information:

In a major step towards promoting the export of Bauxite, the Guyanese government has charted the Panamanian flag vessel M.V. "Arrowcane II", for an initial period of 5 years. This vessel will be a silo ship for transhipment of Bauxite.

She will be permanently moored in position Lat. 06° 49' N., Long. 58° 10.5' W. (approximate), heading North (See "Plan").

The "Arrowcane II" has been converted into a self-loading/discharging silo ship. She has an arrangement for discharging barges on her port side using on-board grabs, and then loading larger ships on her starboard side using a conveyor belt. She also has "Yokohama type" fenders on her starboard side.

Initially there was a draft restriction for vessels loading Bauxite at Linden (06° 01' N., 58° 18' W.) (up the Demerara River), so it was not possible for large vessels to take a full load. With the establishment of this silo ship at the mouth of the river it will be possible to load vessels to a deeper draft.

It was not possible to get other details about the loading draft restrictions, loading rates, etc., as the silo ship was still not operational when we left Georgetown. The 4 buoys have been laid and M.V. "Arrowcane II" was to carry out the "mooring operation" within a few days and become fully operational after 2 weeks.

SHIPMASTER'S REPORT: November 1989 and December 1989.

Charts: B.A. Charts No. 519, 527, 533 and 572.

Documents:
3 copies Crew Personal Effects List.
3 copies Bonded Stores List.
3 copies Provisions List.
2 copies Unmanifested Cargo.
1 copy Maritime Declaration of Health.
8 copies Crew List.

Port Officials: The Port Officials boarded at the berth and the party was large for a small vessel. The bond was sealed after gratuities given out.

Pilotage: The pilot boards at the Pilot Buoy (which was unlit at the time of our visits) from a large cutter with a black hull and white upper works with "Pilot" on the side. The name of the vessel was "Lady Young" and it was similar in appearance to a small tug.

There is a shortage of pilots as they are also required for Berbice and Essequibo, so it is usual for a pilot to transfer from an outward bound vessel to an inward bound vessel, and as this is the case, there are quite often long delays. Change of pilot takes place off the town.

A 24 hour pilot service is operated from Georgetown to the sea as long as the leading lights are operating.

Approaches: The headland on Pomeroon River is conspicuous on the radar at 20 miles. The tower and factory at Devonshire Castle Flats/Anna Regina are conspicuous on the radar at 25 miles. The town of Georgetown is also conspicuous at 25 miles on the radar.

The wreck just North of the Pilot Buoy in position Lat. 07° 00.8' N., Long. 58° 02.9' W. is no longer visible at low water.

The Demerera D/F Beacon is very unreliable and the Georgetown light was not operating at the time of our visit.

Anchorage: November 1989: Vessels anchor just North of the Pilot Buoy in a depth of approximately 4 fathoms. The bottom is mud and there is a large groundswell.

December 1989: Whilst waiting for the Sea Pilot for the outward passage we used the River Anchorage and anchored in Position "C". The River Pilot advised us to use 4 shackles in the water. Whilst at this anchorage a good watch should be maintained as thieves may try to board the vessel.

Channel: There are very few buoys left in the Channel and the pilot uses the leading marks day and night.

The old front leading mark has been moved to behind the rear mark (225° × 0.85 miles behind the original rear mark).

The Channel from the Pilot Buoy to the ship silo is 200 ft. wide and is aligned 045°/225°. The Channel has recently been dredged to 20 ft. 6 in. at chart datum (19 ft. 6 in. MLWS), although it was found to be silting to 17 ft. chart datum. There is a lot of mud/silt in suspension.

Radio/VHF: In November 1989, Georgetown Lighthouse Radio was first contacted on VHF Channel 16 at a distance of 30 miles, working Channel 12.

We were not able to contact Demerera Radio (8RB) prior to contacting Georgetown Lighthouse Radio, although another vessel reported making contact with the station at a distance of 120 miles on 2,558 kHz./2,049 kHz.

Whilst at anchor we worked Demerera Radio on 2,558 kHz./2,049 kHz. The station was very helpful.

The pilot launch "Lady Young" works on VHF Channel 16 but will switch to Channel 14 if required.

In December 1989, we made contact with Demerera Radio at over 100 miles (calling 2,182 kHz., working 2,258 kHz./2,049 kHz.). It is in order to make a local call to the Agent.

Berthing: Shell (November 1989): We berthed on the sea side of the Shell pontoon bridge at high water. Our draft was 4.4 m. and we experienced no difficulties going alongside. We unberthed one hour before low water with a draft of 4.1 m. and again experienced no difficulties even though the echo sounder indicated no water under the keep until we were 10 m. off the berth, where the depth was 7.0 m. at datum until we were abeam of Georgetown Lighthouse.

We berthed head out starboard side alongside.

The moorings consisted of 2 head/stern lines and 1 spring at each end. The mooring lines are run by the boat which was very efficient.

The tidal range at the berth is about 2.0 m. The depth alongside at chart datum was found to be about 4.0 m.

Berthing and unberthing is affected day and night.

A searchlight is very useful when berthing and unberthing.

Shell/Texaco (December 1989): Pilots are not keen to berth or unberth at Shell (called 'Rome' on documents) and Texaco (called 'Ramsburg' on documents) at slack low water. At low water the forward mooring pile at Texaco is dry so the mooring boat would be unable to get alongside the pile.

Pilots prefer to dock 2 hours either side of low water at Texaco and about one hour either side of low water at the Shell berth.

The depth at the Texaco berth is greater than at Shell, 4.5 m. at chart datum. At both Shell and Texaco, vessels berth head out starboard side to.

The Texaco berth is made up of wooden pilings and a platform and is about 80 m. in length. Parts have recently been renewed. A searchlight is necessary for night mooring. The after moorings at the Texaco berth are sent to a staghorn.

The official opening times of the pontoon bridge appear to be 0300 hrs., 1100 hrs., 1600 hrs. and 2300 hrs., although these times are liable to change if power is not available. They will also open at other times for river traffic if power is available.

Cargo: Shell (November 1989): The ship's portable flexible hose was used for discharge. The capacity of the shore tank is 180 tonnes.

The maximum back pressure allowed is 12 Bar and with 2 pumps we averaged 40 t.p.h. (LPG mix 80/20). The ship's radio was used to communicate with the shore during cargo operations.

Check for leaks were made prior to commencement of discharging and hot gas was used for 10 minutes on completion. No difficulties were encountered.

The shore Surveyor checks the shore tanks and then boards the vessel on completion.

Texaco (December 1989): Texaco have 9 horizontal cylindrical tanks for ambient storage of LPG (5 × 660 bbls. and 4 × 160 bbls.). The maximum back pressure allowed at the berth is 150 p.s.i. (10 Bar). There are LPG shipments to the Texaco berth every 3 weeks. White oils are also handled at this berth.

The Esso berth which is 0.25 miles upstream of the Texaco berth is of similar construction.

General: It is advisable to keep all cabins and lockers locked and all movable objects under lock as many "visitors" are likely to board the vessel.

We employed 2 guards, larger vessels should employ more guards.

There are 2 tanker berths upstream of the pontoon bridge, these are operated by Texaco and Esso. The Pontoon bridge is only very occasionally opened for sea-going vessels as there is a lack of electric power to operate the winches.

All lights, including Georgetown Lighthouse, but excluding the leading lights are extinguished.

Bauxite vessels with maximum draft of 18 ft. can transit the 55 miles up river to Mackenzie, but during day time only and on a flood tide.

There is a silo ship at fixed moorings to the West of the main Channel, abeam of Georgetown Lighthouse. It is moored bow out. Vessels with a draft of 30 ft. can be handled at the silo vessel at MHWS and 28 ft. 6 in. at normal high water.

Fresh water is only available at one general cargo berth in the town.

It was possible to make an international call from the Tower Hotel near the Cathedral. The cost to Europe is about U.S.$1.60 per minute.

It is very important to make a thorough stowaway search prior to departure.

SHIPMASTER'S REPORT: February 1990.

Berth: Esso Ramsburg.

Position: Lat. 06° 45.2' N., Long. 58° 11.25' W. (BA Chart No.519).

Berthing: The berth is on the East bank of the River at Georgetown. It is 100 m. long and is at the present time being refurbished with tarred hardwood and logs.

The depth alongside at MLW is 14 ft. This depth extends to 100 ft. off the jetty.

Cargo: Mogas is handled by a 6 in. line to a tank of 15,000 bbls. Gas Oil is handled by a 6 in. line to a tank of 18,000 bbls. and Av. Jet is handled by a 4 in. line to a tank of 6,200 bbls. Lube Oils are also handled. There are no facilities for handling of LPG.

Shore hoses are used and a pumping rate of 1,700 bbls./hr. can be achieved. On completion of operations, ullages, temperatures and water dips are taken, ship's forms used.

General: Vessels berth port or starboard side alongside, depending on the tide.

Ship's gangway was difficult to land at low water.

Berth: Guyoil Providence.

Position: Lat. 06° 45.65' N., Long. 58° 11' W. (BA Chart No.519).

Berthing: The berth is operated by Guyoil Providence who are a state oil distribution company. The berth is 50 m. long and is constructed of hardwood, logs and planks. The depth alongside at MLW is 12.5 ft.

Cargo: There is 1 dual purpose 6 in. line for Av. Jet and Gas Oil and1×6 in. line for Mogas. There are 4 tanks, 1×5,000 bbl. for Mogas, 1×5,000 bbl. for Av. Jet and 1×5,000 bbl. and 1×10,000 bbl. tank for Gas Oil. There are no tanks for LPG.

Shore hoses were used for discharge operations.

A water flush is required between Av. Jet and Gas Oil and vice-versa.

General: Vessels berth port or starboard side alongside, dependent on tide.

AUTHORITY: Transport and Harbours Department, Battery Road, Kingston, Georgetown, Guyana. *Tel:* 02-59350. *FAX:* 02-78545. *Contact:* I. English, General Manager.

Guyana

ESSEQUIBO RIVER (Bartica): 06.24 N. 58.37 W.

DOCUMENTS: See "Georgetown".
PILOTAGE: Pilots are stationed at Georgetown. ETA to be given 24 hours in advance to Pilot Station. Pilotage compulsory. Pilot boardsfrom black cutter 5 cables N.W. of the Outer Georgetown Light.

Essequibo Light (steel framework tower with red and white horizontal bands) marks seaward end of Essequibo Main Ship Channel. Vessels in vicinity of Demerara Pilot Station should listen for pilot boat on VHF Channel 16.
RESTRICTIONS: The Essequibo Bar is composed of hard mud and sand. The least depth of water is 3 ft. less than for Demerara Bar. Vessels should not attempt to cross the Essequibo Bar drawing more than 3 ft. less than that predicted for the Demerara Bar.
MAX. SIZE: Controlled by Bar draft predictions.
HEALTH: Pratique given at Georgetown when Pilot boards. If vessel is suspect or infected, Master to advise Harbour Authority by radio before arrival.
RADIO: Demerara Radio call sign 8RB operating on 2182 kHz. Georgetown Lighthouse operates VHF Channel 16 and HF 2738 kHz 24 hours a day. Also SSB 8281.2 kHz.
TUGS: Not available.
MEDICAL: Hospital at Georgetown and Bartica.
DENSITY: 1000, fresh water.
FRESH WATER: Not available.
FUEL: Not available.
CONSULS: At Georgetown.
REPAIRS: Government dry dock situated at Mazaruni, approximately 40 miles up river at junction of Essequibo and Mazaruni Rivers. Extreme dimensions: 160 ft. by 35 ft.
OPENING/CLOSING HATCHES: By ship's crew.
CUSTOMS ALLOWANCES: Up to 200 cigarettes and 1 bottle wine or spirits per man. Only 40 cigarettes may be taken ashore at any time.
AUTHORITY: Transport and Harbours Department, Battery Road, Kingston, Georgetown, Guyana. *Tel:* 02-59350. *FAX:* 02-78545. *Contact:* I. English, General Manager.

GEORGETOWN: 06.49 N. 58.10 W. (See Plan)

PORT LIMITS: Seaward by an arc of a circle with radius 1 nautical mile, with the Georgetown Lighthouse as centre.
DOCUMENTS:
Certificate of Registry.
8 Crew Lists.
8 Provisions and Stores Lists.
4 Passenger Lists.
Customs Documents:
2 Reports of Ship's Stores (Form C1).
2 Lists of Crew Personal Effects (Form C2).
1 List of Unmanifested Cargo (Form C3).
12 Health Declaration Forms (W.H.O.2)
Health Documents for Crew (1 copy for each crew member).
5 Cargo Manifests.
5 Bills of Lading.
PILOTAGE: Vessels apply for Pilots through local Agents or direct to Chief Pilot, Georgetown, through "Demerara Radio, 8 Romeo Bravo", 12 hours in advance of ETA at Pilot Station when vessel is proceeding in to Georgetown Harbour. Pilot boarding ground is in Northwestern quadrant of circle with radius 5 cables and centre the Outer Georgetown Light. Normal international day or night signals for "I require a Pilot" are used. All pilot cutters are painted black (hull) and white (superstructure) with the word "Pilot" painted in white on black ground. Cutters are approximately 60 ft. in length.
ANCHORAGES: There are 5 with a least depth of approximately 20 ft. MLWS named A to E from North to South. Vessels are safely anchored at any of the above anchorages 1.5 cables to 2 cables from Georgetown park line. Bottom is soft mud and provides good holding ground.
RESTRICTIONS: No entry restrictions except those on draft imposed by the bar at estuaries.
MAX. SIZE: Draft 30 ft. 08 in.
HEALTH: Radio Pratique is not given, and Pratique is only given at Georgetown. This normally involves a visit from the Health Authorities if the vessel is clear. If a vessel is "suspect" or "infected", Master should advise Harbour Authority by special message through Demerara Radio or Georgetown Lighthouse and await advice of Port Health Officers; meanwhile, if in the vicinity of Georgetown, vessel may anchor at the specified quarantine anchorage near the Outer Georgetown Buoy as entry into the limits of the port without the authority of the Ministry of Health is prohibited if the vessel is suspect or infected.
RADIO: Name of radio station "Demerara Radio", call sign "8RB", always standing by on 2182 kHz., will give latest weather report or RDF bearings on request. Georgetown Lighthouse operates VHF Channel 16, HF 2738 and SSB 8281.2 kHz.
RADAR: No service available.
TUGS: At present, vessels dock stem on to the tide without aid of tugs. However, tugs could be provided if urgently required.
BERTHING: There are 6 main wharves privately and government owned, situated along the river frontage at Georgetown and varying in length from 210 ft. to 730 ft. Depths alongside range from 16 ft. to 20 ft. at LWS, but as the bottom is soft mud vessels may safely lie aground alongside. Ships work cargo with their own appliances.
CRANES: Heavy lift cranes of 25 tons available. Ship's gear has to be used. No floating cranes.
BULK HANDLING FACILITIES: The sugar berth is 416 ft. in length with least depth alongside of 18 ft. MLWS and can accommodate vessels up to 530 ft. in length. Loading rate is 500 t.p.h. using 2 chutes. Vessels should not be more than 63 ft. beam.
BRIDGES: Demerara Harbour Bridge: Floating bridge with retractor span situated 4.2 miles from mouth of river. Arrangements for passing are made by Agents. Bridge operators keep radio watch on VHF Channel 16.
STEVEDORES: Ship's Agent normally arranges for gangs in accordance with cargo plans or Master's cable advice. Gangs are unionised. Stevedores work around the clock every day of the week though they are paid overtime between hours of 1600 and 1900 and they earn time-and-a-half or double time on public holidays according to which one of the 12 public holidays they work.
MEDICAL: No special advance notice of required medical attention is necessary, and hospital facilities are always available.
TANKERS: There are no residue discharge facilities at this port. There are 4 tanker berths in the Georgetown area.
Rome Terminal (Shell) – depth alongside 18.5 ft.
Ramsburg Terminal (Esso) – depth alongside 16 ft.
Ramsburg Terminal (Texaco) – depth alongside 18 ft.
Providence (Guyoil) – depth alongside 8.5 ft.
Size of pipelines: 6 in.
DENSITY: Average density in port is 1015, though during the rainy season (March-May; October-December) density of water may be as low as 1000 at LW in the harbour.
FRESH WATER: Fresh water is available, and is delivered alongside. The ship is required to pay for labour, overtime, etc., involved in the delivery.
FUEL: In case of emergency, providing advance notice is given by Master, vessels may be partially bunkered at any of Shell, Texaco or Esso installations. Vessels may be required to go alongside 2 hours before HW and leave not later than 1 hour after HW at the above-mentioned installations. Grades of fuel available are "Bunker C" and diesel fuel.
FIRE PRECAUTIONS: There are no stated precautions other than regulations against pumping out residual heavy oil (e.g. "Bunker C"). Ships having cargoes of ammunition, high explosives, dynamite, etc., are required by Harbour Regulations to anchor North of Georgetown Lighthouse prior to proceeding alongside wharf to unload and/or proceeding up river.
CONSULS: (and Embassies)
Belgium
Brazil
Canada
China
Colombia
Costa Rica
Cuba
Denmark
Egypt
France
Germany
India
Italy
Jamaica
Japan
Korea
Libya
Mexico
Netherlands
Norway
Panama
Sweden
Trinidad & Tobago
United Kingdom
U.S.A.
Venezuela
Yugoslavia
REPAIRS: Every type of deck or engine repair is undertaken at Guyana National Engineering Corporation (GNEC) Dry Dock. Above waterline and engine-room repairs of any type are undertaken on vessels exceeding the dimensions mentioned below while vessel is anchored in the stream. Also see "Dry Docks".
DRY DOCKS: GNEC Dry Dock: A graving dock 210 ft. × 37 ft. 9 in. at entrance situated South of GNEC No. 2 Wharf, which is State owned and operated on normal commercial lines. 198 ft. length of dry dock is on blocks. Breadth: top 46 ft. 4 in., bottom 40 ft. 9 in., depth on sill at HWOST 92 ft.

Government Dry Dock: Situated at Mazaruni approx. 40 miles upriver at junction of Essequibo and Mazaruni rivers is a graving dock and has extreme dimensions of approx. 160 ft. × 35 ft.
SURVEYORS: Lloyd's and Bureau Veritas. No cargo inspectors available.
GANGWAY/DECK WATCHMEN: Services of watchmen are compulsory and are obtained through a watchman's pool by ships' Agent.
PIRACY: Armed gangs of robbers have boarded vessels from shore and from canoes and stolen quantities of ship's stores.
OPENING/CLOSING HATCHES: Normally carried out by ship's crew.
CUSTOMS ALLOWANCES: Each crew member is permitted up to 200 cigarettes aboard held out of bond, but is only allowed to take ashore 40 at any time. Only on a *final discharge* would a member of crew be permitted a tobacco allowance of half-a-pound. Each crew member is allowed to keep out of Bond, 1 (one) bottle of wine or spirits, but is prohibited from taking any of it ashore. Each member of crew is allowed tax-free only one-sixth gallon wine and one-sixth gallon spirits *when he is finally discharged.*
CARGO GEAR: Ship's gear.
REPATRIATION: Arrangements normally made through ship's Agents.
AIRPORT: Timehri International Airport is situated approx. 30 miles South of Georgetown with highway connection and is served by many intercontinental airlines.
TIME: 3 hours behind GMT. No alterations made to clocks during the year.
HOLIDAYS: New Year (January 1st); *Eid-ul-Ahza; *Phagwah; Republic Day (February 23rd); Good Friday; Easter Monday; Labour Day (May 1st); *Youman Naubi; Caribbean Day (July 5th); Commonwealth Day (First Monday in August); *Deepavali; Christmas Day (December 25th); Boxing Day (December 26th). *Religious holidays are variable.
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STORING: See "Prelims".
(1) Yes. (4) Yes.
(2) Yes. (5) Yes.
(3) Yes. (6) Yes.

SHORE LEAVE: Granted by Immigration Boarding Officer.
IDENTIFICATION CARDS: Not required.
DELAYS: Only when berths are occupied.

SHIP'S OFFICER'S REPORT: September 1988.

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It was not possible to get other details about the loading draft restrictions, loading rates, etc., as the silo ship was still not operational when we left Georgetown. The 4 buoys have been laid and M.V. "Arrowcane II" was to carry out the "mooring operation" within a few days and become fully operational after 2 weeks.

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All lights, including Georgetown Lighthouse, but excluding the leading lights are extinguished.

Bauxite vessels with maximum draft of 18 ft. can transit the 55 miles up river to Mackenzie, but during day time only and on a flood tide.

There is a silo ship at fixed moorings to the West of the main Channel, abeam of Georgetown Lighthouse. It is moored bow out. Vessels with a draft of 30 ft. can be handled at the silo vessel at MHWS and 28 ft. 6 in. at normal high water.

Fresh water is only available at one general cargo berth in the town.

It was possible to make an international call from the Tower Hotel near the Cathedral. The cost to Europe is about U.S.$1.60 per minute.

It is very important to make a thorough stowaway search prior to departure.

SHIPMASTER'S REPORT: February 1990.
Berth: Esso Ramsburg.
Position: Lat. 06° 45.2' N., Long. 58° 11.25' W. (BA Chart No.519).
Berthing: The berth is on the East bank of the River at Georgetown. It is 100 m. long and is at the present time being refurbished with tarred hardwood and logs.

The depth alongside at MLW is 14 ft. This depth extends to 100 ft. off the jetty.

Cargo: Mogas is handled by a 6 in. line to a tank of 15,000 bbls. Gas Oil is handled by a 6 in. line to a tank of 18,000 bbls. and Av. Jet is handled by a 4 in. line to a tank of 6,200 bbls. Lube Oils are also handled. There are no facilities for handling of LPG.

Shore hoses are used and a pumping rate of 1,700 bbls./hr. can be achieved. On completion of operations, ullages, temperatures and water dips are taken, ship's forms used.

General: Vessels berth port or starboard side alongside, depending on the tide.

Ship's gangway was difficult to land at low water.

Berth: Guyoil Providence.
Position: Lat. 06° 45.65' N., Long. 58° 11' W. (BA Chart No.519).
Berthing: The berth is operated by Guyoil Providence who are a state oil distribution company. The berth is 50 m. long and is constructed of hardwood, logs and planks. The depth alongside at MLW is 12.5 ft.

Cargo: There is 1 dual purpose 6 in. line for Av. Jet and Gas Oil and1×6 in. line for Mogas. There are 4 tanks, 1×5,000 bbl. for Mogas, 1×5,000 bbl. for Av. Jet and 1×5,000 bbl. and 1×10,000 bbl. tank for Gas Oil. There are no tanks for LPG.

Shore hoses were used for discharge operations.

A water flush is required between Av. Jet and Gas Oil and vice-versa.

General: Vessels berth port or starboard side alongside, dependent on tide.

AUTHORITY: Transport and Harbours Department, Battery Road, Kingston, Georgetown, Guyana. *Tel:* 02-59350. *FAX:* 02-78545. *Contact:* I. English, General Manager.

LINDEN: 06.00 N. 58.17 W.

DOCUMENTS: See "Georgetown".
PILOTAGE: Pilotage compulsory. Pilots are stationed at Georgetown. ETA to be given 12 hours in advance to Pilot Station. Pilot boards from black cutter 5 cables N.W. of the Outer Georgetown Light.

From Georgetown to Linden and Linden to Georgetown, pilotage not compulsory, but advisable to use G.N.E.C. Pilots.
RESTRICTIONS: Governed by depth of water at Demerara River Bar. Entrance normally at HW. Max. speed limit on the river is 10 knots.
ANCHORAGES: Vessels proceeding to Linden in ballast and drawing less than 15 ft. may anchor beyond Southern limit of Georgetown. Depths 16 ft. – 18 ft. MLWS.
MAX. SIZE: Draft 21 ft. 6 in.
HEALTH: Pratique given at Georgetown by Health Authorities. If vessel is suspect or infected, Master to advise Harbour Authority by radio before arrival.
RADIO: Demerara Radio call sign 8RB operating on 2182 kHz. Georgetown Lighthouse operates VHF Channel 16 and HF 2738 kHz, 24 hours a day. Also SSB 8281.2 kHz.
TUGS: Not available.
BERTHING: There are 2 bauxite berths accommodating vessels of up to 570 ft. One loader for metal grades has an airdraft of 29 ft. 8 in. and a loading rate of 800 t.p.h. The second loader for calcined bauxite has an airdraft of 34 ft. and a loading rate of 350 t.p.h.

The Alumina berth has a travelling tower with an airdraft of 64 ft. and a loading rate of 400 t.p.h. Max. beam of vessel 85 ft.
MEDICAL: Hospital at Georgetown.
DENSITY: 1000, fresh water.
FRESH WATER: Can be supplied.
FUEL: Can be supplied.
CONSULS/REPAIRS: At Georgetown.
OPENING/CLOSING HATCHES: By ship's crew.
CUSTOMS ALLOWANCES: Up to 200 cigarettes and 1 bottle wine or spirits per man. Only 40 cigarettes may be taken ashore at any time.
AUTHORITY: Transport and Harbours Department, Battery Road, Kingston, Georgetown. *Tel:* 02-59350. *FAX:* 02-78545. *Contact:* I. English, General Manager.

NEW AMSTERDAM (Everton, Berbice): 06.14 N. 57.31 W.

DOCUMENTS: See "Georgetown".
PILOTAGE: Pilots are stationed at Georgetown. ETA to be given 24 hours in advance to Pilot Station. Pilotage compulsory. Pilot boardsfrom black cutter 5 cables N.W. of the Outer Georgetown Light.
RESTRICTIONS: The Berbice Bar is composed of fairly hard mud. Vessels may cross the Berbice Bar on even keel (reported to be dredged to 14.8 ft.)
MAX. SIZE: Controlled by Bar draft predictions.
HEALTH: Pratique given at Berbice by Health Authorities. If vessel is suspect or infected, Master to advise Harbour Authority by radio before arrival.
RADIO: Demerara Radio call sign 8RB operating on 2182 kHz. Georgetown Lighthouse operates VHF Channel 16 and HF 2738 kHz, 24 hours a day. Also SSB 8281.2 kHz.
TUGS: Not available.
BERTHING: The Bauxite Berth is about 1,500 ft. long, and has a fixed loading arm with an average loading rate of 500 t.p.h. The airdraft is 36 ft.

There is a strong ebb current of about 4-5 knots, although the flood runs at about 3 knots.
MEDICAL: Hospital at Georgetown.
DENSITY: 1000, fresh water.
FRESH WATER: Can be supplied.
FUEL: Can be supplied.
CONSULS/REPAIRS: At Georgetown.
OPENING/CLOSING HATCHES: By ship's crew.
CUSTOMS ALLOWANCES: Up to 200 cigarettes and 1 bottle wine or spirits per man. Only 40 cigarettes may be taken ashore at any time.
AUTHORITY: Transport and Harbours Department, Battery Road, Kingston, Georgetown, Guyana. *Tel:* 02-59350. *FAX:* 02-78545. *Contact:* I. English, General Manager.

NOTES

Please also advise Shipping Guides Ltd.

Guyane (French Guyana)

DEGRAD-DES-CANNES (Main Port): 04.51 N. 52.16 W.
LE LARIVOT (Secondary Port): 04.54 N. 52.22 W.
CAYENNE (Secondary Port): 04.56 N. 52.20 W.
KOUROU (Secondary Port): 05.09 N. 52.40 W.
SAINT LAURENT-DU-MARONI (Secondary Port): 05.30 N. 54.02 W.

(See Plan)

LOCATION: Degrad-des-Cannes – 15 km. from Cayenne.
Le Larivot – 10 km. from Cayenne.
Kourou – 60 km. from Cayenne.
Saint-Laurent-du-Maroni – 250 km. from Cayenne.

PILOTAGE: Notice of ETA and request for a Pilot no less than 24 hours before ETA at Degrad-des-Cannes Channel Buoy and 48 hours for Saint-Laurent and Kourou.

Station de Pilotage de Guyane, Port du Degrad-des-Cannes, 97354 – Remire. Tel: 35.45.20, 35.47.64.

ANCHORAGES:
1. At Sea Buoy at Cayenne.
2. At Sea Buoy at Degrad-des-Cannes.
3. At Salut Island (Iles du Salut).

RESTRICTIONS: Permanent dredging underway. Recommended that vessels approach at high tide.
Depth of water in channels:
Cayenne-Larivot (10 km.): Height of tide.
Degrad-des-Cannes (15 km.): 3.0 m. + height of tide.

HEALTH: French Regulations apply.

RADIO: Cayenne Radio.

VHF: Harbour Master and Pilot Station on Channel 16.

TUGS: Not available.

BERTHING: Berth at Degrad-des-Cannes on the Mahury River, length of concrete wharf is 300 m., max. LOA 160 m. Roll-on/Roll-off facilities available. Discharge of general cargo and containers by ship's gear.

BULK HANDLING FACILITIES: Steel wharf with dolphins. Cement discharged with ship's gear. Max. LOA 160 m.

TANKERS: *Degrad-des-Cannes:* Steel wharf with dolphins. Min. LOA 80 m. Max. LOA 130 m.
Le Larivot: Concrete wharf. Max. LOA 100 m. Depth 4.9 m.

FRESH WATER: Available.

FUEL: By road tanker.

REPAIRS: Limited facilities available.

REPATRIATION: Rochambeau Airport. Connecting flights to France, Suriname and Brazil.

TIME: GMT minus 3 hours.

POLICE/AMBULANCE/FIRE: Contact Harbour Office at Degrad-des-Cannes.

GENERAL: Customs and Frontier Police at Degrad-des-Cannes.

SHIPMASTER'S REPORT: October 1990.

Arrival: Vessel arrived at Degrad Des Cannes Fairway Buoy at 2130 hrs., and anchored to Pilot's advice.

Pilot starts one hour before H.W., in order to be between Buoys No. 10 – 18 at H.W. The shallowest part of the channel is between Buoys No. 1 – 27.

Our deepest draft was 5.03 m.

A tug stands by in case there are any difficulties when transitting the channel. The channel is 80 m. wide, and the buoys are spaced 160 m. apart. The current was to the West at 2.5 knots. Vessel has to keep close to the green buoy.

Departure: Vessel departed at 0330 hrs., and waited at the channel entrance to allow a vessel with draft 5.90 m. to enter.

Dredger: On our arrival, the dredger was under repair, but began work again after 10 days.

Current: According to the Pilot, the current is normally to the West, but changes twice a year and runs to the East for 8 days. In the dry season, the current still runs up 15 minutes after H.W. In the rainy season, the current runs down half an hour before H.W.

Berthing: On approaching the berth, the vessel turns on the starboard anchor, with 2 shackles in the water.

Vessels without bow thrusters must leave berth before H.W., as the current from H.W. onwards pushes the vessel on to the berth.

AUTHORITY: *Port Director:* M. le Directeur, Departemental de l'Equipement, Vieux Port, 97300 Cayenne.

Port Manager: M. l'Ingenieur Subdivisionnaire du Service Maritime, B.P. 1106, 97306 Cayenne, Cedex. *Tel:* 35.58.00. *FAX:* 35.53.96.

Harbour Master: M. le Commandant des Ports de Guyane, B.P. 1106, 97306 Cayenne, Cedex. *Tel:* 35.44.90, 35.45.28. *FAX:* 35.52.51.

NOTES

Please also advise Shipping Guides Ltd.

Haiti

GENERAL

DOCUMENTARY REQUIREMENTS PRIOR TO ARRIVAL:
Advice of Arrival: The arrival of the vessel must be announced 48 hours in advance, and in writing, to the Port Captaincy and to the Port Authority, with indication of the vessel's characteristics, the cargo which will be discharged and loaded, and requirements concerning supply of water, etc.
Information Concerning Cargo Intended for the Port: The Agency must receive in good time by air mail 6 copies of the Cargo Manifest and 2 copies of the Bills of Lading. In the event that it is not possible to supply these documents by mail, the information must be provided by telex to the Agency so that the latter may draw them up.

The Cargo Manifests are distributed to the Port Authority, the Haiti Terminal (private concern handling cargo consolidation), to the Ministry of Commerce, the Ministry of Finances and to the Agency.
REQUIREMENTS RELATING TO THE RECEIPT OF THE VESSEL:
Reception Commission: The vessel is received by representatives of the Port Health, Immigration, Customs, International Police, National Port Authority and the Agency.
Documentation Required: On the arrival of the vessel, the following documents are required, OEA/ALALC, IMO and certain other documents being acceptable.

	No of Copies and Distribution					
Type of Document	*Health*	*Immigra-tion*	*Customs*	*Police*	*NPA*	*Agency (a)*
General Declaration	–	–	1	–	1	1
Cargo Manifest (b)	–	–	–	–	1	–
Crew List	1	1	3	1	–	1
List of Passengers	–	1	2	–	–	–
List of Stores	–	–	2	–	–	–
Declaration of Crew Effects	–	–	2	–	–	–
Maritime Health Declaration	1	–	–	–	–	–
Mail List	–	–	–	–	–	1
Arms and Ammunition Manifest	–	–	1	1	–	1

(a) The Agency requires additional copies of the Crew List, the Passenger List, the Stores List, the Arms and Ammunition Manifest, etc., dependent upon the destination of the vessel, in accordance with the requirements of Consular Clearance.

(b) Required in the event that the manifest has been received, or information regarding the cargo, in advance of the arrival of the vessel; if not, the agency requires 4 or 6 copies for distribution amongst the different authorities.
REQUIREMENTS CONCERNING DOCUMENTATION ON SAILING:
Documentation on Sailing: At the request of the Agency, the Customs issue a clearance with which permission to sail is applied for from the Port Captaincy. The latter's permit is used for requesting the services of the Pilot from the National Port Administration.

An Outgoing Manifest is presented to Customs which also contains a sworn statement (sworn statement of the Master of a vessel with cargo, or sworn statement of the Master of a vessel in ballast), and the List of Passengers. If the vessel is sailing with cargo, it is presented in 6 copies; if in ballast, in 4 copies.
CONSULAR INTERVENTION:
Consular Documentation: In accordance with the 1963 Customs Code, Article 119, the Master of a vessel loading cargo for Haiti, or his representative, must sign before the Consul a Declaration sworn as to the truthfulness of the manifest. This article is transcribed as follows:
Quote:

Article 119, *Oath.* Masters of vessels or their representative, at the time of having their manifests visaed, shall give the following oath which shall be transcribed by the Consul at the bottom of the manifest: I swear that this manifest contains exactly the packages shipped on board my vessel, that the quantities are in agreement with those shown on the Bills of Lading. I declare that I will accept all penalties which I may incur for offence against the Customs Law. I give my hand hereto.
Unquote.

In general, Consular Clearance has to be obtained at each port from the first at which cargo is loaded for Haiti. For this purpose, the Consul requires 6 copies of each of the following documents:
General Declaration.
Cargo Manifests or In Ballast.
Crew List.
List of Passengers or Negative.
Stores List.

The Consul returns 3 copies of the documents, which must go with the vessel, and 6 envelopes, i.e. 1 for each of the following Authorities:
General Customs Administration.
Director of Customs.
Department of Commerce.
Fiscal Department.
Finance Department.
Customs Collector.

The 6 envelopes are not always received, and at times only 2 copies of the visaed documents are given back. The Authorities apply a certain tolerance when it is established that the Consular Fees have been paid at the Consulate or at destination.

CAP HAITIEN: 19.46 N. 72.12 W. (See Plan)

APPROACHES: The current is about 3 knots in the entrance to the port when the river is in flood.
ANCHORAGE: Vessels which are unable to moor alongside because of deeper draft are anchored off the wharf.
BERTHING: The wharf at Cap Haitien was constructed by the Compania Industrial Maritima. The construction is in reinforced concrete. It extends for a length of 900 ft. in an Easterly direction and comprises 3 sections. The most important section is 600 ft. long and has berths for deep sea vessels on the South side in depths of 30 ft. The Western section, nearest the shore, is 300 ft. long with variable depths of 7 ft. to 9 ft. alongside, with berths for motor vessels of small tonnage and sailing ships. The central section accommodates the Customs offices. 2 metal warehouses border the East and West ends of the wharf. Between the warehouses is 1 fixed crane of 30 tons capacity.
FRESH WATER: Fresh water is available at Cap Haitien.
FUEL: Available, only in drums.
GENERAL: For all general information refer to "Port-au-Prince".
DEVELOPMENTS: Ro/Ro Berth length 100 m., under construction. Main pier length 250 m., under construction. Cruise ship pier length 170 m., to be constructed.

REPORT: December 1984.
Documents: See "Port-au-Prince".
Approaches: New lighthouse on Pte. Pinolet seen at 30 miles.
Pilotage: Pilots boarded in Lat. 19° 48.8' N., Long. 72° 10.9' W. Pilots board from small launch, approx. 5 m. long, with grey hull and yellow decking. The words "Pilote No. 1" painted in black on either side of white housing.

2 Pilots boarded – Senior Pilot/Port Captain: Eugene Magloire.
Restrictions: Channel very well marked – new beacons in positions as shown on "Plan". Least depth encountered in channel 10 m.
Radio: ETA telex sent via satellite to Agents. No radio station available.
VHF: Called Pilot Station on VHF Channel 16, 2 hours and 1 hour prior to arrival, but received no reply. Shortly before arrival at pilot boarding point, Pilot Station advised, on Channel 16, that pilot boat was coming out to our vessel.
Tugs: None. Small mooring boat takes heaving lines only ashore.
Berthing: Our vessel, 200 m. long, berthed at the Passenger Berth after swinging to starboard in the basin off the berth (depth 11 m.).

The berth is well fendered (Kleber fenders). Apart from main access to berth, there is also a footbridge for passengers.

Port has recently been reconstructed with modern berthing facilities, adequate mooring points, lighting, warehousing, open storage, etc.
Cargo Handling Equipment: Observed 1 conveyor, no cranes in evidence.
Regulations: Not permitted to take fruit ashore.
Authority: Autorite Portuaire National.

MIRAGOANE: 18.25 N. 73.04 W. (See Plan)

BERTHING: The facilities at Miragoane are 1 small jetty for loading and discharging general cargo with a max. depth alongside of 18 ft.

There is a wharf for loading bauxite, belonging to the Reynolds Company, with a depth alongside of 34 ft. Total annual export about 350,000 tons.
GENERAL: For all general information refer to "Port-au-Prince".

PORT-AU-PRINCE: 18.33 N. 72.21 W. (See Plan)

Also see "General" before first port.
DOCUMENTS:
Shipmasters Report: October 1982.
Clearance from Last Port.
6 Crew Lists.
3 Nil Passenger Lists.
3 Provisions/Stores Lists.
3 Crew Personnel Effects Lists.
2 Ports of Call Lists.
1 Vaccination/Inoculation List.
APPROACHES: The Port of Port-au-Prince is situated at the extreme S.E. of the bay. It can be approached from the North and from the South by 2 channels.

One may approach from the N.E. by the Saint-Marc channel or from the West by the Gonave channel, between Trou-Forban Point and the village of Ca-Ira. The bay extends between Trou-Forban Point in the North and the village of Ca-Ira about 20 miles to the South. The position of Ca-Ira is 18° 32' N., 72° 39' W. From Ca-Ira the South coast of the bay extends about 2 miles N.E. and about 12 miles East to Pointe Lamentin.
PILOTAGE: Pilotage is compulsory for all movements of ships in the port. The Pilot boards to the West of the Fairway Buoy and is accompanied by port officials, i.e. Port Doctor and Representatives of Immigration, Police and Customs. These officials insist on using the accommodation ladder to board the vessel. Masters must arrange with their respective Agents the time which they will require a Pilot to leave the port. If they are ready to depart before the hour arranged they may call the Pilot by 3 blasts of the ship's whistle.

Berthing from 0530 hrs. – 2100 hrs. except Sundays and holidays.

ANCHORAGE: Vessels must anchor to the West of the large red Buoy No. 29 or at the quarantine buoy, situated about 1.5 mile N.N.W. of Buoy No. 29. A bottom of sand over coral is to be found all over this region n depths of 10 to 18 fathoms.

Vessels may anchor or depart at any hour of the day or night.

In order to facilitate the rapid movement of vessels, these are normally nchored in order of arrival.

RADIO: All deep-sea vessels which enter the territorial waters of Haiti re obliged to advise the Port Radio Station.

The radio station is situated at the Bureau de Port. It is in operation 4 hours a day.

Visual light signalling may also be carried out as far as it is possible do this.

The following apparatus is used at the radio station:

1. VHF Radio – Channels 6, 12, 16 and 18.
2. Medium frequency, SSB compatible frequencies 2182 kHz, 2738 kHz. Power 150 watts, range about 250 miles.

In addition to the VHF Channels, the Pilots may use radio-telephone n the following frequencies: 2182 and 2738 kHz.

The general call and distress frequency 2182 kHz is monitored ontinuously.

All messages addressed to the Port Authorities and messages oncerning pilotage must be handled at this radio station.

Masters are particularly required to give the radio station, as soon as ey arrive, the following information:

Vessel's draft and net tonnage, amount of cargo for discharge by atch, number of gangs required.

The telephone number of the radio station is 2 – 3235.

48 hour ETA message to APN also to include details of the vessel, xpected time of departure, quantity and nature of cargo to be handled.

UGS: The port has at present a tug of 2,000 h.p. available at all times. he tug is compulsory for ships from 1,000 tons gross and upwards. At l times 2 aluminium launches, each 30 ft. long, are available for Pilot's se.

ERTHING: The new port facilities are in service, located 600 ft. North f and parallel to the existing pier.

Prime features of new facilities are:

Length of berthing space: 1,400 ft.
Width of apron 93 ft.
Container crane on rails on the apron with 30 tons capacity equipped to handle 20 ft., 35 ft. and 40 ft. containers.
Ro/Ro platform.
Depth alongside 32 ft. MLW.

inger Pier: Length 1,250 ft., width 60 ft. Ro/Ro platform on North side. n the South side there is 1,250 ft. of berthing space, depth 25 ft. – 0 ft. On the North side there is 540 ft. of berthing space, depth 32 ft.

At the outer end of the finger pier there is a dolphin berth for passenger essel. Length 888 ft., depth alongside 32 ft. Vessels may berth on both des.

There is an angular portion of 100 ft. between Quays No. 1 and 2 hich may not be used for mooring, but which the bow of the ship may verhang. Vessels must be secured by at least 2 mooring cables at the ow and at the stern.

The Port Authorities require for vessels manoeuvring in the port a inimum of 2 ft. of water under the keel. This regulation may be modified y special authorisation of the Chef de Port.

In addition to the public pier, there are 5 jetties belonging to private ompanies used for handling products in bulk. These jetties belong to e following companies:

A. La Hasco, sugar refinery established at Port-au-Prince.
B. La Minoterie, flour mill situated at Laffiteau.
C. Le Ciment d'Haiti SA, cement factory situated at Fonds Mombin.
D. Jean Ackmed, fuel installation situated at Simonette.

The above jetties are established on the North side of the bay.

E. Installations of Shell Company and Tropigas on the South side of the bay, equipped with their own mooring buoys for tankers.

ARGO HANDLING: For vessels loading and discharging at the public ier, cargo is transported on railway trucks of 25 tons max. capacity.

One quay is equipped for container ships. One quay is equipped to andle Roll-on/Roll-off traffic.

STEVEDORES: Loading and discharging of ships is carried out by gangs f private workers who are engaged by the ship's Agents under the upervision of a chief stevedore. The working gangs use the ship's own quipment for loading and discharge.

Handling rates are normally about 15 t.p.h. for general cargo, or about 25 t.p.h. for heavy articles, such as drums, planks, bundles of steel rods, etc.

Normal working hours in the port are from 0700 hrs. to 1900 hrs. from Monday through Saturday. Overtime is payable for work required at other than these hours and also for work required on Sundays and holidays.

MEDICAL: There are adequate medical facilities, pharmacies and hospitals.

FRESH WATER: Drinking water is available alongside; however, the ship must provide its own connections. Rate of loading varies from 6 t.p.h. to 12 t.p.h. 48 hours notice required.

FUEL: Fuel oil may be supplied by tanker truck.

CONSULS: Argentina, Brazil, Canada, Chile, China, Colombia, Dominican Republic, Ecuador, El Salvador, France, Germany, Honduras, Japan, Liberia, Mexico, Panama, Peru, Spain, U.K., U.S.A., Venezuela.

REPAIRS: There are no proper facilities for ship's repairs although minor repairs may be effected by small private workshops ashore.

AIRPORT: An international airport for jet planes connects Haiti with principle U.S. and Caribbean points. A local air service connects Port-au-Prince with principal towns of the Republic.

FIRE-FIGHTING EQUIPMENT: The Port Authority has a fire fighting squad equipped for early assistance. There is a town fire service organised by the Army and working in close cooperation with the Port.

HOLIDAYS: *Legal Holidays:*

Independence Day (1st and 2nd January); Labour Day (1st May); Flag Day (18th May); Ascension Day; Assumption (15th August); All Saints (1st November); Commemoration Day (13th November); Discovery of Haiti (5th December).

Authorised Holidays:

Lundi-Gras (half-day); Mardi-Gras; Good Thursday; Good Friday; Pan-American Day (14th April); President's Day (22nd June); Dessaline's Anniversary (17th October); United Nations Day (24th October); Fete des Morts (2nd November).

SERVICES: Fresh provisions are obtainable locally.

There are no facilities for refuse collection, but nevertheless it is forbidden to throw refuse, cinders or any other polluting material overboard.

Launches used for the transport of tourists are available at Port-au-Prince and these are operated by private companies. The Port Authority does not take an active part in the traffic of tourist passengers. Those who disembark on the wharf from cargo vessels or cruising liners must make their way on foot to the taxi station to take part in excursion tours. However, the majority of tourists coming on passenger liners anchored in the roads disembark by launches belonging to the Department of Tourism. They disembark at the Quai Colomb, which is under the authority of the Department of Tourism.

WEATHER: The Bay of Port-au-Prince is nearly always calm except at certain times of the year; for example, during the months from May to November, occasional strong winds may interrupt normal loading and discharging movements.

A light breeze from the East or N.E. blows after dawn, but in the afternoon a breeze 3 times stronger blows in the opposite direction.

The height of the tide is only 1.5 ft. Currents in the port are almost negligible, except that, when mooring or unmooring a vessel, one should pay attention to a Northerly current of about a quarter of a knot.

SHIPMASTER'S REPORT: June 1990.

Position: 18° 33.5' N., 72° 21' W.

Chart: B.A. Chart No. 466.

Documents:

6 Crew Lists.
1 Vaccination List.
3 Stores Lists.
3 Crew Effects Lists.

Six persons board on arrival alongside, and vessel was cleared within 15 minutes. Bonded store is not sealed; Radio Pratique not available; Only Derat Certificate is sighted.

Pilotage: 24 hour watch kept by Port Pilot Station and on Channel 16/12.

Pilot boarded at the Quarantine Anchorage at daybreak.

Pilot disembarks upon unberthing, just after vessel clears berth.

This vessel used 2 tugs, with ship's lines. Vessel berthed port side alongside at a good berth.

Anchorage: Good anchorage about 2.5 nautical miles W.N.W. of jetty.

Approaches: Only one starboard hand buoy exists.

Berth: Up to 36 ft. depth alongside. Berth can accommodate vessels up to 250 m. LOA.

Time: GMT minus 4 hours.

Flag: Blue horizontal stripe over red stripe ("Echo" can be used).

General: No passport or other documents required. I was informed by Agent that it is dangerous to be ashore after 2200 hrs. due to muggings.

No facility exists for any spares, repairs or provisions. Fuel oil available after ample notice through Agent; fresh fruit such as bananas and mangoes are available; fresh water not available. Medical services are poor.

This vessel discharged edible oil (about 3,000 tonnes) directly into tank trucks. The operation took about 48 hours, into a total of 115 trucks.

In the S.W. part of the Bay there is a Shell berth for small tankers and gas ships. Pilot advised us to use a minimum of lines for safe mooring, due to the possibility of lines being cut or stolen at night; our gangway was kept up except when in use, as a deterrent to unauthorised visitors.

AUTHORITY: Autorite Portuaire Nationale, Port de Port-au-Prince, B.P. 616, Port-au-Prince, Haiti.

Honduras

GENERAL

DOCUMENTS:

Consular Documents:

Masters shall submit for certification to the Honduran Consul or Consular Agent residing in the port of loading 4 copies of the general manifest of goods carried for the Honduran port to which it is bound. 3 copies are to be left with the Consul or Agent, and 1 copy, with the certification and receipt to be provided by the Honduran official, is to be retained. The Consul will retain 1 copy in his files, the other 2 shall be sent by the earliest mail to the Secretariat of the Treasury and the Customs Administrator.

Prior to arrival:

Arrival notice:

The Chief of Operations of the National Port Authority (ENP) must be notified in writing no more than 24 hours and no less than 8 hours in advance, of the time and date of the vessel's arrival. This notice is received on working days up to 1600 hrs., but for holidays, the request must be submitted the day before up to 1100 hrs.

The Captain of the Port, Customs, Migration and Maritime Health must be notified of the arrival within the same period indicated above.

Information on cargo for the port:

If available, the following documents must be submitted: 4 copies of the Cargo Manifest, a set of Bills of Lading, 3 copies of the Cargo List, 3 copies of the Container Contents List, and information on the cargo to be loaded. In addition, the following copies of the Cargo Index must be provided, according to the type of goods: 4 to 6 for Customs, 14 to 18 for the National Port Authority; 1 for each depot of the agency to take part, and 1 for general control.

The ENP also allows this information to be submitted after the official visit (boarding party).

Port services request:

The arrival notice submitted to the ENP also serves as a request for pilotage, docking and port services.

On arrival:

Type of Documents	*Number and Distribution of Documents*					
Basic Forms	*Port Captain*	*Customs*	*Migration*	*Maritime Health*	*Agriculture Inspection*	*Total*
General Declaration	1	1	–	–	1	3
Cargo Manifest	–	5	–	–	1	6
Crew List	–	3	1	–	1	5
Passenger List	1	2	1	–	1	5
Ship's Stores List	1	1	–	1	1	4
Crew Effects Declaration	–	–	–	–	–	–
Maritime Declaration of Health	–	–	–	1	–	1
Mail List	–	–	–	–	1	1(a)
Additional Documents						
Clearance from Last Port	1	–	–	–	–	1
Visaed Clearance from Last Port	–	1	–	–	–	1
"No Passengers" Declaration	1	2	1	–	1	5
List of Passengers In-Transit or "No In-Transit Passengers" Declaration	1	2	1	–	1	5
Cargo Manifest (b)	–	1	–	–	–	1
Crew List (b)	–	1	–	–	–	1
Passenger List (b)	–	1	–	–	–	1
Ship's Stores List (b)	–	1	–	–	–	1

(a) Submitted to the shipping Agent.

(b) With Consular visa.

Prior to departure:

Clearance must be requested from the Captain of the Port, on a special form at least 2 hours before the vessel's estimated time of departure. The form must be cleared by the Customs Chief of Exports and the Customs Administrator, therefore copies of the export cargo manifest must be submitted to Customs.

In the case of the terminals of Puerto Cortes, 30 copies of all documents are prepared, of which the vessel carries (aside from the original Sailing Permit and the Maritime Health Declaration) an original and 24 copies of the Cargo Manifest (or Ballast Manifest), the Crew List, Passenger List, the Mail and Firearms List, the Ship's Stores List, and 2 sets of the Bills of Lading.

In addition, when the ship sets sail, 3 Freighted Cargo Manifests, 2 sets of the Bills of Lading, a Crew List, a Passenger List, a Mail and Firearms List, and a Ship's Stores List must be submitted to the Chief of Docks. A copy of each of the following documents must be submitted to the Maritime Guard: Sailing Permit, Cargo Manifest, Crew List, Mail and Firearms List, and Ship's Stores List.

When the ship leaves for Guatemala, it should have 34 copies of all documents, because 4 copies are submitted to the Consul.

For ships leaving for the United States, the clearance document is in Spanish, with 6 copies to be distributed locally, plus 18 copies of the Cargo Manifest, in English, of which 16 are carried on board ship, 1 copy is sent to San Pedro Sula and the other remains in possession of the shipping agency.

Request for pilotage:

Requests for pilotage and unberthing of the vessel are submitted to the National Port Authority at least 2 hours before clearance.

Report: 1990.

Vessels are now expected to deliver 2 copies of their Register to the Port Captain at the time of Clearance Inwards at all Honduran ports.

Owners are recommended to ensure that Masters have same prepared at previous ports, to ensure that no delay is caused in Clearance Inwards.

AMAPALA: 13.18 N. 87.39 W.

PORT NO LONGER IN OPERATION.
COMMERCIAL OPERATIONS AT THIS PORT HAVE BEEN TRANSFERRED TO THE NEW PORT OF SAN LORENZO

LA CEIBA: 15.47 N. 86.47 W.

SHIPMASTER'S REPORT: 1979.

DOCUMENTS:

10 copies of Crew List
6 copies of Stores List
6 copies of Bonded Stores List
4 copies of Vaccination List
Mail Report
Passenger Report
1 copy of Derat Certificate.
Zarpe/Clearance from previous port.
14 copies Cargo Manifest/Ballast Manifest.
3 copies Bills of Lading.

If no Consul available, documents should be legalised by Consul of friendly nation or by Chamber of Commerce, stating the facts.

Also see "Puerto Castilla".

PILOTAGE: Compulsory. Pilot boards 0.5 miles from the pier. 2 hours notice required.

ANCHORAGE: Good anchorage 5 cables, 129° from pier, depth of water 40 ft.

RESTRICTIONS: Vessels able to berth and unberth at any stage of the tide day or night. Limiting factors are length and forward draft of vessel.

MAX. SIZE: Max. LOA 600 ft. However, the after end of the vessel would overhang end of berth (This vessel loaded to 23 ft. draft).

HEALTH: Quarantine Officials operate between 0600 hrs. and 1800 hrs. 2 hours notice of arrival required.

RADIO: HRW – Standard Fruit operate from their own radio station. They handle vessel's traffic on 6350.5, 8560 and 12750 kHz. They also listen on 500 kHz and 8 MHz.

Hours of Operation: 24 hours (Daily).

VHF: The Agent is on Channel 16.

TUGS: Not available. Vessel is able to dock and undock without assistance of tugs.

BERTHING: Berth available both sides of finger type pier, South side berth for side-door loading; North side for unrestricted operations. Nature of the bottom of the berth is sand.

Mooring gang (6 men) come aboard with the Pilot to assist. The bananas are loaded direct from the rail cars using spiral elevators. It is usual to load all decks at the same time.

There are no facilities for handling bulk cargoes or Ro/Ro vessels. There are no shore cranes or floating cranes. There is no storage space for breakbulk cargo or palletised cargo.

Fendering: Pier fendered with the usual Standard Fruit type fendering, vertical uprights on a horizontal "V" bellows on horizontal girders.

CHARTS: B.A. Chart No. 513 (Isla Roatan to Puerto Cortes) and U.S.G. 5393 (positions on this chart are 2.5 miles W.S.W. of B.A. chart).

CONSULS: None, however, American Consulate and those of other nations in Tegucigalpa, about 250 miles by road.

SURVEYORS: Lloyd's Agency in Puerto Cortes.

AIRPORT: International Airport "Goloson" with service daily to New Orleans and Miami, served by regular airlines.

SERVICES: Fresh water, fresh provisions, airport, telex, doctor, hospital, groceries and meats all available.

Labour: Shore labour is available for contract work such as scavenge cleaning, hull painting, etc. The work carried out during our stay was satisfactory and the rate for the foreman was U.S. $1.50 per hour and workmen U.S. $1.00 per hour.

AUTHORITY: Empresa Nacional Portuaria, Apartado Postal No. 215, La Ceiba, Honduras, Central America. *Tel:* 42-2712 (Superintendent), 43-0297, 43-0394, 43-0397. *Telex:* 8007 Enaporto Ho. *FAX:* 43-2712. *Cables:* Enportuaria. *Contact:* Raul Lafitte S., Port Superintendent.

PUERTO CASTILLA: 16.01 N. 86.03 W. (See Plan)

DOCUMENTS:

2 copies Health Declaration.
Zarpe or Clearance from Last Port.
14 copies General Cargo Manifest of all cargo to be discharged in Puerto Castilla or Ballast Manifest.
10 copies Crew List.
10 copies Passenger/Negative Passenger List.
Derat Certificate, only if first call.
10 copies Stores List.
10 copies Mail Declaration (negative or positive).
3 complete sets Bills of Lading.
5 copies Hatch List.
15 copies Tally Books (prepared generally by Agent).

New Honduras Consular Law provides that within 24 hours after a vessel sails from load port, Cargo Manifest (including Ballast), Passenger List, Crew List and Provisions List must be legalised, in Spanish language, by Honduras Consul, as well as Consular clearance obtained.

If no Consul of Honduras available within 50 miles radius of port, documents can be legalised by statement from local Chamber of Commerce, stating the facts.

PILOTAGE: Available.

ANCHORAGES: Once the vessel enters the bay, if no berth is available, she should anchor at a distance of between 0.5 mile – 1 mile from pier, and await boarding party in order to be granted Free Pratique. If proceeding direct alongside, Boarding Party will board when vessel berthed.

RESTRICTIONS: Vessels may enter the port day or night. Visit by authorities available during night time on request. Owing to remoteness of the port, Authorities have to be collected by Agent from villages within 10 miles radius of port.

MAX. SIZE: Vessels with draft up to 36 ft. can safely enter port and moor alongside pier.

HEALTH: Pratique granted after Port Authorities (including doctor) board vessel, between 0600 hrs. and 2000 hrs. Pratique granted if no contagious illnesses on board, otherwise quarantine restrictions imposed. No automatic Pratique when arriving from another Honduran port.

RADIO: Lantana Radio WOE, New Orleans Radio WNU, Limon Radio TIM, Balboa Radio NBA, Miami Radio WAX, messages routed via telegraph station Hondutel in nearby Trujillo, but not considered reliable.

Ship's radio not to be used in port except for communications with Port Authority. Vessel is fined if there is a violation.

VHF: Use Puerto Cortes Radio: Call Sign 'Cortes Radio', Channel 16, if Castilla Radio does not respond (Hours see "Puerto Cortes").

TUGS: None available.

BERTHING: The Agent and/or Port Authority to supply information as to berth, and time of docking. Departure should be effected when the despatch documents are on board and operations finished.

Pier: Made of concrete 150 m. long, width 38 m., depth 38 ft., used for all operations. Rubber/wooden fenders.

Directly adjacent to a paved area 300 m.×200 m.

Equipped with 2 open sided warehouses, each 3,000 sq.m.

Electric connections for 190 reefer containers.

CRANES: 1×20 ton (Port Authority) and 1×60 ton (Private) mobile cranes with tyres.

TANKERS: Pipeline for loading of African Palm Oil. A connection of 16 in. exterior diameter, 14 in. interior diameter, reducers available. Pumping rate 200 t.p.h.

Storage Capacity:

Product	*No. of Tanks*	*Total Capacity*
Diesel	2	240,000 barrels
Gasoline	2	100,000 barrels
Palm Oil	2	40,000 barrels
Bunkers	2	40,000 barrels
Water	1	300,000 barrels

DENSITY: 1028/1030.

FRESH WATER: Water available at wharf, and of good quality, rate approximately 15 t.p.h.

FUEL: Only Diesel and Bunker "C" fuel available, 24 hours' notice required.

CONSULS: None in port. American Consulate and others in Tegucigalpa, 320 miles by road.

REPAIRS: No facilities.

SURVEYORS: Lloyd's Agency available at Puerto Cortes.

GANGWAY/DECK WATCHMEN: Shore watchmen not usually required, and service left to the discretion of the Master.

HATCHES: On liners normally by crew with assistance of stevedores, otherwise according to C/P.

CERTIFICATES: On first call, Registered Tonnage Certificate (2 copies).

CUSTOMS ALLOWANCES: Free use on board and private consumption only.

REPATRIATION: Facilities available for effecting repatriation in La Ceiba, by air.

AIRPORT: International airport "Goloson" in La Ceiba, 90 miles from port. Local airport connecting with La Ceiba daily, except Sundays and holidays, located in Trujillo, across the bay.

TIME: GMT minus 6 hours throughout year.

HOLIDAYS: 1st January; 14th April; 1st May; Maundy Thursday; Good Friday; Saturday and Sunday of Easter; 15th September; 3rd, 12th, 21st October; 25th December. Cargo work can be arranged on those days, except Good Friday, 1st May, Independence Day and Christmas Day.

TELEPHONES: Available at the Port Authority building and Hondutel office at Trujillo, across the bay.

SHORE LEAVE: Permitted without restrictions.

IDENTIFICATION CARDS: Must be shown to gate watchmen, when crew members come back on board, and are supplied by Agents.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: U.S.$ 1.00 = 11.60 Lempirus (Lps.) (July 1996).

AUTHORITY: Empresa Nacional Portuaria (E.N.P.), Puerto Cortes, Honduras. *Tel:* Puerto Cortes: 55-0987, 55-1125. Puerto Castilla: (504) 444962. *Telex:* 8007 Enporto Ho. *Cables:* ENP, Puerto Cortes, Honduras. *FAX:* Puerto Cortes: 55-1402. Puerto Castilla: (504) 444962. *Contact:* Captain Victor Iglesias, Operations Manager.

AGENT: Maritima y Transportes, S.A., Carretera Vieja a La Lima, Km. 2, Apartado Postal No. 991, San Pedro Sula, Honduras. Tel: 53-4900, 53-1773. Telex: 5634 Marhond Ho. Fax: 53-3730. Cables: Matra, San Pedro Sula.

PUERTO CORTES: 15.51 N. 87.56 W. (See Plan)

DOCUMENTS:

Health Declaration, 2 copies.

Zarpe or Clearance Permit from the Last Port.

General Cargo Manifest (in ballast if that is the case) of all the cargo to be discharged in Puerto Cortes, 14 copies.

Crew List, 10 copies.

Passengers in Transit, or no passenger declaration, 10 copies.

Derat Certificate, only if first on board call.

Stores List, 8 copies.

Mail Sacks Declaration (negative or positive).

Bills of Lading, 3 complete sets.

Hatch List, 5 copies.

Tally Books, 15 copies.

If no consul of Honduras available, a letter from the Chamber of Commerce, stating the facts, is recommended.

Also see "Puerto Castilla".

APPROACHES: *Shipowner's Report:* 1983 (Updated 1992).

Tankers should make their arrival at a position near Lat. 15° 55' N. and Long. 87° 58' W., 4 miles North of Punta Caballos and well offshore of the shoal patches near the point. From this position true course 180° takes the ship into the bay in a minimum depth of 10.6 m. (35 ft.) West of the tanker dock and between 2 shallow patches of 8.1 m. (27 ft.) 700 yards and 450 yards W.S.W. of the tanker dock. There are 2 sets of daymarks and 2 buoys marking this approach.

Vessels may also enter the bay about 2 miles off the coast of Punta Omoa. Steer E.N.E. in the natural channel which has a minimum depth of 10.9 m. (36 ft.).

Caution: The above mentioned navigational aids are not all indicated on the charts, and are not reliable.

Work is in progress; buoyage and the shape of the coast may have changed. The West entrance will become the main deep water channel when dredging is complete and when leading lights, buoys, and beacons have been installed. An extensive reclaimed land area extends to the North from the mouth of the Rio Medina. The city wharves are being extended West.

The distance from the sea buoy to the Texaco Dock is about 4.5 miles. The city wharves are 0.5 miles further to the East. The Texaco refinery tanks, the water tank near Pier 4, the railroad shop, and the Coast Guard Pier are conspicuous in daytime.

PILOTAGE: Compulsory for vessels over 300 g.r.t. ETA to the Agent, 72, 48 and 24 hours ahead of arrival required. Pilot on VHF Channels 16 and 6.

ANCHORAGES: Once the ship enters the bay, *if no berth space has been notified to the Master,* she should anchor at a distance beyond 0.5 miles from the nearest pier, and wait for the boarding of the official party in order to be granted Free Pratique.

RESTRICTIONS: Vessels may enter the port day or night but are not visited by Port Authorities between 0000 hrs. to 0600 hrs., except in special cases.

MAX. SIZE: Dry cargo vessels up to 31 ft. draft. Tankers up to 30 ft. draft.

HEALTH: Pratique granted after Port Authorities (including doctor) board vessel, between 0600 hrs. – 2000 hrs. Pratique granted if no contagious illnesses aboard, otherwise quarantine restrictions imposed. No automatic Free Pratique when arriving from another port in Honduras.

All crew members to be vaccinated against yellow fever and cholera, if being repatriated. Vaccinations not available in Honduras.

RADIO: Port Authority operates a station HQSU, monitoring 2738 kHz, but by arrangement can reply on other frequencies. Telegrams to be routed via Hondutel, Lantana WOE, New Orleans WNU, Limon TIM, Balbao NBA and Miami WAX.

Ship's radio not to be used in port except for communication with the port authority. Vessel is fined if there is a violation. Also see "VHF".

VHF: Puerto Cortes Radio: Call sign "Cortes Radio". Channel 16.

Hours: 24 hours daily.

TUGS: 2×800 h.p. tugs available for joining up to 0.5 miles off piers. One tug usually employed for berthing and unberthing. Compulsory for vessels over 300 g.r.t.

BERTHING: The Agent to supply information as to berth, and time of docking. Pilot will board the vessel and berth it, assisted by a launch to pass ropes. Departure should be effected when the despatch documents are on board and operations finished.

Pier No. 1 (Texaco Pier), for tankers or ships loading diesel or lub-oil; max. draft 30 ft.

Pier 1-A (molasses and bulk liquids), max. depth 9.15 m. Rebuilt concrete T-Pier, in front of white and red painted tanks, between Texaco Pier and ex-Banana Pier No. 2.

Pier No. 2 out of service.

Pier No. 3 (General Cargo and Ro/Ro Pier) Length 630 ft., depth 30 ft.

Pier No. 4 (General Cargo and Ro/Ro Pier) Length 1,060 ft., depth 30 ft.

Pier No. 5 (Container Terminal, it also handles dry bulk cargo) length 1,060 ft., depth 31 ft.

CRANES: One P & H 125 ton capacity crane, 2 Paceco Container Cranes 45 ton capacity at No. 5 pier and eight cranes of varying capacities.

BULK CARGO FACILITIES: Pier No. 5 (Container Terminal) is used as a multi-function pier, it is used to handle grain, ores, fertilisers and bulk sugar. It is large enough to be able to handle both operations simultaneously.

STEVEDORES: Vessels must give accurate ETA at least 24 hours in advance to enable Agents order necessary gangs. Gangs ordered 0700 and 2100 hrs. working 12 hours (daytime) and 9 hours (night-time) excluding the meal hours (0600–0700; 1200–1300; 1700–1800 and 2300–2330). No work on Holy Friday, May 1st (Labour Day), on other holidays work is possible with double payment.

MEDICAL: No advance notice necessary for medical attention, except in very urgent cases. At San Pedro Sula (35 miles by road) very good medical service can be obtained but several medical clinics are serving this Port. No inoculations required but Master should possess International Health Cards for each member of crew.

TANKERS: *Terminal:* The Texaco Oil Refinery dock is in the S.E. corner of the peninsula. A pipe trestle/roadway of about 100 yards leads S.S.W. to the hose platform and breasting dolphins. The mooring dolphins are about 100 ft. inshore of the hose platform. The tidal range is 0.5 ft. The current in the manoeuvring area is unpredictable. Most of the time it runs parallel to the berth (110° and 290°). The breasting dolphins have been damaged several times, reportedly due to sudden changes in current.

Berthing: Tankers are moored and unmoored at anytime. The ship may be turned anywhere South of the refinery berth, then it proceeds to the dock heading either W.N.W. when mooring starboard side to, or E.S.E. when mooring port side to. The ship is stopped, stemming the current, about 100 ft. off the dock for a parallel mooring. A launch runs the head and stern ropes to the mooring dolphins. The spring ropes are either taken to the breasting dolphins by the launch or later by hand. Anchors should be ready. When mooring starboard side to, an anchor may be used to hold the ship against an inshore set. The 1,100 h.p. tug works forward alongside on his own rope. It shifts to amidships, if needed, to push the ship in or to hold her off. Sometimes the tug works the ship's rope on the hook. Pilot and tug use VHF radio (Channels 16 and 6).

Only 5 pile bollards are available for the ship's moorings, of which 3 are for the spring lines. The breast lines may have too much angle. It is recommended that segregated ballast tanks be used to keep the tanker low in the water. It is advisable not to remain alongside during strong Northers.

Facilities: There are no set emergency shutdown procedures. Each breasting dolphin is fendered by steel beams with wooden protection and 4 rubber shock absorbers. 2×8 in. hoses are used for crude oil discharge into an 18 in. pipeline about 1,500 ft. long to the 360,000 barrels storage tanks. The transfer rate is about 7,000 bbls.p.h. 1×8 in. hose is used for loading fuel oil via a 10 in. pipeline at a rate of about 3,000 bbls.p.h. Ballast and slop facilities are not available. 1 floating oil spill containment boom is kept in storage at the refinery.

Security: The port area and the Texaco Pier are fenced in and guarded; crewmen must have identification cards.

Services: No. 6 fuel is available at 3,000 bbls.p.h. and light diesel oil at 1,000 bbls.p.h. Fresh water is available at 10 t.p.h. Local machine shops can perform very minor repairs. Divers are available. Hospital, medical, and dental services are available at Puerto Cortes, or at San Pedro Sula.

Crew changes can be made. Small quantities of provisions are available.

Departure: Tankers leave the Texaco Pier and Molasses Pier at any time. Tug assistance is seldom necessary. Usually the tanker is unberthed either holding the spring ropes forward or aft to ease the vessel off the dolphins.

The Master should consult with the Pilot as to the sailing draft.

Also see "Shipmaster's Reports" – June 1981 and April 1989.

DENSITY: 1028/1030.

FRESH WATER: Water available at wharf face at 100 ft. intervals. Rate approximately 8 t.p.h. – 10 t.p.h.

FUEL: Diesel, Intermediate Fuel and Bunker "C" available, 24 hours' notice required for good service.

CONSULS: None in the port. American Consulate and others at Tegucigalpa, 200 miles by road.

REPAIRS: Local marine repair companies can undertake limited repairs of general nature; pre-advice recommended.

GANGWAY/DECK WATCHMEN: Shore watchmen not usually required and this service left to discretion of the Master.

OPENING/CLOSING HATCHES: On liners normally by crew with assistance of stevedores, otherwise according Charter Party.

CERTIFICATES: On first call, Registered Tonnage Certificate; thereafter not required unless gross/net tonnage be changed.

CUSTOMS ALLOWANCES: No restrictions, free use on board. Customs officials check no sales ashore.

SURVEYORS: Lloyd's Agency available locally.

REPATRIATION: All facilities available for effecting crew changes and repatriation by sea or air.

AIRPORT: International Airport Ramon Villeda Morales at San Pedro Sula served by regular airlines. 35 miles by road.

TIME: GMT minus 6 hours, no changes during year.

HOLIDAYS: January 1st; April 14th; May 1st; Thursday, Friday and Saturday in Easter week; August 15th; September 15th; October 3rd, 12th and 21st; and December 25th. Cargo work can be arranged on those days, except on Good Friday, and May 1st (Labour Day).

TELEPHONES: Connections to all countries of the world from Hondutel, located just outside main port gate, cable services also available.

SHORE LEAVE: Permitted without restrictions for most nationalities.

IDENTIFICATION CARDS: Identification card must be shown to gate watchman when crew members come back aboard.

GARBAGE DISPOSAL: No collection service available, but agents can arrange for private contractor to haul garbage to city dump.

WASTE OIL DISPOSAL: No waste oil service available. However, agent can arrange for disposal, if oil in 55 gallon drums or similar for hauling to oil-recycling plant.

SEAMAN'S CLUBS: No seaman's clubs available. However, agent can arrange for low cost tours of historical sites nearby, beaches, and football matches with prior notice. Postage facilities and international telephone service is available.

CURRENCY: Lempiras (LPS). U.S.$1.00 = LPS 11.60 (July 1996).

GENERAL: It appears that many of the stowaways discovered recently, are seafarers with a good knowledge of where to conceal themselves.

Local authorities are taking steps to restrict access to vessels by unauthorised persons, but Masters should take special precautions in this respect.

SHIPMASTER'S REPORT: September 1978 (Updated 1996).

Pilotage: Pilotage compulsory. Pilot boards 2–4 cables off the berth, advance notice of 72, 48, and 24 hours required.

Restrictions: Vessels can enter and leave at any stage of the tide day and night. Vessels are able to leave the berth in an emergency without use of Pilot if a tug available. Least depth of water in channel from sea to berth about 35 ft.

Max. Size: LOA 600 ft. Depth of water at banana berth is 33 ft. forward and 38 ft. aft. Max. draft 30 ft. There is a shoal patch about 150 ft. ahead of the berth.

Health: Authorities require 72, 48 and 24 hours notice of arrival.

Radio: Radio stations used when approaching the port were "WNU" and "TIM".

VHF: Port Authority, Pilot and Agent on Channel 16. Channel 14 also available.

Tugs: There are 2 tugs available, each 800 h.p.

Berthing: Banana Pier – Position 15° 50.05' N., 87° 57.35' W. Distance from berth to entrance 2 miles. The nature of bottom at the berth is coral, mud and sand. Prior to arrival it is an advantage to have all derricks up as various equipment has to be brought on board.

Always starboard side alongside, starboard side banana lids can be opened on all decks prior to arrival.

The banana elevators are extremely close to the quay side and usually moved to the East end of the berth for docking purposes, but as vessel is making fast they are moved into position. Leave starboard gangway turned in until alongside and elevators moved. It is a good idea to turn in overside light fittings and on no account have a starboard list. The bollards are situated on the edge of the quay. The quay is concrete with wooden face, only about 1.5 ft. above the water.

Four elevators used for loading. Work carried out around the clock, best hatch rate 48 t.p.h.

Ro-Ro facilities available, vessel moors with 2 anchors and stern to the quay. There are facilities for handling containers. Presently the container area is being expanded.

Currency: Lempiras. If cable sent in advance U.S. Dollars can be obtained.

Diversion: Agents request, if diverted to a Honduran port, a diversion cable must be sent to the Agents of that port giving time/date/nationality/port of departure/and ETA. (This helps Agents with the documentation).

Medical: Doctor and hospital available.

Tankers: The Texaco Pier accepts tankers with a draft of 30 ft.

Fresh Water: Available.

Fuel: Bunker fuel, diesel oil and lubrication oils available.

Density: 1025.

Repairs: Facilities available for small repairs.

Surveyors: Available.

Services: Fresh provisions, groceries, meats and laundry services available. Contract work such as deck and engine room cleaning and painting can be undertaken, however, prices of contractors should be compared.

SHIPMASTER'S REPORT: June 1981.

Berth: Texaco Refinery.

Arrival Draft: Forward 33 ft. 01 in., Aft 33 ft. 01 in.

Density: 1025.

Hoses: 1×6 in. and 2×8 in. clean products; 3×8 in. dirty products.

Pumping Distance: 4,000 ft.

No. of Berths: One.

Tidal Restrictions: None.

Bunker: Bunker "C" and diesel oil.

Bunkering Rate: 2,000 b.p.h.

Depths at LW: Bow, 33 ft.; stern, 40 ft. (by sounding).

Max. Size: LOA 700 ft., beam 90 ft., draft 33 ft.

Products Handled: Crude oil, fuel oil, diesel, kerosene.

Loading/Discharging Rate: 18,000 b.p.h.

Fresh Water: Limited supplies.

Ballast Facilities: None.

Distance from Sea to Berth: 2 miles.

Channel: Width 2,000 ft., minimum depth 35 ft.

Current: Variable/strong.

Docking/Undocking: Any time.

Tug: One required docking and undocking.

Depth Alongside: Minimum 37 ft.

Silting: Rapid.

Bottom: Sand.

Total Length of Dock: 250 ft. Condition: Good/moderate.

Chart: DMA 28000, 28160, 28162, 28163 or HON. 002 – 003.

SHIPMASTER'S REPORT: August 1981 (Updated 1992).

Entrance recommended via buoyed channel close to Punta Cabballos light which is normally unlit and has NO radio beacon. Pilot will board one mile North of channel if requested via VHF Channel 16. Large vessels are instructed by Port Authorities to anchor at least 0.75 miles from piers. One tug only is available – 900 h.p. approx.

Fresh water available at Banana Pier. Launch service available to vessels at anchor.

SHIPMASTER'S REPORT: April 1989.

Berth: Texaco Refinery.

Arrival Draft: Forward: 26 ft. 00 in. Aft: 30 ft. 00 in. (after taking Pilot's advice and discharging part of the ballast).

Density: 1025.

Cargo: Recon Crude Oil, discharge through 2 × 8 in. hoses. Max. discharge rate 15,000 bbls./hr. Distance to tank 500 m.

No. of Berths: One.

Tidal Restrictions: None.

Docking: Starboard side alongside. 3 head lines/stern lines, 2 springs fore and aft. 1 small tug assists docking/undocking any time (24 hours). Berth of wooden construction and in moderate condition.

Vessel Particulars: LOA: 684 ft. 08 in. Breadth: 105 ft. 08 in. Displacement: 63,578 tonnes.

Approach: Pilot boards 1.5 miles North of Punta Caballos, if requested to do so. Call Port Control on Channel 16, 2 hours prior to arrival. Pilot boards from tug. Pilot recommends that deep draft vessels visiting for first time do not enter bay without a pilot. N.E. Channel marker missing and Punta Caballos light destroyed.

Silting: Silting at Texaco Dock is serious. Vessel grounded during berthing. It appears that seaward end of dock has less than 25 ft. of water. Dredging carried out almost continuously so water depth variable. On this visit seaward end of dock was 25 ft., middle 29 ft. and aft 33 ft., bottom is sand.

Stores: Some fresh fruit, vegetables and fish available, also bonded stores.

SHIPMASTER'S REPORT: March 1994.

Documents:

- 1 copy Clearance from Last Port.
- 2 copies Maritime Declaration of Health.
- 2 copies Vaccination List.
- 10 copies Crew List. ***
- 10 copies Passenger List (if no passengers, statement thereof) ***
- 10 copies Ammunition List. ***
- 8 copies Stores List.
- 10 copies General Declaration. ***
- 14 copies Cargo Manifest. ***
- 3 copies Bill of Lading.

*** These documents, at least 5 copies (preferably in Spanish), to be stamped by the Honduras Consul in the previous port.

Approaches/Pilotage: Approaches to the port can be made from the North or West. In either case, there is adequate water for vessels drawing less than 9.00 m., but care should be taken as shoals of between 9.0 m. and 10.0 m. do exist within the vicinity. When approaching from the North on a course of 181° with the peninsula of Puerto Cortes dead ahead, an alteration of course to 221° was made direct to the Northern Pilot Station, with the peninsula 1.2 miles off. Indexing off the N.W. coast of the peninsula proved accurate. However, indexing off Punta Caballos whilst transitting the short channel on a course of 182° (final approaches to the berth), could not be relied upon due to the indefinite coastline. This is due to the constantly varying build-up/dispersal of silt on the very West of the peninsula, which in addition varies with seasonal changes (i.e. during Winter months (September – February), the peninsula is further covered by the sea, but in the Summer months (March – August), much of it dries out.).

The Beacons in the short approach channel cannot always be relied upon, and on this occasion, Beacon No. 4 was missing and Beacon No. 2 poorly lit. Beacons No. 1 and 3 were both well lit and appeared in position. However, it should be pointed out that all 4 Beacons are marked (PA).

The Pilot will board at the Northern Pilot Station (approximately 1.5 miles North of Punta Caballos), by prior request, but normally prefers to board at Southern Pilot Station, South of the short channel, basically just off the jetty. The short approach channel is about 1.0 miles long and about 360 m. wide. There is plenty of water within this channel, and least depth ever recorded during the channel transit was 13.0 m.

Restrictions: Vessels can berth anytime, day or night.

Berthing: Texaco Berth: Vessels always berth starboard side alongside. Moorings: 4 headlines and 2 springs fore and aft. Springs are usually first lines, by heaving line to the jetty. The 4 head/breast lines from the forecastle all go to the same dolphin, and tend to lead more as breast lines than headlines. A similar arrangement exists aft. All lines to dolphins are by mooring boat (with a heaving line). Only one mooring boat is available for both ends, and boat prefers to take all 4 lines together. However, this is not often possible due to lack of manpower on board. A tug of 1,200 h.p. assists during berthing, but does not normally make fast, and generally just pushes along the port side where required.

Depth alongside the berth varies, especially at West end (i.e. forward with the vessel starboard side to). This is due to the build-up of silt on the end of the peninsula, as described earlier, and is the reason why vessels always berth starboard side to (i.e. bow in the most unpredictable and shallowest water, and the more vulnerable stern in the deeper water at the East end of the berth). Due to the problem of silt build-up, a dredger is permanently on station close to the berth.

In view of what has been mentioned above with regard to the build-up of silt, the maximum permitted draft alongside the berth appears to vary, especially from season to season. Ships have been known to berth here with drafts of up to 32 ft. (9.7 m.). On this occasion, our Voyage Orders were for a maximum safe arrival draft of 29 ft. (8.84 m.), and the depths that we recorded alongside the berth were forward 31 ft. 06 in., aft 36 ft. 00 in. I personally would suggest that a draft restriction of 30 ft. must be considered the absolute safe maximum, and recommend that vessels arrive 2 ft. – 3 ft. trimmed by the stern, rather than even-keel.

Cargo Handling Facilities: The Texaco Berth is an old wooden "T" jetty, but reasonably well fendered.

Cargo discharge is via flexible hoses, as follows:

Gas oil	1×8 in. hose
Mogas (all grades)	1×8 in. hose
Jet	1×6 in. hose.

Maximum back pressure ashore is 100 p.s.i. per line/grade.

The shore tanks are only about 0.5 miles away, and overall average discharge rates are approximately as follows:

Gas oil	1,150 cu.m./hr.
Mogas (all grades)	350 cu.m./hr.
Jet	230 cu.m./hr.

With concurrent discharge of grades as described above, a total cargo of about 19,500 tonnes should be completed in about 24 – 26 hours, depending on quantities of grades, of which the Mogas grades are usually the predominant factor.

General: Shore leave is permitted with passes provided by the Agents. A good security watch should be kept with particular regard to "visitors", who inspite of security guards at the gate do sometimes attempt to board vessels. A letter is issued from the Port Authorities upon arrival, stating that unaccompanied females are not allowed on the vessel whilst alongside, and if such an infringement is detected, the ship will be fined.

Shore labour for cleaning/painting work is available at a very low cost. Quotes were submitted for U.S.$2.00 per man/hour with a total of 8 – 10 men being available, plus U.S.$2.50 per hour for the Foreman. Due to short notice, this offer was not taken-up, so the quality/quantity of work was not evaluated, but suggest this should perhaps be considered in the future, as it may prove cost-effective.

AUTHORITY: Empresa Nacional Portuaria, P.O.Box 18, Puerto Cortes, Honduras C.A. *Tel:* (504) 550908. *Telex:* (374) 1157 Enaporto Ho. *FAX:* (504) 551402. *Cables:* Enportuaria. *Contact:* Elezar V. Quiroz, Assistant General Manager.

AGENT: Maritima y Transportes S.A., Apartado 991, San Pedro Sula, Honduras. Tel: (504) 534900. Telex: (374) 5634 Marhond. Fax: (504) 533730. Cables: Matra San Pedro Sula.

SAN LORENZO (Henecan): 13.24 N. 87.22 W. (See Plan)

LOCATION: On the mainland of the Pacific Coast of Honduras near to lthe city of San Lorenzo, Valle.

PORT LIMITS: *Port Jurisdiction:* Lat. 13° 21' 51" N., Long. 87° 26' 15" W. Lat. 13° 24' 51" N., Long. 87° 25' 13" W.

Laytime: In the opinion of the Agent, laytime will commence when vessel received by Port Authorities and Pratique granted. Vessel will be received when docked or at anchorage in the port (but not at Pilot Station).

DOCUMENTS: List of documents requested on arrival of vessels at the Port of San Lorenzo (all documents must be written in Spanish and without these documents serious delay of starting operations on board vessel are foreseen).

	Port Doctor	Port Captain	Port Authorities	Customs	Food Inspector	Immigration	Agency	Agency by Mail
1. Sanitary Declarations	1	—	—	—	—	—	—	—
2. Vaccination List	1	—	—	—	—	—	—	—
3. Clearance Last Port	—	1	—	—	—	—	—	—
4. Voyage Memorandum	—	1	—	1	1	—	2	—
5. Crew List	—	1 Leg.*	—	2 Leg.*	—	1	1	—
6. Store List	—	1 Leg.*	—	2 Leg.*	1	—	1	—
7. Passenger List	—	1 Leg.*	—	2 Leg.*	—	1	1	—
8. Transit Passenger List	—	1 Leg.*	—	2 Leg.*	—	1	1	—
9. Cargo Manifest	—	1 Leg.*	—	1 Leg.* 4 copies	1	—	10	2
10. Freight Manifest	—	—	2	—	—	—	2	—
11. Tally Books	—	—	15	5	—	—	10 on board	—
12. Mail List	—	—	—	2	—	—	2	—
13. Copies B/L	—	—	—	—	—	—	2	2
14. Stowage Plan	—	—	—	1	—	—	2	2
Hatch Lists	—	—	—	—	—	—	1	—
Ballast Manifest	—	1 Leg.*	—	2 Leg.*	—	—	1	—

Documents 1/2/3/4 – only from last port.

Documents 5/6/7/8/9/10/11/12/13/14 – from all ports where cargo has been loaded.

If the vessel will arrive without cargo for the port of Amapala/San Lorenzo documents as stated Ballast and Manifest (Manifiesto on Lastre) from the last port only before arrival are requested.

Leg.*=Legalised by Honduras Consul – or by consul of a friendly nation.

If there is no consul of any friendly nation, by Port Captain, BUT in this case one copy of each manifest should be sent to: Secretaria de Economia y Hacienda, Tegucigalpa, D.C. Honduras CA and to Administracion de Aduanas, Amapala, Honduras C.A. by airmail and certified.

Also see "Puerto Castilla".

PILOTAGE: Compulsory. Distance from sea buoy to berth – 16 nautical miles.

Pilot station for San Lorenzo is at last buoys painted black/white in position: Lat. 13° 12' 03" N., Long. 87° 35' 15" W. Pilot will board the vessel about 1.0 miles – 1.5 miles South of the Sea Buoy, after coming down the Bay from San Lorenzo for about 2 hours' cruise by pilot boat.

Pilot recommends the best arrival time at Sea Buoy to be 3 hours prior to HW.

Two hours before arrival Pilot Station vessel must call Agent's office at San Lorenzo via VHF Channel 10 in order to send Pilot.

Pilot boat has white and green upper works, black hull with the word "San Lorenzo" on poop. Pilot boat on VHF Channel 16.

Shipmaster's Report: March and May 1992.

Pilot boat was a small open boat with outboard motor. When sailing, the vessel may be requested to carry the boat out to the Sea Buoy.

ANCHORAGE: Buoy in position: Lat. 13° 12' 03" N., Long. 87° 35' 15" W.

RESTRICTIONS: All incoming vessels must wait at the Sea Buoy located at the entrance of the access channel, where vessels will be boarded by the Pilot.

The access channel to the Port of San Lorenzo is being provided with light buoys however, vessels may only berth/unberth during daylight hours. This is due to the tide variation and the prevailing fog in the channel at night. The seaward buoy is the Pilot Station. Depth of access channel at LW is 30 ft., width 122 m., and length 30 km.

MAX. SIZE: Depth alongside 32 ft. at LW. Vessels with draft 23 ft. may enter/sail at any time and vessels with draft 30 ft. – 31 ft. at HW.

HEALTH: If no disease on board reported by Master, no special procedure necessary.

The local authorities require all Crew members of vessels visiting Honduras to have valid vaccination certificates against yellow fever and cholera. Such vaccinations are not available in Honduras and Crew members should be vaccinated at a convenient port prior to calling at Honduras.

RADIO: No radio station at San Lorenzo.

VHF: A continuous watch is maintained in office hours on Channel 16, after hours and on holidays, the watch is intermittent.

All calling should be on Channel 16. Tug works on Channel 12. Intership working is on Channel 6. Agents on Channel 10.

TUGS: One tug available. Tug normally joins the ship about half mile from the berth. Use of tug compulsory.

BERTHING: "T" shaped pier with 4 berthing places.

Berth No. 1: 157 m. long. Depth alongside 10.67 m.
Berth No. 2: 139 m. long. Depth alongside 10.67 m.
Berth No. 3: 116.43 m. long. Depth alongside 6.70 m. (Inner).
Berth No. 4: 134 m. long. Depth alongside 6.70 m. (Inner).

Equipment: 1×30 ton portainer. 2 cranes capacity 30 tons and 25 tons. One additional 140 tonnes crane is planned. 6 forklifts, 3×6,000 lbs.; 1×15,000 lbs. and 2×8,000 lbs. 4 yard trucks.

Facilities: General Cargo Warehouse: 2,408 sq.m.; Lumber Shed: 1,204 sq.m.; Piling Sugar Warehouse: 3,072 sq.m. (10 tons capacity); Open Side Warehouse, for cotton: 1,806 sq.m.; 2 molasses tanks, capacity 1 million gallons; open storage 32,913 sq.m.

STEVEDORES: Arranged by Agents, working around the clock with breaks for meals.

Shifts: 0700 – 1200, 1300 – 1700, 1800 – 2300 and 2400 – 0600 hrs.

Cargo Handling Rates:

Resin:	15 tonnes per gang/hour.
Coffee:	30 tonnes per gang/hour.
Lumber:	20 tonnes per gang/hour.
Timber:	25 tonnes per gang/hour.
Cotton:	15/20 tonnes per gang/hour (100 bales).
Molasses:	145 tonnes per hour.
Sugar:	50 tonnes per gang/hour (2 gangs).
Meat:	10 tonnes per gang/hour.
Cars:	15/20 per hour.
General cargo:	8/10 tonnes per gang/hour.
Cement:	30 tonnes per gang/hour (in bags).
Wire/iron bars:	40 tonnes per gang/hour.

MEDICAL: Nearest hospital in Choluteca City, 30 minutes by car. Minor cases can be attended by doctor at San Lorenzo.

TANKERS: Tanker connections between Berths No. 1 and No. 2 (See "Plan").

FRESH WATER: Good quality potable water available in unlimited quantities.

FUEL: Only if required, and if sufficient notice given to the Ship's Agency.

CONSULS: Consulates exist for the following countries:

Nicaragua, El Salvador in Choluteca City, 30 minutes by car from San Lorenzo.

Consulates for other countries in Tegucigalpa, the capital, (90 km.) 2 hours by car from San Lorenzo.

REPAIRS: Not available.

DRY DOCKS: None available.

SURVEYORS: Not locally available but can be called through Agency. Lloyd's Sub-Agency San Lorenzo, c/o Servicios Portuarios SA, San Lorenzo, Honduras, C.A.

GANGWAY/DECK WATCHMEN: Not recommended and not necessary.

HATCHES: By stevedores.

CUSTOMS ALLOWANCES: Tobacco/Wine; spirits are not allowed to be held out of bond.

REPATRIATION: Immigration Offices in town and in Tegucigalpa. Flights leave daily from Tegucigalpa. (90 km. from San Lorenzo).

AIRPORT: In Tegucigalpa, 90 km., 2 hours by car. Connections to Miami/New Orleans/Houston/Panama/Mexico and all Central American countries.

HOLIDAYS: January 1st, April 14th, May 1st, August 10th, September 15th, October 3rd, 12th and 21st, December 25th and Thursday, Friday and Saturday of the Easter week.

Work can be arranged excepting May 1st, September 15th and Holy Friday during Easter week.

TIME: GMT minus 6 hours, no alteration during year.

EMERGENCY CO-ORDINATION CENTRE: Firstly Port Superintendent must be called using VHF Channel 16. Also Honduran Coast Guard can be called on the same Channel.

TELEPHONES: None.

BANKS: At Tegucigalpa: Bank of America, Bank of London & Montreal, Banco Atlantida and Banco Ahorro Hondureno.

STORING: See "Prelims".

1. Vessels are stored by truck.
2. Trucks can proceed alongside the berth.
3/4. Fork lift trucks can be used on the jetty to handle stores. Truck must be hired.
5. There is no Custom Regulation in force regarding storing.
6. Local riggers can be employed to assist with storing.

SHORE LEAVE: Allowed. Restrictions placed on crew from some countries. Crew members to shore passes.

GENERAL:
Chart: Honduras Chart No. 004.
Tidal Variation: 2.5 m. – 4.0 m.
Prevailing Winds: From South and East.
Flags: Flags required:

1. The country's flag where the ship is registered.
2. The Honduran flag.
3. The yellow (Quarantine) flag (if necessary).
4. The red flag (if necessary).

SHIPMASTER'S REPORT: May 1994.
Cargo: Loading molasses.
Charts: B.A. Charts No. 1049 and 1960.
Sailing Directions: NP 8, 1975 + NP 8S 10-92, 4.31 ET SEQ.
Standard Time: GMT minus 5 hours. This is in force from early May 1994 under new law. Information published in Admiralty List of Radio Signals and Nautical Almanac is now incorrect.

Approaches: No problems on approach to Gulf of Fonseca. Pilot was contacted at about 25 miles. At this time, he was in his boat and awaiting our arrival, but due to the change in Standard Time kept in Honduras, which had been changed from GMT minus 6 hours to minus 5 hours, we were working on a different time to him, and therefore he had a long and uncomfortable wait for us.

Pilotage: Pilot boards about 1 mile South of Sea Buoy. His boat is a light open boat powered by an outboard motor. This also functions as a mooring boat for running the first lines at the berth.

There is also a heavier steel motor boat with black hull and green superstructure, which was used when we departed.

Buoys cannot be relied upon as charted. Sea Buoy and Buoys No. 1 and No. 2 appear to be in position, but after that, the sequence and position of buoys becomes erratic. On the way in, the following buoys were not seen: No. 7, 8, 9, 14, 15, 16, 17 and 21. The following were out of position as charted: No. 3, 4, 13, 18, 19, 20, 22, 23, 25, 29, 30 and 33. Buoy shapes seem arbitrary, but the colours, although faded, are correct. Although some are fitted with lights and solar panels, they do not appear to be working. Certainly the one buoy visible from the berth was unlit.

Off the beach at Raton, here are 2 large white mooring buoys apparently laid by the U.S.Navy, and there are 4 more similar buoys laid to the North of the Pier, just before the bend in the river. At first, the Pilot appeared confused, and I was concerned about his ability, but perhaps two or three hours waiting for us was a little trying, and once the bridge team began to understand his English, he proved very competent. The echo sounder showed adequate water on a rising tide and a draft of 25 ft. 03 in. with the worst patch in the vicinity of Buoys No. 3/4 (where they should be) and Buoys No. 5/6. Pilot reckons, maximum draft would be 30 ft. to 31 ft. at high tide. As we were entering on the flood, we used the starboard anchor to swing off the berth, stemming the current just North of the North end of the wharf. Current was then used to ease the ship alongside the South outer berth. The manoeuvre was well judged.

There are no tugs at present. There is supposed to be one, but it is not operational.

Departure was on a rising tide, with a maximum draft of 29 ft.03 in. There was 1.0 m – 1.5 m. under vessel from the berth to the bend off Estr. de la Conchelitas, after which depths were 6.0 m. – 8.0 m. under vessel. There was plenty of water until the position of Buoy No. 19 on the chart, where a stretch of shallow water, 1.0 m. under-keel, extended to the bend off Estr. de la Jagua. The final shallow stretch extended from the position of Buoy No. 13 on the chart until Buoys No. 1 and No. 2.

Berth: Clean, open deck with a road to the shore. Dimensions as in the "Guide". Well fendered and a good number of bollards were available. Fresh water is available from metered supply points, and supply is no problem. Molasses connection of 8 in. is on South outer berth.

There are connections for imported petroleum products at the centre point of the outer side. There is another connection on the North outer berth which looks similar to the molasses connection on the South berth. Although the berth is provided with lights on tall poles, they are not used because of the shortage of power, and at night there are very few shore lights visible.

There appears to be less water alongside than advised. At low water we touched bottom (soft mud) when drawing 29 ft.03 in.

Documents/Officials: Documents prepared using information in the "Guide", and this was by and large correct, but with the usual request for three more copies.

No problems with presenting forms in English. Last port was Manzanillo (Mexico), so Clearance was in Spanish with Crew Lists endorsed by Mexican Immigration Authorities.

Bond was not sealed.

Prior to arrival, Agents advised that, due to periodic power cuts, communications with them could be uncertain, and their only solution was to request us to try again later.

Agents were efficient. Two representatives remained on board throughout the loading. One took care of Agency work and the other was the cargo surveyor.

AUTHORITY: Empresa Nacional Portuaria (E.N.P.), P.O.Box 32, San Lorenzo, Valle, Honduras. *Tel:* 81-21-12, 81-21-45. *Telex:* 504-4005 Enaporto Ho. *FAX:* 81-21-27. *Contact:* Miguel Estrada, Port Superintendent.

TELA: 15.47 N. 87.27 W. (See Plan)

DOCUMENTS:

1 original Clearance
1 original Health Certificate.
1 original and 12 copies Manifest.
1 original and 11 copies Cargo Book.
1 original and 8 copies Stores List.
1 original and 8 copies Crew List.
1 original and 8 copies Passenger List.
1 original Baggage.
1 original Voyage Memorandum.

All documents must be in Spanish; Cargo Book should be in alphabetical order.

Certificates: Health and Derat certificates needed.

Also see "Puerto Castilla".

PILOTAGE: Permanent Pilot available and compulsory. There is a small boat that assists docking by handling mooring lines from vessel to wharf. 48 hours advance notice of ETA required.

ANCHORAGES: 1 mile out, North from wharf, 57.5 ft. or more; no boundaries.

MAX. SIZE: Max. permissible length 580 ft., breadth no restrictions, draft 10.3 m.

HEALTH: Agents arrange Pratique; in case of disease or fever aboard, the vessel will be placed in quarantine for a minimum of 5 days.

Valid Vaccination Certificates against yellow fever and cholera required. These vaccinations are not available in Honduras.

VHF: Port Authority on Channel 16.

TUGS: Available on request.

BERTHING: Berthing possible throughout 24 hours..

General Cargo Berth: East side of pier, starboard side alongside.

Banana Berth: West side of pier, port or starboard side alongside, depending on which side elevator space is required (See "Shipmaster's Report" – 1979). 4 elevators available, type camel back. Rate per elevator 3,500 boxes per hour.

Depths: West side: 8.0 m. – 9.9 m. East side: 8.6 m. – 10.3 m.

STEVEDORES: ETA advice should be given 48 hours prior to arrival in order to arrange gangs. Labour rates are subject to surcharge of 25%, 50%, 75% and 100% to cover overtime, depending on hour or day worked.

Gangs: For bananas: 180 men, 3 gangs. General cargo: No restrictions.

MEDICAL: Hospital facilities available.

TANKERS: Discharging lines only, spray oil 6 in. Berth available for 1 tanker on East side. Max. draft 30 ft. Storage for bunkers and LPG available.

DENSITY: Average density in port is 1029.

FRESH WATER: Delivered by hoses at rate of 100 gallons per minute.

FUEL: Available from Texaco Refinery, and by barge.

FIRE PRECAUTIONS: Extinguishers and water hoses available.

CONSULS: None.

REPAIRS: Only minor repairs.

GANGWAY/DECK WATCHMEN: Watchmen can be obtained at daytime rates plus 25%, 50%, 75% and 100% to cover overtime, depending on the hour or day worked.

OPENING/CLOSING HATCHES: Work done by stevedores.

CUSTOMS ALLOWANCES: 1 carton cigarettes and 1 bottle wine or spirits for each man.

CARGO GEAR: Must have current valid certificate for ship's gear.

REPATRIATION: Repatriation can be made on request by Master.

AIRPORT: Distance from wharf to airport is about 80 km. served by regular airlines.

TIME: GMT minus 6 hours.

HOLIDAYS: January 1st, work possible; April 14th, work possible; May 1st, not possible; September 15th, work possible; October 3rd, work possible; October 12th, work possible; October 21st, work possible; December 25th, work possible. Thursday, Friday and Saturday of Holy Week – work possible except Friday.

POLICE/AMBULANCE/FIRE: Contact telephone operator.

TELEPHONES: No facilities for placing telephones on board. There is a telephone in stevedores office on pier.

SERVICES: Ship chandler and launch service available.

SHORE LEAVE: Crew members allowed ashore, providing they do not have any diseases.

IDENTIFICATION CARDS: Required (supplied on arrival).

DELAYS: Delays can be expected any time there are 2 ships docked.

GENERAL: Ships must have Honduran flag on board.

SHIPMASTER'S REPORT: February 1979 (Updated 1992).

Contrary to the previous information on this Port, "Vessel" berthed starboard side alongside.

Pilots: Available on request.

Berthing: Used port anchor, head out. The mooring boat meets vessel at the end of the jetty. It is a white painted boat with a small cabin. Very helpful in assisting with the lines, going from forward to aft as required. It is of great advantage to have a mooring rope on the fore deck starboard side, ready to lead forward as due to the Northerly wind and swell, vessel soon drops astern.

The beach shelves fairly fast, and with a ship of this length (575 ft.) a good guide is not to let the bow pass the end of the jetty. A depth of 24 ft. was recorded when sounding round when alongside, only 30 ft. astern of the ship.

The jetty itself has a sprung centre of about 350 ft. long with rubber tyres along same, unfortunately secured by chains which ruins the overside paintwork when the ship surges in the swell.

Additional moorings: The Tela Rail Co. is at present renewing the coir springs on the berth. The shore labour assisted at all times with the moorings as the ship was loaded, also when shifting ship at midnight.

Cargo Gear: The shore side derricks have to be "Doubled up". The existing runners doubled back and shackled to the preventer lug and a snatch block used. It is one straight lift and pulled on board by the single runner on the off-side derrick. The "Hallen" was used at No. 4 hatch but the preference was to use "Double Gear" at No. 3. The "Lift aboard" elevators are 3.7 tonnes, but at the jetty end they run on a steel roller, which is placed on a large steel plate.

Loading: Vessel loaded all hatches, No. 5 being through the side doors and later when No. 1 had finished vessel shifted ahead to give more depth of water aft. Due to a labour shortage we only loaded any three hatches at one time.

Cargo is brought onto the pier by train with several small shunts a shift, very little time lost during shunts.

Fresh Water: Available at slightly differing pressures, rate varies between 5 and 7 tonnes per hour.

Labour: All key personnel speak very good English and are extremely helpful. It is not necessary to keep crew on "Captive Time" for shifting ship during the night, Foreman and labour are only too pleased to assist.

SHIPMASTER'S REPORT: August 1981.

Engines should be kept at immediate notice while alongside, especially from December till May as swell may increase with little warning.

Shore labour for deck/engine room cleaning and painting are readily available.

Two mooring buoys shown on U.S. and B.A. charts to West of piers DO NOT EXIST.

AUTHORITY: Empresa Nacional Portuaria, P.O.Box 38, Tela, Honduras. *Tel:* 48-2024, 48-2187. *FAX:* 48-2187.

Contact: Rosendo Garay, Port Superintendent.

Operator: Tela Railroad Company, Exportation Department, Tela, Honduras. *Tel:* (504) 48-2108. *Telex:* 448706 TrrexPth Ho.

Contact: G.Delgado, Port Superintendent.

Head Office: Apartado Postal No. 30, San Pedro Sula, Cortes, Honduras, C.A. *FAX:* 482441.

NOTES

Please also advise Shipping Guides Ltd.

Hong Kong

HONG KONG: 22.18 N. 114.10 E. (See Plan)

Hong Kong will return to Chinese sovereignty with effect from 1st July 1997.

HARBOUR LIMITS: (Approximately): Western Entrance – the N.S. line between S.E. extremity of Tsing Yi Island and the flashing light at S.W. corner of Green Island. Eastern Entrance – the N.E./S.W. line between the on-shore Fl. W. and the Fl. R. lights either side of the Lei Yue Mun Pass.

DOCUMENTS:

Pre-Arrival Immigration Clearance Facility: Marine Department Notice No. 99A of 1993, issued 5th July 1993:

1. The attention of Owners, Operators, Agents and Masters of vessels is invited to the availability, since 1st September 1992, of Pre-Arrival Immigration Clearance facility for vessels intending to call at Hong Kong. Under the scheme, all vessels other than North Korean vessels and vessels carrying any North Korean crew, are eligible to apply, provided they meet the normal Immigration requirements. Each application is, however, considered on its own merit.
2. Under existing procedures, supernumerary crew, i.e. those not actually employed in the working or service of the ship, are treated as passengers, and if they are visa nationals, they require their travel documents and visas to enter Hong Kong. Vessels carrying supernumerary crew without proper documentation will be precluded from PAC facilities. However, consideration may be given to the issue of visas to them upon the ship's arrival in Hong Kong, provided details are given 48 hours in advance.
3. Applications should be made on Form ID325, with supporting documents specified in Para. 4 below, to the Chief Immigration Officer, Harbour Control Section, 2nd Floor, Central Government Pier, Road D3, New Central Reclamation Area, Central, Hong Kong, at least 48 hours before the estimated time of arrival of a vessel. The Form ID325, "Application for Immigration Pre-Arrival Clearance for Vessels", may be obtained from the Harbour Control Office.
4. Supporting documents consist of:
   (i) Three copies of the Crew List,
   (ii) Two copies of the Passenger List, and
   (iii) A cable from the Master requesting Pre-Arrival Immigration Clearance certifying that all travel documents of crew and passengers are valid for their intended period of stay in Hong Kong. The cable should be sent after the vessel has left its previous port of call, and may be submitted separately (after the original application) to the Harbour Control Section not less than 24 hours before the ship's arrival in Hong Kong.
5. All vessels are encouraged to use this Pre-Arrival facility as it is intended to improve the port efficiency and turn around time of vessels.
6. Further information may be obtained by writing to the Chief Immigration Officer at the address given in Para. 3 above, or by telephoning the Harbour Control Office at No. 25347121.

Signed: Director of Marine (Ag.), Marine Department, Hong Kong.

Marine Department (Arrival):

Marine Department Shipping Report (Form MO. 618).

Certificate of Registry and/or Tonnage Certificate.

Certificate of Fitness (all vessels carrying chemicals in bulk if applicable).

Passenger ship: Safety Certificate.

Passenger or cargo ship: Load Line Certificate.

Cargo ship: Radio Certificate.

Cargo ship: Safety Equipment Certificate.

Cargo ship: Safety Construction Certificate.

Ship's Articles of Agreement with the crew (if the ship is British, or is a foreign ship belonging to a nation not represented by a Consul in Hong Kong).

1 copy Minimum Safe Manning Certificate.

Derat Certificate or Derat Exemption Certificate.

1 copy of the ship's Passenger List (if specifically requested).

Clearance Certificate from the Last Port.

1 copy of the Import Cargo Manifest (if specifically requested).

1 copy of the Dangerous Goods Manifest (if applicable) and a declaration that dangerous goods are being carried in accordance with the IMDG Code.

4 copies of the Radioactive Substance Manifest (if applicable) and a declaration that any Class 7 substances are being carried in accordance with the IMDG Code.

Compulsory Insurance Certificate (if carrying more than 2,000 tons of persistent oil in bulk as cargo).

Note: The ship's Articles of Agreement to be submitted to the Mercantile Marine Office, all others must be submitted to the Port Formalities Office of Marine Department within 24 hours of a ship's arrival with the exception of the Dangerous Goods Manifests (2) which should be submitted at least 48 hours prior to the vessel's arrival.

For regular port callers employing Agents with established credibility, all the above requirements are waived providing:

(a) The original certificates have been sighted once.
(b) Validity of certificates is maintained.
(c) Marine Department Shipping Report (Form MO618) is submitted by fax on vessel's arrival.
(d) Dangerous goods requirements are being complied with.

In addition to the above, certain types of vessels are required to give notification to the Director of Marine prior to arrival as follows:

(i) The Master of every vessel over 300 g.r.t., address to 'MARDEP' using:
   (a) W/T communications via Hong Kong Radio (VPS); or
   (b) Telex: 63607 Mdvts HX; or
   (c) VHF R/T on Channel 12 (156.6 MHz).
   An initial notification of not less than 12 hours before the vessel is expected to enter the waters of Hong Kong, also a confirmatory notification of not less than 4 hours before the vessel is expected to enter the waters of Hong Kong.
(ii) The Master, Owner or Agents of every oil tanker (if carrying more than 2,000 tons of persistent oil bulk), gas tanker and chemical tanker, address to 'MARDEP' by Telex: 63607 Mdvts HX, not less than 48 hours before the vessel is expected to enter the waters of Hong Kong, a tanker arrival notice.

Marine Department (Departure):

Application for Port Clearance (MO 618), 2 copies of Ship's Export Dangerous Goods Manifest.

1 copy of Ship's Export Cargo Manifest (if specifically requested), all relevant documents and trading certificates are same required for the Report of Arrival.

Port Health Officer (Arrival Only):

Maritime Declaration of Health.

1 copy of the ship's Passenger List.

1 copy of the Crew List.

Derat Certificate or Derat Exemption Certificate (whichever is applicable).

Note: The above documents/forms must be produced for the inspection of the Port Health Officer on boarding at the Quarantine Anchorage.

Customs and Excise Department:

One copy of the ship's Import/Export Cargo Manifest for Cargo Research Division, 9/F, MTL Building, Kwai Chung.

One copy of Import/Export Statement in respect of Dutiable Goods (CED 39 and 40) for Excise Control Group, 7/F, Harbour Building, 38 Pier Road, Hong Kong.

One copy of the ship's Import/Export Cargo Manifest, upon request, for boarding Customs Officers.

One copy of Arrival Declaration in respect of Dutiable Stores (CED 64), upon request, for boarding Customs Officers.

One copy of the Arrival Declaration (CED 114) and one copy of Crew List and Passenger List, upon request, for boarding Customs Officers.

NOTE: According to current practice, the Trade Department and the Census and Statistics Department, also both receive a copy of the ship's Import/Export Cargo Manifests from the respective shipping agents. These copies are in addition to the copies supplied to the Customs and Excise Department.

Immigration Officer (Arrival):

2 Transit-Passenger Lists.

2 Landing-Passenger Lists.

3 Crew Lists.

Note: The above forms must be produced for the inspection of the Immigration Officer on boarding after the ship has been 'cleared' by the Port Health Officer.

Immigration Officer (Departure):

2 Lists Passengers boarding.

2 Lists Transit Passengers.

2 Crew Lists.

Post Office (Arrival Only):

1 copy of the Ship's Mail Manifest.

Hong Kong Police:

1 copy of The List of Arms and Ammunition on board (Nil return required) to be handed in at the Entry and Clearance Office with Marine Department papers.

Shipmaster's Report: October 1988.

To be sent from last port of call before Hong Kong:
1 Hong Kong Official Crew List.
1 List of Ports of Call.
Copies of: Ship's Register
Safety Equipment Certificate.
Safety Construction Certificate.
Safety Load Line Certificate.
Safety Radio Certificate.
Derat Exemption Certificate.
Agent: All Certificates.
1 Safety Manning Certificate.
Clearance from Last Port.
1 copy ordinary Crew List.
1 copy Stores List.
Quarantine: 1 Maritime Declaration of Health.
1 ordinary Crew List.
Immigration: On arrival: 1 set of Hong Kong Crew Lists.
5 copies ordinary Crew Lists.
On departure: 2 copies ordinary Crew Lists.
Police: 1 copy Arms and Ammunition List.
Customs: 2 copies Stores List. (Also see "Customs and Excise Department" above).

ARRIVAL ADVICE: It is mandatory for Shipmasters to cable MARDEP Hong Kong 24 hours (See "Notices" – No. 44/1995) before arrival requesting permission to enter Hong Kong waters and advising ship's name, nationality, type of vessel, total number of persons on board, ETA abeam of Waglan Island and reason for call. It is not permitted to enter Hong Kong waters until permission has been granted. It is mandatory for all vessels over 300 tons gross to carry VHF radiotelephone capable of operating on Hague Plan frequencies and to make contact with the Vessel Traffic Centre on Channel 12 before entering Hong Kong waters and thereafter at specified calling points. They should report their position, ETA at Pilot Station, final berth, and intended route inwards, East or West. The vessel's mast height above the water should also be reported. (This is needed for information to the airport where the runway extends close North of the Hung Hom Fairway, and also to check the vertical clearance for vessels to pass under the Tsing Ma Bridge – See "Notice" – No. 45/1995). Shipmasters are also asked to report any other relevant information such as dangerous (including radioactive) goods on board. If the vessel is taking a Pilot, reference should be made to the 'Sailing Directions' in the China Sea Pilot Vol. I, with regard to the positions of the Pilot Stations, and Pilots should only be embarked or disembarked at these points. Additional radio reports to MARDEP during the vessels inward or outward passage aid in the safe movement of all vessels in the port and approaches. The Marine Department has introduced a new radar-assisted Vessel Traffic Service. The system consists of high technology radar surveillance, tracking and data processing equipment.

APPROACHES: (A) (Dry-cargo and container vessels): The approaches are reasonably free from hazards and are well marked by day and night. Vessels working at buoys with drafts up to 11.2 m. are requested to enter port via the Western Entrance. Other vessels with drafts up to 10.9 m. may enter via Lei Yue Mun entrance.

(B) (Tankers): Tankers without a gas-free certificate are prohibited from transit through Victoria Harbour. Tankers which berth at Tsing Yi Island, Lamma Island, and Tap Shek Kok are requested to use the Western approaches. A channel has been dredged at Hongkong Electric Company Wharf at West Lamma Island for the purpose of accommodating vessels at 13.8 m. draft.

(C) Buoyage. The system of buoyage used in Hong Kong has been changed from the Uniform to the IALA System.

Compulsory traffic separation lanes are in force for both the East and West approaches. Up-to-date Admiralty charts should be consulted for details.

PILOTAGE: Pilotage is compulsory in the port for certain categories of ships, as described in the Pilotage (Amendment) Ordinance 1995, which came into effect on 1st October 1995. Pilots are licensed by the Pilotage Authority (Cables: Pilot Hong Kong. Telex: 62062. Fax: 28030859) and are available to board ships at the 4 pilot boarding stations described in the Second Schedule of the above mentioned Ordinance.

The Hong Kong Pilots Association provides pilotage services. Pilots generally board inbound ships using the Eastern Entrance in the vicinity of the Lei Yue Mun 'TCS4' Buoy (Lat. 22° 16' 00" N., Long. 114° 15' 40" E.) and disembark at the same point from outward-bound ships. At the Western entrance, Pilots embark and disembark to the S.W. of Green Island (Lat. 22° 16' 00" N., Long. 114° 06' 36" E.). It is a contravention of Regulation 21(1) of the Shipping and Port Control Regulations, 1978, for any vessel to pick up or discharge a Pilot within a distance of 1 nautical mile from the centre of either the Lei Yue Mun Pass or the Sulphur Channel. Maximum speed inside Harbour is 8 knots.

Hong Kong Pilots can be contacted on VHF Channel 11.

Also see "Notices" – No. 53/1985 and No. 121/1987.

ANCHORAGES: Examination Anchorages (quarantine and immigration) for clearance inwards are situated within the harbour limits to cover the entry of shipping from East and West. The principal dangerous goods anchorages are situated at the Western end of the harbour and at Kau Yi Chau (tankers), whilst there are others at Junk Bay, Tsuen Wan and Rocky Harbour.

The Western Examination Anchorage works 24 hours a day whereas the Eastern Examination Anchorage works from 0630 – 1800 hrs. Since 20th June 1994, the Western Tuen Mun Immigration Anchorage (TMIA) has come into operation daily from 0100 hrs. and 1100 hrs. for river trade vessels plying between Hong Kong and the Pearl River Delta Ports. Ocean-going vessels will not be accorded immigration clearance services at the TMIA. Only on request. Ships requiring service in the Eastern Quarantine Anchorage should advise MARDEP on VHF radio Channel 12 when establishing contact prior to arrival.

Report: The following was sent by the Marine Department to Tanker Terminal Operators in September 1993 (Updated 1996).

Quote:

Vessel Traffic Centre – Anchoring of Large Tanker Vessels Awaiting Berths at Approved Petroleum Wharves:

Tankers of 120 m. LOA or more in length and which are intending to berth at Tsing Yi, will be instructed by Vessel Traffic Centre (VTC) to proceed to anchor at South Lamma Dangerous Goods Anchorage (SLDGA), if they cannot confirm their berths are available before entering the waters of Hong Kong. Only under very exceptional circumstances will such large tankers be allowed to proceed to anchor at Reserved Dangerous Goods Anchorage (RDGA). Tankers of less than 120 m. LOA may continue to anchor in Kau Yi Chau Dangerous Goods Anchorage (KYCDGA) for the time being pending further proposals on anchorage areas and fairways currently being formulated by this department.

The implementation of the above requires close coordination between various offices. I should be grateful therefore if you would make all necessary arrangements, including providing the Masters before they approach, the information on whether a berth is available and, if a designated berth is still occupied, instruct the Master to anchor and wait at SLDGA. You should also book a pilot *only for berthing* your vessel alongside Tsing Yi Wharf. I will inform pilots that they should not take large tankers to KYCDGA unless there is permission from VTC to do so.

Unquote.

MAX. SIZE: Largest vessels calling regularly have been container vessels, length up to 305 m., with drafts up to 14.6 m.; tankers length over 274 m., draft 14.6 m. Maximum size governed by draft of vessel. No limit as to length and beam. Draft in harbour: "A" class mooring buoys 6.5 m. to 12.0 m. "B" class mooring buoys 5.7 m. to 8.8 m.

HEALTH: *Conditions under which a Vessel may be Granted Radio Pratique:*

(a) The vessel must not have called at a plague infected port within 7 days prior to arrival at Hong Kong. The vessel must not carry sacks, rugs or duck feathers as cargo on board.

(b) If the vessel has called at a cholera infected port within 5 days prior to arrival at Hong Kong, the Chief Port Health Officer or his delegated officer has full discretion in the granting of Radio Pratique.

(c) There are not more than 24 passengers on board at the time of arrival.

(d) A vessel carrying more than 24 passengers may be granted Radio Pratique if there is a ship's surgeon on board.

(e) The Master must furnish, through his shipping company or Agent, the following cabled information to the Port Health Office not more than 30 hours and not less than 8 hours before his expected time of arrival at Hong Kong:

(i) Ports of call with dates of departures during the 14 days prior to arrival.
(ii) Numbers of passengers and crew members on board.
(iii) A statement that all persons on board are healthy.
(iv) A statement indicating whether any case of infectious disease has occurred on board during the voyage.
(v) Whether any person on board is sick.
(vi) The date of issue of the Derat or Derat Exemption Certificate.
(vii) Type of vessel.
(viii) Whether foodstuffs are carried as cargo on board ship, and if so, type of foodstuff and country of origin.

Notes:

1. Applications for Radio Pratique must be made by shipping companies or Agents. Application forms should be sent to Port Health Office, Wu Chung House, 18th Floor, 213 Queen's Road East, Wanchai, during normal office hours (0900 – 1700 hrs. on Mondays to Fridays and 0900 – 1300 hrs. on Saturdays).

2. For urgent cases outside normal office hours, shipping companies or Agents may apply for Radio Pratique by telephone or by Fax to the Port Health Office, Hong Kong Airport (Tel: 7696284) during the following hours:

Mondays to Fridays	1700 to 2300 hrs.
Saturdays	1300 to 2300 hrs.
Sundays and Public Holidays	0900 to 2300 hrs.

All necessary information together with supporting documents must be submitted in writing to Port Health Office, Wu Chung House, on the next working day.

3. No Radio Pratique will be granted between 0000 and 0900 hrs.

4. When Radio Pratique is granted, shipping companies or Agents will be responsible for notifying the Master concerned.

5. The granted Radio Pratique will automatically expire 24 hours after the stated expected time of arrival at Hong Kong.

6. The granted Radio Pratique will no longer be valid if there is any change in the health status on board the vessel concerned during the period from the submission of the application to the actual time of arrival of the vessel at Hong Kong. This means that the Master of the vessel concerned will have either to re-apply through his shipping company or Agent, giving the additional information, or to display the appropriate signal when approaching the Quarantine Anchorages:

Day: International Code flag "Q".
Night: A red light over a white light in a vertical line, 2.0 m. apart.

7. Ships granted Radio Pratique will be required to display the following signal when entering Hong Kong waters:

Day: International Code flag "TO."
Night: 3 white lights in a vertical line, 2.0 m. apart.

8. Maritime Declaration of Health and Passengers and Crew List will have to be collected by the shipping companies or Agents and delivered during office hours to the Port Health Office, Wu Chung House within 24 hours of the ship's arrival.

Also see "Notices".

N.B. Vessels coming from non-infected ports are cordially invited to apply for Radio Pratique, directly by the Master of the vessel by Fax or by telegram to the Port Health Office Hong Kong Airport or through their shipping Agents/companies in accordance with the place and time as stipulated under Notes 1 and 2.

Enquiries on Radio Pratique procedures can also be made to Tel: 29618846 during office hours.

IMMIGRATION: Immigration formalities take place at the Eastern or Western Examination Anchorages after clearance by the Port Health Authorities. Immigration launches are on duty 24 hours a day in the Western Anchorage and from 0630 hrs. to 1800 hrs. in the Eastern Anchorage throughout the year. Since 20th June 1994, the Western Tuen Mun Immigration Anchorage (TMIA) has come into operation daily from 0100 hrs. and 1100 hrs. for river trade vessels plying between Hong Kong and the Pearl River Delta Ports. Ocean-going vessels will not be accorded immigration clearance services at the TMIA.

RADIO: Cable Agent via Radio Hong Kong call sign "VPS".

The Marine Department Vessel Traffic Centre (VTC) is manned 24 hours a day throughout the year. It can be contacted by telex, by cable, by facsimile and by VHF radio-telephone on Channel 12. The VTC is the control centre of the newly installed Vessel Traffic System which consists of high technology radar-based surveillance, tracking and data processing equipment. The VTC can be contacted by Telex number 63607, Answerback MDVTS HX. Facsimile number 28586646.

Wireless Telegraphy: Radio communication apparatus on board a merchant vessel is not permitted to be used while the vessel is within Hong Kong territorial waters except in the following circumstances:

When a vessel is proceeding through Hong Kong territorial waters such apparatus may be used to communicate on minimum power with the nearest coast station or, if communication with the nearest coast station is impracticable and the safe navigation of the vessel so requires, with a more distant coast station or another vessel;

For the purpose of summoning assistance on an occasion of danger to the life of any person or to the vessel;

For the purpose of carrying out experimental tests for which permission in writing must first be obtained.

During the period when tropical cyclone signals 8, 9 or 10 are in force, radio and television stations will extend their hours of operation around the clock, and will undertake broadcasting of tropical cyclone warnings in English and Chinese, at two minutes to the hour and half past the hour. Should the expected local conditions so warrant, warnings will be broadcast at quarter to and quarter past the hour. Warnings in English will be broadcast by individual announcers at each station. Radio Television Hong Kong and Commercial Radio will provide a Chinese announcer to broadcast warnings in Chinese from the broadcasting studio at the Royal Observatory.

If conditions are expected to worsen, tropical cyclone warnings may continue after the normal close down time of the stations, or commence before the usual starting time in the morning even though only the No. 1 signal is in force at that time. After consulting the Director, Royal Observatory, the Director of Broadcasting will decide whether or not to adopt either of these courses. He will inform Commercial Radio, HK-TVB, ATV of his intentions as early as possible.

Frequencies: Radio Television Hong Kong – Radio 1 (Chinese) 92.6, 92.9, 93.2, 93.4, 93.5, 93.6 or 94.4 MHz; Radio 2 (Chinese) 94.8, 95.3, 95.6, 96.0, 96.3, 96.4 or 96.9 MHz; Radio 3 (English) 567 kHz, 1584 kHz, 97.9 MHz, 106.8 MHz; Radio 4 (English) 97.6 to 98.9 MHz; Radio (BBC World Service relay) 675 kHz; Radio 7 (Chinese) 621 kHz; Commercial Radio – Quote AM (Chinese) 864 kHz, Metro plus (English) 1044 kHz, 104 FM Select (English), 102.4, 102.5, 104, 104.5, 104.7, 105.5 or 106.5 MHz; BFBS (English), 96.6, 102, 104.8 or 107.4 MHz; Chinese Radio 1, 88.1, 88.3, 88.6, 88.9, 89.1, 89.2 or 89.5 MHz; Chinese Radio 2, 90.3, 90.7, 90.9, 91.1, 91.2, 91.6 or 92.1 MHz.

All ships bound for Hong Kong must obtain permission from MARDEP before entering the waters of Hong Kong. A contravention of this direction will render offending Masters liable to a fine of twenty thousand dollars and to imprisonment of 1 year. When applying for permission to enter the waters of Hong Kong Masters must provide the information required as contained in Marine Department Notices to Mariners No. 39 of 1983 and No. 89 of 1985 (See "Notices"). You are required to answer all signals including those passed from Royal Navy vessels patrolling the approaches to H.K. when approaching Hong Kong – Mardep Hong Kong.

VHF: Vessel Traffic Centre, Marine Department Hong Kong Port Radio call sign "MARDEP" Channel 12, 24 hours listening watch. Range up to 35 miles. Navigational warnings are routinely broadcast on VHF Channels 12, 14 and 20 every hour.

Maritime VHF Radio-telephone Service (Hague Plan): This service operates in Hong Kong on 3 international channels, Nos. 16, 26 and 27. Channel 16 (156.8 MHz) is the simplex distress and calling frequency on which contact is made between shore and ship before changing over to either of the public correspondence channels, No. 26 or 27. The latter are duplex channels and Hong Kong transmits on 161.9 MHz and receives from ships on 157.3 MHz for Channel 26; transmits 161.95 MHz, receives 157.35 MHz for Channel No. 27.

Local connection to the service is *via* the Hong Kong Telephone Company and is made in the same way as for overseas radio-telephone calls by dialling "011". The local operator should then be informed that a telephone call is required on "the Maritime VHF Hague Plan Service". The operator will ask for details of the call, such as the name of the ship and the person required, and will then connect the call *via* Cable and Wireless. Calls can also be sent from ship to shore. The range is about 50 miles and the service is available at all times of the day and night.

Harbour telephones: Service is provided by any one of 3 companies – Hutchinson Tel. Co., China Telecom System and Communication Services Ltd. Calls may be made between any two ships so equipped and between a ship and any telephone number on the Hong Kong Telephone Company network.

Ship to Shore service: Hong Kong Telephone Company will also provide ship to shore telephone service by means of land lines at selected wharf locations. For service at the Container Port call 420-8800.

Also see "Notices".

TUGS: Available for berthing and unberthing. Advance booking is required.

Also see "Table" opposite.

Tug Requirements at Tanker Terminals:

Company	*Location*	*Berthing*	*Unberthing*
Esso	Tsing Yi Island	4 (including 2 escort)	3
China Resources	Ngar Ying Chau/ Tsing Yi Island	3 (including 2 escort)	3
Mobil Oil Wharf	Tsing Yi Island	3 (including 1 escort)	2, 3 if draft more than 10.0 m.
Power Station	Tsing Yi Island	1	1
Caltex	Tsing Yi Island	4	3
		(over 198 m. LOA)	
		3	2
		(under 198 m. LOA)	
Mobil LPG Wharf	–	1	1
Shell	Tsing Yi Main Jetty		
	LOA less than 121.99 m.	2	2
	LOA 122 m. – 152.99 m.	2	2
	LOA 153 m. – 197.99 m.	3	2
	LOA 198 m. – 245 m.	4	3
	LPG Jetty		
	LOA less than 121.99 m.	2	2
	LOA 122 m. – 135 m.	2	2

These tug requirements are to be used during normal working conditions, with the proviso that it should have a flexibility on a case by case basis, and should conditions deteriorate during inclement weather, such as in the typhoon season, then additional tug requirements may be necessary.

Vessels with bow and/or stern thrusters of over 1,000 h.p. each will be able to allow for one tug less per thruster over the 1,000 h.p. mentioned, at separate ends of the vessels, subject to Agent or Master giving requisite confirmation that the thruster is capable of this horsepower, or in excess of, and that they are in good working condition, and depending on the thruster being submerged at the relevant draft.

Providing that duckpeller tugs are ordered, subject to availability, a compromise may be reached allowing for the number of tugs to be reduced.

It is strongly recommended that these guidelines be strictly followed, due to the volatile and dangerous cargoes that these vessels transport to and from oil terminals.

BERTHING: Berthing of dry cargo vessels alongside wharf can be performed any time during day and night. Berthing at tanker wharf not permissible after sunset, depending on size of vessel or other special circumstances. Ships carrying explosives must obtain permission from the Marine Department before berthing is allotted.

Boatmen: Labour to handle ships' mooring lines when berthing and unberthing at any of the wharves in Hong Kong waters is supplied by the owners of the wharf concerned, the cost being included in the berthing fee. For berthing at a Marine Department mooring buoy it is usual for the ship's Agent to arrange for boatmen to handle the ship's slip wire and anchor cable, unless the ship's crew undertake this task. The services of boatmen are generally obtained through the Hong Kong Pilots Association.

Mooring Buoys: See "Max. Size" All ships are required to secure to Marine Department mooring buoys by their chain cable (vessel to supply shackle). The maximum length of a ship permitted to berth at an "A" class mooring is 183 m., the swing circle encompassing each buoy having a radius of 213 m. The maximum length of a ship permitted to berth at a "B" class mooring is 137 m., the radius of swing circle around such buoys being 167 m. It is therefore within the limits of safety for a vessel, when secured to a Marine Department mooring, to slack out to "1 shackle on the windlass" and still clear ships berthed at adjacent buoys, except in exceptional circumstances. As all Marine Department moorings are of the 1-legged type, it is permissible, should circumstances make it necessary, for a ship, when attempting to secure to a mooring, to drop an anchor at not less than 15 m. from the buoy without fouling the mooring chain. It should be noted, however, that 3 moorings sited within the Naval Mooring Area are either of the 2 or 3-legged type, and it is therefore not permissible to use an anchor when berthing.

52 "A" class mooring buoys and 24 "B" class mooring buoys for ocean going vessels.

WHARVES: *Kowloon Wharf Terminal & Warehouse Ltd.:*

	Length (m.)	*Depth* (m.)
Ocean Terminal	396	9.0 – 11.0

CONTAINER FACILITIES: *Kwai Chung Container Port:*

Terminal	*Operator*	*Length* (m.)	*Depth* (m.)	*Facilities*
1, 2 & 5	Modern Terminals Ltd.	1,082	12.2	52 hectares, 1,572 reefer points, 12 quay cranes up to 40 tons capacity, 15 transtainers, 74 straddle carriers, 124 forklifts.
3	Sealand Orient Terminals Ltd	305	12.2	41 acres 3 cranes (30 tons) 9 transtainers.
	Asia Terminals Ltd.			C.F.S.
4, 6 & 7	H.K. International Terminals Ltd.	3,292	12.2 (No.4&6) 14.5 (No.7)	89 hectares, 25 quay cranes, 86 rubber tyre gantries, 8 front loaders, 70 forklifts, 960 reefer points.
8 (East)	H.K. International Terminals Ltd.	640	14.5	6 quay cranes, 20 rubber tyre gantries.
8 (West)	Modern Terminals Ltd.	320	14.5	10 hectares, 280 reefer points, 7 quay cranes (40 tons), 26 rubber tyre gantries.

CRANES: The Hong Kong Salvage & Towage Co.Ltd. operate a floating crane "Proteus 1" of 350 tonnes capacity.

BULK HANDLING FACILITIES: *China Light & Power:*

Location: Tap Shek Kok (N.T.).

Berth: Length 545 m. Depth 20 m. Max. draft 12.9 m. (limited by channel depth 13.7 m.). Max. Beam 42 m. LOA no restrictions.

Cargo: Discharge rate for coal 15,000 tons per day.

Hong Kong Electric Co. Ltd.:

Location: Lamma Island.

Berth: Depth 15.8 m. Max. draft 13.8 m. Max. LOA 270 m. Max. beam 40 m.

Cargo: 2 unloaders for coal, rate 15,000 tons per day.

Also see "Shipmaster's Report" dated July 1991.

China Cement:

Location: Tap Shek Kok (N.T.).

Berth: Length 270 m. Depth 14.0 m. Max. size 60,000 d.w.t.

TUGS:

Name of Vessel	Classification Society	Year built	Type	Gross Tons	Bollard Pull (tons)	Brake Horse Power (B.H.P.)	No. of Props.	Propulsion
The Hong Kong Salvage & Towage Co. Ltd.								
Llam Tong	BV	1995	Coastal/Harbour Tug	200	40	3,200	2	Twin Z-peller 360° Azimuthing Units
Tung Lung	BV	1995	Coastal/Harbour Tug	200	40	3,200	2	Twin Z-peller 360° Azimuthing Units
Shek O	LR	1994	Multi-Purpose/ Ocean Going Tug	450	51.5	4,000	2	Twin Kawasaki Rexpeller C.P.P. 360° Azimuthing Units plus 3T Bowthruster.
Mai Po	LR	1994	Multi-Purpose/ Ocean Going Tug	450	52.3	4,000	2	Twin Kawasaki Rexpeller C.P.P. 360° Azimuthing Units plus 3T Bowthruster.
Sung Kong	BV	1994	Ocean Going/ Berthing Tug	440	56.7	4,000	2	Twin Z-peller 360° Azimuthing Units.
Ngan Chau	BV	1994	Ocean Going/ Berthing Tug	440	54.9	4,000	2	Twin Z-peller 360° Azimuthing Units.
Tai Koo	BV	1993	Multi-Purpose/ Ocean Going Tug	450	52.2	4,000	2	Twin Kawasaki Rexpeller C.P.P. 360° Azimuthing Units plus 3T Bowthruster.
Yam O	LR	1991	Multi-Purpose/ Ocean Going Tug	456	55	4,200	2	Twin Z-peller 360° Azimuthing Unit plus 3T Bowthruster.
Heung Kong	BV	1991	Coastal/Harbour Tug	190	37	3,000	2	Twin Z-peller 360° Azimuthing Units.
Kwai Chung	BV	1991	Coastal/Harbour Tug	190	37	3,000	2	Twin Z-peller 360° Azimuthing Units.
Tolo	BV	1989	Coastal/Harbour Tug	190	37	3,000	2	Twin Z-peller 360° Azimuthing Units.
Tsing Yi	BV	1989	Coastal/Harbour Tug	190	37	3,000	2	Twin Z-peller 360° Azimuthing Units.
Sha Tin	BV	1989	Coastal/Harbour Tug	190	37	3,000	2	Twin Z-peller 360° Azimuthing Units.
Ting Kau	BV	1989	Coastal/Harbour Tug	1990	37	3,000	2	Twin Z-peller 360° Azimuthing Units.
Tai Tam	BV	1987	Coastal/Harbour Tug	185	35	2,600	2	Twin Z-peller 360° Azimuthing Units.
Waglan	BV	1987	Coastal/Harbour Tug	185	35	2,600	2	Twin Z-peller 360° Azimuthing Units.
Tai O	LR	1986	Multi-Purpose/ Ocean Going Tug	411	53.6	4,000	2	Twin Duckpeller 360° Azimuthing Units.
Tap Mun	BV	1982	Coastal/Harbour Tug	267	35	2,600	2	Twin Duckpeller 360° Azimuthing Units.
Kau Lung	LR	1982	Coastal/Harbour Tug	267	35	2,600	2	Twin Duckpeller 360° Azimuthing Units.
Lamma	LR	1978	Coastal/Harbour Tug	267	35	2,600	2	Twin Duckpeller 360° Azimuthing Units.
Cheung Chau	BV	1976	Coastal/Harbour Tug	252	41	3,200	2	Twin Z-peller 360° Azimuthing Units.
Peng Chau	BV	1984	Coastal/Harbour Tug	243	38	3,000	2	Twin Z-peller 360° Azimuthing Units.
Hung Hom	BV	1984	Coastal/Harbour Tug	237	38	3,000	2	Twin Z-peller 360° Azimuthing Units.
The Far East Towage Co. Ltd.								
Far East No. 1					25	2,000		Diesel Twin Screw Kort Rudders
South China Towing Co. Ltd.								
Shantou						3,200		Z-Peller
Shanwei						3,200		Z-Peller
Shenyang						3,200		Z-Peller
Suzhou						2,600		Z-Peller
Shunde						2,600		Z-Peller
Kunming						2,600		Z-Peller
Hangzhou						2,600		Z-Peller
H.K. & Kowloon Wharf & Godown Co. Ltd.								
Snipe*			Motor Tug			140		
Heron*						205		

*Suitable for towing lighters in the harbour.

STEVEDORES: The following table shows the average handling rates per gang hour:

Cargo	*Place*	*Load tons per gang hour*	*Discharge tons per gang hour*
General	Wharf	12	15
General	Stream	10	12
Bale or bag	Wharf	20	25
Bale or bag	Stream	15	20

Stevedores work 24 hours per day except Mid-Autumn Festival and Chinese New Year Holidays.

TANKERS: Any leaking of oil to water will be subjected to heavy fines. If not gas-freed, not allowed through harbour.

Also see Table A – Oil Installations.

Shell: *Main Jetty:*

Max. LOA: 245 m.
Max. Draft: 15.5 m.
Max. Displacement: 130,000 tonnes.
Minimum Size: LOA 77 m. (Depth 5.85 m.).
Smallest Vessel: 2,300 d.w.t. for Bitumen.
Product Handled: See "Table A".
Services: Bunkers and fresh water available by barge. No dirty ballast or slop facilities.
Density: 1025.
Restrictions: Berthing and unberthing possible day and night.
Pilotage: Pilot boards off Green Island.

Loading Arms: There are a total of 6 loading arms. Product and location as follows:

Most Afterwards	: ULP	10 in. size
Second Afterwards	: Gasoil	10 in. size
Third Afterwards	: Jet A-1	10 in. size
Fourth Afterwards	: PMS	10 in. size
Most Forward	: FO1500/4000	12 in. size
Second Forward	: FO 90/MDF	12 in. size

Remaining products are discharged via hoses. Hoses have to be picked up by ship's derrick.

Also see "Table A" – "Oil Installations".

LPG Jetty:

Max. LOA: 135 m.
Max. Draft: 6.58 m.
Max. Size: 8,136 d.w.t. (10,200 cu.m.).
Minimum Size: 1,500 d.w.t., LOA 70 m. (Depth 5.4 m.).
Products: LPG.
Services: Bunkers, diesel and fresh water available by barge.
Density: 1025.
Restrictions: Berthing and unberthing possible day and night.
Pilotage: Pilot boards at Green Island. Compulsory for vessels over 1,000 g.r.t.
Minimum/Maximum Distance from Ship's Manifold to Waterline: 1.40 m./9.30 m.
Max. Distance Bow to Centre Manifold: 71 m.
Max. Distance Stern to Centre Manifold: 65 m.

Table A. OIL INSTALLATIONS

Company	Location	Length of berth	Depth alongside (Chart Datum)	Grade of oil	Capacity (water tons)	Delivery rate(t.p.h.)	Hose connection
(i) Shell Co. (H.K.) Ltd.	Tsing Yi Main Jetty	*226 m.	18.5 m.	F.O. 1,500/4,000		1440/1450	12"
				M.D.O./F.O. 600		1300/1410	12"
				N-Hexane		120	4"
				Shell Sol A		120	4"
				DMK		120	4"
				IPA		120	4"
				MEK & Back Load		315	8"
				Polyols		200	6"
				PMS		670	10"
				Toluene		170	4"
				Ind. Kero		310	4"
				X-55B		210	4"
				T-407		290	4"
				Jet A-1, Kero		985	10"
				Gas Oil		760	10"
				ULP		670	10"
				Lub. Add		200	8"
				HVI 60/160 B		215/220	8"
				HVI 650		220	8"
				Neodols		140	8"
				Bitumen		150	6"
	LPG	*118 m.	12.5 m.	LPG	6,000 cu.m. (Pressurised)	110	4" (liquid) 3" (return)
(ii) Caltex Oil Hong Kong Ltd.	Tsing Yi No.1A	198 m.	14.0 m.	Boiler Fuel	40,000	450	10"
	1B	60 m.	14.0 m.	Boiler Diesel	20,000	400	10"
	2A	110 m.	6.5 m.	Gas Oil	70,000	350	8"
	2B	50 m.	6.5 m.	Jet	30,000	450	8"
	3	65 m.	3.5 m.	Gasoline	20,000	150	6"
	4	65 m.	3.5 m.	LPG (Berth 2)	3,000 tonnes		
	5	65 m.	3.5 m.				
	6A	110 m.	8.0 m.				
	6B	30 m.	8.0 m.				
(iii) Mobil Oil Hong Kong Ltd.	Tsing Yi	700'	38'	Boiler Fuel	39,000	500	10"
				Marine Diesel	26,000	300	8"
				Kerosene	17,000	300	8"
(iv) Esso Standard Oil (H.K.) Ltd.	Tsing Yi	920'	52'	See "Tankers."			
(v) China Resources Ltd	Ngan Ying Chau	820'	40'	Boiler Fuel Marine Diesel White Oil	232,900	820	12"
(vi) China Resources Ltd	Tsing Yi	640'	40'	Boiler Oil Marine Diesel	20,000	—	12"

* Distance between Outer Bollards.
** Dedicated to tankers of 2,300 d.w.t.
Also see "Tankers".

(i) A shore telephone is available at the berth. Shore electrical supply is not available. Fresh water available from shore and by lighter. Berthing facilities available only for small coasters, ferries and harbour craft.
(ii) A shore telephone is not available at the berth. Shore electrical supply is not available. Fresh water available by lighter only.
(iii) and (iv) A shore telephone is available at the berth. Shore electrical supply is not available. Fresh water available by lighter only.
(v) A shore telephone is available. Shore electricity supply is not available. Fresh water available by lighter only.
(vi) A shore telephone is available at berth. Shore electrical supply is not available. Fresh water available by lighter only.
(vii) Bunker facilities available.

Esso: The Esso Tsing Yi Terminal is situated on the Southern part of Tsing Yi Island in position Lat. 22° 19.7' N., Long. 114°06' E. The facilities are owned by Exxon Storage & Wharfage Company Ltd., and used by Esso Standard Oil Hong Kong Ltd., and are used for discharging dirty and clean products, chemicals and LPG.

Pilots: At the Western entrance, Pilots generally embark and disembark to the West of Green Island (Tsing Chau). By pre-arrangement Pilots can be picked up off Ngan Chau and all tankers are recommended to make use of this service and request the Agent to notify the Pilot Association accordingly.

The Pilots maintain a listening watch on VHF Channel 11. Senior Pilots will usually be assigned to larger tankers.

Pilot launches display the international signals by day and by night and during poor visibility sound the international signals. In addition they may sound an identity signal of 4 short blasts.

Esso Tsing Yi Terminal: The berth consists of a T-head pier having 3 separated areas for handling barges and tankers ranging from 500 – 120,000 d.w.t.

The main loading area is designated Berth No. 1 and consists of a fendered loading platform, 2 fendered breasting dolphins, 4 mooring dolphins and associated equipment such as capstans, quick release mooring hooks for 120,000 d.w.t. tanker, etc. Berth No. 2 is provided by fendering the onshore face of one of Berth No. 1 Eastern mooring dolphins and adding an adjacent breasting dolphin suitable for vessels up to 2,500 d.w.t. Berth No. 3 is a small berth for vessels up to 500 d.w.t. and is located adjacent to the Eastern side of the trestle/access way. In addition there is a small jetty from the shore, inside of the Western side of the T-head, used at the present time by small tankers up to 2,000 d.w.t. and barges loading/discharging FO, ADO and LPG.

Berthing Procedure: At the present time the berthing of tankers exceeding 570 ft. LOA and up to 42 ft. draft is carried out during daylight hours and on flood tide only. Above 42 ft. draft, berthing is carried out at HW slack only and during daylight hours only and on a trial basis, HW neap during daylight hours when no HW slack exist for that day.

Tankers not exceeding 570 ft. LOA, draft under 36 ft. can be berthed day and night, but on flood tide. Currents near the berth, up to a distance of approximately 400 ft. off, run parallel to the berthing face. Further out, the ebb tide sets out and the flood tide in towards the North. Vessels always berth port side to. (Maximum tidal current is generally below 1 knot). In addition to the 2 escort tugs used for larger vessels for the passage through the channel from Green Island, usually 2 more tugs are in attendance for berthing larger vessels. Tugs are normally employed in the alongside manner and use their own wire. Pilots bring vessel parallel to the berth, and about 200 ft. off, and then ease her alongside with the aid of attending tugs and mooring lines.

Nearby, approximately 500 ft. Eastward is a new berth owned and operated by China Resources Oil Company. This berth projects further offshore than the Esso Pier. *Caution has to be exercised not to overshoot the Esso Berth.*

Two mooring launches strong enough to handle 120,000 d.w.t. vessel's wire ropes are in attendance. All 4 mooring dolphins are fitted with triple quick release hooks and capstan. The 2 breasting dolphins and 2 corners of the loading platform are fitted with double quick release hooks and capstan. The terminal requires that larger vessels use a minimum of 2 headlines, 2 forward breastlines, 2 forward backsprings, 2 aft backsprings, 2 aft breastlines and 2 sternlines.

Products	*No. and Size of Loading Arm*	*Shoreline* (in.)	*Maximum Pressure* (p.s.i.)	*Average Discharging Rate* (bbls.p.h)
Dark Product	4×10 in.	12/20/24	100	11,000 per load arm
DPK	1× 8 in.	10	100	8,000
DPK and other clean products/ lubes	2× 6 in.	6 and 8	100	2,500/4,000
LPG	Liquid 6 in. Vapour 4 in.	6 4	350	800
Chemical	1× 6 in.	6	100	2,500

Tolo Harbour Terminal:

Shipmaster's Report: July 1987.

The vessel called at Tolo Harbour to discharge a parcel of Light Virgin Naphtha.

On account of the terminal having only been opened recently, the following information should be of some use to vessels having to call at Tolo Harbour in the future.

Position:	Lat. 22° 26.8' N., Long. 114° 14.5' E.
Operators:	China and Hong Kong Gas Co. Ltd.
Products handled:	Light Virgin Naphtha.
Cargo connections:	2 × 10 in.
Shore Tanks:	6 km. away. Submarine pipeline 24 in.
Pilotage:	Daylight movements only.
Tugs & mooring launches:	Come around from Hong Kong harbour.
Vessel:	LOA 174 m. Beam 32 m. Draft 10.92 m.

See "Plan".

Also see "Notices" – No. 52 of 1986.

China Resources Ltd.:

Shipmaster's Report: July 1994.

Location: Ngan Ying Chau.

The Terminal is to be found at the top of Tsing Yi Island (Tsuen Wan) Hong Kong.

Berthing is in daylight only at H.W., and departure is in daylight only.

The Agent confirmed departure as daylight only and at L.W. + 1 hour up to H.W. I would point out that the current runs past on the ebb at up to 2.5 knots and at slightly less on the flood.

When turning off the berth, a vessel of 170 m. length has about 85 m. clearance each end, and on this basis, I would only depart at slack water.

The Terminal asked the vessel to maintain a pressure of 7 kg./sq.m. at the manifold during discharge, and for a gas oil cargo the average bulk rate runs at 1,500 cu.m./hr. via 2 lines (1×10 in. and 1×6 in.).

The Agent and Pilots informed me that the berth itself may be approaching the end of its life, mainly due to the environmental pressures exerted on CRC by the local population, in that the tank farm is built right in the middle of high rise flats. China Resources has another terminal on the South Eastern end of Tsing Yi Island which is normally for larger crude vessels. However, I was lead to understand that the Product Berth will have it's operations moved to this berth, but I was given no time scale other than it seemed sooner than later.

DENSITY: 1017.

FRESH WATER: The supply to ships is made at commercial wharves and from water boats.

Water Boats:

Company	Vessel	Capacity	Delivery (Approx.)
Leung Tai Kee Waterboat Co. Ltd.	Taikee No. 1	150 long tons	150-180 t.p.h.
	Taikee No. 2	120 long tons	150-180 t.p.h.
	Taikee No. 3	320 long tons	150-180 t.p.h.
	Taikee No. 5	250 long tons	150-180 t.p.h.
	Taikee No. 6	320 long tons	150-180 t.p.h.
	Taikee No. 7	130 long tons	150-180 t.p.h.
Union Waterboat Co. Ltd.	Tai Yat No. 1	270 tons	150 t.p.h.
	Tai Yee No. 2	290 tons	150 t.p.h.
	Tai Sam No. 3	300 tons	150 t.p.h.
	New No. 4	340 tons	170 t.p.h.
	Tai Ng No. 5	295 tons	150 t.p.h.
	Pier services to ocean terminal		1,500 tons/day

FUEL: Excellent facilities exist for bunkering vessels with fuel oil and coal. Fuel oil can be obtained either at the wharves adjacent to the oil installation, or from harbour oilers owned and operated by the oil companies. Fuel oil from these vessels can be pumped on board without impeding cargo operations. Adequate stocks of good quality bunker coal suitable for coal-fired marine boilers are maintained in the port. Fuel oil available with viscosity up to 1,000 sec. Redwood. 24 hours' notice for supply is required. Also gas oil and marine diesel available.

Also see Table B – "Port Oilers".

REPAIRS: In addition to ship and engine maintenance and repair work, the dockyards have facilities for many miscellaneous services such as are provided by modern dockyards. These include physical tests on materials such as anchors and cables, for which test certificates can be supplied, chemical analysis, drawing office requirements, chemical cleaning of engines and boilers, shot and sand blasting, zinc spraying to name but a few.

DRY DOCKS:

Hong Kong United Dockyards Ltd.: Three floating docks, two located off Tsing Yi and one at North Lantau. The largest has a lifting capacity of 24,000 tonnes, length 230 m., depth 8.0 m. over blocks and width 38.0 m.

Yau Lian Dockyards: Four floating docks, one located off Tsing Yi and three at North Lantau. The largest has a lifting capacity of 45,000 tonnes, and can accommodate ships up to 150,000 d.w.t.

FIRE PRECAUTIONS: The Fire Services Department operates six fire boats, the largest being the 350 ton "Alexander Grantham". It has an output capacity of 45,000 litres of water and 32,850 litres of foam a minute through a battery of monitors. This vessel is equipped to deal with any type of fire on any size vessel, and is designed to operate both in port and at sea.

GANGWAY/DECK WATCHMEN: Not compulsory but recommended.

OPENING/CLOSING HATCHES: Usually performed by ship's crew.

CERTIFICATES: See "Documents".

CARGO GEAR: Normal routine gear, wire and rope slings, nets, grabs, and floating cranes up to 100 tons available.

Vessel's cargo gear must be used for working cargo at all alongside berths.

SEAMEN: All formalities connected with engagement and discharge on board British ships, and on foreign ships whose flag is not represented by a Consular Officer resident in Hong Kong, are required by law to be conducted at the Mercantile Marine Office of the Crew's Branch, Marine Department. Hong Kong continues to be one of the main recruitment centres of Asian seamen and a Seamen's Registry Office, which is an adjunct to the Seaman's Recruiting Office, under the same branch, maintains records of all Hong Kong seamen. The Hong Kong Government Seaman's Service Record Book (Seaman's Discharge Book) is issued by the Seamen's Recruiting Office and is a record of employment.The Seamen's Recruiting Office regulates the recruitment, selection and supply of Hong Kong Registered seamen to ships requiring them, and is situated at the Harbour Building, 3/F, 38 Pier Road, Hong Kong.

Seamen's Travel Documents: The Hong Kong Government Seaman's Identity Book is issued by the Immigration Department and enables the holder to join ships abroad, and return to Hong Kong without a visa during the validity of the book (initially 5 years, with 5 year renewals), and also within 12 months after the expiry of the validity of the book.

A Seaman's Certificate of Nationality and Identity is issued at the Immigration Department only to seamen of British nationality, whereas the Seaman's Discharge Book and the Seaman's Identity Book may also be issued to seamen resident in Hong Kong and no visa is required for return to Hong Kong.

All Crew members signing-off for repatriation must first obtain permission from the Director of Immigration. All crew arriving to join a vessel must produce a guarantee letter through the Agents responsible for all maintenances and other eventual expenses.

CONSULS: The following countries maintain consular offices in Hong Kong:

Antigua & Barbuda
Argentina
Australia
Austria
Bangladesh
Barbados
Belgium
Belize
Benin
Bhutan
Botswana
Brazil
Canada
Central African Republic
Chile
China (People's
  Republic of)
Colombia
Costa Rica
Cuba
Cyprus
Denmark
Dominica
Dominican Republic
Egypt
Fiji
Finland
France
Gabon
Germany
Greece
Grenada
Guinea
Honduras
Iceland
India
Indonesia
Irish Republic
Israel
Italy
Ivory Coast
Jamaica
Japan
Jordan
Korea
Liberia
Luxemburg
Malaysia
Maldives
Malta
Mauritius
Mexico
Monaco
Mongolia
Morocco
Mozambique
Myanmar
Netherlands
New Zealand
Nicaragua
Nigeria
Norway
Oman
Pakistan
Panama
Papua New Guinea
Paraguay
Peru
Philippines
Poland
Portugal
St. Lucia
Seychelles
Sierra Leone
Singapore
South Africa
Spain
Sri Lanka
Sweden
Switzerland
Thailand
Tongo
Trinidad & Tobago
Turkey
U.S.A.
Uruguay
Venezuela
Western Samoa

AIRPORT: Regular International flights. Airstrip is capable of handling any size of jet planes. Transportation from port to airport terminal about 40 minutes bus drive.

Shipmaster's Report: July 1987.

Personnel joining vessels at Hong Kong: The vessel's Agent must give a letter to the Airport Immigration advising them of incoming air passengers who are joining vessels at Hong Kong. Personnel will be detained by Kai Tak Airport Immigration pending the letter's arrival.

TIME: Standard time kept in the colony is 8 hours in advance of GMT.

HOLIDAYS: Public holidays in Hong Kong occur mainly on festivals whose date is governed by the lunar calendar.

Every Sunday; First week-day in January; Chinese New Year's Day; Second day of Chinese New Year; Third day of Chinese New Year; General holiday in lieu of that for the Ching Ming Festival; Good Friday; Ching Ming Festival; Easter Monday; Birthday of Her Majesty the Queen; Tuen Ng Festival; First Monday in August; Last Monday in August, which shall be Liberation Day; Day following Chinese Mid-Autumn Festival Day; Day following Chung Yeung Festival: Christmas Day; First week-day after Christmas Day.

NOTE: Ching Ming Festival and Good Friday are separate holidays (Occasionally they fall on the same day. When this occurs a lieu day is granted).

POLICE/AMBULANCE/FIRE: When the services of the fire brigade, immigration, port health or police are required, appropriate signals should be made in accordance with the list of "Hong Kong Port Signals". The Marine Region of the Police is responsible for internal port security. Its fleet of launches maintain constant patrols in Hong Kong's territorial waters.

EMERGENCY CO-ORDINATION CENTRE: *Maritime Rescue Coordination Centre (MRCC):* The Marine Department maintains a 24 hour watch at the MRCC, and is responsible for coordinating search and rescue operations in the South China Sea as far South as Latitude 10° N.

The station meets fully the IMO GMDSS requirements for Areas A1, A2 and A3.

Telex: 82952 MRCC HX.
Tel: (852) 545 0181/2/3.
Fax: (852) 541 7714.
Call Sign: Hong Kong Rescue.

Table B. PORT OILERS.

Company	*Vessel*	*Grade of oil*	*Capacity-product long tons*	*Delivery rate per hour in tons*
Shell Co. (H.K.) Ltd.	Fu Yung Shan	Boiler fuel or Marine diesel	762	264
	Shih Tou Shan	Boiler fuel or Marine diesel or White oil	762	264
Caltex Oil Hong Kong Ltd.	Caltex HK-5	Marine diesel/White oil	180	70
	Caltex HK-11	Marine diesel/White oil	400	100
Mobil Oil Hong Kong Ltd.	M.V. Mobil Mei Ping	Light oil	145	60
	M.V. Mobil Mei An	Light oil	145	60
H.K. Oil Co.	Barge 101	Boiler fuel	762	420
	Barge 102	Marine diesel/Boiler fuel	508	360
	Barge 103	Gas oil	1,270	720
	Gulf 16	Gas oil	1,270	720
Esso Standard Oil (H.K.) Ltd.	M.V. Esso Tsuen Wan II	White oil	274	84
	M.V. Esso Tsing Yi	Boiler fuel or Marine diesel	1,625	360
	M.V. Esso Hok Un	Boiler fuel or Marine diesel	1,625	360
China Resources Petrochems (Group) Co.Ltd. Callany Ltd.	Carbo	Aviation oil/Gas oil and Marine diesel	1,650	2×500
	Carchun	Aviation oil/Gas oil and Marine diesel	1,650	2×500
	Carlok	Aviation oil/Gas oil and Marine diesel	1,260	2×400
	Carlingta	Aviation oil/Gas oil and Marine diesel	1,215	2×340
	Carwai	Aviation oil/Gas oil and Marine diesel	1,070	2×400
	Carho	Aviation oil/Gas oil and Marine diesel	710	2×200 1×250
	Carcheong	Aviation oil/Gas oil and Marine diesel	535	2×150
	Carrie	Aviation oil/Gas oil and Marine diesel	740	2×300
	Carching	Marine diesel and Boiler fuel	2,150	1×108 1×215 1×430
	Caryun	Marine diesel and Boiler fuel	1,740	2×400
	Carson	Marine Diesel and Boiler fuel	1,125	2×410
	Carfai	Marine Diesel and Boiler fuel	1,090	2×410
	Carhon	Marine Diesel and Boiler fuel	1,070	2×410
	Green Pine	Marine diesel and Boiler fuel	630	2×300
	Green Cypress	Marine diesel and Boiler fuel	630	2×300
	Oiler One	Marine diesel and Boiler fuel	1,000	2×200

TELEPHONES: Available at all alongside berths for connection on board ship.

SERVICES: Services available including tank cleaning, painting, washing, compass adjusting, calibration of direction finder, radar repairs, 24 hours' service laundry, supply of stores and provisions, motor-boats service between ship and shore.

BANKS: Algemene Bank Nederland, Edinburgh Tower, The Landmark, Hong Kong. Tel: 842-9211.

American Express Bank Ltd., 35/F, One Pacific Place, Hong Kong. Tel: 844-0688.

Australia and New Zealand Banking Group, 27 One Exchange Square, Hong Kong. Tel: 843-7111.

Banco di Roma, 18-19/F., 13-14 Connaught Road, Central, Hong Kong. Tel: 521-2221.

Bank of America, 21/F., Bank of America Tower, 12 Harcourt Road, Hong Kong. Tel: 847-5333.

Bank of Canton, The Landmark, Hong Kong. Tel: 844-7911.

Bank of China, Bank of China Building, 2A Des Voeux Road, Central, Hong Kong. Tel: 521-2626.

Bank of East Asia, 106 Des Voeux Road, Central, Hong Kong. Tel: 545-0461.

Bank of India, Ruttonjee House, Hong Kong. Tel: 524-0186.

Bank of Tokyo, 112-114 Des Voeux Road, Central, Hong Kong. Tel: 543-0311.

Bank Indosuez, Alexandra House, 11 Des Voeux Road, Central, Hong Kong. Tel: 526-5411.

Banque Nationale de Paris, Central Building, 23 Queen's Road, Central, Hong Kong. Tel: 521-8218.

Barclays Bank PLC, 2 Pacific Place, Hong Kong. Tel: 826-1888.

Belgian Bank, Belgian House, Hong Kong. Tel: 823-0566.

Chase Manhattan Bank, Alexandra House, Hong Kong. Tel: 841-4321.

Citibank, Wheelock House, Pedder Street, Hong Kong. Tel: 522-3022.

Deutsche Bank, New World Tower, Central, Hong Kong. Tel: 843-0400.

Hamburgische Landesbank, Room 1402-1408, 11 Pedder Street, Central, Hong Kong. Tel: 843-2688.

Hokkaido Takushoku Bank, 28/F, Two Pacific Place, Hong Kong. Tel: 841-0100.

Hong Kong and Shanghai Banking Corporation, 1 Queen's Road, Central, Hong Kong. Tel: 822-1111.

Lloyds Bank International, 29/F., Tower 1, Admiralty Centre, Hong Kong. Tel: 823-2111.

Philippine National Bank, 2/F., 110 Queen's Road, Central, Hong Kong. Tel: 543-9555.

Royal Bank of Canada, 18/F., Gloucester Tower, The Landmark, Hong Kong. Tel: 843-0888.

Scandinavian Bank, Room 2006, Hutchison House, 10 Harcourt Road, Hong Kong. Tel: 843-4666.

The Standard Chartered Bank, Standard Chartered Bank Building, Hong Kong. Tel: 842-2333.

Trust Bank of Africa, Room 1802, Hutchison House, Hong Kong. Tel: 526-5731.

SHORE LEAVE: Crew members are usually allowed ashore.

IDENTIFICATION CARDS: No identification card is required for crew or passengers going ashore. When the vessel has exceeded a stay of 14 days in port, all crew members of North Korean registered vessels or North Korean crew members of all vessels must deliver to the Harbour Control Office, Immigration Department through the agents their photographs and a signed copy of the "Immigration Arrival Card".

CLASSIFICATION SOCIETIES: American Bureau of Shipping, 15/F, Queen's Centre, Queen's Road East, Hong Kong. Tel: 527-8478. Telex: 74513 ABS HX. Fax: (852) 861-3403.

Bureau Veritas, Room 806-7, 111 Connaught Road, Central, Hong Kong. Tel: 815-1863. Telex: 74336 BUVER. Fax: 815-3248.

Det Norske Veritas, Harcourt House, 39 Gloucester Road, Hong Kong. Tel: 865-3332. Telex: 43690 NORVE HX. Fax: (852) 865-3513.

Germanischer Lloyd, 18/F, Fortune House, 61 Connaught Road, Central, Hong Kong. Tel: 545-9883. Telex: 61350 GLOHOK. Fax: 854-0001.

Lloyd's Register of Shipping, 2 Pacific Place, 21/F, 88 Queensway, Hong Kong. Tel: 526-5317. Telex: 60555 MARIN HX. Fax: (852) 845-2616.

Nippon Kaiji Kyokai (NK), Room 1908-1909, Hutchison House, 10 Harcourt Road, Central, Hong Kong. Tel: 525-0389. Telex: 75213 HX. Fax: (852) 810-1095.

China Classification Society (CCS), Hong Kong Branch, Room 2904-2905, Shun Tak Centre, 200 Connaught Road Central, Hong Kong. Tel: (852) 547-6181. Telex: 82475 ZCFE HX. Fax: (852) 858-2629.

GARBAGE DISPOSAL: A shipboard domestic waste collection service is provided by the Hong Kong Government Marine Department free-of-charge to ocean-going vessels calling at the port of Hong Kong. Vessels moored at buoys in the mid-stream, or anchored within Victoria Harbour, are visited daily by three dedicated refuse collection vessels. Each vessel has a refuse reception capacity of 10 cu.m. Request for the service can be made during office hours through vessel's agents to Marine Department on Tel: 385-5661 or 815-0100.

The Marine Department also provides an operational waste collection service. A nominal charge of H.K.$ 300/cu.m. of waste is levied for the provision of such service. Request for this service must be made directly by the vessel's agent to the Pollution Control Unit, Marine Department, Tel: 815-0100, at least 48 hours in advance, giving details of the quantity and type of waste to be collected.

The above services are available daily between 0830 hrs. to 1800 hrs., except Sundays and public holidays.

WASTE OIL DISPOSAL: A chemical and oily waste treatment plant is ready for use.

SEAMAN'S CLUBS: Mariner's Club, 11 Middle Road, Kowloon, Hong Kong. Tel: 368 8261. Fax: 366 0928.

Facilities: Some 72,000 seafarers use the facilities each year. Accommodation for 150 seafarers is provided by the Mariner's Club which has 83% occupancy. Public rooms are converted into dormitories in case of need. Restaurants, bars, bowling alley and swimming pool are well patronised, but the services which are most appreciated are the free use of typewriter, secretarial and travel help and access to fax and international telephone services. Two social workers offer counselling service to the Chinese seafarers and their families. The chaplains, assisted by the Marine Department, Seamen's Union and Officers' Guild, also provide advice and assistance to foreign seafarers who need help during their stay in Hong Kong.

CURRENCY: Hong Kong Dollar (H.K.$). U.S.$ 1.00 = H.K.$ 7.80. Fixed rate. No restrictions on capital flow in or out.

WEATHER: 1st May to 31st October usually considered as typhoon season. No operation of cargo when typhoon signal No. 3 or upward is hoisted. Also see "Radio".

GENERAL: No waste to be thrown into harbour. A free refuse disposal service is available for domestic refuse. Ship's agents can arrange this through Marine Department. Chain required for mooring to buoy. Unnecessary use of ship's sirens prohibited.

DEVELOPMENTS: *Terminal 9:* A four berth Terminal will be constructed by reclamation on Tsing Yi Island. Completion expected in 1999. *Terminal 10:* A four berth Terminal (No. 10) will be constructed on East Lantau Island. Completion expected in 2000. *Terminal 11:* A four berth terminal (No. 11) is expected to be completed in 2000.

NOTICES: Marine Department Notice No. 42 of 1985 (Dated 4th March 1985).

Quarantine Inspection – Eastern Quarantine Anchorage

1. Masters, Owners and Agents of ships are advised that with effect from 1st April, 1985, a Quarantine Service will be available in the Eastern Quarantine Anchorage between the hours of 0800 and 1800 daily upon request. Ships requiring this service should make a request to the Vessel Traffic Centre when establishing contact on VHF Radio Channel 12 prior to arrival.

2. The existing continuous Quarantine Service in the Western Quarantine Anchorage remains unchanged.

3. Marine Department Notice No. 186 of 1984, concerning arrangements for obtaining the services of the Port Health Doctor at the Eastern Quarantine Anchorage will be superseded with effect from that date.

4. Copies of the Notice may be obtained free of charge from the Port Formalities Office, Marine Department, 3/F, Harbour Building, 38 Pier Road, Hong Kong.

Signed: Director of Marine.

Marine Department Notice No. 152 of 1984 (Dated 8th August 1984).

Notice to Owners, Agents and Masters of vessels of over 300 gross registered tons calling at Hong Kong

Owners, Agents and Shipmasters are reminded that Vessels of more than 300 gross registered tons are required to have on board, whilst in the waters of Hong Kong, very high frequency (VHF) radiotelephone equipment. Such vessels are required to make contact with the Vessel Traffic Centre on Channel 12 or 14 of the VHF radiotelephone before they enter the waters of Hong Kong and thereafter to make reports as specified in the Shipping and Port Control Regulations. In addition, a continuous listening watch must be maintained on the radiotelephone, on the specified channels. Failure to comply with these requirements renders the Master liable to prosecution.

Accordingly, Owners and Agents are requested to advise the Masters of vessels enroute to Hong Kong of the foregoing requirements.

The booklet, Hong Kong Shipping and Port Control Laws giving further details is available from the Marine Department Headquarters, Harbour Building, 38 Pier Road, Hong Kong, price $5. You should obtain a copy of this booklet if you are in any doubt as to the laws applicable in Hong Kong.

You are also advised to obtain the publication "Hong Kong Vessel Traffic Services User's Guide for Group 1 Users", promulgated with the intention of facilitating users' familiarisation with the Vessel Traffic Service, which is being introduced with a view to its ultimate compulsory participation.

Please note that the requirement to comply with these VHF reporting procedures does not apply to any vessel to which Part IV of the Shipping and Port Control Ordinance applies.

Signed: Director of Marine.

Notice to Mariners No. 39 of 1983:

Hong Kong Waters, Approaches to Hong Kong Permission to Enter Hong Kong Waters

1. Agents and Masters are reminded that it is mandatory for ships to obtain permission to enter Hong Kong waters from the Director of Marine. It is in their best interests to give as much prior notice as possible before arrival. Permission to enter is conditional upon the following information being supplied to the Director:

(a) Name and nationality of vessel.
(b) Number of persons on board.
(c) Type of vessel.
(d) Reason for call at Hong Kong.
(e) ETA off Waglan Island.

2. The Director of Marine can be contacted through the Vessel Traffic Centre ("MARDEP") in any of the following ways:

(a) By W/T or R/T (HF) via Hong Kong Radio (VPS).
(b) By R/T on VHF Channel 12 (156.60 MHz).
(c) By Telex: 63607 Mdpcc Hx.

Signed: Director of Marine.

Notice to Mariners No. 52 of 1986

Hong Kong Waters – Approaches to Tolo Harbour Establishment of Pilot Boarding Station

Date: With effect from 1st September 1986.
Position: Latitude 22° 29' 36" N., Longitude 114° 19' 42" E.
Area: Tolo Channel.
Details: A pilot boarding station has been established in the above position.
Remarks: Providing its Master has reported to the Authority in accordance with Section 10E of the Pilotage (Amendment) Ordinance 1985, a ship required to be under Compulsory Pilotage may navigate in the pilotage area without a licensed pilot, if it is on its inward voyage from the time it enters the pilotage area to the time it arrives at a pilot boarding station, so long as it is directly proceeding to a pilot boarding station and if it is on its outward voyage under the pilotage of a licensed pilot, from the time the licensed pilot disembarks to the time it leaves the pilotage area, so long as it is directly leaving the pilotage area.

Charts Affected: BA 939, 3386.

Signed: Director of Marine.

Marine Department Notice No. 44 of 1995.

Pre-Arrival Notification before Entering Hong Kong Waters

1. Owners, Operators, Agents and Masters or persons-in-charge of vessels intending to enter the waters of Hong Kong, are required, under the Shipping and Port Control (Amendment No. 2) Regulation 1994, Cap. 313, the Law of Hong Kong, to submit to the Vessel Traffic Centre (VTC, call sign "Mardep"), at least 24 hours before the vessel's intended entry, the information specified in the Annex to this Notice.

2. The information is required by VTC for processing a vessel's application for permission to enter the port. Permission for entry may be refused, withheld or delayed if such information is not received by VTC.

3. Copies of this Notice may be obtained free of charge from the Port Formalities Office, Room 318, Harbour Building, 38 Pier Road, Hong Kong.

Signed: Director of Marine.

Annex: Pre-Arrival Notification before Entering Hong Kong Waters:

1. Name of vessel.
2. Call sign of vessel.
3. Flag of vessel.
4. Type of vessel.
5. Gross registered tonnage of vessel.
6. Length overall of vessel in metres.
7. Number of crew including Master.
8. Purpose of call in Hong Kong.
9. Estimated maximum draft of vessel in metres on arrival.
10. Any defects affecting manoeuvrability or seaworthiness, or special condition of the vessel or its cargo.
11. Quantities and categories of dangerous goods onboard including radioactive materials (insert "None" if applicable).
12. (a) Name of Agent of vessel in Hong Kong (insert "None" if no Agent appointed and indicate whether an Agent is to be appointed or whether the Master is to act as Agent).
    (b) Name of Master of vessel.
13. Intended pilot boarding station if a Pilot is required.
14. Estimated time of arrival at intended pilot boarding station (expressed as "YY/MM/DD/hh/mm").
15. Last port of call (state name of port and country or territory).
16. Height to highest point of vessel in metres above waterline on arrival.
17. Any other relevant information (if applicable).

Marine Department Notice No. 45 of 1995.

Airdraft Information

1. Shipowners, Operators, Agents and Masters or persons-in-charge of vessels or other floating craft intending to enter the waters of Hong Kong are reminded to provide the Vessel Traffic Centre (VTC, call sign "Mardep") with the airdraft of such vessels or floating craft. This information should be included into the pre-arrival notification of the vessel and be submitted to the VTC not less than 24 hours before the vessel's intended entry into the waters of Hong Kong. Airdraft is defined as the height of the highest point of a vessel's structure above sea-level at any particular draft.

2. Copies of this Notice may be obtained free of charge from the Port Formalities Office, Room 318, Harbour Building, 38 Pier Road, Hong Kong.

Signed: Director of Marine.

Marine Department Notice No. 121 of 1987

Compulsory Pilotage

1. Notice is hereby given that the Pilotage (Amendment of First Schedule) Order 1987 will come into effect on 1st August, 1987. The Order will extend the requirement for compulsory pilotage generally to ships of 5,000 gross registered tonnage, or over, as specified in the First Schedule. The amended First Schedule will specify the following vessels:

(1) A ship of 5,000 gross registered tonnage or over.

(2) A ship of 1,000 gross registered tonnage or over, but under 5,000 gross registered tonnage, proceeding to or from any wharf specified in Part I of the First Schedule, and any container terminal specified in the Third Schedule, to the Dangerous Goods (Shipping) Regulations.

(3) A ship of 1,000 gross registered tonnage or over carrying dangerous goods specified in Categories 1, 2 and 5 in the Schedule to the Dangerous Goods (Classification) Regulations.

(4) A ship of 1,000 gross registered tonnage or over, but under 5,000 gross registered tonnage, proceeding to or from a Government mooring buoy.

(5) A ship of 300 gross registered tonnage or over which –

(a) is for any reason, unable to proceed under its own power, manoeuvre with its own steering gear, or work with its own anchors;

(b) has any part of the hull structure removed, or under repair, which may affect the watertight integrity of the ship; or

(c) is at risk of causing injury to persons or damage to property, any other ship or the environment by virtue of the condition of the ship or the nature or condition of its cargo.

2. Copies of the Pilotage (Amendment of First Schedule) Order 1987 (Gazette Legal Notice No. 163 of 1987) may be obtained from the Government Publications Sales Centre, Ground Floor, General Post Office Building, Connaught Place, Central, Hong Kong.

Signed: Director of Marine.

SHIPMASTER'S REPORT: October 1984 (Updated 1996).

Immigration: Notice to Master – Immigration Clearance on Arrival in Hong Kong (Form 1D 245A)

1. (Text) Being the Master of a vessel, you are required, on arrival of the vessel in Hong Kong, to anchor or moor the vessel at an approved Immigration Anchorage (as illustrated on the back page) for as long as may be necessary for Immigration examination, and hoist the Immigration Examination Signal until an Immigration Officer permits you to lower it. The Immigration Examination signal should be, by day, the letters H. N. N. shown by means of signal flags and, by night, 3 lights coloured WHITE in a vertical line one over the other, equally spaced at a distance of not less than 1 m. and visible from any direction at a distance of at least 1 nautical mile. Failure to comply with this requirement is an offence under the Immigration Ordinance, Cap. 115, Laws of Hong Kong and is punishable with a maximum fine of HK$120,000.

2. This opportunity is also taken to remind you that it is your duty to ensure that no persons leaves or boards your vessel (except a Port Health Officer or a Pilot in the course of his duty) and nothing shall be removed from or taken or placed on board your vessel before Immigration Examination.

Master's Remark: Approaching the Western Quarantine Anchorage without a Pilot was difficult, because of an enormous quantity of Chinese and local junks occupying the very narrow roads, waiting for their turn to be cleared. Vessel dropped anchor at 0900 hrs. local time and first persons to board were 2 Customs Officers who came on board by means of lowered accommodation ladder. They were followed half an hour later by the doctor and thereafter by the ship's Agent and shipchandler. As soon as the yellow flag was lowered bumboat people rushed to the ship displaying their merchandise on the aft part of the ship's deck. When Immigration Officers boarded almost 3 hours later they seemed to be very upset and asked me immediately to remove all persons not belonging to the ship's crew and furthermore to write a letter to their office explaining why I let anybody board before Immigration had cleared the ship. Fortunately I had hoisted the signal H. N. N. as per Agent's advice. With few words, they cleared the vessel at 1400 hrs. and I did not have to pay a penalty. They warned me again and told me on my request, after giving me their Circular 1D 245A that nobody including Customs Officers shall board the vessel except Pilot or doctor before them and whenever the Customs Officers want to board before (which is the usual case) the Master is to contact MARDEP on Channel 12 VHF, asking to contact Immigration Office to get Immigration's confirmation for the Customs to board the vessel before Immigration have cleared her. They told me furthermore not to lower the accommodation ladder and to repulse any person who tries to board.

Note: (1993) All ocean-going vessels can obtain Pre-Arrival Clearance, except those registered in North Korea or carrying North Korean crew.

Sailing without a Pilot was also not very easy and I strongly recommend Masters to take Pilots whenever entering or leaving the port of Hong Kong due to the great amount of traffic in this port.

MARDEP – Reporting Points: Vessels entering Hong Kong must report their passing to MARDEP on Channel 12 VHF at the following points:

Through East Lamma Channel	*Through West Lamma Channel*
Wang Lan Island	Wang Lan Island
Potoi Island	Potoi Island
LCS 1 Lamma Channel Buoy	Cheung Chau Island
Lamma Patch Channel Buoy	Green Island
LCS 2 Lamma Channel Buoy	
Green Island	

Through Tathong Channel
Wan Lan Island
Tathong Point
Hak Kok Tau (Cape Collinson)
Lei Yue Mun

RADIO OFFICER'S REPORT: September 1990 (Updated 1996).

Since September 1st 1992, the Pre-Arrival Clearance facility has been possible for all vessels except those registered in North Korea or carrying North Korean crew.

Radio Free Pratique possible.
Advance Port Clearance possible.

To obtain entry permission, MARDEP should be informed of the following information at least 12 hours before arrival:

1. Name/Call Sign.
2. Flag.
3. Type.
4. G.r.t.
5. LOA.
6. Number of Persons on board.
7. Reason for Call.
8. Arrival Draft.
9. Any Defects.
10. IMO Class 1, 2 and 3.
11. Agent.
12. Pilot Yes/No.
13. ETA Pilot Station.
14. Last Port.

At least 4 hours before arrival:

1. Name/Call Sign.
2. ETA Pilot Station.
3. Any Change to First Message.

Radio Pratique:
"Name" "Type"
"ETA HK", called "Last Ports in 14 days with dates of departure", Crew "Number", all healthy, possess valid travel documents and vaccination certificates, no infections, disease occured/sick person on board, valid Derat Exemption Certificate issued "Date" at "Port" apply for Radio Pratique Master.

Advance Port Clearance (staying one day only):
Name/Call Sign.
ETA Hong Kong.
Nationality.
G.r.t.
N.r.t.
Certificate of Registry, Issue Date, Expiry Date, Annual Date, Authority.
Load Line.
Safety Construction.
Safety Equipment.
Safety Radio.
Derat Exemption.
Request Advance Port Clearance.
Signed Master.

Send if coming from Australia:
Hong Kong Official Crew List.
List of Ports of Call.
Copies of: Ship's Registry, Safety Equipment, Safety Construction, Load Line, Safety Radio, Derat Exemption.

Agent:
All Certificates.
Minimum Safe Manning Certificate, 1 copy.
Last Port Clearance.
Ordinary Crew List, 3 copies.
Stores List, 2 copies.
Customs and Excise Service Form, 2 copies.
Tonnage Form, 1 copy.

Quarantine:
Maritime Declaration of Health, 1 copy.
Crew List, 1 copy.

Immigration:
Officers will not board when Pre-arrival Clearance granted.
If they do board – Arrival: 3 Crew Lists.
2 Passenger Lists.
– Departure: 2 Crew Lists.
2 Passenger Lists.

Police:
Arms and Ammunition List, 1 copy (will not always attend).

Customs:
See "Documents" – "Customs & Excise Department".

SHIPMASTER'S REPORT: July 1991.

Terminal: Lamma Power Station Terminal(See Plan).

Cargo: Coal for discharging.

Location: West side of Lamma Power Station, Lamma Island, in position Lat. 22° 13.1' N., Long. 114° 5.9' E. (See B.A.Chart No. 1918).

Approaches to Terminal: Approach to berth is via a 2 nautical mile dredged channel at South side of the berth. This channel widens into a turning basin immediately off the berth. Pilot normally boards 1.5 miles South of Yuen Kok, South of Lamma Island. Channel is 260 m. wide and has a depth of 16.5 m., and is marked by lighted buoys on both sides of the channel. Berthing and unberthing are in daytime only. Pilots for berthing are available until one hour before sunset. Four tugs are used, two made fast and two assist. Tug's lines used.

Jetty Particulars: Jetty is supported by piles and connected to Power Station by an access road alongside the coal conveyors. Length of jetty 290 m., width 26.0 m. and depth alongside 16.5 m. The berthing face is on the West side. On the East side of jetty, there is a coaster berth and ferryboat landing. A display board is fitted near the South end of jetty to indicate distance off and berthing speed of vessel.

Mooring fenders: 8×75 ton quick release hooks, 10×50 ton quick release hooks and 4×50 ton mooring bollards. There are 10 rubber fenders of different configuration for berthing and protection of jetty.

Fire protection: The jetty is protected by fire hydrants.

Coal Unloading Equipment: There are 2 grab type unloaders of 25 tonnes S.W.L. and one continuous unloader. Maximum unloader travel 230 m. Grab outreach from fender 28 m.

Freeboard limitation: No restrictions.

Communications: VHF Channels 6, 9 and 11.

Operational Particulars: Maximum vessel draft: 14.35 m.

Maximum vessel length: 262 m.

Maximum vessel beam: 40 m.

Density of water off berth: 1022/1025.

Berthing: Daylight only from HW + 30 minutes to LW − 30 minutes.

Unberthing: Daylight only, at any state of tide.

Linesmen: Provided by Lamma Power Station.

Lineboat: Pilot launch usually doubles as lineboat. Lamma Power Station also have a workboat available.

Bunkering: Not permitted when vessel is alongside. Vessels requiring bunkers will shift from Lamma to the West Anchorage via Western Lamma Channel. Maximum draft 8.5 m. for passing the channel, to take bunkers.

AUTHORITY: Marine Department, Harbour Building, 38 Pier Road, G.P.O.Box 4155, Hong Kong. *Tel:* 5-8523001. *Telex:* 64553 Marhq Hx (Headquarters). 63607 Mdvts (Vessel Traffic Centre). *FAX:* 5449241. *Cables:* Mardep Hong Kong. *Contact:* Director of Marine.

AGENT: Jardine Shipping Agencies (Hong Kong) Ltd., Room 1608-1612, 16th Floor, Tower 1, Metro Plaza, 223 Hing Fong Road, Kwai Chung, New Territories, Hong Kong. Tel: 852-24183467. Telex: 63454 JMSHA HX. Fax: 852-24278946. Cables: Jarocean.

NOTES

Please also advise Shipping Guides Ltd.

Iceland

AKUREYRI: 65.41 N. 18.03 W. (See Plan)

DOCUMENTS: See "Reykjavik".
APPROACHES: Natural well protected harbour formed by Oddeyri peninsula and the end of the fjord. Entrance to harbour (Pollurinn) has a width of 800 m. and depth of 47 m.
PILOTAGE: Not compulsory but available by arrangement with Senior Pilot.
VHF: Channels 16 and 12.
TUGS: Two tugs available, 1×800 h.p. and 1×250 h.p.
BERTHING:

Berth	Berth No.	Length (m.)	Depth at LW (m.)	Remarks
Krossanes	1	50	6.0	Oil, fish-oil, meat, cement
Drattarbraut	3			Slipway
Slippkantur	4	275	6.0-7.0	Ship repairs, asphalt tank
Togarabryggja 1	6	110	6.5	General cargo
Togarabryggja 2	7	67	6.5	General cargo
Londunarkantur 1	8	75	6.0	Fish landing
Londunarkantur 2	9	65	5.5	Fish landing
Esso-bryggja	10			Oil
Tangabryggja	11	70	8.0	Cattle feed, General cargo
Oddeyrarbryggja	12	140	7.5	General cargo, Passengers
Torfunefsbryggja	13	100	5.5	Passengers
Austurbakki		170	7.0	Fish landing

STEVEDORES: Working hours: 0800 – 1600.
MEDICAL: Full hospital facilities available without prior notice.
TANKERS: At Oddeyri (KEA-bryggja) and Krossanes, there are oil berths with depths alongside of 5.0 m. – 6.0 m.
FRESH WATER: Available at quays.
FUEL: Gas and fuel oil is available from Oliuverslun Islands (BP), Oliufelagio Hf. (Esso) and Oliufelagio Skeljungur (Shell).
CONSULS: Denmark, Finland, France, Germany, Norway, Sweden and U.K.
REPAIRS/DRY DOCKS: One floating dock, length 116.4 m., lifting capacity 5,000 tons.

Two patent slips, one for vessels up to 200 d.w.t. and the other for vessels up to 1,000 d.w.t. Ordinary repairs can be effected. Shipyard has a quay of 275 m. length with a depth of 7.0 m. Divers available.
SURVEYORS: Det Norske Veritas: Brynjar Skapason, Hamarstig 35, 600 Akureyri. Tel: 354-462-1782, 354-462-2375. Fax: 354-462-1027.

Lloyds: Olafur Larsen, Kotargeroi 1, 600 Akureyri. Tel: 354-462-4303.
AIRPORT: At Akureyri, 2 km. from the port.
AUTHORITY: Port of Akureyri, P.O.Box 407, 602 Akureyri, Iceland. *Tel:* 354-462-6699. *FAX:* 354-461-1517. *Contact:* Guomundur Sigurbjornsson, Port Director (After hours Tel: 354-462-2346). Gunnar Arason, Harbour Master (After hours Tel: 354-462-4293).

GRUNDARTANGI: 60.20 N. 21.41 W.

DOCUMENTS:
Crew Lists.
Stores List.
Crew's Declaration of wine, spirits, tobacco and radios.
Cargo Manifest.
Customs Documents.
Health Documents.
PILOTAGE: Not compulsory, but can be obtained from Reykjavik, Akranes or Hafnarfjordur.
ANCHORAGE: At Maiuhofn, approximately 1.5 miles East of the Grundartangi Quay.
RESTRICTIONS: No restrictions.
RADIO: Reykjavik Radio (TFA).
VHF: Port works on Channel 14.
TUGS: Available from Reykjavik, Akranes and Hafnarfjordur.
BERTHING: One quay with length 120 m. and depth 8.0 m. A second quay with length 55 m. and depth 10.0 m.
CRANES: Cranes of 10 tons – 12 tons capacity.
BULK CARGO FACILITIES: One crane with a discharge rate of 300 t.p.h.
STEVEDORES: Contact Transport Manager at Icelandic Alloys Ltd. Working hours: Monday – Friday, 0730 hrs. – 1600 hrs. Overtime can be arranged.
MEDICAL: No facilities locally.
DENSITY: 1025.
FRESH WATER: Available by hose.
FUEL: Gas oil, diesel oil and IFO available from Reykjavik.
CONSULS: Located in Reykjavik.
REPAIRS: Contact Thorgeir & Ellert, 300 Akranes. Tel: +354-431-4611. Fax: +354-431-1833.
DRY DOCKS: Slipway with 2,000 d.w.t. capacity in Reykjavik.
SURVEYORS: Survey Ltd. (Lloyd's Agents). Tel: 587-8422.
GANGWAY/DECK WATCHMEN: Not available.
HATCHES: Opening and closing by crew.
CUSTOMS ALLOWANCES: 200 cigarettes and one bottle of spirits.
REPATRIATION: Not usually undertaken.
AIRPORT: Keflavik Airport, distance 150 km.
TIME: GMT.
HOLIDAYS: Saturday, Sunday, New Year's Day, Easter, Whitsun, 1st May, 17th June, Christmas Day and New Year's Eve.
POLICE/AMBULANCE/FIRE: Tel: 112.
EMERGENCY CO-ORDINATION CENTRE: Tel: 112.
TELEPHONES: Telephone on quay in a shed.
BANKS: National banks in Akranes and Reykjavik.
STORING: See "Prelims".
1. Yes.
2. Yes.
3. Yes.
4. Yes.
5. Customs in attendance when wine, spirits and tobacco are supplied.
6. No.
SHIP SUPPLY SERVICE: Contact Frilager. Tel: 525-7553.
SHORE LEAVE: Allowed.
GARBAGE DISPOSAL: Available on quay.
WASTE OIL DISPOSAL: Contact Uppdaeling. Tel: 587-8720.
SEAMAN'S CLUBS: Located in Reykjavik.
CURRENCY: Icelandic Krona.
AUTHORITY: Icelandic Alloys Ltd., Skilmannahreppur 301, Grundartangi, Borgarfjordur, Iceland. *Tel:* +354-432-0200. *Telex:* 2131 Alloys Is. *FAX:* +354-432-0101. *Contact:* Petur Baldursson, Transport Manager.

HAFNARFJORDUR: 64.04 N. 21.58 W. (See Plan)

PORT LIMITS: The seaward boundary is drawn as follows:
Line 1: 020°, from Lat. 64° 02.4' N., Long. 22° 08.0' W. ("Hraunsnes").
Line 2: 272°, from Lat. 64° 04.7' N., Long. 21° 59.2' W. ("Balaklettur").
These lines cross at Lat. 64° 04.9' N., Long. 22° 05.9' W.
DOCUMENTS: Documents required for Immigration and Customs clearance:
3 copies of Cargo Manifest
2 copies of Crew List and Passenger List
1 copy of Crew Declaration to the Customs
1 copy of Stores List
Customs Clearance from Last Port.
APPROACHES: Vessels, with a draft of 7.0 m. or greater, are warned that shoals exist at Lat. 64° 04.7' N., Long. 22° 08.8' W. (1.5 miles×260° from Valhusagrunn Buoy).
PILOTAGE: Pilotage is compulsory for all foreign vessels and is available 24 hours. The Pilot usually boards the vessel 0.5 miles S.E. of the Outer Buoy (Valhusagrunn, red) and requires 2 hours notice on VHF Channel 14 (or mobile telephone 8925493). Smaller vessels and Masters familiar with the port are invited to proceed to the Inner Buoy (Helgasker, green). The Buoyage is IALA "System A". VHF communication with the Pilot on Channel 14.
ANCHORAGES: For vessels awaiting the Pilot, a good anchorage is to be found 1 mile S.S.E. of the Outer Buoy (Lat. 64° 04' N., Long. 22° 04' W.). Smaller vessels may anchor 0.4 miles North of Hvaleyrarhofdi (Lat. 64° 03.9' N., Long. 21° 59.9' W.).
MAX. SIZE: Max. draft 8.5 m.
Tankers: Max. LOA 190 m., max. draft 11.0 m. for arriving tankers.
VHF: Pilot on Channel 14.
TUGS: Hafnarfjordur Pilot tug with 4 tons bollard pull. Further tugs can be ordered from Reykjavik.
BERTHING: The inner harbour is enclosed by 2 breakwaters. The Northern one is 200 m. long and the Southern one 400 m. Entrance channel is 150 m. wide, 9.0 m. deep, bottom soft clay.
North Quay: 245 m. long, depth 5.5 m. to 6.5 m., bottom soft clay. For general cargo.
Oseyrar Pier: 130 m. long and 25 m. wide, depth 2.5 m. to 4.0 m. at Southern side and 6.0 m. at Northern, bottom clay. Mainly used for fishing vessels.
South Quay: 430 m. long, depth 6.0 m. to 8.0 m. bottom clay. For bulk and general cargo vessels.
Finger Pier: 70 m. long, 10 m. wide, depth 5.5 m. to 6.5 m., bottom clay. For asphalt and laying.
CRANES: Mobile cranes of various capacities are available.
BULK CARGO FACILITIES: South Quay: Salt Store House for 8,000 tons and facilities for discharging and handling of salt.
SPECIALISED CARGO HANDLING FACILITIES: South Quay: Store House of 12,000 cu.m. for frozen fish and other frozen and refrigerated cargoes and transit cargoes.
STEVEDORES: Working hours are 0800 – 1700, Monday to Friday. Overtime can be arranged.
TANKERS: *Oil Pier:* Inside the head of the Southern Breakwater is a berth for oil tankers. See "Max. Size".
Berthing and Mooring: Vessels approach the harbour entrance on heading 098°, in the line of 2 red lights. When off the harbour entrance, the vessel is swung, assisted by tug, the port anchor is let go and the vessel comes astern inside the breakwater and is moored port side alongside.
Tidal Variation: Up to 4.5 m. Spring tide average 3.9 m. and Neap tide 1.5 m.
DENSITY: 1025.
TIDAL VARIATION: Up to 4.5 m.
FRESH WATER: Available at all quays.
FUEL: Available.
CONSULS: Available at Reykjavik (10 km.).
REPAIRS: All types of deck and engine repairs possible.
DRY DOCKS: None. Slipway for vessels up to 300 tons.

SURVEYORS: Lloyd's Agents and representatives for other classification societies: Konnun Hf., Dranghals 14-16, P.O.Box 10053, 130 Reykjavik. Tel: 354-1-688422. Fax: 354-1-680472.
CUSTOMS ALLOWANCES: 1 bottle of spirits (0.75 litres); 200 cigarettes or equivalent; 6 litres of beer or 1 bottle of wine.
REPATRIATION: Possible.
AIRPORT: Domestic airport at Reykjavik 10 km. International airport at Keflavik 35 km.
TIME: GMT throughout year.
GARBAGE DISPOSAL: Collection service is available and can be arranged by ship's agent.
WASTE OIL DISPOSAL: Collection service is available. Further information can be obtained from ship's agent.
SEAMAN'S CLUBS: Church services for visiting foreign vessels and seamen.
CURRENCY: Icelandic Krona (IKr).
DEVELOPMENTS: Landfill West of harbour with additional 800 m. of wharf planned.
AUTHORITY: Captain of the Port, Buh Husid, Nordurbakka, 220 Hafnarfjordur, Iceland. *Tel:* 354-5652300. *FAX:* 354-5652308. *Contact:* S. Hallgrimsson, Harbour Master.
Board of Direction, Hafnarstjorn Hafnarfjardar, Strandgata 6, 220 Hafnarfjordur, Iceland. *Tel:* 354-1-53444. *FAX:* 354-1-51276.

ISAFJORD: 66.05 N. 23.06 W. (See Plan)

DOCUMENTS: As for "Reykjavik".
Certificates: All relevant certificates required.
PILOTAGE: TFZ Isafjord Radio 2182 kHz. To call Pilot use VHF Channels 16 and 12 or morse lamps or whistle "G".
ANCHORAGE: In Fjord, depth of 6 fathoms.
MAX. SIZE: Dry cargo vessels up to 4,000 g.r.t. Tankers up to 30 ft. draft.
HEALTH: Inform Agent.
RADIO: TFZ 2182 kHz and VHF Channel 16.
TUGS: One small tug available.
MEDICAL: Inform Agent 1 hour in advance. Hospital available.
FRESH WATER: Always available through hose-pipes.
FUEL: All grades available advance notice required is 2 hours.
CONSULS: British, German, Norwegian, Swedish, Danish.
REPAIRS: All types of repairs possible.
DRY DOCKS: 1 small dry dock available.
GANGWAY/DECK WATCHMEN: Necessary. Carried out by crew.
OPENING/CLOSING HATCHES: Performed by crew.
CUSTOMS ALLOWANCES: Tobacco: 200 cigarettes each crew member, 400 for Master.
Wine/Spirits: 1 bottle for each crew member, 2 bottles for Master.
Beer: 24 bottles for each crew member. 48 bottles for Master.
REPATRIATION: No facilities exist.
AIRPORT: Distance from port 2 miles, regular flights.
TIME: GMT. No change.
HOLIDAYS: Work carried out every day.
POLICE/AMBULANCE/FIRE: Police: 3258 and 4222. Fire/Ambulance: 3300 and 3333.
TELEPHONES: None available.
SERVICES: Compass adjusting, radar, echomaster, specialists.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Not required.
AUTHORITY: Isafjord Port Authority, Harbour Building, 400 Isafjordur, Iceland. *Tel:* 354-4-3295. *FAX:* 354-4-4523. *Contact:* Hermann Skulason, Harbour Master (After hours Tel: 354-4-3721).

KEFLAVIK-NJAROVIK: 64.00 N. 22.33 W.

DOCUMENTS: As for "Reykjavik".
PILOTAGE: Pilotage is compulsory for vessels over 100 tons net. Pilot is available for all vessels 24 hours per day and is reached via Reykjavik Radio. Pilot boards vessel 1 mile outside Vatnsnes.
ANCHORAGE: Outside the harbour in depths of 27 m. with good holding ground.
TUGS: Use of tug is not necessary.
BERTHING: Port has concrete pier which will be extended for a length of 110 m., and a wooden quay 45 m. in length. Depth of water in harbour and alongside wharves is 20 ft. to 45 ft. Entrance is easy for access.
STEVEDORES: Working hours: 8 hours per day 0800 to 1700 hrs.
FRESH WATER: Available through hose connection on the quay.
FUEL: Available.
REPAIRS: 2 shipyards available.
AIRPORT: Keflavik International Airport is only 4 km. away.
TIME: GMT. No change.
POLICE/AMBULANCE/FIRE: All Tel: 2222.
TELEPHONES: None available on board.
SHORE LEAVE: Allowed.
AUTHORITY: Harbour Master.

NESKAUPSTADUR, Nordfjordur: 65.09 N. 13.41 W.

DOCUMENTS:
Crew List.
Passenger List.
Customs Documents.
Provision List.
Manifests and Ship's Papers.
PILOTAGE: No Pilots. Road clear, keep in middle of fjord.
ANCHORAGES: Depending wind. With North or N.W. winds anchor towards South coast and well in the fjord. When N.E. off town towards North coast, but keep clear of small boat moorings.
MAX. SIZE: Length/breadth no restriction. Main quay is 70 m. long and it is built right out to the steep bank at the coast. Depth close to jetty 7 m. but increases quickly.
HEALTH: Free Pratique automatic from Customs Officer. Radio for doctor if illness on board.
RADIO: Neskaupstadur Radio 2182 kHz (TFM) 24 hour watch. VHF, Channels 16 and 26. Range approximately 40 miles.
TUGS: No tugs but large motor-boats are normally obtainable if necessary.
BERTHING: No specific requirements unless over 7 m. draft, when fendering required.
STEVEDORES: If possible 24 hours ETA. Preferably before 1600 hrs. for commencing next morning. Load or discharge rates according to goods.
MEDICAL: Always send advance notice of required medical attention. Hospital available, also 3 doctors and dentist.
TANKERS: Diameters of lines 4 in. and 6 in. Oil companies B.P. and Shell have their own small quays. The third company Esso uses B.P. Jetty.
DENSITY: Normal.
FRESH WATER: Shore line on jetty. No barge.
FUEL: Diesel oil only.
CONSULS: Denmark Tel: 71299, 71430. France Tel: 71119, 71114.
REPAIRS: Limited repairs to engines, hull and deck. Good repairs to radars, sounders, tiller pilots, etc.
DRY DOCKS: None. 1 slipway, 450 tons.
GANGWAY/DECK WATCHMEN: Available but not compulsory.
OPENING/CLOSING HATCHES: Normally carried out by crew.
CERTIFICATES: Ship's Register.
CUSTOMS ALLOWANCES: 200 cigarettes a week while in Iceland. Only 1 allowance of spirit, i.e. on arrival 1 to 3 bottles according to occupation.
REPATRIATION: Possible.
AIRPORT: Distance 3 km. Daily flights.
TIME: GMT, no alterations.
HOLIDAYS: Last Thursday April; 17th June; 1st May; 25th and 26th December; New Year, etc. If work is carried out 31st December, 24th December, Saturday before Easter and Whitsun double pay is claimed.
POLICE/AMBULANCE/FIRE: Telephone office at shore end jetty.
TELEPHONES: No arrangement to place telephones on board.
SERVICES: No tank-cleaning equipment. No discharge of tank-washings. Compass adjusting available.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Not required.
DELAYS: None except if berth not available.
DEVELOPMENTS: No expected draft increases. New berths are under construction but will take unforeseen time.
AUTHORITY: Hafnarstjorinn, c/o Gisli Gislason, 740 Neskaupstad, Iceland. *Tel:* 477-1333. *FAX:* 477-1771. *Contact:* Gisli S. Gislason.

PATREKSFJORDUR: 65.35 N. 23.59 W.

DOCUMENTS:
8 copies Crew List.
Passenger Lists.
Custom Documents.
Health Documents.
Manifests.
Bills of Lading.
Ship's Papers.
PILOTAGE: Pilotage not compulsory, but if needed then contact Radio Patreksfjordur on 2182 M/F.
ANCHORAGE: Anchorage is sheltered by the peninsula.
MAX. SIZE: See "Berthing".
RADIO: Radio Patreksfjordur on 2182 M/F.
TUGS: Available.
BERTHING: The entrance has a depth of 4.7 m. to 4.9 m. (15.5 ft. to 16 ft.) at LLWST. The harbour has a depth of 6.4 m. (21 ft.) at LW, and 10 m. (33 ft.) at HW. 320 m. of quayage with depths from 5.5 m. to 5.8 m. (18 ft. to 19 ft.) alongside. The harbour can be entered by day and night.
STEVEDORES: Working hours 0800 hrs. to 1900 hrs.
MEDICAL: Hospital available, contact through radio.
FRESH WATER: Available. No notice required.
FUEL: Available. No advance notice required.
REPAIRS: Machine-shop. General repairs can be effected. Diver obtainable.
AIRPORT: About 26 km. distance from harbour. Regular service, by airlines.
TIME: GMT. No change.
SHORE LEAVE: Allowed.
AUTHORITY: Hafnasjodur Vesturbyggdar, Hafnarbraut 2 Bildudali, 465 Vesturbyggd, Iceland. *Tel:* 354-456-2165. *FAX:* 354-456-2252.

REYKJAVIK: 64.09 N. 21.56 W. (See Plan)

DOCUMENTS:
For the Immigration Office
1 Crew List.
1 Passenger List.
For Customs Authority
Master's Report on vessel's arrival from abroad.
Master's Certificate with Manifests of all goods.
Master's Certificate with Manifests of goods to each port of discharge.
Health Declaration.
List of Provisions and other Stores in ship.
Ordinary procedure at least 5 copies of each manifest (3 for Customs).

PILOTAGE: Pilotage compulsory. Telegraphic address: Harbour Master, Harbour Office, Reykjavik. Desirable advance notice of ETA 24 hours and again notice 3 hours before expected time of arrival. VHF working Channels 12 and 17 at Pilot Station and pilot boats. 24 hour watch maintained.

Pilot boat: Grey hull with red and white deckhouse. International signals used if necessary. Pilot boat leaves harbour on request and meets vessel up to 1 nautical mile off Grotta (East of Buoy No. 6). Most frequent boarding place is Buoy 7 Kollafjordur.

ANCHORAGES: Good anchorage at Kollafjordur in 30 to 35 m. water 1.5 miles North of Engey Lighthouse. Anchorage prohibited in neighbourhood of harbour entrance.

RESTRICTIONS: All day service. Draft in old harbour restricted at MLWST to 7.0 m. (23 ft.), in Sundahofn to 8.0 m. (26 ft.). No other restriction.

MAX. SIZE: Longest straight quay 315 m. Breadth unrestricted. Depth 26 ft. at MLWST (29 ft. at MLWNT). At present 2 installations for oil carriers to discharge through submerged pipelines. Moorings for up to 32,000 d.w.t. ships.

HEALTH: Pratique obtained through Customs Authorities. In case of suspected disease notify port office or Agent in advance.

RADIO: Reykjavik Radio TFA.

RADAR/VHF: Radar service available for vessels approaching harbour. Pilot office can be contacted by VHF Channel 16. Working Channels 12 and 17.

TUGS: Tugs meet vessels on roadstead. Ship's lines used. Twooceangoing tugs of 800 h.p. and 1 smaller tug available.

BERTHING: Larger vessels preferably handled at high water.

Old Harbour: The Old Harbour is protected by 2 moles leaving a 100 m. wide entrance. It is divided into the West Harbour and East Harbour. The Old Harbour is a fishing harbour where passenger traffic is also served. Cruise liners berth in city centre with max. length 170 m. and max. draft 8.0 m. (26 ft.). In the Old Harbour there are several areas for ship maintenance, the main slipways and a great number of firms specialised in services for the fleet. Quayage is about 2,800 m., of which there are 600 m. only for smaller fishing craft. Draft in Old Harbour at MLWST 7.0 m. (23 ft.) and 8.0 m. (26 ft.) at Cruise liners berth. Bottom is sand and mud.

Sunda Harbour – Vatnagardar: This area is the largest for general and containerised cargo, with a special quay for grain and a container terminal with a 1 × 32 ton Paceco Portainer with an outreach of 31 m. Ro-Ro ramp available. The entrance to the area is not restricted and water depth is more than 8.0 m. (26 ft.) at MLWST. Length of quays is 780 m., with a water depth of 8.0 m. (26 ft.) at MLWST. Bottom is sand and mud.

Sunda Harbour – Holtabakki: Another harbour area for general cargo is in Kleppsvik. The entrance is a 50 m. wide channel dredged to 7.0 m. (23 ft.) at MLWST. The water depth at the quay is 7.0 m. – 8.0 m. Length of quay 250 m.

Sunda Harbour – Vogabakki: Length 300 m. Depth 8.0 m. Quay used for handling general cargo.

Sunda Harbour – Grafarvogur: This area is used for discharging and storing of cement, gravel and asphalt for industries in the vicinity. An approach channel has been dredged to 4.0 m. (13 ft.) at MLWST and water depth at the quay is 4.5 m. (14 ft.)

Eidsvik: In Eidsvik there is a quay for the State Fertiliser Plant. The entrance is unrestricted with deep water to the quay.

STEVEDORES: Stevedoring must be arranged in advance preferably by Agent. Working Hours: 0800 – 1700 hrs. With labour unions permission, work may be carried out until 2200 hrs. and on Saturdays.

MEDICAL: Medical attention available without notice. For hospital stay or surgical operation advance notice desirable, either through Agent or port office.

TANKERS: Submarine pipelines diameter for discharging are 8 in. 2 terminals handling vessels of 15,000 – 25,000 g.r.t. Vessels moor to buoys.

DENSITY: Salinity varies from 33.6% to 35.0% giving sea water density about 1027 in average.

FRESH WATER: Water delivered from taps at quay at rate of 20 t.p.h.– 30 t.p.h.

FUEL: Grade of fuel oil 200 – 400 sec. Supplied by barge or lorry.

FIRE PRECAUTIONS: Ordinary precautions for handling of dangerous goods applied.

SURVEYORS: Lloyd's Register, Norske Veritas, Germanischer Lloyd and Bureau Veritas.

GANGWAY/DECK WATCHMEN: Ship's gangway to be used. Watchmen services from ashore not necessary but can be arranged if asked for.

OPENING/CLOSING HATCHES: Carried out by stevedores.

REPAIRS: All kinds of ship repair possible.

DRY DOCKS: Only slipways available up to 2,000 metric tons weight. Dimensions: Length 85 m., breadth 13.6 m.

REPATRIATION: Can be arranged.

AIRPORTS: Reykjavik Airport within 10 minutes drive. Mostly for local routes. Keflavik Airport 50 km. distance, served regularly by airlines both to Europe and America.

CONSULS:

Belgium	Consul General	Tel.	20000
Brazil	Consul	"	11500
Canada	Consul General	"	680820
Chile	Consul	"	38640
Czech Rep.	Commercial Attache	"	19823
Denmark	Embassy	"	621230
Finland	Embassy	"	621577
France	Embassy	"	17621
Germany	Embassy	"	19535
Greece	Consul	"	24303
Israel	Consul General	"	685300
Italy	Consul General	"	623042
Japan	Consul	"	82800
Mexico	Consul	"	25430
Netherlands	Consul General	"	678333
Norway	Embassy	"	13065
Poland	Commercial Attache	"	625710
Portugal	Consul	"	686166
Russia	Embassy	"	15156
Spain	Vice-Consul	"	695500
Sweden	Embassy	"	82022
Switzerland	Consul	"	625870
Turkey	Consul General	"	688588
United Kingdom	Embassy	"	15884
U.S.A.	Embassy	"	29100

CERTIFICATES:
1. Certificate of Nationality.
2. International Tonnage Certificate.
3. Certificate of Seaworthiness.
4. Cargo Ship Safety Construction Certificate.
5. Cargo Ship Safety Equipment Certificate.
6. Cargo Ship Safety Radiotelegraphy Certificate or Cargo Ship Safety Radiotelephony Certificate.
7. International Load Line Certificate.

Passenger ships must have certificates No. 1, 2, 3, 7 and in addition Passenger Ship Safety Certificate.

CUSTOMS ALLOWANCES: 200 cigarettes or equivalent. 1 litre alcoholic beverage, 24 bottles beer or 2 litres of wine.

TIME: Icelandic Summertime used all year round and is same as GMT.

HOLIDAYS: January 1st (New Year's Day); Maundy Thursday; Good Friday; Easter Monday; May 1st; Ascension Day; Whit Monday; June 17th (National Day); First Monday in August (Bank Holiday); Christmas Day and Second Christmas Day. On Christmas Eve and New Year's Eve work stops at noon. Dock work goes on on Bank Holiday and by Labour Union permission work may be carried out on Saturday against overtime payment and exceptionally at night until 2200 hrs.

POLICE/AMBULANCE/FIRE: Police (Main station) 11166; Police (Harbour Station) 10145; Ambulance 11100; Fire 11100.

TELEPHONES: Telephone connection can be arranged at some berths in the old harbour and in Sundahofn telephone connections will be at the quay.

SERVICES: Compass adjusting carried out by private firm as well as tank cleaning.

SHORE LEAVE: Crew members are allowed ashore.

IDENTIFICATION CARDS: Identification card must be carried.

DELAYS: Normally no delay is to be expected beyond that caused by normal customs clearance.

GENERAL: Engines may not be run while ship is berthed.

DEVELOPMENTS: Extension of terminal facilities at Sunda Harbour underway (See "Plan").

AUTHORITY: Port of Reykjavik, Box 382, 121 Reykjavik, Iceland. *Tel:* 354-1-28211. *FAX:* 354-1-28990. *Contact:* Hannes Valdimarsson, Port Director. Captain J. Ingolfsson, Harbour Master.

SIGLUFJORD: 66.10 N. 18.50 W. (See Plan)

DOCUMENTS: As for "Reykjavik".

PILOTAGE: Compulsory. Pilot meets vessel about 400 m. from harbour entrance.

ANCHORAGE: East of harbour in depths up to 25 m. to 30 m., good holding ground. Gales from North set heavy sea, vessels then seek anchorage in small bay S.W. of Siglunes.

RADIO: Siglufjordur Radio TFX 2182 kHz.

VHF: Channels 16, 24, 26 and 27.

TUGS: None available.

BERTHING: There are several piers and wharves inside the North Mole, 4 quays used by larger vessels have depths up to 23 ft. at LW. The quays have lengths from 50 m. to 125 m.

STEVEDORES: Available. Working hours 0700 to 1200 and 1300 to 1700. Overtime can be arranged.

MEDICAL: All facilities available.

FRESH WATER: Available.

FUEL: Available in general grades only.

CONSULS: Denmark Tel. 71672. Sweden Tel. 71440

REPAIRS: Repairs to moderate size vessels can be obtained. Diver available.

GANGWAY/DECK WATCHMEN: Necessary.

OPENING/CLOSING HATCHES: Stevedores normally perform this work.

CARGO GEAR: Cranes lift up to 20 tons.

AIRPORT: Small airport close to town.

TIME: GMT. No change.

POLICE/AMBULANCE/FIRE: All tel. 467-1170.

SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Not required.
GARBAGE DISPOSAL: Service available, Tel: 71237.
WASTE OIL DISPOSAL: Tanks for 5,000 litres.
SEAMAN'S CLUBS: Available, Tel: 94-71514.
CURRENCY: Icelandic Krona (IKr).
AUTHORITY: Siglufjardarhofn, Havegur 58, IS-580 Siglufjordur, Iceland. *Tel:* 467-1237, 467-1433. *FAX:* 467-2038. *Contact:* K. Rognvaldsson, Captain of the Port.

SKAGASTROND: 65.50 N. 20.20 W.

DOCUMENTS: As for "Reykjavik".
PILOTAGE: Pilots are available. When approaching port, order Pilot through Agent if required.
MAX. SIZE: Max. draft 19 ft.
MEDICAL: Doctor available but located in Blonduos 20 km. away, doctor visits Skagastrond 3 days a week.
FRESH WATER: Available.
FUEL: Available.
GANGWAY/DECK WATCHMEN: Not necessary.
OPENING/CLOSING HATCHES: Normally carried out by stevedores.
REPAIRS: Small repairs available.
AIRPORT: Nearest 20 km. away in Blonduos.
TIME: GMT. No change.
POLICE/AMBULANCE/FIRE: Police Station and Firemen in the port.
TELEPHONES: Available.
SHORE LEAVE: Allowed.
AUTHORITY: Arnason Berger, Straumnes, 545 Skagastrond, Iceland. *Tel:* 95-4614.

STRAUMSVIK: 64.03 N. 22.03 W. (See Plan)

This port belongs to the Hafnarfjordur Harbour Authority. It is inside the Hafnarfjordur Port Limits and served by the same personnel.
PORT LIMITS See "Hafnarfjordur".
DOCUMENTS: See "Hafnarfjordur".
APPROACHES: See "Hafnarfjordur".
PILOTAGE: For vessels awaiting the Pilot, a good anchorage is to be found 1 mile S.S.E. of the Outer Buoy (Valhusagrunn, red) Lat. 64° 04' N., Long. 22° 04' W.
ANCHORAGE: For vessels awaiting the Pilots, a good anchorage is to be found 1 mile S.S.E. of the Outer Buoy (Valhusagrunn, red) (Lat. 64° 04' N., Long. 22° 04' W.
RESTRICTIONS: See "Berthing".
TUGS: See "Hafnarfjordur".
BERTHING: Inside the 300 m. long breakwater is a berth, 220 m. long with minimum depth 12.0 m. The entrance channel is 160 m. wide with a depth of 10.0 m.

This port is very narrow for vessels of length over 160 m. Such vessels are only docked and undocked in daylight.
CRANES: Two 8 ton harbour cranes for handling general cargo.
BULK CARGO FACILITIES: There is a suction unloader for discharging alumina.
DENSITY: Mixed salt and fresh water.
TIDAL VARIATION: Up to 4.5 m. Average: Spring tide 3.9 m. Neap tide 1.5 m.
FRESH WATER: Available.
FUEL: Available.
CONSULS: Available at Reykjavik (10 km.).
REPAIRS: See "Hafnarfjordur".
DRY DOCKS: See "Hafnarfjordur".
SURVEYORS: Cargo Surveyors, Lloyd's Agents and representatives for other classification societies: Konnun Hf., Drangahals 14-16, P.O.Box 10053, 130 Reykjavik. Tel: 354-1-688422. Fax: 354-1-680472.
CUSTOMS ALLOWANCES: 1 bottle of spirits (0.75 litres); 200 cigarettes or equivalent; 24 bottles of beer or 1 bottle of wine.
AIRPORT: Domestic airport at Reykjavik (15 km.). International airport at Keflavik (35 km.).
TIME: GMT throughout year.
GARBAGE DISPOSAL: Collection service is available and can be arranged by ship's agent.
WASTE OIL DISPOSAL: Collection service is available. Further information can be obtained from ship's agent.
SEAMAN'S CLUBS: Church services for visiting foreign vessels and seamen.
CURRENCY: Icelandic Krona (IKr).

SHIPMASTER'S REPORT: June 1985.
Pilotage: This is a satellite port under the jurisdiction of Hafnarfjordur Harbour Authority, who supply Pilots. Prior notice via Agents. Confirm by VHF to "Hafnarfjordur Pilots", but will also answer to "Straumsvik Pilots". Pilot boards 1 – 1.5 miles outside harbour.
Restrictions: Large ships berthed and unberthed in daylight only.
Max. Size: Normal max. length 210 m. O.A. Beam unlimited. Depth 12 m., and max. draft guaranteed by charterers 37 ft. (11.28 m.).
Berthing: This port is very small, with one berth only on the inner side of the breakwater. Ships handled comprise about 4 vessels a year of up to 60,000 d.w.t. importing Alumina from Australia for the Icelandic Aluminium Company smelter. Also about 65 vessels a year, of less than 3,000 tons load Aluminium ingots for export.
Tugs: On berthing a tug with bollard pull of 10 to 12 tons, which travels from Reykjavik, is used forward, and the pilot boat, with bollard pull of 3 tons is used aft. In the case of large vessels ships berth head in/port side to.
Cargo Operations: One suction unloader discharges Alumina at about 250-300 t.p.h. For 38,000 tons allow 6 days in port. No public holidays are observed while discharging Alumina. Two travelling cranes also available for loading ingots (8 tons at 20.8 m. radius).
Density: Salt water.
Fuel: Not available.
Fresh Water: Available at about 16 t.p.h.
Provisions: Available at high cost from Hafnarfjordur or Reykjavik.
Other Facilities: None. All minor repairs, medical, Agents, etc., will travel from Reykjavik. There is no permanent population at Straumsvik.
Directions: A group of three conspicuous silos, painted red and white, and about 35 m. in height, are located close to the root of the breakwater and are visible from many miles away.

AUTHORITY: Captain of the Port, Buh Husid, Nordurbakka, 220 Hafnarfjordur. *Tel:* 354-1-652300. *FAX:* 354-1-652308. *Contact:* S. Hallgrimsson, Captain of the Port.
Board of Direction, Hafnarstjorn Hafnarfjardar, Strandgotu 6, 220 Hafnarfjordur, Iceland. *Tel:* 354-1-53444. *FAX:* 354-1-51276.

VESTMANNAEYJAR: 63.30 N. 20.14 W. (See Plan)

DOCUMENTS:
- Health Certificate.
- Crew List.
- Passenger List.
- Manifest.
- Ship's Register.

PILOTAGE: Pilotage compulsory, day and night service. Ship to advise over Vestmannaeyjar Radio ETA. Pilot always available but 1 hour's advance ETA is required.
ANCHORAGE: There are anchorages with depths from 24 m. to 34 m., good holding ground about 0.5 miles North of harbour and on North side of peninsula in depths of 28 m. to 34 m.; this anchorage is exposed to winds between West and North.
RESTRICTIONS: No restrictions except for largest vessels. They must enter at high tide.
MAX. SIZE: 5,000 g.r.t.
RADIO: Vestmannaeyjar Radio. VHF available.
TUGS: Normally join in-coming vessels at anchorage. The use of tug is optional. 1 Tug, 500 h.p.
CRANES: 2 mobile cranes, capacity up to 15 tons.
STEVEDORES: Available. Ordered by Agent. Working hours: 0800-1700 hrs., Monday-Friday.
MEDICAL: Not necessary to receive advance notice. Hospital facilities and doctors available.
TANKERS: Discharge lines, 7 in. No deballasting facilities available.
FRESH WATER: Shore installations on every berth.
FUEL: All grades available.
CONSULS: Denmark, Germany, Norway, Sweden and United Kingdom. To be called through Vestmannaeyjar Radio.
REPAIRS: All repairs possible.
GANGWAY/DECK WATCHMEN: Available.
OPENING/CLOSING HATCHES: Stevedores.
CUSTOMS ALLOWANCES: For each crew member; 100 cigarettes or 20 cigars or 100 grm. tobacco, and 1 bottle spirits.
AIRPORT: Local airport. Daily connection to Reykjavik.
TIME: Local time GMT.
HOLIDAYS: New Year's Day; Good Friday; Easter Monday; Labour Day (1 May); Ascension Day; Whit Monday; National Festival Day (17 June); Prayer Day; Christmas Day (25 December). No work on New Year's Day, Good Friday, Easter Sunday, Whit Sunday, 17 June, Christmas Day.
POLICE/AMBULANCE/FIRE: All tel. 1666.
SERVICES: Radio, radar services etc. Divers available.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Not required.
DEVELOPMENTS: Depth of entrance to harbour to be increased to 6.5 m. New Quays on North Side of harbour to be built in the near future.

SHIPMASTER'S REPORT: August. 1985.
Vessel: Research vessel, length 55 m.
Approaches and Pilotage: Heimaey is the harbour on the largest island in the Vestmannaeyjar Group; off the S.W. corner of Iceland. It is principally a fishing port, and is one of the few places providing shelter on the South Coast of Iceland.

ETAs are sent to Vestmannaeyjar Radio.

The Pilot normally boards from a white and red tug, between Heimaey and Bjarnarey Islands, but in S.E. gales a vessel should go to the North side of Heimaey.

A narrow, tortuous channel, with high cliffs on the North side, and a recent (1973) lava flow on the South, leads into an old Volcano crater where a port has been built.

Berths: The quays are modern, and well fendered. We found the harbour full of fishing boats, but space is kept for visiting vessels. Turning room is restricted, and high winds could make it difficult. The Pilot Tug assists as required.

Officials/Documents: Icelandic Officials can be very strict.

I prepared: 2 Crew Lists, 2 Ship Store Declarations (British Form C14 was accepted, as this was similar to the Icelandic Form). 2 Lists of Items in Bond – including Beer. 2 Personnel Declarations. 2 Ship's Bar Declarations (Including Beer).

Services: A courteous and efficient service was provided.

Water Supplied ex-quay at 10 t.p.h.

Fuel Delivered by Road Wagon, 5 tons at a time. Both IFO 30 and Gas Oil were available. We were able to alter the stem without any bother.

Provisions: Small quantities available through the Agent on Wednesdays.

Repairs: There are several Slips for fishing vessels.

Cranes: Mobile cranes are easily available.

Communications: Flights are frequent to Reykjavik, and there is a ferry to the Mainland.

Recreational Facilities: The main Tourist Attraction is the Volcano, still smoking from the 1973 eruption.

Good views of the spectacular Harbour and Entrance can be had by climbing up into the surrounding hills. The commercial area, near the Docks, is mainly taken up by the fishing industry. There are a few shops, a bank and a post office. Prices are reported to be high.

There are some snack type bars. Beer is Banned! Spirits are available – at a price.

AUTHORITY: Harbour Master.

NOTES

Please also advise Shipping Guides Ltd.

GENERAL (See Plan)

THE INDIAN SHIP POSITION AND INFORMATION REPORTING SYSTEM (INSPIRES): Notice No. 7A/90.

1. With effect from 01 November 1986, the Indian Ship Position and Information Reporting System (INSPIRES) was brought into operation for all Indian merchant vessels, including coastal vessels and fishing vessels of more than 300 g.r.t. All other vessels in the area are encouraged to participate in this system.

2. **Objectives:** INSPIRES has the following objectives:
   (a) to provide up-to-date information on shipping for search and rescue;
   (b) for effective Vessel Traffic Management Services;
   (c) for weather forecasting;
   (d) for prevention and containment of marine pollution.

3. **Area of Applicability** (INSPIRES Area). All the sea area North of Lat. 30° S. in the Indian Ocean including Arabian Sea and Bay of Bengal, on the West along the African Coast between Lat. 10° 30' S. and Lat. 12° N. (boundary of Navarea VIII) and in the East upto Long. 95° E.

4. **Operating Authority:** The Director General Shipping shall co-ordinate the functioning of the system with Maritime Operations Room, Mumbai. The Indian Naval Communication Centres (COMCENs) Mumbai (VTF) and Vishakhapatnam (VTO); Mumbai Radio (VWB) and Madras Radio (VWM) will participate as the shore stations for receiving INSPIRES messages.

5. **Types of Reports.**
   (a) *Sailing Plan (SP):*

   Immediately prior to departure, at departure or immediately after departure from a port within the INSPIRES area, or when entering the INSPIRES area.

   As the Sailing Plan message is lengthy with full particulars, it would be advisable to send this directly by telex. In the event the sailing time is changed by more than two hours, then only the time may be amended by the vessel when the Pilot is disembarked.

   Ships fitted only with Radiotelephony should send their departure reports prior to sailing, and send their position reports through other vessels in the vicinity. Vessels fitted with W.T. are requested to assist vessels not fitted to relay the position reports.

   (b) *Position Report (PR):*

   Every day at time specified below, vessels shall transmit a Position Report:

   A. *West of Longitude 80° E.*

   Latitudes: 0° – 10° N. 0400 – 0455 GMT
   10° N. – 20° N. 0500 – 0655 GMT
   North of 20° N. 0700 – 0755 GMT
   0° – 30° S. 0400 – 0455 GMT

   B. *East of Longitude 80° E.*

   Latitudes: 0° – 10° N. 0300 – 0355 GMT
   10° N. – 20° N. 0500 – 0555 GMT
   North of 20° N. 0600 – 0655 GMT
   0° – 30° S. 0400 – 0455 GMT

   (c) *Deviation Report (DR):*

   When ship's position varies significantly from the position that would have been predicted from previous reports, or when changing the reported route, or as decided by the Master.

   (d) *Final Report (FR):*

   On arrival at destination or when leaving the INSPIRES area.

   (e) *Any other Report:*

   Whenever required as decided by the Master to enhance the effectiveness of the objective of INSPIRES, and may, if necessary, include brief report on cyclones, deep depressions, defects, damages, deficiencies, limitations, etc., of the participating vessel which assists the position reporting system, and also reports concerning marine pollution observed at sea during the reporting period.

6. **Reporting Format.** Reporting format and procedures are given in Appendix 'A'. Sections of the Reporting Format which are not relevant to the ship should be omitted from the report.

7. **Receiving Stations.**
   (a) All the reports specified in Paragraph 5 are to be prefixed INSPIRES and transmitted to the stations detailed in Appendix 'B'.
   (b) At present the reports can be sent by any of the following methods:
      (i) Wireless telegraphy
      (ii) Radiotelephony
      (iii) Radio Telex and
      (iv) Telephone (Terrestrial)
   (c) Particulars of frequencies, watch-keeping timings, telex number, telephone numbers, etc., of Mumbai Radio (VWB), Madras Radio (VWM), COMCEN Mumbai (VTF), COMCEN Vishakhapatnam (VTO) through which the reports can be made are given at Appendix 'B'.
   (d) INSPIRES reports will be accepted free of charge by VTF and VTO. Reports sent through VWB and VWM are chargeable, but are likely to be free of charge in near future.
   (e) The reports should be sent as follows:

Sailing Plan	Before or as near to the time of departure from a port within a system or when entering the area covered by the system.
Position Report	Every day at the time specified in Paragraph 5 (b).
Deviation Report	When the ship's position varies significantly from the position that would have been predicted from previous reports, when changing the reported route or as decided by the Master.
Final Report	On arrival at destination and when leaving the area covered by the system.
Any other Report	Any other report should be made in accordance with the system procedures as notified in accordance with Paragraph 5 (c).

   (f) Importance of forwarding reports at the scheduled times specified in Paragraph 5 (b) is stressed upon the Masters and Shipowners. Masters and Shipowners are advised that if the Position Reports are not received within 6 hours of the scheduled times, names of such vessels will be broadcast on frequencies given in Notice No. 11/89 Paragraph 5. Masters are advised to listen to broadcast BN from COMCEN Mumbai (VTG) for vessels West of 80° E. and broadcast VN from COMCEN Vishakhapatnam (VTP) for vessels East of 80° E., every day at 1400 hrs. GMT on frequencies given in Notice No. 11/89 Paragraph 5. Vessels whose names are enlisted in this broadcast are to send their Position Reports to the concerned COMCEN immediately.

APPENDIX 'A'

STANDARD REPORTING FORMAT AND PROCEDURES

Telegraphy	*Telephone (alternative)*	*Function*	*Information required*
Name of System	Name of System		
INSPIRES	INSPIRES	System Identifier	Ship Reporting System
(1) SP (2) PR (3) DR (4) FR (5) Give in full	State in full	Type of Report	Type of Report (1) Sailing Plan (2) Position Report (3) Deviation Report (4) Final Report (5) Any other Report
A (Alpha)	Ship	Ship	Name and Call Sign or Ship Station identity.
B (Bravo)	Time	Date and time of event	A 6 digit group giving day of month (first two digits) hours and minutes GMT (last four digits).
C (Charlie)	Position	Position	A 4 digit group giving latitude in degrees and minutes suffixed with N (North) or S (South), and a four digit group giving longitude in degrees and minutes suffixed with E (East) or W (West); or
D (Delta)	Position	Position	True bearing (first 3 digits) and distance (two digits) in nautical miles from a clearly identified landmark (state landmark).
E (Echo)	Course	True Course	A 3 digit group.
F (Foxtrot)	Speed	Speed	A 3 digit group in knots and tenths of knots.
G (Golf)	Departed	Port of Departure.	Name of last Port of Call.
H (Hotel)	Entry	Date, time and point of entry into system	Entry time expressed as in (B) and entry position expressed as in (C) or (D).
I (India)	Destination and Ee-Tee-Aye	Destination and expected time of arrival.	Name of port and date time group expressed as in (B).
J (Juliet)	Pilot	Pilot	State whether a deep sea or local pilot is on board.
K (Kilo)	Exit	Date, time and point of exit from the system.	Exit time expressed as in (B) and exit position expressed as in (C) or (D).
L (Lima)	Route	Route information.	Intended track (see Note 2).
M (Mike)	Radio communications	Radio communications	State in full, name of stations/frequencies guarded.
N (November)	Next report	Time of next report.	Date time group expressed as in (B).
O (Oscar)	Draft	Maximum present static draft in metres.	4 digit giving metres and centimetres.
P (Papa)	Cargo	Cargo	Cargo and brief details of any dangerous cargoes including harmful substances and gases that could endanger persons or the environment.
Q (Quebec)	Defect, damage, deficiency limitations.	Defect, damage, deficiencies, other limitations.	Brief details of defects, damage, deficiencies or other limitations.

Telegraphy	*Telephone (alternative)*	*Function*	*Information required*
R (Romeo)	Pollution	Description of pollution incident or observation.	Brief details, including type of pollution (oil, chemicals, etc.), position expressed as in (C) or (D).
S (Sierra)	Weather	Weather conditions to report cyclonic conditions only.	Brief details.
***T** (Tango)	Agent	Ship's representative.	Details of name and particulars of ship's representative for provision of information.
***U** (Uniform)	Size and type	Ship size and type	Details of length, breadth (in metres) gross tonnage and type etc. as required.
V (Victor)	Medical personnel	Medical personnel	Doctor, physician's assistant, nurse, No Medic.
W (Whiskey)	Persons	Total number of persons on board.	State number.
X (X-ray)	Remarks	Miscellaneous	Any other information – give brief details.

Note:

1. For route information, latitude and longitude should be given for each turn point, expressed in C above, together with type of intended track between these points, e.g. 'RL' (rhumb-line), 'GC' (great circle) or 'Coast', or in the case of coastal sailing, the estimated date of passing significant points expressed by a 6 digit group as in (B) above.
2. The International Code of Signals should be used to send detailed information whenever language problems may exist. When the International Code is used, the appropriate indicator should be inserted after the alphabetical index in the text.

* 3. Information under 'T' and 'U' groups shall be provided by the Shipowner or Agent of Indian ships. All other ships may include this information in Sailing Plan (SP) on departure from any Indian Port or entry into the system.

Messages should normally contain the following Groups:

SAILING PLAN: SP A B E F G I L M N O P V W.
Please see Note No. 3.
ENTRY REPORT: SP A B C or D E F G H I L M N O P V W.
Please see Note No. 3.
POSITION REPORT: PR A B C or D E F N.
DEVIATION REPORT: DR A B C or D E F L N and Q, if desired.
FINAL REPORT: FR A B C or D.
EXIT REPORT: FR A B C or D E F K L.

APPENDIX 'B'
(see table below)

APPENDIX 'C'

Frequencies, Call Sign, Class of Emission, Scheduled Time and Details of Transmission of broadcast by COMCEN Mumbai (BN) and COMCEN Vishakhapatnam (VN) are tabulated below:

(a) Broadcast by COMCEN Mumbai (BN):

Name of Station	*Call Sign*	*Frequencies kHz*	*Class of Emission*	*Scheduled Time (GMT)*	*Details of Transmission*
COMCEN Mumbai (Main Station)	VTG 3 VTG 4 VTG 5 VTG 6	2072 4268 6467 8634	A1	0500 Main 1500	VTG 4 VTG 6 Continuous VTG 7
	VTG 7 VTG 8 VTG 9	12808.5 16938 22378		0900 Repeat Period	VTG 3 Night VTG 5 (1430 – 0230 GMT)
				1215 Sunday Summary	VTG 8 Day VTG 9 (0230 – 1430 GMT)

(b) Broadcast by COMCEN Vishakhapatnam (VN):

Name of Station	*Call Sign*	*Frequencies kHz*	*Class of Emission*	*Scheduled Time (GMT)*	*Details of Transmission*
COMCEN Vishakhapatnam (Supplementary station	VTP 3 VTP 4	2295 4238		0500 Main 1500	VTP 4 Continuous VTP 6
	VTP 5 VTP 6	6418 8646	A1	0900 Repeat Period	VTP 3 Night VTP 5 (1430 - 0230 GMT)
	VTP 7	12840		1215 Sunday Summary	VTP 7 Day (0230 – 1430 GMT)

APPENDIX 'B'
RECEIVING STATIONS

Sl. No.	*Station*	*Call Sign*	*Freq. Bank covered*	*Hours of Watch-keeping*	*Answer (kHz)*	*Ship Calling Frequency (Band)*	*Ship Working Frequency*
1.	COMCEN Mumbai Telex 3797 Tel: 250692	VTF 2	4178 – 4187	1430 – 0230	4283	(CH 5) 4181.6 to 4182 (CH 6) 4182 to 4182.4	See Note
		VTF 3	6267 – 6280.5	1430 – 0230	6386.5	(CH 5) 6272.4 to 6273 (CH 6) 6273 to 6273.6	
		VTF 4	8356 – 8374	Continuous	8566	(CH 5) 8363.2 to 8364 (CH 6) 8364 to 8364.8	
	A1	VTF 5	12534 – 12561	Continuous	12849	(CH 5) 12544.8 to 12546 (CH 6) 12546 to 12547.2	
		VTF 6	16712 – 16748	0230 – 1430	17132	(CH 5) 16726.4 to 16728 (CH 6) 16728 to 16729.6	
2.	COMCEN Vishakhapatnam Telex 495-240	VTO 2	4178 – 4187	1430 – 0230	4283	(CH 5) 4181.6 to 4182 (CH 6) 4182 to 4182.4	
		VTO 3	6267 – 6280.5	Continuous	6386.5	(CH 5) 6272.4 to 6273 (CH 6) 6273 to 6273.6	
		VTO 4	8356 – 8374	Continuous	8566	(CH 5) 8363.2 to 8364 (CH 6) 8364 to 8364.8	
3.	MUMBAI RADIO	VWB		Continuous	476, 500, 512, 521	500, 512	
	Telex 11-71135-BRDO			0230 – 1430	4316 8514 8630 12966 16935 22551	Ch. 3, 5, 6, on 4 MHz 8 MHz 12 MHz Ch. 1, 3, 4 16 MHz on 22 MHz	
	A3A			Continuous	2003.5	2182	
				Continuous	2182	C. 813	
				Continuous	8756.1 13128.7	C. 1210	
				Continuous	156.80 MHz 161.90 MHz	VHF Ch. 16 26	
4.	MADRAS RADIO Telex 443	VWM		Continuous	485, 500 512, 515	500, 512	
	A1			0200 – 1400	4301 8674.4 12718.5 16 MHz 16975	Ch. 5, 6, 18 On 4 MHz 8 MHz, 12 MHz 16 MHz	
	A3A			Continuous	2042.5 2182 8722 13150.4	2182 C. 802 C. 1217	
	F3			Continuous	156.80 MHz 161.90 MHz	VHF Ch. 16, 26	

Note: Ships are to indicate their working frequency to COMCEN.

COURTESY FLAG: Correct flag to be flown by foreign ships visiting Indian ports is Indian Merchant Navy Ensign (a red flag with a length of one and one half times the width and with National Flag of India superimposed in top quarter next to staff) and not Indian National flag.
SHIP'S OFFICER'S REPORT: Apart from the various forms and Crew Lists, etc., the Customs Boarding Officer also requires a List of Private Property in possession of the Master, officers and crew on Form No. IV in duplicate and the local Agents need 2 more copies of the same for clearing the vessel inward. This procedure is followed when a vessel arrives from abroad or even when she is arriving from an Indian Port. It is common in both the cases.

ALLEPPEY: 09.29 N. 76.23 E.

PORT LIMITS: On the North by a line drawn from the North boundary pillar (white masonry structure) to 7 fathoms of water. On the South by a line drawn from the South boundary pillar, S.W. to 5 fathoms of water and thereon West to 7 fathoms of water. On the West by a line running North to South joining the Northern and Southern boundary lines. On the East by the beach road from the North boundary pillar to a stone on the beach road 220 ft. East of South boundary pillar.
DOCUMENTS:
(a) For Port Office:
Last Port Clearance (original for verification and return). Ship's Registry (original for verification and return). Load Line Certificate (for perusal and return). Safety Radio Telegraphy Certificate (for perusal and return). Safety Equipment Certificate (for perusal and return). Passenger List (1). Crew List (1). Deck Cargo Certificate (1).
(b) For Customs:
Application for Entry Inwards. Last Port Clearance. Port Office Entry Certificate. Arrival Report. Particulars required by Customs in approved form. Favour Parcel Certificate. Gift Parcel Certificate. Health Report. Opium Certificate. Arms and Ammunition Certificate. Import Manifest. Passengers List. Stores List, Crew List, and Private Property Declaration. Ship's Currency Declaration. ILH Receipt.
PILOTAGE: None. Open roadstead port.
ANCHORAGES: Approach to port free from navigational dangers. The anchorage, 3 miles offshore, provides good holding ground.
MAX. SIZE: Being open roadstead, vessels of any size can anchor according to draft.
HEALTH: Port Health Officer may be contacted by telegram addressed "Cyclone Alleppey" for issue of Pratique certificate. Procedure to be followed in Indian Port Health Rules.
RADIO: Morse system of signalling by light and signalling by International Code flags alone are available. Vessels code can be used as call sign.
VHF: Port Office on Channel 16.
TUGS: 2 tugs owned by Port Department render services per requisitions from Agents. Tugs usually approach vessels after anchoring.
BERTHING: No Berths. Electric cranes on the pier.
MEDICAL: Government hospitals available.
DENSITY: 1025.
FRESH WATER: Only available in very small quantities.
FUEL: Not available.
CONSULS: Nil.
REPAIRS/DRY DOCKS: None.
GANGWAY/DECK WATCHMEN: Available.
OPENING/CLOSING HATCHES: By stevedores.
REPATRIATION: Crew changes are effected subject undertaking by Owners through Agents.
AIRPORT: Cochin, 62 km. North of Alleppey. Internal flights only.
TIME: GMT plus 5.5 hours.
HOLIDAYS: For work on approved closed port holidays and national holidays labourers have to be paid extra in addition to wages.
POLICE/AMBULANCE/FIRE: Emergency (Fire and Police) 100 Alleppey Exchange.
SHORE LEAVE: Crew allowed to land. Foreigners required obtain prior permission of Police authority through Agents.
IDENTIFICATION CARDS: Necessary only when crew land ashore.
AUTHORITY: Port Officer. *Tel:* 2213, home 3594.
AGENT: See "Cochin".

BEDI BUNDER: 22.31 N. 70.02 E.

DOCUMENTS:
1 Maritime Declaration of Health.
1 Last Port Clearance.
6 Crew Lists.
6 Passenger Lists.
4 Stores Lists.
4 Private Property List of crew and officers.
4 Certificates of Currency, Arms and Ammunition and Deck Cargo.
1 Same Bottom cargo list.
1 Hazardous Cargo List with categories.
PILOTAGE: Vessels anchor at roads as pilotage not compulsory; however, if requested in advance by Master to "Portal Bedi", ship may be piloted from Pirotan Lighthouse to Rozi Anchorage about 7 miles from port by local Pilot Guide. Pilot boards vessel off Pirotan Island Light (Lat. 22° 36' N., Long. 69° 57' E.).
ANCHORAGE: Lighterage port. Vessels anchor at Rozi Anchorage about 7 miles from port, where good anchorage up to 7 fathoms at LW.
HEALTH: Pratique granted on delivering Maritime Declaration of Health to Customs Officer on boarding. Vessels having touched yellow fever area prior to arrival granted Free Pratique by Mosquito Party to be deputed from Kandla, which can only be arranged by prior notice failing which vessel has to proceed either Kandla or Mumbai for Free Pratique.
RADIO: Call sign VUK5. Working hours:
0930 – 1130 hrs. 1730 – 1930 hrs.
1330 – 1530 hrs. 2130 – 2330 hrs.
Frequency 600 m. or 500 kHz, working at 429 m. and calling at 500 m.
TUGS: Port tug available for use at anchorage.
BERTHING: No berths.
STEVEDORES: Agents and stevedores require advance ETA of 24 hours for preparing labour gangs. Daily loading is 400/500 tons for bagged cargo.
MEDICAL: 24 hours notice required for medical service. Government hospital at Jamnagar where vaccination/fever injection services available.
DENSITY: 1025.
FRESH WATER: Supplies by barge capacity 50 tons. Possible supply about 50 tons every alternate tide subject adequate supply of water in port area.
FUEL: None.
CONSULS: None.
REPAIRS: No facilities for repairs to ships.
DRY DOCKS: None.
GANGWAY/DECK WATCHMEN: The services of watchmen are recommended.
OPENING/CLOSING HATCHES: By ship's crew.
CERTIFICATES:
Ship's Register.
Load Line Certificate.
Safety Radio Certificate.
Safety Equipment Certificate.
Derat Exemption Certificate.
Cargo Gear Certificate.
AIRPORT: Jamnagar – 7 miles from city. Daily flight Jamnagar-Mumbai.
TIME: GMT plus 5.5 hours.
HOLIDAYS: Non-working days and work not permitted even on payment of overtime charges: Indian Republic Day; Bakri-Id; Holi; Muharram; Gokulastami; Dasehra; Diwali; Ramzan-Id.
POLICE/AMBULANCE/FIRE: District Superintendent of Police 100 and 3795; Ambulance/Casualty Department 4444; Fire 101.
SHORE LEAVE: Crew members allowed ashore in emergency or for medical treatment. Necessary police permits take 48 hours.
REGULATIONS: No launch services available for crew. Only 5 ships allowed to work at time at anchorage. Further arrivals wait turn.
DELAYS: Delay expected for loading and discharging in monsoon due to limited number of barges available.
GENERAL: Tidal port and barges loaded and sent out to ship during tide time only. Loading of barges carried out manually.
DEVELOPMENTS: The scheme of creating additional facilities, road connection, transit godowns, electrification and water supply and cranes, etc. near mouth of creek. This newly developed area is completed and connected by good all weather road with City of Jamnagar.

SHIPMASTER'S REPORT: September 1991.
Pilotage: No pilotage service available.
Anchorage: Lighterage port. Vessels anchor at Rozi Anchorage. The working area is within a circular area with radius 2.0 miles – 2.25 miles, centred on Kalvan Lighthouse and the 10.0 m. line.
Radio: Not confirmed. Okha Radio have no information.
Tugs: Out of use for anchorage.
Fresh Water: Supplies by barges of 100 tons capacity.
Fuel/Luboil: Available.
Repairs: Small repairs available through local Agent.
Dry Dock: Available.
Shore Leave: Crew members allowed ashore. Master must send notice to the local Agent 24 hours beforehand, giving name and crew list's numbers of each person in order to obtain Immigration Officer's permit. The day after which the Agent sends a motor launch to take crew members nominated to the shore.
Regulations: During ship's stay at anchorage (21 days), 7 ships loaded and 1 ship discharged at the same time and 3 ships were waiting turn.
Authority: Immigration/Port Officer.

AUTHORITY: Port Officer.
AGENT: See "Cochin".

BELEKERI: 14.43 N. 74.15 E. (See Plan)

PORT LIMITS: *North:* A line drawn due West from Kawada Guda Peak into the sea up to 7 fathoms of water starting from a point 50 yards above high-water mark of the shore.
East: Seashore of Belekeri Bay 50 yards above high-water mark from North Boundary Mark to rocky promontory in Lat. 14° 40' N. including the Belekeri Creek and all branches thereof, as far as navigable and the shores and banks within 50 yards of high-water mark Spring tides including Islands. All patta lands and other private sites excluded.
South: A line drawn due West from a point 50 yards above high-water mark of rocky promontory in Lat. 14° 40' N. into the sea up to 7 fathoms of water.
West: A line joining the two 7 fathom points in the sea.

ANCHORAGE: The anchorage for shallow draft vessels in open roadstead is with Kukra Island bearing 080°(T) distance about 1.5 miles in depth of 27 ft. to 29 ft. Anchorage for deep drafted vessels is with Kukra Island bearing 080°(T) distance about 2.5 miles in depth 34 ft. to 37 ft.

DOCUMENTS:
8 Crew Lists.
2 Manifests of Stores.
2 Private Property Declarations.
2 Currency Lists.
1 Maritime Declaration of Health.
3 Passenger Lists.
4 Import Manifests.
Last Port Clearance.

PILOTAGE: Not necessary. Vessels anchor in stream and in open sea. Ships can be manoeuvred under guidance of Port Officer.

HEALTH: Medical Officer, Ankola acts as Port Health Officer. Free Pratique to incoming vessels granted by radio. All vessels calling from foreign destination must send radio message addressed "Medical Officer, Ankola", at least 48 hours before entering, giving last port of call, number of crew, health conditions, ETA and requesting Pratique; same message must be repeated to Agents also, on which Pratique granted on shore. Anchoring time is Pratique time. For vessels from Indian ports Pratique not required. Vessels which have taken on board passengers or crew from yellow fever areas within 30 days of departure from such ports will be under quarantine. Free Pratique will not be granted until Mosquito Search Party, from nearest major port (i.e. Cochin, Goa or Mumbai) has inspected, disinfected and certified that ship fit for granting Pratique. Master to inform Agent well in advance if arriving from yellow fever area to enable arrange Mosquito Search Party for quick Pratique.

RADIO: Recommended to give ETA or Pratique messages via Goa or Mumbai Radio.

BERTHING: No berths.

STEVEDORES: ETA required at least 48 hours prior arrival order Agents advise Shippers and stevedores.

MEDICAL: No hospital but good medical aid given at Karwar, 20 miles distant. In case of inoculations and vaccination at least 2 days advance notice to be given for vaccines to be brought from Hubli or Mumbai, distance 100 and 150 miles respectively.

DENSITY: 1025.

FRESH WATER: Can be supplied from Karwar by water barge.

FUEL: None.

CONSULS/REPAIRS/DRY DOCKS: None.

GANGWAY/DECK WATCHMEN: Not required.

OPENING/CLOSING HATCHES: Generally done by ship's crew.

CERTIFICATES:
Ship's Register.
Load Line Certificate.
Safety Radio Certificate.
Safety Equipment Certificate.
Derat Certificate.
Vaccination and Inoculation Certificates.

CUSTOMS ALLOWANCES: 200 cigarettes allowed per crew member. Wine and/or Spirit: 1 bottle of light spirit and 1 bottle of hard spirit per crew member.

CARGO GEAR: Valid International Cargo Gear Certificate not more than 12 months old. Validity shall cover whole period of loading and discharging.

REPATRIATION: Arranged from Goa or Mumbai.

AIRPORT: Nearest airports Goa or Mumbai.

TIME: GMT plus 5.5 hours.

HOLIDAYS: Observed as declared by Port Authorities. Non-working days when work not permitted even on payment of overtime: Republic Day (26th January) and Gandhi Jayanti (2nd October).

POLICE: Tel: 49.

SHORE LEAVE: Permission may be obtained (Chinese personnel not allowed to land on shore).

IDENTIFICATION CARDS: Not required.

AUTHORITY: Port Conservator, Belekeri, Ankola, Uttar Kannada District, Karnataka State, India. *Tel:* Belekeri 22.

BEYPORE: 11.08 N. 75.52 E.

PORT LIMIT: The seaward (Westward) limit of the Port is the 9 fathom line.

DOCUMENTS:
6 copies Crew List.
6 copies Passenger List.
A & B Certificate.
Bill of Health.
Last Port Clearance.
Port and Light Dues Register.
Vessel's Manifest.
Bill of Lading and other documents which may be necessary (6 copies each).
Ship's Certificates.
Register.
Articles of agreement in the case of foreign going vessels staying in Port for more than 48 hours.

PILOTAGE: Pilotage is compulsory. 48 hours and 24 hours notice of ETA required. 2 hours before arrival, vessel to contact Calicut Signal Station through VHF Channel 16. Pilot boards at the anchorage. No night pilotage at present.

ANCHORAGE: Safe anchorage can be obtained in a depth of 7.0 m. – 10.0 m. between Beypore Lighthouse bearing 090° (T) and 045° (T).

RESTRICTIONS: At present, entry only during daytime and during high water, permitted draft 4.0 m.

MAX. SIZE: Maximum permissible length 100 m., beam 12.0 m. and draft 4.0 m.

HEALTH: See "Calicut".

RADIO: See "Calicut".

Signalling: The signal station is situated on the Northern side of the Beypore Port on the inner end of the breakwater. The station is manned only while a vessel is waiting, otherwise VHF contact can be made through Calicut Signal Station.

VHF: 24 hours at Calicut Signal Station, when expecting a vessel, or when there is a vessel at anchorage, calling Channel 16, working Channel 12.

RADAR: No radar station.

TUGS: Two motor tugs of 191 h.p. and 132 h.p. (twin screw) are available for assisting berthing and towing cargo lighters. Number of tugs used for berthing depends on time and weather conditions.

BERTHING: There is a wharf 152 m. in length with closed and open go-down facilities. Draft alongside 4.0 m. at low water. Load/discharge by shore cranes or by ship's gear for handling general and bulk cargoes.

CRANES: There are 4×3 ton shore cranes and 1×5 ton shore crane. No heavy lift cranes available.

BULK CARGO FACILITIES: See "Berthing".

SPECIALISED CARGO HANDLING FACILITIES: None.

BRIDGE: None.

STEVEDORES: See "Calicut".

MEDICAL: General hospital and medical college hospital situated about 12 km. and 18 km. respectively.

TANKERS: No facilities.

DENSITY: 1022 (varies).

FRESH WATER: About 25 tons a day available at cost of Rs.50/ton.

FUEL: Only HSD oil available by trucks with ample notice.

FIRE PRECAUTIONS: Usual precautions.

CONSULS: None.

REPAIRS: Minor deck and engine repairs are possible.

DRY DOCKS: None.

SURVEYORS: The Port Officer, Calicut, undertakes private surveys.

GANGWAY/DECK WATCHMAN: Recommended.

OPENING/CLOSING HATCHES: Normally by stevedores.

CUSTOMS ALLOWANCES: One bottle of spirit and 200 cigarettes for each crew member.

CARGO GEAR: Loading/discharging effected by shore gear and ship's gear.

REPATRIATION: Possible.

AIRPORT: See "Calicut".

TIME: See "Calicut".

HOLIDAYS: See "Calicut".

POLICE/AMBULANCE/FIRE: See "Calicut".

TELEPHONES: No facilities.

SERVICES: Available from Cochin.

BANKS: Many at Calicut.

SHORE LEAVE: Permitted.

IDENTIFICATION CARDS: Required. Shore passes are issued.

GARBAGE DISPOSAL: Can be arranged through Agent.

SEAMAN'S CLUB: None.

CURRENCY: Rupees.

GENERAL: *Charts:* Indian Charts No. 22, 259, 2053 and 2003.

DEVELOPMENTS: Extension of present wharf underway, and 2 go-downs are under construction.

It is also proposed to construct an LPG plant on the Southern bank of the river at Chaliyam, and a suitable wharf with a depth alongside of 9.0 m.

AUTHORITY: Port Officer, Port Office, Kozhikode. *Contact:* Captain C. Ramachandran, Port Officer.

Also see "Calicut".

BHAVNAGAR: 21.47 N. 72.08 E.

DOCUMENTS:
Ship's Register.
Load Line Certificate.
Safety Equipment Certificate.
Safety Radio Certificate.
Last Port Certificate.
Manifest on prescribed form (3 copies).
Declaration of private and personal property.
2 Copies of Crew List.
Customs circulation copy issued by Boarding Officer of last Indian Port of call.
Place and date of Derat Certificate.
Also see "Report" dated January 1996.

PILOTAGE: Pilotage should be arranged in advance through ship's local Agent who may be contacted via the port radio, call-sign VUJ-9. An ETA should be sent at least 48 hours in advance in order to arrange Pilot. Pilotage is compulsory. Pilot boat is normally a tug boat which can be contacted by VHF. Pilot station is 4.5 miles N.N.E. of Piram Island Lighthouse and pilot boat will only be on station when the vessel is scheduled to arrive. Vessels should arrive at Pilot Station about 2 hours prior to time of HW and are advised not to anchor awaiting a Pilot but to make a reciprocal course until arrival of the pilot boat.

ANCHORAGE: Vessels up to 35 ft. draft are anchored about 3 miles Eastward of Perigee Light Vessel (increased from 31 ft. on a trial basis). All vessels at anchorage are loaded and discharged by means of lighters

Precautionary guidance to the Master of the Ship arriving at Bhavnagar Anchorage:

1. Proper anchorage watch to be kept throughout the period at the anchorage.
2. Engine should be kept on stand-by so as to be made available within 20 minutes in case of an emergency when Spring tides are running.
3. To prevent yawing during Spring tides a second anchor is to be used with about 2 shackles and must be heaved up and dropped well in advance of every turn of the tide, (about 1.5 hours before and after tide change) so as not to foul the anchor.

Suggested routine is as follows:

(a) Heave up the riding anchor to one shackle.
(b) Steer well clear, about 35° to 40° from the leading anchor.
(c) Let go second anchor.
(d) Walk back to get good lead on second anchor.
(e) Let go second anchor 1.5 hours after HW.
(f) Heave up second anchor 1.5 hours before LW.
(g) Let go second anchor 1.5 hours after LW.
(h) Heave up second anchor 1.5 hours before HW.
(i) Never clear the fouled anchors during the middle of the tide, it should be done at slack water, i.e. about 1.5 hours before relevant end of the tide.
(j) In case of violent shearing the steering may be used. Auto-pilot can be made use of to steer a course in between yaw.

MAX. SIZE: Up to 500 ft. length, and up to 65 ft. breadth may berth alongside.

Permissible draft for a particular tide is arrived at by subtracting 17 ft. from predicted height of HW for that particular tide.

HEALTH: Healthy ships are granted Pratique by the Pilot. If the Vessel is coming from a Yellow Fever area or a jigger infected port within the last 30 days then Pratique is granted by the Port Health Officer at Kandla.

RADIO: Bhavnagar Port Radio, call sign VUJ-9 should be used for routing ETA messages, and is also used by Agents in cables to shipping.

Time of operation:	0200 – 0700 hrs. 0800 – 1300 hrs. 1400 – 1800 hrs.
Range:	250 miles.
Calling Frequency:	500 kHz and VHF Channel 16.
Working Frequency:	418 kHz and VHF.

VHF: Port Control available 1100 hrs. to 1800 hrs. on Monday to Friday and 1st and 3rd Saturday of each month.

TUGS: Tug assistance is available for berthing and unberthing vessels in inner harbour. Position where tugs join the vessel is dependent upon prevailing weather conditions. Usually ship's lines are used in connections to tug.

BERTHING: Port equipped with 3 berths having 6 cranes with 3 tonnes capacity. Cranes available for loading or discharging ship cargo. 3 mobile cranes with capacity up to 18 tons and 1 fork lift also available.

Storage: Concrete Jetty: 16 transit sheds with floor area of 21,205 sq.m.

Steel Jetty: 3 transit sheds with floor area of 4,753 sq.m.

Godowns: Steel Jetty: 51 godowns with 50 partitions. Total floor area of 59,710 sq.m.

In City: 3 godowns with floor area of 2,230 sq.m.

Ample open storage space is available.

STEVEDORES: The stevedoring gangs are arranged directly by Agents through approved stevedores.

Working Hours: Day: 0800 hrs. to 1200 hrs. and 1300 hrs. to 1700 hrs.

Overtime: 1800 hrs. to 2200 hrs. and 2300 hrs. to 0300 hrs.

Recess: 0300 hrs. to 0800 hrs. and 1200 hrs. to 1300 hrs. 1700 hrs. to 1800 hrs. and 2200 hrs. to 2300 hrs.

MEDICAL: Medical facilities can be arranged by Master through Agent. Hospital facilities available in city of Bhavnagar which is 13 km. from port.

FRESH WATER: Fresh water supplied alongside jetty as well as at anchorage.

Shipmaster's Report: Water is often in short supply, and ships may be unable to obtain any at all at the anchorage. Ships should not rely upon an evaporator to make water at the anchorage, due to the high mud content of the sea water.

FUEL: Oil bunkering available in limited quantity.

FIRE PRECAUTIONS: Alongside jetty fire-fighting facilities available. At anchorage fire-fighting facility is provided by the tug.

Usual fire precautions applicable.

CONSULS: No consulates at port. Nearest consulates are at Mumbai.

REPAIRS: No repair facilities exist for the ship except repairs of minor nature which could be undertaken by private repair firms.

DRY DOCKS: Small dry dock available for repairs of vessel of up to 200 ft. length.

SURVEYORS: Surveyors should be arranged in advance with Agent. Surveyors come from Mumbai.

GANGWAY/DECK WATCHMAN: Gangway and deck watchman are recommended.

OPENING/CLOSING HATCHES: As arranged between the Master and stevedores.

CERTIFICATES: Registration; Safety Equipment; Safety Radio and Telegraphy; International Load Line.

CUSTOMS ALLOWANCES: As per Customs regulations in force from time to time at Indian ports.

CARGO GEAR: Ships should possess valid Cargo Gear Certificate.

REPATRIATION: Possible.

AIRPORT: Bhavnagar City is served by an airport situated about 7 km. from the Port. Regular flights to Mumbai are available daily and to Surat on Monday, Wednesday and Friday.

TIME: GMT plus 5.5 hours.

HOLIDAYS: 8 holidays a year declared by Port Authorities on which working of the ship can be attended at the option of the port.

POLICE/AMBULANCE/FIRE: Police force and ambulance and fire facility available from Bhavnagar City. Limited fire-fighting facility available at port.

TELEPHONES: No facility is available for providing telephones on board the ships.

SHORE LEAVE: Citizens of The People's Republic of China and Pakistan not allowed ashore. All other nationals are allowed to go to Bhavnagar City which is 13 km. from port for which shore passes are issued by Customs Dept.

CREW IDENTIFICATION CARD: Valid international passport or identification card necessary. Shore passes are issued.

REGULATIONS: Photography in port prohibited. No crew member allowed to take liquor ashore.

DELAYS: Delays in berthing depend upon number of ships working on berth and awaiting if any. At anchorage generally not more than 2 ships are worked at a time.

SHIPMASTER'S REPORT: April 1981.

Bhavnagar discharging anchorage is a dangerous anchorage due to strong currents and an abnormal bottom.

All Shipmasters must make contact by cable 24 hours before arrival and await appointment from Port Authorities and Pilot Station. VHF not available and radio station working only during daytime.

All ships must arrive at Pilot Station, maximum 2 hours before HW and only during daytime and in good visibility, otherwise Pilot cannot board.

For many years anchorage was used for discharging, but now closed as about 300 anchor-chains remaining on bottom. In 1981, another anchorage opened, near to the port, and up till April, 4 ships lost anchors due to strong currents and irregular bottom. Contact with shore is very difficult and at night time impossible.

Our vessel was there for discharging and from 0300 hrs. when port anchor broke with 7 shackles of chain, up till 0700 hrs. we were waiting for tugboat from shore to pick up 100 stevedores, but was impossible. At 0700 hrs. we took ship out of dangerous area without Pilot and without any assistance, with 100 stevedores onboard.

To enter Bhavnagar Port, draft no more than 17 ft. and breadth no more than 65 ft., to pass the locks.

SHIPMASTER'S REPORT: July 1992.

Pilotage: Pilot will board 4.5 miles N.N.E. of Piram Island, about 1.5 hours before high water, day or night. However, vessel must have prior confirmation of pilot before arriving at the Pilot Station.

Waiting Area: There is no anchorage area for awaiting pilot close to the port. Lighter vessels may anchor South of Piram Island, where ships awaiting beaching for breaking are generally anchored. Heavily laden vessels are advised to anchor about 5 miles South of Jafarabad Port (20° 51.5' N., 71° 23' E.), about 80 miles S.W. of Bhavnagar, and enter Gulf of Cambay at an appropriate time when called for pilot.

Anchorage: When anchored in the port to work cargo, following routine is suggested during Spring tides:

1. About 1.5 hours after the L.W., use helm to steer clear of the riding anchor and let-go second anchor, 2 shackles in water.
2. About 1.5 hours before the next H.W., heave-up second anchor.
3. About 1.5 hours after the H.W., use helm to steer clear of riding anchor and let-go second anchor, 2 shackles in water.
4. About 1.5 hours before L.W., heave-up second anchor.

During the Spring tides of June 1992, this vessel lost starboard anchor with 7 shackles of cable. Two other ships also lost their anchors in the same period.

It is true that no assistance from the port can be expected at any time of emergencies. The port anchorage area is now congested with more ships than it can take, which can be hazardous during the emergencies.

REPORT: January 1996.

Documents: Required by vessel upon arrival: 10 copies Crew List, 5 copies Personal Effect List with currencies of any kind, 5 copies Stores List with details of Deck/Engine/Saloon, etc.

Berthing: Berthing is out of the question as insufficient water for entering/leaving. Only small lighters up to 2,200 tonnes d.w.t. are brought inside during Spring tides.

All vessels calling at Bhavnagar Port work at anchorage and use private barges and private shore cranes on Jetty.

Shore Leave: Shore passes issued by Immigration Officer and Master to confirm, in advance, via Bhanvagar Radio on VHF, both name and rank of officers and crew landing ashore, so shore passes can be arranged and delivered on arrival.

Developments: No major dredging proposed in near future.

Authority: Port Officer changes from time to time. No permanent Port Captain is stationed at Bhavnagar Port.

AUTHORITY: Port Officer, Gujarat Maritime Board, New Port Bhavnagar, Bhavnagar (Gujarat), India. Pin Code No. 364005. *Tel:* 24302 (office). *Telex:* 0162-224 GMB IN. *Cables:* Portal Bhavnagar.

AGENT: See "Cochin".

CALCUTTA: 22.32 N. 88.22 E. (See Plan)

DOCUMENTS:
Ship's Register.
Load Line Certificate.
Safety Radio Certificate.
Safety Equipment Certificate.
Derat Certificate.
Port Clearance from Last Port.
Indian Coast Light Dues Receipt (if any).
4 copies of Crew List.
4 copies of Passenger List.
1 copy of Through Cargo Manifest.
4 copies of Stores List.
1 copy of Cargo Manifest with B/Lading for the same.
4 copies of Opium and Dangerous Drugs Certificate.
Cargo Plan.
Cargo on Deck Declaration.
4 copies of Certificate of Foreign Currency.
4 copies of Certificate of Arms and Ammunition.
Letter to Assistant Collector of Customs regarding Local Agency.
Letter to Assistant Collector of Customs regarding duty on ships stores.
Application to the Inspector of Police.
3 copies of Arrival Report.
4 copies of Watches and Clock List possessed by each member of the crew.
6 copies Hazardous Cargo, if any.

PILOTAGE: Telegraphic address of Pilot station: VWST "Pilots Sandheads". Radio message should be sent 48 hours prior arrival giving (a) ETA Eastern Channel Lt. Vs.; (b) from . . . to . . . (either Haldia, Budge Budge, or Calcutta); (c) deepest *fresh* water draft; (d) length overall; (e) d.w.t.; (f) whether VHF is or is not on board.

Pilot boards vessel at Sandheads from pilot vessel fitted with W/T, DF, VHF, radar, echo sounder and other navigational equipment, maintains continuous watch on 500 kHz and receives ETA messages of incoming vessels.

As an aid to navigation, navigable channel in river is marked with lights and channel buoys. There is a lighthouse at Sagar and downstream from this point, 2 unattended Light Vessels are stationed at Upper Gasper and Lower Gasper and 2 attended Light Vessels at Intermediate and Eastern Channel Stations. Navigable channel leading to Haldia Port from sea is 63 nautical miles and to Calcutta about 123 nautical miles. There are 15 bars in different reaches of the river, 4 of these are downstream of Haldia and the remaining 11 between Haldia and Calcutta. Since these bars are subject to fluctuations, the river is regularly surveyed and dredged as required. Owing to sharp bends, narrow channel and difficult tidal conditions the navigation of ships between ports and sea requires service of trained Pilots employed by The Port Trust. River Pilots take change of vessels at Sandheads to navigate to Haldia/Baj Baj/Garden Reach, as the case may be. River Pilots manoeuvre vessels to Haldia Dock, but at Baj Baj and Garden Reach hand over the ships to Harbour Pilots, who manoeuvre the vessels on the river moorings at Baj Baj and to the moorings or dock entrance lock in Calcutta. Movement of ships inside docks is guided by Berthing Master.

Shipmaster's Report: December 1983.

Procedure for sending ETA Sandheads Calcutta: Vessels calling at Calcutta should, along with their ETA messages to the Commander Pilot Vessel, Sandheads, also indicate the Owner's/Agent's name and only then will Master's ETA message be recorded, otherwise vessel will not be treated by Calcutta Port Trust on arrival at Sandheads for further coming up river to the port.

ANCHORAGES: Anchorage in River Hooghly at Saugor Roads, Haldia Kalpi, Baj Baj, Diamond Harbour, Royapur, Ulubaria and Garden Reach of which Royapur, Ulubaria and Garden Reach utilised only by ships on passage to and from the port in emergency. Depths of anchorages vary on day to day basis according to River Draft Forecast but on average 30 ft. deep.

RESTRICTIONS: Navigation on River Hooghly is carried out only with Pilot on board and according to tide. Speed of vessel important factor and must be declared to Pilot on board, preferably telegraphed 48 hours in advance to Pilot vessel.

MAX. SIZE: Maximum LOA 565 ft. with beam of 80 ft. for Netaji Subhas Docks and 515 ft. LOA with beam of 70 ft. for Kidderpore Docks. A vessel of 535 ft. and over can sail out as "Tide Time Sailing" only and this restricts her draft from Calcutta.

Maximum LOA of tankers for tanker terminal at Budge Budge is 620 ft. Restriction of beam for vessels berthed at Budge Budge is 85 ft. Deepest draft alongside dock berths in Netaji Subhas and Kidderpore Docks 8.70 m. At Budge Budge deepest draft at any berth 9.00 m. Berthing of vessels, depends on prevailing draft of day published in Draft Forecast for month.

HEALTH: Procedure for obtaining Pratique: To obtain Radio Pratique incoming vessels communicate by wireless to Port Health Officer, Calcutta, Cable address: "Quarantine Calcutta":

(a) No sickness or death from sickness on board within last 15 days.
(b) No sand, earth, pigs, poultry, crew or passenger taken aboard from E. Coast of Africa between Port Sudan and Durban, both ports included.
(c) Ship not touched within last 30 days any port in E. Africa between Northernmost point of Eritrea and Southernmost point of Tanzania, including Island of Zanzibar or any other yellow fever infected area.
(d) No abnormal mortality of rats or mice on board.
(e) No monkey on board.

(Item *(a)* to be sent in code under usual standard quarantine messages required by ships; rest in plain language through local wireless station.)

In case of any suspected disease or fever on board, local Agents may be contacted by cable who arrange for doctor to be sent or for removal of a patient if necessary. Vessels calling at another port in same country are exempted from obtaining Pratique.

RADIO: Calcutta Radio, call sign VWC. R/T. and VHF.

Weather bulletins broadcast to ships from Calcutta Radio (VWC) at 0018 hrs. and 0918 hrs. GMT, on 500/470, 4286, 12745 kHz. Bulletins are preceeded by time signals.

Also see "Pilotage".

TUGS: 15 tugs, 550 hp. – 2,200 hp. Tugs used for vessels after passing lock entrances at Netaji Subhas and Kidderpore Docks. Tugs used for vessels to turn. Vessels own lines. At Garden Reach sailing on ebb tide for "Tide Time Sailings".

BERTHING: Vessels brought in for berthing according to tide. Movements from one berth to another inside dock not dependent on tide, but according to convenience of port. Vessels berthed at riverside jetties or river moorings required to have starboard anchor unshackled in order that starboard chain could be tied to buoy on arrival. After first chain is shackled on, port anchor is unshackled and 2 pieces of chain, each 30 fathoms long are removed from port cable and sent aft by boat and made fast to buoys, etc., and tied to stern of ship. The remaining port cable is tied up to another buoy forward. Vessels at river jetties and river moorings if left during Bore Tide are to comply with following:

Half an hour before low water:
(a) Gangway to be hoisted up, if ashore.
(b) Pipe-lines disconnected and triced up (for vessels at Budge Budge Jetty).
(c) Heave tight on forward chains to keep vessel about 6 ft. off jetty or pontoon. Make sure weight is on bore springs and not on chains aft.
(d) Tighten all buoy ropes.
(e) When bores expected, all vessels in stream shall have steam on main engines, windlasses and winches and a sufficient number of officers and crew on board to tend vessel in case of emergency.

After bore made, and vessel stopped ranging, slack forward chains to old mark. Bore springs can be had through Agents from local suppliers.

Budge Budge (oil terminal) on banks of River Hooghly has river jetties, hence above instructions also apply to vessels berthed at Budge Budge Jetties.

At Budge Budge two lengths of chain provided by Port Trust for stern moorings.

Kidderpore Dock: Dock not in use.

Netaji Subhas Dock: Lock entrance: 700 ft.×90 ft. 8 general cargo berths, No. 1 Berth equipped with 200 ton heavy lift crane. One oil berth, Berth No. 12, used for unloading petroleum products. 6 additional berths available.

Garden Reach Jetties: 2 alongside berths for overside cargo work only.

Budge Budge: Also see "Tankers". 6 jetties which can accommodate vessels up to 625 ft. (190.50 m.) LOA.

These jetties are presently available for handling bulk liquids like edible oil, vegetable oil, soya bean oil, etc., for which separate storage of 59,000 tonnes capacity is under control of the State Trading Corporation.

BRIDGES: 2 bridges; 1 collapsible, 1 swing, situated inside Kidderpore Dock are open for navigation to suit convenience of port.

STEVEDORES: 48 hours notice of arrival at Pilot Station required by Agent.

MEDICAL: Masters in need of medical services required cable Agents. Hospital facilities. Ships leaving for foreign port or minor Indian port (where no Port Health Officer) required to ensure officers and crew have valid health certificates (for cholera and yellow fever if proceeding to a yellow fever area).

TANKERS: Not permitted discharge residue into dock (at Berth No. 12 – Netaji Subhas Dock).

S.G.	A.P.I. of local types of oil
0.91 and 0.94	0.9430 varying to 0.9550.

Tanker terminal at Budge Budge 13 nautical miles from Calcutta by river.

BB Jetty No. 1 for accommodating vessels of LOA 620 ft.
BB Jetty No. 2 for accommodating vessels of LOA 380 ft.
BB Jetty No. 3 for accommodating vessels of LOA 460 ft.
BB Jetty No. 5 for accommodating vessels of LOA 620 ft.
BB Jetty No. 6 out of commission.
BB Jetty No. 7 out of commission.
BB Jetty No. 8 for accommodating vessels of LOA 460 ft. – 580 ft.

Deepest draft alongside jetty berths 9.0 m., but vessels brought up according to prevailing draft as per forecast.

Berthing: Vessel is moored starboard side to at Budge Budge as follows: Port Anchor to about 6 shackles on the Port bow with the ship's starboard anchor unshackled, and cable shackled to the shore cable on the starboard bow. 2 shore cables made fast round the bitts are used aft. These cables are crossed. An experienced shore mooring gang boards vessels to assist in berthing, and these men require very little help from the Ship's Crew. The operation generally takes about 1.5 to 2 hours.

The sequence is as follows: The Port anchor is dropped well off and up-stream of, the Pontoon, on the first of the Ebb tide. The vessel's bow is then swung into the forward in-shore mooring buoy by a mooring rope. This buoy is then brought close under the bow whilst the starboard ship's cable is made fast to the shore cable. For this purpose, the Shore mooring gang, will, on first boarding, hang off the starboard anchor, through the hawse pipe, leaving the first 15 fathoms of cable flaked on deck. Ship's wire rope (100 mm.), should be available for hanging off, together with 75 mm. rope, quantities will be advised by the Berthing Master for lashing the cable.

When the forward cable is fast, the stern is swung, again using mooring and are made fast round the two bitts. 75 mm. (3 in.) rope lashings will also be used here. On completion of making fast the after cables, the vessel is hove into position by the windlass. The mooring ropes are made fast to the two quarter and two bow mooring buoys and are again used when the shore Gang board to break moorings prior departure. To avoid any chance of delay in mooring, the vessel should ensure that the first shackle of her Starboard cable is free prior to arrival, and should have three joining shackles ready for use in case these are required. One ship's wire will be required forward, for hanging off the anchor, and two aft, for heaving on board the ends of the shore cables. Although the shore mooring gang have their own shackles, etc., at Budge Budge, it is necessary for the ship to provide a drift punch and heavy hammer for breaking the cable.

It should be noted that at Calcutta itself there are not enough shore chains to provide moorings to all vessels using the port, and in these cases vessel's Port anchor cable will be broken to provide the after moorings. All the Budge Budge Berths, however, are supplied with sufficient cables. These latter cables are anchored to swamped moorings at each berth.

Shore Lines: All products handled through 150 mm. (6 in.) or 200 mm. (8 in.) hoses.

Restrictions: Handling of packed cargo permitted in daylight only, but not permitted during the discharge of Low Flash bulk cargo.

Fuel: Fuel oil, diesel oil and gas oil available ex-wharf at Budge Budge and by lighter. Lubricants available.

Fresh Water: Available.

General: A continuous and strict watch, especially during the hours of darkness, should be kept on the vessel, both when anchored or in the berth, in order to prevent unauthorised persons boarding the vessel.

DENSITY: Average density in port is about 1000.

FRESH WATER: Fresh water on application from Masters or Agents and preferable if at least 48 hours' notice given. Supplies through barges and direct from quay line.

FUEL: Redwood 600 – 700 sec. supplied at Calcutta and require at least week's notice for supplying vessels lying inside dock. Fuel also supplied at Budge Budge Terminal, 3 days notice to suppliers and Port Authorities.

FIRE PRECAUTIONS: Usual non-smoking precautions and Master, Owners, Charterers or their Agents of vessels carrying import cargo or intending to load export cargo of hazardous or inflammable nature, furnish 6 copies of list of cargo involved to Traffic Manager in prescribed form, at least 10 days before vessels intend to land or ship cargo. Traffic Manager on receipt of list, categorise items enumerated in list and landing delivery and storage of such cargo be done strictly in accordance with instructions.

CONSULS: (Telephone Numbers)

Australia	22-1554	Nepal	45-2024
Belgium	44-3886	Netherlands	23-4442
Bolivia	23-5615	Nicaragua	44-1329
Brazil	45-2120	Norway	22-4094
Czech Rep.	46-4542	Pakistan	44-5208
Denmark	23-4069	Panama	47-6765
Dominican		Peru	23-2331
Republic	55-5067	Philippines	22-0514
Egypt	45-4168	Poland	44-7144
	and 45-2507	Russia	44-2006
El Salvador	55-7392	Spain	23-5539
Finland	22-4602	Sweden	23-2243
France	23-2958	Switzerland	44-8039
Greece	23-5615	Thailand	46-0837
Haiti	34-2673	Turkey	34-2770
Italy	45-1411	U.K.	44-5171
Japan	44-5455	U.S.A.	44-3611
Liberia	46-1164	Venezuela	23-5615
Myanmar (Burma)	22-7071	Yugoslavia	44-6881

REPAIRS: All types of deck and engine repairs undertaken.

DRY DOCKS: 5 dry docks owned by Port Trust available. 3 in Kidderpore Docks and 2 in Netaji Subhas Docks, dimensions as follows:

Dry Dock (Kidderpore) (1) 547 ft.×69 ft.×25 ft. (2) 497 ft.×69 ft.×27 ft. (3) 350 ft.×60 ft.×23 ft. (max. length/beam of vessel allowed. No. 1: 515 ft.×64 ft. No. 2: 500 ft.×64 ft. No. 3: 335 ft.×48 ft.)

Dry Dock (Netaji Subhas) (1) 581 ft.×80 ft.×22 ft. (2) 596 ft.×80 ft. ×22 ft. (max. length/beam of vessel allowed. No. 1: 565 ft.×75 ft. No. 2: 565 ft.×75 ft.)

Netaji Subhas Dry Docks arranged in tandem and used as one dock. Power supply, compressed air and fresh and unfiltered water supply, hydraulic capstans for propeller work and cranage service including heavy-lift available all dry docks. Each dock provided with automatic telephones for use on board ships.

GANGWAY/DECK WATCHMEN: Necessary and recommended by Agents at rate of 3 watchmen per shift of 8 hours.

OPENING/CLOSING HATCHES: Normally undertaken by stevedores, unless specifically mentioned that same will be attended to by crew.

CUSTOMS ALLOWANCES: 0.25 lb. tobacco and 200 cigarettes. Wine and/or Spirit: 1 bottle of wine or spirit per head for consumption on board.

CARGO GEAR: Proof of cargo gear tested by a competent authority required.

REPATRIATION: Facilities exist for effecting crew changes and arranging any necessary repatriation.

AIRPORT: 12 miles; served by regular international airlines with minimum 1 flight per day.

TIME: GMT plus 5.5 hours.

POLICE/AMBULANCE/FIRE: Police (port) Tel: 4791566 and ask Port Police or dial 100; Ambulance dial 102 or 45–4163; Fire dial 101 or 4791566 and ask Fire Fighting Service.

CONTRABAND: Regulations provide that a vessel shall be liable to confiscation which is or has been in Indian Customs' waters where constructed, adapted, altered or fitted in any manner for the purpose of concealing goods.

The act also provides for a fine in lieu of confiscation which could in theory be up to the value of the vessel.

Indian Customs Authorities regard vessels as subject to the regulations if they have any alterations to the normal structure of the vessel or its fittings which is not of operational value, e.g. holes cut in panelling (over bulkheads) which are frequently found concealed from view behind cabin furniture such as settees, bunks, desks, wardrobes, etc. Customs invariably impose fines for such cavities even though empty of about Rs. 5,000/- for 1 or 2 cavities and increasing if more cavities are found. Fines would be substantially higher if cavities in fact contained contraband.

To minimise fines it is essential that Shipowners should instruct their Masters to organise periodic anti-smuggling searches of all accommodation and other places in the vessel by ship's officers with a view to locating any cavities or contraband and such searches, and results thereof, should be logged. Furthermore, the Customs Authorities invariably obtain a statement from the occupant of the cabin whether instructions had been issued by the Owners or Master for each officer crew member to search his own cabin for cavities or hiding places or other unusual or irregular tampering with the normal structure of the cabin and to report to the Master any such cavities, hiding-places or such other unusual tampering found at any time whilst serving on the vessel.

If no such instructions have been issued, the Customs generally regard the Owners/Master as failing to take proper anti-smuggling precautions and the risk of increased Customs fines arises.

It is suggested that appropriate instructions should accordingly be issued without delay by all Masters to their officers and crews and that each officer or crew member should acknowledge receipt in writing of such instructions. It is also emphasised that such instructions should also be notified to any officer or crew member who joins the vessel after first issue of the instructions to the existing officers and crew.

HOLIDAYS: Closed Holidays (when no work is permissible): Independence Day, Republic Day, Gandhi's Birthday, Vijaya Dashami and Kali Puja.

Holidays when double wages payable: Saraswathi Puja, Netaji's Birthday; Idul Fitr, Dholjatra, Muharram, Bengali New Year, May Day, Fateh Duaz Dahan, Durgapuja, Guru Nanak's Birthday, Id and Christmas Day.

TELEPHONES: No arrangements for installing telephones on board, but use of telephones from Port Trust's/Superintendent's Office on each dock.

SERVICES: Tank-cleaning equipment with minimum notice of at least 7 days. Discharge of tank-washings not permitted while vessels lying in dock. Compass and radar technicians available.

SHORE LEAVE: Seamen permitted to go ashore after cleared by Immigration Officer boarding vessel on arrival. In case of Chinese, special permission to be obtained from Immigration Authorities, through vessel's Agents.

IDENTIFICATION CARDS: Not necessary if holding Seamen's Books or Passport.

REGULATIONS: Booklet "Dock and Jetty Handbook" supplied free by Port Trust to incoming vessels.

DELAYS: Delays occur during monsoon.

GENERAL: *Important:* Masters of vessels in port should ensure that vessel's engines are not immobilised without prior permission of the Harbour Master.

DEVELOPMENTS:

1. Construction of container terminal (Netaji Subhas Dock) with related facilities has commenced and will take about 3 years to complete. Annual capacity will be 100,000 TEU's as compared with the present 45,000 TEU's.
2. 11 new cranes and 16 fork lifts have been purchased.
3. Dredging (maintainance – deepening) of river to allow deeper draft vessels into Calcutta and Haldia.

SHIPMASTER'S REPORT: September 1979 (Updated 1994).

Approaches: When approaching Calcutta from South Sri Lanka it would be advisable to pick up False Point Light and then proceed to Eastern Channel Light Float at Sandheads for Pilot. During the S.W. monsoon vessels encounter long spells of overcast skies and rain hence vessels should pick up Dolphin Nose Light at Vishakhapatnam then coast up to False Point Light before branching off to Eastern Channel Light Vessel.

Pilotage: Pilots board at the Sandheads. For picking up Pilots from the pilot vessel, vessels will have to approach close to the pilot vessel's stern with M.M.D. approved type pilot ladder rigged over side. Separate accommodation has to be provided for Pilot.

Restrictions: None for vessels below 22 ft. draft. Those between 22 ft. and 24 ft. 6 in. may have to wait for Spring tide for entrance and departure. However, Hooghly River Authority publishes a booklet every month stating the draft restrictions for entry into Calcutta.

Berthing: Whilst entering locks, passing through cuttings and berthing, vessels should have good fenders rigged 2 ft. above the water to prevent dents and scrapes to the hull. The Port is not equipped with fenders. The coal berths at Kidderpore Docks are old. Masters should exercise caution when coming alongside these berths for waiting or loading. For tying up to riverside moorings both anchors have to be unshackled. Starboard cable lead to port buoy and port cable to starboard buoy in a cross fashion. At the stern vessels with stern cables will have to follow the same as forward. Over and above, ropes and tackles will have to be rigged for taking the initial stress of the bores before strain comes on the cable.

Tying up the vessel to the buoys at the riverside moorings can be aided by experienced shore mooring gangs at Owner's expense.

Radar/VHF: No Radar. VHF Channel 16 for contact with pilot boat or by W/T, Channel 12 for Deputy Harbour Master and Channel 10 for Dock Master and Assistant Dock Master.

Customs: Very stringent about cargo particulars.

Cranes: One heavy lift quay side crane of 200 tonnes. Berths No. 2, 3, 4 and A at NS Dock fitted with 2 tonne cranes. Berth B and D of NS Dock are fitted with 3 tonne electric cranes. Berths No. 27, 28 and 29 at K-P Docks are fitted with new 3 tonne electric cranes.

Hatches: Wooden hatch boards and beams by stevedores. Mechanically operated or other hatches by ship's crew. Rigging gangs may be employed at Owners' expense.

Stevedores: 1st shift (0630 – 1530 hrs.). 2nd shift (1530 – 2230 hrs.). 3rd shift (2230 – 0530 hrs.).

Medical: Very good hospitals and nursing homes.
Specialised Cargo Handling Facilities: Containers can be loaded and stuffed aboard. No Roll-on/Roll-off facility.
Surveyors: A.B.S., I.R.S., L.R.S., G.L., N.V. and others. Standard marine, cargo surveyors and general surveyors also available.
General: Vessels navigating the Hooghly River should be very careful about river thieves who will board the vessel whether stopped or at anchor or making way at full speed.

SHIPMASTER'S REPORT: November 1984 (Updated 1994).
Pilotage: Accommodation is sometimes required for up to 3 Pilots transferring from Sandheads to Haldia/Calcutta or vice versa.

Radio Officer is required on standby (From Hooghly Point to Garden Reach – inward and outward) during pilotage to send W/T messages as required by the Pilot.

Silting problems at Auckland Bar required a 0.4 m. reduction on published drafts November 1984.
Radio: Information on weather on 2000 m. not heard.

SHIP OPERATOR'S REPORT: January 1987 (Updated 1994).
Location: The port is located on the left bank of the River Hugli about 129 km. above the river entrance off Sagar Island in the Bay of Bengal.
Pilotage: Pilotage is compulsory for all vessels over 100 gross tons. River pilotage which extends from Sandheads, 72 km. below Sagar Island, covers a total distance of 201 km. The River Pilot boards the vessel at Sandheads (Lat. 20° 59' N., Long. 88° 14' E.) and a Harbour Pilot boards the vessel at Garden Reach (Lat. 22° 33.5' N., Long. 88° 17.5' E.) for mooring vessels in the river or berthing in the docks. The movement of ships inside the docks is controlled by the Berthing Master.
Approach Channel: The Approach Channel to the main port requires considerable navigation skill. There are several sand bars and crossings, as well as sharp bends in the river which the ships have to negotiate. These bars are subject to seasonal and, at times, sudden fluctuations both in depth and alignment of the channel, necessitating dredging on the shallow reaches. The channel is well marked with numerous navigational aids which consist of lighthouses, lightvessels and channel buoys, automatic tide gauges and signals and river marks; thus facilitating navigation both by day and night. Surveying and charting of the river is continuous and depths over the river bars are forecast daily. Besides navigation aids, a fleet of dredgers, barges, a river survey vessel and hydraulic research vessel are employed to provide safe navigation to shipping.
Permissible Draft: Drafts are subject to fluctuations according to the rise of tide and the condition of controlling bars. The port of Calcutta publishes a monthly draft forecast about 6 weeks in advance, copies of which are available from the Harbour Master's Office (River) in Calcutta. The River Hugli can generally be navigated as far as Calcutta during the period:

(a) June to October
At HW Springs by vessels drawing 8.7 m.
At HW Neaps by vessels drawing 8 m.
(b) October to June
By vessels drawing between 6.7 m. to 8.2 m.

However, there are times during the above period, when the permissible draft could decrease to as low as 5.5 m. before increasing again. Therefore it is strongly recommended that Masters of vessels loading for Calcutta should consult the monthly fresh water draft forecast of River Hugli, issued by Calcutta Port, and should load accordingly in order to avoid unplanned delays outside the river at Sandheads.
Communication:

Radio: There are W/T stations at Ram Nagar, Hugli Point and Haldia. Long range and short range W/T service for navigational messages is available for ships at sea within the range of 850 km. and 24 km. respectively.

VHF: There is a VHF network in operation in the port as an essential means of communication. Apart from Ram Nagar, Hugli Point and Haldia, VHF communication facilities are also available on the pilot vessel, survey vessel, dredgers and other vessels of the port.

The port has 2 pilot vessels fitted with W/T and VHF. These vessels maintain a continuous watch on 500 kHz and receive ETA messages from incoming vessels. At Sandheads, vessels in the vicinity may communicate with the pilot vessels on VHF Channel 12.

Calcutta Port issues time of embarking Pilot at Sandheads to meet required fresh water drafts for a particular day. Therefore Masters of all incoming vessels should take note of time for embarking Pilot and should radio their ETA Sandheads with names of local Agents, destination, deepest FW draft, LOA and speed of the vessel to the local Agents and to Sandheads (Call sign: "VWST") as soon as possible. There is slight reductions in FW draft of vessels, whose speed is below 12 knots.
Traffic Control: It is established and co-ordinated by the Harbour Master. Traffic information and navigational warnings are given on 500 kHz. The general rules governing traffic in the river are as follows:

All vessels going with the tide will have the right of way. Navigation in the river is carried out exclusively on Pilot's advice at times and tidal conditions established by the Port Authority. Night navigation is permitted. Since the depths at numerous locations change continuously, the River Pilots are notified of depth changes and traffic movements through a system of visual signals and via ship's radio on 500 kHz.
Special Feature: Calcutta being a river port is subjected to a "Bore Tide" condition. Vessels at river moorings or jetties are subjected to sudden surges on their moorings during flood tide. The "Bore" takes place only during certain periods, which are predicted a year in advance and last for 1 day to 5 days.

During the "Bore", no vessel over 152 m. in length in Calcutta and over 160 m. in length in Buj Buj will remain in the moorings/jetties. The max. draft of vessels in the river moorings/jetties will also be restricted to 5.5 m. at Calcutta and 6.1 m. at Buj Buj. Vessels which cannot remain in the river moorings/jetties are taken inside the docks where ships are not influenced by "Bore" tidal conditions. Those vessels which remain in the river are provided with extra shore mooring ropes and tackles.
Bunkers/Fresh Water: Adequate facilities exist in the port for the supply of drinking water to ships in the river moorings and at Buj Buj jetties but not at "C" Berth in N.S. Docks.

Oil bunkers can be supplied by pipeline or barge at Buj Buj and N.S. Docks. Only 1 grade of intermediate fuel oil and diesel oil are available.
Repairs: The existing facilities comprise 5 dry docks for all major surveys and underwater repairs. Of the 5 dry docks, there are 3 docks up to max. 515 ft.×64 ft. in Kidderpore Docks and the remaining docks of max. 516 ft. and 75 ft. are in N.S. Dock. The entry into docks is from the unpounded dock basins and not directly from the river.
N.S. Dock Oil Terminal (previously known as Paharpur): The terminal is located at "C" Berth in N.S. Docks; which is in line with "B" Berth used for general cargo. Therefore the max. length of a vessel which can berth at "C" Berth depends upon the size of the vessel at "B" Berth up to a max. of 172 m. The shore facilities are owned by the government and used by various oil companies for lube products only.

The access to cargo manifold platform is by steel walkway fitted with wooden covering, some of which is missing or in poor condition. The berth structure consists of the cargo manifold area and 2 mooring dolphins, 1 at each end of the manifold area, which are made of concrete and filled with wooden beams to avoid metal to concrete contact. The manifold size is 8 in. and 1 length of 60 ft. hose sufficient for ship/shore connection is provided.

There are a few fire hydrants located near by but no oil spill control equipment is available at the berth.
Buj Buj Oil Terminal (also known as Budge Budge): The terminal is located about 28 km. downstream from N.S. Docks. 6 out of 8 oil berths are now in operation. This is the major oil terminal for the port of Calcutta and handles all grades of petroleum products, except crude and LPG. The oil berths are located in the river and have floating pontoons. The moorings consist of 4 mooring buoys of old construction. 8 ship's lines are sent to 2 buoys and 2 shore mooring chains to the remaining 2 buoys. The buoys are provided with a ring on top, through which the ship's lines are passed and secured. The mooring chains are made fast under the buoy to the buoy pendants and divers carry out these operations. 1 or 2 floating pontoons are provided at each berth. The pipeline is carried on a steel walkway fitted with wooden steps which also acts as an access to the pontoon. The pipelines end on the pontoon where the manifold is located. The shore manifold is connected to the ship's manifold by hoses of 6 in., 8 in. and 12 in.

It is essential that vessels ensure prior to arrival that the detachable link of the first shackle can be easily opened. Inability to send the cable to the buoy may cause serious delays.
Berth Limitation and Facilities:

Berth	*Length* Min. – Max. (ft.)	*Beam* Max. (ft.)	*Product Handled*
1	455 – 620	85	Fuel oil, diesel, lube
2	280 – 380	85	Lube
3	350 – 460	85	Bunkers
5	435 – 620	85	Clean products only
8	425 – 620	85	Clean products, solvents and petro-chemicals

Facilities Available:

Slops: No facilities available at the terminals.

Pollution: No oil spill control equipment available at the terminals. In case of oil pollution, private contractors are engaged to clean up the area with the assistance of the fire brigade.

Security: Terminals and berths are considered restricted areas. The whole area is fenced and the gates are guarded. Watchmen are available and are considered essential by local Agents.

Safety: Fire fighting truck/boats are available. There is no safety check list provided. Safety is left entirely to the ship's personnel.

AUTHORITY: Calcutta Port Trust, 15 Strand Road, Calcutta – 700001, India. *Tel:* 2203451 (16 lines). *Telex:* 21-7336 Calp In. 21-7423 Port In. *Cables:* Calpotrust. *FAX:* 033-220-4901. *Contact:* Captain R.M. Gangahar, Director – Marine Department.

AGENT: See "Cochin".

CALICUT: 11.15 N. 75.46 E.

PORT LIMITS: The seaward (Westward) limit of the port is the 9 fathom line.
DOCUMENTS:
Register.
Articles of agreement in the case of foreign-going vessels staying in port for more than 48 hours.
Nominal list of crew and passengers and the A & B Certificates.
Bill of Health in the case of a vessel arriving from an infected port.
Clearance from last port.
Port and Light dues receipts.
Vessel's manifest and any other document, which may be necessary.

PILOTAGE: No pilotage available.
ANCHORAGE: Anchorage is about 3 miles offshore with Calicut Lighthouse bearing 078° (T), in depth of 10.0 m. Mud – good holding ground.
HEALTH: In the case of all infected vessels Health Officer proceeds aboard, and in the case of all other vessels Health Officer may proceed on board and examine vessel. Master shall give every facility for examination of passengers, crew, personal effects, cargo, provisions, water-supply and any part of vessel Health Officer considers necessary to examine. Health Officer may require written declaration from Medical Officer (if any) of vessel or from Master (or from both) stating whether

any death or sickness from an unknown or suspicious cause or any case of any disease occurred on board either during voyage or before departure, and whether any unusual mortality has been observed among rats on vessel. If Health Officer satisfied that such deaths or cases of sickness as may have occurred were not due to any of diseases specified he shall permit vessel to proceed to usual place of anchorage or berth in harbour and to discharge passengers and cargo without further restriction. Inspection by Health Officer not between sunset and sunrise except in unusual circumstances.

RADIO: Messages through Cochin Radio or Mangalore Radio.

SIGNALLING: The signal station is situated North of the lighthouse and is manned 24 hours a day. Station on VHF Channel 16.

TUGS: 2 motor tugs for towing lighters.

BERTHING: No berths, only one pier.

CRANES: Fixed wharf cranes with capacity of 3 tons – 5 tons on the South Pier.

STEVEDORES: Arranged through Agents and stevedore contractors.

MEDICAL: General Hospital and Medical College Hospital situated about 0.5 miles and 5 miles away respectively.

DENSITY: Sea water – 1025.

FRESH WATER: Can be supplied by port tug, max. 15 tons per day.

FUEL: Available. Small quantity of 30 tons can be provided, 48 hours notice required.

CONSULS: None.

REPAIRS: No facilities.

DRY DOCKS: None.

SURVEYORS: The Port Officer at Calicut undertakes private surveys.

CERTIFICATES:
- Registry.
- Radio Telegraphy.
- Safety Equipment.
- Load Line Certificate.
- Certificates of Competency of Master and other officers.

AIRPORT: Calicut Airport 25 km. from port. Daily flights to Mumbai, Madras and Bangalore, and international flights to Gulf countries.

TIME: GMT plus 5.5 hours.

HOLIDAYS: Holidays declared by the State Government are holidays for the port. Cargo work can be arranged on holidays.

FIRE/AMBULANCE/POLICE: Police 100; Ambulance 101; Fire 102.

SHORE LEAVE: Permitted.

IDENTIFICATION CARDS: Necessary.

GENERAL: Ship-to-shore signalling is normally by morse light. When a vessel is at anchorage, VHF service can be obtained with the Signal Station.

Charts: Indian Charts No. 22, 259 and 2053.

DEVELOPMENTS: Port of Beypore has been declared 10th wharf of Calicut. Vessels with a maximum draft of 4.0 m. can be berthed alongside wharf. The port has two breakwaters at the mouth. Two navigational guide lights are provided at the tip of the breakwater. An additional wharf is under construction. Increasing depth in the harbour is under consideration (See "Beypore").

AUTHORITY: Port Officer, Port Office, Calicut. *Tel:* 55604 (Office), 365725 (Residence). *Cables:* Cyclone, Calicut. *Contact:* Captain C. Ramachandran, Port Officer.

COCHIN: 09.58 N. 76.15 E. (See Plan)

PORT LIMITS: *Seaward Limits:* 9 nautical miles Westwards between the following 2 positions:
- (a) Lat. 10° 02' N., Long. 76° 03' 27" E.
- (b) Lat. 9° 55' N., Long. 76° 06' 00" E.

DOCUMENTS:
- 7 Crew Lists.
- 7 Passenger Lists.
- 1 Last Port Clearance.
- 4 Stores Lists, including List of arms and ammunition.
- 5 Passengers' and Crew Personal Effects Declarations.
- 4 Cargo Manifests.
- 3 Cargo Certificates.
- 3 Deck Cargo Certificates.
- 3 Opium Certificates.
- 3 Currency Declarations.

PILOTAGE: Berthing arrangements, booking of Pilot, etc., normally done by Agent. Advisable send ETA messages at least 48 hours in advance to Agent. Amendments to ETA messages must be sent at least 12 hours in advance. ETA messages may also be sent to Harbour Master, Cochin Port Trust. Messages should contain time and date of arrival at Outer Roads in IST and also draft fore and aft (in salt water). 30 minutes before arrival at Fairway Buoy the Port Control to be contacted on VHF for instructions.

No Pilot vessel on station in Outer Roads. A pilot boat with red hull and white superstructure exhibiting the normal International Pilot Signal comes out to Outer Roads for embarking and disembarking Pilots. No special light or sound signal need be made for Pilots. All ships awaiting Pilot in Outer Roads must have engines ready at all times to enter harbour (unless instructed otherwise). Masters should ensure that a good pilot ladder with 2 manropes is lowered about 2 ft. above water for embarking Pilots. Also while embarking Pilot, lifebuoy must be kept handy, and a good lee given. Pilots must be escorted from and to the bridge, to the embarkation deck. Also see "Restrictions".

ANCHORAGE: Cochin Roads is open anchorage with good holding ground of oily mud. Masters are required to anchor vessels in Westerly area from North to South of Fairway Buoy within radius of 0.5 miles. Deep-drafted vessels may anchor in a Westerly direction from Fairway Buoy within a distance of 0.5 to 1 mile. To facilitate entry and departure of deep-drafted ships, Masters not to anchor in line with direction of main channel, Westward of Fairway Buoy.

RESTRICTIONS: Unless otherwise specifically instructed, vessels not to enter main channel at any time without Pilot on board. Pilotage compulsory for all vessels over 100 tons gross. No night entry for crude oil tankers.

Draft Restrictions for Tankers in Ballast: The Cochin Port Trust has recently issued the following notice regarding draft restrictions for tankers.

Tankers less than 500 ft. in length:
Minimum F. 14 ft. ± 2 ft. (and trimmed by stern).
A. 16 ft.

Tankers between 500 ft. and 700 ft. in length:
Minimum F. 16 ft. ± 2 ft.
A. 20 ft.

Tankers over 700 ft. in length: Draft should not be less than 16 ft. forward and 20 ft. aft (as for ships between 500 ft. and 700 ft.), but not more than 28 ft. draft.

MAX. SIZE: LASH ships of about 900 ft. LOA are being handled at Ernakulam Channel. Draft for such ships is limited to 32 ft. salt water. Ships of up to 550 ft. in length are accommodated at Mattancherry Wharf.

Tidal Conditions: In Cochin Port ebb and flood begins to run 2 to 2.5 hours after HW and LW. During monsoons, freshets are encountered and there may not be any flood for several days.

New Tanker Berth: Max. size 115,000 d.w.t. with part cargo. Max. draft 35 ft.

HEALTH: When a ship arrives at an Indian port, the Pilot who boards to bring vessel into harbour is authorised to give Free Pratique to healthy ships. The only exception to this procedure is if a vessel is arriving in India within 30 days of calling at 'Yellow Fever port' the vessel is put in quarantine and she is granted Free Pratique *only* after the Port Health Officer has boarded and satisfied himself that all persons on board are in possession of valid certificates against Yellow Fever and after conducting Mosquito Survey.

Once a ship has been granted Free Pratique at an Indian port, it is not necessary to apply for Pratique at any subsequent Indian port she may proceed to which is automatic Pratique.

Part I. The complete message comprises two parts. The first part embodying the code group on page 126 (Radio Quarantine Reports) from ships at sea e.g. ZS, ZT, ZU, ZV, etc.

Part II. The second part is in plain language and the following information must be given:

A. (i) Expected time and date of arrival in the port.

(ii) List of ports of call with dates of departure within 30 days period prior to arrival at the Indian port.

OR

'Called at' 'not called at' any port in West Coast of Africa from Senegal to Angola and Eritrea, Somalia, Kenya or Tanzania, Brazil, Peru and any other countries North of these in South America including Trinidad, Tobago, Venezuela, Panama, Surinam, Guyane, Guatemala, Bolivia, Belize, Colombia, Costa Rica, Ecuador, Guinea, Nicaragua, etc. within 30 days.

(iii) Whether any monkeys on board.

(iv) Whether any person/crew taken aboard at Djibouti or Aden (if the ship has touched either of these ports).

(v) Number of crew and vaccination status.

(vi) Maritime Declaration of Health Questions. Whether negative 'ZT' or positive (indicated by compliments – 'ZU') as the case may be.

(vii) The message must finally embody the phrase 'Request Radio Pratique'.

B. Additional information: Name of Agent. Request for 'Radio Pratique' must also include the name of the ship's Agent in the quarantine message. The message should be sent when the vessel is not more than 12 hours and not less than 4 hours from the Indian port. If the expression 'Request Radio Pratique' is not used but the complete message outlined above has been sent in that specific form Free Pratique will be granted by the Pilot provided that 'all is well' aboard. The message should be complete, timely and specific otherwise Radio Pratique cannot be granted.

In addition to the quarantine message the Maritime Declaration of Health must always be completed and presented to the Pilot, Port Health Officer or other authorised person immediately on arrival. On verification of Maritime Declaration of Health if it is found that quarantine message sent by the Master of ship is defective then Port Health Officer has the right to cancel the Radio Pratique granted earlier.

Port Health Officer usually inspects all incoming ships coming from foreign ports to Indian ports and also carries out health and sanitary inspection and if satisfied gives Free Pratique on board the ship and certificate of clearance to sail out from Cochin port.

Note: Masters are requested to check this information with the Agents in individual Indian ports and advise us without delay, if these instructions are at variance with local requirements.

Special Reservations for India:

1. Ships having other infectious diseases besides diseases subject to the regulations, e.g., Chickenpox, Measles, Mumps (Epidemic Pariotitis), Cerebrospinal Meningitis, Whooping Cough, Malaria, Paralytic Poliomyelitis, Influenzal Pneumonia or any crew/passenger having temperature of 100°F or more for more than 2 days which is accompanied by rash, jaundice, glandular swelling or diarrhoea severe enough to interfere with normal activities should inform 'Quarantine' Cochin by message and to be brought in under QQ flag in day time and red and white light at night. Port Health Officer will board such ships and grant Free Pratique after observing health formalities.

2. Ships having passenger/crew originating from or embarking at ports of Djibouti, Massawa, Aden or Yemen and arriving within 14 days of departure from the said ports should inform 'Quarantine' Cochin and the ship to be brought in under QQ flag. Port Health Officer will board such ships and grant Free Pratique after observing all health formalities.

3. Healthy ships touching Aden or Djibouti and coming to Indian ports within 6 days without any passenger or crew embarking at Aden or Djibouti, should hoist 'Q' flag on approaching the port limit. The boarding Pilot in such cases shall grant Free Pratique to the ship.

If passengers or crew embarked on a ship either at Aden or Djibouti and the ship arrives at Indian ports within 6 days, such ship is required to hoist 'QQ' flag and Port Health Officer is to board the ship to eliminate the risk of Yellow Fever and grant the ship Free Pratique.

Master of such ships should send quarantine message to the Port Health Officer before arrival at the port. This message should be sent not more than 12 hours and less than 4 hours before arrival.

4. Ships carrying monkeys from Yellow Fever area and coming to Indian ports within 31 days to be brought in under 'QQ' flag and Master should send quarantine message positively. Port Health Officer will board such ships and grant Pratique after observing health formalities.

5. Any ship carrying dead body, Master should send cable. Port Health Officer will board the ship to investigate the cause of death whether due to any diseases subject to the Regulations.

RADIO: Cochin Radio keeps listening watch on 500 kHz, 24 hours a day (HF does not work). MF and RT is low powered and is reported to have a range of less than 300 km. ETA messages may be routed through Bombay or Madras Radio which stations are directly linked with Cochin telegraphically.

VHF: VHF sets are installed in all port pilot launches, tugs, dredgers and at the Port Control Station in Harbourmaster's Office. Channel 16 is used for calling and Channels 14, 13, 12, 10 and 6 are available for communication. Ships awaiting berthing should maintain listening watch on Channel 16 at all times. Information regarding berthing would be generally available from Port Control at 0600 hrs., 1330 hrs. and 1800 hrs. daily. Cochin Radio maintains a VHF service which can be linked to shore telephones anywhere in India. This facility is available 24 hours a day. But is is recommended that they first be contacted on 500 kHz.

TUGS: There are 3 conventional tugs and one V.S. tractor tug in operation in Cochin. The conventional tugs have 32 tons, 22 tons and 19 tons bollard pull and the V.S. tug 30 tons bollard pull. Two more tractor tugs, each of 32 tons bollard pull, are under construction. Ship's rope may be used at the discretion of the Pilot.

BERTHING: Generally crude tankers are berthed to ebb, and loading tankers to flood. Other ships depending on the draft and also to the Agent's requirements.

CARGO HANDLING: Modern systems of cargo handling such as preslinging, palletisation and containerisation are commonly used. The port has at present 24 wharf cranes with capacity varying from 3 tonnes to 10 tonnes, 12 mobile cranes of 10 to 40 tonnes capacity, 49 forklift trucks of 2 to 2.7 tonnes capacity and 1 floating crane of 120 tonnes capacity, 3 high powered tractors each of 180 h.p., 19 semi-trailer chassis, (10 with payload of 40 tons, 9 with payload of 20 tons), 2 heavy duty fork lift trucks with side lift attachment for handling empty containers and 5 ordinary tractors and 11 trailers for cargo handling operations.

There are 7 general cargo wharf berths, 1 coal berth, 1 boat train pier jetty, 3 tanker berths, 1 open berth and 2 low wharves and 11 stream moorings. Ro-Ro ships and container ships are also handled. Fertiliser raw material is discharged at Quay 10. A grab crane which can handle up to 600 tonnes per hour is fitted at this berth. Phosphoric acid is also discharged at this berth. The South Coal Berth has been converted to take ammonia gas tankers. Berths Q8 and Q9 are being converted to fully fledged container berths.

STEVEDORES: Booking of gangs undertaken by Agent on receipt of ETA message.

MEDICAL: Medical attention easily available in Cochin. If medical attention required immediately on arrival, Agent to be informed when sending ETA. Valid inoculation and vaccination certificates against Cholera and Yellow Fever are essential.

Medical advices if required on high seas to be communicated to 'Quarantine' Cochin. Harbour Master/Deputy Conservator/Agents of shipping company usually arrange evacuation of serious cases for hospitalisation from anchorage.

TANKERS: LOA limited to 700 ft. at North Tanker Berth and 560 ft. LOA at South Tanker Berth. Max. draft 30 ft.

The new oil terminal can accommodate tankers up to 115,000 d.w.t. with part cargo. Max. draft 35 ft. Products Handled: 1×750 mm. line for crude. 2×400 mm. lines for furnace oil and white oils; 4×300 mm. discharge arms. Discharge rate 4,000 tonnes/p.h.

Deep draft tankers berth only on ebb tide. Ballasted or loaded tankers can sail any time.

All tankers must have fire wire fast and ready fore and aft on side facing channel.

DENSITY: Varies from 1000 to 1020 depending on tidal and weather conditions.

FRESH WATER: Supplied by shore hydrants at Rs. 15/Mt. and Rs. 24/Mt. respectively for coasting and foreign vessels. Rates for supplying through barges range between Rs. 45/Mt. to Rs. 130/Mt. and Rs. 20/Mt. to Rs. 210/Mt. respectively to coasting and foreign vessels according to the position of the vessel and the time of supply.

FUEL: All grades fuel oils normally available. Essential give advance notice to Agent to make necessary arrangements.

CONSULS: United Kingdom, Norway, Italy and France have consuls at Cochin.

REPAIRS: The Cochin Shipyard now undertakes all types of deck and engine repairs.

In addition there are various other workshops who undertake engine and deck repairs. Exclusive surveyors to Lloyd's and non-exclusive surveyors to other classification societies are also available for hull/engine surveys. Repairs to radio, radar and other electronic equipment can also be arranged.

DRY DOCKS: Port dry dock can handle ships of up to 217 ft. LOA. However, not normally available for foreign craft.

The Cochin Shipyard dry dock can accommodate ships of up to 100,000 d.w.t. with max. size of ship up to 257 m. length and 38.5 m. beam. The dry dock entry draft permitted is 6.5 m.

GANGWAY/DECK WATCHMEN: Watchmen available at nominal cost. Recommended employ watchmen at gangway, on deck and in holds.

OPENING/CLOSING HATCHES: Opening hatches normally done by stevedores. Topping derricks and removing locking arrangements on hatches must be done by ship's personnel.

CARGO GEAR: All cargo gear must have valid test certificates and all other factory act requirements must be complied with.

REPATRIATION: Crew changes are carried out in this port. The Agents execute a bond before the Shipping Master before disembarkation. Repatriation undertaken by the Agents as mentioned in the said bond as well as general bond executed by them in Port Registration Office. Permission to enter India, travelling within India to the International airport through which they are leaving India and permission to leave India through Cochin port are being given by the Port Registration Office.

AIRPORT: Airport about 2 miles from harbour area. Cochin Airport handles internal flights only.

TIME: GMT plus 5.5 hours.

HOLIDAYS: Closed holidays: Republic Day (26th January); Independence Day (15th August); Gandhi Jayanti (2nd October); 1st May and 25th December.

FIRE/AMBULANCE/POLICE: Willingdon Island Fire Station 6555; Willingdon Island Police 6005.

TELEPHONES: Arrangements can be made for telephone connections on board ships on wharf berths only.

SHIP SUPPLY SERVICE: "Ship Supply Service" is functioning at Cochin port. The Agents of the vessel arrange ship-to-shore transport of personnel and/or essential stores and/or sick crew members, etc., whenever such services are required. Usually, vessel's Agent gets this work after securing necessary clearance from the concerned Authorities and these are arranged through their ship chandlers or other contractors as the case may be. In cases of such emergencies, helicopter services are arranged by the local Agents with the Naval Authorities in Cochin with the assistance of the Port Health Officer stationed in the area.

SHORE LEAVE: Temporary landing permits are issued to foreign crew, subject to restrictions as per Government orders, if any.

IDENTIFICATION CARDS: Shore passes (temporary landing permits) are being issued. Seaman's Books cannot be used by foreigners unless with Immigration stamp.

GARBAGE DISPOSAL: No service available.

WASTE OIL DISPOSAL: No service available.

SEAMAN'S CLUBS: Club located 1.0 km. from wharf.

GENERAL: Floating crane 120 tons, fire float.

DEVELOPMENTS: One of the existing berths (Q-9, length 414 m.) is being converted into a fully fledged container berth. Necessary infrastructure facilities like hard-surfaced area, lighting, power plug points, container freight station, etc. have been provided. Tractor-chassis, trailers, heavy duty fork lift trucks, etc. to handle 40 ft. and 20 ft. containers have also been provided. Four transfer cranes have been installed in the stacking yard, and 2 gantry cranes are under construction. Steps have already been taken to provide quayside gantry cranes at the wharf in order to provide fully fledged container terminal facilities for handling cellular container ships at the port in view of the rapid increase of container traffic.

SHIPMASTER'S REPORT: August 1979.

Hatches: Beams and hatchboards by stevedores and the remainder by ship's crew.

Stevedores: 1st shift 0800 – 1700 hrs., 2nd shift 1800 – 0300 hrs.

AUTHORITY: Cochin Port Trust, Willingdon Island, Cochin 682009. *Tel:* 6871. *Telex:* CN-203. *Cables:* Portrust.

Contact:	*Tel. No.* *Office*	*Tel. No.* *Residence*
Chairman	6286	6400
Deputy Chairman	6592	6420
Deputy Conservator	6417	6002
Harbour Master	6410	6859

AGENT: G.A.C. Shipping (India) Pvt. Ltd., P.O.B. 515, (GAC House, Subramanian Road, Willingdon Island), Cochin 682003, India. Tel: (91-484) 667066, 668372, 667765. Telex: 8856537, 8856549 GAC IN. Cables: "Confidence", Cochin-3. Fax: (91-484) 668388.

COONDAPUR (Kundapura): 13.37 N. 74.40 E.

DOCUMENTS:

Inward Report.
Valid Certificate of Safety.
Radio Telegraphy.
Safety Equipment.
Safety Construction.
Crew List.

PILOTAGE: Optional. Vessels call at this Port for carrying ore cargo and anchor at open roadstead at a distance of about 1.25 miles to 5 miles depending upon their draft in a holding ground of sand and mud. The Agent of the ship bound for this port reports the vessel's ETA in advance. In the ETA message the name of the vessel, date and time of arrival are included.

ANCHORAGES: Good anchorage in depth over 8 fathoms at a distance approximately 5 miles from the channel bar.

Tippu Sultan Gudda Light bearing 053.5°(T) and Kodi Light bearing 080.5°(T). The Northern approaches to the Port area are rocky and the safest approach to the anchorage is from the South. Tidal range is 5 ft. Depth at bar 7 ft. at LWOST. 8 ft. – 10.5 ft. during HW.

RESTRICTIONS: No restrictions except that vessels calling at the port anchor at open roadstead.

MAX. SIZE: Vessels of smaller draft can anchor in 9 fathoms of water.

HEALTH: The Assistant Surgeon, Government Hospital, Kundapura is the Port Health Officer at the port.

RADIO: There is no radio station at the port. The nearest wireless station is at Mangalore and its call sign is "VWL".

VHF: Not available.

TUGS: There is one pilot launch for towage service of sailing vessels and for special trips.

BERTHING: No berthing facilities available for ships.

1 wharf of 300 ft. in length with small stocking area.

1 RCC sheet piled wharf of 700 ft. length with vast stocking area duly electrified and a stocking platform of 180 ft. length are the only shore facilities at this port.

CRANES: None.

BULK CARGO FACILITIES: None.

STEVEDORES: Advise well in advance of ETA to shippers in order to arrange shore loading. Main cargo – ore.

MEDICAL: No advance notice except in case of serious illness to be included in arrival message. Hospital facilities available at Kundapura.

TANKERS: No facilities.

FRESH WATER: No facilities for supplying water to vessels are available. Sailing vessels crew draw their requirements of fresh water from nearby wells.

FUEL: For ocean going vessels, there is no bunkering facility. There are oil depots at Gangoli, Kundapura from where High Speed Oil can be supplied to small vessels in drums.

CONSULS: None.

REPAIRS: Small workshops where repair work for fishing launches, barge, etc., are undertaken.

DRY DOCKS: None.

SURVEYORS: Ship surveyors of Mercantile Marine Department at Goa and Cochin are available. Private Surveyors are available at Mangalore and Goa.

OPENING/CLOSING HATCHES: Usually by ship's crew.

CARGO GEAR: No shore facilities. Ships anchor at open roadstead and load cargo by ship's gear.

REPATRIATION: No facilities.

AIRPORT: Nearest airport is at Bajpe which is situated 73 miles South of the port.

TIME: GMT plus 5.5 hours.

HOLIDAYS: Holidays declared by the Collector of Customs, Bangalore are followed at the port.

POLICE/AMBULANCE/FIRE: Pilot sub-station is located at Gangoli. Ambulance facilities available at Government Hospital and Private Hospitals at Kundapura. Fire station available at Kundapura (Tel: 20724).

TELEPHONES: No arrangements exist for placing telephones on board the ship.

SERVICES: No facilities for ocean going vessels.

BANKS: Syndicate Bank and Canara Bank, Gangoli, Kundapura Taluk, South Kanara Dt., S. India. No telex facilities.

SHORE LEAVE: Crew members are allowed ashore subject to Customs formalities.

IDENTIFICATION CARD: Seaman's Book is sufficient and shore passes are issued by Customs.

DELAYS: Delays in loading can normally be expected during bad weather.

GENERAL: The Port of Coondapur is a riverine port which is seasonal. Open for traffic from 15th September to 15th May every year. Port is situated at the confluence of the Heal and Chakianadi rivers at Gangoli village. The Port is 60 miles North of Mangalore which is the nearest railway head.

Charts: B.A. Chart No. 745. Indian No. 2019.

AUTHORITY: Port Officer, Kundapura, Gangoli P.O. Pin Code 576216, Karnataka, India. *Tel:* 45072 and 45075 Gangoli. *Contact:* Captain R. Mohan, Port Officer.

CUDDALORE: 11.43 N. 79.46 E.

DOCUMENTS:

8 Crew Lists.
8 Passengers Lists.
3 Forms of Import Manifest of Stores.
3 Lists of articles in slop chest.
3 Private Property Declaration of Crew.
3 Manifests.
3 Bills of Lading.

PILOTAGE: No pilotage. Open roadstead port.

ANCHORAGE: Vessels anchor in 5 to 7 fathoms with Cuddalore lighthouse bearing 265° to 295°, which is most convenient anchorage for communicating with shore at all seasons of year. Nature of bottom, sand.

Explosive Anchorage: An area of 0.5 miles radius from the position Lat. 11° 48.80' N., Long. 79° 49.42' E. has been designated as anchorage of handling dangerous goods at Cuddalore port. Vessels should enter this area for specific purpose of handling dangerous goods.

New Lighthouse Position: Lat. 11° 42' 21" N., Long. 79° 46' 36" E.

RESTRICTIONS: No restrictions regarding entry of vessels during day or night.

MAX. SIZE: Any size of vessel handled.

HEALTH: On arrival, Master to signal Port Health Officer stating all crew well and requesting Free Pratique. In event of any crew member suffering from suspected infectious disease, Master to advise Agents sufficiently in advance to enable Port Health Officer to board vessel on arrrival. No Free Pratique necessary whenever vessels call from another Indian port.

RADIO: No radio station. Cables routed through Madras Radio (call sign VWM), 72 hours prior to arrival.

VHF: Cuddalore Port on Channels 16, 12 and 14 from 0600 hrs. – 1000 hrs. and 1500 hrs. – 1900 hrs., except on Saturdays, Sundays and Government Holidays.

TUGS: There are two tugs available. The tugs are utilised for towing the lighters between ship to shore and vice-versa.

BERTHING: No berths.

Lighters: About 60 lighters owned by private individuals are operating for transporting cargo between ship and shore and vice-versa and handle 1,000 tonnes in total for a round trip.

Railway Sidings: Metre gauge railway line from Cuddalore Junction is extended upto the wharves at the port to facilitate easy movement of cargo from the port.

Cargo Shed: 3 covered cargo sheds with plinth area of 720 sq.m each are available.

Storage capacity 1,700 tonnes. 2 open transit cargo sheds with plinth area 293 sq.m each are available, storage capacity 500 tonnes.

BULK CARGO FACILITIES: Open roadstead port. Vessels anchor in 5 to 7 fathoms at a distance of 1 mile from the port. Cargo is being handled by means of lighters. There are 6 wharves for landing and shipping of cargo from lighters. Total length of wharfage with platform is 1,033 m. Total length of jetties 460 m. Depth alongside of 1.8 m. at MLWST.

CRANES: 1 'Coles' 10 ton capacity mobile crane has been purchased for handling cargo in this port. This is a diesel electric crane.

STEVEDORES: ETA advice required 72 hours in advance to enable stevedores to make adequate arrangements for handling cargo.

1. M/s Galaxy (Cuddalore) Agencies, Cuddalore Port. Tel: 20092.
2. M/s Senthil Traders, Cuddalore Port. Tel: 22385, 22531.
3. M/s Combined Freight Forwarders Ltd. Cuddalore.
4. M/s Prasath Enterprises, Cuddalore Port. Tel: 22314.

MEDICAL: No advance notice required unless vessel arrives with crew member requiring immediate medical attention. Seamen can be treated at Municipal Dispensary at Old Town near port and also at Government headquarters hospital in charge of District Medical Officer at New Town about 6.5 km. from port.

DENSITY: Density of water 1024 – 1025. State of tide does not affect density.

FRESH WATER: 1 steel water barge of 50 tonnes capacity is available for supplying fresh water to vessels in the Roads.

FUEL: None.

FIRE PRECAUTIONS: Smoking is strictly prohibited in transit sheds, wharves, godowns and on board vessels. Smoking is also prohibited in any areas where gasoline or similar materials are being handled.

CONSULS: None.

REPAIRS: Minor repair facilities available.

GANGWAY/DECK WATCHMEN: Services of watchmen recommended in interest of ship to avoid pilferage. 3 watchmen night and day per shift of 8 hours.

OPENING/CLOSING HATCHES: By stevedores.

CERTIFICATES:

Ship's Register.
Load Line Certificate.
Safety Equipment Certificate.
Safety Construction Certificate.
Safety Radio Certificate.
Derat Certificate.
Last Port Bill of Health.
Last Port Clearance.

CUSTOMS ALLOWANCES: Tobacco, 200 cigarettes permitted for each crew member to be held out of bond. Wine/Spirit, 1 open quart bottle per crew member permitted to be held out of bond.

CARGO GEAR: Register of cargo gear and machinery to be maintained up to date and to be attested by competent authority.

REPATRIATION: Facilities exist for effecting crew changes and arranging necessary repatriations.

AIRPORT: Nearest airport at Madras, distance 180 km.

TIME: GMT plus 5.5 hours.

HOLIDAYS: Cargo work arranged on all holidays except Republic Day, Gandhi's Birthday, Pongal, Karinal, Masimagam, Pennayar Festival, Independence Day and Deepavali, on payment of overtime.

POLICE/AMBULANCE/FIRE: Tel: Police 2024; Fire and Ambulance 99.

SERVICES: Cleaning of hatches after discharging cargo available.

SHORE LEAVE: Crew members permitted to go ashore within municipal limits.

IDENTIFICATION CARDS: Needed.

BANKS:

State Bank of India, Cuddalore Port.
Indian Overseas Bank, Cuddalore Port.
Indian Bank, Cuddalore Port.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Indian Rupee.

DELAYS: No delay of anchoring of vessels. Cargo work carried out during day. No night work.

GENERAL: Private launches arranged for purposes of crew going ashore. Such launches ply between 0600 hrs. and 1700 hrs. Laundry, provisions, etc., can be arranged.

AUTHORITY: Government of Tamil Nadu, Tamil Nadu Port Department, State Port Office, 56 Chamiers Road, P.O.Box No. 2179, Raja Annamalaipuram, Madras 28, India. *Contact:* Captain I.V.G. Prasad, State Port Officer. Tel: 457994 (office), 459588 (personal).

Port Officer, Cuddalore Port, Tamil Nadu, South India 605003. *Tel:* 22025 (office), 20059 (residence), 22026 (personal). *Contact:* Captain S. Sainath, Port Officer.

AGENT: See "Cochin".

DAHEJ: 21.43 N. 72.35 E.

SHIPMASTER'S REPORT: March 1987.

DOCUMENTS:
- Clearance from Last Port.
- 2 copies Ship's Stores List.
- 2 copies Crew Personal Effects List.
- 6 copies Crew Lists.
- Cargo Manifest.

PILOTAGE: Optional. The Assistant Port Officer acts as Pilot. Masters are advised to approach/anchor during daylight hours.

ANCHORAGE: Vessel anchors with Luhara Point Lt. (21° 39.5' N. 72° 33' E.) bearing 137° T, 5.3 miles off. Anchorage marked on chart. Cable "APO DAHEJ" via Mumbai Radio at least 24 hours prior arrival for pilotage if required. Vessels should approach the anchorage during slack water (20 minutes after Bhavanagar) and bring up the vessel on port anchor with about 6 shackles in water. Holding ground is good. Vessel may drop starboard anchor underfoot. Depth about 16 m. at chart datum. This is a tidal port and currents are up to 5 knots during Springs.

MAX. SIZE: No restrictions.

HEALTH: Cable "APO DAHEJ" and "PORTAL BHARUCH" via Mumbai Radio for Free Pratique. Pratique normally granted on anchoring.

RADIO: Mumbai Radio (VWB) or Bhavanagar Radio (VUJ9).

VHF: Vessels should contact Bhavanagar Port Control and Dahej Port on Channel 16 for anchoring instructions at least 2 hours prior to arrival. Dahej Port maintains a listening watch on Channel 16 from 0930 hrs. – 1230 hrs. and 1530 hrs. – 1900 hrs. (local time).

BERTHING: *Discharging:* The port is solely used for unloading bulk fertilisers. At present there are 3 self-propelled barges, each of about 550 tonnes capacity. These barges come alongside during high water and leave at the next high water.

Discharging done manually using ship's gear and a rate of about 1,300 tonnes per day can be obtained on the basis of 4 working hooks during Springs.

The Receivers of the cargo are Gujarat Narmada Valley Fertiliser Corporation, Bharuch.

STEVEDORES: Only one stevedoring company available, M/s Ocean Shipping Services, Bharuch (Cable: "Oceanship Bharuch"). Only one vessel at a time permitted to work in this port. The port does not handle any discharging from April to September. The shore labour which boards the vessel stays on board until completion.

MEDICAL: No facilities. Under exceptional circumstances, emergencies may be arranged from Bharuch through the Agent. Advisable to inform the Agent well in advance.

DENSITY: 1024 (approx.).

FRESH WATER: Extremely difficult to obtain. Small quantities (10 tonnes – 15 tonnes) may be obtained after arrangements made with the stevedores who are the owners of the self-propelled barges. Vessels are strongly advised to arrive with sufficient fresh water for their stay.

FUEL: Not available.

CONSULS: None locally.

REPAIRS: No facilities at present time.

SURVEYORS: None locally. May be arranged from Mumbai.

GANGWAY/DECK WATCHMEN: Not required.

HATCHES: Opening/closing by ship's crew.

CUSTOMS ALLOWANCE: Standard allowance for Indian ports.

REPATRIATION: Not possible at present. Under consideration by the authorities.

AIRPORT: Nearest is Vadodara (formerly Baroda), which is about 90 km. distant. Daily flights to Mumbai.

TIME: Indian Standard Time (GMT plus 5.5 hours).

HOLIDAYS: In accordance with other Indian ports but work can be arranged during holidays.

SHORE LEAVE: Not permitted under normal circumstances, this also includes Indian nationals.

GENERAL: Provisions are expensive and difficult to obtain.

AUTHORITY: The Assistant Port Officer, Gujarat Maritime Board, Dahej Port.

AGENT: See "Cochin".

HALDIA: 22.00 N. 88.05 E. (See Plan)

Subsidiary deep water modern dock of Calcutta, situated on West bank of Hooghly River and 56 miles downstream of Calcutta.

DOCUMENTS, PRATIQUE: All general information; refer to "Calcutta".

RESTRICTIONS: The lock entrance lead-in jetty – 1,010 ft. (307.84 m.).

Lock: 985.5 ft. (300.38 m.) long and 130 ft. (39.62 m.) wide. Ships up to lengths of 885 ft. (269.75 m.) can be safely accommodated at Haldia Dock.

MAX. SIZE: Capital dredging in shipping channel is in progress and the results being constantly reviewed. Currently actual drafts as per draft of the day. Draft forecasts are issued 6 weeks in advance.

TUGS: 5 tugs available.

BERTHING:

1. Satish Samanta Oil Jetty (Berth No. 1): Berth to provide berthing accommodation for super-tankers with LOA of approximately 780 ft. and draft up to 35 ft.

See "Tankers" and "Developments".

2. A Finger Jetty – equipped with grab-bridge crane capable of transferring salt, rock phosphate and other bulk cargo from ship to barge, or vice versa at an average rate 5,000 tons per day.

3. A Coal Berth length 270 m. with depth alongside of 45 ft. is capable of loading bulk carriers of the 60,000 d.w.t. class. Mechanical plant capable of loading conventional ships and bulk carriers at a designed rate of 2,000 tonnes/p.h. 2 wagon tipplers, capacity 1,500 tonnes/p.h.; 1 conveyor belt; 2 stacker-cum-reclaimers – stacking capacity 1,500 tonnes/p.h. Reclaiming capacity 1,000 tonnes; 2 Shiploaders, capacity 1,500 tonnes/p.h. per loader.

4. An Ore Berth – rate of loading 5,000 t.p.h. and with provision for increasing to 8,000 t.p.h. Accommodation for carriers up to 80,000 d.w.t. 2×1,500 ton wagon tipplers, 4 stacker-reclaimers with capacity 1,500 tonnes/p.h.; 2 shiploaders, capacity 3,000 tonnes/p.h. This berth can also handle tankers.

5. A Fertiliser Berth – for ships up to 50,000 d.w.t. class.

Mechanical plant for rapid mechanical discharge of finished fertiliser, rock phosphate, sulphur, etc., from bulk carriers and conventional ships at a designed rate of 1,400 t.p.h.; 1 conveyor belt, 1,300 tonnes/hr. capacity can be extended up to the Fertiliser Factory; 2 ship unloaders, capacity 700 tonnes/p.h.; covered storage for 30,000 tonnes (with provision for increase to 60,000 tonnes in future) and open storage for 15,000 tonnes, (with provision for increase to 30,000 tonnes in future).

6. Two general Cargo Berths – each with a quay of 720 ft. and 120 ft. wide and back-up area of 18 acres. Both will have adequate cranage, latest in cargo handling machinery and direct rail-road facilities.

7. Container Terminal: The first fully-fledged container terminal in India with portainer crane (30 ton Paceco) for handling containers into or from ships. Back-up area 180,000 sq.ft. (16,722 sq.m.) providing storage space for over 1,000 containers at a time. Equipped with one high-speed transtainer crane capable of serving both rail and road vehicles.

TANKERS: No. 1 Oil Jetty extends 180 m. into the deep water channel. The maximum velocity of current during ebb tide is 6 knots. During period March to June, Northwesterly squalls frequently blow up on inshore side of tankers moored at No. 1 Oil Jetty, with reported wind speeds of up to 90 km./hr.

Vessels are programmed to berth on HW (daylight only) and port anchor is used to swing vessel for starboard side berthing. The flood stream continues to run 1.5 hours after HW and this provides sufficient time for safe mooring operations. 1 tug is in attendance when mooring. Although there is a hose handling gantry, it is not used during discharge as the hoses are reported to kink when excessive ranging occurs.

In view of the jetty being located in an area where strong tides are experienced, vessels are required to have the following moorings:

Forward		Aft	
	– 5 head ropes		– 5 stern ropes
	– 3 breast ropes		– 3 breast ropes
	– 3 back springs		– 3 back springs

This gives a total of 22 moorings. Doubling up of mooring ropes is acceptable to provide the above requirement provided all ropes are in good condition and of sufficient length to reach the shore bollards. After the vessel has been securely moored, ropes are turned over and the opposite eye is sent ashore. Mooring wires may be used as back springs.

In the final mooring position, the drift (distance fairlead to shore bollards/hooks) for the various moorings is a as follows:

Head and Sternlines:	Approx. 240 ft. (73 m.)
Breastlines F & A:	Approx. 125 ft. (38 m.)
Springs F & A:	Less than breastlines.

Above drifts apply to a ship with LOA 560 ft. (170.7 m.)

Hose Connections: Midships.

Shore Line System: Handles white oils, fuel oil and crude oil. 30 in. crude line with 3×12 in. connections on jetty. White oil line: 200 mm. (8 in.) to 300 mm. (12 in.) Shore lines: 1.5 km. long. Max. back pressure 7 bar (105 p.s.i.) Average rate 600 tonnes/p.h. (product).

Shore Steam: No facilities.

Bunkers/Lubricants: Not available.

Fresh Water: Available from shore in small quantities.

Tank Cleaning/Dirty Ballast Facilities: No facilities. Clean ballast may be pumped overboard.

General: Continuous and strict watch to be kept on vessel when anchored or in the berth to prevent unauthorised persons boarding.

Due to the remoteness of Haldia it is extremely difficult to arrange the formalities associated with crew members joining or leaving the ship.

In view of current and wind conditions it is recommended that a continuous watch is maintained to ensure that moorings are well tended at all times.

Also see "Shipmaster's Reports".

WASTE OIL DISPOSAL: 1×15 kl. slop tank on service platform for spillage from loading arms and pipelines.

1×7,000 kl. tank for collection of ballast water from tankers.

SEAMAN'S CLUBS: Seaman's Hostel, Haldia. Tel: 03224-2424.

The facility was opened in April 1992 and provides accommodation for officers and crew. Shops and telephone will be provided later.

DEVELOPMENTS: Oil Berth No. 2 became operational in October 1991. *Location:* 470 m. downstream of Berth No. 1 (the First Oil Jetty).

Vessel Size Acceptable:

	Maximum	Minimum
D.w.t.	150,000 tons	18,000 tons
LOA	270 m.	140 m.
Draft	12.2 m.	

Type of Structure: The berthing and mooring dolphins are of flexible type, resting on large diameter steel piles which have been provided with cathodic protection against corrosion.

Distance between outer-most Mooring Dolphins: 330 m.

Fenders: 2 Bridgestone type cell rubber fenders have been fixed on each berthing dolphin.

Facilities: 5 marine unloading arms have been provided with a provision for an additional arm in the future. 3 unloading arms (300 mm. diameter) are connected to HSD, SKO, SRN and ATF pipelines. 2 unloading arms (400 mm. diameter) are connected to crude, FO and deballasting pipelines. Apart from these, there are pipeline connections for water supply and firefighting.

Fire Protection System: 2 rotatable and elevating type remote controlled/manually operated fire-monitors have been provided on 22 m. high towers on fire-monitor deck. These monitors are fed with water and foam by heavy duty pumps installed in the Pump House.

Tug and Launches: 2 tractor tugs having 35 tonnes bollard pull capacity and one mooring launch have been ordered.

SHIPMASTER'S REPORT: November 1984.

Pilotage: Ensure a boat rope is rigged; of good length and well down to the water and Pilot comes out in a small open boat, requiring a good lee and about 4 knots headway.

Also see "Calcutta".

Radio: See "Calcutta".

Tugs: Berthing at Haldia is critical in windy conditions. Tugs are under powered and have high freeboards. New tugs have been ordered. Present set up requires clear understanding on Pilot's side of controllable pitch ships where engines run continuously. Tugs slip wires unexpectedly on occasions.

Tankers: Tankers are sometimes berthed on the Iron Ore Berth inside the locked – in dock (11 m. alongside). Good pumping rates, up to 1,600 cu.m.p.h. Hose size 10 in., up to 4 connections. No night movements. If dealing with the India Oil Corporation, be ready for draft survey, independent quantity surveyor and a "standard" letter or protest. Also keep to hand all bunker/water information for arrival at previous port through to departure from present port, for end of passage and full away on passage plus port consumption/liftings.

SHIPMASTER'S REPORT: February 1994.

The following information has been supplied by the Hoogly River Pilot, who also berths and unberths the vessel.

The port is a tidal river port with strong to very strong currents, and is affected by cyclones when in season.

Tankers can be moored inside Haldia Dock after passing a lock, or in the river where 2 jetties are built.

We berthed at River Jetty No. 2, being the most Southward one. These jetties are very much affected by strong currents, and 22 mooring ropes are required and doubling of ropes is permitted.

There is no night berthing.

The ship arrives at Sandhead Pilot Station, which is a wide open anchorage affected by rotary currents, which can be strong. Pilot Book and chart gives sufficient information on this matter.

Ship has to anchor at Sandhead Pilot Station awaiting the tide/high water.

After picking up Pilot near East Channel lightvessel, vessel proceeds up-river under pilotage.

The pilot vessel (31 years in age) is cruising or anchored near East Channel lightvessel. See Pilot Book and chart for information regarding possible position of pilot vessel (depends on season).

Communication with the pilot cutter is good, and is carried out by VHF Channel 16 and/or 13.

First contact with Pilot Station has to be done through wireless. However, as ships have no wireless station these days, Agent has to be requested explicitly to inform Sandhead Pilot Station of ETA, fresh water arrival draft, etc.

Boarding of the Pilot near the pilot vessel is carried out by small motor boarding launch lowered from the pilot vessel. Vessel has to approach pilot vessel up to 3 or 4 cables and stay in contact with pilot vessel regarding manoeuvring, etc.

For safe boarding of Pilot, the following is necessary:

(1) 2 manropes for pilot ladder.
(2) Heaving line for hoisting some pilot equipment. He carries with him Indian charts which show the river depth in great detail.
(3) Boatrope, long enough to reach from manifold to well aft of pilot boarding ladder. Rope to be lowered in a bight just above the water.
(4) Pilot ladder (combination accommodation ladder/pilot ladder) to hang 1.0 m. above water.

In most cases, ships proceed up-river in a small convoy (in our case 3 ships, of which we were the last one). This can create some time lag when berthing at the river jetty, as the current turns sharply and in short time at the river jetty.

Anchorages:

(1) Sandhead Pilot Station: For awaiting high water/tide.
(2) Sagar Roads: Occasionally ships will be moved (under pilotage) from Sandhead to Sagar Roads and await high water/tide there.
(3) Haldia Anchorage: This is an emergency anchorage, in case ships arrive at tanker berth river jetties, and for one reason or another ship is unable to berth due to a last minute change, such as vacating tanker unable to leave.

There is no night berthing at Haldia. However, night movements from sea up to Sagar Roads are carried out.

Current Information:

March/April:	Current 7 knots. Ebb current weaker than flood current.
July/August: (especially August)	Ebb current 8 knots, due to heavy rain. Flood current is less.
November to March:	Current 3 to 4 knots. Night current is stronger.
May to June and September to October:	Cyclone season with weak tides. However a tidal surge, which can be strong.
Current at Sandhead:	Normal rotary current, see Pilot Book and chart for more detailed information.
Current at Sagar Roads:	Linear current, flood tide setting N.N.E., less than 5 knots.
Current at Haldia Anchorage:	Strong current. Anchor likely to drag, therefore constant manoeuvring required.

Charts used: The British Admiralty Charts can be used. However, due to the numerous and very frequent changes in buoys, depths, etc., these charts are not updated. This is simply not possible due to the fact that many corrections are not passed on to the Admiralty.

The Pilot, when boarding, has a complete set of river charts which show the buoys and depths in great detail.

Every 2 weeks, the river is sounded extensively and dredging is also carried out.

However, siltation of the river is unavoidable, and Pilot considered it as being a lost fight, unless very modern techniques are employed. The big problem delaying the dredging is the strong currents, thus dredging has to be postponed for some months.

Mooring at Haldia River Jetty: Berthing starboard alongside. Vessel has to use 22 ropes. Fixed drum Atlas ropes are unsuitable for using as a loose rope. They are too smooth and slippery, and therefore they slip through when handled on the winch. For this reason, it is not possible to get these loose Atlas ropes tight.

Jetty No. 2 is a platform in the river. See "Plan" for mooring arrangement.

Mooring bollard "H" appeared rather damaged and it is not advisable to place 3 springs on it. However it is discussable.

For that reason, one fixed Atlas rope had to be given out from the port maindeck to forecastle and leaving ship from the forecastle head. This was not ideal, but can be safely executed. The fixed rope could be kept on the drum, as using as loose rope is not possible (slips through).

Mooring is carried out by using shore messenger attached to ship's messenger and attached to ship's mooring rope and thus to shore and ship. Mooring launch is not used due to current.

Messenger must be strong, as there is a lot of weight coming on these lines. Weight of mooring ropes, sinking in water and the force of the mooring has to be carried out within a certain time frame, as the current is changing quickly.

When one is last in the convoy, this could work out unfavourable due to lack in time when mooring.

Consequently any delay in mooring (parting of messengers, confusion in understanding orders, etc.) minimises the remaining mooring time.

If mooring should go wrong, one has to stop mooring and anchor at Haldia Anchorage, which is small in size and 8 knot currents are experienced.

2 tugs assist with mooring but only push, do not make fast.

Communication with tugs on VHF was not possible for one reason or another. However, they do have a VHF set. Communication was done through whistle signals.

Communication with shore through VHF was good.

Pilot was very competent, despite the fact that his last mooring at Haldia was over a year earlier.

The paying out of mooring ropes is time consuming. Due to the fact that the current starts to build up, ropes are easily twisted and will reach shore messed up and this delays mooring. It is almost impossible to get the ropes straightened out again on the shore.

Ship is requested to pay out 4 ropes at one time. However, I refused as there was a shortage of manpower and to avoid messing up ropes. Even with paying out 2 ropes at a time, the head lines appeared to be twisted and the operation had to start again.

We had the bad luck during mooring operations, a heavy rainfall started for approximately 30 minutes. When this happens, the shore mooring gang abandons the mooring operations, which they actually did.

The passing out and also bringing in of the ship's gangway when leaving is time consuming and not easy.

If one trusts bollard "H", in respect of strength, the 3 springs forward can be paid out from the maindeck. This assists the mooring operation greatly.

When the ship is approaching the river jetty, she will be swung to starboard by using hard starboard rudder and full power on the engines. When the swing starts, full astern is applied. One tug is pushing on the port bow. No anchor is used for swinging purposes. This manoeuvre is commenced when the ship is abreast Haldia Lock, which is approximately 7 cables from the jetty (down-river). Vessel is then ready to land abreast (more or less) the jetty, as the current sets her rapidly up-river. Engines on astern when necessary.

At a certain stage, port anchor is dropped with maximum 3 shackles in water to hold the bow up. We ended up with 6 shackles in the water.

The jetty, we berthed to, had a rather damaged appearance, probably due to heavy landings of ships. Repair was carried out.

Unmooring: No tugs to be used.

Vessel has to follow the Pilot's unmooring sequence.

As the ropes are very tight, and as the Pilot advised us not to slack any ropes, with the exception of the spring lines, the automatic release hooks are used.

For this reason, when the order to the shore is given to let go the ropes, the ship's mooring gangs have to take shelter, because the breast lines, stern lines and head lines are catapulted through the air and hit the ship's hull heavily.

I protested to the Pilot, but he advised me that this was the only way unmooring at Haldia was carried out. The last ropes to let go are the 4 head lines which are at that moment under heavy stress, and it is especially these ropes which are catapulted heavily.

Taking the head lines on board together with the heaving-up of the anchor can cause some nuisance, as ropes tend to twist around the anchor chain, due to the current.

Remarks: The ropes have to be watched and constantly attended during the whole discharge period. No special problems were encountered during that period.

Be aware of thieves coming on board from the riverside, with the sole purpose of cutting and stealing mooring ropes which are scattered around forward and aft. Special watches had to be organised by the vessel to keep these ropes under constant surveillance. Agent is unable to supply any shore watchmen. The dark hours are especially favoured for stealing mooring ropes, and the period just after being moored and just before departing, when everybody is busy.

Armed military/police guards are stationed on shore.

AUTHORITY: Calcutta Port Trust, Haldia Dock Complex, Jawahar Tower Annexe, P.O.Haldia Township, Midnapore 721607, West Bengal, India. *Tel:* 03224-3209, 3232, 3229. *Telex:* 0645-208 Hdok In. *FAX:* 03224-3152. *Contact:* The General Manager – Operations.

AGENT: See "Cochin".

HAZIRA (Magdalla): 21.05 N. 72.37 E. (See Plan)

(A) ANCHORAGE PORT
(B) SBM

(A) ANCHORAGE PORT

SHIPMASTER'S REPORT: April 1995.

We called at Hazira Anchorage (Surat Roads) for discharging our cargo of 41,357 tonnes of steel slabs, which were loaded at Bandar Imam Khomeini and we were, according to receivers, the first vessel with this kind of cargo calling in the port.

Hazira is situated 400 km. North of Mumbai, 4 – 6 miles S.S.W. of Suvali Point, and is the anchorage for Tapi River, in depths from 12 m. – 30 m.

Vessels may need to veer additional anchor cable in this anchorage because of the strong tidal streams, particularly on the falling tides.

At Surat Roads, the weather is unsettled with Southerly winds, which precede the S.W. Monsoons, occur earlier than Mumbai.

After mid-April and in early May, strong Southerly winds are common, raising a considerable sea during Spring tide. We experienced this weather from mid-March and discharge was interrupted during this period.

Tidal Streams: At Surat Roads, the flood stream sets North, continuing for one hour after the time of local high water. At the outer anchorage, Spring tidal streams are strong, especially the ebb, which sets South at the rate of 4 knots to 5 knots. Nearer the bar the streams are weaker. The tide often falls 2.0 m. before tidal stream turns South.

The following are some lines of a letter received by the receivers ESSAR, stating:

"This is to inform you that tidal currents are extremely strong at this anchorage. You are requested to maintain proper anchor watch for the safety of your vessel and our lighterage crafts made fast alongside your vessel".

However, this port was introduced to us as a safe anchorage.

DOCUMENTS: As in all Indian ports.
Ship's Register.
Load Line Certificate.
Safety Equipment Certificate.
Safety Radio Certificate.
Last Port Clearance.
Cargo Manifest.
Declaration of Private and Personal Property.
Money Declaration.
Narcotics Declaration.
Ammunition Declaration.
Crew List.
No monkeys on board Declaration.
Place and date of Derat Certificate.

Customs Officials boarded on arrival with the first tide, together with Agent. We prepared ship's documents in advance and were accepted. The Agent took a photocopy of ship's certificates.

APPROACHES: The chart used on our visit was B.A. Chart No. 1486, a middle scale chart. No other bigger scale chart available.

No difficulties were encountered on our approach.

We shaped course, from abreast Daman (Lat. 20° 24' N., Long. 72° 50' E.) for the roads, keeping depths of from 10 m. – 20 m. (33 ft. – 66 ft.) and well clear from Malacca Eastern Bank.

Valsad, Machiwada, Borsi and finally Hazira lights are good radar targets, and it is possible to fix very good positions by them. However, our vessel also equipped with a GPS satellite navigator, so we double-checked our position.

PORT LIMITS/ANCHORAGES: Hazira Anchorage or Surat Roads, is bounded by the following positions:

Lat. 21° 03' N.,	Long. 72° 34' E.
Lat. 21° 03' N.,	Long. 72° 36' E.
Lat. 21° 01' N.,	Long. 72° 36' E.
Lat. 21° 01' N.,	Long. 72° 38' E.
Lat. 21° 00' N.,	Long. 72° 38' E.
Lat. 21° 00' N.,	Long. 72° 34' E.

We anchored in the middle West-side of this anchorage which was 5 miles S.W. of Hazira Light. The depth of the water was approximately 29 m. and the nature of the bottom is mud. The holding was good.

PILOTAGE: Not available. Hazira is an open anchorage area.

UNLOADING: Vessels coming to this anchorage will discharge the cargo into the barges, which in turn will take the cargo to the jetties, constructed on the banks of the River Tapi.

The main discharge places are ESSAR Jetty, L & T Jetty, Reliance Jetty, Kaibhod Jetty (Silted badly) and Magdala Port Jetty.

Barges and small coastal vessels drawing a draft upto 3.5 m. can enter Tapi River (Draft is dependent on the tide). The range of tide is upto 6.0 m., thus causing strong current in the river as well as at the anchorage.

Vessels anchor at Surat Roads in the depth of water of 12 m. – 30 m. to carry out the discharge of the cargo, then shift closer to the entrance as the draft reduces by the discharge of the cargo.

As Magdala is a tidal port, vessels only move during the high water, and towage is restricted to daylight hours only. The barges available are hatch type self-propelled or open barges. Most of the cargo imported is bulk and is received by ESSAR.

The ship can be visited only during the high water, and if the boat does not come back on the same tide, it has to wait for the next high water.

Discharge of the cargo at the jetties is carried out by mobile cranes. The barges generally sit on the river bed during low water.

The discharge rate is totally dependent on the cargo gear and specially barge availability.

The stevedores' and receivers' equipment are in short supply. During discharge, we faced the problem of missing slings and other tools and especially missing barges. Stevedores try to replace their slings and tools with ship's gear.

Portable VHF equipment was not available. As communication between stevedores and receivers was essential, we were forced to provide our equipment for this purpose.

Cooperation between stevedores and ship was very good. The stevedoring company, engaged for discharge of cargo, work fast when barge alongside the vessel and cause only minor damage.

The first problem was with the receivers (ESSAR). The holds were recently surveyed by Bureau Veritas surveyor for the needs of the ship's certificates, sandblasted and painted, in the shipyard. But we received the following letter:

"It is noticed that your vessel's cargo hold internals are damaged at several places. Australian ladder, their railings broken at several places. Brackets at intersection of frames with lower hopper bent at several places. Eyes at various places in cargo hold broken. Above damages were noticed while undersigned visit on your vessel prior commencing discharge."

The second problem was because the discharging rate according to charter party was about 5,000 tonnes daily, but this was never reached. We registered a protest letter for slow discharging, due to "No Barges Availability", as the reason shown on the stevedores Idle Report, where it clearly stated "Waiting for Barges" about 12 hours daily.

ESSAR replied with a protest letter for bad stowage, even if they knew that a Charterer's representative attended the loading.

However, it was very easy to prove them wrong, as the reason for slow discharge was only due to "Waiting of Barges".

The third problem was at Hazira Anchorage, and was witnessed by other vessels on the VHF. A crew member wished to disembark due to a very serious family reason (Chief Officer's father died). The Master of that vessel was trying for a whole day and asked the man on watch at ESSAR base station to make a telephone call to his Agent to ask if it was possible for the Chief Officer to disembark. After a long wait period, the answer was "Sorry Captain, we are the receivers, not your Agents. It is not our job to help you in any way. If you like to contact your Agent, try a radio station. We know on which telephone your Agent replies and if you like we can give this number to you, but nothing else".

As you understand, if you are in the middle of nowhere with a problem like that, you must at least have the help of your very close companions, even if they are "the receivers".

Finally, we wish to close this report with a telex received by our local Agent:

"Since this port is in a remote area (400 km. from Mumbai), hence everything is quite expensive. Suggest Master not to ask for any fresh water or provisions, etc., as same would be 5-6 times more costlier in comparison to Mumbai or nearby ports. Even taxi/barge operators charges are tremendously high. However, shall try protect Owner's interest to the maximum extent possible".

STEVEDORES: Stevedores are fixed by the Agent, and the receivers of the cargo are usually ESSAR. 60-70 stevedores boarded the vessel and stayed until the end of discharge. In our case stay was 16 days.

FRESH WATER: Fresh water is not available at this port and we arrived with our tanks nearly full. We had water discipline for all the period that the vessel discharged, due to very high consumption. For the first two days that the water was free to stevedores, the daily consumption rose to 25 tonnes. After the discipline, the daily consumption fell between 6 tonnes to 8 tonnes.

CUSTOMS: Customs allowed 200 cigarettes and one bottle of spirits.

The bonded stores were sealed and Customs assured us that after a week it would be possible to open again. We called Agent and asked for an issue but due to very high price of launch (U.S.$1,000), it was impracticable for the Customs to visit us and open the bonded store.

SHORE LEAVE: As Immigration is completely absent in this place, shore passes and permission to go ashore restricted.

OPERATOR'S REPORT: March 1996.

RELIANCE INDUSTRIES LTD., HAZIRA MARINE FACILITIES:

Reliance Industries Ltd. (RIL) owns and operate jetty facilities on the river front of the petrochemical plant at Hazira. These facilities are comprised of 3 terminals (gas/chemicals/petroleum) for loading and unloading of cargoes such as liquified gases/chemicals/petroleum products and Single Point Mooring terminal (See Part "B") for loading and unloading of chemicals and petroleum products. These areas are covered by Indian Charts Nos. 254, 209 and 2019, published by Naval Hydrography Office in India. The controlling port is Magdalla (21° 08.2' N., 72° 44.1' E.).

General: The distance from Fairway Buoy to RIL jetties at petrochemical plants site, on the bank of Tapi River is approx. 12 nautical miles. The channel is very shallow and the vessels navigate in/out only during high tide periods. Tapi River channel is liable to change due to the natural phenomena. Mariners are advised to navigate with extreme caution due to strong tidal currents and channel marking buoys are liable to drift from the actual marked positions.

Lighterage Areas:

Ethylene lighterage area:
Lat. 21° 00.0' N. to 21° 01.0' N.
Long. 72° 36.0' E. to 72° 38.0' E.
General lighterage area:
Lat. 21° 00.0' N. to 21° 03.0 N.
Long. 72° 34.0' E. to 72° 36.0' E.
Proposed lighterage area:
Lat. 20° 59.0' N. to 21° 00.0' N.
Long. 72° 36.0' E. to 72° 38.0' E.
Proposed tanker waiting/lighterage area:
Lat. 21° 03.0' N. to 21° 06.0' N.
Long. 72° 33.5' E. to 72° 35.5' E.

Dangerous Cargo Lighterage: The mother vessels carrying dangerous cargoes will anchor in the designated Ethylene/LPG/Tanker lighterage areas after getting confirmation from Reliance Base on VHF Channel 67 (24 hours). For some small vessels with draft less than 3.0 m. calling at Reliance jetty, pilotage is optional and normally Masters are required to navigate themselves in the channel. All vessels calling at Reliance are subject to safety inspection and have to comply with all the Safety Check Lists during the operations. Reliance own and operate 4 shallow draft chemical/gas lighterage tankers.

(B) SBM

LOCATION: Reliance Industries own and operate the Hazira Offshore Terminal on the West coast of India.

The terminal, which is within Magdalla Port limits, is situated approximately 9 miles N.N.W. of the Tapi River Fairway Buoy at the head of the Sutherland Channel.

The Single Point Mooring (SPM) is located at Lat. 21° 08' 56.508" N. Long. 72° 34' 25.943" E. in a water depth of 25 m.

It is fitted with a radar reflector, fog horn and a navigation light, continuous flashing (Morse "U"), 15 second period.

Tidal current in the vicinity of the SPM reaches 5-6 knots during Spring tides and the direction of the ebb and flood is generally South and North. The tidal range is approximately 7.0 m.

Charts: India Naval Hydrographic Office Chart No. 209 covers the area.

DOCUMENTS: The following documents should be completed for arrival (Magdalla Port forms):

2 copies Form I General Declaration.
2 copies G.O.I. Maritime Declaration of Health.
2 copies Customs Form: Ship's Certificates & Declaration.
2 copies Customs Form: Break Bulk Permission.
3 copies Form II Port/Customs/MMD/Health/Police.
6 copies Form III Arrival/Departure Form.
2 copies Drugs Declaration Form.
2 copies Foreign Currency/Deck Cargo/Agency Form.

Agent: Normally the agent will board the tanker at Surat Roads Anchorage or after berthing and the previously mentioned documentation will be handled by him.

Customs and Immigration: Officials of the Customs and Immigration Services will board the tanker prior to or after berthing.

SPM, to prevent accidental dropping when the vessel is secured to the SPM. Under no circumstances should anchors be dropped closer to the SPM than 500 m. and in the Prohibited Area to the East of the SPM as marked on the chart.

PILOTAGE: Pilotage is by Hazira Reliance pilots, who normally board at Surat Roads. Tankers are recommended to anchor in this area and await instructions. Such vessels may call Reliance Base, Hazira and request information.

The pilot, who will be assisted by a Reliance Marine Officer, will remain on board the vessel during the full stay at Hazira Reliance SPM and during that time will act as company representative. All company business and radio communications will be under his direct control.

The Pilot and Marine Officer will advise on pilotage, mooring and unmooring the vessel, hose connection and disconnection. In this respect the Pilot and Marine Officer are to be deemed servants of the Owner and Reliance Industries Limited shall not have or engage any liability for anything done or omitted to be done by any Pilot or Marine Officer.

Boarding Facilities: All vessels using the Hazira Reliance SPM must be fitted with a pilot ladder and accommodation ladder as specified in "SOLAS 1974", Chapter V, Regulation, 17. Such pilot ladder, accommodation ladder and ancilliary equipment must be rigged as specified in the Regulation and used for embarking and disembarking personnel.

In addition, all personnel embarking and disembarking must wear an approved life saving appliance.

Masters should be aware that the port side manifold area should be kept clear to allow access for the tug towing the floating hoses, and passing same to vessel for connection.

ANCHORAGE: Tankers delayed prior to berthing at the SPM due to port closure, berth occupancy or awaiting HW/LW will normally anchor in the Surat Roads anchorage. Vessels will only berth in daylight at HW/LW slack periods.

Proposed tanker anchorage area is located North of general lighterage area (3 nautical miles × 2 nautical miles).

The area is enclosed by following co-ordinates:
Lat. 21° 03.0' N., Long. 72° 33.5' E.
Lat. 21° 03.0' N., Long. 72° 35.5' E.
Lat. 21° 06.0' N., Long. 72° 33.5' E.
Lat. 21° 06.0' N., Long. 72° 35.5' E.
The depth is 25 m. below CD.

Anchors: Anchors must be secured by stoppers/lashing wires before approaching SPM, to prevent accidental dropping when the vessel is secured to the SPM. Under no circumstances should anchors be dropped closer to the SPM than 500 m. and in the Prohibited Area to the East of the SPM as marked on the chart.

PRE-ARRIVAL CHECK LIST: Actions to be taken when vessel arrives in the Waiting Area:

Ref. Item:

W1 Discuss and agree Cargo Transfer Plan.
W2 Confirm Berthing Time.
W3 Obtain and process cargo samples for approval.
W4 Transfer additional mooring equipment, if required Ref. V7 (See "Radio").
W5 Transfer additional lifting equipment, if required Ref. V8 (See "Radio").
W6 Transfer personnel and communications equipment.
W7 Transfer Camlock wrench and valve hose handle.
W8 Transfer flange reducers, gaskets and seals.
W9 Operational checks on SPM Buoy.
  Rotating Assembly free to rotate
  All SPM valves OPEN
  Battery charge levels OK
  Instrumentation systems functional
  Mooring Hawsers free of damage
  Mooring Hawsers free streaming
  Floating Hoses clear and free streaming

RESTRICTIONS: Vessels berth at slack H.W./L.W. and in daylight.

MAX. SIZE/REQUIREMENTS: *Vessel Requirements:*

Minimum Summer Deadweight:	15,000 Tonnes
Maximum Summer Deadweight:	50,000 Tonnes
LOA:	170 m. – 250 m.
Beam Moulded:	24 m. – 35 m.
Depth Moulded:	15 m. – 23 m.
Maximum Arrival Draft:	13.00 m.
Bow Mooring Fittings:	As per OCIMF (including 2 (OCIMF only require 1 stopper) bow stoppers to accommodate 54 mm. chafe chains, SWL 200 tonnes).
Bow Mooring Arrangement:	As per OCIMF (i.e. fairleads, bollards, etc.).
Windlass capable of lifting:	15 tonnes at the bow.
Minimum derrick/crane SWL: (Port cargo manifold)	15,000 – 20,000 tonnes d.w.t. vessels require a crane of SWL 7.5 tonnes (OCIMF states all vessels 16,000 – 60,000 tonnes should be fitted with crane of minimum 10 tonnes SWL). 20,000 – 50,000 tonnes d.w.t. vessels require a crane of SWL 10 tonnes and sufficient outreach for SPM operations.
Cargo manifold/reducers:	As per OCIMF.
Cargo Manifold size:	16 in. 150 ASA Naphtha/gas oil (import line). 10 in. 150 ASA NGL (export line)
Maximum bow/manifold distance:	450 ft.
General Compliance of Vessels:	As per OCIMF.

Other Requirements:

1. Vessel must be capable of discharging cargo and loading ballast OR loading cargo and discharging ballast concurrently and retaining 30% Summer d.w.t. on board at all times.
2. Owners to warrant that the vessel is fitted with sampling point at the manifold.
3. Vessel's crew shall perform mooring/unmooring operations and assist tanker boarding personnel in connecting/disconnecting cargo hoses during the SPM operations.
4. Owner warrants that the vessel is capable of discharging entire cargo within 24 hours or maintaining 100 p.s.i. at ship's manifold.
5. ETA Notices: 5/3/2/1 days addressed to Operations In-Charge (OIC), Reliance Shipping Offshore Terminal Hazira.

RADIO: *ETA:* Vessels are requested to confirm ETA and arrival draft to Reliance Base, Hazira, 12 hours before arrival and any adjustment to that time at least 2 hours before arrival (Also see "Max. Size/ Requirements").

PRE-ARRIVAL CHECK LIST: Details to be given BY the Vessel's Master 72 hours before ETA.

Ref:Item: *Details*

V1 Communication Channel with Terminal.
V2 Emergency Channel.
V3 Communication Channel at Wait Area.
V4 Communication Channel at Mooring.
V5 Estimated Time of Arrival at Wait Area.
V6 Vessel Draft.
V7 Vessel Mooring Equipment:
  Type of Chain Stopper
  Size of Chain Stopper
  Length and Size of Messenger Lines
  Additional Mooring Equipment required
V8 Hose Lifting Gear:
  Type
  SWL
  Shackle Sizes Available
  Strop Available for Rail Hose
  Lines Available for Snubber Use
  Additional Equipment required
V9 Cargo Details:
  Type
  Quantity
V10 Vessel Manifold:
  Position
  Size
  Type
  Rating
V11 Cargo Pumping Details:
  Vessel Pump Pressure at Manifold, MAX.
  Vessel Flowrate at Manifold, MAX.
V12 Damaged or defective equipment on vessel which may affect manoeuvrability

PRE-ARRIVAL CHECK LIST: Details to be given by the Terminal Controller TO the Vessel's Master 72 hours before ETA.

Ref:Item: *Details:*

T1 Communication Channel with Vessel.
T2 Emergency Channel.
T3 Communication Channel at Wait Area.
T4 Communication Channel at Mooring.
T5 Navigation Route to SPM Buoy.
T6 Give details of Defined Waiting or Holding Area.
T7 Confirm SPM Buoy Location.
T8 Confirm Buoy Navigation Signals and Markings.
T9 Allocate Preliminary Mooring Time.
T10 Give Instructions and Information regards:
  Local Regulations
  Special Procedures
  Special Safety Precautions
  Any changes to Standard Procedures

Tide data to be transmitted to the vessel:

Date *Time* *Height*

Weather forecasts to be transmitted to the vessel:

Date *Forecast*

VHF: *Hazira Reliance SPM:* Reliance Base, Hazira operates a 24 hour listening station on VHF Channel 67, Call Sign "Reliance Base".

Communications during berthing and stay at Terminal: In addition to the tanker's own radio facilities, the Hazira Reliance pilots normally operate on VHF Channel 67 for port operations and communications with the tugs.

TUGS: 2×40 tons B.P.

Reliance Workboats: Reliance Industries Limited maintain vessels to assist in berthing. These vessels are under the direct supervision of the Pilot.

BERTHING: *Pilot and Marine Officer Attendance:* The Pilot and Marine Officer will attend to the vessel during its entire stay at the Hazira Reliance SPM, to maintain its position and assist with turning round the buoy at slack water/change of tide.

The stern tug will remain made fast, under the instructions from the Pilot.

Usual Sequence of Events:

1. Pilot and Marine Officer boards the tanker at Surat Roads Anchorage area, prior to next available daytime H.W. or L.W. (Hazira Outer).
2. Approximately 3 miles from the Hazira Reliance SPM, the mooring and hose connection equipment will be passed aboard from a Reliance Tug (it should be noted that the tanker should have the port derrick/crane rigged for this purpose) which will then make fast aft.
3. The tanker will then proceed to a position approximately 450 ft. from the SPM and pass a light messenger (4 in. polypropylene rope) to the Mooring Launch. Her crew will attach it to a 10 in.×450 ft. polypropylene "pick-up" rope which is secured to the mooring chafe chain. This pick-up rope is heaved until the chafe chain is inboard. The chafe chain is then secured in the mooring bow stopper.

   On vessels where 2 moorings are required, the operation will be repeated. The port mooring is taken first, following by the starboard mooring.
4. As the weight is taken up on the mooring, a Reliance Tug, having previously secured and cleared the hose string for the tanker's approach, will now come alongside and the hose connection operation commences.

MOORING/UNMOORING: *SPM:* The SPM consists of 2×15 in. circumference × 150 ft. braided nylon ropes secured to the SPM by 76 mm. diameter × 4.0 m. length of Grade U3 stud link chain.

The ship's end of the mooring consists of 54 mm. diameter × 5.5 m. length of Grade U3 stud link chain.

These chafe chains are secured in the tanker bow stoppers.

Vessels of 15,000 d.w.t. will take one mooring. All vessels of a greater tonnage will take two moorings.

Mooring: Mooring will be carried out with the assistance of ship's crew under the advice of the Marine Officer and his crew.

During final approach to the berth, the vessel's anchors must be tight home and secured by stoppers/lashing wire to prevent accidental dropping. The stoppers/lashing wire must remain in position until the vessel is clear of the berth after unmooring.

Unmooring: Unmooring will be carried out with the assistance of the ship's crew under the advice of the Marine Officer. The weight of the mooring will be taken on the 10 in. pick-up rope (using the ship's engines to reduce the load if necessary) and the chafe chain(s) released from the bracket.

The messenger will then be slowly slacked away until the support buoy is in the water and taking the weight of the chafe chain.

As the vessel drops astern the messenger should be slowly paid out.

LOADING/DISCHARGING: *Discharge Commencement/Completion:* On the instructions of the Pilot discharge/loading will commence.

On completion of discharge/loading, after tank inspection/gauging, the manifold valves will be closed and hoses disconnected.

Sailing: When the hoses have been passed to a Reliance Tug, the tanker will slip from the Monobuoy.

Once the mooring messenger(s) has/have been lowered into the water the crew will collect all mooring equipment and hose connection gear in the manifold area and sling it ready to pass to the tug when the vessel is clear of the SPM for handing down in the Sutherland Channel.

The Pilot and Marine Officer will disembark when the vessel is clear of the Sutherland Channel.

HOSES: *General Information:* Discharging/loading hoses are 1×10 in. and 1×16 in. floating hoses, fitted with 150 ASA flanges.

Each hose is fitted with a "Camlock" coupling for connection to the ship's manifold. Both strongs are fitted with a Gall Thomson marine breakaway coupling.

Hoses are connected on the port side of the vessel only.

Hose connection and disconnection will be carried out with the assistance of the ship's crew under the advice of the Marine Officer and his crew. All equipment for the operation will be provided by Reliance Industries Limited, and passed to the vessel approximately 3 miles South of the Monobuoy.

Hose Handling: Hose handling should always be carried out with the string de-pressured.

After the vessel is securely moored, the Reliance Tug will tow the ends of the floating hoses to a position beneath the tanker's derrick/crane.

If both hoses are to be used, it is essential that the forward hose string is made fast to the forward manifold and the after hose string to the after manifold, in that order.

Hose Lifting: The derrick/crane should be rigged with the head positioned midway between the vessel's rail and manifold.

The lifting hook should be lowered to the tug where the crew will attach it to the lifting chain. The hose should then be lifted to the tanker's rail.

At this time, the condition and securing arrangement of the various hose lifting gear components should be visually inspected for excessive wear, damage or poor connections.

The hose should then be lifted to a height sufficient to enable the hose supporting chain to be attached to the hang-off chain, which is then made fast to a suitable cruciform bollard. The hang-off retention chain can be uncoupled at this stage.

Hose Securing: The hose should then be lowered to transfer the full weight to the hose support chain.

A snubbing rope positioned around the hose and secured to the tanker's rail will assist in lining up the hose to the tanker-manifold, and prevent lateral movement during connection.

The height of the hose should be sufficient to allow the hose to be bent over to the tanker's manifold and for the hose and manifold flanges to be aligned.

The hose end should then be lowered to deck level and the blind flange removed. Before removal, a check should be made to ensure the line is de-pressured and a spill tank or drip tray should be positioned to contain any leakage.

Hose Connection: The hose should then be connected to the tanker's manifold using the Camlock quick coupling or end flange as applicable.

If the hose end flange is connected to the tanker's manifold or if reducers are required (these should be secured prior to hoisting hoses out of the water), the full number of nuts should be used and tightening should be in a diagonal sequence. New, high quality gaskets should be used.

When the hose connection has been made, a strop should be connected to the rail hose(s) and hooked onto the derrick. The strop(s) should be used to achieve an acceptable bend radius configuration.

The snubbing rope may be left in position to minimise lateral movement of the hose(s) induced by sea/swell.

During the hose lifting and connection, care should be taken to ensure that the weight of the hose string is not taken off the support chain by other than the prescribed lifting gear. In particular, the strop should not be used to take the full weight of the hose string to adjust the support chain.

Hose Disconnection: Care should be taken to ensure that the hoses are secured to the tanker or derrick/crane at all times, until they are lowered to the sea. Before disconnection, the tanker's manifold valve(s) must be closed, the hose end butterfly valve closed and secured and the line de-pressured.

To disconnect the hose, its weight should be taken on the derrick/crane at the strop and the Camlock coupling/end flange disconnected. Care should be taken to stop the hose moving when disconnected and this is most easily done by securing a line around the hose near the flange and fastening it to a convenient set of bitts.

When disconnected, the blind flange must be refitted to the Camlock coupling/end flange. (Prior to closure, inspect the Camlock "o" ring gasket for damage). It is important that the blind flange be properly fitted and all shackles assembled (i.e. hang-off and pick-up chain) and secured properly before the hose is lowered into the water.

If 2 hoses are used it is essential that the hoses are disconnected in sequential order form aft to forward. This will avoid the hoses fouling each other when they are lowered to the sea.

When the blind flange is secure, the derrick/crane hook should be transferred to the hose pick-up chain. The hose should then be slowly lifted to the vertical. When the hose is hanging vertically with all the weight on the derrick/crane hook, the hose support chain should be removed from the safety hook assembly and re-connected to the hang-off retention chain.

The snubbing rope may now be disconnected and the hose lowered until the pick-up arrangement is level with the tanker's rail.

A line should be passed through the pick-up arrangement and secured to the tanker so that it can be used as a slip rope. Care should be taken to ensure that the slip rope is long enough to lower the hose to sea level.

Prior to sailing, hose(s) will be lowered to the Reliance Tug for towing clear. Alternatively, the hoses may remain hanging-off the rail until the tanker slips and then lowered to the water as the tanker drops astern.

FRESH WATER: Not available.

FUEL: Not available at the buoy.

SHORE LEAVE: No officers and crew shall be allowed shore leave and no boats of any kind, except in an emergency, shall be lowered during the vessel's stay in the berth.

GENERAL: *Dirty Ballast/Garbage/Oil Residue:* There are no dirty ballast reception facilities at the Hazira Reliance Terminal nor can oil residue/sludge and garbage be disposed of.

Vessel Readiness: Any vessel which is not in the opinion of the Hazira Reliance Pilot, ready in all respects to discharge may be rejected until such faults are rectified.

Notice of Readiness: Notice of Readiness will only be accepted without prejudice by the Hazira Reliance Pilot on behalf of Reliance Industries Limited when the vessel is ready in all respects to berth and load/discharge cargo.

Delay, etc.: Reliance Industries Limited is not to have or engage any liability for any delay to any vessel for any reason over which Reliance Industries Limited has no direct control or is otherwise beyond its reasonable control.

Site and Bathymetric Information: The SPM buoy is sited approximately 3.8 km. West of the Low Water line at Hazira in a water depth of 25 m. (nominal surveyed depth 1994).

The vessel's Master should be acquainted with navigation and bathymetric charts related to the Hazira area.

Tide and Weather Information: Vessel's Masters must always be in possession of the latest tide, current and weather information when in the terminal area.

When moored at the SPM terminal, vessels will assume a position of least resistance to tide and wind. The SPM enables vessels to weathervane through a full 360°.

The SPM-CALM buoy is designed to withstand the following conditions when a vessel is moored and transferring cargo. The operator should stipulate maximum allowable operating conditions to ensure that the design limits are not exceeded. Figures given relate to dual hawser mooring for 50,000 d.w.t. vessel.

Max. Wave Height:	4.5 m.
Significant Wave Height:	2.8 m.
Max. Wind Velocity:	18.0 m/s (1 minute duration)
Max. Current Velocity:	3.0 m/s (surface)
Tidal Range:	8.8 m. (astronomical)
Environmental Direction:	N–S prevailing

REPORT: August 1995.

LOCATION: Reliance Offshore Terminal is located in position Lat. 21° 01' N., Long. 72° 35' E.

The Terminal is operated by Reliance Industries Ltd., Mumbai. They have a berth in the Tapi River for unloading barges.

TANKERS: *Specifications of the Tankers:*

Summer Deadweight:	15,000 – 50,000 tonnes.
LOA:	170 m. – 250 m.
Beam (Molded):	24 m. – 35 m.
Depth (Molded):	15.5 m. – 23.0 m.
Draft on 100% Loading:	9.6 m. – 13.0 m.
Draft on 20% Loading:	3.0 m. – 4.3 m.
Manifold Size:	16 in. 150 ASA for Naphtha/Gasoil. 10 in. 150 ASA for Gasoline/Xylene.
Maximum Bow to Manifold Distance:	450 ft.
Minimum Derrick/ Crane SWL:	7.5 tonnes for 15,000-20,000 tonnes d.w.t. 10 tonnes for 20,000-50,000 tonnes d.w.t.

Minimum water depth in approaches to SBM from Surat Roads Fairway Buoy is about 20.0 m.

Forward winch/windlass to be capable of lifting 10 tonnes at the bow.

Tidal rise in vicinity of SBM reaches 5.0 m. – 6.0 m. during Spring tides. Tidal range between High Water and Low Water is 9.2 m.

Other Requirements:

1. The vessel should be fitted with a bow stopper and a bow fairlead in accordance with OCIMF Recommendations for use with 54 mm. chafe chain. Owner to warrant that the vessel is fitted with sampling point at the manifold.
2. The vessel to be capable of discharging cargo and ballasting or loading cargo and deballasting concurrently and retaining 30% S.d.w.t. onboard at all times.
3. Vessel's crew shall connect and disconnect cargo hoses.
4. Owner warrants that the vessel is capable of discharging the entire cargo within 24 hours or maintaining 100 p.s.i. at ship's rail.
5. Delays in berthing for loading and discharging and any delays after berthing which are due to weather conditions shall count as one half laytime, or if on demurrage at one half demurrage rate.
6. Owner guarantees that the vessel's manifold arrangements are in accordance with OCIMF Recommendations for the size of the vessel.

General:

1. No facilities available for receiving dirty ballast/slops.
2. Night berthing/unberthing not planned in the initial stage.
3. No bunker or fresh water supplies facilities available.
4. Two tugs of 40 tonnes bollard pull each will be available for SBM operations. Mooring launch also available for mooring operations.

SHIPMASTER'S REPORT: January 1996.

Contact was made with "Reliance Industries" on VHF Channel 67 5 hours before arrival and vessel informed to anchor at Surat Roads. One hour before arrival contact was again made and anchor position requested as 10 vessels were anchored in Surat Roads and 5 vessels in the Transhipment Area. We were instructed to anchor 6 miles South of Suvali Point but in fact anchored at 2350 hrs., 6 miles S.S.W. of Suvali Point at the Southern edge of Transhipment Area in 22 m. of water. We were informed of possible berthing at 1700 hrs. next day.

The port is tidal and all operations, customs clearance, etc., take place around high water time.

Agent and customs boarded at 0400 hrs. next morning and vessel cleared at 0430 hrs. Usual Indian paperwork required, with the Agent doing most of the work after which customs sealed the bonded store.

Pilot, Marine Officer, I.O.C. representatives and Surveyors boarded at the anchorage at 1448 hrs. and during the run to the SPM, the tanks were inspected and passed. Just prior to arrival at the buoy, mooring and pipeline strops plus a mooring gang were shipped from a tug. The SPM is approached at slack water and the final run to the buoy at beginning of the ebb tide. One tug is made fast alongside on starboard forward shoulder and a second tug made fast from centre lead right aft. Mooring was a normal SPM operation. Two hoses were available but only one was connected by ship's crew and the mooring gang.

The SPM is owned by Reliance Industries, and I.O.C. rent the facility for import and export cargoes. This vessel was the third vessel to use the buoy and the first to export cargo.

The operation is controlled by the Reliance Industries Pilot with other information being given by the I.O.C. Loading Master. All went quite smoothly with regards to cargo planning, emergency stop procedures, communication arrangements and a shore stop on the cargo to load was requested.

The loading rate was 720 tonnes/hr. using one shore pump. A second pump was available but as I.O.C. have to rent the pumping facilities no-one in I.O.C. could make the decision to start the second pump. The loading went smoothly if somewhat slowly, taking 28 hrs. 20 minutes to load 20,385 tonnes of Naphtha (NGL). (21,000 tonnes maximum had been requested).

There is no night berthing or unberthing at present, therefore as loading completed at 2330 hrs., the vessel had to wait until 0656 hrs. next day to unberth. The cargo documents are prepared on board by the I.O.C. representatives and it took until 0400 hrs. for them to be completed.

A tug remains fast astern throughout the operation and Reliance Industries personnel are stationed forward, checking on the SPM at all times. At each change of tide the vessel must swing anti-clockwise round the buoy to avoid fouling the pipelines. Ship's officers and the pilot monitor this and if any possibility of swinging the wrong way, the aft tug is called to correct the swing or ship's steering gear utilised. Vessel's engines remain on stand-by throughout.

In conclusion, a smooth operation well organised by Reliance Industries who are very much in charge. Rather an excessive number of shore personnel on board at times, reaching a maximum of 14 extra persons at meal times. The pilot, Marine Officer and I.O.C. representatives have to be accommodated, the Reliance Industries personnel change watch from the tug astern.

The I.O.C. Loading Master was from Mumbai and I recognised him from other visits to that port. He was training the other I.O.C. staff from Hazira. Once their training is complete the number of extra personnel on board may be reduced.

It would appear that the plan it to export all Naphtha from Hazira instead of Kandla, thus reducing the congeston at that port.

OPERATOR: Reliance Industries Ltd., Shipping Division, Village Mora, Post Bhatha, Surat Hazira Road, Surat - 394510 (Gujarat), India. *Tel:* +91 261 88 5484. *FAX:* +91 261 89 5489. *Contact:* Captain R.K. Singh, Assistant Vice-President (Shipping).

Head Office: Reliance Industries Ltd., Shipping Division, Reliance Centre, 19 W.H. Marg, Ballard Estate, Mumbai 400 038, India.

HONAVAR: 14.16 N. 74.27 E.

DOCUMENTS:
- Crew Lists.
- Passenger Lists.
- Customs Documents.
- Health Documents.
- Manifests.
- Bills of Lading.
- Ship's Papers.

PILOTAGE: Open roadstead port. No system of pilotage. Pilot is however available, on requisition by Master or Agent.
ANCHORAGE: Distance off 3 miles, depth of 5.5 fathoms.
MAX. SIZE: No restrictions on length and breadth. Generally up to 34 ft. draft vessels can anchor within 2 miles to 3 miles from entrance.
HEALTH: Port Health Officer grants Pratique as and when necessary, on requisition.
RADIO: Wireless station at Mangalore.
BERTHING: No berthing facilities. Ships anchor on open roadstead.
MEDICAL: Medical facilities for minor treatment available in Honavar. Proper hospital facilities available only at Karwar about 60 miles North. At least 24 hours advance notice ETA to be communicated to Agents.
DENSITY: Varies 1020/1025.
FRESH WATER: Very small quantities available. No arrangements for delivery to ships.
FUEL: Not available.
CONSULS: None.
REPAIRS: Nearest workshops undertaking repairs available at New Mormugao or Mangalore. Minor repairs may be carried out at Karwar.
DRY DOCKS: None.
OPENING/CLOSING HATCHES: By crew.
CERTIFICATES: All ship's papers such as Certificate of Registry, W/T Certificate, Safety Equipment, Load Line, etc., to be on board for verification.
CARGO GEAR: Cargo gear Test Certificates, etc., to be produced.
REPATRIATION: Facilities available.
AIRPORT: Belgaum, about 178 miles.
TIME: GMT plus 5.5 hours.
HOLIDAYS: Charter Party Holidays observed. Cargo work can be arranged on holidays. Dates of holidays vary from year to year.
POLICE/AMBULANCE/FIRE: Police 48; Ambulance 32; Fire Kumta 20.
SHORE LEAVE: Crew members are allowed ashore.
IDENTIFICATION CARDS: Needed, if going ashore.
DELAYS: Generally no delays are expected.
AUTHORITY: Port Officer – Honavar, Port Office, Honavar, India 581395. *Tel:* Honavar 43. *Contact:* The Port Officer.

JAKHAU: 23.15 N. 68.37 E.

LOCATION: In Gulf of Kutch, on Godia Creek about 5 miles inside Arabian Sea. Port is about 7 miles West of Jakhau. Small sub-port exporting salt utilised by foreign-going and coastal traffic. Vessels calling Jakhau anchor in open roadstead about 6 miles offshore. Highest tidal range 14 ft. Current parallel to coast running about 4 knots.
AUTHORITY: Assistant Conservator Jakhau-Kutch.
AGENT: See "Cochin".

JAWAHARLAL NEHRU PORT (Nhava Sheva): 18.57 N. 72.58 E. **(See Plan)**

PORT LIMITS: Vessel is considered to have "arrived" when Pilot is embarked, and/or when vessel is required to anchor outside pilotage area, awaiting a suitable tide, as in the case of large bulk carriers/ container vessels.
DOCUMENTS: Agents to submit 'VIA' form prior to the vessel's arrival to Operations Department and Berthing Application to the Harbour Master's Office.
PILOTAGE: Compulsory for vessels of 100 n.r.t. and above.

Minimum of 24 hours advance notice to Agents and Harbour Master, JNPT, who can be contacted directly over telex installed in the Port Signal Station, and is manned 24 hours a day (Telex: 01177506 HM JP IN).

Jawaharlal Nehru Port Trust operates a VHF service on Channels 13 and 16 on a 24 hours basis, with the call sign "Jawaharlal Port Control".

In-bound vessels are required to contact "Jawaharlal Port Control" on Channel 13 and 16 to report ETA and receive instructions. Vessels must not proceed beyond Mumbai Floating Light without being instructed to do so.

Pilot will be embarked by means of a pilot launch with a black hull and white superstructure with the legend "Pilot" on the side, in position 1.8 miles South of Prongs Reef Lighthouse. The pilot launch is equipped with VHF Channel 13, radar and searchlight, and displays the usual pilot jack during daylight hours and pilot lights at night.

Whilst Jawaharlal Nehru Port Pilot will give instructions and communicate directly on VHF to incoming vessels, overall control of shipping at Jawaharlal Nehru Port/Mumbai Port, pilotage ground will rest with the Master Pilot/Port Control, working in conjunction with the Pronge Lighthouse, which maintains continuous VHF watch on Channels 12 and 16.

During the S.W. monsoon season, a long swell prevails at the port entrance, and the pilot launch may experience difficulties in coming alongside. At such times, Masters may be instructed to steam up to a position approximately one mile S.E. of Sunk Rock Lighthouse, where a better lee may be obtained. Masters will be advised which side to make a lee by the Pilot. During the early part of the S.W. monsoon, when the wind is South of S.W., the sea runs from the South, and Masters are advised to keep their ships heading East, when making a lee for the Pilot.
ANCHORAGE: *Outer Anchorage:* See "Mumbai".
Inner Anchorage: For the present, Jawaharlal Nehru Port does not afford any inner anchorage to vessels. However, one 500 m. diameter emergency anchorage with a dredged depth of 13.5 m. exists North of the container berth.
RESTRICTIONS: Maximum draft of vessel's for transiting through JNPT is 12.0 m. inward and 12.5 m. outward.
MAX. SIZE: Drafts in the common channel, JNP approach channel, bulk and container terminals are subject to dredging soundings and rise of the tide. These drafts are declared by the Harbour Master, JNPT, periodically. Vessels, intending to call at JNP and planning to load to the maximum permissible draft, should check at the time with the Harbour Master's Office.
HEALTH: See "Mumbai".
RADIO: See "Mumbai".
VHF: See 'Pilotage'.
RADAR: The port has no radar. However, one integrated VTMS service together with Mumbai Port is planned to be provided in the near future.
TUGS: 3 Voith Schneider tugs of 30 tons bollard pull. Tugs join vessel at the JNP channel entrance. Tugs lines are used. 2 mooring boats are provided for docking.
BERTHING: Separate berthing facilities available for the discharge of bulk cargo at the Bulk Terminal, and loading and unloading of containerised cargo at the Container Terminal.
CRANES: 2 Omega P&H mobile cranes with telescopic boom and capacities of 50 tons and 25 tons available for maintenance work.
BULK CARGO FACILITIES:
Bulk Terminal:
2 berths with total quay length 500 m.
Service Berth with quay length 212 m.
Depth alongside 12.5 m.
Maximum permissible ship draft at low water level: 12.5 m.
Discharge by shore equipment at both bulk berths.
Discharge can be done in Service Berth by ship's own gear.
No loading facility at present.
Cargoes handled:
Fertiliser (DAP, MCP, SOP, Borax).
Fertiliser raw material (Sulphur, Rock Phosphate).
Foodgrains.
Equipment:
Bulk Berth No. 1 is equipped with 2 grab unloaders.
Bulk Berth No. 2 is equipped with 2 continuous unloaders.
Maximum height of discharging gear above high water level: 60.80 m.
Maximum discharge rate: 12,000 tonnes/day (all equipment combined).
CONTAINER HANDLING FACILITIES:
Container Terminal:
3 berths with total quay length 680 m.
Depth alongside 12.5 m.
Maximum permissible ship draft at low water level: 12.5 m.
Discharge and loading by shore equipment.
Cargo handled: Containerised cargo.
Equipment:
3 rail mounted quay cranes, one in each berth. Two cranes working possible in each berth.
8 rubber tyred gantry cranes for yard operations.
1 rail mounted gantry crane for ICD operations.
38 tractors (prime movers).
136×40 ft. trailers.
Ro/Ro facilities available in container terminal. Presently, Maruti cars and other heavy vehicles are being exported.
STEVEDORES: Stevedoring work undertaken by port employees. No special agency. Both bulk and container terminals work 24 hours a day in 3 shifts, except holidays.
Shift Times: 1st shift: 0700 hrs. – 1500 hrs.
2nd shift: 1500 hrs. – 2300 hrs.
3rd shift: 2300 hrs. – 0700 hrs.

Overtime work is arranged on holidays, if necessary.

Average discharge rate for bulk cargo 8,000 tonnes/day (with all 4 appliances).

Average discharge rate for container cargo is 1,200 TEUs/day with all 3 quay cranes on a cellular vessel.
MEDICAL: Emergency medical facilities are provided at JNP. However, in serious cases, arrangements can be made for transportation and hospitalisation at Mumbai.
DENSITY: See 'Mumbai'.
FRESH WATER: Available at all berths.
FUEL: Diesel and furnace oil available at all berths. Bunkers provided from storage tanks belonging to BPCL.
FIRE PRECAUTIONS: Port Fire Service maintains 24 hours watch. Any fire/emergency must be immediately reported to Port Signal Station on VHF Channel 13, which operates on a 24 hour basis. All hot work to be carried out after obtaining Hot Work Permit from Port Safety Inspector. Tel: 306.
CONSULS: See "Mumbai".

REPAIRS/DRY DOCKS: See "Mumbai".
SURVEYORS: See "Mumbai".
GANGWAY/DECK WATCHMEN: Routine gangway/deck watch is the responsibility of the vessel's Master. Private watchman not envisaged as a port requirement.
HATCHES: Opening and closing done by ship's crew.
CUSTOMS ALLOWANCE: See "Mumbai".
CARGO GEAR: Load/discharge effected by shore gear.
Special beams available for handling O/H containers.
REPATRIATION: See "Mumbai".
AIRPORT: See "Mumbai".
TIME: See "Mumbai".
HOLIDAYS: See "Mumbai".
POLICE/FIRE/AMBULANCE: Police: Sheva Police Station, Tel: 364. Fire: JNP Fire Station, Tel: 306. Ambulance: Tel: 360, 346.
TELEPHONES: Arrangements are being made to provide telephones at all the berths.
IDENTIFICATION CARDS: See "Mumbai".
REGULATIONS: See "Mumbai".
GENERAL: *Hazardous Cargo:* At present, hazardous cargo in break bulk form is not handled in JNP. Except for Class 1 and 7, IMDG code hazardous goods of all IMO Classes are allowed to be landed/loaded in containerised form at JNP container berths.

In each case, Masters of vessels carrying dangerous cargo in containers must arrange to transmit Dangerous Cargo List, giving container No., IMO Class, Bay Plan, description of goods, UN Code No., to the Harbour Master of JNPT.

DEVELOPMENTS: Procurement of additional container handling equipment such as 2 quay cranes, 2 yard gantry cranes and 2 reach stackers.

Conversion of bulk service berth for import of phosphoric acid, edible oils, LPG and export of foodgrains. Expected completion by end of 1996.

Construction of two additional berths for container handling, enlargement of stacking area, enlargement of CFS, etc. Expected date of completion after 1996.

AUTHORITY: Jawaharlal Nehru Port Trust, Administration Building, Sheva Tal-Uran, District Raigad, Maharashtra, India. *Tel:* 7242301. *Telex:* 011-01313202, 011-84148. *Contact:* Captain R.Ramkumar, Harbour Master.

AGENT: See "Mumbai".

KAKINADA: 16.56 N. 82.15 E.

DOCUMENTS: *(a)* To be supplied by Master on arrival:
Ship's Register.
Safety Equipment Certificate.
International Load Line Certificate.
Derat Certificate.
Last Port Clearance.
ILH Dues Receipt, if coming from an Indian Port.
Crew List: 6 copies to Agents, 2 copies to Immigration Dept., 2 copies to Customs.
Customs Circulating Copy, if coming from another Indian Port.
Import Manifest of Stores (Stores List).
Private Property Statement of crew and officers.

(b) Master to sign following certificates, in prescribed forms, presented by Agents, on arrival:
Port Entry.
Port Clearance.
Customs Entry.
Customs Clearance.
Departure.
Health.

PILOTAGE: No pilotage.
ANCHORAGE: *Allotment of Anchor Berths:*
Masters of vessels calling at the Port of Kakinada should cable the following information to the Port Officer directly, 24 hours before their arrival off the Port:—
(a) ETA (Indian Standard Time)
(b) Total cargo for loading/discharging at Kakinada and nature of cargo.
(c) Hatchwise distribution.
(d) Declaration of hazardous, inflammable and explosive cargo.
(e) Declaration of vessels winches in good working condition.
(f) Draft Fore and Aft.

A specimen cable covering the above is quoted below:
"Port Officer Kakinada STOP Vessel XXX ETA Kakinada 22/10 0900 Local Time quantity loading 9,500 tonnes rice bran extractions hatch one 1,000 hatch two 2,000 hatch three 3,000 hatch four 3,000 hatch five 500 no hazardous inflammable explosives STOP All winches derricks good working condition draft fore 8 m. aft 9 m."

The above cable sent to the Port Officer (in addition to the cable sent to their Agents as per normal practice) will facilitate proper anchoring instructions from Port Authorities to the Master and avoid difficulties in Port operations.

Masters should also keep watch on VHF Channel 16 to receive instructions from Port Control and contact Port Control on arrival at the approaches to the Port.

Specific instructions will be given by the Port Officer on VHF through Port Control in respect of anchorage positions. When once anchored as above, Masters should not shift their position without specific re-anchorage position given by the Port Officer, unless in case of emergency in regard to the safety of the vessel.

Masters of vessels calling at this port are advised to be in possession of the latest navigation chart corrected up to-date. The Indian edition available is 3009 "Approaches to Kakinada Port" with an inset of Kakinada Bay.

Main engines should not be immobilised without specific permission from Port Authorities.

The Godavari Point (sand spit) is extending Northwestwards at a rate of about 170 ft. per annum and a port hand buoy (flashing red) 5 secs. is installed at the tip of the spit.

The holding ground anywhere in the anchorage is considered excellent (soft mud and sand).

MAX. SIZE: No restriction. Vessels any size can enter the port.
HEALTH: Masters have to send standard quarantine message not more than 12 hours and not less than 4 hours before arrival. Pratique will be granted by Port Health Officer basing on the quarantine message, which will be instructed to the Agents. Health inspection of the vessel will be carried out by the Port Health Officer at the earliest convenience. Vessels that have touched ports in the yellow fever endemic area within the last 30 days, should send the quarantine message at least 48 hours before the expected time of arrival.
RADIO: Radio stations are Visakhapatnam and Madras.
VHF: VHF radio station is in the Port Office (Port Control) on International frequency, Channels 16 and 12, communication from ship/Port control and vice versa. If ship requires communication on Channel 12, it should be advised in advance to prepare machine accordingly.

The Port control VHF functions round the clock at the following specified times:–

0045 to 0100 hrs.	1245 to 1315 hrs.
0345 to 0415 hrs.	1445 to 1515 hrs.
0545 to 0615 hrs.	1745 to 1815 hrs.
0745 to 0815 hrs.	1945 to 2015 hrs.
1045 to 1115 hrs.	2245 to 2315 hrs.

All times Indian Standard Time.

TUGS: There are 5 small tugs and 6 Pablo Boats for towing cargo lighters.
BERTHING: 1 wharf, length 300 m. 1 floating crane, capacity 50 tons.
CARGO LIGHTERS: There are 110 cargo boats with total capacity of 9,600 d.w.t. In addition 5 self-propelled mechanised barges each of 250 d.w.t. owned by the Port Authorities.

There are also available 6 mechanised barges each 240 d.w.t. owned by Central Island Water Transport Corporation Ltd., Calcutta.

STEVEDORES: Gangs engaged by party doing stevedoring work. In case of liners, Agents attend. In case of chartered vessels, consignees/shippers attend. Master to give ETA with number of hatches to be worked on arrival. Revised ETA to be sent whenever there is change.
MEDICAL: Government general hospital available with specialists. Private nursing homes also available with efficient physicians and surgeons. Agents arrange medical aid on advance advice. Being roadstead port, launches have to be arranged, hence advance notice of 6 hours necessary through signal station while in port.
DENSITY: Ranging from 1010 to 1025.
FRESH WATER: Of the 5 mechanised barges owned by the Port Authorities, 1 mechanised barge is used for supply of fresh water up to 200 tons. Privately owned self-propelled barge is also available for supply up to 100 tons. Prior arrangements to be made through Agents of vessels 24 hours in advance.
FUEL: No fuel suppliers. In case of emergency small quantities of 10/15 tons, in 205 litre drums, can be arranged from Visakhapatnam, duty paid.
CONSULS: None.
REPAIRS: No facilities. Only minor repairs to winches, welding work, casting and repairing spare parts.
GANGWAY/DECK WATCHMEN: Arranged by stevedores.
OPENING/CLOSING HATCHES: By ship's crew only.
CUSTOMS ALLOWANCES: Tobacco: 200 cigarettes per head per week. Wine and Spirits: 16 oz. per head per week for those who are eligible for supply by ship.
REPATRIATION: Can be arranged.
AIRPORT: Visakhapatnam 105 miles, Madras 350 miles.
TIME: GMT plus 5.5 hours = IST.
HOLIDAYS: Charter Party holidays are observed. Work is done day and night. Port and Customs also work on holidays and out of office hours on payment of overtime. No work even on overtime payment on following days: Bhogi, Pongal, Kanumu. Optional holidays to labour on Chollangi Amavasya, in January.
POLICE/AMBULANCE/FIRE: Police 3052; Fire 101; Ambulance 3311.
SERVICES: Fresh and dry provisions available.
SHORE LEAVE: Shore permits given by Port Registration Officer (Immigration).
IDENTIFICATION CARDS: Required.
NOTARY: Available for noting protest.
DEVELOPMENTS: Development programmes include canal protection, transport facilities, navigational aids, power supply to loading/discharging points and stacking yards at shore and providing breakwater of 880 m. in length (sea wall) and mooring circle on the West side of the sand-spit known as Hope Island. The breakwater can be extended a further 3.2 km. Eastward for direct berthing of ships to serve long term needs of the port.

Deep water facilities to be built. 3 berths, 2 mobile cranes, 2 tugs, transit sheds and navigational aids will be available 1996.

AUTHORITY: Port Officer.
AGENT: See "Cochin".

KANDLA: 23.00 N. 70.12 E. (See Plan)

DOCUMENTS: To be submitted by Masters on arrival:

Customs: Crew List (3 copies).
Crew Private Property List – this should indicate all items they possess (3 copies).
Ship's Stores List (3 copies).
All valid documents of ship in English for verification of Customs Boarding Officer.
Port Maritime Declaration in duplicate.
Health: Valid crew health cards and Derat Certificate.
Agents: Stowage Plan, Cargo Manifest and Bills of Lading.

Boarding Pilot collects following documents:
4 copies Arrival Report.
4 copies Pilotage Certificate.
2 copies Crew List.

PILOTAGE: Compulsory. Pilot station situated Lat. 22° 49.5' N., Long. 70° 07' E. Loaded vessels can cross bar only during high water. Vessel to report at Pilot Station 2.5 hours before high water. Masters to keep Agents closely advised of ETA and anchoring time. 12 hours advance notice to be given by Agents for Pilot. No pilot ship or telegraphic address for Pilot Station (Outer Tuna buoy). Vessels can contact Kandla Tower through VHF Channel 16. Pilot station 16 miles away from port. During all weathers vessels have to anchor at above position and await Pilot.

Chart: Indian No. 2059 and 203.

Shipmaster's Report: On calling at Kandla, the Pilot advised that anchorage outside a 2 mile range from the Outer Tuna Buoy and the Pilot having to board there, increases the pilotage dues by 100 per cent.

ANCHORAGE: Vessels can anchor 1 mile S.W. of above anchoring position. Inside harbour, anchorages allotted by Port Authorities, and Pilots anchor vessels at suitable positions.

Vessels can however anchor more than 2 miles from Fairway Buoy but must pick-up Pilot within 2 miles of Outer Tuna Buoy.

RESTRICTIONS: Being a tidal port, entering and leaving of loaded vessels depends on tide, and loaded vessels can cross bar at entrance of channel only during high water. Night navigation has been introduced and is restricted to vessels up to 189 m. LOA and up to 8.23 m. draft.

Tankers bound for oil jetties are only handled during daylight hours.

Ships having speed of less than 9 knots through the water will not be moved in and out of the port of Kandla during hours of darkness.

Berthing and unberthing of ships at the moorings will be restricted to daylight only. Daily draft forecast for crossing Kandla Bar published at intervals by the Kandla Port Trust.

REGISTRATION: Report: August 1985.

On account of congestion a registration system has been introduced.

When vessel has arrived at the Outer Tuna Buoy and registered with the signal station she will be allowed to proceed to other ports.

It will be up to the vessel to ensure that she is at the Outer Tuna Buoy when her turn comes up.

MAX. SIZE: Max. overall length 740 ft. No breadth restrictions.

For oil tankers max. permissible overall length is 700 ft.

Draft according to water on the bar varies from 30 ft. year round, to 31 ft. (frequently), to 32 ft. (occasionally) and 33 ft. – 34 ft. (very occasionally).

Sogal Channel (Mid Channel) was commissioned in 1984 which has given additional draft of 3 ft. i.e. 14 ft. at Chart Datum.

Tides:

MHWN	5.71 m.
MHWS	6.66 m.
MLWN	1.80 m.
MLWS	0.80 m.
HHW	7.59 m.
LLW	– 0.40 m. (Below Chart Datum).

HEALTH: The Masters of all ships arriving at Kandla are required to send the Port Health Officer, Kandla (cable address "Sandgrodh") a wireless message embodying all applicable terms of information set out in the Standard Quarantine message of the International Code of Signals. In addition to the International Code message, Masters are also required to give the following information in plain language:

(a) Whether there is any abnormal mortality of rats or mice.
(b) Whether there is any monkey on board.
(c) Whether touched or embarked at Aden or Djibouti any person.
(d) Names of all ports touched en-route within preceding 30 days, with dates of departure.
(e) Request for Radio Pratique.

Upon anchoring at Pilot Station, cable again "Sandgrodh" stating time anchored and requesting Radio Pratique.

In cases where the vessel has touched any yellow fever area within preceding 30 days it is necessary for Master to certify that all officers and crew/passengers on board possess valid yellow-fever certificates.

Present practice for granting Pratique is by radio or by Port Health Officer boarding vessels inside harbour.

If the Maritime Declaration is not in order, the Pilot refers the Master to the Port Health Officer who then boards the vessel and grants Free Pratique after his inspection of the vessel.

RADIO: Within a range of 800 km. off Kandla, vessels can contact Kandla Radio on call sign VVK. Before 800 km. off, Kandla can be contacted through Mumbai Radio only.

TUGS: 5 tugs. Port tugs join ships inside harbour off berth. Ship's wires used.

BERTHING: The cargo jetty provides 6 alongside-berths with total quayage of 4,725 ft. which can accommodate ships drawing up to 32 ft. loaded draft. The cargo jetty is served with 26 electric level luffing cranes, 20 of 3 tonnes, 5 of 6 tonnes and 1 of 10 tonnes capacity for handling cargo from ships.

3 mooring berths are available near the cargo jetty for vessels up to 600 ft. LOA and 25 ft. draft and vessels up to 500 ft. LOA and 24 ft.-26 ft. draft. In addition, there are separate moorings for *(a)* ships loading salt, max. LOA 600 ft. and max. draft 30 ft.,((b) deep draft mooring for ships up to 35 ft. draft and 740 ft. LOA.

The Bunder basin has 3 wharves, two wharves with transit sheds. The South wharf is served with 4 quay electric level-luffing cranes of 3 tons to 10 tons capacity for handling cargo from lighters. The North Wharf is for country craft. The West wharf is provided with a 60 tons capacity electric gantry crane.

Marine unloader with rated capacity of 350 tonnes per hour for discharging bulk fertiliser and its raw materials has been commissioned.

There is a back-up storage area of 30,000 tonnes. Automatic bagging and stitching machines are also available.

CRANES: 3 mobile cranes with capacity 3 tons – 20 tons.

Also see "Berthing".

STEVEDORES: Minimum 24 hours notice required for arranging stevedoring labour and gangs. Bulk fertiliser – average 650 tonnes per berth/day by conventional method. Grain – 850 tons. General cargo 250 tons per hook, subject congestion prevailing in sheds, wharves, warehouses and clearance, and on number of vessels working at particular period.

Cargo Operations:

1. At this port the unloaded/loaded LASH barges are towed by tugs which are subsequently discharged/picked up by LASH ships (operation suspended at present).

2. Regulations concerning the handling of dry-cargo are applicable to handling of cargo in barges.

3. Trucks can proceed alongside the berth and can park within the reach of the shore cranes. Cargo is loaded/unloaded from trucks directly on the wharf for shipment per vessel.

4. Forklift trucks are used to transport the cargo from the place of unloading to the stacking area and vice-versa.

5. Cargo on board the vessel is handled by Kandla Dock Labour Board workers. Packaged cargo on shore is handled by labour engaged by respective importers/exporters which are drawn from local market. Bulk cargo viz. fertiliser and wheat is handled on shore by departmental labour of Food Corporation of India

MEDICAL: Private Doctors' services available for vessels at berth. For vessels at Pilot Station or inner anchorages minimum advance notice of 12 hours and 6 hours respectively required. Very limited facilities of private practitioners. No hospital facilities. Inoculation and vaccination carried out by Port Health Officer (a Government body) – minimum 48 hours' notice required.

TANKERS: (Also see "Port of Vadinar"). Tankers with max. overall length of 700 ft., 40,000 tons displacement and 34 ft. draft permitted to berth. 3 main pipelines connected to tanks situated about 10 km. from berth, 2 generally used for white oils and one for black oil. White-oil pipelines diameter 12 in. and black-oil pipeline diameter of 16 in. In addition, one 8 in. diameter pipeline for soyabean oil, one 3 in. diameter pipeline for acetone and one 4 in. diameter pipeline for formaldehyde and one 12 in. diameter pipeline for Phosphoric Acid imported by Indian Farmers Fertiliser Co-operative Ltd.

Berthing of Ammonia Tankers at Tanker Berth No. 1 with loading/unloading arm but restriction depending on the position of manifold.

Shipmaster's Report: Tankers will sometimes be brought in to the port even though a berth may not be available at that time. Such vessel will then be moored to a mooring buoy close to the jetty, awaiting her berth at the tanker pier. Mooring to this buoy is effected by use of the vessel's starboard anchor chain, so that the anchor has to be disconnected from the chain before entering.

In securing alongside the oil-pier, tankers are required to utilise 1 insurance wire fore and aft (not supplied from shore). In addition vessel is required to use all her available ropes and wires owing to strong currents – 4 head-ropes, 2 breast-ropes, 2 springs.

DENSITY: Varies from 1020–1030.

FRESH WATER: Can be supplied through shore pipe alongside and by barges in the stream.

Shipmaster's Report: Water is very scarce and should be ordered at least 3 days prior arrival.

FUEL: Furnace oil (heavy oil) and light diesel oil can be supplied. Usually 12 hours advance notice required for bunkering. In event of oil tanker discharging at berth, bunker supply can only be commenced 18 hours after completion of discharge by tanker. Quantities up to 500 tons supplied by tank trucks, above 500 tons supplied through pipelines if berth vacant. However, any quantity can be supplied by tank trucks.

FIRE PRECAUTIONS: 3 sea water fire fighting pumps installed at oil jetty. These pumps are under charge of fire brigade officers and have adequate fire fighting equipment. A tug fully manned with fire fighting arrangements also available at short notice.

CONSULS: None.

REPAIRS: Minor repairs carried out. Chipping and painting work also carried out.

DRY DOCKS: A floating dry dock with lifting capacity of 2,700 d.w.t. to accommodate small craft up to 100 m. in length and 5.0 m. draft.

SURVEYORS:

G. P. Dave & Sons, Tel: 20288.
J. B. BodaMarine, & General Survey Agents Pvt. Ltd., Tel: 21693, 21946.
Metcalfe & Hodgkinson Pvt. Ltd., Tel: 21740, 20940.
Navark & Mareng, Mohan Bhuvan, Tel: 21123.
Seascan Services Pvt. Ltd., Tel: 20288.
S.G.S. Ltd., Tel: 21857.

GANGWAY/DECK WATCHMEN: All ships engage 2 watchmen round the clock at gangway. To look after mooring lines, 8 mooring men (4 each at fore and aft) are engaged round the clock.

OPENING/CLOSING HATCHES: Unless specified in relative Charter Party to contrary, ship's crew to accomplish this work.

SHIP CERTIFICATES:

Registration.
Safety Equipment.
Safety Radio and Telegraphy.
International Load Line.

CUSTOMS ALLOWANCES: 200 cigarettes per week per person. Wine and/or Spirit: 2 pegs of spirit per person per day or 4 pints beer.

Shipmaster's Report: Very strict Customs supervision, particularly in regard to declaration of foreign currency.

CARGO GEAR: Ships should possess valid Cargo Gear Certificates.

REPATRIATION: Adequate facilities available.

AIRPORT: Kandla Airport 20 km. from the port and an additional airport about 70 km. from port.

TIME: GMT plus 5.5 hours.

HOLIDAYS:

	Approximate Date
Republic Day	January 26th
Holi (Second Day)	March 10th
Chetichand	March 26th
Good Friday	April 9th
May Day	May 1st
Id-Ul-Fitr	July 23rd
Janmashtami	August 12th
Independence Day	August 15th
id-Ul-Azha (Bakrid)	September 28th
Mahatma Gandhi's Birthday	October 2nd
Dussehra	October 27th
Muhurram	October 28th
Diwali	November 15th
Diwali (New Year Day)	November 16th
Guru Nanak's Birthday	November 30th
Christmas Day	December 25th

TELEPHONES: Available for tankers and cargo vessels.

SERVICES: Tank cleaning by shore labourers. Tank washings and residue not allowed to be discharged in port area.

SHORE LEAVE: Possible.

Regulations: Photography in port area prohibited. No crew members allowed to take with them liquor of any kind ashore and not permitted to drink liquor outside port limit.

IDENTIFICATION CARDS: Required. See "Shore Leave".

GARBAGE DISPOSAL: No service available.

WASTE OIL DISPOSAL: There are 2 tanks at the Oil Jetty (400 tons and 250 tons) for waste oil, and the Port Authority has a tanker lorry for collection of waste oil.

SEAMAN'S CLUBS: The Seaman's Club is situated close to the port. International telephone calls can be made at the Post Office.

CURRENCY: Rupees.

GENERAL: Port equipped with 21 electric level luffing shore cranes of 3 tons to 10 tons capacity used for discharging all ships alongside cargo jetty. For discharging tankers with bulk grain port's vacuvators belonging to Food Corporation of India used.

Kandla port is a prohibited area where entry and exit are restricted to those persons having bona fide work only. Masters are requested to exercise a strict check at the gangway in order to ensure that only those persons with bona fide business to transact are allowed aboard. In the event that any unauthorised person is found to be aboard the vessel, this should be reported to port officials and the police on duty.

Masters are requested to advise their crew in advance of arrival at Kandla that photography within the port area is strictly prohibited, and it is suggested that all cameras should be left in the safe custody of the Master in order that crew members may not violate this regulation inadvertently and become involved in legal proceedings.

DEVELOPMENTS: Berths and bar continuously under dredging.

An additional berth (343 m.) has been constructed and will be commissioned in the near future. It will have a container freight station, storage yard and container handling facilities.

SHIPMASTER'S REPORT: May 1988.

1. Vessels can anchor any distance from the Outer Tuna Buoy but must rendezvous with the pilot vessel about 2 cables North of the buoy to take pilot.

   Arriving vessels picking up pilot must pass the Outer Tuna Buoy to starboard, then swing to port to give the pilot boat a good lee. (Pilot ladder rigged starboard side, 1 metre from the water.)
2. Communication through Kandla Tower for berthing instructions and pilot boat works on Channel 8. Kandla Tower calls on Channel 16, works on Channels 10 and 8.
3. No night berthing for loaded tankers.
4. Vessel anchored 2.7 miles from Outer Tuna Buoy with 5 shackles in water, good holding ground in sand/mud in very strong tides.
5. Vessel berthed at Oil Jetty No. 3, pilot reported that there is 32 ft. of water at low water.
6. Pilot reported that it was very rare for a tanker to be moored at a buoy in the river using anchor cable to buoy, but common for cargo ships awaiting berth or cargo.
7. Vessel used port anchor in river just after passing berth to swing (1 shackle in water) then, when turned, anchor is weighed to clear of the water.

   On approaching berth, port anchor is again used to control movement towards jetty. One tug assists, usually just pushing.
8. Normal moorings only required at this berth, 3 head/stern lines, 2 breast lines and 2 springs, one mooring boat employed.

   Special wires from either the ship or the shore not required.
9. At Oil Jetty No. 3 we used 2×8 in. flexible cargo hoses, max. pressure of 10.5 Bar, which gave a rate of 1,200 – 1,300 cu.m.p.h.

   Fresh water available ex-jetty, we gave Agent 3 days' notice and 100 tonnes was no problem, but we were told that this was the maximum at this time of year.
10. Tank washing for clean ballast possible alongside, but best to get written permission from the Harbour Master via the agent.
11. Officials required 5 copies of all usual documents.
12. Shore passes must be issued to all persons wishing to go ashore. No other identification required. Those going ashore must return to the vessel by 2230 hrs.

    Customs suggest all cameras locked away by Master as a precaution against possible illegal use.

    Town is 16 km. away, taxis and a bus (every 30 minutes) available at head of jetty.

    Foreign currency can be changed ashore at official places but a receipt must be obtained.

    Agent recommended that no watchmen be employed on board.
13. Unberthing at night costs more than normal daylight rate, also on the tanker berths a loaded tanker is unable to berth at night, so better to unberth during daylight.
14. One tug used unberthing, it does not make fast, normal unmooring using engine and heaving on anchor cable.
15. All Kandla buoyage in position, but lights not checked due to daylight movements only by this vessel.

    Pilot left vessel 1–1.5 miles North of the Outer Tuna Buoy, swinging to starboard to give lee for pilot ladder on the starboard side.
16. On leaving Kandla this vessel had to stop at sea (120 miles off) to clean lub oil coolers as they had become blocked quite badly due to sand and mud picked up in the Kandla River/creek.

Other details of vessel/cargo: Vessel in port 5 days. Cargo discharged: 24,431 tonnes diesel oil. Arrival draft 9.55 m. LOA 171.45 m.

SHIPMASTER'S REPORT: October 1993.

Charts: B.A. Charts No. 43, 672 (old) and 3466 (new).

Approach: Approaching Gulf of Kutch from S.W., the promontory of "Okhamandal" shows up well on radar with all Racons operating.

Buoyage fairly reliable in N.E. Monsoon. Local knowledge suggests that in S.W. Monsoon, buoys either withdrawn or become unreliable.

Tidal currents are strong, up to 5 knots or more with high swells in S.W. Monsoon.

Anchorage: Outer Anchorage: Near "Outer Tuna" Buoy in 10.0 m. to 12.0 m. Holding ground good.

Large swell in S.W. Monsoon.

We anchored in position Lat. 22° 48.9' N., Long. 70° 06.2' E. with 7.8 m. draft. Anchorage quite crowded.

Inner Anchorage: Under pilotage with tug assistance.

In Kandla Creek. From approx. Lat. 22° 58.5' N. to Lat. 23° 00.0' N. in deep water near Western shore, and Lat. 23° 01.5' N. to Lat. 23° 02.5' N. in deep water nearer Eastern shore. Usually about 5 shackles second anchor dropped to about 1 shackle on bottom between change of tides to steady vessel. During tide changes, this anchor is hove up 30 minutes before change of tide and let go again after vessel has completely swung and settled to tide.

Berthing delays are common and sometime at anchor seems to be inevitable.

Pilot: Now boards just S.W. of Buoys No. 2 and No. 3, not West of the Outer Tuna Buoy as indicated on chart.

There used to be a rule that if you anchored over 2 miles from the Outer Tuna Buoy, a double pilotage fee charged. Quite often, due to number of ships at anchor, it is impossible to anchor this close, also Kandla Tower gives vessel plenty of notice, so this rule no longer seems to be in force.

Kandla Tower gives out berthing information around 2100 hrs. and 0900 hrs.

No night berthings, at present, for any ships. This is partly due to the lack of pilots (4), and also the difficulty of berthing with the poor quay/jetty lighting.

Sailing of tankers not undertaken during darkness, but cargo ships can sometimes sail at night, depending on draft, and with prior arrangement.

Movement of tankers is governed by transit of Sogal Channel Bar during daylight.

We left Lower Creek Anchorage (opposite new container berth) at 0530 hrs. with 8.8 m. draft, about 30 minutes before H.W., crossing Bar on H.W. at dawn. Pilot advised me that this is the earliest a tanker can leave.

Pilots were very good. Two younger Pilots for the river and channel, and two more experienced Pilots for berthing and unberthing. Sometimes retired Pilots brought in.

Pilot cutter is a large steel craft with speed of 12.0 knots. The Pilot says it is good in S.W. Monsoon.

Kandla Pilots also work offshore terminal at Vadinar (to South West), which comes under Kandla port limits.

VHF: Kandla Tower on Channels 16 and 8 (officially 24 hours). During the early hours (12 to 4) not very responsive. Station comes to life around 0430 hrs. We made contact 45 miles away.

Signal Station: Pilots/VHF/radar from Signal Tower situated just North of General Cargo Wharves (23° 00.48' N., 70° 13.3' E.). Pilots advised that radar is not used.

Pratique: Radio Pratique if coming from a foreign port (as per ALRS/International Format). Kandla Radio (VWK) impossible to obtain. Send message via telex or telegram or via Agents. A sister ship reported that Pratique can be given on anchoring.

Channel: During S.W. Monsoon, outer buoys often drift out of position and are lifted and not replaced until N.E. Monsoon. In early October, Buoy No. 1 was missing. Pilots report every effort is concentrated in S.W. Monsoon in keeping Sogal Channel buoys in position.

Chart No. 672 (now withdrawn) does not reflect changes in Sogal Channel buoys and leading lights. Chart No. 3466 should show changes (not on board at time of visit). Pilots advise maximum draft 35 ft. (10.6 m.) on HWS. Bar is maintained by 2 dredgers constantly working at 4.5 m. Chart Datum.

We crossed on top of H.W. with a draft of 8.8 m. with 1.5 m. underkeel (echo trace) on tide height of 5.9 m. This was confirmed by our arrival draft crossing Bar at H.W., that 4.5 m. Datum is accurate.

Least depth just South of Buoy No. 11. All Sogal Channel Buoys lighted.

Kandla Creek, between Lat. 23° 01.6' N. and Lat. 23° 00.0" N., bottom of sand wave formation.

Kandla Creek is full salt water – 1026 obtained at various times. Pilots report no fresh water intake.

Kandla Creek Buoys No. 16 and 17 unlit. Leading lights ISO. 3 sec. and QW bearing 050° discontinued, although beacons still in position. Front leading light (QR) Lat. 22° 58.3' N., Long. 70° 15.7' E., has been doubled to give sector bearing 035° to 037°, basically 2 front leading lights (QR), side by side.

Tugs: 4 modern Kort Knozzle tugs of 32 tonnes bollard pull. All could do with some maintenance. Ship's lines used.

Berthing: Always berth into the tidal current. Generally no berthing 45 minutes either side of the turn of the tide.

Deeply laden ships generally have to anchor in the Creek for next tide before berthing and unberthing and proceeding alongside or to sea.

We berthed on the ebb at Oil Jetty No. 2 – port side to, and crossed the Sogal Bar at H.W., but due to Berthing Pilot's delay, insufficient time to berth before L.W. Likewise had to leave on ebb, so had to wait for next daylight H.W. before crossing Bar.

Offshore anchor let go to 4 – 5 shackles about 100 m. off berth.

One tug pushing was used.

Moorings were 3-2-2, each end. Head and stern lines (dependent on side to) to buoy South of jetty.

Mooring boat with large mooring gang provided.

On departure, we used anchor and stern tug.

Fenders are vertical hardwood bulks and are adequate.

Berth: 3 oil jetties available. No. 1 (North side), No. 2 and No. 3 (detached on South side).

Jetties No. 1 and No. 3 are capable of handling up to 75,000 d.w.t., depending on draft.

Jetty No. 2 can handle up to 40,000 d.w.t., depending on draft.

Jetties No. 1 and No. 2 are of concrete pile construction and require renovation.

Jetty No. 3 is of more recent construction (1989), and is a typical tanker "T" jetty of concrete with outlying mooring dolphins North/South and connected by catwalks.

Depths: No. 1 – 11.0 m. at C.D. (reported).
No. 3 – 10.0 m. at C.D. (reported).
No. 2 – Found by soundings round at L.W. – minimum 7.7 m. C.D., but generally 9.0 m. C.D. (See "Plan").

Gangway: Due to tide, only Regulation Brow type gangway can be used. Accommodation ladder must be turned in before berthing.

Cargo: Berths handle all products, except crude.

Jetty No. 1 handles ammonia for the fertiliser plant situated close North of berth. Also handles furnace oil and some chemicals.

Jetty No. 2 handles vegetable oils (particularly the export of castor oil), diesel oil and chemicals.

Jetty No. 3 handles furnace oil, diesel and some chemicals.

We berthed at No. 2 for the loading of castor oil, which comes from storage tank down 8 in. line to berth manifold, then 6 in. hose to vessel. Trucks also deliver direct into pipeline at tank farm.

When coming direct from storage tank, loading rate for castor oil is around 140 t.p.h. and from trucks as low as 50 t.p.h.

Heating instructions stipulate maximum temperature of 35°C, but cargo comes on board at up to 43°C. Protest required.

To clear line on completion of loading, a "Pig" used, which takes around 30 minutes.

Two surveyors live onboard, cabin required.

Allow 2 hours for paperwork on completion.

Agent signs Bills of Lading.

About 15,000 to 20,000 tonnes of castor oil is exported each month. It can also be loaded at No. 3 General Cargo Jetty by pipeline.

Chicksan arms on Berths No. 1 and 3, although not seen used during our 3 days at Berth No. 2. Ammonia is reportedly discharged by hose.

Fresh Water: Fresh water is piped to all jetties, and is often unavailable or in very short supply, which has happened in the dry season.

Water was rationed ashore during our call.

Medical: After many requests, Agent arranged for 4 crew members to attend a local doctor. Reports were reasonable.

Security: Maximum security required. Thieves roam around at night in high powered boats.

Gang thieving is rife as we learnt to our cost.

Watchmen not available. Agent reported that watchmen act in collusion with thieves, and he would not employ them.

Port Authorities are not interested, and in fact if thieving is reported, Customs will search ship and check Stores Manifest very carefully for any differences.

Authorities: We came from Mumbai and might just as well have come from a foreign port as a large amount of paperwork was required.

Basically boarding is by three different groups, and they require the following:

Customs:	"Rider" from Mumbai, containing all Mumbai entry papers. Mumbai Clearance. 2 copies Crew List. 2 copies Personal Currency List. Checked Bond and Resealed.
Immigration:	2 copies Crew List. Seamen's Discharge Books sighted. Issued shore passes to all crew (not required to be handed back).
Health:	Mumbai Health Clearance. Derat Exemption sighted. Galley and Storerooms visited.
Pollution:	Sights IOPP. Both Oil Record Books, the Noxious Substances Book not understood but stamped it.
Port Safety:	Safety Equipment Certificate.

Numerous forms to fill in, in fact more paperwork/forms in this port than in any other that I have visited.

The Authorities seem to be very hot on cameras, and photography is not allowed. I signed a form advising that cameras not allowed off vessel, but nothing checked.

General: Very busy at general cargo quays, all with cranes operating.

The new quay at the South end is open and operating for self-discharging container vessels. Pilots report 10.0 m. alongside.

Kandla City is about 10 miles away to N.W. over salt pans. Land around very flat.

Two local shops in Kandla Port area advertise onboard International telephone connections (U.S.$ 2.00 per minute to North Europe). Rickshaw ride from gate U.S.$ 4.00 return.

Noticed on way in and out that anchorage port of "Bedi Bandar" (22° 38'N., 70° 04' E.) was very busy and crowded. We heard several ships on VHF complaining that other ships were anchoring too close.

AUTHORITY: Kandla Port Trust, Administrative Building, P.O.Box 50, Gandhidham-Kutch, Gujarat, India, Pin. 370201. *Tel:* (02836) 20001, 20601. *Telex:* 105-208. *Cables:* Port Trust Kandla. *Contact:* Harbour Master or Deputy Port Conservator.

AGENT: See "Cochin".

KARWAR: 14.48 N. 74.06 E. (See Plan)

PORT LIMITS: *North:* A line drawn from Dayamada Point to Parker Rock.
East: Seashore of Karwar Bay from Dayamada Point to Badchidar Point 50 yards above high-water mark including Baithkol Cove, Kalinady and all branches thereof as far as navigable and the shores and banks within 50 yards of high-water mark Spring tides including all islands and thence to Mogera Guda Island (including Mogera Guda Island). All patta lands and other private sites excluded.
South West: A line drawn from Mogera Guda Island through Gudsav Sunv, Westernmost point of Mandal Island to Parker Rock.

DOCUMENTS:

8 Crew Lists.
2 Manifests of Stores.
2 Private Property Declarations.
2 Currency Lists.
1 Maritime Declaration of Health.
3 Passenger Lists (if any).
4 Import Manifests.
Last Port Clearance.

PILOTAGE: The approach from Northward is between Oyster Rock Lighthouse and 2 front and rear leading lights on Simshigudda and Kurmagad Islands, respectively, in positions Lat. 14° 50' 11" N., Long. 74° 05' 43" E. and Lat. 14° 50' 33" N., Long. 74° 05' 59" E. Vessels approaching from Southward may enter between Oyster Rock Light and Karwar Head. Currents in bay are negligible. Ocean-going vessels are piloted by Departmental Port Officer who is a licensed Pilot. No pilotage charges at present.

ANCHORAGE: Anchorage for shallow draft vessels is with the Port Signal Station, bearing 120° (T), distance 1 to 2 miles, or Oyster Rock Lighthouse, bearing 278° (T), distance 2.5 miles in about 24 ft. to 28 ft. of water. Anchorage for deep drafted vessels is with the signal station, bearing 099° (T), distance 3 to 3.5 miles in depths of 38 ft. to 42 ft.

RESTRICTIONS: No entry restrictions. Karwar Bay may be entered on either side of Sunghiri Island, according to draft and anchorage taken as required. A vessel can enter Karwar either by day or night after having made lighthouse on Devghad Island.

MAX. SIZE: Any size of vessel can be worked as loading and unloading operation done in open sea. Depth at Outer Roads over 7 fathoms increasing accordance distance from land.

HEALTH: District Civil Surgeon acts as Port Health Officer. Free Pratique to incoming vessels from foreign ports granted by radio. All vessels calling from foreign destination must give radio message addressed "Civil Surgeon Karwar" at least 48 hours prior entering port giving last port of call, number of crew, health conditions, approximate time of arrival and requesting Pratique, same message must be repeated to Agents who obtain Pratique on shore. Anchoring time is Pratique time. For vessels calling from an Indian port, Pratique not required.

Vessels which have taken on board passengers or crew from yellow fever areas, within 30 days of departure from such ports will be under quarantine. Free Pratique will not be granted until such time as a mosquito search party, from nearest major port (e.g. Cochin, Goa or Mumbai) has inspected, disinfected and certified that ship is fit for granting Pratique.

Necessary for Owners or Masters to inform Agents well in advance in case of vessel arriving from yellow fever area to enable arranging of mosquito search party and quick Pratique.

RADIO: ETA and Pratique messages should be sent via Goa or Mumbai Radio as Karwar Radio has been shut down.

TUGS: No tugs necessary as vessels work in stream.

BERTHING: No berth, vessels work in open sea. Baithkol Cove is safe berthing place for lighters. Alongside wharves 10 to 12 smaller vessels can obtain safe berth with depth of 6 ft. to 8 ft.

Also see "Developments".

STEVEDORES: 48 hours notice ETA required order enable Agents advise shippers and stevedores to keep cargo and labourers ready. Main commodity export of ore. Mechanised barge loading operations in port. Ore loading rate up to 4,000 tons per day. General cargo 1,000/1,300 tons per day.

MEDICAL: Good hospital facilities exist. 2 hospitals about 1.5 miles from port. In case of inoculations and vaccination at least 2 days advance notice to be given enabling bring vaccine from nearby town (Hubli or Belgaum) distance 100 miles and 150 miles respectively.
TANKERS: No facilities for tankers.
DENSITY: 1025.
FRESH WATER: Dumb water barge for supply to vessels anchored in open Roadstead.
FUEL: No bunkering facilities for ocean-going vessels. Diesel and petrol storage depots within port for supply to small vessels.
OPENING/CLOSING HATCHES: Generally carried out by ship's crew.
CERTIFICATES:

Ship's Register.
Cargo Gear Certificates.
Load Line Certificate.
Safety Radio Certificate.
Safety Equipment Certificate.
Derat Certificate.
Vaccination and Inoculation Certificates.

CUSTOMS ALLOWANCES: 200 cigarettes and 1 bottle spirits.
CARGO GEAR: Before commencement of loading, Master to present shippers or their Agents with valid International Cargo Gear Certificate, which shall not be more than 12 months old. Validity of said certificate to cover whole period for loading and discharging. Fourth five-year plan includes proposals for mechanical front-end loaders, tipping trucks, mobile cranes and forklift trucks.

A 10 ton mobile crane is available.
CONSULS: None.
REPAIRS: Moderate-sized workshop in town able carry out minor deck and engine repairs.
REPATRIATION: Shipping Master arranges crew changes and necessary repatriation. Crew signing off repatriated via Goa or Mumbai.
AIRPORT: No airport, or rail connections. Nearest airports Goa or Belgaum, 60 miles and 150 miles distant respectively. 2 flights per day to Mumbai from Goa.
TIME: GMT plus 5.5 hours. Permanent.
HOLIDAYS: Charter party holidays declared and published every year by Honorary Secretary of the Karnataka Chamber of Commerce and Industry, Jaya Chamaraj Nagar, Hubli-20.

Non-working days when work not permitted even on payment of overtime: Republic Day (26th January) and Gandhi Jayanti (2nd October).
POLICE/AMBULANCE/FIRE: Circle Police Inspector 116; City Police Station 33; District Superintendent of Police 7; Reserve Police Headquarters 18; Ambulance 19.
SHORE LEAVE: Crew members are allowed ashore provided not of Chinese nationality.
DEVELOPMENTS: Proposed to develop Port of Karwar into all-weather intermediate port, with 2 berths (the jetty 375 m. long) and 1 mechanical berth (ore berth, for vessels 40,000 d.w.t.), an approach channel and turning basin. Intended arrangements include ability accommodate up to 60,000 d.w.t. ore carriers, loading up to 8 million tons ore and 1.25 million tons other cargo per year. Also intended develop fishing harbour with facilities accommodate large-scale deep-sea fishing industry for 1 million tons fish per year. Also see "Cargo Gear".

Provision of Channel Marks:
1 Fairway Buoy.
10 channel marking buoys.
Provision of a mooring boat with equipment for maintenance of buoys.
Experimental dredging.
Dredging approach channel and turning basin.
Land acquisition for future expansion.
Diversion of present main road alongside port wharf.
Improvement of Binga/Karwar Road.
Provision of 2 berths and 1 mechanical berth for ocean-going vessels.

Main berth length 172 m., depth 9.75 m. and secondary berth length 122 m., depth 7.5 m.
AUTHORITY: Port Officer – Karwar, Port Office, Karwar, Uttar Kannada District, Karnataka State, India. *Tel:* Karwar 342: *Contact:* Port Officer, Karwar.
AGENT: See "Cochin".

MADRAS: 13.06 N. 80.18 E. (See Plan)

PORT LIMITS: The seaward boundaries of the Port are lines joining the following points:

A.	13° 07' 58.8" N.,	80° 17' 57.9" E.
B.	13° 09' N.,	80° 20' E.
C.	13° 09' N.,	80° 22' E.
D.	13° 03' N.,	80° 22' E.
E.	13° 03' N.,	80° 20' E.
F.	13° 13' 54" N.,	80° 17' 15" E.

DOCUMENTS:

3 Private Property Lists.
3 Stores Lists (Bonded Stores).
3 Crew Lists.
Last Port Clearance.
1 valid Derat Exemption Certificate.
1 Bill of Health (only if vessel has touched yellow fever areas).
3 Slop Chest Declarations.
3 Currency Declaration.
Passenger List (if applicable).

Ship's Papers:
Ship's Register.
Load Line Certificate.
Safety Equipment Certificate.
Safety Radio Certificate.
Safety Construction Certificate.
Ship's articles (if vessel is Indian or Commonwealth flag).
Ship's papers to be handed over to Agent's Representative for final entry of vessel in Customs House. Same returned to Master.

PILOTAGE: Pilotage compulsory, both inward and outward, also for purpose of shifting inside harbour. Master required to advise ETA at least 24 hours before arrival, when local Agents contact Port Authorities for arranging berthing. If any berthing delay, vessel has to anchor at Outer Anchorage. Vessels requiring Pilot fly "G" flag by day and 1 white light exhibited on a conspicuous point on ship by night. For departure from berth, vessel must call for Pilot 30 minutes before readiness to sail.
ANCHORAGE: Vessels should anchor South of Latitude 13° 06' N.

Also see "Notice" – "Instructions to Ship Masters".
Wreck: M.V. "Decan Pioneer" sank on 11th November 1985 in position 13° 05' 52" N., 80° 19' 11" E. (Masts are visible).
RESTRICTIONS: No restrictions of entry, both day and night. In Bharathi Dock berthing of tankers more than 50,000 d.w.t. while in a loaded condition is undertaken only during daylight hours, unberthing of ships of all sizes whether loaded or light is undertaken at all times.

Also see "Notice".
MAX. SIZE: *Maximum Permissable LOA:*

North Quay – 540 ft. (164.6 m.)
West Quays – No restriction.
South Quay 1 – 710 ft. (216.4 m.)
South Quay 2 – 500 ft. (152 m.)
South Quay 3 – 518 ft. (158 m.)
South Quay 4 – 500 ft. (152 m.)
South Quay 5 – 450 ft. (137 m.)
East Quay – 540 ft. (164.6 m.)
Mooring No. 3 – 560 ft. (170.7 m.)

Outer Petroleum Berth: – 900 ft. (274.31 m.)
Jawahar Dock: Total available length 2,150 ft. (654 m.) on the East and West sides respectively with drafts up to 11 m. Breadth of Jawahar Dock entrance is 110 ft. (33.49 m.). It can accommodate vessel up to LOA 750 ft. (228.59 m.) and breadth 105 ft. (32.0 m.).
Bharathi Dock: Max. length 900 ft. (274.31 m.) and draft of 53 ft.(16.15 m.) for oil tankers using Bharathi Dock is in force. Ore berth accepts vessels with draft up to 53 ft. (16.15 m.)
Container Berth: Max. LOA 900 ft. Max. draft 42 ft.
Moorings: No. 3 – max. draft 35 ft.

Max. draft in the enclosed harbour varies from 26 ft. (7.92 m.) to 35 ft. (10.67 m.).

Details may be obtained from the Deputy Port Conservator, Madras Port Trust, Madras – 600 001.
HEALTH: All vessels arriving from foreign ports have to apply for Pratique through their radio – not earlier than 12 hours and not later than 4 hours before arrival. Pratique message to be addressed "Quarantine Madras" and worded as required by Port Health Authorities.

The Pilot boarding the vessel grants Free Pratique if the vessel is healthy in all respects – answer to all health questions being negative.

In all other cases or if vessel is coming from yellow fever infected area within 30 days of departure or in case of any infectious disease on board, Port Health Officer boards vessel and after due inspection grants Pratique.

Telegrams should take the following form: Name of vessel; ETA, in hours and date. No monkeys on board; answer to all health questions, (ports touched in last 30 days with departure dates). Request Radio Pratique.

Port Health require to sight Derat and Vaccination Certificates when vessel due to leave before issuing clearance for Pilot and Customs who then issue Port Clearance.
RADIO: Coast Station Madras Radio, call sign VWM. VWM operates throughout 24 hrs. Vessels with powerful transmitters can contact VWM on HF from Singapore, Mauritius or Aden. Information regarding weather distributed twice daily. VHF communication with Pilot Station available around the clock to transmit and receive berthing and other operational messages. Calling frequency Channel 16 and operating frequencies Channels 14, 12 and 10. Channel 12 is the port's working channel.

Weather Radar is installed on top of the new Madras Port Trust Administrative Office Buildings.

Also see "Notice" – "Instructions to Ship Masters".
RADAR/VHF: VHF communication available, see "Radio".
TUGS: Join vessel just inside breakwater. Vessels usually use own lines. Tugs' lines are also used if required by Pilot.
BERTHING: Vessels berth at all times.

There are in all 18 general cargo/bulk cargo berths and 1 mooring.

Dock/Quay	*Berth* No.	*Length* (m.)	*Depth* (m.)	*Cargo Handled*
Bharathi Dock	1	338.94	14.60	Oil
	2	222.00	16.20	Ore
	3	304.00	16.20	Oil
Container Quay	1	380.00	11.00	Containers
	2	220.00	11.00	Containers
North Quay	–	198.00	8.50	Passenger/General
West Quay	1	170.60	7.90	General
	2	170.60	9.20	General
Centre Berth	–	170.60	9.20	General
West Quay	3	170.60	9.20	General
	4	170.60	7.6 - 8.5	Fertiliser/General
South Quay	1	246.00	9.50	Fertiliser/General
	2	179.00	9.50	Fertiliser/General
	3	181.00	9.20	Ore/General
	4	184.00	8.50	Coal
	5	185.00	7.90	Coal
East Quay	–	157.00	7.90	Coal/General

Dock/Quay	*Berth No.*	*Length (m.)*	*Depth (m.)*	*Cargo Handled*
Jawahar Dock	1	218.33	10.06	Food Grains/General
	2	218.33	10.40	Ore/Coal/General
	3	218.33	10.06	Food Grains/General
	4	218.33	10.40	Ore/Coal/General
	5	218.33	10.06	Food Grains/General
	6	218.33	10.40	Ore/Coal/General

CRANES:
North Quay: 1×3 tons and 1×5 tons.
West Quay: 3×3 tons, 3×10 tons and 2×5 tons.
South Quay 1: 1×50 tons and 1×10 tons.
South Quay 2: 1×3 tons, 1×5 tons and 1×10 tons.
South Quay 3: 2×8 tons and 1×10 tons.
South Quay 4: 1×5 tons, 1×8 tons and 1×10 tons.
Jawahar Dock West: 7×3 tons, 1×5 tons and 4×10 tons.
Jawahar Dock East: 3×10 tons and 7×13 tons.
Jawahar Dock South wall: 3×3 tons.
One heavy duty floating crane of 120 tons available.

BULK HANDLING FACILITIES: There are 4 berths, 3 in the Jawahar Dock and 1 in South Quay. Handling of iron ore has been discontinued in Jawahar Dock due to the operation of mechanised iron ore plant at the Bharathi Dock. Instead bulk cargo like barytes is handled.

An iron ore berth with modern mechanical loading facilities is in operation at Bharathi Dock with an air draft of 17 m. and rated capacity of 8,000 t.p.h. The berth can accommodate vessels of 130,000 d.w.t. with a max. draft of 53 ft.

The Bharathi Dock has the potential for accommodating 2 more berths one of which can be converted into a container berth.

A breakwater has been constructed extending Northwards from the North end of the old breakwater to ensure tranquil sea conditions in turning circle of Bharathi Dock.

CONTAINER HANDLING FACILITIES: There are 2 container berths with a quay length of 600 m. and max. draft of 12.8 m. Four heavy duty gantry cranes of 35.5 tons – 40 tons capacity under spreader have been provided.

The container parking yard has a capacity for stacking 5,200 containers and is served by 4 rubber-tyred transfer cranes of 35.5 tons capacity under spreader.

5 top lift trucks for 20 ft. and 40 ft. containers.

The container freight station with an area of 6,300 sq. m. has been provided for stuffing and unstuffing operations.

40 reefer plug points for refrigerated containers are available with a standby generator for giving continuous power supply to reefer containers.

STEVEDORES: A copy of Manifest for stevedores' required on board.

Working hours: 1st shift, 0600 – 1400 hrs. (Recess 1100 – 1130 hrs); 2nd shift, 1400 – 2200 hrs. (Recess 1900 – 1930 hrs.); 3rd shift, 2200 – 0600 hrs. (Recess 0200 – 0230 hrs.).

Rate of Discharge/Loading:
Grains, by hooks/derricks:
Bulk: 300 tons per day per hook.
Bagged: 300 tons per day per hook.
By Vacs: 250 tons per Vac. per day.
Fertiliser: By hooks/derricks.
Bulk: 200 tons per day per hook.
Bagged: 300 tons per day per hook.
General Cargo: 150 tons per day per hook.
Liquid Cargo: About 150 t.p.h.

MEDICAL: Advance notice for medical aid useful if vessel anchored/anchoring outside and not coming alongside, as it takes time to arrange for launch, etc. Medical assistance arranged easily if vessel alongside. Various hospitals and private nursing homes with modern equipment available. All crew members to be in possession of valid health cards in respect of inoculations/vaccinations against cholera, etc. Facilities for renewal available.

BRIDGES: There are 2 bridges for pedestrian traffic only. 1 swing bridge at the entrance of Jawahar Dock and another Bascule bridge at the entrance of boat basin.

TANKERS: *Bharathi Dock – I:* B.D.I is equipped for handling crude, products and furnace oil. There are 5 marine loading arms of 12 in. diameter each. The rated discharge of each arm is 1,500 tonnes per hour. Three of these arms are earmarked for handling crude oil and all the three arms are connected to a 30 in. diameter pipeline. Two of the crude arms are also connected to the furnace oil pipeline having a diameter of 14 in.

The two product arms could be connected to either 14 in. diameter pipeline or to 20 in. diameter pipeline.

The present maximum permissible draft at the berth is 48 ft.

The berth is provided with fire fighting facilities consisting of remote control tower monitors, water curtains and fire hydrants, etc.

Bharathi Dock – III: There are 5 marine loading arms, out of which 3 are of 16 in. diameter and 2 of 12 in. diameter. The rated capacity of 16 in. is 2,500 tonnes per hour and that of 12 in. is 1,500 tonnes per hour. The distribution of the arms for handling crude, product and furnace oil are same as in B.D.I. These marine loading arms are fitted with hydraulic remote control quick connect and disconnect (QCDC) couplings.

The berth is provided with fire fighting facilities consisting of remote control tower monitors, water curtains and fire hydrants, etc.

B.D.III is equipped with quick release mooring hooks to facilitate casting off the mooring ropes by remote control,

The present maximum permissible draft at the berth is 53 ft.

Both berths are equipped with efficient communication system with main harbour.

Also see "Ship Operator's Report".

FRESH WATER: Available and can be supplied to vessels either through shore connections or by water barges (rate 40 t.p.h.). During Summer months due to scarcity of water, full requirements of vessel may not be possible.

DENSITY: Varies from 1019 to 1025 according to season. No variation due to state of tide.

FUEL: Heavy Oil, Marine Diesel Oil, High Flash High Speed Diesel Oil, conforming to the following specification limits are available from the Indian Oil Corporation Limited with 48 hours notice.

(1) Furnace Oil (Heavy Oil)	Viscosity 100° F	1500 seconds Redwood I
	or	180 C.St. at 50°C.
	Sulphur % by Wt.	4.5 maximum
	Flash point	66°C minimum
(2) Light Diesel Oil (Marine Diesel Oil)	Viscosity 100° F	2.5 to 17.0 C. St. (typical at 15°C. St.)
	Flash point	66°C minimum
	Sulphur % by Wt.	1.8
(3) High Flash High Speed Diesel Oil	Kinematic Viscosity	2 to 7.5 C.St.
	Flash point	66° C
	Sulphur % by Wt.	1

Lubricants – All the grades are available.

Note: Mode of Delivery – Heavy Oil by pipelines
Marine Diesel Oil/High Flash High Speed Diesel Oil by trucks.
No barge supplies.

CONSULS:

France	Tel. 472131	Sri Lanka	Tel. 476751
Germany	Tel. 473593/471747	United Kingdom	Tel. 473136
Japan	Tel. 665594	U.S.A.	Tel. 473040/478912
Russia	Tel. 71112		

REPAIRS: All types of deck/engine repairs possible. Experienced and established marine workshops available.

DRY DOCKS: 1×40,000 d.w.t. and 1×5,000 d.w.t. Lifting capacities of 14,000 tonnes and 2,500 tonnes respectively.

SURVEYORS: Lloyd's Register, Bureau Veritas, Indian Register and ABS. Standard cargo and marine survey services available.

GANGWAY/DECK WATCHMEN: Services of watchmen are compulsory and they can be engaged from Dock Labour Board.

OPENING/CLOSING HATCHES: Work of opening/closing of hatches usually depends on what Charter Party says and also type of hatches of vessel. Liner Term Vessels:- "MacGregor Type" – These types of hatches are opened/closed by the crew; but, if Owners/Master desires, rigging gangs may be hired for this work at Owner's expense. Ordinary – beams & hatch boards or pontoon type-opening/closing of this type of hatches is done by stevedores.

CUSTOMS ALLOWANCES: Tobacco: 200 cigarettes and half-ounce tobacco per week can be held by each crew member. Wine/Spirit: 1 open bottle of spirit or wine per week can be held by each crew member.

CARGO GEAR: Vessel should be in possession of valid cargo gear certificate issued by competent authority. Port Dock Safety Inspector may inspect cargo gear before or during loading/discharging in spite of vessel being in possession of a valid certificate.

REPATRIATION: All facilities for effecting crew changes and arranging repatriation exist.

AIRPORT: The Madras Airport (Meenambakkam) about 15 miles from harbour and served by regular airlines.

TIME: GMT plus 5.5 hours.

HOLIDAYS: Declared by authorities are observed, but work completely closed on: Pongul, Republic Day, May Day, Independence Day, Mahatma Gandhi's Birthday and Deepavali.

POLICE/AMBULANCE/FIRE: Police 100; Ambulance 102; Fire 101.

TELEPHONES: Can be placed on board, but only on vessels at certain berths. All berths on West Quay, i.e. WQ 1, WQ 2, Centre Berth, WQ 3 and WQ 4, North Quay berth and berths on Jawahar docks (West) only, i.e. JD 1, JD 3 and JD 5.

SERVICES: All services available.

SHIP SUPPLY SERVICE: Madras Port does not operate off-shore ship supply services either by the Port Authority or by private parties. However, certain private firms and individuals have been granted permits to ply their launches within the Port limits for the purpose of transporting ship's personnel, supply of provisions and stores for ships waiting at Outer Anchorage or for transporting sick crew members of ships.

SHORE LEAVE: Crew members allowed ashore after securing shore passes issued by Port Security Officer. However, they must restrict themselves to city limits.

IDENTIFICATION CARDS: All crew members should be in possession of their respective CDC's/Z. Cards/Passports.

GARBAGE DISPOSAL: Skips are provided at all berths and cleared daily. It is the responsibility of the ship's Masters to arrange to dump waste into these skips. Direct disposal of garbage from vessels to outside the port is also arranged by the ship's Agents. Details of charges and collection times can be obtained through Agents.

WASTE OIL DISPOSAL: A waste oil reception tank of 4,400 kl. is available at the Tank Farm located close to the oil berths for tankers. Similarly one 5 ton capacity tanker trailer is available for cargo ships. One small tank of 175 kl. in the Tank Farm is available to store sludge from tankers. Additionally, the port has a multi-purpose self-propelled barge, "Prestige", with 90 tons tank capacity to collect waste oil from ships.

SEAMAN'S CLUBS:
(a) Marine Club, Rajaji Salai, George Town, Madras 600 001. Tel: 510821.
(b) Seafarers' Club, Rajaji Salai, Opp. Reserve Bank, Madras 600 001. Tel: 562696.
(c) St. Mary's Church (Oldest church East of Suez), inside Fort St.George.

CURRENCY: Indian Rupee.

PORT REGULATIONS: Normal Port Regulations. No photograph allowed in harbour except with Chairman of Port Trust's permission.

WEATHER: *Bad weather and seasons in Madras:*

(a) Cyclone Period:

	15th April – 15th June	S.W. Monsoon
	15th October – 15th January	N.E. Monsoon
(b) Tropical Season:		
	1st December – 30th April	Load Lines are read accordingly.
Summer Season:		
	1st May – 30th November	

DELAYS: When there is heavy arrival of bulk grain and fertiliser, vessels may expect a delay of about a week or so.

DEVELOPMENTS: The Madras Port Trust have definite plans for the following scheme:

Madras Port is constructing a satellite port at Ennore, about 12 km. North of the present Port, mainly for import of about 8 million tonnes of coal per annum for the North Madras Thermal Power Station. This port is expected to be operational in 1998.

NOTICE:

Instructions to Ship Masters:

(1) No ship is allowed to enter the following area without a Pilot on board. This area is bounded by the following points:

(a)	Lat. 13° 06.4' N.	Long. 80° 18.7' E.
(b)	Lat. 13° 07.0' N.	Long. 80° 19.7' E.
(c)	Lat. 13° 07.4' N.	Long. 80° 21.7' E.
(d)	Lat. 13° 08.2' N.	Long. 80° 21.7' E.
(e)	Lat. 13° 07.5' N.	Long. 80° 18.5' E.

(2) Pilot Boarding Area No. 1 for ships less than 230 m. in length is marked by the following points:

(k)	Lat. 13° 06.5' N.	Long. 80° 19.6' E.
(l)	Lat. 13° 06.3' N.	Long. 80° 19.6' E.
(m)	Lat. 13° 06.3' N.	Long. 80° 19.9' E.
(n)	Lat. 13° 06.5' N.	Long. 80° 19.9' E.

(3) Pilot Boarding Area No. 2 for ships of 230 m. in length or more is marked by the following points:

(p)	Lat. 13° 07.2' N.	Long. 80° 21.6' E.
(q)	Lat. 13° 06.8' N.	Long. 80° 21.6' E.
(r)	Lat. 13° 06.8' N.	Long. 80° 22.0' E.
(s)	Lat. 13° 07.2' N.	Long. 80° 22.0' E.

(4) No ship is allowed to anchor within the Pilot Boarding Areas No. 1 and No. 2 without express permission from Port Control.

(5) Ships that are not berthing on arrival, should anchor South of Latitude 13° 06' N.

Instructions to Ships Approaching Madras Harbour:

(6) Ships entering the harbour should have enough stern power to check their headway within their own length.

(7) Ships embarking Pilot outside the harbour should have the pilot ladder rigged on the land side, irrespective of the direction of the wind.

(8) All ships entering, leaving or shifting in the harbour are required to have the following minimum ballasted draft:

LOA (ft.)	*Draft Forward* (ft.)	*Draft Aft* (ft.)
500	10	15
600	15	20
700	20	25
800	25	30
900	30	35

(9) Ships bound for Madras should contact Port's Signal Station on VHF Channel 16 as soon as possible and give the following particulars:

(a) Ship's name
(b) Nationality
(c) Name of Master
(d) Last Port
(e) Local Agents
(f) LOA
(g) Draft, Forward and Aft
(h) Summer Deadweight
(i) GRT
(j) NRT
(k) Nature of Cargo
(l) Hazardous Cargo, if any with I.M.D.G. Classification, and Quantity.

(10) *Instructions to Masters during bad weather at Madras Port:* Whenever a depression/cyclone is formed in the Bay of Bengal, the Meteorological Office sends out weather bulletins and the Madras Port Trust hoists storm signals at her Signal Station in accordance with these weather bulletins. During such conditions, Masters of ships inside the harbour are advised to contact the Port Signal Station on VHF Channel 16 for receiving the latest weather bulletins and any further guidance in this regard. They are also advised to immediately put out extra mooring lines. In addition to this, if they experience any ranging of their ships at their respective berths, they should contact the Port Signal Station immediately and have the ship's main engine ready. If the prevailing weather conditions so demand, the ships that are affected due to ranging at the berths would be taken out of the harbour.

Information regarding functioning of Madras Radio:

(11) (i) Calling/Watch keeping: VHF 24 hours on Channel 16 (156.8 MHz)
(ii) Passing messages by Madras Radio Channel 26
Transmission: 161.9 MHz
Reception: 157.3 MHz
(iii) On W/T Watch keeping: 500 kHz.
Transmission on 485 kHz.
Reception as per Ship's working channel.

SHIP OPERATOR'S REPORT: January 1987 (Updated 1992).

General: Madras is an artificial harbour on the coast of Tamilnadu State. Protected from sea and swell by 2 breakwaters, but is vulnerable to cyclonic weather. The oil berth is located in Bharathi Dock. The Madras Refinery receives crude from Bharathi Dock Oil Terminal.

Lube and non-flammable liquid cargo are also handled at West Quay No. 1/North Quay – which is also a general cargo berth.

All terminals and berths within the port limits are owned and operated by Madras Port Trust.

Communications: All traffic by W/T via Madras Radio (call sign: "VWN"). When within VHF range, communication with Madras Pilot can be established on VHF (Channels 16 and 14), which is located at the Port Signal Station.

Laden tankers should include in their initial ETA message: Deepest draft, actual displacement, cargo quantities, Shipper(s), Consignee(s) and name of local Agent.

The above information should be copied to:

1. Agent Madras.
2. Indian Oil Madras. Telex: 041-7168 for SR S & D Manager.
3. Indlub, Madras. Telex: 041-6345.
4. Indian Oil Bombay. Telex: 011-71656 for SR Shipping Manager.

ETA should be subsequently confirmed (or revised) 3 days, 2 days and 1 day prior to arrival.

Radio Pratique is permitted and the following information should be cabled to "Quarantine Madras", maximum 12 hours and minimum 4 hours prior arrival:

AAA Name of vessel and call sign.
BBB ETA Madras – local time.
CCC Maritime Declaration of Health has negative answers to all questions.
DDD No monkeys on board.
EEE Names and dates of ports visited within last 30 days.
FFF Ship healthy – request Free Pratique.

Approaches: When within VHF range, call "Madras Pilot" on Channel 16 stating ship's name, ETA and deepest draft. There are 2 waiting areas for Pilot which are clearly marked on the chart. The first waiting area is for ships over 11 m. draft and the second is for ships under 11 m. draft. If it becomes necessary to anchor, Madras Pilot will advise the anchorage position. The anchorage has good holding ground but is exposed to sea and swell.

Prior to the Pilot boarding, the pilot office will advise the vessel by VHF, at short notice, to proceed to the waiting area where the Pilot will board the vessel. Pilotage is compulsory. The pilot boarding area is about 1 km. to 1.5 km. seaward of Fairway Buoy.

The depth of water in the Approach Channels (1992):

Outer Channel = 19.2 m.
Inner Channel = 18.6 m.
Turning Circle = 18.0 m.
Approach to Berth
in Bharathi Dock = 17.7 m.

Permissible Draft and Length of Vessels: Oil tankers carrying crude and/or refined petroleum products normally berth at Bharathi Docks Berths I, II and North Groyne Mooring, while tankers carrying lube oil berth at West Quay I.

Oil tankers may berth at Bharathi Dock II, which is meant for loading of iron ore, if there is no vessel loading ore. Similarly, vacant container terminal berths can be used by tankers, but only for transhipment from mother vessel to daughter vessel and shore discharge for all products with flashpoint above 40°C.

The berth parameters and products handled are as follows:

Name of Berth	*Maximum size of vessel that can safely berth*			*Products handled*
	Length (m.)	*Beam* (m.)	*Draft* (m.)	
Bharathi Docks I (Exclusive Oil Jetty)	345	No restriction	14.6	Crude, fuel oil, MDO, naphtha, motor
Bharathi Docks II (Iron Ore Jetty) Oil tankers are handled at this berth when there is no iron ore vessel	345	No restriction	16.15	Regular and premium gasoline, kerosene Aviation turbine fuel, high speed diesel
Mooring (North Groyne)	210	No restriction	9.1	Fuel oil, MDO, premium gasoline, kerosene, aviation turbine fuel, high speed diesel
West Quay I/ North Quay	152.4	No restriction	7.9	Lube oil
Container Terminal Berth	330	No restriction	13.4	Lube oil

Bharathi Dock Oil Terminal: Bharathi Dock is an extension of old Madras Harbour, built mainly for the export of iron ore and import of crude oil. Berth I is located along the inside of breakwater in the form of "T" head jetty with 2 mooring dolphins each side of the berth. There are 2 berths – Bharathi I – exclusively for oil tankers and Bharathi II – designed for ore vessels but can be used by oil tankers, when the berth is vacant.

There is also a mooring berth for oil tankers inside the main harbour where vessels are secured with 2 anchors, and stern to the harbour wall/North Quay Breakwater.

Bharathi Dock I is also used for ship-to-ship transfer as well as for ship-to-shore transfer. Both operations are performed while alongside the dock.

General Cargo Berth Tanker Handling: The West Quay I/North Quay share a common facility which is connected to tanker with a 6 in. hose to receive lube.

AUTHORITY: Madras Port Trust, Rajaji Salai, Madras – 600 001. *Tel:* 560161 and 562201 (24 hours). *Telex:* 041-331. *FAX:* 044-561228. *Cables:* Porttrust, Madras. *Contact:* Deputy Port Conservator.

AGENT: G.A.C. Shipping (India) Pvt. Ltd., P.O.Box 1804, (141 Thambu Chetty Street), Madras 600001, India. Tel: (91-44) 5221588, 5222423. Telex: 418105, 418732 GAC IN. Cables: "Gacshipmas", Madras. Fax: (91-44) 5233074.

MALPE: 13.21 N. 74.42 E.

ANCHORAGE: The port is an open roadstead. Anchorage can be obtained at a distance of 0.81 km. N.W. of Daria Bahadur Ghur Island. Depth at Anchorage – 4.5 fathoms.

BERTHING: With the construction of two breakwaters, the channel in between is maintained at about 4.50 m. at LWOST. The maximum tidal range is 1.52 m.

Length of Jetties: 1st – 33.53 m. 2nd – 5.79 m.

FRESH WATER: Not available.

FUEL: There are oil storage depots in the Port area where HSD oil can be supplied to small vessels. For ocean going vessels there is no bunkering facility.

AIRPORT: Nearest at Bajpe (Mangalore).

TIME: GMT plus 5.5 hours.

HOLIDAYS: Holidays declared by the Collector of Customs, Bangalore.

POLICE/AMBULANCE/FIRE: Malpe Police Station Tel: 21999 Udipi. Fire: Tel: 20333 Udipi.

BANKS: Syndicate Bank and Corporation Bank, Malpe P.O., Via Udipi, South Kanara Dt., South India.

GENERAL: There is a small shed for storage of cargo. Storm warning signals are hoisted on the flagstaff.

AUTHORITY: Port Office, Malpe, South Kanara Dt., South India. *Contact:* Mr. M. Devawas Shetty, Deputy Port Conservator, *Tel:* 20592 (Udipi).

MANDVI: 22.49 N. 69.21 E.

DOCUMENTS: Arrival: Arrival Report with ship's details, Voyage Memorandum, Crew Lists, Stores Lists.

Departure: Departure Report with ship's details, Export General Manifest, Certificate of Cargo Tonnage Loaded.

PILOTAGE: None. All vessels anchor in stream.

RESTRICTIONS: Vessels anchor in open roadstead in 3 – 5 fathoms, 2 – 2.5 miles from shore. Vessels of 9 ft. draft can reach wharves at HW and vessels drawing 12 ft. can reach Albert Edward Breakwater. Vessels having 750 tons cargo only can enter port during high tide. Highest tidal range 14 ft., average range 10 ft. Current 2 knots during fair season.

HEALTH: Government Medical Officer attends as Health Officer.

RADIO: No radio. All messages delivered through Kandla. Ship to shore radio messages delivered through VHF at stipulated times.

TUGS: Services optional. 3 tugs and 1 launch. Charges based on time and horse power.

STEVEDORING: Arranged by Agent with Port Authority.

MEDICAL: 24 hours notice required of any medical requirements.

FIRE PRECAUTIONS: Fire extinguishers are available at the port. Fire fighter is available at the Port workshops. Smoking strictly prohibited in port area.

WATCHMEN: Arranged through Agents.

HATCHES: Opened and closed by crew.

CERTIFICATES: Non-carriage of dangerous cargo, Cargo Gear Certificates, Statement that no passengers carried.

CUSTOMS ALLOWANCES: No restrictions for crew of coastal vessels. Stocks of tobacco, wine and spirits to be declared to Customs. Wines and spirits prohibited in Gujarat States but Master permitted daily quota by Customs Authorities.

REPATRIATION: No facilities.

TIME: GMT plus 5.5 hours.

HOLIDAYS: Usually possible to arrange work on holidays.

POLICE/AMBULANCE/FIRE: Police 8; Ambulance 32; Fire 10.

SHORE LEAVE: Crew of coastal vessels only allowed ashore subject prior permission from Captain of the Port.

DELAYS: Delays to be expected in supply of cargo at times of lowest water.

GENERAL: Gulf of Kutch Ports, viz. Mandvi, Mundra, Jakhau and Koteswar administered by Chief Executive Officer and Vice-Chairman, Gujarat Maritime Board, Ahmedabad. Mandvi located on Southern coast Gulf of Kutch at mouth of River Bukmavati, seasonable, tidal and intermediate ports.

AUTHORITY: Office of the Deputy Executive Engineer (Civil) and Port Office, Mandvi-Kutch, Gujarat Maritime Board, Mandvi-Kutch, India 320455. *Tel:* 33 (Office), 40 (Residence). *Cables:* Portal Mandvi-Kutch. *Contact:* Port Officer, Mandvi-Kutch.

AGENT: See "Cochin".

MANGALORE (Minor Old Port): 12.50 N. 74.50 E.

PORT LIMITS:

North: A line drawn due West from the Northern boundary pillar on the seashore about 740 yards from Sultan's Battery to 9 fathoms of water.

South: The line drawn due West from the Southern boundary pillar to the seashore, about 1,000 yards below the marine yard to 9 fathoms of water.

West: The 9 fathom line between its intersections with the lines above defined as the Northern and Southern limits.

DOCUMENTS:

Crew Lists (6 copies).
Crew's Declarations for Customs (4 copies).
Stores Lists (4 copies).
Currency Declaration (2 copies).
Import Manifest, inclusive of Deck Cargo and bottom cargo (3 copies).
Bill of Lading (1 copy).
Ship's particulars inclusive of service stand (2 copies).
Declaration of opium, dangerous drugs, gold, arms, ammunitions and explosives, monkeys on board, last and next port of call (2 copies).
Valid Safety Equipment Certificate.
Valid Construction Certificate.
Valid Radio Certificates.
Valid Certificate of Registry.
Derat Certificate.
Vaccination Certificates.
Declaration of Health.
Arrival Report and Port and Light dues receipts (2 copies).

PILOTAGE: Compulsory. ETA must be informed at least 48 hours ahead of arrival. In the message of ETA the following information must be included:

(a) Name.
(b) Nationality.
(c) Call sign of the vessel.
(c) LOA (draft, forward and aft), g.r.t. and n.r.t. of the vessel.

ANCHORAGES: Open roadstead. Vessels anchor in 7.32 m. to 10.98 m. due West of entrance and are loaded and discharged by lighters. Bar situated due West of entrance. Depth of bar 2.13 m. LWST.

RESTRICTIONS: No night pilotage.

HEALTH: Vessel arriving from foreign country sends radio message in code or otherwise to respective Agents who contact Port Health Officer accordingly. If vessel from yellow fever area, Master should give prior notice to Agent to arrange for Mosquito Party from Cochin to come to Mangalore and board ship on arrival. If suspected or infected, vessel should anchor not less than 0.5 miles from all other vessels and notify Port Authorities of situation either by radio or through signal station.

RADIO: Call sign VWL on 500 kHz and 438 kHz working frequency. Tel: 24300.

TUGS: 1 Port tug (210 h.p.) and 1 launch and 2 private tugs capable of towing over 600 tons each are available.

CRANES: 1×1 ton and 1×5 tons. 1×18 ton mobile crane.

STEVEDORES: Stevedores available. Average loading/discharging rates per day:

(a) Iron ore 400 tons per hook (weather permitting).
(b) Fertiliser or wheat bags 200 tons per hook (weather permitting).
(c) General cargo bagged 200 tons per hook (weather permitting).

MEDICAL: 24 hours notice necessary to arrange for a doctor on board. Government Hospital and Nursing Homes available.

DENSITY: Density of 1022/3 throughout year, except in September (immediately after Monsoon at beginning of shipping season) when density about 1016.

FRESH WATER: Supplied by water barge at rate of 100 tons per trip with 48 hours prior notice. Cost of supply inclusive of all charges except crew overtime on holidays. Minimum order 35 tons.

FUEL: Not available.

CONSULS: None.

REPAIRS: Minor repairs to engines and gear carried out by auto-workshops.

DRY DOCKS: Small dry dock, maximum capacity 450 d.w.t. Dimensions, 110 ft.×30 ft. Depth on sill 8 ft. at MHWS. For minor repairs only.

SURVEYORS: Qualified Cargo Survey Agencies are available.

Surveyors available for Lloyd's Register, American Bureau, Bureau Veritas, etc.

GANGWAY/DECK WATCHMEN: Available.

OPENING/CLOSING HATCHES: Stevedores or ship's crew, whichever to ship's advantage.

CERTIFICATES:

Ship's Registry.
Derat Certificate.
Articles of Agreement.
Dock Safety Register (cargo gear).
Radio Telegraphy Certificate.
Load Line Certificate.
Port Clearance from last port.
Bill of Health.
Safety Equipment Certificate.

CUSTOMS ALLOWANCES: Tobacco: 200 cigarettes or 50 grams tobacco per week. Wine and spirits: 950 ml. per week.

CARGO GEAR: Derricks and boat devices to be hoisted in when not required to prevent contact with masts and sailyards of lighters alongside. Advisable that lifeboats be lowered only on non-working side.

REPATRIATION: Can be arranged by ship's agents or at shipping office for Indian crew.

AIRPORT: Bajpe – 20 km. away. Daily air service available to Bombay to connect with international flights.

TIME: GMT plus 5.5 hours.

HOLIDAYS: 26th January, Republic Day; 15th August, Independence Day; 2nd October, Gandhi Jayanthi; and other local holidays declared by the Central Government.

POLICE/AMBULANCE/FIRE: Tel: 100/102/101 respectively.

EMERGENCY CO-ORDINATION CENTRE: Relay information to Port's Signal Station through New Mangalore Port. VHF also available at Port Signal Cabin.

TELEPHONE: No arrangement for placing telephone on board.

BANKS: State Bank of India, Main Branch, Mangalore 575 001.

SHORE LEAVE: No restrictions.

IDENTIFICATION CARDS: Shore passes are issued.

GARBAGE DISPOSAL: No facilities.

WASTE OIL DISPOSAL: No facilities.

SEAMAN'S CLUBS: None.

DELAYS: Adverse bar conditions necessitate stopping work for bad weather.

GENERAL: *Weather:* During monsoon, mid-May to mid-September no communication with shore and port is officially closed. There is an All Weather Major Port at Panambur (New Mangalore Port) 9 km. North of roadstead.

Tides: Range of tide 1.22 m. to 1.52 m.

Lighters: Approximately 25 lighters are available with average capacity of 45 tons each and 3 motor launches. Depth at quay 2.44 m. LW.

AUTHORITY: Captain R. Mohan, Port Officer, Old Mangalore Port, Mangalore 575 001, Karnataka, India. *Tel:* 420374 (personal), 425031 (residence).

Sri H.S. Nagaraja, Port Engineer, Old Mangalore Port, Mangalore 575 001, India. *Tel:* 420814 (personal), 421229 (residence).

AGENT: See "Cochin".

MORMUGAO: 15.25 N. 73.47 E. (See Plan)

PORT LIMITS: Roughly up to 10 fathom line running North and South from Cabo to Grand Island. Vessel is considered "arrived vessel" when she comes under direction of Signal Station.

DOCUMENTS:

10 Crew Lists.
10 Passenger Lists, if any.
3 copies of Manifest.
Last Port Clearance.
1 Bill of Lading in case of imports.
3 Stores Lists.
3 Personal Property Lists.
1 Letter of Authority to Agents addressed to Asst. Collector of Customs (prepared on arrival).
1 Arrival Report to Immigration Officer.
1 Customs Declaration.
1 Inward Clearance Certificate.
1 List of Particulars.
1 Deck Cargo Certificate.
1 Arrival Report.

Last 7 items to be signed by Master in port after arrival.

Ship's papers: Documents placed at disposal of port:

Ship's Registry.
Derat Certificate.
Safety Equipment.
Load Line.
Radio Telegraphy.
Indian Light Dues.
Annual Cargo Gear Certificate.
Safety Construction Certificate.

PILOTAGE: Compulsory. ETA required at least 48 hours before arrival to order Pilot. Call Pilot by VHF Channel 16, preferably 6 hours before arrival, with subsequent amendments up to 1 hour before arrival.

Pilot launch shows the Pilot flag. In fair weather Pilots board West of Entrance Buoys. In bad weather, Pilots guide vessel from launch until boarding possible. Pilot launch leaves from Inner Harbour with Pilot and is not stationed at any particular position. International Regulations for Pilots' ladders applicable. Vessels awaiting Pilot may anchor 2 miles to 4 miles West of the breakwater lighthouse, depending on arrival draft.

RESTRICTIONS/MAX. SIZE: Pilotage around the clock during the fair weather season (October – May). Draft restricted. Deep-laden vessels await high tide. Max. draft permissible 13.0 m. (with tide).

Draft particulars in fair weather season for various berths as detailed below.

Berth No.	*Max. Draft* (m.)	*Max. Length* (m.)
5*	8.50	152
6*	6.00	200
7	3.00	85
8	12.50	260
9	13.00	305
10	10.00	203
11	10.00	203

Vessels loading West of breakwater in fair weather: No restriction on size or draft.

*These berths are to be decommissioned shortly for construction of new cargo berths No. 5A and 6A. The berths will have a total berthing length of 450 m. and a depth of 11.0 m.

HEALTH: International Regulations apply. Pratique automatic when calling from another Indian port. Pratique granted by Port Health Officer by radio. Telegraphic Pratique can also be obtained from Port Health Officer cable address "Quarantine Mormugao".

Master should send quarantine message 48 hours prior to arrival indicating:

1. Name of ship.
2. Expected date and time of arrival.
3. My Maritime Declaration of Health has negative answers to all 6 Health Questions or ZT or My Maritime Declaration of Health has a positive answer to question (indicated by complements) or ZU (indicated by complements 1 – 6).
4. List of ports of call with dates of departure during last 30 days.
5. Have or have not monkey on board.
6. Have or have not any person on board embarking at Aden, Djibouti or Yemen.

Request Radio Pratique.

RADIO: Goa Radio, call sign VWG. Operating continuously on 500 kHz, 417 kHz, and 2182 kHz. Communication range 100 miles.

VHF radio telephone station at headland signal station, call sign Goa Port, calling Channel 16, working Channels 11, 12, 10 and 14 (24 hours). Port VHF station attracts attention of desired ship by light signalling, when VHF is inoperative.

VHF service restricted for port operation, ship's emergencies and movements. All messages to be addressed to Harbour Master. Third party communication not allowed.

TUGS: 3 tugs available with 30 ton bollard pull. Tugs usually used inside breakwater. Normally push, but when towing, use ship's lines or tug's lines.

BERTHING: Deep loaded incoming vessels berthed 2 hours before HW. Vessels also use anchor and quarter line to mooring buoy to keep off berth.

Berth No. 10: New multi-purpose general cargo berth. Length 250 m. Depth alongside 11.0 m.

BULK HANDLING FACILITIES: *Ore Berth (Berth No. 9):* Provided with a mechanical loading plant of a rated capacity of 8,000 tonnes/p.h. The facility, presently capable of fully loading 60,000 d.w.t. vessels is designed to cater for 100,000 d.w.t. vessels after further dredging of entrance channel, turning circle and berth. Vessels of up to 325 m. length are being part-loaded alongside the berth up to a draft of 13.0 m., and then topped-up at anchorage by transhippers which are capable of loading around 20,000 tonnes a day (loading rate at the berth varies from 60,000 – 90,000 tonnes per day). The channel is presently dredged to −13.7 m. and berthing basin to −13.1 m. Synthetic ropes only to be used for mooring at Berth No. 9.

Ore Transfer in Stream: Carried out between October and May (fair weather). Vessels are loaded or topped-off to a draft of 20 m. Four transhippers available with loading, rates 950 t.p.h. – 3,000 t.p.h.

STEVEDORES: Original ETA of 48 hours and a definite ETA of 24 hours required and Master should indicate stowage and gangs required before arrival, also how derrick booms must be arranged so as to enable stevedores to arrange same on arrival.

MEDICAL: Hospital facilities for any serious sickness and port ambulance is available around the clock.

TANKERS: Discharge line 35 cm., using 8 in. reducers. No loading facilities. Permissible draft in fair weather 12.5 m. at Oil Berth No. 8. Max. LOA 260 m. Discharge facilities at Berths No. 4 and No. 5 for MEG and caustic soda lye and loading facilities for molasses. Depth 8.5 m. (with tide).

DENSITY: Salt water 1025 – slightly fresh during monsoon season.

FRESH WATER: Available alongside berths also from 200 tons capacity barge. Pumped by hose at 20 t.p.h. at berth, and 30 t.p.h. from barge. Sometimes restricted to 50 tons maximum if supply is limited.

FUEL:

Grades		*Viscosities*
High speed diesel oil		Less than 45 Redwood
Light diesel oil		41 ,,
Furnace oil (also known as light fuel oil)	of	623 ,,

48 hours advance notice required.

FIRE PRECAUTIONS: During discharge of oil tanker, great care taken that no naked lights are visible nearby. Movements of unauthorised persons at point of discharge strictly restricted. Ships alongside or up to a distance of 100 ft. are advised not to emit smoke through funnel. Round the clock standby duty carried out by Fire Service, around tanker, till completion of cargo discharge.

REPAIRS: A private floating dry dock has been established in place of decommissioned Berths No. 1, 2 and 3, and major repairs to vessels up to 200 m. LOA can be carried out.

DRY DOCKS: Floating dock available.

GANGWAY/DECK WATCHMEN: Necessary to have watchmen in case of loading general cargo to protect goods. In case of loading iron ore no watchman required.

OPENING/CLOSING HATCHES: Usually by crew, unless contrary to Charter Party.

CUSTOMS ALLOWANCES: Tobacco: 200 cigarettes per crew member per week. Wine and/or Spirit: 4/5ths of bottle per week for each member of European crew. 2/5ths of bottle per week for each member of Asian crew as per practice.

CARGO GEAR: Certificates to be valid.

REPATRIATION: Facilities exist for changing and repatriating crew.

AIRPORT: Approx. 7 km. from harbour. One local flight daily to Mumbai. No international flights from Goa and all outgoing foreign passengers have to be repatriated via Mumbai.

TIME: GMT plus 5.5 hours.

HOLIDAYS: New Year's Day, Republic Day, Gudi Padva, Good Friday, May Day, Id-Ul-Fitr, Independence Day, Ganesh Chaturthi, Mahatma Gandhi's Birthday, Idu's Zuha, Diwali, Muharram, Feast of St. Francis Xavier, Goa Liberation Day and Christmas Day.

POLICE/AMBULANCE/FIRE: Police 2234 through Postal Exchange; Ambulance (Health Centre) 2454 through Postal Exchange; Fire 222 or 223 through Port Exchange and 2300 through Postal Exchange.

TELEPHONES: No arrangements for installation of telephones on board.

SHORE LEAVE: Crew members allowed to go on shore with Police landing pass.

IDENTIFICATION CARDS: Not essential but according to Immigration Rule temporary Police landing pass issued to each crew member going on shore, valid for municipal area of Vasco town; if valid passport is possessed.

GARBAGE DISPOSAL: Bins and garbage truck are provided alongside as and when required. Charges included in pilotage fees.

WASTE OIL DISPOSAL: Agents can make arrangements to collect oil. Pontoon available for bilge water collection.

SEAMAN'S CLUBS: None. Usual local facilities.

AUTHORITY: Mormugao Port Trust, Mormugao Harbour, Goa, India 403803. *Tel:* 512725, 512499. *Telex:* 0191-219, 0191-256. *FAX:* 0834-513065. *Cables:* Harbadmin Mormugao. *Contact:* Captain V.S. Gopinath, Deputy Conservator. Captain B. Gomes, Harbour Master.

AGENT: See "Cochin".

MULDWARKA: 20.45 N. 70.40 E.

SHIPMASTER'S REPORT: January 1995.

LOCATION: Lat. 20° 45.2' N., Long. 70° 39.8' E., about 19 nautical miles E.S.E. of Veraval (Refer to B.A. Chart No. 1474).

DOCUMENTS:
6 copies Crew List.
2 copies Crew Private Property List (The list should indicate all items possessed by crew, including all currencies).
3 copies Ship's Stores List.
Clearance from Last Port.
All Safety Certificates.
Ship's Register.

PILOTAGE: Not available.

ANCHORAGE: Anchorage port. This vessel, a 42,025 tonne handymax bulk carrier, drawing 11.45 m., anchored about 1.7 miles W.S.W. of breakwater in a depth of about 20 m.

The port has a shallow water private berth owned by Gujarat Ambuja Cements Ltd. (GACL). It is used for loading cement and cement clinker in to barges. Loading is done at anchorage from these barges, using ship's gear. We were able to obtain a load rate of 5,000 tonnes per day, using 4 cranes fitted with grabs with capacity of about 9 cu.m.

HEALTH: Master should send message through Agent 48 hours in advance with all information as required for port of Kandla.

RADIO: As there is no local port office, all notices, etc., are to be sent through the local Indian Agent, who tenders same on vessel's behalf to the concerned authorities.

VHF: GACL normally operate on Channel 71. Range 4-5 miles. Call sign "Gujarat Ambuja".

RADAR: Breakwater paints clearly on radar on 3 mile range.

BERTHING: See "Anchorage".

STEVEDORES: Normally work round the clock, provided the cargo barges are alongside.

MEDICAL: One private hospital at Ambujanagar, about 9 km. from breakwater.

DENSITY: 1024.

FRESH WATER: Difficult to obtain. However, small quantities can be obtained through cargo barges, provided vessel can use its own pump to take in the water.

REPAIRS: Not possible.

GANGWAY/DECK WATCHMAN: Not required.

OPENING/CLOSING HATCHES: By ship's crew.

CUSTOMS ALLOWANCES: See "Kandla".

REPATRIATION: Possible.

AIRPORT: Nearest airport at Rajkot, a distance of 250 km. (4 hours by road). There are daily flights to Mumbai for international connections.

TIME: GMT plus 5.5 hours.

SHORE LEAVE: Very difficult for foreign nationals as there is no Immigration Office at the port. However, same can be obtained through Customs by giving good advance notice.

GENERAL: Shipchandler available.

MUMBAI (Bombay): 18.56 N. 72.49 E. (See Plan)

PORT LIMITS: Vessel is considered to have "arrived" when Pilot is embarked and/or when vessel is required to anchor outside pilotage area awaiting a suitable tide, as in the case of large tankers.

PILOTAGE: Pilots will board in approximate position Lat. 18° 51' N., Long. 72° 49.5' E., from a white pilot launch with the legend 'Pilot' on either side.

A radar equipped Vessel Traffic Management System is likely to be in operation in the near future.

Minimum 24 hours advance notice to Agents and Harbour Master, Mumbai, through Mumbai Radio (VWB).

Mumbai Port Trust operates a VHF service with the following call: "Prongs" on Channels 16 or 12, Port Signal Station on 12. VHF Channel 14 used as a change over channel.

(1) "Mumbai Port Signals" for Harbour Control, Port Signal Station and Prongs Lighthouse.
(2) "Jawahar Dweep Island" for Marine Oil Terminal.

Inbound vessels are required to contact Harbour Control/Prongs Lighthouse on Channel 16 to report ETA and receive instructions.

It is compulsory for all power driven merchant vessels of over 200 tonnes to have a Pilot on board to proceed North of Pilot Cruising grounds. Such vessels may not enter, leave or shift berths in this area without a Pilot or Harbour Official on board.

Pilots now embark/disembark inbound/outbound vessels only from/in a pilot launch usually painted white with the legend 'Pilot' on the side. During the S.W. monsoon season a long swell prevails at the port entrance and it is imperative that vessels should give a proper lee, as the pilot launch may experience difficulties in coming alongside. During such times, Masters will be advised which side to make a lee by the Pilot vessel. During the early part of the S.W. monsoon, when the wind is South of S.W., the sea runs from the South and Masters are advised to keep their ships heading East when making a lee for the Pilot.

DOCUMENTS:
Ship's Register.
International Load Line Certificate.
International Safety Radio Certificate (Telegraphy).
International Safety Radio Telephony Certificate.
Derat Certificate.
International Safety Equipment Certificate.
Port Clearance from last Port.
Indian Coast Light Dues Receipt (if any).
4 copies of Crew List.
4 copies of Passenger List.
1 copy of Through Cargo Manifest.
4 copies of Stores List.
1 copy of Cargo Manifest with Bill of Lading for the same.
4 copies of Opium and Dangerous Drugs Certificate.
Cargo Plan.
Cargo on Deck Declaration.
4 copies of Certificate of Foreign Currency.
4 copies of Certificate of Arms and Ammunition.
Letter to Assistant Collector of Customs regarding Local Agency.
Letter to Assistant Collector of Customs regarding Duty on Ship Stores.
Application to Inspector of Police for Shore Passes.
3 copies of Arrival Report.
4 copies of Personal Property Declaration.

Note: The above list of documents is likely to undergo a change in order to bring the documentation and procedures in line with IMO convention on Facilitation (subject to special needs of Public Authorities in India).

ANCHORAGES: The designated anchorages 'A' and 'B' are located West of the West Port Limit. Vessels required to anchor outside the pilotage area must anchor in either of these two areas only.

Anchorage Area 'A':

(1)	19° 08.0' N.	72° 29.6' E.
(2)	19° 08.0' N.	72° 33.2' E.
(3)	19° 02.0' N.	72° 34.8' E.
(4)	19° 02.0' N.	72° 31.1' E.

Anchorage Area 'B':

(1)	18° 53.0' N.	72° 31.7' E.
(2)	18° 45.8' N.	72° 23.2' E.
(3)	18° 35.2' N.	72° 33.5' E.
(4)	18° 42.2' N.	72° 41.7' E.

Outer Anchorage: When not berthing on arrival, deep-drafted vessels should anchor in Area 'A' or Area 'B', which are clear of submarine gas pipelines and submarine cables. The mud and shingle bottom is reported to be good holding ground. Pilots do not assist in outer anchorage. It is entirely up to the Master to find a suitable anchorage in areas indicated.

A long swell is present during the S.W. monsoon in the Outer Anchorage and at the entrance to the harbour.

Visibility is often reduced by heavy rains during S.W. monsoons and by smoke haze which frequently prevails in the area from November to March.

Where for any reason such as adverse weather, a vessel does not anchor on arrival the Master should ensure that the Port Signal Station/Pilot Vessel/Harbour Master are advised of his arrival as vessels are handled on a first come first served basis.

In all cases, vessels anchoring at Outer Roads are to report their anchoring time and all particulars requested by Prongs Lighthouse or Port Signal Station.

Inner Anchorages: Inner anchorages are allotted to vessels by the Harbour Master upon application by the Agents and taking into account the draft. There are more than 60 anchorage berths with radius 1,000 ft. having depths from 32 ft. to 14 ft., of these, 2×32 ft., 10×30 ft., 22×20 ft. – 30 ft. and the remainder below 20 ft. All anchorages are safe. The permissible draft at the anchorages varies from 15 ft. to 32 ft. Depending upon the room available, vessels may be provided with a Pilot to take an incoming vessel directly to the assigned anchorage. The usual inner anchorage for merchant vessels is on the West Side of the harbour, abreast of the City of Mumbai. An area North of Sunk Rock is reserved for naval vessels.

A vessel subject to quarantine will be instructed to anchor as convenient for boarding by the Port Health Officer.

RESTRICTIONS: According to state of tide and draft.

HEALTH: The Master of every vessel calling Mumbai from a foreign port must send the following particulars by cable to "Quarantine Mumbai" 12 hours to 24 hours prior to arrival at Mumbai.

1. Name of vessel and Call Sign.
2. ETA (Local Time).
3. Ports called and date of departure within last 30 days.
4. Maritime Declaration of Health has Negative Answers to the 6 Health Questions (Note: Code Signal "ZT" should be used).
5. No monkeys on board.
6. No person embarked aboard from any Yellow Fever Endemic ports.
7. Date and Port of Issue of International Derat Exemption Certificate.
8. Name of Local Shipping Agent.
9. Code Signal "ZU" should be used if Maritime Declaration of Health has positive answers to any of the 6 Health Questions.

Radio "Quarantine Mumbai" 24 hours before arrival using standard Quarantine Messages from International Code of Signals, if vessel has called at a Yellow Fever area port within the last 30 days, whether all on board have valid Yellow Fever Vaccinational Certificates or if any contagious disease is suspected.

Radio Pratique is permitted and the information required under "Pratique" should be cabled to "Quarantine Mumbai" maximum 24 hours and minimum 12 hours, prior to arrival.

The boarding Pilot also hands over a form for the Master to complete and this is forwarded by the Pilot to the Port Health Officer for their records.

MAX. SIZE: Drafts at Indira Dock, Prince's and Victoria Docks and Jawahar Island and Pir Pau are subject to dredging, soundings and rise of the tide. These drafts are declared by the Deputy Conservator of the Mumbai Port every month in the Daily Shipping List.

Commercial Docks:

(1) Indira Docks, including Ballard Pier and Ballard Pier Extension.
(2) Prince's Dock and Victoria Docks.

Name of Dock		*Max. Normal Dimensions (ft.)*	*Max. Oversize Dimensions (ft.)*	*Remarks*
Indira Dock Basin Berths	LOA	625		
	Beam	85		
	Draft	29 to 30		
Ballard Pier Extension Passenger Terminal	LOA	750		Passenger vessels including 'Queen Elizabeth II'
	Beam	95		
	Draft	30		
Ballard Pier Mole Station	LOA	600	650	
	Beam	85	90	
	Draft	29		
Harbour Wall Berths	LOA	550		
	Beam	70		
	Draft	19/20		
Victoria Dock	LOA			
	By Day	460	460	
	By Night	400	400	
	Beam	62	65 Day only	
	Draft	19	19	
Prince's Dock	LOA			
	By Day	500		
	By Night	460		
	Beam	61.03		
	Draft	17		
Prince's Dock Harbour Wall New Ferry Wharf Berths	LOA	250		
	Beam	45		
	Draft	15		

Also see "Tankers".

RADIO: Mumbai Coastal Station, call sign VWB.

Information regarding weather will be broadcast at 0630 hrs. and 1030 hrs. local time on 2,000 metres.

Special Information required from Tankers: Radio Agents 96 hours before arrival giving Master's name, ETA, draft, ports visited last 30 days, vessel's gross and net tonnage, present loaded displacement, distance manifold from amidships, cargo quantities on board gradewise, and, if Mumbai last discharge port, "Load-on-top" data, vaccinations required, men for doctor and dentist, supplies and cash requirements. *Failure to comply with foregoing could incur berthing delays.* Confirm ETA 48 hours before arrival. Any subsequent changes to be notified to Agents.

Note: Agents Offices are closed from Friday 1730 hrs. IST to Monday 0930 hrs. IST. Week-end messages to be in by Friday afternoon.

Agents can be contacted by Mumbai Radio VHF Channel 26, and thence public telephone system.

A Naval Signal Station is situated on the extreme South end of Mumbai Island at Colaba Pt. and ships entering or leaving port are liable to be called up by signal lamp. Masters are required to answer such signals by lamp should their ship be called up.

RADAR: The Port has no Radar/VTMS service.

VHF: See "Pilotage".

TUGS: 9 tugs, 900 h.p. – 3,000 h.p. Tugs join vessel when close dock entrance and assist undocking. Ship's lines are used.

BERTHING: *Indira Dock:* 21 berths, able to handle cargo vessels up to 20,000 d.w.t. Average length of berth 150 m. Most berths are equipped with 1×6 ton crane and 4×3 ton cranes.

Victoria Dock: 15 berths, able to handle vessels up to 5,000 d.w.t. Average length of berth 110 m. Most berths are equipped with 1.75 ton and 1.5 ton cranes. Vessels dock and undock from about 3 hours before high water to half an hour before high water.

Prince's Dock: Length 1,560 m. of which 1,200 m. is available for handling cargo. There are 8 berths able to handle vessels up to 5,000 d.w.t. Vessels dock and undock from about 3 hours before high water to half an hour before high water.

Ballard Pier: Container berth: Length 244 m., width 110 m., has a large back-up area for stacking containers. 2 gantry cranes and 2 transtainers on rubber tyres have been provided.

The extension at Ballard Pier is the passenger terminal and receives passenger vessels up to 30,000 g.r.t. at any stage of the tide, commensurate with draft. The berth is a continuous solid concrete pier fitted with rubber fenders.

Berthing/Unberthing is allowed during day and night, depending on the draft for the safe transit of the access channel. When entering the dock basin, the Harbour Pilot brings the vessel in to the locks of Indira Dock. Berthing Master takes the vessel to the berth in the dock. The entire docking/undocking operation is carried out under the overall charge of the Dock Master.

Allotment of Berths: Type of cargo carried is divided into 6 groups for allotment of berths to vessels:

Group I	Finished Fertiliser and Food grains.
Group II	Fertiliser raw materials.
Group III	Edible Oil in bulk.
Group IV	One commodity comprising more than 80% of the cargo, e.g. Scrap Metal, Iron and Steel cargo.
Group V	Containers.
Group VI	Break Bulk and General Cargo.

Under the pre-booking of berth facilities introduced from 1st February 1990, one berth for each of the above groups will be set aside for the owner/agent of a vessel who would like to occupy the berth on a priority basis, instead of waiting in the general queue. For this the owner/agent has to apply latest 72 hours before the arrival of the vessel and only 4 hours grace period will be allowed for any delay in arrival of the vessel. To avail of this facility the owner/agent has to pay a specified sum as a service charge. If however the vessel fails to arrive by declared time plus 4 hours grace period, with the allotment will stand cancelled, the booking fee will be forfeited and the vessel will have to join the general queue.

CARGO HANDLING EQUIPMENT: Compliance with M.P.T. Port Rules and Dock Bye Laws is essential.

Electric and Heavy Lift Cranes, Floating Mobile and Crawler Cranes available.

2 gantry cranes (35 tonnes each) are fitted at Ballard Pier (Mole Station).

2 Transtrainers on rubber tyres (35 tonnes) are provided in the Ballard Pier back-up yard for stacking containers.

1 Transtrainer on rubber tyres (35 tonnes) is provided at the Stacking Yard at No. 1, Indira Docks.

29 Mobile Cranes with capacity up to 30 tonnes available.

Heavy Lift Electric Crane of 60 tonnes at Jetty End Indira Docks.

2 Floating Cranes available of 60 tonnes and 125 tonnes capacity.

Forklifts – 43×3 tonnes and 4×1.0 – 1.5 tonnes.

STEVEDORES: Supplied by Dock Labour Board. Mumbai Port Trust supplies shore labour for handling cargo, including stacking in sheds.

Working hours:

1st Shift (0800 hrs. – 1700 hrs.)
2nd Shift (1700 hrs. – 2300 hrs.)
3rd Shift (2300 hrs. – 0500 hrs.) - restricted.

Advance information and notice will aid agents in arranging for any specialised services that may be required.

Good facilities for LASH System of cargo.

MEDICAL: Excellent medical facilities and hospitals in the city. Notice in sufficient time, depending on seriousness of case, to arrange for transport, hospitalisation, etc.

TANKERS: The oil terminal facilities are located on the Eastern side of Jawahar Island (Butcher Island) and consist of a concrete jetty about 1,700 ft. long, having 3 pier heads, with dolphins at either end of the pier head. The jetty carries a roadway and pipelines and has berths for 3 vessels of various sizes. The berths are numbered from North to South as No. 1, 2 and 3 respectively. Each berth is provided with breasting dolphins and mooring dolphins. A fourth oil berth South of Jawahar Island has been added for loading/discharging of crude oil.

The oil terminal is administered by a Senior Dock Master, who works 24 hours on – 24 hours off.

Approach to the Berth: From the Pilot Cruising Ground the vessel proceeds towards Jawahar Island at slow speed, under the direction of the Port Pilot, to avoid squat and so as to arrive off the berth on top of high water, in the case of loaded tankers. During the approach to the oil terminal, the vessel has to pass through the inner harbour, where other vessels are anchored. Before arrival at the berth, engines should be stopped and tested astern. This trial is compulsory before berthing at the oil jetty.

The tanker anchorages, 9 cables and 13 cables S.W. of Butcher Beacon, are available for light tankers awaiting berth or suitable tide. An emergency anchorage exists 4.5 cables N.E. of Butcher Beacon.

The tidal stream directions are not in line with the jetty. The ebb stream runs at an angle of 15° onto Berths No. 2 and No. 3 and 20° to Berth No. 1. Berth No. 1 and No. 2 are partially protected from the flood stream effects by the surrounding shore. Berth No. 3 is protected by an artificial reef from the shore towards Butcher Beacon. But there are reports that the flood stream tends to push the vessel off the berth. Although Berth No. 4 lies in the direction of tidal stream, which runs about N.E. – S.W. it does experience some strong tidal stream, pushing the vessel away from the berth and has resulted in moorings breaking if not properly tended.

Deep draft laden tankers dock on top of high water/beginning of the ebb, always port side alongside.

Berth Limitations and Facilities at Jawahar Dweep Marine Oil Terminal and Pir Pau:

Jawahar Dweep:

Berth	*Max. Displacement* (tons)	*LOA* (ft.)	*Max. Oversize LOA* (ft.)	*Beam* (ft.)	*Beam Oversize* (ft.)
No.1	70,000	740	780 (Daytime only)	95	130
No.2	48,000	600	-	95	NA
No.3	70,000	740	780 (Daytime only)	95	130
No.4	125,000	984	NA	130	NA

Pir Pau Berth:

LOA: 560 ft. (day light), Beam: 85 ft. Maximum Oversize: Length 585 ft. and Beam 95 ft.

Vessel to be equipped with a functioning bow thruster and be able to pump over tide.

Draft:

	LOA up to 600 ft.	LOA over 600 ft.
No.1	33 ft. 09 in.	29 ft. 06 in.
No.2	30 ft. 06 in.	30 ft. 06 in.
No.3	33 ft. 06 in.	31 ft. 10 in.
No.4	42 ft. 00 in.	42 ft. 00 in.

Pir Pau:

LOA up to 525 ft. – 19 ft. 00 in.
LOA up to 560 ft. – 18 ft. 04 in.

Also see New Pir Pau Pier.

Note: Drafts indicated above are at chart datum and correct at time of going to print. These are subject to change due to dredging/siltation. Drafts for these berths are declared by the Deputy Conservator of the Mumbai Port Trust every month.

Mooring and Unmooring Operations: At Berths No. 1, 2 and 3 the usual mooring arrangement consists of 3 head, 3 stern, 2 breast and double back springs fore and aft. An offshore anchor is sometimes used underfoot. 2 mooring launches assist in running the lines ashore. It is recommended, to facilitate in quick positioning of the vessels, that the back springs fore and aft are paid out and stored along the vessel's sheer strake so that they can be quickly hove in and made fast once placed ashore. Mooring and unmooring times and conditions are decided by the Jawahar Island Dock Master. No long delays are experienced. Usually 2 tugs of sufficient power assist with mooring and unmooring. When berthing, tugs come alongside abeam of Butcher Beacon.

When berthing at Berth No. 4 the mooring arrangements are 3 head/stern, 3 breast lines fore and aft and 2 springs fore and aft are used. When berthing, the tugs come alongside between North Karanja and West Uran Buoys. During monsoons additional lines may be required and will be indicated by the Dock Master. Strong ebb stream is experienced at Jawahar Island. Prior to start of the ebb it must be ensured that both back springs and breast lines are taut. Moorings must be tended regularly in view of strong currents and unsettled weather and fairly large range during Spring tides.

Gangway: No shore gangways are provided so vessel's gangway should be used. Pilot will indicate which side the vessel will berth and the gangway should be ready on deck about 20 ft. forward or aft of the manifold, ready to be put ashore as soon as the vessel has made fast. Hose gangs come aboard via the gangway, therefore, it is important to have the gangway placed promptly.

Pumping Over the Tide: Berth siltation takes place rapidly, and therefore depths at the berths vary from time to time. These should be checked from the monthly bulletins issued by the Deputy Conservator of the Port. The tidal ranges above the chart datum are from zero to 16 ft. during Spring tides and from 6 ft. to 10 ft. during Neap tides.

Pumping over the tide is a routine practice by the local oil industries. Vessels are required to reduce their draft before the first low water after berthing, hence vessel should be in all respects ready to commence discharge once mooring and connecting up are completed. Discharge over the first four hours should be planned to reduce the vessel's draft to the draft which will be indicated by the Dock Master. At least 1 ft. under keel clearance should be kept at all times.

Cargo Operations: Crude Oil Vessels: Vessels of 740 ft. LOA are routinely accepted. Spot approvals for vessels up to 780 ft. LOA docking at Berths No. 1 and 3 may be granted provided that Berth No. 2 is vacant or the vessel there is small enough to accommodate the extra length.

3×10 in. ASA hoses are used on crude vessels. Vessels are allowed to arrive with the blanks off and reducers in place, on the manifold. A shore crane is available, but it is also advisable to have the vessel's derrick ready. Connecting of hoses is carried out by an experienced gang. At Berth No. 4, 5 Ckicksan type loading arms are fitted with end flange size 12 in. 150 lb. class. The shore will accept ship's ullage figures (arrival) taken without their representative present if this is necessary in order to avoid delay in commencing discharge.

Product Vessels: Products are loaded and discharged through 8 in. diameter hoses with ASA flanges. These vessels dock at Berths No. 1, 2 and 3 only. Loading of product tankers involves considerable line clearing. Usually, 2 hoses are connected, although 3 lines are available. Vessels arriving alongside for loading, should have clean ballast only, with all tanks washed and ready to load any product. Since changes in the cargo pattern occur very frequently, it is essential that vessels observe this requirement. Tank cleaning including Crude Oil Wash is carried out only with the specific permission of the Dock Master/Safety Officer.

For clean products, 3 lines are available at Berths No. 1, 2 and 3, 1×16 in. for HSD, 1×16 in. for Kerosene and 1×12 in. for other clean products such as M.S., ATF, JP 1, etc. This line is always being kept full of water. Products are separated in this line by interface, if quality so permits, or by water plugs.

In the process of flushing, a small amount of water may be loaded on board the vessel. This amount of water has to be checked, calculated and included in deadfreight calculations.

The shore representatives inspect the tanks, prior to loading, and seal the sea chests. He remains on board throughout the stay of the vessel, maintains communication and co-ordinates the activities with the shore. He should be provided with a cabin.

Early Departure Procedure is practised and Bill of Lading quantities are communicated to the vessel after sailing. Discrepancies, if any, between ship and shore figures are to be protested by cable.

Discharge of Dirty Ballast and Slops: There is a slop tank available. Clean ballast may be discharged over board. Slops and dirty ballast may be pumped ashore via a 12 in. line to a Slop Tank. Sufficient notice and information of quantities of slops/washings should be given. Maximum quantities acceptable 4,500 tonnes, rate 1,000 t.p.h.

Pollution and Safety: No facilities or equipment are available within the port for combating an oil spill.

The Port has a fire station at the Marine Oil Terminal. Several firemen are in attendance at the berth at all times. Each jetty has 2 towers fitted with fire monitors. There are also trailer pump generators at each jetty equipped with foam compound.

Fire wires must be hanging over the side on the outboard side, bow and quarter, while alongside to enable tugs to connect readily in an emergency situation. The towing eyes should be maintained at water level and sufficient slack should be flaked out on deck.

Strict security is maintained at Jawahar Island. Access to the oil jetty is from a small pier close Northward of the Island. No boats are allowed alongside. All crew members are provided with a pass and these are to be returned before sailing.

Fuel and Bunker Facilities: Fuel oil and light diesel oil are available ex-wharf. Lubricants also available in drums. The loading rate of fuel oil is about 500 t.p.h.

Fresh Water: Drinking and boiler water available ex-wharf (30 t.p.h. – 35 t.p.h.). Private water boats (about 150 tons each) at 25 t.p.h.

Pir Pau: Pir Pau Pier is situated at the Northern end of Mumbai Harbour in a locality called Trombay. Here the refineries of Bharat Petroleum Corporation and Hindustan Petroleum Corporation are situated.

The approach to Pir Pau Pier is made through the channel between Jawahar Dweep and Elephanta Island, thence through the Pir Pau Dredged Channel which is marked by buoys. Only daytime berthing/unberthing during the flood tide is allowed.

A number of bollards are laid throughout the length of the Pier and provide a suitable mooring layout for any size vessel up to 560 ft. length overall. The fendering system consists of vertical rubber fenders on the pier for its entire length. It it advisable to keep portable fenders readily available.

Pipeline size varies from 6 in. to 12 in. A loading/discharging rate of 150 t.p.h. for all products is maintained. Cargo discharged at this pier is mainly L.P.G., ammonia, lube oils and chemicals.

Refrigerated cargoes acceptable, but due to design limitations of pipeline/tank volume, cargo to be heated to − 10° C. to 23° C. Pipeline length 5 km. (8 in. ASA 300.). No vapour return line available. Maximum discharge rate 120 tonnes per hour at back pressure 14.5 kg./cm. Vessels to carry suitable hoses of 75 ft. length for discharge.

No bunkering facilities available at Pir Pau. Fresh water available ex-wharf at 5 t.p.h. or by water boat.

New Pir Pau Pier: A pier is under construction for handling bulk liquid chemicals and special grades of POL products (LPG, LSHS, lube oil, etc.).

The pier is located in position Lat. 18° 58.76' N., Long. 72° 55.22' E. Ships upto 10.6 m. draft can remain at the berth at all states of tide. Night navigation will be available. The pier is scheduled to be ready for operation in April/May 1996.

Lube Terminals at Commercial Docks:

Certain Lubes, Vegetable Oils and fats are discharged both at Indira Dock and at Prince's and Victoria Docks at berths nominated by the Port. These are discharged either through a pipeline or into tank trucks. The average rate of discharge into tank trucks is 40 t.p.h. From the docks the pipeline (10 in.) extends to a tank farm about 10 km. away. For docking in the commercial docks a valid Gas Free Certificate will be required.

Ship Operator's Report: January 1987 (Updated 1996).

Location: The Port of Mumbai is situated almost mid-way on the Western coast of India and is a natural deep water harbour protected by the mainland on its East and the island of Mumbai on its West. It is the largest Indian port for dry cargoes in bulk and container trade. The Marine Oil Terminals are located at Jawahar Island (Butcher Island) and Pir Pau at Trombay, where also refineries of Bharat Petroleum, Hindustan Petroleum and Indian Oil are located.

Lube Oils and certain non-flammable liquid cargoes are also handled at some wharves of the Indira Dock and Victoria Dock.

Communications: All vessels bound for Mumbai should listen to Mumbai Radio (Call Sign — VWB) which is located at Lat. 18° 36' N., Long. 72° 50' E. and send their initial ETA as soon as possible.

Tankers arriving in ballast should notify: ETA, amount of slop and dirty ballast to be discharged ashore, deballasting time, proposed loading sequence and quantity of each grade, displacement on completion of loading and alll requirements/services needed.

The initial ETA should be subsequently confirmed or revised, 72, 48 and 24 hours prior to arrival.

Approaches: The approaches outside the 10 fathom contour are free of dangers. The vessel may approach Mumbai from North to South through West, but attention must be paid to areas in which fishing stakes may be encountered as indicated on the chart. Dangerous wrecks and fouled ground exist within the area bounded by parallels Lat. 18° 48.5' N. – Lat. 18° 50' N. and meridians Long. 72° 42.5' E. — Long. 72° 44.5' E. Masts of sunken ships are sometimes visible during the periods of the LLW tides. Under no circumstances should vessels of any draft, attempt to cross this area.

The harbour entrance is lined by light buoys moored North of Thal Shoal, S.E. of Prongs Reef and S.W. of Prongs Reef.

Racons are fitted onto Kanoji Angre Lighthouse and Prongs Lighthouse, which transmit the morse signal "K" and "P" respectively. The performance of Khanderi Racon is satisfactory and that at Prongs is under test.

Permissible Draft: There are no night restrictions, except at Oil and Chemical Jetty at Pir Pau. The minimum depth in the entrance channel to the harbour is 34 ft. 6 in. below chart datum. The shallowest bar extends from a beam of the buoys at the entrance to abeam of Middle Ground Island.

Deep draft vessels, including laden tankers, should be at Pilot Cruising Ground from 1 hour 30 minutes before high water to on top of high water, depending on the instructions received from Prongs Lighthouse or Port Signal Station.

It is advisable to start heaving anchor in good time, about 2 hours before time required at Pilot Cruising Ground; and to make approach to the port entrance, passing about 1 mile North of Mumbai Floating Light Vessel (Withdrawn 1996). Then vessel should head towards the middle of the 2 entry buoys (Prongs Reef Buoy and South Entrance Buoy), passing about 8 cables South of S.W. Prongs Reef Buoy.

DENSITY: The Port of Mumbai is essentially a salt water port and major fluctuations in the density occur on account of tide. Density varies mostly in monsoon period June to September. Sea water temperature 18° C. to 23° C. throughout the year.

FRESH WATER: Available at all berths ex-wharf at following delivery rates:

Jawahar Dweep	30 t.p.h. – 35 t.p.h.
Pir Pau	5 t.p.h.
Indira Dock	12 t.p.h. – 15 t.p.h.
Prince's and Victoria Docks	12 t.p.h. – 15 t.p.h.

Fresh water also available by water boats.

Privately owned water boats (150 tons)	25 t.p.h.

Ship Officer's Report: Vessel berthed at Ballard Pier, East side. Fresh water availability on pier dependent on capacity of storage tank at the time of call. The water was not available continuously and we had to wait for the tank to be refilled.

FUEL: Diesel oil and fuel oil are available ex-wharf at the four Jawahar Island berths. No bunkers are available at Pir Pau. At the commercial docks only diesel oil is available and is supplied by tank trucks.

Bunker barges for fuel oil are available, however some delay can be expected. Bunker requirements should always be included in the first ETA message to minimise delays.

FIRE PRECAUTIONS: All regulations of Petroleum Rules (Chapter 1/50 of MPT Port Rules). Port maintains fire stations, 24 hours per day, both at docks and at Butcher Island Oil Terminal. Special precautions taken for tankers at Marine Oil Terminal at Butcher Island.

CONSULS: Most countries of the world have consulates/representative offices in the city.

REPAIRS/DRY DOCKS: Major repairs may be carried out afloat and in dry docks. Excellent facilities exist and all repairs possible. There are several private and public ship repairers to do this work.

There are 2 dry docks belonging to the Mumbai Port Trust. Hughes Dry Dock is 1,000 ft. long and 100 ft. wide and the entrance to the dry dock is from Indira Dock Basin. Merewether Dry Dock is 525 ft. long and 65 ft. 6 in. wide and the entrance to the dock is from Prince's Dock Basin.

SURVEYORS: Nautical surveyors (Mercantile Marine Department) and all Classification Societies (Marine) and General Surveyors available.

GANGWAY/DECK WATCHMEN: Private watchmen, regulated by the Port, are posted on deck as and when required by the Agents/Owners.

OPENING/CLOSING HATCHES: All mechanically operated hatches are opened and closed by ship's crew. Rigging gangs may also be employed for this work.

CUSTOMS ALLOWANCES: Weekly allowance is 200 cigarettes and 1 bottle of spirits (1,000 ml.).

REPATRIATION: Can be arranged, also crew changes.

AIRPORT: International Airport at Sahar, 25 km. from Mumbai Harbour.

TIME: Indian Standard Time ahead of GMT by 5 hours and 30 minutes. No alterations to clocks are made any time.

HOLIDAYS: Republic Day (January), Holi (2nd Day) (March), Ambedkar Jayanti (April), Shivaji Jayanti (April), Ramzan Id (April), Maharashtra Day (May), Bakri Id (July), Mohurram (August), Independence Day (August), Ganesh Chaturthi (August), Dasera (September), Diwali (October) and Christmas (December).

POLICE/AMBULANCE/FIRE: Police 100; Ambulance 102; Fire 101.

TELEPHONES: Arrangements for placing a telephone on board ship exist at all transit sheds in the Commercial Docks.

IDENTIFICATION CARDS: Shore passes issued. Necessary for Police/Custom Authorities and are to be returned prior to vessel's departure.

GARBAGE DISPOSAL: Bins are placed on shore at the end of the berth where vessels are expected to place their garbage. Collection of the garbage from the bins is arranged by MPT. Collection service is not available from on board of the vessel.

WASTE OIL DISPOSAL: Collection service for disposal of waste oil is presently available at all the commercial berths by tanker trucks. There is no charge levied for this service at present. Application on plain paper for this service has to be made to the Director, Pollution Control, MPT. Tel: 2619565. Telex: 011-81047.

SEAMAN'S CLUBS: The Royal Mumbai Seamen's Society, Prince of Wales Seamen's Club, 18 R. Kamani Marg, Ballard Estate, Mumbai 400 038. Tel: 2613731, 2612260. Facilities: Beer bar, snack bar, club shop, biliards and table tennis, dances twice weekly on Tuesdays and Fridays, chapel, card room, accommodation for 153 persons, postage facility available. Technical meetings and lectures held every month through Technical Institutions.

CURRENCY: Indian Rupee (Rs.).

REGULATIONS: Stringent Port Rules and Docks By-laws detailed in "Mumbai Port Rules".

GENERAL: *Hazardous Cargo:* All items of Dangerous Goods are published by the International Maritime Organisation and are treated as hazardous cargo. They are divided into four broad categories for the purpose of handling in Port area. These categories are graded according to risk involved in handling:

Category "A": Low Flash Point (below 50° F. or 10° C.) or other goods which are too dangerous to be handled through the dock. Cargo of this category is discharged into lighters in the stream for direct delivery from the Port Hazardous depot at Haji Bunder. Vessels carrying commodities belonging to this category are not admitted into the docks.

Category "B": Intermediate Flash Point (above 50° F. to 76° F. or 10° C. to 24.4° C.) or other goods which present moderate degree of hazard. Cargo of this category is discharged into lighters in the stream for transportation to Haji Bunder for storage. Containers carrying this category of cargo may be landed from container vessels on shore in the docks and the containers are removed immediately to Haji Bunder for storage.

Category "C": High Flash Point (above 76° F. to 141° F. or 24.4° C. to 60.6° C.) or other goods which present lesser degree of hazard. Cargo of this category is permitted to be discharged in docks for immediate delivery only. If direct delivery is not possible these commodities will have to be discharged overside into barges in the docks for delivery from Haji Bunder.

Category "D": Flash Point above 141° F. or 60.6° C. or other goods, specially some poisons and some corrosives, which also have hazardous properties. These are permitted to be stored and handled in the port area subject to special handling and storage instructions.

In every case Masters of vessels carrying such cargoes are advised to inform their local agents well in advance of all hazardous cargo on board so that necessary arrangements can be made for off-loading such cargo as required.

REPORT: Pir Pau Jetty (LPG), June 1984 (Updated 1996).

Pir Pau Jetty: Datum draft 19 ft. 4 in. for Max. LOA 525 ft. Pir Pau Channel datum 13 ft. 1 in. Max. rise of tide approximately 15 ft. No berthing/unberthing between sunset and sunrise.

Pipeline/discharging facilities:

1. Refrigerated cargoes acceptable, but due design limitation of pipeline/tank volume cargo to be heated to −10°C. before discharge. Sea water temperature at Mumbai during year 18° minimum to 23° maximum.
2. Pipeline length 5 km. diameter 8 in. ASA 300 psi, no vapour return line available.
3. Max. discharge rate 120 tonnes/p.h. at back pressure 14.5 kg/cm. (abs).
4. Vessel to carry suitable hoses making length of 75 ft. for discharge keeping in view items (2) and (3) above and to be equipped with derrick.

SHIPS OFFICER'S REPORT: May 1989 (Updated 1996).

Documents:

Maritime Declaration of Health.
Arrival Report.
Cargo on Deck/Transit with Port of Loading/Discharging.
Customs Arrival Report.
Vessel's Arrival Report.
2 copies No Arms/Ammunition Form.
2 copies Agent's Report.
6 copies Deck Cargo Declaration.
4 copies Stores List.
6 copies Personal Effects List.
Other Local Forms. If visiting Mumbai for the first time, the vessel may use its own forms.
10 copies Crew Lists.
3 copies Narcotics List.
1 copy Vaccination List.

Note: The Agent will provide a booklet which contains all the forms needed.

Customs: Customs Officers will board the ship to check the bonded store. Ship hands over the forms prepared by the Agent.

Quarantine: Hand over the forms prepared by the Agent.

Immigration: Hand over the forms prepared by the Agent.

Shore passes are obligatory.

SHIPMASTER'S REPORT: October 1993 (Updated 1996).

Charts: B.A. Chart No. 1487, 2621 and 2624.

Approach: Khandri Lt. and Prongs Reef Lt. are very conspicuous.

Khandri Lighthouse Racon was not operating.

A lot of fishing vessels sighted inshore, so it is best to approach anchorage from seaward.

Anchorage: The Outer Anchorage, judging by the anchored vessels, seems to be a square (18° 55' N. 72° 40' E.; 18° 55' N. 72° 45' E.; 18° 50' N. 72° 40' E.; 18° 50' N. 72° 45' E.).

We anchored in the middle of the area with 5 shackles, clear of the disused submarine cables. There is a large ground swell, even in N.E. Monsoon. I believe the area can be awkward at the height of the S.W. Monsoon. The bottom is mud.

Even with port congestion, there is plenty of anchorage room.

Area A on B.A. Chart No. 1487 not used, and Area B in "Guide to Port Entry" not used.

Entry into the Inner Anchorage, which is inside the port limits, and subject to port charge, is conducted under pilotage (although due to pilot shortage, did hear on VHF, ships being told to anchor themselves in designated area). The area is as on B.A. Chart No. 2624, but area extends from 72° 50' E. each side of dredged fairway.

VHF: Mumbai Port: Channels 16/12. Mumbai Pilot: Channels 16/14.

The Port Radio Station is quite good with information and operates throughout 24 hours.

Pilot: Pilot boards and disembarks throughout 24 hours from old slow cutter off Red Buoy (FL (2) R. 10 sec. – 18° 51.2' N., 72° 49.4' E.).

Tugs: There are numerous old and poorly maintained tugs, and they are often difficult to obtain (Pilot's Report).

Ship's lines are used.

On berthing, we used 3 tugs (one forward, one aft and one large tug pushing).

On departure, tugs were not obtainable (after waiting 45 minutes), so left Indira Dock outer wall using traditional methods.

Berthing: No. 19 Indira Dock Wall:

We found Cross Island Reef, from echo traces inwards and outwards to extend about 70 m. South of the Buoy (confirmed by Pilot).

Vessel berthed starboard side alongside dock wall with 7.4 m. maximum draft 2 hours after LW.

There was confusion over actual depth of water on berth, with Pilot maintaining a depth of 5.5 m. C.D. (actually correct along dock wall) which required ship to anchor off Indira Dock "Bull Nose".

Berthing and unberthing on dock wall is during daylight only, and in Indira Dock throughout 24 hours.

For berthing on dock wall, vessels swing off Bull Nose and are towed stern in, berthing starboard side to.

This vessel sailed from Indira Dock No. 10 with a draft of 8.72 m. on H.W. without any problems.

Berth: Indira Dock Wall No. 19:

Recent harbour depth survey gives 7.3 m. C.D. alongside, out to a distance of 50 m. (Sheds No. 18 and 19).

There is 10.0 m. C.D. alongside Ballard Pier East side.

We found (See "Plan") 5.0 m. alongside dock wall slopping out to 7.3 m., 21.0 m. off dock wall. North of the South end of Shed No. 20 (18° 56.33' N.) shoaling takes place. Dock Master advised depth of 6.0 m. C.D., then shoaling to about 3.0 m. North of Shed No. 21.

Indira Outer Dock wall has no fenders, dock side smooth concrete blocks, ships must provide their own fenders. Fortunately we had plenty of rubber truck tyres and wooden fenders.

The old floating pontoon fenders are on the dock side under repair.

Berthing/unberthing on dock wall is in daylight only.

Ship's gangway used and just avoided having to turn in at L.W.

Vessel grounded at L.W. (soft mud).

Sailed with 7.66 m. maximum draft.

Lines were 2,1,2 each end. Plenty of bollards available, mooring boat and large mooring gang assist in mooring.

Very little room between adjacent vessels.

In S.W. Monsoon, Pilots report a swell is felt alongside.

Loading: We loaded castor oil from small (13 tonne) tank trucks, which bring the oil from storage tanks about 15 km. away.

Loading was through open access hatch from 3 shore pumps connected to individual trucks.

Maximum rate achieved about 100 tonnes/hr. per tank.

Tally clerk keeps record of trucks ("Boat Note").

During the night, trucks tend to 'dry up' with long waits.

No Bill of Lading figure on completion as trucks empty weights have to be checked and tallied up, so normally about 36 hours before Bill of Lading figures obtainable.

About 30,000 tonnes of different castor oil grades shipped from Mumbai per month, mainly to U.S.A. and North Europe, for medicinal purposes, aircraft engine lubricants and in the plastics industry.

Numerous cranes along dock wall, but understand only those at Shed No. 18 in operating condition.

Fresh Water: Available ex-quay. Apply through the Agent well in advance. Water barges also available for vessels at anchorage.

Medical: Arranged through Agent. Extensive facilities in city. Vessels at outer anchorage can land sick seamen at Pilot Boarding Station, by arrangement through Agent.

Shore Leave: Shore passes required, which have to be handed in on departure.

No restrictions on foreign currency usage.

Taxis line up alongside vessel hoping for a fare. Hire of 3 hours and return to dock costs U.S.$ 10.00.

Chandler: A number of chandlers are available. We used Mazda Associates as with previous call. They are fair and are paid through the Agent.

Authorities: They board vessel spasmodically.

Agent : 2 hours after berthing.
Immigration : 1.5 hours after berthing.
Customs : 3 hours after berthing.
Health : 3.5 hours after berthing.

I believe Customs only work from 0930 hrs. to 1730 hrs.

No problems over currency, not checked, and U.S.Dollars are freely used ashore.

Applied for Free Pratique as per format in "Guide to Port Entry" by telegram through telex system, no reply received. Pilot granted Pratique on boarding.

We had transit papers to Kandla, Customs boarded before departure with sealed Transit envelope.

The following documents were required at various times:

12 copies Crew List.
1 copy Crew Currency List.
1 copy Ship's Currency.
1 copy Arms "Nil" List.
1 copy Drugs in Master's Safe.
1 copy Cargo in Transit.
2 copies Crew Declaration.
2 copies Stores List/Bond List.
1 copy Ports of Call List.
1 copy Passenger "Nil" List.
3 copies Health Declaration (1 copy Pilot).
2 copies Vaccination List.

The Agent makes out numerous Indian forms.

Gratuities consisted of 18 cartons of cigarettes and one case of beer.

AUTHORITY: Mumbai Port Trust, Port House, 1st Floor, Shoorji Vallabhdas Marg, Ballard Estate, Mumbai-400 001, India. *Tel:* 2614321, 4145100. *Telex:* 011-81047. *Cables:* Portrust Mumbai. *FAX:* 022-2611011. *Contact:* Captain J.C. D'Souza, Harbour Master.

AGENT: G.A.C. Shipping (India) Pvt. Ltd., P.O.Box 11531, 211 Dalamal Tower, Mumbai 400021, India. Tel: (91-22) 2679980-6. Telex: 011-85988 GAC IN, 011-83835 MRTN IN. Fax: (91-22) 2672579. Cables: "Gacsteam", Mumbai-21.

MUNDRA: 22.54 N. 69.42 E.

LOCATION: In Gulf of Kutch near Navimal Lighthouse, about 2 miles inside Bocha Creek. Port is about 6 miles West of Mundra town. Salt exporting port open for deep sea and coastal traffic. Vessels calling Mundra anchor in open roadstead 2 miles from shore. Vessels of 8 ft. draft can berth alongside jetty. Highest tidal range 17 ft. Current parallel to coastline running about 3 knots.

AUTHORITY: Assistant Conservator.

AGENT: See "Cochin".

NAGAPATTINAM: 10.45 N. 79.50 E. (See Plan)

PORT LIMITS: All water front sea area and 50 m. from high water mark contained between the following 4 points:

1. Lat. 10° 49' 36" N., Long. 79° 51' 06" E.
2. Lat. 10° 49' 36" N., Long. 79° 57' 06" E.
3. Lat. 10° 44' 51" N., Long. 79° 57' 30" E.
4. Lat. 10° 44' 51" N., Long. 79° 51' 06" E.

DOCUMENTS: To be completed by Masters of vessels on arrival:

8 Crew Lists.
8 Passenger Lists.
3 Form of Import Manifests of Stores.
3 Lists of articles in slop chest.
3 Private Property Declaration of the Crew.
3 Manifests.
3 Bills of Lading.
Arrival Report in the proper form.
Deck Cargo Certificate.
Bottom Cargo Certificate.
Arms and Ammunition Certificate.
Drugs Certificate.
Gold or Silver Certificate.
Maritime Declaration of Health.

To be handed to Agents:

Ship's Register.
Load Line Certificate.
Safety Equipment Certificate.
Safety Construction Certificate.
Safety Radio Certificate.
Last Port Bill of Health.
Last Port Clearance.
Certificates of Deck Officers, Engineers and Radio Officer.

PILOTAGE: No Pilot Station, being open roadstead port. Vessels not piloted to anchorage.

ANCHORAGE: Vessels anchor according to draft and prevailing weather conditions. In fine weather, good anchorage in depths of 7.0 m. – 14.0 m. with lighthouse bearing 281° to 255°. Holding ground, sand and mud, good. Agents, in consultation with Port Authorities, signal Master on arrival of vessel, anchorage position for guidance.

MAX. SIZE: No restrictions. Vessels choose anchorage according to draft.

HEALTH: On arrival Master to signal local signal station, addressed Port Health Officer stating vessel arrived and no sick person on board. Agents then obtain Free Pratique from Port Health Authorities. In event any person having chicken-pox on board, advisable that Master informs Agents sufficiently in advance to enable them make necessary arrangements for Port Health Officer to board vessel on arrival and obtain Free Pratique after Port Health Officer is satisfied that isolation arrangement on board adequate.

RADIO: Madras Radio. Send ETA to local Agent 48 hours before arrival.

VHF: Port Radio Station on Channels 16, 12 and 14. Working hours 0600 hrs. to 1000 hrs. and 1500 hrs. to 1900 hrs. on all days, except holidays and Sundays.

TUGS: 1 motor launch of 66 h.p. belonging to the Port Department is available for towing lighters. Launches owned by private owners are also available for towing lighters.

BERTHING: Open roadstead port. No berths. A mobile crane of 4 tons capacity is available in the port for handling heavy cargoes.

STEVEDORES: Port usually handles fertiliser imported on Government of India account and rate of discharge per day about 750 to 1,200 tons. Advisable that ETA of vessel is passed to Agents at least 2 days in advance to enable them to advise receivers to arrange necessary gangs.

MEDICAL: No advance notice required unless sickness of serious nature when Medical Officer boards vessel on arrival. In case of sickness to officers or crew, Medical Officer boards vessel or if in condition to go ashore, necessary arrangements made to take sick crew to Doctor. District Headquarters Hospital with all medical facilities available. Special wards available for sick members of crew. Vaccination, inoculation against yellow fever, cholera, plague, etc., can be arranged.

There are also a number of private nursing homes available.

DENSITY: 1025.

FRESH WATER: Available in limited quantities and dependent upon port getting continuous supply from municipality. A water barge of 30 tons capacity is available.

FUEL: Diesel oil available in a limited quantity.

CONSULS: None.

REPAIRS: Minor repairs in engine room and on deck can be effected. Chipping and painting can also be arranged.

DRY DOCKS: None.

SURVEYORS:

1. Cargo inspectors not available.
2. All leading Classification Society Surveyors available from Madras.

GANGWAY/DECK WATCHMEN: In the interest of vessel, 2 gangway and deck watchmen daytime and at night to be employed to avoid pilferage.

OPENING/CLOSING HATCHES: Opening and closing of hatches on arrival of vessel before commencement of discharge and on completion carried out by stevedores. Time used for opening and closing of hatches not counted.

CUSTOMS ALLOWANCES: Tobacco, 1 carton per week per crew member. Wine and Spirit, Whisky or brandy 1 quart each member for a week. No restriction for beer as the issue is based on weather, etc.

REPATRIATION: Facilities available for effecting crew changes and arrangements can be made for repatriation.

AIRPORT: Nearest airport at Trichy, served by regular airlines.

TIME: GMT plus 5.5 hours.

HOLIDAYS: Observed as declared by Authorities. Vessels work on Charter Party and Government holidays but time not counted. No closed holidays but overtime charged for any work done on Government holidays and on Sundays.

POLICE/AMBULANCE/FIRE: Police 22100; Ambulance 22102; Fire 22101. The Police and Customs Departments maintain their own W/T stations which can be contacted or utilised at times of emergency.
EMERGENCY CO-ORDINATION CENTRE: The information should be passed on in case of a vessel in distress to the Maritime Operations Room/Sector Search and Rescue Co-ordination Centre as "Life-Saving Call" to Madras Radio for this area.

Call Sign: VWM
MADRAS
RADIO
Frequency: 500 kHz
2182 kHz
Time: Continuous.

SERVICES: Hatch cleaning after discharge of cargo can be carried out.
BANKS: American and European banks are not available at Nagapattinam town, but are available in Madras.
STORING: See "Prelims".

1. Ship's stores to be sent to vessels are loaded into lighters from port wharves, as Nagapattinam is an open roadstead port, having no berths for mooring vessels.
2. Stores can be taken from lighters both during loading and discharging.
3. Trucks can proceed only up to the wharves of the port. The approximate distance from wharves to the ship depends upon the place of anchoring of the vessel. It will be about 2 to 3 nautical miles.
4. Fork-lifts are not available.
5. Necessary shipping bills are to be filed with the Port and Customs Offices before taking in stores from the shore to the vessel.
6. Local riggers may be employed.

SHORE LEAVE: Officers and members of crew allowed to go ashore and necessary passes obtained by Agents.
IDENTIFICATION CARDS: Needed.
GARBAGE DISPOSAL: Not available.
WASTE OIL DISPOSAL: Not available.
SEAMAN'S CLUBS: None.
DELAYS: Usually no delay in anchoring vessels and generally all formalities including survey carried out on vessel's arrival. If vessel arrives between 0600 hrs. and 1400 hrs., she commences discharge same day.
GENERAL: No regular launch service between ship and shore. Agents hire out private launch and obtain permission from port office to ply launch between ship and shore, to facilitate officers and crew to go ashore and for Doctor, Agent and Port Health Officer. Port Authorities do not permit plying of launch after 1800 hrs. 3 trips arranged for launch to go to vessel and back from 0600 hrs. to 1800 hrs. every day weather permitting.
AUTHORITY: Port Officer and Harbour Master, Port Office, P.O. Box No. 6, Nagapattinam, PIN 611001, Tamil Nadu State, India. *Tel:* 22255 (office), 22363 (personal), 22285 (residence). *Cables:* Port Officer, Nagapattinam. *Contact:* Port Office and Harbour Master.
AGENT: See "Cochin".

NAVLAKHI: 22.57 N. 70.27 E.

DOCUMENTS:
Arrival:
Last Port Clearance.
Bill of Health/Maritime Declaration of Health.
Customs Arrival Report.
Port Arrival Report.
Agent's Arrival Report.
List of Same Bottom Cargo.
Crew List (6 copies).
Import General Manifest.
Light Dues Receipts (in case the last port of call being Indian port).
Stores List & Private Property List (8 copies each).
Misc. Declaration.
Departure:
Port Clearance (handed over by Customs).
Bill of Health.
Port Departure Report.
Agent's Departure Report.
Income Tax Clearance Certificate (in case of export cargo).

PILOTAGE: Not compulsory. If required an experienced local guide provided by Port Authorities. In such cases Pilot meets vessel at Tuna Buoy station about 19.5 miles from port.
ANCHORAGE: Open roadstead port. Vessels work in stream. 2 vessels can be brought to inner anchorage and work conveniently in good weather. In case a third vessel arrives, it has to anchor at Buoy No. 5 until one of the vessels sails from inner anchorage. During non-monsoon times vessels can be moored at Buoy (Navlakhi) No. 5. Chart of the approaches is No. 2017.
RESTRICTIONS: Night navigation not provided. Generally vessels' movements during daytime high water period. Vessels should arrive Tuna Buoy 3 hours before high water in daytime.
HEALTH: Port Health Officer available at Mahendrasinghji Hospital, Morbi.
RADIO: Radio messages intended for this port should be addressed either through Kandla or Mumbai Radio Stations.
VHF: To be installed in the near future.
TUGS: Four tugs available, 150 h.p., 370 h.p., 350 h.p., and 240 h.p.
CARGO HANDLING: Ships lie at anchor in the stream about 2.0 km. from shore and cargo is shipped/landed through lighters. There are 17 barges of 100 tons capacity each. There are 17 godowns of 17,000 sq. m. floor area to store the cargo passing through ports. There are four 3 tonnes capacity cranes two of 5 tonnes capacity, and one of 12.5 tonnes capacity.
STEVEDORES: At least 24 hours notice to arrange gangs. Rate of loading and discharging for grains and fertilisers about 1,600 tonnes a day if 1 ship working; in case 2 vessels working simultaneously, combined average of about 1,600 tons can be maintained in fair weather days.
MEDICAL: Small dispensary exists under control of Medical Officer. Qualified extensive medical facilities available at Morbi which is 44 km. away or Rajkot about 109 km. Health Officer comes from Morbi to attend vessels, if required.
DENSITY: 1025.
FRESH WATER: Supplied only in small quantities. 1 barge with carrying capacity of about 49 tons a trip. Due to very low pressure in pipelines, minimum 12 hours to fill barge.
FUEL: Not available. Can be arranged by Agents.
CONSULS: None.
REPAIRS: Workshop for repairs to port equipment and urgent repairs of minor nature can be carried out.
DRY DOCKS: Dry dock for repairs to port service units is under construction.
GANGWAY/DECK WATCHMEN: Necessary to appoint watchmen on board to avoid possible thefts.
OPENING/CLOSING HATCHES: Depends upon terms of working. Local stevedores generally attend to this operation but charge to vessel (Owners) in case these operations are vessel's account.
CERTIFICATES:
Load Line Certificate.
Safety Equipment Certificate.
Safety Radio Certificate.
Ship's Register.
Derat Certificate.

REPATRIATION: Crew being repatriated from this port would be sent to Jamnagar or Rajkot (after Customs examination) where facilities are available.
AIRPORT: Navlakhi not connected by air. In case of emergency, Jamnagar or Rajkot nearest airports.
TIME: GMT plus 5.5 hours.
HOLIDAYS: The port holidays are taken as office holidays and non-working days as Charter Party Holidays. Except for non-working days, overtime work will be carried out on payment of overtime.
POLICE/AMBULANCE/FIRE: Checkpost Police Station without telephone.
TELEPHONES: Few important offices are connected with telephones, and no telephone service can be provided on board vessel.
SHORE LEAVE: The crew members are allowed ashore on showing Identification Cards to Customs and Ports.
IDENTIFICATION CARDS: Customs examine and issue pass to land. But if crew go to suburbs (beyond Morbi which is 30 miles away), identity cards should be carried.
DEVELOPMENTS: A new lighter-wharf measuring 102 m. × 8 m. with three approaches in Sue-Side Creek is under construction so as to work lighters all round the clock.
AUTHORITY: Port Officer, Port Officer's Office, Navlakhi Port.
AGENT: See "Cochin".

NEENDAKARA: 08.56 N. 76.33 E.

SHIPMASTER'S REPORT: July 1985.

Neendakara is a seasonal port and operates only from mid-November to mid-April. About 5 to 6 deep sea vessels load per year. Only export cargo of mineral sands is loaded i.e. (Silliminite, Illuminite and Zircon). The shippers are Indian Rare Earths Limited, which is a Government of India undertaking.
PORT LIMITS: There is no defined port limit as such. For the purpose of Charter Party a vessel is considered as an "arrived ship" from the time of dropping anchor.
DOCUMENTS: See "Cochin".
PILOTAGE: Neendakara is an anchorage port hence no Pilots available.
ANCHORAGE: There is no defined anchorage. We anchored 2.5 miles due West of the breakwater in a depth of 15 m. Holding ground is good. Care should be taken to anchor the vessel in such a position so as to have at least 5 m. under the keel on expected maximum departure draft as sometimes heavy swell can be experienced. Agents, Customs and Port Officer usually board vessel during daylight hours for clearing vessel. Port Officer usually does the draft survey and also hold inspection prior to loading.
RESTRICTIONS: There are no restrictions on arrival/sailing at night, tide or draft.
MAX. SIZE: No limit.
HEALTH: Radio Pratique not possible. A doctor from local Government hospital is empowered to grant Pratique. The doctor does not come on board vessel. Completed Health Declaration and Vaccination List is taken by the Agents to obtain Pratique. Pratique is automatic if coming from another Indian port.
RADIO: It is best to send ETA messages via Mumbai Radio or Madras Radio and Agents kept well informed.

VHF: VHF is installed in the Port Office and watch is usually kept from 0800 hrs. to 2200 hrs. when a ship is loading at anchorage. Also one of 6 harbour tugs is equipped with a VHF set. Port Office keeps watch on Channel 16.

RADAR: No Port Radar.

TUGS: Port has 6 small tugs for towing barges during loading operation of deep sea vessels at anchorage. The tugs are old and some of them are under repair at any one time.

BERTHING: No berths available.

BULK CARGO FACILITIES: Cargo is loaded in bulk and/or bags. It is brought to the ship in bags by barges. The bags are brought on board and emptied into ship's holds. The bags are mostly torn and a lot of cargo is lost overboard or left behind in barges. On completion of loading vessel will usually receive about 6% to 8% less than the shore figures. Hence Master must ask for more cargo.

STEVEDORES: About 100 labourers boarded the vessel and stayed on board throughout the loading except from 2000 hrs. on Saturday to 0800 hrs. on Monday. No work on Sundays. Average rate of loading was about 800 – 1000 tonnes per day. First barge comes alongside the ship at about 0900 hrs. and last barge leaves shore at about 1700 hrs. Loading stops around 2200 hrs. after cargo from last barge has been loaded. Strict watch should be kept on number of bags per sling as the labour tends to overload the slings. Repeated warnings by Ship's Officers made no impact so it became necessary to switch off deck power for about half an hour and only then did they reduce the load per sling.

Vessel must arrive with maximum fresh water and maintain strict rationing during stay at anchorage. Usually overtime work is not possible but to finish the ship they may speed up the loading. While we were loading, there was possibility of strike from a certain date and hence need to complete loading before that date, more labour was placed on board and loading rate went up to about 1,300 tonnes to 1,400 tonnes per day.

MEDICAL: All cases of illness are referred to Benziger Hospital in Quilon. It is preferable to give advance notice to Agents. Dental facilities also available. Cholera inoculations can be arranged.

DENSITY: Salt water.

FRESH WATER: Advance notice to be given to Agents. It is expensive to take fresh water as it is supplied by tugs at the rate of 15 tonnes per trip. There is no water barge available. Approximate cost Rs.100 per tonne.

FUEL: Not available. Nearest port for bunkers is Cochin.

CONSULS: None available.

REPAIRS: No repairs possible.

DRY DOCKS: None.

SURVEYORS: Have to be called from Cochin.

GANGWAY/DECK WATCHMEN: Ship's crew must keep a constant vigil on deck. Keep all stores, accommodation entrances and cabins locked. Try to keep lifeboat gear and fire equipment under lock and key.

OPENING/CLOSING HATCHES: By ship's crew.

CUSTOMS ALLOWANCES: 1 bottle spirits and 200 cigarettes per crew member per week.

CARGO GEAR: Loading by ship's gear only. Ensure that a few gin fall wires and cargo blocks kept ready as same may require changing due to rough handling of cargo gear.

REPATRIATION: Possible. Advance notice should be given to Agents.

AIRPORT: Nearest airports are Trivandrum and Cochin from where domestic flights will connect to Mumbai/Madras for international flights.

TIME: Always GMT plus 5 hours 30 minutes.

HOLIDAYS: Same as "Cochin".

BANKS: Branches of most Indian Banks in Quilon.

STORING: Should be avoided as labour charge too much to transfer stores from truck into tug and then from tug to vessel at anchorage. Labour does not permit stores to be handled by ship's crew when they are working cargo even if one hook idle or even if vessel has special stores derrick. Thus, it is best to get stores alongside at night when labour has completed loading for the day.

No forklift truck available ashore, but truck can go up to about 75 ft. from the barge. At times the tug allocated for stores may not be able to come alongside jetty but may tie up alongside a barge in which case it is extremely difficult to handle heavy packages as there is no crane available and every item must be carried by hand. Even tug's crew and Port Office personnel expect "complementaries" from the vessel and Agents for allowing use of tug for stores. On shore stores are handled by labour only. No attempt should be made to employ cheap labour from outside by any other means as it will lead to stoppage of cargo loading both on vessel as well as ashore. Provisions are supplied to vessel by 0ship chandler from Quilon. He has his own launch and will bring provisions onboard after midnight.

SHORE LEAVE: No restriction on shore leave.

IDENTIFICATION CARDS: Not issued. However, every crew member landing ashore must sign a register in the Port Office, giving his particulars and time landed. On returning from shore he must also sign and put down time of return.

DELAYS: No delays. Usually only one deep sea vessel is loaded per month.

AGENT: See "Cochin".

NEW MANGALORE: 12.57 N. 74.48 E. (See Plan)

LOCATION: New Mangalore port is situated at 9 km. North of the existing minor port of Mangalore.

PORT LIMITS: *Westward Points:*

(a)	Latitude: 12° 53.6' N.	Longitude: 74° 44.4' E.
(b)	Latitude: 13° 00.2' N.	Longitude: 73° 43.1' E.

DOCUMENTS:

Quarantine:

Declaration of Health.
Derat Certificate.
Vaccination Certificate.

Customs:

General Particulars of the vessel.
Declaration of Deck Cargo and same bottom cargo.
*Crew List – (8 copies).
Arrival Report – (2 copies).
Departure Report (2 copies).
General Declaration in Form No. 1 – (3 copies).
Maritime Declaration of Health – (5 copies).
*Cargo Declaration in Form No. H – i.e. Cargo for Discharge – (3 copies).
*Vessel's Stores List in Form No. III – (5 copies).
List of Private Property (Property in possession of Master, Officers and crew of vessel) in Form No. IV – (5 copies).

*These items should be prepared in advance before arrival of the vessel. The other documents can be filled in after arrival.

Port Requirements:

General Particulars of the vessel.
Declaration of Deck Cargo and same bottom cargo.
Arrival and Departure Report on Port's Form – (in duplicate).
Declaration to comply with the Regulations of the Port for granting Certificate.

Immigration:

Crew List – (2 copies).
Passports for scrutinisation.

APPROACHES: The port has been created by carving out of the mainland a 200-acre lagoon 15.1 m. deep. The lagoon is connected to the sea by an approach channel, 5,400 m. long, 245 m. wide, 15.4 m. deep and protected by 2 breakwaters each 770 m. long, constructed one on either side of the channel and extends to the 5 m. contour.

NAVIGATION AIDS: The outer approach channel is marked by a Fairway Buoy and 4 sets of channel marker buoys which are lighted, and in addition there is a set of front and rear transit towers with lights to mark the center-line of the channel.

Obstruction: A visible wreck at Lat. 12° 54.5' N., Long. 74° 46.1' E., about 300 m. S.W. of Buoy No. 1, marked by a wreck buoy. All vessels approaching channel should avoid approach from South and keep clear.

PILOTAGE: Compulsory. ETA must be informed at least 48 hours ahead of arrival. In the message of ETA the following information must be included:

(a) Name.
(b) Nationality.
(c) Call sign of the vessel.
(d) LOA, Draft fore and aft, g.r.t. and n.r.t. of the vessel.

Telegraphic Address of the Pilot Station: New Mangalore Port Control. Tel: 407341/407428.

Pilot Boarding Station:
Latitude: 12° 54' 55" N. Longitude: 74° 45' 24" E.
VHF Channel to be used: Channel 16.
Channel to be used to contact Pilot Boat: Channel 12.
Description of Pilot Boat: Red hull and white superstructure.

Vessels should arrive at the pilot boarding point (0.5 miles North of Fairway Buoy) and await instructions from Pilot, who will, depending on weather conditions, give instructions regarding pilot boarding point.

Berthing and Unberthing:

(a) Berths arranged by the Committee of the Port Trust in advance.
(b) Three tugs available for berthing and unberthing.
(c) Linesmen and boatmen are arranged through Port Trust.
(d) ETD requires minimum 2 hours advance notice to Port Control/ Deputy Conservator/Harbour Master's Office.

ANCHORAGE: Vessels are advised to anchor at least 1 mile North of the Fairway Buoy, distance depending on draft of the vessel. Entry into the channel is made with 3 transit towers with lights.

RESTRICTIONS: No restrictions. Night pilotage available.

MAX. SIZE: See "Berthing" and "Tankers".

HEALTH: The following radio advice is required:

(a) Name of the vessel and ETA with date.
(b) Request for Radio Pratique.
(c) International Code (ZT).
(d) International Code (ZU).
(e) List of Ports of Call with dates in last 30 days.
(f) Have/Have no monkeys on board.
(g) Have/Have no persons embarked at Aden/Djibouti.
(h) Condition of health of all on board with details of any sickness and whether all vaccinated.

RADIO: Mangalore Radio: Call sign VWL on 500 kHz., 438 kHz. Tel: 411388.

VHF: Communication facilities with Port Control on Channel 16. For Port Operations Channel 12 can be used. On arrival of the vessel general information will be given.

RADAR: No Port Radar Service.

TUGS: 2×32 ton bollard pull V.S.P. tugs and 1×22.5 ton bollard pull V.S.P. tugs available for berthing and unberthing of ships. Normally the tugs meet the vessel that is entering at the base line, which is at the entrance to the lagoon.

BERTHING: The port provides 7 alongside berths for handling general cargo, bulk cargo, break-bulk cargo, liquid cargo and containers, etc. Berth No. 8 is reserved for handling iron ore (mechanised) and handles 60,000 d.w.t. vessels. Berth No. 9 is exclusively for handling POL products, edible oil, Naphtha, LPG, etc.

(a) 1 straight wharf on the Eastern side of the dock arm which is 594 m. in length and consists of 3 berths having maximum permissible drafts of 10.1 m., 10.1 m. and 9.45 m., respective (South to North) of length 198 m. each.

(b) 1 straight wharf on the Western side of the dock arm which is 594 m. in length and consists of 3 berths having maximum permissible drafts of 9.1 m., 7.6 m. and 9.15 m. respectively (South to North) of length 198 m. each.
(c) 1 shallow draft berth of max. draft 6.5 m. and 125 m. in length.
(d) 1 iron ore berth of length 245 m. and max. draft 12.5 m. Effective loader travelling distance 170 m.
(e) Tanker Berth: See "Tankers".

CRANES: The following electric level luffing wharf cranes are positioned at the Straight Wharf: 1×6 ton, 3×3 ton and 4×10 ton.

One iron ore loader situated at the ore berth for loading iron ore, cement, etc., directly to vessels through chutes.

No cranes available in other berths.

Ship has to use her own gear in those berths.

Three tyre-mounted mobile cranes available for shore operations with capacity up to 30 tons. Similar cranes of lesser (5 ton) capacity available from private parties.

BULK CARGO FACILITIES: The Wharf Berths (No. 2, 3, 4, 5, 6 and 7) are reserved for bulk cargo handling. Normally grains, fertilisers, cement, coal, etc., are handled at this berth.

SPECIALISED CARGO HANDLING FACILITIES: This port is not specially equipped for handling containers. Containers are handled by ship's gear and with the limited mobile equipment of the port. Agents are allowed to use private handling equipment inside port.

Liquid chemicals/oils/molasses/LPG can be handled at oil jetty.

Liquid ammonia can be handled at Berth No. 4.

STEVEDORES: Advise before 0400 hrs. for commencing 0600 hrs. shift, and 1200 hrs. for commencing 1400 hrs. shift.

Main commodities loaded:

Coffee – average load rate per gang per shift – 120 tonnes.

Granite stones – average load rate per gang per shift 400 tonnes.

Fruit products and cashew kernels – average load rate per gang per shift – 3,500/4,000 cartons.

Reefer Cargo – average load rate per gang per shift – 3,500/4,000 cases.

Heavy Machinery – average load rate per gang per shift – 120 tonnes.

Iron ore concentrate and pellets through mechanised ship loader – 5,000/6,000 tonnes/hr.

Main Commodities Discharged:

Fertilisers – average discharge rate per gang per shift – 200 tonnes.

Timber – Average per gang per shift – 200 tonnes.

Tanker Oil – various, according to commodity.

MEDICAL: No advance notice except in cases of serious illness to be included in arrival cable. Ample hospital facilities for treatment are available.

TANKERS: The oil jetty is located in the S.W. portion of the lagoon very near to the approach channel. The maximum permissible draft available is 10.1 m., which affords berthing facilities for 30,000 d.w.t. (length 600 ft.) product carriers, molasses and edible oil, chemical and LPG tankers.

A second oil jetty has been constructed South of the first oil jetty by cutting out a dock arm, and it can accommodate crude and product oil tankers up to 12.5 m. maximum permissible draft and 85,000 d.w.t.

DENSITY: 1025. During S.W. Monsoon density varies, may fall to 1010.

FRESH WATER: Available by direct delivery from shore to vessel.

FUEL: Oil delivered by Indian Oil Corporation (a Government of India undertaking) by tank trucks in all berths. Major grades bunker fuel/diesel/marine lubricants can be obtained from them. Pipeline supply of fuel oil at iron ore berth and oil berths.

FIRE PRECAUTIONS: Only normal precautions against fire at berths.

CONSULS: No Consuls at the port.

REPAIRS: Most deck and engine repairs are carried out.

DRY DOCKS: No dry docking facilities at the port.

SURVEYORS:
(a) Qualified Cargo Surveying Agencies are available.
(b) Surveyors available for Lloyd's Register, American Bureau, B.V., etc.

GANGWAY/DECK WATCHMEN: Services are available and compulsory.

OPENING/CLOSING HATCHES: Stevedores or ship's crew, whichever to ship's advantage.

CUSTOMS ALLOWANCES: 50 grams of tobacco or 200 cigarettes and 950 ml. wine/spirits per person per week.

CARGO GEAR: Cargo can be handled either by ship's gear or shore cranes. Shore cranes are available up to 10 tonnes capacity.

REPATRIATION: Crew changes and repatriation can be carried out.

AIRPORT: 15 km. from the harbour and 21 km. away from Mangalore City. Air services available to Mumbai and Bangalore to connect with international flights.

TIME: Local time is 5 hours 30 minutes ahead of GMT.

HOLIDAYS: 26th January – Republic Day; 15th August – Independence Day; 2nd October – Gandhi Jayanthi.

No work on these days.

POLICE/AMBULANCE/FIRE: Tel: 100/102/101 respectively.

EMERGENCY CO-ORDINATION CENTRE: Relay information to Port Signal Station on VHF Channels 16/12.

TELEPHONES: Facilities available for local/international calls on all berths.

SERVICES: Services available for tank cleaning, compass adjusting, radio/radar repairs, etc., with prior arrangements.

BANKS: Branches of all nationalised banks.

STORING: See "Prelims".
(1) By truck.
(2) Barges are normally not used for storing.
(3) Trucks can proceed alongside berths.
(4) Forklifts also used on the jetty while handling palletised or heavy stores.
(5) Customs documentation and regulations are in force.
(6) Private labour is to be engaged for loading stores.

SHORE LEAVE: No restrictions – crew members are allowed to go ashore.

IDENTIFICATION CARDS: Shore passes are issued.

GARBAGE DISPOSAL: Available.

WASTE OIL DISPOSAL: Collection facility is available. Ships with their own gear and flexible hoses can discharge up to 500 tonnes of slop or ballast water into a tank constructed near oil jetty.

SEAMAN'S CLUBS: None.

CURRENCY: Indian Rupee (Rs.). U.S.$1.00 = Rs. 34.50 (8.96).

REGULATIONS: Vessel to comply with Major Port Trust Act and New Mangalore Port Trust Rules.

DELAYS: Priority berthing for 24 hours port stay are generally allowable for export and import general cargo ships. Otherwise berths are offered according to priority of arrival for long-duration ships.

DEVELOPMENTS: The size of ships for loading iron ore are to be increased. There is a possibility of handling ships transporting thermal coal for a 2×210 megawatt power generation station to be established in the neighbouring area.

SHIPMASTER'S REPORT: Updated 1987.

Documents: Same as other major Indian ports.

Pilotage: Pilot boards in vicinity of Fairway Buoy. Pilot boat has pilot flag atop its mast.

Restrictions: Regular night pilotage is provided.

Anchorage: North of Fairway Buoy as South of buoy being used as dumping ground for dredgers.

VHF: Channel 16 for calling and listening. Pilots operate on 12 and 16.

Radar: None.

Hospital: Hospital facilities good.

Hatches: Opening/closing by ship's crew.

Drydocks: None.

AUTHORITY: New Mangalore Port Trust, Panambur, Mangalore 575010, India. *Tel:* 407300, 407341 PABX. *Telex:* 0832-220 Ponm In. *Cables:* Portrust. *FAX:* 0824-408390. *Contact:* The Chairman.

AGENT: See "Cochin".

OKHA: 22.28 N. 69.05 E.

DOCUMENTS: 5 copies each of Import Manifest, Crew List. Passenger List, Ship's Stores Manifest, Crew Property List.

PILOTAGE: Compulsory. Pilot station Lat. 22° 30.5′ N., Long. 69° 04.6′ E.; 1.35 miles N.W. of Samiani Light Tower.

ANCHORAGE: Roadstead anchorage near Pilot Station.

MAX. SIZE: 525 ft. LOA during N.E. monsoon and 540 ft. LOA during S.W. monsoon. Max. draft variable, 22 ft. – 27 ft. depending on daily tide.

HEALTH: The Master should cable the Port Health Officer (Quarantine Okha) in International Health Code, requesting Free Pratique. If Radio Pratique is not effected, then Masters should present Maritime Declaration to the Customs Boarding Officer who is authorised to grant Free Pratique. If the vessel is arriving from yellow-fever area, the mosquito control team is arranged from Kandla, where the cable address of the Port Health Officer is "Sangrodh Kandla".

RADIO: Post and Telegraph Department Wireless station call sign VWO can be contacted from 0800 to 2000 hrs. I.S.T. for communication to and from Local Agents.

TUGS: Port-owned tugs join vessel while entering port channel and/or vacating it at time of berthing and/or unberthing.

CRANES: Vessels use own derricks for heavy lifts. There are 2 electric cranes at the Dry cargo berth each 1.5 – 2.0 tons capacity.

BERTHING: Only daylight hours. Vessels should be ready in all respects to move berth 1.5 hours before high water at Pilot Station.

Sayaji Pier – East side 27 ft. draft; West side 20 ft. draft.

Dry cargo berth – 25 ft. draft.

BRIDGES: None.

STEVEDORES: Firm ETA including requirements order avoid delay.

(a) Exports: Mainly cement, bauxite and chemicals and general merchandise, rate 100/125 tons per shift per hook.

(b) Imports: Mineral oils average rate about 300 to 500 t.p.h. according to ship's pumping capacity; general cargo same rate as export.

MEDICAL: Port Health Officer always available. Well-equipped hospital at Mithapur under Tata Chemicals at a distance of about 7 miles from port. Medical aid available throughout day and night.

TANKERS: All dry cargo vessels regulations apply for tankers, particularly size, etc. 1 berth, draft 27 ft. No slop facilities.

DENSITY: 1025.

FRESH WATER: Limited. Port supplying water by barge and shore pipeline. In normal cases 25 tons water supplied per day. In cases of emergency 40 tons water can be supplied per day.

FUEL: Available but arrangement should be made through Indian Oil Corporation; head offices at Mumbai.

FIRE PRECAUTIONS: Port Department maintains a small fire station.

CONSULS: None.

REPAIRS: Only minor repairs.

DRY DOCKS: None.

GANGWAY/DECK WATCHMEN: Vessel to provide own gangway watchmen. Shore-watchman available for employment on shift basis (8 hour shifts).

OPENING/CLOSING HATCHES: To be attended to by ship's crew, if not contracted with stevedores which may cost extra.

CERTIFICATES: Ship's Register, Load Line Certificate, Safety Equipment, Safety Gear, Radio.

CUSTOMS ALLOWANCES: At Customs Preventive Squad's discretion.

CARGO GEAR: Normal gear supplied by stevedores for hire.

REPATRIATION: Necessary formalities to be completed at District Headquarters situated at Jamnagar, a distance of about 110 miles: such as Police, Health (whereas Customs formality can be completed locally).

AIRPORT: Nearest airport Jamnagar about 110 miles connected with Okha by rail and road. Only local service to Mumbai daily operated.
TIME: GMT plus 5.5 hours. (I.S.T.)
HOLIDAYS: As declared by Port Authorities, cargo work can be arranged by paying usual scheduled overtime but labour's observed holidays (about 8 days in a year) completely closed.
TELEPHONES: Only for tankers by respective oil installation.
SERVICE: Tank cleaning by manual labour.
SHIP SUPPLY SERVICE: Off-shore ship supply service operated by J.M. Baxi and Co., Mumbai.
SHORE LEAVE: Crew allowed ashore after vessel cleared by immigration officer who boards vessel on arrival.
IDENTIFICATION CARDS: Necessary.
DELAYS: Delay only encountered if berth or moorings are occupied.
GENERAL: Port governed by Gujarat State and all rules and regulations laid down by them in addition to Central Government rules applicable to this port. Port connected with hinterland by rail, motor transport, 300 miles by sea from Mumbai, 2 tides in 24 hours, mean high water spring rise about 11.5 ft. and mean low water neap rise 9.5 ft.; current in neap tide is 2 to 3.5 knots. Wind force/direction during April/September S.W. 3/5 and in October/March N.W. to N.E. from 2/4.
AUTHORITY: Port Officer – Okha Port and Superintendent of Customs, Okha (Ahmedabad Collectorate).

AGENT: See "Cochin".

PARADIP: 20.14 N. 86.42 E. (See Plan)

PORT LIMITS: When vessel arrives in the Roads, 1 mile S.E. of Fairway Buoy.
DOCUMENTS:
8 copies Crew List.
3 copies Ship's Stores List (Form No. III).
Crew Private Property List (Form. IV) including Foreign Currency Declaration.
3 copies Currency Declaration.
3 copies Passenger List, if any.
3 copies Cargo Manifest.
3 copies Survey Bottom Cargo Manifest, if any.
3 copies Deck Cargo Certificate.
3 copies Hazardous Cargo Certificate.
3 copies "No Opium" Certificate.
3 copies Arrival Pets Abroad.
3 copies Declaration for "No Monkeys on Board".
3 copies Any other Declaration.

The Master of the vessel should deposit the following documents with the Port Authorities through their Agents.
Ship Registration.
International Load Line Certificate.
Safety Radio Certificate.
Light Dues Certificate.
Safety Equipment Certificate.
Last Port Clearance.
International Health Certificate.
Derat Certificate.
Last 3 Ports Certificate.
Cavities Certificate.
Ballast Certificate.
Vaccination/Inoculation Certificate.
Arms and Ammunitions Certificate.

The Agents will return the documents to the Master before sailing of the vessel along with the Port Clearance.
PILOTAGE: Notice of ETA must be intimated to the Harbour Master by Master or Ship's Agent not less than 24 hours before arrival of vessel in the Roads. Telegraphic Address: Harbourmaster, Portrust, Paradip. Telex: 0674-211. Channel 16 VHF is continuously watched. The pilot boat is white and flies Pilot's flag on the mast whenever Pilot is on board. Pilot boards the vessel S.E. of the Fairway Buoy. Vessels required to hoist call letters for identification. A vessel requiring a Pilot for sailing out is required to give minimum 2 hours' notice to Port Control on VHF Channel 16 and hoist "G" Flag one hour in advance.
ANCHORAGE: Vessels can anchor, depending on draft, 3 miles S.E. of Southern Breakwater in the recommended anchorage.
RESTRICTIONS: Pilotage is carried out from 0500 hrs. to 2100 hrs. 24 hours pilotage is under consideration.
MAX. SIZE: Maximum permitted LOA 260 m. and max. draft 12.0 m. Vessels loading iron ore are permitted to sail with 12.8 m. draft in fair weather period. LASH vessels are also entertained as a special case.
HEALTH: Send quarantine message to "Quarantine Paradipport" 24 hours before arrival for Radio Pratique. Pilot gives Free Pratique on boarding vessel subject to no sick person on board. In case of suspected disease or fever on board, Port Medical Officer visits ship at anchorage/berth and cases of contagious disease are isolated and sent to nursing home.
RADIO/VHF: Continuous VHF watch is maintained on Channel 16 at Port Signal Station. Working period 24 hours. Working Channels are 12, 9 and 6.

Vessels are requested to establish contact with the Port Signal Station when within VHF range (approx. 40 to 60 miles) and before entering, moving in or sailing from the port.

When within VHF range, ships are requested to give the following information:
(1) Name of ship.
(2) Last port of call.
(3) ETA.
(4) Vessels gross tonnage, LOA, breadth, draft, d.w.t. and speed.
(5) Number of cases of dangerous and contagious diseases on board.
(6) Type and quantity of cargo.
(7) Name of Agents and requirements.

TUGS: Two tugs of 18 tons bollard pull and 2 tugs of 30 tons bollard pull are available. Tugs join vessel inside breakwater. Ship's lines only used.
BERTHING: Vessels must have maximum ballast for berthing and unberthing.

Iron Ore Berth:	Length from dolphin to dolphin 320 m. Capable of berthing ships of 260 m. LOA with 12.8 m. draft, beam limited to 40 m. for Ore Handling Plant.
General Cargo Berth:	Total quay length 686.65 m. Depths: East Quay No. 1, 2 and 3 – 11.5 m. No. 3 – North: 12.5 m. Shore cranes available for loading and unloading.
South Quay:	Total quay length 265 m. Designed depth 11.5 m. No shore cranes available. Vessel to work with her own gear. Berth also used as a tanker discharge berth.
Mooring Berth:	Length 200 m. Designed depth 11.5 m.
Fertiliser Berth:	(Captive berth for Paradip Phosphates Limited) Quay length 252 m. Designed depth 12.5 m.
Multi-Purpose Berth:	Length 290 m. Designed depth 12.5 m.
West Quay:	Length 347 m. (Additional 50 m. under construction). Designed depth 12.5 m.

CRANES:

Type of Crane	*No.*	*Capacity*
Wharf Cranes	4	13 ton
Mobile Cranes	5	12.5 ton
Mobile Cranes	1	31.75 ton
Cargo Handling Equipment:		
Forklift Trucks	14	3 ton
Front End Loaders	4	2.3 cu.m. to 4 cu.m.
Tractor Trailer	1	5 ton
Shovels	2	3.5 cu.yd.
Bulldozer	1	180 h.p.
Track Shovel	1	1.3 cu.m.

BULK HANDLING FACILITIES: 1 iron ore berth with mechanical loading plants of rated capacity 2,500 t.p.h. Average loading rate 20,000 - 25,000 tons per day.
SPECIALISED CARGO HANDLING FACILITIES: Semi-mechanised handling facilities for coal, chrome and other bulk cargoes are available.

At the Fertiliser Berth facilities exist for fully mechanised unloading of bulk rock phosphate, phospheric acid and ammonia.
Warehouses and Transit Sheds: 4 warehouses are available, having capacity of storage of 22,515 tonnes and Transit Sheds having a space for storage of 48,450 tonnes. There are also a number of private warehouses belonging to Central Warehousing Corporation with a total storage capacity of 20,000 tonnes. At present, 220,300 sq.m. of open stacking area is available inside the Port area for storage of more than 3 million tonnes of different cargoes. These stockyards are connected with rail and road.
Port Railway: Port has its own railway system.
STEVEDORES: Stevedores required for loading/unloading of cargoes at General Cargo Berth and Mooring Berth. A number of stevedoring companies are available in the Port. The Port Trust also undertakes stevedoring. Average loading rates achieved for different cargoes as follows:

Cargo	*Tonnes per day*
Chrome-ore	3,000
Coal	5,000
Iron & Steel	3,000
Foodgrains	1,000
Fertilisers	1,000
Other General Cargo	800
Phospheric Acid	15,000
Ammonia (Liquid)	8,000

MEDICAL: A 50 bed port hospital is available at the port. The crew can also be treated at the Government hospitals at Cuttack and Bhubaneswar which are 98/120 km. respectively from Paradip.
TANKERS: Tankers are being handled regularly at the South Quay and the Iron Ore Berth. Transhipment operation is carried out at Iron Ore Berth and at South Quay, both transhipment and shore discharging are being undertaken. At present only H.S.D. and S.K.O. are handled.

Also see "Shipmaster's Report".
DENSITY: Varies from 1018 to 1024 with average of 1021. Density as low as 1009 is also reported during Winter months.
FRESH WATER: Water supply is available alongside berths and through water barges at the moorings. Water supply is possible in the Roads in fine weather.
FUEL: HSD and furnace oil can only be procured from Cuttack on duty paid oils only. Arrangements will have to be made well in advance. Oil is transported by small road tankers of capacity 11 tons to 12 tons. Port provides berthing facilities for taking bunkers.
CONSULS: Nearest consuls located at Calcutta.
FIRE PRECAUTIONS: There is a fire station situated inside the Port area equipped with one water tender, 4,500 litres capacity and 2 trailer pumps (capacity: 1,000 and 600 litres). One foam tender is being procured during 1988. All tugs are equipped with external fire fighting equipment which is available for use in the event of fire.
REPAIRS: Minor repairs can be undertaken.
DRY DOCKS: A 500-ton slipway available for repairs to port craft. No dry dock available.
CERTIFICATES:
Ship's Register.
Load Line Certificate.
Safety Radio Certificate.
Safety Equipment Certificate.
Last Port of Clearance.
Derat Certificate.

GANGWAY/DECK WATCHMEN: Gangway watch is required.
OPENING/CLOSING HATCHES: Undertaken by crew only.
CUSTOMS ALLOWANCES: Tobacco: 200 cigarettes per head per week. Wine and/or Spirit: 1 bottle of 24 ounces per head per week.
CARGO GEAR: Valid cargo gear certificate required. Dock Safety Inspector inspects the cargo gear.
REPATRIATION: Repatriation of foreign personnel is permitted.
AIRPORT: Nearest airport at Bhubaneswar 120 km. Direct flights available to Delhi, Calcutta, Mumbai and Hyderabad.
TIME: Local time GMT plus 5.5 hours.
HOLIDAYS: Charter Party holidays. Normally work carried out on all days.
POLICE/AMBULANCE/FIRE: Police 22027; Ambulance 22041; Fire Station 22385. Also contact Port Signal Station on VHF Channel 16.
TELEPHONE: No facilities for telephones on board. Telephone booths operated privately are available at some berths. Crew can make international calls on payment.
SERVICES: Available.
SHORE LEAVE: Immigration Authority issue shore passes to all foreign nationals and with shore passes crew allowed ashore.
IDENTIFICATION CARDS: Authorities issue landing pass.
GARBAGE DISPOSAL: Collection service not available, can be arranged by agent.
WASTE OIL DISPOSAL: A 100 ton barge is available for the reception of oily waste. The port authorities are to be contacted through the agent.
SEAMAN'S CLUBS: None.
CURRENCY: Indian Rupee (Rs.). U.S.$1.00 = Rs. 35.50 (12.10.96).
DELAYS: Generally no delays. Vessels are allotted berths on "first come first served" basis.
DEVELOPMENTS: Dredging of two mechanised coal berths, North of existing iron ore berth is in progress. Berths are expected to be operational by 1998.

An oil berth for vessels 100,000 d.w.t. is in the design stage.

SHIPMASTER'S REPORT: February 1996.

I.O.C. Paradip has one HSD tank (48,000 cu.m.) already in use, one SKO (48,000 cu.m.) and one MS tank (30,000 cu.m.) (To be commissioned by March 1996). HSD and SKO tanks are fed by a common 24 in. line, and M.S. tank is fed by a 16 in. line from South Quay (multi-purpose jetty).

HSD and SKO tanks are to be used for storage of HSD. MS tank to be used for storage of SKO, as there is no permission for handling high volatile products as yet. I.O.C. Terminal has facility to load tankers at South Quay (SKO and MS).

The above white products farm is 6 km. – 8 km. from South Quay. I.O.C. requests for maximum pressure 4 kg./sq.cm. or 1,500 cu.m./hr. (whichever achieved first). The weakest links in the system are the flexible hoses, which are of indigenous make and not suitably tested. I.O.C. requests to set up Chicksan is pending with the port.

Officially declared draft at this berth is 11.6 m., but ships up to 11.9 m. have berthed.

AUTHORITY: The Chairman, Paradip Port Trust, P.O. Paradip Port, District Jagatsinghpur, (Orissa), India 754 142. *Tel:* 06722-22046, 22127. *Telex:* 0674-211. *Cables:* Portrust, Paradip. *FAX:* 06722-22256. *Contact:* Deputy Conservator (Tel: 06722-22025 (Office), 06722-22194 (Residence)).

AGENT: See "Cochin".

PONDICHERRY: 11.56 N. 79.50 E.

DOCUMENTS:
Ship's Register.
Load Line Certificate.
Safety Equipment Certificate.
Safety Radio Certificate.
Last Port Bill of Health.
Last Port Clearance.
Stores List with Private Property Declaration in Triplicate.
Crew List (8 copies).
Light Dues Receipt.
Manifest (Import or Export).
Bill of Lading.
PILOTAGE: Not necessary as open roadstead anchorage.
ANCHORAGES: Proper anchorage in line with New Pier. 2 chimneys in line (276°) will provide good transit in day time and at night green/red light in transit with red pier light can be taken.
MAX. SIZE: Anchorage is 7 fathoms within 1 mile from New Pier.
HEALTH: Free Pratique obtained on arrival and Master expected to address message to Port Health Officer, advising that all are well on board. Free Pratique automatic for vessels calling from any Indian ports.
RADIO: Cables routed through Madras Radio (call sign VWM).
TUGS: Tug kept ready at New Pier for towing barges.
BERTHING: Berthing facilities for vessels up to 500 d.w.t.
STEVEDORES: 48 hours notice prior to arrival. Rate of discharge of bagged cargo 800 to 1,000 tons per day.
MEDICAL: No advance notice necessary. General Hospital and Jipmer Hospital available.
TANKERS: Transfer operations are carried out at anchorage 1.5 miles – 2.5 miles offshore.
DENSITY: 1025.
FRESH WATER: Available. Rate 50-60 tonnes per day.
FUEL: Not available.
CONSULS: Only French Consulate General. Tel. 4058.
REPAIRS: Deck and Engine repairs not attended. Special arrangements can be made from Madras. Minor repairs carried out privately.
DRY DOCKS: None.
GANGWAY/DECK WATCHMEN: Services not compulsory, but recommended to avoid pilferage. 3 watchmen day/night.
OPENING/CLOSING HATCHES: Normally carried out by crew.
CUSTOMS ALLOWANCES: Tobacco, 200 cigarettes permitted for each Crew member to be held out of bond. Wine and/or Spirit, 1 open quart bottle per Crew member permitted to be held out of bond.
REPATRIATION: Facilities exist for effecting crew changes and arranging necessary repatriation.
AIRPORT: Nearest airport is Meenambakam Airport, Madras, (160 km.).
TIME: GMT plus 5.5 hours.
HOLIDAYS: Observed as declared by Authorities but cargo work arranged on all holidays on payment of overtime, except on Republic Day, Gandhi's Birthday, May Day and Independence Day.
POLICE/AMBULANCE/FIRE: Police 100; Fire 101; Ambulance arranged through hospital doctor on duty, Tel: 6008.
TELEPHONES: No facilities to place on board.
SERVICES: Ship chandling and supply of stores available.
SHORE LEAVE: Crew members permitted ashore but have to remain within town limit.
IDENTIFICATION CARDS: Not needed if furnished with Crew List.
DELAYS: Delays occur only under unavoidable circumstances such as Surf Declaration, Cyclone, etc. Vessels arriving at night, commence discharge operations next morning.
GENERAL: For purposes of crew going ashore, launches arranged between 0600 hrs. and 1800 hrs. weather permitting, hired from private parties. Laundry facilities, supply of fresh vegetables and provisions arranged.
AUTHORITY: Government of Pondicherry, Port Department, Pondicherry. *Contact:* Captain N. Selvaraje, Port Director.
AGENT: See "Cochin".

PORBANDAR: 21.38 N. 69.36 E.

DOCUMENTS:
Crew Lists (6 copies).
Passenger Lists (6 copies).
Customs Documents to be prepared by Agents and signed by Master (4 copies).
Arms and Ammunition Certificate 4 copies duly signed by Master.
Health Documents: All yellow fever and cholera books should be valid on arrival as well as on departure, if they are not valid on departure Port Health Officer should visit ship and give required injection to persons for completing health books before obtaining Bill of Health.
Port Clearance: Port Clearance of last port to be submitted to Boarding Officer of Customs.
Private Property List (6 copies duly signed by Master).
Stores List (4 copies duly prepared by ship's officer).
Currency Declaration (4 copies).
Bills of Lading: Bills of Lading for export cargo generally to be prepared and signed by Agents.
PILOTAGE: Compulsory for inward/outward movements for all vessels and for shifting to and from berths.
ANCHORAGE: Anchor in stream about 1.5 miles off shore. 6 fathoms at low water, with good holding ground.

Outer anchorage is with Rajah's Old Palace, about 1.5 miles South-eastward of lighthouse, bearing 085° and lighthouse bearing 026°, 4.5 fathoms to 5 fathoms sand and rock (or further out as required).
MAX. SIZE: Any size vessel at anchorage. Alongside berth – Max. LOA of vessels up to 177 m. Max. permissible draft 9.00 m. No beam restrictions.

1 mooring buoy – max. draft 7.0 m.

For roadstead, no restrictions on length or breadth.
HEALTH: If arriving from yellow fever area within 30 days a grant of Free Pratique is necessary. Mosquito Party to be deputed from Kandla, which can only be arranged by prior intimation, failing which vessel would have to proceed to either Kandla or Mumbai for Free Pratique.
RADIO: Porbandar call sign VWY, working frequency 462 kHz and watch keeping on 500 kHz.
TUGS: Will join ships for assisting berthing/unberthing.
BERTHING: 1 alongside berth and 1 mooring buoy.
STEVEDORES: 24 hours notice required for Agents to arrange gangs.

Average rate of working – 380 to 400 tons per gang per day for general cargo.

For vessels loading bulk ores 3,000 to 4,000 tons per day with ship's gear.

Export Commodities: G.N. Extraction in bags, bulk ground nut HPS, cotton bales, frozen fish, lime and lime stone, lime powder, abrasive powder, bauxite, white clay, fruits, onion, etc.
MEDICAL: Government hospital available. There are also private hospitals.
TANKERS: Presently no facility for discharging oil.
FRESH WATER: Vessels alongside can be supplied by pipeline and water tanker. Vessels at anchorage supplied by water barge.
FUEL: Fuel can be supplied by road tankers at berth through Indian Oil Corporation at Okha and Rajkot.
CONSULS: None.
REPAIRS/DRY DOCKS: A dry dock of 150 ft.×55 ft. for repairs to port crafts. Also port workshop for repairs to shore and marine equipment.
GANGWAY/DECK WATCHMEN: Not necessary.
OPENING/CLOSING HATCHES: Charter Party terms.

CERTIFICATES:
(*a*) Load Line Certificate.
(*b*) Safety Equipment Certificate.
(*c*) Safety Radio Certificate, all certificates must be valid before departure of vessel.

CUSTOMS ALLOWANCES: Tobacco: 200 cigarettes permitted for use of each crew member from bonded stores of ship.

Wine and/or Spirit: Customs Officer remains on board from arrival till departure and issues required quantity of wine and spirit from bonded stores. Quota is issued every week.

CARGO GEAR: Tested cargo gear should be used for loading and discharging operations.

AIRPORT: 3 miles from town, daily flight to Mumbai.

TIME: GMT plus 5.5 hours.

HOLIDAYS: Observed as declared by Government of Gujarat and can be worked on payment of overtime charges, but work on non-working days like Indian Republic Day, Independence Day, Holi (2nd Day), Ramnavami, Muhurram, Gokul Ashthami, Dessera, Diwali (New Year) and Ramzan-Id not possible.

POLICE/AMBULANCE/FIRE: Police Station 114; Ambulance/Fire Brigade 244.

SHORE LEAVE: Police, port and Customs permission required before landing.

IDENTIFICATION CARDS: Necessary.

GENERAL: The port is an "all weather port".

AUTHORITY: Office of the Chief Executive Officer and Vice Chairman, Gujarat Maritime Board, New Mental Hospital Building, Block No. 0/20, Ahmedabad - 380 016. *Tel:* 66610, 45116, 66270. *Cables:* Princport. *Contact:* The Chief Executive Officer and Vice Chairman, Gujarat Maritime Board, Ahmedabad-16.

The Port Officer, Gujarat Maritime Board, Porbandar – 360 575, Gujarut State, India.

AGENT: See "Cochin".

PORT REDI: 15.44 N. 73.39 E.

DOCUMENTS:

Arrival:
- Maritime Declaration of Health Form (in duplicate).
- Port Clearance from last port of call.
- Ship's Stores List (in triplicate).
- Crew Private Property List (in triplicate), containing full details of every article such as: cameras, radios/transistors, record players, records, watches, all types of currency, other valuable articles, souvenirs, spirits, etc.
- Crew Lists (6 copies).
- Ship's Currency List (in triplicate).
- Arms and Ammunition Declaration.
- Passenger List – if any.
- Through Cargo Manifests.

Departure:
- Medical Inspection or Examination Certificate (Bill of Health).
- Port Clearance.
- Consumed stores list in duplicate (a list of stores consumed during the stay of the vessel at port).

PILOTAGE: Compulsory. Port Officer acts as Pilot. Cable via Mumbai Radio to Port Officer, Redi, Cable Address: Port Officer Vengurla, ETA of vessel 48 hours prior arrival (cable should reach Port Officer before 24 hours prior arrival). Anchor off Rairi Point – West of Rairi Point – about to 1.5 miles where Port Officer boards ship to pilot to proper loading anchorage. Pilotage restricted to daylight hours only. Shifting without Pilot not permitted.

On arrival keep gangway or complete pilot ladder with manropes and step-down, ready for Pilot.

No fixed anchorage marked at Pilot station; however, vessel should not proceed beyond 1 mile from Rairi Point (for safety of vessel). Keep engine ready till Pilot boards. If vessel arrives during night hours be ready for shifting next morning.

ANCHORAGE: Anchorage Rairi Point or Redi Point (Lat. 15° 44' N., Long. 73° 39' E.) is a flat rocky projection, Western extremity of which is 50 ft. (15.2 m.) high. Foul ground and shoal water extend about 0.75 miles S.S.W. and about 0.5 miles Westward of this point; at Southern side of foul area is Rairi (Redi) Rock which is 36 ft. (11 m.) high and steep. Vessel should not proceed into depths of less than 6 fathoms or within 1 mile Westward in vicinity of this point without Pilot.

Loading anchorages are on both sides of Rairi Point (known as Jetty One anchorage and Jetty Two anchorage).

MAX. SIZE: No restrictions on size. This is a minor port exporting only iron ore, and vessels up to 34 ft. draft load at safe anchorage.

HEALTH: On arrival, Customs Authorities board and grant Free Pratique to ships arriving under normal conditions and on completion of Maritime Declaration of Health Form. Medical Officer, Candy Dispensary, Vengurla, acts as Port Health Officer (Quarantine Officer) for this port, and boards vessel at his convenience before sailing to conduct Medical Examination and grants Medical Examination Certificate (Bill of Health) on day of sailing. Certificate to be collected from Vengurla Office. No facilities for Radio Pratique.

If coming from yellow fever or jigger infected regions within 30 days Port Health Officer grants Pratique after boarding vessel with Mosquito Party deputed from Mumbai at Owners' cost. Mosquito Party can only be arranged on advance information failing which, vessel would have to proceed either Mumbai and/or Mormugao for Free Pratique. Master and/or Owners to give Agents prior notice to avoid delay in arranging Pratique. Vessels transiting through above infected areas for bunkers or water only do not require Mosquito Party for obtaining Pratique.

Advisable inform Agents prior to arrival of last port of call, crew, and nationality, and if arriving from yellow fever and/or jigger infected regions, whether called only for bunkers or water, or purpose of call and vessel's health condition.

RADIO: Mumbai Radio.

BERTHING: No berths. Open roadstead port.

LOADING: Port only exporting iron ore in bulk and suppliers. The Minerals & Metals Trading Corporation of India Ltd., make own arrangements to load cargo on FOB terms. Rate between 3,000 to 4,500 tons per day per vessel if 3 vessels are working and 4,000 to 6,000 tons per day if 1 vessel is working. This rate is being achieved due to increased fleet and improvement of shore loading facilities.

MEDICAL: Preliminary medical aid available at Port Redi/Shiroda. Well-equipped hospitals situated at Savantwadi and Vengurla about 25 and 45 miles away respectively by road. Cholera inoculations done through Port Health Officer and if required this information may be passed on to Agents for arranging with Port Health Officer.

DENSITY: Average 1025.

FRESH WATER/FUEL: Not available.

CONSULS: None.

REPAIRS/DRY DOCKS: None.

GANGWAY/DECK WATCHMAN: Not necessary.

OPENING/CLOSING HATCHES: As per Charter Party. However, opening done by stevedores to save their time and commence loading earliest during free time.

CERTIFICATES: All certificates, particularly Cargo Gear Certificate to be in order and valid.

CUSTOMS ALLOWANCES: 200 cigarettes per week of 7 day per crew. Wine and/or Spirit, 1 bottle each per crew of spirit or beer as required.

REPATRIATION: Facilities for crew changes. 4 days advance notice required with full particulars of crew.

AiRPORT: Belgaum and/or Vascodagama 90 miles distant.

TIME: Indian Standard Time GMT plus 5.5 hours.

HOLIDAYS: Cargo work can be arranged on overtime on all holidays except 26th January, Republic Day; 2nd October, Mahatma Gandhi Birthday; 15th August, Independence Day. On these holidays work not permitted even on overtime.

SHORE LEAVE: Crew of Chinese and Pakistani nationality not allowed land on shore. Other crew permitted land only after obtaining requisite permission from Police Authorities from Ratnagiri, distant about 160 miles and thereafter from Customs Authorities. On arrival, Crew List and guarantee duly signed by Master, are furnished to Police Authorities at port and telegram sent to Ratnagiri requesting landing permission from District Superintendent of Police.

Obtaining landing permission takes 3 days; and therefore, Masters requested not to allow crew members to land on shore unless written landing permission sent on board. Crew members not allowed beyond Port Redi limits, without permission obtained from Police Authorities, Ratnagiri.

IDENTIFICATION CARDS: Necessary.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Indian Rupee (Rs.).

REGULATIONS: Port Officer conducts Final Draft Survey on completion of loading in consultation with Master. Master's refusal to allow shifting creates complications. Master should not shift vessel without Pilot on board or permission from Port Officer; this does not apply in case of emergency.

DELAYS: Only 3 vessels (i.e. 1 at each jetty) can work at a time on a first come first served basis. Overlapping vessels have to wait turn. Waiting time about 4/5 days.

GENERAL: Post and Telegraph Office about 2.5 miles from jetty.

Vessels on arrival and at departure thoroughly examined by Customs, and Masters therefore requested to ensure that crew private property list is correctly presented to Customs Authorities and its accuracy maintained throughout stay of vessel.

Ship's wireless station not to be used for despatching cables during the vessel's stay.

Discharge of bilge water and/or dirty waste oil or cargo prohibited.

Fresh vegetables, etc., supplied in limited quantity from 90 miles distance.

AUTHORITY: Port Officer Vengurla, District Sindhudurg, Maharashtra State, India. *Tel:* Vengurla 177.

AGENT: See "Cochin".

SIKKA: 22.34 N. 69.42 E.

SHIPMASTER'S REPORT: June 1982.

DOCUMENTS: 8 Crew Lists, 6 each Personal Effects and Stores Lists, 4 Vaccination Lists, 5 Currency Lists, (Customs do like all paperwo properly prepared).

On departure 3 Crew Lists if any changes and 3 Personal Effects Lists for those who remained on board.

For personnel leaving, Customs require Currency Form (Foreig Exchange Act 1947) in duplicate (Indian Form) and International Crew Baggage Declaration (Local Form) in duplicate.

Clearance from Last Port, Register, Load Line, Derat, Safcon, Safequip and Safradio all sighted by Agent but not taken from vessel.

All personal belongings to be recorded with makes, models and numbers.

PILOTAGE: Pilot boards vessel at anchor from tug boat using ship's derrick and tug's basket if weather is rough.

ANCHORAGE: Plenty of room for anchoring with good holding ground. Contact Mother Tanker for anchor position. We, berthing on flood tide, were requested to anchor 2 miles – 069° True from Mother Tanker.

Locally the storage vessel is referred to as the Mother Tanker (MT) and own ship (OS).

RESTRICTIONS: Apparently none, plenty of water. Larger vessels (this vessel 149,000 d.w.t.) are loaded from daughter tankers which go alongside OS.

HEALTH: Free Pratique is granted by Customs Officer.

RADIO: To local Agent at Jamnagar via Bedi Radio VUK5. The MT (which was m.t. "Koyali") keeps an R/T watch. Would suggest contacting the MT for any advance information as nobody else would give any.

VHF: Call MT on Channel 16. While anchored/approaching Channel 11 is used after initial contact. While double banked Channel 13 is used between MT and OS. Cargo operations are conducted on UHF using MT walkie-talkies. Contact Shipindia Channel 13, who pass messages to and from Agent.

TUGS: One tug available but not used. Tug used by Pilot and runs lines from OS to MT.

BERTHING: Position off Sikka for cargo operations approximately Lat. 22° 34' N., Long. 69° 42' E. Apparently 140,000 d.w.t tankers are the ideal size. They berth alongside MT and can take up to a full cargo without the MT having to top up from a daughter tanker. Operations off Sikka are temporary and from 1st May to end of monsoon. Consult with Pilot about berthing and obtain all details. Vessels berth alongside when tide is running in daylight hours. Usual Yokohama fenders used, 4 for vessels less than 750 ft. LOA and 6 for vessels over 750 ft. LOA. Fenders are made fast on MT. First 2 floatable headlines from OS to MT at least 220 m. long and may require longer. They do not like using '1st ropes ashore' off reels. In our opinion '1st ropes ashore' would be quite adequate and fast enough. Then 2 floatable stern lines from OS to MT. Final moorings were from OS to MT 3 and 2 each end with no breastlines. From MT to OS 2 headlines leading aft, 2 stern lines leading forward, forward 2 springs leading from forward to aft and 2 springs aft leading from aft to forward.

TANKERS: Loading by 2×10 in. ID hoses of ASA 150 standard, 23 m. long.Their discharge rate is quoted as 12,000 t.p.h and OS receives a letter to this effect with a request for OS loading rate. However, hoses restrict rate to about 2,700 t.p.h. overall. Hoses provided by MT, reducers supplied by OS. Only ropes or wires with rope tails used for mooring. Entire operation is guided by the ICS, OCIMF, ISGOTT. Tankers being loaded by daughter tankers should anchor with port anchor and daughter tanker berths starboard side. OS port side derrick and manifolds used alongside MT. Ballast is pumped overside. Ballast draft on arrival to be such that distance from manifold to water line does not exceed 15 m. Ballast trim not to exceed 3 per cent of LOA at any time. Distance of manifold to water line must never exceed 15 m. EDP is used. Samples are taken to Mumbai for analysis before B/L figures are given together with cargo quality details. API, loading temperature and pourpoint are given prior to loading. Our API was 39.48 at 60°F and loading temperature will normally be around the same as sea temperature of about 86°F (as during 1st week in June). Cargo was Indian High crude, very thin and apparently quite clean. A Loading Master boards to assist with berthing but does not live aboard. Accommodation and victuals required for Pilot, 2 Cargo Surveyors and 1 Indian Oil Representative. MT normally has 9.5 shackles of cable out. MT does COW but not usual with OS of 140,000 d.w.t. tanker.

WATCHMEN: Not necessary. The only boats allowed alongside were official boats and no other small boats were observed in the vicinity. There is no gangway between MT and OS.

CUSTOMS ALLOWANCES: 200 cigarettes. The State of Gujarat is 'dry' and no alcohol allowed ashore, except foreigners being repatriated may take one bottle.

REPATRIATION: Possible. Airport at Jamnagar. The boat journey ashore is about 2 hours but boat can only get to or leave jetty about 2 hours either side of high water. Foreigners require a visa otherwise they may travel in India but are not allowed to stay at hotels. This applies to departing and arriving personnel. Indian crew are not allowed Rupee notes of greater denomination than 20 Rupees.

AIRPORT: About 1.5 hours drive by car.

SHORE LEAVE: Possible, but due to length of journey and tidal restrictions it is not recommended.

GENERAL: In June 1982 "VQ" Buoy Kachchh was missing, shore authorities were advised. A night approach is better than a daytime approach as the buoys are not easy to sight against the discoloured water (on flood tide) although the buoys and Racons show very well on radar.

DEVELOPMENTS: After the end of the SW Monsoon (1982) work will resume on the oil and gas lines to Mumbai from the offshore oil-field. An SPM will probably be positioned off Mumbai and this will be used during the SW Monsoon when vessels cannot load at the oil-field.

OPERATOR: Shipping Corporation of India Limited.

SHIPMASTER'S REPORT: July 1994.

Berth Location: Lat. 22° 27.4' N., Long. 69° 47.8' E. (approx.).

A vessel is considered to have arrived when she is in the vicinity of the pilot boarding ground (Lat. 22° 30' N., Long. 89° 46' E.). As vessels are berthed/unberthed only during daylight hours, ships arriving during hours of darkness will have to anchor. Good holding ground is available about 1 mile North of the pilot boarding ground in 17.0 m. of water. During the months of May to October, crude oil lighterage operations are conducted about 2 miles North of this anchorage area.

The discharge berth at Sikka is owned by Gujrat State Fertiliser Corporation (G.S.F.C.) and managed by the Gujrat Maritime Board. The berth presently has facility for the discharge of ammonia and phosphoric acid, though work is in progress to extend this for LPG imports. Pilot for movements to and from the berth is requisitioned from other neighbouring ports.

There is no radio station at Sikka. However, Bedi Radio (of a neighbouring port) keeps a watch on VHF Channel 16 during daytime hours. Alternatively, the Agent calls the ship on VHF to exchange any information.

Berthing generally takes place just before slack water. Ships berth stemming the tide. Ships with a maximum draft of 8.0 m. are accepted alongside. This ship has berthed prior to low water slack with an aft draft of 7.2 m. The least depth in the approach of the channel as shown on the chart is 8.0 m. However, whilst approaching berth with the ship's head 140° and about 3 cables and also 1 cable from the berth, the ship smelt bottom resulting in sluggish handling and loss of steering with a telltale muddying of water.

Two very low powered tugs are presently available for assisting in berthing. These are also used to take lines ashore. It is best to keep only a shallow bight when the tug is taking lines ashore, so that they are quick to take weight on the bollard.

The berth lies at the end of a causeway with 4 dolphins, two on either side of the berth. The berth is fendered by pneumatic (Yokohama) fenders. The top edge of the berth and dolphins are fendered by tractor/truck tyres. The lay of the berth is about 168°. Ships drawing 8.0 m. and up to 180 m. LOA have been accommodated at the berth. Due to the construction of the berth, the accommodation ladder (gangway) cannot be used and the ship's wharf ladder must be kept ready.

Ammonia is discharged through a hardarm. The ship provides a 300 ASA 8 in. reducer to which the hardarm is connected by shore staff. Phosphoric acid is also discharged at the berth using a 10 in. flexible hose.

The shore line to the tank is about 5 km. long. We discharged at a low rate of about 100 tonnes/hr. for about 6 hours before increasing rate to a maximum of 650 tonnes/hr.

About 4 cables South of the berth lies a disused island berth which was once connected to shore by a ropeway. The supporting pillars of the ropeway still stand. The jetty was in use for the export of cement from the factory located inshore. Cement is presently loaded into ships at the anchorage working with barges.

This vessel picked up fresh provisions at Sikka which are of reasonable price and quality. It is understood that fresh water can be supplied by barges and bunkers can be arranged by trucks. However, adequate notice is required.

Sikka is a small town serving 2 major factories and a thermal power plant located there. Local population consists mostly of fisherfolk. It is connected by a good road to Jamnagar, a mid-sized city about 30 km. away, where all Government offices and Agents are located, as also are an airport and a railroad station which connect Jamnagar to the rest of the country. Mumbai has the closest international airport. International telephone calls can be made from Sikka/Jamnagar. Transportation has to be arranged by the Agent, as no unauthorised vehicle is allowed to approach the berth beyond the security check-point, which itself is about 4 km. away.

Strict prohibiton is in force ashore and an infringement could lead to embarrassment and delays.

The earlier Shipmaster's Report of 1982 in the Guide refers to the required documentation and is still valid. Currency regulations for Indian crew has been amended (R.B.I. Notification No. FERA 153/93 dated 12.7.93), and currency up to Rs. 1,000 may be carried by them in denominations not greater than Rs. 50.

AGENT: See "Cochin".

TUTICORIN: 08.45 N. 78.13 E.

PORT LIMITS: *On the North:* A line drawn due East from the boundary pillar erected to the North at Arasadi along the parallel of Lat. 08° 50' N., to a position in Lat. 08° 50' N., Long. 78° 22' E.

On the East: A line joining a position in Lat. 08° 50' N., Long. 78° 22' E. to a position in Lat. 08° 41' 40" N., Long. 78° 20' 20" E.

On the South: A line due West from a position in Lat. 08° 41' 40" N., Long. 78° 20' 20" E. to where it meets the point 45.72 m. from the HW mark on the shore.

DOCUMENTS: Required on arrival:

4 Manifests.
2 Bills of Lading.
5 Crew Lists.
5 Passenger Lists.
4 Crew Personal Property Declaration.
4 Crew Currency Declaration.
4 Import Manifest of Stores List.
2 Health Report Form.

All statutory certificates in respect of vessels in Marine, Traffic, Customs and Immigration.

PILOTAGE: Compulsory within the pilotage zone. At present pilotage is restricted from 0600 hrs. to 1800 hrs. There is no night pilotage. To avoid a delay in obtaining a Pilot, the Owner, Master or Agent of a ship bound for Tuticorin must report ETA via their Agents at least 72 hours in advance, and again 24 hours in advance of arrival. The ETA must be confirmed or amended not less that 6 hours prior to arrival. Time can be either in GMT or IST. The vessels must contact Port Signal Station on VHF Channels 16/12. In message of ETA, the following information must be included:

1. Name/call sign of the vessel.
2. Nationality.
3. Length, draft and g.r.t.
4. Last port and cargo.
5. Port of origin/destination of cargo.
6. Last Port of call/next port of call.

CERTIFICATES:
(*a*) Load Line Certificate.
(*b*) Safety Equipment Certificate.
(*c*) Safety Radio Certificate, all certificates must be valid before departure of vessel

CUSTOMS ALLOWANCES: Tobacco: 200 cigarettes permitted for use of each crew member from bonded stores of ship.

Wine and/or Spirit: Customs Officer remains on board from arrival till departure and issues required quantity of wine and spirit from bonded stores. Quota is issued every week.

CARGO GEAR: Tested cargo gear should be used for loading and discharging operations.

AIRPORT: 3 miles from town, daily flight to Mumbai.

TIME: GMT plus 5.5 hours.

HOLIDAYS: Observed as declared by Government of Gujarat and can be worked on payment of overtime charges, but work on non-working days like Indian Republic Day, Independence Day, Holi (2nd Day), Ramnavami, Muhurram, Gokul Ashthami, Dessera, Diwali (New Year) and Ramzan-Id not possible.

POLICE/AMBULANCE/FIRE: Police Station 114; Ambulance/Fire Brigade 244.

SHORE LEAVE: Police, port and Customs permission required before landing.

IDENTIFICATION CARDS: Necessary.

GENERAL: The port is an "all weather port".

AUTHORITY: Office of the Chief Executive Officer and Vice Chairman, Gujarat Maritime Board, New Mental Hospital Building, Block No. 0/20, Ahmedabad - 380 016. *Tel:* 66610, 45116, 66270. *Cables:* Princport. *Contact:* The Chief Executive Officer and Vice Chairman, Gujarat Maritime Board, Ahmedabad-16.

The Port Officer, Gujarat Maritime Board, Porbandar – 360 575, Gujarut State, India.

AGENT: See "Cochin".

PORT REDI: 15.44 N. 73.39 E.

DOCUMENTS:

Arrival:
- Maritime Declaration of Health Form (in duplicate).
- Port Clearance from last port of call.
- Ship's Stores List (in triplicate).
- Crew Private Property List (in triplicate), containing full details of every article such as: cameras, radios/transistors, record players, records, watches, all types of currency, other valuable articles, souvenirs, spirits, etc.
- Crew Lists (6 copies).
- Ship's Currency List (in triplicate).
- Arms and Ammunition Declaration.
- Passenger List – if any.
- Through Cargo Manifests.

Departure:
- Medical Inspection or Examination Certificate (Bill of Health).
- Port Clearance.
- Consumed stores list in duplicate (a list of stores consumed during the stay of the vessel at port).

PILOTAGE: Compulsory. Port Officer acts as Pilot. Cable via Mumbai Radio to Port Officer, Redi, Cable Address: Port Officer Vengurla, ETA of vessel 48 hours prior arrival (cable should reach Port Officer before 24 hours prior arrival). Anchor off Rairi Point – West of Rairi Point – about 1 to 1.5 miles where Port Officer boards ship to pilot to proper loading anchorage. Pilotage restricted to daylight hours only. Shifting without Pilot not permitted.

On arrival keep gangway or complete pilot ladder with manropes and step-down, ready for Pilot.

No fixed anchorage marked at Pilot station; however, vessel should not proceed beyond 1 mile from Rairi Point (for safety of vessel). Keep engine ready till Pilot boards. If vessel arrives during night hours be ready for shifting next morning.

ANCHORAGE: Anchorage Rairi Point or Redi Point (Lat. 15° 44' N., Long. 73° 39' E.) is a flat rocky projection, Western extremity of which is 50 ft. (15.2 m.) high. Foul ground and shoal water extend about 0.75 miles S.S.W. and about 0.5 miles Westward of this point; at Southern side of foul area is Rairi (Redi) Rock which is 36 ft. (11 m.) high and steep. Vessel should not proceed into depths of less than 6 fathoms or within 1 mile Westward in vicinity of this point without Pilot.

Loading anchorages are on both sides of Rairi Point (known as Jetty One anchorage and Jetty Two anchorage).

MAX. SIZE: No restrictions on size. This is a minor port exporting only iron ore, and vessels up to 34 ft. draft load at safe anchorage.

HEALTH: On arrival, Customs Authorities board and grant Free Pratique to ships arriving under normal conditions and on completion of Maritime Declaration of Health Form. Medical Officer, Candy Dispensary, Vengurla, acts as Port Health Officer (Quarantine Officer) for this port, and boards vessel at his convenience before sailing to conduct Medical Examination and grants Medical Examination Certificate (Bill of Health) on day of sailing. Certificate to be collected from Vengurla Office. No facilities for Radio Pratique.

If coming from yellow fever or jigger infected regions within 30 days Port Health Officer grants Pratique after boarding vessel with Mosquito Party deputed from Mumbai at Owners' cost. Mosquito Party can only be arranged on advance information failing which, vessel would have to proceed either Mumbai and/or Mormugao for Free Pratique. Master and/ or Owners to give Agents prior notice to avoid delay in arranging Pratique. Vessels transiting through above infected areas for bunkers or water only do not require Mosquito Party for obtaining Pratique.

Advisable inform Agents prior to arrival of last port of call, crew, and nationality, and if arriving from yellow fever and/or jigger infected regions, whether called only for bunkers or water, or purpose of call and vessel's health condition.

RADIO: Mumbai Radio.

BERTHING: No berths. Open roadstead port.

LOADING: Port only exporting iron ore in bulk and suppliers. The Minerals & Metals Trading Corporation of India Ltd., make own arrangements to load cargo on FOB terms. Rate between 3,000 to 4,500 tons per day per vessel if 3 vessels are working and 4,000 to 6,000 tons per day if 1 vessel is working. This rate is being achieved due to increased fleet and improvement of shore loading facilities.

MEDICAL: Preliminary medical aid available at Port Redi/Shiroda. Well-equipped hospitals situated at Savantwadi and Vengurla about 25 and 45 miles away respectively by road. Cholera inoculations done through Port Health Officer and if required this information may be passed on to Agents for arranging with Port Health Officer.

DENSITY: Average 1025.

FRESH WATER/FUEL: Not available.

CONSULS: None.

REPAIRS/DRY DOCKS: None.

GANGWAY/DECK WATCHMAN: Not necessary.

OPENING/CLOSING HATCHES: As per Charter Party. However, opening done by stevedores to save their time and commence loading earliest during free time.

CERTIFICATES: All certificates, particularly Cargo Gear Certificate to be in order and valid.

CUSTOMS ALLOWANCES: 200 cigarettes per week of 7 day per crew. Wine and/or Spirit, 1 bottle each per crew of spirit or beer as required.

REPATRIATION: Facilities for crew changes. 4 days advance notice required with full particulars of crew.

AIRPORT: Belgaum and/or Vascodagama 90 miles distant.

TIME: Indian Standard Time GMT plus 5.5 hours.

HOLIDAYS: Cargo work can be arranged on overtime on all holidays except 26th January, Republic Day; 2nd October, Mahatma Gandhi Birthday; 15th August, Independence Day. On these holidays work not permitted even on overtime.

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Obtaining landing permission takes 3 days; and therefore, Masters requested not to allow crew members to land on shore unless written landing permission sent on board. Crew members not allowed beyond Port Redi limits, without permission obtained from Police Authorities, Ratnagiri.

IDENTIFICATION CARDS: Necessary.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Indian Rupee (Rs.).

REGULATIONS: Port Officer conducts Final Draft Survey on completion of loading in consultation with Master. Master's refusal to allow shifting creates complications. Master should not shift vessel without Pilot on board or permission from Port Officer; this does not apply in case of emergency.

DELAYS: Only 3 vessels (i.e. 1 at each jetty) can work at a time on a first come first served basis. Overlapping vessels have to wait turn. Waiting time about 4/5 days.

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Vessels on arrival and at departure thoroughly examined by Customs, and Masters therefore requested to ensure that crew private property list is correctly presented to Customs Authorities and its accuracy maintained throughout stay of vessel.

Ship's wireless station not to be used for despatching cables during the vessel's stay.

Discharge of bilge water and/or dirty waste oil or cargo prohibited.

Fresh vegetables, etc., supplied in limited quantity from 90 miles distance.

AUTHORITY: Port Officer Vengurla, District Sindhudurg, Maharashtra State, India. *Tel:* Vengurla 177.

AGENT: See "Cochin".

SIKKA: 22.34 N. 69.42 E.

SHIPMASTER'S REPORT: June 1982.

DOCUMENTS: 8 Crew Lists, 6 each Personal Effects and Stores Lists 4 Vaccination Lists, 5 Currency Lists, (Customs do like all paperwork properly prepared).

On departure 3 Crew Lists if any changes and 3 Personal Effects Lists for those who remained on board.

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PILOTAGE: Pilot boards vessel at anchor from tug boat using ship's derrick and tug's basket if weather is rough.

ANCHORAGE: Plenty of room for anchoring with good holding ground. Contact Mother Tanker for anchor position. We, berthing on flood tide, were requested to anchor 2 miles – 069° True from Mother Tanker.

Locally the storage vessel is referred to as the Mother Tanker (MT) and own ship (OS).

RESTRICTIONS: Apparently none, plenty of water. Larger vessels (this vessel 149,000 d.w.t.) are loaded from daughter tankers which go alongside OS.

HEALTH: Free Pratique is granted by Customs Officer.

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TUGS: One tug available but not used. Tug used by Pilot and runs lines from OS to MT.

BERTHING: Position off Sikka for cargo operations approximately Lat. 22° 34' N., Long. 69° 42' E. Apparently 140,000 d.w.t tankers are the ideal size. They berth alongside MT and can take up to a full cargo without the MT having to top up from a daughter tanker. Operations off Sikka are temporary and from 1st May to end of monsoon. Consult with Pilot about berthing and obtain all details. Vessels berth alongside when tide is running in daylight hours. Usual Yokohama fenders used, 4 for vessels less than 750 ft. LOA and 6 for vessels over 750 ft. LOA. Fenders are made fast on MT. First 2 floatable headlines from OS to MT at least 220 m. long and may require longer. They do not like using '1st ropes ashore' off reels. In our opinion '1st ropes ashore' would be quite adequate and fast enough. Then 2 floatable stern lines from OS to MT. Final moorings were from OS to MT 3 and 2 each end with no breastlines. From MT to OS 2 headlines leading aft, 2 stern lines leading forward, forward 2 springs leading from forward to aft and 2 springs aft leading from aft to forward.

TANKERS: Loading by 2×10 in. ID hoses of ASA 150 standard, 23 m. long.Their discharge rate is quoted as 12,000 t.p.h and OS receives a letter to this effect with a request for OS loading rate. However, hoses restrict rate to about 2,700 t.p.h. overall. Hoses provided by MT, reducers supplied by OS. Only ropes or wires with rope tails used for mooring. Entire operation is guided by the ICS, OCIMF, ISGOTT. Tankers being loaded by daughter tankers should anchor with port anchor and daughter tanker berths starboard side. OS port side derrick and manifolds used alongside MT. Ballast is pumped overside. Ballast draft on arrival to be such that distance from manifold to water line does not exceed 15 m. Ballast trim not to exceed 3 per cent of LOA at any time. Distance of manifold to water line must never exceed 15 m. EDP is used. Samples are taken to Mumbai for analysis before B/L figures are given together with cargo quality details. API, loading temperature and pourpoint are given prior to loading. Our API was 39.48 at 60°F and loading temperature will normally be around the same as sea temperature of about 86°F (as during 1st week in June). Cargo was Indian High crude, very thin and apparently quite clean. A Loading Master boards to assist with berthing but does not live aboard. Accommodation and victuals required for Pilot, 2 Cargo Surveyors and 1 Indian Oil Representative. MT normally has 9.5 shackles of cable out. MT does COW but not usual with OS of 140,000 d.w.t. tanker.

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CUSTOMS ALLOWANCES: 200 cigarettes. The State of Gujarat is 'dry' and no alcohol allowed ashore, except foreigners being repatriated may take one bottle.

REPATRIATION: Possible. Airport at Jamnagar. The boat journey ashore is about 2 hours but boat can only get to or leave jetty about 2 hours either side of high water. Foreigners require a visa otherwise they may travel in India but are not allowed to stay at hotels. This applies to departing and arriving personnel. Indian crew are not allowed Rupee notes of greater denomination than 20 Rupees.

AIRPORT: About 1.5 hours drive by car.

SHORE LEAVE: Possible, but due to length of journey and tidal restrictions it is not recommended.

GENERAL: In June 1982 "VQ" Buoy Kachchh was missing, shore authorities were advised. A night approach is better than a daytime approach as the buoys are not easy to sight against the discoloured water (on flood tide) although the buoys and Racons show very well on radar.

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OPERATOR: Shipping Corporation of India Limited.

SHIPMASTER'S REPORT: July 1994.

Berth Location: Lat. 22° 27.4' N., Long. 69° 47.8' E. (approx.).

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The berth lies at the end of a causeway with 4 dolphins, two on either side of the berth. The berth is fendered by pneumatic (Yokohama) fenders. The top edge of the berth and dolphins are fendered by tractor/truck tyres. The lay of the berth is about 168°. Ships drawing 8.0 m. and up to 180 m. LOA have been accommodated at the berth. Due to the construction of the berth, the accommodation ladder (gangway) cannot be used and the ship's wharf ladder must be kept ready.

Ammonia is discharged through a hardarm. The ship provides a 300 ASA 8 in. reducer to which the hardarm is connected by shore staff. Phosphoric acid is also discharged at the berth using a 10 in. flexible hose.

The shore line to the tank is about 5 km. long. We discharged at a low rate of about 100 tonnes/hr. for about 6 hours before increasing rate to a maximum of 650 tonnes/hr.

About 4 cables South of the berth lies a disused island berth which was once connected to shore by a ropeway. The supporting pillars of the ropeway still stand. The jetty was in use for the export of cement from the factory located inshore. Cement is presently loaded into ships at the anchorage working with barges.

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Sikka is a small town serving 2 major factories and a thermal power plant located there. Local population consists mostly of fisherfolk. It is connected by a good road to Jamnagar, a mid-sized city about 30 km. away, where all Government offices and Agents are located, as also are an airport and a railroad station which connect Jamnagar to the rest of the country. Mumbai has the closest international airport. International telephone calls can be made from Sikka/Jamnagar. Transportation has to be arranged by the Agent, as no unauthorised vehicle is allowed to approach the berth beyond the security check-point, which itself is about 4 km. away.

Strict prohibiton is in force ashore and an infringement could lead to embarrassment and delays.

The earlier Shipmaster's Report of 1982 in the Guide refers to the required documentation and is still valid. Currency regulations for Indian crew has been amended (R.B.I. Notification No. FERA 153/93 dated 12.7.93), and currency up to Rs. 1,000 may be carried by them in denominations not greater than Rs. 50.

AGENT: See "Cochin".

TUTICORIN: 08.45 N. 78.13 E.

PORT LIMITS: *On the North:* A line drawn due East from the boundary pillar erected to the North at Arasadi along the parallel of Lat. 08° 50' N., to a position in Lat. 08° 50' N., Long. 78° 22' E.

On the East: A line joining a position in Lat. 08° 50' N., Long. 78° 22' E. to a position in Lat. 08° 41' 40" N., Long. 78° 20' 20" E.

On the South: A line due West from a position in Lat. 08° 41' 40" N., Long. 78° 20' 20" E. to where it meets the point 45.72 m. from the HW mark on the shore.

DOCUMENTS: Required on arrival:

4 Manifests.
2 Bills of Lading.
5 Crew Lists.
5 Passenger Lists.
4 Crew Personal Property Declaration.
4 Crew Currency Declaration.
4 Import Manifest of Stores List.
2 Health Report Form.

All statutory certificates in respect of vessels in Marine, Traffic, Customs and Immigration.

PILOTAGE: Compulsory within the pilotage zone. At present pilotage is restricted from 0600 hrs. to 1800 hrs. There is no night pilotage. To avoid a delay in obtaining a Pilot, the Owner, Master or Agent of a ship bound for Tuticorin must report ETA via their Agents at least 72 hours in advance, and again 24 hours in advance of arrival. The ETA must be confirmed or amended not less that 6 hours prior to arrival. Time can be either in GMT or IST. The vessels must contact Port Signal Station on VHF Channels 16/12. In message of ETA, the following information must be included:

1. Name/call sign of the vessel.
2. Nationality.
3. Length, draft and g.r.t.
4. Last port and cargo.
5. Port of origin/destination of cargo.
6. Last Port of call/next port of call.

CERTIFICATES:
(a) Load Line Certificate.
(b) Safety Equipment Certificate.
(c) Safety Radio Certificate, all certificates must be valid before departure of vessel
CUSTOMS ALLOWANCES: Tobacco: 200 cigarettes permitted for use of each crew member from bonded stores of ship.

Wine and/or Spirit: Customs Officer remains on board from arrival till departure and issues required quantity of wine and spirit from bonded stores. Quota is issued every week.
CARGO GEAR: Tested cargo gear should be used for loading and discharging operations.
AIRPORT: 3 miles from town, daily flight to Mumbai.
TIME: GMT plus 5.5 hours.
HOLIDAYS: Observed as declared by Government of Gujarat and can be worked on payment of overtime charges, but work on non-working days like Indian Republic Day, Independence Day, Holi (2nd Day), Ramnavami, Muhurram, Gokul Ashthami, Dessera, Diwali (New Year) and Ramzan-Id not possible.
POLICE/AMBULANCE/FIRE: Police Station 114; Ambulance/Fire Brigade 244.
SHORE LEAVE: Police, port and Customs permission required before landing.
IDENTIFICATION CARDS: Necessary.
GENERAL: The port is an "all weather port".
AUTHORITY: Office of the Chief Executive Officer and Vice Chairman, Gujarat Maritime Board, New Mental Hospital Building, Block No. 0/20, Ahmedabad - 380 016. *Tel:* 66610, 45116, 66270. *Cables:* Princport. *Contact:* The Chief Executive Officer and Vice Chairman, Gujarat Maritime Board, Ahmedabad-16.

The Port Officer, Gujarat Maritime Board, Porbandar – 360 575, Gujarut State, India.
AGENT: See "Cochin".

PORT REDI: 15.44 N. 73.39 E.

DOCUMENTS:
Arrival:
- Maritime Declaration of Health Form (in duplicate).
- Port Clearance from last port of call.
- Ship's Stores List (in triplicate).
- Crew Private Property List (in triplicate), containing full details of every article such as: cameras, radios/transistors, record players, records, watches, all types of currency, other valuable articles, souvenirs, spirits, etc.
- Crew Lists (6 copies).
- Ship's Currency List (in triplicate).
- Arms and Ammunition Declaration.
- Passenger List – if any.
- Through Cargo Manifests.

Departure:
- Medical Inspection or Examination Certificate (Bill of Health).
- Port Clearance.
- Consumed stores list in duplicate (a list of stores consumed during the stay of the vessel at port).

PILOTAGE: Compulsory. Port Officer acts as Pilot. Cable via Mumbai Radio to Port Officer, Redi, Cable Address: Port Officer Vengurla, ETA of vessel 48 hours prior arrival (cable should reach Port Officer before 24 hours prior arrival). Anchor off Rairi Point – West of Rairi Point – about 1 to 1.5 miles where Port Officer boards ship to pilot to proper loading anchorage. Pilotage restricted to daylight hours only. Shifting without Pilot not permitted.

On arrival keep gangway or complete pilot ladder with manropes and step-down, ready for Pilot.

No fixed anchorage marked at Pilot station; however, vessel should not proceed beyond 1 mile from Rairi Point (for safety of vessel). Keep engine ready till Pilot boards. If vessel arrives during night hours be ready for shifting next morning.
ANCHORAGE: Anchorage Rairi Point or Redi Point (Lat. 15° 44' N., Long. 73° 39' E.) is a flat rocky projection, Western extremity of which is 50 ft. (15.2 m.) high. Foul ground and shoal water extend about 0.75 miles S.S.W. and about 0.5 miles Westward of this point; at Southern side of foul area is Rairi (Redi) Rock which is 36 ft. (11 m.) high and steep. Vessel should not proceed into depths of less than 6 fathoms or within 1 mile Westward in vicinity of this point without Pilot.

Loading anchorages are on both sides of Rairi Point (known as Jetty One anchorage and Jetty Two anchorage).
MAX. SIZE: No restrictions on size. This is a minor port exporting only iron ore, and vessels up to 34 ft. draft load at safe anchorage.
HEALTH: On arrival, Customs Authorities board and grant Free Pratique to ships arriving under normal conditions and on completion of Maritime Declaration of Health Form. Medical Officer, Candy Dispensary, Vengurla, acts as Port Health Officer (Quarantine Officer) for this port, and boards vessel at his convenience before sailing to conduct Medical Examination and grants Medical Examination Certificate (Bill of Health) on day of sailing. Certificate to be collected from Vengurla Office. No facilities for Radio Pratique.

If coming from yellow fever or jigger infected regions within 30 days Port Health Officer grants Pratique after boarding vessel with Mosquito Party deputed from Mumbai at Owners' cost. Mosquito Party can only be arranged on advance information failing which, vessel would have to proceed either Mumbai and/or Mormugao for Free Pratique. Master and/or Owners to give Agents prior notice to avoid delay in arranging Pratique. Vessels transiting through above infected areas for bunkers or water only do not require Mosquito Party for obtaining Pratique.

Advisable inform Agents prior to arrival of last port of call, crew, and nationality, and if arriving from yellow fever and/or jigger infected regions, whether called only for bunkers or water, or purpose of call and vessel's health condition.
RADIO: Mumbai Radio.
BERTHING: No berths. Open roadstead port.
LOADING: Port only exporting iron ore in bulk and suppliers. The Minerals & Metals Trading Corporation of India Ltd., make own arrangements to load cargo on FOB terms. Rate between 3,000 to 4,500 tons per day per vessel if 3 vessels are working and 4,000 to 6,000 tons per day if 1 vessel is working. This rate is being achieved due to increased fleet and improvement of shore loading facilities.
MEDICAL: Preliminary medical aid available at Port Redi/Shiroda. Well-equipped hospitals situated at Savantwadi and Vengurla about 25 and 45 miles away respectively by road. Cholera inoculations done through Port Health Officer and if required this information may be passed on to Agents for arranging with Port Health Officer.
DENSITY: Average 1025.
FRESH WATER/FUEL: Not available.
CONSULS: None.
REPAIRS/DRY DOCKS: None.
GANGWAY/DECK WATCHMAN: Not necessary.
OPENING/CLOSING HATCHES: As per Charter Party. However, opening done by stevedores to save their time and commence loading earliest during free time.
CERTIFICATES: All certificates, particularly Cargo Gear Certificate to be in order and valid.
CUSTOMS ALLOWANCES: 200 cigarettes per week of 7 day per crew. Wine and/or Spirit, 1 bottle each per crew of spirit or beer as required.
REPATRIATION: Facilities for crew changes. 4 days advance notice required with full particulars of crew.
AIRPORT: Belgaum and/or Vascodagama 90 miles distant.
TIME: Indian Standard Time GMT plus 5.5 hours.
HOLIDAYS: Cargo work can be arranged on overtime on all holidays except 26th January, Republic Day; 2nd October, Mahatma Gandhi Birthday; 15th August, Independence Day. On these holidays work not permitted even on overtime.
SHORE LEAVE: Crew of Chinese and Pakistani nationality not allowed land on shore. Other crew permitted land only after obtaining requisite permission from Police Authorities from Ratnagiri, distant about 160 miles and thereafter from Customs Authorities. On arrival, Crew List and guarantee duly signed by Master, are furnished to Police Authorities at port and telegram sent to Ratnagiri requesting landing permission from District Superintendent of Police.

Obtaining landing permission takes 3 days; and therefore, Masters requested not to allow crew members to land on shore unless written landing permission sent on board. Crew members not allowed beyond Port Redi limits, without permission obtained from Police Authorities, Ratnagiri.
IDENTIFICATION CARDS: Necessary.
GARBAGE DISPOSAL: Not available.
WASTE OIL DISPOSAL: Not available.
SEAMAN'S CLUBS: None.
CURRENCY: Indian Rupee (Rs.).
REGULATIONS: Port Officer conducts Final Draft Survey on completion of loading in consultation with Master. Master's refusal to allow shifting creates complications. Master should not shift vessel without Pilot on board or permission from Port Officer; this does not apply in case of emergency.
DELAYS: Only 3 vessels (i.e. 1 at each jetty) can work at a time on a first come first served basis. Overlapping vessels have to wait turn. Waiting time about 4/5 days.
GENERAL: Post and Telegraph Office about 2.5 miles from jetty.

Vessels on arrival and at departure thoroughly examined by Customs, and Masters therefore requested to ensure that crew private property list is correctly presented to Customs Authorities and its accuracy maintained throughout stay of vessel.

Ship's wireless station not to be used for despatching cables during the vessel's stay.

Discharge of bilge water and/or dirty waste oil or cargo prohibited.

Fresh vegetables, etc., supplied in limited quantity from 90 miles distance.
AUTHORITY: Port Officer Vengurla, District Sindhudurg, Maharashtra State, India. *Tel:* Vengurla 177.

AGENT: See "Cochin".

SIKKA: 22.34 N. 69.42 E.

SHIPMASTER'S REPORT: June 1982.

DOCUMENTS: 8 Crew Lists, 6 each Personal Effects and Stores Lists, 4 Vaccination Lists, 5 Currency Lists, (Customs do like all paperwork properly prepared).

On departure 3 Crew Lists if any changes and 3 Personal Effects Lists for those who remained on board.

For personnel leaving, Customs require Currency Form (Foreign Exchange Act 1947) in duplicate (Indian Form) and International Crew Baggage Declaration (Local Form) in duplicate.

Clearance from Last Port, Register, Load Line, Derat, Safcon, Safequip and Safradio all sighted by Agent but not taken from vessel.

All personal belongings to be recorded with makes, models and numbers.

PILOTAGE: Pilot boards vessel at anchor from tug boat using ship's derrick and tug's basket if weather is rough.

ANCHORAGE: Plenty of room for anchoring with good holding ground. Contact Mother Tanker for anchor position. We, berthing on flood tide, were requested to anchor 2 miles – 069° True from Mother Tanker.

Locally the storage vessel is referred to as the Mother Tanker (MT) and own ship (OS).

RESTRICTIONS: Apparently none, plenty of water. Larger vessels (this vessel 149,000 d.w.t.) are loaded from daughter tankers which go alongside OS.

HEALTH: Free Pratique is granted by Customs Officer.

RADIO: To local Agent at Jamnagar via Bedi Radio VUK5. The MT (which was m.t. "Koyali") keeps an R/T watch. Would suggest contacting the MT for any advance information as nobody else would give any.

VHF: Call MT on Channel 16. While anchored/approaching Channel 11 is used after initial contact. While double banked Channel 13 is used between MT and OS. Cargo operations are conducted on UHF using MT walkie-talkies. Contact Shipindia Channel 13, who pass messages to and from Agent.

TUGS: One tug available but not used. Tug used by Pilot and runs lines from OS to MT.

BERTHING: Position off Sikka for cargo operations approximately Lat. 22° 34' N., Long. 69° 42' E. Apparently 140,000 d.w.t tankers are the ideal size. They berth alongside MT and can take up to a full cargo without the MT having to top up from a daughter tanker. Operations off Sikka are temporary and from 1st May to end of monsoon. Consult with Pilot about berthing and obtain all details. Vessels berth alongside when tide is running in daylight hours. Usual Yokohama fenders used, 4 for vessels less than 750 ft. LOA and 6 for vessels over 750 ft. LOA. Fenders are made fast on MT. First 2 floatable headlines from OS to MT at least 220 m. long and may require longer. They do not like using '1st ropes ashore' off reels. In our opinion '1st ropes ashore' would be quite adequate and fast enough. Then 2 floatable stern lines from OS to MT. Final moorings were from OS to MT 3 and 2 each end with no breastlines. From MT to OS 2 headlines leading aft, 2 stern lines leading forward, forward 2 springs leading from forward to aft and 2 springs aft leading from aft to forward.

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POLICE/AMBULANCE/FIRE: Police Station 114; Ambulance/Fire Brigade 244.

SHORE LEAVE: Police, port and Customs permission required before landing.

IDENTIFICATION CARDS: Necessary.

GENERAL: The port is an "all weather port".

AUTHORITY: Office of the Chief Executive Officer and Vice Chairman, Gujarat Maritime Board, New Mental Hospital Building, Block No. 0/20, Ahmedabad - 380 016. *Tel:* 66610, 45116, 66270. *Cables:* Princport. *Contact:* The Chief Executive Officer and Vice Chairman, Gujarat Maritime Board, Ahmedabad-16.

The Port Officer, Gujarat Maritime Board, Porbandar – 360 575, Gujarut State, India.

AGENT: See "Cochin".

PORT REDI: 15.44 N. 73.39 E.

DOCUMENTS:

Arrival:
- Maritime Declaration of Health Form (in duplicate).
- Port Clearance from last port of call.
- Ship's Stores List (in triplicate).
- Crew Private Property List (in triplicate), containing full details of every article such as: cameras, radios/transistors, record players, records, watches, all types of currency, other valuable articles, souvenirs, spirits, etc.
- Crew Lists (6 copies).
- Ship's Currency List (in triplicate).
- Arms and Ammunition Declaration.
- Passenger List – if any.
- Through Cargo Manifests.

Departure:
- Medical Inspection or Examination Certificate (Bill of Health).
- Port Clearance.
- Consumed stores list in duplicate (a list of stores consumed during the stay of the vessel at port).

PILOTAGE: Compulsory. Port Officer acts as Pilot. Cable via Mumbai Radio to Port Officer, Redi, Cable Address: Port Officer Vengurla, ETA of vessel 48 hours prior arrival (cable should reach Port Officer before 24 hours prior arrival). Anchor off Rairi Point – West of Rairi Point – about 1 to 1.5 miles where Port Officer boards ship to pilot to proper loading anchorage. Pilotage restricted to daylight hours only. Shifting without Pilot not permitted.

On arrival keep gangway or complete pilot ladder with manropes and step-down, ready for Pilot.

No fixed anchorage marked at Pilot station; however, vessel should not proceed beyond 1 mile from Rairi Point (for safety of vessel). Keep engine ready till Pilot boards. If vessel arrives during night hours be ready for shifting next morning.

ANCHORAGE: Anchorage Rairi Point or Redi Point (Lat. 15° 44' N., Long. 73° 39' E.) is a flat rocky projection, Western extremity of which is 50 ft. (15.2 m.) high. Foul ground and shoal water extend about 0.75 miles S.S.W. and about 0.5 miles Westward of this point; at Southern side of foul area is Rairi (Redi) Rock which is 36 ft. (11 m.) high and steep. Vessel should not proceed into depths of less than 6 fathoms or within 1 mile Westward in vicinity of this point without Pilot.

Loading anchorages are on both sides of Rairi Point (known as Jetty One anchorage and Jetty Two anchorage).

MAX. SIZE: No restrictions on size. This is a minor port exporting only iron ore, and vessels up to 34 ft. draft load at safe anchorage.

HEALTH: On arrival, Customs Authorities board and grant Free Pratique to ships arriving under normal conditions and on completion of Maritime Declaration of Health Form. Medical Officer, Candy Dispensary, Vengurla, acts as Port Health Officer (Quarantine Officer) for this port, and boards vessel at his convenience before sailing to conduct Medical Examination and grants Medical Examination Certificate (Bill of Health) on day of sailing. Certificate to be collected from Vengurla Office. No facilities for Radio Pratique.

If coming from yellow fever or jigger infected regions within 30 days Port Health Officer grants Pratique after boarding vessel with Mosquito Party deputed from Mumbai at Owners' cost. Mosquito Party can only be arranged on advance information failing which, vessel would have to proceed either Mumbai and/or Mormugao for Free Pratique. Master and/or Owners to give Agents prior notice to avoid delay in arranging Pratique. Vessels transiting through above infected areas for bunkers or water only do not require Mosquito Party for obtaining Pratique.

Advisable inform Agents prior to arrival of last port of call, crew, and nationality, and if arriving from yellow fever and/or jigger infected regions, whether called only for bunkers or water, or purpose of call and vessel's health condition.

RADIO: Mumbai Radio.

BERTHING: No berths. Open roadstead port.

LOADING: Port only exporting iron ore in bulk and suppliers. The Minerals & Metals Trading Corporation of India Ltd., make own arrangements to load cargo on FOB terms. Rate between 3,000 to 4,500 tons per day per vessel if 3 vessels are working and 4,000 to 6,000 tons per day if 1 vessel is working. This rate is being achieved due to increased fleet and improvement of shore loading facilities.

MEDICAL: Preliminary medical aid available at Port Redi/Shiroda. Well-equipped hospitals situated at Savantwadi and Vengurla about 25 and 45 miles away respectively by road. Cholera inoculations done through Port Health Officer and if required this information may be passed on to Agents for arranging with Port Health Officer.

DENSITY: Average 1025.

FRESH WATER/FUEL: Not available.

CONSULS: None.

REPAIRS/DRY DOCKS: None.

GANGWAY/DECK WATCHMAN: Not necessary.

OPENING/CLOSING HATCHES: As per Charter Party. However, opening done by stevedores to save their time and commence loading earliest during free time.

CERTIFICATES: All certificates, particularly Cargo Gear Certificate to be in order and valid.

CUSTOMS ALLOWANCES: 200 cigarettes per week of 7 day per crew. Wine and/or Spirit, 1 bottle each per crew of spirit or beer as required.

REPATRIATION: Facilities for crew changes. 4 days advance notice required with full particulars of crew.

AIRPORT: Belgaum and/or Vascodagama 90 miles distant.

TIME: Indian Standard Time GMT plus 5.5 hours.

HOLIDAYS: Cargo work can be arranged on overtime on all holidays except 26th January, Republic Day; 2nd October, Mahatma Gandhi Birthday; 15th August, Independence Day. On these holidays work not permitted even on overtime.

SHORE LEAVE: Crew of Chinese and Pakistani nationality not allowed land on shore. Other crew permitted land only after obtaining requisite permission from Police Authorities from Ratnagiri, distant about 160 miles and thereafter from Customs Authorities. On arrival, Crew List and guarantee duly signed by Master, are furnished to Police Authorities at port and telegram sent to Ratnagiri requesting landing permission from District Superintendent of Police.

Obtaining landing permission takes 3 days; and therefore, Masters requested not to allow crew members to land on shore unless written landing permission sent on board. Crew members not allowed beyond Port Redi limits, without permission obtained from Police Authorities, Ratnagiri.

IDENTIFICATION CARDS: Necessary.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Indian Rupee (Rs.).

REGULATIONS: Port Officer conducts Final Draft Survey on completion of loading in consultation with Master. Master's refusal to allow shifting creates complications. Master should not shift vessel without Pilot on board or permission from Port Officer; this does not apply in case of emergency.

DELAYS: Only 3 vessels (i.e. 1 at each jetty) can work at a time on a first come first served basis. Overlapping vessels have to wait turn. Waiting time about 4/5 days.

GENERAL: Post and Telegraph Office about 2.5 miles from jetty.

Vessels on arrival and at departure thoroughly examined by Customs, and Masters therefore requested to ensure that crew private property list is correctly presented to Customs Authorities and its accuracy maintained throughout stay of vessel.

Ship's wireless station not to be used for despatching cables during the vessel's stay.

Discharge of bilge water and/or dirty waste oil or cargo prohibited.

Fresh vegetables, etc., supplied in limited quantity from 90 miles distance.

AUTHORITY: Port Officer Vengurla, District Sindhudurg, Maharashtra State, India. *Tel:* Vengurla 177.

AGENT: See "Cochin".

SIKKA: 22.34 N. 69.42 E.

SHIPMASTER'S REPORT: June 1982.

DOCUMENTS: 8 Crew Lists, 6 each Personal Effects and Stores Lists, 4 Vaccination Lists, 5 Currency Lists, (Customs do like all paperwork properly prepared).

On departure 3 Crew Lists if any changes and 3 Personal Effects Lists for those who remained on board.

For personnel leaving, Customs require Currency Form (Foreign Exchange Act 1947) in duplicate (Indian Form) and International Crew Baggage Declaration (Local Form) in duplicate.

Clearance from Last Port, Register, Load Line, Derat, Safcon, Safequip and Safradio all sighted by Agent but not taken from vessel.

All personal belongings to be recorded with makes, models and numbers.

PILOTAGE: Pilot boards vessel at anchor from tug boat using ship's derrick and tug's basket if weather is rough.

ANCHORAGE: Plenty of room for anchoring with good holding ground. Contact Mother Tanker for anchor position. We, berthing on flood tide, were requested to anchor 2 miles – 069° True from Mother Tanker.

Locally the storage vessel is referred to as the Mother Tanker (MT) and own ship (OS).

RESTRICTIONS: Apparently none, plenty of water. Larger vessels (this vessel 149,000 d.w.t.) are loaded from daughter tankers which go alongside OS.

HEALTH: Free Pratique is granted by Customs Officer.

RADIO: To local Agent at Jamnagar via Bedi Radio VUK5. The MT (which was m.t. "Koyali") keeps an R/T watch. Would suggest contacting the MT for any advance information as nobody else would give any.

VHF: Call MT on Channel 16. While anchored/approaching Channel 11 is used after initial contact. While double banked Channel 13 is used between MT and OS. Cargo operations are conducted on UHF using MT walkie-talkies. Contact Shipindia Channel 13, who pass messages to and from Agent.

TUGS: One tug available but not used. Tug used by Pilot and runs lines from OS to MT.

BERTHING: Position off Sikka for cargo operations approximately Lat. 22° 34' N., Long. 69° 42' E. Apparently 140,000 d.w.t tankers are the ideal size. They berth alongside MT and can take up to a full cargo without the MT having to top up from a daughter tanker. Operations off Sikka are temporary and from 1st May to end of monsoon. Consult with Pilot about berthing and obtain all details. Vessels berth alongside when tide is running in daylight hours. Usual Yokohama fenders used, 4 for vessels less than 750 ft. LOA and 6 for vessels over 750 ft. LOA. Fenders are made fast on MT. First 2 floatable headlines from OS to MT at least 220 m. long and may require longer. They do not like using '1st ropes ashore' off reels. In our opinion '1st ropes ashore' would be quite adequate and fast enough. Then 2 floatable stern lines from OS to MT. Final moorings were from OS to MT 3 and 2 each end with no breastlines. From MT to OS 2 headlines leading aft, 2 stern lines leading forward, forward 2 springs leading from forward to aft and 2 springs aft leading from aft to forward.

TANKERS: Loading by 2×10 in. ID hoses of ASA 150 standard, 23 m. long.Their discharge rate is quoted as 12,000 t.p.h and OS receives a letter to this effect with a request for OS loading rate. However, hoses restrict rate to about 2,700 t.p.h. overall. Hoses provided by MT, reducers supplied by OS. Only ropes or wires with rope tails used for mooring. Entire operation is guided by the ICS, OCIMF, ISGOTT. Tankers being loaded by daughter tankers should anchor with port anchor and daughter tanker berths starboard side. OS port side derrick and manifolds used alongside MT. Ballast is pumped overside. Ballast draft on arrival to be such that distance from manifold to water line does not exceed 15 m. Ballast trim not to exceed 3 per cent of LOA at any time. Distance of manifold to water line must never exceed 15 m. EDP is used. Samples are taken to Mumbai for analysis before B/L figures are given together with cargo quality details. API, loading temperature and pourpoint are given prior to loading. Our API was 39.48 at 60°F and loading temperature will normally be around the same as sea temperature of about 86°F (as during 1st week in June). Cargo was Indian High crude, very thin and apparently quite clean. A Loading Master boards to assist with berthing but does not live aboard. Accommodation and victuals required for Pilot, 2 Cargo Surveyors and 1 Indian Oil Representative. MT normally has 9.5 shackles of cable out. MT does COW but not usual with OS of 140,000 d.w.t. tanker.

WATCHMEN: Not necessary. The only boats allowed alongside were official boats and no other small boats were observed in the vicinity. There is no gangway between MT and OS.

CUSTOMS ALLOWANCES: 200 cigarettes. The State of Gujarat is 'dry' and no alcohol allowed ashore, except foreigners being repatriated may take one bottle.

REPATRIATION: Possible. Airport at Jamnagar. The boat journey ashore is about 2 hours but boat can only get to or leave jetty about 2 hours either side of high water. Foreigners require a visa otherwise they may travel in India but are not allowed to stay at hotels. This applies to departing and arriving personnel. Indian crew are not allowed Rupee notes of greater denomination than 20 Rupees.

AIRPORT: About 1.5 hours drive by car.

SHORE LEAVE: Possible, but due to length of journey and tidal restrictions it is not recommended.

GENERAL: In June 1982 "VQ" Buoy Kachchh was missing, shore authorities were advised. A night approach is better than a daytime approach as the buoys are not easy to sight against the discoloured water (on flood tide) although the buoys and Racons show very well on radar.

DEVELOPMENTS: After the end of the SW Monsoon (1982) work will resume on the oil and gas lines to Mumbai from the offshore oil-field. An SPM will probably be positioned off Mumbai and this will be used during the SW Monsoon when vessels cannot load at the oil-field.

OPERATOR: Shipping Corporation of India Limited.

SHIPMASTER'S REPORT: July 1994.

Berth Location: Lat. 22° 27.4' N., Long. 69° 47.8' E. (approx.).

A vessel is considered to have arrived when she is in the vicinity of the pilot boarding ground (Lat. 22° 30' N., Long. 89° 46' E.). As vessels are berthed/unberthed only during daylight hours, ships arriving during hours of darkness will have to anchor. Good holding ground is available about 1 mile North of the pilot boarding ground in 17.0 m. of water. During the months of May to October, crude oil lighterage operations are conducted about 2 miles North of this anchorage area.

The discharge berth at Sikka is owned by Gujrat State Fertiliser Corporation (G.S.F.C.) and managed by the Gujrat Maritime Board. The berth presently has facility for the discharge of ammonia and phosphoric acid, though work is in progress to extend this for LPG imports. Pilot for movements to and from the berth is requisitioned from other neighbouring ports.

There is no radio station at Sikka. However, Bedi Radio (of a neighbouring port) keeps a watch on VHF Channel 16 during daytime hours. Alternatively, the Agent calls the ship on VHF to exchange any information.

Berthing generally takes place just before slack water. Ships berth stemming the tide. Ships with a maximum draft of 8.0 m. are accepted alongside. This ship has berthed prior to low water slack with an aft draft of 7.2 m. The least depth in the approach of the channel as shown on the chart is 8.0 m. However, whilst approaching berth with the ship's head 140° and about 3 cables and also 1 cable from the berth, the ship smelt bottom resulting in sluggish handling and loss of steering with a telltale muddying of water.

Two very low powered tugs are presently available for assisting in berthing. These are also used to take lines ashore. It is best to keep only a shallow bight when the tug is taking lines ashore, so that they are quick to take weight on the bollard.

The berth lies at the end of a causeway with 4 dolphins, two on either side of the berth. The berth is fendered by pneumatic (Yokohama) fenders. The top edge of the berth and dolphins are fendered by tractor/truck tyres. The lay of the berth is about 168°. Ships drawing 8.0 m. and up to 180 m. LOA have been accommodated at the berth. Due to the construction of the berth, the accommodation ladder (gangway) cannot be used and the ship's wharf ladder must be kept ready.

Ammonia is discharged through a hardarm. The ship provides a 300 ASA 8 in. reducer to which the hardarm is connected by shore staff. Phosphoric acid is also discharged at the berth using a 10 in. flexible hose.

The shore line to the tank is about 5 km. long. We discharged at a low rate of about 100 tonnes/hr. for about 6 hours before increasing rate to a maximum of 650 tonnes/hr.

About 4 cables South of the berth lies a disused island berth which was once connected to shore by a ropeway. The supporting pillars of the ropeway still stand. The jetty was in use for the export of cement from the factory located inshore. Cement is presently loaded into ships at the anchorage working with barges.

This vessel picked up fresh provisions at Sikka which are of reasonable price and quality. It is understood that fresh water can be supplied by barges and bunkers can be arranged by trucks. However, adequate notice is required.

Sikka is a small town serving 2 major factories and a thermal power plant located there. Local population consists mostly of fisherfolk. It is connected by a good road to Jamnagar, a mid-sized city about 30 km. away, where all Government offices and Agents are located, as also are an airport and a railroad station which connect Jamnagar to the rest of the country. Mumbai has the closest international airport. International telephone calls can be made from Sikka/Jamnagar. Transportation has to be arranged by the Agent, as no unauthorised vehicle is allowed to approach the berth beyond the security check-point, which itself is about 4 km. away.

Strict prohibiton is in force ashore and an infringement could lead to embarrassment and delays.

The earlier Shipmaster's Report of 1982 in the Guide refers to the required documentation and is still valid. Currency regulations for Indian crew has been amended (R.B.I. Notification No. FERA 153/93 dated 12.7.93), and currency up to Rs. 1,000 may be carried by them in denominations not greater than Rs. 50.

AGENT: See "Cochin".

TUTICORIN: 08.45 N. 78.13 E.

PORT LIMITS: *On the North:* A line drawn due East from the boundary pillar erected to the North at Arasadi along the parallel of Lat. 08° 50' N., to a position in Lat. 08° 50' N., Long. 78° 22' E.

On the East: A line joining a position in Lat. 08° 50' N., Long. 78° 22' E. to a position in Lat. 08° 41' 40" N., Long. 78° 20' 20" E.

On the South: A line due West from a position in Lat. 08° 41' 40" N., Long. 78° 20' 20" E. to where it meets the point 45.72 m. from the HW mark on the shore.

DOCUMENTS: Required on arrival:

4 Manifests.
2 Bills of Lading.
5 Crew Lists.
5 Passenger Lists.
4 Crew Personal Property Declaration.
4 Crew Currency Declaration.
4 Import Manifest of Stores List.
2 Health Report Form.

All statutory certificates in respect of vessels in Marine, Traffic, Customs and Immigration.

PILOTAGE: Compulsory within the pilotage zone. At present pilotage is restricted from 0600 hrs. to 1800 hrs. There is no night pilotage. To avoid a delay in obtaining a Pilot, the Owner, Master or Agent of a ship bound for Tuticorin must report ETA via their Agents at least 72 hours in advance, and again 24 hours in advance of arrival. The ETA must be confirmed or amended not less that 6 hours prior to arrival. Time can be either in GMT or IST. The vessels must contact Port Signal Station on VHF Channels 16/12. In message of ETA, the following information must be included:

1. Name/call sign of the vessel.
2. Nationality.
3. Length, draft and g.r.t.
4. Last port and cargo.
5. Port of origin/destination of cargo.
6. Last Port of call/next port of call.

Pilot Boarding Station: Vessels are required to approach the Fairway Buoy and the Pilot will board the vessel about 0.5 nautical miles East of Fairway Buoy while underway. The position is approximately 2.5 km. to 3.0 km. away from the entrance to the port basin.

ANCHORAGE: *Zone A:* There is an Explosives anchorage in position Lat. 8° 44' 48" N., Long. 78° 14' 22" E, in a sector with the Fairway Buoy as centre circumscribed over an arc of 171° from 009° (T) to 180° (T) at a distance of 0.5 miles to 1.0 miles.

Zone B: There is an open roadstead available at Zone 'B'. Vessels of any size and draft can be handled at the open roadstead. The loading and unloading operations are carried out by lighters at the open roadstead throughout the year.

MAX. SIZE: See "Berthing".

HEALTH: Free Pratique is issued in normal cases by the Municipal Health Officer, Tuticorin, but in the case of vessels coming from yellow fever area and jigger infection ports within 30 days, it is to be issued by the Port Health Officer, Mandapam Camp.

RADIO: When vessel within 24 hours' distance Tuticorin Radio could be used, call sign VWT. Otherwise according to route followed, vessels use Madras or Mumbai Radio.

VHF: Signal station stands-by throughout 24 hours on Channels 12 and 16.

TUGS: Three tugs (bollard pull 30 tons) available for berthing and unberthing inside the harbour. However, if services are required for any special service, arrangements have to be made. Ships usually anchor in open roads and enter and sail without tug assistance.

BERTHING: In Zone 'A' there are at present 6 alongside berths available to handle break-bulk and dry-bulk cargoes. Berths No. 1, 2, 5 and 6 are designed for ships of 168 m. length and 9.14 m. draft and Berths No. 3 and 4 for ships of 192 m. length and 10.67 m. draft. One coal jetty is available at North Breakwater which has been designed for ships of 235 m. length and 10.67 m. draft. Pending completion of dredging in the approach channel, ships with 8.24 m. draft can enter the port at all times. Draft of 9.14 m. will be available on completion of the balance of capital dredging along the approach channel.

The berths are connected with metre gauge railway tracks and roads which are in turn connected with road and railway system to hinterland.

Floating Craft: Sufficient number of tugs and other floating craft are available for pilotage and other operations.

Cargo Handling Facilities:

3×3 ton wharf cranes.
2×6 ton wharf cranes.
4×10/4 ton grab wharf cranes.
1×10 ton hook wharf crane.
7 mobile cranes of 10 tons to 75 tons.
1×36 ton port tower crane.
12×3 ton diesel forklift trucks.
3×2.3 cu.m. capacity bucket front end loaders.
1×3.1/4.6 cu.m. capacity bucket front end loader.
2×500 ton and 2×1,500 ton diesel locomotives.
1×40.0 TR-35.0 CH top lift truck.
1×25 ton top lift truck.
2×600 t.p.h. marine unloading arms.
18×440 V reefer sockets.
6×200 V reefer sockets.

Storage:

2 Transit sheds 150 m.×36 m. each.
3 Warehouses 150 m×36 m. each.
1 Dangerous cargo shed 36.23 m.×20.23 m.
1 Fumigatorium 40.50 m.×18.24 m.

15 Covered transit sheds including combustible cargo shed and dutiable cargo shed with a storage capacity of 25,370 tonnes (in Zone 'B').

One open platform for storage of cargo with a capacity of 61,500 tonnes (in Zone 'B').

Open storage area of 24,000 sq.m. inside the security wall for storing bulk cargo and 30,000 sq.m. outside the security wall at Hare Island for stacking timber logs (in Zone 'A').

Reefer Cargo Handling Facilities: 12 plugs (6×220 volts and 6×440 volts) points. Standby generators provided.

STEVEDORES: Agents require 24 hours notice of ETA for arranging gangs, and receivers for lighters. General cargo, average rate load or discharge about 1,000/1,200 tons per weather working day.

Working hours:

(i) In respect of working of vessels in the Port, period between 0600 hrs. to 1400 hrs. on working day is treated as free time, for levy of night and holiday charges. For periods outside these hours, night and holiday charges are leviable.

(ii) In respect of delivery of import cargo and admission of cargo for shipment, period between 1000 hrs. to 1800 hrs. is treated as free time for levy of night and holiday charges. For periods outside these hours on working days, night and holiday charges are levied.

(iii) On holidays no free time is permissible either for working of vessels or for delivery/admission of cargo for purpose of levy of night and holiday charges.

MEDICAL: For doctor's visit on board early advice helps to arrange for tug or launch to take doctor from shore. In cases of emergency, medical attention can be arranged but there may be some delay. Hospital facilities available. Personnel should have valid inoculation and vaccination certificates. If certificates expired, arrangements made for re-vaccination/re-inoculation and renewal of certificates.

TANKERS: One permanent oil jetty to accommodate vessels of lengths from 150 m. to 228 m. and 9.14 m. draft is available for handling petroleum products.

Pipelines of 457 mm. diameter for furnace oil and 356 mm. diameter for naphtha, 400 mm. diameter for liquid ammonia, 203 mm. diameter for ethylene di-chloride (EDC) and 250 mm. diameter for vinyl chloride monomer (VCM).

Pending completion of the dredging of the approach channel, only tankers with 8.24 m. draft can enter port.

FRESH WATER: Available from hydrants alongside and by barges at the anchorage when no scarcity of water.

FUEL: Supplied by road tanker.

CONSULS: None.

REPAIRS: Minor repairs possible.

DRY DOCKS: A small dry dock with workshop facilities has been constructed at the Port for docking and attending to repairs of port's own small vessels.

GANGWAY/DECK WATCHMEN: Engaging watchmen always done at the discretion of Masters. In case required could be engaged.

OPENING/CLOSING HATCHES: By ship's crew. If done by stevedores charges extra.

CERTIFICATES:

Ship's Register.
Safety Construction Certificate.
Load Line Certificate.
Safety Equipment Certificate.
Safety Radio & Telegraphy Certificate.
Derat Certificate.
Cargo-gear Stability Certificate.

REPATRIATION: Could be arranged via Madras.

AIRPORT: Nearest airport is Madurai, distance 100 miles, which could connect Madras.

TIME: GMT plus 5.5 hours.

HOLIDAYS: New Year's Day, Pongal, Mattu Pongal, Republic Day, Tamil New Year's Day, Good Friday, May Day, Ramzan, Bakrid, Independence Day, Gandhi Jayanthi, Dussehra (2 days), Moharrum, Deepavali, Christmas, Meelad-un-nabi.

SERVICES: Fish, meat and all kinds of provisions and stores are generally available.

SHORE LEAVE: Crew allowed shore leave but movements limited to municipal limits. Must obtain shore permits from police.

IDENTIFICATION CARDS: Identification cards or Seaman's Book required to be presented to Police and Immigration authorities while coming on shore.

REGULATIONS: Usual regulations. All crew members coming onto shore and returning to ship must report to Customs and Port Police on every trip.

AUTHORITY: Tuticorin Port Trust, Administrative Office, Tuticorin 628 004, India. *Tel:* 85-2290 and 85-2299. *Telex:* 0434-243. *Cables:* Portrust. *Contact:* The Chairman.

AGENT: See "Cochin".

VADINAR: 22.31 N. 69.42 E.

LOCATION: Vadinar is in the Gulf of Kachchh about 40 miles S.W. of Kandla Port. The port has 1 Single Buoy Mooring (SBM) for crude oil tankers.

Position of SBM: Lat. 22° 30' 34.48" N., Long. 69° 42' 4.07" E.

The deep water channel from Dwarka to SBM is marked by 9 deep sea lighted marker buoys (refer Chart No. 203).

PILOTAGE: Pilotage is compulsory and the Pilots board the tankers at anchorage (Lat. 22° 33' N., Long. 69° 38' E.). Tanker should communicate ETA Vadinar to Harbour Master Kandla Port and local Agents, Jamnagar 72, 24 and 12 hours in advance.

VHF: Vadinar Control Tower can be contacted on VHF Channel 12 and 16.

TUGS: Port tugs and the launch join ships at the approach to SBM.

RESTRICTIONS/MAX. SIZE: VLCC's of max. 300,000 d.w.t. can be moored at the SBM. At present berthing of tankers is only in daylight hours but night berthing may start soon. Unberthing can be done during hours of darkness.

FRESH WATER: Fresh water can be supplied only by water barge.

DEVELOPMENTS: Deep water berth planned.

AUTHORITY: The Chairman, Kandla Port Trust, A.O. Building, P.O.Box No. 50, Gandhidham (Kachchh), India. *Tel:* 8540. *Telex:* 001-105-208. *Cables:* Portrust. *Contact:* Superintendent Engineer, Offshore Oil Terminal.

VERAVAL: 20.55 N. 70.22 E.

LOCATION: Veraval is an important intermediate lighterage fair weather town port, situated at Lat. 20° 54' 40" N., Long. 70° 22' 12" E., on the South West Coast of Saurashtra Peninsula, facing the Arabian Sea, and nearly 62 miles South of Porbandar and 192 miles North of Mumbai.

DOCUMENTS:

Last Port Clearance.
Ship's Stores Manifest (3 copies).
Crew List (5 copies).
Private Property List of Crew (3 copies).
Same Bottom Cargo (3 copies).
Ship and Crew Currency List (3 copies).
Indian Coast Light Dues Receipt (if vessel arriving from Indian port).
Maritime Declaration of Health.
Customs Arrival Report.
Customs Declaration for arms, ammunition, etc.
Port Arrival Report.

PILOTAGE: Not required. Vessels anchor midstream.

NAVIGATION AIDS: *Veraval Lighthouse:* The lighthouse, in position Lat. 20° 54.6' N., Long. 70° 21.15' E., is a square masonary tower with semi-circular frontage towards the sea side, and rectangular towards land side, painted in alternate black and white bands. Height of tower 33.5 m. Height of light (centre of lantern) about 33.5 m. above NHWS. Range of visibility 26 km. Character of light – occulting white every 15 seconds, i.e. flash 10 seconds and eclipse 5 seconds. A signal horn is also sounded from the lighthouse structure as and when required.

Bhidia Beacon: Located in position Lat. 20° 53.8' N., Long. 70° 22.9' E. The beacon is a square masonary structure, painted with red and white bands. The height of the structure is 20 ft. The range of visibility 4 miles. Character of the light is flash red every 10 seconds.

Both lights are maintained by the Lighthouse Department of the Government of India. In addition there are lights for guiding local movements at (1) Old Lighthouse, (2) Breakwater, and (3) Creek entrance. These local lights are maintained by the Port Department of the State Government.

ANCHORAGES: The port is well protected by a breakwater extending 1,600 ft. into the open sea with fairly deep water of about 8 to 9 fathoms. Deep draft vessels can anchor at a distance about 1.5 km. away from the shore. The holding ground is good, so deep draft vessels can anchor quite close to the port without any specific restrictions. Two anchorage positions are marked on Indian Chart No. 2050. The ships are supposed to wait there for their turn, as only 3 ships are worked at a time. A refer ship is worked at night as a 4th vessel. However, a maximum of 2 import ships only can work at a time.

Port working zones have been prescribed as A, B, C, D and E, and five points A B C D E are marked as under. From Arrival Anchorage Zone, ships have to move to the working zone and select any of the points A B C D or E, as convenient to them. Otherwise ship's work would not commence.

Anchorage	*Point*	*Position Lat./Long.*	*Depth approx.*	*Suggested for a vessel having draft up to*
1	A	20° 53' 27" N. 70° 22' 40" E.	11.50 m.	8.75 m. (28 ft. 00 in.)
2	B	20° 53' 20" N. 70° 22' 20" E.	12.00 m.	9.25 m. (30 ft. 00 in.)
3	C	20° 53' 03" N. 70° 22' 33" E.	12.80 m.	10.00 m. (32 ft. 00 in.)
4	D	20° 53' 14" N. 70° 22' 48" E.	11.00 m	8.25 m. (26 ft. 00 in.)
5	E	20° 53' 16" N. 70° 22' 33" E.	13.00 m.	10.25 m. (33 ft. 00 in.)

Point	*Veraval Lighthouse*	*Bhiria Beacon*	*Somnath Temple*
A	311°	030.5°	101°
B	321°	048°	094.5°
C	321.5°	027°	083.5°
D	312.5°	015.5°	088°
E	317.5°	034.5°	092°

The movement of lighters is constant as the harbour has water at all times, enabling constant cargo working.

Approaches to the port are also directly from the open sea with no tidal difficulties, or cross currents. Tidal rise is quite normal and negligible, from 5 ft. to 8 ft.

RESTRICTIONS: None, day or night anchorage possible.

MAX. SIZE: No restriction.

HEALTH: (a) Bill of Health is being granted by the Resident Medical Officer of the local Hospital.

(b) Free Pratique is granted by the Customs Boarding Officer, on presentation to him of "International Maritime Declaration of Health" by Master.

RADIO: Messages via Mumbai Radio or Kandla Radio.

TUGS: 4 tugs, 1×191 h.p., 1×270 h.p., 1×255 h.p. and 1×360 h.p.

VHF: Channels 16, 11, 12 and 14.

BERTHING: No berths for ocean-going vessels.

There are 4 lighter wharves for vessels working which can provide loading/unloading points, of which 4 have cranage facilities.

Barges: There are 27 barges with 100 tonnes capacity each and one water/cargo barge with capacity 100 tonnes.

Storage Facilities:

4 transit godowns – 1,600 tons capacity.
4 platforms – 4,000 tons capacity.
53 storage godowns – 50,000 tons capacity.

CRANES:

1 × 0.5 tonnes capacity at Wharf A.
1 × 0.5 tonnes capacity at Wharf B.
4 × 12.5 tonnes capacity mobile cranes.
1 × 5.0 tons capacity mobile crane.
1 × 75.0 tonnes capacity diesel crane.
1 × 80.0 tonnes capacity mobile diesel crane.

STEVEDORING: Particulars of ETA and labour gangs required well in advance. Average loading/discharging:

Loading bagged cargo oilcake, etc.	225/250 tons per hook per day
Loading GN oil in drums	150/175 tons per hook per day
Discharging fertiliser (bagged)	150/200 tons per hook per day
General cargo loading/discharging	150/200 tons per hook per day

Working Hours: Port working hours: 0800 – 1200 hrs. and 1300 – 1700 hrs.

Vessel working hours: Throughout 24 hours. Vessels are allowed to work during recess hours and during nights which are 1200 – 1300 hrs. (recess), 1700 – 1800 hrs. (recess), 1800 – 2200 hrs. (night – 1st half), 2300 – 0300 hrs. (night – 2nd half) and 0300 – 0800 hrs. (recess).

MEDICAL: Qualified doctors and hospital facilities.

TANKERS: No tanker berths.

FRESH WATER: Water is required to be obtained from port premises and is transported by port tank truck and being supplied by water barge or by tug to vessel on payment of transportation charges from port premises to shore and from shore to anchorage excluding cost of water.

FUEL: Not available.

CONSULS: None.

REPAIRS: Port is equipped with workshop and dry dock for minor repairs to tugs and barges. Minor repairs are carried out in town.

GANGWAY/DECK WATCHMEN: Not necessary unless required. Can be arranged through Agents.

OPENING/CLOSING HATCHES: Carried out by stevedores. Ships' derricks worked by crew.

CERTIFICATES:

Safety Equipment Certificate.
Load Line Certificate.
Safety Radio-Telegraphy Certificate.
Derat Certificate.
Ship's Registration Certificate.

REPATRIATION: Can be arranged.

AIRPORT: Nearest airport Keshod, 30 miles from Veraval, but motor transport not easily available and advance arrangements have to be made.

TIME: Local Time GMT plus 5.5 hours.

HOLIDAYS: On which work not allowed for loading/discharging: Indian Republic Day, Holi (Second Day), Ramnavami, Mohurram (Ashura or 10th day), Gokulashtami, Dussera Diwali (New Year's Day), Ramzan-Id (Id-ul-Fitr).

POLICE/AMBULANCE/FIRE: Police 3; Ambulance 5; Fire 5.

TELEPHONES: No arrangements for placing telephones on board the ship, but calls via VHF are possible.

SHORE LEAVE: Crews permitted ashore with permission from Customs and Port Authorities. While coming ashore and returning to ship crew should pass through Customs.

DELAYS: 3 ships can work and fourth vessel if for lifting frozen fish can work during night hours only. Fourth vessel other than frozen fish cargo wait in turn.

GENERAL: Closed for traffic between 15th May to 15th September every year due to monsoon season.

Charts: Plans of Kathinwar – Gulf of Kutch to Vijaydurg 2736. Plans of Veraval Port Roads No. 1321 and 2054.

DEVELOPMENTS: Veraval is being developed as an all weather fishery harbour working under the World Bank Project. There will be extensive facilities available at the Port. The existing breakwater is being extended by about 334 m. and another would be erected in opposite direction for about 3,200 ft. A minimum depth of water in the inner breakwater would be 17 ft. 6 in.

AUTHORITY: Office of the Port Officer – Veraval, Gujarat Maritime Board, Junagadh District, Pin. 362265. *Tel:* 20001 (office), 20956 (residence). *Telex:* 163-209 GMBV IN. *Contact:* Port Officer.

AGENT: See "Cochin".

VISAKHAPATNAM: 17.41 N. 83.18 E. (See Plan)

PORT LIMITS: 3 nautical miles East of and parallel to 10 fathoms line of soundings may be taken as the seaward boundary of the port within which a vessel is considered to be an "arrived vessel".

DOCUMENTS:

12 copies of Crew List.
3 copies of Stores List.
3 copies of Private Property List.
3 copies of Currency Declaration.
3 copies of Watch Lists, giving details of make and value, etc.

The vessel must possess following valid certificates:

Ship's Register.
Load Line Certificate.
Safety Equipment Certificate.
Safety Construction Certificate.
Safety Radio Telegraphy and Telephony Certificates.
Cargo Gear Test Certificate.
Safety and Survey Certificate.
Derat Certificate.
Last Port Clearance.

Also see "Shipmaster's Report" – June 1988.

PILOTAGE: Vessels generally anchor at roadstead where Pilots board. Signal station contacts all vessels arriving and advises all information about Pilot's arrival, etc. A minimum notice of 48 hours of vessel's ETA required. Pilot ladder to be rigged on the Starboard side.

ANCHORAGE: Anchorage position to be marked with Dolphin's Nose Lighthouse bearing 270° (T) at a distance of 1.5 nautical miles.

RESTRICTIONS: *Inner Harbour:* The Inner Harbour is open to ships of 193.55 m. LOA, 9.14 m. draft and 30.48 m. beam at all stages of tide and ships of 193.55 m. LOA with a max. draft of 10.05 m. on a minimum rising tide of 0.91 m. for arrival and draft of 10.21 m. for sailing. Vessels of LOA 175.26 m. and above with draft of 9.14 m. and above can enter during daylight hours only. There are no restrictions on account of night navigation for sailing of vessels from Inner Harbour.

Outer Harbour: Vessels with 270 m. LOA, 42 m. beam, 15.3 m. draft, can sail from the Outer Harbour "OB–1" and "OB–2" berths at all times. The draft for ships entering the Outer Harbour in loaded condition is 14.3 m. No tidal restrictions. The max. permissible draft at oil mooring is 14.3 m., and LOA 260 m.

Vessels of 60,000 d.w.t. and above can enter during daylight hours only. There are no restrictions on account of night navigation for sailing of vessels from Ore Berths No. I and II.

Mooring and unmooring of vessels at Oil Mooring is restricted to daylight hours only.

Pilot Boarding Station: Vessels are required to approach the Fairway Buoy and the Pilot will board the vessel about 0.5 nautical miles East of Fairway Buoy while underway. The position is approximately 2.5 km. to 3.0 km. away from the entrance to the port basin.

ANCHORAGE: *Zone A:* There is an Explosives anchorage in position Lat. 8° 44' 48" N., Long. 78° 14' 22" E, in a sector with the Fairway Buoy as centre circumscribed over an arc of 171° from 009° (T) to 180° (T) at a distance of 0.5 miles to 1.0 miles.

Zone B: There is an open roadstead available at Zone 'B'. Vessels of any size and draft can be handled at the open roadstead. The loading and unloading operations are carried out by lighters at the open roadstead throughout the year.

MAX. SIZE: See "Berthing".

HEALTH: Free Pratique is issued in normal cases by the Municipal Health Officer, Tuticorin, but in the case of vessels coming from yellow fever area and jigger infection ports within 30 days, it is to be issued by the Port Health Officer, Mandapam Camp.

RADIO: When vessel within 24 hours' distance Tuticorin Radio could be used, call sign VWT. Otherwise according to route followed, vessels use Madras or Mumbai Radio.

VHF: Signal station stands-by throughout 24 hours on Channels 12 and 16.

TUGS: Three tugs (bollard pull 30 tons) available for berthing and unberthing inside the harbour. However, if services are required for any special service, arrangements have to be made. Ships usually anchor in open roads and enter and sail without tug assistance.

BERTHING: In Zone 'A' there are at present 6 alongside berths available to handle break-bulk and dry-bulk cargoes. Berths No. 1, 2, 5 and 6 are designed for ships of 168 m. length and 9.14 m. draft and Berths No. 3 and 4 for ships of 192 m. length and 10.67 m. draft. One coal jetty is available at North Breakwater which has been designed for ships of 235 m. length and 10.67 m. draft. Pending completion of dredging in the approach channel, ships with 8.24 m. draft can enter the port at all times. Draft of 9.14 m. will be available on completion of the balance of capital dredging along the approach channel.

The berths are connected with metre gauge railway tracks and roads which are in turn connected with road and railway system to hinterland.

Floating Craft: Sufficient number of tugs and other floating craft are available for pilotage and other operations.

Cargo Handling Facilities:

3×3 ton wharf cranes.
2×6 ton wharf cranes.
4×10/4 ton grab wharf cranes.
1×10 ton hook wharf crane.
7 mobile cranes of 10 tons to 75 tons.
1×36 ton port tower crane.
12×3 ton diesel forklift trucks.
3×2.3 cu.m. capacity bucket front end loaders.
1×3.1/4.6 cu.m. capacity bucket front end loader.
2×500 ton and 2×1,500 ton diesel locomotives.
1×40.0 TR-35.0 CH top lift truck.
1×25 ton top lift truck.
2×600 t.p.h. marine unloading arms.
18×440 V reefer sockets.
6×200 V reefer sockets.

Storage:

2 Transit sheds 150 m.×36 m. each.
3 Warehouses 150 m×36 m. each.
1 Dangerous cargo shed 36.23 m.×20.23 m.
1 Fumigatorium 40.50 m.×18.24 m.

15 Covered transit sheds including combustible cargo shed and dutiable cargo shed with a storage capacity of 25,370 tonnes (in Zone 'B').

One open platform for storage of cargo with a capacity of 61,500 tonnes (in Zone 'B').

Open storage area of 24,000 sq.m. inside the security wall for storing bulk cargo and 30,000 sq.m. outside the security wall at Hare Island for stacking timber logs (in Zone 'A').

Reefer Cargo Handling Facilities: 12 plugs (6×220 volts and 6×440 volts) points. Standby generators provided.

STEVEDORES: Agents require 24 hours notice of ETA for arranging gangs, and receivers for lighters. General cargo, average rate load or discharge about 1,000/1,200 tons per weather working day.

Working hours:

(i) In respect of working of vessels in the Port, period between 0600 hrs. to 1400 hrs. on working day is treated as free time, for levy of night and holiday charges. For periods outside these hours, night and holiday charges are leviable.

(ii) In respect of delivery of import cargo and admission of cargo for shipment, period between 1000 hrs. to 1800 hrs. is treated as free time for levy of night and holiday charges. For periods outside these hours on working days, night and holiday charges are levied.

(iii) On holidays no free time is permissible either for working of vessels or for delivery/admission of cargo for purpose of levy of night and holiday charges.

MEDICAL: For doctor's visit on board early advice helps to arrange for tug or launch to take doctor from shore. In cases of emergency, medical attention can be arranged but there may be some delay. Hospital facilities available. Personnel should have valid inoculation and vaccination certificates. If certificates expired, arrangements made for re-vaccination/re-inoculation and renewal of certificates.

TANKERS: One permanent oil jetty to accommodate vessels of lengths from 150 m. to 228 m. and 9.14 m. draft is available for handling petroleum products.

Pipelines of 457 mm. diameter for furnace oil and 356 mm. diameter for naphtha, 400 mm. diameter for liquid ammonia, 203 mm. diameter for ethylene di-chloride (EDC) and 250 mm. diameter for vinyl chloride monomer (VCM).

Pending completion of the dredging of the approach channel, only tankers with 8.24 m. draft can enter port.

FRESH WATER: Available from hydrants alongside and by barges at the anchorage when no scarcity of water.

FUEL: Supplied by road tanker.

CONSULS: None.

REPAIRS: Minor repairs possible.

DRY DOCKS: A small dry dock with workshop facilities has been constructed at the Port for docking and attending to repairs of port's own small vessels.

GANGWAY/DECK WATCHMEN: Engaging watchmen always done at the discretion of Masters. In case required could be engaged.

OPENING/CLOSING HATCHES: By ship's crew. If done by stevedores charges extra.

CERTIFICATES:

Ship's Register.
Safety Construction Certificate.
Load Line Certificate.
Safety Equipment Certificate.
Safety Radio & Telegraphy Certificate.
Derat Certificate.
Cargo-gear Stability Certificate.

REPATRIATION: Could be arranged via Madras.

AIRPORT: Nearest airport is Madurai, distance 100 miles, which could connect Madras.

TIME: GMT plus 5.5 hours.

HOLIDAYS: New Year's Day, Pongal, Mattu Pongal, Republic Day, Tamil New Year's Day, Good Friday, May Day, Ramzan, Bakrid, Independence Day, Gandhi Jayanthi, Dussehra (2 days), Moharrum, Deepavali, Christmas, Meelad-un-nabi.

SERVICES: Fish, meat and all kinds of provisions and stores are generally available.

SHORE LEAVE: Crew allowed shore leave but movements limited to municipal limits. Must obtain shore permits from police.

IDENTIFICATION CARDS: Identification cards or Seaman's Book required to be presented to Police and Immigration authorities while coming on shore.

REGULATIONS: Usual regulations. All crew members coming onto shore and returning to ship must report to Customs and Port Police on every trip.

AUTHORITY: Tuticorin Port Trust, Administrative Office, Tuticorin 628 004, India. *Tel:* 85-2290 and 85-2299. *Telex:* 0434-243. *Cables:* Portrust. *Contact:* The Chairman.

AGENT: See "Cochin".

VADINAR: 22.31 N. 69.42 E.

LOCATION: Vadinar is in the Gulf of Kachchh about 40 miles S.W. of Kandla Port. The port has 1 Single Buoy Mooring (SBM) for crude oil tankers.

Position of SBM: Lat. 22° 30' 34.48" N., Long. 69° 42' 4.07" E.

The deep water channel from Dwarka to SBM is marked by 9 deep sea lighted marker buoys (refer Chart No. 203).

PILOTAGE: Pilotage is compulsory and the Pilots board the tankers at anchorage (Lat. 22° 33' N., Long. 69° 38' E.). Tanker should communicate ETA Vadinar to Harbour Master Kandla Port and local Agents, Jamnagar 72, 24 and 12 hours in advance.

VHF: Vadinar Control Tower can be contacted on VHF Channel 12 and 16.

TUGS: Port tugs and the launch join ships at the approach to SBM.

RESTRICTIONS/MAX. SIZE: VLCC's of max. 300,000 d.w.t. can be moored at the SBM. At present berthing of tankers is only in daylight hours but night berthing may start soon. Unberthing can be done during hours of darkness.

FRESH WATER: Fresh water can be supplied only by water barge.

DEVELOPMENTS: Deep water berth planned.

AUTHORITY: The Chairman, Kandla Port Trust, A.O. Building, P.O.Box No. 50, Gandhidham (Kachchh), India. *Tel:* 8540. *Telex:* 001-105-208. *Cables:* Portrust. *Contact:* Superintendent Engineer, Offshore Oil Terminal.

VERAVAL: 20.55 N. 70.22 E.

LOCATION: Veraval is an important intermediate lighterage fair weather town port, situated at Lat. 20° 54' 40" N., Long. 70° 22' 12" E., on the South West Coast of Saurashtra Peninsula, facing the Arabian Sea, and nearly 62 miles South of Porbandar and 192 miles North of Mumbai.

DOCUMENTS:

Last Port Clearance.
Ship's Stores Manifest (3 copies).
Crew List (5 copies).
Private Property List of Crew (3 copies).
Same Bottom Cargo (3 copies).
Ship and Crew Currency List (3 copies).
Indian Coast Light Dues Receipt (if vessel arriving from Indian port).
Maritime Declaration of Health.
Customs Arrival Report.
Customs Declaration for arms, ammunition, etc.
Port Arrival Report.

PILOTAGE: Not required. Vessels anchor midstream.

NAVIGATION AIDS: *Veraval Lighthouse:* The lighthouse, in position Lat. 20° 54.6' N., Long. 70° 21.15' E., is a square masonary tower with semi-circular frontage towards the sea side, and rectangular towards land side, painted in alternate black and white bands. Height of tower 33.5 m. Height of light (centre of lantern) about 33.5 m. above NHWS. Range of visibility 26 km. Character of light – occulting white every 15 seconds, i.e. flash 10 seconds and eclipse 5 seconds. A signal horn is also sounded from the lighthouse structure as and when required. *Bhidia Beacon:* Located in position Lat. 20° 53.8' N., Long. 70° 22.9' E. The beacon is a square masonary structure, painted with red and white bands. The height of the structure is 20 ft. The range of visibility 4 miles. Character of the light is flash red every 10 seconds.

Both lights are maintained by the Lighthouse Department of the Government of India. In addition there are lights for guiding local movements at (1) Old Lighthouse, (2) Breakwater, and (3) Creek entrance. These local lights are maintained by the Port Department of the State Government.

ANCHORAGES: The port is well protected by a breakwater extending 1,600 ft. into the open sea with fairly deep water of about 8 to 9 fathoms. Deep draft vessels can anchor at a distance about 1.5 km. away from the shore. The holding ground is good, so deep draft vessels can anchor quite close to the port without any specific restrictions. Two anchorage positions are marked on Indian Chart No. 2050. The ships are supposed to wait there for their turn, as only 3 ships are worked at a time. A refer ship is worked at night as a 4th vessel. However, a maximum of 2 import ships only can work at a time.

Port working zones have been prescribed as A, B, C, D and E, and five points A B C D E are marked as under. From Arrival Anchorage Zone, ships have to move to the working zone and select any of the points A B C D or E, as convenient to them. Otherwise ship's work would not commence.

Anchorage	*Point*	*Position Lat./Long.*	*Depth approx.*	*Suggested for a vessel having draft up to*
1	A	20° 53' 27" N. 70° 22' 40" E.	11.50 m.	8.75 m. (28 ft. 00 in.)
2	B	20° 53' 20" N. 70° 22' 20" E.	12.00 m.	9.25 m. (30 ft. 00 in.)
3	C	20° 53' 03" N. 70° 22' 33" E.	12.80 m.	10.00 m. (32 ft. 00 in.)
4	D	20° 53' 14" N. 70° 22' 48" E.	11.00 m	8.25 m. (26 ft. 00 in.)
5	E	20° 53' 16" N. 70° 22' 33" E.	13.00 m.	10.25 m. (33 ft. 00 in.)

Point	*Veraval Lighthouse*	*Bhiria Beacon*	*Somnath Temple*
A	311°	030.5°	101°
B	321°	048°	094.5°
C	321.5°	027°	083.5°
D	312.5°	015.5°	088°
E	317.5°	034.5°	092°

The movement of lighters is constant as the harbour has water at all times, enabling constant cargo working.

Approaches to the port are also directly from the open sea with no tidal difficulties, or cross currents. Tidal rise is quite normal and negligible, from 5 ft. to 8 ft.

RESTRICTIONS: None, day or night anchorage possible.

MAX. SIZE: No restriction.

HEALTH: (a) Bill of Health is being granted by the Resident Medical Officer of the local Hospital.

(b) Free Pratique is granted by the Customs Boarding Officer, on presentation to him of "International Maritime Declaration of Health" by Master.

RADIO: Messages via Mumbai Radio or Kandla Radio.

TUGS: 4 tugs, 1×191 h.p., 1×270 h.p., 1×255 h.p. and 1×360 h.p.

VHF: Channels 16, 11, 12 and 14.

BERTHING: No berths for ocean-going vessels.

There are 4 lighter wharves for vessels working which can provide loading/unloading points, of which 4 have cranage facilities.

Barges: There are 27 barges with 100 tonnes capacity each and one water/cargo barge with capacity 100 tonnes.

Storage Facilities:

4 transit godowns – 1,600 tons capacity.
4 platforms – 4,000 tons capacity.
53 storage godowns – 50,000 tons capacity.

CRANES:

1 × 0.5 tonnes capacity at Wharf A.
1 × 0.5 tonnes capacity at Wharf B.
4 × 12.5 tonnes capacity mobile cranes.
1 × 5.0 tons capacity mobile crane.
1 × 75.0 tonnes capacity diesel crane.
1 × 80.0 tonnes capacity mobile diesel crane.

STEVEDORING: Particulars of ETA and labour gangs required well in advance. Average loading/discharging:

Loading bagged cargo oilcake, etc.	225/250 tons per hook per day
Loading GN oil in drums	150/175 tons per hook per day
Discharging fertiliser (bagged)	150/200 tons per hook per day
General cargo loading/discharging	150/200 tons per hook per day

Working Hours: Port working hours: 0800 – 1200 hrs. and 1300 – 1700 hrs.

Vessel working hours: Throughout 24 hours. Vessels are allowed to work during recess hours and during nights which are 1200 – 1300 hrs. (recess), 1700 – 1800 hrs. (recess), 1800 – 2200 hrs. (night – 1st half), 2300 – 0300 hrs. (night – 2nd half) and 0300 – 0800 hrs. (recess).

MEDICAL: Qualified doctors and hospital facilities.

TANKERS: No tanker berths.

FRESH WATER: Water is required to be obtained from port premises and is transported by port tank truck and being supplied by water barge or by tug to vessel on payment of transportation charges from port premises to shore and from shore to anchorage excluding cost of water.

FUEL: Not available.

CONSULS: None.

REPAIRS: Port is equipped with workshop and dry dock for minor repairs to tugs and barges. Minor repairs are carried out in town.

GANGWAY/DECK WATCHMEN: Not necessary unless required. Can be arranged through Agents.

OPENING/CLOSING HATCHES: Carried out by stevedores. Ships' derricks worked by crew.

CERTIFICATES:

Safety Equipment Certificate.
Load Line Certificate.
Safety Radio-Telegraphy Certificate.
Derat Certificate.
Ship's Registration Certificate.

REPATRIATION: Can be arranged.

AIRPORT: Nearest airport Keshod, 30 miles from Veraval, but motor transport not easily available and advance arrangements have to be made.

TIME: Local Time GMT plus 5.5 hours.

HOLIDAYS: On which work not allowed for loading/discharging: Indian Republic Day, Holi (Second Day), Ramnavami, Mohurram (Ashura or 10th day), Gokulashtami, Dussera Diwali (New Year's Day), Ramzan-Id (Id-ul-Fitr).

POLICE/AMBULANCE/FIRE: Police 3; Ambulance 5; Fire 5.

TELEPHONES: No arrangements for placing telephones on board the ship, but calls via VHF are possible.

SHORE LEAVE: Crews permitted ashore with permission from Customs and Port Authorities. While coming ashore and returning to ship crew should pass through Customs.

DELAYS: 3 ships can work and fourth vessel if for lifting frozen fish can work during night hours only. Fourth vessel other than frozen fish cargo wait in turn.

GENERAL: Closed for traffic between 15th May to 15th September every year due to monsoon season.

Charts: Plans of Kathinwar – Gulf of Kutch to Vijaydurg 2736. Plans of Veraval Port Roads No. 1321 and 2054.

DEVELOPMENTS: Veraval is being developed as an all weather fishery harbour working under the World Bank Project. There will be extensive facilities available at the Port. The existing breakwater is being extended by about 334 m. and another would be erected in opposite direction for about 3,200 ft. A minimum depth of water in the inner breakwater would be 17 ft. 6 in.

AUTHORITY: Office of the Port Officer – Veraval, Gujarat Maritime Board, Junagadh District, Pin. 362265. *Tel:* 20001 (office), 20956 (residence). *Telex:* 163-209 GMBV IN. *Contact:* Port Officer.

AGENT: See "Cochin".

VISAKHAPATNAM: 17.41 N. 83.18 E. (See Plan)

PORT LIMITS: 3 nautical miles East of and parallel to 10 fathoms line of soundings may be taken as the seaward boundary of the port within which a vessel is considered to be an "arrived vessel".

DOCUMENTS:

12 copies of Crew List.
3 copies of Stores List.
3 copies of Private Property List.
3 copies of Currency Declaration.
3 copies of Watch Lists, giving details of make and value, etc.

The vessel must possess following valid certificates:

Ship's Register.
Load Line Certificate.
Safety Equipment Certificate.
Safety Construction Certificate.
Safety Radio Telegraphy and Telephony Certificates.
Cargo Gear Test Certificate.
Safety and Survey Certificate.
Derat Certificate.
Last Port Clearance.

Also see "Shipmaster's Report" – June 1988.

PILOTAGE: Vessels generally anchor at roadstead where Pilots board. Signal station contacts all vessels arriving and advises all information about Pilot's arrival, etc. A minimum notice of 48 hours of vessel's ETA required. Pilot ladder to be rigged on the Starboard side.

ANCHORAGE: Anchorage position to be marked with Dolphin's Nose Lighthouse bearing 270° (T) at a distance of 1.5 nautical miles.

RESTRICTIONS: *Inner Harbour:* The Inner Harbour is open to ships of 193.55 m. LOA, 9.14 m. draft and 30.48 m. beam at all stages of tide and ships of 193.55 m. LOA with a max. draft of 10.05 m. on a minimum rising tide of 0.91 m. for arrival and draft of 10.21 m. for sailing. Vessels of LOA 175.26 m. and above with draft of 9.14 m. and above can enter during daylight hours only. There are no restrictions on account of night navigation for sailing of vessels from Inner Harbour.

Outer Harbour: Vessels with 270 m. LOA, 42 m. beam, 15.3 m. draft, can sail from the Outer Harbour "OB–1" and "OB–2" berths at all times. The draft for ships entering the Outer Harbour in loaded condition is 14.3 m. No tidal restrictions. The max. permissible draft at oil mooring is 14.3 m., and LOA 260 m.

Vessels of 60,000 d.w.t. and above can enter during daylight hours only. There are no restrictions on account of night navigation for sailing of vessels from Ore Berths No. I and II.

Mooring and unmooring of vessels at Oil Mooring is restricted to daylight hours only.

MAX. SIZE:

Inner Harbour:

Max. permissible LOA	193.55 m.
Max. permissible breadth	30.48 m.
Max. permissible draft	10.21 m.

Outer Harbour:

Max. permissible LOA	270 m.
Max. permissible breadth	42 m.
Max. permissible draft	15.3 m.

HEALTH: A separate radio Free Pratique message addressed "Quarantine Visakhapatnam" must be transmitted by all vessels arriving from foreign port not less than 4 hours and not more than 12 hours prior ETA.

On information furnished therein Port Health Officer grants Free Pratique. Pilot boarding the ship for bringing her into the harbour has superseding power to cancel radio Free Pratique already granted. However based on information contained in Maritime Declaration Pilot also grants Free Pratique. In case of doubt or in case of inspection, if necessary, Quarantine Officer boards ship for granting clearance. No necessity for vessel to obtain Free Pratique when the vessel arrives directly from another Indian Port.

RADIO: Radio station call sign VWV. Working round clock. Range about 600 miles during daytime and 1,000 miles during night. Better to use Madras Radio Station for all communications in respect of vessels arriving from Madras side. Vessels arriving from Calcutta side, use Calcutta Radio Station. Generally Visakhapatnam Radio station is used for vessels anchored at roadstead. VHF Channel 16.

TUGS: Tugs are available. For ships entering the port, the tugs wait in the lee of the breakwater. Ship's lines and/or tug's lines are used, depending upon the mode of making fast.

BERTHING: The Inner Harbour has 15 berths of which 11 are quay berths, 3 jetty berths and 1 mooring berth, while in the Outer Harbour, there are 2 ore berths and an oil mooring berth. No specific requirements of arrival times for berthing.

CONTAINER HANDLING FACILITIES: Container handling facilities are provided at Visakhapatnam Port.

These facilities include:

Priority berthing;

An earmarked regular quay berth with a draft of 10.06 m. and LOA 168 m.;

50,000 sq. m. open storage space;

3,000 sq. m. of covered storage area;

A 150 tonne floating crane with two 150 tonne flat top pontoons for overside operations;

A 50 tonne gantry crane in the container park;

Two 50 tonne crawler mounted mobile cranes;

Four 25 ton mobile cranes;

Fleet of forklift trucks with extended forks up to a capacity of 8 tons and Truck-trailer units.

CRANES: The Port has 6×10 tonne cranes, 6×6 tonne and 18×3 tonne quay cranes, one 30 tonne stationary electric crane and 1×150 tonne self-propelled floating crane in addition to various mobile equipment such as mobile cranes, forklifts, tractors and trailers and front end loaders.

BULK CARGO FACILITIES: Iron ore is loaded through a mechanical ore handling plant having a rated capacity of 8,000 tonnes per hour into ore carriers of 100,000 d.w.t., at the finger type ore jetty (OB-1, OB-2) in the Outer Harbour.

Fertiliser raw materials (i.e.) rock phosphate and sulphur on account of Coromandal Fertilisers are handled at the fertiliser berth in the bulk form by means of grabs and conveyors into a silo.

Grabs are also used for unloading fertilisers and other bulk cargoes at the Port.

SPECIALISED CARGO HANDLING FACILITIES:

Inner Harbour: *Fertiliser berth:* For the import of fertiliser raw materials vis. sulphur and rock phosphate by grab unloading on to a conveyor belt.

OR-1 and OR-2 Berths: For the handling of P.O.L.

EQ-1 and EQ-2 Berths: For the export of Manganese ore and other ores by semi-mechanical means. Portable flat belt conveyor system for handling bag cargoes.

Use of grabs for unloading bulk cargoes. Poclain Hydraulic excavator and front end loaders for handling bulk cargoes.

Outer Harbour: *OB-1 and OB-2 Berths:* For loading iron ore through a mechanical ore handling plant at a rated capacity of 8,000 tonnes per hour.

STEVEDORES: Agents must give proper notice of vessel's arrival to the stevedores not less than 48 hours to make necessary arrangements for working vessel and also to order sufficient gangs, etc.

MEDICAL: All crew and officers must possess individual international vaccination certificates against cholera before leaving this port for any foreign port. Cholera inoculation facilities available with 24 hours notice. Well-equipped hospital facilities available round the clock.

TANKERS: There are 2 berths in the Inner Harbour for discharging and loading oil. The max. permissible draft at these berths is 10.06 m. at HW. In the Outer Harbour, an oil mooring berth is available to accommodate tankers of up to 100,000 d.w.t. with a draft of not exceeding 14.3 m.

DENSITY: Fluctuates from day to day between 1020 and 1023.

FRESH WATER: Normal quantities available and delivery made by Port Trust both from shore and barges.

FUEL: Indian Oil Corporation and Hindustan Petroleum Corporation supply on request either through pipeline in some cases or by barges in other cases.

FIRE PRECAUTIONS: Fire precautions are to be observed in the port area. The Port has fire fighting equipment consisting of a fire float capable of combating fires afloat as well as ashore and 3 shore fire fighting units.

CONSULS: None.

REPAIRS: All types of deck and engine repairs possible.

DRY DOCKS: The Port has a dry dock which is 137.2 m. long and 18.4 m. wide for port craft and small ships. It has a depth of 5.6 m. below the low water.

Hindustan Shipyard Limited's services available generally for major ship repairs. It has a dry dock which is 244 m. long and 38 m. wide. It can take in ships of 70,000 d.w.t.

GANGWAY/DECK WATCHMEN: Necessary according to demands of local labour unions.

OPENING/CLOSING HATCHES: Stevedores.

CUSTOMS ALLOWANCES: Tobacco: 200 cigarettes per head per week. Wine and/or spirit: Asian Crew 2/5 units per 3 days. Non-Asian crew 4/5 units per 3 days. Bottle of liquor equals unit.

CARGO GEAR: Valid cargo gear test certificate must be on board all vessels using ships' gear for loading or discharging.

REPATRIATION: Facilities exist to foreign countries via Madras, Calcutta or Mumbai. About 3 days delay to obtain travel permit.

AIRPORT: Distance 14 km. Regular daily flights to Calcutta and Hyderabad by Indian Airlines Corporation.

SURVEYORS: Available.

TIME: Indian Standard Time GMT plus 5.5 hours.

HOLIDAYS: Port's closed holidays are: Pongal, Kanumu, Republic Day, Kotha-Amavasya, Vijayadasimi, Independence Day, Gandhi's Birthday and Nagulachaviti, when work not possible even on payment of overtime.

POLICE/AMBULANCE/FIRE: Police Station 62140; Fire Station 64841 – Ext 239; Ambulance 64841 – Ext 213 (Port Hospital), Ext 275 (Ambulance).

TELEPHONES: Arrangements exist for placing telephone on board.

SERVICES: Tank cleaning facilities available.

SHORE LEAVE: Crew members allowed ashore after receiving immigration permits.

IDENTIFICATION CARDS: Not needed if have valid Seaman's Books.

DEVELOPMENTS: A Fishing Harbour was constructed in a 24 hectare area as a by-product of the Outer Harbour. The first stage of the Fishing Harbour provides accommodation to 15 trawlers and 150 mechanised boats. The second stage of the Fishing Harbour can accommodate 56 trawlers and 300 mechanised boats.

A slipway facilitating 6 trawlers or 12 boats at a time for repairs is also constructed at the Fishing Harbour.

Construction of an oil berth to accommodate tankers of 150,000 d.w.t. in the Outer Harbour, provision of facilities for handling of import of coal, provision of facilities for export of Alumina and import of caustic soda, construction of a general/bulk cargo berth in the Outer Harbour to accommodate 60,000 d.w.t. vessels, construction of 2 warehouses of a total capacity of 30,000 tonnes, provision of third wagon tippler for the iron ore handling complex, addition of tugs and other floating craft and cranes and other cargo handling equipment are some of the principal developments.

SHIPMASTER'S REPORT: September 1983.

Documents: On boarding, Pilot hands Master Arrival Report (in duplicate) with 24 questions to be completed and handed back to Pilot before passing Dutch Battery. The questions relate to the vessel, certificates, cargo and voyage just undertaken and it is quite a lengthy document. Recommend copy should be obtained at previous port to have all completed for arrival.

For security reasons, all cameras must be collected prior to arrival and kept in the safe custody of the Master. Pilot gives Master a Declaration to sign that no photographs will be taken of the Port Area on arrival, whilst berthed, or on departure.

The Indian Authorities are presently having meetings to come up with a single Arrival Form for vessels, to end the present duplication of information between Port Authorities, Customs, Immigration, etc.

Pilotage: On departure, Agents make tentative booking of Pilot with Port Trust, vessel then to hoist International Code Flag 'G' 1 hour before departure.

Radio: Visakhapatnam Radio/VWV workable about 1 day out.

Health: Send Free Pratique message stating no persons embarked at Aden or Djibouti and that there are no monkeys on board. Pilot initially grants Pratique with stamp in Deck Log Book.

Tugs: Four tugs of 32 ton bollard pull available; for deeply laden large vessels passing into Inner Harbour, 2 are required, 1 made fast right ahead, the other made fast starboard shoulder. They are necessary for vessels to negotiate the bends in the Cutting. Tugs join in the Outer Harbour and there is little time to make them fast. Therefore, Pilot asks for Aft Mooring Gang to make one of these tugs fast, as they are not required aft until vessel is in the Turning Basin.

Medical: It is recommended that personnel have Cholera and Typhoid inoculations before arrival. Stocks of these vaccinations are not usually held locally unless there is an outbreak of the disease.

Density: Varies from 1018 to 1023 depending on season and recent rainfall.

Fresh Water: Delivered by barge, hoist International Code Flags 'Y' over 'J' 2 days before required.

Repairs: Below average standard of metal work/welding. Very little assistance and spares available in electronic area.

Opening/Closing Hatches: Automatic/hydraulic type are operated by ship's crew.

Surveyors: Lloyd's (exclusive), ABS, GL, NKK, Korean Register, International Cargo Gear Bureau NY (non-exclusive), also Nautical Inspector for Governments of Liberia, The Bahamas and Republic of Panama.

Telephones: No shore telephone was placed on board.

Services: Very few services available.

Shore Leave: Immigration permits/shore passes to be carried at all times issued for limited period initially.

Indian currency in notes of greater value than Rs 10/- (about U.S.$1 not permitted inside Dock Area.

Security: Local Watchmen not particularly effective and pilfering is rife. Make the accommodation block secure with only one controlled entry exit. Keep a strict watch over any items which cannot be removed secured.

SHIPMASTER'S REPORT: November 1984.

We presented Crew List (See Note 1), Passenger List, Stores List (Form 3), a Bonded Stores List (See Note 4), Drugs List (Morphine, etc.), Arms and Ammunitions List, comprehensive Customs List Form IV (See Notes 2, 3, and 5 below), Hidden Cavities Declaration List and Vaccination List.

Note 1: The Crew Lists must show Passport or Discharge Book numbers. Not interested in dates of birth. The Immigration Officials issue passes for all on board who wish to go ashore (or just a few blanks, if only 4 or 5 people want to go ashore). These must be returned to Agent before sailing.

Note 2: Endeavour to obtain correct forms prior departing for first Indian port. A complete set of 4 is required for all subsequent Indian ports visited. Ensure that *all* paper money is declared, whatever the amount. (Undeclared currency, cigarettes, gifts, etc. confiscated). Rummage squads are thorough. Also ensure that the term "Dress materials and personal effects" is entered in Column 12 with other listed items.

Note 3: Currency – it is a fine-carrying offence to take high denomination notes ie. Rupees 20, 50, 100 and above, out of the country. Agents usually supply cash in 10 Rupee notes** or less.

Note 4: It is advisable to carry minimum sufficient bonded and slop chest items.

Note 5: Ensure that vessel sails with "travelling copy" handed to Master prior sailing first port for second port and so on for multi-Indian-port calls.

** Where foreign currency is changed ashore, a proper 'encashment certificate' with serial number must be obtained and details of passport given at time of exchange. The jetty duty Customs Official must be informed on return to ship and a supplementary currency declaration form C.B.R. CUS419 filled out showing amount exchanged and new balance of foreign currency in your possession. Both forms must be retained by exchanging person.

Also on arrival, the Health Officials carry out a "Marpol" inspection. There are many arrival and departure forms to be completed, including comprehensive pilot information forms. Have some detailed prior arrival to complete same as they are time consuming. Obtain blank sets if trading regularly.

Marpol Inspection:

Government of India
Port Health Organisation
Visakhapatnam

Sanitary Inspection of the Ship under Rule 83(i) of the
Indian Port Health Rules, 1955.

Date of inspection: Nationality:
Name of the ship: No. of crew: /Passengers:
1. Yellow Fever Vaccination Certificate Valid/Not Valid
2. Derat/Exemption Certificate Date: Place:
3. Medical Chest Inspection Date: Place:
4. Rat guards affixed Yes/No
5. Probable date of departure Date: Place:
6. Anybody sick/hospitalised Yes/No
7. Nature of sickness Fever/Skin Rash/Diarrhoea
8. Any Provisions taken or likely to be taken from this Port Yes/No
9. Date of last cleaning of Water Tank Date:
10. Last Ports of Call within 30 days
1. Date: 4. Date:
2. Date: 5. Date:
3. Date: 6. Date:
11. General Sanitation:
Pantry Stores
Galley Crew Accommodation
Linen Room Lavatories and bath
Sick Bay
Vermin: Mosquitoes/House Fly/Rodents/Cockroaches
Garbage Disposal: On high seas:
Shore Disposal:
Sullage/Sewage and liquid waste disposal (S.W. system)
Holding Tank: Size: Numbers:
Treatment Plant (make and capacity): Size: Numbers:
Final disposal of Sewage
Liquid Wastes/Oily Bilge High seas/On shore disposal
Dirty Ballast Water
Mode of disposal C.B.T./S.B.T. disposal
Oil Water Separators (details): High seas/On shore
Potable Water (F.W. system) (Fresh Water) Date: Quantity:
Chlorination on board done/not done
Fresh Water Generator (Desalinisation Plant): Make: Capacity:
End Point Chlorination: Results:
Temperatures: Freeze room:
Dish washing water:
Remarks:
Signature of the Master:
Health Officer
Visakhapatnam.

Regulations: The taking of photographs in the harbour is not permitted. The placing of all cameras in the bond is advised, or a written notice posted.

SHIPMASTER'S REPORT: June 1988.

The Dock Safety Authorities inspect the certificates of each wire rope belonging to the ship's gear, regardless of the validity of the four yearly and one yearly Cargo Gear Inspection Certificates.

The above demand is valid at all Indian ports and if the certificates are not available on board, severe delays may arise with loading and discharging operations.

We also experienced very strict customs regulations. Using U.S. Customs Form 1301 for Ship's Stores Declaration, we had declared all listed items and ship's radios, tape recorders, T.V., video and adding machines.

We did not declare the ship's 4 washing machines and one of them was seized as it was still in its original packing and had not yet been installed in place of the damaged machine. After three days, we managed to obtain release of the machine.

In the past, sextants, binoculars, stop watches, etc., have been seized when they have not been declared.

SHIPMASTER'S REPORT: June 1994.

Iron Ore Berth loads at about 3,000 tonnes per hour.

There is no daylight restriction. Delay on entering/leaving port may occur due to harbour channel being occupied.

A watch for thieves must be maintained, especially at the anchorage. All ship's personal items should be declared in detail, making the list as comprehensive as possible.

At Ore Berths No. 1 and 2, the belt meter is not always reliable, and due to its excessive length, more cargo than ordered may be delivered because once it is loaded it has to be emptied into the ship's holds.

Provisions, laundry services and prices are reasonable.

Repatriation is difficult as there are no direct international connections, and formalities take a long time.

AUTHORITY: Visakhapatnam Port Trust, Visakhapatman 530035. Andhra Pradesh, India. *Tel:* 4841. *Telex:* 0495/235. *Cables:* Portrust. *Contact:* Harbour Master.

AGENT: See "Cochin".

NOTES

Please also advise Shipping Guides Ltd.

Indonesia

GENERAL – TANKERS

INTRODUCTION:

Situation:

The Republic of Indonesia comprises the islands of:

Sumatra : including Riau, Bangka, Belitung, Nias, Mentawai, etc.
Java and Madura
Kalimantan (Borneo) : including Tarakan, Bunyu, Laut, etc.
Sulawesi : including Kabaena, Muna, Buton, Peleng, Banggai, etc.
Maluku : consisting of Halmahera, Bacan, etc.
Bali
West Nusatenggara : consisting of Lombok, Sumbawa, Tanimbar, Buru, Seram, Kai, Aru, Babar, Wetar, etc.
East Nusatenggara : consisting of Sumba, Flores, Solor, Alor, Timor, etc.
Timor Timur
Irian Jaya : including Waigeo, Misool, Salawati, Biak, etc.

Laws:

The Laws of Republic of Indonesia are in force and all personnel, for their own protection, are urged to abide by them.

Languages:

The main language is Indonesian and the second language is English.

Territorial Waters:

The breadth of the sea claimed as territorial waters is 12 miles. Indonesia also claims sovereignty over all waters within the archipelago. Fishing jurisdiction is claimed to extend 200 miles from the base line.

Authority:

All harbours in Indonesia are under supervision of responsibility of the Government, i.e. Directorate General of Sea Communication, and to a great extent established as commercial harbours. Pertamina operate the dedicated oil and gas harbours/terminals on behalf of the Directorate General of Sea Communication under the Mutual Agreement Letter between the Director General of Sea Communication and the President Director of Pertamina.

Currency:

The monetary unit is the Rupiah (Rp) which is divided into 100 sens. Notes are issued in denominations from Rp.100.- to Rp.10,000.- and there are coins of 5, 10, 25, 50 and 100 Rupiahs.

Sailing Directions:

Refer to the "Eastern Archipelago Pilot Book".

Tidal Streams and Current:

The tidal streams and current can be found in "Tidal Stream Tables". These are published annually by the Indonesian Naval Hydro-Oceanographic Office (Jawatan Hidro-oceanografi Angkatan Laut Indonesia), Jl. Gunung Sahari No. 87, Jakarta, Indonesia.

Port Charges:

Company charges and Government charges such as service charges, light and harbour dues, agency fees, also berthing fees, pilotage fees, towage fees, etc., on application and are standard throughout Indonesian harbours.

Advance Payment:

The tanker Owner or Charterer must comply with the "Procedure for Appointing Agent". Pertamina Directorate for Shipping and Telecommunication will acknowledge receipt of cable appointment, and will request an advance deposit, depending on the size of vessel, to cover the Port Charges, not including Corporate Tax. In addition a sum of U.S.$5,000 to U.S.$10,000 is to be paid as advance payment for freight tax.

Advance payment should be made payable to:

"Pertamina Agency",
Account No. 11.51.006.000.0005,
Bank Negara Indonesia 1946, Cabang Gambir,
Jl. Kebon Sirih No. 77A,
Jakarta, Indonesia.

To facilitate handling preparation, Owners/Charterers are required to telex "Pertamina Directorate for Shipping and Telecommunication" advising Telegram Transfer (T.T.) Number, the name of vessel and the port(s) of call.

In those instances where payment exceeds the actual port charges, the balance will be credited to the Owners/Charterers account or remitted by the Agent.

Neither the Agent nor the Company will be responsible for demurrage or other charges resulting from failure to pre-arrange obligations in this manner. All cash advances required by crew and vessel at arriving port(s) such as ready cash for Master, expenses for repairs, provisions and repatriation will be covered by advance deposit of Owners/Charterers. These advance deposits are the pre-requisite for handling a vessel and should be forwarded to "Pertamina Agency" Account No. 31174, Bank Exim, Jl. Enggano No. 100, Tanjung Priok, Jakarta, Indonesia.

Safety and Fire Regulations:

Safety and Fire Regulations will be strictly adhered to. The Notice "Instructions in Case of Fire" and the Notice "Safety and Fire Regulations" must be posted in prominent positions onboard the vessel by the Master, or by his designated alternate.

Safety Check List:

The purpose of Safety Check List is to emphasise the safety requirements necessary to protect both ship and shore and the personnel involved in cargo operations during the time when the vessel is alongside the waterfront.

To assist all personnel in understanding the total requirement for each item in the Check List, extracts have been taken from the ISGOTT (International Safety Guide for Oil Tankers and Terminals) and the "Safety Guide for Terminal Handling Ships Carrying Liquefied Gases in Bulk" issued by OCIMF. It should be understood that before cargo operations commence, this Safety Check List is jointly checked by ship and shore/terminal personnel. It will nevertheless be necessary to carry out "follow-up inspections" during the vessel's stay alongside. This action is essential to ensure that acceptable safety standards are being maintained.

Prevention of Pollution of the Sea:

Owners, Masters, Agents and the operators of harbours/terminals are responsible to observe International Convention Laws of Indonesian Government Regulations concerning pollution of sea waters.

It is not permitted to pump dirty ballast into the water.

No oil or mixture containing oil shall be discharged into Indonesian waters from any vessel.

No refuse, garbage, waste matter, carcasses, substance of dangerous or obnoxious nature or trade effluent is to be discharged from any vessel into Indonesian waters.

Any fines imposed by governmental authority for pollution shall be for the vessel's account.

Removal of Wrecks:

Should any vessel or craft sink, or become an obstruction in any part of the Port, or approaches or the area of the submarine pipeline thereto, the Company shall be empowered and shall have the right to take steps it may deem necessary to remove the obstruction, without notice to the owners. All expenses of such removal shall be borne by the Owners of the vessel or craft, causing the obstruction, and the Company shall be entitled to reimbursement by them for any such expenses which it may incur.

General Holidays:

New Year's Day
Nyepi Saka Day
Good Friday
Ascension Day of Prophet Muhammad S.A.W.
Buddhist New Year (Waisak)
Ascension Day of Jesus Christ
Idul Fitri
Idul Adha
Independence Day (August 17th)
Islamic New Year (1 Muharram)
Birthday of the Prophet Muhammad S.A.W. (Isra'Mi'raj)
Christmas Day

APPOINTMENT OF AGENT:

General Agent:

Pertamina Direktorat Perkapalan, Kebandaran dan Komunikasi
Jalan Yos Sudarso 32-34, Tanjung Priok,
Jakarta Utara 14320, Indonesia.
Attention : Dinas Operasi Perkapalan/Keagenan
Jl. Merdeka Timur No. 1A,
Pertamina Building, 19th Floor,
Jakarta Pusat, Indonesia.
Mailing address : P.O. Box 327.
Cable address : Pertaminaship – Jakarta.
Telephone number : 3843806, 3816305, 3815397, 3816523.
Facsimile : 3843781.
Telex number : 44450, 45348.

Procedure for Appointing Agent:

Owners should appoint "Pertaminaship – Jakarta" as General Agent by cable or telex 2 weeks prior to attending the vessel at the oil harbour/terminal, (hereinafter referred to as "Shipping Company").

The Agent/Shipping Company will notify the Port Authorities one week prior to vessel's arrival.

Details of Cable/Telex:

The following information should also be given in the cable or telex to obtain Agency Permit for Flag Dispensation from the Directorate General of Sea Communication.

- Name and address of owners.
- Name of vessel and radio call sign.
- Flag.
- Port of Registry.
- DWT, GRT, NRT, LOA of vessel.
- Name of Master.
- Number of Crew.
- Last Port of Call and ETD.
- Quantity and grade to be loaded/discharged.
- Consignee.
- Estimated Time of Arrival (ETA in local standard time).
- Destination(s) after loading/discharging.
- Indonesian Ports of Call.

ARRIVAL PROCEDURE:

Flag Dispensation/Agency Permit:

Each foreign vessel entering Indonesian Ports must have requested and been granted Flag Dispensation/Security Clearance prior to its arrival.

General Agency Certificate:

The General Agency Certificate (Surat Keagenan Umum/S.K.U.) is a document issued by the Directorate General of Sea Communication stating that a certain authorised company in Indonesia has been appointed as the Ship's Agent (as a guarantor) and therefore this document is essential.

Health and Medical:

Vessels destined for an Indonesian port must send application for Provisional Free Pratique to the Quarantine Section, Department of Health, Jakarta, well in advance.

Vessels arriving at an Indonesian port without prior advice must first call at a first class Port of Entry for obtaining Free Pratique. The first class ports are: Belawan (Medan), Tanjung Priok (Jakarta), Tanjung Perak (Surabaya) and Ujung Pandang (Makasar).

Port Health Clearance is issued after vessel's arrival and is also valid for Departure Clearance. If Provisional Pratique is not granted a Port Health Officer will be provided.

Flags and Signals:

In accordance with practice in Indonesian Ports, by day, the Indonesian and the vessel's national flags must be flown as long as the vessel stays in port.

Display of Quarantine, Pilot, Immigration, Call Sign flags and other signals according to the International Code Signal Agreement on approach to the port must be maintained until Pratique is granted.

These signals are as follows:

Quarantine : Flag "Q" (sunrise to sunset). Signal lights red over white (sunset to sunrise). It is to be substituted by flag "QL/QQ" when the Port Health Officer has declared infected or suspected with a quarantinable disease.

Pilot : Flag "G". It is to be substituted by flag "H" when the Pilot/Mooring Master boards your vessel.

Immigration: : Flag "N" should be flown until the Immigration Officer boards your vessel.

Call Sign : To be flown until berthed and again when sailing.

During loading/discharging : During loading/discharging of oil, flag "B" must be displayed (at night, red signal light).

Notice of Readiness:

A tanker will be considered as "arrived" and Notice of Readiness will be accepted provided she is in all respects ready to commence loading/discharging.

Viz:

(a) from the time the Pilot/Mooring Master has boarded the vessel, or
(b) from the time of anchoring, when the vessel has anchored in the designated anchorage and has advised the oil harbour/terminal of the time of anchoring, or
(c) from the time a tanker within the anchorage area, awaiting the Pilot/Mooring Master's arrival, is required "not" to anchor.

Documentation:

Two days before arrival of vessel the ship's agent has to inform Port Authorities by completing appropriate forms. Copies of completed forms must also be submitted to the Port Administration, Harbour Master, Customs, Immigration and Port Health Service for preparation of services.

The Pilot/Mooring Master may berth the vessel on request of the ship's agent only after obtaining clearance from the above Port Officials.

Health Documents:

Maritime Declaration of Health Certificate.
Deratting or Exemption Certificate.
Vaccination Certificates (Cholera).
Health Book or Bill of Health.

Ship's Documents:

If arriving from a foreign port, the following documents may be required for granting Pratique. These documents are:

Certificate of Nationality.
Certificate of Measurement.
Certificate of Registry.
Certificate of Appliances (Cargo Gear Certificate).
Load Line Certificate.
Safety Equipment Certificate.
Ship's Construction Certificate.
Safety Radio/Telegraph Certificate.
Approved Letter of Compliance (International).
Oil Record Book and Certificate of Fitness (in case of gas and chemical carriers).

Harbour Master:

The ship's documents are then delivered to the Harbour Master with the following documents attached: Last Port Clearance, Crew List approved by the Immigration Officer and Light Dues Receipt if arriving from another Indonesian port. The Harbour Master submits a Harbour Report Form for the Master to complete.

The Harbour Master issues a Port Clearance at departure, provided clearance is also granted by the other governmental authorities. A Panamanian Port Clearance for Panamanian Flag vessels is not required at oil harbours/terminals.

Immigration:

The Immigration Officer requires copies of the Crew List and Passenger List (if any) and will check the Ship's Articles and the Passports of the crew.

Each crew member should be in possession of a Passport and Seaman's Book. Crew members having no Passport are required to carry a Seaman Identification Card (S.I.C.).

A re-entry permit from the country concerned is sufficient, if there is no Passport available.

Customs:

Vessels loading/discharging cargo have to get a Customs Permit. Copies of Bill of Lading, Cargo Manifest, Ship's Stores List, Personal Effects List and Crew List should be delivered to Customs and Port Administration.

It is most important that the lists concerning personal effects, stores and crew are completed with great care as the Port Authorities are liable to carry out a detailed check and any discrepancies can lead to heavy fines.

After the vessel is all secure, the Customs Officer will seal the stores. If arriving from a foreign Port, the Agent will prepare the General Cargo Declaration Form stating the cargo onboard the tanker and attaching appropriate Shipping Documents. If arriving from an Indonesian Port, the Form 5-B issued at the last Indonesian Port will be retained by the Customs and the Arrival Clearance is granted.

Ship's bonded stores will be sealed by the Customs Officials on arrival and will remain sealed until the vessel leaves Indonesian waters.

1. Ship's Stores:

Cigarettes, cigars, tobacco, matches, spirits, wine, beer, perfume, firearms, ammunition and possibly some other items have to be locked up under Customs Seal from time of arrival of vessel in Port until time of leaving territorial waters. Each person is allowed to bring in 200 cigarettes or the equivalent in grams of tobacco or cigars ashore without paying import duty. Special allowances are made for the Master under special circumstances.

2. Contraband:

The attention of Masters is called to the strict enforcement of Indonesian Regulations against smuggling and trading. Illegal possession of such items as narcotics, liquor, ammunition and similar weapons or other articles of contraband is subject to severe penalty and may result in prolonged delay of the vessel concerned if action is taken by the authorities. All precautions must be taken to prevent the violation of contraband laws. Masters are requested to inform the Ship's Officers and crews of the foregoing regulations pertaining to contraband, shore liberty, etc., and to be assured that all personnel completely understand.

COMMUNICATIONS:

Advice of Arrival:

It is important that all incoming tankers advise the oil harbour/terminal 72 hours and 48 hours before estimated time of arrival, giving the best estimate of ship's arrival at the oil harbour/terminal via cable and or telex. Changes in ETA must be notified thereafter.

Further ETA messages should be sent to the oil harbour/terminal when the tanker is 24 hours and 6 hours distant from the oil harbour/terminal and any other time, if any appreciable change occurs in the original ETA or those subsequent thereto.

Communication for Contacting Agent:

1. Tankers approaching the oil harbour/terminal should make initial contact on VHF Channel 16.

Masters are recommended to use this system on coming within radio range of Port Control, particularly when approaching the port, as if poor visibility exists the tanker's approach may not be observed. Attention to VHF communications may be the means of avoiding delay in berthing.

During berthing, the ship's radio will be under the sole control of the Master, and the terminal radios will be under the sole control of the Terminal Superintendent or his assistant.

Masters are reminded that if tankers are requested to anchor to await berthing, it is their responsibility to maintain constant listening watch on VHF Channel 16 to receive Terminal instructions. Any delay due to failure to maintain a constant listening watch on Channel 16 will be for the ship's account, and will not be included in Lay Time calculation.

For subsequent inter-ship communications within the oil harbour/terminal a "walkie-talkie" UHF Radio on Frequency 157.725 MHz will be used by the Pilot/Mooring Master. This frequency will not be used for general purposes, unless clearance is obtained by the oil harbour/terminal. This is required for safety reasons.

Should all radios on the tanker become inoperative, the emergency signal, i.e. continuous blasts on the ship's whistle will be sounded to notify the oil harbour/terminal of the radio failures. Upon hearing this signal from a tanker, the terminal will immediately stop loading/discharging until communications have again been re-established.

2. In the event incoming tankers are not able to contact the oil harbour/terminal on the foregoing VHF/FM Frequencies, or by HF/SSB, Pertamina maintains coastal radio stations located in Jakarta.

Pertamina Jakarta Radio, Call Sign PKI-2, may be contacted on HF/SSB on the following frequencies and during the following service hours:

Frequency (kHz)	*Hours* (GMT)	*Keep Watching* (kHz)
452	H24	500
8626	0200-0400/1000-1200 0500-0600/1400-1600 0700-0800/1700-2000	8363.2-8364.8 8372.8-8373.6
12980	0100-0200/1200-1400 0400-0500/1600-1700 0800-1000/2000-2200	12544.8-12547.2 12559.2-12560.4
4419.4 4425.6	0500-0600/0800-0900 1600-1800/2200-2400	4125.0 4131.2
6512.6	0000-0100/1200-1400 0300-0400/1800-2000 0600-0700	6206.2
8759.2	0100-0300/1100-1200 0400-0500/1500-1600 0700-0800	8235.3
VHF Channel 9, 16, 19	H24	Channel 16

Details of Cables:

The following information should be included in the cable:

Name of vessel and Radio Call Sign.
Cargo requirements.
Quantity of ballast loaded on passage/arrival.
Quantity of segregated/dirty ballast on arrival.
Draft on arrival (forward and aft).
Last Port of call.
Flange dimensions of vessel's manifold connection, if not to ASA Series 150 or equivalent.
Maximum loading rate and approximate topping-off rate.
If there is any sickness aboard, give whatever information is available as to the possible type of sickness.
Confirm that vessel has clean Bill of Health.

Any hull, bulkhead, valve or pipeline leaks on vessel which could affect loading/discharging or cause pollution.

Special conditions, difficulties, defective equipment or gear which could present special hazards or difficulties when mooring/unmooring or during operations.

Distance in feet/metres from the bow to vessel's loading manifold.

The following information should be included in the cable by LPG tankers:

Total cargo capacity in cubic metres.

Have any cargoes other than LPG been carried during last 3 loaded voyages.

Gauge pressure, top, bottom and mean temperatures of each cargo tank.

Maximum allowable relief valve settings for all cargo tanks.

Maximum Oxygen content by volume per cent of each inerted cargo system.

If tank purging required specify whether:
(a) Parallel or in Series.
(b) Liquid from shore direct to cargo tanks.
(c) Liquid from shore to deck tank to vaporisers to cargo tanks. State capacity of ship's vaporisers in tons of LPG per hour throughput.

If cooling down tanks is required, specify maximum cooling rate in terms of temperature reduction per hour and maximum temperature differential permitted between any 2 points in cargo tanks.

Available total capacity of ship's reliquefaction plant for each nominated cargo product.

Grade and quantities of any part cargoes or cargo residues and where loaded.

Are part cargoes to be commingled with refinery loadings.

Quantity of purge product required in addition to cargo requirements.

Type of ship's reliquefaction system, i.e. direct, cascade or other.

Capacity of ship's gas blowers to shore vapour return line in volume per hour at reference temperature.

For further information contact Pertamina Direktorat Perkapalan dan Telekomunikasi, 32-34 Jalan Yos Sudarso, Tanjung Priok, Jakarta, Indonesia. Attention: Biro Pelabuhan Sub Dit. PMK. Telephone: (Hunting lines): 494309 Ext. 217, 362, 363, 365. (Direct lines): 495402, 490323.

AMAMAPARE: 04.49 S. 136.58 E. (See Plan)

PILOTAGE: Not available. A Freeport Indonesia Master is available on request to assist the ship's Master with entering the channel.

NAVIGATION/APPROACHES:

Chart: B.A. Chart No. 3527.

Fairway Buoy: Buoy 'A' located in position Lat. 04° 55' 17" S., Long. 136° 42' 59" E. is the Fairway Buoy. Light is flashing white Morse 'A'.

Lighthouse: There is a new lighthouse to the West of the port.

Name	Aika
Visibility range	12 miles
Tower colour	White
Height of tower	30 m.
Light colour	White
Light characteristic	Gp.Occ.(2) 10 sec.

Harbour Passage: The distance from Buoy 'A' to the port is approximately 15 km. The channel is well marked by buoy and beacons. Width of channel is 1,000 ft.

Tides: Indonesian Tide Tables. Port used is Sungai Mimika/Muara (04° 43' S., 136° 27' E.). Lowest tide −0.3 m. Highest tide +3.3 m.

Approaches:

There is a sand bar between Buoys No. 3, 4 and 5, approximately 3 km. wide. The depth of water at the Bar is the controlling factor as to whether all of a specific cargo is loaded at the Amamapare Dock or partly offshore at Sea Buoy 'A'. Tides normally rise and fall every 24 hours. At low tide the water on the Bar is about 4.30 m.

If approaching the area on a clear night, lights in the mountains are visible due North of the Port. This is from the Freeport Mines and Tram area at 11,000 ft. elevation and can be seen from about 50 miles offshore.

On approaching the Port/Buoy 'A', call "Port Ampre" on VHF Channel 16 for further information.

MAX. SIZE: Vessels of 38,000 d.w.t. have docked to load concentrates.

Large vessels are normally topped-up outside the Bar at Buoy 'A'.

Also see "Cargo Handling Facilities".

RADIO/VHF: Dock Superintendent's office on VHF Channel 16.

Harbour Master's office on SSB radio – frequency 6215.0 kHz. Ore barge on same frequency when on ocean passage.

Office hours are 0800 – 0930 and 1630 – 1930 (local time).

Tugs on VHF Channel 16 and many SSB frequencies.

TUGS: 1×3,000 h.p. (Bollard pull 45 tons), 2×350 h.p. and 2×1,300 h.p.

Tugs are available throughout 24 hours to assist large vessels docking and undocking and to guide them in and out of the channel.

BERTHING: The wharf is about 600 ft. offshore and is parallel to the shore. It is well fendered with rubber tyres.

Length	942 ft.
Straight face	522 ft.
Height above LW	10 ft.
Depth at LW	9.2 m. (East end) 8.0 m. (West end and over a distance of 750 ft.)

CARGO HANDLING FACILITIES: *Bulk Cargo:* Vessels load copper concentrate from a conveyor and fixed shiploader at an approximate rate of 1,200 tonnes/hr. Weight of concentrate is approximately 175 pounds per cubic foot. Dust is not a problem as it has a 9% moisture content.

The shiploader can be raised and lowered but not moved. Ship's crew are responsible for shifting ship and changing of holds.

A loading plan should be telexed to the port at least 48 hours prior to arrival.

Large vessels are normally topped-off outside the Bar at Buoy 'A'. Cargo is delivered to the vessel by 2×2,500 tonne barges (additional barge of 3,500 tonnes to be delivered in May 1992) and loaded by ship's electric hydraulic grabs at a rate of 200 tonnes/hr. in good weather.

General Cargo: Flat top barges available for transhipment of cargo and fuel. A 100 ton non self-propelled barge crane and 4 ton forklift trucks available for cargo handling. Workboats and speedboats available for transporting workforce throughout 24 hours. General cargo handling rate is approximately 1,000 tonnes/day.

FRESH WATER: Available in emergency cases only.

FUEL: Available in emergency cases only.

TIME: GMT plus 9 hours.

GENERAL: *Immigration:* Rp. 200 per man fee upon docking of ship.

Customs: Inspection and clearance normally takes about 1 hour to 2 hours.

Harbour Master: Available.

Police/Security: Available.

Handling Agents: Not available. Freeport Indonesia handle all general cargo, explosives and fuel. Freeport Indonesia personnel operate general cargo cranes and other equipment.

Stores: Limited stores and provisions are available. They are sold on emergency basis only.

SHIPMASTER'S REPORT: October 1993.

1. Ship's echo sounder confirmed minimum Sea Bar Chart Datum depth of 4.5 m.
   According to local information, the Southern part of buoyed channel within area of Sea Bar is most desirable, so vessel should steer almost in line with Buoys No. 3 and No. 5 when passing bar.
2. General Anchorage (North of Buoy No. 10) with minimum depths 9.0 m. is very large in comparison with other anchorages close to port, and it is best to wait for high tide.
3. After passing Sea Bar, vessel radios this fact to Port Amamapare on VHF Channel 16.
   In case of topping-off outside the bar at Buoy "A", there is a signal for barge(s) to proceed to vessel.
4. There are 3 barges to deliver cargo to the vessel: 2×2,500 tonnes and the new 3,500 tonne barge "Kamora".
   Motor barge "Kamora": Modern, one box-shaped hold barge with bow thruster, well protected with 3 Yokohama fenders, length 71.0 m., breadth 16.0 m., hold 36 m. × 12.5 m. (all data approx.), manned by experienced crew.
5. Rolling of barge due to swell considerably disturbs delivery of the cargo. Because of the very short outreach of cranes (big fenders, breadth of the barge), after discharge "half side of cargo", the barge has to reberth herself.

SHIPMASTER'S REPORT: April 1994.

The following is an update on the Report dated October 1993 (See above).

1. Unlike first time berthing with 6 shackles on port anchor chain, other guider (Pilot) used one shackle on port anchor only for swinging and then heaved it up after all lines fast at the wharf. This method of berthing (with one shackle only) is simple and additionally unberthing without heaving-up long cable is much more convenient.

2. During loading operations at dock, the foreman is always available on VHF Channel 9 (Call "Scale House"). He provides all useful information (e.g. quantity of cargo loaded at given moment).

3. When shifting the vessel at wharf, due to fixed shiploader, it is necessary to change/transfer mooring lines to other bollards, but owing to a lot of hands/stevedores engaged, it is carried out quickly and safely.

There are 2 small pusher tugs (used for swinging when approaching wharf) on stand-by. Tugs on VHF Channels 16/9.

4. New wharf for dry cargo vessels is soon to be ready.

5. Three barges deliver cargo of copper concentrates (topping off-shore):

"Ajkwa"	2,500 tonnes.
"Otomona"	2,500 tonnes.
"Kamora"	3,500 tonnes.

All barges have one box shaped hold.

Dimensions of the hold ("Ajkwa" and "Otomona"): 33 m. × 10 m.

6. Some observations on Amamapare:
   (a) The minimum of depth is observed between Buoy No. 3 and pair of Buoys No. 4 and 5 (Western part of this stretch).
   (b) For safety, all loading calculations and times of passing Sea Bar are checked by Harbour Master and Port Superintendent of Amamapare on the basis of Chart Datum 4.3 m. and Indonesian Tide Tables for Sungai Mimika (Muara), situated 20 miles North-Westerly, but analysis of depth when passing Sea Bar (6 observations – 3 under ballast and 3 when laden) testify that Chart Datum is not less than 4.5 m.
   (c) There is a precise plan for passage of the fairway from Sea Buoy "Alpha" to Amamapare port, distributed to ships by Port Superintendent.
   (d) Due to scale and frequent corrections on B.A. Chart No. 3527 and owing to considerable changes of Chart Datum, predictions of H.W. for Aika (situated 5 miles North-Easterly of Sea Bar) taken from B.A. Tide Tables has no navigational value when passing buoyed fairway from Sea Buoy to Amamapare Dock.

SHIPMASTER'S REPORT: January 1995.

Pilotage: Pilot station position: Lat. 04° 55' S., Long. 136° 40' E. (0.5 miles from 'A' Buoy).

Operator: P.T. Freeport Indonesia Co., Amamapare, Irian Jaya, Indonesia. (P.O.Box 516, Cairns, Queensland 4870, Australia). Tel: (62) 0979 540 7900. Telex: (073) 46703. Fax: (62) 0979 540 7970 or 4470.

Messages should be addressed for attention of Captain S. Rizal.

Communications: Advance notices were given by telex to Agents, and direct to Freeport Indonesia.

The advance loading plan was sent by telex direct to Freeport Indonesia. Communications to the vessel were from the Agents.

On approaching the 'A' Buoy, VHF contact was established with Port Amamapare and anchoring and pilotage information passed to the vessel.

Requests for arrival draft reduction were received from Agent.

Amamapare is a little off the beaten track and although telephone, telex and fax facilities are available, mail will take a long time to arrive.

Approaches: Using B.A. Chart No. 3527, Edition 20.5.88, with corrections to 1993(671), was not easy as the buoys are not in the positions as charted, and also are not correctly described on the chart. For more accurate positions see plan (See "Plan Section").

Tg. Aika Light structure (Lat. 04° 52.45' S., Long. 136° 44.75' E.) is not easily seen by day, and at this time would have been even more difficult to see at night, as it was found to be unlit.

The Racon 'O' on 'A' Buoy was not seen on approach, but on departure was found to give one weak flash on the 3 cm. radar at infrequent intervals.

A band of discoloured water, extending about 7 miles offshore and which looked far more solid than it was subsequently found to be, did not increase confidence in a safe arrival.

All positions on approach, both visual and radar, were checked by G.P.S.

Anchorage: Anchorage recommended was 0.5 miles from 'A' Buoy in about 36 m., and is used for vessels awaiting tides to enter and for vessels topping-off with cargo loaded from barges.

The anchorage is exposed to N.W. and Westerly winds which are prevelant in January (Pilot charts indicate December to February), creating a short swell off the entrance and will cause long delays in topping-off, due to vessels and barges being unable to work.

One vessel topping-off with 2 barges alongside reported that it had dragged anchor and had to cease loading in a N.W.'ly wind with Force 5-6, which had steadily increased from mid-afternoon and died out with the first rain shortly before midnight on 2 successive nights (The swell on the 2nd night was worse than first).

Pilotage: Pilotage is reported not to be available. However, the tug's and barge's Masters join vessels entering and leaving and are referred to as 'Guides'.

The guide on this occasion is reported to attend most of the vessels arriving and sailing, and did an excellent job of piloting and berthing the vessel inwards and outwards, but did not seem to fully appreciate the effects of a strong beam wind on a large vessel at light draft when making a lee for embarking and disembarking.

Largest Vessel: Largest vessel reported to have visited the port was LOA 198.8 m. with beam 32.4 m.

Tides: Heights and times are taken from Indonesian tide tables for Sungai Mimika (Muara) in position Lat. 04° 07' S., Long. 163° 05' E., and reported to have a lowest of −0.3 m. and highest of 3.3 m. above Datum.

Tides are once a day, and high water neaps as low as 1.6 m. have been predicted.

Entrance Bar: There is a sand bar with its shallowest depth between Buoys No. 3 and No. 4/5, about 1 mile. The depth is reported to be 4.3 m. at lowest tide.

Observations with the echo sounder entering and leaving the port are recorded in the following tables.

On both occasions, strong N.W.'ly winds and a short swell were experienced when crossing the bar.

Position	*Date*	*Time*	*Draft* (m.)	*Least UKC* (m.)	*Total Depth* (m.)	*Pred. Tide* (m.)	*Datum Depth* (m.)
Buoy No. 3	25.1.95	2230	5.71	1.0	6.71	2.05	4.66
Buoys No. 4/5	25.1.95	2241					
Buoys No. 4/5	26.1.95	2241	6.22	0.9	7.12	2.20	4.92
Buoy No. 3	26.1.95	2241					

A table of depths on the bar is attached (See "Notice").

Directions for the Marked Channel: (See "Plans").

Buoy 'A' to Concentrate Loading Pier is 11.5 miles. Channel width is 1,000 ft. (304.8 m.).

The guide will call on VHF Channel 16 when approaching the vessel and boards from a small harbour tug which will precede the vessel into port as an extra guide.

Expected time of boarding will be advised on anchoring and will be updated by VHF.

Time of entering depends on the vessel's draft, and this will be confirmed over VHF.

Weigh anchor in sufficient time to manoeuvre to make a lee for the Pilot to board.

Passage over the bar is at dead slow speed, and it is recommended to keep as close as possible to Buoy No. 3. After passing Buoys No. 4/5, speed can be increased as the depth increases.

The instruction to pass close to Buoy No. 3 may have been taken too literally by someone in the past, as on 25th/26th January 1995 the buoy was unlit but was easily picked-out with the Aldis lamp from the bridge.

From Buoys No. 4/5, the range 'A' leading lights mark the mid-channel, and it is advisable to keep close to Buoy No. 6 to avoid the drying patch on the starboard side. A strong set and leeway may be experienced between Buoys No. 4/5 and Beacon No. 8, particularly with N.W.'ly winds.

Beacon No. 8 has been moved from its original position, and the course to Beacon No. 10 is as indicated on the plan.

From Beacon No. 10 to Beacon No. 11, Range 'B' leading lights mark the mid-channel.

From Beacon No. 11 to Beacon No. 13, the course is as per plan.

From Beacon No. 13 to Beacon No. 12, Range 'C' leading lights mark the mid-channel.

The positions of Range 'C' lights are doubtful as they are shown differently on various versions of the plan, but course as shown.

Speed will be reduced from Beacon No. 13 and engines stopped at about Beacon No. 12, and only used after that to maintain steerage way.

If crossing the bar at H.W., the current off the berth will probably be setting to the West and vessels will generally berth port side to.

With a current setting Easterly, vessels will turn on the anchor with tug assistance, off the berth, and go alongside starboard side to. The guide (Pilot) is advised on approach which way the current is setting.

Two tugs will be in attendance from Beacon No. 12, and when stopped level with the berth will push on the starboard bow and quarter to put vessel alongside. The engines only being used to maintain position abreast the berth.

The starboard anchor should be ready and, if used, let go to 2 shackles and slacked if required to get alongside.

Holding ground is reported to be poor. The anchor should be brought home when securely moored.

The tugs will also help to maintain the vessel's heading by pushing if required during the approach.

First line ashore will be a headline lowered to a mooring boat, followed by a stern line using the same boat.

Navigation Marks: Well maintained by Freeport, only Buoy No. 3 light being inoperative and Buoy 'A' Racon poor.

The buoys and beacons are all green with green lights to starboard and red with red lights to port when entering.

Leading beacons are white or orange lights.

Tg. Aika Light, which is not maintained by Freeport, was unlit.

Berth: The mine pier for loading copper concentrate is a 'T' pier on piles with length overall 942 ft. (287.1 m.), with a straight face at the centre of 522 ft. (159.1 m.).

Good fenders of timber with MD rubber absorbers inside and faced with large tyres outside are fitted .

Height above water at LWS is 10 ft. (3.0 m.).

Depth alongside at 0.0 m. tide is 8.0 m. at the far West end and 9.2 m. at the East end.

Tugs: There are 4 tugs available, 2×350 h.p. and 2×1,300 h.p., and they are available 24 hours to assist vessels to and from the dock and to guide vessels in and out through the channels. (Editor's Note: A new tug of 45 tons bollard pull also available – arrived after Master's Report).

All are fitted with VHF Channel 16 for contact.

Clearance: About 10 Officials board with the Agent, and require standard papers for Indonesian ports, as well as some local papers required by Freeport.

A Customs search of accommodation and stores is carried out which will take 2-3 hours.

Electrical equipment and excessive items of personal effects will be removed and put under seal, even though declared.

Access to the Vessel: By an open cage which is available on the pier by the loader and is used on the ship's cranes to bring officials and visitors on and off.

Security: No problems were experienced with theft or unauthorised visitors onboard. Security in the area is good, and this can be considered a safe port.

The precautions of welding up the access to the forecastle stores was taken before arrival which upset the Customs, but they accepted that if they could not get in, it was unlikely that we would be breaking in to dispose of our stores.

Loading Operation: (See "Freeport" instructions, last item in Report).

The copper concentrate weighs 175 lb./cu.ft. or 2.803 tonnes/cu.m. or 0.357 cu.m./tonne.

Loading is on a 24 hour basis and will commence as soon as possible after berthing and hold survey.

Loading at a rate of up to 1,200 tonnes/hr. is from a fixed loader and the vessel has to be shifted between holds by ship's crew.

The airdraft is satisfactory for vessels with side opening hatch covers at ridiculously light draft.

The loader can move in the athwartship's direction to distribute the cargo, but the ship must be moved for fore and aft distribution.

Shifting of the vessel with the loader over the ship is not permitted, so any fore and aft distribution results in stopping loading. The loading arm will be removed and secured before the vessel can be moved. On completion of the shift, loading will resume.

Ship's staff are responsible for distribution of cargo in the holds and for this purpose, communication with the loading personnel is by VHF Channel 9. The ship's staff are also responsible for advising on athwartship's distribution to avoid listing.

No trimming is carried out other than by movement of the vessel and athwartship movement of the loader.

The loading personnel do not come onboard, except for pre-loading hold survey, but are friendly and flexible in their operation.

Moisture Content: Reported to be about 9%.

Certificates for flow moisture point and transportable moisture limit were put onboard on completion of loading in spite of requests through the Charterers before arrival and to the Agent on arrival that a certificate was required before loading.

The certificate, when received, did not give the moisture content but only certified that it did not exceed the limits.

The cargo was quite dusty and at the reported 9% content is well below the TML of 10.65.

Cargo Papers: This vessel completed loading just in time to sail and catch the tide on the bar. The papers were put on board as the vessel left the berth and signed on passage down river. They were checked by the guide who takes the shore copies off with him when he disembarks.

Any discrepancies can be sorted out through the guide over the VHF.

Limiting Draft: Around 6.2 m. (See "Tides and Entrances Bar" tables). Vessel due to load to a deeper draft will be topped-off at the outer anchorage using ship's gear and personnel to load from barges. Three motorised barges are available, 2×2,500 tonnes and 1×3,500 tonnes, to transport the cargo to the anchorage. It is reported to take about 6 hours for an empty barge to go to the dock, load and return to the anchorage.

A loading rate of about 100 tonnes/hr. per crane can be expected, but see remarks in "Anchorage".

It is not clear if grabs can be supplied from ashore, but it would seem that ship's grabs are required.

General Cargo: Flat barges are available for working general cargo, each 150 ft. × 50 ft. × 10 ft., as well as a non-self-propelled barge crane with 100 ton capacity and forklift trucks of 4 ton capacity.

Explosives Anchorage: Any ship loaded with explosives is to anchor only in the Explosive Anchorage Area. Harbour Officials, Immigration and Customs will board explosives ships only in this area.

Stores, Provisions, Fuel and Fresh Water: Only available on an emergency basis and reported to be limited.

Some local produce may be obtained on a barter basis from passing canoes, but no indication was given that this was officially approved.

Notice:

Depth of Bar measured at 00 decimeters lowest low water 15 ft. 01in. or 4.60 m. between Buoy No. 3 and Buoys No. 4/5.

Tide decimeters	*Depth* (ft.)	(in.)	*Depth* (m.)	*Tide* decimeters	*Depth* (ft.)	(in.)	*Depth* (m.)
00	15	01	4.60	23	22	06	6.90
01	15	04	4.70	24	23	00	7.00
02	15	07	4.80	25	23	03	7.10
03	16	01	4.90	26	23	06	7.20
04	16	04	5.00	27	24	00	7.30
05	16	07	5.10	28	24	03	7.40
06	17	01	5.20	29	24	06	7.50
07	17	04	5.30	30	24	09	7.60
08	17	07	5.40	31	25	03	7.70
09	18	00	5.50	32	25	06	7.80
10	18	04	5.60	33	25	09	7.90
11	18	07	5.70	34	26	02	8.00
12	19	00	5.80	35	26	06	8.10
13	19	04	5.90	36	26	09	8.20
14	19	07	6.00	37	27	02	8.30
15	20	00	6.10	38	27	06	8.40
16	20	03	6.20	39	27	09	8.50
17	20	07	6.30	40	28	02	8.60
18	21	00	6.40	41	28	05	8.70
19	21	03	6.50	42	28	09	8.80
20	21	07	6.60	43	29	02	8.90
21	22	00	6.70	44	29	05	9.00
22	22	03	6.80	45	29	09	9.10
23	22	06	6.90	46	30	02	9.20

While the above is believed to be accurate to the best of our knowledge, Freeport Indonesia cannot guarantee the accuracy or continued accuracy of the above table, the accuracy of the following tide charts or the channel information in the Tipoeka River.

Based on Information available. Accuracy not guaranteed.

Loading of Copper Concentrate Procedures for Ore Ship/Dockside Loading:

(A) Master should fill loading plan form prior to commencement of loading.

(B) Master/Officer should supervise stowage of concentrate in the hold during dockside loading, and inform of any change of stowage to Amamapare Office by VHF Channel 16 to confirm with the dockside loading Supervisor. Amamapare Office station on VHF Channel 16 is on stand-by for 24 hours during ship loading progress.

(C) There is no trimming of the ore after completion of loading in the hold.

(D) If any special instruction required from the ship's Master regarding loading plan he should inform Amamapare Office by Channel 16.

(E) For safety reasons, shifting of the ship should commence after the shiploader boom is completely up and in the locked position. The dockside loading Supervisor will inform the ship's Master/Officer on duty when the shiploader boom is completely locked.

(F) To control listing of the ship during loading, it is required that the ship's Master/Officer on duty be fully responsible. The movement of the ship loader's shuttle is ship's port side and starboard side is to be done only under instruction from the ship's Master/Officer on duty.

(G) If any stoppage of loading is required by the ship's Master, he should inform the Amamapare Office, the reason for the stop and duration.

(H) Ship's Master/Officer on duty should control the tightness of the mooring lines at all times, especially on lowest tide to avoid shifting of the ship's position, since it may cause the shiploader boom to make contact with the ship's crane or others.

(I) Ship's Master/Officer should provide suitable gangway or ladder to allow Port Authority to come on board after the ship is moored alongside dock.

(J) Ship's holds should be ready for inspection after the ship is completely alongside dock.

(K) If remaining cargo is to be topped-up offshore, the ship should load on board by ship's crane, 4 sets of Yokohama fenders and two bobcat loaders, which was prepared by shore crew on main jetty.

Port Superintendent.
P.T. Freeport Indonesia Company.

AUTHORITY: Freeport Indonesia Inc., Amamapare, Irian Jaya, Indonesia. *Contact:* Captain S. Rizal, Port Superintendent (Tel. 5260).

New Orleans office: *Telex:* 46703 Freetpe LA. *Fax:* (504) 582-1835.

AMBON: 03.41 S. 128.10 E.

DOCUMENTS:

14 Passenger Lists.
7 Crew Lists.
2 Customs Documents.
2 Health Documents.
7 Cargo Manifests.
7 Bills of Lading.
5 Ship's Papers.
Sailing Permit.

PILOTAGE: Compulsory. Apply for pilot boat by calling Ambon Coast Station (Ambon Radio) or fly "G" Flag. Pilot boat located at Ambon Bay. Entrance in all seasons and weathers. All parts of Ambon Bay suitable for anchorage to await Pilot.

ANCHORAGE: 03° 40' 04" S. 128° 10' 02" E. or 03° 40' 56" S. 128° 10' 48" E. Areas of anchorage can take all sizes of vessel.

RESTRICTIONS: Open 24 hours. Tides do not affect entry. But when entering at night ship must anchor and await orders.

MAX. SIZE: Max. draft 11.0 m.

HEALTH: Port Health Officer boards vessel together with Pilot.

RADIO: Ambon Coast Radio, call sign PKE. Operating 24 hours. Frequencies 500–470 kHz, 8473 and 8472-8799 kHz and 13101 kHz. VHF all Channels used.

TUGS: Normally tugs do not join vessel but when necessary to use tugs call PT "Dock Waijame".

BERTHING: Yos Soedarso Pier: Length 187 m., breadth 35 m., depth 7.5 m. – 12.5 m. Wainitu Pier: Length 100 m., breadth 20 m., depth 8 m. Halong Navy Pier: Length 153 m., depth 11.0 m.

CRANES: Mobile cranes, capacity 5 tons – 40 tons.

STEVEDORES: Agent arranges. 3 stevedore companies: PT. "Gotong Rojong", PT. "Mastra" and PN. "Varuna Tirta Prakarsa".

MEDICAL: Hospital facilities available. No advance notice required.

TANKERS: Berth at Wainitu Pier. Type of pipe, 6 in. and 8 in. Discharging capacity, 125 t.p.h.

FRESH WATER: Available only at Yos Soedarso Pier. Loaded by pipeline with 25 t.p.h. capacity.

FUEL: Only diesel and marine fuel.

CONSULS: No consuls available locally.

REPAIRS: Deck and engine repairs available. Floating dock, lifting capacity for 2,000 d.w.t.

SURVEYORS: Available.

GANGWAY/DECK WATCHMEN: Deck watchmen needed, particularly for tankers.

OPENING/CLOSING HATCHES: Carried out by stevedores.

CUSTOMS ALLOWANCES: Cannot be held out of bond.

REPATRIATION: Possible. Dealt with by Immigration through Jakarta.

AIRPORT: Distance from airport about 7 miles. Regular airline Garuda Indonesian Airways (GIA). 4 flights per week from Ambon to Jakarta.

TIME: Local time GMT plus 10 hours.

HOLIDAYS: Port open for 24 hours even in holidays.

POLICE/AMBULANCE/FIRE: Police and Port Health at Port. But when necessary to use fire brigade call by connecting to "Burgomaster".

SHORE LEAVE: All crew members allowed ashore with permission of Immigration.

IDENTIFICATION CARDS: Needed by Immigration (landing permit).

DEVELOPMENTS: Plans for future developments dependent on Government expenditure.

AUTHORITY: Ambon Port Administration.

ANOA MARINE TERMINAL: 05.14 N. 105.36 E.

(See Plan)

LOCATION: The Oil Field and Marine Terminal are located in an area of the South China Sea known as the Natuna Sea, about 140 miles North of the Anambas Islands. It is within Indonesian territorial waters but only 2 miles East of the Malaysian/Indonesian border. (Consult relevant Hydrographic Office, Notices to Mariners and Admiralty Chart and publications for exact locations and navigational information).

Description: The Anoa Marine Terminal is a purpose built Floating Production Storage and Offloading vessel (FPSO) the "Anoa Natuna", of 77,292 (M) d.w.t. permanently moored, via a forward turret and swivel assembly and catenary anchor leg mooring chains, to the sea bed. The turret and swivel assembly allows the vessel to weather vane and connects via flexible riser hoses to the subsea PLEM (pipeline end manifold). Produced crude oil and gas from the adjacent production platform flows to the vessel through 8 in. and 6 in. subsea pipelines respectively.

An export tanker is moored in tandem to the stern of the FPSO and cargo is transferred through a single 16 in. floating hose which terminates in a 12 in. ASA quick release manifold connection. Total crude oil storage capacity of the FPSO is 550,000 barrels. The export system is designed to handle parcel sizes up to 400,000 barrels.

Oil Production Platform: The oil production platform is located in 73 m. (250 ft.) of water and receives production from as many as 15 wells. The platform is a four legged, piled structure rising to an elevation of 30 m. above sea level. First stage separation and crude oil stabilisation is carried out in the process train on the platform which accommodates 12 people.

FPSO: The "Anoa Natuna" is located in position Lat. 05° 13.3' N., Long. 105° 36' 22" E., in 73 m. (250 ft.) of water. Crude and produced gas is received from the platform via 8 in. and 6 in. subsea lines respectively. Final processing, stabilization and storage of the crude oil is performed onboard. The FPSO of 77,292 (M) d.w.t. has a length overall of 182 m. and a loaded draft of 14.3 m.

PORT LIMITS: *Terminal Limits:* A prohibited area is established bounded by the following coordinates:

	Latitude	*Longitude*
Point "A"	05° 12' 51" N.	105° 36' 23" E.
"B"	05° 13' 55" N.	105° 35' 16.5" E.
"C"	05° 14' 17.5" N.	105° 35' 39.3" E.
"D"	05° 13' 13" N.	105° 36' 45.5" E.

Restricted Area: A restricted area surrounds the prohibited area, bounded by the following coordinates:

	Latitude	*Longitude*
Point "D"	05° 11' 54.5" N.	105° 36' 23" E.
"E"	05° 13' 55" N.	105° 34' 19" E.
"F"	05° 15' 14.5" N.	105° 35' 38.4" E.
"G"	05° 13' 13" N.	105° 37' 43" E.

Anchoring is forbidden within the restricted area above. Vessels cannot enter the prohibited area without a Company Mooring Master onboard.

DOCUMENTS: *Clearance:* Indonesian Immigration, Customs and Harbour Master officials will board the vessel after arrival to perform Inbound Clearance procedures. Each export tanker must have requested and been granted flag dispensation prior to its arrival. At the same time, application is made for Provisional Pratique through the Directorate of Quarantine and, if granted, cable advice is sent to the Harbour Authorities. Port Health Clearance is issued prior to vessel's arrival and is also valid for Departure Clearance. If Provisional Pratique is not granted a Port Health Officer will be provided.

All of the foregoing is arranged through and by the Agent.

Each crew member should be in possession of an International Vaccination Card. The Agent prepares the ship's Documents Check List Form to check the validity of each document.

These documents are:
Certificate of Registry.
Ship's Safety Construction Certificate.
Load Line Certificate.
Life Saving Equipment Certificate.
Safety Radio/Telegraph Certificate.
Cargo Gear Certificate.
Deratisation Certificate or Deratisation Exemption Certificate.

The list is then delivered to the Harbour Master with the following documents attached:
Port Clearance from last port (original).
8 copies Crew List.
Passports of all crew (originals).
3 copies Personal Effects List.
3 copies Stores List/Bonded Stores List.
3 copies Drugs List.
3 copies Ammunition List.
3 copies Cargo Manifest.
3 copies Ship's Particulars.
Light Dues Receipt if arriving from another Indonesian port.

The Harbour Master issues a Port Clearance at departure provided Clearance is also granted by the other Governmental Authorities.

The Immigration Officer requires 2 copies of the Crew List and will check the ship's articles and the passports of the crew. When these documents are found to be in order, an Arrival Clearance will be marked on the Crew List.

If arriving from another Indonesian port, the Agent will sign a guarantee if the vessel cannot prove that Light Dues have been paid.

Also see "Customs".

PILOTAGE: The Mooring Master will board incoming tankers in the anchorage area or other agreed location.

ANCHORAGE: *Approach to the Anchorage/Mooring Master Boarding Area:* When within VHF communication range, Masters of export tankers should confirm berthing prospects with the Terminal.

Should it be necessary to anchor, then vessel should proceed to the recommended tanker anchorage area which is within a circle 0.75 miles in diameter with its centre located in position Lat. 5° 12' N., Long. 105° 38' E., to the S.E. of the Restricted Area.

Arrival at Pilot Station/Anchorage: Means of access to the vessel by the Amoseas Mooring Master shall be provided in accordance with the requirements of SOLAS, early advice will be given by Amoseas to confirm the side of the vessel that access should be provided.

At night the access area shall be adequately illuminated to provide for the approach and boarding of the Mooring Master, Government officials and for Amoseas representatives.

Vessel Anchoring: If a tanker is not scheduled to berth on arrival (e.g. another vessel is in the berth, or the port is closed due to adverse weather conditions, etc.), Master will be advised by radio and requested to anchor in the anchorage mentioned above.

NAVIGATION AIDS:
The FPSO displays the following light signals:
(a) At the bow and stern – white morse (U) light, period 15 seconds, range 5 miles.
(b) At the bow only – red morse (U) light, period 10 seconds, range 3 miles.
(c) In restricted visibility a fog signal (morse "D") is synchronized to sound simultaneously with the light signal.

Note: A 16 in. floating hose lies in the water within 850 ft. (260 m.) of FPSO stern. Yellow lights are established along the length of the hose visible at 2 miles distance.

The Platform displays the following light signals:
(a) White morse (U) lights, one at each corner, synchronized to flash simultaneously, with a 5 miles range of visibility.
(b) In the event of restricted visibility the Platform sounds one prolonged blast followed by two short blasts on the foghorn.

In addition to these prescribed signals both the FPSO and the Platform burn excess produced gas by flaring. The consequent orange/yellow flame is visible at a considerable distance.

RESTRICTIONS: Vessels may berth during daylight hours and unberth at any time (See "Berthing").

Maximum bow to centre line of manifold distance 480 ft.

MAX. SIZE: Vessels in the size range 50,000 d.w.t. – 160,000 d.w.t. can be accommodated in the berth, and there is no draft limitation. Vessels outside this size range may be accommodated, however the envelope of operational conditions will be restricted.

RADIO/VHF: Following receipt of a nomination for a "named export vessel" to load at Anoa Terminal, Amoseas will contact the vessel's Agent, Owner or Charterer giving details of:
(a) Nomination.
(b) Loading API and Temperature (approx.).
(c) Berthing prospects.

On receipt of this message and in any case not less than 72 hours prior to estimated arrival time at Anoa Terminal, Amoseas will transmit the following questionnaire to the export tanker via the vessel's Agent, Owner or Charterer:

1. Vessel's name and Summer d.w.t.
2. ETA in local mean time (G.M.T. + 7 hours).
3. Last port and next port.
4. Cargo requirements: Maximum loading rate via 1 × 12 in. manifold.
5. Quantity of ballast on board. Type of ballast. (SBT, etc.).
6. Vessel able to load and deballast simultaneously maintaining 30% of S.D.W.T. throughout. (N.B. Terminal has no dirty ballast facilities).
7. Estimated arrival and departure drafts, fore and aft.
8. Bow to centre manifold distance.
9. Distance between tanker hose rail and manifold presentation flange, port side.
10. Size of bow fairlead/s. Bow chain stopper or Smit Bracket.
11. Bow chain stopper or Smit Bracket fitted – details and S.W.L.
12. Derrick or crane available port side with minimum 10 tons S.W.L.
13. Vessel has clean Bill of Health, if sickness onboard give details.
14. IGS operational and all cargo tanks inerted to less than 8% oxygen by volume. (Mooring Master will make random check of tanks prior to berthing. Failure to comply with this requirement will result in berthing delays).
15. Closed loading procedure can be followed.
16. Vessel entered in TOVALOP.
17. Vessel's Owner/Operator has a recognised "Drug and Alcohol Control onboard ship" policy in accordance with OCIMF "Guidelines for the control of drugs and alcohol onboard ship (January 1990)". A copy of the Owner's/Operator's policy statement is onboard the vessel and the Master and crew understand and are guided by such policy.
18. Date of last dry dock and date of last special survey.
19. Nationality of officers and crew.
20. Independent cargo surveyor – if appointed.
21. Please note, no bunkers, stores or potable water are available at the terminal.
22. Indonesian Government regulations require that Pertamina Directorate of Shipping & Telecommunications be appointed General Agent for all tankers proceeding to load in Indonesia.

These questions should be answered as completely as possible and a reply transmitted immediately.

Terminal will not be responsible for berthing delays due to lack of information/notification. Delays due to non-compliance with terminal regulations will be for vessel's account.

Amoseas Indonesia Communications address: Notification as above should be sent via Telex: 60555 AMOSEA IA or Fax: (062-21) 520 5588.
Telephone: (062-21) 525-7660, 525-7720, 520-7140.
Mailing address: Amoseas Indonesia Inc., Attn. Marine Operations Dept., Mulia Tower, Suite 1601-1701, Jl. Jend. Gatot Subroto Kav 9-11, Jakarta 12930, P.O. Box 2782, Jakarta 10001, Indonesia.

Vessel shall notify Amoseas of ETA 48 hours, 24 hours and again 12 hours prior to the export vessel's arrival at the Terminal and at any other time when ETA changes more than one hour. The 24 hour and the 12 hour messages should, in addition, be transmitted directly to the "Anoa Natuna" (FPSO).

FPSO Communication Facilities:
(a) VHF/FM Radio Communications:

The Terminal maintains a continuous watch on VHF Channel 16 and Masters of inbound export tankers are recommended to use this when they are within range. The Terminal is able to select any public VHF channel for use as a working channel after initial contact on Channel 16. Attention to VHF communications may be the means of avoiding delay in berthing and vessel turn around time.

Masters are reminded that if tankers are requested to anchor to await berthing, it is their responsibility to maintain a *constant* listening watch on Channel 16 to receive Terminal instructions.

Any delay due to a failure to maintain a *constant* listening watch on Channel 16 will be for the ship's account.

(b) HF/SSB Telex/Voice Communications:

The "Anoa Natuna" also maintains a continuous watch on the following HF/SSB frequencies:

Watch:	Working:
13,525 kHz.	5,910 kHz.
2,182 kHz.	4,492 kHz.

(c) Satellite Telex/Voice Communications:

Vessels, Owner or Charterer may contact Amoseas Jakarta office by telecommunications satellite using international dialling code 062-21 (380-5655).

(d) Pertamina Control Radio Station:

In the event that incoming tankers are unable to contact Anoa Marine Terminal on the foregoing VHF/FM frequencies or HF/SSB, Masters should request Jakarta Radio to relay the necessary information to Amoseas Indonesia by telex or telephone.

Details of Jakarta Radio:

Name:	Jakarta Radio
Call Sign:	PKX – 2
Operated by:	Pertamina
Nature:	CR
Tax:	50 Centimes
Geographical Position:	06° 30' 00" S. 106° 50' 00" E.

Calling Frequency (kHz)	*Working Frequency* (kHz)	*Power* (kW)	*Class*	*Working Hours* (GMT)
500	452	1.0	A1	H 24
8363.2–8364.8 8372.8–8373.6	8626.0	1.0	A1	0200–0400 0500–0600 0700–0800 1000–1200 1400–1600 1700–2000
12544.8–12547.2 12599.2–12560.4	12980.0	1.0	A1	0000–0200 0400–0500 0800–1000 1200–1400 1600–1700 2000–2200
4131.2–4425.6	4425.6	1.0	A3A/A3J	0500–0600 0800–0900 1600–1800 2200–2400
6206.2	6512.6	1.0	A3A/A3J	0000–0100 0300–0400 0600–0700 1200–1400 1800–2000
8235.3	8759.2	1.0	A3A/A3J	0100–0300 0400–0500 0700–0800 1100–1200 1500–1600

When the export tanker is at the anchorage, communication between the FPSO and the export tanker will be established on a mutually agreed VHF channel.

When moored to the FPSO, communication between the two vessels will be maintained by VHF equipment, supplimented as necessary by UHF walkie talkies.

ARRIVAL PROCEDURES: Lifting vessels will normally be accepted and berthed in chronological order of arrival, provided such vessels have current nomination for cargo valid at the time of tender, carry clean ballast, if any, and have cargo tanks in a fit condition to receive cargo. Also, they must be in all respects properly equipped, manned and ready to moor. Should berthing be delayed on account of bad weather, vessels will keep their position in line.

(a) *Hours of Operation:*

The Anoa Marine Terminal will operate 24 hours a day, 7 days a week. Tankers will normally be berthed during daylight hours, weather and other circumstancees permitting. In special circumstances and at the sole discretion of the FPSO Superintendent, night berthing may be allowed if all conditions are favourable. Unmooring will be carried out at any hour.

The company will make every effort to moor offtaking vessels upon arrival in daylight, weather permitting.

(b) *Notice of Readiness:*

Arrival time will be considered as the time when the Mooring Master boards the vessel, or the time the vessel arrives in the deep water anchorage, if not berthing immediately.

The Mooring Master will act on behalf of the Company to sign acknowledgement of tanker's Notice of Readiness. Notice of Readiness shall be in English.

Notice of Readiness will be accepted between the hours of 0600 and 1630 (L.M.T.) provided the Mooring Master is satisfied that the export vessel is apparently in all respects ready to moor and load. Notice of Readiness will not be accepted during a period when the port is closed on account of adverse weather, or when an export vessel arrives prior to, or after firm 3 days date range in which it is accepted to load.

The foregoing paragraph notwithstanding, in no event shall a Notice of Readiness, whether previously accepted or not, be valid or binding on the Terminal unless and until such time as the export vessel, her tanks and equipment, are in fact, in every respect whatsoever in the proper condition and operational status to receive the cargo.

(c) *Bad Weather Interruption of Loading/Berthing:*

Vessel required to leave the Terminal area on account of bad weather should keep in contact with the Terminal via VHF and or Radio Telephone in order that they may be available when the weather is fit for resumption of operations. Amoseas reserve the right to berth and load vessels out of turn following the return of good weather.

Amoseas reserves the right to decline to moor a specific vessel if its condition or facilities are unsafe for mooring or loading even though the Terminal may be open to other vessels.

Should a vessel be rejected for any reason the Terminal will supply the vessel and Owners/Charterers with written reasons for non-acceptance.

The decision of the FPSO Superintendent to permit a vessel to berth shall be final. On receipt of such permission, berthing will be at the discretion of the vessel's Master in agreement with the Company Mooring Master.

TUGS: *Mooring Launches:* The Terminal maintains boats to assist in mooring and unmooring vessels. These boats are directed by the Mooring Master, to whom requests by the lifting vessel for action or assistance must be directed. *Services and facilities provided by the Company including the services of the Mooring Master, riggers, boats or berthing equipment, are at the vessel's risk.*

BERTHING: *Design Export Tanker Operational Conditions:* The Anoa Natuna Marine Terminal is an open unsheltered mooring. On occasions there may be circumstances or a combination of circumstances which may preclude mooring and/or loading/deballasting operations. In these circumstances good judgement should be exercised by the Master, under the Mooring Master's advice, as to precise actions to take (See "Port Conditions" below).

With respect to export tanker operations, the FPSO and mooring system is designed for the following operational condition limits:

(a) Mooring Operational Limit: The FPSO and mooring system is designed to enable the export tanker to moor to the FPSO under the following conditions:

Wave: Significant height of 1.5 m.
Wind: Up to 25 knots.

(b) Offloading Operational Limit: The FPSO and mooring system is designed to enable the FPSO to continue offloading to a moored export tanker under the following conditions:

Wave: Significant height of 3.0 m.
Wind: Up to 35 knots.

Port Conditions: The following table indicates outline conditions covering status of the Terminal. These regulations apply to vessels in the size range 50,000 d.w.t. to 160,000 d.w.t. The Terminal may handle vessels outside this size range but the operational envelope will be limited.

Port Condition	Operational Limitations				
	Wind Speed Knots	Significant Wave Height (m.)	Deballasting	Loading	Berth
Open	< 20	< 1.5	Continue	Continue	Remain/Berthing Ops.
Restricted	20-35	1.5-3.0	Continue	Continue	Remain/Berthing Ops.*
Closed	> 35 and/or	> 3.0	Reballast	Continue Unberth	No Berthing (At Mooring Master/FPSO Superintendent discretion)

*Berthing operations for selected vessels only.

(a) Calm: Extreme still conditions with no surface air movement which may allow the accumulation of hydrocarbon vapours at deck level. Port will close temporarily. Export tanker may berth (or remain in the berth if already berthed). Cargo and ballast operations will cease.

(b) Lightening: In some rain squall conditions severe lightening is experienced. Port will close temporarily. Export tanker may remain in the berth (or undertake berthing operations). All cargo and ballast operations will cease.

(c) Darkness: Port will normally be closed from 1630 hrs. LMT until 0600 hrs. LMT (during the hours of darkness). Export tankers already in the berth by 1630 hrs. LMT continue operations and may also unberth at night.

MOORING: *Mooring Equipment:* Vessel must be equipped with correct mooring equipment relevant to its size as recommended in the "OCIMF Standards of Equipment Employed in the Mooring of Ships at a Single Point Mooring". The minimum dimensions of the centre bow fairlead/s is/are 600 mm. wide and 450 mm. deep, in order to accommodate the chafe chain/s.

ANOA TERMINAL STANDARD FOR MOORING EQUIPMENT IS: BOW CHAIN STOPPER/S. AS OUTLINED IN THE OCIMF PUBLICATION "RECOMMENDATIONS FOR EQUIPMENT EMPLOYED IN THE MOORING OF SHIPS AT SINGLE POINT MOORINGS". 2ND EDITION 1988.

VESSELS NOT FITTED WITH BOW CHAIN STOPPER/S WILL BE CONSIDERED "UNSAFE" FOR 'NORMAL MOORING OPERATIONS'.

Vessels which, in the Mooring Master's opinion, do not have a suitable method of attaching the mooring, will be refused permission to berth. Should bitts have to be utilised, or should the bow stopper/Smit Bracket be located at such distance from the fairlead that they are unusable, rope snotters of 14 in. circumference and 15 m. long will be utilised. This is not considered a normal mooring operation and vessels requiring this mooring technique will not be considered suitable for subsequent operations at Anoa Terminal.

Mooring Operations:

(a) The Mooring Master will board incoming tankers at the anchorage area or other agreed location. The Mooring Master will advise the ship's Master on approach to the FPSO, mooring and unmooring, connecting and disconnecting hoses, and all other operations within the Terminal area, including all manoeuvring of the tanker. The Master must be on the bridge at all times while the tanker is being manoeuvered.

(b) The services of a Mooring Master are provided upon the express understanding and conditions that when any Mooring Master furnished by the Company goes aboard a tanker for the purpose of assisting such tanker, he becomes for such purposes the servant of the Owners of the vessel, and the Company shall not be liable for any damage or injury which may result from the advice or assistance given or made by such Mooring Master while aboard or in the vicinity of such vessel.

(c) Support vessels assist in mooring tankers. These are under the direct control and supervision of the Mooring Master. Any service and/or facilities provided by the Company including, but not limited to, the services of Mooring Master, support vessels and their crews, or mooring and loading equipment, are at the vessel's risk. The furnishing of a Mooring Master, support vessels or other services and facilities, shall not be construed to be, or give rise to, a personal contract.

(d) Tankers due for mooring must have a pilot ladder or hoist securely rigged on the side requested by the Mooring Master. Vessels with a freeboard of more than 30 ft. shall have an accommodation ladder rigged so that the lower platform is not more than 10 ft. above the water level with a short pilot ladder rigged for access to the platform. Upon the approach of the Mooring Master in the support vessel, the tanker must provide a good lee on the appropriate side. Tanker shall also have the port derrick rigged and crew on deck standing by.

(e) The Mooring Master and his assistants (Assistant Mooring Master plus 2 riggers, who will advise the tanker crew during mooring and hose connection), will normally board tankers from the support vessel which also serves as a stand-by safety boat throughout the loading operation. Immediately the Mooring Master and his assistant have boarded, the support vessel will proceed to the portside derrick area of the tanker where mooring and hose connection equipment will be lifted aboard. Sufficient crew must be available on deck to transfer the mooring equipment from the derrick area to the forecastle.

The following equipment, provided by the export tanker, shall be ready for use when the Mooring Master boards:

On the forecastle head:
(1) 1 buoyant mooring rope of 10 in. circumference.
(2) 2 messenger lines of minimum 3 in. circumference × 300 ft.
(3) A selection of shackles, wire strops and tools (sledge hammer, crowbar, etc.).

On the poop deck:
(1) 2 messenger lines of minimum 3 in. circumference.
(2) 1 buoyant mooring rope of 10 in. circumference.

(f) When the approach to the terminal commences, support vessel will be in attendance to assist if necessary.

(g) *Approach to the FPSO involves manoeuvring at close quarters to the FPSO. It is therefore imperative that all measures are taken to ensure that there is no loss of power or steering during these manoeuvres.* Mooring Master will test export tanker engines ahead and astern and full port to starboard rudder movement before commencing his approach run.

(h) A mooring boat will be situated near the stern of the FPSO at the end of the pick-up rope. The pick-up rope is secured to a 54 mm./76 mm. combination chafe chain, which in turn is secured to the main mooring, a 19 in. circumference nylon grommet connected to a 76 mm. chafing chain at the FPSO stern.

(i) During the approach of the tanker towards the stern of the FPSO, the ship's crew, under the advice of the Mooring Master will prepare the forecastle for the mooring operation. This will include passing one or two messenger ropes through the centre bow fairlead, or other fairleads designated by the Mooring Master and lowering the end to sea level; the mooring attachment will also be prepared.

(j) Upon the close approach of the tankers bow, the mooring boat manoeuvres alongside and attaches the mooring pick-up rope to the ship's messenger line. The tanker will then heave up the messenger and pick-up rope, carefully picking up the slack as the tanker approaches the stern of the FPSO.

(k) The pick-up rope should be continually hove in as the tanker nears the FPSO stern. The distance between the vessels will be continuously relayed to the Mooring Master on the bridge from the forecastle and by the support vessel and mooring boat. When the pick-up rope has been brought inboard through the fairlead, it may be necessary to adjust the direction of pull and assist the chafing chain through the fairlead. Action required by the tanker's crew in this respect will be advised by the Mooring Master.

(l) When the chain is inboard, depending upon the method of attachment available, the connection will be made.

(m) On completion of the mooring operation the support vessel will be secured to the stern of the tanker, using its towline, to prevent the tanker from coming into contact with the FPSO. Until the support vessel is secured it may be necessary to use the tanker's engine for this purpose. Once the support vessel is secured, the Mooring Master will then advise "Finished with Engines". *Engines must be maintained in a constant state of readiness and at no time during the tanker's stay at the Terminal may the engines be immobilised.*

(n) Finally, emergency towing wires should be rigged, one on the starboard bow and one on the starboard quarter. These lines must be maintained with the eye 1.0 m. from the waterline and "no slack on deck".

BALLAST: *Deballasting:* Vessels must arrive at the Terminal with clean ballast and be able to deballast concurrently with loading, maintaining 30% of the vessel's S.D.W.T. throughout the operation.

Vessels unable to comply with this requirement will be permitted to load part cargo, then to deballast while loading operations are suspended and to complete loading on completion of deballasting. Vessels will be allowed 6 hours to complete the deballasting operations.

Prolonged deballasting will necessitate either removal from the berth or the commencement of loading. The Terminal will not be responsible for any free water or deadfreight.

Inert Gas System: All vessels must be equipped with an Inert Gas System conforming to the SOLAS Regulations. This must be in service throughout the vessel's operations at Anoa Natuna Terminal, with tanks inerted and maintained under positive pressure. Vessel's crew must ensure that the correct atmosphere is maintained with oxygen content at no time to exceed 8% by volume in any cargo or slop tank.

The Terminal will make random checks to establish the condition of the tanks on arrival and throughout the operation. In the event of failure of the system or, when tank atmospheres depart from industry accepted limits, the vessel will be removed from the berth.

Ballast Operations:

(a) There are no ballast or slop reception facilities at Anoa Natuna Marine Terminal, therefore all vessels must arrive with clean ballast suitable for discharging directly to sea in accordance with the standards set by International Conventions. Vessels arriving with ballast unsuitable for discharge to sea will be rejected for loading. Any tanker rejected because of contaminated ballast or sea pollution will automatically invalidate her Notice of Readiness and will lose any priority of loading. Vessels discharging contaminated ballast overboard will be subject to the anti-pollution laws of Indonesia.

(b) Vessels arriving at Anoa Natuna Marine Terminal should maintain 30% of Summer d.w.t. to ensure safe handling and manoeuverability in the prevailing weather and sea conditions and in accordance with the good practice of seamanship. *Propellers should be immersed.*

(c) Whenever possible, loading procedures should be so arranged as to allow for concurrent deballasting and loading operations, provided that at least a 2 valve separation can be maintained. Permanent ballast should not be discharged before the vessel has loaded at least the equivalent amount of cargo.

(d) The Mooring Master or his assistant may accompany the Independent Cargo Surveyor in witnessing the tank inspection prior to loading, but will not sign certificates attesting to the emptiness or cleanliness of tanks for loading. The ullaging of the slop tank and determination of oil content will also be witnessed.

PENALTIES FOR POLLUTION ARE HARSH.

LOADING: *Hose Connecting Equipment:* Vessel to be equipped with loading manifold in accordance with the "OCIMF Standards for Ships Manifolds". Flange to be prepared to accept a single 12 in. 150 lbs ASA connection. Derrick and rigging to be certified not less than 10 tons SWL. Hose connection will normally be accomplished on the port side.

Loading Rates: Terminal can provide an average loading rate of 20,000 b.p.h. through one 12 in. hose. Vessels which cannot accept this loading rate will be rejected.

Hose Connection:

(a) Upon completion of the mooring operation, the loading hose will be connected to the tanker's port manifold which must be prepared to accept 1×12 in. 150 ASA flange prior to berthing. Hose connection will be made by the ship's crew, assisted by the 2 Amoseas riggers, under the supervision of a responsible deck officer. The Mooring Master's Assistant will advise on the correct procedures to be adopted.

(b) Depending on the freeboard of the tanker, the weight of the hose string to be lifted could approach 10 tonnes. All tankers calling at Anoa Natuna Marine Terminal must have their port derrick rigged to lift at least 10 tons.

(c) The mooring boat will tow the tanker end of the hose to a position below the manifold area and connect the ship's cargo runner to the 'Hose Pick-up Chain'. The hose will then be lifted to a position above the main deck so that the 'Hang-Off Chain' can be made fast to the hose bitts using a snubbing chain, such that the hose flange will closely align with the required manifold flange. The hose end will then be lowered to the deck for the blind flange to be removed. The hose flange will normally be connected to the manifold by a quick release Camlock coupling.

(d) When the hose is connected, the length between the manifold and rail will be supported by a nylon sling to ensure that there is no undue strain on any part of the manifold or hose string.

Loading Operations:

(a) On satisfactory completion of the pre-loading transfer conference and Safety Check List as agreed by the Amoseas Mooring Master and the export tanker officer in charge, the vessel will be declared ready to load, and all the necessary valves will be opened, the hose end butterfly valve will be opened and the Mooring Master will instruct the Terminal to commence loading at a slow rate. The rate will not be increased until the tanker has confirmed that the hose connection is tight, that cargo is being received in the selected tanks only and that no leakage is taking place through the sea valves. Thereafter, the loading rate will be increased, on request by the export tanker, to a maximum of 25,000 b.h.p.

(b) Throughout the loading, a responsible deck officer must be in charge of operations, either on deck, or in the cargo control-room and in continuous contact with the FPSO and Mooring Master via walkie-talkie radio. In addition, an efficient deck watch in constant contact with cargo control-room must be maintained at all times.

Additionally, one Amoseas employee will be stationed on the forecastle at all times to observe and report on the mooring condition, i.e. the state of the mooring and the distance and attitude of the Tanker to the FPSO. The Mooring Hawser is fitted with a load monitor and mooring weight is continuously monitored on the FPSO.

(c) At any time during loading operations, the rates can be reduced on request. Except in an emergency, 10 minutes notice should be given to the Terminal when rate reduction is required. As in normal tanker practice, valves *must not* be closed against the oil flow without permission from the Terminal.

If, for any reason, radio communication between the Tanker and the Terminal is lost, the Terminal will stop the loading until communication is re-established.

In the absence of radio contact, oil flow can also be stopped by sounding the Emergency Flow Stop Signal, consisting of continuous short blasts on the ship's whistle.

(d) The volume of oil loaded is accurately available at all times from the Terminal, and periodic comparisons should be made between Tanker and Terminal.

(e) The question of ship or Terminal responsibility to stop cargo on loading the required quantity will be discussed and agreed before loading commences, during the Pre-Transfer Conference.

Request for the Terminal to stop the flow of cargo at a pre-determined tonnage must be in writing. The request must include the statement by the ship's Master that the Company will not be held responsible for any error, and that in the case of the vessel being overloaded, the excess cargo cannot be pumped back to the FPSO.

Hose Disconnection: On completion of loading, and when the tanker is informed by FPSO Control that all flow has ceased, the hose-end butterfly valve will be closed first, followed by the ship's manifold valve. Once the spool piece has been drained, the hose can be disconnected from the manifold (sufficient drip tray volume must be available to contain any oil remaining in the spool pieces and reducer), and the blind flange will be replaced on the hose. The weight of the hose will be taken on the derrick and pick-up chain, to allow the snubbing chain to be released from the hose bitts. The hose will then be lowered to the water.

Cargo Documentation and Inspection:

(a) Documents such as Bills of Lading, Quality Certificate, Quantity Certificate, Time/Loading Report, Certificate of Origin, Cargo Manifest and Master's Receipt for Documents/Samples etc. are prepared at Anoa Natuna Marine Terminal. When the tanker has been loaded, the documents will be completed and taken aboard the tanker for the Master's signature. Signing of these documents by the Master will take place at the same time as final departure clearance formalities are being carried out.

(b) Immediately upon completion of loading, the official Bill of Lading quantity will be relayed to the Mooring Master by radio. In the event of a dispute, the vessel will be requested to recheck the measurement and calculations of the quantity, the Mooring Master will witness such measurement and calculations. After both ship and shore figures have been verified, should an appreciable difference still exist, receipt of a Letter of Protest will be acknowledged by the Mooring Master.

(c) Notes of Protest if any, should be handed to the Mooring Master for further delivery to Amoseas Indonesia Inc. Please note that the Mooring Master will acknowledge receipt of the Note of Protest only, and is not authorised to signify acceptance of such letters.

(d) From time to time Owners, Charterers, Consignees, or other interested parties may appoint a third party oil inspector to survey the loading operation on their behalf. Any delays caused by such survey/s shall be considered "vessel delays".

DEPARTURE: *Departure Procedures:*

(a) Immediately after the loading hose is disconnected, unmooring of the vessel will commence, The support vessel at the stern of the tanker will be released but will remain on location to assist. On advise from the Mooring Master, the mooring hawser will be heaved in by the tanker and the mooring connection broken. In some cases it may be necessary to briefly ring the engines ahead to relieve the weight on the mooring. As soon as the mooring is released, the engines will be rung astern and the vessel will back away from the FPSO. During the move astern, the mooring hawser will be lowered into the water by easing back on the pick-up rope.

(b) When the vessel is safely clear of the FPSO, the Anoa Natuna Terminal mooring equipment will be taken from the forecastle to the port derrick to be transferred to the support craft together with the hose connection equipment.

(c) Any remaining cargo calculations and paperwork will be completed before the vessel sails. When such paperwork has been completed, the vessel will make a good lee to disembark Terminal Personnel and Government Officials. Upon disembarkation of all such personnel, the vessel must clear the terminal area as directed by the Mooring Master before his departure.

CUSTOMS: Cigarettes, cigars, tobacco, matches, spirits, wine, beer, perfume, arms, ammunition and possibly other items have to be locked up under Custom's seals from time of arrival of ship in port until time of leaving territorial waters. Each person is allowed to bring in 200 cigarettes or the equivalent weight of tobacco or cigars. Special allowances are made for the Master under special circumstances.

After the ship is all secure the Customs Officer will seal the stores. If arriving from a foreign port, the Agent will prepare the General Cargo Declaration Form stating the cargo on board the tanker and attaching appropriate Shipping Documents. If the tanker is arriving from an Indonesian port, Form 5-B issued at the last Indonesian port, will be retained by the Customs and the Arrival Clearance at Anoa is granted. The Harbour Master will submit a Harbour Report form for the Master to complete.

CONSULS: Located in Jakarta.

TIME: GMT plus 7 hours throughout the year.

SERVICES/SUPPLIES:

(1) Should it be necessary to supply divers, a boat, materials, equipment or labour, to carry out repair work to enable the vessel to continue loading, any costs involved will be charged to the vessel's account at rates to be established at that time. These services will only be provided in emergencies.

(2) There are no bunkers, no fresh water, no small boat hire, no shore leave nor shore services, and no medical assistance (except in cases of emergency) available at the Terminal. Information on port services in the area should be obtained from the vessel's agents.

(3) Crew members cannot leave the vessel at Anoa Terminal except in cases of emergency. Even in an emergency it should be noted that Seamen's Books may not be valid under local Government Law. A valid passport is required. No crew changes will be permitted during the period a vessel is in the Terminal area.

WEATHER: *Weather Pattern:*

(1) Winter – the N.E. Monsoon Season:

In the Anoa Natuna area, the N.E. Monsoon becomes established during November, although in some years it may not blow regularly until December. During this period the wind direction over the open sea is predominantly North Easterly and the average force, when fully evolved, is about Force 4, South of Latitude 5° N. and Force 5 to the North of this latitude.

The winds tend to blow in successive pulsations, periods of comparatively fresh winds followed by periods when the wind is less strong. At times the wind freshens to Force 6 or 7, while at others it does not exceed Force 3. The frequency of Force 7 winds is estimated to be about 1% in most of the season, probably reaching 2% – 3% during December, the month of greatest frequency.

(2) Summer – the S.W. Monsoon Season:

From about May to October, winds are predominantly South Westerly, mainly Force 3 or 4. Over the open sea, the South Westerly winds can reach Force 6 but nearer the coast they are weaker and more irregular. During October the winds become variable before the onset of the N.E. monsoon.

Although during the Summer monsoon wind speeds of Force 7 are rare, squalls, known locally as "Ribut", in which gale force winds may be experienced temporarily are fairly common. The most dangerous type is the arch squall which is preceded by clouds rising from the horizon in the form of an arch, heavy rain is usual when the arch is passing overhead.

Currents: The surface currents of the Natuna Sea in the Anoa area are wind generated, currents therefore will be in the direction of the prevailing monsoon. These currents will generally exceed one knot and on occasions exceed 2 knots.

Typhoons: The Natuna Sea area is not normally affected by 'typhoons'.

Tidal Streams: Tidal streams can be expected to reach 1.5 knots during spring tides.

Relative Humidity: This is high over the area for most of the year, averaging about 90% – 95% in all months at 0700 hrs. and falling to about 70% – 74% by 1300 hrs.

Temperature: The average air temperature is high throughout the year. April is the warmest month with a mean daily air temperature of about 88°F. January is the coolest month with a mean daily temperature of 86°F.

The average sea temperature typically lags 1 to 2 months behind the air tempurature with warmest mean temperatures in June/July of 85°F and coolest mean temperatures in January of 65°F.

Fog and Visibility: Fog is rare throughout the area, however during rain squalls visibility can be extremely limited.

Rainfall: Average annual rainfall in the Anoa area is about 100 in. Rainfall is most abundant from about October to January, i.e. at the onset and in the early part of the N.E. Monsoon, however thunderstorms and heavy rain squalls occur frequently throughout the S.W. Monsoon.

GENERAL: *Vessels Operations:* Operations will be conducted in accordance with ISGOTT (latest edition) guidelines. Vessels loading at Anoa Terminal must be in compliance with the latest SOLAS and MARPOL conventions and protocols. Vessels found to be deficient or substandard in any safety or pollution control requirement will not be berthed or if already berthed will not be loaded.

The vessel Owner or Bareboat Charterer is to be a party to TOVALOP and have insurance covering the liabilities under the International Convention of Civil Liabilities for Oil Pollution Damage 1978 (C.L.C.).

The cargo to be loaded will be covered by CRISTAL, and/or the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage 1971 (I.O.P.C.).

Tankers are expected to conduct operations using a closed loading method. A vessel which is unable to comply with this requirement will not be loaded.

Vessel Owners/Operators must have a recognised "Drug and Alcohol control policy". Such policy should be in accordance with OCIMF "Guidelines for the Control of Drugs and Alcohol on board Ship (January 1990)". A written copy of the Owners/Operators policy statement must be onboard. The vessel's Master and crew must understand and be guided by such policy.

Time taken to correct any unsatisfactory condition and/or to bring the vessel into an acceptable state to commence or continue loading or berthing operations shall not count as used laytime. Any unsatisfactory condition not corrected or unable to be corrected will result in the vessel being denied berthing and loading facilities. Costs and delays so incurred will be for the Charterer/Owner's account.

Air-Conditioning: Due to the climatic conditions of the area, vessels not fitted with a working air-conditioning system pose a threat to the safety of loading operations. Only in exceptional circumstances, when a vessel has demonstrated its ability to comply with all conditions of the ISGOTT Safety Check List, will a vessel without air-conditioning be accepted for loading.

Crew: Vessel's crew must be qualified to the requirements of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers 1978. If any infringement of safety regulations or the inability of ship's crew to operate safely and efficiently is noticed then the vessel will be removed from the berth.

Certification of Deratisation and General Cleanliness: Vessel to be in possession of a valid Derat Certificate and other deinfestation measures as appropriate. Should the vessel be infested with rats, vermin or other insects which could be a threat to the health or well being of Terminal personnel then the vessel will not be accepted.

Indonesia Flag: The national flag of the Republic of Indonesia shall be prominently displayed by the vessel at all times whilst at the Anoa Natuna Marine Terminal.

Indonesian Government Regulations:

Masters are informed that the following Indonesian Government Regulations are strictly enforced.

In accordance with practice in Indonesian Ports, Quarantine, Immigration, Pilot and Call Sign flags must be displayed by all vessels approaching Anoa Natuna Marine Terminal. These signals shall be displayed continuously until clearance is granted. The signals are as follows:

(1) The Quarantine flag 'Q'.
(2) The 'N' flag should be flown until the Immigration Officer boards.
(3) The 'G' flag (request for Pilot) should be flown until the Mooring Master boards. As soon as the Mooring Master boards the 'G' flag should be replaced by the 'H' flag which signifies that the Pilot is aboard.

During the hours of darkness the appropriate International light signals should be substituted for the flags.

(4) During loading the International Code flag 'B' shall be displayed from the top-mast signal halyard during daylight hours.

During hours of darkness a red light shall be displayed; visible at a distance of at least 2 miles and show an unbroken light all around the horizon.

AGENCY: *Procedure for Appointing Agent:*

(a) Indonesian Government Regulations require that Pertamina Directorate of Shipping and Telecommunications be appointed General Agent for all tankers proceeding to load in Indonesia.

Address:
Pertamina Directorate of Shipping and Telecommunication,
Attention: Agency Department
19th floor, Pertamina Building,
Jl. Medan Merdeka Timur IA,
Jakarta, Indonesia.
Cable address: PTM JKT IA.
Telex: 44450 and 45348.
Tel: 343 806, 303 3356, 303 3307, 303 3305.

For vessels arriving in Indonesian waters, Owners or Charterers are requested to appoint Pertamina Directorate of Shipping and Telecommunication Agency Department as General Agent to attend the vessel at "Anoa Natuna Marine Terminal" by Letter of Appointment. This Letter of Appointment must be sent at least 2 weeks prior to ship's first arrival. The above also applies to vessels which may have changed their name and vessels for whom a Letter of Appointment has expired.

Owners or Charterers can attach a list of vessels under their management/control which are scheduled for operating in Indonesian waters, in such case the single Letter of Appointment will be valid for all ships named in the Letter. Letters of Appointment have a validity of one year after which they must be renewed. It is vital that the General Agent receives the following information 2 weeks before a vessel's first arrival to enable the necessary permits to be obtained from the Government Directorate General of Sea Communications:

(1) Name and full address of Owner.
(2) Name of tanker and call sign.
(3) Deadweight tonnage, Gross Register Tonnage and Length Overall.
(4) Flag and Port of Registry.
(5) Certificate of Registration Number.
(6) Name of Master.
(7) Number of Crew.
(8) ETA at Anoa Natuna Terminal. (Lat. 05° 13' N., Long. 105° 36' E.).
(9) Last Port of Call.
(10) Intended Indonesian Ports of Call.
(11) Destination after loading.
(12) Quantity and type of crude oil to be loaded.

(b) Pertamina Directorate of Shipping and Telecommunication will acknowledge receipt of telex or cable appointment and will request an advance deposit, depending on the size of the vessel, to cover the Agency and Government Charges. In addition, for a vessel registered in a country that has no Tax Treaty Agreement with Indonesia, Owner shall make advance payment of freight tax (approximately 2.4% × U.S.$5.00 × Cargo loaded long tons) for the exported crude (see section (c) (2)).

List of countries with Tax Treaty status:
Austria, Belgium, Canada, France, Germany, India, Japan, Netherlands, New Zealand, Sweden, Switzerland and United Kingdom.
Note: Thailand 50% tax due; Philippines 1.5% tax due.

(c) Government charges will consist of Port Charges and Outgoing Freight Tax.

(1) Port Charges are in accordance with the Decree of Minister of Communication No. KM 92/Phb/85 dated 1st April, 1985, which normally consist of Pilotage Fee, Towage Fee, Harbour dues, Tonnage dues, etc.
(2) Outgoing Freight Tax: For a tanker registered in a country that has no Tax Treaty with Indonesia, Owners are required to pay the "Outgoing Freight Tax" for the exported cargo.

(d) Advance Payment for Agency and Government Charges should be made to:
"Pertamina Agency", Account No. 0089-690 384 020.
Bank Negara Indonesia, Cabang Gambir, Jl. Kebon Sirih 77A, Jakarta, Indonesia. Telex: 44450, 45348.

To facilitate handling preparation, Owners/Charterers are required to telex "Pertamina Directorate of Shipping and Telecommunication" advising Telegraphic Transfer (T.T.) Number, the name of the vessel for which the T.T. is made and Indonesian Ports of call. In those instances where advance payment exceeds the actual Port Charges and disbursements, the balance will be credited to the Owner's/Charterer's accounts or remitted by the agent. Neither Pertamina or Amoseas Indonesia Inc. will be responsible for demurrage expenses, or other charges resulting from failure to pre-arrange obligations in this manner.

OPERATOR: Amoseas Indonesia Inc., Mulia Tower, Suite 1601-1701, Jl. Gatot Subroto Kav 9-11, Jakarta 12930. Postal Address: P.O.Box 2782, Jakarta 10001, Indonesia. *Tel:* (062-21) 525-7660, 525-7720, 520-7140. *Telex:* 60555 Amosea IA. *FAX:* (062-21) 520-5588.
Contact: Captain A. Santoso, Operations Coordinator.

ANYER: 06.02 S. 105.56 E. (See Plan)

(A) CHANDRA ASRI PETRO-CHEMICAL CENTRE
(B) TRIPOLITA TERMINAL

(A) CHANDRA ASRI PETRO-CHEMICAL CENTRE

LOCATION: The Chandra Asri Petrochemical Centre (CAPC) at Anyer is located in position Lat. 06° 1.7' S., Long. 105° 56.1' E.

Charts: B.A. Chart No. 198 and Indonesian Charts No. 71 and 95.

FLAG: The Indonesian national flag should be hoisted at sea within Indonesian Territorial Waters.

DOCUMENTS: The following documents are required for Port Clearance:

Registry Certificate.
Sea Worthiness Certificate.
Measurement (Tonnage) Certificate.
Derat (Exemption) Certificate.
International Load Line Certificate.
Safety Equipment Certificate.
Safety Radio and Radio Telegraphy Certificates.
Certificate of Approval (Ship's Radio Station).
Health Book.
Vaccination Certificate.
Last Port Clearance.
Crew List.
Ship's Article.
List of Crews Personal Effects.
Medicine List.

PILOTAGE: Compulsory for all ships. There are 6 Pilots available at the station. The pilot station is on VHF Channel 12, call sign "Kilo Bravo". The pilot boats can also be contacted on Channel 12, call sign "Pilot Boat 32" or "Pilot Boat 40".

APPROACHES: *Approach to Chandra Asri Petrochemical Centre:* P. Ular (Lat. 06° 01.7' S., Long. 105° 55.6' E.) is a good navigation mark point, height is 47 m., covered with trees. A lighthouse with character: Fl.W. 5 sec., 8 miles, could be helpful to approach the anchorage area.

Caution:

(1) Volcanic activity has been reported in the area between Rakata Island and Sebesi Island. Ships are advised to avoid this area.
(2) Small fishing craft operate in the vicinity of Sunda Strait.

ANCHORAGE: *Anchorage – Waiting Area:* Position Lat. 06° 01.5' S., Long. 105° 54.0' E. or 2 nautical miles S.W. of P. Ular. Depth is 20 m. up to 30 m., with coral/sand bottom. This place is considered to be safe for anchoring.

Approaching the Anchorage Area: Consult Admiralty Sailing Directions.

MAX. SIZE: Berth A: 80,000 d.w.t., max. draft 13.0 m.
Also see "Berthing".

HEALTH: *Quarantine:*

Request for Free Pratique – hoist "Q" flag.

If quarantineable disease declared by Master or if Medical Officer suspects a quarantineable disease onboard – hoist "QL" or "QQ" flags.

RADIO: *Ship's Arrival and Departure:* ETA has to be sent to the Agent 2 days prior to arrival.

With this ETA information, Agent will be able to commence paper work for port clearance. Agent will have to fill in an appropriate form which will be sent to Harbour Master, Port Health Service, Immigration, Customs and Security. This will obviously avoid unnecessary delays.

The vessel's ETA will have to be updated at intervals of 24 hours, 12 hours and 6 hours prior to arrival.

VHF: Vessels are to listen to Channels 16 and 12.

Vessels are to contact Banten Pilot (Call sign "Kilo Bravo") as early as possible to obtain arrival information.

Also see "Pilotage".

TUGS: There are 4 tugs available. "Katalia I" 3,300 h.p., "Dumai I" 3,200 h.p., "Melati" 2,000 h.p. and "Bintang Jaya" 1,300 h.p.

BERTHING:

Berth	*Depth* (m.)	*Max. Draft* (m.)	*Capacity* (tonnes)
A	15.0	13.0	10,000 – 80,000
B	12.0	10.0	1,000 – 3,000
C	7.6 *8.3	6.5 *7.0	10,000

* After dredging.

Berthing: The ship will normally be berthed in daylight hours. Berthing might be suspended in the following circumstances:
(a) Storm warning issued.
(b) Wind velocity over 13 m./sec.
(c) Harbour Master Suspension Order is issued.
(d) Electrical storm, or electrical storm is approaching.

Unberthing: Could be carried out at any time.

Emergency Unberthing: Emergency unberthing might be executed in the following cases:
(a) Harbour Master's orders.
(b) Emergency situation at another berth or another ship in order to avoid a secondary disaster.
(c) Terminal representative or Master considers that the ship shall leave the jetty due to unfavourable situation occurring.

Notice:

To: Master
Ship's Owner
Ship's Operator

SAFETY MEASURE AT CAPC TERMINAL

We request you to perform the following safety measures to prevent accidents:

(A) Berthing Speed and Angle:

A.1 Jetty A:
Ships with d.w.t. 50,000 up to 80,000 tons.
Berthing speed shall be less than 10 cm./sec.
Berthing angle shall be 0° – 6° and as parallel as possible.
Ships with d.w.t. below 50,000 tons
Berthing speed shall be less than 15 cm./sec.
Berthing angle shall be 0° – 6° and as parallel as possible.

A.2 Jetty B:
Berthing speed shall be less than 15 cm./sec.
Berthing angle shall be 0° – 6° and as parallel as possible.

A.3 Jetty C:
Berthing speed shall be less than 25 cm./sec.
Berthing angle shall be 0° – 6° and as parallel as possible.

(B) Safe Manoeuvring:

Master shall perform the safe manoeuvring in consideration of ship's condition and circumstances (Sea current, wind, weather, etc.).

Please pay special attention to berthing speed and angle and also unberthing is parallel with jetty.

(C) Tug:

We request you to arrange tug(s) on berthing and unberthing for safe manoeuvring. The account is to the ship's Owner/Operator.

LOADING/UNLOADING:

No.	*No. of Arm/Hose*	*Product*	*Diameter/ Line No.*	*Appr. Length to the Tank (m.)*	*Max. Pressure (kg./sq.cm.)*	*Max. Rate (cu.m./hr.)*
Jetty A:						
1.	JI 1801	Naphtha	24 in. P 18001-A21A	1,869	18	3,000
	JI 1801	Py Gas	10 in. P 18517-A21A	1,495	–	1,000
2.	JI 1809	Naphtha	24 in. 18,001-A21A	1,869	18	3,000
3.	JI 1806	Py Gas	10 in. P 18517-A21A	1,495	–	600
4.	S 8101	L/P Proylene				
Jetty B:						
5.	S 8102 A	H/P Propylene			L V 18.6 18.6	201
6.	S 8102 B	Py Gas	10 in. P 18517-A21A	1,178	L V 18.6 18.6	500
Jetty C:						
7.	JI 1802	L/P Ethylene	14 in. P 18276-A11KR	476	L V 3.5 0.1	880/ 1,600
8.	JI 1803	Hexene	6 in. P 19001-A21A	609	10	300
		Hexane	6 in. P 19011-A21A	558	10	300
9.	JI 1804	Diesel Oil	10 in. FO 18609-A21A	949	10	540
10.	JI 1804	Wash Oil	10 in. FO 18609-A21A	682	10	200
11.	JI 1805	Butene	6 in. P 18951-A21A	870	L V 24 12	300
		Butane	6 in. P 18951-A21A	870	L V 24 12	200
		Isobutane	6 in. P 18723-A21A	900	L V 24 12	200
		LPG	6 in. P 18723-A21A	917	L V 24 12	300
12.	JI 1808	Py Gas	10 in. P 18517-A21A	768	10	550

Berth Facility – Jetty Arms and Hoses List:

Jetty	*Item No.**	*Arm/ Hose*	*Product Description*	*Flange Size (in.)*	*Standard*
"A"	1.	JI 1801	Naphtha/Py Gas Arm	16	ANSI 150 lbs Rf
	2.	JI 1806	Py Gas Hose	8	ANSI 150 lbs Rf
	3.	JI 1809	Naphtha Hose	8	ANSI 150 lbs Rf
	4.	S 8101	LP-Propylene Arm	Liq=8 Vap=6	ANSI 150 lbs Rf
"B"	5.	S 8102 A	HP-Propylene Arm Liquid	6	ANSI 300 lbs Rf
	6.	S 8102 B	HP-Prpoylene Arm Vapour	4	ANSI 300 lbs Rf
"C"	7.	JI 1802	LP-Ethylene Arm	Liq=8 Vap=6	ANSI 150 lbs Rf
	8.	JI 1803	Hexene/Hexane Hose	6	ANSI 150 lbs Rf
	9.	JI 1804	D/O & W/O Hose	8	ANSI 150 lbs Rf
	10.	JI 1805	Butene/Butane/ Isobutane & LPG	Liq=4 Vap=4	Liq:ANSI 300 lbs Rf Vap:ANSI 150 lbs Rf
	11.	JI 1808	Py Gas Hose	8	ANSI 150 lbs Rf

* Notes:

Item No. 4, 5 and 6 = Existing Arms.

This Jetty Arms and Hoses List will be revised as soon as confirmation obtained.

List of Tanks Connected to Jetty:

No.	*Tanks Tag No.*	*Product*	*No. of Tanks*	*Tank Net Working Capacity (cu.m.)*	*Connected to Jetty*
1.	FB 1801	Naphtha	4	45,840	A
2.	FB 1804	LP Ethylene	1	19,420	C
3.	FB 1808	Py Gas	3	10,673	A, B, C
4.	FB 1811	LPG	2	1,200	C
5.	FB 1832	Diesel Oil	1	4,640	C
6.	FB 1851	Hexene	1	2,740	C
7.	FB 1852	Hexane	1	780	C
8.	FB 1853	Butene-1	1	1,580	C
9.	FB 1854	Isobutane	1	940	C
10.	FB 202	Wash Oil Tank	1	400	B
11.	D 8108	LP Propylene	2		

MEDICAL: Hospital available at Krakatau Steel.

FRESH WATER: Available from Tripolyta at cost of 12,000 Rp/tonne (1994).

FUEL: Not available.

CUSTOMS ALLOWANCE: 200 cigarettes; 50 cigars or 100 grams of tobacco.

It is necessary to produce the crew's personal effects to avoid smuggling and to protect crews possessions.

TIME: GMT plus 7 hours.

SHORE LEAVE: Bus service or car service arrangable via Agent. Shore pass and I.D. card are required.

Master has to inform the crew of the latest time to be onboard the ship.

Master has to satisfy himself that the total number of crew staying onboard is sufficient to handle the ship in case of an emergency.

GENERAL: *Publications:* Admiralty Tide Tables Volume No. 3 and Admiralty Sailing Directions.

Also see "Location".

Immigration: Vessels arriving from other countries must hoist "N" (November) flag.

Master has to produce the Passenger List and
(a) Disembarking Passenger List.
(b) Transiting Passenger List.
(c) Through Passenger List.

Passports and Seaman's Books will be checked.

SHIPMASTER'S REPORT: August 1995.

We dropped anchor at 1900 hrs., 0.8 miles off the coast and 1.3 miles off Ular Island (Leneng) on bearing 030° in position Lat. 06° 01.6' S., Long. 105° 55.2' E.

Luckily arrival time was shortly after high water, so there was only a little current observed, whereas an hour later with full ebb tide running, current rate increased to about 3 knots. We payed out chain until 7th shackle at the water line. Good holding ground, no dragging of anchor observed. Water depth 22 m. – 25 m. Both hawsepipes were made "robbersave" by means of steel gratings and lashings. Double watch was kept, and it appeared to be necessary as there were some boats in the vicinity.

Pilot boarded next morning at 0710 hrs., and vessel was moored at 0845 hrs. port side alongside (3-2-2). One low powered tug assisted aft. Starboard anchor was lowered when approaching the jetty. In laden condition, vessel was resting against all four fenders, but in light ballast condition the forward fender was off the vessel by more than 1 m. and the aft one by about 0.15 m., but was still working when vessel was swinging towards the jetty. Low swell was encountered during the whole stay alongside, coming from S.W.'ly direction. We had slight breeze and fine weather.

Discharging was done in 19 hours (including draining) via 1×16 in. Chicksan arm. There was also 1×8 in. flexible hose, which will be used in higher swell conditions.

Parallel body was never discussed with jetty representatives, but was closely watched by ourselves. Due to favourable weather conditions, it was not necessary to take ballast before all cargo was discharged.

Unfortunately, the jetty is not equipped with shore gangway. Berthing normally in daylight only, but jetty operators will make exception in urgent cases. Pilots will berth day or night. Unmooring no restrictions.

Jetty and loading/discharging installation was clean and in very good condition, all looked new.

Unmooring was done next morning at 0930 hrs. and again one tug assisting, but this one was more powerful. The Pilot left when vessel was about 100 m. of the jetty and at 1000 hrs. was F.A.O.P.

AUTHORITY: *Operators:* Pt. Chandra Asri.

Office: Wisma Barito Pacific Tower A, 7th and 8th Floor, Jl. Let, Jend. S. Parman Kav. 62-63, Jakarta 11410, Indonesia. *Tel:* (021) 5307950 (Hunting). *Telex:* 65701 CAPC IA. *FAX:* (021) 5308930.

Plant: Jl. Raya Anyer Km. 123, Ciwandan, Cilegon, West Java 42447, Indonesia. *Tel:* (021) 5212887, (0254) 601501. *FAX:* (0254) 601505.

(B) TRIPOLITA TERMINAL

SHIPMASTER'S REPORT: February 1996.

APPROACHES: The Terminal is new and is South of the terminal shown on Chart No. 918, which is the Asahimas Terminal for chemicals. To the South, close inshore, is another berth. Approach is straightforward. Area is well charted and navigation is not a particular problem.

PILOTAGE: Pilots were contacted on VHF Channel 16 and 12 at 25 miles, but reception was poor until 20 miles off.

We were due to discharge a cargo of Naphtha at the Anyer Terminal which had been loaded in Kuwait so we were approaching from S.W.

Pilots requested us to approach to 0.5 – 1.0 miles off Pu. Ular and he met the ship a little further out.

Pilot boarded from a small nondescript boat and 2 large tugs joined shortly afterwards.

BERTHING: Tide was running South fairly strongly and approach to berth was taken easily. Port anchor was used. Small launch took ropes. Tie-up was straightforward – 3-2-2. Linesmen were slow.

New modern berth, well designed and equipped and well fendered. Well provided with hooks and line winches.

A little exposed and during the discharge we were moving to a swell from the Indian Ocean.

LOADING: Berth has 2 loading arms, 1×12 in. for Naphtha and 1×6 in. for diesel oil.

Discharge was no problem – shore tanks are close.

The area is under development and there are extensive tank farms, factories and berths nearby.

Further North up the Strait are more developments at Cicadang and Merak.

FRESH WATER: Available on request.

GENERAL: *Charts:* B.A. Charts No. 918 and 2056.

Sailing Directions: NP 36, 2.14, 2.16. Supplement No. 11, 1994.

Guide to Port Entry 1995/96 Edition.

Light List: NP 83 – Vol. K, 1050 – 1051.58.

Radio Signals: NP 286(2) – Vol. 6, Part 2, E4790 – Cicading.

General: Agent, Quarantine and others boarded with Agent.

The Loading Master was surprised to see that we had no Certificate of Quality as we had used Early Departure Procedure at Kuwait, and it took a long time to convince him that "To follow by airmail" noted on my receipt for documents meant that I did not have it.

Stores: Chandler came on board immediately and took laundry away, which was returned in 10 hours.

Small order of fresh vegetables taken – good quality and reasonable prices.

Fresh fish prices very good.

Chandlers were obliging and efficient.

ARDJUNA: 05.54 S. 107.44 E. (See Plan)

LOCATION: Ardjuna Marine Terminal is an open, unsheltered mooring in the Java Sea, about 18.5 miles from the nearest point on the North Coast of Java.

The Terminal is approximately North 72° East distant 59 nautical miles from Jakarta.

There are 5 standard type single buoy moorings and 1 rigid arm single buoy mooring situated as follows:

1. Crude oil storage barge "Arco Ardjuna" SBM (Buoy No. 1).
   Lat. 5° 54' 15" S., Long. 107° 44' 22" E.
2. Crude oil export SBM for tankers loading from "Arco Ardjuna" or chartered crude oil storage tanker (Buoy No. 2).
   Lat. 5° 53' 19" S., Long. 107° 45' 18" E.
3. Crude oil storage vessel "Cempaka Nusantara" SBM (Buoy No. 3).
   Lat. 5° 54' 10.6" S., Long. 107° 43' 45" E.
4. Crude oil export SBM for loading from "Cempaka Nusantara" (Buoy No. 4).
   Lat. 5° 53' 29" S., Long. 107° 43' 20" E.
5. Liquefied Petroleum Gas Storage Barge "Ardjuna Sakti" rigid-arm type SBM. (Buoy No. 5).
   Lat. 5° 53' 10" S., Long. 107° 44' 13" E.
6. Butane SBM for butane export tankers (Buoy No. 6).
   Lat. 5° 52' 19" S., Long. 107° 45' 18" E.

THE FOLLOWING ITEMS ARE OF PARTICULAR IMPORTANCE:

1. No dirty ballast.
   Tankers with dirty ballast will be rejected and will have to tender a new Notice of Readiness upon second arrival.
2. No shore leave.
3. No crew changes.
   If emergency conditions prevail, for humanitarian reasons, exceptions to the foregoing may be permitted. All expenses incurred will be for ship's account.
4. No stores available.
5. No clinic is available.
6. The laws of Indonesia govern this Terminal and all personnel are urged to abide by them.
7. During daylight hours the Indonesian flag must be flown throughout the vessel's stay in port.
8. Ardjuna time is GMT plus 7 hours throughout the year.
9. No bunkers are available.
10. Pertamina Directorate of Shipping and Telecommunications Jakarta, handles all Agency matters for tankers.
11. The Unit of Currency is the Indonesian Rupiah.
    The rate of exchange varies from time to time. The Master can obtain the current exchange rate from the Agent.
12. There are no Consulates available at Ardjuna Marine Terminal. However, there are many Embassies and Consulates represented in Jakarta 59 nautical miles S.W. of the Terminal.
13. Language of the port is English and Indonesian.
14. Only authorised personnel or visitors are permitted on the Storage Barges and/or Export Tanker.
15. No fresh water is available.
16. No slop tanks are available.
17. The Crude Oil testing laboratory is equipped to perform the following tests:
    API Gravity, B.S. & W., Pour Point and R.V.P.
    Any additional tests that may be required will be performed in Jakarta.
18. For convenience, mail for personnel on incoming tankers may be sent to the Jakarta Office of The Company for delivery to the tanker when it arrives at Ardjuna Marine Terminal. Except on an emergency basis, spare parts or other material will not be accepted for delivery to incoming tankers.

DOCUMENTS:

8 copies Crew List.
8 copies Passenger List.
3 copies Ships Stores List.
3 copies Crew Personal Effects List.
Last Port Clearance.
Health Declaration.
Ship's Certificates.

The Harbour Master submits a Harbour Report Form for the Master to complete.

The Agent prepares the ship's documents check list form to check the validity of each document. These documents are: Certificate of Registry, Ship's Construction Certificate, Load Line Certificate, Life Safety Equipment Certificate, Safety Radio/Telephone/Telegraph Certificate; Cargo Gear Certificate; Derat Certificate or Exemption Certificate. This list is then delivered to the Harbour Master with the following documents attached: Last Port Clearance, Crew List approved by the Immigration Officer and light dues receipt if arriving from another Indonesian port. The Harbour Master issues a port clearance at departure provided clearance is also granted by the other governmental authorities. A Panamanian port clearance for Panamanian flag vessels is not required at Ardjuna.

The Immigration Officer requires 2 copies of the Crew List and will check the Ship's Articles and the passports of the crew. When these documents are found to be in order, an arrival clearance will be marked on the Crew List.

If arriving from another Indonesian port the Agent will sign a guarantee if the vessel cannot prove that light dues have been paid.

Cargo Documentation: Documents such as Bills of Lading, Quality Certificate, Quantity Certificate, Dry Certificate, Ullage Certificate, Time Loading Report, Certificate of Origin, Cargo Manifest and Master's Receipt for Documents/Samples are prepared at Ardjuna Marine Terminal. When the tanker has been loaded, the documents shall be completed and be taken aboard the tanker for the Master's signature.

Signing of these Documents by the Master will take place at the same time final departure clearance formalities are being carried out.

Notes of Protest, if any, should be handed to the Mooring Master for further delivery to Atlantic Richfield Indonesia Inc., Jakarta. Please note that the Mooring Master will acknowledge receipt of the Note of Protest only and is not authorized to accept such letters.

Departure Procedure:

Prior to the vessel's departure, the Immigration Official requires 6 copies of the Crew List to be marked for *"Departure Immigration Clearance"*, and duly signed, it will be distributed as follows:

Master of the vessel	1 copy
Harbour Master	1 copy
Customs	1 copy
Pertamina Agent	1 copy
Immigration	2 copies
Total	6 copies

The Customs Official on duty will issue the Customs 5-B Form which serves as Customs Departure Clearance.

Upon presentation of the Crew List which is signed and marked for Departure Immigration Clearance and Customs Clearance, the Harbour Master will issue the *Port Clearance.*

Final Clearance formalities will be carried out aboard the tanker, either at the Export SBM or alongside the storage barge "Ardjuna Sakti" or in the Anchorage Area, as circumstances dictate.

Before leaving the Terminal Area, the Master should advise the Terminal, the vessel's ETA at destination through the Mooring Master.

PILOTAGE: Under normal conditions, if a tanker is scheduled to berth upon arrival, the Mooring Master will board such tanker in the vicinity of the mooring area.

Tankers waiting to load shall wait their turn in the recommended anchorage area, and shall maintain radio-telephone contact with the Terminal using the International Marine Calling and Safety Channel 16 for Terminal instructions.

The Mooring Master will act on behalf of the company to sign acknowledgement of tankers' Notice of Readiness. Such notice will not be accepted for a time earlier than:

(a) the Master has received the Mooring Master onboard or
(b) the tanker shall have dropped anchor within the recommended anchorage area, and has advised the Terminal the time of anchoring.

Exception to (a) and (b) will be if the tanker is within the anchorage area awaiting arrival of the Mooring Master and has been requested by the Terminal not to anchor.

In this case N.O.R. will be accepted from the time the Terminal requested the ship not to anchor.

The company reserves the right to decline to berth a specific tanker if its condition or facilities are unsafe for berthing or loading, even though the berth may be open to other tankers.

The decision of the Atlantic Richfield Indonesia Terminal Superintendent or his designated alternate to berth or not to berth a vessel shall be final.

ANCHORAGE: For tankers requested to anchor, the recommended anchorage area is an area Northwestward from the Single Buoy Moorings enclosed by a line drawn through the following positions.

Lat. 5° 52' 36" S.,	Long. 107° 41' 36" E.
Lat. 5° 50' 57" S.,	Long. 107° 40' 57" E.
Lat. 5° 50' 06" S.,	Long. 107° 42' 40" E.
Lat. 5° 51' 24" S.,	Long. 107° 43' 19.5" E.

Prior to their arrival Masters of tankers should contact the Terminal for instructions concerning anchorage positions.

Under no circumstances should the export tanker enter the Restricted Area around the structures without a Mooring Master aboard.

The attention of Masters is drawn to the existence of underwater pipelines in the Restricted Area (See "Plan").

NAVIGATION AIDS:

Approaches: Approach information can be obtained by radio from the terminal. Under normal weather conditions, if a tanker is scheduled to berth upon arrival, the Mooring Master will board such tanker in the close vicinity of the mooring area.

In addition to the single buoy mooring points for export tankers and the storage barges, various oil wells and production structures are located in the immediate vicinity and the areas extending East, South and Westerly from the storage barges which constitute a hazard to navigation for mariners.

SBMs, storage barges and structures within Ardjuna Marine Terminal area display the following visual characteristics:

Export Single Buoy Moorings (Buoy No. 2, No. 4 and No. 6): A white light flashing every second, visibility 5 miles, mounted on the rotating deck of each SBM. Buoy No. 4 and No. 6 are fitted with radar reflectors.

Storage Barges "Arco Ardjuna" and "Ardjuna Sakti" and "Cempaka Nusantara": By day, the black ball as required by the Regulations for Preventing Collisions at Sea. The 2 storage barges at night display the lights for tankers at anchor as required by the Regulations for Preventing Collisions at Sea and are equipped with automatic fog signals at the bow and at the stern.

Each barge has a bell forward as required by the Collision Regulations and gong aft, under the same rules. When visibility is restricted the Fog Signals are continuously sounded.

The SBM to which the "Cempaka Nusantara" is moored, is fitted with a radar reflector and a white light flashing every second visibility 5 miles.

The "Arco Ardjuna" SBM (SBM No. 1) shows a white light flashing every second, visibility 5 miles.

The SBM to which "Ardjuna Sakti" is moored, shows a white light flashing alternately for a 3-second period and a 1-second period every 12 seconds, visibility 5 miles.

Crude Oil Production Platforms and Natural Gas Liquids Processing Facilities: There are 9 crude oil production platforms, 110 well platforms, 1 junction platform, 1 natural gas processing facility platform and 1 quarters platform for the natural gas facility within the Ardjuna Marine Terminal area.

"B" (Bravo) Flow Station, situated approximately 0.5 nautical miles South of the "Cempaka Nusantara" Barge. Indicated as BB.

"E" (Echo) Flow Station, situated 12 nautical miles Eastward of Bravo. Indicated as platform EA.

"K" (Kilo) Flow Station, located 8 nautical miles S.S.W. of Bravo. Indicated as platform KA.

"L" (Lima) Flow Station, situated 15 nautical miles West of Bravo. Indicated as platform LA.

"U" (Uniform) Flow Station, located 13 nautical miles S.S.E. of Bravo. Indicated as platform UB.

"M" (Mike) Flow Station, located 33 nautical miles West of Bravo. Indicated as platform MX.

"F" (Foxtrot) Flow Station, located 28 nautical miles E.S.E. of Bravo. Indicated as platform FC.

"NGL" The natural gas facility and quarters platforms are joined by a bridge. Their position is: Lat. 5° 54' 36" S., Long. 107° 44' 01" E.

New Platforms: "BL" in position Lat. 5° 52' 14" S., Long. 107° 41' 35" E. and "BNA" in position Lat. 5° 51' 23" S., Long. 107° 43' 37" E.

In addition to the above specified obstructions and navigational aids, all platforms display interrupted quick flashing white lights. The storage barges, flow stations, LNG facility and quarters platforms will brightly illuminate the areas around them at night through the use of lights for normal working purposes.

MAX. SIZE: SBMs No. 2 and No. 4 up to 100,000 d.w.t. and 200,000 d.w.t. respectively (for crude oil). Max. draft 30.20 m.

SBM No. 6 up to 50,000 d.w.t. (for butane liquids). Depth of water approximately 135 ft. below mean sea level.

RADIO: *Advice of Arrival by Cable or Telex:* It is important that incoming tankers advise Ardjuna Marine Terminal 72 hours and 48 hours before estimated time of arrival, giving the best estimate of ship's arrival at the Terminal, via:

Cable address: ARDJAK, Terminal Section, Jakarta
Telex number: 011-47390 Jakarta.

Time to be used for ETA is "GOLF" Time Zone of GMT plus 7 hours throughout the year.

The first message should also include the following information:

1. Name of tanker and Radio Call Sign.
2. Cargo requirements.
3. De-ballast time. (Note: If a separate/permanent ballast system is fitted on board, ability of ship to load crude oil and discharge ballast simultaneously must be stated.)
4. Maximum loading rate.
5. Arrival draft, forward and aft.
6. Last Port of Call.
7. Confirm that vessel has clean Bill of Health.
8. If there is any sickness aboard, give whatever information is available as to the possible type of sickness.
9. If cholera inoculation required. If so, number required.
10. Distance in feet from the bow to tanker's loading manifold.

Further ETA messages should be sent to Ardjuna Marine Terminal via above cable address and Telex Number when the tanker is 24 hours and 12 hours distant from the Terminal and any other time, if any appreciable change occurs in the original ETA or those subsequent thereto.

RADIO COMMUNICATIONS:

(1) VHF/FM Radio Telephone: (International Marine Calling & Safety Channel 16, 156.800 MHz).

Masters are recommended to use this system when they arrive within radio range of the Ardjuna Marine Terminal, particularly when approaching the port. If poor visibility exists the tanker's approach may not be observed. Attention to VHF communications may be the means of avoiding delay in berthing.

During berthing the ship's radio will be under the sole control of the Master, and the storage barge radios will be under the sole control of the Terminal Marine Superintendent or his assistant.

Masters are reminded that if tankers are requested to anchor to await berthing, *it is their responsibility to maintain constant listening watch on VHF Channel 16* to receive Terminal instructions.

Any delay due to failure to maintain a constant listening watch on Channel 16 will be for the ship's account, and will not be included in Lay Time calculation.

The Ardjuna Marine Terminal is equipped with VHF/FM Radio Telephone Sets and continuous watch is maintained on Channel 16 (156.800 MHz) and 157.725 MHz.

Tankers approaching the Terminal should make initial contact on Channel 16. For subsequent inter-ship communications within the Terminal a "Handie Talkie" UHF Radio Freq. 157.725 MHz will be used by the Mooring Master.

This frequency will not be used for general purpose, unless clearance is obtained by the Terminal. This is required for safety reasons.

Should all radios on the tanker become inoperative, the emergency signal i.e. continuous blasts on the ship's whistle will be sounded to notify the Terminal of the radio failures. Upon hearing this signal from a loading tanker the storage barges will immediately stop loading to the Export Tanker until communications have again been established.

(2) High Frequency Single Side Band Radio Telephone: A voice message from incoming tankers may be relayed by HF/SSB. Atlantic Richfield Indonesia Inc., located in Jakarta, Indonesia, is inter-connected to the Ardjuna Marine Terminal via local communications system and maintain a continuous watch on HF Frequency 7320 kHz (Upper Side Band A3J Mode, 100 Watts, Vertical Whip Antenna, Call Sign 8GJ9).

(3) Pertamina Control Radio Stations – HF/SSB: In the event incoming tankers are not able to contact the Ardjuna Marine Terminal on the foregoing VHF/FM Frequencies, or by HF/SSB, Pertamina maintains coastal radio stations located in Jakarta and Merak.

Pertamina Jakarta Radio, Call Sign PKI 2 may be contacted on HF/SSB per following frequencies and during the following service hours:

Frequency/kHz	*Hours/GMT*	*Keep Watch/kHz*
452	0000–2400	500
8626	0200–0400, 0500–0600, 0700–0800, 1000–1200, 1400–1500, 1700–2000,	8363.2–8364.8
12980	0000–0200, 0400–0500, 0800–1000, 1200–1400, 1600–1700, 2000–2200,	12544.8–12547.2 12559.2–12560.4
4419.4 4425.6	0100–0400, 0700–0900, 1000–1100, 1300–1500, 1800–2000	4125.0 & 4131.2
6512.6 6521.9	0000–0100, 0300–0400, 0600–0700, 1200–1400, 1800–2000	6215.5 & 6202.2
8759.2	0100–0300, 0400–0500, 0700–0800, 1100–1200, 1500–1600	
VHF		
Ch. 9/16/19	0000–2400	Channel 16

Pertamina Merak Radio, Call Sign PKQ may be contacted on HF/SSB per following frequencies and during the following service hours:

Frequency/kHz	*Hours/GMT*	*Keep Watch/kHz*
452/500	0000–1600	500
8626	0100–0200, 0900–1000, 1500–1600	8363.2–8364.8 8372.8–8373.6
4419.4, 4425.6	0000–0100, 1200–1400	4125.0, 4131.2
6512.6, 6521.9	0200–0300, 0400–0500, 0800–0900,	6206.2, 6215.5
VHF		
Ch. 9/16/19	0000–2400	Channel 16

Masters should request the Pertamina Coastal Radio Station to relay the necessary information to Atlantic Richfield Indonesia Inc., Jakarta attention "Terminal Section" by telephone number: 737474 (18 lines) or by Pertamina Internal Telex System number 18 which is the designated number of Atlantic Richfield Indonesia Inc., Jakarta.

Also see "General" before first port.

HEALTH/IMMIGRATION/CUSTOMS: In accordance with practice in Indonesian ports, quarantine, immigration, pilot and call sign flags must be displayed by all vessels approaching Ardjuna. These signals shall be displayed continuously until clearance is granted. The signals are as follows: Sunrise to sunset: quarantine flag "Q". Sunset to sunrise: signal lights (red over white).

The "N" flag should be flown until the Immigration Officer boards the ship. The "G" flag (request for Pilot) should be flown until the Mooring Master boards. The vessel should also fly its call sign. As soon as the Mooring Master boards, the "G" flag should be replaced by the "H" flag which signifies that the Pilot is aboard. The tanker may fly the "P" flag if it is going to sail within 24 hours.

Indonesian Immigration, Customs and Harbour Master Officials will board the vessel after arrival to grant clearance.

Each tanker entering the port of Ardjuna must have requested and been granted Flag Dispensation prior to its arrival. At the same time, application is made for Provisional Pratique through the Directorate of Quarantine and, if granted, a cable advice is sent to the Harbour Authorities.

Port Health Clearance is issued prior to the tanker's arrival and is also valid for departure clearance.

If Provisional Pratique is not granted a Port Health Officer will be provided. All of the foregoing is arranged through and by the Agent.

Each Crew member should be in possession of an International Vaccination Card.

After the tanker is all secured, the Customs Officer will seal the stores. If arriving from a foreign port, the Agent will prepare the General Cargo Declaration Form stating the cargo onboard the tanker and attaching appropriate shipping documents. If the tanker is arriving from an Indonesian port, the 5-B Form issued at the last Indonesian port will be retained by Customs and the arrival clearance at Ardjuna is granted.

TUGS: There is 1 tug available to assist mooring/unmooring. When berthing at an SBM 1 mooring launch will be used to pass the line to the tanker.

The following mooring launches will be available for running lines as required, also for transporting Government Officials, Agents and other authorised personnel to and from the export tanker.

Name and description	*Length*	*Rated HP*
(1) *Arco Ardjuna V*	40 ft.	275
(2) Chartered boat		600
(3) Chartered boat		1,200

TERMINAL FACILITIES: For Crude Oil Tankers:

Export SBMs No. 2 and No. 4 are designed, during reasonable weather conditions, to handle tankers up to 100,000 d.w.t. and 200,000 d.w.t. respectively; each SBM is equipped with dual 170 ft./18 in. circumference floating braidline mooring ropes with 22 ft. long anti-chafe chains fitted, so arranged as to avoid chafe to the mooring ropes while tankers are at the buoy.

The crude oil loading hoses are connected to the ship's manifold on the port side of the Export Tanker. Tankers arriving are requested to have the derrick on the port side raised and rigged, ready to lift aboard the Terminal equipment.

Crude oil tankers are loaded through 2 strings of 16 in. I.D. floating hoses extending from the Export SBMs No. 2 and No. 4, connected to the tanker's port side manifold at the ends by means of the rail hoses of 12 in. I.D. All crude oil tankers not having 12 in. hose connection should provide their own reducers in such a way as not to cause any delay in the hose connecting operation. On SBMs No. 2 and No. 4 the length of the hose strings is 825 ft.

For crude oil tankers intending to load in the Ardjuna Marine Terminal, the distance from the bow to the loading manifold should not exceed 490 ft.

The minimum loading rate at the Ardjuna Marine Terminal for crude oil tankers is 15,000 bbls./p.h.. Any tanker arriving unable to receive crude oil at the above rate may be rejected. Tankers loading crude oil at the SBMs No. 2 and No. 4 can accomplish a maximum loading rate of approximately 35,000 bbls/p.h. through meters.

In order to save time as well as to make the berth available for others, it is requested that ships receive crude oil as fast as it can be delivered, with due regard for safety.

Masters are reminded that for safety reasons, it is advisable to have the ship half loaded as quickly as possible. Rate can be reduced for topping off tanks. When requested by the ship to stop, cessation of crude oil flow is almost immediate.

Masters are also advised that the minimum quantity tankers can load in the Ardjuna Marine Terminal is 60,000 barrels and maximum 715,000 barrels. Nominations in excess of 715,000 barrels can be accepted on the condition that offtanker/ship's Owners agree to issue a written statement to waive any demurrage incurred due to waiting on berth and/or cargo.

Storage Barge "Arco Ardjuna": The company marine administrative offices, storage and laboratory for testing crude oil stock are located on board storage barge "Arco Ardjuna".

Overall length of the barge is 467 ft., and total crude oil capacity 1,022,000 gross barrels. Crude oil from the "Arco Ardjuna" is delivered to tankers through 4×16 in. diameter, size A.O., Smith Positive Displacement Meters, each having a maximum capacity of 12,500 barrels per hour.

"Arco Ardjuna" barge is moored on the SBM No. 1, Lat. 5° 54' 15" S., Long. 107° 44' 22" E.

Storage Vessel "Cempaka Nusantara": The second storage vessel "Cempaka Nusantara" is moored to SBM No. 3, Lat. 5° 54' 10.6" S., Long. 107° 43' 45" E. Total crude oil capacity is 1,719,000 gross barrels. Loading of crude oil to the tankers, like that from the "Arco Ardjuna", is done through 4 each A.O. Smith Positive Displacement Meters. There are 3 cargo pumps capable of delivering crude up to a maximum of 35,000 barrels per hour through meters.

Export tankers loading Ardjuna Crude Oil of approximately 36° API at 60°F will be moored to SBM No. 4, Lat. 05° 53' 29" S., Long. 107° 43' 20" E.

This vessel is also equipped with a laboratory to test crude oil stocks and crude loaded into export tankers at SBM No. 4.

Ardjuna Crude Specifications:

API gravity at 60° F	:	37.0 – 35.0
Reid Vapour Pressure	:	6.0 – 8.0 p.s.i.g.
Sulphur, % Wt.	:	0.06 – 0.13
Kinematic, Viscosity at 100°F	:	1.20 – 6.00 cST
Pour Point, °F	:	75+
Carbon Residue, % Wt.	:	0.50 – 1.45
B.S. & W, % Vol.	:	0.05 – 0.45
Flash (TCC), °F	:	Below room temperature

For LPG Refrigerated Vessels:

Storage Barge "Ardjuna Sakti":

1. The LPG storage facility is a prestressed concrete barge, measuring 461 ft. in length, 136 ft. in width and having a depth of 56.4 ft. The barge carries 12 tanks each of which has a capacity of 31,528 barrels giving a total of 378,336 barrels.
   A pumping rate of 3,180 cu.m. (20,000 barrels or 1,600 metric tons) per hour at a maximum rail pressure of 10 p.s.i.g. can be achieved. The following operating rules have been adopted which shall apply to the lifting of products from the "Ardjuna Sakti".
2. Refrigerated LPG vessels *will not be considered ready for loading* at Ardjuna Marine Terminal *unless and until all LPG tanks contain LPG vapours and are cooled down sufficiently* to permit loading of products nominated.
3. Vessels receiving fully refrigerated products will only be acceptable for loading provided they are capable of receiving the products at a pressure up to 2.5 p.s.i.g. Such vessels must have a refrigeration system capable of liquefying all vapours coming from vessels tanks resulting from loading at an average rate of 3,120 cu.m.p.h., and including those vapours formed as a result of heat gained by the vessel's tanks.
4. The "Ardjuna Sakti" is equipped with a vapour compressor and condensing facilities for liquefying vapours, however, no liability of any kind whatsoever, to provide the compressor and or condensing facilities for vessels use is accepted.
5. Provided a vessel has the capabilities described in paragraph (3), at the sole discretion of the Terminal Superintendent or his designated representative, in the event the vessel has difficulties with her refrigeration system, the facilities available on the "Ardjuna Sakti" may be made available to assist the vessel, provided they are operational. There is *no obligation* implied or accepted to continue to assist the vessel with chill down, even if assistance is commenced. In the event that assistance is requested and is provided all charges and expenses incurred shall be paid for by the consignee. Such charges shall include any amount payable in demurrage for all the time that chill down operations causes the vessel to exceed the allowed laytime. The conditions set out in this paragraph (5) for assisting in chill down operations shall apply to purging operations.
6. Ardjuna Marine Terminal has no facilities for inerting arriving LPG tankers. It is imperative that arriving vessels do not arrive with tanks designated to receive product "in air". Vessels arriving to load LPG will not be accepted for loading product if the oxygen in the tanks exceeds 8.0 mole per cent.
7. Loading lines and vapour return lines at the Ardjuna Marine Terminal are fitted with quick release Camlock flanges which are 12 in. ASA 150. Arriving vessels must be able to connect to these flanges. The terminal will have a limited number of spool pieces and reducers available but will accept no obligation or liability to provide them. It is the vessel's responsibility to provide a connection suitable to connect with the Camlock flanges described above. Failure of the loading vessel to present the required 12 in. ASA 150 flange for connection will result in rejection of the vessel for loading and cancellation of her Notice of Readiness. All costs, charges and expenses incurred due to rejection will be for vessel's account.
8. Venting of product while the vessel is within the Ardjuna Marine Terminal is not allowed. Failure to comply with this requirement may result in delay or cessation of loading and all costs, expenses or losses due to loss of production caused by such failure to comply will be for the account of the buyer.

For Butane Tankers:

1. Vessels arriving in the Ardjuna Marine Terminal to load Butane Plus will be berthed at the SBM No. 6 which is designed, weather permitting, to handle tankers up to to 50,000 d.w.t. Small butane tankers can be accepted to load, provided they meet all terminal operating requirements.

2. Butane Plus tankers are loaded through 1×6 in. I.D. floating hose extending from the SBM and connected to the tanker's port side manifold. Present length of hose is 520 ft. When required, the length can be increased up to 720 ft. to accommodate tankers up to 50,000 d.w.t. and in this case, the tanker's distance from bow to manifold (B/Cm) is not to exceed 400 ft. Ship's Owner planning to load a tanker of the above size should notify Terminal Operator at least 15 days in advance. The floating hose is equipped with ANSI 150, quick release Camlock flange size 4 in. Tankers must provide a 4 in. manifold connection to permit the loading. Failure to carry out this obligation may result in rejection of the tanker for loading and nullification of her Notice of Readiness. All costs, charges and expenses incurred therefrom will be for the ship's account.

On arrival at the terminal area, Butane Plus tankers are required to have the port derrick ready to lift the equipment necessary for berthing and loading. Weight of hose to be lifted is approximately 1,500 lbs.

3. Small Butane Plus tankers of up to 3,500 d.w.t. capacity intending to load at SBM No. 6 will not be accepted if the bow to manifold distance exceeds 250 ft.

4. The quantity of Butane Plus delivered will be determined by the metering system consisting of 2×3 in. A.O. Smith Positive Displacement Meters. These meters are located on the NGL Plant situated approximately 3 miles S.W. of the SBM No. 6.

5. An arriving Butane Plus tanker will not be accepted for loading product if:

a. Oxygen in the tanks exceeds 8.0 mole per cent.

b. Vessel is not adequately equipped with boil-off liquefaction unit capable of liquefying all vapours coming from vessels tanks resulting from loading at the maximum rate of 115 cu.m./hr.

There is no facility for inerting butane tankers on SBM No. 6, nor is there a ship's vapour return line facility.

Masters of vessels are strongly reminded to ensure that ship's vapour compressors are in good running condition.

Failure to observe such requirement may result in cessation of the loading and any delay so caused will be for the ship's account.

6. During the extended loading period of the Butane Plus tanker at the SBM No. 6 it is the responsibility of the vessel to ensure that all mooring lines and loading hoses are properly tended.

The Terminal Mooring Masters may at any time request the ship's securing lines to be tightened or slackened under the direction of a responsible ship's officer. This may be necessary to avoid the ship overriding the buoy. Failure to comply with such a request may result in cessation of loading and all costs, expenses or losses due to loss of production caused by such failure to comply, will be for the account of the buyer. See also "Mooring/Unmooring".

7. Masters of Butane Plus tankers are advised that raising, lowering connecting and disconnecting of Butane Plus loading hoses as well as other labours and duties on shipboard connected with the loading of cargo or maintaining mooring lines in a correct manner will be performed BY THE SHIP'S CREW DIRECTED BY A RESPONSIBLE OFFICER as required by the Mooring Master.

MOORING/LOADING/UNMOORING: The Ardjuna Marine Terminal will operate 24 hours a day, 7 days a week. Tankers will normally be berthed during daylight hours, weather and other circumstances permitting. In special circumstances at the sole discretion of the Company Terminal Superintendent night berthing may be allowed if all conditions are favourable. Unmooring will be carried out at any hour.

Tankers to be moored or manoeuvred at the Ardjuna Marine Terminal will be boarded by the Company Mooring Master within the anchorage area.

Under normal weather conditions if a tanker is scheduled to berth on arrival, the Mooring Master will board such vessel in the close vicinity of the mooring area.

All such manoeuvring of ships shall be done only in accordance with the advice of the Mooring Master, subject to the understanding that in all cases and circumstances the Master of the tanker being manoeuvred shall remain solely responsible on behalf of his vessel's owners for the safety and proper manoeuvring of his vessel.

The ship's Master, or one of his *designated and qualified deck officers, must* be on the navigating bridge at all times while the vessel is being manoeuvred.

The Mooring Master will report unsatisfactory conditions to the company Terminal Superintendent who may in turn, reject the tanker until corrections are fully made. All costs accruing therefrom will be for the vessel's account. The services of the Mooring Master are provided upon the express understanding and conditions that when any Mooring Master provided goes on board a vessel for the purpose of assisting such vessel, he becomes for such purpose the servant of the owners of the vessel and the company shall not be liable for any damage, or injury resulting from any advice, or assistance, or actions directed, or made, by such Mooring Master while on, or in the vicinity of the assisted vessel.

Before loading, the tanker's cargo tanks are to be inspected and if suitable for loading crude oil, or LPG, as the case may be, a notation signed by both the Terminal Representative and vessel's Master to this effect will be made on the Company Dry Certificate.

The Company Terminal Superintendent, or his designated alternate, shall be the sole authority to decide when the port is closed due to unsuitable weather conditions preventing normal working operations.

Various combinations of wind, sea, and tidal conditions also the size, length, ballasted trim, and handling qualities of a vessel can affect the decision to berth a vessel at Ardjuna Marine Terminal. All these factors have to be evaluated before a final berthing decision is made.

Delays to vessels using Ardjuna Marine Terminal due to the port being closed because of bad weather conditions shall not be computed as used lay time when compiling vessel's turn around time.

Request for the terminal to stop the flow of oil at a predetermined tonnage must be in writing. The request must include the statement by the ship's Master, that the company will not be held responsible for any error and that in case of the vessel being overloaded the excess cargo cannot be pumped back to the storage barge. The ship's Master will also be held responsible for any oil spills caused by this request.

The ship's Master is responsible to ensure that no communication by radio is allowed within the terminal area.

Unauthorised radio communications will be cause for cessation of all operations, except clearing of the berth, and the vessel's Notice of Readiness will be immediately nullified.

The Master of each tanker will be given a copy of the Conditions of Use of Port of Ardjuna Marine Terminal which he will be required to sign before the vessel proceeds to berth.

The vessel's personnel are responsible for the safety of the vessel and must take all necessary precautions, whether or not so advised by the Mooring Master, having in mind the hazards of the operation because of the products being handled, weather conditions and any other circumstances requiring special care or caution.

Ships are requested to have a pilot ladder safely and securely rigged, ready for immediate use, and long enough to reach the Mooring Master's launch.

A combination of pilot ladder and ship's accommodation ladder, so arranged that the personnel can first use the pilot ladder until part way up the vessel's side, and then transfer to the accommodation ladder is recommended, especially on very large tankers. A light line should be ready to take aboard the Mooring Master's equipment.

Tankers will provide a broad lee for the Mooring Master both when boarding and leaving the ship. Adequate explosion proof lighting at night must be provided near the pilot ladder, and manifold connection area. During loading overside lighting must be provided in the vicinity of sea valves and floating hoses.

During a tanker's stay at the Export SBM, emergency towing wires shall at all times be hung over the ship's stern on each quarter of the vessel. These wires shall be secured on the bollards inboard to enable the vessel to be towed away should the need arise. They must be tended throughout to keep the eye of the wire not more than 2 ft. above the water.

Butane tankers moored to SBM No. 6 shall at all times have a suitable towing rope hung over the tanker's stern in such a way that the towing rope can be fastened to the company tug, thereby enabling the tug to assist in preventing the tanker from riding up on the SBM, should the need arise.

Before any crude is loaded all ship's scuppers on main decks must be plugged and cemented oil tight. Approved mechanical means of closing scuppers may be accepted.

It is absolutely essential that extremely careful supervision be exercised by officers of all tankers while loading operations are in progress. A responsible ship's officer is required to be on duty continuously while the tanker is being loaded. He will be assisted by an adequate number of ship's personnel in these operations.

It is the responsibility of the vessel to ensure that all mooring lines are properly tended on loading tankers. The Mooring Master at any time, may direct an additional ship's line to be secured to the buoy and this line to be hove up or slackened off under the supervision of a responsible ship's officer so as to prevent the vessel overriding the buoy. *At all times sufficient crew must be available* to carry out under the supervision of a responsible officer, instructions given by the Mooring Master.

Masters of loading tankers are advised that raising, lowering, connecting and disconnecting of oil loading hoses as well as other labours and duties on shipboard connected with the loading of cargo or maintaining mooring lines in a correct manner will be performed *by the ship's crew directed by a responsible officer* as required by the Mooring Master. Loading of crude oil tankers is through 2×12 in. I.D. hoses with 150 ASA flange rating. The weight of each hose is approximately 2.5 tons. All tankers loading crude oil at Ardjuna Marine Terminal must be able to connect their manifolds to the 12 in. hoses. Masters are strongly reminded, it is the ship's responsibility to provide reducers to make the connection, if the ship's manifold is not 12 in.

Preparations for mooring will be advised by the terminal through VHF communication prior to tanker's arrival or by the Mooring Master before the mooring operation commences.

Crude oil tankers are required to have ready:

1. On the portside: a derrick of at least 5 tons safe working load, rigged, and ready to pick up the mooring and hose connecting gear from the Mooring Master's launch.
   This derrick subsequently will be used for raising, connecting, disconnecting and lowering loading hoses and eventually to transfer the mooring and hose connecting gear back to the launch before the tanker sails.
2. On the forecastle: at least 6 good ship's mooring lines shall be required. Two of them will be used as messenger lines for bringing aboard both terminal mooring lines from the SBM.
   The 4 remaining ship's lines will be laid out 2 and 2 on either side of the foc'sle deck, eyes about 3.5 m distant from the fairleads as advised by the Mooring Master. When the terminal mooring lines have been hove up and anti-chafe chains have been hove about halfway inboard through the fairleads, the eyes of the ship's lines will be shackled onto the end links of the chain, so arranged that in the final position of mooring, the tanker is tied to the SBM using the terminal mooring lines/chains and made fast to the ship's bollards by means of the ship's own lines. This will be backed up by 2 lengths of wire strops each 30 ft. in length and 2 in. diameter. These wires will be provided by the terminal to be used as preventer wires. These 2 wire strops will not be used as the permanent mooring system.
   Their purpose is to hold the ship safely moored in the event one or more of the ship's lines part until the crew can replace such lines.
3. Tanker loading Butane Plus at SBM No. 6 will moor in the same manner as crude oil tankers referred to in para. 2 above.

Refrigerated LPG tankers will berth alongside the starboard side of the LPG storage barge "Ardjuna Sakti". The "Ardjuna Sakti" is secured to a Rigid Arm Single Buoy Mooring System which allows the storage barge to rotate according to direction of wind and tide. There are 5 large Yokohama type rubber fenders aboard the storage barge 4 of which are supported on davits. The fenders are lowered to the water prior to the berthing operation. Each fender is 6.5 m. in length the diameter of the fenders is 3.3 m. Line running launches are available to pass the mooring lines between the barge and the ship.

When secured in position the moorings will be as follows:

5 lines on the forecastle.
4 lines on the poop.
2 springs on the maindeck forward leading aft.
2 springs on the maindeck aft leading forward.

Each LPG tanker loading at Ardjuna Marine Terminal will be required to provide the above ropes. Where tension winches are available they will only be used if they can be locked in a fixed position.

EQUIPMENT: A ship may be rejected if, upon inspection, it is not properly equipped, or if it is not suitably manned, or tanks unsuitable for the cargo, or if in the case of crude oil tankers the ballast is dirty.

A vessel is suitably manned if it has a full complement of qualified officers and a crew all of whom are in a sober condition, competent and willing to carry out their duties and orders.

A ship must be equipped with a good working propulsion unit as passed by the appropriate survey society. Inoperative ships or partly inoperative ships will be rejected. Should a ship become inoperative or partly inoperative while berthed alongside the storage barge "Ardjuna Sakti" or while secured to a crude oil export single buoy mooring, it will be removed at the ship's expense.

No repairs to main engines or other essential equipment or machinery while alongside the storage barge "Ardjuna Sakti" or while secured to an export SBM may be carried out, unless with the permission of the Terminal Superintendent or his designated alternate.

Crude oil and butane tankers must lift the export hoses from the water to connect with the ship's manifold by means of its *own derricks and using its own crew.*

A vessel must have both bow anchors in good working condition. Both bow anchors and anchor cable must be of a size and standard to meet either "Lloyds" or "A.B.S." requirements, even though they may in fact, be classified by other societies.

All vessels must have ready on deck suitable stoppers for manila, synthetic lines and wires used for mooring purposes.

All vessels must have suitable winches or capstans in good working order.

Such winches or capstans must have sufficient power to heave the ship to the position required by the Terminal Mooring Master.

Tankers must have the capacity to heave on the 12 in. and 18 in. braid lines used to secure them to the export SBMs. Power supply to all deck machinery must be maintained throughout the period the ship is secured alongside the storage barge "Ardjuna Sakti" or to the export SBM. Failure to comply with this requirement will result in cessation of loading and delay, and expense so caused will be for the ship's account.

To assist in vessel's turn around, ships should have all necessary gear ready on arrival.

Crude oil and butane tankers must have the cargo boom on the port side raised with the cargo gear rigged and ready before the ship is boarded by the Mooring Master.

Vessels which may consider the lifting capacity of their gear to be marginal should strengthen their gear accordingly. A common way to do so is to rig a second topping lift on the boom.

Masters of crude oil tankers are reminded that the hose connecting operation will normally be carried out while the ship is deballasting.

The cargo derrick required to raise the hose from the water, must have a sufficient length of strong lifting wire rope on the winch drum to enable the cargo hook to reach the water and still have adequate turns of wire left on the drum to ensure safety.

BALLAST: Owners and Masters are responsible for observance of International Convention Laws and Indonesia Government Regulations concerning pollution of the sea, having particular regard for this area of the Java Sea.

No facilities are available for disposal of dirty ballast.

It is the responsibility of the ship's Master to see that no oil of any kind is pumped or spilled overboard from his ship.

The categories of pollution include oily water from bilges, crude residual from previous voyages, or any other matter that may result in pollution of the sea. Any fines imposed shall be for ship's account.

As soon as practical after arrival, all tankers will be inspected by an Ardjuna Marine Terminal Official for dirty ballast. During discharge of ballast, similar inspections will continue.

If evidence of oil appears at any of these inspections, the ship will be rejected, and will not be accepted again until satisfactory evidence is produced that such ballast was disposed of in a proper manner. If, during inspection, or during progress of loading, it is revealed that the ship's tanks are not tight, or that oil is leaking from the ship, the ship may be rejected or refused further loading.

If the ship's tanks are found to be leaking, it will not be accepted for loading unless satisfactory evidence of repair duly certified by Lloyd's or A.B.S. Surveyors, or other recognised Surveyors is submitted. It is the responsibility of the ship's Master to see that no oil of any kind is pumped or spilled overboard from his ship. Drip pans, sand, dispersant etc. should be used at all times especially when disconnecting hoses in order to avoid any spillage of oil overboard.

Any tanker rejected because of dirty ballast or sea pollution will automatically nullify his Notice of Readiness and will lose any priority of position for loading.

A tanker must have sufficient ballast for safe handling having due regard to existing weather and sea conditions. Through a careful watch of the weather and sea conditions, frequent exchange of information between ship and terminal, and by a knowledge of the behaviour of his own ship, a ship's Master may come to the terminal with a minimum safe ballast and thus lessen any possibility of infringement of sea pollution regulations.

In addition to the lights usually displayed, vessels in the moorings discharging ballast or loading cargo during darkness will brilliantly illuminate the sea around the ship, so that any pollution will be noticeable.

Tankers equipped with a separate system of ballast tanks will be allowed to discharge ballast, and load oil simultaneously, providing approval is first obtained from the company Terminal Superintendent or his alternate.

Most responsible ship owners have adopted a system of tank cleaning using circulatory methods of transfer of tank washings on shipboard and treating these washings with chemicals.

The result is that no oil is discharged into the sea and the oil separated is collected in a slop tank. With the written permission of lifting companies, the terminal will load on top of such slops. This system is highly recommended to avoid pollution of the Java Sea.

Masters are required to certify in writing the quantity of slops remaining on board (if any). If they intend to load crude oil on top of the slops, it must be clearly stated. The Mooring Master will confirm the amount stated in writing by ullaging and calculating the slops to ensure the amount declared is correct.

Provided agreement is reached on the amount of slops the Mooring Master will confirm the amount of slops on the Dry Certificate.

Note: Separate "Slop Certificate" signed by Chief Officer and witnessed by the Mooring Master is required to substantiate calculation.

Masters are warned that inspection of ballast is strict.

If, at any time an overflow of crude oil occurs, loading will be suspended immediately and not be resumed until the oil is cleaned up and removed from the decks of the vessel and/or from the surface of the sea, and any damage is repaired and no further danger exists. It is stressed that during loading operations, the Ardjuna Cargo Controller will immediately slow down the loading rate on receipt of a request for same from the ship's deck officer – in charge of loading.

All spillages of oil must be reported immediately to the Ardjuna Terminal Superintendent, or his alternate, and subsequently a detailed report in writing submitted by the Master of the vessel concerned giving all relevant details.

MEDICAL: First aid is available.

FRESH WATER: No fresh water is available.

FUEL: No bunkers are available.

CONSULS: There are no consulates available at Ardjuna Terminal. However, there are many embassies and consulates represented in Jakarta about 59 miles S.W. of the Terminal.

CUSTOMS ALLOWANCES: Cigarettes, cigars, tobacco, matches, spirits, wines, beers, perfume, arms, ammunition and possibly other items have to be locked up under Customs' seal from time of arrival of ship in port until time of leaving territorial waters. Each person is allowed to bring in 200 cigarettes or the equivalent in grams of tobacco or cigars.

Special allowances are made for the Master under special circumstances.

REPATRIATION: No crew changes. If emergency conditions prevail, for humanitarian reasons exceptions to the foregoing may be permitted. All expenses incurred will be for ship's account.

AIRPORT: Nearest airport at Jakarta.

TIME: Ardjuna time is GMT plus 7 hours throughout the year.

SHORE LEAVE: Not allowed.

SAFETY/FIRE REGULATIONS: Safety and Fire Regulations will be strictly adhered to.

The notice "Instructions In Case Of Fire", and the notice "Safety And Fire Regulations" must be posted in prominent positions on board the export tanker by the Master, or by his designated alternate.

The Safety Check List must be jointly completed by a ship's officer designated by the Master, together with the Terminal Marine Supervisor/Mooring Master. After completing and signing the Check List both the ship's officer and Marine Supervisor/Mooring Master will retain copies.

Terminal Safety and Fire Inspections: It is the duty of the Mooring Master to make periodical inspections on board vessels in respect of any breach of the Terminal Safety and Fire Regulations.

For this purpose he must be allowed free access to all parts of the vessel at all times and must be accompanied by a responsible ship's officer to assist him in carrying out such inspections. The Mooring Master will advise the ship's Master when he wishes to make a safety inspection. It is the responsibility of the ship's Master to ensure that the Mooring Master is given every assistance to carry out this duty.

AGENCY: See "General" before first port.

OPERATOR: Atlantic Richfield Indonesia Inc.

Principal Offices:

Atlantic Richfield Indonesia Inc., Panin Bank Building, Jalan Jendral Sudirman, P.O.Box 1063/JKT, Jakarta, Indonesia.

ARCO International Oil and Gas Co., Division of Atlantic Richfield Co., 2300 West Plano Parkway, Plano, Texas 75206, U.S.A.

Maxus Northwest Java Inc., Jalan Let.Jen M.T. Haryono 58, P.O.Box 2759/JKT, Jakarta, Indonesia.

Maxus Northwest Java Inc., c/o Maxus Energy Trading Co., 717 North Harwood Street, Dallas, Texas 75201, U.S.A.

Repsol (Java) Exploration and Production Ltd., Pez Volador 2, 28007 Madrid, Spain.

Inpex Java Ltd., Toranomon 37, Mori Building, No. 5-1 Toranomon, 3-chome, Minato-Ku, Tokyo 105, Japan.

Warrior Minyak Inc., 750 N. St. Paul, Suite 1530, Dallas, Texas 75201, U.S.A.

Deminex Java Oel GmbH, Setiabudi Building, 2nd Floor, Jln. H.R. Rasuna Said 62, Jakarta, Indonesia.

Deminex Java Oel GmbH, P.O.Box 100944, Dorotheenstrasse 1, 4300 Essen 1, Germany. Att: P-1.

Nominations: Tanker nominations for liftings of either Ardjuna Crude Oil or liquefied natural gas are co-ordinated through Atlantic Richfield Company, Los Angeles, California and Atlantic Richfield Indonesia Inc., Jakarta.

All crude oil and liquefied petroleum gas sales, also tanker chartering are arranged by the following parties in each of their respective locations. Pertamina, ARCO International Oil and Gas Co., Maxus Northwest Java Inc., c/o Maxus Energy Trading Co., Repsol (Java) Exploration and Production Ltd., Inpex Java Ltd., Warrior Minyak Inc., Deminex Java Oel GmbH and C. Itoh Energy Development Co.Ltd.

Tanker scheduling is co-ordinated for all of the partners through Atlantic Richfield Company, Plano, Texas, and arranged through Atlantic Richfield Indonesia Inc., Jakarta.

BALIKPAPAN: 01.16 S. 116.48 E.

DOCUMENTS: Upon arrival vessels have to produce the following Certificates and Documents, which will remain in the Harbour Master's custody until cleared:

- Nationality (Registry) Certificate.
- Seaworthiness Certificate.
- Measurement (Tonnage) Certificate.
- Derat (Exemption) Certificate.
- International Loading Line Certificate and SOLAS Classification (Hull and Machinery).
- Safety Construction Certificate.
- Safety Certificate (passengers ships).
- Safety Equipment Certificate (cargo ships).
- Safety Radio and Radiotelephony Certificate (cargo ships).
- Certificate of Approval (ship's radio station).
- Civil Liability Convention Certificate.
- International Oil Pollution Prevention Certificate.
- Health Book or Bill of Health.
- Last Port Clearance.
- 10 Crew Lists and Passenger's Lists.
- 2 Stores Lists.

PILOTAGE: Pilotage service available 24 hours. Master should signal their ETA at the Fairway Buoy to the Harbour Authorities at least 48 hours in advance, and confirm ETA 24 hours before arrival, and contact pilot station 1 hour before Fairway Buoy on VHF Channel 12.

Berthing and unberthing services are 24 hours. Request for pilotage should be arranged 4 hours before arrival and 3 hours before departure.

APPROACHES: The surrounding land is in general low with few conspicuous hill rows as background. Only the high spit on which Balikpapan is built can be used as a landmark with the regular cone-shaped hill Tokong.

RESTRICTIONS: Vessels with a draft of 12.0 m. are handled anytime, weather permitting. Vessels with draft of less than 11.5 m. are handled at anytime, weather permitting.

Bar Channel: Length (Buoy No. 1 to Buoy No. 12) 9 miles. Width 150 m. Depth 13.0 m. at LW.

MAX. SIZE: *Tankers:* Shell normally permit max. LOA of 215 m., draft 12.0 m. and max. d.w.t. 35,000 tons. Drafts are restricted by the bar where the depth below chart datum is 25 ft. 3 in. Minimum keel clearance required is 1 ft. 3 in. Sailing drafts depending on rise of tide up to a max. of 33 ft. salt water.

HEALTH: Vessels arriving from abroad have to apply well in advance from the Department of Health (Quarantine Section) for provisional Free Pratique, as said Pratique has to be cabled to the port concerned. The provisional Free Pratique is only valid for the port concerned, the next port of call must be a First Class Port as no further provisional Free Pratique will be issued, unless the vessel sails directly abroad.

RADIO/VHF: Balikpapan Radio. Call sign "PKN-2" on 500, 448 and 8437 kHz. and VHF Channels 16, 12 and 14.

TUGS: 3 tugs. 870 h.p., 1,700 h.p. and 2,400 h.p.

Vessels over 100 m. LOA must use 2 tugs.

BERTHING:

Jetty No. 0: Length 269 m. Width 21 m. Depth alongside 9.0 m.
Jetty No. 6: Length 185 m. Width 12 m. Depth alongside 12.0 m.
Jetty No. 7: Length 235 m. Width 28 m. Depth alongside 12.0 m.
Jetty No. 7A: Length 175 m. Width 15 m. Depth alongside 10.0 m.

Also see "Tankers".

BULK HANDLING FACILITIES: *Coal Terminal:* The Terminal is operated by PT Dermaga Perkasapratama, and is situated on a 33 hectare area in Teluk Tebang, a sheltered deep water inlet, about 6 km. North of Balikpapan and about 28 km. from the mouth of the dredged approach channel.

The Terminal is designed to handle up to five million tonnes of coal per annum and the loading of ocean-going vessels ranging from 15,000 d.w.t. to 80,000 d.w.t.

The Terminal will serve various mines in South and East Kalimantan. The coal will be transported to the Terminal by barge and unloaded at the receiving jetty by 2 grab unloading cranes with a maximum discharge capacity of 1,520 tonnes per hour.

The Terminal is the biggest "common" Indonesian coal loading facility, and a large share of the South and East Kalimantan coal will now be loaded at this Terminal instead of at anchorage off Samarinda, Banjarmasin. This will provide a much quicker loading rate and also enable gearless vessels to load these Samarinda coal cargoes. In the past, vessels had to be geared and, in many cases, equipped with grabs.

Wharf:

Acceptable vessel size:	15,000 d.w.t. – 80,000 d.w.t.
Length of Wharf:	235 m.
Number of mooring dolphins:	2
Distance between mooring dolphins:	276.5 m.
Berth depth:	15 m. lwd (UKC 1.0 m.).
Depth of turning basin:	20 m. lwd (UKC 6.0 m.).

Shiploader:

Type:	One luffing travelling.
Loading rate:	Max. 2,800 t.p.h. Ave. 2,200 t.p.h.
Max. throw of coal from fenderline:	43 m.
Longitudinal travelling distance:	180 m.
Highest boom working angle:	+17°
Lowest boom working angle:	−8°
Max. ship airdraft:	+19 m. lwd.

Channel:

Channel depth:	13 m. lwd (UKC 10% of fully laden draft).
Width of channel:	Approx. 150 m.
Length of channel:	14,000 m. (Straight section: 12,000 m.) (Bends: 200 m.).

CRANES: 4×15 tons – 25 tons.

MEDICAL: Hospital facilities available.

TANKERS:

Berth	*Depth at L.W.S.* (m.)	*L.O.A.* (m.)	*Max. Size D.W.T.*
Wharf No. 0 (Semayang Wharf)	7.0-10.0	180	15,000
Wharf No. 1	9.0	190	35,000
Wharf No. 2	12.0	190	35,000
Wharf No. 3	12.0	165	35,000
Jetty No. 4	12.0	190	35,000
Jetty No. 5	12.0	190	35,000
Jetty No. 5A (Inner)	5.0	110	5,000
*Jetty No. 5B (Outer)	13.0	190	35,000
Jetty No. 5C (Outer)	12.6	190	35,000
Jetty No. 6/7	12.0-10.0	213	35,000
Jetty No. 7A	10.0	120	35,000

* See "Shipmaster's Report" dated July 1995.

Storage Capacity: Tons unless stated.

Crude	27,000	IDO	4,900	
Naphtha	14,800	HSD	12,870	k/l
Premium	8,100	MDF	6,045	k/l
Avtur	7,500	MFO	2,200	k/l
Kerosene	17,000	Slops	37,400	k/l
ADO	1,700	Fresh water	4,000	

Loading Rates:

Crude	1,000 t.p.h.
LSRW	1,200 t.p.h.
HSD	400-800 t.p.h.
MDF	500 t.p.h.
MFO	250 t.p.h.
Avtur	300-500 t.p.h.
Kerosene	500-800 t.p.h.
Premium	300-500 t.p.h.
Naphtha	1,500 k/l.p.h.

Loading Arms: 8 in. – 10 in. diameter.
Hoses: 6 in. – 10 in. diameter.

STEVEDORES: Working hours: 0700 – 2000 hrs. Monday to Friday. 0700 – 1500 hrs. Saturdays. Sundays work possible at overtime rates.

DENSITY: 1012 – 1020.

FRESH WATER: Available in limited quantity. Rate 10 t.p.h. – 15 t.p.h.

FUEL: Fuel oil and diesel oil available at Berth No. 1 to No. 5C (except No. 5A). Pumping rate 150 t.p.h. – 650 t.p.h.

PORT SECURITY: Maintained by Port Security Unit (KPLP) and Police (KP.3). Crew members should be in possession of a shore-pass issued by the Port Authority, accompanied by an identification card when leaving or entering the guarded gates of the Port Area. Shore passes can be obtained via the Agencies.

CUSTOMS ALLOWANCES: Indonesian currency from vessels arriving from overseas must be inspected. Foreign currency may be taken ashore. It is recommended that Masters consult the Agents with the local prevailing Customs Laws with regard to currency, cigarettes, spirits, etc., to prevent unnecessary difficulties and eventually fines.

AIRPORT: Sepinggan Airport, distance 8 km.

GENERAL:

Provisions: Available.
Current: Flows North/South at up to 3 knots.
Nature of Bottom: Mud and sand.
Telephone Numbers:

Port Administration	22872
Harbour Master (Secretary)	22096
Pilot Station	21774
Perum Pelabuhan	22246
Port Health Office	21740
Manager Shipping and Telecommunication Pertamina	21953

SHIPMASTER'S REPORT: July 1995.

Vessel: 41,000 d.w.t.
Berth: Jetty No. 5 C.
Operations: Vessel loaded white products through hard arms.

Shore gangway fitted, but inoperative. Ship's accommodation ladder not suitable. D.o.T. gangway used to Chicksan Operating Platform, but not very satisfactory.

Note of Protest issued by ship.

Large difference in ship/shore figures.

AUTHORITY: Balikpapan Port Administration, Jl. Raya Pelabuhan No. 1, P.O.Box 35, Balikpapan, East Kalimantan, Indonesia. *Tel:* 22872, 22096. *Telex:* 37105. *Cables:* Adpel Balikpapan. *Contact:* Dr. Eddi Hidayat, Port Administrator.

BALONGAN: 06.21 S. 108.23 E.

PILOTAGE: The Mooring Master boards in the vicinity of the SBMs and requires 4 hours notice.

ANCHORAGES: The anchorage position is 3 miles North of the SBM (export) for awaiting pilot, or 1 mile North of the SBM (domestic) for awaiting berth. If vessel is not scheduled to berth on arrival, Master will be advised by radio and requested to anchor.

RESTRICTIONS: Berthing in daylight hours only. Unberthing at anytime.

MAX. SIZE: 150,000 d.w.t. Max. LOA 290 m.

Also see "Berthing".

RADIO/VHF: Balongan Coastal Radio Station, call sign PKQ-2, on VHF Channels 9, 16 and 19.

TUGS: 3 tugs, 1,200 h.p. – 1,700 h.p.

BERTHING:

Location/Berth	*Position*	*Depth at LWS* (m.)	*Size Restriction Max. d.w.t.*	*Max. LOA* (m.)
Offshore				
SBM No. 1	Lat. 06°16'17.8"S. Long. 108°27'47.2"E.	22.0	150,000	290
CBM (4 MB System)	Lat. 06°18'00"S. Long. 108°25'26.8"E.	9.0	6,500	130
*SBM No. 2	Lat. 06°17'05.0"S. Long. 108°23'26.0"E.	14.0	35,000	200
Inshore				
Jetty	Lat. 06°21'39.5"S. Long. 108°23'26.0"E.	4.0	600	55
Jetty	Lat. 06°21'35.7"S. Long. 108°23'23.6"E.	3.8	1,000	60

* See "Shipmaster's Report" dated June 1995.

Shore Storage Tanks:

Oil Products	Total Safe Capacity
Jatibarang Crude Oil	920,000 Bbls.
Arimbi Crude Oil	530,000 Bbls.
Premium	14,290 k/l.
LPG	3,000 cu.m.
Kerosene	40,075 k/l.
HSD	16,110 k/l.
IDO	21,075 k/l.
Slop Oil	1,000 k/l.

Loading/Discharging Rates:

		Average Rates		Hoses	
Berth	*Cargo Handled*	*Loading* (tons)	*Discharging* k/l.p.h.	*No.*	*Size* (in.)
Offshore					
SBM No. 1	Crude Oil	1,500	–	2	12
CBM (4 MB System)	IDO	–	75	1	8
SBM No. 2	Premium/ Kerosene	–	600	1	10
Inshore					
Jetty	LPG	–	70	2	4/6
Jetty	General Cargo	–	–	–	–

Vessels take hose on the port side at the offshore berths.

Vessels may berth either side alongside at the inshore berths.

CONSULS: None.

MEDICAL: Hospital and clinic available.

FRESH WATER: Available.

FUEL: Not available.

AIRPORT: Penggung Airport at Cirebon.

TIME: GMT plus 7 hours.

GENERAL: *Charts:* Indonesian: No. 79.
British: 1066, 1653A.

Dirty Ballast: No facilities.

AGENCY: See "General" before first port.

SHIPMASTER'S REPORT: June 1995.

Vessel: 41,000 d.w.t.

Berth: SBM No. 2.

Loading: Vessel loaded white products through 10 in. hose.

Vessel had to stop loading and sail short of cargo due to leak in submarine pipeline to SBM. Large ship/shore difference in cargo figures. Note of Protest issued by ship.

AUTHORITY: *Operator:* Pertamina, Pertamina P&T UEP-111, Jl. Patra Raya, Klayan, P.O.Box 15, Cirebon, Indonesia. *Tel:* (0231) 4629, 5051, 5054. *Telex:* 44451 Pert-Crb. *FAX:* (0231) 26536.

BANJARMASIN: 03.18 S. 114.35 E.

PILOTAGE: Compulsory. Sea pilot boards the vessel in the anchorage area.

ANCHORAGE: Vessels anchor in position 03° 38.5' S., 114° 30' E.

RESTRICTIONS: The bar is silting excessively and continuous dredging is necessary to keep the shallowest part at 5.0 m. depth.

Vessels will proceed when the height of tide enables the vessel to pass through the channel. The channel is approximately 20 miles long and has a depth of 6.0 m. – 8.0 m.

RADIO: Banjarmasin Radio, call sign "PKG"

Frequencies:	456 kHz.
	2,080 kHz.
	8,457 kHz.

VHF: Banjarmasin Radio on VHF Channel 16.

TUGS: 5×215 h.p. – 800 h.p.

BERTHING: The inner harbour is located in position Lat. 03° 20' S., Long. 114° 30' E.

There is one quay with a length of 200 m. and the depth alongside is 8.0 m. at LWS.

Storage: There is a godown with an area of 7,500 sq.m. and open storage area of 11,500 sq.m.

CRANES: 1×25 ton mobile crane. 9 forklifts with capacity 2.5 tons – 7.5 tons.

MEDICAL: Medical and hospital facilities available.

STEVEDORES: Available from the labour pool (U.K.A.).

FRESH WATER: Fresh water is available alongside the quay.

FUEL: Not available.

REPAIRS: Minor repairs only.

SHIPMASTER'S REPORT: November 1995.

Documents:
- Crew List.
- List of Ports of Call.
- Stores List.
- Provisions List.
- Bonded Stores List.
- Personal Effects Declaration.
- Cargo Manifest.
- Vaccination List.
- Last Port Clearance.
- Arms and Ammunition List.
- Passenger List.
- Narcotics List.

All officials board the vessel at the anchorage. Bonded store was not sealed.

Pilotage: Pilotage is compulsory. Pilot boards in position Lat. 03° 39.8' S., Long. 114° 25.2' E.

When vessels carry out loading operations at anchorage, Pilot is not compulsory.

Anchorage: Open anchorage, open to the weather from East, South and West. Holding ground is good. Available depth is about 22.0 m.

Approaches: B.A. Charts No. 3029 and 3015.

As it is an open anchorage, approaches are very easy. There are good land marks and sufficient lighthouses for position plotting.

Approaching vessel should first pick-up T. Selatan Lighthouse, and when S.W. of it, proceed Northerly, keeping the vessel outside the 20.0 m. sounding contour.

At anchorage, there is ample room for all sized vessels.

When approaching, caution is to be exercised, as tugs towing barges may be encountered.

Restrictions: The draft available for the inner harbour is 5.0 m. at the top of high water. Due to excessive silting in the river, it requires continuous dredging. Cargo operations for larger vessels are performed at the anchorage.

Health: Free Pratique is granted at the anchorage.

VHF: Port Control operate on Channel 16.

Tugs: In the inner harbour, there are 3 tugs available to assist in the berthing/unberthing operations. There are also several tugs for towing the barges. Tugs up to 3,000 h.p. are available.

Berthing: In the inner harbour, there is one quay with length 500 m. and 4 vessels can be accommodated at a time.

Trade: Main trade of the port is export of coal. Lumber, plywood and rubber also handled. Petroleum, petroleum products and containers are handled in the inner harbour.

Draft Survey: Cargo quantity is ascertained by draft survey, which is jointly carried out by ship's staff and surveyor, appointed by shipper.

Loading: Loading operations of larger vessels are carried out at the anchorage by the barges. We loaded 42,500 tonnes of coal. Ship's cranes and grabs are mostly used for loading. However, for gearless vessels, there are 2 floating cranes fitted with grabs of 15 tonnes capacity. Loading rate depends on the availability of barges. A 40,000 tonne cargo loading usually takes about 7 days.

Stevedores: Available from the local pool. Hatch opening and closing is carried out by the ship's crew.

Medical: Medical attention and hospitalisation possible.

Density: Density in the river is 1000 and at the anchorage 1020.

Fresh Water: Available at anchorage by barges. Cost is about U.S.$15.00/ton.

Fuel: All grades of fuel available alongside or at the anchorage.

Repairs: Only small repairs are possible locally. However, workshops can be arranged from Jakarta, Surabaja and Singapore.

Gangway/Deck Watchmen: Not required.

Customs Allowances: Spirits 0.75 litre, beer 24 cans and cigarettes 200.

Repatriation: Possible.

Airport: There are flights to Jakarta and Surabaja, where international flights are available.

Time: GMT plus 8 hours.

Shore Leave: Permitted. It takes about 2 hours to reach the shore by speed boat from the anchorage.

Identity Cards: Not required. Crew should carry passports duly stamped by Immigration Officer.

General:

Supplies: Only fresh provisions and seasonal fruits are available. The Agent acts as ship chandler.

Services: Thre are no facilities for tank cleaning, garbage disposal or compass adjusting.

Weather: Since most of the cargo operations are carried out at the open anchorage, the weather is a limiting factor. Quite often, there is a strong S.W.'ly wind in the afternoon of about 20 knots – 25 knots, which creates swell of up to 2.0 m. – 3.0 m., but the weather subsides in the evening. However, dragging of vessel's anchors is rarely reported.

Agency: PT Arpinebathera Adhignua, Jalan Kapten Piere Tendean No. 78, Banjarmasin, Indonesia. Tel: (0511) 252075, (0511) 251744. Fax: (0511) 256757. Telex: 39345 Apolbm Ia.

BANYUWANGI: 08.13 S. 114.23 E.

OLD PORT NOW PRACTICALLY CLOSED FOR SHIPS.
(OPENED FOR BOATS AND FISHING BOATS ONLY).

DOCUMENTS: Customs and Harbour Master requires:
- Crew List.
- Passenger List.
- Customs Documents.
- Health Certificate.
- Port Clearance.
- Harbour Report.
- Derat Certificate.
- Radio Certificate.
- Certificate of Registry.

PILOTAGE: Not necessary because anchorage open.

ANCHORAGE: Position: Lat. 8° 12' S., Long. 114° 23' 16" E. Depth 25 m. – 30 m.

MAX. SIZE: No restrictions, vessels must be anchored outside harbour.

HEALTH: All vessels boarded by Harbour Quarantine on arrival.

RADIO: None, moved to Meneng Port.

TUGS: 2 tug boats belong to P.T. Jakarta Lloyd, Banyuwangi Branch.

BERTHING: Distance 500 m. to 750 m. from lighthouse. Anchorage berths only.

STEVEDORES: 6 gangs available. P.T. Jakarta Lloyd, Banyuwangi Branch. 1 gang consists of 13 labourers, 1 gang boss, 1 tallyman, 2 winch drivers and 1 commander.
MEDICAL: Arranged by Department of Health.
FRESH WATER: None available.
FUEL: None available.
CONSULS: No local representation.
REPAIRS: No facilities.
GANGWAY/DECK WATCHMEN: None available from shore.
OPENING/CLOSING HATCHES: Arranged by stevedores.
CUSTOMS ALLOWANCES: 50 cigarettes each crew member. Packs or tins of tobacco must be open before going ashore. Wine and/or spirits: Enough for own use, if more required must pay import duties.
CARGO GEAR: Ship's gear used. Cargo loading on board by lighter.
REPATRIATION: Not possible.
TIME: GMT plus 7 hours.
HOLIDAYS: On Sundays and holidays no work carried out, but if necessary, can be arranged. No work when raining.
POLICE/FIRE/AMBULANCE: Police and ambulance available. Fire brigades belong to District and Paper Mill. Phone Nos. 352, 653, 353 and 503.
TELEPHONES: No facilities for placing telephones on board.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Required.
DELAYS: Possible during loading if it rains.
AUTHORITY: Kepala Pelabuhan (Port Administration).

BANYUWANGI (Tanjungwangi Port): 08.07 S. 114.23 E. (See Plan)

PORT FOR LARGE VESSELS.

DOCUMENTS: Customs and Harbour Master require:
Crew List.
Passenger List.
Customs Documents.
Health Certificate.
Port Clearance.
Harbour Report.
Derat Certificate.
Radio Certificate.
Certificate of Registry.
Perfection Certificate.
PILOTAGE: Compulsory pilotage for vessels over 150 g.r.t. Pilots must be ordered by respective Agent at least 48 hours in advance of the time their service is required.
ANCHORAGE: Lat. 8° 07' 20" S., Long. 114° 24' 14" E.
For vessels over LOA 150 m.:
1. Lat. 08° 20' 00" S., Long. 114° 24' 00" E.
2. Lat. 08° 24' 10" S., Long. 114° 24' 50" E.
RESTRICTIONS: Mooring and unmooring is restricted to daylight hours only for tankers.
MAX. SIZE: Draft alongside quay max. 40 ft. Present quay permits max. LOA of 500 ft. Bar 200 m. East of quay, depth below chart datum is 27 ft. Max. size 20,000 d.w.t.
HEALTH: All vessels boarded by Harbour Quarantine on arrival.
RADIO: Name: Meneng Coastal Radio Station. Call sign: PKD 22 with 2182/2690 kHz, 6215/6209 kHz and 8270/8794 kHz.
VHF: Meneng Radio: Channels 12, 13, 14, 16 and 20.
Tanjungwangi Pilot Station: Channels 8, 12, 14 and 16.
Pertamina Tanker/Shipping: Channels 16 and 9.
TUGS: 1 tug × 1,400 h.p. owned by Pelindo III Meneng. 2 tugs × 850 h.p. owned by Pertamina.
BERTHING: Present berth length 388 m. Depth alongside 40 ft.
New Port: Located about 0.4 miles South of the Pertamina Oil Jetty. Port operated and owned by DMK (Dhisa Manunggal Karya) for all off-loading and discharging purposes. Max. LOA 110 m., max. draft 8.0 m.
Note:
Max. safe capacity for the jetty:
Cargo jetty No. I max. capacity 3 tons/sq.m.
Cargo jetty No. II max. capacity 3 tons/sq.m.
Cargo jetty No. III max. capacity 3 tons/sq.m.
STEVEDORES: 12 gangs available.
One gang consists of 1 gang boss, 2 winch drivers, 1 Pilot and 13 labourers.
Working Hours: 0800 – 1600, 1600 – 2400 and 2400 – 0800.
Rest Time: 1200 – 1300, 1800 – 1900 and 0300 – 0400.
FACILITIES: *Godowns:*
(a) 2 transit godowns, max. capacity 1,000 sq.m./2,000 tons.
1 transit godown, max. capacity 1,250 sq.m./2,500 tons.
1 transit godown, max. capacity 1,800 sq.m./3,600 tons.
1 transit godown, max. capacity 3,000 sq.m./6,000 tons.
Owned by PT (Persero) Pelindo III Tanjungwangi.
(b) 2 transit godowns, max. capacity 10,000 tons.
Owned by PT Djakarta Lloyd Tanjungwangi.
Equipment: 1 mobile crane of 25 tons capacity. 2 forklifts of 3 tons capacity. 3 forklifts of 2 tons capacity.
MEDICAL: Arranged by Department of Health.
TANKERS: One berth operated by Pertamina. Max. LOA 155 m. Max. draft 8.00 m. Max. d.w.t. 20,000 tons.
FRESH WATER: Available. Handled by Harbour Board, with a loading capacity of about 50 t.p.h.
FUEL: Available.
CONSULS: No local representation.
REPAIRS: No facilities.
GANGWAY/DECK WATCHMEN: Available.
OPENING/CLOSING HATCHES: Normally by stevedores.
CUSTOMS ALLOWANCES: 50 cigarettes each Crew member. Packs or tins of tobacco must be open before going ashore. Wines and/or spirits enough for own use. If more required must pay import duties.
CARGO GEAR: Ship's gear used.
REPATRIATION: Foreign crew members must go to Immigration Office at Jember City for clearance. Facilities will be available at Banyuwangi in near future.
TIME: GMT plus 7 hours.
AIRPORT: Ngurah Rai Airport 60 miles. Juanda Airport (Surabaya) 125 miles.
HOLIDAYS: On Sunday and holidays no workers available, but if necessary work can be arranged, except Independence Day (17th August) and 1st Sjawal (Idul Fitri/Moslem Holiday).
POLICE/FIRE/AMBULANCE: Police and Ambulance available. Fire Brigade owned by P.T. Pelindo III Tanjungwangi.
Police: 110 or 2110. Fire: 113. Ambulance: 118 or 2118.
TELEPHONES: No facilities for placing telephones on board.
SHORE LEAVE: Allowed, shore pass required from Pelindo III. Tel: (0333) 21638 – 24636.
IDENTIFICATION CARDS: Required.
DELAYS: Possible during loading if it rains.
AUTHORITY: PT (Persero) Pelabuhan Indonesia III Port Tanjungwangi Branch, Raya Situbondo Street, Tanjungwangi, Banyuwangi, Indonesia. *Tel:* (0333) 21638, (0333) 24636. *Contact:* H.Suwandhy Sarlan, Port Manager.

BATU AMPAR: 01.10 N. 104.00 E.

PILOTAGE: No pilot available.
RESTRICTIONS: Entrance channel has a width of 80.0 m. and a depth of 6.0 m. – 8.0 m.
RADIO: Sekupang Radio. Call sign PKJ 20. Frequencies 500/452 kHz.
VHF: Sekupang Radio on VHF Channels 16, 9 and 19.
TUGS: There are 5 tugs and 1 mooring boat available.
BERTHING: New concrete wharf, length 1,000 m., depth alongside 6.0 m. at LWS.
Storage: There is a shed of 9,000 sq.m. and open storage area of 27,000 sq.m.
Fork Lifts: There are 8 fork lifts with capacity 2 tons – 5 tons.
CRANES: 6×10 tons – 25 tons mobile cranes and 1×150 tons capacity mobile crane.
STEVEDORES: Local labour available.
FRESH WATER: Available.
FUEL: Not available.
GENERAL: *Barges:* 5 barges available, each with capacity 400 tons.

BELAWAN: 03.47 N. 98.41 E. (See Plan)

DOCUMENTS: Upon arrival ships have to fill in the following Forms:
Harbour Report obtainable from the boarding Pilot, or from the Harbour Master.
Pilot's Certificate.

Upon arrival vessels have to produce the following Certificates and Documents, which will remain in the Harbour Master's custody until cleared:
Nationality (Registry) Certificate.
Seaworthiness Certificate.
Measurement (Tonnage) Certificate.
Derat (Exemption) Certificate.
International Load Line Certificate.
Safety Certificate (passenger ships).
Safety Equipment Certificate (cargo ships).
Safety Radio and Radiotelephony Certificate (cargo ships).
Certificate of Approval (ship's radio station).
Health Book or Bill of Health.
Last Port Clearance.
Subscription of Light and Harbour Dues and wharfage if any.
Crew Lists and Passenger's Lists.
Ship's Articles.
Other certificates and documents as required.
2 Stores Lists.
PILOTAGE: Pilotage for vessels over 150 g.r.t. is compulsory. Location of anchorage for vessels awaiting a Pilot is Lat. 03° 54' 50" N., Long. 98° 45' 50" E., near Light Buoy No. 0 (Lat. 03° 54' 14" N., Long. 98° 44' 40" E.).

The new lighthouse at Tg. Nipa Larangan (Lat. 03° 54' 12" N., Long. 98° 40' 20" E.) with characteristic Gp. Fl (3) 20 sec. 17M 40m., will assist Masters to approach the anchorage. Before arrival Masters have to contact their Agents via Belawan Radio (PKB) and give Information about: ETA, cargo, LOA, draft etc.

To receive information, Masters may use the VHF radio on Channel 12 calling "Belawan Pilot" or "Pilot Boat".

Pilot's service available 24 hours a day.

Pilot must be ordered by the Agent at least 6 hours in advance of the time their service is required.

A Sea Pilot and Harbour Pilot embark at anchorage when berth has been allotted.

Vessels will proceed when the draft enables vessels to pass through the channel.

The channel is approximately 9 miles in length, 100 m. width and 8.5 m. depth at LWS with a tidal range about 2 m. and is provided with 9 light buoys and 5 light beacons.

Basin 1,350 m. length. 220 m. width.

Pilot boat is located in the harbour.

When the Pilot is on pilot vessel, "H" flag will be flown in daylight and quick flashing white light at night.

RESTRICTIONS: Bar is silting excessively and continuous dredging is necessary to keep the shallowest part at 8 m. at LWS. Narrowest part of channel is 50 m. wide. Also see "Developments".

Outer Roads about 600 m. square marked by light buoy. No pilot light vessel. This roadstead is approx. 600 m. wide, the centre of which is the range-line of the swept channel. This channel is provided with buoys and beacons.

MAX. SIZE: LOA 200 m. Max. draft 10.0 m.

RADIO: Belawan Coastal Radio Station: Call sign PKB; Class A1, Frequency 500 kHz, 6,215 kHz, 2,182 kHz (emergency) 17,239.7 kHz, 12,970 kHz, 5 MHz (long). 8,686 kHz (middle). 4,295 kHz (short). Channels 16, 20, 22 Port Area (VHF). 8,746 kHz telephony. Telex: 51320, 52534.

TUGS: 1×800 h.p., 2×1,700 h.p., 1×1,500 h.p. and 1×2,400 h.p. Join the vessels at Buoy No. 9 about 2 miles from harbour. Ship's line to be used for towing line.

Port Authority Regulation:

(a) Vessels with LOA less than 70 m., tug assistance not required.
(b) Vessels with LOA from 71 m. up to 100 m., assisted by minimum 1 tug with total power 600 h.p. up to 1,200 h.p.
(c) Vessels with LOA over 101 m. up to 150 m., assisted by minimum 2 tugs with total power 1,700 h.p. up to 3,400 h.p.
(d) Vessels with LOA 151 m. up to 200 m., assisted by minimum 2 tugs with total power 3,400 h.p. up to 5,000 h.p.
(e) Vessels with LOA 201 m. up to 300 m., assisted by minimum 3 tugs with total power 5,000 h.p. up to 10,000 h.p.
(f) Vessels 301 m. or more, assisted by minimum 4 tugs with total power not less than 10,000 h.p.

BERTHING:

Dock or Quay	*Berth No.*	*Nominal Depth below Chart Datum* (m.)	(ft.)	*Length of Quay* (m.)
Gabion Container Quay	–	9.5	–	500
Conventional Wharf	C-1	–	–	350
	C-2	8.0	–	
Ocean-going Ujung Baru	101-113	5-9	30	1,557
Citra Ujung Baru	201	7	23	625
	202			
	203			
Industri Kimia Dasar (IKD)	–	7	23	150
Pelabuhan Lama	001	5-6	20	567
	002			
	003			
	006			
	007			
	008			
Oil Jetty	Pertamina	9	30	60
Mooring Buoys	Pelb.Lama	5-6	20	

STEVEDORES: Working hours: Monday-Thursday 0800 – 1200 hrs., 1300 – 1600 hrs. Friday 0800 – 1100 hrs., 1400 – 1600 hrs. Saturday 0800 – 1200 hrs., 1300 – 1600 hrs. Overtime to be applied for from authorities concerned and is usually granted: on working-days during meal-hours, from 1600 – 2000 hrs. and occasionally till 0400 hrs.; on Sundays and holidays, except Independence Day, 1st Ramadhan, Christmas and 1st January.

CRANES: Floating crane 40 tons capacity and 5 front lifters (top loader 1×10 tons capacity and 1×40 tons capacity).

4 travellifts, capacity 3.5 tons each.
2 gantry cranes, capacity 40 tons each under the spreader.
5 forklifts, capacity 2.5 tons.
1 forklift, capacity 3 tons.
1 forklift, capacity 5 tons.
1 forklift, capacity 2.5 tons.
2 forklifts, capacity 7.6 tons.
1 forklift, capacity 15 tons.
2 mobile cranes, capacity 15 tons.
1 mobile crane, capacity 25 tons.
1 mobile crane, capacity 35 tons.
1 mobile crane, capacity 40 tons.

MEDICAL: Hospital facilities available.

FRESH WATER: Handled by the Harbour Board. Artesian wells all along the Ocean Quay with a loading capacity of about 40 t.p.h. The water is regularly laboratory checked and declared drinkable but boiling before use remains recommended. Barge with 150 tons capacity also available.

FUEL: MFO and MDO available from Pertamina, advance notice required. Pumping capacity about 60 t.p.h.

REPAIRS: Slipways available for small craft only. Machine-shops available for minor repairs. Radio repairs available, viz. the Post Telegraph and Telephone Office. Electronic repairs available.

PORT SECURITY: Maintained by members of the Indonesian Armed Services, usually, Police, Navy or Coast Guard. Crew members should be in possession of a shore pass issued by the Port Authority, accompanied by an identification card when leaving or entering the guarded gates of the Port Area. Shore passes can be obtained via the Agencies.

CUSTOMS: It is strictly prohibited to take undeclared foreign currency ashore. Local currency restrictions may apply to shore-going crew members. It is recommended that Masters consult the Agents for the local prevailing Customs Regulations with regard to currency, cigarettes, spirits, etc., to prevent unnecessary difficulties and eventually fines.

DEVELOPMENTS: New Quay, length 851 m. and width 25 m. has been completed (See "Berthing"). 2 container cranes with capacity of 40 tons, outreach 36 m. and backreach 15 m. available. The berths will handle vessels up to 35,000 d.w.t.

To be constructed: 1 wharf, 175 m. long and 11.5 m. depth. 1 wharf, 490 m. long and depth 8.0 m. 1 wharf, 500 m. long (extension) and depth 8.0 m. 1 Fuel Oil Terminal.

Dredging: The Belawan Harbour Master has issued the following guidelines in connection with dredging work being carried out:

Commencing as of September 24th, 1984, the sailing channel of the Belawan Harbour shall be dredged for the length of about 14,000 m. with a depth of 10 m. LWS. The dredger to be used is the mud sucker 'Irian Jaya'. The location of the mud to be deposited 03° 55' 14" N., 98° 44' 48" E.

All ships passing by the dredger are requested to observe all signals shown.

At the time of passing each other, the manoeuvre should be carefully conducted, or passing each other in the middle of the channel should be avoided .

SHIPMASTER'S REPORT: December 1985 (Updated 1988).

Channel: Pilot advised controlling section now reduced to 40 m. wide and 8.0 m. depth at zero tide or chart datum. Constant silting taking place. Underkeel clearance 1.0 m. required.

One vessel per tide can pass at 7.0 m. plus the predicted height of tide. Imperative to obtain information from Pilot inward, as simply not available from Agents, Port Radio, etc.

Gabion Wharf: This new project has been completed. The Northern portion will be for containers, and the Southern end for general or direct delivery cargoes. However, this wharf appears to be already suffering from silting, and the S.W. berth was found to have a minimum of 7.1 m., increasing to 9.3 m. and 9.1 m. to the N.E. (Any ship visiting an Indonesian port must take soundings immediately on berthing to establish the safety of the berth, and not immobilise until this is done). This wharf extends S.W. from beacon (F.1364) Fl. Y. 3 secs.

Density: 1015 on flood tide, 1012 on ebb tide.

Entry Formalities: The vessel used:

7 Crew Lists, (checked in detail against I.D. Cards).
1 Manifest "Nil" cargo.
5 Bonded Stores Lists.
5 Personal Effects Lists.
5 Deck, Engine, Bond, Provisions Stores Lists.
5 Animals Lists.
5 Parcel Lists.
5 Arms and Ammunition Lists.
5 Ports of Call Last Voyage.

Inspection Team: (1) 2 Immigration Officers, 1 Port Health Officer, 1 Harbour Master, (all conveyed by Agent's minibus).

(2) 5 Customs Officers arrived separately.

Departure inspection may be similar. Agent attends with both inspection teams.

Thefts: Forecastle store broken into twice while alongside, padlocks being no deterrent. 2 shore watchmen employed throughout. Shackles stolen from hatch operating gear.

Transport: Normal mode is to ride pillion on a small motorcycle! 4.5 km. to shopping street.

Postage: A letter from Medan post office to Hong Kong reported to take 3 weeks.

Telex: Communications are poor.

SHIPMASTER'S REPORT: January 1992 (Updated 1994).

Charts: B.A. Charts No. 1353 and 3584.

Documents:

8 copies Crew List.
2 copies Crew Manifest.
2 copies Stores List.
2 copies Cargo Manifest, in transit and for discharge (or 'nil' if no cargo to discharge).
1 copy Dangerous Drugs List (checked by customs).
1 copy Ports of Call List.
1 copy Maritime Declaration of Health.
1 copy Vaccination List.

Pilotage: Pilot boards at Buoy No. 2 and departs at Buoy No. 1 from a black hulled cutter with white superstructure. Pilot can be contacted on VHF Channel 12 throughout 24 hours, working channels are 10 or 11.

Vessel berthed at Ocean Wharf with 50 m. to spare between two other vessels. This operation was carried out without the use of tugs.

The Pilot Station will link the vessel with the agent's office which is located in the passenger terminal at the East end of Ocean Wharf. The pilot's office is located in the same position.

Anchorage: Vessel anchored with Nipa Larangan Light bearing 262°×6.8 miles and Buoy No. 2 bearing 250°×2.5 miles.

Vessels are well spread out to the East of the channel over a distance of up to 2.5 miles.

Whilst at the anchorage a careful watch should be kept for small boats, boarders and pilferage. Constant patrols are necessary at night when all lights should be on and total security maintained.

Approaches: Nipa Larangan Light is conspicuous and has a Racon 'M'.

The wreck buoy in postion Lat. 03° 54.1' N., Long. 98° 44.2' E. no longer exists. The pilot reported that the wreck close East sank into the mud and is no longer a hazard to navigation.

The channel buoys are in position and are lit and the leading lights are good.

Channel: The channel is dredged to 8.5 m. MLWS from the West end of the Ocean Wharf to Buoy No. 2.

Continuous dredging is in progress by dredger 'Iran Jaya'.

Restrictions: Berthing and unberthing throughout 24 hours.

Max.Size: Maximum permitted draft in channel with suitable tide is 9.6 m.

Radio/VHF: Belawan Radio can be contacted on VHF Channel 16, working on Channel 20, and on W/T during normal working hours. We heard vessels calling at night on VHF and they received no reply.

International calls through VHF are connected very quickly.

Tugs: There are 5 tugs available. Two of the tugs are large modern fire fighting tugs of 2,400 h.p. and they also serve the offshore oil discharge berth. The three smaller tugs are approximately 1,700 h.p.

Berths: There are 6 berths on the Ocean Wharf for vessels of average length. Official depth alongside is 8.3 m. at MLWS. Vessels generally berth head in, port side to.

The quay wall is concrete and has good modern rubber fenders along the face. All berths are served by sheds.

Cargo: Latex and vegetable oils are loaded at Berths No. 106 and 107 (3rd and 2nd berths from the Western end).

Latex is piped from numerous small storage tanks behind the sheds into a central manifold between the berths and then by portable pipes laid to the ship's rail, two manifolds used.

Vegetable oils can be loaded through the central manifold between the sheds or directly from tank trucks.

Latex is loaded through 2×6 in. hoses straight into the tank hatches. Rate per hose is approximately 65 t.p.h.

Shore labour tended the hoses throughout.

Surveyor entered all tanks (with gas mask) and made inspection.

Fumigation Certificate required.

Fresh Water: Fresh water is available at any time. Loading is by shore hoses through a meter at a good rate. Waterman in attendance.

Watchmen: The agent provides two watchmen. One is in attendance at the gangway at all times and the other patrols the vessel. They are fairly good at keeping unwanted guests away.

The latex gangs also have two armed watchmen in attendance.

Chandlers: Numerous chandlers will visit the vessel. The watchmen can obtain fish and fresh produce at prices lower than the chandlers.

General: It is not advisable for Europeans to go ashore after dark or on their own during day time. Watches and jewellery should not be worn on shore.

We received spares from Japan and it took 10 days for clearance through customs.

There is an airport at Medan which is 10 miles from the port. There are flights to Singapore. It takes 3 days to arrange tickets.

Developments: There is a new coastal tanker berth in Citra Basin with a reported depth of 7.0 m. at MLWS. There are storage tanks close East of the berth.

Both the container quay and the tanker berth have good fenders.

The offshore oil discharge terminal is as indicated on B.A. Chart No. 3584. The mooring buoys do not have lights.

SHIPMASTER'S REPORT: November 1995.

Indonesia – General: The Port Authorities take all the ship's Certificates and the Seaman's Books ashore, and they keep them until ship's sailing time.

They also require the so-called "Indonesian Health Book", a green book for which they charge the vessel U.S.$200.00.

On ship's sailing, Agents bring to the Master various receipts for signing and stamping, some of them are unacceptable (e.g. U.S.$150.00 as representation to the Pilot for berthing alongside during darkness hours, or for berthing the vessel in a specific dock). Very poor international communications.

Belawan Port: This vessel, a 45,000 d.w.t. double hull tanker, berthed at the new commercial jetty between two ships to load vegetable oils. Pilot tried, even at the last steps of berthing when the vessel was already alongside, to use the main engine for arranging the vessel's position (to shift the vessel 3 m. – 5 m. forward or astern) without taking into consideration the possibility of causing damage to the mooring lines of the next ship. I ordered the shift to be done by the vessel's ropes and the tugs' assistance.

The anchorage is not safe, so all anti-pirate measures have to be taken while at anchor. The vessel is surrounded by small boats day and night.

Whilst alongside berth, some people try to come on board and everybody must be very cautious. There is a rumour that local thieves have master keys for ships' cabins, especially of Japanese and Korean built ships.

Customs are very strict. They inspect vessels' drugs and count pill by pill. If they do not find anything, they then proceed to search the medicine chest. It is very easy for them to find some cough syrup containing codeine or something else or some pill containing something.

The vessel's Agent/P&I Club advise that large "fines" and delay to vessels' departure can occur if all is not in order.

AUTHORITY: PT (Persero) Pelabuhan Indonesia I Branch, Port of Belawan, Jln. Sumatera No. 1, Belawan 20411. Indonesia. *Tel:* (061) 641919. *Telex:* 51695 PPC BLW IA. *FAX:* (061) 641300. *Contact:* Branch Manager.

BELIDA MARINE TERMINAL: 04.08 N. 105.08 E.

(See Plan)

LOCATION: The Terminal is an open unsheltered mooring in the Natuna Sea, about 150 km. W.N.W. of the Matak Island in the Anambas archipelago. It is in Indonesian territorial waters about 15 miles East of the Malaysian/Indonesian border.

Description: The Belida Marine Terminal consists of a floating storage and offloading facility (FSO) named "Intan", soft moored to a conventional catenary anchor leg mooring buoy (CALM). The "Intan" is a converted tanker of 178,000 m.d.w.t., 300 m. LOA, with a storage capacity of 1,250,000 barrels. Crude oil is produced from the Drilling and Production Platform A (DPPA) located approximately 8,000 ft. from the FSO. There is a bridge connected flare tripod connected to DPPA, which gives an orange light, often visible at great distances from the Terminal. The average sea water depth in this area is about 250 ft. The FSO is moored to the CALM by 1×21 in. circumference nylon with OCIMF recommended hardware, including a load cell. Crude oil is pumped from DPPA along the subsea pipeline, the PLEM to flexible risers, CALM, floating hoses and into the FSO for storage. At the stern, the FSO has been fitted to act as a mooring and offloading point for export tankers moored in tandem. The discharging pumps have been re-routed to direct the flow through a metering system and extended to the port side of the poop deck, where it terminates in a string of 20 in. diameter floating hoses, 1,200 ft. long. On the FSO centerline at the after end of the poop deck, a twin 17 in. circumference nylon mooring line, 70 m. long, with OCIMF recommended hardware and load cell, is fitted. The export tanker is secured in tandem with the FSO.

Terminal Limits: The oil field facilities are in the following coordinates:

DPPA (wellhead platform)	
Latitude:	4° 08' 38.19" N.
Longitude:	105° 06' 30.27" E.
CALM/FSO	
Latitude:	4° 07' 57.30" N.
Longitude:	105° 07' 43.09" E.

A prohibited area is established, bounded within a radius of 500 m. from a line joining the above positions. Vessels shall not enter this area without a Conoco Mooring Master on board. In an area within a radius of 1 nautical mile, from a line joining these points, anchoring of vessels is strictly prohibited.

DOCUMENTS: *Customs and Health Requirements:*

Clearance: Indonesian Immigration, Customs and Harbour Master Officials will board the vessel after arrival to perform inbound clearance procedures. At the same time, application is made for Provisional Pratique through the Directorate of Quarantine and if granted, cable advice is sent to the Harbour Authorities. Port Health Clearance is issued prior to vessel's arrival, and is also valid for departure clearance. If Provisional Pratique is not granted, a Port Health Officer will be provided.

All of the foregoing is arranged through and by the Agent.

Each crew member should be in possession of an International Vaccination Card.

The Agent prepares the Ship's Documents Check List Form to check the validity of each document.

These documents are:

Certificate of Registry.
Ship's Safety Construction Certificate.
Load Line Certificate.
Life Saving Equipment Certificate.
Safety Radio/Telegraph Certificate.
Cargo Gear Certificate.
Derat Certificate or Derat Exemption Certificate.

The list is then delivered to the Harbour Master with the following documents attached:

1 copy (original) Port Clearance from Last Port.
8 copies Crew List.
Passports of all crew members.
3 copies Personal Effects List.
3 copies Stores List/Bonded Stores List.
3 copies Drug List/Ammunition List.
3 copies Cargo Manifest.
3 copies Ship's Particulars.
Light Dues Receipt, if arriving from another Indonesian port.

The Harbour Master issues a Port Clearance at departure, provided clearance is also granted by the Governmental Authorities.

The Immigration Officer requires 2 copies of the Crew List, and will check the ship's articles and the passports of the crew. When these documents are found to be in order, an Arrival Clearance will be marked on the Crew List.

If arriving from another Indonesian port, the Agent will sign a Guarantee if the vessel cannot prove that Light Dues have been paid.

MINIMUM STANDARDS OF ACCEPTANCE: MINIMUM STANDARDS OF ACCEPTANCE FOR TANKERS LOADING AT BELIDA MARINE TERMINAL:

1. *Size:* Vessels in the size range 50,000 d.w.t. to 230,000 d.w.t. can be accommodated in the berth, and there is no draft limitation. Vessels below this size range may be accommodated, however, the envelope of operational conditions will be restricted.
2. *Vessel's Operations:* Operations will be conducted in accordance with ISGOTT (latest edition) guidelines. Vessels loading at the Belida Terminal must be in compliance with the latest SOLAS and MARPOL conventions and protocols. Vessels, found to be deficient or substandard in any safety or pollution control requirement, will not be berthed or if already berthed, will not be loaded.
3. *Deballasting:* Vessels must arrive at the Terminal with clean ballast and be able to deballast concurrently, maintaining 30% of the vessel's Summer d.w.t. throughout the operation.

Vessels, unable to comply with this requirement, will be permitted to load part cargo, then to discharge ballast while loading operations are suspended, and to complete loading on completion of deballasting. Vessels will be allowed 6 hours to complete the deballasting operation.

Prolonged deballasting will necessitate either removal from the berth or the commencement of loading. The Terminal will not be responsible for any free water or deadfreight.

4. *Inert Gas System:* All vessels must be equipped with an Inert Gas System conforming to the SOLAS Regulations. This must be in service throughout the vessel's operations at Belida Terminal, with tanks inerted and maintained under positive pressure. Vessel's crew must ensure that the correct atmosphere is maintained, with oxygen content at no time to exceed 8% by volume in any cargo or slop tank.

   The Terminal will make random checks to establish the condition of the tanks on arrival and throughout the operation. In the event of failure of the system or, when tank atmospheres depart from industry accepted limits, the vessel will be removed from the berth.

5. *Mooring Equipment:* Vessel must be equipped with correct mooring equipment, relevant to its size, as recommended in the "OCIMF Standards of Equipment Employed in the Mooring of Ships at a Single Point Mooring". The minimum dimensions of the centre bow fairlead/s is/are 600 mm. wide and 450 mm. deep in order to accommodate the chafe chain/s.

   Equipment employed at Belida Terminal for Mooring Vessels:

   Bow chain stopper/s, as outlined in the OCIMF publication "Recommendations for Equipment Employed in the Mooring of Ships at Single Point Moorings", 2nd Edition 1988.

   Vessels not fitted with bow chain stopper/s will be considered "Unsafe" for "Normal Mooring Operations".

   Vessels which, in the Mooring Master's opinion, do not have a suitable method of attaching the mooring, will be refused permission to berth. Should bitts have to be utilised, or should the bow stopper or Smit Bracket be located at such distance from the fairlead that they are unusable, rope snotters of 14 in. circumference and 15 m. long will be utilised. This is not considered a normal mooring operation, and vessels requiring this mooring technique will not be considered suitable for subsequent operation at Belida Terminal.

6. *Hose Connecting Equipment:* Vessel to be equipped with loading manifold in accordance with the "OCIMF Standards for Ships Manifolds". Flange to be prepared to accept a single 16 in. 150 lb. ASA connection. Derrick and rigging to be certified not less than 10 tons S.W.L. Hose connection will normally be accomplished on the port side.
7. *Loading Rates:* Terminal can provide an average loading rate of 32,000 b.p.h. through 1×16 in. hose. Vessels which cannot accept this loading rate will be rejected.
8. *Air-Conditioning:* Due to the climate conditions of the area, vessels not fitted with a working air-conditioning system pose a threat to the safety of loading operations. Only in exceptional circumstances, when a vessel has demonstrated its ability to comply with all conditions of the ISGOTT Safety Check List, will a vessel without air-conditioning be accepted for loading.
9. *Crew:* Vessel's crew must be qualified to the requirements of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers 1978. If any infringement of safety regulations, or any inability of ship's crew to operate safely and efficiently is observed, then the vessel will be removed from the berth.
10. The vessel's Owner or Bareboat Charterer is to be a party to TOVALOP, and have insurance covering the liabilities under the International Convention of Civil Liabilities for Oil Pollution Damage 1978 (C.L.C.).

    The cargo to be loaded will be covered by CRISTAL, and/or the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage 1971 (I.O.P.C.).
11. Tankers are required to conduct operations using a closed loading method. A vessel, which is unable to comply with this requirement, will not be loaded.
12. Vessel Owners/Operators must have a recognised "Drug and Alcohol Control Policy". Such policy should be in accordance with OCIMF "Guidelines for the Control of Drugs and Alcohol Onboard Ship (January 1990)". A written copy of the Owners/Operators policy statement must be onboard the vessel. Master and crew must understand and be guided by such policy.
13. *Certificate of Deratisation and General Cleanliness:* Vessel to be in possession of a valid Certificate of Deratisation and other de-infestation measures as appropriate. Should the vessel be infested with rats, vermin or other insects, which could be a threat to the health or well-being of Terminal personnel, then the vessel will not be accepted.

ARRIVAL: ARRIVAL PROCEDURES: Vessels will normally be accepted and berthed in chronological order of arrival, provided such vessels have a current nomination for cargo valid at the time of tender, carry clean ballast, if any, and have cargo tanks in a fit condition to receive cargo. Also, they must be in all respects properly equipped, manned and ready to moor. Should berthing be delayed on account of bad weather, vessels will keep their position in line.

1. *Hours of Operation:* The Belida Marine Terminal operates 24 hours a day, 7 days a week. Tankers will normally be berthed during daylight hours, weather and other circumstances permitting. In special circumstances and at the sole discretion of the FSO Superintendent, night berthing may be allowed if all conditions are favourable. Unmooring will be carried out at any hour. The company will make every effort to moor vessels upon arrival in daylight, weather permitting.
2. *Notice of Readiness:* Arrival time will be considered as the time when the Mooring Master boards the vessel, or the time the vessel arrives in the deep water anchorage, if not berthing immediately (The anchorage area is shown in the "Plan Section".).

   The Mooring Master will act on behalf of the Company to sign acknowledgement of tanker's Notice of Readiness. Notice of Readiness shall be in the English language.

   Notice of Readiness will be accepted between the hours of 0600 and 1630 LMT, provided the Mooring Master is satisfied that the export vessel is in all respects ready to moor and load. Notice of Readiness will not be accepted during a period when the port is closed on account of adverse weather.
3. *Approach to the Anchorage/Mooring Master Boarding Area:* When within VHF communication range, Masters of export tankers should confirm berthing prospects with the Terminal.

   Should it be necessary to anchor, the vessel should proceed to the recommended tanker anchorage area which is within a circle 1 mile in diameter, and with its centre located in position Lat. 04° 11' 15.0" N., Long. 105° 05' 47.0" E.
4. *Arrival at Pilot Station/Anchorage:* Means of access to the vessel by the Conoco Mooring Master shall be provided in accordance with the requirements of SOLAS. Early advice will be given by Conoco to confirm the side of the vessel that access should be provided.

   At night, the access area shall be adequately illuminated to provide for the approach and boarding of the Mooring Master, Government Officials and other Conoco representatives.
5. *Vessel Anchoring:* If a tanker is not scheduled to berth on arrival (e.g. another vessel is in the berth, or the port is closed due to adverse weather conditions, etc.), the Master will be advised by radio and requested to anchor in the area shown in the "Plan Section".
6. *Port Closed – Bad Weather Interruption of Loading/Berthing:* Vessels, required to leave the Terminal area on account of bad weather, should keep in contact with the Terminal via VHF and/or Radiotelephone, in order that they may be available when the weather is fit for resumption of operations. Conoco reserve the right to berth and load vessels out-of-turn following the return of good weather.

   The Terminal reserves the right to decline to moor a specific vessel, if its condition or facilities are unsafe for mooring or loading, even though the Terminal may be open to other vessels.

   Should a vessel be rejected for any reason, the Terminal will supply the vessel and Owners/Charterers with written reasons for non-acceptance.

   The decision of the FSO Superintendent to permit a vessel to berth shall be final. On receipt of such permission, berthing will be at the discretion of the vessel's Master in agreement with the Company Mooring Master.
7. *Indonesia Flag:* The national flag of the Republic of Indonesia shall be prominently displayed by the vessel at all times whilst at Belida Marine Terminal.
8. *Indonesian Government Regulations:* Masters are informed that the following Indonesian Government Regulations are strictly enforced.

   Signals to be Displayed on Arrival: In accordance with regulations for Indonesian ports, Quarantine, Immigration, Pilot and Call Sign flag must be displayed by all vessels approaching Belida Marine Terminal. These signals shall be displayed continuously until clearance is granted. The signals are as follows:

   Sunrise to sunset: Quarantine flag "Q".

   The "N" flag should be flown until the Immigration Officer boards the ship.

   The "G" flag (request for Pilot) should be flown until the Mooring Master boards.

   As soon as the Mooring Master boards, the "G" flag should be replaced by the "H" flag, which signifies that the Pilot is aboard. During the hours of darkness, the appropriate international lights should be substituted for the flags.

NAVIGATION AIDS: The CALM, FSO and platform and flare tripod within the Belida Marine Terminal restricted areas display the following visual navigational aids and characteristics. During restricted visibility, the following sound signals will also be given:

CALM:	Light	(1) white "U" flash, vis. 5 miles.
	Sound	"U" morse.
FSO:	Light	(2) white "U" flash (bridge wing) vis. 10 miles. (1) red "U" flash (stern) vis. 10 miles.
	Sound	"U" morse, 2 miles during fog or poor visibility.
Platform and Flare Tripod:		
	Light	White and red "U" flash on each side of platform vis. 10 miles. (2) red "U" flash on flare bridge vis. 10 miles.
	Sound	"U" morse.

PILOTAGE: See "Arrival".

Boarding by Helicopter: When, due to the weather conditions, boarding of the Mooring Master and his Assistant is not possible by boat, helicopter embarkation may be used to vessels suitably equipped. Masters should inform the Terminal in their initial message if helicopter landing facilities exist on their vessel.

ANCHORAGE: For tankers requested to anchor, the recommended area is located N.W. of the Production Platform (DPPA), and is centered on position Lat. 04° 11' 15.0" N., Long. 105° 05' 47.0" E.

This position represents the centre of a circle with a radius of 1 nautical mile.

Holding ground is considered good.

Anchoring within the Terminal limits is strictly prohibited.

The sea water depth around the area is about 250 ft., and there are no draft restrictions at Belida.

RESTRICTIONS: *Design Export Tanker Operational Conditions:* On occasions, there may be circumstances or a combination of circumstances which may preclude mooring and/or loading/deballasting operations. In these circumstances, good judgement should be exercised by the Master, under the Mooring Master's advice, as to the precise action to take.

With respect to export tanker operations, the FSO and mooring system is designed for the following operational condition limits:

(a) Mooring Operational Limit:

The FSO and mooring system are designed to enable the export tanker to moor to the FSO under the following conditions:

Wave: Significant height of 1.5 m.

Wind: Up to 25 knots.

(b) Offloading Operational Limit:

The FSO and mooring system are designed to enable the FSO to continue offloading to a moored export tanker under the following conditions:

Wave: Significant height of 3.0 m.

Wind: Up to 35 knots.

Port Conditions:

(a) Calm: Extreme still conditions with no surface air movement which may allow the accumulation of hydrocarbon vapours at deck level. Port will close temporarily. Export tanker may berth (or remain in the berth if already berthed). Cargo and ballast operations may be suspended.

(b) Lightning: In some rain squall conditions, severe lightning is experienced. Port will close temporarily - export tanker may remain in the berth (or undertake berthing operations). All cargo and ballast operations will cease.

(c) Darkness: Port will normally be closed from 1630 hrs. LMT until 0600 hrs. LMT during the hours of darkness. Export tankers, already in the berth by 1630 hrs. LMT, continue operations and may also unberth at night.

MAX. SIZE: 230,000 d.w.t. There is no draft restriction at the Terminal.

HEALTH: See "Documents".

RADIO: *Communications:*

1. Following receipt of a nomination for a "named export vessel" to load at Belida Terminal, Conoco will contact the vessel's Agent, Owner or Charterer giving details of:
    Nomination.
    Loading API and Temperature (approx.).
    Berthing prospects.
2. On receipt of this message and in any case not less than 72 hours prior to estimated arrival time at Belida Terminal, Conoco will transmit the following questionnaire to the export tanker via the vessel's Agent, Owner or Charterer:
    1. Vessel's name and Summer d.w.t.
    2. ETA in local mean time (GMT + 7 hours).
    3. Last port: Next port.
    4. Cargo requirements: Maximum loading rate via 1×16 in. manifold.
    5. Quantity ballast on board. Type of ballast (SBT, etc.).
    6. Vessel able to load and deballast simultaneously, maintaining 30% of S.d.w.t. throughout. (N.B. Terminal has no dirty ballast facilities).
    7. Estimated arrival and departure drafts (fore and aft).
    8. Bow to centre manifold distance.
    9. Distance between tanker hose rail and manifold presentation flange, port side.
    10. Size of bow fairlead/s.
    11. Bow chain stopper or Smit Bracket fitted detail and S.W.L.
    12. Derrick or crane available port side with minimum 10 tons S.W.L.
    13. Vessel has clean Bill of Health: If sickness onboard, give details.
    14. IGS operational and all cargo tanks inerted to less than 8% oxygen by volume (Mooring Master will make random check of tanks prior to berthing. Failure to comply with this requirement will result in berthing delays).
    15. Closed loading procedure can be followed.
    16. Vessel entered in TOVALOP.
    17. Vessel Owners/Operator have a recognised "Drug and Alcohol Control On Board Ship" policy in accordance with OCIMF "Guidelines for the Control of Drugs and Alcohol Onboard Ship (January 1990)". A copy of the Owners/Operator policy statement is onboard the vessel, and Master and crew understand and are guided by such policy.
    18. Date last dry dock and date of last special survey.
    19. Nationality of officers and crew.
    20. Independent cargo surveyor – if appointed.
    21. Please note, no bunkers, stores or potable water are available at the Terminal.
    22. Indonesian government regulations require that Pertamina Directorate of Shipping and Telecommunications be appointed General Agent for all tankers proceeding to load in Indonesia.

These questions should be answered as completely as possible and a reply transmitted immediately. Terminal will not be responsible for berthing delays due to lack of information/notification. Delays due to non-compliance with Terminal regulations will be for vessel's account.

3. *Conoco Indonesia Communications Address:* Notification as above should be sent via:

Telex No. : 60560, 60561 CONOCO IA.
Fax No. : (62) (021) 2500050, 5204600.
Telephone No. : (62) (021) 5210100, 5222525.

Mailing address:
Conoco Indonesia Inc.
Attn. Marine Operations Department
Menara Mulia, 3rd–5th Floor,
Jl. Jend. Gatot Subroto, Kav. 9-11,
Jakarta 12930
P.O.Box 1367, Jakarta 10013, Indonesia.

Vessel shall notify Conoco of ETA 48 hours, 24 hours and again 12 hours prior to the export vessel's arrival at the Terminal, and at any other time when ETA changes more than one hour. The 24 hours message and the 12 hours message should, in addition, be transmitted directly to the Belida FSO.

4. *FSO Communication Facilities:*

(a) VHF/FM Radio Communications: The Terminal maintains a continuous watch on VHF Channel 16 (156.8 MHz) and Masters of in-bound export tankers are recommended to use this when they are within range. The Terminal is able to select any public VHF channel for use as a working channel after initial contact on Channel 16. Attention to early VHF communication will assist in avoiding delays in berthing and vessel turnaround time.

Masters are reminded that if tankers are requested to anchor to await berthing, it is their responsibility to maintain a *constant* listening watch on Channel 16 to receive Terminal instructions.

Any delay due to a failure to maintain a constant listening watch on Channel 16 will be for the ship's account.

(b) HV/SSB Telex/Voice Communications: The Belida Marine Terminal also maintains a continuous watch on the following HF/SSB frequencies:

Watch: 13525 kHz.
2182 kHz.
Working: 5910 kHz.
4492 kHz.

(c) Satellite Telex/Voice Communications: Vessels, Owners or Charterers may contact Conoco Jakarta office by Telecommunications Satellite using International Dialling Code 062-21 (5210100).

(d) Pertamina Control Radio Station: In the event that incoming tankers are unable to contact Belida Marine Terminal on the foregoing VHF/FM frequencies or HF/SSB, Masters should request Jakarta Radio to relay the necessary information to Conoco Indonesia by telex or telephone.

(e) Details of Jakarta Radio:

Name : Jakarta Radio
Call Sign : PKX-2
Operated by : Pertamina
Nature : CR
Tax : 50 Centimes
Geographical position : 06° 30' 00" S.
106° 50' 00" E.

Calling Frequency (kHz)	*Working Frequency (kHz)*	*Power*	*Class (GMT)*	*Working Hours*
500	452	1 kw	Al	H24
8363.2-8364.8 8372.8-8373.6	8626.0	1 kw	Al	0200-0400 0500-0600 0700-0800 1000-1200 1400-1600 1700-2000
12544.8-12547.2 12599.2-12560.4	12980.0	1 kw	Al	0000-0200 0400-0500 0800-1000 1200-1400 1600-1700 2000-2200
4131.2-4425.6	4425.6	1 kw	A3A/A3J	0500-0600 0800-0900 1600-1800 2200-2400
6206.2	6512.6	1 kw	A3A/A3J	0000-0100 0300-0400 0600-0700 1200-1400 1800-2000
8235.3	8759.2	1 kw	A3A/A3J	0100-0300 0400-0500 0700-0800 1100-1200 1500-1600

When the export tanker is at the anchorage, communication between the FSO and the export tanker will be established on a mutually agreed VHF channel.

When moored to the FSO, communication between the two vessels will be maintained by VHF equipment, supplemented as necessary by UHF walkie-talkies, provided by the Conoco Mooring Master.

TUGS: *Mooring Launches:* The Terminal maintains boats to assist in mooring and unmooring vessels. These boats are directed by the Mooring Master, to whom requests by the tanker for action or assistance must be directed.

BERTHING FACILITIES: See "Location – Description".

MOORING: *Mooring Operations:*

1. The Mooring Master will board incoming tankers at the anchorage area or other agreed location. The Mooring Master will advise the ship's Master on approach to the FSO, mooring and unmooring, connection and disconnection of hoses, and all other operations within the Terminal area, including all manoeuvring of the tanker. The Master must be on the bridge at all times while the tanker is being manoeuvred.
2. The services of a Mooring Master are provided upon the express understanding and conditions that, when any Mooring Master, furnished by the Company, goes aboard a tanker for the purpose of assisting such tanker, he becomes for such purposes the servant of the Owners of the vessel, and the Company shall not be liable for any damage or injury which may result from the advice or assistance given or made by such Mooring Master while aboard or in the vicinity of such vessel.
3. Support vessels assist in tanker mooring. These are under the direct control and supervision of the Mooring Master. Any service and/or facilities provided by the Company including, but not limited to, the services of Mooring Master, support vessels and their crews, or mooring and loading equipment, are at the vessel's risk. The furnishing of a Mooring Master, support vessels or other services and facilities, shall not be construed to be, or given rise to, a personal contract.
4. Tankers due for mooring must have a pilot ladder or hoist securely rigged on the side requested by the Mooring Master. Vessels with a freeboard of more than 30 ft. shall have an accommodation ladder rigged so that the lower platform is not more than 10 ft. above the water level with a short pilot ladder for access to the platform. Upon the approach of the Mooring Master in the support vessel, the tanker must provide a good lee on the appropriate side. Tankers shall also have their port derrick rigged and crew on deck standing by.
5. The Mooring Master and his assistants, if any, who will advise the tanker crew during mooring and hose connection, will normally board tankers from the support vessel, which also serves as stand-by safety boat throughout the loading operation. Immediately the Mooring Master and his assistant have boarded, the support vessel will proceed to the port side derrick area of the tanker where mooring and hose connection equipment will be lifted aboard. Sufficient crew must be available on deck to transfer the mooring equipment from the derrick area to the forecastle.

   The following equipment, provided by the tanker, shall be ready for use when the Mooring Master boards:

   On the forecastle head:
   (1) 1 buoyant mooring rope, 10 in. circumference.
   (2) 2 messenger lines, minimum 3 in. circumference × 300 ft.
   (3) A selection of shackles, wire strops and tools (sledge hammer, crowbar, etc.).

   On the poop deck:
   (1) 2 messenger lines, minimum 3 in. circumference.
   (2) 1 buoyant mooring rope, 10 in. circumference.

   When the approach to the Terminal commences, the support vessel will be in attendance to assist if necessary.

   Approach to the FSO involves manoeuvring at close quarters to the FSO. It is therefore imperative that all measures are taken to ensure that there is no loss of power or steering during these manoeuvres. The Mooring Master will test the tanker engines ahead and astern and full port to starboard rudder movement before commencing the approach run. Ship's anchors are not to be used in connection with mooring to the FSO.
6. A mooring boat will be situated near the stern of the FSO at the end of the pick-up ropes. The pick-up ropes are secured to 76 mm. chafing chains, which in turn are secured to the main mooring of dual 17 in. circumference nylon ropes connected to a 76 mm. chafing chain at the FSO stern.
7. During the approach of the tanker towards the stern of the FSO, the ship's crew, under the advice of the Mooring Master will prepare the forecastle for the mooring operation. This will include passing 2 messenger ropes through the centre bow fairlead, or other fairleads designated by the Mooring Master, and lowering the ends to sea level. The mooring attachments will also be prepared. Sufficient crew members must be present to handle the 2 mooring lines simultaneously.
8. Upon the close approach of the tanker's bow, the mooring boat manoeuvres alongside and attaches the mooring pick-up ropes to the ship's messenger lines. The tanker will then heave up the messengers and pick-up ropes, carefully picking up the slack as the tanker approaches the stern of the FSO.
9. The pick-up ropes should be continually hove in as the tanker nears the FSO stern. The distance between the vessels will be continuously relayed to the Mooring Master on the bridge from the forecastle and by the support vessel and mooring boat. When the pick-up ropes have been brought inboard of the fairlead, it may be necessary to adjust the direction of pull to assist the chafing chains through the fairlead. Action required of the tanker crew in this respect will be advised by the Mooring Master.
10. When the chains are inboard, depending upon the method of attachment available, the connection will be made.
11. Upon completion of the mooring operation, the support vessel will be secured to the stern of the tanker, using a ship's line, to prevent the tanker from coming into contact with the FSO. Until the support vessel is secured, it may be necessary to use the tanker's engine for this purpose. Once the support vessel is secured, the Mooring Master will then advise "Finished with Engines".

    Engines must be maintained in a constant state of readiness, and at no time during the tanker's stay at the Terminal may the engines be immobilised.

    In cases when there is a failure of a tanker's main propulsion machinery or steering gear, which renders the vessel incapable of instant manoeuvrability, the Mooring Master shall be informed immediately. Loading operations will be suspended, and the tanker will be removed from the berth. All charges incurred shall be for the Owner's account.
12. Emergency towing wires should be rigged, one on the starboard bow and one on the starboard quarter. These lines must be maintained with the eye 1.0 m. above the water line with "no slack on deck".

LOADING: *Loading Operations:*

1. On satisfactory completion of the Pre-Loading Transfer Conference and Safety Check List as agreed by the Belida Mooring Master and the export tanker officer-in-charge, the vessel will be declared ready to load. All necessary valves will be opened, the hose end butterfly valve will be opened and the Mooring Master will instruct the Terminal to commence loading at a slow rate. The rate will not be increased until the tanker has confirmed that the hose connection is tight, that cargo is being received in the selected tanks only, and that no leakage is taking place through the sea valves. Thereafter, the loading rate will be increased, on request by the export tanker, to a maximum of 50,000 b.p.h.
2. Throughout the loading, a responsible deck officer must be in charge of operations, either on deck or in the cargo control-room and in continuous contact with the FSO and Mooring Master via walkie-talkie radio. In addition, an efficient deck watch in constant contact with the cargo control-room must be maintained at all times. *Additionally, one ship's crew will be stationed on the forecastle at all times to observe and report on the mooring condition, i.e. the state of the mooring and the distance and attitude of the tanker to the FSO. The mooring hawser assembly is fitted with a load monitor and mooring weight is continuously monitored on the FSO.*
3. At any time during loading operations, the rates can be reduced on request. Except in an emergency, 10 minutes notice should be given to the Terminal when rate reduction is required. As in normal tanker practice, valves must not be closed or throttled back against the oil flow without permission from the Terminal.

   Masters are specifically warned of the severe consequences of this practice which could result in damage to Terminal equipment and serious oil pollution, for which the Owner will be held responsible.

   If for any reason, radio communication between the tanker and the Terminal is lost, the Terminal will stop the loading until communication is re-established.

   In the absence of radio contact, oil flow can also be stopped by sounding the Emergency Flow Stop Signal, consisting of continuous short blasts on the ship's whistle.
4. The volume of oil loaded is accurately available at all times from the Terminal, and periodic comparisons should be made between the tanker and Terminal figures.
5. The question of ship or Terminal responsibility to stop cargo on loading the required quantity will be discussed and agreed before loading commences, during the Pre-Transfer Conference.

   Request for the Terminal to stop the flow of cargo at pre-determined tonnage must be in writing. The request must include the statement by the ship's Master that the Company will not be held responsible for any error, and that in the case of the vessel being overloaded, the excess cargo cannot be pumped back to the FSO.

Hose Connection:

1. Upon completion of the mooring operation, the loading hose will be connected to the tanker port manifold which must be prepared to accept 1×16 in. 150 ASA flange prior to berthing. Hose connection will be made by the ship's crew under the supervision of a responsible deck officer. The Mooring Master or his assistant will advise on the correct procedures to be adopted.
2. Depending on the freeboard of the tanker, the weight of the hose string to be lifted could approach 10 tons. All tankers calling at Belida Marine Terminal must have their port derrick rigged to lift at least 10 tons.
3. The mooring boat will tow the tanker end of the hose to a position below the manifold area and connect the ship's cargo runner to the "Hose Pick-Up Chain". The hose will then be lifted to a position above the main deck, so that the "Hang-Off Chain" can be made fast to the hose bitts using a snubbing chain, such that the hose flange will closely align with the required manifold flange. The hose end will then be lowered to the deck and the blind flange will be removed. The hose flange will normally be connected to the manifold by a quick release Camlock coupling.
4. When the hose is connected, the length between the manifold and rail will be supported by a nylon sling to ensure that there is no undue strain on any part of the manifold or hose string.

High Flow Rates: Masters are provided with, and asked to acknowledge receipt of a letter warning of the serious consequences of totally or partially closing valves against the flow of oil from the Terminal. Should damage to the Terminal equipment result from such malpractice, costs of all direct and consequential damage shall be for the account of vessel's Owners, and any persistantly offending vessel will not be subsequently accepted for loading.

Hose Disconnection: Immediately prior to completion of loading, the ship's crew and one deck officer should be placed on stand-by at the cargo manifold, ready for hose disconnection. When the tanker is informed by the FSO Control that all flow has ceased, the hose end butterfly valve will be closed, followed by the tanker's manifold valve. Once the spool piece has been drained into the tanker drip tray, the hose will be disconnected from the manifold (sufficient drip tray volume must be available to contain any oil remaining in the spool piece and reducer). The hose support slings will be removed, and the blind flange will be replaced on the hose. The weight of the hose will be taken by the derrick on the pick-up chain, to allow the snubbing chain to be released from the hose bitts. The hose will then be lowered to the water, where the mooring boat will disconnect the cargo runner.

Belida Crude Oil Specification:

Gravity at 60°F	Approx. 45.0
Salt Content	N/A
B.S. & W.	N/A
Sulphur	0.02% WT
Pour Point	Approx. 60°F
Viscosity	5.64 cst. at 80°F
Reid Vapour Pressure	N/A

Cargo Documentation and Inspection:

1. Documents such as Bills of Lading, Quality Certificate, Quantity Certificate, Time/Loading Report, Certificate of Origin, Cargo Manifest and Master's Receipt for Documents/Samples, etc., are prepared at Belida Marine Terminal. When the tanker has completed loading, the document will be completed and taken aboard the tanker for the Master's signature. Signing of these documents by the Master will take place at the same time as the final departure clearance formalities are being carried out.
2. Immediately upon completion of loading, the official Bill of Lading quantity will be relayed to the Mooring Master by radio. In the event of a dispute, the vessel will then be requested to re-check the measurement and calculations of the quantity, and the Mooring Master will witness such measurement and calculations. After both ship and shore figures have been verified, should an appreciable difference still exist, receipt of a Letter of Protest will be acknowledged by the Mooring Master. To maintain "Clean Documents", Masters are not to put any notes or protest on the prepared Cargo Documents.
3. Notes of Protest, if any, should be handed to the Mooring Master for further delivery to Conoco Indonesia Inc. The Mooring Master will acknowledge receipt of the Note of Protest only, and is not authorised to signify acceptance of such letters.
4. From time to time Owners, Charterers, Consignees, or other interested parties may appoint third party oil inspectors to survey the loading operation on their behalf. Any delays caused by such survey/s shall be considered "vessel delays".

Departure Procedures:

1. Immediately after the loading hose is disconnected, unmooring of the vessel will commence. The support vessel at the stern of the tanker will be released, but will remain on location to assist. Upon advice from the Mooring Master, the mooring hawsers will be heaved in by the tanker, and the mooring connections will be released. In some cases it may be necessary to briefly ring the engines ahead to relieve the weight on the moorings. As soon as the moorings are released, the engines will be rung astern, and the vessel will back away from the FSO. During the move astern, the mooring hawsers will be lowered into the water by easing back on the pick-up ropes.
2. When the vessel is safety clear of the FSO, the Belida Terminal mooring equipment will be taken from the forecastle to the port derrick, to be transferred to the support craft together with the hose connection equipment.
3. Any remaining cargo calculations and paperwork will be completed prior to the disembarkation of the Mooring Master. Upon completion of all formalities, the vessel will make a good lee to disembark Terminal personnel and Government Officials. Upon disembarkation of all such personnel, the vessel must clear the Terminal area as directed by the Mooring Master before his departure.

BALLAST: *Ballast Operation:* There are no ballast or slop reception facilities at Belida Marine Terminal, therefore all vessels must arrive with clean ballast suitable for discharging directly to sea in accordance with the standards set by International Conventions. Vessels arriving with ballast unsuitable for discharge to sea will be rejected for loading. Any tanker rejected because of contaminated ballast or sea pollution will automatically invalidate her Notice of Readiness, and will lose any priority of loading. Vessels discharging contaminated ballast overboard will be subject to the anti-pollution laws of Indonesia. *Penalties for Pollution are Severe.*

Vessels arriving at Belida Marine Terminal should maintain 30% of Summer d.w.t., to ensure safe handling and manoeuvrability in the prevailing weather and sea conditions and in accordance with the good practice of seamanship. *Propellers must be Immersed.*

Whenever possible, loading procedures should be so arranged as to allow for concurrent deballasting and loading operations, provided that at least 2 valve separations can be maintained. Permanent ballast should not be discharged before the vessel has loaded at least the equivalent amount of cargo.

The Mooring Master or his assistant may accompany the Independent Cargo Surveyor in witnessing the tank inspection prior to loading, but will not sign certificates attesting to the emptiness or cleanliness of tanks for loading. The ullaging of the slop tank and determination of oil content will also be witnessed.

MEDICAL: No facilities available.

FRESH WATER: Not available.

FUEL: Not available.

CUSTOMS ALLOWANCES: *Bonded Stores:* Cigarettes, cigars, tobacco, matches, spirits, wine, beer, perfume, arms, ammunition and possibly other items have to be locked up under Custom Seals from time of arrival of ship in port until time of leaving territorial waters. Each person is allowed to bring in 200 cigarettes or the equivalent weight of tobacco or cigars. Special allowance is made for the Master under special circumstances. After the ship is all secured, the Customs Officer will seal the stores.

If arriving from a foreign port, the Agent will prepare the General Cargo Declaration form stating the cargo onboard the tanker and attaching appropriate shipping documents.

If the tanker is arriving from an Indonesian port, Form 5-P issued at the last Indonesian port, will be retained by the Customs, and Pre-Arrival Clearance at Belida is granted. The Harbour Master will submit a Harbour Report form for the Master to complete.

GENERAL:

Services: Should it be necessary to supply divers, boats, materials, equipment or labour, to carry out repair work to enable the vessel to continue loading, any costs involved will be charged to the vessel's account at rate to be established at that time. These services will only be provided in emergencies.

Supplies: There are no bunkers, no fresh water, no small boat hire, no shore leave or shore services, and no medical assistance (except in cases of emergency) available at the Terminal. Information on port services in the area should be obtained from the vessel's Agent.

Crew Leaving: Crew members cannot leave the vessel at Belida Terminal, except in cases of emergency. Even in an emergency it should be noted that Seamen's Books may not be valid under local Government Law, and a valid passport may be required. No crew change will be permitted during the period a vessel is in the Terminal Area.

Swimming: Swimming in the sea around the Terminal is prohibited.

Alcoholic Drinks: Masters are advised that offering alcohol is strictly forbidden, and are warned of the serious consequences of offering such drinks to the Terminal staff and Government Officials who may board their vessels.

Accommodation: Members of the Terminal staff, the Mooring Master and/or his assistant, if any, will require accommodation throughout the vessel's stay in port. The Mooring Master shall be accommodated in the officers quarters, and his assistant in the crew's quarters. Meals will be taken in the appropriate mess room.

WEATHER/WIND/TIDE: *Weather Pattern:*

1. Winter – The Northeast Monsoon Season: In the Belida Oil Field area, the Northeast Monsoon becomes established during November, although in some years it may not blow regularly until December. During this period, the wind direction over the average force, when fully evolved, is about Force 4 South of Latitude 5° North and Force 5 to the North of this latitude. The wind tends to blow in successive pulsations, periods of comparatively fresh wind, followed by periods when the wind is less strong. At times the wind freshens to Force 6 or 7, while at other times it does not exceed Force 3. The frequency of Force 7 winds is estimated to be about 1% in most of this season, probably reaching 2% – 3% during December, the month of greatest frequency.
2. Summer – The Southwest Monsoon Season: From about May to October, winds are predominantly Southwesterly, mainly Force 3 or 4. Over the open sea, the Southwesterly winds can reach Force 6, but nearer the coast they are weaker and more irregular. During October, the winds become variable before the onset of the Northeast monsoon.

   Although during the Summer, monsoon wind speeds of Force 7 are rare, squalls, known locally as Ribut, in which gale force winds may be experienced temporarily are fairly common. The most dangerous type is the arch squall, which is preceded by clouds rising from the horizon in the form of an arch, heavy rain is usual when the arch is passing overhead.

Currents: The surface currents of the Natuna Sea in the Belida Oil Field area are wind generated, and currents therefore will be in the direction of the prevailing monsoon. These currents will generally exceed one knot and on occasions exceed two knots.

Typhoons: The Natuna Sea area is not normally affected by typhoons.

Tidal Streams: Tidal streams can be expected to reach 1.5 knots during Spring tides.

Relative Humidity: This is high over the area for most of the year, averaging about 90% – 95% in all months at 0700 hrs., and falling to about 70% – 74% by 1300 hrs.

Temperature: The average air temperature is high throughout the year. April is the warmest month with a mean daily air temperature of about 88°F. January is the coolest month with a mean daily temperature of 68°F.

The average sea temperature typically lags 1 to 2 months behind the air temperature with warmest mean temperatures in June/July of 85°F and coolest mean temperatures in January of 65°F.

Fog and Visibility: Fog is rare throughout the area. However, during rain squalls visibility can be extremely limited.

Rainfall: Average annual rainfall in the Belida area is about 100 in. Rainfall is most abundant from about October to January, i.e. at the onset and in the early part of the N.E. Monsoon. However, thunderstorms and heavy rain squalls occur frequently throughout the S.W. Monsoon.

AGENCY: *Procedure for Appointing Agent:* Indonesian Government Regulations require that Pertamina Directorate of Shipping and Telecommunication be appointed General Agent for all tankers proceeding to load in Indonesia.

Address : Pertamina Directorate of Shipping and
Telecommunication
Attention: Agency Department
19th Floor, Pertamina Building
Jl. Medan Merdeka Timur 1A
Jakarta, Indonesia
Cable address : Pertaminaship 1A
Telex No. : 44450 and 45348
Telephone No. : 3816305, 3816358, 3815157, 3816317.

For vessels arriving for the first time in Indonesian waters, Owners and Charterers are requested to appoint Pertamina Directorate of Shipping and Telecommunication Agency Department as General Agent to attend the vessel at Belida Marine Terminal by Letter of Appointment. This Letter of Appointment must be endorsed by the nearest Indonesian Consulate to point of dispatch of the letter, and must be sent at least 2 weeks prior to ship's arrival. The above applies also to vessels which may have changed their name and vessels from whom the Letter of Appointment has expired. Owners or Charterers can attach a list of vessels under their management/control which are scheduled for operating in Indonesian waters. In such cases, the single Letter of Appointment will be valid for all ships named in the letter.

Letters of Appointment have a validity of one year, after which they must be renewed. Each tanker entering Belida Marine Terminal must have requested and been granted an entry or agency permit prior to its arrival. It is vital that the General Agent received the following information 2 weeks before vessel's arrival, to enable the necessary permits to be obtained from the Government Directorate General of Sea Communications:

(a) Name and full address of Owners.
(b) Name of tanker and call sign.
(c) Deadweight tonnage and length overall.
(d) Flag and Port of Registry.
(e) Certificate of Registration Number.
(f) Name of Master.
(g) Number of crew.
(h) ETA at Belida Terminal Anchorage Area
(Lat. 04° 11' 15.0" N., Long. 105° 05' 47.0" E.).
(i) Last Port of Call.
(j) Intended Indonesian Ports of Call.
(k) Destination after loading.
(l) Quantity and types of Crude Oil to be loaded.

Advance Payment: Advance payment for Agency and Government Charges should be made to:

"Pertamina Agency"
Account No. 0089-690 384 020
Bank Negara Indonesia
Cabang Gambir
Jl. Kebon Sirih 77A
Jakarta – Indonesia
Telex: 44450-45348

To facilitate handling preparation, Owners/Charterers are required to telex "Pertamina Directorate of Shipping and Telecommunication", advising Telegraphic Transfer (T.T.) Number, the name of the vessel for which the T.T. is made and Indonesian Port of Call. In those instances, where advance payments exceed the actual Port Charges and disbursements, the balance will be credited to the Owners/Charterers' accounts or remitted by the Agent. Neither Pertamina nor Conoco Indonesia Inc. will be responsible for demurrage, expenses, or other charges resulting from failure to pre-arrange obligations in this manner.

SHIPMASTER'S REPORT: February 1993.

Operator: Conoco Indonesia Inc.

Cargo: Specifications of Belida Crude Oil at date of loading:

API at 60°F.: 46.2.
Salt Content: N/A.
B.S. and W.: 0.
Sulphur: 0.02% WT.
Pour Point: 50°F.
Viscosity: 5.64 cst. at 80°F.
Reid Vapour Pressure: N/A.
Loading Temperature: 38.5°C.

Terminal Limits: DPPA (Wellhead Platform):
Lat. 04° 08' 38.19" N., Long. 105° 06' 30.27" E.
Calm/FSO:
Lat. 04° 07' 57.30" N., Long. 105° 07' 43.09" E.

A prohibited area is established – bounded within a radius of 500 m. from a line joining the above positions. Vessels shall not enter this area without a Conoco Mooring Master on board. In an area within a radius of one nautical mile from a line joining these points, anchoring of vessels is strictly prohibited.

Terminal: Belida Terminal presently consists of a Drilling and Production Platform A (DPPA). There is a flare on the DPPA, which is visible from a great distance. It has a helipad. There are plans for installation of 3 more platforms.

Radio: Initial communication is on VHF Channel 16, call sign "Belida Terminal". Working channel is VHF Channel 9.

Anchorage: Anchorage area is centered in the following position:
Lat. 4° 11' 15.0" N., Long. 105° 05' 47.0" E., which is the centre of a circle with radius 1.0 miles. Holding ground is good. Water depth approximately 250 ft.

FSO: The floating storage and offloading facility (FSO), named "Intan", is a converted 178,000 d.w.t. tanker, LOA 300 m., storage capacity 1,250,000 bbls.

The "Intan" has a helicopter platform at her stern. A Racon (U) is fitted on the bridge on the vessel and the vessel is moored to an SPM. Water depth in the area is approximately 250 ft.

At the stern of the "Intan" are the mooring ropes and floating cargo line.

2×17 in. circumference nylon mooring lines, 70 m. long, and to OCIMF standard, with a load cell are fitted. For vessels of our size (83,000 d.w.t.), only one mooring rope is used, made fast on the AKD stopper.

The oil from the "Intan" flows through a metering system before reaching the 20 in. diameter floating string (total length of 1,200 ft.).

Mooring to the "Intan" is done in tandem. Messenger line from the approaching vessel is made fast to the end of the pick-up line, which is held in a launch/dinghy. Mooring is done in the normal SPM way.

A tug makes fast at the stern of the vessel by means of a ship's line.

Restrictions: No berthing between 1600 hrs. and 0600 hrs. local time (approx.). No restrictions on unberthing.

Time: GMT plus 7 hours.

Max. Size: 50,000 d.w.t. – 230,000 d.w.t.

Deballasting: Maintain 30% deadweight throughout the operation.

Manifold Size: 16 in.

Max. Loading Rate: Through 1×16 in. hose – 32,000 bbls/hr.

Pilot: Pilot boards close to anchorage after anchor is aweigh. One of the available supply vessels acts as pilot vessel.

Authorities: Customs, Immigration, Health, Harbour Master and Agent all board the vessel after she is moored.

"Q" flag and "N" flag (Immigration) should be displayed till clearance is granted.

Documents:

1 copy Declaration of Health.
10 copies Crew List.
1 copy Vaccination List.
5 copies Personal Effects List.
5 copies Bonded Stores List.
5 copies Stores List.
2 copies Ship's Particulars.
5 copies List of Narcotics.
5 copies Cargo Manifest.
1 copy Outward Clearance from Last Port.

The Outward Clearance is received during the visit of the Authorities.

During the loading operation, only the Loading Master/Mooring Master remains on board.

Documents are received approximately 30 minutes after completion of ship's calculations. They are prepared on board the "Intan".

After completion of documents the vessel can sail.

AUTHORITY:

Conoco Indonesia Inc. – Conoco Indonesia Inc. is a wholly owned subsidiary of Conoco International Inc., Houston, Texas, and the operator for a group of oil companies having a working interest in the contract area designated as the Belida Oil Field (Block "B") in the Natuna Sea, which is held by the group together with Pertamina, the State Owned Oil Company, under a Production Sharing Contract. The group consists of the following companies:

1. Pertamina,
No. 1, Jalan Medan Merdeka Timur,
Jakarta, Indonesia.
2. Conoco Indonesia Inc.,
Menara Mulia 3rd–5th Floor,
Jalan Jenderal Gatot Subroto, Kav. 9-11,
Jakarta 12930, Indonesia.
3. Conoco International Inc.
P.O.Box 2197,
Houston,
Texas 77252, USA.
4. Texaco Block B South China Sea Inc.,
2000 Westchester Avenue,
White Plains,
NY 10650, USA.
5. Inpex Natuna Ltd.,
No. 8-10, 2-chome,
Toramon, Minota-ku,
Tokyo 105, Japan.

Conoco Indonesia Inc., as the operator of the group, produces crude oil from the Belida Field, Natuna Sea, known as "Belida Crude Oil", and delivers the crude oil to tankers for export to world markets.

Nomination: Tanker nominations for Belida Crude Oil liftings are coordinated through Conoco International Inc. (Singapore Branch), Singapore (Telex: RS 50645 CII. Fax: (65) 3450792) and Conoco Indonesia Inc., Jakarta.

Tanker scheduling is coordinated for all the partners by Conoco International Inc., Singapore and Conoco Indonesia Inc., Jakarta.

BENGKULU (Pulau Baai): 03.46 S. 102.16 E.

(See Plan)

LOCATION: The Port of Pulau Baai is located approximately 20 km. South of Bengkulu.
PILOTAGE: Compulsory.
ANCHORAGE: Vessels anchor in position 03° 47.5' S., 102° 11.5' E.
RESTRICTIONS: The fairway is 800 m. in length and 400 m. wide. Depth of fairway 10.0 m. at LWS.
MAX. SIZE: 12,000 d.w.t. Max. draft 9.0 m.
RADIO: Bengkulu Coastal Radio Station, call sign PKC 53.
VHF: Bengkulu Coastal Radio Station on Channels 16 and 12 (24 hours).
TUGS: 1×250 h.p. tug.
BERTHING: There is a concrete wharf for ocean going vessels. Length of wharf 165 m. Depth alongside 10.0 m. at LWS.

There is a domestic wharf for small vessels. Length of wharf 124 m. Depth alongside 4.0 m. at LWS.

Storage: There is a godown at the ocean going wharf of 2,450 sq.m. and a godown at the domestic wharf of 1,750 sq.m. There is also an open storage area of 5,413 sq.m.

CRANES: 2×4 – 25 tons mobile cranes. 5×3 tons fork lifts.
STEVEDORES: Available from the labour pool (YUCA).
MEDICAL: Hospital available.
FRESH WATER: Fresh water is available in limited quantities.
FUEL: Available.
REPAIRS: No facilities for repairs.
GENERAL: There is a barge with capacity 150 tons.
AUTHORITY: Harbour Master. *Tel:* 31344/31409.

BENOA: 08.45 S. 115.13 E. (See Plan)

PILOTAGE: Compulsory. Pilot boards at the anchorage and during daylight only.

ANCHORAGE: Vessels anchor in position 08° 46' 20" S., 115° 14' 30" E. Depth of water in the anchorage 12.0 m.

RADIO: Benoa Coastal Radio Station. Call sign PKD-5.
Frequencies: 6,945 kHz. and 500/487.5 kHz.
Class emission: A1 – 0.05 Kw.

TUGS: There are 2 tugs available but they are used for cargo operations only.

BERTHING: There is one pier with a length of 206 m. and a depth of 6.0 m. at LWS. There is also a wooden pier with a length of 22.5 m. and a depth of 6.0 m. at LWS.
Storage: There is a godown with an area of 1,128 sq.m.
Fork Lifts: 2×3 ton capacity fork lifts available.

STEVEDORES: Stevedores are available from the labour pool.

MEDICAL: Hospital facilities available.

TANKERS: Tankers for Pertamina berth at the wooden pier.

FRESH WATER: Available.

FUEL: High speed diesel available in limited quantities.

REPAIRS: There are no facilities available for repairs.

GENERAL: No barges available locally.

BIAK: 01.10 S. 136.05 E. (See Plan)

PILOTAGE: Compulsory. Pilot boards vessel at the anchorage. Pilot requires 6 hours notice of arrival and 3 hours notice of departure.

ANCHORAGE: Vessels anchor in position 01° 12' 12" S., 136° 05' E.

RESTRICTIONS: Maximum draft for entering channel is 11.0 m.

RADIO: Biak Coastal Radio Station. Call sign: PKY2.
Frequencies: 2,182 kHz and 6,215 kHz (J3E) and 8,366 kHz (A1).

VHF: Biak Radio (8 ATZ) on Channels 16, 12 and 14.

TUGS: Available.

BERTHING: There is a concrete wharf, length 142.0 m., breadth 15.0 m. and depth alongside 12.0 m. at LWS. There are mooring buoys off the East end of the wharf.
Storage: There is a godown of 3,800 sq.m. and open storage area of 2,625 sq.m.
Fork Lifts: 3 fork lifts with capacity 1.5 tons – 3.5 tons.

CRANES: 1×12 ton mobile crane.

STEVEDORES: Stevedores are available from labour pool U.K.A., this is arranged by Agent.

MEDICAL: Hospital facilities available.

FRESH WATER: Fresh water available alongside the wharf. Pumping rate 4 t.p.h.

FUEL: Limited supplies of high speed diesel available.

REPAIRS: There are no facilities for repairs.

BIMA: 08.25 S. 118.42 E.

DOCUMENTS:
6 Crew Lists.
6 Vaccination Lists.
6 Stores Lists.
6 Passenger Lists.

PILOTAGE: None available.

ANCHORAGE: 300 m. off the quay in depth of 16 m.

RESTRICTIONS: None, vessel may enter harbour day or night.

MAX. SIZE: Not limited at anchorage.

RADIO: Coastal Radio Station, cable address "Pelni Bima" by Post Office.

TUGS: No tugs available.

BERTHING: Entering and sailing allowed after dark. No berthing facilities except for very small ships.

STEVEDORES: Ordered by Agent. No work allowed on Muslim holidays, New Year and 17th August.

MEDICAL: 1 government hospital available.

FRESH WATER: Not available.

FUEL: Not available.

GANGWAY/DECK WATCHMEN: None available, Police and Customs officers posted on board.

OPENING/CLOSING HATCHES: Carried out by stevedores.

AIRPORT: Flights from Bima to Sumbawa, Ampenan and Bali by AOA Zamrud (Dakota) every Sunday, Tuesday, Thursday and Saturday.

TIME: GMT plus 8 hours.

HOLIDAYS: Muslim holidays, New Year, 17th August.

TELEPHONES: No phone connections between ship and shore available.

SHORE LEAVE: Crew members are allowed to go ashore and arranged by Agents.

GENERAL: 1 motor-boat, 4 lighters each of 15 tons and 1 lighter of 25 tons. Loading general cargo, live buffaloes and fodder. For heavy cargo max. 7 tons each lift can be handled through lighters.

BIMA MARINE TERMINAL: 05.46 S. 107.04 E. (See Plan)

LOCATION: Bima Marine Terminal is an open, unsheltered mooring in the Java Sea, located approximately 020°×24 nautical miles from Jakarta.

There are 3 standard type Single Buoy Moorings situated as follows:

1. "Citra Ayu" SBM (Buoy No. 7, Storage Tanker Buoy).
   Lat. 05° 46' 02" S., Long. 107° 04' 14" E.
2. Storage/Export SBM (Buoy No. 8, as standby SBM).
   Lat. 05° 45' 25" S., Long. 107° 04' 52" E.

This SBM can be used either as a storage tanker buoy or as the export tanker buoy whenever required.

3. Export SBM for tankers loading from "Citra Ayu" (Buoy No. 9).
   Lat. 05° 44' 49" S., Long. 107° 05' 29" E.

"Citra Ayu" is a chartered storage tanker used as the main floating storage and export facility at Bima Terminal.

THE FOLLOWING ITEMS ARE OF PARTICULAR IMPORTANCE:

1. No dirty ballast.
   Tankers with dirty ballast will be rejected and will have to tender a new Notice of Readiness upon second arrival.
2. No shore leave.
3. No crew changes. If emergency conditions prevail, for humanitarian reasons, exception to the foregoing may be permitted. All expenses incurred will be for ship's account.
4. No stores available.
5. No clinic available.
6. The laws of Indonesia govern this terminal and all personnel are urged to abide by them.
7. During daylight hours the Indonesian Flag must be flown throughout the vessel's stay in port.
8. Bima Terminal time is GMT plus 7 hours throughout the year.
9. *No bunkers are available.*
10. Pertamina Directorate of Shipping and Telecommunications Jakarta handles all Agency matters for tankers.
11. The unit of currency is the Indonesian Rupiah.
    The rate of exchange varies from time to time. The Master can obtain the current exchange rate from the Agent.
12. There are no Consulates available at Bima Marine Terminal. However, there are many Embassies and Consulates represented in Jakarata.
13. Language of the port is English and Indonesian.
14. Only authorised personnel or visitors are permitted on the storage barge and/or export tanker.
15. No fresh water is available.
16. No slop tanks are available.
17. The crude oil testing laboratory is equipped to perform the following tests: API Gravity, B.S. & W, Pour Point and RVP. Any additional tests that may be required will be performed in Jakarta.
18. For convenience, mail for personnel on incoming tankers may be sent to the Pertamina Agency Jakarta Office for delivery to the tanker when it arrives at the Bima Marine Terminal. Except on an emergency basis, spare parts or other material will not be accepted for delivery to incoming tankers.

DOCUMENTS: The Agent prepares the Ship's Documents Check List Form to check the validity of each document.

These documents are: Certificate of Registry, Ship's Construction Certificate, Load Line Certificate, Safety Equipment Certificate, Safety Radio/Telegraphy Certificate, Cargo Gear Certificate and Derat Certificate or Derat Exemption Certificate. This List is then delivered to the Harbour Master with the following documents attached: Last Port Clearance, Crew List approved by the Immigration Officer and Light Dues Receipt if arriving from another Indonesian port.

The Harbour Master issues a Port Clearance at departure provided clearance is also granted by the other governmental authorities. A Panamanian Port Clearance for Panamanian Flag vessels is not required at Bima Terminal.

The Immigration Officer requires 2 copies of the Crew List and will check the ship's articles and the passports of the crew. When these documents are found to be in order, an Arrival Clearance will be marked on the Crew List.

Cargo Documentation: Documents such as Bills of Lading, Certificate of Quality, Certificate of Quantity, Dry Certificate, Ullage Certificate, Loading Time Report, Certificate of Origin, Cargo Manifest and Master's Receipt of Documents/Samples, etc., are prepared at the Terminal.

When the tanker has been loaded, the documents shall be completed and be taken aboard the tanker for the Master's signature.

Signing of these Documents by the Master will take place at the same time final departure clearance formalities are being carried out.

Notes of Protest, if any, should be handed to the Mooring Master for further delivery to Atlantic Richfield Indonesia Inc., Jakarta.

Please note that the Mooring Master will *acknowledge receipt of the Note of Protest only and is not authorised to accept such letters.*

Departure Procedure: Prior to the vessel's departure, the Immigration Officials require 6 copies of the Crew List to be marked for "Departure Immigration Clearance", and duly signed, it will be distributed as follows:

Master of the vessel	1 copy
Harbour Master	1 copy
Customs	1 copy
Pertamina Agent	1 copy
Immigration	2 copies

Upon presentation of the Crew List which is signed and marked for Departure Immigration Clearance the Harbour Master will issue the Port Clearance.

Final clearance formalities will be carried out aboard the tanker after completion of loading.

Before leaving the terminal area the Master should advise the terminal the vessel's ETA at destination through the Mooring Master.

APPROACHES: Approach information can be obtained by radio from the terminal. Under normal weather conditions, if a tanker is scheduled to berth upon arrival, the Mooring Master will board such tanker in close vicinity of the mooring area.

In addition to the 3 single point mooring buoys for export tankers and the storage tanker, oil wells and production structures are located South from the storage barge which constitute a hazard to navigation for mariners.

SBMs, Storage Barge and Structures within Bima Marine Terminal area display the following characteristics:

(1) *Storage: "Citra Ayu" and SBM (Buoy No. 7):*
By day, the black ball as required by Rule 30, paragraph A of the Regulations for Preventing Collisions at Sea. Storage barge at night displays the lights for a tanker at anchor as required by the Regulations for Preventing Collisions at Sea and is equipped with automatic fog signals at the bow and at the stern.
The "Citra Ayu" SBM (Buoy No. 7) shows a white light flashing every second, visibility 5 miles.

(2) *Standby Storage/Export SBM and Export SBM (Buoys No. 8 and 9):*
(a) A white light flashing every second, visibility 5 miles, mounted on the rotating deck of each SBM. All Export SBMs are fitted with radar reflectors.
(b) 1 yellow coloured light buoy marked with yellow cross on top and yellow coloured light flashing period 2 seconds (0.5 second flash + 1.5 dark), 4 miles visibility equipped with radar reflector.
Position of the light buoy: Lat. 05° 41' 10" S., Long. 107° 07' 20" E.

(3) *Crude Oil Production Platforms Facilities:*
There are 5 crude oil production platforms, 32 wells, 1 processing platform and 1 quarters platform within the Bima Marine Terminal Area.
P.A. Lat. 05° 47' 15.0" S., Long. 107° 04' 00.0" E.
P.B. Lat. 05° 47' 42.5" S., Long. 107° 02' 28.0" E.
P.D. Lat. 05° 46' 39.8" S., Long. 107° 02' 12.5" E.
P.E. Lat. 05° 47' 16.0" S., Long. 107° 02' 04.0" E.
P.F. Lat. 05° 48' 07.0" S., Long. 107° 01' 48.0" E.
PCP (Process Platform)
Lat. 05° 47' 17.0" S., Long. 107° 03' 02.0" E.
PCS (Quarters Platform)
Lat. 05° 47' 19.0" S., Long. 107° 03' 04.0" E.

In addition to the above specified obstructions and navigational aids, all platforms display interrupted quick flashing white lights.

The storage barge, flow stations, and quarters platform will brightly illuminate the areas around them at night through the use of normal working lights.

PILOTAGE: Tankers waiting to load shall wait their turn in the recommended anchorage area, and shall maintain radio-telephone contact with the terminal using the International Marine Calling and Safety Channel 16 (156.8 MHz) for terminal instructions.

The Mooring Master will act on behalf of the company to acknowledge receipt of tanker's Notice of Readiness.

Masters of tankers are reminded that due to operational reasons, ship's Notice of Readiness (N.O.R.) will not be accepted between the hours of 1630 and 0530 unless the company, in order to accelerate ship's turn-around time, is willing to accept same. In any case, N.O.R. will not be accepted for a time earlier than when;

(a) The Master has received the Mooring Master onboard.
or
(b) The tanker has anchored within the recommended anchorage area, and has advised the terminal the time of anchoring.

Exception to (a) and (b) above will be if the tanker is within the anchorage area awaiting arrival of the Mooring Master and has been requested by the terminal not to anchor. In this case N.O.R. will be accepted from the time the terminal requested the ship not to anchor.

In order to meet safe and efficient marine operations, tankers are recommended to arrive during daylight hours. However, if on ship's arrival the required Loading Clearance is not yet received at Bima Marine Terminal then, in this case, the acceptance of N.O.R. will be the time when such clearance is received on the storage tanker "Citra Ayu" or whenever the tanker is secured.

The Company reserves the right to decline to berth a specific tanker if its condition or facilities are unsafe for berthing or loading even though the berth may be open to other tankers.

The decision of Atlantic Richfield Indonesia Inc.'s Terminal Section Manager or his designated assistant to berth or not to berth a tanker shall be final.

ANCHORAGE: For tankers requested to anchor, the recommended anchorage area is an area Northeastward from the single point mooring buoys enclosed by a line drawn through the following positions:

A. Lat. 05° 43' 00" S., Long. 107° 06' 00" E.
B. Lat. 05° 41' 30" S., Long. 107° 07' 10" E.
C. Lat. 05° 42' 50" S., Long. 107° 08' 37" E.
D. Lat. 05° 44' 20" S., Long. 107° 07' 28" E.

Prior to arrival Masters of tankers should contact the terminal for instructions concerning anchorage positions.

Refer to "Radio" for further instructions.

Under no circumstances should an export tanker enter the Restricted Area without a company Mooring Master aboard.

The attention of Masters is drawn to the existence of underwater pipelines in the Restricted Area.

RESTRICTIONS: Berthing during daylight hours only. Maximum distance bow to manifold is 500 ft.

MAX. SIZE: 250,000 d.w.t. Depth of water in approaches and at buoys is 110 ft.

HEALTH/IMMIGRATION/CUSTOMS: See "General" before first port.

RADIO: *Advice of Arrival by Cable or Telex:* It is important that all incoming tankers advise Bima Marine Terminal 72 hours and 48 hours before ETA, giving the best estimate of ship's arrival at the terminal, via:

Cable Address: Ardjak, Terminal Section, Jakarta
Telex: 011-47390 Jakarta.

Time to be used for ETA is "Golf" (local) Time Zone of GMT plus 7 hours throughout the year. The first message should also include the following information:

1. Name of tanker and Radio Call Sign.
2. Cargo requirements.
3. De-ballast time. (Note: if a separate/permanent ballast system is fitted, ability of ship to load crude oil and discharge ballast simultaneously must be stated.
4. Maximum loading rate.
5. Arrival draft, forward and aft.
6. Last Port of Call.
7. Confirm that vessel has clean Bill of Health.
8. If there is any sickness aboard, give whatever information is available as to the possible type of sickness.
9. If cholera inoculation required, advise number required.
10. Distance in feet from the bow to tanker's loading manifold.

Further ETA messages should be sent to Bima Marine Terminal via the above cable address or telex number when the tanker is 24 hours and 12 hours distant from the terminal and any other time, if any appreciable change occurs in the original ETA or subsequent ETA's.

RADIO COMMUNICATIONS:

(1) VHF/FM Radio Telephone: (International Marine Calling and Safety Channel 16. Frequency 156.8 MHz).

Masters are recommended to use this system when they arrive within radio range of Bima Marine Terminal, particularly when approaching the port, if poor visibility exists the tanker's approach may not be observed. Attention to VHF communications may be the only means of avoiding delay in berthing.

During berthing, the ship's radio will be under the sole control of the Master, and the storage barge radio will be under the sole control of the Terminal Superintendent or his assistant. Masters are reminded that if tankers are requested to anchor to await berthing, *it is their responsibility to maintain constant listening watch on VHF Channel 16* to receive terminal instructions.

Any delay due to failure to maintain a constant watch on Channel 16 will be for the ship's account, and will not be included in Calculation of Lay Time.

Bima Marine Terminal is equipped with VHF/FM Radio-telephone sets and continuous watch is maintained on Channel 16 (156.8 MHz) and frequency 157.725 MHz.

Tankers approaching the terminal should make initial contact on Channel 16. For subsequent inter-ship communication within the terminal a "Handie Talkie" VHF radio frequency 157.725 MHz will be used by the Mooring Master. This frequency will not be for general purpose use, unless clearance is obtained by the terminal. This is required for safety reasons.

Should all radios on the tanker become inoperative, the emergency signal i.e. continuous blasts on the ship's whistle will be sounded to notify the terminal of the radio failures. Upon hearing this signal from a loading tanker, the storage barge will immediately stop loading to the Export Tanker until communications have again been established.

(2) High Frequency Single Side Band Radio Telephone: A voice message from incoming tankers may be relayed by HF/SSB. Atlantic Richfield Indonesia Inc., located in Jakarta, Indonesia, is inter-connected to Bima Marine Terminal via local communications system and maintains a continuous watch on HF frequency 7320 kHz (upper side band A3J mode. 100 watts, vertical whip antenna, call sign "8GJ9").

(3) Pertamina Control Radio Stations – HF/SSB: In the event incoming tankers are not able to contact Bima Marine Terminal on the foregoing VHF/FM frequencies or by HF/SSB, Pertamina maintains coastal radio stations located in Jakarta and Merak.

Pertamina Jakarta Radio, call sign "PKI 2" may be contacted on HF/SSB using the following frequencies and during the following service hours:

Frequency (kHz)	*Hours (GMT)*	*Keep Watch (kHz)*
452	0000 – 2400	500
8626	0200 – 0400, 0500 – 0600, 0700 – 0800, 1000 – 1200, 1400 – 1500, 1700 – 2000	8363.2 – 8364.8
12980	0000 – 0200, 0400 – 0500, 0800 – 1000, 1200 – 1400, 1600 – 1700, 2000 – 2200	12544.8 – 12547.2 12559.2 – 12560.4
4419.4 4425.6	0100 – 0400, 0700 – 0900, 1000 – 1100, 1300 – 1500, 1800 – 2000	4125.0 and 4131.2
6512.6 6521.9	0000 – 0100, 0300 – 0400, 0600 – 0700, 1200 – 1400, 1800 – 2000	6215.5 and 6202.2
8759.2	0100 – 0300, 0400 – 0500, 0700 – 0800, 1100 – 1200, 1500 – 1600	
VHF Channels 9, 16, 19	0000 – 2400	Channel 16

Pertamina Merak Radio, call sign "PKQ" may be contacted on HF/SSB per the following frequencies and during the following service hours:

Frequency (kHz)	*Hours (GMT)*	*Keep Watch (kHz)*
452, 500	0000 – 1600	500
8626	0100 – 0200, 0900 – 1000, 1500 – 1600	8363.2 – 8364.8 8372.8 – 8373.6
4419.4, 4425.6	0000 – 0100, 1200 – 1400	4125.0, 4131.2
6512.6, 6521.9	0200 – 0300, 0400 – 0500, 0800 – 0900	6206.2, 6215.5
VHF Channels 9, 16, 19	0000 – 2400	Channel 16

Masters should request the Pertamina Coastal Radio Station to relay the necessary information to Atlantic Richfield Indonesia Inc., Jakarta, c/o Terminal Section during office hours and radio operator after office hours, by Tel: 737474 (18 lines), or by Pertamina internal telex system number 18 which is the designated number for Atlantic Richfield Indonesia Inc.

Also see "General" before first port.

TUGS: *Mooring Launches:* For running lines as required, also for transporting Government Officials, Agents and other authorised personnel to and from the export tanker, 1 suitable mooring launch will be available.

There is also 1 tug available to assist mooring/unmooring and to transport Government Officials to and from the export tanker as required.

BERTHING FACILITIES: *Single Buoy Mooring for Export of Crude Oil:* SBM No. 8 is designed with double function capability i.e. as a storage SBM and an Export SBM. SBM No. 8 is designed, during reasonable weather conditions, to handle export tankers up to 250,000 d.w.t. Export SBM No. 9 is designed to handle tankers up to 250,000 d.w.t., weather permitting. Each of the above loading buoys is equipped with a dual 24 in. circumference floating braidline mooring rope together with anti-chafe chains (length 26 ft.), so arranged as to avoid chafe to the mooring ropes while tankers are at the buoy.

The crude oil loading hoses are to be connected to the ship's manifold on the port side of the export tanker. Tankers arriving are requested to have the derrick on the port side raised and rigged, ready to lift aboard the terminal equipment.

Crude oil tankers are loaded through 2 strings of 20 in. I.D. floating hoses extending from each Export SBM, connected to the tanker's manifolds by rail hoses of 16 in. I.D. All crude oil tankers not having 16 in. hose connections should provide their own reducers in such a way as not to cause any delay in the hose connecting operation. On Export SBM's No. 8 and No. 9 the length of the hose strings is 900 ft.

For crude oil tankers intending to load at Bima Marine Terminal, the distance from the bow to the loading manifold should not exceed 500 ft.

The minimum loading rate at Bima Marine Terminal for crude oil tanker is 15,000 bbls.p.h. Any tanker arriving unable to receive crude oil at the above rate may be rejected. The storage barge loading to tankers on SBM No. 8 or No. 9 can accomplish a maximum loading rate of approximately 35,000 bbls.p.h. through meters.

In order to save time as well as to make the berth available for others, it is requested that ships receive crude oil as fast as it can be delivered, with due regard for safety.

Masters are reminded that for safety reasons, it is advisable to have the ship half loaded as soon as possible. Rate can be reduced for topping off tanks. When requested by the ship to stop, cessation of crude oil flow is almost immediate.

Masters are also advised that the minimum quantity tankers can load at Bima Marine Terminal is 100,000 bbls. and the maximum is 1,200,000 bbls. At the sole discretion of the Terminal Manager or his designated assistants and based on written request from the Master/Offtakers, tankers may be allowed to load up to 1,500,000 bbls. 45%. However, if the quantity to be loaded exceeds 1,200,000 bbls., Offtaker/Shipowner(s) will be required to state that they waive any demurrage incurred due to waiting on cargo and/or berth for loading.

Storage Tanker "Citra Ayu": The Company's Main Offshore Terminal Administrative Office, Storage and Laboratory for testing crude oil stock at Bima Terminal is a 236,000 d.w.t. storage tanker named "Citra Ayu" of Bahamian registry.

Overall length of the barge is 1,067 ft., and total crude oil capacity 1,608,000 gross barrels.

Crude oil from the "Citra Ayu" is delivered to tankers through Positive Displacement Meters, of which there are 4, each having a maximum capacity of 12,500 bbls.p.h.

The "Citra Ayu" is moored to SBM No. 7 in position Lat. 05° 46' 02" S., Long. 107° 04' 14" E.

Export tanker loading crude oil from "Citra Ayu" will be moored to SBM No. 9 or SBM No. 8.

Position of SBM No. 9: Lat. 05° 44' 49" S., Long. 107° 05' 29" E.
Position of SBM No. 8: Lat. 05° 45' 25" S., Long. 107° 04' 52" E.

Zu-Bima Crude Specifications:
API Gravity at 60°F: 20.4 – 18.5
Reid Vapor Pressure: 0.7 – 0.9
Sulphur, % Wt.: 0.10 – 0.14
Kinematic, Viscosity at 100°F: 218.7 – 692.1
Pour Point: 30°F – 50°F
Carbon Residue, % Wt.: 4.75 – 8.29
B.S. & W, % Vol.: 0.10 – 0.60
Flash (TCC): 12.6°F – 144°F

MOORING/LOADING/UNMOORING: Bima Marine Terminal will operate 24 hours a day, 7 days a week. Tankers will normally be berthed during daylight hours, weather and other circumstances permitting. In special circumstances at the sole discretion of the Company Terminal Superintendent, night berthing may be allowed if all conditions are favourable.

Unmooring will be carried out at any hour.

Tankers to be moored or manoeuvred at Bima Marine Terminal will be boarded within the anchorage area by the Company Mooring Master. Under normal weather conditions if a tanker is scheduled to berth on arrival, the Mooring Master will board such vessel in close vicinity of the mooring area.

All such manoeuvring of ships shall be done only in accordance with the advice of the Mooring Master, subject to the understanding that in all cases and circumstances the Master of the tanker being manoeuvred shall remain solely responsible on behalf of his vessel's owners for the safe and proper manoeuvring of his vessel.

The ship's Master or one of his designated and qualified deck officers, must be on the navigating bridge at all times while the vessel is being manoeuvred.

The Mooring Master will report unsatisfactory conditions to the Company Terminal Superintendent who may in turn, reject the tanker until corrections are fully made. All costs accruing therefrom will be for the vessel's account.

Before loading, the tanker's cargo tanks are to be inspected and if suitable for loading crude oil, a notation signed by both the Terminal Representative and Vessel's Master to this effect will be made on the Company Dry Certificate.

The Company Terminal Superintendent or his designated assistant, shall be the sole authority to decide when the port is closed due to unsuitable weather conditions.

Various combinations of wind, sea and tidal conditions also the size, length, ballasted trim and handling qualities of a vessel can affect the decision to berth a vessel at Bima Marine Terminal. All these factors have to be evaluated before a final berthing decision is made.

Delays to vessels using Bima Marine Terminal due to the port being closed because of bad weather conditions shall not be computed as used Lay Time when compiling vessel's turn around time.

Request for the terminal to stop the flow of cargo at a predetermined tonnage must be in writing. The request must include the statement by the ship's Master that the Company will not be held responsible for any error and that in case of the vessel being overloaded the excess cargo cannot be pumped back to the storage barge. The ship's Master will also be held responsible for any spills caused by this request.

The ship's Master is responsible to ensure that no communication by radio is allowed within the terminal area.

Unauthorised radio communications will cause cessation of all operations except clearing of the berth, and the vessel's Notice of Readiness will be immediately nullified.

The Master of each tanker will be given a copy of the *Conditions of Port Use of Bima Marine Terminal* which he will be required to sign before the vessel proceeds to berth.

The vessel's personnel are responsible for the safety of the vessel and must take all necessary precautions, whether or not so advised by the Mooring Master, having in mind the hazards of the operation because of the products being handled, weather conditions and any other circumstances requiring special care or caution.

Ships are requested to have a pilot ladder safely and securely rigged ready for immediate use and long enough to reach the Mooring Master's launch.

A combination of pilot ladder and ship's accommodation ladder, so arranged that personnel, boarding the vessel can first use the pilot ladder until part way up the vessel's side, and then transfer to the accommodation ladder is recommended, especially on very large tankers.

A light line should be ready to take aboard the Mooring Master's equipment.

Tanker will provide a broad lee for the Mooring Master both when boarding and leaving the ship. Adequate explosion proof lighting at night must be provided near the pilot ladder and manifold connection area. During loading, overside lighting must be provided in the vicinity of sea valves and floating hoses.

During a tanker's stay at the Export SBM, emergency towing wires shall at all times be hung over the ship's stern on each quarter of the vessel. These wires shall be secured on the inboard bitts to enable the vessel to be towed away should the need arise. They must be tended throughout to keep the eye of the wire not more than 2 ft. above the water.

Before any crude is loaded all ship's scuppers on main decks must be plugged and cemented oil tight. Approved mechanical means of closing scuppers may be accepted.

It is absolutely essential that extremely careful supervision be exercised by officers of all tankers while loading operations are in progress.

A responsible ship's officer is required to be on duty continuously while the tanker is being loaded. He will be assisted by an adequate number of ship's personnel in these operations.

It is the responsibility of the vessel to ensure that all mooring lines are properly tended on loading tankers. The Mooring Master at any time, may direct an additional ship's line to be secured to the buoy and this line to be hove up or slackened off under the supervision of a responsible ship's officer so as to prevent the vessel overriding the buoy. *At all times sufficient crew must be available* to carry out under the supervision of a responsible officer instructions given by the Mooring Master.

Masters of loading tankers are advised that raising, lowering, connecting and disconnecting of oil loading hoses as well as other labours and duties on board connected with the loading of cargo or maintaining mooring lines in a correct manner will be performed *by the ship's crew directed by a responsible officer* as required by the Mooring Master. Loading of crude oil tankers is through 2×20 in. I.D. hoses with 150 A.S.A. flange rating. The weight of each hose is approximately 4 tons.

All tankers loading crude oil at Bima Marine Terminal must be able to connect the 16 in. hoses to their manifolds. Masters are strongly reminded, that it is the ship's responsibility to provide reducers to make the connection, if the ship's manifold is not 16 in.

Preparations for mooring will be advised by the terminal through VHF communication prior to tanker's arrival or by the Mooring Master before the mooring operation commences.

Crude oil tankers are required to have ready:

1. On the port side: a derrick of a least 10 tons safe working load rigged with a second topping lift ready to pick up the mooring and hose connecting gear from the Mooring Master's launch. This derrick will be subsequently used for raising, connecting, disconnecting and lowering loading hoses and eventually to transfer the mooring and hose connecting gear back to the launch before the tanker sails.

2. On the forecastle: at least 6 good ship's mooring lines shall be required. 2 of them will be used as messenger lines for bringing aboard both terminal mooring lines from the SBM. The 4 remaining ship's lines will be laid out 2 on either side of the foc'sle deck, eyes about 3.5 m.

distant from the fairleads as advised by the Mooring Master. When the terminal mooring lines have been hove up and anti-chafe chains are about halfway through the fairleads, the eyes of the ship's lines will be shackled onto the end links of the chain so that in the final position of mooring, the tanker is tied to the SBM using the terminal mooring lines/chains made fast to the ship's bitts by means of the ship's own lines. This will be backed up by 2 wire strops each 30 ft. in length and 2 in. diameter.

These wires will be provided by the terminal to be used as preventer wires. These two wire strops will not be used as the permanent mooring system.

Their purpose is to hold the ship safely moored in the event one or more of the ship's lines parting until the crew can replace such lines.

EQUIPMENT: *Export Tanker Gear and Equipment:* A ship may be rejected, if upon inspection, it is not properly equipped, or if it is not suitably manned, or if its tanks are not suitable for the cargo, or if in the case of crude oil tankers the ballast is dirty.

A vessel is suitably manned if it has a full complement of qualified officers and crew all of whom are sober, competent and willing to carry out their duties and orders.

A ship must be equipped with a good working propulsion unit as passed by the appropriate survey society. Inoperative ships or partly inoperative ships will be rejected. Should a ship become inoperative or partly inoperative while secured to a single point mooring buoy, it will be removed at the ship's expense.

No repairs to main engines or other essential equipment or machinery while secured to an Export SBM may be carried out, unless with the permission of the Terminal Superintendent or his designated assistant.

Crude oil tankers must lift the export hoses from the water to connect with the ships manifold by means of their own derricks and using their own crew.

A vessel must have both bow anchors in good working condition. Both bow anchors and anchor cable must be of a size and standard to meet either "Lloyds" or "A.B.S." requirements, even though they may in fact, be classified by other societies.

All vessels must have ready on deck suitable stoppers for, manila, synthetic lines and wires used for mooring purposes.

All vessels must have suitable winches/capstans in good working order.

Such winches or capstans must have sufficient power to heave in the 18 in. terminal mooring lines as required by the Terminal Mooring Master. Tankers must have the capacity to heave up the 24 in. braid lines used to secure them to the Export SBM's. Power supply to all deck machinery must be maintained throughout the period the ship is secured to the Export SBM. Failure to comply with this requirement will result in cessation of loading and delay and expense so caused will be for the ship's account. To assist in vessel's turn around, ships should have all necessary gear ready on arrival. Crude oil tankers must have the cargo derrick on the port side raised with cargo gear rigged and ready before the ship is boarded by the Mooring Master.

Vessels which may consider the lifting capacity of their gear to be marginal should strengthen their gear accordingly. A common way to do so is to rig a second topping lift on the boom. Masters of crude oil tankers are reminded that the hose connecting operation will normally be carried out while the ship is deballasting.

The cargo derrick required to raise the hose from the water, must have sufficient length of strong lifting wire runner on the winch drum to enable the cargo hook to reach the water and still have adequate turns of wire left on the drum.

BALLAST: *Disposal of Ballast:* Owners and Masters are responsible to observe International Convention Laws and Indonesian Government Regulations concerning pollution of the sea, having particular regard for this area of the Java Sea.

No facilities are available for disposal of dirty ballast.

It is the responsibility of the ship's Master to see that no oil of any kind is pumped or spilled overboard from his ship.

The categories of pollution include oily water from bilges, crude residue from previous voyages or any other matter that may result in pollution of the sea. Any fines imposed shall be for ship's account.

As soon as practical after arrival, all tankers will be inspected by a Bima Marine Terminal Official for dirty ballast. During discharge of ballast, similar inspections will continue.

If evidence of oil appears at any of these inspections, the ship will be rejected and will not be accepted again until satisfactory evidence is produced that such ballast was disposed of in a proper manner. If, during inspection or during loading it is found that the ship's tanks are not tight or that oil is leaking from the ship, the ship may be rejected or refused further loading.

If the ship's tanks are found to be leaking it will not be accepted for loading unless satisfactory evidence of repair, duly certified by Lloyd's or A.B.S. Surveyors or other recognised Surveyors, is submitted. It is the responsibility of the ship's Master to see that no oil of any kind is pumped or spilled overboard from ship. Drip pans, sawdust, dispersent, etc., should be ready for use at all times especially when disconnecting hoses in order to avoid any spillage of oil overboard.

Notice of Readiness will automatically be nullified for any tanker rejected because of dirty ballast or sea pollution and such tanker will lose priority of position for loading.

A tanker must have sufficient ballast for safe handling having due regard to existing weather and sea conditions. Through a careful watch of the weather and sea conditions, frequent exchange of information between ship and terminal and by a knowledge of the behaviour of his own ship, a Master may come to the terminal with minimum safe ballast and thus lessen any possibility of infringement of sea pollution regulations.

In addition to the lights usually displayed, vessels in the moorings discharging ballast or loading cargo during darkness will brilliantly illuminate the sea around the ship, so that any pollution will be noticeable.

Tankers equipped with a separate system of ballast tanks will be allowed to discharge ballast, and load oil simultaneously, providing approval is first obtained from the Company Terminal Superintendent or his assistant.

Most responsible ship owners have adopted a system of tank cleaning using circulatory methods of transfer of tank washings on board and treating these washings with chemicals.

The result is that no oil is discharged into the sea and the separated oil is collected in a slop tank. With the written permission of lifting companies, the terminal will load on top of such slops. This system is highly recommended to avoid pollution of the Java Sea. Masters are required to certify in writing the quantity of slops remaining on board (if any). If they intend to load crude oil on top of the slops, it must be clearly stated. The Mooring Master will confirm the amount stated in writing by ullaging and calculating the slops to ensure the amount declared is correct.

Provided agreement is reached on the amount of slops the Mooring Master will confirm the amount of slops on the Dry Certificate.

Note: Separate "Slop Certificate" signed by Chief Officer witnessed by the Mooring Master is required to substantiate calculation.

Masters are warned that inspection of ballast is strict.

If, at any time an overflow of crude oil occurs, loading will be immediately suspended and will not be resumed until the oil is cleaned up and removed from the decks of the vessels and/or from the surface of the sea and any damage is repaired and no further danger exists. It is stressed that during loading operations, the Bima Cargo Controller will immediately slow down the loading rate on receipt of a request for same from the ship's deck officer in charge of loading.

All spillages of oil must be reported immediately to the Bima Terminal Superintendent or his assistant and subsequently a detailed report in writing submitted by the Master of the vessel concerned giving all relevant details.

MEDICAL: No facilities available.

FRESH WATER: Not available.

FUEL: Not available.

REPATRIATION: Not possible.

TIME: GMT plus 7 hours.

SHORE LEAVE: Not Possible.

GENERAL: *Wind and Tides:* Refer to Eastern Archipelago Pilot Vol. II. Water depth approximately 110 ft. below mean sea level.

Charts: Admiralty Chart No. 1653A. Java – Western portion including Straat Sunda.

Sailing Directions: Eastern Archipelago Pilot Vol. II.

AGENCY: See "General" before first port.

OPERATOR: Atlantic Richfield Indonesia Inc.

Principal Offices:

Pertamina, Jalan Medan Merdeka Timur No. 1 A, Jakarta, Indonesia.

Atlantic Richfield Indonesia Inc., Panin Bank Building, Jalan Jenderal Sudirman, P.O.Box 63/JKT, Jakarta, Indonesia. Tel: 737474. Telex: 47390, 44379.

Arco International Oil and Gas Company, Division of Atlantic Richfield Company, Wells Fargo Building, 444 South Flower Street, Los Angeles, California 90017, U.S.A.

Iiapco, Inc., Jalan Let. Jen. M.T. Haryono 58, P.O.Box 2759/JKT Jakarta, Indonesia.

Iiapco, Inc., c/o Natomas Trading Co., 601 California Street, San Francisco, California 94108, U.S.A.

Inpex Java Ltd., 10th Floor, Toranomon 37 Mori Building, No. 5-1 Toranomon 3-Chome, Minato-Ku, Tokyo 105, Japan.

Tidewater N.W. Java, Inc., 1440 Canal Street, Suite 2100, New Orleans, Louisiana 70112, U.S.A.

Warrior Minyak Inc., 750 N. St. Paul, Suite 1530, Dallas, Texas 75201, U.S.A.

C. Itoh Energy Development Co. Ltd., C. Itoh Building, 5-1 Kita-Aoyama 2-Chome, Minato-Ku, Tokyo 107, Japan.

Deminex Java Oel GmbH, Setiabudi Building, 2nd Floor, Jalan H. Rasuna Said 62, Jakarta.

Deminex Java Oel GmbH, Attn: P4, P.O.Box 10 09 44, Dorotheenstr. 1, 4300 Essen 1, Federal Republic of Germany.

Nominations: Tanker nominations for lifting of Bima Crude Oil are co-ordinated through Arco International Oil and Gas Company, Los Angeles, California and Atlantic Richfield Indonesia Inc., Jakarta.

All crude oil sales, also tanker chartering are arranged by the following parties in each of their respective locations:

Pertamina,
Arco International Oil and Gas Company,
Iiapco, Inc., c/o Natomas Trading Co.,
Inpex Java, Ltd.,
Tidewater N.W. Java Inc.,
Warrior Minyak Inc.,
Deminex Java Oel GmbH,
C. Itoh Energy Development Co. Ltd.

Tanker scheduling is co-ordinated for all of the partners through Arco International Oil and Gas Company, Los Angeles, California, and arranged through Atlantic Richfield Indonesia Inc., Jakarta.

BIRINGKASI: 04.49 S. 119.29 E.

LOCATION: The Port of Biringkasi is 28 miles from Ujung Pandang.

PILOTAGE: Pilotage is not compulsory. However, vessels that are not familiar with the port may request pilotage assistance from Ujung Pandang/Macassar.

ANCHORAGE: Depth of water in anchorage 10.0 m.

RADIO: All communications are via Ujung Pandang Coastal Radio Station.

TUGS: There is 1 tug of 500 h.p. and 1 mooring boat of 75 h.p.

BERTHING: Concrete Pier No. 1: Length 209 m., breadth 27 m. and depth alongside 7.0 m.

Concrete Pier No. 2: Length 20 m., breadth 40 m., depth alongside 2.4 m.

This port is a private port with a cement factory operated by P.T. Semen Tonasa. The port is equipped with a conveyor/shiploader for loading cement in bags.

Storage: Storage facilities available.

CRANES: 4×5 ton – 40 ton mobile cranes.

MEDICAL: Hospital facilities available.

STEVEDORES: Labour available from the cement factory.

FRESH WATER: Fresh water available in limited quantities.

FUEL: Not available.

REPAIRS: No facilities for undertaking repairs.

GENERAL: *Barges:* 4 barges available with capacity of 700 – 900 tons each.

Clearance: Biringkasi is an outport and therefore all vessels entering this port have to clear inward and outward at Ujung Pandang.

BITUNG: 01.26 N. 125.12 E. (See Plan)

DOCUMENTS:

4 Crew Lists.
4 Lists Passengers in Transit.
4 Lists Passengers Disembarking.
3 Cargo Lists.
3 Provisions Lists.
List of Articles new and Customs-barred in possession of each crew member – cameras, binoculars, radios, cigarettes, tobacco, etc.
Ship's Register.
International Vaccination Certificate for Crew and Passengers.
(Especially for International Travellers.)
Health Book/Maritime Declaration of Health.
Derat Exemption Certificate.

PILOTAGE: Contact Coastal Radio Station Bitung (call sign PKM), telegram address: Bitung Port Administration; advance notice of ETA 24 hours. Pilot boats: 100 h.p. and 350 h.p. light grey. Requiring a Pilot: flag, sound and Morse Signal: "G".

Anchorage for vessel awaiting a Pilot: the area between Southern part of the Lembeh Street at: Lat. 1° 25' 00" N., and Lat. 1° 30' 35" N. at the Northern part of the street.

Ships have to anchor outside the mentioned Latitude above.

ANCHORAGE: The area between coast of Lembeh Island and coast of Sulawesi: Lat. 01° 27' N., Long. 125° 12.3' E.; Lat. 01° 26.2' N., Long. 125° 13.5' E. and Lat. 01° 26.3' N., Long. 125° 10' E.; Lat. 01° 25' N., Long. 125° 10.8' E. Depths: 42 ft. to 114 ft.

RESTRICTIONS: No restrictions on night entry.

Shipmaster's Report: Numerous fishing boats at the port entrance especially at night-time, also fishing sticks, and small fishermen's houses on bamboo sticks built at sea, without lights, dangerous to navigation. Approaching or sailing from port at night-time should not be attempted.

MAX. SIZE: Draft alongside pier, max. 32 ft. L.O.A. 760 ft. or 100,000 B.R.T. (60,000 d.w.t.).

HEALTH: Vessels coming direct from other countries or coming from infected port: "Q" flag to be flown. Pratique procedure and action necessary to obtain Pratique according to the International Sanitary Regulations.

RADIO: Bitung Radio (Call sign P.K.M.) for vessels to route ETA cables to Agents, Receivers, etc.

(MF-Working frequency 438 and 500 kHz, listening frequency 500 kHz, emission A.1., A.2.).

Time Schedule: 0000 – 0100
0400 – 0500 } G.M.T.
0800 – 0900

VHF: Bitung Radio on Channels 16 and 26.

TUGS: 1 tug, 1,160 h.p. also 2 motor launches of 115 h.p.

BERTHING:

Berth	*Length* (m.)	*Depth* (m.)
Ocean Quay 1	423	4.5 – 11.0
Ocean Quay 2	150	4.5 – 11.0
Ocean Quay 3	146	4.5 – 11.0
Coastal Quay	505	5.0

CRANES: 3×15-35 tons mobile cranes.

STEVEDORES: Arranged by handling Agent.

Handling Rates:

Bulk cargo: 13–18 tons/gang/hour.
Bagged Cargo: 20–35 tons/gang/hour.
General Cargo: 12–15 tons/gang/hour.

MEDICAL: Hospital facilities available. Masters to advise by radio prior to arrival if medical attendance required aboard. Vaccination/fever certificates required, 3 copies.

TANKERS: 1 oil jetty for domestic tankers (not general use). With 7 bunkering points alongside the 582 m. Ocean Going wharf, of which 3 are presently used. Bunker fuel is supplied directly by P.N. Pertamina (state oil company).

DENSITY: About 1030.

FRESH WATER: Available from hose connections on the pier, at a rate of 30 t.p.h., also 1 fresh water barge with the capacity of 200 tons.

FUEL: Not all grades fuel available. Diesel and marine lubricants can be supplied. 48 hours notice required. Rate 50–150 t.p.h.

REPAIRS: Some deck and minor engine repairs are possible at Bitung dockyard. Radar and electronic repair available, but not for big repairs.

CONSULS: Philippines only.

DOCKYARD: P.T. IKI and P.T. Dock Surya.

GANGWAY/DECK WATCHMEN: Not needed.

OPENING/CLOSING HATCHES: Normally by crew/stevedores, otherwise according charter party.

SHIP'S CERTIFICATES: Registered Tonnage Certificate and all certificates normally required to be on board.

CUSTOMS ALLOWANCES: 100 cigarettes or 20 cigars or 100 gram. tobacco each crew member; 1 bottle wine or spirits for each crew member.

Passengers: Articles to the value of U.S.$25 per person or U.S.$100 per family.

CARGO GEAR: Loading and discharging by ship's own derricks. Shore crane capacity up to 15 tons.

REPATRIATION: Facilities available.

AIRPORT: About 50 km. from port of Bitung. Regular airlines: Garuda Indonesian Airways (G.I.A.), Bouraq, Merpati and Mandala. All have daily flights to Makassar and Jakarta.

TIME: GMT plus 9 hours, permanent.

HOLIDAYS: New Year's Day; Idul Adha, 1st Muharam; Ascension Day; Birthday of Prophet Mohammad S.A.W.; Good Friday; Proclamation Day (August 17th); Idul Fitri, Waisak and Christmas Day.

POLICE/AMBULANCE/FIRE: Dial 111, 27, 60, 106 and 108.

SHORE LEAVE: Crew members are allowed ashore with a shore pass issued by the Immigration Office.

IDENTIFICATION CARDS: Shore pass issued by the Immigration Office for crew members at Agent's request.

DEVELOPMENTS: A container quay is to be built.

SHIPMASTER'S REPORT: February 1980.

There is a 300 m. concrete wharf in approx. position Lat. 01° 26.2' N., Long. 125° 11.6' E and a naval wharf in approximate position Lat. 01° 26.5' N., Long. 125° 12.1' E. Fuel by road tanker is available.

AUTHORITY: Port Administrator of Bitung, Jalan Makassar, Bitung, Indonesia. *Tel:* 60, 106, 27, 105, 108, 56 and 111. *Contact:* Iljas Sudikto, Port Administrator.

BONTANG (Loktuan): 00.11 N. 117.12 E.

PILOTAGE: Pilotage compulsory for all vessels entering the inner harbour at Loktuan. Pilot boards at Bontang LNG Pilot Station. Contact should be made prior to arrival with Bontang Radio on VHF Channel 16.

ANCHORAGE: Vessels anchor in position 00° 08' 30" N., 117° 34' 50" E. The holding ground in the anchorage is good. Depth of water 13.0 m.

RESTRICTIONS: Depth of water in channel is 13.0 m. – 20.0 m. The turning circle off the terminal has a diameter of 750 m. and depth of 14.0 m.

RADIO: Bontang Coastal Radio Station – Call sign PKN 7.

VHF: Bontang Radio on Channels 16, 9 and 19.

TUGS: 1 tug available.

BERTHING: Concrete wharf with length 152 m., breadth 32 m. and depth 13.0 m. The berth can accept vessels up to 20,000 d.w.t.

Fork Lifts: Fork lifts with capacity 2.5 tons – 8 tons available.

CRANES: 2×150 tons mobile cranes.

STEVEDORES: Available from Samarinda labour pool and arranged by Agent.

TANKERS: LNG Facilities.

Operator: Pt. Badak NGL Co., Jl. M.H. Thamrin 59, Jakarta. Telex: 44261.
P.O.Box 216, Balikpapan. Telex: 37211.

Location: Lat. 00° 05' 51" N., Long. 117° 28' 47" E.

Max. Size: 125,000 cu.m. LOA 300 m.

Depths at L.W.: Alongside: 13.5 m. Outer bar: 49 m. Entrance: 25 m. Inner bar: 15.0 m.

Anchorage: Awaiting Pilot: Lat. 00° 02' 05" N., Long. 117° 34' 00" E. Awaiting berth: Lat. 00° 01' 00" N., Long. 117° 35' 30" E.

Radio: Bontang Radio – "PKN-7" or Balikpapan Radio "PKN-2".

Pilot: Compulsory. Request Pilot 6 hours prior to arrival and 3 hours prior to departure.

Documents: Health Declaration, Last Port Clearance, 10 copies Crew List, 10 copies Passenger List, 5 copies Cargo Manifest, 5 copies Ship's Stores List, 3 copies Crew Effects List.

Cargo: LNG loading rate: 10,000 cu.m.p.h.

Loading lines: 5 loading lines with 16 in. loading arms.
Vapour return: 1 line with 16 in. arm.
Storage capacity: 487,000 cu.m.
Liquid nitrogen facility: Max. quantity: 50 cu.m. Line size: 2 in. I.D.
Pressure at ship's rail: 112 p.s.i.

LNG characteristics:

Explosion limits:	5.3 – 14.0 % Vol.
Flammable:	Yes
Boiling Point:	−161°C.
Flash Point:	−175°C.
Critical Pressure:	45.6 kg./sq.cm.
Critical Temperature:	−82.5°C.
Reactive with:	Steel, Polythene.
Chemical compatibility:	Chlorine (dry).
Condensing ratio:	0.8023 dm³

Also see "Shipmaster's Report".

FRESH WATER: Available.

FUEL: Available.

CONSULS: None.

REPAIRS: No repair facilities at the port.

AIRPORT: Samarinda Airport.
GENERAL: This port has been constructed to serve the fertiliser factory of P.T. Pupuk Kalimantan Timur.
Barges: There are 2 flat top barges. Each with a capacity of 1,000 tons.

SHIPMASTER'S REPORT: February 1991.
Berth: LNG/LPG facility.
Position: Lat. 00° 11' N., Long. 117° 12' E.
Radio/VHF: Telex sent to Pkk.LNG.Badak. Telex No. 38283 and 37211 via radio station "PKN – 7".
VHF: Terminal on Channels 16 and 19, Pilots on Channel 9.
Anchorage: Lat. 00° 02' 07" N., Long. 117° 36' 44" E.
Pilotage: Pilot boards at Fairway Buoy.
Tugs: 4×4,000 s.h.p. available.
Berth: LPG/LNG Berth No. 2 is fitted with an electronic berthing aid. The dolphin berth is fitted with quick release hooks. Vessels always berth port side alongside. Shore gangway used.

Moorings: Forward – 2 long headlines, 2 short headlines, 2 breastlines and 2 springs. Aft – 2 long sternlines, 2 short sternlines, 2 breastlines and 2 springs.

Depth at berth: 12.5 m.
Loading: Manifold presentation, from forward:

Propane vapour	8 in. 150 ASA
Propane liquid	12 in. 150 ASA
Butane liquid	12 in. 150 ASA
Butane vapour	8 in. 150 ASA

Note: Lines are not interchangeable.

Loading rates up to 5,000 cu.m./hr.
Vapour return: Only to flare.
Shore line: 500 m. × 22 in.
Bill of Lading: In vacuum, raised from Customs sealed in-line meters.
Surveyor: No independent surveyor available.
Documents:
10 copies Crew List.
2 copies Personal Effects List.
3 copies Ship's Stores List.
2 copies Cargo Manifest.
2 copies Passenger List.
1 copy Maritime Declaration of Health.
3 copies List of Ports Visited.
Last Port Clearance.
General: All vessel's information, ETA's, etc., sent to agent in Jakarta. They must also be sent direct to Terminal as communications between Jakarta and Bontang take several days.

Landfall very poor when coming from the East. Rigs to the North of the port assist with position fixing.

Channel marked by excellent leads for entering port. Night departure is not as good due to numerous fishing boats at edges of channel.
AUTHORITY: *LNG Facilities:* Operated by Pertamina/Pt. Badak LNG Co., under supervision of P & T Bontang.

Pt.Badak LNG Co., Nusuntara Building, 9th Floor, Jl.M.H.Thamrin 59, P.O.Box 216BPP, Jakarta, Indonesia. *Tel:* 335231, 330243, 330265, 375223 (P & T Bontang). *Telex:* 44261 Bdklng Ia, 37211 Bdklng Bpp.

AGENT: See "Jakarta".

BUATAN: 00.45 N. 101.50 E.

PILOTAGE: Compulsory. Pilot requires 6 hours notice of arrival and 3 hours notice of departure.
ANCHORAGE: The anchorage whilst awaiting sea pilot is in Morong Strait in position Lat. 01° 56' 30" N., Long. 101° 50' 30" E.

The anchorage whilst awaiting the harbour pilot is in Siak Sri Indrapura in position Lat. 01° 23' 00" N., Long. 102° 10' 00" E.
RESTRICTIONS: Berthing and unberthing during daylight hours only.
Approach Channels: Depths at LWS.

Outer bar	4.2 m.
Entrance	4.8 m.
Inner bar	13.0 m.
Harbour/Turning Basin	6.5 m.

MAX. SIZE: 5,000 d.w.t. Max. LOA 110 m.
VHF: Sungai Pakning Coastal Radio Station operated by Pertamina, call sign PKP-5.
BERTHING: The jetty is located in position Lat. 00° 44' 50" N., Long. 101° 49' 35" E. Depth at LWS 6.5 m.

Crude oil is loaded at a rate of 6,000 bbls.p.h. through 3×8 in. hoses.
Shore Storage Tanks:

Oil Products	Total Safe Capacity
Crude Oil	285,000 bbls.
Slop Oil	10,000 bbls.

Physical Characteristics of Crude Oil:

API Gravity at 60°F.	:	35
B.S. & W.	:	0.2 % vol.
Pour Point	:	110°F.

MEDICAL: Clinic available.
DENSITY: 1000-1010.
FRESH WATER: Not available.
FUEL: Not available.
CONSULS: None.
AIRPORT: Simpang Tiga Airport at Pekanbaru.
TIME: GMT plus 7 hours.

GENERAL: The water in the vicinity of the berth is shallow and the channels are liable to shift.

A good look-out should be kept for fish traps, nets, logs and floating debris.
Charts: Indonesian Charts No. 14, 14A and 24. British Admiralty Charts No. 3933 and 3947.
AGENCY: See "General" before first port.
AUTHORITY: *Operator:* Pertamina U.EP-II, Lirik.

BUNYU (Banyu): 03.28 N. 117.50 E. (See Plan)

PILOTAGE: Mooring Master boards at the anchorage.
ANCHORAGE: Vessels awaiting berth anchor in position Lat. 03° 25' 30" N., Long. 117° 51' 45" E.
RESTRICTIONS: Daylight berthing and unberthing only.
MAX. SIZE: *CBM:* 21,000 d.w.t. Max. LOA 175 m.
Platform: 30,000 d.w.t. Max. LOA 185 m.

Also see "Berthing".
RADIO: Tarakan Radio (PKO).
VHF: Bunyu Coastal Radio Station, call sign PKO-3, operated by Pertamina on Channels 16 and 19 (24 hours).
TUGS: 1×120 h.p.
BERTHING: *CBM:* Vessel moors to 4 buoys in position Lat. 03° 26' 12" N., Long. 117° 50' 50" E. Depth of water 15.3 m. at LWS. Hose connects on starboard side. Crude oil loaded at rate of 2,500 t.p.h. through 1×8 in. hose.
Jetty: There is a jetty for small vessels in position Lat. 03° 27' 30" N., Long. 117° 50' 03" E. Depth alongside 5.0 m. at LWS. Max. size 1,000 d.w.t. Max. LOA 60 m. Vessels berth starboard side to. General cargo handled at this berth.
Platform (Methanol): A platform for handling of methanol is located in position Lat. 03° 27' 24.8" N., Long. 117° 50' 39.7" E. Depth of water 14.5 m. at LWS. Max. size 30,000 d.w.t. Max. LOA 185 m. Methanol is loaded at a rate of 1,000 cu.m.p.h. through 1×10 in. arm.
Barge Platform: There is a platform for barges in position Lat. 03° 27' 27" N., Long. 117° 50' 09" E. with a depth alongside 6.0 m. at LWS. Max. size 3,500 d.w.t. Max. LOA 90 m. Premium gas is handled at this platform with 1×8 in. hose.
Shore Storage Tanks:

Oil Products	Total Safe Capacity
Crude Oil	309,068 bbls.
Methanol	45,000 cu.m.

Physical Characteristics of Crude Oil:

API Gravity at 60°F.	:	32.2 – 31.1
Sulphur Content	:	0.09% wt.
B.S. & W.	:	0.10 – 0.15 % vol.
Flash Point (PMCC)	:	Below 66°F.
Pour Point	:	45 – 50°F.

DENSITY: 1020-1025.
FRESH WATER: Not available.
FUEL: Not available.
CONSULS: None.
AIRPORT: Tarakan Airport.
TIME: GMT plus 8 hours.
AGENCY: See 'General' before first port.
AUTHORITY: Operated by Pertamina, under supervision of Pertamina Dak Kalimantan, Pertamina P & T Dak, Jl.Minyak, Balikpapan, Indonesia. *Tel:* (021) 37177, 371010, 372184. (0542) 21453, 22500. (0511) 21327. *Telex:* 37161 Ptamina Bpp. *FAX:* (0542) 22638.

CAMAR MARINE TERMINAL: 06.18 S. 113.00 E. (See Plan)

LOCATION: The Camar Oil Field consists of a storage vessel and 2 oil production platforms. These platforms are situated in Lat. 06° 19' 15.22" S., Long. 113° 00' 21.9" E. and Lat. 06° 14' 40.5" S., Long. 113° 03' 32.4" E. Each platform has a gas flare which gives off an orange light and can normally be seen from great distances.

The platforms are connected by a 6 in. subsea pipeline and from the closest platform to the storage vessel there is a connecting 8 in. diameter subsea pipeline.

The Marine Terminal consists of one floating storage vessel of 106,239 d.w.t. It is situated approximately 30 miles S.E. of the Indonesian island of Bawean in position Lat. 6° 18' S., Long. 113° 00' E. The storage vessel, "Camar Nusantara", is moored to the seabed by 6 chains secured to a turret system so that it will weathervane to the prevailing conditions. Crude oil from the 2 production platforms flows from the subsea pipeline into the turret then through a swivel on to the storage vessel.
PILOTAGE: Mooring Master boards in the anchorage or an agreed location.
MINIMUM STANDARDS OF ACCEPTANCE:
Size: Export tankers are to be not larger than the storage vessel, which is 106,239 d.w.t. and 853 ft. in length, except with the prior written consent of the Marine Terminal.
Vessel Loading: Export tankers loading at the Camar Terminal must comply with the latest SOLAS and MARPOL conventions and protocols. Vessels found to be seriously deficient or substandard in any safety and pollution control requirements will not be permitted to moor and load.
De-ballasting: Export tankers must arrive at the Terminal with clean ballast. Vessels with contaminated ballast will not be permitted to discharge ballast. Vessels should be able to deballast concurrently with loading. The Terminal is not responsible for any free water or deadfreight.

Inert Gas System: All export tankers must be equipped with an inert gas system conforming to the current SOLAS regulations. This must be operable throughout the vessel's operations at Camar Terminal. Tanks are to be monitored by vessel's crew throughout the loading to ensure correct oxygen content is maintained.

Mooring Equipment: Export tanker equipment must be in good working order and should remain ready for use at all times.

Hose Connecting Equipment: Export tankers are to be equipped with 2 loading manifolds in accordance with OCIMF standards for ships manifolds. Flanges should be prepared to accept 12 in. 150 ASA connections. Derricks must be not less than 5 tons SWL.

Crew: Export tankers crews must be qualified to the requirements of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers 1978. Any infringement of safety regulations or the inability of ship's crew to operate safely and efficiently will cause the vessel to be removed from the berth.

TOVALOP: The vessel's owner or bareboat charterer is to be a party to TOVALOP and have insurance covering the liabilities under the International Convention of Civil Liabilities for Oil Pollution Damage 1969 (C.L.C.). The cargo to be loaded will be covered by Cristal and or the International Convention on the Establishment of International Fund for Compensation for Oil Pollution Damage 1971 (C.L.C.).

Loading: Vessels are required to load using the closed loading system.

Note: Failure by Enterprise to reject an export tanker does not constitute a warranty of its suitability for loading at the Camar Terminal.

ARRIVAL PROCEDURE:

Order of Berthing: Export tankers will normally berth in order of arrival with due regard to nominated date ranges, etc., unless to do so would result in an unacceptable stock position.

Hours of Operation: The Camar Marine Terminal will operate 24 hours a day, seven days a week. Export tankers will normally be berthed during daylight hours, weather permitting. Unmooring is carried out at any hour.

Vessels Anchoring: If an export tanker is not scheduled to berth on arrival the Master will be advised by radio and requested to anchor.

Notice of Readiness: The Mooring Master will act on behalf of the company to sign acknowledgement of export tanker's Notice of Readiness which should be tendered at the time of arrival at the anchorage or berth, provided no de-ballasting time is required.

Port Closed: Notice of Readiness will not be accepted during periods when the port is closed. The port is closed when the weather is such that it is too rough for incoming tankers to berth or remain alongside the storage tanker. Notice of Readiness need not be accepted by the Terminal between the hours of 1630 and 0600 local time, at the Mooring Master's discretion. Any decision regarding the opening and closing of the port will be made solely at the discretion of the Terminal. In such a case the Terminal will provide the export tanker's Master with written notice of the times during which the port was closed and the reasons for it.

Indonesian Flag: The national flag of the Republic of Indonesia shall be prominently displayed by the export tanker at all times between sunrise and sunset.

Indonesian Government Regulations: Masters are informed that the following Indonesian Government Regulations are strictly enforced:

(a) Signals to be displayed on arrival: In accordance with practice in Indonesian Ports, quarantine, immigration and pilot signal flags should be displayed.

(b) The quarantine flag should be flown until health clearance is granted. The 'G' flag requesting a pilot should be flown until the Mooring Master boards. As soon as the Mooring Master boards the flag is to be replaced with flag 'H'. These flags are to be flown from sunrise to sunset.

NAVIGATIONAL AIDS: The storage vessel is fitted with two 360° white lights with a visibility range of 5 miles, one forward and one aft. It is equipped with a fog horn with an accoustic range of 0.5 miles.

Each platform has 4 white lights situated one on each corner. The range of each light is 10 miles and the characteristic is the Morse code signal 'U' every 15 seconds. On two of the corners there are red lights with a range of 3 miles also flashing the Morse code signal 'U' every 15 seconds.

APPROACHES: *Restricted and Prohibited Areas:* It is prohibited to pass closer than 500 m. to the oil platforms and the storage vessel without an Enterprise Oil Mooring Master on board, or pass between the storage vessel and the nearest platform.

The following are the platform and storage vessel locations where it is prohibited to anchor within a radius of:

1,750 m. with a centre at Lat. 06° 18' 23" S., Long. 113° 00' 27" E.
1,750 m. with a centre at Lat. 06° 14' 40.5" S., Long. 113° 03' 32.4" E.
1,750 m. with a centre at Lat. 06° 19' 15.2" S., Long. 113° 00' 21.9" E.

It is also prohibited to anchor between the 2 platforms in a corridor extending 1,250 m. either side of the centre line. This is where the oil pipeline runs along the seabed.

Finally, it is prohibited to anchor in the following areas where there are subsea wellheads, in a radius of 1,250 m. with the centre at:

Lat. 6° 16' 21.65" S., Long. 113° 03' 05.62' E.
Lat. 6° 17' 11.00" S., Long. 113° 02' 57.48" E.
Lat. 6° 17' 48.39" S., Long. 113° 01' 11.87" E.
Lat. 6° 19' 09.20" S., Long. 113° 01' 12.50" E.
Lat. 6° 15' 51.41" S., Long. 113° 02' 21.82" E.

ANCHORAGE: There is an anchorage 3 nautical miles N.W. of the storage vessel with the centre at Lat. 6° 16' S., Long. 112° 58' E. It has a radius of one nautical mile.

RESTRICTIONS: Berthing normally during daylight hours only, unberthing at anytime.

Maximum distance bow to manifold is 425 ft.

MAX. SIZE: 106,239 d.w.t. 853 ft. LOA.

RADIO/VHF: All incoming tankers must advise Camar Marine Terminal of best estimated time of arrival when departing from their last port of call and 72 hours, 48 hours and 24 hours before arrival. Any appreciable change of ETA should be advised accordingly. Vessels may contact Camar Marine Terminal directly on:

SSB	4,638 kHz	Night.
	9,984 kHz	24 Hours.
	10,282 kHz	Day (0700 hrs. – 1900 hrs.).
	12,252 kHz	Day.
VHF	Channel 16	

Time to be used for ETA is local time which is G.M.T. + 7 hours throughout the year.

Initial Message:

In addition to the ETA, the first message should include:

(a) Name of tanker and radio call sign.
(b) Cargo requirements.
(c) Deballast time.
(d) Maximum loading rate.
(e) Arrival draft, fore and aft.
(f) Last port of call.
(g) Confirmation that vessel has clean Bill of Health.
(h) Is there any sickness on board, give all available information as to possible type of sickness.
(i) Distance in feet from the bow to the tankers loading manifold (max. allowable distance is 425 ft.).
(j) Confirmation that the minimum standards of acceptance have been complied with.

Addresses: The above communications with Camar Marine Terminal should be made via:

Enterprise Oil (Bawean) Ltd., Landmark Center, 21st Floor, Jl. Jend. Sudirman No. 1, Jakarta 12910, Indonesia. P.O.Box 97/JKWK. Telephone: 0062-21-571-2707, 0062-21-520-9551. Telex: 62912 Eprise IA. Fax: 0062-21-571-2755, 0062-21-570-0385.

In the absence of direct telex or telephone link to the above numbers, messages may be relayed to Enterprise for onward transmission to Camar Marine Terminal through the Pertamina Coastal Radio Station at Jakarta.

VHF/FM Radio Communications: The Terminal maintains a continuous watch on VHF Channel 16 (156.8 MHz) and Masters are recommended to use this when they are in range. The Terminal is able to select any marine VHF channel for use as a working channel after initial contact.

Masters are reminded that if export tankers are requested to anchor before berthing, it is their responsibility to maintain a constant listening watch on Channel 16 to receive Terminal instructions.

Any delays due to failure to maintain a constant listening watch on Channel 16 will be for the ship's account and will not be included in calculation of the laytime.

Pertamina Control Radio Station:

In the event that incoming export tankers are unable to contact Camar Marine Terminal on the above mentioned frequencies, Masters should request Jakarta Radio to relay the necessary information to Enterprise by telex. Details of Jakarta Radio are:

Name	Jakarta Radio.
Call sign	PK1 – 2
Operated by	Pertamina.
Nature	Coastal Radio Station.
Geographical Position	06° 50' 00" S. 106° 50' 00" E.

Calling Frequency (kHz)	*Working Frequency* (kHz)	*Power* (kW.)	*Class*	*Working Hours* (GMT)
500	452	1.0	A1	H24
8,363.2 – 8,364.8	8,626.0	1.0	A1	0200 – 0400
8,372.8 – 8,373.6				0500 – 0600
				0700 – 0800
				1000 – 1200
				1400 – 1600
				1700 – 2000
12,544.8 – 12,547.2	12,980.0	1.0	A1	0000 – 0200
12,599.2 – 12,560.4				0400 – 0500
				0800 – 1000
				1200 – 1400
				1600 – 1700
				2000 – 2200
4,131.2 – 4,425.6	4,425.6	1.0	A3A/A3J	0500 – 0600
				0800 – 0900
				1600 – 1800
				2200 – 2400
6,206.2	6,512.6	1.0	A3A/A3J	0000 – 0100
				0300 – 0400
				0600 – 0700
				1200 – 1400
				1800 – 2000
8,235.3	8,729.2	1.0	A3A/A3J	0100 – 0300
				0400 – 0500
				0700 – 0800
				1100 – 1200
				1500 – 1600

VHF: Power – 50 Watts.

Calling Channel	*Working Channels*	*Working Hours*
16	6 – 19	Continuous

MOORING: *Mooring Operations:* Mooring Master will board the incoming export tanker at either the anchorage area or an agreed location. The Mooring Master will advise the ship's Master on approach to the storage vessel, mooring and unmooring, connecting and disconnecting hoses and all other operations within the Terminal area including all manoeuvring of the export tanker. The Master, or one of his qualified deck officers must be on the bridge at all times while the export tanker is being manoeuvred.

Support vessels assisting in mooring export tankers are under the direct control and supervision of the Mooring Master.

Export tankers due for mooring must have a pilot ladder or hoist securely rigged on the starboard side. Vessels with a freeboard of more than 30 ft. shall have an accommodation ladder rigged so that the lower platform is not more than 10 ft. above the water level with a short pilot ladder rigged for access to the platform. Upon the approach of the Mooring Master the export tanker is to provide a good lee. Export tankers are to have the port derrick rigged.

The Mooring Master will bring with him 2 × 4.5 in. circumference polypropylene messenger lines approximately 720 ft. long. These are to be lifted on board and one taken to the bow and one to the stern of the tanker.

When the export tanker is off the storage vessel 2 support vessels with heavily fendered bows will push the export tanker closer to the storage vessel. A small support vessel will take the messenger lines to the storage vessel. The export tanker will then slowly winch closer to the storage vessel, making sure not to bring the two vessels out of parallel. Normally 6 mooring ropes either end will be used.

Engines on the export tanker must at all times be ready for immediate use.

BALLAST: *Ballast Operations:* There are no ballast or slop reception facilities at Camar Marine Terminal, therefore all export tankers must arrive with clean ballast suitable to be discharged into the sea. Indonesian Government Regulations forbid discharge of water containing more than 15 ppm. of oil. Rejection of any tanker because of contaminated ballast will automatically invalidate a Notice of Readiness and may change priority of loading. Vessels discharging contaminated ballast overboard shall be subject to the laws of Indonesia.

Vessels arriving at Camar Marine Terminal should have sufficient ballast to ensure safe handling and manoeuvrability in the prevailing weather and sea condition and in accordance with good seamanship.

Whenever possible loading should be so arranged as to run concurrently with deballasting, provided that there is a 2 valve separation maintained between ballast and cargo. Permanent ballast should not be discharged before the export tanker has loaded an equivalent amount of cargo.

The Mooring Master will be present and observe the tank inspection prior to loading but will not sign certificates attesting to the emptiness, cleanliness or suitability of the cargo tanks. The ullaging of the slop tank and determination of oil content will also be observed by the Mooring Master.

TUGS: Two tugs and one line boat will be available to assist berthing/unberthing operations.

HOSES: *Hose Connection:* Upon completion of mooring, the loading hoses will be connected to the export tanker's port manifold. This must have 2×12 in. 150 ASA flanges. The storage vessel's hoses will have quick disconnects on the ends of them. The export tanker's derrick will be used to transfer the hose end on to its deck and to align the quick connect flange of the loading hose on to its loading manifold. Each hose string has a support chain connected to the second-to-last flange. This is to be made fast on to the "crucifix" or "bitts" to support the weight of the hose string. Each hose string will weigh approximately 4.5 tons.

Hose Disconnection: On completion of loading and when the export tanker has been informed by the storage vessel that all flow has ceased, the hose end butterfly valves will be closed, followed by the export tanker's manifold valve. Sufficient drip trays must be provided on the export tanker to prevent pollution by any oil from the reducing pieces and spool pieces. Any clean-up costs shall be to the Owner/Charterer's account. The butterfly valves on the hose ends will be sealed by a representative of Customs and Excise. The hoses will be disconnected from the ship's manifold and a blind flange put on the ends of both of them. The derrick wire of the storage vessel will be connected in turn to each of the hoses and the string will be lifted onto the deck of the storage vessel.

LOADING: The export of crude oil is carried out by ship-to-ship alongside transfer. The storage vessel has 4 Yokohama pneumatic fenders (size 2.5 m. diameter × 5.5 m. long), spaced 120 ft. apart. These are on the starboard side of the storage vessel. The storage vessel is equipped with a metering and proving system which is certified by the Indonesian Government.

Loading Operations: When the Officer-in-Charge on board the export tanker has declared the vessel ready to load, with all necessary valves open, the representative of Customs and Excise will break the seal on the butterfly valve at the loading hose end. The butterfly valve will then be opened. The Mooring Master will instruct the storage vessel to commence loading at a slow rate. When the export tanker has confirmed that everything is operating in good order, then the rate will be increased. The export tanker may request a loading rate up to a maximum of 30,000 bbls./hr.

Throughout the loading, a responsible Deck Officer shall be in charge of export tanker operations, either on deck or in the cargo control room. In addition an efficient Deck Watch in constant contact with the cargo control room must be maintained at all times.

At any time during loading, transfer rates can be reduced on request. Except in emergency, 10 minutes notice should be given to the storage vessel when rate reduction is required. Valves must not be closed against incoming oil.

If for any reason radio communication between export tanker and the storage vessel is lost, the storage vessel will stop loading until radio communication is re-established.

The volume of oil loaded is accurately available at all times from the storage vessel and periodic comparisons can be made.

The volume of oil to be loaded shall be agreed between the export tanker's Master and the Mooring Master with due regard to any written instructions received by the Mooring Master in advance. In the event of any conflict, the export tanker Master's requirements shall prevail and Enterprise Oil will not be held responsible for any failure to comply with the Owner/Charterer's requirements.

Subject always to considerations of safety, the export tanker will normally stop the loading once the volume of oil agreed to be loaded has been loaded. Any advance arrangement for the storage vessel to stop the cargo must be made in writing. The request must include the statement by the export tanker's Master that Enterprise Oil will not be held responsible for any error, and that in case of the export tanker being overloaded, the excess cargo cannot be pumped back to the storage vessel.

The export tanker's Master will also be held responsible for any spills caused by this request.

Cargo Documentation and Inspection: Documents such as Bills of Lading, Quality Certificates, Quantity Certificates, Time Loading Report, Certificate of Origin, Cargo Manifest and Master's Receipt of Documents/Samples, etc. are prepared at Camar Marine Terminal. When the export tanker has been loaded, the documents will be completed and taken aboard the tanker for the Master's signature. Signing of these documents by the Master will take place at the same time final departure clearance formalities are being carried out.

Immediately upon completion of loading, the official Bill of Lading quantity will be relayed to the Mooring Master by radio. In the event of a dispute, the export tanker will be requested to recheck the measurement and calculations of the quantity. The Mooring Master will not witness such measurement and calculations of the quantity. After both ship and shore figures have been verified, should an appreciable difference still exist, receipt of a Letter of Protest will be acknowledged by the Mooring Master.

Notes of Protest, if any, should be handed to the Mooring Master for further delivery to Enterprise Oil (Bawean) Ltd. The Mooring Master is only authorised to acknowledge receipt and not to accept such letters as correct.

From time to time owners, charterers, consignees and other interested parties may appoint third party cargo surveyors to survey the loading operation on their behalf. Any delays caused by the cargo surveyors shall be considered "vessel delays".

Notwithstanding any provisions contained elsewhere herein, Camar Marine Terminal Certificates shall be final and binding save for fraud or manifest error.

Departure Procedures: Immediately after the loading hose is disconnected and stored on the storage vessel and all cargo documentation has been completed, the export tanker will be unmoored. The export tanker will single up to one breast line and one spring line each end. The two tugs will be made fast at either end of the export tanker. All mooring lines will be released and the tugs will pull the export tanker away from the storage vessel. When the export tanker is safely clear the tugs will be released.

FRESH WATER: Not available.

FUEL: Not available.

REPATRIATION: Crew changes not allowed.

SHORE LEAVE: Not allowed.

GARBAGE DISPOSAL/WASTE OIL DISPOSAL/SEAMAN'S CLUBS: No facilities (Off-Shore Terminal).

CURRENCY: Rupiah.

SERVICES: No stores available. No crew mail can be received or sent.

WEATHER: The Camar Marine Terminal is an open unsheltered mooring. Weather conditions may preclude mooring operations or require the export tanker to unmoor before completing loading. In these circumstances good judgement should be used by the export tanker's Master, under the Mooring Master's advice as to what action to take.

Currents: In general these are up to 1.5 knots but can on occasion run to 2.5 knots.

Wave Heights: December to February (N.W. Monsoon season): The wave direction is predominantly West and N.W. and the wave height exceeds 6 ft. for 20% of the time.

March to May: Wave height exceeds 6 ft. for only 5% of the time. Wave direction is from the East and S.E.

June to October: (S.E. Monsoon season): The wave direction is predominantly East, S.E. and South and the wave height exceeds 6 ft. for 33% of the time. This is the roughest season.

November: Wave direction is predominantly East, S.E. and South and the wave height exceeds 6 ft. 2% of the time. This is the calmest period.

Air Temperatures: This averages about 82° F. and varies between 70° F. to 95° F. with occasional maximum temperature over 100° F.

Rainfall: Maximum occurs during the N.W. Monsoon season. The average rainfall is approximately 113 in. per year.

Humidity: The relative humidity is often in the range of 70% – 100%.

Sea Temperature: On the surface approximately 84° F. – 86° F.

GENERAL:

Responsible Officers: The man in overall control of the Marine Terminal and associated facilities is the Production Superintendent. The man co-ordinating marine activities and acting as "Mooring Master" is the Marine Superintendent.

Safety/Environmental Requirements: As for all tanker terminal operations, vessels visiting Camar Marine Terminal must comply with the minimum safety requirements specified in the "International Safety Guide for Oil Tankers and Terminals" (I.S.G.O.T.T.) and the O.C.I.M.F. "Recommendations for Ship to Ship Transfers". Vessels must also comply with the current SOLAS and MARPOL requirements.

When the Mooring Master boards the export tanker, he will present the Master with a safety booklet containing details of the safety and fire regulations and safety check list. When fully checked and understood, the regulations will be signed by both the Mooring Master and the ship's Master.

Safety and Fire Regulations will be strictly adhered to and the Mooring Master will make periodic checks to ensure that they are being enforced. If any infringements of these safety or environmental regulations are observed, they will be brought to the attention of the Master for corrective action. If no action is taken immediately, the Mooring Master will take such action that would appear to be most appropriate and shall advise the Master accordingly.

Inert Gas System: All export tankers must be equipped with an inert gas system conforming to the current SOLAS regulations. This must be operable throughout the vessel's operations at Camar Terminal. Tanks are to be monitored by vessel's crew throughout the loading to ensure correct oxygen content is maintained.

Mooring Equipment: Export tanker equipment must be in good working order and should remain ready for use at all times.

Hose Connecting Equipment: Export tankers are to be equipped with 2 loading manifolds in accordance with OCIMF standards for ships manifolds. Flanges should be prepared to accept 12 in. 150 ASA connections. Derricks must be not less than 5 tons SWL.

Crew: Export tankers crews must be qualified to the requirements of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers 1978. Any infringement of safety regulations or the inability of ship's crew to operate safely and efficiently will cause the vessel to be removed from the berth.

TOVALOP: The vessel's owner or bareboat charterer is to be a party to TOVALOP and have insurance covering the liabilities under the International Convention of Civil Liabilities for Oil Pollution Damage 1969 (C.L.C.). The cargo to be loaded will be covered by Cristal and or the International Convention on the Establishment of International Fund for Compensation for Oil Pollution Damage 1971 (C.L.C.).

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Notice of Readiness: The Mooring Master will act on behalf of the company to sign acknowledgement of export tanker's Notice of Readiness which should be tendered at the time of arrival at the anchorage or berth, provided no de-ballasting time is required.

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Indonesian Flag: The national flag of the Republic of Indonesia shall be prominently displayed by the export tanker at all times between sunrise and sunset.

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RESTRICTIONS: Berthing normally during daylight hours only, unberthing at anytime.

Maximum distance bow to manifold is 425 ft.

MAX. SIZE: 106,239 d.w.t. 853 ft. LOA.

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Time to be used for ETA is local time which is G.M.T. + 7 hours throughout the year.

Initial Message:

In addition to the ETA, the first message should include:

(a) Name of tanker and radio call sign.
(b) Cargo requirements.
(c) Deballast time.
(d) Maximum loading rate.
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(f) Last port of call.
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Call sign	PK1 – 2
Operated by	Pertamina.
Nature	Coastal Radio Station.
Geographical Position	06° 50' 00" S. 106° 50' 00" E.

Calling Frequency (kHz)	*Working Frequency* (kHz)	*Power* (kW.)	*Class*	*Working Hours* (GMT)
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12,544.8 – 12,547.2 12,599.2 – 12,560.4	12,980.0	1.0	A1	0000 – 0200 0400 – 0500 0800 – 1000 1200 – 1400 1600 – 1700 2000 – 2200
4,131.2 – 4,425.6	4,425.6	1.0	A3A/A3J	0500 – 0600 0800 – 0900 1600 – 1800 2200 – 2400
6,206.2	6,512.6	1.0	A3A/A3J	0000 – 0100 0300 – 0400 0600 – 0700 1200 – 1400 1800 – 2000
8,235.3	8,729.2	1.0	A3A/A3J	0100 – 0300 0400 – 0500 0700 – 0800 1100 – 1200 1500 – 1600

VHF: Power – 50 Watts.

Calling Channel	*Working Channels*	*Working Hours*
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Support vessels assisting in mooring export tankers are under the direct control and supervision of the Mooring Master.

Export tankers due for mooring must have a pilot ladder or hoist securely rigged on the starboard side. Vessels with a freeboard of more than 30 ft. shall have an accommodation ladder rigged so that the lower platform is not more than 10 ft. above the water level with a short pilot ladder rigged for access to the platform. Upon the approach of the Mooring Master the export tanker is to provide a good lee. Export tankers are to have the port derrick rigged.

The Mooring Master will bring with him 2 × 4.5 in. circumference polypropylene messenger lines approximately 720 ft. long. These are to be lifted on board and one taken to the bow and one to the stern of the tanker.

When the export tanker is off the storage vessel 2 support vessels with heavily fendered bows will push the export tanker closer to the storage vessel. A small support vessel will take the messenger lines to the storage vessel. The export tanker will then slowly winch closer to the storage vessel, making sure not to bring the two vessels out of parallel. Normally 6 mooring ropes either end will be used.

Engines on the export tanker must at all times be ready for immediate use.

BALLAST: *Ballast Operations:* There are no ballast or slop reception facilities at Camar Marine Terminal, therefore all export tankers must arrive with clean ballast suitable to be discharged into the sea. Indonesian Government Regulations forbid discharge of water containing more than 15 ppm. of oil. Rejection of any tanker because of contaminated ballast will automatically invalidate a Notice of Readiness and may change priority of loading. Vessels discharging contaminated ballast overboard shall be subject to the laws of Indonesia.

Vessels arriving at Camar Marine Terminal should have sufficient ballast to ensure safe handling and manoeuvrability in the prevailing weather and sea condition and in accordance with good seamanship.

Whenever possible loading should be so arranged as to run concurrently with deballasting, provided that there is a 2 valve separation maintained between ballast and cargo. Permanent ballast should not be discharged before the export tanker has loaded an equivalent amount of cargo.

The Mooring Master will be present and observe the tank inspection prior to loading but will not sign certificates attesting to the emptiness, cleanliness or suitability of the cargo tanks. The ullaging of the slop tank and determination of oil content will also be observed by the Mooring Master.

TUGS: Two tugs and one line boat will be available to assist berthing/unberthing operations.

HOSES: *Hose Connection:* Upon completion of mooring, the loading hoses will be connected to the export tanker's port manifold. This must have 2×12 in. 150 ASA flanges. The storage vessel's hoses will have quick disconnects on the ends of them. The export tanker's derrick will be used to transfer the hose end on to its deck and to align the quick connect flange of the loading hose on to its loading manifold. Each hose string has a support chain connected to the second-to-last flange. This is to be made fast on to the "crucifix" or "bitts" to support the weight of the hose string. Each hose string will weigh approximately 4.5 tons.

Hose Disconnection: On completion of loading and when the export tanker has been informed by the storage vessel that all flow has ceased, the hose end butterfly valves will be closed, followed by the export tanker's manifold valve. Sufficient drip trays must be provided on the export tanker to prevent pollution by any oil from the reducing pieces and spool pieces. Any clean-up costs shall be to the Owner/Charterer's account. The butterfly valves on the hose ends will be sealed by a representative of Customs and Excise. The hoses will be disconnected from the ship's manifold and a blind flange put on the ends of both of them. The derrick wire of the storage vessel will be connected in turn to each of the hoses and the string will be lifted onto the deck of the storage vessel.

LOADING: The export of crude oil is carried out by ship-to-ship alongside transfer. The storage vessel has 4 Yokohama pneumatic fenders (size 2.5 m. diameter × 5.5 m. long), spaced 120 ft. apart. These are on the starboard side of the storage vessel. The storage vessel is equipped with a metering and proving system which is certified by the Indonesian Government.

Loading Operations: When the Officer-in-Charge on board the export tanker has declared the vessel ready to load, with all necessary valves open, the representative of Customs and Excise will break the seal on the butterfly valve at the loading hose end. The butterfly valve will then be opened. The Mooring Master will instruct the storage vessel to commence loading at a slow rate. When the export tanker has confirmed that everything is operating in good order, then the rate will be increased. The export tanker may request a loading rate up to a maximum of 30,000 bbls./hr.

Throughout the loading, a responsible Deck Officer shall be in charge of export tanker operations, either on deck or in the cargo control room. In addition an efficient Deck Watch in constant contact with the cargo control room must be maintained at all times.

At any time during loading, transfer rates can be reduced on request. Except in emergency, 10 minutes notice should be given to the storage vessel when rate reduction is required. Valves must not be closed against incoming oil.

If for any reason radio communication between export tanker and the storage vessel is lost, the storage vessel will stop loading until radio communication is re-established.

The volume of oil loaded is accurately available at all times from the storage vessel and periodic comparisons can be made.

The volume of oil to be loaded shall be agreed between the export tanker's Master and the Mooring Master with due regard to any written instructions received by the Mooring Master in advance. In the event of any conflict, the export tanker Master's requirements shall prevail and Enterprise Oil will not be held responsible for any failure to comply with the Owner/Charterer's requirements.

Subject always to considerations of safety, the export tanker will normally stop the loading once the volume of oil agreed to be loaded has been loaded. Any advance arrangement for the storage vessel to stop the cargo must be made in writing. The request must include the statement by the export tanker's Master that Enterprise Oil will not be held responsible for any error, and that in case of the export tanker being overloaded, the excess cargo cannot be pumped back to the storage vessel.

The export tanker's Master will also be held responsible for any spills caused by this request.

Cargo Documentation and Inspection: Documents such as Bills of Lading, Quality Certificates, Quantity Certificates, Time Loading Report, Certificate of Origin, Cargo Manifest and Master's Receipt of Documents/Samples, etc. are prepared at Camar Marine Terminal. When the export tanker has been loaded, the documents will be completed and taken aboard the tanker for the Master's signature. Signing of these documents by the Master will take place at the same time final departure clearance formalities are being carried out.

Immediately upon completion of loading, the official Bill of Lading quantity will be relayed to the Mooring Master by radio. In the event of a dispute, the export tanker will be requested to recheck the measurement and calculations of the quantity. The Mooring Master will not witness such measurement and calculations of the quantity. After both ship and shore figures have been verified, should an appreciable difference still exist, receipt of a Letter of Protest will be acknowledged by the Mooring Master.

Notes of Protest, if any, should be handed to the Mooring Master for further delivery to Enterprise Oil (Bawean) Ltd. The Mooring Master is only authorised to acknowledge receipt and not to accept such letters as correct.

From time to time owners, charterers, consignees and other interested parties may appoint third party cargo surveyors to survey the loading operation on their behalf. Any delays caused by the cargo surveyors shall be considered "vessel delays".

Notwithstanding any provisions contained elsewhere herein, Camar Marine Terminal Certificates shall be final and binding save for fraud or manifest error.

Departure Procedures: Immediately after the loading hose is disconnected and stored on the storage vessel and all cargo documentation has been completed, the export tanker will be unmoored. The export tanker will single up to one breast line and one spring line each end. The two tugs will be made fast at either end of the export tanker. All mooring lines will be released and the tugs will pull the export tanker away from the storage vessel. When the export tanker is safely clear the tugs will be released.

FRESH WATER: Not available.

FUEL: Not available.

REPATRIATION: Crew changes not allowed.

SHORE LEAVE: Not allowed.

GARBAGE DISPOSAL/WASTE OIL DISPOSAL/SEAMAN'S CLUBS: No facilities (Off-Shore Terminal).

CURRENCY: Rupiah.

SERVICES: No stores available. No crew mail can be received or sent.

WEATHER: The Camar Marine Terminal is an open unsheltered mooring. Weather conditions may preclude mooring operations or require the export tanker to unmoor before completing loading. In these circumstances good judgement should be used by the export tanker's Master, under the Mooring Master's advice as to what action to take.

Currents: In general these are up to 1.5 knots but can on occasion run to 2.5 knots.

Wave Heights: December to February (N.W. Monsoon season): The wave direction is predominantly West and N.W. and the wave height exceeds 6 ft. for 20% of the time.

March to May: Wave height exceeds 6 ft. for only 5% of the time. Wave direction is from the East and S.E.

June to October: (S.E. Monsoon season): The wave direction is predominantly East, S.E. and South and the wave height exceeds 6 ft. for 33% of the time. This is the roughest season.

November: Wave direction is predominantly East, S.E. and South and the wave height exceeds 6 ft. 2% of the time. This is the calmest period.

Air Temperatures: This averages about 82° F. and varies between 70° F. to 95° F. with occasional maximum temperature over 100° F.

Rainfall: Maximum occurs during the N.W. Monsoon season. The average rainfall is approximately 113 in. per year.

Humidity: The relative humidity is often in the range of 70% – 100%.

Sea Temperature: On the surface approximately 84° F. – 86° F.

GENERAL:

Responsible Officers: The man in overall control of the Marine Terminal and associated facilities is the Production Superintendent. The man co-ordinating marine activities and acting as "Mooring Master" is the Marine Superintendent.

Safety/Environmental Requirements: As for all tanker terminal operations, vessels visiting Camar Marine Terminal must comply with the minimum safety requirements specified in the "International Safety Guide for Oil Tankers and Terminals" (I.S.G.O.T.T.) and the O.C.I.M.F. "Recommendations for Ship to Ship Transfers". Vessels must also comply with the current SOLAS and MARPOL requirements.

When the Mooring Master boards the export tanker, he will present the Master with a safety booklet containing details of the safety and fire regulations and safety check list. When fully checked and understood, the regulations will be signed by both the Mooring Master and the ship's Master.

Safety and Fire Regulations will be strictly adhered to and the Mooring Master will make periodic checks to ensure that they are being enforced. If any infringements of these safety or environmental regulations are observed, they will be brought to the attention of the Master for corrective action. If no action is taken immediately, the Mooring Master will take such action that would appear to be most appropriate and shall advise the Master accordingly.

AGENCY:
Procedure for Appointing Agent: Indonesian Government Regulations require that Pertamina Directorate of Shipping and Telecommunications be appointed General Agent for all tankers proceeding to load in Indonesia.
Address: Pertamina Directorate of Shipping and Telecommunication, Attention: Agency Department, 19th Floor, Pertamina Building, Jl. Medan Merdeka Timur 1A, Jakarta, Indonesia. Cable address: Pertaminaship IA. Telex: 44450, 45348. Tel: 343 806, 303 3356, 303 3307, 303 3305.

For vessels arriving for the first time in Indonesian waters, owners or charterers are required to appoint Pertamina Directorate of Shipping and Telecommunication Agency Department as general agent to attend the vessel at Camar Marine Terminal by Letter of Appointment. This Letter of Appointment must be endorsed by the nearest Indonesian Consulate to point of dispatch of the letter, and this must be sent at least 2 weeks prior to the vessel's arrival. The above applies also to vessels which may have changed their name and vessels for whom the Letter of Appointment has expired. Owners or charterers can attach a list of vessels under their management which are scheduled to operate in Indonesian waters. In such cases, the single Letter of Appointment will be valid for all ships named in the letter. Letters of Appointment have a validity of one year after which they must be renewed. Each tanker entering tha Camar Marine Terminal must have been granted an entry or agency permit prior to its arrival. It is vital that the general agent receives the following information 2 weeks before the vessel's arrival, to enable the necessary permits to be obtained from the Government Directorate General of Sea Communications:

(a) Name and full address of owner.
(b) Name of tanker and call sign.
(c) Deadweight tonnage and length overall.
(d) Flag and port of registry.
(e) Certificate of Registration number.
(f) Name of Master.
(g) Number of crew.
(h) ETA at Camar Marine Terminal.
(i) Last port of call.
(j) Intended Indonesian ports of call.
(k) Destination after loading.
(l) Quantity and type of crude oil to be loaded.

Owners or Charterers of vessels loading at the Camar Terminal are deemed to warrant that an agent has been appointed and that all permits required from time to time have been obtained. Owners and Charterers shall hold Enterprise harmless from any and all consequence of any failure of the vessel to comply with Indonesian Government Regulations.
Advance Payment: Advance payment for Government and port charges should be sent to:
Pertamina Agency, (account No. 11.51.006.000.0005), Bank Negara Indonesia, Cabang Gambir, Jl. Kebon Sirih 77A, Jakarta, Indonesia.

To facilitate handling preparation, owners/charterers are required to telex "Pertamina Directorate of Shipping and Telecommunication" advising Telegraphic Transfer (T.T.) number, the name of the vessel for which the T.T. is made and the Indonesian Ports of call. Telex numbers are 44450 and 45348. In those instances where advance payment exceeds the actual port charges and disbursements the balance will be credited to the owners/charterers accounts or remitted by the agent. Neither Pertamina nor Enterprise will be responsible for demurrage, expenses or other charges resulting from failure to pre-arrange obligations in this manner.

AUTHORITY:
Operator: Enterprise Oil (Bawean) Ltd., P.O.Box 97/JKWK, Landmark Center, 21st Floor, Jl. Jend. Sudirman No. 1, Jakarta 12910, Indonesia. *Tel:* 0062-21-571-2707, 0062-21-520-9551. *Telex:* 62912 Eprise IA. *FAX:* 0062-21-571-2755, 0062-21-570-0385. *Contact:* Captain M.E.Hancock, Marine Adviser.

CIGADING: 06.00 S. 105.57 E.

SHIPMASTER'S REPORT: January 1986.

LOCATION: The Port of Cigading is situated in position: Lat. 06° 00.3' S., Long. 105° 57.5' E. and about 45 nautical miles N.E. of the entrance to Sunda Strait. The port is under the control of Port Merak, which is approximately 15 km. – 18 km. N.E. of Port Cigading.

DOCUMENTS: Crew Personal Effects Declaration, Provisions List, Bonded Stores List, Crew List, Currency List, Seaman's Books, Passports.

APPROACHES: Vessels can approach this port any time during day or night. But no berthing possible after sunset.

PILOTAGE: Pilot station located at Merak. Pilot station on VHF Channel 12. Call sign "Kilo Bravo". Station also guards Channel 16, with working Channels 13 and 14. Pilot boat guards Channel 12.
Ports attended by Pilot at Banten area:

1. Brown & Root Terminal.
2. Port of Banten.
3. Cigading Terminal.
4. Unggul Indan Corp. Jetty.
5. Dover Chemical Jetty.
6. Prointal Chemical Jetty.
7. Depot Pertamina Terminal.
8. Merak/Ferry Terminal.
9. I.P.I/Tg. Serong Terminal.
10. Suralaya PLTU Coal/Oil Jetty.
11. Polychem Lindon Jetty.

Also see "Radio".

ANCHORAGES: Vessels awaiting berth can safely anchor 4 cables N.E. of the berth in a depth of 22 m. – 24 m. The currents are very strong in this area. The vessel experienced 3–4 knots of current from Northeasterly and Southwesterly directions, changing every 12 hours, depending upon the tide. Vessels are advised to pay out substantial amounts of cable in order to retain the anchor position.

HEALTH: The Health Authorities board the vessel for Pratique. All international health regulations are followed. The officer checks all the vaccination books for inoculations. Ships arriving from African or South American ports are required to have yellow fever certificates. Pratique is granted only after the officials check all the papers and complete formalities.

RADIO: Radio Jakarta 500 kHz. Call sign JKI.
Arrival Advice: 48 hours before arrival at Cigading, it is essential to cable the local Agents, the full details of the vessel and ETA, including the requirements of pilot service for berthing the vessel. The Pilot is stationed at Merak, as and when any vessel calls at Cigading, the Pilot is arranged from Merak. There is only one Pilot supplied from Jakarta for Merak, Cigading and other minor ports. Pilotage is maintained by the pilotage division of the port of Banten.

Chief Pilot/Harbour Pilot: Sukendear Hadi Utomo. Office: 105 Pulorida Street, Merak-West of Java, Indonesia. Tel: 367808/367594, ext. 194 via P&T. Residence: Jl Raya Anyer No. 03, Komplek B.P.P., Tegal Ratu Cigading, West of Java, Indonesia.

24 hour service is available. Masters or Agents are requested to advise the Pilot whenever there is a change in an ETA.

TUGS: There are 4 small tugs, stationed at Cigading, each approximately 800 b.h.p. These tugs are generally used for towing barges and also utilised for ships berthing at Cigading. Vessels are unberthed at any time during day or night.

BERTHING: There is only 1 long berth extending well into the sea, running in a N.E./S.W. direction. The length of the berth is 550 m. and the breadth approximately 55 m. The outer portion of the berth is utilised for discharging iron ore and has 2 unloading arms. It is mobile and rail mounted. Maximum outreach of unloader from fender face is 24 m. The unloader has grabs, each with capacity of 10 tons. Minimum air-draft to be be maintained at berth, 15.9 m. during maximum high tide in ballast condition. The S.W. portion of the berth is utilised for loading sponge iron, and has one loader. During our stay the loader was not operational. Ships were loaded by truck loads. 2 small vessels of 4,000–5,000 d.w.t. capacity can be berthed alongside simultaneously. The inner portion of the berth, particularly the Northeasterly portion, is utilised by general cargo ships of lesser draft and length. The depth of water at the inner berth is said to be 11 m. plus tide. The depth of water at the outer berth is about 14.5 m. plus rise of tide. The inner portion of the berth is angled in the mid-section. The closed conveyor belts and necessary installations running overhead, almost in a Southeasterly direction. A wide road runs below.

The iron ore discharge from the vessel is fed solely through the conveyor to the steel plant. The steel plant is directly connected by the said conveyor. The "Karakatu Steel Plant" or works, (government owned) is situated approximately 7 km. N.E. of the berth.

The discharging rate at the berth is 700 tonnes/h., allowing for the breakdown of the conveyor at times.

Our vessel: LOA 245 m. Beam 32 m. Max. arrival draft 13.70 m. D.W.T.: 76,900 tonnes. Discharged 71,500 tonnes of iron ore pellets from Brazil in 6 days.

MEDICAL: Hospital, doctor and inoculations are available at Cilegon and Merak. Serious cases to be attended to at Jakarta.

DENSITY: 1022.

FRESH WATER: Not available.

FUEL: Not available.

CONSULS: None.

REPAIRS: No facilities available.

GANGWAY/DECK WATCHMEN: Not compulsory.

CUSTOMS ALLOWANCES: Allowances are as per Jakarta requirements. Personal declaration forms are essential. All electronic goods and currency must be declared on the personal property declaration. Beside this, Provisions List and Bond Statement is also essential (1 copy each), along with the Crew List (1 copy).

REPATRIATION: Possible. During repatriation crew baggage is thoroughly checked by the Customs. Any electronic goods in possession of crew are entered in the individual passports.

AIRPORT: Jakarta, 3 hours by road.

BANKS: Banking facilities available at Cilegon. Several Indonesian National Banks have branches at Cilegon. Travellers' cheques are honoured in the shopping complexes.

SHORE LEAVE: No restrictions.

Immigration authorities take away all Seamen's Books/Passports into their custody. Identity Cards are issued to each crew member. Seamen's Books/Passports are returned to the vessel prior departure.

Shore leave passes to be carried by the crew member when going ashore.

GENERAL:
Provisions: Available.
Agency: Karana Line are the recommended Agents at Cigading. They have an office situated at nearest town – Cilegon. Karana Line have long-term contracts with the Indonesian Government for supply of iron ore to the existing steel works near Cigading.
Head Office: Address. Jl. Kali Besar Timur 30 Jkt. Tel: 679103 (5 lines). Telex: (011) 42727, 42895. Cable Address: Karana Line. P.O.Box 81. Office: Jl. Raya Cilegon No. 31. Tel: 157-7.6378 (K S) Cilegon.
Karana Line have representation on board throughout the ship's stay. Hence communication was excellent and smooth. All other appointed Agents have to come from Jakarta, which is about 130 km. from Cigading. No other Agency has an office near the port.

SHIPMASTER'S REPORT: June 1988.

DOCUMENTS:
8 copies Crew List.
2 copies Stores List.
2 copies Crew Declaration.

The following documents are taken ashore and returned with the clearance outward:
Certificate of Register.
Load Line Certificate.
Safety Construction Certificate.
Safety Equipment Certificate.
Safety Radio Certificate.
Derat Exemption Certificate.
Health Book.
Last Port Clearance.

PILOTAGE: Pilot boards from a launch which is equipped with VHF. I was advised that pilotage was only available during daylight hours.

ANCHORAGE: The anchorage is about 4 cables N.W. of the Northern end of the jetty, in position 6° 00.4' N., 105° 57.2' E. Depth of water is about 20 m.

RADIO: Communications were via Agent in Jakarta as the port is not equipped with facilities. The Agent should be given 10 days, 5 days, 3 days, 2 days and 1 days Notice of Arrival.

TUGS: 2×3,000 h.p. tugs available.

BERTHING: There are 4 berths available with a depth alongside of 14.0 m. In addition, 2 cargo wharves and a timber terminal are being developed nearby.

The vessel loaded a cargo of steel products and the approximate loading rate is 6,000 tonnes per day, but this is subject to supply of trucks and reliability of fork lifts.

There is no shore gear for working general cargo. There are two unloaders for ore and coal imports and a bulk loader which is used for turnings and other mill waste.

STEVEDORES: Work throughout 24 hours.

MEDICAL: Facilities available.

FRESH WATER: Available at jetty.

CONSULS: At Jakarta.

REPAIRS: No facilities available.

SURVEYORS: Based in Jakarta.

REPATRIATION: Can be arranged via Jakarta.

GENERAL: *Stores:* Provisions and some stores can be obtained.

Communications: Communications are poor as Agent has no telephone or telex links. Krakatau Steel Company will allow use of their telephone and telex. Vessel was permitted to use her radio to send daily cargo reports.

Travel/Accommodation: Jakarta is about 110 km. by road. The Merak Beach Hotel is about 16 km. from the berth.

Shippers: P.T. Krakatau Steel and P.T. Cold Rolling Mill Indonesia Utama.

Agent: Vessel's Agent based at Cilegon.

Chart: B.A. Chart No. 918.

SHIPMASTER'S REPORT: November 1992.

TANKERS: Vessel ties between 4 buoys, with 3 small hose marking buoys on starboard side. After the vessel is secured between 4 buoys, the divers pick-up 2 under water hoses for connecting to ship's manifold.

Maximum Size of Vessel : 220 m.

Depth at the berth is approximately 18.0 m.

Pilot uses 3 tugs for berthing/unberthing, which are necessary for positioning the vessel and keeping it away from hose marking buoys.

Hoses are 2 × 10 in., although I received conflicting information regarding the sizes of hoses until the time of berthing, Agents and Cabot Chemicals kept insisting that the hoses were 8 in. each.

The vessel has to connect both hoses as they are part of the same line ashore.

Maximum pressure permitted is 4.0 kg. at the ship's manifold. Vessels must not increase this pressure as it causes leaks in underwater hoses and unnecessary delay to the vessel.

Wind is normally from the S.W., hence it is necessary to pass 4 good ropes to buoys on port side (forward and aft), and 3 ropes to buoys on starboard side.

Berthing/unberthing only in daylight, although I received conflicting information about it as well, until the time of departure.

The berth and the pipelines are owned by the steel factory and they receive a fuel oil tanker every 14/15 days. My ship was discharging Carbon Black for P.T. Cabot Chemicals, who normally hire the berth and pipeline facilities from steel factory to fill up their tanks once every 6 months.

CILACAP (Tjilatjap): 07.44 S. 109.00 E. **(See Plan)**

(a) CILACAP PORT.
(b) CILACAP – IRON SAND PORT.

(a) CILACAP PORT.

DOCUMENTS: Upon arrival vessels have to produce the following Certificates and Documents, which will remain in the Harbour Master's custody until cleared:
Nationality (Registry) Certificate.
Seaworthiness Certificate.
Measurement (Tonnage) Certificate.
Derat (Exemption) Certificate.
International Load Line Certificate.
International Oil Pollution Prevention Certificate.
Safety Certificate (passenger ships).
Safety Equipment Certificate (cargo ships).
Safety Radio and Radiotelephony Certificate (cargo ships).
Certificate of Approval (ship's radio station).
Health Book or Bill of Health.
Last Port Clearance.
Subscription of Light and Harbour Dues and wharfage if any.
Crew Lists and Passenger's Lists.
Passports and Seaman's Books.
Stowage Plan.
Personal Effects List.
Bills of Lading.
Ship's Articles.
Ship's Stores List.
Other certificates and documents as required.

PILOTAGE: Compulsory. 8 Harbour Pilots available. 6 hours notice required for berthing and 3 hours notice required for unberthing. Pilot available 24 hours for vessels up to 150 m. LOA and tankers under 36,000 d.w.t. and daytime only up to 1800 hrs. for vessels over 150 m. LOA and tankers over 36,000 d.w.t.

Pilot station on VHF Channels 12, 14 and 16.

Pilot station position: Lat. 07° 44' 30" S., Long. 108° 59' 46" E.

ANCHORAGES:

Cargo Ships:	07° 45' 25.0" S. 109° 02' 50.0" E.	and	07° 46' 26.8" S. 109° 03' 07.0" E.
	To		
	07° 45' 34.0" S. 109° 03' 12.2" E.	and	07° 46' 22.5" S. 109° 03' 37.0" E.
Tankers:	07° 45' 38.0" S. 109° 03' 12.2" E.	and	07° 46' 22.5" S. 109° 04' 28.5" E.
	To		
	07° 45' 38.0" S. 109° 03' 48.5" E.	and	07° 46' 10.0" S. 109° 04' 28.5" E.

RESTRICTIONS: Least depths at the bar and in the channel are 70 dm. at LWS.

Current: Semi-diurnal. By the influence of the Donan River, especially during the rainy season, the duration of the outgoing current is longer than that of the ingoing. In the rainy season the outgoing current can reach 5 knots.

Channel Depths: Depths in metres at LWS.

	Crude Island Berths	Area 70	Area 60	Barge Dock
Outer Channel	17.0	17.0	17.0	7.0
Entrance Channel	16.0	14.5	12.1	4.0
Inner Channel	14.5	12.1	7.0	4.0
Berth/Port Basin	17.0	13.0	8.0	4.0
Turning Basin	14.5	13.0	8.0	–

Minimum Underkeel Clearance:

Outer Channel	2.64 m. or 20% draft
Entrance Channel	2.00 m. or 15% draft
Inner Channel	1.32 m. or 10% draft
Turning Basin (Crude Island Berth)	1.32 m. or 10% draft
Channel/Basin of Area 70	1.10 m. or 10% draft
Channel/Basin of Area 60	0.55 m. or 10% draft

MAX. SIZE:
Cargo Vessels: Max. LOA 186 m. Max. draft at HW 9.5 m.
Tankers: Max. d.w.t. 85,000. Max. LOA 250 m. Max draft 12.0 m.

Also see "Tankers".

HEALTH: Vessels arriving from abroad direct have to apply well in advance to the Department of Health (Quarantine Section) for a Provisional Free Pratique, as said Pratique has to be cabled to the port concerned. The Provisional Free Pratique is only valid for the port concerned, the next port of call must be a First Class Port as no further Provisional Free Pratique will be issued, unless the vessel sails directly abroad.

RADIO: Cilacap Coastal Radio Station. Call sign PKR-3. Frequencies: 500, 474 and 8714 kHz. Station also on VHF Channel 16.

Tankers: Cilacap Radio (PKR-6) is owned and operated by Pertamina. The station keeps 24 hour watch on 500 kHz and works on 542 kHz with power of 1 kW. See "Radio Signals" for other working frequencies.

Advice of Arrival: The Master of a vessel shall advise "Pertaminaship" 72 hours prior to arrival at Cilacap Port regarding the ETA and other requirements by cable/telex via Pertamina's Coastal Radio Station (call sign PKR-6) or via Cilacap Radio (PKR-3) or Jakarta Radio (PKX-2). The ETA advice to be confirmed 48 hours and 24 hours before arrival.

Details of arrival cable/telex: The following information shall be included in the Master's cable:
Name of vessel, call sign and Nationality.
ETA and date in local time (GMT + 7 hours).
Any ballast on board (type and quantity).
Deballasting time.
Maximum loading rate.
Clean Bill of Health.
Flange sizes of vessel's manifold.
Last port of call.

VHF: Pilot on Channels 16 and 20. Pertamina on Channels 16, 9 and 19.

Tankers: Masters of vessels arriving at Cilacap are requested to contact "Pertamina Shipping" either through Coastal Radio Station (PKR-6) on VHF Channel 16 and 19 or direct by VHF Channel 16.

TUGS: 1×870 h.p., 1×1,700 h.p. (twin-screw).

Tankers: Pertamina: 4 tugs. 3×3,000 h.p. ("Z" peller) and 1×1,740 h.p. (twin-screw).

Tug Requirements: Tankers require the following under normal conditions for berthing and unberthing.

LOA up 100 m.	1 tug.
LOA 101 m. – 150 m.	2 tugs.
LOA 151 m. – 200 m.	3 tugs.
LOA over 200 m.	4 tugs.

BERTHING: Outer Roads while waiting for the Pilot during the West monsoon a safe anchorage in 12 m. water. During the S.E. monsoon not a safe anchorage. Inner Roads, under all circumstances a safe anchorage in 9 m. water in the vicinity of Nusa Kambangan opposite the quays for small crafts and East of Tg. Sodong. Vessels over 80 m. length have to moor due to limited swinging space, current and winds.

Name	*Length* (m.)	*Depth at LWS* (m.)	*Remarks*
Wharf No. 1	120	7.5	—
Wharf No. 2	134	8.5	—
Wharf No. 3	142	8.5	—
Wharf No. 4	130	6.0	—
Pusri Jetty	Under Construction		Fertiliser
Aneka Tambang Jetty	156	11.0	See "Section B"
Semen Nusantara Jetty	70	5.5	Cement

STEVEDORES: Working hours Monday–Thursday 0730 – 1200 hrs. and 1300 – 1530 hrs. and Saturday. Overtime Friday 0730 – 1130 hrs. and 1300 – 1530 hrs.; Sunday-holidays 0730 – 1200 hrs. and 1300 – 1530 hrs.; Night shift 1700 – 2300 hrs. Gang's capacity: Loading general cargo 12 t.p.h.; bagged cargo 20 t.p.h.; iron sand by conveyor 400 t.p.h. – 500 t.p.h.; bulk cargo 17 t.p.h.

MEDICAL: Pertamina Hospital Service and Public Health Service.

TANKERS: *Berth Particulars:*

Location	*Berth*	*Depth at LWS* (m.)	*Size Restriction* *DWT* *min.*	*DWT* *max.*	*LOA* *min.* (m.)	*LOA* *max.* (m.)
Crude Island Berth (CIB)						
	Platform "A"	17.0	35,000	135,000	170	250
	Platform "B"	17.0	35,000	135,000	170	250
Area 70						
	Jetty B-I	13.5	3,000	35,000	87	180
	Jetty B-II	13.5	3,000	35,000	87	180
	Jetty B-III	13.5	3,000	17,000	87	200
Area 60						
	Jetty Donan-I	5.0	700	3,000	50	85
	Jetty Donan-II	7.0	700	8,000	60	105
	Jetty Donan-III	7.0	600	3,000	51	105
PDN						
	Wharf	6.5	700	10,000	60	135

Vessels berth starboard side to at the Crude Island Berths and port side to at all other berths.

Shore Storage Tanks:

Oil Products		Total Safe Capacity
Crude Oil		1,010,971 cu.m.
Slop Oil	Area 70	15,000 k/l
	Area 60	3,580 k/l

Products/Loading Rates:

Berth	*Cargo Handled*	*Average Rate* *Loading* k/l.p.h.	*Disch.* (t.p.h.)	*Connections* *No.*	*Hose* (in.)	*Arm* (in.)
CIB-I	Crude Oil	–	4,000	4	–	12
	MDF/MFO	350	–	1	4	–
	Fresh Water	50	–	1	4/2	–
CIB-II	Crude Oil	–	4,000	4	–	12
	MDF/MFO	350	–	1	4	–
	Fresh Water	50	–	1	4/2	–
B-I	Crude Oil	–	1,500	2	–	10
	White Products	1,500	–	2	–	10
	Black Products	1,200	–	2	–	10
	MFO	200	–	1	4	–
	Water	10 t.p.h.	–	1	2	–
B-II	Crude Oil	–	1,500	2	–	10
	White Products	1,500	–	2	–	10
	Black Products	1,200	–	2	–	10
	MFO	200	–	1	4	–
	Water	10 t.p.h.	–	1	2	–
B-III	White Products	1,500	–	2	–	8
	Black Products	1,200	–	2	–	10
	MFO	200	–	1	4	–
	Water	50 t.p.h.	–	1	2	–
D-I	BFS	150	–	1	–	6
	Lub Oil	200	–	1	–	6
	Avtur	200	–	1	4	–
	MDF	50	–	1	3	–
	Fresh Water	5 t.p.h.	–	1	2	–
D-II	BFS	200	–	2	–	6
	Lub Oil	300	–	2	–	6
	Avtur	300	–	2	–	6
	MDF	50	–	1	3	–
	Fresh Water	5 t.p.h.	–	1	2	–
D-III	300 cu.m.	–	1	–	6	
LPG	300	–	1	4	–	
Avtur	50	–	1	3	–	
MDF	5 t.p.h.	–	1	2	–	
Fresh Water						
PDN	MDF MFO ADO	50	–	2	6	–

Notice of Readiness: Upon arrival in the anchorage area and if the vessel is ready in every respect to load/unload, the Master may tender his Notice of Readiness.

Notice of Readiness will be accepted by Loading Master/Oil Inspector once the vessel is alongside the jetty.

Hoses/Loading Arm Connections: The loading hoses will be hoisted individually by the vessel's gear. The hoses/loading arms will be connected/disconnected by shore personnel under direction of the Loading Master. Assistance is required from the vessel's personnel to operate crane, boom, winches, etc. Unused cargo and bunker connections to be blanked off. The Master will inspect and ensure to his satisfaction that cargo loading hoses/arms between shore and ship are in good condition.

Equipment: Vessel must be equipped with the necessary lifting gear, i.e. derrick, blocks, tackle, gaskets, wrenches, bolts and nuts, deck hose stand and adaptors.

Pre-Loading Notification: One hour's notice shall be given by the vessel to the Loading Master before her cargo tanks are completely empty or ready to be inspected.

Before Loading: Before loading commences, the Master will check that International and Port Regulations pertaining to the safety of the vessel and terminal have been complied with, that the vessel is manned and in all respects ready to receive cargo and that all precautions required by circumstances have been taken.

Agreed Communications During Loading: The Terminal's personnel will be at the jetty at all times during the loading operation.

All communications related to the loading of the vessel must be passed to the Loading Master, who will remain in contact with the control room constantly.

Failure of Communications: If communications with the control room fail, operations will be stopped until communications have been re-established.

Loading Rate: Loading is commenced by gravity and when the vessel informs that oil is flowing into the tank the loading rate will be increased up to the required rate. A responsible member of the crew will be stationed on the main deck all the time and will maintain communication and remain in visual contact with the shore operator during loading.

He will advise the operator when changes are required in loading rate and in the event of an oil spill he will notify the Loading Master immediately.

The Loading Master will coordinate the cleaning of the oil in the water.

Topping-Off: The vessel must give 4 hours notice to the Loading Master before starting to "TOP-OFF" and must advise if decrease in loading rate is desired.

Completion of Loading: The vessel must give one hour's notice to the Loading Master before completion of loading.

On completion of loading, all pumps will be stopped and the 2 butterfly valves on the loading arm will be closed and the loading arm will be disconnected before being lowered. There should be no leakages and all cargo tank openings on the tanker must be closed immediately after samples have been taken by shore laboratory personnel.

Leaking Oil Tankers: If during loading it is noticed that oil is leaking from the tanker, loading must stop and the tanker may have to leave the berth at the discretion of the Senior Terminal Representative. Loading will be resumed if repairs have been carried out to the tanker to the satisfaction of the Senior Terminal Representative.

Cargo Documents: All documents to be completed as soon as possible after loading is completed. Signing of these documents, by the Master, is at the same time final departure clearance formalities are being carried out.

Loading documents such as Bill of Lading, Quality and Quantity Certificate, Dry Certificate, Ullage Report, Loading Report, Certificate of Origin, Cargo Manifest and Master's Receipt for Documents/Samples are prepared at the terminal.

Before Discharging: Before discharging commences the Loading Master will inspect the ullages and sealed overboard and sea valves. Cargo in each tank will be sampled by shore laboratory's personnel. The ship's discharge pumps can be started after the shore pipelines and tanks are stated ready to receive cargo from the tanker.

Discharge Rate: Discharge should be started at slow rate and be increased to the agreed rate (as itemised in agreed discharge plan) once both parties are satisfied that the flow of oil to and from designated tanks is confirmed. During discharge the flow of cargo should be controlled by ship's crew in accordance with the arrival agreement. The discharge rate should not be substantially changed without informing the shore.

Stripping and Draining of Cargo Tanks: If a slop tank or other selected tank is being used to receive the drainings of tanks being stripped, the ship's personnel should be alerted and aware that the oil level in the receiving tank will be increased. Special care should be taken to avoid an overflow and oil spill.

Completion of Discharge: As soon as discharge is completed the Master and Loading Master will inspect the cargo tanks to ensure that all tanks are in a dry condition. They will then sign the Dry Certificate at the same time.

Hose Disconnection: Before hoses or arms are disconnected the drain cocks at the ship's manifold should be opened into a drain tank or drip pan.

Cargo manifolds and hoses or arms should be blanked-off after disconnection.

Outward Clearance Report: The Master of a vessel is requested to report to Pertaminaship agent once vessel has crossed the outer bar (Buoy No. 'O').

Oil Pollution by Tanker: The Master of the vessel shall be responsible for any oil pollution caused by his vessel or crew.

He should sign the oil pollution statement for P&I Club (insurance) purposes.

Authority: Pertamina P&T UP – IV, Area 70 Benteng Pendem, Cilacap 53221, Indonesia. Tel: (0282) 22276. Telex: 22380 PEKC CP. Fax: (0282) 22853, 21710.

Also see "Shipmaster's Reports" and "General" before first port.

PORT EQUIPMENT:
Cranes: 1 mobile crane with lifting capacity of 15 tons.
Forklifts: 1×10 ton, 1×7.5 ton, 2×5 ton, 2×3.5 ton, 4×3 ton and 3×2 ton.

DENSITY: 1012 – 1020.

FRESH WATER: Water is supplied through pipelines to the wharves, capacity 10 t.p.h. – 15 t.p.h.

FUEL: Bunkers (M.D.F., M.F.O., H.S.D.) available alongside by pipeline. Supplier is State Corporation Pertamina. Rate 60 t.p.h.

CONSULS: None.

AIRPORT: Tunggul Wulung Airport. Distance from port 14 km. Served by Merpati Nusantara Airline with daily flights to and from Jakarta.

TIME: GMT plus 7 hours.

PORT SECURITY: Maintained by members of the Indonesian Armed Services, usually, Police, Navy or Marine and Army. Crew members should be in possession of a shore pass issued by the Port Authority, accompanied by an identification card when leaving or entering the guarded gates of the Port Area. Shore passes can be obtained via the Agencies.

CUSTOMS: It is strictly prohibited to take undeclared foreign currency ashore. It is recommended that Masters consult the Agents about the local prevailing Customs Regulations with regard to currency, cigarettes, spirits, etc., to prevent unnecessary difficulties and eventually fines.

Ship's Inspection Team: Consisting of members of the Port Authority. This team will search the vessel, after the ship is cleared by the Port Medical Officer. Prior to mentioned search no Cargo handling is allowed. This Team will search the Store Rooms and Cargo hatches, and subsequently seals the Bonded Stores and Radio Transmitter. Careful attention should be given in making up the Store Lists, as any difference found in the items declared and discovered during the search may lead to difficulties.

SHORE LEAVE: When leaving and entering the Custom's Area the crew is checked on the basis of the Crew List and Identification Cards and searched.

GENERAL: *Charts:* Indonesian Charts No. 69 and 108. British Admiralty Charts No. 912 and 1653B.

DEVELOPMENTS: Dockyard for ship repairs under construction.

Pusri Jetty for fertiliser under construction.

SHIPMASTER'S REPORT: August 1985.

Vessel (31,000 d.w.t.) entered Cilacap to load a cargo of gas oil for discharge at Bukom (Singapore). Unfamiliarity together with no chart for the port onboard created some difficulties, but in fact, it is quite an open approach to the port. However, entry into the dredged channel should not be attempted without guidance if the Pilot cannot board the vessel due to strong Southeasterly winds and heavy swell.

Port Limits: Not clearly defined, but assumed to start in area of the Channel Entrance Buoy.

Documents: All officials board after berthing.

Customs were satisfied with 3 detailed copies of Personal Effects and Currency Declarations, plus 3 copies of Bonded and Ship's Provisions Stores.

Immigration require 3 Crew Lists, Agents 2 copies and Customs 2 copies. Port Health also require 2 copies. Immigration also require all Passports (or Discharge Books where Passport not available) to stamp entry and issue Shore Passes. Passports are re-stamped with exit stamp prior to departure and Shore Passes must be returned, before sailing.

2 Officials board from Port Health and require Master to complete and sign Health Declaration and they check Yellow Fever/Cholera Vaccination Certificates (all up to date). If onboard, they also require the Indonesian Health Book.

For the Harbour Master, the Agent will collect the following documents for sighting ashore on signed receipt: Last Port Clearance, Certificate of Registry, Load Line Certificate, Safety Construction Certificate, Safety Equipment Certificate, Radio Safety Certificate, Derat Certificate, Tonnage Certificate, Certificates of Class, Hull and Machinery (both new building and completion of Survey Cycle), I.O.P.P., TOVALOP and Safe Manning Certificate.

Agent also presents cargo manifests for signing for Customs. Bills of Lading for petroleum cargoes are issued on Pertamina Bills of Lading and others cannot be used or Pertamina's endorsed. Issue usual protests as per Charter Party instructions.

Radio/VHF: W/T as per Vol. 6. Station PKR6, very helpful, with good English will contact Agent for vessel – no charges for service. Closer to port, Pilots work Channel 12 and Agents (Pertamina Agency) works on Channel 19.

Pilotage: Refer Pilot Book 34 Vol. II, page 50, Chapter 3.25 – the details re. Tg. Cimiring Lighthouse not applicable to deep draft vessels as too far offshore to see any signals (6 – 8 miles). The lighthouse is also very difficult to spot during the day due to trees. Call on VHF Channels 19/12 as indicated above. Chart coverage of the area is very poor. Tg. Cimiring should not be approached closer than 5 – 6 miles and the headland rounded at this distance, unless local knowledge available. Good depths of water available if Pilot Book directions followed to Channel Entance Buoy shown on B.A. Chart 912. However, B.A. Chart 912 (issued March 1985) is full of inaccuracies. Namely:

1. The buoyed channel has a dredged depth of approximately 11 m. which is not indicated.
2. Some leading line beacon lights are in the incorrect position on the chart, or if correctly charted, do not show the present correct direction of approach.
3. Existing leading beacons bear no relationship to present channel.
4. Several buoys are not shown or position is doubtful. Characteristics, shape and topmarks also vary to those shown on B.A. Chart 912. However, the Approach Channel is reasonably well marked and vessels should experience no difficulties as channel buoys follow IALA system.

Comments in the Pilot Book Chapter 3.26 concerning a black No. 1 Buoy (1.60) and the light beacons (L36-50) should be disregarded. However, the caution re. tidal streams heeded. (L36-50). Our vessel experienced a strong Southeasterly set onto the Channel Entrance Buoy at half ebb despite Southeasterly winds Force 4 – 5. Considerable wallowing in the swell was experienced and a good underkeel clearance should be maintained at all times.

Comments in the Pilot Book re. Pilots boarding in the S.E. monsoon season are correct (R23-28). During the Southeasterly monsoon, the combined wind and seas/swell make boarding in the Outer Roads hazardous and transit via the dredged channel to more sheltered waters between Buoy Nos. 5 and 7 (abeam of Kg. Rempak) is required. However, Shipmasters with little or no local knowledge should request the tug to meet them at the Entrance Buoy and then act as lead boat along the channel (imperative if no local chart onboard). Local Pilots and tugs very competent as Cilacap is quite a busy oil port. The Outer Buoy referred to in Chaper 3.28 on page 51 (lines L27-29) does not exist, but directions given are sound.

Anchorages: Covered in Appendix of 34, Volume II. Several tankers observed at anchor in S.E. Force 5 – 6 winds with swells of 2 m. – 3 m. – no shelter afforded in Southeasterly monsoon weather, but reported as secure anchorage. Mined areas still exist.

Restrictions: Max. permissible draft is 10.5 m. (SW). However, always check. No written information re. depths was available to the Master or table of Tidal Predictions (appeared to have been produced locally) offered, although latter printed. Shipmasters should insist on a copy being placed onboard. Caution is also required on receiving sailing times. We refused to sail on falling tide when instructed and chose to depart at 1 hour before HW. Echo sounder trace indicated a minimum depth average of 4 m. recorded throughout passage to channel, except for one shoal patch abeam of the Ore Jetty, showing 0.3 – 0.6 m. UKC. The predicted tidal range at the times in question was approximately 1.3 m. So on LW, likely UKC would have been 2.5 m. However, the Pilot indicated that the actual depths of water available on the West side of the river are not really known and as vessel has to be swung prior to sailing, it seemed prudent to have as much water as possible. If berthed starboard side to at Cilacap Berths (East side of river), vessel turns bow to jetty on last of flood or bow out on ebb tide. Daylight sailing only if vessel requires to swing prior to sailing. Otherwise, vessel can sail any time. Those vessels berthed on S.W. side of the river (on Nusa Kambangan) appear to berth laden facing upstream and swing in the turning basin S.E. of the Ore Jetty in ballast.

Tugs: 3 vertical screw tugs of 3,500 h.p. plus a smaller unit. Tugs adopt push/pull practice. Very efficient.

Berths: At Cilacap, 3 modern 'T' head jetties with Chicksan loading arms and a storing crane. Use ship's gangway. Terminal security is very good with a Security Guard and shore jetty man in attendance at all times. Entry to the terminal is by pass or written authorisation only. Jetties are designed for vessels in 150 m. – 200 m. length range. There are 2 similar jetties in the S.W. corner of the river downstream in the first bend for larger vessels. There was one vessel of 230 m. length alongside during our visit. Again, modern 'T' head construction with dolphins.

Tankers: Shore present 4×10 in. Chicksan arms. High loading rates achieveable. 1,800 cu.m.p.h. until hastily slowed down as was vessels max. loading rate on one line. Cargo papers take about 4 – 5 hours. Independent Surveyor appointed who was very efficient. No lab available for final density, so it more than 2 shore tanks loaded, surveyor takes mean of 4 – 5 samples drawn from ship's tanks to establish Bill of Lading Relative Density. No final density given by shore.

Density: Lowest recorded was 1022 at half tide flood, but probably lower in the rainy season.

Fire Precautions: Good check list procedures and detailed tank preparation/loading and discharge instructions given by Terminal Representative.

Surveyors: See "Tankers".

Gangway/Watchmen: See "Berthing".

Customs Allowances: 200 cigarettes and 1 case of beer and 1 bottle of spirits. No rummaging took place.

Time: GMT plus 7 hours all year round.

Storing: (See "Prelims"). Several chandlers available, Pertamina vessels store locally. Believe locally supplied fresh vegetables and fruits of good value. All meats butchered locally.

1. Truck.
2. Not available.
3. Goods would have to be brought to vessel on handcart (nearly 0.5 miles on Jetty 3).
4. Would imagine shipchandler would provide labour.

Shore Leave: Passes essential. Currency regulations not strictly enforced. Local trishaw costs about Sing.$10.00 per person return to town. Locals very friendly. Area best described as rural. Jakarta is 1 hours flight, 4 hours by car and 6 hours by train from Cilacap.

SHIPMASTER'S REPORT: August 1992.

Pilotage: Boat reluctant to come outside, but channel clearly marked and easy approach, except for heavy swell.

Anchorage: Best to anchor well out to avoid swell.

Restrictions: Channel showed 16.0 m. depth throughout approach to Crude Oil Terminal.

No draft restrictions given by Pilot (vessel was 12.2 m. draft).

Berth: Crude Oil Terminal. All ships berth port side to in daylight hours only.

Vessel discharged through 2×12 in. hoses.

No access to shore, except by Pertamina launch, which is irregular and unreliable.

AUTHORITY: Department Perhubungan, Perusahaan Umum Pelabuhan 111, Cabang, Cilacap, Jalan Laut Jawa, Pelabuhan Cilacap. *Tel:* (0282) 21334, 22651, 22652, 22653. *Contact:* Soeroso Prawirosiswojo, Branch Manager. Sojoto Prawirodirjo, Harbour Master.

(b) CILACAP – IRON SAND PORT.

LOCATION: Iron Sand Jetty (loading installation) is situated at the Port of Cilacap, South coast of Central Java, in position: Lat. 07° 45' 03" S., Long. 109° 00' 51" E.

FLAGS: To be flown by incoming vessels: Vessel's National Flag; Indonesian Flag; Vessel's Number; Quarantine & Immigration Flag.

PILOTAGE: Pilotage is compulsory. Two Government Pilots are available.

There is one Pilot Station in position Lat. 07° 44' 08" S., Long.108° 59' 34" E. If vessel wishes to be piloted to Iron Sand Jetty on day of arrival vessel must arrive at the Pilot Station before 1500 hrs. local time at the latest provided the Pilot is available (information of which will be confirmed by Sub-Agent).

DOCUMENTS: To be produced upon vessel's arrival:

15 Crew Lists.
10 Passenger Lists.
5 Parcel Lists.
8 Stores Lists.
8 Cargo Manifests.
3 Narcotic Lists.
5 General Information (if any).
5 Personal Effects Lists.
5 Vaccination Lists.
Last Port Clearance.
10 Firearms & Ammunition Certificates.
10 Harbour Reports.
5 Crew's Radio and Camera Lists.
International Loadline Certificate.
Maritime Declaration of Health Certificate.
Safety Radio Certificate.
Health Book or Bill of Health.
Derat Certificate.
Safety Equipment Certificate.
Certificate of Registry and Tonnage.
Certificate of Vessel's Nationality.

Inspection Team: This team consists of the Port Health Officer, Custom Officer, Harbour Master, Immigration Officer and Police.

After the vessel is granted Free Pratique, the Immigration Officer will check Passports, Seaman's Books and Crew List and issue shore passes.

RESTRICTIONS: Vessels served on first come, first served basis. Vessels berth between 0600 hrs. and 1500 hrs. and leave during daylight hours on high water. The depths at LWS are: Alongside wharf, 13.0 m.; Channel Bar 11.30 m.

Vessel's Conditions: The height of vessel from water line to top of hatchcoaming or railing must not exceed 15 m. Each side deck breadth from bulwark to hatchcoaming must be preferably 7 m. minimum and 9 m. maximum.

MAX. SIZE: LOA 186 m. Max. draft 10.40 m. Deeper possible but it depends on depth at the time of passing bar and after consultation with the Harbour Master.

RADIO: Messages to Pasirbesi Cilacap can be sent through Cilacap Coastal Radio Station, call sign PKR 3.

Arrival Notice – Information Required:

Owner's Advice: Owner or Agent to advise by cable to Anekatambang Jakarta and Pasirbesi Cilacap at least 10 working days before vessel's expected arrival at the loading port.

Master's Advice: At least 48 hours before vessel's arrival at Cilacap Pilot Station, the ship's Master or Agent shall give the following information to Anekatambang Jakarta and Pasirbesi Cilacap: Last port of call, draft on arrival, quantity of iron sand to be loaded, stowage plan (hatch division for iron sand cargo) and other necessary messages.

Final amended arrival time must be sent at the latest 24 hours before arrival.

Previous experience showed that one cannot rely on telegrams regarding ETA sent by Agents at last port of call arriving in due time, therefore Pasirbesi Cilacap waits for the Master's telegram in order to make necessary preparation such as ordering Pilot etc.

Ship's radio transmitter is not to be used while lying in port.

TUGS: Available.

BERTHING:

Mooring: Vessels are moored alongside 1 jetty and 6 dolphins with 4 bollards with good nylon ropes, 4 fore, 4 aft, 1 fore breastline and 1 after breastline. Distance between the two extreme dolphins is 160 m.

Loading Facilities: Loading installation consists of one boom (stacker), iron sand is loaded into the hold of the vessel by means of conveyor belt. Boom can be hoisted vertically from 00° to 60° but the maximum position for proper operation is only up to 15° inclination angle and can swing 26.85 m. (60°) to each side. The length of boom is 33.33 m. The maximum outreach is about 16.33 m. from jetty to seaward.

Loading Capacity: About 400 – 500 t.p.h., however, it depends on the type of vessel, cargo space and size of hatches available.

Weighing: The iron sand is automatically weighed during loading by means of weightometer. The specific gravity of iron sand is around 2.60.

Unloading: Cargo for Aneka Tambang only.

Labourers: Labourers will be supplied by shipper. Making the vessel ready for loading to be done by vessel's Crew members.

STEVEDORES: Loading is performed by shipper's personnel. Loading equipment to be furnished by the vessel.

Working Hours: Loading to be effected on weather working days of 24 consecutive hours, Sundays and Holidays included (WWD SHINC), but the following National Holidays are excepted:

New Year (January 1st); Idulfitri (the fixed 2 consecutive days of the year; Idul Adha (the fixed day of the year); Independence Day (the fixed day of the year); Maulid Day (the fixed day of the year); Easter (the fixed day of the year; Waisyak (the fixed day of the year); Nyepi (the fixed day of the year); Ascension (the fixed day of the year); the first Muharram (the fixed day of the year) and Christmas Day (December 25th). For definite dates consult Port Administrator.

CUSTOMS: Vessel's bonded store will be sealed by Customs Officer on arrival and will remain sealed until the vessel leaves Cilacap Port.

Note: It is recommended that ship's Master consult the Agents about the local prevailing Customs regulations with regard to currency, cigarettes, spirits, narcotics, etc. to prevent unnecessary difficulties and eventually fines.

MEDICAL: Doctor, hospital and inoculation service available.

FRESH WATER: Not available.

FUEL: Not available.

CONSULS: None.

TIME: GMT plus 7 hours.

REPATRIATION: Can be arranged. Repatriant to be guarded by Immigration Officer from Cilacap to Jakarta until his departure from Jakarta to the destined country.

SHORE LEAVE:

General: Crew members are permitted only to go to Cilacap. Shore pass must be carried by crew during shore visit.

Going beyond Cilacap is prohibited without special landing permit, which can be issued by the local Immigration Officer through Agents.

Visitors: Crew members are not allowed to invite friends, hawkers from shore aboard the vessel. It is also prohibited to lower lifeboats or rafts for purpose of fishing, sailing, visits to nearby islands, etc.

At Anchorage: While lying at anchor awaiting berth, no one is allowed to go ashore until vessel cleared.

Shore Leave Hours: From 0600 hrs. to 2300 hrs. local time.

GENERAL:

Fumigation: No facilities.

Nature of Bottom: Sand and hard materials.

Currents: Direction: at high tide, from East to West; at ebb tide, from West to East. Velocity: around 3-5 knots.

Chart: Indonesian Sea Chart No. 108.

AUTHORITY: *Shipper's Local Office:* P.T. Aneka Tambang (Persero), Unit Pertambangan Pasir Besi, Cilacap. Jalan Penyu, P.O.Box 123, Cilacap Central Java. *Cable Address:* Pasirbesi Cilacap. *Tel:* 22142, 22143. *Telex:* 22457. *FAX:* (0282) 22217.

Shippers: P.T. Aneka Tambang (Persero), Jalan Letnan Jendral TB, Simatupang Lingkar Selatan, Tanjung Barat, Jakarta Selatan 12530, Indonesia. *Tel:* (021) 7891234. *Telex:* 66209 ATKJKT IA. *FAX:* (021) 7891224. *Cables:* Aneka Tambang Jakarta.

CINTA TERMINAL: 05.27 S. 106.15 E. (See Plan)

DOCUMENTS: The following documents are required for immediate inspection by the Terminal Officials:

Maritime International Declaration of Health.
Valid Derat or Exemption Certificate.
6 copies of Crew Lists.
Passenger List, if any.
Certificates of Inoculation against any communicable diseases.
Valid Passports and/or Seaman's Books for all Crew members or passengers.
Notice of Readiness.
Indonesian Consular Clearance.
1 Crew Declaration of Personal Belongings.
1 Ship's Stores Inventory.
6 copies of Cargo Manifest for Cinta Terminal loading.
1 Copy of Cargo Manifest for Transit Cargo with a Summary.
1 Copy of Passenger Manifest.

Clearance from the last port of call will be required by the Government Authorities. Crew Lists and Crew Declaration of Personal Belongings must be on the approved Indonesian documents. Vessels are advised on their initial visit to the port to obtain sufficient forms for future visits.

In the normal course of events, Cinta Terminal acts as tanker agent and prepares all crude oil documents. No charges are made for these services. A tanker will be considered clear to depart Cinta Terminal when the crude oil loading documents and his outward clearance certificate have been delivered to the Master of the vessel.

EQUIPMENT: A vessel must have both bower anchors and ground tackle in good working condition and in such sizes and amounts as to meet either "Lloyd's" or "A.B.S." standards, although they may be in fact classified by other societies. It is strongly recommended that anchors have proper anchor buoys attached to each anchor.

All vessels must carry suitable stoppers for all manila or synthetic lines for mooring use. Vessels must also have 2 chain stoppers of 3 in. diameter chain, 3.0 m. from the Panama Lead, or fairlead with minimum 20 in. diameter opening.

Vessels to have suitable winches or capstans in good operating condition on the forecastle deck. Constant tension-type winches may not be used except when they can be solidly locked and the constant tension feature not used.

PILOTAGE: Pilotage is compulsory within the Terminal limits. Vessels to be moored at Cinta Terminal will be boarded by Cinta Terminal Mooring Master in the anchorage area. The Mooring Master will advise the ship's Master on approaches to the SBM, mooring, unmooring, connection and disconnecting hoses, and all other operations within the Terminal area. Vessels are requested to have a pilot's ladder, safely and securely rigged, ready for immediate use and long enough to meet the Mooring Master's launch. Vessels will provide a lee for the Mooring Master, both when boarding and leaving. Also a light line should be ready to take aboard the Mooring Master's portable radio.

ANCHORAGE: Position is Lat. 5° 25' 25" S., Long. 106° 11' 09" E. with a radius of 1 mile which must be used by vessels required to wait at anchor. Anchoring within the Terminal Area is prohibited. Mooring Masters will board arriving tankers in the anchorage area.

The holding area is West of the Export SBM with water depth of 18 to 20 fathoms. Holding ground is fairly good. Area is large enough for sufficient manoeuvring and swinging room for several vessels.

If a tanker is not scheduled to berth on arrival (e.g. another vessel is already in the berth, or the Terminal is closed on account of adverse weather, etc.), Master will be advised by radio and requested to anchor.

RESTRICTED AREA: The limits of the restricted area is covered by lines between points of the following positions:

AA.	Lat. 04° 48' S.,	Long. 106° 12' E.
BB.	Lat. 04° 48' S.,	Long. 106° 14' E.
CC.	Lat. 05° 04' S.,	Long. 106° 22' E.
DD.	Lat. 05° 04' S.,	Long. 106° 27' E.
EE.	Lat. 04° 56.5' S.,	Long. 106° 27' E.
FF.	Lat. 04° 56.5' S.,	Long. 106° 34' E.
GG.	Lat. 05° 00' S.,	Long. 106° 34' E.
HH.	Lat. 05° 00' S.,	Long. 106° 30' E.
JJ.	Lat. 05° 07' S.,	Long. 106° 30' E.
KK.	Lat. 05° 10' S.,	Long. 106° 26' E.
LL.	Lat. 05° 10' S.,	Long. 106° 25' E.
MM.	Lat. 05° 26' S.,	Long. 106° 28' E.
NN.	Lat. 05° 33' S.,	Long. 106° 18' E.
PP.	Lat. 05° 33' S.,	Long. 106° 14' E.
RR.	Lat. 05° 37' S.,	Long. 106° 14' E.
SS.	Lat. 05° 37' S.,	Long. 106° 09' E.
TT.	Lat. 05° 15' S.,	Long. 106° 09' E.
XX.	Lat. 05° 15' S.,	Long. 106° 04' E.
YY.	Lat. 05° 06' S.,	Long. 106° 04' E.
ZZ.	Lat. 05° 06' S.,	Long. 106° 10' E.

RESTRICTIONS: Weather permitting, Cinta Terminal will operate on 24 hours per day, 7 days per week. Tankers will be berthed during daylight hours only and unmoored on 24 hours basis provided the berth is not occupied and/or storage is not critical.

MAX. SIZE: *Minimum Size Tanker Acceptable:* The minimum sized tanker acceptable at the Terminal will be not less than 20,000 d.w.t.

Max. Size Tanker Acceptable: The max. sized tanker acceptable at the Terminal calling for a full cargo will be 175,000 d.w.t. Larger tankers may be accepted subject to weather conditions at the time of loading without recourse to Maxus for any delays.

NAVIGATION AIDS: There are 2 SBMs, each fitted with 5 nautical mile white flashing light, flashing Morse code (U) at 15 second intervals.

The positions are as follows:

No. 1 Storage SBM: Lat. 05° 26' 40" S., Long. 106° 14' 42" E.

Permanently secured to this SBM is a large 602 ft. long barge "Cinta Natomas" used for storage of crude oil and accommodation, (headquarters of Cinta Terminal personnel). The barge shows lights and shapes as prescribed in the International Regulation for Preventing Collisions at Sea for vessels engaged in underwater operations. The barge is also equipped with a foghorn 5 second on, 55 second off, 5 second on, 10 second apart.

No. 1 Export SBM: Lat. 05° 25' 25" S., Long. 106° 14' 09" E.

Platform Co-ordinates:

Cinta-A	Lat. 05° 26' 24.46" S., Long. 106° 15' 44.73" E.
Cinta-B	Lat. 05° 27' 00.34" S., Long. 106° 15' 17.72" E.
Cinta-C	Lat. 05° 27' 00.33" S., Long. 106° 15' 19.57" E.
Cinta-D	Lat. 05° 28' 04.07" S., Long. 106° 14' 34.37" E.
Cinta-E	Lat. 05° 27' 44.93" S., Long. 106° 15' 23.22" E.
Cinta-F	Lat. 05° 27' 17.29" S., Long. 106° 14' 20.81" E.
Cinta-G	Lat. 05° 26' 49.77" S., Long. 106° 16' 11.19" E.
Cinta-H	Lat. 05° 25' 24.61" S., Long. 106° 16' 26.63" E.
Cinta-P	Lat. 05° 27' 02.51" S., Long. 106° 15' 19.25" E.
Cinta-P1	Lat. 05° 27' 04.63" S., Long. 106° 15' 19.25" E.
Duma-A	Lat. 05° 25' 37.59" S., Long. 106° 27' 46.26" E.
Farida-A	Lat. 05° 10' 52.30" S., Long. 106° 19' 44.70" E.
Farida-B	Lat. 05° 10' 36.50" S., Long. 106° 18' 41.60" E.
Farida-C	Lat. 05° 10' 36.50" S., Long. 106° 18' 41.60" E.
Gita-A	Lat. 05° 22' 11.38" S., Long. 106° 22' 45.00" E.
Karmila-A	Lat. 04° 59' 14.03" S., Long. 106° 31' 57.38" E.
Kitty-A	Lat. 05° 30' 58.85" S., Long. 106° 11' 52.82" E.
Kitty-3	Lat. 05° 31' 32.90" S., Long. 106° 11' 07.58" E.
Krisna-A	Lat. 05° 11' 05.20" S., Long. 106° 11' 31.00" E.
Krisna-B	Lat. 05° 12' 18.56" S., Long. 106° 12' 28.90" E.
Krisna-C	Lat. 05° 13' 13.20" S., Long. 106° 11' 40.30" E.
Krisna-D	Lat. 05° 14' 03.50" S., Long. 106° 13' 06.25" E.
Krisna-E	Lat. 05° 10' 45.22" S., Long. 106° 10' 51.09" E.
Krisna-10	Lat. 05° 11' 04.19" S., Long. 106° 13' 06.98" E.
Krisna-P	Lat. 05° 12' 18.56" S., Long. 106° 12' 28.90" E.
Nora-A	Lat. 05° 30' 06.65" S., Long. 106° 18' 50.55" E.
Rama-A	Lat. 05° 26' 50.23" S., Long. 106° 17' 15.95" E.
Rama-B	Lat. 05° 26' 25.96" S., Long. 106° 19' 54.49" E.
Rama-C	Lat. 05° 25' 21.00" S., Long. 106° 18' 56.60" E.
Rama-D	Lat. 05° 27' 03.00" S., Long. 106° 19' 00.00" E.
Rama-E	Lat. 05° 25' 12.65" S., Long. 106° 20' 00.84" E.
Rama-F	Lat. 05° 27' 07.80" S., Long. 106° 20' 17.37" E.
Rama-G	Lat. 05° 25' 51.76" S., Long. 106° 17' 53.68" E.
Rama-H	Lat. 05° 25' 54.59" S., Long. 106° 20' 37.50" E.
Rama-I	Lat. 05° 27' 14.28" S., Long. 106° 18' 18.46" E.
Rama-P	Lat. 05° 26' 27.65" S., Long. 106° 19' 55.00" E.
Selatan-A	Lat. 05° 33' 42.30" S., Long. 106° 10' 59.10" E.
Selatan-B	Lat. 05° 34' 52.36" S., Long. 106° 11' 33.73" E.
Sundari-A	Lat. 04° 59' 52.93" S., Long. 106° 12' 51.58" E.
Sundari-B	Lat. 04° 59' 16.41" S., Long. 106° 12' 54.76" E.
Titi-A	Lat. 05° 10' 13.39" S., Long. 106° 24' 13.24" E.
Wanda-A	Lat. 05° 22' 39.58" S., Long. 106° 21' 17.56" E.
Yvonne-A	Lat. 05° 09' 41.28" S., Long. 106° 10' 27.87" E.
Yvonne-B	Lat. 05° 09' 41.28" S., Long. 106° 30' 27.87" E.
Zelda-A	Lat. 05° 11' 11.11" S., Long. 106° 22' 56.48" E.
Zelda-B	Lat. 05° 11' 09.00" S., Long. 106° 21' 18.00" E.
Zelda-C	Lat. 05° 11' 07.74" S., Long. 106° 21' 15.42" E.
Zelda-D	Lat. 05° 10' 13.61" S., Long. 106° 22' 10.93" E.
Zelda-E	Lat. 05° 11' 22.53" S., Long. 106° 22' 01.41" E.
Zelda-P	Lat. 05° 11' 10.72" S., Long. 106° 22' 54.85" E.

RADIO/VHF: *Cable Address:* "Maxus S.E.S. Jakarta". *Telex:* 44221-1A.

Operating Schedules and Frequencies: Direct communication by radio telephony between Cinta Terminal (call sign: 6ZFT) and incoming vessels will be by: amplitude modulation (A3, A3H and A3J) operation in the 2, 4, 8 and 12 MHz bands and by International Marine VHF Channel 13.

Cinta Terminal (call sign: 6ZFT) particulars are as follows: Operated by Maxus South East Sumatra.

Position: Lat. 5° 26' 40" S., Long. 106° 14' 42" E.

Hours of operation: 24.

Frequencies	*Class*	*Power*	*Mode*
4456.0 kHz	A3, A3H, A3J	150 W	AM

International Marine VHF Channels:

6 – 156.30 MHz	Simplex		
12 – 156.60 MHz	Simplex		
13 – 156.65 MHz	Simplex		
14 – 156.70 MHz	Simplex		
16 – 156.80 MHz	Simplex		
20 – 157.00 MHz	Receive	161.60 MHz	Duplex
26 – 157.30 MHz	Receive	161.90 MHz	Duplex
28 – 157.40 MHz	Receive	162.00 MHz	Duplex

Notes: 6ZFT keeps continuous watch on 4456 kHz. 6ZFT keeps continuous watch on VHF Channel 16.

All communications between ships and Cinta Terminal (6ZFT) will be way of this station except should a vessel be unable to contact 6ZFT, she should send messages through: Singapore Radio/9VG or Pertamina Radio/PKI-2.

Initial Communications: It is most important that ships establish communications with the Cinta Terminal (6ZFT) not less than 72 hours prior to arrival at the Terminal, giving estimated time of arrival. Further ETA information should be sent when the vessel is 48 hours, 24 hours, 12 hours and 4 hours distant or any time a change of one hour in original ETA occurs. These messages should specifically state whether ETA is given in GMT (Z) or local time (K).

Cinta Terminal time is GMT plus 7 hours throughout the year.

The 72 hours signal should include the following:

1. Name of vessel and radio call sign.
2. ETA and date.
3. Cargo requirements.
4. Deballast time.
5. Max. loading rate.
6. Vessels draft on arrival.
7. If there is any sickness aboard or clean bill of health.
8. Last port of call.
9. Any hull, bulkhead, valve or pipeline leaks on vessel which could affect loading or cause pollution.
10. Distance in feet from bow to vessel's loading manifold.

On receipt of the first signal from a vessel Cinta Terminal (6ZFT) will transmit a message to her giving preliminary requirements and details as to Terminal. Masters are urged to comply with this in all details in order to facilitate vessel turn-around and Government formalities.

Communications Within 4 Hours of Terminal: Once ships are within the 4 hours distance of Cinta Terminal (6ZFT) communication, valid radio-telephone communications on International marine VHF may be established on Channel 16. This channel is monitored continuously.

Once contact has been made on Channel 16 further conversation will be conducted on a mutually compatible channel.

The 4 hours signal should confirm information on the time she will require to discharge ballast after arrival. Precise time of arrival should be given when the ship is 4 hours distant from the Terminal.

Communication in Terminal: The Mooring Master will be in direct control of all ship communications while in the Terminal Area. Any unauthorised communications will be cause for cessation of all operations excepting clearing the berth, and the vessel's Notice of Readiness will be nullified immediately.

PRATIQUE: In accordance with international practice, quarantine signals must be displayed by all vessels approaching Cinta Terminal area. These signals shall be displayed continuously until Pratique is granted. By day the flag of Indonesia should be flown throughout the vessel's stay in port. The boarding officials will attend the incoming vessel from the Cinta Terminal launch.

NOTICE OF READINESS: After arrival in the anchorage area and when the tanker is in every respect ready to load, the Master may tender his Notice of Readiness. Notice of Readiness will not be accepted during periods when the Terminal is closed. The Terminal is "closed" when the weather is such that it is too rough for incoming tankers to berth. The decision regarding the opening and closing of the Terminal will rest with the Terminal Superintendent. Tenders by vessels to load crude oil cargo will be normally accepted and berth assigned to vessels in chronological order of arrival provided such vessels have current nomination for cargo valid at the time of tender, carry clean ballast (if any), and have cargo tanks in fit condition to receive cargo. Also they must be in all respects properly equipped and ready to moor. Should berthing be delayed on account of bad weather, vessels will keep their position in line.

TUGS: Tugs and/or launches may assist in berthing vessels. These are under the direct supervision and control of the Mooring Master.

BERTH DESCRIPTION: The Terminal and Production Administrative Offices are located on board the 143,391 d.w.t. crude storage barge *Cinta Natomas* permanently moored approximately 8,500 ft. on a line bearing 164° from the First Export SBM. The nearest port with facilities is Jakarta approximately 51 nautical miles South-east.

The single point mooring buoy berth (SBM) is 13.5 m. in diameter, and designed to handle tankers in the 175,000 d.w.t. class. The buoy is equipped with dual 12 inch floating hose with ASA 150 lb. flanged connections. Both strings must be taken aboard. Loading rates will be from 11,000 to 20,000 barrels per hour range. The SBM is also provided with two permanently attached 15 inch circumference synthetic fibre floating mooring lines. These lines should be held under tension by the vessel at all times.

MOORING: Tankers are requested to have ready on the forecastle head the following:

(a) Messenger lines on the forecastle head for bringing 2 mooring lines aboard from the SBM (mininum 6 in. circumference).
(b) Mooring winches on forecastle head for handling two 12 in. circumference synthetic fibre floating mooring lines from the SBM.
(c) Adequate chafing gear to prevent damage to mooring lines.
(d) Derrick rigged and ready to pick up from launch, mooring shackles, nylon strops and hose connection gear on the port side midships.

On the near approach to the buoy a launch will attach a ship's line to one of the Terminal's floating mooring lines. This will be hove aboard and secured to the towing brackets, if the ship is so fitted, or otherwise secured by a ship's mooring wire and nylon strop previously passed aboard. The same operation will be repeated with the second mooring line.

The Mooring Master may require the vessel to unmoor at any time he deems it necessary for the safety of the vessel or mooring buoy or both, or infringement of the Terminal regulations.

HOSES: The Mooring Master along with a ship's officer will direct the ship's crew in the raising, lowering, connecting and disconnecting the oil loading hoses as well as all other labour pertaining to the loading of crude. The Terminal will not provide any labour for work done aboard the vessel.

Vessels must be adequately equipped with boom, blocks, tackle, wire runners and sundry equipment on the port side to hoist the floating hoses from the sea to the loading position. (5 tons minimum hoist size required.) Vessel's loading manifolds should be prepared for two 12 in. ASA 150 lb. Camlock flanged hose connections prior to vessel's arrival at Terminal. Vessel should have adaptors available if their flanges do not correspond to the loading hoses' flanges. For details of Camlock flanges see "Plan". Where no crossover valves exist on loading manifolds it is recommended that loops between loading lines on the starboard side of these manifolds be fitted. 8 in. hose connections to be removed; also, if necessary, "Y" pieces removed so that maximum flow through the 12 in. cargo hoses will not be reduced. To assist in vessel's turnaround, tankers should have all necessary booms and cargo gear rigged and ready before ship is boarded by Mooring Master.

Vessels which may consider the lifting capacity of their gear to be marginal should strengthen their gear accordingly. A common way to do so is to rig a second topping lift on the boom.

LOADING: Before the loading begins, the Master will ensure that all Terminal and Port Regulations pertaining to the readiness of the vessel have been complied with; that the vessel is manned and in all respects ready to receive crude, and that all precautions required by the circumstances have been taken.

All communications relative to the loading of the vessel shall be routed through the Mooring Master who will remain in contact with storage barge *Cinta Natomas* constantly via portable VHF Units. In case of temporary breakdown of the portable VHF circuit, contact may be continued on International Marine Channels if the vessel is so fitted.

Should communications with the *Cinta Natomas* fail, loading ceases. An emergency cessation of loading may be effected by a continuous sounding of the ship's whistle.

The max. loading rate will be 17,000 b.p.h. (2,300 long t.p.h.). Loading will commence with one pump; when the vessel advises that the cargo is flowing into the tanks, the loading rate will be increased until the desired rate has been reached.

Vessels shall not close down against the incoming oil flow. Vessels will be held liable for damages resulting from failure to observe this precaution.

The vessel must give 30 minutes notice to the *Cinta Natomas* before starting to "top-off", and shall advise if a decrease in loading rate is desired.

The vessel must give 15 minutes' notice to the *Cinta Natomas* prior to the completion of loading, at which time the *Cinta Natomas* may reduce to one pump.

On completion of loading, all pumps will be stopped, loading hoses disconnected, and blind flanges with gaskets installed on the loading hose before lowering over the side. There should be no leakage. All cargo tank openings and pressure vacuum relief valves must be closed immediately after ullages and samples have been taken.

All documentation will be completed as soon as possible after loading is completed.

If during loading it is revealed that oil is leaking from the tanker, so as to constitute a safety or pollution hazard, loading shall cease and the tanker may have to leave the Terminal limits at the sole discretion of the Mooring Master. Completion of loading will only be undertaken if repairs have been carried out to the tanker to the satisfaction of the Mooring Master. A tanker so rejected shall not later be accepted on a subsequent visit for loading until satisfactory evidence of repair is submitted duly certified by ABS, Lloyd's or other recognised surveyors.

Notice must be given by the vessel to the Mooring Master 30 minutes before vessel completes deballasting. The Mooring Master will advise the Cinta Terminal.

BALLAST: It is the responsibility of the ship's Master to see that no oil (crude, bunkers, diesel or bilge) or dirty ballast is pumped or spilled overboard from his ship while in the area. Drip pans should be used, especially when disconnecting hoses, in order to prevent spillage overboard.

Before loading commences all overside scuppers shall be made oiltight. At Cinta Terminal there are no slop tanks or facilities for receiving dirty ballast. Tankers must arrive with clean ballast. In the event a tanker does have dirty ballast it will not be allowed to be pumped overboard.

A vessel must have sufficient ballast for safe handling, having due regard to existing weather and sea conditions. Through careful watch of the weather and sea conditions, frequent exchange of information between ship and Terminal, and by a knowledge of the behaviour of his own vessel, the ship's Master may come to the Terminal with a minimum of ballast and thus lessen any possibility of infringement of sea pollution regulations.

Vessels equipped with a separate system of ballast tanks will be allowed to discharge ballast and load oil simultaneously, provided approval is first obtained from the Company Mooring Master and provided Government Petroleum Inspector agrees to do so.

Discharging Ballast at Night: When any vessel is discharging ballast in darkness, the sea around the area of discharge will be adequately lighted, so that any pollution will be readily noticeable.

FRESH WATER: Not available.

FUEL: Not available.

REPAIRS: No repairs are to be made while berthing or unberthing, or in the berth. All engines to be on 30 minutes standby and steam on deck at all times.

MEDICAL: At Cinta Terminal, medical and dental services are not available. In emergencies requiring hospitalisation, the patient will have to be flown by helicopter to Jakarta. All expenses will be charged to the ship owner.

CUSTOMS ALLOWANCES: Cigarettes, cigars, tobacco, matches, spirits, wines, beer, perfume, arms, ammunition and possibly other items will be locked up under customs' seal from time of arrival of ship at the Terminal until the time of leaving territorial waters.

Each person is allowed 20 cigarettes per day of stay or 3 grams of tobacco or cigars in lieu thereof. Each man is allowed 1 litre of beer or 0.5 litres of wine per day. Special allowances are made for the Master under special circumstances.

Indonesian Customs and Immigration Officials will board the vessel as soon as possible after arrival to give inward clearance and pratique service. Indonesian Government Regulations are strictly enforced.

Contraband: The attention of Masters is called to the strict enforcement of Indonesian Regulations against smuggling. Illegal possession or landing of such items as narcotics, liquor, cigarettes, ammunition, sheath knives and similar weapons or other articles of contraband is subject to severe penalty and may result in prolonged delay of the vessel concerned.

All precautions must be taken to prevent the violation of contraband laws.

Masters are requested to inform the ship's officers and crew of the foregoing regulations pertaining to contraband, shore liberty, etc., and to be assured that all personnel completely understand.

TIME: Indonesian local time is GMT plus 7 hours.

SHORE LEAVE: Shore liberty will not be granted except in cases of extreme emergency. Crew members cannot pay off or leave vessel at Terminal.

IDENTIFICATION CARDS: Visitors must obtain a Special Pass from Indonesian Government Officials located in the Terminal and from the Company's Mooring Masters. It is recommended that visitors be restricted to a minimum due to hazards involved.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Indonesian Rupiah (Rp.).

GENERAL: Safety rules and regulations are strictly enforced. The safety requirements are based upon the provisions of the Code of Safe Practices currently accepted by the Oil and Tanker Industries.

Provisions, spare parts or stores of any sort shall not be loaded from or discharged into any craft while the tanker is in or near the berth.

When a Mooring Master and his launch crew are assigned to a ship on business, it is expected that the ship will supply them with meals at the same time and in the same manner as comparable with personnel of the ship. No special meals or special foods will be required. The Terminal will keep this item to a basic minimum. The ship should also provide shelter and smoking facilities in the same manner as meals. All communictions between Terminal personnel assigned to a ship and ship's personnel should be through the Mooring Master.

AGENCY: See "General" before first port.

SHIPMASTER'S REPORT: July 1987.

The storage barge is moored to its own SBM.

After connecting the first line to the SBM, the Pilot goes forward and communicates with the bridge on VHF Channel 13.

AUTHORITY: Maxus S.E.S. Inc., P.O.Box 2759, Five Pillars Office Park, Jl. Letjen Haryono M.T.58, Jakarta, Indonesia. *Tel:* 7991608. *Telex:* JKT 47121-IA, 47487-1A. *FAX:* 7994243. *Cables:* Maxus. *Contact:* N.E.Umboh or I.Amilie, Port Captains.

CIREBON (Tjirebon): 06.41 S. 108.33 E. **(See Plan)**

DOCUMENTS:
Crew List.
Passenger List.
Customs Documents.
Manifest.
Bills of Lading.
Ship's Papers/Certificates.
Health Documents.

PILOTAGE: Compulsory. Applications made through Agent or to Port Administrator via Cirebon Radio.

ANCHORAGE: Boundaries of port area are coast line, meridian 108° 35' 30" E. and the parallels of 06° 42' 15" S. and 06° 43' 40" S.

A light buoy on the position of Lat. 06° 42' 10" S., Long. 108° 36' 20" E. is placed on the guidance line to the entrance of the harbour.

RESTRICTIONS: Cirebon Roads only accessible for ships of 8 m. max. draft, by taking the Tandkung Sanggarong Light Buoy at port hand. Only ships with 5 m. max. draft can enter Inner Harbour and moor alongside wharves.

All other ships anchor at outer roads.

HEALTH: Usual international procedures.

RADIO: Cirebon Coastal Radio Station. Call sign PKZ-2. Working freq. 6491.5 kHz and 8799.5 kHz, watching freq. 6265 – 6285 kHz and 8204 – 8249 kHz. Working time 0030 – 0130 hrs. and 0600 – 0700 hrs. GMT.

VHF: Port on Channels 16, 12 and 14.

TUGS: Tug services available. Order through Agents.

BERTHING: Muarajati II Wharf: Length 238 m. Depth at LWS – 5.0 m.

Linggarjati Wharf: Length 131 m. Depth at LWS – 4.5 m.

STEVEDORES: Arranged by Agent.

MEDICAL: Normal hospital facilities available. Agent will arrange for medical attention. Advance notice required.

TANKERS: Berthing for only 300 d.w.t. tankers at special oil jetty.

DENSITY: 1025.

FRESH WATER: Delivered by water lighter. One delivery 75 tons, discharged within 6 hours. For quick delivery 2 days advance notice to Agents required.

FUEL: Not available.

CONSULS: At Djakarta, 280 km. from Tjirebon.

REPAIRS: Light repairs only by local dockyard.

DRY DOCK: Graving dock of 600 d.w.t. capacity.

GANGWAY/DECK WATCHMEN: Recommended. Arrange with Agent.

OPENING/CLOSING HATCHES: Usually done by stevedores. Appreciated if done by crew.

CERTIFICATES: Port clearance last port of call. Certificates as required by vessel's country of registry and by SOLAS 1960.

CUSTOMS ALLOWANCES: 200 cigarettes per person. Wine/spirits: 1 bottle per person. Bottle opened.

REPATRIATION: Can be arranged by Agents.

AIRPORT: Kemajoran International Airport 257 km. from Tjirebon. Domestic Airport 40 km. from Tjirebon.

TIME: Local time (Western Indonesia Time) is GMT plus 8 hours.

HOLIDAYS: New Year (1st January); Ascension of Christ (15th May); Santa Maria (15th August); Independence Day (17th August); Maulud, Mir'adj and Idul Fitir determined by Moslem calendar and differ from year to year by International calendar. For definite dates consult Port Administrator. Cargo work on Idul Fitir (2 days) not guaranteed due to labour shortage.

POLICE/AMBULANCE/FIRE: Harbour Police 3897; City Police 4466; Ambulance 118; Fire brigade 113.

SHORE LEAVE: Allowed after satisfactory fulfilment of immigration requirements and in possession of crew's Harbour Card.

IDENTIFICATION CARDS: Preferably Passports, Seamen's ID Cards (issued by maritime authorities; vessel's country).

DELAYS: Bad weather (mostly rain).

DEVELOPMENTS: Surveys being made for extension and development of port with 10 m. deep basins, container facilities and a 10 m. deep channel for accommodation of 10,000 d.w.t. ships and future shipping.

AUTHORITY: Port Administrator. *Tel:* (0231) 2697, 3688. *Telex:* 28292.

CIWANDAN: 06.01 S. 105.57 E. (See Plan)

SHIPMASTER'S REPORT: May 1995.

VESSEL:

LOA : 143.4 m.
Beam : 19.8 m.
Summer Draft : 9.06 m.
Max. Draft (Aft) : 9.29 m.
G.R.T. : 9,073 tons.
D.W.T. : 15,077 tonnes.
Cargo : 14,000 tonnes (Sugar).

LOCATION: Lat. 06° 01.05' S., Long. 105° 57.07' E., about 2.5 cables S.W. of Cigading Jetty.

DOCUMENTS: See "Cigading".

APPROACHES: The vessel approaches on a course of 061°(T) from West of Pulau Ular Island. When the island bore 180° at a distance of 1.3 miles, the course was altered to 128°(T) to approach the anchorage, 4 – 7 cables N.W. of Cigading Jetty. Vessel anchored at position Lat. 06° 00.2' S., Long. 105° 56.9' E. at 1600 hrs.

Charts: B.A. Charts No. 918 and 2056.

PILOTAGE: Port is controlled by Merak Pilot Station at Lat. 05° 56' S., Long. 105° 59.6' E. Call sign is "Kilo Bravo". Station listens on VHF Channels 12 and 16. No radar available. Pilot boat equipped with VHF. Berthing possible only during daytime. Pilot boarded the vessel at 0630 hrs., and 2 tugs were used for berthing vessel portside alongside. Vessel secured alongside at 0800 hrs.

HEALTH: The Health Authorities board the vessel for Pratique. The Officer checks all vaccination books. Cholera vaccination to the crew were provided.

BERTHING: There is a single berth, about 120 m. long (See "Plan"), extending into the open sea and running approximately 230° – 050°. The berth has extended dolphins on either ends for mooring. The berth is made of concrete and has wooden spars as fenders.

The vessel experienced slight rolling and surging alongside, due to ground swell reflected from shore.

The minimum depth along the berth by hand lead sounding was 10.0 m., plus the height of tide. The bottom is soft mud.

CARGO HANDLING: The berth does not have any cargo gear. Ship's derricks were used for discharging bagged sugar in slings onto trucks. Stevedores worked around the clock.

MEDICAL: Nearest hospital is at Cilegon. Serious cases have to be referred to Jakarta.

DENSITY: 1025.

FRESH WATER: Not available by pipeline. It was supplied by water tanker lorry of 12 tons capacity, on request through the Agent.

FUEL: Not available.

CONSULS: At Jakarta. Survey visit may be arranged through Agent.

REPAIRS: No facilities available.

REPATRIATION: Possible. Arriving crew must have valid transit visa.

AIRPORT: Nearest airport at Jakarta, 2 hours by road.

TIME: GMT plus 7 hours.

TELEPHONE: Nearest telephone on highway outside Cigading port.

SHORE LEAVE: No restrictions. Shore passes are issued by the Immigration Authorities.

GARBAGE DISPOSAL: No facilities.

SEAMAN'S CLUBS: None.

CURRENCY: U.S.$ 1.00 = 2210 Rupiah (May 1995).

GENERAL: Provisions and stores available.

Nearest town is Cilegon, which is about 12 km. by road; it has facilities such as telephone, post office, hotels and shopping complexes.

DILLI: 08.33 S. 125.31 E. (See Plan)

PILOTAGE: Compulsory.

RESTRICTIONS: All foreign vessels calling at this port should obtain the Special Security Clearance, this is arranged by the vessel's Agent.

MAX. SIZE: Maximum LOA 120 m.

RADIO: Kupang Radio. Call sign PKK.

Frequencies: 2,182 kHz and 6,115 kHz.

VHF: Kupang Radio on VHF Channel 16.

TUGS: 1 tug of 240 h.p. and 1 mooring boat.

BERTHING: Length of wharf 180 m., breadth 20 m., depth alongside 7.0 m.

Storage: There is a godown with 1,600 sq.m.

Fork Lifts: 4×2 tons – 3 tons.

CRANES: 1×7 tons capacity.

STEVEDORES: Available.

FRESH WATER: Available alongside in small quantities.

FUEL: Not available.

DUMAI: 01.41 N. 101.27 E. (See Plan)

IMPORTANT FEATURES:

1. There are 4 CPI Oil Loading Berths, 2 Government Cargo Wharves and 2 Pertamina Refinery Wharves (6 berths) at Dumai. The CPI Oil Loading Berth No. 4 can be utilised for handling refined oil product, Oil Berth No. 4 can also be utilised for discharging crude oil. The Pertamina Refinery Wharves are for sole use of the Refinery. The Government Dry Cargo Wharf No. 1 can handle a vessel with a draft of 8 m. and 20,000 g.r.t., whilst No. 2, which can also be utilised for handling palm oil, is for handling dry cargo vessels with a capacity of 10,000 g.r.t. and a draft of 6 m.

2. Government Pilots moor and unmoor all vessels at Dumai Harbour. CPI supervises the movements of all vessels at the CPI loading berths.

3. Safety rules are strictly enforced. The safety requirements are based upon the provisions of the Codes of Safe Practice currently accepted by the Oil and Tanker Industries.

4. The Indonesian Government maintains a radio station (call letters "PKP") at Dumai. All incoming vessels should establish early contact with this station, in order to transmit ETA data, etc.

5. Shore liberty may normally be granted to ship's officers and crew after clearance of the vessel by Harbour Authorities on a 24 hour basis (subject to change).

6. The laws of the Republic of Indonesia are in force at Dumai; and all personnel, for their own protection, are urged to abide by them.

7. Display of quarantine signals on approach to Dumai must be maintained, until Pratique is granted. By day the flag of Indonesia should be flown throughout the vessel's stay in port.

PORT LIMITS: See "Pilotage" – "Harbour Pilot Area".

DOCUMENTS:

Copy of Agency Agreement Letter of Appointment (SIT LKP).
International Maritime Declaration of Health.
Valid Derat or Derat Exemption Certificate.
13 Crew Lists.
13 Passenger Lists (if passengers carried).
Certificates of Inoculation against any communicable diseases.
Valid Passports and/or Seamen's Certificates for all crew members and passengers.
Harbour Report/Last Port Clearance.
Load Line, Ship's Registry, Safety Radio, Construction and Equipment Certificates.
International Certificate on the Prevention of Pollution from Oil and Poisonous liquids.
For Customs: 1 Crew List, 4 copies Personal Effects List, 4 copies Stores List.

APPROACHES: The Dumai Port installations can be reached by deep draft vessels by proceeding from Malacca Strait into Bengkalis and following a buoyed channel on a Southerly course for a distance of 22 miles to the junction of the Rupat Strait. Vessels must make a turn of approximately 180° to enter the Rupat Strait and thence Westerly for a distance of 33 miles to Dumai. The Bengkalis and Rupat Strait Fairways have been wire-dragged clear to a depth of 24 m. and 18.3 m. LWS respectively.

Last survey was carried out from April to June 1982. Based on that survey, Dumai Sea Communication imposed the maximum draft of vessels passing Rupat Strait in/out bound Dumai Port is 17 m. (55.77 ft.) and LOA of 315 m. (1,033 ft.)

Vessels which have an LOA more than the above should have and obtain special guidance and permit from Government Harbour Master.

PILOTAGE: Harbour pilotage is performed by Government Pilots. The Harbour Pilot will board a vessel at anchorage for berthing or immediately on arrival at Buoy No. 18 when berth is available.

Harbour Pilot Area is:

Lat. 01° 44' 00" N., Long. 101° 22' 50" E.
Lat. 01° 44' 00" N., Long. 101° 26' 50" E.
Lat. 01° 42' 35" N., Long. 101° 30' 00" E.
Lat. 01° 40' 00" N., Long. 101° 30' 00" E.

Sea Pilots: Sea piloting for the Rupat and Bengkalis Straits is provided by the Department of Sea Communication.

According to the Dumai Port Authority's letter dated June 25, 1974, there are 2 piloting areas for Sea Pilot.

1. Bengkalis Strait and Rupat Strait from Fairway Buoy or Eastern part of Morong Strait to Eastern limit of Dumai Harbour Pilot Area (Long. 101° 30' 00" E.).

2. Rupat Strait and Bengkalis Strait from Eastern limit of Dumai Harbour Pilot Area (Long. 101° 30' 00" E.) to Northern limit of Sungai Pakning Harbour Pilot Area.

Pilotage is compulsory for vessels with a capacity exceeding 105 g.r.t. 6 hours prior to arrival Dumai Harbour area, all vessels should contact CPI through VHF Radio Channels 10 or 16 and 69. At Fairway Buoy all vessels should hoist International Code Flag "I require a Pilot" and contact Morong Pilot Station via Channel 16 for a "request for Pilot".

According to the Dumai Port Authority's memo dated May, 1972, effective on 1st June, 1972, all vessels proceeding to Dumai should hoist the International code flags "H" or "PT" when passing Buoy No. 17 as "requesting for Pilot" and call CPI's radio telephone (VHF) on Channel 12. You will be informed whether or not Pilots are available, if not you may then proceed directly to Dumai Harbour Anchorage Area.

The practice of berthing and unberthing vessels utilising CPI Mooring Masters has been discontinued.

Shipmaster's Report: 1977. Sea pilotage for the Rupat and Bengkalis Straits is now compulsory. The Sea Pilot will board vessels at Fairway Buoy, position Lat. 01° 54.5' N., Long. 101° 51.5' E.

Contact with the Pilot Station "Morong" is allowed on Channel 16.

In case the Pilot is not available, the recommended anchorage area is 0.5 miles N.N.E. from Fairway Buoy.

ANCHORAGE: The Dumai general anchorage area is North and West of oil wharves. Minimum depth of water in this area 43 ft.; 35 ft. shoal spot to East of general anchorage should be noticed. Holding ground in anchorages considered good, bottom clay. Area large with sufficient manoeuvring and swinging room for several vessels of size to be accommodated at oil wharves.

If vessels are not met by the Pilot's launch on arrival, or not instructed by the Dumai Port Control Radio to berth on arrival, it is suggested that they proceed to the recommended anchorage area.

Cargo Ships:

Lat. 01° 43' 20" N.	Lat. 01° 42' 50" N.
Long. 101° 25' 30" E.	Long. 101° 27' 00" E.
Lat. 01° 42' 50" N.	Lat. 01° 42' 10" N.
Long. 101° 25' 30" E.	Long. 101° 27' 00" E.

Ballasted Tankers:

Lat. 01° 44' 20" N.	Lat. 01° 43' 34" N.
Long. 101° 24' 30" E.	Long. 101° 27' 00" E.
Lat. 01° 43' 36" N.	Lat. 01° 42' 46" N.
Long. 101° 24' 30" E.	Long. 101° 27' 00" E.

For Deep Draft or Loaded Tankers:

Lat. 01° 43' 34" N.	Lat. 01° 42' 46" N.
Long. 101° 27' 00" E.	Long. 101° 29' 50" E.
Lat. 01° 42' 50" N.	Lat. 01° 42' 00" N.
Long. 101° 27' 00" E.	Long. 101° 29' 50" E.

Prohibited Area:

Lat. 01° 42' 50" N.	Lat. 01° 42' 16" N.
Long. 101° 27' 00" E.	Long. 101° 28' 46" E.
Lat. 01° 41' 12" N.	Lat. 01° 40' 58" N.
Long. 101° 27' 00" E.	Long. 101° 28' 46" E.

RESTRICTIONS: *Requirements for Entering Restricted Maritime Zone of Sumatra:* For some years, the Rupat-Bengkalis Straits area has been designated a Restricted Maritime Zone by decree of the Government of Indonesia.

A partial exemption from the requirement to secure special Indonesian Consular Clearance before entering this Zone has been granted by the Indonesian Navy to tanker vessels proceeding to Dumai from any port in the world except Singapore. Vessels require only normal clearances from their last port to obtain entry at Dumai. Vessels diverted at sea need only normal clearance from last port and the diversion cable. All vessels inbound to Dumai from the time abreast Raleigh Bank Light Buoy until anchored off Dumai Terminal must display the following recognised signals:

By Day: The International Code Flag hoist "CAL" flown from a single hoist from the signal yard.

By Night: A red light 6 ft. above a white light both visible all around the horizon at a distance of not less than 2 miles.

Vessels should be prepared to answer identification queries from Indonesian Naval Patrol Crafts.

The foregoing is subject to change.

MAX. SIZE: Length 315 m., draft 17.7 m. Vessels over 315 m. have to have a special permit.

Also see "Approaches" and "Shipmaster's Report" dated October, 1983 – "Circular".

HEALTH: In accordance with international practice, quarantine signals must be displayed by all vessels approaching Dumai. These signals shall be displayed continuously until Pratique is granted. These signals are: Sunrise to Sunset, Quarantine flag "Q". Sunset to Sunrise, Signal lights (red over white).

Quarantine Officer and Immigration Officer will come on board to prepare the clearance at anchorage, except when the vessel comes alongside on arrival by issuing berthing permit only (not Free Pratique).

RADIO/VHF:

1. *Means of Communications:* The following communication systems are available for vessels proceeding to Dumai:
(a) Dumai Radio Call Letters "PKP" (Government Coastal Radio).
(b) VHF Station Channel 16 (CPI and Pertamina operated).
(c) Telex CPI No. 44386 Jakarta or 56271 Dumai.
(d) Telex Pertamina No. 45348 Perta Jakarta or 49285 Perta Jakarta.

2. *ETA Messages:* Vessels proceeding to Dumai shall send ETA Dumai message as follows:

2.1. When proceeding direct from any port other than Palembang and Singapore:
(a) 96 hours prior to arrival at Dumai, transmit ETA Dumai message by vessel's radio to "Caldum" Dumai and "Pertaminaship" Dumai through Dumai Radio Station Call Letters "PKP".
(b) Should ETA Dumai change by 3 hours, send an amended ETA message immediately to "Caldum" Dumai and "Pertaminaship" Dumai.
(c) 24 hours before arrival at Dumai, *confirm* or *amend* ETA Dumai to "Caldum" Dumai and "Pertaminaship" Dumai regardless of any change in last ETA message sent.

2.2. When proceeding from Singapore:
(a) 96 hours prior to arrival at Singapore, cable ETA Dumai and estimated time of stay in Singapore to "Caldum" Dumai and "Pertaminaship" Dumai. Include words "From Singapore" in ETA message.
(b) At Singapore, when departure time from Singapore is known, *confirm* or *amend* ETA Dumai to "Caldum" Dumai and "Pertaminaship" Dumai through vessel's Agent in Singapore.
(c) Immediately upon departure from Singapore, and when vessel's radio can be used legally, re-*confirm* or *amend* ETA Dumai to "Caldum" Dumai and "Pertaminaship" Dumai.

2.3. When proceeding from Palembang:
(a) At Palembang, when departure time from Palembang is known, cable ETA Dumai to "Pertaminaship" Dumai through vessel's agent in Palembang.
(b) Immediately upon departure from Palembang, and when vessel's radio can be used legally, *confirm* or *amend* ETA Dumai to "Pertaminaship" Dumai.

3. *Operating Schedule and Frequencies:* There is a Government Coastal radio station at Dumai. Any message for Dumai Terminal should be sent through this radio station which operates as follows:

Name : Dumai Radio
Call Letters : "PKP"

Time (GMT)	*Transmits*	*Listens On*
0000 – 0030	448 kHz	500 kHz
0400 – 0500	448 kHz	500 kHz
0800 – 0900	448 kHz	500 kHz
1200 – 1300	448 kHz	500 kHz
1300 – 1400	8726 kHz	8726 kHz
0030 – 0130	8726 kHz	8726 kHz
0230 – 0330	13101 kHz	13101 kHz
0630 – 0730	17184 kHz	17184 kHz
0130 – 0200	2182 kHz	2182 kHz

If contact cannot be made with Dumai Radio, contact Singapore Radio, Call Sign "9VG" and forward ETA message to Amoseas Singapore "RS-21349".

4. *Radio Telephone (VHF):* A CPI operated VHF station is maintained 24 hours a day, and is available for information concerning vessel's port activities.

The following channels are available:

Channel 10 with Frequency : 156.500
Channel 16 with Frequency : 156.800
Channel 69 with Frequency : 156.475

Also see "General" before first port.

TUGS: At present mooring and unmooring assistance is provided by 5 Government 3200 h.p. diesel tugs which are stationed in the immediate vicinity of the wharves. Tugs lines used. While rendering assistance the tugboats are under orders of the Pilot on duty.

Number of tugs required is based on vessel's length.

71 m. – 100 m. length	1 tug
101 m. – 150 m. length	2 tugs
151 m. – 200 m. length	2 tugs
201 m. – 300 m. length	3 tugs
Over 301 m. length	4 tugs

BERTHING: Incoming ships are assigned in accordance with time of arrival, product to be loaded, size of vessels, and loaded draft.

Every effort will be made to berth vessels immediately upon arrival, and to this end Master should maintain radio contact with radio telephone (VHF) Channels 12 and 16.

At Dumai there are 8 wharves. 2 wharves are Government-owned and operated cargo wharves. One wharf is Pertamina owned and consists of 2 berths. A new wharf is Pertamina owned and consists of 4 berths. The other 4 wharves are C.P.I. owned and operated and referred to as Oil Wharf No. 1, Oil Wharf No. 2, Oil Wharf No. 3, and Oil Wharf No. 4. These C.P.I. wharves are utilised for loading/unloading of crude oil. These oil wharves are equipped with docking sonar for monitoring speed and distance of approaching vessels to be berthed at the wharves.

Terminal Official will relay the indicated speed and distance by walkie-talkie radio to the Pilot or Master on board vessel.

(a) C.P.I. Oil Wharf No. 1, located in approx. position: Lat. 01° 41' 14" N., Long. 101° 28' 07" E. Design capacity 150,000 d.w.t. Length between outer dolphins 1,210 ft. Least depth at face of wharf 61 ft. (MLWS). In terms of vessel's size and design this would be an LOA of approx. 285 m., and a draft of 17.7 m. Orientation of the wharf parallels the current flow.

(b) C.P.I. Oil Wharf No. 2, located in approx. position: Lat. 01° 41' 14" N., Long. 101° 27' 52" E. Design capacity 150,000 d.w.t. Length between outer dolphins 1,424 ft. 8 in. Least depth at face of wharf 59 ft. (LWS). In terms of vessel's size and design this would be an LOA of approx. 350 m., and a draft of 17.7 m. Orientation of the wharf parallels the current flow. Under certain circumstances in favourable weather conditions, slack tide during day time, this wharf is capable of receiving a VLCC with special arrangements.

(c) C.P.I. Oil Wharf No. 3, located in approx. position: Lat. 01° 41' 14" N., Long. 101° 27' 42" E. Design capacity 100,000 d.w.t. Length between outer dolphins 1,170 ft. In terms of vessel's size and design this would be an LOA of approx. 260 m., and a draft of 17.7 m. Orientation of the wharf parallels the current flow at 095° – 275° true.

(d) C.P.I. Oil Wharf No. 4, located in approximate position: Lat. 01° 41' 14" N., Long. 101° 27' 31" E. Design capacity 55,000 d.w.t. Length between outer dolphins 1,005 ft. 6 in. In terms of vessel's size and design, this would be an LOA of approx. 210 m., and a draft of 15.3 m. Orientation of the wharf parallels the current flow.

(e) Government Cargo Wharf No. 2, located in approx. position: Lat. 01° 41' 14" N., Long. 101° 27' 04" E. Design capacity 16,500 d.w.t. but able to handle 23,000 d.w.t. Length between outer dolphins 750 ft. Least depth at wharf face 34 ft. (LWS). Orientation of the wharf parallels the current flow. Only mobile cranes with a maximum lifting capacity of 5 tons are available. As no heavy lift floating crane or stationary crane is available, heavy lifts must be handled by ship's gear.

(f) Government Cargo Wharf No. 1, located next to Cargo Wharf No. 1, has designed capacity of 10,000 d.w.t.

(g) Pertamina Wharf Nos. 1 – 6.

1. Approximate Location:
   Berth Nos. 1 – 2: Lat. 01° 41' 12" N., Long. 101° 28' 16" E.
   Berth Nos. 3 – 6: Lat. 01° 41' 12" N., Long. 101° 28' 39" E.
2. All 6 berths are utilised for loading/unloading refined products, residue, Coke (Berth No. 4 only) and LPG.
3. Design Capacity:

Berth No.	*Max. d.w.t.* (tonnes)	*LOA* (m.)	*Draft* (m.)	*Least Depth at face of wharf at LWS* (m.)
1	100,000	275	17.2	18
2	10,500	135	13.0	15
3	35,000	200	16.4	16
4	25,000	154	16.0	15
5	35,000	200	15.6	16
6	3,000	90	16.1	15

4. Orientation of the berths parallel to the current flow.
5. Put into service:
   Berth Nos. 1 – 2 in 1971, Berth Nos. 3 – 6 in 1984.
6. Wharf Facilities:

Berth No.	*No. of Chiksans*	*Size* (in.)	*Capacity*	*Bunker*	*Fresh Water*	*Deballast Facility*
1	1	12	1,200 l.t.p.h.	N/A	N/A	N/A
	1	16	2,500 l.t.p.h.			
	1	8	600 l.t.p.h.			
2	1	12	1,200 l.t.p.h.	N/A	N/A	N/A
	1	8	600 l.t.p.h.			
3	3	12	1,500 l.t.p.h.	N/A	Available	N/A
4	1	—	600 t.p.h. 500 t.p.h. (coke)	N/A	Available	N/A
5	3	12	1,500 l.t.p.h.	N/A	Available	N/A
6	1	4	280 cu.m./hr.	N/A	Available	N/A

Notes: Berth Nos. 1 and 2:

Terminal: Also known as Putritujuh (Seven Sisters), Pertamina Terminal (Berth Nos. 1 and 2) consists of a finger shaped oil jetty with 2 loading berths (Outer and Inner) which are utilised for refined products. A barge pier lies immediately Westward of the oil jetty. All are owned and operated by Pertamina.

At the Outer Berth (Berth No. 1) 3,200 h.p. tugs are being used to berth/unberth vessels at any time and any stage of the tide by using the minimum vessels' engine and working in "lock" position nosing vessel at forward, midship and aft. Mooring boats assist in bringing lines to mooring dolphins. Head and stern lines are sent first.

The Jetty is a steel/concrete piling system with a concrete slab paving. The fendering is very efficient and in good condition and consists of 4 steel framed pads with springs and rubber bumpers chained to the jetty. Ordinary mooring equipment (ropes and/or wires) is requested from the vessel. No shore moorings are provided. Minimum vessel size for this berth is 13,000 d.w.t.

At the Inner Berth (Berth No. 2) mooring and unmooring is restricted to tide flooding current (Eastward), vessels always to berth with starboard side to 2 fendering pads similar to those at the Outer Berth ensure a good berthing. Vessels to provide only the ordinary mooring equipment existing on board. No additional moorings are provided by shore.

(h) General Wharves

Berth	*Length* (m.)	*Width of Apron* (m.)	*Depth* (m.)
Barges Wharf	40	16	9.0
Pilot Wharf	34	6	7.0
Domestic Wharf	60	6	6.0
Domestic Wharf	40	7	6.0
Palm Oil Dolphin			12.0

CARGO: There are 3 types of cargo in Dumai at C.P.I. Terminal.

1. Sumatra Light Crude with API gravity 36° approximate. Pour point 100°F. Solid point ±85°F.

2. Duri Crude with API gravity 22° approximate. Pour point ±60°F. Solid point ±55°F.

3. Pedada Crude. This crude is classified as Sumatran Light Crude.

LOADING: The Master or his representative is required to hand to C.P.I. within normal business hours a written Notice of Readiness to load.

C.P.I. Oil Wharf	*Size of arms* (in.)	*No. of arms*	*Size of flanges* (in.)	*Sumatra Light and Medium Crude Peak Capacity*	*Average Capacity*
No. 1	12	4	12	50,000	35,000
No. 2	16 – 12	3	12	75,000	40,000
No. 3	12	4	12	50,000	35,000
No. 4	12	2	12	25,000	15,000

All the loading arms flanges are designed to U.S. standard flanges, faced and drilled. All these wharves have Chicksan loading arms. The above peak and average capacity rates are for Sumatran Light Crude. For Duri Crude the above rate should be reduced to approximately 70%.

In case of low stock position, the average capacity may be reduced to approximately 50%.

Responsibility for Loading Arrangements: All operations in connection with the starting of loading, discharging, switching of tanks and topping off must be directly and personally supervised by a ship's Officer, and sufficient personnel should be on deck at all times to handle the loading and/or unloading operation.

Upon completion of loading and/or unloading, the vessel will be required to leave the wharf immediately after disconnecting hoses to await clearance at the anchorage.

Hose Handling: Wharf crews are on duty to handle loading arms and/or oil hoses on the wharf. Any required reducers and/or elbows to be fixed to ship's manifolds should be handled by ship's personnel (will not be handled by CPI personnel).

Cargo Loading Procedures: Before the loading is begun, the Master will assure that Terminal and Port Regulations pertaining to readiness of the vessel have been complied with; that the vessel is manned and in all respects ready to receive cargo, and that all precautions required by the circumstances have been taken. When the vessel is in all respects ready, the following loading procedure will apply:

(a) The Chicksan arms and/or cargo hoses will be swung on board by lifting gear located on the wharves and also with the assistance of the vessel's gear if required.
    The required reducers and elbows to fit vessel's manifold must be connected and disconnected and taken from or to shore by ship's personnel.

(b) Notice must be given by the vessel to the Head Wharfman 90 minutes before the vessel completed deballasting.

(c) Loading will commence under gravity or with 1 pump. When the vessel advises that the cargo is flowing into tanks, the loading rate will gradually be increased until the desired rate has been reached.

(d) The vessel must give 30 minutes notice to the wharf before starting to "top off", and shall advise if a decrease in loading rate is desired.

(e) The vessel must give 15 minutes' notice to the wharf prior to completion of loading at which time the Head Wharfman may reduce to 1 pump.

(f) Ship's valves shall not be closed against loading pump pressure.

(g) On completion of loading, loading arms and/or cargo hoses must be drained and disconnected immediately.

(h) All cargo tanks openings and pressure vacuum relief valves must be closed immediately after ullages and samples have been taken.

The vessel will be unmoored immediately after completion of loading as tide and weather condition permit.

Suspension of Oil Handling Operations: Terminal personnel are authorised to suspend oil handling operations in the event any of the safety rules mentioned under "Safety Regulations" are not observed, or in the event of non-compliance with safety rules generally observed by competent tanker personnel. Oil handling operations may also be suspended if any other danger is believed to exist.

Oil Inspectors: There is no independent agency providing oil inspection service at Dumai.

Vessel's Gangways: Vessels shall supply safe gangway from ship to shore, which shall be adequately illuminated during the hours of darkness.

BALLAST: *Pollution of Sea by Oil:* The discharge of dirty ballast within the territorial waters of Dumai Port and entrance passage (Rupat and Bengkalis Straits) is strictly prohibited. Shore facilities for disposal of dirty oily ballast water is available at Dumai, however only for domestic tankers. For safe manoeuvring purposes, it is therefore compulsory that tankers arrive with sufficient clean ballast water on board to meet the requirement for minimum safe manoeuvring draft. All ballast water on board tankers other than domestic tankers loading at Dumai Wharves must be pumped overboard after arrival at berth and prior to loading. If after arriving alongside, a vessel is found to have dirty ballast water on board, such vessel will be sent to sea to accomplish the necessary tank cleaning. Such action will be on the vessel's expense and C.P.I. will not accept responsibility for the resulting delay to the vessel or any claims of the result thereof. A new Notice of Readiness to load must therefore be tendered. "Load-on-Top" procedure is expected to be carried out by each vessel loading at Dumai.

Ballast Requirements: Vessels should arrive with sufficient clean ballast water to enable safe manoeuvring under prevailing weather conditions. The accepted standard of deballasting time is 6 hours.

Deballasting Facility: Deballasting facilities have been constructed in Dumai and connected to all 4 C.P.I. Wharves.

However, this facility is only for domestic sailing tankers. Oceangoing tankers are expected to arrive with sufficient clean ballast water.

Minimum Draft: Minimum draft schedule recommended for various tonnage tankers are as follows:

	d.w.t	*Forward*	*Aft*
a.	12,000 – 22,000	12 ft.	20 ft.
b.	22,000 – 32,000	16 ft.	24 ft.
c.	32,000 – 45,000	18 ft.	26 ft.
d.	45,000 – 60,000	19 ft.	27 ft.
e.	60,000 and over	22 ft.	28 ft.

The above is a recommendation only and the Master should use his own discretion in order to have safe manoeuvrable draft on arrival and while berthing.

READINESS: *Notice of Readiness:* The Master or his representative is required to hand to C.P.I. or its Agent at loading port, a written Notice of Readiness to load during business hours (24 hours everyday). Receipt of such Notice of Readiness by C.P.I. does not necessarily imply acceptance.

Every effort will be made to berth and load vessels on arrival in port. Arrival means anchoring or arrival at anchorage area in Dumai Harbour, see "Anchorage".

Readiness to Load or Unload: The following will apply in regard to Notice of Readiness to Load or Unload.

Notice of Readiness to Load or Unload is a warranty on the part of the Master that the vessel is in all respects ready to load or unload and that all tanks, pumps, pipelines and appurtenances of the vessel are fit to receive the cargo to be loaded or unloaded.

CRANES: 1×13 tonnes. 1×18 tonnes used for small ships and barges.

STEVEDORES: ETA should be sent to Agency or stevedoring company 2 days before arrival in order that necessary gangs may be arranged. Main commodity rates: Palm oil 200 tonnes/p.h. Sawn timber 25 cu.m.p.h. and bagged cargo 20 – 25 t.p.h.

MEDICAL: The Port Health Doctor has only limited facilities for medical treatment. If the services of more complete and/or specialised medical assistance are needed or emergency cases arise on board tankers calling at Dumai, the Port Health Doctor might refer such cases to C.P.I. hospital facilities or Pertamina Hospital. Dental facilities available. However, Masters of all vessels bound for Dumai are requested, if possible, to call at Singapore for medical assistance.

DENSITY: 1020.

FRESH WATER: Fresh water is available in limited quantities at all wharves. A request statement must be submitted to the Port Authority through the vessel's Agent.

FUEL: Not available.

FIRE PRECAUTIONS: Perumpel I Dumai Co., Tel: 2469. Caltex, Tel: 261. Pertamina, Tel: 272.

CONSULS: There are no Consuls or other foreign Government Representatives located at Dumai, or in the immediate vicinity.

REPAIRS: No repairs shall be carried out to the main propulsion machinery and/or essential auxiliaries while alongside. The vessel's main propulsion machinery shall be in readiness for instantaneous use on short notice. No repair facilities ashore.

GANGWAY/DECK WATCHMEN: Strongly suggest that all Masters of tankers calling at Dumai maintain a close security watch while at anchor as well as when alongside the wharves. It is further recommended that on board the tankers unoccupied rooms should be securely locked and port holes closed before being vacated.

OPENING/CLOSING HATCHES: By stevedores.

CUSTOMS: Ships' bonded stores will be sealed by the Indonesian Customs Officials on arrival and will remain sealed until the vessels leave Indonesian waters.

CARGO GEAR:

Forklifts: 3×2 tonnes.
2×3 tonnes.
1×5.5 tonnes.
Head Truck: 2×40 tonnes.
Trailers: 2×40 tonnes.
4×20 tonnes.
Top Loader: 1×40 tonnes.

REPATRIATION: Due to transportation difficulties and shortage of accommodation, normally no crew members from any vessel are allowed to disembark for repatriation purposes.

In emergency cases such as sickness and accident, however, C.P.I. may at its own discretion and upon request of the Master of the vessel concerned, assist in the repatriation process.

AIRPORT: Distance to airport 10 km. Jakarta: 3 flights weekly served by Merpati Pelita. Medan: 4 flights weekly served by Merpati Pelita. Batam: 3 flights weekly served by Merpati Pelita.

TIME: GMT plus 7 hours all year round.

HOLIDAYS: 12 religious and national holidays.

POLICE/AMBULANCE/FIRE: Tel: 21351 or 381 or 266.

EMERGENCY CO-ORDINATION CENTRE: Tel: 21437 (Coast Guard).

BANKS: 5 National Banks available.

STORING: See "Prelims".

1. Vessel can be stored by truck.
2. Shipmaster to inform Agency who will contact Company.
3. Distance 4 km.
4. Yes.
5. Contact Agent.
6. Riggers can be employed to assist with storing.

SHORE LEAVE: Shore liberty may normally be granted to ship's Officers and crew after clearance of the vessel by Harbour Authorities. Personnel proceeding on shore liberty should be provided with ship's pass and advised that the C.P.I. compound is out of bounds with the exception of the road from the wharves to the village road. Penalties imposed for violation of Harbour Regulations or local laws have been severe and C.P.I. can not intervene in such cases.

IDENTIFICATION CARDS: I.D. Cards and Passports required.

PROVISIONS: There are very limited facilities to handle ship's laundry and supply ship's provisions.

WEATHER: *Tides and Currents:* The tide rise is approximately 8 ft. in the springs and approximately 5 ft. at neaps.

Max. tide currents: Flooding Easterly at 3 knots. Ebbing Westerly at 2 knots.

The general direction of the current is parallel to the faces of the wharves. There is no slack current period in the Rupat Strait during Spring tides and only a very brief period of slack current during neap tides. The current reverses its direction almost immediately. Vessels will always be berthed stemming the current flow.

Winds: The N.E. monsoon is never very steady but is most constant in January when from 20 to 40 per cent of winds are N.E. In November and December N.E. winds are the most frequent. In February the most frequent winds are N.E. The S.W. monsoon begins in late May or early June. From June to September winds in the straits are mainly S.E. but not steady. At this season squalls known as "Sumatra's" occur off the coast; they are most frequent between 2200 hrs. and 0200 hrs.

Rain: The rainfall is heavy with yearly average from 80 to 100 inches. The wettest months are October to December or January. There are 2 comparatively dry seasons, February to March and June to August. The most intense rainfalls are in the afternoon but these heavy downpours are often short in duration. The duration of the rain is more evenly spread over 24 hours during the N.E. monsoon than during the rest of the year when rain most likely occurs in the evening and night.

Temperature: The average temperature is a little below 80°. The range in an average year is only 30°, between 65° and 95°. The daily range is from 15° to 20°. The humidity is high (70% – 90%).

SAFETY: While alongside, vessels must have the eye of towing (fire) wires lowered to the water's edge from offshore bow and quarter for emergency use. The eye of the wire should be painted white.

Emergency Facilities: The following shore fire fighting facilities are available at each wharf to assist a vessel in the initial stages of a fire at wharf.

(a) C.P.I. Oil Wharf Nos. 1 – 4:

1 fire pump capacity 750 g.p.m.
1 fire fighting monitor.
6 fire hydrants.
2 fog spray hydrants.
2 revolving nozzles underneath wharf.
1,000 ft. fire hoses of 2.5 in.
16 cans foam compound.
6×20 lbs. safety meter dry chemical powder.
1 set booster hose.
1 set foam equipment.
2×150 lbs. Yamato dry chemical powder fire extinguisher.

(b) Tugboats: Under instructions of Port Authority, equipped with fire fighting equipment and remote controlled nozzles.

Emergency Signal:

(a) The ship should sound an emergency station's signal consisting of a continuous ringing of the ship's alarm bells supplemented by a series of short blasts of the ship's whistle or siren. C.P.I. will then take such action as is necessary.

(b) A telephone is fitted on each wharf. C.P.I. personnel should be telephoned for assistance.

If no C.P.I. personnel are available, ship's personnel may call for emergency assistance by dialling telephone number 222 from each wharf.

After dialling, state the following:

1. Your name and name of vessel.
2. The exact location of the fire.
3. The nature of the fire if possible.

(c) Assistance can be summoned on VHF Radio if necessary. Use International Channel 12 or 16 on VHF. Given location and extent of assistance required.

(d) Refer to Fire Instructions Pamphlet as usually given to all vessels alongside the wharves.

(e) The shore signal in the event of an emergency is a fire siren or an alarm.

GENERAL: *Charts and Publications:* Masters of vessels proceeding to Dumai should obtain the latest sailing directions, charts and Hydrographic bulletins for the area.

In this respect attention is invited to the latest editions:

(a) U.S. Hydrographic Office Publication 162, Sailing Directions for Malacca Strait, Cape Rachado to Singapore;
(b) U.S. Hydrographic Office Chart No. 3764, Bengkalis and Rupat Straits;
(c) Netherlands Hydrographic Office Chart No. 18 (East Coast of Sumatra);
(d) British Admiralty Chart No. 795 (Cape Rachado to Singapore);
(e) The Indonesian Hydrographic Office Chart No. 18 covering Bengkalis and Rupat Straits.

Boarding on Arrival: A Government Pilot will board vessel on arrival if Wharf is available and will advise and assist in proceeding to wharves. A representative of the ship's Agent will also board the vessel at anchorage or alongside one of the wharves to deliver publications and forms and will make the necessary arrangements for vessel to load.

Port Officials: The Indonesian Government Port Authorities are located in the Government building situated along Jalan Laksamana (Laksamana Street).

General Cargo: General cargo consigned to C.P.I. is handled at the Government Cargo Wharf at Dumai. Only mobile cranes with a maximum lifting capacity of five tons are available. As no heavy lift floating crane or stationary crane is available, heavy lifts must be handled by ship's gear. *Compulsory Sea Pilot Area:* Bengkalis Strait and Rupat Strait from Fairway Buoy or Eastern port of Morong Pilot Station to Eastern limit of Dumai Harbour Pilot Area (Long. 101° 30' 00" E.).

Other Areas Requiring Sea Pilot: Rupat Strait and Bengkalis Strait from Eastern limit of Dumai Harbour Pilot area (Long. 101° 30' 00" E.) to Northern limit of Sungai Pakning Harbour Pilot Area. (Applicable to vessels bound for Sungai Pakning from Dumai or v.v.).

General: While vessels are at anchor, no physical communication is allowed with shore except in emergency cases and/or with prior approval from the Harbour Authorities.

Lowering of ship's boats is prohibited without the prior approval from the Harbour Authorities.

Pilferage has taken place recently on board tankers at Dumai anchorages and wharves. C.P.I. of course regrets this practice, and strongly suggests that all Masters of tankers calling at Dumai maintain a close security watch while at anchor as well as when alongside, the wharves. It is further recommended that on board the tankers unoccupied rooms should be securely locked and port holes closed before being vacated. C.P.I. also wishes to draw all Masters' attention to the practice of trading with local sampans at the anchorage, which is also a fire hazard, and will not be tolerated by C.P.I. C.P.I. request that all possible steps be taken by ship's personnel to keep sampans away from the vessels while alongside, as loading may be stopped until this hazard has been cleared.

It should be noted that Harbour Authorities prohibited the presence of sampans near alongside vessels.

Contraband: The attention of Masters is called to the strict enforcement of Indonesian Regulations against smuggling. Illegal possession or landing of such items as narcotics, liquor, cigarettes, precious stones and metals, fire arms, ammunition, sheath knives and similar weapons, or other articles of contraband is subject to severe penalty and may result in prolonged delay of the vessel concerned.

All precautions must be taken to prevent the violation of contraband laws. C.P.I. employees are prohibited from bringing firearms, knives, liquor, cigarettes, food stuffs or other articles ashore and shipboard personnel must not offer such items to them. Commissions for the importation of goods from other countries are not to be solicited or accepted.

Compliance: Masters are requested to inform ship's Officers and crews of the foregoing regulations pertaining to contraband, shore liberty, etc., to assure that they are completely understood, and to require the full compliance of all hands.

DEVELOPMENTS: One new berth for palm oil under construction, also 3 berths for sawn timber, fertiliser, palm kernels, rubber and general cargo.

SHIPMASTER'S REPORT: October, 1983.

Documents: 14 Crew Lists required and all ship's personnel require passes. Immigration stamp all Discharge Books and/or Passports on arrival and Agent will take them ashore about 1 hour before unberthing for stamping again, when all passes also returned.

Pertamina, as vessel's Agents, have own forms for N.O.R., and Dry Certificates.

Cargo Inspector has his own forms.

Berthing: Vessel (140,000 d.w.t.) berthed at No. 2 Berth, stemming the tide. 3 tugs used, 1 forward, 1 aft and 1 midships with tugs' lines. Moorings 3, 3, 2 each end. Forward headlines first then breasts then springs and aft springs first, then breasts then sternlines. 2 watchmen on board all the time and they are very efficient.

After loading and if on maximum permissible draft, (See "Circular") then vessel unberths and anchors off berth to await HW.

Density: Density varied between 1008 and 1015 depending on state of tide.

Services: Ship Chandler will arrange for a barber to come on board and will also bring on board items for sale such as batik.

A telex message sent through Agents took 51 hours to reach Singapore. *Identification Cards:* All visitors to vessel require a pass issued by Texaco. Also see "Documents".

Circular: To All Agency Tankers Calling at Port of Dumai:

Based on the Circular of Dumai Harbour Master dated 14th January, 1982, Ref. No. S.DMI.AL.14/1/1982 regarding the draft limitation for vessels passing Dumai-Morong route, based on the result of the survey carried out by the Sea Communication Team, we herewith inform you that for the sake of your vessel's safety, your vessel's draft should not be more than 17 m. (max. LOA 315 m.) when passing the above mentioned route. Please be advised too, that you are recommended to pass this route during the high tide only.

Dumai, 20th January, 1982,
Pertamina of Shipping Dumai.

SHIPMASTER'S REPORT: January 1992.

Vessel: 113,528 d.w.t.; 15.62 draft; 265.18 m. LOA.

Approaches: The approaches to this port are quite straightforward, but when coming from the East, it is necessary to cross the S.E. bound traffic in Malacca Strait, and that can be a problem if it is congested. Traffic was not heavy when we crossed.

Communications can be awkward because of accents, but English is fairly well understood.

Pilotage: The Pilot boat is a slow and heavy launch which could manage only about 4.5 knots into the wind. At best, it is probably capable of making about 8 knots in smooth water.

The Pilot Station is on Rupat Island, with only sea transport available for the Pilots. As there is no launch available with any speed, the Pilots bring a ship out, then wait at the Station for another ship to take in. If extra Pilots are needed at either end, they travel on a ship along with the Pilot who is piloting the vessel. The pilotage is about 60 miles, and takes from 4 hours to 6 hours; the tidal streams being very strong.

Sea Pilots are now compulsory, and Harbour Pilots berth the ships. All the Pilots are Indonesian.

They seem to operate quite well, although they are reluctant, or unable, to discuss "passage planning", and did not seem to understand why we were questioning them.

Channel: The channel is a natural one, with good deep water nearly all the way. The shallower section, between Buoys 15, 17 and 19, is still quite deep, and we never had a UKC of less than 4.0 m., but mostly the ship had more than 8.0 m. UKC, at full speed.

The "hair pin bend" section seems to have been extended to the East to find deeper water, and that new part is the only really narrow part of the whole channel. On the inward passage, being less than 10.0 m. draft, we did not use the new channel, and crossed over at Buoy No. 9, rounding the buoy.

The navigation is straightforward, with buoys marking all the bends, and 4 sets of leads – 2 inward, 2 outward – to assist.

It was completely dark (a moonless, overcast night) both inwards and outwards, and we were not able to assess any of the channel in daylight.

Some of the buoys were unlit, as was a rear lead on one of the inward leads, but we had no advance notice about them. We just noted that they were out. The rear lead had been lit again when we sailed. From what the Pilots said, our ship is about the maximum size they handle in the port.

Dumai Port: There are 3 tanker berths (at least) and several dry cargo berths. There is also a ship repair section, to the West, with 2 medium size floating docks. They have LPG tanks and a coking plant.

The port seems to work round the clock, and ships (ranging from 3,000 to 30,000 tonnes) were coming and going all the time we were there. 3 large tugs are available, and they are normally all used when handling a large tanker. One was out of action when we berthed, but we used all 3 on departure.

The berthing procedure is simply to stem the tide and push onto the berth, sideways, with the tugs, who then hold her up while the back springs are sent out, using heaving lines and shore messengers. 3 head/stern lines are then sent, by lauch, then 3 breast lines. The tugs are not dismissed until mooring is complete.

Loading booms are used, and their rates seem to match up to their promises.

From completion of loading till sailing takes about 4 hours, but the Loading Master does not return to the ship with the Bills of Lading. Any Letters of Protest have to be given to the Agent, who will not sign for anything.

General comments: A large and varied amount of requests were made for presents, but we only gave out cigarettes, beer, soft drinks and coffee.

Customs made a full check on the contents of the Bond Store and the Beer Room, and picked up one or two small discrepancies. I explained that we had spent longer than expected in Singapore, and that we had to prepare the documents before arriving at Dumai. No big fuss was made, but they were amazed that we did not experience such a check at every port we visited.

Shore leave is avaiable, and proved to be very popular. All the Passports are taken ashore by Immigration, with no receipt being signed, and paper passes, made up on board on paper supplied by the ship, are issued. These passes *must* be returned to the authorities before sailing.

SHIPMASTER'S REPORT: November 1995.

Indonesia – General: See "Belawan – Shipmaster's Report, dated November 1995".

Dumai Port: Dumai is a refinery town with poor quality of living.

This vessel (45,000 d.w.t., double hull tanker) berthed alongside the new jetty. Although we had information for maximum allowable draft of 10.00 m. during Low Water, we sounded by sounding lead and found only 9.20 m. of water.

For an independent survey, stating and recording only the depth soundings we were taking, we paid U.S.$500.00.

We required ratguards on all our mooring lines.

Sometimes we did not see the Agent for 3 days, and this was the only form of contact.

AGENCY: See "General" before first port.

AUTHORITY: Port Administration of Dumai, JL. Datuk Laksamana, Dumai. *Tel:* 21469, 21369, 21325, 21442. *Telex:* 56290. *Cables:* Adpel Dum. *Contact:* H. Simanjuntak, Port Administrator. Tel: 21162.

Note: Pilot Station, 21442-278-372, contact 24 hours.

C.P.I.: 434-261-278. Pertamina: 272-372.

P. T. Caltex Pacific Indonesia. (Head Office), Kebon Sirih 52, Jakarta 10110, Indonesia. *Tel:* 376908. *Telex:* 44386 Caltex IA. *Cables:* Calpacem, Jakarta.

Operating Office: Rumbai, Pekanbaru 28271, Sumatra. *Tel:* 21377. *Telex:* 56112 Caltex PBR, 56271 Caltex DUM (Dumai Terminal Office). *Cables:* Calpacem Pekanbaru.

GEBE ISLAND: 00.03 S. 129.23 E. (See Plan)

LOCATION: Port of Gebe Island is situated in the Halmahera Sea, North Maluku in position Lat. 00° 03' 50" S., Long. 129° 22' 44" E.

DOCUMENTS: *Documents to be produced upon vessel's arrival:*

14 copies Crew List.
11 copies Passengers List (if any).
4 copies Parcel List (if any).
5 copies Stores List.
5 copies Cargo Manifest.
5 copies Narcotic List.
6 copies General Information.
4 copies Personnel Effects List.
3 copies Vaccination List.
5 copies Fire Arms & Ammunition List.
7 copies Voyage Memorandum.
Ship's Register.
Certificate of Nationality.
Safety Equipment Certificate.
Seaworthy Certificate.
International Load Line Certificate.
Maritime Declaration of Health Certificate.

Derat Certificate.
Last Port Clearance.
Safety Radio Certificate.
Harbour Report.

Ship's Inspection Team: This team consists of the Port Health Officer, Customs Officer, Harbour Master and Immigration Officer.

After the vessel has been granted Free Pratique, the Immigration Officer checks Passports, Seamen's Books and Crew List and then issues shore passes.

Vessel's bonded store will be sealed by Customs Officer on arrival and will remain sealed until the vessel leaves Gebe Island.

Use of ship's radio transmitter is prohibited while lying in port.

Note: It is recommended that ship's Master consult the Agents about the local prevailing Customs Regulations with regard to currency, cigarettes, spirits, narcotics, etc., to prevent unnecessary difficulties and eventually fines.

PILOTAGE: Pilotage not compulsory. There is no Pilot at Gebe Island.

ANCHORAGE: Anchorage position for ore loading at Gebe Island is Lat. 00° 03' 50" S., Long. 129° 22' 33" E. Depth 65 m. LWS.

Chart: Indonesian Sea Chart No. 388.

RESTRICTIONS: Vessels may berth/unberth at any time between 0600 hrs. and 2400 hrs.

Vessel may leave the loading point between 0600 hrs. and 2200 hrs.

RADIO: Local Radio Station at Gebe:
Name/Call Sign 6HN 26/GEBE. Power 100 Watts.
Class 2.8/J3EJN.
Frequencies: 14,490 kHz, 7,395 kHz, 16,726 kHz.
Antenna Position: 00° 02' 08" S., 129° 33' 30" E.

Cables to Adhiguna Jakarta, Antam Jakarta and Antam Ternate can be sent through Jakarta Coastal Radio Station, call sign PKE and Ternate Coastal Radio Station, call sign PKE 5.

Arrival Notice: *Owner's Advice:* Owner to advise by cable to Adhiguna Jakarta and Antam Ternate, with copy to Antam Jakarta, at least 8 working days notice of vessel's ETA at loading port.

Master's Advice: At least 48 hours before vessel's arrival at Port of Loading, Master shall give the following information to Adhiguna Jakarta and Antam Ternate, with copy to Antam Jakarta; Last port of call, draft on arrival, quantity of nickel ore to be loaded, stowage plan, quantity and kind of commodity to be discharged and other necessary information.

Final amended arrival time must be sent at the latest 24 hours before arrival.

Previous experience has shown that one cannot rely on telegrams regarding ETA sent by Agents at last port of call to arrive on time, therefore Antam Ternate will wait for the Master's telegram before making the necessary preparations.

TUGS: Available and compulsory.

CARGO HANDLING:

Lighters: A number of lighters of 120 d.w.t. to 600 d.w.t. are available.

Wharves: No facilities.

Loading/Unloading Facilities for General Cargo: No facilities.

Loading Facilities for Ore Carriers: Loading of nickel ore at Gebe loading point is done by means of ore barges from 3 jetties.

Number of Gangs: 4 gangs are usually used by vessels equipped with cranes or derricks. If necessary stevedores can provide 6 gangs.

Loading Capacity: Average 5,000 tons/24 hours, depending on the type of vessel, vessel's cargo gear, weather conditions, etc.

Ore Carriers: All types of fully loaded draft ore carriers are acceptable. (Steep bottom sea around the loading point).

Vessels without cranes or derricks, including buckets, are not acceptable.

Minimum capacity of cranes or derricks must be 5 tons.

Unloading: Cargo for Aneka Tambang only.

STEVEDORES: Loading is performed by Shipper's personnel.

Working Hours: Loading to be effected on weather working days of 24 consecutive hours, Sundays and holidays are excepted:
New Year, 1st January.
Idhul Fitri, fixed – 2 consecutive days of the year.
Idhul Adha, fixed day of the year.
Independence Day, 17th August.
Maulid Day, fixed day of the year.
Easter, fixed day of the year.
Waisyak, fixed day of the year.
Nyepi, fixed day of the year.
Ascention, fixed day of the year.
The First Muharram, fixed day of the year.
Christmas, 25th December.

Despatch/Demurrage money to be settled in accordance with the related contract.

Labourers: First Shift: 0600 hrs. – 1400 hrs. Second Shift: 1400 hrs. – 2200 hrs. Third Shift: 2200 hrs. – 0600 hrs.

Labourers will be supplied by Aneka Tambang. Making the vessel ready for loading to be done by vessel's crew members.

MEDICAL: Hospital not available, doctor and inoculations are available.

DENSITY: 1020.

FRESH WATER: Not available.

FUEL: Not available.

CONSULS: None.

SURVEYORS: On/Off Hire surveys can be arranged.

OPENING/CLOSING HATCHES: The first opening and the last closing as well as removing and reinstalling of hatch beams to be done by vessel's crew.

REPATRIATION: Can be arranged.

AIRPORT: There are 3 flights per week between Ternate and Gebe and vice-versa, served by Aneka Tambang Charter Flight. Flying time is about 60 minutes.

TIME: GMT plus 9 hours.

HOLIDAYS: See "Stevedores".

SHORE LEAVE: Shore pass must be carried by the crew during shore visit.

Invitation: Vessel's crew members are not allowed to invite friends, hawkers from shore aboard the vessel.

Leaving for Ternate: The crew members are prohibited to leave Gebe for Ternate, except Master and Officers who must be guided by Agents.

Local leave in Gebe is permitted as a concession.

GENERAL: *Priority:* First come first served.

Flags to be flown by incoming vessels: Vessel's National flag, Indonesian flag, Vessel's numbers, Quarantine and Immigration flag.

Ship Chandler: None. In emergency cases, for a limited quantity, Agents can act as ship's chandler.

Fumigation: No facilities.

Vessel's Disbursement Accounts: All vessel's disbursement accounts will be charged to the related principals through the General Agents.

Despatch/Demurrage: To be settled in accordance with the related contract.

Cash in Rupiah: Cash advance at Master's request can be supplied by Agents in a reasonable amount.

Facilities: There are 3 jetties to load nickel ore to the barges. General facilities available ashore include lawn tennis, football, badminton, basket ball, golf course, swimming pool and local beach, but no restaurant. All belong to the Company.

Delays: No delays unless bad weather (rain, strong winds, rough seas, etc.).

Entrance: Please go direct to loading position.

Fire Fighting: No facilities.

Ice: No facilities.

Slop Reception: No facilities.

Tides and Currents: As per Tide Tables of Indonesian Archipelago.

Customs: Kapaleo Town, Gebe Island. Crews are not allowed to bring alcohol to the shore (whisky, wine, beer and other similar, etc.).

Wind and Sea: No prevailing winds observed.

Watchmen: No watchmen from ashore.

Garbage Removal: No facilities. Never throw away your garbages.

AGENCY:

General Agents: P.T. Pelayaran Bahtera Adhiguna, Jakarta, 10 – 12 Jl. Kalibesar Timur, P.O.Box 1315, Jakarta, Indonesia. Cable Address: Adhiguna Jakarta. Telex: 42854 Adhiguna JKT. Tel: 676547, 672613.

Local Agents (Head Office): P.T. Aneka Tambang, 24–26 Jl. Bungur Besar, Jakarta, Indonesia. Cable Address: Aneka Tambang JKT. Telex: 49147 Antam JKT. Tel: 410108 (Hunting system).

Local Agents at Loading Port: P.T. Aneka Tambang, Unit Pertambangan Nikel Gebe, Jl. Batu Angus No. 11, P.O.Box 37, Ternate, North Maluku, Indonesia. Cable Address: Antam Ternate. Telex: 73153 ATKTTE IA. Tel: (0921) 21686, 22221.

GRESIK: 07.09 S. 112.40 E. **(See Plan)**

BERTHING: Main jetty with length 284.5 m. and berthing dolphin 50 m. from jetty. Depth of water 15 m. – 18 m. Vessels up to 30,000 d.w.t. able to berth off seaward side and 10,000 d.w.t. on shore side.

CARGO FACILITIES: *Discharge Facilities:* 15 ton grab Kangaroo crane with normal operating capacity of 300 t.p.h. and max. 550 t.p.h.

Multi-purpose conveyor to transport materials from the jetty to TSP plant – 600 t.p.h. capacity.

Pumping system for phosphoric acid from vessel to TSP plant tanks, complete with pump – 300 t.p.h. capacity.

Pumping system for ammonia –33°C from vessel to TSP plant complete with pump – 150 t.p.h. capacity.

FRESH WATER: Available.

SHIPMASTER'S REPORT: July 1984.

Location: Lat. 07° 08.4' S., Long. 112° 39.6' E., about 4.8 nautical miles N.W. of Sourabaja.

Documents:
Ship's Register.
Derat Certificate.
Load Line Certificate.
Radiotelegraphy Certificate.
Safety Equipment Certificate.
Safety Construction Certificate.
Seamen's Books.

These documents will be kept ashore during the vessel's stay at Gresik.

For Gresik:
2 Crew Lists.
2 Stores Lists.
2 Crew's Declaration Lists.
1 Maritime Declaration of Health.
1 Vaccination List.
1 Cargo Manifest and/or 1 Bill of Lading.

In addition for Sourabaja:
9 Crew Lists.
2 Stores Lists.
2 Crew's Declaration Lists.
1 Maritime Declaration of Health.
1 Vaccination List.
2 Cargo Manifests and/or 2 Bills of Lading.

Customs: The Customs will not seal the bonded stores, but strictly controls the said quantity of narcotics.

Pilotage: Compulsory, same Pilots as for Sourabaja. ETA to be sent at least 24 hours in advance. Normally the Pilot boards the vessel when passing the Karang Jamuang Island (Pilot Station), but if required specially for deep draft vessels, the Pilot will board the vessel at the Outer Anchorage.

Anchorage: Position Lat. 06° 51' S., Long. 112° 45' E., depth of water between 35 m. and 40 m.

Gresik Anchorage: Position: Lat. 07° 05.7' S., 112° 39.8' E., 2.5 cables off the Petro Kimia Jetty. Sandy ground, no safe anchorage.

Restrictions: Maximum depth of water 33 ft. Maximum breadth of channel: 90 m. Official allowed sea water draft 32 ft., but Pilots accept 32 ft. 06 in.

Berth: Petro Kimia Jetty (private berth). Length of berth 320 m. approx., equipped with large rubber fenders every 40 m. Depth of water between 12 m. and 15 m. Height of tide about 2.5 m.

VHF: Call "Sourabaja Pilots" on Channel 12 or Channel 16 if no reply.

If vessel enters the channel without Pilot, a second call before passing Buoy No. 5 is required.

Tugs: Same tugs as for Sourabaja.

Vessel with a length of more than 150 m. has to take 3 tugs, (one of them only for stand by).

Cranes: 2 cranes, but only one used for discharging sulphur. This crane has a discharging capacity of 300 tonnes/hr.

Working Hours: Day and night, even during "Ramadan".

Times: 0800 – 1200
1300 – 1800
1900 – 2400
0100 – 0600

Fresh Water: Available from the jetty.

Fuel: Available by barge at Sourabaja Anchorage only.

Repairs: From Sourabaja.

Medical: In Sourabaja only.

Shore Passes: Given by Agent, to be returned before departure.

General: No Immigration and Port Health board the vessel at this berth. No foreign currency declaration necessary. Crew changes not allowed.

AUTHORITY: Harbour Master.

JAKARTA (Tanjung Priok): 06.10 S. 106.50 E.

(See Plan)

IMMIGRATION: Vessels arriving from abroad with passengers must hoist the "N" Flag. Masters have to supply the boarding Immigration Officer with Passenger's List of: *(a)* disembarking. *(b)* transhipping. *(c)* through passengers.

No persons are allowed on board until the vessel has been examined and the "N" Flag taken down. Passengers must be in possession of a valid visa: visitor's, entry or a transit visa. Those not having a visa may at the discretion of the Immigration Officer, obtain a landing permit. Members of the crew including the Master must appear in the Articles, in order to get shore permits.

DOCUMENTS: Upon arrival vessels have to produce the following Certificates and Documents, which will remain in the Harbour Master's custody until cleared:

Nationality (Registry) Certificate.
Seaworthiness Certificate.
Measurement (Tonnage) Certificate.
Derat (Exemption) Certificate.
International Load Line Certificate.
Safety Certificate (passenger ships).
Safety Equipment Certificate (cargo ships).
Safety Radio and Radiotelephony Certificate (cargo ships).
Certificate of Approval (ship's radio station).
Health Book or Bill of Health.
Vaccination Certificates.
Last Port Clearance.
Subscription of Light and Harbour Dues and wharfage if any.
Crew Lists and Passenger's Lists.
Ship's Articles.
Other certificates and documents as required.

Ship's Arrival and Departure: 2 days before arrival of vessel, the ship's Agent has to inform the Port Administration, by completing appropriate forms. Copies of completed forms must also be submitted to the Harbour Master, Port Health Service, Immigration, Customs and Security for preparations of services. The Pilot may berth the vessel on request of the ship's Agent only after obtaining clearance from the Port Administrator, Harbour Master, Port Health Service and Immigration (foreign vessels only).

Before departure, port clearance is issued by the Harbour Master, after clearance has been obtained from Customs, the Port Health Service, and Immigration.

Certificates: The Ship's Certificates should be delivered to the Harbour Master through the Agent. These certificates will be returned to the Ship's Master prior to the ship's departure.

Ship's Manifest and Bill of Lading: The copy of the ship's manifest should be delivered to the Port Administrator through the Agent.

Also see "Radio Officer's Report".

APPROACHES: *Navigable Channel:* Length 8,000 m. Minimum width 250 m. – 350 m. Minimum depth 11.0 m. – 12.0 m. (Chart datum).

PILOTAGE: Compulsory and available throughout 24 hours. Pilot boards 1 mile North of harbour entrance (Master has reported that pilots like to board inside the breakwater, with engines stopped).

The ship's Owner/Agent has to inform the Port Administration (the Pilotage Division) of the ship's arrival 24 hours in advance.

Walkie-talkie radio with a frequency of 156.600 MHz is used for communication between the pilot boats and the Pilot Station.

ANCHORAGE: Anchorage for vessels waiting for the Pilot is outside the breakwater (Position Lat. 6° 04' S., Long. 106° 53.2'E.).

RESTRICTIONS: Max. draft is approximately 11 m.

MAX. SIZE:

Harbour	*Length* (m.)	*Draft* (m.)
1st	225	9.50
2nd	195	9.50
3rd	220	11.00
Oil	220	11.00
Bogasari (wheat)	230	9.60
DKP (chemicals)	230	9.00

HEALTH:

Quarantine: A vessel is in quarantine and must hoist the quarantine flag (Q, QL, QQ), when it is a vessel:

1. that comes directly from abroad (Q flag),
2. that comes from an infected Indonesian Port (Q flag),
3. that takes passengers or cargo over from vessels mentioned in items (1) and (2) (Q flag),
4. whose Master has declared that a quarantineable disease exists or is suspected on board (QL/QQ).
5. which the Port Medical Officer has declared infected or suspected with a quarantineable disease (QL/QQ).

The concerned vessel is free from quarantine measures when Free Pratique has been obtained. The Free Pratique becomes invalid when a vessel is in quarantine as stated above or a quarantineable disease occurs during the validity of Free Pratique.

The Port of Tanjung Priok is a 1st class Quarantine Port.

At the request of the ship's Owner/Agent, the Department of Health will provide "Provisional Pratique", for vessels calling directly from abroad to any Indonesian port which is not classified as a quarantine port, provided that health conditions on board comply with the required health conditions. This "Provisional Pratique" however does not relieve the vessel from quarantine measures, and it is not to be construed as "Free Pratique".

Accordingly vessels enjoying "Provisional Pratique" are still required to hoist the quarantine flag.

Vaccination/Immunisation: Vaccination and immunisation against cholera can be carried out by the Port Health Service.

BOARDING AREA: Harbour Pilots, Quarantine Officer and Immigration will board the vessel at the Outer roads.

RADIO: Coastal Radio Station Call sign PKI Class A1, A2, A3; call sign PKZ Class A3.

VHF:

Harbour Master	Channels 13
Pilot	Channels 5, 10, 12, 14, 80
Tugboat Operations	Channels 5, 10, 14
Port Operations	Channel 14
Public Service	Channel 16

TUGS: Tugs are operated by PT (Persero) Pelabuhan Indonesia II. Vessels of 100 m. LOA and over have to use 2 tugs. 10 tugs available from 900 h.p. to 2,500 h.p. 2 tugs are equipped for fire fighting.

BERTHING:

Wharves	*Length* (m.)	*Depth (Chart Datum)* (m.)
Coaster Harbour	510	5.0
1st Inner Harbour	2,540	5.0 – 9.5
2nd Inner Harbour	1,800	5.0 – 9.5
3rd Inner Harbour	1,155	6.0 – 11.0
Container Wharf 1	980	12.0
Container Wharf 2	360	12.0
Mineral Oil Harbour		
Oil Jetty	100	6.0 – 13.0
Bulk Wharf (Bogasari)	162	10.0
Liquid Chemical Wharf	276	9.0
Buoys	*Number*	*Capacity* (tons)
West Buoys	8	15,000
East Buoys	27	5,000

SPECIALISED CARGO-HANDLING FACILITIES:

Conventional Terminal :

18	forklifts	2 – 10	ton capacity
4	mobile cranes	18 – 35	ton capacity
1	head truck	40	ton capacity
1	top loader	40	ton capacity

Container Terminal :

10	Container cranes	30 – 40	ton capacity
41	Transtainers	35 – 40	ton capacity
28	Forklifts	2 – 40	ton capacity
55	Head Trucks	40	ton capacity
100	Chassis	40	ton capacity

Container yard has a capacity of 24,701 TEU.

CRANES:

	No.	*Capacity* Tonnes
Mobile Cranes	4	5 – 95
Floating Cranes	1	100
Quay Cranes	10	30 – 40
Transtainers	41	35 – 40

STEVEDORES:

Working hours: The working hours at the harbour are 24 hours, 7 days a week.

Shipmaster's Report: Cargo work continuous, 7 days a week. No work for 2 days at the end of Ramadan.

MEDICAL: First Aid at the scene of accident. Medical treatment or advice available on request to the Port Health Service. Hospitalisation available in general and private hospital in Jakarta.

FRESH WATER: Available by pipeline or barge, rate 50 – 100 t.p.h. Barge capacity 200 – 300 tons.

FUEL: Available by pipeline or barge, (3×400 tonnes), supplier is Pertamina. Rate: 65 t.p.h. – 80 t.p.h. by pipeline, and 45 t.p.h. – 60 t.p.h. from barge.

REPAIRS: Dry-docking and repairs are carried out by the State-owned P.N. Dock.

Electronic Repair Shop: Repair of electronic navigational aids and radio can be carried out by experts.

Repair and Testing of Navigational Instruments: Carried out by experts of the Hidral (Hydrography of the Indonesian Navy) and those of the P.N. Pelni workshop. Compass can be adjusted by an expert of the above-mentioned Hidral. Testing and issuing of certificates for navigational lamps by the Pelni workshop.

DRY DOCKS: 3 floating docks, max. capacity 17,500 tons, and 7 slipways, max. capacity 3,275 tons.

GANGWAY/DECK WATCHMEN: Available if required.

CERTIFICATES: See "Documents".

CUSTOMS ALLOWANCES: No crew allowance for tobacco, alcohol and other commodities.

REPATRIATION: A valid document is needed. A re-entry permit from the country concerned is sufficient, if there is no passport available. Joining crew must hold an Indonesian Transit Visa.

AIRPORT: Soekarno-Hatta International Airport is approximately 26 km. from Tanjung Priok, and Halim International Airport is approximately 25 km.

TIME: The Port of Tanjung Priok is located in the zone of Western Indonesian Time, which is based on the time at the meridian of 105° East Longitude.

POLICE/AMBULANCE/FIRE: Fire Tel: 4301080, Ext. 2222; Police Tel: 4301080, Ext. 6400; Ambulance Tel: 4403026, Ext. 199, 194.

SHIP SUPPLY SERVICE:

P.T. Harapan Insani, 25 Jalan Imam Bonjol, Jakarta. Tel: 334-032, 334-084, 334-180, 334-214, 349-971. Telex: 44912 Incate Jkt, 46855 Insani Jkt. Branch: Balikpapan (East Kalimantan).

P.T. Patra Supplies & Services, No. 3 Gedung Patra, Jalan Gatot Subroto, P.O.Box 377/KBY, Jakarta. Tel: 513-955, 511-356. Telex: 44976 Cater Ia. Branches: Balikpapan (East Kalimantan) and Singapore.

P.T. Tata Wisata, Jalan Iskandarsyah Raya No. 1, Kebayoran Baru. Tel: 713-707 (3 lines). Telex: 47331 Tata Ia.

P.T. The First Trijaya, Jalan Tanah Abang II/97, Jakarta. Telex: 45965 Fitric Jkt. Cable: Fitricate.

P.T. Nesitor, Jln. Senen Raya No. 54, Jakarta. Tel: 375515. Fax: 3865165, 493675.

PORT SECURITY: Maintained by members of the Indonesian Armed Services, usually Police, Navy or Marine and Army. Crew members should be in possession of a shore pass issued by the Port Authority, accompanied by an identification card when leaving or entering the guarded gates of the Port Area. Shore passes can be obtained via the Agencies.

CREW IDENTIFICATION CARD: Crew members having no Passport are required to carry a Seamen Identification Card (S.I.C.).

GARBAGE DISPOSAL: Agent must apply for a permit from Port Corporation before any garbage can be disposed of.

WASTE OIL DISPOSAL: Two barges of 185-190 ton capacity are provided by the PT. (Persero) Pelabuhan Indonesia II and are located at Nusantara Berth.

SEAMAN'S CLUBS: None.

CURRENCY: Indonesian Rupiah (Rp.).

RADIO OFFICER'S REPORT: September 1990.

Documents:

Agent:

8 copies Crew List.
1 copy Personal Effects List.
1 copy Stores List.
Ship's Certificates.
Oil Record Book.
Health Book (supplied on first visit to Jakarta).

Customs:

1 copy Personal Effects List.
1 copy Stores List.
1 copy Crew List.
1 copy Ports of Call List.
1 copy "Nil" Return of Mail/Parcels/Passengers/Arms and Ammunition/Animals.

Amount cargo for Jakarta and next port.
Manifests.
Bonded Store will not be sealed.
Agent will handle Immigration and Quarantine matters.

Shore Leave: If no shore passes are issued, Passport will suffice when going ashore.

AUTHORITY: Tanjung Priok Port Administration, P.O.Box 98, Jalan Palmas No. 1, Tanjung Priok, Indonesia. *Tel:* 491132, 491207, 491233, 491364, 492208. *Telex:* 49282. *Contact:* Port Administrator.

AGENT: P.T. Jardine Tama Transport Services, Jalan Pemuda No. 66, Jakarta 13220, Indonesia. Tel: (62-21) 4722237, 4711469. Telex: 48868 JSA IA. Fax: (62-21) 4722237, 4711469.

JAMBI: 01.35 S. 103.38 E.

PILOTAGE: Compulsory. Pilot station at Muara Sabak.

RESTRICTIONS: The port is located approximately 90 miles from the outer bar of Batanghari River.

Maximum depth at the outer bar at high water is 4.0 m.

RADIO: Jambi Coastal Radio Station. Call sign PKC-3.

Frequencies: 6,491.5 kHz (A1), 3,825 kHz (A3).

VHF: Jambi Coastal Radio Station on Channel 16.

BERTHING: Concrete wharf with length 72 m. and depth alongside 2.0 m.

Storage: There is a godown with 700 sq.m.

Fork Lifts: 2×2 tons – 5 tons.

CRANES: 2×5 tons – 10 tons mobile cranes.

STEVEDORES: Available from the labour pool.

MEDICAL: Medical assistance available.

FRESH WATER: Available in limited quantities.

FUEL: Not available.

REPAIRS: No facilities available.

GENERAL: *Barges:* Barges available with capacity 300 tons.

JAYAPURA: 02.37 S. 140.39 E.

PILOTAGE: Pilotage is compulsory. Pilot boards vessel at the anchorage.

ANCHORAGE: Vessels anchor in position 02° 32' 12" S., 140° 43' 24" E.

RADIO: Jayapura Coastal Radio Station. Call sign PKN.

Frequencies: 8,694 kHz. (A1)
13,101 kHz. (A1)
17,074.4 kHz. (A1)

TUGS: No tugs available.

BERTHING: Concrete wharf length 132 m., depth alongside 8.8 m.

Storage: There is a godown with 4,100 sq.m. and an open storage area with 2,000 sq.m.

Fork Lifts: 4×2.5 tons – 3.5 tons.

CRANES: 1×5 ton mobile crane.

TANKERS: There is an oil jetty for small tankers. Length of jetty 33 m.

STEVEDORES: Available from labour pool.

FRESH WATER: Available.

FUEL: Not available.

REPAIRS: No facilities available.

KAKAP NATUNA MARINE TERMINAL:
05.01 N. 105.57 E. **(See Plan)**

LOCATION: The Kakap Natuna Marine Terminal is located about 120 nautical miles North from the nearest land, in a group of Indonesian islands called the Anambas Islands.

Position of SPM Buoy: Lat. 05° 01' 28" N.
Long. 105° 57' 02" E.
Position of Wellhead Platform: Lat. 05° 01' 44" N.
(The nearest wellhead platform) Long. 105° 55' 55" E.

Charts for the area as follows: British Admiralty Charts No. 2660/A, 3573, 1311 and 1371.

Description: The Marine Terminal consists of a floating production, storage and offloading facility (FPSO). The FPSO, a converted tanker of 137,160 Summer d.w.t. tonnes, is permanently moored to a catenary anchor leg mooring buoy (SPM). The FPSO and buoy are connected by a rigid 'Delta' frame yoke. To accommodate motion, the yoke is hinged to the FPSO stern and the arm is attached to the buoy turntable allowing the FPSO and export tanker to rotate 360° around the mooring in response to current, wind and wave conditions. The export tanker is moored in tandem and loaded by means of a floating hose from the bow of the FPSO to the midship manifold of the tanker. Total crude oil storage capacity of the FPSO is 750,000 barrels. The greatest single lift available to an export tanker is approximately 500,000 barrels.

The fluids from wells, located on a wellhead platforms, flow through subsea pipelines, through the flexible risers, the fluid swivel on the buoy, and then through rigid piping on the arm of the yoke to the processing equipment on the deck of the FPSO.

There is a flare located on a self-standing tripod connected by a bridge to the KH wellhead platform. The flare gives an orange light, often visible at a great distance from the terminal.

PORT LIMITS: *Terminal Limits:* The area within a radius of 1,750 m. from the SPM buoy and 500 m. from the wellhead platform is a prohibited area and must not be entered without a Company Mooring Master on board.

The area within the operational map as delineated or bounded by the coordinates, HH, II, JJ, KK, LL, is a restricted area and anchoring is prohibited:

Coordinates	*Latitude*	*Longitude*
HH	05° 07' 00" N.	105° 52' 40" E.
II	05° 06' 28" N.	106° 00' 13" E.
JJ	05° 04' 45" N.	106° 03' 40" E.
KK	04° 56' 53" N.	106° 11' 09" E.
LL	04° 51' 45" N.	105° 59' 17" E.

MINIMUM STANDARDS OF ACCEPTANCE: *For tankers loading at Kakap Natuna Marine Terminal:*

1. *Size:* Vessel size not to be more than 100,000 tons Summer d.w.t.
2. *Vessels Loading:* Vessels loading at the Kakap Terminal must comply with the latest SOLAS and MARPOL Conventions and Protocols. Vessels found to be seriously deficient or substandard in any safety requirements will be refused mooring and loading.

3. *De-Ballasting:* Vessels must arrive at the Terminal with clean ballast. Vessels should be able to deballast concurrently with loading. Vessels unable to do so will be allowed 6 hours to complete this operation. Prolonged deballasting will necessitate either removal from the berth or to commence loading. The Terminal is not responsible for any free water or deadfreight.
4. *Inert Gas System:* All vessels must be equipped with an Inert Gas System conforming to the SOLAS Regulations. This must be operable throughout the vessel's operations at Kakap Natuna Terminal. Tanks to be monitored by vessel's crew to ensure the correct atmosphere is maintained.

   In turn, the Terminal reserves the right to check the condition of the tanks on arrival and throughout the operation.

   In the event of prolonged failure of the system or, when tank atmospheres depart from industry accepted limits, the vessel will be removed from the berth.
5. *Mooring Equipment:* Vessel to be equipped with correct mooring equipment relevant to its size as laid down in the "OCIMF Standards of Equipment Employed in the Mooring of Ships at a Single Point Mooring". The minimum dimensions of the centre bow fairlead are 600 mm. wide and 450 mm. deep, in order to accommodate the chafe chains.
6. *Hose Connecting Equipment:* Vessel to be equipped with loading manifold in accordance with the "OCIMF Standards for Ships Manifold". Flanges to be prepared to accept 12 in. 150 ASA connections. Derricks and rigging to be not less than 10 tons SWL and certified.
7. *Certificate of Deratisation and General Cleanliness:* Vessel to be in possession of a valid Certificate of Deratisation and other deinfestation measures as appropriate. Should the vessel be infested with rats, vermin or other insects which could be a threat to the health or well being of Terminal personnel, then the vessel will not be accepted.
8. *Loading Rates:* Terminal can load at a maximum rate of 24,000 bbls./hr. through 1 × 12 in. hose. Vessels which cannot accept this loading rate will be rejected.
9. *Air-Conditioning:* Due to the climatic conditions of the area, vessels not fitted with a working air conditioning system pose a threat to the safety of loading operations. Only in exceptional circumstances when a vessel has demonstrated its ability to comply with all conditions of the I.S.G.O.T.T. Safety Check List, will a vessel without air conditioning be accepted for loading.
10. *Crew:* Vessel's crew must be qualified to the requirements of the International Convention on Standards of Training Certification and Watchkeeping for Seafarers 1978. If any infringement of safety regulations or the inability of ship's crew to operate safety and efficiently is noticed, then the vessel will be removed from the berth.
11. The vessel's owner or bareboat charterer is to be a party to TOVALOP and have insurance covering the liabilities under the international convention of Civil Liabilities for Oil Pollution Damage 1969 (C.L.C.).

    The cargo to be loaded will be covered by CRISTAL, and/or the International Convention of the Establishment of an International Fund for Compensation for Oil Pollution Damage 1971 (C.L.C.).
12. Tankers are expected to conduct operations using a closed loading method. The loading of any vessel which is unable to comply, will be at the discretion of the Mooring Master.

ARRIVAL PROCEDURE:

1. *Order of Berthing:* Vessels will normally berth in order of arrival, with due regard to nominated date ranges, etc.
2. *Hours of Operation:* The Kakap Natuna Marine Terminal will operate 24 hours a day, 7 days a week. Tankers will normally be berthed during daylight hours, weather and other circumstances permitting. In special circumstances, at the sole discretion of the Company Operations Superintendent, night berthing may to allowed if all conditions are favourable.

   Unmooring will be carried out at any hour.
3. *Vessel Anchoring:* If a tanker is not scheduled to berth on arrival (e.g. another vessel is in the berth, or the port is closed due to adverse weather conditions, etc.), Master will be advised by radio and requested to anchor (See "Anchorage").
4. *Notice of Readiness:* The Mooring Master will act on behalf of the Company to sign acknowledgement of tanker's Notice of Readiness, which should be tendered at time of arrival at the anchorage.
5. *Port Closed:* Notice of Readiness will not be accepted during periods when the Port is closed. The Port is closed when the weather is such that it is too rough for incoming tankers to berth or remain safely moored to the FPSO. Any decision regarding the opening and closing of the Port will be made solely at the discretion of the Kakap Natuna Operations Superintendent. In such a case the Terminal will provide the Master with a written notice of the times during which the port was closed due to adverse weather.

   The Company reserves the right to decline to berth a specific tanker if its conditions or facilities are unsafe for berthing or loading, even though the berth may be open to other tankers. Various combinations of wind, sea and tidal conditions and also the size, length, ballasted trim and handling qualities of a vessel can affect the decision to berth a vessel at Kakap Natuna Marine Terminal. All these factors have to be evaluated before a final berthing decision is made. Should a vessel be rejected for any of the aforesaid reasons, the Terminal will supply the vessel and owner/charterers with written reasons for non-acceptance.

   The decision of the Company Operations Superintendent to permit a vessel to berth shall be final. On receipt of such permission, berthing will be at the discretion of the Master in agreement with the Company Mooring Master.
6. *Indonesia Flag:* The national flag of the Republic of Indonesia shall be prominently displayed by the vessel at all times at the Kakap Natuna Marine Terminal.
7. *Indonesian Government Regulations:* Masters are informed that the following Indonesian Government Regulations are strictly enforced. Signals to be Displayed on Arrival: In accordance with practice in Indonesian Ports, Quarantine, Immigration; Pilot and Call Sign flags must be displayed by all vessels approaching Kakap Natuna Marine Terminal. These signals shall be displayed continuously until clearance is granted.

   The signals are as follows:

   Sunrise to sunset : Quarantine flag " Q".

   The "N" flag should be flown until the Immigration Officer boards the ship.

   The "G" flag (request for pilot) should be flown until the Mooring Master boards.

   As soon as the Mooring Master boards, the "G" flag should be replaced by the "H" flag which signifies that the pilot is aboard. During the hours of darkness the appropriate International lights should be substituted for the flags.

NAVIGATION AIDS: The SPM, FPSO and platform and flare tripod within the Kakap Natuna Restricted Areas display the following visual navigational aids and characteristics. During restricted visibility the following sound signals will also be given:

SPM :	Light	(1) yellow "U" flash, vis. 5 miles.
FPSO :	Light	(2) red "U" flash (bridge) vis. 5 miles.
		(1) white "U" flash (foc'sle) vis. 5 miles.
	Sound	'U' morse.
Platform and Flare Tripod :		
	Light	(8) white flash, vis. 10 miles. One at each corner of platform and 4 along flare bridge.
	Sound	'U' morse.

ANCHORAGE: For tankers required to anchor, the recommended anchorage area is located North and East of the SPM and is centered on position Lat. 05° 02' 54" N., Long. 105° 58' 29" E.

This position represents the centre of a circle with a radius of 1,609 m. Anchoring within the terminal limits is strictly prohibited.

MAX. SIZE: 100,000 tons Summer d.w.t.

RADIO/VHF: All incoming tankers must advise Kakap Marine Terminal of their best ETA at the anchorage area (05° 02' 54" N.,105° 58' 29" E.), on departure from their last port of call and 72 hours, 48 hours and 24 hours before arrival. Any appreciable change of ETA should be advised accordingly. Vessel may contact Kakap Natuna Marine Terminal directly on intership frequency 8,291.2 kHz. Listening watches are observed everyday between 0300 hrs. – 0500 hrs. and 1200 hrs. – 1900 hrs. GMT and 72 hours, 48 hours and 24 hours before scheduled arrivals of incoming tankers.

Time to be used for ETA is local time, which is GMT plus 7 hours throughout the year.

Initial Message: In addition of the ETA, the first message should include:

(a) Name of tanker and radio call sign.
(b) Cargo requirements.
(c) De-ballasting time.
(d) Maximum loading rate.
(e) Arrival draft, fore and aft.
(f) Last port of call.
(g) Confirm that vessel has clean Bill of Health.
(h) If there is any sickness onboard, give all available information as to the possible type of sickness.
(i) Distance in feet from the bow to the tanker's loading manifold (max. allowable distance bow to manifold is 440 ft.).

Addresses: The above communications with Kakap Natuna Marine Terminal should be made via:

Clyde Petroleum Indonesia, Ltd.
Lippo Life Building, 4th Floor,
Jl. H.R. Rasuna Said Kav. 8 – 10,
P.O.Box 3293,
Jakarta,
Indonesia.
Telex : 62690.
Telephone: (021) 5251540, 5252290.
Fax: (021) 5200379.

In the absence of direct telex or telephone link to the above numbers, messages may be relayed to MPIL for onward transmission to Kakap Natuna Marine Terminal through the Pertamina Coastal Radio Station at Jakarta.

VHF/FM Radio Communications: The Terminal maintains a continuous watch on VHF Channel 16 (156.8 MHz) and Masters are recommended to use this when they are within range. The Terminal is able to select any public VHF channel for use as a working channel after initial contact.

Attention to VHF communications may be the means of avoiding delay in berthing and vessel turn around time. While in the Terminal area the ship's radio will be under the sole control of the Master. The Terminal Facility radios will be under the sole control of the Terminal Operations Superintendent or his designated alternate.

Masters are reminded that if tankers are requested to anchor to await berthing, it is their responsibility to maintain a CONSTANT listening watch on Channel 16 to receive Terminal instructions.

Any delay due to a failure to maintain a constant listening watch on Channel 16 will be for ship's account and will not be included in calculation of the laytime.

Frequencies for HF/SSB: In the event that incoming tankers are unable to contact the storage tanker by any of the above procedures, the storage tanker also maintains a continuous watch on the following HF/SSB frequencies.

Watch kHz :		Working kHz :	
	11,528.50		5,373.50
	13,812.50		16,411.50

Pertamina Control Radio Station: In the event that incoming tankers are unable to contact Kakap Natuna Marine Terminal on the foregoing VHF/FM frequencies, or by HF/SSB, Masters should request Jakarta Radio to relay the necessary information to MPIL by telex or telephone.

Detail of Jakarta Radio are :

Name : Jakarta Radio
Call sign : PKI – 2
Operated by : Pertamina
Nature : CR

Calling Frequency (kHz)	*Working Frequency (kHz)*	*Power*	*Class*	*Working Hours (GMT)*
500	452	1 Kw	A1	H 24
8363.2-8364.8	8626.0	1 Kw	A1	0200-0400
8372.8-8373.6				0500-0600
				0700-0800
				1000-1200
				1400-1600
				1700-2000
12544.8-12547.2	12980.0	1 Kw	A1	0000-0200
12599.2-12560.4				0400-0500
				0800-1000
				1200-1400
				1600-1700
				2000-2200
4131.2-4425.6	4425.6	1 Kw	A3A/A3J	0500-0600
				0800-0900
				1600-1800
				2200-2400
6206.2	6512.6	1 Kw	A3A/A3J	0000-0100
				0300-0400
				0600-0700
				1200-1400
				1800-2000
8235.3	8759.2	1 Kw	A3A/A3J	0100-0300
				0400-0500
				0700-0800
				1100-1200
				1500-1600

VHF:

Name : Jakarta Radio
Call sign : PKI – 2
Operated by : Pertamina
Class : F3
Power : 50 Watt
Nature : CR

Calling	*Working*	*Working Hours (GMT)*
Channel 16	Channel 6-19	H 24

Terminal Station: FPSO Kakap Natuna.
Call sign : E L E P 7

Watch Frequency kHz	*Working Frequency kHz*	*Power*	*Class*	*Working Hours (GMT)*
CH 16	CH 8/12	0.025	F3E	H 24
2182.0	2638.0	0.2	J3E/R3E	H 24
4125.0	4143.6	0.6	J3E/R3E	0100–0200
6215.5	6218.6	0.6	J3E/R3E	0200–0300
8257.0	8291.1	0.6	J3E/R3E	0300–0500
				0800–1200
12392.0	12429.2	0.6	J3E/R3E	0500–0700
16522.0	16548.0	0.6	J3E/R3E	0700–0800

MOORING:

1. The Mooring Master will board incoming tankers at either the anchorage area or other agreed location. The Mooring Master will advise the ship's Master on approach to the FPSO, mooring and unmooring, connecting and disconnecting hoses, and all other operations within the Terminal area including all manoeuvring of the tanker. The Master or one of his qualified deck officers must be on the bridge at all times while the tanker is being manoeuvred.
2. The services of a Mooring Master are provided upon the express understanding and condition that when any Mooring Master furnished by the Company goes aboard a tanker for the purpose of assisting such tanker, he becomes for such purposes the servant of the owners of the vessel, and the Company shall not be liable for any damage or injury which may result from the advice or assistance given or made by such Mooring Master while aboard or in the vicinity of such vessel.
3. Support vessels assist in mooring tankers. These are under the direct control and supervision of the Mooring Master. Any service and/or facilities provided by the Company including, but not limited to, the services of Mooring Master, support vessels and their crews, or mooring and loading equipment, are at the vessel's risk. The furnishing of a Mooring Master, support vessels or other services and facilities, shall not be construed to be, or give rise to, a personal contract.
4. Tankers due for mooring must have a pilot ladder or hoist securely rigged on the port side. Vessels with a freeboard of more than 30 ft. shall have an accommodation ladder rigged so that the lower platform is not more than 10 ft. above the water level with a short pilot ladder rigged for access to the platform. Upon the approach of the Mooring Master in the support vessel, the tanker will provide a good lee on the port side. Tankers shall also have the port derrick rigged and manned ready for use.
5. The Mooring Master and his assistant, who will advise a tanker crew during mooring and hose connection, will normally board tankers from the support vessel which also serves as a stand-by safety boat throughout the loading operation. Immediately the Mooring Master and his assistant have boarded, the support vessel will proceed to the port side derrick area of the tanker where mooring and hose connection equipment will be lifted aboard. Sufficient crew must be available on deck to transfer the mooring equipment from the derrick area to the forecastle.

   The following equipment, provided by the vessel, shall be ready for use on the forecastle head when the Mooring Master boards:
   - (a) 1 mooring rope, polypropylene or other man-made fibre, situated forward.
   - (b) 1 mooring rope, polypropylene or other man-made fibre, situated aft.
   - (c) 2 messenger lines, minimum 3.5 in. circumference × 300 ft. natural fibre.
   - (d) A selection of shackles, wire strops and tools (sledge hammer, crowbar, etc.).
6. When the approach to the terminal commences, a support vessel will be in attendance to assist by pushing if necessary. At this time, another support vessel will prepare the mooring and standby at the FPSO.
7. *Approach to the FPSO involves manoeuvring at close quarters to the FPSO. It is therefore imperative that all measures are taken to ensure that there is no loss of power or steering during these manoeuvres.*
8. Another support vessel will be situated near the bow of the FPSO with 2×10 in. circumference polypropylene pick-up ropes, each secured by a 54 mm. chafe chain, or 1×10 in. circumference polpropylene pick-up rope secured by 1×76 mm. chafe chain, depending on the size of the tanker's centre leads, secured to the main mooring, which consists of a 21 in. circumference nylon rope connected to one standard O.C.I.M.F. chafing chain (76 mm.).
9. During the approach of the tanker towards the bow of the FPSO, the ship's crew, with the advice of the Mooring Master will prepare the forecastle for the mooring operation (See "Plans"). This will include passing one or two messenger ropes through the centre bow fairlead (or other fairleads designated by the Mooring Master) taking the end to the after port corner of the forecastle and, from this point, lowering the end to sea level. The mooring attachment will also be prepared, and will be, in order of preference:
   - (a) Bow stopper (AKD).
   - (b) Bitts.
10. Vessels which, in the Mooring Master's opinion, do not have a suitable method of attaching the mooring, will be refused permission to berth. Should bitts have to be utilised, or should the bow stopper be located at a substantial distance from the fairlead, wire snotters of 2 in. diameter and various lengths are available from the berthing tug.
11. Upon the close approach of the tanker's bow, the standby support vessel manoeuvres alongside the port shoulder and attaches the mooring pick-up rope to the ship's messenger line. The tanker will then heave up the messenger and pick-up rope, carefully picking up the slack as the tanker approaches the bow of the FPSO. The unsecured support vessel will now be stationed at the end of the floating hose string in order to tow the hoses clear of the ship's side should this become necessary.
12. The pick-up rope should be continually hove in as the tanker nears the FPSO bow. The distance between both bows will be continuously relayed to the Mooring Master on the bridge from the forecastle and by the support vessels. When the pick-up wire has been brought inboard though the fairlead, it may be necessary to adjust the direction of pull and assist the chain through the fairlead. Action required by the tanker's crew in this respect will be advised by the Mooring Master.
13. When the chain is inboard, depending upon the method of attachment available, the connection will be made (See "Plans").
14. After the connection to the mooring is made, it may be necessary to run the engines astern to ensure the tanker does not contact the FPSO. The Mooring Master will then advise "Finished with Engines", *but at no time during the tanker's stay at the Terminal shall the engines be immobilised.*
15. Shortly after the mooring operation is completed, the support vessel will be secured from the stern of the tanker using a 12 in. circumference polypropylene rope supplied by the support vessel.

BALLAST:

1. There are no ballast or slop reception facilities at Kakap Natuna Marine Terminal, therefore all vessels must arrive with clean ballast suitable for discharging directly to sea in accordance with the standards set by the International Conventions. Vessels arriving with ballast unsuitable for discharge to sea will be rejected for loading. Any tanker rejected because of contaminated ballast or sea pollution will automatically invalidate her Notice of Readiness and will lose any priority of loading. Vessels discharging contaminated ballast overboard shall be subject to the anti-pollution laws of Indonesia.
2. Vessels arriving at Kakap Natuna Marine Terminal should have sufficient ballast to ensure safe handling and manoeuvrability in the prevailing weather and sea conditions and in accordance with good seamanship practice.
3. Whenever possible, loading procedures should be so arranged as to allow for concurrent deballasting and loading operations, provided that a 2 valve separation can be maintained. Permanent ballast should not be discharged before the vessel has loaded at least the equivalent amount of cargo.
4. The Mooring Master or his assistant will witness the tank inspection prior to loading, but will not sign certificates attesting to the emptiness, cleanliness or suitability of tanks for loading. The ullaging of the slop tank and determination of oil content will also be witnessed.
5. Penalties for pollution are harsh.

LOADING: *Hose Connection:*

1. Upon completion of the mooring operation, the loading hose will be connected to the tanker's port manifold, which must have been prepared to accept 1×12 in. or 16 in. 150 ASA flange prior to berthing. Hose connection will be made by the ship's crew who must be under the supervision of a responible deck officer. The Mooring Master's Assistant will advise on the correct procedures to be adopted.
2. Depending on the freeboard of the tanker, the weight of the hose to be lifted could approach 10 tonnes, and all tankers calling at Kakap Natuna Marine Terminal must have their port derrick rigged to lift at least 10 tonnes.
3. A support vessel will tow the tanker end of the hose to a position below the manifold area and connect the ship's cargo runner to the hose pick-up chain. The hose will then be lifted to a position above the main deck so that the hang-off chain can be made fast to the hose bitts in such a way that the hose flange will closely align with the required manifold flange. The hose end will then be lowered to the deck for the blind flange to be removed. The hose flange will normally be connected to the manifold by a Camlock coupling.
4. When the hose is connected, the length between the manifold and rail will remain supported on 2 slings by the ship's derrick. This is to ensure that there is no undue strain on any part.

Loading Operations:

1. When the officer-in-change on board the tanker has declared the vessel ready to load, with all necessary valves open, the hose end butterfly valve will be opened and the Mooring Master will instruct the Terminal to commence loading at a slow rate. The rate will not be increased until the tanker has confirmed that the hose connection is tight, that cargo is being received in the selected tanks and that no leakage is taking place through the sea valves. Thereafter, the loading rate will be increased, on request by the tanker, to a maximum of 24,000 bbl.p.h.
2. Throughout the loading, a responsible deck officer shall be in charge of operations, either on deck, or in the cargo control-room. In addition, an efficient deck watch in constant contact with the cargo control-room must be maintained at all times.

   Additionally, one man must be stationed on the forecastle at all times to observe and report on the mooring condition, i.e., the state of the mooring and the distance and attitude of the Tanker to the FPSO.
3. At any time during loading operations. the rates can be reduced on request. Except in an emergency, 10 minutes notice should be given to the Terminal when rate reduction is required. As in normal tanker practice, valve *must not* be closed against the oil flow without permission from the Terminal.

   If, for any reason, radio communications between the Tanker and the Terminal are lost, the Terminal will stop the loading until communications are re-established.

   In the absence of radio contact, oil flow can also be stopped by sounding the Emergency Flow Stop Signal, consisting of continuous blasts on the ship's whistle.
4. The volume of oil loaded is accurately available at all times from the Terminal, and periodic comparisons should be made between Tanker and Terminal.
5. The question of ship or Terminal responsibility to stop cargo on loading the required quantity will be discussed and agreed before loading commences.

Request for the Terminal to stop the flow of cargo at a predetermined tonnage must be in writing. The request must include the statement by the ship's Master that the Company will not be held responsible for any error, and that in the case of the being overloaded, the excess cargo cannot be pumped back to the FPSO. The ship's Master will also be held responsible for any spills caused by this request.

Hose Disconnection: On completion of loading, and when the tanker is informed by the FPSO Control that all flow has ceased, the hose end butterfly valve will be closed first, followed by the ship's manifold valve. The hose will then be disconnected from the manifold (sufficient drip trays must be available to contain any oil remaining in the spool pieces and reducer) and the blind flange will be replaced on the hose. The weight of the hose will be taken on the derrick and pick-up chain to allow the hang-off chain to be released from the hose bitts and re-connected to the eye on the hose flange collar. The hose will then be lowered to the water where a support vessel will be in attendance to remove the cargo hook and tow the hose clear.

Kerapu Crude Oil Specifications:

Gravity at 60°F	43° – 45° API
Salt Content	Nil – 63 lb./MBBL
B.S.& W.	Nil – 0.5 % Vol.
Sulphur	0.05% WT
Pour Point	85°F
Viscosity	3.56 Cst
Reid Vapour Pressure	5 p.s.i. – 7 p.s.i. at 100°F.

Cargo Documentation and Inspection:

1. Documents such as Bills of Lading, Quality Certificate, Quantity Certificate, Time Loading Report, Certificate of Origin, Cargo Manifest and Master's Receipt for Documents/Samples, etc. are prepared at Kakap Natuna Marine Terminal. When the tanker has been loaded, the documents will be completed and taken aboard the tanker for the Master's signature. Signing of these documents by the Master will take place at the same time final departure clearance formalities are being carried out.
2. Immediately upon completion of loading, the offical Bill of Lading quantity will be relayed to the Mooring Master by radio. In the event of a dispute, the vessel will be requested to recheck the measurement and calculations of the quantity, but the Mooring Master will not witness such measurement and calculations. After both ship and shore figures have been verified, should an appreciable difference still exist, receipt of a Letter of Protest will be acknowledged by the Mooring Master.
3. Notes of Protest if any, should be handed to the Mooring Master for further delivery to Clyde Petroleum Indonesia, Ltd. Please note that the Mooring Master will acknowledge receipt of the Note of Protest only, and is not authorised to accept such letters.
4. From time to time owners, charterers, consignees, or other interested parties may appoint third party oil inspectors to survey the loading operation on their behalf. Any delays caused by oil inspectors, shall be considered "vessel delays".

DEPARTURE: *Departure Procedures:*

1. Immediately after the loading hose is disconnected and transferred to the custody of the support craft, unmooring of the vessel will commence. The support vessel at the stern of the tanker will be released but will remain on location to assist if required. On advice from the Mooring Master, the mooring hawser will be heaved in by the tanker, the snotter and it's attachment disconnected. In some cases it may be necessary to steam the vessel ahead to relieve the weight on the mooring. As soon as the mooring is released, the engines will be ordered astern and the vessel will back away from the FPSO. During the move astern, the mooring hawser will be lowered into the water by the pick-up rope.
2. When the vessel is safely clear from the FPSO, the Kakap Natuna Marine Terminal mooring equipment will be taken from the forecastle to the port derrick to be transferred to the support craft, together with the hose connecting equipment.
3. Any remaining cargo calculations and paperwork will be completed before the vessel sails. When such paperwork has been completed, the vessel will make a good lee on the port side to disembark "shore" personnel. Upon disembarkation of all such personnel, the vessel is cleared to proceed to sea.

MEDICAL: Only available in cases of emergency.

FRESH WATER: Not available.

FUEL: Not available.

SURVEYORS: Not available.

REPATRIATION: Not available.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Indonesian Rupiah (Rp.).

SAFETY: *Safety Requirements:*

1. As for all tanker terminal operations, vessels visiting Kakap Natuna Marine Terminal must comply with the minimum safety requirements specified in the International Safety Guide for Oil Tankers and Terminals (I.S.G.O.T.T.).

   Kakap Natuna Marine Terminal operations are of a special nature in that vessels must soft-moor in tandem to the floating production and storage vessel, which is complete with production train and ground flare. Hence, Company requirements may be more stringent than those specified in I.S.G.O.T.T. These requirements will be enforced.
2. When the Mooring Master boards the vessel, he will present to the Master a safety booklet containing details of the Safety and Fire Regulations, Safety Check List and a letter to the Master. When fully checked and understood, the Regulations will be signed by both the Terminal Representative and the Ship's Master.
3. Safety and Fire Regulations will be strictly adhered to and a Terminal Representative will make periodic checks to ensure that they are being enforced. If any infringements of these safety regulations are observed, they will be brought to the attention of the Master or his Deputy for corrective action. If such action is not taken immediately, the Mooring Master will take such measures as appear most appropriate to deal with the situation, and shall advise the Master accordingly.

WEATHER: The Kakap Natuna Marine Terminal is an open unsheltered mooring. On occasions there may be circumstances or a combination of circumstances which may preclude mooring operations. In these circumstances good judgement should be used by the Master, under the Mooring Master's advice as to what action to take.

Currents: The surface currents of the Natuna Sea in the Kakap area are wind generated, currents therefore will be in the direction of the prevailing monsoon. These currents will generally exceed 1 knot and on occasions exceed 2 knots.

Typhoons: The Kakap area is not normally affected by "typhoons".

Weather Pattern: In the Kakap area the N.E. monsoon becomes established during November, although in some years it may not blow regularly until December. During this period the wind direction over the open sea is predominantly Northeasterly and the average force when fully developed is about Force 4, South of Latitude 5° North, and Force 5 to the North of this Latitude.

The winds tend to blow in successive pulsations, periods of comparatively fresh winds followed by periods when the wind is less strong. At times the wind freshens to Force 6 or 7, while at others it does not exceed Force 3. The frequency of Force 7 winds is estimated to be about 1% in most of this season, probably reaching 2% – 3% during December, the month of greatest frequency. From about May to October, winds are predominantly South-westerly, mainly Force 3 or 4. Over the open sea, the South-westerly winds can reach Force 6 but nearer the coast they are weaker and more irregular. During October the winds become variable before the onset of the N.E. monsoon.

Although during the Summer, monsoon wind speeds of Force 7 are rare, squalls, know locally as "Ribut" in which gale force winds may be reached temporarily are fairly common. The most dangerous type is the arch squall which is preceded by clouds rising from the horizon in the form of an arch, heavy rain is usual when the arch is passing overhead.

Tidal Streams: Tidal streams can be expected to reach 1.5 knots during Spring tides.

Relative Humidity: This is high over the area for most of the year, averaging about 90% – 95% in all months at 0700 hrs. and falling to about 70% – 74% by 1300 hrs.

Temperature: The average air temperature is high throughout the year. April is the warmest month with a mean daily temperature of about 88°F. January is the coldest month with a mean daily temperature of 86°F.

Fog and Visibility: Fog is rare throughout the area, however during rain squalls visibility can be extremely limited.

Rainfall: Average annual rainfall near the Kakap area is about 100 in. Rainfall is most abundant from about October to January, i.e. at the onset and in the early part of the N.E. monsoon, however thunderstorms and heavy rain squalls occur frequently throughout the S.W. monsoon.

SHIPMASTER'S REPORT: April 1990.

Officials: Before berthing the vessel is boarded by the following Officials:

2 Agents (Pertamina).
2 Customs.
2 Immigration.
2 Harbour Masters.

These officials are flown out to the Storage Barge before the loading vessel berths and stay there until she sails.

Documents:

5 copies Crew List.
3 copies Arms and Ammunition List.
3 copies Dangerous Drugs List.
5 copies Passenger List.
3 copies Manifest of Cargo for discharge at Terminal ("Nil" return).
1 copy Vaccination List.

Loading:

The well produces approximately 25,000 bbls./ day.
The average number of ships is 2 per month.
The average loading rate supplied was 3,000 cu.m.p.h.

Cargo: Certificate of Quality (API was different from Terminal Booklet).

Test	*Method*	*Test Result*
API gravity at 60°F	ASTM D. 1298	50.3
Sulphur % WT	ASTM D. 1551	–
BS & W % Vol	ASTM D. 96	0.05
Pour Point °F	ASTM D. 97	+60°
R.V.P.	ASTM D. 323	7.3
Density @ 15° C.	ASTM Table 3	0.7780
Spec. Gravity.	ASTM Table 3	0.7783

AGENCY: *Procedure for Appointing Agent:* Indonesian Government Regulations require that Pertamina Directorate of Shipping and Telecommunication be appointed General Agent for all tankers proceeding to load in Indonesia.

Address : Pertamina Directorate of Shipping and
Telecommunication,
Attention: Agency Department,
19th Floor, Pertamina Building,
Jl. Meden Merdeka Timur 1A,
Jakarta, Indonesia.
Cable Address : Pertaminaship IA.
Telex : 44450 and 45348.
Telephone : (021) 381-6362, 381-6305, 381-6335,
381-6365, 381-6523, 381-6307,
381-6524, 381-5397, 381-6345.
Fax: : (021) 384-3781.

For vessel arriving for the first time in Indonesian waters, Owners or Charterers are requested to appoint Pertamina Directorate of Shipping and Telecommunication Agency Department as General Agent to attend the vessel at Kakap Natuna Marine Terminal by letter of Appointment. This Letter of Appointment must be endorsed by the nearest Indonesian Consulate to point of dispatch of the Letter, and must be sent at least 2 weeks prior to ship's arrival. The above applies also to vessels which may have changed their name and vessels for whom the Letter of Appointment has expired. Owners or Charterers can attach a list of vessels under their management/control which are scheduled for operating in Indonesian waters. In such cases the single Letter of Appointment will be valid for all ships named in the Letter. Letters of Appointment have validity of 1 year, after which they must be renewed. Each tanker entering Kakap Natuna Marine Terminal must have requested and have been granted an Entry or Agency Permit prior to its arrival. It is vital that the General Agent receives the following information 2 weeks before vessel's arrival to enable the necessary permits to be obtained from the Govenment Directorate General of Sea Communications:

(a) Name and full address of Owners.
(b) Name of tanker and call sign.
(c) Deadweight tonnage and length overall.
(d) Flag and Port Registry.
(e) Certificate of Registration Number.
(f) Name of Master.
(g) Number of Crew.
(h) ETA at Kakap Natuna Marine Terminal anchorage area (Lat. 05° 02' 54" N., Long. 105° 58' 29" E.).
(i) Last Port of Call.
(j) Intended Indonesian Ports of Call.
(k) Destination after loading.
(l) Quantity and type of crude oil to be loaded.

Also see "General" before First Port.

AUTHORITY: *Operator:* Clyde Petroleum Indonesia, Ltd., 4th Floor, Lippo Life Building, Jl. H.R. Rasuna Said Kav. B-10, P.O.Box 3293, Jakarta Selatan, Indonesia. *Tel:* (021) 5251540, 5252290. *FAX:* (021) 5200379. *Contact:* Iwan Kuswana, Crude Oil Superintendent.

KASIM MARINE TERMINAL: 01.18 S. 131.01 E. (See Plan)

LOCATION: The terminal is located at the mainland Irian Jaya.

DOCUMENTS:

Certificate of Registry.
International Oil Pollution Prevention Certificate.
Load Line Certificate.
Safety Equipment.
Safety Construction Certificate.
Radio Certificate.
Derat Certificate.
15 copies Crew Lists.
6 copies Cargo/No Cargo Declaration by Master
6 Vaccination Lists.
2 Crew Declaration.
4 Stores Lists.

PILOTAGE: Compulsory. Pilot boards in-bound vessels in position 00° 53' S., 131° 10' E. Vessels berth and unberth at any stage of the tide during the day.

Accommodation ladder is required. Also see "Anchorage". Vessels must make a lee for Pilot boat in choppy seas.

ANCHORAGES: Recommended anchorage area is 4.5 miles West of Sorong in position 00° 53' S., 131° 10' E. Under no circumstances should any vessel enter the restricted area around the structure at Kasim Terminal without a Mooring Master aboard. The area is marked by the dotted lines on the plan (See "Plan").

Any vessel arriving in the anchorage area after 1400 hrs. local time may have to wait in the anchorage area until first light the next morning to transit the Sele Strait to the terminal.

On arrival at anchorage contact "Sorong Control" and Pertamina Sorong Radio on VHF Channel 16 and between hours of 0600 and 1800 contact Kasim Marine Terminal Channel 16.

Note: Ensure that vessels do not anchor within Sorong Port Limits marked on chart. If they do Harbour Master will charge double fee.

It is preferable to anchor just outside the marked area. The anchorage position recommended is outside the harbour area.

RESTRICTIONS:

	Controlling depth (MLW)	*Mean tidal range*	*Velocity of current*	*Nature of bottom*
Entrance:	51 ft.	Approx. 5 ft.	Max. 7 kt.	Sand, mud
Channel:	51 ft.	Approx. 5 ft.	Max. 7 kt.	Sand, hard clay, coral
Anchorage:	120 ft.	Approx. 5 ft.	Max. 7 kt.	Hard clay, sand
Berth:	60 ft.	Approx. 5 ft.	Max. 7 kt.	Sand, hard clay, coral

MAX. SIZE: The channel is swept to a depth of 57 ft. Vessels max. draft is 50 ft. Also see "Berthing".

PRATIQUE: Available night and day. Customs and Immigration board on arrival.

RADIO: *Advice for arrival:* 72 hours prior to arrival at Sorong vessels should advise the Company of their estimated time of arrival by cable sent via "Pertamina's Coastal Radio" Station at Jakarta or Government Radio Station at Sorong. They should also confirm or amend them when they are 48 hours and again 24 hours, distant from Sorong.

Cable address: Pertamina, EPV, Sorong.
Cable address: Pertamina – Jakarta.

Pertamina Coastal Radio Stations:

(1) Name of Station/Call Sign: Pertamina Jakarta Radio – PKZ.
Geographical Coordinate: 06° 08' S., 106° 50' E.

Frequency (kHz)	*Class*	*Service (hrs.)* (GMT)		*Power*	*Nature*	*Keep Watch* (kHz)
452	A1	H24		1 kW	CR	500
8,626	A1	0200–0400	0500–0600	1 kW	CR	8363.2–8364.8
		0700–0800	1000–1200	1 kW	CR	8372.8–8373.6
		1400–1500	1700–2000			
12980	A1	0000–0200	0400–0500	1kW	CR	12544.8–12547.2
		0800–1000	1200–1400	1kW	CR	12559.2–12560.4
		1600–1700	2000–2200			
4419.4	A2	0500–0600	0800–0900	1kW	CR	4125.0–4131.2
4425.6	A2	1600–1800	2200–2400			
6512.6	A2	0000–0100	0300–0400	1kW	CR	6206.2–6215
		0600–0700	1200–1400			
		1800–2000				
6521.9	A2	0600–0700	1200–1400	1kW	CR	
		1800–2000				
8759.2	A1	0100–0300	0400–0500	1kW	CR	8235.3
		0700–0800	1100–1200			
		1500–1600				
VHF Ch. 9,16,19.		H24				Ch. 16

(2) Name of Station/Call Sign: Pertamina Sorong Radio (PKY–41)
Geographical Coordinate: 01° 08' S., 131° 15' E.

Frequency (kHz)	*Class*	*Service Hours* (GMT)
6456.5	AI	0000–0020
		0100–0120
		0200–0220
		0300–0320
		0400–0420
		2300–2320
6512	A3J	0020–0100
		0120–0200
		0200–0300
		0320–0400
		0420–0500
500	A1	H12 Hx
452	A1	H12 Hx
6518	SSB	H12 Hx
8755	AM	0000–0100
8730	AM	0200–0300
		2300–0500

Working Hours Local Time (GMT + 9 hours):
Monday–Thursday 0715–1430 Local Time.
Friday 0715–1130 Local Time.
Saturday 0715–1330 Local Time.
Sundays and holidays are normally closed (except on request).

VHF Ch 16,9.

Government Radio Station:
Name of Station/Call Sign: Sorong Radio (PKY–4).

Frequency (kHz)	*Nature*	*Class*	*Hours* (GMT)
8461	—	A1	0000–0100 1000–1100
2182	SSB	—	0000–1300
8802	SSB	—	0900–1000 0300–3400
8219.5	—	—	0900–0930 0200–0300
6306	SSB	—	0600–0700 0800–0900
6337	SSB	A1	0500–0600 1100–1300
12 MHz 500/452			2230–2330

VHF Ch. 16, 20, 22, 28.

It is recommended that vessels arriving on weekends and public holidays and/or whenever there is no response from Pertamina PKY–41 contact the Government Coastal Radio Station PKY–4 who work every day, including holidays.

The following information should be included in the cable:
(1) Name of vessel and radio call signal.
(2) ETA in GMT and date (local time GMT plus 9 hours).
(3) Cargo requirements.
(4) Deballasting time.
(5) Maximum loading rate.
(6) If there is any sickness on board or clean bill of health.
(7) Flange dimension of vessel's manifold connection.

Also see "General" before first port.

TUGS: 2 tugs of 45 ton bollard pull each and 2×220 h.p. mooring boats.

BERTHING: Berthing is usually daylight hours but night berthing undertaken if required. It is not unusual to undock with a strong stern tide running.

Kasim Terminal is owned by Pertamina-Petromer Trend. Maximum size of vessel at the berth is, length 1,000 ft., beam 150 ft., and draft 50 ft. Depth of water 60 ft. (LW).

The berth is a standard type of tanker berth with 4 breasting dolphins and a loading platform set back inside the line of breasting dolphins. 4 mooring dolphins are set at intervals along the length of the berth and are fitted with quick release hooks and electric winches to handle light rope messengers.

Loading is through two 16 in. Chicksan loading arms and vessels with non-standard manifolds must provide their own reducers. Max. loading rate 39,000 bbls. p.h.

Loading arms are connected and disconnected by terminal staff.

The Kasim Marine Office is an octagonal wooden structure on piles, situated at the mouth of a small river 300 m. N.E. of the Loading Pier.

A Mooring Master remains on board throughout the vessel's stay and is in radio contact with the tank farm, pump station and Marine Office. The berth has its own gangway which is placed onboard the ship by shore crew.

Crude Oil Characteristic:
API Gravity at 60°F. : 35.3
Reid Vapour Pressure at 100°F. : 3.5 p.s.i.
Sulphur Content : 0.7 % wt.
Carbon Residue : 1.0 – 3.0 % wt.
B.S. & W. : 0.1 % vol.
Flash Point (PMCC) : Below 50°F.
Pour Point : 30°F.
Loading Temperature : 95°F.

DRY CARGO BERTH: 370 ft. long with depth of 15 ft. MLWS alongside vertical steel face with rubber fendering. 2 cranes available for discharge/loading with SWL 40 tons and 60 tons.

MEDICAL: Doctor available.

FRESH WATER: Limited supply (100 tons approx.) available at U.S.$3.75 per ton in an extreme emergency only.

FUEL: Not available.

REPAIRS: Can be undertaken at Sorong but not at Kasim Terminal.

CUSTOMS ALLOWANCES: 200 cigarettes and 1 bottle of spirits per man.

REPATRIATION: Possible in an emergency.

TIME: GMT plus 9 hours.

STORING: Not possible to store by truck or barge. Customs regulations state that nothing can be moved internally or externally without informing them. No riggers or equipment available.

SHORE LEAVE: No shore leave.

GENERAL: No stores. Clinic available.

During daylight hours Indonesian flag must be shown.

SHIPMASTER'S REPORT: December 1994.

The vessel arrived at 1500 hrs. local time on 26th December, and anchored at "Salawati and Kasim Terminal" Pilot Station Anchorage, as shown on B.A. Chart No. 1420 "Selat Sele", this being the only B.A. chart available. There was a strong Southerly set (approximately 2 knots) at this time of year, approaching the anchorage.

Contact was established via 'Sorong Radio'. They will put you through to Kasim Terminal, between 0600 hrs. – 1800 hrs. We were able to raise them faintly on VHF Channel 71, which is their 'working channel' when alongside. Charterers had appointed an agency in Jakarta, but they never attended the vessel, all agency duties being performed by Pertamina locally.

While in the anchorage, we mounted high profile anti-piracy patrols, but no attempt was made to board the vessel. Some bartering took place for green coconuts and exotic seashells with the locals, who were generally friendly.

Local officials from Sorong boarded at 0745 hrs. on 27th December, to clear the ship.

Documents required were as follows:
3 copies Personal/Crew Effects List.
9 copies Crew List.
4 copies Cargo Manifest (Nil).
3 copies Bonded Stores List.
3 copies Provisions Stores List.
3 copies Narcotics List.
3 copies Passenger List (Nil).
3 copies Arms and Ammunition List.
3 copies Voyage Memo.
3 copies Marine Health Declaration.
3 copies Ship's Particulars.

The following ship's certificates were required ashore for issue of Ship's Clearance:
Ship's Registry Certificate.
Safety Equipment Certificate.
Safety Construction Certificate.
Safety Radio Certificate.
Load Line Certificate.
I.O.P.P. Certificate.
Clearance from last Port.

Abour 12 Officials boarded. Customs sealed the bond after carrying out a thorough check of the contents. They also searched a few of the crew cabins. Everything ran smoothly.

Once the vessel was cleared, we heaved up anchor and proceeded inwards. The actual pilotage was carried out by a Pilot, supplied by Kasim Terminal, who was assisted by a Mooring Master. Both of these gentlemen were ex-seafarers, very competent and helpful. Due to "Local Regulations", we were required to have a Sorong Government Pilot onboard. He took no active part in the proceedings.

The pilotage looks "difficult" on the B.A. chart, and we did not follow the "recommended route" inwards, but followed a parallel route about 1 mile to the West. The Southerly current was about 4 knots, when transitting narrow channels between islands.

Our inward draft was 8.6 m. and the minimum UKC was 10.0 m. (Outbound, our deepest draft was 13.2 m., and the minimum UKC was 5.0 m.). Whilst at the berth, I obtained a local chart, Indonesian Chart No. 213 "Selat Sele". This shows the swept route we followed clearly, and indicated a minimum depth of 16.0 m. off the island of "Orama Ce". The coverage of this chart stops before the Terminal itself.

The maximum safe recommended draft for the Terminal, according to the Pilot, is 15.0 m. This may be exceeded, depending on local advice and time of year.

Pilotage, both inwards and outwards, is in daylight only, due to the buoyed channel being unlit. Many of the buoys shown on the B.A. chart were missing, or incorrectly positioned.

The Terminal is situated behind an island, as shown in the "Plan Section".

Two tugs made fast along our port side, while in the main channel, approximately 1 mile North of the first entrance.

Our approach to the Terminal was made via the Southern entrance, due to the strong Southerly current. This is certainly the favoured approach, and was comparatively simple.

A third tug was used to assist with berthing at the later stages.

First lines were head line forward, and spring aft, both run by mooring boats. The final moorings were (forward) 4-2-2 and (aft) 4-2-3. The additional spring being required aft due to the strong current at the berth (approximately 2 knots).

The berth is well maintained, and reasonably equipped. A shore gangway was provided. Loading was via 2×16 in. Chicksans, the maximum rate received being approximately 35,000 bbls./hr., though this depended on the level of the tank being used at the time.

Officially there is no shore leave, but ship's staff were formally invited to use the facilities of the Terminal's "yacht club", which acts as the social club for the Terminal. A reasonable standard of dress was the only condition.

Officially, there are no medical facilities, but again we were offered the use of the Terminal's clinic. I sent 2 crew with minor ailments, and these were promptly dealt with, free of charge.

Officially, there is no fresh water available, but again this was offered, but not required.

Kasim Terminal is a joint venture between Pertamina and Santa Fe Energy Resources Ltd. The installation is very isolated, and the main means of transport between the Terminal and nearest town, Sorong, was by boat. The Terminal as a result, was fairly "self-sufficient".

At Sorong, there is a local airfield, with several flights a day to Jakarta. Mail was hand-carried by staff returning to Jakarta on leave, as the local service was not reckoned to be too reliable.

Generally, all the Terminal staff were friendly and helpful, and the operation went smoothly, thanks to co-operation on both sides. I would recommend acquiring a copy of the local chart, prior to berthing, if possible.

AGENCY: See "General" before first port.

AUTHORITY: Petromer Trend Corp., Kasim Marine Terminal, Sorong, Irian Jaya, Indonesia. *Telex:* (In Jakarta) 47163 JKT. *Cables:* Trendex JKT. *Contact:* Petromer Trend, Jakarta. L.R. Zeigler, Resident Manager; Captain Manopo Sambow, Marine Superintendent.

Jakarta Office: Five Pillars Office Park, Jalan Letjen, M.T. Haryono 58, P.O. Box 209, Jakarta. *Tel:* 791308. *Telex and Cables:* See above. *Government Authority:* Kesyahbandaran Sorong, Direktorat Jenderai, Perhubungangan Laut IX, Sorong, Irian Jaya.

Harbour Master – Sorong, Jln. Jend A. Yani No. 13, Sorong. *Tel.:* 21839. *Contact:* Captain Delson Nainggolan.

KIJANG: 00.51 N. 104.37 E. (See Plan)

LOCATION: The Bauxite Loading Port of Kijang is situated at the S.E. coast of Bintan Island in the Riau Archipelago, in position Lat. 00° 50' 44" N. and Long. 104° 36' 31" E.

FLAGS: To be flown by incoming vessel:
Vessel's National Flag.
Indonesian Flag.
Vessel's Number.
Quarantine & Immigration Flag. (" Q" and "N").

DOCUMENTS: To be produced upon vessel's arrival:
12 Crew Lists
4 Passenger Lists (if any).
4 Parcel Lists (if any).
4 Stores Lists.
4 Cargo Manifests.
4 Narcotics Lists.
2 General Information.
4 Firearms and Ammunition Lists.
4 Personal Effects Lists.
2 Vaccination Lists.
1 *Declaration of Health Certificate.
2 *Harbour Reports.
International Load Line Certificate.
Certificate of Registry and Tonnage.
Certificate of Vessel's Nationality.
Safety Equipment Certificate.
Seaworthy Certificate.
Safety Radio Telegraphy Certificate.
Derat Certificate.
Last Port Clearance.
*Forms to be supplied by Agents.

Inspection Team: This team consists of the Port Health Officer, Customs Officer, Harbour Master and Immigration Officer.

After the vessel is granted Free Pratique, the Immigration Officer checks Passports, Seamen's Books and Crew List and issues shore passes.

PILOTAGE: One Government Pilot available. Pilot compulsory.
Pilot's office : c/o Port Administration Tanjung Pinang.
Priority : First come first served.
There are 2 Pilot boarding positions:

1. Tanjung Tillie:	00° 48' 12" N.	104° 35' 30" E.
2. Temborak Laut:	00° 49' 00" N.	104° 41' 30" E.

If vessel wishes to be piloted to the port on arrival day, vessel has to arrive at the desired Pilot boarding position at under mentioned times:
1. Tanjung Tillie: Not later than 1800 hrs. local time.
2. Temborak Laut: Not later than 1600 hrs. local time.

However, it depends on Pilot's decision after considering tide and current's conditions.

In case vessel is long overdue (3 hours delay after Master's last ETA cable), Perbaki shall charge compensation for keeping labourers waiting, etc.

RESTRICTIONS: The height of vessel from waterline to top of hatch coaming or railing must not exceed 12.00 m. Each side deck breadth from bulwark to king post or mast must not be less than 6.50 m. vertically and from bulwark to hatch coaming must be preferably 7.00 m. min., and 9.00 m. max. Minimum breadth 20.0 m.

Cable Way: There is a cable way across the entrance channel about 500 m. South of the jetty. Height above LWS is 45 m.

MAX. SIZE: LOA 185 m. Max. draft 11.00 m. Max. beam 28.0 m.

Greater max. draft and LOA might be possible after consultation with the Pilot/Harbour Master and considering the depth at entrance of the port upon departure.

RADIO: Cables to Perbaki Tanjung Pinang can be sent through Tanjung Pinang Coastal Radio Station, Call sign "PKJ2". Station also on VHF Channel 16.

Arrival Notice: Owner's advice: Owner to advise by cable to Adhiguna Jakarta and Perbaki Tanjung Pinang, with copy to Aneka Tambang Jakarta: at least 8 working days notice of vessel's ETA at loading port.

Master's advice: At least 48 hours before vessel's arrival at Pilot Station, Master shall give the following information to Adhiguna Jakarta and Perbaki Tanjung Pinang, with copy to Aneka Tambang Jakarta: last port of call, draft on arrival, quantity of bauxite to be loaded, stowage plan (hatch division for bauxite cargo), quantity and kind of commodity (ies) to be discharged — if any — and other necessary messages.

Final amended arrival time must be sent at the latest 24 hours before arrival.

Previous experience has shown that one cannot rely on telegrams regarding ETA sent by Agents at last port of call arriving in due time, therefore Perbaki Tanjung Pinang waits for the Master's telegram in order to make necessary preparation such as ordering Pilot, etc.

Availability of berthing space: The availability of berthing space will be confirmed by Sub-Agents.

TUGS: Available and compulsory. 6 tugs 170 h.p. – 1,600 h.p.

BERTHING: Vessels are moored alongside 2 jetties and 7 dolphins with good nylon ropes, 5 fore, 5 aft, 2 foresprings, 2 after springs, 2 fore breastlines and 2 after breastlines. For Spring tide a hercules wire rope (extra) is obtainable.

Same will be carried out from the Southern part of bauxite jetty and serves then as additional breastline. If a vessel has not got sufficient lines, same may be hired from Perbaki.

When moored alongside jetties, vessels must take special care of the moorings during hours of ebb-tide, which runs in S-N. direction.

Due to strong current in Strait of Kijang the ship's Master is kindly requested to pay attention to Sub-Agents advices.

Vessels over 20,000 d.w.t. will need extra 2 stern and 2 head lines.

Shifting Ship: Shifting ship will be done during slack water only by utilising ship's gear and with assistance of tugboat if necessary. But to finalise loading as scheduled in stowage plan, shifting may be done even during flood/ebb tides using vessel's engine.

Jetty: There is no quay. Vessels are moored alongside 7 dolphins and 2 jetties.

Distance between the 2 extreme dolphins is 135 m.

Loading Facilities: Loading installation consists of 2 loading conveyors or stacker. Bauxite is loaded in the hold of vessel by means of conveyor belt.

Stacker can be moved vertically from 13° to 35°, but the maximum position for proper operation is only up to 18° inclination angle.

Each stacker can swing 8.00 m. (4.0 m. to inner side and 4.0 m. to outer side).

Distance between the 2 stackers in parallel position is 50.00 m.

The length of stackers is 47.79 m. each. At the lowest position (13°) the end of stackers outreach about 10.50 m. from jetty seaward. (In this position the height from water line to the end of stackers is about 15.0 m. HWS).

Loading Capacity: About 7,000 tons per day using 2 stackers.

Weighing: The bauxite is automatically weighed during loading by weightometer. The specific gravity of bauxite is around 1.25 and stowage factor around 29.

Unloading: Cargo for Aneka Tambang only.

STEVEDORES: Labourers will be supplied by Perbaki. Making the vessel ready for loading/unloading to be done by vessel's crew members.

Loading is performed by Shipper's personnel. Loading/unloading equipments to be furnished by the vessel.

If necessary and at vessel's request, trimming of the bauxite can be done by bulldozer, except in deep tanks, cross bunkers, small holds in which bulldozer cannot operate. Weight of bulldozer is 5 tons, so double gear is compulsory when loading, discharging or shifting bulldozer. In hold where bulldozers are going to operate, all beams of upper as well as lower tween decks have to be removed. This has to be done by vessel's crew members. Loading/unloading and shifting bulldozers (with engine off) to be done by vessel's crew members. The vessel is responsible for any damage to the bulldozers while loading/unloading or shifting.

Working Hours: Loading to be effected on weather working days of 24 consecutive hours, Sunday and Holidays included.

MEDICAL: Doctor, hospital and inoculation service available.

DENSITY: 1020.

FRESH WATER: Not available.

FUEL: Not available.

CONSULS: None.

HATCHES: The first opening and the last closing of hatches as well as removing and reinstalling of hatch beams to be done by the vessel's crew.

CUSTOMS ALLOWANCES: Vessel's bonded store will be sealed by Customs Officer on arrival and will remain sealed until the vessel leaves Kijang port.

Note: It is recommended that ship's Master consult the Agents about the local prevailing Customs Regulations with regard to currency, cigarettes, spirits, narcotics, etc., to prevent unnecessary difficulties and eventually fines.

REPATRIATION: Can be arranged.

AIRPORT: There are regular daily flights from Tanjung Pinang, a domestic airport near Kijang, to Jakarta. Flying time is about 2 hours 15 minutes. Also a daily ferry service is available from Tanjung Pinang to Singapore. Sailing time about 3–4 hours.

TIME: GMT plus 7 hours.

HOLIDAYS: The following National Holidays are non-working days. New Year, 1st January; Idul fitri, the fixed 2 consecutive days of the year; Idul Adha, the fixed day of the year; Independence Day, 17th August; Christmas Day, 25th December; Maulid Day, the fixed day of the year; Easter, the fixed day of the year; Waisyak, the fixed day of the year; Nyepi, the fixed day of the year; Ascension Day, the fixed day of the year; Mi'radz, the fixed day of the year and The First Muharam, the fixed day of the year.

SERVICES: *Cash Advances:* At Master's request can be supplied by Agents in a reasonable amount.

Fumigation: No facilities.

Ship's Chandlers: None. In emergency cases, Perbaki can act as ship's chandler for a limited quantity.

SHORE LEAVE: *Shore Pass:* Shore pass must be carried by Crew members during shore leave.

Invitation: Vessel's Crew members are strictly prohibited to invite friends and hawkers from shore aboard the vessel.

Anchorage: While lying at anchor waiting for berth no one is allowed to go ashore as long as vessel is not cleared.

It is also prohibited to lower lifeboats or rafts for the purpose of fishing, sailing, visiting nearby islands etc.

Leaving for Kijang and Around: Permitted.

GENERAL:

Depths: Entrance: 10.50 m. LWS; Alongside jetty: 11.00 m. LWS

Current: Direction: At high tide, from North to South; At ebb tide, from South to North.

Velocity: Around 2–6 knots.

Chart: Indonesian Sea Charts No. 42 and 65.

Nature of bottom: Sand and soft materials.

SHIPMASTER'S REPORT: 1977.

Vessel's Dimension: Length 185.5 m. Beam 25.5 m.

Vessel sailed after loading wet bauxite ore in bulk. Vessel has previously visited the port 3 times and loaded to a draft of 11.2 m., however, due to poor tides loaded draft this voyage was 10.8 m.

Entrance to the port is from the North between Mapor Island and Merapas Island. The channel is clear and swept to 13.5 m. (chart datum) there are no navigational problems and Pilot boards in position 00° 50' N. and 104° 43' E. Also one can proceed onwards to the North of Kambat and Rusa Islands and then between Gabi and Riau to Tanjung Tillie anchorage. This is the accepted Pilot boarding ground and pilotage is compulsory and daytime only. The Pilot is accommodated at Tanjung

Pinang but drives by car to the bauxite terminal and takes a launch from there to the vessel. He may not board upon arrival of vessel if the tide is unsuitable for berthing, as the ebb tide can reach 8 knots in Selat Kijang. There are 3 tugs available which are small, but quite adequate for berthing. The vessel proceeds past the berth then turns so as to berth starboard-side alongside. Moorings consist of 6 headlines, 1 breast line and 2 springs forward and 3 springs and 6 stern lines aft. Nylon lines are in position and can be hired as needed from the shore. The loading arms are fixed and shifting of the vessel is carried out at slack water.

Communication can be difficult at times. Tanjung Uban functions for 15 minutes in the hour and is not normally raised until day of arrival. All cables are sent through radio "PKI" Jakarta and seem to arrive at their destination. If possible despatch 3 copies of the Crew List to the port in advance as this speeds up clearance on arrival.

AGENCY:
General Agents: PT. Pelayaran Bahtera Adhiguna. 10-12 Jalan Kalibesar Timur, P.O. Box 1313, Jakarta, Indonesia. Cable Address: Adhiguna Jakarta. Telex: Adiguna JKT 42854. Tel: 676547, 672613.
Local Agents (Head Office): PT. Aneka Tambang. Jalan Bungur Besar 24–26, Jakarta, Indonesia. Cable Address: Anekatambang Jakarta. Telex: Antam JKT 49147 Jakarta. Tel: 410108 (hunting system).
Local Agents at Loading Port: PT. Aneka Tambang, Unit Per-tambangan Bauksit, Kijang. Postal Address: Kijang, Tanjung Pinang. Riau, Indonesia. Cable Address: Perbaki Tanjung Pinang. Telex: 57110 Antam TPI, 45665 Antam IA. Tel: 21177.
Vessel's Disbursement Account: All vessel's expenses will be charged to the related Principals through the General Agents.
AUTHORITY: Tanjung Pinang Port Authority, Port Administration, Tanjung Pinang, Riau, Indonesia. *Tel:* Tanjung Pinang 21153. *Contact:* Harbour Master.

KRUENG RAYA (Malahayati): 05.35 N. 95.31 E.

PILOTAGE: Compulsory. Pilot may be contacted on VHF Channel 12.
ANCHORAGE: Vessels anchor in position 05° 36' 30" N., 95° 30' 30" E.
RADIO: Coastal Radio Station PKA-5.
Frequencies: 4,055/5,165/5,295/6,926 kHz.
TUGS: No tugs available. One mooring boat of 99 h.p. available.
BERTHING: Length of wharf 100 m. Depth alongside 6.0 m.
Storage: Godown with capacity of 2,000 tons.
Fork Lifts: 4×2 tons – 5 tons.
CRANES: 1×15 ton mobile crane.
STEVEDORES: Available from labour pool U.K.A.
FRESH WATER: Available.
FUEL: Not available.
REPAIRS: No facilities available.

KUALA BEUKAH: 04.53 N. 97.57 E.

LOCATION: The terminal is situated on the East coast of North Sumatra, South of Diamond Point, almost due West of Penang Island.
The loading terminal consists of a five point conventional buoy mooring, positioned at Lat. 04° 53' 08" N., Long. 97° 56' 51" E.
PILOTAGE: Not compulsory.
RESTRICTIONS: Berthing during daylight hours only (preferred time 0600 hrs. – 1500 hrs.). Unberthing at any time.
MAX. SIZE: Minimum: 60,000 d.w.t. Maximum: 90,000 d.w.t.
The operational limit is 102,000 d.w.t., but recommended maximum for safety purposes is 90,000 d.w.t.
RADIO/VHF: Contact Pertamina at Pangkalan Susu (Call Sign "PKB-2") on VHF Channels 9, 16 and 19.
Vessels can also call via Lhok Seumawa (Call Sign "PKB-20") on 452 kHz.
Arrival Notice: ETA should include:
Name of vessel.
Nationality.
Year built.
Name of owner.
Name of Master, and nationality.
Vessel specification.
TUGS: 2×1,200 b.h.p. tugs are usually available, and an additional tug can be provided if required (due to weather conditions).
2×125 h.p. workboats are available for support and transportation.
TANKERS: Hose: One string of floating hose 280 m. in length and 16 in. inside diameter is extended to the tanker. All vessels not having 16 in. hose connection must provide their own reducer.
Stern to Centre Minifold: Maximum 140 m.
Usual Loadable Quantity: ± 215,000 bbls.
Depth of Water: 57.5 ft. at end of pipeline at low tide.
Minimum Under Keel Clearance Required: N/A.
Tidal Range: Maximum tidal range is 7.0 ft. and maximum wave and swell is 8.0 ft.
Storage Capacity:
Total Capacity: 230,000 bbls.
Dead Stock: 10,000 bbls.
Net Working Capacity: 220,000 bbls.
Loading Rate:
Average: ± 4,500 b.p.h.
Maximum: 5,000 b.p.h.

Crude Oil Characteristic:
Name: Katapa.
Specific Gravity at 60/60°F: 0.7762.
API Gravity at 60°F: 50.8.
Pour Point: Minus 30°F.
Reid Vapour Pressure at 100°F: 7.4.
Sulphur Content: 0.06% (weight).
Inspector: If required, Buyer shall appoint an independent inspector (surveyor) at loadport, acceptable to Seller with costs to be shared equally between Buyer and Seller. Quality and quantity is to be determined by independent inspector in accordance with good standard industry practice, with quantity established as per Bill of Lading at loadpoint, and shall be final and binding.
MEDICAL: Clinic available.
DENSITY: 1020 – 1025.
FRESH WATER: Not available.
FUEL: Not available.
CONSULS: None.
REPAIRS: No facilities.
TIME: GMT plus 7 hours.
AUTHORITY: *Operator:* Asamera Oil (Indonesia) Ltd.

KUALA TANJUNG: 03.22 N. 99.28 E.

PILOTAGE: Compulsory. Pilotage is arranged by vessel's Agent.
ANCHORAGE: Vessels anchor in position 03° 23' 05" N., 99° 28' E.
The holding ground in the anchorage is good and consists of clay and silty sand. Depth of water 15 m. – 23 m.
RESTRICTIONS: There are 2 recommended approach routes to the port. These routes are 2 miles wide and were surveyed by the Indonesian Hydrographic Office in 1979. Minimum depth of water in the area is 12.2 m. (C.D.).
No obstructions have been found in the area but many fish traps exist on both sides of the approach routes.
RADIO: All communications are passed via Belawan Coastal Radio Station.
VHF: Channels 16, 14 and 12 available.
TUGS: 2×1,300 h.p.
BERTHING:

Wharf	*Length* (m.)	*Depth* (m.)
A	200	9.0
B	150	9.0
C	80	5.6

Storage: There is a godown with 10,700 sq.m. and an open storage area of 12,800 sq.m.
Fork Lifts: 10×3 tons – 5 tons.
MEDICAL: Hospital facilities available.
STEVEDORES: Available from labour pool.
FRESH WATER: Available.
FUEL: Not available.
REPAIRS: No facilities available.

LABUANTRING BAY (Lembar): 08.44 S. 116.04 E.
(See Plan)

AMPENAN: 08.34 S. 116.04 E.

DOCUMENTS:
Health Certificate.
1 Vaccinations List (Yellow Fever, Cholera/Typhus).
9 Crew Lists.
7 Passenger Lists (landing/transit).
4 Lists of Personal Effects.
7 Ship's Stores Lists.
2 Cargo Manifests (discharge/transit).
4 Dangerous Cargo Lists.
1 Stowage Plan; all to be signed by Ship's Master and/or Chief Officer.
APPROACHES: When approaching Ampenan, harbour is marked by light tower. Excellent holding ground in about 16 m.
PILOTAGE: When Pilot required, vessel must request via Agent or via Ampenan Radio at least 24 hours before arrival. Pilot service will then be given by Harbour Master from Ampenan to Labuantring Bay.
ANCHORAGE: Overseas vessels not familiar with Labuantring Bay, normally call Ampenan and await particular information and/or Pilot to enter Labuantring Bay (outer buoy). Good holding ground in about 16 m. Vessels with a draft of more than 6 m. must keep clear from channel to inner harbour. Navigating in channel without Pilot may cause difficulties; channel equipped with buoys, depth approx. 7 m.
RESTRICTIONS: Vessel may enter Ampenan and Labuantring Bay (outer buoy) day and night. Vessel not visited by port authorities between 1800 hrs. to 0700 hrs. (local time), exceptional cases allowed. Vessels are not allowed enter into inner harbour (Labuantring Bay) after sunset.
HEALTH: Pratique granted by port doctor after boarding vessel. Vessels from an infected port have to hoist "Q" flag. If any suspected disease or fever on board, necessary inform Agent by cable or via radio station. Treatment of crew members for illnesses other than quarantinable diseases arranged by Government's practitioners through ship's Agent.

RADIO: Ampenan Radio. Call sign PKD 9. Freq. 500 kHz and 430 kHz. Times GMT: 0000–0100, 0500–0600: except Friday and Saturday: 0000–0100, 0900–1000. Sunday and holiday closed.

TUGS: None.

BERTHING: Length of quay at Labuantring Bay (Lembar) 128 m. Depth alongside 6.5 m. – 7.5 m. Berthing at Ampenan (anchorage) for all sizes of vessel.

CRANES: None.

STEVEDORES: Ordered by Agent. To enable Agent ordering necessary gangs, vessel must give accurate ETA at least 24 hours in advance. Working on Sunday and holidays allowed by agreement in exceptional cases.

MEDICAL: Cable or radio before arrival if medical assistance necessary on entry. Government's hospital facilities available. Yellow Fever Certificates inspected on arrival.

TANKERS: Berthing at Ampenan.

FRESH WATER: Available.

FUEL: Available in limited quantities.

CONSULS: None available locally.

GANGWAY/DECK WATCHMEN: Usually employed during loading and discharging operations.

OPENING/CLOSING HATCHES: Normally carried out by stevedores; ship's crew may if required by vessel to do so.

CERTIFICATES: Registered Tonnage Certificate, Load Line Certificate, Safety Radio Certificate, Safety Equipment Certificate, Light dues Receipt, Derat Certificate, Clearance from previous port, all to be shown on arrival.

CUSTOMS ALLOWANCES: No restrictions. Custom's Officer supervises opening and resealing of bond.

CARGO GEAR: Wire and rope-slings, nets and net-slings, lighters all supplied by stevedores except rain-tents. No shore cranes available. Loading and discharging using ship's derricks.

AIRPORT: Served by regular airlines to Bali and Java.

TIME: GMT plus 8 hours.

HOLIDAYS: 1st January; Independence Day (17th August); Christian, Islamic and Balinese holidays as appointed by the Indonesian Government.

SHORE LEAVE: Crew allowed ashore; passports required whilst ashore.

IDENTIFICATION CARDS: All crew's passports must be certificated by Immigration Officer on arrival, whereafter to be used as shore passes.

DELAYS: November to April is the rainy season. High winds and rain can affect cargo work.

WEATHER: November till April rainy season. Quite heavy winds and rain can affect cargo work.

GENERAL: Vessels should not use ship's radio station. Harbour Police and Customs' guards on board during ship's stay in harbour.

LALANG MARINE TERMINAL: 01.11 N. 102.13 E.

(See Plan)

LOCATION: Lalang Marine Terminal is located offshore in Lalang Channel on the East Coast of Sumatra, between the island of Padang and the mainland of Sumatra, Indonesia.

The Terminal lies approximately 10 nautical miles in a South Easterly direction from Sungai Pakning.

The Terminal coordinates are:

Latitude 1° 11' 22" N.
Longitude 102° 13' 03" E.

Description: The Terminal consists of a 141,186 tonne storage barge named "Lasmo Riau".

The storage barge is secured to a Single Point Oil Loading System (SPOLS) which enables the storage barge to swing freely to the wind and tidal currents. The storage barge is painted a bright orange colour.

The administrative office of the Lalang Terminal is situated aboard the storage barge. Telephone and telex communication with Kondur main office in Jakarta is available. There is also the facility of a single telephone channel for the whole Lalang field which can connect to any Jakarta or international number. Use of the communications systems is allowed only through the export tankers agent with the approval of the Terminal Superintendent. Normally only important calls of an urgent nature will be allowed. Laboratory facilities are available on the barge for the testing of crude oil stocks.

The "Lasmo Riau" is equipped with four A.O.Smith Positive Displacement Meters for quantity measurement in accordance with Indonesian Government Regulations. Each meter has a maximum capacity of 12,500 bbls./hr.

The overall length of "Lasmo Riau" is 932 ft. The total crude oil capacity is approximately one million barrels of which 912,000 barrels can be loaded to an export tanker.

DOCUMENTS: After the ship is all secured alongside the storage barge or anchored in the anchorage area, the Customs Officer will seal the stores. If arriving from a foreign port, the agent will prepare the General Cargo Declaration Form stating the cargo onboard the tanker and attaching the appropriate Shipping Documents.

If the tanker is arriving from an Indonesian port, the Port Clearance issued at the last Indonesian port will be retained by the Local Port Authority and the Arrival Clearance at Lalang is granted.

The Harbour Master submits a Harbour Report Form for the Master to complete.

The agent prepares the Ship's Documents Check List Form to check the validity of each document.

These documents are: Certificate of Registry, Ship's Construction Certificate, Load Line Certificate, Safety Equipment Certificate, Safety Radio/Telegraph Certificate, Cargo Gear Certificate and Derat Certificate or Derat Exemption Certificate.

This list is then delivered to the Harbour Master with the following documents attached: Last Port Clearance and Crew List approved by the Immigration Officer.

The Harbour Master issues a Port Clearance at departure, provided clearance is also granted by the other governmental authorities. A Panamanian Port Clearance for Panamanian Flag vessels is not required at Lalang Marine Terminal.

The Immigration Officer requires 2 copies of the Crew List and will check the ship's articles and the passports of the crew. When these documents are found to be in order, an Arrival Clearance will be marked on the Crew List.

Departure Procedure: Prior to the vessel's departure, the Immigration Official requires 6 copies of the Crew List to be marked for "Departure Immigration Clearance", and duly signed, they will be distributed as follows:

Master of the vessel	1 copy.
Harbour Master	1 copy.
Customs	1 copy.
Pertamina Agent	1 copy.
Immigration	2 copies.

Upon presentation of the Crew List which is signed and marked for Departure Immigration Clearance and Customs Clearance, the Harbour Master will issue the Port Clearance.

Final Clearance formalities will be carried out aboard the tanker alongside the storage barge or in the anchorage area as circumstances dictate.

Before leaving the Terminal Area, the Master should advise the Terminal the vessel's ETA at destination through the Company Representative. This is required for onward transmission to the owners or charterers.

ARRIVAL PROCEDURE:

INDONESIAN GOVERNMENT REGULATIONS ARE STRICTLY ENFORCED.

In accordance with practice in Indonesian ports, Quarantine, Immigration, Pilot and Call Sign flags must be displayed by all vessels approaching the pilot. These signals shall be displayed continuously until clearance is granted.

The signals are as follows:

Sunrise to sunset: Quarantine flag 'Q'.
Sunset to sunrise: Signal lights (red over white).

The 'N' flag should be flown until the Immigration Officer boards the ship.

The 'G' flag (request for pilot) should be flown until pilot boards. Vessels should also fly the Call Sign.

As soon as the pilot boards, the 'G' flag should be replaced by the 'H' flag which signifies that the pilot is aboard.

Indonesian Immigration, Customs and Harbour Master Officials will board the vessel after arrival at Lalang anchorage or terminal.

Each tanker entering the Port of Lalang must have requested and been granted "Agency Agreement" which is approved by the Directorate General of Sea Communication.

At the same time, application is made for Provisional Pratique through the Directorate of Quarantine and if granted, a cable advice is sent to the Harbour Authorities.

Port Health Clearance is issued prior to tanker's arrival and is also valid for departure clearance.

If Provisional Pratique is not granted a Port Health Officer will be provided.

All of the foregoing is arranged through and by the agent.

Each crew member should be in possession of an International Vaccination Certificate.

Under normal conditions if a tanker is scheduled to berth on arrival the Company Representative will board such vessel in the vicinity of the anchorage area.

Tankers waiting to load shall wait their turn in the recommended anchorage area, and shall maintain radio telephone contact with the Terminal on VHF Channel 16 and await Terminal instructions.

The Company Representative will act on behalf of the Company to acknowledge receipt of tanker's Notice of Readiness. Such notice will not be accepted for a time earlier than:

(a) the Master has received the Company Representative onboard or;

(b) the tanker shall have dropped anchor within the recommended anchorage area, and has advised the Terminal the time of anchoring.

Exception to (a) and (b) will be if the tanker is within the anchorage area awaiting arrival of the Company Representative and has been requested by the Terminal not to anchor.

In this case Notice of Readiness will be accepted from the time the Terminal requested the ship not to anchor.

The Company reserves the right to decline to berth a specific tanker if in the opinion of the Company Representative its condition or facilities are unsafe for berthing or for loading even though the berth may be open for tankers.

The decision of the Lalang Terminal Superintendent or his designated alternate to berth or not to berth a vessel shall be final.

PILOTAGE: Pilotage is compulsory. Request for pilotage assistance must be made at least 6 hours before arrival and the owner's agent must inform the Port Administration (Pilotage Division) of the ship's anticipated arrival 24 hours in advance.

The position for awaiting pilot embarkation is Eastward from the Morong Strait. Morong Pilot Station is positioned at Lat. 01° 56' 27" N. Long. 101° 51' 12" E. Morong Strait (Selat Morong) is a narrow channel located between Padang and Rupat Islands.

ANCHORAGE: The anchorage for awaiting the Government Sea Pilot on departure is 1.5 miles North of the storage barge in a depth of 21.0 m. (68.9 ft.).

Also see "Pilotage".

APPROACHES: The approach channel is well marked with lighted radar reflecting buoys and beacons (See "Plan"). The Terminal can be reached by deep draft vessels by proceeding from the Malacca Strait into the Bengkalis Strait thence following the buoyed channel on a Southerly course past the junction of the Rupat Strait thence onwards on a South Easterly course to the Terminal, a total distance of approximately 51 nautical miles.

RESTRICTIONS/MAX. SIZE: Berthing during daylight only. Unberthing at anytime.

The following minimum draft schedule is recommended for various tonnage tankers berthing at Lalang Marine Terminal, subject to agreement between the Master and the Company Representative, depending on prevailing weather conditions.

D.W.T.			*Minimum Draft*		
From		*To*	*Forward* (ft.)		*Aft* (ft.)
12,000	–	22,000	12	–	20
22,000	–	32,000	16	–	24
32,000	–	45,000	18	–	26
45,000	–	60,000	19	–	27
60,000	–	100,000	22	–	28
100,000	–	140,000	24	–	30

Vessels in excess of 140,000 d.w.t. and 55 ft. departure draft are not accepted for loading unless special arrangements with the District Operations Manager (DOM) have previously been agreed. This would only apply to larger vessels loading part cargo and various factors would have to be considered, such as length, displacement at departure, departure draft and height of tide on arrival and departure date.

Owners and Masters are advised that the water depth in the manoeuvring approach area to "Lasmo Riau" is 17 m. (55.77 ft.). When berthed alongside "Lasmo Riau", water depth is 22.7 m. (74.5 ft.). To the above depths a tidal rise averaging 5 ft. at neaps and 8 ft. at springs may be added according to the particular tide.

Therefore deeply loaded vessels drawing 55 ft. can only depart from the Terminal using the tidal rise to give adequate under keel depth of water.

Also see 'Anchorage".

HEALTH: See "Arrival Procedure".

RADIO/VHF: It is important that incoming tankers advise Lalang Marine Terminal through "Pertaminaship Jakarta" as General Agent, and copy to Kondur Petroleum S.A. 72 hours, 48 hours and 24 hours before estimated time of arrival, giving best estimate of the ship's arrival time at Morong Pilot Station (Lat. 01° 56' 27" N., Long. 101° 51' 12" E.). Advices of less than 24 hours prior to estimated time of arrival have to be sent by telex to "Pertaminaship" Local Agent in Dumai/Sungai Pakning, Telex No. 56285 or by radio.

Address: Pertaminaship (See "Agency").
Kondur Petroleum S.A. (See "Authority").

Time to be used for ETA is local time or "Golf" time zone G.M.T. plus 7 hours throughout the year.

The first message should include the following information:

1. Name of tanker and radio call sign.
2. Cargo requirements.
3. De-ballasting time. (Note: If the ship is equipped with a separate permanent ballast system, ability to load crude oil and discharge ballast at the same time must be stated).
4. Maximum loading rate the ship is able to accept.
5. Arrival draft, forward and aft. Estimated departure draft.
6. Last port of call.
7. Confirm that vessel has a clean Bill of Health.
8. If there is any sickness on board give whatever information is available as to the possible type of sickness.
9. If inoculation or vaccinations are required. If so advise number and type required.
10. Distance in feet from the bow and the bridge to tankers loading manifold.
11. Size and number of manifold connections.

If there is any appreciable change in the vessel's ETA the Terminal should be advised by cable or telex to Kondur Petroleum S.A. as soon as possible. Additionally the Lalang Terminal should be advised of changes in ETA through Dumai Radio, who will pass the information to the Terminal direct or through the local agent.

Radio Communication: VHF/FM radio telephone (International Calling Channel 16, Frequency 156.800 MHz.).

Masters are recommended to use this system immediately they are within radio range of the Lalang Marine Terminal. Attention to VHF communications may be the means of avoiding delay in berthing and vessel turn around time. While in the Terminal area the ship's radio will be under the sole control of the Terminal Superintendent or his designated alternate.

Masters are reminded that if tankers are requested to anchor to await berthing, it is their reponsibility to maintain a *constant* listening watch on Channel 16 to receive Terminal instructions.

Any delay due to failure to maintain a constant listening watch on Channel 16 will be for the ship's account and will not be included in calculation of Lay Time.

The storage barge is equipped with VHF Marine Channels 6, 9, 12, 14, 16 Simplex and 19 and 20 Duplex. Subsequent to the Company Representative boarding the tanker, intership communication within the Terminal area will be by portable handheld UHF radio (frequency 453.8125 MHz.). This frequency is not for general purpose use unless clearance is first obtained from the Terminal Superintendent. This is required for safety reasons.

Should for any reason communications between a loading tanker and the storage barge breakdown, the tanker should make the emergency signal (i.e. a series of continuous blasts on the ship's whistle or siren). Upon hearing this signal from a loading tanker, the storage barge will *immediately* stop loading to the export tanker. Loading will not again be commenced until communications have been re-established.

High Frequency Single Side Band Radio Telephone: A voice message from incoming tankers may be relayed to Lalang Terminal through Dumai Radio. Masters should request the Coastal Radio Station to relay the necessary information to Lalang Terminal through Kurau Base Camp or the local agent.

Alternatively, a message may be passed to Kondur Petroleum S.A. through the Pertamina Coastal Radio Station at Jakarta for onward transmission to Lalang Marine Terminal. Masters should request the information be relayed to Kondur Petroleum S.A. by telephone, the number being 5710707.

Information on the Radio Station at Dumai (PKP) and Pertamina Radio Station at Jakarta (PKI-2) follows. Attention is drawn to the fact that information for Sungai Pakning passes via Dumai Radio Station, however voice contact with Sungai Pakning (PKP-5) through VHF is direct.

JAKARTA:
HF/MF:
Name of Coastal Station: Jakarta Radio.
Call Sign: PKI-2.
Owned and operated by: Pertamina.
Nature: CR.
Power: 1 kW.
Antenna position: Lat. 6° 08' S., Long. 106° 50' E.

Carrier Frequency (kHz.) Coastal Station	(kHz.) Ship Station	*Class*	*Hours of Service* (G.M.T.)
452/500	500*	A1 – A2	H24
8626	8363.2 – 8364.8	A1	0200 – 0400/1000 – 1200 0500 – 0600/1400 – 1600 0700 – 0800/1700 – 2000
12980	12544.8 – 12547.2 12559.2 – 12560.4	A1	0100 – 0200/1200 – 1400 0400 – 0500/1600 – 1700 0800 – 1000/2000 – 2200
4419.4 4425.6	4125* 4131.2	A3A – A3J	0500 – 0600/0800 – 0900 1600 – 1800/2200 – 2400
6512.6	6206.2	A3A – A3J	0000 – 0100/1200 – 1400 0300 – 0400/1800 – 2000 0600 – 0700
8759.2	8235.3	A3A – A3J	0100 – 0300/1100 – 1200 0400 – 0500/1500 – 1600 0700 – 0800

VHF:
Name of Coastal Station: Jakarta Radio.
Call sign: PKI-2.
Owned and operated by: Pertamina.
Power: 50 W.

Channel	*Transmitting Frequency* (MHz.) Coastal Station	(MHz.) Ship Station	*Nature*	*Hours of Service* (G.M.T.)
9	156.45	156.45	CR	H24
16*	156.80	156.80	CR	
19	161.55	156.95	CR	

* – Frequencies followed by an asterisk are "Calling Frequencies".

DUMAI:
HF/MF:
Name of Coastal Station: Dumai Radio.
Call sign: PKP.
Owned and operated by: Directorate General of Sea Communications.
Nature: CP.
Power: 1 kW/800 W.
Antenna position: Lat. 1° 39' 45" N., Long. 101° 26' 56" E.

Carrier Frequency (kHz.) Coastal Station	(kHz.) Ship Station	*Class*	*Hours of Service* (G.M.T.)
448/500	500*	A1 – A2	0100 – 0300 0800 – 0900 1100 – 1300
6337	6272.4 – 6273.0 6279.6 – 6280.2	A1	1200 – 1300
8457	8363.2 – 8364.0 8372.8 – 8373.6	A1	0100 – 0200 1300 – 1400
12682.5	12544.8 – 12546.0 12559.2 – 12560.4	A1	0230 – 0330 0630 – 0730
17184.8	16726.4 – 16728.0 16745.6 – 16747.2	A1	0500 – 0600
2182/3180	2182*	A3A – A3H – A3J	0130 – 0230 0700 – 0800 1100 – 1200
4357.4	4063	A3A – A3J	HX
6215.5	6215.5*	A3A – A3H – A3J	0230 – 0330
8765.4	8241.5	A3A – A3H – A3J	0000 – 0100 0800 – 0900
13125.6	12354.8	A3A – A3H – A3J	

VHF:
Name of Coastal Station: Dumai Radio.
Call sign: PKP-4.
Owned and operated by: Pertamina.
Power: 50 W.

Note: If contact cannot be made with Dumai Radio, then vessel should immediately contact Singapore Radio, call sign "9VG' and forward ETA message to "Amoseas Singapore RS – 21349". The communication between the vessel and Pilotage Section is on VHF Channel 12.

Channel	*Transmitting Frequency* (MHz.) Coastal Station	(MHz.) Ship Station	*Nature*	*Hours of Service* (G.M.T.)
9	156.45	156.45	CR	H24
16*	156.80	156.80	CR	
19	161.55	156.95	CR	

* – Frequencies followed by an asterisk are "Calling Frequencies".

SUNGAI PAKNING:
HF/MF:
Name of Coastal Station: Via Dumai Radio.
Call sign: PKP.
Owned and operated by: Directorate General of Sea Communications.
Nature: CP.
Power: 1 kW/800 W.
Antenna position: Lat. 1° 39' 45" N., Long. 101° 26' 56" E.

Carrier Frequency (kHz.) Coastal Station	(kHz.) Ship Station	*Class*	*Hours of Service* (G.M.T.)
448/500	500*	A1 – A2	0100 – 0300 0800 – 0900 1100 – 1300
6337	6272.4 – 6273.0 6279.6 – 6280.2	A1	1200 – 1300
8457	8363.2 – 8364.0 8372.8 – 8373.6	A1	0100 – 0200 1300 – 1400
12682.5	12544.8 – 12546.0 12559.2 – 12560.4	A1	0230 – 0330 0630 – 0730
17184.8	16726.4 – 16728.0 16745.6 – 16747.2	A1	0500 – 0600
2182/3180	2182*	A3A – A3H – A3J	0130 – 0230 0700 – 0800 1100 – 1200
4357.4	4063	A3A – A3J	HX
6215.5	6215.5*	A3A – A3H – A3J	0230 – 0330
8765.4	8241.5	A3A – A3H – A3J	0000 – 0100 0800 – 0900
13125.6	12354.8	A3A – A3H – A3J	

VHF:
Name of Coastal Station: Sungai Pakning Radio.
Call sign: PKP-5.
Owned and operated by: Pertamina.
Power: 50 W.
Antenna position: Lat. 1° 23' N., Long. 102° 10' E.

Channel	*Transmitting Frequency* (MHz.) Coastal Station	(MHz.) Ship Station	*Nature*	*Hours of Service* (G.M.T.)
9	156.45	156.45	CR	H24
16*	156.80	156.80	CR	
19	161.55	156.95	CR	

* – Frequencies followed by an asterisk are "Calling Frequencies".

TUGS: There are 2 tugs, each of 3,600 h.p. available to assist export tankers during berthing and unberthing operations. Also available are small mooring launches to run mooring lines and also to transport officials as required between the storage barge and the export tanker.

BERTHING :
Mooring/Unmooring: Lalang Marine Terminal will operate 24 hours a day, 7 days a week.

Tankers will normally be berthed during daylight hours, weather and other circumstances permitting. In special circumstances, at the sole discretion of the District Operation Manager, night time berthing may be allowed if all conditions are favourable. Unmooring will be carried out at any hour subject to approval of the Terminal Superintendent.

Tankers to be moored or manoeuvred at Lalang Marine Terminal will be boarded by the Government Harbour Pilot in Sungai Pakning anchorage area.

All such manoeuvring of ships shall be done only in accordance with the advice of the Government Harbour Pilot, subject to the understanding that in all cases and circumstances the Master of the tanker being manoeuvred shall remain solely responsible on behalf of his vessel's owners for the safety and proper manoeuvring of his vessel.

The ship's Master, or one of his designated and qualified deck officers must be on the navigating bridge at all times whilst the vessel is being manoeuvred.

The Company Representative will board the vessel in the vicinity of Lalang Terminal anchorage area and report unsatisfactory conditions to the Terminal Superintendent who may reject the tanker until corrections are fully made. All costs accruing therefrom will be for the vessel's account.

Before loading, the tanker's cargo tanks are to be inspected and if suitable for loading oil cargo a notation signed by both the Terminal Representative and vessel's Master to this effect will be made on The Company Dry Certificate.

The Company Terminal Superintendent, or his designated alternate, shall be the sole authority to decide when the port is closed due to unsuitable weather conditions preventing normal working operations.

Various combinations of wind, tidal conditions also the size, length, ballasted trim, and handling qualities of a vessel can effect the decision to berth a vessel at Lalang Marine Terminal. All these factors have to be evaluated before a final berthing decision is made.

Delays to vessels using Lalang Marine Terminal due to the port being closed because of bad weather conditions shall not be computed as used Lay Time when compiling vessel's turn around time.

Request for the Terminal to stop the flow of cargo at a predetermined tonnage must be in writing. The request must include the statement by the ship's Master that The Company will not be held responsible for any error and that in case of the vessel being overloaded the excess cargo cannot be pumped back to the storage barge. The ship's Master will also be held responsible for any spills caused by this request.

The ship's Master is responsible to ensure that no communication by radio telegraphy is allowed within the Terminal area.

Unauthorised radio communications will be cause for cessation of all operations, except clearing of the berth, and the vessel's Notice of Readiness will be immediately nullified.

The Master of each tanker will be given a copy of the *"Conditions of Use of Lalang Marine Terminal"* which he will be required to sign before the vessel proceeds to berth.

The vessel's personnel are responsible for the safety of the vessel and must take all necessary precautions, whether or not so advised by the Company Representative, having in mind the hazards of the operation because of the products being handled, weather conditions and any other circumstances requiring special care or caution.

Ships are requested to have a pilot ladder safely and securely rigged, ready for immediate use, and long enough to reach the Company Representative's launch.

A combination of pilot ladder and ship's accommodation ladder, so arranged that the personnel can first use the pilot ladder until part way up the vessel's side, and then transfer to the accommodation ladder is recommended, especially on very large tankers. This should be on the tanker's starboard side. A light line should be ready to take aboard the Company Representative's equipment.

Tankers will provide a broad lee for the Company Representative both when boarding and leaving the ship. Adequate explosion proof lighting at night must be provided near the pilot ladder and manifold connection area. During loading overside lighting must be provided in the vicinity of the sea valves.

During a tanker's stay alongside the storage barge, emergency towing wires shall at all times be hung over the ship's stern on each quarter of the vessel and on each bow. These wires shall be secured on the bollards inboard to enable the vessel to be towed away should the need arise. They must be tended throughout to keep the eye of the wire not more than 2 ft. above the water.

Before any crude oil is loaded all ship's scuppers on the main decks must be plugged and cemented oil tight. Approved mechanical means of closing scuppers may be accepted.

It is absolutely essential that extremely careful supervision be exercised by officers of all tankers while loading operations are in progress. A responsible ship's officer is required to be on duty continuously while the tanker is being loaded. He will be assisted by an adequate number of ship's personnel in these operations.

It is the responsibility of the vessel to ensure that all mooring lines are properly tended on loading tankers. The Company Representative at any time may direct additional ship's lines to be put out, or require the moorings to be adjusted as he thinks necessary. At all times sufficient crew must be available to carry out, under the supervision of a responsible officer, instructions given by the Company Representative.

Master's of loading tankers are advised that raising, lowering, connecting and disconnecting of oil loading hoses as well as other work and duties onboard ship connected with the loading of cargo or maintaining mooring lines in a correct manner will be performed by the ship's crew, directed by a responsible officer as required by the Company Representative. Loading of crude oil tankers is through 2 strings of 12 in. I.D. hoses with 150 ASA flange rating. The weight of each hose is approximately 1 ton. All tankers loading crude oil at Lalang Marine Terminal must be able to connect their manifolds to the 12 in. hoses. Masters are strongly reminded that it is the ship's responsibility to provide reducers to make the connection, if the ship's manifold is not 12 in.

Preparations for Mooring: Preparations for mooring will be advised by the Terminal through VHF communication prior to tanker's arrival or by the Company Representative before the mooring operation commences.

Crude oil tankers are required to have ready:

1. On the port side: A derrick of at least 10 tons safe working load, rigged, and ready to pick up the hose connecting gear. The derrick will subsequently be used for raising, connecting, disconnecting and lowering loading hoses. There is a crane and a derrick available on the storage barge, sited near the loading manifold, which are available to assist the export tanker with connecting and disconnecting loading hoses.
2. Forward: 6 good mooring lines.
   2 good spring wires.
   Heaving lines, stoppers, etc.
   Aft: Same as forward.

When in position the moorings will be as follows:
Forward:
5 head lines, one of which is from the storage barge.
2 breast lines.
2 springs leading aft.
Aft:
5 stern lines, one of which is from the storage barge.
2 breast lines.
2 springs leading forward.

Export Tanker Gear and Equipment: A ship may be rejected if upon inspection one or more of the following is noted: It is not properly equipped, it is not suitably manned, its tanks are not suitable for cargo, its ballast is dirty.

There should be 4 persons forward and 4 persons aft during mooring and unmooring operations.

A vessel is suitably manned if it has a full complement of qualified officers and crew, all of whom are in a sober condition, competent and willing to carry out their duties and orders.

A ship must be equipped with a good working propulsion unit as passed by the appropriate survey society. Inoperative ships or partly inoperative ships will be rejected. Should a ship become inoperative while berthed alongside the storage barge it will be removed at the ship's expense.

No repairs to main engines or other essential equipment or machinery may be carried out while alongside the storage barge, unless with the permission of the Terminal Superintendent or his designated alternate. Crude oil tankers must be able to lift the export hoses from the storage barge to connect with the ship's manifold by means of its own derricks and using its own crew. Terminal personnel will assist at the discretion of the Terminal Superintendent. A vessel must have both bower anchors in good working condition. Both bow anchors and anchor cable must be of size and standard to meet either Lloyds or A.B.S. requirements, even though they may in fact be classified by other societies.

All vessels must have ready on deck suitable stoppers for manila or synthetic lines and wires used for mooring purposes.

All vessels must have suitable winches or capstans in good working order.

Such winches or capstans must have sufficient power to heave the ship to the position required by the Terminal Company Representative. Power supply to all deck machinery must be maintained throughout the period the ship is secured alongside the storage barge. Failure to comply with this requirement will result in cessation of loading and delay and expense so caused will be for the ship's account. To assist in vessel's turnaround, ships should have all necessary gear ready on arrival. Crude oil tankers must have the cargo boom on the port side raised and ready before the ship is boarded by the Company Representative.

Vessels which may consider the lifting capacity of their gear to be marginal should strengthen their gear accordingly. A common way to do so is to rig a second topping lift on the boom. Masters of crude oil tankers are reminded that the hose connecting operation will normally be carried out while the ship is deballasting.

The cargo derrick required to raise the hose from the storage barge must have sufficient length of strong lifting wire rope on the winch drum to enable the cargo hook to reach the deck of the barge and still have adequate turns of wire left on the drum to ensure safety.

LOADING: Crude oil tankers are loaded through 2 strings of 12 in. I.D. cargo hoses. All crude oil tankers not having 12 in. hose connections should provide their own reducers ready on the manifold prior to the ship's arrival so as to avoid delay in the hose connecting operation. The maximum loading rate at Lalang Terminal is 37,500 bbls./hr., while the minimum rate is 15,000 bbls./hr. Any tanker unable to receive crude oil at the above rate may be rejected or may lose its turn to load to avoid delay to other tankers waiting to load. In order to save time as well as to make the berth available to others, it is requested that ships receive crude oil as fast as it can be delivered with due regard for safety. Masters are reminded that for safety reasons it is advisable to have the ship half loaded as quickly as possible. Rate can be reduced for topping-off tanks. When requested by the ship to stop, cessation of crude oil flow is almost immediate.

General Characteristics of Lalang Crude Oil:

API Gravity at	60°F		38.2
Kinematic Viscosity at	100°F	cSt	13.36
	122°F	cSt	6.827
	140°F	cSt	5.510
Pour Point		°F	95
Sulphur Content		wt%	0.11
Ash Content		wt%	0.001
Salt Content as NaCl		wt%	0.0005
Conradson Carbon Residue		wt%	1.556
Reid Vapour Pressure at	100°F	psi	2.5

Cargo Documentation: Documents such as Bills of Lading, Quality Certificate, Quantity Certificate, Dry Certificate, Ullage Certificate, Time Loading Report, Certificate of Origin, Cargo Manifest and Master's Receipt for Documents/Samples, etc. are prepared at Lalang Marine Terminal. When the tanker has been loaded, the documents will be completed and be taken aboard the tanker for the Master's signature.

Signing of these documents by the Master will take place at the same time final Departure Clearance formalities are being carried out.

Notes of Protest if any, should be handed to the Company Representative for further delivery to Kondur Petroleum S.A., Jakarta. Please note that the Company Representative will acknowledge receipt of the Note of Protest only, and is not authorised to accept such letters.

BALLAST: Owners and Masters are responsible to observe International Convention Laws and Indonesian Government Regulations concerning pollution of the sea, having particular regard to avoid pollution caused by dirty ballast discharge.

No facilities are available for disposal of dirty ballast.

The categories of pollution include oily water from bilges, crude residue from previous voyages, or any other matter that may result in pollution of the sea. Any fines imposed shall be for ship's account.

As soon as practical after arrival, all tankers will be inspected by a Lalang Marine Terminal official for dirty ballast. During discharge of ballast, similar inspections will continue.

If evidence of oil appears at any of these inspections, the ship will be rejected, and will not be accepted again until *satisfactory evidence is produced that such ballast was disposed of in a proper manner.* If, during inspection, or during progress of loading, it is revealed that the ship's tanks are not tight, or that oil is leaking from the ship, the ship may be rejected or refused further loading.

If the ship's tanks are found to be leaking, it will not be accepted for loading unless satisfactory evidence of repair duly certified by Lloyd's or A.B.S. surveyors, or other recognised surveyors is submitted. It is the responsibility of the ship's Master to see that no oil of any kind is pumped or spilled overboard from his ship. Drip pans, sawdust, dispersant, etc. should be used at all times, especially when disconnecting hoses in order to avoid any spillage of oil overboard.

Any tanker rejected because of dirty ballast or sea pollution will automatically nullify its Notice of Readiness and will lose any priority of position for loading.

A tanker must have sufficient ballast for safe handling, having due regard to existing weather and sea conditions. Through a careful watch of the weather and sea conditions, frequent exchange of information between ship and Terminal, and by a knowledge of the behaviour of his own ship, a ship's Master may come to the Terminal with minimum safe ballast and thus lessen any possibility of infringement of sea pollution regulations.

In addition to the lights usually displayed, vessels discharging ballast or loading cargo during darkness will brilliantly illuminate the sea around the ship, so that any pollution will be noticeable.

Tankers equipped with a separate system of ballast tanks will be allowed to discharge ballast and load oil simultaneously, providing approval is first obtained from the Company Terminal Superintendent or his alternate.

Most responsible shipowners have adopted a system of tank cleaning using circulatory methods of transfer of tank washings onboard ship and treating these washings with chemicals. The result is that no oil is discharged into the sea and the oil separated is collected in slop tank. With the written permission of lifting companies, the Terminal will load on top of such slops. This system is highly recommended to avoid pollution of the rivers and seas.

Masters are required to certify in writing the quantity of slops remaining on board (if any). If they intend to load crude oil on top of the slops, it must be clearly stated. The Company Representative will confirm the amount stated in writing, by ullaging and checking the calculations of the slops to ensure the amount declared is correct. Provided agreement is reached on the amount of slops, the Company Representative will confirm the amount of slops on the Dry Certificate.

Note: A separate "Slop Certificate" signed by the Chief Officer and witnessed by the Company Representative is required to substantiate calculations.

Masters are Warned that Inspection of Ballast is Strict.

If, at any time an overflow of crude oil occurs, loading will be suspended immediately and not be resumed until the oil is cleaned up and removed from the decks of the vessel and/or from the surface of the sea, and any damage is repaired and no further danger exists. It is stressed that during the loading operations, the Oil Movement Supervisor will immediately slow down the loading rate on receipt of a request for same from the ship's deck officer in charge of loading.

All spillages of oil must be reported immediately to the Terminal Superintendent, or his alternate, and subsequently a detailed report in writing submitted by the Master of the vessel concerned giving all relevant details. Failure of the Master to provide a full report may cause delay in obtaining the ship's Outward Clearance. Costs caused by such delay will be for the ship's account.

It is emphasised that there are absolutely no facilities for dealing with dirty ballast at Lalang Marine Terminal. Also that the geographical position of the terminal in the middle of the Lalang Strait, near the town of Sungai Pakning, surrounded by many small fishing villages causes supervision of adherence to oil pollution regulations to be very strict. Masters are warned accordingly to arrive with clean ballast.

MEDICAL: No clinic is available. There is a doctor based in Kurau to render emergency medical aid to all in the Lalang Field. In serious cases of illness the doctor will endeavour to assist. In a life or death situation all possible efforts will be made to assist the ship, however, where possible sick crew members should be disembarked in Singapore prior to proceeding to Lalang or as circumstances dictate, after departure from Lalang Marine Terminal.

DENSITY: 1012 – 1020.

FRESH WATER: Not available.

FUEL: No bunkers are available at Lalang Marine Terminal. If obtained from an outside source, no bunkering is permitted when the tanker is berthed alongside the storage barge, or in the Terminal area.

CONSULS: None.

CUSTOMS ALLOWANCES: Cigarettes, cigars, tobacco, matches, spirits, wine, beer, perfume, arms, ammunition and possibly other items have to be locked up under Customs seal from time of arrival of ship in port until time of leaving territorial waters.

Each person is allowed to bring in 200 cigarettes or the equivalent in grams of tobacco or cigars. Special allowances are made for the Master under special circumstances.

REPATRIATION: No crew changes allowed.

If an emergency and for humanitarian reasons exceptions to the foregoing may be permitted. All expenses incurred will be for the ship's account.

TIME: GMT plus 7 hours throughout the year.

SHORE LEAVE: Not allowed.

GENERAL:

Charts:

1. Indonesian Hydrographic Office Charts No. 12, 14, 18 and 24.
2. British Admiralty Charts No. 3933 and 3947.
3. U.S. Hydrographic office Charts No. 71260 and 71261.

Sailing Directions:

U.S. Hydrographic Office Publication 162 "Sailing Directions for the Malacca Strait and Sumatra".

British Admiralty Publication "Indonesia Pilot Vol. 1, First Edition 1975".

Each vessel proceeding to Lalang Marine Terminal should obtain the latest charts, sailing directions and hydrographic bulletins for the area.

Language: The languages of the Terminal are Indonesian and English.

Visitors: Only authorised personnel or visitors are permitted on the storage barge and/or export tanker.

Crude Oil Testing: The crude oil testing laboratory is equipped to perform the following tests: A.P.I. Gravity, B.S.& W., Pour Point and R.V.P.

Indonesian Flag: During daylight hours the Indonesian flag must be flown throughout the vessel's stay in port.

Agency: Pertamina Directorate of Shipping and Telecommunications, Jakarta handle all agency matters for tankers (See "Agency").

Mail/Spares: Mail for personnel on incoming tankers may be sent to the Company's Jakarta office for delivery to the tanker. Mail which arrives after a tanker has left will be handed over to the ship's agent. The Company cannot and will not accept any responsibility for such mail. It must be clearly understood that spare parts and other materials will not be accepted for delivery to tankers, except in severe emergency situations and by prior arrangement with the Company Production Manager in Jakarta. All costs for transport and other services connected with delivery of the parts or materials will be for ship's account. Owners and Masters are warned that such charges are "high".

WEATHER: Bad weather is rare, during the rainy season a morning mist sometimes restricts visibility. The mist normally clears away about four hours after sunrise. Otherwise visibility is good, except in very heavy rain squalls. The average temperature is slightly below 80°F. The range in an average year is only 30°, between about 65°, and 95°. The daily range is from 15° to 20°. The humidity is high (70% to 90%).

The rainfall is heavy with a yearly average from 80 in. to 100 in. The wettest months are October to January. There are two comparatively dry seasons, February and March and also June, July and August. The most intense rainfalls are in the afternoon but these heavy downpours are mostly of short duration. In the N.E. Monsoon the duration of the rain is more evenly spread over the 24 hours than during the rest of the year when rain is most likely to occur in the evening and at night.

Winds: The N.E. Monsoon is never very steady but is most constant in January when from 21% to 40% of the winds are Northeasterly. In November and December Northwesterly winds are most frequent. In February the most frequent winds are North East. The S.W. Monsoon begins in late May or early June. From June to September winds in the Straits are mainly Southeasterly but are not steady. Squalls known as "Sumatras" occur off the coast from June to September, most frequent between 2200 hrs. and 0200 hrs.

Tidal Current: The average range of spring tides is approximately 8 ft. and the range of neap tides is approximately 5.5 ft. The lowest L.W. recorded was 1.6 ft. above chart datum, the highest H.W. recorded was 6.1 ft. above chart datum.

The current flow follows the natural deep water channel very closely. The current at Lalang Terminal floods in a Southerly direction at a maximum rate of 4.5 knots and ebbs in a Northerly direction at a maximum rate of 3.0 knots. Vessels will normally be berthed stemming the current flow on the starboard side of the storage barge.

NOMINATIONS: Tanker nominations for lifting of Lalang Crude Oil are coordinated through;

Kondur Petroleum S.A., Landmark Centre, Jl. Jend. Sudirman No. 1, Jakarta 12910, Indonesia. Fax: 5711004.

All crude oil sales and tanker chartering are arranged by the following parties in each of their respective locations, namely Pertamina, Kondur Petroleum S.A., China National Offshore Oil Corporation and Novus Petroleum Ltd.

Tanker scheduling is coordinated for all of the parties through Kondur Petroleum S.A., Jakarta.

Principal Offices:

Pertamina Head Office, Jl. Medan Merdeka Timur 1A, Jakarta Pusat, Indonesia.

Kondur Petroleum S.A., Landmark Centre, Tower A, Jl. Jenderal Sudirman No. 1, Jakarta 12910 (P.O.Box 3415), Indonesia.

China National Offshore Oil Corporation, Beijing, China.

Oryx U.K. (Malacca Strait) Ltd., c/o Novus Petroleum Ltd., Level 5, 70 Phillip Street, Sydney, NSW 2000, Australia.

AGENCY: *Procedure for Appointing Agent:*

General Agent: Indonesian Government Regulations require that Pertamina Directorate of Shipping and Telecommunications be appointed General Agent for all tankers proceeding to load in Indonesia. Address: Pertamina Directorate of Shipping and Telecommunication, Attention: Agency Department, 19th Floor, Pertamina Building, Jl. Medan Merdeka Timur 1A, Jakarta, Indonesia. Cable address: Pertaminaship IA. Telex: 44450, 45348. Tel: 343 806, 303 3356, 303 3307, 303 3305. Fax: 343 781.

For vessels arriving for the first time in Indonesian waters, owners or charterers are required to appoint Pertamina Directorate of Shipping and Telecommunication Agency Department as general agent to attend the vessel at Lalang Marine Terminal by Letter of Appointment. This Letter of Appointment must be sent at least 2 weeks prior to the vessel's arrival. The above applies also to vessels which may have changed their name and vessels for whom the Letter of Appointment has expired. When issuing the Letter of Appointment, owners or charterers can attach a list of vessels under their management/control which are scheduled to operate in Indonesian waters. In such cases, the single Letter of Appointment will be valid for all ships named in the letter. Letters of Appointment have a validity of one year, after which they must be renewed. Each tanker entering Lalang Marine Terminal must have requested and been granted an entry or agency permit prior to its arrival.

It is vital that the general agent receives the following information 2 weeks before the vessel's arrival, to enable the necessary permits to be obtained from the Government Directorate General of Sea Communications:

(1) Name and full address of Owner.
(2) Name of Tanker and Call Sign.
(3) Deadweight tonnage and length overall.
(4) Flag and Port of Registry.
(5) Certificate of Registration number.
(6) Name of Master.
(7) Number of crew.
(8) ETA at Morong Pilot Station (Lat. 01° 56' 27" N., Long. 101° 51' 12" E.).
(9) Last port of call.
(10) Intended Indonesian ports of call.
(11) Destination after loading.
(12) Quantity and type of crude oil to be loaded.

Advance Payment: "Pertamina Directorate of Shipping and Telecommunications" will acknowledge receipt of telex or cable appointment and will request an advance deposit depending on the size of the vessel to cover "Port Charges". In addition a sum of U.S.$5,000 is to be paid as advance payment for Freight Tax.

Advance payment for Government and port charges should be sent to: Pertamina Agency, (Account No. 11.51.006.000.0005), Bank Negara Indonesia, Cabang Gambir, Jl. Kebon Sirih 77A, Jakarta, Indonesia.

To facilitate handling preparation, owners/charterers are required to telex "Pertamina Directorate of Shipping and Telecommunication" advising Telegraphic Transfer (T.T.) number, the name of the vessel for which the T.T. is made and the Indonesian Ports of call. Telex numbers are 44450 and 45348. In those instances where advance payment exceeds the actual port charges and disbursements the balance will be credited to the owners/charterers accounts or remitted by the agent.

Neither Pertamina nor Kondur Petroleum S.A. will be responsible for demurrage, expenses or other charges resulting from failure to pre-arrange obligations in this manner.

AUTHORITY: Harbour Master, Sungai Pakning, Riau, East Sumatera, Indonesia. *Tel:* 3452301. *Contact:* Nur Iman, Harbour Master.

OPERATOR: Kondur Petroleum S.A., Landmark Building, Jl. Jend. Sudirman 1, P.O.Box 3415, Jakarta, Indonesia. *Tel:* 5710707. *FAX:* 5711004.

LAWI LAWI (Sepinggan): 01.27 S. 116.46 E.

(See Plan)

LOCATION: The Shore Terminal is situated approximately three miles inshore on the East coast of Kalimantan, Indonesia, in the Makassar Strait. It is about 12 miles South of Balikpapan.

The Single Buoy Mooring is approximately 5.75 miles offshore in position 01° 27' 30.1" S., 116° 45' 37.1" E. in 22 m. of water. The submarine line to the SBM sea bed manifold is 30 in. diameter. A double string of 20 in. diameter flexible submarine rubber hoses joins the sea bed manifold to the SBM (Tanker rail to ship's manifold is 12 in.).

DOCUMENTS: If arriving from a foreign port the following documents may be required for granting pratique:

Certificate of Registry.
Construction Certificate.
Load Line Certificate.
Safety Equipment Certificate.
Safety Radio/Telephone/Telegraph Certificate.
Exemption Certificate.
Cargo Certificate.
Derat Certificate.

Also required will be last Port Clearance and Crew List.

Crude oil loading documents will be prepared at the Lawi Lawi Terminal and when the vessel has been loaded the documents will be completed and final clearance formalities will be carried out on board.

Flag Dispensation: Each tanker entering the Lawi Lawi Terminal must have requested and been granted Flag Dispensation prior to its arrival. At the same time application should be made for Provisional Pratique through the Directorate of Quarantine and if granted a cable advice is sent to the Harbour Authorities. Port Health clearance is issued prior to the tankers arrival and is also valid for departure. If Provisional Pratique is not granted a Port Health Officer will be provided. All of the foregoing is arranged through and by the Agent.

PILOTAGE: A Mooring Master will board the vessel in the anchorage area and advise the Master on all manoeuvres relative to berthing and unberthing and connecting the hoses.

Vessels are requested to make a lee and have a pilot ladder long enough to reach the Mooring Master's launch. At night adequate lighting should be provided. Ships with more than 30 ft. freeboard should rig a pilot ladder to a position 3 ft. above the water and an accommodation ladder so rigged that the Pilot can transfer from the pilot ladder to the accommodation ladder once he is clear of the pilot boat.

READINESS: *Procedure when berth available on arrival:* A vessel for which a berth is available on arrival will be boarded by a Mooring Master in the anchorage area and providing that the vessel is in all respects ready to commence loading/discharging (except for the necessary deballasting) the Notice of Readiness will be accepted at the time of the Mooring Master boarding.

If the vessel is not in all respects ready to proceed to the berth, with main engines fully manoeuverable, mooring ropes on deck, windlasses, winches, etc. in good working order, Notice of Readiness will not be accepted until the Mooring Master is satisfied that all these conditions are met.

Procedure when instructed to anchor on arrival: A vessel which has been instructed by Lawi Lawi Port Control "PKN-2" to anchor on arrival should, after doing so, inform Port Control of the precise arrival time. According to the practice of the port, acceptance of the Notice of Readiness will coincide with this arrival time, providing:

(a) that it is within the hours of daylight-deemed to be from 0600 hours, local time to 1800 hours, local time.
(b) that it is not a Public Holiday or Sunday, unless the vessel is actually handled on that day.
(c) that the port is open.
(d) that vessel's arrival is within her accepted date range.

An exception to clause (a) above, is when conditions allow night berthing, in which case the vessel will be accepted when the Mooring Master boards, or, should the vessel have been at anchor, when the anchor is aweigh, providing that the Mooring Master is then on board.

In addition to clause (a), (b) and (c), above, vessels will not be accepted when arriving at an unreasonable time ahead of their last signalled estimated time of arrival. It is not the practice of the port to keep pilots (Mooring Masters) on station in the anchorage.

Notwithstanding anything in the foregoing, Notice of Readiness will not be accepted at a time when it is not the practice of the port to accept it.

Delay due to excessive deballasting: Delays in commencement of loading due to deballasting in excess of 6 hours will be deducted from the laytime.

Exact arrival time: It is stressed that vessels must advise Port Control of their exact arrival time, as failure to do so may lead to loss of their berthing turn.

Lay Time: Lay time will be calculated as outlined in the Crude Off-Take Procedure, Lawi Lawi Terminal.

Conditions of use of port: The Master of each tanker will be given a copy of the "Conditions of use of Port of Lawi Lawi Terminal" which he will be asked to sign before the Company mooring and connecting equipment is hoisted on board and before any manoeuvre is commenced under the Mooring Master's advice.

RADIO: *Advice of arrival:* 72 hours prior to arrival at the Terminal, vessels should advise their ETA's by cable sent via "Pertamina" Coastal Radio Station at Balikpapan. They should also confirm or amend them when they are 48 hours and again when 24 hours, distant from the terminal

Pertamina cable address:
Pertamina Ship Balikpapan
Pertamina Coastal Radio Stations:
I. Name of Station – Pertamina Balikpapan Radio
Call Sign – PKN 2
Frequency – Keeps watch on 4131 kHz and 6206 kHz A3
Answers on: 4423 kHz A3
6507 kHz A3
Class – A3H – A3J
Power – 500 Watt
Service – 24 Hours
Location – Lat. 01° 16' S.
– Long. 116° 50' E.

ETA messages sent to PKN2 should be addressed:
Pertamina PKP/PKK – Up V Balikpapan =
Message =
Master +

As long as no direct contact exists with PKN2 ships will send ETA's to PKI2

Lawe – Lawe Radio (PKN 28) with power of 20 Watts on VHF Channels 16, 9 and 19 for cargo operations.

II. Name of Station – Jakarta Radio
Call Sign – PKI2
Frequencies – 500 kHz (operates on 452 kHz)
– 2182 kHz answers on: 4178; 4280.5; 4363; 4410; 6457.5; 6520; 6516 kHz
– 8 MHz (operates on 8628 kHz)
Class – A1 500 kHz
A3 2182 kHz
A1 8 MHz
Power – 1 KW 500 kHz
500 W 2182 kHz
1 KW 8 MHz
Service – 500 kHz H24
2182 kHz 0400–0500 GMT
0700–0800
1000–1100
1500–1600
2000–2100
2300–2400
8 MHz 0100–0300 GMT
0500–0600
0900–1000
1100–1200
1400–1500
1730–1900
2100–2200

Geographical Location: Lat. 06° 08' 00" S. Long. 106° 50' 00" E.
ETA messages sent to PKI2 should be addressed:
Pertamina PKP/PKK – Up V Balikpapan =
Message =
Master +

Details of cable:
The following information should be included in the cable:

1. Name of vessel and radio call sign.
2. ETA in GMT and date (local time is GMT + 8 hours).
3. Cargo requirements or cargo on board.
4. Deballast time.
5. Maximum loading/discharging rate.
6. Vessel's draft on arrival.
7. If there is any sickness aboard or clean bill of health.
8. Last port of call.
9. Any hull, bulkhead, valve or pipeline leaks on vessel which could affect loading or cause pollution.
10. Distance in feet from bow to vessel's loading manifold.
11. Flange dimensions of vessel's manifold connection if not to ANSI B16.5, B.S. 1560, Series 150 or equivalent.

Also see "General" before first port.

ANCHORAGE: *Recommended Anchorage:* If vessels are obliged or instructed to anchor they must do so in the designated anchorage area. On no account is a vessel to anchor North of Latitude 01° 26' 30" S. or West of Longitude 116° 47' E. The depth of water in the anchorage is 30 m. The bottom is mud/clay and the holding ground is considered good.

RESTRICTIONS: Berthing any time, unberthing possible at any time. Minimum depth 25.0 m. Tidal range 2.2 m.

MAX. SIZE: *Minimum Size Tanker Acceptable:* The minimum size of tanker that can be accepted for loading/discharging at the SBM is 15,000 d.w.t. and 145 m. LOA.

Maximum Size Tanker Acceptable: With the presently fitted, mooring assembly and hose string length, the maximum size tanker that can be loaded at the SBM is 135,000 d.w.t. and 290 m. LOA.

VHF: Vessels equipped with VHF radio telephone should contact Pertamina Radio direct on the International Maritime Service Channel 16 (156.80 MHz) when in range to request instructions, working on Channel 19.

Language: The language of the terminal is English and Indonesian.

BERTHING: *Work Crew Service:* Mooring and un-mooring, lifting, lowering, connecting and disconnecting hoses will be done by ship's crew and assisted by a Terminal crew under the direction of the Mooring Master. Assistance from the ship's personnel in operating windlasses, winches, etc. will be required. Ship's crew will assist in hose connection/disconnection/mooring/un-mooring and carrying equipment from deck to forecastle as required. Any vessel whose crew do not give such assistance may be rejected and returned to the anchorage. Costs of such a delay would be for the ship's account.

Mooring: This description is only intended as a general outline and may be varied as to the order in which lines are taken up, etc. according to the circumstances prevailing at the time of mooring.

Moorings required from Tanker: The ship must provide and have ready the following. Two mooring ropes and one rope messenger line on forecastle.

The Approach: The ship approaches the buoy from down tide and wind, taking care to keep the wind right ahead. Adequate ballast must be retained on board to ensure that the vessel retains full manoeuvrability throughout the approach to the buoy and the actual mooring.

Bringing Aboard the Mooring Lines: The vessel will be brought to a position close to the buoy with the vessel stopped in the water and with the buoy fine on the port bow. During the approach to the buoy and while mooring, a Terminal work boat will keep the hoses pulled well clear to port. Under normal conditions the port rope will be the first taken on board. The Mooring Master will advise as to which rope is to be taken first and as to which fairlead this will be taken and the actual work of mooring will be done by ship's crew. The ship will lower a strong messenger line to the mooring boat who will in turn make this fast to the approach rope. The approach rope of 10 in. circumference will be hove aboard and will in turn be hove on until the chafing chain and open links are centred in the fairlead.

Securing the Mooring Lines: While the approach rope is being hove aboard a strong wire strop will be made fast to a set of forecastle bitts. To the end of this strop will be fitted a 50 ton shackle and the strop will be so made fast that the end and the shackle will be about 5 ft. inboard of the fairlead. The approach rope will be hove on until the large link of the chafe chain is sufficiently far inboard for it to be connected to the strop by the 50 ton shackle. When this is done the approach rope will be slacked off until the full weight comes on the strop/chafing chain/buoy rope. The buoy rope is 150 ft. long and is 12 in. circumference nylon of plaited construction.

The approach rope can now be taken to the bitts to act as a preventer.

The second rope is now taken aboard and made fast in the same way. When both the ropes are fast, good ropes or strops, provided by ship, can be made fast to the spare links on the chafing chains to back up the main mooring if required.

Fire Wire: A fire wire must be rigged on the starboard side forward and on the stern. These must be tended throughout the vessel's stay at SBM to ensure that they are kept within 2 to 3 ft. of water. In the case of fire the tugs would connect to these wires to pull vessel clear of the SBM.

Connecting Hoses: When the mooring is completed the work boat holding the hoses clear will bring these alongside the ship in way of the port side manifold.

Strops and Shackles: Strops and shackles will be provided by the Terminal and put on board as the vessel approaches the buoy. The ship must provide 2 mooring ropes at least 8 in. circumference and 100 fathoms long, a 4 in. circumference messenger line, and 2 rope lashings 4 in. in circumference and 15 ft. in length. These lashings should be of Manila or Polypropylene, nylon is not acceptable.

Unmooring: To unmoor from the buoy any extra back-up lines that have been made fast to the chafing chains are slipped first. The approach ropes are then taken to the ship's windlass/capstan and the weight taken on them until the shackle between the strop and chafing chain is undone. With the vessel moving slowly astern the approach ropes are slacked off and finally slipped and allowed to float free. While the ship is unmooring, a Terminal work boat will keep the floating hoses towed clear and will keep them clear until the ship has slipped the moorings is clear of the buoy.

HOSES: *Hose Lifting Capacity:* Tankers must be equipped with a hose lifting derrick at the port side manifold, with a lifting capacity in conformance with the table shown on Page C2 of Appendix "C" to The International Oil Tanker and Terminal Safety Guide. For instance; a 15,000 d.w.t. ship, at ballast draft with smooth sea conditions would have to lift a weight slightly in excess of 3.5 tons. For this purpose it is essential that the derrick is double rigged and that there is sufficient runner wire on the winch for the block to reach the water when hooking the hose on. The winch must be in good working order, the end of the runner securely fastened to the drum end and the winch brake operative. The hoses at the Terminal are 16 in. internal diameter with the tanker rail hoses having an internal diameter of 12 in.

Manifold Connection Sizes: The manifold connection will be 12 in. The Terminal is equipped with flanged spools to connect 8 in., 10 in., 12 in. and 16 in. manifolds. Ships manifolds must terminate in flanges of ASA 150 series.

Details of ASA 150 flat face flanges are shown in the "Plan Section". Unless the Terminal is given adequate notice, tankers equipped with manifold flanges of sizes and or ratings other than those specified above, will be rejected.

1×16 in. self floating hose is run from the buoy to the tanker. The last 3 hoses of the string, including the tanker rail hose, are 12 in. diameter. This reduction in diameter is made at the tanker end of the string so that the ship has less weight to lift when hoisting the hoses on board.

Hanging Off Hoses: Small bitts for hanging off loading hoses should be provided in line with the loading manifold.

LOADING: *Loading Rate:* Maximum loading rate is 13,500 bbls.p.h. Maximum manifold pressure 8 kg./cu.m. or SBM pressure 100 p.s.i. If the shore tank empty, discharge rate could be ±25,000 bbls.p.h. It is recommended that vessels take maximum flow, with due regard to safety, in order to expedite turn around time as well as to provide ballast as quickly as possible. Care should be taken not to overload, as there is no possibility whatever of pumping back ashore. When vessels are equipped with permanent ballast tanks, the ballast in these tanks should be retained on board until the vessel has taken on board sufficient cargo to be manoeuvrable. Vessels not so equipped should examine the possibility of safely loading and discharging ballast simultaneously, as such practice improves turn around time as well as reducing the possibility of breaking out of the berth in bad weather in a completely light condition.

Closing Valves Against Oil Flow: Warning is given of the danger of closing valves against an incoming oil stream. This will create excessive pressure which may result in damage to the loading hoses, sea-line and Terminal facilities. Vessels will be held liable for damages resulting from failure to observe this precaution.

Radio Contact: During loading operations the vessel will contact the Terminal Despatcher ashore every 30 minutes by the assigned VHF channel to ensure that radio contact is being maintained. Pumping will be stopped immediately if it is found that radio contact with the ship has been lost.

In addition to the ship's VHF, the Mooring Master will carry a portable radio, of approved design, with which he will be able to contact the shore terminal and mooring launches.

Mooring Launch: Throughout the loading operation a Terminal mooring launch will be in attendance at the ship to tend hoses, etc.

Every vessel requiring a "Shore Stop" will be required to inform the Mooring Master at start of loading and sign the form carried by the Mooring Master, requesting "Shore Stop". When requesting a "Shore Stop", Masters must understand that Pertamina accept no responsibility for any errors in the quantity. Should the cargo asked for overload the vessel, it is not possible to pump oil back from the ship to the shore.

Lawi Lawi Crude Oil Specifications:

Gravity at 60°F.:	39 A.P.I. to 34 A.P.I.
Salt Content:	Less than 12 pounds per 1,000 bbls.
B.S. & W.:	0.30 Vol. % or less.
Sulphur:	0.04 – 0.15 Weight %
Pour Point:	15°F. to 20°F.
Viscosity:	1,000 to 2,000 cST @ 100° F.
Reid Vapour Pressure:	3 to 8 p.s.i.

BALLAST/POLLUTION: *Adequate Ballast:* Due to the exposed location of the crude oil loading berth, vessels are required to carry sufficient ballast for safe handling, having due regard to existing weather and sea conditions. A vessel found by the Mooring Master to be not adequately ballasted will be rejected.

Pollution: Owners and Masters are responsible to observe International Convention Laws and Indonesian Government regulations concerning pollution of the sea, having particular regard for this area of the Macassar Strait.

Clean Ballast: As there are no ballast discharging facilities, vessels must arrive at the Terminal with clean ballast, ensuring that all pipelines, pumps and strainers have been flushed out prior to arriving.

The Mooring Master will inspect ship's ballast on boarding and has the power to reject any vessel that he deems would cause pollution of the sea area, in which case the vessel must proceed to sea and return only when ballast is completely free of oil. Any vessel rejected because of dirty ballast will automatically nullify its Notice of Readiness and will lose any priority of position for loading. Ballast discharge should not be commenced without the prior agreement of the Mooring Master.

Bilges: Bilges must not be discharged while at the SBM or in the anchorage.

Inspection During Loading/Discharging: At night the sea area around the vessel shall be adequately lighted, as frequent inspection by the Mooring Master will be made during the discharge of ballast. Any pollution whatsoever will be cause for rejection. Similarly, any hull leaks causing pollution during loading will be cause for rejection and the vessel will not be reaccepted unless satisfactory evidence of repairs has been certified by a qualified surveyor.

Cargo hose connections should be inspected during loading/discharging, drip-pans should be placed under the manifold, all unused cargo connections should be blanked off, sea-valves should be closed and lashed upon completion of deballasting and all scuppers must be securely plugged.

Fines and Claims: Any fines imposed by Governmental Authority for pollution shall be for the vessel's account.

In the event that the Company has to settle any third party claims as a result of damages to property caused by pollution attributable in any way to the vessel, they will have the right to reimbursement by those responsible for the vessel for all expenses incurred.

In the event of oil spillage or pollution of the waters, all labour and equipment costs for cleaning operations will be to the vessel's account.

REPAIRS: Being an open roadstead, vessels must keep engines on standby during their stay in the berth. No repairs to main engines may be undertaken while in the berth. Power must be kept on deck winches in case adjustments to mooring lines are found necessary.

Only the automatic turning gear should be used. If it should become necessary to turn the propeller(s) at revolutions greater than the minimum obtained by the automatic turning gear, application must be made to the Mooring Master in order that arrangements can be made to ensure that hoses are kept clear. The Mooring Master's written permission must be obtained before any such increase in revolutions.

CUSTOMS ALLOWANCES: Cigarettes, cigars, tobacco, matches, spirits, wine, beers, perfume, arms, ammunition and possibly other items have to be locked up under customs seal from time of arrival of ship in port until time of leaving territorial waters. Each person is allowed to bring in 200 cigarettes or the equivalent in grams of tobacco or cigars. Special allowances are made for the Master under special circumstances. The Customs Officer will seal the stores.

AIRPORT: Sepinggan Airport, distance 8 km.

TIME: GMT plus 8 hours.

FACILITIES: There are no facilities of any kind at Lawi Lawi S.B.M.

There are no engineering repair shops.
No fresh water.
No bunkers available.
No provisions or stores.
No crane or barge service.
No shore leave.
No crew changes.
No consulates available.

GENERAL: *Charts:*

British Admiralty Charts:

3014	Balikpapan Bay to Pulo Laut.
3031	Plans on the East Coast of Kalimantan.
941 B	Eastern Archipelago Sheet 2 Western Portion.
2637	Strait of Macassar South Port.

U.S. Naval Oceanographic Office Charts:

HO. 3045 Southern Part of Macassar Strait.
HO. 6188 Tanjung Tamarong to Sungai Pasir.

Sailing Directions: Indonesia Pilot Vol II, 1st Edition 1976.

Hydrographic Survey: A detailed hydrographic survey including a wire sweep was carried out from November 1975 to February 1976. This survey covers the approach channel, anchorage area and the manoeuvring area in the vicinity of the SBM (See "Plan").

Safety: Every vessel which berths at the buoy shall remain under the charge of the Master who will take all steps necessary to preserve the safety and security of such vessel, crew and terminal personal who may board in the execution of their various duties.

The Master of every vessel at anchor in the designated anchorage or secured to the SBM shall ensure that all parts of the vessel to which any person may be lawfully required to proceed are properly illuminated. Efficient and easy means of access shall be provided to every vessel at anchor at the SBM and such access shall be adequately illuminated between sunset and sunrise.

Operations: No person(s) shall be permitted to board or leave the vessel other than by the gangway or other proper means provided for the purpose.

The Mooring Master may require the vessel to unmoor at any time he deems it necessary for the safety of the vessel or the moorings or both, or for infringement of Port Regulations. Unsatisfactory conditions will be reported to the Company's Marine Superintendent, who is empowered to reject a vessel for future calls unless the reported deficiencies have been remedied.

Sufficient crew members must be immediately available at all times to assit with any or all operations on board the vessel at the terminal.

Floating Logs: Masters are advised to keep a good lookout for partially submerged logs floating in this area. These can be large and a hazard to safe navigation.

AGENCY: See "General" before first port.

AUTHORITY: The installations of this Terminal are owned by P. H. Perusahaan Pertambangan Minjak Dan Gas Bumi Negara (Pertamina), a State Enterprise of the Republic of Indonesia.

Operator: Pertamina Direktorat Pengolahan, Jalan Merdeka Timur 1A, Jakarta, Indonesia. *Tel:* 3847245, 3815410. *Telex:* 44152, 44302, 44441, 46549, 46552 and 46554. *FAX:* (021) 363585, 3843882.

Pertamina PKP/PKK – Up V, Jalan Minyak, Balikpapan 76111, Kalimantan Timur, Indonesia. *Telex:* 37131, 37165 Pertamina Bpp. *FAX:* (0542) 515668. *Contact:* Terminal Superintendent – Lawi-Lawi.

LHOKNGA: 05.27 N. 95.14 E.

LOCATION: This port is located about 52 km. from Banda Aceh (Port of Malahayati).

PILOTAGE: Compulsory. Pilot boarding station is located in position 05° 27' 30" N., 95° 12' 30" E.

ANCHORAGE: Vessels anchor in position 05° 28' 20" N., 95° 12' 40" E.

MAX. SIZE: Maximum LOA 150 m., maximum draft 9.10 m.

RADIO: Ulee Lheu Coastal Radio Station. Call sign PKA-5. Station on SSB.

VHF: The Coastal Radio Station is on Channels 12, 13, 14 and 16. Working hours 0800 – 1200 and 1600 – 1800.

The cement factory is on Channels 6, 12, 15 and 16.

TUGS: 2 × 800 h.p.

BERTHING: There is a concrete berth with a length of 125 m. and an average depth alongside of 10.0 m. The port is used by P.T. Semen Andalas for delivery of cement to their factory.

CRANES: 1 × 10 ton mobile crane.

STEVEDORES: Available.

MEDICAL: Doctor and clinic available.

FRESH WATER: Available.

FUEL: Not available.

REPAIRS: No facilities available.

REPATRIATION: Crew repatriation possible via Blang Bintang Airport situated about 32 km. from Lhoknga.

HOLIDAYS: 17th August (National Independence Day), Idul Fitri and Idul Adha. Work can be carried out in the evenings on holidays.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Indonesian Rupiah (Rp.). U.S.$ 1.00 = Rp.2.330. (1.1.96 (Subject to change).

AUTHORITY: Port Authority of Malahayati, Jalan Pelabuhan No. 10 Ulee Lheue, Banda Aceh 23233, Sumatra, Indonesia. *Tel:* (0651) 23501 Residence 23501. *Contact:* Agus Sutiono, Harbour Master.

Operator: P.T. Semen Andalas Indonesia, J.L. Banda Aceh, – Meulabo km. 17, P.O.Box 30, Lhoknga, Banda Aceh 23523, Indonesia. *Tel:* (0651 44200, 22571. *Telex:* 54120 Saibna la. *FAX:* (0651) 33585, 44110 44101. *Contact:* Yusta Bustamam, Senior Shipping Officer.

LHOKSEUMAWE (Including Hagu, Blang Lancang (Arun Terminal) and Krueng Geukueh): 05.15 N. 97.07 E.

(See Plan)

LOCATION: The port is situated on the North coast of Sumatra, Indonesia. The port limits (compulsory pilotage) are:

North:	Lat. 05° 17' 00" N.	Long. 97° 10' 00" E. to
	Lat. 05° 17' 00" N.	Long. 96° 58' 20" E.
West:	Lat. 05° 17' 00" N.	Long. 96° 58' 20" E. to the coast.
East:	Lat. 05° 17' 00" N.	Long. 97° 10' 00" E. to the coast.
South:	Along the coast between East and West limits include Blang Lancang and Public and Special Fertiliser Harbour (K.G.).	

The Blang Lancang outer buoy is in position:

Lat. 05° 15' 22" N. Long. 97° 07' 02" E. Fl. 8 sec.

Chart and Sailing Directions for the area:

Republik Indonesia Hidral No. 8 Plant Chart No. 25.
Sailing Direction.
List of Lights.
Special Publication.

Lhokseumawe Harbour is divided into 4 areas:

1. Lhokseumawe Harbour.
2. Hagu Pertamina Special Oil Terminal.
3. Blang Lancang Pertamina Special Harbour (LNG/LPG/Condensate Terminal).
4. Krueng Geukueh Harbour (Fertiliser Terminal and Public Berth).

DOCUMENTS: *Clearance:* The Document Clearance will be undertaken at any port (anchorage or berth).

Cholera Vaccination Certificates for all crew members and passengers (date not exceeding 6 months).

Certificates of Inoculation against any contagious diseases.

Customs, Immigration, Quarantine and Harbour Master will require the following for inspection:

10 Crew Lists.
3 Crew Declaration of Personal Effects.
3 Ship's Stores Lists (inventory).
2 Passengers Lists (if any).
5 Cargo Manifests, with a summary for transit cargo.
Clearance from the Last Port of Call.
Valid passports and/or Seaman's Certificates for all crew members.
International Maritime Declaration of Health.
Valid Derat or Derat Exemption Certificate.
Arms and Ammunition Declaration.
Load Line Certificate, Ship Registry, Radio Safety/Telegraphy Certificate, Ship's Construction Certificate, Safety Equipment Certificate.
U.S.C.G. Letter of Compliance.
General Information.

In accordance with practice in Indonesian ports the vessel's national flag, the Indonesian country flag, Quarantine, Immigration and Pilot flags must be displayed by all vessels approaching Lhokseumawe Harbour. These signals shall be displayed continuously until clearance is granted.

PILOTAGE: Compulsory for any movement of the ship in harbour and within the port limits.

Lhokseumawe Harbour: Pilot will board the vessel at the anchorage.

Hagu Special Oil Jetty: Pilot will board the vessel at the anchorage.

Blang Lancang Harbour: Pilot will board the vessel at the sea buoy or in the Anchorage Area about 3 miles from the breakwater.

Krueng Geukueh Harbour: Pilot will board in the Anchorage Area or one mile from breakwater.

Master, Owner or Agent should request the Pilot 6 hours in advance for berthing and 3 hours in advance for unberthing. The vessel should be stopped when the Pilot is boarding. Call the Lhokseumawe/Blang Lancang/Krueng Geukueh Pilot Station by VHF on Channel 12 (24 hours). Moving the ship for berthing and unberthing available in good conditions. The limit is: for the wind not more than 10 m./sec. and swell not more than 2 ft./sec. (for MBM) and visibility not less than 1 mile.

ANCHORAGE: A vessel which has been informed by the Agent to anchor on arrival shall proceed to the designated Anchorage Area.

Anchorage Area for Lhokseumawe Harbour and Hagu Special Oil Terminal is in position:

Lat. 05° 10' 32" N. Long. 97° 09' 20" E. Depth 20 m.

There are two Anchorage Areas at Blang Lancang Pertamina Special Harbour:

1. Anchorage Area for LNG and LPG tankers:
   Lat. 05° 15' 15" N. Long. 97° 07' 45" E. Depth of water 60 m.
2. Anchorage Area for condensate tankers:
   Lat. 05° 15' 15" N. Long. 97° 07' 25" E. Depth of water 60 m.

No dry cargo ship will anchor in Blang Lancang Special Harbour. All dry cargo ships visiting Blang Lancang Special Harbour should anchor in Lhokseumawe Harbour for clearance and awaiting a berth.

All vessels visiting Krueng Geukueh Harbour should anchor 1 mile North from breakwater in position:

Lat. 05° 16' 00" N. Long. 97° 01' 40" E. Depth of water 42 m.

The holding ground in the Anchorage Area is reported to be poor. All vessels are required to maintain engines on one hour's notice in good weather and 15 minutes' notice when wind speed exceeds Beaufort Scale 4 (moderate breeze).

RESTRICTIONS: If there are two LNG ships alongside the dock no other ship will move to West Cargo Dock in the Blang Lancang Harbour, except P & T marine craft actually assisting the LNG tanker.

No ship will enter Blang Lancang Harbour with ammunition on board.

Vessel not allowed to proceed into the Blang Lancang MBM restricted area without permission.

No ship will berth during night time at Lhokseumawe/Hagu Wharf or at Blang Lancang SPM/MBM. Blang Lancang Harbour open for 24 hour service. Krueng Geukeuh Harbour open for day time only.

MAX. SIZE:

Old Lhokseumawe Harbour: Only barge and tugboats are able to moor at the dock, depth 2.4 m.

Hagu Wharf: Max. draft 6.0 m.

Blang Lancang Harbour:

LNG Berth 2 (North):	Max. LOA – 290 m.
	Max. draft – 12.5 m.
	Max. size – 100,000 tonnes d.w.t.
LNG Berth 3 (South):	Max. LOA – 290 m.
	Max. draft – 12.5 m.
	Max. size – 100,000 tonnes d.w.t.
West Cargo Dock:	Max. LOA – 180 m. General cargo.
	Max. draft – 6.5 m.
LPG Dock – (Berth 3):	Max. LOA – 175 m. – 255 m.
	Max. draft – 12.5 m.
	Max. d.w.t. – 60,000
MBM:	Max. LOA – 275 m.
	Tankers – 30,000 – 100,000 d.w.t.
	LOA – 275 m.
SPM:	Tankers – 40,000 – 280,000 d.w.t.
	LOA – 350 m.

Krueng Geukueh Harbour:

Berth A–AAF	Max. d.w.t. – 10,000
	Max. LOA – 169 m.
	Max draft – 9.50 m.
Berth B–AAF	Max. d.w.t. – 15,000
	Max. LOA – 175 m.
	Max. draft – 9.5 m.
Berth PIM	Max. d.w.t. – 10,000
	Max. LOA – 169 m.
	Max. draft – 9.5 m.
Public Berth (length 80 m. with 1 mooring buoy and 1 mooring dolphin).	Max. d.w.t. – 10,000
	Max. LOA – 150 m.
	Max. draft – 9.5 m.

HEALTH: In order to obtain Free Pratique vessel must cable name and nationality of the ship; ports of call during the voyage; number of crew and passengers (if any); port of destination and Agent; condition of health of all onboard with details of any sickness and whether all vaccinated.

Officials will board before with Pilot. Quarantine flag "Q" and Immigration flag "N" must be flown until clearance is granted.

RADIO: Ships proceeding to Pertamina/Pt. Arun: Call Lhokseumawe Radio Station, call sign PKB 20. (Owned/operated by Pertamina). Open 24 hours. See "List of Radio Signals" or on VHF Channel 16 or Pilot Station on VHF Channel 12.

Dry cargo ships: Call the General Agent in Belawan. Call Belawan Radio PKB 1. (Owned/operated by Port Authority). See "List of Radio Signals."

Arrival Notice: *LNG:* With respect to each cargo of LNG to be loaded, the Master of the LNG vessel shall give to the company the following notices:

(1) A First notice, which is to be sent upon the departure of the LNG vessel from a discharge port, is to set forth:
  * The time of departure from the discharge port.
  * The estimated time of arrival at the loading port (ETA).
  * The estimated amount of cargo to be loaded.
  * Crew changes that will take place (if any).
(2) A Second notice 96 hours prior to the estimated time of arrival at the loading port;
(3) A Third notice which is to be sent 48 hours prior to the estimated time of arrival at the loading port;
(4) A Fourth notice which is to be sent 24 hours prior to the estimated time of arrival at the loading port;
(5) A Fifth notice is to be sent 5 hours prior to the estimated time of arrival, stating the ship's equator and bottom tank temperature.

Advice of Arrival (Condensate Tankers, Dry Cargo Vessels, etc.):

Vessels other than LNG/LPG tankers are to give notice of arrival 72, 48 and 24 hours prior to arrival at the terminal. The vessel should send the above notice to the General Agent and/or to the local agent via telex or Pertamina's coastal radio stations at Lhokseumawe.

It is requested that confirmation or amendments or requirements as set out in the departure message be received by the terminal at least 48 hours prior to arrival.

Cable Address Blang Lancang Indonesia:

The cable address for Blang Lancang is "Pertaminaship Blang Lancang". Communication for contacting Agent: Messages destined for Pertaminaship Blang Lancang can be forwarded through Lhokseumawe Radio Station/PKB 20 via R.T. or telex.

Telex Communications:

Vessels equipped with telex facilities may contact terminal Marine Office using the following telex numbers: 51696 first priority (4 lines) and 51343 pta lsm ia.

Auto switching facilities to Marine Office may be activated by using the following message format and must be used for all telexes sent:

1) Telex number.
2) Answer back from receiving telex.
3) Type MM and wait.
4) Answering telex will print date and time.
5) Type PKK OPP +++ (plus plus plus).
6) Type text of telex.
7) Type NNNN at end of transmission.
8) Answering telex will print "message accepted".

Details of Cable (All Vessels):

The following information should be included in the first cable with any changes to be advised immediately to Pertamina PKK Blang Lancang:

AA. Name of vessel and radio call sign.
BB. Voyage number.
CC. Cargo number.
DD. Time/Date completion of discharge.

EE. Time/Date/Place of departure.
GG. Loading/unloading port or drydocking port.
FF. ETA pilot station of loading port.
GG. LNG quantity required and estimated time for cooldown.
HH. LNG quantity remaining on board.
II. Any operational deficiencies of vessel.
KK. Ports of call/ETA prior to next arrival at the loading port.
LL. Others.
Master.

VHF: For Lhokseumawe Harbour and Krueng Geukueh Harbour: Call Lhokseumawe Pilot on Channel 12. Mooring and unmooring on Channel 8 at Krueng Geukuh.

For Blang Lancang Harbour: Lhokseumawe Radio PKB 20 Channel 16. Marine Office Channels 16, 9 and 13. Pertamina Channels 16 and 19 (working). Mooring and unmooring on Channels 6 and 13 at Blang Lancang.

For Pilot Station: Call Blang Lancang Pilot Station and Lhokseumawe Pilot on Channel 12.

Language: Indonesian and English.

RADAR: No radar service available.

TUGS: No tugs available in old Lhokseumawe Harbour.

Blang Lancang Harbour: 5 tugs×4,200 h.p. and 3 mooring launches 550 h.p. – 800 h.p.

For Supertanker and LNG: Tanker will use the tug's lines. Tug's line will be charged by Company/Pertamina: Rates will be subject to change in accordance with operation cost and will not be subject to advanced notice.

Cargo ships will use ship's line.

In Krueng Geukueh Harbour: 2 tugs available with 1,000 h.p. Use ship's line. 1 mooring launch, 105 h.p. 1 pilot boat, 250 h.p. and 1 pilot boat, 270 h.p.

Tug Requirements:
MBM: 3 tugs for berthing and 2 tugs for unberthing.
SPM: 2 tugs for berthing and unberthing.
LNG/LPG: 4 tugs for berthing and unberthing.

BERTHING: *Old Lhokseumawe Harbour (Lhokseumawe Terminal):* A small pier with length 60 m. Construction: Piles with wood on the top. Depth 2.4 m. Only barges and small vessels under 500 d.w.t. can berth.

Blang Lancang Harbour (Arun Terminal): 2 special LNG docks, 400 m. length each with 10 mooring dolphins and 4 rubber fenders. Depth 14 m. at LWS.

One special LPG dock, 270 m. length, with 6 mooring dolphins and 2 rubber fenders. Depth 14 m. at LWS.

West Cargo Dock: Length of the dock 400 m. Depth 6 m. at LWS.

East Cargo Dock: No longer operational.

MBM: The berth which is located offshore (Lat. 05° 14' 30" N., Long. 97° 04' 26" E.) is designed for oil tankers ranging from 30,000 d.w.t. to 100,000 d.w.t. Depth 30 m. Max. loading rate 60,000 bbls./hr.

Vessel approaches berth heading 250°T between Buoys 6 and 7 (See "Plan").

The MBM consists of 9 cylindrical mooring buoys secured by 3.5 in. stud-link chain to 30,000 lb. anchors. Some of the mooring buoys are fitted with 44 mm.×750 ft. long preventer wires for use with large ships.

Ships using the 12 in. hoses must have a derrick on the port side with SWL of 10 tons with which to lift the hoses from the seabed. The winches of ship for taking on the shore wires on the drum must be able to withstand 35 tons breaking strain.

Engines to be on one hour's notice throughout.

SPM: Located 1 km. N.W. of MBM in position: Lat. 05° 15' 18.23" N., Long. 97° 04' 03.33" E. The SBM is designed for 40,000 d.w.t. – 280,000 d.w.t. Depth 60 m. Max. loading rate 55,000 bbls./hr. Port derrick to have S.W.L. of 7.5 tons.

Asean Aceh Fertiliser (AAF Special Fertiliser Harbour): Berth A: Special fertiliser in bulk. 200 m. long with 8 dolphins (4 fenders). Depth. 10 m. at LWS. Designed capacity : Max. d.w.t. 10,000 or 169 m. length able to moor.

Berth B: General cargo berth. Concrete construction 300 m. long with fenders every 20 m. Depth 10 m. at LWS. Max. size 160 m. LOA able to moor.

PIM Special Fertiliser Berth: Located S.E. from Berth "Berth A" – AAF berth. (PIM – Pupuk Iskandar Muda; AAF – Asean Aceh Fertiliser). Designed capacity : Max. d.w.t. 10,000 or 169 m. length able to moor.

New Lhokseumawe Public Berth: Length 80 m. Vessels with Max. LOA 150 m. are able to moor using dolphin and mooring buoy.

STEVEDORES: Available. PBM Stevedoring Company. Stevedores work 24 hours.

MEDICAL: Hospital facilities available.

TANKERS: Oil tankers will be berthed at the MBM or the SPM.

The Loading/Mooring Master will provide shore labour for connection/disconnection of the submarine hose strings. He maintains communication links with terminal.

Diameter of load line – 2×16 in. Hoses with 12 in. over the rail hoses.

Ships visiting Blang Lancang (Arun Terminal) should have clean ballast. No dirty ballast or slops facilities available.

Also see "Shipmaster's Reports".

LPG/LNG: *Storage Capacity:*

LNG	636,000 cu.m.
Liquid nitrogen	6,500 gallons

Working Pressure:

LNG	70 p.s.i.
LPG	22 p.s.i.

LNG Characteristics:

Explosion limits	5.3 – 14 % vol.
Flammable	Yes
Boiling point	−161°C.
Flash point	−175°C.
Critical pressure	45.6 kg./sq.cm.
Critical temperature	−82.5°C.
Condensing ratio	0.8038

Loading:

	LNG	Vapour Return	LPG	Vapour Return
Pipeline (in.)	24	30	28	24
Loading rate (cu.m.p.h.)	11,000		3,400-4,770	
Discharging rate (nominal cu.m.)		77,880		10,700 (Propane) 12,400 (Butane)
No. of lines	3	1	2	1 (Propane) 1 (Butane)
Hose connection (in.)	16	16	12	12 (Propane) 12 (Butane)
Max. vertical limit (m.)	7.0		11.9	
Manifold to rail (m.)	3.35 (max.)		2.60 (max.) 1.25 (min.	

Condensate:

Storage capacity:	340,000 k/l
Loading temperature:	90°F.
Working pressure:	220 p.s.i.
Reed Vapour Pressure:	13 p.s.i.
API Gravity at 60°F.:	56-51
Loading rate (Bbls.p.h.):	55,000-60,000
Pipeline:	42 in.
Hoses:	2×12 in.

Also see "Berthing".

DENSITY: 1024.

FRESH WATER: Available at a rate of 20 t.p.h.

FUEL: Not available.

FIRE PRECAUTIONS: No smoking will be allowed on board while the ship is berthed and on the plant site of Arun Terminal, except in places approved by Harbour Master.

CONSULS: No Consuls in Lhokseumawe.

Consuls in Medan (375 km.): Japan, Malaysia, U.K. and U.S.A.

REPAIRS: Minor repairs possible.

DRY DOCKS: No facilities.

SURVEYORS: Saybolt Surveyor attends at Blang Lancang CBM/SPM/LNG dock.

GANGWAY/DECK WATCHMEN: Ship's crew maintain deck watch.

Gangways: Cargo and oil tankers use ship's gangway. LNG and LPG tankers use shore gangway.

OPENING/CLOSING HATCHES: By ship's crew.

CUSTOMS ALLOWANCES: 200 cigarettes/10 cigars. 100 grams of tobacco. No spirits to be taken ashore.

CARGO GEAR: At Lhokseumawe Terminal/Hagu no facilities for heavy lifts.

At AAF Cargo Dock/Blang Lancang Cargo Dock, heavy lifts can be handled.

REPATRIATION: Crew changes and repatriation can be effected.

AIRPORT: Lhokseukon Mobil Oil Domestic Airport, about 30 km. from Lhokseumawe.

Malikussaleh/Kreung Mane PT. Arun Public Airport (Domestic) about 30 km. from Lhokseumawe.

Polonia International Airport located in Medan, about 360 km. from Lhokseumawe.

TIME: GMT plus 7 hours.

HOLIDAYS: For LNG and Condensate: No holidays in operation. For other vessels: Idul Fitri – Idul Adha, no operations.

POLICE/AMBULANCE/FIRE: *Police:* Lhokseumawe/Hagu Area: (Sector) Public Tel: 110. (Resort) Tel: 21490.

Blang Lancang Area: Public Phone Tel: 21566 ext. 3242. Plant security ext. 2041/3222. PT. Arun Phone (Direct) Tel: 3242 or call PKB 20 on VHF Channel 16.

Krueng Geukueh Area: Public Phone (Number not given).

Ambulance:

Lhokseumawe/Hagu Area: Public Phone Tel: 118. (Public) Tel: 21012.

Blang Lancang Area: PT. Arun Phone (Direct) Tel: 3111, 2572, 2463 or call PKB 20 on VHF Channel 16.

Kruen Geukueh Area: PT. AAF (Direct) Tel: 555. PT. PIM (Direct). Tel: 333/444.

Fire:

Lhokseumawe/Hagu Area: Government Public Tel: 113/21955. Mobil Oil 21444 ext. 4225-4226. PT. Arun: Government Public Telephone Tel: 21566 ext. 2111, 1111.

Blang Lancang Area: PT. Arun (Direct) Tel: 2111, 1111 or call PKB 20 on VHF Channel 16.

Krueng Geukueh: AAF public telephone No. 22433, 22343, 22232. Plant Site ext. 222. Housing ext. 333. PIM public telephone No. 22699, 22149, 22769.

EMERGENCY CO-ORDINATION CENTRE: Contact "PKB 1" Belawan Radio for Search and Rescue.

TELEPHONES: No ships' telephones except for LNG/LPG ships during berthing.

SERVICES: Available.

BANKS: Lhokseumawe:
Bank Exim Tel: 22085
B.D.N. Tel: 21062
B.I. Tel: 21399/21581
B.B.D. Tel: 21332
B.R.I. Tel: 21113
B.N.I.-46 Tel: 21258
Blang Lancang Area:
B.D.N. Post Batuphat PTG. Arun (Direct) Tel: 3157,3158
PT. Arun Pioneer Camp (Direct) Tel: 3314
Krueng Geukueh Area:
P.I.M. (Direct) Tel: 341.

SHORE LEAVE: Possible.

IDENTIFICATION CARDS: Shore pass as required by Agent.

GARBAGE DISPOSAL: Not available.

DELAYS: Vessels calling at Blang Lancang CBM may be delayed ship's mooring system is unsuitable or when berth is affected by strong winds and/or swell.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Indonesian Rupiah (Rp.).

GENERAL: *Post Office:* Lhokseumawe: Jl. Samudera. Tel: 21026. Blang Lancang/Krueng Geukueh: Batuphat (PT. Arun Tel: 3159).
Telegraphic Office: Centre or Interlocal: Jl. Merdeka. Tel: 21757.
Port Services: Jl. Pelabuhan Tel: 21181. Harbour Master Tel: 21485.
Restricted Area: 1.75 nautical miles radius of the centre of the SPM position.

SHIPMASTER'S REPORT: April 1981 (Updated 1990).
Arun Terminal:
Documents: See "Jakarta".
Chart: B.A. 3584.
Berthing: There are jetties for LNG loading.
North Dock: Lat. 05° 13' 23" N., Long. 97° 05' 55" E.
South Dock: Lat. 05° 13' 09" N., Long. 97° 05' 49" E.

This is an open sea loading point located just at the right hand side of the port of Blang Lancang for ships to load condensate cargo only.

Pilotage: Compulsory, Loading Master together with 4 – 6 shore personnel will assist in mooring, Pilot also onboard.

Loading: Vessel should be equipped with 10 ton derrick on port side, manifold 2×12 in. on port side, 2 mooring winches/drums, 1 minimum available at forward maindeck and 1 at after maindeck for serving the preventer wire 44 mm.×750 ft., as breast lines for 2 buoys. Vessel should also be equipped with 14 mooring lines minimum length 210 m. each for 9 mooring buoys. Loading Master will discuss the mooring procedures with Master before mooring.
Shore Facilities: None.
Agent: Pertamina, Blang Lancang, Cable Address: Pertaminaship, Jakarta.

SHIPMASTER'S REPORT: September 1983 (Updated 1990).
Arun Terminal:
Documents:

On arrival Health, Immigration and Harbour Master's Officer will board with the Agent to issue clearance.
Papers required:
Maritime Declaration of Health.
Vaccination Cards.
Derat Certificate.
Crew List (10-12 copies).
Passports/Seamen's ID Books.
Last Port Clearance.
Arrival Report (supplied by the Agent).

The Agent will require the following documents to take to the Custom House ashore:
Ship's Register.
International Loadline Certificate.
Safety Radio Certificate.
Safety Equipment Certificate.
Safety Construction Certificate.
Certificate of Financial Responsibility (oil pollution).
Derat Certificate.

Immigration may take some, or all Passports/ID ashore.

After these formalities have been completed 4 or 5 Customs Officers will board. They will require:
Ship's Stores List.
Crew Personal Effects List.
Cargo Manifest ('Nil' declaration if applicable).

About 4 – 5 copies of each of the above should be adequate. The bond store, and possibly other storerooms, will be checked and some or all cabins will be searched.

Cargo documents should normally be ready by the time the hoses are disconnected, (about 1.25 hours after completion of loading). Return of Ship's Certificates, Passports, and issue of Port Clearance, can, it is reported, cause some delay. Vessels are not allowed to wait at the berth for documentation.
Pilotage: See "Berthing".
Anchorages: A designated waiting anchorage for tankers lies about 1.25 miles North-Eastward of the berth, in depths of about 60 m. (clay).
Restrictions: Mooring of condensate tankers carried out in daylight only. Unmooring is allowed day and night.

Restricted area: 1.75 nautical miles radius from centre of SPM.
Max. Size: The tanker berth is designed to accept vessels up to 100 MDWT, with LOA 275 m.
Approaches: Charts: BA 2777; BA 3585.

Apart from an active fishing industry operating in the area there are no navigational hazards in the approaches. There are adequate navigational lights serving Blang Lancang and Pelabuhan Blang Lancang, (although neither the light or racon on the beacon at Ka Geukueh, about 1.5 miles Westward of the terminal were active 9th – 15th September, 1983). The storage tanks and gas flares at the terminal are prominent day and night.
Radio: Send ETA 72, 48, 24 and 5 hours in advance to Lhokseumawe Radio Station, Telex No. 51696 (Station operated by Pertamina). Additional information regarding the vessel's details, last port, cargo requirements, etc., is not obligatory as far as is known but seems advisable.

Radio Station 'PKB 20', at Lhokseumawe will handle traffic concerning navigation, cargo, etc., but watch schedules do not appear to be regular. The terminal may, via PKB 20, request information from the vessel regarding cargo requirements, loading rate, deballasting time (if applicable), number/type of mooring lines.
VHF: When within appropriate range the terminal may be contacted on VHF Channel 16; working Channels 9 and 19. The call sign is 'Arun'.
Tugs: Three tugs, each 4,200 h.p., assist the berthing. One tug is made fast forward and one aft; centre leads; tugs' towing ropes. One tug pushes at amidships as required. Two tugs attend during unberthing. Two large mooring boats are employed for mooring/unmooring.
Berthing: The terminal, owned and operated by Pertamina, together with Mobil and Japanese interests, exports Arun Natural Crude and LNG. Tankers load at a multi-buoy berth about 1.5 miles off-shore. Gas carriers load in a small artificial harbour (Pelabuhan Blang Lancang), about 1.5 miles E.S.E of the terminal. The small port of Lhokseumawe lies about 5 miles S.E. of the terminal. New Lhokseumawe Public Harbour and Fertiliser Terminal (AAF & PIM) located in Terminal Krueng Geukueh, about 5 miles WNW of the Blang Lancang outer buoy.

The tanker berth is located in an open roadstead in depths of 35 m. – 50 m. There are 9 mooring buoys, 2 bow buoys, 2 breasting buoys each side, 2 quarter buoys and 1 stern buoy. The tanker will require 4 bow lines, 4 breast lines and 5 stern lines. Wire ropes are acceptable, preferably with nylon tails. The bow lines should be at least 250 m. in length. Additionally the tanker will be required to pick up a 42 mm. diameter wire rope from each of the breasting buoys. Prior to berthing the vessel's mooring equipment will be inspected by the Mooring Master who will discuss the mooring operation with the Ship's Officers. The Mooring Master and Assistant will board with the Pilot at the time of berthing to supervise the mooring operation.

Accommodation on board is required for the Loading Master and one Mooring Master.

Scuba divers are in attendance to sort out any underwater problems that may occur with regard to the moorings and hoses.
Loading: Arun Natural Crude is a condensate, (akin to naphtha), very light and gassy. Approximate quality details are:
API, 55; temperature, 32°C; RVP, 11 psi. Cargo is loaded via two 12 in. flexible hoses. The terminal supplies labour for connecting/disconnecting the hoses. Ship's crew required to assist and operate winch and derrick. Allow for about 6 tons lift on each hose. Maximum loading rate is 65,000 bbls/hour. The terminal meters the quantity of cargo loaded. The meter is proved at each loading and the ship should receive a proving report on completion of loading.
Medical: Treatment available.
Fresh Water: None. (Said to be available at Pelabuhan Blang Lancang).
Fuel: None. (Said to be available at Pelabuhan Blang Lancang).
Airport: There is, reportedly, an air service with Medan, about 150 miles S.E. of Blang Lancang. Medan is said to be served by international flights.
Shore Leave: Permitted.
Developments: Plans to install an SBM, as an additional berth, have been approved, it is reported.
General: Tides: Refer Lhokseumawe. Tides are semi-diurnal. Spring range is 1.4 m. Rates appear to be fairly weak. A ship will generally lay windrode at the anchorage.
Weather: November to March winds from N.E. prevail. June to September winds from S.W. prevail. The area is subject to SW'ly squalls May-September, and particularly June-August. Thunderstorms are most frequent March – April and October – November.

AUTHORITY: Lhokseumawe Port Administrator, Jl. Pelabuhan No. 4, Lhokseumawe, Indonesia. *Tel:* 21485.

Public Port Service (PERUM Pelabuhan I Lsm) Jl. Pelabuhan No. 1, Lhokseumawe, Indonesia. *Tel:* 21181 – 21881. *Telex:* 51039 PPI Lsm.
Contact: Ibrahim Muchtar, Branch Manager.
Ubed Beddy, Harbour Master. Tel: 21485 and VHF Channel 16.
Dr. Sukristoro Wardoyo, Port Health. Tel: 21154.
B. Sutrisno, Lsm. Customs. Tel: 21267.
Hamzah Akimin, Blang Lancang, Customs. Tel: (PT. Arun) 2145.
Darsoeki, Immigration. Tel: 21039.

P.T. Arun N.G.L. Co., Blang Lancang, Post Office Batuphat, Lhokseumawe, Aceh Utara 24353, Indonesia. *Tel:* (0645) 56677. *Telex:* 51343, 51696 Ptalsm la. *Cables:* Ptarunngl Lhokseumawe. *FAX:* (0645) 43922, 41312. *Contact:* Erman Djamil, Marine Manager.

MADURA: 06.51 S. 112.57 E.

PILOTAGE: Mooring Master boards in position Lat. 06° 48' 30" S., Long. 112° 56' 49" E.
RESTRICTIONS: Berthing and unberthing during daylight hours only.
MAX. SIZE: Max. d.w.t. 105,000. Max. LOA 250 m.
RADIO: Surabaya Radio. Call sign PKD.
VHF: Surabaya Radio. Call sign PKD 6.
BERTHING: Depth alongside storage tanker 21.3 m.
LOADING: Crude oil is loaded at an average rate of 15,000 b.p.h. through 2×12 in. hoses.
Characteristics of Crude Oil:

API Gravity at 60°F.	:	46.1
Reid Vapour Pressure at 100°F.	:	3.9 psi
Viscosity at 100°F.	:	1.75 cST
Sulphur Content	:	0.02 % wt
Carbon Residue	:	0.7 % wt
Flash Point (PMCC)	:	Below 50°F.
Pour Point	:	40°F.

MEDICAL: First-aid available.
DENSITY: 1020-1025.
FRESH WATER: Not available.
FUEL: Not available.
CONSULS: None.
AIRPORT: Juanda Airport at Surabaya is the nearest airport.
TIME: GMT plus 7 hours.
GENERAL: *Charts:* Indonesian Charts No. 84 and 96. British Admiralty Charts No. 1066, 1653 (C) and 921.
AGENCY: See "General" before first port.

SHIPMASTER'S REPORT: December 1985.
Location: The terminal is located 2.5 miles off the island of Madura on the N.W. coast in position: Lat. 06° 50' 40" S., Long. 112° 56' 45" E., near the entrance of Surabaya Strait.
Documents: See "Jakarta".
Pilotage: Compulsory within the terminal limits. Pilot boards in the anchorage or if berthing on arrival Pilot will board 2 miles North of the storage tanker "Asoka Nusantara". Pilot comes on board from a tug flying the "H" flag and requires a lee with pilot ladder or accommodation ladder rigged on lee side.
Anchorage: Within a 500 m. radius of position: Lat. 06° 45' 30" S., Long. 112° 56' 49" E. (2 miles North of storage tanker). Depth of water 32 m.
Restrictions: Normally daylight berthing only. Unberthing at any time.
Max. Size: Max. LOA 250 m. Depth of water 75 ft.
Health: The Health Authorities come on board after completion of berthing. They come from Surabaya by helicopter.
Radio: All incoming tankers are to send 72 hours and 48 hours notice of ETA to Kodeco-Madura Marine Terminal, through Pertaminaship Jakarta (Telex: 44450 and 45348) as Agents, giving best ETA. The first message should also include the following information:

1. Name of tanker and radio call sign.
2. Cargo requirements.
3. De-ballasting time; if a separate/permanent ballast system is fitted on board, this must also be stated.
4. Maximum loading rate.
5. Arrival draft, forward and aft.
6. Last port of call.
7. Confirm that vessel has clean Bill of Health.
8. If there is any sickness aboard, give all available information as to the possible type of sickness.
9. Specification, difficulties, defective equipment or gear which could present a hazard or difficulties when mooring/unmooring or during operations.

Further ETA message should be sent (to Kodeco-Madura Marine Terminal via, Pertamina local Agent; Cable address: Pertaminaship Surabaya. Telex: 31390 PSHSB) when the tanker is 24 hours and 12 hours from the terminal and if any significant change occurs in the original ETA or those subsequent thereto.
VHF: The storage tanker keeps watch on Channel 16 throughout 24 hours. The Pilot works on Channel 6.

Whilst in the anchorage vessel is to maintain watch on Channel 16.
Tugs: 2 tugs, "Ogan" 1,700 h.p. and "Semeru" 3,200 h.p. assist in berthing.
Berthing: The storage tanker "Asoka Nusantara" is of 107,000 d.w.t., LOA 260 m. and is permanently moored to an SBM by a 14 in. line. To load crude oil, the export tanker will be moored alongside the starboard side of the storage tanker. For this purpose 4 Yokohama fenders are laid on the water along the starboard side of the storage tanker. Six ropes are required at each end. Berthing is port side to.

Hose Connection: 2×12 in. rubber hoses with camlock quick release mechanisms. Ship's derrick required and connection is made by ship's crew.
Loading: The storage tanker has 3×10,000 bbls.p.h. pumps. Maximum loading rate is 30,000 bbls.p.h. and minimum loading rate is 15,000 bbls.p.h.

Madura Crude Oil is as follows:

API at 60°F	47.0 – 46.0
Temperature	85°F – 90°F
Pour point	10°F

Facilities:

1. No dirty ballast facilities.
2. No slop tanks available.
3. No fresh water available.
4. No shore leave allowed.
5. No crew changes possible.
6. No stores available.
7. No clinic is available.
8. No bunkers available.

Time: GMT plus 7 hours.

AUTHORITY: *Operator:* Kodeco Energy Co. Ltd., Nusantara Building, 19th Floor, Jakarta, Indonesia. *Tel:* 336244. *Telex:* 44734 Kdcegy-Ia.

MALILI: 02.39 S. 120.59 E. (See Plan)
MANGKASA: 02.44 S. 121.04 E. (See Plan)

OPERATOR: P.T. International Nickel Indonesia (P.T.Inco).
LOCATION: Malili and Mangkasa Tanker Terminal are situated in the Gulf of Bone, South Sulawesi about 300 miles N.E. of Ujung Pandang.
Malili:
Malili port is situated in the Gulf of Bone, South Sulawesi about 9.5 miles from Mangkasa Sea Tanker Terminal.

Vessels arriving at Malili port must remain in the Roads Anchorage, Anchorage Light Buoy (Iso. 1 sec.) in position Lat. 02° 42' 30" S., Long. 121° 01' 40" E. Anchorage is to the South of the buoy and having average depth of more than 20 m. (LWS)

This port *is to be assigned for* dry general cargo discharging and loading of nickel.

The sea chart to be used is Indonesian Chart No. 319.
Mangkasa Sea Tanker Terminal:
The terminal is located at Lat. 02° 44' 25" S., Long. 121° 04' 00" E. This terminal is provided for tankers of about 20,000 d.w.t. which are to be equipped with hose lifting derrick at either port or starboard manifold.

The sea terminal itself consists of a four buoy mooring.

The hose has a diameter of 12 in. and fitted with 12 in. × 150 lb. ASA flange. Max. pressure allowed 7 kg./sq.cm. The submarine pipe diameter is 20 in.

FLAGS: In accordance with the practice in Indonesian ports, the vessel's national flag, the Indonesian courtesy ensign, quarantine, immigration, Pilot and call sign flags must be displayed by all vessels approaching the port. These signals shall be displayed continuously until clearance is granted.

The above mentioned signals are:
Sunrise to sunset: quarantine flag "Q".
Sunset to sunrise: signal lights red over white.

The flag "N" should be flown until the Immigration Officer boards the ship. The "G" flag should be flown until the Pilot boards.

The vessel should also fly its call sign until the vessel is secured in the berth. These call sign flags must be flown again when the vessel is sailing until the vessel is clear of the anchorage area and the Pilot has departed.

The "G" flag should be replaced by "H" flag if the Pilot is already aboard the vessel.

The "P" flag may be flown if the vessel is going to sail within 24 hours.
DOCUMENTS: Indonesian Immigration, Customs and Port Officials will board the vessel to grant clearance. Each crew member should be in possession of an International Vaccination Card and passport.

The following documents may be required for granting Pratique for the vessels arriving from foreign ports:
Certificate of Registry.
Ship's Construction Certificate.
Load Line Certificate.
Safety Equipment Certificate.
Safety Radio/Telephone/Telegraph Certificate.
Derat or Exemption Certificate.
Cargo Gear Certificate.

The last Port Clearance and Crew Lists are also required.
Flag Dispensation: All foreign vessels entering Indonesian ports must have requested and been granted Flag Dispensation prior to the arrival at the port. Also a loading or discharging permit must have been applied for from the authority concerned. All this will be done by the general Agent.
PILOTAGE: A Mooring Master will board the vessel in the anchorage area and advise the Master on all manoeuvres relative to berthing and unberthing and connecting the hoses.

Vessels are requested to make a lee and have an accommodation ladder long enough to reach the Mooring Master's launch. At night adequate lighting should be provided.
MAX. SIZE: The tanker buoy mooring is designed for a vessel of 20,000 d.w.t., 26,700 tons displacement, LOA 600 ft., and max. draft of 31 ft.
RADIO: Vessels arriving between 0700 – 2300 hrs. (local time) should contact Malili Radio "PKF-7" on VHF Channel 16 four hours before arrival to confirm arrival time.
Notice of Arrival: 72 hours prior to the arrival at Malili or Mangkasa Tanker Terminal, the Master has to cable his ETA to "Inco Ujungpandang" through Ujung Pandang Coastal Radio Station which then, will be passed on to Malili or Mangkasa Coastal Radio Station.

The Master has to reconfirm or amend the ETA 48 hours and 24 hours before arrival at the port.

The cable address of "P.T. International Nickel Indonesia" (P.T. "Inco") of Ujung Pandang is Nikel Indonesia Ujung Pandang.

The coastal radio station of Ujung Pandang has the following particulars:
Name of Station: Ujungpandang Radio.
Call Sign: PKF.
Frequency: 465 – 500 – 8686 – 13101 kHz (A1), and 4409 – 2182 - 6518.6 – 8738.4 kHz (A3).
Power: 1 kW.
Service Hours: See book of Indonesia Coastal Radio Stations.
Geographical Location: Lat. 05° 06' 30" S., Long. 119° 26' 20" E.

Details of Cable: The information cable should give the following data:

1. Name of vessel and radio call sign.
2. ETA in GMT and date (local time, GMT plus 8 hours).
3. The quantity of cargo to be discharged.
4. Maximum discharging capacity (for tanker only).
5. Vessel's draft on arrival.
6. If there is any sick crew on board or clean bill of health.
7. Last port of call.
8. Any hull, bulkhead or valve leakages which may cause pollution (for tanker only).
9. Distance in feet from bow to vessel's manifold connection.
10. Flange dimensions of vessel's manifold.
11. Any requirements such as provisions, fresh water, etc.

Language: The languages used are Indonesian and English.
BERTHING: Mangkasa Sea Tanker Terminal: Mangkasa Sea Tanker Terminal is an offshore system with 4 fixed anchors connected to buoys which have a quick release mooring system. Buoys are located to suit 20,000 tonners with 2 buoys on the bow and 2 buoys at the stern. These buoys are not lit.

Connection to tank farm is via 12 in. flexible hose joined to 20 in. undersea pipe to the tanks. The flexible hose is fitted with a 12 in.×150 lb. ASA flange.

If the jetty of Mangkasa Tanker Terminal or "four mooring buoys" is unoccupied and has been fixed for certain vessel, the vessel will be boarded by a Mooring Master in the anchorage area providing that the vessel in all respects ready to commence discharging her cargo. The NOR tendered by the Master concerned will be accepted at the time the Mooring Master boards.
Anchoring: A vessel which has to anchor on arrival due to certain circumstances has to inform Balantang Base (VHF Channel 16) of her exact time of arrival at the port. This is important for adjusting the acceptance of the NOR tendered, providing:

1. It is within daylight, i.e. 0600 to 1800 hrs. local time. The NOR is considered to be accepted at the time the Mooring Master boards. Should the vessel have been at anchor, NOR is also accepted at the time the anchor is aweigh providing the Mooring Master is already onboard the ship.

2. It is not a public holiday or Sunday, unless the vessel is actually handled on that day.
3. The port is still open.

In addition to the above conditions, vessels arriving at an unreasonable time ahead of their last signalled estimated time of arrival will not be accepted.

Exact Time of Arrival: It is stressed that every Master has to advise the Port Control of his exact time of arrival to avoid unfavourable situations.

Work Crew Service: Mooring and unmooring, lifting, lowering, connecting and disconnecting hoses will be done by a terminal work crew under the direction of the Mooring Master. Assistance from ship's personnel in operating windlasses, winches etc., will be required.

Tanker Engines and Hose Lifting Derrick: Being an open roadstead, vessels must keep engines on stand-by during their stay in the berth. No repairs to main engines may be undertaken while in berth. Power must be kept on deck winches in case adjustments to mooring lines are found necessary. Ship's booms and deck winch must be capable of operating with a SWL in conformance with table shown on Page C2 of Appendix C to the International Oil Tanker and Terminal Safety Guide. Vessels with inadequate hose lifting equipment will be rejected.

Safety: Every vessel which berths at the buoys shall remain under the charge of the Master who will take all steps necessary to preserve the safety and security of such vessel, crew and terminal personnel who may board in the execution of their various duties.

The Master of every vessel at anchor in the designated anchorage or secured to the mooring buoys shall ensure that all parts of the vessel to which any person may be lawfully required to proceed are properly illuminated.

Efficient and easy means of access shall be provided to every vessel at anchor and at the mooring buoys and such access shall be adequately illuminated between sunset and sunrise.

No person(s) shall be permitted to board or leave the vessel other than by the gangway or other proper means provided for the purpose.

The Mooring Master may require the vessel to unmoor at any time he deems necessary for the safety of the vessel or the moorings or both or for infringement of Port Regulations.

Unsatisfactory conditions will be reported to the company's Logistic Superintendent, who is empowered to reject a vessel for future calls unless the reported deficiencies have been remedied.

Sufficient crew members must be immediately available at all times to assist with any or all operations on board the vessel at the terminal.

MEDICAL: Treatment possible at the Nickel Projects Hospital at Soroako, about 60 km. from Malili. Clinic at Malili available for emergencies.

FRESH WATER: Not available.

FUEL: Not available.

CONSULS: None.

REPAIRS: No facilities.

CUSTOMS ALLOWANCES: Cigarettes, cigars, tobacco, matches, spirits, wine, beers, perfume, arms, ammunition and possibly other items have to be locked up under Customs and sealed from time the ship arrives in port until she leaves territorial waters.

Each person is allowed to bring in 200 cigarettes or equivalent in grams of tobacco or cigars. Special allowances are made for the Master under special circumstances. The Customs officials will seal the stores.

REPATRIATION: Crew changes especially foreign crew are difficult to arrange.

AIRPORT: P.T. "Inco" operate a charter flight between Malili and Ujung Pandang (formerly Makassar) once a day with a Twin Otter aircraft, flying time 1 hour.

SERVICES: Provisions and stores not available.

GARBAGE DISPOSAL: No service available.

WASTE OIL DISPOSAL: No service available.

SEAMAN'S CLUBS: None.

GENERAL: *Chart:* Chart for the area is the Republic of Indonesian Chart No. 319 (The Gulf of Bone).

Facilities: Malili Port is a special port for handling incoming cargo(general cargo, sulphur and coal in bulk, diesel oil tanker, high sulphur fuel oil tanker) and for an out going cargo(final product "Nickel Matte").

Pt.Inco is only authorised to handle discharging/loading by Company's stevedores and marine fleet facilities, as long as the cargo is to be for Company's own purposes. Therefore, Pt.Inco is not allowed to handle cargo and other services for third party, even though all facilities are available at Malili/Soroako.

AGENCY: Owners have to appoint one of the Indonesian shipping companies as their general Agent for Indonesia. This shipping company will then appoint P.T. "Inco" to be their sub-agent for the Port of Malili and/or Mangkasa tanker terminal to attend the arriving vessel.

The agency appointment which should be confirmed by official company letter which has to be received at least 10 days prior to the ship's arrival at Malili Port or Mangkasa Tanker Terminal to give the general Agent a chance to arrange the necessary permits from the Indonesian Government.

AUTHORITY: P.T. International Nickel Indonesia, 18th Floor, Antara Building, Jl. Medan Merdeka Selatan No. 17, P.O.Box 2799, Jakarta, Indonesia. *Tel:* (21) 3810800/03 (4 lines). *Telex:* 01-44757 Nikel Ia. *Cables:* Internickel Jakarta. *FAX:* 021-3810804.

Malili/Mangkasa/Soroako Office: P.T. International Nickel Indonesia, Malili, Soroako 91984, South Sulawesi, Indonesia. *Tel:* (21) 374378, (0411) 318545. *Telex:* 01-46806 Inco Skoia. *FAX:* 021-3842413, 3842418. *Contact:* Captain J. Rusdadi, Superintendent-Logistics.

MUNTOK: 02.04 S. 105.10 E.

DOCUMENTS:
Register Book.
Load Line Certificate.
Derat Certificate.
Harbour Report.
Radio Certificate.
Nationality Certificate.
Safety Equipment Certificate.
Port of Call List.
Last Port Clearance.
Light dues Payment.
Health Book.
6 copies Crew List.
3 copies Stores List.
6 copies Passenger List (if any).
Navy Book.
Port Manifest from every port.
Vaccination Certificates.
All loading Custom paper from every port.

PILOTAGE: Not available.

ANCHORAGE: Safe anchorage in 10 m. in position Lat. 02° 06' S., Long. 105° 10' E.

RESTRICTIONS: None.

MAX. SIZE: 2 m. draft at quay length 100 m., breadth 30 m.

RADIO: Pangkalbalam Radio. Call sign PKC-7.

TUGS: 7 tugboats available for communication between shore and ships, with capacity 340 h.p. each.

BERTHING: Anchorage 165° Tg. Kalian, 2 miles from shore. Only small vessels draft 7 ft. alongside quays.

19 barges with capacity 100 tons – 200 tons available for cargo operations.

STEVEDORES: Ordered by Agent.

MEDICAL: Facilities available.

TANKERS: No facilities.

FRESH WATER/FUEL: Not available.

CONSULS/REPAIRS/DRY DOCKS: None.

CUSTOMS ALLOWANCES: 200 cigarettes per man; 1 bottle per man.

AIRPORT: None.

HOLIDAYS: On Moslem holidays, no cargo work.

SHORE LEAVE: After receiving permit issued by Chief of Police.

IDENTIFICATION CARDS: Not necessary.

REGULATIONS: Customs, Harbour Master, Police Maritime, visit ship on arrival.

DELAYS: Delays due shortage lighter space.

NUNUKAN: 04.05 N. 117.37 E.

PILOTAGE: Pilotage is compulsory.

ANCHORAGE: Vessels anchor in position 03° 59' 15" N., 117° 57' 45" E.

RADIO: Tarakan Radio Station (See "Tarakan").

TUGS: No tugs available.

BERTHING: Wooden pier length 60 m., width 12 m. and depth alongside 3.5 m.

Storage: There is a godown and open storage is also available.

STEVEDORES: Available from labour pool.

FRESH WATER: Not available.

FUEL: Not available.

REPAIRS: No facilities available.

GENERAL: *Barges:* Not available.

PAGERUNGAN: 06.58 S. 115.57 E. (See Plan)

LOCATION: Pagerungan Marine Terminal is an open, unsheltered mooring in the East corner of Java Sea, about 137 km. (85 miles) from the nearest point on the North Coast of Bali Island.

The Terminal is approximately North 83° East, with the distance of 216 nautical miles from Surabaya, capital city of East Java Province, Indonesia.

There is only one standard type S.B.M. situated in Lat. 06° 58' 14" S., Long. 115° 57' 23" E.

It is a Condensate Export SBM for tankers loading condensate from ARBNI-Pagerungan Gas Plant Facility.

DOCUMENTS: *Arrival Procedure:* See "General" before first port.

Cargo Documentation: Documents such as Bills of Lading, Certificate of Quality, Certificate of Quantity, Dry Certificate, Ullage Certificate, Time Loading Report, Certificate of Origin, Cargo Manifest and Master's Receipt for Documents/Samples, etc., are prepared at Pagerungan Marine Terminal.

When the tanker has been loaded, the documents shall be completed and be taken aboard the tanker for the Master's signature.

Notes of Protest if any, should be handed to the Mooring Master for further delivery to Atlantic Richfield Bali North, Inc., Jakarta. Please note that the Mooring Master will *acknowledge receipt of the Note of Protest only, and is not authorised to accept such letters.*

Departure Procedure: Prior to the vessel's departure, the Immigration Official requires 6 copies of the Crew List to be marked for "Departure Immigration Clearance", and duly signed, it will be distributed as follows:

Master of the vessel	1 copy
Harbour Master	1 copy
Customs	1 copy
Pertamina Agent	1 copy
Immigration	2 copies
Total	6 copies

Upon presentation of the Crew List which is signed and marked for Departure Immigration Clearance and the Harbour Master will issue the Port Clearance.

Final Clearance formalities will be carried out aboard the tanker either at the Export SBM or in the Anchorage Area as circumstances dictate.

Before leaving the Terminal Area, the Master should advise the Terminal the vessel's ETA at destination through the Mooring Master.

PILOTAGE: The Company Mooring Master will board within the anchorage area.

The Mooring Master will act on behalf of the Company to acknowledge receipt of tanker's Notice of Readiness. Masters of arriving tankers are reminded that due to operational reasons, ship's Notice of Readiness will not be accepted between the hours of 1630 and 0530 unless the Company, in order to accelerate ship's turnaround time, is willing to accept same. In any case, Notice of Readiness (N.O.R.) will not be accepted for a time earlier than when:

(a) The Master has received the Mooring Master on board,
or
(b) The tanker shall have dropped anchor within the recommended anchorage area, and has advised the Terminal the time of anchoring.

Exceptions to (a) and (b) will be if the tanker is within the anchorage area awaiting arrival of the Mooring Master and has been requested by the Terminal not to anchor. In this case N.O.R. will be accepted from the time the Terminal requested the ship not to anchor.

In order to meet safe and efficient marine operations, tankers are recommended to arrive during daylight hours, however, if on ship's arrival the required Customs Loading Clearance is not yet received at the Pagerungan Terminal, then the acceptance of N.O.R. will be the time when such Clearance is received on Pagerungan Terminal or whenever the tanker is secured.

The Company reserves the right to decline to berth a specific tanker if its condition or facilities are unsafe for berthing or loading even though the berth is open to other tankers.

The decision of the ARBNI District Production Manager or his designated alternate to berth or not to berth a vessel shall be final.

APPROACHES: Approach information can be obtained by radio from the Terminal. Under normal weather conditions, if a tanker is scheduled to berth upon arrival, the Company Mooring Master will board such tanker in the close vicinity of the Mooring Area.

In addition to the Single Buoy Mooring for export tanker, various oil/gas wells as well as submarine pipelines and other future production structures may be located in the immediate vicinity and the areas extending East, South and Westerly from Pagerungan Island which constitute a hazard to navigation for Mariners.

Attention is drawn to the locations of structures in the restricted and designated areas of the ARBNI-Pagerungan Marine Terminal (See "Plan").

SBM, Harbour and Jetty and other Facility Structures on Pagerungan Island within ARBNI-Pagerungan Marine Terminal area display the following visual characteristics:

(1) Export Single Buoy Mooring:
A white light flashing every second, visibility 5 miles, mounted on the rotating deck of SBM. The SBM is also fitted with Radar Reflectors.

(2) Pagerungan Island-Pertamina Special Harbour and Jetty:
In addition to the SBM and submarine gas pipeline, Pagerungan Gas Processing facility also has one jetty S.E. of the plant for alongside workboat and barge to support plant activities.
The details are as follows:
(a) Jetty Head and Causeway:
Size : Jetty Head : 110 m. long × 33.6 m. wide.
Causeway : 500 m. long × 20 m. wide.
Capacity : 5,000 d.w.t.
Position :
Lat. : 06° 57' 48" S.
Long. : 115° 55' 42" E.
(b) Harbour Basin and Entrance Channel:
Basin size is 117 m. long × 117 m. wide.
Entrance channel is 53 m. long × 67.2 m. wide.
Water depth is 6.0 m. – 8.0 m. LWS.
(c) Boat Landing Facility:
6 bolder with the bollard-pull capacity of 25 tons each.
17 V-type fenders.
(d) Navigational Aid Facility:
Two channel entrance leading lights installed at jetty Head (Front Lead Nav. Aid) and causeway (Rear Lead Nav. Aid).
Two harbour entrance day markers (red and green) located at
(i) Red Marker : 06° 57' 55.77" S., 115° 55' 34.57" E.
(ii) Green Marker : 06° 57' 55.99" S., 115° 55' 36.50" E.

(3) Gas Processing Facilities on Pagerungan Besar Island:
The Gas Processing Facility is located at the Eastern end of Pagerungan Besar Island. The plant's position is Lat. 06° 57' 20" S., Long. 115° 54' 00" E.
The whole processing plant on the island will brightly illuminate the areas around them at night through the use of lights for normal working purposes.

ANCHORAGE: For tankers requested to anchor, the recommended anchorage area is an area enclosed by a line drawn through the following position.

(A) Lat. 7° 00' 00" S., Long. 115° 56' 00" E.
(B) Lat. 7° 00' 00" S., Long. 115° 57' 00" E.
(C) Lat. 7° 01' 00" S., Long. 115° 57' 00" E.
(D) Lat. 7° 01' 00" S., Long. 115° 56' 00" E.

Prior to her arrival the Master of a tanker should contact the Terminal for instructions concerning anchorage position (See "Radio").

Under no circumstances should an Export Tanker enter the Restricted Area around the structures without a Company Mooring Master aboard.

The attention of Masters should be drawn to the existence of underwater pipelines in the restricted area (See "Plan").

RESTRICTIONS: Mooring in daylight only. Unmooring at any time.

MAX. SIZE: 125,000 d.w.t.

Depth of water 65 m.

RADIO/VHF: *Advice of Arrival by Cable or Telex:* It is important that all incoming tankers advise ARBNI Pagerungan Marine Terminal 72 hours and 48 hours before estimated time of arrival, giving the best estimate of ship's arrival at the Terminal, via cable address: Ardjak, Terminal Section, Jakarta. Telex: 073 – 60048, 60052 Jakarta.

Time to be used for ETA is Local time or "Golf" Time Zone or G.M.T. plus 7 hours throughout the year. Changes in ETA must be notified thereafter.

The first message should also include the following information:

1. Name of tanker and Radio Call Sign.
2. Cargo requirements.
3. De-ballasting time. (Note: If a separate/permanent ballast system is fitted on board, ability of ship to load condensate and discharge ballast simultaneously must be stated).
4. Maximum loading rate.
5. Arrival draft, forward and aft.
6. Last Port of Call.
7. Confirm that vessel has clean Bill of Health.
8. If there is any sickness aboard, give whatever information is available as to the possible type of sickness.
9. Is cholera inoculation or smallpox vaccination required. If so advise number required.
10. Any hull, bulkhead, valve or pipeline leaks on vessel which could affect loading or cause pollution.
11. Special conditions, difficulties, defective equipment or gear which could present a special hazard or difficulties when mooring/unmooring or during operations.
12. Distance in feet from the bow to tanker's loading manifold.

Further ETA messages should be sent to Pagerungan Marine Terminal via above cable address and telex number when the tanker is 24 hours and 6 hours distant from the Terminal and at any other time, if any appreciable change occurs in the original ETA or those subsequent thereto.

(1) *VHF Marine Radio Telephone* (International Marine Calling & Safety Channel 16):

Masters are recommended to use this system when they arrive within radio range of the Pagerungan Marine Terminal, particularly when approaching the port. If poor visibility exists, the tanker's approach may not be observed. Attention to VHF communications may be the means of avoiding delay in berthing.

During berthing the ship's radio will be under the sole control of the Master, and the storage Terminal radios will be under the sole control of the Terminal/Production Superintendent or his assistant.

Masters are reminded that if tankers are requested to anchor to await berthing, *it is their responsibility to maintain constant listening watch on VHF Channel 16* to receive Terminal instructions.

Any delay due to failure to maintain a constant listening watch on Channel 16 will be for the ship's account, and will not be included in laytime calculation.

The Pagerungan Marine Terminal is equipped with VHF Marine Radio Telephone sets and continuous watch is maintained on Channel 16.

Tankers approaching the Terminal should make initial contact on Channel 16. For subsequent inter-ship communication within the Terminal, a "Handy Talkie" UHF Radio with Frequency on 400 MHz band will be used by the Mooring Master.

This frequency will not be used for general purpose, unless clearance is obtained by the Terminal. This is required for safety reasons.

Should all radios on the tanker become inoperative, the emergency signal, i.e. continuous blasts on the ship's whistle will be sounded to notify the Terminal of the radio failure. Upon hearing this signal from a loading tanker, the shore storage Terminal will immediately stop loading to the Export Tanker until communications have again been established.

(2) *Pertamina Control Radio Stations – HF/SSB:*

In the event incoming tankers are not able to contact the Pagerungan Marine Terminal on the foregoing VHF/FM Frequencies or by HF/SSB, Pertamina maintains coastal radio stations located in Jakarta and Surabaya.

Pertamina Jakarta Radio, Call Sign PKX-2 may be contacted on HF/SSB. See "General – Tankers" – "Communications" before first Indonesian port, for frequencies.

Masters should request the Pertamina Coastal Radio Station to relay the necessary information to ARCO Indonesia, Jakarta c/o Terminal Section, during office hours, and Radio Operator after office hours, by telephone numbers 021-520 2121 (20 lines), or by Pertamina telex number 46450, 45348 which is the designated number of ARCO Indonesia, Jakarta.

Pertamina Surabaya Radio, Call Sign PKD-6, may be contacted on VHF per following frequencies and during the following services hours:

Frequency/MHz	Hours/GMT	Keep watch/MHz
VHF Ch. 9/16/19	0000 – 1200	Channel 16

(3) *Pagerungan Marine Terminal Radio Station – HF/SSB:*
The Pagerungan Marine Terminal Radio, Call sign "Pagerungan Base" may be contacted on HF/SSB per following frequencies and during the following services hours:

Frequency/KHz	Hours/GMT	Keep watch/KHz
4958, 7668, 9960	0000 – 2400	9960
7673.5, 12628		
VHF Ch. 6/9/10/16	0000 – 2400	Channel 16

TUGS: *Mooring Launches:* There is one tug available for running lines and to assist mooring/unmooring as required, also for transporting Government officials, Agents and other authorised personnel to and from the export tanker.

BERTHING: *Terminal Facilities for Condensate Tankers – Export Single Buoy Mooring:*
Export SBM is designed, during reasonable weather conditions, to handle tankers up to 125,000 tons d.w.t. The SBM is equipped with a dual 160 ft.×13 in. circumference Floating Braidline Mooring ropes together with anti-chafe chains length 22 ft., to be arranged as to avoid chafing to the mooring ropes while tanker is at the buoy. (OCIMF type B).

LOADING: *Loading Condensate:* The condensate loading hose is connected to the ship's manifold on the port side of the Export Tanker. Tankers arriving are requested to have the derrick on the port side raised and rigged, ready to lift the Terminal equipment aboard.

Condensate Tanker is loaded through 1×12 in. I.D. floating hose extending from Export SBM, connected to the Tanker's manifold at the ends by means of rail hose of 12 in. I.D. equipped with a 12 in. butterfly valve. All condensate tankers not having 12 in. hose connections should provide their own reducers in such a way as not to cause any delay in the hose connecting operation. On export SBM the total length of the hose string is 800 ft.

For tankers intending to load condensate at the Terminal, the distance from the bow to the loading manifold should not exceed 490 ft.

The minimum loading rate at the Terminal for condensate liquid tankers is 3,500 barrels per hour. Any tanker arriving unable to receive Condensate Liquid at the above minimum loading rate may be rejected.

The shore condensate tanks loading to tankers on the SBM can accomplish a maximum loading rate of approximately 6,500 barrels per hour through meters.

In order to save time as well as to make the berth available for others, it is requested that ship receives Condensate Liquid as fast as it can be delivered, with due regard for safety.

Masters are reminded that for safety reasons, it is advisable to have the ship half loaded as quickly as possible. Rate can be reduced for topping-off tanks. When requested by the ship to stop, cessation of Condensate Liquid flow is almost immediate.

Masters are also advised that the minimum quantity tanker can load at the Terminal is 50,000 barrels and maximum 150,000 barrels. Nominations in excess of 150,000 barrels can be accepted on the condition that offtaker/ship's owners agree to issue a written statement to waive any demurrage incurred due to waiting on berth and/or cargo.

1. Condensate Storage Tank "ARBNI – Pagerungan":
   The Company's Main Onshore Terminal Administrative Office Storage and Laboratory for testing Condensate Liquid Stock are located on Gas Processing Facility, Pagerungan Besar Island, having 2 storage tanks with operating capacity of 75,000 barrels each, giving a total of Condensate Storage Capacity of 150,000 barrels. Condensate from the Pagerungan Gas Processing Plant Storage Tanks is delivered to SBM through a 16 in. submarine pipeline size, via 2×6 in. Parity Turbine Meters worked in parallel. There are 2 cargo pumps capable of delivering Condensate Liquid up to a maximum of 6,500 barrels per hour through meters.
2. The floating hose is equipped with ANSI 150#, quick release Camlock flange size 12 in. Tankers must provide a 12 in. manifold connection to permit the loading. Failure to carry out this obligation may result in rejection of the tanker for loading and nullification of her Notice of Readiness. All costs, charges and expenses incurred therefrom will be for the ship's account.
   On arrival at the terminal area, tankers are required to have the port derrick ready to lift the equipment necessary for berthing and loading. The weight of the loading hose to be lifted is approximately 2.5 tons (5,000 1b).
3. The quantity of Condensate Liquid delivered will be determined by the metering system consisting of 2×6 in. Parity Turbine Meters. These meters are located at the Gas Processing Plant situated approximately 1.4 miles N.W. of the SBM on a 300° bearing.
4. The Terminal Mooring Masters may at any time request the ship's securing lines to be tightened or slackened under the direction of a responsible ship's officer. This may be necessary to avoid the ship overriding the buoy.
   Failure to comply with such a request may result in cessation of loading and all costs, expenses and/or losses due to loss of production caused by such failure to comply, will be for the account of the buyer.
5. Masters of Condensate tankers are advised that raising, lowering, connecting and disconnecting of loading hoses as well as other labours and duties on board ship connected with the loading of cargo or maintaining mooring lines in correct manner will be performed *by the ship's crew directed by a responsible officer* as required by the Terminal Mooring Master.

MOORING/UNMOORING: The ARBNI Pagerungan Marine Terminal will operate 24 hours a day, 7 days a week. Tankers will normally be berthed during daylight hours, weather and other circumstances permitting. In special circumstances at the sole discretion of the Company Terminal Production Superintendent, night berthing may be allowed if all conditions are favourable.

Unmooring will be carried out at any hour.

Tankers to be moored or manoeuvred at the Pagerungan Marine Terminal will be boarded by the Company Mooring Master within the anchorage area.

Under normal weather conditions, if a tanker is scheduled to berth on arrival, the Mooring Master will board such vessel in the close vicinity of the mooring area.

All such manoeuvring of ships shall be done only in accordance with the advice of the Mooring Master, subject to the understanding that in all cases and circumstances the Master of the tanker being manoeuvred shall remain solely responsible on behalf of his vessel's owners for the safety and proper manoeuvring of his vessel.

The ship's Master, or one of his *designated and qualified deck Officers, must* be on the navigating bridge at all times while the vessel is being manoeuvred.

The Mooring Master will report unsatisfactory conditions to the Company Terminal Production Superintendent who may in turn, reject the tanker until corrections are fully made. All costs accruing therefrom will be for the vessel's account.

Before loading, the tanker's cargo tanks are to be inspected and if suitable for loading condensate liquid, as the case may be, a notation signed by both the Terminal Representative and Vessel's Master to this effect will be made on the Company Dry Certificate.

The Company Terminal Production Superintendent, or his designated alternate, shall be the sole authority to decide when the Port is closed due to unsuitable weather conditions preventing normal working operations.

Various combinations of wind, sea and tidal conditions, also the size, length, ballasted trim and handling qualities of a vessel, can affect the decision to berth a vessel at the Terminal. All these factors have to be evaluated before a final berthing decision is made.

Delays to vessel using the Terminal due to the Port being closed because of bad weather conditions shall not be computed as laytime when compiling vessel's turnaround time.

Request for the Terminal to stop the flow of cargo at a predetermined tonnage must be in writing. The request must include the statement by the ship's Master that the Company will not be held responsible for any error and that in case of the vessel being overloaded the excess cargo cannot be pumped back to the storage tanks. The ship's Master will also be held responsible for any oil spills caused by this request.

The ship's Master is responsible to ensure that no communication by radio is allowed within the Terminal area.

Unauthorised radio communications will be cause for cessation of all operations, except clearing of the berth, and the vessel's Notice of Readiness will be immediately nullified.

The Master of each tanker will be given a copy of the Conditions of Use of Port of Pagerungan Marine Terminal, which he will be required to sign before the vessel proceeds to berth.

The vessel's personnel are responsible for the safety of the vessel and must take all necessary precautions, whether or not so advised by the Mooring Master, having in mind the hazards of the operation because of the products being handled, weather conditions and any other circumstances requiring special care or caution.

Ships are requested to have a pilot ladder safely and securely rigged, ready for immediate use, and long enough to reach the Mooring Master's launch.

A combination of Pilot ladder and ship's accommodation ladder so arranged that the personnel can first use the Pilot ladder until part way up the vessel's side, and then transfer to the accommodation ladder is recommended, especially on very large tankers. A light line should be ready to take aboard the Mooring Master's equipment.

Tankers will provide a broad lee for the Mooring Master both when boarding and leaving the ship. Adequate explosion proof lighting at night must be provided near the Pilot ladder and manifold connection area. During loading overside lighting must be provided in the vicinity of sea valves and floating hose.

During a tanker's stay at the Export SBM, emergency towing wires shall at all times be hung over the ship's stern on each quarter of the vessel. These wires shall be secured on the bollard inboard to enable the vessel to be towed away should the need arise. They must be tended throughout to keep the eye of the wire not more than 2 ft. above the water. Also the tanker shall at all times have a suitable towing rope hung over the tanker's stern in such a way that the towing can be fastened to the company tug, thereby enabling the tug to assist in preventing the tanker from riding up on the SBM, should the need arise.

Before any condensate liquid is loaded, all ship's scuppers on main decks must be plugged and cemented oil tight. Approved mechanical means of closing scuppers may be accepted.

It is absolutely essential that extremely careful supervision be exercised by officers of all tankers while loading operations are in progress. A responsible ship's officer is required to be on duty continuously while the tanker is being loaded. He will be assisted by an adequate number of ship's personnel in these operations.

It is the responsibility of the vessel to ensure that all mooring lines are properly tended on loading tankers. The Mooring Master at any time may direct an additional ship's line to be secured to the buoy and this line to be hove up or slackened off under the supervision of a responsible ship's officer so as to prevent the vessel overriding the buoy. *At all times sufficient crew must be available* to carry out, under the supervision of a responsible officer, instructions given by the Mooring Master.

Masters of loading tankers are advised that raising, lowering, connecting and disconnecting of condensate loading hose as well as other labours and duties on shipboard connected with the loading of cargo or maintaining mooring lines in a correct manner, will be performed *by the ship's crew directed by a responsible* officer, as required by the Mooring Master.

Preparations for mooring will be advised by the Terminal through VHF communication prior to tanker's arrival or by the Mooring Master before the mooring operation commences.

Condensate liquid tankers are required to have ready:

1. On the port side: A derrick of at least 5 tons safe working load, rigged and ready to pick up the mooring and hose connecting gear from the Mooring Master's launch. This derrick will subsequently be used for raising, connecting, disconnecting and lowering loading hoses (weight 2.5 tons approx.) and eventually to transfer the mooring and hose connecting gear back to the launch before the tanker sails.
2. On the forecastle: At least 6 good ship's mooring lines shall be required. Two of them will be used as messenger lines for bringing aboard both terminal mooring lines from the SBM. The four remaining ship's lines will be laid out two and two on either side of the foc'sle deck, eyes about 3.5 m. distant from the fair leads as advised by the Mooring Master. When the Terminal mooring lines have been hove up and antichafe chains have been hove about halfway inboard through the fairleads, the eyes of the ship's lines will be shackled onto the end links of the chain, so arranged that in the final position of mooring, the tanker is tied to the SBM using the Terminal Mooring lines/chains and made fast to the ship's bollards by means of the ship's own lines. This will be backed up by 2 lengths of wire strops, each 30 ft. in length and 2 in. diameter. These wires will be provided by the Terminal to be used as preventer wires. These two wire strops will not be used as the permanent mooring system. Their purpose is to hold the ship safely moored in the event one or more of the ship's lines part, until the crew can replace such lines.

Export Tanker Gear and Equipment: A ship may be rejected if upon inspection it is not properly equipped, or if it is not suitably manned, or if its tanks are not suitable for the cargo, or if in the case of crude oil tankers, the ballast is dirty.

A vessel is suitably manned if it has a full complement of qualified officers and a crew, all of whom are in a sober condition, competent and willing to carry out their duties and orders.

A ship must be equipped with a good working propulsion unit as passed by the appropriate survey society. Inoperative ships or partly inoperative ships will be rejected. Should a ship become inoperative or partly inoperative while secured to the SBM, it will be removed at the ship's expense.

No repairs to main engines or other essential equipment or machinery whilst secured to an export Single Buoy Mooring may be carried out, unless with the permission of the Terminal Superintendent or his designated alternate. Condensate tankers must lift the export hoses from the water to connect with the ship's manifold by means of its own derricks and using its own crew.

A vessel must have both bow anchors in good working condition. Both bow anchors and anchor cable must be of a size and standard to meet either "Lloyd's" or "A.B.S." requirements, even though they may in fact, be classified by other societies.

All vessels must have ready on deck suitable stoppers for manila, synthetic lines, and wires used for mooring purposes.

All vessels must have suitable winches or capstans in good working order.

Such winches or capstans must have sufficient power to heave in the 18 in. Terminal mooring lines as required by the Terminal Mooring Master.

Tankers must have the capacity to heave in the 18 in. braid lines used to secure them to the Export SBM's. Power supply to all deck machinery must be maintained throughout the period the ship is secured to the Export SBM. Failure to comply with this requirement will result in cessation of loading and delay and expense so caused will be for the ship's account. To assist in vessel's turnaround, ships should have all necessary gear ready on arrival.

Crude oil or condensate tankers must have the cargo boom on the port side raised with the cargo gear rigged and ready before the ship is boarded by the Mooring Master.

Vessels which may consider the lifting capacity of their gear to be marginal, should strengthen their gear accordingly. A common way to do so it to rig a second topping lift on the boom.

Masters of tankers are reminded that the hose connecting operation will normally be carried out while the ship is deballasting.

The cargo derrick required to raise the hose from the water must have a sufficient length of strong lifting wire rope on the winch drum to enable the cargo hook to reach the water and still have adequate turns of wire left on the drum to ensure safety.

Typical Pagerungan Condensate Specifications:

API gravity @ gravity 60°F.	: 60 – 62
Specific Gravity @ 60/60°F.	: 0.7300 – 0.7390
Reid Vapor Pressure	: 8.0 – 11.0 psig
Kinematic Viscosity @ 100°F.	: 0.606 cSt.
B.S. & W. % vol.	: Nil
Pour Point	: Below −50°F.
Flash Point	: Below 0°F.
Sulphur Content, % wt.	: Less than 0.01

BALLAST: *Disposal of Ballast:* Owners and Masters are responsible to observe International Convention Laws and Indonesian Government Regulations concerning pollution of the sea water, having particular regard for this area of the Java Sea.

No facilities are available for disposal of dirty ballast.

It is the responsibility of the ship's Master to see that no oil of any kind is pumped or spilled overboard from his ship.

The categories of pollution include oily water from bilges, crude residual from previous voyages, or any other matter that may result in pollution of the sea. Any fines imposed by governmental authority for pollution shall be for the ship's account.

As soon as practical after arrival, all tankers will be inspected by a Shore Marine Terminal Official for dirty ballast. During discharge of ballast, similar inspections will continue.

If evidence of oil appears at any of these inspections, the ship will be rejected, and will not be accepted again until satisfactory evidence is produced that such ballast was disposed of in a proper manner. If, during inspection, or during progress of loading, it is revealed that the ship's tanks are not tight, or that oil is leaking from the ship, the ship may be rejected or refused further loading.

If the ship's tanks are found to be leaking, it will not be accepted for loading unless satisfactory evidence of repair, duly certified by Lloyd's or A.B.S. Surveyors or other recognised Surveyors, is submitted. It is the responsibility of the ship's Master to see that no oil of any kind is pumped or spilled overboard from his ship. Drip pans, sawdust, dispersant, etc., should be used at all times, especially when disconnecting hoses in order to avoid any spillage of oil overboard.

Any tanker rejected because of dirty ballast or sea pollution will automatically nullify his Notice of Readiness and will lose any priority of position for loading.

A tanker must have sufficient ballast for safe handling, having due regard to existing weather and sea conditions. Through a careful watch of the weather and sea conditions, frequent exchange of information between ship and Terminal, and by a knowledge of the behaviour of his own ship, a ship's Master may come to the Terminal with a minimum safe ballast and thus lessen any possibility of infringement of sea pollution regulations.

In addition to the lights usually displayed, vessels in the moorings discharging ballast or loading cargo during darkness will brilliantly illuminate the sea around the ship, so that any pollution will be noticeable.

Tankers equipped with a separate system of ballast tanks will be allowed to discharge ballast and load oil simultaneously, providing approval is first obtained from the Company Terminal Production Superintendent or his alternate.

Most responsible shipowners have adopted a system of tank cleaning using circulatory methods of transfer of tank washings on shipboard and treating these washings with chemicals. The result is that no oil is discharged into the sea and the oil separated is collected in a slop tank. With the written permission of lifting companies, the Terminal will load on top of such slops. This system is highly recommended to avoid pollution of the sea waters.

Masters are required to certify in writing the quantity of slops remaining on board (if any).

Masters are warned that inspection of ballast is strict.

If, at any time, an overflow of oil or condensate liquids occurs, loading will be suspended immediately and not be resumed until the oil is cleaned up and removed from the decks of the vessel and/or from the surface of the sea, and any damage is repaired and no further danger exists. It is stressed that during loading operations, the Shore Cargo Controller/Operator will immediately slow down the loading rate on receipt of a request for same from the ship's deck officer in charge of loading.

All spillage of oil must be reported immediately to the Pagerungan Operations/Terminal Production Superintendent or his alternate, and subsequently a detailed report in writing submitted by the Master of the vessel concerned, giving all relevant details.

MEDICAL: No facilities available.

FRESH WATER: Not available.

FUEL: Not available.

CONSULS: Consuls in Surabaya (216 miles) and embassies in Jakarta (610 miles).

REPATRIATION: No crew changes. If emergency conditions prevail, for humanitarian reasons, exceptions to the foregoing may be permitted. All expenses incurred will be for the ship's account.

TIME: GMT plus 7 hours throughout the year.

SHORE LEAVE: Not possible.

GENERAL: *Stores:* Not available.

Flags: During daylight hours the Indonesian flag must be flown throughout the vessel's stay in Port.

Mail: For convenience, mail for personnel on incoming tankers may be sent to the Company's Surabaya office (address: Jl. Jemursari Raya No. 3A, Surabaya 60287, Indonesia) for delivery to the tanker when it arrives at ARBNI–Pagerungan Marine Terminal.

Spares: Except on an emergency basis, spare parts or other materials will not be accepted for delivery to incoming tankers.

Admiralty Charts and Sailing Directions: Admiralty Chart No. 1653C. Admiralty Chart No. 934.

Sailing Directions: Eastern Archipelago Pilot, Vol. II.

Procedure for Appointing Agent: See "General" before first port.

Nominations: Tanker nominations for lifting of Pagerungan Condensate are coordinated through ARCO International Oil and Gas Company, Plano, Texas and ARCO Indonesia, Jakarta, Indonesia.

All condensate liquid and natural gas sales, also tanker chartering, are arranged by the following parties in each of their respective locations: Pertamina, ARCO International Oil and Gas Company, BP Exploration (Kangean) Ltd. and P.T. Bimantara Duta Samudra.

Tanker scheduling is coordinated for all of the partners through ARCO International Oil and Gas Company, Plano, Texas, and arranged through ARCO Indonesia, Jakarta.

Principal Offices: Pertamina, Jalan Medan Merdeka Timur No. 1A, Jakarta, Indonesia.

ARCO Indonesia (See "Operator").

ARCO International Oil and Gas Company, Division of Atlantic Richfield Company, 2300 West Plano Parkway, Box 260888, Plano, Texas, 75026-0888, U.S.A. Telex: 163511 Aiogc Plno.

BP Exploration (Kangean) Ltd., Kuningan Plaza, South Tower, Suite 401, Jl. H.R. Rasuna Said, Kav. C11-14, Jakarta Selatan, Indonesia. P.O. Box 2749/JKT. Telex: (073) 62461 Beepee 1A.

P.T. Bimantara Duta Samudra, Jl. Kebon Sirih No. 17-19, Jakarta Pusat, Indonesia. Tel: (62)21-3909211. Fax: (62) 21-3909207.

AGENCY: Pertamina Directorate of Shipping and Telecommunications Jakarta, handles all emergency matters for tankers. They may appoint its local representatives from Pertamina PKK UPPDN-V Surabaya.

Also see "General" before first port.

REPORT: November 1994.

Location: The S.B.M. at Pagerungan Marine Terminal is located in position Lat. 06° 58' 14" S., Long.115° 57' 23" E.

The first shipment of condensate was loaded in May 1994.

Anchorage: Within the area bounded by co-ordinates A, B, C and D.

(A) Lat. 07° 00' 00" S., Long. 115° 56' 00" E.
(B) Lat. 07° 00' 00" S., Long. 115° 57' 00" E.
(C) Lat. 07° 01' 00" S., Long. 115° 57' 00" E.
(D) Lat. 07° 01' 00" S., Long. 115° 56' 00" E.

Max. Size: The S.B.M. is prepared for handling tankers up to 125,000 d.w.t.

Loading: Hose connection is 1×12 in., butterfly valve manifold.

Loading tankers should prepare their own hose connection for 12 in.

On export S.B.M., total length of hose string is 800 ft., so for tankers intending to load condensate, the distance from bow to loading manifold should not exceed 490 ft.

Loading Rate: 3,500 - 6,500 bbls./hr.

Details of an October 1994 loading:

Loading Rate (Average): 5,952 bbls./hr.
Loading Temperature (Average): 88.3°F.
API Gravity 60°F: 61.38.
Specific Gravity 60°/60°F: 0.7336.

General: The General Agent arranges foreign flag vessel permit to enter Indonesian waters against Sea Commercial Department. Pertamina Shipping must be appointed as Port Agent as Terminal is owned/operated by Arco/Pertamina (See "General" before first port).

OPERATOR: ARCO Indonesia, Atlantic Richfield Bali North, Inc. (ARBNI), The Landmark Centre, B Tower, 22nd and 23rd Floor, Jalan Jenderal Sudirman, Kav. 70A, Jakarta 12910 (P.O.Box 1063, Jakarta), Indonesia. Tel: (62) 21-5202121. Fax: (62) 21-5202221, 5219967. Telex: (073) 60048, 60052 Ardjak la.

PALEMBANG: 02.59 S. 104.45 E.

DOCUMENTS: Upon arrival ships have to fill in the following Forms:

Harbour Report obtainable from the boarding Pilot, or from the Harbour Master.
Pilot's Certificate.

Upon arrival vessels have to produce the following Certificates and Documents, which will remain in the Harbour Master's custody until cleared:

Nationality (Registry) Certificate.
Seaworthiness Certificate.
Measurement (Tonnage) Certificate.
Derat (Exemption) Certificate.
International Load Line Certificate.
Safety Certificate (passenger ships).
Safety Equipment Certificate (cargo ships).
Safety Radio and Radiotelephony Certificate (cargo ships).
Certificate of Approval (ship's radio station).
Health Book or Bill of Health.
Last Port Clearance.
Subscription of Light and Harbour Dues and wharfage if any.
10 copies Crew List.
6 copies Passenger List.
2 copies Ship's Articles.
2 copies Stores List.
Manifests.
Bills of Lading.

Maritime Declaration to be completed by Master upon arrival, obtainable from boarding Quarantine officer, or via Agency.

ARRIVAL: 2 days before arrival of vessel, the ship's Agent has to inform the Port Administration, by completing appropriate forms. Copies of completed forms must also be submitted to the Harbour Master, Port Health Service, Immigration, Customs and Security for preparations of services.

Agent/Owners to advise Port Administration (Pilot Division) of vessels arrival 24 hours in advance.

PILOTAGE: Compulsory, consisting of Outer (River) and Harbour Pilot. Applications should be cabled to pilot vessel via Palembang Radio Station. Pilot vessel located at station position Lat. 02° 11' 08" S., Long. 104° 57' 08" E.

The Pilot may berth the vessel on request of the ship's Agent only after obtaining clearance from the Port Administrator, Harbour Master, Port Health Service and Immigration (foreign vessels only).

Vessels arriving in afternoon and unwilling to navigate the river in darkness should not hoist the pilot signal. The signal station is at the aforementioned pilot vessel, which answers the pilot signal as follows:

By night:

A flare-up light slightly over the railing, or waving with a white light means: Pilot will soon board the vessel. 1 red light vertical over a white light means: No Pilot available, vessel allowed to proceed until Pilot is met.

By day:

1. The international flag signal KYS from the International Code of Signal meaning: Pilot unable to attend due to motor defect or heavy seas. The Pilot can be picked up by ship's motor-boat.
2. The flag signal KKO meaning: No Pilot available, vessel allowed to proceed until Pilot is met.

Use of Harbour Pilot in Palembang is compulsory.

ANCHORAGE: *Musi Bar:* anchorage position Lat. 2° 08' 30" S., Long. 104° 58' 30" E., in depth of 9 fathoms, used for topping up ocean tankers from river craft.

MAX. SIZE: Max. length 185 m. Max. draft 7.5 m.

RESTRICTIONS: Palembang is 54 miles upstream. The main entrance is the River Arun between Tg. Tjarat and Tg. Gedeh.

Depths from sea to Palembang/Musi River:

Sungai Lais	53 Dm. at mean level.
Kumbang Merah	49 Dm. at mean level.
Selat Djaran	49 Dm. at mean level.
South part of Pulau Ayam	54 Dm. at mean level.
Parit XII	54 Dm. at mean level.
South of St. Pandan	56 Dm. at mean level.
Tanjung Carat	50 Dm. at mean level.
South of Pulau Payung	56 Dm. at mean level.

Incoming ships have priority in passing the Outer Bar from 2 hours to 1 hour prior to HW. From 2 hours to 45 minutes prior to HW, outgoing ships have to wait between Tangjung Gedeh and Tandjung Tjarat.

Channel East of Pajung for incoming ships.

Channel West of Pajung for outgoing ships.

HEALTH: Vessels arriving from abroad have to apply well in advance from the Department of Health (Quarantine Section) for a provisional Free Pratique, as said Pratique has to be cabled to the port. The provisional Free Pratique is only valid for this port, the next port of call must be a First Class Port as no further provisional Free Pratique will be issued, unless the vessel sails directly abroad.

RADIO: Palembang Coastal Radio Station. Call sign PKC.

Working Frequencies: 500/448 kHz, 8437 kHz, 2182/2690 kHz, 8,808.8 kHz.

VHF Channel 16, 20, 22, 26 and 28. Time operating (local time) 0700 – 1330, 1500 – 1730, 1900 – 2100 hrs.

VHF:

Harbour Master	Channel 14
Pilot	Channel 12 – 14 – 16
Port Operations	Channel 12 – 16
Safety/Security	Channel 09 – 12 – 16

TUGS: Vessels over 60 m. length are required to use at least 1 tug. 3 tugs available, 1,700 h.p. – 1,800 h.p. 2 fire-fighting tugs at Pertamina, 750 and 850 h.p.

BERTHING: Boom Baru: Concrete Wharf, length 630 m., depth alongside 7 m. at LWS.

Fertiliser Wharf:

PUSRI I	:	Length 125 m. Depth 6 m.
PUSRI II	:	Length 100 m. Depth 6 m.
PUSRI III & IV	:	Length 280 m. Depth 7 m.

Also see "Plaju".

CRANES: *Palembang:* (Mobile cranes). 1 at 7 tons capacity, 1 at 10 tons, 3 at 15 tons, 2 at 18 tons, 1 at 25 tons and 1 at 30 tons.

There are 18 fork-lift trucks available, capacity 2 tons – 15 tons.

Pusri: 2 mobile cranes, capacity 5 & 7.5 tons. 3 shore cranes, capacity 25, 40 and 100 tons.

MEDICAL: Hospital and First Aid available.

TANKERS: Pladju Terminal (Right Bank): Downstream of Harbour Board quay operated by P. N. Pertamina Unit II (Pladju) (ex-Shell). Also see "Plaju".

Sungai Gerong Terminal (Right Bank): Downstream of Harbour Board quay, operated by P. N. Pertamina Unit II Sungai Gerong (ex-Stanvac). Also see "Plaju".

STEVEDORES: According to the requirements of the vessel concerned, labourers are requested from the U.K.A. (Port Labour Pool).

The usual working hours at the harbour are:

Monday – Thursday	0800 – 1200 hrs.
	1300 – 1600 hrs.
Friday	0800 – 1100 hrs.
	1300 – 1600 hrs.
Saturday	0800 – 1200 hrs.
	1300 – 1400 hrs.

Overtime is allowed on request.

DENSITY: 1000.

FRESH WATER: Piped water supply is at 15/20 t.p.h., and through water barges is at 50/60 t.p.h. Water barge capacity 100 tons.

FUEL: Obtainable from Pertamina provided payment is arranged in advance through their Head Office in Jakarta. Delivery by pipeline or barge.

REPAIRS: Facilities available.

PORT SECURITY: Maintained by members of the Indonesian Armed Services, usually, Police, Navy or Marine and Army. Crew members should be in possession of a shore pass issued by the Port Authority, accompanied by an identification card when leaving or entering the guarded gates of the Port Area. Shore passes can be obtained via the Agencies.

CUSTOMS ALLOWANCES: 200 cigarettes or 50 cigars or 100 grams of tobacco. There is no alcohol allowance.

REPATRIATION: A valid document is needed. A re-entry permit from the country concerned is sufficient, if there is no passport available.

AIRPORT: Talang Betutu Airport is approximately 12 km. from the port.

TIME: The Port is located in the zone of Western Indonesian Time, which is based on the time at the meridian of 104° 46' 36" East Longitude.

POLICE/FIRE/AMBULANCE: Security – 22386, Fire 20451/22386, Ambulance 22531.

IDENTIFICATION CARDS: Crew members having no passport are required to carry a Seaman's Identification Card (S.I.C.). A re-entry into country if there is no S.I.C.

CUSTOMS/NAVY REG.: Upon vessels arrival/departure, boarding team will come on board consisting of:

2 Navy Officers.
2 Customs Officers.
2 Health Officers (in case vessels coming from infected ports or abroad).
2 Immigration Officers (in case vessels coming from abroad only).
3 Clerks from Agents.

Nobody allowed on board until this team declares the vessel cleared.

AUTHORITY: Port Administrator.

PANARUKAN: 07.42 S. 113.56 E.

DOCUMENTS:
Port Clearance.
5 B/Model/Customs Clearances.
Customs papers.
Stores List.
Crew List.
Passenger List.
Light Dues Certificate.
Seaman's Book and Health Certificate.
Ship's Registry.
Load Line Certificate.
Safety Radio Certificate.
Derat Certificate.
Certificate of Nationality.
Tonnage Certificate.
Suez Canal Certificate.
Dispensation for Deck and Engineer Officers.

PILOTAGE: Not available.

ANCHORAGE: With bearings: Patjaron Hill, 275°; white light, 128°; red light, 187°. This anchorage leaves ship 300 m. from 20 m. line and over 500 m. from 7.5 m. patch.

RESTRICTIONS: No restrictions, vessel may enter and leave port at any time.

MAX. SIZE: In anchorage position draft permissible up to 15 m.

HEALTH: Pratique will be arranged by Agent and especially if the ship is just coming from a country suspected of special disease or fever, otherwise Pratique is automatic and a quarantine doctor boards.

RADIO: *(a)* Coastal station: Call sign, PKD 2; medium wave, 500 kHz; WF, 474 kHz; working hours GMT, 2400–0100 hrs., 0400–0500 hrs. *(b)* Fixed station: Call sign, 8 AD 3; short wave, 8 MHz; working hours GMT, 0100–0400 hrs., 0500–0600 hrs.

TUGS: Tugs join vessel at anchorage position. Vessel can use tug's lines and the Agent will arrange. Usual charge for use of tug's lines.

BERTHING: There are no berths alongside.

STEVEDORES: 24 hours before ETA advice needed to arrange gangs.

MEDICAL: Hospital facilities available, vaccination/fever Certificates for crew can be issued by authority.

FRESH WATER: No facilities.

FUEL: No facilities.

CONSULS: No local representation.

REPAIRS: No facilities.

GANGWAY/DECK WATCHMEN: Available.

OPENING/CLOSING HATCHES: Carried out by stevedores.

CUSTOMS ALLOWANCES: No restriction as long as goods remain on board ship.

CARGO GEAR: All gear supplied by stevedores except rain tent.

TIME: GMT plus 7 hours.

HOLIDAYS: Sundays, 1st January; 17th February; 9th March; 7th May; 18th May; 15th August; 17th August; 28th September; 30th November; 1st December; 25th December. Work cannot be arranged on 17th August and 30th November but on other holidays cargo work can be arranged.

SHORE LEAVE: Can be arranged.

IDENTIFICATION CARDS: Needed if crew going ashore.

PANGKALAN SUSU: 04.07 N. 98.12 E.

DOCUMENTS:
12 copies Crew List.
12 copies Passenger List.
3 copies Cargo Manifest.
3 copies Ship's Stores List.
3 copies Crew Personal Effects List.
1 copy Maritime Declaration of Health.
1 copy Clearance from Last Port.

PILOTAGE: Compulsory. Sea pilot boards in position Lat. 04° 12' 00" N., Long. 98° 23' 10" E. Pilot requires 10 hours notice of arrival and 5 hours notice of departure.

RESTRICTIONS: Daylight berthing and unberthing only.

MAX. SIZE: Max. permissible size at the SBM is 100,000 d.w.t. Max. LOA 275 m. Depth of water 22 m.

RADIO: Pangkalan Susu Radio. Call sign PKB-2.

VHF: Channels 16, 12, 19, 24 and 29.

TUGS: Tugs and mooring boats available.

BERTHING: *SBM:* The buoy is located in position Lat. 04° 13' 05" N., Long. 98° 24' 30" E.
Inshore wharves: There are 3 inshore wharves with depth alongside 6.0 m. at LWS. Max. d.w.t. 3,500. Max. LOA 90 m. – 95 m.

LOADING: *SBM:* Crude oil is loaded at a rate of 2,000 k/l.p.h. through 1×12 in. hose. Storage capacity for crude oil is 119,528 k/l.
Inshore wharves: Wharf A-B: Crude oil is discharged at a rate of 15 k/l.p.h. through 1×6 in. hose. MSD is loaded at a rate of 15 k/l.p.h. through 1×4 in. hose.

Wharf C: Asphalt is loaded at a rate of 30 t.p.h. through 1×6 in. hose and BFS is discharged at a rate of 50 k/l.p.h. through 1×6 in. arm.

Wharf D: LPG is loaded at a rate of 300 k/l.p.h. through a loading arm with 4 in., 6 in. and 8 in. reducers.

Tank storage at Inshore Wharves: Asphalt 7,792 k/l. MSD 1,000 k/l.

MEDICAL: First-aid clinic available.

DENSITY: 1020-1025.

FRESH WATER: Not available.

FUEL: Not available.

CONSULS: None locally.

AIRPORT: Polonia Airport at Medan.

TIME: GMT plus 7 hours.

GENERAL: *Charts:* Indonesian Chart No. 16 and British Admiralty Charts No. 3574, 2777 and 1353.
Provisions: Fresh and dry stores available.

AGENCY: See "General" before first port.

SHIPMASTER'S REPORT: December 1978.
Location of SBM: Lat. 04° 13' 05" N., Long. 98° 24' 30" E.
General: Normally weather is fair with moderate variable winds. But from November to March there are very often very strong Northeasterly winds together with heavy rain showers and thunderstorms. There are 2 tides a day, following the coast-line. The current on flood tide sets from N-buoy to S-buoy, the ebb tide sets from S-buoy to N-buoy. The depths around the SBM inside of these buoys are between 18 m. to 25 m. Vessels up to 100,000 d.w.t. are berthed at the SBM. The density is approximately 1023.

For approaching B.A. Chart No. 1353 is used. The Operator of the Terminal is Pertamina, Pangkalan Susu.

Navigation: Agent in Pangkalan Susu is Pertaminaship. Cable address is Pertaminaship Pangkalan Susu. ETA cables should be sent 72, 48 and 24 hours prior to arrival. First ETA should include the requested cargo. Pangkalan Susu Radio belongs to Pertamina. Call sign is "PKB 2". Frequency 6456.5 kHz, calling band 6 MHz. The working hours are from 0700 to 1900 hrs.

VHF Channel for calling (Susu Radio) Channel 16, working Channel 12, 19, 20 and 24 for information. No Radio Pratique.

On arrival vessel has to anchor 2 miles East of SBM. At the anchorage the Pilot boards with the Loading Master and 7 crew, after the vessel is cleared by the Port Authorities. All stay on board to assist berthing and connecting cargo hose, and vessel has to supply food and accommodation. Regarding food – they are all very strict Moslems. They will also stay until the loading operation is completed.

Pilotage is compulsory (Government Pilot). A vessel will berth only during daylight, but unmooring day and night. After which the vessel has to anchor to await cargo papers.

Vessel must arrive with sufficient clean ballast for berthing at the SBM. Pilot ladder only is required.

Berthing at the SBM is normal SBM procedure with messenger rope from the vessel to pick up 1 rope only from the SBM. Then 3 ship ropes, eyes going from the vessel to the SBM and then back to the vessel again. During the vessel's stay at the SBM one tug is made fast with the ship's rope aft and the tug keeps the vessel clear of the SBM.

Tugs: Three tugs are used as follows:
1 tug 300 h.p. for floating hose.
1 tug 300 h.p. for line handling during mooring.
1 tug 1,700 h.p. for towing the vessel off the SBM and keeping her clear during the whole operation.

Steam turbine vessels have to run their turbine with 3–5 revs astern during their stay at the SBM and the tug aft.

Wharves/Buoys: SBM Pangkalan Susu is situated at Lat. 4° 13' 05" N., and Long. 98° 24' 30" E. and has a diameter of 15 m. and a height of 4.4 m. The buoy is an orange colour and has a red light with 3 long flashes, also 1 floating hose with 12 in. diameter. The SBM is used for export production of Katapa Crude and North Sumatra Crude. Four buoys are situated around the SBM within 1,000 m. of the SBM. Their positions are as follows:

"N"–Buoy	Lat. 4° 13' 38.5" N.,	Long. 98° 24' 30" E.
"S"–Buoy	Lat. 4° 12' 40.0" N.,	Long. 98° 24' 30" E.
"E"–Buoy	Lat. 4° 13' 04.0" N.,	Long. 98° 25' 30" E.
"W"–Buoy	Lat. 4° 13' 04.0" N.,	Long. 98° 23' 57" E.

The depth of water is between 18 m. and 25 m. in this area.

Time: GMT plus 7 hours.
Repairs/Dockyards: No repairs possible.
Supplies/Service: Provision supply possible. But no bunkers, water, Deratting Certificate, no Consuls, crew change or medical treatment available.
Cargo Operations: Terminal Operator is Pertamina, Pangkalan Susu. Cargo information can be received on Channel 19. Other information on Channel 16 (Susu Radio) 19, 20 and 24. Loading rate 2,000 t.p.h., but can be reduced to 1,600 cu.m. when necessary for topping tanks. One×12 in. cargo hose is connected from SBM to ship's manifold, for connections, ship's derrick is used on portside with minimum 5 tons load (SWL). Seven crew with Loading Master assist for connecting the hose.

API=50.0   Temp.=85°F

One hour and again half-hour before completion of loading the Loading Master is to be informed. He will then stand by for stopping the cargo. All papers are typed on board the vessel and vessel has to supply typewriters, two if possible, to reduce the waiting time. After completion of loading the vessel will anchor about 1 mile off the SBM to wait for the cargo papers to be completed (about 2 to 3 hours).

Rescue/Distress: No salvage or Coast Guard available.
Port Authority: The vessel has to anchor about 2 miles off the SBM and the Custom Officials, Immigration, Quarantine Officer and Agent will board the vessel at the anchorage, about 12 persons in all. The authorities also clear the vessel if she is also bound for Kuala Beukah. For clearance the following are requested:

12 Crew Lists; 2 Vaccination Lists; 3 Stores Lists; 3 Crew Effects Lists; 1 Health Declaration; 1 Ship's Health Book for Indonesian Ports only, if not on board it will be issued by the authorities.

Approaches: The approach is very easy. The coast line gives a very good picture on the radar for navigation. But it is very difficult to pick up the SBM on the radar due to many fishing boats and fishing houses. The fishing boats will also interfere with the approach, especially during the night, many of them are showing no lights, until the vessel is very close.

AUTHORITY: *Operator:* Pertamina, Pertamina P&T, Daeran Sungag Pangkalan Brandan, Indonesia. *Tel:* (62-61) 373657. *Telex:* 517 Perta PBO. *FAX:* (62-61) 322688.

PANGKALBALAM: 02.06 S. 106.08 E. (See Plan)

DOCUMENTS:

Health Documents:

Maritime Declaration of Health.
Derat Exemption Certificate.
Vaccination Certificates.
Crew and Passenger List.
Health Book.

(a) Port Health Measures: The Port Health Service is responsible for the protection of the port against the introduction or dissemination of quarantinable diseases. This responsibility is based on:
1. The National Quarantine Law.
2. The National Epidemiological Law.
3. International Health Regulations.

(b) Vaccination/Immunisation:
Vaccination and Immunisation against cholera can be carried out by the Port Health Service. Yellow Fever prevention is carried out by the Port Health Service and General Hospital.

(c) Extermination of rats is carried out by the Port Health Service at the expense of shipping Agent.

Certificates: The Ship's Certificates should be delivered to the Harbour Master through the Agent.

The certificates will be returned to the ship's Master prior to the ship's departure.

Ship's Manifest and Bill of Lading: The copy of the ship's Manifest should be delivered to the Port Administration through the Agent.

Ship's Arrival/Departure:

(a) Two days before arrival of vessel, the ship's Agent has to inform the Port Administration, by completing appropriate forms. Copies of completed forms must also be submitted to the Harbour Master, Port Health Service, Immigration, Customs, and Security for preparation of services.

(b) Before departure Port Clearance is issued by the Harbour Master, after Clearance has been obtained from Customs, the Port Health Service and Immigration.

Immigration: Vessels carrying passengers arriving at Indonesian ports from abroad should have to show the "N" flag.

The Master is required to furnish the boarding Immigration Officer with a Passenger List showing the names of all on board and classified as:

(a) Disembarking passengers.
(b) Transhipment passengers.
(c) Through passengers (from abroad to ports outside of Indonesia).

PILOTAGE: Not available.

ANCHORAGE: Safe anchorage at green buoy, 10 m. Anchorage area: Lat. 02° 04' S., Long. 106° 14' 30" E.

RESTRICTIONS: No anchoring at Eliot (red buoy).

MAX. SIZE: Length 140 m., breadth 30 m. Only vessels with draft of 8 ft. allowed to discharge alongside the quays.

RADIO: Coastal Radio Station Pangkalbalam Radio, call sign PKC5.

Time Schedule:

Frequencies		*Working Times*	
2182 kHz	A.1	0000–0100	GMT
2690 kHz		0300	GMT
2090 Rx		0600	GMT
2075 Rx		0000–0600	GMT
2085 Rx			
2100 Rx			
2638 Rx			
Channel 16 VHF.			

VHF: Channels 16, 15, 10, 20, and 22.

TUGS: 4 tugboats available, owned by P.N. Djakarta Lloyd, P.T. Samudera-Indonesia, and P.T. Pelni for communication between shore and ships. Capacity 150 h.p. – 350 h.p.

BERTHING: First Wharf: Length 60 m. Depth 1.65 m. at LWS.

Second Wharf: Length 60 m. Depth 1.65 m. at LWS.

CRANES: 2×10 tons (Port Authority), 4×10 tons and 1×4 tons (Private), All mobile cranes.

Port Authority has 2×2.5 ton fork lift trucks. 2×2.5 tons (Private) also available.

STEVEDORES: Ordered by Agent. Rates 15/20 t.p.h. per gang.

MEDICAL: First aid available at the scene of accident. Medical treatment or advice available regularly from the Port Health Service. Hospitalisation available at general and private hospital at Pangkalbalam.

FRESH WATER: Not available.

FUEL: Not available.

CONSULS: None.

REPAIRS/DRY DOCKS: None.

CERTIFICATES: See "Documents".

CUSTOMS ALLOWANCES: *Customs Regulations:* Ports in Indonesia are divided into:

(a) Sea Ports, i.e. ports at which foreign vessels may call without a "Flag Dispensation" from the Ministry of Communications (Directorate General of Sea Communications) and the Ministry of Finance. (Concerning the import and export of goods).

(b) Coastal Ports at which only vessels flying the Indonesian flag may call according to the Regulations.

The Port of Pangkalbalam is a Sea and Coastal Port. Vessels unloading and loading cargoes have to get a Customs Permit. The Cargo Manifest, the Ship's Stores List and the List of Crew's Belongings have to be delivered to Customs within 48 hours.

Tobacco Allowance: Each crew member is allowed to carry 200 cigarettes or 100 grams of tobacco ashore without paying import duty.

Alcohol Allowance: There is no allowance for alcoholic drinks.

Other Commodities: Maximum value of U.S.$100.

Each crew member is allowed to bring in goods for personal use up to maximum value of U.S.$100.

REPATRIATION: A valid document is needed, entry permit from the country concerned is sufficient, if there is no passport available.

AIRPORT: Pangkalpinang 14 km. Regular flights to Jakarta and Palembang every day.

HOLIDAYS: On Moslem holidays, no cargo work.

POLICE/AMBULANCE/FIRE: Police 386 LB; Ambulance 444 OTM; Fire 326 LB.

SHORE LEAVE: After permission by Chief of Immigration.

IDENTIFICATION CARDS: Crew members having no passport are required to carry a Seaman's Identification Card (S.I.C.)

REGULATION: Every ship on arrival must be passed by; Customs, Harbour Master, Maritime Police, Health service and Immigration Chief.

DELAYS: Due shortage of lighter space.

AUTHORITY: Pangkalbalam Port Administration, Jl. Yos Soedarso, Pangkalpinang, Indonesia. *Tel:* 21736, 21737. *Contact:* Mr. Soenaryo, Port Administrator.

PANJANG (Lampung), Including Tarahan: 05.28 S. 105.19 E. (See Plan)

PORT LIMITS: The Southern limit of the port is along the parallel 5° 34' S.

DOCUMENTS:

Quarantine:

Vessels arriving from abroad have to hoist "Q" flag on arrival until boarded and released by Quarantine Officer.

Documents which have to be prepared:
Declaration of Health.
Derat (Exemption) Certificate.
Valid International Vaccination Certificates.
Crew and Passenger Lists showing the validity dates of above certificates.

Immigration:
Immigration, Crew and Passenger Lists.
Crew/Passengers to be cleared.

Customs:
General Declaration of Cargoes Aboard Ship.
(Copies of each Manifest).
Crew/Passenger Lists and Personal Effects Lists.
Ship's Stores List.
Clearance from Last Port.

Harbour Master: After having filled Harbour Report (handed to Harbour Master's Office or Boarding Agent), ships have to prepare the following documents to be kept in custody of Harbour Master during ship's stay in port.

Nationality (Registry) Certificate.
Derat (Exemption) Certificate.
International Load Line Certificate.
Safety Certificate(Passenger Ship).
Safety Equipment Certificate (Cargo Ship).
Safety Radio Telegraph/Telephony Certificate, and Ship's Radio-Station Certificate.
I.O.P.P. (International Oil Pollution Prevention) Certificate.
Declaration of Health.
Last Port's Clearance.
Subscription of Light and Harbour Dues and wharfage.
Crew/Passenger List.

APPROACHES: *Navigational Report:* Approaching Panjang there are numerous small fishermen's houses built on bamboo sticks at sea, some without lights. Therefore approaching or sailing from Panjang at night time should not be attempted.

PILOTAGE: Compulsory for vessels of 70 g.r.t. and over. Pilots are in Government Service. Pilot signals according the International Code of Signals. Boarding area is on the outer (West) side of a line of reefs, which extends from South to North on the West of the harbour basin. Pilot (7) can be ordered from the Port Administration via ship's Agents not less that 8 hours prior to berthing, and 4 hours prior to unberthing and shifting.

Pilotage information can be obtained from the Pilot Radio Station, Panjang Pilot/Panjang Radio/PKC9. VHF Channels 12 and 14, opened daily from 0030-1200 GMT. Pilotage available throughout 24 hours.

ANCHORAGE:

(a) Areas: Kunyit Lighthouse bearing 345° × 2 miles.
(b) Anchorage position for vessels awaiting a Pilot:
Between (A) Lat. 05° 28' 20" S., Long. 105° 17' 00" E.
(B) Lat. 05° 28' 20" S., Long. 105° 17' 40" E.
(C) Lat. 05° 29' 30" S., Long. 105° 17' 00" E.
(D) Lat. 05° 29' 30" S., Long. 105° 17' 40" E.
(c) Depths: 22.0 m. (72.6 ft.).
(d) Largest Vessel: Max. deadweight 40,000 tons.
Max. draft 10.5 m.
Max. length overall 200 m.

MAX. SIZE: Max. draft 9.5 m.

HEALTH: During the time that the "Q" Flag is flying no one is allowed to board or leave the vessel, except with the permission of the boarding Quarantine Officer.

Also see "Documents".

RADIO/VHF:

(a) Coastal Radio Station, Panjang Radio, call sign PKC4.
Frequencies: 4396.6, 430 and 450 kHz.
(b) Pilot Radio Station/Panjang Radio/PKC9, working hours:
Channel 12 and 14: 0030 – 1200 GMT.

Vessels are requested to report correct ETA to Pilot Radio Station 2 or 3 hours before arrival and inform the ship's particulars as follows:
Name and Nationality of the vessel.
LOA, g.r.t., draft.
Last Port and Next Port of Call.

TUGS: It is compulsory for ships with a length of 70 m. and over to use tugs in berthing and unberthing operations.

The port owns 3 tugs of 978 h.p. – 1,700 h.p.

BERTHING:

Quay A on the South side, length 172 m., depth 8.5 m. LWS.
Quay B on the East side, length 210 m., depth 6.5 m. LWS.
Quay C on the West side, length 138 m., depth 4.5 m. LWS.
Quay D on the North side, length 486 m., depth 12.0 m. LWS.
Ro-Ro Berth, length 20 m., depth 9.0 m. LWS.

Private Wharves:

Pertamina Oil Jetty (2 units): Depth 5.50 m. LWS.
Single Palm Oil Jetty (1 unit): Depth 8.00 m. LWS.
PTP Palm Oil Jetty (1 unit): Depth 7.00 m. LWS.
PTP Andatu Lestari Wharf: Length 75 m., depth 8.00 m. LWS.
Tarahan Wharf: Length 174 m., depth 12.00 m. LWS (See below).

Ocean vessels can also be berthed at 3 buoys in the inner basin (harbour).

Tarahan: Terminal is one mile to the South of Panjang, operated by P.T. Tambang Batubara Bukit Asam. Berth length 174 m., depth 12.0 m., distance between dolphins 240 m. Max. size: 40,000 d.w.t. Max. LOA 179 m., max. beam 27 m., max. draft 8.0 m. Loading rate (coal) 5,000 t.p.h.

LIGHTERAGE: 16 lighters available, capacity between 70 and 170 tons, owned by P.T. Pelabuhan Indonesia II and Shipping Agents, can be hired for loading vessels at anchor or buoys.

STEVEDORES: There are 1,300 registered labourers; working hours are 24 hours a day.

Gang's average capacity 21.46 t.p.h. for bulk cargo and 22.80 t.p.h. for general cargo. Bag cargo 21.51 t.p.h., liquid cargo 112.73 t.p.h.

Also see "Cargo Gear".

MEDICAL: Medical attention can be arranged through the Agents. There is a port doctor. The general hospital is in Tanjung Karang, about 13 km. away, where sick crew members may be hospitalised.

TANKERS: See "Berthing".

FRESH WATER: Supply is handled by P.T. (Persero) Pelabuhan Indonesia II to the wharves through pipelines. All berths fitted with fresh water connections (6 hydrants). Capacity is normally about 72 t.p.h. No water barge available.

FUEL: Bunkering only available at Wharf B.

FIRE PRECAUTIONS: P.T. (Persero) Pelabuhan Indonesia II handles 1 fire-fighting truck and 1 fire trailer.

Smoking strictly prohibited in warehouses, inside the Pertamina yard, on oil-jetty, and on board tankers. During the time a tanker is discharging, fire extinguishers must stand ready on the pier.

CONSULS: No local representation.

REPAIRS: Minor repairs can be carried out.

DRY DOCKS: None available.

SURVEYORS: No Classification Society is represented at the port.

GANGWAY/DECK WATCHMEN: None available.

OPENING/CLOSING HATCHES: Opening and closing of ship's hatches is normally carried out by stevedores.

CUSTOMS: It is strictly prohibited to take undeclared foreign currency ashore. It is recommended that Masters consult the Agent about the local prevailing Customs Regulations with regard to currency, cigarettes, spirits, etc., to prevent unnecessary difficulties and eventually fines.

CARGO GEAR: Loading and discharging effected by ship's gear. 2 mobile cranes of 15 tons, are available from P.T. (Persero) Pelabuhan Indonesia II, as well as 17 forklifts (between 2 and 15 tons) owned by P.T. (Persero) Pelabuhan Indonesia II and shipping Agents.

AIRPORT: Branti Airport situated about 34 km. from Panjang. Regular (domestic) flights, Tanjung Karang-Jakarta v.v. 4 times daily.

TIME: GMT plus 7 hours.

HOLIDAYS: Fixed dates are: New Year (1st January); Independence Day (17th August) and Christmas Day (25th December). Other holidays: Idhul Adha, First of Muharram, Maulid of the Prophet Mohammad, Good Friday, Christ's Ascension, Mi'radj of the Prophet Mohammad and Idhul Fitri (2 days).

POLICE/FIRE: Port security is maintained by the state police; tel: 31.228 (Harbour Police). Fire Brigade, tel: 31113 or 52.741.

TELEPHONES: No arrangement exists for placing telephone on board.

SERVICES: Radar and radio repairs possible.

SHORE LEAVE: Crew members are allowed ashore. See "Shipmaster's Report".

IDENTIFICATION CARDS: Shore passes needed, obtained via Agents.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Indonesian Rupiah (Rp.).

DELAYS: Normal expected delays due to shortage of berthing facilities and rainy weather.

GENERAL: The port's status is general exports (rubber, coffee, pepper, timber, cattle fodder, corn, etc.)

Charts and nautical publications concerning this port are issued by the Indonesian Naval Hydrographic Office (HIDRAL).

All Government offices in the port (Except Customs) keep working hours as follows: Monday to Thursday 0730 – 1430, Friday 0730 – 1100, Saturday 0730 – 1330 (Customs 0700 – 1600).

Wind and Sea:

December – February	Wind from W/NW/N:	0.5 – 0.8 knots.
	Wave Height:	0.5 – 0.75 m.
March – May	Wind from NW:	0.5 – 0.6 knots.
	Wave Height:	0.5 – 0.70 m.
June – August	Wind from SE:	5.0 – 6.0 knots.
	Wave Height:	0.5 – 1.0 m.
September – November	Wind from SE/E:	0.5 – 0.8 knots.
	Wave Height:	0.5 – 1.0 m.

DEVELOPMENTS:

(a) Short Term Development Plan (up to year 1997):
    Container wharf (300 m.) and gantry crane 45 tons capacity.
    Reconstruction of Wharf C and Wharf B.
    Demolition of shed 004 and 006.
    New connection road (Jl. Yos Soedarso – Jl. Soekarno Hatta).
    Dry bulk terminal.
    Container yard expansion (up to 15 ha.).
(b) Long Term Development Plan (up to year 2002):
    Container wharf expansion (up to 450 m.).
    Rail transfer area.
    Inter-island berth expansion.
    Liquid bulk terminal.

SHIPMASTER'S REPORT: November 1987.

Anchorage: Due to numerous fishermens' houses on bamboo sticks in designated anchorage area, vessels can anchor at distance of about 0.5 miles to 1.0 miles West of reef that closes the port or South of designated anchorage area and more to the East of bay where no fishermens' houses observed.

Berthing: There are 2 berths on North side with depths of 9.4 m. and 10 m. Length of pier is about 450 m.

Gangway/Deck Watchman: Available through agent and strongly recommended due to the fact that many "stevedores" try to come on board for the purpose of stealing. Shore watchmen can distinguish the genuine stevedores.

Customs: Vessels are required to declare foreign currency. Bonded store is not sealed.

Stowaways: Vessel should be checked for stowaways.

Shore Leave: Extreme caution should be taken when going ashore as there are numerous attacks on crews, some resulting in killing of crew members. Stevedores/agents advise crew not to go ashore at night.

AUTHORITY: Port Perum Branch Panjang, Directorate General of Sea Communication, Communication Dept. (Lampung – Indonesia), Jl. Kalimantan Pelabuhan Panjang, Panjang 35241, Indonesia. *Tel:* (0721) 31302, 31447, 31392. *Telex:* 27391. *Cables:* Adpel Panjang. *Contact:* Captain P. Siahaan, Port Administrator.

PLAJU (Sungai Gerong): 02.59 S. 104.50 E. (See Plan)

LOCATION: Port of Plaju/Sungai Gerong is located on the Musi River in South Sumatera, 60 miles from the Estuary.

Plaju : 02° 59' 05" S., 104° 50' 05" E. (See Plan).
S.Gerong : 02° 59' 00" S., 104° 49' 00" E. (See Plan).

PILOTAGE: Compulsory. Pilot requires 12 hours notice of arrival and 6 hours notice of departure. Requests to be made to Palembang Pilot via Palembang Radio on VHF Channel 16, call sign "PKC".

ANCHORAGE: The anchorage whilst awaiting River pilot is in position Lat. 02° 14' 08" S., Long. 104° 57' 03" E.

The anchorage whilst awaiting a berth is in position Lat. 02° 58' 55" S., Long. 104° 50' 32" E.

RESTRICTIONS: In the long dry season (once in 3 or 4 years) It is foggy (maximum visibility is 25 m). During this season navigation is on a one way basis (one day for outward traffic and one day for inward traffic) in order to avoid collisions. This regulation finishes when the rainy season arrives.

MAX. SIZE: 18,000 d.w.t., max. LOA 150 m. and max. beam 16.0 m. Depth at L.W.S. is 5.5 m.

RADIO/VHF: Plaju Radio on VHF Channel 9, 16 and 19.

Plaju Radio (PKC-2):
Telephony stand-by on 4131 kHz. (working hours).
Telegraphy stand-by on 8364 kHz. (working hours).

TUGS: Available.

BERTHING:

Location	*Depth at LWS (m.)*	*Max. d.w.t.*	*Min. LOA (m.)*	*Max. LOA (m.)*
Sungai Gerong				
No. 1	8.0	21,000	50	160
No. 2	8.0	21,000	–	160
No. 3	8.0	21,000	50	160
No. 4	8.0	21,000	28	160
No. 5	8.0	21,000	–	160
No. 6A	8.0	300	40	100
No. 6B	8.0	300	40	100
Plaju				
PTA	8.0	9,000	–	117
No. 7	8.0	12,000	71	140
No. 8	8.0	21,000	50	160
No. 9	8.0	21,000	50	160
No. 10	8.0	21,000	50	160
No. 11	8.0	21,000	–	145
No. 12	11.0	21,000	60	160

General cargo handled at Sungai Gerong at Berths No. 2 and 5 and at Plaju at PTA and Berth No. 11.

LOADING: *Shore Storage Tanks:*

Oil Products	*Total Safe Capacity* (k/l)
Crude Oil	368,485
Intermediate	315,543
Avgas	19,067
Super 98	20,053
Mogas	271,810
Avtur	24,280
Kerosene	114,861
Autogas	80,992
Diesel Oil	56,576
Fuel Oil	111,885
LPG	7,087
Solvent	3,898
SBP-x40B	8,934
Haws	8,564
Asphalt	9,158
BFS	14,961
LSWR	130,994
Chemicals	12,059
Slop Oil	6,000

Products Handled: Max. Pressure on all lines is 100 p.s.i.

Berth	*Cargo Handled*	*No. of Lines*	*Flange Diameter* (in.)	*Average Transfer Rate* (t.p.h)
Sungai Gerong:				
Berth No. 1	Super 98	1	8 L/A	250
	Premium	1	8 L/A	350
	Kerosene	1	8 L/A	250
	A.D.O.	1	8 L/A	350
	L.S.W.R.	1	8 L/A	400
	Crude Oil	1	8 L/A	600
	Jet Fuel	1	8 L/A	300
Berth No. 2	Liquid Wax	1	6 L/H	200
	Liquid Tel	1	4 L/H	100
	Crude Oil	2	8 L/H	600
Berth No. 3	Super 98	1	8 L/A	250
	Premium	1	8 L/H	350
	Kerosene	1	8 L/A	300
	A.D.O.	1	8 L/A	350
	Avtur	1	6 L/H	200
	L.S.W.R.	2	8 L/A–H	400
	Crude Oil	2	8 L/H	600
	L.P.G.	2	3–2 L/H	20
	Jet Fuel	2	8 L/H	300
Berth No. 4	Premium	1	8 L/A–H	350
	Kerosene	1	8 L/A–H	300
	A.D.O.	1	8 L/A–H	350
	Avtur	1	8 L/H	200
	L.S.W.R.	1	8 L/A–H	300
	Crude Oil	2	8 L/H	600
	L.P.G.	2	3–2 L/H	20
	Jet Fuel	1	8 L/A–H	300
Berth No. 5	I.D.O.	2	8 L/H	350
	L.S.W.R.	2	8 L/H	300
	Crude Oil	2	8 L/H	500
Berth No.6A	Premium	1	4 L/H	160
	Kerosene	1	4 L/H	160
	A.D.O.	1	4 L/H	160
Berth No.6B	Premium	1	6 L/H	160
	Kerosene	1	6 L/H	160
	A.D.O.	1	6 L/H	160
Plaju:				
Berth No. 7	Premium	2	6 L/A	300
	Kerosene	2	6 L/A	450
	A.D.O.	2	6 L/A	450
	I.D.F.	2	6 L/A	600
	L.S.W.R.*	2	6 L/A	450
	H/L.S.F.O.	2	6 L/A	450
	S.B.P. – X	1	6 L/A	150
	L.A.W.S.	2	6 L/A	150
	Avtur	1	6 L/A	150
	Naphtha	1	6 L/A	300
	Avigas	1	6 L/A	100
	Crude	2	6 L/A	500
	B.F.S.	2	6 L/A	250
	Mogs.Comp.	2	6 L/A	500
	Paraxylene		6 L/A	750
	Acetic Acid	1	6 L/A	500
Berth No. 8	Premium	2	8 L/A	300
	Kerosene	2	8 L/A	250
	A.D.O.	2	8 L/A	250
	I.D.F.	2	8 L/A	250
	L.S.W.R.*	2	8 L/A	350
	H/L.S.F.O.	2	8 L/A	450
	S.B.P. – X	1	8 L/A	150
	L.A.W.S.	2	8 L/A	150
	Avtur	1	8 L/A	150
	Naphtha	1	8 L/A	300
	Avigas	1	8 L/A	150
	Crude Oil	2	8 L/A	500
	B.F.S.	2	8 L/A	250
	Mogs.Comp.	2	8 L/A	500
Berth No. 9	Premium	2	8 L/A	300
	Kerosene	2	8 L/A	450
	A.D.O.	2	8 L/A	450
	I.D.F.	2	8 L/A	600
	L.S.W.R.	2	8 L/A	450
	H/L.S.F.O.	2	8 L/A	450
	S.B.P. – X	1	8 L/A	150
	L.A.W.S.	2	8 L/A	150
	Avtur	1	8 L/A	150
	Avigas	1	8 L/A	100
	Crude	2	8 L/A	500
	B.F.S.	2	8 L/A	250
	Mogs.Comp.	2	8 L/A	500
	Naphtha	1	8 L/A	400
Berth No.10	Premium	2	8 L/A	300
	Kerosene	2	8 L/A	450
	A.D.O.	2	8 L/A	450
	I.D.F.	2	8 L/A	600
	L.S.W.R.	2	8 L/A	450
	H/L.S.F.O.	2	8 L/A	450
	S.B.P. – X	1	8 L/A	150
	L.A.W.S.	2	8 L/A	150
	Naphtha	1	8 L/A	300
	Avigas	1	8 L/A	150
	Crude Oil	2	8 L/A	500
	B.F.S.	2	8 L/A	250
	Mogs.Comp.	2	8 L/A	500
	Asphalt	1	8 L/A	300
Berth No.12	L.S.W.R.	1	8 L/H	300
	Crude Oil	3	8 L/H	500

*LSWR lines at Berths No. 7 and 8 not operating since 1980.

Note: L/A = Loading Arm.
L/H = Loading Hose.

MEDICAL: Hospital and Clinic available.
CRANES: 2×25 ton mobile cranes for general cargo.
FRESH WATER: Available at most jetties.
FUEL: Available at certain jetties.
FIRE PRECAUTIONS: No smoking or cooking or flames in open places on board the ship, barge or in dock area.
CONSULS: None.
REPAIRS: All types of deck and engine room repairs are possible.
DRY DOCK: Available. Dry Dock: "Bagus Kuning" for small craft. Floating Dock: 100 tons lifting capacity.
CERTIFICATES: The Ship's Certificates should be delivered to the Harbour Master through the Agent.

Certificate of Registry.
Load Line Certificate.
Safety Construction Certificate.
Safety Equipment Certificate.
International Oil Pollution Prevention Certificate.
Safety Radio/Telephone/Telegraph Certificate.
Ship's Manifest and Bill of Lading.
Health documents.
Customs documents.

EMERGENCY COORDINATION CENTRE:
Pertamina Harbour Authority: 25233, ext. 6345 / 2968 / 3018.
Police: 25233, ext. 4244.
Ambulance: 25233, ext. 2022.
Agent: 25233, ext. 2019.
Fire: 25233, ext. 131 /141.
Pollution: 25233, ext. 4549 / 3325.

AIRPORT: Sultan Machmud Badaruddin II Airport at Palembang, approximately 25 km. from Pertamina Plaju Harbour.
TIME: GMT plus 7 hours (West Indonesian Time).
TELEPHONES: Available at all jetties.
BANKS: B.D.N. (Bank Dagang Negara), approximately 500 m. from Pertamina Plaju Harbour.
GARBAGE DISPOSAL: Not available.
WASTE OIL DISPOSAL: Waste oil must be discharged to shore slop tanks. Shore tank capacity 6,000 ton. Available at Jetties No. 1, 3, 4, 5, 7, 8, 9, 10. Diameter of pipe 8 in., Pumping rate 200 – 300 t.p.h.
SEAMAN'S CLUBS: Seamen's club not available. Some facilities available in Palembang, e.g. shop, dances, games, etc. International telephone services for seafarers, church services, football matches arranged, postages facilities, etc., available at Plaju Port. Please contact agent for further information.
CURRENCY: Indonesian Rupiah (Rp.).
AUTHORITY: Pertamina Shipping & Telecommunication, South Sumatera Area, Jalan Beringin No. 1, P.O.Box No. 1, Plaju, Indonesia. *Tel:* (0711) 596030. *Telex:* 27121 Ptamina PL,27113 Ptamina Sg. *FAX:* (0711) 312961, 513777. *Contact:* Captain Daniel Malonda, Manager.

POLENG: 06.39 S. 112.55 E.

SHIPMASTER'S REPORT: April 1978.

LOCATION: The Poleng Terminal consists of the tanker "Lynda" moored stern first to an SBS. The "Lynda" is a tanker of some 72,000 d.w.t. The position of the "Lynda" is 06° 38' 42" S., 112° 55' 23" E.
PILOTAGE: Performed by the Master of the "Lynda".

ANCHORAGE: The anchorage position is anywhere North and West of the "Lynda" distance 1 mile. The depth of water is 26 fathoms and 9 shackles of cable is recommended.

RESTRICTIONS: The "Lynda" is moored in 180 ft. of water and there is no restriction regarding the draft or the size of ship that she can accommodate alongside.

RADIO: The Post and Telecommunications Department do not permit the use of the WT/RT on the "Lynda" so all ETA's are sent via Pertaminaship Jakarta.

Once the "Lynda" receives the ETA they then organise the 'opening of the Port' and the officials to clear the ship are ordered from Surabaja. The usual documents are required and 2 Agents come out with the officials.

VHF: The "Lynda" keeps watch on Channel 6 and only monitors Channel 16 when a vessel is expected.

BERTHING: The "Lynda" has 4 "Yokohama" type fenders on her port side for berthing. Six ropes are required at each end. Berthing is port side alongside.

The "Lynda" is loaded direct from the well and the API is 55 with a loading temperature of 84°. Normally, the API is 47-42. The pumping capability of the "Lynda" is 2,000 t.p.h. although we were only able to get 1,557 t.p.h. The cargo is loaded through 1×12 in. hose.

Prior to loading the tanks on the "Lynda" are ullaged in the presence of the Customs and the cargo calculated. This is repeated at the end of the load for the Bill of Lading figures. Clearance is granted from Poleng and all documents are signed prior to sailing. There being no early departure available.

At present they are receiving 1 ship about every 2 months, mainly topping-off operations and it is thought that the vessel may be moved to another position.

FRESH WATER: Not available.

FUEL: Not available.

STORES: Not available.

GENERAL: No Walport film exchange. All shore personnel are accommodated aboard the "Lynda". Some vessels have parted their mooring lines during the Winter months with winds of 25 knots and 8 ft. – 18 ft. seas running.

POMALAA (Tanjung Lepee): 04.14 S. 121.32 E.

(See Plan)

LOCATION: Port of Pomalaa, Kolaka, is situated in the Gulf of Bone, S.E. Sulawesi in position Lat. 04° 10' 30" S., Long. 121° 36' 00" E.

FLAGS: To be flown by incoming vessels: Vessel's National Flag; Indonesian Flag; Vessels numbers; Quarantine & Immigration Flag.

PILOTAGE: Pilotage is not compulsory and there is no Pilot at Pomalaa. Because Pomalaa waters are still declared as uncleared waters, it is advisable that vessels calling for the first time at Pomalaa, use a Pilot.

Pilot can be ordered from Ujung Pandang via Nikel Ujung Pandang not less than 72 hours before vessel's arrival at Pilot Station.

There are 2 Pilot Stations: (1) For Pomalaa loading point and berth, Lat. 04° 04' 03" S., Long. 121° 28' 00" E. (2) For Tanjung Lepee loading point, Lat. 04° 15' 00" S., Long. 121° 29' 00" E.

If vessel wishes to be piloted to the loading/unloading point on arrival day, vessel has to arrive at Pilot Station before 1200 hrs. local time for Pomalaa loading point and berth and before 1400 hrs. local time for Tanjung Lepee loading point.

LOADING POSITIONS:

Berth: Lat. 04° 10' 30" S., Long. 121° 35' 56" E.

Anchorage position for ore loading at Pomalaa: Vessels of 15,000 d.w.t. and over, Lat. 04° 10' 00" S., Long. 121° 35' 24" E. Vessels up to 15,000 d.w.t., Lat. 04° 10' 06" S., Long. 121° 35' 30" E.

Anchorage position for ore loading at Tanjung Lepee: Lat. 04° 13' 38" S., Long. 121° 32' 31" E.

DOCUMENTS: To be produced upon vessel's arrival:

14 Crew Lists
4 Passenger Lists
5 Parcel Lists
5 Stores Lists
5 Cargo Manifests
3 Narcotics Lists
3 General Information
5 Personal Effects Lists
3 Vaccination Lists
5 Arms and Ammunition Lists
International Load Line Certificate
Maritime Declaration of Health Certificate
Health Book or Bill of Health
Derat Certificate
Last Port Clearance
Safety Radio Certificate
Harbour Report.

Inspection Team: This team consists of the Port Health Officer, Customs Officer, Harbour Master and Immigration Officer.

After the vessel is granted Free Pratique, the Immigration Officer checks Passports, Seaman's Books and Crew List and issues shore passes.

RESTRICTIONS: *Arriving/Departing Hours:* Arrival: from 0600 – 1800 hrs. local time. Departure: 1. Pomalaa loading point and berth: from 0600 – 1600 hrs. local time. 2. Tanjung Lepee loading point: from 0600 – 1800 hrs. local time.

Mooring: The undermentioned vessels can be moored alongside berth: General cargo vessels of max. LOA 135 m. and tankers of max. LOA 110 m.

Depths: Bar channel 11.00 m. (LWS); Alongside berth, North Pier, 5.00 m. (LWS); South Pier, 7.00 m. (LWS). At Pomalaa anchorage or loading point: for vessels of 15,000 d.w.t. and over – 13.00 m. (LWS); for vessels up to 15,000 d.w.t. – 11.00 m. (LWS). At Tanjung Lepee anchorage or loading point – 24.00 m. (LWS).

MAX. SIZE: *General Cargo:* At North Pier: LOA not to exceed 135 m. and fully loaded draft not more than 5.00 m. At South Pier: LOA not to exceed 135 m. and fully loaded draft not more than 7.00 m.

Tankers: LOA not to exceed 110 m. and fully loaded draft not more than 7.00 m.

Ore Carriers: Fully loaded draft not to exceed 11.00 m. Vessels without cranes or derricks are not acceptable. Minimum capacity of cranes or derricks must be 5 tons.

General Cargo at Anchorage: Fully loaded draft not to exceed 11.00 m.

RADIO: Cables to Nikel Ujungpandang can be sent through Ujungpandang (Macassar) Coastal Radio Station, call sign PKF.

Arrival Notice: Information required.

Owner's advice: Owner to advise by cable to Adhiguna, Aneka Tambang Jakarta and Nikel Ujungpandang at least 8 working days before vessel's arrival at loading port.

Master's advice: At least 48 hours (or 72 hours if Pilot's assistance required) before vessel's arrival in Pomalaa waters, Master shall give the following information to Adhiguna and Aneka Tambang Jakarta and Nikel Ujungpandang. Last port of call, draft on arrival, estimated draft on departure, quantity of nickel ore or ferro-nickel ingots to be loaded, stowage plan (hatch division for the respective cargo), quantity and kind of commodity(ies) to be discharged and other necessary messages. Final amended arrival time must be sent at the latest 24 hours before arrival.

Previous experience showed that one cannot rely on telegrams regarding ETA sent by Agents at last port of call in due time, therefore Nikel Ujungpandang waits for the Master's telegram in order to make necessary preparation.

Shipper/Agent's advice: Shipper/Agents shall cable the Master 3 working days before vessel's arrival indicating the loading/unloading position prepared and other necessary messages.

Ship's radio transmitter is not to be used while lying in port.

VHF: Communication by marine VHF possible with the port.

TUGS: Available.

BERTHING: The wharf consists of a concrete quay extending 70 m. seaward and 18 m. breadth.

Priority: Ore carriers. First come first served. Other vessels: Priority to be given to tankers.

Loading/Unloading Facilities for General Cargoes:

Shore facilities: A number of mobile cranes with capacities of 5 tons and 20 tons are available, also forklifts.

Lighters: A number of lighters of 70 d.w.t. up to 120 d.w.t. are available.

Loading/Unloading capacity: About 12 tons per gang per working hour, depending on the type of vessel, available cargo spaces, vessel's cargo gear, kind of cargoes, size of hatches, etc.

Unloading Facilities for Tankers:

Pipe-lines: 1 line of 10 in.×1,600 m. for M.F.O.
1 line of 8 in.×1,600 m. for I.D.O.

Pumps: 3 booster pumps with capacity of 150 cu.m./h. each.

Hoses: 4 pieces flexible hoses of 10 in.×9.40 m. with ASA 150 flanges connections.

Unloading capacity: maximum 200 t.p.h. by ship or shore pumps.

Tank farm capacity: 2×5,000 KL for M.F.O.
1×1,500 KL for I.D.O.

Tank cleaning: Tank cleaning operation is not allowed in Pomalaa waters.

Lay-time: Lay time shall commence 6 hours after N.O.R. tendered.

Loading Facilities for Ore Carriers:

General: Loading of nickel ore at Pomalaa and Tanjung Lepee loading point is done by means of barges.

Number of gangs: Usually 4 gangs are used by vessels equipped with cranes or derricks. If necessary stevedores can provide 6 gangs.

Loading capacity: About 2,000 tons/24 hours per vessel, depending on the type of vessel, vessel's cargo gear, weather conditions, etc.

Unloading: Cargo for Aneka Tambang only.

Vessels without cranes or derricks are not acceptable.

Labourers will be supplied by shipper. Making the vessel ready for loading/unloading to be done by vessel's crew members.

CRANES: Mobile cranes with capacity 5 tons – 40 tons.

Forklifts also available.

MEDICAL: Doctor, hospital and inoculation services available.

TANKERS: See "Berthing".

FRESH WATER: None. In an emergency water can be supplied in limited quantity (max. 200 tonnes). This supply is intended for special ship which can berth alongside the jetties.

FUEL: Not available.

CONSULS: None.

STEVEDORES: Stevedoring is performed by P.T. Aneka Tambang's personnel. Loading/unloading equipment to be furnished by the vessel.

Working Hours: Loading to be effected on weather working days of 24 consecutive hours Sunday and Holidays included (WWD SHINC), but the following National Holidays are excepted:

New Year (January 1st); Buddhist New Year; Hindu New Year; Independence Day (August 17th); Christmas Day (December 25th). Idul Adha, Maulid Day, Easter, and Lebaran determined by Moslem calendar and differ from year to year by international calendar. For definite dates consult Port Administrator.

Despatch/demurrage money to be paid in accordance with the related contract.

Loading/unloading to be effected with customary quick despatch (C.Q.D.) on good weather working days whereby Sundays, holidays governmental local holidays and Saturdays between noon and midnight and Mondays between 0000 hrs. and 0800 hrs. are always excepted.

At Shipmaster's request, work on these excepted days can be arranged. The principals will pay the overtime charge on these excepted days.

CUSTOMS: Vessel's bonded store will be sealed by Customs Officer on arrival and will remain sealed until the vessel leaves port.

Note: It is recommended that ship's Master consult the Agents about the local prevailing Customs Regulations with regard to currency, cigarettes, spirits, narcotics, etc. to prevent unnecessary difficulties and eventually fines.

REPATRIATION: Can be arranged. Repatriant is to be guarded by Immigration Officer from Pomalaa to Jakarta via Ujung Pandang until his departure from Jakarta to the destined country.

AIRPORT: There is one flight a week between Ujung Pandang and Pomalaa, served by Merpati Nusantara Airlines (MNA) using Cassa or Oisi Planes. Flying time about 60 minutes.

TIME: GMT plus 8 hours.

SHORE LEAVE:

Shore Pass: Shore pass must be carried by crew whilst ashore.

Visitors: Vessel's crew members are not allowed to invite friends, hawkers from shore aboard the vessel.

Visiting Kolaka: Crew members are prohibited to leave Pomalaa for Kolaka, except Master and Officers, who must be guided by Agents. Local leave in Pomalaa concession is permitted.

Shore Leave Hours: From 0600 hrs. to 2300 hrs. local time.

GENERAL:

Cash Advances: Cash advance at Master's request can be supplied by Agents in a reasonable amount.

Fumigation: No facilities.

Survey On/Off Hire: Can be arranged.

Ship's Chandler: None. In emergency cases, for a limited quantity Agents can act as ship's chandler.

Chart: Indonesian Sea Chart No. 152.

Nature of Bottom: Sand and soft materials.

M.P.S. Tax: So called M.P.S. Tax (freight tax) has to be paid in advance to the Indonesian Tax Office at Jakarta, through the General Agents, Jakarta, therefore Principals are requested to remit the said MPS Tax's funds at the same time with the remittance of advance payment of ship's disbursements.

The amount of M.P.S. Tax (about 2% of the concerned freight earned) will be advised by the General Agents, Jakarta to the Principals, if possible a few days before Principal remits advance payment for disbursements. The final calculation of the M.P.S. Tax will be made later.

Disbursements: At least 14 days before vessel's arrival at Pomalaa, vessel's principal have to remit U.S.$4,000 to the account of General Agents, at Jakarta as advance payment of the related ship's disbursement.

Vessel's Disbursement Accounts: All vessel's expenses will be charged to the related Principals through the General Agents.

AGENCY:

General Agent for Ore Carriers: PT Pelayaran Bahtera Adhiguna. 10-12 Jalan Kalibesar Timur, P.O.Box 1313, Jakarta, Indonesia. Tel: 276547. Cables: Adiguna Jakarta, Telex: Adiguna Jkt 42854.

General Agent for Non-Ore Carriers: To be nominated by principals.

Sub-Agents: PT Aneka Tambang, Unit Pertambangan Nikel, Pomalaa. Jalan Dr. Sam Ratulangi 60, P.O.Box 213, Ujung Pandang, Indonesia. Cable address: Nikel Ujungpandang. Tel: 22237 – 22234. Telex: 71200. Fax: (0411) 82234.

Sub-Agent's Head Office: PT Aneka Tambang 24-26 Jalan Bungur Besar, Jakarta, Indonesia. Tel: 410108, Telex: Antam Jkt 49147. P.O.Box 2513, Jakarta.

AUTHORITY: Port Authority of Pomalaa, Pomalaa, Sulawesi Tenggara, Indonesia. *Contact:* Harbour Master.

PONTIANAK: 00.01 S. 109.19 E.

SHIPMASTER'S REPORT: March 1986.

PILOTAGE: Compulsory. Pilot boards at Muara Kubu.

DOCUMENTS: Inspection team of 2 Immigration Officers and Agent board at anchorage. This was the second Indonesian port of call.

Standard Indonesian Arrival Forms required, soon after arrival at anchorage.

15 copies Crew Lists (8 signed/dated for arrival – 7 signed/undated for departure).
2 copies Vaccination Lists.
Indonesian Health Book.
5 copies Personal Effects Declaration.
2 copies Bonded Stores Lists.
5 copies Deck, Engine, Provisions Lists.
5 copies Ship's Dutiable Goods.
5 copies Narcotics List.
5 copies Ports of Call List.
5 copies Parcel List (even if "Nil").
5 copies Arms and Ammunition List (even if "Nil").
5 copies Animals List (even if "Nil").
5 copies Currency List (even if "Nil").
5 copies Passenger List (even if "Nil").
5 copies Import Manifest (even if "Nil").
5 copies Transit Manifest (even if "Nil").

ANCHORAGE: Ocean-going ships anchor S.W. of safe water buoy clear of prohibited area. Soundings have been reduced by up to 1.5 fathoms from those charted.

MAX. SIZE: Max. LOA 110 m., max. draft 5.0 m.

RADIO: Call sign PKS. Frequencies 500 and 6355 kHz.

VHF: Pilot station on VHF Channels 12, 14 and 16.

LOADING: Vessel loaded plywood crates of standard 8 ft. × 4 ft. sheets, averaging 1.070 kg. to 1.146 kg. Freight volume 1.8 cu.m., gross volume 2.02 cu.m., stowage 3.06 cu.m. centre holds. Vessel worked mostly one hook from a single barge alongside, 50-80 crates per hour. Using 1 forklift truck to stow 6 tiers, then laid steel plates and loaded up to 6 further tiers.

A large barge of 1,200 crates capacity, required 6.5 days to return to factory for a further load. Single tarpaulins on barges leave damp patches after heavy rain. Stevedores lived onboard. 19 miles by launch to city, about 3 hours and $115.00 per trip. Speedboat for 2/3 people about 30 minutes each way and about U.S.$136 per trip.

FRESH WATER: Available in limited quantities.

FUEL: Not available.

PULAU SAMBU: 01.09 N. 103.54 E.

LOCATION: Wharf No. 1 is located in position Lat. 01° 09' 35" N., Long. 103° 53' 41" E. There are 2 additional wharves and 2 jetties nearby.

DOCUMENTS: Upon arrival ships have to fill in the following forms:
Harbour Report (obtainable from the boarding Pilot).
Pilot Certificate.

Also required from the Masters are:
6 copies of Crew List.
1 copy Stores List.
1 copy Personal Effects List.

PILOTAGE: Pilots are in Government Service. Pilot signals according to the International Code of Signals. Pilots can be ordered direct by cable to the Harbour Master or via the ship's Agent. Pilot boards in position Lat. 1° 10' 44 " N., Long. 103° 52' 19" E. Pilot requires 6 hours notice of arrival and 3 hours notice of departure.

RESTRICTIONS: Daylight berthing and unberthing only.

MAX. SIZE:

Berth	*Max. d.w.t.* (tons)	*Max. LOA* (m.)
Wharf No. 1	29,500	175
Wharf No. 2	2×400	2×56
Wharf No. 3	6,500	125
Jetty No. 4	400	60
Jetty No. 5	200	31.5 (Small Craft)

HEALTH: Vessels arriving from abroad have to fly the "Q" Flag (yellow flag) until boarded and released by the Quarantine Officer. Masters have to fill in the Quarantine Form and signed by him and the ship's surgeon, if any, and produce the following:
Health Book or Bill of Health.
Derat (Exemption) Certificate.
Valid International Vaccination Certificates of Crew members and Passengers.
Crew and Passenger's Lists showing the validity dates of above Certificates.

During the time that the "Q" Flag is flying no one is allowed to board or leave the vessel except with the permission of the boarding Quarantine Officer.

TUGS: 4 tugs, 850 h.p. – 1,700 h.p.

RADIO: Vessels calling at Pulau Sambu for bunkers should communicate with PKC 2 Pladju Radio or Tunasix Singapore, or direct with Sambu Radio PKJ 51 (A3 Radio Telephone) and VHF Channel 19.

VHF: Sekupang Radio (PKJ-20) and Sambu Radio (PKJ-51) both on VHF and operated by Pertamina.

BERTHING: Pulau Sambu has an excellent location 8 miles South of Singapore and approximately 3 miles from the International waterway. The length of the navigable channel is 1,500 ft.

Depth alongside at LWS:

Wharf No. 1	10.5 m.
Wharf No. 2	11.3 m.
Wharf No. 3	10.6 m.
Jetty No. 4	5.6 m.
Jetty No. 5	3.0 m.

TANKERS: See "Berthing" above and "Loading/Discharging" overleaf.

DENSITY: 1020 – 1025.

FRESH WATER: Available.

FUEL: Ideally, it is necessary to advise suppliers of bunkers required at least 15 days before the ETA of the vessel. The authorities at Pulau Sambu also require the vessel to contact them 24 hours prior to their ETA.

Bunkers available: Fuel Oil, 1000 seconds, and MDO.

CONSULS: None.

AIRPORT: Nearest airport at Hang Nadim on Batam Island.

TIME: GMT plus 7 hours.

CUSTOMS: Masters have to declare all local currency on board. It is strictly prohibited to take local currency ashore. No limitation for foreign currency.

Master should consult the Agent about prevailing Customs regulations with regard to currency, cigarettes, spirits, etc., to prevent unnecessary difficulties and fines.

AGENCY: See "General" before first port.

AUTHORITY: Syahbandar Pulau Samba, Pulau Samba, Indonesia.

LOADING/DISCHARGING: (Pulau Sambu)

Physical Characteristics of LSWR:

API Gravity at 60°F.	:	29.5 – 20.5
Viscosity at 100°F.	:	100 – 350 cSt
Sulphur Content	:	Max. 0.2% wt.
Carbon Residue	:	Max. 8% wt.
Flash Point (PMCC)	:	Min. 166°F.
Pour Point	:	Max. 120°F.
Loading Temperature	:	±140°F.

Shore Storage Tanks:

Oil Products	Total Safe Capacity
LSWR	127,816 k/l
HSFO	66,975 k/l
HSD	17,075 k/l
MDF	11,682 k/l
Kerosene	2,514 k/l
Premium	1,265 k/l
Slop Oil	2,984 k/l

Products Handled:

Berth	*Cargo Handled*	*Pipelines* (in.)	*Average Transfer Rate* *Loading* (t.p.h.)	*Discharging* (t.p.h.)	*Hose Connections* *No.*	*Size* (in.)	*Max. Vertical Limit* (m.)
Wharf No. 1	Kerosene	6	400		1	6	18
	HSD/ADO	10	700		1	10	37
	LSWR	16	1,800		2	16	42
	MDF/MFO	12	1,000		1/2	12	21-35
	Slop Oil	6		200	1	6	16
Wharf No. 2	Fresh Water	6	50		1	6	12
Wharf No. 3	Kerosene	6	400		1	6	18
	HSD/ADO	10	700		1	10	37
	LSWR	16	1,800		2	16	42
	MDF/MFO	10	1,000		1/2	10	21-35
	Premium	4	300		1	4	20
	Slop Oil	6		200	1	6	16
Jetty No. 4	HSD	4	50		1	4	37
	Kerosene	4	50		1	4	18
	Premium	4	50		1	4	20
	MFO	4	50		1	4	35
Jetty No. 5	Fresh Water	6		90	1	6	12
	General Cargo						

RAMBA (Dawas River): 02.37 S. 104.08 E.

PILOTAGE: Not compulsory.
RESTRICTIONS: Daylight berthing and unberthing only.
MAX. SIZE: *Jetty:* 10,000 d.w.t. Max. LOA 90 m.
RADIO/VHF: Ramba Radio on HF. Station operated by Asamera Oil.

Ramba Oil Jetty Radio on VHF. This station is also operated by Asamera Oil.

BERTHING:

Berth	*Position*	*Depth at LWS* (m.)	*Remarks*
Jetty	Lat. 02° 36' 40" S. Long. 104° 07' 50" E.	6.0	Oil barges
Cargo Dock	Lat. 02° 36' 40" S. Long. 104° 08' 17" E.	2.0	Barges
Storage "GW" Tanker	Lat. 02° 01' 40" S. Long. 104° 57' 20" E.	22.0	Good weather
"BW"	Lat. 02° 16' 40" S. Long. 104° 13' 10" E.	16.5	Bad weather

LOADING: Crude oil (API 38) is loaded at the jetty at a rate of 1,000 t.p.h. through 2×8 in. loading arms.

Storage capacity of crude oil 100,000 bbls.

MEDICAL: Clinic available.
DENSITY: 1000 – 1010.
FRESH WATER: Available by tank truck (maximum of 21 tons per day).
FUEL: Available at the jetty.
CONSULS: None.
AIRPORT: Sultan M. Badaruddin II Airport at Palembang.
TIME: GMT plus 7 hours.
AUTHORITY: Pelabuhan Khusus – Ramba, Pelsus Pertamina Plaju, c/o Asamera Oil – Palembang (See below).

Operator: Asamera Oil, Manggala Wanabakti Building, Block 4, 7th & 8th Floor, Jalan Gatot Subroto, P.O.Box 2858, Jakarta, Indonesia. *Tel:* 5704469, 5704483. *Telex:* 65031, 65551. *FAX:* (62-21) 570-4397.

Asamera (South Sumatra) Ltd., Jl. Ki. Demang Lebar Daun No. 52, P.O.Box 1076, Palembang-30010, Sumatra Selatan, Indonesia. *Tel:* 0711-410440, 0711-412951. *Telex:* 27418 Asamera Plb. *FAX:* 0711-410440.

SABANG: 05.50 N. 95.20 E. (See Plan)

DOCUMENTS: Upon arrival vessels have to produce the following Certificates and Documents, which will remain in the Harbour Master's custody until cleared:

Nationality (Registry) Certificate.
Seaworthiness Certificate.
Measurement (Tonnage) Certificate.
Derat (Exemption) Certificate.
International Load Line Certificate.
Safety Equipment Certificate (cargo ships).
Safety Radio and Radiotelephony Certificate (cargo ships).
Health Book or Bill Health and vaccination certificates.
Last Port Clearance.
Subscription of Light and Harbour Dues and wharfage if any.
Crew Lists and Passenger's Lists with vaccination dates.
Ship's Articles.
Stores List.

Passport or Seaman's Card remain in Immigration Office until cleared and the crew to use shore pass to go on shore, issued by the Immigration.

PILOTAGE: *Approach:*

Vessel should steer on the light of Klah Island and keep at least 1 mile offshore, especially of Ujung Masam owing to an inward drift, until the bay is well open. When entering the bay, the light-buoy South of Ujung Lho Me should be kept on port side.

The Signal Station at Peunimpun reports day and night the arrival of ships, by night an unofficial white light, showing all around is shown, visible at a distance of 12 miles.

Signals by day with flags according the International Code of Signals and by night by signal lamp.

ANCHORAGE: Lat. 05° 53' N., Long. 95° 32' E.
HEALTH: Vessels arriving from abroad direct have to apply well in advance to the Department of Health (Quarantine Section) for a provisional Free Pratique, as said Pratique has to be cabled to the Port. The provisional Free Pratique is only valid for this Port, the next port of call must be a First Class Port as no further provisional Free Pratique will be issued, unless the vessel sails directly abroad.
RADIO: Sabang Radio. Call sign: PKA. Frequency: 500 kHz/438 kHz. Time: 0100–0200, 0400–0500, 0900–1000 GMT. 8473 kHz/8686 kHz. Time: 0200–0230, 1000–1030 GMT. 17184.5 kHz Time: 0230–0300, 1030–1100 GMT. VHF – Available. Power – 1 kW.
TUGS: A small tug available for mooring assistance, subject advance notice.
FRESH WATER: Available, rate 30 t.p.h. with one hose. Usual to use 3 hoses. Water can be pumped faster if additional water pump used.
FUEL: Not available.
BERTHING: The usual anchorage in the inner roads is the North side of the bay, vessels can approach shore until in 32 m. and 29 m. depth. There is good holding ground. During S.W. or S.S.W. squalls in the West monsoon vessels have to be kept free from the quays by means of the mooring buoys moored off the berths.

Western Coal Wharf: Usable berth length 140 m. with depths alongside of 7 m. at LWS.

Eastern Coal Wharf: Usable berth length 150 m. Depths 6.8 m. at LWS.

Commercial Wharf: Usable berth length 150 m. Depths 8.0 m. at LWS (length: 220).

At the head of the oil jetty there is a depth of 10 m. at LWS.

REPAIRS: Minor repairs can be carried out at the West end of the Coal Wharf at the repair shop and electrical power station.
CUSTOMS ALLOWANCES: It is recommended that Masters consult the Agents about the local prevailing Customs Regulations with regard to currency, cigarettes, spirits, etc., to prevent unnecessary difficulties and eventually fines.
AIRPORT: One domestic flight a day, 15 minutes drive from the Harbour.
AUTHORITY: Department of Sea Communication.

SALAWATI: 01.21 S. 130.59 E. (See Plan)

LOCATION: Salawati Marine Terminal is located in the Sele Straits between the Island of Salawati and mainland Irian Jaya, Indonesia.

Salawati Marine Terminal Office is located on board the storage barge "Wampum" adjacent to the export tanker mooring.

Mooring system is positioned in Latitude 1° 21' 18" S. and Longitude 130° 58' 39" E. The minimum water depth in the area of the mooring system is 51 ft.

FLAGS: In accordance with practice in Indonesian Ports, Quarantine, Immigration, Pilot and call sign flags must be displayed by all vessels approaching the anchorage. These signals shall be displayed continuously until clearance is granted. The signals are as follows:

Sunrise to sunset:	Quarantine Flag "Q"
Sunset to sunrise:	Signal Lights (red over white)

The "N" flag should be flown until the Immigration Officer boards the ship. The "G" flag (request for Pilot) should be flown until the Mooring Master boards. The vessel should also fly its call sign. As soon as the Mooring Master boards, the "G" flag should be replaced by the "H" flag which signifies that the Pilot is aboard. The tanker may fly the "P" flag if it is going to sail within 24 hours.

DOCUMENTS: The boarding team, e.g. Agent, Customs, Immigration, Port Health Officers, Harbour Master will board the vessel in the anchorage area to grant clearance.

The Customs Officer will board the vessel to seal the stores. If arriving from a foreign port, the Agent will prepare the General Cargo Declaration form stating the cargo on board the vessel and attaching appropriate shipping documents. If the tanker is arriving from an Indonesian port, the 5-B Form issued at the last Indonesian port will be retained by Customs and the arrival clearance at Salawati is granted.

The Harbour Master submits a Harbour Report Form for the Master to complete. The Agent prepares the Ship's Documents Check List Form to check the validity of each document. These documents are: Certificate of Registry, Ship's Construction Certificate, Load Line Certificate, Safety Equipment Certificate, Safety Radio/Telephone/Telegraph Certificate, Cargo Gear Certificate and Derat/Exemption Certificate. This list is then delivered to the Harbour Master with the following documents attached: Last Port Clearance, Crew List approved by the Immigration Officer and Light Dues Receipt if arriving from another Indonesian port. The Harbour Master issues a port clearance on departure provided clearance is also granted by the other governmental authorities (A Panamanian port clearance for Panamanian flag vessels is not required at Salawati).

The Immigration Officer requires 2 copies of the Crew List and will check the Ship's Articles and the passports of the crew. When these documents are found to be in order, an arrival clearance will be marked on the Crew List.

If arriving from another Indonesian port the Agent will sign a guarantee if the vessel cannot prove that light dues have been paid.

Prior to the vessel's departure the Immigration Official requires 2 copies of the Crew List to be marked for departure immigration clearance. The Master is given a signed copy by the Immigration official of the Crew List for departure.

Crude oil loading documents such as Bills of Lading, Quality Certificate, Quantity Certificate, Dry Certificate/Ullage Report, Time Loading Report, Certificate of Origin, Cargo Manifest and Master's Receipt for Documents/Samples are prepared at Salawati Marine Terminal. When the tanker has been loaded, the documents shall be completed and signed by the Master. Final clearance formalities will be carried out aboard the vessel in the anchorage area.

Customs will issue the 5–B form which is for departure clearance of the vessel.

The Master should be prepared to issue:

15 copies of Crew List.
4 copies of Cargo Manifest.
4 copies of Personal Effects.
4 copies of Bonded Store List.
4 copies of Stores List.
4 copies Narcotics List.
2 copies of Vaccination List.

Before leaving the terminal area, the Master should advise the terminal the Vessel's ETA at destination.

PILOTAGE: The Salawati Terminal Pilot will board the vessel in the anchorage area for passage to the Salawati Terminal. The channel is marked with numerous Navigational Aids to permit safe passage through the Sele Strait. Vessels arriving in the anchorage area after 1400 hrs. local time (GMT + 9 hours) will be berthed at the terminal at Pilot's discretion.

Ships are requested to have a pilot ladder safely and securely rigged and ready for immediate use, and long enough to reach the mooring launch. A combination of pilot ladder and ship's accommodation ladder, so arranged that personnel can first use pilot ladder until part way up the vessel's side, and then transfer to the accommodation ladder is recommended, especially on very large ships. A light line should be ready to take aboard the Mooring Master's equipment. There should be adequate lighting at night. Vessels will provide a lee for the Mooring Master both when boarding and leaving.

ANCHORAGE: If requested to anchor, the recommended anchorage area is 4.5 miles West of Sorong in position Latitude 00° 53' 00" S. and Longitude 131° 10' 00" E. Under no circumstances should the export tanker enter the restricted area around the structures without the Mooring Master aboard.

RESTRICTIONS: The approach channel has a minimum depth of 49 ft. A minimum under keel clearance of 6 ft, is required, restricting the maximum loaded draft of an export tanker to 43 ft.

Strength of Tide: Up to 4.5 knots.

MAX. SIZE: Salawati Marine Terminal can accept vessels up to 60,000 d.w.t. Under certain weather conditions, vessels up to 100,000 d.w.t., light loaded to the equivalent of a 60,000 d.w.t. vessel may be accepted. Such acceptance is at the discretion of the Area Superintendent or his designated alternate.

The Ship's Master must not permit his vessel to be loaded to a depth of more than 43 ft. deepest draft due to the restrictions of water depth in Sele Strait unless permitted to do so by The Company Area Superintendent or his designated alternate.

HEALTH: Each tanker entering the Port of Salawati must have requested and been granted entry permit/agency permit prior to its arrival. At the same time application is made for provisional Pratique through the Directorate of Quarantine and, if granted, a cable advice is sent to the harbour authorities. Port Health Clearance is issued prior to the tanker's arrival and is also valid for departure clearance. If provisional pratique is not granted a Port Health Officer will be provided. All of the foregoing is arranged through and by the Agent.

Each crew member should be in possession of an International Vaccination Card.

VHF: Vessels equipped with VHF radio telephone should contact terminal on International Mobile Service Channel 16/156.80 MHz from 0000 – 2400 hrs GMT. The language of the terminal is English and Indonesian.

RADIO: It is most important that incoming tankers contact Salawati Marine Terminal 72 hours before the estimated time of arrival. Further cables should be sent to the terminal 48 hours and 24 hours in advance of arrival, or when ETA changes by more than 3 hours. Communications with Salawati Marine Terminal can be established using one of the following links.

Sorong Coastal Radio Station

Name of Radio : Pertamina Sorong Radio

Time schedule of Pertamina Sorong Radio/PKY.41

	Frequency		*Hrs. of Service (GMT)*	*Emission*	*Remarks*
	QSW	*QSX*			
I.	6456.5	6 mc/s Common- Ch. 5/6	0000 – 0020 0100 – 0120 0200 – 0220 0300 – 0320 0400 – 0420 2300 – 2320	A1	I. Service: Mon-Thurs: 2300 – 0500 Friday: 2300 – 0230 Saturday: 2300 – 0400
II.	6512.6	6206.2	0020 – 0100 0220 – 0300 0420 – 0500	A3J	II. Message/Telegram: QSJ: SC=40 CTMS CC=50 CTMS LC=30 CTMS
III.	4425.6	4131.2	0120 – 0200 0320 – 0400 2320 – 2400	A3J	III. Telephone Call: Minimum 3 minutes VHF : CC=4.80 GF. HF : CC=7.20 GF. by adding 1.60GF(VHF) 2.40GF(HF) every minute extra. (The land line charge is included in the land station charge).
IV.	156.45MHz 156.80MHz 161.55MHz	– Ch. 16 –	2300 – 0500	F3	IV. Proceed Sorong, please contact first, 2 or 3 days before arrival.

Time schedule Government Sorong Radio PKY 4.

Frequency		*Hours of Service (GMT)*	*Emission*
TX	*RX*		
500	500	0000 – 0500 0800 – 1300	A1
8461	8356 – 8374	0200 – 0300 0900 – 1000	A1
2182	2182	0000 – 0030 1000 – 1300	A3
8802.6	8270	0030 – 0100 1000 – 1100	
6204	6215	2230 – 2330	A3
6213.5	6215	0400 – 0500 0800 – 0900 0900 – 1000	
Ch. 16	Ch. 16	0000 – 0500 0800 – 1300 2300 – 2400	

Master should request Pertamina Sorong Radio to relay the necessary information to Salawati Marine Terminal.

Details of Arrival Cable:

The following information should be included in the cable sent to Salawati Marine Terminal 72 hours in advance of arrival.

1. Name of vessel and radio call sign.
2. ETA in GMT and date (Local time is GMT + 9 hours).
3. Cargo requirements.
4. Deballast time.
5. Maximum loading rate.
6. Arrival draft.
7. If there is any sickness aboard give whatever information is available as to the possible type of sickness, or confirm that vessel has clean bill of health.
8. Last Port of call.
9. Any hull, bulkhead, valve or pipeline leaks on vessel which could effect loading or cause pollution.
10. Flange dimension of vessel's manifold connection.

Entry Permit or Agency Permit:

Each tanker entering Salawati Marine Terminal must have requested and been granted entry permit prior to its arrival. It is vital that the General Agent receives the following information two weeks before vessel's arrival to obtain agency permit for foreign vessel from the Government/Directorate General of Sea Communication:

1. Name of owners/principals and full address.
2. Name of vessel.
3. d.w.t./Call Sign/Flag.
4. Name of Master/Number of Crew.
5. Last Port of Call.
6. ETA.
7. Destination after loading.
8. Indonesian Ports of Call.

The ship's Master is responsible to ensure that no communication by radio is allowed within the terminal area. Unauthorised radio communication will be cause for cessation of all operations, except clearing of the berth, and vessel's notice of readiness will be immediately nullified.

Also see "General" before first port.

BERTHING: The Company Area Superintendent, or his designated alternate, shall be the sole authority to decide when the port is closed due to unsuitable weather conditions preventing normal working operations.

Various combinations of wind, sea, and tidal conditions, also the size, length, ballasted trim, and handling qualities of a vessel can affect the decision to berth a vessel at Salawati Marine Terminal. All of these factors have to be evaluated before a final berthing decision is made.

After a vessel has been berthed, a terminal official will board to discuss loading arrangements. Before any crude is loaded all ship's scuppers on main decks must be plugged and cemented oil tight. Approved mechanical means of closing scuppers may be accepted. A deck inspection will be made by Salawati officials and if the vessel is suitable for loading crude oil a signed notation to this effect will be made on the Company Dry Certificate.

It is the responsibility of the vessel to ensure that all mooring lines are properly tended. Salawati personnel will constantly check the vessel's mooring and at any time may direct the lines to be heaved tighter or slackened off under the supervision of a responsible ship's officer, as circumstances warrant.

During the vessel's stay at the mooring emergency towing wires shall at all times be hung over the ship's bow and stern. These wires shall be secured to the bollards inboard to enable the vessel to be towed away should the need arise. They must be tended throughout to keep the eye of the wire not more than 2 ft. above the water.

The terminal official will report unsatisfactory conditions to the Company Area Superintendent or his designated alternate, who may, in turn, reject the ship until corrections are fully made. All costs accruing therefrom will be for the ship's account.

A ship may be rejected, if, upon inspection, it is not properly equipped, or if it is not suitably manned, or if it has dirty ballast or tanks unsuitable for the cargo as determined by the Company Area Superintendent or his designated alternate.

A vessel is suitably manned if it has a full complement of qualified officers and a crew all of whom are in sober condition, competent and willing to carry out their duties and orders.

A ship must be equipped with a good working propulsion unit as passed by the appropriate survey society. Inoperative ships, or partially inoperative ships will be rejected. Should it become inoperative while at the moorings it will be removed at the vessel's expense.

No repairs are to be made while mooring or unmooring, or at the moorings without the express permission of the Company Area Superintendent or his designated alternate.

A vessel must have both bower anchors in good working condition and in such sizes and amounts as to meet either "Lloyd's or A.B.S." standards although they may be, in fact, classified by other societies. It is strongly recommended that anchors have proper anchor buoys attached to each anchor.

All vessels must carry adequate, synthetic lines used for mooring purposes. No wire ropes should be used for mooring export tankers at this terminal. Each mooring rope must not be less than 100 fathoms in length.

To assist in vessel's turn around, the Mooring Master will advise necessary booms and cargo gear rigged and ready before the ship is berthed.

BALLAST: No facilities are available for disposal of dirty ballast.

Owners and Masters are required to observe International Convention laws and Indonesian Government regulations concerning pollution of the sea, having particular regard for this area of the Sele Strait.

It is the responsibility of the ship's Master to see that no oil of any kind is pumped or spilled overboard from his ship. Drip pans, sand, dispersant etc., should be used at all times especially when disconnecting hoses, in order to avoid any spillage overboard.

The categories of pollution include oily water from bilges, crude residual from previous voyages, or any other matter that may result in pollution of the sea.

Any fines imposed by governmental authority for pollution shall be for the vessel's account.

In the event that the Company has to settle any third party claims as a result of damages to property caused by pollution attributable in any way to the vessel, they will have the right to reimbursement by those responsible for the vessel for all expenses incurred.

In the event of oil spillage or pollution of the waters all labour and employment costs for cleaning operations will be to the vessel's account if caused by the vessel.

As soon as practical after arrival, all tankers will be inspected by a Salawati Marine Terminal Official for dirty ballast. During discharge of ballast similar inspections will continue.

If evidence of oil appears at any of these inspections, the ship will be rejected, and will not be accepted again until satisfactory evidence is produced that such ballast was disposed of in a proper manner. If during inspection, or during progress of loading, it is revealed that ship's tanks are not tight, or that oil is leaking from the ship, the ship may be rejected or refused further loading.

If the ship's tanks are found to be leaking, it will not be accepted for loading.

A tanker must have sufficient ballast for safe handling having due regard to existing weather and sea conditions and also for safe passage through the Sele Strait. Through a careful watch of the weather and sea conditions, frequent exchange of information between ship and terminal, and by a knowledge of the behaviour of his own ship, a ship's Master may come to the terminal with a minimum of ballast and thus lessen any possibility of infringement of sea pollution regulations.

In addition to the lights usually displayed, vessels at the moorings discharging ballast or loading cargo during darkness will brilliantly illuminate the sea around the ship, so that any pollution will be noticeable. The lighting will be of an approved and permanent nature.

Tankers equipped with a separate system of ballast tanks will be allowed to discharge ballast, and load oil simultaneously, providing approval is first obtained from the Company Area Superintendent or his designated alternate or independent inspector.

Most responsible ship Owners have adopted a system of tank cleaning using circulatory methods of transfer of tank washings with chemicals. The result is that no oil discharges into the sea and oil separated is collected in a slop tank. The terminal will load on top of such slops unless otherwise directed. This system is highly recommended to avoid pollution of the Sele Strait.

Masters are warned that inspection of ballast is strict.

Any tanker rejected because of dirty ballast or sea pollution will automatically nullify his notice of readiness and will lose any priority of position for loading.

LOADING: It is absolutely essential that extremely careful supervision be exercised by officers of vessels while loading operations are in progress. A responsible ship's officer is required to be on duty continuously at a point near to the tanks being loaded. He will be assisted by an adequate number of ship's personnel in these operations.

Raising, lowering, connecting, tending and disconnecting of oil loading hoses as well as other labours and duties on shipboard connected with loading of cargo or maintaining mooring lines in a correct manner will be performed by the ship's crew directed by a responsible officer as required by the terminal official. Loading of export tankers is through two loading hoses with 10 in. ASA 150 connections.

All ships using Salawati Marine Terminal must be able to connect their manifold to the 10 in. flanges. Masters are reminded that it is the ship's responsibility to provide such reducers as may be required to make the connection and that the hose connecting operation will normally be carried out while the ship is de-ballasting.

The Terminal Official will report unsatisfactory conditions to the Company Area Superintendent or his designated alternate, who may, in turn, reject the ship until corrections are fully made. All costs accruing there from will be for the ship's account.

Request for the terminal to stop the flow of oil cargo at a predetermined tonnage must be in writing. The request must include the statement by the ship's Master that the Company will not be held responsible for any error and that in case of the vessel being overloaded the excess cargo cannot be pumped back to the storage tanker. Ship's Master will also be held responsible for any oil spills caused by this request.

The export tanker must move the loading hoses from the oil storage barge by means of its own derrick and using its own crew. The cargo derrick required to raise the loading hoses from the oil storage barge side must have minimum lifting capacity (SWL) of 5 tons and have a sufficient length of strong lifting wire rope on the drum to enable the cargo hook to reach the oil storage barge side, which is approximately 45 ft. away from the tanker's side, and still have adequate turns of wire left on the drum to ensure safety. Vessels which may consider the lifting capacity of their gear to be marginal should strengthen their gear accordingly. A common way to do so is to rig a second topping lift on the boom.

An A.O. Smith Metering System is used to load the export tanker.

Two loading hoses with 10 in. of ASA 150 Camlock flange connections are used to load the export tanker. All vessels not having 10 in. connections must provide their own reducers.

A loading rate of approx. 20,000 bbls.p.h. can be accomplished.

If, at any time an overflow of crude oil occurs, loading will be suspended immediately, and not be resumed until the oil is cleaned up and removed from the decks of the vessels, and/or from the surface of the sea, and any damage is repaired and no further danger exists. It is stressed that during loading operations, the Salawati Cargo Supervisor will immediately slow down the loading rate on receipt of a request for same from the ship's deck officer in charge of loading.

All spillages of oil must be reported immediately to the Company Area Superintendent, or his designated alternate, and subsequently, a detailed report, in writing, submitted by the Master of the vessel concerned giving all relevant details.

CARGO: *Typical Salawati Crude Analysis:*

API – Gravity at 60°F	41
Reid Vapour Pressure	2.0 at 100°F
Sulphur, Wt.%	0.5%
Kinematic Viscosity at 100°F	4.2 cST
Pour Point	+20°F
Carbon Residue	1.3% by weight
B S & W	0.1% by weight
Flash (PMCC)	Below 50°F

CARGO DOCUMENTATION: Crude oil loading documents such as Bills of Lading, Quality Certificate, Quantity Certificate, Dry Certificate, Ullage Reports, Time Loading Report, Certificate of Origin, Cargo Manifest and Master's Receipt for Documents/Samples are prepared at Salawati Marine Terminal.

When the tanker has been loaded, the documents shall be completed and be taken aboard the tanker for the Master's signature.

Notes of Protest, if any, should be handed to the Company Area Superintendent or his designated alternative for further delivery to Phillips Petroleum Company Indonesia, Jakarta.

FRESH WATER: Not available.

FUEL: Not available.

MEDICAL: No clinic available.

REPAIRS: No facilities.

CONSULS: None.

CUSTOMS ALLOWANCES: Cigarettes, cigars, tobacco, matches, spirits, wine, beer, perfume, arms, ammunition and possibly other items have to be locked up under Customs seal from time of arrival of ship in port until time of leaving territorial waters. Each person is allowed to bring in 200 cigarettes or the equivalent in grams of tobacco or cigars. Special allowances are made for the Master under special circumstances. The Master should prepare two copies of the Stores List for Customs use.

REPATRIATION: Not possible. If emergency conditions prevail, for humanitarian reasons, exceptions to the foregoing may be permitted. All expenses incurred will be for ship's account.

TIME: GMT plus 9 hours throughout the year.

SHORE LEAVE: Not possible.

DELAYS: Delays to vessels using Salawati Marine Terminal due to the port being closed because of bad weather conditions shall not be computed as used lay time when compiling vessel's turn around time.

GENERAL:

Logs: Masters are advised to keep careful watch on the approaches for semi-submerged floating logs which may become hazardous to safe navigation.

Charts: Charts for the area are as follows:

1. Admiralty Chart No. 3744
2. Admiralty Chart No. 3745.
3. Admiralty Chart No. 1416.
4. Indonesian Hydrographic Charts No. 213, 217 & 219.

Winds: Winds can reach a maximum of 75 m.p.h. during local storms and all vessels must make sure they carry sufficient ballast to be manoeuvrable in the restricted waters of Sele Strait during these storms.

Stores: Not available.

Visitors: Only authorised personnel or visitors are permitted on the storage barge and/or export tanker.

Crude Oil Testing: The crude oil testing laboratory is equipped to perform the following tests:

API Gravity, BS & W, Pour Point, R.V.P. and salt content. Any additional tests that may be required will be performed in Jakarta.

Flag: During daylight hours the Indonesian flag must be flown throughout the vessel's stay in port.

AGENCY: See "General" before first port.

SHIPMASTER'S REPORT: August 1978.

General: The loading terminal is located on the East coast of Salawati Island at Sele Strait. Salawati marks the Western part of New Guinea and belongs to Indonesia.

Reference: Refer to B.A. Charts 3744, 3745, 1416.

Coast Pilot 35, Eastern Archipelago Volume III.

Documents: Inward and outward clearance carried out at anchorage. Watches in excess of one, radios, cassette recorders, perfume etc., will be sealed by Customs. Seal will be inspected when receiving outward clearance. Papers required for clearance:

15 copies of Crew Lists.
4 copies of Cargo Manifest
4 copies of Personal Effects
4 copies of Bonded Store List
4 copies of Stores List
4 copies of Narcotics List
2 copies of Vaccination List

Ship's Registry taken ashore and returned on outward clearance.

Pilotage: Government Pilot and Mooring Master – usually from Kasim Terminal board at anchorage. Mooring Master acts as Pilot. From the anchorage vessel proceeds through Sangoilin Mon (Heilige Straat) and Sele Strait towards Salawati. Heilige Straat is marked by unlit buoys and beacons, privately maintained by the oil companies. The min. depth is 49 ft., max. sailing draft from Salawati is 43 ft.

Anchorage: Recommended anchorage in position Lat. 00° 53' S., Long. 131° 10' E. in approx. 25 fathoms of water.

Restrictions: Usually transit from anchorage towards Salawati is carried out during daylight hours only.

Vessels of 100,000 d.w.t. have been berthed at Salawati.

Health: Radio Pratique not available.

Radio: Pertamina office listens on VHF Channel 16 but calls are seldom answered. Kasim Marine Terminal listens on 16 and contacts Pertamina office by telephone.

Advance notice. As per Charterer's instructions to Pertamina, Jakarta.

Tugs: Two tugs are available from Kasim Terminal to assist in berthing and unberthing.

Berthing: Berth is constructed of 2 mooring dolphins and 2 breasting dolphins with storage barge "Wampum" being moored to the Western side of dolphins and export tanker being moored to the Eastern side.

Vessel may berth port or starboard side to, depending on stage of tide. The vessel is moored with 8 ropes forward and 8 aft, ropes being handled by mooring launches.

Two hoses of 10 in. are connected to ship's manifold by ship's crew. The barge is said to have a capacity of about 70,000 LT, the maximum loading rate of Salawati crude is 20,000 bbls./hr.

Vessels not having received inward clearance by 1500 hrs. local time at the latest will have to await the following daylight before proceeding towards Salawati.

Weather/Winds: Uniformly high temperatures, high humidities and abundant rainfall. Winds are usually light, with a seasonal reversal as N.W. and S.E. Monsoon, however, winds can reach a maximum of 75 m.p.h. during local storms.

Tide: Between 2 – 5 knots at berth and in Sele Strait, rise of tide about 2 m.

Repairs: Not available.

Supplies/Services: None available.

Shore Leave: Not possible.

AUTHORITY: Pertamina, Jalan Yos Soedarso No. 32-34, Jakarta, Indonesia. *Tel:* 62.21.490311. *Contact:* Mr. Indra Kartasasmita.

SAMARINDA: 00.30 S. 117.09 E. (See Plan)

APPROACHES: The distance from the port of Samarinda to the outer basin is about 60 km.

The depth of channel before the dredging was 5.00 m. LWS and had various widths.

After dredging it has a minimum depth of 6.0 m. LWS and a width of about 100 m.

The current speed is between 1.00 km./hr. – 2.0 km./hr. in the inner harbour.

The current speed is between 2.5 km./hr. – 4 km./hr. at the outer bar/channel.

PILOTAGE: Pilotage is compulsory. Pilot boards at Muara Pegah. There are 14 Sea Pilots and 4 Harbour Pilots.

ANCHORAGE: Vessels entering Samarinda inner harbour anchor at Muara Pegah: 01° 00' S., 117° 21' E. Depth 22 m.

Vessels loading/discharging at outer anchorages: Muara Berau: 00° 14' 30" S., 116° 34' 04" E. or at Muara Jawa: 01° 02' 30" S., 117° 15' 00" E. Depth of water 20 m.

RESTRICTIONS: Maximum LOA entering outer bar 156 m., with maximum draft 6.0 m. Depth of outer bar 6.0 m. at LWS. Depth of inner harbour 7.0 m. at LWS.

MAX. SIZE: 6,000 d.w.t. and draft 6.0 m.

RADIO: Samarinda Coastal Radio, call sign PKN-6, frequency 8,445 kHz.

VHF: Samarinda Radio, call sign PKN-13, Channels 16 and 12.

TUGS: 4 pilot boats available.

BERTHING: Concrete Wharf: Length 450 m., depth 7.0 m. and width 125 m.

Warehouses: 2 × 1,600 sq.m.

Open Storage: 19,398 sq.m.

Forklifts: 16 × 3 – 5 tons.

CRANES: 2×12 tons mobile cranes.

STEVEDORES: Available from labour pool.

MEDICAL: Hospital facilities available.

FRESH WATER: Available, rate 18,000 litres per hour.

FUEL: Not available.

REPAIRS: No facilities available.

GENERAL: *Barges:* Privately owned barges available.

AUTHORITY Perum Pelabuhan IV, Cabang Kelas II Samarinda, Niaga Timur Street 130, Samarinda, East Kalimantan, Indonesia. *Tel:* (0541) 22044 – 21615. *Telex:* 38237. *Contact:* Mr. Baharuddin Zaenal, BA, Head of Branch.

SAMPIT: 03.06 S. 113.04 E.

LOCATION: The port is located 45 miles from the outer bar.

PILOTAGE: Not available.

ANCHORAGE: Vessels anchor in position 03° 06' 00" S., 113° 02' 15" E.

RESTRICTIONS: Maximum depth at outer anchorage 2.10 m. at LWS.

RADIO: Sampit Coastal Radio Station. Call sign PKG-2. Frequencies: 2,182/6,215.5 kHz.

TUGS: Not available.

BERTHING: Length of wharf 208 m. Depth alongside 4.5 m. at LWS.

Storage: Godown and open storage available.

Fork Lifts: Available.

CRANES: Available.

STEVEDORES: Available from labour pool.

FRESH WATER: Not available.

FUEL: Not available.

REPAIRS: No facilities available.

GENERAL: *Barges:* Not available.

SANGATTA: 00.22 N. 117.34 E.

PILOTAGE: Mooring Master available.

ANCHORAGE: The anchorage whilst awaiting berth is located in position Lat. 00° 18' 58" N., Long. 117° 37' 35" E.

RESTRICTIONS: Berthing during daylight hours only. Unberthing at any time, day or night.

MAX. SIZE: *CBM:* 36,500 d.w.t. Max. LOA 220 m.

VHF: Balikpapan Radio, call sign PKN-2, on VHF. Station operated by Pertamina.

Sangatta Radio, call sign PKN-4, on VHF. This station also operated by Pertamina.

BERTHING: There is a CBM (4 buoys) located in position Lat. 00° 21' 35" N., Long. 117° 34' 26.5" E. Depth of water 21.0 m. Crude oil is loaded at a rate of 8,570 bbls.p.h. through 2×12 in. hoses.

There is a jetty in position Lat. 00° 23' 03" N., Long. 117° 33' 58.0" E. The depth alongside the jetty is 1.5 m. at LWS.

LOADING:

Shore Storage Tanks:

Oil Products	Total Safe Capacity
Crude Oil	250,000 bbls.
Premium	290 k/l.
HSD	870 k/l.

Physical Characteristics of Crude Oil:

API Gravity at 60°F.	:	34
Reid Vapour Pressure at 100°F.	:	3.8 psi
Viscosity at 100°F.	:	2.7 cSt
Sulphur Content	:	0.08% wt.
Carbon Residue	:	0.65% wt.
B.S. & W.	:	0.15% vol.
Flash Point (PMCC)	:	Below 50°F.
Pour Point	:	75°F.

DENSITY: 1020 – 1025.
FRESH WATER: Not available.
FUEL: Not available.
AIRPORT: Temindung Airport at Samarinda.
TIME: GMT plus 8 hours.
AUTHORITY: *Operator:* Pertamina.

SANTAN TERMINAL: 00.06 S. 117.32 E. (See Plan)

LOCATION: The Terminal is situated on the East Coast of Kalimantan, Indonesia in the Makassar Strait. It is about 80 miles North of Balikpapan.
DOCUMENTS: If arriving from a foreign port the following documents may be required for granting pratique. Certificate of Registry, Ship's Construction Certificate, Load Line Certificate, Safety Equipment Certificate, Safety Radio/Telephone/Telegraph Certificate, Exemption Certificate, Cargo Certificate and Derat Certificate. Also required will be last Port Clearance and Crew List.

Crude oil loading documents will be prepared at the Santan Terminal and when the vessel has been loaded the documents will be completed and final clearance formalities will be carried out on board.

Each Crew member should be in possession of an International Vaccination Card and Passport or Seaman's Book. Indonesian Immigration, Customs and port officials will board the vessel to grant clearance.

Flag Dispensation: Each tanker entering the Santan Terminal must have requested and been granted Flag Dispensation prior to its arrival. At the same time application should be made for provisional Pratique through the Directorate of Quarantine and if granted, a cable advice is sent to the harbour authorities. Port Health clearance is issued prior to the tanker's arrival and is also valid for departure. If Provisional Pratique is not granted a Port Health Officer will be provided. All of the foregoing is arranged through and by the Agent.

Customs and Immigration: In accordance with practice in Indonesian ports, the vessel's national flag, the Indonesian courtesy ensign, quarantine, immigration, Pilot and call sign flags must be displayed by all vessels approaching Santan. These signals shall be displayed continuously until clearance is granted.

The signals are as follows:

Sunrise to Sunset:	Quarantine Flag "Q"
Sunset to Sunrise:	Signal Lights (red over white)

The "N" flag should be flown until the Immigration Officer boards the ship. The "G" flag (request for Pilot) should be flown until the Mooring Master boards. The vessel should also fly its call sign, (signal letters). This signal may however be hauled down after the vessel is secured to the SBM. As soon as the Mooring Master boards, the "G" flag should be replaced by the "H" flag which signifies that the Pilot is aboard.
PILOTAGE: *Procedure When Berth Available on Arrival:* A vessel for which a berth is available on arrival will be boarded by a Mooring Master in the anchorage area and providing that the vessel is in all respects ready to commence loading (except for the necessary deballasting) the Notice of Readiness will be accepted at the time of the Mooring Master boarding.

If the vessel is not in all respects ready to proceed to the berth, with main engines fully manoeuvrable, mooring ropes on deck, windlasses, winches, etc., in good working order and readiness, it will not be accepted until the Mooring Master is satisfied that all these conditions are met.

Also see "Operations".
ANCHORAGE: If vessels are obliged, or instructed, to anchor, they should do so in the recommended anchorage and on no account are they to manoeuvre or anchor West of Longitude 117° 33.5' E. unless a Mooring Master is on board. The depth of water is 40 m. with a bottom of mud/clay. Holding ground is considered good.

The Southern limit of the anchorage is defined by two buoys Number "10" coloured red and Number "12" coloured red and white chequers. At night both buoys show a white light flashing 1 second every 6 seconds.

The Southerly limit of a reef on the Northern side of the anchorage area is marked with a buoy numbered "11" and coloured green. At night this buoy shows a green light flashing green 1 second every 5 seconds. Another buoy coloured with red and white horizontal bands and marked with the letter "A" shows a group flash light showing 3 white flashes every 6 seconds.

All the buoys are fitted with radar reflectors.
READINESS: *Procedure When Instructed to Anchor on Arrival:* A vessel which has been instructed by Santan Port Control to anchor on arrival should, after doing so, inform Port Control of the precise arrival time. According to the practice of the port, acceptance of the Notice of Readiness will coincide with this arrival time, providing:

(a) Vessel is within scheduled date range.
(b) That it is within the hours of daylight – deemed to be from 0600 hrs. local time to 1800 hrs. local time.
(c) That it is not a Public Holiday or Sunday, unless the vessel is actually handled on that day.
(d) That the Port is open.

An exception to clause (a) above, is when conditions allow night berthing, in which case the vessel will be accepted when the Mooring Master boards, or, should the vessel have been at anchor, when the anchor is aweigh, providing that the Mooring Master is then on board.

In addition to clauses (a), (b) and (c) above, vessels will not be accepted when arriving at an unreasonable time ahead of their last signalled estimated time of arrival. It is not the practice of the port to keep Pilots (Mooring Masters) on station in the anchorage. Santan Port Control maintains a continuous listening watch on Channel 16 VHF.

Notwithstanding anything in the foregoing, Notice of Readiness will not be accepted at a time when it is not the practice of the port to accept it.

Also see "General".

NAVIGATION:
Attaka Reef: The Attaka Reef Light has been removed permanently.
Ship Approach Channel: The ship approach channel to the Santan Anchorage is marked with 3 buoys and numbered from seaward 8, 10 and 12 respectively. At night they show a white light flashing 0.5 seconds every 2 seconds. The No. 8 buoy is positioned at Lat. 00° 06' 00" S., Long. 117° 37' 42" E. Ships should stay to the North of these buoys.
SBM: The SBM is fitted with a radar reflector and at night shows a Qk. Fl. W. light. One of the floating hose strings is fitted with two winker lights.
Inshore Area: Inshore of the SBM area a concrete pile beacon painted red and numbered "16" shows a red flashing light every 6 seconds and marks the Northerly limit of two dangerous reefs.

The work boat canal is marked by 2 concrete pile beacons, the Northerly one numbered "15" and showing a green flashing light and the Southerly numbered "18" and showing a red light.

There is a beacon on each bank of the canal, at the shore line. The North bank beacon showing a green light and the South bank a red light.
Onshore Area: A radio antenna approx. 150 ft. high is located at approximately Lat. 0° 05' 24" S., Long. 117° 26' 34" E. The mast shows fixed red air lights by night on the top and midsection.

RESTRICTIONS: Berthing during daylight only, unberthing at any time.

MAX. SIZE:
Minimum Size Acceptable: The minimum sized tanker acceptable at the Terminal is the T-2 Class or equivalent of not less than 35,000 d.w.t.
Maximum Size Acceptable: The maximum sized tanker acceptable at the Terminal calling for a full cargo is 125,000 d.w.t. and 275 m. LOA.

RADIO:
Procedure for Appointing Agent: Owner should cable: Pertamina Ship Jakarta. The cable should appoint Pertamina as Agent to attend the tanker at Santan and should be sent 2-4 weeks prior to vessel's arrival.
Advice of Arrival: 72 hours prior to arrival at the Terminal vessels should advise the company of their estimated times of arrival by cable sent via Pertamina's Coastal Radio Station at Balikpapan. They should also confirm or amend ETA when they are 48 hours and again when 24 hours, distant from the Terminal.

Unocal Indonesia Company. Cables: Pertamina Tanjungsantan.
Pertamina's Coastal Radio Stations:

I. Name of station – Balikpapan Radio; Call Sign – PKN 2; Frequency – Keeps watch on 2182 kHz A3, answers on 4415 kHz A3, 6520 kHz A3 (vessel's selection); Class – A3H-A3J; Power – 500 watt; Service - 24 hour; Location – Lat. 01° 16' S., Long. 116° 50' E.

ETA messages sent to PKN2 should be addressed:
Pertamina Tanjung Santan =
Message ....
Master...............

As long as no direct contact exists with PKN2, ships send ETAs to PKI2 (See below).

II. Name of station – Jakarta Radio; Call sign – PKI2; Frequency - 500 kHz (operates on 452 kHz), 2182 kHz answers on: 4178, 4280.5, 4363, 4410, 6457.5, 6520, 6516 kHz. 8 MHz (operates on 8628 kHz); Class – A1 500 kHz; A3 2182 kHz; A1 8 MHz; Power – 1 kW, 500 kHz, 500 watt, 2182 kHz; 1 kW 8 MHz.

Service – 500 kHz H24, 2182 kHz 0400 – 0500, 0700 – 0800, 1000 - 1100, 1500 – 1600, 2000 – 2100, 2300 – 2400 hrs. GMT; 8 MHz 0100 - 0300, 0500 – 0600, 0900 – 1000, 1100 – 1200, 1400 – 1500, 1730 - 1900, 2100 – 2200 hrs. GMT.

Location: Lat. 06° 08' 00" S., Long. 106° 50' 00" E.

ETA messages sent to PKI2 should be addressed:
Pertamina Tanjungsantan via PKN2 =
Message ....
Master...............

Details of Cable: The following information should be included in the cable:

Name of vessel and radio call sign.
ETA in GMT and date (local time is GMT+8 hours).
Cargo requirements.
Deballast time.
Maximum loading rate.
Vessels draft on arrival.
If there is any sickness aboard or clean Bill of Health.
Last port of call.
Any hull, bulkhead, valve or pipeline leaks on vessel which could affec loading or cause pollution.
Distance in feet from bow to vessel's loading manifold.
Flange dimensions of vessel's manifold connection if not to ANS B76.5, B.S. 1560, Series 150 or equivalent.
Also see "General" before first port.

VHF: Vessels equipped with VHF radio telephone should contac "Santan-Control" on Channel 16 (156.80 MHz) when within range request instructions.
Language: The language of the Terminal is English and Indonesian.
TUGS: 2×365 h.p. mooring boats and 1×1,000 h.p. tug assist wit mooring at the SPM and the Propane export facilities.

MOORING/UNMOORING: This description is only intended as a guide and may be varied as to the order in which lines are taken up etc. according to the circumstances prevailing at the time of mooring.

Moorings Required From Tanker: The ship must provide and have ready the following: Two mooring ropes and one rope messenger line on the forecastle.

The Approach: The ship approaches the buoy from down tide and wind, taking care to keep the wind right ahead. Adequate ballast must be retained on board to ensure that the vessel retains full manoeuvrability throughout the approach to the buoy and the actual mooring.

Bringing Aboard the Mooring Lines: The vessel will be brought to a position close to the buoy with the vessel stopped in the water and with the buoy fine on the port bow. During the approach to the buoy and while mooring, a terminal work boat will keep the hoses pulled well clear to port. Under normal conditions the port rope will be the first taken on board. The Mooring Master will advise as to which rope is to be taken first and as to which fairlead this will be taken. The actual work of mooring will be done by ship's crew. The ship will lower a strong messenger line to the mooring boat who will in turn make this fast to the approach rope. The approach rope of 10 in. circumference will be hove aboard and will in turn be hove in until the chafing chain and triangular plate is centred in the fairlead.

Securing the Mooring Lines: While the approach rope is being hove aboard, a strong wire strop will be made fast to a set of forecastle bitts. To the end of this strop will be fitted a 50 ton shackle and the strop will be so made fast at the end and the shackle will be about 5 ft. inboard of the fairlead. The approach rope will be hove on until the large link of the chafing chain is sufficiently far inboard for it to be connected to the strop by the 50 ton shackle. When this is done the approach rope will be slacked off until the full weight comes on the strop/chafing chain/buoy rope. The buoy rope is 150 ft. long and is 13 in. circumference double nylon of plaited construction.

The approach rope can now be taken to the bitts to act as a preventer. The second rope is now taken aboard and made fast in the same way. When both the ropes are fast, good ropes or strops, provided by ship, can be made fast to the spare links on the chafing chains to back up the main moorings.

Fire Wires: A fire wire must be rigged on the starboard side for'd and on the stern. These must be tended throughout vessels stay at the SBM to ensure that they are kept within 2 ft. to 3 ft. of water. In case of fire the tugs would connect to these wires to pull vessel clear of the SBM.

Connecting Hoses: When the mooring is completed, the work boat holding the hoses clear will bring these alongside the ship in way of the port side manifold.

Unmooring: To unmoor from the buoy any extra back up lines that have been made fast to the chafing chains are slipped first. The approach ropes are then taken to the ship's windlass/capstan and the weight taken on them until the shackle between the strop and chafing chain is undone. With the vessel moving slowly astern the approach ropes are slacked off and finally slipped and allowed to float free. While the ship is unmooring, a terminal work boat will keep the floating hoses towed clear and will keep them clear until the ship has slipped the moorings and is clear of the buoy.

Strops and shackles will be provided by the Terminal and put on board as the vessel approaches the buoy. The ship must provide 2 mooring ropes at least 8 in. circumference and 100 fathoms long, a 4 in. circumference messenger line, and two rope lashings 4 in. circumference and 15 ft. in length. These lashings should be of manilla or polypropylene, nylon is not acceptable.

BERTHING FACILITIES: SPM: The Sea Terminal consists of a "single point mooring" loading berth also known as a "mono-buoy" or "single buoy mooring". The berth is located at Lat. 00° 06' 18.6" S., Long. 117° 32' 18.8" E.

The "single buoy mooring" is approximately 4.33 miles offshore in 28 m. of water. The submarine line to the "single buoy mooring" is 30 in. in diameter. A double string of 20 in. submarine hose connects the submarine line header to the "single buoy mooring". Two strings of 16 in. floating hose connect the "single point mooring" to the tanker rail hoses which are 12 in. in diameter. The hoses are always taken up on the port side.

Hose lifting Derrick Capacity: Tankers must be equipped with a hose lifting derrick with a lifting capacity in conformance with the table shown on Page C2 of Appendix C to the International Oil Tanker and Terminal Safety Guide.

Manifold Connection Sizes: The minimum size manifold connection will be 8 in. The Terminal is equipped with flanged spools to also connect to 10 in., 12 in., and 16 in. manifolds. Tanker manifolds should terminate in ASA Series 150, flat face flanges. Unless the Terminal is given adequate notice, tankers equipped with manifold flanges of other sizes or ratings will be rejected.

LPG Jetty:

Location	: Lat. 00° 05' 29" S., Long. 117° 30' 45" E.
Year Built	: 1977.
Product Handled	: Propane.
Jetty Length	: 100 ft.
Dolphin Distance	: 400 ft.
Loading Manifold	: 4 in. ANSI series 300.
Vapour Manifold	: 2 in. ANSI series 300.
Distance – Storage	: 5.5 miles (approx.).
– Offshore	: 2.5 miles (approx.).
Water Depth	: 11.5 m.
Allowable Tanker Berthing	:
Tonnage	: Max. 4,100 tonnes.
Draft	: Max. 7.5 m.
LOA	: Max. 110 m.
LOA	: Min. 60 m.
Freeboard Empty	: Not more than 7.0 m.
Freeboard Loaded	: Not less than 1.0 m.
Length of Flat Hull	: Not less than 30.5 m.
Cargo Carrying Capacity	: Not less than 500 tonnes. Not more than 3,000 tonnes.

BALLAST/POLLUTION:

Adequate Ballast: Due to the exposed location of the crude oil loading berth, vessels are required to carry sufficient ballast for safe handling, having due regard to existing weather and sea conditions. A vessel found by the Mooring Master to be not adequately ballasted will be rejected.

Pollution: Owners and Masters are responsible to observe International Convention Laws and Indonesian government regulations concerning pollution of the sea, having particular regard for this area of the Makassar Strait.

Clean Ballast: As there are no ballast discharging facilities, vessels must arrive at the Terminal with clean ballast, ensuring that all pipelines, pumps and strainers have been flushed out prior to arriving.

The Mooring Master will inspect ship's ballast on boarding and has the power to reject any vessel that he deems would cause pollution of the sea area, in which case vessel must proceed to sea and return only when ballast is completely free of oil. Any vessel rejected because of dirty ballast will automatically nullify its Notice of Readiness and will lose any priority of position for loading. Ballast discharge should not be commenced without the prior agreement of the Mooring Master.

Bilges: Bilges must not be discharged while at the SBM or in the anchorage.

Inspection During Loading: At night the sea area around the vessel shall be adequately lighted, as frequent inspection by the Mooring Master will be made during the discharge of ballast. Any pollution whatsoever will be cause for rejection. Similarly, any hull leaks causing pollution during loading will be cause for rejection and the vessel will not be re-accepted unless satisfactory evidence of repairs has been certified by a qualified surveyor.

Cargo hose connections should be inspected during loading, drip-pans should be placed under the manifold, all unused cargo connections should be blanked off, sea-valves should be closed and lashed upon completion of deballasting and all scuppers must be securely plugged.

Fines and Claims: Any fines imposed by governmental authority for pollution shall be for the vessel's account.

OPERATIONS:

Mooring Master: A Mooring Master will board the vessel in the anchorage area and advise the Master on all manoeuvres relative to berthing and unberthing and connecting the hoses.

Vessels are requested to make a lee and have a pilot ladder long enough to reach the Mooring Master's launch. At night adequate lighting should be provided. Ships with more than 30 ft. freeboard should rig a pilot ladder to a position 3 ft. above the water and an accommodation ladder so rigged that the Pilot can transfer from the pilot ladder to the accommodation ladder once he is clear of the pilot boat.

Work Crew: Mooring and unmooring, lifting, lowering, connecting and disconnecting hoses will be done by ship's crew under the direction of a Terminal Supervisor. Assistance from ship's personnel in operating windlasses, winches, etc. will be required. Ship's crew will undertake hose connection/disconnection/mooring/ unmooring and carrying equipment from deck to forecastle as required. Any vessel whose crew do not give such assistance may be rejected and returned to the anchorage. Costs of such a delay would be for the ship's account.

Tankers Engines and Hose Lifting Derrick: Being an open roadstead, vessels must keep engines on standby during their stay in the berth. No repairs to main engines may be undertaken while in berth. Power must be kept on deck winches in case adjustments to mooring lines are found necessary. Ship's booms and deck winch must be capable of operating with a SWL in conformance with the table shown on Page C2 of Appendix C to the International Oil Tanker and Terminal Safety Guide. Vessels with inadequate hose lifting equipment will be rejected.

Only the automatic turning gear should be used. If it should become necessary to turn the propeller(s) at revolutions greater than the minimum obtained by the automatic turning gear, application must be made to the Mooring Master in order that arrangements can be made to ensure that hoses are kept clear. The Mooring Master's written permission *must* be obtained before any such increase in revolutions.

Hanging Off Hoses: Small bitts for hanging off loading hoses should be provided in line with the loading manifold.

Safety: Every vessel which berths at the buoy shall remain under the charge of the Master who will take all steps necessary to preserve the safety and security of such vessel, crew and terminal personnel who may board in the execution of their various duties.

The Master of every vessel at anchor in the designated anchorage or secured to the SBM shall ensure that all parts of the vessel, to which any person may be lawfully required to proceed, are properly illuminated. Efficient and easy means of access shall be provided to every vessel at anchor or at the SBM and such access shall be adequately illuminated between sunset and sunrise.

No person(s) shall be permitted to board or leave the vessel other than by the gangway or other proper means provided for the purpose.

The Mooring Master may require the vessel to unmoor at any time he deems it necessary for the safety of the vessel or the moorings or for infringement of Port Regulations.

Unsatisfactory conditions will be reported to the company's Marine Superintendent, who is empowered to reject a vessel for future calls unless the reported deficiencies have been remedied.

Sufficient Crew members must be immediately available at all times to assist with any or all operations on board the vessel at the Terminal.

LOADING: *Loading Rate:* Maximum loading rate will be about 27,000 bbls.p.h. It is recommended that vessels take maximum flow with due regard to safety in order to expedite turn around time as well as to provide ballast as quickly as possible. Care should be taken not to overload, as there is no possibility whatever of pumping back ashore. When vessels are equipped with permanent ballast tanks, the ballast in these tanks should be retained on board until the vessel has taken on board sufficient cargo to be manoeuvrable. Vessels not so equipped should examine the possibility of safely loading and discharging ballast simultaneously, as such practice improves turn around time as well as reducing the possibility of breaking out of the berth in bad weather in a completely light condition.

Closing Valves Against Oil Flow: Warning is given of the danger of closing valves against an incoming oil stream. This will create excessive pressures which may result in damage to the loading hoses, sea-line and Terminal facilities. Vessels will be held liable for damages resulting from failure to observe this precaution.

Crude Oil Characteristics:

		Attaka/Badak	*Bontang Mix*	
API Gravity at 60°F	:	43.4	51.7	
Reid Vapour Pressure at 100°F	:	8.4	8.2	psi
Viscosity at 100°F	:	1.42	1.38	cSt
Sulphur Content	:	0.05	0.04	% wt.
B.S. & W.	:	0.05	0.04	% vol.
Pour Point	:	5	20	°F.

Storage Capacity:

Crude	2,500,000 bbls.
Propane	20,000 k/l.

Loading Temperature:

Propane	85°F. – 90°F.

Radio Contact: During loading operations the vessel will contact the Terminal Despatcher ashore every hour by the assigned VHF channel (Channel 9) to ensure that radio contact is being maintained. Pumping will be stopped immediately if it is found that radio contact with the ship has been lost.

In addition to the ship's VHF the Mooring Master will carry a portable radio, of approved design, with which he will be able to contact the shore terminal and mooring launches.

Mooring Launch: Throughout the loading operation a terminal mooring launch will be in attendance at the ship to tend hoses, etc.

Every vessel requiring a shore stop will be required to inform the Mooring Master at start of loading and sign the form carried by the Mooring Master, requesting shore stop. When requesting a "Shore Stop", Masters must understand that Unocal Indonesia Ltd. accept no responsibility for any errors in the quantity. Should the cargo asked for overload the vessel, it is not possible to pump oil back from the ship to the shore.

CUSTOMS: Cigarettes, cigars, tobacco, matches, spirits, wine, beers, perfume, arms, ammunition and possibly other items have to be locked up under customs seal from time of arrival of ship in port until time of leaving territorial waters. Each person is allowed to bring in 200 cigarettes or the equivalent in grams of tobacco or cigars. Special allowances are made for the Master under special circumstances. The Customs officer will seal the stores.

FACILITIES: There are no facilities of any kind at Santan. There are no engineering repair shops; no fresh water; no bunkers available; no provisions or stores; no crane or barge service; no shore leave; no crew changes; no consulates available, no garbage or waste oil disposal and no Seaman's clubs.

GENERAL: *Exact Arrival Time:* It is stressed that vessels must advise Port Control of their exact arrival time, as failure to do so may lead to loss of their berthing turn.

Lay Time: Lay time will be calculated as outlined in the Crude Off-Take Procedure, Attaka Unit.

Conditions of Use of Port: The Master of each tanker will be given a copy of the Conditions of Use of Port of Santan Marine Terminal, which he will be asked to sign.

Delay Due to Excessive Deballasting: Delays in commencement of loading due to deballasting in excess of 6 hours will be deducted from the laytime.

Floating Logs: Masters are advised to keep careful watch on the approaches for semi-submerged or floating logs which may become hazardous to safe navigation.

Charts: Charts for the area are as follows:

1. Republic of Indonesia, Chart 130, East coast of Kalimantan, Balikpapan to Muara Berau.
2. Republic of Indonesia, Chart 37, East coast of Kalimantan, Muara Berau Kutei River to Cape Mangkalihat.
3. U.S. Naval Oceanographic office, old Chart H.O. 3044, new Chart N.O. 72014 Borneo East coast. Sandakan Harbour to Sungai Mahakam.
4. U.S. Naval Oceanographic office, old Chart H.O. 6185, new Chart N.O. 72110 Borneo East coast, Tanjung Mangkalihat to Tanjung – Tamarong.
5. British Admiralty, Chart 2636, North part of Strait of Makassar.
6. British Admiralty, Chart 2660, China Sea – Southern Portion.
7. British Admiralty, Chart 941-B, Eastern Archipelago.
8. British Admiralty, Chart 3040, Approaches to Santan and Bontang.

Sailing Directions: Sailing directions are in the following:

Eastern Archipelago Pilot, Vol II. 7th Edition, 1961.

Hydrographic Survey: A detailed hydrographic survey was carried out from November 1971 to January 1972, of an area between Lat. 0° 03' S. and 01° 23' S. and extended from the shore line to some 20 miles offshore. Charts are available on request from the Terminal showing the results of this survey for the approaches to the Terminal on a natural scale of: 1:25,000 and for the anchorage and loading area on a natural scale of 1:12,500.

AGENCY: See "General" before first port.

SHIPMASTER'S REPORT: 1976 (Updated 1992).

Situated about 80 miles North of Balikpapan on the East coast of Borneo, in 00.07 S. 117.28 E., the only chart available BA.2636 is of too small a scale to advise safe first time entry in darkness. So, after a number of unsuccessful attempts to contact Santan Terminal for instructions – only the latter portion of his transmissions were being received, and very underpowered, it was decided to await daylight, cruising on 118° Meridian.

At 0600 hrs. vessel was again in the vicinity of Attaka Buoy, Pilot contacted by VHF 16. He instructed us to proceed 270° T and he would meet us, East of SBM. The SBM is located about 4.5 miles offshore, marked by a QK.FL.W. light, vis. 6 miles, and is impossible to distinguish from Attaka Buoy.

The best approach is to reach a point 4 miles North of Attaka Buoy which has a Ra.Refl. and was identified at just under 12 miles. From thence, subject to the Master's assessment of the situation, and assuming possession of a copy of the Chartlet, to proceed inward on 257° T, which will take him along the Approach Channel. But he should be prepared for quite strong set to North or South – this being my experience, both inward and outward. Pilot states that up to 125,000 d.w.t. can be handled. Originally, the channel had 4 buoys, marking the South side of the channel, but the outer 2 have been withdrawn. Channel has been swept and min. depth shown is 50 m. Each buoy has a Ra.Refl. and with 3.5 mile spacing, are easy to track on radar and visually, once their existence is known, from the Chartlet.

An anchorage area exists between 0.5 and 2 miles East of the SBM, bounded by 3 buoys to West side and 1 to South. These mark Coral Shoals. The Pilot said it was acceptable to come straight in from Attaka Buoy, in ballast, but loaded vessels must stay in Swept Channel, as the possibility of isolated Coral Heads exists, and the area South of the channel has not been fully swept.

A ship's mooring line is lowered to the launch to pick up the port SBM polypropylene line, this finally brings up a chain (approx. 8 in. dia. link). A special very flexible wire, provided by shore, is secured round both Port and Starboard forward bitts on foc's'le head, with an eye at each end projecting forward. The mooring chain is then shackled to this. A stout messenger is acceptable for picking up the starboard mooring, but it is advisable to have a second mooring line available on deck in our opinion. The chain is then shackled to the South eye of the shore wire, which is around the bitts. There is no provision for quick release gear, so letting go in an emergency, e.g. wind, would not be easy (Note: Since 1987 a a mooring/hose party has not been provided).

Hoses are 16 in., but fitted with 12 in. flanges (not reducers) and are bolted to manifold, again no quick release provided. Pilots' estimate of weight of each hose is 7.5 tons. Hoses are hung off on chains passed round manifold supports, instead of cruciform bollards – apparently because of the length of chain used. Hose/mooring party work well and safely.

EDP is not available, and vessel had to lie awaiting papers after leaving SBM for about 40 minutes, after which passage outward along the channel was without problem, with adequate water depths all the way.

Radio messages are sent via Balikpapan PKN2 to Petroleum Balikpapan, but appears to be on only 2 hours a day. But Pilot said they had not received our ETA's, but said this was quite normal. Agents were Pertaminaship Jakarta. No relief facilities, stores, water or bunkers available, and mail both in and out not advised, due uncertain delivery.

SHIPMASTER'S REPORT: May 1986.

Vessel: 95,000 d.w.t.

All papers as per Senipah were required, also transit cargo or 'nil' cargo manifest, in duplicate. Terminal is operated by Unocal 76. Coast Guard boarded with Agent to inspect vessel's documents which were also taken ashore by Agent. Polypropylene rope aft for tow boat.

With reference to Admiralty Chart No. 3040 only No. 8 channel buoy still exists. According to the Pilot the depth of 18.5 adjacent to Buoy 'A' is decreasing.

AUTHORITY: *Operator:* Unocal Indonesia Company, Ratu Plaza Building, 7th Floor, Jl. Jend. Sudirman, P.O.Box 264, Jakarta, Indonesia. *Tel:* 7397344. *Telex:* 47335 Unocal-Ia.

Santan Marine Terminal: Unocal Indonesia Company, P.O.Box 276, Pasir Ridge, Balikpapan 76102, Indonesia. *Tel:* (0542) 34000, (021) 3854047 (Ext.3315). *Telex:* 37174, 37240 Unocal Ia. *FAX:* (0542) 32993. *Contact:* Captain Suardi St. Marajo and Captain R.I. Triyanto, Port Captains.

SEKUPANG: 01.07 N. 103.55 E.

PILOTAGE: Pilot not available.

ANCHORAGE: Vessels anchor in position 01° 07' 30" N., 103° 53' 30" E. Depth of water in the anchorage is 15 m. – 20 m. at LWS.

RADIO: Sekupang Radio Station. Call sign PKJ 20.

BERTHING: There is a concrete wharf with a length of 80 m. and depth alongside 12.0 m. at LWS.

Storage: There is a transit shed of 6,000 sq.m.

Fork Lifts: There are 5 units with capacity 2 tons – 5 tons.

CRANES: 4×10 tons – 25 tons mobile cranes.

STEVEDORES: Local labour available.

FRESH WATER: Available.

FUEL: Not available.

SEMARANG: 07.01 S. 110.27 E. (See Plan)

DOCUMENTS:

Required for inward and outward:

Certificate of Registry.
Certificate of Nationality.
Load Line Certificate.
Radio Telegraphy Safety Certificate.
Derat Exemption Certificate.
Last Port of Clearance.
Safety Equipment Certificate.
Health Book (used Indonesian Port only)
Crew List (9 copies).
Stores List.
Personal Effects List.
Free Pratique Granted.
Light Dues Bill from last Port of Call.
Customs Cargo Clearance (PU) Import.
Customs 5 B Form from Last Port of Call.
Manifest (25 copies).
Customs Documents Export Cargo (if any).
Customs Documents Transhipment (Model H if any).

Authorities boarding the vessels on arrival:

Immigration Officer.
Customs Officer.
Quarantine Health Officer and Police Officer.

PILOTAGE: Compulsory. Pilot boards at anchorage, can be contacted on VHF Channel 16.

ANCHORAGE: Anchorage 3 nautical miles from coast, where depth 9 m. For smaller ships safe anchorages 1,900 m. from pier, where depth 5.0 m. – 7.0 m.

HEALTH: Vessels arriving must hoist "Q" flag. Work can only begin after inspection of security team boarding vessel upon arrival during working hours.

RADIO: Semarang Coastal Radio Station. Call sign PKR. Frequencies: 500, 8249 and 8354 kHz. Also VHF Channel 16.

TUGS: Normally tugs join vessel in roads.

BERTHING: New Wharf: Length 605 m. Depth alongside 9.0 m. at LWS.
Domestic Wharf: Length 340 m. Depth alongside 5.0 m. at LWS.

STEVEDORES: Necessary to inform Agent exact time of arrival. Labour gangs to be arranged 1 day before. Also details of cargo to be discharged needed to arrange stevedoring materials, especially for ships anchoring in roads.

Gang Capacity:

In Semarang Port there are 1,409 stevedore workers registered at the Labour Pool (Y.U.K.A.) 1 gang labour = 15 stevedore workers.

Working Rates:

(a) From vessel to barges and vice versa:
- Load/discharge general cargo – 12 tons gang hour.
- Load/discharge bulk cargo – 20 tons gang hour.

(b) From barges to Godown and vice versa.
- Load/discharge general cargo – 10 tons gang hour.
- Load/discharge bulk cargo – 18 tons gang hour.

(c) From vessel to Godown and vice versa. (if vessels at the quay).
- Load/discharge general cargo – 15 tons gang hour.
- Load/discharge bulk cargo – 18 tons gang hour.

(d) Discharge glass sheet from vessel to barges; same as general cargo.

(e) Discharge steel bars from vessel to barge – 20 tons gang hour.

Working Hours (normal working hours):
Monday – Thursday 0800 – 0400 hrs.
Friday – Saturday 0800 – 0200 hrs.

EQUIPMENT: One day's notice required for hiring.

Cranes/Forklifts:

P.L.T.U. Projects: 1 shore crane with max. capacity 90 tons. Can be used if not required by P.L.T.U.

Port Administration (Perum Pelabuhan): 3 mobile cranes with max. capacity 10 tons, 10 forklifts max. capacity 2.5 up to 10 tons.

Unit Terminal P.A: 2 mobile cranes with max. capacity 10 tons, 5 forklifts with max. capacity 3 up to 5 tons.

Samudera Indonesia: 2 mobile cranes with max. capacity 3 tons and 10 tons.

Gesuri Lloyd: 3 mobile cranes with max. capacity 4 tons. 1 forklift max. capacity 2 tons.

Djakarta Lloyd: 2 mobile cranes with max. capacity 3 and 4 tons. 3 forklifts max. capacity 2.5 tons each.

Bahari: 2 forklifts with max. capacity 3 tons.

Godowns:

Trikora Lloyd: 1,960 sq.m.
Djakarta Lloyd: 5,400 sq.m.
Samudera Indonesia: 3,480 sq.m.
Pelni: 3,510 sq.m.
Bahari: 3,000 sq.m.
PN.VTP/Tobacco: 1,780 sq.m.
Unit Terminal PA: 10,520 sq.m.
Dangerous cargo Warehouse: 800 sq.m. (one only)

Open Storage:

Trikora Lloyd: 4,000 sq.m.
Unit Terminal PA.I-II-III.: 15,470 sq.m.
Djakarta Lloyd II.: 1,200 sq. m.
Djakarta Lloyd III.: 1,200 sq. m.

Tugs:

Samudera Indonesia: 4 tugs.
Gesuri Lloyd: 4 tugs.
Pelni: 1 tug 300 h.p.
Trikora Lloyd: 1 tug 120 h.p.
Hesti Kencana Lloyd: 1 tug 120 h.p.
Atrind Marina Graha: 6 tugs.
Bahari: 1 tug.

Lighters:

Samudera Indonesia: 18 lighters (3,955 tons capacity).
Djakarta Lloyd: 12 lighters (1,850 tons capacity).
Pelni: 9 lighters (1,100 tons capacity).
Trikora Lloyd: 11 lighters (1,925 tons capacity).
Bahari: 5 lighters (500 tons capacity).

MEDICAL: Medical assistance can be given upon ship's arrival. First aid can be given by harbour doctor in harbour area. Serious cases taken to hospitals in town. 4 hospitals available. Port Health Officer can issue vaccination/fever Certificates if required.

TANKERS: Buoy mooring in position Lat. 06° 53.6' S., Long. 110° 25.8' E.

FRESH WATER: Can be supplied by 100 ton barge once a day. Also available alongside, rate 10 t.p.h.

FUEL: Fuel oil and diesel oil available in limited quantities, only to coasters.

CONSULS: No local representation.

REPAIRS: Minor repairs only. Dock for repairing small vessels, tugs and barges.

SURVEYORS: Bulk and general cargo surveyors available.

GANGWAY/DECK WATCHMEN: Not required.

OPENING/CLOSING HATCHES: Opening and closing hatches done by stevedores.

CUSTOMS ALLOWANCES: 200 cigarettes or equivalent in tobacco permitted for each crew member to hold out of bond. Wine and/or spirits, maximum value of U.S. $10.

REPATRIATION: Repatriation of crew members arranged by Agents by contacting Immigration Officer for permits concerned.

AIRPORT: Airport (A. Yani) 5 miles from harbour. Domestic flights only.

TIME: GMT plus 7 hours.

HOLIDAYS: New Year (1st January); Independence Day (17th August); Id el Fitr; Christmas Day (25th December), Waisak.

POLICE/AMBULANCE: Semarang 245 or 726.

TELEPHONES: No facilities for placing telephones on board.

SHORE LEAVE: Crew members allowed ashore.

IDENTIFICATION CARDS: Needed.

SERVICES: No facilities for underwater repairs, electrical repairs or tank cleaning.

SHIPMASTER'S REPORT: November 1987.

Pilotage: There is no need for vessels of draft over 3.5 m. to anchor in roads.

Berthing: There are 2 berths for vessels of max. draft up to 9.0 m. Length of berth about 600 m. We loaded tapioca in bags.

Tugs: 2×1,500 h.p.

Customs Allowances: Bonded store not sealed. It was possible to take beer and cigarettes without permission of Customs.

Time: GMT plus 7 hours.

Delays: It seems that no loading is carried at anchor any more.

AUTHORITY: Port Authority Tanjung Emas, Jl. Sers. Marinir Usman Janatin No. 8, Semarang, Central Java, Indonesia. *Tel:* 24491, 20687. *Telex:* 22305. *Cables:* Kacab Smg. *Contact:* Captain Alex Moniaga, Branch Manager.

SENIPAH TERMINAL: 01.03 S. 117.13 E. (See Plan)

LOCATION: The Sea Terminal consists of a SBM (Single Buoy Mooring), loading berth also known as "mono-buoy". Berth is located in position Lat. 1° 03' 05" S., Long. 117° 13' 13" E.

The Terminal is situated about 45 km. N.E. of Balikpapan on East Coast of Kalimantan, Indonesia, at position 0° 58' 05" S., 117° 08' 27" E.

DOCUMENTS: Indonesian Immigration, Customs, Harbour Master and Port Officials will board the vessel to grant clearance and will require the following for inspection:

2 Parcel Lists.
2 Currency Lists.
2 Arms & Ammunition Lists.
2 Inventory Lists.
2 Vaccination Lists.
2 Animals Lists
2 Narcotics Lists.
8 Crew Lists.
2 Crew Declaration of Personal Belongings.
2 Ship's Stores List (inventory).
3 Passenger Lists (if any).
2 Cargo Manifest for Transit Cargo with a summary.
Clearance from the Last Port of Call.
Valid Passport and/or Seaman's Certificate for all crew members.
Certificate of Inoculation against any contagious diseases.

If arriving from a foreign port, the following documents may be required for granting Pratique: Certificate of Registry; Ship's Construction Certificate; Load Line Certificate; Life Safety Equipment Certificate; Safety Radio/Telephone/Telegraph Certificate; Cargo Gear Certificate and Derat or Exemption Certificate. TOVALOP Certificate.

Crude oil loading documents will be prepared at the Senipah Terminal and when the vessel has been loaded, the documents will be completed and final clearance formalities will be carried out on board.

Also see "General" before first port.

PILOTAGE: *Procedure when berth is available on arrival.*

A vessel for which the berth is available on arrival will be boarded by a Mooring Master in the anchorage area and, providing that the vessel is in all respects ready to commence loading (except for the necessary deballasting) the Notice of Readiness will be acknowledged as soon as tendered to the terminal by the Master of the vessel.

The Mooring Master will advise the Master on all manoeuvres to berthing and unberthing and connecting the hoses.

Vessels are requested to make a lee and have an accommodation ladder long enough to reach the Mooring Master's launch.

At night, adequate lighting should be provided.

When Mooring Master boards all mooring and hose equipment will be lifted on board from the mooring launch.

FLAGS: In accordance with practice in Indonesian ports, the vessel's national flag, the Indonesian courtesy ensign, quarantine, immigration, pilot and call sign flags must be displayed by all vessels approaching Senipah. These signals shall be displayed continuously until clearance is granted.

The signals are as follows: Sunrise to Sunset: Quarantine Flag "Q". Sunset to Sunrise: Signal lights (red over white).

The "N" flag should be flown until the Immigration Officer boards the ship. The "G" flag should be flown until the Mooring Master boards. The vessel should also fly its call sign (signal letters). This signal may, however, be hauled down after the vessel is secured to the SBM. It must be flown again when the vessel is sailing and kept flying until after the vessel is clear of the anchorage area and the Mooring Master has left. As soon as the Mooring Master boards, the "G" flag should be replaced by the "H" flag. The tanker may fly the "P" flag if it is going to sail within 24 hours.

NAVIGATION AIDS:

S.B.M.: The S.B.M. has a 360° yellow light, flashing every second, visible for 5 miles under an atmospheric transmissivity of 0.85. This operates from sunset to sunrise.

Oil Platforms: Oil platforms of Bekapai Oil Field which are situated approximately 17 miles East by North of Senipah SBM, show at night a white light flashing, 2 short and 1 long flash (letter U).

ANCHORAGE: If vessels are obliged, or instructed to anchor, they should do so in the recommended anchorage area which is centred at position: Lat. 1° 05' 29" S., Long. 117° 15' 01" E. and has a radius of 1 mile. Water depth is between 40 m. to 45 m. While at anchor they should exercise vigilance and keep in touch with the Terminal by VHF at all times.

Procedure when instructed to anchor on arrival: A vessel which has been instructed by Senipah Terminal to anchor on arrival should, after doing so, inform the Terminal of the precise anchoring time. According to the practice of the Terminal acknowledgement of the Notice of Readiness will coincide with this anchoring time, providing:

(a) That it is within the hours of daylight – deemed to be from 0600 hrs. local time to 1800 hrs. local time.
(b) That it is not a Public Holiday or Sunday, unless the vessel is actually handled on that day.
(c) That the Terminal is open.
(d) That cargo is available in accordance with accepted loading date.

In addition to clauses (a), (b) and (c), above, vessels will not be accepted when arriving at an unreasonable time ahead of their last advised ETA. It is not the practice of the Terminal to keep Pilots (Mooring Masters) on station in the anchorage area. Senipah Terminal maintains a continuous listening watch on VHF (Channel 6).

RESTRICTIONS: Berthing during daylight only. Unberthing at any time.

MAX. SIZE:

Minimum Size: Minimum size tanker acceptable at the Terminal is 50,000 d.w.t. However, on an exceptional basis, it will be possible to accommodate tankers of 32,000 d.w.t. minimum size but must be able to use SBM mooring system. Minimum LOA 195 m.

Maximum Size: Maximum size tanker acceptable lifting a full cargo will be 125,000 d.w.t. On exceptional basis, Terminal can consider handling a tanker up to 150,000 d.w.t. Max. LOA 275 m.

Tankers of a larger size may be accommodated in the future, provided that Senipah is their first port of loading and that they load a part cargo only. These limits are at present under study.

Draft Requirement on Arrival: Vessels arriving at Senipah Marine Terminal should have the following draft:

d.w.t.	Fore	Aft
Under 60,000	5.0 m.	8.0 m.
Over 60,000	7.0 m.	9.0 m.

RADIO: *Advice of Arrival:* 72 hours prior to arrival at the Terminal, vessels should advise the Company of their ETA by cable sent via Pertamina's Coastal Radio Stations at Jakarta/Merak/Balikpapan. They should also confirm or amend them when they are 48 hours, and again when 24 hours, distant from the Terminal.

Total Indonesie cable address: Totalindo Balikpapan. Attention: Senipah Marine Terminal and Totalindo Jakarta. Attention: Shipcoord.

Communication for Contacting Agent: Pertamina Jakarta Radio/PKI2 (owned and operated by Pertamina).

Frequency kHz	Hours GMT	Keep Watch kHz
452*	H24	500
8628	0200–0300, 0400–0500, 0700–0800, 1030–1200 1400–1500, 1800–2000, 2200–2300.	8356–8374
12980	0000–0200, 0300–0400, 0500–0700, 0800–1030, 1200–1400, 1500–1800, 2000–2200, 2300–2400.	12534–12561
VHF Ch. 9/16/19	0000–1500.	Ch.16

*Call/Reply

Pertamina Merak Radio/PKQ (owned and operated by Pertamina).

Frequency kHz	Hours GMT	Keep Watch kHz
452*	0000–0400, 0800–1000, 1200–1400.	500
8626	0100–0200, 0900–1030, 1500–1600, 2300–2400.	8356–8374
4361.6	0000–0100, 0200–0300, 0800–0900.	2182, 4066 4063 A3J/A3H
6518.6	0300–0400, 1200–1400.	2182, 6204 A3JA3H
VHF Ch.16/19/24/26	H24	Ch.16

*Call/Reply

Pertamina Balikpapan Radio/PKN2 (owned and operated by Pertamina).

Frequency kHz	Hours GMT	Keep Watch kHz
4415	H24	2182
6520	H24	8249 A3J/A3H
VHF Ch.16/19	H24	Ch.16

Note: 1. All messages destined to "Pertaminaship" can be sent to either PKI2, PKQ or PKN2.

Details of Cable: The following information should be included in cable;

(a) Name of vessel and radio call sign.
(b) ETA and date in local time (GMT plus 8 hours).
(c) Cargo requirements.
(d) Deballast time.
(e) Maximum loading rate.
(f) If there is any sickness aboard or clean bill of health.
(g) Last port of call.
(h) Any hull, bulkhead, valve or pipeline leaks on vessel which could affect loading or cause pollution.
(i) Distance in metres from bow to vessel's loading manifold.
(j) Flange dimensions of vessel's manifold connection, if not to ASA series 150 or equivalent.

2. For tankers equipped with telex system, can make direct contact to: TI JKT attention Ship-Coord: Telex No. 44108. TI BPPN attention Snp-Term: Telex No. 37101 or 37181.

Failure to advise Terminal of ETA may lead to loss of berthing turn.

Also see "General" before first port.

VHF: Vessels equipped with VHF Radio Telephone should contact terminal on international mobile service Channel 6 from 0000–2400 hrs. GMT. Other Channel used is 16.

Language: The language of the Terminal is English and Indonesian.

BERTHING: The SBM is approximately 6 miles (11.1 km.) offshore in approximately 28 m. of water.

The SBM is served by 2 submarine lines of 26 in. diameter. Two strings of 20 in. hose connect the SBM to submarine line header. One 16 in. floating hose string reduced to 12 in. is connected to Tanker for loading purposes. Hoses are lifted up and connected individually on port side.

Work Crew Service: Mooring, unmooring, lifting, lowering, connecting and disconnecting hoses will be done by ship's crew under the direction of the Mooring Master and assistance of Terminal crew.

Accommodation and meals: The Company Mooring/Loading Master and his crew (2 persons) stay on board the tanker during the time of the operations. Free accommodation and meals of the same standards as those of the Tanker's officers (for the Mooring Master) and of the Tanker crew (for company crew) must be provided.

Tanker's Engines: Being on open roadstead, vessels must keep engines on standby during their stay in berth. No repairs to main engines may be undertaken while in berth.

Only the automatic turning gear should be used. If it should become necessary to turn the propeller(s) at revolutions greater than the minimum obtained by the automatic turning gear, application must be made to the Mooring Master in order to ensure that there is no inconvenience to do so.

The Mooring Master's written permission must be obtained before any such increase in revolutions.

MOORING/UNMOORING: *Method of Securing to Buoy:* This description is only intended as a guide and may be varied as to orders of lines etc. according to circumstances and weather prevailing at time of mooring.

When Mooring Master boards all mooring and hose equipment for the job on hand will be lifted from the mooring launch.

The Approach: The vessel will be brought to a position close to the buoy with vessel stopped in water with SBM fine on port bow. During approach to SBM, one mooring launch will keep hoses well clear of vessel. From May 1994 there will be only one mooring rope of 21 in. for securing vessel to SBM. Actual work of mooring will be done by ship's crew with assistance from terminal work crew. Vessel will lower a mooring rope with good lashing on eye to the mooring launch which will make this fast to approach rope. The approach rope of 10 in. circumference polypropylene will be hove on board until the chafing chain is approximately centred in the fairlead.

Securing the Mooring Lines: While approach is being made, two 11 in. rope strops will be made fast one on each side to the forecastle bitts. The strop will be attached to a 50 ton shackle with pin removed. This shackle should be lying between 2 m. to 3 m. in board of fairlead.

When sufficient chafing chain has been heaved on board, the rope strops will be shackled on to the end links of the chain. The approach rope will then be slackened off and used as back up to the rope strops. When mooring is completed the mooring launch will be made fast by a mooring rope (200 m. long) through the centre lead aft so as to be in position to tow as long as the tanker is in the berth.

Connecting Hoses: When mooring is completed a work boat holding the hoses clear will bring the hoses alongside the port side manifold for connection.

Unmooring: To unmoor from the SBM all extra back up lines that have been secured are slipped first. The approach rope is then taken to ship's windlass/capstan and hove up, both of them together, until sufficient chain is in board to remove both shackles from the terminal strops. When the vessel is moving slowly astern the approach ropes are slackened off into the water slowly and finally slipped until allowed to float free.

LOADING: *Loading Rate:* Maximum loading rate will be nearly 19,000 barrels (2,850 metric tons) per hour. It is recommended that vessels take maximum flow with due regard to safety in order to expedite turn around time as well as to provide ballast as quickly as possible.

Care should be taken not to overload, as there is no possibility whatever of pumping back to Terminal. When vessels are equipped with permanent ballast tanks, the ballast in these tanks should be retained on board until the vessel has taken on board sufficient cargo to be manoeuvrable. Vessels not so equipped should examine the possibility of safely loading and discharging ballast simultaneously, as such practice improves turn around time as well as reducing the possibility of breaking out of the berth in bad weather in completely light condition.

Hose Lifting Derricks – Deck Winches: Ship booms and deck winches must be capable of operating with a SWL of 5 tons for tankers to be secured to the SBM. Vessels with inadequate hose lifting equipment will be rejected. Power must be kept on deck winches in case adjustments to mooring lines are found to be necessary.

Manifold sizes: The hoses at the terminal are 12 in. in diameter.

Tanker manifolds should terminate in ASA series 150. Unless terminal is given adequate notice, tankers equipped with other sizes or ratings will be rejected.

Grades of crude oil available: There are 2 grades of Crude Oil available at Senipah Marine Terminal, namely, Bekapai Crude Oil and Handil Crude Oil. Vessels lifting Bekapai Crude are not required to heat the oil during voyage to the discharge port.

Vessels lifting Handil Crude Oil are required to be equipped with heating coils.

It is recommended, as from commencement of loading of Handil Crude, the vessel should endeavour to maintain a temperature of 105°F or at least a temperature slightly above the pour point (±85°F) until the time the vessel discharges its cargo at the unloading port.

In case a vessel has to load 2 parcels of cargo (i.e. 1 Handil and 1 Bekapai), loading must be stopped between the two parcels for line flushing with the second grade of oil.

Outward Clearance: A tanker will be considered clear to depart Senipah Terminal when the crude oil loading documents have been delivered to the Master.

Any protests by the Master concerning the quantity of cargo should be made before departure and any resulting investigation should be made before the vessel sails.

BALLAST:

Adequate Ballast: Due to the exposed location of the crude oil SBM berth, vessels are required to carry sufficient ballast for safe handling, having due regard to existing weather and sea conditions. A vessel found by the Mooring Master to be not adequately ballasted will be rejected.

Pollution: Owners and Masters are responsible to observe International convention laws and Indonesian Government regulations concerning pollution of the sea, having particular regard for this area of the Macassar Strait.

Clean Ballast: As there are no ballast discharging facilities, vessels must arrive at the Terminal with clean ballast, ensuring that all pipelines, pumps and strainers have been flushed out prior to arriving.

The Mooring Master will inspect ship's ballast on boarding and has the power to reject any vessel that he deems would cause pollution of the sea area, in which case the vessel must proceed to sea and return only when ballast is completely free of oil. Any vessel rejected because of dirty ballast will automatically nullify its notice of readiness and will lose any priority of position for loading. Ballast discharge should not be commenced without the prior agreement of the Mooring Master.

Bilges: Bilges must not be discharged while at the Terminal.

Inspections During Loading: At night the sea area around the vessel shall be adequately lighted, as frequent inspection by the Mooring Master will be made during the discharge of ballast. Any pollution, whatsoever, will be cause for rejection. Similarly, any hull leaks causing pollution during loading will be cause for rejection and the vessel will not be reaccepted unless satisfactory evidence of repairs has been certified by a qualified surveyor.

Cargo hose connections should be inspected during loading, drip-pans should be placed under the manifold, all unused cargo connections should be blanked off, sea-valves should be closed and lashed upon completion of deballasting and all scuppers must be securely plugged.

CUSTOMS ALLOWANCES: Cigarettes, cigars, tobacco, matches, spirits, wine, beers, perfume, arms, ammunition and possibly other items have to be locked up under Customs seal from time of arrival of ship in port until time of leaving territorial waters. Each person is allowed to bring in 200 cigarettes or the equivalent in grams of tobacco or cigars. Special allowances are made for the Master under special circumstances.

The Customs Officer will seal the stores.

AIRPORT: Senipah Airport is near the town. Sepinggan Airport is 70 km.

TIME: GMT plus 8 hours.

SERVICES: There are no facilities of any kind at Senipah:

There are no engineering repair shops.
No fresh water.
No bunkers available.
No provisions or stores.
No crane or barge service.
No shore leave.
No crew changes.
No consulates available.
No clinic available.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

GENERAL:

Floating Logs: Masters are advised to keep careful watch on the approaches for semi-submerged or floating logs which may become hazardous to safe navigation.

AGENCY: *General Agent:* Pertamina Shipping Directorate, 32-34 Jalan Yos Sudarso, P.O. Box 327, Jakarta, Indonesia. Cables: Pertaminaship Jakarta. Tel: 691185, 692639, ext. 225-315-335. Telex: 49221, 49285 Jakarta.

Also see "General" before first port.

SHIPMASTER'S REPORT: May 1986.

Vessel: 95,000 d.w.t.

Of the documents listed only Crew Lists, Narcotics Lists, Crew Declarations, and Stores Lists were required. 2 cargo manifests of 'Nil' cargo were required. Ship's documents taken ashore for examination. Cargo papers take at least 1 hour. Pilot boat's full speed only 8 knots.

AUTHORITY: *Operator:* Total Indonesie, P.O.Box 606, Balikpapan, East Kalimantan, Indonesia. *Tel:* (0542) 24311. *Telex:* 37101 Bpp. *Cables:* Totalindo Balikpapan. *FAX:* (0542) 22212. *Contact:* Head of Production Department.

Head Office: Plaza Kuningan Menara Utara, Jalan H. R. Rasuna Said, Kavling C. 11-14, Jakarta Selatan. P.O.Box 10, Jakarta 10010, Indonesia. *Tel:* 5200505. *Telex:* 011-44108. *Cables:* Totalindo Jakarta.

SIBOLGA (Pulau Herek): 01.44 N. 98.45 E.

PILOTAGE: Not compulsory.

ANCHORAGE: Vessels anchor near Pulau Sarudik Beacon (red light). Position 01° 43' N., 98° 45' E. Depth 9.0 m.

RESTRICTIONS: Maximum draft 5.3 m. at LWS.

RADIO: Sibolga Coastal Radio Station. Call sign PKB-3. Frequencies: 474 kHz. and 500 kHz. (A1/A2).

TUGS: Privately owned tugs available.

BERTHING: A "T" shaped wharf with length 130 m. and width 10 m. The approach is 103 m. long and 15.5 m. wide. Depth alongside 5.3 m. at LWS. Maximum capacity 15 tons.

Storage: Godown space available of 900 sq.m. and open storage space of 600 sq.m.

Fork Lifts: 2 × 2 tons – 5 tons.

CRANES: Not available.

STEVEDORES: Available from labour pool.

FRESH WATER: Available when alongside wharf.

FUEL: Not available.

REPAIRS: No facilities available.

GENERAL: *Barges:* Privately owned flat-top barge available.

SORONG: 00.53 S. 131.15 E.

PILOTAGE: Compulsory. Pilot requires 6 hours notice of arrival and 3 hours notice of departure.

ANCHORAGE: The anchorage whilst awaiting sea pilot is located in position Lat. 00° 52' 00" S., Long. 131° 13' 30" E.

RESTRICTIONS: Berthing and unberthing possible at any time day or night.

MAX. SIZE: 21,000 d.w.t. Max. LOA 175 m.

RADIO: Sorong Radio on HF, call sign PKY-41. The station is operated by Pertamina.

Vessels should contact Pertamina 72 hours, 48 hours and 24 hours prior to arrival.

TUGS: Available.

BERTHING: The jetty is located in position Lat. 00° 52' 54" S., Long. 131° 14' 43.8" E. Depth alongside 11.0 m. at LWS.

Also see "Kasim Marine Terminal".

LOADING:

Cargo Handled:

Product	*Loading Rate* (per hour)	*Discharge Rate* (per hour)	*Hoses*
Crude Oil	800 bbls.		1×8 in.
Premium		100 k/l	1×6 in.
Kerosene		100 k/l	1×6 in.
HSD	40 k/l	100 k/l	1×6 in.

Shore Storage Tanks:

Oil Products	Total Safe Capacity
Crude Oil	170,000 bbls.
Premium	2,572 k/l
Kerosene	1,528 k/l
HSD	7,961 k/l
Slops	5,000 k/l

Physical Characteristics of Crude Oil:

API Gravity at 60°F. : 35 – 34
Reid Vapour Pressure at 100°F. : 2.5 psi
Viscosity at 100°F. : 5.9 cSt
Sulphur Content : 0.7% wt.
Carbon Residue : 1.0 – 2.5% wt.
B.S. & W. : 0.05 – 0.10% vol.
Flash Point (PMCC) : Below 50°F.
Pour Point : 10°F.

Loading Temperature: 86°F.

MEDICAL: Hospital and clinic available.
DENSITY: 1020 – 1025.
FRESH WATER: Available at a rate of 25 t.p.h.
FUEL: Available.
CONSULS: None.
AIRPORT: Jefman Island which is 8 miles away.
TIME: GMT plus 9 hours.
AUTHORITY: *Operator:* Pertamina, Pertamina P&T Unit, EP-V, Jl.A.Yani, Sorong, Irian Jaya, Indonesia. *Tel:* (0951) 21743. *Telex:* 77110. *FAX:* (0951) 21729.

SUNGAI PAKNING: 01.20 N. 102.09 E.

PILOTAGE: Compulsory. Pilot requires 6 hours notice of arrival and 3 hours notice of departure.
ANCHORAGE: The anchorage whilst awaiting sea pilot is located in position Lat. 01° 56' 30" N., Long. 101° 50' 30" E.

The anchorage whilst awaiting berth is located in position Lat. 01° 23' 00" N., Long. 102° 10' 00" E.
RESTRICTIONS: Berthing during daylight hours only. Unberthing any time, day or night.
MAX. SIZE: 61,000 d.w.t. Max. LOA 220 m.
RADIO: Dumai Radio on HF, call sign PKP. This station is operated by Ditjenla.
VHF: Sungai Pakning Radio, call sign PKP-5. This station is operated by Pertamina.
BERTHING: There is an offshore platform located in position Lat. 01° 20' 24" N., Long. 102° 09' 29.5" E. Depth of water at the platform is 15.3 m. at LWS.

There are two berths, the inner berth and the outer berth.
LOADING: *Outer Berth:* Vessel's port side manifold required. Vessels discharge crude oil at a rate of 1,000 t.p.h. and load LSWR at a rate of 1,300 t.p.h. There are 10 in. loading arms on the platform.
Inner Berth: Vessel's starboard side manifold required. Naphtha, kerosene and diesel oil loaded at a rate of 400 t.p.h. through 6×8 in. loading arms.
MEDICAL: Hospital and clinic available.
DENSITY: 1012 – 1020.
FRESH WATER: Not available.
FUEL: Not available.
CONSULS: None.
TIME: GMT plus 7 hours.
AUTHORITY: *Operator:* Pertamina, Dumai.

SURABAJA (Tandjong Perak): 07.12 S. 112.44 E.

(See Plan)

DOCUMENTS: Upon arrival vessels have to produce the following Certificates and Documents, which will remain in the Harbour Master's custody until cleared:

Nationality (Registry) Certificate.
Seaworthiness Certificate.
Measurement (Tonnage) Certificate.
Derat (Exemption) Certificate.
International Load Line Certificate.
Safety Certificate (passenger ships).
Safety Equipment Certificate (cargo ships).
Safety Radio and Radiotelephony Certificate (cargo ships).
Certificate of Approval (ship's radio station).
Health Book or Bill of Health.
Last Port Clearance.
Subscription of Light and Harbour Dues and wharfage if any.
Crew Lists and Passenger's List.
Ship's Articles.
2 Stores Lists.
Also see "Radio Officer's Report".

IMMIGRATION: (Department of Defence and National Security). Vessels arriving from abroad with passengers must hoist the "N" Flag. Masters have to supply the boarding Immigration Officer with Passenger's List of: *(a)* disembarking. *(b)* transhipping. *(c)* through passengers.

No persons are allowed on board until the vessel has been examined and the "N" Flag taken down. Passengers must be in possession of a valid visa: visitor's, entry or a transit visa. Those not having a visa may at the discretion of the Immigration Officer, obtain a landing permit. Members of the crew including the Master must appear in the Articles, in order to get shore permits.
PILOTAGE: Pilots are in Government service. Pilot signals according to International Code of Signals. Pilots have to be ordered by Agent 10 hours before arrival and 8 hours before departure.

Compulsory Pilotage, consisting of sea and harbour pilotage.
Western Channel: The Sea Pilot will board the vessel at the entrance of the Western Channel from pilot launch stationed at Karang Jamuang position Lat. 6° 55' 43" S., Long. 112° 43' 46" E. Upon arrival at the Pilot Station by day, ships should hoist the International Code Flag "G" and the Ship's International Call Sign. Pilot station on VHF Channel 12, from 0600 hrs. – 0000 hrs. Pilot boat on VHF 12, 14 and 16. The following local signals regarding Pilots should be observed if shown by the pilot vessel:

(a) By night: a flare-up light (white) or waving a white light above the railing means: Pilot will soon board your vessel.

(b) By day: the First Substitute over the Code Flag "S" means: no Pilot available, vessel allowed to proceed until she meets the Pilot. By night: a red light over a white light.

(c) By day: 2 black cones 1 vertical over the other points downwards or by night: 2 green lights 1 over the other means: no Pilots are available for ships of less than 10,000 cu.m. gross. If this signal is made by the Pilot, vessels do not have to show the pilot signals.

(d) By day: the International Signal GFM or by night: a green light over a white light means: Pilot will board your vessel by row-boat as no motor-boat is available.
Eastern Channel: No pilot vessels. Pilots will board the vessel at the entrance by means of a pilot barge dispatched from Tg. Perak Pilot Station at the Harbour Master's Office.

Sea Pilot will take the vessel up to the Inner Roads, where the Harbour Pilot takes over.
Request for Pilot: Request for Pilot is made by the ship's Agent 10 hours prior to the entry of vessel in port. At least, 6 hours prior to departure, request for Pilot must also be submitted.

This request is submitted to Pilot Division on telephone numbers 293157, 291354.

For information regarding the arrival of a vessel, the Master of the vessel can send a cable to Tanjung Perak Port Administration by way of VHF radio telephone on Channel 12, which is available round the clock.

The Master of vessel can also send the cable through "PKD", see "Radio".
ANCHORAGE: Waiting anchorage for Pilot within:

Lat. 6° 51' S., Long. 112° 45' E.; Lat. 6° 51' S., Long. 112° 47' E.; Lat. 6° 52.5' S., Long. 112° 47' E.; Lat. 6° 52.5' S., Long. 112° 45' E. Depth 22 m. at LWS.
RESTRICTIONS: There are 2 entrances: Western and Eastern Channels.
Western Channel: Used for deep draft vessels with depth of 9.5 m. at LWS. Distance to Tg. Perak about 25 miles.
Eastern Channel: Least bar depth through this channel is 2.5 m. – 5 m. at LWS. Distance to Tg. Perak is about 22.5 miles.
Boarding Area: Harbour Pilots, Quarantine Officer and Immigration will board the vessel at the Inner Roads (anchorage).
MAX. SIZE: The max. draft for vessels entering the access channel to the port is 9.5 m. with a max. LOA of 210 m. without escort by tug.

If vessel's draft is over 9.5 m. and up to 10.2 m., it must be escorted by a tug through the access channel, and will only enter on high tide.
RADIO: Coastal Radio Station call sign PKD.

Frequencies: 430, 500, 550, 8730 and 8754.4 kHz.

Pilot Station Karang Jamuang is also reachable through radio call sign PKW: frequency 500 kHz. This station can also be contacted by VHF Channels 12, 16.
VHF: Pilot boats: Channels 16, 14, 12 and 10.
Pilot Station: Channels 12 and 14.
Harbour Master: Channel 16.
Tugs: Channels 12, 14 and 10.
TUGS: For poor steering vessels and those with deep drafts, tugs assistance is indispensable from light buoy No. 5 till light buoy No. 4 is passed.

The tug service is provided by the Port Administration for which the Port Administration has 8 tugs (800 h.p. – 1,700 h.p.). 2 mooring boats also available.
BERTHING: The total length of effective quay in Tanjung Perak Port is 5,205 m.

Quay	*Length*	*Depth at LWS*
Jamrud Utara	1,117 m.	9.5 m.
Jamrud Selatan	800 m.	9.5 m.
Jamrud Barat	203 m.	9.5 m.
Berlian Barat	735 m.	9.5 m.
Berlian Timur	780 m.	9.5 m.
Berlian Utara	140 m.	9.5 m.
Nilam Timur	930 m.	9.5 m.
Perak	140 m.	9.5 m.
Mirah	755 m.	7.0 m.
Bogasari (wheat)	300 m.	9.5 m.

Tanker Terminal:

Government Petroleum Pier	Depth alongside at LWS is	9 m.
Semampir East	"	12 m.
Semampir West	"	10 m.

Coal Wharf: Situated at the Southern end of Tambatan Nilam, equipped with 1 transporter and 2 bunker barges with steam operated grippers, owned by P.N. Tunda Bara.
PORT EQUIPMENT:

Capacity	*Port Administration*	*Private*	*Total*
Forklifts:			
2 tons	—	5 units	5 units
2.5 tons	70 units	5 units	75 units
3 tons	—	19 units	19 units
3.5 tons	—	20 units	20 units
4 tons	—	6 units	6 units
5 tons	10 units	14 units	24 units
7.5 tons	3 units	3 units	6 units
10 tons	1 unit	1 unit	2 units
12.5 tons	—	1 unit	1 unit
15 tons	2 units	—	2 units
25 tons	2 units	1 unit	3 units
Mobile Cranes:			
7 tons	—	1 unit	1 unit
15 tons	10 units	—	10 units
25 tons	2 units	2 units	4 units
30 tons	—	1 unit	1 unit
Floating Crane:			
50 tons	1 unit	—	1 unit
200 tons	1 unit	—	1 unit
Trailers:			
3.5 tons	1 unit	—	1 unit
20 tons	3 units	—	3 units
30 tons	—	1 unit	1 unit
40 tons	—	2 units	2 units

STEVEDORES: Working hours: Monday-Thursday 0700 – 1200, 1300 – 1500 hrs. Friday 0700 – 1100, 1300 – 1500 hrs. Saturday 0700 – 1200 hrs. Overtime: Monday-Friday 1500 – 1700 hrs. Sundays, holidays 0700 – 1200, 1300 – 1500 hrs. Night work allowed after permission from the Port Authority.

Average for bulk cargo 20 t.p.h. per gang
Average for bagged cargo 27 t.p.h. per gang
Average for general cargo 20 t.p.h. per gang
Average for machinery/iron 8 t.p.h. per gang

MEDICAL: Hospital and Port Health Centre.

TANKERS: See "Berthing".

FRESH WATER: Supply is handled by the Harbour Board to the berths and by 5 water barges. Present capacity about 1,100 tons per day for the whole harbour. Priority is for passenger vessels and application required 48 hours prior to ship's arrival.

FUEL: Fuel can be obtained via pipelines to all berths or by barge.

CONSULS: Australia, Belgium, France, India, Japan, Netherlands, Pakistan, Philippines, Russia, U.K., U.S.A.

REPAIRS: Dry-docking and all kinds of repairs are carried out by the State-owned P.N. Dock. There are floating docks, capable of lifting 15,500, 3,500 and 4,000 tons. There are several slipways for coasters. *Electronic Repair Shop:* All kinds of electronic repairs such as radar, echo-sounder, etc., can be repaired by private contractors.

PORT SECURITY: Maintained by members of the Indonesian Armed Services, usually, Police, Navy or Marine and Army. Crew members should be in possession of a shore pass issued by the Port Authority, accompanied by an identification card when leaving or entering the guarded gates of the Port Area. Shore passes can be obtained via the Agencies.

CUSTOMS: It is strictly prohibited to take undeclared foreign currency ashore. It is recommended that Masters consult the Agents about local prevailing Customs Regulations with regard to currency, cigarettes, spirits, etc., to prevent unnecessary difficulties and eventually fines.

BANKS: Bank Negara 1946, Bank Bumi Daya and Bank Rakyat Indonesia.

DEVELOPMENTS: *Developments of the Short Term (1981-85):*

Supply of facilities for inter-state vessels: 8 quays length 640 m., 4 Godowns (area 13,700 sq.m.), 7 stacking areas (area 15,573 sq.m.).

Supply of facilities for container ships by changing part of the berths which are available, so that there is a facility for loading and unloading the containers: 4 quays length 1,200 m., stacking area 66,800 sq.m.

Build CFS (Container Freight Station) at the former Perak Airfield of an area 42,695 sq.m. To have available loading and unloading equipment: 2 multi-purpose mobile cranes, 12 head trucks, 27×40 ft./20 ft. chassis, 12×25 ton top loaders. 2×40 ton transtainers.

Developments of the Medium Term (1986-90):

Supply of facilities for inter-state vessels: 16 quays length 1,280 m., 8 Godowns (area 25,600 sq.m.), 8 stacking areas (area 30,000 sq.m.).

Supply of the facilities for container ships: 2 quays length 500 m., CFS near the quay 20,000 sq.m.

At the former Perak Airfield 200,000 sq.m. To have available loading and unloading equipment: 4 container gantry cranes, 18 head trucks, 32×40 ft./20 ft. chassis, 12×25 ton top loaders and 6×40 ton transtainers.

Developments Long Term (1991-2000):

At this stage a new basin at the West side of the Naval Academy is planned.

In this stage will be prepared: Facilities for inter-state vessels: 40 quays. Facilities for ocean-going vessels: 14 non-container quays, 2 container quays.

A container quay with length 500 m. and depth 10.5 m. (completed).

RADIO OFFICER'S REPORT: September 1990.

Documents:

Agent:
1 copy Personal Effects List.
2 copies Crew List.
Arrival Conditions: Extra Lub Oil, Boiler Water, Ballast Water.
Manifest.
1 copy Maritime Declaration of Health.
1 copy Vaccination List.
Agent attends to Immigration and Quarantine matters.

Customs:
1 copy Personal Effects List.
7 copies Crew List.
Customs will come on board to do a "Boat check". Bonded stores were not sealed.

Customs Allowance: 1 bottle of spirits and 40 cigarettes or 50 gm. of tobacco.

Shore Leave: Crew are supplied with shore passes which have to be returned prior to departure.

AUTHORITY: Port Administration Tanjung Perak, Jalan Kalimas Baru No. 194, Tanjung Perak. *Tel:* 291194, 291364. *Contact:* The Harbour Master.

AGENT: P.T. Jardine Tama Transport Services, Jalan Sadari 7, Surabaya 60177, Indonesia. Tel: 62-31-340084. Fax: 62-31-340870. Cables: Jarship Surabaya.

TANAH MERAH: 01.47 S. 116.07 E.

SHIP OPERATOR'S REPORT: July 1993.

LOCATION: The coal port of Tanah Merah is located in position Lat. 01° 47' 03" S., Long. 116° 07' 30" E. in Adang Bay (Tanah Grogot).

BERTHING/LOADING: The coal concession is state owned by P.T.Tambang Batu Bara Bukit Asam – P.T. Kideco, a joint enterprised contractor (Indonesia/Korea) acting as explorer and exporter.

The coal mine is located about 2.0 km. – 2.5 km. from the port.

A conveyor belt is installed from the site to the Tanah Merah Coal Terminal straight to the port.

Two private wharves available:
A concrete block type construction Coal Pier with:
Length: 230 m.
Width: 30 m.
Bollards: 8
Yokohama type Fenders: 12
Mooring Dolphins: 2
Depth Alongside: 11.0 m. at LWS.

Keel clearance at Master's prerogative, but usually 0.5 m.

Tidal rise: Springs up to 3.54 m.
Neaps up to 2.04 m.
Mean up to 2.79 m.
Mean water level is up to 1.98 m.

Length of the channel is 27 nautical miles. Owing to the depth of the channel, only 8.0 m., vessels must finish and 'depart' from the port on a rising tide.

Departure draft to be a maximum of 10.0 m.

Maximum permittable LOA 200 m., max. d.w.t. 60,000 tons, max. beam 35.0 m.

Max. loadability: 40,000 tonnes (about 65%).

I met the Pilot Officer, who advised, due to the manoeuvring difficulties at Inner Roads, that a vessel of max. LOA 170 m. and max. beam 35.0 m. may be considered safe to proceed for berthing at this port.

Port main facilities:
Truck Hoppers: 150 cu.m.
Stack/Reclaimer: 500 tonnes/hr. – 1,500 tonnes/hr.
Shiploader: 1,500 tonnes/hr.
Belt conveyor system: 1,900 m.
Traverse of Shiploader: 171.0 m.
Outreach of Shiploader: 23.0 m.
Air Draft: 19.0 m.
First Stage Stockpile Capacity: 260,000 tonnes.
Second Stage Stockpile Capacity: 520,000 tonnes.

The Coal Terminal is located about 150 m. from the Pier.

In general, it looks very much similar to other coal ports at East Kalimantan, such as at Kota Baru. Only at this loading point the anchor positon is extremely far.

The loading position (anchorage) is mostly dependant on vessel's draft.

Kideco has two loading points:
Position No. 1: About 30 miles from the site.
Position No. 2: About 40 miles from the site.

Barge steaming time at normal condition is about 9 hours – 10 hours to Position No. 2, and about 6 hours – 7 hours to Position No. 1.

I was not able to board the vessel due to the rough sea and heavy rain. Also the motorboat operator refused to proceed with such unfavourable weather.

The loading operation was undertaken by 2 tugs of 3,500 h.p. and 4 barges (2×5,500 tonnes and 2×8,000 tonnes).

The loading rate varies from 5,000 – 6,000 tonnes per day.

Labourers are well prepared by the shippers, whereas the loading operation is controlled by P.T. Bahtera Adhiguna.

Next to the Coal Pier is a conventional concrete block type wharf of 40 m. length, 28 m. width and 8.0 m. depth at LWS.

There are 2 bollards and 5 rubber fenders. The pier has been used for berthing tugs and barges.

Further upstream, a well constructed palm oil jetty is available. It is owned by PT Perusahaan Perkebunanam Kelapa Sawit Expl.VI.

TANDJUNG UBAN: 01.04 N. 104.13 E.

DOCUMENTS:
11 Crew Lists.
11 Passenger Lists.
Harbour Report (form to be supplied by the Agent).
Maritime Declaration of Health.
Vaccination List.
2 Stores Lists.
2 Bonded Stores Lists.
2 Personal Effects Lists.
Last Port Clearance.
2 copies Cargo Manifest.

PILOTAGE: Agent requests Pilot upon arrival of vessel, 72 hours advance notice of ETA required. Pilot boards vessel in harbour area.

ANCHORAGES:
Awaiting Pilot:
North entrance: Lat. 01° 15' 10" N., Long. 104° 12' E.
South entrance: Lat. 01° 02' 55" N., Long. 104° 12' E.
Awaiting Berth:
Large tankers: Lat. 01° 06' 20" N., Long. 104° 10' 40" E.
Small tankers: Lat. 01° 03' 15" N., Long. 104° 12' 20" E.

RESTRICTIONS: Berthing and unberthing during daylight only

MAX. SIZE:

Jetty No.	*Max. Size* d.w.t./cu.m.	*Min. Size*	*Max. LOA* (m.)	*Min. LOA* (m.)
1	60,000 cu.m.	10,000 cu.m.	240	130
2 (Oil)	40,000	16,000	210	150
(LPG)	7,000 cu.m.		115	75
3 (Barge)	700		48	
4	20,000	1,200	160	60
5	36,000	5,000	185	100

HEALTH: Health Officer will board vessel after berthing. No Pratique granted, even for vessel after calling at another port in same country.

RADIO: Tandjung Uban Radio – call sign PKJ-2 and Sekupang Radio – call sign PKJ-20.

VHF: PKJ-2 on VHF.

TUGS: No tugs available.

BERTHING: *Depths Alongside at LWS:*

Jetty No. 1 –	17.4 m.
Jetty No. 2 –	11.7 m.
Jetty No. 3 –	6.4 m.
Jetty No. 4 –	11.4 m.
Jetty No. 5 –	10.5 m.
Jetty No. 6 –	4.7 m. (for small craft).

Shore Storage Tanks:

Oil Products	Total Safe Capacity
Premium	9,200 tons
Kerosene	23,500 tons
HSD	31,750 tons
MDF	5,900 tons
MFO	23,000 tons
Propane	70,000 cu.m.
Butane	9,000 cu.m.
Mixed LPG	18,000 cu.m.

Loading/Discharging Rates:

Jetty No.	*Cargo Handled*	*Average Transfer Rate* *Load* t.p.h./cu.m.p.h.	*Discharge*	*No. of Lines*	*Arm/Hose Connection Flange Dimensions* *Hose* (in.)	*L.A.* (in.)
1.	Butane,	2,200 (cu.m.)	–	2	–	12
	propane	–	2,750 (cu.m.)	2	–	8
	Vapour Return					
2.	Mixed LPG	700 (cu.m.)	–	1	–	6
	Vapour Return	–	700 (cu.m.)	1	–	4
	Kerosene	150	300	2	8	–
	Premium	150	250	2	8	–
	Premium	100	100	1	6	–
	HSD	150	250	2	8	–
	HSD	80	–	1	4	–
	MDF	100	100	1	8	–
	MFO	250	250	1	8	–
3.	Premium	100	–	1	4	–
	Kerosene	100	–	1	4	–
	HSD	60	–	1	4	–
4.	Kerosene	150	300	2	8	–
	Premium	150	250	1	8	–
	HSD	150	250	2	8	–
	MDF	200	300	3	8	–
	MFO	80	80	1	6	–

MEDICAL: Very limited facilities. Only a clinic with experienced wound dresser available. Valid cholera certificates for crew members required.

DENSITY: 1025.

FRESH WATER: Available ex-pipeline – 5 t.p.h.

FUEL: Available.

CONSULS: None.

GANGWAY/DECK WATCHMEN: Port Authority provides 1 safety guard during vessel's stay in port.

CUSTOMS ALLOWANCES: Reasonable quantity allowed to be used during vessel's stay in port.

REPATRIATION: No facilities available.

AIRPORT: Kijang Airport (Tanjung Pinang) and Hang Nadim Airport (Batam Island).

TIME: GMT plus 7 hours.

POLICE/AMBULANCE/FIRE: Police, Tel: 55; Clinic, 37 and 58; Fire, 44 and 13.

TELEPHONES: Agents place telephone on board at no cost.

IDENTIFICATION CARDS: Possession of a valid Seaman's Book sufficient.

AGENCY: See "General" before first port.

AUTHORITY: Penguasa Pelabuhan (Port Authority).

Operator: Pertamina.

TANJUNG BARA: 00.33 N. 117.48 E. (See Plan)

SHIPMASTER'S REPORT: September 1991 (Updated by Terminal Operator in September 1996).

LOCATION: Tanjung Bara Port is situated in East Kalimantan, about 10 miles North of Sangatta Harbour. A landfall light is situated in position Lat. 00° 32' 48.6" N., Long. 117° 37' 17.4" E. with characteristic of Fl. 5 sec. White.

DOCUMENTS:

8 copies Crew List.
8 copies Crew Effects List.
4 copies Stores List.
8 copies Passenger List (or Negative).
4 copies Cargo Manifest (or Negative).
4 copies Arms and Ammunition List (or Negative).
4 copies Narcotics List (or Negative).
4 copies Vaccination List.
2 copies Maritime Declaration of Health.

PILOTAGE: Berthing Master will board inbound vessels at either of the following positions:

(1) North Entrance Boarding Station: Lat. 00° 33' N., Long. 117° 48' E.
(2) South Entrance Boarding Station: Lat. 00° 29' N., Long. 117° 47' E.

Masters will be informed prior to arrival at which position the pilot will board.

Pilot ladders should be properly rigged in accordance with SOLAS and IMO Regulations. A combination ladder and pilot ladder must be rigged together if length of pilot ladder exceeds 9.0 m.

APPROACHES: There are 2 fairway beacons, North entrance beacon in position Lat. 00° 32' 06" N., Long. 117° 46' 26" E., Fl.(6) 15 sec. White. South entrance beacon in position Lat. 00° 29' 54" N., Long. 117° 44' 39" E., ISO 2 sec. White.

There are some reef patches in between the two beacons, which means that incoming vessels must keep North beacon on their port side about 0.5 miles distance and the South beacon on their starboard side about 0.5 miles distance. The approach course is about 270°.

ANCHORAGE: The anchorage is situated 0.5 miles to 2.0 miles East of the coal terminal in a depth of 30 m. – 45 m.

RESTRICTIONS: Vessels can berth and unberthing any time day or night.

Arrival Condition: Arrival draft for ballasted ships is to be consistent with safe manoeuvring. As a guide, minimum draft should be such that:

(a) Propeller is fully immersed or 90% immersed.
(b) A stern trim of not more than 2.0 m.

MAX. SIZE:

D.W.T. – 200,000 tonnes.
LOA – 300 m.
Beam – 50 m.
Draft – 17.80 m., vessel must maintain 0.75 m. under keel clearance during loading.
Airdraft – 22.0 m. at Highest Astronomical Tide.

HEALTH: Pratique is granted when alongside.

RADIO: Bontang Radio is the closest but Jakarta Radio is more convenient.

Arrival Advice: Vessels must advise the Coal Terminal of their ETA 96 hours, 72 hours, 48 hours and 24 hours prior to arrival and any changes.

The Berthing Master should be contacted on VHF Channel 16 when 2 hours from the Terminal.

Pre-Arrival Questionnaire: The vessel should supply the Coal Terminal with answers to the following questions at least 72 hours prior to arrival.

AA Arrival draft, fore and aft.
BB Estimated metric tonnage to be loaded.
CC Estimated departure draft, fore and aft.
DD Is all navigation, propulsion, steering and other equipment, required for the safe entry and departure from the port in good working order. (Detail if any deficiencies).
EE Is all water ballast clean, in accordance with IMO/MARPOL requirements. Amount of water ballast to discharge.
FF Have all Bending Moments and Shearing Forces been calculated and are they within accepted safe levels for the loading sequences.
GG Ore/Oil and OBO vessels, state last three cargoes.
HH Max. air draft on arrival, including hatches opened where appropriate.

VHF: Port Control on Channels 16 and 12.

TUGS: The tugs "Zuleika" and "Zoi-III" have sufficient power to assist with berthing and unberthing.

LOADING: *Loading Rate:* There are 2 loaders, each with a capacity of 2,350 tonnes.p.h. We loaded 56,832 tonnes inside 28 hours.

Clearing of Belt: The Shift Controller must be advised by the Master or Chief Officer when 3,000 tonnes is required to complete loading.

Bill of Lading: Figures are according to draft survey.

DENSITY: 1021 – 1025, depending on season.

FRESH WATER: Not available.

FUEL: Not available.

OPENING/CLOSING HATCHES: By crew.

CERTIFICATES:

Ship's Register.
Load Line.
Safety Equipment.
Safety Construction.
Safety Radio (Telephony and Telegraphy).
Certificate of Class.
International Oil Pollution and Prevention.
Tonnage.
Derat or Exemption.

TIME: GMT plus 8 hours.

SHORE LEAVE: Shore passes issued by Immigration on request.

GENERAL:

Gangway: Shore gangway provided.

Stores: Stores and shipchandler not available.

Weather: N.E'ly winds prevail from January to June and S.E'ly winds prevail from July to December.

Communications: Telephone, telex and facsimile communications are available, using Company's facilities. It is best to route all messages through agent's head office in Jakarta.

SHIPMASTER'S REPORT: January 1992 (Updated by Terminal Operator September 1996).

LOCATION: The port of Tanjung Bara in situated in East Kalimantan, Indonesia. The port is approximately 10 miles North of Sangatta. A land fall light is situated in position Lat. 0° 32' 48.6 " N., Long. 117° 37' 17.4" E., with a characteristic of Fl. 5 sec. White. Fairway beacons are placed in positions: North Entrance Lat. 0° 32' 06" N., Long. 117° 46' 26" E. and South Entrance Lat. 0° 29' 54" N., Long. 117° 44' 39" E. Their respective light characteristics are North Beacon – Fl. (6) 15 sec. White, South Beacon – ISO 2 sec. White (Also see "Pilotage").

PILOTAGE: *Pilot Boarding Station:* A company Berthing Master will board vessel inbound at either of the following positions:

North Entrance Boarding Station: Lat. 00° 33' N., Long. 117° 48' E.
South Entrance Boarding Station: Lat. 00° 29' N., Long. 117° 47' E.

Masters will be informed prior to arrival at which position the Berthing Master will board.

Pilot ladders must be properly rigged in accordance with SOLAS and ISO standards. For ladders in excess of 9.0 m. in height, a combination gangway and pilot ladder must be rigged. The pilot ladder should be rigged 2.0 m. above the waterline. Masters should ensure that a good lee is provided for the pilot vessel to come alongside. A speed of 3 – 5 knots should be maintained whilst the pilot transfer takes place.

ARRIVAL: *Draft:* Masters should ensure that the arrival draft for ballasted vessels is consistent with safe manoeuvering. As a guide, the minimum draft should be such that:

(a) The propeller is fully immersed or 90% immersed.
(b) A stern trim of no more than 2.0 m.

For part-loaded vessels, a stern trim of no more than 2.0 m. is considered appropriate, provided that the vessel complies with the minimum draft requirements listed above. Any changes to the above guidelines should be communicated to the Marine Superintendent in the 72 hour questionnaire.

If a vessel arrives in a ballast or part-loaded condition with drafts which are considered by the Berthing Master not to be consistent with safe manoeuvering, then the ship will be required to change the draft to a safe condition. Any costs or delays in berthing or loss of loading turn will be to the owner's account.

Air Draft: The maximum air draft allowable is 22.0 m. at Highest Astronomical Tide (HAT). Shipmaster will ensure that the maximum air draft of the ship does not exceed 22.0 m., including the height of the hatches for side opening hatches. Vessels which exceed 22.0 m. air draft should communicate this fact to the Marine Superintendent prior to arrival as some allowance may be possible for tide height.

MAX. SIZE: See "Berthing".

RADIO/VHF: *Notification of Arrival:* Vessels must communicate their ETA directly to the Company. Shipmasters are required to communicate their ETA 72 hours, 48 hours and 24 hours prior to arrival.

Any change in the vessel's ETA after the 24 hour notification must be communicated to the Company immediately.

The above information should also be communicated to the vessel's Agent so that all other relevant authorities may be informed.

Failure to confirm changes of vessel's ETA may incur waiting time charges for tugs and/or loss of berth turn, which will be for ship's account.

Pre-Arrival Questionnaire: The following questionnaire must be completed and accompany the 72 hour arrival advice.

A. Arrival draft, fore and aft.
B. Estimated metric tonnage to load.
C. Estimated departure draft, fore and aft.
D. Is all navigation, propulsion, steering and other equipment required for the safe entry into and departure from the port working (details of any deficiencies).
E. Is all water ballast clean, in accordance with IMO Marpol requirements. Amount of ballast water to discharge.
F. Have all Bending Moment and Shear Stress calculations been calculated and within accepted safe levels for the loading program planned.
G. Ore-Oil and OBO vessels, state last 3 cargoes.
H. Maximum airdraft on arrival, including hatches opened where appropriate.

Arrival Notification: Vessels arriving at Tanjung Bara should, 2 hours prior to arrival at the Pilot Boarding Ground, confirm ETA at the Pilot Boarding Ground by VHF Channel 16.

TUGS: 2 tugs will be allocated to assist in berthing and sailing all vessels. All vessels needing to shift ship on the berth will also use tugs as required by the Berthing Master.

BERTHING: *Berth Design:* The Terminal will accept vessels of the following dimensions:

Length overall	300 m.
Beam	50 m.

The berth has a natural depth of 17.25 m. alongside. The Departure Channel increases in depth to 18.0 m. when 50 m. distance off the berth, to 22.0 m. when abeam of Beacon No. 4, and 35.0 m. when abeam of the Inner Shoal Beacon. Masters must ensure an underkeel clearance at all times of 0.75 m. whilst in the berth. Vessel will require a 1.25 m. underkeel clearance when sailing. The draft of the vessel will be consistent with tide height. The Terminal Superintendent will discuss tidal information on arrival.

Berthing and Mooring: Every vessel at a berth shall be properly moored, fastened or anchored as the case may require, and it is the Master's responsibility at all times to see that lines are kept taut and secure. Berthing Masters will advise on the mooring layout.

Ships with LOA in excess of 270 m. will be required to shift to complete cargo loading.

Mooring Lines: The Master is responsible for ensuring that his vessel is securely moored at the Terminal.

To ensure that vessel is safely moored at the Terminal, KPC recommends that the minimum mooring pattern for vessels using the Terminal are as follows:

Vessel Size (d.w.t.)	*Head & Stern Lines*	*Breast Lines*	*Springs*
25,000 – 60,000	3	1	1
60,000 – 100,000	3	2	1
100,000 – 150,000	3	2	2
150,000 – 200,000	4	2	2

All lines will be run using shore messengers and ship's heaving lines. Lines will be run ashore starting with the fore and aft springs, then breast lines and finally the head and stern lines.

LOADING:

(i) Vessels will normally be loaded in turn provided:
  (a) They are ready in all respects to receive cargo. This includes being gas-free where necessary.
  (b) All cargo is available at the Terminal.
  (c) This is in accordance with instructions received from the shipper(s) and/or charterers.

(ii) Vessels requiring to discharge ballast must notify the Company of the cleanliness and amount to discharge, as per 72 hour questionnaire. If the expected discharge rate of ballast water is such that it may affect the Terminal loading, the Company's Terminal Superintendent is to be notified at least 48 hours prior to arrival.

(iii) Loading plans and bending moment/stress calculations must be presented to the Terminal Superintendent or his representative upon arrival at the loading berth.

(iv) The sole responsibility for the loading of a vessel rests with the Master. Vessel's Master must therefore ensure that a responsible officer is on deck at all times during loading to ensure the correct loading of each hatch.

The Company takes no responsibility for the leveling of cargo loaded at the ship's request, above the main deck level (inside of the hatch coamings).

The tonnage indicated by the shore belt is considered to be an approximate indication only. It is the responsibility of the vessel's Master to maintain continuous checks on the draft to calculate tonnages loaded.

Loading Procedure:

Loading Sequence and Shear Force and Stress Calculations: After berthing, the Master is to provide the Terminal Superintendent with a loading plan, loading sequence plan and a copy of the shear force and stress calculations for the planned loading sequence. When planning the loading sequence for large vessels, Masters should be aware of the need to shift ship.

Pre-Loading Meeting: Once formalities are concluded, a loading meeting is to be held between ship's representative (Master or deputy, i.e. Chief Officer), Terminal Superintendent or the Terminal Shift Supervisor to discuss the planned loading.

Communications During Loading: The ship will be loaned a Coal Terminal radio by which direct communications with the Shift Supervisor are available.

Loading Rate: Maximum loading rate achievable at the Tanjung Bara Terminal in 4,200 tonnes per hour. Each loader is able to run at the maximum rate.

Draft Checks: The ship is responsible for checking that the correct tonnage is poured into each hatch. The weightometer is to be used as an approximation of weight only. Masters must ensure the draft is sufficiently monitored.

Topping-Off: Masters are to ensure that sufficient officers are on deck to monitor topping-off operations. The Terminal will accept no responsibility for overloading of vessels or leveling of cargo loaded above deck level in the hatch coamings.

Clearing Belt: Masters must ensure that the Shift Controller is advised when approximately 3,000 tonnes of cargo is left to load. The trestle belt must be cleared at completion of cargo.

Bill of Lading Figure: Draft Survey.

Ore-Oil and OBO Vessels:

(i) Ore-oil and OBO vessels must inform the Company at least 72 hours prior to arrival of the last 3 cargoes carried and whether the vessel is carrying any slops.

(ii) Ore-oil and OBO vessels which have carried petroleum products and/or slops during the last 3 voyages will arrange for an independent chemist and a licensed marine surveyor to board the vessel with the Berthing Master, prior to berthing. Provided that the vessel is declared gas-free and the holds clean to the satisfaction of the Company's Terminal Superintendent, the vessel may proceed to the loading Terminal. All costs incurred for chemists and surveyors will be to the Owner's account.

(iii) Ore-oil and OBO vessels which have not carried petroleum products and/or slops during the last 3 voyages may, with the approval of the Company's Terminal Superintendent, proceed to the loading terminal, provided that a declaration by the vessel's Master, that the vessel is gas-free and in all ways safe to load coal, is received prior to arrival.

If there is any doubt regarding the vessel being gas-free, (ii) above will be followed. Any delay and/or costs caused through false or wrong information will be to the Owner's account.

(iv) Ore-oil and OBO vessels which are carrying ballast in NON-segregated ballast tanks (SBT) or clean ballast tanks (CBT) systems, must inform the Company of this fact prior to arrival. Such vessels will not be able to discharge such ballast without inspection and authority of the Company's Terminal Superintendent. Delays due to inspections of such vessels will be to the Owner's account.

FRESH WATER: Not available.

FUEL: Not available.

REPAIRS: The propellers of vessel shall not be turned whilst the vessel is moored at the berth without prior consent of the Terminal Superintendent.

Masters of the vessels moored at the berth shall notify the Terminal Superintendent of any intention to undertake repairs to the engines or other repairs of whatsoever nature to the vessel. No such repairs shall commence without obtaining permission in writing, from the Company's Terminal Superintendent. Certain safety requirements may have to be met prior to the commencement of any such work, dependent upon the nature of the work. Any such requirements will be communicated to the Master, in writing by the Company's Terminal Superintendent.

SAFETY:

(i) It is expected that the Master of any vessel moored at the Terminal will give priority to the safety of his vessel and the Terminal in accordance with the practice of good seamanship.

(ii) The following Safety Regulations are listed, but not limited to, for the guidance of Master:

- (a) Ship's mooring lines shall be tended and kept taut at all times, to keep the vessel in position.
- (b) The Master will ensure that sufficient personnel are onboard the vessel at all times, to attend moorings, conduct cargo loading operations in safety, depart the berth in emergency and be able to cope with any shipboard emergency.
- (c) No swimming or fishing is allowed from the Terminal Jetty.
- (d) No person shall interfere with or remove any life-saving equipment or appliance except for the purpose of saving life.
- (e) Explosives or highly inflammable goods shall not be loaded or unloaded at the berth, except with written permission from the Terminal Superintendent and the Harbour Master.
- (f) No person shall smoke or light matches or fires in an area or place where smoking is prohibited.
- (g) No welding or burning may be performed.

GENERAL: *Charts:* Reference to Indonesian Chart No. 37 and 67 – Kalimantan – Panti Timur, Muara Berau (Sungai Kutei) Hingga, Tanjung Mangkalihat.

Detailed port charts are currently being prepared.

Tides: The tidal range is 2.5 m. at Springs.

Currents: The tidal steam runs approximately North/South at the berth and can reach a velocity of 1 knot on Spring tides.

Weather: The weather pattern is predominantly N.E. winds from January – June and S.E. winds from July – December. The wind is generally below 12 knots.

Gangway: A shore gangway is provided.

Stores: Very few stores are available in Sangatta.

Tanjung Bara – Summary: A new coal deposit was found just under the soil in Eastern-Middle Kalimantan (Borneo) and a Company, P.T. Kaltim Prima Coal, was founded to excavate the coal on a commercial basis.

The open cut mine is named "Pinang Mine", the coal grade "Prima Coal" and the port facilities constructed at the nearest suitable place on the coast "Tangjung Bara". The transport from the mine to the stockpile onshore, a distance of about 25 km., is taken care of by a conveyor belt. The same method also from the stockpile, where presently only one reclaimer is available, to the two quadrant loaders on the Sea Island berth some 2 km. away.

The berth was opened for traffic in July 1991 and up to the middle of January 1992 about 33 ships had loaded there.

Berthing assistance is available around the clock.

The tug service is handled by two new "Japanese Style" tugs of sufficient power.

When approaching Tanjung Bara the ship receives a clear echo on radar from the two outer beacons (The North Beacon and the South Beacon). It is imperative that a proper ETA is given to Agent in due time as the coal berth is the only activity in this port. The Pilot will normally respond to a call on VHF Channel 16, about one hour prior to arrival. The Pilot boarding ground is situated in Position Lat. 00° 29' N., Long. 117° 47' E., but the Berthing Master prefers to embark just South of the South Beacon. He will meet vessel in that area with one of the tugs used as pilot launch. Green and red beacons mark the general approach. When reaching a position level with the Sea Island, the ship is stopped and turned around by swinging to starboard or another way is to come through the North Fairway to approach the berth. This operation is mainly done by the power of the tugs. Tug's line is used. With bow heading outwards, the ship is then pushed alongside. The berth has a natural depth of 17.25 m., but can handle slightly deeper drafts by working on tides.

The nautical operation experienced was smooth and well taken care of. Once alongside, the vessel is moored to the Sea Island, consisting of several dolphins. Only the middle ones are in line, the rest are moved back and allow use of breast lines of sufficient length. All mooring points ashore are equipped with slip-hooks.

Papers and documents are as for other Indonesian ports. They work by the new IMO Regulations for clean ballast water. No samples were taken from ballast.

Quite a few surveyors attended, but this partly depending on charterer and Agent. They carried out a standard procedure draft survey before and after loading. Bill of Lading figures are based on these draft surveys.

The loading is carried out by 2 quadrant loaders, all modern and impressive. The Supervisor and the rest of the crew are all Indonesian.

The said capacity of the berth is 4,200 tonnes/hour, but we experienced a rate of about 3,000 tonnes/hour.

There are fairly good scales attached to the loading system, but still it seemed that the control of what passed onboard was far from sufficient. I recommend a tight attendance by the ship's officers, especially if you are restricted by draft at either end.

Except for the mine and adjoining facilities, there is nothing in the area, so most secondary services are not available.

All in all, a satisfactory port where vessel should arrive well stored to reach discharge port without receiving anything, and well prepared for loading.

During the port stay at least one Agent and one surveyor stay onboard and they request meals.

AUTHORITY: The Harbour Master, Sangatta, Indonesia.

Operator: PT Kaltim Prima Coal, KPC Minesite, Sangatta, East Kalimantan, Indonesia. Postal address: P.O.Box 620, Balikpapan 76106, Indonesia. *Tel:* (0549) 21800 (Ext. 5088). *FAX:* (62)(21) 520-0580.

TANJUNG GEREM: 05.58 S. 105.59 E.

REPORT: November 1994.

PILOTAGE: Compulsory. Call Pilot Station when approaching Terminal.
ANCHORAGE: 0.5 miles off wharf.
MAX. SIZE: 35,000 d.w.t.
BERTHING:

Wharf No. 1: Lat. 05° 58' 17" S., Long. 105° 59' 18.4" E.
Wharf No. 2: Lat. 05° 56' 24.5" S., Long. 105° 59' 14.4" E.
Depth of Water: 13.0 m.

LOADING: First vessel expected to load on 9th November 1994.

Loading Arm Size Connection:
Wharf No. 1: 6 in.
Wharf No. 2: 10 in.
Shore Tanks:
Kerosine: 2×10,000 kilolitres.
Gas Oil: 5×10,000 kilolitres.

OPERATOR: Pertamina.

SHIPMASTER'S REPORT: December 1995.

This new port started operations less than a year ago.

There are two fairways. The North channel has a depth of 13.6 m., is about 740 m. wide, and is used by small coasters and Ro-Ro ships.

Northern part of the harbour anchorage is congested by small coasters and Ro-Ro ships.

The South channel is designated for cargo and tanker ships.

We arrived at the port at 2230 hrs. (draft 11.05 m.). We called Pilot on VHF Channel 12/16 and Pertamina on Channel 9. But no reply. As we were not familiar with the port, we dropped anchor (6 shackles) in depth of 46 m. to 50 m. in position Lat. 05° 55' 42" S., Long. 105° 58' 12" E., 1 mile off Besar Maerak Island. After 20 minutes, we heaved up anchor as the vessel was dragged due to 20 knots wind and 3 knots – 4 knots current in N.E.ly direction, coming from Indian Ocean in Sunda Strait.

We remained drifting in safe area for the night. At about 0820 hrs. next day, we managed to contact Pilot on Channel 16, working Channel 12, and they informed us that the entrance for cargo and tanker vessels is by the South channel and not the North channel.

We anchored in position Lat. 05° 59' S., Long. 105° 58' E. The anchorage position was given by the Pilot and is 7 cables from the Ore Jetty of Cigading Port. The Pilot boarded at unmarked pilot station in position Lat. 05° 58' S., Long. 105° 58.3' E.

About 900 m. East of Jetty No. 2, water depth is 11.0 m. Vessel was alongside Jetty No. 2 at 1735 hrs. and commenced discharging automotive diesel oil (29,465 tonnes) at 2100 hrs. From 1800 hrs. until 0500 hrs. next day, a continuous strong wind of 15 knots to 20 knots was blowing from an Easterly direction (open berth, no breakwater). We loaded ballast in empty cargo tanks when the vessel discharged 60% cargo. One forward breast line and one stern line parted due to strong wind and swell. On the sea side of the vessel, there are 2 mooring buoys for additional ropes forward and aft.

On departure, the Pilot reported that 2 tankers grounded in Northern channel. The first vessel was manoeuvring to anchor and the other picking-up Pilot from South to North channel, due to strong currents.

TANJUNG PANDAN (Belitung): 02.45 S. 107.38 E.

PILOTAGE: Not available.
ANCHORAGE: Vessels up to 3,000 d.w.t. anchor in position 02° 44' 20" S., 107° 36' E. Vessels over 3,000 d.w.t. should anchor in Mangkob Besar Reef area, near lighted buoy, depth 11 m. – 12 m.

At time of S.W. Monsoon, vessels should anchor at the Northern entrance of Mendanau Strait.

RESTRICTIONS: No restrictions on vessel draft or size at anchorage.
RADIO: Not available.
TUGS: 6 × 80 h.p. – 320 h.p.
BERTHING: Anchorage port.
Storage: Godown space available.
CRANES: 1 × 15 ton shore crane available.
STEVEDORES: Available from labour pool.
FRESH WATER: Not available.
FUEL: Not available.
REPAIRS: No facilities available.
GENERAL: *Barges:* 19 × 40 tons – 200 tons available.

TARAKAN: 03.17 N. 117.35 E.

(A) GENERAL CARGO
(B) TANKERS

(A) GENERAL CARGO

DOCUMENTS: See "Jakarta".
PILOTAGE: Compulsory pilotage consisting of Sea and Harbour Pilots. Ships requiring pilot service should notify the Harbour Master at least 24 hours before arriving at outer buoy. Tide: Semi-diurnal.

Pilots do not normally work at night. The approach buoys and leading lights are frequently extinguished and vessels arriving at night are recommended to anchor at No. 1. Buoy and await a Pilot in daylight.
ANCHORAGE: Lat. 03° 14' 40" N., Long. 117° 43' 45" E.
HEALTH: Vessels arriving from abroad direct in one of the 2nd Class Ports have to apply well in advance to the Department of Health (Quarantine Section) for a provisional Free Pratique, as said Pratique has to be cabled to the port concerned. The provisional Free Pratique is only valid for the port concerned, the next port of call must be a First Class Port as no further provisional Free Pratique will be issued, unless the vessel sails directly abroad from the 2nd Class Port concerned.
RADIO: Tarakan Coastal Radio Station. Call sign: PKO. Class A1. This station also has VHF Maritime Bands working on the same hours as the Short Wave Transmissions.
VHF: Pilot Station on Channel 16. Harbour Master on Channel 12.
TUGS: None.
BERTHING: The anchorage will hold many ships but very little cargo is worked from the anchorage as most vessels calling are timber ships waiting to load. The very occasional ocean cargo ship usually unloads on to a barge but very occasionally goes alongside the Commercial Jetty. The Commercial Jetty has a least depth of 5.5 m. and a length of about 100 m. There is a crane capable of lifting 2 tons on the inside berth. This jetty is very old and dilapidated and normally handles only small craft of local inter-island character.
STEVEDORES: Working hours: 7 hours on normal working days. Overtime can be arranged.
FRESH WATER: Limited supply available by barge.
FUEL: Not available.
GENERAL: Port doctor available.

Carrying a camera ashore or even on deck of a ship for photography is strictly prohibited.

There is a small hospital. No stores, water, or fuel oil are available. There are no repair facilities at all. Pertamina operates a small hospital and a clinic. There is air communication to other parts of Indonesia through Balikpapan.
PORT SECURITY: Maintained by members of the Indonesian Armed Services, usually, Police, Navy or Marine and Army. Crew members should be in possession of a shore pass issued by the Port Authority, accompanied by an identification card when leaving or entering the guarded gates of the Port Area. Shore passes can be obtained via the Agencies.

(B) TANKERS.

PILOTAGE: Compulsory. Pilot requires 12 hours notice of arrival and 10 hours notice of departure.
ANCHORAGE: The anchorage whilst awaiting the Sea Pilot is 5 miles East of Tg. Batu.

The anchorage when awaiting a berth is Lat. 03° 15' 30" N., Long. 117° 36' 30" E.
RESTRICTIONS: Berthing and unberthing 24 hours.
MAX. SIZE: *CBM:* 55,000 d.w.t. Max. LOA 230 m. Depth of water 10.5 m.
Pertamina Jetty: 6,000 d.w.t. Max. LOA 120 m. Depth of water 7.0 m.
RADIO: Tarakan Radio (PKO) on HF-A1, R/T and VHF Channels 16 and 6, and operated by Ditjenla.
VHF: Pertamina Radio (PKO-2) operated by Pertamina on Channel 16.
TUGS: Available.
BERTHING: *CBM:* Vessels moor to a 6 buoy sea berth located in position Lat. 03° 17' 05" N., Long. 117° 35' 07" E. Crude oil loading is at a rate of 4,000 bbls.p.h. through 2×10 in. hoses.
Jetty: The jetty is located in position Lat. 03° 17' 11.5" N., Long. 117° 35' 25" E. Premium, Kerosene, Avtur and HSO are discharged at the jetty at a rate of 200 – 250 k/l.p.h. through 1×8 in. hose.
Shore Storage Tanks:

Oil Products	Total Safe Capacity
Crude oil	389,100 bbls.
Avtur	1,060 k/l
Premium	1,045 k/l
Kerosene	1,050 k/l
HSD	3,560 k/l

Physical Characteristics of Crude Oil:
API Gravity at 60°F. : 21.5 – 19.5
Sulphur Content : 0.13% wt.
B.S. & W. : Less than 0.5% vol.
Flash Point (PMCC) : 35°C.
Pour Point : No higher than 5°C.
MEDICAL: First-aid clinic available.
DENSITY: 1020 – 1025.
FRESH WATER: Not available.
FUEL: Not available.
CONSULS: None.
AIRPORT: There is an airport at Tarakan.
TIME: GMT plus 8 hours.
GARBAGE DISPOSAL: No facilities available.
WASTE OIL DISPOSAL: No facilities available.
SEAMAN'S CLUBS: None.
CURRENCY: Indonesian Rupiah.
AGENCY: See "General" before first port.
AUTHORITY: Kantor Administrator, Pelabuhan Takakan, Jl. Yos Sudarso No. 8, Lingkas Ujung. *Tel:* (0551) 21676. *Contact:* Kasubsie Kesyanbandaran.
Operator: Tesoro Indonesia Petroleum Co., Wisma Gunung Sewu, 5th-6th Floor, Jl. Jend. Gatot Subroto, Jakarta, Indonesia. (Postal address: P.O.Box 34, Tarakan 77100, East Kalimantan, Indonesia). *Tel:* 510508. *Telex:* 46178 Tesoro-la.

TEGAL, Java: 06.52 S. 109.10 E.

DOCUMENTS: Upon arrival, vessels have to produce the following Certificates and Documents, which will remain in the Harbour Master's custody until cleared:
Nationality (Registry) Certificates.
Seaworthiness Certificate.
Tonnage Certificate.
Derat (Exemption) Certificate.
International Load Line.
Safety Equipment Certificate.
Safety Construction Certificate.
Safety Radio-telegraphy Certificate.
Vaccination List.
5 Crew Lists.
2 Stores Lists.
2 Crew Baggage's Declaration.
Last Port Clearance.
Health Book.
Custom Clearance and Custom Documents.
Cargo Manifest and Bills of Lading.

When vessels arrive direct from foreign port, Customs and Harbour Police Officials board for search.
PILOTAGE: None.
ANCHORAGES: Lat. 06° 49' S., Long. 109° 08' 07" E.
RESTRICTIONS: No restriction on night entry, but work is done next day (after 0800 hrs.).
MAX. SIZE: Max. draft for entering the port is 9 ft.
HEALTH: Maritime Declaration of Health needed from Master, if vessels coming direct from abroad. If vessel comes from other Indonesian ports, automatic Free Pratique.
RADIO:
I. Fixed Station:
Call sign 8AC on freq. 5315 kHz at 0100 – 0130 GMT
0230 – 0300
freq. 5165 kHz at 0430 – 0500 GMT
1000 – 1015
II. Tegal Coast Radio Station:
Call sign PKD 21 on freq. 2182/2690 kHz at 0030 – 0100 GMT
0400 – 0430
III. Open every day except on holidays.
VHF: Tegal Coastal Radio Station on Channel 16.
TUGS: Only used for towing lighters to vessels on the roads.
BERTHING: None. Anchorage only.
STEVEDORES: Ordered by Agent. If possible before arrival of vessel, some information mainly concerned with requirements of the Shipmaster advises Agents to arrange gangs and available space for Tegal cargo.
MEDICAL: Normally medical attention for crew to be arranged by Agent at order of Master.
FRESH WATER: Not available.
FUEL: Not available.
CONSULS: None available locally.
REPAIRS: Slipways and berths for small vessels, LOA 25 m. and draft 9 ft.
GANGWAY/DECK WATCHMEN: Services of watchmen if necessary to be ordered by Master.
OPENING/CLOSING HATCHES: Carried out by crew – sometimes by stevedores.
CUSTOMS ALLOWANCES: Tobacco, wine and/or spirits not allowed to be taken ashore.
REPATRIATION: Agents arrange necessary repatriation of crew.
TIME: Indonesian Western Time, GMT plus 7 hours.
HOLIDAYS: Only Moslem holidays: Id el Fitr. For 2 days no cargo work can be arranged.
POLICE/AMBULANCE/FIRE: Accident, Police, Tel: 10; First Aid for Ambulance (Texin Hospital), Tel: 387; Fire Departments (Texin), Tel: 17.
TELEPHONES: No facilities for placing telephones on board.
SHORE LEAVE: Crew members allowed ashore from 0800 up to 2100 hrs. every day. Not allowed to spend night on shore.
IDENTIFICATION CARDS: Necessary.
REGULATIONS: Crew members not allowed to bring cameras and/or foreign money ashore.
AUTHORITY: Tegal Port Directorate, Syahbandar, Jl. Kesatrian No. 6, Tegal, Indonesia. *Tel:* 61038, 41107.

TELOK AYER: 00.44 S. 109.05 E.

SHIPMASTER'S REPORT: March 1982.

PILOTAGE: Pilot Station in position: Lat. 00° 39' S., Long. 109° 05' E. Pilot comes from inner anchorage by small boat, journey time 5 hours.

ANCHORAGE: Vessels approaching Telok Ayer (Telok Airport) drop anchor 5 cables West of Fairway Buoy in position: Lat. 00° 39.5' S., Long. 109° 05.5' E.

RADIO: 24 hours notice to Agent to arrange Pilot.

VHF: Call "Padang Tikar Pilot" on VHF Channel 16.

CARGO HANDLING: Depth at loading point is 6 fathoms. Maximum depth in entrance to Padang Tikar River is 7.2 m. at HW. Vessels load plywood and sawn timber.

GENERAL: There are no alongside facilities for ships.

Stevedores, Shippers, Immigration and Customs Officers take full meals and accommodation onboard, during the loading operation, as the nearest town (Pontianak) is 12 hours away by speedboat.

TELUK BAYUR (Padang): 00.58 S. 100.20 E.

(See Plan)

FLAGS: *Flags to be Shown by Incoming Vessels:*

Nationality of vessel and Indonesian flag.

Call sign.

"Q" when the vessel comes from an infected port or when calling for a Port Health Officer.

"G" when Pilot is required.

"N" when vessel from abroad carrying Passengers. (Request for Immigration).

"H" when Pilot is on board.

"Y" when mail on board.

"B" when carrying dangerous cargo.

Flag to be Shown when Vessel Leaving Port:

Nationality of vessel and Indonesian flag.

Call Sign.

"H" Flag when Pilot is on board.

DOCUMENTS:

(a) The Master must have in readiness for the Harbour Master Officials:

Certificate of Registry.
Certificate of Nationality.
Load Line Certificate.
Radio Safety Certificate.
Derat Certificate.
Safety Equipment Certificate.
Last Port Clearance.
Health Book (Indonesian Health Book) to be used in Indonesian waters only.
Crew List.
Stores List.
Personal Effects List.
Free Pratique.
Light Dues Bill from Port of Call (last Port).

(b) Cargo Documents required by the Agent to clear the Vessel through Customs:

Customs Cargo Clearance.
Manifest.
Customs Document (outward cargo AVI and model E3).
Customs Document (inward cargo – AA).
Customs Document of transhipment cargo (model HH).

Authorities boarding the vessel on arrival:

Port Health Doctor (Quarantine Officer):

1. All vessels entering Port of Teluk Bayur from abroad should obtain Free Pratique. Vessel must wait until the Quarantine Officers board the ship before entering.
2. Documents to be shown to the Port Health Doctor:
   Indonesian Health Book.
   Crew List.
   Passenger List.
   Vaccination List.
   International Vaccination Certificate.
   Derat Exemption Certificate.

Customs:

1. It is prohibited during vessel's stay to sell any goods belonging to crew.
2. Foreign vessel, if carrying local cargo must have coasting permit.
3. Documents to be shown to Customs:
   Cargo Manifest.
   Provisions/Stores List.
   Crew List.
   Crew Personal Effects Declaration.
   Last Port Clearance/Custom clearances.

Immigration:

1. All vessels coming from abroad (Indonesian vessels as well as foreign vessels) are to use crew passes.
2. Foreign crew to be repatriated must be accompanied by an Immigration Officer, except if their pass is a visa.
   All expenses (ticket and travelling expenses) are for owner's account.
3. All foreign transit passengers have to fill in an embarkation/debarkation card.
4. Vessels arriving from abroad carrying passengers; The Master is also obliged to provide the Immigration Officers with a List of the Passengers on board.
5. Documents to be shown to the Immigration Officers:
   Crew List.
   Passenger List.
   Crew Passports/Passengers' Passports.
   Last Port Clearance/Immigration Clearances.
6. Foreign passengers landing at Teluk Bayur Port without visa, *must pay for Immigration Fee.*

Harbour Master:

1. If vessel intends to use their own life/motorboat for rowing exercise, permission should first be obtained from Harbour Master and Coast Guard.
2. Documents to be shown to the Harbour Master:
   Certificate of Registry.
   Certificate of Nationality.
   Load Line Certificate.
   Vessel and Passenger Safety Certificate.
   Radio Safety Certificate.
   Master Roll.
   Crew List.
   Passenger List.

Cargo Documents:

Cargo Manifest covering Teluk Bayur cargo – 7 copies.
Cargo Manifest covering cargo for other Port – 7 copies.
Stores List – 7 copies.
Crew Personal Effects List – 7 copies.
Crew List – 10 copies.

The above apply for a single call. In the event of a vessel arriving from a out-port for re-checking at Teluk Bayur, another set of copies of the Stores List and Personal Effects List must be re-submitted.

PILOTAGE: Compulsory harbour pilotage. Ships have to wait for Pilot inside the roads limits (See "Anchorage").

Pilot is available each day from 0000 – 2400 hrs. ETA required 6 hours before arrival. ETD required 3 hours before departure.

ANCHORAGE: Vessels should anchor outside the breakwater until Pilot comes on board at Position: Lat. 1° 00' 50" S., Long. 100° 22' 20" E. Distance from anchorage to the quay/jetty is about 2 miles.

Approaching the anchorage is not recommended during darkness due to fishing vessels and narrow channel.

HEALTH: Vessels arriving from abroad direct have to apply well in advance to the Department of Health (Quarantine Section) for a provisional Free Pratique, as said Pratique has to be cabled to the port. The provisional Free Pratique is only valid for the port and the next port of call must be a First Class Port as no further provisional Free Pratique will be issued, unless the vessel sails directly abroad.

RADIO: Padang Coastal Radio Station: Call sign PKP 2.

Frequencies: 500, 6355, 2182, 6218 and 6215.5 kHz.

Arrival Advice: Required before ship's arrival (to be telegraphed 48 hours prior to ship's arrival, however not less than 24 hours via Radio Station).

a. Name of vessel.
b. ETA at the Roads.
c. Draft.
d. Quantity of cargo to be discharged (in tons).
e. Number of passengers disembarking, also dangerous cargo (if any).
f. Ship's requirement (quantity required).
g. Any other information.

VHF: Pilot Station on Channel 12. Port Operations on Channel 16.

TUGS: *Selat Siberut* of 1,700 h.p. and *Selat Riau* of 1,200 h.p. are stationed at Teluk Bayur, the use of which is compulsory for incoming and outgoing ocean-going ships. Mooring boat available.

BERTHING:

Berth	*Length* (m.)	*Depth* (m.)
1st wharf	108	10.0 (under repair)
2nd wharf	108	10.0 (under repair)
3rd wharf	96	10.0 (under repair)
4th wharf – I	150	10.0
5th Quay – II	150	10.0
Special Quay Terminal		
Cement	98.5	10.0
Cement Terminal		
T.S.T	150	9.0
T.S.B.	150	10.0
Coal Terminal	225	7.5

CRANES: 1 mobile crane 25 ton capacity, operated by Perum Pelabuhan II Teluk Bayur.

Forklifts: Capacity 10 tons (one), capacity 5 tons (two), capacity 3.5 tons (two), capacity 2.5 tons (three).

P.T. Trikors Lloyd: capacity 3 tons (two), capacity 5 tons (one).
P.T. Samudera Indonesia: capacity 2.5 tons (one).
P.T. Djakarta Lloyd: capacity 2.5 tons (four).
P.T. Rintis Prasetya Stevedoring: capacity 3.5 tons (one).
P.T. Bomala: capacity 2.5 ton (two).
P.T. Karya Nasional: capacity 2.5 ton (one).
P.T. Setia Jaya: capacity 3.5 ton (one).

STEVEDORES: *Working Hours:*

Monday-Thursday: 0800 – 1200; 1300 – 1600; 1800 – 2400; 0100 – 0400 hrs.

Friday: 0800 – 1100; 1330 – 1600; 0000 – 0100; 0100 – 0400 hrs.

Saturday: 0800 – 1200; 1300 – 1600; 1800 – 2400; 0100 – 0400 hrs.

Overtime can be worked at request of the ship on normal days and Sunday/Holidays, are counted as overtime from 0800 – 2400 hrs. and from 0000 – 0600 hrs.

Rest hours (meal time): Monday till Thursday: 1200 – 1300; 0000 – 0100 hrs. Friday: 1100 – 1330; 0000 – 0100 hrs.

Day overtime: 1600 – 1800 hrs.

Night overtime: 0000 – 0100; 0400 – 0600 hrs.

Discharging/Loading Rate:

Average speed for:

Discharging: General cargo 12 – 15 tons per gang hour. Bagged cargo 18 – 20 tons per gang hour.

Loading: General cargo 12 – 15 tons per gang hour. Bagged cargo 18 – 22 tons per gang hour.

Number of Men per Gang: Ships gang 15 men. Wharf gang 20 men.

FRESH WATER: Available at wharf, officially at a rate of 15 cu.m. per hour, unlimited quantity during the wet season (September-April). During the dry season with a maximum request of 150 cu.m. and a capacity of 4 – 6 cu.m.p.h. Water should be boiled or chemically treated before consumption.

FUEL: High speed diesel and MFO available at Wharf No. 1 and Beton No. 1.

REPAIRS: Dry dock available for ships up to 500 d.w.t. Machine-workshops for minor repairs available.

SURVEYORS: Available.

MEDICAL: Teluk Bayur has harbour clinic for emergency cases. Hospitals at Padang.

AIRPORT: At Tabing, distance 15 km.

GARBAGE DISPOSAL: The Port Authority has enacted a garbage disposal system using plastic bags and wooden crates. Red bags are provided for machinery waste such as oil and old parts and blue bags are provided for galley garbage.

WASTE OIL DISPOSAL: No service is available at present, however barges and tanker trucks will soon be provided and an incinerator will also be constructed.

SEAMAN'S CLUBS: Teluk Bayur Seaman's Club. Tel: 0751-33638/33646. Facilities include shop, sports, dances and telephone service.

CURRENCY: Indonesian Rupiah.

DEVELOPMENTS: Padang Cement have a new bagging terminal in operation.

AUTHORITY: Port Administration of Teluk Bayur/Padang, Jalan Tg. Priok, Teluk Bayur/Padang, Sumatra, Indonesia. *Tel:* 21836, 27282, 21066. *Telex:* 55151 Adpel Pd. *Contact:* V. Sima Da Silva, Port Administrator.

TELUK SEMANGKA (Semangka Bay):

05.34 S. 104.37 E.

PORT LIMITS:

Limit of Anchorage:

(a) Lat. 05° 32' S., Long. 104° 36' E.
(b) Lat. 05° 32' S., Long. 104° 39' E.
(c) Lat. 05° 36' S., Long. 104° 39' E.
(d) Lat. 05° 36' S., Long. 104° 36' E.

LOCATION: There are 2 storage tankers located in positions Lat. 05° 34' 15" S., Long. 104° 36' 45" E. ("White Rose") and Lat. 05° 33' 10" S., Long. 104° 35' 00" E. ("Supernal").

DOCUMENTS:

11 Crew Lists.
11 Passenger Lists.
7 Stores Lists.
7 Slop Chest Lists.
3 Customs Declaration Forms.
1 Clearance from Last Port.
2 Cargo Manifests.
2 Crew Personal Effects Lists.
1 Health Declaration.
1 Master's Declaration provided by Agent on arrival.

PILOTAGE: Compulsory. Pilot and Mooring Master board at the anchorage.

ANCHORAGE: In same area as floating storage vessels in about 30 fathoms of water. There is a gap in the fish traps with Tg. Balang Besi bearing 093° × 6.9 miles. This is about 9 cables from storage vessels.

The anchorage when awaiting the Sea Pilot is in position Lat. 05° 28' 55" S., Long. 105° 17' 20" E.

RESTRICTIONS: Berthing during daylight hours only. Unberthing at any time.

MAX. SIZE: 235,000 d.w.t. Depth of water 59 m. Max. LOA 325 m.

HEALTH: "Q" flag must be flown until Officials have been on board. Port Officials come from Panjang.

RADIO/VHF: ETA etc. to be sent to Pertamina Jakarta.

Agung Radio, which is situated at Kota Agung at the head of the bay, may be contacted on VHF Channels 16 or 9 during office hours.

Panjang Radio (PKC-6) operated by Pertamina, may also be contacted on VHF.

TUGS: 2 tugs used for berthing/unberthing.

BERTHING: Vessels berth alongside Floating Storage Tankers "White Rose" or "Supernal" with Yokohama fenders on starboard side. They are anchored in positions between 2 miles and 4 miles from the head of the bay.

Vessels berth port side alongside. Access is provided by floating storage vessel.

Hose connection amidships. Storage tankers mooring gang connect hoses. Ship's crane/derrick required for hose support. 2×12 in. hoses used, 1 per grade.

MEDICAL: Hospital clinic available.

FRESH WATER: Available by barge.

FUEL: Available by barge.

CONSULS: None.

REPAIRS: No facilities available.

AIRPORT: Baranti Airport at Bandar Lampung.

TIME: GMT plus 7 hours.

GENERAL: It must be ensured that the STS operation is carried out in accordance with the ICS/OCIMF STS transfer guide and ISGOTT recommendations.

There are approximately 100 moored floating fish traps in the area. They are met with from about 7 miles from the head of the bay. At night, they are well lit with powerful fishing lights and they tend to lie in lines which, with care, allows access to the Anchorage Area.

Accommodation may be needed for Pilot and Mooring Master.

Numerous jellyfish may cause problems with intakes.

AGENCY: See "General" before first port.

SHIPMASTER'S REPORT: January 1983.

Documents: Advisable to have at least 12 copies of Crew List. Harbour Master takes all certificates ashore and returns same prior to sailing.

Pilotage: No Pilots available for anchoring. Mooring Master berths/unberths vessel alongside storage tanker.

Anchorage: Good anchorage in depths of 15 fathoms – 50 fathoms of water in the Northern part of the bay.

Radio: PKI 1 and PKI 2 (Jakarta).

VHF: "Kota Agung Radio" keeps continuous watch on Channel 9.

Pertamina, local Agent, Mooring Master and storage tankers can be contacted on Channel 9.

Tugs: Two harbour tugs available for berthing/unberthing.

Tankers: No berths. 2 storage tankers of about 235,000 d.w.t. handling gas oil and kerosene. 4 Yokohama fenders on the starboard side of storage tankers. 12 in. hoses used for cargo transfer.

Fuel: Gas oil available.

Consuls: British Consul stationed in Jakarta (Tel: 330904).

Repairs: Minor repairs possible.

Surveyors: Lloyd's and Indonesian Government Radio Surveyors had to come from Jakarta to carry out vessels Safety Equipment and Safety Radio Telegraphy Surveys.

Airport: Nearest airport at Tanjung Karang, 100 km. away. Several flights to Jakarta daily.

Time: GMT plus 7 hours throughout the year.

Services: Limited stocks of fresh fruits, vegetables and meat available locally.

Shore Leave: Pertamina operates 3 service boats daily for crew to go ashore.

Identification Cards: Not necessary.

Delays: About 7 days – 10 days for discharging gas oil.

SHIPMASTER'S REPORT: October 1992.

Ship to Ship Discharge:

The vessel sailed from Singapore to Teluk Semangka, loaded to Tropical Marks (draft 11.9 m. forward, and 12.3 m. aft), with 57,286 tonnes (423,872 bbls. of gas oil – Bill of Lading figure). Ship's figures 57,398.5 tonnes and 424,702 bbls. respectively.

Route was via Karimata and Sunda Straits, total distance 866 miles. Route via Gaspar is shorter (708 miles), but in approaches to latter numerous shallow patches reported, and charts have various warnings on them concerning inadequate survey work in Gaspar Strait. Only tricky navigation is passage through 'Outer Channel', where we encountered fishing boats, tugs and tows, coastal vessels crossing and other vessels also transitting the Strait itself. Navigation lights en route are poor, and some extinguished, but good land radar targets all the way. Frequent ferries crossing Sunda Strait.

Teluk Semangka Bay is open to the sea only from the S.W., from which direction a gentle, short swell is induced. The whole Inlet has deep water with no obstructions (local fishing craft apart), and no shallow patches. It would seem ideally suited to 'ship-to-ship transfer operations, which appear to be continuous.

The anchored group of about 10 vessels at the Terminal could easily be discerned on the radar at distance in excess of 20 miles. We arrived at 0430 hrs. and were unable initially to contact Agent on VHF Channel 16, or the local frequency in use (Channel 9).

On approaching, we spoke to the mother vessel 'Supernal', which had little firm information. A short while later we contacted Agent who advised us to anchor in vicinity of 'Supernal', and to be ready for berthing from 0800 hrs. 'Supernal' anchored near head of Bay in position 05° 32.8' S., 104° 35.3' E., in 41 m. of water. We anchored one mile South of her to await berthing. There was plenty of room between all of the anchored vessels. There were two other 'ship-to-ship' transfers in progress, but these were 2 miles to the East of 'Supernal'.

'Supernal' is of about 225,000 d.w.t., with maximum loaded draft of about 21 m., although she was fairly light when we berthed alongside her. Vessel appears to be well maintained and operated. The floating string of 4 large Yokohama fenders were in good condition, with a good spare on deck. The 2×12 in. hoses, one for gasoil and one for kerosene, were in good condition. 'Supernal' is equipped with derricks only, but they appeared to be in good condition, and were rigged with large doubling blocks for heavy lifting. The 'Supernal' is equipped with inert gas, and this appeared to be fully operational.

Due to severe overhead lightening accompanied by torrential rain on at least two occasions, we were very glad of the inert gas systems on both vessels. The 'Supernal' crew were very efficient, although the protective clothing fell well short of international standards. All moorings were from lightening ship alone. Communications on Motorola were very good, and maintained throughout.

Local Pilot boarded at about 0830 hrs. At least 4 tugs of varying age, size and horsepower can be seen lying off the small port. Two of these tugs were assigned to us, but there was 30 minutes delay after weighing anchor at 0832 hrs., because one tug had apparently developed compressor problems prior to leaving port, and a substitute was assigned. One tug made fast each end of the maindeck starboard side at about 0930 hrs. Disappointingly, neither had tug lines available, and vessel had to secure tugs with own mooring ropes, eventually doubled up. Our mooring ropes are inadequate for such powerful tugs, particularly when in a loaded condition. Additonally, our ropes were badly chafed through the Panama fairleads at the bows of the tugs. Hence the need for doubling up towing lines. After departure, 3 ropes had to have new eyes spliced into them. Whilst awaiting second tug and securing same, we were edged up to starboard quarter of 'Supernal', to within 3 cables or so, in readiness for berthing.

Weather was clear, sunny and nearly flat calm. 'Supernal' appeared to be on a pretty steady heading pointing to the S.W. Throughout, there appeared to be little tide or current, and we laid in various directions. Basically, for mooring, we edged forward to a position close abeam of 'Supernal' (about 300 m.), and then the tugs pushed us alongside, and using our engines ahead and astern to adjust for final position. We expressed concern regarding the lack of and position of fendering at the bow of the aft tug. The bow of this tug had a large, horizontal, flat pushing platform. However, it was not well covered, which consisted mainly of badly positioned tractor tyres. There was a danger of the edge of the platform being pushed into our side, piercing or causing indentation. In view of the latter, Pilot was told to proceed slowly with pushing. 'Supernal' had plenty of leads, and we completed mooring at 1115 hrs., with basically 4 head and stern lines, and 2 springs at each end. The poorest leads were the shorter forward springs, as 'Supernal' did not have fairlead close forward of her manifolds.

Only two local surveyors stayed throughout, alternating between both vessels. A number of officials boarded at about 1330 hrs. A spare set of cargo documents for the Customs official would have saved us a bit of time.

Discharge was with one pump via the 1×12 in. hose. Initial rates exceeding 3,000 cu.m./hr. were achieved, but the rating of the pump is only 2,000 cu.m./hr., and so for fear of damaging valves by exceeding pipeline maximum recommended throughput rates, the pump was eased such that bulk discharge continued at about 2,250 – 2,500 cu.m./hr.

Moorings were comfortably adequate for this operation in persisting weather conditions. Gentle pitching and minimal rolling were experienced. Basically, the 'Supernal' handles products only, i.e. gasoil and kerosene. She acts purely as a storage and transfer facility. Other smaller vessels take various quantities of product from her, ferrying it to local refineries and ports. We believe 'Supernal' has been on station for 4 years.

Two miles to the East, the 390,000 d.w.t. 'White Rose' is doing a similar operation, but for crude oil. She has been here for one year. Both mother vessels appear busy. Crude to "White Rose' comes from various locations, we believe mainly Indonesia, but surprisingly also from the Gulf. It is thence ferried to local refineries such as Balikpapan, Cilacap and Sepinggan.

We completed discharge at 2230 hrs. on the day after arriving. No problems, apart from a bit of protracted draining experienced. No night-time berthing or unmooring undertaken. We let go at 0830 hrs. the following morning. Unmooring is basically the reverse of berthing, with the vessel being pulled clear by a tug at each end.

TERNATE: 00.46 N. 127.22 E. (See Plan)

DOCUMENTS: The following documents must be ready upon vessel's arrival:

14 copies Crew List.
12 copies Passenger List.
5 copies Stores List.
8 copies Cargo Manifest.
Bills of Lading
8 copies General Information.
5 copies Personal Effects List.
5 copies Vaccination List.
5 copies Firearms and Ammunition List.
Harbour Report.
Last Port Clearance.
Completed Declaration of Health.
Valid Derat Certificate.
Passports.

PILOTAGE: Compulsory. Notice of ETA and request for a Pilot must be made at least 6 hours in advance to Pilotage Authority through Ternate Radio (Coastal Station) on VHF Channel 16 or direct to Ternate Pilot Station on VHF Channel 12.

Pilotage service address: Dinas Kepanduan Perum Pelabuhan IV Cabang Ternate. Tel: 21574.

ANCHORAGE: Safe anchorage in harbour but better anchorage about 3 cables to the East of wharf in a depth of about 65 m.
MAX. SIZE: Max. draft alongside 9.5 m.
HEALTH: Pratique is normally given by Pilot Station. Any advice on health matters obtainable from pilot service.
RADIO: Ternate Coastal Station, call sign "PKE" on VHF Channel 16. Pilot Station on VHF Channel 12 (Every day during working hours: 0800 – 1500).
TUGS: As required by Pilots, ship's line normally used.
BERTHING: Berth No. 1: Wharf length 173 m. Depth at LWS 9.0 m.
CRANES: 1 × 25 tonne mobile heavy lift crane.
STEVEDORES: Stevedoring arranged by labour union via Agent.
MEDICAL: Hospital facilities available.
TANKERS: Oil Jetty (Pertamina Depot): Located 9 miles South of Ternate. Max. size alongside is 7,000 d.w.t.
DENSITY: 1025.
FRESH WATER: Available from berth, rate 40 t.p.h.
FUEL: Oil delivered by tank trucks.
CONSUL: None.
DRY DOCKS: No facilities.
GANGWAY/DECK WATCHMEN: Usually ship's crew.
OPENING/CLOSING HATCHES: By stevedores or ship's crew. Whichever to ship's advantage.
CERTIFICATES: Register, Tonnage and usual Certificates.
REPATRIATION: Crew changes and repatriation can be arranged.
AIRPORT: Distance about 5 miles, served by Bourag Air Lines and Merpati Nusantara Airlines.
TIME: GMT plus 9 hours.
HOLIDAYS: National holidays are New Year, Idul Fitri, Idul Adha, Maulid, Easter Day, Waisyak, Nyepi, Ascencion Day, Miradz and the first day of Muharam.
POLICE: Tel: 21164.
EMERGENCY CO-ORDINATION CENTRE: Ternate Coastguard Tel: 21143.
SHORE LEAVE: No restrictions.
GENERAL: *Ship's Inspection Team:* This team consists of the Port Health Officer, Customs Officers, Harbour Master/Immigration Officer. The vessel having been granted Free Pratique, the Immigration Officer starts checking Passports, Seamen's Books and Crew Lists and then issues shore passes.

Vessel's bonded store will be sealed by Customs Officer on arrival and will remain sealed until the vessel leaves Ternate Port.

The ship's radio transmitter may not be used whilst vessel alongside.
Chart: Indonesian Chart No. 385.
AUTHORITY: The Port Administrator, JL. Jend. A. Yani No. 1, Ternate. *Tel:* 21129, 21206, 21574.
Harbour Master, JL. Jend. A. Yani No. 1, Ternate. *Tel:* 21572.

TUBANG: 01.45 S. 125.06 E. (See Plan)

SHIP'S OFFICER'S REPORT: August 1989.

LOCATION: Port of Tubang is situated on the Northern side of Taliabu Island, in the Molucca Sea. Built-up areas consist mainly of Tubang Sawmill and scattered houses for the labourers.
PILOTAGE: A Singaporean supercargo who assists the Master in anchoring, boards in position Lat. 01° 44' S., Long. 125° 4' 30" E.
ANCHORAGE: The anchorage, which also serves as loading position, is in position Lat. 01° 45' 16" S., Long. 125° 05' 37" E. The depth of water is 18.0 m., with muddy bottom. This vessel (19,000 g.r.t.) used 5 shackles of chain. The Southerly wind reached a maximum 15 knots.
RESTRICTIONS: Vessel waited until daylight before entering as no chart available (BA. Chart No. 3241 was of little use). Later, the Agent supplied us with Indonesian Chart No. 274, which we used when leaving.
RADIO: Ambon Coast Radio. Call Sign PKE.
MEDICAL: First Aid available.
DENSITY: 1025.
FRESH WATER: Not available.
FUEL: Not available.
OPENING/CLOSING HATCHES: By ship's crew.
STEVEDORES: Work throughout 24 hours.
CUSTOMS ALLOWANCES: 200 cigarettes and 1 bottle of wine/spirits per person.
TIME: GMT plus 9 hours. No alteration of clocks during the year.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Not necessary.
GENERAL: Pratique granted on arrival at the anchorage. Agent and Port Authorities are from Ambon. They boarded the ship together with the stevedores, who are from the adjacent island of Mangoli. After formalities had been completed, the Agent and 2 Customs Officers remained on board. Food and accommodation must be provided by the ship. As for the stevedores, fresh water and a makeshift "toilet" should be provided, as they cooked and stayed on board during loading operation.

On departure, the stevedores disembarked, but the Agent and Customs stayed with the ship until the next loading port of Waisarisa, Seram Island. They disembarked after completion of loading.

The Singaporean supercargo also stayed on board and disembarked while receiving fuel and stores in Singapore.
Provisions: Small quantity of provisions and stores can be obtained.

UJUNG PANDANG (Macassar): 05.08 S. 119.24 E. (See Plan)

DOCUMENTS:

Certificate of Registry
Crew List
Log Book
Certificate of Seaworthiness
Load Line Certificate
Radio Certificate (Solas Certificate)
Health Certificate
Equipment Certificate (Solas Certificate)

Shipping documents as follows:

Manifest of cargo
Bills of Lading
Charter Party (if necessary)

PILOTAGE: Pilotage compulsory for vessels of more than 150 cu.m. i gross volumes.
To order a Pilot:

1. Contact the ship's Agent in this port via Ujung Pandang Radio (cal sign PKF) by ship's radio or VHF Channel 16.
2. Also contact Ujung Pandang Pilot Station tower by VHF Channel 16.

Pilotage Information:

1. Every vessel of 71 m. LOA and over under Pilot's direction for berthing and unberthing is to use the Port Administration tugs.

There are 2 tugs available with initial letters "PA" on their blue funnel,

M.T. "Anggada VII" 800 h.p.
M.T. "Selat Tanakeke" 1,160 h.p.

2. Every vessel of 31 m. LOA and over, under Pilot's direction for berthing and unberthing is to be assisted by Port Administration mooring boat.

ANCHORAGE: The anchorage for vessels awaiting a Pilot is around the position Lat. 05° 07' 30" S., Long. 119° 22' 30" E. with depth of water 25 m. at LWS.

RESTRICTIONS: Entry not permitted after 1800 hrs. Every foreign vessel is to have special permission from Indonesian Government or Directorate General of Sea Communication for entering and should have representatives or handling Agent before entering this port.

Warships should contact the Indonesian Navy Commander of Territory VII (Pangdaeral VII) before entering the port.

MAX. SIZE: Max. LOA 200 m. Max. draft 9.0 m.

RADIO: See "Pilotage".

VHF: Harbour Master on Channel 16. Pilot Station on Channel 12.

TUGS: 5 tugs available.

BERTHING:

Depths of Water:

Main Entrance Channel: 13 m. at LWS.
Soekarno Wharf: Length 1,350 m. Depth 8.0 m. – 9.0 m. at LWS.
Hatta Wharf: Length 550 m. Depth 8.0 m. – 9.0 m. at LWS.
Oil Jetty (Pertamina Jetty): 8 m. at LWS.
Anchorage in the inner waters: 11 m. at LWS.

Special Attention in West Monsoons (November to February):

All vessels alongside Soekarno and Hatta Wharf should use fore and aft mooring lines to buoys which are available, to prevent the beating of ship's hull against the wharf.

STEVEDORES: Stevedoring by Port Labour (UKA). Capacity for discharging: 12 ton gang/hour – General Cargo. 17 ton gang/hour – Bulk Cargo (in bags). Heavy cranes available, capacity 15 tons.

MEDICAL: Doctor and clinic available.

TANKERS: *Pertamina Jetty:*

LOA: 160 m.
Depth: 9.0 m.
Max. Size: 18,000 d.w.t.
Cargo handled: Premium, Kerosene, Avtur, HSD, HFO and Gas Oil.
Loading rates: 25 – 120 kl./hr.
Discharge rates: 250 – 375 t.p.h.
No. of lines/size: 7 lines (4 in., 6 in. and 8 in.).
Operator: Pertamina, Jl.Garuda No. 1, Ujung Pandang, Indonesia. Tel: (62-411) 4682, 5683. Fax: (62-411) 82813. Telex: 71141, 71186.

FRESH WATER: Available rate 50 t.p.h.

FUEL: Available, MFO 50 t.p.h.

IDENTIFICATION CARDS: Needed by Immigration Office.

CONSULS: Japan and Norway.

REPAIRS: Minor deck or engine repairs possible.

GANGWAY/DECK WATCHMEN: There are no special deck watch-men services but can be arranged through Agent.

OPENING/CLOSING HATCHES: Work carried out by stevedores.

CUSTOMS ALLOWANCES: Tobacco. Only sufficient for personal use (500 grams tobacco or 200 cigarettes for one passenger).

Wine and/or spirits not permitted out of bond.

AIRPORT: Macassar Airport, called "Mandai Airport", distance from town about 23 km.

Services: Macassar – Kendari and Jakarta – Surabaya – Macassar Manado every day (3 times a day). Macassar – Ambon – Jayapura.

TIME: Middle Indonesian Time, GMT plus 8 hours.

HOLIDAYS: Every Sunday; New Year (January 1st); Idul Adha (November 11th); 1st Muharam 1399 H. Isa Almasih (May 15th); Proclamation Day (August 17th); Mi'radj Muhammad (July 3rd); Idul Fitri (September 9th); Maulud Muhammad (February 20th); Santa Maria (May 15th); Christmas Day (December 25th). Work can be arranged at overtime rates.

POLICE/FIRE/AMBULANCE: Police, Fire 4306. Ambulance 7227.

TELEPHONES: No arrangements exist for placing telephones on board.

DELAYS: Caused by rain (bad weather).

DEVELOPMENTS: In near future, Ujung Pandang to have bonded warehouse, godown for dangerous cargoes and be able to handle containers.

SHIPMASTER'S REPORT: March 1986.

5 buoys marked swept channel which has been realigned west of Kudingareng Lompo. Most local vessels use the alternative swept channel which passes South and East of Kudingareng Lompo. Mariso Beacon has been replaced by Ujung Pandang Beacon. The windows of the flour mill and silo terminal are the most positive mark for approaching the Pilot Station. The light beacons close to the entrance are impossible to identify from the city lights behind.

Pilot station has VHF Channels 12 and 16. 24 hour pilotage service is now available. The Harbour is cluttered by a dozen unlit mooring buoys, and great care is needed for ship's propellers.

Standard Indonesian Arrival Formalities soon after arrival. Inspection team consists of 2 Immigration Officers, 2 Customs Officers, Officials from the Harbour Masters Office and 2 Agents.

Vessels loaded crated plywood, standard 8 in. × 4 in. sheets, averaging 1.070 kg. Freight measurement 1.8 cu.m., gross measurement 2.02 cu.m. stowage about 3.06 cu.m. in centre holds. Small fork lift stows 6 tiers high, then lay steel plates and load up to a further 6 tiers. Vessel worked 3 hooks which averaged 50 – 60 crates per hook per hour. Factory 10 km. by road. Special alertness required for closing hatches in sudden torrential rain at night. Also Special precautions required for pilferage, such as removing all pressure gauges from hydraulic systems in deck houses. Long hasp padlocks provide no security at all, being broken more quickly than they can be unlocked.

AUTHORITY: Department of Communication, Directorate of Sea Communication, Port Administration Ujung Pandang, 6th Sea Communication Regional Office, Ujung Pandang.

WAINGAPU: 09.38 S. 120.16 E. **(See Plan)**

PORT LIMITS: To the South of Lat. 09° 37' 30" S., and to the West of Long. 120° 18' 00" E., to the shore.

DOCUMENTS:

2 copies Master's Cable.
2 copies Arrival Crew List.
2 copies Passenger List.
2 copies Stores and Provisions List.
2 copies Declaration of Crew's Personal Effects.
2 copies Manifest of all Foreign Cargo on board.
2 copies Manifest of Dangerous Cargo on board.
Clearance from last port of call.
All ship's Certificates.

PILOTAGE: No Pilot available.

Master of the vessel is required to pilot his vessel to the berth. Communication can be made with the Harbour Master through VHF Channel 16 to enquire if berth is ready or not.

ANCHORAGES: Vessels over LOA 60 m. may anchor 0.25 miles N.E. of the outer red beacon in a depth of 45 m. – 60 m.

RESTRICTIONS: No restrictions imposed upon entry at night-time or in accordance with the tide and draft.

MAX. SIZE: LOA 100 m., draft 10.0 m.

HEALTH: Vessels entering after calling at a foreign port are required to obtain Pratique. Free Pratique not necessary when coming from another Indonesian port.

RADIO: Waingapu Radio – Call sign "PKD 62".

SSB frequencies: 6,215 kHz. Hours: 0030 hrs. – 0100 hrs. (UTC) and 0300 hrs. – 0400 hrs. (UTC), and 2,182 kHz from 0000 hrs. – 0030 hrs. (UTC).

VHF: Waingapu Radio on Channel 16.

Working Hours: 0000 hrs. – 0600 hrs. (UTC).

TUGS: No tugs available at the port.

BERTHING:

Berth No. 1: Used by small vessels up to 500 d.w.t. Length of the jetty 70 m. Depth alongside 5.0 m.

Berth No. 2: Used for handling cargo vessels up to 6,000 d.w.t. and passenger vessels. Length of quay 100 m. Depth alongside 14.0 m.

Berth No. 3: Used by oil tankers up to 2,000 d.w.t. Length of jetty 50 m. Depth alongside 12.0 m.

CRANES: No shore cranes available.

BRIDGES: None.

STEVEDORES: Vessel to give Agent early advice of ETA and cargo, in order to arrange gangs.

Main import commodities: Foodstuff (rice or flour) and building materials. Average discharge/loading rate per hour is 12 tonnes, and bagged cargo is 20 tonnes per hour.

MEDICAL: There is a general hospital with doctors and dental facilities available. Inoculations and vaccination certificates and treatment can be obtained, if required.

TANKERS: See "Berthing".

DENSITY: There are 2 small rivers flowing into the harbour, but the water in the harbour area is almost salt.

FRESH WATER: Available. Rate of delivery 50 cu.m./hr. Cost RP. 3.750/ton.

FUEL: All grades available by tanker truck.

FIRE PRECAUTIONS: Special fire precautions required if arms, ammunition or inflammable cargo on board.

CONSULS: None.

REPAIRS: No facilities.

DRY DOCKS: None.

GANGWAY/DECK WATCHMEN: Not necessary, as Police and Port Authority Officers are in charge of security in the port and on the vessel.

OPENING/CLOSING HATCHES: Mechanical hatches and electric hatches handled by ship's crew. Stevedores handle conventional hatch covers.

CUSTOMS ALLOWANCES: 200 cigarettes and 1 pint of spirits per person per week.

CARGO GEAR: No cranes and forklifts available.

REPATRIATION: Repatriation of crew members possible by air or passenger vessel to Surabaya or Jakarta.

AIRPORT: Distance from harbour is 10 km. Served by Bouraq and Merpati Airlines with daily flights.

TIME: Local time is GMT plus 8 hours.

HOLIDAYS: New Year's Day; Good Friday; Nyepi Day, Ascension Day; Indonesian Independence Day (17th August); Idul Fitri Day; Idul Adha Day; Waisak Day; Christmas Day.

POLICE/AMBULANCE/FIRE: Telephone No.: Police (0386) 110. Ambulance (0386) 118.

EMERGENCY CO-ORDINATION CENTRE: No Search and Rescue (SAR) in Waingapu.

TELEPHONES: No arrangements exist for placing telephones on board.

SERVICES: None.

BANKS: Bank Rakyat Indonesia, Jalan A. Yani No. 30. Tel: (0386) 21030. Telex: (0386) 35433.

BNI, 46 Jalan Ampera No. 1, Waingapu. Tel: (0386) 22146. Fax: (0386) 22112.

STORING: See "Prelims".
(1) Vessel cannot be stored by barge.
(2) No regulations concerning barge storing.
(3) Trucks can proceed alongside the berth.
(4) No forklifts available.
(5) None.
(6) No local riggers available.

SHIP SUPPLY SERVICE: Not available.

SHORE LEAVE: Crew members are allowed to go ashore as long as vessel is alongside the berth.

IDENTIFICATION CARDS: No shore passes issued. Seaman's Book is sufficient.

GARBAGE DISPOSAL: No special service available. No drums or skips provided on board.

WASTE OIL DISPOSAL: No special berth for waste oil disposal.

SEAMAN'S CLUBS: None.

CURRENCY: Indonesian Rupiah (RP). One Sterling Pound buys RP. 3,541.12 (24.2.96).

DELAYS: Delay occurs when there is a passenger ship already alongside or due to arrive that day.

AUTHORITY: Port of Waingapu, P.O.Box 87112, Jalan Nangamesi, Waingapu, Sumba Timur, Nusatenggara Timur, Indonesia. *Tel:* (0386) 21346, 21418. *Contact:* Y. Littik, Harbour Master/Port Administrator, Adam Malik No. 53, Waingapu. Tel: (0386) 21418, 21802.

WAISARISA: 03.13 S. 128.16 E. (See Plan)

SHIP'S OFFICER'S REPORT: August 1989.

LOCATION: Teluk Piru, Seram Island. B.A. Charts No. 3241 and 3242 used.

ANCHORAGE: The anchorage, which also serves as loading position, is in position Lat. 03° 12' 54" S., Long. 128° 15' 39" E. Depth of water is 80 m. – 85 m. Bottom is sand and mud. At times fresh breeze prevails from S.E. to S.W. and creates swell. At these times barges should always be alongside the vessel's port side.

RADIO: See "Ambon".

MEDICAL: A doctor is available.

DENSITY: 1025.

STEVEDORES: Work 3 shifts.

TIME: GMT plus 9 hours.

AIRPORT: See "Ambon". Reachable from Waisarisa by speedboat ferry which leaves Waisarisa every morning.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Not necessary.

GENERAL: Private port. There is a pier, but used mainly by tugs. Salvage work is in progress on a wreck a few metres from the pier.

Three to 4 ships can be accommodated at the anchorage.

Provision: Vegetables and some stores available.

WAMSASI: 03.33 S. 126.09 E.

Log loading port on the West coast of Buru Island in position: Lat. 03° 33.5' S., Long 126° 09.5' E.

Vessels anchor 600 m. (approximately) off-shore in depth of 15 m.

WIDURI TERMINAL: 04.40 S. 106.39 E. (See Plan)

LOCATION: Widuri Terminal consists of the crude oil production and export facilities of the Widuri, Intan, and N.E. Intan Fields, offshore Indonesia in the Java Sea, Northeast of Sunda Strait.

The Terminal limits cover an area of approximately 5.5 square miles. Within the Terminal limits there are the following designated areas:

Anchorage Area
Manoeuvring Area

Within these areas the Terminal Mooring Master supervises the movement of all vessels and the Terminal Safety Regulations are in effect.

Also see "Aids to Navigation".

The Terminal (pipelines, PLEMs, submarine hoses, metering systems and export buoys) is owned by Perusahaan Pertambangan Minyak Dan Gas Bumi Negara (Pertamina), a State Enterprise of the Republic of Indonesia, and operated by Maxus Southeast Sumatra, Inc., a Maxus Energy Enterprise, hereinafter referred to as Maxus. The Terminal storage and pumping system comprises a 338,000 d.w.t. tanker, the "Maxus Widuri". The tanker is owned by Limosa and is jointly operated by Maxus and the owners.

No. 1 Storage Tanker "Maxus Widuri": Maxus Marine Administrative Offices, personnel living quarters, storage and crude testing laboratory are located on board the "Maxus Widuri" which is permanently moored on location by 10 mooring chains attached to piles. Overall length of the tanker is 1,204.10 ft. with a moulded breadth of 181.92 ft. and moulded depth of 94.35 ft.

Total crude oil capacity is 2,536,261 gross barrels. Loading of crude oil from the No.1 Storage Tanker to the export tankers is accomplished through Daniels Turbine Meters, each having a maximum capacity of 11,000 barrels per hour. Maximum discharge rate is 44,000 barrels per hour.

IMPORTANT FEATURES:
1. There are 2 single point mooring berths (SPM's) at the Widuri Terminal.
2. The Mooring Master moors, unmoors and supervises the movement of all vessels in the anchorage and manoeuvring areas.
3. Safety rules and regulations are strictly enforced. The safety requirements are based upon the provision of the Codes of Safe Practices currently accepted by the oil and tanker industries.
4. The Widuri Terminal will maintain a 24 hour radio watch. All incoming vessels should establish early contact with this station in order to transmit ETA data, etc.
5. Shore liberty will not be granted except in cases of extreme emergency. Crew members cannot sign-off or leave their vessel at the Terminal.
6. The laws of Indonesia are in force at Widuri Terminal and all personnel are required to abide by them.
7. Display of 'Q' (Quarantine), 'N' (November) and call sign flags on approach to Widuri Terminal must be maintained until clearance is granted. By day, flag of Indonesia should be flown throughout the vessel's stay in port.
8. Vessels should be prepared to answer identification queries from Indonesian Naval Patrol Craft.
9. During loading or unloading, the International Code Flag 'B' or red light at night shall be displayed in accordance with the International Code Signal Agreement.
10. Language of the Terminal is English and Indonesian.
11. Indonesian local time is GMT plus 7 hours.
12. Visitors must obtain a Special pass from Indonesian Government officials located in the Terminal and from the Company Mooring Master. Due to potential hazards involved, visitors will be allowed at the Terminal only under special conditions.

DOCUMENTS: *Documentation:* In the normal course of events Widuri Terminal acts as a tanker agent and prepares all crude oil documents. No charges are made for these services.

Documents needed by vessel: The following documents are required for immediate inspection by the Terminal Officials:

Maritime Declaration of Health.
Valid Derat or Exemption Certificate.
Crew List.
Passenger List, if any.
Vaccination Certificates of all crew members or passengers.
Certificates of Innoculation against any communicable diseases.
Valid Passports and/or Seaman's Books for all crew members or passengers.
Notice of Readiness.
Indonesian Consular Clearance.

Customs will require the following:

8 copies Crew List.
1 copy Crew Declaration of Personal Belongings.
1 copy Ship's Stores List.
1 copy Passenger List.
6 copies Cargo Manifest for Widuri Terminal loading.
1 copy Cargo Manifest for Transit Cargo with a summary.
1 copy Passenger Manifest.

Clearance from the last Port of Call will be required by the Government Authorities.

Crew List and Crew Declaration of Personal Belongings must be on the approved Indonesian Documents. Vessels are advised on their initial visit to the port to obtain sufficient forms for future use.

Outward Clearance: A tanker will be considered clear to depart Widuri Terminal when the crude oil documents and its Outward Clearance Certificates have been delivered to the Master of the vessel.

PILOTAGE: Pilotage is compulsory within the Terminal limits. Vessels to be moored at Widuri Terminal will be boarded by the Terminal Mooring Master in the anchorage area. The Mooring Master will advise the ship's Master on approaches to the SPM, mooring, unmooring, connection and disconnection of hoses and all other operations within the Terminal area.

All manoeuvring of ships within the Terminal area shall be done only in accordance with the advice of the Widuri Terminal Mooring Master, subject to the understanding that in all cases and circumstances the Master of the vessel is solely responsible for the safety and proper manoeuvring of the vessel. The vessel's Master or one of his qualified deck officers must be on the bridge at all times while tanker is being manoeuvred.

When a Mooring Master and his launch crew are assigned to a ship on business, it is expected that the ship will supply them with meals at the same time and in the same manner as comparable with personnel of the ship. No special meals or special foods will be required. The Terminal will also keep this item to a basic minimum. The ship will also provide shelter and smoking facilities in the same manner as meals. All communications between Terminal personnel assigned to a ship and Ship's Personnel should be through the Mooring Master.

Also see "Mooring".

AIDS TO NAVIGATION: The approach channel is along a heading so that the "Maxus Widuri" blow light is aligned with the Widuri Process Platform flare.

No.1 Storage Tanker "Maxus Widuri" is used for storage of crude oil, accommodation and headquarters of Widuri Terminal personnel. It lies permanently moored in position Lat. 04° 40' 50.685" S. Long. 106° 39' 9.541" E.

The "Maxus Widuri" is fitted with a 15 nautical mile all around white light, flashing Morse Code 'U' at 15 seconds interval. In addition, two (2) 2.5 nautical mile red peripheral lights, flashing Morse Code 'U' at 15 seconds interval, are installed on the port and starboard side of the vessel, in way of the midships section.

The 1st Export SPM is located in approximate position Lat. 4° 40' 11.66" S., Long. 106° 39' 50.0" E., and is fitted with a 5 nautical mile white light, flashing Morse Code 'U' at 15 seconds interval.

The 2nd Export SPM is located in approximate position Lat. 4° 41' 36.11" S., Long. 106° 38' 48.99" E., and is fitted with a 5 nautical mile white light, flashing Morse Code 'U' at 15 seconds interval.

The Widuri Intan Platforms are located at the following positions:

	Lat.	Long.
N.E. Intan	4° 33' 35.340" S.	106° 42' 01.220" E.
Intan A	4° 35' 04.977" S.	106° 38' 33.860" E.
Intan B	4° 34' 48.060" S.	106° 39' 37.626" E.
Widuri Process	4° 40' 01.618" S.	106° 37' 46.518" S.
Widuri Flare Bridge	4° 40' 01.678" S.	106° 37' 50.351" E.
Widuri A	4° 40' 01.069" S.	106° 37' 44.387" E.
Widuri B	4° 41' 01.487" S.	106° 37' 54.961" E.
Widuri C	4° 39' 53.192" S.	106° 38' 48.456" E.
Widuri D	4° 40' 51.204" S.	106° 37' 36.246" E.
Widuri E	4° 41' 12.5" S.	106° 37' 13" E
Indri	4° 38' 46.768" S.	106° 35' 54.968" E.

APPROACHES: *Approach Channel:* A surveyed Approach Channel from an established navigation area has been provided for access to and exit from the Terminal area. This channel is 1,000 ft. wide and 15 miles long and has a minimum water depth of 69 ft. Lowest Astronomical Tide (LAT).

Manoeuvring Area: The Manoeuvring Area is the immediate approach to and exit from the export buoys. The Manoeuvring Area is laid out with maximum flexibility for approach directions, depending upon prevailing sea conditions. However, the Manoeuvring Area is limited by the presence of pipelines and storage tanker mooring chains.

Entering and exiting the Manoeuvring Area is prohibited without the onboard presence of the Mooring Master and the assistance of the Line Handling Vessels. Anchoring is prohibited within the Manoeuvring Area.

The minimum water depth of the Manoeuvring Area is 68 ft. LAT.

Prohibited Area: The Prohibited Area is distinguished by the presence of numerous platforms, pipelines, cables and chains. Entry to and anchoring in this area is strictly prohibited.

Restricted Area: The Restricted Area contains oil pipelines and high voltage electric cables and is restricted to minimum draft vessels.

The Restricted Area is contained within the lines joining the following points:

	Lat.	Long.
A.	04° 40' 17" S.	106° 40' 40" E.
B.	04° 42' 19" S.	106° 39' 26" E.
C.	04° 42' 12" S.	106° 36' 40" E.
D.	04° 40' 50" S.	106° 36' 38" E.
E.	04° 39' 36" S.	106° 38' 00" E.
and between:		
F.	04° 33' 35" S.	106° 42' 01" E.
G.	04° 35' 04" S.	106° 38' 33" E.
H.	04° 40' 50" S.	106° 36' 38" E.

Approach to Terminal: On approaching the Widuri Terminal, the Master of an incoming tanker should head for the anchorage area where under normal conditions after 'H' flag is shown, the vessel will be boarded by the Widuri Terminal Mooring Master.

Vessels approaching or departing the Terminal area are recommended to enter to or exit from via the Approach Channel. The Mooring Master may reject a vessel entering the Terminal area from areas other than the designated Approach Channel and may be rejected for future cargo up lifting.

Vessels Anchoring: If tanker is not scheduled to berth on arrival (e.g. another vessel is already in the berth, or the Terminal is closed on account of adverse weather, etc.), the Master will be advised by radio and be requested to anchor in the anchorage area.

Operations: Weather permitting, Widuri Terminal will operate 24 hours per day, 7 days per week. Tankers will be berthed during daylight hours only and unmoored at any time.

If storage is critical, ships may be berthed at any time day or night.

ANCHORAGE: The Anchorage Area is the holding area for tankers waiting to berth at the export buoys.

Entrance position is Lat. 04° 42' 08.483" S., Long. 106° 41' 18.199" E.

This represents the entrance to a triangular area with approximately 2.0 mile sides which must be used by vessels required to wait at anchor. Anchoring in any area other than the Anchorage Area is prohibited. The Mooring Master will board arriving tankers in the Anchorage Area.

Centre of Anchorage Area: Lat. 04° 41' 40" S., Long. 106° 40' 30" E.

The holding area is East of the Terminal facilities with a minimum water depth of 68 ft. LAT. Holding ground is fairly good. Area is large enough for sufficient manoeuvring and swinging room for several vessels.

READINESS: *Notice of Readiness:* After arrival in the anchorage area and when the tanker is in every repect ready to load, the Master may tender his Notice of Readiness.

Notice of Readiness will be accepted only *after the Master has received the Mooring Master on board.*

Laytime will commence 6 hours after acceptance of Notice of Readiness or commencement of loading if sooner or completion of deballasting if later.

Port Closed: Notice of Readiness will not be accepted during periods when the Terminal is closed. The Terminal is "closed" when the weather is such that it is too rough for incoming tankers to berth. The decision regarding the opening and closing of the Terminal will rest with the Mooring Master.

RESTRICTIONS: Widuri Terminal operates day and night around the clock throughout the year. Weather and other circumstances permitting, ships will be unmoored all hours of the day and night and normally moored during daylight hours only.

MAX. SIZE: *Minimum Size Tanker Acceptable:* The minimum size tanker acceptable at the Terminal will not be less than 20,000 d.w.t.

Maximum Size Tanker Acceptable: The maximum size tanker acceptable at the Terminal calling for a full cargo will be 178,000 d.w.t. Vessels with a fully loaded draft not greater than 50 ft. are accepted. Larger tankers may be accepted subject to weather and favourable tide condition at the time of loading without recourse to Maxus for any delays.

Minimum Draft Schedule Recommended for Various Tonnage Tankers Mooring at Widuri Export SPM's:

Deadweight (Tons)		Minimum Draft (m.)	
From	To	Forward	Aft
22,000	32,000	4.9	7.3
32,000	45,000	5.5	7.9
45,000	60,000	5.8	8.2
60,000	and over	6.7	8.5

HEALTH: In accordance with International Practice, Quarantine Signals must be displayed by all vessel's approaching Widuri Terminal area.

These signals shall be displayed continuously until pratique is granted.

These signals are:

Sunrise to Sunset – Quarantine flag 'Q'.
Sunset to Sunrise – Signal lights (red over white).

The boarding official will attend the incoming vessel from the Widuri Terminal launch.

RADIO/VHF:

Cable Address: Maxus Southeast Sumatra, Inc.

Telex: 47121 IA, 47437 IA.

Operating Schedule and Frequencies: Direct communication by Radio Telephone between Widuri Terminal (P3YS3) and incoming vessels will be by Amplitude Modulation (A3, A3H and A3J) Operation in the 2-4-8 and 12 MHz bands and by International Marine VHF Channel 16 (156.80 MHz).

Widuri Terminal (P3YS3) particulars are as follows: Operated by Maxus Southeast Sumatra, Inc.

Position: Lat. 04° 40' 52.956" S., Long. 106° 39' 08.596" E.

Hours of operation: 24.

Frequencies (kHz)	*Class*	*Power* (Watts)	*Mode*
2182	A3, A3H, A3J	150	AM
2638	A3, A3H, A3J	150	AM
4078.0	A3, A3H, A3J	150	AM
4456.0	A3, A3H, A3J	150	AM
8281.2	A3, A3H, A3J	150	AM

International Marine VHF Channels:

6 – 156.30 MHz Simplex
12 – 156.60 MHz Simplex
13 – 156.65 MHz Simplex
14 – 156.70 MHz Simplex
16 – 156.80 MHz Simplex
20 – 157.00 MHz Simplex : 161.60 MHz Duplex
26 – 157.30 MHz Simplex : 161.90 MHz Duplex
28 – 157.40 MHz Simplex : 162.00 MHz Duplex

Notes:

1. P3YS3 keeps continuous watch on AM frequencies 2182, 4456 and 8201.1 kHz.
2. P3YS3 keeps continuous watch on VHF Channel 16.

All communications between ships and Widuri Terminal (P3YS3) should be by way of this station.

Should a vessel be unable to contact P3YS3 she should send her message through Singapore Radio (9VG).

Communication for Contacting Agent: All messages destined to "Pertaminaship" can be sent to PK12.

Pertamina Jakarta Radio (PK12) is owned and operated by Pertamina.

Frequency (kHz)	*Hours* (G.M.T.)	*Keeps Watch* (kHz)
452*	H24	500
8626	0200-0300, 0400-0500 0700-0800, 1030-1200 1400-1500, 1800-2000 2200-2300	8356-8374
12980	0000-0200, 0300-0400 0500-0700, 0800-1030 1200-1400, 1500-1800 2000-2200, 2300-2400	12534-12651
VHF Channel 9/16/19	0000-1500	Channel 16

* Call/Reply

Initial Communications: It is most important that ships establish communications with Widuri Terminal (P3YS3) not less than 72 hours prior to arrival at the Terminal, giving estimated time of arrival. Further ETA information should be sent when the vessel is 48 hours, 24 hours, 12 hours and 4 hours distance or any time a change of one hour in original ETA occurs. These messages should specifically state whether ETA is given in GMT (Z) or Local Time (K).

Widuri Terminal time is GMT plus 7 hours throughout the year.

The 72 hour message should include the following:

1. Name of vessel and radio call sign.
2. ETA and date.
3. Cargo requirements.
4. Deballast time.
5. Maximum loading rate.
6. Vessel's draft on arrival.
7. If there is any sickness on board or clean Bill of Health.
8. Last port of call.
9. Any hull, bulkhead, valve or pipeline leaks on vessel which could affect loading or cause pollution.
10. Distance in feet from bow to vessel's loading manifold.

On receipt of the first message from a vessel, Widuri Terminal will transmit a message to the vessel, giving preliminary requirements and details of terminal. Masters are urged to comply with this in all details in order to facilitate vessel turn-around and government formalities.

Communications Within 4 Hours of Terminal: Once ships are within the 4 hours distance of Widuri Terminal communication, valid Radio-telephone communication on International Marine VHF may be established on Channel 16 (156.8 MHz). This channel is monitored continuously.

Once contact has been made on Channel 16 further conversations will be conducted on a mutually compatible channel.

Precise time of arrival should be given when the ship is 4 hours distance from the Terminal.

Communications after Mooring Master has Boarded Vessel: The Widuri Terminal Mooring Master will board incoming tankers in the anchorage area and will bring with him a portable VHF/FM radio telephone unit. From that time onward all communications between the tanker and Widuri Terminal will be conducted by the Mooring Master via the portable VHF/FM unit on frequencies of 156.3 MHz and 156.8 MHz. Frequency 156.3 MHz (VHF Channel 6) is reserved for communications between ships in mooring and the Terminal Oil Movement Control Centre and should only be used for general purposes after obtaining clearance from Oil Movement Centre frequencies (F1) 152.8 MHz and (F2) 152.125 MHz.

Safety Channel: Channel 2182 kHz is for calling and safety use only. After initial contact on 2182 kHz, a mutually acceptable frequency can then be established when it is necessary to make radio telephone contact in the 2 MHz band.

In an emergency, due to failure of radio telephone communication, daylight lamp signalling may be used with the Control Centre of the Terminal.

Communication in Terminal: The Mooring Master will be in direct control of all ship communications while in the Terminal area. Any unauthorised communications will be cause for cessation of all operations except clearing the berth, and the vessel's Notice of Readiness will be nullified immediately.

TUGS: *Tugs, Launches, Mooring and Hose Equipment:* Tugs and/or launches may assist in berthing vessels. These are under the direct supervision and control of the Mooring Master. Any service or facility provided by Widuri Terminal, including but not limited to, the services of the Mooring Master, tugs and/or launches and their crew, or berthing and hose equipment, is at the vessel's risk.

Hawser Requirement: Besides "Fire Towing Wire", while in the berth, vessels are also requested to have a hawser of 8 in. minimum circumference and long enough to be used by a tug boat for pulling the vessel in case it moves very close to the SPM. This hawser should be laid on the poop deck and be ready for immediate use.

BERTHING:

Facilities: The Terminal and Production Administration Offices are located on board the 338,000 d.w.t. crude storage tanker "Maxus Widuri" permanently moored approximately 5,690 ft. on a line bearing 226° SSW from the 1st export SPM and approximately 5,047 ft. on line bearing 024° from the 2nd export SPM.

The 1st Single Point Mooring buoy berth (SPM), No. 1146, is 15.0 m. in diameter and designed to handle tankers in the 175,000 d.w.t. class, or larger, during reasonable weather. The buoy is equipped with dual 12 in. floating hoses with 150 ASA flanged connections. Both strings must be taken aboard. Tail end hoses are 12 in. diameter with 150 ASA flanged connections.

The 2nd SPM, No. 1134, is 13 m. in diameter and designed to handle tankers in the 175,000 d.w.t. class, or larger, during reasonable weather. The buoy is equipped with dual 16 in. floating hoses with 150 ASA flanged connections. Both strings must be taken aboard. Tail end hoses are 12 in. diameter with 150 ASA flanged connections.

Loading rates for each buoy will be in the 11,000-44,000 bbls/hr. range. Each SPM is also provided with 2 permanently attached 15 in. circumferential synthetic fibre floating mooring lines. These lines should be held under tension by the vessel at all times.

Leaving Berth in an Emergency: Vessels required to leave terminal area on account of bad weather should keep in contact with the terminal via Widuri Terminal radio station, in order that they may be available when the weather is fit to resume Terminal operations. (See "Radio/VHF").

Maxus reserves the right to load vessels out of turn following the return of good weather, to the extent that such loading 'out of turn' does not materially delay the loading of other vessels in line.

Further, Maxus reserves the right to decline to moor a specified vessel if its condition is unsafe for mooring or loading even though the Terminal may be open to other vessels.

The Widuri Terminal Mooring Master's decision on this is final.

Rejection of Vessel: The Mooring Master may reject a vessel if it is not, upon inspection, properly equipped or if it is not suitably manned or if he deems it to have dirty ballast or tanks unsuitable for the cargo.

Crew: A vessel is suitably manned if it has a full complement of officers and crew in a sober condition, competent and willing to carry out their duties and orders and provided sufficient English is spoken that the Mooring Master can understand and be understood.

Vessel's Propulsion Units: A vessel must be equipped with good working propulsion units as passed by the appropriate survey society.

Inoperative or partially inoperative vessels will be rejected. Should they become inoperative while in berth, they will be removed at the vessel's expense. No repairs are to be made while berthing or unberthing, or in the berth. All engines shall be on 30 minutes standby and steam must be available on deck at all times. Sometimes it will be necessary to keep engines in reverse while in berth.

Deck Gear: A vessel must have both bower anchors and ground tackle in good working condition and in such sizes and amounts as to meet either "Lloyds" or "A.B.S." standards, although they may be classified by other societies of an equal standard. It is strongly recommended that anchors have proper anchor buoys attached to each anchor.

All vessels must carry suitable stoppers for all manila or synthetic lines for mooring use.

Vessels are to have suitable winches or capstans in good operating condition on the forecastle deck. Constant tension type winches may not be used except when they can be solidly locked and the constant tension feature not used.

Vessels must be adequately equipped with boom, blocks, tackle, wire runners and sundry equipment on the port side to efficiently hoist the floating hoses (approximately up to 5 long tons each string) from the sea to the loading position. Sundry equipment should include wrenches, drift pins, nuts and bolts, wire and fibre straps, drip pans, gaskets, chain block and brass hammer. (5 tons minimum hoist size required).

Before Arriving at Terminal: Vessel's loading manifold's should be prepared for 2×12 in. 150 ASA flange hose connections prior to vessel's arrival at Terminal. Where no crossover valves exist on loading manifolds it is recommended that loops between loading lines, on the starboard side of these manifolds be fitted. Vessels equipped with 8 in. hose connections should have these removed; also if necessary, 'Y' pieces should be removed so that maximum flow through the 16 in. cargo hoses will not be reduced.

To assist in vessel's turnaround, tankers should have all necessary boom and cargo gear rigged and ready before ship is boarded by Mooring Master.

Vessels which may consider the lifting capacity of their gear to be marginal should strengthen their gear accordingly. A common way to do so is to rig a second topping lift on the boom, doubling up gear.

MOORING:

Preparation for Mooring: Vessels are requested to have a pilot ladder, gangway or mechanical pilot hoist, safely and securely rigged, ready for immediate use and long enough to meet the Mooring Master's launch, both when boarding and leaving.

If the freeboard of the arriving tanker is more than 9.0 m., access from the pilot ladder to the ship shall be by means of a gangway or other equally safe and convenient means. The pilot ladder or gangway shall be adequately illuminated during hours of darkness.

A light line should also be ready to take aboard the Mooring Master's portable radio.

Tankers are requested to have ready on the forecastle head the following:

1. Messenger lines for bringing 2 mooring lines aboard from the SPM (minimum 6 in. circumference).
2. Mooring winches for handling 2×15 in. circumference synthetic fibre floating messenger lines from the SPM.
3. Adequate chafing gear to prevent damage to mooring lines.
4. Derrick rigged and ready to pick up from launch, mooring shackles, nylon straps and hose connection gear on the portside amidships.

Securing of the Terminal's Mooring Lines: On the near approach to the buoy, a launch/working boat will attach a ship's line to one of the SPM's floating mooring lines. This will be hove aboard and secured to the towing brackets, if the ship is so fitted, or otherwise secured by a ship's mooring wire and nylon strap previously passed aboard. The same operation will be repeated to secure the second line.

Emergency Unmooring: The Mooring Master may require the vessel to unmoor at any time he deems it necessary for the safety of the vessel or mooring buoy or both. He may also require the vessel to unmoor if he deems the vessel to have infringed upon Terminal regulations.

BALLAST:

Precautions Regarding Pollution: It is the responsibility of the ship's Master to see that no oil (crude, bunkers, diesel or bilge) or dirty ballast is pumped or spilled overboard from his ship while in the area.

Drip pans should be used, especially when disconnecting hoses in order to prevent spillage overboard.

Owners and Masters are requested to examine all International Convention Laws concerning pollution at sea, having particular regard for this area of the Java Sea.

Any fines levied by the Indonesian Government will be to the ship's account.

Scuppers: Before loading commences all overside scuppers shall be made oil tight.

Dirty Ballast: At Widuri Terminal there are no slop tanks or facilities for receiving dirty ballast. Tankers must arrive with clean ballast. In the event a tanker does have dirty ballast it will not be allowed to pump ballast overboard. The Mooring Master has the final decision as to determination of dirty ballast.

As soon as practical after arrival, all of the vessel's tanks will be inspected for oil or other contaminates in the ballast and during discharge of ballast similar inspection will be continued by the Mooring Master.

If evidence of oil appears at any of these inspections, the ship will be rejected forthwith and will not be accepted until satisfactory evidence is provided that such ballast was disposed of in a proper manner.

If during inspection or during the progress of loading, it is revealed that the ship's tanks are not tight or that oil is leaking from the ship, the ship may be rejected or refused for further loading. Ship will not be later accepted for loading unless satisfactory evidence duly certified by "Lloyds" or "A.B.S." surveyors, or other recognised surveyors of the repair is submitted.

Rejection of any vessel because of dirty ballast or sea pollution will automatically nullify his Notice of Readiness and any priority position for loading will be lost.

Discharging Ballast at Night: When any vessel is discharging ballast in darkness, the sea around the area of discharge will be adequately lighted, so that any pollution will be readily noticeable.

Ballast for Safe Handling of Ship: A vessel must have sufficient ballast for safe handling, having due regard to existing weather and sea conditions.

Through careful watch of the weather and sea conditions, frequent exchange of information between ship and Terminal and by a knowledge of the behaviour of his own vessel, the ship's Master may come to the Terminal with a minimum of ballast and thus lessen any possibility of infringement of sea pollution regulations.

Separate System of Ballast Tanks: Vessels equipped with a separate system of ballast tanks will be allowed to discharge ballast and load oil simultaneously, provided approval is first obtained from the Terminal

Mooring Master and provided the Government Petroleum Inspector agrees to do so.

HOSES: *Hose Lifting Derrick Capacity:* Tankers must be equipped with a hose lifting derrick in conformance with the table shown on Page 4 of Appendix XI to the International Oil Tanker and Terminal Safety Guide. The hoses at the Terminal are 16 in. diameter with 12 in. diameter tail hoses.

Manifold Connection Sizes: The size of the manifold connection will be 12 in. Tanker's manifold should terminate in 150 ASA flat faced flanges. Unless the Terminal is given adequate notice, tankers equipped with manifold flanges of other sizes or rating will be rejected.

Hose Connections: The Mooring Master along with a ship's officer will direct the crew in raising, lowering, connecting and disconnecting the oil loading hoses as well as other operations pertaining to the loading of crude. The Widuri Terminal will not provide any labour for work done around the vessel.

Hoisting Loading Hoses Aboard Tanker: 2×16 in. diameter loading hoses with 12 in. tail hoses with 150 ASA flanges will be lifted onboard with vessel's gear on port side. Each lift is 5 long tons.

The hoses shall be hoisted and connected by the vessel's crew. The Mooring Master will advise the ship's personnel in hose lifting and connecting procedure, however a ship's deck officer must be present and must direct the ship's crew in all handling.

Sundry Hose Connecting Equipment: Tankers shall be equipped with the necessary lifting derrick, blocks, tackle, wrenches, gaskets, nuts, bolts, chain block, brass hammer, etc., to efficiently effect the hose connection.

Flange Sizes: Terminal loading hoses are fitted with 2×12 in. 150 ASA flat face flanges. Vessels should have adapters available if their flanges do not correspond to the loading hose flanges.

LOADING:

Order of Loading: Tenders by vessels to load crude oil cargo will normally be accepted and berths assigned to vessels in chronological order of arrival, provided such vessels have current nominations for cargo. Also they must be in all respects properly equipped and ready to moor. Should berthing be delayed on account of bad weather, vessels will keep their position in line.

Prior to Loading: Before loading begins, the Master will ensure that all Terminal and Port Regulations pertaining to the READINESS OF THE VESSEL have been complied with; that the vessel is manned and in all respects ready to receive crude and that all precautions required by the circumstances have been taken.

Communication During Loading: All the communications relative to the loading of the vessel shall be routed through the Mooring Master who will remain in contact with the "Maxus Widuri" constantly via portable VHF units. In case of temporary breakdown of the portable VHF circuit, contact may be continued on International Marine Channels if the vessel is so fitted.

Failure of Communication: Should communication with the "Maxus Widuri" fail, loading will cease.

Emergency Shut-down Signal: An emergency cessation of loading may be effected by a continuous sounding of the ship's whistle.

Loading Rate: The maximum loading rate will be 28,000 bbls/hr.

Loading will commence with one pump, when the vessel advises that the cargo is flowing into the tanks, the loading rate will be increased until the desired rate has been reached.

Closing Valves Against Flow: Vessel's shall not close valves against incoming oil flow. Vessels will be held liable for damages resulting from failure to observe this precaution.

Topping-Off: The vessel must give 30 minutes notice to the "Maxus Widuri" before starting to 'top-off' and shall advise if a decrease in loading rate is desired.

The vessel must give 15 minutes notice to the "Maxus Widuri" prior to the completion of loading, at which time the "Maxus Widuri" may reduce to one pump.

Completion of Loading: On completion of loading, all pumps will be stopped, loading hoses disconnected and blind flanges with gaskets installed on the loading hose before lowering over the side. *There should be no leakage.*

All cargo tank openings and pressure vacuum relief valves must be closed immediately after ullages and samples have been taken.

Documentation: All documentation will be completed as soon as possible after loading is completed.

Leaking Oil Tankers: If during loading it is revealed that oil is leaking from the tanker, so as to constitute a safety or pollution hazard, loading shall cease and the tanker may have to leave the terminal limits at the sole discretion of the Mooring Master. Completion of loading will only be undertaken if repairs have been carried out to the tanker to the satisfaction of the Mooring Master. A tanker so rejected shall not later be accepted on a subsequent visit for loading until satisfactory evidence of repair is submitted duly certified by "Lloyds" , "A.B.S." or other recognised surveyors.

Preloading Notification: Notice must be given by the vessel to the Mooring Master 30 minutes before vessel completes deballasting. The Mooring Master will advise Widuri Terminal.

MEDICAL: Only emergency medical services are available at Widuri Terminal. In emergencies requiring hospitalisation, the patient will have to be transported to Jakarta. All expenses will be charged to the ship's owner.

SERVICES: The following services are NOT available at Widuri Terminal.

1. Bunkers.
2. Fresh Water.
3. Stores.
4. Boats for hire.
5. Repair facilities.
6. Facilities for changing ship's crew.
7. Shore leave.
8. Mail service.

REPAIRS: Positively no repairs of any sort will be permitted while vessel is moored to the SPM.

CUSTOMS: Indonesian Customs and Immigration officials will board the vessel as soon as possible after arrival to give Inward Clearance and Pratique service. Indonesian Government regulations are strictly enforced.

Ship's Stores: Cigarettes, cigars, tobacco, matches, spirits, wines, beer, perfume, arms, ammunition and possibly other items will be locked up under Customs seal from the time of arrival of ship at the Terminal until the time of leaving territorial waters.

Each person is allowed 20 cigarettes per day of stay or 3 grammes of tobacco or cigars in lieu thereof.

Contraband: The attention of the Master is called to the strict enforcement of Indonesian Regulations against smuggling. Illegal possession or landing of such items as narcotics, liquor, cigarettes, ammunition, sheath knives and similar weapons or other articles of contraband is subject to severe penalty and may result in prolonged delay of the vessel concerned.

All precautions must be taken to prevent the violation of the contraband laws.

Masters are requested to inform the ship's officers and crew of the foregoing regulations pertaining to contraband, shore liberty, etc. and to be assured that all personnel completely understand.

WEATHER:

Winds, Waves, Tides and Currents: The navigator is referred to published sailing instructions for this area for information on tides, currents, wind and weather, vis:

United States Hydrographic Office publication No. 126 named: "Sailing Directions for Sunda Strait and the Western Coast of Borneo and Off-lying Islands".

Similar documents have been published by the British Admiralty and other countries agencies.

The tidal values for the Widuri Terminal area are described briefly as follows:

Highest Astronomical Tide (HAT)	5.9 ft. (1.81 m.)
Mean High Water (MHHW)	4.6 ft. (1.40 m.)
Mean Sea Level (MSL)	3.2 ft. (0.97 m.)
Mean Low Water (MLLW)	1.5 ft. (0.47 m.)
Lowest Astronomical Tide (LAT)	0.0 ft. (0.00 m.)

Tidal information may be obtained from the Widuri Terminal Control Centre on VHF Channel 16. A permanent tide gauge is installed on Widuri process platform.

Caution: Tidal gauge display is referenced to LAT.

The tide at Widuri Terminal area is almost entirely diurnal. The tides are relatively small, having a mean range of 0.93 m. (3.1 ft.).

CHART: The largest scale chart known for the area is entitled "Selat Bangka and Selat Gelasa".

AGENCY: See "General" before first port.

AUTHORITY:

All harbours in Indonesia are under supervision and responsibility of the Government, i.e. Directorate General of Sea Communications.

Pertamina operates dedicated oil and gas harbours/terminals on behalf of the Directorate General of Sea Communications.

Operator: Operating under agreement with the Government of Indonesia, to produce and export crude oil, Maxus Inc. maintains offices at the following address:

(a) Maxus Southeast Sumatra, Inc., P.O.Box 2759, Jakarta, Indonesia. *Tel:* (62-21) 799-1608. *Telex:* 47121, 47473, 47176. *Cables:* Maxus. *FAX:* (62-21) 799-4243.

(b) Maxus Energy Corporation, 717 North Harwood Street, Dallas, Texas 75201, U.S.A. Telex: 730337. Fax: (214) 953-2906.

Iran

GENERAL

NOTE: Movements of all types of general cargo, bulk cargo, refrigerated cargo, containers, steel products, machinery, cars, etc., are expected to increase considerably.

Dry cargo ports which are operational are Bandar Abbas, Bushire, Bandar Imam Khomeini and Chah Bahar.

The ports of Abadan and Khorramshahr are also operational and can accommodate small vessels.

Regarding the Iranian dry cargo ports, these ports are fully equipped to facilitate loading/unloading of any type of vessel. That means gearless vessels, such as "Panama type", who can be discharged by means of Vac-U-Vator. Shore cranes are available in the ports of Bandar Imam Khomeini and Shahid Radjaie. Containers can also be handled by gantry cranes.

Money/Liquor: Importing, buying, selling and drinking of any kind of alcoholic drink is forbidden in Iran.

Any amount of money can be brought into the country, and carrying large amounts of money is not considered a crime in this country, though any person can only take a limited amount of money out of the country.

Flag: Vessels to fly the flag of the Islamic Republic of Iran (flag is green, white and red with a red emblem in the centre).

Photography/Dress/Alcohol: In Iranian ports, photography and drinking of alcoholic drinks are prohibited. All crew, whether men or women, should strictly observe the Islamic way of dressing (Hejab).

TIME: GMT plus 3.5 hours. GMT plus 4.5 hours from 21st March till 22nd September.

NOTICES:

Procedures for vessels approaching Iranian Ports: The following information on procedures are necessary.

Masters should:

Contact Bandar Abbas Port Radio on the following frequencies:

HF 8469 kHz
MF 500 kHz
MF 464 kHz
KF 12700 kHz

and state:

1. Ship's name.
2. Flag.
3. Kind of vessel.
4. Loading or discharging port(s).
5. ETA Sirri Island (for tankers).
6. Expected time and date of passing Hormuz.
7. Ship's speed.
8. Reason for call/cargo for discharge or to load prior to arrival, and take instructions.

As per instructions issued by Iranian Port Authorities, the words "Persian Gulf" should follow the name of Iranian ports in the Persian Gulf in all messages, example: "Kharg Island Persian Gulf".

Tankers should anchor at Sirri Island after passing Bandar Abbas for proper turn when loading at Kharg Island, unless instructed to proceed towards Kharg Island directly.

Upon anchoring Sirri Island vessels should communicate with Sirri Marine on VHF for further instructions.

Masters should send all messages and ETA notices for NIOC Kharg Island, Lavan Island, Sirri Island and other oil loading ports, also for NIOC head office at Tehran, should be sent via Bandar Abbas Port Radio, with copy to Agents.

Arrival Notice – Tankers:

Please instruct all tankers to advise NIOC 72 hours prior to arrival to Kharg Island (P.G.) otherwise Marketing and Export Operation Department has no responsibility, so kindly advise urgently the following information:

1. Ship's deadweight.
2. Arrival loaded displacement.
3. Cargo bunker requirement.
4. Deballasting time.
5. Height of manifold when vessel ready to load.
6. Maximum arrival and sailing draft.
7. Vessel's dimensions.

Please furnish the Harbour Master at Kharg Terminal with above information from now on. Meanwhile it would be much appreciated if you follow the same procedure for other terminals (i.e. Sirri and Lavan) if the vessels are intended to load there.

AUTHORITY: Ports and Shipping Organisation, 751 Enghelab Avenue, Tehran 15994, Iran. *Tel:* 8809280-9. *Telex:* 212271 and 214260 Bndr Ir. *FAX:* 8809324, 8804100. *Contact:* M.R. Ghaderi, Director General – Maritime Affairs.

ABADAN: 30.20 N. 48.16 E.

NOTE: The port was extensively damaged during the conflict and is not expected to be fully operational in the near future.

LOCATION: The Port of Abadan situated on right bank of the Shatt-al-Arab, about 47 miles up river from Rooka Buoy.

DOCUMENTS: See "Khorramshahr".

PILOTAGE: Compulsory. Pilot available 24 hours.

ANCHORAGES: On arrival of pilot boat vessel can anchor with no depth restriction. On entering the Shatt-al-Arab the following are the recognised anchorages: Kasba Anchorage position about 2 miles above Fao with a max. depth of 35 ft. in fresh water. Bawarda Anchorage position about 2 miles above Abadan with a max. depth of 31 ft. in fresh water. Vessels which are too deep to pass out of the river on one tide will be required to anchor at Kasba.

RESTRICTIONS: The Port is open for day and night navigation with arrival and sailing being controlled by the tide. Vessels normally enter the Bar at 4 hours before high water at the Bar or at 2 hours after high water at the Bar. Those entering 4 hours before, arrive at Bawarda anchorage generally during flood tide, so must anchor for 6 hours awaiting ebb. Those entering 2 hours after high water, arrive Bawarda during ebb tide and berth on arrival, providing berth available, weather conditions permit and outward movements do not delay. Vessels always berth starboard side to stem the ebb tide and without using tugs and leaving Abadan 4 to 6 hours before high water at Bar.

MAX. SIZE: Max. length 600 ft. Max. draft in the Shatt-al-Arab, Abadan and other river ports is 28 ft. 06 in.

HEALTH: Inward clearance is affected on board after receiving Free Pratique. Also see "Khorramshahr" – "Documents".

RADIO: The National Iranian Oil Company Coastal Radio Station call sign EQZ. The station listens for various calls on the normal International Marine Calling frequencies. When close to may be contacted on 500 kHz transferring to 428 kHz for exchange of traffic. Traffic list sent at 5 minutes past odd hours.

VHF: Abadan Port Radio on Channels 16, 13, 18 and 35 throughout 24 hours.

TUGS: Not available.

BERTHING: The number of jetties on the Abadan riverside have been reduced to eight. Nos. 3, 4, 7, 9, 11, 16, 22 and 26 have been maintained and are used for bunkering purposes and dry cargo operations.

Ships pass day and night so it is necessary that mooring lines be kept taut at all times to prevent surging on the jetties thereby breaking lines and causing damage to Company property.

Bunkering jetties for those vessels coming only for purpose of taking bunkers are:

Jetty No. 3	Draft alongside	31 ft.
Jetty No. 9	" "	28 ft.
Jetty No. 22	" "	25 ft.
Jetty No. 16	" "	28 ft.

Bunkering jetties for those vessels bringing Oil Company's cargo are:

Jetty No. 7A	Draft alongside between 28 ft. – 31 ft.
Jetty No. 7B	
Jetty No. 7C	
Jetty No. 7D	

MEDICAL: Emergency cases: An ambulance will be dispatched on demand by calling telephone number 5555.

In ordinary cases of sickness or dental treatment: Agents will arrange transportation of patients, and advise Masters regarding necessary medical attention forms. If patient does not speak English he should be accompanied by an interpreter. Only in exceptional cases will a medical officer visit a patient on board.

TANKERS: Deliveries of the refined oil products of Abadan Refinery are effected to ocean-going tankers at Bandar Mahshahr since the inauguration of the products terminal of the National Iranian Oil Company at that port, therefore such shipments are not taking place from Abadan any more.

DENSITY: Fresh water.

FRESH WATER: Available at all jetties and at the anchorage by barge.

FUEL: Ships' bunkers are available; however not all types are available at all jetties, therefore, ship's Master should advise by radio the exact quantity and kind of bunkers required. Bunkers are delivered concurrent with loading unless otherwise requested by Master. Due to heavy bunkering commitments it is mandatory that vessels take their bunkers when convenient for the terminal, any delay incurred by a vessel taking bunkers after loading is the responsibility of the Master.

AUTHORITY: National Iranian Oil Co. Abadan Refinery.

AGENT: See "Bandar Abbas/Kharg Island".

BAHREGAN (Norwuz Loading Terminal): 29.43 N. 50.10 E.

(See Plan

PORT LIMITS: Port area limits which are under the control of N.I.O.C extend between the following points:

Lat. 29° 43' N., Long. 50° 00' E.
Lat. 29° 43' N., Long. 50° 12' E.
Lat. 29° 40' N., Long. 50° 10' E.
Lat. 29° 40' N., Long. 50° 24' E.

Vessels must not enter this area without permission from the po control. Anchoring in this area is prohibited.

DOCUMENTS:

5 Crew and Passenger Lists.
4 Stores Lists.
4 Bonded Stores List.
Clear Bill of Health from last port.
4 Bills of Lading.
6 Manifests.

PILOTAGE: Vessels must not enter the Port Limits without a Mooring Master on board. Vessels should wait for the Mooring Masters approximately 2 miles off the SBM.

Prior Arrival: Vessels should have the following equipment ready for use upon their arrival at the port:

(a) Accommodation ladder lowered together with the pilot ladder if a VLCC, otherwise a pilot hoist or pilot ladder.

NOTE: Berthing Masters will not board any vessel which does not present a clean safe means of access.

(b) Ballast tank lids opened to allow the Berthing Master to inspect ballast water.

(c) Pilot room available and ready for the Berthing Master and also trainee accommodation, should they decide to stay on board throughout the loading.

(d) Under normal conditions vessels will be moored using 6 ship's lines. In rough weather the number of mooring lines will be increased. Therefore each ship to be moored at Bahregan SBM Terminal must be equipped with at least ten good quality mooring lines, each 120 fathoms or more in length with eyes and tail ropes spliced into each end. Two of these mooring lines should be laid out free for running adjacent to bitts and warping winches. Warping winches must be adequate to handle mooring lines under heavy strain, and efficient stoppers must be readily available to "hang off" mooring lines and transfer same from winch to bitts without loss of tension.

Ships must also have at least one good messenger line ready for immediate use; anchors, chains and anchor windlass must be in good condition. Vessels must be equipped to fit flanges of floating hoses, which are of ASA standards.

Ships must be adequately equipped with blocks, tackles and booms to hoist the floating hose, a 5.5 ton lift from the sea to the ship's rail, in a safe, efficient and expeditious manner. If, in the opinion of the Mooring Master, the vessel is not equipped with adequate mooring facilities, lines or gear, he will so inform the vessel's Master and in such event the vessel shall not be brought into the mooring until facilities, lines, or gear are deemed satisfactory. In this connection, lines cannot be provided by the company.

(e) Before a ship is moored at MBM Terminal, she must be equipped with at least 9 good quality mooring lines, each 120 fathoms or more in length with eyes and tail ropes spliced into each end. Mooring lines should be laid out free for running adjacent to bitts and warping winches. Warping winches must be adequate to handle mooring lines under heavy strain, and efficient stoppers must be readily available to "hang off" mooring lines and transfer same from winch to bitts without loss of tension.

Ships must have both bower anchors ready for immediate use, each with a minimum of 120 fathoms of chain. Anchors, chains and anchor windlass must be in good condition and capable of letting one chain go out on the run while heaving in on the other chain. Vessels must be equipped to fit flanges on submarine hoses, which are of ASA standards.

Ships must be adequately equipped with blocks, tackle and booms to hoist the submarine hoses, a 5 ton lift from the floor of the sea to the ship's rail, in a safe, efficient and expeditious manner.

If, in the opinion of the Mooring Master, the vessel is not equipped with adequate mooring facilities, lines or gear, he will so inform vessel's Master, and in such event the vessel shall not be brought into the mooring until facilities, lines or gear are deemed satisfactory.

On Arrival: Immediately upon boarding the vessel, the Berthing Master will present the following documentation to the Master for his signature:

(a) A copy of the Port Rules and Regulations Book receipt and agreement form.

(b) N.I.O.C. "Notice of Readiness" form.

(c) Combined Tug, Pilot, Berthing/Unberthing Charge form.

(d) Fire and Safety Regulations and No Smoking Notices for posting in approved spaces.

All the above documents must be processed prior to the vessel being berthed.

ANCHORAGE: The SBM is in the open sea with no surface obstructions in the vicinity. However, anchorage is prohibited in the following areas:

(a) Immediate vicinity of the SBM and MBM – within a 1-5 miles radius of the SBM and MBM.

(b) One mile on either side of 36 in. submarine pipeline from SBM to Bahregan Oil Centre.

Suggested anchorage area is 2 miles S.W. of the SBM.

NAVIGATIONAL AIDS/PROHIBITED AREAS:

Two flares are located at:

Lat. 29° 50' N., Long. 50° 15.8' E.

Nowrouz Production Facility (Offshore) located in:

Lat. 29° 29' 55" N., Long. 49° 24' 10" E.

The above platform complex, approximately 50 nautical miles South West of Bahregan, is situated in the centre of the Nowrouz Oil Field. This area, and 3 miles around it, is prohibited to navigation.

Bahregansar Production Facility (Offshore) located in:

Lat. 29° 56' 23" N., Long. 49° 50' 58" E.

The above platform complex, approximately 30 nautical miles West of Bahregan. This area, and 3 miles around it, is prohibited to navigation.

RESTRICTIONS: The Bahregan SBM Terminal operates 24 hours per day, 7 days a week. However, mooring or unmooring is only carried out if fair or moderate weather conditions are prevailing.

In the event that berthing is delayed on account of weather, vessels will keep their position in line. Vessels required to leave the terminal area on account of weather (terminal closed) should keep in contact with the terminal via radio in order to be available when weather moderates.

FLAG: All vessels are required to fly the Iranian flag on the foremast during daylight hours. Iranian territorial waters extend 12 miles seaward from the mainland and adjacent islands.

ADVICE OF ARRIVAL: It is important that ships establish radio contact with N.I.O.C. Bahregan Marine when 3 days distant from Bahregan Terminal and maintain this contact until just previous to arrival at the Terminal. All ships should send a 72 hour ETA message to N.I.O.C. giving the best estimate of ship's arrival time at the Terminal.

Further ETA messages should be sent to N.I.O.C. when the vessel is 24 and 12 hours distant from Bahregan Terminal and at any other time any appreciable change occurs in the original ETA or those subsequent thereto. The 12 hour ETA should include a positive statement regarding "ship's readiness to load" on arrival and the number of hours that will be required to discharge clean ballast after ship is berthed in mooring, as well as details of the flange size of the manifold.

MAX. SIZE: Water depths at the Terminals at LW are:

SBM	79 ft. (24.0 m.)
MBM	52 ft. (15.5 m.)

Keel clearance required by the Terminal is 3.3 ft. (1 m.) at all times. Tonnage capacity of the Terminals are:

SBM	250,000 d.w.t.
MBM	45,000 d.w.t.

HEALTH: Masters should obtain Free Pratique before arrival at Bahregan by cabling "NIOC Kharg Port Health" via EQZ Oilco Station or "Porthealth NIOC" Kharg.

RADIO: Vessels nominated to load at Bahregan should transmit arrival information 96 hours and confirm 48 hours prior to arrival.

Arrival messages should be transmitted to the following address through either Abadan Radio (EQZ) or Bandar Abbas (EQI).

N.I.O.C., Tehran. Telex: 212598 – 212346 – 212707. "Attn. Marsupt. Bahregan".

Arrival messages to be in the following format:

AA	Name of ship.
BB	ETA Bahregan in GMT and last port.
CC	Cargo required/cargo to discharge.
DD	Deballast time/Ballast time.
EE	Size and number of cargo connections.

Bahregan Radio Station, is operating on 500 kHz, call sign BOC, from 0530 hrs. – 1330 hrs. GMT.

Bahregan Radio maintain a listening watch on 2638 kHz. Vessel should commence calling "Bahregan" when passing Kharg Island.

Free Pratique: Vessels requesting Free Pratique by radio are required to transmit the following message through the same Channels as their ETA advice.

AA	Name of vessel and ETA Bahregan (in GMT).
BB	Number of crew and state of health.
CC	Number of vaccinations required for Cholera.
DD	Number of deaths or cases of serious illness in the last 30 days.
EE	Name all ports called at during the last 30 days.
FF	Master's Name.

VHF: Bahregan Terminal maintains a listening watch 24 hours a day on VHF Channels 16 and 13.

Vessels should commence calling "Bahregan" 4 hours prior to arrival, on Channel 16. When contact has been made, switch to working frequency Channel 13.

NOTICE OF READINESS: The ship's officer responsible for loading or discharging should give N.I.O.C.'s Mooring Master at least 30 minutes Notice of Readiness to commence loading or discharging.

The Master's "Notice of Readiness" will be rejected if any of the ballast is oily, or if there is any leakage of oil from the vessel during loading, or any unsatisfactory condition on board ship which affects cargo worthiness or seaworthiness while under the jurisdiction of the Terminal. In all such situations of dispute, the decision of the N.I.O.C. Marine Superintendent will be final.

TUGS: Available and required. Two modern tugs of sufficient horse power fitted with controllable pitch propellers is stationed at the Terminal and used for all manoeuvres.

The N.I.O.C. tug is equipped for fire fighting, using both water and foam through monitors situated on a fire fighting platform. N.I.O.C. tug is on instant readiness throughout the entire time that a vessel is moored at the Terminal. The tug will answer the emergency signal or by calling on Channel 13 VHF.

MBM: MBM Terminal is located 5 miles from coast at:

Lat. 29° 47' 00" N., Long. 50° 11' 30" E.

The MBM Terminal is connected by a 4.5 mile 18 in. diameter submarine pipeline to Bahregan Terminal. Bahregan Terminal is located at:

Lat. 29° 49' 30" N., Long. 50° 15' 47" E.

BERTHING: The Terminal operates a mooring launch and 3 small supply boats.

SBM: The SBM is designed to provide a safe mooring for tankers in most states of weather or sea. When moored to the SBM, tankers can load their cargo while weather-vaning about the Terminal. The moored vessel normally remains head into the wind and sea, riding at its most comfortable position. The SBM consists of a strongly constructed steel vessel securely moored in position by 6 sets of heavy mooring chains, each set is attached to a 3 pile template. The SBM is equipped with a Rotating Mooring Bollard, to which the tanker secures, a Rotating Cargo Manifold which carries the crude flow system from the SBM through the hoses, and a Rotating Balance Arm, which maintains the SBM on an even keel. These 3 components all rotate as one unit as the tanker swings with the sea or wind.

A submerged peripheral fender extending outward from the hull is provided to prevent damage to the floating hoses and SBM, should the tanker ride up against it.

MBM: Permanent mooring in the berth consists of 5 steel cylindrical buoys each fitted with a quick release hook to which the ship's mooring lines are attached by the company's mooring launches. The berth is laid out on a one heading basis, using both ship's bower anchors with 9 mooring ropes (4 beam, 4 quarter, and 1 stern).

The mooring buoys are numbered 1, 2, 3, 4 and 5 starting with No. 1 East of the mooring and numbers running consecutively in a clockwise direction.

PETROLEUM INSPECTORS: Services of the Saybolt Agency available subject to at least 3 days advance notice.

Surveyors of the American Bureau of Shipping and Lloyd's are stationed at Bandar Abbas.

HOSES: The Terminal carries a full range of reducing spool pieces and flexible hoses for connections.

SBM: 2×16 in. floating hoses.

After the vessel is securely moored to the SBM, the service launch will tow the end of the floating hoses to a point on the portside of the tanker immediately below the tanker's cargo manifold. The tanker's derrick runner should be ready to lift the hoses which will be secured by the attached chains in such a manner as to allow the ends of the hoses to reach the ship's manifold. The weight of the hose to be lifted is approximately 5.5 tons. The hoses are fitted with 16 in. flanges, and the company will provide reduction pieces to 14 in. or 12 in. or other sizes (as well as gaskets) as required to make connections to the ship's manifold. The hose connection is normally performed by N.I.O.C.'s loading crew under the supervision of the Mooring Master. However, a ship's deck officer must be present, and must direct the ship's crew as required.

MBM: 2×10 in. submerged hoses.

After the vessel is securely moored, with the MBM, the submarine loading hose must be lifted to the rail amidships. The 10 in. hose lift is 5 tons. Hoses are lifted by ship's gear on the starboard side. Ships should have manifold fittings aboard to allow connection of the flanges.

Tankers are loaded or discharged at this berth.

LOADING: Crude oil is delivered to the SBM through a 36 in. line and to the MBM through an 18 in. line from a 2,198,000 barrel tank farm.

Flow rate under normal conditions is approximately:

SBM (two hoses) 6,000 t.p.h.
MBM (two hoses) 5,000 t.p.h.

The minimum flow rate is 15,000 bbls./p.h. All vessels accepting nominations to load at Bahregan must be capable of loading crude at rates above this figure.

The initial loading rate is normally about 1,500 t.p.h. while the Loading Master and the ship's officer satisfy themselves that all is in order with the Terminal and the ship's facilities. As soon as this is done, the loading rate is increased to maximum or other rate as requested by the ship.

The API of Bahregan Crude oil is 26.0.

The temperature of Bahregan Crude oil varies between 62°F and 78°F (Winter/Summer).

The Terminal will accept cargo requests 10% above or below the official nominated quantity unless specifically requested otherwise by the consignor.

A shore stop to close off the flow of crude oil to the tanker will be executed by the Terminal; provided the Master issues a written request to the Loading Master upon arrival at the loading terminal. This request must include the statement that N.I.O.C. will not be held responsible for any error in the final quantity loaded.

Master should note that in cases of overloading, the excess cargo cannot be returned to the shore line. Masters should also be aware that they will be held responsible for any overflows and pollution caused by their request for a shore stop.

An "Early Sailing System" of tanker documentation is operated by the Terminal as standard practice for all cargoes.

The Terminal will accept the "Load-on-top" system of co-mingling tank cleaning oil residue from previous cargoes with the nominated quantity of Bahregan Crude oil, provided agreement has been obtained from the consignor.

Slops should be segregated in a special "Slop Tank" or accumulated in one of the cargo tanks. A sample of the slop must be taken on arrival at the Terminal and kept for any future reference. Exact quantities must be calculated.

Vessels which arrive in ballast to load part cargo, should endeavour to place the ballast in such a manner as to allow loading to commence upon arrival at the Terminal. The ballast may be retained for discharge en-route to the next port, or discharged concurrent with loading, provided the vessel can show adequate valve separation, this method is accepted by the Terminal, and will be finally confirmed by the Loading Master when satisfied that no pollution or contamination will occur. Vessels arriving in ballast to load a full cargo, who carry most of their ballast in "Permanent ballast" tanks, should also endeavour to arrange the remaining ballast in such cargo tanks as to allow loading to commence upon arrival at the Terminal, and discharge concurrent, using segregated lines and pumps. The Terminal will accept this system on the same basis as above paragraph.

MEDICAL: Depending on the availability of the Company doctor, medical assistance can be provided, although there is no hospital available. In cases of extreme emergency, N.I.O.C. will arrange transport to nearby towns at the ship's expense and responsibility.

CUSTOMS: A Customs Officer boards each vessel calling at the Terminal.

DENSITY: Salinity is approximately 20% more than normal sea water.

FRESH WATER: Not available.

FUEL: Not available.

CONSULS: There are no consulates at the Bahregan Terminal; however, consular or diplomatic representatives for most nations maintain offices in Tehran and some in Khorramshahr.

REPAIRS: Masters of vessels loading at Bahregan Terminal are advised that this port is considered an "open roadstead" and under no circumstances may engines be shut down for repairs while their ships are moored. There are no facilities at Bahregan Terminal for making vessel repairs.

STORES: Not available.

TIME: Standard zone time for Iran is GMT plus 3.5 hours.

SERVICES: No facilities for crew change, etc., or any other vessel's requirements, as the Terminal is situated off-shore in the Gulf and there are no transportation facilities other than Oil Company's flights from Abadan which are meant for their own personnel.

SHORE LEAVE: There is no shore leave permitted due to lack of facilities.

GARBAGE DISPOSAL: No service available - No dumping.

WASTE OIL DISPOSAL: No facilities available.

SEAMAN'S CLUBS: None.

AUTHORITY: Iranian Offshore Oil Company, 339 Dr.Beheshti Avenue, Tehran – Iran. *Cables:* Falatghareh, Tehran. *Telex:* 212598 – 212346 – 212707. *Tel:* 624102-7.

Mail address: P.O.Box 4546, 4547, 4548.

AGENT: See "Bandar Abbas/Kharg Island".

BANDAR ABBAS (Including Shahid Radjaie):

27.08 N. 56.12 E. **(See Plan)**

Old Port of Bandar Abbas now called Bandar Shahid Bahonar. New Port is called Bandar Shahid Radjaie

DOCUMENTS: See "Bandar Imam Khomeini".

PILOTAGE: Application for Pilot to be made well in advance of vessel's arrival off Bandar Abbas, through Bandar Abbas Port Radio EQI. Agents may also arrange pilotage but should be advised of ETA well in advance.

ANCHORAGE: Approx. position Lat. 27° 04' N., Long. 56° 14' E. Depth 36 ft. The distance from the Outer Anchorage at Buoy No. 1 to the port entrance is about 2 miles.

Also see "Notice".

RESTRICTIONS: *Old Port:* Entry or departure day or night. Depth of water alongside jetty, minimum 34 ft. and depth in channel approx. 32 ft. at LW. Height of tide at HW about 3 m.

Width of entrance channel is about 150 m. at surface, and 100 m. at seabed.

MAX. SIZE: *Old Port:* Port can accommodate oil tankers up to 666 ft. length and cargo vessels up to 733 ft. length with a max. draft of 34 ft.

Max. draft alongside: Jetty Nos. 1, 2 and 3 – 33 ft.; Nos. 4 & 5 – 31 ft.; No. 6 – 30 ft.

New Port: Max. draft for cargo vessels 40 ft. and max. LOA 833 ft. Max. draft for oil tankers 40 ft. and max. LOA 733 ft.

RADIO: Bandar Abbas Port Radio EQI – 500 kHz. 24 hour service. Port Telex No. 362815, 214287 BNDR IR. Tel: 0098-761-28078, 28079. Fax: 0098-761-29424.

Radio Officer's Report: December 1984.

Abbas Radio/EQI will work on the following calling frequencies, GMT time and traffic lists.

From 0330 hrs. to 0830 hrs., Tx 8469 kHz, Rx 8 MHz (Channel 5/6).
Traffic List at 0335 hrs – 0535 hrs. – 0735 hrs. GMT.
From 0830 hrs. to 1230 hrs., Tx 12700 kHz, Rx 12 MHz (Channel 5).
Traffic List at 0835 hrs – 1035 hrs. GMT.
From 1230 hrs. to 1430 hrs., Tx 8469 kHz, Rx 8 MHz (Channels 5/6).
Traffic List at 1235 hrs GMT.
From 1430 hrs. to 0330 hrs., Tx 4262 kHz, Rx 4 MHz (Channel 5).
Traffic List at 1435 hrs – 1635 hrs. – 1835 hrs. GMT. Weather forecast will be broadcast on 8 MHz at 0535 hrs. and 1235 hrs. GMT, and on VHF Channel 18 at 0900 hrs. and 1600 hrs. LMT.

Please observe the above table for your messages.

VHF: Channels 13, 16, 18 and 25. HF call-sign EQI available. Also see "Radio". Tugs on Channels 13 and 16.

TUGS: 2×1,200 h.p., 2×2,400 h.p. and 1×3,500 h.p.

BERTHING: Old Port: Berthing and unberthing possible throughout 24 hours.

Quay is 1,050 m. long, 35 m. wide and depth 10.0 m., capable of accommodating 6 vessels each of 175 m. LOA.

The Barge Jetty with a depth of 24 ft. can accommodate one vessel for alongside discharge.

There are 2 closed sheds, each having a capacity of 7,500 tons, 1 closed shed with a capacity of 15,000 tons and 6 open sheds having capacity of 100,000 tons.

Ore handling installation. The ore is loaded by conveyor belt and the average daily loading rate is 1,500 tons per running day of 24 hours.

Chrome ore loading is carried out at one hatch at a time only, and therefore the vessel has to be shifted by the crew in order to load the other hatches.

Shahid Radjaie: Located about 20 km. West of Old Port.

Location: Lat. 26° 07' N., Long. 56° 04' E.

Channel: 6,500 m. × 249 m. × 13.5 m. depth at LLW.

Basins: Basin No. 1: Depth 14.0 m. at LLW.

Basin No. 2: 12.5 m. at LLW.

Berth Particulars:

Cargo	*No. of Berths*	*Total Length* (m.)	*Depth* (m.)	*Max.D.W.T* (tons)
Container	5	1,000	12.0	30,000
Bulk Cargo	2	400	14.0	80,000
Multi-purpose	4	719	12.0	30,000
General Cargo	11	2,200	12.0	45,000
Liquid Bulk	2	–	12.0	70,000
Barges	1	150	2.0	–
Ro/Ro (Berth No. 8)	1	–	12.5	45,000

Shore Equipment:
4 rail mounted suction units for bulk cargo.
6 rail mounted mobile cranes of 15 tons capacity.
32 mobile cranes of 6 tons – 550 tons capacity.
48 forklift trucks.
26 tractors.
166 trailers.

Container Facilities:
4×40 tons gantry cranes.
10×35 tons transtainers.
6×40 tons transtainers.
7×35 tons top lifts.
10×10 tons forklift trucks.
53 tractor and trailers.
129 reefer points (220-380 Volts).
Also see "Shipmaster's Reports".

STEVEDORES: Working hours at the New Port are 24 hours.

FREIGHT TAX: Freight tax is payable on any freight earned in Iran for any export cargo loaded at any Iranian port. Per Article 90 of Tax Law, freight tax is payable at the rate of 5 per cent of gross freight, regardless of whether freight is collected in Iran or elsewhere. There is no tax on import cargo freight regardless of where the freight is paid. In other words, for cargo discharged in Iranian ports, even if freight is payable at destination to be collected in Iran, there is no tax applicable.

MEDICAL: There is a General Hospital with about 100 beds. A number of physicians and dentists are available. Facilities available for vaccinations and inoculations. There is a general hospital with 5 beds in the port area. A number of physicians are available.

TANKERS: *Old Port:* 3 jetties with depth 10.0 m.
Shahid Radjaie: Oil installations near Berths No. 1 and 2.

FRESH WATER: Available in port by pipeline and at anchorage by barge. Requests for water must be made well in advance.

FUEL: Fuel oil, gas oil and marine diesel oil are available at all berths ex-pipeline excepting the chrome ore berth which is at a separate jetty. Vessels loading chrome ore must take fuel (and fresh water) before or after loading as there is no connection at the ore loading berth.

CONSULS: None.

REPAIRS: Major and minor repairs are possible at dry dock and private workshops. Radio and navigation aid repairs are carried out by Ship Suppliers Co. Tel: +98-761-57930. Fax: +98-761-56770. Telex: 88-362243.

CARGO GEAR: All vessels calling at this port should be capable of loading/discharging with their own gear, including rope, canvas and wire slings as necessary and/or wire or rope nets, etc.
Equipment: Equipment available ashore is as follows:
Mobile Crane: 3×60 tons, 24×20 tons, 11×10 tons, 2×30 tons, 1×45 tons, 1×25 tons, 5×6 tons, 4×40 tons, 1×90 tons and 1×550 tons.
Lift Trucks: 8×2.5 tons, 11×4.5 tons, 14×5 tons, 16×7 tons, 8×10 tons, 11×13.5 tons and 2×15 tons.
Tractors: 92.
Trailers: 233.

CUSTOMS: Customs Officer will seal the store-room. All liquor and cigarette stocks will be placed under bond and reasonable ship's requirements should be taken from store before sealing.

AIRPORT: About 15 km. distance from the old port (Shahid Bahonar). Jet flights to international destinations on virtually a daily basis.

TIME: GMT plus 3.5 hours.

TELEPHONES: May be placed on board.

SERVICES: Survey, repairs, crew changes at sea or launch service to vessels off the port can be arranged. Contact through Agent.

SHORE LEAVE: Provided Security Dept. approves, crew allowed to go ashore by surrendering their Seamen's Books to port police guard.

IDENTIFICATION CARDS: According to regulations in force seamen should hold shore pass issued by respective Agents and signed by the Port Health, Port Police and local town Police Authorities. All shore passes should bear a photo of the holder, in order to facilitate checking at exit of port area. It is therefore necessary for Officers and crew to have a photo ready on arrival at the port to facilitate obtaining shore passes.

WEATHER: With the exception of about 2 months during the Winter, the air is generally wet and humid, but with little rainfall. Temperature seldom falls below 10 degrees centigrade in Winter, and seldom exceeds 40 degrees centigrade in Summer.

NOTICES:
Notice to Mariners No. 16/64
UNMARKED SHIPS IN BANDAR ABBAS AREA
There are some unlit and unmanned dead ships in Bandar Abbas anchorage area and its vicinity, ships navigating in the area should take special care and are recommended to have local Pilots on board.

GENERAL: *Hotels:* The Gameron (Homa Hotel) is a modern hotel equipped with air-conditioning, swimming pool and having 120 beds. A wooden swimming pier has been constructed on the sea-beach opposite the hotel for the use of residents. The Welcome Inn, a 3-star motel equipped with air-conditioning is used by seafarers.
Provisions: Fresh and canned provisions are available through the ship chandlers.
Transport: Distance between new port (Shahid Radjaie) and the town of Bandar Abbas is about 20 km. and there are private mini-buses and taxis available. Motor-boats are available for attendance upon vessels at anchorage and also at the chrome ore berth which is not approachable by land transport.
Laundry: Subject to time available, can be arranged by ship's Agent.
Hotwork: Permission to be obtained from Maritime Safety Head Office.
Lowering of Lifeboats: Permission to be obtained from Maritime Safety head office.
Overboard Discharges: Inspected by Maritime Safety Office inspectors.
Painting: Overside painting is strictly prohibited, except for draft marks and ship's name. Inboard painting requires the permission of Maritime Safety Office.

DEVELOPMENTS: There is a new jetty, specially designed for heavy industry, located about 5 km. East of the new port. Max. LOA 250 m., max. draft 12.2 m.

SHIPMASTER'S REPORT: January 1986 (Updated 1996).

New port of Shahid Radjaie is now in operation. 24 hours day working except reefer vessels which work from 0700/1100 and 1400/2300 hrs. depending on truck and heat situation.

The new port is over 20 km. from city of Bandar Abbas. Repatriation is possible as there are now direct flights from Bandar Abbas to Zurich/Frankfurt. Agents require 72 hours notice of incoming and outgoing crew changes in order to arrange visas and formalities. Shore leave normally possible by application day before and only permitted between 1000 hrs.-1600 hrs. No telephones placed onboard. Limited supplies of fruit, vegetables, etc., at moderate prices, obtainable via Agent. Also numerous boats with fish, vegetables, etc., at outer anchorage. Fresh water available from pipelines.

Boarding party arrives at anchorage and conducts search of all crew and officers cabins and accommodation areas. No alcohol permitted in anyones possession also strict Islamic laws re calendars, magazines, etc. Papers required – as per "Guide to Port Entry" plus lists of all foreign currency in each crew member's possession.

A further search similar to that on arrival is made prior to departure. Essential to advise Coast Guard prior to entering Bandar Abbas approaches via VHF, also Harbour Authorities via W/T Bandar Abbas Radio 24 hours prior to arrival. Bonded store and main W/T transmitter sealed.

SHIPMASTER'S REPORT: January 1987 (Updated 1996).
Max. Size: Port can accommodate cargo/bulk vessels of 200 m. length with a maximum draft of 36 ft.
VHF: Channel 16 for Port, call "Port Control". Bandar Abbas Radio listens on Channel 25 and can be used for local calls.
Tugs: 5 tugs, 2,500 h.p. each for harbour duties and berthing.
Berthing: Bandar Abbas harbour has two ports.

Old Port: As mentioned in the "Guide", but now mainly used by dhows and barges. Only very rarely do general cargo ships discharge there. Ore jetty, bunker berth and a ferry berth still in use and will remain so. The remainder of the port will only be used by Iranian Navy, barges, dhows, etc.

New Port: Charts No. 3003 and 3004 have been prepared for this area. It is located about 20 km. West of Old Port. Main channel from breakwater to anchorage (South of Old Port) is buoyed in the direction of 104°–284°.

Originally the port was being constructed for 40 berths but work has been suspended after completion of 24 berths. Oil handling installation is near Berths No. 1 and 2.

Berth No. 3 is normally used for discharging vegetable oil, Berths No. 4 to 8 for containers, but in absence of appropriate vessels any ship can be berthed there. All 24 berths are now in use, and plans still exist for completion of up to 40 berths but it is not known when the work will restart.

No silos provided for bulk cargoes, hence it is discharged into lorries. Discharge rate can be up to 5,000 t.p.h. depending upon availability of transport.
Fresh Water: At anchorage available by barge and in port by pipelines. Road tanker water is also expensive, hence vessels are advised to arrive with maximum water and if required to take water in Bandar Abbas it must be requested well in advance.
Fuel: Good quality fuel is available by barges, and the request must be made to Shipping Co., Bandar Abbas if chartered to them.
Repairs: There is a dry dock for major and minor repairs at Bandar Abbas. But it must be checked properly.

Shipyard is now in operation 5 km. West of New Port but so far has only been used by Iranian ships. Except in emergency it is not available for other ships.
Telephones: Only available ashore for international calls. No telephones placed aboard vessels.

SHIPMASTER'S REPORT: February 1989 (Updated 1996).
Port: Bandar Abbas (Shahid Radjaie).
Arrival: On arrival at the anchorage, contact Port Control on VHF Channel 16 and give arrival information. Port Control are of little assistance with regard to berthing information. The agent is the best person to supply this advice. The State Shipping Agents "ShippingCo" maintain a watch on VHF Channel 16.

The vessel may also be contacted by the Iranian Coast Guard on entering the outer anchorage.

Boarding Party: The boarding party of Customs and Immigration Officers boarded at the anchorage 24 hours after arrival. Normal paperwork is required.

All cabins were searched for alcohol, etc. and the bond was sealed.

The vessel is also searched for stowaways prior to departure by Customs Officials.

Communications: The radio room is sealed. VHF telephone calls can be made via Bandar Abbas Radio or Muscat Radio.
Berthing: The vessel berthed at Shahid Radjaie which is about 1 hour from the outer anchorage.

Shahid Radjaie is a large, modern and well planned port with about 24 berths. The maximum draft is probably in excess of 13.0 m.

This vessel discharged barley in bulk at a rate of approximately 3,400 tonnes per day, utilising evacuators and lorries ashore. The ship's cranes are required for suspending the suction hose.
Fresh Water: Available.
Fuel: Available.
Repairs: Mechanical, radar and navigation equipment repairs are possible. However, no spares are available.
Repatriation: Possible.
Shore Leave: Allowed.

General: Mail: It is possible to send mail. The vessel received courier mail from overseas.

Spares: It is not advisable to receive spares, due to delays at Customs and paper work, etc.

Supplies: Fresh provisions available.

Fumigation: Hatches with grain cargoes require fumigation. Crew have to stay on board. If only a few hatches require fumigation they are sealed and stevedores continue to work on other hatches.

SHIPMASTER'S REPORT: October 1993 (Updated 1996).
Bandar Abbas, Shahid Radjaie Port:
Documents: The Port Inspector will visit the vessel and check the ship's certificates.
Pilotage: Vessel must send ETA 72 hours before arrival to Agent and to Harbour Master's Office, otherwise Coast Guard may stop the vessel when approaching Bandar Abbas, if they have not been informed of vessel's arrival.

While approaching Bandar Abbas Anchorage in the morning, vessel must keep clear of small speed boats carrying passengers from islands across to Bandar Abbas town to work.

Best place to anchor is 3 miles South to S.E. of old port breakwaters, where Customs, Port Guards, Immigration, Port Health and Agent board the vessel and give Inward Clearance. Berthing usually takes place at night.
VHF: Port Control keeps watch on Channels 13 and 16. Port Radio "Abbas Radio" keeps watch on Channel 25.
Cranes: New shore cranes of 15 tons SWL are available at Berths No. 15 and 16, and new cranes are available at the Container Terminal (Berths No. 7 and 8).
Cargo Gear: Ship's cargo gear must be in good order as it is used for discharging cargo.
Medical: Hospital, private doctors and dental clinics are available. Advance notice required by Agents to make shore passes. Inoculations and vaccinations are available.
Fresh Water: Fresh water available at berth by shore connection and at anchorage by barge, advance notice required.
Fuel: Good grades of fuel can be supplied by barge.
Consuls: U.A.E.
Repairs: Mechanical repairs available.
Surveyors: Cargo inspectors available (Iran Group of Surveyors – IGS). Lloyd's Register and Bureau Veritas surveyors available and require advance notice to call on board vessels.
Deck Watchmen: It is advisable to keep a deck watch at all times at gangway in port and in the anchorage.
Customs Allowances: Consumption of wine and spirits not permitted and must be placed in bond on arrival at anchorage, prior to Port Guards or Customs coming onboard. A sufficient amount of cigarettes and tobacco are issued to crew.
Repatriation: This can be done via Bandar Abbas Airport to Dubai or by ferries sailing 4-5 times a week to Sharjah. Price for one way to Sharjah is about U.S.$ 30.00 per person. Name of ferry company is Valfajeh 8 Shipping Co. (Telex: VEC IR 213819. Fax: 892404 Head Office Tehran).
Airport: About 10 km. to old port and 28 km. to new port (Shahid Rejaie). Flights available to Tehran, Dubai and Sharjah daily. Incoming crew given 72 hours visas to join vessel. CDC or Seamen's Book is required by Immigration at Tehran Airport to issue visa.
Time: Summer-time (GMT plus 4.5 hours from 21st March (Iranian New Year) to 22nd September and then GMT plus 3.5 hours in Winter.
Telephones: Not available at berth. Calls can be made through "Abbas Radio" to Agent by VHF. When alongside, it is advisable to keep VHF on for incoming calls from Agent.
Banks: Bank Melli Iran (National Bank) located outside gate in Custom's House and branches in town.

Bank of Tejarat (Trade Bank), Bank of Saderat (Export Bank), Bank of Melat (Nation Bank) and Bank of Sepah, all located in town.
Supplies: Provisions, fresh provisions and cabin stores supplied at good prices.
Shore Leave: Crew members allowed to visit town during daytime. A shore pass is issued by Immigration Officer for one day period and one photograph is required.
Garbage Disposal: This is carried out everyday at 0900 hrs. when alongside or at anchorage. Receipt to be signed.
Seamen's Clubs: Inside the new port, a Seamen's Club has been established with the traditional Iranian living environments, having international telephone, prayer room, duty free shop, traditional tea room, restaurants, gold shop, postage, fax line facilities. Mini-bus calling at ship's gangway every hour from 1600 hrs. – 2300 hrs. to carry crew to club. Air-conditioned rooms available for rent. Barber's shop available.
Regulations: Ladies calling at Iranian ports must wear long dresses and their hair has to be covered.

AUTHORITY: Port Director, Bandar Abbas.

Shahid Radjaie Port Complex. *Tel:* (0761) 29127-30. *Telex:* 362815 BNDR IR. *FAX:* (0761) 27430, 29424, 26077. *Contact:* R. Ansari, Port Director.

Also see "General" before first port.

AGENT: Gulf Agency Company (Iran).

All enquiries, telexes, cables, letters concerning Ship's Agency at Iranian Ports should be directed to G.A.C. Shipping (UK) Ltd., No. 1 Charlwood Court, County Oak Way, Crawley, West Sussex RH11 7XA, England. Tel: (01293) 615555 (5 lines). Telex: 87561 GAC UK G (4 lines). Fax: (01293) 615161. Cables: GACSHIP Crawley UK.

BANDAR IMAM KHOMEINI: 30.25 N. 49.05 E.
(See Plan)

Note: Jetties and port facilities are operational.

DOCUMENTS: Documents requested from Master on arrival.
Quarantine Officer
1 copy Crew List.
1 copy Maritime Declaration of Health.
1 copy Vaccination List.
1 copy List of Ports of Call.
Customs Officer
1 copy Crew List.
1 copy Stores List.
1 copy Crew Declaration.
1 copy Cargo Manifest.
Port Authority
1 copy Port Clearance from Last Port.
1 copy Ship's Register.
1 copy Tonnage Certificate.
Ship's Certificates: (One photocopy of each of the following):
Safety Telephony.
Safety Telegraphy.
Certificate of Machinery.
Load Line Certificate.
Ship's Register.
Classification Certificate.
Ship's Cargo Gear and Safety Equipment Certificate.
Derat Certificate.
Port Police:
1 copy Crew List.
1 copy Stores List.
1 copy Passenger List.
Agents
Crew List (2 copies).
Cargo Documents: The following documents must be sent to Agents as far in advance of vessel's arrival as possible, by Owners or Loading Ports:
Cargo Manifest (5 copies).
Freight Manifest (2 copies).
B/L Copies (2 copies).
Stowage Plan (2 copies).

All cargo shown on manifests must be landed at the port, and it is therefore essential that short-shipments, cancellations, diversions, etc. (if any) be reported as early as possible and manifest should be corrected before submission to Port Authorities to avoid payment of fines. Stowage plans and hatch lists should also be sent ahead, giving ample time to be studied by Cargo Supervisor for unloading arrangements.

The names of consignees must be inserted on the manifest at the port of origin. This is due to the fact that names have not been inserted, as this is a necessary requirement, as per Iranian Customs authorities requirements.

In view of the above, Owners are kindly requested to make sure that manifests for Bandar Imam Khomeini are properly made out at loading port with correct names of consignees.

APPROACHES: Shipping channels well marked with light beacons and buoys and present no navigational difficulties in clear weather.

Small unlit tide gauge platform located on edge of the shoal West of shipping channel in Lat. 29° 42' 30" N., Long. 49° 03' 48" E., approximately 1.75 miles West of Khor Musa Approaches Buoy No. 4, and shown on Admiralty Chart.

Approaching vessels should steer for Khor Musa Light Float, in position Lat. 29° 36' 32" N., Long. 49° 34' 47" E., and from there a course should be set along marked channel for Buoy No. 12 in position Lat. 29° 53' 20" N., Long. 49° 12' 32" E., and Buoy No. 7 in position Lat. 29° 53' 37" N., Long. 49° 12' E.

PILOTAGE: Application for Pilot to be made 48 hours in advance of vessel's arrival at Khowr-e Musa Pilot Station, through Agent and Bandar Imam Khomeini Port Radio by telex, and 6 hours before arrival Pilot Station to Bandar Khomeini Port Control on VHF Channel 16.

Pilotage operated by Bandar Imam Khomeini Port Authority from Buoy No. 12 up to Bandar Imam Khomeini Anchorage. Pilot vessel is usually in position Lat. 29° 55' 54" N., Long. 49° 06' 30" E. Approach within 2.5 cables of pilot vessel. During adverse weather pilot vessel may proceed above Bar, in such cases, Masters should not attempt proceed inward without Pilot.

MAX. SIZE: LOA 780 ft. and draft 42 ft. (S.W.). Vessels of 37 ft. draft may enter port at any time. Higher drafts depending on state of tide. Normal rise of tide about 11 ft. Entry permitted day or night.

HEALTH: Medical Officer boards at Bandar Imam Khomeini. Subject no infectious diseases reported on board during voyage, Medical Officer will grant Pratique.

RADIO: Bandar Imam Khomeini Port Radio EQN 500 kHz. Telex 612051 BDKIR.

Continuous watch on 500 kHz is to be maintained at all times while navigating in Khor Musa Waterway.

VHF: Channels 16 and 13. 24 hours service.

"Khor Musa" Pilots on Channel 16.

TUGS: Tugs for berthing and unberthing on Harbour Pilot's advice. 12×900 h.p. – 4,400 h.p. tugs.

BERTHING:

Berth Use	*No. of Berths*	*Total Length* (m.)	*Depth* (m.)	*Max. d.w.t.* (tons)
General Cargo	29	5,312	10.6	30,000-45,000
Container	5	1,051	12.1	
Grain	2	560	12.1	
Ore	1	220	12.1	

BULK HANDLING FACILITIES: Iron Ore Installation, loading capacity about 8,000 tons per day. The loading installation consists of 2 powerful moving cranes with a capacity of 150 t.p.h. on each unit, 2 funnel-shaped containers with a capacity of 30 tons each and a 600 m. long conveyor belt with a capacity of 2,000 t.p.h.

Sulphur: Sulphur is loaded at the Petrochemical Berth. The shiploader travels the length of the vessel and has a loading rate of 400 t.p.h.

All derricks to be swung away from the shore giving the loader maximum clearance. Radio aerials, and fore and back stays to be removed.

Due to high temperatures, every precaution must be taken to combat risk of fire.

Aluminium Powder: Berth No. 6 is usually used for discharge.

Grain: Berths No. 13, 14 and 15 normally used for discharging grain by 2 suction units of 240 t.p.h. each.

Wheat: One discharge berth for bulk wheat (Silo Jetty). Discharge rate about 10,000 tons per day.

Vegetable Oil: Discharged by shore pipe at 3,000 tons per day.

EQUIPMENT:

5 rail mounted mobile cranes, capacity 15 tons.
35 mobile cranes, capacity up to 90 tons.
37 forklifts, capacity 10 tons.
43 tractors.
140 trailers, 1 trailer (120 tons).
2 suction units for bulk cargo (240 t.p.h. each).
43 forklifts, up to 15 tons capacity.

Private:

1×250 ton crane.
1×120 ton rubber wheeled crane.
1×80 ton rubber wheeled crane.

Container equipment:

2×40 ton gantry cranes.
2×40 ton transtainers.
4×40 ton top lifters.
4 trailers.

MEDICAL: 24 hours advance notice of requirements to be sent to Agent.

FRESH WATER: There is water supply at Jetties No. 1 – 6 and 11 – 20, and Masters are requested to inform their Agents 24 hours in advance of their requirements, allowing Agents to pay for the water and take turn for supplying water to the vessel.

Fresh water can also be arranged at the Inner Anchorage by 2 barges, and Agents will need 48 hours advance notice in order to obtain barge. Agents will have the barge loaded with water from jetty and deliver to anchorage.

FUEL: Diesel oil and gas oil available by barge at 2–3 days notice.

REPAIRS: Radio and navigation aid repairs can be undertaken by Ship Supplies Co. Tel: +98-651-5220. Fax: +98-651-5219. Telex: 88-612108 SSBI IR. Minor technical and mechanical repairs possible by private workshops. Repair shop and slip of 1,500 tons capacity in process of construction.

HATCHES: Opening and closing by ship's crew.

WATCHMEN: Not compulsory.

CUSTOMS ALLOWANCES: Reasonable quantity spirits and tobacco for consumption in port may be issued prior sealing store rooms. Strict supervision imposed by Customs and prohibited items, particularly tobacco and cigarettes, should not be taken ashore in excess of 50 cigarettes, or cigars, or 1 oz. tobacco.

AIRPORT: Mahshahr Airport, 20 km. Regular flights.

TIME: GMT plus 3.5 hours. GMT plus 4.5 hours in Summer.

IDENTIFICATION CARDS: According to regulations in force, seamen should hold shore pass issued by respective Agents and signed by the Immigration Office. All shore passes should bear a photo of the holder, in order to facilitate checking at exit of port area. It is therefore necessary for officers and crew to have a photo ready on arrival at the port to facilitate obtaining shore passes.

SHIPMASTER'S REPORT: December 1991 (Updated 1994).

Berth Name: PCC Berth, Bandar Imam Khomeini.

1. Berth Operator and/or user: Petrochemical Company of Bandar Imam Khomeini.
2. Maximum LOA: 285 m.
3. Maximum beam: 35 m.
4. Maximum Summer d.w.t. or displacement or capacity in cubic metres: Only limited by draft.
5. Maximum draft: 12.0 m. – tidal dependent. 11.0 m. any state of tide (this would only give 0.2 m. UKC). Need over 2.0 m. tide to exceed 11.0 m. draft for departure.
6. Minimum depth at berth and required underkeel clearance (UKC): Vessel always afloat with 1.0 m. UKC on low water of 0.7 m. and 10.1 m. draft, so this bears out report of minimum depth on berth of 11.2 m. We loaded so as to be finished for high water departure from berth, but documentation delays kept us there until low water which was 1.9 m., so minimum UKC was still over 1.0 m. (see note below regarding tides).
7. Minimum depth in approaches and required underkeel clearance (UKC): 10.0 m. – 12.5 m. on Khor Musa Bar, depending on who you talk to. Our soundings indicate around 12.0 m. at chart datum (1.0 m. UKC).
8. Water density: 1032 on high water, altering with tide.
9. Night berthing/unberthing: Possible.
10. Bunkers/diesel/fresh water and how delivered: Available.
11. Minimum and maximum vertical distances from ship's manifold to waterline: Not discovered, but with freeboard of 22.40 m. and 4.0 m. high water, we must have been close to limit, but vessel berthing after us is larger.
12. Type of berth: Dolphin berth, well fendered.
13. Minimum size of vessel: 5,000 tonne gas carrier loaded here. 100 m. central dolphin.
14. Maximum distance ship's bow to centre manifold (B.C.M.): Not discovered.
15. Maximum distance ship's stern to centre manifold (S.C.M.): Not discovered.
16. Grades of cargo handled: Propane, Butane, Pentane Plus.
17. Is lighterage available for liquified gas? No.
18. Dirty ballast facilities: Available.
19. Are slops accepted? If so, what constraints: No facilities.
20. Number and size of tugs available: Used 2 tugs, Pilot said 1,100 h.p.
21. Air-draft restrictions caused by bridges, etc.: None.
22. Pilot boarding areas: Khor Musa Channel Pilot at Buoys No. 10 – 20. Wreck in mid-channel just before Pilot Station that you have to dogleg round. Harbour Pilot off Bandar Khomeini.
23. Pilot: Compulsory.
24. What type of storage is present on shore, i.e., pressurised or refrigerated? 6 refrigerated tanks.
    Numerous various sized spheres all severely shell damaged.
25. Volume of storage available on shore for each grade handled: Propane, 2×20,000 tonnes; Butane, 2×20,000 tonnes; Pentane Plus, 2×14,000 tonnes.
26. Is vapour return to shore available and used: For emergency only, if used metered off boil.
27. What is loading/discharging arm configuration: From downstream – Propane Vapour/Propane Liquid/Butane Liquid/Butane Vapour, not interchangeable (10 other arms).
28. What are sizes of liquid and vapour connections? Liquid 12 in. 150 ASA; vapour 10 in. 150 ASA.
29. Any special requirements for gas ship, including certification: Photocopies of Tonnage Certificate and Register.
30. Any other relevant port information:
    (a) Imperative that B.A. Charts No. 1268 and 1269 on board.
    (b) E.S.D.S. system safety: Plant yes, jetty yes, by telephone/pager from Jetty Operator to control room.
    (c) Product initially very warm – Butane + 16° and Propane – 25°, gave initial pressure problems but settled down.
    (d) All jetty winches broken, ship's crew put ashore to help mooring gangs with our 38 mm. wires. Vessel heaved own moorings ashore.
    (e) Tank farm of about 40 tanks and 2 refineries severely damaged and out of use. Some installations under repair. Ammonia plant destroyed. New gas plant very small part of total plant. About 30,000 tonnes a month exported, but more available.
    (f) Customs carry out full ship search. Very strict about alcohol, cameras and pornography. Re-searched after completion of cargo prior to vessel being issued with clearance to leave jetty. Master signs declaration that he alone is responsible for any infringements. Check that no Iranians on board.
    (g) Petty thefts reported. Everything should be locked up or secured.
    (h) Jetty is to East of fertiliser plant jetty marked on B.A. Chart No. 1269 (Plan Bandar Khomeini to Bandar Mashahr).
    (i) Berthing/unberthing Pilot is very competent.
    (j) Heavy atmospheric pollution from adjacent phosphate/ammonia/sulphur plant.
    (k) Telex link via Bandar Khomeini Port Radio (Telex No. 612051 Bdkir). Very good and all information appears to have got through.
    (l) No Pilot vessel on station as per ALRS. It is tug stationed at Buoy No. 28, inside bar, which ventures out when vessel arrives.
    (m) It is forbidden to look at installation through binoculars. Cautioned over this by revolutionary guards.
    (n) Original LPG Terminal (Jetty No. 6 at Bandar Mashahr) still out of commission but presently being repaired.
    (o) Papers: 6 Crew Lists, 2 Personnel Declarations, 2 Bonded Stores Lists, 1 Maritime Declaration of Health, 1 Vaccination List, 1 List of Ports of Call.
    (p) Vessel received visits from all port authorities.
    (q) No ship/shore Check Lists, only fire safety instructions issued by Port Officer.
    (r) Independent surveyor (IGS – Watson Gray), most competent.
    (s) Bill of Lading raised on surveyors calculation of ship's figures.
    (t) Shore gangway not operational, only room for accommodation ladder lashed to Chicksan base.
    (u) No shore leave.
    (v) Pilot unable to disembark after crossing bar, due to bad weather, and it is not permitted to oncarry him. He retains vessel's Port Clearance until tug arrives to disembark him.
    (w) Very long stand-bys and uncertain start to loading but once settled down, it was very steady.

SHIPMASTER'S REPORT: June 1994.

Charts: B.A. No. 1268 and 1269.

Approaches: Flat and featureless. Khowr E Musa Light Float observed on radar at 20 miles (together with Racon "T"). Light seen at 7 miles. Telex Bandar Khomeini Radio (Telex: 612051, Fax: 0651-6900) with ship's details 48 hours and 24 hours prior to arrival.

VHF: Term "BIK" widely used by Iranians.

Call BIK Port (as per ALRS D3840) when obtainable. We contacted passing Kharg Island. VHF conditions in the Gulf are somewhat chaotic. BIK Port works on Channels 4, 6, 13 and 74.

We were told to call again at Buoy No. 4, and then instructed to enter up to Buoy No. 12, and anchor to West of the Buoy.

BIK Port Control asks if ship is using up-to-date Charts B.A. No. 1268/1269, plus holding Tide Tables on board.

Radio: Bandar Imam Khomeini Radio: Telex 612051 BDKIR. Fax: (0651) 6900. VHF: Channel 16 (24 hours).

Hours of Transmission of Traffic List	*Transmitting Frequency* (kHz)	*Class of Emission*	*Receiving Frequency*	*Working Hours* (hrs.)
0435	8,655	A1A	Channels 3/4	0400-0530
	8,797	J3E	8273 kHz	0530-0930

Hours of Transmission of Traffic List	*Transmitting Frequency* (kHz)	*Class of Emission*	*Receiving Frequency*	*Working Hours* (hrs.)
0935	12,690	A1A	Channels 3/4	0930-1130
	13,167	J3E	12,320 kHz	1130-1430
1435	8655	A1A	Channels 3/4	1430-1630
	8797	J3E	8273 kHz	1630-2030
2035	4282	A1A	Channels 3/4	2030-0400
1435-1135- 0835-0635 2035 - 1735	500	A1A	500 kHz	24 hours
	458-463	A1A	458-463 kHz	
	476-512		476-512 kHz	

Anchorages: Inwards: 1 mile West of Buoy No. 12 in 15.0 m. Holding is good. Next anchorage is for outbound vessels waiting to cross Bar outbound, about 1.8 miles North of Beacon 36, holding reported as good from previous visit. This anchorage is under pilotage.

Anchorage for inbound vessels off BIK (30° 24.5' N., 49° 02.5' E.) again under pilotage. Holding good as long as anchor well clear of deep 73 m. trench close S.W.

Channel: Depths generally more than charted. We ran echo trace inbound/outbound and continually compared with chart and found not less than charted (when reduced to Datum) from Khowr Musa Light Float to BIK PC Berth, *except* between Buoys No. 14 to 16, when charted depth is not more than 1.0 m. less (12.2 m. dredged depth, 11.2 m. actual).

Buoyage below Bar is accurate as charted. Above Bar some beacons moved as reported elsewhere.

GPS does not always agree with channel positions.

3 dredgers available and seen working at various times.

Pilots say they report depths to Harbour Master as ships transit Khowr Musa Bar, and then dredger is ordered to work, although they say some time since Lower Bar was dredged. Deep draft vessels should transit on H.W. only. Speed is reduced to half speed in Bar Channel.

Pilots: 24 hour operation.

Channel and Berthing Pilots use Admiralty Tide Tables. Pilots board and disembark just South of Buoy No. 12 from tug. Pilot tug remains on station.

Pilots change off BIK Port West.

Normal to have 2 Pilots.

Pilots are competent and speak good English.

Sometimes a backlog of Pilots builds up, either on tug or in port and inbound/outbound ships used to transport Pilots.

Pilots contacted via BIK Port Radio.

Pilot station as marked in port area (30° 25.36' N., 49° 04.4' E.).

Tugs: 6 tugs up to 2,000 h.p. available. They appear to be in good condition and are well maintained.

Tug's lines sometimes used.

We berthed/unberthed with 2 tugs. On departure forward tug used ship's lines and parted the line.

Berth: BIK Petrochemicals Jetty No. 2 (Jetty No. 1 is for materials).

Position: 30° 25.50' N., 49° 06.46' E. GPS gave 30° 25.61' N., 49° 06.47' E. Alignment is 261° – 081°.

Minimum depth at L.W. alongside 12.8 m.

Vessels berth into tide and unberth on either tide.

Berth is a flat "T" jetty of concrete construction with 95 m. flat face. Outlying mooring dolphins connected by catwalk to jetty.

Mooring hooks used and fenders are good.

Berth gangway not operational.

Pilots advise ship to turn gangway in prior to berthing due to pipes very close to berth face. Turn out again when tied up.

Offside gangway also required for officials.

Moorings 4-2-2 each end. They do not like wires.

Mooring gang each end, but no mooring boat.

Mooring fairly quick.

Cargo: Berth No. 2 adjacent to the refinery.

Refrigerated shore tanks for 90,000 tonnes butane/propane each (total 180,000 tonnes).

Chemical gases plant opened in March 1994.

Most of damage inflicted in the war is now repaired. Chemical gases including propylene, butane/propane and naphtha exported and shipped to other Iranian ports.

Butane/propane configuration conforms to Japanese standards from East to West – Butane vapour, butane liquid, propane liquid, propane vapour. Liquid 12 in., vapour 10 in.

Vessels with OCIMF manifolds and no vapour cross connection have to berth port side to for simultaneous loading. Propane vapour is connected by flexible hose to vapour Chicksan.

To return vapour, charged to ship basis 25 tonnes/hr.

Average propane temperature at manifold (June 1994) – 41.7°C.

Average butane temperature – 4.1°C.

Ambient rose to + 45°C (June).

Propane S.G. 15°C – 0.5079.

Butane S.G. 15°C – 0.5779.

Flow rates of butane/propane can be variably adjusted from minimum of 50 t.p.h. to maximum 1,000 t.p.h. each grade. Below 400 t.p.h. cannot be sustained for long periods.

Loading Master takes ship's walkie-talkie UHF. Moderate English and cooperative.

There are 9 other Chicksans for petrochemicals/chemical gases/naphtha with 6 in. and 8 in. connections.

From completion of loading to completion of all documentation takes about 4 hours.

Two surveying companies in attendance, one of which is SGS.

Fresh Water: Obtainable from barge at Inner Anchorage at U.S.$14.00 per tonne. Some berths have fresh water pipes to them. Fresh water available at PC Berths No. 1/2 at U.S.$40.00 per tonne.

Provisions: Obtainable through Agent. No ship chandler.

Stores generally plentyful in Spring and Summer.

Note: Stores by boat only, at launch charge of U.S.$320.00, or if a large amount, tug charge is U.S.$600.00.

Shore Leave: Possible. No access through refinery. Boat has to be hired at U.S.$320.00 per trip for up to 12 persons.

Formalities: If vessel anchors in Inner Anchorage before proceeding alongside, ship is cleared here.

Customs, Port Health and Immigration board, but not at same time. No Agent at anchorage.

Bond sealed, but no cabin searches.

Alcohol, cameras and "magazines" are sealed.

When alongside, Agent, Terminal Manager, Port Safety, Port Pollution and Port Radio board. Safety and Pollution officials make a tour of the main deck and engine room. Port Radio seals radio equipment, including Inmarsat.

Clearance given by Outward Channel Pilot.

Documents required:

9 copies Crew List.
2 copies Bond List.
2 copies General Stores.
2 copies Crew Declaration.
1 copy Vaccination Certificate.
1 copy Health Declaration.
Derat Certificate sighted.
2 copies Ports of Call.
1 copy Register.
1 copy Tonnage Certificate (if separate from Register).
IOPP and Safety Equipment Certificate.
Last Port Clearance.

Agent and 2 clerks require a cabin and typewriter to prepare all cargo documents. Agent stays onboard with 2 clerks about 8 hours before cargo completion.

The Agent was very helpful.

General: As previously mentioned, most of the war damage has been repaired throughout the port.

In the refinery, 3 sphere pressure tanks and 4×45,000 tonne LPG tanks are under construction.

All berths (No. 1 to 34) seem usable, with ships at several berths. Pilots report all berths operational.

One floating crane of 50 tonnes in operation.

Radio station accepts international calls. Calls are inexpensive compared with other Gulf ports.

Very few vessels now call at Bandar Mahshahr, although berths and channel are still maintained for daylight berthing and unberthing.

BIK is strictly an industrial complex, nearest town is 20 km. to N.E.

Weather in Summer is very hot and dry. Winter is cool to cold.

AUTHORITY: See "General" before first port.

AGENT: See "Bandar Abbas/Kharg Island".

BANDAR MAHSHAHR: 30.27 N. 49.20 E. (See Plan)

Refined Products Loading Terminal of the National Iranian Oil Company.

FLAG: All vessels required to fly Iranian flag from foremast during daylight hours, while in port.

DOCUMENTS:

8 Crew Lists.
2 Bonded Stores Lists.
International Health Form.
If cargo aboard, Manifest certified by Iranian Consulate.
Clearance from Last Port.

GENERAL: Khor Musa is deep tidal inlet at head of the Gulf. Consists of triangular-shaped entrance 35 miles wide and 22 miles long followed by a channel, approximately 14 miles long with average width about 800 ft., ending at Port of Bandar Mahshahr. Khor Musa is entered by deep water approach channel 25 miles long and 0.8 miles wide, commencing at Khor Musa light float, located in position Lat. 29° 36' 32" N., Long. 49° 34' 47" E. At end of approaches channel, near Buoy No. 12, restricted depths and channel widths extend for distance of 8 miles, in vicinity of Khor Musa Bar. A deep water channel then exists up to commercial port of Bandar Imam Khomeini, and to oil port of Bandar Mahshahr, a total distance of 37 miles from end of Bar Channel. Refined products delivered to Bandar Mahshahr Terminal from National Iranian Oil Company's Refinery at Abadan.

TERRITORIAL WATERS: The 12 mile limit of Iranian territorial waters crosses approaches channel in vicinity of Khor Musa Approaches Buoy No. 8, which is approximately 20 miles from Khor Musa light float.

KHOR MUSA APPROACHES:

Navigational Dangers: Numerous shoals and sand banks in Khor Musa with low-lying shore lines and few conspicuous marks. However, shipping channels well marked with light beacons and buoys and present no navigational difficulties in clear weather. A small unlit tide gauge platform located on edge of shoal West of shipping channel in Lat. 29° 42' 30" N., Long. 49° 03' 48" E., approximately 1.75 miles West of Khor Musa Approaches Buoy No. 4, and shown on Admiralty Chart.

Outer Khor Musa Channel: Approaching vessels should steer for Khor Musa light float, in position Lat. 29° 36' 32" N., Long. 49° 34' 47" E. and from there a course should be set along marked channel for Buoy No. 12 in position Lat. 29° 56' 03" N., Long. 49° 06' 47" E., bearing 308° 45' from Khor Musa light float.

New Khor Musa Channel: Depth of channel is 40 ft. below L.A.T.

Note: Buoys South of and including Buoy No. 12 above are referred to as Khor Musa Approaches Buoys. Buoys North of No. 12 above are referred to as Inner Khor Musa Buoys.

PILOTAGE: Compulsory. Service operated by Bandar Imam Khomeini Port Authorities up to Bandar Imam Khomeini, and by Oil Company between Bandar Imam Khomeini and Bandar Mahshahr. Pilot vessel maintains station approximately 1 mile, 135° from Khor Musa Approaches Buoy No. 12. Vessels requiring Pilot should approach within 2.5 cables of pilot vessel. During adverse weather conditions Pilot may proceed above bar for shelter; in such cases vessels should not attempt to proceed inward without Pilot. Essential that ETA Bandar Imam Khomeini is transmitted to Coastal Radio Station EQZ as soon as possible after Pilot has embarked at Pilot Station. If for any reason a vessel is required to wait at any time at Bandar Imam Khomeini, it will be advised through EQZ. Marine Operation Section, Bandar Mahshahr Terminal, on receipt of ETA Bandar Imam Khomeini, will arrange for Berthing Master to board vessel at Bandar Imam Khomeini anchorage and allocate jetty berth at Bandar Mahshahr.

BANDAR MAHSHAHR APPROACHES:

Navigational Dangers: Khor Musa Channel well marked with buoys and beacons, but attention is drawn to following:

(a) Outer Khor Musa Bar: Lat. 29° 59' N., Long. 49° 04' E. and Inner Khor Musa Bar Lat. 30° 02' N., Long. 49° 01' E., where restricted channel widths and depths exist and min. depth 40 ft. Buoyed channel over bar is 800 ft. wide, but declared min. depth of 40 ft. only applicable to central half of channel. Towards edges of channel, shallower depths exist.

(b) Qassar bin Siswan: A rocky shoal, in Lat. 30° 12' N., Long. 48° 58' E. approximately 10 miles North of Inner Khor Musa Bar, marked by Buoy No. 9 with min. depth 6 ft.

(c) Khor Wastah to Beacon 18: Near sharp bend to East in channel, where tidal streams reach rate of over 4 knots at ebb.

Khor Musa Bar: Reached approximately 5 miles N.W. from pilot vessel, and normally does not restrict passage of inward vessels.

Khor Musa Channel: After leaving bar, channel is followed up Khor Musa for about 32 miles to anchorage at Bandar Imam Khomeini.

Bandar Imam Khomeini: All inward bound ships required to anchor on arrival off Bandar Imam Khomeini, where Pilot disembarks and a Government Medical Officer comes on board to grant Pratique. For this purpose an accommodation ladder should be rigged and ready before arrival.

Bandar Mahshahr Roadstead: Shortly after leaving Bandar Imam Khomeini, the channel to Bandar Mahshahr is entered between the starboard hand Beacon No. 1 (flashing white) and the port hand Beacon No. 2 (temporarily removed). Channel well marked by light beacons to entrance of Bandar Mahshahr, at Beacon No. 4. All port hand lights flash red and all starboard hand lights flash white. Distance from Bandar Imam Khomeini Anchorage to Bandar Mahshahr about 7 miles. Before arriving at Bandar Mahshahr, the accommodation ladder must be taken in and the ship's side cleared for tugs and berthing.

ANCHORAGE: No anchorages in Bandar Mahshahr or Bandar Mahshahr roadstead. Inward bound vessels must anchor on Northern side of Khor Musa Channel, West of Bandar Imam Khomeini, and await arrival of Oil Company Berthing Master.

WIND AND TIDE:

Khor Musa Bar: Classified as Standard Port in Admiralty Tide Tables, Volume II. Tidal predictions considerably affected by strong winds. Variations up to 3 hours in time, and 3.5 ft. in height have been recorded. North-Westerly winds tend to lower level and retard predicted times of high and low waters; South-Easterly winds have opposite effect. At Khor Musa Bar, MHHW has rise of 11.6 ft. and MLHW has rise of 9.6 ft. above chart datum. Rise of tide at bar is also given by automatic tide indicator established near inner Khor Musa Buoy No. 8. Masters may obtain expected depth of water on Khor Musa Bar at any time by telephone to Marine Operations Office, Mahshahr, 4264.

Khor Musa: Tidal range increases between bar and Mahshahr. Maximum tidal velocities in Khor Musa about 3.5 knots on flood and 4.5 knots on ebb, at bend near Inner Khor Musa Beacon No. 18.

At Ports of Imam Khomeini and Mahshahr: Average time high water is 1 hour 35 minutes later, and low water 16 minutes later than on Bar. MHHW has rise of 17.0 ft., and MLHW rise of 14.6 ft. above Mahshahr chart datum.

Mahshahr Terminal: N.W. prevailing winds blow across jetties, from shore. On average, 60% of prevailing winds from N.W., 30% from S.E., and 10% variable. N.W. and S.E. winds frequently reach Force 8, but winds from other directions normally do not exceed Force 4. Maximum tidal range 18.9 ft. At springs, flood tide has velocity of 2 knots and ebb tide velocity 3 knots.

MAX. SIZE: Max. LOA 780 ft. Max. permissible draft at Khor Musa Bar is 40 ft. Depths in tanker berths vary from 37 ft. at Berth No. 4 up to 43.5 ft. at Berth No. 6.

Vessel up to 740 ft. LOA can be berthed day or night at any stage of the tide. Vessels lengths 741 ft. – 780 ft. can only be berthed during daylight hours flood tide and unberthed on flood tide day or night.

HEALTH: Owners should check with Agent respecting any recent imposition of anti-epidemic regulations and requirements for additional injections for crew members. Medical Officer boards at Imam Khomeini Anchorage. Subject no infectious diseases reported on board during voyage, Medical Officer will grant Pratique.

RADIO: Oil company has coastal radio station at Abadan, call sign EQZ. Station handles messages to and from oil ports of Mahshahr, Abadan, Kharg Island and Cyrus Terminal.

Nomination and Loading Orders: Signalled by Iranmash on receipt of vessel's first ETA. Vessels should signal tentative ETA Khor Musa Bar, 72 hours in advance, confirming ETA not less than 48 hours before arrival Khor Musa Pilot Vessel Station.

Radio Watches: Continuous watch on 500 kHz to be maintained at all times while navigating Khor Musa waterway, and ordinary listening watches maintained when at anchor.

VHF: Mahshahr Terminal equipped with International Maritime VHF/FM Radio Telephone Service, using standard international frequencies. Masters recommended use this facility when within range of Mahshahr Terminal. Channels available on continuous watch basis:

No. 16 Safety and Calling.
No. 12 Port use, tankers and tugs.
No. 20 Port use, telephone extension.
No. 26 Port use, telephone extension.

Initial contact should be made on Channel 16 and then transfer to Channel 12 for port operations, or Channel 20 or 26 for telephone extension.

TUGS: 3 tugs at terminal, all of 1,500 b.h.p., all fully equipped for fire fighting. Incoming ships are met by tugs in channel about 1 mile below port limits. 2 tugs always used berthing, and 1 or 2 unberthing, according to state of tide and direction of ship's head. Vessels take tug's ropes.

BERTHING: Vessels arriving on flood tide berthed starboard side to jetty, vessels arriving on ebb tide berth port side to jetty. 6 bulk loading jetties, each fitted with Woodfield loading unit. 10 in. loading arms, 6 in. bunker arms. Minimum number mooring ropes or wires required is 14, as follows: (Forward) – 4 head ropes, 2 breast ropes, 1 back spring. (Aft) – 4 stern ropes, 2 breast ropes, 1 back spring. For additional security 1 extra breast line forward and aft should be used. Unless breasts of adequate strength line are used, there is every possibility of vessel when in light condition being blown off jetty by N.W. wind and damaging loading equipment.

Maximum loading rates are:

Liquid propane/butane	1,500 t.p.h.
Aviation gasolines	700 t.p.h.
White spirits (solvent)	400 t.p.h.
Motor gasolines	2,200 t.p.h.
Motor gasoline (over the rail blending)	400 t.p.h.
Naphtha	2,100 t.p.h.
Turbine fuels	1,600 t.p.h.
Kerosenes	1,500 t.p.h.
Gas oils	2,500 t.p.h.
Marine diesels	700 t.p.h.
Fuel oils	5,000 t.p.h.

LPG LOADING: Propane and Butane Gas is loaded at No. 6 Jetty at a rate of 1,500 t.p.h. Propane and Butane cannot be loaded simultaneously.

As 16 in. fixed Chicksan liquid and vapour return arms are used for loading, certain ships are limited to one-side berthing only. To avoid delay of vessels, it is advisable to have vapour return connections on both sides of liquid connection on board.

Terminal has available a series of ASA Standard reducers and adapters.

Loading temperature of Propane is about minus 48°F., and Butane is about minus 23°F.

MEDICAL: No medical facilities at terminal. Agents may arrange medical attention through Oil Company clinic in Abadan. In event hospital treatment required, patient would be taken to Abadan.

BALLAST: Tankers may discharge ballast ashore at Jetty Nos. 1, 2, 5 and 6. Ballast received at rate of 2,000 t.p.h. Slops and residues at rate of 200 t.p.h.

FRESH WATER: Limited supply of potable water available at all jetties, but supply very limited during months June to October.

FUEL: Not available.

FIRE PRECAUTIONS: On arrival Imam Khomeini Anchorage, Master is given 6 copies of Fire and Safety Regulations. Fire Station and Emergency tel. 4111.

REPAIRS: No repair facilities at Mahshahr or Imam Khomeini. In emergency, the Oil Company may be able to undertake minor repairs. No main engine repairs whilst alongside loading jetties without permission from Terminal Superintendent.

CUSTOMS ALLOWANCES: Reasonable quantity spirits and tobacco for consumption in port may be issued prior sealing store rooms. Strict supervision imposed by Customs and prohibited items, particularly tobacco and cigarettes, should not be taken ashore in excess of 50 cigarettes, or cigars, or 1 oz. tobacco.

TIME: GMT plus 3.5 hours.

TELEPHONES: Available at each jetty. If requested, telephone may be placed aboard.

SHORE LEAVE: Restricted to foreshore area only. Recreation centre opposite No. 2 Jetty.

CURRENCY: The unit of currency is the Iranian Rial. It is illegal to use any other than Iranian currency ashore and heavy fines have been imposed for infringement of this regulation. Masters are requested to bring this matter to the individual notice of their officers and crew. Currency denominations are:

Notes: 10,000, 5,000, 1,000, 500, 200, 100, 50 rials.
Coins: 20, 10, 5, 2 and 1 rial.

Report: 1994.

Berths Characteristics:

Berth No.	Max. LOA (m.)	Max.Summer d.w.t (tonnes)	Max. Draft (m.)	Max. Depth (m.)
1	236	35,000	12.20	13.40
2	238	45,000	12.20	
3	225	50,000	12.30	12.90
4	225	40,000	11.20	11.80
5	230	55,000	12.20	13.00
6	230	60,000	12.20	13.30

AUTHORITY: National Iranian Oil Co. Bandar Mahshahr.

AGENT: See "Bandar Abbas/Kharg Island".

BANDAR TAHERI (Kangan): 27.40 N. 52.21 E. (See Plan)

LOCATION: The SPM is located in approximate position Lat. 27° 39' 45" N., Long. 52° 20' 49" E.

Taheri (onshore) is located 978 km. from Tehran and 145 km. from the nearest airport.

PILOTAGE: See "Berthing".

ANCHORAGE: The SPM is in open sea with no surface obstructions in the vicinity. However, anchorage is prohibited within 1 mile radius of SPM.

Suggested anchorage area is 1 mile South of SPM in position Lat. 27° 38' 25" N., Long. 52° 20'14" E. The pilot will board at the anchorage.

RESTRICTIONS: Bandar Taheri operates 24 hours a day and 7 days a week. However, mooring/unmooring is only carried out in fair or moderate weather conditions.

In the event that mooring is delayed due to prevailing weather, vessel is requested to leave Terminal area, but to keep in close contact with Terminal via VHF, in order to be available when weather moderates. The vessel will keep her order in line.

MAX. SIZE: 40,000 d.w.t. and LOA 200 m.

Depth of water at L.W. is 16.0 m. An under-keel clearance of 2.5 m. is required at all times within a radius of 240 m. around the SPM.

Distance from bow to SPM is 60 m.

HEALTH: Masters are to obtain Free Pratique before arrival at Bandar Taheri.

RADIO: *Arrival Advice:* It is most important that ETA is given to Bandar Taheri Terminal and Agent by vessel 72 hours, 48 hours, 24 hours, 12 hours and 6 hours prior to arrival.

Also see "VHF".

Arrival Information: The following information is also required 72 prior to arrival:

1. ETA.
2. Summer deadweight.
3. Arrival displacement.
4. Cargo requirement.
5. Deballasting time.
6. Height of manifold when vessel ready to load.
7. Max. arrival/sailing draft.
8. LOA.
9. Loading rate.
10. Distance from bow to the centre loading connection.
11. Derrick capacity.
12. Name of Master.
13. Number of the crew.
14. Consignee/Charterers.
15. Flag.
16. Destination/last port.
17. G.r.t./n.r.t.
18. Call sign.

VHF: The Terminal maintains 24 hours watch on Channels 16, 12 and 6.

Vessels should contact Bandar Taheri Terminal on VHF, 12 hours and 6 hours prior to arrival, with amended ETA and advise number of hours required to discharge clean ballast after berthing, as well as details of flanges, size of manifolds, etc.

TUGS: 1×3,000 h.p. tug available. The tug is used for all manoeuvring, and is equipped for firefighting.

BERTHING:

1. Vessel should not enter the port limits without Mooring Master on board. Mooring Master boards about 1 mile South of SPM.
2. Accommodation and pilot ladder to be lowered together.
3. Under normal conditions and Pilot's requirements, vessel to be moored by using 2 ship's lines of 200 m. each.
4. In adverse weather and rough sea, the number of lines will be increased. Therefore vessels to be moored at SPM are to be equipped with at least 4 lines and 2 good messengers.

LOADING: *Hose:* The Terminal is equipped with reducing spool for 16 in. to 12 in.

After mooring, the service boat will tow the end of the floating hose (16 in.) to the port side and below manifold of vessel.

Vessel's derrick runner should be ready to lift the 16 in. hose, which should be secured on board in such manner as to allow the end of the hose to reach vessel's manifold.

The weight of hose to be lifted is approximately 7 tons. The Terminal will provide 12 in. reducer to fit vessel manifold.

The hose must be 1.0 ft. – 2.0 ft. above rail.

Loading: Naphtha is delivered to SPM through submerged line from shore tanks. The flow rate under normal conditions is 285 tonnes/hr. by gravity, and 1,100 tonnes/hr. with pumps.

Shore stop to close off the flow of cargo to vessel will be executed by Terminal, provided Master issues a written request to Loading Master upon arrival at Terminal. This request must include the statement that N.I.G.C. will not be held responsible for any error in final quantity loaded.

FRESH WATER: Not available.

FUEL: Not available.

AIRPORT: Jam Airport, 65 km. North of Bandar Taheri.

REPORT: August 1995.

The Terminal is operated by the National Iranian Gas Company and has been in operation for about 5 years. The Terminal only handles Kangan Condensate at an SPM buoy.

SPM position, by GPS when vessel on the berth, was Lat. 27° 39.27' N., Long. 52° 20.58' E., and is 0.47 miles from the shore line.

SPM was visible on radar at 7 miles.

A prominent small boat jetty exists about 0.7 miles S.W. of the buoy.

The Berthing/Loading Master will board about 1 mile South of SPM with NIGC representatives, Agent and Customs. Berthing Master and Agent travelled from Tehran when vessel due.

Customs require 2 copies Crew List, 2 copies Stores List and last Port Clearance. Berthing Master handles other formalities and requires 2 copies Crew List, 2 copies Vaccination List and Declaration of Health.

If required, vessel can anchor about 1.3 miles South of SPM in fair weather in about 35 m. of water, holding ground reported as not being good, especially in S.W.'ly winds and swell.

Terminal can be contacted by VHF Channel 16 and works on Channel 6.

Pre-arrival information forwarded via Agents by telex. ETA's also forwarded by telex to NIGC.

Maximum size of vessel for the berth is 40,000 d.w.t., no restrictions on length or beam.

Recommended minimum under-keel clearance is 2.0 m. Reported minimum depth at the berth is 16.0 m. at L.W.

S.W.'ly winds and swell during Winter months can cause delays in berth utilisation. It is not unknown for delays in berthing of up to a week, due to weather in Winter months.

Flood tide reportedly sets onshore in the vicinity of the berth.

Terminal only loads Kangan Condensate at the SPM. Density about 0.7383 at 15°C, and loading temperature in August was 36.5°C. Loading is by 1×16 in. floating hose from the buoy. Terminal can supply 12 in. to 16 in. reducer. Hose connected on port side. All loading by gravity, rates 900 t.p.h. to 1,100 t.p.h. Shore tanks about 40 m. above sea level. Terminal personnel connect hose.

All moorings to the buoy are ship's ropes. Mooring boat runs lines to the buoy. Present boat is under-powered, but we were advised that a 550 h.p. mooring boat would be available from September 1995.

First line is secured to the buoy using a toggle. Second and third lines are then run and are secured on board as slip ropes. When these are secured, the first rope is then also rigged back to the vessel as a slip rope.

The tug "Pilary 5" (2,600 h.p.) was secured aft using 2 ship's lines, one from each quarter, when approaching the buoy, and remained secured until the vessel left the buoy. The tug was utilised to stop the vessel from drifting down on to the buoy.

No bunkers, water or stores available.

Ship's loaded volume is used by the Terminal for calculating the Bill of Lading figure. Table ASTM 54B not used by the Terminal in their calculations.

Terminal reports that condensate production will be increasing in the near future.

SHIPMASTER'S REPORT: August 1995.

Vessel loaded products by hose.

Comments: SPM position by GPS when vessel on berth was Lat. 27° 39.27' N., Long. 52° 20.58' E. SPM located 0.5 miles from shore. Ship's lines used for mooring to the buoy. 1×16 in. hose for loading. Terminal handles Naphtha/Condensate only. Loading rate 900 t.p.h. by gravity only. Tug secured aft while vessel on buoy. Condensate SG about 0.7383. No length or beam restriction. Recommended 2.0 m. UKC. Exposed location for SW'ly wind and swell during Winter months, sometimes limits berth operation. Anchorage 1.3 miles South of buoy in about 35 m. of water. Poor holding ground reported.

Recommendations/Requirements: As production set to increase, recommended chart should be produced for the area as B.A. chart is inadequate.

Mooring boat is under powered. According to pilot a new 550 b.h.p. boat is to be available in September.

Buoy to be fitted with suitable moorings with chains. Do not consider ship's lines suitable for mooring to SPM with SW'ly weather/sea conditions in Winter due to high probability of chaffing.

AUTHORITY: National Iranian Gas Company (NIGC), 401 Mofatteh Square, Taleghany Street, (P.O.Box 4533-6394), Tehran, Iran. *Tel:* 8131-8733785. *Telex:* 226755, 214549 NIGC IR. *FAX:* 8133238, 839049. *Contact:* A.R. Anssari, Export Operations Manager.

BUSHIRE: 28.59 N. 50.50 E. (See Plan)

Note: Jetties and port facilites are operational and no major damage has been caused to the port facilities.

DOCUMENTS:

Quarantine Officer

Crew List (1 copy, also all crew vaccination cards for inspection).

Customs Officer

Crew List (2 copies).

Stores List (2 copies).

Port Authority

Crew List (1 copy).

Agents

Crew List (2 copies).

In order to avoid any delay in entering and discharging, the following documents must be sent by all loading port Agents to Bushire Agents (via Khorramshahr) as far in advance of vessel's arrival as possible:

Cargo Manifest (8 copies).

Freight Manifest (2 copies).

B/L Copies (2 copies each).

All cargo shown on manifest must be landed at the port, and it is therefore essential that short-shipments, cancellations, diversions, etc. (if any) be reported as early as possible and manifest should be corrected before submission to Port Authorities to avoid payment of fines. Stowage plans and hatch lists should also be sent ahead, giving ample time to be studied by Cargo Supervisor for unloading arrangements.

PILOTAGE: Compulsory. Application for Pilot to be made well in advance through Bushire Port Radio EQM, 500 kHz. Agents may also arrange pilotage but should be advised of ETA well in advance.

ANCHORAGE: In outer port in (approx.) position Lat. 28° 57' 30" N., Long. 50° 43' 20" E.

RESTRICTIONS: Entry and departure day or night. Depth in outer channel 8.6 m. at LW. Depth of inner channel, 28.2 ft. at LW and 35 ft. at HW.

The depth alongside the berth is 30 ft. at LW and 37 ft. at HW.

MAX. SIZE: LOA 600 ft. Max. draft 27 ft.

RADIO: Bushire Port Radio EQM, 500 kHz. Telex number of port 0332108 BDBU IR.

VHF: VHF radio, operating on International VHF Marine Channels 16 and 6. MF call sign EQM available at following zone times: 0500 to 0800 hrs. and 1200 to 1500 hrs.

TUGS: Normally used. 2 tugs of 1,200 h.p. and 1 tug of 2,400 h.p.

BERTHING: Jetty 348 m. long.

Max. draft No. 1 Jetty – 27 ft.
No. 2 Jetty – 28.6 ft.
Dolphins – 24.6 ft.
Oil Berth – 24.6 ft. at L.W.

MEDICAL: Doctor available for vaccinations and inoculations.

TANKERS: Tankers berth at the Northern Jetty.

FRESH WATER: Available at berths ex-pipeline.

FUEL: Not available.

HATCHES: To be opened and closed by shore labour.

CUSTOMS: Customs Officer will seal the store room. All liquor and cigarette stocks will be placed under bond and reasonable ship's requirements should be taken from store before sealing.

CONSULS: None.

REPAIRS: Minor repairs possible by local workshops.

CARGO GEAR:

4 cranes up to 5 tons.
3 cranes up to 5/10 tons.
1 crane up to 10/15 tons.
5 cranes up to 20/30 tons.
2 cranes over 50 tons.
1 crane up to 16 tons.
2 cranes up to 30/40 tons.
7 forklifts 2/3 tons.
5 forklifts 3/4 tons.
2 forklifts 4 tons.
2 forklifts 13 tons.
5 forklifts 10 tons.

AIRPORT: 7 km. from port. Regular flights.

TIME: GMT plus 3.5 hours.

TELEPHONES: May be connected on board.

SHORE LEAVE: Permitted.

IDENTIFICATION CARDS: According to regulations in force seamen should hold shore pass issued by respective Agents and signed by the Port Health, Port Police and local town Police authorities. All shore passes should bear a photograph of the holder, in order to facilitate checking at exit of port area. It is therefore necessary for officers and crew to have a photograph ready on arrival at the port to facilitate obtaining shore passes.

DELAYS: Occasional delays awaiting berth turn.

CIRCULAR: Issued by Ports and Shipping Organisation – Bushire Directorate.

To: Master of MV/MT ....

We would like to draw your kind attention that polluting Iranian territorial waters with garbage or wastes is prohibited (same as other pollutants), therefore reception facilities will be available to collect all waste and garbage from all vessels as follows:

1. Collecting garbage will be carried out 3 times per week.
2. Reception facilities will be available at more than above mentioned times, upon Master or Ships Agencies request.
3. Collected waste and garbage shall be handed to Bushire Port Officials who approach your vessel.
4. Use of said facilities will be compulsory.
5. Related expenses will be charged to all vessels (used/not used) according to Bushire Port Directorate tariff.

The Master shall be responsible for following the provision of this Circular.

Penalty will be charged against those violating this Circular in accordance with Iran's existing legal regulations.

SHIPMASTER'S REPORT: 1977 (Updated 1996).

Vessel discharged 726 metric tonnes of crane parts in 2 days (4 hatches).

ETA: To be given at least 7 days in advance through Bahrain Radio as telegrams take 2 days. From the outer anchorage the following Telegram must be sent to "Port Director Bushire" via Bushire Radio EQM 500 kHz: Anchor time, Draft, Length, Breadth, Cargo, Last Port.

Outer anchorage: Buoy No. 2 of fairway bearing 130° and 250° to the prohibited area in 10 m. to 20 m. water. The anchorage is not protected, but the holding ground is good, even in bad weather.

Pilots: The Pilot comes by a fast blue boat to the outer anchorage. There is 1 Pilot, also assistant and 1 docking master with 1 assistant, they only come out in daytime and good weather.

Tugs: There are 2 small and 1 large tugboat, which are used for turning the ship.

Pier: The 348 m. long pier has good wooden and rubber fenders and sufficient bollards. Ships always berth port side alongside. The starboard anchor is used for turning.

Clearance: The following documents are necessary:

5 Crew Lists.
1 Health Clearance.
1 Vaccination List (cholera).
1 Stores List.
1 Crew Effects List.

The stores and the radio-room are sealed, beer is not sealed.

Immigration: The immigration officials do not come aboard, the Agent takes all Seamen's Books ashore and exchanges them for shore passes which are valid from 0600 hrs. until 2200 hrs. while the ship is in port. Before leaving the Seamen's Books will be returned in exchange for the shore-passes.

Provisions: Fruit and fish can be obtained, good quality and low prices at the local market.

Water: Water from the pier in any quantity and good quality. Fresh water also available by barge.

Doctor: 24 hour's advance notice required.

Sea Protest: Notary public available, no consulates.

Bunkers: Not available.

Repairs: Were urgently required by the vessel and confirmed by Agent's, but nobody came on board.

Photographs: Taking of pictures not allowed, as Bushire is Military Base.

Crew-change: Very easy and can be done even on the outer anchorage when the ship has no clearance. The crew coming without delay directly from the airport to the ship in a launch (4 hours).

REPORT: October 1994 (Updated 1996).

The following information was given to a Master on arrival by the Port Authority.

Documents: Crew List, Health Documents, Manifests, Bill of Lading and all necessary Certificates, such as Safety Equipment, I.O.P.P., etc.

Pilotage: Pilotage for all foreign vessels of any tonnage, and Iranian ships above 60 g.r.t., is compulsory. Request Pilot from Bushire Port Control on VHF Channel 16.

Advance notice of ETA is required at least 10 hours before reaching Bushire Anchorage, either via VHF or 500 kHz. Pilotage is available throughout 24 hours.

Anchorage: Outer Anchorage is about 0.5 miles from the Fairway Buoy (No. 1). The depth of the water is about 12.0 m.

Inner Anchorage is suitable for small vessels (max. LOA 100 m.). Max. depth is 5.5 m.

Bushire Channel: From entrance of the channel to the Oil Jetty in harbour area is about 7 miles. The width of the channel is 140 m. and there is a sharp bend (curve) between Buoys No. 11, 12, 13 and 16, of about 110°. The maximum LOA for entry is 200 m. and the maximum draft for vessels of 185 m. and above (max. LOA 200 m.) is 27 ft., and for vessels less than 185 m. LOA, draft is 28.6 ft. The direction of the current is from the sides.

Berthing:

Oil Jetty (North Pier): Length 64 m. Depth 7.5 m.
Dolphins: Max. depth 6.0 m. (for lightering).
Pier No. 1: Length 174 m. Max. depth 8.4 m.
Pier No. 2: Length 174 m. Max. depth 8.8 m.
New Jetty: Length 286 m. Max. depth 4.0 m. Suitable for small ships.
Petrochemical Jetty (QODS Pier): Max. depth 5.0 m.
Persian Marine Jetty (for small craft and barges): Length 80 m. Max. depth 3.0 m.

Tugs: Towage undertaken by Bushire Port Authority with tugs of variable horse power.

Fresh Water: Supplied and delivered by special barge, inshore and offshore. Rate of delivery about 40 t.p.h. Cost U.S.$12.0/cu.m.

Surveyors: Cargo inspectors and ship surveyors are available.

Bulk Handling Facilities: Operated by private companies. Other facilities, such as shore cranes with various capacities and trucks, etc., are available from Port Authority.

Airport: Bushire Airport for domestic flights is about 5 miles from the port. There is a daily flight to Tehran. On Wednesdays, there is an extra flight to Tehran via Shiraz and Isfahan.

Police/Ambulance/Fire: Call Bushire Port Control on VHF Channel 16 and ask for service required, both in anchorage and in port.

Banks: Bank Melli or Iran.

Shore Leave: The crew are allowed ashore, in accordance with Regulations of the Customs Police (Master: 0800 hrs. – 1200 hrs. and 1600 hrs. – 2000 hrs. Crew: 1600 hrs. – 2000 hrs.).

Regulations: All particular and Islamic regulations should be respectfully obeyed by crew during their stay in port and whilst ashore.

General: All vessels at the time of arrival are inspected by Customs Police and Health Authority (Quarantine), and their radio aids, except VHF, are sealed by the Communications Department.

Authority: Bushire Port Authority. *Tel:* (0771) 22051-7. *Telex:* 332108 BDBUIR. *Contact:* Captain M.R. Golkar, Harbour Master.

AUTHORITY: See "General" before first port.

AGENT: See "Bandar Abbas/Kharg Island".

CHAH-BAHAR: 25.17 N. 60.37 E. (See Plan)

ANCHORAGE:

Latitude: 25° 22' N.	Longitude: 60° 30' E.
Latitude: 25° 22' N.	Longitude: 60° 33' E.
Latitude: 25° 18' N.	Longitude: 60° 30' E.
Latitude: 25° 18' N.	Longitude: 60° 33' E.

MAX. SIZE: Max. size 10,000 d.w.t. – 25,000 d.w.t. Max. draft 29 ft. at HHW. LOA 180 m.

VHF: All ships destinated to the Chah-Bahar Port are requested to call Chah-Bahar on VHF Channel 16.

TUGS: 3×2,500 h.p.

BERTHING: 4 berths with total length 600 m., depth 9.0 m. – 11.0 m. for vessels up to 25,000 d.w.t.

Shore Equipment: 4 mobile suction units for bulk cargo; 11 forklift trucks; 6×10 ton cranes; 9 grabs; 59 tractors and trailers.

FRESH WATER: Available.

FUEL: Available.

DEVELOPMENTS: Considerable development is taking place, and the port is expected to become of considerable importance in the future. No date for expected completion of various development work being undertaken has been received, but we understand that the following plans have been made:

A Container Terminal with length of 270 m., a warehouse of 9,000 sq. m. and an open area of 60,000 sq. m., suitable for vessels of up to 30,000 d.w.t.

Two Jetties for general cargoes. Length of jetties to be 360 m. with warehouses of 54,000 sq. m., and an open area of 60,000 sq. m., suitable for vessels of up to 20,000 d.w.t.

One Bunkering Jetty. Length of jetty 300 m. and suitable to accommodate vessels of up to 30,000 d.w.t.

SHIP'S OFFICER'S REPORT: May 1983 (Updated 1996).

Approaches: The approaches to Chah-Bahar from the East, West and South are straightforward, as far as the Outer Anchorage Areas, where a Pilot will embark. There is a buoy in position Lat. 25° 14.8' N.,Long. 60° 29.6' E., and marks a 16 m. obstruction to the North of it.

There is a Fl. 10s. 16M. light on Damagheh ye Chah-Bahar Point, this is at the present time unlit, and the Racon on the point has not been observed either.

The light on Damagheh ye Puzim is Fl. (1) 15s. 30m. 10M., and working at present.

The coastline also offers a good radar target, on both sides of the bay.

Pilotage: Pilotage is compulsory (to the best of my knowledge), the Pilot boards the vessel at anchor to the South of Damagheh ye Chah-Bahar Point, and takes the vessels to the anchorage within the bay (see Admiralty Chart No. 145).

The pilot boat is merely an open boat. International code flag "G" has to be flown by vessels requiring a Pilot.

Anchorages: The anchorage where vessels have been discharging, is bounded by the following positions: Lat. 25° 22' N., Long. 60° 30' E.; Lat. 25° 22' N., Long. 60° 33' E.; Lat. 25° 18' N., Long. 60° 30' E.; Lat. 25° 18' N., Long. 60° 33' E.

The bottom is soft mud, and the minimum charted depth is 10.3 m.

VHF: There is a Port Control Office situated in Chah-Bahar, the details are:

Frequency: VHF Channel 16, Channel 14.
Hours: 24 hours.
Call: Chah-Bahar Port Control.

Tugs: 2×1,200 h.p., 2×1,600 h.p. and 2×800 h.p.

Berthing: There is extensive work being carried out at Chah-Bahar, however at present there are no berths open to vessels, 4 berths are due to be completed within the space of 4 months approximately. When these berths are open the main cargoes to be handled are bagged grain and fertiliser, for distribution within this Southern area of Iran. Vessels are however being discharged at anchor into barges and their contents being taken to Chah-Bahar.

Medical: There is a hospital at Chah-Bahar, with limited facilities.

Fresh Water: Delivered by barge at a rate of 500 tons per day.

Fuel: Diesel oil available by barge.

Repairs: Not available.

Cargo Gear: Ship's gear used at anchorage.

Repatriation: Possible from Chah-Bahar and Konarak.

Airport: The airport is at Konarak. 1 flight daily to Tehran (2 flights on Monday).

Time: GMT plus 3.5 hours.

Holidays: No work is carried out on Fridays.

Shore Leave: Shore leave is permitted, any person visiting the vessel, e.g. doctor, has to be accompanied by the vessel's Agent.

Regulations: Vessels are not permitted to leave Chah-Bahar without clearance papers from the Harbour Master.

Delays: Delays of varying lengths can be expected.

General: From approximately mid June all facilities are closed down at Chah-Bahar due to the S.W. Monsoon, as the working anchorage is affected by the S'ly swell that develops. Ships waiting here to proceed to Bandar Abbas, will also be despatched as the Agents, etc. also close down, and the whole port set-up is then non-operational.

Ship's stores are not available at Chah-Bahar.

Authority: The main Port Administration takes place at Chah-Bahar, where there is a Harbour Master's Office and radio station.

Agent: The main Agents at Chah-Bahar appear to be Shipping Co., Tehran. There are no telex facilities ashore, however there are no restrictions placed on vessels who wish to use their own radio equipment.

SHIPMASTER'S REPORT: January 1984 (Updated 1996).

Anchoring: 3 nautical miles East of the buoy at about Lat. 25° 15.5' N., Long. 60° 29.5' E. off Ras Pusim.

Port: Unsheltered Port (Port Facilities under development). No bad weather docking. Max. draft 31 ft. Max. length 200 m. Density 1026.0.

Pilot: Pilotage compulsory, will be advised by Port Control and meets vessel at the anchorage. Pilot comes out by tug.

VHF: Chah-Bahar Port Control on Channels 16 and 12.

Tugs: tug of 2,500 hp ("Ramassan"). Tug lines available, no line charges.

Documents: 7 Crew Lists, 7 Passenger Lists, 7 Stores Lists, 7 Vaccination Lists (Cards for inspection, Cholera obligatory), 7 Cargo manifests, last draft survey from loading port for bulk carrier, Ship's Safety Certificates for inspection (Rats, Cargo, etc.).

Health: From other Iranian ports no clearance formalities necessary. From sea clearance is effected before coming alongside and arrival.

Radio: Via Radio Chah-Bahar "EQJ".

Discharging: Only by ship's gear. Port Authorities have to be informed about cargo gear type (Cranes or derricks). No shore facilities. In case of emergency 1 crane of 35 tons lifting capacity available. Bulk cargo discharging rate about 2,000 tons per day, will be carried away by lorry.

Medical: Facilities available (Doctor, Ambulance). Emergency cases are sent to Tehran (Inform Port Authorities).

Jetty: Consists of two pontoons on legs, connected by a bridge. Size of pontoons 150 m. by 30 m., bridge length 90 m. 8 bollards on pontoon ship's side.

Fresh Water: Will be delivered by truck, rate about 30 tons max. per day. (Line under construction).

Fuel: Diesel oil by truck. Prices above international rate to keep supply low until Line and Stores are ready (now under construction).

Consul: None.

Repairs: Not possible.

Gangway/Deck watchmen: Supplied by Shore. Rate about 4,000 Rials per day.

Hatches: Opening and closing carried out by crew.

Customs Allowances: Customs Officer will seal all store rooms. Reasonable ships requirements (Cigarettes) should be taken out before sealing. 200 Cigarettes Allowance per week per crew member.

Repatriation: Can be arranged by agent.

Airport: Konarak Airbase. Daily flight from Bandar Abbas and Tehran and back. Konarak lies about 70 km. from Chah-Bahar.

Time: Iranian Time 3.5 hours minus UTC.

Telephone: 24 hours through Chah-Bahar Radio.

Services: Provisions from local market at reasonable prices. Garbage removal available.

Shore Leave: By shore passes (photograph to be included).

Authorities: Port and Shipping Organisation. H. Raofi (Port Director).

SHIPMASTER'S REPORT: January 1987 (Updated 1996).

The following is an update of the "Shipmaster's Report – dated January 1984". Items not remarked upon are the same.

Port: Drafts at berths are different, no dredging has been done for years. Maximum depth is no more than 9.0 m. In any case a vessel must not arrive here with d.w.t. of more than 25,000 tonnes, otherwise vessel will be directed to other Iranian ports for lightening.

Tugs: 2×2,500 h.p.

Discharging: Most cargo discharged here is on direct delivery basis and there are severe problems regarding lorries. Rate of discharge for bulk cargoes varies between 2,000 tons to 3,000 tons, general cargo about 1,000 tons and iron ore about 3,000 tons per day.

Fresh Water: Available, but should be tested before filling ship's tanks.

Fuel: Twice the price of current market price.

Telephones: Telephone exchange ashore provides international calls. There is no delay to Europe and U.S.A.

Regulations: Strict Islamic Regulations to be adhered to especially for wives onboard. They must not be seen outside the accommodation without proper Islamic cover.

AUTHORITY: See "General" before first port.

AGENT: See "Bandar Abbas/Kharg Island".

KHARG ISLAND: 29.14 N. 50.19 E. (See Plan)

Below is the latest information regarding operational jetties at Kharg Island:

Further to recent repairs at Kharg Island Terminal, please note Jetties No. 3 and 5 at "T" Jetty became operational during April 1994.

Below is the current position of operational jetties at Kharg Island:

Berth No. 15 at Sea Island:
1. Loading arms 4×16 in.
2. Max. draft 100 ft. (31 m.).
3. Max. loading rate 20,000 t.p.h. (at present).
4. Max. displacement 250,000 tonnes.
5. Max. d.w.t. 550,000 tonnes full cargo.
6. No LOA restriction.
7. No beam restriction.
8. Height of manifold 100 ft.
9. Measuring by meter from 4th May 1994.

Jetty No. 3 at "T" Jetty – Kharg Island:
1. Loading arms 3×16 in. and 2×12 in. (first and last are 12 in.).
2. Max. sailing draft 68 ft.
3. Max. loading rate approximately 10,000 t.p.h. (normal rate 8,000 t.p.h.).
4. Max. displacement 200,000 tonnes (under review).
5. D.w.t. minimum 100,000, maximum 275,000 tonnes (for loading part cargo, bigger d.w.t. acceptable).
6. No LOA restriction.
7. No beam restriction.
8. Manual measuring and not with meter.

Jetty No. 5 at "T" Jetty – Kharg Island:

1. Loading arms 3×16 in. and 2×12 in. (first and last are 12 in.).
2. Max. sailing draft 59 ft.
3. Max. loading rate approximately 10,000 t.p.h. (normal rate 8,000 t.p.h.).
4. Max. displacement 200,000 tonnes (under review).
5. D.w.t. minimum 100,000, maximum 275,000 tonnes (for loading part cargo, bigger d.w.t. acceptable).
6. No LOA restriction.
7. No beam restriction.
8. Max. height of manifold 75 ft.
9. Manual measuring and not with meter.

Motherships: Only mothership "Damavand" for export of Lavan Blend Crude Oil from Kharg Island.

SPM:

SPM 1: For loading heavy crude oil only.

SPM 2: For loading light crude oil only.

250,000 d.w.t. with 2 hawsers for SPM 1/SPM 2, ships accepted with max. 250,000 d.w.t.

Manifold connection 2×16 in. (only one SPM is operational at one time due to only one set of hawsers available).

Other restrictions: All vessels calling Kharg Island need following items on board:

(A) Minimum 8 lines each end with rope tails of approximately 10.0 m. at the end.
(B) 3×12 in. and 2×16 in. reducers.
(C) Derricks or cranes must be functional on both sides.

A. **DOROOD TERMINAL (DARIUS TERMINAL).** Oil-loading terminal of National Iranian Oil Co. – Offshore (N.I.O.C.).
B. **KHARG TERMINAL.** Oil-loading terminal of the National Iranian Oil Company. Including Sea Island Terminal.
C. **KHEMCO TERMINAL.** Loading terminal of Kharg Chemical Co.

GENERAL: (Items common to all Terminals): There are no ballast disposal facilities at Kharg and it is of the utmost importance that all vessels arriving at the anchorage should ensure that all water ballast and pipelines are completely clean.

FLAG: All vessels required to fly Iranian Ensign on foremast during daylight hours in Iranian waters. Iranian territorial waters extend 12 miles seaward from mainland and adjacent islands. Iranian flags may be obtained from Agent.

DOCUMENTS:

Bill of Health (Certified by Iranian Consulate at port of origin or port of call. If no Iranian Consul available, the legalisation fees are payable at Kharg Island).

Health Declaration (International Health Form to be filled out by Master on arrival).

Manifest (if with cargo certified by Iranian Consul (See "Bill of Health" above). If vessel is in ballast, no legalisation fees due).

Clearance (from last port).

Register.

Crew List.

Passenger Manifest (if any passengers are on board).

Stores List.

Bonded Stores List.

APPROACHES: Vessels approaching Kharg from South, should keep at least 2 miles to East of Island. Vessels approaching Kharg from North should keep to West of Island, as Kharg Island to the North is very low lying and difficult to see at night until dangerously close-to.

Landfall: 3 high gas flare towers, 2 in the South and 1 to the North of the Island, make a most conspicuous landfall. At night, from a distance, the light from these flares tends to obliterate the various navigation lights. At night the glow from the 3 gas flares is visible from great distance, far beyond the range of any navigation lights. However on occasions, 1 or more or all of the flares may not be burning, making the main navigation lights more readily visible.

Navigational Dangers: Eastern coast is open and free from navigational dangers, except for coral reef, which extends for about 0.25 miles seawards along whole coast line. To S.W. of Island, numerous oil platforms in positions up to 5 miles offshore.

Kharg South Beacon: Lat. 29° 12' 46" N., Long. 50° 19' 15" E. At Southern end of Island, rotating white light, on steel tower, 295 ft. above MHHW, 2 flashes every 12 seconds, visibility 24 miles. Obscured by high ground and oil tanks between 151° and 215° from seaward. Light beam partly diverged upwards for aircraft. This is the main navigation light for Kharg area.

Kharg North Beacon: Lat. 20° 15' 02" N., Long. 50° 18' 18" E. At Northern end of Island, white light on steel tower, 261 ft. above MHHW, 2 flashes every 6 seconds, visibility 12 miles. Obscured by high ground and oil installations between 330° and 352° from seaward.

Khargu Beacon: Lat. 29° 20' 20" N., Long. 50° 21' 18" E. At Northern end of Khargu Island, on a steel tower 59 ft. above MHHW, a white light with 10° red sectors towards Ganaveh and Kharg Island to indicate general directions of submarine pipelines, 3 flashes every 8 seconds, visibility, 10 miles red sector, 15 miles white sector. Obscured between 011° and 041° from seaward by Kharg Island. Radar reflectors fitted to North and East sides of tower top.

Ganaveh Beacon: Lat. 29° 35' 20" N., Long. 50° 29' 50" E. On mainland, at start of submarine pipelines to Island, 2 miles N.W. of Ganaveh village, on steel tower, white light with 10° red sector along general direction of submarine pipelines, 1 flash every 5 seconds, visibility 10 miles red sector, 15 miles white sector. Light beam partly diverged upwards for aircraft.

South-East Buoy: Lat. 29° 11' 29" N., Long. 50° 19' 51" E. Red can buoy, white light, 1 flash every 2 seconds. Near edge of reef, S.E. Kharg Island in 54 ft. of water.

North-East Buoy: Lat. 29° 14' 51" N., Long. 50° 20' 10" E. Red conical buoy, white light, 1 flash every 6 seconds. On Northern boundary of port limits.

Channel Buoy: Lat. 29° 16' 12" N., Long. 50° 20' 27" E. Red conical buoy, white light, 1 flash every 3 seconds. In Eastern end of channel between Kharg and Khargu Island.

Radio Masts: At South end of Kharg Island a high radio mast painted red and white positioned at Lat. 29° 12' 47" N., Long. 50° 19' 15" E., approximate elevation 510 ft. Fitted with fixed red lights. Another radio mast, also painted red and white, positioned at Lat. 29° 14' 10" N., Long. 50° 18' 26" E., approximate elevation 367 ft., fitted with fixed red light.

Dideban Tomb: On highest point of Kharg Island, Lat. 29° 14' 57" N., Long. 50° 18' 29" E., a small domed building located, elevation 290 ft.

Mir Muhammad Tomb: On N.E. part of Kharg Island at Lat. 29° 15' 10" N., Long. 50° 18' 46" E., conical shaped tower surmounted by small dome, elevation 165 ft.

Khargu Trees: On Khargu Island at Lat. 29° 18' 45" N., Long. 50° 20' 30" E., a small group of trees, only ones on island, visible from long distances.

Notice Boards: On North, S.E. coast and S.W. of Kharg Island and along coasts of Khargu Island, large white notice boards indicating prohibited anchorages surrounding submarine pipelines.

Port Area: The area within:

29° 12' 23" N.	29° 14' 53" N.
50° 18' 36" E.	50° 21' 17" E.
29° 12' 21" N.	29° 14' 53" N.
50° 21' 40" E.	50° 20' 20" E.

Offshore from Kharg Island has been proclaimed a port area. Port area used by vessels manoeuvring to and from oil-loading terminals. The whole of area within port limits declared a Prohibited Anchorage, and, a Restricted Manoeuvring Area. Vessels must not enter within port limits unless Berthing Master is on Board.

PILOTAGE: Vessels should proceed to Eastern Anchorage, outside port limits (Prohibited Anchorage and Manoeuvring Area) approximately 1.5 miles East of oil loading jetty, and await arrival of Berthing Master.

ANCHORAGE: The approved Anchorage Area is to East of Eastern boundary of Port Limits, where holding ground is good. All vessels on arrival at Kharg must proceed to anchorage area and await instructions.

Prohibited Anchorages: 3 Prohibited Anchorages in the Kharg Area:

(a) Submarine Pipe-lines: Anchorage prohibited in vicinity of submarine oil pipelines laid between North coast of Kharg Island and mainland near Ganaveh.

(b) Offshore Oil Platforms: Anchorage prohibited to S.W. of Kharg Island in vicinity of numerous oil wells and drilling platforms extending 5 miles or more out to sea.

(c) Harbour Area (East): The area surrounding the "T" jetty and extending approximately 2.5 km. offshore from the East coast has been declared as a Harbour Area.

(d) Harbour Area (West): The area surrounding the sea island and extending to a distance of approximately 4 km. offshore has been declared as a Harbour Area. The Harbour Area is used by vessels manoeuvring to and from the oil loading jetty. No vessel is allowed to enter or anchor within these areas unless a Berthing Master is on board.

Cautions: (a) Unlit mooring buoys at S.E. of Kharg Island (see Dorood Terminal). *(b)* Oil Platforms to S.W. of Kharg Island. *(c)* Aircraft approach lane S.E. of a point mid-way between Naval Boat Harbour and Kharg North Buoy, in N.W. corner of Port Area.

HEALTH: Tankers calling at Kharg Island and requiring Radio Pratique should cable Agents 48 hours prior to arrival advising the following details:

(a) Number of persons on board, including Master and passengers.
(b) Last port of call.
(c) Ports of call during the voyage.
(d) Duration of voyage.
(e) If any person on board requires vaccination against cholera.
(f) If there has been any case of illness of contagious nature.

If approved, the Master will be notified and the vessel will be allowed to enter port without yellow flag or night quarantine signal.

RADIO: Vessels bound for Kharg Terminal should prefix messages with "NIOC Kharg", and vessels bound Dorood Terminal should prefix with "NIOC for I.O.O.C. Kharg", in both cases with copy to Agents. Terminal on Telex No. 212770.

Radio Watches: While at anchor off Kharg Island, vessels should maintain normal listening watches on WT, and Kharg Terminal on VHF. Use of the ship's radio station and/or battery-charging equipment prohibited during cargo transfer operations.

Arrival Information:

We quote below text of a message received from Gulf Agency Co. (Iran) Ltd. in Crawley, U.K.

Quote:

These procedures are general guidelines and will not supersede specific instructions and/or procedures advised by Owners/Charterers or NIOC through their customers.

Master should contact Bandar Abbas Port Radio (EQI) and state:

Ship's name and Voyage No.
Flag.
Call sign.
Kind of vessel/g.r.t./n.r.t./d.w.t.
Master's name and No. of crew.
Port of Register and Official Number.
Loading or discharging port(s).
Expected time and date of passing Hormoze.
Ship's speed.
Last port/destination.
ETA Kharg Island (for tankers).
Reason for call/cargo to load – cargo requirement.
If Pilot required.

Vessels nominated for crude oil liftings are requested to inform Port Authorities 72 hours before their arrival, the actual time they are going to tender Notice of Readiness. NIOC will not be responsible for delays, etc., if this Notice is not sent.

Vessels are required by NIOC Tehran and Kharg Island to send following information 36 hours before arrival: (Telex No. of NIOC Tehran is 212177, 212248 A/B NIOC (Cable Naft Melli Tehran) and NIOC Kharg Island No. 332380/81 A/B NMKG IR (Cable Naft Melli Hkarg Island) and Harbour Master Kharg Island Telex No. 332380.)

Please also send copy of messages to this office (Telex No. 87561 GAC UK G).

1. ETA Kharg Island.
2. Cargo requirements and supplier.
3. If loading two grades, indicate sequence of loading.
4. Arrival and departure drafts, forward and aft.
5. Deballasting time before loading.
6. Height of manifold above sea level when vessel is ready to load.
7. Loading rate.
8. Summer d.w.t. and arrival displacement.
9. LOA and distance from bow to centre of manifold.
10. Condition of derricks or cranes, port and starboard.
11. Condition of accommodation ladders, port and starboard.
12. Mooring wires must be connected to a minimum 10.0 m. of nylon tails.
13. Three reducers of 16 in. × 12 in. must be available on board.
14. International Nett Tegister Tonnage.
15. Vessel registration and call sign.
16. Master's name and nationality, and number of crew.
17. Radio Free Pratique by Quarantine message addressed to "Port Health Kharg Iran".
18. There are oil pollution patrols by launch and helicopter around Kharg, ensure clean ballast and pipelines, no oily discharge from any source allowed.
19. All cargo tank cleanings must be closed while tugs alongside.
20. Port Safety Regulations rigorously enforced.
21. Cable anchoring time and position.
22. Report departure time from Kharg Anchorage on VHF Channel 12.
23. Terminal is operating on VHF Channel 12 and 77.
24. Intership VHF traffic to be kept clear of Channels 12, 10, 14 and 77, while in anchorage and alongside.
25. Diesel, bunker fuel and fresh water not available at Kharg.
26. EDP is available, vessels using EDP to cable ship's figures within 12 hours of saling.
27. Ensure that all exhaust uptakes are clean before berthing to prevent funnel sparking alongside.
28. Propeller turning alongside must not exceed 5 r.p.m. and be strictly watched.
29. Ensure that propeller is fully immersed and trim not exceeding 4.0 m. by stern for safe manoeuvring.
30. Pilot boarding by means of accommodation ladder only (no combination is required).
31 Is I.G. system (where fitted) operating and oxygen content of cargo tanks below 8%?
32. Is vessel equipped with Smit Bracket for mooring to SPM?
33. Is ship equipped with sufficient enclosed type fairleads suitable for ship to ship operation?
34. Sufficient length of 3.5 in. wires must be available to be used as emergency fire wires, forward and aft.
35. Note that local time in Kharg Island is GMT plus 4.5 hours from 21st March till 21st September.
36. Kharg Terminal Telex No. is 332380 NMKG IR.
37. Agent is not authorised to give any cash advance to Masters due to strict Government currency control.

Unquote.

VHF: Kharg Terminal equipped with VHF radio telephone, using international frequencies. Continuous watch kept on international calling and emergency Channel 16, frequency 156.80 MHz. Other channels, available after contact has been established are: Nos. 12, 11 and 10. Masters recommended use this facility when within range, particularly when approaching port. In poor visibility, when vessel's approach may not be observed from shore, VHF communication may be the means of avoiding delay in mooring/berthing.

DENSITY/TIDE/WINDS: Salinity of sea approximately 20% more than normal sea water. Surface temperature of sea ranges from 63° to 97°F depending on season. The extreme tidal range between 7 and 8 ft. with maximum rate of about 1.5 knots. Wind directions and velocity subject rapid change without warning and precautions necessary to avoid difficulties. Heaviest seas and swells while in port are from N.E. through S.E.

Tidal heights		*Tidal streams*			
L.A.T.	=+I0.4 ft.	Slack water	10.75 hrs.	before	HHW
MLLW	=+1.8 ft.	Ebb (full)	7.75 hrs.	before	HHW
MHLW	=+3.6 ft.	Slack water	4.50 hrs.	before	HHW
MSL	=+4.1 ft.	Flood (full)	1.50 hrs.	before	HHW
LLHW	=+4.7 ft.	Slack water	1.00 hr.	after	HHW
MHHW	=+6.5 ft.	Ebb (max.)	3.75 hrs.	after	HHW
H.A.T.	=+8.2 ft.	Slack water	6.50 hrs.	after	HHW
		Flood (max.)	9.50 hrs.	after	HHW

Heights in feet above Chart Datum

Times are approximate only

MEDICAL: Small hospital with clinic on Kharg operated by National Iranian Oil Company for minor medical treatment. More serious cases may have to be sent by air to Abadan Hospital. Any medical services required should be brought to attention of Medical Officer when he boards vessel to grant pratique.

FRESH WATER: Not available.

FUEL: Not available.

STORES: Not available.

REPAIRS: No facilities.

CUSTOMS ALLOWANCES: Present regulations allow each seaman to retain maximum 50 cigarettes or 1 ounce of tobacco or 5 cigars. The balance of all smoking items must be collected and carefully listed prior to arrival. This list will be checked by Customs before sealing locker. If any discrepancies, vessel subject to fine.

AIRPORT: Small airport used by Oil Company aircraft and Iran Air flights to and from Abadan. Due security arrangements movement of crew must be programmed through Agent.

TIME: GMT plus 3.5 hours. GMT plus 4.5 hours from 21st March till 21st September.

IDENTIFICATION CARDS: Each seaman will be issued with a pass which will be punched when crossing the jetty limits going out and in, and may be used once only. In addition to this pass, seamen should carry an Identification Card or Vaccination Certificate, bearing the owner's photograph.

GARBAGE DISPOSAL: No facilities available.

WASTE OIL DISPOSAL: No facilities available.

SEAMAN'S CLUBS: Recreation Centre is closed.

AGENT: Gulf Agency Company (Iran).

All enquiries, telexes, cables, letters, concerning Ship's Agency at Iranian Ports should be directed to G.A.C. Shipping (UK) Ltd., No. 1 Charlwood Court, County Oak Way, Crawley, West Sussex RH11 7XA, England. Tel: (01293) 615555 (5 lines). Telex: 87561 GAC UK G (4 lines). Fax: (01293) 615161. Cables: GACSHIP Crawley UK.

(A) DOROOD TERMINAL (Darius Terminal).

(Additional requirements and details).

Terminal operates 24 hours per day, 7 days a week. Ships moored in daylight only, and unmoored at any hour, weather and other circumstances permitting. Terminal will never be closed due to religious holidays.

LOCATION: A submarine terminal at S.E. corner off Kharg Island Lat. 29° 12' 40" N., Long. 50° 20' 40" E.

LANDMARKS: *Jetty:* Approximately 0.5 miles North of the mooring is a "T" shaped wharf for the berthing of supertankers.

Khemco Jetty: Approximately 0.25 miles West of the terminal is a dolphin type jetty for berthing LPG and sulphur ships.

South Gas Flares: At the South end of Kharg Island, 2 very conspicuous gas flares bearing 277°, 1,900 ft. and 271°, 2,150 ft. from South Beacon. Approximate elevations: 400 ft.

North Gas Flares: In the centre of Kharg Island 2 very conspicuous gas flares bearing 191°, 3,050 ft. from North Beacon, elevation 435 ft.

Khemco Gas Flares: On the S.E. of Kharg Island 2 small gas flares burning in the Kharg Chemical Plant.

Note: At night, the glow from the 4 gas flares is visible at great distances. However, on occasions, 1 or more or all of the flares may not be burning.

Also see "Approaches" at beginning of Kharg Island.

RADIO: *Arrival Advice:* It is important that ships establish radio contact with N.I.O.C. when 3 days distant from Kharg Island and maintain this contact until just prior to arrival at the Terminal. All ships should send a 72 hour ETA message to N.I.O.C., giving the best estimate of ship's arrival time at the Terminal. This first ETA message should also include a definite statement of the details of any equipment required from shore for connecting submarine hoses to ship's manifold. Further ETA messages should be sent to N.I.O.C. when the vessel is 24 hours and 12 hours distant from Kharg Island and at any other time when an appreciable change occurs in the original ETA or those subsequent thereto. The 12 hour ETA should include a positive statement regarding "Ship's readiness to load" on arrival, and the number of hours that will be required to discharge clean ballast after ship is berthed in mooring.

Ship-to-Shore Communication: Kharg Terminal is equipped with VHF radio-telephone, using international frequencies. A continuous watch is kept on the international calling and emergency Channel 16, frequency 156.80 MHz. Masters are recommended to use this facility when within range, particularly when approaching the port. In poor visibility, when a vessel's approach may not be observed from the shore, VHF communication may be the means of avoiding delay in mooring. While a ship is in mooring, communication will be by portable VHF radiotelephone units. The Mooring Master will advise Masters and Officers regarding the emergency whistle signals set up for use in event VHF radiotelephone units becoming inoperative. The use of the ship's radio station and/or battery charging equipment is prohibited during cargo transfer operations.

Radio Watches: While at anchor off Kharg Island, vessels should maintain normal listening watches on W/T and VHF.

MOORING: Vessel requested to have pilot ladder safely and securely rigged, ready for immediate use, and long enough to reach Mooring Master's launch. Mooring Master will board 2 miles seaward of the Terminal sea-buoy. Adequate searchlights should be rigged on both bridgewings, when mooring at night, to assist in running lines to buoys. Raising, connecting, disconnecting and lowering of submarine hoses will be performed by N.I.O.C. line handling crew as advised by Mooring Master, who will remain on board while ship in moorings. A capable winchman to be provided by ship.

Mooring buoys for Dorood Terminal not lighted. Permanent moorings in berth consist of 5 steel cylindrical buoys each fitted with quick release hook, to which ship's mooring lines are attached by N.I.O.C.'s mooring launches. The berth is laid out on the one heading basis, using both ship's bower anchors with 9 mooring ropes (4 beam, 4 quarter and 1 stern). Mooring buoys numbered 1, 2, 3, 4 and 5. Starting with No. 1 East of the mooring and numbers running consecutively in a clockwise direction.

Tankers to have ready: *(a)* Windlass and both bower anchors, each with not less than 11-12 shackles of chain. *(b)* 9 good manila or synthetic mooring lines, each not less than 120 fathoms in length, with efficient stoppers for each line. *(c)* On port side opposite ship's manifold equipment capable of lifting submarine hose safely and expeditiously. Weight of lift 5 tons.

LOADING: Ship loaded by means of submarine pipeline and 2 hoses at 1 loading berth, located approximately 1 mile offshore in over 65 ft. of water. Crude oil loading hoses lifted on port side. Maximum crude oil loading rate for tanker using two 12 in. deck hoses and 20 p.s.i. at ship's rail is approximately 5,000 t.p.h.

In order to save ship time as well as to make berth available for others, requested that ships receive oil as fast as it can be delivered, with due regard for safety. Also requested that any fittings on ship's manifold such as "Y's", strainers, or mud boxes, which tend to restrict flow of crude oil into ship, be removed before arrival at terminal. It is preferable that connections be provided so that a 12 in. deck hose can be used. Vessels must be equipped to fit flanges on submarine hoses, which are of ASA standards.

DISCHARGING: *Discharge of Clean Products:*

The facilities for discharge of clean products are called "Dorood MBM" (ex. Darius Terminal), located approximately one mile towards the East from South end of Main Island (Kharg Island).

1. Vessels discharging at MBM require following:
   (a) Vessel must have 2 anchors with 11 to 12 shackles on each anchor.
   (b) Vessel must have a crane or derrick ready on the port side with safe working load over 5 tons.
   (c) Vessel must have a winch forward of the bridge in order to secure 4 mooring ropes (2 on starboard side and 2 on port side) as breast lines.
2. MBM has 5 buoys with hooks on the top of them.
3. The distance from centre of manifold to stern should not exceed 450 ft.
4. The authorities prefer to have segregated ballast.
5. Maximum d.w.t. should not be more than 80,000. With minimum/maximum cargo 60,000 to 65,000 tons.
6. Vessel must have 5 mooring lines aft (on poop deck) and 4 mooring lines forward of the bridge, that means 9 mooring lines altogether. The length of the ropes should be between 400 ft. – 500 ft. If wires are used, they should have nylon tails.
7. The depth of water at MBM at high water is 70 ft. (maximum).

FIRE PRECAUTIONS AND SAFETY: Full instructions will be given by Mooring Master, but vessel's personnel responsible for safety of vessel and must take all necessary precautions, whether or not so advised by Mooring Master.

During time vessel moored in Dorood Terminal, a continuous and efficient fire watch must be kept on deck and in the engine room. In the event of fire breaking out in any part of vessel, however minor it may be, fire alarm must be given immediately. This will consist of a succession of long blasts on ship's whistle, together with a rapid and continuous ringing of ship's bell.

EMERGENCY MEDICAL ASSISTANCE: Vessels requiring emergency medical assistance should hoist international code flag "W" in daylight, and at night send "W" (· – –) on blinker light. To attract immediate attention, the same signal "W" (· – –) should be given on ship's whistle in either day or night hours. The signal should be repeated until acknowledged visually by either another ship in the moorings, or from N.I.O.C. launch. As soon as signal is received. Terminal officials will advise Agent as soon as possible of the emergency medical aid required.

FUEL: No bunkers available at submarine mooring. Bunkers may be loaded at main jetty having obtained nomination through NIOC Tehran (Export and Marketing). Tankers loading crude oil at "T"-head jetties have at all times priority for berth, over the vessels lifting bunkers only. Marine lubricants not available, except through marketing representatives by arrangement through Agent.

CURRENTS: Generally on the axis of the ship berthed in the mooring; however, rotary currents can be expected.

SHORE LEAVE: For personnel of vessels loading or unloading at the Terminal is arranged between Agent and Iranian Security Officer aboard vessel. Ship's personnel (other than medical or emergency cases) not allowed to disembark or embark at Terminal. Sufficient personnel must be aboard at all times for letting go lines and clearing moorings immediately.

(B) KHARG TERMINAL

(Additional requirements and details).

RESTRICTIONS: If arriving with a part cargo vessels will be refused loading by N.I.O.C. if the maximum displacement exceeds 250,000 tons.

TUGS: Vessel normally berthed with assistance of tugs which, together with Berthing Master, meet vessel at port limits. The tugs will come alongside, normally 1 to the bow and 1 to the stern, as far forward and aft as is safe and practical. Tugs' towing equipment will be used on all occasions.

OIL LOADING JETTY: "Tee" head with overall length of 6,038 ft. between fender faces. The fender to fender width is 138 ft., for the section South of trestle approach, and 124 ft. for North section. Jetty face is aligned in direction 172° 35' – 352° 35'. Deck level 22 ft. above chart datum. The jetty, being on Eastern side of Island, is sheltered from prevailing N.W. winds, but exposed to S.E., when during Winter storms, waves of 8 ft. to 10 ft. often occur. A maximum wave height of 15 ft. has been recorded at Southern end of jetty, under such conditions.

Berth	*Depth of water (m.)*	*Maximum capacity (d.w.t.)**	*Loading and bunker arms†*	*Height limits ship's manifold in metres above chart datum*
1	21.3	250,000	3×16 in. 2×12 in.	4.3 to 23.8
2	19.8	38,000	4×12 in.	3.4 to 18.9
3	21.3	250,000	3×12 in. (flexible)	4.3 to 23.8
4	20.1	65,000	5×12 in.	3.4 to 18.9
5	21.3	250,000	3×16 in.	5.8 to 25.3
6	20.4	120,000	3×16 in. 2×12 in.	4.3 to 23.8
7	18.3	175,000	3×16 in. 2×12 in.	4.3 to 23.8
8	19.2	45,000	5×12 in.	3.4 to 18.7
9	17.4	140,000	3×16 in.	4.3 to 23.8
10	17.7	90,000	5×12 in.	3.4 to 18.7

* Subject to weather, tidal conditions and lengths of vessels adjacent berths.

†12 in. Bunker arms at all berths. All Chicksan arm flanges are series 150 API.

Berth Nos. 8, 9 and 10 located North of trestle approach.

SEA ISLAND TERMINAL: A 4 berth Sea Island Loading Terminal is in operation on the West side of Kharg Island.

The structure, 1,800 ft. long, is centred in Lat. 29° 13' 29" N., Long. 50° 17' 10" E., and is aligned in a direction 154°/334°. It is designed to accommodate vessels of approximately 150,000/500,000 tons at No. 11 Berth on the West side, and vessels of approximately 150,000/300,000 tons at No. 12 Berth on the East side.

Unless advised to the contrary, all vessels should proceed to the anchorage East of the Main Jetty.

Vessels instructed to load at the Sea Island are required to rig an accommodation ladder to facilitate the boarding of Customs, Health, and Port Authorities. Agency work and crew changes must also be effected at the anchorage. There is no shore leave from the Sea Island.

The comparatively exposed position of the Sea Island makes additional moorings advisable and vessels should be prepared to use their maximum number of mooring lines. Quick-release hooks are provided for all mooring lines.

Minimum size vessel, about 150,000 d.w.t.

Loading rates of up to 30,000 t.p.h. to one berth can be achieved at the Sea Island.

Only fuel-oil bunkers are available.

Vessels may, if considered necessary, be required to retain on board sufficient ballast while loading cargo to ensure that the loading arms do not exceed their maximum designed elevation.

Berth	*Depth of water (m.)*	*Maximum capacity (d.w.t.)*	*Loading and bunker arms*	*Height limits ship's manifold in metres above chart datum*
11	32.0	500,000	4×24 in. 2×16 in.	6.1 to 33.5
12	29.5	300,000	4×16 in.	6.1 to 28.3

The Sea Island has been extended to the Northward to create two new berths, 14 and 15.

Berth	*Depth of water (m.)*	*Maximum capacity (d.w.t.)*	*Loading and bunker arms*	*Height limits ship's manifold in metres above chart datum*
14	25.9	300,000	2×16 in. 4×16 in.	6.1 to 28.3
15	27.4	500,000	4×16 in.	6.1 to 33.5

Loading Arms: Luceat – quick coupling.

Effective Loading Rate: Berth No. 14 – 16,000 t.p.h. Berth No. 15 – 30,000 t.p.h.

BERTHING: Approaching berth, 2 fibre-rope headlines should be lowered to mooring launch, for transfer to jetty. 2 stern lines are then handled, preferably one at a time, to avoid possible fouling of vessel's propeller. Positioning of vessel's loading manifold in relation to Chicksan loading arms on jetty has to be carried out to a close tolerance, as directed by Berthing Master, to requirements of jetty operator. On inner berths, particularly Nos. 2, 4 and 8, vessels are berthed head outwards, i.e. stern to trestle. In these cases, vessels are towed stern first by after tug's hook wire, with forward tug either alongside or on towing hook, depending on tidal and weather conditions.

Mooring System: Under normal conditions, 12 lines are used to moor a vessel as follows: Forward: 3 headlines, 2 breast lines and 1 spring. Aft.: 3 stern lines, 2 breast lines and 1 spring.

During Winter S.E. storm period, it is usual to use 1 each additional headline and breast line, at each end making a total of 16 mooring lines. Breast lines and springs of wire rope are acceptable.

Berthing Limitations: Various combinations of wind, sea and tidal conditions, also size, length, ballasted trim and handling qualities of a vessel and available berth space, can effect decision to berth a vessel at Kharg. All these factors have to be evaluated before a final berthing decision is made.

Manifold Position: No berthing where manifold of vessel cannot be positioned, within horizontal limits of Chicksan loading unit arms, due to adjacent occupied berths.

Note: On outside berths, very large vessels of light free board in excess of 70 ft., may be required to retain sufficient ballast, to ensure that their manifolds remain within the vertical range of the Chicksan loading arms, until sufficient cargo is loaded.

LOADING: Both Iranian light and heavy crude oils available at all jetty berths. Crude oil is delivered to jetty from Tank Farm, situated on central plateau of sand, by gravity flow through 4×48 in. diameter pipelines and to the Sea Island by 2×78 in. shorelines and 2×56 in. sealines. Loading rates of up to 15,000 t.p.h. to one berth can be achieved at Kharg Terminal. Up to 60,000 t.p.h. can be delivered to all 10 berths simultaneously.

FUEL: Not available.

FIRE PRECAUTIONS: A copy of the "Fire and Safety Regulations" notice is given to Master of every vessel by Berthing Master, at Anchorage. 5 additional copies are passed aboard vessel when it arrives alongside jetty. These extra copies must be posted in conspicuous places throughout the vessel. While a vessel is within Port Area a continuous and efficient Fire Watch shall be maintained on deck and in the engine room. In event of fire, however minor it may be, the Fire Alarm shall be given immediately as follows:

On Board Vessel: Rapid and continuous ringing of ship's bell, together with a succession of long blasts on the ship's whistle or siren.

On Jetty or Elsewhere in Port Area: Rapid and continuous ringing of the gongs on the jetty. A push-button alarm system is provided at each berth.

SAFETY:

Amendment to Safety Regulations and Safety Inspections:

To keep Safety Regulations and Safety Inspections in line with current world-wide practice, the following new Rules will be put in force immediately.

1. At least 50% of the crew including sufficient senior officers shall be available on board at all times to deal with emergencies.
2. Two dry powder extinguishers plus 1 fire hose to be available at the manifold at all times.
   Note: This is especially important before connecting lines.
3. Present funnel deck hoses, now only required at inside berths, are now required on all berths including Sea Island.

AGENT: Gulf Agency Company (Iran).

All enquiries, telexes, cables, letters, concerning Ship's Agency at Iranian Ports should be directed to G.A.C. Shipping (UK) Ltd., No. 1 Charlwood Court, County Oak Way, Crawley, West Sussex RH11 7XA, England. Tel: (01293) 615555 (5 lines). Telex: 87561 GAC UK G (4 lines). Fax: (01293) 615161. Cables: GACSHIP Crawley UK.

(C) KHEMCO TERMINAL:

(Additional requirements and details)

OPERATOR: Kharg Chemical Company, Ltd. (Khemco), Tehran, Iran. Cable Address: "Chemkharg" Tehran. Telex: 2402 Khemco Tn.

LOCATION: Khemco Terminal dolphin jetty is located at the S.E. corner of Kharg Island Lat. 29° 12' 45" N., Long. 50° 20' 05" E.

APPROACHES: Vessels entering Kharg Island Roads must not approach or anchor West of Long. 50° 21' 30" E. (being approximately 1 mile East of Khemco Terminal), unless a Company Berthing Master is on board.

PILOTAGE: N.I.O.C. pilots will board vessels outside the port area and will pilot and berth the vessel alongside Khemco Jetty. The pilots will also carry out the duties of safety officer.

Vessels with the pilots on board shall display the international flag "H" in a prominent position while manoeuvring under his advice. This flag will be in addition to the "Q" flag, being already hoisted for quarantine purposes.

Vessels are requested to have a clean pilot ladder safely secured on the leeside of the ship for the pilots. The pilot ladder should be long enough to reach the pilot tug or launch. At night adequate lighting for the pilot ladder shall be installed.

Pilotage, berthing, mooring and sailing of vessels will be carried out in accordance with instructions of the pilots, subject to the understanding that in all circumstances the Master of the vessel being manoeuvred shall remain solely responsible for the safety, proper navigation and manoeuvring of his vessel. The Master or a qualified ship's deck officer must be on the bridge at all times while the vessel is underway or unmoored.

NOTICE OF READINESS: Notice of Readiness will not be accepted at the time of arrival unless the vessel is in all respects ready to load. Arrival time will be considered as the time the berthing Master boards the vessel or the time that the vessel anchors, whichever occurs first.

RESTRICTIONS: Vessels can be berthed day or night in 2 directions using ship's moorings. Occasionally bow anchor will be used during berthing operation.

MAX. SIZE: Length of pier is 1,180 ft. with maximum of 39 ft. water alongside at MLLW.

RADIO: Messages for Khemco should be prefixed with "NIOC for Khemco Kharg", with copy to Agent.

Advice of Arrival: It is important that ships establish radio contact with Khemco, when 3 days distance from Kharg Island, and maintain this contact until just prior to arrival at the terminal. All ships should send a 72 hours ETA message to Khemco, giving the best estimate of the ship's arrival time at Kharg anchorage. The first ETA message should also include a definite statement of the details of manifold dimensions, cargo requirement, Agent and any other necessary information. Further ETA messages should be sent to Khemco when the vessel is 24 hours and 12 hours distant from Kharg Island and at any other time if any appreciable change occurs in the original ETA or those subsequent thereto. The 12 hour ETA should include a positive statement regarding ship's readiness to load on arrival, and the number of hours required to discharge clean ballast after ship has berthed.

TUGS: Two 2,000 h.p. and one 1,000 h.p. diesel tugs are provided by N.I.O.C. Normally 2 tugs are used for berthing and unberthing, depending on the Berthing Master's discretion. Tugs moorings are provided by the company and vessels are requested to have good heaving lines handy on the deck for picking up the tug lines. All tugs are equipped with fire-fighting equipment, including a foam system, which can be used when required.

MOORING: If, in the opinion of the Berthing Master, the vessel is not equipped with adequate mooring facilities, lines or gear, he will so inform vessel's Master, and in such event shall not be brought into berth until such facilities, lines or gear are deemed satisfactory.

Mooring Launches: Two powerful mooring launches are provided by N.I.O.C. and normally one is used during berthing and unberthing operations.

Mooring Lines: Under normal weather conditions the following mooring lines are required: forward: 3 head lines, 2 breast lines, 1 spring; aft.: 3 stern lines, 2 breast lines, 1 spring.

All lines to be of 120 fathoms, with the exception of the breast lines, being of shorter length. No wire lines are to be used at Khemco jetty.

During abnormal conditions, especially during Winter periods, some additional 4 lines are required for extra moorings.

In most cases it might be necessary to pass all forward lines from the bow and all stern lines from the poop.

Dolphins. The jetty consists of 1 main and 8 smaller dolphins. 4 on either side of the main dolphin are for ships mooring. The main dolphin is connected to the shore via a trestle and causeway. Head and stern lines are passed to the dolphins by means of line handling launches and others by heaving lines. All mooring dolphins are fitted with quick-release hooks.

BERTHING:

A. Berthing Masters: Vessels to be berthed at Khemco jetty will be boarded by an N.I.O.C. Pilot at Kharg anchorage and after advising the ship's Master of all port formalities, will normally take 2 tugs (1 to the bow and 1 to the stern), alongside while proceeding to the jetty.

B. Berth Turn: Vessels to load at Khemco jetty will normally be accepted and the berth will be assigned to the vessel in order of arrival and nomination. In the event the berthing is delayed by weather or other reasons, vessels will keep their positions in line. Vessels leaving the port area on account of weather or other reasons should keep in contact with the terminal in order that they will be available when weather moderates. Khemco reserves the right to load vessels out of turn following the return of good weather, to the extent that such loading out of turn does not materially delay the loading of other vessels in line. For example, in the event that weather or other reasons make it necessary for vessels awaiting berth to leave the terminal and put to sea, Khemco may load another vessel after the port opens, but before the return of the vessels waiting in line ahead of it. And further, Khemco reserves the right to decline to berth a specific vessel if its condition or facilities are unsafe for berthing or loading, but berths other vessels "Out of turn".

C. Gangway: When alongside the jetty, vessels shall provide an efficient gangway with a net rigged underneath. During the hours of darkness, they shall install adequate safe lighting for the gangway. These lights are in addition to those used for the deck illumination.

D. Sailing: All lines are dropped by means of quick-release hooks, fitted on all dolphins and under normal conditions 1 tug is used on the hook at the bow of the vessel in order to clear her off the berth. Usually the documents are signed before departure, unless the berth is needed for another ship.

BALLAST:

A. Rules and Regulations: Vessels arriving at Kharg should maintain a reasonable draft fore and aft for safe manoeuvring and berthing. When conditions permit, the Berthing Master will advise the Master to commence discharging ballast. It is the Master's responsibility to see that dirty ballast, whatsoever, is not pumped or spilled overboard. Only clean ballast or bilge water may be discharged within 50 miles of the coast-line. In the event of contaminated ballast or bilge water, the vessel will be required to divert this material to a ship's slop tank. Otherwise, the vessel may be unberthed and returned to a point not less than 50 miles from the coast line to discharge contaminated ballast.

There are no ballast disposal facilities at Kharg Island.

Masters are requested to arrive at Kharg with clean tanks, pipelines, sea suctions, strainers and pumps. Ships will not be accepted for loading if evidence of any dirty ballast is observed.

Any vessel returned to a position at least 50 miles off-shore to discharge dirty ballast, or for any similar reason, automatically nullifies any "Notice of Readiness" already tendered and loses any priority held for loading. The vessel will be entered for loading at the time of second arrival when a new "Notice of Readiness" will be tendered.

B. Loading and Deballasting Simultaneously: Vessels are permitted to load cargo and discharge clean ballast at the same time provided all safety and other aspects are observed.

C. Tank Cleaning: Ship-tank cleaning will not be allowed at the pier. Ships will be allowed to draw sea water ballast while alongside.

LOADING:

A. Ship's Gear: Although the jetty is equipped with a boom to handle loading hoses, ships are requested to rig jetty side boom in a proper and safe manner for possible use. Masters will be responsible for ensuring that the ships gear or fittings are in good working order and will not in any way interfere with or hamper the working of the facilities.

B. Inspection: After the vessel has been berthed and all formalities carried out the vessel will be boarded by the loading Master. A joint inspection will be made by an authorised ship's officer and the loading Master after the exchange of information and documents. If the ship's tanks, piping or equipment are in such condition that a potential hazard exists, the ships will be refused permission to load until such hazards are corrected. In any case, the Owners or Charterers of the ship will be notified of any delay or refusal to load because of hazardous conditions and any expense due to such delay or refusal to load will be borne by Owners.

If the ship does not arrive with tanks and/or piping sufficiently cooled to permit loading, the time required to cool down shall not be counted as lay time. Any expenses, including LPG furnished by company, demurrage, etc., involved with the cool-down period and operation shall be borne by the Owners or Charterers of the vessel.

Should the vessel arrive at the loading terminal with inert gas in its tanks, after purging from a previous cargo of ammonia or other gas to prevent contamination of shore lines and facilities, the inert gas shou be vented if possible before ship is moored. If the ship's tanks to be loaded previously contained a product different from what is to be loaded, the Master shall verify that the tanks are clean and ready to receive Kharg Chemical cargo.

C. Loading Propane and/or Butane:

1. General Information: No loading will begin until the ship is safely moored with fibre mooring lines, gangway lowered and secured, the ship grounded and ground tested, ship's and shore emergency fire hose pressurised and ready for use, fire wire in place, and ship/shore communications tested and in good working order.

All loading personnel will wear fibreglass hard hats, leather-palmed gloves, cotton long-sleeved shirts, long cotton trousers, cotton socks, and sandals or shoes that do not have spark-generating material, such as steel nails, cleats, toe or heel plates. Non-sparking tools will be used in making hose and ground connections. Silk clothing or headgear will not be permitted due to its affinity for collecting static electricity. Ship's grounds will be tested for continuity to shore before product or vapours pass through hoses.

Since the LPG may not contain an odorant, particular care shall be taken that the atmosphere does not become explosive. If there is no air movement, explosimeter readings will be taken hourly, and if an explosive atmosphere exists, loading shall stop until conditions change. Prior to loading the main cargo a small quantity of propane and/or butane will be loaded or circulated initially for cooling down purposes. The amount set aside for cooling down will depend on whether the cool down is for the ship's lines or ship's tanks. Generally, the ship's lines will be cooled down before loading each parcel.

Although a small amount of refrigerated LPG is normally retained in the bottoms of the ship's cargo tank during the trip to Kharg Island, the tank vapour space and tank walls are warmer. For a period of about an hour while low temperature circulation of the shore lines continues, a small amount of propane may be taken by the ship from cargo holds and sprayed into ship's tanks. This method cools the upper parts of the ship's tanks and vapour spaces. If propane is taken from shore lines, this is replaced from shore tankage as the circulating pump suction is "floating" on the shore tank outlet line.

The enclosed spaces around ship cargo tanks and double bulkheads should be frequently monitored by ship's personnel for cargo leakage.

The measures for dealing with any leakage to prevent the temperature of the hull structure from falling below a safe level depends upon the ship's design. The Master shall have standing orders for dealing with any leakage observed on the ship and shall so inform the Loading Master.

2. Loading Master and Jetty Operator: Once the vessel has been berthed, berth will be manned at all times by an operator, who will be stationed in the immediate vicinity of the berth loading bay. All information and forms will be passed by the Loading Master prior to commencement of loading.

3. Alarms: All alarm systems on vessel and communications between the jetty and control room shall be checked before loading is begun. Masters are requested to make the Loading Master fully familiar with the vessel's alarm systems. Otherwise, confusion may occur between loading alarms and fire alarms.

4. Connecting Loading Hoses: The loading and vapour-return hoses will be well supported and laid along the pier. Each hose and hose valve will be supported by jacks on ship's deck. Hoses will be protected by rope mesh. Once the loading hoses are connected they will be adjusted during loading operations. The shore and ship personnel shall be careful not to kink, stretch or damage hoses. Hoses not used will be blanked. Hose flanges will be completely bolted and shrouded.

Size of Hoses; propane 8 in. (with 8 in. ASA 150 flanges); butane 8 in. (with 8 in. ASA 150 flanges); vapour 6 in. (6 in. ASA flanges).

5. Air: It is most important that no air is allowed to enter either the ship or shore loading lines. All hoses and spools must be purged free of air after being connected.

Provision is made on shore for purging air from LPG and vent hoses on completion of hose connection to ship and for purging LPG vapour from hoses before disconnecting when loading is finished. Provision is made to supply inert gas for this purpose. Provision is also made for disposal of remaining liquid in hoses safely and effectively from shore connection of hoses before disconnecting and gas purging of hoses when loading is finished. Valves and connections are provided for this purpose on the shore end. All ice must be removed from around hose insulating gasket prior to hose disconnection. Cargo hoses shall be blanked and be removed from ship. Ground wires will remain connected until ship's gangway is removed and ship is ready to depart.

6. Loading Pressure: Loading pressure should not exceed 50 p.s.i. at any time.

7. Ship's Compressor: During loading, the ship may pump vapours ashore via the ship's compressor. The Loading Master should be advised before the compressor is started or stopped.

8. Loading Rates: Maximum loading rates for LPG products are as follows:

Propane (2 lines)	10,900 barrels per hour
Butane (2 lines)	7,800 ,, ,, ,,
Propane (1 line, pumping)	7,000 ,, ,, ,,
Butane (1 line gravitating)	3,900 ,, ,, ,,

It is more important that the Loading Master be informed before any changes are made by the ship in the vapour compression operation. He then will inform the shore loading area. Starting and stopping compressors on the ship affect the shore tank pressures and can result in damage to tanks and pumps. Ship's valves should under no circumstances be partially or completely closed against LPG flow without first informing the Loading Master. Pumping rates will normally be adjusted from the shore loading area.

The ship's Master is responsible for his ship at all times. The Company Loading Master will advise the Master in respect to loading pressures and hazards, but will not direct the loading except as may be necessary to protect their terminal's facilities or to prevent any hazards. Manipulation of ship's valves is the direct responsibility of ship's personnel.

LPG loading will be done on a 24 hours basis; hence the Master of the vessel, while alongside the LPG loading pier, will be responsible for the provision of adequate explosion proof lights, fittings and switches in all parts of the vessel where work is being carried out in any way connected with loading of LPG.

The ship's pipelines/vent system and/or liquification system shall be manifolded so that only those pipelines connected to the ship's tank being loaded will be open. All other pipelines' lines shall be closed and outlets blinded.

All doorways, vents, ports, air-conditioner intakes and other openings into which gaseous vapours could enter shall be closed.

During loading, there shall be no smoking, no open lights and no galley fire on the ship or in the vicinity of the pier.

Packaged goods, bunkers, water, freight and ship stores shall not be loaded or discharged during loading. Visitors will not be permitted on the ship during loading.

Loading of LPG shall be stopped whenever weather or sea conditions are hazardous to the ship, dolphins, LPG hose and manifold, adjacent vessels or personnel. The Senior Terminal Representative and authorised Ship's Officer shall jointly judge if such conditions exist. In case of dispute, the Senior Terminal Representative's judgement shall be followed.

During severe thunder storms, sand storms and electrical storms in the vicinity of the ship, loading shall cease until the storm subsides.

9. Strainer Boxes: It is important that no ice, pipe scale, etc., be allowed into the vessels' tanks. The ship should have strainers placed immediately upstream of the manifold valves. A careful watch must be kept on the pressure to prevent the strainers being blocked and periodically the strainers should be cleaned by using the built-in wiper, which should be turned clockwise only. In case of an absolute blockage loading will have to be suspended and the strainer cleaned, if necessary by removal. If one of the vessel's strainers is blocked, it may be possible to continue on the other hose.

10. Completion of Loading: A reduction in loading rate before topping of the final tank or tanks may be arranged through the Loading Master by the ship's officer in charge. When the vessel asks for a slow rate, the loading pump will be shut-down and valves re-aligned for circulation. The vessel should then complete loading at its own controlled rate off the circulation flow. The terminal might ask for a suspension of loading while re-aligning the circulation pump. When required to stop completely, the Loading Master should be advised.

11. Hose Disconnection: When disconnecting hoses in order to change or clean a strainer at the time of completion of loading, the following points must be remembered:

(a) All ice must be removed from around the hose insulating gaskets prior to disconnecting.
(b) The hoses and hose valves must be secured to the vessel to avoid slipping or twisting. This is best done with rope and/or pulleys.
(c) The hose valves and ship's manifold valves must be shut.
(d) The vessel's vent valves must be open either to the atmosphere or to the vapour return hoses.
(e) The ship's strainer and all pipes and flanges between the hose and manifold valves must be de-iced.
(f) The hose can then be disconnected, but the ship's manifold valves, vapour return valves and hose valves must be shut.

D. Loading of Bulk Sulphur: All rules and regulations concerning LPG loading also apply to sulphur.

1. Inspection: The joint inspection of the ship and the ship's holds to be loaded with sulphur will be made by the Loading Master and authorised ship's officer. If the condition of the ship's holds presents a potential hazard to personnel, sea or shore facilities, the ship will be refused permission to load until conditions are corrected. The Master shall bear the responsibility for notifying the Owners or Charterers of the ship of any delay or refusal to load because of hazardous conditions and any expenses due to such delay or refusal to load shall be borne by them. The Company reserves the right to refuse loading and their decision is final.

If the ship's cargo holds are not clean or are so hot and/or contain residue (such as excessive rust, sand-scrap iron, minerals, or mineral dust) that alone or in combination with sulphur or sulphur dust would contaminate sulphur being loaded, oxidise with sulphur, or cause a fire or explosion of the sulphur cargo, permission to load sulphur will be withheld until this condition is corrected.

2. General Information: Bulk Sulphur is loaded at 500 t.p.h. via a conveyor. The conveyor extends from the shore storage area along the causeway, trestle and finally to the main dolphin close to the ship's holds.

No loading will begin until the ship is safely grounded, moored with fibre lines, fire hoses pressurised, ship-to-shore communications operable and the chute grounded.

In order to minimise movement of fine sulphur dust, cowl ventilators serving hold into which sulphur is being loaded shall be blanked off to prevent circulation of air. Package goods, bunkers, water, freight, ship stores shall not be loaded or discharged during or after sulphur loading.

When sulphur is loaded in a deep hold with general cargo in the tween deck hold above the sulphur, the ship's Master will be responsible for installing a dust proof wooden bulk head enclosure in the hatchways from the over deck of the lower hold to the weather deck forming a tight enclosure to prevent sulphur dust from entering the tween decks during loading. Ceilings shall be tight to prevent sulphur dust from entering bilges. Any chinking at tank tops or bilge will be of non-combustible material.

Masters to maintain sufficient personnel to adjust and maintain chute position, gangways and keep mooring lines taut as ship is loaded.

If sulphur is loaded into a hatch already containing sulphur, representative samples may be requested by the terminal to determine quality.

Since the sulphur loading facility at the pier is fixed the ship will be warped and moored so that various ships holds that will receive sulphur can be loaded.

After each warping the ship will be moored and grounded and chute grounded. The hold to be loaded will be checked with an explosimeter to be certain that the hold is not in the explosive range. Personnel entering cargo holds for inspection must be equipped with life-lines and belts with non-sparking hardware, goggles with green tinted lenses, and self-contained breathing apparatus with a mask covering eyes and nose. The life-lines shall be of sufficient length and strength that 1 line could be used to pull a man out of a hatch. For each man working in the hold 1 man on deck must attend his life-lines. Personnel in the hold must wear gauntlet gloves, high-top shoes, long cotton socks, a fibre glass hard hat with a cotton cap ear flaps covering the head and ears, pants fastened at the cuff and long-sleeve shirts buttoned at the neck and wrists. Silk clothing or headgear will not be permitted due to its affinity for collecting static. Cotton clothing material is preferred.

Only the hatch being loaded with sulphur will be open. All other ship hold hatches must be closed. All doorways, vents, ports, air scoops, air conditioner intakes and other openings into which sulphur dust could enter should be closed during loading. After loading and trimming a hold, the hold hatch cover shall be closed and the next hatch to receive sulphur will be opened. The pier sulphur loading tower can be raised and lowered as well as rotated in order that the cargo hold being loaded can be evenly trimmed with little or no manual trimming. Each time the tower is moved the chute shall be grounded. No hand cargo load trimming will be allowed while the pier loading sulphur tower is in operation. The tower down-spout drop distance will be adjusted to minimise sulphur dusting.

The loading-tower operator will be advised by authorised ship's personnel on the deck by use of agreed hand signals of any hazards such as deck cargo, lifeboats, aerial guy wires, etc., that can do damage to loading tower. Personnel will work upwind as much as possible to minimise sulphur dust inhalation or sulphur on skin. Eye baths and showers are located at the dock and will be ready for use if needed.

No loading will be done until all personnel are out of ship's cargo holds. The ship's authorised officer shall assign personnel to sweep sulphur dust into cargo holds to minimise pollution of the adjacent sea water. If shovels or scoops are used the shovels must be of a non-sparking material such as monel. Personnel working cargo holds or on deck shall not be permitted to wear shoes with steel nails, or metal heels or toe plates that could cause sparking.

Loading of sulphur will be stopped whenever weather or sea conditions are hazardous to the ship, pier, dolphins, sulphur loading tower, pier equipment, adjacent vessels or personnel.

Sulphur dust, like most poor electrical conductors rapidly acquires a static charge under dry atmospheric conditions. To minimise this hazard the loading tower is equipped with water spray nozzles to humidify the sulphur and reduce dusting. Conveyor hoppers are also equipped with sprays.

During severe weather conditions loading will cease and cargo hold hatches shall be closed until the storm or seas subside.

Sulphur loading will be done on a 24 hour basis. The Master of the vessel while alongside the sulphur loading pier will be responsible for the provision of adequate explosion proof lights, fittings and switches in all parts of the vessel where work is being carried out in any way connected with loading. The Master of the vessel will assign authorised ship's officers and men as deemed necessary for the safe loading of the ship and to adjust mooring lines and keep sulphur dusting to a minimum.

FUEL: Presently no bunker facilities are available at Khemco jetty.

WEATHER:

A. Climate: The climate along the coast of Kharg Island is generally mild. The days in mid-Summer are extremely warm and humid with the temperature reaching 117°F. (47°C.) and a relative humidity ranging from 10% to 98%. The Winter months, from November to March, are pleasant with a minimum temperature of about 39°F. (4°C.). Freezing weather is uncommon.

B. Weather Data and Summary:

Average annual rainfall	8 in.
Mean maximum temperature	87°F.
Mean minimum temperature	66°F.
Extreme maximum temperature	117°F.
Extreme minimum temperature	39°F.
Average relative humidity	59%

C. Winds: Wind directions and velocity are subject to rapid change without warning and precautions are necessary to avoid difficulties. The heaviest seas and swells are from the N.E. through S.E. The prevailing wind for most of the year is from the N.W., but during the Winter period strong S.E. storms occur with very little warning. The Khemco jetty is sheltered from the N.W. winds.

D. Tides: The tidal range is between 7 ft. and 8 ft., with a maximum rate of about 1.5 knots. The tidal streams run approximately parallel to the line of the jetty, with occasional cross currents.

E. Sea Temperatures: The surface temperature of the sea ranges from 63°F. to 97°F., depending on the season.

SAFETY: Masters of vessels are responsible for the safety of their vessels including, but not limited to compliance with official precautions, and must take all necessary precautions while the vessels are alongside the Khemco jetty. While the vessels are alongside the jetty, all personnel must comply with all port's safety rules and regulations.

GENERAL: *(a)* Shore Leave: Shore leave at the terminal must be arranged between Master and ship's Agent. Sufficient personnel must be on board at all times for emergencies.

(b) Visitors: Due to hazards involved, no visitors are allowed while the vessel is alongside the Khemco jetty.

(c) Light Dues: A charge of half a Rial per g.r.t. is levied on each vessel for light dues by the Iranian Government. This is in addition to light dues for Middle East Navigation Service. The Company shall have no responsibility in respect of any taxes, dues, or other charges levied by the Iranian Government or any of its departments or agencies.

(d) Painting and Scaling: Painting, chipping, scaling and any repairs on deck or overside is strictly prohibited while vessel is alongside the Khemco jetty.

(e) Garbage: Dumping of garbage and refuse strictly prohibited in port area.

(f) Repairs: No workshops or other facilities for repairs at Kharg Island.

(g) Customs: There are Customs and other official offices on the Island. Vessel will normally be boarded by a Custom Director, Immigration Officer and Director of Ports and Shipping.

(h) Consulates: No consulates on Kharg Island.

(i) Marine Surveyor: No marine surveyor on the Island, but can be available at 48 hours' notice through ship's Agent.

(j) Recreation Centre closed.

(k) Supplies: Provisions are not available. No fresh water is available for delivery to the ships. No laundry services are available at Kharg Island.

(l) Mail: Regular plane services between Kharg Island and the mainland and mail receiving and dispatching can be arranged through ship's Agent.

SHIPMASTER'S REPORT: June 1979 (with further updates in March 1992 and November 1994).

Approaches: Generally not a great deal of traffic. The D/F at the airport is operational and useful. Ships anchor at S.E. and S.W. of island.

2 buoys at Southern end of island:

Red Pillar Buoy Gp. Fl. (2) 6 sec. (29° 11' N., 50° 20' 24" E.);

Green Wreck Buoy, conical (29° 12' 06" N., 50° 19' 39" E.), marks position of tug.

Anchorage: The Eastern anchorage is very exposed to Southerly winds (use Western anchorage if waiting for a long time in Winter). At the present time there are many tankers waiting which means small tankers and LPG vessels either have to anchor themselves in amongst VLCC's or anchor well out – generally about 4 miles East of the "T" jetty (less shipping waiting in March 1980). This seems to be quite acceptable to the Authorities and is more satisfactory as far as engine maintenance and winds are concerned.

Berth: South of "T" jetty owned by Khemco – Kharg Chemical Co. Approximate max. size of vessel 250 m. long; water depth LW 13.6 m. and about 60,000 d.w.t.

Consists of jetty stretching over about 150 m. connected to shore by pier. On the jetty there is a manifold for flexible LPG lines, line derrick with powered winch, sulphur gantry and chute connected by conveyor belt to stockpile ashore.

On either side of jetty there are 2 dolphins with quick release mooring hooks. The jetty and near set of dolphins are faced by shock absorbing fenders.

March 1980: With strong Southerly winds the berth is a hazard. We experienced a force 6 S.E. wind one night which fetched the swell up and caused the vessel to work heavily on the jetty, one release hook gave way (the securing pin snapped), luckily it was on a dolphin that had a catwalk so we were able to change the moorings. As we were port side too facing North into the "T" jetty we had to sit tight and put out extra moorings.

Fenders were very good (about the best that I have seen with large timber faces)

Depth by lead line. After (Southerly dolphin with catwalk) 12 m. at LW, forward dolphin 13 m. at LW.

VHF: Call 'N.I.O.C. Marine' on Channel 10.

Vessel can call 'Kharg Pilots' 24 hours on Channel 12, who will try to pass message for you. 'Kharg Pilots' have nothing to do with 'Khemco' jetty.

Pilots: 2 Iranian 'N.I.O.C.' Company Pilots solely for 'Khemco' jetty. They board 2 to 3 miles East of "T" jetty from tug (will use hoist).

Berthing: Generally only in daylight. Will unberth at night. Max. berthing winds Northerly 45 knots, Southerly 10 knots. Visibility 0.5 miles.

We actually ended up with visibility at about 2 cables in a sand storm when approaching the berth. But as all the preparations had been made and little wind, continued on Radar with no problems.

Vessels berth either side alongside (head into tide).

Current: From readings taken off ships log which accurate, current speed corresponds to position "B" on "T" jetty, BA Chart 11.

Tugs: 2 tugs used for berthing and unberthing. Tug's lines.

Lines: 3 headlines, 2 breast lines and 2 springs each end. 3 headlines to outer dolphins, 2 as breasts to inner dolphins, 2 as springs to jetty ends.

There are quick release hooks but they are jammed up. 1 line boat only who goes backwards and forwards both ends, try to send 3 lines together (Tie up is slow, about 2 to 3 hours).

An exact line up with ends of flexible pipes on jetty with ship's manifold is required because the flexible pipes are not very flexible.

Gangway: Cannot be turned out and landed and must be brought in until before and after connection/disconnection.

It has to be turned through 130° if it is aft facing, or use fixed length. If vessel port side to, it is much easier to use in the conventional fashion.

Manifold: Most particular that manifold is lined up with hoses on quay. Liquid: 2×8 in. 150 ASA. Vapour return: 2×6 in. 150 ASA. Ship's reducers, shore derrick, ship's chain blocks supporting hoses from manifold gantry. Shore personnel connect.

Cargo: Propane and Butane only by gravity feed. Max. rate each product 300 t.p.h., generally around 150 t.p.h. when shore tank near the bottom there is insufficient pressure to even gravitate. Vapour return lines available for both.

Cargo Temperatures:

At manifold, Butane – 6°C (B.P. 0.2 bars)
At manifold, Propane – 42°C (B.P. 0.7 bars)

The shore have no thermometers on their lines. Pockets jammed with old probes, all measurement is on pressure.

On my visit to the plant I ascertained the Propane to be −43°C and Butane −5°C.

Vapour Return Line: 1 flare for each product about half way up jetty on spur jetty, which normally just alight, so when you open up they can immediately see. If used in moderation no difficulties encountered.

No charge directly, but it is the practice to measure shore and ship tanks and check the difference. On our visit this did not happen as shore tanks had not been taken on departure due to being virtually empty.

At the start the vapour return lines were closed so the valve had to be sought.

Loading Master: There is always one on the jetty, tries to be helpful and speaks reasonable English. Best to telephone 441, 442, the managers – very helpful, or telephone Control Room 433 for shift supervisor who will give you tank tonnages in barrels.

Stopping Propane: 1 hour's notice required to ready the pump for stopping and 5 minutes before completion. When you tell them to stop a little more liquid will run down the line by gravity. It was not possible to top off by gravity alone as by this time the shore tanks were very low.

Stopping butane was no problem as they ran out and we were at the end taking it as they were making it until that process came to a halt.

Specific Gravity: Propane: 0.505 60/60.
Butane: 0.574 60/60.

Surveyor: No outside surveyors. Plant chemist does the survey, agrees with Chief Officer. Ship figure on Bill of Lading.

Draft Reading: Difficult to read after draft, best to use binoculars and Aldis Lamp at night.

Tanks on Arrival: Up to Master whether the ship is capable of loading. If loading propane into butane atmosphere or I.G. or vice versa, Khemco require statement to this effect from Master.

The line is normally circulated for 8 to 12 hours before arrival by a small quantity of liquid being bled through to the VRL. Nevertheless, the first "Slug" is warm due to exposed quay section of line.

The lines (flexible) to ship are purged with Nitrogen after connection by a bleed in at the manifold connection. Nitrogen bottles on jetty.

Documentation:
8 copies Crew Lists.
2 copies Vaccination List.
1 copy Stores List.
2 copies Crew Declaration.
2 copies Maritime Declaration of Health.

The Agent, Port Authority Representative, Port Health and Customs board arrival berth. Numerous forms have to be completed. Arrival formalities take 45 minutes Clearance is given to Master on arrival.

On departure the 'Khemco' shift manager comes down with all the cargo papers – Manifest, Bill of Lading, Spec., etc., and signed onboard.

We finished cargo at 0900 hrs., and papers came aboard at 1145 hrs. This is normal.

The Agent is always on about E.D.P., it is not the practice on this berth and in any case for the sake of a few hours its best to have all the papers correct and note protest if necessary.

Pratique: Granted at berth.

Notice of Readiness: Generally will only be accepted when first line ashore (not at anchorage).

Note of Protest to be given with all force and Khemco may back down and accept on anchoring if port is not closed due to wind.

Communications: Cable "Chem Kharg" Tehran. Telex 2402 Kemco TN.

All telexes have to be routed via Tehran for international acceptance.

Telephone poor, can hardly get through to mainland.

It became necessary for me to telephone UK so managed at night to get through to 'Kuwait Maritime' about 120 miles away. 24 hour watch not restricted as ALRS. Call Channel 16, generally works Channel 26. After contact vessel can wait about 30 minutes on Channel 16 before operator calls back. Channel 26 very clear.

March 1980: Not possible to contact 'Kuwait Maritime' in Winter months. It is possible to telephone UK from Kharg and from the jetty. A long wait is usual from the jetty and the line very weak, but it can be done with perseverance.

A better method is to get the Plant Manager to take you to the Central Exchange in the township and UK can be contacted via STD, it took about 40 minutes of constantly ringing to get connected and then you run the risk of disconnection, but again communication is possible and reasonably clear.

Telex via the Agent takes about 26 hours to get a reply due having to be telephoned through to Khorramshahr and then telexed to London via Tehran and vice versa.

Alcohol: We arrived with everything sealed. The Customs allowed us to have 6 cans of beer per man per day, no spirits (it depends on the Customs and Master).

Do not drink outside or give Iranians alcohol, the punishment is severe.

Radio Room: The Port Authority wanted to seal this but persuaded them to seal the antenna switchboard only (with chart paper and glue).

Fresh Water: Fresh water main runs to ship's side with meter. We obtained about 40 tonnes. Water is distilled and slightly brown.

Plant: At present about 300 tonnes per day of butane and 500 tonnes per day of propane are being produced which is about 60% of capacity.

Sulphur production is just resuming and is normally about 200 tonnes per day.

Feedstock is taken from Kharg Chemical Co. which is, or used to be, 50% AMOCO owned.

Feedstock is in the form of third stage refined well gas taken from 3 local wells, 2 on the island and the Dorood field on the S.W. coast. Most of the 'Sour Crude Gas' is extracted before acceptance, what's left is used for making sulphur.

The plant is completely self contained apart from initial feedstock and covers about 1 sq. mile. It is fully automated and staffed by six operators on a shift system.

The gas which comes in H.P. and L.P. form depending on the wells, is fed through in 2 streams which are crossed to accept different Hydrocarbons thereby achieving a no waste system.

The gas is fed through Glycol towers for water absorbtion then heat exchangers to separate the different molecules.

After basic separation vertical separators are employed to further refine the product. This is then led to 3 stage compressors for re-liquefaction then to chillers.

After processing the liquid is fed to receiving tanks for settling purposes then to 2 large atmospheric holding tanks.

The tanks are heavily lagged with bitumen glass wool compound and any boil off being re-liquefied.

The approximate amounts capable of being stored are 120,000 bbls. butane (11,000 tonnes), and 250,000 bbls. propane (20,000 tonnes) which under the original Japanese shipment meant about one 30,000 tonne shipment per month.

Power requirements for the electric motor drives are provided by two 4 MegaWatt Mitsubishi compound turbo generators, 1 being on auto stand by at any one time, supplied with steam from the 2 boilers that also produce sulphur.

Cooling water for the various systems is provided by salt and fresh depending on the plant. Salt by two 3,000 M3 electric pumps situated about two thirds the way down the jetty, these are backed up by a diesel driven auto start pump.

Fresh water is distilled at the rate of 700 tonnes per day by a steam separator and stored in two 1,000 tonne tanks.

A new Glycol plant was commissioned in March 1978 and a new distillation plant supplied last year but not erected. At present it is in polythene sheeting awaiting engineers.

Generally the plant is in a good state of repair and all instruments seemed to be working in the very comprehensive control room. The staff were most helpful but a camera was not allowed.

A product specification can be obtained. One is always given on completion, but with a lot of pressing can be obtained about 12 hours after commencement of loading.

Sulphur loading is slow and by a conveyor belt to a directional chute. The ship has to shift to load individual holds.

Kharg Crew Facilities:

Films: No Walport exchange.

Travel: The Agent said in emergency it could be possible for repatriation to be arranged.

Iran Air have restarted their 737 flights to Abadan, Bushire and Tehran once a day in each direction. Leaves for Abadan about 1000 hrs.

Khemco/N.I.O.C. have a flight from Tehran twice a week for their own personnel by Fokker Friendship. I was told it would be possible to get a seat or two on this on a one-off basis, arrangements would have to be made direct to these 2 companies in Tehran.

General (March 1980): Approximately 2 million barrels crude oil per day being exported. About 2 to 3, at maximum, tankers using the "T" jetty at any one time. About 2 tankers per week using the Western Sea Island.

The airport is functioning with regular 737 flights to Abadan, Bushire and Tehran.

The Soroosh field about 40 miles W.S.W. of Kharg has ceased production and the Dorood Terminal has about 1 ship per month.

The Khemco berth handles 1 sulphur ship per month mainly for African countries and 1 LPG ship every 6 weeks for Japan.

AGENT: Gulf Agency Company (Iran).

All enquiries, telexes, cables, letters, concerning Ship's Agency at Iranian Ports should be directed to G.A.C. Shipping (UK) Ltd., No. 1 Charlwood Court, County Oak Way, Crawley, West Sussex RH11 7XA, England. Tel: (01293) 615555 (5 lines). Telex: 87561 GAC UK G (4 lines). Fax: (01293) 615161. Cables: GACSHIP Crawley UK.

KHORRAMSHAHR: 30.26 N. 48.10 E.

Note: The port was extensively damaged in the conflict and reconstruction is underway. Vessels of 2,000 d.w.t. are able to load and discharge at the port.

The information below refers to the situation prior to the conflict.

LOCATION: Khorramshahr lies at confluence of Karoon and Shatt-al-Arab Rivers and is principal commercial port of Iran. Khorramshahr is terminus for Iranian Railway system and regular train service to rest of country is available. Good asphalt road connecting Khorramshahr to other major cities in country.

DOCUMENTS:

(a) Iraqi Quarantine Officer: Vessels arriving Outer Bar (Shatt-al-Arab Pilot Station) will be boarded by Iraqi Quarantine Officer who will check all crew vaccination cards. Masters requested notify Fao Quarantine Office at least 18 hours' prior vessel's arrival Outer Bar giving exact arrival time Outer Bar enabling Quarantine personnel board vessel immediately. Upon arrival Outer Bar, Master should have ready a copy of Crew List and crew vaccination certificates for presentation to Quarantine Officer.

(b) Iranian Quarantine Officer: Upon arrival Khorramshahr anchorage and prior berthing, the Iranian Quarantine Officer will board vessel. He requires 1 copy Crew List, and all vaccination cards should be available for inspection.

(c) Customs Officer: Customs Officer boards ship at anchorage or alongside Khorramshahr Jetty (in case of immediate berthing) and requires following documents:
Crew List (2 copies).
Stores List (2 copies).

(d) Port Authorities:
Crew List plus (1 copy).

Arrival information form of the port Administration will be supplied to the Master in duplicate upon arrival, by a port representative. This form should be filled in and returned to the port Berthing Master.

(e) Agents:

Crew List (2 copies, for arranging shore passes).

Order avoid any delay in entering and discharging, the following documents must be sent by all loading port Agents to Khorramshahr Agents as far in advance of vessel's arrival as possible:

Cargo Manifest (8 copies).

Freight Manifest (2 copies).

B/L Copies (2 copies each).

All cargo shown on manifest must be landed at the port, and it is therefore essential that short-shipments, cancellations, diversions, etc. (if any) be reported early as possible and manifest should be corrected before submission to Port Authorities to avoid payment of fines. Stowage plans and hatch Lists should also be sent ahead, giving ample time to be studied by Cargo Supervisor for unloading arrangements.

PILOTAGE: With exception of ships of Government of Iran or Iraq and sailing craft, pilotage compulsory for all vessels entering, leaving or navigating in the Shatt-al-Arab. Pilotage in river outside harbour limits of Khorramshahr conducted by River Pilot; within limits of Port by Harbour Master.

Vessels entering Shatt-al-Arab boarded by River Pilot from pilot vessel situated in proximity of Rooka Buoy (Lat. 29° 49' N., Long. 48° 47' E.), showing a white flash every 6 seconds and equipped with Radar Reflector.

Vessels bound for Khorramshahr are conducted by River Pilot as far as Khorramshahr Anchorage, from where a Harbour Master (Iranian) will board vessel and berth her as necessary.

Pilotage, dredging and other navigational dues are collected by Basrah Port Authorities and must be settled directly with Iraqi Maritime Transport Co. Ltd., Basrah, Iraq.

N.B. Owners having vessels bound for Khorramshahr or Abadan should contact Iraqi Maritime Transport Co. Ltd., Basrah, cables "Bawakhir", Basrah, about arranging of Shatt-al-Arab pilotage. Owners should also put Messrs. Iraqi Maritime Transport Co. Ltd. in funds by remittance well in time before vessel reaches the Outer Bar of Shatt-al-Arab in order to cover port tonnage dues, pilotage and dredging dues for sailing from Outer Bar to Abadan or Khorramshahr and return.

ANCHORAGES: On arrival off the pilot boat vessel can anchor with no depth restriction. On entering the Shatt-al-Arab River the following are the recognised anchorages:

Kasba Anchorage, position about 2 miles above Fao with a max. depth of 35 ft. in fresh water.

Bawarda Anchorage, position about 2 miles above Abadan with a max. depth of 31 ft. in fresh water.

Hartha Point, position about 20 miles above Abadan and 15 miles below Khorramshahr with a max. depth of 35 ft. in fresh water. Hartha Point is the anchorage to enable vessels to lighten to 29 ft. in fresh water to enable them to cross the Karun Bar.

Abu Flus, position about 16 miles above Hartha Point and about 14 miles below Basrah (Khora Anchorage) with a max. depth of 29 ft. in fresh water.

MAX. SIZE: Maximum permissible length for vessels calling Khorramshahr is 525 ft. Max. draft for crossing Karun Bar and also at Khorramshahr (Failieth) Anchorage is 28 ft. 6 in., fresh water. Max. draft at Karun Bar in December 1976 was 26 ft. so it is advisable to check before vessel proceeds to the port. The depth alongside Berth Nos. 1 to 3 is 27 ft., Berth Nos. 4 to 7 is 26 ft., and Berth Nos. 8 and 9 is 29 ft.

SPEED RESTRICTIONS: Engine speed must be reduced well in advance so that the vessel's speed when passing jetties at Khorramshahr and Abadan will not exceed 3.5 knots for vessels with more than 20 ft. draft, and 5 knots for all other vessels of over 100 g.r.t.

The same speed restrictions will apply in the Shatt-al-Arab when passing ships at anchor with barges or other vessels moored alongside, tugs with barges or other vessels in tow, and vessels engaged in dredging or other salvage work.

SHIP'S REGISTRATION: Ships have to register upon arrival at outer bar by sending telegram to Port Director Khorramshahr via EQK Khorramshahr Port Radio. At present the vessel, after registering her turn should wait at outer bar. If vessel proceeds to another port for discharging, her registration will not be valid. Vessel after registration of berthing turn for Khorramshahr can however call at Abadan Port during waiting period without losing her turn subject to permission from Harbour Master.

For registration Masters must answer a 14 point registration cable and also advise anchoring time (GMT).

HEALTH: See "Documents". Inward clearance is effected on board after receiving Free Pratique.

RADIO: Khorramshahr Port Radio, call sign EQK, 500 kHz, 2182 kHz.

Khorramshahr Harbour Master can be contacted on VHF Channels 13 and 16, 18 and 25.

Vessels destined for Khorramshahr should send a radio message to the Port Director Khorramshahr and to the ship's Agent 24 hours prior arrival at the Shatt-al-Arab Pilot Station (Outer Bar). Times should be quoted in GMT. Also see "Ship's Registration".

TUGS: The Port Organisation of Khorramshahr owns 2 tug-boats which are used for assisting berthing and unberthing whenever necessary. No tug boats which could be used for long-distance towage. Employment of tug-boats is not compulsory.

BERTHING: See "Ship's Registration". Berthing and unberthing performed by Iranian Harbour Masters supplied by Iranian Port Administration, Khorramshahr. Berthing turn, allocation of berth and anchorage space is under the control of Iranian Port Administration, Khorramshahr.

The Port consists of 3,199 ft. long jetty constructed with wooden piles (Berths 1 to 7) plus the new extension covering 1,000 ft., built by steel/concrete piles (Berths 8 and 9) running parallel with river bank. Jetty can receive 9 ocean-going vessels at a time.

CARGO HANDLING: *(a) Jetty.* All cargo handling/operations on shore, under control of Khorramshahr Port Administration. General cargo discharged from ships alongside jetty is received on domestic railway wagons and trailers controlled by Port Administration, and transported to Port Warehouses or open yards. Port Warehouse/Store keepers will later deliver cargo to consignees against clearance papers issued by Customs. There are shore cranes and floating cranes available for the purpose of discharging cargo as follows: 2 floating cranes (50 ton and 100 ton); 2 mobile cranes (80 ton); 3 mobile cranes (50 ton); also additional mobile cranes of 25 tons capacity or less.

The port yard is equipped with 3 cranes (90 ton, 50 ton and 40 ton). All cargo must be discharged by ship's own gear, and vessels calling at Khorramshahr should not accept cargo beyond their gear capacity to discharge.

(b) Barges. (i) General Cargo: Vessels carrying less than 500 tons cargo are permitted to discharge their cargo into barges, in which case all extra expenses and costs of barging, discharging ex barges, etc., are to be borne by the carriers and such operation is entirely at the risk and responsibility of the respective carrier.

(ii) Structural Iron/Steel: Structural iron/steel is always to be discharged in barges for unloading at Failieh Creek. Barges must be arranged by vessel's Agents, who also have to arrange labour for discharging the cargo ex barge at Failieh, sorting of the iron, and delivery to consignees. Agents should also employ watchmen for protecting the cargo while awaiting delivery to consignees, also tally clerk for supervising sorting and delivery of iron to the respective consignees.

(c) Cranes. For use in loading/unloading cargo *in the storage areas*, cranes are all used in the port yard *for unloading cargo ex rail wagons* and loading on to merchants' trucks.

There is 1 electric crane permanently installed at Failieh Creek with lifting capacity said to be 100/120 tons. This crane can be used for discharging cargo from barges at Failieh barge jetty.

(d) Storage. 19 warehouses (goods sheds), plus an open yard between the warehouses used for storing iron goods, as well as cargoes which can be stored in the open.

(e) Wagons/Trailers. For receiving cargo ex-vessels alongside jetty the Authorities have 160 rail wagons and 77 trailers with average capacity of 10 tons, but number of wagons/trailers provided to each vessel not sufficient to last 24 hours work at jetty. Although 24 hours working alongside jetty is compulsory, due to shortage of wagons hardly 12/18 hours work can be accomplished efficiently. A stand-by of 6/7 hours in Summer and of 9/11 hours in Winter is unavoidable.

(f) Delivery of cargo discharged at jetty. Port Authorities considered as direct receivers of the cargo discharged, who in turn deliver same to ultimate consignees against presentation of the carrier's Agents' Delivery Order.

Carrier's responsibility for cargoes discharged in good condition cease under tackle; slings are opened by labourers provided on wagons alongside each vessel. Broken packages are not permitted (by Customs) to be discharged on the wagons, and are therefore collected on board. Once daily, under full control of ship's officer, port supervisor and carrier's supervisor, the broken packages are delivered to Port Authorities and an official Process-verbal will be drawn by respective warehouse-keeper corresponding to remarks noted at the time. This arrangement is to prevent any delay to operations of the vessel.

(g) Overtime Costs. Wages of port staff on board for official hours are borne by port Authorities but overtime and food allowance are paid by carriers.

(h) Port Working Hours. Dayshift: 0700 – 1300 hrs. and 1500 - 2100 hrs. There is no night shift.

24 hour discharging at jetty is compulsory. The only stoppages are for lunch and dinner, 1 hour each. In Summer season, however, due to heat, discharging at jetty is stopped from 1400 hrs. to 1700 hrs.

(i) Liquid Cargo. Due to non availability of tank barges as well as storage area at Bandar Imam Khomeini, vessels carrying liquid cargo are bound to call at Khorramshahr, where consignees have their own tank-barges and storage tanks. This being the case, the Port Authorities do not divert vessels carrying liquid cargo, to Bandar Imam Khomeini.

In the Port of Khorramshahr, importers of vegetable oil and other liquid commodities, have arranged their own storage area outside Customs yard, and liquid consignments will be received directly ex-vessel into consignees' barges without any expenses to carrier. (Discharging performed at anchorage.)

Vessels carrying part-liquid cargo can discharge their cargo while awaiting a berth or alongside jetty, whilst unloading other cargo on the pier.

Further to above, whenever Port Authorities divert any vessel to Bandar Imam Khomeini, in the diversion order they indicate "Subject no liquid cargo on board", as vessels with liquid cargo will have to be accepted in the port of Khorramshahr.

Notice of Readiness for vessels carrying liquid cargo, has to be tendered after vessel has anchored at Khorramshahr anchorage (within Khorramshahr port limits). If, due to congestion, there is no space at Khorramshahr anchorage, vessels may have to remain at Shatt-al-Arab Pilot station for 1 or 2 days before entering the river.

(j) *Dangerous Cargo.* Dangerous cargoes are divided in two categories:

1. Acid and flammable cargoes.
2. Explosives such as dynamite, etc.

Vessels carrying acid and flammable cargoes are accepted alongside Khorramshahr berths to unload their general cargo plus dangerous cargo, and Port Authorities unload the dangerous cargo in a yard at Failieh, which yard is mainly used for storing iron joists, but a part is allocated for dangerous cargo.

Vessels carrying explosives are not allowed to berth at Khorramshahr. Recently the Port Authorities have stopped accepting any vessel with explosive cargo on board into the port of Khorramshahr, and those vessels have to proceed directly to Bandar Imam Khomeini before calling Khorramshahr for discharging general cargo, if any. The main port for discharging explosive and special cargoes consigned to Iranian Army is Bandar Imam Khomeini, where the Army have an agreement with the Port Authorities for 1 berth out of the 6 berths. Berth No. 3 is allocated for vessels carrying cargo consigned to Iranian Army, and whenever such vessel arrives at Bandar Imam Khomeini it will be berthed immediately, even if the port is congested; in other words, vessels with Army cargo have priority for berthing.

FREIGHT TAX: Freight tax is payable on any freight earned in Iran for any export cargo loaded at any Iranian port. Per Article 90 of Tax Law, freight tax is payable at the rate of 5 per cent on gross freight, regardless of whether freight is collected in Iran or elsewhere. There is no tax on import cargo freight regardless of where the freight is paid. In other words, for cargo discharged in Iranian ports, even if freight is payable at destination to be collected in Iran, there is no tax applicable.

MEDICAL: Private doctors and hospitals located in the town for medical and dental treatment and hospitalisation. Arrangements for patients' visits to the doctors, dentists and hospital will be made by Agents upon request. In case of emergency special medical attendance on board can also be arranged. X-Rays, radiographies, blood and urine tests can also be conducted by equipped hospitals existing in Khorramshahr and Abadan.

DENSITY: Fresh.

FRESH WATER: Fresh water supply alongside berth available by pipelines and at anchorage by barges, capacity 100 tons.

FUEL: Bunkers are not available at Khorramshahr Jetty, however, bunkers (diesel oil and gas oil) can be supplied by barge. All classes of bunkers are supplied at Abadan jetties only. Bunkers could be obtained from Abadan provided arrangement for supply has been made beforehand with NIOC.

REPAIRS: Minor repairs can be carried out to a limited extent by private workshops existing at Khorramshahr. However due to lack of skilled workers the workshops in question do not undertake any responsibility or guarantee for the jobs performed, and charges are high.

For radar, wireless, echo-sounders, etc. as well as refrigerator and air condition service there are a few engineering groups at Khorramshahr as well as Abadan, and technicians of these groups will attend to the repairs on board both at Khorramshahr and Abadan jetties or at anchorage, upon request.

Ships moored to the jetty are not permitted to disable main power-plants for repairs without prior approval of Marine Department. A port tug will be assigned to stand by alongside ship with tow line attached during entire period while plant is disabled.

DRY DOCKS: None.

SURVEYORS: Lloyd's Register; Det Norske Veritas; Bureau Veritas American Bureau of Shipping; Surveyors for ordinary damage to cargo and/or ship as well as for on-hire/off-hire survey can be arranged by Agents.

CUSTOMS ALLOWANCES: After receipt of documents, the Customs Officer will seal the store room. All liquor and cigarette stocks will be sealed and reasonable ship's requirements while in port should be taken from store before sealing. This amount recommended to be assessed and be ready for removal from the stores prior to the vessel's arrival in port. During the stay at the port, and upon request and giving prior notice to the Agents' supervisor on board, arrangements may be made to have the Customs officials open the stores to issue further quantities of stores for crew consumption.

AIRPORT: Abadan International Airport about 10 minutes by car.

TIME: GMT plus 3.5 hours.

TELEPHONES: May be placed on board.

SHORE LEAVE: See "Identification Cards".

IDENTIFICATION CARDS: According to regulations in force seamen should hold shore pass issued by respective Agents and signed by the Port Health, Port Police and local town Police Authorities. All shore passes should bear a photo of the holder, in order to facilitate checking at exit of port area. It is therefore necessary for officers and crew to have a photograph ready on arrival at the port to facilitate obtaining shore passes.

All officers and crew of ships lying at jetties or anchorage of the Port of Khorramshahr to carry their Seamen's Books with them when going ashore. At the gate, the Seamen's Books will be checked by the Police against the shore pass of each crew member, the Seamen's Book will then be kept by the Police and will be returned to the holder when returning through the gate.

PROVISIONS: Fresh provisions in limited quantity can be obtained but large quantities of provisions sometimes may not be possible to arrange due to the fact that the Municipality is controlling the market and sometimes may prohibit the supply of the items which are in short supply. Due to certain formalities involved in supplying provisions to vessels, it is requested that 24 hour notice be given to the shipchandler.

STORES: Local commodities only available. Bonded stores not available.

LAUNDRY: Laundryman can be arranged upon request.

AUTHORITY: Ports and Shipping Organisation, Tehran.

AGENT: See "Bandar Abbas/Kharg Island".

LAVAN ISLAND: 26.47 N. 53.20 E. (See Plan)

Note: Production has been resumed.

LOCATION: Lavan Island is 13 miles long and about 2.5 miles wide. It is situated on the S.E. coastline of Iran in Lat. 26° 48' N., Long. 53° 16' E. (Island centre). The Island lies roughly East – West.

PORT LIMITS: Port area limits which are under the control of N.I.O.C. – Offshore, extend between the following points:

Lat. 26° 47.5' N.,	Long. 53° 22.0' E.
Lat. 26° 46.4' N.,	Long. 53° 22.0' E.
Lat. 26° 47.5' N.,	Long. 53° 19.4' E.
Lat. 26° 46.8' N.,	Long. 53° 19.4' E.

Vessels must not enter this area without permission from the Port Control. Anchoring in this area is prohibited.

DOCUMENTS:

5 Crew and Passenger Lists.
2 Stores Lists.
2 Bonded Stores Lists.
Clear Bill of Health from last port.
4 Bills of Lading.
8 Manifests.

In Iran, an additional copy of the Bill of Lading is required for all exports from the country. This must be signed by the Master and forwarded to the Customs Authorities, Lavan Island by the ship's Agent.

EARLY SAILING PROCEDURE: (Not in use November 1994).

Notice to Masters – Early Sailing Procedure:

In order to minimise delays to tankers awaiting official documentation after loading at the port, an Early Sailing System is now in force.

The following documents are prepared in advance, *except for cargo figures*, and presented by the ship's Agent to the Master for his signature upon the ship's arrival at the loading dock.

(A) Nos...... Originals & Nos...... Copies N.I.O.C. – Offshore Bill of Lading.

(B) Nos...... Originals & Nos...... Copies N.I.O.C. – Offshore Certificate of Origin and Cargo Manifest.

(C) Nos...... Originals & Nos...... Copies N.I.O.C. – Offshore Tanker Time and Loading Report.

(D) Nos...... Originals & Nos...... Copies N.I.O.C. – Offshore Report of Cargo and Ship's Ullages.

(E) Master's Receipt for Documents covering both pre-signed and onsite prepared forms.

Documents for Master's use, and for the Consignee care of the Master will be retained on board. All other pre-signed documents to be returned by the Agent to the N.I.O.C. – Offshore Terminal Office.

Official cargo figures will be passed to the Master by radio *within 1 hour* of his departure. Advice of quantities loaded should be inserted by the Master on the 'Bill of Lading' and 'Certificate of Origin' forms as prior indicated.

Hand written copies of items (C) and (D) will be passed to the Master for his reference.

In cases of disagreement on cargo figures, the Master may,

(1) 'Note Protest' by cable or telex.
(2) Authorise the ship's Agent to 'Note Protest' on his behalf.
(3) Pass a written 'Note of Protest' to the Berthing Master who will acknowledge receipt on behalf of the Terminal.

N.I.O.C. appreciates the co-operation of Masters, Owners, Shippers and Consignees in agreeing to implement this system.

APPROACHES: Vessels approaching Lavan Island from due South will have a clear approach.

(a) Landfall. The flares onshore, when burning, make a conspicuous landfall for Lavan Island, but at night from a distance tend to obliterate the various navigational lights.

The latest flare positions are:

No. 1:	Lat. 26° 47' 48" N.,	Long. 53° 20' 43" E.
No. 2:	Lat. 26° 47' 45" N.,	Long. 53° 20' 42" E.
No. 3:	Lat. 26° 47' 49" N.,	Long. 53° 20' 22" E.
No. 4:	Lat. 26° 47' 49" N.,	Long. 53° 20' 25" E.
No. 5:	Lat. 26° 47' 49" N.,	Long. 53° 23' 25" E.

Flare No. 5 is the Refinery flare.

All tanks in the N.I.O.C. – Offshore Tank Farm are painted white. The two front tanks have the word N.I.O.C. – Offshore painted in black on the South side. Tank No. 2 is in position Lat. 26° 47' 57" N., Long. 53° 20' 24" E.

Salman Onshore Tanks: Tanks No. 1, 2, 3, 4 and 6 are each 500,000 bbls. capacity, and tanks No. 7 and 8 are 1,000,000 bbls. capacity.

Reshadat Onshore Tanks: Tank No. 1 has a capacity of 500,000 bbls.

(b) Navigational Dangers. South side of Island is open and free from dangers, but care should be exercised approaching from seaward as soundings shallow rapidly near coast with depths of 200 ft. only 4,500 ft. off shore.

(c) Charts covering the operational areas of N.I.O.C. – Offshore are:

USHO 3647, 3648, 3650, 3660.
BA 2837, 2847, 2858, 2887, 2888, 3517, 3707.

PILOTAGE/NOTICE OF READINESS: Vessels must not enter the Port Limits without a Berthing Master on board.

Vessels should wait for the Berthing Master approximately 2 miles S.E. of the loading dock.

Pilot Room to be available and ready for the Loading Master and also trainee accommodation, should they decide to stay on board throughout the loading.

Immediately upon boarding the vessel, the Berthing Master will present the following documentation to the Master for his signature:

(a) A copy of the Port Rules and Regulations Book receipt and agreement form.

(b) N.I.O.C. – Offshore "Notice of Readiness" form.

(c) Combined Tug, Pilot, Berthing/Unberthing charge form.

(d) Fire and Safety Regulations and No Smoking Notices for posting in approved spaces.

All the above documents must be processed prior to the vessel being berthed.

A vessel arriving in light condition must have sufficient ballast on board for safe handling. As the Terminal dock is located in the open sea, this amount has been set at 33% of the d.w.t. Trim must not be more than 10 ft. by the stern.

The Master's "Notice of Readiness" will be rejected if any of the ballast is oily, or if there is any leakage of oil from the vessel during loading, or any unsatisfactory condition on board ship which affects cargoworthiness or seaworthiness while under the jurisdiction of the Terminal.

In all such situations of dispute, the decision of the N.I.O.C. – Offshore Marine Superintendent will be final.

NAVIGATIONAL AIDS: *Warning:* The following information is for the guidance of ships. N.I.O.C. – Offshore does not guarantee or warrant that the listed aids to navigation are in the stated positions or operating. Note: In November 1994, Items (a) to (h) were not functioning.

(a) Lavan Island Terminal Beacon: Located in Lat. 26° 48.1' N., Long. 53° 21.3' E. Fitted on top of a steel lattice tower 182 ft. above MLWIS. Light exhibited is Gp.Fl. (3) ev. 12 sec. vis. 15 miles.

(b) Terminal Sea Buoy: Located in Lat. 26° 46.5' N., Long. 53° 22.1' E. A white can buoy with lattice tower and radar reflector. Light exhibited is Fl. ev. 5 sec. vis. 3 miles.

(c) Salman Pipeline Marker Buoy: Located in Lat. 26° 46.8' N., Long. 53° 20.5' E. A red can buoy with lattice tower and radar reflector. Light exhibited is Fl.R. ev. sec. vis. 3 miles.

(d) Salman Pipe-line Rear Beacon (Onshore): Located in Lat. 26° 48.0' N., Long. 53° 20.2' E. Fitted on top of a steel lattice tower 192 ft. above MLWIS. Light exhibited is Fl.R. 10° vector, centred over the oil pipeline, vis. 12 miles.

(e) Salman Pipeline Front Beacon (Onshore): Located in Lat. 26° 47.6' N., Long. 53° 20.1' E. Fitted on top of a steel lattice tower 115 ft. above MLWIS. Light exhibited is Fl.R. 10° vector, centred over the oil pipeline, vis. 12 miles.

(f) The Salman Pipeline lights in transit signify a vessel is over the Salman pipeline. Anchorage is prohibited within the area covered by the vector outline of the range lights, 10° apart.

(g) Reshadat Radio Mast: Located in Lat. 26° 48.2' N., Long. 53° 19.2' E. A steel lattice tower, painted red, 408 ft. above MLWIS. Light exhibited is Occ. R. ev. sec. visible 20 miles.

(h) Decca Mast – Station "Green South": Located in Lat. 26° 47.5' N., Long. 53° 22.4' E. A steel lattice tower, painted red and white bands, 336 ft. above MLWIS. Light exhibited is Fl.R. vis. 20 miles. Not in Operation.

(i) A steel lattice tower (Radio mast) in Lat. 26° 48' 12.3" N., Long. 53° 21' 24" E., painted with red and white bands, 420 ft. above M.L.W.I.S. (350 ft. in height) with 3 red vertical lights has recently been installed.

Flares: The following flares are highly conspicuous and tend to obstruct the other navigational aids:

Salman – Located in Lat. 26° 47.6' N., Long. 53° 20.6' E.
Reshadat – Located in Lat. 26° 48.4' N., Long. 53° 20.0' E.
LRC – Located in Lat. 26° 47.7' N., Long. 53° 21.0' E.

Radio Beacons: The following radio beacons belonging to N.I.O.C. – Offshore are situated onshore and offshore at the Company's Salman Oil Field:

Signal LAV transmitted on 310 kHz. Located in Lat. 26° 47.6' N., Long. 53° 23.0' E. (Onshore).

Signal SAL transmitted on 397 kHz. Located in Lat. 25° 32.2' N., Long. 53° 09.0' E. (Offshore).

Signal RSL transmitted on 273 kHz. Resalat 1 Oilfield (Offshore) in approximate position Lat. 26° 01' N., Long. 53° 11' E.

Signal RSH transmitted on 252 kHz. Oilfield offshore in approximate position Lat. 25° 56' N., Long. 52° 54.5' E.

ANCHORAGES: Vessels must not enter port limits (which enclose a Prohibited Anchorage Area and Manoeuvring Area). They should proceed to vicinity of suggested Anchorage Area East of Oil Loading Dock and East of Long. 53° 22' 00" E., and in suitable depths of water wait for N.I.O.C. – Offshore Berthing Master. The sea bottom is good holding ground. Depth about 40 m.

RESTRICTED AREAS: Salman's Production Facility (Offshore):

Located in Lat. 25° 32.2' N., Long. 53° 09.0' E.

The above platform complex, approximately 76 nautical miles South of Lavan Island, is situated in the centre of the Salman Oil Field.

This area, and 3 miles around it, is prohibited to navigation.

Crude oil is delivered to Lavan Island from offshore oil fields by submarine pipeline.

From the Salman production complex in Lat. 25° 32.0' N., Long. 53° 09.1' E. A 22 in. pipeline running approximately 008° T to a shore location on Lavan Island at Lat. 26° 47.5' N., Long. 53° 20.1' E. From the Reshadat production complex in Lat. 25° 45.5' N., Long. 52° 54.5' E. An 18 in. pipeline running approximately 023° T to a shore location on Lavan Island at Lat. 26° 47.5' N., Long. 53° 20.0' E.

In addition to the above, a 14 in. submarine pipeline has been laid from the Balal Oil Field (undeveloped) to Lavan Island. The pipeline runs approximately 056° T from an offshore location in Lat. 26° 18.8' N., Long. 52° 32.8' E., to a shore location on Lavan Island at Lat. 26° 47.6' N., Long. 53° 19.6' E.

Vessels are requested not to anchor or carry out any under sea/seabed operations in the vicinity of these pipelines.

MAX. SIZE: Water depths, adjacent to the dock, at LW are:

Berth No. 1: 68 ft. 4 in. (20.83 m.)
Berth No. 2: 65 ft. 0 in. (19.82 m.)

Keel clearance required by the Terminal is 3 ft. 0 in. at all times.

Tonnage capacity of the loading dock is:

Berth No. 1: 200,000 d.w.t.*
Berth No. 2: 75,000 d.w.t.**

*Vessels in the range 200,000 d.w.t. – 225,000 d.w.t. may be accepted subject to prior approval from N.I.O.C. – Offshore Management which is based on answers to a 14 point questionnaire.

**Vessels are accepted for Berth No. 2 based on tonnage, overall length (maximum 850 ft. = 259 m.) and position of the manifold in relation to the bow. Vessels over 65,000 d.w.t. should always be cleared by N.I.O.C. – Offshore prior to firming up a nomination.

Following is a table of maximum loads that different size tankers can have on board on arrival, and remain acceptable for berthing:

(a) The maximum size vessel that is acceptable for berthing in a fully loaded condition is 100,000 d.w.t. This refers to vessels nominated for bunkers only.

(b) The maximum acceptable arrival load for tankers in the range 101,000 d.w.t. – 120,000 d.w.t. is 90,000 tons (675MB±).

(c) The maximum acceptable arrival load for tankers in the range 121,000 d.w.t. – 170,000 d.w.t. is 85,000 tons (638MB±).

(d) The maximum acceptable arrival load for tankers in the range 171,000 d.w.t. – 225,000 d.w.t. is 70,000 tons.

This schedule to be used in conjunction with the standard 14 point questionnaire for very large crude carriers.

Note: As the berths have not been dredged for a long time, the maximum departure drafts have been reduced to 64 ft. at Berth No. 1 and 35 ft. at Berth No. 2.

CLEARANCE: *(Arrival)*: After Berthing Master has boarded vessel at Port Limits, and before vessel allowed proceed, Master will be required to sign following forms. *(a)* Condition of use of Port of Lavan Island, *(b)* Tug Requisition.

Master will also be provided with copies of Fire and Safety Regulations and a Safety Inspection form. After Pratique granted, Customs inspection carried out. Master will be required to furnish particulars of vessel including bonded stores, cargo, bunkers, and other information. 5 copies of the Crew List and stores remaining on board will be required before clearance is granted. *Customs surveillance is strict.*

The Terminal operates an Early Sailing System (Not operating in November 1994) covering all cargo documentation. The following documents will be prepared in advance, *except for cargo figures*, and presented by the ship's Agent to the Master for his signature, upon the ship's arrival at the loading dock.

(a) B/L. (b) Certificate of Origin and Cargo Manifest. (c) Tanker Time and Loading Report. (d) Report of Cargo and Ships Ullages. (e) Master's receipt for documents.

Official cargo figures will be passed to the Master within 1 hour of his departure for insertion by the Master on the Bill of Lading and Certificate of Origin and Cargo Manifest (Not operating in November 1994).

In cases of disagreement over cargo figures the Terminal will accept the Masters "Note of Protest" by telex, by the authorised ship's Agent, or by written note handed to the Berthing Master.

HEALTH: Owners should check with Agent respecting any recent imposition of anti-epidemic regulations and requirements for additional injections for crew members. In the case of tankers, doctor will board when ship berthed at Loading Dock and for cargo vessels after ship has anchored. Should vessel, in either case, arrive from another Iranian port and carry a Clear Bill of Health, doctor will not normally board, and Pratique automatically granted.

Signals to be exhibited for vessels entering from foreign port: by day: "Q" Flag flown at masthead; by night: red all-round light, over white all-round light. If suspected that ship has disease or fever on board, ship will report details by VHF Channel 12 to Lavan Marine.

There are occasional outbreaks of cholera. International Certificates of Inoculation/Vaccination are essential.

See Radio, "Free Pratique".

RADIO: Vessels nominated to load at Lavan Island should transmit arrival information 96 hours and confirm 48 hours prior to arrival.

Arrival messages should be transmitted to the following address through either Bandar Abbas Radio (EQI) or Lavan Radio (EQV).

N.I.O.C. – Offshore Tehran. Telex: 212598 – 212346 – 212707 "Attn. Marsupt. Lavan".

Arrival messages to be in the following format:

AA Name of ship.
BB ETA Lavan in GMT and last port.
CC Cargo(s) required and Bunker(s) required.
DD Deballast time.
EE Size and number of connections for cargo/bunker.

If bunker connection only one side of maniforld, state location.

Lavan Radio Station, is operating on 500 kHz, call sign EQV, from 0530 hrs. – 1330 hrs. GMT.

N.I.O.C. – Offshore tugs maintain a listening watch on 2182 kHz. Vessels should commence calling "Kosar I and II" when passing Quoin Island. When contact has been made, switch to working frequency 2638 kHz.

Radio Free Pratique: Vessels requesting Free Pratique by radio are required to transmit the following message through the same Channels as their ETA advice.

AA Name of vessel and ETA Lavan Island (in GMT).
BB Number of crew and state of health.
CC Number of vaccinations required for Cholera.
DD Number of deaths or cases of serious illness in the last 30 days.
EE Name of all ports called at during the last 30 days.
FF Master's Name.

14 Point Questionnaire:

A 14 point questionnaire has to be completed and sent to NIOC by principals prior to appointment of a vessel for loading cargo at Lavan Island as follows:

1. Overall length of vessel.
2. Moulded depth of vessel.
3. Mean draft in light condition, ready to load (i.e. with only permanent ballast on board).
4. Can vessel discharge permanent ballast concurrent with cargo loading?
5. If any clean ballast is carried in the cargo tanks, can this be segregated and discharged concurrent with cargo loading?
6. If answer to (5) above is "Yes" what will be the mean draft with permanent ballast and clean cargo tank ballast on board?
7. What will be the maximum loading draft? Is this Summer or Tropical mark?
8. What is required "Owners Clearance" under keel in loaded condition?
9. Height of loading valve manifold connections above the deck.
10. Distance of loading valve manifold centre from the bow.
11. What is spacing (on centres) between loading valve manifold connections and how many connections are available for this loading?
12. Distance of loading valve connection from side of ship.
13. Advise if Lavan Island is first or second loading port.
14. If second loading port, how much cargo will be on board on arrival and what will be the arrival draft, fore and aft?

VHF: Lavan Terminal maintains a listening watch 24 hours on VHF Channels 16 and 12.

Vessels should commence calling "Lavan Island" 4 hours prior to arrival on Channel 12.

TUGS: Two diesel tugs of 3,120 b.h.p. fitted with controllable pitch propellers and a bollard pull of 42 tons are stationed at the loading dock and used for all manoeuvres.

The tugs are equipped with their own towing lines, fire fighting capability, foam, dispersant and fire wires.

Both tugs are on instant readiness throughout the entire time that a vessel is alongside the loading dock. The tugs will answer emergency signals, or can be called on VHF Channel 12, or by telephone (Tel. No. 355).

BERTHING: Vessels should have the following equipment ready for use upon their arrival at the port:

(a) Anchors, port and starboard, ready for letting go.

(b) Ropes or wires, eight each end, not on automatic tension.

(c) Derricks rigged if shore reducers or flexible hoses are required.

(d) Manifold blanks removed and reducers fitted ready to connect 16 in. series 150 ASA loading arm flanges.

(e) Accommodation ladder lowered together with the pilot hoist or pilot ladder.

Note: Berthing Masters will not board any vessel which does not present a clean safe means of access.

(f) Ballast tank lids opened to allow the Berthing Master to inspect ballast water.

The tanker loading dock is constructed of a loading platform in the centre of 4 two-sided jacket piled breasting dolphins, and 4 outlying two-sided jacket piled mooring dolphins.

The dock is 1,240 ft. (378 m.) long, and is connected to the shore by a trestle 1,764 ft. (538 m.) long.

The platform deck is 31 ft. 4 in. (9.55 m.) above Chart Datum (MLWIS). Maximum reach of the loading arms above Chart Datum is:

Distance Manifold to Ship's Side	*Elevation*
10 ft. (3.05 m.)	76 ft. 6 in. (23.32 m.)
12 ft. (3.66 m.)	75 ft. 9 in. (23.09 m.)
14 ft. (4.27 m.)	75 ft. 0 in. (22.85 m.)
16 ft. (4.88 m.)	74 ft. 0 in. (22.56 m.)
18 ft. (5.49 m.)	72 ft. 9 in. (22.18 m.)

Rigid "Chicksan" hydraulically operated loading arms are situated on both sides of the loading platform.

Berth No. 1 4×16 in. for crude oil loading.
Berth No. 1 1×12 in. for product loading – (fuel & gas oil).
Berth No. 2 2×16 in. for crude oil loading.
Berth No. 2 *1×16 in. for naphtha loading.
Berth No. 2 1× 8 in. for product loading (fuel & gas oil).

* Gas oil can also be loaded through this arm.

All loading arms are fitted with a series 150 ASA American Standard outer flange with quick connection coupler.

The Terminal carries a full range of aluminium reducing spool pieces and flexible hoses (15 ft.×8 in.) for crude and product/bunker connections.

Shore gangways are provided for both berths, with a safety net for each gangway.

Fire wires must be rigged forward and aft, of sufficient strength to tow the vessel away from the berth in an emergency. The "eye" of the fire wire must be lowered to within 4 ft. of the water and maintained at this level at all times. The N.I.O.C. – Offshore tugs are equipped with their own towing wires which will be shackled onto the vessel's fire wire.

Rat Guards: All ships berthed alongside must provide rat guards for the ship's moorings.

LOADING: Tankers are loaded at Lavan Island alongside an "L" shape 2 berth jetty, approximately 2,000 ft. offshore. The loading platform is fitted with rigid hydraulic loading arms which have quick connection/release couplers attached to the end flange.

There are 4×16 in. arms on the South Berth (No. 1) for crude loading, and 2×16 in. arms on the North Berth (No. 2) for crude loading.

Crude oil is delivered to the loading platform by gravity through 2×36 in. lines from a 4,500,000 barrel tank farm (Salman), and from a 500,000 barrel tank farm (Reshadat).

Flow rates under normal conditions, with only 1 vessel loading, are approximately, Berth No. 1 (4 arms) 52,000 bbls./hr., Berth No. 2 (2 arms) 32,000 bbls./hr.

Flow rates with a vessel loading at each berth are approximately, Berth No. 1 (4 arms) 40,000 bbls./hr., Berth No. 2 (2 arms) 24,000 bbls./hr.

The minimum flow rate is 15,000 bbls./hr. All vessels accepting nominations to load at Lavan Island must be capable of loading crude at rates above this figure.

The API of Salman Crude Oil is 34 and the API of Reshadat Crude Oil is 35.

The temperature of Salman Crude Oil varies between 91°F and 78°F (Summer/Winter), and the temperature of Reshadat Crude Oil varies between 85°F and 66°F (Summer/Winter).

The Terminal will accept cargo requests 10% above or below the official nominated quantity unless specifically requested otherwise by the Consignor.

A shore stop to close off the flow of crude oil to the tanker will be executed by the Terminal provided the Master issues a written request to the Loading Master upon arrival at the loading dock. This request must include the statement that N.I.O.C. – Offshore will not be held responsible for any error in the final quantity loaded.

Masters should note that in cases of overloading the excess cargo cannot be returned to the shore line.

Masters should also be aware that they will be held responsible for any overflows and pollution caused by their request for a shore stop.

An "Early Sailing System" of tanker documentation is operated by the Terminal as standard practice for all cargoes (Not operating in November 1994).

The Terminal will accept the "Load-on-Top" system of co-mingling tank cleaning oil residue from previous cargoes with the nominated quantity of Salman or Reshadat crude oil, provided agreement has been obtained from the Consignor.

Slops should be segregated in a special "slop tank" or accumulated in one of the cargo tanks. A sample of the slop must be taken on arrival at the loading dock and kept for any future reference. Exact quantities must be calculated.

Vessels which arrive in ballast to load part cargo, should endeavour to place the ballast in such a manner as to allow loading to commence upon arrival at the loading dock.

The ballast may be retained for discharge en route to the next port, or discharged concurrent with loading. Provided the vessel can show adequate valve separation, this method is accepted by the Terminal, and will be finally confirmed by the Loading Master when satisfied that no pollution or contamination will occur.

Vessels arriving in ballast to load a full cargo, who carry most of their ballast in "permanent ballast" tanks, should also endeavour to arrange the remaining ballast in such cargo tanks as to allow loading to commence upon arrival at the loading dock, and discharge concurrent, using segregated lines and pumps. The Terminal will accept this system on the same basis as above paragraph.

BALLAST: The Terminal does not have any reception facility for disposal of dirty or contaminated ballast.

TIDE: The mean range of tide is 3 ft. 9 in. (1.14 m.)

The extreme range of tide is 5 ft. 6 in. (1.68 m.)

The highest tide recorded is 7 ft. 3 in. (2.21 m.) above MLWIS.

The lowest tide recorded is 0 ft. 5 in. (0.13 m.) above MLWIS.

A chart reading automatic tide gauge is fitted on the loading dock (Not operating in November 1994).

FUEL: Bunkers are now available at Lavan Island and can be loaded at both berths of the tanker loading dock through rigid hydraulic operated Chiksan loading arms.

These bunker products are provided by the Lavan Refining Complex (LRC) which is operated by the National Iranian Oil Company (NIOC). Available bunker products are fuel oil and gas oil.

The plant also produces naphtha.

Bunker Requests:

Requests for information on bunkering should not be directed to N.I.O.C. – Offshore. All questions relating to the bunker facility at Lavan Island will be handled by NIOC Marketing & Exports Division.

The address is:

Marketing & Exports,
National Iranian Oil Company,
P.O. Box 1863,
Tehran, Iran.
Cable Address: Naftmelli Tehran
Telex: 21-2514, 21-2613 and 21-2182
Telephone: 6151 – ask for Marketing.

LRC Tank Capacity is:

Naphtha 74,000 cu.m. (465,000 bbls.)
Fuel Oil 74,000 cu.m. (465,000 bbls.)
Gas Oil 55,000 cu.m. (346,000 bbls.)

Storage for Mogas of 53,000 cu.m. (333,360 bbls.) under construction.

LRC loading rates, by pump are:

Naphtha 650 t.p.h.
Fuel Oil 650 t.p.h.
Gas Oil 650 t.p.h.

LRC loading arms at the tanker dock are:

Berth No. 1: 1×12 in. supplying both fuel and gas oil.
Berth No. 2: 1×8 in. supplying both fuel and gas oil.
Berth No. 2: 1×16 in. supplying both naphtha and gas oil.

LRC product specifications are:

Naphtha SG at 60°=0.7100 (API at 60° 67.7)
Fuel Oil SG at 60°=0.9600 (API at 60° 15.9)
Viscosity Redwood at 100°=1,440 seconds.
Gas Oil SG at 60°=0.8300 (API at 60° 38.98)
Mogas SG at 60°=0.7280 (API at 60° 62.8)

MEDICAL: N.I.O.C. – Offshore operate small clinics on the Island with resident doctors. This facility will be made available for emergency cases only.

DENSITY: The temperature of sea water alongside the Loading Dock varies from 71°F. in January to 93°F. in August. The density of sea water alongside the Loading Dock varies between 1023 and 1026.

FRESH WATER: None available.

FIRE PRECAUTIONS: Vessel receives full detailed instructions from Berthing Master. Vessels must have fire-wires and engines not to be immobilised.

CONSULS: No consular representation on Lavan Island. Embassies of most nations are situated in Tehran.

REPAIRS: No repairs allowed alongside oil loading jetty. No workshop or repair facilities available. Ship's main engines must be available at all times while alongside jetty.

MARINE SURVEYS: Surveyors of the American Bureau of Shipping and Lloyd's are stationed at Bandar Abbas.

CARGO GEAR: Ship's discharging dry cargo to barges in the cargo ship anchorage use ship's gear.

AIRPORT: No scheduled or regular air flights to Lavan Island. All aircraft required for transportation of goods or passengers must be made by charter. Airport is used by Oil Company Charter planes only and no other passengers are carried except in an emergency situation.

TIME: Standard zone time for Iran is GMT plus 3.5 hours from 21st September to 21st March, and GMT plus 4.5 hours from 21st March to 21st September.

POLICE/AMBULANCE/FIRE: There is a Government Gendarmerie Station on the Island. There are no telephones established for these services. Emergencies will be handled by N.I.O.C. – Offshore staff in case of tankers.

SHORE LEAVE: Ships' crew not allowed to go ashore.

CREW CHANGES: Not permitted.

GARBAGE DISPOSAL: Not available.
WASTE OIL DISPOSAL: Not available.
SEAMAN'S CLUBS: None.
CURRENCY: Iranian Rial. U.S.$1.00 = 3,000 Rials (20.7.96).
REGULATIONS: (Miscellaneous): *Painting and scaling.* Painting, chipping, scaling or spray painting on deck or overside *strictly prohibited* while vessel at any jetty berth.
WEATHER: In Summer time from May to September temperature reaching 110°F. (43°C.) and humidity ranging from 10% to 100%. The Winter (November to March) mild and pleasant with minimum temperature approximately 48°F. (9°C.). The wind for most of year from N.W., but sometimes particularly during Winter strong S.E. storms likely to occur lasting for several days. Oil Loading Pier partly sheltered from N.W. winds, but exposed to winds from South.

During Winter storms, waves of 8 ft. to 10 ft. often occur. A max. wave height of 15 ft. has been recorded at the Southern end of the Island.
GENERAL: *Flag:* All vessels are required to fly the Iranian Flag in Iranian territorial waters which extend 12 miles offshore.
Garbage: Dumping overside of garbage and refuse prohibited in Port Area.
Sanitation: Government Health Regulations require suitable covers to be fitted over all lavatory discharge outlets, etc., to prevent fouling of jetty or craft alongside.
Damage to Port Facilities: If a Master has reason to suppose that any damage has been caused by his vessel to any Port Facilities, he must agree, in writing, with N.I.O.C. – Offshore Berthing Master as to nature and extent of such damage, and this must be confirmed by N.I.O.C. – Offshore Marine Superintendent. N.I.O.C. Offshore has standard liability forms which cover both ship and shore, and are issued on every occasion.
Rat-guards: All ships berthed alongside must provide Rat-guards for Ship's Moorings.
No visitors: No visitors allowed on terminal dock, or on board vessels alongside dock, unless by written permission of Marine Superintendent. Only persons having authorised work will be given access to port limits, dock or vessels.
AUTHORITY: N.I.O.C. – Offshore, Lavan Island Marine Superintendent, P.O. Box 15875-4547, Tehran, Iran. *Tel:* 624102-5. *Telex:* 212598, 212346, 212707. *Cables:* Manateghe Daryaee, Tehran. *FAX:* 628143, 663990. *Contact:* Captain H. Shirafkan, Harbour Master. Captain F. Rahbari, Assistant Harbour Master. Captain A. Amirieh, Port Captain. G.H. Larijani, District Superintendent. S.E. Jalilian, General Manager.

AGENT: See "Bandar Abbas/Kharg Island".

SIRRI ISLAND: 25.54 N. 54.33 E. (See Plan)

FLAG: The Iranian flag, green side uppermost, must be flown while the vessel is within territorial waters. Iranian territorial waters extend 12 miles seaward from the mainland and offshore islands.
LOCATION: The loading station is located in the S.E. part of the island of Sirri at:

Lat. 25° 54' N., Long. 54° 33' 30" E.

Landfall on the island presents no difficulty, by day or night, for vessels coming from the Strait of Hormuz or from one of the Gulf Ports. The Island gives a good radar echo at 17 miles.
PORT LIMITS: Port area limits which are under the control of N.I.O.C. – Offshore extend between the following points:

Lat. 25° 55.0' N., Long. 54° 33.1' E.
Lat. 25° 55.0' N., Long. 54° 34.6' E.
Lat. 25° 52.0' N., Long. 54° 31.1' E.
Lat. 25° 52.0' N., Long. 54° 34.6' E.

Vessels must not enter this area without permission from the Port Control. Anchoring in this area is prohibited.
NAVIGATIONAL AIDS:
Warning: The following information is for the guidance of ships. N.I.O.C. – Offshore does not guarantee or warrant that the listed aids to navigation are in the stated positions or operating.

Sirri Island Terminal Light located in: Lat. 25° 54' N., Long. 54° 33' E. Light exhibited Fl. W. every 7 secs., visible 10 miles.

A lighted buoy, showing Fl. W.(3) every 12 secs. is visible 6 miles, and is located to the West of the S.E. end of the island.

The flare located in: Lat. 25° 54.1' N., Long. 54° 31.9' E. is highly conspicuous and tends to obstruct the other navigational aids:

Masters may find it useful to refer to the following documents:

1. French Hydrographic and Oceanographic Department Charts No. 2172 and 6051.
2. French Nautical Instructions, Series L, Volume IV.
3. British Admiralty Charts No. 2837, 2887, 2832 and 3781.
4. Lights and Fog Signals Book, series L.

PROHIBITED AREAS: Nasr Production Facility (Offshore) located in position: Lat. 25° 42' N., Long. 54° 17' E.

The above platform complex, approximately 18 nautical miles S.W. of Sirri Island, is situated in the centre of the Sirri "A" oil field.

This area, and 3 miles around it, is prohibited to navigation.

Crude oil from offshore oil fields is delivered to Sirri Island by submarine pipeline, from Papa production complex.

3 pipelines running approximately 182°T to a shore location on Sirri Island at: Lat. 25° 53.4' N., Long. 54° 32.6' E.

Vessels are requested not to anchor or carry out any under sea/seabed operations in the vicinity of these pipelines.

PILOTAGE: Vessels must not enter the Port Limits without an N.I.O.C. – Offshore Berthing Master on board.

Vessels should wait for the Berthing Master approximately 2 miles off the Loading Dock.

Vessels should have the following equipment ready for use upon their arrival at the Port:

(a) Anchors, port and starboard, ready for letting go.
(b) Ropes or wires, 8 each end, not on automatic tension winches.
(c) Derricks rigged if shore reducers or flexible hoses are required.
(d) Manifold blanks removed and reducers fitted ready to connect 20 in. series 150 ASA loading arm flanges.
(e) Accommodation ladder lowered together with the pilot ladder if a VLCC, otherwise a pilot hoist or pilot ladder.
Note: Berthing Masters will not board any vessel which does not present a clean safe means of access.
(f) Ballast tank lids opened to allow the Berthing Master to inspect ballast water.
(g) Pilot room available and ready for the Berthing Master and also trainee accommodation, should they decide to stay on board throughout the loading.

Immediately upon boarding the vessel, the Berthing Master will present the following documentation to the Master for his signature:

(a) A copy of the Port Rules and Regulations Book receipt and agreement form.
(b) N.I.O.C. – Offshore "Notice of Readiness" form.
(c) Combined Tug, Pilot, Berthing/Unberthing charge form.
(d) Fire and Safety Regulations and No Smoking Notices for posting in approved locations.

All the above documents must be processed prior to the vessel being berthed.

A vessel arriving in light condition must have sufficient ballast on board for safe handling. As the Terminal Dock is located in the open sea, this amount has been set at 33% of the d.w.t. Trim must not be more than 10 ft. by the stern.

Also see "Tugs".
ANCHORAGE: Vessels arriving to load at Sirri may anchor in 60 m. depth of water, 1.5 miles East of the lighthouse of Sirri Island, and take up a holding anchorage at their own initiative, providing they have not received instructions for docking upon arrival.
Prohibited Anchorage: Under no circumstances may vessels anchor in the zone surrounding the dock area, within a one-mile radius.

It is strictly forbidden to anchor in the vicinity of the S.E. end of the island (undersea pipelines); anchorage to the North and West of the island is considered unsafe and of poor holding qualities.
HEALTH: Following mooring and positioning of the vessel's access ladder, Iranian medical authorities or their representative will grant Pratique. Masters are advised to notify by radio any cases of infectious disease which may have broken out aboard.
RADIO/VHF:

1. Vessels nominated to load at Sirri Island should transmit arrival information 96 hours and confirm 48 hours prior to arrival.

Arrival messages should be transmitted to the following address through either Bandar Abbas Radio (EOI) or Abadan Radio (EQZ).

N.I.O.C. – Offshore Tehran, Telex: 212598 – 212346 – 212707.
Attn. Marsupt. Sirri.

Arrival messages to be in the following format:

AA Name of ship.
BB ETA Sirri in GMT and last port.
CC Cargo required.
DD Deballast time.
EE Size and number of connections for cargo.

2. Sirri Island Station, is operating on 500 kHz, and 2182 kHz from 0400 – 0800 hrs. LT and from 1100 – 1400 hrs. LT.

3. Sirri Terminal maintains a listening watch 24 hours on VHF Channels 16 and 12.

Vessels should commence calling "Sirri Island" 4 hours prior to arrival. on Channel 16. When contact has been made, switch to working frequency Channel 12.

4. Sirri tugs maintain a listening watch on 2182 kHz. Vessels should commence calling "Sirri Tugs" when passing Quoin Island. When contact has been made, switch to working frequency 2638 kHz.

5. *Radio Free Pratique:* Vessels requesting Free Pratique by radio are required to transmit the following message through the same Channels as their ETA advice.

AA Name of vessel and ETA Sirri Island (in GMT).
BB Number of crew and state of health.
CC Number of vaccinations required for Cholera.
DD Number of deaths or cases of serious illness in the last 30 days.
EE Name all ports called at during the last 30 days.
FF Master's Name.

14 Point Questionnaire:

A 14 Point Questionnaire has to be completed and sent to NIOC by principals prior to appointment of a vessel for loading cargo at Sirri Terminal as follows:

1. Overall length of vessel.
2. Moulded depth of vessel.
3. Mean draft in light condition, ready to load (i.e. with only permanent ballast on board).
4. Can vessel discharge permanent ballast concurrent with cargo loading?
5. If any clean ballast is carried in the cargo tanks, can this be segregated and discharged concurrent with cargo loading?
6. If answer to (5) above is "Yes" what will be the mean draft with permanent ballast and clean cargo tank ballast on board?
7. What will be the maximum loading draft? Is this Summer or Tropical mark?
8. What is required "Owner's Clearance" under keel in loaded condition?
9. Height of loading valve manifold connections above the deck.

10. Distance of loading valve manifold centre from the bow.
11. What is spacing (on centres) between loading valve manifold connections and how many connections are available for this loading?
12. Distance of loading valve connection from side of ship.
13. Advise if Sirri is first or second loading port.
14. If second loading port, how much cargo will be on board on arrival and what will be the arrival draft, fore and aft?

MAX. SIZE: The loading station is designed for docking and handling of vessels having a minimum length of 240 m. and a maximum length of 365 m. This normally restricts utilisation to vessels in the approximate size range of 80,000 d.w.t. to 330,000 d.w.t. The maximum authorised draft for these vessels is 24.00 m. (78 ft. 9 in.).

TUGS: 3 modern tugs of 4,600 h.p., 3,000 h.p. and 2,000 h.p., fitted with controllable pitch propellers and a bollard pulls of 65 tons, 45 tons and 35 tons respectively, one stationed at the loading dock and used for all manoeuvres.

The tugs are equipped with their own towing lines, fire fighting capability, foam, dispersant and fire wires.

Launches: The Terminal operates a pilot launch and 2 mooring launches for rope handling.

NOTICE OF READINESS: The Master's "Notice of Readiness" will be rejected if any of the ballast is oily, or if there is any leakage of oil from the vessel during loading, or any unsatisfactory condition on board ship which affect cargoworthiness while under the jurisdiction of the Terminal.

In all such situations of dispute, the decision of the Sirri Marine Superintendent will be final.

The vessel's Owner may bring in a Classification Surveyor, at his own expense, to conduct a survey.

BERTHING: *Port Facility – Tanker Dock:*

1. Vessels are ordinarily docked port side to the dock on a heading of 017°, at mooring piling equipped with "Yokohama" type inflatable fenders. Mooring lines are attached to 6 mooring pilings, equipped with quick-release hooks. The dock comprises a loading platform linked to land by a catwalk. All ships berthed alongside must provide rat guards for the ship's moorings.
2. Water depth, adjacent to the dock, at LW is 28 m.
3. Keel clearance required by the Terminal is 3 ft. at all times.
4. Connection and disconnection of the loading arms is performed by N.I.O.C. – Offshore personnel, with the assistance of the vessel's crew. The vessel's cranes (derricks) are used for lifting 2×12 in. flexible hoses (subject to change).

Vessels are advised to have their reducers attached to the loading manifold, ready for connection. Before connection is begun, the vessel will be connected to the arc system voltage equalising cable.

5. After the vessel is moored and Pratique issued, an N.I.O.C. – Offshore representative responsible for loading and safety will reach agreement with the vessel as to loading conditions, possible flow rate, and quantities to be handled. The N.I.O.C. – Offshore representative is on watch on the dock at all times. The Master of the vessel must provide him with all the information necessary to ensure proper completion of the loading process. The Master shall designate an officer to be responsible for loading and safety on board, in liaison with this representative, and a crew member who shall be permanently stationed near the manifold for direct communication with the dock. The Master shall be fully responsible for valve operations and safe loading on board. If necessary, the vessel may at any time request a reduction in the pumping rate.

When loading is completed, tank ullages shall be taken by an officer of the vessel, in the presence of the N.I.O.C. – Offshore representative.

The Terminal shall furnish the vessel with samples of the crude loaded, taken by continuous sampling on the loading line. Such samples shall be numbered and sealed, and shall state the origin of the crude.

6. At the end of the loading process, the vessel shall notify the Terminal 0.5 hour, and again 10 minutes, before the planned stop loading.

LOADING: *Loading Facility:*

1. Tankers are loaded at Sirri Island alongside a 1 berth jetty, approximately 600 ft. offshore. The loading platform is fitted with rigid hydraulic loading arms which have quick connection/release couplers attached to the end flange.

Crude is loaded by 2×12 in. flexible hoses. Dirty ballast facilities are not operational.

2. The maximum loading rate is 15,000 cu.m./hr. The minimum flow rate is 15,000 bbls/hr. All vessels accepting nominations to load at Sirri Island must be capable of loading crude at rates above this figure.
3. The API of Sirri Crude oil is 31.
4. The temperature of Sirri crude oil varies between 93°F and 86°F (Summer/Winter).
5. The Terminal will accept cargo requests 10% above or below the official nominated quantity unless specifically requested otherwise by the Consignor.
6. A shore stop to close off the flow of crude oil to the tanker will be executed by the Terminal provided the Master issues a written request to the Loading Master upon arrival at the loading dock. This request must include the statement that N.I.O.C. – Offshore will not be held responsible for any error in the final quantity loaded.

Masters should note that in cases of overloading, the excess cargo cannot be returned to the shore line.

Masters should also be aware that they will be held responsible for any overflows and pollution caused by their request for a shore stop.

7. An "Early Sailing System" of tanker documentation is operated by the Terminal as standard practice for all cargoes (See "Early Sailing Procedure").
8. Most responsible ship owners have adopted a system of tank cleaning using circulatory methods of transfer of tank washing on board ship and treating these washings with chemicals. The result is that no oil is discharged into the sea and the oil separated is collected in a Slop Tank. With the written permission of Off-Taking Companies, the Terminal will "Load on Top" of such slops. To avoid pollution of the Gulf, this system is highly recommended.
9. Vessels which arrive in ballast to load part cargo, should endeavour to place the ballast in such a manner as to allow loading to commence upon arrival at the loading dock.

The ballast may be retained for discharge enroute to the next port, or discharged concurrent with loading. Provided the vessel can show adequate valve separation, this method is accepted by the Terminal, and will be finally confirmed by the Loading Master when satisfied that no pollution or contamination will occur.

Vessels arriving in ballast to load a full cargo, who carry most of their ballast in "permanent ballast" tanks, should also endeavour to arrange the remaining ballast in such cargo tanks as to allow loading to commence upon arrival at the loading dock, discharge concurrent, using segregated lines and pumps. The Terminal will accept this system on the same basis as above paragraph.

10. Dirty ballast tank and system are not operational at present.

BALLAST: *Ballast Upon Arrival:* Vessels must come in with adequate ballast and proper trim to be able to manoeuvre in satisfactory conditions of safety.

Ballast must not be less that 30% of d.w.t., or 50% of loaded draft; FW, bunkers and stores are not considered ballast. N.I.O.C. – Offshore reserves the right to leave at anchor vessels not meeting these conditions; the resulting delay will be for account of the vessel.

The Terminal is equipped with a dirty ballast holding tank; ballast unloading is performed by two 20 in. arms. Any discharge of dirty water overboard is forbidden (the system is not operational at present).

Ballast Discharge: A 90,000 cu.m. storage reservoir enables vessels to discharge the dirty water ballast from their tanks into N.I.O.C.– Offshore land installations, by means of two of the 20 in. handling arms in the dock installation (the system is not operational at present).

Disposal of Ballast: International Law: Ship's Masters are held responsible to observe International Convention Laws concerning pollution of the sea, having particular regard to the Gulf Area.

Disposal of Ballast at Sea: Ship's Masters are warned that no dirty ballast, or bilge water should be disposed of in the sea within 50 miles of the coast of Iran.

When so disposing of ballast, all pipelines, sea suctions, strainers, and pumps that are later to be used to discharge clean ballast, must be flushed clean, so that there will be no chance of even a small amount of sea pollution when the clean ballast is pumped out.

Master's Responsibility: It is the ship's Master's responsibility to see that no oil of any kind is pumped or spilled overboard from his ship.

Categories of Pollution: This includes oil water from bilges, crude residue from previous voyages, or any other matter that may result in pollution of the sea. Any fines imposed shall be to ship's account.

Tank Inspection: As soon as practical after arrival, all vessels' tanks will be inspected for oil in ballast. During discharge of ballast similar inspections will continue.

Ship Rejections: If evidence of oil appears at any of these inspections the ship will be rejected, and will not be accepted until satisfactory evidence is produced that such ballast was disposed of in a proper manner. If during inspection, or during progress of loading, it is revealed that ship's tanks are not tight, or that oil is leaking from the ship, she may be rejected or refused further loading.

Ship Survey: Should the ship's tanks be found leaking it will not be later accepted for loading, unless satisfactory evidence duly certified by Lloyd's or A.B.S. Surveyors, or other recognised Surveyors of repair, is submitted.

Notice of Readiness Rejection: Any vessel rejected because of dirty ballast or sea pollution will automatically nullify his "Notice of Readiness" and lose any priority of position for loading.

On return from sea, ships' Masters should tender a new Notice of Readiness to N.I.O.C. – Offshore. If this is accepted by N.I.O.C. – Offshore vessels will then be entered for loading at the new time of acceptance. Vessels will be rejected for dirty ballast at all times.

Ballast Quantity: A vessel must have sufficient ballast for safe handling, with due regard to existing weather and sea conditions. Through a careful watch of the weather and sea conditions, frequent exchange of information between ship and Terminal, and by a knowledge of the behaviour of his own vessel a ship's Master may come to the Terminal with a minimum of ballast and thus lessen any possibility of infringement of sea pollution regulations.

Additional Lighting: In addition to the lights usually displayed, vessels in the berth discharging ballast or loading cargo during darkness will themselves illuminate the sea around the ship, so that any pollution will be readily noticeable.

Special Provision: Vessels equipped with a separate system of ballast tanks will be allowed to discharge ballast and load oil simultaneously, providing approval is first obtained from the Sirri Terminal Superintendent.

Load on Top Method: Most responsible ship owners have adopted a system of tank cleaning using circulatory methods of transfer of tank washing on board ship and treatment with chemicals.

The result is that no oil is discharged into the sea and the oil separated is collected in a slop tank. With the written permission of Off-Taking Companies, the Terminal will "Load on Top" of such slops. To avoid pollution of the Gulf, this system is highly recommended.

EARLY SAILING PROCEDURE: Notice to Masters:

In order to minimise delays to tankers awaiting official documentation after loading at the port, an Early Sailing system is now in force.

The following documents are prepared in advance, *except for cargo figures,* and presented by the ship's Agent to the Master for his signature, upon the ship's arrival at the loading dock.

(A) Nos........ Originals & Nos........ Copies of N.I.O.C. – Offshore Bill of Lading.

(B) Nos........ Originals & Nos........ Copies of N.I.O.C. – Offshore Certificate of Origin and Cargo Manifest.

(C) Nos........ Originals & Nos........ Copies of N.I.O.C. – Offshore Tanker Time and Loading Report.

(D) Nos........ Originals & Nos........ Copies of N.I.O.C. – Offshore Report of Cargo and Ship's Ullages.

(E) Master's Receipt for Documents covering both pre-signed and onsite prepared forms.

Documents for Master's use, and for the Consignee care of the Master will be retained on board. All other pre-signed documents to be returned by the Agent to the N.I.O.C. – Offshore Terminal Office.

Official cargo figures will be passed to the Master by radio *within 1 hour* of his departure. Advice of quantities loaded should be inserted by the Master on the "Bill of Lading" and "Certificate of Origin" forms as prior indicated.

Hand written copies of items (C) and (D) will be passed to the Master for his reference.

In case of disagreement on Cargo figures, the Master may:

1. "Note Protest" by cable or telex.
2. Authorise the ship's Agent to "Note Protest" on his behalf.
3. Pass a written "Note of Protest" to the Berthing Master who will acknowledge receipt on behalf of the Terminal.

N.I.O.C. – Offshore appreciates the co-operation of Masters, Owners, Shippers and Consignees in agreeing to implement this system.

POLLUTION: It is the Master's responsibility to ensure that no garbage, refuse or liquid discharge is allowed to pollute harbour waters.

Adequate covers must be placed over all sanitary and galley discharges to prevent fouling the dock structure.

Ship's Masters are obliged to observe International Convention Laws concerning pollution of the sea.

Rules and Regulations establishing procedure for the Sea of Oman and the Gulf must be strictly observed by all Masters.

N.I.O.C. – Offshore monitors the entire area within their field of operation, and will fully document and report back to NIOC any case of pollution for further action.

MEDICAL: N.I.O.C. – Offshore operates a small clinic on the Island with resident doctors. This facility will be made available for emergency cases only.

FRESH WATER: Not available.

FUEL: Not available.

REPAIRS: The island has no repair shop. Repairs may be made at anchorage after loading, subject to approval by N.I.O.C. – Offshore.

REPATRIATION: N.I.O.C. – Offshore's air transport to Tehran is not available for the transport of relief crews.

AIRPORT: N.I.O.C. – Offshore has an air transport service to Tehran.

TIME: Sirri Island is on Iranian Standard Time which is GMT plus 3.5 hours.

SHORE LEAVE: Crew are prohibited from going ashore, except by special authorisation issued by N.I.O.C. – Offshore, by agreement with the consignees and the local authorities.

Swimming alongside the vessel and the dock is prohibited.

GARBAGE DISPOSAL: No facilities available.

WASTE OIL DISPOSAL: Oily ballast receiving facilities available but no working at present time.

SEAMAN'S CLUBS: None.

CURRENCY: Rial.

GENERAL: *Weather:* From May to September, very hot and humid conditions prevail with temperatures reaching 47°C (117°F) and relative humidity ranging from 10% and 100%.

The Winter months, from November to March, are mild and pleasant with minimum temperatures of about 4°C (39°F). The average rainfall is approximately 200 mm. (8 in.) per annum, all of which falls during the Winter months.

Throughout the year, the dominant winds are from the W.N.W., with winds of a force greater than 20 knots from November to March. This orientation is approximately 290° at Sirri. This wind, known as the "Shomal", blows particularly in the Summer during a period of forty days (beginning of June to mid-July); in the Winter, the wind comes on abruptly and can reach 30 to 40 knots.

Note: Violent winds from the N.E. reaching 60 knots have been observed in the Winter season.

Tides: In the waters around the island of Sirri, the tides are semidiurnal with diurnal assymetry. High tide occurs approximately 9 hours after the moon passes the meridian of Greenwich. The average water level is 0.90 m. above chart datum and the average tidal range 1.50 m.

The seasonal S.W. wind from April to September causes the water level in the Gulf to rise by 0.30 m.

Sea Conditions: The swell is short and rapidly becomes steep, and it is often out of proportion to the wind force. With the Shomal, it can reach 3.50 to 4.50 m., but the maximum wave height at Sirri is in the range of 1.80 to 3.00 m. The swell subsides rapidly after the wind dies down.

Sea temperature varies from 71°F. (22°C.) in January to 93°F. (34°C.) in August.

Currents: Tidal currents are of the order of one knot, with N.N.E. and S.S.W. major components; thus currents are roughly parallel with the dock alignment.

Sanitary Report: This formality is normally performed after the vessel docks; however, vessels remaining at anchor may, through their Agents, complete customs and health examinations in the roadstead.

Publications and Charts: Masters may find it useful to refer to the following:

a. French hydrographic and oceanographic department charts No. 2172 and 6051.
b. French nautical instructions, Series L, Volume IV.
c. Lights and fog signals book, Series L.
d. British Hydrographic Office chart Nos. 2837, 2887 and 2832.
e. Gulf Pilot (63).

Rat Guards: All ships berthed alongside must provide Rat Guards for the ship's moorings.

Territorial Waters: Iranian territorial waters extend 12 nautical miles from the coast and adjacent islands.

Surveyors: Surveyors of the American Bureau of Shipping and Lloyd's are stationed at Bandar Abbas and Abadan.

Consuls: No Consular representation is available at Sirri but the Embassies of most nations are situated in Tehran.

Officials: Customs, Ports and Shipping, and Gendarmerie Officials are stationed on Sirri Island.

Maintenance: Maintenance work such as scaling and painting on deck or from the loading dock, is prohibited at all times while the vessel is alongside the loading dock.

SAFETY: *Safety Watch:* A safety watch is provided on the loading platform by N.I.O.C. – Offshore personnel, under the orders of the Loading Supervisor.

Throughout the time the vessel is alongside, N.I.O.C. – Offshore makes the following seagoing facilities available to the vessel:

a. Two 300 h.p. docking escort boats.
b. Two safety tugs with monitor water nozzles, foam generators and anit-pollution spray equipment.
c. Fixed dock equipment (water screens, nozzles).

The Master remains solely responsible for safety aboard his vessel. He shall maintain sufficient crew on board to be able to handle his vessel without hazard, and ensure rapid response with fire fighting equipment:

a. Keep the engines ready for use.
b. Make sure the vessel keeps its station with the dock, so that the loading arms always operate within their designed work-zone.
c. Make sure that the mooring lines provide firm mooring without abnormal strain.

An N.I.O.C. – Offshore representative shall make sure that these safety provisions are in force throughout the time the vessel is alongside the loading station.

If need be, the standby tug may be called upon for correction of docking position. Loading may be halted, and the arms disconnected.

Preventative Measures: The vessel must show a red flag by day, and by night a red light visible through 360°.

The Master must post a notice at the gangway, absolutely prohibiting smoking, the use of open lights, and access to visitors.

All hull valves shall be closed, except for those handling water circulation.

All main deck scuppers shall be plugged.

Two wire rope emergency tow lines, of adequate length and strength shall be placed on the starboard side, one forward and one aft; the eyes of the tow lines shall be maintained a suitable distance above the water, so that the tugs can couple to them easily.

The access gangway shall be properly positioned on deck.

Fire Protection: Smoking, the use of open lights, and the use of tools liable to produce sparks are prohibited outside the zones where such are normally authorised on a tanker.

In zones classified as dangerous, the use of equipment other than types approved for this use by an official body is prohibited.

Further, in general, the Master is obliged to adhere to international safety regulations.

SHIPMASTER'S REPORT: November 1993.

Report on STS Operation at Sirri Island:

The STS operation now at Sirri Island was originally at Kharg Island, and consists of 2 mother ships.

"Lampeter", Greek flag, storage for Gasoil and Kerosene, 225,000 d.w.t.

"Sanandja 2", Iranian flag, storage for Gasoil only, 253,984 d.w.t.

Vessels fendered on both sides, and can handle two operations at one time.

The operation is under the control of Sirri Marine who provide 2 tugs, Pilot, Loading Master, Customs and bring out the GAC Agent.

The operation was generally satisfactory, and the Pilot was very capable. All sampling and clearance was done in a civil manner.

I felt that the fendering offered (3 Yokohama type – 40 m. apart) should have been spaced further apart.

No Safety Check Lists were offered from "Lampeter", and access to the mother ship was via accommodation ladder/stage which was *unsafe*.

All radio communication was via hand-held radios on VHF Channel 6.

Moorings were 3-3-2, and we requested an additional wire from "Lampeter" at each end.

Safety observed on board "Lampeter" was generally poor, and we had to threaten cessation of operations when "Lampeter" crew observed smoking on the quarters.

The Agent (GAC) came out. However, we had to transmit his traffic to GAC Tehran. Other GAC traffic was to GAC UK at Crawley.

AUTHORITY: National Iranian Oil Company – Offshore, 339 Dr. Beheshti Avenue, Tehran, Iran. P.O. Box 4546, 4547, 4548. *Tel:* 8718779. *Cables:* Falatghareh, Tehran. *Telex:* 2122779, 212707. *FAX:* 8718143 (Operations Department). *Contact:* H. Hassani, Deputy Director – Operations, N.I.O.C. – Offshore. Captain Makvandinejad, Marine Superintendent.

AGENT: See "Kharg Island".

SOROOSH TERMINAL (Formerly Cyrus Terminal): 29.01 N. 49.28 E. (See Plan)

Not operational.

LOCATION: Open, unsheltered submarine export mooring, Lat. 29° 01' 27" N., Long. 49° 28' 51" E. Storage barge *(Pazargad).* Lat. 29° 01' 57" N., Long. 49° 29' 30" E.

DOCUMENTS:

Bill of Health.

Health Declaration (International Health Form to be filled out by Master on arrival).

Manifest (if with cargo certified by Iranian Consulate. If vessel is in ballast, no legalisation dues).

Clearance (from last port).

Register.

5 Crew Lists.

Passenger Manifest (if any passengers are on board).

5 Stores Lists.

Bonded Stores List.

APPROACHES:

Obstructions: In addition to submarine export mooring and storage vessel *Pazargad,* various oil wells and production structures located in immediate vicinity, which constitute hazard to navigation, as follows:

	Lat.	*Long.*
Well C–2A and the Production Stations	29° 03' 07" N.	49° 29' 57" E.
C–3	29° 02' 38.7" N.	49° 27' 23.1" E.
C–4	29° 00' 15" N.	49° 32' 00" E.
C–5	29° 02' 52" N.	49° 31' 34" E.
C–6	29° 03' 57" N.	49° 29' 57" E.
C–7	29° 03' 31.2" N.	49° 29' 05.6" E.
C–8	29° 03' 31.2" N.	49° 30' 48" E.
C–9	29° 02' 15" N.	49° 29' 57" E.
C–10	29° 03' 33" N.	49° 27' 22.5" E.
C–11	29° 04' 51" N.	49° 26' 31" E.
C–12	29° 03' 33" N.	49° 23' 56.5" E.
C–13	29° 02' 41" N.	49° 25' 39.5" E.

Safest and most desirable direction of approach to Soroosh Terminal is from S.E. Due to numerous obstructions noted above any approach should be made with extreme caution.

Navigational Aids. All structures located within Soroosh Terminal area display interrupted quick flashing white lights and sound a fog horn. The storage barge *Pazargad* displays, as required, those day and night signals as prescribed by articles 27 (b) and 30 (a) of International Rules. The 6 mooring buoys for the Soroosh Terminal are not lighted.

PILOTAGE: Vessels will be boarded by Mooring Master of IPAC within 2 miles, approximately 180° true from *Pazargad.* Mooring Master will advise Master on approaches to berth, mooring and unmooring, connecting and disconnecting submarine hose and all other operations within berthing area. All manoeuvring within loading berth area shall be done only in accordance with advice of an IPAC Mooring Master, subject to understanding that Master shall remain solely responsible for safety and proper manoeuvring. Master or qualified deck officer must be on bridge at all times while ship manoeuvring.

Vessels requested to have pilot ladder safely and securely rigged, ready for immediate use, and long enough to reach Mooring Master's launch. If at night, adequate lighting must be rigged overside for Mooring Master to approach side of ship and climb ladder safely. Adequate searchlights should also be rigged on both wings of bridge when mooring at night, to assist in running lines to buoys.

ANCHORAGE: Area bound by: 28° 59' 00" N. to 29° 01' 00" N. between meridians 49° 28' 00" E. to 49° 31' 00" E. Depth of water 24 fathoms.

Masters cautioned not to anchor North of Lat. 29° 01' 00" and East of Long. 49° 31' 00" as there are numerous flow lines on sea bed connecting various structures, storage tanker and submarine terminal. During Winter months, November through March, severe South-easterly storms often encountered with little or no indication of impending storm. Vessels at anchor, and loading in submarine terminal, must have engines ready with full power for immediate use. Masters cautioned to use adequate scope of chain while anchored awaiting berth.

RESTRICTIONS: None. Terminal operates 24 hours per day, 7 days a week. Ships moored, loaded and unmoored at any hour, weather and other circumstances permitting. Terminal will never be closed due to religious holidays.

MAX. SIZE: Ship loaded by means of submarine pipeline and 1 hose at 1 loading berth, located in approximately 140 ft. of water. Mooring buoys numbered 1, 2, 3, 4, 5 and 6. Starting with No. 1 East of mooring and numbered consecutively in clockwise direction. Max. capacity 70,000 d.w.t., max. length 950 ft.

HEALTH: The rules governing quarantine are the same as found in other ports of the world. Owners should check with Agent respecting any recent imposition of anti-epidemic regulations and requirements for additional injections for crew members.

RADIO: *Advice of Arrival:* Incoming tankers must send ETA at least 3 days before arrival. The radio station at Abadan will handle IPAC's radio traffic, pre-arrival messages, etc., for vessels calling Soroosh Terminal. The station call sign is EQZ. Messages for IPAC should be to NIOC Kharg, prefixed "for IPAC" with copy to Agent. Further ETA messages should be sent when vessel 24 and 12 hours distant from Soroosh Terminal and at any other time any appreciable change occurs in original ETA or those subsequent thereto. The 12 hours ETA should include a positive statement regarding "ship's readiness to load" on arrival and the number of hours that will be required to discharge clean ballast after ship is berthed in mooring.

Radio Watches: While at the anchorage off Soroosh Terminal, vessels should maintain normal listening watches on both HF and WT.

VHF: Soroosh Terminal base *(Pazargad)* is equipped with VHF radio telephone and maintains a radio watch. Vessels arriving at Soroosh Terminal may communicate with the *Pazargad* on Channel 6.

TUGS: A charge for each tug movement will be made in accordance with rates established by IPAC. When tug/tugs are standing-by vessel mooring/unmooring, for use if required, the full fee will be charged. IPAC maintains launches to assist in mooring and unmooring.

LOADING: Maximum crude oil loading rates for a tanker using one 12 in. deck hose and 20 p.s.i. at ship's rail is approximately 12,000 b.p.h. Requested that ships receive oil as fast as it can be delivered, with due regard for safety, also that any fittings on manifold such as "Y's", strainers, or mud boxes, which tend to restrict flow of crude oil into the ships, be removed before arrival at terminal. Preferable that connections be provided so that a 12 in. deck hose can be used.

BERTHING: (Also see "Max. Size"). Tankers to have ready: *(a)* Windlass and deck winches fore and aft. *(b)* 12 good manila or synthetic mooring lines, each not less than 120 fathoms in length, with efficient stoppers for each line. *(c)* On port or starboard side as directed, opposite ship's manifold, equipment capable of lifting submarine hose safely and expeditiously. Weight of lift 5.5 tons. *(d)* 1 bower anchor ready for immediate use, with minimum of 120 fathoms of chain. Anchors, chains and anchor windlass must be in good condition. *(e)* Equipped to fit flanges on submarine hoses, which are of ASA standards.

Permanent moorings in the berth consist of 6 steel cylindrical buoys each fitted with a quick release hook to which ship's mooring lines attached by mooring launches. The berth is laid out on a 2 heading basis, using 12 mooring ropes (4 bow, 4 beam, and 4 quarter).

MEDICAL: Neither medical nor hospital facilities provided by IPAC. Private doctors and hospital facilities available at Tehran or Abadan. Emergency hospital cases only can be handled on Kharg Island, approximately 53 miles from Soroosh Terminal.

DENSITY: Salinity approximately 20% more than normal sea water.

TIDE/CURRENT: Tidal range between 6 ft. and 8 ft. Currents generally on axis of ship berthed in mooring; however, rotary currents can be expected.

FRESH WATER: No fresh water available.

FUEL: No bunkers or lubricants available.

FIRE PRECAUTIONS: A continuous and efficient fire watch must be kept on deck and in engine room. In event of fire breaking out in any part of a vessel, however minor it may be, fire alarm must be given immediately. This will consist of a succession of long blasts on ship's whistle, together with a rapid continuous ringing of ship's bell.

CONSULS: No consulates at Soroosh Terminal; consular or diplomatic representatives for most nations maintain offices in Tehran.

REPAIRS/STORES: Port is considered an "open roadstead", and under no circumstances may engines be shut down for repairs while ships are moored in submarine berth. No facilities for making vessel repairs. No spare parts, stores or supplies should be sent to Soroosh Terminal for delivery to a ship.

CUSTOMS ALLOWANCES: Present regulations allow each seaman to retain a maximum of 50 cigarettes or 1 oz. of tobacco or 5 cigars. The balance of all smoking items must be collected and carefully listed prior to arrival. This list will be checked by Customs before sealing locker. If any discrepancies, vessel is subject to a fine.

REPATRIATION: No facilities.

TIME: GMT plus 3.5 hours.

SHORE LEAVE: There is no shore leave permitted due to lack of facilities. No visitors permitted on tankers loading.

INSPECTION SERVICE AND MARINE SURVEYS:

Petroleum inspection services available at Soroosh Terminal from Saybolt. IPAC also inspects cargoes on specific request of off-taker companies.

GOVERNMENT OFFICIALS: Iranian officials, such as the Customs Officers, Immigration Officer and Quarantine Officer, are available on the barge *Pazargad.* Should Customs Guards be stationed on board vessels while in the moorings, it is expected that ships will provide food for these guards and other officials. All vessels calling at Soroosh Terminal must provide an accommodation ladder, rigged for Iranian Officials.

AUTHORITY: Iran Pan American Oil Co.

Iraq

GENERAL:

AGENCY: The sole Agent for all ships and tankers calling at Iraqi ports is as follows:

State Enterprise for Water Transport, (Formerly State Enterprise for Maritime Agencies), P.O. Box 3, Basrah, Iraq. Tel: 01-8853347, 040-214438 and 040-413646. Fax: 01-8862068. Telex: 207009 B BSR IK, 207066 BWAKR IK. Cables: Bawakhir Basrah.

Note: Dated 10th April 1996.

All vessels calling at Iraqi ports of Umm Qasr and Khor Al-Zubair are exempted from payment of the customary Port and Agency disbursements, i.e. the Owners have the privilege of sending their ships to discharge their cargoes at our ports free of charge until further notice.

DOCUMENTS: Documents required by vessels heading for ports in Iraq: The following certificates issued according to the valid international agreements shall be made available on vessels over 500 d.w.t.:

Certificate of Registry of the vessel.
Derat Certificate.
Certificate of Radio-Telegraphy.
Certificate of Ship's Instruments/Equipments.
Load Line Certificate.
All other internationally required documents (Safety Certificates).

NOTICE:

The General Establishment of Iraqi Ports
Notice to Mariners No. 1-1996
North Arabian Gulf
Sub/Iraqi Territorial and National Waters

Notice is hereby given to all shipowners and Agents that the Iraqi Territorial and National Waters and Channels leading to Al-Bakr Terminal, ports of Umm Qasr and Khor Al Zubair are safe for navigation.

Maximum permissible draft for buoyed channel leading to Al-Bakr Terminal is 21 m., and for buoyed channels of Khor Abdullah and Khor Al Zubair is 12 m.

The Terminal and ports mentioned above are ready to receive all types of cargo.

The Authority originating the above information is the General Establishment of Iraqi Ports – Basrah.

Tel: 413211-129. Telex: 207008.

Signed: Director General

RADIO: Masters of vessels proceeding to ports in Iraq are to notify the Control Officer and pilot station of vessel's ETA (by radio) 24 hours prior to arrival at the pilot station. The vessel's Agent should also be advised at the same time.

If the vessel is carrying hazardous cargo, ETA advices should be sent 48 hours prior to arrival.

Free Pratique should be requested at least 24 hours prior to arrival, and health conditions at last port of call should be reported.

The Control Officer also requires the following information:

Name of vessel and nationality.
Call sign.
Position in which anchor dropped.
Draft fore and aft in meters.
Name of vessel's Agent at the port of destination.

Gas Tankers: Masters of gas tankers should contact the Harbour Master of the gas terminal and the Control Officer (telegraphically) 72 hours, 48 hours, 24 hours and 12 hours prior to arrival at the pilot station.

Prior to arrival at the pilot station, the Master shall advise the Control Officer of the following:

Name of the tanker prefixed with letter (L.P.G.) and her nationality.
Call sign of tanker.
Port of Registry.
LOA and LBP.
Deadweight.
GRT.
NRT.
Draft of tanker on arrival.
Expected draft on departure.
Last port of call.
Health condition of tanker's crew.

Every vessel proceeding to ports in Iraq has to contact Basrah Radio Station, call sing "YIR", or Umm Qasr Radio Station, call sign "YIU" on the following frequencies:

Band	Shore transmits	Shore receives
8 MHz	8,440 kHz	8,363.6 kHz
12 MHz	12,660 kHz	12,545.4 kHz
16 MHz	16,906 kHz	16,748 kHz
22 MHz	22,338 kHz	22,230 kHz

Medium calling frequency: 500 kHz.
Working frequency: 461 kHz.
For further information refer to Admiralty List of Radio Signals.

ALBAKR TERMINAL: 29.41 N. 48.49 E. (See Plan)

Also see "General" before first port.

LOCATION: The terminal is 31 miles S.E. of Fao in position Lat. 29° 40' 36" N., Long. 48° 48' 38" E. Depth of water 29.30 m. at MLWOST.

PILOTAGE: Pilotage is compulsory for all inward and outward tankers using the Khor al Khafja buoyed channel when the draft is over 15.85 m.

Pilot station located at Lat. 21° 29' N., Long. 49° 03' E.

NAVIGATIONAL AIDS: 8 lighted buoys define the deep water channel at the 69 ft. (21m.) depth contours in the immediate vicinity of Albakr Terminal. The buoys are battery powered with quick flash characteristics with visibility range of 1 mile. The perimeter of Albakr Terminal is outlined with flashing marine lanterns to define a hazard to marine navigation. The lanterns are battery powered, some are white lens flash with 5 mile range and others are red lens flash with 2 mile range.

The radio tower is equipped with an aviation hazard light (red). It is also equipped with a long range marine beacon (white) located below the red hazard light.

BERTHING: The terminal consists of 2 loading platforms (A) and (B) each loading platform has 2 loading berths. Berths No. 1 and 2 of Platform "A" and Berth No. 4 of Platform "B" can accommodate tankers ranging in size from 35,000 d.w.t. to 350,000 d.w.t., Berth No. 3 of Platform "B" can accommodate tankers ranging in size between 85,000 d.w.t. and 350,000 d.w.t., Total length of structure is 975.4 m. and 106.7 m. wide at centre.

RADIO: Tankers are requested to contact Albakr Terminal through Basrah Control Radio (YIR) at least 72 hours, 48 hours and 24 hours prior to arrival giving ETA. Prior to docking the tanker must also provide the terminal operator with information required to prepare the "loading order" format, this information should include the type of crude to be loaded, loading rate in barrels, the Registry No. of vessel, nationality, name of Master. The Master will be informed of approach instructions such as location of berth, weather and sea conditions, and the communication channel to be used for vessel docking assistance.

Vessels bound for Iraqi territorial waters should also contact Fao Radio (YIS) at least 24 hours before entering territorial waters requesting free pratique from Medical Officer Fao. The request should indicate the state of health of the crew on board together with relevent information.

Name of Station: Khor al Khafja FC(10) Albakr Terminal FP
Call Sign : Albakr Radio
Service : 24 Hours

The following table shows the details for contacting the Iraqi port coast stations. The number between brackets corresponds to the notes explained below.

Frequency	*Emission Channel*	*Class*	*Power*	*Service Nature*
156.375 MHz	67	F^3	0.02	OT (2) (3) (6) (8)
156.550 MHz	12	F^3	0.02	OT (2) (3) (3) (5)
156.80 MHz	16	F^3	0.02	(1) (3) (4) (7) (8) (11)
161.80 MHz	24	F^3	0.02	

FC	Coast Station
FP	Port Station
OT	Station open exclusively to operational traffic of the service concerned
(1)	Transmits urgent Notices to Mariners
(2)	Transmits meteorological bulletins (North Arabian Gulf Weather Forecast)
(3)	For Navigation and harbour control services
(4)	Calling and Safety frequency
(5)	First priority working frequency
(6)	Second priority working frequency
(7)	Weather bulletins at 0630 hrs., 1430 hrs. and on request
(8)	Used for marine traffic control
(10)	Station under the direction of General Establishment of Iraqi Ports
(11)	Permanent watch

While in Iraqi Territorial waters, ships under way shall maintain watch on Channel 16 (156.80 MHz) and/or (461.5 kHz) to ensure immediate reception of the instructions issued by the controlling authorities.

(a) Khor Al-Khafja, Albakr Terminal Radio, maintains listening watch on Channel 16 (156.80 MHz).
(b) Pilot station (Al-Rasheed Radio YIBE maintains listening watch on Channel 16 (156.80 MHz) and 500 kHz.
(c) Fao Radio (YIS) maintains listening watch on Channel 16 (156.80 MHz) and 500 kHz.
(d) Basrah Control Radio (YIR) maintains listening watch on Channel 16 (156.80 MHz) and 500 kHz.

Instructions:

(a) Navigation warnings are transmitted on 500 kHz by Basrah Control Radio (YIR).

(b) North Arabian Gulf weather forecast is transmitted by:

1. Basrah Control Radio on:
   440 kHz at 0530, 1330 GMT and on request.
   6493.25 kHz at 0530 GMT and on request.
   8668 kHz at 1330 GMT and on request.
2. Khor Al Khafja, Albakr Terminal Radio, on Channel 16 (156.80 MHz) at 0530 GMT and on request.

(c) Traffic control signal on Channel 16 (156.80 MHz) and on 500 kHz by Basrah Control Radio (YIR).

(d) Traffic control signal on Channel 16 (156.80 MHz) and 500 kHz by Fao Radio (YIS).

(e) Traffic control signal on Channel 16 (156.80 MHz) by Albakr Terminal Radio.

Commercial and Public Correspondence: Call Basrah Radio (YIR) on Channel 16 (156.80 MHz) 500 kHz. 4, 6, 12 and 16 MHz. bands, and after initial contact has been established change to one of the working frequencies as instructed to pass messages.

MAX. SIZE: Max. length, 366 m. Max. draft 21 m. Night berthing possible.

TUGS: 2 tugs available.

LOADING: Storage and pumping facilities on shore are connected to Albakr Terminal by 2×48 in. pipelines. The Terminal is capable of loading through either one of the pipelines at a time or both.

Capacity of each line varies between 77,000 and 89,000 b.p.h. depending on type of crude (Basrah Heavy or Basrah Light type). Wi both lines in operation at the same time loading rate can be increased to max. 141,500 b.p.h. (19,000 tonnes p.h.). 2 tankers can load with different types of crude at the same time. Loading facilities can be remotely controlled from the Control Room.

Loading will be stopped if any regulations are not observed and in the case of oil spillage.

Loading may be stopped in still air conditions, during severe electrical storms and/or high wind and sea conditions.

Loading Arms: For each loading berth, 2 identical 24 in.×80 ft. long Luceat DCMA loading arms, with hydraulically operated coupling fitted with adaptors to allow automatic and fast coupling to tanker manifold flanges ranging from 16 in. to 24 in. (spools for 10 in., 12 in. or 14 in. to 16 in. are available at the terminal if required).

Gangway: A power operated telescopic personnel gangway is provided at each berth. These gangways can withstand 500 lb. load at mid-span in the extended position.

Meters: 16 in. A. O. Smith positive displacement meters, 16 meters for each platform, capacity of each meter 12,500 b.p.h.

Meter Prover: One 24 in. triple "U" bi-directional mechanical displacement meter prover for each platform. The occurence of each prover is decided bi-yearly utilising certified volume tanks.

Continuous Crude Oil Gravity Analyzer: There is a number of ARCCO Anulus Model 1-F10 50X liquid gravity analyzers on each loading platform capable of detecting API gravity from 45° to 15°, the output from these analyzers are displayed on the appropriate loading formats and is recorded on charts in the Control Room.

These gravity analysers are to be checked constantly and re-calibrated bi-yearly according to the manufacturer's recommendations.

A responsible member of the crew must be in contact with the terminal officials at all times.

READINESS: Notice of Readiness will be received by INOC representative provided the vessel is ready to load. Lay time will commence 6 hours after receipt of Notice of Readiness berth or no berth.

SAFETY PRECAUTIONS: On arrival at the terminal, INOC Representative will discuss with the Master the "Safety Requirements" letter addressed to him also the Safety Check List.

Attention is also drawn to the Tanker Safety Guide published by the International Chamber of Shipping and to the International Oil Tanker Terminal Safety Guide.

SHIP DOCKING ASSISTANCE SYSTEM: 1 unit for each berth, consisting of speed of approach measuring instrument with fixed wide and narrow beam R.F. heads, a data processor and visual display units when the vessel is within 2 miles of Albakr Terminal. The rotatable R.F. head which is nearest to the vessel shall be aimed at it, during the docking the system will display approaching vessel's velocity.

FRESH WATER: Can be made available by The General Establishment of Iraqi Ports after 24 hours notice from tankers. Water supply is from barges or small water tankers. Notice to be through Agent.

FUEL: May be made available after 72 hours notice through Agent. Supply is direct from small bunker tanker or barges. Bunkering however, not allowed while tanker is on berth and it is allowed only when tanker is waiting for berth or after completion of loading and unberthing.

SHORE LEAVE: Not allowed.

LIGHT DUES: The General Establishment of Iraqi Ports will collect any light dues payable including those due to the Middle East Navigation Aid Service.

REGULATIONS:

(a) Mooring.
"All vessels after arrival, having been moored to the satisfaction of the Harbour Master, shall tend their own anchor cables, ropes, lines and hawsers. It is important for tankers to tend their mooring frequently".

(b) Ship must be ready to move under its own power.
While in berth, ships must be ready to move under their own power in the event of their breaking adrift, catching fire or any other emergency. No repairs are to be carried out while in the berth, which would immobilise the ship or impair her firefighting efficiency.

(c) Cleaning of boiler tubes.
Cleaning of boiler tubes alongside the Island Terminal is forbidden.

POLLUTION: No dirty ballast. No oily water or other refuse to be discharged overboard.

When a vessel enters port waters in ballast, the ballast water for overside discharge must be clean and a declaration signed by the Master delivered to the representative of the terminal to this effect.

Ashes, oil, oily water or other refuse must not be discharged overboard in port waters. Vessel's scuppers must be effectively plugged and leakage or spillage of oil aboard ship must not be swept or washed overboard whilst in port waters.

Vessels are subject to heavy fines and liabilities for claims arising.

AUTHORITY: All approaches to Albakr Terminal and Khor al Khafja are controlled by The General Establishment of Iraqi Ports. Tel: 413211-129. Telex: 207008 Ports.

Attention is drawn to Port Rules and Bye Laws 1942, Quarantine Regulation No. 28 of 1963 and schedules of dues and charges.

The terminal is the property of Iraq National Oil Company (INOC) and is administered and controlled by the said company to facilitate the loading of tankers with crude oil.

Cable Address INOC (Basrah) - PETROLNA BASRAH
INOC (Baghdad) - PETROLNA BAGHDAD

Telex No. INOC (Basrah) - 207003
INOC (Baghdad) - 21204

The sole Agent for all vessels visiting Iraqi ports is The State Enterprise for Water Transport. All requests for services to tankers should be directed to the Agent.

See "General" before first port.

BASRAH (Maqal and Umm Qasr): 30.31 N. 47.50 E.

Note: Iraqi imports are mainly made up by bulk wheat, bagged rice and sugar, but a significant increase in the import of construction equipment, consumer goods, etc. is expected.

The main Iraqi port of Basrah situated in the Shatt Al Arab waterway has been landlocked since the outbreak of the conflict. It is expected that it will take a considerable time to remove wrecks and dredge the waterway, once an agreement is reached.

Also see "General" before first port.

DOCUMENTS: On arrival at Pilot Station vessel requires following: Ship's Register, letter from Owner confirming that vessel has not called at an Israeli port, all Health Certificates of Crew must be valid against cholera, 2 copies Crew List, 2 copies Provision List, 2 copies Manifest, Freight manifest for Baghdad Rail cargo, Breakdown list and Stowage Plan, Dangerous cargo and heavy lift list (if any).

PILOTAGE: Compulsory. Owners having vessels bound for Umm Qasr Port should instruct Masters to cable ETAs to State Enterprise for Water Transport, Basrah, cable address "Bawakhir Basrah", Telex: 207009, 207066 BWAKR IK.

The pilot boat is located usually in position Lat. 29° 45' 15" N., Long. 48° 50' 45" E. and on arrival vessel should contact pilot boat immediately for instructions. Pilots are available for vessels proceeding to Abadan and Khorramshahr (in Iran) and Basrah (Maqal and Umm Qasr). Providing Master has given Agent 48 hours notice of vessel's ETA Pilot will board immediately providing tide is suitable to allow vessel to continue to destination. Master should use call sign YIR on 500 kHz for Basrah Radio in order to pass messages to Agent. Vessel should listen for messages on 440 kHz from YIR or use VHF on Channels 14 and 12. On boarding the River Pilot will hand Master various forms for completion in respect of Light Dues and River Pilotage. Master to hoist the Iraqi National Flag.

The Navigation of the Shatt-al-Arab River is under the jurisdiction of The General Establishment of Iraqi Ports which takes in the approaches to Abadan and Khorramshahr in Iran.

ANCHORAGES: Vessels can anchor within the following area:

(a) 29° 40.0' N., 48° 43.0' E.
(b) 29° 40.0' N., 48° 45.0' E.
(c) 29° 36.0' N., 48° 43.0' E.
(d) 29° 36.0' N., 48° 45.0' E.

RESTRICTIONS: The General Establishment of Iraqi Ports issue a booklet of Tide Tables each year and the movements of vessels in and out of the Shatt-al-Arab River are restricted to the high water tables for vessels using Basrah and Khorramshahr. Movements to and from these ports are only permitted in the hours of daylight. The max. draft for a vessel proceeding to Basrah is 29 ft. in fresh water. If vessel's draft exceeds this lightening takes place at Umm Qasr. Although the draft obtainable alongside the wharves is 31 ft. the max. draft for moving in the river is 29 ft. on account of the restriction at the Karun Bar.

MAX. SIZE: The maximum acceptable draft for vessels calling at Umm Qasr Port is 10.0 m. No beam restrictions. Fairway draft is 12.0 m. The fairway is marked by port and starboard buoys.

HEALTH: Masters are requested to call the Chief Medical Officer at Fao on 500 kHz, call sign "YIS", requesting Free Pratique 24 hours before vessel's arrival at Pilot Station. All crew Vaccination Certificates should be valid and available for Medical Officer's arrival on board. He will also expect to find a valid Derat Certificate on board. Anyone boarding the vessel ahead of the Medical Officer whilst the "Q" Flag is still hoisted is liable to a fine. Special precautions are taken in case of a vessel arriving direct from an epidemic area and even if the crew are holding valid inoculation certificates the vessel may be delayed at the Pilot Station. The Iraq Government is very sensitive about the spread of cholera. Derat Certificate renewable at Basrah.

RADIO: See "General" before first port.

VHF: Port radar service. VHF can be used to call the Port Administration at Basrah on Channel 16.

TUGS: River and sea-going tugs are available. Tug-boat services are offered as and when deemed necessary by port Pilot or Harbour Master, and are available at all times during day and night.

BERTHING: See "Restrictions". All berthing of vessels at Basrah is done during daylight hours only and according to suitable tide. The Harbour Master joins vessel on her arrival at Khora Anchorage which lies about 2 miles from the Maqal Wharves. In the case of Umm Qasr the Harbour Master joins vessel on arrival off the wharves.

Height of pier (quay) at berthing places above mean low water:

(a) Maqal – Plus 12.5 ft. above zero port datum. Port datum is 3.96 ft. above mean zero level at Fao.
(b) Umm Qasr – 24.65 ft. above lowest water of spring tide which is referred to as Umm Qasr Port datum.

Difference between high and low water:

(a) Maqal: A daily variation of 5 ft. between tides and max. of 8 ft.
(b) Umm Qasr: An average of 12 ft. between tides, and max. of 17 ft.

Maqal (Ma'gal): Wharves have continuous frontage of 2,000 m. depth alongside 9.15 m. Max. length of vessel, 171 m., berthing for 12 vessels. Report: 1989.

Berth No.	*Length* (m.)	*Cranes* (tons)	*Use*
1	200	3× 5	General
2	200	3× 5	General
3	200	2×40	Containers
4	220		
5	200	–	Bulk, sulphur, by conveyors
6	200	–	
7	200	2× 3 1×15 1× 8	General

Umm Qasr: The port is situated at the South end of the Khor Zubair, where it joins the Khor Abdullah. The sea approach to Umm Qasr is some 103 km. in length along the Khor Abdullah, commencing in deep waters of the Gulf near the mouth of the Shatt-al-Arab.

A navigation channel, the lowest part of which is 9 m. at LLW and of ample width is well marked with beacons and light buoys from the Shatt-el-Arab entrance pilot vessel to Umm Qasr. Loaded vessels with a draft of 8.0 m. will be able to sail on 2 tides each day to and from Umm Qasr. Pilot and Harbour Master services are compulsory.

Facilities available in February 1996:

Berth No.	*Length (m.)*	*Cargo handled*	*Equipment*
1	201	General Cargo	1×15 ton crane, 3×8 ton cranes.
2	201	General Cargo	1×15 ton crane, 2×3 ton cranes.
3	201	Export of Sulphur	Conveyor Belt Rate 1,000 t.p.h.
4	200	Export of Sulphur	2×3 ton cranes, 1×8 ton cranes.
5	250	Containers	2×40 ton cranes, 2×15 ton cranes.
6	183	General Cargo	
7	183	General Cargo	2×8 ton cranes, 2×15 ton cranes.
8	183	General Cargo	7×3 ton cranes.
8(A)	73	Lighters	
9	285	Grain Silo	
10	200	Vegetable Oil	
11-18	200	General Cargo	1×15.5 ton crane, 1×8.5 ton crane, 2×3 ton cranes.
19		Containers	Gantry cranes not yet erected.
20	54	Ro-Ro	

CRANES: See "Berthing".

BRIDGES: There are no bridges across the river from the entrance to Basrah Wharves (a distance of about 80 miles).

STEVEDORING: Information of the numbers of gangs required on board on vessel's arrival should be passed to the Agent together with vessel's ETA through Basrah Radio. The average rate of discharge of general cargo at Basrah (Maqal and Umm Qasr) is 6 tons per ganghour per 16 hour day. Contractors will place labour on board to discharge or load cargo but at the risk of the vessel as a Contractor will not accept any responsibility for damage done by labour.

Unloading of vessels basically carried out from vessels to wharves by Port cranes or ships' derricks. Heavy lifts and some dangerous cargoes are discharged overside into barges. Loading from jetty is by crane directly into ships. Loading at midstream is by lighters.

Bulk Cargoes: Discharged by grab direct to the Dock at Umm Qasr and by suction to the silo at Basrah. The equipment at Basrah is rated at 2,500 L/tons per day discharge and 5,000 L/tons per day loading, but under favourable conditions discharge rate may exceed 3,000 L/tons per day.

MEDICAL: For a vessel in to Basrah (Maqal and Umm Qasr) no advance notice is required, in order to obtain medical attention. Hospital facilities available at the new port hospital and other local hospitals.

For arrival at Basrah it is necessary to hold valid cholera certificate.

TANKERS: See "Khor-al-Amaya".

FRESH WATER: Fresh water is available at the wharves at Maqal and Umm Qasr but where a vessel is moored in midstream and requests water there is the additional charge for the hire of the water tanker.

FUEL: Only 1 grade of fuel oil available from the Basrah Refinery, a fuel oil viscosity 200 to 210 Red. No. 1, SG 0.920. Diesel oil also available.

Fuelling is direct if taken alongside Muftiyah Refinery jetties, otherwise by barge. No coal bunkers available.

GANGWAY/DECK WATCHMEN: It is recommended that vessels moored or anchored in the river employ Gangway/Deck Watchmen.

OPENING/CLOSING HATCHES: This work is normally done by crew, but if the labour on board are asked to do it they should be supervised by an Officer.

CUSTOMS ALLOWANCES: (Tobacco) The Ship's Bond is sealed on arrival but prior to the sealing each member of the crew can have 200 cigarettes. The Bond will be opened by the Customs on the request of the Master at any time during vessel's stay in Basrah.

(Wine and/or Spirit). Each crew member is permitted to have 1 litre out of Bond. On sailing from Basrah the Master is required to wait till vessel has cleared the Shatt-al-Arab River before opening the Bond. This does not apply when vessel calls at Khorramshahr or Abadan on the way down river.

REPAIRS: All types of repairs except major engine repairs can be carried out.

DRY DOCKS: Floating dock available, capacity 4,000 tons. Also slipway, capacity 700 tons.

REPATRIATION: No difficulties in arranging the repatriation of crews from Basrah. Emergency visas are easily obtained for joining and departing crews.

AIRPORT: The Basrah Airport formerly an International Airport is now used only as a domestic airport and is situated about 2 miles from the Maqal Wharves but 50 miles from Umm Qasr.

TIME: Iraq time is 3 hours ahead of GMT and there are no alterations made to clocks during the year.

HOLIDAYS: The official holiday of the week in Iraq is Friday. The other holidays are: 3 days Id-el-Fitr; 4 days Id-el-Adha; Al Hijaa; Ashura; Birth of the Prophet Mohammad; New Year 1st January; Army Day, 6th January; 8th February; 21st March; 1st May Labour Day; 14th July; 17th July.

POLICE/AMBULANCE/FIRE: A call to 7601 or 7606 will connect to the department required.

TELEPHONES: Telephone is placed on board a vessel as soon as secured alongside wharf.

SPECIAL SERVICES: There is a laundry service available.

SHORE LEAVE: There is no restriction on crew members going on shore but it is important that they carry a form of identification.

IDENTIFICATION CARDS: All crew members are required to carry with them some form of identification when going on shore.

REGULATIONS: The Port Authority have requested that no photography takes place from the ship whilst passing naval or military installations.

GENERAL: The rain season in Basrah is between November and April and during the Summer months from May to October the temperature can be as high as 55°C. It is important that crew members keep the backs of their necks covered whilst working on deck during the heat of the Summer. The use of salt tablets are recommended during the heat of the Summer.

AUTHORITY: The General Establishment of Iraqi Ports, Basrah, Iraq. *Tel:* 413211-129. *FAX:* 207008. *Contact:* The Director General.

AGENT: See "General – Agency" before first port.

FAO: 29.58 N. 48.29 E.

Also see "General" before first port.

DOCUMENTS: On arrival at Pilot Station, vessel requires the following:

Ship's Register.
Letter from Owner confirming that vessel has not called at Israeli Port.
Health Certificates of Crew must be valid against cholera.
2 copies Crew List.
2 copies Provision List.
2 copies Manifest.
Dangerous Cargo List, if any.

PILOTAGE: The pilot boat is located in position Lat. 29° 46' 45" N., Long. 49° 48' 37" E., and on arrival vessel should contact Pilot boat immediately for instruction. VHF Channels 14 and 12. Provided Master has given Agent 48 hours' notice of vessel's ETA, Pilot will board immediately.

ANCHORAGE: On arrival of the pilot boat, vessel can anchor with no depth restriction.

MAX. SIZE: *Tankers:* 675 ft. LOA. Vessels may load to a max. draft of 35 ft. (10.65 m.) depending on the tidal conditions at the time, otherwise to a draft suitable to cross the bar with safety.

HEALTH: Masters are requested to call the Port Medical Officer at Fao on 500 kHz, call sign "YIS4", requesting Free Pratique between 8 and 12 hours before vessel's arrival. All crew vaccination certificates should be valid and available for the medical officer's arrival on board. He will also expect to find a valid Derat Exemption Certificate on board. Anyone boarding the vessel ahead of the Medical Officer whilst the "Q" Flag is still hoisted is liable to a fine.

Special precautions are taken in the case of a vessel arriving from an epidemic area and even if the crew are holding valid vaccination certificates the vessel may be delayed at the Pilot Station. The Republic of Iraq is very sensitive about the spread of cholera.

RADIO: Basrah Radio, call sign "YIR" on high frequencies 4, 6, 8, 12 and 16 bands. Fao Radio, call sign "YIS", traffic control signals on Channel 16, and 500 kHz. Also see Khor-al-Amaya.

Tankers should establish contact with Iraqi National Oil Co. 48 hours before arrival. Call sign RNT. Frequency 6493 kHz.

TUGS: Available on request.

BERTHING: There are 4 loading jetties with a depth of 10.95 m. alongside at LWST. Each jetty has one 60 cm. crude oil delivery line with four 25 cm. flexible hoses. Jetties are floodlit and fitted with fire monitors and four 3 ton SWL cranes. Lengths of berth, 205.75 m. each. Max. draft 10.65 m. Night berthing possible. Loading rates Nos. 2 and 4 jetties average 4,000 t.p.h.

MEDICAL: No advance notice is required in order to obtain medical attention. Medical units are present at Fao, Umm Qasr and Maqal. A modern hospital containing all the essential units is found at Maqal. Crew in need of special attention or admission may be referred to it by the medical units.

FRESH WATER: Available, rate approximately 10 t.p.h.

REPAIRS: Minor repairs possible.

TIME: 3 hours ahead of GMT.

AUTHORITY: The General Establishment of Iraqi Ports, Basrah.

KHOR-AL-AMAYA: 29.47 N. 48.49 E.

Also see "General" before first port.
Note: Port not operational July 1996.

LOCATION: Island Terminal about 17 miles out in the Gulf from the mouth of the Shatt-al-Arab River.

ADMINISTRATION: All waters of the Shatt-al-Arab and of the approaches to Khor-al-Amaya are controlled by The General Establishment of Iraqi Ports.

DOCUMENTS:

Crew List (5 copies).
Store List (2 copies).

APPROACHES: *(a) Lights.* One white all-round navigation light has been fitted to the top of the radio mast on the centre piled structure at a height of 153 ft. above MHWS. Character: flashing every 5 seconds, visible for 18 miles: candlepower 7,400.

Red lights are fitted at the 4 extreme corners of the structure which is 1,300 ft. long. Character: fixed red visible 2 miles.

Additionally there are several aircraft warning lights (red) on various parts of the structure marking the upper extremities of towers and other erections including the central radio tower.

The channel between the entrance to the Shatt-al-Arab and the Khor-al-Amaya Sea Island Oil Terminal is marked by buoys and the Shatt-al-Arab Light Vessel (refer to relevant notices issued by The General Establishment of Iraqi Ports, M.E.N.A.S., and Admiralty Notices to Mariners).

(b) Tides. High water at the Terminal may be expected to occur about 20 minutes before high water at the Shatt-al-Arab, Outer Bar. This may vary due to local meteorological and spate conditions. Tidal streams in the vicinity are rotatory and are not likely to exceed 2 knots. The maximum streams are generally along the berthing faces of the Terminal, but at certain states of the tide, cross sets, at right angles to the berthing faces, may be experienced. These are unlikely to exceed 0.75 knots.

PILOTAGE: Compulsory. Masters of vessels bound for Khor-al-Amaya Terminal should contact the Pilot vessel which cruises in an area about 2 miles S.E. of the Terminal. They will receive instructions as to whether to lie off, anchor or proceed towards the Harbour Master's launch.

(a) All vessels using Khor-al-Amaya buoyed channel are reminded that loaded tankers outward bound from Khor-al-Amaya Terminal have top priority in navigating the buoyed channel and all other vessels are to keep clear in all cases.

(b) All inward-bound vessels are to contact Khor-al-Amaya Harbour Master on VHF Channels 16 and 14 before entering Khor-al-Amaya channel for information regarding deeply laden tankers using the restricted channel, and for berthing and anchoring instructions.

(c) Pilotage is compulsory for all inward and outward bound tankers using the Khor-al-Amaya buoyed channel when the draft of the tanker is 15.85 m. (52 ft.) or over.

(d) Tankers arriving to load at Khor-al-Amaya with draft in excess of 15.85 m. (52 ft.) must give their ETA at Shatt-al-Arab Light-vessel at least 12 hours in advance by contacting the Pilot station or Khor-al-Amaya Terminal.

ANCHORAGES: Anchorage areas have been established bounded by lines joining the following positions:

(a) *Anchorage "A"*
- (i) Lat. 29° 32' 08" N., Long. 48° 58' 59" E.
- (ii) Lat. 29° 31' 24" N., Long. 48° 58' 06" E.
- (iii) Lat. 29° 32' 53" N., Long. 48° 56' 56" E.
- (iv) Lat. 29° 33' 14" N., Long. 48° 57' 20" E.

(b) *Anchorage "B"*
- (i) Lat. 29° 44' 03" N., Long. 48° 49' 34" E.
- (ii) Lat. 29° 43' 52" N., Long. 48° 49' 12" E.
- (iii) Lat. 29° 42' 08" N., Long. 48° 50' 18" E.
- (iv) Lat. 29° 42' 21" N., Long. 48° 50' 45" E.

(c) *Anchorage "C"*
- (i) Lat. 29° 45' 39" N., Long. 48° 48' 41" E.
- (ii) Lat. 29° 44' 28" N., Long. 48° 47' 38" E.
- (iii) Lat. 29° 44' 06" N., Long. 48° 49' 31" E.
- (iv) Lat. 29° 43' 35" N., Long. 48° 48' 28" E.

(d) *Temporary Lightering Anchorage*
- (i) Lat. 29° 46' 00" N., Long. 48° 48' 28" E.
- (ii) Lat. 29° 45' 40" N., Long. 48° 48' 39" E.
- (iii) Lat. 29° 45' 34" N., Long. 48° 46' 35" E.
- (iv) Lat. 29° 44' 06" N., Long. 48° 47' 18" E.

Note:
- (i) Anchorages "A" and "B" are for deep-draft vessels of 12.19 m. (40 ft.) and upwards.
- (ii) Anchorage "C" is to be used by tankers (laden or in ballast) whose draft does not exceed 12.19 m. (40 ft.).
- (iii) The temporary lightering anchorage is for the exclusive use of lighters. No other ships or vessels are to anchor within this area.

MAX. SIZE: 330,000 d.w.t. loading part cargo. Max. LOA: 1,200 ft. Max. draft 69 ft.

HEALTH: Quarantine Officer boards after berthing. Vaccination Certificates required.

RADIO: *Procedure for Contacting Iraqi Ports Coast Stations*

1. Summary of Procedure. Whilst inside Iraqi territorial waters, ships under way will maintain watch on Channel 16 (156.80 MHz) and/or 461.5 kHz to ensure immediate reception of instructions issued by the controlling authorities.

- *(a)* Khor Al-Amaya Radio maintains listening watch on Channel 16 (156.80 MHz).
- *(b)* Pilot station (Al-Rasheed Radio YIBE) maintains listening watch on Channel 16 (156.80 MHz) and 500 kHz.
- *(c)* Fao Radio (YIS) maintains listening watch on Channel 16 (156.80 MHz) and 500 kHz.
- *(d)* Al-Wasiliyah Radio (YIT) maintains listening watch on Channel 16 (156.80 MHz) and 461.5 kHz.
- *(e)* Basrah Control Radio (YIR) maintains listening watch on Channel 16 (156.80 MHz) and 500 kHz.
- *(f)* Umm-Qasr Radio (YIU) maintains listening watch on Channel 16 (156.80 MHz) and 500 kHz.

II. Special Instructions.

- *(a)* Navigational warnings are transmitted on 500 kHz by Basrah Control Radio (YIR).
- *(b)* North Gulf weather forecast is transmitted by: 1. Basrah Control Radio on: 440 kHz at 0530, 1330 hrs. GMT and on request. 6493.25 kHz at 0530 hrs., GMT and on request. 8668 kHz at 1330 hrs., GMT and on request. 2. Khor-al-Amaya Radio on Channel 16 (156.80 MHz) at 0530, 1330 hrs. GMT and on request.
- *(c)* Traffic Control Signals on Channel 16 (156.80 MHz) and on 500 kHz by Basrah Control Radio (YIR).
- *(d)* Traffic Control Signals on Channel 16 (156.80 MHz) and 461.5 kHz by Al-Wasiliyah Radio (YIT).
- *(e)* Traffic Control Signals on Channel 16 (156.80 MHz) and 500 kHz by Fao radio (YIS).
- *(f)* Traffic Control Signals on Channel 16 (156.80 MHz) and 500 kHz by Umm-Qasr Radio (YIU).
- *(g)* Traffic Control Signals on Channel 16 (156.80 MHz) by Khor-al-Amaya Radio.

III. Commercial and Public Correspondence. Call Basrah Radio (YIR) on Channel 16 (156.80 MHz), 500 kHz, 4, 6, 8, 12 and 16 MHz bands, and after initial contact has been established change to one of the working frequencies as instructed to pass messages.

Frequencies instruction to pass messages time table 1200 – 1400 hrs. listen on 8354 – 8374 answer on 8668 traffic lists 1305.

Note: All messages are changeable except those concerning navigational aids, distress, pratique and medical advice messages.

TUGS: 3 tugs of 4,000 b.h.p. are available to assist in berthing and unberthing.

BERTHING: The Terminal consists of a piled structure, in 22 m. of water, having 1 tanker berth on one side and 2 berths on the other side with suitable mooring dolphins and platforms ahead and astern which are connected by cat-walks. The orientation is 320°/140°. The max. loading rate, with only 1 berth in use, is 9,000 t.p.h.; with 2 berths in use the max. loading rate at each is 4,500 t.p.h. Fire-fighting towers are provided, also a helicopter platform. Loading by "Woodfield" flow booms offering 4×16 in. and 2 or 4, 12 in. hoses. Vessels of the order of 120,000 d.w.t. can be accepted at berths 5 and 6 and 330,000 d.w.t. max. draft 21 m. at berth No. 7.

The S.G. and A.P.I. and temperature of the crude oil will be supplied to the Master on radio request.

Berthing of Tankers: MENAS NOTICE No. 114/74.

No tanker of draft exceeding 17.68 m. (58 ft.) shall be permitted to berth or unberth at the existing Wharf No. 7 in the N.W. Direction.

No tanker of draft exceeding 17.00 m. (56 ft.) shall be permitted to berth at Wharf No. 7 and in the S.E. Direction.

No tanker of draft exceeding 17.68 m. (58 ft.) shall be permitted to berth at the proposed Wharf No. 8 and in the N.W. Direction.

No tanker of draft exceeding 17.00 m. (56 ft.) shall be permitted to berth at the proposed wharf No. 8 and in the S.E. Direction.

MEDICAL: Port Administration Medical Dresser will always be available to attend to quarantine matters, Derat Certificates, etc. A doctor can be made available, through vessel's Agent, upon prior request, but necessary to give 24 hours notice to arrange.

FRESH WATER: Available with 24 hours notice.

FUEL: Not available ex-wharf.

REPAIRS: No facilities to undertake ship repair work of any description.

GANGWAYS: Ships must supply their own gangways when alongside. Accommodation ladders and other ship side ladders are not suitable.

CUSTOMS ALLOWANCES: During vessel's stay at Terminal, 1 carton of cigarettes only allowed to each crew member.

SAFETY REGULATIONS: Safety regulations and fire fighting procedures will be discussed with the Master on arrival.

AGENCY: Masters of tankers should contact the Agent through Basrah Radio Station prior to arrival. Agent's representatives are not housed on the island. Ship's documents for port clearance purposes are passed by them to the Agent for action. Stores and provisions will be sent out by the Agent, given sufficient prior notice.

See "General" before first port.

AUTHORITY: The General Establishment of Iraqi Ports, Basrah.

KHOR AL ZUBAIR: 30.12 N. 47.53 E.

Also see "General" before first port.

PILOTAGE: Compulsory. Vessels bound for Khor al Zubair should send their ETA to State Enterprise for Water Transport, Telex No. 207009 B BSR IK or 207066 BWAKR IK or Cable Address "Bawakhir Basrah".

Pilot boarding station is located at Lat. 29° 39' N., Long. 48° 45' E.

ANCHORAGE: Vessels can anchor at the new anchorage within the following co-ordinates.
- (a) 29° 40.0' N., 48° 43.0 E.
- (b) 29° 40.0' N., 48° 45.0 E.
- (c) 29° 36.0' N., 48° 43.0 E.
- (d) 29° 36.0' N., 48° 45.0 E.

RESTRICTIONS: Berthing and unberthing from sunrise to sunset. The depth in the fairway is 12.0 m.

MAX. SIZE: Max. draft 10.0 m.

RADIO: See "General" before first port.

TUGS: Available.

BERTHING: Facilities available in February 1996:

Berth No.	*Length* (m.)	*Cargo handled*	*Equipment*
1	100	General Cargo	
2	180	General Cargo	4×8 ton cranes
3	180	General Cargo	4×8 ton cranes.
4	180	General Cargo	4×8 ton cranes.
5	250	Export of Fertilisers and Phosphate	1×600 t.p.h. loader.
6	250	Export of Fertilisers and Phosphate	1×300 t.p.h. loader.

Berth No.	*Length* (m.)	*Cargo handled*	*Equipment*
7	250	Export of Fertilisers and Phosphate	1×150 t.p.h. loader.
8	250	Export of Petrochemicals	4×8 ton cranes.
9	250	Export of Petrochemicals	2×6 ton cranes.
10	240	Export of Scrap Iron	2×10 ton cranes, 2×8 ton cranes.
11	320	Iron Ore and Export of Iron	2×1,500 t.p.h. loaders.
12	100	Service Berth (Lighters)	

CRANES: See "Berthing".

LPG: The terminal is located 8 miles South of Khor Zubair Port.

Jetty No.1:

Four mooring dolphins, two on each side.

Five pipelines connected to 5 loading arms.
(a) One gasoline.
(b) Two propane lines.
(c) Two butane lines.

Berth can accommodate vessels up to a maximum of 55,000 d.w.t.

Draft is expected to reach 14.0 m.

Density of water is 1009 (brackish water).

STEVEDORES: Loading and discharging in 3 shifts throughout 24 hours.

FRESH WATER: Available.

FUEL: Available.

SHIPMASTER'S REPORT: May 1990.

Location: The port lies in approximate position Lat. 30° 12.2' N. Long. 47° 52.8' E., on the Khor Abdullah, close to the boarder between Kuwait and Iraq, at a distance of about 60 miles from the Pilot Station.

Documents: Many documents are supplied by the pilot and others are supplied by the Harbour Master, Agent and/or Doctor respectively. Usual requirements are as follows:

Arrival:	1	Arrival Certificate (Pilot).
	3	Arrival Certificates (Different to above) Agent.
	3	Pilotage Certificates (River Pilot).
	3	Harbour Master Certificates (Harbour Master).
	3	Tug use Certificates (each tug) (Harbour Master).
	1	Arrival Form (Customs).
	1	Health Declaration (Doctor).
	1	Ship's Stores List (Customs).
	1	Personal Effects Declaration.
	1	Vaccination List (Doctor).
	3	Crew Lists (Doctor, Customs, Agent).
	1	Livestock List (Customs).
	1	Passenger List (Customs).
	1	Arms and Ammunition List (Customs).
	1	List of Ports visited since last time in Iraq (Agent).
	1	Request for Garbage Removal (Agent).
Departure:	3	Sailing Reports (Agent).
	3	Tug use Certificates for each tug (Harbour Master).
	1	Departure Certificate (Harbour Master).
	3	Draft Certificates (Harbour Master).
	3	Harbour Master use Certificates (Harbour Master).
	4	Pilotage Certificates (River Pilot).

Pilotage: Pilot boarding ground is in position Lat. 29° 39.0' N., Long. 48° 45.0' E., about 3 miles S.W. of Al Bakr Terminal. The usual approach is to use the deepwater Khor al Khafka Channel until about 1.5 miles from Al Bakr Terminal, then proceed due West to the Pilot Station.

The pilots are usually stationed on cutter "Shoorook", but board vessels from a tug. They answer to "Iraqi Pilot", usually listening on VHF Channel 14.

Anchorage: Designated anchorage for vessel's awaiting river passage to Khor al Zubair or Umm Qasr is bounded by following co-ordinates, Latitudes 29° 35.9' N. and 29° 39.9' N. and Longitudes 48° 43.1' E. and 48° 45.2' E.

River Passage: The river is undergoing constant dredging by both Iraqi and foreign dredgers, not only to maintain the channel, but also as part of a major works programme to enlarge and improve the facilities at Umm Qasr, where extensive new dock works for general cargo vessels are nearing completion. Construction is also well advanced on 3 jetties for the export of liquid gas, between Umm Qasr and Khor al Zubair.

The river is mainly featureless, and the buoyage is undergoing frequent change, both deliberate and accidental (buoys liable to shift). Absolute reliance cannot be placed upon them, and it is necessary to rely on the expertise of the pilot. Any vessel making night transit should not hope to find that the charted characteristics will be correct, as if a buoy becomes defective, it is not always replaced by one with the charted characteristics, if one is not available. The criteria appears to be that a buoy of same colour light is used if available, and failing that, green buoys may on occasion have white lights. Reds are usually replaced by red, but on occasions may be off-station until a suitable replacement is available. Pilot assured us that this situation will gradually improve.

Health: In addition to the message mentioned in "Radio", on passing Umm Qasr, vessels must hoist 'Q' flag or relevant light signal until vessel is cleared by quarantine doctor after berthing. This person requires a Crew List, a Vaccination List and Health Declaration as noted under 'Documents', and also requires to sight the ship's Derat Certificate.

Radio: This vessel communicated mainly by telex, to Oil Company and Agents, but it is necessary to request Free Pratique from Basrah Radio for passage as far as Umm Qasr, by advising where from, where bound, number and state of health of crew, and requesting Free Pratique. This is usually, but not always received from Basrah Radio. Sometimes pilot will board and advise that it has been received on the cutter.

Tugs: Usually at least 2 stationed at Zubair, about 3,200 b.h.p, others of similar size also available from Umm Qasr if required (about 2 hours away). Generally 2 tugs used for berthing/unberthing, but if Harbour Master agreeable, vessels with bow thrusters can sometimes be permitted to use only one tug.

Berthing: The berths used by tankers are the 3 most northerly in the port, (No's. 9,10 & 11). All are alongside continuous quay. Berth No.9 and Berth No.10 have small diameter rubber fenders slung in loops to protect concrete face. Berth No. 11, has 'buffer' type fenders. Berth No.11 is also used by barges unloading iron ore pellets by means of large moving gantries with grabbling arrangements. At present three grades of product, and occasionally crude oil, are handled, all grades being available at all berths, but usually Berth No.10 is occupied by a 35,000 ton Iraqi tanker on a semi-permanent basis, as a depot ship for fuel oil. Vessels berth outside of her (she is equipped with 4 Yokohama Fenders) to load fuel oil. This is also loaded at Berth No.9. We were chartered to carry Naphtha, which is always loaded at Berth No.9 or Berth No. 11. Gas oil is apparently usually loaded from Berth No.9, and it is not certain from which berth crude is lifted. Local information is that this is now infrequent. Naphtha is loaded from 2 × 4 in. lines, rate very slow, average 230 cu.m.p.h., which equates to about 160 tonnes per hour. This vessel usually takes 6.25 days to load a full cargo. Fuel oil and gas oil are faster, but no rates know at present.

Vessels are usually berthed port side to, as arrival is arranged by authorities to be before L.W., in order to still be stemming the tide. On occasions, there are unforeseen delays, in which case vessels are swung before berthing starboard side to. Mooring for this vessel and as far as has been seen, for other tankers, are 3 head/stern lines, 2 breast lines and 2 springs.

June 1990:

It has recently been noticed that the Oil Company also, on occasions uses a vessel on Berth No. 9 as a transshipment vessel for the loading of gas oil. Bunkers are also supplied ex-barge, both to tankers and cargo ships in the port. One of the gas jetties between Khor al Zubair and Umm Qasr is nearly complete, and the second one is scheduled to be finished before the end of the year. Local information was that the inauguration is to take place in late July 1990.

Density: About 1019.

Fresh Water: Fresh water is available, but cannot be recommended, except in cases of emergency. Rate very slow and supply intermittent. It should be alright for boiler use, but any vessel which is forced to take it, should take every possible precaution before using. It should be noted that the local people took water from us in preference to using it.

Fuel: MFO bunkers of good quality are available ex-wharf at tanker berths and ex-barge at other berths from IOTC, Basrah. Bunkers should be arranged and paid for by Owners or Charterers in sufficient time, (minimum 3 days, not counting local weekend or hoildays). The loading rate experienced by this vessel was about 30 cu.m.p.h., which is exceptionally slow.

Consuls: At Baghdad.

Customs Allowances: 200 Cigarettes per man. If stay prolonged, Customs Officer will release further supplies on request.

Repatriation: Agent advises that this is possible via Baghdad. As there are British, Dutch and Belgian dredgers working in the river, and they make crew changes, it would not seem that there are any great difficulties.

Time: Iraqi Standard Time is GMT plus 3 hours, but Summertime usually kept between April and September (check exact dates with Authorities) Summertime is GMT plus 4 hours.

Shore Leave: Nearest town is Basrah. Agent advises that there should be no problem in going there.

General: This port, and Umm Qasr, about 16 miles downriver, will become of increasing importance as the present developments are completed and other planned developments take place. Local information is that a number of dedicated products jetties are to be constructed at Umm Qasr, and that a depth of 15.0 m. at low water is the planned depth at both these and LPG jetties in due course.

Provisions: Provisions of uncertain quantity and quality are available.

Ireland

GENERAL:

CUSTOMS ALLOWANCES: Notice No. 1198 (Rev. 1), dated March 1983.

Notice by the Revenue Commissioners

Customs Allowances for (1) Frontier Zone Residents and Workers, and (2) International Transport Crews.

Scale of duty-free allowances for goods having no commercial character which are imported from Northern Ireland by frontier zone residents or workers, or which are imported by crews of means of transport used in international travel (Also see Notes below).

1. Tobacco Products:
   40 cigarettes or 20 cigarillos (cigars of a maximum weight of 3 grammes each) or 10 cigars or 50 grammes (about 2 ounces) of smoking tobacco.
2. Alcoholic Beverages:
   (a) A total of 0.25 litre (33.3% of a normal sized bottle) of distilled beverages and spirits of an alcoholic strength exceeding 22% by volume, e.g. whiskey, brandy, gin, rum, or
   A total of a 0.5 litre (66.6% of a normal sized bottle) of distilled beverages and spirits and aperitifs with a wine or alcohol base of an alcoholic strength not exceeding 22% by volume, e.g. sparkling wine, fortified wines, and
   (b) A total of 0.5 litre (66.6% of a normal sized bottle) of still wines.
3. Perfume and Toilet Waters:
   7.5 grammes of perfume and 3/80ths of a litre of toilet water.
4. Portable Fuel Containers:
   You may import a portable container of fuel duty-free with each motor vehicle being imported, provided that it contains no more than 10 litres of fuel.
5. Other Dutiable Goods:
   To a total value not exceeding IR£ 25.00 per person, or IR£ 6.00 if the person is under 15 years of age.

NOTES:

A. The allowances at 1 and 2 above are not granted to travellers under 17 years of age.

B. A Frontier Zone is a zone extending to a depth not exceeding 15 km. (9.3 miles) as the crow flies from the Land Frontier with Northern Ireland, and it includes cities, towns, villages and their environs the territory of which is partially included in the Zone. For the purpose of the grant of the above allowances, Frontier Zone residents may reside on either side of the Land Frontier.

Different allowances apply (See Notice No. 962 Rev. 1) to Frontier Zone residents who can prove to Customs that they are either travelling to a place in the State which is not within the Frontier Zone, or that they are not returning from the Frontier Zone in Northern Ireland.

C. Frontier Zone workers are persons living on either side of the Land Frontier who are required by their usual occupation to go to the other side of the Land Frontier on working days. They are granted the above allowances when they import goods while travelling for reasons connected with their work.

D. Crews of means of transport used in international travel are granted the above allowances when they import goods while travelling for reasons connected with their work.

E. The above allowances are only granted where the goods have no commercial character, that is, if they consist exclusively of goods for the personal or family use of the travellers mentioned or of goods intended as presents. The nature or quantity of the goods must not be such as might indicate that they are being imported for commercial reasons.

BANTRY BAY: 51.41 N. 09.27 W. (See Plan)

DOCUMENTS:

1 Crew List.
1 Stores List.
1 Crew Declaration.
1 Maritime Health Declaration.
Ship's Register (tonnage).
British Light Dues (receipts).
Clearance from Last Port.

APPROACHES: The approaches to the Bay are marked by the Sheep Head Light, visible 18 miles, Roancarrig More Light, visible 12 miles, and Whiddy Island Light, visible 3 miles.

Buoy No. 9 is now the only buoy on station.

PILOTAGE: Pilotage compulsory for tankers. Not compulsory for other vessels. Pilot launch available for tankers through VHF at Oil Terminal Control. Pilot launch available for other vessels if requested through Valentia Radio to their local agents at Bantry. First time users of the port are advised to use a Pilot or at least not to attempt a night entrance without one. Pilots disembark when and where requested. Contact with Pilot launch is through VHF radio. Tankers using the Oil Terminal should send ETAs to their appointed agents and also to the Oil Terminal, Bantry. Cargo vessels using Bantry Inner Harbour/Pier should send ETAs to their local Agents.

Request for Pilots may be made to Murphy and O'Connor. Ltd. Tel: 027-50001. Telex: 75870. Fax: 027-50352.

ANCHORAGE: For smaller vessels, the East end of Whiddy Island (10 fathoms) and Bantry Harbour (25 ft. depth).

MAX. SIZE:

(a) Bantry Harbour – draft not more than 25 ft.
(b) Bantry Pier – 150 ft. length with draft 12 ft.
(c) Oil Terminal – Operations suspended pending repairs.
(d) SPM installed. Operating licence applied for.

HEALTH: All vessels must exhibit quarantine signals until quarantine formalities completed or Free Pratique granted. By day, International Code Flag "Q"; by night, red light over white light.

No person other than Pilot is allowed to board any vessel either alongside jetty or at anchorage until pratique has been granted. Pilot to be informed when any suspected disease or fever on board.

RADIO: Messages and ETAs through Bantry Radio, Land's End or any UK station.

VHF: A 24-hour VHF service is maintained at Oil Terminal Control, operating on Channels 16, 14 and 11. This service is normally for use by tankers using the Oil jetty, but may also be used by ships using Bantry Inner Harbour and Pier.

BERTHING: Berthing at Bantry Pier depends on size of vessel and state of tide.

Ascon Jetty: Located on South side of Oil Terminal, this berth can accommodate small vessels up to 93 m. in length and a max. draft of 7.0 m.

A 6 in. manifold loading/discharge is situated midway along this jetty for small diesel tankers and mobile cranes can be provided for small vessels discharging cargo for the Terminal. Also see "Tankers".

TANKERS: *Oil Terminal:* (The Terminal was damaged by a disaster in January 1979 – it is non-operational at the moment, the only navigational buoy still on station is, the West Ground, No. 9). The sea island is still standing and is 1,600 ft. in length and situated approx. 1,300 ft. offshore. The island jetty is comprised of a centre platform and mooring dolphins.

SPM: Light: White morse "U" every 15 seconds. Height approximately 6.0 m., range is 3 nautical miles.

Foghorn: Morse "U" every 30 seconds, range 0.5 miles.

Hoses: 25×24 ft. and 5×16 ft. hose sections, reducing to 16 in. hoses at the manifold.

Pipeline: 1×42 in. crude line and 1×30 in. ballast line.

Berths Details:

Berth:	Ascon Jetty	SBM
Location:	Whiddy Island	51° 41' 54.826" N. 09° 32' 03.298" W.
Operator:	Bantry Terminals	Bantry Terminals
Users:	Bantry Terminals	Bantry Terminals
Density:	1025	
Nature of bottom:	Mud	Mud
Minimum water depth in approaches at zero rise of tide:	7.8 m.	30 m.
Minimum under-keel clearance in approaches:	–	8.0 m.
Minimum depth at berth:	6.0 m. forward 7.0 m. aft	30.0 m.
Minimum under-keel clearance at berth:	0.5 m.	8.0 m.
Maximum Summer deadweight:	3,000 tonnes	320,000 tonnes
Minimum Summer deadweight:	500 tonnes	80,000 tonnes
Maximum length of vessel:	93 m.	340 m.
Minimum length of vessel:	–	200 m.
Maximum permitted draft:	6.0 m. forward 7.0 m. aft	22.0 m.
Maximum bow to manifold distance:	60 m.	180 m.
Minimum bow to manifold distance:	30 m.	100 m.
Maximum stern to manifold distance:	40 m.	200 m.
Minimum stern to manifold distance:	40 m.	160 m.
What cargo grades are handled?	Gas oil	Crude oil
Are bunkers available from berth:	Gas oil	No
Are bunkers available by barge?	Gas oil	Yes
Is fresh water available at berth?:	No	No
Is fresh water available by barge?:	No	Not at present.
Dirty ballast capacity:	–	75,000 cu.m.
Slop facilities:	None	Not at present.

STEVEDORES: Available; 24 hour advance notice to Agent required. *Stevedores:* Murphy and O'Connor Ltd., Bantry. Tel: 027-50001. Telex: 75870. Fax: 027-50352.

MEDICAL: Medical attention is available on arrival and in an emergency on a 24 hour basis. Vessels should give instructions regarding medical attention through Agents who will make the necessary arrangements for emergency medical attention either on board or at Bantry Pier.

DENSITY: 1025.

FRESH WATER: Available at Bantry Pier.

FUEL: Gas oil and fuel available at Bantry Pier and Ascon Jetty in road tenders of 20 tons. Fuel also available by barge.

CONSULS: Spanish Consul (Murphy and O'Connor Ltd.). Tel: 027-50001.

REPAIRS: Local repair firms can undertake limited repairs, but nearest dockyard available for major repairs is at Cork.

SURVEYORS: Ship's surveyors available subject to 24 hours notice through Agent.

CUSTOMS ALLOWANCES: Tobacco: Depending on stay in port. Approximately 80 to 100 cigarettes per man for 2 to 3 days.

Wine and/or Spirits: half litre per man.

REPATRIATION: There are facilities for crew repatriation.

AIRPORT: Situated 48 miles away at Cork. Frequent International flights.

TIME: GMT plus 1 hour during Summer months. GMT from October to March.

HOLIDAYS: Cargo work can be carried out on most holidays, except Christmas.

POLICE/AMBULANCE/FIRE: Dial 999.

EMERGENCY CO-ORDINATION CENTRE: Marine Co-ordination Service Shannon Airport – Tel: 061-61969 and 61219.

TELEPHONES: No arrangements for placing telephones on board.

SERVICES: Vessels requiring any of the following services should advise Agent prior to arrival, giving fullest possible details.

Divers: Services of divers available to vessels for inspection and freeing fouled propellers.

Provisions: Normal supplies of most categories available. Ample time should be given to ship chandler.

Laundry: Laundry service without ironing available (Ironing can be arranged at dry cleaners, but makes operation more expensive).

Storing: Vessels can be stored by truck at Bantry Bay.

BANKS: Allied Irish Bank. Tel: 027-50008.
Bank of Ireland. Tel: 027-50377.

SHORE LEAVE: Permitted.

IDENTIFICATION CARDS: Required.

GENERAL: All vessels required to fly Irish Ensign on foremast during daylight hours. Irish territorial waters extend 12 miles seaward from mainland.

DEVELOPMENTS: One SBM may be installed to facilitate the re-opening of the oil terminal.

AUTHORITY: Bantry Bay Harbour Commissioners, Gurteen Roe, Bantry, Co. Cork, Ireland. *Tel:* 353-27-50525. *FAX:* 353-27-50016. *Contact:* Jerry Desmond, Harbour Master.

BURTONPORT: 54.59 N. 08.26 W.

PORT LIMITS: Carrickatine Beacon No. 2 at entrance to harbour.

DOCUMENTS:
Inward Clearance on arrival (C&E No. 925).
Outward Clearance on departure (C&E No. 925).
SAD (SAD-2).
C & E No. 200 (Optional) – Required if Customs are needed between 1800 hrs. and 0800 hrs.

PILOTAGE: Pilot Boarding Position: Lat. 55° 1.5' N., Long. 08° 29' W. (approx.). Contact Pilot on Tel: (075) 20502.

ANCHORAGES: Safe anchorage South of Calf Island in Arran Roads, depth 4.0 m. (approx.).

RESTRICTIONS: Daytime entry at high tide only.

MAX. SIZE: LOA 60 m., draft 4.25 m.

VHF: Contact Harbour Master on Channels 16/12.

TUGS: None.

BERTHING: North side of pier: Length 70 m., depth 2.0 m. (approx.).

CRANES: Mobile cranes and forklifts available.

STEVEDORES: Local gangs available.

MEDICAL: Local doctors available. Hospitals 8 km. and 60 km.

TANKERS: No facilities.

FRESH WATER: Available.

FUEL: Diesel and lube oil available on pier.

REPAIRS: Local engineers can undertake minor repairs.

SURVEYORS: Department of Marine Sureveyors available.

GANGWAY/DECK WATCHMEN: Ship to provide watchmen.

OPENING/CLOSING HATCHES: By crew.

CARGO GEAR: Ship's gear or shore crane.

REPATRIATION: Possible.

AIRPORT: 12 km. from port.

TIME: GMT. Summertime GMT plus 1 hour.

HOLIDAYS: Holidays do not affect shipping.

POLICE/AMBULANCE/FIRE: (075) 42007, (075) 21044 and (075) 21366, 21372 respectively.

BANKS: Three banks within 6 km.

STORING: No difficulties with storing.

SHORE LEAVE: Permitted.

GARBAGE DISPOSAL: Skips available.

DELAYS: Normally no delays.

DEVELOPMENTS: Dredging underway and almost completed.

AUTHORITY: Donegal County Council, Council House, Lifford, Co. Donegal, Ireland. *Tel:* (074) 41066. *FAX:* (074) 41205. *Contact:* The Environmental Officer.

CASTLETOWNBERE: 51.41 N. 09.54 W. (See Plan)

LOCATION: See Admiralty Chart No. 1840 (plan insert) "Bantry Bay Blackballhead/Shot Head".

Castletownbere is a Fishery Harbour Centre. Owned and controlled by the Department of Marine (Fisheries Division – Harbours).

DOCUMENTS: Health Certificate, Crew List, List of Bonded Stores, Vessel's Register, Logbook, Crew Passports.

Also valid Load Line Certificate. Safety Equipment Certificate, Radio Safety Certificate, Safety Construction Certificate, Cargo Gear Book.

PILOTAGE: Not compulsory. If Pilot required, contact Harbour Master for local Pilot.

ANCHORAGES: Bearhaven Sound. (See Admiralty Chart No. 1840), a large well sheltered anchorage adjacent to port.

MAX. SIZE: Always afloat. Dinish Island Wharf. 17 ft. MLWS. Length 305 ft.
Mainland Wharf East. 12 ft. MLWS. Length 426 ft.
Mainland Wharf West. 12 ft. MLWS. Length 557 ft.
All berths are accessible for wagons/containers, etc.

HEALTH: Customs grant pratique if vessel is clear, if not Doctor will be notified.

VHF: Harbour Master's Office on Channel 16.

TUGS: None.

BERTHING: In accordance with Harbour Master's instructions. Berthing day or night.

STEVEDORES: None. Local labour available if required.

MEDICAL: No advance notice necessary. Hospital facilities available.

FRESH WATER: Available at all berths.

FUEL: Available at all berths, no notice required (diesel only) and all berths accessible to tanker wagons. Also available at Dinish Island Wharf where there are 3 lines at the West end of the wharf.

REPAIRS: Syncrolift for vessels with max. weight 200 tons and 100 ft. LOA. Carriages and bays for 3 vessels.

Local machine shops/engineers for repair work available. Electronics engineer available.

GANGWAY/DECK WATCHMAN: Not required.

OPENING/CLOSING HATCHES: By crew.

CUSTOMS ALLOWANCES: As per current regulations.

AIRPORT: Cork Airport 80 miles, served by regular airlines.

TIME: GMT plus 1 hour, reverting to GMT from October to March.

HOLIDAYS: Cargo work can be arranged on holidays.

POLICE/AMBULANCE/FIRE: Tel: Police 70002. Ambulance 70004. Fire station 70049.

TELEPHONES: Not available for placing onboard.

BANKS: Allied Irish Bank Ltd., Castletownbere. Tel: 027-70025.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Not required.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Irish Pound – Punt (IR£).

GENERAL: Castletownbere is designated as a fishery harbour centre, for the import/export of fish, fish products and processed fish, from local plants. Also for landing of fish from local fishing fleets. Ice plant on West end of Dinish Wharf.

Stores/Provisions: Available locally.

Bonded Stores: Available from Cork.

Customs and Excise: Office in harbour office building. Tel: 027-70102.

AUTHORITY: Department of The Marine, Harbour Office, Castletownbere, Co. Cork. *Tel:* 027-70220. *FAX:* 027-70329. *Contact:* Captain W. H. Jones, Harbour Master. Tel: (after hours) 027-70128.

CORK (including Cobh, Whitegate): 51.50 N. 08.17 W. (See Plan)

PORT LIMITS: Line joining Cork Head and Power Head.

DOCUMENTS:
3 Crew Lists.
2 Passenger Lists.
1 Health Declaration.
3 Customs Manifests.
For Shore Formalities
Ship's Register.
Safety Equipment Certificate.
Safety Radio Certificate.
Load Line Certificate.
Light Dues Certificates.
Derat Certificate.

PILOTAGE. Minimum 24 hours notice of ETA and draft to Agent. Accurate ETA's are vital as Pilots only go afloat on this basis. When within VHF range, contact should be established through "Cork Harbour Radio" (See "Radio"). This station combines Port Operations and Information service and co-ordinates the pilotage service. The pilot launches are also fitted with VHF Channels 6, 12 and 16.

For large deep-drafted vessels, Pilot usually boards up to 2 or 3 miles South of Roches Point. Compulsory river pilotage area extends upstream from Spit Bank Light.

ANCHORAGES: Safe deep-water anchorages as arranged with Pilots.

RESTRICTIONS: Navigation by night and day. Ships of 5.0 m. draft can make passage of river to Cork at any stage of tide.

Bridges: Near Albert Quay and Andersons Quay.

MAX. SIZE: *Cork:* Max. length 152 m. Draft fresh water on Spring tides 8.7 m. on Neap tides 7.8 m.

Whitegate: Tankers up to 275 m. length. 11.6 m. draft. Max. draft 12 m. at highest tides.

Ringaskiddy: Max. size 60,000 d.w.t. LOA 210 m. Max. draft 13.0 m.

HEALTH: Health Declaration form is presented to Customs Officer or Port Health Inspector and Pratique issued without delay. In cases of disease on board notify Agents who inform Health Authorities.

RADIO: Coast Station – Valentia Radio. W/T and R/T. R/T link call facilities available. Telex fitted. In U.K., Coast Stations also relay messages direct to Agents.

VHF: Harbour Radio: VHF Channels 12, 14 and 16, 24 hour watch maintained. Call sign "Cork Harbour Radio". A Port Operations and Information Service is provided and it is through this organisation that the requirements of the Harbour Master will be made known.

Vessels underway are required to maintain a VHF watch on Channel 12 or 14 as instructed.

RADAR: No Port Control Radar. Pilot boats equipped with radar.

TUGS: Deep draft vessels take tug assistance from Horse Head to Cork and vice versa. Tug's lines are used. Tankers use two to three tugs for berthing at Whitegate Terminal.

1×2,000 h.p., 2×3,500 h.p., 1×2,500 h.p. and 1×1,300 h.p. The latter 4 tugs are stationed in the Lower Harbour.

BERTHING: The quays at Cork afford good accommodation for vessels up to 152 m. LOA, on fresh water drafts of 7.8 m. on Mean Neap tides and 8.7 m. on Mean Spring tides with 8.8 m. alongside quay. The Deep Water Quay at Cobh is 189 m. long and vessels of 6.0 m. draft can berth with safety. The deep water berth at Ringaskiddy can accommodate vessels up to 60,000 d.w.t. with max. draft 13.0 m.

Berth	*Length* (m.)	*Depth* (m.)
City Quay:		
Albert Quay	135.0	5.6
South Jetties	411.5	8.8
South Deepwater Quay	201.2	6.0
Ford's Wharf (Private)	347.5	4.5
E.S.B. (Private)	152.4	4.0
Penrose Quay	146.0	3.6
Horgan Wharf	205.7	8.8
North Swinging Basin	146.6	6.9
North Deepwater Quay	335.5	5.2
Custom House Quay (North)	176.9	7.3
Custom House Quay (South)	167.6	4.5
Tivoli:		
Ro-Ro Terminal	125.0	5.0
Container Berth	210.0	6.9
General Purpose Berth	250.0	8.8
Bulk Liquid/Livestock	115.8	5.1
Oil Jetty	24.4	3.9
Lower Harbour Quays:		
Deepwater Quay (Cobh)	183.0	6.1
Kennedy Wharf	61.0	3.2
Whitegate Oil Jetty No. 1 (Private)	365.0	11.9
Whitegate Oil Jetty No. 2 (Private)	106.7	10.2
Spencer Jetty (Private)	131.0	5.2
Basin (Private)	152.0	5.2
Bunkering Berth (Private)	76.4	7.1
ADM Jetty (Private)	259.0	9.6
Haulbowline Industries (Private)	53.3	9.0
Ringaskiddy Ro-Ro/Ferry Terminal No. 1	180.0	9.2
Ringaskiddy Ro-Ro Ramp No. 2	150.0	8.5
Ringaskiddy Deep Water Terminal	335.0	13.4
Marino Point (Private)	237.0	10.0
Passage West (Private)	274.3	9.0

SPECIAL CARGO FACILITIES:

Grain: 1 mobile suction discharge plant at South Jetties, discharge rate up to 120 t.p.h. Max. ship size 152 m. LOA, 8.7 m. draft on spring tide. Storage capacity 80,000 tons.

1 suction unit×150 tonnes per hour. Silo capacity 7,000 tons at South Deepwater Quay.

Deepwater Terminal equipped with 2 high output grab cranes (400 tonnes/hr. per crane) and dust controlled hoppers. 3 private grain silos with storage capacity 100,000 tonnes.

Containers: 1×30 ton and 1×40 ton travelling transporter container cranes backed up by 4×30 tonne straddle carriers. Length of berth 210 m. Depth at chart datum 6.9 m. 64 reefer points.

Roll-on/Roll-off Berth "Tivoli": Max. height of link span 9.0 m. above chart datum. Min. height of link span 3.0 m. above chart datum. Max. loading 65 tons. Distance from side of berth to centre line of link span 11.4 m. Max. ship size 137 m. LOA. Berth dredged to 5.0 m. above chart datum.

Roll-on/Roll-off Berth Ringaskiddy: Ramp No. 1: Length of linkspan 42.1 m., width of linkspan 7.2 m. spadehead at outer end 31 m.×20 m. Berth dredged to 9.2 m. above Chart Datum.

Ramp No. 2: Length of linkspan 42.1 m., width of linkspan 7.2 m. Berth dredged to 8.5 m. above Chart Datum.

Livestock loading Ramp and Lairage: Max. ship size 106.7 m. LOA. Berth dredged to 5.1 m. above chart datum. Accommodation for 1,200 head of cattle.

ADM Jetty: Length between dolphins 259.2 m. Max. draft 9.6 m. on all tides.

Molasses discharge rate, 1,000 t.p.h.
Fuel Oil discharge rate, 600 t.p.h.
Sulphuric Acid discharge rate, 200 t.p.h.

STEVEDORES: Labour hiring times. Week-days 0800, 1000 and 1130 hrs. Gangs for week-end working must be hired at 1700 hrs. on Fridays. ETA advice could include number of gangs workable.

MEDICAL: All medical and hospital services available at short notice.

TANKERS: Irish Refining Co. Terminal at Whitegate is situated on East side of Lower Harbour. Two deep water berths for tankers. Max. size, 55,000 d.w.t. or 90,000 d.w.t. partly laden. Slop reception facilities available.

Length between dolphins, 366 m.
Crude discharge rate up to 4,000 t.p.h.
HFO loading rate up to 1,700 t.p.h.
Gas Oil loading rate up to 700 t.p.h.
Petrol loading rate up to 600 t.p.h.
LPG loading rate up to 20 t.p.h.

Diameter of Hoses:
Berth No. 1: Crude and Black Oils 10 in. ASA.
Clean Products 8 in. ASA.
Berth No. 2: All Products 6 in. ASA.

I.F.I. (Irish Fertiliser Industries): At Marino Point. Overall length dolphin to dolphin 375 m. Dredged to 10.0 m. above chart datum to accommodate Ammonia tankers of up to 15,000 d.w.t. and bulk or general cargo vessels of up to 25,000 d.w.t. (Partly loaded). Vessels of up to 186 m. LOA and 9.5 m. draft will be acceptable.

DENSITY: Average density of water in river 1008.

FRESH WATER: Available at all quays ex-hydrants – delivery rate 25 t.p.h.

FUEL: Major grades of bunker fuel and diesel as well as marine lubricants can be obtained through suppliers. Delivery by road or river tanker.

CONSULS:
Belgium: D. Daly, Pembroke House, Pembroke Street, Cork. Tel. 277399.
Denmark: T. Halpin, Algonquin House, Kilcoolishal, Glamire, Co. Cork. Tel: 353535.
Finland: C. Doyle, 1 Connell Street, Cork. Tel. 275235.
France: F. Letellier, c/o Eurotranslations, 6 Sullivans Quay, Cork. Tel. 276093.
Germany: M. Corkery, Solicitor, Camden House, Camden Quay, Cork. Tel: 509367.
Italy: P. Cali, University College, Cork. Tel. 276871.
Netherlands: F. Ronayne, Ronayne Shipping Co.Ltd., Monahan Road, Cork. Tel: 317900.
Norway: B. J. Foley, c/o Marine Transport Services, Atlantic Quay, Cobh. Tel: 811485.
Spain: F. Ronayne, c/o Ronayne Shipping Ltd., Monahan Road, Cork. Tel: 317900.
Sweden: W.H. Sullivan, 6 St. Patrick's Quay, Cork. Tel: 500588.

REPAIRS: All types of deck and engine repair facilities available.

DRY DOCK: Cork Dockyard main dry dock can take vessels up to 158.5 m. in length. Floating dock of 2,000 tonnes lifting capacity, also 4×40 tonne cranes. Able to carry out repairs to ships afloat of any tonnage using the port.

SURVEYORS: None.

WATCHMEN: Recommended but not compulsory.

OPENING/CLOSING HATCHES: Crew must perform this work as dockers decline to do it.

CUSTOMS ALLOWANCES: 200 cigarettes per man, and 1 bottle spirits per man.

CARGO GEAR: No special local requirements. Regulations similar to British Board of Trade safe working requirements. 1×30 ton and 1×40 ton container crane is provided by Cork Harbour Commissioners. A number of mobile cranes up to 100 tonnes capacity are available from local plant hire firms and stevedoring firms.

REPATRIATION: Can be carried out without difficulty.

AIRPORT: 5 miles from city. High frequency scheduled flights to Irish, British and continental airports.

TIME: GMT from 0200 hrs. on Sunday following 3rd Saturday in October to 0200 hrs. on Sunday following 3rd Saturday in March (unless latter is Easter Saturday, in which case to 0200 hrs. on Sunday following 2nd Saturday in March).

One hour ahead of GMT (i.e. Standard European time) for remainder of year.

HOLIDAYS: New Years Day, St. Patrick's Day (March 17th); Good Friday; Easter Monday; First Monday in May; First Monday in June; First Monday in August; Last Monday in October; Christmas Day (December 25th); St. Stephen's Day (December 26th).

POLICE/AMBULANCE/FIRE: 999 is emergency number for all services. Actual: Police 273161; Fire 966333; Ambulance 966333.

EMERGENCY CO-ORDINATION CENTRE: Port Operations and Information Station will provide this service and will raise the alarm in the event of a major marine emergency. Tel: (021) 811380, VHF Channels 12 and 16. Outside the port area, emergency services will be co-ordinated by Irish Marine Emergency Service, Dublin. Tel: 01-6620922, 6620933. or through Cork Air Traffic Control during opening hours (021) 965326.

SERVICES: All tanker services available at Whitegate. Otherwise, various general services required by ships available at Cork.

BANKS:
Allied Irish Banks Ltd., 66 South Mall, Cork. Tel: 276811.
Bank of Ireland Ltd., 32 South Mall, Cork. Tel: 276712.
National Irish Bank Ltd. 71 South Mall, Cork. Tel: 277944.
Ulster Bank Ltd. 54 South Mall, Cork. Tel: 274381.
Citibank N.A., Cork. Tel: 271953.
Anglo Irish Bank Corporation, Cork. Tel: 271761.

STORING: See "Prelims".

1. Vessels can be stored by truck.
2. No restrictions on storing. Barge storing not applicable.
3. Trucks may proceed alongside for storing.
4. Fork lifts may be used for storing.
5. Bonded stores authorised by Collector of Customs, Government Buildings, Sullivans Quay, Cork.
6. Local riggers may be employed to assist with storing.

SHORE LEAVE: No restrictions on shore leave.

IDENTIFICATION CARDS: Not required.

GARBAGE DISPOSAL: Private contractors available, and can be arranged through ship's Agent.

WASTE OIL DISPOSAL: Private contractors available, and can be arranged through ship's Agent.

Atlas Waste Oil. Tel: (0502) 22411 (24 hours) or Freephone 1800-504-504.

SEAMAN'S CLUBS: Seafarers' Club, 29/30 South Terrace, Cork. Tel: (021) 505011. Facilities: Snacks, bar, soccer, shop, currency exchange and international telephone.

CURRENCY: Irish Pound.

DELAYS: Except waiting for tide there are very few occasions on which entry to or departure from the port is subject to delay.

DEVELOPMENTS: The deepwater berth at Ringaskiddy became operational in August 1986, thus concluding the first phase of the creation of the largest deepwater industrial complex in Ireland. Ringaskiddy has a fully serviced 1,000 acre area owned by the Industrial Development Authority. Cork Harbour Commissioners have reclaimed a further 155 acres for use as operational and storage areas.

Ringaskiddy is serviced by the Cork City and Harbour Water Supply Scheme which provides 30 million gallons of water per day. The Irish Government has enacted legislation to set up a freeport at Ringaskiddy which will enhance the attractiveness of Cork Harbour.

A second linkspan became operational at the Ringaskiddy Ferry Terminal in 1996.

The channel to Tivoli Berths has been dredged to 6.5 m.

The Kinsale Gas Field 30 miles due South of Cork Harbour serves industry in the harbour area and is linked to the national natural gas grid. The gas is used by I.F.I. at Marino Point in their ammonia/urea plant.

AUTHORITY: Cork Harbour Commissioners, P.O.Box 53, Custom House Street, Cork, Ireland. *Tel:* (021) 273125-9. *Telex:* 75848. *FAX:* (021) 276484. *Contact:* P. Keenan, Chief Executive. D. Healy, Manager – Engineering Services. Captain P. Farnan, Harbour Master. S.J. Geary, Marketing Manager. A.C. Feehely, Secretary.

DUBLIN: 53.21 N. 06.16 W. (See Plan)

PORT LIMITS: Port of Dublin includes all water between Rory O'More Bridge (over River Liffey) and imaginary line drawn from Sutton on North side of Dublin Bay to Sorrento Point at Dalkey on South side, but excluding Dun Laoghaire Harbour.

DOCUMENTS:

Forms C. 1 or C. 2 Customs report form (actually a copy of Manifest).

Form CU. 35 Victualling Bill (note covering Bonded Stores to be loaded Dublin).

Form CU. 7 Entry Outwards in ballast (for vessels sailing light).

Form CU. 10 Entry Outwards with cargo.

Form CU. 25 Entry Outwards (details of previous and forthcoming voyages).

Health Form.

"Jerque" Note (List of bonded stores on board on arrival).

Crew List must also be presented with personal declarations of dutiable possessions (i.e. radios; T.v.s; record players, etc.).

PILOTAGE: Limits of Dublin Pilotage District are waters of River Liffey between Butt Bridge and of sea Westward of Sixth Meridian West longitude between parallels of latitude passing through Bailey Lighthouse on North and through Sorrento Point on South including all bays, creeks and harbours and all tidal and closed docks within such area. Following classes of ships exempted from compulsory pilotage if not carrying passengers:

(1) Ships trading coastwise of not more than 200 tons gross tonnage.
(2) Home trade ships (including ships trading coastwise), of not more than 450 tons gross tonnage, excluding ships carrying petroleum or explosive cargo.

All vessels carrying passengers, tankers carrying petroleum, gas or chemicals, and vessels carrying explosives as cargo are required to take a pilot.

Incoming Vessels: Pilotage service is based on a Pilot shore station situated on Eastern Breakwater and operated by direct boarding cutters, each about 15.0 m. long. Harbour Office, Pilot Shore Station and Pilot Cutters are equipped with VHF Channels 16, 12 and 6.

ETAs should be given 12 hours before arrival and amendments may be made up to 2 hours before original ETA.

ETAs and any subsequent amendments should be passed by radiotelephone (VHF Channel 12; call sign "Dublin Port Radio") or radiotelegram to "Harmaster Dublin".

Holders of Dublin Pilotage Certificates should indicate this by flashing single letter signal "C" when approaching pilotage area between sunset and sunrise.

Vessels Outward Bound or Shifting: Order for Pilot should be made early as possible through Harbour Office Tel: 855-0888, Fax: 836-3850 or Telex: 32508 during office hours (0900 – 1700 hrs.); and Tel: 8748779 outside office hours. Following details should be given: name and situation of vessel, destination, draft, time of departure. It must be stressed that such orders must be made in sufficient time making due allowance, particularly at night, for accessibility of vessel. A minimum of 1 hour's notice is necessary for inward or outward Pilot.

ANCHORAGES: It is the general practice to anchor about 1 nautical mile South of Rosbeg South Buoy, about 10 km. from the Quays of Dublin. Depth at L.W. is 11.0 m. – 18.0 m.

RESTRICTIONS: Draft restrictions: 10.2 m. HW Normal Tides; 10.5 m. HW Spring Tides. Vessels drawing 6.5 m. or less can enter at any state of tide.

ENTRANCE: Approach well lighted and easy of access. Inner Channel of Harbour, formed by almost straight channel of River Liffey from entrance at Poolbeg Lighthouse to Alexandra Basin, is 215 m. wide for greater part of length and maintained at depth of 7.8 m. LW. From Alexandra Basin entrance, River is quayed for a distance of nearly 3.0 km. to Matt Talbot Memorial Bridge in centre of City.

MAX. SIZE: State of tide governing max. draft, no breadth restriction, overall length restriction of approx. 220 m.

HEALTH: Pratique automatic for movements Ireland/U.K. area. Maritime Declaration of Health indicates requirements. This declaration must be submitted on arrival by Master of ship coming from foreign port. This requirement does not now normally apply to vessels trading *solely* between Ireland and ports in Germany, Belgium and Netherlands, Atlantic and Mediterranean coast of France, Italy and Greece. Other requirements mentioned on Maritime Declaration of Health form still apply to such ships.

"Foreign Port" is port situated elsewhere than Ireland and UK. Master of foreign-going ship may be asked to produce valid Derat Certificate or Derat Exemption Certificate in respect of vessel. Travellers (passengers and crew) may be requested to produce valid certificates of vaccination. Ships may be subjected to sanitary inspection by inspectors of Port Health Service.

Swill must not be landed from vessels which trade outside Ireland.

Granting of Pratique by radio not practised at Dublin, But is under consideration at present.

RADIO: Dublin Radio, Valentia Radio, Ireland. Portishead Radio, U.K. Anglesea Radio, U.K.

TUGS: 3 tugs available, equipped with VHF Channels 16, 12 and 6, and modern fire pumps. Normally meet vessels at North Bank Lighthouse (roughly half-way mark of main channel) 1 mile West of Poolbeg Lighthouse.

BERTHING: The following berthage is available to shipping using the port.

North Side of the River, from Talbot Memorial Bridge to North Wall Light, available as berthage, 2,244 m., depth 3.5 m. – 6.5 m. LAT. Cranes: 4×4 tonnes.

Alexandra Basin, South and East sides: Length of berthage 520 m., depth 7.2 m. – 7.8 m. LAT.

Alexandra Quay West (North side of Alexandra Basin): Length of berthage 355 m. depth 9.8 m. – 10.2 m. LAT. Cranes: 1×20 tonne grab crane, 4×4 tonnes.

Alexandra Quay East: Length of berthage 360 m., depth 9.6 m. – 10.3 m. LAT. Cranes: 3×4 tonnes.

Ocean Pier West (East end of Alexandra Basin): Length of berthage 400 m., depth 9.5 m. LAT. Cranes: 1×10 tonnes, 4×4 tonnes, 1×35 tonne derrick.

Ocean Pier South: Length of berthage 142 m. depth 9.5 m. LAT.

Ocean Pier East: Length of berthage 244 m., depth 9.7 m. LAT. Cranes: 3×4 tonnes.

South side of the River, from Talbot Memorial Bridge to Ringsend Gut, available as berthage 1,598 m., depth 3.6 m. – 6.5 m. LAT. Cranes: 1×4 tonne.

South Bank Quay: Length of berthage 205 m., depth 8.5 m. LAT.

Lift-on/Lift-off: Dublin Port has three dedicated Lo/Lo Terminals:

The Marine Terminals Ltd. (MTL) facility at South Bank Quay;

The Dublin Ferryport Terminal (DFT) at Ferryport on the North side of the River Liffey, and

The Coastal Line Container Terminal, also on the North side, and at the Eastern extremity of the port.

Coastal Line Container Terminal:

Length of Berth:	220 m.
Depth at LAT:	6.1 m.
Cranes:	3×30 tonnes transporters.
Second-Handling Equipment:	3×30 tonnes rail mounted Goliath cranes.
Storage Area:	4.25 hectares.

On this Terminal, Coastal Line provide fully flexible round-the-clock stevedoring to scheduled vessels, operating up to 8 direct services each week to Great Britain and the Netherlands.

A second working berth will be constructed and cranage and storage facilities are being enhanced. A third ship-to-shore Wellman gantry crane is being installed, which will enable two ships to be worked simultaneously. The expansion now being undertaken is expected to provide the necessary capacity at the Terminal for the foreseeable future.

DFT Terminal Ferryport:

Length of Berth:	229 m.
Depth at LAT:	6.0 m.
Cranes:	1×30 tonnes transporter. 1×28 tonnes derrick crane.
Second-Handling Equipment:	3 straddle carriers. 2×12 tonne forklift trucks.
Groupage Facility:	6,000 sq.m. available.
Storage Area:	11 hectares.

On this Terminal, which is rail-linked, DFT provide fully flexible round-the-clock stevedoring to scheduled vessels, operating up to 4 direct services each week to Belgium, France and the Netherlands.

The Container Terminal, which opened in 1972, is currently being expanded with the addition of 100 m. of new quay, deeper berths, a new container transporter crane with the necessary second-handling equipment and container stacking area. The existing transporter crane is also being upgraded to incorporate state-of-the-art technology.

MTL Terminal, South Bank Quay:

Length of Berth:	567 m.
Depth at LAT:	7.6 m.
Cranes:	1×40 tonnes transporter. 1×35 tonnes transporter. 1×30 tonnes transporter. 1×32 tonnes derrick crane.
Second-Handling Equipment:	5× Hyster forklift trucks. 1× Kalmar forklift truck.
Storage Area:	13 hectares.

On this Terminal, Marine Terminals Ltd. provide fully flexible, round-the-clock stevedoring to scheduled vessels, operating up to 15 direct services each week to Great Britain, Belgium, France, Germany, Netherlands, Latvia, Spain, Portugal, Italy, Greece and Eastern Mediterranean ports.

Although MTL currently has the deepest Lo/Lo berths in the port (up to 7.6 m. LAT), there is a growing requirement for the company to provide still deeper berthage. The company is, therefore, planning to extend the Terminal Eastwards to incorporate 200 m. of existing quay wall with 8.7 m. (LAT) available. A ship-to-shore gantry crane may also be provided.

Common User Terminal:

In addition, containers are also handled under a 35 tonne derrick crane at Ocean Pier West, in the common user area of the port. A storage area of 1.6 ha. adjoins the 183 m. long berth, with a depth at LAT of 9.4 m.

Stevedoring services and second-handling equipment are offered by the three companies licensed to operate in this area viz:

Dublin Port Stevedores Ltd.
Poolbeg Stevedoring Co. Ltd.
Portroe Stevedores Ltd.

Roll-on/Roll-off: Terminal details:

	No. 1 Ramp	No. 5 Ramp
Length of Berth:	140 m.	216 m.
Depth at LAT:	6.0 m.	11.0 m.
Length of Shore Ramp:	35 m.	40 m.
Width of Shore Ramp:	6.0 m.	20.0 m. at ship tapering to 17.25 m. at shore end.
Maximum Vehicle Load:	140 tonnes	180 tonnes

A passenger terminal building adjacent to No. 5 Ramp caters for the 700,000 passengers, who use this facility annually.

Stevedoring services are provided by Dublin Ferryport Terminals (DFT).

Additional Ro/Ro terminal facilities are being developed at North Quay Extension and Ferryport.

BULK HANDLING FACILITIES:

Dry Bulk Jetty in Alexandra Basin: Length of jetty 247 m. depth 9.8 m. (North side) and 11.0 m. (South side). This jetty is equipped with a bulk ore conveyor and ship loading system for export of ore concentrates. 2×10 tonne grabbing cranes. It is also equipped with pipelines for molasses. The jetty is also used for coal imports with a separate conveyor system linking the jetty with a back area coal storage site.

Coal/Dry Bulk Quay, South Side: Length of quay 357 m., depth 11.0 m. LAT. This quay, with storage areas, hoppers, conveyor belts, 2×4 tonne and 2×10 tonne grabbing cranes is one of the most sophisticated bulk handling berths in Western Europe. The quay is also equipped with pipelines for molasses in bulk.

STEVEDORES: ETA required by Stevedores before 1500 hrs. Monday to Thursday for work the following day, and by 1500 hrs. Friday for work Saturday, Sunday or Monday.

Average discharge rates: *Grain:* 3,000 tons per day. *Timber:* 120 standards packaged per gang/day. *General:* Bagged cargo and fast general, including paper, 250 tons per gang/day. *Other Generals:* 90 tons per gang/day.

Stevedores for deep-sea section: Dublin Cargo Handling Ltd., East Wall Road, Dublin 1. Tel: 745023. Telex: 30903.

TANKERS: No slop residue discharge facilities.

Tanker Berths	*Depth at LAT*	*Length*
No. 1, West Oil Jetty, West Side	10.2 m.	226 m.
No. 2, West Oil Jetty, East Side	10.4 m.	235 m.
No. 3, East Oil Jetty, West Side	9.8 m.	207 m.
No. 4, East Oil Jetty, East Side	6.4 m.	110 m.
South Bank Quay (E.S.B.)	7.5 m.*	213 m.
South Bank Quay (Poolbeg)	10.6 m.*	198 m.

*Time suitable for navigation in approaches – 1 hour before High Water for deepest draft.

Common User Oil Pipe-line System: This system provides 21 pipelines to Eastern Oil Jetty and 15 pipelines to Western Oil Jetty. Cargoes of tankers berthed at these jetties can be discharged to storage installations of any of the oil companies.

E.S.B. (Electricity Supply Board): At Poolbeg Jetty (formerly known as "Pigeon House 'B' Jetty"). Max. size 35,000 d.w.t. with the aid of tugs. Present depth sufficient for vessels of this size.

DENSITY: 1025 at all stages of tide.

FRESH WATER: Available at all berths by 2.5 in. hose line – 8/10,000 g.p.h. per hydrant.

FUEL:

Grades of Fuel Oil	*Viscosities*
Heavy Fuel Oil	3,500 sec. max.
Inter. Fuel Oil	1,500 sec. max.
Medium Fuel Oil	950 sec. max.
Light Fuel Oil	200 sec max.

Advance Notice required. Bunkering by pipeline depends on availability of Oil Berth. Bunkering by Oil Barge normally a.m. notice on day required. Bunkering by Road Tanker – 24 hours notice.

FIRE PRECAUTIONS: Port By-Laws; Harbour Master's orders/Letters to Masters. Ref.: International Maritime Dangerous Goods Code.

Packed Petroleum: IMO Recommendations on the safe transport, handling and storage of dangerous substances in port areas.

Fibrous Cargoes: See Directives No. 2 and 3 to Masters. Jute, hemp and sisal must be removed ex-ship from port area.

Cotton, cocoa fibre, kapok, etc., must be removed ex-ship to Hazardous Goods Shed.

General: Harbour Police-Watch obligatory during handling of all hazardous or inflamable cargoes, and on tankers during vessels' stay in port. No smoking permitted in Oil Zone, sheds, etc.

CONSULS: *Embassies:*

	Telephone		*Telephone*
Argentine	69 15 46	Indian	97 08 43
Australian	76 15 17	Italian	60 17 44
Austrian	69 45 77	Japanese	69 42 44
Belgian	69 20 82	Netherlands	69 34 44
	69 15 88	Nigerian	60 43 66
British	69 52 11	Portuguese	89 33 75
Canadian	78 19 88	Russian	97 75 25
Chinese	69 17 07	Spanish	69 16 40
Danish	75 64 04	Swedish	71 58 22
Egyptian	60 65 66	Swiss	69 25 15
French	69 47 77	Turkish	68 52 40
German	69 30 11	U.S.A.	68 87 77
Greek	76 72 54		

Consular Offices:

Brazilian	85 19 71	Monaco Consulate General	73 55 66
Cyprus	69 13 97	Norway Honorary Consul	79 36 83
Ecuador	69 54 48	Pakistan Honorary Consul of	69 82 34
Finland Honorary Consul General of	76 51 53	Panama	74 78 67
Iceland Honorary Consul General of	80 81 03	Peru	80 02 56
Luxembourg Honorary Consul General of	68 17 56	Philippines Honorary Consul of	76 01 50
Malta Honorary Consul of	76 03 33	Portugal Honorary Consul of	89 44 16

REPAIRS: All classes of repairs carried out by Independent Companies located in the Port area.

DRY DOCKS: Graving Dock No. 2: Inside length with caisson gate in: Extreme outer position 202 m.; normal outer position 194 m. Centre position 112 m.; inner position 78 m. Width at entrance 24.4 m.; depth over sill at HWOST 7.62 m. Depth over blocks at HWOST 6.8 m.

The intermediate positions for the caisson gates make it possible to operate inner section so as to accommodate a small or medium-size vessel independently of remainder of dock.

Equipment: One E.P. crane, 25 tons at 22 m. radius to 5 tons at 30 m. radius. Seven power capstans of 5, 10 and 15 tons pull. Fresh and salt water hydrants at dock sides.

GANGWAY/DECK WATCHMEN: If no watchmen from crew, then shore watchman is recommended.

OPENING/CLOSING HATCHES: Patent hatches by crew; other hatches with some assistance from dockers.

CERTIFICATES:

Certificate of Registry.
Radio Safety Certificate.
Load Line Certificate.
Current Trinity House light bills.
Safety Equipment Certificate.

CUSTOMS ALLOWANCES: Tobacco per 8 days: 200 cigarettes – Master; 150 cigarettes – Officers; 100 cigarettes – Crew. Wine and/or Spirits: quarter pint per day per man.

REPATRIATION: May be arranged by ship's Agent through Department of Justice.

AIRPORT: Dublin Airport, 6 miles North of city centre, served by regular services direct to U.K., Europe, U.S.A. and Canada.

TIME: GMT plus 1 hour. Reverting to GMT between October and March.

HOLIDAYS: New Year's Day (1st January); St. Patrick's Day (National Holiday) (17th March); Good Friday*; Easter Monday; Spring Bank Holiday (1st Monday in June); August Bank Holiday (1st Monday in August); Last Monday in October; Christmas Eve, half holiday (24th December); Christmas Day (25th December); St. Stephen's Day (26th December).

*Not a port holiday, but all other offices closed.

These days can be worked at Sunday rates and conditions.

POLICE/AMBULANCE/FIRE: Contact Harbour Police patrol or at Dock Gates, or dial 999 on public telephone for all emergency services.

Port fire alarm system is linked via fire panel at Alexandra Road to local fire station.

TELEPHONES: Coin-box telephones available near Oil Berths. No rental charges; normal coin-box rates.

SERVICES: No facilities for tank cleaning; discharge of tank washings in small quantities to road tankers.

SHORE LEAVE: No port restriction on crew's shore leave.

GENERAL: Masters' cash requirements for week-end must be notified to Agent by noon on Friday.

GARBAGE DISPOSAL: IPODEC Ltd., Tel: 593781. Fax: 592337. Notice of 48 hours is desirable. Charge IR£ 300.00 per skip.

WASTE OIL DISPOSAL: Atlas Waste Oil. Tel: (0502) 22411 (24 hours) or Freephone 1800-504-504. Road tanker service free of charge, unless there is a high water content, when a charge is made.

SEAMAN'S CLUBS: Missions to Seamen, St.Anne's Dawson Street, Dublin 2. Tel: 611984.

Stella Maris, c/o Fr. Albert, Franciscan Friary, Church Street, Dublin 7. Tel: 8730599.

AUTHORITY: Dublin Port and Docks Board, Port Centre, Alexandra Road, Dublin 1. *Tel:* (01) 855-0888. *Telex:* 32508. *FAX:* (01) 836-3850, 874-1241. *Cables:* Harbour Dublin. *Contact:* E.P. Connellan, Chief Executive. Captain R.G.J. Wiltshire, Assistant Harbour Master.

DUN LAOGHAIRE: 53.18 N. 06.08 W. **(See Plan)**

PORT LIMITS: Seaward port limits extend to 457 m. beyond the breakwater pierheads.

DOCUMENTS: See "Dublin".

PILOTAGE: See "Dublin". Dun Laoghaire lies within the Dublin Pilotage District.

ANCHORAGES: Scotsmans Bay. See "Irish Coast Pilot".

RESTRICTIONS: See "Irish Coast Pilot".

MAX. SIZE: Fairway dredged to approximately 5.5 m., see chart for latest soundings.

HEALTH: See "Dublin".

RADIO: See "Dublin".

VHF: The Harbour Office has Channels 16, 14, 12, 9 and "M". A continuous dual listening watch is kept on Channel 16 and working Channel 14. Call sign "Dun Laoghaire Harbour Office".

TUGS: Tugs arranged through Dublin Port.

BERTHING: Harbour formed by 2 breakwaters, East Breakwater length 1,290 m. West Breakwater, length 1,548 m. Width at entrance between breakwaters, 232 m. Depth at entrance 6.2 m. – 7.9 m.

Berth No.	*Berth Name*	*Berth Length* (m.)	*Depth below Chart Datum* (m.)
1	East Pier Berth.	76	5.0
2	Carlisle Pier, East Side.	139	5.5
3	Carlisle Pier, West Side	130	5.5
4	Catamaran Berth, East Side.	142	5.5
5	St.Michael's Pier, West Side.	142	5.5
	Traders Wharf Shoreward side.	131	2.4-3.3

CRANES: Mobile cranes can be hired locally.

SPECIALISED CARGO HANDLING FACILITIES: Ro-Ro facilities at Berth No. 3. Ramp width 3 m. Maximum slope 1 in 8. Berth No. 3 can accommodate vessels up to 22 m. beam. Berth No. 4 has been converted to a small high speed catamaran berth with pontoon, so no longer usable by Ro-Ro ferries. Berth No. 5 can accommodate large H.S.S. catamarans.

BRIDGES: None.

STEVEDORES: Arranged by ferry company.

MEDICAL: Hospital and dental facilities available locally.

DENSITY: 1025.

FRESH WATER: Available at all berths.

FUEL: Fuel delivered by road tanker to berths, fuelling for yachts available at waterfront yacht club.

FIRE PRECAUTIONS: Normal non-smoking precautions during fuelling.

CONSULS: See "Dublin".

REPAIRS: See "Dublin".

DRY DOCKS: See "Dublin".

SURVEYORS: As per Lloyd's Shipping Agents, Dublin.

GANGWAY/DECK WATCHMEN: The ship's watch.

CUSTOMS ALLOWANCES: As per E.E.C. Regulations.

CARGO GEAR: Not available.

REPATRIATION: Facilities exist for crew changes and repatriation.

AIRPORT: Dublin Airport, 20 km.

TIME: GMT. GMT plus 1 hour from last Sunday in March to fourth Sunday in October.

HOLIDAYS: New Year's Day, St. Patrick's Day (17th March), Good Friday, Easter Monday, first Monday in May, first Monday in June, first Monday in August, last Monday in October, Christmas Day, St. Stephen's Day.

POLICE/AMBULANCE/FIRE: Police 2801285/2800187; Fire 2801903/999; Ambulance 999.

EMERGENCY CO–ORDINATION CENTRE: Telephone 999.

TELEPHONES: None on board visiting ships.

SERVICES: Various services available in nearby town.

BANKS: All major Irish banks have branches in nearby town.

STORING: Ship's stores available. Trucks proceed alongside at the berth.

SHORE LEAVE: Possible.

IDENTIFICATION CARDS: Seaman's Identification Card sufficient.

GARBAGE DISPOSAL: Collection service arranged for vessels as agricultural restrictions apply in controlling foot and mouth disease, with regard to landing of waste food. Collection arranged by ship's agents.

WASTE OIL DISPOSAL: Collection service available by road oil-tanker, at berths accessible to such tanker. Ship's agents will arrange collections.

SEAMAN'S CLUBS: No Seaman's Clubs in the town, but the berths in the harbour are no more than 5 minutes walk from the town.

CURRENCY: Currency can be changed in local hotels, banks and exchange bureaux.

AUTHORITY: Department of the Marine, Leeson Lane, Dublin 2, Ireland. *Tel:* (01) 785444. Harbour Manager/Engineer (Mr.T.F. Vaughan). Tel. (01) 2801311. *FAX:* (01) 2809607. *Contact:* Captain J.P. Carter, Harbour Master. *Tel:* (01) 2801130. *FAX:* (01) 2808062.

DUNDALK: 54.00 N. 06.23 W. **(See Plan)**

PORT LIMITS: From Dunary Point to a point 2 miles Eastwards and then to Cooley Point.

DOCUMENTS:

1 copy Crew List.
2 copies Ship's Stores Declaration.
2 copies Crew Declaration.
Cargo Manifest.
Bill of Lading.

PILOTAGE: Limits of Pilotage District are the waters of the harbour and bay of Dundalk between the bridge of Dundalk and an imaginary straight line drawn from Gyles Quay to a position 270° (true) distant 2 miles from Dunary Point.

Pilotage is compulsory.

Pilots board 1 mile S.S.E. of the Pile Light. Pilots should be advised of vessel's ETA and deepest draft, 24 hours before arrival, through local Agents or Harbour Office. When ships are expected, pilots keep watch on VHF Channels 16 and 14 from 3 hours before H.W. to H.W.

Harbour Office: Tel: 042-34096, (After hours 042-72472). Fax: 042-35481.

Pilots: Tel: 042-36339, 042-36200.

Pilots normally board incoming vessels about 1 hour before H.W. to allow berthing at H.W.

Outward bound vessels (generally in ballast) can depart from about 2 hours before H.W.

ANCHORAGES: Dundalk Bay, 1.5 miles South from Gyles Quay. Charted depth 8.0 m.

RESTRICTIONS: Port is tidal draft restricted to predicted height of tide less 0.30 m. The height of tide is strongly influenced by barometric pressure and wind direction. Tides are cut by winds from a Northerly direction.

MAX. SIZE: Max. length 106 m., no restriction on breadth or height. Maximum draft dictated by height of tide, i.e. 0.30 m. less than predicted height of tide. If in doubt, local Agents and Harbour Master should be consulted.

RADIO: Dublin Radio: VHF Channels 16, 67 and 83.

Malin Head Radio: VHF Channels 16, 67, 23 and 85, and M/F 2182 kHz. and 1827 kHz.

Also Portishead Radio and Anglesey Radio.

VHF: Dundalk Pilot Station and pilot boat keep watch on Channels 16 and 14, only when ship movements are expected.

Also see "Radio".

RADAR: No port radar service.

TUGS: Pilot boat (300 h.p.) can assist vessels berthing and swinging. Nearest available tug (500 h.p.) is in Carlingford Lough, 1 hour steaming from Dundalk.

BERTHING: Berths consist of 360 m. of quay for handling bulk and general cargoes. Vessels lie aground at low water.

CRANES: 5×30 tonne crawler cranes. Larger mobile cranes, up to 300 tonnes, available from local contractors.

BULK CARGO FACILITIES: All bulk cargoes are discharged/loaded by grab. Bulk cargoes can be handled on all quays. There is a large coal yard and grain store on the quays.

STEVEDORES: Labour is arranged through Agents.

MEDICAL: Notice not necessary, but advisable if treatment required. Full hospital facilities available.

TANKERS: Two berths available.

DENSITY: 1015.

FRESH WATER: Available.

FUEL: Marine diesel oil available locally and delivered in bulk by road tanker.

FIRE PRECAUTIONS: Ship's watchman to be on duty.

CONSULS: See "Dublin" and "Belfast".

REPAIRS: Deck and engine repairs possible.

DRY DOCKS: Nearest dry docks at Belfast and Dublin.

SURVEYORS: Lloyd's Sub-Agency. Tel: 042-34096. Fax: 042-35481.

GANGWAY/DECK WATCHMEN: Watchman recommended.

HATCHES: All hatch opening/closing carried out by crew.

CUSTOMS ALLOWANCES: Tobacco per 8 days: Master - 200 cigarettes. Officers – 150 cigarettes. Crew – 100 cigarettes.

Wine and/or spirits, quarter pint per day per man.

REPATRIATION: May be arranged by ship's Agent.

AIRPORT: Nearest airport at Dublin, 70 km. from port. Served by regular services direct to U.K., Europe, U.S.A. and Canada.

TIME: GMT plus 1 hour. Reverting to GMT between October and March.

HOLIDAYS: New Year's Day (1st January), St.Patrick's Day (National Holiday) (17th March), Good Friday *, Easter Monday, Spring Bank Holiday (1st Monday in June), August Bank Holiday (1st Monday in August), Last Monday in October, Christmas Eve – half holiday (24th December), Christmas Day (25th December), St.Stephen's Day (26th December).

* Not a port holiday, but all other offices closed.

These days can be worked at Sunday rates and conditions.

POLICE/AMBULANCE/FIRE: Police, 042-35577. Ambulance, 042-34701. Fire, 042-34666. Dial 999 on public telephone for all emergency services.

EMERGENCY CO-ORDINATION CENTRE: Irish Marine Emergency Service (IMES), Tel: 01-6785444.

TELEPHONES: Mobile telephones may be hired locally.

SERVICES: Some special services available locally. Confirm availability of services with ship's Agent.

STORING: See "Prelims".

1. Vessels can be stored by truck.
2. No regulations regarding storing vessels by barge.
3. Trucks can proceed alongside vessels on all berths.
4. Forklift can be used in storing vessels.
5. Customs Regulations only apply to bonded stores.
6. Advisable that ship's crew load stores.

SHIP SUPPLY SERVICE: Work boat available from Dundalk Harbour Commissioners (Tel: 042-34096).

SHORE LEAVE: No port restriction on crew's shore leave.

GARBAGE DISPOSAL: Bin provided on quays for ship's use.

WASTE OIL DISPOSAL: Contact Allied Oils. Tel: 042-34582.

AUTHORITY: Dundalk Harbour Commissioners, Quay Street, Dundalk, Ireland. *Tel:* 042-34096. *FAX:* 042-35481. *Contact:* Captain R. Grey, Chief Executive Officer and Harbour Master.

DUNMORE EAST: 52.09 N. 06.59 W.

LOCATION: Dunmore East is situated on the West side of the Waterford Estuary, 14.5 miles from the Port of Waterford. It is a major fishing harbour centre.

DOCUMENTS: Standard ship's papers.

APPROACHES: Width at entrance 280 ft.

PILOTAGE: See "VHF".

VHF: Not used in the harbour. However, Waterford Harbour Commissioners operate a Pilot Station on the high ground East of the Harbour and can be contacted on Channel 16.

BERTHING:

	Length	Depth below Chart Datum
	(m.)	(m.)
East Pier	146	2.9
Auction Hall Quay	80	2.9
West Wharf	155	2.9

CRANES: Mobile cranes can be hired locally.
MEDICAL: Hospital and dental facilities available.
DENSITY: 1025.
FRESH WATER: Fresh water available at East Pier and Auction Hall Quay.
FUEL: Piped diesel available on East Pier.
DRY DOCK: Syncrolift (30 m. × 10.7 m. S.W.L. 230 tonnes).
AIRPORT: Waterford Airport, 13 km.
TIME: GMT. GMT plus 1 hour from last Sunday in March to fourth Sunday in October.
HOLIDAYS: New Year's Day, St. Patrick's Day, Good Friday, Easter Monday, first Monday in June, first Monday in August, last Monday in October, Christmas Day, St. Stephen's Day.
POLICE/AMBULANCE/FIRE: Police 83112/74888; Ambulance 73321; Fire 83196.
EMERGENCY CO-ORDINATION CENTRE: Telephone 999.
STORING: Ships stores available. Trucks proceed alongside at the berth.
GARBAGE DISPOSAL: Two skips are provided free of charge to port users.
WASTE OIL DISPOSAL: No facilities.
SEAMAN'S CLUBS: No seamen's clubs. Usual local facilities.
CURRENCY: Irish Pound – Punt (IR£).
AUTHORITY: Department of Marine, Leeson Lane, Dublin 2, Ireland. *Tel:* (01) 785444. *Telex:* MRNE 91798. *Cables:* Marine. *FAX:* 01-618214. *Contact:* Lt. Cmdr. J.J. Grannell, Harbour Master. *Tel:* (051) 83166.

FENIT: 52.17 N. 09.53 W.

PORT LIMITS: All waters East of a line from Kerry Head to the Westernmost point of the Magharee Islands.
DOCUMENTS: See "Dublin".
PILOTAGE: Pilotage is not compulsory, but is recommended. ETA at least 24 hours before Pilot required. VHF to Pilots and Harbour Master is available.
ANCHORAGE: Included in Pilotage duty. The area recommended is W.N.W. of Samphire Lighthouse.
RESTRICTIONS: Deep draft vessels berth some 2 hours either side of high tide.
MAX. SIZE: Vessels of 400 ft. have no difficulty in berthing. Maximum draft 20 ft. to be afloat.
HEALTH: Pratique procedure as in other Irish Ports.
RADIO: Valentia Radio Station will accept and forward W/T messages.
VHF: Harbour Master and Pilots listen on Channel 16 and switch to Channel 12 for passing messages.
RADAR: No service available.
TUGS: Not necessary.
BERTHING: 328 ft. of berthing space.
CRANES: There is one crane on the pier of 15 tons capacity. Extra cranes may be hired.
STEVEDORES: There are 4 stevedores for the Port:

R. McCowens & Son, Edward St., Tralee. Tel: 066-23477.
I. T. I. Ltd., Dock Rd., Limerick. Tel: 061-313088.
Argosea Services Ltd., Foynes.

MEDICAL: Regional Hospital in Tralee (8 miles).
TANKERS: Not to exceed max. draft 18 ft.
FRESH WATER: Supplied from hydrants on quay side at 20 t.p.h. Cost £1.25 per ton.
FUEL: Bunkers available from oil terminal on the pier.

Contact: Kerry Petroleum Clash, Tralee. Tel: 066-21155.

REPAIRS: May be arranged on a limited scale.
AIRPORT: Local airport at Farranfore (15 miles) and International Airports at Shannon and Cork (80 miles)
GARBAGE DISPOSAL: Collected every Wednesday by local authority at a cost of IR£0.50 per black plastic garbage bag. Contact Tel: 066-2111.
WASTE OIL DISPOSAL: Available by private arrangement.
SEAMAN'S CLUBS: None.
CURRENCY: Irish Pound – Punt (IR£).
AUTHORITY: Tralee & Fenit Harbour Commissioners, The Harbour Office, The Pier, Fenit, Tralee, Co.Kerry, Ireland. *Tel:* 066-36231. *FAX:* 066-36231. *Contact:* David Buttimer, Port Manager. William Revington, Harbour Master.

GALWAY: 53.16 N. 09.03 W. (See Plan)

DOCUMENTS:

1 Crew List (official form).
1 Passenger List (official form).
1 List of Articles (dutiable) in Possession of Crew (official form).
1 Stores List (to include bonded surplus stores for seal, firearms, ammunition, animals, radio transmitting and receiving sets) (unofficial form).
Maritime Declaration of Health (official form).

Documents, etc., required by Agent for Customs Purposes:

Ship's Register.
Tonnage Certificate.
Load Line and Safety Certificates (Radio Safety Certificate, etc.).
Receipt for previous payments of light dues if any.

PILOTAGE: Compulsory. Pilots board incoming vessels only at "tide times" (approx. 2.5 hours before HW until HW); vessels arriving at times outside this period should anchor and await Pilot. Safe anchorages at Inner Roadstead or near Margaretta Buoy according to tonnage and draft, Pilot will board at either. Application for Pilot should be to Agent with notice of ETA. International light and sound signals may be used. Pilots. Tel: Galway (091) 561874/562329.
ANCHORAGES: During S.W. gales safest anchorage is at Black Head.
RESTRICTIONS: Entry from 2 hours before HW until HW only.
MAX. SIZE: Governed by depth on sill of 28 ft. at springs and 24 ft. at neaps: width of dock gates, 65 ft. and length of turning area 480 ft.
HEALTH: Master of ship arriving from foreign port must deliver Maritime Declaration of Health in order to obtain Pratique. An oral declaration will suffice for ships trading solely between Republic of Ireland and E.E.C. Countries. Pratique will be granted or withheld depending on answers given to questions put in Health Declaration.

In event of a suspected disease or fever on board, vessel is detained pending arrival of Medical Officers of Health. No unauthorised person is allowed to leave ship without authority of Chief Medical Officer.

Pratique is automatic when vessel arrives from ports in the E.E.C.

RADIO: ETA cables to Agents, etc., through Valentia Radio if approaching from South or Malin Head if from North. Valentia Radio and Malin Head Radio, both have telephone link service.
VHF: Port Office watch Channel 16 from 0900 hrs. – 1700 hrs., Monday to Friday and from 2 hours before high water until high water at each tide.
TUGS: One small harbour tug (Damen Pushycat) available. Nearest tugs are on River Shannon which is 10 hours steaming.
BERTHING:

Berth	Length
	(m.)
Mulvoy Quay	209
Breatnach Quay	176
Dun Aengus Dock – North	164
Dun Aengus Dock – South	161
New Pier	134

CARGO HANDLING FACILITIES: Grain, coal, bulk fertilisers, etc. are all handled by grabs, discharge rates 1,500 t.p.d. per crane.

4×25 tonne cranes for grab discharge.

STEVEDORES: Agents arrange after receipt of ETA.
MEDICAL: No special port medical requirements. Ships medical requirements should be included in ETA signal.
TANKERS: 2 berths. No special requirements. Fire/Safety Warden in attendance at tanker berth when tanker in port.
DENSITY: 1012 (average).
FRESH WATER: Available by hose in unlimited quantities. Rate up to 50 t.p.h.
FUEL: All grades available.
CONSULS: T. McDonogh & Sons Ltd., Merchant's Road, Consul for France and Belgium.

Royal Norwegian Consulate, Victoria House, Eyre Square, Galway. Tel: (091) 567391. Fax: (091) 567394.

REPAIRS: Deck and engine repairs carried out afloat.
DRY DOCKS: No dry dock.
GANGWAY/DECK WATCHMEN: Open quays – watchmen recommended. Fire/Safety Warden in attendance at tanker berth when tanker in port.
OPENING/CLOSING HATCHES: Normally carried out by crew.
CUSTOMS ALLOWANCES: Master: 2 litres spirits, 4 litres wine and 200 cigarettes or 8 oz. tobacco.

Officers and crew: 1 litre spirits, 4 litres wine and 200 cigarettes or 8 oz. tobacco.

REPATRIATION: Crew changes and repatriation can be effected.
AIRPORT: Galway (5 miles), Dublin (140 miles) and Shannon (55 miles). Airports served by regular flights.
TIME: GMT plus 1 hour. Reverting to GMT from October to March.
HOLIDAYS: Christmas Day; St. Stephen's Day (26th December); St. Patrick's Day (17 March); Easter Monday; Whit Monday; First Monday in August.
POLICE/AMBULANCE/FIRE: Police Tel: 563161. Ambulance Tel: 564222. Fire Tel: 565555/568984.
TELEPHONES: Can be arranged by Agent.
SERVICES: Compass adjusters available in Dublin. 24 hours notice to Agent.
SHIP SUPPLY SERVICE: Arranged by ships Agents: City of Galway Shipping Co. Ltd.

The occasional call for landing sick/injured seamen could be effected by the Lifeboat Service (R.N.L.I.) or on occasion by the Harbour Authorities' Pilot Launch.

SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Not needed.
GARBAGE DISPOSAL: Skips provided but these are normally locked. Keys are available from Harbour Office, Safety Wardens Office and ship's agent. Charge for commercial vessels IR£15.
WASTE OIL DISPOSAL: Facilities for pleasure and fishing craft provided on quay. Large quantities collected by road tanker through ship's agent.
SEAMAN'S CLUBS: None.
CURRENCY: Irish Pound – Punt (IR£).
DELAYS: Apart from tidal, none.
AUTHORITY: Galway Harbour Commissioners, 49 Dock Street, Galway, Ireland. *Tel:* 091-561874, 562329. *FAX:* (091) 563738. *Contact:* Captain F.W. Sheridan, Harbour Master & Pilotage Superintendent (Home Tel: 091-563920).

HOWTH: 53.23 N. 06.04 W.

PORT LIMITS: Seaward port limits extend to 457 m. beyond the breakwater pierheads.
DOCUMENTS: Standard ships papers.
MAX. SIZE: Max. LOA 38 m. Larger vessels may be allowed after consultation with Harbour Master.
VHF: Harbour Office operates on Channels 16 and 13 when office is manned.
BERTHING:

	Length (m.)	*Depth below Chart Datum* (m.)
West Pier	240	3.0
Auction Hall/Ice Berths	85	3.9
South West Pier	120	3.9
Middle Pier	180	4.0

CRANES: Mobile cranes can be hired locally.
MEDICAL: Hospital and dental facilities available.
DENSITY: 1025.
FRESH WATER: Fresh water available at most berths.
FUEL: Fuel delivered by road tanker.
REPAIRS: All types of repairs possible locally.
DRY DOCK: Syncrolift (36 m. × 12.5 m., S.W.L. 600 tonnes). 3 repair bays in repair yard.
SURVEYORS: Available from Dublin.
AIRPORT: Dublin Airport, 14 km.
TIME: GMT. GMT plus 1 hour from last Sunday in March to fourth Sunday in October.
HOLIDAYS: New Year's Day, St. Patrick's Day, Good Friday, Easter Monday, first Monday in June, first Monday in August, last Monday in October, Christmas Day, St. Stephen's Day.
POLICE/AMBULANCE/FIRE: Police 322806/322003; Ambulance or Fire 481704/999.
EMERGENCY CO-ORDINATION CENTRE: Telephone 999.
STORING: Ship's stores available. Trucks proceed alongside at the berth.
GARBAGE DISPOSAL: A skip is kept in repair yard for general use.
Larger skips can be readily hired.
Foreign garbage/waste can be landed by special arrangement.
WASTE OIL DISPOSAL: 40 gallon and 5 gallon drums are supplied for used lube oil. Larger quantities can be arranged.
SEAMAN'S CLUBS: See "Dublin".
AUTHORITY: Howth Fishery Harbour Centre, c/o Department of Marine, 2 Leeson Lane, Dublin 2, Ireland. *Tel:* 01-6785444. *FAX:* 01-6618214.
Captain John Burrows, Harbour Master and Port Manager, West Pier, Howth. *Tel:* 01-8322252. *FAX:* 01-8326948.

KILLYBEGS: 54.38 N. 08.26 W. (See Plan)

PORT LIMITS: A line joining Drumanoo Head and Pound Point.
DOCUMENTS: See "Dublin".
PILOTAGE: No permanent Pilot but one can be acquired on request.
ANCHORAGE: Very safe anchorage.
RADIO: Malin Head Station.
VHF: Link calls through Malin Head VHF Channel 16.
BERTHING: Large fishing fleet has to be accommodated.
MEDICAL: Necessary to send advance warning re illness or injury to a Crew member.
FRESH WATER: Available.
FUEL: Fuel oil available.
SHORE LEAVE: Crew members allowed ashore.
IDENTIFICATION CARDS: Not needed.
GARBAGE DISPOSAL: Not available.
WASTE OIL DISPOSAL: By arrangement.
SEAMAN'S CLUBS: Usual local facilities.
CURRENCY: Irish Pound – Punt (IR£).
DEVELOPMENTS: Work is nearing completion on provision of syncrolift and boat repair bays.
AUTHORITY: Department of The Marine. Leeson Lane, Dublin 2. *Tel:* (01) 785444. *Telex:* 91798. *FAX:* (01) 618214. *Contact:* Captain P.J. Hodgman, Harbour Master (Tel: (073) 31032. Fax: (073) 31840).

KILRUSH: 52.37 N. 09.30 W.

PORT LIMITS: Anchorage East of Scattery.
DOCUMENTS:
2 copies Crew List.
2 copies Passenger List.
2 copies General Declaration (Form C.13).
2 copies Ship's Stores List (Form C.14).
1 copy Crew Effects Declaration.
1 copy Cargo Manifest.
PILOTAGE: Pilot station located 1 mile off Scattery. Shannon Pilots (Tel: (065) 51027) require 24 hours notice of ETA.
ANCHORAGE: One mile off Scattery, least depth 10.0 m.
RESTRICTIONS: Best time for berthing is last hour of flood tide.
MAX. SIZE: LOA 75 m.
HEALTH: Normal procedures apply. Contact Agent if in doubt.
RADIO: Valentia Radio, 2,182 kHz.
VHF: Shannon Radio on Channel 16.
Call "Shannon Pilots" on Channels 16/12, 3 hours prior to arrival for anchoring/berthing information.
RADAR: Radar monitored at pilot station on request.
TUGS: Available, but only used in exceptional circumstances.
BERTHING:
Berth No. 1: Length 160 ft. Vessel takes the ground approximately 3 hours after H.W. Berth dries out at Spring tides.
Berth No. 2: Length 150 ft. Vessel takes the ground approximately 4 hours after H.W. Berth does not dry out.
CRANES: Discharge by mobile shore cranes (from Limerick – up to 50 tons S.W.L.).
BULK CARGO FACILITIES: Main cargo handled is timber imports.
STEVEDORES: Importer uses his own labour.
Working Hours: 0800 hrs. – 1800 hrs. Overtime up to 2200 hrs. on request.
MEDICAL: Agent requires advance notice for hospital or dental treatment.
TANKERS: No facilities.
DENSITY: 1010 (average).
FRESH WATER: Available from hydrants on pier. Cost 20p/ton.
FUEL: Heavy fuel and diesel available by road tanker.
CONSULS: See "Limerick".
REPAIRS: Local firms can undertake minor repairs.
DRY DOCKS: See "Limerick".
SURVEYORS: Classification Societies in Dublin and Cork.
GANGWAY/DECK WATCHMEN: Recommended.
OPENING/CLOSING HATCHES: By crew.
CUSTOMS ALLOWANCES: Usual E.E.C. allowances.
REPATRIATION: Facilities available.
AIRPORT: Shannon Airport – 40 km., served by major airlines.
TIME: GMT. GMT plus 1 hour in Summertime.
HOLIDAYS:
January 1st
March 17th
Easter Monday
May 1st
1st Monday in June
1st Monday in August
Last Monday in October
December 25th
December 26th
POLICE/AMBULANCE/FIRE: Dial 999.
EMERGENCY CO-ORDINATION CENTRE: Contact Limerick Harbour Master (Tel: 088-542266).
TELEPHONES: Available on pier.
SERVICES: Compass adjusting, radio and radar repairs, charts, Notice to Mariners and safety equipment. All available on request to Agent.
BANKS:
A.I.B., Francis Street, Kilrush.
Bank of Ireland, Francis Street, Kilrush.
STORING: See "Prelims".
(1) Truck.
(2) Preferably outside working hours.
(3) Can come alongside vessel.
(4) Yes.
(5) None.
(6) Yes.
SHORE LEAVE: No restrictions.
IDENTIFICATION CARDS: Seaman's Book is sufficient.
GARBAGE DISPOSAL: Skip on pier. Private collector available, if required.
WASTE OIL DISPOSAL: Tanker truck, by prior arrangement.
CURRENCY: Irish Punt (IR£). IR£1.0 = U.S.$ 1.58.
REGULATIONS: All ropes to be kept tight whilst vessel is on the ground.
DELAYS: Usual delays are caused by S.W. or Westerly gales.
AUTHORITY: Kilrush (Cadda) Harbour Authority, Town Hall, Kilrush, Co. Clare, Eire. *Tel:* (065) 51047. *FAX:* (065) 51843. *Contact:* Mary Griffin.

KINSALE: 51.42 N. 08.31 W.

PORT LIMITS: Straight line drawn due West of Hangman's Point ("Arrived Ship Line"). See BA. Chart No. 2053.
DOCUMENTS: See "Dublin".
PILOTAGE: 24 hours notice of ETA required. Pilot operates on VHF Channels 16 and 14. Pilot boards at Bulman Buoy (WP). Pilot station tel: 021-772300 and 774233 and 772256.
ANCHORAGE: 4 cables South of Bulman Buoy or off Lower Cove in line with Charles Fort. Depth 6.7 m. LW.
RESTRICTIONS: Berthing at HW only. Bar, depth 3 m., 2 to 3 cables South of Charles Fort. All vessels lie aground at LW. Tides 1.5 knots.
Also see "Berthing".
MAX. SIZE: Vessels up to 80 m. LOA, draft 5.0 m. and 2,500 d.w.t.
VHF: Vessels approaching the port call Pilot Station on Channel 16 and then switch to Channel 14. Call sign "Kinsale Harbour Radio".
BERTHING: Berthing at HW on Southern side of Pier Head (Customs Quay); length 60 m. Depth MHWST 6.10 m., MLWNT 2.74 m. All vessels lie aground at LW. The North side of the pier is a marina.
CRANES: Mobile grab cranes of 25 tons – 35 tons capacity available.
STEVEDORES: Working hours 0800 – 2000 hrs., Monday to Friday. Stevedores: Henry Good Ltd., Kinsale. Tel: 021-772300, after hours 021-772256/772355. Telex: 28491. Fax: 021-772548.
FRESH WATER: Available ex-hydrant on berth.
AIRPORT: Cork Airport 14 miles (19 km.).

TIME: GMT; Summertime GMT plus 1 hour (March to October).
GARBAGE DISPOSAL: Arranged on request.
WASTE OIL DISPOSAL: Contact Atlas Waste Oil, Marina, Commercial Park, Cork.
SEAMAN'S CLUBS: None.
CURRENCY: Irish Pound – Punt (IR£).
AUTHORITY: Kinsale Harbour Commissioners, The Pier, Kinsale, Co. Cork. *Tel:* 021-772503. *Telex:* 28491. *FAX:* 021-772548. *Contact:* E. Hurley, Harbour Master.

LIMERICK: 52.40 N. 08.38 W. (See Plan)

PORT LIMITS: The Port of Limerick extends from Sarsfields Bridge in Limerick City to a line joining Loop Head and Kerry Head. It includes Limerick City Dock and Quays, Shannon Airport Jetty, Aughinish Marine Terminal, Foynes Island Jetty, Tarbert Island Jetty and Money Point Jetty but *not* Foynes Port and Cappa Pier Kilrush.

According to custom and practice, smaller vessels "arrive" as they pass Scattery Island Lighthouse and larger vessels at the outer anchorage.

DOCUMENTS:

EEC Arrival Form for tankers over 1,600 tons gross (to be presented to boarding Pilot).
2 Crew Lists.
2 Passenger Lists.
3 Custom's Manifest (Tobacco List).
Deck Cargo Declaration.
Health Declaration.
Ship's Register (Tonnage Certificate).
Safety Equipment Certificate.
Safety Radio Certificate.
Load Line Certificate.
Receipt for last previous Trinity House Light Dues payment (if any).
Derat Certificate.

PILOTAGE: Compulsory from Scattery Island (52.35 N., 09.31 W.) to Limerick for all vessels and from Kilcredaun for vessels in excess of 5,000 g.r.t. Large vessels with drafts of 13.0 m. and over are advised to embark their Pilots West of Kilcloher. ETA for Pilots passed in advance by Agents. Masters may call Pilots (Scattery Pilot Station – Channel 16 VHF). ETA to be sent 24 hours in advance and amended as necessary. Pilots watch only when vessels are expected inwards or outwards.
ANCHORAGES: Coastal vessels normally wait tide to Limerick at Scattery Roads; Beighcastle Anchorage depth over 18.0 m. (52.40 N., 08.57 W.) about 18 miles downstream off Limerick is nearest deep-water anchorage; now disused as lightening place for bulk grain cargoes. Larger vessels (over 10,000 d.w.t.) anchor 2.5 to 3.0 miles West of Scattery Lighthouse in depths from 12.0 m. – 25.0 m.
RESTRICTIONS: Entrance to Limerick Dock is limited to 2 hours preceding HW; vessels over 3,500 d.w.t. normally berth on daylight tides only.
MAX. SIZE: Dependent on tide. Up to 6.1 m. draft on Spring tides (neap tides about 5.0 m.) Vessels of 155 m. × 20 m. beam have berthed at Limerick Dock on suitable draft. Such vessels are subject to weather delays.
HEALTH: If no infectious diseases on board, Pratique granted by Customs Preventive Officer on arrival on presentation of Health Declaration of Master. Landing of dogs and cats from outside British Isles strictly forbidden.
RADIO: Irish Stations; Valentia Radio VHF or R/T (link-calls available) or Malin Head Radio, or any U.K. Radio Station. Agents have special arrangements with Valentia Radio and Malin Head Radio, cables passed by direct telex to Agent's office.
VHF: Masters can call Scattery Pilot Station on Channel 16, or Limerick Harbour Radio – same, working on Channels 12 and 13.
TUGS: 2×37 ton B.P., 2×27 ton B.P. and 1×22 ton B.P.
BERTHING: In Limerick Dock there are 10 berths of which only 1 (Shell berth) is reserved exclusively for tankers. The cement berth is also used for tankers when required. Drafts on all berths approx. tidal gauge plus 0.3 m.
STEVEDORES: At Limerick City Docks the sole stevedores are Limerick Cargo Handling Ltd. (as a result of rationalisation scheme). ETA per Agent before 1600 hrs. each day Monday to Thursday for labour next day. Master to state number of gangs/workable hatches. Crew open and close hatches. Normal work 0800/1700 hrs. but overtime can be worked 24 hours per day, Saturday and Sunday included. Requisition for labour for weekend work and 0800 hrs. Mondays by 1600 hrs. Friday.

Discharge rates: Bulk cargoes 1,000 tons per day.
D.B.B. 60 standards per day.
Packaged timber 150 stand. per gang day.
Bagged cargoes (palletised in hold) 400 tons per gang day.
Generals 130 tons per gang day.
All cargoes by crane discharge.

MEDICAL: All medical facilities available at short notice.
TANKERS: Two tanker berths. The Shell Berth on the South side (No. 2 on plan) and the Texaco Berth on the North side (No. 1 on plan). All grades of petroleum handled.
DENSITY: 1000 in Limerick Dock, except in certain late Summer conditions.
FRESH WATER: Available at all berths in Limerick ex-hydrant. Average rate 7.5 t.p.h.
FUEL: All grades available in reasonable quantities per road truck on 24 hours notice. (Non-bunker port prices).
CONSULS: Belgium, Denmark, Finland, France, Germany, Netherlands, Spain, Sweden.
REPAIRS: Limited facilities. Dry dock available in emergencies only for vessels up to 40 ft. beam and not exceeding 15 ft. draft.
SURVEYORS: Nearest Marine Surveyor is Captain E. Hayes. Tel: Limerick (061) 43606 (office) and 62502 (home). Telex: 28224. Fax: 061-40262.

Also Caleb Brett, Belfast; Cargo Superintendents, Dublin; P.B. Harrison, Dublin; Casebourne & Turner, Dublin.

Lloyd's Register Offices are at Rushbrook, Cork, Tel: 021 – 811831. A.B. and B.V. are represented by P. B. Harrison (Dublin) Tel: 01 – 895878.

Salvage Association are represented by Mullock & Sons (Limerick Foynes) Lloyd's Agents, Tel: 061 – 54044, Telex: 26911.

WATCHMEN: Watchmen from crew, or if none available shore watchmen available.
HATCHES: Opening and closing of hatches, setting up derricks, shifting of hatches, beams, patent hatches, etc., all to be done by ship's crew with no assistance from shore gangs.
CUSTOMS ALLOWANCES: (Tobacco per 8 days). Master 200 cigarettes; Officers 150 cigarettes; Crew 100 cigarettes. Wine/Spirits: quarter pint per man per day.
REPATRIATION: No difficulties.
AIRPORT: Shannon International Airport 15 miles from Limerick. Daily flights world-wide destinations.
TIME: As U.K. GMT or GMT plus 1 hour (Summer Time).
HOLIDAYS: (For dock working), New Year's Day (1st January); St. Patrick's Day (17th March); Easter Monday; First Monday in June; First Monday in August; half-day 24th December; 25th December and 26th December (Christmas Day and St. Stephen's Day).
POLICE/AMBULANCE/FIRE: Dial 999 for all emergency services.
EMERGENCY CO-ORDINATION CENTRE: Irish Marine Emergency Services, VHF Channel 16 or dial 999. There is a marine emergency plan and anti-pollution plan for Shannon Estuary, co-ordinated by the Harbour Master, Limerick.
BANKS: Bank of Ireland (Limerick) Telex: 26840 with overseas agencies and branches throughout area.

Allied Irish Bank (Limerick) Telex: 26864 with overseas agencies and branches throughout area.

STORING: Alongside from trucks. No restriction on fork lifts or riggers. In the case of Petroleum vessels with Class I or Class II cargoes, storing is not allowed during cargo working or ballasting, except where small items are hand carried onboard from vehicles parked at least 30 m. from ship.

Storing at Shannon Jetty restricted to very light vehicles when cargo work permits.

SHORE LEAVE: No restrictions.
GARBAGE DISPOSAL: Harbour Authority provide skips at Limerick Dock. On estuary berths, ship's agent must arrange on a time and material cost basis.
WASTE OIL DISPOSAL: Available by road tanker (max. 26,000 ltr. capacity) through Atlas Waste Oil, Tel: 0502-22411 (24 hours) or Freephone 1800-504-504. Fax: 0502-20691.
SEAMAN'S CLUBS: None.
CURRENCY: Irish Pound.
AUTHORITY: Shannon Estuary Ports, Harbour Office, 3 Percy Square, Limerick, Ireland. *Tel:* +353 (0) 61 315377. *FAX:* +353 061 314857. *Contact:* Captain A. Coghlan, Harbour Master.

NEW ROSS: 52.23 N. 06.56 W. (See Plan)

PORT LIMITS: Drumdowney Point to Kilmokey adjacent Barrow Bridge Lat. 52° 21.4' N., Long. 7° 00' W. The vessel is considered to be an arrived ship at the time of first HW after arrival off Cheek Point Pilot Station.
DOCUMENTS:

2 Cargo Manifests.
1 Bill of Lading.
1 Crew List.
1 Ship's Stores List.
1 Passenger List.
1 Clearance.
Register.
Light Dues Certificate.
Derat Certificate.

PILOTAGE: For Estuary Pilot (See "Waterford").

New Ross Pilots ordered via Agent. Pilotage messages received and transmitted by Cheek Point Radio VHF Channels 16 and 14. Early ETA advisable. Pilotage compulsory. New Ross Pilots and Ross Station on VHF Channel 14.

ANCHORAGE: To Pilot's advice.
RESTRICTIONS: Max. draft 19 ft. at Neap tides, 22 ft. at Spring tides, max. length 360 ft. (may be increased under certain conditions), max. beam 60 ft.

Navigation of the River Barrow for max. size vessels usually restricted to 2 hours before, to 2 hours after HW.

HEALTH: Declaration on arrival, international signals for Pratique.
RADIO: Mine Head, Rosslare, Land's End or Ilfracombe Radio Station.
TUGS: Available on request.
BERTHING: Up to 310 m. of wharves available.
Roll-on/Roll-off facilities available.
CONTAINER FACILITIES: 45 ton crane. Five acre storage space.

STEVEDORES: 24 hours notice required.

Staffords, New Ross. Tel: (051) 21400. Telex: 80711. Fax: (051) 21805.

Stokestown Port Services. Tel: (051) 22322. Telex: 80566. Fax: (051) 22355.

Bulk discharge rate:	200 t.p.h.
Bag rate	100 t.p.h.
Liquid discharge	300 t.p.h.

MEDICAL: Services available locally.
TANKERS: 2 oil jetties used by Campus Oil, Esso and Texaco.
DENSITY: 1000.
FRESH WATER: Available at all berths.
FUEL: Obtainable by road tankers.
REPAIRS: Repairs afloat possible.
WATCHMAN: Available if required.
HATCHES: Ship's crew normally open and close hatches; shore-crane may assist.
CUSTOMS ALLOWANCES: Members of a crew who remain on a vessel during stay in port, are allowed to retain under certain conditions the following quantities of the undermentioned goods:

Tobacco (in any form): Master 8 oz., cigarettes 200; Officers: tobacco 6 oz., cigarettes 150; Crew members: tobacco 4 oz., cigarettes 100.

Spirits (in any form) to cover 4 days 1 pint (1 bottle each). Wine of any strength allowed in place of spirits at rate of 1 pint wine to half pint spirits. In addition, an allowance of 1 quart of beer or 1 pint of wine 30 proof per man per day. Members of crew whatever rank finally leaving vessel allowed to take ashore free of duty for their own personal consumption, following quantities of undermentioned goods, when they form whole of their unconsumed stores:

(a) If from ports in Great Britain, Northern Ireland, or the Isle of Man, or continental ports between the Elbe and Brest (except vessels crossing at regular and frequent intervals): tobacco in any form 4 oz.; spirits (ordinary drinkable) quarter pint; spirits (cordials or perfumed) quarter pint.

(b) If from any other port, double the quantities specified at *(a)*.

(c) Irrespective of the port from which arriving.

REPATRIATION: Facilities exist.
AIRPORT: Dublin 95 miles; Cork 90 miles; Waterford 16 miles.
TIME: GMT plus 1 hour. Reverting to GMT between October and March.
HOLIDAYS: St. Patrick's Day (17th March); Easter Monday; Whit Monday (1st Monday in August); 25th and 26th December.
POLICE/AMBULANCE/FIRE: Telephone 999.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Not required.
GARBAGE DISPOSAL: A skip will be available in the near future.
WASTE OIL DISPOSAL: Contact Agent or Harbour Office for collection by private company.
SEAMAN'S CLUBS: None.
CURRENCY: Irish Pound (Punt).
GENERAL: *Chart:* No. 2046 and 2049.
AUTHORITY: New Ross Harbour Commissioners, The Quay, New Ross, Co. Wexford, Ireland. *Tel:* +353-51-21303. *FAX:* +353-51-21294. *Contact:* Captain L.J. Foley, Harbour Master.

RATHMULLEN: 55.05 N. 07.31 W.

DOCUMENTS: Papers supplied by Agent in Rathmullen or by Customs.
PILOTAGE: Pilot obtained through Agent in Rathmullen 24 hours notice of ETA required.
ANCHORAGE: Anywhere in Lough.
MAX. SIZE: Any size of vessel can anchor. Max. draft for berthing, 30 ft.
HEALTH: See "Dublin".
RADIO: Malin Head.
TUGS: None required.
BERTHING: No specific requirements.
CRANES: Mobile cranes available. 24 hours notice required.
STEVEDORES: 24 hours ETA required.
MEDICAL: Assistance can be arranged at short notice. Hospital facilities are available at Letterkenny.
FRESH WATER: Available on berth.
FUEL: Different grades available at short notice.
CONSULS: None at port.
REPAIRS: Only small repair jobs carried out.
GANGWAY/DECK WATCHMEN: Recommended
OPENING/CLOSING HATCHES: Normally carried out by crew.
CUSTOMS ALLOWANCES: Tobacco, Wine: See "Dublin".
REPATRIATION: Facilities exist.
AIRPORT: 80 miles away, serviced by regular flights.
TIME: GMT plus 1 hour. Reverting to GMT in Winter months.
HOLIDAYS: Work can be arranged on all church and bank holidays.
POLICE/AMBULANCE/FIRE: Police, Rathmullen 074-58113; Fire, Letterkenny 074-21676; Ambulance, Letterkenny 074-25888.
TELEPHONES: No arrangement for placing telephones aboard.
SERVICES: No special services.
IDENTIFICATION CARDS: Not needed.
GARBAGE DISPOSAL: No service available.
WASTE OIL DISPOSAL: No service available.
SEAMAN'S CLUBS: None.
AUTHORITY: Harbour Master – Rathmullen. *Tel:* 074-58177. *Contact:* C. Lynch, Harbour Master.

Donegal County Council, County House, Lifford, Co. Donegal, Ireland. *Tel:* (074) 41066. *Telex:* 42124. *FAX:* 41205. *Contact:* T. O'Reilly, County Secretary.

ROSSLARE: 52.16 N. 06.20 W. (See Plan)

PORT LIMITS: The limit lines start from a point on shore 4,000 ft. S.E. of viaduct and extend due North for a distance of 6,000 ft. and then due West for a distance of 7,000 ft., thence due South for a distance of 3,430 ft., terminating on shore at a point 3,650 ft. West of existing viaduct.
DOCUMENTS:
Customs Documents.
Ships Manifests.
Crew List.
PILOTAGE: Not compulsory.
ANCHORAGES:

Prohibited Anchorage:	304° – 4.5	cables	from	Lighthouse
Thence	214° – 2.0	"	"	"
"	124° – 4.5	"	"	"
"	034° – 2.0	"	"	"

No anchorage inside breakwater. Sheltered from Southerly round to North Westerly winds.

Dangers: Shoals with depths of less than 18 ft. extend about 4 cables E.S.E. from head of breakwater. Shoal 18 ft., Southern end of which lies about 0.75 cables Northward of end of breakwater. Southern end of an extensive stony flat, having depths of 13 ft. to 18 ft. lies about 3.5 cables further to N.W. Between these shoals lies several outcrops of 18 ft.-19 ft.

MAX. SIZE: Harbour dredged to depth 6 m. LWOST.

Ro/Ro Berth No. 2: Length overall 152 m. Ro/Ro Berth No. 3: Length overall 171 m. Max. beam 22.86 m.

HEALTH: If no infectious diseases on board, Pratique given by customs on arrival. If from a port within E.E.C. this may be given verbally, otherwise required in writing.
RADIO: Ilfracombe, Lands End Radio and Celtic Radio stations.
VHF: Call sign "Rosslare Harbour Radio" Channel 16. Channels 14, 12 and 6 for further communication when within radio range.
RADAR: Not available.
TUGS: None available.
BERTHING: Berth No. 2 and 3 adjustable. Ro/Ro ramp SWL 50 tonnes. Also see "General".
CRANES: None. Roll-on/Roll-off only.
STEVEDORES: Ordered by Agents. ETA necessary.
MEDICAL: Advance notice required at least one hour. Hospital facilities 12 miles away.
DENSITY: Average 1025.
FRESH WATER: Laid on, delivery by hose. Cost £1.00 per 1,000 gals, or part thereof. Rate 15 t.p.h. – 30 t.p.h.
FUEL: No facilities.
CONSULS: None.
REPAIRS: Rosslare Harbour Ships Repairs. Telephone (053) 33194. Telex: 80675.
GANGWAY/DECK WATCHMEN: Not compulsory.
OPENING/CLOSING HATCHES: Crew assisted by stevedores.
CUSTOMS ALLOWANCES: Tobacco: 50 grammes per day or (40 cigarettes or 10 cigars). Spirits, 0.25 litres per day. Wine, 0.50 litres per day.
REPATRIATION: No facilities.
AIRPORTS: Dublin 110 miles. Cork 134 miles. Waterford 51 miles. Small private airfield Castlebridge, 18 miles.
TIME: GMT plus 1 hour. Reverting to GMT in Winter months.
HOLIDAYS: New Year's Day; St. Patrick's Day (17th March); Easter Monday; June Bank Holiday; August Monday; Christmas Day (25th and 26th December). No work Christmas Days – 25th and 26th December.
POLICE/AMBULANCE/FIRE: Police: Rosslare Harbour 33204; Ambulance: County Hospital, Wexford 22233; Fire: Fire Brigade, Wexford 22618.
TELEPHONES: Operators to arrange with Department of Posts and Telegraphs.
SHORE LEAVE: Crew allowed ashore.
IDENTIFICATION CARDS: Seaman's Book sufficient.
GENERAL: Leading lights for Berth No. 3 are fixed red, 120° visible over and arc of 90° from 079° to 169° surmounting yellow diamond shaped daymarks.

Lighthouse on main pier end, 50 ft. flashing W.R.G. every 5 seconds.

New pier built 1980. Overall length 152 m. Berth No. 1 is reserved for future developments. Berth No. 2 in operation, Mardev Linkspan (Ro/Ro). Depth 6 m. LOWST. Light pier end. QK Fl. white. Leading lights occ. white 3 secs. 146°.

AUTHORITY: Coras Iompair Eireann, Heuston Station, Dublin.

Rosslare Harbour, Co. Wrexford, Ireland. *Tel:* (053) 33114. *Telex:* 80730. *FAX:* 053-33206. *Contact:* Captain G. Livingstone, Harbour Master/Port Manager.

SHANNON ESTUARY: (See Plan)

(A) Foynes Harbour: 52.36 N. 09.06 W.
(B) Foynes Island: 52.37 N. 09.07 W.
(C) Tarbert Island Oil Terminal: 52.35 N. 09.21 W.
(D) Money Point Generating Station: 52.36 N. 09.25 W.
(E) Aughinish Island Marine Terminal: 52.38 N. 09.03 W.
(F) Dernish Island Jetty: 52.41 N. 08.55 W.

(A) FOYNES HARBOUR

DOCUMENTS: See "Limerick".
PILOTAGE: Compulsory from Scattery Island to Foynes Buoys. Pilot may be taken off Kilcredane Head about 9 miles farther West as an optional extra (usually by vessels over 5,000 d.w.t.). ETA for Pilots passed in advance by Agent. Masters may call Pilots (Scattery Pilot Station, Channel 16 VHF) or by normal International Code sight or sound signals. Foynes Harbour Pilot boards at Foynes Buoys. Call Foynes Harbour Radio VHF Channel 16.
ANCHORAGE: Vessels waiting to enter Foynes normally anchor Foynes Roads (West of Foynes Buoys).
RESTRICTIONS: No restrictions by day or night on vessels under 6,000 d.w.t.
MAX. SIZE: Vessels up to 190 m. length and 10.20 m. draft with restriction on beam of 28.0 m. Ore cargoes of up to 22,000 tons and grain cargoes up to 27,000 tonnes have been loaded and tankers up to 32,000 tons have discharged.
HEALTH: See "Limerick".
RADIO: See "Limerick".
VHF: As for Limerick except for "Limerick Harbour Radio" substitute "Foynes Harbour Radio".
TUGS: 2 × 1,250 h.p. at Foynes Harbour.
BERTHING:
West Pier: 10.5 m. LWOST. 106 m. quay with mooring buoys. For tankers, crude ore (loading by conveyor system) and other cargoes. See "Stevedores".
East Pier: 11.3 m. LWOST. 140 m. quay with mooring buoys ahead and astern.
Inner Berth, East Jetty: 6.5 m. LWOST. Length 155 m.
East Jetty Extension: 11.3 m. LWOST. 160 m. of quay.
Two other berths where vessels up to 2,000 d.w.t. lie safe aground on soft mud during low water.
CRANES: 2×30 ton mobile cranes are available from local firms if and when required. A local firm based in Foynes has a fleet of 80 forklifts, and 5 Bob-Cats which are also available at the Port. 1×15 tonne Nelcon mobile grabbing crane and 1×15 ton Liebherr mobile grabbing crane, capable of conversion for general cargo also available.
STEVEDORES: ETA to Agent before 1600 hrs. Monday/Thursday for labour next day 0800 hrs., before 1600 hrs. Friday for labour Saturday or 0800 hrs. Monday. For cargoes other than bulk ore or concentrates in bulk Masters should state number of gangs/workable hatches.
Crude Ore: West Pier Conveyor: 500 t.p.h. loaded normally on continuous basis, day and night, commencing on berthing (16,000 tons in 28 running hours).
Packaged D.B.B.: 120 stds. per gang day (pre-slung).
Packaged D.B.B.: 70 stds. per gang day (shore slings).
Bulk Fertilisers: 1,000 tons per day (mobile grab crane).
Bag Fertilisers: 400 tons per gang day (shore mobile cranes).
Bagged Barytes, bagged cement and other bagged commodity: 400 tons per gang day (ship's gear/mobile crane).
Storage Facilities: 15 acres of open landing ground and 45,000 sq.ft. of covered storage.
Weighbridge: There are 6 modern weighbridges (max. 60 tonnes) located throughout the Harbour Lands, and further weighing facilities will be installed as required.
MEDICAL: Emergency facilities available at short notice locally. Full general hospital facilities at Limerick, 25 miles distant.
TANKERS: New berth for handling bulk liquid cargoes located close N.E. of East Jetty. Vessels up to 10,000 d.w.t. or 400 ft. LOA can berth.
DENSITY: Variable on season and tidal conditions between 1008/1020.
FRESH WATER: Available at all berths. Industrial water also available.
FUEL: Available East Pier from adjacent installation.
REPAIRS: Limerick facilities – no dry dock.
WATCHMEN: Normally crew watchmen.
HATCHES: See "Limerick".
CUSTOMS ALLOWANCES: See "Limerick".
REPATRIATION: No difficulties – Shannon Airport 34 miles.
TIME: See "Limerick".
HOLIDAYS: See "Limerick".
POLICE/AMBULANCE/FIRE: Dial 999.
SHORE LEAVE: No restrictions.
SHIP SUPPLY SERVICE: Contact: Ocean Inchape (Ireland) Limited, Aras Ide, Foynes, Co. Limerick.
Offshore Supply Services, Aras Ide, Foynes, Co. Limerick.
Irish Tugs Limited, Yacht Club Building, Cobh, Co. Cork.
Messrs. James Scott & Co. (Shannon) Limited, Hartstonge House, Hartstonge Street, Limerick.
GARBAGE DISPOSAL: Skips available on quays and jetties.
WASTE OIL DISPOSAL: Atlas Waste Oil will supply necessary equipment on request. Tel: (0502) 22411 (24 hours) or Freephone 1800-504-504.
SEAMAN'S CLUBS: None.
CURRENCY: Irish Pound (Punt).
AUTHORITY: Foynes Harbour Trustees, Harbour Office, The Docks, Foynes, Co. Limerick, Ireland. *Tel:* Foynes (069) 65111, 65380, 65473. *FAX:* (069) 65142, 65552. *Contact:* J.F.O'Malley, Secretary. Captain S.A.Histon, Harbour Master. Tel: (069) 65381, 65244. Fax: (069) 65552.

(B) FOYNES ISLAND

LOCATION: Cement Limited Oil Jetty is located on N.W. side of island, which is not connected to mainland. Buoyed moorings for tankers up to 60,000 tons (length 950 ft.). Vessels lie alongside breasting dolphins off pipe trestle in 50 ft. min. LWOST. (Berth currently unused due to change over to coal by Cement Ltd. in 1992).
DOCUMENTS: See "Limerick".
PILOTAGE: Compulsory from Scattery Island to Foynes Island for all vessels but for vessels over 5,000 g.r.t. it is compulsory from Kilcredaun (otherwise as Limerick). Harbour Master advises vessels over 13.0 m. draft to embark Pilot West of Kilclogher.
ANCHORAGES: Vessels normally wait in Outer Anchorage 2.5 miles – 3.0 miles West of Scattery or at anchor in Cahircon Anchorage N.E. of Foynes Island Jetty waiting daylight early flood tide for berthing.
RESTRICTIONS: None for vessels up to 60,000 d.w.t. subject daylight movements berthing flood tide and departures during flood tide.
Mooring lines required: at least 4×120 fathoms and 6×90 fathoms polypropylene or similar.
MAX. SIZE: Min. depth alongside 50 ft.
HEALTH: }
RADIO: } "See Limerick"
VHF: }
TUGS: Tugs available.
MEDICAL: No facilities on island. See "Foynes" and "Limerick".
TANKERS: Flexible hoses 2×8 in. passed by derrick from pipe trestle to ship. Connections – PCD 11.75 in., 8 holes.
DENSITY: 1013 (average).
FRESH WATER: None available.
FUEL: None available.
REPAIRS: None except via Foynes or Limerick.
SURVEYORS: See "Limerick".
CUSTOMS ALLOWANCES: See "Limerick".
REPATRIATION: See "Limerick".
TIME: See "Limerick".
HOLIDAYS: As Limerick. Vessels normally discharge without regard to holidays.
EMERGENCY CO-ORDINATION CENTRE: See "Limerick".
TELEPHONES: Shore telephone placed on board for ship's use with cargo hoses. Tel.: 069-65226.
BANKS: See "Limerick".
STORING: Island location. All stores must be conveyed by launch.
SHORE LEAVE: Restricted to daylight hours as launch service only then available. No access to mainland except by launch.
GARBAGE DISPOSAL: By workboat by arrangement with Agent.
WASTE OIL DISPOSAL: Atlas Waste Oil. Tel: (0502) 22411 (24 hours) or Freephone 1800-504-504.
AUTHORITY: Shannon Estuary Ports (See "Limerick").

(C) TARBERT ISLAND OIL TERMINAL

LOCATION: Electricity Supply Board power station and Jetty located on N.W. shore of Tarbert Island (with road access from the mainland) 52°35' N., 09°21' W. Berth 48 ft. draft LWOST, overall length including outer mooring dolphins 1,050 ft. with berthing face of 300 ft.
DOCUMENTS: See "Limerick".
PILOTAGE: Compulsory from Scattery Island to Tarbert for all vessels but for vessels over 5,000 g.r.t. it is compulsory from Kilcredaun (otherwise as Limerick). Harbour Master advises vessels over 13.0 m. draft to embark Pilot West of Kilclogher (See "Limerick").
ANCHORAGES: Vessels normally wait 2.5 miles West of Scattery for daylight flood tide for berthing.
RESTRICTIONS: None for vessels up to 50,000 d.w.t. on suitable draft, berthing daylight flood tide, departure on flood tide in daylight or darkness (subject good weather). Vessels in excess of 50,000 d.w.t. may be required to keep a tug on standby throughout stay.
MAX. SIZE: The berth has 48 ft. alongside at low water.
HEALTH: }
RADIO: } "See Limerick"
VHF: }
TUGS: Available.
MEDICAL: No facilities. Nearest doctor at Glin, Co. Limerick (6 miles), See "Limerick".
TANKERS: 2 Marine Arms – 10 in. PCD 14.15/16 in. Outer diam. 16 in., inner diam. 11 in. Holes, 12 of 0.75 in. diam.
DENSITY: 1025, except in very exceptional conditions.
FRESH WATER: Available.
FUEL: None available. Jetty head approached from shore by footway (4.5 ft. wide×650 ft. long), therefore no direct access to berth from shore for road transport.
REPAIRS: None locally. Nearest Limerick 40 miles distant or Foynes, 7 miles distant. Difficulty of access should be noted.
SURVEYORS: See "Limerick".
WATCHMEN: Watchmen from crew.
CUSTOMS ALLOWANCES: See "Limerick".
REPATRIATION: See "Limerick".
TIME: See "Limerick".
EMERGENCY CO-ORDINATION CENTRE: See "Limerick".
TELEPHONES: At jetty head.

STORING: A narrow viaduct 650 ft. long makes storing impossible from trucks alongside. Small four wheeled hand trolleys are used.
SHORE LEAVE: No restrictions.
GARBAGE DISPOSAL: By arrangement with Agent.
WASTE OIL DISPOSAL: By arrangement with Agent.
AUTHORITY: Shannon Estuary Ports (See "Limerick").

(D) MONEY POINT GENERATING STATION:

LOCATION: On North shore, 3 miles East of Scattery Island. 52° 36' N. 9° 25' W.
DOCUMENTS: See "Limerick".
PILOTAGE: Compulsory from Scattery. Vessels over 5,000 g.r.t. are required to take a Pilot from Kilcredaun (See "Limerick").
ANCHORAGES: Vessels normally anchor 2.5 miles – 3.0 miles West of Scattery when conditions allow. Vessels over 13.0 m. draft may be required to remain West of Loop Head in very bad weather. For these large vessels Pilots will normally board inside Loop Head.
RESTRICTIONS: Contact Port Control. Vessels in excess of 13.0 m. draft normally cross Kilclogher/Ballybunnion Bar before high water and berth port side alongside on first of ebb.
MAX. SIZE: 180,000 d.w.t. Max. draft 17 m.
RADIO/VHF/HEALTH: See "Limerick".
TUGS: Available. Number and size as directed by Harbour Master.
BERTHING: Length of berth 380 m. Depth alongside 25 m.
DENSITY: 1025.
FRESH WATER: Available.
FUEL: Available from road tanker.
REPAIRS: Limited repair facilities.
SURVEYORS: See "Limerick".
CUSTOMS ALLOWANCES: See "Limerick".
CARGO GEAR: 2×40 tonne ship unloaders will give a coal discharge rate of 1,500 t.p.h. 1 H.F.O. Marine Arm.
REPATRIATION: See "Limerick".
TIME: See "Limerick".
EMERGENCY CO-ORDINATION: See "Limerick".
TELEPHONE: At jetty.
BANKS: See "Limerick".
STORING: No restrictions provided adequate notice is given to E.S.B. Money Point.
SHORE LEAVE: No restriction.
AUTHORITY: Shannon Estuary Ports (See "Limerick").

(E) AUGHINISH ISLAND MARINE TERMINAL:

LOCATION: On South side of estuary, 2 miles N.E. of Foynes Island. 52° 38' N. 9° 03' W.

"L" Shaped Jetty with outer and inner berths. Outer berth: 12 m. draft LWOST, length of jetty head 275 m., plus 68 m. to dolphin.

Inner berth: 11 m. draft LWOST. Berth 230 m. long. Inner berth worked only on flood tide.

The berth is owned by Aughinish Alumina Ltd.
DOCUMENTS: See "Limerick".
ANCHORAGES: Vessels normally anchor 2.5 – 3 miles West of Scattery.

Anchorage also at Cahircon opposite Foynes Island if awaiting tide with Pilot on board.
PILOTAGE: Compulsory from Kilcredane for vessels over 5,000 tons g.r.t. and from Scattery for smaller vessels. Vessels over 13.0 m. draft are advised to embark Pilot West of Kilclogher (See "Limerick").
RESTRICTIONS: Contact Port Control. Jetty owner's place own handbook onboard on arrival.
MAX. SIZE: Outer berth 70,000 d.w.t. Inner berth 40,000 d.w.t., subject to max. length 180 m. Max. draft 11.0 m. in brackish water on inner berth. Prior approval from Harbour Master's Department required.
RADIO/VHF/HEALTH: See "Limerick".
TUGS: Available. Number and size as directed by Harbour Master.
CARGO GEAR: *Outer Berth:* 1 Bauxite Unloader (Krupp) 18,000 tons per 24 hr. day. 1 Alumina Loader (Claudius Peters) 24,000 tons per 24 hr. day.
DENSITY: Average 1013 – varies with tidal and seasonal conditions.
FRESH WATER: Available.
FUEL: Not available in bulk.
REPAIRS: Limited repair facilities.
SURVEYORS: See "Limerick".
CUSTOMS ALLOWANCES: See "Limerick".
REPATRIATION: See "Limerick".
TIME: See "Limerick".
EMERGENCY CO-ORDINATION CENTRE: See "Limerick".
TELEPHONE: At jetty.
BANKS: See "Limerick".
STORING: No restrictions provided adequate notice is given by Chandler to Aughinish Alumina (Tel: 061-49488).
SHORE LEAVE: No restriction other than company security controls.
GARBAGE DISPOSAL: By arrangement with Agent.
WASTE OIL DISPOSAL: By arrangement with Agent.
AUTHORITY: Shannon Estuary Ports (See "Limerick").

(F) DERNISH ISLAND JETTY:

LOCATION: On North side of estuary one mile South of Shannon International Airport (52° 41' N., 08° 55' W.). "T" jetty 45 m. long with buoys for head and sternlines. Distance between head and stern buoys 135 m. Depth alongside 8.0 m. LWOST. Jetty is used only for cargoes of aviation fuel which are pumped directly to tanks in the Airport.
DOCUMENTS: See "Limerick".
ANCHORAGES: See "Limerick".
PILOTAGE: See "Limerick".
RESTRICTIONS: Vessels must cross a mud bank (3.5 m. LWOST) on approach to jetty, so movements are restricted to upper half of tide.
MAX. SIZE: 6,500 tons deadweight with 7.0 m. draft assuming manifold is amidships.
RADIO/VHF/HEALTH: See "Limerick".
TUGS: Available but not normally used.
CARGO GEAR: Marine arm, 8 in. connection.
DENSITY: Average 1020, but varies with tidal and seasonal conditions.
FRESH WATER: Available.
FUEL: Not available.
REPAIRS: See "Limerick".
SURVEYORS See "Limerick".
CUSTOMS: See "Limerick".
REPATRIATION: See "Limerick".
TIME: See "Limerick".
EMERGENCY COORDINATION CENTRE: See "Limerick".
TELEPHONE: Available at jetty.
BANKS: Small branch at Shannon Town, 2 miles away. Also see "Limerick".
STORING: No restrictions, except that no vehicles allowed on jetty or approach.
SHORE LEAVE: No restrictions.
GARBAGE DISPOSAL: Covered skip at landward end of approach.
WASTE OIL DISPOSAL: Not available, see "Limerick".
AUTHORITY: Shannon Estuary Ports (See "Limerick").

SLIGO: 54.17 N. 08.30 W.

DOCUMENTS:
2 copies Crew List.
1 copy List of Live Animals.
2 copies Passenger List.
1 copy List of Stowaways.
1 copy Crew Declaration.
1 copy Bonded Stores Declaration.
1 copy Stores List.
Aliens List for other than Irish and British Ships.
Customs Clearance from previous port.
Health Declaration.
1 copy Bill of Lading.
2 copies Freighted Manifest.
1 copy Draft Survey (At loading port).
International Tonnage Certificate.
Surveys 109 Deck Cargo and 107 for Grain.

PILOTAGE: Tel: (072) 41455, (072) 41552 and (073) 21473. Fax: 072-41989. Pilots can be contacted (at least 6 hours before arrival) through Belmullet Radio when coming from South or Glenhead Radio when coming from North. Pilot boards off Raghley Head.
ANCHORAGE: East of Wheat Rock Buoy, depth 40 ft.
RESTRICTIONS: Small vessels from half tide to 2 hours after high tide, large vessels near high tide and daylight.
MAX. SIZE: 92 m. long (100 m. if fitted with bow thruster), breadth not restricted, draft 5.00 m. MHWS and 4.30 m. MHWN.
HEALTH: Home trade areas, verbal declaration, all others written declaration. Vessels from EEC automatic procedure. Suspected diseases inform Customs Officer or County Medical Officer of Health. Appropriate signals day and night.
RADIO: Malin Head, Wick or Port Patrick Radio.
ETA: Advise Agent of ETA at Raghly Point, 24 hours in advance.

Pilots require 6 hours notice of arrival.
VHF: Malin Head Radio, Glenhead Radio and Belmullet Radio.
TUGS: None.
BERTHING: Barytes Jetty: Length 55 m. Depth 3.0 m. (at MLWS). The bottom is soft which enables vessels to lie safely aground.

Deepwater Berth: Length 75 m. Depth 5.0 m. (MLWS).
Timber Berth: Length 30 m. Depth 1.8 m. (MLWS).
CRANES: 2×14 tonne mobile cranes.
STEVEDORES: 24 hours notice required. Average discharge rate: Coal and timber 150 t.p.h. Fertilisers in bags 2 gangs, 500 tons per 8 hour day.
MEDICAL: Large regional hospital. Doctors and dentists available.
TANKERS: The Deepwater Jetty is used for the import of oil (See "Berthing").
DENSITY: 1004, high tide.
FRESH WATER: Available by hose.
FUEL: All grades available.
CONSULS: Netherlands Vice-Consul, Sligo 2622.
REPAIRS: Welding and light repairs.
GANGWAY/DECK WATCHMEN: Not necessary.
OPENING/CLOSING HATCHES: By crew.

CERTIFICATES:
Safety Equipment.
Register.
Articles.
Light Dues Certificate.
Derat Certificate.
CUSTOMS ALLOWANCES: See "General" before first port.
REPATRIATION: Facilities exist.
AIRPORT: Strandhill, Sligo. Dublin International Airport, 217 km.
TIME: GMT plus 1 hour. Reverting to GMT between October and March.
HOLIDAYS: St. Patrick's Day (17th March); Easter Monday; 1st Monday in May; Whit Monday (1st Monday in August); Last Monday in October; 25th and 26th December. Not usual to work on any of these days.
POLICE/AMBULANCE/FIRE: Tel: 999.
TELEPHONES: None available for placing on board.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Required.
GARBAGE DISPOSAL: Skips are available from local waste disposal company if required.
WASTE OIL DISPOSAL: Can be arranged.
SEAMAN'S CLUBS: None.
CURRENCY: Irish Pound – Punt (IR£).
GENERAL: In N.W. gales, shelter available at Inver Bay, Donegal Bay. In Southerly gales shelter in Killala Bay or Mullaghmore.
AUTHORITY: Sligo Harbour Commissioners, Harbour Office, Custom House Quay, Sligo, Co. Sligo, Ireland. *Tel:* 071-61197. *FAX:* 071-61197. *Contact:* The Secretary.

WATERFORD: 52.15 N. 07.07 W. (See Plan)

DOCUMENTS:
3 Manifests.
1 set Bills of Lading.
1 Crew List (aliens).
1 Ship Stores List.
1 Passenger List.
PILOTAGE: Compulsory. Tel. Address "Waterford Pilots" 24 hours ETA if possible. Tel. Dunmore East 353-51-383119. VHF call sign "Waterford Pilots". Channel 16 calling up, Channel 14 working.

Pilot boat black hull with words "Pilots" in white on sides. Location off Dunmore East Pier.

In event bad weather a vessel is directed to Passage East by VHF where a Pilot will board in smooth water.
ANCHORAGE: Good anchorage on Eastern Shore at entrance to Harbour in Easterly winds. 30 ft. LWOST.
RESTRICTIONS: Draft restricted by 2 bars. At Duncannon, a sand bar with a low water depth of 6.0 m. The other at Cheekpoint with low water depth 6.0 m.

Vessels of deeper draft await tide at Dunmore East Anchorage.

There are no air draft restrictions at Waterford.
MAX. SIZE: 150 m. LOA normally; 156 m. LOA by arrangement. Draft 6.8 m. neap tides; 7.5 m. spring tides at City Centre. At Belview 230 m. LOA and draft 10.0 m.
HEALTH: Vessels fly "Q" flag, pratique given by Customs. Infectious diseases to be notified to Agent before arrival.
RADIO: Messages through Land's End or Valentia Radio Stations.
VHF: Harbour Commissioners have VHF station at Dunmore East, Channel 16 for calling, Channels 12 and 14 for working. A watch is kept at the station during daylight hours and when a vessel is expected.

Geographical position of the R.T. Station: Latitude 52° 08' 45" North. Longitude 6° 59' 30" West.
TUGS: 24 hours notice required. Tug will be available in near future.
BERTHING:

Name	Length (m.)	Depth (m.)	*Remarks*
City Docks:			
North Wharf	177	6.9	
	122	6.9	
	247	7.6	
Halls Wharf	91.5	7.6	
Frank Cassin Wharf	278	6.9	
Forde Wharf	91.5	6.9	
Clyde Wharf	244	5.2	
Adelphi Wharf	73.9	5.5	
Belview: Also see "Developments".			
Belview Port	500	10.0	Containers/Cruise ships. 2×45 ton container gantries.
	120	10.0	Bulk cargoes. 1×600 t.p.h. mobile crane.

There are various other cranes – 10 ton mobiles, forklifts, travel-lifts up to 28 tons, etc., available.
BRIDGES: Times of passing through Rice and Suir Bridge for National Board and Paper Mills Berth and for vessels proceeding upriver to Fiddown, to be arranged by Ship's Agent.
STEVEDORES: Agent arranges discharge upon receipt of ETA.
Grain discharge: 2,400 tonnes per day (300 t.p.h.).
Coal discharge: 3,300 tons per day.
Feedstuffs discharge: 2,500 tons per day.
MEDICAL: Hospital and ambulance available. Arrangements made by ship's Agent.
TANKERS: Great Island Jetty, used by Electricity Supply Board. Max. design size 20,000 d.w.t. Depth 11.0 m. Cruise vessels up to 240 m. LOA may dock at the facility.

Morris: Length 45.0 m., depth 4.0 m. For heavy oil, diesel oil and petroleum spirit. Max. beam 10.5 m. Berth is located 12 miles upstream from Suir railway bridge.
DENSITY: 1008 at LWOST.
FRESH WATER: Available by hose 15 t.p.h. (minimum).
FUEL: Supplies available by road tanker.
CONSULS: Denmark: Mr. D. Baxter, Ove Arup and Partners, 99 The Quay, Waterford, Tel: 876511.
Spain: Mr. I. Farrell, c/o Nolan, Farrell & Goff, Newtown, Waterford, Tel: 872934.
France: Mrs. Sylvia Murphy, Dunmore East. Tel: 051-383416.
REPAIRS: Minor repairs.
DRY DOCKS: Dry docks available at Dublin and Cork.
GANGWAY/DECK WATCHMEN: Day watchmen not necessary. Night watchmen at Master's request.
OPENING/CLOSING HATCHES: By crew.
CERTIFICATES:
Light Certificate.
Register.
Load Line Certificate.
Tonnage Certificate.
Derat Certificate.
Radio Certificate.
Safety Construction Certificate.
Life-saving Appliance Certificate.
CUSTOMS ALLOWANCES: See "General" before first port.
CARGO GEAR: Not beyond ordinary Factory Act requirements.
REPATRIATION: Facilities exist.
AIRPORT: Waterford 5 miles, Dublin 100 miles, Cork 75 miles, Shannon 75 miles. Served by regular airlines.
TIME: GMT plus 1 hour. Reverting to GMT in Winter months.
HOLIDAYS: St. Patrick's Day; Easter Monday; August Bank Holiday; December 25th and December 26th.
POLICE/AMBULANCE/FIRE: Police 051-874888; Ambulance 051-873321; Brigade 051-875555.
TELEPHONES: Telephones can be ordered through Agent at any berth.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Not needed.
GARBAGE DISPOSAL: Collection service available. Skips provided alongside. Collected on request.
Waterford Utility Services. Tel: 051-873915/876360.
IPODEC Ltd. Tel: 051-873533.
Phelan Waste Disposal. Tel: 051-382547.
WASTE OIL DISPOSAL: Tanker trucks available. Contact Atlas Waste Oil. Tel: 051-878985 or 0502-22411 (24 hours) or Freephone 1800-504504.
SEAMAN'S CLUBS: None.
CURRENCY: Irish Pound (Punt).
GENERAL: *Cruise Port:* Waterford had 20 scheduled cruise vessel calls in 1996. Waterford Harbour Commissioners are actively promoting the port as a cruise destination and major cruise companies are making Waterford a regular port of call.

Vessels of 150 m. waterline length can access City Centre Berths, vessel of 240 m. LOA berth in the middle port (See "Tankers"), and large vessels anchor at anchorage at Dunmore East (See "Plan"), where a Customs built landing stage has been installed for ship tenders.

Vessels calling in 1996: "Crystal Symphony", "Royal Viking Sun", "Norwegian Crown" and others.
Chart: B.A. Chart No. 2046.
DEVELOPMENTS: 150 m. extension (multi-modal) to Belview Terminal, 4 miles down-river of city, for completion 1997. This is the second phase of a 5 phase development, part-funded by EU grant aid.
AUTHORITY: Waterford Harbour Commissioners, Harbour Office, George's Street, Waterford, Ireland. *Tel:* 051-874907. *FAX:* 051-874908. *Contact:* J.V. Clancy, General Manager. Captain P. Cowman, Harbour Master (Tel: 051-874499. Mobile 088-598297).

WICKLOW: 52.59 N. 06.02 W. (See Plan)

PORT LIMITS: The seaward limits of the harbour are defined by a line drawn across the harbour entrance.
DOCUMENTS: Usual documents for Irish ports.
PILOTAGE: Pilotage is not compulsory, but strongly recommended. Pilots can be arranged through the local Agent or the Harbour Office. Pilots usually board about 3 cables North of the East Pier Lighthouse.
ANCHORAGES: A safe anchorage can be found anywhere in Wicklow Bay, except in N.E. or Easterly gales. A good anchorage can be found about 1 mile off the harbour entrance.
RESTRICTIONS: Deep draft vessels must dock at HW (See "Berthing"). Deep draft vessels lie safely aground at LW, the bottom consisting of soft mud.
MAX. SIZE: Max. length 100 m. (approx.), max. draft 5.20 m.
HEALTH: See "Dublin".
RADIO: Dublin Radio and Wicklow Head Radio.
VHF: Calling – Channel 16, Working – Channel 14. Channels 2, 6, 7, 8, 26, 27 and 28 are also available.

Reception of port VHF only extends to about 20 miles offshore in a Northerly and Easterly direction and to about 10 miles offshore in a Southerly direction due to the signals being blocked by Wicklow Head. It is hoped to overcome these restrictions in the near future by raising the height of the aerial.
RADAR: No Port Radar.
TUGS: Tug "Kilquade" with bollard pull of 5 tons available with 2 hours notice.

BERTHING:
East Pier: 95 m. long, depths HW 5.2 m., LW 3.1 m. Not often used as the pier is exposed to North-Easterly winds and is only 7.3 m. wide.
Packet Pier: 93 m. long, depths HW 5.2 m., LW 3.1 m. Most used berth. Timber cargoes generally worked here.
North Quay: 130.1 m. long, depths HW 4.7 m., LW 2.8 m. Paper is worked at Northern end and the Southern end is in general use.
South Quay: 126.22 m. long, depths HW 4.9 m., LW 3.0 m. This quay is used for the export of woodchips in bulk. It is presently being redeveloped.
CRANES: Mobile cranes are hired from local firms by stevedores or Agents. Max. lifting capacity is about 8 to 10 tonnes. For heavier lifts Agents or stevedores should be consulted.
BULK CARGO: Usually worked at Packet Pier and North Quay.
BRIDGES: None.
STEVEDORES: Working hours 0800 – 1700 hrs. Overtime worked when required.
MEDICAL: Full medical facilities available. It is desirable if possible to give advance notice of any medical attention that may be required.
TANKERS: There are no tanker berths.
DENSITY: Varies between 1012 at LW to 1025 at HW.
FRESH WATER: Available at all quays.
FUEL: Gas oil is readily available and is brought to the ships' side by road tanker. Other types of fuel would need to be specially ordered.
FIRE PRECAUTIONS: Normal precautions only.
CONSULS: Nearest at Dublin.
REPAIRS: Only small repairs can be carried out.
DRY DOCKS: None.
SURVEYORS: Cargo surveyors can be contacted at Dublin or locally if necessary.
Lloyds' Register of Shipping, 2 Lower O'Connell Street, Dublin 1.
GANGWAY/DECK WATCHMEN: Not necessary.
HATCHES: Operated by vessel's crew.
CUSTOMS ALLOWANCES: As per European Economic Community (E.E.C.) Regulations.
CARGO GEAR: Shore cranes or vessel's gear may be used.
REPATRIATION: Arranged by Agents.
AIRPORT: Dublin, 40 miles away.
TIME: GMT, Summertime GMT plus 1 hour (March – October).
HOLIDAYS: See "Dublin".
POLICE/AMBULANCE/FIRE: Dial 999 or

Police	0404-67107/67287
Ambulance	0404-67108
Fire	0404-67371
Harbour Office	0404-67455
After hours	01-2826482.

EMERGENCY CO-ORDINATION CENTRE: The Irish Marine Emergency Service Headquarters, Leeson Lane, Dublin.
Tel: 01-6620922, 01-6620923.
Telex: 93039 Imes Ei.
Fax: 01-6620795.
24 hour operation.
TELEPHONES: No facilities for placing telephones on board ship.
SERVICES: By contacting the ship's Agent all services are available. There is a waste oil disposal service. Nearly all services like radio and radar repairs, nautical publications, etc. are supplied from Dublin.
BANKS: Bank of Ireland Ltd., Main Street, Wicklow. Tel: 0404-67376. Allied Irish Banks Ltd., Abbey Street, Wicklow. Tel: 0404-67311 and 67051.
STORING: See "Prelims".
1. Stored by Truck.
2. Barge storing at Harbour Master's discretion.
3. Trucks can proceed alongside the vessel.
4. Fork lift trucks can be used.
5. Normal Customs Regulations in Ireland. Consult local Officer.
6. Local people can be employed.
SHIP SUPPLY SERVICE: Contact: R. F. Conway & Co. Ltd., North Quay, Wicklow. Tel: (0404) 67210/67019. Telex: 25719. Telegram: Conway, Wicklow.
SHORE LEAVE: Permitted.
IDENTIFICATION CARDS: Seaman's Book is sufficient.
GARBAGE DISPOSAL: Skips are provided on the quay.
WASTE OIL DISPOSAL: Can be arranged through local agent.
SEAMAN'S CLUBS: None.
CURRENCY: Irish Pound – Punt (IR£).
DELAYS: Tide restrictions only.
AUTHORITY: Wicklow Harbour Commissioners, North Quay, Wicklow, Co. Wicklow, Ireland. *Tel:* 0404-67455. After hours 01-2826482. *FAX:* 0404-67455. *Contact:* Captain W.D. Garvey, Harbour Master/ Secretary (After hours Tel: 01-2853210).

NOTES

Please also advise Shipping Guides Ltd.

Israel

GENERAL:

All vessels bound for the ports of Haifa, Ashdod and Ashkelon have to send a position report when they arrive at a distance of 100 miles from the Israeli coast. Such position reports shall be sent free of charge to "SVC IMOT" via "4XO" and shall contain the following information: (a) Date and time; (b) Ship's name; (c) Position; (d) Course; (e) Speed; (f) Destination.

Vessels should monitor VHF Channel 16 thereafter for Israeli Navy identification supposes.

ASHDOD: 31.49 N. 34.39 E. (See Plan)

DOCUMENTS:
3 Crew Lists, and Crew Passports or Seamen's Books.
1 Provisions List.
1 List of Articles in possession each Crew member – cameras, binoculars, radios, cigarettes, tobacco, etc.
Master to declare firearms and rounds of ammunition.
4 Passenger Lists.
Stowage Plan and Manifest to be mailed in advance, preferable Master to cable 72 and 48 hours before arrival holds workable and gangs required also draft forward and aft on arrival.

PILOTAGE: ETA through Haifa Radio 4XO addressed to Agent at least 12 hours before arrival. Pilot station and boat equipped VHF Channel 14 and 16 contact station for instructions. Pilot boards about 0.5 miles off port entrance between W. to N.W. from breakwater head (green light).

In bad weather, when boarding impossible, vessel is guided into harbour by VHF or tugboat waiting at entrance, at Master's consent.

Pilot ladder as per Safety of Life at Sea. Vessel should head about 4 points off the wind. Recommended 2 life-lines running along ladder, 1 each side, ropes 2.5 in. – 3 in. circumference.

ANCHORAGE: All area open sea, no recommended safe anchorage, but vessel should avoid anchorage near fairway and too close to oil installation buoys.

Masters are advised to keep the decks well lit in view of the strong lights ashore which may cause the anchor lights to be seen with difficulty by approaching vessels.

Vessels moored to the breakwaters shall have their anchor lights burning.

RESTRICTIONS: Pilotage available 24 hours. Enter according arrival time or berths available. Vessels at anchorage awaiting berth keep watch Channels 14 and 16.

MAX. SIZE: Draft limitations at Bulk Pier: Summer, 12.50 m. Winter, 12.00 m. Draft limitations at other piers: 9.8 m. Draft limitations vary according to the length and beam of vessels.

HEALTH: Free pratique is requested via Haifa, address, "Quarantine Haifa".

RADIO: Haifa Radio 4XO, also see "Haifa".

VHF: *Ship's Reporting Arrival Time to Ashdod Port Control:* Vessels due to berth on arrival should report their arrival time to the Port Control when reaching the position one mile Northwest of the port entrance.

Vessels due for anchorage at Ashdod Roads should report their arrival time when dropping anchor within the harbour limits, not more than 1.5 miles off the main breakwater, as close as possible to the designated anchorage area.

TUGS: 1×4,500 h.p. and 2×3,000 h.p. Each charge included in pilotage charge for normal berthing attendance. Tugs wait at port entrance and act on Pilot's instructions. Tug's lines are used.

BERTHING: Container terminal with 4 gantry cranes.

DENSITY: *Report:* January 1992.

The density of the water measured alongside Pier No. 101 (Harbour Master's Station) was 1030. This density may have increased due to a constant dropping of phosphate powder from adjacent piers.

FRESH WATER: Fresh water supplied by hydrants at 220 t.p.h.

FUEL: Supplied by trucks, or supplied by special barges. 24 hours advance notice required.

CONSULS: Uruguay. All other Consulates in Tel-Aviv approx. 40 km. Available by telephone.

REPAIRS: No dock, but minor repairs effected.

GANGWAY/DECK WATCHMEN: Private companies supply gangway watchmen, obtainable through Agent.

OPENING/CLOSING HATCHES: Performed by stevedores. Mechanical hatch covers operated by crew.

CUSTOMS ALLOWANCES: 200 cigarettes, 1 open bottle of spirits per person.

AIRPORT: Ben Gurion Airport, served by regular airlines, distance 35 km.

TIME: Local standard time is 2 hours ahead of GMT. GMT plus 3 hours from Saturday 24th March until Saturday 25th August(1990).

HOLIDAYS: Port business is suspended on the following holidays: Saturdays; The 2 days of the Jewish New Year (Rosh Hashana); The Day of Atonement (Yom Kippur); The first and the last day of the Feast of Tabernacles (Sucot); The first and the last day of Passover (Pesah); Pentecost (Shavuot); Independence Day. The first of May is observed by the port workers as Labour Holiday and therefore no work is done in the port on that day.

POLICE/AMBULANCE/FIRE: Police, Ambulance, Fire Services, telephone 22222.

IDENTITY CARDS: Issued by port police on arrival.

GARBAGE DISPOSAL: Daily collection service. Garbage must be placed in strong plastic bags. Daily charge: LOA up to 90 m., U.S.$ 14.40, over 90 m., U.S.$ 21.60.

WASTE OIL DISPOSAL: Available by tanker trucks. Charges (for 15 days): LOA up to 90 m., U.S.$ 70, over 90 m., U.S.$ 105.

SEAMAN'S CLUBS: Scandinavian Seamen's Church.

CURRENCY: New Israeli Shekel (N.I.S.).

REGULATIONS:

Stand-by for Moving Vessels: The Master or person for the time being having charge of a vessel shall ensure that adequate officers and crew are available and that the main propelling machinery of the vessel is maintained for moving the vessel at 1 hour's notice.

No vessel may drop steam, dismantle engine or otherwise interfere with the propelling power of the vessel, nor may the vessel be left unattended by responsible officers and crew unless permission to do so is first obtained in writing from the Harbour Master.

Photography: Photography in the Port Area is strictly forbidden without a written permit issued by the Security Officer of the Port.

Swimming: Swimming in Ashdod Harbour is strictly forbidden and Masters should instruct their crews accordingly.

Use of Ship's Boats: The use of ship's boats is forbidden in Ashdod Port. Launch service is available for the convenience of ship's personnel.

Shore Leave: Shore leave passes are obtainable at the Frontier Control Section of the Port Police Station. Applications for the passes shall be filed with the Boarding Officer, Port Police.

All breakwaters are out of bounds to crews of merchant vessels.

SHIPMASTER'S REPORT: 1979.

Documents:
1 Police Condition Slip
1 Customs Condition Slip
3 Crew Lists
1 List Ship's Stores and Bond

Pilotage: Compulsory. Pilot boards 0.5 miles from breakwater.

Restrictions: Vessels may berth and unberth at any stage of the tide day or night.

Health: 24 hours before arrival request radio pratique from "Quarantine Haifa".

Radio: Haifa 4X0.

VHF: Pilot and Port Authority on Channels 16 and 14.

Tugs: 3 tugs available 1×3,000 h.p., 1×1,500 h.p., 1×1,000 h.p. The use of tugs depends on which berth used and also which direction the vessel will be heading.

Berthing: North Quay: Berths 101, 102, 103: berths located just inside the breakwater, max. draft permitted 10 m., density alongside 1029. Accommodation ladder required.

Bulk Handling Facilities: Phosphate loading facilities available.

Cranes: 9×30 tons at 15 m. (15 tons at 25 m.).
9× 8 tons at 15 m. (4 tons at 25 m.).

Ample mobile cranes available.

Special Cargo Handling Facilities: Ro/Ro facilities available. 3 container gantries available. Ample storage space for breakbulk cargoes, palletised cargoes and containers.

Stevedores: Labour normally refuses to rig derricks or handle hatches.

Working Hours:
Sunday to Thursday (inclusive):
First Shift 0630 and 1400 hrs.
Second Shift 1500 and 2145 hrs.
Friday:
First Shift 0630 to 1300 hrs.
Second Shift 1300 to 1530 hrs.
Saturday — No work.

Services Available: Fresh water, fresh provisions, repair facilities, machine shop, Lloyd's Surveyor (from Haifa), Salvage Surveyor (from Haifa), laundry services, bunker fuel oil, diesel oil, lubricating oil, doctor and hospital, groceries and meats. Nearest airport is at Tel-Aviv.

AUTHORITY: Israel Ports Authority, Port of Ashdod, P.O.Box 9001, Ashdod, 77191 Israel. *Tel:* 972-8-512211, 381822. *Telex:* 381822. *FAX:* 972-8-512641. *Contact:* A. Sachish, Port Director/General Manager. Captain Y. Lasker, Harbour Master/Port Captain.

AGENT: Carmel International Shipping Services Ltd., Port Area, Block 2, P.O.Box 4020, Ashdod, Israel. Tel: (8) 8524811, (8) 8564250, (8) 8523154. Telex: 381183 Carin IL. Fax: (8) 8522719. Cables: "Carmelship Haifa".

ASHKELON: 31.38 N. 34.32 E. (See Plan)

PORT LIMITS: Encompassed by a line joining the following positions:
1. Lat. 31° 38' 54" N., Long. 34° 31' 52" E.
2. Lat. 31° 39' 49" N., Long. 34° 31' 27" E.
3. Lat. 31° 40' 32.5" N., Long. 34° 31' 26.3" E.
4. Lat. 31° 41' 16.6" N., Long. 34° 30' 12" E.
5. Lat. 31° 37' 26" N., Long. 34° 27' 05.8" E.
6. Lat. 31° 36' 48" N., Long. 34° 28' 07.6" E.
7. Lat. 31° 37' 07" N., Long. 34° 30' 30" E.

DOCUMENTS: The following documents are required for presentation on arrival:
3 copies Crew List.
3 copies Passenger List.
1 copy Custom Declaration.
1 copy Condition slip by Agent.
1 copy Photograph of each crew member for shore leave pass.

PILOTAGE:
1. Pilotage is compulsory.
2. Boarding position of Pilot and mooring crew: Lat. 31° 40' 10" N., Long. 34° 29' E.
3. Combination ladder as per Solas compulsory.

ANCHORAGE: Anchorage can be made in the following positions:
1. Lat. 31° 40' 10" N., Long. 34° 29' E.
2. Lat. 31° 39' 30" N., Long. 34° 28' 30" E.
3. Lat. 31° 38' 50" N., Long. 34° 28' E.

APPROACHES: *Navigation Aids:*
1. Ashkelon Lighthouse (Gr. fl. 2 ev. 10 sec.):
   Lat. 31° 38' 10" N., Long. 34° 32' 28.5" E.
2. New Power Station funnel – 250 m. high (White light Gr. fl. 40 per minute).
   Lat. 31° 37' 52" N., Long. 34° 31' 16" E.
3. Transmitting tower (Red light Gr. fl. 40 per minute)
   Lat. 31° 37' 55" N., Long. 34° 31' 36" E.

RESTRICTIONS/MAX. SIZE:
1. Mooring during daylight only.
2. Unmooring throughout 24 hours.
3. Berthing according to arrival sequence or berth availability. Vessel at anchor, awaiting berth to listen on VHF Channel 13.
4. Draft: Vessel arriving or departing to/from the Port of Ashkelon must meet the MARPOL Annex 1, Regulation 13(2)a, b, c, namely:
   (a) dm = 2.0 + 0.02 * L.
   (b) Trim < 0.015 * L.
   (c) Propeller fully immerse.
   Where: dm = draft amidship. L = length overall.
5. Max. size of tankers: 280,000 d.w.t.

HEALTH: Free Pratique arranged by Agent.

RADIO: *Advance Notices:* Advance notices of ETA are to be submitted directly or through Agent, 72 hours, 48 hours and 24 hours prior to arrival.

The 72 hour notice should include in addition to the ETA, the following:
1. Draft fore and aft.
2. Whether loaded, part loaded or in ballast.
   If ballasted: Type of ballast (segregated/oily) and quantity to be discharged ashore.
3. Quantity to be loaded/discharged.
4. Defects in vessel or equipment affecting safe operation.
5. Confirmation that I.G. system is fully operational and oxygen content does not exceed 8% by volume.
6. Quantity of slops on board.

VHF: A 24 hour watch is maintained on VHF Channel 13. Call sign "Delek".

TUGS: Berthing assisted by 3 mooring boats of 6 ton bollard pull each.

TANKERS: The Port of Ashkelon is used for loading and unloading of oil tankers only.

Mooring Facilities: The port has 4 mooring facilities for loading/discharging of oil: Berths No. 1 and No. 2 are the multi-buoy type, whilst Berths No. 3 and No. 4 are SPM's. The maximum depth at each berth is as follows:

Berth No. 1	20 m.
Berth No. 2	16 m.
Berth No. 3	30 m.
Berth No. 4	30 m.

The maximum loading rate is 6,500 cu.m./hr.

Slops: Slops may be discharged ashore by special pre-arrangement.

Ballast: Only clean ballast water from SBT tanks may be discharged into the sea. Dirty ballast must be discharged ashore.

DENSITY: The density of the sea water in Ashkelon Port is usually 1025 – 1027.

FRESH WATER: Supply is not available.

FUEL: Bunkering of tankers can be carried out by barge from Ashdod Port.

CONSULS: At Tel-Aviv or Jerusalem (approximately 60 km. away).

CUSTOMS ALLOWANCES: 1 bottle of spirits and 200 cigarettes or 50 gm. tobacco.

AIRPORT: Ben Gurion International Airport approximately 70 km., is served by most regular airlines.

TIME: Local standard time is GMT plus 2 hours. Summertime (GMT plus 3 hours) is kept from mid-March until mid-September.

HOLIDAYS: Official holidays: Jewish New Year, The Day of Atonement, the first and the last day feast of Tabernacles, the first and the last day of Passover, Pentecost, Independence Day. The port is closed only on the Day of Atonement.

EMERGENCY CO-ORDINATION CENTRE: In case of emergency, call "Delek" on VHF Channel 13.

TELEPHONES: Cellular telephones can be arranged by Agent.

IDENTIFICATION CARDS: Identity cards are issued by Port Police, and are to be arranged by Agent.

STORING: Stores can be arranged from Ashdod Port by Agent.

GARBAGE DISPOSAL: Garbage disposal to be arranged by Agent and collected by the service boat "Nayedet Yona".

WASTE OIL DISPOSAL: No waste oil disposal is available at Ashkelon Port.

CURRENCY: The currency in Israel is the New Israeli Shekel (N.I.S.). Current exchange rate U.S.$1.00 = 3.10 N.I.S. (March 1996).

PORT REGULATIONS:
1. "Ashkelon Oil Port – Information and Regulations" booklet includes all the data to acquaint Owners, Charterers, Agent and Masters of tankers with the general conditions and facilities in the Oil Port of Ashkelon.
2. Official government regulations published in frame of Port Ordinance: "Ports (loading and unloading of oil) Regulations 5736-1976.

REPORT: April 1991.
Position: Lat. 31° 08' 10" N., Long. 34° 32' 28.5" E.
Location: Ashkelon port is located about 14 miles South of Ashdod port.

Cargo Handled: The port is used for importing crude oil and fuel oil for the new electric power station built in the area.

Loading and Mooring Facilities: The oil discharge facilities consist of one multi-buoy mooring at Berth No.2 and 2 mono-buoy moorings at Berths No.3 and 4.

Multi-buoy No.2 is mainly used to discharge fuel oil for the power station. Vessels with max. size of 100,000 d.w.t., max. length of 200 m. and max. draft of 16.0 m. can be accepted. 1×12 in. hose is connected to the manifold on port side.

Max. backpressure allowed on the manifold is 8 kg.

The line capacity is about 1,500 cu.m., therefore each vessel arriving should accept onboard to a separate tank the content of the line which is light flushing oil, and on completion of discharge vessel should flush lines with the light flushing oil.

Mono-buoys No.3 and 4 are fitted to accept vessels with maximum d.w.t. of 250,000 tons, LOA 350 m. and max. draft of 25.0 m.

2×12 in. hoses are connected to the manifold on the port side. Max. back pressure allowed on the manifold is 8 kg.

Mooring and unmooring only on daylight.

Tanker's Gear: Tankers should be equipped with the following equipment:
1. A Smit type towing bracket or a chain stopper and adequate leads to take 76 mm. stud link chain.
2. Derricks with a minimum S.W.L. of 7 tons.
3. Flanges at vessel's manifold on the port side suitable for connection of 2×12 in. hoses 150 ASA.
4. Adequate supply of nuts, bolts, gaskets, wrenches and reducers to connect the cargo hoses.

Other Facilities:
1. Mooring launches are provided to assist with mooring and unmooring of tankers.
2. Boats for transportation of personnel between the tankers and the Port of Ashkelon are available.
3. Ship's personnel are allowed to embark and disembark at Ashkelon.
4. Shore passes are issued by Immigration Officer at Ashkelon.
5. Bunkers are available from a 650 ton barge which comes from Ashdod.
6. Fresh water not available at Ashkelon.
7. Repairs, provisions, medical assistance, laundry, etc. available.

Arrival Notice: All cables should be passed through Haifa Radio, call sign 4X0. Cable address of the terminal is Elatash Tel-Aviv or Telex No. 33865.

On approaching Ashkelon the vessel is to call "Delek", the terminal's name, on VHF Channel 13.

Anchorage: Anchorage is located approximately 1 mile N.W. from Mono-buoy No.3 (the Northernmost mono-buoy).

Authorities: Immigration Officer boards vessel at Ashkelon. Masters should prepare 3 copies of Crew List, 3 copies of Crew Declaration, 3 copies of Passenger List and 3 copies of Stores List for Customs.

OPERATOR: Eilat Ashkelon Pipeline Co.Ltd., 2 Carlebach Street, P. O. Box 20056, Tel-Aviv 61200, Israel. *Tel:* 972-3-5610292. *Telex:* 33870. *FAX:* 972-3-5610997. *Contact:* Captain Y. Neeman.

EILAT (Elath): 29.32 N. 34.57 E. **(See Plan)**

DOCUMENTS:

For Customs:

Customs Questionnaire, Crew Customs Declaration, Stores List, Crew List, Passengers List, Foreign Currency List, Narcotics List, Arms List, Import Cargo Manifest, Transit Cargo Manifest.

For Quarantine:

International Quarantine message may be sent, addressed "Quarantine Haifa" via Haifa Radio (4XO), to obtain Free Pratique. Maritime Declaration of Health.

For Border Control (Immigration):

1 Police Questionnaire, 2 Crew Lists, 2 Passenger Lists, Seamen's Books and travelling documents of passengers.

PILOTAGE: Compulsory, ordered through Agent. When unable to contact Agent, Pilot can be ordered by contacting Harbour Master by Haifa Radio, or by VHF Channel 14. Vessel due to berth awaits opposite oil installations located approximately 2.5 cables South of the main jetty. Vessels requesting Pilot for anchoring stop opposite the North end of the main jetty. Tankers waiting Pilot for oil installations to stop 0.5 miles South of oil installations. Pilot motor launch, red hull, buff superstructure amidships stationed at North end of main jetty. Pilot ladder complying with all safety regulations and properly lighted during dark hours is necessary. Vessels awaiting Pilot should anchor only in designated area.

ANCHORAGES: Boundaries of area marked by lines connecting following positions;

(A)	Lat. 29° 32' 51" N.,	Long. 34° 57' 19" E.
(B)	Lat. 29° 32' 26" N.,	Long. 34° 58' 34" E.
(C)	Lat. 29° 31' 40" N.,	Long. 34° 58' 27" E.
(D)	Lat. 29° 32' 31" N.,	Long. 34° 57' 06" E.

Average depth 25 fathoms. If arriving at port for first time, do not try anchoring anywhere outside anchoring area.

Anchorage positions will be alloted by Port Control – call sign "Yam" on VHF Channel 14.

Anchorage Positions:

(1)	Lat. 29° 32.62' N.,	Long. 34° 57.37' E.
(2)	Lat. 29° 32.49' N.,	Long. 34° 57.64' E.
(3)	Lat. 29° 32.37' N.,	Long. 34° 57.97' E.
(4)	Lat. 29° 32.25' N.,	Long. 34° 58.31' E.
(5)	Lat. 29° 32.37' N.,	Long. 34° 57.34' E.
(6)	Lat. 29° 32.17' N.,	Long. 34° 57.70' E.
(7)	Lat. 29° 32.06' N.,	Long. 34° 58.04' E.
(8)	Lat. 29° 31.96' N.,	Long. 34° 58.37' E.
(9)	Lat. 29° 32.22' N.,	Long. 34° 57.02' E.
(10)	Lat. 29° 32.02' N.,	Long. 34° 57.29' E.
(11)	Lat. 29° 31.82' N.,	Long. 34° 57.65' E.
(12)	Lat. 29° 31.69' N.,	Long. 34° 58.06' E.

MAX. SIZE: For berthing alongside main cargo jetty, length 528 m., max. draft up to 11.9 m. Vessels are allowed to load to 12.1 m. draft and sail on high tide when using spacing fenders.

Additional cargo jetty length 205 m., max. draft up to 6.1 m.

North Oil Jetty accommodates tankers up to 125,000 d.w.t. with draft of 17.1 m.

South Oil Jetty can accommodate tankers up to 500,000 d.w.t. Depth of water alongside 28.6 m.

HEALTH: Free Pratique may be requested by cable via Haifa Radio from Quarantine Authorities. If suspected disease or fever on board immediately advise Quarantine Eilat with all details.

RADIO: Communication via Haifa Radio 4XO. Full details working hours and frequencies found in "Admiralty List Radio Signals" and similar publications. Good radio connection with Eilat can be obtained also via Haifa Radio, call sign 4XO, operating continuously. "IMOT" cable *must* be sent as per List of Radio Signals.

TUGS: Tugs meet vessel off quay. Lines not usually used as tugs usually push. When needed, ship's lines used. 1 tug 3,000 h.p., 1 tug 3,200 h.p., 1 tug 1,000 h.p., 1 boat 280 h.p. and 2 boats 330 h.p. each.

BERTHING: No difficulty except at times of strong Southerly winds when small vessels may have to leave quay and proceed to anchorage or sea, due to strong swell.

BULK HANDLING FACILITIES: Bulk elevator for bulk loading (Phosphate & Potash) capacity 800 m.t.p.h. Max. airdraft 11.5 m. (regular). Extreme airdraft 14.5 m. (notice required).

Storage Area:

Sheds – 17,000 sq.m.
Open storage – 115,000 sq.m. (including car park).
Cold storage warehouse – 500 tons.
Bulk potash shed – 80,000 tons.
Phosphate bulk shed – 35,000 tons (3,300 sq.m.)

CRANES: 1 electric driven crane S.W.L. 50 tonnes. 1 electric driven crane S.W.L. 35 tonnes. 4 electric driven cranes S.W.L. 25 tonnes, when coupled S.W.L. 48 tonnes per couple. 1 diesel driven crane S.W.L. 60 – 80 tonnes. 6 diesel driven cranes S.W.L. 7 – 13 tonnes.

Port is fully equipped for container handling. Container traffic exceeds 39,500 TEU's.

STEVEDORES: Booked by ship's Agent. All details of cargo distribution and storage to be cabled in advance to Agent.

Port Working Hours:

Summer: (May 16th – October 15th)
Sunday – Thursday 0530 – 1330 and 1600 – 2300 hrs.
Friday 0530 – 1230 and 1400 – 2000 hrs.
Winter: (October 16th – May 15th)
Sunday – Thursday 0600 – 1400 and 1530 – 2230 hrs.
Friday 0630 – 1300 and 1400 – 2000 hrs.

MEDICAL: Hospital facilities available.

DENSITY: 1028 (Winter), 1030 (Summer).

FRESH WATER: Available in unlimited quantities and supplied at all jetties. No facilities for supplying fresh water at anchorage.

FUEL: All grades supplied by road tankers.

CONSULS: Denmark, France, Germany, Netherlands, Norway, Sweden, United Kingdom.

REPAIRS: All afloat deck and engine repairs can be performed by local workshops.

DRY DOCKS: Syncrolift with lifting capacity of 1,200 tons.

OPENING/CLOSING HATCHES: Normally by stevedores.

CUSTOMS ALLOWANCES: Every Crew member is permitted to keep 200 cigarettes or equivalent amount of other tobacco, out of bond. Every crew member is permitted to keep 1 bottle of spirits and 1 bottle of wine, out of bond.

REPATRIATION: Facilities available for repatriation or crew changes.

AIRPORT: Eilat Airport is used at present for internal traffic only. There are 8 flights daily from Eilat to Tel-Aviv except on Saturdays. From Tel-Aviv there is good transportation to Ben Gurion International Airport.

TIME: Local time is GMT plus 2 hours. GMT plus 3 hours from Saturday 24th March until Saturday 25th August in 1990.

HOLIDAYS: No cargo work is usually performed during official holidays or Saturdays. The official holidays are: Passover (2 days during April); Independence Day (1 day end April/beginning May); First Harvest Day (1 day end May/beginning June); Jewish New Year (2 days, September); Day of Atonement (1 day end September); Feast of Tabernacles (2 days, October). No cargo work is usually performed during 1st of May although it is not an official holiday.

TELEPHONES: At present there are no facilities to arrange telephones on board ships.

TELEPHONE NUMBERS:

Eilat Port Management	07-358333
Port Director	07-358332
Harbour Master	07-358341
	07-376868 (after office)
Oil Pipeline	07-376171
Immigration	07-372590
Hospital	07-358011

SHORE LEAVE: Crew members are granted shore leave.

IDENTIFICATION CARDS: Every crew member going ashore should have a shore leave pass. Shore leave passes will be received from the border control officer after the vessel is cleared.

GARBAGE DISPOSAL: Garbage collection from vessels carried out daily. Contractor is employed directly by Port Authority. Plastic bags are supplied by contractor. Collection available for vessels alongside only. Charges included in port dues.

WASTE OIL DISPOSAL: Oily water collected from vessels alongside on request by means of tanker trucks. Service operated by Port Authority and can be requested through agent. Charges compulsory and cover a 14 day period.

SEAMAN'S CLUBS: None.

CURRENCY: New Israeli Shekel (N.I.S.). U.S.$ 1.00 = 3.10 N.I.S. (March 96).

REGULATIONS: Booklet containing port regulations placed onboard all vessels on first arrival and must be adhered to.

DELAYS: Normally vessels arriving after midnight are berthed only at daybreak, before the beginning of the morning shift.

GENERAL: Meteorological: Weather warnings if any are issued and delivered to vessels upon receipt.

Supplies: Provisions (fresh and frozen), duty free and technical goods, available from local ship chandler, may be contacted by Agent.

Gangway: A gangway with length 18.0 m. may be hired.

DEVELOPMENTS: Passenger Terminal of 1,200 sq.m. in operation.

AUTHORITY: Israel Ports and Railways Authority, Port of Eilat, P.O.Box 37, Eilat 88100, Israel. *Tel:* 972-7-358333. *FAX:* 972-7-358300. *Cables:* Namsuf Eilat. *Contact:* Captain I. Beery, Harbour Master. Captain R. Blass, Port Director.

AGENT: Carmel International Shipping Services Ltd., P.O.Box 1472, Haifa 31014, Israel. Tel: (4) 8523293-9. Telex: 46719/46821 Carin IL. Fax: (4) 8523293-9. Cables: "Carmelship Haifa".

HADERA: 32.28 N. 34.52 E. (See Plan)

LOCATION: About half-way between Haifa and Tel-Aviv. The terminal is used for the importation of coal for the adjacent power station.

APPROACHES: *Lights and Shore Features:* The 2 Power Station Buildings which are about 80 m. high, the three chimneys which are 254 m., 254 m. and 300 m. high and the pier with its 3 gantry cranes are very outstanding features on the otherwise rather flat coast. The pier is a very conspicuous radar target.

A vessel approaching in darkness will be able to distinguish the port by the set of red and white lights on the chimneys, and a fixed red light at the Western extremity of the pier. The Mount Carmel Light and Mikhomoret Light will also be in sight.

There are red and green flashing lights at the entrance to the cooling-water basin, and a flashing white light on the North-Westerly buoy of the multi-buoy installation.

PILOTAGE: Compulsory. Also see "General".

ANCHORAGE: See "General".

HEALTH: Free Pratique can be obtained from "Quarantine Haifa" prior to arrival.

VHF: VHF radio installed to communicate with ships, tugs and other craft on matters relating to the port's operation. Agent and Cargo Receiver can be contacted on Channel 10 when within range.

TUGS: 2 tugs, about 45 tons pull each, with fire-fighting equipment 2 boats function as mooring, passenger and pilot boats.

BERTHING: The port's installations consist of:

1. An off-shore coal unloading terminal consisting of a pier (300 m.×24 m.) which is constructed 1.7 km. from the Shore Line. It is connected to the shore by an approach jetty on piles.

Minimum water depth at the pier – 20 m. It is designed for ships of up to 200,000 d.w.t.

The height of the pier above MSL is 14 m. There are 11 breasting and mooring dolphins along its North side, their height above the sea is 4.5 m. Quick-release hooks installed where applicable.

Ships are moored to the North side of the pier with their bow to seaward. Two tugs assist with berthing, and starboard anchor is used (8-10 shackles).

Discharging the ship's cargo is done by 3×35 ton gantry cranes.

2. A cooling water basin for the supply of sea water to the station condensers is also used by the port's craft. The water's depth in the navigable area is 4.5 m.

MEDICAL: Regional Hospital at Hadera, or Italian hospital at Haifa.

TANKERS: There is a fuel oil unloading terminal, about 1.0 km. North of the coal pier, where tankers are made fast to a multi-buoy system and fuel is pumped ashore through a 32 in. submarine pipeline. Water depth is 18 m. and ships of 70,000 d.w.t. can be accommodated.

FRESH WATER: Available to the pier.

FUEL: Arranged by Agent.

REPAIRS: Arranged by Agent.

TIME: Local standard time is 2 hours ahead of GMT. GMT plus 3 hours from Saturday 24th March until Saturday 25th August in 1990.

STORES: Arranged by Agent.

GARBAGE DISPOSAL: Garbage in sealed plastic bags shall be placed in the garbage container on the pier.

GENERAL: *Instructions to Ships' Masters:*

1. Please keep the port informed of your ETA, any changes in your original notice should be communicated to your Agent.

2. Your VHF Channels 16 and 10 should be used for radio contact with the port when approaching and when your ship is anchored.

3. The Pilot will prefer to board your vessel when in a position 1.3 miles North of the jetty, and bow Southward; the same position is also the best for anchoring if your ship does not berth on arrival.

4. Your pilot ladder should be as directed by IMO Regulations, properly cleaned and secured.

5. Due to the exposed position of the berth, constant and thorough attention to the mooring lines should be carried out. Generally the moorings will consist of:

A. Forward:
4 Head Lines.
2 Breast Lines.
2 Springs.
B. Aft:
4 Stern Lines.
2 Breast Lines.
2 Springs.

All head and stern lines must be fibre ropes-polypropylene or others. Breast lines and springs, if not made of fibre must have fibre tails, 15 m. – 20 m. long. Starboard anchor with about 8 shackles will also be used.

6. When the ship is moored to the jetty.
(a) Main engines, steering, windlasses etc., should be in working order. Any fault or damage to be repaired immediately and the port to be informed.
(b) The ship shall always have sufficient officers and crew onboard so as to be able to leave the jetty in an emergency.
(c) Mooring lines should be continuously checked for wear, load distribution, etc., and any irregularity tended to.
(d) All ballast tanks, including holds designed for water ballast, to be filled as soon as possible.
Cargo holds into which water ballast will be pumped should be the first to be emptied of cargo.
(e) The vessel to keep herself informed on expected weather conditions.
(f) Constant – tension winches should not be in operation for head and stern leading lines simultaneously.
(g) Do not change your mooring lines nor re-arrange them, unless the Duty Pilot is consulted.

7. Oily water should not be pumped, nor garbage be thrown overboard.

For ships that have to pump out oily residues, there is a reception tank of 50 tons capacity on the jetty.

Ship's garbage should be put in plastic bags and loaded into a supplied container.

8. You have to get permission before doing:
(a) Welding work, anywhere on the ship.
(b) Diving work at the ship's hull.
(c) Lifeboat exercises.

9. The ship has to inform the Port immediately about any accident, fire, explosion, leakage etc. on or near the ship.

10. The above instruction to Masters are based on the Ports' Ordinance and Regulations, issued by the Israeli Ministry of Transport.

SHIPMASTER'S REPORT: October 1985 (Updated 1996).
1. Agents, Harbour Master and Pilots are very co-operative.
2. There is always 1 Pilot and 1 tug on duty in case of rough weather.
3. Master receives a weather report twice daily from Harbour Master.
4. Agent (National Coal), Harbour Master (Hadera Port), Pilot (Hadera Pilot) and boat service all listen to VHF Channel 10 (call signs in brackets). If necessary at night the port will telephone the Agent at his home, and he will then call vessel on Channel 10.
5. Due to deck arrangements of our vessel the shore gangway could not be used. Vessel's gangway used and landed on fender.
6. Due to distance to jetty (good fenders) it is not possible to use the transverse crane of the vessel for storing.
7. National Coal employs 4 time-chartered bulkers of 120,000 – 160,000 tons to supply the power station of Hadera with coal. The station consumes about 10,000 tons daily. About 5 more shiploads are needed yearly. Mostly Panamax bulkers from U.K.

AUTHORITY: Port of Hadera, P.O.Box 314, Hadera 38102, Israel. *Tel:* (06) 225577. *FAX:* (06) 343034. *Contact:* Y. Nachshol, Port Manager. Captain S. Ezekiel, Harbour Master.

HAIFA: 32.49 N. 35.00 E. (See Plan)

DOCUMENTS:
1 Photograph of each member of the crew.
3 Crew Lists, and Crew Passports or Seamen's Books.
1 Provisions List.
1 List of Articles in possession each Crew member – cameras, binoculars, radios, cigarettes, tobacco, etc.
Master to declare firearms and rounds of ammunition.
4 Passenger Lists.

Stowage Plan and Manifest to be mailed in advance, preferable Master to cable 72 and 48 hours before arrival holds workable and gangs required, also draft forward and aft on arrival.

PILOTAGE: Compulsory for all merchant and foreign naval vessels. Pilotage service is rendered round the clock. Vessels are boarded by Pilot seaward of the main breakwater.

ANCHORAGE: Vessels shall not anchor within the prohibited areas and must keep clear of the fairways of the main harbour and Kishon Zone.

MAX. SIZE: The width of the entrance channel to the main port, between the main and lee breakwaters, is 183 m. The depth of the entrance is 13.8 m. The width of the entrance to the Kishon Harbour is 80 m., with a min. depth of 12.0 m. Vessels of max. draft 35 ft. can be safely accommodated in the main port.

In the Kishon Harbour, accommodation is limited to vessels of 9.5 m. draft. Depth in both harbours are maintained by dredging at regular intervals.

Tankers: Up to 50 ft. draft at buoy moorings.

RADIO: Radio-telephone service from ship-to-shore and vice versa via Haifa Radio, call sign 4XO. Ships in port may also be connected to the Israeli telephone system.

The port has a signal station equipped with a modern 60 kw VHF installation, working on Channels 12, 14 and 16. The station is licensed for port operation only and is in continuous service. For all other ship-to-shore communication contact Haifa Radio, call sign 4XO.

The Israeli Meteorological Service broadcasts twice daily the weather forecast in English for East Mediterranean area over Haifa Radio.

Vessels approaching the coast of Israel shall report their position to the Israeli Authorities in accordance with the following procedure:

(a) Every foreign vessel bound for the ports of Haifa, Ashdod or Ashkelon shall send a position report to the Israeli Ministry of Transport (IMOT) via Haifa Radio (4XO). Such position report should be sent in the form of a free of charge service cable when the vessel arrives at a distance of 50 miles from the coast and it shall contain vessel's name, position, course, speed and destination.

(b) In addition to the report, in *(a)* above and according to the Ports' Regulations, every vessel (foreign or Israeli) entering the Israeli territorial waters shall send a position report which shall contain vessel's name, position, course, speed and destination and which shall be sent at the time the vessel enters territorial waters (6 miles) to:
(1) The nearest Port Operation Services, by means of VHF; or
(2) The IMOT via Haifa Radio (free of charge service cable) in cases where VHF communication with the nearest port cannot be established.

HEALTH: Free Pratique by radio is granted on request by the International Quarantine Message to the Quarantine Station round the clock (including holidays) via Haifa Radio, call sign 4XO on 500 kHz.

Medical advice by radio for all ships may be obtained through Haifa Radio 4XO free of charge. Call "Medico Haifa".

There is no special quarantine anchorage.

TUGS: Vessels obtain tug assistance, if required, for entering or leaving the harbour and for shifting. 3×3,000 h.p. (30 tons B.P.).

BERTHING: Ships moor normally to wharves and jetties, and to a lesser extent stern to the main breakwater and alongside dolphins.

Main Harbour

The main harbour is situated on the Southern shore of Haifa Bay at Lat. 32° 48' N., Long. 35° 01' E. It is protected by 2 breakwaters: the main breakwater, 2,826 m. long, in the Northwest, and the lee breakwater, 765 m. long, in the East.

The harbour basin covers an area of 1,066,000 sq.m. The main port's land area amounts to 1,000,000 sq.m.

Kishon Auxiliary Harbour

To the East of the main port, around the lower reaches of the Kishon rivulet, lies the Kishon Auxiliary Harbour. It consists of an outer harbour basin that is protected by 2 breakwaters of 600 m. and 350 m. length respectively, and a main channel of 1,045 m. length, of which the first stretch of 700 m., measured from the entrance to the outer harbour basin, has a depth of 8 m. while the second stretch of 345 m. has a depth of 6.50 m. A side channel, 213 m. long and 4 m. deep, which branches off the main channel toward the East, serves as a fishing dock. Another side channel 350 m. long and 8 m. deep serves as holding basin of the shipyard and the Chemicals Terminal.

Location	*Length* (m.)	*Depth* (m.)	*Remarks*
Main Harbour			
Wharves 1 - 4	497	4.6 – 10.0	General cargo
Wharves 5 - 6	259	10.0 – 11.5	Passenger ships and general cargo
Wharf 7	158	11.5	Bulk and general cargo
Wharves 8 - 9	232	13.8	Grain (automatic discharge)
Wharves 10 - 11	396	8.5 – 10.5	Western Container Terminal
Wharves 12 - 13	224	8.0	Ro/Ro
Service Quay	110	4.0	
Oil jetties	800	10.7	
Cargo, passengers and service wharves	560	5.5 – 10.0	
Dolphins	296	10.2 – 10.8	
Eastern Wharf	955	12.0 – 13.5	Containers and bulk
Kishon Zone			
Wharves 1 - 4	625	10.0	General cargo
Chemicals Terminal (North)	340	4.5 – 9.0	Liquid chemicals
Chemicals Terminal (South)	60	8.5	Liquid chemicals
Fishery Dock	325	4.0	

BULK HANDLING FACILITIES: *Coal:* Coal imports are usually handled by grabs fixed to shore cranes.

Grain: 3 mobile elevators on main wharf (depth 13.8 m.) with combined unloading capacity of 1,800 t.p.h. Silo capacity 100,000 tons.

Chemicals: Northern Terminal: Situated in the Northern part of the Kishon Zone.

The terminal can handle 3 ships at a time; two of up to 100 m. in length each drawing a maximum of 9 m. and a third ship of 80 m. length and 5 m. draft.

Terminal facilities: An ethylene handling and storage installation with a direct pipeline link to the factory.

An ammonia handling and storage installation with direct pipeline link to the factory.

A BTX handling installation with 3 pipes to the factory.

A methanol and MTBE handling installation with direct pipeline to the factory.

34 storage tanks in the "Gadot Terminals" tank farm for storage of various materials; total capacity 15,000 cu.m.

"Miluot" tank farm.

The terminal is protected by a sophisticated fire-fighting system. Various services are available, including: Steam generator, water supply, bilge water tank, communications, weighbridge, air compressor, etc.

Southern Terminal: Situated at the tip of the general cargo wharf in the Kishon Harbour. The terminal has 70 atmospheric storage tanks of different capacities for chemicals with flash-points above 30° C; acids and basic chemicals. The tanks are connected by pipeline to dolphins with mooring for one ship. The Southern Terminal is operated by Gadot Terminals Ltd.

MEDICAL: Hospital facilities available. Agent will board vessel with company doctor if so required by the Master.

CRANES:

	No.	*Capacity* (Tons)
Floating Derrick	1	100
Gantry Cranes	7	35
Transtainers	12	35
Cranes	6	35
	4	5
	3	15
	6	25
Mobile Cranes	2	13
Forklift Trucks	95	—

CONTAINER HANDLING EQUIPMENT:

New Eastern Wharf:

5 container gantry cranes; lifting capacity 35 tons under spreader, 65 tons heavy lift; hoisting height 30.7 m. above sea level, 11.3 m. below sea level; outreach 33 m.

12 stacking cranes; lifting capacity 35 tons under spreader. Number of stacking rows 17 (14 between legs, 3 under cantilever).

2 portal cranes, lifting capacity 32 tons.

Planned: 2 more gantry cranes.

Western Wharf: Length 400 m., depth up to 10.5 m.

1 gantry crane; lifting capacity 35 tons under spreader; hoisting height 28.5 m. above sea level, 7.5 m. below sea level.

1 container gantry crane; lifting capacity 35 tons under spreader; hoisting height 25 m. above sea level, 8 m. below sea level.

2 portal cranes, lifting capacity 25 tons.

STEVEDORES: Enable Agent order gangs, important obtain 48 hours advance accurate ETA from vessel. Failure give precise ETA may result in ship losing 12/24 hours, also cost gang waiting time. No work on official holidays.

Working Hours: Work is usually carried on in 2 shifts: the first shift is from 0630 to 1430 hrs., on ordinary working days, or from 0630 to 1330 hrs. on the eve of Saturdays and holidays. The second shift is from 1530 to 2230 hrs. on ordinary working days and from 1330 to 2030 hrs. on the eve of Saturdays and holidays. Occasionally, in order to complete work on a ship or for special cargoes, a third shift is worked.

TANKERS: *Oil Jetty:* Up to 2 oil tankers can be accommodated at one time, one on each side (draft 9.7 m. – 10.4 m.).

In the Roadstead.

There is 1 submarine oil loading and unloading berth, connected to a submerged pipeline.

Berth No.	*Situation in relation to harb. entrance*	*Diameter*	*Extension from shore*	*Direction*	*Depth under water*
3	0.50 m. N.E.	32 in.	10,000 ft.	319°	58 ft.

The signal station ashore opposite Berth No. 3 has 2 signal masts. Vessels moor with their own 2 anchors ahead and mooring lines to 2 buoys astern. The oil company's Mooring Master supervises the connecting and loading or discharging, remaining aboard until sailing time.

Throughput Rates: Vessels load or unload up to 1,000 t.p.h. through 10 in./12 in. pipelines on the Oil Jetty and up to 2,500 t.p.h. at the 32 in. pipeline submarine berth.

Oil Storage Facilities: 41 tanks with a total capacity of 937,000 cu.m. of crude oil in the Bayside tank farm of the oil refineries.

In the port, 16 tanks with a capacity of 157,000 cu.m. for storage of light and heavy fuel oil, gas oil, kerosene and benzene.

Also see "Bulk Handling Facilities".

FRESH WATER: Drinking water is plentiful and of satisfactory quality; no treatment is needed as water is frequently examined and chlorinated when required. The water is supplied by hydrants from shore or by water-barge at a delivery rate of 30–50 t.p.h. Boiler water not available.

FUEL: The following grades of oil are available for supply as bunkers:

Heavy Fuel Oil	1,500 secs. Red. 1 at 100°F.
Light Fuel Oil	450 secs. Red. 1 at 100°F.
Marine Diesel Oil	Standard Grade

The oil is supplied direct from Oil Dock or from barges. Bunkers are normally supplied between 0700 and 1515 hrs. on working days; at any other time by special arrangement. Delivery rate from Oil Dock is up to 500 t.p.h. (3,500 bbls.) and from barges up to 150 t.p.h. (1,000 bbls.)

CONSULS:

Austria
Belgium
Denmark
Finland
France
Greece
Guatemala
Ivory Coast
Liberia
Netherlands
Norway
Panama
Spain
Sweden
Yugoslavia

REPAIRS: There is a modern shipyard, situated in the Kishon Zone, capable of building ships of up to 18,000 d.w.t. and to handle hull repairs, conversions, engine repairs and repairs of electric equipment.

The yard operates 2 floating docks with a lifting capacity of 20,000 tons and 1,100 tons respectively.

Vessels which need no dry docking can be repaired at the shipyard's quay, totalling 900 m. length with 11.5 m. depth.

Ogen Ltd. also undertake ship repairs.

GANGWAY/DECK WATCHMEN: Not compulsory. Port guard keeps gangway watch.

OPENING/CLOSING HATCHES: Performed by Stevedores. Mechanical hatch covers operated by crew.

CUSTOMS ALLOWANCES: 200 cigarettes, and 1 open bottle of spirits per person.

TIME: Local standard time is 2 hours ahead of GMT. GMT plus 3 hours from Saturday 24th March until Saturday 25th August in 1990.

AIRPORT: International air connection from Ben Gurion Airport, 105 km. from Haifa.

HOLIDAYS: Port business is suspended on the following holidays: Saturdays; the 2 days of the Jewish New Year (Rosh Hashana); the Day of Atonement (Yom Kippur); the first and the last day of the Feast of Tabernacles (Succot); the first and the last day of Passover (Pesach); Pentecost (Shavuot); Independence Day. The first of May is observed by the port workers as Labour Holiday and therefore no work is done in the port on that day.

SHORE LEAVE: Shore leave passes are obtainable at the Frontier Control Section of the Port Police Station. Applications for the passes shall be filed with the Boarding Officer, Port Police. All shore leave passes must be surrendered to the Boarding Officer before departure of the vessel.

IDENTITY CARDS: Issued by port police on arrival.

GARBAGE DISPOSAL: Conditions of Service:

The service includes the receipt of garbage which has been delivered by ship's crew and disposal thereof according to the Port Manager's instructions. The present conditions and rates do not apply to passenger liners and vessels on cruises to whom regular service is given. The service is available each working day to vessels inside the harbour basin, and according to the Port Manager's instructions to vessels outside of harbour basin. Charged are applied for each day of stay in the harbour basin and for the days the service was given or tendered in the roads. The days of arrival and departure are charged if the vessel was in port during part of the first shift of that day.

Surcharges:

For service by special request on days of rest: 100%.
For vessels in floating dock: 25%.

Rates:

Cargo vessels	up to 90 m.	15.60 N.I.S./day
	over 90 m.	23.40 N.I.S./day
Passenger vessels	up to 140 m.	45.00 N.I.S./day
	over 140 m.	90.00 N.I.S./day

WASTE OIL DISPOSAL:

Bilge Water: Conditions of Service.

Vessels are charged once for every 15 days, or part thereof, stay in Israeli port(s). The service includes the removal of oily water from bilges.

Rates (N.I.S.):	Ship's Pumps	Port's Pumps
Oil tankers	132.60	189.60
Other vessels up to 90 m.	75.40	111.80
over 90 m.	113.75	164.45

The dues and charges above are linked to the "representative" exchange rate of the U.S.Dollar, as published by the Bank of Israel.

Removal of Sludge:

Removal of sludge is not covered under the international convention IMO 1973. Ordering sludge removal by ship's staff and confirmation that the service has been rendered will be on a separate form provided by the contractor in order to distinguish it from the Port Authority form for disposal of bilge water.

The tariff for removal of sludge from ships as agreed with the contractor, Messrs. Gal-Yam, is as follows:

1. Flat rate: U.S.$ 16/ton.
2. The minimum charge: U.S.$ 150/ton.

The garbage disposal, waste oil disposal and the removal of sludge services are given by Gal-Yam Boat & Tourism Ltd, P.O.Box 33871, Haifa. Tel: 04-641744. Fax: 04-641745.

SEAMAN'S CLUBS: None.

CURRENCY: New Israeli Shekel (N.I.S.).

DEVELOPMENTS: The Eastern Wharf is to be extended by 300 m. A fourth gantry crane and a sixth stacking crane will be added to the equipment at the wharf.

GENERAL:

Persons Boarding Vessels: No person shall be allowed on board any vessel unless he is in possession of a boarding pass which must be shown on demand to the police officer at the gangway.

Passes for boarding cargo vessels on business are issued by the Port Management; passes for boarding cargo vessels for any other purpose and passes for boarding passenger vessels are issued by the Frontier Control Section of the Port Police.

Swimming: Swimming in Haifa Harbour is strictly forbidden and Masters should instruct their crews accordingly.

Use of Ship's Boats: The use of ship's boats is forbidden in Haifa Port. A public motor-launch service is available for the convenience of ship's personnel. Call the motor-launch by day and night on VHF Channel 18.

Photography: Photography in the port area is strictly forbidden without a written permit issued by the Commander of the Port Guard.

AUTHORITY: Ports and Railway Authority, Haifa Port, P.O.Box 33539, Haifa 31334, Israel. *Tel:* 04-518111. *Telex:* 46659. *FAX:* 04-674853. *Cables:* Malhof. *Contact:* Mendy Zaltzman, Port Manager. Captain Naftali Weiss, Harbour Master.

AGENT: Carmel International Shipping Services Ltd., P.O.Box 1472, Haifa 31014, Israel. Tel: (4) 8523293-9. Telex: 46719, 46821 Carin IL. Cables: "Carmelship Haifa". Fax: (4) 8515886.

Italy

GENERAL:

WEAPONS AND ARMS: In July 1988, the Italian Government passed a law that all vessels carrying arms, including personal or ship's equipment, must declare them in order to obtain a Ministerial permission, before entering Italian territorial waters, only valid for one call.

Vessels calling at Italian ports with arms as described above have to declare them to the Agent at least 4 days before entering territorial waters with indications of full type/brand, serial number, calibre/gauge of each weapon kept onboard as well as the quantity of ammunition held.

All weapons should be in Master's care and declared on the Stores/Provisions List on arrival.

If undeclared weapons are found onboard, same will be confiscated and the Master will be subject to court trial.

Further to the above, the Ministry concerned has decided that for vessels calling at various Italian ports, a licence to carry firearms on board can, on application through the Agent at the first port of call, be obtained and this will also be valid for all other ports of call.

The application must specify names of all ports and dates of call.

HEALTH: *Shipmaster's Report:* March 1983: Radio Pratique granted 12 hours prior to arrival.

If vessel applies 24 hours prior to arrival she will be requested to re-apply 12 hours prior to arrival.

TANKERS: All tankers of more than 1,600 g.r.t. carrying crude oil and petroleum products as well as gas carriers, chemical carriers, full or partly loaded, empty but not in gas-free condition, and which, prior to entrance to territorial waters of any Italian port, shall advise the port authorities of the following details:

(a) Vessel's name and international call sign,
(b) Vessel's nationality,
(c) Vessel's LOA and draft,
(d) Port of destination and accurate ETA,
(e) Quality/quantity of cargo and
(f) IMO Certificate if carrying dangerous chemical cargo in bulk.

Furthermore, the Master should hand over to the Pilot a detailed list concerning all vessel's data, Safety Equipment, Safety Class and other Certificates, together with Crew List, etc.

Also SOLAS/MARPOL 73/78 and annexes applied.

For Italian ships, Italy has implemented the A.R.E.S. (Automazione Ricerca e Soccorso) as application of S.A.R. Convention, Hamburg 1979. The system is mandatory for all Italian vessels of over 1,600 g.r.t., except for those vessels making national voyages of less than 24 hours' duration, and international voyages of less than 12 hours. Non-Italian vessels in the Mediterranean are encouraged to participate in the system. The A.R.E.S. Manual (Italian and English version) may be obtained at Port Authority's Offices. Also see Admiralty List Radio Signals, Vol. 1 (Ship Reporting Systems).

Also see "Augusta" – "Agent's Report".

Tankers over 1,600 g.r.t., entering or leaving Italian ports or carrying, or with uncleaned tanks which last carried petroleum, gas or chemical products, are required to make a comprehensive report to the appropriate Port Captain. See *Admiralty List of Radio Signals, Vol. 6.*

Such tankers must establish and maintain radio contact, preferably by VHF R/T, with the Port Captain, advising him immediately of any incidents or defects which may affect the safety of navigation or cause pollution. Pilots should be employed outside the areas of compulsory pilotage whenever the nature of the cargo or navigational conditions, including reduced visibility, require.

CREW CHANGES: In Italian ports, signing on of crew on to ships whose flag is not the flag of the citizenship of said crew (for instance of a Norwegian crew member signing on a Liberian vessel, a Danish crew member signing on a Swedish vessel, etc.) should be aware that from now on Italian Port Authorities will strictly require copy of the contract showing that the crew member was engaged out of Italy. It is also required that the contract be signed and stamped by the Consul (of the flag of the ship) of the place where the crew member is engaged. If Consulate is not available, by the National Authorities of the place. In no instance will the signature of the engaging company be accepted as substitute of the signature and stamp of Consul or Authorities.

STRAIT OF MESSINA:

Regulations:

1. Passage of the Strait is prohibited to vessels of 50,000 g.r.t. or over carrying pollutants.

2. Pilotage is compulsory for vessels of:
(a) 15,000 g.r.t. and above;
(b) 6,000 g.r.t. and above if carrying pollutants.

3. Vessels in (2) should pass the following information at least 12 hours in advance via Messina Radio:

Name.
Nationality.
Call Sign.
Deadweight tonnage.
Type and quantity of pollutant carried.
ETA at Capo Peloro or Punta San Raineri.
ETA should be confirmed at least 1 hour in advance.

Vessels other than those in (2) should pass the same information by VHF Channel 16 at least 2 hours in advance.

4. Vessels passing through the strait should keep to starboard of a line joining:

(a) Lat. 38° 16.5' N., Long. 15° 43.5' E.
(b) Lat. 38° 14.0' N., Long. 15° 36.6' E.
(c) Lat. 38° 10.8' N., Long. 15° 36.0' E.

5. Vessels on passage through the strait should keep engines ready for immediate manoeuvring and should maintain constant watch on VHF Channel 16.

Pilotage: Pilots for vessels on passage through the strait embark 3 miles North of Capo Peloro or 2.5 miles S.E. of Punta San Raineri.

Pilots for vessels entering Port of Messina embark 1.25 miles North of Punta San Raineri.

NOTE: Tankers with no cargo on board from 6,000 up to 14,999 g.r.t. can pass Messina Strait without Pilot. Tankers over 50,000 g.r.t. with no cargo on board can pass Messina Strait (pilotage compulsory).

ANCONA: 43.37 N. 13.32 E. (See Plan)

PORT LIMITS: A vessel is considered to have "arrived" when she anchors in the Roads 1 mile from the red light located at the end of Mole and also when, in the case of a vessel of large tonnage she anchors a further mile out and communicates her time of arrival.

DOCUMENTS: Immediately after arrival and shortly prior to departure, the Master must complete the arrival and departure forms supplied and send them to the Maritime Authority.

When the Pilot is on board, the Master must submit to the other authorities, Customs, Police and Health the following further documents:

4 copies Crew List.
1 copy Provisions List.
1 copy B/L for every set.
1 copy General Cargo Manifest.
3 copies of Crew Dutiable Articles.
5 copies Passenger List (in transit or otherwise).

PILOTAGE: The Ancona Port Pilots listen 24 hours a day on VHF Channel 12. Telegraphic address: Piloti – Ancona. Telephone: 071/54297. Pilotage, compulsory for all tankers and all vessels over 500 g.r.t. Pilotage starts within a radius of 1 mile from the port entrance.

There are 4 pilot cutters operated by the Pilots' Association. Vessels waiting for a Pilot must hoist the "G" flag of the International Code of Signals and await him in the roads.

The pilots' station is in a building located near the angle between Berths 1 and 2. There are 4 Pilots available.

ANCHORAGE: In the Roads at the Master's discretion. The advice of the Pilots may be sought via VHF. Anchorage in the roads is safe with winds coming from the 2nd and 3rd quadrants.

RESTRICTIONS: Vessels may enter and leave port day or night. The entry and departure of vessels of large tonnage and draft is governed by the tide which has an approximate range of 2 ft.

Normally, tankers carrying petrol or vessels carrying hazardous goods in category "A" are not allowed to enter port.

MAX. SIZE: In the port of Ancona, the entry of vessels up to 250 m. length is permitted. At the oil installations located outside the port, tankers over 300,000 d.w.t. can berth in water depth 33 m. At the oil installations located closer to the coast, tankers of 27 ft. to 40 ft. draft can berth. (See "Tankers").

HEALTH: There is a maritime health station in the port. Free Pratique may be granted to an anchored vessel by radio (by calling up "Sanimare Ancona" 12 to 6 hours prior to arrival) for vessels coming from countries not affected by health strictures. If fever is suspected aboard a vessel, she must anchor in the roads, hoisting the appropriate International Code of Signals flag, and waiting for the port doctor to come on board.

RADIO: Ancona Radio "ICA" uses calling frequency 500 kHz and a working frequency of 489 kHz. Radio telephone: Ancona Radio P.T. "ICA" on 2182 kHz. VHF: calling up Channel 16 and working Channels 25, 26 and 27. Station maintains 24 hours watch.

RADAR: There is no radar station in the port.

VHF: Port Authority on VHF Channel 16 from 0800 hrs. – 2200 hrs.

TUGS: Use of tugs in port is not compulsory but may be requested by Pilot or ordered by the Port Authority if necessary. From 0700 to 1700 hrs., there are always 4 tugs available, and from 1700 hrs. there is 1 tug available.

Requests for additional tugs can be made via the ship's Agent a few hours prior to the vessel's entry in port, this order to be made to Corima Soc. Coop. R.L. Tel: 71-202002. Telex: 560553 corimai. Fax: 71-50045. Tugs wait for vessel 1 mile from the port entrance and work on VHF Channel 12.

SPECIAL CARGO HANDLING FACILITIES: Berth No. 15 has a multi-purpose electro-hydraulic crane particularly suited for containers up to 40 ft. and for lifting conventional cargo up to 42 tons. The quay space behind is currently used as a container terminal.

A new handling area at Berths No. 23, 24 and 25 will come into operation with an area of 15 hectares and whose berths will have cranes particularly suited to container handling.

Adjacent to the port, in the Ancona Port Industrial Zone, there is a private area with Customs sheds for retention and movement of containers. This area covers 16,000 sq.m.

For Ro-Ro traffic there is no special equipment, but this type of traffic can be handled at almost all the berths.

STEVEDORES: The Compagnia Lavoratori Portuali operates in the port. Telephone: 071/28095. Telegraphic address: Compagnia Lavoratori Portuali Ancona. Requests for labour are made via the ship's Agent at least 24 hours prior to commencement of operations.

BERTHING:

Berth No.	Location	Length (m.)	Depth alongside at distances from quay face: Distance	Depth alongside at distances from quay face: Depth	Max. size g.r.t.	Utilisation	Cranes
1	Clementino Mole	250	1 m. 5 m. 10 m.	9.14 m. 9.44 m. 9.90 m.	75,000	Load/discharge Dry goods, lumber, coils, palletised cement.	2×6 tons 2×10–20 tons
2	Luigi Rizzo Mole	189	1 m. 5 m. 10 m.	9.14 m. 9.30 m. 9.75 m.	35,000	Load/discharge Dry goods (phosphate, china clay, carbon etc.)	2 discharging platforms ×8 tons on rails and 1×12 tons (being renovated)
3	Luigi Rizzo Mole	116	1 m.	9.14 m.	25,000	Loading/discharging General and containers	Mobile cranes of 6.3–20 tons 2×5 cu.m. grabs available.
4	Luigi Rizzo Mole	200	5 m. 10 m.	10.30 m. 10.36 m.	35,000	Loading/discharging Bulk commodities and general	2×6 tons
8	Molo Wiotyla	122	1 m. 5 m. 10 m.	7.62 m. 8.70 m. 8.70 m.	10,000	Bulk goods	Mobile cranes of 6.3–20 tons
Head	At head of No. 8 Berth	47	1 m.	7.62 m.	8,000	Containers, Passengers Lorries	—
9	Molo Wiotyla	124	1 m. 5 m. 10 m.	7.62 m. 9.14 m. 9.14 m.	10,000	Passenger vessels and Naval vessels	—
11	S. Maria Mole	147	1 m. 5 m. 10 m.	7.92 m. 9.40 m. 9.14 m.	15,000	Passenger vessels	—
12	S. Maria Mole	75	1 m. 5 m. 10 m.	7.92 m. 7.40 m. 7.31 m.	4,000	Passenger vessels	—
13	S. Maria Mole	155	1 m. 5 m. 10 m.	9.00 m. 9.75 m. 10.70 m.	20,000	Passenger vessels and Customs warehouse	—
14	Calata della Republica	194	1 m. 5 m. 10 m.	9.00 m. 9.00 m. 10.50 m.	25,000	Passenger vessels, General and timber	Mobile cranes 6.3–20 tons
15	Mole XXIX Sept. New Eastern container area (North side)	214	1 m. 5 m. 10 m.	9.14 m. 9.80 m. 10.20 m.	35,000	Containers, heavy lifts, Timber	1 Paceco crane 1 Badoni crane
16	New Eastern container area (South side)	120	1 m. 5 m. 10 m.	7.92 m. 10.00 m. 11.40 m.	12,000	Containers	—
17	Giovanni Berth	60 (Usable)	1 m.	7.00 m.	5,000	General	—
18	—	113	1 m.	8.22 m.	10,000	Coastal and small vessels	
19–20	Silos	295	1 m. 5 m. 10 m.	8.22 m. 10.10 m. 12.50 m.	75,000	Loading/discharging of cereals	2 suction plants each 2,000 t.p.h. Silos: 38 cells for cement and 4 cells for iron.
21	Silos	141	1 m. 5 m. 10 m.	8.54 m. 9.90 m. 12.50 m.	75,000	Loading/discharging of cereals	2 suction plants each with capacity of 125 t.p.h. on rails. Storage capacity 21,600 cu.m.
22	Silos	195	1 m. 5 m. 10 m.	9.30 m. 10.50 m. 12.00 m.	35,000	Loading/discharging cereals, loading/ discharging goods by hook	2×6 ton cranes 2 suction plants capacity 140 t.p.h. each.
—	IGIC Landing Stage	200	3 m. 1 m.	9.75 m. 8.85 m.	15,000	Discharging of cargo for company's plant	
23	Nuova Darsena	263		10.80 m.	75,000	Containers, Timber, General	
24	Nuova Darsena	150		10.80 m.	10,000	Containers, Timber, General	Mobile cranes 5 – 20 tons
25	Nuova Darsena	258.5		10.80 m.	75,000	Containers, Timber, General	1×20/35 ton crane

CARGO HANDLING FACILITIES: Normal working times for mechanical equipment is from 0800 to 1200 hrs. and from 1330 to 1730 hrs.

Mechanical handling equipment on the quays consists of:

1 multi-purpose Paceco crane, of 42 tons capacity for containers and various goods.
4 De Bartolomeis 20 ton electric cranes with retractable jib.
6 electrical cranes of 6 tons capacity, with retractable jib.
2 electrical unloading platforms of 8 tons capacity.
1 electrical unloading platform of 10/12 tons capacity.
3 automatic De Bartolomeis of 20 tons capacity.
1×5 ton automatic.

It is possible to attach electro-hydraulic grabs to the quay cranes for the discharge of scrap iron.

BRIDGES: None have to be negotiated when entering the port.

MEDICAL: There is an Italian Naval hospital in the port area close to Berth No. 10. It is reserved for personnel of the Italian Navy. Telephone number (M.M. exchange) 201392. There is a permanent service available.

Apart from this, there are in the town a main hospital "Umberto 1" with 1,000 beds, a 400-bed pediatric hospital, a cardio-rheumatological hospital, 2 geriatric hospitals, a neuropsychiatric provincial hospital, and a hospital specialising in tumours. There are also two private clinics with medical and surgical facilities.

TANKERS: *SFIR Mooring:* Mooring dolphins for tankers up to 10,000 g.r.t. Products handled: Refined products.

API – Island Terminal: Berth Position: Lat. 43° 40' 03.7" N., Long. 13° 24' 21.6" E. It is a single berth for tankers up to 90,000 d.w.t. with draft not exceeding 40 ft. Ship moored with her port side alongside the berth. Mooring manoeuvres permitted in daylight only. Unmooring manoeuvre permitted anytime.

Fittings for Loading/Unloading: 3 loading arms. 10 in. quick connections. 7 sea-lines (1×8 in., 1×12 in., 2×14 in., 2×16 in., 1×24 in.) for loading/unloading various grades of oil products and crude oil. The 24 in. sea-line is electrically heated (skin effect) for fuel oil and high viscosity crude oil.

Water Ballast: Water ballast to be discharged ashore by sea-line. Vessels on arrival for loading, when notifying their first ETA to Falconara, must communicate to the refinery the quantity of ballast to be pumped ashore. Actual ballast capacity in normal circumstances does not exceed 4,800 cu.m.

Bunker and Water Supply: All grades of bunkers and undrinkable fresh water are available by pipes. Bunker loading to be performed before or after cargo operations.

Main Engine and Auxiliaries: Should the main engine and/or auxiliaries be temporarily out of use, the discharging operations will immediately be stopped, and vessel unmoored, until everything is once again in order. In such a case all expenses, delays and/or all arising damages will be to the account of the vessel and/or her Owner.

In case of weather deterioration, Master could be requested by the Terminal Operator to leave the berth. In this case, the Terminal Operator will call the port services (Pilot, tugs and Mooring gang).

API Buoy Field: The buoy field that was positioned about 600 m. Westward of the Island Terminal for unloading crude oil, has been dismantled.

API Jetty: It is a pier of 1,308 m. in length with 4 berths: 3 for loading/unloading tankers and the other, closer to shore, for service boats.
Berths:

Head Jetty: (Position: Lat. 43° 38' 52.2" N., Long. 13° 23' 38.4" E.) for tankers with draft not exceeding 27.5 ft.

Berth No. 1: For tankers with draft not exceeding 18 ft.

Berth No. 2: For tankers with draft not exceeding 16 ft.

Landing Stage: For service boats – water depth 10 ft.

Tankers are moored with the stern to the jetty and two anchors. Therefore ships must be fitted with cargo stern-line.

Fittings for Loading/Unloading: One derrick for each berth for connecting flexible hoses (4 in., 6 in., 8 in., 10 in.). Seven pipelines (3×8 in., 2×10 in., 2×12 in.) for loading/unloading various grades of oil products.

Water Ballast: Water ballast to be discharged ashore by pipeline. Vessel on arrival for loading, when notifying their first ETA to Falconara, must communicate to the refinery the quantity of ballast to be pumped ashore. Actual ballast capacity in normal circumstances does not exceed 4,800 cu.m.

Bunker and Water Supply: All grades of bunker and undrinkable fresh water are available by pipes. Bunker loading to be performed before or after cargo operations.

API Sea Terminal

The API Sea Terminal consisting of a single steel platform mooring for vessels up to 300,000 d.w.t. and is located off Ancona Harbour in position: Lat. 43° 44' 37" N., Long. 13° 31' 20" E.

It has a minimum depth of water of 98 ft. at LWS. The platform, fixed on 6 steel piles sunk into the sea bottom is connected to the shore tanks by an underwater sea line 40 in. diameter.

On the platform there is a Cardan joint from which 1 floating hose of 20 in. diameter departs (average discharging rate 7,000 cu.m.p.h.), at the top of which are connected 2 lines of 16 in. diameter that end with 2 conic hoses 16 in./12 in. diameter (Tanker MS-GI) for connection to the ship.

Each tail hose is fitted with a quick closing valve to prevent risk of pollution.

The platform has a diameter of 82 ft. and is fitted with special rubber fenders.

Platform Light:

Light: White – Code Letter: "U" – Height a.s.l.: 39 ft. Period: 15 sec.
Light Characteristics:

(1) Light:	0.5 sec.	(4) Eclipse:	1 sec.
(2) Eclipse:	1 sec.	(5) Light:	2 sec.
(3) Light:	0.5 sec.	(6) Eclipse:	10 sec.

Range: 6 miles

Foghorn: Code Letter "U" – Range: 3 miles.
Characteristics:

(1) Blast:	1 sec.	(4) Silence:	2 sec.
(2) Silence:	2 sec.	(5) Blast:	2 sec.
(3) Blast:	1 sec.	(6) Silence:	22 sec.

The platform is equipped with radar reflector.

Weather and Currents:

Weather is generally good from May to the end of September. During the Winter time bad weather prevails from N.E.

The N.E. wind commonly named "Bora" is the strongest and the most frequent. The Easterly sea, which does not occur often, is generally strong. The Westerly winds generally cause fog or mists which, particularly in Winter, is very thick.

For approximately 8 to 9 months of the year the current sets in a S.E. direction whilst for the rest of the year, it is running in opposite direction.

The strength of the S.E. current is variable from 2 to 3 knots, therefore, in consideration of these facts neither engine repairs nor engine maintenance are permitted during the time the vessel is secured to the API platform and the main engine must be on permanent standby and ready for manoeuvring.

Radio/VHF:

Vessels bound for Falconara must send their ETA to Apioil – Falconara 72, 48 and 24 hours before their arrival.

In the last message the following information must be reported:
(1) Maximum lifting capacity (S.W.L.) of derricks
(2) Distance between bow and manifolds.
(3) Diameter and type of manifolds flanges.
(4) Whether the cargo tanks are equipped with inert gas system.
(5) No. of lifeboats and capacity. No. of persons for which lifebelts are available on board. Total number of actual crew on board, including passengers and technicians.

5/6 hours before arrival VHF contact can be established with the refinery maritime office on Channel 12.

Anchoring:

Vessels waiting for berth may anchor in a position approximately 1.5 miles Eastward off the platform. Ideal position for anchorage is: Lat. 43° 45' 00" N., Long. 13° 33' 00" E. or as otherwise instructed. Vessels are warned to anchor only in the recommended position because of the existence of submarine pipelines in other areas.

On Arrival:

The refinery operator, together with a gang of 4 skilled workers, will board the vessel before berthing to coordinate the discharging operations and they leave after completion of unmooring. Masters are therefore kindly requested to arrange for food and accommodation for the whole period of their stay aboard.

Mooring Operations:

Mooring operations will be undertaken with favourable weather conditions. The vessel shall proceed at a reasonable speed to the platform and generally shall start mooring by heading into the sea current or wind or swell.

As soon as the vessel is a proper distance from the platform she will run out 2 mooring ropes (1 on each side) which will be secured to the platform ropes by mooring crew. These ropes will then be heaved on board in order to pull up the platform ropes which will be secured on the bitts of the forecastle. The platform mooring ropes comprised of nylon rope, chain and polypropylene rope and pelican hooks will be used as stoppers for the chains. If the vessel is equipped with appropriate chain stoppers on the bow, the two mooring chains will be secured on them as soon as they reach the corresponding bitts on the forecastle. This second solution, which corresponds to OCIMF recommendations, is preferable to maintain the ship more safely moored under bad weather conditions.

4 mooring lines (2 for each side) must be ready on the forecastle for joining before manoeuvring to the platform.

The refinery operator shall not fail to give to the deck officer on duty on the forecastle all requested information concerning mooring operations as well as API's installation. All winches and windlass must be in perfect working condition with sufficient power and ready to work during the whole of the vessel's stay at the API platform. A good mooring rope of sufficient length must be ready aft and passed to the supply vessel enabling her to assist the tanker from the end of mooring up to few seconds before unmooring. Mooring operations will be carried out by the crew, under the Master's responsibility and according to the Pilot's suggestions.

During the ship's stay at the platform, the crew and API personnel will keep a constant watch on the mooring ropes and the platform. During the night the forecastle and mooring ropes must be brightly lit.

General Note for all Tankers:

(1) When anchoring on arrival, vessels *must* contact Pilot Station (VHF Channel 12). Once at anchor, the exact position must be transmitted by VHF to Pilot Station.

(2) All tankers, upon completion of loading /discharging operations *must* leave the berth upon request of Terminal Operators. Ship's Master must call port services directly by VHF or through the Agency (Pilot, tugs, Mooring gang).

Notes for Tankers Discharging Crude Oil: A P.S.D. (portable sampler device) will be assembled on the manifolds of tankers discharging crude oil. For this purpose, compressed air supply will be requested from the vessel for all the time of discharging operations.

Unmooring:

The unmooring operations, except during unfavourable weather conditions, are quite simple. As soon as the 2 hoses have been disconnected, it will be sufficient to let go the supply vessel, heave up, as quickly as possible, the stern rope, then let go the 2 platform ropes, and put the main engine astern (if necessary). Masters are warned that as soon as the hoses are disconnected the service of the supply vessel will no longer be required.

Hose Handling:

On arrival both derricks must be rigged and ready to lift up the maximum permissible weight.

Throughout the period of time when the hoses are hoisted up, connected, disconnected or lowered overboard, 1 deck officer and 1 Crew member are required to coordinate and operate the winches. Lifting, connecting, lowering and other handling of hoses will be performed by API's gang under the Receiver's representative control.

Discharging Operations:

The Receivers' representative will advise the Master on all matters concerning the discharging speed, manifold pressure, or eventual hazards, but will not direct the discharging operations except if it may be necessary to protect the facilities or any Receivers' properties or apparatus.

Pollution:

The Master is fully responsible and must ensure that no petroleum or other contaminated products are discharged, or spilled overboard.

During the vessel's stay at the API installation, all deck scuppers and all overside deck openings shall be securely closed and oiltight. All pipelines not in use, must be blanked off.

Drip-pans must be in place at all times under manifold connections. An adequate supply of sandbags, or other anti-pollution chemical products, must be available at all times for immediate use.

Under no circumstances shall bilge water, oil, waste, or contaminated products be discharged overboard.

Blowing of boiler tubes is not permitted during vessel's stay at the Refinery Terminals and black smoke may not be emitted from the funnel.

The Receivers will take any action or steps necessary to clean up or remove the contamination of the sea and the terminal structures if any. The vessel and/or her Owner, will be responsible for all expenses and all damage in connection with the contamination.

Italian Authorities are very strict and severe about pollution. It is worthwhile to remind Masters of the eventual penal implications against them for pollution.

Safety:

During the vessel's stay at the API Terminal a sufficient number of crew members must remain on board to be ready for any kind of emergency. Crew members going ashore are warned that in case of bad weather it might not be possible to return on board until weather conditions have improved.

All fire equipment and hoses must be, at all times in perfect working condition and ready for use. A number of portable fire extinguishers must always be ready by the discharging manifolds and the breathing apparatus must be ready by the pump rooms for immediate use.

Main Engine and Auxiliaries:

Should the main engine and/or auxiliaries be temporarily out of use, the discharging operations will immediately be stopped, and vessel unmoored, until everything is once again in order. In such a case all expenses, delays and/or all arising damages will be to the account of vessel and/or her Owner.

Tending Mooring:

A crew member must be stationed at the bow of the ship while the vessel is at the platform to keep a constant watch on the moorings.

During the hours of darkness moorings must be illuminated.

Winches:

During the stay of the vessel at the terminal all deck winches must be ready to operate.

Supervising Discharging Operations:

The receivers' personnel will remain on board for the whole time. A qualified deck officer must always be available. It is recommended that the duty officer always carries with him a portable VHF in order to keep close and constant contact with Receivers' representative.

Supervising Floating Hoses:

Whilst the vessel is secured to the platform a sharp lookout on floating hoses must be ordered by the Master. Every abnormal situation in this respect must be immediately notified to Receivers' representative.

Washing Floating Hoses:

When discharge is completed, if requested, the vessel will pump water for a few minutes before disconnecting hoses, in order to displace crude oil from the floating lines. The Receiver's representative will advise the Officer on duty about this manoeuvre as well as pumping time.

In case of "SBT" or "SB" vessels, where the ballast line is segregated from cargo line by a connection spool piece, this spool piece must be assembled with all bolts tightened before unloading operations commence. This allows the operation of "pumping water ashore" in any emergency upon Refinery Representative's request. The fulfillment of the above will be checked by Refinery Representative upon vessel's arrival.

Communications Between Ship and Shore:

Normally communications between ship and shore are maintained by API's representative. Masters are kindly requested to authorise the use of vessel's VHF when requested.

Boilers:

Boiler tubes must not be blown whilst at anchor or secured to the API platform.

Garbage: Garbage and refuse must not be thrown overboard while the vessel is at anchor or secured to the API platform.

Bunkers: Weather permitting, bunkers can be supplied by barges. API can supply all grades of fuel oil, marine diesel, gasoil and all grades of API's marine lube oils.

For bunker requirements vessels must cable to their own Agent at least 72 hours before their arrival (holidays, Saturdays excepted) stating qualities and quantities required. (No limitations for supplying).

Fresh Water: Available only by tugboats with favourable weather conditions, and to be requested through vessel's Agents.

IMPORTANT WARNING

All vessels with a draft up to 40 ft. scheduled for API platform but not duly equipped to operate thereat, will be moored, if possible, at API conventional berths. All expenses, time lost and/or damages arising from the above will be to account of and charged to vessel/owners.

Report: *Crude Oil Washing:*

To carry out crude oil washing operations (COW) the vessel must be fitted with the following equipment:

(a) An inert gas system capable of supplying gas containing not more than 5% oxygen to all cargo tanks during all discharging and washing operations. Such systems must be fitted with an automatic alarm signal which will operate if the oxygen content of the gas rises above 5%.

(b) A tank cleaning machine permanently installed in the cargo tanks and connected to the cargo/wash system by permanent steel piping.

(c) A remote reading tank gauging system to ensure that the liquid levels in the cargo tanks can be monitored at any time, without having to open any ullage ports.

(d) The tank cleaning lines must be completely separate and isolated from the fire fighting system.

The procedures to be followed are listed below:

1. Prior to vessel arrival at the discharge port, the following test will be carried out:

   All cargo discharge lines and wash system lines must prove to be tight and free of leaks. The test will be effected with crude oil, to a pressure ranging between 150 p.s.i. and 175 p.s.i.

   The main cargo pumps safety devices, i.e.: pump casing and bearing temperature gauges and high temperature alarms, pump overspeed trips, remote emergency stops, pump reverse rotation alarms, cargo pump trip for low inert gas pressure, must be tested and found fully operational.
2. All openings to all cargo tanks must be securely closed and the pressure/vacuum valves set in the operational position.
3. All in and out valves of sea water heater must be closed.
4. The crude supply for the washing system will be secured directly from the main discharge lines or from separate tank cleaning lines connected directly to the main cargo pumps.

   The pressure used for "COW" will be 140 p.s.i. maximum. In the case of vessels equipped with washing system supply coming direct from the main discharge lines, such back pressure of 140 p.s.i. will be achieved by closing down completely on manifold valve or two manifold valves, if necessary.

   In the case of vessels equipped with a separate tank cleaning line, the 140 p.s.i. back pressure will be achieved by controlling the main cargo pump revolutions and it will not be necessary to close any manifold valves.

   Whichever manifold is used the shore hoses, or hard arms, will not be pressurised for crude washing purposes.
5. Before commencing crude washing any tank, the oxygen content of the inert gas supply must be checked and must not be more than 5%. In addition the atmosphere in the tank to be washed must be checked and must not be more than 5%.

   The inert gas system must be capable of supplying positive pressure to all cargo tanks during all discharging and crude washing operations. In the event that pressure in the cargo tanks falls to 4 in. W.G. the system will automatically stop all cargo pumps. Before crude washing each tank, its pressure must be checked and must not be lower than 20 in. W.G.
6. The tanks will be washed in two stages:

   Top Wash: When the level in the tank is down to 15 ft. innage the top two/thirds of the tank will be washed, using all machines in the tank simultaneously, on a pressure of max. 140 p.s.i. The washing pattern will be from 40° to 120° elevations. During top washing the tank will continue to be pumped out on the main cargo pumps.

   Bottom Wash: The top wash cycle will normally be completed when the tank is draining out on the main cargo pumps. The washing machines will be stopped and reset to the bottom wash pattern (from 0° to 40° elevation). The tank main suction will be closed and the stripping suction opened.

   When the tank is dry, bottom washing will commence using a maximum of four machines in the tank to ensure good drainage throughout the bottom wash cycles.

   On completion of the bottom wash cycles, the machines will be stopped and the cargo system will revert to normal discharge operations.
7. The whole "COW" operation will be carried out under the direct supervision of a responsible Officer well acquainted with "COW" and tank cleaning, who will be assigned to this supervision task by the Master.

   The necessary personnel will be put at the disposal of the responsible Officer by the Master, to carry out "COW" operations and, in particular, one man equipped with VHF radio will be stationed at the manifold throughout discharge operations.

   Before commencing "COW", the responsible Officer supervising the operation will discuss, in detail, the whole operation with Receivers' Representative and will carefully observe any provisions issued by Port Authorities and by Receivers in relation to "COW".

   If during "COW" operations the Master and/or the responsible Officer judge, at any time, that the operational conditions do not ensure total safety, all "COW" operations will be stopped at once.

DENSITY: The average salinity of the water in the Port of Ancona is 17.5 gr. per litre of chloride.

FRESH WATER: Along all the quays are numerous supply points with rates varying from 15 to 25 t.p.h. Vessels in the roads can be supplied with drinking water via the port tugs.

FUEL: Vessels moored at berths can be supplied by tanker barge. The supplier is S.P.A. API from their marine refinery at Falconara.

Requests for bunkers must be submitted to the ship's Agent at least 72 hours in advance, Saturdays and holidays excepted. Any type of product can be supplied.

FIRE FIGHTING FACILITIES: Apart from the water hydrants along the quays, which, if need be, can be used for coupling to hoses for fire fighting purposes, the port of Ancona has a fire brigade equipped with fire engine, together with other means on land and water.

The fire brigade is near the marine station at Berth No. 13. Apart from facilities on land, there are 2 craft available, one of which is highly sophisticated. Telephone: 201715.

If necessary, at very short notice, the town fire brigade can be called to the scene. Their equipment consists of a fire engine with pumps, ladders and other means of efficient fire fighting. Telephone: 115.

In port, there are the following maritime means for combating fires:

(a) A motor launch of the port captaincy with fire fighting hoses and also the ability to spray foam.

(b) 2 motor barges with pumping facility operated by the port fire brigade, having the following characteristics:

Vessel "VV.F.207" – speed 11 knots, equipped with 2 fire fighting pumps each capable of delivering 6,000 litres per min. at a pressure of 10 atmospheres and driven by 2 Fiat Aifo 260 h.p. engines each; 2 liquid foam pumps; 2 foam projectors; 2 foam tanks with a total capacity of 5,800 litres; 20 delivery pipes with 70 UNI unions, 400 m. overall; 16 delivery pipes with 45 UNI unions, 220 m. overall; 1 comet portable projector, 2 fixed foam projectors; 16 UNI 70 hose attachment points; 2 UNI 150 ditto; 2 double tube cannons for mixed usage (water and foam); 1 electrical compressor giving 5 atm. pressure; 2×500 watt projectors of which 1 is portable with 100 m. of cable; 1 retransmitter apparatus attached exclusively to the apparatus operated by the fire brigade.

6 port tugs having the following characteristics:

Tugs "Luisella" and "Tiziana" – TSL 485 – speed 14 knots – 5,000 h.p. – equipped with 2 exhaust pumps in the deck on starboard and port sides; regulation fire fighting equipment; 2 motor driven pumps; for internal use 2 pumps connectable to those on deck; international attachments and points; equipped with radar, radio and echo sounder.

Tug "Katria Prima" – TSL 140 – speed 12.5 knots – 1,014 h.p. – equipped with 1 monitor; 4×45 mm. swivel guns; thermo-mechanical electric pump of 60 t.p.h. capacity; foam tank – fitted with radar; radio; echo sounder.

Tug "Luisa Davanzali" – TSL 238 – speed 12.5 knots; equipped with 1×30 t.p.h. fire fighting pump; 2 exhauster pumps of 50 t.p.h. and 1 of 200 t.p.h. capacity; radar, radio, echo sounder, gyroscopic compass.

Tug "Cesare Davanzali" – TSL 364 – speed 14 knots – 1,800 h.p. – equipped with 2 electrical pumps of 200 cbm/hr. capacity for delivery purposes and capable of attachment to Minimax equipment for fire fighting purposes using foam with 2 cannon type projectors; in the deck are 14 points for attachment of hoses; 2×1,000 kW. adjustable projectors; 1 motor compressor of the low pressure type working at a pressure of 8 atm.; equipped with radar, radio, echo sounder.

CONSULS:
Belgium: Tel 896811.
Denmark: Tel. 200252.
French Consular Agency: Tel. 206866.
Netherlands: Tel. 200764.
Sweden: Tel. 200252.

REPAIRS: It is possible to effect repairs of all types at yards within the port, and at the large electrical and mechanical repair undertakings in the town.

Cantiere Navali Riuniti (for large construction). Tel: 5951.
Cantiere Morini (also has available a floating dock for vessels up to 1,000 g.r.t. and slipways). Tel: 202224.
Cantiere Castracani (slipway). Tel: 55663.
Cantiere Riparazioni Navali (pleasure craft). Tel: 204323.
Cantiere Tecno-Matic (fibreglass units). Tel: 53643.
Cantiere Cooperativa G. Tommasi (only for steel vessels). Tel: 204303.
Ditta EL.ME.A. (marine electrical equipment). Tel: 29409.
Ditta Schiavoni (marine electrical equipment). Tel: 55731.

DRY DOCKS: There is only one small floating dock in which it is possible to carry out repairs to vessels up to 1,000 g.r.t. The dock is owned by Cantieri Navali Morini. Tel: 204303.

SURVEYORS: In Ancona the Registro Italiano Navale has a town office at via Marsala No. 8. Tel: 202204. R.I.N.A. acts for the following foreign classification bodies: Germanischer Lloyd, Nippon Kaiji Kyokai, Jugoslavinski Registar Brodova and Register of Shipping of Russia.

GANGWAY/DECK WATCHMEN: This service is advisable but not compulsory. In Ancona is a security firm "Istituto di Vigilanza Urbana e Campestre" di Dattilo Salvatore. Tel: 201784.

HATCHES: Hatches are opened by the crew where they are of the automatic type, and by the port labour force where they are of the conventional type. Hatches are re-closed in the event of rain.

CUSTOMS ALLOWANCES: On arrival in port, all goods under Customs exemption must be placed under seal. At the completion of Customs inspection, the Master may request the Customs officers permission to supply the following goods:

50 cigarettes for each Crew member.
1 kg. of salt for every 50 persons.
50 grams of sugar per person per day.
15 grams of coffee per person per day.

Liquor – small quantities to be agreed with the Customs officials according to the time of year.

REPATRIATION: It is possible to effect exchange of foreign Crew members on board foreign vessels since there is in the port an office of the Frontier Police.

For repatriation purposes, the following travel connections are available:

Train: Via the Ancona/Bologna/Rome line; via the Ancona to Rome direct line and via the Ancona/Pescara/Bari line.

Air: Departures from the Falconara Marittima Airport which is 10 km. from the port and reached by bus. There are 2 daily departures to Milan, 1 to Pescara and 1 to Rome.

Sea: the following lines are available:

From 1st January – 31st December, Wednesdays (1330 hrs.) and Saturdays (2200 hrs.) to Patras by Greek vessel "Mediterranean Sea". From 1st October – 30th May, Mondays (0900 hrs.) Tuesdays (0030 hrs.) and Fridays (1700 hrs.) to Zara and Spalato by Italian vessel "Tintoretto". From 1st June – 30th September daily departure to Zara by Jugoslav vessel "Illirija". From 1st June – 30th September every Thursday (1300 hrs.) and Sundays (2200 hrs.) to Patras by vessel "Mediterranean Sky". From 1st June – 30th September every Saturday (2200 hrs.) per Panamanian vessel "Neptunia" to Patras, Corfu and Haifa. From 1st June – 30th September every Tuesday (2200 hrs.) to Patras per Greek vessel "Patris". From 1st June – 30th September every Wednesday (1300 hrs.) and Saturday (2200 hrs.) departures to Patras and Higoumenitza by Greek vessel "Ionian Star". From 1st June – 30th September every Tuesday (1700 hrs.) departures to Dubrovnik by Italian vessel "Tintoretto".

There are other possiblities of connections with Greece and Yugoslavia. The information can be obtained by telephoning the following Agents:

Adriatica	Tel: 204915.
Morandi	Tel: 202033.
Paroletti	Tel: 56789.
Archibugi	Tel: 202223.

These Agents manage the lines and can give times and frequencies of sailings.

TIME: GMT plus 1 hour. From last Saturday in March to last Saturday in September, GMT plus 2 hours.

HOLIDAYS: Every Sunday, 1st January (New Year); the Monday after Easter; 25th April (Liberation); 1st May (Labour Day); 4th May (Town's Patron Saint's Day); 15th August (Assumption); 1st November (All Saints); 8th December (Immaculate Conception); 25th December (Christmas); 26th December (St. Stephen's).

Work is possible on all these days, but at an increased rate.

POLICE/AMBULANCE/FIRE: Port Police 201030. Town Police 202860. Yellow Cross Ambulance 55622. Red Cross Ambulance 22680. Port Fire Brigade 201715. Town Fire Brigade 22222.

TELEPHONES: It is not possible to connect telephone lines on board vessels. In the port there are numerous telephone boxes for national and local communications and where it is possible to telephone to any part of the world.

SERVICES: The following special services are available in Ancona:

Tank washing at Falconara Marittima by the "crude oil washing" system, compass adjusting, repairs to radar or other electronic instruments on board and underwater work.

SHORE LEAVE: Foreign Crew members may go ashore from 0800 until 0200 hrs. the next morning provided they have a pass stamped by the Port Police. Beyond 0200 hrs. a special permit from the police is necessary to allow an overnight stay outside the port area.

GARBAGE DISPOSAL: At Ancona the service is provided by Gruppo Garbage Service Sak. on advice from agent. Charges are dependent on ship size and type with surcharges levied outside of normal working hours.

Garbage disposal is also compulsory for tankers at Falconara Terminals, with surcharges for boat service. Service arranged by ship's Agent.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Italian Lira.

SPECIAL REGULATIONS: Vessels of draft greater than 30 ft. mooring at berths on the South mole are secured a short distance off the quay by means of dolphins.

DELAYS: No delays.

NOTICE: *Regulations concerning navigation, fishing and anchoring in vicinity of API installations:*

1. It is forbidden for any vessel or craft whatsoever, with the exception of vessels intended to operate at the API installations:

(a) to transit, remain or anchor within a radius of 1 nautical mile centred on the installations;

(b) to anchor and fish by whatever means within a radius of 1 nautical mile centred on the installations quoted;

(c) to anchor, engage in bottom fishing or engage in any activity on the sea bed within the area limited by the following points:

A – Lat. 43° 40' 20" N., Long. 13° 24' 57" E.
B – Lat. 43° 44' 28" N., Long. 13° 30' 42" E.
C – Lat. 43° 44' 12" N., Long. 13° 31' 09" E.
D – Lat. 43° 39' 42" N., Long. 13° 24' 57" E.

2. In the areas of the sea mentioned in No. 1, all vessels and craft in general which accidentally become entangled with anchors, fishing equipment or similar, underwater pipelines, must obligatorily abandon such equipment on the bottom in order to obviate damage to it and inform as quickly as possible the Maritime Authority.

3. Regulation No. 11/86 of 22.2.86 is in force.

4. Those contravening this current regulation, provided that their action does not constitute the cause of a serious reaction, will be pursued within the terms of Article 1164 of the Navigation Code and must compensate for the damage caused. It is obligatory for all entities whatsoever to observe and cause to be observed the terms of the present regulation.

Signed: The Commandant of the Port of Ancona.
Date: 22nd February 1986.

DEVELOPMENTS: 5 deep water berths (920 m.) to be constructed. Existing breakwater to be extended. New breakwater (300 m.) to be constructed.

AUTHORITY: Capitaneria di Porto Ancona, Banchina Nazario Sauro 12, 60100 Ancona, Italy. *Tel:* 71-2074697. *Telex:* 561529 Compan I. *FAX:* 71-2074697 (Not automatic). *Cables:* Compamare Ancona. *Contact:* Francesco Colli, Port Director. Paolo Castellani, Assistant Harbour Master. R. De Bernardinis, Harbour Master.

API Terminal-Operator: API Raffineria di Ancona S.P.A., Via Flaminia 685, 60015 Falconara, Italy. *Tel:* (71) 9167258. *Telex:* 560086 Apioil I. *FAX:* (71) 9167346. *Contact:* Captain M.D'Angelo, Chief-Marine Department.

AGENT: See "Genoa".

ARBATAX, Sardinia: 39.57 N. 09.42 E. **(See Plan)**

SHIPMASTER'S REPORT: September 1980.

PORT LIMITS: A vessel is considered to have "arrived" when she anchors in the roads 5 – 7 cables Northwards of the light of East Breakwater. Pilot leads vessel to the place for anchoring and also delivers on board all local documents and forms for completing for arrival clearance.

PILOTAGE: Not compulsory, but only available in daytime for entering. On leaving port the Pilot is available day and night. VHF Channel 16. Pilot boat black hull, about 6 m. in length, white house, on which is painted "Pilotti"; vessel awaits the Pilot Northward of the light of East Breakwater between breakwaters and Isola D'Oliastra Islet in position: Lat. 39° 57.24' N., Long. 09° 42.95' E., depth on roadstead from 10 m. to 30 m., good holding ground.

MAX. SIZE: Vessels of 200 m. length and max. draft 25 ft. 00 in. have entered.

HEALTH: Free Pratique may be requested by radio to "Sanimare Arbatax" between 12 to 6 hours prior to arrival, advising vessel's name, nationality, last port, number of crew and passengers and state of health on board. If from another Italian port Free Pratique is granted automatically.

VHF: Port Authority on Channels 16 and 11 from 0700 hrs. – 1900 hrs.

TUGS: One tug with sufficient power for assisting in manoeuvres is available, ship's lines used. Tug takes lines in the roads and accompanies vessel to the port. Prior to mooring vessel drops anchor with about 3 shackles, tug turns the stern of the ship towards the pier, after which the ropes from fore and aft are transported and secured on the pier, tug pushes vessel alongside the pier on the port-side. The chain is slackened until 5-6 shackles out.

BERTHING:

Banchina Ovest – length 450 m. – depth 25 ft.
Banchina Postal – length 100 m. – depth 15 ft.
Banchina Centrale – length 100 m. – depth 15 ft.
Banchina Sud – length 80 m. – depth 15 ft. (for Ro/Ro ships only).

CRANES: One private mobile crane, 6 tons capacity, for discharging pulpwood at Banchina Ovest.

MEDICAL: Advise Agent of any requirements.
DENSITY: 1025.
FRESH WATER: Only from water barges.
FUEL: Pipe-line 250 mm. in diameter from store tanks on shore to the terminal at the head of the West pier.
HATCHES: Opening/closing is normally carried out by ship's crew. Winchmen from stevedoring company or ship's crew.
CUSTOMS ALLOWANCES: Depends on flag of vessel.
REPATRIATION: Regular line of ferry boats, train to Cagliari close to which there is an airport.
TIME: GMT plus 1 hour from 29th March to 26th September, GMT plus 2 hours European time.
HOLIDAYS: 1st January (New Year's Day), 25th April (Liberation Day), 1st May (Labour Day), 15th August (Assumption), 1st November (All Saint's Day), 8th December (Local Religious Holiday), 25th December (Christmas Day), 26th December (Boxing Day).
IDENTIFICATION CARDS: Special shore passes issued by local police, against passports.
DEVELOPMENTS: Present basin will be dredged to 9 m., new basin close to present one will be constructed with depth of up to 10 m.
AUTHORITY: Ufficio Circondariale Marittimo, 08041 Arbatax, Sardinia, Italy. *Contact:* Antonio Camboni, Port Commandant. *Tel:* (0782) 667093, 667072.

AUGUSTA (including Priolo and Melilli):
37.13 N. 15.14 E. **(See Plan)**

LOCATION: Augusta – Position refers to Torre Avolos Old Lighthouse in position Lat. 37° 12' 37" N., Long. 15° 13' 34" E.

Priolo – Same position as Augusta, Priolo lays on Southern part of harbour including a chemical pier outside the breakwaters. The port is under the jurisdiction of Siracusa.

Melilli – Correct name is Siracusa Santa Panagia, located 6 miles South of Augusta. Lat. 37° 06' 30" N., Long. 15° 15' 40" E.

Largest scale charts: B.A. 181-187. U.S. 53000-53200-53201. Italian 270-271.

PORT LIMITS: A line drawn between Santa Croce Lighthouse and Magnisi Lighthouse defines the seaward limits of the Port of Augusta.

A line drawn between Punta Magnisi and Punta Santa Panagia defines the seaward limits of the port of Santa Panagia.

DOCUMENTS: Ship's information must be sent by telex to Compamare Augusta, or to Compamare Siracusa for Santa Panagia, 24 hours before arrival (See "examples" below) in accordance with instructions issued by European Economic Community No. 79/116.

Crew Lists (at least 4 copies).
Custom Manifest.
Passenger Lists (4 copies).
Maritime Declaration of Health.
Bills of Lading.
Vaccination Certificates.
The following documents must be sent to Harbour Master's Office:
Certificate of Registry.
Civil Liability Certificate (for tankers only).
Information Note of Arrival.
Additional Declaration of Departure.
Cargo and Gear Safety Certificate.
Safety Construction Certificate.
Italian Light Dues.
Tanker Check List (to be presented to Pilot for acknowledgement).

In addition ships bound for the Esso Terminal must also radio the refinery, Rafinesso Augusta, via Roma Radio (IAR) 72 hours and 48 hours before arrival, giving ETA in local time and following advice:

Bill of Lading quantities in long tons, metric tons, gross bbls./net bbls.

Slop quantity, water percentage, tank number. If slop mixed with cargo, advise quantity cargo in slop tank.

Arrival draft.

Temperature of cargo for vessel carrying atmospheric residues and catfeeds.

For tankers calling to load: 72 hours prior arrival send cargo layout, preferred order of loading and number of grades ship can load at same time.

Examples: Messages sent to vessels:
Vessel Over 20,000 g.r.t.:

Please send the following information cabling Compamare Augusta. Telex: 912336. Vessels data, ETA Pilot, reasons for call, cargo/ballast details, if SOLAS Certificates 74-78, em. 81/83.

CLC data, IGS yes/no, Paris memo issued date prescriptions, if any, last port and confirm if all apparatus, hull machinery in good order.

Vessel under 20,000 g.r.t.:

Please send the following information cabling Compamare Augusta. Telex: 912336. Vessel's data, ETA Pilot, reasons for call, cargo/ballast details, if SOLAS Certificates 74-78, em. 81/83.

CLC data, Paris memo issued date prescriptions, if any, last port and confirm if all apparatus, hull, machinery in good order.

Chemical Carriers:

Please send the following information cabling Compamare Augusta. Telex: 912336. Vessel's data, ETA Pilot, reasons for call, cargo/ballast details, if SOLAS Certificates 74-78, em. 81/83.

CLC data, Paris memo issued date prescriptions, if any, certificate of fitness/IMO yes/no, last port and confirm that all apparatus, hull, machinery are in order.

Vessel's reply:
To: Harbour Master, Augusta.
Telex: 972336 Compau I

Vessel Features	Capo Argento, IBMX, Italian Flag, g.r.t. 2,976, d.w.t. 4,500, LOA 100 m. max. draft 5.95 m.
ETA Pilot	Pilot Augusta, 2nd December, 0600 hrs.
Agent	Mayflower Shipping Agency
Reason of Call	Unloading 1,400 tonnes Ethylene
Cargo	Ethylene 1,400 tonnes
SOLAS	Available SOLAS 74/Prot 78
IOPP	Expiring 30th April, 1986
CLC	Expiring 20th February, 1986
Paris Memo	Athens 19th September, 1985/No Prescription
IMO	Expiring December 1985
Last Port	Porto Torres
Remarks	In good order
	Master Capo Argento

APPROACHES: There are 2 entrances: the main one is situated between the central and northern breakwaters, with leading lights on a heading of 273° 51' – Entrance is about 260 m. wide, with a depth over 36 m. in the middle, and may be used day and night.

Note: Vessels entering should be lined up on the leading lights/marks 1 mile before entrance and ship departing 0.5 miles before exit. In case of controversy Harbour Master will ask for documentation of above positions.

Santa Panagia is an open road and berthing to ISAB Terminal is allowed in daytime only.

A current may cross the entrance after prolonged periods of windy weather. The leading lights/marks are sometimes obscured by smoke from the industrial plants in the Southern part of the harbour. Naval vessels and outbound traffic have the right of way when passing through the harbour entrance.

Santa Panagia:

(a) Masters are cautioned when approaching Santa Panagia by night as there are no navigational aids in this area. Only 2 lighthouses (Murro di Porco Lighthouse to the South and Cape S. Croce Lighthouse to the North) can be used to fix the position of the vessel. In the landfall however, their bearings are opposite and therefore useless. Radar must be in good operating condition.

(b) Tunny nets are laid down in the area and marks can be temporarily missing and small fishing boats engaged in net fishing may be encountered up to 8 miles from the coast; these boats carry no special marks or lights to indicate that they are using nets.

(c) Naval ships quite often exercise off the East coast of Sicily, particularly in an area including Augusta to the North and extending well South of Syracuse.

Two submarine exercise areas are close to this part of the coast.

(d) A current may cross the entrance of the bay as well as the terminal area after prolonged periods of windy weather.

PILOTAGE: Compulsory for vessels over 500 g.r.t. – 24 hours service – Second Pilot recommended by Local Authorities for vessels of 60,000 g.r.t. or above. Weather permitting, Pilot boards about 1 mile East of port main entrance – In case of bad weather, the pilot boat will station itself just inside the entrance and instructions to proceed will be given to vessels by VHF. Upon request, to facilitate vessels, or for other special reasons, Pilot can board up to 3 miles off the normal embarkation point.

Pilot charges vary with vessel's g.r.t., for hours between sunrise to 0800 hrs. and 1700 hrs. to sunset, for night hours, for Sundays and holidays, for flammable and explosive cargo and for boarding over 1 mile from main breakwater.

ETA to be confirmed 1 hour before arrival, calling "Augusta Pilot Station" on VHF Channel 12. In case of no radio contact, vessels must stop about 2 miles Eastward of the breakwater and hoist or flash the international code signals.

The pilot boat has a black painted hull with a white band and white superstructure with the word "Piloti" painted on both sides.

For Santa Panagia (Melilli), Pilot will board 1 mile seaward from Punta Santa Panagia for vessels incoming from South and 1 mile seaward from Punta Magnisi for vessels incoming from North. Pilot should be contacted on VHF Channel 14. Second Pilot recommended by Local Authorities for vessels of 60,000 g.r.t. or above.

ANCHORAGES: Pilot compulsory inside and outside the breakwaters within the port limits.

The Inner Anchorage has a central zone with a depth of water not less then 22.4 m.

Outside it is recommended to anchor South of Main Entrance, because North of it there are many limitations.

For Santa Panagia Pilot compulsory inside the harbour limits – vessels anchoring outside of this line are not considered to be in port and consequently without port dues.

RESTRICTIONS: Vessels over 60,000 g.r.t. berth during daylight only. No restrictions on unberthing.

MAX. SIZE: VLCCs can enter the harbour with tug assistance, with the following limitations: 69 ft. draft for operations in the road (bunkers – provisions – crew changes) and 66 ft. 10 in. with a max. displacement of 450,000 tons to moor alongside SELM Priolo Supertanker Jetty. For Santa Panagia no limitations.

HEALTH: Vessels arriving from countries not suspect of epidemical diseases can ask and receive Free Pratique by radio, sending a telegram not more than 24 hours before arrival to "Sanimare 96011 Augusta" via Roma Radio (IAR) or "Sanimare Siracusa" for the Port of Santa Panagia. Arrivals from Italian or EEC Ports are considered clear.

It is necessary to request Free Pratique by radio because Health Officers do not board vessel from sunset to 0800 hrs.

The Office of the Health Department is located at Via Lungomare Rossini. Tel: (0931) 974920.

Report: January 1992.

If vessel arrives without "Q" flag hoisted, even if Free Pratique was requested, they are subject to interrogation at the local police station.

RADIO: Augusta Radio P.T. Listening on 2182 kHz. Working on 1643 and 2260 kHz (24 hour service).

VHF: Augusta Radio P. T. Call Channel 16, working Channels 26 and 27 (24 hour service).

Harbour Master (Channel 16).
Pilots (Channel 12). Working 24 hours.
Tugs and Line Handlers (Channel 8). Working 24 hours.
Taxi-boats (Channel 10) From 0600 to 2330 hrs.
Agents Connection (Channel 9). Office hours.
Traffic Control (Channels 9 and 12). Working 24 hours.

TUGS: Tugs available in the harbour: 4×2,000 h.p., 2×2,400 h.p., 3×2,500 h.p., 2×1,200 h.p. and 1 tug on stand-by/emergency of 2,600 h.p.

Harbour service: 6 tugs on duty from 0800 – 1200 hrs. and from 1300 – 1800 hrs. 3 tugs available from 1800 – 2200 hours and 2 tugs available from 2200 – 0700 hrs.

Tugs' charges vary with vessel's g.r.t., for hours between 0001 – 0800 hrs, 1200 – 1300 hrs., 1700 – 2359 hrs., for Saturday, Sunday and holidays, for service exceeding 1 hour, for operations at SELM – Priolo Terminal.

For Santa Panagia there are 3 tugs available, 1 tug can be employed from Syracuse Harbour – additional tugs can be supplied from Augusta Harbour.

Use of tugs is compulsory for berthing and unberthing (vessels over 60,000 g.r.t. require 5 tugs). The number of tugs allocated is decided by the Harbour Authority according to gross tonnage. Because of tug crew duty rosters, the most suitable tugs may not always be available. Tugs make fast on the hook after the vessel has cleared the entrance, using ship's ropes. Pilots communicate with tugs via VHF portable radios which they bring on board with them.

Line Handlers: Service is performed with 1 launch for vessels of less than 10,000 g.r.t. and 2 launches for vessels above 10,000 g.r.t.

Wires are not accepted but may be used when provided with a 5 m. Manila or other fabric end tail with eye.

Charge varies with vessel g.r.t., flammable and explosive cargo, rain, waiting time (1 hour delay), overtime from 0600 – 0800 hrs., 1200 – 1300 hrs., 1700 – 2000 hrs., night hours, Saturday, Sunday, holidays, lines above the total of 8 and mooring on dolphins/buoys.

BERTHING: *Commercial Wharves:*

Ro/Ro Pier: Length 260 m. Depth 12.0 m.

Banchina di Riva: Length 246 m. Depth 12.0 m.

Commercial Quay: Length 255 m. Depth 12.0 m.

Consortium Jetty: Length 738 m. Depth at seaward end 12.2 m. 6 berths available. With Port Authority permission vessels may berth to discharge dirty ballast or transhipment cargoes.

MACET: Berth Nos. 1, 2 and 3 are at a finger jetty. Berth Nos. 1 and 3 used only by coasters and bunkering barges. Depth 12 ft. Berth No. 2 used by vessels up to 25,000 d.w.t. on stern discharge. Depth 28 ft. (See "Plan").

Enichem Augusta: Punta Cugno – Berth Nos. 3, 4, 5 and 5 Bis.

Berth No. 3 Northern Jetty used by Enichem Augusta for discharging and loading chemical products. Berth accepts vessels up to 3,000 d.w.t. mooring alongside. Depth 17 ft.

Berth No. 4 (Mid Jetty) used by Enichem Augusta for barges.

Berth No. 5 (Southern Jetty) used by Enichem Augusta for vessels up to 30,000 d.w.t. moored by stern for loading/discharging black/white products and chemicals. Depth alongside 30 ft.

Berth No. 5 Bis used by Enichem Augusta. It is a steel island connected to Berth No. 5 for vessels up to 5,000 d.w.t. for loading/discharging black/white products and chemicals. Depth alongside 21 ft.

Esso: Pier No. 1: Length of pier about 1,050 m. Heading 110°.

Berth No. 6: Used only by bunker barges.

Berth No. 7: For vessels up to 10,000 d.w.t. with LOA 197 ft. – 525 ft. Depth of water 35 ft. Pipe-lines with connection of 6 in. Loading rate 150 t.p.h. – 900 t.p.h. Loading of gasoline, gasoil, bitumen, fuel oil. Gangway ashore. Stern loading only.

Berth No. 8: For vessels up to 38,000 d.w.t. with LOA 197 ft. – 820 ft. Depth of water 35 ft. Pipelines with connections of 8 in. Loading of gasoline, JP/5, benzine and bitumen. Loading rate 165 t.p.h. – 900 t.p.h. Gangway ashore. Deballasting pipeline available for all berths. Diameter 14 in., rates from 700 to 2,000 t.p.h. Shore capacity 20,000 tons.

Pier No. 2: Length of pier about 1,150 m. Heading: 110° ending in a steel platform. Large tankers discharge crude oil on either side of the platform at rates of up to 6,000 t.p.h.

North side, No. 10, receiving tankers up to 90,000 d.w.t. with LOA 230 ft. – 909 ft. Depth of water 51 ft. Loading of gasoline, gasoil, fuel oil, lube oil. Connections: 6 in. for bunker, 10 in. for black and white products, 10 in. for lube oil. Gangway ashore.

South side, No. 11, depth 54 ft., receiving tankers up to 140,000 d.w.t. with LOA 504 ft. – 974 ft. Depth of water 54 ft. Loading of all products as No. 10 except lube oil. Connections 10 in. No night-time movements for vessels over 60,000 g.r.t.

At about 400 m. from end platform there are 2 smaller platforms(Berths No. 9 and 12).

Berth No. 9: Receiving tankers up to 10,000 d.w.t. with LOA 197 ft. – 469 ft. Depth of water 26 ft. Loading of gasoline, gasoil, fuel oil, lube oil. 4 pipelines with connections of 6 in. – 24 in.

Berth No. 12: For tankers up to 12,000 d.w.t. with length 213 ft. – 492 ft. Depth of water 28 ft. Connections of 6 in. Loading of same products as No. 9. Alongside the pier pipelines are of diameter of 18 in. to 24 in. for crude oil, 16 in. to 20 in. for fuel oil, 14 in. for diesel and gasoil, 10 in. for kerosene, 8 in. for gasoline, 10 in. for naphtha and JP4. There is also a 14 in. pipeline for deballasting and 8 in. lines for lube oil. All berths are provided with gangway. At Nos. 10 and 11 vessels may use wire ropes only if the eyes are made of either manila or nylon.

Unicem: A finger jetty. Berth Nos. 13 and 14 with depths of 23 ft. Used by small vessels carrying cement in bulk. Operations are through a conveyor-belt system, with a handling rate of about 300 tons per day. Berths No. 13 Bis and 14 Bis recently completed but not yet in use.

N.A.T.O. Pier: Berth Nos. 15 and 16 in depths of 35 ft. and 36 ft. respectively. Used for loading and discharging petroleum products, but being a Navy jetty, berthing is subject to priority being given to Navy requirements.

SELM-Priolo: Supertanker Jetty: For vessels up to 420,000 d.w.t. Berth Nos. 17 to 24 at SELM Jetty; Berth Nos. 25 and 26 at Steel Island; Berth No. 27, for vessels up to 20,000 d.w.t. which are moored by the stern, and secured to 4 buoys with bow anchors down. Berth used for chemical and petroleum products. All the berths have a deballasting pipeline. Connections: 16 in. for crude and 8 in. for products.

SELM concrete jetty: Both dry and liquid chemicals are handled at this jetty. Berth No. 28, for small vessels whose length is not more than 80 m. moored by the stern. Berth No. 29, for vessels up to 20,000 d.w.t. Berth No. 31, for vessels up to 30,000 d.w.t. Bagged cargo at a rate of 2,000 tons per day, and bulk cargo up to 4,000 tons per day, load or discharge. Berth No. 30 used by bunker barges. Berth No. 32, for small tankers only.

Berth No.	*Depth* (ft.)	*Max. Draft* (ft.)	*Max. DWT*
17	14.75	13.01	1,000
18	24.28	22.06	6,000
19	42.00	40.35	3,000-48,000
20	73.50	64.99	250,000
21	73.50	66.08	375,000
22	45.90	42.00	3,000-48,000
23	24.60	23.00	6,000
24	11.81	9.08	1,000
25	45.93	42.06	5,000-70,000
26	45.93	37.06	5,000-35,000
27	37.40	34.00	26,000
29	—	29.06	Used by Agrimont
30	14.43	13.00	
31	—	31.06	

ENICHEM – ANIC: (Carichi Liquidi): Is situated in Priolo's Cove. Chemical products are handled. Berth No. 33, for vessels up to 3,000 d.w.t. Berth No. 34, for vessels up to 15,000 d.w.t. Berth No. 35 and No. 36 used by small vessels only.

Also see "Shipmaster's Reports".

Santa Panagia: *Berthing Procedure at I.S.A.B.:* At all berths vessels are berthed so as to head outwards. The vessel approaches the berth almost perpendicularly to the pier and with the aid of tugs (generally 6 for a VLCC) and swung seaward, to approach the berth with an angle of about 45°. When at safe distance from the berth and almost in position, the vessel is then swung parallel to the berth and pushed alongside.

No anchor is used, however, both must be ready for any emergency. The following are the maximum landing speeds:

Berth No. 1: 25,000 d.w.t., 22.5 cm./sec.
50,000 d.w.t., 17.0 cm./sec.
Berth No. 2: 10,000 d.w.t., 25.0 cm./sec.
30,000 d.w.t., 30.0 cm./sec.
Berth No. 5: 250,000 d.w.t., 14.5 cm./sec.
50,000 d.w.t., 21.0 cm./sec.
Berth No. 6: 385,000 d.w.t., 13.5 cm./sec.
50,000 d.w.t., 21.0 cm./sec.

Cautionary Advice: Masters are cautioned that prevailing strongest winds and the resulting swell can affect their stay alongside. It is therefore very important that vessels, particularly high freeboard ships pay particulary attention to moorings. The most efficient moorings are all wire moorings – mixed moorings of different stretch characteristics and breaking strain should be avoided, particularly in breast lines and springs.

Moorings reeled on winches must be held by brakes hardened up to full torque. No self-tensioning devices should be used. The mooring must be reeled in such a direction as to assist the break. Where split drum winches are used, a maximum to 2 layers should be on the working drum when the mooring reaches the shore bollard/mooring hooks. Brake must be in good condition.

There are limits applicable to freeboard from a windage point of view. This together with maximum operable wind speeds will be discussed with Master's of VLCC by a Terminal Supervisor. The vessel must be held firmly against the fenders at all times. It is unnecessary and dangerous to slack away lines, even if they appear taut, if the ship is not hard against the fenders.

The minimum recommended is 2 spring lines and 2 breast lines at each end.

Operator: Industria Siciliana Asfalti and Bitumi (ISAB).

The terminal is situated 6 miles South of Augusta, 5 miles North of Syracuse, Sicily. The Marine Terminal is connected to the Refinery storage through 5 lines for LPG and 18 large diameter pipelines for Crude and Products which allow for high unloading and loading rates.

All berths are equipped to ensure rapid and safe operations.

Clean and dirty ballast discharge facilities, including ballast reception tanks of 100,000 cu.m. (0.6 million barrels) are available.

A sheltered harbour accommodates service boats and 3 modern 2,000 h.p. tugs are permanently available.

When more tugs are required, additional units are supplied from nearby Augusta.

Bunkering facilities are available on all berths and sea-going barges are operating from the Terminal and from a sheltered harbour equipped for bunkering purposes.

Crude Oil Transhipment: The marine facilities are also suited for transhipment from ULCC-VLCC to smaller tankers better fitted to serve various refinery and/or pipe terminal locations in the Mediterranean and Adriatic.

Crude and Product Storage: 8 tanks are available for incoming crude with a total capacity of 800,000 cu.m. (5 million barrels).

Semi-finished (intermediate) product storage enables the operation of plant units when upstream sections are not available for short periods and contributes to Refinery flexibility.

In particular there is large storage of fuel oil and gas oil fractions and 12 motor fuel component storage tanks.

Total intermediate storage in 27 tanks, amounting to 431,000 cu.m. (2.7 million barrels).

Finished product storage is in 38 tanks of various grades with a capacity of 825,000 cu.m. (5.2 million barrels).

A further 42,000 cu.m. (0.25 million barrels) are held in Refinery service tanks.

Jetty: Deep water is available close to the shore at the jetty side. The marine facilities consist of a finger with 5 berths having the following capabilities and restrictions:

Berth No. 6: Vessels of minimum 18,000/max. 600,000 d.w.t. Max. LOA 1,200 ft. max. draft 78 ft. For unloading crude and loading fuel oil.

Berth No. 5: Vessels of minimum 18,000/max. 250,000 d.w.t. Max. LOA 1,200 ft. Max. draft 78 ft. For unloading crude and loading fuel oil, gasoil and gasoline.

Berth No. 1: Vessels of minimum 5,000/max. 55,000 d.w.t. Max. LOA 790 ft. Max. draft 42 ft. 6 in. For unloading crude and loading all products.

Berth No. 2: Vessels of minimum 10,000/max. 30,000 d.w.t. Max. LOA 650 ft. Max. draft 36 ft. For unloading crude and loading all products except LPG.

Berth No. 7: Vessels of minimum 500/max. 3,000 d.w.t. and LPG carriers of minimum 500/max. 1,500 d.w.t. Max. LOA 320 ft. Max. draft 18 ft. For loading all products.

Also see "Shipmaster's Reports".

Somicem-Magnisi: Sea berth, stern mooring for loading crude oil – max. 22,000 g.r.t. Draft 36 ft.

Also see "Agent's Report".

STEVEDORES: Available from Compagnia Lavoratori Portuali.

CRANES: *Heavy Lifts:* Floating cranes with lifting capacity of 20 tons – 94 tons at a distance of 27 m. – 12 m. are available.

MEDICAL: Medical and hospital facilities available. Vaccinations done on board. Advance notice preferred for assistance required on arrival.

TANKERS: See "Agent's Report" for accomplishments required before entering the Harbour and "Berthing" for facilities.

All petroleum product carriers, chemical and gas tankers calling at Augusta for loading or discharging must confirm, by cabling the Harbour Master, that the responsible officers taking care of loading/discharging/handling operations, fulfil the requirements according to IMO Convention STCW/78 and are in possession of relevant valid certificates.

DENSITY: 1025, however it may be reduced by heavy rain.

FRESH WATER: Good quality potable water available by barges.

FUEL: All grades available by pipeline or barge at anchorage, max. draft 65 ft.

Suppliers Esso, Agip, I.P., Shell, Mobil and Gulf. 48 hours notice required.

CONSULS:

Denmark	Tel: (0931) 977470.
Liberia	Tel: (0931) 975341.
Norway	Tel: (0931) 978544.

REPAIRS: Not permitted to tankers while alongside refineries jetties, may be carried out, while at anchorage, subject to Harbour Master's authorisation. If repairs to engine or it will affect the proper use of engine or in any way restrict the capability of manoeuvring the ship, continuous tugboat assistance may be imposed. Light steel, carpentry and routine maintenance is available from small local shipyards. Also electronic and electrical services.

DRY DOCKS: One floating dock, length 105 m., breadth 17.10 m., lifting capacity 3,000 tons. Ships up to 5,000 g.r.t. can be moored alongside the dry dock for light repair operations.

One floating dock, length 115 m., breadth 22.0 m. Lifting capacity 2,750 tons.

SURVEYORS: Available.

GANGWAY/DECK WATCHMEN: Employment of shore watchmen advisable. Employment of shore fire guards advisable.

OPENING/CLOSING HATCHES: Normally by ship's crew.

CUSTOMS ALLOWANCES: 40 cigarettes and 1 opened bottle wine/spirits per man.

REPATRIATION: No difficulties.

AIRPORT: Nearest at Catania, can be reached in 40 minutes (distance 40 km. by car). Daily flights to Rome and Milan for international connections. Weekly flights to North Europe capitals available.

TIME: GMT plus 1 hour. Summer time, last Sunday in March to last Sunday in September, GMT plus 2 hours.

HOLIDAYS: Tankers not affected. 1st January; Easter Monday; 25th April; 24th May; 15th August; 8th December; 25th December.

POLICE/FIRE/AMBULANCE: Boundary and Immigration Police, Tel: 113; Police (Carabinieri), Tel: 112; Ambulance, Tel: 971122; Fire, Tel: 974777.

TELEPHONES: Situated at all berths, not for private use. No direct connection to vessels.

SHORE LEAVE: Immigration Police issues shore passes to permit the landing of the crew and passengers. Crew members require Passport or Seaman's Book.

IDENTIFICATION CARDS: Shore passes given by Immigration Police.

GENERAL: *Garbage removal:* Compulsory service on arrival and every 24 hours thereafter.

SHIPMASTER'S REPORT: June 1982.

If landing a sick crew member, Pilot will board and vessel anchors inside the breakwaters. Harbour Master and assistant boarded to check that ship's certificates all valid. All usual entry papers required except Crew Declaration and Stores List, but total quantity of cigarettes required. Crew Lists on IMO Fal Form 5. Cables sent to Agents on Sundays and holidays should include Telex number in address otherwise they are not delivered until the next day.

We were anchored about 1.5 hours and the Pilot stayed on board. It was necessary to send ashore some crew members to assist with the stretcher, but they brought it back with them.

EEC Tanker Check List required.

SHIPMASTER'S REPORT: April 1985.

Radio Pratique: Send radio message, 12 hours prior to arrival to "Sanimare Siracusa".

Pilotage: Pilot boards 1 mile North of Cabo Santa Panagia and is contacted by VHF Channel 14. Call sign is "Siracusa Pilots".

Fresh Water: Water is available by barge from Augusta so advance notice required.

Repairs: Normal repairs, but no welding can be carried out alongside.

Fuel: Bunkers are taken via pipeline when loading/discharging.

Officials: All Officials come from Siracusa (Syracuse).

Ship Chandlers: Available.

SHIPMASTER'S REPORT: February 1987.

Vessel: 95,000 d.w.t.

Berth: Santa Panagia Oil Terminal (formerly Melilli).

Pilot boards to anchor the vessel. He boards about 1 mile N.E. of Santa Panagia. The anchorage is in deep water, bottom mud and clay.

After anchoring, Agent boards with Harbour Master to check vessel's documents. As is usual at Italian ports, 3 firemen live on board.

1 tug each end, 2 ship's lines, 1 tug pushing, their lines taken ashore by boat. Tugs are paid by the hour (i.e. 1 hour 5 mins. = 2 hours' pay).

Shore passes required and shore leave is by boat to boat harbour. Ship's stamp required on all documents.

SHIPMASTER'S REPORT: May 1987.

Port : Priolo.

Vessels are directed to proceed to Santa Panagia Bay by the Agent. It comes under the jurisdiction of Siracusa. Pilots are picked up at Siracusa or off the berth. This appears to be dependent on what berth movements there are.

Anchorage is close off the berth or in Siracusa Bay. Vessel is charged for anchorage whether used or not.

There are no known restrictions at the berth.

Stores appear to be a considerable problem, due to Customs Regulations, so cancelled our requirements. Laundry was very expensive.

Shore leave is by launch from ship. No walking along jetty is allowed. Passes are supplied by Agents.

Master or his deputy *must* visit Harbour Master's Office to sight and sign for having seen Italian Notices to Mariners.

SHIPMASTER'S REPORT: October 1987 (Updated February 1988).

Documents:

6 copies Crew List.
2 copies Crew Declaration.
2 copies Manifest.
1 copy Health Declaration.
1 copy Arms and Ammunition List.
6 copies Cargo Manifest.
All Passports.

The port is a naval port and tends to be very strict with documentation. All the certificates are to be sited by the Harbour Master and a deck officer before they are taken ashore to the Harbour Master's Office. Shore passes are issued.

Charts: B.A. Charts No. 966 and 1941.

Approaches: Mount Etna is often seen visually at about 60 miles. It is behind Catania about 20 miles to the North of Augusta. The Catania area often shows up on the radar at over 70 miles. Cape Spartivento is a good radar target at 80 miles.

In the vicinity of Augusta, Siracusa and Cape Morro Di Porco have proved to be good radar targets at over 40 miles.

There is a Racon (G) on the North beacon (green) at the main breakwater entrance.

Pilotage: Pilotage is available throughout 24 hours. Daytime movements only are carried out at certain berths. If vessel has to await berthing she can always anchor inside the breakwater. The pilotage service is good and efficient. Many traffic movements take place in the port.

The Pilot boards from a fast black hulled 'Speedcutter'. If the weather is good he will board 0.5 miles outside the breakwater and if the weather is poor he will board inside the breakwater heads. VHF Channel 12 is used for communicating with the pilots. He may also be contacted through the Port Authority telex (Telex No. 0043912336 COMPAU I). The Pilot requires an EEC Tanker Check List. Overtime rates charged between 1900 hrs. and 0800 hrs.

Anchorages: The anchorages off Augusta are generally poor, especially in bad weather as the bottom shelves rapidly and the holding ground is poor. The best anchorage for large vessels is about 100° T at a distance of one mile from the Southern Breakwater entrance (anchorage is prohibited within 1 mile of the entrance). Small vessels anchor in the northern area near Porto Xifonio. A favoured anchorage area for large vessels away from Augusta is at Bahia Dis Panagia which is about 4 miles South of Augusta. The alternative area is in the Bay of Simeto which is about 6.5 miles South of Catania. This Bay is open and the holding ground is quite good, thereby allowing vessels to drag safely. In February 1988 the coastguard moved us away and told us that only Catania or Augusta could be used for waiting.

Vessels nominated to berth or for services (bunkering, stores, etc.) anchor inside the breakwater and under Pilot's guidance. Small vessels use Waiting Area "A". Vessels can drag in strong winds so a second anchor and engines to be kept in readiness.

Health: Vessels are to request "Free Pratique" from Sanimare Augusta, Telex No. 0043 970817 AUG RT, 24 hours before arrival or earlier if arriving from a nearby port. The vessel is to answer standard World Health Declaration questions. The agent will confirm Free Pratique before the Pilot boards. Free Pratique not necessary if from EEC country.

Tugs: Many tugs available. Ship's lines are used.

For Tankers, the following applies:

GRT	500 – 2,000	inward 1 tug	outward None
	2,000 – 5,000	inward 1 tug	outward 1 tug
	5,000 – 12,000	inward 2 tugs	outward 1 tug
	over 12,000	inward 2 tugs	outward 2 tugs

For Dry Cargo vessels under 5,000 G.R.T. no tugs required inward or outward.

If over 5,000 G.R.T. the table above applies.

Berthing: The port is mainly for oil products and gases. There is one berth for fertilisers near the Southern Breakwater. All berths in the port are numbered.

For gas products Pontile Montecantini, just outside Augusta South Breakwater, is used and it handles all gas products.

Pontile Super Petrolier (Berth No. 18 – inner North side) which is just South of the Military Pier also handles gas products. All berths are well fendered. Mooring boats are used.

At Pontile Montecantini which is well exposed in the Winter the moorings consist of 2 head/stern lines, 2 breast lines and 2 springs each end. Vessels berth head out at all piers. At Pontile Montecantini vessels berth on either side, the North side berth is No. 34. The use of the pier gangway is compulsory. It is used by pier personnel only. The offshore anchor is used when berthing.

Cargo: Pontile Montecantini Pier - Priolo: Vessel required to nitrogen purge to less than 0.2% and less than −50°C dewpoint in 13 hours (2,756 cu.m.) at about 1,000 cu.m.p.h. The surveyor was not often in attendance, the ship's staff did all the monitoring.

The propylene Chicksan is 6 in. with a 6 in. vapour return to shore flare.

Shore maximum loading rate 250 t.p.h. Temperature in tank −46° C, giving a manifold temperature of −44°C. The shore minimum rate for cooling down is 20 t.p.h. The requested supply rates adhered to quite closely by the terminal. Only a little English was spoken by the jetty staff. There is a shore stop for minimum/maximum.

Pontile Super Petroliere: For LPG mixture, Propane 25%, Butane 75%. Hydraulic Boom/hose arrangement is 6 in. 300 ASA with 2 in. vapour hose attached. Shore reducer supplied, shore labour connect/disconnect hoses. Max. rate 200 t.p.h. Temperature LPG mix −4°C. Density 0.5667 at 15°C. Ship stop only. On presentation of Bill of Lading, watch difference; we were presented with shore/ship difference of 45 tonnes for discharge Tripoli, Libya. Understand this happens from time to time.

Fresh Water: Fresh water is available by barge throughout 24 hours at all berths. Any quantity of water can be supplied at a fast pumping rate using the barge hoses.

General: Boat service is provided by calling on VHF Channel 10, give the vessel's berth number or anchorage position. This is the only way to get ashore as walking down the piers is not permitted.

Shore passes are required.

Bunker barges are operated on VHF Channel 9. They are suitable for attending large tankers but are very awkward when supplying small gas vessels.

There are numerous ship chandlers available at the port, the produce is good and the prices are reasonable.

As this port is a Naval port it is under very strict control of the Military Harbour Master. They monitor gas vessels very closely.

Daily rubbish collection is compulsory.

The nearest airport is at Catania which is about 20 miles to the North.

Customs board after the Agent. Immigration matters now carried out ashore.

SHIPMASTER'S REPORT: August 1991.

Vessel arrived at Santa Panagia Bay and was due to berth at ISAB Berth No. 5 at Priolo.

Vessel used the compulsory pilot for less than 0.5 nautical miles before dropping anchor 1.4 miles East of the ISAB terminal.

The vessel was asked to arrive in a gas-free state to load 59,000 tonnes of Gas Oil.

Cargo inspectors boarded the vessel and declared her fit for loading, after which the tanks were inerted but vessel did not berth immediately due to berth congestion.

Once alongside ISAB Berth No. 5 tanks were again dipped for water.

One loading arm, reduced to 16 in., was connected and loading of Gas Oil started.

An average loading rate of 1,930 cu.m./hr. was achieved, even though vessel was able to receive at up to 5,000 cu.m./hr. The shore line is 6 km. in length and has a diameter of 22 in. Density of the Gas Oil was 0.8590 at 15°C.

ISAB Terminal operates on VHF Channel 9 for ship/shore communications but we were advised that the quickest way of attracting attention was to speak to the terminal staff keeping a watch on the loading arm on the pier. This seemed to be true as even in an emergency there was no response on Channel 9.

Boat service to the shore has to be arranged by the ship. The journey time is about 20 minutes. Boat service is expensive after 1800 hrs. and on holidays. For this reason, provisions are also expensive.

A garbage collection boat calls on every ship daily. This is a compulsory service arranged by the port.

On completion of loading, vessel went to anchorage and waited over 10 hours for documents.

AGENT'S REPORT:

The following is a copy of a telex received from a ship's Agent in February 1980.

From: Seafox – Shipping Agents and Bunker Brokers. Head Office: Via Garibaldi, 3/5. Phones : (0931) 977470-978544. Telex: 970072 BONMAR I. Cable: Seafox Augusta Tlx. 970072. 96011 Augusta, Sicily.

We are acting as Shipping Agents in Augusta-Siracuse-Melilli (ISAB) ports and in this connection we take the liberty to advise you of new ordinance issued by Ports Authority in Augusta and Siracuse Ports in order to be able to inform through your good publication well known over the world.

Port Information:

According to instructions issued by European Economic Community No. 79/116, please be advised that Augusta Port Authority introduced a new Ordinance, to apply immediately, as follows:

Quote:

All Masters of petroleum-gas-chemical tankers, having d.w.t. 1,600 and over, with full or partial cargo or in ballast and not gas-free. Before entering or leaving Italian ports must comply with following regulations:

1. In due time, before entering territorial waters adjacent to the port, cable via Romaradio to their Agents:
   (a) Ship's name and call letters.
   (b) Ship's flag.
   (c) Length and draft.
   (d) Destination port and ETA.
   (e) Quantity and quality on board.
   (f) If ship carrying chemical products in bulk, Master's declaration to be in possession of safety equipment and construction certificate to carry chemical products in bulk, according to IMO Code.
   (g) If ship carrying chemical products in bags or liquid gas in containers, Master's declaration to be in possession of the appropriate certificate, according IMO Code.
2. On Pilot boarding vessel, Master must submit following Check List, duly filled, to the Pilot:

(a) Vessel's details:

1. Ship's name.
2. Flag.
3. Owners.
4. Port of Registry.
5. Year built.
6. Gross tonnage.
7. Length.
8. Classification.
9. Call letters.
10. Kind of propulsion.
11. Agents.
12. Propulsion apparatus-horsepower.
13. Draft forward.
14. Draft aft.
15. Draft amidships.
16. Cargo (according to cargo plan).
17. Quality.
18. Quantity.

(b) Safety Equipment		*Good Working Order*	*Deficiencies*
(i)	Construction and technical equipment	(Yes)	(No)
	Main engine and auxiliaries	"	"
	Main rudder apparatus	"	"
	Auxiliary rudder apparatus	"	"
	Anchor apparatus	"	"
	Fire fighting equipment	"	"
(ii)	Navigation equipment	"	"
	Characteristic of available manoeuvrings	"	"
	First radar apparatus	"	"
	Second radar apparatus	"	"
	Gyro compass	"	"
	Magnetic compass	"	"
	Radio direction-finder	"	"
	Echo-sounder	"	"
	Other electronic equipment to determine vessel's position	"	"
(iii)	Radio equipment	"	"
	Radiotelegraphy apparatus	"	"
	Radio-telephone apparatus	"	"
	VHF apparatus	"	"

(c) Safety Certificates and other documents:		
Safety Construction	(Valid)	(Not valid)
Safety Equipment Certificate	"	"
Safety Radio-Telegraph Certificate	"	"
Safety Radio-Telephone Certificate	"	"
Cargo Certificate	"	"
Registry Certificate	"	"
International Oil Pollution Liability Certificate	Valid From	– Till
Oil Record Book up to date	"	"
Fitness Certificate to carry chemical products in bulk according to IMO Code	"	"
Fitness certificate to carry LPG in bulk, according to IMO Code	"	"

(d) Master and Crew on board

Description of Title and Number – issued certificates of……

Date issued ……………………………………………………

Place issued/country ……………………………………………

Master
Chief Mate
Second Mate
Third Mate
Chief Engineer

First Engineer
Second Engineer
Third Engineer
Radio Officer
Pilot on board

Remaining other crew members, deck and engine

Date ……………………

Master's signature or Master's Representative
(if applicable)

Unquote

Please kindly instruct all Masters to comply accordingly in order to avoid delay in entering the port.

These same regulations apply for Melilli Port (ISAB Terminal) except for first part of information which all Masters have to cable directly to "Compamare Siracusa" via Romaradio in due time before arrival.

AGENT'S REPORT: November 1993.

The following information was supplied to a Master by the ship's Agent:

Quote:

You are kindly requested to take good note of the below listed information, mainly concerning the port services that are compulsory and those which are not.

Compulsory services:

(AA) Towage: Number of tugs to be employed for in-out shiftings is ordered by the Port Authority according to vessel's g.r.t. The towing service commences, and is charged, from the time each tug arrives alongside the vessel and finishes at the time the Master of the vessel notifies to the Master of each tug that assistance is no longer required. Where feasible, the tugs' employment is to be kept within one hour in order to avoid a 50% surcharge that is debited to the vessel, even for exceeding 5 minutes over the first hour of employment.

Tugs' service vouchers must be carefully filled in, reporting for each tug the name, the time of arrival alongside and the time of departure from the vessel.

A great amount is involved, so please check carefully before signing vouchers.

Number of tugs to be employed:

Vessel size		Mooring No. of Tugs	Unmooring No. of Tugs
From 501	To 1,999	1	–
2,000	5,000	1	1
5,001	12,000	2	1
12,001	20,000	2	2
20,001	30,000	3	2
30,001	60,000	4	2
60,001	100,000	5	3
over 100,000		6	3

(BB) Garbage Collection: Upon vessel's arrival, then every 24 hours. Service is charged whether garbage is collected or not.

(CC) Anti-Pollution Fences: Fences are fitted during the vessel's stay alongside the jetty, and are charged lumpsum according to the vessel's gross tonnage.

Non-compulsory services:

(aaa) Watchmen on Board: Charged per person employed per hour of employment and is expensive.

(bbb) Fire Watchmen: This service is not compulsory, provided ship's staff in attendance during load/discharge operations. Service is charged per person employed per time of employment. When vessel chooses to use this service, we suggest to clearly ask for one fireman only.

Please check carefully that service's voucher reporting the number of firemen and the time of employment correctly.

IMPORTANT NOTICE.

Please be advised that installations can accept dirty ballast, provided it does not contain chemicals and/or surface active products. No ballast can be discharged into port/sea waters, except where "SBT", provided such "SBT" arrangements are duly reported on IOPP Certificate.

In any case, deballasting ex "SBT" cannot take place without Harbour Master's permission.

Generally, port services' overtime is effective from 1700 hrs. until 0800 hrs. next day, and overtime surcharge is 50% of the basic tariff. In order to save expenses, please take into account the aforesaid times when ordering services like boating, etc.

Installations very often order the shifting of vessels to piers to take place at 0700 hrs. or 0800 hrs., which means that all port services involved for the said shifting will be charged at overtime rates. Such overtime can be avoided by delaying the vessel's moving by an hour, or less when feasible. The Master is to advise Pilot Station by VHF in advance about vessel's readiness to move.

Do not hesitate to call Agent for any further information you may need, as well as when you are not clear about vouchers submitted to your goodself for signature, bearing in mind that once signed, owners and Agents are obliged to settle the accounts.

Unquote.

Telex/Cable to be sent to "Compamare" by Chemical Tankers and Gas Carriers:

Quote

All chemical tankers and/or gas carriers calling Augusta to load and/or to discharge dangerous cargoes in bulk, to cable/telex 48 hours to "Compamare Augusta", as well as to the Agents as per the herebelow wording:

To Compamare Augusta Telex No. 972336
cc Agents
Vessel's name/flag/call sign/g.r.t./d.w.t./LOA/max. draft/year of built.
ETA Augusta Pilot Station.
Agent's name.
Reasons of call:
(AA) To discharge: Commodity/U.N. number/class/stowage/quantity each tank.
(BB) To load: Commodity/U.N. number/class/stowage stating for each tank quantity to be loaded/last cargo carried/U.N. number/class/whether tanks empty, clean and gas-free or containing residues and/or washing waters to be disposed ashore/or clean ballasted.
Cargo in transit, if any state: Commodity/U.N. Number/class/quantity/stowage.
CLC: Number/expiring date.
Paris Memorandum: Date of issue/outstandings if any.
COF or ICOF: Expiring date.
Class Certificate (hull and machinery): Number/expiring date.
Last port of call: Place/country/sailing date.
Statement:

"All ship's Certificates are in course of validity, stating efficiency load/discharge equipments and vessel's safety services in accordance with Art. 6, Ordinance 11/87. I assure commencement of commercial operations only after Harbour Master's permission and to comply with Port Safety Rules. I also declare that officers on duty to load/discharge operations holding Certificate of Competence as per STCW/78.

Signed the Master (Name).

Unquote.

AGENTS'S REPORT: February 1994.

Berths:

Berth No.	*Operator*	*Draft* ft. in.	*G.R.T* tons	*Length* (m.)	*Side alongside*	*Products handled **
2	Maxcom Augusta	28 06	20,000	180	Stern	C/D
3 South	Enichem Augusta	18 07	3,500	110	Port	C/CH
5 Testata	Enichem Augusta	30 00	15,000	—	Stern	C/CH
5 Bis	Enichem Augusta	21 00	3,500	—	Stern	C/CH
6	Esso Augusta	16 00	2,000	95	Stbd	C/D/A/G
7	Esso Augusta	37 00	10,000	160	Stbd	C/D/A/G
8	Esso Augusta	37 00	20,000	250	Port	C/D/A
9	Esso Augusta	28 00	7,000	143	Stbd	C/D/L/CH
10	Esso Augusta	52 00	50,000	277	Stbd	C/D/L/CR
11	Esso Augusta	54 00	75,000	297	Port	C/D/CR
12	Esso Augusta	28 00	10,000	150	Port	C/D/L
13	Unicem Augusta	23 00	5,000	110	Stbd	CE
14	Unicem Augusta	23 00	4,000	100	Port	CE
18	Praoil Priolo	22 00	5,000	120	Stbd	C/D/CH
19	Praoil Priolo	40 03	25,000	220	Stbd	C/D/CH
20	Praoil Priolo	65 00	130,000	350	Stbd	C/D/CR
21	Praoil Priolo	66 08	220,000	380	Port	C/D/CR
22	Praoil Priolo	42 00	25,000	220	Port	C/D/CH
23	Praoil Priolo	23 00	5,000	120	Port	C/D/CH
25	Praoil Priolo	42 06	45,000	250	Stbd	C/D/CH/G
26	Praoil Priolo	37 06	25,000	205	Port	C/D/CH/G
27	Praoil Priolo	34 00	20,000	200	Stern	CH
29	Enichem Priolo	29 06	15,000	160	Stbd	F
31	Enichem Priolo	31 06	20,000	160	Port	F
32	Enichem Priolo	11 06	1,000	65	Port	G
33	Enichem Priolo	18 01	1,600	95	Stbd	G
34	Enichem Priolo	26 00	5,000	160	Stbd	G
35	Enichem Priolo	27 00	8,000	160	Port	G

* Products:
C = Clean Petroleum Products.
D = Dirty Petroleum Products.
CH = Chemicals.
L = Luboils.
A = Asphalts.
CR = Crude.
G = Gases.
CE = Cement.
F = Fertilisers.

All above berths located in Augusta Inner Roads, except for Piers No. 33/34/35, which are located in Augusta Outer Roads.

Restrictions:

Berth No. 2	: Berthing daylight only.
Berth No. 5T	: Vessels over 5,000 g.r.t. berthing daylight only.
Berth No. 6	: Berthing daylight only.
Berths No. 10/11	: Manifold air draft restriction 17.50 m.
Berths No. 20/21	: Manifold air draft restriction 19.80 m.

Garbage Service: Compulsory. Garbage collected daily by motorboat of authorised company.

Arms and Ammunitions: In case of arms and ammunitions being held on board, prompt notice to be given to Agent prior to vessel's entrance into Italian waters.

AUTHORITY: Capitaneria di Porto, 96011 Augusta. *Tel:* (0931) 978922, 978695, 978616. *Telex:* 972336. *FAX:* (0931) 978009. *Contact:* Captain Pietro Trovato Gangemi, Port Commandant.

AGENT: See "Genoa".

BAGNOLI: 40.48 N. 14.10 E. (See Plan)

DOCUMENTS: An arrival report containing vessel's main particulars and data of certificates has to be filled in by Port Officer upon arrival.
5 Crew Lists.
5 Passenger Lists.
Stores List in duplicate.
International Health Declaration.
Cargo Manifest.

PILOTAGE: Bagnoli Pilot is permanently on watch as from 0600 to 0600 hrs. Usual Pilot position is Lat. 40° 47' 30" N., Long. 14° 08' 10" E. Pilotage is compulsory for vessels over 500 g.r.t. for anchoring or entering the port. Permanent watch is maintained by Pilot Station on VHF Channel 9 and/or 12. Vessel requiring Pilot may also use other international signals, such as flag, morse/sound letter "G". When in port vessels to give Pilot Station 1 hour's notice for any service required. In the event of bad weather (Bagnoli area is mainly exposed to S.W. winds) vessels to shift out of piers or to change anchorage to Baia Roads (sheltered natural bay 3 miles from Bagnoli in a Westerly direction).

ANCHORAGE: Depth of safe anchorages in Bagnoli area and in Baia Roads ranging from 20 m. to 45 m. – sandy bottom. Anchorage is allowed in the line from the lighthouse of Nisida Island to the lighthouse of Capo Miseno.

RESTRICTIONS: Vessels can enter port at any time of day. No restriction for night departures.

MAX. SIZE: See "Berthing".

HEALTH: Free Pratique can be requested via radio cabling to Health Officer of Naples. Cable address: Sanimare, Naples.

RADIO: Naples Radio.

TUGS: Presently no tug available, if required they come from Naples. Time taken approximately 2 hours.

BERTHING: *Italsider Ore/Coal Discharging Pier:* Two berths available. Pier length 357 m. Berth accommodation length 200 m. – max. draft allowed when berthing in Westerly direction is 41 ft. 6 in. – max. draft allowed when berthing in an Easterly direction is 36 ft. with H.T. This pier is equipped with two turntable gantry cranes and conveyor belts. Ore discharging rate: 1,100 t.p.h. Coal discharging rate: 900 t.p.h. All necessary stevedoring services are performed by Italsider with their own personnel. Cranes capacity: 32 tons. Fresh water available.

Italsider Loading Pier: Equipped with 6 turntable cranes and rails – max. draft allowed on both berths is 10.5 m. Fresh water available.

Federconsorzi Discharging Pier: Equipped with a fixed gantry crane and aerial ropeway for discharging of phosphates and pyrites. Discharging rate per shift of 8 hours – 450 tons. Max. draft allowed is 5.40 m. Fresh water available.

Tide Range: Approximately 30 cm.

STEVEDORES: Available. Rate of discharge 1,500/1,700 t.p.h.

FRESH WATER: Available from pier. Rate of delivery 20 t.p.h., or by barge. Vessels at anchor supplied with fresh water by barge from Naples.

FUEL: All types available, always delivered by barge, normally oil companies require 48 hours notice.

CONSULS: At Naples.

REPAIRS: Small repairs undertaken.

GANGWAY/DECK WATCHMEN: Recommended.

OPENING/CLOSING HATCHES: Carried out by crew.

CUSTOMS ALLOWANCES: (For entire duration of stay). Tobacco, 50 cigarettes per crew member. Spirits: 1 bottle (opened) per crew member.

TIME: GMT plus 1 hour Winter. GMT plus 2 hours Summer.

HOLIDAYS: See "Naples".

POLICE/AMBULANCE/FIRE: Police 7602553; Ambulance 7520696, 258044 (Ospedale S. Paolo); Fire 7330210 and 7605353.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Required.

GENERAL: *Launch Hire:* Vessels waiting at anchor for their turn may hire launch for crew shore leave and relevant service performed from 0700 to 2400 hrs.

The Port of Bagnoli is mainly used for the discharge of ores, minerals, coal and for the loading of steel products for account of the Italsider S.p.A., metallurgic industrial group of national interest, operating with its own shore appliances. Manufacturers of chemical products, the Federconsorzi of Naples, operate in the Port of Bagnoli also with their own shore appliances.

AUTHORITY: Capitaneria di Porto di Napoli, Sezione Staccata di Bagnoli, Via Coroglio 10 Bis, Napoli. *Tel:* 7232272. *Cables:* Seziomare Bagnoli. *Contact:* Sandro Musto, Captain of the Port.

BARI: 41.08 N. 16.51 E. (See Plan)

DOCUMENTS: On arrival:

5 Crew Lists.
3 Provision Lists.
3 Lists of Articles in possession each Crew member.
Customs Documents.
Cargo Manifests.
Bills of Lading.
Ship's Papers.
Health Documents.
On departure:
Additional Declaration of Departure.

PILOTAGE: Pilot boards vessels on arrival by motor-boat one mile N.W. of the head of the main breakwater. Pilotage compulsory for vessel over 500 g.r.t. inward or outward, shifting vessels from one point to another in or out of port. The Pilot Office is located at Berth No. 13 (Tel. 080–5211507) and listens on VHF Channels 16 and 12.

Pilot call: Letter "G" of International Code, Pilot attending day and night. For services from 1700 hrs. to sunset, or from sunrise to 0800 hrs. the dues are increased.

ANCHORAGE: Good anchorage in all weathers, but precautions should be taken against winds from North. Rocky bottom covered by mud. Bad holding ground. Strong range in the port when bad weather. Anchorage usually allowed East side of Nuovo Molo Foraneo at a distance of about 1 mile from shore.

Prohibited Anchorage: Anchoring is prohibited near the port entrance and the point of union of the heads of the S. Cataldo Mole and the third arm of the New Foraneo Mole, due to the presence of underwater pipelines.

From 1st June to 30th September, it is prohibited for all vessels to anchor in front of the Port of Bari, included between the land and the line extending 239° for 2.5 miles from the S. Cataldo Lighthouse.

RESTRICTIONS: Max. depth at harbour entrance 40 ft., width 793 ft. Depth of water at berths from 33 ft. to 40 ft.

Night berthing and unberthing is restricted for vessels exceeding 5,000 g.r.t. because of the unavailability of the tugs. Only 1 tug is available for 24 hours a day and a second tug only between 0700 – 2200 hrs. and with 24 hours advance notice.

MAX. SIZE: Maximum permissible length 800 ft. for oil carriers proceeding to oil pier. Max. draft 39 ft.

HEALTH: Masters can request Free Pratique by radio by applying to "Sanimare Bari". Free Pratique automatic for vessels coming direct from other Italian port, and "Q" flag not to be flown on entering. In event of any suspected disease or fever on board, Master should inform Sanimare Bari, not permitting anybody to board the vessel before doctor's inspection.

RADIO: Radio Roma, call sign "IAR." Bari Radio P.T. call sign "IPB" on 2182 kHz. and VHF Channel 16.

VHF: Port Captain's Office on Channel 16 from 0000 hrs. – 2400 hrs.

TUGS: The use of tugs is optional. However, their use can be made temporarily compulsory on the instructions of the Maritime Authority for certain types of vessels, taking account of the type of cargo carried, as well as in the event of unfavourable weather conditions or security requirements in the port and of vessels.

The use of tugs for tankers over 1,600 g.r.t. is compulsory during the operations of arrival and sailing and manoeuvring inside the port. Tankers from 1,600 g.r.t. to 5,000 g.r.t. use 1 tug, and tankers over 5,000 g.r.t. use 2 tugs.

The service is provided by the Societa Rimorchiatori Napoletani with offices on Berth No. 8 (Tel. 080-219342), using tugs of 1,100 h.p. and 800 h.p. The tugs provide service from 0700 hrs. – 1900 hrs., and listen on VHF Channels 6 and 12.

After the hours of service, the tankers, moored at S. Cataldo Mole containing, or which have contained, oil products in Category "A", must alternatively:

(a) Put into action the inertion plants for the tanks in question containing, or which have contained, the oil products, provided such plants are installed.
(b) Use the available assistance service for the discharge operations provided by the tugs.
(c) Leave the berth, and proceed to the outer roads to await the return again to the S. Cataldo Berth, when the tug service recommences.

BERTHING: When specific side alongside berth is required by stevedores, Agents radio Master prior arrival and advise Pilot. Otherwise side alongside at Master's option after conferring with Pilot. Depth at piers 10 ft. – 47 ft. dependent location. No shore fenders alongside quays.

Berth	*Length* (m.)	*Depth* (m.)	*Remarks*
Molo Pizzoli	400	3.0 – 4.50	Fishing vessels
Molo S. Vito			
No. 1	—	3.00	Ferries
No. 2	153	5.00	
No. 3	120	6.00	
No. 4	273	5.00	
Banchina Dogana	250	4.25	Small vessels
Banchina Capitan			
No. 5	70	5.00	Cargo and passenger vessels
No. 6	300	5.00	
No. 7		5.50	
Vecchio Molo Foraneo			
No. 8	380	5.80	Pilots, tugs, cattle holding station
No. 9		5.80	
No. 10		5.48	
Molo Ridosso (Esterno) Avamporto			
No. 11a	280	10.37	Waiting
No. 12a		9.76	
Molo Ridosso (Interno)			
No. 11	280	7.62	Naval vessels, ferries
No. 12		7.92	
Banchina Deposito Franco			
No. 13	300	9.14	Large passenger and cargo vessels, free zone, silos
No. 14		8.53	
Banchina Mezzog			
No. 15	175	9	
Banchina Levante			
No. 16	470	9.15	
No. 17		9.15 – 9.75	
No. 18		9.75	
Nuovo Molo Foraneo			
Nos. 19 – 23	570	7.31	Waiting, laying-up, bunkering, repairs
Nos. 24 – 25	200	7.31	
Nos. 26 – 28	300	8.83	
Nos. 29 – 31	300	13.00	Supertankers
No. 31a	300	14.00	
Molo S. Cataldo			
No. 31 bis	630	10.50	Loading/discharging oil products
No. 32		10.00	
No. 33e		9.50	
No. 33i		6.50	
No. 34		4.30	

BULK HANDLING FACILITIES: Grain discharge by 2 suction pipes a rate of 90 to 100 metric t.p.h. each.

CARGO HANDLING EQUIPMENT:

Electric jib cranes on rails on the Eastern (Levante) Berth:
2 × 6/7 tons capacity.
2 × 6/15/24 tons capacity.
Electric jib cranes on the Deposito Franco Berth:
2 × 3 tons capacity.

Mobile cranes:
1 × 30 tons capacity.
2 × 100 tons capacity.
1 × 150 tons capacity.

Lift trucks:
1 × 42 tons capacity with telescopic spreader for 20 ft., 30 ft. and 40 ft. containers.
1 × 27 tons capacity with spreader for 20 ft. and 40 ft. containers.
1 × 14 tons capacity.
1 × 12 tons capacity.
3 × 6.5 tons capacity.
2 × 4 tons capacity.
2 × 3 tons capacity.

STEVEDORES: Important to give ETA in good time. Normal working hours: Winter time (weekdays), 0800 – 1200 hrs., 1300 – 1700 hrs. Saturdays, 0800 – 1300 hrs. Summer time (weekdays), 0800 – 1200 hrs., 1400 – 1800 hrs. Saturdays 0630–1300 hrs.

Overtime: From 0600 – 0800 hrs. the tariff to be increased 25%; 1200 – 1300 hrs., 50%; 1700 – 2000 hrs., 25%; 2000 – 0600 hrs., 70%. For handling pieces over 1,000 kilos, increase of 50% on the tariff. For unhealthy work, increase of 30% on the tariff.

Sunday. From 2400 – 0800 hrs. the tariff to be increased 100%; 0800 – 1200 hrs., 50%; 1400 – 1800 hrs., 50%; 1200 – 1400 hrs., 100%; 1800 – 2400 hrs., 100%.

MEDICAL: Not necessary for Agents to receive advance notice of required medical attention. Hospital facilities available.

TANKERS: Not allowed to do any degassing of tanks or any kind of repairs to vessel without Harbour Office permission.

Cleaning and degassing of tanks not allowed in port. Inspection of tankers and gas-free certificate can be obtained. Only clean ballast can be discharged in port.

Diameter of load-discharge pipelines at oil berth are:

20 in., 16 in. and 12 in. pipeline for crude oil; 12 in and 18 in. pipeline for fuel oil; 8 in. pipeline for gasoil; 8 in. pipeline for gasoline.

Crude oil discharged to Stanic Refinery from Berths No. 31 and No. 4 (Molo Foraneo) suitable for tankers up to 39 ft. draft.

Fuel and other refined products discharged at Berth Nos. 31, 32, 33 and 34.

Deballasting Facilities: There is a shore capacity for 6,500 tons of ballast water. All S. Cataldo Berths are served by a common 12 in. deballast line. On each berth a dirty product arm is used for deballasting line (partially made of concrete), the normal deballasting rate is 250 t.p.h. The maximum pressure being limited to 42 p.s.i.

For this reason it is suggested to arrive at berth with minimum safe manoeuvring ballast quantity.

No slop facilities are available.

DENSITY: Salinity 36%.

FRESH WATER: Available at all berths, except Molo Pizzoli, at a rate of 20 t.p.h. Good drinking water supplied by Ente Acquedotto Pugliese. No barge available to carry water in the harbour and in the roads. Tugs may be used for this purpose.

FUEL: Available, 3 days advance notice required.

CONSULS:

Austria
Belgium
Bolivia
Denmark
Ethiopia
France
Germany
Greece
Liberia
Monaco
Netherlands
Norway
Portugal
Spain
Sweden
Switzerland
Turkey
United Kingdom

REPAIRS: Workshops and shipyards are capable to carry out repairs to hull and engines.

SURVEYORS: 1.There are cargo inspectors available; these can be obtained from S.G.S. Tel: 080/410333.

2. The representative of Lloyd's Register in the port is Lorusso.

DRY DOCKS: No dry docks are available at Bari. Nearest dry docks are at Taranto.

GANGWAY/DECK WATCHMEN: Service of watchmen is recommended, shift of 10 hours.

OPENING/CLOSING HATCHES: Normally carried out by stevedores. Opening or closing of hatches charged for work carried out during usual working hours.

CUSTOMS ALLOWANCES: 50 cigarettes only are given to each crew member out of bond on vessel's arrival. Wine is permited to be held out of bond but no spirits allowance permitted.

REPATRIATION: Many facilities for effecting crew changes and possibilities for arranging any necessary repatriations.

AIRPORT: Airport is located about 10 km. North of city. Served by regular airlines with flights for all countries daily.

TIME: Local time 1 hour ahead of GMT. Alterations to clocks are made from Spring to beginning of Autumn, giving 2 hours advance on GMT.

HOLIDAYS: New Year's Day (1st January); Liberation Day (25th April); Labour Day (1st May); Easter Monday; St. Nicholas, Patron of the Town (10th May); Proclamation Day (2nd June); Assumption B. V. Maria (15th August); All Saints' Day (1st November); Immaculate Conception (8th December); Christmas Day (25th December); Boxing Day (26th December).

Cargo work can be arranged on above days, and the stevedoring tariff increased as follows: From 2400 to 0800 hrs., increase 100%; 0800 to 1200 hrs., 50%; 1400 to 1800 hrs., 50%; 1200 to 1400 hrs., 100%; 1800 to 2400 hrs., 100%.

POLICE/AMBULANCE/FIRE: Police 5210156. Ambulance (First Aid) 5221514. Fire 115.

EMERGENCY CO-ORDINATION CENTRE:

Bari Port Captaincy (Italian Coast Guard) – Tel: 5216860 or VHF Channel 16.

Bari Radio 'P.T.' on VHF (listens throughout 24 hours) on Channel 16.

BANKS: Banca Commerciale Italiana, Via Abate Gimma No. 87, 70100 Bari Tel: 080 – 216680.

Credito Italiano, Via Putignani No. 98, 70100 Bari. Tel: 080-216771.

Banco di Roma, Via Calefati No. 82, 70100 Bari. Tel: 080-235300.

STORING: See "Prelims".

1. Vessels in port can be supplied by lorries.
2. Lorries with stores for vessels at quays, apart from normal Customs requirements, (if necessary), have to be authorised to enter the port.
3. Lorries with trailers can line up on the berths alongside the vessels. The process is subjected to the commercial operations on hand and/or the position of the vessel at the berth.
4. Fork lift trucks are never used for supplying stores to ships in this port.
5. For the supply of provisions there is the company S.p.A. Cianciola – Tel: 080/235260, 235261, 235262. Telex: 810021. Cianci I. P. O. B. 240, 70100 Bari who may be approached for any specific requirement. The same Company also has a large area in the port, as a free zone, for storage of goods.
6. Local unloaders can be employed to help in placing goods in store on board if required and available.

TELEPHONES: No arrangements exist for placing telephone on board.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Shore leave pass is compulsory.

DEVELOPMENTS: Expected draft increases in the near future for berthing tankers up to 80,000 tons.

AUTHORITY: Capitaneria di Porto – Bari, Corso de Tullio 1, 70100 Bari, Italy. *Tel:* 080-5216860. *Telex:* 812289. *Cables:* Compamare Bari. Also VHF Channel 16. *Contact:* Giuseppe Ciulli, Port Captain.

Bari Port Authority, Molo San Vito, Stazione Marittima Passeggeri, Bari, Italy. *Tel:* 080-5235205.

AGENT: See "Genoa".

BRINDISI: 40.39 N. 17.56 E.

DOCUMENTS:

3 Crew Lists.
3 Lists of Passengers Disembarking.
3 Lists of Passengers in Transit.
Manifests of Cargo carried, with specification of port of origin and whether for local discharge or in transit. If stowed on deck or below deck.
List of Articles in possession of each crew member, such as cameras, binoculars, portable radios, cigarettes, tobacco or any kind of cheap-priced goods.

Other Certificates required to be on board:
Certificate of Ship's Tonnage.
Load Line Certificate.
Derat Certificate.
R/T Certificate.
Safety Certificate.
Anchorage Dues Receipt (if previously paid).

PILOTAGE: Compulsory for vessels over 500 g.r.t., tankers and gas carriers. Pilotage available 24 hours.

Vessel approaching port should apply for Pilot by hoisting the "G" flag, if by daytime. By night-time, letter "G" will have to be signalled by Morse, to port semaphore (Signal Station) which is located under shore lighthouse showing white flashes.

Telegraphic address of Pilot Station is "Piloti Porto, Brindisi". Characteristics of pilot boat: gross tonnage, 9.4; power, 65 h.p.; speed, 8 knots.

Area where Pilot boards vessel:

In good weather: 1 mile from harbour entrance.

In bad weather: (a) If vessel is heading for inner harbour and is of small tonnage (up to 3,000 tons) Pilot boat will steer in a direct line, bows pointing towards vessel, up to entrance to "outer" harbour, where Pilot will board vessel. If vessel is of higher tonnage, she will have to take a "crosswise" position so as to form a sheltered area for Pilot, about 1 mile from harbour entrance. *(b)* If vessel (tanker) is bound for outer off-shore terminal (Montedison Installation) for discharge of crude-oil, Pilot boat will endeavour to approach vessel to communicate impossibility of immediate mooring. Anchorage roads, pending possibility for Pilot to board vessel, are 0.8 miles E.N.E. of "Punta Penne" (Capo Gallo).

ANCHORAGES: Besides anchorage point described above, there exists safe anchorages in bay for vessels having draft of 9 m. (29 ft. 6 in.) and in external harbour for vessels of less than 3,000 tons (gross).

RESTRICTIONS: Tankers of over 1,500 tons gross may berth only from sunrise till sunset. Port berths are inaccessible in unfavourable winds. Passenger or cargo vessels no restrictions.

MAX. SIZE: *Inner Harbour:* Draft not to exceed 9.4 m. (30 ft. 10 in). *Outside Main Port area:* For discharging crude oil at offshore terminal, max. draft allowed 11.50 m. (37 ft. 8 in.). For discharging or loading of other refined products of Montedison Installations, depth of berths varies from 4 m. to 9 m. (from 13 ft. 1 in. to 29 ft. 6 in.).

HEALTH: Apply to "Sanimare, Brindisi" by radio, 12 hours before arrival, and not later than 4 hours before arrival, according to provisions of Health Regulations, notifying in message state of health of crew and port of origin of vessel. Procedure not required if vessel entering after calling at another port in same country.

RADIO: Vessel can communicate ETA messages to Agents through Bari Radio (nearest station) or through Rome Radio which can pick up messages from vessels at sea almost in any part of the world.

VHF: Pilots on Channel 12 throughout 24 hours.

Port Authority on Channels 16 and 11, from 0700 hrs. – 1900 hrs.

TUGS: Tug service is generally effected from Punta Riso-Faro Della Pedagne Junction, up to inner harbour. It is customary to use tugs' lines for mooring and unmooring of tankers at terminals outside main port area, in view of the peculiarity of mooring operations and the area where tugs are to operate (subject to surf, choppy seas, winds). Charge for use of tugs' lines is 20% extra on normal towing rates.

STEVEDORES: Always advisable to notify in ETA messages to Agents number of hatches vessel intends working simultaneously to arrange gangs. Normal working hours: From 0700 to 1200 hrs. and 1400 to 1700 hrs. Overtime: Weekdays, 70% increase on normal tariffs. Sundays and holidays: Work performed during normal hours, 50% increase. On overtime, 100% increase.

MEDICAL: Hospital facilities available. For any kind of medical attendance or hospitalisation, if needed, it will be helpful to have port Agents advised by radio in advance.

TANKERS: Crude oil discharged at offshore buoy mooring for vessels up to 37 ft. 8 in. draft.

Other tanker berths at Inner Harbour for refined products, suitable for tankers up to 28 ft. draft.

FRESH WATER: Almost all mooring points alongside wharves are fitted with fresh water distributing hydrants. At off-shore terminals, supply is effected by tugs.

FUEL: Types of fuel available: Bunker "C", viscosity Engler at 50° (Centrigrade), 16/20; specific weight, 0.950/0.960. Gasoil, viscosity Engler at 20° (Centigrade), 1.4; specific weight, 0.830. 48 hours advance notice for any supplies required.

FIRE PRECAUTIONS: Firemen always in attendance during loading/unloading operations by oil carriers.

CONSULS: Vice-Consulate of Denmark, Portugal and Netherlands, all having the same telephone number: 21123. Vice-Consulate of Spain: telephone: 21039.

REPAIRS: Only minor deck and engine repairs can be carried out locally.

GANGWAY/DECK WATCHMEN: Not required.

OPENING/CLOSING HATCHES: Normally carried out by crew.

CERTIFICATES: For vessels over 500 tons effecting international voyages:

(a) Passenger vessels:
  Safety Certificate.
  Radio and Radiophone Certificates (latter if included in vessel's equipment).

(b) Freighters:
  Safety Construction Certificate.
  Safety Equipment Certificate.
  Radio and Radiophone Certificates.

CUSTOMS ALLOWANCES: 50 cigarettes a day for each crew member, if vessel's stay in port exceeds 24 hours. No allowance if stay is shorter than 24 hours. Third of a bottle of spirits only.

REPATRIATION: Adequate facilities exist for effecting crew changes and repatriations as necessary.

AIRPORT: Distance from local airport 5 km. (3 miles). Airport regularly served by Alitalia Airline, ensuring 2 daily flights to Rome and 1 daily flight to other Italian cities, including, among others; Naples, Catania, Palermo, Cagliari, and other destinations via Rome. Direct international flights not scheduled from Brindisi.

TIME: Local time 1 hour ahead of GMT; from 29th March to 26th September, 2 hours ahead of GMT (Summer time).

HOLIDAYS: Officially recognised. Both national and religious holidays include: Sundays; New Year's Day; Epiphany (6th Jan.); St. Joseph's Name Day (19th March); Easter (Easter Monday); Anniversary of Liberation (25th April); Labour Day (1st May); Ascension, Corpus Domini (movable dates); Proclamation of the Italian Republic (2nd June); the Saints Peter and Paul Name Day (29th June); Assumption (15th August); All Saints' Day (1st Nov.); National Unity (4th Nov.); the Virgin Immaculate Conception (8th Dec.); Christmas, Boxing Day.

POLICE/AMBULANCE/FIRE: Police, 25555; Ambulance, 21310; Fire, 21222.

TELEPHONES: No current arrangements existing for placing telephones on board.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Not particularly needed besides regular seaman's books.

DEVELOPMENTS: Under construction: 1 pier in outer harbour, which is scheduled to be 200 m. in length (219 yards) with a depth of 12 m. (39 ft. 4 in.).

Coal unloading wharf of 670 m. length to be built to accommodate 2×150,000 d.w.t. vessels. Unloading will be by 2×1,500 t.p.h. bucket unloaders.

AUTHORITY: Capitaneria di Porto – Brindisi, Via Regina Margherita, No. 1, 72100 Brindisi, Italy. *Tel:* (0831) 21022, 21023. *Telex:* 813395 Compbr I. *FAX:* (0831) 21023. *Cables:* Compamare Brindisi. *Contact:* Giovanni Lombardi, Port Captain.

AGENT: See "Genoa".

CAGLIARI (including Sarroch), Sardinia:
39.05 N. 09.01 E. **(See Plan)**

DOCUMENTS:
6 Crew Lists.
6 Passenger Lists.
2 Provisions Manifests.
2 Manifests of Crew Personal Effects.
Cargo Manifest.
Bills of Lading.
2 Arrival Reports, completed on arrival.
Maritime Declaration of Health, completed on arrival.
Ship's Certificates including Italian Anchorage Dues.
Vaccination Certificates for sighting.

PILOTAGE: Compulsory for vessels over 500 tons. Requested by ship's Agents. Vessels should wait in the roads for Pilot to board. International Code signals used for calling Pilot. Pilot station telephone number: 652929. Pilot boards tankers about 2 miles East of oil terminal.

Sarroch: Compulsory for all tankers. Vessels should wait in roads as follows:

G1 – (for tankers of more than 42 ft. draft) Lat. 39° 05' 00" N., Long. 09° 05' 00" E.
G2 – (for tankers of less than 42 ft. draft) Lat. 39° 04' 27" N., Long. 09° 03' 15" E.
G3 – (for tankers of less than 5,000 g.r.t.) Lat. 39° 05' 48" N., Long. 09° 02' 00" E.

Pilot station telephone number 929006–929057. VHF Channel 16.

ANCHORAGE: All of the Roads are available for anchorage except where prohibited zones indicated on charts.

HEALTH: Free Pratique may be requested by radio to Sanimare Cagliari between 12 to 6 hours prior to arrival advising vessel's name, nationality, last port, number of passengers and crew and state of health on board. Pratique is automatic for vessels coming from ports in E.E.C. countries.

RADIO: Cagliari Radio operating continuously on 2182 kHz, and on 156.8 MHz.

Tankers: 48 hours' radio notice must be given, also advice of readiness on arrival.

Following information to be sent with first ETA message to Saras - Sarroch, Telex: 790169 Saraff I.

1. Quantity of clean and/or dirty ballast.
2. Quantity of slops to be discharged/kept on board.
3. Previous cargo.
4. Condition of cargo tanks i.e. inerted, gas free, etc.
5. Arrival draft.
6. Sailing draft.
7. Distances bow manifold and stern manifold.
8. Manifold size and number of loading arms required.
9. Maximum acceptable loading rate.

MAX. SIZE: Cagliari Port: Max. draft 26 ft. Sarroch, SARAS Terminal, tankers up to 380,000 d.w.t. Max. draft 68 ft. Depth of channel 75 ft.

VHF: *Cagliari:* Harbour Master's Office, Channel 16.
Sarroch: Harbour Master's Office, Channel 16. Pilot station, Channel 9. Mooring station, Channel 6. Boat service station, Channel 8. Loading Master – Saras Terminal, Channel 14.
Also see "Shipmaster's Report".

TUGS: 6 available, of up to 4,500 h.p.
Cagliari: Normally join vessels at the port entrance.
Sarroch: Normally join tankers at anchorage points and assist berthing at Saras Jetties Terminal.

BERTHING: *Cagliari*
Berth No. 1: Length 68.0 m.; draft 14 ft.
Berth No. 2: Length 128.0 m.; draft 24 ft.
Berth No. 3: Length 227.0 m.; draft 21 ft.
Berth No. 4: Length 123.7 m.; draft 18 ft. 03 in.
Berth No. 5: Length 60.3 m.; draft 18 ft. 03 in.
Berth No. 6: Length 116.8 m.; draft 8 ft.
Berth No. 7: Length 92.6 m.; draft 16 ft. 06 in.
Berth No. 8: Length 278.6 m.; draft 23 ft.
Berth No. 9: Length 325.8 m.; draft 24 ft.
Berth No. 10: Length 328.0 m.; draft 26 ft. 06 in.
Berth No. 11: Length 203.2 m.; draft 26 ft. 06 in.
Berth Nos. 2, 3 and 4 reserved daily for passenger ships.

MEDICAL: All facilities available at Cagliari.

TANKERS: *Sarroch Saras Jetties*
P.1: Draft 39 ft. 6 in.
P.2: Draft 36 ft.
P.3: Draft 40 ft.
P.4: Draft 38 ft.
P.5: Draft 36 ft.
P.6: Draft 20 ft.
P.7: Draft 31 ft.
P.8: not yet workable
P.9: Draft 23 ft.
P.10: Draft 20 ft.
Platform Island No. 1 (for crude oil discharging only) draft 68 ft.
Platform Island No. 2 (for crude oil discharging only) draft 57 ft.

Loading Rates:

Berth Nos. 1 – 4	Crude oil	5,000 t.p.h.
	Fuel oil	2,000 t.p.h.
	Gas oil	2,000 t.p.h.
	Gasoline	1,500 t.p.h.
Berth No. 5	Fuel oil	2,000 t.p.h.
	Gas oil	800 t.p.h.
	Gasoline	500 t.p.h.
	LPG	200 t.p.h.

Berth No. 6 For small tankers up to 3,000 d.w.t. Fuel oil, gas oil, kerosene and gasoline at slow pumping rates.

Berth No. 7	LPG	200 t.p.h.
	Fuel oil	1,000 t.p.h.
	Gas oil	800 t.p.h.

Platform island for crude oil only at 10,000 t.p.h.

BALLAST: The discharge of ballast by tankers can be effected at all berths at a pumping rate between 1,000 and 2,500 t.p.h. Reception of ballast ashore is into 3 tanks with total capacity of 20,000 cu.m. and 6 API separator vessels.

DENSITY: 1025.

FRESH WATER: Available by pipeline at all berths. No water barges, although tugs may be able supply small quantity fresh water in emergency only.

At times fresh water is in short supply and may not be available.

Cost of delivery of fresh water by tug is 3,000 lire per tonne.

FUEL: All grades available ex-barge only. Barges supply vessels at anchor and vessels calling for bunkers only.

Vessels calling at Sarroch for bunkers by barge are required to keep Agents closely advised of their ETA and bunker requirements. Messages confirming the vessel's ETA should be sent to Agents 72, 48 and 24 hours before vessel's arrival. Masters should note that Customs Regulations do not permit the return of bunkers to the refinery after the barge is loaded, therefore an accurate figure of bunkers required must be given in the first ETA message to Agents.

Report: August 1992: Bunkers not available.

CONSULS:
Belgium
Denmark
France
Netherlands
Norway
Sweden
United Kingdom

REPAIRS: Minor repairs can be handled at Cagliari. Slipway for vessels up to 400 tons.
CUSTOMS ALLOWANCES: 40 cigarettes and 1 opened bottle wine/spirits per man, usually allowed for consumption on board while vessel in port.
REPATRIATION: No difficulties.
AIRPORT: Elmas Airport situated 12 km. from Cagliari.
TIME: GMT plus 1 hour. Summertime March to September: GMT plus 2 hours.
HOLIDAYS: Not applicable to tankers. New Year's Day (1st January); Epiphany (6th January); St. Joseph (19th March); Liberation Day (25th April); Labour Day (1st May); Easter and Day after Easter; Ascension Day; Corpus Domini; Proclamation Day (2nd June); St. Peter & St. Paul (29th June); Assumption B.V.Maria (15th August); All Saints' Day (1st November); Victory Day (4th November); Immaculate Conception (8th December); Christmas Day (25th December); Boxing Day (26th December).
POLICE/FIRE/AMBULANCE: *Cagliari:* Police Tel: 658956. Fire Tel: 652222. Ambulance Tel: 656979.
Sarroch: Police Tel: 929063. Fire Tel: 652222. Ambulance Tel: 929024.
TELEPHONE: No telephone connection on board.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Shore passes issued by local police.
DEVELOPMENTS: The new industrial port S.W. of Cagliari is still under construction. Both Meridionale and Settentrionale Moles have now been completed.

SHIPMASTER'S REPORT: October 1979 (Updated 1986).
Anchorage Restrictions: The following port regulation in force since April 30th, 1979:
Vessels calling at Sarroch for orders only, may not get permission to anchor at Golfo di Cagliari Anchorage.
Such a vessel must remain in position South of the line Cape Spartivento – Cape Carbonara.
Offence against this regulation will cause the vessel to be fully charged for harbour and light dues in connection with clearing by Immigration, Port Health, Customs and Agents.
VHF: Pilot operates on Channels 16 and 9. Agencies operate on Channel 8. Loading Master Sarroch/Saras Jetties operate on Channel 14. Call sign: "Saras Terminal".

SHIPMASTER'S REPORT: May 1981.
At the oil berths it is usual to have 4 tugs and tugs are paid by the hour, i.e. the use of a tug for 61 minutes costs 2 hours hire.
Moorings are usually 3,2,2, with head and stern lines sent first followed by springs. Require plenty of turns on the bitts for tugs.
Apparently the boatmen will not come out to the vessel if she is anchored outside the designated anchorage areas as shown on the chart unless, of course, the draft prohibits a close approach. It is frequently used for bunkering and crew changes.
To obtain fresh water from the jetty it is necessary to obtain, in duplicate, an official form from the Agent.
According to Pilot the max. size is now 250,000 d.w.t. and draft 23 m.
Harbour Master boards for, usually, at least one inspection and collects EEC Check List. Vessels documents usually taken ashore for perusal by Harbour Master.
Anchorage dues are valid for one month.

AUTHORITY: Capitaneria di Porto di Cagliari, 09100 Cagliari, Italy. *Contact:* Port Commandant.
SARAS Marine Terminal, 09018 Sarroch (CA), Italy. *Tel:* (070) 900031 - 900061. *Telex:* 790350. *Cables:* Saras – Sarroch. *Contact:* Captain D. Grosso, Manager – Marine Service.

CATANIA, Sicily: 37.29 N. 15.06 E. (See Plan)

DOCUMENTS: Arrival report requested by Harbour Authorities. Also see "Augusta".
PILOTAGE: Master can communicate with Pilot on VHF Channel 16. Pilot boards at sight on harbour entry. International Code signals used to call Pilot.
ANCHORAGE: Vessel must remain on roads awaiting Pilot.
RESTRICTIONS: No restrictions on entry at night, except for tankers (either loaded or empty, as per harbour regulation). The tide at Catania is no more than 30 cm. Bar at entrance 30 ft.
MAX. SIZE: No limitation on the length and breadth but only on draft of vessel, provided same can be contained within the size of piers of Catania Harbour. See "Berthing".
HEALTH: The usual Sanitary Pratique as per all Italian ports is requested. Free Pratique obtainable by radio prior arrival sending cable to "Sanimare Catania".
RADIO: The quickest way is to address messages to "Romaradio", better if adding to the telegraphic address the telex number of Agency, so that after very short time from reception at Romaradio the message is in Agent's hands.
It is important that 72 *working* hours notice of ETA be passed to Agent.
TUGS: When Pilots are on board, they can call tugs by small radio-calling station. Very frequently the tug's Company, when seeing a large ship, join vessel at same time as Pilot. Tugs using ship's lines.

BERTHING:

Berth No.		*Length*	*Depth*
1 and 2	Molo Mezzogiorno, Oil berths	361 m.	30 ft. 6 in.
6	Molo Crispi, Silo berth	154 m.	30 ft.
7	" "	130 m.	29 ft.
8	" "	140 m.	29 ft.
9	" "	130 m.	20 ft. to 28 ft.
10 and 11	Sporgente Centrale	307 m.	30 ft.
12	Molo Centrale	120 m.	30 ft.
13	Sporgente Centrale	182 m.	30 ft. 6 in.
14	" "	169 m.	29 ft.
17	" "	142 m.	22 ft.
18	" "	142 m.	22 ft.
19	" "	156 m.	18 ft. to 21 ft.
20	" "	170 m.	16 ft. 6 in.
21	" "	111 m.	19 ft. 6 in.
22	" "	60 m.	16 ft. to 20 ft.

STEVEDORES: As per actual Port Labour Regulations, in order to book gangs, stowage details must reach Agency not later than 1100 hrs. of the day before ship's arrival, except for work to be done on Saturdays, Sundays and Mondays when application for gangs must be made on Friday.
The official load/discharge rate for general cargo is 50 tons per hatch per day (8 hours), but real output is higher. Increase for overtime, continuous shifts (0700–1330 hrs.; 1330–2000 hrs.; 2000–0230 hrs.). Night work, Sundays, national holidays, etc.
MEDICAL: Hospital facilities easily available. No advance notice required unless for emergency cases and for cases to be urgently treated during night and holidays.
TANKERS: 2 tanker berths are situated in line at Southern Breakwater, called "Molo Mezzogiorno". There are 3 pipelines, diameters of 8 in., 6 in., 4 in. No discharge facilities for tank washing.
Tankers are not allowed to berth or unberth at night.
SALINITY: Average salinity of water inside the port is the same as the average salinity of Mediterranean.
FRESH WATER: Available at nearly all quays including bunker piers.
FUEL: Bunkers available and supplied only by pipe connection at bunker pier (Molo Mezzogiorno). Max. rate 400 t.p.h.
CONSULS:
Austria
Belgium
Denmark
Finland
France
Germany
Greece
Netherlands
Nicaragua
Norway
Portugal
Spain
Sweden

REPAIRS/DRY DOCK: Small repairs can be carried out at Catania. No dry docks available.
CUSTOMS ALLOWANCES: Tobacco, for foreign ships not in coastal service in Italian Ports: 50 cigarettes per each crew member, for the first 24 hours of the ship's stay in port. Other cigarettes can be obtained for which an application to the Customs House is required. Spirits: 2 or 3 bottles per day (provided minimum 20 crew members).
AIRPORT: Very near important airport with regular international flights.
TIME: GMT plus 1 hour. In Summer time GMT plus 2 hours.
HOLIDAYS: Normally, during all holidays it is possible to work with extra payment.
TELEPHONES: Numbers of emergency services: Police 531905; Emergency Police 113; Fire Brigade 327702; Sanitary Office 532123; Harbour Master 531667, 531134; Pilot 531906; Mooring 531150.
DEVELOPMENTS: Ferry berth under construction. 40 ton multi-purpose container crane to be installed. With spreader it will be able to handle 20 ft., 35 ft. and 40 ft. containers and general cargo up to 45 tons by hook.
AUTHORITY: Capitaneira di Porto, Via Dusmet, Porto di Catania, Italy. *Tel:* 531667, 531134. *Telex:* 912350. *Cables:* Capitaneria di Porto-Catania. *Contact:* Comm. Antonino Petralia.
AGENT: See "Genoa".

CHIOGGIA: 45.14 N. 12.19 E. (See Plan)

PORT LIMITS: Bacino Marittima and Banchina Lombardo Esterno.
DOCUMENTS:
6 Crew Lists (IMO Form).
6 Passenger Lists.
2 Stores Lists.
2 Cargo Manifests.
2 Crew Personal Effects Lists.
PILOTAGE: Compulsory for vessels over 500 g.r.t. ETA at least 24 hours prior to arrival. Pilot will board 1.5 miles E.N.E. of channel entrance. Vessels on arrival may contact Pilots by VHF (Channel 14).
ANCHORAGE: Recommended anchorage 1.5 miles North East of the entrance. All vessels must keep radio watch, specially in Winter time owing to very strong E.N.E. winds.
Anchorage in inner road available, with Harbour Master authorisation.
HEALTH: Clearance on arrival.
VHF: Harbour Master on Channel 16 from 0800 hrs. – 2000 hrs. Venice Radio (PT) on Channel 16, continuously.
TUGS: Available.
BERTHING: For general cargo there are the following berths: Banchina Lombardo Esterno: Length 650 m., max. draft 21 ft. Bacino Marittima, with 3 berths available, total length 480 m., draft from 14 ft. to 16 ft.
Banchina Lombardo Interno: Length 100 m., draft 14 ft. For bulk carriers (grain etc.) there are 2 mooring buoys.
Campo Boe San Felice: For ships LOA 220 m., max. draft 28 ft.
Campo Boe Perognola: For ships LOA 150 m., max. draft 21 ft.
Ro/Ro berth: Bacino Marittima South – max. draft 15 ft.

CRANES: 16 mobile cargo cranes – max. capacity 130 tons. 3 floating elevators for bulk carriers. 1 cargo crane on rails – capacity 5 tons alongside Banchina Lombardo Interno.
STEVEDORES: Working hours normally 0800 – 1200 hrs, 1400 – 1800 hrs.
MEDICAL: Hospital facilities available.
FRESH WATER: Available on the berth by hose connection. For ships on road by tug or barge, is necessary.
FUEL: Available by lighter.
CONSULS:

Argentina
Belgium
Brazil
Denmark
Finland
France
Germany
Greece
Lebanon
Liberia
Netherlands
Norway
Panama
Peru
Portugal
Spain
Sweden
United Kingdom

REPAIRS: Routine maintenance possible.
CUSTOMS ALLOWANCES: Italian Regulations apply.

SHIPMASTER'S REPORT: August 1980.
Vessel discharged yellow corn.

Chioggia is a famous fishing port in the Southern region of the Venice lagoon. In the past few years more and more vessels with grain cargo have been directed to this port because the facilities of Venice, Ravenna, etc., are not sufficient to handle the increasing quantities of imported grain, corn, soyabean meal, etc.

Vessels with an arrival draft deeper than 28 ft. have to anchor outside the breakwater about one mile N.E. of the entrance. The depth there is 12.0 m. – 14.0 m., the bottom is muddy. The lightering operations are done by floating elevator and modern barges. It is understood that the season is good and the sea calm. The daily discharge rate with one elevator is between 3,000 and 4,000 metric tons. The elevator is not self propelled, the barges are handled by a modern pushing tug. From the vessel the barges move alongside to the inner harbour basin named "Bacino della Stazione Marittima" where they are discharged by mobile cranes into lorries.

A shipchandler is available, the quality of fresh provisions is good. The shipchandler also co-operates with "Unitor" gas and oxygen change.

Fresh water is only available by tug at outer roads and in small quantities, tug charges about U.S.$300.00 per hour.

Transportation of crew and small amounts of stores is done by the pilot boat, which charges U.S.$75.00 per trip from 0800 hrs. until 1700 hrs. Monday-Saturday, outside that time 50% more.

The pilot boat listens on Channel 14 VHF during daytime, otherwise only when there is work for the Pilot.

When vessel's draft is not more than 28 ft., shifting into the inner roads is possible, there is a place close S.W. of the castle "Forte S. Felice" with two mooring buoys for the stern and one for the bow, distance between stern buoys and bow buoy is 250 m., the depth is 10.0 m. – 11.0 m.

There is one tug available, further tugs have to come from Venice.

At the inner roads fresh water is available by waterboat from Venice-Marghera, minimum of two days notice required, the quality is good. A crewboat is available and has to be arranged by the Agent, VHF is not available, the charge rate is about 30,000 (thirty thousand) Italian Lira per trip.

The nearest airport is Venice/Marco Polo Airport, taxi charges from Chioggia to Airport between 30,000 and 40,000 Italian Lira.

From the ship's documents only the Certificate of Measurement was required by the authorities, other forms like those required at Venice.

Doctor and hospital with X-ray facility available, giving medical reports in Italian language only.

Repair facilities are not available, have to be ordered from Venice.

AUTHORITY: Capitaneria di Porto – Chioggia, Piazza Santa Croce 1290, 30015 Chioggia, Italy. *Tel:* (041) 400242, 404741, 404761. *Telex:* 411063 Compch I. *Cables:* Compamare Chioggia. *FAX:* (041) 406812. *Contact:* R. Barnabei, Port Commandant.

CIRO MARINA (Pta. Alice): 39.24 N. 17.09 E.

(See Plan)

SHIPMASTER'S REPORT: November 1979.

The vessel was instructed to go to Ciro Marina to load a cargo of salt, at the time the vessel was berthed at Marina de Carrara. We realised that we did not have a chart of Ciro Marina and ordered one from Genoa. After 4 days still no chart was forthcoming, I do not think such a chart exists.

We approached Ciro Marina from the South, as close in as was considered prudent, but no sign of any harbour could be seen at the village of Ciro Marina.

Looking further North towards Pta. Alice (Al-lee-chi) a large hangar type building and loader could be seen, (this coincides with the statement in the Pilot supplement, page 78). We rounded the point and proceeded towards the loader, where dolphins could be seen. (See "Plan").

Torre Vecchia is not so noticeable when approaching from the East. (Mediterranean Pilot Vol. 2, Page 475, lines 18-22).

It was established that a Pilot should have been ordered through Crotone Pilot Station, 20 miles South of Pta. Alice. As the weather was excellent, and ascertaining that there was ample water I decided to berth the vessel, this was accomplished without any difficulty.

It is best to drop the anchor well out, as it is used to haul small ships off the dolphins to load, as the loader cannot traverse right in close. We were told there is usually a buoy moored offshore to take an offshore headline, but this had been washed ashore in the Winter. An offshore dolphin for a similar stern line is in position. (See "Plan").

I was told the loader can load up to 2,000 tonnes per hour, and is fairly manoeuvrable. With the loader placed amidships it was necessary to shift ship twice, to load right forward, and right aft.

No fresh water is available. It might be possible to get a small quantity of stores, although getting them on board would be quite a carry, the loading chute/pipe is about 300 m. long with a narrow catwalk alongside the loading belt, it is not the best way to get stores aboard.

Sailing presents no difficulties, just let go and steam away. The Pilot does not appear.

As this is an open to the sea berth it is dangerous with winds from W.S.W. through North to E.S.E., or any Northerly swell. Vessels of 14,000 tons use this "port" and large quantities of salt are exported.
References:
B.A. Chart 198.
Mediterranean Pilot Volume 2. 9th Edition 1965. Pages 474 and 475, along with supplement No. 7 – 1975.
Position: Gulf of Taranto. Lat. 39° 24.2' N., Long. 17° 08.7' E. (approx.).
Type of Port: Open to the sea.
Pilot: Ordered through Crotone Pilot, VHF Channels 16 and 14.
Radio Station: Crotone Radio is the nearest.
Cargo Loaded: Mineral salt.
Rate of Load: Up to 2,000 tonnes per hour.
Fresh Water: Not available.
Boatmen: Available. They stand by from arrival to departure.

AUTHORITY: Capitaneria di Porto Crotone, Lago Molo, Porto Nuovo, 88074 Crotone, Italy. *Tel:* 0962-20721, 0962-20722. *Telex:* 890083 Compcr I. *Contact:* Manlio Ritiore, Harbour Master.

CIVITAVECCHIA: 42.05 N. 11.47 E. (See Plan)

DOCUMENTS: On arrival:
4 Crew Lists.
4 Lists Passengers in Transit.
4 Lists Passengers Disembarking.
2 Provisions Lists.
2 Lists of Crew Articles, including Tobacco, Cigarettes, Spirits, Radio, etc.
Detailed declaration of all firearms, weapons and ammunition onboard as ship's equipment.
Manifest(s) and Bill(s) of Lading (non-negotiable) covering all cargo on board.

It is recommended that particular care be exercised in giving the exact weight and number of tobacco, cigarettes, spirits, paper for cigarettes, cigars, cigarillos, coffee, sugar, salt, pepper, spices, cocoa and chocolate, etc., on board, as well as bunker quantities and lube oil, thus avoiding fines in case the Customs guards in searching vessel subsequently should find any concealed.
PILOTAGE: Pilots are advised of vessel's arrival by Port Authorities and by Agents. Therefore accurate advance notice of ETA should be addressed by Master to Agents. Pilot usually boards vessel within 1 mile of port. Pilot station in port area. Pilots work on VHF Channel 14.
ANCHORAGES: Any vacant place assigned by Port Authorities, taking into account vessel's draft. If port is congested vessels anchor at roads. Pilot assistance is recommended.
RESTRICTIONS: No restrictions are imposed upon entry. With the exceptions of particular individual cases to be submitted for perusal to Harbour Authorities, vessels may berth and sail at any time, weather permitting. Only 1 tug available between 0000 hrs. – 0500 hrs.
MAX. SIZE: Max. draft 34 ft. 6 in.
HEALTH: Clearance is granted by radio; Master to cable Sanimare Civitavecchia 24 hours prior to vessel's arrival. Quarantine requirements are those prevailing in all other Italian ports.
RADIO: Communications to and from vessels are sent and received from Roma Radio.
TUGS: Tugs wait for vessel at port entrance. Tug assistance is necessary although not compulsory.
BERTHING: Shore fenders keep vessel off the quay.

Berth No.	*Length* (m.)	*Depth* (ft.)
2	184.6	28.2
3	192.5	18
4	90.7	18
5	105.7	18
6	180	18
7	228	25
8	241	34
9	130	24
10	220	28.2
11	218.7	28.2
12	195	28
13	172	
14	184.6	34
15	133	18
16	208	34
18	303	39
19	151.5	34
20	246.6	36
21	144	18

SPECIALISED CARGO HANDLING FACILITIES: Berth No. 8: Grain silo of 35/40,000 tons capacity is available; this berth is equipped with 1 rail-sucker with capacity 400 t.p.h. Ore, coal, fertilisers, sulphur, etc. can be handled at Quay Nos. 2, 7, 9, 10, 11 and 14. Structures for containers not available here, nevertheless small traffic might be practicable. Ro/Ro traffic practicable. No facilities exist for LPG carriers

STEVEDORES: To enable Agent to order gangs it is very important to provide accurate ETA in good time.

Normal working time, Saturday inclusive: From 0600 – 1230 hrs., from 1230 – 1900 hrs. and from 1900 – 0030 hrs. against payment of 50% extra, Saturday 70% extra.

Sunday: Work can be performed at overtime rates plus 53% extra from 0600 – 1230 hrs., and 100% extra from 1230 hrs. – 1900 hrs.

Holidays: Work can be performed at overtime rates plus 150% extra from 0600 – 1230 hrs., from 1230 – 1900 hrs. and from 1900 – 0030 hrs.

MEDICAL: Not necessary to receive advance note of required medical attention. Hospital and clinical surgery available. Master to advise in advance of particular inoculations required.

TANKERS: Max. draft allowed 38 ft. Max. length 220 m. Tankers are not permitted to enter port before sunrise and after sunset. Diameter of discharge lines 8 in. – 14 in.

FRESH WATER: Drinking water and water for boilers is supplied from pier by hoses. Average pumping rate 40 t.p.h. – 100 t.p.h. Fresh water also available by barge, capacity 120 tons.

Shipmaster's Report: April 1980: Fresh water is always in short supply and only limited quantities supplied to vessels.

FUEL: Bunkering can be effected by means of barges and/or tank-lorries at all quays. Grades available: fuel oil and gas oil.

IDENTIFICATION CARDS: Required. Passes issued by local police.

CONSULS: There are no Consulates, but only Consular Agencies or Honorary Representatives for the following countries:

Finland	Tel. 23134	Portugal	Tel. 23048
France	Tel. 23048	Spain	Tel. 24304
Norway	Tel. 25207	Sweden	Tel. 23109

Nearest British Consulate is in Rome.

REPAIRS: Repairs of limited extent and importance may be carried out by 2 local workshops.

GANGWAY/DECK WATCHMEN: Watchmen services recommended.

CERTIFICATES: Requirements are those prevailing in all other Italian ports, e.g. Tonnage Certificate, Safety Equipment, Load Line, Derat Certificate, etc.

CUSTOMS ALLOWANCES: Tobacco. Quantity permitted to each crew member: 50 grams to be smoked within first 48 hours. Wine and/or Spirits. 1 open bottle of spirits.

REPATRIATION: Facilities exist to effect crew changes and to arrange repatriations.

AIRPORT: Distance from airport Leonardo da Vinci (Rome) 70 km.

TIME: 1 hour in advance in relation to GMT. Clock will be advanced 1 hour in Summertime, giving 2 hours advance of GMT.

POLICE/AMBULANCE/FIRE: Police, 23739; Ambulance, 33333; Fire, 23333.

TELEPHONES: Can be connected on board vessels at Quay No. 7, 8, 9 and 10.

HOLIDAYS: All Sundays, 1st and 6th January, 19th March, 25th and 28th April, 1st May, 2nd and 29th June, 15th August, 1st and 4th November, 8th, 25th and 26th December, Easter Monday, Ascension Day, Corpus Domini. Holiday work is subject to the authorisation of port authorities.

GARBAGE DISPOSAL: Service available through La Marittima SRL, Via Trieste 37, Civitavecchia. Tel: 0766-25986.

WASTE OIL DISPOSAL: Service available through Societa Combustibili Civitavecchia SRL, Viale Guido Baccelli 202, Civitavecchia. Tel: 0766-21938.

SEAMAN'S CLUBS: Lega Navale Italiana, V. Thaon de Revel 3. Tel: 0766-20374.

Centro Sportivo Nautico, "La Mattonara", V. Aurelia. Tel: 0766-29289.

CURRENCY: Italian Lira (ITL.).

DEVELOPMENTS: Breakwater under construction.

AUTHORITY: Capitaneria di Porto di Civitavecchia, 00053 Civitavecchia, Italy. *Tel:* 0766-35993. *Telex:* 611011. *FAX:* 0766-501717. *Cables:* Compamare Civitavecchia. *Contact:* Technical Department or Harbour Master.

AGENT: See "Genoa".

FIUMICINO: 41.46 N. 12.13 E. (See Plan)

DOCUMENTS:

Before entering territorial waters in the vicinity of the port, tankers' Masters must, directly or by ship's Agent advise authority of the following:

Ship's name and call sign;
Length and draft;
Destination and ETA;
General nature and quantity of cargo.

Documents required:

3 copies Crew List.
Stores Manifest.
List of Personal Effects.
Manifest of Cargo.

PILOTAGE: Vessel should await Pilot about 1.0 miles off the tanker loading platforms which are situated in the following positions:

Platform R1: Lat. 41° 45' 07" N., Long. 12° 09' 20" E.
Platform R2: Lat. 41° 44' 36" N., Long. 12° 10' 07" E.

ANCHORAGE: Vessels waiting to berth should anchor to the South of Platform R2, not less than 1 mile from the platform and not less than 3 miles from the coast. The anchorage is not recommended during strong South or South-westerly winds, and in unfavourable weather conditions it is advisable for vessels to remain underway.

It is forbidden to use anchors in the near vicinity of the tanker berths, due to the presence of underwater pipelines. When approaching the moorings, anchors must be firmly secured in the hawse.

RESTRICTIONS: Pilotage and mooring is not carried out during hours of darkness. Unmooring possible day and night.

MAX. SIZE: R1 platform: 150,000–290,000 d.w.tonnes, 200,000 displacement tonnes, draft 50 ft.

R2 platform: 150,000 d.w.tonnes, 130,000 displacement tonnes, draft 45 ft.

HEALTH: Vessel will advise "Sanimare Roma Fiumicino" via Civilta' Romana, 8-Roma, 12 – 24 hours before arrival.

RADIO: Advise Refinery of vessel's ETA 72 hours before arrival via Roma Radio. Confirm ETA 24 hours before arrival.

Vessels should also communicate draft, cargo temperature, lifting power of derrick, and vessels loading should also advise quantity of ballast on board.

During cargo operations, the tanker will communicate by radio-telephone with the pumping station and the refinery.

VHF: Pilot station on VHF Channel 16. Listens during daylight hours only. Port Authority available 24 hours on VHF Channel 16.

TUGS: 1 × 2,700 h.p. tug. Tug required by crude oil tankers and product tankers to pull aft during all cargo operation.

MEDICAL: Local doctor and hospitals available in Rome.

TANKERS: 2 offshore mooring platforms, R1 and R2, connected to sea-lines of 16 in. (2) with manifold connections of 16 in. at Platform R1 and 12 in. at Platform R2. Loading rates 800 to 1,000 cu.m. per hour. Max. rate of discharge 5,500 cu.m.p.h. for crude and 1,000 cu.m.p.h. for products.

Platform R1 for crude oil tankers.

Platform R2 for product tankers and small crude oil tankers of not less than 10,000 d.w.t.

Mooring: Vessel to have ready on arrival: port derrick rigged for hose handling; boat-rope, pilot ladder and combination ladder, heaving lines and lifebuoys on both sides; and chain stopper.

Vessel is moored by the bow 50 m. distant from the mooring platform.

Hoses: Connecting and disconnecting hoses performed by refinery personnel, vessel to supply winchman and man the derrick. Derrick capacity to be at least 3 tons for ships loading and discharging products and 8 tons for crude oil tankers. Each platform is equipped with 2 floating hoses, about 200 m. long, which drift fully extended when berth is not occupied.

BALLAST: Raffineria di Roma can accept dirty ballast or tank washings up to a maximum of 13,000 tons. Recommended advise before arrival the quantity of ballast to be discharged. Ballast should be reduced to a safe minimum to save time at the mooring berth.

SALINITY: 25-28 grams per litre.

FRESH WATER: Supply by barge 100 tons per trip.

FUEL: Bunkers not available, only lube oil in drums can be supplied.

CONSULS: All Consulates and Embassies in Rome.

REPAIRS: Small repairs can be effected but no dry dock.

CUSTOMS ALLOWANCES: 40 cigarettes per day for 3 days for each Crew member.

AIRPORT: International airport "Leonardo da Vinci" at Fiumicino.

TIME: GMT plus 1 hour. From March 29th to September 26th, GMT plus 2 hours.

GARBAGE DISPOSAL: Contact Fiumicino Harbour Service S.R.L., Torre Clementina 159, 00054 Fiumicino. Tel: (06) 6505804.

WASTE OIL DISPOSAL: No service available.

SEAMAN'S CLUBS: None.

REGULATIONS: Raffineria di Roma will hold vessel responsible for consequences of any pollution caused by oil leaking or discharged from the ship. Strictest precautions to be observed.

Engine to be kept ready to leave the berth in the shortest possible time.

Propeller movements are forbidden while vessel in berth, due to presence of floating pipelines.

WINDS: In the Fiumicino Roads the strongest winds come from S.W., but all winds coming from S.E. to N.W. can cause storms that can be dangerous both for moored ships and anchored ships.

Northern winds, being partially weakened by the coast, are dangerous only when exceptionally strong.

Usually storms begin with S.E. winds, which then turn South-westerly reaching their maximum force; then they usually turn Northerly or North-westerly, finally weakening; this cycle can last from 3 days up to more than a week. However the above cycle does not always develop in this way, since the peculiar characteristic of this zone is the rapidity by which wind can change both in force and direction, as well as the sea possibility of becoming rough in a very short time. The stream almost always goes from S.E. towards N.W. at the speed of 0.5 to 1 knot. Owing to the Tiber's mouth, the stream can exceptionally increase in intensity, but due to the distance between terminals and shore, it has never up to now increased in intensity to such a point as to be dangerous for mooring and anchoring ships. Tides are practically negligible; in fact the maximum difference between high and low tide is about 0.40 m.

GENERAL: A refinery representative will remain on the vessel to supervise cargo inspection, loading/unloading and surveillance. He is to be provided with accommodation and meals.

A Raffineria di Roma S.p.A. representative will, upon boarding the vessel, require a letter, stating:

(a) the minimum discharge rate of crude oil, products or ballast or the maximum loading rate;
(b) the maximum back pressure to be maintained at ship's manifold;
(c) amount of cargo requested for loading vessel.

SHIPMASTER'S REPORT: January 1993.

When moored, and loading, unloading or ballasting operations are underway, a tug is in attendance, and keeps a stern towing line constantly taut from about 100 m. away.

AUTHORITY: Compamare Roma, Viale Traiano 37, 00054 Fiumicino, Italy. *Tel:* (06) 6581911, 6581933. *Telex:* (06) 626847. *Cables:* Compamare Roma. *FAX:* (06) 6581933, 6581911. *Contact:* Captain Giorgio Falcone, Comandante.

Operator: Raffinoria di Roma SPA, Via di Malagrotta 226, 00050 Pantano di Grano, Italy. *Tel:* (06) 655981. *Telex:* 61645 Romaraff I.

GAETA: 41.13 N. 13.35 E. (See Plan)

PORT LIMITS: Although not reported on nautical charts, port limits may be considered as the seaward boundaries of the compulsory pilotage area.

DOCUMENTS:

6 copies Crew List.
6 copies Passenger List.
6 copies Cargo Manifest.
3 copies Provisions Manifest (Stores List).
3 copies List of Crew Personal Effects.
2 copies Arrival Report (on form submitted by Agents).
2 copies Maritime Health Declaration.
Vaccination Certificates for sighting.
Ship's Certificates including Italian Authority dues.

PILOTAGE: Compulsory for entering Roads, docking and undocking. Seaward boundaries of compulsory pilotage area within 2 miles from Punta Stendardo, up to a line joining Punta Stendardo with Torre Scauri (line bearing about 65° from Punta Stendardo). Pilots meet vessel about 2 miles from Punta Stendardo and can be contacted by VHF (calling Channel 16, working Channel 12) 1 hour before vessel's arrival.

Advance notice to Pilots given by vessel's Agent.

ANCHORAGES: Safe anchorage can be found outside the compulsory pilotage area or, according to Pilot's instructions, inside above said area.

RESTRICTIONS: No restrictions outside the compulsory pilotage area. Inside above area vessels to keep clear from prohibited anchorage areas, sea berth facilities and mooring buoys, mooring buoys for military vessels, oil jetty facilities and mussel beds.

Also see "Berthing".

MAX. SIZE: Inside compulsory pilotage area, max. permissible length, breadth, draft, within values of 200,000 d.w.t. class VLCC.

Also see "Berthing".

HEALTH: Pratique automatic for vessels coming from ports in E.E.C. countries.

Otherwise Free Pratique granted by local Health Officer who boards ships on arrival together with Harbour Officers, between 0700 hrs. and sunset. In order to facilitate boarding by officers at anchorage or berths, it is requested that vessels have a convenient accommodation ladder/gangway ready.

RADIO: 72, 48 and 24 hours' definite notice to Agent through Roma Radio (IAR).

VHF: Port Authority, Pilots, Tugs, Oil Sea Berth, Oil Jetty and Agency Offices equipped with VHF; calling Channel 16.

TUGS: Tugs standing just inside Punta Stendardo, being called for service by the boarding Pilot. Ship's lines used.

Tug-boat assistance compulsory, for vessel over 1,600 g.r.t., for docking and undocking; stand-by tug compulsory, for vessel loading or discharging at oil jetty (but not at oil sea berth), from connection to disconnection of cargo hoses.

BERTHING: Oil sea berth for VLCCs discharging crude oil, oil jetty for tankers discharging/loading crude oil and oil products, dry cargo main quay "Caboto", dry cargo pier "Genepesca". Docking/undocking normally performed in daytime only with possible exceptions.

VLCC Sea Berth: Owned by Messrs. S.I.O.G. (Societa' Italiana Oleodotti Gaeta) for class VLCC 200,000 d.w.t. discharging crude oil. Restrictions for vessels within above d.w.t. class not yet officially issued. Max. values of d.w.t., length, draft of vessels already called:

- Max. d.w.t.: 260,000 (VLCC Athene)
- Max. length: 349 m. (VLCC Agip Lazio)
- Max. draft: 20.30 m. (VLCC Agip Lazio)

One or 2 extra tugs (in addition to the 3 existing in the Port of Gaeta) may be needed for berthing larger size vessels at the sea berth, said extra tugs to come from Naples with adequate advance notice.

Terminal A.G.I.P.: Owned by A.G.I.P. (Deposito Costiero di Gaeta) for tankers discharging/loading crude oil and oil products.

Restrictions:

Maximum permissible draft	48 ft.
Maximum permissible distance between cargo manifolds and vessel's stern	450 ft.
Maximum permissible height of above vessel's cargo manifold from sea level	49 ft.

Tankers up to 60,000 d.w.t. normally berth and operate at A.G.I.P. Jetty; tankers over 60,000 d.w.t. and up to 90,000 d.w.t. may be berthed at Oil Jetty or at Sea Berth according A.G.I.P. advice; tankers over 90,000 d.w.t. will find berth at Sea Berth.

Terminal A.G.I.P. is a finger jetty with 3 berths: North Berth with restrictions as above; South Berth for vessels up to 39 ft. draft; stern berth for small coastwise vessels.

North and South Berths equipped with 4 articulated 8 in. steel pipe connections.

Dry Cargo Quay "Caboto": 106 m. long quay with max. official draft limitation of 20 ft.; vessels up to 130 m. length, drafts up to 20 ft. fwd and 22 ft. aft, are normally accommodated.

Dry Cargo Pier "Genepesca": 50 m. long pier with 1 berth each side for vessels up to 15 ft. draft.

New Dry Cargo Quay "Salvo D'Acquisto": Length 250 m., width 80.0 m., dredged depth 8.0 m.

Dry Cargo Handling: Cargo normally handled – general cargo, clay, kaolin, fertilisers, animal-feed, frozen commodities, clinker, cement, steel rounds, steel coils, aluminium ingots, etc.

CRANES: 8 mobile dock cranes available, having max. lifting capacity 30 tons – 70 tons.

STEVEDORES: Compagnia Lavoratori Portuali 'G. Caboto'. Gangs ordered by Agents dealing with cargo. Working hours: 0800 hrs. – 1200 hrs. and 1300 hrs. – 1700 hrs.

MEDICAL: Physician, Dentist, Eye and other Specialists available. Hospital and Nursing Home in Formia (7 km. from Gaeta); new Gaeta Hospital operative. Inoculation service available. Vaccination Certificates issued. Extension of Derat Certificates granted.

TANKERS: See "Berthing".

BALLAST: At all berths only clean ballast can be pumped out. G.I.P. Oil Jetty equipped with system for discharging ballast ashore through 8 in. connections and a 1600 m. long 10 in. pipeline at a rate of about 400 – 450 t.p.h.

FRESH WATER: Of excellent quality supplied to ships at all berths but not at sea berth. At sea berth or at road, fresh water can be supplied by tug-boat but expensive.

FUEL: Supplies of Bunker "C" and Gasoil can be arranged ex-installation at A.G.I.P. Oil Jetty; a minimum quantity of 200 tons is required for fuel and 100 tons for Gasoil. At dry cargo berths bunkers can only be arranged by road tanker. Bunkers not available for vessels accommodated at sea berth.

REPAIRS: Minor steel and machinery repairs currently performed by local machine shops; major repairs may be effected by personnel and equipment from Naples.

DRY DOCKS: 2 dry docks for vessels up to about 70 m. length.

SURVEYORS: Lloyd's, A.B.S. and other Classification Societies' Surveyors obtainable from Naples.

CUSTOMS ALLOWANCES: 40 cigarettes and 1 opened wine/spirit bottle per man.

REPATRIATION: Facilities available for effecting crew changes and arranging repatriation.

AIRPORT: Nearest airports Naples (96 km.) and Rome (International airport 135 km.).

TIME: GMT plus 1 hour September to March; GMT plus 2 hours March to September.

POLICE/AMBULANCE/FIRE: Police station telephone numbers: 113 (emergency); 460031; 460474. Ambulances telephone numbers: 24361; 24461. Fire department telephone number: 460270; 460931.

EMERGENCY CO-ORDINATION CENTRE: Contact Harbour Master's Office.

TELEPHONES: Arrangements for placing telephone aboard vessels not available.

STORING: At dry cargo berths vessels may be stored by truck. At oil jetty or sea berth by motor launch or barge.

IDENTIFICATION CARDS: Shore passes issued by local police.

GARBAGE DISPOSAL: Available.

DEVELOPMENTS: New commercial port and tourist port to be constructed.

AUTHORITY: Capitaneria di Porto – Gaeta, Piazzale Cabato, 04024 - Gaeta. *Tel:* (0771) 460100, 460088. *Contact:* Mario Magliulo, Port Commandant.

GALLIPOLI: 40.04 N. 17.58 E. (See Plan)

PORT LIMITS: 500 m. from the red and green entrance lights to the port.

DOCUMENTS: Crew List, ship's documents and Customs documents.

PILOTAGE: Pilot and mooring boat service compulsory for vessels over 500 g.r.t.

To contact the Pilot (Mr. Salvatore Di Santis) Tel: (833) 201241, 232221.

ANCHORAGES: In North and South Bay. Contact Gallipoli Harbour Master on VHF Channel 16 before anchoring.

RESTRICTIONS: Call Harbour Master before entering harbour.

MAX. SIZE: Max. draft 10.5 m.

HEALTH: Cable "Sanimare Taranto" 24 hours prior to arrival to obtain Free Pratique.

RADIO: No local radio station.

Merchant vessels are to advise Harbour Master of ETA 24 hours prior to arrival.

VHF: Harbour Master on Channel 16, working on Channel 11.

TUGS: Not available locally. If required, tugs come from Taranto.

BERTHING:

Name	*Length* (m.)	*Depth* (m.)
Molo Sottoflutto	110	6.5
Banchina di Riva	145	4.5
Banchina Ferrovia	175	4.5
Molo Foraneo	357	7.0 – 11.0
Molo Tramontana	169	12.0

CRANES: One mobile crane available.

BULK CARGO FACILITIES: Two hoppers for bulk cargo.

STEVEDORES: Compagnia Portuale Co-op "F. Petrelli". Tel/Fax: (833) 266163.

MEDICAL: Gallipoli Hospital is 1 km. from harbour. Tel: (833) 261191.

TANKERS: No facilities for oil tankers.

Facilities for wine tankers to load.

DENSITY: 1026.

FRESH WATER: Available at berths.

FUEL: Available by road tanker from Nuova Anpa Ltd. Tel: (833) 261356.

CONSULS: None locally.

REPAIRS: Small/medium size repairs (hull, engine, electrical, electronic equipment).

SURVEYORS: RINA in Taranto. Tel: (99) 4533123.

GANGWAY/DECK WATCHMEN: Not available.

REPATRIATION: Possible.

AIRPORT: Brindisi (75 km.) served by national and international airlines.

TIME: GMT plus 1 hour. GMT plus 2 hours in Summer.

POLICE/AMBULANCE/FIRE: Police, Tel: 266113. Ambulance Tel: 261191. Fire, Tel: 202222, or call Harbour Master on VHF.

EMERGENCY CO-ORDINATION CENTRE: Call Harbour Master (See "Authority").
TELEPHONES: Available on pier. Telephone line available on request.
SERVICES: Compass adjusting, radio and radar repairs, supply of Italian charts and publications, Notice to Mariners, safety equipment, extension of certificates.
BANKS: Major Italian banks in Gallipoli.
STORING: See "Prelims".
(1) Vessels can be stored by truck.
(2) Storing by barge not available.
(3) Trucks can proceed alongside the berth.
(4) Forklift trucks can be used.
(5) Advise Customs before storing.
(6) –
SHIP SUPPLY SERVICE: Available. Contact De Luca Maritime Agency. Fax: (833) 263840. Tel: (833) 266108, 283841. Telex: 860147.
SHORE LEAVE: Permitted.
IDENTIFICATION CARDS: Frontier Police exchange Passports for shore passes when vessel arrives in port. Seaman's Book should also be carried.
GARBAGE DISPOSAL: Not available.
WASTE OIL DISPOSAL: No slop facilities.
SEAMAN'S CLUBS: Italian Naval League (Sailors Club).
GENERAL: Floating skimmer available to combat oil spills.
AUTHORITY: Capitaneria di Porto di Gallipoli, Lungomare Marconi 1, 73014 Gallipoli, Italy. *Tel:* (833) 266862. *Telex:* 813699. *FAX:* (833) 264023. *Contact:* Harbour Master.

GELA: 37.04 N. 14.15 E.

DOCUMENTS:
For Maritime Authority:
Arrival Report.
Crew List.
Ship's Certificates, for sighting.
For Port Health:
Maritime Declaration of Health (1 copy).
Vaccination Certificates, for sighting.
For Customs:
List of supplies, deck and engine stores.
Cargo Manifest and Bills of Lading.
For Commissariat of Public Safety:
Passenger List (2 copies).
Crew List (1 copy).
Shore Passes for all Passengers and Crew.
PILOTAGE: Pilotage is compulsory for vessels of 500 g.r.t. and over. The Gela Pilots' Corporation, based at Ionio Street No. 2. Tel: 0933/917051, has VHF equipment (Channel 16 for calling-up; Channel 12 for working).

Requests for pilotage must be made two hours prior to ETA, and in office hours (0600hrs to 2000 hrs.).

The Corporation has 2 service vessels with a black hull and with the letter "P" painted in white on both sides. To call the Pilot, the signals laid down in the international signalling code must be employed.

The pilotage service is rendered up to 1 mile from the Port Island.

Vessels awaiting the Pilot must anchor 1 mile to the West of the breakwater on a bearing of 250° from the green light on the breakwater or 1 mile to the East of the same breakwater on a bearing of 160° from the red light on the breakwater.

Berthing may be effected daylight hours. Unberthing can be effected day and night.
ANCHORAGE: See "Pilotage".
RESTRICTIONS: See "Pilotage".
MAX. SIZE: See "Berthing".
HEALTH: Free Pratique is not granted by radio but is given onboard after an accurate inspection.
RADIO: Roma Radio or Augusta Radio. Messages are forwarded quicker through Roma Radio. There is a coastal radio station at Gela.
VHF: The District Maritime Office listens on VHF Channel 16 during office hours (0800 to 2000 hrs.).
TUGS: Tug service is effected by 3 tugs stationed at the Port Island.

Use of tugs is compulsory for tankers and dry cargo vessels (dependent on g.r.t. and n.r.t.).
BERTHING: On the Port Island of Gela, the following berths are available:

6 berths on the breakwater suitable for taking tankers with a gross registered tonnage up to 30,000 tonnes and with a draft of 31 ft. 6 in. All berths are equipped to take bilge water and dirty ballast.

2 berths at the head of the pier suitable for taking vessels with dry cargo loading facilities and up to 18,000 g.r.t. with a draft of 31 ft. 6 in.

The Eastern berth is equipped with two platform trucks for handling bulk cargo, capacity 8 tons.

The Western berth does not have stationary quay equipment; mobile cranes can be made available for handling manufactured products, capacity 2.5 tons.

2 berths on the small head of the pier capable of taking tankers up to 3,000 g.r.t. with a draft of 20 ft.

1 sea berth in the buoyed area capable of taking tankers up to 80,000 g.r.t. with a draft of 42 ft.

Also see "Tankers".
STEVEDORES: Stevedoring carried out by local company. Labour must be ordered by Agent 3 – 12 hours in advance, depending on the shift requested.
MEDICAL: All assistance can be arranged by Agents. Hospital and private clinic available. Vaccinations and inoculations together with relative certificates can be carried out by the Office of Marine Health.
TANKERS: Anic Sea Line Terminal: Situated about 1 mile off the breakwater, a crude oil discharge berth in depth of 42 ft. served by 34 in. sea-line terminating in two 12 in. flexible hoses. No slop discharge facilities. At the breakwater, Berths No. 1 to 6 for loading refined products and LPG can accommodate vessels up to 30,000 g.r.t. with max. draft 31 ft. 6 in. Berths No. 1 and 2 are used for crude oil and heavy products. Berths No. 3 and 4 are used for light products and gasoil. Berths No. 5 and 6 are used for LPG and petrochemical products.

Storage tanks situated up to about 15 m. above sea level.
DENSITY: 1024.
FRESH WATER: Available at all berths against payment. Rate 10 t.p.h. Not available at Sea-Line Terminal.
FUEL: Available to vessels moored at the jetty head by means of road tanker, for small quantities only.
FIRE PRECAUTIONS: General standards of safety applicable to oil ports must be observed.
CONSULS: No local representation.
REPAIRS: Only minor repairs possible (Wood and metal work).
DRY DOCKS: None.
OPENING/CLOSING HATCHES: Optional to employ shore personnel.
CUSTOMS ALLOWANCES: As for other Italian Ports.
CLASSIFICATION SOCIETIES: None.
AIRPORT: No airport at Gela. Nearest airports at Catania and Palermo.
TIME: GMT plus 1 hour. Summertime: GMT plus 2 hours.
HOLIDAYS: 1st January, Easter, Lunedi dell' Angelo (Angel's Monday), April 25th, May 1st, August 15th, November 1st, December 8th, December 25th and 26th.
TELEPHONE NUMBERS: (Prefix 0933).

Maritime Authority	917755	Fire Brigade	911922
Customs	917716	Civil Hospital	930522
Maritime Health	930067	Pilots	917051
Finance Guard	930170	Tugs	911008
Public Safety Authority	930091	Boatmen	918009
Carabinieri	912868	Port Company	917775

TELEPHONES: It is not possible to have telephones placed onboard.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Required.
AUTHORITY: Capitaneria di Porto di Gela, Ufficia Circondariale Maritimo, Gela.

GENOA: 44.24 N. 08.54 E. (See Plan)

DOCUMENTS:
6 Crew Lists.
6 Passenger Lists.
Provisions Manifest.
Manifest of Crew Personal Effects.
3 Cargo Manifests.
Arrival Report, completed on arrival.
Maritime Declaration of Health Certificate, completed on arrival.
Ship's Certificates including Italian Authority Dues.
Vaccination Certificates for sighting.

Tankers: All the ships whose building contract dates 1975 or whose building started after June, 1976, must have a certificate I.O.P.P. (International Oil Pollution Prevention). If not, sailing will not be granted.

All other ships built before must have onboard all anti-pollution equipment and must hold the I.O.P.P. Certificate as from October 2nd, 1984.

Also the ships whose country has not taken part in MARPOL will be inspected by Port Authorities and R.I.N.A. for obtaining sailing permit.
PILOTAGE: Pilots advised of vessel's arrival by port authority and the latter by vessel's Agent. Therefore accurate ETA recommended. Pilotage compulsory for vessels over 500 g.r.t. To contact Pilots and pilot boats, VHF Channel 12. Time of working 24 hours. Pilots board vessel at about 1 mile off port entrance.
ANCHORAGES: Anchorage beyond the meridian passing through the port light at the end of Duca di Galliera Pier is forbidden from 1st June to 15th September.
RESTRICTIONS: Tankers not usually berthed during night.

During discharging at SPM vessel should keep at all times at least 30% of her SDWT (cargo and/or ballast) on board and trim should not exceed 5 m.
MAX. SIZE: Tankers: Up to 46 ft. draft within port. No limit for tankers mooring at Single mooring platform outside the port.

Other vessels: 31 ft. to 40 ft. draft. Also see "Tankers" and "Berthing".
HEALTH: Free Pratique may be requested by radio to "Sanimare, Genoa", between 12 to 6 hours before arrival, advising vessel's name, nationality, last port, number of passengers and crew and state of health on board. Pratique is automatic for vessels coming from all ports where there is no sanitary order.
RADIO: Genoa Radio, call sign ICB. Agent uses same station when cabling to vessels.
TUGS: Tugs join vessel at port entrance. Ship's line used. 42 tugs available, 600 h.p. – 6,000 h.p. Use of tugs optional except for vessels mooring to the platform or the buoy (oil discharge).
BERTHING: Pilot advises Master which side to berth. Shore fenders keep vessel off quay.
Molo Vecchio: 452 m. berthing length; 29–31 ft. permitted draft.
Silos Ponte Parodi: 200 m. berthing length; 36 ft. permitted draft.
Silos S. Limbania: 150 m. berthing length on both sides of the pier; permitted draft: 33 ft. East side, 36 ft. West side.

Ponte dei Mille: East side: 292 m. berthing length; 27–28 ft. permitted draft West side: 265 m. berthing length; 26–27 ft. permitted draft.

Ponte Andrea Doria: East side: 238 m. berthing length; 36 ft. permitted draft. West side: 233 m. berthing length; 36 ft. permitted draft.

Calata Oli Minerali: 474 m. berthing length (bow mooring); 24–36 ft. permitted draft.

Calata Stefano Canzio: 422 m. berthing length (bow mooring); 31–33 ft. permitted draft.

Calata Bettolo: 434 m. berthing length; 30 ft. permitted draft.

Ponte Rubattino: East side: 328 m. berthing length; 34 ft. 6 in. permitted draft. West side: 340 m. berthing length; 27–29 ft. permitted draft.

Ponte S. Giorgio: East side: 390 m. (will soon be in operation); 32 ft. permitted draft (will be 37 ft. 6 in.). West side: 264 m. berthing length; 30 ft. 6 in. permitted draft.

Ponte Ex-Idroscalo: East side: 190 m. berthing length; 29 ft. permitted draft. Head: 190 m. berthing length; 35 ft. permitted draft. West side: 260 m. berthing length; 28–32 ft. permitted draft.

Ponte Ethiopia: East side: 255 m. berthing length; 32–33 ft. permitted draft. Head: 146 m. berthing length; 32 ft. permitted draft. West side: 399 m. berthing length; 29–31 ft. permitted draft.

Ponte Eritrea: East side: 388 m. berthing length; 29–31 ft. permitted draft. Head: 145 m. berthing length; 31 ft. permitted draft. West side: 398 m. berthing length; 29–31 ft. permitted draft.

Banchina Italsider: 500 m. berthing length; 40–44 ft. permitted draft.

Also see "Container Handling Facilities" and "Specialised Cargo Handling Facilities".

CRANES: Over 300 cranes and elevators with lifting capacities ranging from 1 to 45 tons. Over 80 self-propelling cranes with lifting capacities ranging from 10 to 45 tons. 9 floating cranes with lifting capacities of up to 210 tons.

CONTAINER HANDLING FACILITIES: Ponte N. Ronco/Ponte Canepa/Ponte Libia: The Container Terminal covers a total surface of about 250,000 sq.m., of which 230,000 sq.m. are uncovered areas for positioning containers and about 17,000 sq.m. consist of covered areas for deposit of packed goods coming from stripping and intended for stuffing of containers. Quays with a total length of 1,200 m. and a depth of 11 m. – 11.5 m. (36 ft. – 38 ft.) make it possible to berth 5 ships and modern lifting facilities enable to effect loading and unloading operations at a rate of 1 container every 3 minutes. About 5 km. of railway lines are at the disposal of the terminal for the containers marshalling.

The terminal has a stacking capacity of about 10,000 containers and handles 200,000 containers a year for 30 companies.

The Port of Genoa Authority (C.A.P.) runs the Container Terminal and sees to the integral management of the operations for unloading/loading containers.

The Port Authority renders all the services in connection with containers and cargo, and in particular:

Total planning of ship operations, included calculations of stability, draft, torsion, etc.

Checking of the conditions of containers on receiving and on delivering them, on stuffing and on stripping, and issuing of the relevant "interchanges".

Drawing up of damage reports.

Cleaning and disinfestation (when necessary) of containers.

Assistance on stowing, unstowing and on lashing, unlashing cargo inside containers.

Assistance in repairing packing.

Container sealing, labelling and weighing.

Assistance to reefer containers (plugging and unplugging to electric outlets, checking of temperatures, drawing up of "pre-trip inspection certificates").

Terminal Equipment:

6 × 45 ton container gantry cranes.
6 transtainers on rails.
4 transtainers on tyres.
Large fleet of straddle carriers, lift trucks, trailers and fork-lift trucks.

Calata Sanita Container Terminal:

Length of Quay	525 m.
Available Operating Length	440 m.
Depth	14.5 m. (46 ft.)
Total Area	165,000 sq. m.
Stacking Capacity	4,000 TEU.
Annual Handling Capacity	200,000 TEU.
Portainer Cranes	3×45 ton Lifting Capacity
Transtainers	8×40 ton Lifting Capacity

Also see "Developments".

SPECIALISED CARGO HANDLING FACILITIES: See "Berthing" for max. draft.

Ro/Ro Terminals: 25 special berths at Ponte Spinola, Ponte Calvi, Ponte dei Mille, Ponte A. Doria, Calata S. Lazzarino, Ponte Colombo, Ponte Assereto, Calata San Benigno, Calata Bettolo, Calata Bengasi, Calata Tripoli and Calata Derna, 45,000 sq.m. parking areas.

Cotton: 2 warehouses at Molo Vecchio, totalling 42,000 sq.m. in area and a 85,000 bale capacity.

Grain Silos: One at Santa Limbania (65,000 ton storage capacity – 600 t.p.h. unloading capacity). One at Ponte Parodi (45,000 ton storage capacity – 450 t.p.h. unloading capacity).

Maritime Passenger Stations: One at Ponte dei Mille and another one at Ponte Andrea Doria, capable of dealing with 5,000 passengers a day.

Three stations for Ro/Ro passengers at Ponte Calvi, Ponte Colombo and Calata Chiappella.

Animal Fats and Oils Depots: Plants at Ponte Assereto, Calata Sanita and Ponte Etiopia.

144 tanks having a total capacity of up to 53,000 tons.

14 barges with a total capacity of up to 12,000 tons.

Timber Terminal: 2 berths at Ponte ex-Idroscalo, 50,000 sq.m. area yard.

Coffee: A special warehouse is available at Ponte Etiopia, covering 8,800 sq.m. 50,000 sacks can be stored there.

Cellulose Terminals: 2 special berths at Ponte Eritrea and Ponte Somalia. 12,000 sq.m. of covered area.

Export-cargo Clearing Centre: Warehouse of 15,000 sq.m. equipped for the handling of 1,000 tons a day of parcels.

Wool: A special warehouse at Ponte Libia covering a 17,000 sq.m. area. 40,000 bale capacity.

Other Special Plants: Warehouses, depots, and special facilities for wine, salt, skins, bananas, coal.

MEDICAL: All medical assistance available. Advance notice required for urgent cases only.

TANKERS: Berths in Genoa Harbour suitable for tankers up to 750 ft. length, 34 ft. draft. Tankers discharging at Calata Sanita and Calata Olii Minerali are berthed stern to quay.

Multedo Harbour situated West of main harbour has the following jetties:

Multedo Pier – for vessels up to 588 ft. length, 31 ft. draft.
Pier "A" – for vessels up to 580 ft. length, 36 ft. draft.
Pier "B" – for vessels up to 850 ft. length, 43 ft. draft.
Pier "C" – for vessels up to 850 ft. length, 46 ft. draft.
Pier "D" – Presently accommodating tankers up to 46 ft. draft.

Discharge Rate: Maximum discharge rate for crude products:

Pier "A"	2,500/3,500 t.p.h.
Pier "B"	3,500/6,000 t.p.h.
Pier "C"	6,000/8,000 t.p.h.
Pier "D"	6,000/8,000 t.p.h.

Masters may speak direct to Pilots or Harbour Masters at Multedo Oil Berth in order to obtain latest information about berthing, etc., by calling on VHF Channel 6.

All tankers over 40,000 d.w.t. must have inert gas system fitted and working.

Multedo Inner Harbour: Cautionary Advice: The twisted course of the buoyed channel and its limited width decreasing from 700 ft. at the entrance down to 490 ft. abeam the head of Molo Multedo represent a high risk factor. Therefore a good helmsman should steer the ship and prompt engine response is required. In approaching the entrance channel do not attempt to pass between the SPM and the breakwater.

Berthing Procedure: From the Pilot Station, vessels approach the buoyed channel heading 036°(T) in order to pass 800 m. abeam the tower and 200 m. abeam of the new Voltri Breakwater head. Tugs are made fast at the entrance of the buoyed channel. Vessels are swung in the dredged turning area off the pier heads and backed down to the berths. The mooring operation is controlled from the pier by a Marine Terminal Supervisor (Docking Master) who communicates with the Pilot by walkie-talkie.

Calata Canzio: Cautionary Advice: The direction of approach across the West-going current, the limited width and the considerable traffic of vessels demand great caution when entering or leaving the East Entrance.

Single Buoy Mooring: The new mooring facility is located at 1,740 m. from the airport breakwater in a water depth of about 65 m., at distance of 2,250 m. from the platform and just in front of Italsider steel factory; it is linked with shore plants by a submarine pipeline.

The new buoy can accommodate tankers up to 270,000 d.w.t., 350 m. length, 53 m. beam, 20 m. draft. This size was chosen on account of the fact that 80% of vessels coming up to the platform are under 270,000 d.w.t., whereas it can accommodate vessels up to 500,000 d.w.t.

The terminal operations are expected to take the following time:

Mooring: (from tanker arrival to pump beginning) 2 – 3 hours.

Discharge: (tankers up to 270,000 d.w.t. and discharge rate 9,000 cu.m./p.h.) 20 hours.

Unmooring: 30 minutes.

Single Mooring Platform: A steel tower, set up about 2,800 m. off the Genoa Multedo Oil Dock in water 50 m. in depth is provided for the discharge of crude oil from supertankers up to 500,000 d.w.t. Unloading capacity 14,000 cu.m./h.

A 48 in. (120 cm.) submarine pipeline connects the tower with the terminals of all the oil companies operating at the Multedo Oil Dock.

Technical Characteristics: The tower consists of a steel structure having the form of a truncated pyramid set into the sea-bed at a depth of 50 m. and supporting the following parts above the level of the sea:

A lower platform having quarters for the accommodation of personnel or the housing of the various services, the deck being at a height of 6.335 m. a.s.l. This platform is protected by a steel structure mounted on elastic supports, with wooden fenders topped with rubber buffers. The toroidal structure, externally to the rubber buffers, is 34.20 m. in diameter. Under the impact of a vessel, the ring will shift axially for a distance of 2 m. as a result of the system of shock absorbers which support the lower platform.

An upper platform 10.335 m. a.s.l. which carries the rotating arm for berthing tankers and the connection of the floating discharge hoses. The rotating arm reaches a height of 13.882 m. a.s.l. and is fitted with:

(a) a bollard capable of withstanding a horizontal pull of 360 tons;

(b) 2 pipes 24 in. in diameter running to a double universal joint at sea level for connecting the riser of the submarine line to the floating hoses linking tower and tanker; on the rotating part of the tower, the two 24 in. pipes are fitted with cut-off valves and may be connected one to the other by means of a by-pass with a gate valve;

(c) a 5 ton service crane;

(d) a lighted beacon and radar reflector at a height of 23 m.

Floating Hoses for Crude Oil Discharge: The 2× 24 in. pipes with which the riser connects on the tower are coupled by universal joints to 2 floating hoses of 24 in. diameter, with 16 in. terminals, each hose being about 310 m. in length and consisting of 29 sections of 10.67 m., of which the last 3 are of 16 in. diameter for connecting to the ship's manifold. They are fitted with a blank flange, a Camlock rapid-closing joint and a Keystone rapid cut-off valve that will ensure perfect tightness and rapid disconnection in an emergency.

The hose connections are exactly 90° left of the bollard with respect to the mooring vessel.

Signal Lights and Fog Horn: The tower is equipped with a regulation flashing white light 23 m. a.s.l. and a fog horn.

The 2 floating hoses are marked at night by 5 red lights visible at a distance of 2 miles.

Request for Berth: Mooring at the tower is generally reserved for tankers which, owing to their size and draft, are unable to use the Multedo Oil Dock and have applied for permission to the Port of Genoa Authority Oil Dock Management.

Order of Berthing: Arriving tankers that are to work cargo at the tower and are awaiting authorisation to berth thereat must anchor in the roads.

The order of berthing is that of anchorage in the roads and, for vessels authorised to berth, according to the moment when arrival in the roads is signalled to the Port Authority's lookout station at the foot of the main lighthouse in Genoa Harbour.

Should it be impossible to communicate with the lookout station, the time when communication is established with the Genoa-Multedo Oil Dock Operations Office over VHF radio, on the frequency that will be notified as soon as possible (normally Channel 6 – 156.3 MHz), indicating the point of anchorage or the ship's position, will serve for establishing the order of berthing.

Berthing at the tower will be authorised by the Oil Dock Management upon receipt of the Master's written or radioed assurance that the ship is fully efficient and ready to proceed to berth and commence discharge. The Oil Companies that are receivers of cargoes or in anyway interested as users of the Oil Dock should begin discharge within 4 hours of completion of mooring and continue without interruption, day and night.

Saving cases of proven *force majeure,* vessels moored at the tower must restrict berth occupancy to the time strictly needed for discharge operations and for ballasting.

Berthing at Tower: Berthing at the tower will be authorised only weather permitting and must be carried out with the assistance of a Pilot. The Master may ask for the help of tugs, in the number needed to ensure the manoeuvre being executed safely.

Ships should moor using two 15 in. nylon hawsers 65 m. in length, supplied by the tower, each able to withstand a 300 ton pull. The end of each hawser is fitted with a 4.5 m. length of chain of which the last link, devoid of stud, will be made fast to the ship's bow structures for securing mooring ropes.

The section of chain outside the fairleads contains a safety element calculated for a breaking load of 200 tons.

The vessel's mooring structures: anchor plates with aperture for pin, quick release hooks, bollards, steel ropes, warping winches, etc., must be in fully efficient condition and able to withstand the stresses to which they will be subject once the mooring ropes have been made fast to them; they must furthermore allow for the ship being unmoored at any moment by the crew.

As the mooring hawsers can break for accidental or other unpredictable causes before the limit of 200 tons is reached, despite the inspection normally made before the arrival of each ship, all tankers moored at the tower must at all times have their engines ready to move at full speed.

Safety Distance around Tower and Pipe-line: No ship or other craft may station itself, anchor, fish, or carry out underwater or other activities in the area around the tower and pipeline, boundaries of which are:

South: Parallel 44° 23' 30" N.
North: The coast.
West: Meridian 8° 49' 40" E.
East: Meridian 8° 49' 20" E.

Excepting for tankers proceeding to the tower and the craft providing harbour services and assistance, or other craft which have been duly authorised, no vessel or whatsoever craft may sail within a radius of 800 m. of the tower.

Mooring and Warping Ropes: The 2 mooring hawsers will be secured to a bollard which is part of the rotating structure of the tower and about 14 m. a.s.l. When no vessel is at berth, the 2 hawsers float on the surface, supported by red and yellow luminescent sleeves.

The ends of the hawsers are secured to 2 luminescent red buoys which support the lengths of chain that are to be made fast aboard.

Before a tanker arrives, the Port Authority's personnel will make the ends of the chain of each mooring line fast to a big, floating polypropylene rope about 80 m. in length which the vessel must pick up so that she may be slowly warped in to the tower.

Vessel will be moored with the aid of a craft suitable for operations in the open sea.

Watches, Emergency services and Master's Contacts with Personnel Engaged in Discharge: As though at anchor in the roads, vessels moored at the tower must continue to keep sea watches and retain on board the crew required to cope with any emergency manoeuvre, either for vacating the berth or to meet any other serious event involving the safety of the ship, persons and cargo.

Before commencing discharge, Masters should take steps to see that liaison ensuring rapid and reliable communication between the Oil Dock Management's representatives aboard, the Company interested with the discharge and the Master has been arranged.

Safety Measures to keep Vessel Clear of Tower: Vessels at berth must keep sufficiently clear of the outer ring of the tower to ensure that the bow bulb will not collide with the tower structures.

To this end, the Master must adopt all necessary measures and precautions and take such other steps as may be ordered by the Port Authority, including the use of a tug in order to keep the vessel at a safe distance from the tower.

Vessels needing to activate propellers in order to heat turbines must keep revolution to the minimum and run engines astern.

Hose Handling: While vessels are approaching and mooring at the tower, one of the craft will take the floating hoses in tow, arranging and keeping them in a position where they will not hinder manoeuvring.

On completion of mooring, the hoses will be brought alongside the vessel on the port side, so that the ends are level with the ship's manifold, and will be secured to the tackle of the cargo derrick in such a manner that the cargo receivers' personnel and the ship's crew may jointly hoist, connect and get the hoses ready and then begin discharge. Hoses must not be subjected to a pressure of more than 14 kg./sq. cm.

The ship's derrick should be able to lift at least 10 tons.

Stand-By Tenders during Discharge: During mooring and discharge and until sailing, the Port Authority will keep alongside or in proximity to the tower a stand-by tender of suitable size and power provided with the personnel, material and equipment that will ensure the proper functioning of the tower's facilities and provide any assistance that may be needed in the event of a spillage or other emergency.

Another smaller craft, duly equipped for the purpose, will be provided by the Port Authority for liaison between the Oil Dock, tower, tanker and tender and for transporting personnel or light materials.

The 2 craft will be equipped with continuous listening VHF radio and with anti-pollution and fire-fighting equipment.

Platform Services: The services relating to the operation of the tower's fixed and mobile facilities are under the control of the Genoa-Multedo Oil Dock Management, which exercises them through its personnel on the spot.

The employee in charge of services on the tower will be in touch, by VHF radio, with the Oil Dock Management, informing the latter how discharge is proceeding and of any abnormality and receiving from the latter such instructions as may be necessary. Locally, he will keep in touch with the ship's Master and the representative of the Company interested with the discharge in order to facilitate operations in so far as he is responsible and comply with all requests that may result in advantages and in improving safety in general.

Personnel Attending to Ship's Discharge: The Oil Company who is cargo receiver or anyway interested with the discharge and the Master, each within his own field of competence, will jointly supervise and be responsible for discharge and for connecting and disconnecting hoses.

A representative of the cargo receivers appointed for the purpose, will keep in constant touch with the company's booster station and the Oil Dock by means of VHF radio. He will act also in collaboration with the Master and the Port Authority's representative. For connecting and disconnecting hoses, the latter will make available the material and equipment provided on the tender.

Filling of Hoses With Water When Not In Use: For reasons of safety and to prevent pollution, the floating hoses must be kept full of water when not in use.

To this end, the 2 hoses are connected in the tower by means of the by-pass before the gate and non-return valves.

In agreement with the Master, the cargo receivers must drain the hoses of water before commencing discharge.

On completion of discharge, the cargo receivers must likewise flush out the hoses to remove all traces of oil, fill then with water, disconnect them, apply the blank flanges, close the Keystone cut-off valves and lower the hoses into the sea.

It is strictly forbidden:

(a) to introduce compressed air or any kind of gas into the hoses or the submarine pipeline;

(b) to discharge the water from the hoses into the sea at the beginning of operations or that used for flushing the hoses on completion of operations.

During flushing, the cargo receivers must take all precautions against leakage or spillage of the water employed for the purpose.

Interruption of Discharge Operations for Safety Reasons: In the event of a deterioration of sea conditions, violent thunderstorms, trouble with the facilities that jeopardises safety, large scale pollution or other dangerous circumstances, the Management of the Oil Dock may, at its own unchallengeable discretion, order:

- immediate interruption of discharge;
- that the hoses be got ready for lowering into the sea;
- the adoption of all such measures as will enable the vessel rapidly to vacate the berth.

In agreement with the cargo receivers, vessels must therefore maintain a trim during discharge that will enable them to take to sea safely at any moment.

Prohibition to Pollute. Cleaning Up: Ships moored at the tower must not pollute the water with hydrocarbons, solid residues, or oil mixtures of any kind, nor effect gas-freeing or tank cleaning or transfer oil from one tank to another by means of temporary hoses or pipes slung over manholes or other tank apertures.

In the event of oil spills, the Oil Dock Management, without prejudice to the application of the penalties provided by law, will order the anti-pollution equipment of the craft standing by to come into operation at once, at the expense of whomsoever may be concerned, and the despatch of other equipment for cleaning up should it deem this necessary.

Bunkering and Victualling: Bunkers, victuals, drinking water and stores must in general be taken aboard while awaiting berth in the roads. Such operations may also be effected with the vessel moored at the tower before or during discharge (but not during ballasting) according to the procedure prescribed by the Oil Dock Management and with observance of the precautions that are ordered.

Ships and any other craft coming alongside tankers must be provided with a sufficient number of strong fenders to prevent hull to hull contact and be fitted with spark arresters on all main and auxiliary engine exhausts.

Authorisation to go Aboard: Persons needing to go aboard to do work or for other justified reasons must be provided with an authorisation issued by the Oil Dock Management.

Work on Engines: It is forbidden to vessels moored at the tower to carry out works which put the engines out of action or reduce its efficiency.

Other work which cannot be delayed may be authorised exceptionally by the Oil Dock Management at its own discretion provided certain instructions and safety measures are observed.

Transhipments: Vessels moored at the tower may carry out transhipment of their cargoes only to vessels moored in the Oil Dock, for such purposes making use of the pipeline.

Other Regulations: Without prejudice to the regulations currently in force in the waters of the Maritime Department of Genoa, for all such matters as are not expressly provided for in the present regulations there shall be applied, to the extent to which they are applicable, the provisions of the Harbour Police and Safety Regulations for the Genoa-Multedo Oil Dock, approved by order No. 10 of the President of the Port of Genoa Authority on the 30th September, 1968, the regulations for bunkering tankers in the Genoa-Multedo Oil Dock, approved by decree No. 1384 of the President of the Port of Genoa Authority on the 1st September, 1966, of the Marine Services and Harbour Police Regulations approved by order No. 2 of the President of the Port of Genoa Authority on the 1st March, 1972, and the other laws and regulations in force in the Port of Genoa.

Penalties: Infringements of these regulations will be punished by application of the penalties provided in the Code of Navigation.

Safety Rules to Complied with during Stay of Tankers at Sea Terminal of Genoa-Multedo: The following are the principal safety rules that the Master is bound to strictly comply with and enforce during the stay of the ship under his command of Genoa-Multedo.

1. The main propelling machinery must be kept ready to move (standby) and there must always be available on board a sufficient number of crewmen to enable the ship to leave the berth immediately whenever ordered to by the Port of Genoa Authority (Consorzio Autonomo del Porto);
2. Vessel must have ready the accommodation ladder on starboard side and – on port side – the pilot ladder rigged forward of the poophouse;
3. Decks and surrounding waters must be properly lighted;
4. When mooring to platform anchors must never be dropped;
5. Vessel's firefighting equipment and the men in charge of its operation must always be ready for immediate action (in case of emergency). Men in drunken state must be watched and kept under supervision;
6. The ends provided with eyes of 2 strong 3.5 in./4 in. wire cables, length of which must be of 80 m./100 m. (260 ft./330 ft.) at least, must be placed hanging one fore and one aft to enable the ship to be towed out (to sea) in case of fire.
7. Unless authorised to the contrary and which will only be allowed in exceptional cases by the Oil Harbour Master, it is forbidden:
   (a) to carry out repair works, cleaning or gasfreeing of tanks or bunkers, etc.;
   (b) to carry out loading of cargo, water or other liquid products using hoses introduced through the cargo tanks lids.
8. It is strictly prohibited:
   (a) to keep fires of any kind on board, with the only exception of those for the service of ship's boilers and galleys if located in special rooms thoroughly protected against gas exhalations and far from the cargo lines;
   (b) to throw or pump overboard water ballast, bilge-water or water from any other source, that might pollute the port waters;
   (c) to cause escape of oil from the sea valves due to delay in starting the ballast pumps or any other reasons; to cause escape of oil due to leakage of pipes or valves on board; to provoke overflow of oil from cargo tanks. Accidental leakages on deck on deck must be collected into suitable receptacles and – with all precautions – poured again into the cargo tanks or carried ashore; all scuppers on the main deck and particularly those near the cargo manifolds must be plugged during the loading/unloading and ballasting operations;
   (d) the use of devices, tools and wrenches not made of non-sparking material, to connect or disconnect hoses, pipes or pipe fittings and to carry out work to any ship's equipment placed on deck or inside those spaces where the generation and/or presence of gas is possible;
   (e) to smoke on board except in those rooms approved by the Master and to throw overboard lighted matches or cigarettes;
   (f) the use of rocket signals, flares, etc.;
   (g) the use of electric hot plates, fans and other equipment which might produce sparks on deck or into those rooms having openings towards the cargo tanks;
   (h) the use of electric portable lamps and cables and of telephones not being explosion proof;
   (i) to keep open skylights, doors and hatches of spaces located in way of or near the cargo tanks;
   (l) to keep open the cargo tanks lids; to keep open Butterworth openings.

   The ship's personnel should take care that all ullage openings and gas vents are provided with spark arresters and that the latter are sound. They also should take care that the spark arresters placed on the funnels and combustion gases exhausts are sound;
   (m) shifting of steel tools, winch manoeuvring, loading and unloading of materials, connecting and disconnecting of cargo hoses during the whole period in which sampling and gauging of cargo tanks is carried out;
   (n) to carry out loading and unloading operations during storms with lightning;
   (o) the idling of pumps. Ship's personnel should immediately stop pumps that – for any reason – should idle;
   (p) the blowing of boiler's tubes;
   (q) the coming onboard of unauthorised people.
9. All engine propelled boats approaching the vessel must be provided with spark arresters on the combustion gas exhausts.
10. During shifting operations into tanks:
    (a) radio apparatus must be switched off and all aerials set to ground;
    (b) cargo lines not in use must have all valves closed and manifolds are to be blank flanged.
11. Loading of ship's stores and equipment should be carried out from the extreme poop. In case the aforesaid operations have to be carried out on deck, near the cargo tanks and should it involve the handling of heavy or metallic materials anyway, all precautions relating to the case or those each time specified by the Oil Harbour Master, should be taken.

    As a general rule the above mentioned operations are not allowed during the loading or ballasting of the ship. The crafts used for the transportation of the materials must approach the ship, stay alongside and move out without making use of the engine.
12. Tankers having on board inflammable or dangerous products, or – being empty or in ballast – having their tanks not certified gasfree, must hoist steadily and well in view, a red flag (letter "B" of the international code of signals) and by night a red light, which can be sighted from round the horizon.

Products/Chemicals:

Pier Alfa: Diameter of the connecting flange 10 in. ASA 150 with vertical face, the radius of 750 mm. from the axis of the connecting pipe at manifold is to be free from any hindrance. The distance between two centres of the 2 neighbouring pipes to manifold must be minimum 1,250 mm. A space of 1,200 mm. from the flange towards ship's rail horizontal axis is to be free of any hindrance.

West Pier: Diameter of the connecting flange 6 in. ASA 150 with vertical face. Radius from axis at least 500 mm. free from any hindrance. Minimum distance between 2 neighbouring centres at manifold 1,000 mm. Free space from flange towards ship's rail along horizontal axis at least 1,200 mm. It is understood that ships not equipped for above discharge will not be allowed to operate.

BALLAST: Facilities exist for the collection and clearance of slops by means of special barges.

STEVEDORES: *Working Hours:* General cargo: 3 shifts from Monday to Saturday: 0630 – 1300 hrs., 1300 – 1930 hrs., 1930 – 0100 hrs.

A fourth working shift is available from Monday to Friday in the period 15th March/15th November.

Coal, ore, grain: only the first 2 shifts. Italsider Pier: 24 hours' daily in 3 shifts.

DENSITY: Varying from 1025 to 1026.

FRESH WATER: Available direct from quay at almost all berths. Supply by lighter, minimum 20 cu.m.

FUEL: All grades available. Delivered by barge. 48 hours' notice desirable.

CONSULS:

Argentina
Austria
Belgium
Bolivia
Brazil
Chile
Colombia
Congo Brazzaville
Costa Rica
Cuba
Cyprus
Denmark
Dominica
Ecuador
El Salvador
Finland
France
Germany
Greece
Guatemala
Haiti
Honduras
Iceland
India
Indonesia
Ireland
Ivory Coast
Lebanon
Liberia
Madagascar
Malta
Mexico
Monaco
Netherlands
Nicaragua
Norway
Pakistan
Panama
Paraguay
Peru
Philippines
Portugal
Russia
San Marino
Senegal
South Africa
Spain
Sri Lanka
Sweden
Switzerland
Thailand
Tunisia
Turkey
U.K.
U.S.A.
Uruguay
Venezuela
Zaire

REPAIRS: All types of repairs available. Preferable have advance notice of requirements.

DRY DOCKS: 1 floating dry dock, lifting capacity up to 15,000 tons; 7 dry docks (largest dimensions 280 m. × 40 m. × 12.50 m.). Max. size 100,000 d.w.t.

GANGWAY/DECK WATCHMEN: Recommended.

CUSTOMS ALLOWANCES: Tobacco: Customs allow a maximum of 50 cigarettes or 10 cigars, or 50 grams tobacco per person, as long as vessel stays in port. All cigarettes, cigars, etc. must be ready on arrival in a locker in order to be checked and sealed by Customs guards. Wine and/or spirits. Wine allowed any reasonable amounts.

Spirits allowed: 1 bottle for every 2 Crew members.

Report: May 1983: Customs Regulations – Supply of Cigarettes and Tobacco: "Please inform members of a new rule at Genoa concerning forwarding of cigarettes, which provides that they may only be sent from the Port of Registry with invoices visaed by the Italian Consul there.

At Genoa, the Master must declare cigarettes and tobacco on board, number of crew and duration of next employment, thereafter the Customs will allow 40 cigarettes each day to each crew member for the duration of the voyage.

In case there is sufficient stock on board, the Customs will not allow supply, which might cause other troubles as well, due to the fact that the truck normally carrying other provisions and stores will remain stopped at Customs until the situation with cigarettes is clear".

OPENING/CLOSING HATCHES: First opening and last closing normally carried out by crew.

CARGO GEAR: Certificates must be in order, otherwise authorities may prevent vessel performing commercial operations, especially if using derricks.

REPATRIATION: All facilities available.

AIRPORT: Located at about 5 km. from town. Served by regular lines international services.

Alitalia to Rome, Bari, Parigi, Naples; British Airways to London; Alisarda to Olbia; A.T.I. to Rome, Turin, Palermo, Alghero, Cagliari; Swissair to Zurich; Lufthansa to Frankfurt; Golden West Airlines to Turin, Venice and Trieste.

TIME: Local time in relation to GMT 1 hour ahead. Summer time further 1 hour ahead from March to September.

HOLIDAYS: New Year's Day (1st January); Liberation Day (25th April); Labour Day (1st May); Easter and day after Easter; Patron Saint's Day (24th June); Assumption B.V. Maria (15th August); All Saints' Day (1st November); Immaculate Conception (8th December); Christmas Day (25th December); Holiday (26th December).

Holiday work is available at overtime rates. Generally workers not available on 1st January, 1st May and 25th December. Saturday: Work performed after 1200 hrs. is at overtime rates.

POLICE/AMBULANCE/FIRE: Police: tel. 113; 25.69.75; 26.13.95; Ambulance: tel. 59.59.51; Fire: tel. 25.25.25 – 25.80.21.

TELEPHONES: Telephones can be placed on board at cost fixed by Italian State Telephone System.

IDENTIFICATION CARDS: Required. Shore passes issued by local police.

DEVELOPMENTS:

Genoa Port Docks:

Works in Progress:

Within the port of Genoa area, the more outstanding works are:

New industrial zone including the construction of a giant floating-dock in pre-stressed-reinforced concrete for vessels of up to 350,000 d.w.t. A deep water (−22 m.) 350 m. long, service pier will also be built, together with 400 m. of new quays with 11 m. – 20 m. depth alongside and 80,000 sq.m. of connected areas;

Besides the aforementioned listed works, there are others worthy of mention as follows:

Medium term works:

Rectification of the Calata Gadda and Calata Boccardo quays thus allowing a more efficient use for ship repair purposes;

Long term works:

Completion of the San Benigno area arrangement works.

Voltri Dock:

Works in progress:

Seaward filling in works will be continued;

The protection breakwater will be extended 500 m. Eastward;

End-stretch of the seaward road connecting the material excavation area with the sea zone to be filled in.

Medium term works:

Voltri will consist of quays 1,100 m. long in the first stage, and 2,050 m. on completion.

5 container berths 300 m. long, 15 m. draft are planned, each terminal composed of 135,000 sq.m. of yards. They will be of the closed type – which means no outside vehicles allowed to circulate within the terminal – and will be capable of handling 100,000 TEU per year, that is 500,000 TEU total capacity per year.

The yard will be divided in zones as follows:

Operative zone, for container unloading/loading operations, adjacent to the quay;

Areas for container handling and marshalling;

Areas for reefer containers;

Parking areas for service vehicles.

The Ro/Ro terminal is planned to be 500 m. long, with adjacent yards 250,000 sq.m. in area, which will allow the parking of 2,000 trucks at the same time.

The 8 berths above mentioned will absorb 3,000,000 tons traffic of general cargo per year.

Two check-points for Customs controls are provided, each having a 60,000 sq.m. surface. One will be sited at the Eastern way out and the other at the Western way, thus allowing the service of containers and Ro/Ro traffic at minimum distance and maximum efficiency. The check-point will have space enough to park 300 trucks and straight connections with the City and National roads.

An area of 50,000 sq.m. is already used for stacking empty containers and storing trucks and trailers.

The first section, 2 container berths, equipped with 4 × 45 ton container gantry cranes and 2 Ro/Ro berths operational.

SHIPMASTER'S REPORT: October 1993.

Cargo: Latex discharge.

Charts: B.A. No. 1461, 3909.

Approaches: The coastline shows up well on radar at 48 miles with high mountain backdrop. Latterna Lighthouse is conspicuous.

Anchorage: We observed, during our call, that area on Chart B.A. No. 3909 "Anchoring and Stopping Prohibited 1st June to 15th September" heavily used by anchored vessels (area to East of port, depths 20 fathoms).

Also Area "Bravo" off breakwater Cornigliano in 20 fathoms used. We believe this area is dangerous in high winds.

Pilot: The Pilot is available 24 hours and boards from a fast cutter. Pilot on VHF Channel 12. Depending on area of port being used, Pilot boards 1 mile S.E. or S.W. of breakwater entrance.

Channel: Inside channel between breakwater and berths is effected by wind. We found least depth 11.0 m. in Channel Bacina del la Lanterna off Canzio Berths (44° 23.84' N., 08° 55.05' E.).

Tugs: 6×3,000 h.p. tractor tugs. We used two tug's lines.

Berths: Numerous berths in the old port and new port to West.

We berthed at Ponte Ethiopia, just West of Latterna Lighthouse, in a novel fashion alongside a ship loading steel (See "Plan"). This was due to the latex discharge standpipe in position as shown with adjacent tanks and steel loading being used.

Depths of 10.0 m. were advised and found to be correct.

Barge as shown on "Plan" was well fendered.

Berthing: We used port anchor with 6 shackles and starboard anchor with 3 shackles.

We put ship's fenders out along starboard side, but not actually used.

Mooring boat was used.

Ship's B.O.T. brow gangway onto barge in way of No. 6 Tank.

Discharge: Shore latex hose from shore pipe over barge to ship's rail. Ship's hose to starboard rail. Shore tanks about 1 km. away. Shore line holds 4 tonnes. We found a high back pressure and were able to pump at about 80 t.p.h.

The receiver is not willing to work overtime (0100 to 0600 hrs.). So arrangements needed beforehand as to starting of latex tank or not.

Shore can blow back both ways (to ship or shore). Stop valve at ship's side. Receivers and surveyor spoke good English. Receivers personnel in attendance to complete discharge at shore manifold.

Fresh Water: Standpipe from Ro/Ro quay astern. Shore connect with shore hoses to ship's rail. Ship undertakes the rest of the operation. Rate 20 t.p.h.

Chandler: Stores only by barge due to our berthing arrangement. Everything arranged for one operation.

Bunkers: By barge alongside during discharge. Modern barge at maximum rate ship can take. All grades available. We loaded 400 tonnes 180 cst. at an average of 230 t.p.h.

Telephone: At dock gate, about 10 minutes walk. All require telephone cards or coins.

Authorities: We were boarded on arrival by Immigration. Customs arrived about one hour later. Immigration carefully check Passports and Seamen's Books and issue shore passes which are non-returnable.

Generally no difficulties, but Immigration strict with Non-EEC crew, as to transit out of Italy. They must leave direct from Genoa to overseas airport (not via Rome), and cannot stay in Italy after ship departs.

Documents:

6 copies Crew List.

1 copy Crew Manifest.

1 copy Ship's Stores List.

1 copy Discharge Manifest.

1 copy Transit Manifest.

Pratique: Within 24 hours of arrival via Genoa Radio to "Sanimare" as per ALRS. The station replies quickly. Send in working hours.

AUTHORITY: Consorzio Autonomo del Porto di Genova, Palazzo San Giorgio, Via Della Mercanzia 2, 16123 Genova, Italy. *Tel:* (10) 26901. *Telex:* 286579. *FAX:* (2) 2415437. *Contact:* Dr. Giuseppe De Sanctis, Port Director.

AGENT: MEDOV, Via XX Settembre 29, 16121 Genoa, Italy. Tel: (010) 54901. Fax: (010) 562050, 5490275. Telex: 270070, 283836.

LA SPEZIA: 44.01 N. 09.51 E. (See Plan)

DOCUMENTS:

3 Crew Lists.

3 Passenger Lists.

1 Provisions List.

1 List of Parcels.

1 Cargo Manifest.

1 Bill of Lading.

All Ship's Certificates including Italian Anchorage Dues.

Shipmaster's Report: November 1988 (Updated 1996).

3 copies Crew List.

3 copies Passenger List.

2 copies Stores List.

1 copy Parcel List (if any).

1 copy Cargo Manifest.

1 set Bills of Lading.

1 copy Nil List.

1 copy IMO Cargo List with Stowage Position.

Oil Record Book.

Ship's Certificates.

1 Statement of Amount of Lubricating Oil on board.

Also see "Radio Officer's Report".

PILOTAGE: Compulsory for vessels over 500 g.r.t. Pilot station situated on breakwater at West entrance to Gulf. One hour's notice to Pilots required for shifting and sailing vessel. Pilot boards incoming vessels at Torre Scuola.

Pilot on VHF Channel 14/16 throughout 24 hours. Tel. 0039-187-732722. Fax: 731972.

ANCHORAGE: Safe areas available in depths 25 ft. to 34 ft. Mud bottom, no tide (±0.3 m.).

Tankers: If waiting for berth, required to anchor in Safety Zone immediately behind the breakwater. If this anchorage is occupied by 2 vessels, the later arrivals must anchor outside the Gulf.

RESTRICTIONS: Western entrance to Gulf is 400 m. wide with depth of 42 ft. 6 in. The dredged channel to the port is 14.5 m. deep. Eastern entrance is 200 m. wide used by smaller vessels only.

MAX. SIZE: Limited only by draft; 33 ft. for the Commerical Port and grain silos.

For vessels proceeding to bulk terminal (Berth No. 5) max. draft 30 ft. 4 in.

For vessels proceeding to Fornelli Pier max. draft 13.0 m. – 14.5 m.

For vessels proceeding to Enel Pier 42 ft. 6 in.

HEALTH: Radio Pratique may be requested to Sanimare-La Spezia before arrival. Pratique is automatic for vessels from Ports in E.E.C. countries.

RADIO: Genoa Radio – ICB or Navy ICS. Radio telephone station at Leghorn, transmitting 2591 kHz, receiving 2182 kHz.

VHF: Pilot Service Channel 14, Port Control Channel 9, Harbour Master Channel 16 and boat service Channel 12.

TUGS: 9 tugs available. For large tankers, 4 or 5 tugs usually used.

BERTHING: Primo Bacino:
Garibaldi Mole: The port basin is limited to the East by Garibaldi Mole, running North – South, to the coast and for a length of 509 m. It is used for discharging cereals, paper, containers and metal products. It has open storage areas and warehouses. The mole is used on both sides, which are equipped with fenders.
West Side:

Berth No. 1: Length 207 m., depth 7.6 m. 4 cranes up to 8 tons. Speter: General cargo; warehouse situated on the Garibaldi Mole with a capacity of 6,700 sq.m. and a 5,000 tons stocking capacity.

Berth No. 2: Length 151 m., depth 7.3 m. 3 cranes up to 8 tons.

Berth No. 3: Length 151 m., depth 6.7 m. 3 cranes up to 6 tons.

East Side:

Berth No. 9: Length 350 m., depth 11.0 m. 2 cranes up to 12 tons, 1 crane up to 6 tons, 1 grain silo of 30,000 tons capacity with 4 pumps, capacity 400 t.p.h.

Berth No. 10: Works for consolidation and expansion in progress.

Malaspina Wharf:

Berth No. 4: Length 200 m., depth 6.0 m. 2 cranes up to 6 tons, 2 cranes up to 3 tons. Warehouse available of 1,600 sq.m.

Paita Wharf:

Berth No. 5: Length 180 m., depth 10.0 m., bulk terminal, berth equipped with unloader crane up to 16 tons for handling of coal and ore and silos of 12,000 cu.m. Discharge average 150 t.p.h. (coal). Presently managed by Compagnia Lavoratori Portuali. 2 cranes up to 35 tons, outreach 32 m. 3 cranes up to 6 tons. Cement silos of 4,200 tons capacity, pumping capacity 150 t.p.h., owned by Soc. Gabeca.

Berth No. 6: Length 180 m., depth of water 11.0 m. At the rear of the berth, there are open areas covering 750 sq.m., and oil (cooking) deposit covering 2,100 sq.m., owned by Societa Carapelli.

Berth No. 7: Length 180 m., depth 11.0 m. The berth is equipped with 4 cereal aspirators and conveyor belts, together with plant for moving bagged material from shore to ship. At the rear of the berth are cereal silos of 52,000 cu.m. capacity, owned by Silos Granari della Sicilia, and 1,750 sq.m. of open area. Warehouse of 3,500 sq.m. capacity. The berth is rail-served.

Berth No. 8: Length 80 m., depth of water from 4.0 m. to 7.0 m. As no mechanical handling means, berth can receive small vessels (tankers) for moving water to the islands, and has the necessary piping and tank facilities. Berth is rail-served.

Italia Mole: 362 m. long, 10 m. wide, depth of water 4.0 m. – 6.0 m. Constructed to protect the port basin, and therefore not equipped with port equipment, it is used for berthing tugs.

Currently, it is to be used for berthing the passenger ferries between La Spezia and Bastia (Corsica) in Summer.

Secondo Bacino:
Artom Wharf:

Berth No. 11-12: Length 300 m., depth of water 9.5 m. Equipped with 4×25 ton cranes. Rear open storage areas of approximately 15,000 sq.m. Mobile crane Gottwald up to 100 tons capacity.

Fornelli Pier: West and East Side: The La Spezia Container Terminal (Contship Group). Berths No. 13, 14, 15, 16, 17 and 18.

West Side: Length 520 m., depth of water 13.0 m. 4 unloading cranes (Post-panamax) with capacity 44 tons. Outreach from 38 m. to 44 m. 4 stacking cranes with capacity up to 45 tons.

East Side: Length 467 m., depth of water 14.0 m. 3 unloadings cranes (Post-panamax) with capacity 44/45 tons. Outreach 44 m. 4 stacking cranes up to 45 tons. 3 RTG up to 35 tons, 8 FLT up to 41 tons, 2 FLT up to 8 tons and 2 FLT up to 12 tons.

Stacking area capacity 13,000 TEU's. 300 reefer points × 380 V. Heavylifts arriving both by rail and truck can be handled up to 65 tons and loaded into vessels up to 17 m. over fender.

Consolidations: CFS Terrestre Marittima, total area 1.9 ha., covered area 2,750 sq.m.

At S. Stefano Magra, storage and repair facilities 15,000 sq.m. operated by Contrepair.

Outer Terminals: The Port of La Spezia incorporates the terminals of a few companies involved in maritime traffic. There are, to the East of the port, the "Messina Terminal" and the "Terminal del Golfo", all with their own berths and private operational land areas for containers.
Messina Berth: Length 100 m., depth of water 11.0 m. Berth allows simultaneous berthing of 3 Ro/Ro vessels bow-on. Capacity 2,000 TEU's. Lifting capacity up to 42 tons. 26 FLT up to 35 tons. 20 FLT from 2 tons to 12 tons. 50 reefer points × 380 V. Container park of 65,000 sq.m. at rear of berth. Covered storage area of 8,000 sq.m. for CFS operations. All the services on the terminal for stuffing and stripping of any type of container. The facility has direct connection with rail and motorway network.
Terminal del Golfo Berth: Including Cantieri Navali del Golfo and Tarros Terminal facilities 60,000 sq.m. multi-purpose terminal with following equipment. 5 Ro-Ro berths up to 10.0 m. depth. 2 Lo-Lo berths, 310 m. up to 10.0 m. depth.

1 unloading crane of 42 tons capacity. 5 FLT with capacity 35 tons. 5 FLT with capacity 25 tons. 5 FLT with capacity 12 tons. Customs bonded area with capacity for 7,500 TEU's. 40 reefer points × 380 V. Facilities for CFS operations. Direct connection with rail and motorway network. Seasonal passenger station to Sardinia.

At S.Stefano Magra, further storage area of 11,000 sq.m. and capacity for 6,000 TEU's operated by Nora Container Spa refurbishing centre.
ENEL Landing Stage: Length 260 m., depth of water 12.8 m. Tankers and coal carriers can be berthed on both sides. Berth equipped with 2 unloaders and conveyor belt for coal and with a pipeline for oil products.
SNAM: Landing stage with length 520 m. and depth of water 10.4 m., equipped for discharge of LPG from ship to shore.
Arcola Petrolifera: Buoy complex of 5 buoys, positioned 650 m. from the San Bartolomeo Coast, with their axis S.S.W. Berth permits mooring of tankers up to 230 m. with a draft up to 42 ft. (12.6 m.) and carrying capacity of 50,000 tons. It is connected by pipeline to the Arcola Refinery.

CONTAINER HANDLING FACILITIES: See "Berthing".
BULK HANDLING FACILITIES: See "Berthing".
CRANES: See "Berthing".
STEVEDORES: Contact terminal operators. Generally gangs to be ordered by 0700 hrs. for morning shift, and by 1300 hrs. for afternoon shift every normal day from Monday to Friday. For mechanised work the same routine is to be followed. Saturdays, morning is considered as overtime work. On the afternoon of Saturday, time is considered as holidays and so are Sundays. Saturdays and Sundays shift to be ordered on Friday afternoon by 1500 hrs.
MEDICAL: All facilities available. Vaccination/inoculation can be arranged. Prior notice should be given if urgent attention required on arrival.
TANKERS: See "Berthing".

Safety Regulations are handed to Master on arrival and must be strictly observed. No shore steam or electricity available.

FRESH WATER: Available at Berths No. 2 – 5, otherwise by barge.
FUEL: Supplied by barge and road tankers at berths.
CONSULS: Following countries represented at Spezia: Denmark, France, Finland, Netherlands, Norway, Portugal, Sweden.
REPAIRS: Naval and civil repair yards can undertake all types of work. Divers available through Port Captain.
DRY DOCKS: 2 floating docks available.

Gestione Bacini – Fincantieri: 240 m. × 40 m. Capacity 110,000 d.w.t.
INMA: 180 m. × 34 m. Capacity 13,000 d.w.t.

TIME: GMT plus 1 hour. GMT plus 2 hours from March (Last Sunday) to September (Last Sunday).
HOLIDAYS: New Year's Day (1st January); St. Joseph (19th March); Liberation Day (25th April); Labour Day (1st May); Easter and Day after Easter; Ascension Day; Assumption B.V. Maria (15th August); All Saints' Day (1st November); Immaculate Conception (8th December); Christmas Day (25th December); Boxing Day (26th December).
POLICE/AMBULANCE/FIRE:

Police: 0187 113/0187 734418.
Ambulance: 0187 736386.
Hospital: 0187 533111.
Fire: 0187 115/0187 514888.

SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Shore passes issued to crew.
GARBAGE DISPOSAL: Daily collection compulsory.
WASTE OIL DISPOSAL: Barge available.
DEVELOPMENTS: There is the possibility for the year 2002 to carry out a plan of expansion of the port for another 15 hectares. The expansion will be dedicated to rail tracks, internal roads and main part to depots. About 80,000 sq.m. would be for container handling and would represent about 200/250,000 additional TEU's. The expansion will take place on the East side of the port.

SHIPMASTER'S REPORT: October 1988.
General: It is very difficult to contact the Pilot Station prior to arrival. It appears that pilots are only using portable W/T when answering ships approaching La Spezia Roads.

Channel 16 and working channels are frequently disturbed by powerful stations in the vicinity (Corse, Genoa, etc.).

Anchoring: Vessels up to 10.0 m. draft can anchor in position 1 mile S.E. of breakwater (Passo di Poniente) and at a distance of about 7 cables from Torre Scuola Island.

This anchorage is not recommended for ships with a draft of 10.0 m. in periods of swell. Charted depths are 13.0 m. up to 15.0 m.

In case of swell, or ship with draft of 10.0 m. or more, it is preferable to anchor mile East of Del Tino Island.

Pilot: Pilot embarks in the Inner Harbour, when ship has already cleared the breakwaters (Passo di Poniente).

RADIO OFFICER'S REPORT: September 1990.
Documents:
Agent:

4 copies Crew List.
1 copy Stores List.
Certificates, Italian Light Dues, Oil Record Book, Ship's Particulars and Lub Oil.
Copy first and last page of Oil Record Book.

Customs:

1 copy Stores List (also showing pepper / cigarette papers / cacao / chocolate).
1 copy Crew List.
Manifest.

Immigration:

1 copy Crew List.

When second Italian port:
Customs:

Italian Stores List from previous Port (Manifesto di partenza).

Shore Leave: Shore passes are issued but do not have to be returned.

AUTHORITY: Autorita Portuale della Spezia (Port Authority of La Spezia), Calata Paita, Porto Mercantile, 19126 La Spezia, Italy. *Tel:* 0187-770700, 0187-501061. *Telex:* 282888. *FAX:* 0187-22858, 0187-524579.

Camera di Commercio Industria Artigianato ed Agricoltura di La Spezia, Via V.Veneto 2, 19100 La Spezia. *Tel:* (0187) 728111. *Telex:* 282687 Camesp I. *FAX:* (0187) 777908. *Contact:* The President.

Capitaneria di Porto di La Spezia. *Tel:* 0187-778015.

AGENT: See "Genoa".

LICATA: 37.06 N. 13.57 E.

PORT LIMITS: From Salso River to Ecnomo Hill.
Charts: Italian Chart No. 267. B.A. Chart No. 2113.
DOCUMENTS: Basic Customs documents for entry:
1 copy Mooring Request.
2 copies Notice to the Maritime Authority.
2 copies Additional Declaration of Departure.
1 copy Arrival Crew List.
1 copy Passenger List.
1 copy Dangerous Cargo Manifest.
PILOTAGE: Compulsory. Pilots provided by Pilots Association of the port of Gela. Tel/Fax: (0933) 939303.
Pilots communicate with vessels on VHF Channel 12.
ANCHORAGES: Designated by Port Authority and Pilots.
MAX. SIZE: Max. draft 6.10 m.
HEALTH: Free Pratique must be requested from Port Health Office before entry.
RADIO/VHF: Port Office can be contacted on 2,182 kHz and VHF Channel 16. Hours: 0800 hrs. – 2000 hrs.
TUGS: Available from Gela on Master's request.
BERTHING: 190 m. of quay for commercial shipping.
CRANES: Cranes and forklifts available for handling bulk and general cargo.
MEDICAL: Hospital available. Doctors and dentists available during normal working hours.
FRESH WATER: Available by truck.
FUEL: Available by truck.
AIRPORT: At Catania (Fontana Rossa).
POLICE/AMBULANCE/FIRE: Police, Tel; 113. Fire, Tel: 115.
EMERGENCY CO-ORDINATION CENTRE: Contact Port Authority.
BANKS: Banco di Sicilia, Via Umberto No. 102, Licata. Tel: (0922) 774081, 774987.
Banco Popolare "S. Angelo", Via Vitt. Emanuele 8/10, Licata. Tel: (0922) 860111.
GARBAGE DISPOSAL: Available.
WASTE OIL DISPOSAL: Available.
AUTHORITY: Officio Circondariale Marittimo, Via Libotti No. 9, 92027 Licata (AG), Italy. *Tel:* (0922) 772222, 774113. *Telex:* 912137. *FAX:* (0922) 772222. *Contact:* Harbour Master.

LIVORNO (Leghorn): 43.33 N. 10.20 E. **(See Plan)**

PORT LIMITS: The port limits are 3 miles off the entrance.
Ships Information Service: All incoming vessels shall inform the Harbour Master one hour before their arrival by contacting Livorno Ships Information Service on VHF Channel 10.
Ships Information Service (A private station without any function of port control) is also in charge, on behalf of the Harbour Master, of taking note of the arrival times of ships when they are 3 miles away from the harbour entrance.
DOCUMENTS: Complete set of Manifests and B/Ls relative to cargo destined for this port. Complete set of Manifests of all cargo in transit; 4 Crew Lists; 4 Passenger Lists; 2 Lists of Dangerous Cargo to be Discharged; 2 Lists of Dangerous Cargo in Transit.
APPROACHES: Navigation within the confines of the port is very tight, the radius of bends are small, channels are narrow and swinging areas cramped. Masters must, therefore, exercise extreme vigilance when their ships are navigating in the port. In particular, it must be emphasised that prompt and accurate responses are required from engines and, in turbine-driven ships, full astern requirements should be met promptly and with maximum power. Masters should inform their Chief Engineers about these requirements before the ship enters the port.
Anchors must be ready to let go.
The current outside the breakwater usually sets across the entrance, but it is variable in both speed and direction. Care must be taken to allow for the set of current when lining up the ship for the entrance.
Immediately on entering between the Diga della Vegliaia and Diga Curvilinea, the ship has to make a 70° turn to port, then navigate a narrow channel for 0.5 miles to Bacino S. Stefano where ships bound for the Nuova Darsena (Berth Nos. 10 and 11) are swung. It is very important to arrive at the Bacino S. Stefano at the slowest possible speed in order to effect a tight swing. When the wind is from the Southern semi-circle, control of the ship can become difficult and proper control of the tugs is important.
PILOTAGE: Pilotage is compulsory for all vessels over 500 g.r.t.; all the vessels below 500 g.r.t., before any movement within pilotage waters, shall contact the Pilot Station on VHF Channel 12. The Pilot Station keeps a continuous watch on VHF Channel 12, and shall be contacted at least one hour before arrival, to give the usual ETA information and to allow for various arrangements to be made.
Before the departure, the Pilot Station shall be contacted at least one hour before, or earlier when possible, in order to book the Pilot.
The Pilot boards incoming vessels one mile S.W. of the harbour entrance.
Pilot hoists are accepted only in good weather conditions. It is recommended that pilot ladder be used without any tripping lines and/or manropes.
ANCHORAGE: The area enclosed between the bearings 024° and 090° from the main lighthouse 1.5 miles, and between the bearings 038° and 078° from 1.5 miles to 3.5 miles, is prohibited for anchoring.
The part of the above-mentioned area, that is to the North of the bearing 058° (of the main lighthouse), shall be used for the outbound vessels, when they are leaving the harbour, and the part that is to the South of the mentioned bearing shall be used for incoming vessels when they are approaching the entrance.
Anchoring is forbidden also in the area 2 miles seaward of above-mentioned area.
Any other place, in the Livorno Roads, is suitable for anchoring.
The ground is not good holding, and great care must be taken in case of bad weather.
In S.W. gales, it might be necessary to leave the anchorage and put to sea. Ships of a small and medium size could find good shelter N.E. of the Meloria Bank.
Whenever necessary, contact Pilot Station on VHF Channel 12.
RESTRICTIONS: Berthing, sailing or shifting of tankers is subject to the regulations stated from the Harbour Master by his Maritime Ordinance No. 1/86, issued on 1.1.86 (under modification).
Sailing is presently allowed during night-time (one hour before sunset to daybreak) from Berth No. 10 and No. 11 to tankers in ballast of max. LOA 230 m. and to loaded tankers of max. LOA 140 m. Berthing during night-time to the same berths is allowed to tankers in ballast of max. LOA 170 m. and to loaded tankers of max. LOA 140 m.
MAX. SIZE: See "Berthing".
HEALTH: To obtain Free Pratique by radio cable to "Sanimare", Livorno, advising all health particulars at least 12 hours before arrival.
RADIO: Livorno Radio generally used for communications.
Arrival Advice: Agent to make request for berthing 3 days prior to arrival for cargo vessels and 10 days prior to arrival for passenger and cruise ships. Request to be made before 1000 hrs.
Day before arrival and not later than 1200 hrs. (1000 hrs. on holidays) advise ETA (day, hour, minutes = 00.00.00); number of containers to be moved.
RADAR: The Pilot Station is equipped with an ARPA radar (Selescan 1024), used when necessary or when requested.
VHF: Livorno Radio on Channel 16 (24 hours); Livorno Harbour Master on Channel 16 (24 hours); Pilot Station on Channels 12 and 16 (24 hours); Tugs on Channels 11 and 12 (24 hours); Ships Information Service on Channels 10 and 16 (24 hours).
TUGS: There are a total of 11 tugs stationed in the port. All of them are motor driven (1×850 h.p., 1×1,160 h.p., 1×1,200 h.p., 2×1,715 h.p., 2×2,205 h.p. and 4×2,067 h.p.).
Five tugs are on duty from 0600 hrs. to 2200 hrs., and three tugs are on duty from 2200 hrs. to 0600 hrs.
Attention must be paid to the limit time to connect the tugs at the end of the shifts (1400 hrs., 2200 hrs. and 0600 hrs.). This limit is 15 minutes before, if the ship is alongside, or has to proceed to a berth, including the area from the entrance to Berth No. 41 (Silot del Tirreno), or 30 minutes when the berth of the ship is to the North of Berth No. 41.
Attention must also be paid to the lunchtime of the tugs' crew (1120 hrs.), when the limit time, to connect the tugs, is 15 minutes before (1105 hrs.), whichever area of the port the ship has to reach or leave.
The tugs employ "on the hook" towing methods, using ship's lines. Only good lines should be used for this purpose. The tugs are (normally) made fast inside the breakwater, except in particular circumstances and for large vessels, when a maximum of 3 tugs can be made fast outside the harbour.
The number of tugs used is (normally) set according to the size of the ship, her manoeuvring ability and the berth she has to proceed to or from.
Ships over 100 m. LOA, that have to berth in the Canale Industriale or that have to leave, shall use (compulsory) at least one tug. Tankers over 100 m. LOA, carrying or have carried petroleum products, shall use (compulsory) at least one tug.
It is always possible to allocate tugs where requested according to their power, for the best service to the ship.
Pilots communicate with the tugs by using personal portable VHF sets.
BERTHING: Depths and Lengths of Various Berths

Berth	*Berth No.*	*Length/Depth/Remarks*
Bacino Santo Stefano - North West Side:		
1. Nuova Darsena Petroli	10	Length 344 ft., depth 37 ft. for tankers.
	11	Length 295 ft., depth 35 ft. for tankers with a max. length of 984 ft. Tankers longer than 984 ft. with a draft of 37 ft. 6 in. can be moored in good weather on full tide
2. Radice Nuova Darsena Petroli	11/A	Length 229 ft., depth 14 ft.
3. Piccolo Fondale	11/B	Length 360 ft., depth 17 ft. 6 in. Only for vessel of a max. length of 360 ft. Petroleum/gas oil.
4. Vecchia Darsena Petroli	12	Length 20 ft., depth 30 ft. Petroleum/gas oil/fuel oil/crude oil.
	13	Length 98 ft., depth 30 ft. for small LPG carriers.
5. Darsena Toscana West Side	14	Length 984 ft., depth 37 ft. Containers.
Bacino di Evoluzione:		
1. Calata Tripoli (Dow Chemical)	16	Length 690 ft., depth 26 ft. Chemicals/Ferries.
Darsena N. 1:		
1. Calata Assab		Total Length 1,312 ft.
	17	Depth 28 ft. 6 in. U.S. Navy.
	18	Depth 28 ft. 6 in. Ferries.
2. Calata Gondar	19	Length 690 ft., depth 27 ft. Ferries.
3. Calata Addis Abeba	20	Length 875 ft., depth 26 ft. Ferries and Bulk Cargoes.
4. Calata Neghelli	21	Length 787 ft. depth 26 ft. 6 in. Fruit.
Calata Neghelli	0	Length 197 ft,. depth 20 ft. Fruit.

Berth	*Berth No.*	*Length/Depth/Remarks*
Canale Industriale:		
1. Calata Bengasi	22	Length 885 ft., depth 24 ft. 6 in. General and Bulk Cargoes.
2. Pontile Giopescal	23 S	Length 328 ft., depth 18 ft.
3. Terminal Sintermar	23 N 24 S 24 N	Total length 562 m. depth 31 ft.
4. Pontile Cledca	25	Length 370 ft., depth 14 ft. Tar, pitch, solvents.
6. Costiero Cereol-Italso	27	Length 459 ft., depth 28 ft. with distance barge. Vegetable oils and seeds.
7. Costiero D.O.C. (Chemicals)	28	Length 649 ft., depth 28 ft. with distance barge. Chemicals and vegetable oils.
8. Costiero d'Alesio	29	Length 460 ft., depth 28 ft. with distance barge. Tankers.
9. Costiero Liquigas/Agip	30	Length 689 ft., depth 27 ft. 6 in. with distance barge. LPG.
10. Banchina Laviosa	34 N	Length 93 m. Sulphuric acid.
11. Silos Ardenza	34 S	Length 515 ft., depth 27 ft. (31 ft. with distance barge).
12. Terminal Leonardo Da Vinci	35	Length 545 ft., depth 31 ft. Max. LOA 190 m.
13. Darsena Ugione	36	–
	36/A	Length 170 m., depth 28 ft.
	37	Disused.
14. Officine Meccaniche Botteghi	38	Length 490 ft., depth 18 ft.
Calata del Magnale:		
1. Magnale Non Operativo	39	Length 4,265 ft., depth 14 ft. Repairs.
2. Magnale Operativo Nord	40	Length 490 ft., depth 14 ft. Cement.
3. Magnale Operativo Centro	40	Length 490 ft., depth 18 ft. Cement.
4. Magnale Operativo Sud	40	Length 490 ft., depth 14 ft. Cement.
Darsena Pisa:		
1. Calata Darsena Pisa	41	Length 206 m., depth 35 ft. 2 Grain elevators.
	42	Length 40 m., depth 35 ft. Ro-Ro.
Bacino Santo Stefano - South East Side:		
1. Calata Alto Fondale	43-44-45	Length 2,505 ft., depth 35 ft.
	-46-47	Length 195 ft., depth 18 ft. Ferries.
	48	
Bacino Cappellini		
1. Calata Orlando	49	Length 495 ft., depth 30 ft. Bulk cargoes.
	50	Length 495 ft., depth 30 ft. Containers and general.
	51	Length 495 ft., depth 30 ft. Bulk cargoes and general.
2. Calata Siena	58	Length 165 ft., depth 20 ft. Ferries.
3. Calata Punto Franco		Total length 885 ft.
	59	Depth 28 ft. Ferries.
	60	Depth 34 ft. Silos. Bulk cargoes.
Bacino Firenze:		
1. Calata Pisa	52-53-54	Total length 1,475 ft., depth 23 ft. 6 in.
2. Calata Carrara	55-56-57	Total length 1,475 ft., depth 23 ft. 6 in. Ferries.
Porto Mediceo:		
1. Calata Sgarallino	61-62	Total length 785 ft., depth 28 ft. 6 in. Passenger vessels.
2. Andana Degli Anelli	64	Length 490 ft., depth 25 ft.
3. Pontile Elba	66 North	Length 190 ft., depth 18 ft. Passenger vessels/ferries.
	66 South	Length 190 ft., depth 17 ft. Passenger vessels/ferries.
4. Andana Delle Ancore	67	Length 525 ft., depth 13 ft.
5. Banchina Allestimento Cantiere Orlando	74	Length 590 ft. Fitting out berth.
6. Molo Mediceo	75	Length 1,540 ft., depth 19 ft.
Darsena Nuova:		
1. Banchina South	70	Length 328 ft., depth 19 ft. 6 in.
2. Banchina West	71	Length 328 ft., depth 19 ft. 6 in.
Nuovo Bacino di Carenaggio:		
1. Banchina East	76	Length 1,050 ft., depth 26 ft. 6 in.
2. Banchina West	78	Length 835 ft., depth 29 ft. 6 in.

CRANES: (owned by Azienda dei Mezzi Meccanici)

Pier	*Type*	*Berth*	*Capacity* (Tons)	*Use*
Alto Fondale	crane	47	3.75	General cargo
Alto Fondale	crane	47	8-16	General and bulk
Alto Fondale	crane	47	3.75	General cargo
Alto Fondale	crane	47	3.75	General cargo
Alto Fondale	crane	46	8-16	General and bulk
Alto Fondale	crane	46	3.75	General cargo
Alto Fondale	crane	46	30-16	General and bulk
Alto Fondale	portainer	44	40	Containers
Alto Fondale	portainer	43	40	Containers
Orlando	bulk gantry crane	49	25-18	Bulk cargoes
Orlando	portainer	50	38	Containers
Orlando	crane	51	12-18	General and bulk
Carrara	crane	55	8-16	General cargo
Carrara	crane	55	8-16	General cargo
Carrara	crane	55	8-16	General cargo
Sgarallino	crane	62	6	General cargo
Addis Abeba	crane	20	8-16	General and bulk
Addis Abeba	crane	20	8-16	General and bulk
Bengasi	bulk gantry Crane	22	10-18	Bulk cargoes
Darsena Toscana	portainer	14A-B	47	Containers
Darsena Toscana	portainer	14A-B	47	Containers
Darsena Toscana	portainer	14A-B	41	Containers
Darsena Toscana	portainer	14B-C	41	Containers
Darsena Toscana	portainer	14B-C	45	Containers
Darsena Toscana	portainer	14B-C	45	Containers
Owned by Sintermar:				
Sintermar	portainer	23N-24S	40	Containers
Sintermar	portainer	23N-24S-24N	30	Containers
Sintermar	portainer	24S-24N	40	Containers

Mobile Cranes and Equipment.

Pier	*No. of Cranes*	*Capacity*
Bengasi	1	36 tons
Assab	1	23 tons
Addis Abeba	1	29.5 tons
	1	26.5 tons
	1	24 tons
	1	22 tons
Orlando	1	40 tons
	1	34 tons
	1	30 tons

Available for use anywhere in the port:

1 crane × 21 to 60 tons.
1 crane × 5.1 to 41 tons.
1 crane × 1.6 to 26 tons.
1 crane × 1 to 15.5 tons.

Mobile cranes and equipments owned by Dockers' Organisation:

20 electrically powered trucks	1 – 6 tons
144 forklift trucks	3 – 45 tons
1 mobile crane	80 tons
1 mobile crane	90 tons
1 mobile crane	100 tons
1 mobile crane	120 tons
13 container cranes (B 75)	35 tons
25 tractors, towings, etc.	
37 vans	

Floating cranes owned by Fratelli Neri:

Pontone Italia – Lifting capacity max. 1,000 tons.
Pontone Giacomo – Lifting capacity max. 100 tons.
Pontone Meloria – Lifting capacity max. 35 tons.

BULK HANDLING FACILITIES: Grain: Discharging rate 1,000 to 1,500 m. tons per day.

Ore and coal bulk: Discharged by shore elevators at Calata Orlando, discharging rate 1,500 to 2,000 tons per day.

Cereals Silos: Silos Livornesi 28,000 tons. Silos and Tirrenian Warehouses 31,500 tons. Ardenza of Liquifarm G.I.A. 52,000 tons. Italso 32,000 ton.

BRIDGES: None that interfere with port traffic.

STEVEDORES: ETA required by Agent in order to arrange matters with stevedores at least 48 hours before arrival.

MEDICAL: It is advisable to give details of assistance required together with ETA cable. Hospital facilities available.

TANKERS:

Nuova Darsena Petroli Terminal:

Cautionary Advice: The berthing heads of Berth Nos. 10 and 11 in the Nuova Darsena Terminal are constructed on stone walls and their protection consists of 6 fenders.

These fenders have small energy absorption characteristics and their size and spacing afford little protection against striking the quay wall or indenting the hull due to small single point landings. Heavy landings must, therefore, be avoided and ships must dock as parallel to the berth as possible.

The Nuova Darsena Berths are exposed to Westerly winds and, therefore, ships should ensure that moorings are adequate and in good condition.

Berthing Procedures: Ships for Berth Nos. 10 and 11 are swung in the Bacino S. Stefano, and usually make a port swing with the aid of tugs and are then backed down to berth. Ships are, therefore, always starboard side to these berths. Headlines are run out first by mooring boat and, when in position, 2 of the tugs push the ship alongside. There is no power assistance on the jetties to heave moorings ashore. For large ships, it is recommended to use 2 mooring boats.

Fibre ropes as head and stern lines are preferred.

The shore gangway is located aft of the hose tower.

Cargo Bunker Connections:

Berth No. 10:	
Crude oil	2×12 in. arms.
Fuel	2×12 in. arms.
Gasoil	1×10 in. hose.
Clean products	1× 8 in. hose.
Berth No. 11:	
Crude and Fuels	2×12 in. arms.
Gasoil and Clean products	2× 8 in. arms.

Bunker is supplied throughout the same flow booms.

Ullaging, Temperatures, etc.: To be checked by ship's personnel prior to arrival.

Deballasting Facilities: Receiving capacity is 15,000 cu.m. The rate is about 600 cu.m.p.h.

Passing Traffic, Weather, Tide, Current: The berth is exposed to winds from the Western semi-circle. The short breasting distance and the low quay make it very important to keep a close watch on moorings during unsettled weather conditions, particularly during the later stages of discharging when the moorings will become very steep. Ships with entirely separate ballast systems may ballast simultaneously with discharging; otherwise discharging may have to be stopped to take on ballast.

Density of Dock Water: Lowest recorded 1018.

Cargo and Bunker Facilities: Crude receiving facilities consist of 1×30 in. and 1×20 in. pipelines. Tankage is located about 5 km. away. Average discharge rates are about 3,000 t.p.h. Fuel oils are shipped via 1×16 in. line, average loading rate 650 t.p.h. Gas oil is shipped via 1×12 in. line, average loading rate 550 t.p.h.

Freeboard Restrictions: The Port Authority will not allow the freeboard of discharging tankers to rise above the height of the firefighting foam cannons located at the berth, i.e., 14 m. above water level. Ships which cannot maintain their freeboard below this level by ballasting during discharge will have to stop discharging when the freeboard reaches 14 m. and take on ballast before resuming discharge.

Darsena Ugione Terminal:

Cautionary Advice: Darsena Ugione, located about 1 mile up the narrow and congested Industrial Canal is itself narrow and congested. Ships have to back into Ugione and the corners of the Darsena are not fully protected.

The Channel to and from Darsena Ugione and the Darsena itself is subject to silting, and therefore maximum advertised draft must never be exceeded.

Berthing Procedures: Ships bound for Darsena Ugione will proceed up the Industrial Canal with the assistance of tugs and be swung either in the Bacino di Evoluzione about 0.5 km. below Ugione or at the entrance to Ugione itself. Before backing into Ugione, the port anchor is sometimes dropped and the head and stern lines are run out by mooring boat. There is no power assistance on the shore to heave the mooring ropes to the bollards and, therefore, ships should take care not to run out too much line at once. This is especially important if wires are used. An additional dolphin, new high capacity fenders and bollards, recently installed, ensure safer mooring. Ships are always starboard side to Berth No. 36A.

Shore gangway is run from main deck, close to manifold.

Cargo Bunker Connection: All products are handled through 4 fully balanced hard arms having 6 in. ASA bolted connections.

Cargo, Bunkers Handled: Fuel oil (1×16 in. pipeline), gasoline/kerosine/gasoil (3×12 in. pipeline), MTBE (1×8 in. pipeline), lube oils (1×12 in. and 2×6 in. pipelines). The average rates range from 150 t.p.h. to 500 t.p.h.

Fuel oil and gas oil bunkers available via pipeline at the berth.

Deballasting Facilities: Ballast water is discharged ashore through 12 in. line, maximum storage capacity is 6,000 cu.m. Tank washings (slops) cannot be received. Discharge rate of ballast water averages 300 t.p.h., therefore, ships should arrive with minimum ballast consistent with safety.

Both Terminals:

Oil Pollution Clean-up: Facilities are available.

Fire Fighting Facilities: At both terminals, elevated foam cannons serve each berth. At Nuova Darsena, the cannons are remotely controlled.

Services: Fresh water, distilled water, laundry, and stores are available.

Repairs, Gas Freeing, Immobilisation: All kinds of ships' repairs can be undertaken at Livorno including servicing of radio, radar and echo sounders with prior notice.

Tank cleaning and gas freeing are not allowed alongside the tanker berths.

While alongside the tanker berths, the engine and steering gear must be maintained ready at all times. If engines require immobilisation for any reason, prior permission must be obtained from the Harbour Master.

Also see "Berthing".

FRESH WATER: Fresh water available at all berths except Bacino Alto Fondale. Water barge available.

FUEL: All grades available from berth. Advance notice required 48 hours; supply subject to Owners' stem.

FIRE PRECAUTIONS: Berths at which tankers operate are equipped with monitors.

CONSULS:

Chile
Denmark
Finland
France
Germany
Greece
Liberia
Malta
Monaco
Netherlands
Norway
Portugal
Spain
Sweden
Uruguay

REPAIRS: All types of deck and engine repairs are possible.

DRY DOCKS: Dry docks suitable to accommodate a Liberty type ship. A small floating dry dock for vessels up to maximum of 1,500 tons.

New Graving dock 350 m. × 56 m., depth on sill 10.0 m. (For 300,000 d.w.t. vessels) in operation.

GANGWAY/DECK WATCHMEN: Recommended, 8 hour shifts, 0600 - 1400, 1400 - 2200, 2200 - 0600 hrs.

OPENING/CLOSING HATCHES: Normally carried out by ship's crew.

CERTIFICATES: All ship's certificates required.

CUSTOMS ALLOWANCES: Tobacco: 50 cigarettes, or 50 grams tobacco per man for the first 24 hours. Wine and/or Spirits: only in consignment of the Master.

REPATRIATION: All necessary repatriations possible.

AIRPORT: Nearest at Pisa, distance about 20 km.; served by Alitalia, British Airways, Lufthansa and Air France.

TIME: Local time is 1 hour ahead of GMT, and Summer time 2 hours ahead.

HOLIDAYS: 1st January, Easter Monday, 1st May, 15th August, 1st November, 8th December, 25th December, 26th December.

POLICE/AMBULANCE/FIRE: Police Tel: 23413, Carabinieri Tel: 808002, Dept. of Customs Guards Tel: 24066, Ambulances Tel: 33333/22111, Fire Brigade Tel: 22222.

TELEPHONES: Only at some quays is it possible to place telephones on board.

SERVICES: Tank cleaning and slop facilities available. Compass adjuster available. Refuse collection.

Agency: Steamship and Forwarding Agents:

G.Panessa & C. S.r.l., Scali del Corso 11, 57123 Livorno. Tel: (0039-586) 848111. Fax: (0039-586) 848225. Telex: 500018.

SHORE LEAVE: Possible.

IDENTIFICATION CARDS: Shore passes required, issued by local police authorities.

GARBAGE DISPOSAL: Collection time is from 0730 hrs. – 1230 hrs. and from 1330 hrs. – 1630 hrs. once a day. Overtime service is available on request by your local Agency.

Skips on board and drums alongside are provided on request. The Company operating this service is Faro Verde. Tel: 0586-405272.

WASTE OIL DISPOSAL: Collection service is available from 0800 hrs. to 1200 hrs. and from 1300 hrs. to 1700 hrs. Overtime can be requested by your local Agent. Every berth is suitable for this service provided by barges and vacuum tankers. Name of the Company operating this service is Labromare. Tel: 0586-409435. Fax: 0586-409748. Telex: 502090 Labrom I.

SEAMAN'S CLUBS: None.

CURRENCY: Italian Lira.

DELAYS: No considerable delays.

REPORT: November 1989.

The following is from an agent to a ship operator.

This letter is to inform you that the local Harbour Authorities have recently issued a new regulation, which makes it compulsory, to declare on the "Berth Request", the following information in addition to the usual ship's details:

1. Ship's international call sign and official number.
2. Arrival draft (fore and aft).
3. Previous and subsequent ports of call.
4. When Livorno is the first or last Mediterranean port of call, the following must be declared:
   (a) Access point (Gibraltar/Suez/Bosporus) with date and time of transit.
   (b) Exit point (Gibraltar/Suez/Bosporus) with expected date and time of transit.
5. Memorandum of understanding on port state control (Memorandum of Paris): place and date of issue and expiry date.
6. Total cargo on board on arrival and on departure, cargo previously carried, and whether tanks are clean, dry, gas-free.

Please note that if any of the above details are missing, the Harbour Authorities will not accept the "Berth Request".

RADIO OFFICER'S REPORT: September 1990.

Documents:

Agent:
4 copies Crew List.
1 copy Stores List.

Customs:
1 copy Crew List.
1 copy Stores List (include pepper, cigarette papers, cacao, chocolate).
Manifests.

Immigration:
1 copy Crew List.

Harbour Master:
1 copy Crew List.
1 copy Harbour Master's Papers.

Health:
When Northbound, 1 copy Maritime Declaration of Health is required.

Shore Passes: Immigration issue passes, but they do not have to be returned.

AGENT'S REPORT: April 1994.

Anchorage: Anywhere outside traffic separation zone limited by following points:

Main lighthouse bearing/distance:
A – 024° × 1.5 miles.
B – 038° × 3.5 miles.
C – 078° × 3.5 miles.
D – 090° × 1.5 miles.

Approaches: Vessels within 4 miles of port entrance to follow traffic separation scheme divided by main lighthouse bearing 058°, keeping to starboard in traffic lane when entering. Pilot usually boards about 1.0 miles off.

Tankers: Night berthing or sailing allowed, basis LOA limit and weather conditions.

Berths: Nuova Darsena Petroli – Agip Plas:

No. 10: Length 344 ft. For tankers with max. LOA 984 ft. with draft 37 ft. Moored in fair weather and at high tide.

No. 11: Length 295 ft. For tankers up to LOA 984 ft. (Berth No. 10 not engaged) and draft 35 ft.

Tankers longer than 984 ft. may be moored on Harbour Master's authorisation.

Mud dredging to original depth of 37 ft. 6 in. presently scheduled.

Darsena Ugione – Agip Plas:

No. 36A: For tankers up to 558 ft. (maximum distance between bow and ship's manifold – 263 ft.) and draft 27 ft.

No. 36: Dismantled.

No. 37: Presently not in service.

Cargo bunker connections:

No. 10:		
	Crude oil/fuel oil	3 arms × 12 in. ASA
		4 hoses × 10 in. ASA (spare)
	Gasoil	1 hose × 10 in. ASA
	Bunker fuel oil	1 hose × 6 in. ASA
No. 11:	Fuel oil/crude	2 arms × 12 in. ASA
	Gasoil/Kerosene/Gasoline	2 arms × 8 in. ASA

All loading arms are provided with an alarm system, in case ship's movements at the berth exceed the set limit, with automatic closing of the arm valves and arm disconnection.

Fuel oil and gasoil bunkers available via pipeline at berth.

Cargo and bunker facilities:

Crude receiving facilities consist of 1×30 in. pipeline.

Fuel oils are received/shipped via 1×16 in./12 in. and 1×20 in. (spare for crude oil) pipelines.

Gasoil, kero, gasoline are received/shipped via 3×12 in. pipelines.

The average rates are 3,000 – 1,800 t.p.h. for crude oil/fuel oil discharging; 650 t.p.h. for fuel and oil shipping; 900 t.p.h. for gasoil/gasoline discharging; 450 t.p.h. for virgin naphtha shipping and 500 t.p.h. for kerosene shipping.

Booster pumps are available for reaching above said rates during discharge.

Freeboard restrictions:

The deck floor must not exceed the height of 16.0 m. from dock ground (about 17.5 m. from medium sea level) marked out by a white line on middle plant fire fighting tower.

AUTHORITY: Capitaneria Di Porto Di Livorno, 57100 Livorno, Italy. *Tel:* 893362. *Contact:* Raimondo Pollastrini, Captain of the Port.

Azienda Dei Mezzi Meccanici E Dei Magazzini Del Porto, Scali Rosciano 7, Livorno, Italy. *Tel:* 848611. *Telex:* 500486. *FAX:* 848808. *Contact:* Direttore: Dr. Francesco Ruffini.

Camera di Commercio Industria Artigianato E Agricoltura, Piazza Municipio 48, Livorno. *Tel:* 231111. *Telex:* 500486. *FAX:* (586) 886689.

AGENT: See "Genoa".

MANFREDONIA: 41.37 N. 15.55 E. (See Plan)

PORT LIMITS: Seaward boundaries do not exist. A vessel is considered an "arrived ship" and (subject to Charter-Party terms) laytime will commence when boarding the Pilot or dropping the anchor in the Roads.

DOCUMENTS:

5 Crew Lists.
3 Provision Lists.
1 Arrival Report.
3 Curios Lists.
Cargo Manifest (Italian Form).
Bills of Lading and ship's documents not expired.

ANCHORAGE: Boundaries according to the draft; the bottom (mud and sand) has good holding. No anchorage is suggested with heavy S.E'ly weather. See "Plan".

PILOTAGE: Compulsory for vessels over 500 g.r.t. The ship's ETA is furnished to the Pilots by the Agent. VHF service around the clock on Channel 12; Pilot station to be contacted 1 or 2 hours prior the ship's arrival in the Roads. International signals are used for calling Pilot; Pilot has to be taken on board within 1 mile range from the harbour entrance but, upon ship's request, Pilot may board the vessel wherever required. The pilot boat has a black hull with a white stripe all around and the letter "P" printed on both sides of the bow. White superstructure and mast. Max. speed 8 knots.

RESTRICTIONS: Ships carrying dangerous cargoes will only berth in daytime (from sunrise to sunset); departure is allowed at any time for all vessels.

MAX. SIZE: No restrictions on LOA or beam. The only limitation is given by the draft which is 32 ft. 6 in. for ships operating to the New Industrial Port and 21 ft. 6 in. for those operating to the old harbour. The above drafts are referred to the Mean tide condition. One more foot can be added if docking with high tide.

HEALTH: Free Pratique is granted by the Port Authorities at anchorage or at the dock. Radio Pratique may be requested, by cable via Bari Radio, to "Sanimare Manfredonia".

RADIO: For ETA and other communications with Agents, receivers, etc., Roma Radio is suggested; call sign IAR.

VHF: Port Authorities: Channel 16 from 0800 to 2000 hrs. local time from October to May and 24 hour watch from June to September.

Pilots, Tugs and Mooring Gangs: Watch and working Channel 12; service continuous.

Local Agents provided with VHF equipment listen from 0800 to 1700 hrs. on Channel 9 and 12.

RADAR: The new Pilot Station will be equipped with radar and Pilots should be able to provide a suitable radar service and port control.

TUGS: 2 tug boats of 1,300 h.p. Usually join the vessels in the Roads, together with the Pilot. Either ship's or tug's lines are used. Towage is compulsory for ships carrying dangerous cargoes.

BERTHING: New Industrial Port: A/1 300 m., A/2 250 m., A/3 265 m., A/4 265 m., A/5 315 m. Draft at MHWS 32 ft. 6 in.

Old Commercial Port: Nos. 1, 2 and 3 together 480 m., Nos. 4 and 5 together 220 m. Draft at MHWS 21 ft. 6 in.

CRANES: Old Commercial Port: Pier No. 2 equipped with 2 cranes with a safe working load of 6 tons each.

New Industrial Port: 2 cranes Reggiane type, multi-purpose, are located on Piers A/3 and A/4. Safe working load 25 tons at 40 m. spread.

BULK CARGO FACILITIES: In addition to the cranes, the new port is equipped with 3 escalators for loading fertiliser in bulk (Berth A/2) and 2 self-moving suction pumps for cereals (Berths A/1 and A/2).

The rates are: Fertiliser in bulk 3,000 tons per working day. Grain, wheat and other cereals 5,000 tons per working day. Sulphur in bulk 2,000 tons per working day. Silver sand 2,500 tons per working day (working day 0700 – 1900 hrs.).

BRIDGES: None.

STEVEDORES: Gangs arrangements made by the Agent in due time. The load or discharge rates vary depending on the type of cargo, the vessel, the type of the ship's gear, etc.

MEDICAL: Crew members must be in possession of a valid vaccination card against cholera and yellow fever when coming from countries declared infected by the international health laws.

DENSITY: The average salinity of water in the port is 1026.

FRESH WATER: Available on the quays of both ports. Watering operations carried out by hoses which are connected to the pier connections.

FUEL: Any kind, grades and viscosity delivered by trucks.

FIRE PRECAUTIONS: Towing wires hanging from the sea side forward and aft.

CONSULS: None.

REPAIRS: Small deck and engine repairs are possible.

DRY DOCK: None.

SURVEYORS: All Classification Societies are represented in Bari, 2 hours away from Manfredonia.

GANGWAY/DECK WATCHMEN: Available, but not compulsory.

OPENING/CLOSING HATCHES: Opening and closing carried out by ship's crew.

CUSTOMS ALLOWANCES: 40 cigarettes per man. 1 bottle spirits.

REPATRIATION: All facilities exist for effecting Crew changes and arranging all the necessary pratiques for repatriation.

AIRPORT: The nearest airport is Bari, 130 km. away, but the re-opening of Foggia airport, 36 km away is expected.

TIME: From the last Sunday of March till the last Sunday of September "daylight saving time" is in force. GMT plus 2 hours. For the rest of the year the standard time is used, GMT plus 1 hour.

HOLIDAYS: Cargo operations are not carried out on the following days: All Sundays, April 25th, August 15th and 31st, December 8th, 25th and 26th, and January 1st.

POLICE/AMBULANCE/FIRE: For all services dial 113.

SERVICES: Compass adjusting, radar and gyro repairs. Divers available on request.

TELEPHONE: No arrangements exist for placing telephone on board. 1 telephone booth exists on "Molo di Ponente", Old Commercial Port, for local and long distance calls. A few telephone booths on Berths A/1 and A/3 of the New Industrial Port are to be connected in the near future.

SHORE LEAVE: Crew members of all nationalities are allowed ashore.

IDENTIFICATION CARDS: Seaman's Book is sufficient.

DELAYS: Delays for port congestion are very unusual, however, delays no longer than 24/48 hours are expected.

GENERAL: 2 shipchandlers are available for stores, provisions, cigarettes and spirits.

AUTHORITY: Capitaneria di Porto, Piazza Marconi, Manfredonia. *Tel:* (0884) 23871-2-3. *Telex:* 812156 Compmf I. *Contact:* Harbour Master.

MESSINA: 38.11 N. 15.34 E. (See Plan)

DOCUMENTS: If vessel comes from foreign port, whenever possible, at least 1 copy of Crew List and Passenger List to be sent some days before her arrival, so that they can be delivered to police in advance. Required on arrival:

3 Crew Lists.
1 Provisions List.
3 Lists Passengers in Transit.
3 Lists Passengers Disembarking.
1 List of Articles – new and Customs-barred in possession each crew member – cameras, binoculars, radios, cigarettes, tobacco, new articles, etc. If on inspection articles or quantities not in conformity or in excess, Master responsible; articles removed and heavy fine imposed.

Copies of Cargo Manifest also to be prepared on arrival.

If Anchorage Dues already paid and still in force, the relative receipt to be shown to the Harbour Authorities, together with other ship's papers and report of arrival to be delivered to them.

PILOTAGE: Pilotage through Messina Straits is available but not compulsory.

Vessels in transit who intend to avail themselves of optional pilotage may request a Pilot via:

(a) Radio PT – Messina (IDF) on frequency 2182 kHz by radiotelephony at least 4 hours in advance.

(b) The Messina and Reggio Calabria Port Captaincy telegraphically at least 12 hours in advance.

(c) Through the ship's Agent.

(d) By contacting the local Pilot Station directly by telephone 090 44483 or VHF Channel 12 at any time.

Ships requesting a pilotage service shall embark the Pilot in the following positions (which are also the boarding positions for the Port Pilots):

(a) If Southbound: 3 nautical miles North of Cape Peloro.
(b) If Northbound: 1.5 nautical miles S.E. of San Ranieri Light.

We wish to point out the great advantages that such a pilotage service may render to the ship, both in terms of fuel saving because it avoids the longer passage to the South of Sicily, and in terms of safety to navigation.

Also see "Italy – General" before first port and "Report" dated May 1985.

ANCHORAGES: Allowed outside harbour; at Paradiso's Bay, sufficient depths for safe anchorage existing. Advisable to request Pilot's assistance for indication of best anchorages.

Prohibited Anchorage: Between the parallels of 38° 12' 58" N. and 38° 10' 48" N.

RESTRICTIONS: For entering harbour during night-time ETA to be given in advance.

Also see "Italy – General" before first port and "Report" dated May 1985.

MAX. SIZE: Max. draft allowed: 33 ft. at passenger quay; other berths 27 ft.

Max. length 200 – 300 m.

Tankers: Length 100 m., draft 27 ft.

HEALTH: Free Pratique automatic for vessels coming from other Italian ports and quarantine flag not to be flown on entering. From other countries usual procedure applies.

RADIO/VHF: Contact through Rome Radio, Naples Radio, Augusta Radio, or Messina Radio VHF Channel 16 or R/T 2182 kHz.

TUGS: Not compulsory. Tugs join vessels at about 0.5 miles from entrance of harbour. If tug's lines used increase of 10% on tariff.

STEVEDORES: To enable Agent order gangs important obtain accurate ETA. Latest time to order gangs: normal shift 0730 hrs. for work in the morning; 1200 hrs. for work in afternoon; night shift 1600 hrs. same day – Saturday noon or Sunday at 1200 hrs. on Saturday.

Failure to give ETA results in cost of waiting gangs, charged to vessel.

Tonnage: Per gang in 8 hours: General cargo 50 ton – cereals 80 ton.

MEDICAL: Doctor can attend sick crew members or for vaccinations. Hospitals available.

TANKERS: There is a Eurobunker station only. Small tankers from time to time discharge fuel oil, gasoline, etc. Gas freeing, tank cleaning, slops and dirty ballast reception facilities available.

CONSULS:

Argentina	Finland	Norway
Australia	Germany	Panama
Colombia	Guatemala	Peru
Denmark	Netherlands	Sweden

FRESH WATER: Only quays have water pipeline connections and water may be supplied day and night directly from ashore by hoses; during Summer time water may be supplied from 0600 to 1100 hrs. only. Water available at night time by boat (max. 250 tons).

REPAIRS: Almost all types of deck and engine repairs can be carried out.

DRY DOCK: One dry dock belonging to SMEB (Societa' Messinese Esercizio Bacini) can be hired. Dimensions are as follows: Length 853 ft. (260 m), breadth 118 ft. (36 m.). One dry dock belonging to Italian Navy, therefore application must be granted by the Marina Militare. Dimensions are as follows: 492 ft. × 52 ft. 7 in. (bottom), 81 ft. 6 in. × 24 ft. 8 in. (top).

GANGWAY/DECK WATCHMEN: Recommended.

OPENING/CLOSING HATCHES: May be carried out by the crew or stevedores.

CERTIFICATES: Safety Certificate, Wireless Safety Certificate, Freeboard Certificate, Derat Certificate, Anchorage Duties Voucher, Passenger List, Construction Certificate.

CUSTOMS ALLOWANCES: 50 gm. tobacco for each seaman. Spirits: 0.75 bottle for all crew.

REPATRIATION: No particular facilities existing; but necessary repatriation can normally be arranged.

AIRPORT: Reggio Calabria Airport – distance about 10 km. From Messina, Reggio Calabria can be reached in 15 minutes by hydrofoil boats, which run every half hour (about). Flights from Reggio Airport in Winter, 1 per day; in Summer, 2 per day.

TIME: In relation to GMT local time is an hour ahead. During Summer, from March to September, clocks are put 1 hour forward.

HOLIDAYS: Work can be arranged, provided timely notice is given, in following official holidays, paying the respective increase on normal tariff: New Year's Day (January 1st); Easter Monday; 25th April; 1st May; June 3rd; local religious holiday; 15th August; 25th December; 26th December.

POLICE/AMBULANCE/FIRE: Police, 46830; Ambulance, 2935592; Fire, 2930222.

TELEPHONES: No arrangements exist.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Required.

REPORT: May 1985.

The following is a copy of telex from ship's Agent to Ship Operator. Quote:

Port Orders 7 – 18/85

As from 10th May 1985 *temporarily pilotage in the Strait of Messina* is compulsory for vessels over 6,000 g.r.t. carrying petroleum products or noxious substances to the sea. Pilotage is also compulsory to vessels not carrying the above products over 15,000 g.r.t. Vessels are to inform at least 12 hours prior arrival Messina Radio call sign IDF frequency 2182 kHz and cable Port Authorities of Messina and Reggio Calabria or through their Agents the following:

International call sign.

Flag.

G.r.t. as per International Certificate.

Type of cargo/es and quantities.

CLC and IDPP certificate details.

Same information has to be given to *Messina* and *Reggio Calabria's Port Authorities* by vessels not compulsory to take Pilot at least 2 hours prior their arrival at Messina via Messina Radio or VHF/FM Channel 16.

Pilot boards vessels coming from South at 2.5 miles S.E. of Punta S. Raineri Light.

Pilot boards vessels coming from North at 3 miles North of Capo Peloro Light.

Joint Port orders No. 6/85 and 13/85 issued respectively by Reggio Calabria Maritime Direction and Catania Maritime Direction is abrogated as from 10/5/1985.

Furthermore the decree of Ministry of Merchant Marine of 8th May 1985 about the navigation in the Strait of Messina states as follows:

As from 10th May 1985 the navigation in the Strait of Messina is forbidden to vessels equal or over 50,000 g.r.t. carrying petroleum products or noxious substances to the sea as defined by the International Conventions effective in Italy.

Unquote.

Also see "General – Strait of Messina" before first port.

AUTHORITY: Capitaneria di Porto – Messina, Via V. Emanuele, Messina, Italy. *Tel:* 41896. *Contact:* Port Commandant.

AGENT: See "Genoa".

MILAZZO (Sicily): 38.13 N. 15.16 E. **(See Plan)**

DOCUMENTS:

6 Crew Lists.

6 Passenger Lists.

Provisions Manifest.

Manifest of Crew Personal Effects.

Cargo Manifest.

Arrival Report – completed on arrival.

Maritime Declaration of Health Certificate – completed on arrival.

Ship's Certificates, including Italian Authority dues.

Vaccination Certificates for sighting.

ARRIVAL ADVICE: At least 24 hours' notice of arrival to be passed to Agent in order to obtain allocation of berth from Port Authority. Consignees-Receivers as for Charter Party.

PILOTAGE: Pilot boards 1.5 miles off the berths. International Code signals used. Pilot can be contacted on VHF Channel 12. Compulsory for vessels over 500 g.r.t. (Berthing/Unberthing).

ANCHORAGE: Anchorages No. 1, 2, 5, 6 and 7 are cancelled. All tankers must anchor in a zone East of the refinery jetties near Anchorages No. 3 and 4, and to the East. Anchoring is prohibited within 0.5 miles of the refinery jetties. The use of a Pilot for anchoring is recommended.

No. 3 up to 3,870 m. off the harbour green light – Bearing 097°

No. 4 up to 3,050 m. off the harbour green light – Bearing 101°

RESTRICTIONS: All tankers are berthed between 0600 hrs. and 2000 hrs., and unberthed between 0600 hrs. and 2100 hrs.

MAX. SIZE: Tankers up to 420,000 d.w.t.

HEALTH: Free Pratique on board may be requested on arrival by way of ship's Agents. The procedure to obtain Free Pratique by radio is being perfected. Pratique is automatic for vessels coming from ports in E.E.C. countries.

RADIO/VHF: Harbour Master Authority, Mediterranea Refinery, Pilot and Tugs may be contacted on VHF Channel 12. Harbour Master Authority may be contacted also on VHF Channel 16.

TUGS: 4 tugs available, 2×2,500 h.p., and 2×1,800 h.p. Tugs meet vessels 1.0 miles North of the refinery jetties. All gas tankers and all tankers over 1,600 g.r.t. use one tug for mooring and unmooring; tankers 3,000 g.r.t. to 25,000 g.r.t. use 2 tugs, and tankers from 25,000 g.r.t. up to 60,000 g.r.t. use at least 3 tugs. Ship's lines used.

DRY CARGO FACILITIES:

New breakwater (130° from old green lighthouse), length 350 m.

One berth with length 210 m., depth 9.0 m. in South part of the port.

One berth, length 40 m., depth 7.0 m. for Ro-Ro vessels.

One berth, length 210 m., depth 7.0 m. – 9.0 m.

MEDICAL: All facilities available.

TANKERS: AGIP Petroli Co.: 8 berths for Tankers, distributed in 2 jetties as follows:

No. 1 Jetty: (West Jetty) 500 m. long, for loading/unloading, with the following berths:

Berth No. 1 (West side – Outer end) – depth 48 ft. LPG arms and lines available.

Berth No. 2 (East side – Outer end) – depth 48 ft.

No. 2 Jetty: (Middle Jetty.) 650 m. long, for loading/unloading, with the following berths:

Berth No. 5 (West side – Middle) – depth 55 ft.

Berth No. 6 (East side – Middle) – depth 55 ft. Arms:12 in. – Ballast line 1×20 in. – Cargo lines 2×40 in. (Crude oil) – 20, 16, 12 in. (Fuel oil) – 20 in. (Gasoil) – 12 in. (Virgin Naphtha) – 10 in. (Super Gasoline) – 10 in. (Normal Gasoline) – 10 in. (Kerosine).

Berth No. 5 bis (West side – Outer end) – depth 83 ft. Available for vessels up to 420,000 d.w.t.

Berth No. 6 bis (East side – Outer end) – depth 75 ft. Arms: 16 in. – Crude oil lines 2×40 in.

Berth No. 7 (West side – Inner end) – depth 25 ft., loading arms 6 in.

Berth No. 8 (East side – Inner end) – depth 24 ft., loading arms 6 in.

Berth No. 7 available for vessels up to 6,500 d.w.t. LPG arms and lines available.

Berth No. 8 available for vessels up to 4,500 d.w.t. LPG arms and lines available.

No. 3 Jetty: No equipment on this jetty.

Vessels berth head out. Lines run to mooring dolphin ahead and astern. Anchor is permitted only for small tonnage tankers. Tankers may use wire ropes only on the jetty mooring hook. On the bitts may use wire ropes only if the eyes are made of manila or nylon. For tankers alongside the jetty it is compulsory to have ahead and astern, outside, wire ropes with eye.

Crude oil washing permitted.

Oilboom: Compulsory for vessels alongside the refinery jetties.

BALLAST: Ballast facilities available at Mediterranea's berths. Reception 1,000 t.p.h. No restrictions on capacity.

FIRE WATCHMEN: Compulsory for tankers alongside the Refinery Mediterranea jetties. Number of watchmen onboard is variable, according to the cargo Class ("A", "B" or "C") loading/discharging and to the tanker's g.r.t.

FRESH WATER: Boiler water supplied from the jetty. Drinking water available alongside and at anchorage by barge. Max. pumping rate 50 t.p.h.

FUEL: No fuel available at Mediterranea Refinery berths. Fuel is available at Milazzo Dry Cargo Harbour berths by truck.

CONSULS: No Consuls in Milazzo. The nearest are in Messina for the following countries: Argentine, Australia, Chile, Denmark, Germany, Great Britain, Norway, Peru, Uruguay.

DRY DOCKS: There is a shipyard at Messina (25 km.) for all types of work.

REPAIRS: All types of deck/engine repairs possible. Experienced and established marine workshops available.

SURVEYORS: Cargo Surveyors and Superintendents available. Ships Surveyors and Salvage Association also available.

GANGWAY/DECK WATCHMEN: Watchmen service available. It is, however, recommended but not compulsory.
CUSTOMS ALLOWANCES: 50 cigarettes are allowed per man per day for the first 2 days.
AIRPORT: The nearest is at Reggio Calabria where there are 3 regular flights per day. Reggio Calabria can be reached by car and by hydrofoil in about 2 hours. Catania Airport also nearby, and may be reached by car or train in about 2 hours.
TIME: GMT plus 1 hour. Summer-time: March to September GMT plus 2 hours.
HOLIDAYS: Cargo work can be arranged on every day.
TELEPHONE: No possibility of connection at Refinery Wharves.
GARBAGE: Boats are available, and compulsory for vessels 24 hours after arrival.
BANKS: Italian banks only.
STORING: Vessels can be stored by barge during loading and unloading.

Forklift trucks can only be used in the commercial port.

Local riggers can be employed to assist with storing in the commercial (dry-cargo) port only.
SHORE LEAVE: Allowed, but transit through the refinery area not permitted except in emergency. Boats are available for hire from wharves and anchorage to the landing pier in the Port of Milazzo. Shore passes given by local police.
IDENTIFICATION CARDS: Shore passes given by local police.
GARBAGE DISPOSAL: Service is available and compulsory after 24 hours in port. The service is provided by boat and collection is in bags.
WASTE OIL DISPOSAL: No facilities.
SEAMAN'S CLUBS: None.
CURRENCY: Local currency is Italian Lira.

SHIPMASTER'S REPORT: April 1986.
Vessel: 95,000 d.w.t.

With vessels this size Pilot will normally board for anchoring which operation is carried out with anchor in gear due to water depth. Usually slack down to about 2 shackles in water and then slack to 9 shackles.

Only means of getting ashore from anchorage and from the refinery jetty is by boat service which is arranged through Agent. VHF communication is very good and on berth the refinery requires VHF watch on Channel 12. Bonded stores sealed by Customs and for Liberian registered vessels will not be unsealed irrespective of vessel's length of stay.

Boat service does not operate after 2300 hrs. or if weather, in boatman's opinion, is too rough.

If American dollars are required then it is necessary to go to Messina to obtain them.

Pilot for berthing boards from pilot boat at anchor and usually requests vessel to weigh anchor before boarding. 3 tugs for berthing, 2 of which require 2 ship's ropes each, forward and aft, third tug puts up small rope amidships.

At Berth No. 5 usually starboard side to. Moorings 3, 2, 2 with head and stern lines first then springs, then breasts. Good mooring facilities with messengers and winches and berth is designed for VLCCs with shore gangway.

AUTHORITY: Capitaneria di Porto di Milazzo, Via Molo Marullo, Milazzo, Italy. *Tel:* 090-9281110. *Telex:* 981148. *FAX:* 090-9222612.

Agip Petroli Raffineria di Milazzo, Box 154, 98057 Milazzo (Messina), Italy. *Tel:* 090-92321. *Telex:* 980025. *Cables:* Raffimed-Milazzo. *Contact:* Geom. Gianni Zimmardi, Refinery Marine Superintendent.

MONFALCONE: 45.48 N. 13.32 E. (See Plan)

PORT LIMITS: A vessel is considered to be an "arrived ship" when it is secured alongside the berth.
DOCUMENTS:

Arrival Report.
Crew List.
Passenger List.
Customs Documents.
All SOLAS Certificates.
Health Documents (only for vessels that are not arriving from the United States, and are not members of the West European Union).

PILOTAGE: Pilotage service is the responsibility of the Harbour Office, and is carried out by local Pilots. Pilots are not supplied with radio equipment. Pilotage service has to be requested by radio via Trieste radio station, to the Harbour Office or via VHF Channel 16. Pilotage is compulsory for vessels over 500 g.r.t. Pilot boat is equipped with VHF. Pilot boards about one mile from the entrance buoy.
ANCHORAGE: Vessels awaiting entry to the port are required to anchor between Duino and Sistiana, about 3 miles from the entrance. The anchorage provides good shelter from winds from the first and fourth quarters. The depth is approx. 12.0 m. and the bottom is mud.
RESTRICTIONS: Pilotage is effected day and night. It is not available during thick fog or when strong winds are blowing from the first quadrant. Maximum draft at high water is 10.5 m.
MAX. SIZE: At the ENEL Berth (berth for the discharge of coal destined for the electrical power station), vessels longer than 180 m. may not berth.
HEALTH: Pratique requested by radio via the Maritime Health Office at Trieste.
RADIO: Nearest coast station is Trieste Radio, through which all radio messages should be routed.
TUGS: Tug service is optional except for vessels proceeding to ENEL Berth, but the Maritime Authority can make service temporarily compulsory.
BERTHING: 1,080 m. of berthing space (7 berths) for loading and discharging various types of cargo, with a maximum depth of water of 10.5 m. One berth 120 m. long for discharging cereals with maximum depth of 10.5 m. The berths are served by railway branch lines.
BULK HANDLING FACILITIES: Silo berth is well equipped for discharging cereals.
CRANES: 5 heavy lift cranes on rails up to 45 tonnes capacity. 8 mobile cranes of varying capacities.
BRIDGES: There are no bridges that hinder maritime traffic.
STEVEDORES: Ordered via Agent.
MEDICAL: Hospital, doctor and vaccination facilities available.
TANKERS: The port only receives tankers with cargoes for ENEL.
DENSITY: Average 1027.
FRESH WATER: Available at all berths.
FUEL: Bunkering is by barge or by truck (capacity 20 tons).
FIRE PRECAUTIONS: Only for hazardous goods, during bunkering operations and the effecting of any work on board vessels involving flames.
CONSULS: None at Monfalcone, but available at Trieste.
REPAIRS: Minor repairs only.
DRY DOCKS: Max. size 300,000 d.w.t.
SURVEYORS: None at Monfalcone, but these may be easily contacted at Trieste.
GANGWAY/DECK WATCHMEN: Not compulsory, but available through Agent.
OPENING/CLOSING HATCHES: Opened and closed by ship's crew.
CUSTOMS ALLOWANCES: 50 cigarettes or 50 grams of tobacco available per man per day for the first two days.
AIRPORT: 5 km. from Monfalcone with connections to Milan and Rome.
TIME: GMT plus 1 hour; from 29th March to 26th September GMT plus 2 hours.
HOLIDAYS: Every Sunday, 1st January, 6th January, 1st May, Easter, first day after Easter, 15th August, 1st November, 25th and 26th December. It is, however, possible to load and discharge vessels on these days by paying premium rates.
POLICE/AMBULANCE/FIRE: Police 113 or 72332; Ambulance 72249; Fire 74444.
TELEPHONES: Not available on board, numerous public telephones in the port.
BANKS: Banca Antoniana, Via F. Rosselli No. 37. Tel: 45301.

Banca Cattolica, Via Marconi No. 1. Tel: 470337.
Credito Italiano, Via Oberdan No. 5. Tel: 40061.
Banca del Friuli, Piazza Cavour No. 22. Tel: 73230.
Banco di Roma, Piazza Cavour No. 34. Tel: 45191.

STORING: See "Prelims".

1. There are no coastal fuel stores, and vessels arriving at Monfalcone are either supplied by road tanker or by fuel barges. The usage of the one or the other means is the responsibility of the Owners or Agents.

2. Supplies by barge can be effected at any time, whilst by road tanker only during non-working hours.

3. For loading and discharge, vehicles may come right alongside the berthed vessels.

4. There are no forklift trucks in use in the port of Monfalcone for unloading goods.

5. For discharge or shipment of goods, there is an Accident Prevention Ordnance No. 07/1981 issued by the Port Captaincy of Monfalcone.

SHORE LEAVE: Possible. Time restriction for crew members of certain countries.
IDENTIFICATION CARDS: Issued without any formality by the local police.
GARBAGE DISPOSAL: Drums or skips are provided on board at ship's request. Daily garbage collection is compulsory for ships over 450 tons. Charges are between 10,000 and 80,000 lira per day depending on size of ship. Contact Sea Service. Tel: (040) 369928.
WASTE OIL DISPOSAL: Barges and tanker trucks are available on request from Sea Service, Trieste. Tel: (040) 369928. Fax: (040) 304977. Telex: 461021 CRSMAR. Details of charges on request.
SEAMAN'S CLUBS: None.
CURRENCY: Italian Lira (lira).
REGULATIONS: There are no special regulations.
DELAYS: Caused only by weather conditions.
GENERAL: During the Winter, there are days of very strong winds gusting up to 110 km/h. coming from the first quadrant which sweep the port's quays. The wind tends to become strong during the night, and it is necessary to strengthen moorings.
DEVELOPMENTS: An additional berth will be available in the near future.
AUTHORITY: Capitaneria di Porto – Monfalcone, Via C. Cosulich 20, 34074 Monfalcone, Italy. *Tel:* 0481-712111/712112. *Telex:* 461087. *FAX:* 0481-483408. *Contact:* Captain Giovenni Gardella, Harbour Master.

NAPLES: 40.50 N. 14.17 E. (See Plan)

DOCUMENTS:
2 Crew Lists.
2 Passenger Lists.
Provisions Manifest.
Manifest of Crew Personal Effects.
Cargo Manifest.
Arrival Report – completed on arrival.
Maritime Declaration of Health Certificate – completed on arrival.
Ship's Certificates, including Italian Authority Dues.
Vaccination Certificates for sighting.

APPROACHES: *Port Approaches:* Approaches to the Gulf of Naples are free of navigational dangers. Ships approaching Naples from the North are cautioned to avoid the Procida Canal, between Procida Island and Capo Miseno (1.5 miles wide) in view of the heavy traffic usually met in this area and other navigation hazards. Passing well clear West of Ischia Island is recommended. Caution is necessary because numerous fishing boats are likely to be encountered in the area, especially at night and in the early morning.

Port Operations: The port is located on the Northern shore of a natural Gulf and is well sheltered from Northerly winds, but winds from the S.W. to S.E. may affect port operations at the petroleum berths, by creating a considerable swell inside the breakwater.

Entry/Berthing: For the berthing manoeuvres, and particularly when ships swing inside the petroleum basin, it is very important that ship's engine orders are carried out accurately and promptly. The Chief Engineer should be advised in advance of importance of this.

PILOTAGE: 12 Pilots and 3 motor launches. ETA to Pilot Station, VHF Channel 12 or to "Compamare" on Channels 16, 11 and 14.

ANCHORAGES: Approximately 70 anchorages, having depths ranging from 11 m. to 15 m.

RESTRICTIONS: 2 port entrances of which the Western is 280 m. wide, the Eastern is 250 m. wide.

Use of propellers and thruster within 20 m. of piers not allowed.

MAX. SIZE: Tankers up to 45 ft. draft.

HEALTH: Free Pratique may be requested by radio to "Sanimare Naples" between 12 to 6 hours before arrival advising vessel's name, nationality, last port, number of passengers and crew, and state of health on board, Pratique is automatic for vessels coming from ports in E.E.C. countries.

TUGS: 8 tugs available as required to assist berthing.

BERTHING:

	Berth No.	*Depth*
Molo Angioino Ponente	5	26 ft.
	6	33 ft.
	7	33 ft.
Molo Angioino Testata	8	33 ft.
Molo Angioino Levante	9	35 ft.
	10	35 ft.
	11	26 ft.
Calata Piliero	12	21 ft.
	13	24 ft.
	14	24 ft.
Pontile Immacolatella Vecchia	15	29 ft.
Calata Porta di Massa	16	31 ft.
	18	22 ft.
	19	22 ft.
	20	28 ft.
Pontile Pisacane Ponente	21	33 ft.
	22	33 ft.
Pontile Pisacane Testata	23	25 ft.
Pontile Pisacane Levante	24	30 ft.
	25	19 ft.
Villa Popolo Ponente	26	20 ft.
Pontile Silos Ponente	27	36 ft.
Pontile Silos Levante	27A	30 ft.
Villa Popolo Levante	28	24 ft.
Molo Carmine Ponente	29	25 ft.
	30	25 ft.
Molo Martello	—	30 ft.
Molo Carmine Levante	31	25 ft.
	32	26 ft.
Testate Bacini	32	28 ft.
Cesario Console Ponente	33	26 ft.
Cesario Console Levante	34	26 ft.
	35	26 ft.
Calata Marinella	36	—
	37	28 ft.
	38	—
Vittorio Emanuele Ponente	39	24 ft.
	40	24 ft.
Vittorio Emanuele Levante	42	31 ft.
	43	31 ft.
Vittorio Veneto Calata	44	22-29 ft.
Flavio Gioia Ponente	45	32 ft.
	46	32 ft.
Flavio Gioia Testata	47	25 ft.
Flavio Gioia Levante	48	32 ft.
	49	32 ft.
Calata Granili	50	30 ft.
Bausan Ponente	51	33 ft.
	52	33 ft.
Bausan Testata	53	29 ft.
Bausan Levante	54	38 ft.
	55	38 ft.
Calata Pollena	56	37 ft.
Calata Vigliena Ponente	57	27 ft.
Darsena Pellegrino	57	18 ft.
	57	18 ft.
Calata Vigliena Levante	58	28 ft.
Vigliena Ponente	59	30 ft.
	60	30 ft.
Vigliena Testata	61	25 ft.
Vigliena Pennello	62	25 ft.
	63	25 ft.
Vigliena Levante	64	37 ft.
	65	37 ft.
	66	37 ft.
Calata Petroli	67	27 ft.
Calata Petroli	68	27 ft.
Molo Progresso Ponente	69	45 ft.
Diga Curvilinea		17 ft. depth at 5 m. from quay
Molo San Vincenzo	—	

Naples is the main port in the South of Italy, and is classified amongst the top domestic multi-purpose ports. The equipment and facilities available make it capable of providing a full range of services, such as to cover a wide range of traffic, including general cargo, standard containerised goods, solid and liquid bulks, oversized cargoes.

Services and Facilities: Full assistance and a wide range of services are available in the Port of Naples to both ship cargoes, passengers and crew. Worth mentioning are: 24 hour Pilot, tug and mooring men services; several ship repair shops duly equipped for any sort of repair work; dry docks and floating dry dock; a wide range of marine supplies (shipchandlers, catering, etc.); a Maritime Health Commissary and a Veterinary Centre. Water supply to ships is provided through a wide net, with no limitation in terms of quantity and service time. Withdrawal of slops. An extremely modern automatic firefighting system at the oil wharf.

Door to door goods can be easily moved either to final destination: The Port of Naples is directly linked to the national motorway network for Southern Italy, Northern Italy and Europe. The port rail system connects all piers to the rail shunting station inside the port, where container block-trains are formed.

Specialised Berths: In order to make the loading, unloading and storing operations as fast as feasible and make the handling operations and the onward journey to the final destination of the goods as practical as possible, arrangements have been made to provide special berthing.

CONTAINER FACILITIES: The port is equipped with a container terminal. The facility includes: Quay of 689 m. Depth of water 13 m. (Bausan Quay). Container park of 200,000 sq.m. A link with the National Railway Network. 80 outlets for refrigerated containers.

There is an additional 50,000 sq.m. of container storage near the city and various private storage areas.

Container Cranes: 4×50 ton Paceco Reggiane (portainers) and 2×100 ton mobile cranes (1 Liebherr 1300 HD and 1 Liebherr 1300 HDVG) at Bausan Pier. 1×100 ton mobile crane Gottwald 280 HMK and 1×60 ton mobile crane Gottwald HMK 280 E at Flavio Gioia Pier, owned by private port operators.

BULK HANDLING FACILITIES:

Coal: Four 6 ton units with hourly payload of 400 tons.

Cereals: The traffic of cereals and of cereal derivates is extremely flourishing. Cereals represent one of the most significant commodities handled through the Port of Naples, taking also into consideration the large number of cereal industries spread all over the hinterland in the Campania Region.

Two Terminals: The Terminal at Wharf Villa del Popolo consists of a 150 m. long pier allowing 2 ships at the time to moor and operate simultaneously. Two tower and 4 suction pipes provide a total rated capacity of 600 t.p.h. and an output capacity of 3,200 t.p.h. The two silos account for a storing capacity of 45,000 tons of cereals, or 23,000 tons of cereals and 18,000 tons of mealy cereals. The other silo at Wharf Marinella is served by a mobile tower and 2 suction pipes with a total suction capacity of 200 t.p.h.; the silo accounts for an average storing capacity of 30,000 tons of cereals.

Forest Products (Timber, Wood Pulp): Two Terminals at Pontile Pisacane and at Pontile V. Emanuele (almost 40,000 sq.m. area) and suitable equipment place the Port of Naples among the most specialised ports in the Mediterranean area for the traffic of forest products. Almost 15,000 sq.m. are covered area.

Ro-Ro: 3 platforms and 1 slipway.

Passenger Facility: Angioino Quay is dedicated to cruise ships and ferry boats. 6 anchorage berths for high tonnage ships alongside both its pier, and 3 berths for medium tonnage ships stern to at its seaward head. The passengers are assisted in the "Stazione Marittima" (the marine passenger station: 12,000 sq.m. surface area, large waiting and visitor catering rooms, Customs clearing halls, post offices, police offices, bars, shops, public telephone booths, etc. Eleven passenger and freight lifting units are installed, boarding and landing facilities between station building and ships, besides the main gangways at the quay level, there are 11 mobile gangways, electrically operated footbridges mounted above and over the cantilever canopies). There are spacious stretches of car parking apron.

Near to Angioino Quay, there is Calata Beverello which is engaged with the passenger traffic in the Gulf of Naples, while Calata Piliero is engaged with passenger traffic to/from the great islands of Italy and cabotage.

TANKERS: The petroleum port is located at the far East area of the port and consists of the Vigliena Pier, Calata Petroli and Progresso Pier. The oil terminal is exclusively used for handling of petroleum products, white, black, chemical products and LPG at its 11 berths, and several pipelines connect these berths with Q8, Esso, IP, Mediterranea Bitumi, Agip Covengas, Petrolchimica Partenopea, Cleam and Italcost which are all located in industrial area of Naples adjoining the petroleum terminal at a distance not exceeding 4 miles.

CRANES: *Electric:* 2×12 tons (with hook); 2×12 tons (with hook and bucket); 10×15 tons (with hook), 1×20 tons (with hook).
Floating: 1 of 100 ton (Italian Navy) and 1 of 60 ton at dry docks.
FRESH WATER: Water pipelines are connected to all wharves and piers in Port. Water barges available.
FUEL: All grades available. Delivered by barge, subject to advance notice given.
REPAIRS: All types of ship repairs can be carried out by the shipyards of Societa Bacini Napoletani and CAMED (Cantieri del Mediterraneo Spa).
DRY DOCKS: 3 graving docks with dimensions as follows:
Length 113 m., width 20.5 m.
Length 202 m., width 28.9 m.
Length 349 m., width 45 m.
In addition 1 floating dock:
Length 233 m., width 37 m.
CUSTOMS ALLOWANCES: 300 cigarettes, 50 cigars, 250 grams of smoking tobacco, 1 litre of distilled drinks and alcoholic drinks over 22°, 2 litres of distilled drinks and alcoholic drinks, aperitives, tafia, sake or similar drinks less or equal to 22°, 1 litre of non-denatured alcohol equal or over 80°, 2 litres of sparkling wine and 2 litres of table wine, 500 grams of coffee, 100 grams of tea, 50 grams of perfume and 0.25 litre of eau de toilette per person, if from an E.E.C. country.
CONSULS:

	Tel:		*Tel:*
Argentina	5523134	Mexico (Chancery)	5751185
Austria	287724	Monaco	681368
Belgium	5510535	Morocco	7879009
Bolivia	287607	Netherlands	5513003
Chile	5525268	Nicaragua	418943
Cyprus	7648836	Norway	5512211
Denmark	5512211	Pakistan	5591965
Dominican Republic	7648867	Panama	5629107
Ecuador	5888183	Paraguay	7616383
El Salvador	5520217	Peru	5525619
Finland	5512211	San Marino	7641033
France	7612275	Senegal	5525268
Gabon	5524925	Sierra Leone (Consul)	7640866
Germany (Consulate General)	7613393	South Africa (Chancery)	5517519
Greece	7611075	Spain	411157
Guatemala	2393933	Sri Lanka	5522526
Haiti	649662	Sweden (1000 – 1230 hrs.)	5511852
Honduras (Consulate General)	7803276	Switzerland	7614390
Iceland	5752108	Thailand	7690959
Indonesia	5519694	Tunisia	7345161
Ivory Coast (0900 – 1100 hrs.)	415275	Turkey (Consulate General)	7611016
Japan (Honorary Consulate)	5521183	U.K. (Consulate General), Commercial and Consular	663511
Korea	5628180	U.S.A.	5838111
Liberia	206493	Uruguay	403178
Malta (Consul General)	5521573	Venezuela	7640550

AIRPORT: Capodichino Airport, situated 8 km. from city. Full international services.
TIME: GMT plus 1 hour. Summer-time: March to September GMT plus 2 hours.
HOLIDAYS: Local and national holidays: New Year's Day (1st January); Epiphany (6th January); Liberation Day (25th April); Labour Day (1st May); Easter and day after Easter; Assumption B.V. Maria (15th August); Local Saints' Day (19th September); All Saints' Day (1st November); Immaculate Conception (8th December); Christmas Day (25th December); and 26th December.
POLICE/FIRE/AMBULANCE: Police Tel: 5544949; Fire 446555 or 115; Ambulance 7520850 or 7520696 or 794111, or call 113 and ask for service required.
TELEPHONES: Telephone system permits the connecting up of the ships in all berths with the city network.
IDENTIFICATION CARDS: Shore passes given by local police.
DEVELOPMENTS: *Bausan Pier:* Container Terminal to be extended to 300,000 sq.m. with capacity for 250,000 TEU.
Nuovo Darsena: Completed. Length 650 m., depth 13.0 m., berthing for 5 vessels.
AUTHORITY: Autorita Portuale di Napoli, Piazzale Pisacane, 80133 Napoli, Italy. *Tel:* (081) 2283111. *Telex:* 721271 Capna I. *FAX:* (081) 206888. *Contact:* Captain L. Dassatti, Harbour Master. Dr. F. d'Aniello, Administrator. Dr. G. Cappella, Vice-Administrator.
AGENT: See "Genoa".

OLBIA, Sardinia: 40.55 N. 09.31 E. (See Plan)

DOCUMENTS:
For Maritime Authority:
Arrival Report.
Crew List.
Passenger List.
Ship's Certificates, for sighting.
For Port Health:
Maritime Declaration of Health (2 copies).
Vaccination Certificates, for sighting.
For Customs:
List of Supplies and Engine Stores.
Cargo Manifest, enclosing Bills of Lading.
For Police:
Passenger List (2 copies).
Crew List (2 copies).
Shore Passes for all passengers and crew.

PILOTAGE: Pilots are requested by international code signals – Telegraphic address: Pilot – Olbia, at least 2 hours notice of arrival required. VHF of 15 Watts on pilot boat (Watch on Channel 16 – Working on Channels 6, 9, 12, 14) with service from 0500 hrs. till 0100 hrs. Pilot launch is wooden motor boat of 145 h.p. – speed 12 knots. Pilot boards 1 mile from lighthouse Isola Bocca. Vessels may anchor temporarily to await Pilot.
ANCHORAGE: In the Roads of Golfo Aranci.
RESTRICTIONS: Entrance kept clear for liners.
MAX. SIZE: Max. draft 20 ft.
HEALTH: Before arrival vessel to advise Agents if Free Pratique required, indicating state of health on board.
RADIO: The Port Authority listen on Channel 16 (VHF, range about 30 miles).
TUGS: 1 tug available, 1,910 h.p. Service is optional, tug normally meets vessel in vicinity of Isola Bianca.
CRANES: 1 of 6 tons and 1 of 32 tons on rails in the inner port (at the Benedetto Brin Quay). 3 mobiles of 15 tons, 11.75 tons and 5.7 tons.
STEVEDORES: Agents require ETA 24 hours before arrival in order to arrange gangs.
MEDICAL: Hospital facilities available. Vaccinations and inoculations can be done, except for yellow fever which must be done in Cagliari.
FRESH WATER: Available in inner port and Isola Bianca.
FUEL: Available only by tank truck, subject 2 to 3 days notice.
CONSULS: No local representatives.
GANGWAY/DECK WATCHMEN: Service is optional.
OPENING/CLOSING HATCHES: Work is exclusively done by stevedores.
CUSTOMS ALLOWANCES: 40 grammes tobacco per person per day. Not permitted to take tobacco out of the docks. Reasonable amount wine/spirits allowed for normal consumption on board.
AIRPORT: Olbia Airport is Olbia – Costa Esmeralda, 3 km. away. Regular services with Rome, Milan, Pisa, Bologna, Cagliari and Nice (this last one in Summertime).
TIME: GMT plus 1 hour. Summertime GMT plus 2 hours from March to September.
HOLIDAYS: New Year's Day (1st January); Liberation Day (25th April); Labour Day (1st May); Easter Monday; Assumption B. V. Maria (15th August); All Saints' Day (1st November); Immaculate Conception (8th December); Christmas Day (25th December); Boxing Day (26th December).
POLICE/AMBULANCE/FIRE: Police, 22380; Ambulance, 22394; Fire, 22222.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Shore passes required.
DEVELOPMENTS: Planned to dredge entrance to 10 m. depth.
AUTHORITY: Capitaneria di Porto di Olbia, Viale Isola Bianca, 07026 Olbia, Italy. *Tel:* (0789) 21243, 21637. *Telex:* 792080. *Contact:* F. Lucido, Il Comandante.

ORISTANO, Sardinia: 39.45 N. 08.30. E. (See Plan)

LOCATION: Oristano is situated on the West coast of Sardinia in the Gulf of Oristano. Oristano is the chief town of the province of Oristano and the population is in the region of 29,000.
RESTRICTIONS: Entry/Departure, berthing and unberthing carried out in daylight hours only as the port is not equipped with leading lights or buoys.
MAX. SIZE: Martini Silo Quay – Max. draft 8.5 m.
MI.CHI.SA – Max. draft. 5.0 m.
VHF: Oristano Pilots on Channels 16 and 12.
TUGS: One tug available. Larger vessels require additional tugs which must come from Porto Torres (at high cost).
BERTHING: The port consists of 2 harbours. The outer basin being located between the 2 breakwaters and used for general cargo purposes and the inner basin being the industrial harbour. The manoeuvring area between the outer and inner basin has a diameter of 450 m. and depth of 12 m. The depth of both outer and inner basins is 12 m. The outer basin when completed will have berthing space of 1,240 m. and the inner basin (for industrial traffic) will have 2,500 m.
Soc. Chimica del Tirso: Length of berth 48 m. Berth for discharge of liquid chemicals to industries in Ottana.
Banchina di Servizio: Service berth, length 70 m., for berthing of small vessels.
Banchina Industriale – Canale W-E Silos Mangimi Martini: Length 370 m. Berth for discharging cereals. 2 suction pipes and 2 arms available.

In the near future a plant will be built to produce fodder and animal feed.
Banchina Industriale – Canale W-E – MI. CHI. SA.: Length of berth 69 m. Vessels berth to load bentonite by means of conveyor.
MEDICAL: 2 hospitals with 280 beds.
AIRPORT: Civil airport at Cagliari, Alghera and Olbia (daily connections to Rome, Milan, Naples, Bergamo, Pisa, Turin, Venice and Nice) are only 1 hour's drive from Oristano by car.

SHIPMASTER'S REPORT: January 1979.
Port under construction.

This vessel (LOA 299 ft. Extreme breadth 43 ft. 9 in. draft 16 ft. 10 in.) was the fifth vessel to call at the port. We were unable to obtain Chart 3917 however, Chart 161A together with information given in sailing directions proved sufficient for the vessel to be brought to the anchorage

Pilotage: The Pilot advises that he wishes to be embarked close to a buoy in position Lat. 39° 53' N., Long. 08° 31' E. which is indicated on Chart 3917. The pilot boat is a small open boat and does not have any distinctive marks. This boat would not be suitable for taking out to the 'Gulf' especially with a strong Westerly wind.

The Pilot brings the buoy astern and then proceeds on the course of approximately S.E. directly towards the harbour entrance.

Anchorage: Agent requested vessel to anchor about 2 miles off "Grande Torres".

VHF: Not available.

Radio: The Agent requested an accurate ETA as he makes arrangements for the Pilot and on seeing the vessel at the anchorage notifies the receivers by telex. This is then followed by a written Notice of Readiness of berthing.

Berthing: The grain silo berth is at the North side of "Canale Industriale" at its mid-length. This vessel swung with the aid of the port anchor and berthed starboard side alongside.

The quay is constructed of solid concrete and rises to a height of about 8 ft. above the water level. At the water line there is a ridge of about 9 in. extending along the whole length of the quay. Rubber fenders about 2 ft. in diameter are chained to the face of the quay at approximately 120 ft. intervals.

Once the vessel is alongside and against the fenders, it is protected from the concrete ridge but during berthing it would be possible to land on the projection because of the spacing of the fenders.

Bollards are also approximately 120 ft. apart except for one situated ahead of the vessel which is approximately 150 ft. from the next one aft. They coincide with the fenders.

The breakwater protects the harbour but difficulty may be experienced alongside due to swell following strong winds from a Westerly direction.

Port Facilities: Access to the vessel by road vehicle and fresh water facilities are still to be provided.

Harbour does not appear to provide any fire fighting facilities and when the grain silo is closed there is no telephone available.

It is about 10 miles by car to Oristano and the Agent's office. Half of the journey is by unmade road. There are no ship chandlers or repair facilities available in Oristano. Taxi drivers are reluctant to drive their vehicles over the rough ground and made additional high charges for the journey. The ship's agency was very helpful and went to great lengths to arrange for ship's laundry and to have water delivered to the vessel by truck. They also made some purchase of small items for the vessel.

The port of Oristano is likely to become a large complex and it must be assumed that provision of services to ships will be developed.

SHIPMASTER'S REPORT: March 1984 (Update on January 1979 report).

Our vessel LOA 191 m. arrived with laden draft of 35 ft. 5 in. to discharge a part cargo of 12,000 tonnes of grain.

Pilot station is under construction, but Pilot has (at home) VHF listening on Channel 12. So there is VHF communication with "Pilot Station".

Anchoring position according to Agent's cable is Lat. 39° 51.2' N., Long. 08° 28.0' E. and Pilot informed us by VHF when we were approaching the anchorage not to anchor further East than 1.5 miles from a line joining Cape San Marcos and Cape Frasca lights (due to our deep draft). Finally we anchored in position Lat. 39° 50.2' N., Long. 08° 28.5' E.

Pilot boat is still a small open boat with outboard engine, but they were expecting a new fast pilot boat in March 1984.

There is a white and red fairway buoy at approximate position, bearing from Cape S. Marcos light 063° distance 3.5 miles. The following 3 pairs of buoys green and red (red to port entering) and finally 1 red buoy. None of the buoys had lights at the beginning of March 1984.

Therefore entering and leaving the port is permitted only in daylight.

There is a tug stationed at Oristano of about 500 b.h.p., but when large vessels are expected a tug of about 5,000 b.h.p. comes from either Porto Torres or Cagliari. We were told that "large" vessels means more than 5,000 tons gross, but we could not confirm the size information. Naturally we had the assistance of both tugs in mooring and unmooring. The 5,000 b.h.p. tug made fast forward well outside the buoyed channel.

The buoyed channel has minimum depth 13 m. and the depth alongside "Martini" grain pier is 11.5 m., but in charter party draft limitation was 36 ft. SW.

Grain vessels berth port side alongside and when leaving they are swung by tugs and engine just in front of the pier as Canal Maritime is dredged to 11.5 m.

Grain Pier has good fenders but while the head of the vessel is somewhat protected by the silo, the stern is exposed to the strong Northwesterly and Westerly winds and at least 6 stern ropes, 1 breast and 2 springs aft must be passed ashore.

There is a local Shipchandler, but large orders must come from Cagliari.

Fresh water is available but very expensive and only by truck, minimum order 20 tonnes at 25,000 lire per tonne.

A new road of 6 km. connects the port with the town of Oristano.

SHIPMASTER'S REPORT: January 1985.

Vessel, LOA 148 m. Beam 22 m., visited Oristano (Lat. 39° 45' N., Long. 08° 30' E.), to unload maize with deepest draft 9.00 m.

Approaching: We reached pilot boarding ground/anchorage safely by steering to sea buoy at the entrance of Oristano Gulf. Sea buoy was recently installed at Lat. 39° 45' N., Long. 08° 29' E. (position approx.) but unlit, at night it can easily be detected by radar.

Anchorage: North: Close to sea buoy in 6 m. – 7 m. for light draft vessel. South: Close to sea buoy in 15 m. – 16 m. for deep draft vessel.

Pilotage: Pilotage is compulsory, only one Pilot at this port. ETA notice can be given 2 hours prior to arrival through VHF Channel 12 and Pilot keeps in touch with incoming vessel with his own radio. Pilot usually boards the vessel near the sea buoy and takes ship to harbour along a buoyed channel, which was also recently installed and reached both entrance breakwaters. It was installed according to IALA buoyage system (red to port) but unlit. Entry, departure and (un)berthing was restricted at night time.

Tugs: One tug only available and meets the vessel near the breakwater, ship's line was used. If Master insists on extra tug for berthing/unberthing in heavy weather, 48 hours prior notice is necessary, high cost is imposed as extra tug will come from Port of Cagliari. Master should pay special attention to (un)berthing with one tug, which is too low-powered to control a large vessel.

Manoeuvring:

(a) Depth: Buoyed channel was dredged to 13 m. and depth of both inner and outer port is 12 m.

(b) Buoyed channel and entrance breakwater about 200 m. wide and the inner basin entrance is 200 m. wide. Both inner and outer basins have plenty of room for turning around, diameter about 800 m.

General:

(a) Fresh water can be supplied by truck only.

(b) Fuel available by truck.

(c) Provisions and bonded stores can be purchased, ship suppliers provided assorted items, price is very reasonable.

(d) Cash advance in U.S. currency is restricted to small amounts as bank could not collect too much foreign currency.

(e) Density 1025.

PALERMO, Sicily: 38.07 N. 13.20 E. (See Plan)

DOCUMENTS:

6 Crew Lists.
6 Passenger Lists.
Provisions Manifest.
Manifest of Crew Personal Effects.
Cargo Manifest.
Arrival Report, completed on arrival.
Maritime Declaration of Health Certificate, completed on arrival.
Ship's Certificates including Italian Authority Dues.
Vaccination Certificates for sighting.

PILOTAGE: Compulsory for vessels over 499 gross tons. Pilot station keeps listening watch on VHF Channel 12. Pilot joins vessel 1 mile off port entrance. Pilot can be requested by International Code Signals. Pilot station and every Pilot equipped with walkie-talkie VHF set. In case of rough weather pilot boat will be in the bay and will lead ships through port entrance where Pilot will be able to board.

Line Handling: Compulsory for vessels over 499 g.r.t. Line handlers are normally employed at Pilot's orders but they can be directly contacted by VHF Channel 12.

ANCHORAGE: It is advisable to use Pilot for anchoring in Palermo Bay.

RESTRICTIONS: No entry restriction, but there is a daily ferry service from Naples arriving at about 0645 hrs. and sailing at 2030 hrs. and another ferry service four times a week (Monday, Wednesday, Friday and Sunday) arriving at about 1300 hrs. and sailing 1500 hrs. No vessel is allowed to leave or enter the port half an hour before arrival or sailing of these vessels.

MAX. SIZE: Max. draft is up to 44 ft. (13.40 m.) according to the quay. Tankers up to 15 m. draft.

HEALTH: Free Pratique may be requested by radio to "Sanimare", Palermo, between 12 to 6 hours before arrival advising vessel's name, nationality, last port, number of passengers and crew, and state of health on board. Pratique is automatic for vessels coming from ports in Italy, U.K., France, Belgium, Netherlands, Germany and Greece.

RADIO: Naples Radio, Roma Radio, Cagliari Radio or Palermo Radio.

VHF: Port Captain listens on Channel 16 from 0800 hrs. – 2000 hrs.

TUGS: Four tugs are available with up to 2,000 h.p. Tugs normally join vessel in the bay. Ship's lines are used.

BERTHING:

Pier/Quay	*Length* (m.)	*Maximum draft* (ft.)	(m.)
Quattroventi Quay	235	24	7.40
Puntone Quay (containers)	400	44	13.40
S.Lucia Pier – East side	50	31	9.40
S.Lucia Pier – South side	180	24-31	7.40-9.40
Marinai d'Italia – Quay 1	115	34	10.40
Piave Pier – North side	326	37.5	11.40
Piave Pier – East side	85	37.5	11.40
Piave Pier – South side	326	37.5	11.40
Marinai d'Italia – Quay 2	110	37.5	11.40
V.Veneto Pier – North side	326	37.5	11.40
V.Veneto Pier – East side	65	37.5	11.40
V.Veneto Pier – South side	326	24	7.40
Marinai d'Italia – Quay 3	115	24	7.40
Sammuzzo Quay	350	24	7.40
Trapezoidal Mole – East side	350	*	*

* The quay is under construction. When completed, within 3 years, max. draft will be 54 ft. (16.40 m.), depth 17.0 m.

CONTAINER HANDLING FACILITIES: One 30.5 tonne container crane (gantry crane) with outreach of 23 m. from quay edge, height of spreader above sea level 17.5 m.

One 42 tonne container crane (gantry crane) with outreach of 34 m. from quay edge, height of spreader above sea level 29.5 m.

One 42 tonne container crane (gantry crane) with outreach of 36 m. from quay edge, height of spreader above sea level 29.5 m.

One 40 tonne mobile container crane with outreach of 30 m. from quay edge, height of spreader above sea level 26 m.

6 heavy duty lift trucks with front loading lifting frame and spreader (lifting capacity from 6 tonnes – 40 tonnes).

15 tractors.

63 trailer trucks, length 20 ft. and 40 ft.

BULK HANDLING FACILITIES: Silos for cereals at Piave Pier with a total capacity of 29,100 metric tons; discharge rate 250-350 tonnes p.h. (by the suction tower).

Warehouses (either bonded or not) and sheds with a total area of 10,000 sq.m. and a total capacity of 72,000 cu.m.

Refrigerated warehouses with a total capacity of 11,796 cu.m.

Tanks for oils and wines (which can also be used for stockage of any other type of liquid products) with a total capacity of 5,000 cu.m., linked to docks by pipelines.

Open air areas for over 220,000 sq.m.

CRANES: 8 electric cranes with capacity of 15 tons, max. outreach 25 m. and min. outreach 7 m.

4 mobile cranes with capacities of 13 – 20 metric tons.

STEVEDORES: Gangs arranged through Agent for all goods except containers; engagement of gangs can be done in two ways (option left to Agent):

For "labour by day" (0800 – 1200 hrs. and 1300 – 1700 hrs.), to be ordered at 0730 hrs., 0830 hrs., 0930 hrs., 1030 hrs. to start work respectively at 0800 hrs., 0900 hrs., 1000 hrs., 1100 hrs., and 1230 hrs. to start work at 1300 hrs.

For "shifts labour" (first shift 0800 – 1430 hrs., second shift 1430 – 2100 hrs.), to start work at 0800 hrs. or 1430 hrs. to be ordered respectively at 0730 hrs. and 1230 hrs.

Container handling, (every service, including stevedores) is provided by Ente Autonomo del Porto (Port Authority) Palermo for two daily shifts (first shift 0700 – 1400 hrs.; second shift 1400 – 2100 hrs.).

Port labour capacity (quantity of goods, except containers, loaded in 8 hours daily work employing all stevedores available:

Fully loaded trucks and vans carried by Ro/Ro ships – 240.

Bulk cargo 1,700 tonnes.

General cargo 700 tonnes.

Port labour capacity for container handling 140 TEU per shift per crane.

MEDICAL: Assistance will be given upon request.

TANKERS:

Oil Products: Agip. Max. length 185 m., draft 32 ft., 25,000 d.w.t. Tankers drop anchors and are tied up at 2 buoys astern. Discharge rate 200–400 t.p.h.

Esso: Max. draft 15 m., no limitation for length. Vessel drops anchor and ties up at 2 buoys by stern. Discharging rate 600 – 700 t.p.h.

DENSITY: 1025.

FRESH WATER: Available at any quay and in the bay. Rate by hose 70 t.p.h., by barge 80 t.p.h. Barge capacity 250 tonnes.

FUEL: Fuel oil, gas oil and marine diesel available at the quays and by barge with capacity 360 tonnes.

CONSULS: Austria, Belgium, Bolivia, Brazil, Denmark, Finland, France, Germany, Greece, Liberia, Libya, Malta, Monaco, Netherlands, Norway, Panama, Peru, Portugal, Senegal, Spain, Sweden, Tunisia, U.S.A.

REPAIRS/DRY DOCKS: Palermo Shipyard, located in the Northeastern part of the port is operated by Fincantieri-Cantieri Navali Italiani, which groups all the largest Italian shipyards and is part of I.R.I.

It is one of the largest and most experienced shipyards in the Mediterranean area for ship repairs, maintenance, dry dock facilities, large marine motor services and for conversion of ships of any type and dimension.

The shipyard is equipped with:

One dry dock for vessels up to 400,000 d.w.t., fitted with 2 cranes of 120 tonnes and 2 cranes of 20 tonnes capacity.

One dry dock for vessels up to 20,000 d.w.t.

One floating dock for vessels up to 150,000 d.w.t.

One floating dock for vessels up to 32,000 d.w.t.

Two berths for vessels up to 400,000 d.w.t., fitted with cranes of 120 tonnes and 20 tonnes capacity.

One berth for vessels up to 160,000 d.w.t., fitted with cranes of 60 tonnes and 30 tonnes capacity.

Two piers (1×110 m. long and 1×150 m. long) for vessels up to 80,000 d.w.t., each fitted with a crane of 30 tonnes capacity.

A basin-dock for construction of new vessels up to 200,000 d.w.t. which can be alternatively employed for simultaneously building 2 or 4 units such as ferries, sections for lengthening vessels, etc.

A plate shop capable of machining 150 tonnes a day and which is equipped with all the latest machinery drilling and welding units.

Some engineering workshops also equipped with the latest types of machinery enabling total dismantling and re-assembly of engines.

Also see "Developments".

Tankers – Gas Free Plant:

A gas-free plant for tankers has recently been completed in proximity of the shipyard.

It is also able to purify dirty ballast water unloaded by oil tankers.

The plant has following potentialities:

Purify oily waters: 2,300 cu.m.p.h.

Reception of slops: 750 cu.m.p.h.

Steam production: 40 tonnes p.h.

Production of demineralized water: 20 cu.m.p.h.

Production of inert gas: 6,000 cu.m.p.h.

DRY DOCKS: Floating dock, length 285 m., breadth 46 m., suitable for vessels up to 150,000 d.w.t.

Floating dock, length 194 m., breadth 30 m., suitable for vessels up to 31,000 d.w.t.

Graving dock, length 172 m. breadth 28 m., suitable for vessels up to 25,000 d.w.t.

Graving dock, length 370 m. breadth 68 m., suitable for vessels up to 400,000 d.w.t.

Also see "Developments".

GANGWAY/DECK WATCHMEN: Not compulsory; usually number of watchmen required depends upon the Master.

OPENING/CLOSING HATCHES: Crew usually carry out this operation.

CUSTOMS ALLOWANCES: 40 cigarettes and one opened bottle wine/spirits per man.

REPATRIATION: Good facilities exist.

AIRPORT: Distance from Punta Raisi Airport is about 30 km. Airport served by regular services.

TIME: GMT plus one hour. Summertime: March to September, GMT plus 2 hours.

HOLIDAYS: All Sundays; New Year's Day (1st January); Epiphany (6th January); Liberation Day (25th April); Easter Monday; Labour Day (1st May); Patron Saint's Day (15th July); Assumption B.V. Maria (15th August); All Saints' Day (1st November); Immaculate Conception Day (8th December); Christmas Day (25th December); Saint Stephen's Day (26th December).

The following holidays are considered "Non-Workable" (except for Ro/Ro vessels employed in regular lines): 1st January, Easter Sunday, 1st May, 15th July, 15th August, 25th December.

POLICE/AMBULANCE/FIRE: Police, 583664, 333433. Ambulance, 306644. Fire, 587919.

TELEPHONES: Available if required.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Shore passes given by local police.

DEVELOPMENTS: One dry dock under construction for vessels up to 150,000 tons. A terminal for ocean dry bulk cargoes will be operational within 1 year.

AUTHORITY: Ente Autonomo del Porto di Palermo, Piazza Ucciardone 3, 90139 Palermo, Italy. *Tel:* 091-6277111. *Telex:* 910377 Eporto. *FAX:* 091-6374291. *Cables:* Ente Autonomo Porto – Palermo. *Contact:* Paolo Cimino, General Manager.

AGENT: See "Genoa".

PESARO: 43.56 N. 12.55 E. (See Plan)

DOCUMENTS:

2 copies Crew List.

2 copies Passenger List.

1 copy Stores List.

1 copy Cargo Manifest of Cargo to be discharged.

Clearance from last port.

PILOTAGE: Compulsory. Contact Agent to make arrangements.

ANCHORAGES: Anchorage is 2 miles off the port entrance.

RESTRICTIONS: Port Authority permission required before entering port.

MAX. SIZE: LOA 114 m., draft 13 ft.

HEALTH: Cable "Sanimare Ancona" 24 hours prior to arrival to obtain Free Pratique.

RADIO: No local station.

VHF: Harbour Office on Channel 16.

TUGS: Not required or available. Nearest tugs at Ancona and Ravenna.

BERTHING: There is 240 m. of operative quays at Banchini di Levante, Pontile Petroli (oil jetty) and Banchini di Ponente (Dockyard Quay).

Loading and discharging operations by ship's gear or shore gear.

CRANES: 1×25 tons and 1×30 tons.

BULK CARGO FACILITIES: Discharging facilities only.

STEVEDORES: *Working Hours:* Monday to Friday 0730 hrs. – 1200 hrs. and 1300 hrs. – 1800 hrs. Saturday 0730 hrs. – 1200 hrs.

MEDICAL: Hospital and doctor available.

TANKERS: Facilities at Pontile Petroli.

FRESH WATER: Available by truck.

FUEL: Gasoline and benzene available from 0730 hrs. – 1230 hrs.

FIRE PRECAUTIONS: There are 6 fire hydrants in the port.

CONSULS: None locally.

REPAIRS: Facilities available.

DRY DOCKS: 3 small docks.

SURVEYORS: None locally.

GANGWAY/DECK WATCHMEN: Not necessary.

OPENING/CLOSING HATCHES: By ship's crew.

CUSTOMS ALLOWANCES: Usual Italian Customs Regulations.

REPATRIATION: No facilities.

AIRPORT: No airport locally.

TIME: GMT plus 1 hour. Summertime GMT plus 2 hours.

HOLIDAYS: Cargo handling can be arranged on holidays.

POLICE/AMBULANCE/FIRE: Police: (721) 31089. Ambulance: (721) 64118. Fire: (721) 21201.

BANKS: Banca Nazionale Lavoro Pesaro, Via Mameli. Tel: (721) 3811.

SHIP SUPPLY SERVICE: Not available.

SHORE LEAVE: Permitted.

IDENTIFICATION CARDS: Not required.

GARBAGE DISPOSAL: No facilities.

WASTE OIL DISPOSAL: Facilities available.

SEAMAN'S CLUBS: None.

DELAYS: No delays.

AUTHORITY: Capitaneria di Porto, Calata Caio Duilio 47, 61100 Pesaro, Italy. *Tel:* (721) 400016, 400017. *Telex:* 561293. *FAX:* (721) 400016. *Contact:* Carlo Falcicchio, Port Captain.

PIOMBINO: 42.56 N. 10.33 E. (See Plan)

PORT LIMITS: Within 1 mile of Breakwater Light.

DOCUMENTS:

3 copies of Crew List.

3 copies List of Passengers in Transit or Disembarking.

1 Customs List, including ship and crew articles (Master is responsible for any excess or shortfall).

1 copy of Manifest and B/L of Cargo Discharging.

1 copy of Manifest for Cargo in Transit.

PILOTAGE: ETA to Agent in local time (GMT plus 1 hour). Summertime March to September (GMT plus 2 hours).

Pilots embark E.S.E. from breakwater light, distance 1 mile or less according to weather conditions. Pilotage usually available at greater distance on request of ship or Agent. Being an open road, care should be taken to provide shelter to Pilot embarking/disembarking facilities, especially in Southerly winds or a swell.

Pilot ladder according to Convention Safety of Life at Sea, and EMPA recommendations.

Southerly gales may prevent Pilot from embarking or even from approaching the ship; in this case pilot boat may guide limited size vessels to sheltered water and then embark Pilot (signals by lamp or by VHF on Channel 12).

Pilotage compulsory for vessels over 500 b.r.t. for entering and leaving the Port of Piombino and the Port of Tor del Sale (ENEL terminal 2.5 miles East of Piombino) also for shifting in harbour waters.

Pilotage compulsory for all ships directed to anchor in a wide area affected by submarine pipelines (See "Anchorage").

Pilot station has 2 Pilot boats fitted with VHF, keeping watch on Channel 12.

Pilots: Corporazione Piloti del Porto di Piombino e Tor del Sale, Piazzale Premuda, 30 – 57025 Piombino (LI). Tel: (0565) 30.535 (Office); 40.580, 30.175, 40.740, 41.345 (Residences).

ANCHORAGE: Outside the harbour, East or S.E. of Breakwater Light, according to size and draft of vessel. Pilotage compulsory for anchoring within a large area situated North of Lat. 42° 53' N., and East of Long. 10° 32' E. until Long. 10° 37' East. A submarine pipeline has been laid within the said area limits, starting from the coast and running in a Southwesterly direction to the Island of Elba. Anchorage is prohibited within a distance of 0.5 miles from the pipeline. International signals and marks are yet to be set on the pipeline.

Instructions for anchoring in the whole area are to be requested (compulsory) to the Pilots via VHF Channel 12, pending the setting up of a Vessel Traffic Service which is expected to start in the near future, possibly operated by the Pilotage Authority (See "VTS").

RESTRICTIONS: Berthing of large vessels (50,000 d.w.t. or more) is unadvisable in darkness or bad weather. Southerly gales prevent berthing, also for smaller vessels. Severe Southerly gales may force all ships in harbour to leave berths on account of swell and proceed to sea.

No restrictions on sailing but sometimes necessary to disembark Pilot at Portoferraio (Elba Island, 12 miles). Considerable swell in harbour during gales.

MAX. SIZE: Max. draft 39 ft., length 260 m., no breadth restriction. Can accommodate vessels up to 80,000 d.w.t.

HEALTH: Free Pratique automatic for vessels coming from Continent, "Q" flag not to be flown on entering. From other countries, including Spain and Portugal, usual procedure applies. Not coming from Continent it is possible to request Free Pratique by radio to "Sanimare, Piombino", between 12 to 6 hours before arrival.

RADIO: Civitavecchia or Livorno Radio.

VTS: Vessel Traffic Service is being organised by the pilotage service and will be operated from the ancient Semaphore Station in position: Lat. 42° 55' 21" N., Long. 10° 32' 33" E. The building is described in Sailing Directions as white with quadrangular tower and signal mast. VTS will furnish information, radar assistance and radar pilotage in the approaches to Piombino, etc.

BERTHING: Deltasider – Piombino (ex-Acciaierie di Piombino). Pier equipped for quick discharging of ore 1,000 tonnes per hour, coal 800 tonnes per hour, scrap, etc. – Berth No. 4 depth 39 ft. Berth No. 3 depth 35 ft. 6 in. Other commercial berths, max. depth 29 ft., equipped with mobile crane 10 tons.

4 berths for Ro-Ro vessels, max. draft 22 ft., max. length 140 m. (priority to vessels of Sardinia Lines). 2 additional Ro-Ro Berths for limited size ferries, reserved for Elba Island traffic (mostly tourists).

STEVEDORES: To enable Agent to order gangs, it is important to radio accurate ETA. Latest time to order gangs: shift 0600 – 1400 hrs., 1700 hrs. day before, shift 2200 – 0600 hrs., 1700 hrs. same day, shift 1400 – 2200 hrs., 1100 hrs. same day. Failure to give precise ETA may result in ship losing 12 – 24 hours, and the cost of the gang not employed.

MEDICAL: Doctor and dentist can attend sick crew. Hospital facilities available.

TANKERS: Oil terminal at Torre del Sale. In the vicinity of Torre del Sale (2.5 miles East of Piombino), a small shelter-harbour has been adapted for supplying the ENEL (National Electricity Board) electric plant with combustible oil. Torre del Sale shelter harbour can accommodate small tankers (up to 2,000 d.w.t.) with draft not exceeding 14 ft. Daylight traffic only with several restrictions for manoeuvring (use of tugs compulsory, wind not exceeding 14 knots, swell no higher than 1.5 m.). Pilotage compulsory and performed by Piombino Pilots with same charges and rules as in Piombino Harbour. VHF Channel 12.

FRESH WATER: Available at any pier, by pipeline.

FUEL: Available by barge from Livorno.

CONSULS: No Consuls.

REPAIRS: Small repairs only undertaken.

SURVEYORS: Cargo Inspectors available locally or from Leghorn. Surveyors available.

OPENING/CLOSING HATCHES: Normally carried out by crew (if stevedores, extra charge).

CERTIFICATES:

Certificate of Registry.
Load Line.
Safety Equipment.
Radio Certificate.
Derat Certificate.

REPATRIATION: It is possible to arrange repatriation.

HOLIDAYS: Cargo work can be arranged on all official holidays.

POLICE/AMBULANCE/FIRE: Police 31111 or 32222; Ambulance 36022; Fire 33333; Emergency call (all services) 113.

EMERGENCY CO-ORDINATION CENTRE: Capitaneria di Porto – Livorno. Tel: 21362. Telegraphic address: Compamare, Livorno.

BANKS: Monte dei Paschi di Siena, Filiale di Piombino, Corso Italia 77 – 57025 Piombino. Tel: 33021, 35125. Telex: 590195 Paspio I.

Banca Toscana, Filiale di Piombino, Via Lombroso 9/13 – 57025 Piombino. Tel: 33321. Telex: 590057.

Banca Popolare di Novara, Filiale di Piombino, Via della Repubblica 7 – 57025 Piombino. Tel: 31345. Telex: 590320 Novbca I. P.O.Box 165.

Cassa di Risparmio di Livorno, Filiale di Piombino, Corso Italia 111 – 57025 Piombino. Tel: 34290.

STORING: See "Prelims".

1. By truck.
2. Storing while discharging possible by barge or trucks.
3. Trucks are allowed to proceed to some berths, not all berths.
4. Forklift can be used.
5. Customs Regulations as for all Italian ports.
6. Usually not.

SHORE LEAVE: Allowed.

AUTHORITY: Ufficio Circondariale Marittimo, Piazzale Premuda 21, Piombino. *Tel:* (0565) 32506. *Contact:* Comandante del Porto.

PORTO EMPEDOCLE: 37.17 N. 13.32 E. (See Plan)

PORT LIMITS: The seaward boundaries of the port at which a vessel is considered to be an "arrived ship" and laytime to commence are regulated by contract.

DOCUMENTS:

3 Crew Lists.
3 Passenger Lists.
1 Maritime Health Declaration.
1 Cargo Manifest.
1 Crew Declaration.
2 Arrival Reports.
1 Stores List.

PILOTAGE: Pilotage is compulsory for ships with a gross tonnage of more than 500 tons.

International Code Signals and VHF Channel 16 are used to call Pilot. Pilot station telegraphic address "Corporazione Piloti – Porto Empedocle", Tel: 66035 – The Pilot boat displays International Pilot Signals. The Pilot normally boards about 0.25 miles from the port entrance.

ANCHORAGE: About 1 mile from the red light at the head of the Western mole between bearings 90° and 315° in depths of about 10 m.

RESTRICTIONS: No restrictions.

MAX. SIZE: North and East Pier (1st arm): Max. draft 21 ft.

East Pier (2nd arm): Max. draft 25 ft.

HEALTH: Pratique is given by the Port Medical Officer who boards all vessels coming from foreign ports. No Radio Pratique at present.

RADIO: No radio station, however it is possible to call "Capitaneria di Porto" (Harbour Master) operating on frequency of 2182 kHz from 0800 hrs. to 2000 hrs. local time.

VHF: Pilot station on Channel 16 (calling) and 12 (working) continuous. Harbour Master on Channel 16 from 0800 hrs. to 2000 hrs. local time.

RADAR: No radar available.

TUGS: One tug available.

BERTHING: 2 quays with max. draft 21 ft. and 1 pier with max. draft 25 ft. Berths are used for loading salt, fertilisers and general cargo and discharging bulk phosphate.

Salt is loaded at a rate of 300 t.p.h (approx.) at North Pier and 800 t.p.h. (approx.) at East Pier second arm.

CRANES: 1 crane for discharging phosphates. On request it is possible to obtain cranes from outside the port for heavy goods.

SPECIALISED CARGO-HANDLING FACILITIES: The berths are not equipped for handling containers or Ro/Ro traffic. Only small quantities of chemical liquid for local industries are handled.

BRIDGES: No bridges.

STEVEDORES: There are 2 ordering times each day. The first at 0730 hrs. and the second at 1230 hrs. It is possible to order gangs outside normal working hours through ship's Agent.

MEDICAL: All facilities available. Nearest hospital is located at Agrigento, 5 km. away.

TANKERS: No tanker facilities.

DENSITY: Salt water.

FRESH WATER: Only small quantities supplied by tank truck.

FUEL: Small quantities supplied by tank truck.

CONSULS: None.

REPAIRS: Small repairs only undertaken.

DRY DOCKS: None.

SURVEYORS: Registro Italiano Navale (R. I. Na. Agent).

GANGWAY/DECK WATCHMEN: Not necessary.

OPENING/CLOSING HATCHES: Normally carried out by crew, can be done by stevedores on request.

CUSTOMS ALLOWANCES: 40 grammes of tobacco per man. Normal daily consumption wine/spirits allowed.

CARGO GEAR: Shore gear normally used for discharging. Ship's gear used for loading phosphates.

REPATRIATION: Can be arranged through Agents.

AIRPORT: Palermo approx. 170 km., Catania approx. 200 km. Daily flights to main Italian airports.

TIME: GMT plus 1 hour. Summer time (between 29th March to 26th September) clocks advanced 1 hour.

HOLIDAYS: All Sundays, 1st January, 25th April, Easter Monday, 1st May, 15th August, 25th December (Christmas Day), 26th December, All Saints Day (1st November), Victory Day (4th November), Patron Saints (25th or 26th February).

POLICE/FIRE/AMBULANCE: Police: Tel: 66044-66124.

Fire Brigade: Agrigento Tel: 26102-20222.

Ambulance: Tel: by day 66600; by night 66858.

TELEPHONES: No telephones available for placing on board.

SERVICES: No tank-cleaning equipment, no facilities for discharge of tank-washings, no compass adjusting etc.
SHORE LEAVE: Allowed. Shore passes are issued by Immigration.
AUTHORITY: Capitaneria di Porto – Porto Empedocle, Via Gioieni 55, 92014 Porto Empedocle, Italy. *Tel:* (0923) 66640 – 66469. *Telex:* 910638 Comppe. *Cables:* Compamare Porto Empedocle. *Contact:* Harbour Master.

PORTO NOGARO: 43.37 N. 13.33 E. (See Plan)

PORT LIMITS: A vessel is considered to have arrived in the Roads when she is found to be in a circle with a radius of 1 mile from centre Lat. 43° 37' N., Long. 13° 33' E.
DOCUMENTS:
Safety Construction Certificate.
International Load Line Certificate.
International Tonnage Certificate.
Derat/Exemption Certificate.
IOPP Certificate (Tankers of g.r.t. ±150 tonnes).
The certificates are presented when the vessel is moored on the berth.
PILOTAGE: Pilotage is available and can be requested upon arrival in the Roads on Channels 16 or 12. The Pilots can also be reached on Tel: (0335) 6009417.
ANCHORAGES: The Roads opposite Porto Buso constitute a safe anchorage protected from Northerly winds.
RESTRICTIONS: Access to the port is only permitted during daylight hours.
MAX. SIZE: LOA 180 m., beam 22 m. and draft 7.0 m.
HEALTH: As per other Italian ports.
VHF: Continuous listening on Channel 16 (Locamare Porto Nogaro) and on Channel 12 (Pilots).
BERTHING: 6×100 m. berths and 5×80 m. berths.
A berth for offloading/loading cement is available. There are cranes and forklifts. Area provided for storage of goods is 90,000 sq.m.
STEVEDORES: *Working Hours:* 0800 hrs. – 1700 hrs.
DENSITY: Fresh water.
AIRPORT: Ronchi dei Legionari, at a distance of 30 km.
HOLIDAYS: Usual national holidays.
POLICE/AMBULANCE/FIRE: Police Tel: 113; Ambulance Tel: 118; Fire Brigade Tel: 115.
TELEPHONES: Public telephone at San Giorgio di Nogaro, in front of Town Hall.
BANKS: Several branches at San Giorgio di Nogaro.
AUTHORITY: Capitaneria di Porto, Ufficio Locale Marittimo, Via E. Fermi, Porto Nogaro, Italy. *Tel:* (0431) 66490. *FAX:* (0431) 66490. *Contact:* Captain Maurizio Torre, Harbour Master.

PORTO TORRES (Sassari): 40.51 N. 08.24 E.

DOCUMENTS:
4 Crew Lists.
1 Passenger List.
1 Maritime Health Declaration.
1 Arrival Report.
1 Crew Declaration.
PILOTAGE: International Code Signals are used to call Pilot. Pilot station telegraphic address, Corpo Piloti Porto Torres, tel. P. Torres 514936. The pilot boats carry international pilot signals. The Pilot normally boards about 1 mile from port entrance. On request, vessel can be boarded 3 miles off port entrance. Also see "VHF".
ANCHORAGE: About 1 mile from the green light on head of West Mole in depths of 25 m.
RESTRICTIONS: The oil terminal is exposed to winds and swell from N.W. to N.E. Heavy N.E. swell may delay berthing of larger vessels. Vessels should be ready to leave the berth if necessary due to adverse weather conditions.
MAX. SIZE: Inner Port: Length 120 m., draft 7 m. Outer Port: Length 150 m., draft 8 m. West Mole: Length 150 m., draft 8 – 10 m.
ANIC Terminal: Pier A, length no limit, draft 9 m. Pier B, length no limit, draft 12 m. Pier C, length no limit, draft 15 m. Pier E, length no limit, draft 8 m.
HEALTH: Pratique is given by the Port Medical Officer who boards all vessels coming from foreign ports. No Radio Pratique at present. Pratique not required for vessels arriving from Common Market countries.
RADIO: Coastal radio station, Porto Torres Radio P.T., call sign "IZN", operating on 2182 kHz. A continuous service.
VHF: Pilots work on Channel 12. Launch service from anchorage to Oil berths work on Channel 6. It is also possible to call Porto Torres Radio on VHF Channel 16 (Calling and Safety), with continuous service on Channels 25, 26 and 27.
Captain of the Port on VHF Channels 16, 12, and 9 and 14 from 0800 – 2000 hrs.
TUGS: Join vessel about 0.5 mile from port or from ANIC Piers. Ship's lines normally used. 3 tugs available.
STEVEDORES: There are two ordering times each day. The first at 0800 hrs. and the second at 1330 hrs. It is possible to order gangs outside normal working hours through ship's Agents.
BERTHING: Tankers are only permitted to berth between sunrise and sunset, but may unberth at any time.
Dry-cargo vessels may enter at any time.
There are two ports, viz. New Port and Old Port. The New Port is comprised of the ANIC Jetty, and the Old Port is that area bounded by the East and West Breakwater Moles, within which are the Inner and Outer Harbours. The Inner Harbour is composed of the general cargo wharves which have in service electrical cranes up to 10 tons capacity. The Outer Harbour has oil berths at the West Mole, and general cargo berths at the East Mole in depths of up to 8.23 m.
MEDICAL: All facilities available. Nearest hospital located at Sassari, 18 km. away.
TANKERS: *New Port,* consisting of the ANIC Jetty with Berths A, B, C and E and depths of water varying to allow ship drafts of between 9 m. and 15 m.
There are two lines of 20 in. and 10 in. diameter for deballasting ashore.
Old Port, the West Mole which forms the seaward limit of the (Outer) port has tanker berths in a depth of 7 m.
DENSITY: Salt water.
FRESH WATER: Can be supplied in limited quantities to vessels in port and in the roads. All berths are fitted with fresh-water connections, but supply is unreliable due scarcity. Advance notice is required for deliveries by barge or from tugs.
FUEL: All grades available by pipeline at ANIC piers. Elsewhere, can be supplied by barge, subject advance notice of 12 hours.
CONSULS: No local consular representation. French and Costa Rican Consuls in Sassari.
REPAIRS: Only minor repairs can be effected locally.
GANGWAY/DECK WATCHMEN: Authorised shore service available.
OPENING/CLOSING HATCHES: Normally done by crew, can be done by stevedores on request.
CUSTOMS ALLOWANCES: 40 grammes tobacco per man. Normal daily consumption wine/spirits allowed.
REPATRIATION: Can be arranged through Agents.
AIRPORT: Nearest at Alghero-Fertilia, 34 km. away. Daily flights to main Italian cities.
TIME: GMT plus 1 hour. Summer-time, clocks advanced 1 hour between 29th March and 26th September.
HOLIDAYS: New Year's Day (1st January); Epiphany (6th January); Liberation Day (25th April); Labour Day (1st May); Patron Saint (22nd May); Easter Day, Ascension Day, Corpus Domini (variable date); Proclamation Day (2nd June); St. Peter and St. Paul (29th June); Assumption B. V. Maria (15th August); All Saints' Day (1st November); Victory Day (4th November); Immaculate Conception (8th December); Christmas Day (25th December); Boxing Day (26th December).
POLICE/FIRE/AMBULANCE: Police tel. 514888; Fire, 31421; Ambulance, 54973. Sassari Fire Brigade, tel. 270521; Sassari Ambulance, tel. 242124.
SHORE LEAVE: Allowed. Shore passes are issued by Immigration.
IDENTIFICATION CARDS: Not required.
AUTHORITY: Capitaneria di Porto di Porto Torres, Porto Torres, Italy. *Tel:* (079) 502258, 502159. *Telex:* 792091. *Cables:* Compamare Porto Torres. *Contact:* Giorgio Maria Pompei, Port Captain.

PORTO VESME (Sardinia): 39.11 N. 08.23 E. (See Plan)

LOCATION: Porto Vesme Harbour is located on the S.W. coast of Sardinia (Lat. 39° 11' 5" N., Long. 08° 23' 5" E.) in the District of Portoscuso. The harbour was built exclusively to serve the Porto Vesme Industrial Complex.
Porto Vesme is an artificial harbour sheltered by two breakwaters, the one to the North giving protection against N.W. sea and the other to the South giving protection against South and S.W. seas (See "Plan"). The harbour is managed by the Sant'Antioco Maritime District Office which maintains a local branch office at Porto Vesme for this purpose.
Works in progress at the North breakwaters (See "Plan").
DOCUMENTS: See "Genoa".
APPROACHES: The entrance channel to the harbour mouth is marked by 2 pairs of light beacons and 1 pair of light buoys and has been dredged to a depth of 14 m. (45 ft. 11 in.) along its entire length. The manoeuvring area within the harbour and the sea area alongside the Eurallumina Wharf have been dredged to a depth of 13 m. (42 ft. 8 in.).
PILOTAGE: Pilotage is compulsory for vessels over 500 g.r.t.; mooring party services are compulsory for vessels over 400 g.r.t.
The Pilotage Authority for the area is at Sant'Antioco and is equipped with a VHF radio station. A pilot motor boat, equipped with VHF radio and radar, is stationed at Porto Vesme and is utilised for ferrying Pilots to and from ships. As a rule, Pilot services should be requested by ship's Agents, through the local branch of the Maritime District Office. Urgent requests can be made, however, directly by telephone or by VHF to the S. Antioco Pilotage Authority.
ANCHORAGE: Small and medium-size vessels generally anchor in the area off Ghinghetta Rock (Lat. 39° 11' N., Long. 08° 22' E.) just outside the harbour approach channel, where depths vary from 12 m. to 20 m. (Area "A", see "Plan"). Pilotage is compulsory in this area.
Deep-draft vessels usually prefer to await the Pilot or to anchor 2.5 miles North of Isola Piana (Lat. 39° 14' N., Long 08° 19' E.) (Area "B"). During settled weather periods, large-size vessels also tend to anchor off Ghinghetta Rock (Area "A"); should S.W. or N.W. gales rise while large size ships are riding at anchor in this area waiting to berth, Masters usually weigh anchor and lie either in the Gulf of Palmas (Area "C") or on the Southern side of the Island of San Pietro (Area "D"). From these anchorages, ships can subsequently either pick up the Pilot and proceed directly to port or return to ride at anchor off Ghinghetta Rock or Isola Piana.

MAX. SIZE: Max. Draft 12.0 m. Also see "Tankers".

RADIO/VHF:

Station	*Mode*	*Remarks*
Cagliari Radio	Radiotelegraphy Radiotelephony VHF	Italian Post and Telegraph, available to the general public
Sant'Antioco & Carloforte Maritime District Offices	Radiotelephony 2182 kHz VHF: Channels 16 and 14	For Safety at Sea only
Sant'Antioco Pilot Office	VHF: Channel 12	
Pilot Boat, Porto Vesme	VHF: Channel 12	
Harbour tug, Porto Vesme	Radiotelephony 2182 kHz VHF: Channel 6	

TUGS: A 2,100 h.p. tug, equipped with VHF radio, is stationed permanently at Porto Vesme Harbour; if necessary additional tugs can be brought in from Cagliari Port, provided that sufficient warning is given to the ship's Agent.

BERTHING: *Mooring Operations:* A mooring service equipped with a motor boat, is available at Porto Vesme Harbour to assist ships to berth and unberth; this service can be requested either (i) through local ship Agents or the Pilotage Authority, or (ii) directly. All ships at anchor in the roadstead can contact their Agents by radio or by radio-telephone through the Italian Post Office radio-telephone network. At the same time, the Sant'Antioco Pilotage Authority, the pilot boat and the tug stationed at Porto Vesme Harbour can also be contacted directly by VHF radio or by radio-telephone for any details concerning anchorage points, estimated time of berthing or departure, and any other information relevant to ship's manoeuvre or safety while in the roadstead or at berth.

Eurallumina Wharf: The Eurallumina Wharf is provided with 2 berths.

Northern Berth: It is intended for unloading bauxite and caustic soda bulk cargoes. This berth can accommodate ships up to 92,000 d.w.t., drawing up to 12 m. (39 ft. 4 in.)

Depth alongside berth	:	13.0 m. (42 ft. 8 in.)
Length of berth	:	250 m.
Bauxite unloader	:	One "Kocks" unloader with liftable jib
Maximum free digging rate	:	Up to 1,200 tonnes/p.h.
Travel range of unloader along the wharf	:	19.5 m.
Maximum travel range of grab	:	24.50 m. from edge of wharf fenders
Maximum height of grab, in "open" position	:	17.70 m. above sea level
Operative height	:	15 m.
Minimum height of grab, in "open" position	:	10 m. below sea level

Note: It is necessary that the maximum height of the hatches coamings above sea level is kept below 14 m. during unloading operations.

Southern Berth: It is intended for loading of alumina bulk cargoes and for unloading of caustic soda bulk cargoes. This berth can accommodate ships up to 32,000 d.w.t. drawing up to 12 m. (39 ft. 4 in.).

Depth alongside berth	:	13 m. (42 ft. 8 in.)
Length of berth	:	200 m.
Alumina loader	:	One "Claudius Peters" loader with liftable, swivelling arm.
Maximum loading rate	:	Up to 1,000 tonnes/p.h.
Travelling range of loader along the wharf	:	143.5 m.
Maximum height of the loading cone	:	9.50 m. above sea level
Minimum height of loading cone	:	10 m. below sea level
Maximum extension of the loading cone from the outer side of the fenders	:	23 m.
Stowage factor of alumina in bulk	:	1 cu.m./tonne (36 cu.ft./long ton)

Note: It is necessary that the maximum height of the hatch coamings above sea level is kept below 9.50 m. during loading operations.

Both berths are equipped with a flexible pipe – 6 in. in diameter with ASA 150 flanges – for connection to the tanker manifolds to unload caustic soda. All ships must be equipped in order to allow the connection of the above pipe.

A dock booster station is equipped with:
1 booster pump of 275 cu.m.p.h
1 booster pump of 125 cu.m.p.h.

Any of these pumps can be switched on as an aid to the ship's pumps.

Departure: Ships are requested to leave their berths immediately after completion of unloading/loading operations. The Eurallumina Wharf Superintendent may allow extra time at berth, provided that the delay is compatible with the wharf schedule.

Operating Hours: The wharf is operated on a continuous basis, day, night, 7 days a week (holidays included).

Damage: Should damage be caused to the ship by Eurallumina loading/unloading equipment, during unloading of bauxite and caustic soda or loading of alumina, the ship's crew is requested to deliver immediately a "damage report" to Eurallumina's shift foreman on duty to debate the claim as necessary.

TANKERS: Agent's Report: November 1989.

Berth	*Berth* No.	*Max. LOA* ft.	*Max. Draft* ft. in.	*Depth* ft. in.	*Products/Remarks*
Enel Jetty	4	656	27 06	28 00	Fuel and Petcoke
	5	590	20 00	20 06	Fresh Water and Gas Oil
Eurallumina Wharf					
N. Berth	6		†39 04	42 08	Bauxite and Caustic Soda
S. Berth	7		†39 04	42 08	Alumina and Caustic Soda † Max. draft on arrival.
Samin Jetty	8	393	28 00	29 00	Sulphuric Acid

Enel Jetty: Fuel oil/gas oil/fresh water discharge. The jetty is equipped with 3 lines. Two lines of 10 in. and 8 in. are used for the fuel oil and fresh water, the third line of 6 in. is used for gas oil.

Average discharging rates:	Gas oil	400 t.p.h.
	Fuel oil	800 t.p.h.
	Fresh Water	400/600 t.p.h.

Euroallumina Wharf: Caustic Soda Discharge – both Northern and Southern berths are equipped with a flexible hose for the connection with tankers' manifolds. A pumping station ashore is equipped with 1 booster pump of 275 cu.m.p.h. and another booster pump of 125 cu.m.p.h. One of these pumps could be used to assist vessel's pumps.

Average discharging rate 200 t.p.h. – 400 t.p.h.

Samin Jetty:
Length of berth: 40 m.
Max. LOA: 120 m. (to be checked when fixing).

The jetty is equipped with 2 flexible hoses of 4 in. diameter. All vessels must be duly equipped in order to allow connection of the above hoses.

Average loading rate: 450 tonnes.p.h. – 500 tonnes per hour.

IMPORTANT: Pilotage is compulsory for the transit of St. Peter's Channel.

Berthing/unberthing operations are only allowed after sunrise and before sunset, as, according to Harbour Master's order, port is closed during the night.

FRESH WATER: Available, but in short supply. Preferably vessels should arrive with sufficient water on board in order to avoid the heavy charges incurred in deliveries by tank lorries.

FUEL: Not available.

AIRPORT: Elmas, the airport of Cagliari, is only 1 hour by car from Porto Vesme Harbour and is connected to the major international airports on the mainland by several regular daily flights.

TIME: Local time at Porto Vesme harbour is GMT plus 1 hour, i.e. Central European Time. Summertime (GMT plus 2 hours) starts and ends, according to relevant EEC schedules.

WEATHER: *Tides:* Here, as elsewhere in the Mediterranean, the tidal range is very small; the highest tide is only 0.3 m. above the MLWS.

Currents: Since tidal currents are non-existent along the coast, the currents are exclusively wind and/or wave induced.

Wind: Prevailing wind directions are (in order of frequency): N.W. ("Maestrale", 4th quadrant) S.S.E. and E. ("Scirocco" and "Levante", 2nd quadrant) and S.W. ("Libecco", 3rd quadrant); maximum recorded wind speed: 55 knots from the N.W. direction ("Maelstrale").

Visibility: Normally excellent; during the hot Summer months, visibility may occasionally be reduced by early morning mists.

Weather-Temperature: The ambient temperature practically never drops to 0°C during the winter months and rarely exceeds 32°C during the Summer; permanent breezes in the San Pietro Channel mitigate the heat of the Summer. Relative humidity is normally 60-70%; peak values of 100% high and 20% low have been recorded, but are extremely infrequent.

The yearly rainfall varies from a minimum of 350 mm. to a maximum of 500 mm.; rainy periods are more prevalent in Autumn and Winter and at the beginning of Spring.

More detailed information can found either in Italian Sailing Directions or in those issued by other maritime countries.

GENERAL: The town of Portoscuso, situated 1 km. to the North of harbour, has both telegraph and public telephone facilities linked to the national and international telegraph and telephone networks. Excellent roads connect Portoscuso to the nearby mining town of Iglesias and Carbonia; both Iglesias and Carbonia are within easy driving distance of Porto Vesme Harbour and have hospital facilities and local branches of central government departments.

Safety Provisions: The Pilot assisting a ship for berthing at the Eurallumina wharf will give the ship's Master any local navigational information which may be required for bringing the vessel safely into port and for docking it securely alongside the wharf; the wharf is provided with numerous bollards and is protected with rugged fenders.

The ship must be well secured to the wharf according to standard nautical practice and made fast with ropes of adequate strength and in good order.

Since the local Maritime District Office is not in a position to issue regular gale/storm warnings, Masters are advised to rely on their ship's radio for weather forecasts so that, in the event of a gale warning, sufficient time will be available for them to take the necessary steps to avoid damage to the ship, to the wharf, or to port installations.

Derricks, cranes, and any other hoisting equipment on board must be stowed so as not to interfere with unloading or loading operations; derricks shall not be lowered on the side facing the wharf. On request, the ship's hoisting equipment will be placed (fully manned) at the disposal of Eurallumina.

The ship's deck and holds must be adequately illuminated after dark, so that loading and unloading of ship's equipment (grab bucket, power shovel, hose connections) can be operated correctly and so that personnel shovelling away and sweeping up bauxite in the hold and on deck may work safely and efficiently.

All access to the wharf by truck or by any other means of transport for the loading and unloading of ship's store or equipment is subject to clearance beforehand by the Wharf Superintendent and will only be permitted if the presence of vehicles on the wharf does not in any way interfere with cargo operations.

Access to and from the ship and/or wharf will normally be restricted to the ship's gangway. The gangway, which should be run out immediately after berthing, must be easily accessible at all times, safe for public use, and adequately illuminated at night. If the ship's gangway is not hinged at the root, it must be equipped with an auxiliary footbridge of about 4 m. at the lower end to reach the wharf over the fenders.

It is remembered that spills, splashes or puddles of caustic soda could be found on the wharf during the unloading operations of the product, and be a danger to people.

SERVICES: No tank-cleaning equipment, no facilities for discharge of tank-washings, no compass adjusting etc.
SHORE LEAVE: Allowed. Shore passes are issued by Immigration.
AUTHORITY: Capitaneria di Porto – Porto Empedocle, Via Gioieni 55, 92014 Porto Empedocle, Italy. *Tel:* (0923) 66640 – 66469. *Telex:* 910638 Comppe. *Cables:* Compamare Porto Empedocle. *Contact:* Harbour Master.

PORTO NOGARO: 43.37 N. 13.33 E. (See Plan)

PORT LIMITS: A vessel is considered to have arrived in the Roads when she is found to be in a circle with a radius of 1 mile from centre Lat. 43° 37' N., Long. 13° 33' E.
DOCUMENTS:
Safety Construction Certificate.
International Load Line Certificate.
International Tonnage Certificate.
Derat/Exemption Certificate.
IOPP Certificate (Tankers of g.r.t. ±150 tonnes).
The certificates are presented when the vessel is moored on the berth.
PILOTAGE: Pilotage is available and can be requested upon arrival in the Roads on Channels 16 or 12. The Pilots can also be reached on Tel: (0335) 6009417.
ANCHORAGES: The Roads opposite Porto Buso constitute a safe anchorage protected from Northerly winds.
RESTRICTIONS: Access to the port is only permitted during daylight hours.
MAX. SIZE: LOA 180 m., beam 22 m. and draft 7.0 m.
HEALTH: As per other Italian ports.
VHF: Continuous listening on Channel 16 (Locamare Porto Nogaro) and on Channel 12 (Pilots).
BERTHING: 6×100 m. berths and 5×80 m. berths.

A berth for offloading/loading cement is available. There are cranes and forklifts. Area provided for storage of goods is 90,000 sq.m.
STEVEDORES: *Working Hours:* 0800 hrs. – 1700 hrs.
DENSITY: Fresh water.
AIRPORT: Ronchi dei Legionari, at a distance of 30 km.
HOLIDAYS: Usual national holidays.
POLICE/AMBULANCE/FIRE: Police Tel: 113; Ambulance Tel: 118; Fire Brigade Tel: 115.
TELEPHONES: Public telephone at San Giorgio di Nogaro, in front of Town Hall.
BANKS: Several branches at San Giorgio di Nogaro.
AUTHORITY: Capitaneria di Porto, Ufficio Locale Marittimo, Via E. Fermi, Porto Nogaro, Italy. *Tel:* (0431) 66490. *FAX:* (0431) 66490. *Contact:* Captain Maurizio Torre, Harbour Master.

PORTO TORRES (Sassari): 40.51 N. 08.24 E.

DOCUMENTS:
4 Crew Lists.
1 Passenger List.
1 Maritime Health Declaration.
1 Arrival Report.
1 Crew Declaration.
PILOTAGE: International Code Signals are used to call Pilot. Pilot station telegraphic address, Corpo Piloti Porto Torres, tel. P. Torres 514936. The pilot boats carry international pilot signals. The Pilot normally boards about 1 mile from port entrance. On request, vessel can be boarded 3 miles off port entrance. Also see "VHF".
ANCHORAGE: About 1 mile from the green light on head of West Mole in depths of 25 m.
RESTRICTIONS: The oil terminal is exposed to winds and swell from N.W. to N.E. Heavy N.E. swell may delay berthing of larger vessels. Vessels should be ready to leave the berth if necessary due to adverse weather conditions.
MAX. SIZE: Inner Port: Length 120 m., draft 7 m. Outer Port: Length 150 m., draft 8 m. West Mole: Length 150 m., draft 8 – 10 m.

ANIC Terminal: Pier A, length no limit, draft 9 m. Pier B, length no limit, draft 12 m. Pier C, length no limit, draft 15 m. Pier E, length no limit, draft 8 m.
HEALTH: Pratique is given by the Port Medical Officer who boards all vessels coming from foreign ports. No Radio Pratique at present. Pratique not required for vessels arriving from Common Market countries.
RADIO: Coastal radio station, Porto Torres Radio P.T., call sign "IZN", operating on 2182 kHz. A continuous service.
VHF: Pilots work on Channel 12. Launch service from anchorage to Oil berths work on Channel 6. It is also possible to call Porto Torres Radio on VHF Channel 16 (Calling and Safety), with continuous service on Channels 25, 26 and 27.

Captain of the Port on VHF Channels 16, 12, and 9 and 14 from 0800 – 2000 hrs.
TUGS: Join vessel about 0.5 mile from port or from ANIC Piers. Ship's lines normally used. 3 tugs available.
STEVEDORES: There are two ordering times each day. The first at 0800 hrs. and the second at 1330 hrs. It is possible to order gangs outside normal working hours through ship's Agents.
BERTHING: Tankers are only permitted to berth between sunrise and sunset, but may unberth at any time.

Dry-cargo vessels may enter at any time.

There are two ports, viz. New Port and Old Port. The New Port is comprised of the ANIC Jetty, and the Old Port is that area bounded by the East and West Breakwater Moles, within which are the Inner and Outer Harbours. The Inner Harbour is composed of the general cargo wharves which have in service electrical cranes up to 10 tons capacity. The Outer Harbour has oil berths at the West Mole, and general cargo berths at the East Mole in depths of up to 8.23 m.
MEDICAL: All facilities available. Nearest hospital located at Sassari, 18 km. away.
TANKERS: *New Port,* consisting of the ANIC Jetty with Berths A, B, C and E and depths of water varying to allow ship drafts of between 9 m. and 15 m.

There are two lines of 20 in. and 10 in. diameter for deballasting ashore.

Old Port, the West Mole which forms the seaward limit of the (Outer) port has tanker berths in a depth of 7 m.
DENSITY: Salt water.
FRESH WATER: Can be supplied in limited quantities to vessels in port and in the roads. All berths are fitted with fresh-water connections, but supply is unreliable due scarcity. Advance notice is required for deliveries by barge or from tugs.
FUEL: All grades available by pipeline at ANIC piers. Elsewhere, can be supplied by barge, subject advance notice of 12 hours.
CONSULS: No local consular representation. French and Costa Rican Consuls in Sassari.
REPAIRS: Only minor repairs can be effected locally.
GANGWAY/DECK WATCHMEN: Authorised shore service available.
OPENING/CLOSING HATCHES: Normally done by crew, can be done by stevedores on request.
CUSTOMS ALLOWANCES: 40 grammes tobacco per man. Normal daily consumption wine/spirits allowed.
REPATRIATION: Can be arranged through Agents.
AIRPORT: Nearest at Alghero-Fertilia, 34 km. away. Daily flights to main Italian cities.
TIME: GMT plus 1 hour. Summer-time, clocks advanced 1 hour between 29th March and 26th September.
HOLIDAYS: New Year's Day (1st January); Epiphany (6th January); Liberation Day (25th April); Labour Day (1st May); Patron Saint (22nd May); Easter Day, Ascension Day, Corpus Domini (variable date); Proclamation Day (2nd June); St. Peter and St. Paul (29th June); Assumption B. V. Maria (15th August); All Saints' Day (1st November); Victory Day (4th November); Immaculate Conception (8th December); Christmas Day (25th December); Boxing Day (26th December).
POLICE/FIRE/AMBULANCE: Police tel. 514888; Fire, 31421; Ambulance, 54973. Sassari Fire Brigade, tel. 270521; Sassari Ambulance, tel. 242124.
SHORE LEAVE: Allowed. Shore passes are issued by Immigration.
IDENTIFICATION CARDS: Not required.
AUTHORITY: Capitaneria di Porto di Porto Torres, Porto Torres, Italy. *Tel:* (079) 502258, 502159. *Telex:* 792091. *Cables:* Compamare Porto Torres. *Contact:* Giorgio Maria Pompei, Port Captain.

PORTO VESME (Sardinia): 39.1 N. 08.23 E. (See Plan)

LOCATION: Porto Vesme Harbour is located on the S.W. coast of Sardinia (Lat. 39° 11' 5" N., Long. 08° 23' 5" E.) in the District of Portoscuso. The harbour was built exclusively to serve the Porto Vesme Industrial Complex.

Porto Vesme is an artificial harbour sheltered by two breakwaters, the one to the North giving protection against N.W. sea and the other to the South giving protection against South and S.W. seas (See "Plan"). The harbour is managed by the Sant'Antioco Maritime District Office which maintains a local branch office at Porto Vesme for this purpose.

Works in progress at the North breakwaters (See "Plan").
DOCUMENTS: See "Genoa".
APPROACHES: The entrance channel to the harbour mouth is marked by 2 pairs of light beacons and 1 pair of light buoys and has been dredged to a depth of 14 m. (45 ft. 11 in.) along its entire length. The manoeuvring area within the harbour and the sea area alongside the Eurallumina Wharf have been dredged to a depth of 13 m. (42 ft. 8 in.).
PILOTAGE: Pilotage is compulsory for vessels over 500 g.r.t.; mooring party services are compulsory for vessels over 400 g.r.t.

The Pilotage Authority for the area is at Sant'Antioco and is equipped with a VHF radio station. A pilot motor boat, equipped with VHF radio and radar, is stationed at Porto Vesme and is utilised for ferrying Pilots to and from ships. As a rule, Pilot services should be requested by ship's Agents, through the local branch of the Maritime District Office. Urgent requests can be made, however, directly by telephone or by VHF to the S. Antioco Pilotage Authority.
ANCHORAGE: Small and medium-size vessels generally anchor in the area off Ghinghetta Rock (Lat. 39° 11' N., Long. 08° 22' E.) just outside the harbour approach channel, where depths vary from 12 m. to 20 m. (Area "A", see "Plan"). Pilotage is compulsory in this area.

Deep-draft vessels usually prefer to await the Pilot or to anchor 2.5 miles North of Isola Piana (Lat. 39° 14' N., Long 08° 19' E.) (Area "B"). During settled weather periods, large-size vessels also tend to anchor off Ghinghetta Rock (Area "A"); should S.W. or N.W. gales rise while large size ships are riding at anchor in this area waiting to berth, Masters usually weigh anchor and lie either in the Gulf of Palmas (Area "C") or on the Southern side of the Island of San Pietro (Area "D"). From these anchorages, ships can subsequently either pick up the Pilot and proceed directly to port or return to ride at anchor off Ghinghetta Rock or Isola Piana.

MAX. SIZE: Max. Draft 12.0 m. Also see "Tankers".

RADIO/VHF:

Station	*Mode*	*Remarks*
Cagliari Radio	Radiotelegraphy Radiotelephony VHF	Italian Post and Telegraph, available to the general public
Sant'Antioco & Carloforte Maritime District Offices	Radiotelephony 2182 kHz VHF: Channels 16 and 14	For Safety at Sea only
Sant'Antioco Pilot Office	VHF: Channel 12	
Pilot Boat, Porto Vesme	VHF: Channel 12	
Harbour tug, Porto Vesme	Radiotelephony 2182 kHz VHF: Channel 6	

TUGS: A 2,100 h.p. tug, equipped with VHF radio, is stationed permanently at Porto Vesme Harbour; if necessary additional tugs can be brought in from Cagliari Port, provided that sufficient warning is given to the ship's Agent.

BERTHING: *Mooring Operations:* A mooring service equipped with a motor boat, is available at Porto Vesme Harbour to assist ships to berth and unberth; this service can be requested either (i) through local ship Agents or the Pilotage Authority, or (ii) directly. All ships at anchor in the roadstead can contact their Agents by radio or by radio-telephone through the Italian Post Office radio-telephone network. At the same time, the Sant'Antioco Pilotage Authority, the pilot boat and the tug stationed at Porto Vesme Harbour can also be contacted directly by VHF radio or by radio-telephone for any details concerning anchorage points, estimated time of berthing or departure, and any other information relevant to ship's manoeuvre or safety while in the roadstead or at berth.

Eurallumina Wharf: The Eurallumina Wharf is provided with 2 berths.

Northern Berth: It is intended for unloading bauxite and caustic soda bulk cargoes. This berth can accommodate ships up to 92,000 d.w.t., drawing up to 12 m. (39 ft. 4 in.)

Depth alongside berth	:	13.0 m. (42 ft. 8 in.)
Length of berth	:	225 m.
Bauxite unloader	:	One "Kocks" unloader with liftable jib
Maximum free digging rate	:	Up to 1,200 tonnes/p.h.
Travel range of unloader along the wharf	:	19.5 m.
Maximum travel range of grab	:	24.50 m. from edge of wharf fenders
Maximum height of grab, in "open" position	:	17.70 m. above sea level
Operative height	:	15 m.
Minimum height of grab, in "open" position	:	10 m. below sea level

Note: It is necessary that the maximum height of the hatches coamings above sea level is kept below 14 m. during unloading operations.

Southern Berth: It is intended for loading of alumina bulk cargoes and for unloading of caustic soda bulk cargoes. This berth can accommodate ships up to 32,000 d.w.t. drawing up to 12 m. (39 ft. 4 in.).

Depth alongside berth	:	13 m. (42 ft. 8 in.)
Length of berth	:	200 m.
Alumina loader	:	One "Claudius Peters" loader with liftable, swivelling arm.
Maximum loading rate	:	Up to 1,000 tonnes/p.h.
Travelling range of loader along the wharf	:	143.5 m.
Maximum height of the loading cone	:	9.50 m. above sea level
Minimum height of loading cone	:	10 m. below sea level
Maximum extension of the loading cone from the outer side of the fenders	:	23 m.
Stowage factor of alumina in bulk	:	1 cu.m./tonne (36 cu.ft./long ton)

Note: It is necessary that the maximum height of the hatch coamings above sea level is kept below 9.50 m. during loading operations.

Both berths are equipped with a flexible pipe – 6 in. in diameter with ASA 150 flanges – for connection to the tanker manifolds to unload caustic soda. All ships must be equipped in order to allow the connection of the above pipe.

A dock booster station is equipped with:
1 booster pump of 275 cu.m.p.h
1 booster pump of 125 cu.m.p.h.

Any of these pumps can be switched on as an aid to the ship's pumps.

Departure: Ships are requested to leave their berths immediately after completion of unloading/loading operations. The Eurallumina Wharf Superintendent may allow extra time at berth, provided that the delay is compatible with the wharf schedule.

Operating Hours: The wharf is operated on a continuous basis, day, night, 7 days a week (holidays included).

Damage: Should damage be caused to the ship by Eurallumina loading/unloading equipment, during unloading of bauxite and caustic soda or loading of alumina, the ship's crew is requested to deliver immediately a "damage report" to Eurallumina's shift foreman on duty to debate the claim as necessary.

TANKERS: Agent's Report: November 1989.

Berth	*Berth* No.	*Max. LOA* ft.	*Max. Draft* ft. in.	*Depth* ft. in.	*Products/Remarks*
Enel Jetty	4	656	27 06	28 00	Fuel and Petcoke
	5	590	20 00	20 06	Fresh Water and Gas Oil
Eurallumina Wharf					
N. Berth	6		†39 04	42 08	Bauxite and Caustic Soda
S. Berth	7		†39 04	42 08	Alumina and Caustic Soda † Max. draft on arrival.
Samin Jetty	8	393	28 00	29 00	Sulphuric Acid

Enel Jetty: Fuel oil/gas oil/fresh water discharge. The jetty is equipped with 3 lines. Two lines of 10 in. and 8 in. are used for the fuel oil and fresh water, the third line of 6 in. is used for gas oil.

Average discharging rates:		
	Gas oil	400 t.p.h.
	Fuel oil	800 t.p.h.
	Fresh Water	400/600 t.p.h.

Euroallumina Wharf: Caustic Soda Discharge – both Northern and Southern berths are equipped with a flexible hose for the connection with tankers' manifolds. A pumping station ashore is equipped with 1 booster pump of 275 cu.m.p.h. and another booster pump of 125 cu.m.p.h. One of these pumps could be used to assist vessel's pumps.

Average discharging rate 200 t.p.h. – 400 t.p.h.

Samin Jetty:
Length of berth: 40 m.
Max. LOA: 120 m. (to be checked when fixing).

The jetty is equipped with 2 flexible hoses of 4 in. diameter. All vessels must be duly equipped in order to allow connection of the above hoses.

Average loading rate: 450 tonnes.p.h. – 500 tonnes per hour.

IMPORTANT: Pilotage is compulsory for the transit of St. Peter's Channel.

Berthing/unberthing operations are only allowed after sunrise and before sunset, as, according to Harbour Master's order, port is closed during the night.

FRESH WATER: Available, but in short supply. Preferably vessels should arrive with sufficient water on board in order to avoid the heavy charges incurred in deliveries by tank lorries.

FUEL: Not available.

AIRPORT: Elmas, the airport of Cagliari, is only 1 hour by car from Porto Vesme Harbour and is connected to the major international airports on the mainland by several regular daily flights.

TIME: Local time at Porto Vesme harbour is GMT plus 1 hour, i.e. Central European Time. Summertime (GMT plus 2 hours) starts and ends, according to relevant EEC schedules.

WEATHER: *Tides:* Here, as elsewhere in the Mediterranean, the tidal range is very small; the highest tide is only 0.3 m. above the MLWS.

Currents: Since tidal currents are non-existent along the coast, the currents are exclusively wind and/or wave induced.

Wind: Prevailing wind directions are (in order of frequency): N.W. ("Maestrale", 4th quadrant) S.S.E. and E. ("Scirocco" and "Levante", 2nd quadrant) and S.W. ("Libecco", 3rd quadrant); maximum recorded wind speed: 55 knots from the N.W. direction ("Maelstrale").

Visibility: Normally excellent; during the hot Summer months, visibility may occasionally be reduced by early morning mists.

Weather-Temperature: The ambient temperature practically never drops to 0°C during the winter months and rarely exceeds 32°C during the Summer; permanent breezes in the San Pietro Channel mitigate the heat of the Summer. Relative humidity is normally 60-70%; peak values of 100% high and 20% low have been recorded, but are extremely infrequent.

The yearly rainfall varies from a minimum of 350 mm. to a maximum of 500 mm.; rainy periods are more prevalent in Autumn and Winter and at the beginning of Spring.

More detailed information can found either in Italian Sailing Directions or in those issued by other maritime countries.

GENERAL: The town of Portoscuso, situated 1 km. to the North of harbour, has both telegraph and public telephone facilities linked to the national and international telegraph and telephone networks. Excellent roads connect Portoscuso to the nearby mining town of Iglesias and Carbonia; both Iglesias and Carbonia are within easy driving distance of Porto Vesme Harbour and have hospital facilities and local branches of central government departments.

Safety Provisions: The Pilot assisting a ship for berthing at the Eurallumina wharf will give the ship's Master any local navigational information which may be required for bringing the vessel safely into port and for docking it securely alongside the wharf; the wharf is provided with numerous bollards and is protected with rugged fenders.

The ship must be well secured to the wharf according to standard nautical practice and made fast with ropes of adequate strength and in good order.

Since the local Maritime District Office is not in a position to issue regular gale/storm warnings, Masters are advised to rely on their ship's radio for weather forecasts so that, in the event of a gale warning, sufficient time will be available for them to take the necessary steps to avoid damage to the ship, to the wharf, or to port installations.

Derricks, cranes, and any other hoisting equipment on board must be stowed so as not to interfere with unloading or loading operations; derricks shall not be lowered on the side facing the wharf. On request, the ship's hoisting equipment will be placed (fully manned) at the disposal of Eurallumina.

The ship's deck and holds must be adequately illuminated after dark, so that loading and unloading of ship's equipment (grab bucket, power shovel, hose connections) can be operated correctly and so that personnel shovelling away and sweeping up bauxite in the hold and on deck may work safely and efficiently.

All access to the wharf by truck or by any other means of transport for the loading and unloading of ship's store or equipment is subject to clearance beforehand by the Wharf Superintendent and will only be permitted if the presence of vehicles on the wharf does not in any way interfere with cargo operations.

Access to and from the ship and/or wharf will normally be restricted to the ship's gangway. The gangway, which should be run out immediately after berthing, must be easily accessible at all times, safe for public use, and adequately illuminated at night. If the ship's gangway is not hinged at the root, it must be equipped with an auxiliary footbridge of about 4 m. at the lower end to reach the wharf over the fenders.

It is remembered that spills, splashes or puddles of caustic soda could be found on the wharf during the unloading operations of the product, and be a danger to people.

All persons entering the wharf area are requested to follow the marked pedestrian throughways and to keep away from any equipment which may be operating at the time, or from caustic manifolds. If, for any reason, it should prove necessary to board the ship by passing through the cordoned-off area, all possible precautions must be taken to avoid accidents and/or damage and also to avoid treading on bauxite or alumina or caustic spillages.

The Eurallumina Wharf is equipped with a built-in fire extinguishing system which, if necessary, can also be used by ships lying at berth.

On the wharf, 2 safety anti-caustic showers and 2 eye-washing devices are available; they are easily identified by green ever-lighted lamps and red painting

SHIPMASTER'S REPORT: 1975 (Updated 1984).

Harbour: The harbour is protected by two moles between which there is a wharf. A channel marked by buoys leads to the entrance.

Documents: On arrival the following documents are required.

Declaration of Health.
2 Crew Lists.
1 copy of last Port Clearance.
1 copy Vaccination List.
2 Stores Lists.
2 Personal Effects Lists.
1 Valid Derat Certificate.
All other ship's documents.

Radio Pratique: Unavailable.

Pilotage: For ships arriving the Pilot boards at 39° 14' N., 08° 19' E., but in severe North-Easterly gales the Pilot will board in Palmas Bay, position 39° 00' N., 08° 30' E. When leaving Port the Pilot leaves the ship abeam of Ghingetta Is., 3 cables off, position 39° 11' 05" N., 08° 22' 25" E. There is no pilot vessel, the Pilot boards from a tug.

Radio: Cagliari (IDC). No VHF service for pilotage.

Tugs: Two permanent tugs of 1,750 h.p. are operating and other tugs are available from Cagliari when necessary, and advising 4 days before ship's ETA.

Mooring Boat: Available.

Depths of Water:		
	In the Channel	14 m.
	Eurallumina Quay	13 m.
	Alsar Pier	8.5 m.
	Trade Quay	8.25 m.

Berthing: Eurallumina Quay (unloading point of bauxite vessels). Length 442 m. Height on surface of water 3.6 m. Large rubber sprung fenders 150 ft. apart are fixed to the quay. Double bollards 150 ft. apart.

Vessels using this quay usually berth starboard side to using the port anchor which is let go well off the berth.

Bauxite Discharging Rate: 15,000 tonnes/day. Discharging by grab.

Fresh Water: Available at the Trade Quay by tank cars. At Eurallumina Quay available at 15 cu.m./hr. (Boiler water only). No fresh water available at Alsar Pier.

Bunkers: Available by barge from Sarroch, about 70 miles from Porto Vesme.

Repairs: Limited minor repairs only and giving notice by radio. For Radio and Radar available at Cagliari.

Ship Chandler: Available advising Agent.

Consuls: No foreign representation.

Laundry: Available advising Agent.

Provisions: Fresh foods available but notice must be given immediately on arrival.

Airport: Cagliari about 90 km. from Porto Vesme. International schedule flights and domestic flights over the Italy Area.

Medical: Qualified doctors available ashore and also equipped hospitals. In emergency doctor will board ship.

Repatriation: Arrangements must be made with Agent in advance by cable or immediately on arrival.

SHIPMASTER'S REPORT: December 1984.

Porto Vesme is the name of the port and industrial complex. The local town is called Porto Scuso which may be better known to postal and telephone authorities.

Pilotage: Black pilot launch with VHF. Pilot carries portable VHF.

In strong N.W. winds Pilot requests vessels remain stationary, at Pilot Station, for boarding. Pilot disembarks West of Ghingetta Island, heading 340° using starboard side ladder.

Max. Size: Eurallumina Quay: Up to 12 m. draft permitted. (December 1984).

Tugs: One tug, nominal 1,400 h.p., is available at Porto Vesme. Other tugs available on order from Cagliari, etc.

Berthing: Very active rolling on Eurallumina Quay, fenders effective but strip all paint from hull. Local ships insert rubber tyres between ship and wooden faces of fenders. Long leads required on mooring lines to prevent breaking while rolling.

Fenders project at least 2 m. from wharf face, very difficult to swing gangway ashore causing delay. A brow may be more easily placed at first. Gangway or brow must have efficient rollers on ground.

SHIPMASTER'S REPORT: September 1991.

Charts: B.A.Charts No. 1207 and 1202.

Pilot: Main boarding ground is in the Northern area, but only in winds up to Force 5 or 6, especially when winds from the North.

Pilot boards about 2 miles North of Isla Piana from fast (35 knot) black hulled cutter. Pilot on VHF Channel 12.

Pilot also boards just North of Isla Di Sant'Antioco, but there is only 5.5 m. in passage Canale Di San Pietro.

Three pilots available. Our pilot seemed competent and spoke good English. Pilot service available from sunrise to sunset.

Pilot departs off Secche De La Ghinghetta Lighthouse.

Anchorage: Located in position Lat. 39° 13.5' N., Long. 08° 21' E. in 30 m., near Northern Pilot Station. The anchorage is very open to Northerly winds which are prevalent in Winter.

Anchorage also possible in position Lat. 39° 04.5' N., Long. 08° 19.5' E., off Isola Di Sant'Antioco in 40 m.

For vessels with draft less than 5.5 m., anchorage is inside islands of San Pietro and Sant'Antioco.

Channel: Dredged channel reported to be 13.0 m. but we only found 11.0 m., which pilot confirms.

Breakwater extension: From Molo Di Ponente (Fl.R.3s 11 m. 6 mile light (LL 1100.8)) for 234° × 300 m. (about 250 m. completed) then 200° × 100 m. Portable Fl.R. light on present extremity. New breakwater of rock construction.

Tugs: 1×1,000 h.p. available. Tug secured aft with ship's line. Additional tugs available from Cagliari.

Berth: For sulphuric acid loading, vessel berths inside Molo Di Levante (Berth No.8 "Samin"). Berth is of concrete construction and about 50 m. length, with good fenders.

Moorings were 2-2-2, each end, additional stern lines required in Northerly winds. Mooring boat runs lines.

Northerly winds make berthing difficult, but may be better when breakwater completed.

Vessel berths head-in starboard side too.

Maximum draft allowed 8.5 m., due to 8.5 m. patch 100 m. N.E. which pilot tries to avoid. Depth at berth is approximately 9.5 m. The berth has good fenders.

Cargo: Only sulphuric acid loaded at Berth No.8. Loading is through 2×4 in. hoses at 700 t.p.h. total. Ship's reducers are used.

Loading Master is located in hut on quay. He speaks very little English. S.G.S. Surveyor available at start and completion of loading.

General: Fresh water available by tank truck (cost U.S.$11.0 per tonne).

Agent on VHF Channel 9 during working hours.

Customs require precise documentation.

Nearest airport is at Cagliari which is 40 miles to the East.

Ship chandlers available (not used).

Harbour is to be dredged to 14.0 m. when the new breakwater is completed. A new berth is to be constructed for Power Station in position Lat. 39° 11.6' N., Long. 08° 24' E.

Very conspicuous chimney at Power Station (39° 11.7' N., 08° 23.9'E.). The chimney is 200 m. high and has red and white bands.

The industrial port handles Bauxite and Concentrate, and oil for the very large power station.

AUTHORITY: Officio Locale Marittimo, Molo Centrale, Porto Vesme (Portoscuso-Cagliari), Sardinia, Italy. *Tel:* 0781-509114. *Cables:* Locamare Portoscuso. *Contact:* Captain U. Maccioni, Harbour Master.

POZZALLO, Sicily: 36.44 N. 14.51 E.

PILOTAGE: Compulsory for vessels over 449 g.r.t.
Pilot on VHF Channel 10.

VHF: Port Authority on Channel 16. Pilot on Channel 10.

TUGS: 2 tugs available. Compulsory for vessels over 3,000 g.r.t.

BERTHING: The port is 1.0 km. to the West of the city, and is divided into two basins.

The Wet Dock with commercial quays has depths of 10.0 m. – 12.0 m., and the offshore dock has 7.0 m. – 10.0 m. Total length of quays is 700 m.

CRANES: Cranes with capacities of 35, 50, 70, 100 and 150 tons available.

STEVEDORES: Contact Navi Terminal Pozzallo. Tel: (932) 956322, 956840. Fax: (932) 956840. Telex: 971469 Navipo I.

FRESH WATER: Available by truck (pipeline under construction).

FUEL: Available by truck, capacity 30 tons.

REPAIRS: Facilities available.

DRY DOCKS: Not available.

SERVICES: Divers available.

GARBAGE DISPOSAL: Available.

AUTHORITY: Ufficio Circondariale Marittimo, Via E. Giunta 21, Pozzallo, Sicily, Italy. *Tel:* (932) 953327.

AGENT: Navi di Napolitano Vittorio, Via G. Garibaldi 175, 97016 Pozzallo RG, Italy. Tel: 0039-932-956322/956840. Fax: 0039-932-956840. Telex: 971469 Navipo I.

QUILIANO TERMINAL: 44.17 N. 08.28 E. (See Plan)

LOCATION: The SARPOM Marine Terminal at Quiliano is located on the Western shore of Golfo di Genova in Rada di Vado about 3 miles S.S.W. of the town of Savona.

DOCUMENTS: *Required by Savona Port Authorities:*

2 copies Stores List.
2 copies Crew Manifest (See "Customs Allowances").
8 copies Crew List.
8 copies Passenger List.
1 copy Cargo Manifest.
Health Declaration. International Health Form to be filled out by Master on arrival.
Bills of Lading (original and copy).
Certificate of Origin (original and copy).
Ullage Report at the loading port.
Copy of Bill of Lading for the Agent.
Clearance – not required.

PILOTAGE: Pilotage is compulsory. VHF contact on Channel 13 should be established with the Pilot Station at Savona when within range. The pilot boarding position is 44° 17' N., 8° 30.5' E., approximately 2 miles South of Savona Harbour.

Two pilots are normally provided. One is in charge of piloting and the second, with less seniority, is on deck advising the officers and crew performing the mooring operation. The pilots bring with them their own VHF sets to communicate with tugs, mooring boats, and shore.

Pilot Ladder: Vessels are requested to have a proper pilot ladder securely rigged and long enough to reach the Pilot launch. During periods of darkness, adequate lighting must be rigged overboard for the pilot to approach the side of the vessel and climb the ladder safely.

If the vessel's freeboard exceeds 9.2 m. (30 ft.), the pilot ladder must be rigged in conjunction with the accommodation ladder.

Accommodation Ladder: When the vessel is berthed, the accommodation ladder is requested on the starboard side by the Port Authorities.

SARPOM Marine Terminal Supervisor: The vessel is boarded before the commencement of mooring operations by a SARPOM Marine Terminal Supervisor (SMTS) who is an experienced Master. He remains on board up to the end of the unmooring operations and acts as the coordinator of all ship/shore operations, providing local advice to the Master in any emergency that may arise. While at the berth, ship/shore communications are by portable VHF radio units used by the Marine Terminal Supervisor only.

ANCHORAGE: For vessels awaiting berth, the anchorage areas are defined by 2 circles (radius 800 m.) centered in positions:

(1) Lat. 44° 16' 36" N., Long. 08° 29' 24" E.
(2) Lat. 44° 17' 12" N., Long. 08° 30' 16" E.

MAX. SIZE: Max. Draft 70 ft.

HEALTH: In addition to 36 hours notice of ETA prior to arrival, following messages are to be sent to:

(a) "Sanimare Savona" requesting Free Pratique.
(b) "Compamare Savona" (Harbour Master's Office) giving the following information:

Ship's Name.
Flag.
Call Sign.
Length.
Drafts.
Cargo grade and quantity.
ETA anchorage or Pilot Station.

RADIO/VHF:

Master to Radio "SARPOM Quiliano"

AAA Bill of Lading quantity in long tons.
BBB Slops, quantity water percentage, tank number.
CCC ETA Quiliano upon departure last port.
DDD Any ETA change exceeding 12 hours.
EEE ETA Quiliano 72 – 24 hours prior arrival.
FFF Draft of arrival at berth.

Ship-to-Shore Communications: Ship-to-shore communications, while the ship is berthed will be by portable VHF radio units used by SARPOM Marine Terminal Supervisor only. The use of the ship's radio station (except VHF set) and/or battery charging equipment is prohibited for safety reasons during cargo-ballast transfer operations. In event of normal ship-to-shore communications failure, an emergency system will be operated.

Free Pratique. See "Health".

Radio Messages: Local Agent will transmit the following standard messages to all inbound vessels:

Standard Message No.1

Vessels from 50,000 d.w.t. to 90,000 d.w.t.

Master S/T ....

Please advise ETA draft other requirements stop please urgently inform Agent and SARPOM Quiliano:

AAA Have 2×16 in. ASA connections ready on starboard manifold stop All other flanges to be blanked and fully bolted stop If 16 in. not available advise size manifold.
BBB Have boom hoisted on starboard side able to work abreast of main cargo manifold stop Boom must have a certified lifting capacity of not less than 10 tons.
CCC Vessel will be moored at a seven buoy sea berth using bow anchors stop Anchors must have at least 9 shackles of chain each side.
DDD Vessel must have at least 4 wires of 150 fathoms length mounted on mooring winches comma two on poop deck and two on main deck aft stop Winches must be fitted with warping drum in order to heave up and make fast to bitts terminal preventer wires of each buoy stop Synthetic tails are not accepted stop Have ready two synthetic lines on forecastle and three on poop deck for tugs.
EEE Accommodation ladder to be ready on starboard side on arrival at berth for Port Authorities.
FFF During entire stay at berth engine to be always on readiness and steam on deck kept open.
GGG Cargo ullages temperatures and water dip must be taken on arrival by ship personnel jointly with terminal personnel stop Have tanks depressurised in order to carry out above measurements stop Besides depressuring of individual tanks during or at the end of discharge is required to provide access for tanks inspection.
HHH Advise maximum discharging capacity available and estimated total discharge time considering terminal maximum receiving rate of 11,000 t.p.h. stop Cargo and slop quantities with water percentage and total volume cargo grade and slop commingled stop Ballasting time.
III VHF contact on Channel 13 must be established with Pilot Station as soon as possible stop.
LLL Vessel must be capable of simultaneous ballasting and cargo discharge, in order to maintain at any time minimum 30% of S.d.w.t.

Failing to answer above details may result in operational delays accountable to vessel.

Agent.....................................

Vessels from 90,000 d.w.t. to 150,000 d.w.t.

Item CCC – Substitute 11 shackles.

Vessels over 150,000 d.w.t.

Item CCC – Substitute 13 shackles.
Item DDD – Substitute 6 wires (4 poop deck and 2 main deck).
– Substitute 3 synthetic lines on poop for tugs.

Standard Message No. 2

Pollution

Master ....

Your attention is drawn to the serious view taken by Terminal and Port Authorities for pollution of harbour waters by oil stop Please ensure all Crew members conversant and comply with pollution regulations stop Principle causes pollution due leaking sea valves comma overboard discharge valves and cargo/bunkering overflows stop Therefore we recommend you check sea valves and overboard discharges before arrival and review cargo/bunkering operations with Chief Officer/Chief Engineer stop Scuppers must be plugged on main and poop decks stop On arrival Marine Terminal Supervisor will give all assistance necessary but empowered take drastic action in event contravention pollution prevention requirements stop.

Agent.....................................

This cable is sent only to time chartered and voyage chartered vessels calling for the first time at Quiliano Terminal and to all vessels that during a previous call experienced oil spillage or disregarded the oil pollution prevention requirements.

Standard Message No. 3

Crude washing

AAA Inert Gas System fully operational and tested.
BBB Please inform on what tanks COW will be carried out comma if these tanks are normally used for ballast comma if top washing only will be carried out and also bottom washing.
CCC Each tank to be kept below 5 percent oxygen before and during operations.
DDD IGS Gas output to be continuously monitored and maintained below 5 percent oxygen.
EEE Indication of IGS output to be in control room to give instant abort if necessary.
FFF Pressure in cargo tanks must be available to control room personnel.
GGG All system to be permanent steel pipework and pressure tested.
HHH All tank openings to be sealed comma remote tank gauging system therefore essential.
III Responsible designated person to be in charge of operations.
JJJ Tanks to be crude washed must have previously been washed less than 6 months before stop please answer all points and add any additional ship requirements or comments.

Agent.....................................

Standard Message No. 4

We would like to carry out crude oil sampling tests during discharge operation at Sarpom Terminal. These tests consist of the installation of automatic sampling equipment to your manifold flanges. The equipment will be operated by SGS Redwood inspectors. However, to ensure smooth operation we request the following assistance:

AAA Draining accumulated water from your deck air lines, by draining the compressed air reservoir of water and blowing out remaining water at the air connections on deck.
BBB Continuous minimum air pressure throughout discharge operation of 7 bar.
CCC Accommodation on board for one terminal representative and 7 workers assisting connection/disconnection of hoses.

Your assistance will be most appreciated.

Standard Message No. 5

Please be informed that during last few months, some vessels calling at this Terminal arrived with starboard boom in poor operating condition. In order to avoid delay and prevent risk of accident, you are kindly requested, before arrival, to ensure that the starboard boom and all connecting gear, such as lifting top runner and guys, including boom's winch, are tested and in good efficient working order.

Regards,
SARPOM Quiliano.

TUGS: Tugs are generally stationed in Savona Harbour. In view of required time to reach the Terminal Area (about 20 minutes time in good weather conditions) sufficient notice should be given.

The principal characteristics of tugs are:

Luigi Noli: Motor, 3,000 h.p. – 50 tons bollard pull (Kort nozzle). Fire equipment: Equipped with "Sourbel" fire-fighting articulated arms. 1 monitor fore mast, 23 m. above sea level; 2 monitors main mast, 16 m. above sea level, water/foam range 120/90 m.

Carmelo Noli: Motor, 1,700 h.p. – 20 tons bollard pull. 1 monitor fore mast – 12 m. above sea level. 2 monitors main mast – 9 m. above sea level. Water/foam range 90/70 m.

Citta di Savona: Motor, 4,200 h.p. – 52 tons bollard pull. 2 azimutmal propellers, one bow propeller. Fire equipment: 2 monitors with capacity 1,200 cu.m./hr., each 10.0 m. above sea level, water/foam range 150/100 m.

Capo Vado/Liguria: Motor, 1,250 h.p. – 15 tons bollard pull. 2 monitors main mast – 9 m. above sea level. Water/foam.

Priamar/Riviera: Motor, 2,500 h.p. – no monitors – fire hose only.

Piemonte/Lombardia: Motor 2,500 h.p. – 36.5 tons bollard pull (Kort nozzle) – Variable pitch propeller – Bow thrust. Fire equipment: "Sourbel" fire-fighting articulated arms – 1 monitor on foremast 16 m. above sea level – 1 monitor on main mast 12 m. above sea level – Water/foam range 120/90 m.

BERTHING FACILITIES: The berth is a conventional buoy mooring consisting of 7 Lamgar buoys, each designed for a 125 ton mooring load. Each buoy is equipped with a 40 mm. diameter preventer wire. Vessels are berthed with 2 anchors ahead, in addition to buoy preventer wires and the vessel's mooring wires at the stern.

The berth is laid out to allow safe maximum draft of 21 m. (70 ft.). The sea bed at the berth is firm sand overlaid by 1.0 m. — 2.0 m. of mud. Moored vessels have their bow seaward, heading 155° true.

Ships will discharge through 2 strings of hoses, i.e.

String No. 1: 7 lengths 35 ft. × 20 in. diameter.
3 lengths 25 ft. × 16 in. diameter.
String No. 2: 8 lengths 35 ft. × 20 in. diameter.
3 lengths 25 ft. × 16 in. diameter.

The submarine pipeline system, connected by manifold to the above strings, consists of 1 × 32 in. diameter and 1 × 36 in. diameter line of about 3,470 m. length reaching the shore installation (SARPOM Terminal) which has, at present, the capacity of 360,000 cu.m. storage.

MOORING REQUIREMENTS: The vessel is required to have the following equipment:

Synthetic Lines: Synthetic mooring lines are not acceptable for any class of vessel.

Mooring Wires: All vessels must have winch-mounted mooring wires with minimum diameter of 36 mm. and minimum length of 150 fathoms, as follows:

Vessels between 50 – 150 k.d.w.t.— 2 wires on poop deck
— 2 wires on main deck aft
Vessels greater than 150 k.d.w.t. — 4 wires on poop deck
— 2 wires on main deck aft

Mooring Bitts: All vessels must have the following mooring bitts (for connection of Terminal supplied preventer wires):

Vessels between 50 – 150 k.d.w.t.— 4 bitts on poop deck
— 2 bitts on main deck aft
Vessels greater than 150 k.d.w.t. — 5 bitts on poop deck
— 2 bitts on main deck aft

Ship's Derrick: All vessels must have a 10 ton SWL ship's derrick for lifting hoses from sea bed.

Bow Anchors: All vessels must have 2 bow anchors with following scope of anchor chain:

Vessels between 50 – 90 k.d.w.t. — 9 shackles
Vessels between 90 – 150 k.d.w.t.— 11 shackles
Vessels greater than 150 k.d.w.t. — 13 shackles

Simultaneous Ballast Capability: All vessels must be capable of simultaneous ballasting and cargo discharge in order to minimise the exposed wind area of the vessel while moored and maintain at any time minimum 30% of Summer deadweight.

Vessel Rejection: If in the opinion of the Harbour Pilot or of the SARPOM Marine Terminal Supervisor, the vessel is not equipped with adequate mooring facilities, lines or gear, he will so inform the ship's Master and in such event the ship shall not be brought into the mooring until facilities, lines or gear, are deemed satisfactorily.

MOORING/HOSE CONNECTION:

Mooring Approach: Vessel will be boarded by the Harbour Pilots and SARPOM Supervisor off Savona Harbour Breakwater or at anchorage. All manoeuvring of ships proceeding to the Terminal and within the Terminal area will be done in accordance with the Harbour Pilot's advice. Vessels will proceed subsequently to Vado Bay on a course parallel to the coast, about 1.2 miles from the shore, up to the Terminal area.

Status of Vessel Equipment: The Master of the vessel shall notify the Pilot and S.M.T.S. of any special conditions, difficulties or peculiarities, such as defective equipment, lines or gear, which might impose special hazards in connection with handling, mooring or discharging the vessel.

It is required that vessels test steering gear, engine room telegraph, whistle and all navigational equipment before any manoeuvre to or from the berth. The pilot will decline to moor vessels if they are not equipped with satisfactory mooring equipment, lines, gear, etc.

Final Positioning: A starboard turn will be taken, steering on the "approaching range line ", leading to the mooring buoys. Another range line, crossing with the above line, marks the position where the starboard anchor should be dropped. With the assistance of 3 to 4 tugs the vessel continues her starboard turn, drops her port anchor and backs into the berth. A spar buoy is provided to mark the position of the subsea manifold. The S.M.T.S. will give measurements to spar buoy for final positioning. Tugs are stationed close within the Savona Harbour and are also used for unberthing and for emergencies.

Depending on the current direction, the Pilot may do the anti-clockwise manoeuvre instead of above clockwise manoeuvre, in this case the first anchor to be dropped will be the port anchor.

Running of Lines: The arrangement of mooring lines and preventers, and the sequence of mooring operations that will take place will be agreed between Master, Harbour Pilot and Terminal Supervisor. Vessel must be moored to the entire satisfaction of the Pilot and SARPOM Marine Terminal Supervisor.

Status of Mooring: The safety of the moored vessel is the Master's responsibility under all circumstances. However in order to ensure safe cargo handling and avoid damage to the Terminal installation, the Terminal Supervisor will check the vessel's mooring periodically and when found unsatisfactory, he will request the Master to correct or adjust the moorings. In extreme cases the Terminal Supervisor may decide to suspend the cargo discharge.

Cargo Hose Connection/Disconnection: Raising, connecting, disconnecting and lowering of the hoses will be performed by shore personnel (normally 6 men), who will remain on board throughout discharging operations.

The vessel's crew is required to assist shore personnel by handling the boom winch and carefully inspecting their hose boom equipment before arrival.

DISCHARGING:

Notice of Readiness: Notice of Readiness will be accepted at the beginning of the final positioning (1st anchor dropped) when the ship proceeds directly from sea to berth (provided that the vessel is in all respects ready to commence discharging).

It is also accepted at the time the vessel anchors, in case the berth is occupied by another vessel, or in case there is a shortage of storage capacity in the shore tanks.

Vessel Turnaround: The vessel turnaround should be as short as possible. Delays caused by vessel equipment malfunction or vessel operations not associated with cargo discharge may result in charges being levied against the vessel's owner by the chartering party. The time sheet shall be accurately filled out by the Terminal Supervisor and signed by the vessel's Master. This time sheet will form the basis for any demurrage or delay claims.

Documentation and Inspection Before Discharging: An independent inspection, appointed by the owner of the cargo and witnessed by the Terminal Supervisor in conjunction with ship's personnel shall:

(a) Take and record ullage, temperature and measurements of all cargo tanks.
(b) Take a composite sample of each grade of cargo; the receipt for samples shall be signed by a responsible ship's officer and the Terminal Supervisor.
(c) Check arrival ship ullages as above, against ullages reported in ship's documents at loading port or last port of call, in order to ascertain if any unexplained movements of cargo have taken place.
(d) Obtain vessel experience factor from ship's log, or if not available request ship's personnel to determine an experience factor based on the last 5/6 loadings.
(e) Obtain the following from the vessel:
  i. Copy of Ullage Report at loading port.
  ii. Copy of Letter of Protest at loading port in case of excessive difference between ship's/Bill of Lading figures.
  iii. Samples from loading port. The receipt for these samples shall be signed by a responsible ship's officer and the Terminal Supervisor.

Discharge Procedure: The procedure for the intended operation must be pre-planned. They must be discussed and agreed upon by the ship and Terminal Supervisor prior to the start of the operations. The agreed arrangements shall be recorded on the Cargo Discharge Plan. The form shall be signed by a responsible ship's officer and the S.M.T.S. Any change in the apreed procedure that could affect the operation must be discussed by both parties and agreed upon. After agreement has been reached by both parties substantial changes must be laid down in writing as soon as possible and in sufficient time before the change in procedure takes place.

Discharge Regulations:

1. All bunker tanks will be ullaged by the independent inspector and checked for explosivity by the Terminal Supervisor before discharging. Contaminated tanks must be isolated to the satisfaction of the Terminal Supervisor before discharge can commence. If all tanks are contaminated, the vessel will be rejected.
2. S.M.T.S. will check to ensure that all sea suctions and overboard discharge valves (cargo/ballast) are closed and sealed. These valves must be kept closed and sealed throughout discharging operations and opened only in case of emergency or by authorisation of S.M.T.S.
3. Suitable drip trays and sawdust bags must be provided at the ship's manifold.
4. A responsible officer must always be available on deck in close contact with the S.M.T.S. for any occurrence. The S.M.T.S. will advise him in due time when the switching of shore tanks, changes in discharging rates, etc., are required by the shore installation operations and for any emergency.
5. When the first hose is connected, discharging can be started as instructed by the SARPOM Marine Terminal Supervisor.
6. Maximum pressure allowed at Ship's Rail: 150 p.s.i. (10.6 kg./sq.cm.) Maximum discharge rate allowed: 13,000 cu.m./p.h. (81,600 bbls./p.h.)
7. Discharging must be carried out at the maximum rate achievable with the ship's equipment within the limits shown above.
8. On completion of discharge, open suitable filling lines to drain the hoses into ship's tanks.
9. Pumping air or gas into the cargo hoses is prohibited.
10. Because of the importance of ensuring that all cargo discharge regulations and procedures are fully understood, the letter concerning discharging information must be signed as received by a responsible ship's officer.

Documentation and Inspection After Discharging: Terminal Supervisor in consultation with ship's representative will witness and record the measurements of all ship's tanks (dip or ullage, temperature as applicable), including tanks containing cargo of another terminal, and determine the eventual oil remaining in ship's lines.

Before sailing, a Statement of Fact concerning the comparison between the vessel's gross volume discharged and gross terminal outturn received will be provided to the vessel.

Ballasting: Vessels calling at SARPOM Terminal are required to be capable of ballasting simultaneously while discharging, after the S.M.T.S. is satisfied that no sea pollution or cargo contamination might occur. See "Radio" – "Standard Message No. 1 – Item LLL".

In fair weather, the propeller should be submerged and the vessel trimmed 10 ft. by the stern. Ballast operations can continue at reduced speed during unmooring.

While the vessel is ballasting, the S.M.T.S. in agreement with the Master will start singling up by letting go all preventer wires and any other additional mooring lines not strictly required for a safe mooring taking into consideration the environmental conditions.

Switching of Shore Tanks/Emergency Stop: The S.M.T.S. will advise the Cargo Officer or a responsible Officer in due time when the switching of shore tanks, changes in discharging rates, etc., are required by the shore installation operations and for any other emergency that may occur.

Crude Oil Washing: Crude washing during discharging is allowed if requested. Request from ship must be sent at least 10 days before arrival. Permission will be granted by Harbour Master and SARPOM Terminal providing that all operations are in line with items listed in Standard Message No. 3 (See "Radio/VHF").

POLLUTION: The Italian Government enforces strict measures to prevent sea pollution. It is the ship's Master's responsibility to ensure that no oil (crude, bunker, diesel, bilge, etc.) is pumped or spilled overboard from the vessel.

Because of the importance that the Quiliano Terminal places on the avoidance of pollution, the Master will be required to sign acknowledging receipt of the letter concerning sea pollution.

Lighting: The sea area around the ship shall be adequately lighted as frequent inspection will be made during discharging and ballasting, in order to avoid any pollution whatever.

Cargo Hose Connections: Cargo hose connections must be frequently inspected during discharging, drip-trays should be placed at all times under the manifolds, all unused cargo connections must be blanked and fully bolted, all scruppers must be securely plugged, and sea valves must be closed and sealed before starting discharge. When ballasting, pumps must be started before opening sea valves.

Discharging Material Overboard: It is strictly prohibited to throw any material, papers, waste or goods either solid or fluid overboard. The Master of the vessel in conjunction with the ship's agency, should make arrangements for disposal over land of such material, if required.

Excessive Smoke: Excessive smoke from the vessel's funnel and sootblowing are strictly prohibited.

Actions in Event of Pollution: In the event of pollution, immediate notification must be given to the Terminal Supervisor who will notify the local authorities and initiate the Terminal Oil Spill Response Plan.

The Terminal maintains a motor boat equipped with oil dispersant and in the event a vessel causes pollution the Terminal will start the oil spill clean up, pending the arrival of the port authority's anti-pollution brigade.

All expenses and damage costs incurred in connection with pollution due to the vessel, will be charged to the ship.

In the event of continued infringements of pollution prevention rules, the ship will be rejected until appropriate action is taken in order to avoid any further risk of pollution.

MEDICAL: Doctors and hospital facilities are available at Savona.

FUEL: Bunkers are supplied by barge which moors portside alongside the vessel. Bunker requirement must be radioed to local Agent at least 48 hours in advance. For vessels expecting to arrive on Saturday or Sunday, the requirement must be forwarded not later than Thursday afternoon.

CUSTOMS ALLOWANCES: Present regulations allow each seaman to retain in his possession a maximum of 40 cigarettes or the equivalent of tobacco or cigars, and 1 open bottle of spirits. The balance of all smoking items and spirits must be collected, listed and locked, and included in the Stores List.

CONSULS: Consulates for most nations maintain offices in Genoa (about 50 km. from Savona).

REPAIRS: Repair shops for minor repairs are available. For electronic equipment repairs, notice should be sent to the local Agent in due time.

SERVICES: All kinds of stores and provisions are available locally.

Laundry service is available on a round-the-clock basis.

GARBAGE DISPOSAL: Service available. Skips provided alongside. Tel: (019) 821077. Italian Lire 50,000 per cu.m. Service performed from 0700 hrs. – 0900 hrs. every day.

WASTE OIL DISPOSAL: No facilities.

SEAMAN'S CLUBS: Stella Maris, Corso Mazzini 1, Savona. Tel: (019) 821137. Lounge, garden, T.V., games, information, telephone. Hours: 1900 hrs. – 2300 hrs. (Closed Tuesdays).

CURRENCY: Italian Lire. No currency restrictions.

WEATHER: The bay, although sheltered from the strongest winds blowing from the fourth quadrant by high mountains coming down close to the coast, is subject to strong wind gusts from this quadrant, and the relative wind direction varies considerably in different parts of the bay at one time due to irregularities of the coastal heights.

The bay is open to Southerly winds and seas, and it is from this direction that seas and swells caused by strong wind between S.E. and South may interrupt marine operations. Delays in this area are mainly due to the impossibility of mooring a vessel under certain weather conditions than to withstand elements once she is moored. The berth current is part of the general offshore current stream and is not wind blown or tidal; its predominant direction is toward the S.W. and the maximum speed is 0.8 – 1 knots; generally currents do not exceed 0.5 – 0.6 knots. The faster currents are likely to occur more frequently during the Winter period; occasionally they reverse and set N.W. with a reduced velocity.

Tide is negligible and fog is rare.

In general, weather in the bay is seasonal. From May to October it is very good. The worst period is from October to December when winds and seas from South cause the maximum number of port closures.

From December to May the strongest winds are experienced from third and fourth quadrants but sea is usually smooth.

Weather Reports: 12 and 24 hour weather forecast data is available on request on a round-the-clock basis at the Terminal Office.

Broadcast weather reports for Mar Ligure, North Tirreno and Corsica are prepared by Navy Department of La Spezia and Air Force Weather Bureau. For Mar Ligure, they refer to Capo Mele (West of Vado Bay).

Information concerning the weather is given on VHF through Genoa Radio Station, Channel 16 and 25, at 0135, 0735, 1335, 1935 GMT. Special gale reports are provided on VHF Channels 16 and 25 and on wireless on 500 kHz at 15 minutes and 45 minutes after every hour.

Radiotelephone information can also be received on 2182 kHz (Genoa Radio Station). Weather reports are also transmitted on 1722 kHz.

SHORE LEAVE: Launches are sailing from ENEL Pier (located about 1 mile North of berth) and make regular runs to tankers berthed at SARPOM's Berth.

During bad weather the service is performed from Porto Capo Vado.

Sufficient personnel must be aboard at all times for letting go lines so that the vessel can clear the berth whenever required. It is suggested that half the crew, evenly spread between deck and engine, be kept on board. Regular watch for launch services is constantly maintained on Channel 13.

REPORT: November 1985.

Mooring: A 150 h.p. mooring boat with 5 men is usual for the mooring operation. When the ship's stern is nearly positioned, the first lines are sent out, normally to Mooring Buoys No. 6 and 7 on the port side. The remainder of the lines are sent to the buoys and made fast according to the Pilot's advice.

Synthetic lines are not allowed for mooring at Quiliano Sea Berth. Minimum diameter required for mooring wires is 36 mm. and the length of the wire should be at least 150 fathoms (274 m.).

To accommodate the shore preventers, all vessels should have mooring bitts located as follows:

Vessel between 50,000 – 150,000 d.w.t.: 4 bitts on poop deck and 2 bitts on main deck aft.

Vessels over 150,000 d.w.t.: 5 bitts on poop deck and 2 bitts on main deck aft.

Berthing: Ships are berthed assisted by tugs. Normally, 4 tugs are used for vessels up to 150,000 d.w.t. and 5 tugs for vessels over 150,000 d.w.t., 2 on the hook forward and 3 aft using ship's lines.

The Berth is approached on a range line and when in position, the starboard anchor is dropped and slacked out while the vessel proceeds to the port anchor drop position. The port anchor is then dropped and while the vessel continues its starboard swing, it is towed stern first into berth and positioned. A good spread of the anchors and sufficient chain on the bottom are essential for adequate holding power.

AGENCY: SARPOM does not perform any vessel agency functions. Owners of vessels calling at SARPOM Terminal must arrange their own ship's Agent.

AUTHORITY: Capitaneria di Porto, Lungomare Matteotti, 17100 Savona, Italy. *Tel:* (019) 856666. *Telex:* 275544. *Cables:* Compamare Savona. *FAX:* (019) 856498. *Contact:* Captain Giovanni Marinucci, Harbour Master.

OPERATOR: Esso Italiana S.p.a, Viale Castello della Magliana 25, 00148 Roma, Italy. *Tel:* 59952913. *Telex:* 620830 Esso I. *Contact:* Maritime Service Dept.

SARPOM, Quiliano Marine Terminal, Via S. Torcello 1, 17040 Quiliano (SV), Italy. *Tel:* 019-887133. *Telex:* 200070. *FAX:* 019-870031. *Cables:* SARPOM Quiliano.

RAVENNA: 44.25 N. 12.12 E. (See Plan)

(A) RAVENNA
(B) MARINE TERMINAL

(A) RAVENNA

PORT LIMITS: A vessel is considered "arrived" at the Roads within a radius of 5 miles from Agip Terminal No. 3.

LOCATION: The Port of Ravenna is located on the Adriatic coast of Italy about 50 miles South of Venice. The Ravenna-Porto Corsini Port Complex is extensive.

1. The Agip Steel Platform (Terminal 1) – not in use.
2. ENEL Steel Platform.
3. The Agip Oceanic Buoy 5 (Terminal 3).
4. The Agip Rotating Platform (Terminal 4).
5. 9 km. of berths in the Inner Harbour with 27 private Terminals.

Also see Part (B) – "Marine Terminal".

DOCUMENTS:

For Maritime Authority:
- Ship Safety Certificates.
- 3 Crew Lists.
- 3 Passenger Lists.

For Customs:
- 1 Crew List.
- 1 Passenger List.
- Cargo Manifest.
- Bills of Lading.
- 1 Provisions List.
- 1 Customs Declaration of each Crew member.

For Maritime Health:
- 1 Crew List.
- 1 Passenger List.
- Derat Certificate or Exemption.
- Maritime Health Declaration.

For Police:
- 1 Crew List.
- 1 Passenger List.

PILOTAGE: Compulsory. Contact Pilot in advance by VHF Channel 12 or Tel: 0544-530204, 0544-530453 (24 hours). Cables to Piloti del Porto, Marina di Ravenna. Pilot station and both pilot boats equipped with VHF, Channels 16, 9, 6 and 12. Pilot is embarked not less than 1 mile from head of breakwater. Vessel awaiting Pilot may anchor, but must pay attention to the restricted areas. This anchorage is not secure in bad weather. Vessel bound for marine terminals, embark Pilot at least 0.5 miles from the berths. Pilot launches have black hull with white band, white superstructure, 10 m. in length.

ANCHORAGE: Anchorage prohibited in vicinity of submarine pipelines and cables. Vessels waiting for a berth may anchor at a distance more than 1.5 miles from the outer breakwater head according to their draft and subject to weather conditions.

RESTRICTIONS: Berthing and mooring at marine terminals allowed in daylight only. Unberthing and sailing can be carried out in darkness. The following vessels can navigate during hours of darkness: Dry cargo vessels and tankers (excluding inflammable products Cat. "C") with max. draft 24 ft. 00 in. (7.32 m.), max. LOA 160 m. and max. beam 33 m. (max. LOA 175 m. if vessel is fitted with 2 propellers and bow thruster); tankers (inflammable products Cat. "A" and "B") with max. draft 22 ft. 00 in. (6.71 m.) and max. LOA 130 m.; LPG carriers with max. draft 22 ft. 00 in. (6.71 m.), max. LOA 120 m. and max. GRT 3,500 tonnes.

From S. Vitale to Darsena Ravenna navigation during darkness is not allowed except for empty vessels sailing from Adriatank and DE.CO.RA. piers if berthed with bow towards the entrance of the canal.

MAX. SIZE: *Inner Port:* Draft limited from 17 ft. to 17 ft. 6 in. depending on vessel's beam and draft.

San Vitale: Max. draft 28 ft. allowed from port entrance to San Vitale Basin.

ENEL (Oil Berth – No. 2): Length not limited, max. draft 37 ft. 08 in.

Agip Terminal – No. 3: Length not limited, max. draft 45 ft.

Agip (Oil Platform – No. 4): Length no limit, max. draft 70 ft.

HEALTH: Pratique given by radio, on request to "Sanimare Ravenna" 24 hours prior to arrival. Pratique is automatic for vessels coming from ports in E.E.C. countries.

RADIO: Messages via Ravenna Radio, Ancona Radio, Venezia Radio, or Trieste Radio.

VHF: Ravenna VHF Radio Station operates on Channels 16, 25, 26, and 27.

The Ravenna Port Informer is in contact with Ships Agents and operates on Channel 9 from 0630 hrs. – 2200 hrs. every day including holidays.

TUGS: Tugs join vessel in outer port. Ship's lines are used.

There are 7 tugs stationed at Ravenna (1×2,500 h.p. and 2×2,000 h.p. Voith Schneider tugs; 2×2,600 h.p., 1×2,000 h.p. and 1×900 h.p.). 4 of the tugs are equipped for fire fighting. The Harbour Authority lays down the number of tugs to be taken by each vessel according to size.

BERTHING:

Terminal	*Length* (m.)	*Depth* (m.)	*Cranes* No. Tons	*Remarks*
Pir	380	9.40		Oil and chemicals
Magazzini Generali	170	9.40		
Enel	285	9.40		Oil
Cerelo Italia	300	9.40		200,000 cu.m. silos
Alma Petroli	227	9.40		Oil
Lloyd Ravenna	270	9.40	2×400*	
Marcegaglia	355	9.40	2×35	
Rosetti	320	5.80		
Eurodocks	545	9.40		
Docks Cereali	572	9.40	2×750*	90,000 cu.m. silos
Na.Dep.	400	7.00	1×25/30 (Portainer) 1×250*	1 Ro-Ro Berth
Cantieri Ravenna	180	6.40		
Nuovo Cap	198	9.40		35,000 cu.m. silos
Setramar	615	9.40	2×15/30 (Portainers) and 3×350*	2 Ro-Ro berths + 13,600 cu.m. silos
Sapir	1,910	9.40	6×30 3×25/40 (Portainers)	3 Ro-Ro berths, chemicals
Frigoterminal	240	9.40		
Enichem Anic	845	9.40		10,000 cu.m. silo, oil and chemicals
Agip	660	9.40		Oil
Decora	90	5.50		Oil
Atriatank	100	5.50		Chemicals
Cap Ravenna	60	5.50		5,100 cu.m. Silo
Silos	400	5.50		7,450 cu.m. Silo
Ecs	150	5.50		
Fertilmare	150	5.50		8,500 cu.m. Silo
Base Saipem	300	6.40		
Base Agip	700	5.50		
Nuova Nadep	240	7.00		

*Grab capacity (t.p.h.)

Old Port: *Cereals Silos:* Silos Granari Candiano: General warehouse and cereals depot.

CAP: Silo used by various importers.

SIMA: Factory producing animal foods, equipped with bag loader.

Depots: Decora: Depot for petrol and chemical products.

Adriatank: Depot for vegetable oils and not dangerous chemical products.

Industries: SIO: Refinery for vegetable oils.

General Cargoes: Public piers are used to handle all kinds of cargoes.

Fertilmare: Warehouse used for bulk and bagged cement cargoes.

Fiorentina: Warehouse used for bulk and bagged cargoes.

New Port: *Cereals Silos:* Docks Cereali: Silos used by various importers, equipped also with bag loaders.

NUOVO CAP: Silo used by various importers.

EURODOCKS: Silos used by various importers, equipped with bag loaders, gantry crane and 2 self-moving cranes.

NUOVA NADEP: Private warehouse used by various importers, equipped with self-moving cranes.

SETRAMAR: Silo used by various importers.

LLOYD RAVENNA: Silo used by various importers.

Oil Refineries, Industries, Depots: AGIP: Equipped with own docks in the canal and terminals on roadstead. Docks inside port are used to load and discharge refined petrol products.

CEREOL: Refinery for vegetable oils.

PCBI: Factory producing carbon black.

ALMA: Refinery for bituminous products.

E-ANIC: Factory producing fertilisers and synthetic rubber chemicals.

ENEL: Thermoelectric plant.

MARCEGAGLIA: Factory producing steel pipes and plates.

PIR: Depot for petrol and chemical products.

MAGAZZINI GENERALI: Factory for rice handling, general warehouse, equipped with bag loader.

ENEL-ITC: Depot for fuel oil serving ENEL thermoelectric plant situated at Porto Tolle.

General Cargoes Depots: SAPIR: Public bonded warehouse used for all kind of cargoes, located on public wharfs at S.Vitale Basin.

SETRAMAR: Private warehouse used by various importers, mainly for logs, coal, coils, sulphur in bulk and containers.

Lloyd Ravenna: Private warehouse used by various importers, mainly for coal.

NADEP: Private warehouse used by various importers.

Containers: SAPIR: Public terminal equipped with Paceco cranes.

Shipmaster's Report: 1982.

It is advisable to keep vessel well secured when alongside as passing vessels have little consideration.

CRANES: Cranes and elevators located at all terminals.

STEVEDORES: To be ordered before 1030 hrs. for afternoon work, and before 1630 hrs. for following morning.

MEDICAL: All facilities available.

TANKERS: Sea Berths:

Cautionary Advice: Vessels moored at Sea Berths must always keep the engines ready in order to be in position to unmoor and leave immediately in case of emergency or in case in the Master's judgment the weather conditions suddenly get worse.

ENEL Steel Platform: Located in position Lat. 44° 27.8' N., Long. 12° 23.9' E. Length 342 m., with a central platform on tubular piles with 2 mooring dolphins and 4 small platforms on tubular piles for mooring lines. Vessels' length restricted to 160 m. – 270 m. Vessels berth alongside the 2 dolphins with 3 head lines, 2 breast and 2 springs fore and aft.

Also see "Section (B)".

Agip Oceanic Buoy – Terminal No. 3:

General: No. 3 Terminal consists of 1 large anchored buoy on which are installed a red light, flashing twice every 5 secs., a fog horn (letter "C" every 20 secs.) and a radar Racon code "C". Distance from No. 1 Terminal is about 4,500 m. E.N.E. and from coast 10,300 m.

Berthing and Mooring: The mooring must be carried out with ship's bow towards North, and taking up 2 steel wires supplied by Agip, connecting the stern of the ship to the large buoy, and 4 steel wires connecting the ship to 4 small buoys anchored in the proximity of the large buoy. The 2 steel wires on the stern must be secured in order to maintain the ship about 120 m. from the buoy. Vessel must be anchored with 7 – 8 shackles of chain (port and starboard) and the forecastle port side must also be secured with a steel wire connected with a fixed anchor.

Cargo Connection: There is only 1 flexible hose with 10 in. ASA flange to be connected, always on port side.

Derrick: Vessels must arrive ready with port side derrick able to hoist the hose weighing 5 tons.

Ballast Facilities: None.

Gangway: Vessel should rig suitable accommodation ladder.

Bunkering: By barge.

Ullaging – Temperatures: Taken by shore personnel.

Agip Rotating Platform – Terminal No. 4:

General: No. 4 Terminal consists of a rotating platform elastically connected with a fixed platform supported by 6 tubular piles of 48 in. diameter.

Its position is Lat. 44° 27' 25" N., Long. 12° 31' 30" E. Distance from shore is 18,300 m. Mooring is allowed for vessels with a max. draft of about 70 ft. The platform shows a white flashing light 3 times every 15 secs., also a fog horn code "U" and Racon code "U".

Berthing and Mooring: The vessel must approach the platform up to a distance of about 120 m. One vessel's synthetic rope will be connected with the assistance of the mooring boat with the steel wire supplied by ENEL. With the aid of the steel wire heaved up by vessel, vessel will approach the platform as far as a distance of about 65 m. and there the steel wire will be made fast.

The mooring operations will be carried out only in normal weather conditions. The unmooring operations can be carried out at any time day or night. One tug will assist at the stern in order to avoid collision with the platform.

Cargo Connections: There is a floating hose with 16 in. flange (ASA) to be connected on port side manifold. Before disconnecting, the floating hose (length of about 270 m.) must be filled with water. Max. pressure 8 kg./sq.cm.

Derrick: Vessels must arrive with port side derrick of 10 tons SWL.

Ballast Facilities: None.

Gangway: Vessel should rig suitable accommodation ladder.

Bunkering: By barge.

Ullaging – Temperatures: Taken by shore personnel.

Also see Part (B) – "Marine Terminal".

Inner Harbour

Darsena ENEL Berth:

Location: The ENEL Berths are located in the Darsena ENEL on the South side of Largo S. Vitale, the Ponente Berth on the West side and Levante on the East side of the Darsena.

Berthing and Mooring: The Inner Harbour is entered between the breakwaters protecting the entrance to Canale Baiona. 2 tugs are usually made fast on the hook, fore and aft, when abeam of the breakwaters and assist vessels through the channel. Vessels bound for the ENE

Berths proceed farther South through Canale Candiano and are swung (using 1 anchor) assisted by tugs in the Lago S. Vitale. They are then towed stern first into Darsena ENEL and moor starboard side alongside at the Levante Berth, and port side alongside the Ponente Berth. Head and stern lines are run in by mooring boats.

Wires are not accepted, wires with synthetic tails are accepted.

Preparations: A 2 ton SWL derrick is required for hose handling, and should be ready on arrival. There is no shore gangway and the vessel should have a gangway ready on starboard side for the Levante Berth and port side for the Ponente Berth. Ullages and temperatures are taken by terminal personnel.

Cargo Handled and Connections:

Berth Levante

Clean products: 1×8 in. ASA hose 8 kg./sq.cm.

Dirty products: 1×8 in. ASA hose 8 kg./sq.cm.

Berth Ponente

Gasoline: 1×8 in. ASA hose 8 kg./sq.cm.

Gasoil: 1×8 in. ASA hose 8 kg./sq.cm.

Dirty oils: 1×8 in. ASA hose 8 kg./sq.cm.

Ballast Facilities: Ballast facilities are available for unlimited quantities. Discharge rate 400 t.p.h.

Fire Fighting Facilities: There are 3 towers with foam/water monitors.

Oil Pollution – Clean Up: Facilities available.

Services: Bunkers and fresh water are available.

PIR Berth:

Location: The PIR Berth is located on the South side of the Canale Baiona about 1 mile from the port entrance.

Berthing, Unberthing and Mooring: Berthing allowed only by daylight, unberthing not allowed after 1 hour after sunset. The harbour is entered and tugs are made fast as per Darsena SAROM Berth. Vessels bound for PIR Berth, will be berthed with starboard side alongside, therefore vessel will be swung in the Turning Basin (junction – Canale Candiano – Canale Baiona) and then backed in position by tugs.

Cargo Handled and Connections:

Clean products: 2×8 in. flexible hoses with 8 in. ASA connections 5 kg./sq.cm.

Dirty products: 2×8 in. flexible hoses with 8 in. ASA connections.

Maximum pressure allowed: 6 kg./sq.cm.

Gangway: Ships must provide their own gangway.

Derrick: A 2 ton SWL derrick required on port side for hose handling.

Ullaging – Temperatures: Taken by terminal personnel.

Services: Bunkers and fresh water are available.

Fire Fighting: System installed.

Oil Pollution – Clean Up: The terminal has a quantity of oil dispersant and absorbent.

ANIC Berth "Lato Mare":

Cautionary Advice: The ANIC Berth is located on the West side of Largo S. Vitale about 0.5 miles North of the Darsena SAROM. It is a marginal berth and ships bound to and from Ravenna pass close by, and may cause a moored vessel to surge in the berth. It is, therefore extremely important that vessels are securely moored and that the mooring lines are properly tended and watched.

Berthing and Mooring: Vessels bound for the ANIC Berth enter the harbour and connect tugs as described per Darsena SAROM Berth and are then swung in the Largo S. Vitale and berthed head out with port side alongside.

Cargo Handled and Connections: This terminal handles various classes of oils or chemicals. Both jetties have the same facilities.

Solvents: 2×4 in. ASA flexible hose. 7 kg./sq.cm.

Chemicals: 2×6 in. ASA flexible hose. 7 kg./sq.cm.

Dirty oils: 2×8 in. ASA flexible hose. 7 kg./sq.cm.

For clean oils there are also 2 rigid arms 6 in. flange ASA. Max. pressure 8 kg./sq.cm.

Gangway: Ship should rig their port side gangway.

Derrick: A 2 ton SWL derrick required on port side for hose handling.

Ullaging – Temperatures: Taken by terminal personnel.

Services: Bunkers and fresh water are available.

Ballast: None at present. In future there will be possibility of dirty ballast discharge.

Oil Pollution – Clean Up: No facilities available.

Fire Fighting Facilities: Fixed foam/water monitors and mobile fire fighting men.

ENEL:

General: This terminal is on the North bank of Canale Candiano about 1.5 miles West of junction Canale Candiano/Canale Baiona. Handles exclusively boiler oils. The terminal consists of a jetty that can accommodate vessels up to 280 m. LOA with max. draft of about 28 ft.

Berthing and Mooring: Normally 2 tugs are used, and since the vessel must be moored port side alongside it is swung in proximity of confluence of Canale Candiano/Canale Baiona and then backed into position by means of tugs.

Wires not accepted.

Cargo Handled – Connections:

F.O.: 1×8 in. ASA flexible hose. 6 kg./sq.cm.: For larger vessels.

F.O.: 1×6 in. ASA flexible hose. 6 kg./sq.cm.: For smaller vessels.

Gangway: Vessels should rig suitable gangway.

Derrick: 2 ton SWL ready on port side.

Ullaging – Temperatures: Taken by terminal personnel.

Bunkering/Fresh Water: By barges.

Oil Pollution – Clean Up: No facilities available.

Fire Fighting Facilities: 4 foam/water monitors.

Also see "Section (B)".

DENSITY: 1015 – 1030.

FRESH WATER: Only available ex-wharf at San Vitale and at inner port piers. Barge available for deliveries to the Silos Piers and tanker terminals.

Shipmaster's Report: 1982.

Delivered by road tanker only at silo pier (Setramar) in lots of 8 tons.

FUEL: Available by barge (3×1,000 tonnes) and by road tankers (30 tonnes). A minimum of 48 hours notice is required.

FIRE PRECAUTIONS: Tankers are given copy of port fire regulations on arrival. No repairs or gas freeing to be carried out without permission of Port Authorities.

CONSULS:

France	Tel: 40.66.57.
Norway	Tel: 6.15.26.
Sweden	Tel: 21.26.39.

REPAIRS: All kinds of repairs can be effected. Floating dry dock (70 m. × 20 m.) and dry dock (180 m. × 27 m.) are available.

SURVEYORS: Marine surveyors representing R.I.Na., Lloyd's Register, Bureau Veritas, Hellenic Register, operate at the Port or nearby.

GANGWAY/DECK WATCHMEN: Optional, can be employed from shore if required.

OPENING/CLOSING HATCHES: Can be performed by ship's crew or by stevedores.

CUSTOMS ALLOWANCES: 50 cigarettes per man for first day in port. Wine/spirits, allowance is made for normal daily consumption on board.

REPATRIATION: Can be arranged.

AIRPORT: Forli Airport situated 25 km. away, with daily flights to Rome and Milan.

TIME: GMT plus 1 hour. From April to September, GMT plus 2 hours.

HOLIDAYS: 1st January (New Year Day); 6th January (Epiphany); 25th April (Liberation Day); 1st May (Labour Day); 15th August (Virgin's Accession); 1st November (All Saints Day); 25th December (Christmas Day); 26th December (S. Stefano).

POLICE/FIRE/AMBULANCE: Police, Tel: 436367; Ambulance, 22311; Fire, 115.

EMERGENCY CO-ORDINATION CENTRE: Italian Coast Guard – 8th M.R.S.C. (Maritime Rescue Sub-Centre) – Ravenna. Tel: (0544) 453900. Fax: (0544) 455045.

TELEPHONES: Can be installed on board at San Vitale Berths.

SHORE LEAVE: Allowed. Launch service available for vessels in the roads.

IDENTIFICATION CARDS: Shore passes given by police.

SERVICES: All kinds of services are available at the Port or nearby, e.g. tank cleaning, discharge of tank-washings, compass adjusting, supply of charts, nautical publications, sounding paper, course record paper, Notice to Mariners.

STORING: Vessels can be stored by barges at the roads and by trucks at the berth during loading or discharging, except tanker vessels, LPG and chemical carriers if the stores are heavy and voluminous. For storing, fork lift trucks and local riggers can be used; trucks can proceed alongside the berth, but for storing tanker vessels, LPG and chemical carriers it is necessary to obtain authorisation from the Harbour Master.

GARBAGE DISPOSAL: Garbage disposal is provided by the duly licensed private contractor SIMAP s.r.l. by barges going alongside ships at the berth.

WASTE OIL DISPOSAL: Waste oil disposal is provided by the duly licensed private contractor SECOMAR s.r.l. by barges (max. capacity 900 cu.m.) and by tanker trucks (max. capacity 10 cu.m.). Waste oil is collected in shore tanks (total capacity 2,500 cu.m.) and eliminated by a treatment plant with a rate of 150 tons per day.

CURRENCY: Italian Lira: U.S.$1.00 = 1,550 Lira (June 1996).

DEVELOPMENTS: The access channel is to be deepened to 35 ft. and widened.

In the near future a reefer installation for the handling and storage of perishable foodstuffs, frozen and deep-frozen food will be realised. A general and bulk cargo terminal and a terminal for coasting trade, altogether capable of handling 2,000,000 tons of goods a year, will also be built. The building of other terminals is also foreseen. These will be supplied with special equipment for the handling and storage of agricultural products and goods in bulk.

SHIPMASTER'S REPORT: September 1991 (Updated 1994).

Charts: B.A.Charts No. 1445 and 1467.

Pilotage: Pilot boards and departs at the Fairway Buoy. Pilot service operates throughout 24 hours. There are night restrictions on dangerous cargo and length restrictions at night.

Tugs: The tugs operate from Porto Corsini which is just inside the inner breakwater.

The number of tugs is determined by vessel's size and manoeuvres to be undertaken. There are special rules for tankers with dangerous cargo.

The first hour is at the standard rate, which takes the vessel from Porto Corsini to the berth and vice versa.

Approaches: The Fairway Buoy is located in position Lat. 44° 29.5' N., Long. 12° 20.7' E.

There is a wreck 2 miles East of the South Breakwater, marked by a buoy flashing 2 every 10 sec. (it can be confused with the Fairway Buoy).

From Agip Rotating Platform No. 4 to breakwater, vessels must follow suggested course in Traffic Separation Zone.

There are numerous oil rigs in the approaches to the port.

The breakwaters show up well on the radar.

Anchorages: The anchorage is located near the Fairway Buoy or in the transhipment area marked on B.A.Chart No. 1467. The anchorages are very exposed in Northerly winds.

Channel: The Canal Baiona Candiano is about 6 miles long and runs to the main berths at Nuove Darsena Commercialli (Lat. 44° 26.5' N., Long. 12° 14.75' E.). The transit through the Canal takes about 1 hour and the vessel is accompanied by tugs.

The maximum depth in the channel is 9.0 m., but is liable to silting. Maximum allowed draft is 8.53 m.

General: There is no telephone on the quay.

Fresh water is arranged through the Agent, and cost is approximately 7,355 Lira/ton from truck and 4,800 Lira/ton from shore line.

Bologna Airport is about 40 miles away. There are frequent flights to Rome and London.

The Ship Chandler "Montanari" is a member of ISSA, and prices were reasonable. Tel: 0544-436320. Telex: 550121. Other chandlers can be contacted by Agent.

The berths and tankage for chemical tankers and LPG ships are in Canale Baiona near Porto Corsini and Enichem and Agip Darsena in Canal Candiano.

AUTHORITY: Ravenna Port Authority, Via Antico Squero 25, 48100 Ravenna, Italy. *Tel:* (0544) 454848. *Cables:* Compamare Ravenna. *FAX:* (0544) 452929. *Contact:* Dr. Remo Di Carlo, President.

Capitaneria di Porto Ravenna, Via Antico Squero 5, 48100 Ravenna, Italy. *Tel:* (0544) 455357, 453900. *FAX:* (0544) 455045. *Contact:* Captain Gabriele Calcagno, Port Captain.

AGENT: See "Genoa".

(B) ENEL MARINE TERMINAL: 44.28 N. 12.24 E. **(See Plan)**

LOCATION: The ENEL (ex-SONE Terminal) Marine Terminal is located in position Lat. 44° 27' 48" N., Long. 12° 23' 54" E., about 8.5 km. from the coast, and is used for unloading fuel and crude oil.

DOCUMENTS: *For Customs Purposes:*

If vessel arriving from an Italian Port:

Custom's Sailing Manifest.

Copy of Bill of Lading.

1 Crew List.

1 Passenger List (if any).

If vessel arriving from abroad:

Stores List.

Crew Property List.

Cargo Manifest.

Copy of Bill of Lading.

1 Crew List.

1 Passenger List (if any).

If vessel has to lighten, for Customs purposes, and in order to obtain discharging permission prior to entering vessel at Customs House, Master has to cable 30 hours before arrival to Agents, a separate message giving:

Ship's Name/Flag/GRT/Cargo Quantity (Bill of Lading figures in metric tons)/Quality/Density/Loading Port/Name of Shippers and Consignees/Master's Name/Total Number of Crew/Expected Arrival Draft and Total Quantity to be lightened to reach 11.50 m. Draft.

For Immigration Authorities:

1 Crew List.

1 Passenger List (if any).

VERY IMPORTANT: All vessels having on board arms and/or ammunitions not only as cargo but also as Ship's/Personal Equipment/Property, entering Italian Waters/Ports must obtain a proper Licence from Italian Authorities.

Therefore to avoid serious problems and enable Agents to arrange requested Licence Formalities, Master to telex soonest possible to Agents informing if any arms/ammunitions are on board, giving full Details of the same.

For Harbour Master:

2 copies Arrival Reports (if forms not available on board, they are usually filled in by Agent on arrival).

1 copy Control List for Tankers (if forms not available on board, Master to have ready a list showing details of Master's and all Deck/Engine Officers Certificates of Competency).

Description of Licence and Number.

Issued by.

Date of Issue.

Place/Country issued.

3 copies Crew List.

3 copies Passenger List (if any).

Following documents to be produced for Harbour Master:

I.O.P.P. Certificate and supplement.

Class Certificate, including last annual survey.

C.L.C. Certificate.

Oil Record Books, Part I and II (Memorandum of Paris).

If vessel has to lighten, all ship's Certificates (originals) to be taken to the Harbour Master by the Agent.

APPROACHES: *Exclusion Zone around the Terminal:* As well as observing the ban on anchoring and fishing which exists in the area, all ships and other vessels are forbidden to transit, stop, carry on any activity underwater, or of any nature, within a 700 m. radius of the terminal. Exception is made for the tankers heading for the terminal itself and for the ships or other vessels employed for the docking services or to assist any other vessel to whom authorisation has been issued.

PILOTAGE: Generally Pilot boards vessels for berthing only, however Masters are requested to contact Ravenna Pilot Station soonest possible by VHF Channel 12 in order to obtain anchorage or berthing instructions.

All Pilot boats and Pilots are equipped with VHF operating on Channel 12.

Production platforms, well structures, submerged pipelines and cables exist in Ravenna Roads. Mariners should use caution when approaching and anchoring.

ANCHORAGES: Position of anchoring depends on Ship's draft and having regard for existing restricted areas.

It is suggested that Master consults up-to-date sailing direction (Italian Vol. I – Adriatic Sea).

If vessel has to lighten, the area is within an area with the following co-ordinates:

(a) 44° 31' 08" N., 12° 24' 00" E.

(b) 44° 31' 08" N., 12° 28' 00" E.

(c) 44° 29' 30" N., 12° 24' 00" E.

(d) 44° 29' 30" N., 12° 28' 00" E.

RESTRICTIONS: Daylight berthing only.

MAX. SIZE: The terminal can be used by ship's of 160 m. – 270 m. LOA with a max. draft of 11.50 m.

RADIO: *Arrival Advice for Harbour Authority:* 36 hours before arrival, in order to obtain berthing authorisation, following cable/telex is to be sent to "Compamare Ravenna" (Telex No. 551366).

Quote

From M/V. ....

To COMPAMARE RAVENNA (Tlx. 551366).

Vessel/Call Sign/Name/Flag/LOA/GRT/DWT/Year Built/Arrival ETA Pilot Station or at Anchorage at Roads/Max. Draft on Arrival.

Cargo/Technical Name/Quantity to be Discharged and Transit/ Certificates/Safety Equipment/IOPP/All Valid otherwise point out if expired.

Paris Memorandum/Date, Place and Remarks of the Last Survey. Conditions of Hull, Engine, Manoeuvering Equipment, Safety and First Aid Service.

Also state following wording:

I declare to know Regulations concerning Safety Rules for the Carriage of Dangerous Cargo as per Ravenna Harbour Master Ordinances.

I guarantee all crew members to be qualified and trained to carry out discharging operations.

I undertake to inform Harbour Master about any fact which could involve ship and Safety Equipment and influence cargo handling.

Signed Master

Unquote

It is suggested that a copy of above telex also be sent to Agents.

In case vessel arrives with draft exceeding 11.50 m., and in order to obtain lightening permission, the following information to be passed to Agent in order to speed up formalities:

(a) Details of following Ships' Certificates (issued at/on/expiring/Place/ Date last Annual Survey):
    I.O.P.P
    C.L.C.
    Safety Equipment.
    Class Certificate.
    Safety Construction.
    Load Line Certificate.
(b) Name/Rank on board of 2 Officers who will attend lightening operations.
(c) Master's Name.
(d) Classification Details.
(e) Cargo Tanks Total Capacity (Cubic Metres).
(f) Max. Allowable Pressure.
(g) Official Owners.
(h) Port of Registry.
(i) Total Crew.
(l) LOA.
(m) Beam.
(n) Arrival Draft.
(o) Expected Draft after Lightening.
(p) Expected Draft after Discharged Ravenna Cargo.
(q) Main Engine, Number and Type.
(r) Horsepower of Main Engine.
(s) Max. Speed when Vessel Fully Loaded.
(t) Vessel equipped with Bow Thruster or not.
(u) Mooring Winches.
    Fore: Type/No./Capacity.
    Midship: Type/No./Capacity.
    Aft: Type/No./Capacity.
(v) Cargo hose lifting facilities: No./Capacity.
(w) Cargo pumps: No./Type/Capacity cubic metres per hour each.
(x) Cargo Information:
    (1) Total Number of Cargo Tanks.
    (2) Total Capacity of Cargo Tanks.
    (3) Numbers of Tanks where Cargo is Stowed.
    (4) Total Capacity of Tanks in (3) in cubic metres.
    (5) Allowable Cargo Specific Gravity.
    (6) Name of Product.
    (7) Total Quantity of Cargo on Board (Bill of Lading – Tonnes).
    (8) Cargo Temperature.
(y) Ballast Information.
    (a) Numbers of Tanks for Ballast.
    (b) Numbers of Compartments presently with Ballast.
    (c) Type of Ballast: Segregated/Clean/Dirty.
    (d) Total Ballast Presently on Board in cubic metres.
    (e) Total Ballast Capacity in cubic metres.

Terminal Ready Communication: Before the ship is moored, the concessionery company of the terminal must inform the Technica Section of the Harbour Office of Ravenna of the date and hour whe the terminal will be ready, otherwise mooring will not be permitted.

HEALTH: When applicable, Sanitary Free Pratique is granted by cable. Alternatively it may be granted by Health Authority who boards vesse on arrival.

Masters are to cable to "SANIMARE RAVENNA" 24 hours befor arrival, requesting Sanitary Free Pratique.

VHF: The personnel on the terminal keep a constant listening watch o Channel 16 and simultaneously maintain a continuous VHF link with th ship during the mooring, unloading and unmooring operations.

TUGS: Tugs and mooring boats available.

Unmooring from Terminal allowed also during night time, in such case only 1 tug is usually available.

BERTHING: *Description of the Structure:* The jetty 342 m. in length, made up of a central unloading and control platform, 4 mooring dolphi and 2 approach dolphins, all connected to the main structure by catwalk

All the structures are made of steel.

The height above sea level varies between 7.0 m. above MSL approach dolphins, 9.0 m. above MSL for the mooring dolphins 11.5 m. above MSL for the central platform.

Central Platform: On the central platform are positioned:
2 oleodynamic unloading arms of 12 in. diameter.
Firefighting equipment.
System for monitoring the speed of approaching ships.
Gangway.
Service crane.
Control room serving as shelter for the personnel.
Maritime signalling equipment.

Approach Dolphins: The elastic defence of the platform is guaranteed by 2 approach dolphins. The energy of the approaching ship is absorbed by the elastic deformation of the pile and by a system of fenders supported by the pile itself.

At the top of the pile there are 2 quick release slip hooks.

Mooring Dolphins: The mooring structures are made up of 4 dolphins situated along the longitudinal axis of the terminal.

There are 2 quick release slip hooks on the footpath level of the bridge.

Access to the terminal is guaranteed by 5 points:

Boat landing stage on the central platform and 4 vertical ladders on the BD1, BD2, MD1, MD4 dolphins.

Maritime Signalling: All the signalling equipment of the terminal is powered by accumulator batteries, which are recharged during the day by photovoltaic solar panels.

3 optical signals have been installed, as follows:
1 white light with a visibility of 6 – 10 nautical miles.
2 red lights with the same characteristics.
1 fog horn whose sound carries for up to 2 miles.

Firefighting System: The firefighting system is made up of 2 pumps, one electric and one diesel.

Each pump can guarantee a flow of 240 cu.m.p.h at a pressure of 9 bars.

The fluoroproteinic foam is stored in a tank with a capacity of 2,500 litres.

MOORING/UNMOORING: *Mooring and Unmooring Operations:* The mooring and unmooring operations at the terminal are only authorised when the sea and wind conditions are favourable, and when there is no impediment which might render the manoeuvre dangerous. The mooring operations can only be carried out during the daylight hours, while the unmooring can be carried out at night as long as the weather conditions permit.

Docking Service Assistance: As well as requesting a pilot and a large enough team of dockers, the ship's Master must request the assistance of a sufficient number of tugs to ensure the safety of the manoeuvre.

Casting off for Safety Reasons: The Master of the ship moored at the terminal, whose judgement is final, can order the immediate suspension of the unloading operations and the rapid unmooring from the terminal should any of the following occur:

A worsening of the sea conditions, strong electrical discharges, an increase in the wind's force any accident in the unloading systems, pollution or any other event likely to put human life or the safety of the ship in jeopardy.

Approach Operations Monitoring System: The visualisation of the ship's distance from the approach front as it draws near terminal is shown on 2 luminous displays situated on the central platform.

The ship's approach speed is signalled by 2 lights with green/yellow and red lights.

Preparations for Carrying out the Mooring and Unmooring Operations: Before carrying out the mooring and unloading of tankers at the terminal, the following cautionary measures must be carried out by the concessionary Company:

Inspect the winches and the slip hooks on the 4 mooring dolphins.
Inspect the system monitoring the speed and distance of the ship approaching the terminal.
Control the marine meteorological data acquisition systems.
Check that the maritime signalling equipment is functioning properly.
Inspect the 2 unloading arms and the on/off valves and check that they are working properly.
Control the cathodic protection.
Inspect and switch on the fire fighting devices and supplies: in particular, check that the fire fighting pumps, the storage and mixing systems for the foaming agent, the water-foam distribution system and for the remote-controlled monitor are all working properly.

CARGO OPERATIONS: The platform is connected to the onshore depot by means of 2×22 in. pipelines of approximately 13.5 km. in length.

The unloading operations are carried out using 2 completely automatic unloading arms.

Unloading System and Power Plant: The platform is equipped with 2 hydraulic unloading arms of 12 in. diameter. These arms are provided with an automatic release system. This system disconnects the arm from the ship should it (the ship) move out of the normal range of action of the arms for any reason. Max. discharge rate is 2,000 t.p.h. Max. pressure at manifold 12 kg./sq.cm., minimum pressure at manifold 7 kg./ sq.cm.

Before the disconnection is made, the 2 valves will be closed automatically to prevent any spillage of hydrocarbon into the sea: one valve is at the head of the outboard arm and the other is at the ship's manifold.

The electrical energy required for running the terminal is supplied by 2 generators situated on the MD4 dolphin at the Northern extremity of the terminal in a security zone.

Terminal Services: The services concerned with the working of the terminal are organised by ENEL who use their own employees on site.

The management of the unloading operations of the ship and of the connection and disconnection of the hoses is the joint responsibility of the ship's command and the receiving company or whoever is concerned with the unloading within the limits of their respective competences.

Personnel Employed at the Terminal – Logistics: There must be a team of at least 3 persons on the terminal to work on the system. They will be employees of the Company and will be part of the Company firefighting team. ENEL shall nominate a Terminal Chief from among these.

During the unloading operations at the depot, the Company firefighting team must be present.

The accommodation destined for personnel use must be kept clean and in good order, sufficiently lit, ventilated and heated.

MEDICAL: Medical assistance and hospitals are available, including helicopter service for emergency service.

FRESH WATER: No fresh water available at Terminal and no barge service available to supply fresh water in the roads. Only small quantities can be supplied by very expensive port tugs (subject tug availability).

FUEL: Most grades available by barge, at least 48 hours notice required. Replenishment subject to observance of Ravenna Harbour Master Ordinance.

REPATRIATION: Repatriation possible, subject to Immigration/Visa restrictions, if any.

AIRPORT: Nearest airport is at Bologna (approximately 90 km.).

SHORE LEAVE: Shore leave permitted. Liberty boat available, subject to sea conditions. Latest trip from shore is usually 2200 hrs.

Seafarers Centre "Stella Maris" available in the town. (Via P.Costa 55. Tel: 30235).

GENERAL: *Re-provisioning and Loading Materials:* It is forbidden to load or unload heavy or bulky metallic materials. Any bunkering or loading of ship's stores, drinking water or other materials should always be done, if possible, when the ship is at anchor in the roads. These operations can also be carried out, in accordance with the procedures and measures laid down by the Harbour Office, when the ship is tied up at the terminal before or during the unloading, but not during the mooring, casting-off or ballasting.

Ban on going on to the Terminal: Only persons with express authority are allowed to go on to the terminal.

Access to the terminal is limited exclusively to the personnel working there.

CHIEF OFFICER'S REPORT: November 1990.

1. *ENEL ITC Marine Terminal:* Constructed in 1986, and situated about 8.5 km. off the coast of Ravenna in position Lat. 44° 27.8' N., Long. 12° 23.9' E. It is designed to unload fuel oil and crude oil to the onshore tanks and from there to the power plant at Porto Tolle.

This terminal has been designed for the mooring of tankers from 18,000 d.w.t. to 80,000 d.w.t. with a max. draft of 11.5 m. at the mooring point.

The terminal will be unmanned when no tankers are moored.

Two submarine pipelines, each 22 in. diameter and 8.8 km. in length, connect the terminal to the shore.

The terminal is equipped with a "Safety Berthing Device" (SBD). The latter is provided with 2 luminous displays which give the distance between the side of the tanker and the breasting dolphins, starting from 99 m., as well as a traffic light which indicates the tanker approach speed.

Firefighting is ensured by a remote controlled foam monitor.

2. *Lighterage:* To reach a draft of 11.5 m., vessel must be lightered at Ravenna Roads in a special anchorage for lightering purposes. The anchorage is situated between following points:

(a) Lat. 44° 31' 08" N., Long. 12° 24' 00" E.
(b) Lat. 44° 31' 08" N., Long. 12° 28' 00" E.
(c) Lat. 44° 29' 30" N., Long. 12° 24' 00" E.
(d) Lat. 44° 29' 30" N., Long. 12° 28' 00" E.

Our lightering barges were the M.T. "Assunta Ravenna" and M.T. "Marina II", both of 1,000 tonnes. Lighters, according to weather conditions, could berth port or starboard side to and also connected cargo hoses, but lighterage operations will not be carried out simultaneously. Each barge was fitted with 1×150 mm. diameter hose and 2 Yokohama fenders.

During discharging operations on the roads and at the Marine Terminal, automatic sampling equipment was installed on the manifold flanges. The equipment is operated by an SGS-Redwood Inspector, so accommodation and food must be arranged for one person.

3. *Basic Data and Operating Limits:*

	Minimum	Maximum
Tanker class:	18,000 d.w.t.	80,000 d.w.t.
Overall length:	160 m.	270 m.
Max. overall displacement:		110,000 tons
Max. draft:		11.5 m.

Operating approach speed: Less than 0.1 m./sec.
Max. operating approach speed: Less than 0.15 m./sec.
Designed approach speed: Less than 0.2 m./sec.
NOTE: 0.2 m./sec. is the limiting speed and must never be exceeded.

Designed berthing energy of a tanker with 110,000 tons displacement and 0.2 m./sec. berthing speed: 172 tons/m.

Limiting conditions for mooring:
Daylight only.
Wind speed: 30 knots.
Wave height: 2 m. maximum.
Minimum visibility: 0.5 miles.

Limiting conditions for unmooring:
Day and night.
Wind speed: 40 knots.
Wave height: 2 m. maximum.

Conditions in which unloading must be shut down:
Max. wind speed: 50 knots.

4. *Mooring and Unmooring Operations:* Normally the vessel will approach the terminal from the South

After having consulted the Pilot, the Master will decide whether to use two or more tugs, depending on the power of the tugs available and weather conditions.

This decision must, however, be made by radio before the Pilot leaves the port, in order to allow the tugs enough time to reach the terminal, about 30 to 40 minutes.

The moored tanker *must supply* each tug with 2 identical lines, in good condition, which are connected to the hooks on the tugs.

The tugs will await the tanker about one mile from the terminal.

Mooring personnel will reach the terminal by service boat. At least 4 men will leave the boat and connect the tanker's lines to the hooks on the unloading terminal (two at each end of the tanker).

When the tanker is parallel to the terminal and at a distance of about 150 m. – 200 m., it may be necessary to drop the port anchor so as to have better control over the vessel during the last phase of the approach. The anchor will also give greater control during unmooring.

With simultaneous slackening of the chain and heaving off the bow/stern ropes, already connected to the terminal platform, the tanker may be carefully brought alongside and kept, as far as possible, parallel with terminal platform.

The control of tanker manoeuvres will be made easier by using the safety docking device monitoring system (SBD).

After the tanker has been correctly positioned for the connection of the loading arms, the mooring operation must be completed. There must be at least 8 lines: 3 head/stern ropes, 3 breast ropes and 2 springs, at each end.

Unmooring operation: Assuming the same wind and sea conditions as for mooring, the anchor can be used for unmooring (if it has already been employed).

After the lines have been gradually slackened, and the tanker's stern is free, the tanker's engine can be used and the anchor chain heaved in, so that the bow can be moved away from the platform. Assistance will be given by at least one tug of 1,500 b.h.p. which will move the tanker by pulling on a stern rope.

If, however, the anchor is not used, the Master and the Pilot will decide the number of tugs required.

5. Cargo Connections: Unloading operations will be performed by means of 2 hydraulic loading arms of 12 in. diameter. Each arm will be equipped with a double valve disconnector of the MIB type and a connecting flange with a diameter of 12 in. Max. pressure allowed is 12 kg./sq.cm.

6. Ballast Facilities: None available.

7. Gangway: Access to the tanker from the terminal is possible by a built-in automatic telescopic gangway.

8. Ullaging/Temperature Sampling: Taken by terminal personnel and SGS-Redwood Inspector, automatic sampling equipment also installed.

9. Telecommunications: The terminal personnel will be on permanent stand-by on VHF Channels 69 and 16.

The tanker will be able to communicate with the Terminal Control Room on Channel 69.

OPERATOR: Ente Nazionale per L'energia Elettrica (ENEL), Via Trieste 383, 48100 Ravenna 1, Italy. *Tel:* (0544) 436527. *Telex:* 551188 Sone I. *FAX:* (0544) 436579, Ext. 28. *Contact:* Bruno Teston.

AGENT: See "Genoa".

SALERNO: 40.40 N. 14.45 E. (See Plan)

DOCUMENTS: As for all Italian ports, i.e. all ship's documents in valid condition and Arrival Reports, to be filled upon arrival with the Port Authority's representative.

Shipmaster's Report: November 1988.

- 5 copies Crew List.
- 2 copies Ship's Information.
- 1 copy Application for Ship's Clearance.
- 1 copy Stores List.
- 1 copy Cargo Manifest.
- 1 copy Maritime Declaration of Health.
- Oil Record Book.
- Cargo Gear Certificates.

PILOTAGE: Pilot station keeps watch on Channel 16 VHF from 0600 – 2000 hrs., working Channel 14.

ANCHORAGE: Position of anchorage, about 1 mile W.S.W. of green flashing light.

RESTRICTIONS: Vessel cannot enter or sail from the harbour between 2100 hrs. and 0500 hrs.

MAX. SIZE: Vessel allowed to enter port should not exceed 220 m. in length or 30 ft. draft.

HEALTH: Free Pratique not obtainable by radio. Usual formalities on berthing.

RADIO: All cables should be sent via "Napoli Radio" call sign "IQH".

TUGS: Lines must be supplied by the ship.

BERTHING: 13 berths with depths from 21 ft. to 30 ft.

CARGO HANDLING EQUIPMENT:

16 mobile cranes with capacity up to 270 tons.

80 forklift trucks with capacity from 4 tons to 37 tons.

6 dumper trucks.

Hydraulic grabs.

Specialised terminals for cars and wheeled units, containers, forest products, steel products.

Ro/Ro facilities.

Handling and storage area: 250,000 sq.m.

Equipment for loading/discharging bananas, fruit, refrigerated and frozen cargoes in cartons.

CONTAINER HANDLING FACILITIES: *Salerno Container Terminal:* Two quays of 380 m. each, and one quay of 130 m. Depth up to 11.0 m. 2 ship-to-shore cranes with 50 tons capacity under spreader.

STEVEDORES: Stevedores are to be informed 24 hours prior to vessel's arrival.

MEDICAL: Medical Service should be requested in advance. Hospital facilities are obtainable.

DENSITY: Average salinity inside port is 1025.

FRESH WATER: Fresh water available at all berths, ordered through Agent.

FUEL: Bunkers may be supplied from Naples by truck or barge. If large quantities are requested supply will be effected by barge from Naples.

CONSULS: No consular representatives exist in Salerno. Nearest at Naples.

REPAIRS/DRY DOCKS: No dry dock exists. Only small workshops attending minor repairs.

SURVEYORS: Lloyd's Register in Naples. Tel: (081) 323714. R.I.N.A. in Naples Tel: (081) 325644.

GANGWAY/DECK WATCHMAN: Contact Instituto La Vigile. Tel: 239928.

CUSTOMS ALLOWANCES: Only 40 cigarettes on vessel's arrival. This applies to officers and crew. The remaining stock will be sealed in vessel's bonded store.

REPATRIATION: Crew changes and repatriation possible.

AIRPORT: The nearest airport is at Naples. Distance 60 km.

TIME: One hour ahead of GMT in Winter. Summertime (March – September) GMT plus 2 hours.

HOLIDAYS: Other than the national festivities, September 21st, a local holiday, being the Name Day of the town's Patron Saint.

TELEPHONES: Emergency telephone number is 113-112.

IDENTIFICATION CARDS: Crew I.D. cards issued by police on arrival.

GENERAL: *Garbage:* Collection is compulsory. Collected from vessels at anchor and by truck if vessel at quay.

Ship Chandler: Montanari General Ship Chandlers, Tel: (089) 237553.

Services: Radar, VHF and gyro service or repairs may be obtained through request to Agent prior to vessel's arrival.

AUTHORITY: Capitaneria di Porto Salerno, Molo Manfredi, 84100 Salerno. *Tel:* (089) 224544, 224765. *Telex:* Compsa 722559. *Cables:* Compamare Salerno. *Contact:* Harbour Master.

SANT ANTIOCO, Sardinia: 39.02 N. 08.26 E.

SHIP'S OFFICER'S REPORT: May 1996.

VESSEL: A 76,000 tonnes d.w.t. bulk carrier, visited Golfo di Palmas (Italy) and discharged 12,500 tonnes of steam coal ex-Richards Bay (South Africa). It it understood that the receivers ENEL have a thermal power station here and an average lightening of about 3 ships a month at the anchorage port.

PORT LIMITS: Not known. Our laytime commenced on crossing Isola La Vacca.

DOCUMENTS: Same as for Italian ports. Officials from Cagliari, including Italian Coast Guard, boarded vessel shortly after arrival.

PILOTAGE: 24 hours advance information was given to "Circomare Sant Antioco" on Telex No. 790346 via Roma Radio, giving ETA midnight. A reply was received asking us to drop anchor and approach pilot station (marked on chart) after 0530 hrs. (sunrise 0646 hrs.). Vessel called Sant Antioco port from 40 miles range from 1700 hrs. onward on Channels 16, 14 and 12, but no response heard (station listed in NP.286(2) as B.6030). Pilot came of his own accord at 0500 hrs. and embarked in position with Isola La Vacca (Northern tip), bearing 245° × 2.7 miles. A "Trinity House" type launch used, and vessel provided pilot ladder 1 m. above waterline on lee side. Vessel anchored in position with Isola La Vacca, bearing 204° × 4.0 miles in 24 m. of water (vessel's draft 14.0 m.).

RESTRICTIONS: Like most Italian ports, entry is only in daylight hours, but ships permitted to sail without Pilot anytime.

HEALTH: Radio Pratique obtained from Cagliari (Sanimare Cagliari) prior to arrival.

RADIO: We used Roma Radio for telex and Cagliari Radio for W/T.

VHF: All the authorities (cranes, barges, tugs, Agents, etc.) operate on Channel 6 throughout vessel's stay.

TUGS: One large tug is available and is mostly standing-by to assist crane operations.

BULK CARGO HANDLING FACILITIES: The Cavelletto coal discharge system was used. This consists of a 8 cu.m. grab and chute for discharge into a barge. It is fitted on rails (beams) placed over hatch coamings. Average weight with cargo of about 106 tonnes and is spread out by the 11 m. long beams. It takes about 2 to 3 hours to rig and an hour to unrig. A 250 tonne floating crane is used. Vessel should not develop more than 1.5 ° trim or more than 2° list/roll. During swell, the tug is used to steady the vessel. We had to cease discharge when we encountered moderate swell and rain, and the crane had to be cast off. It should be noted that it would not be possible to close hatches with the system rigged. Discharge rate 350 tonnes/hr.

MEDICAL: A doctor and a small hospital available. No specialists. Agent arranged appointments with 24 hours notice.

DENSITY: 1026.5 – 1027.

FRESH WATER: Can be arranged from Porto Vesme.

FUEL: Not available.

CONSULS: Not available.

REPAIRS: Not available.

DRY DOCKS: Not available.

SURVEYORS: Draft surveyor from SGS comes from Cagliari.

REPATRIATION: Vessel repatriated one officer. Ticket arranged by Alitalia at Cagliari, visa required. All formalities were done at Cagliari.

AIRPORT: Cagliari, 85 km.

TIME: Same as for Italian ports.

HOLIDAYS: Same as for Italian ports.

SHIP SUPPLY: Can be arranged from Cagliari.

SHORE LEAVE: No restrictions, and seamen's document is adequate

Sant Antioco is a small town with few shops or facilities. It was not possible to telephone home as telephone cards were not available, and we used VHF for the purpose. International aerograms were not available. However, we obtained some stamps.

GARBAGE: No facilities. The waters are clean and the bay is beautiful, so the normal person will store his garbage.

SEAMAN'S CLUBS: None.

GENERAL: *Charts/Publications:* B.A. Chart No. 1207 and NP46 (Para 9.91) are reasonably accurate and adequate.

SAVONA (including Vado Ligure): 44.18 N. 08.29 E.

(See Plan)

PORT LIMITS: One mile from Savona Port Breakwater.

DOCUMENTS:

Arrival Report for Port Authority.
Cargo Manifest.
Provisions and Crew Personal Effects Manifest.
8 Crew Lists.
Class Certificate.
Safety Equipment Certificate.
Safety Construction Certificate.
Safety Radio Certificate.
Ship's Register – Load Line Certificate.
Derat Exemption Certificate.
I.O.P.P. Certificate.

PILOTAGE: Pilotage is compulsory for vessels over 500 g.r.t. Pilot ordered through Agent. Telegraphic address: Piloti Porto di Savona. Pilot launch is black with white band. To call Pilot, use flag or light signals according to International Code. For vessels bound for Savona or Vado Ligure, Pilot boards about 0.5 to 1 mile S.E. of the red light at Savona port entrance. Pilot station on VHF Channel 13 day and night.

ANCHORAGE: The Roads of Savona offer a safe and spacious anchorage. Depths of 25 m.

Important limits: It is forbidden to anchor North of bearing 270° from red light. It is forbidden to anchor East of bearing 360° from the white light between 15th May and 30th September.

Shipmaster's Report: April 1983.

In any season the limits are:
North Border – bearing 305° from red light "Frandgiflutti".
South Border – bearing 340° from Point Lat. 44° 18' 30" N., Long. 08° 29' 27.5" E.

RESTRICTIONS: Night entrance is considered for each case depending on type of mooring and vessel's draft. At Savona berths, vessels on maximum draft berth in daylight at high tide. No restrictions on unberthing.

MAX. SIZE: See "Berthing".

HEALTH: Free Pratique may be requested by radio from "Sanimare Savona" prior to vessel's arrival except for vessels coming from countries subject to sanitary control, for which the Harbour Doctor must go on board in order to expedite Free Pratique. Free Pratique is automatic for vessels entering after calling at another Italian port or any other port belonging to E.E.C. – In the event of any disease or fever contact Agents.

RADIO: Roma Radio.

VHF: Pilot station on Channel 13, day and night. Harbour Master's office on Channel 16, day and night. Port Authority on Channel 13 (Tel. 019-85541).

TUGS: Tugs join vessel in vicinity of Savona port entrance or at Vado Ligure just off the berth. Ship's line usually used. If tug line used, tariff plus 20% is charged.

CRANES: The port is equipped with modern mobile cranes with the following capacities:

2 Portainers, 45 tons capacity under spreader, 43 m. outreach.
2 Transtainers, 35 tons capacity under spreader, 17.9 m. lifting height, 15 rows.
3 Mobile cranes "Italgru 820" for containers.
1 Mobile crane "Gottwald 260 E" for containers.
3 Telescopic "Ormig" for general cargo, 75 tons capacity.
2 "Ormig" for general cargo, 150 tons capacity.
9 Shore bridge cranes from 5 tons to 6 tons capacity.
2 Shore electric cranes 20 tons capacity.
6 Stockyard mobile container cranes.
97 Forklifts from 1.5 tons to 32 tons capacity.

BERTHING:

Berth No.	*Length* (m.)	*Depth* (ft.)	*Remarks*
1	64	23-26	
2-3	220		
4	145		
5-6	210		
7	150		
7/8	84	29	
8-9-10	345	30	
11	60	17	Tugs
12-13	235	23-36	
14-15-16	290		
16A	130		Savona silos
17	74	32	
18-19-20-21	480	16-20	Fishing, supply boats, pontoons.
22	140	32	Molo Miramare
23	40	24	
24-25	180		
26	205		Waiting, repairs
31-32	460	51	

Vado Ligure

Berth No.	*Length* (m.)	*Depth* (ft.)	*Remarks*
Main Quay	900	10 - 15 m.	2 Berths for container vessels
South Quay			1 Berth for Ro/Ro vessels
North Quay			1 Berth for fruit and 1 berth for Ro/Ro vessels.

SPECIALISED CARGO-HANDLING FACILITIES: Funiviaria Plant is equipped for quick discharging of cargoes in bulk (coals and ores) by means of 4 electric transporters capable of handling 1,300 t.p.h. It is directly connected to overhead wire railway, capable of carrying 400 t.p.h. to its storage, the capacity of which is 600,000 tons. Depth alongside 32 ft. 6 in.

Cereal Silo belonging to "Savona Silo S.p.A." with depth alongside of 35 ft. has a capacity of 60,000 cu. m., it is fitted with 2 pneumatic towers having an intake of 500 t.p.h. and one loading tower with capacity 300 t.p.h. The berth can accommodate vessels of 40,000 d.w.t. with 35 ft. draft.

Steel Terminal of 12,000 sq.m. for the movement of metallurgical products. The terminal is equipped with adequate facilities for the storage and reloading of the goods.

At Berths No. 14 and 15, the steel transit shed belonging to "Must S.P.A." covers an area of 2,400 sq.m., half of which is covered and provides 10,000 tons of storage.

A 14 storey parking house capable of containing 3,000 cars. Ro/Ro terminal available.

Parking yard of 12,000 sq.m. intended for the parking of vehicles to be loaded, with a capacity of 1,200 vehicles.

Container terminal in Savona Basin includes an area of almost 50,000 sq.m., for the storage and the shifting of the containers.

Stockyard for empty containers of 10,000 sq.m. with a capacity of 1,000 TEU with adequate handling facilities.

Terminal in Savona Basin for cellulose and forest products includes 550 m. of loading quays for ocean-going vessels; roofed warehouse of over 16,000 sq.m.; 120,000 cu.m. capacity for 40,000 tons of goods. Three sheds for woodpulp provide further areas respectively of 4,200 sq.m., 2,200 sq.m. and 1,200 sq.m. A timber and general cargo warehouse of 1,100 sq.m. surface area is also available. These facilities are served by 1,600 m. of railways, 300 m. out of which are roofed; over 200 trucks available for forwarding goods by road.

Single storey warehouse for general cargoes having a capacity of 12,000 cu.m.

Three berths available for Ro/Ro traffic, and parking area of 40,000 sq.m.

A further 50,000 sq.m. of park (10,000 sq.m. in use and 40,000 sq.m. under construction) and 50,000 sq.m. of warehouse (7,000 sq.m. in use and 43,000 sq.m. under construction) available.

Vado Ligure: Pier San Raffaele is fitted for discharging and loading large vessels with cargoes in bulk (coal for the Italiana Coke S.p.A.).

South Unloading Pier: Length 160 m. Depth 41 ft. 2 slewing grabs, unloading rate 10,000 tons per day. Berth accepts vessels up to 50,000 d.w.t.

North Loading Pier: Length 128 m. Depth 30 ft. 1 loader, rate 2,000 tons per day. Berth accepts vessels up to 30,000 d.w.t.

Cereal Silo belonging to Messrs. Ceres S.R.L. is capable of handling vessels up to 60,000 d.w.t. Depth alongside 40 ft. Storage capacity 65,000 tons; discharging rate 800 t.p.h.; re-forwarding rate 500 t.p.h.

Reefer Terminal: Length of berth 300 m. Unloading/loading plant for foodstuffs and other refrigerated cargoes at Porto Vado North. The plant consists of conveyor belts which from the holds load goods directly onto trucks, railway-cars and vice-versa. The rate is about 300 tons per line (3 lines) per shift. Packages weight: up to 35 kg. Packages size: up to 600 mm.×500 mm.×350 mm. Refrigerated storage capacity 6,000 tonnes at −2°C.

Container Terminal: S.V.C.T. Container Terminal with park of 20,000 sq.m. for storage of 3,000 TEU.

STEVEDORES: Ordered by ship's Agent, no separate ETA required.

MEDICAL: All facilities available.

TANKERS: *Esso Pier:* Length 345 m. Depth at head 33 ft. Discharge rate 1,000 t.p.h. Storage capacity 200,000 cu.m. Vessel moors to buoys and uses anchor.

Berthing and Mooring: Night berthing is not permitted.

Normally, 1 tug is used by vessels of up to 14,000 d.w.t. and 2 tugs are used for larger vessels. The tugs tow on the hook using ship's lines. 1 tug is used for unberthing.

Vessels approach the berth from a general Easterly direction and are swung off the head of the pier and backed stern first into the berth. Vessels berthing at the pier head use both anchors with about 7 shackles in the water and secure lines from the stern to 4 mooring buoys near the pier head.

Agip Agrimont Pier: Length 700 m. Depth at head 39 ft. Discharge rate 700 t.p.h. Storage capacity at Vadoil 300,000 cu.m. Vessel moors using ship's anchor and 5 buoys. There is a berth along the North side for tankers unloading sulphuric acid, unloading rate 300 t.p.h.

Industria Italiana Petroli Pier: Length 420 m. Depth at head 31 ft. Vessel moors to 4 buoys. Discharge rate 800 t.p.h. Storage capacity in excess of 100,000 cu.m.

Isaoil Pier: Length 435 m. Depth at Head 31 ft. Vessel moors using ship's anchor and 4 buoys. Discharge rate 250 t.p.h. Storage capacity 100,000 cu.m.

Berthing and Mooring: Night berthing is not permitted.

Normally, 3 tugs are used for berthing. The tugs tow on the hook using ship's lines. 1 tug is used for unberthing.

Vessels approach the berth from a general Southern position steering North. When about 500 m. off jetty head, starboard anchor is dropped. With tugs' help, the vessels are swung in order to present the stern to the head of the jetty. Port anchor is dropped. Normally 7 – 8 shackles of chain are used. The stern is moored with 2 lines on each of the 4 buoys. Vessels up to 15,000 d.w.t. can be moored, maximum draft is about 29 ft. Synthetic ropes are recommended.

Sarpom Buoyage: Approximately 1,340 m. from the Quiliano mouth there are the pipelines Quiliano-Trecate's buoys at a draft of 115 ft. for mooring tankers up to 260,000 d.w.t.

By means of its submarine piping they get a pumping rate of over 10,000 t.p.h. Its plant ashore contains a coastal storage from which goes a pipeline 146 km. in length reaching the Sarpom refining mill (See "Quiliano Terminal").

DENSITY: 1025.

FRESH WATER: Can be supplied alongside the quay by hoses, rate of delivery 10 t.p.h. The cost amounts to 4,026 Lire per ton plus 19,012 Lire for the use of hose up to 50 m. long; plus 38,024 Lire for the use of hose up to 150 m. long; plus 57,036 Lire for the use of hose over 150 m. long. Possible to supply fresh water in roads, weather permitting.

FUEL: All grades available from major oil companies and supplied by barge only.

FIRE PRECAUTIONS: Tankers or vessels handling dangerous cargoes, are requested to use vigilance prevention fire service carried out by 2 men, one on board and the other ashore, supplied by the "Cooperativa S.Barbara III°" (fire brigade). No repairs or gasfreeing to be carried out without permission of Port Authority.

CONSULS:

Denmark	Tel. 828814	Netherlands	Tel. 821422
France	" 813055	Spain	" 821747
Malta	" 85551	Sweden	" 809471
Norway	" 821747		

REPAIRS: All types of repairs possible except drydocking.

In Savona the Classification Society is represented by the R.I.N.A. (Lloyd's Register of Shipping). The A.B.S., N.V., etc., are represented in Genoa (40 km. from Savona).

SURVEYORS: General cargo and bulk cargo Inspectors available at Savona or in case of need from Genoa. Petroleum Inspectors such as Saybolt-Van Duyn available at Siracusa with office in charge also for Savona.

Locally available only Italian Register of Shipping (R.I.N.A.) all other Classification Societies available from Genoa. The representative of Salvage Association available from Genoa.

GANGWAY/DECK WATCHMEN: Optional, can be employed from shore if required.

HATCHES: Opening/closing hatches normally carried out by crew, on request stevedores can be arranged.

CUSTOMS ALLOWANCES: Bond sealed. 50 cigarettes or the equivalent in tobacco per person for the first day in port, wine and spirit allowance is made for normal daily consumption on board.

REPATRIATION: All facilities available for crew changes, good railway connections.

AIRPORT: Genoa (Cristoforo Colombo) distance 40 km.; Milano (Malpensa and Linate) distance 210 km.; Torino (Caselle) distance 149 km.

TIME: GMT plus 1 hour. From April to September, GMT plus 2 hours.

HOLIDAYS: New Year's Day, (1st January); Town's Patron Saint, (18th March); Liberation Day, (25th April); Easter Monday; Labour Day, (1st May); Assumption Day, (15th August); All Saints Day, (1st November);
Immaculate Conception Day, (8th December); Christmas Day, (25th December); Boxing Day, (26th December).

POLICE/FIRE/AMBULANCE: Police, Tel. 828868; Ambulance, Tel. 827272 (White Cross), Tel. 806868 (Red Cross); Fire, Tel. 33333 and 86244.

EMERGENCY CO-ORDINATION CENTRE: Harbour Master, Station of Savona. Tel: (019) 856666 (Officer on duty 24 hours a day).

TELEPHONE: Can be connected on board.

SERVICES: Cleaning of holds can be carried out by Impresa "Pippo Rebagliati"; tank-washing is possible only if the washing water is kept on board. Compass adjusting performed by Prof. G. Manella, c/o Nautical Institute.

BANKS:

Banca D'America e D'Italia, Via Garibaldi, 5, 16100 Genova. Tel: 284141 (with automatic selection). Telex: Baigen 270023.

The above bank is a branch of Bank of America, San Francisco.

Banca Commerciale Italiana, Via Paleocapa, 121 r. Tel: 386407. Telex: 270059.

Banca Nazionale del Lavoro, Piazza Marconi, 3. Tel: 802061. Telex: 270313.

Banca Popolare di Novara, Piazza Diaz, 41. Tel: 828881. Telex: 331037.

Banco di Napoli, Via Vegerio, 27. Tel: 37285. Telex: 271092.

Banco di Roma, Piazza Diaz, 48. Tel: 386818. Telex: 616184.

Cassa di Risparmio di Savona, Corso Italia, 10. Tel: 83111. Telex: Carisa 271075.

Istituto Bancario S. Paolo di Torino, Corso Italia, 90 r. Tel: 802051. Telex: 270514.

STORING: See "Prelims".

1. Vessel can be stored both by barge or truck.
2. Vessel can store from barge during loading or discharging.
3. Trucks can proceed along side at the berth only in the commercial port and not at the private piers.
4. Fork lift trucks can be used on the jetty to handle stores.
5. Goods which make up stores loaded or transhipped on vessels sailing from Savona, are considered goods in-transit or re-exportation when foreign and considered final exportation when national or nationalised goods.
6. Local riggers and on request stevedores can be employed to assist with storing.

SHIP SUPPLY SERVICE: Provisions are supplied by the local ship chandlers.

Names and addresses are as follows:

La Naval Provveditoria, Via Chiodo 6, 17100 Savona (Italy). Tel: 822715. Cables: Navalprovis.

Francesco Baglietto & Figlio, Via Piave 33, 17047 Vado Ligure (Italy). Tel: (019) 886400. Telex: 271120. Fax: (019) 886444.

For vessels not alongside a quay, crew and passengers are landed by the motorboats of the following firms:

I.M.A.R.T. s.n.c. di Spezialetti – Saccone & C. Impresa Marittima Artigiana Rimorchi Trasporti, Corso Vittorio Veneto 50/10, 17100 Savona (Italy). Tel: (019) 802537 – 828917.

La Torretta Trasporti Marittimi s.r.l., Via Paleocapa 15/5, 17100 Savona. Tel: (019) 821224 - 821260.

Trasmare s.n.c. Trasporti Marittimi, Via Aurelia 332, 17047 Vado Ligure. Tel: (019) 886062.

Any extra or emergency services can be carried out by the tugs owned by:

Soc. Carmelo Noli fu Giovanni, Sbarchi Imbarchi Spedizioni Rimorchi, Piazza Rebagliati 3, 17100 Savona (Italy). Tel: (019) 821254, 821118. Telex: 272293. Fax: 821254.

Name	*g.r.t.*	*LOA (m.)*	*h.p.*	*Class*
Luigi Noli	398.00	37.90	3,000	Ocean-going
Lombardia	197.52	31.11	2,500	Ocean-going
Piemonte	197.52	31.11	2,500	Ocean-going
Carmelo Noli	274.30	33.36	1,700	Ocean-going
Giuseppe Piaggio	177.45	27.74	1,600	—
Riviera	173.00	30.00	2,040	—
Priamar	173.00	30.00	2,040	—
Liguria	291.00	29.80	3,726	Ocean-going
Capo Vado	291.00	29.80	3,726	Ocean-going

SHORE LEAVE: Allowed. Launch service available for vessels on the roads.

IDENTIFICATION CARDS: Shore passes issued by the Immigration Office.

DELAYS: Normally no delays expected.

DEVELOPMENTS: A company named Interporto Vado I.O. has been established, and will provide the management of a 120,000 TEU/year container terminal which became operational in 1994.

AUTHORITY: Ente Autonomo del Porto di Savona, via Gramsci 14, 17100 Savona, Italy. *Tel:* (019) 85541 (with automatic selection). *Telex:* 271462 EAP SV. *FAX:* 019-827399. *Cables:* Portautonomo.

TARANTO: 40.29 N. 17.13 E. **(See Plan)**

DOCUMENTS:

6 Crew Lists.
6 Passenger Lists.
Provisions Manifest.
Manifest of Crew Personal Effects.
Cargo Manifest.
Arrival Report, completed on arrival.
Maritime Declaration of Health Certificate, completed on arrival.
Ship's Certificates including Italian Anchorage Dues.
Vaccination Certificates for sighting.

PILOTAGE: Pilotage is obligatory for vessels over 500 g.r.t., both for entry and leaving from Mar Grande. The Pilot boards arriving vessels at a distance of not less than 1 mile from the lighthouse of Capo S. Vito, and leaves on sailing when the line between the S. Vito and S. Paolo lights has been passed.

Corpo dei Piloti del Porto, Corsa Vittorio Emanuele II, 17, 74100 Taranto, Italy. Fax: 099-47-13832.

RESTRICTIONS: Entry allowed day and night.

In Mar Grande, the bottom slopes gradually upwards from the mout (more than 30 m. at the centre) to the facing coastline (about 14 m.). I Mar Piccolo, the maximum depth of 12.5 m. in the first inlet and of 9.5 m in the second inlet which slopes upwards towards the coast.

Vessels drawing more than 16 m. must pass to the West of the ligh buoy with radar reflector located about 1 mile to the South of the mout of Mar Grande and which indicates the Western limit of two areas o 17 m. and 18 m. depth.

Passage through the navigable channel: Merchant vessels whos passage necessitates the opening of the swing bridge and all foreig flag vessels must obtain authorisation to pass through the channel fro the Port Captaincy. Methods of passage are indicated in th Mediterranean Sailing Directions.

Prohibited Areas: To the South of the Islands of S. Pietro and S. Pao is an area in which transit is prohibited.

MAX. SIZE: Tankers up to 72 ft. draft may berth at buoy mooring.

Also see "Berthing".

HEALTH: Free Pratique is automatic for vessels coming from E.E.C countries. From other countries it may be obtained via radio, by applyi to "Sanimare Taranto" between 12 and 6 hours before arrival.

Yellow fever vaccinations could be arranged by calling Bari port doct to Taranto with two days' notice.

RADIO: Vessels at sea may communicate with Taranto by the follow means:

By R/T via Crotone Radio, listening continuously on 2182 kHz.

By VHF via Bari Radio, listening on Channel 16 from 0600 – 2400 hr

By VHF via the Port Captaincy, listening continuously on Channel and the Pilot Station listening continuously on Channel 12 (Pilot serv and safety only).

Tankers: Tankers carrying/or to load over 2,000 tons of petroleum products have to send a cable 36 hours in advance to "Compamare Taranto" containing the following details:

Ship	Type/call sign/name/flag/g.r.t./n.r.t./d.w.t.
Age	Age of the ship/LOA/draft fore-amidship-aft.
Arr	ETA to Pilot Station.
Cargo	Type/quantity of cargo on board/or to be loaded.
Fire	If vessel equipped with inert gas system and its efficiency.
Solas	Whether Safety Certificates issued according to Solas 1960 or Solas 74/Protocol 78 or Solas 74.
I.O.P.P.	Date/place/validity I.O.P.P. Certificate.
Paris	Date and place where carried out last 6 monthly inspection in European ports in accordance with Paris 1982 Memorandum.
Poll	Date and place of issuance/validity of Certificate of Insurance or other financial security in respect of civil liability or oil pollution damage – not Tovalop.
Remarks	Any news concerning deficiencies to hull/engine/steering gear/safety equipment.

Tankers belonging to countries who are not signatories to the Solas 74/Protocol 78, will have to anchor in Mar Grande Roads and are subject to a visit by the authorities as per Memorandum of Understanding on Port State Control.

TUGS: 6 tugs (1,000–1,920 h.p.), available. Compulsory for vessels over 20,000 g.r.t., 2,000 g.r.t. carrying hazardous cargo and vessels which have to pass through the navigable channel.

BERTHING: *Outer Harbour:* Quay Nos. 1/2, combined length, 1,050 ft. (32 m.); max. draft, 26 ft. 3 in. (8 m.); Quay No. 3, length, 820 ft. (250 m.); max. 27 ft. 10 in. (8.50 m.).

Italsider Pier: *Eastern side* (for discharge of ore, coal, steel scrap): length, 4,456 ft. (444 m.); depth alongside 52 ft. 6 in.; max. draft allowed 50 ft. Vessels up to 200,000 d.w.t. have berthed at Italsider Jetty No. 4. Length 1,353 ft. Depth alongside 80 ft. Discharge rate for iron ore (2 Dravo unloaders) 1600–2400 m.t.p.h. Discharge throughout 24 hours.

Also see "Regulations".

Western side (for discharge and loading of finished goods): Length, 1,566 ft. (477 m.); depth alongside 33 ft.

Safety: During Winter time, berths are subjected to heavy swell which may force vessels to leave same, as the breakwater effectively protects only the Eastern side. However, work is now in progress to lay new breakwater, which should also render safe the Western side.

Head of the Pier: Width, 448 ft. (136.55 m.); max. length of vessel, 459 ft. (140 m.) or up to 525 ft. (160 m.), subject to vessels laying at Western and Eastern sides being berthed at not less than 164 ft. (50 m.) from head of pier; depth alongside, 32 ft. 8 in., (10 m.).

Cement Pier: Max. depth is 8.50 m.; suggested max. draft 8.20 m. (26 ft. 10 in.); max. vessel length acceptable, 120 m.; rate of loading (in bulk): up to 280 mt.p.h.; (in bag): up to 35 mt.p.h.

BRIDGES: 1 bridge in Inner Harbour. Opening times: 0020 – 0420 hrs., 0830, 1510, 2110 hrs. Opening on Agent's request to Harbour Master (24 hours' notice requested for day opening time). Max. speed in the canal, 6 knots.

STEVEDORES: Available. Normal working from 0700 to 1500 hrs. For work performed in overtime/and/or holiday, the "Tariffs to the Workers" are increased as follows:

Day	*Shift*	*Increase*
Weekdays	1500–2300 hrs.	40%
	2300–0700 hrs.	80%
Saturday	1100–1500 hrs.	40%
	1500–2300 hrs.	40%
	2300–0700 hrs.	80%
Sunday	0700–1500 hrs.	50%
	1500–2300 hrs.	80%
	2300–0700 hrs.	100%

MEDICAL: Civil hospital and private clinics, also military hospital and ambulance service of Italian Red Cross.

TANKERS: *Aviation Gasoline Oil Jetty:* Tankers moor with 2 anchors and with stern made fast to 4 buoys. Connection by stern. Vessel lifting up hoses (9 in.) from the jetty (breadth 9 ft., length 1,476 ft.). Length of pipeline from 0.5 to 1.5 miles.

Access to vessel by boat. No water or bunkers available. Max. draft 25 ft. Night crossing of Mar Piccolo up to and from jetty is not allowed.

Navy Oil Jetty: Pier, terminating in 2 quays, which may accommodate 2 vessels each. Max. draft 33 ft., hoses 300 mm. Night movements allowed.

Petroleum Pier: Exclusively used for handling petroleum products at its 4 berths and is connected by several pipelines with Shell Italiana Refinery, as well as with the bulk plants belonging to Agip, and Industrie Chimiche de Gaeta, which are all located in the industrial area of Taranto adjoining the petroleum port. Access to the pier is through a dock 350 m. long and 33 m. wide. The pier itself is 560 m. long.

Berth Nos. 1 and 2 (after berths), max. length of vessel, 175 m. (557 ft. 3 in.); max. draft, 9.50 m. (31 ft. 2 in.). Max. depth, 10 m. (32 ft. 9 in.). Bunkers from line, (8 in. hose, 10 in. pipeline). Water, by barge. Loading arms, 2 of 10 in., 3 of 8 in.

Berth Nos. 3 and 4 (fore berths), max. length of vessel, 208 m. (682 ft. 5 in.); max. draft, 10.50 m. (34 ft. 5 in.); max. depth, 11.00 m. (36 ft. 1 in.). Bunkers and water, as per berths 1 and 2. Loading arms, 6 of 10 in.

Pier is fitted with 1 line for each product to be loaded (14 lines) and a 20 ft. line for ballast discharge. Any quantity of ballast may be received by the pier. Access to the pier for provisions only via boats.

Shell CBM: Shell Terminal for discharge of crude oil is situated in Mar Grande N.E. of St. Paul's Island. Distance 3,000 m., and bearing 048° from light at the head of St. Paul Breakwater. Vessels moor at Q Buoys with port anchor down. Buoys are equipped with intermittent red lights and quick-release hooks.

The hoses (2×12 in.) are signalled by marker floats and have to be lifted by vessel with derrick capacity at least 8 tons. The terminal is connected with the refinery by a 34 in. pipeline, 5 km. long. Max. length acceptable 330 m., max. draft 72 ft., max. d.w.t. 200,000 tons.

2 tugs recommended for berthing with good weather and without North-westerly winds. Night mooring and unmooring allowed.

Agip/Anic Terminal: Vessels moor with 2 anchors and with stern made fast to 4 mooring buoys.

Maximum draft 26 ft. 3 in. (8 m.). Under rough weather conditions vessels may have to leave the terminal, position being exposed. No mooring at night allowed, while unmooring is permitted. Supplies, bunkers, water, and connections with vessel by barge.

For methanol, tank inspection is usually carried out in the roads, before berthing.

Pozzi Ferrandina SPA Terminal: 3 sea lines, the hoses of which must be lifted from the sea bottom by ship's gear. 1 sea line (6 in.) is used to load methanol and 1 (6 in.) to load soda. Third (3 in.) sea line is for water. Port side hose connection. Pipe-line length 0.25 miles.

Vessels moor with starboard anchor and made fast to 3 buoys astern and 1 port. Night movements are not allowed. Max. draft 22 ft. Max. length 85 m.

Industrie Chimiche Di Gaeta, G.I.D. Terminal: Situated further West of Pozzi Terminal, it has 3 sea lines with hoses of 6 in. and 10 in., which have to be lifted from sea bottom.

Vessels moor with port anchor and make fast to 3 buoys astern and 1 buoy forward starboard. Max. draft 22 ft. Night movements not allowed.

DENSITY: 1026 – 1027, but seldom reaches the latter figure.

FRESH WATER: Available at all quays from 0700 to 1700 hrs. Also available by barge of up to 190 tons capacity.

FUEL: Available by barges from Agip; Shell and Sincat. 48 hours' notice requested, aside from usual stemming. Also available at the tanker berths by pipeline.

Lubricating Oil. Available from Shell, Mobil and Esso.

FIRE PRECAUTIONS: Performed by fire brigade and compulsory to all tankers undergoing repairs/dry docking. It is requested and paid for by the shipyard, which afterwards charge same directly to the Owners.

CONSULS: Spain, France, Panama and Norway.

REPAIRS: All major repairs undertaken.

DRY DOCKS: 2 floating docks owned by Stabilimenti Navali Societa per Azioni Taranto (Telex: 860020) with dimensions as follows:

	Dock No. 1	*Dock No. 2*
Length at support level	699 ft. 8 in.	808 ft. 4 in.
Length overall	765 ft. 4 in.	869 ft. 4 in.
Breadth at support level	121 ft. 3 in.	137 ft. 1 in.
Depth	29 ft. 8 in.	27 ft. 9 in.
Lifting capacities	28,000 tons	40,000 tons

Max. draft acceptable in channel leading to the shipyard is 33 ft.

GANGWAY/DECK WATCHMEN: Available. Hourly cost, lire 450 per watchman used (lire 500 on Sunday and holiday).

OPENING/CLOSING HATCHES: Usually carried out by crew, but stevedores also carry out this operation.

CUSTOMS ALLOWANCES: 40 cigarettes and 1 opened bottle wine/spirits per man.

REPATRIATION: Good facilities exist.

AIRPORT: Located at Grottaglio, 20 minutes by car from the city. It is served by 4 daily connections with Rome, and 1 to Naples.

TIME: GMT plus 1 hour in Winter. GMT plus 2 hours in Summer.

HOLIDAYS: New Year's Day (1st January); Epiphany Day (6th January); Saint Joseph's Day (19th March); Liberation Anniversary (25th April); Easter Monday; Ascension Day (19th May); Corpus Domini Day (9th June); Labour Day (1st May); Republic Foundation's Day (2nd June); Saint Peter and Paul's Day (29th June); Assumption Day (15th August); All Saints' Day (1st November; National Unity Day (4th November); Immaculate Conception Day (8th December); Christmas Day (25th December); Saint Stephen's Day (26th December); Town Saint Patron's Day (10th May), at Taranto.

TELEPHONES: No facilities for placing telephones onboard. Vessels in the roads may make connection via VHF radio.

SERVICES: Compass adjusting, divers, frogmen, daily refuse collection, etc. available.

Slop collection: Societa Armatoriale, Taranto provide a slop collection service for ships passing by Taranto.

The slop-ship Panda (about 16,000 cu.m.) is equipped for removal of bilge water, dirty ballast and slops, having a loading rate of about 200 cu.m./hr., with oil/water separators capable of 150 cu.m./hr.

The company's mailing address is Societa Armatoriale Sri, Corso due Mari 18, 1-74100 Taranto, Italy. Telex: 860864 (AB: diver i).

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Required. Shore passes issued by local police.

REGULATIONS: *Safety Regulations for Coal Vessels:* Vessels arriving with coal for Taranto should follow the following safety procedures:

The Master has to cable (Prior to entering port) to the Harbour Master, Taranto (cable "compamare taranto", telex 813199 compta) stating:

1. (a) Dangerous coal characteristics according to IMO Regulations, i.e. to which class does the coal belong.
   (b) That crew shall adhere to IMO requirements in handling such cargo.
   (c) That opening devices for hatch covers have been recently checked/maintained.
   (d) That cargo does not show any sign of self-combustion.
   (e) That hatch opening operation shall be carried out taking into due consideration every precaution suggested by the type of cargo.
2. Should all requirements as per No. 1 not be duly fulfilled, the Harbour Authorities shall order the vessel to be placed in a safe position and wait for the port chemist to attend on board.
3. Unloading operation is subject to previously opening and ventilating all holds and adjoining spaces which might contain gas.

4. In addition to all safety rules enforced by the Port Safety Regulations and competent authorities, safety regulations are to be followed during sea passage, while lying in roads or at port, i.e. signs must be displayed prohibiting smoking, use of naked flames, chipping or using any other ignition source close to the cargo spaces or any adjoining space.

Any possible repair work must be authorised by Port Authorities. Similar signs must be shown under receiver's care on quay.

5. No incompatable activities can be carried out on board the vessel and/or on the quay. No repairing/maintenance work can be carried out within 15 minutes from holds opening.

6. All necessary precautions must be taken during discharging operations to avoid cargo spilling in sea to prevent any pollution.

GENERAL: The port area of Taranto comprises of areas:

Mar Grande:

(a) The commercial port defined to the East by the S. Eligio Mole and to the West by the first projection (S. Cataldo Mole).

(b) The industrial port defined to the East by the second projection and to the West by the fourth projection of the industrial sector, and also to the West by Punta Rondinella, beyond Mar Grande.

(c) The oil port constituted by the I.P. Pier (this also includes Agip and Montedison), by the pipeline terminals of Agip and Anic-Liquichimica, together with the I.P. buoyed area.

(d) The military pier of Chiapparo as far as operations of merchant vessels are concerned.

Mar Piccolo:

(a) The Cariati and Garibaldi Berths.

(b) The berths and basins of the Taranto Shipyards.

(c) The Military Aeronautical Forces Pier as far as operations of merchant vessels are concerned.

The usages of the berths in the port of Taranto, apart from various contingent arrangements made by the Port Captaincy Command, are as follows:

Commercial Port: S. Eligio Mole: For bunkering from land to vessel, for restocking bunker deposits, for embarkation of port services: Pilots, mooring gangs, fire watchmen, for the launches of Customs and Police. In relation to the requirements of the port services at S. Eligio Mole, vessels carrying various cargoes may also berth.

S. Eligio Berth: For pontoons and tugs.

Wharf No. 1 (Commercial Berth): Intended for commercial traffic.

1st projection (S. Cataldo Mole): Intended for commercial traffic.

Wharf No. 2 (between the 1st projection of S. Cataldo Mole and the 2nd Italsider projection): Intended for commercial traffic.

Industrial Port: (Partly under concession to Soc. Italsider of Genoa for the Fourth Taranto Ironworks and partly to Soc. Cementir).

2nd Italsider projection: East Side: For discharging ore and coal. Head: For discharging Category C oil products; West side. For loading and discharge of metal products.

Wharf No. 3 (between 2nd and 3rd Italsider projections): For loading and discharging metal products.

3rd Italsider projection: East and West Sides: For loading and discharge of metal products. Head: For discharging Category C oil products.

Wharf No. 4 (between 3rd and 4th Italsider projections): For loading bagged cement.

4th Italsider projection: East Side: For discharge of iron ore and coal, and for loading bulk cement.

Italsider Mole (new port basin to the West of Punta Rondinella): West Side: For loading and discharging metal products.

Oil Port: (Under concession to the companies I.P., Agip, Montedison and Anic-Liquichimica). For loading and discharge of oil products of all hazardous categories and chemical products.

Cariati Berth: For motorised fishing vessels and small fishing craft.

Garibaldi Berth: For fishing vessels and laid-up craft.

SHIPMASTER'S REPORT: December 1988.

The following Information Sheet was supplied to the Master by the Agent on vessel's arrival.

VHF:	Commercial calls	:	Channel 16 via Bari Radio.
	Harbour Master/Pilot	:	Channel 12.
	Launch service	:	Channel 10.

All vessels anchored in the roads must keep watch on Channel 12 from the 15th to the 20th minute of each hour for the purpose of receiving orders, or news of their interest, if any, from the Harbour Master.

Pilotage/Linesmen/Towage: Pilotage and linesmen service are compulsory for all vessels over 500 g.r.t.; however vessels up to 2,000 g.r.t. may avail themselves of VHF Pilot service at a 60% reduced rate.

Towage service is compulsory for all vessels over 20,000 g.r.t. (at least 3 tugs up to 40,000 g.r.t. and then 4 tugs) whilst, for tankers, tugs are compulsory as follows:

2,000 to 5,000 g.r.t.	:	1 tug (minimum)
5,000 to 15,000 g.r.t.	:	2 tugs "
15,000 to 30,000 g.r.t.	:	3 tugs "
over 30,000 g.r.t.	:	4 tugs "

Towage of vessels with inactive engines is subject to 40% increase.

Towage lasting more than one hour (two if canal crossing involved) is subject to 30% increase for each subsequent half an hour or portion thereof.

Robbery/Pilferage: Night watching service by crew members or authorised sworn watchmen is recommended in view of robberies having occurred in the past on board vessels berthed or anchored, especially concerning paints and ropes.

Safety in Roads: When a vessel is anchored in Mar Grande Roads, it should be borne in mind that the nature of bottom is mainly clay/mud and offers very bad holding ground; therefore, under strong S./S.E. winds (which occasionally blow in Taranto) the anchors may drag and consequently, danger to the vessel arises.

Bonded Goods: Upon arrival in port, Customs grant for crew consumption purposes, 50 cigarettes for each crew member and 1 bottle of spirits for every 10 crew members, which should be used within 48 hours of vessel's arrival.

Crew Lists: According to IMO International Convention 19/10/1971, upon arrival and departure, Harbour Master requires an updated Crew List on IMO approved forms.

Ship's Documents: We take the liberty to remind the Master that Outward Clearance granting, is subject to following certificates being valid:

Safety Equipment.
Safety Radio.
Safety Construction.
Load Line (including annual survey).
Deratting Exemption.

Launch Service: Vessel's launches cannot be used for connection with shore. Boat service is made available by an authorised firm at an official rate, which is increased by 70% from 1700 hrs. to 2400 hrs. weekdays and from 1200 hrs. to 1700 hrs. on Saturdays; by 100% from 0700 hrs. to 2400 hrs. on holidays and 1700 hrs. to 2400 hrs. on Saturdays; and by 200% from 0000 hrs. to 0700 hrs. any day.

Bunkering: Bunkering operations may be carried out only by barge. While bunkering, an engineer and a fire watchman (sent onboard by the Harbour Master on signing the bunkering authorisation) must stand-by and hose area must be properly lighted during night-time.

Any spillage on deck must be immediately cleaned up.

Water Pollution: Port Authority closely watches this matter and Masters are kindly invited to take all necessary steps to avoid any possible pollution. Also vessels discharging ore/coal are not allowed to wash decks in port (including roads).

Should any pollution be caused and vessel's responsibility proved, all expenses involved in carrying out the cleaning will be for vessel's account (to be paid for prior to departure) or Master shall be sued by Court.

Garbage Collection: Daily collection of garbage from vessels is compulsory and is carried out by the authorised firm (Nigromare) by means of a motorboat, and a supporting slip must be signed each time, even if no garbage is given.

Note: The service covers only galley and crew garbage collection. Disposal of other ship's waste is subject to a charge, to be agreed each time.

Water Supply: Water is only available by barge (except Pier No. 1 in Commercial Port). Minimum charge is for 25 tons. At least 24 hours notice should be given to Agent.

Provisions/Stores: Provisions and stores to be delivered by barge only.

Cash Money Request: Cash must be requested 24 hours prior to being needed.

No foreign currency available unless remitted directly to Master from abroad and sufficient notice is given to Agent to arrange collection in due time.

Repairs: Authorisation to carry out repairs of any kind is subject to an application to Harbour Master, on forms obtainable from Agent.

Hot work (involving naked flames) in the engine room, is always subject to Port Chemist's attendance.

Tankers, including OBO/OOC vessels, must also obtain a "Gas-free Certificate" for the area affected by the repairs (even if carrying iron ore/coal). When above vessels are performing loading/unloading operations, authorisation is also subject to Master's Declaration that vessel is always ready to shift with her own engines at any time.

Landing Spares: Any landing of spares for repairs and/or shipment must be authorised by Customs, through Agent.

Seamen Signing-off for Repatriation: Please note that, according to Italian law, seamen signing-off for repatriation are not allowed to take any bonded goods out of the harbour area. Inspection of baggage is usually carried out by Customs Officers when landing. Furthermore, owing to Italian Money Exchange Regulations, a crew member leaving the country, is not allowed to take abroad more than 200,000 Italian lire, while no limitation exists on foreign currency exportation, if crew member can provide valid evidence of how currency obtained.

AUTHORITY: Comandante del Porto, Capitaneria di Porto, Largo Arcivescovado, 74100 Taranto, Italy. *Telex:* 813199 Compta I. *FAX:* 099-4718288.

AGENT: See "Genoa".

TORRE ANNUNZIATA: 40.45 N. 14.27 E. (See Plan)

DOCUMENTS and all General Information – refer to "Naples".

Arrival: An inspection is made on board by the Finance Guard (Custom Department) to check cargo documents in respect of goods and th composition of provisions on board. Then the Master of the vessel o his Representative (Ship's Agent) presents to Customs the manifest f arrived goods together with relative commercial documents. At th request of the Ship's Agent, the landing of goods is authorised on th "Discharge Copy" of the manifest which sets out each individual ite to be landed.

Goods can be discharged into the Customs Warehouse or Priva Warehouse to await Customs Clearance.

Departure: Prior to departure of vessel, the Customs releases Departure Manifest, setting out a list of any goods in transit or destin for other Italian or foreign ports.

PILOTAGE: Pilotage is obligatory for vessels over 500 g.r.t., and effected by a pilot of the Castellamare di Stabia Corps of Pilots. Th 8072490. Pilots use a wooden pilot cutter 10 m. long and with a spe of 10 knots.

RESTRICTIONS: Entry permitted during daytime only for vessels in excess of 80 m. LOA.

Mainly a fishing port with few facilities for larger vessels. Reported not to be suitable for larger vessels during winter months due to frequent high winds and heavy swell within the harbour.

MAX. SIZE: Length 472 ft., draft 29 ft.

VHF: Radio station of the Port Captaincy, with VHF unit operating between 0800 hrs. and 2000 hrs., listening out on Channel 16, and working on Channel 15.

TUGS: The port has no resident tugs available; if required, they can be requested from Castellammare di Stabia.

2 line boats available to assist with mooring.

BERTHING: *Calata Crocelle:* 1 berth only. Length 302 m. of which 200 m. is in use. Depth alongside 6 m. – 7 m. Used for commercial operations and by fishing vessels.

Molo di Levante: 1 berth only. Length 250 m. Depth 8.5 m. – 9 m. Used for commercial operations; general cargo, cereals, iron pipes, etc., 2 towers each with 2 suction pipes, rate of each tower 400 t.p.h. The silo is owned and operated by Societa Lavorazione Cereali del Mezzogiorno (Tel: (081) 8615991).

CRANES: 1×20 ton quay crane.

CARGO HANDLING FACILITIES: 1 grain silo, capacity 60,000 tons, loading rate 1,200 t.p.h. Loading onto rail trucks or lorries by gravity using hoppers with overall delivery rate 250 t.p.h.

STEVEDORES: Working Hours: 0800 – 1200 hrs. and 1300 – 1700 hrs.

MEDICAL: Port doctor available. Hospital with 100 beds.

FRESH WATER: Available.

FUEL: Available. By tanker or barges owned by Messrs. Garolla of Naples.

SURVEYORS: None.

WATCHMEN: Not available.

AIRPORT: Naples Airport (Capodichino) is 23 km. away, and has domestic services to Rome, Milan, Bologna, Brindisi, Catania, Genoa, Palermo, Turin, with 2 international flights per week to London.

EMERGENCY CO-ORDINATION CENTRE: Comando in Capo del Dipartimento Militare Marittimo del Basso Tireno (Military Naval High Command for Lower Tyrenia), Via Santa Lucia, Naples. Tel: (081) 406244.

BANKS: Banca Commerciale Italiana, Corso Umberto I 153. Tel: 8615100.

Credito Italiano, Corso Vittorio Emanuele III° 307. Tel: 8615240.

Banca Nazionale del Lavoro, Via dei Mille. Tel: 8612003.

STORING: See "Prelims".

1. Yes, using own means of handling.
2. Yes.
3. Yes.
4. Yes.
5. See above.
6. Yes.

GENERAL: The port has no Ship's Agents, Forwarding Agents, or Naval Suppliers.

Two road vehicle weighing bridges on the East Mole, one operated by Customs with a capacity of 40 tons, and one by SO.LA.CE.M. with a capacity of 80 tons.

There are ample electric train services to the rest of Italy from the town station. Torre Annunziata is connected by motorways (A3) with Naples and Salerno, and by main roads to Naples, S. Giovanni Teduccio, Salerno and Sorrento.

Post, telegraph and telephone offices are a short distance from the port in the town.

One lifeboat, 2 engined with a speed of 30 knots, 7.5 m. long, owned by the State and operated by Circomare.

There is no Fire Brigade.

The port is subject to a slow siltation process due to the River Sarno which comes into the sea 1 mile to the South.

The cross wind is from the West. The Scirocco and the Libeccio cause a strong dangerous surf for vessels berthed at the quays.

The tide brought up by the Libeccio sometimes comes right over the West Mole.

When works currently in hand are terminated, involving the construction of a small elbowed quay about 130 m. long in the West area of the port, this will supply a safe berth for fishing vessels, which will also be advantageous for the nearby Calata Crocelle, which will thus remain available for commercial operations only. There are good areas for future development.

DEVELOPMENTS: Calata Crocelle being extended by 35 m. West Breakwater being extended.

AUTHORITY: Ufficio Circondariale Marittimo di Torre Annunziata, Largo Crocelle No.1, Porto di Torre Annunziata, 80058 Torre Annunziata. *Tel:* (081) 8611855, 8622978. *Telex:* Ciranni I 722561. *Contact:* Lieut. Emilio Squillante, Port Captain.

TRAPANI: 38.00 N. 12.30 E. **(See Plan)**

PILOTAGE: Compulsory for vessels over 500 g.r.t. Pilots provided by Pilots Association of the port of Trapani, Tel: (0923) 5400223.

ANCHORAGES: Designated by the Port Authority. For prohibited areas see charts.

RESTRICTIONS: Entrance to the harbour is dangerous in strong winds from S.E. – S.W. – N.W.

MAX. SIZE: Largest vessels handled: 35,000 d.w.t., LOA 202 m. and max. draft 8.5 m.

RADIO: Roma Radio or local station Palermo/Trapani on HF.

VHF: Trapani Radio on Channel 16.

RADAR: There is no radar monitoring available.

TUGS: 2 tugs available to assist with berthing. Service provided by Soc. Somat. Tel: (0923) 29445. Fax: (0923) 27711. Tugs compulsory for passenger vessels and vessels over 500 g.r.t.

BERTHING: A general and bulk cargo port on the West coast of Sicily. There is one quay, inside the harbour, with length 790 m., with facilities for loading salt at a rate of 150 t.p.h. or discharging grain and timber products. Depth at harbour entrance 9.1 m., in outer port up to 15.0 m., and in inner port 8.5 m.

CRANES: Mobile cranes up to 80 tons available for hire.

SPECIALISED CARGO HANDLING FACILITIES: Berths specially equipped for Ro-Ro traffic (Garibaldi Quay), and for handling liquid chemicals (Ronciglio Berth).

STEVEDORES: The recognised working hours of port are 0800 hrs. – 1400 hrs. Monday to Saturday, and Wednesday 0800 hrs. – 1630 hrs., holidays excepted.

MEDICAL: General hospital nearby.

TANKERS: Tankers call each week.

DENSITY: 1025.

FRESH WATER: Available from private firms.

FUEL: Private firms with trucks or barges available by prior arrangement through vessel's Agent.

FIRE PRECAUTIONS: Smoking is prohibited near flammable cargo. Compulsory services against fire for flammable cargo.

CONSULS: See "Palermo".

REPAIRS: Cantiere Navale di Trapani. Tel: 27866.

DRY DOCKS: 2 dry docks available. Dimensions of largest dock: 130 m. × 20 m. × 6.5 m. depth.

SURVEYORS: RINA locally, others at Palermo.

GANGWAY/DECK WATCHMEN: Available on request.

CUSTOMS ALLOWANCES: Italian Customs Regulations.

REPATRIATION: Possible.

AIRPORT: Punta Raisi 76 km., and Birgi 16 km.

TIME: GMT plus 1 hour.

HOLIDAYS: January 1st and 6th; Easter, April 25th; May 1st; August 15th and 16th; November 1st; December 8th, 25th and 26th.

POLICE/AMBULANCE/FIRE: Police (0923) 598111, 22145; Ambulance 113; Fire 115.

EMERGENCY CO-ORDINATION CENTRE: Trapani Harbour Master (0923) 28900. Blue Number 167/090090.

SERVICES: Main services available, contact Agent.

BANKS: Many banks (Italian and foreign) available.

STORING: See "Prelims".

(1) None.
(2) –
(3) Yes.
(4) Yes.
(5) –
(6) In some cases.

SHORE LEAVE: Permitted.

IDENTIFICATION CARDS: Not necessary.

GARBAGE DISPOSAL: Compulsory every 48 hours.

WASTE OIL DISPOSAL: Service provided by private firms. Ship's Agent to make arrangements.

SEAMAN'S CLUBS: Stella Maris. Tel: (0923) 568446, 567910.

AUTHORITY: Capitaneria di Porto di Trapani, Via Torre Arsa W2, 91100 Trapani, Sicily, Italy. *Tel:* (0923) 28900. *FAX:* (0923) 28900. *Contact:* Guiseppe Impallomeni, Port Captain.

TRIESTE: 45.39 N. 13.45 E. **(See Plan)**

PORT LIMITS: From Barcola (4 km. East of Capo Miramare) to Zaule, in the Muggia Bay. The roadstead is 18/24 m. deep. If Readiness is declared before 1200 hrs. laytime commences at 1300 hrs. If readiness is declared between 1200 hrs. and 1700 hrs. laytime commences at 0800 hrs. the following day. The declaration of "Readiness" is made when the ship docks at the operative pier or when the ship anchors in the roadstead.

DOCUMENTS:

For Customs:
2 Cargo Manifests.
1 Stores List.
1 Provisions List.

For Port Authorities:
Arrival Report.
2 Crew Lists.
3 Passenger Lists.

For Police:
1 Crew List.
1 Passenger List.
Shore Passes, provided by Agents.

For Port Health:
Maritime Declaration of Health.

Also see "Shipmasters Report".

PILOTAGE: Compulsory for vessels over 499 g.r.t. Location of Pilot Station for large tankers is in approximate position: Lat. 45° 37' N., Long. 13° 42' E. Call Pilot on VHF Channel 14, working Channel 14.

For smaller vessels Pilot boards in approximate position: Lat. 45° 39' N., Long. 13° 42' E.

Corporazione dei Piloti del Porto. Tel: (040) 304307, 304406. Fax: (040) 311284.

ANCHORAGE: No Pilot required to anchor in roads. Anchoring places have been regulated by Harbour Master's Office as follows:

Tankers: Fixed anchoring places positions: A1, A2 A3 and A4.

Alfa 1: Bearing 248°, distance 1.3 miles from Racon.
Alfa 2: Bearing 259°, distance 1.9 miles from Racon.
Alfa 3: Bearing 257°, distance 2.6 miles from Racon.
Alfa 4: Bearing 270°, distance 2.7 miles from Racon.

Conventional Vessels: Fixed anchoring places C1, C2, C3 and C4.
Charlie 1: Bearing 270° from the green light located on Northern end of the breakwater Porto Franco Vecchio, distance 1 mile.
Charlie 2: Bearing 270° from the light as above, distance 2 miles.
Charlie 3: Bearing 270° from the main lighthouse Faro della Vittoria, distance 2 miles.
Charlie 4: Bearing 270° from the main lighthouse Faro della Vittoria, distance 1.5 miles.

Vessels with dangerous cargo or tankers when all Alfa places are occupied: Fixed anchoring places B1, B2, B3 and B4.
Bravo 1: Bearing 255° from Faro della Vittoria, distance 2.8 miles.
Bravo 2: Bearing 260° from Faro della Vittoria, distance 3.5 miles.
Bravo 3: Bearing 270° from Faro della Vittoria, distance 3.5 miles.
Bravo 4: Bearing 270° from Faro della Vittoria, distance 2.8 miles.

Supplementary anchoring positions, in case all places are occupied, will be fixed by Harbour Master's Office and information given to the vessels by the pilot station.

MAX. SIZE: Tankers up to 1,000 ft. LOA, draft 54 ft. 3 in. and 160,000 S.D.W.T. at SIOT Terminal Berth No. 3 and 1,076 ft. and 215,000 S.D.W.T. at SIOT Berth No. 4.

HEALTH: Free Pratique is granted by the Local Health Officers who board the vessels on arrival together with Port Authorities. The Pratique can also be requested by cable, addressed to "Sanimare – Trieste" and stating the port of origin, the number of crew and general health condition on board.

RADIO: Trieste Radio call sign IQX, operating continuously. Radio Telephony and/or telegraphy can be used. RTF Channels 8, 12, 16, and 500. ETA to be sent 48 hours in advance to Agent. Any change of ETA of more than 1 hour should be reported.

VHF: Harbour Master – call sign 'Compamare Trieste' on Channel 16. Also see "Pilotage" and "Tugs".

TUGS: 8 tugs available up to 3,000 h.p. 6 tugs also available up to 1,500 h.p. Tugs normally join vessel at pilot boarding station. Ship's lines used. Tug assistance is compulsory for tankers. Tugs equipped with VHF and foam fire fighting equipment. VHF working Channels 10/12.

BERTHING: Max. draft allowed at berths as follows:

Punta Franco, Vecchio, ore pier, 28 ft.; Other berths, 21 ft. Punto Franco, Nuovo, ore pier, 30 ft. silos, 31 ft. 5 in.; general cargo, 31 ft. Punto Franco, Scalo Legnami, 17 ft. – 38 ft. Molo Martello, 30 ft., max. length of ship, 171 m. Italsider, berths, 41 ft. 6 in.

Pontile Aquila, oil pier, 34 ft. 6 in. Italcementi, berths, 30 ft. S.A.F.A., berth, 26 ft.

Container Terminal, max. draft 52 ft., 56 ft. 6 in. at pier head.

SPECIALISED CARGO HANDLING FACILITIES: Wheat storage-bin for cereals and oil-seeds, capacity 30,000 tons, with 4 pneumatic unloaders. Auxiliary set, capacity 16,000 tons, with 3 pneumatic dockers.

Coal and ore discharge at Pier 5: 3×6 ton bridge cranes and 6×6 ton jib cranes. Discharge rate 200 tons per shift. Max. draft 9.5 m.

Coals and minerals plant, Molo V, with 7 cranes and 3 bridge cranes.

Coals and minerals plant Italsider pier with two 25-ton unloaders. Rate 400 tonnes/hr. for coal and 500 tonnes/hr. for iron ore.

Unloading, loading, alcohol and other liquid stowage plant, capacity 5,340 cu.m.

Maturity, conservation and disinfestation fruits and vegetables plant.

Refrigerant, capacity 3,700 tons.

Container Terminal: Quay length 650 m. (to be increased to 1,734 m.), total area 20 ha. 4 rail-mounted 42 ton gantry cranes (portainer) and other modern and special installations for unloading/loading, moving and parking containers.

Roll-on/Roll-off: 3 ramps at Mole No. 7.

STEVEDORES: The working hours for the harbour operations are: 1st turn from 0730 to 1400 hrs. 2nd turn from 1400 to 2030 hrs. On Sundays and holidays the 2nd turn is limited to ferry boats, container ships, unloading/loading of live animals, and to perishable goods operations. Customers can take advantage of a possible 3rd turn in the labour days, Monday to Friday, from 2100 to 0330 hrs.

Night work, Sundays and holiday work, the 2nd turn of Saturday and the continuation of the turn is considered as overtime work.

MEDICAL: All facilities available. Preferable order in advance if required on holidays.

TANKERS: No slop discharge facilities; no repairs allowed to tankers at loading/discharge berths; no trucks or lorries allowed at Aquila Oil Pier which can only be approached by motor boats.

Restrictions: Night berthing is not permitted at the Aquila berth except for tankers under 3,000 d.w.t.

When the temperature is below 0°C, vessels calling at the Aquila berth, may, on occasions, not be berthed on account of ice layers forming on the surface of mooring buoys.

Berthing operations are also restricted at all terminals when wind exceeds 80 km./hr. (43 knots).

Cautionary Advice: The Bora is a violent Northeasterly wind, which in the Port of Trieste blows from a general East-Northeasterly direction. It is exceptionally strong from November through February and can, within a few hours, reach gale or hurricane force. The Bora is accompanied by a rise in barometric pressure and a drop in temperature, and freezing conditions can occur.

A very close watch on weather and moorings is therefore necessary at all berths in the harbour.

Tugs: Towage is not compulsory. Pilot will arrange as necessary according to size of vessel and weather conditions.

Berthing Operations: Usual seamanship precautions must be taken approaching berths.

Wires are permitted after the vessel has been bonded using bonding wires.

Pilot/tug/mooring boat communications during berthing operations are carried out on VHF Channels 10, 12 or 14.

Two mooring boats are normally used.

Transalpine Pipeline Terminal (SIOT).

The following are some of the regulations for vessels calling at SIOT.

REGULATIONS

Arrival of Vessels: No vessels may enter the SIOT port area except in strict compliance with instructions issued by SIOT.

Extraordinary Docking Conditions: Damaged vessels must report to SIOT well in advance of their date of arrival at the port area. Should SIOT consider a vessel to be unsuitable for discharge at the terminal, said vessel may be refused admission, or ordered to lay off, even after discharge operations have been started, or be admitted for discharge only on specially defined terms.

Docking and Sailing Manoeuvres: SIOT does not assume any responsibility for the docking or sailing manoeuvres of any vessel, including towage and mooring and for any pollution caused by the vessel. Pilotage and sufficient number of tug-boats with efficient power are compulsory.

Mooring Operations:

1. The right to assign a berth to incoming vessels for the discharge of cargo rests with SIOT.

2. All vessels must securely and tautly be moored at all times when at jetty. Masters' attention is drawn to the peculiar conditions of Bora wind which can blow with little warning and with extreme violence. Hawsers and mooring lines must be secured on quick release hooks and pulleys provided for the purpose.

3. Access to and from a vessel will be established by way of a SIOT gangway. The gangway will not be placed on board before the following conditions are met:

(a) The vessel must be securely moored.
(b) The vessel must be earthed to the jetty.

4. Access from the ship's deck to the gangway, if required, is to be provided by the vessel.

Traffic Within the Port Area:

1. Access to or from a vessel is not permitted until the vessel has been properly cleared by the appropriate Authorities.

2. Employees and Representatives of SIOT on duty must be granted access to the vessel to perform their tasks, the Master or his representatives shall furnish them with all pertinent data that SIOT may require and must give them permission to personally inspect all facilities necessary for handling cargo.

3. Passes provided by the Police must be issued by the Master to crew members and other for shore leave purposes.

4. Any person wishing to enter the SIOT port area must have in his possession a pass as prescribed by SIOT and the Authorities. Once in the port area he must report to the Pier Master for the necessary instructions regarding behaviour in the port area.

5. All traffic between the ship and shore as far as it must pass through the premises of SIOT is restricted exclusively to the tanker jetties and their access roads. Unless specially authorised no motor vehicles are allowed on the piers. All transportation will be performed by a special bus-service provided by SIOT.

Cargo Operations:

1. Before receipt of a cargo, SIOT, on behalf of the consignees will measure the contents of the tankers' cargo tanks at Trieste or may accept a measurement made prior to the arrival at Trieste and will take an average sample.

The binding determination of the quantity received by SIOT will be made by means of manual gauging in the storage tanks of Trieste Tank Farm or with the aid of automatic measuring device and according to the legal, Customs and fiscal requirements.

If the measurements in the storage tanks at Trieste Tank Farm show a difference exceeding 0.5% of the quantity in metric tons stated in the loading documents, SIOT will notify in writing the Master, if possible, advising at the same time the consignee.

2. All sea valves, overboard or other appropriate valves, isolating the cargo system from the sea, must be closed prior to the start of discharge operations and must be checked and where possible sealed. Where tankers are fitted with normal ballast system such sealed valves may only be opened with the consent of SIOT and providing alternative cargo isolating valves can be closed and sealed.

In all other cases valves must remain sealed and closed throughout discharge. Authorisation to open these valves must be obtained from SIOT prior to ballasting.

3. Discharge operations should be carried out as far as possible, without interruption and within the shortest possible time. The maximum pressure permissible on the shore gauge is 10 bar.

4. The completion of discharge shall be agreed by both, SIOT and the Master and if required by the Master or the consignee, both shall sign a "Qualified Certificate on the Petroleum Remaining On Board".

5. Should any complaint arise which may have a bearing on the quantity or the quality of the cargo, or on the discharge operations, SIOT will lodge a protest in writing, the receipt of which must be confirmed by the Master.

6. Inert cargo tanks and tank washing with petroleum:

(a) Discharge of inerted ship tanks and tank washing with petroleum when agreed to by the Port Authorities will only be permitted when it is carried out in full accordance with the "Guidelines for Tank Washing with Crude Oil", latest edition, published jointly by: International Chamber of Shipping and Oil Companies International Marine Forum London.

(b) In particular, inerted cargo tanks of vessels shall remain sealed and kept under positive inert gas pressure throughout the stay alongside except as required for cargo measurement and sampling.

Vessel Berth Occupancy:

1. The estimated discharge time and time for normal ballast operation shall be mutually agreed between SIOT and the Master or his authorised representative.

2. The pumping program shall be determined in agreement between SIOT and the Master. SIOT is entitled to interrupt discharging and have the berth cleared in case of emergency.

3. Upon completion of the discharge and ballast loading the vessel shall clear the berth subject to consideration of safety. Bunkering and fresh water loading, if required, shall, if possible, take place during discharge.

4. As berth occupancy time, tankers shall be allowed the running hours tabled below appropriate to the cargo quantity, Sundays and holidays included:

Cargo Quantity (1,000 tonnes)	*Max. Allowed Running Hours*	
	excl. COW	*incl. COW*
up to 50	30	39
50 up to 100	33	42
over 100	36	45

It is expected that the unloading rate per hour will exceed 5% of the total cargo capacity of the respective vessel.

Running hours shall commence when the vessel has her first rope ashore and shall end when the unloading arms are disconnected on completion of discharge and the last rope ashore is off. If the unloading is prohibited and/or interrupted at the request of SIOT or by request of the Authorities, the running hours shall be extended by the same number of hours that the unloading was prohibited and/or interrupted unless the reason for prohibition and/or interruption is due to circumstances for which the Shipper and/or Master are responsible. Any period exceeding the above mentioned running hours requires special approval from SIOT. In exceptional circumstances SIOT has the right to request a vessel to vacate the berth.

5. SIOT will set up a list of vessels which have failed by their own fault to meet the berth occupancy time referred to above and reserve the right to refuse these vessels for future deliveries. SIOT can also refuse vessels which to SIOT's reasonable judgement may endanger its installations and/or increase SIOT's risk of liabilities towards third parties.

Special Services:

1. SIOT will provide a bus service between the berth and the entrance gate of SIOT port area, the costs of which will be charged to the ships via their Agents.

2. Connections for telephone service to ships will be provided by SIOT. This service and phone invoices will be charged through the ship's Agent.

3. Fees for any other special service rendered by SIOT to a ship, will be charged through the ship's Agent.

Safety Regulations:

1. All safety measures in the SIOT port area shall comply with the ISGOTT and the local safety regulations. In case of different requirements the most stringent ones have to be applied.

2. It is strictly forbidden within the SIOT port area to smoke, to carry any open fire or any equipment with glowing parts, or to use any fire-kindling devices or lighters other than those expressly admitted in special cases by the competent authorities or by SIOT.

3. No hot repair work is allowed whilst a vessel is alongside the SIOT jetties, unless, under exceptional circumstances permission has been granted by SIOT and the Port Authorities.

4. All other repairs whilst at the jetties, will only be permitted after consultation with SIOT and sanction obtained.

5. It is the responsibility of the vessel's Master to report a fire on his vessel to the SIOT Pier Master. The latter will inform immediately the Fire Brigade and the Harbour Master.

Every vessel is required to have a fire wire constantly adjusted to the water line forward and aft while on the berth. The ISGOTT Safety Check List shall be used on all vessels visiting the SIOT Marine Receiving Facilities. Failure to comply with this list may well cause cargo operations to be delayed.

6. Portable Walkie-Talkie sets should only be used for mooring and unmooring. It is strictly prohibited to use them during discharging and ballasting operations unless they are approved and intrinsically safe in compliance with the ISGOTT.

7. Vessels must not be immobilised without permission being obtained from SIOT and the Port Authorities.

Special Incidents:

1. Any incident affecting the safety of the vessel or jetty, any fire and serious accidents on board or caused by the vessel must be reported at once to SIOT.

2. Masters must ensure that as soon as any oil is spilt from their vessel all cargo operations will be stopped and may only resume operations if authorised by SIOT.

3. In case of imminent danger, and if the circumstances warrant, SIOT shall have the right to discontinue cargo operations and take any action considered necessary for the safety of the vessel and/or the terminal. As far as the safety of the vessel is concerned any such action shall be taken in consultation with the Master. If the danger results from the vessel the measures shall be taken at the vessel's expense. No claim will lie against SIOT for any damage resulting from any such measure taken reasonably.

GENERAL: SIOT Marine Receiving Facilities are owned and operated by SIOT (Societa Italiana per l'Oleodotto Transalpino). They are situated in Muggia Bay in postion Lat: 44° 36' 36" N., Long: 13° 46' 36" E. and fall under the administration of the Trieste Port Authority.

The Marine Receiving Facilities consist of 2 finger piers each with 2 berths, for oceangoing vessels, discharging crude oil and petrol products to the Trieste Tank Farm.

Approaches: The Marine Receiving Facilities are approached from the North Adriatic Sea. A dredged channel joins the Gulf of Trieste to the piers. The channel is 1 mile (1,852 m.) long and 200 m. wide.

It is marked by 3 buoys flashing green, 2 buoys flashing red, and 1 buoy flashing white.

Pilotage: Pilotage is compulsory.

Arriving vessels take a Pilot about 1.5 miles from the breakwater (See "Pilotage").

Anchorage: See "Anchorage".

The ground is mud with good holding capacity in normal weather conditions. Dragging as a problem only arises in extreme weather conditions (very strong winds).

Communications: When within range vessels should maintain constant communications with the Agent via Radio Trieste.

Pilot will provide vessels with up to date information in regard to movements and other matters possibly affecting their passage to the port area.

ETA shall be given 48 hours in advance. Any change in ETA of more than 1 hour should be reported.

Minimum Manoeuvring Draft: Pilots require sufficient ballast for safe manoeuvring. The propellers should be covered. The trim of the vessel should not exceed 10 ft. by the stern.

Water Depth: The dredged depth in the harbour approaches to the piers and the depth alongside Berth Nos. 2, 3 and 4 are not less than 17.4 m. at Mean Sea Level (MSL), at Berth No. 1, 16.7 m.

Tides: Water levels may be raised or lowered as much as 0.6 m. due to the tide in respect to MSL. Higher tide excursions are exceptional. Additionally a deviation of 0.6 m. can be expected from predicted heights due to meteorological conditions.

Tugs: There are sufficient tugs available on prior request, to assist in berthing any size of vessels.

The tugs vary in power, from 1,500 h.p. to 2,500 h.p.

All are equipped with VHF multi-channel communication and are provided with foam fire fighting equipment.

The tugs tow ropes can be used for berthing. The number of tugs employed will vary according to the size of vessel and the prevailing weather conditions.

Berths and Max. Size of Tankers: The finger piers are orientated 067.5° – 247.5° (T) in the direction of the prevailing Bora wind. Currents do not affect the berths appreciably.

(a) Berth Nos. 1 and 2 (No. 1 finger pier 1,561 ft. = 476 m. overall length).
Min. Size of vessel acceptable: LOA 525 ft. = 160 m.
Min. Summer deadweight 16,500 d.w.t.
Max. size of vessel acceptable: LOA 950 ft. = 290 m.
Max. allowable draft at Berth No. 1 at MSL 52 ft. 6 in. = 16 m.
Max. allowable draft at Berth No. 2 at MSL 54 ft. 3 in. = 16.5 m.
Max. Summer deadweight 100,000 d.w.t.

(b) Berth No. 3 (finger pier 1,610 ft. = 491 m. overall length).
Max. size of vessel acceptable: LOA 1,000 ft. = 305 m.
Max. allowable draft at MSL 54 ft. 3 in. = 16.5 m.
Max. Summer deadweight 160,000 d.w.t.
Min. size: As per pier No. 1.

(c) Berth No. 4 (finger pier 1,610 ft. = 491 m. overall length).
Max. size of vessel acceptable: LOA 1,076 ft. = 328 m.
Max. allowable draft at MSL 54 ft. 03 in. = 16.5 m.
Max. Summer deadweight 215,000 tons.
Min. Size: As per Pier No. 1.

The breasting dolphins at each berth are designed to withstand the impact forces of the maximum size tankers acceptable when fully laden and approaching at a maximum angle of 2° – 3° to the berthing line at a maximum velocity of 15 cm./s. (approx. 0.25 knot).

On dolphins "A1" and "A2" of both piers there are installed red (above) and green (below) warning lights each having a visibility of 2 miles.

Crude and Product Handling Facilities: Discharge of Crude and Products is via 3×16 in. diameter articulated unloading arms at Berths No. 1, 3 and 4 and via 2×16 in. diameter arms at Berth No. 2.

The shore lines are 36 in. diameter up to the root of the pier: they enlarge into 42 in. diameter for a further 6 km. to the Trieste Tank Farm.

Discharge rates of up to about 9,000 cu.m.p.h. are possible.

Maximum permitted pressure at the shore gauge is 150 p.s.i. = 10 bar. Each pair of lines is provided with a valved cross-over near the unloading platform and all the lines are provided at shore with another valved cross-over manifold which permits the use of any idle line to unload a tanker through more than one line.

Bunkers and Fresh Water: Fuel oil and marine diesel bunkers are available at all berths through the same loading arms fitted with adapting pieces. Fresh water supplies are available at all berths and should be ordered through the Agent or the Master.

Bunker fuel is not supplied directly by SIOT and must be ordered well in advance via Agent. Bunker fuel by barges is not permitted alongside the jetties, unless under special exceptional circumstances with permission of Port Authority and SIOT. In no case bunkering by barges is permitted during ballast or ullaging of tanks.

Mooring Arrangements: See "Plan".

It is ship's responsibility to provide safe and proper mooring in order to prevent tankers drifting off the berth and exceeding the operating envelope of the unloading arms.

Mooring lines must be carefully tended to hold the vessel in position and close to the pier at all times.

2 shore breast wires are provided at Berth Nos. 1 and 2 each and 3 shore breast wires at Berth Nos. 3 and 4 each, and it is recommended that vessel should make use of them.

The mooring dolphins F and G, at each side of Pier No. 2, are combined to an arch-type mooring point, located at 10.55 m. above MSL.

A similar arch-type structure exists in axis F at Pier No. 1.

Mooring patterns and characteristics are dependent on ships' architecture and weather conditions as well as lines material.

Mooring patterns shown in the "Plan Section" have been designed as examples for standard vessels under worst experienced wind conditions.

Assuming that tankers are securely moored with mooring lines and equipment in good condition, and that moorings are properly tended, it should not normally be required to restrict the freeboard of tankers to reduce the exposed windage area when alongside the berths. However, should any limitation be considered necessary it will be arrived at by consultation between the Master and the SIOT Pier Master.

Masters' attention is drawn to the peculiar conditions of Trieste where winds can blow with little warning and with extreme violence. Attention is also directed to the "Mooring Guidelines".

Fire Protection: The fire fighting system of the Marine Receiving Facilities consists of elevated and tele controlled monitors. On the piers there are 4 monitors at each jetty. 2 monitors are located on the platform of each pier, other 2 monitors facing seawards are located each at the catwalks and 2 monitors facing shorewards are located above the access road.

Each monitor, located at the catwalks or above the access roads, has a capacity of 6,000 litres per minute of water-foam compound mixture with a throw of 70 m.

Each monitor located on the platform has capacity of 3,000 litres per minute of water-foam compound mixture with a throw of 60 m.

The foam compound used is fluoroproteinic liquid. All monitors are independently fed with sea water by means of an electric motor driven pump, and a diesel motor driven pump.

All monitors are telecontrolled from the root of each pier.

A main line of 24 in. supplies the water on the main trestle. From the root of the piers, where are located the foam mixer stations, start 4 lines (2×8 in. and 2×10 in.) (reinforced glass fibre) located on the sea bottom. These lines supply the water-foam compound to all monitors.

Each elevated monitor is water cooled.

A 8 in. water-foam line is provided on each pier.

Besides the sea and shoreward located monitors, these lines supply 4 water-foam hydrants along each pier. 6 water-foam hydrants are on each platform.

Portable fire extinguishers, dry powder extinguishers of 10 kg. and 50 kg. capacity are available.

Further, all tugs are fitted with fire fighting monitors for water and foam. During loading and discharging operations firemen certified by local Fire Brigade are present on the pier.

Medical: Any medical requirements should be made through the vessel's Agent before or on arrival.

Only first aid facilities are available 24 hours per day at the Marine Receiving Facilities.

Internal Communications: Internal telephones are located at each pier's platform as well as external telephones on board each vessel moored alongside.

To use the ship's telephones do the following:

1. To call Terminal
   dial 109 for Pier Master
   dial 110 for Pier Foreman
2. To call Outside
   dial 9 and then the required outside number
   (also international calls are possible)
3. Ships are connected with following phones
   Berth No. 1 – Internal 111 – Outside 82 84 55
   Berth No. 2 – Internal 112 – Outside 82 84 56
   Berth No. 3 – Internal 113 – Outside 82 84 57
   Berth No. 4 – Internal 114 – Outside 82 33 70
   incoming and outgoing calls possible.
4. Telephone Operator No. 20.

Pollution: A combined system of floating and pneumatic barrier is installed. Whilst floating barriers are laid underneath the longitudinal axis of each finger pier and the main trestle, a plastic pipe with nozzles anchored with concrete weights on the sea bottom, connects dolphin B1 with dolphin A2, thus protecting Berths No. 2 and 3. A similar plastic pipe nozzle surrounds the sea bottom area occupied by vessels moored at Berth Nos. 1 and 4. Along each berth spot lights are installed in order to allow detection of oil spill, at night time. In the case of oil spillage, air compressors, supplying, via a 6 in./4 in. air supply system, the respective air bubble oil barrier, are started by remote control.

Air bubbles emerging from the pipes on the sea bottom form a water dam able to contain oil within the encircled area.

All expenses in connection with anti-pollution measures, skimming barges and bubble barriers included, will be totally charged to the responsible ship.

Agents: Most shipping Agents visit all vessels on arrival and several times during the duration of the vessel's stay.

The Agent's offices are all situated in the town of Trieste and Master would be well advised to ensure they have the office and the home telephone numbers of the Agent's clerk dealing with their vessels.

Transportation: SIOT provides transport from the platform to the entrance gate. Ship's personnel are recommended, to order a taxi either using the ship-shore telephone or from the watchman's office

Walking through the SIOT port area is not permitted.

Taxis and private cars are not allowed within SIOT port area.

Trieste centre is about 5 km. by road.

Crude Washing: Crude washing is allowed under the prescriptions and following the procedures contained in "Ordinance No. 928/82 – 1st June 1982", issued by the Port Captaincy of Trieste.

Copy of the above Ordinance No. 928/82 can be obtained through the Ship's Agents.

MOORING GUIDELINES: See "Plan".

In order to prevent damage to the loading arms, and possible pollution of the harbour, it is of the utmost importance to ensure that a vessel is not permitted to move off the berth and exceed the operating envelope of the unloading arms.

The advice contained in these Mooring Guidelines has the objective of ensuring that any tendency for the vessel to "drift off" and cause damage to the loading arms and pollution is avoided.

Mooring Examples: The following, as well as the mooring plans, are based on the theoretical calculations according to OCIMF standard and on worst wind conditions.

Wind loads corresponding to gusts of 92 knots or maximum winds *of 78 knots from E.N.E. (Bora) and to gusts of 65 knots or maximum winds* of 55 knots from all other directions.

*Winds of a duration of minimum 30 seconds.

All the lines considered to be wires (steel lines) with MBL (minimum breaking load) of: 83 tons (36 mm. dia.) for ships with more than 100,000 d.w.t. MBL 66 tons (32 mm. dia.) for ships with less or equal to 100,000 d.w.t.

The windage area and the tankers' architecture as used in this example, especially as far as hawse-holes positions are concerned, have to be regarded as typical for the various classes of vessels calling at Trieste, but cannot be considered always applicable.

The Masters' attention is called on the fact that these guidelines have to be regarded as examples only and must be implemented accordingly depending on quality of lines used, MBL of the same, vessel windage area as well as forecast of weather conditions.

In particular we recall the Master's attention on:

(a) If lesser breaking load mooring lines are used vessels should endeavour to provide additional lines (together with any shore wires which are available), as nearly equivalent restraint capability as possible. Mixed mooring of wires and synthetic should be avoided.

(b) If mixed moorings of wire and synthetic or natural fibre are used, it is important that, due to the differing elasticity of these materials, their use in the same direction of restraint shall be avoided. If possible, wires shall be used as breast lines. In addition, 2 shore breast wires are provided at Berths No. 1 and 2, and 3 breast wires at Berths No. 3 and 4, and it is recommended that vessels should make use of them.

(c) The discharging arms are vulnerable to damage should vessels range or move off the berth. It is essential that a vessel is held securely alongside throughout the discharge.

Special care has to be taken in providing lines which must not have excessive elasticity to ensure sufficient transverse restraint.

(d) Full steam pressure must be maintained and be available to all mooring winches throughout the period vessel is alongside.

(e) As soon as a vessel is secured, brakes on all mooring winches must be secured. Winches shall not be left on automatic tensioning.

(f) Masters shall ensure that mooring lines are in good condition and free of visible defects. Winch brakes or securing devices should be in efficient operating order. In case of vessels in excess of 100,000 d.w.t. winch brakes should be capable of withstanding a load of 60% of the MBL and this should be supplemented in strong wind conditions by ensuring winches are put in gear with power applied in the heave position.

(g) An efficient watch must be maintained throughout the vessel's stay alongside.

(h) SIOT is entitled to stop operations and/or summon tugs if it appears that vessel's movement will endanger the discharging arms, or in the absence of an alert and efficient deck watch. All pertinent expenses will be charged totally to the vessel.

Action Guidelines for Adverse Weather Conditions: The following guidelines are drawn up in order to assist SIOT's and vessel's personnel in determining the course of action to be taken during stages of weather deterioration, when wind threatens to blow the vessel off the berth.

Masters are cautioned to use them only as a guide, as the physical characteristics of individual vessels may vary according to the type of vessel and the nature of the mooring used. Any limitation considered necessary will be arrived at by consultation between the Master and the SIOT Pier Master.

Valid for All Berths and All Wind Directions:

Discharge can continue regularly in wind Forces up to 7 (30 knots or 15 m./sec.).

Discharge to be stopped* if the wind is in the ranges from Force 7 (30 knots or 15 m./sec. to 33.5 knots or 17.3 m./sec.) to Force 8 (37 knots or 19 m./sec.) and the cargo on board is less than 30% of the summer d.w.t.

Discharge to be stopped* independently from the quantity of cargo on board if winds over Force 8 (37 knots or 19 m./sec.).

*When stopping discharge for wind conditions loading arms should be drained and disconnected, the crews and engines kept on standby and tugs alerted if necessary.

Weather Forecast: Weather forecasts are not available at the piers, but the local Meteorological Institute may provide them on a phone call. The accuracy of this service cannot be guaranteed and Masters should be alerted for conditions which may differ from those provided in the general forecast and ensure the safety of the vessel and the Marine Receiving Facilities. Masters will be aware of the fact that the prevailing wind blowing at Trieste has an E.N.E. direction, can blow with little warning and gusts can reach 100 km./h. or more in an extremely short time.

SIOT MARINE RECEIVING FACILITIES:

	Berth No. 1	*Berth No. 2*	*Berth No. 3*	*Berth No. 4*
Water depth at Mean Sea Level	55 ft. 4 in. (16.9 m.)	57 ft. (17.4 m.)	57 ft. (17.4 m.)	57 ft. (17.4 m.)
Raising or lowering of water level on predicted heights due to meteorological conditions 0.6 m.				
Maximum allowable draft (dependent on water level)	52 ft. 6 in. (16.0 m.)	54 ft. 3 in. (16.5 m.)	54 ft. 3 in. (16.5 m.)	54 ft. 3 in. (16.5 m.)
Min. size of vessel (d.w.t.)	16,500	16,500	16,500	16,500
Max. size of vessel (d.w.t.)	100,000	100,000	160,000	215,000
Min. length of vessel (m.)	160	160	160	160
Max. length of vessel (m.)	290	290	305	328
Max. discharge rate (cu.m./h.)	9,000	9,000	9,000	9,000
Unloading arms (with flanges ASA 150)	3×16 in.	2×16 in.	3×16 in.	3×16 in.
Bunkering arms (with flanges ASA 150)	2×16 in.	1×16 in.	2×16 in.	2×16 in.
Max. pressure permitted at shore gauge	10 bar	10 bar	10 bar	10 bar

Operator: Societa Italiana per l'Oleodotto Transalpino S.p.A., Piazza Unita d'Italia, 7, (C.P. 1354 – T.S.3), 34121 Trieste/Italy. Tel: 040-77981, 040-827003. Telex: 460126. Fax: 040-366424.

New San Sabba Terminal:

The terminal is located about 600 m. Eastward of the SIOT Pier No. 1 and is used for products discharge. It consists of a concrete finger pier, aligned in an East-Northeasterly direction with a berth on each side. Berth No. 1, facing S.E., is used for larger ships, while Berth No. 2 can accommodate vessels of up to 18,000 d.w.t.

Cautionary Advice: The breasting facilities at Berth No. 1, particularly forward, are poor and a very close watch on moorings is necessary, especially during the Bora season.

Berthing Procedures: Tugs are usually made fast with ship's lines just inside the breakwater. Ships are moored port side alongside. Starboard anchor can be used by smaller vessels in order to sail without tug.

Ships bound for Berth No. 2, steer directly for the berth and moor starboard side alongside. Port anchor is not normally used for this manoeuvre, but should be ready for use in an emergency.

Gangway: There is no shore gangway, ship should rig a safe gangway.

Cargo and Bunker Connections:

Dirty products:
  1 × 12 in. hard arm (ASA type), at Berth No. 1.
  1 × 10 in. hard arm (ASA type), at Berth No. 2.
Clean products and gas oil:
  1 × 8 in. hard arm (ASA type), at Berths No. 1 and No. 2.
Bunkers:
  1 × 6 in. flexible hose at both berths.

Deballasting Facilities: There are no deballasting facilities.

Stores: By barge only.

Aquila Berth: This terminal is located on the South shore of Vallone di Muggia. The berth is aligned in a Northeasterly direction and consists of a concrete T-head type jetty with buoys for all but the spring moorings. Vessels moor starboard side to.

Berthing Procedures: The manoeuvring space off the berth is limited. 2 tugs are normally made fast on the hook, using ship's lines, when the vessel is inside the breakwater. On approaching the berth, the vessel is turned slightly to port and the port anchor is let go and slacked off to about 4 shackles. The vessel is then pushed on to the berth by the tugs, while the chain is slacked out to about 7 shackles in the water. The moorings are taken to the buoys by the mooring boat and made fast.

Gangway: There is no shore gangway and vessels should rig their own gangway.

Cargo Connections, Handling and Ballast: The Aquila Refinery receives crude via the SIOT installations so only products and lubes are handled at this berth.

Dirty products are handled via 1 × 8 in. flexible hose. Clean products and gas oil are handled via 2 × 8 in. flexible hoses, and lubes and bunkers via 1 × 6 in. flexible hose. All are with ASA flange connections.

Dirty ballast can be discharged at a rate of 150 t.p.h.; maximum storage capacity is 3,500 tons.

Old San Sabba Pier:

This berth is only used by bunker barges.

General: *Pollution:* The port pollution sensitivity is very high.

Each vessel alongside is surrounded by a floating barrier. Furthermore, the following equipment is available in the port:
  3 skimming barges (speed 16 knots), 3 cu.m. capacity.
  1,000 m. floating barrier.
  20 tons of absorbent powder.

Fire Fighting Facilities: All berths are well equipped with high level fire fighting facilities including remotely controlled fire pumps and foam monitors. Moreover, all tugs are equipped with 2 or 3 water foam monitors.

Security: Shore leave is permitted. Shore passes are issued by the Port Captaincy and crew members' and visitors' identities are checked at the gate or boarding point.

Bunkers, Lubricants, Hydraulic Oil: Fuel and diesel oil are supplied by pipe with no restrictions on maximum quantity. Minimum quantity delivery by pipe: Fuel oil 100 tons, diesel oil 30 tons. Simultaneous bunkering and discharge is allowed.

Lubricants, hydraulic oils, etc., are generally available, but 3 days' notice is required. They are suplied in drums by barge.

Fresh Water: Drinking water is available by pipe. No restrictions on quantity.

Distilled Water: Not available.

Repairs: Repair facilities available. Immobilisation of main engine not allowed at the berths, but allowed at roads with tug attendance.

No tank cleaning and gas-freeing facililties available.

Stores: Laundry, provisions and stores area available with notice.

Telephone: Can be installed on board.

Special Regulations: For vessels discharging at TAL, SIOT Terminal cargo measurement and sampling may be required both before and after discharge. To facilitate these measurements and to avoid excessive venting when alongside, ships with an operating inert gas system are asked to reduce the system pressure to the safe minimum operational level (100-150 mm. WG.) immediately prior to the Pilot boarding for berthing. Detailed requirements for the safe measurement access to inerted tanks and for repressurisation and operation of the inerted gas system during actual discharge will be handed to and discussed with inerted ships on berthing.

DENSITY: 1025.

CONSULS: Austria, Belgium, Brazil, Chile, El Salvador, Germany, Greece, Guatemala, Honduras, Lebanon, Netherlands, Sweden, Turkey, United Kingdom, U.S.A., Uruguay, Yugoslavia.

FRESH WATER: Available by pipeline at all berths. No barges available.

FUEL: All grades available, loading rate about 250 t.p.h. 48 hours notice required. Also see "Shipmaster's Report".

REPAIRS: All kinds of hull, deck and engine repairs can be carried out by Arsenale San Marco and other yards.

DRY DOCKS: 5 dry docks available.

Shipmaster's Report: January 1985.

There is a new dry dock, located at Arsenale San Marco. Our vessel was the first to use it, our dimensions being:
LOA: 297.0 m., Moulded breadth: 56.0 m., Moulded depth: 19.0 m.

GANGWAY/DECK WATCHMEN: Available but not compulsory.

OPENING/CLOSING HATCHES: Optional, but stevedores usually perform this operation for convenience.

CUSTOMS ALLOWANCES: 50 cigarettes for each man and one bottle wine/spirits between 5 men. Only one allowance given while vessel in port.

REPATRIATION: No facilities.

AIRPORT: 15 miles distant. Two flights daily to Venice/Milan and Rome for international connections.

TIME: GMT plus 1 hour. Summertime: GMT plus 2 hours.

HOLIDAYS: New Year's Day (1st January); Liberation Day (25th April); Labour Day (1st May); Good Friday, Easter Monday, Assumption B.V. Maria (15th August); All Saints' Day (1st November); St. Giusto (3rd November); Immaculate Conception (8th December); Christmas Day (25th December); Boxing Day (26th December); Cargo work can be arranged on the above days.

POLICE/FIRE/AMBULANCE: Police, tel. 113; Fire, 2222; Ambulance, 68888.

TELEPHONES: Can be installed on board.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Shore passes are issued by local police.

GARBAGE DISPOSAL: A collection service is available for garbage with skips provided by barges every 24 hours. Contact Tel: 040-301287, 301788, 369928. Rates vary with skip size.

WASTE OIL DISPOSAL: A collection service is available. Contact Sea Service SRL. Tel: 040-301278, 301788, 369928. Telex: 461021 CRISMAR. Fax: 040-304977. Capacity of shore tanks/tanker trucks: 100 cu.m. Capacity of barges: 1,920 cu.m. Contract negotiated according to requirements.

SEAMAN'S CLUBS: "Casa del Marinaio", Pr. di Montfort St.3, 34100 Trieste. Tel: 040-302460. A catholic church service is available. There are telephone boxes available for international connections.

CURRENCY: Italian Lira (ITL).

DEVELOPMENTS: Ro/Ro terminal with 70,000 sq.ft. storage under construction. Timber yard to be extended.

SHIPMASTER'S REPORT: May 1981.

Documents/Fuel: If anchoring off Trieste for bunkers only the following are required: 5 Crew Lists, 2 Stores Lists, 2 Crew Declarations. No Pratique required if coming from Koper, Yugoslavia. Vessel does not have to pay anchorage dues.

SHIPMASTER'S REPORT: August 1989.

If repatriating any crew members who require transit visa, then Agent requires full name, passport number, place/date of birth, date/place passport issued, in advance.

Vessels pay extra for use of tug lines.

At SIOT berths it is easier to take stores by boat. Shore gangways available.

In arrival message, Agent requests time vessel will commence COW, this is so Inspector can board vessel to check equipment and certificates before start of COW.

Vessels normally berth heading outwards.

AUTHORITY: Autorita Portuale di Trieste, Punto Franco Vecchio, Cas. Post 569, 34100 Trieste, Italy. *Tel:* 6731 (Operator). *Telex:* 460257 Eapt D; 460365 Eapt C and 460282 Eapt C (Container Terminal at Mole VII). *FAX:* (40) 6732406. *Contact:* Dott.ssa Marina Monassi, General Manager.

Harbour Master, Riva 3 Novembre 13, Trieste. *Tel:* 630005/9 (3 lines). *Telex:* Compt TS 461181.

AGENT: See "Genoa".

VADA: 43.21 N. 10.27 E.

LOCATION: About 15 miles S.E. of Livorno.

DOCUMENTS:
  5 copies Crew List.
  3 copies Provisions List.
  3 copies Crew Declarations.
  Customs documents.
  Bill of Lading and Cargo Manifest.
  Health documents.
  Ship's papers.

PILOTAGE: The pilotage service, to the Solvay Jetty, is carried out by Livorno Pilots. Contact with the Pilot Station shall be established 2 hours before arrival, or as soon as possible, on VHF Channel 12, to give the usual ETA information.

The Pilot boards approximately 0.5 miles West of the jetty from the mooring boat that comes from the nearby general cargo harbour.

The Pilot is available both for arrival and departure, but is generally not required for departure.

ANCHORAGE: 1.0 miles to 1.5 miles West to S.W. of the head of the jetty. In case of gales from S.E. to West, it is possible to get some shelter East to N.E. of Secche di Vada.

RESTRICTIONS: Solway normally request ships to berth only in daylight. Departure is possible throughout 24 hours. Berthing during S.W. gales is not practicable, owing to the heavy swell alongside the jetty, and sometimes swell persists when the wind force moderates.

MAX. SIZE: Solvay Jetty: LOA 150 m., draft 8.2 m.
  Small dry cargo harbour: LOA 100 m., draft 3.4 m.

RADIO: Livorno Radio (24 hours).

VHF: Livorno Radio on Channel 16 (24 hours); Livorno Pilots on Channel 12 (24 hours); Vada Pier on Channel 9 (0800 hrs. – 1700 hrs.).

TUGS: Normally not used. In particular circumstances, tugs can be requested from Livorno (Rimorchiatori Fratelli Neri). The charge for the service must be contracted because there are no tariffs in force for Vada.

BERTHING: The berth for gas tankers is located on the Northern side of the jetty. Vessels normally berth port side alongside. Berthing starboard side alongside is also possible, but it makes departure more difficult when Northerly winds are blowing.

The use of the anchor may be necessary when berthing in Southerly winds. The bottom in the vicinity of the head of the jetty is not good holding.

The maximum height of the manifold connection is 10.0 m. from the sea level. The flange at the unloading arm is 6 in./8 in. 300 ASA.

The unloading capacity is about 300 t.p.h. (provided ethylene cargo temperature is −102°C.).

The acceptable pressure at the unloading arm is 6 Bar.

CARGO FACILITIES: There is a single arm to connect with the ship's manifold. The storage capacity of the shore tanks is about 4,800 tons.

Sampling takes about 4 hours.

AIRPORT: The nearest airport is Pisa, about 40 km.

SHIPMASTER'S REPORT: July 1987 (updated April 1988).

Location: 15 miles South of Livorno.

Chart: B.A. Chart No. 131.

Documents:

8 copies Crew List.
2 copies Crew Declaration.
2 copies Manifest.
1 copy Health Declaration.
3 copies Cargo Manifest.
3 copies Italian Port Authority Inward and Outward Forms.

Anchorage: Anchorage is 1.2 miles S.S.W. of the pier face.

In poor weather Secche di Vada Lt. 248° × 1.4 miles found to provide good holding ground in West winds of Force 7.

Pilotage: Pilots are supplied from Livorno. Vessels should call Livorno Pilot on VHF Channel 12, 2 hours before arrival at Vada.

Pilot boards from a mooring boat about 0.5 miles S.W. of the pier.

Restrictions: Daylight berthing only and after 0730 hrs. Departure is possible 24 hours without a Pilot.

VHF: Livorno Information Service on VHF Channel 10. They are very helpful.

Tugs: No tugs available.

Berthing: The berth accepts vessels up to 30,000 cu.m. with a draft 11.0 m.

Vessels normally berth port side alongside. The mooring boat comes from the nearby general cargo harbour.

It is possible to berth starboard side to, but this makes departure difficult.

The Pilot likes to use the anchor when berthing. However, he should be persuaded not to use it as it makes departure difficult and sometimes hazardous.

Moorings in good weather consist of 3 head/stern lines and 2 springs forward and aft. An additional forward back spring is provided by the shore.

Depth alongside is about 42 ft.

Shore gangway used.

The berth is very exposed and berthing delays often occur especially in Winter. If the weather deteriorates while the vessel is alongside the berth the vessel may have to leave in a hurry.

The fenders are good.

Cargo: There is a single ethylene Chicksan of 8 in. which can take the ship's maximum pumping rate (pressure about 2-3 Bar).

Sampling takes about 4 hours.

The capacity of the shore tank for ethylene is approximately 4,800 tonnes. The maximum single intake is 4,000 tonnes. The plant uses about 300 tonnes per day for plastics.

General: The receiver of the cargo was Solvay, Telex No. 500127 Solvri, at Vada.

Very few services available at the rigid pier. No store trucks are able to come down the pier. The Pier Manager will assist in getting down the pier (length of pier 1 mile) in a service car.

Crew changes are not normally allowed. However, it would be possible to make one or two changes as long as prior permission had been given by the terminal. Crew members arriving have to go to the Agent's Office in Livorno during working hours (between 0800 hrs. and 1700 hrs.).

The nearest airport is at Pisa which is about 1 hour by car.

It is about 40 minutes walk from the vessel to the town, which is a pleasant tourist town. Money can be changed at the bank and exchange bureau next door to the bank between 0800 – 1300 hrs. and 1600 – 1800 hrs.

AGENT'S REPORT: April 1994.

Characteristics and restrictions of Solvay Ethylene Jetty:

Max. LOA 138 m.

Max. draft 8.2 m.

Manifold connected: Max. height 10.0 m. from sea level (when vessel empty).

Manifold location: Approximately amidship.

Port side alongside.

No gas pipeline.

Flange at unloading arm 6 in./8 in. 300 ASA.

Unloading capacity: Approximately 300 t.p.h. (provided ethylene cargo temperature −102°C.).

Acceptable pressure at unloading arm: 6 Bar.

Management do not allow any spares to be delivered or bunker/water supply at their private jetty.

Fresh provisions can be delivered by ship chandler's own motorboat.

No motor vehicles permitted inside terminal. A part-private car service, accepted by Solvay, is allowed to shuttle people from gate to alongside and vice versa.

Agent to be advised for any requirements well in advance.

AUTHORITY: Local Port Authority: Delemare Vada. *Tel:* 0586-788121.
Head Office: Capitaneria di Porto Livorno. *Tel:* 0586-893362.

VENICE: 45.26 N. 12.20 E. (See Plan)

DOCUMENTS: Minimum number of ship's papers required upon arrival:

By Port Health:
2 copies Passenger List.
2 copies Crew List.

By Police:
2 copies Passenger List.
2 copies Crew List.

By Ship's Agents:
2 copies Passenger List.
2 copies Crew List.
2 copies Cargo Manifest.

By Customs:
2 copies Cargo Manifest.
2 copies Provisions and Stores List.

PILOTAGE: Pilot boards 2 miles from breakwater. Master can contact Pilot by VHF Channel 13.

ANCHORAGE: Anchorage for large tankers will depend upon Master's discretion.

Report: January 1992.

The position of safe anchorage for tankers approaching Malamoco Entrance was verbally received by Malamoco Pilot. The limits of the anchorage are:

	Latitude	Longitude
(a)	45° 21.2' N.	12° 24.1' E.
(b)	45° 20.8' N.	12° 26.0' E.
(c)	45° 19.26' N.	12° 25.1' E.
(d)	45° 19.7' N.	12° 23.4' E.

RESTRICTIONS: Advisable to enter during daytime and with favourable tide.

Access: North: At Lido with channel depth of 11.0 m.

South: At Malamocco with channel depth of 14.50 m. This channel at Southern end of Lido Island, first leading to San Leonardo tanker berth and then North to Marghera

Also see "Tankers".

HEALTH: Health Officer boards as soon as vessel is berthed. Pratique can be obtained by radio prior arrival. Radio request to "Sanimare Venice" through Trieste Radio.

TUGS: Tugs are available and will join vessel at breakwater and/or off Lido when proceeding to S. Nicolo. Ship's lines have to be used.

BERTHING:

Quay	*Berth* No.	*Length* (m.)	*Depth* (m.)
Marittima:			
Banchina Piave	1 – 6	850.80	7.62 – 7.92
Testata Marmi	7 – 8	233.00	6.40
Banchina Tagliamento	9 – 15	726.70	7.62
Banchina Palazzo	16	150.75	7.01
Banchina Isonzo	17 – 22	741.00	8.84
Testata Silo	23	103.20	4.88
Banchina S. Marta	24	177.40	5.79
	25 – 27	286.20	6.71
Banchina S. Basilio	28 – 29	172.55	7.92
	30 – 31	158.75	7.32
Marghera: Mole A & B			
Banchina Friuli	1 – 2	376.60	3.66 – 8.23
Banchina Cadore	3	230.30	7.92
Banchina Veneto	4 – 9	1001.15	7.92
Banchina Trento	10	220.00	3.05
Banchina Bolzano	11	132.65	9.60
Banchina Lombardia	12 – 15	573.62	10.06
Banchina Aosta	16	165.52	9.45
Banchina Piemonte	17 – 20	770.88	10.06
Banchina Romagna	21	260.00	9.45
Banchina Emilia	22 – 27	1067.89	10.67

CRANES:

Marittima:	29 × 1.5 – 3 tons
	8 × 3 – 6 tons
	4 × 6 – 12 tons
	1 × 30 tons
Marghera:	15 × 3 – 6 tons
	2 × 13 – 30 tons
	2 × 22 – 30 tons
	2 × 12 tons
	4 × 6 tons (Bridge Unloaders)
	2 × 330 t.p.h. (Bridge Unloaders), 30 tons SWL.
	2 × 1,500 t.p.h. (Bridge Unloaders), 34 tons SWL.
	5 × 300 t.p.h. Grain Elevator

Equipment: Handling equipment for general use in yards, in sheds and in holds in the commercial port areas of Marittima and Marghera.

Mobile cranes:
14 × 1.25 – 20 tons
11 × 30 – 40 tons
2 × 90 tons
2 × 100 tons
2 × 150 tons

Rail-wagon moving tractors:
7 × 31 – 35 h.p.
7 × 54 h.p.

Fork lifts:
90 × 1 – 3 tons
17 × 4.8 – 8.1 tons
11 × 12 – 35 tons

Tractor trucks:
5 × 132 h.p.

Trailers:
8 × 40 tons

Wheeled shovels:
16 × 1.5 – 5.4 tons
Tracked shovels:
2 × 1.4 tons
Lorries:
4 × 8 tons
Tank truck:
1 × 7.6 tons
Sweepers:
5 × 0.8 – 76 h.p.
Wheeled transpallets:
5 × 1 ton.

CONTAINER HANDLING FACILITIES: Container and Ro/Ro facilities in the port.

Marittima: Ro/Ro Terminal at the Isonzo Quay: 2 Berths. 45,000 sq.m. marshalling area.
Ro/Ro Terminal at S. Marta Quay: 3 Berths.
Ro/Ro Terminal at S. Basilio Quay: 2 Berths. 1 Passenger Terminal.

Marghera:
Container Terminal at the Emilia Quay:
3 berths (alongside 550 m. quayside), of which one is also a Ro/Ro berth.
On quay:
3 portainers of 48 tons capacity.
1 portainer of 40 tons capacity.
On yard:
2 rail-mounted gantry cranes of 40 tons capacity.
6 rubber-tyred gantry cranes of 34 – 40 tons capacity.
4 mobile cranes of 40 tons capacity under spreader.
7 fork-lifts of 12 – 35 tons capacity.
15 tug-masters of 40 tons truck-capacity.
20 trailers.
180,000 sq.m. stacking area.

Ro/Ro Terminal at the Friuli and Cadore Quays: 2 Berths, 57,000 sq.m. marshalling area.

Ro/Ro Terminal at the Aosta Quay: 4 Berths. 70,000 sq.m. marshalling area. 24,000 sq.m. stuffing sheds. 1 Passenger Terminal.

BULK HANDLING FACILITIES: Bauxite discharging at Montecatini and Molo Commerciale in Porto Marghera.

Discharge by crane grabs at rate of 2,000 tons per day at Montecatini, and 1,500 tons per day at Molo Commerciale. Vessels up to 28 ft. draft can be accommodated.

Coal discharged at ENEL jetty and Mole "A". Discharge rates 6,000 tonnes per day and 6,500 tonnes per day respectively.

STEVEDORES: The Provveditorato al Porto Venice are exclusively entitled to manage all the commercial work in the harbour including stevedores. Vessel should en route ETA cable to Agent at least 48 hours prior vessels arrival to arrange gangs.

MEDICAL: Hospital facilities always available. No notice required in advance.

TANKERS: Tank washings cannot be disposed of inside port. Diameter of loading/discharge lines 8 in. to 12 in.

One berth for tankers at San Leonardo can accommodate vessels up to 85,000 d.w.t. Max. draft is 45 ft. 3 in. Good discharging and no back-pressure. Speedboats up to Venice take about 40 minutes.

Discharging Berths for Tankers at Porto Marghera:
Darsena IROM, length 570 m., depth 30 ft.
Esso Pier: Depth alongside 26 ft.
Shell Pier: Depth alongside 26 ft.

Port entrance of Malamocco, at South point of the Island of Lido, has been reopened where a canal 12 m. deep leads to Port of Marghera. This canal allows large tankers to proceed to coastal storage tanks without passing through urban centre of Venice.

Esso/IP:
Berthing: Ships bound for Darsena Esso/IP proceed along the Malamocco channel, with the assistance of 2 tugs, up to Bacino di Evoluzione No. 1 where 2 additional tugs are made fast aft. They are swung in Bacino di Evoluzione and proceed along the Canale Vittorio Emanuele stern first. They then enter Darsena Esso/IP stern first. Ships are always starboard side to Berth 3M and portside to Berth 2M and to the Esso/IP berth.

Moorings are taken ashore by mooring boats. The minimum number of mooring lines required for each berth is as follows:
Berths 2M, 3M and Esso/IP
2 head lines,
4 breast lines (2 fwd. – 2 aft),
6 spring lines (3 fwd. – 3 aft),
2 stern lines.

The use of wires is not permitted.

I.R.O.M. Brentelle, Berth 4B:
Cautionary Advice: This berth is located at the junction of Canale Vittorio Emanuele and Canale Brentelle. Vessels are berthed starboard side alongside. The facilities are used by I.R.O.M. for clean and dirty products. There is heavy traffic in this area and care must be taken that ship's lines are always tight. Moreover, when a ship over 3,000 d.w.t. is entering or leaving Canale Brentelle, the loading/discharging operations are discontinued and the tanker moved off the berth. Maximum draft is about 22 ft.

Darsena I.R.O.M., Berths 2M and 3M:
Berthing: Ships bound for Darsena I.R.O.M. are swung with the assistance of 4 tugs in Bacino di Evoluzione No. 1. They navigate Canale Vittorio Emanuele stern first for about 4 cables and then enter Darsena I.R.O.M. bow first. Ships are always starboard side to Berth 2M and port side to Berth 3M. Due to the heavy traffic in Canale Vittorio Emanuele care must be taken that ship's lines are always tight. Vessels up to about 18,000 d.w.t. or 20,000 d.w.t. are berthed.

DENSITY: Average salinity of water inside port 1020.

FRESH WATER: Available.

FUEL: All grades available and delivered by barge.

CONSULS: Following are Consulates maintaining their offices at Venice.

Argentine
Austria
Belgium
Bolivia
Brazil
Colombia
Denmark
Finland
France
Germany
Greece
Ivory Coast
Lebanon
Liberia
Luxembourg
Mexico
Monaco
Netherlands
Norway
Panama
Peru
Portugal
Spain
Sweden
Switzerland
United Kingdom

REPAIRS/DRY DOCKS: There are ample facilities for repairs. Following are particulars of Venice dry docks:

Minore	*Maggiore*	*Principe*	
298.8 ft.	526.3 ft.	820.3 ft.	extreme length
58.4 ft.	79.8 ft.	117.8 ft.	breadth of entrance
1.0 ft.	1.0 ft.	3.1 ft.	height of sill above bottom dock
19.7 ft.	29.6 ft.	36.0 ft.	depth on sill at high water.

SURVEYORS: R.I.N.A., Lloyd's Register, Germanischer Lloyd, A.B.S., Norske Veritas, N.K.K. and C.I.S. Register of Shipping.

OPENING/CLOSING HATCHES: Normally carried out by stevedores.

CUSTOMS ALLOWANCES: The Customs require from the ship a complete list in duplicate of Provisions and Stores. It is particularly important that the quantities of items such as tobacco, cigarettes, spirits, coffee, matches, pepper, salt, spices, cars, chocolate, should be given accurately. Customs Officers will supervise the issue while ship is in port. Amount of tobacco allowed out of Bond: 50 cigarettes per man for all foreign vessels except British and U.S.A. flags. 20 cigarettes per day per man on British and American flag vessels.

AIRPORT: International Airport Marco Polo about 10 km. from Porto Marghera. Served by regular airlines.

TIME: GMT plus 1 hour. Summer Time from March to September, GMT plus 2 hours.

HOLIDAYS: The public and port holidays are the following: 1st January; 6th January; 19th March; 25th April; Monday after Easter Day; 1st May; Ascension Day; Corpus Christi Day; 2nd June; 29th June; 15th August; 1st November; 4th November; 21st November; 8th December; 25th December; 26th December.

TELEPHONES: Telephones will be placed aboard the ship.

SHIPMASTER'S REPORT: Porto Marghera. November 1979.

Pilotage: Pilot station works on Channel 13 VHF. Speaks very good English. Pilot launches are built to the same specification as the new Trinity House high speed launches, there are five in number. Black hull with white superstructure. Pilot ladder to be 3 ft. feet above the water line. Pilot boards from the rigging. In favourable weather Pilot Station about 0.5 miles East of the Fairway Buoy, in adverse weather conditions vessel proceeds in on leads and Pilot embarks inside the moles.

Anchorage: Good anchorage for small vessels especially during the Bora from the N.E. in 6 fathoms of water with Porto di Lido Northern Mole Light bearing 280° × 1.5 miles.

Stevedores: Port works 5 days a week in 3 shifts Monday to Friday: 1st shift 0800 to 1430 hrs.; 2nd shift 1430 to 2100 hrs.; 3rd shift 2100 to 0200 hrs.

2 shifts worked on Saturdays 0800 to 1430 and 1430 to 2100 hrs.
Possible to work Sundays 0800 to 1430 hrs.

Container Berth: Berth relatively new with good fenders – room for two vessels. Two container cranes. Ample straddle loaders. Upper berth suitable for Ro/Ro if berthed port side to.

Tugs: For vessels over 100 m. in length it is necessary to engage a tug for turning.

Speed in Canal: Maximum speed through Venice and up the canal to Porto Marghera 6 knots. heavy fines can be imposed for excessive speeds.

Cash Drawn: Customs have to approve any cash drawn and it is essential that any excess must be paid back to Agent before departure. Unable to land at any other port.

Customs: When proceeding from one Italian port to another the Clearance is placed on board together with one copy of 'Manifesto di Partenza'. Most important that Master has this copy on demand at subsequent port.

AUTHORITY: Overall supervising (Military) authority:
Capitaneria di Porto di Venezia, Sede Zattere, I-30135 Venezia, Italy. *Tel:* (041) 5203044. *Telex:* 410242.

The commercial port areas managing (Public) authority:
Provveditorato al Porto di Venezia, Zattere 1401, I-30123 Venezia, Italy. *Tel:* (041) 5334111. *FAX:* (041) 5334200. *Telex:* 410344 Portve I. *Cables:* Provviporto. *Contact:* Commercial and Marketing Department.

AGENT: See "Genoa".

Ivory Coast

ABIDJAN: 05.18 N. 04.00 W. (See Plan)

(A) ABIDJAN PORT
(B) SBM/MBM

(A) ABIDJAN PORT

PORT LIMITS: The pilotage zone is limited by a circle with a 3.5 mile radius centred on the pier lighthouse of the West jetty of the entry canal.

DOCUMENTS: All ships calling at Abidjan to discharge cargo will have to supply on arrival altogether 13 sets of Cargo Manifests and 4 sets of Freighted Manifests for each port of loading (IMO Class Code for all hazardous cargoes), as the administration no longer accepts reproductions of documents supplied by the Agents. Furthermore, Masters are reminded to hand to Agents on arrival, 6 Crew Lists, 4 Stores Lists, 4 Bonded Stores Lists, 4 Crew Declarations, 6 Passenger Lists (even if nil), 5 Animal Lists (even if nil), 5 Narcotics Lists (even if nil), Arms and Ammunition List, (even if nil), 5 Lists of Ports of Call and 1 Vaccination List. Furthermore, the attention of Masters is drawn to the fact that the Customs Services are strictly enforcing the control regulations on incoming vessels and very heavy fines are imposed in cases of omission or mistakes in Declarations of Slop Chests, Stores Lists etc.

All Manifests and Bills of Lading should refer to the IMO class code for hazardous cargoes.

It should also be noted that hazardous cargo found and not mentioned in above documents will have to remain on board.

Also see "Notice".

PILOTAGE: About 1 hour before arrival ships equipped with VHF shall confirm to the Pilot station, on Channel 12 or 16, their correct hour of arrival off the Roads; then the boarding time for Pilot shall be communicated. It is essential that these times are clearly understood both by ship and Pilot station.

Ships shall stay in a position so they keep across the swell and the wind which both generally come from the South and they shall put the pilot ladder on the lee side, i.e. Port if steering Eastward, Starboard if steering Westward.

Pilotage is compulsory, except for shifting alongside quays. For ships leaving harbour or shifting within harbour limits, request for a Pilot should be made at the Harbour Master's Office at least 3 hours before sailing or shifting. For a night sailing or shifting, request must be made before 1700 hrs.

Warning: When embarking Pilot, keep well clear of sandbank extending from entrance to Vridi Canal.

ANCHORAGE: Vessels may anchor on the outer road in 20 m. to 30 m. of water, firm sandy bottom, also to the South and to the West of the West jetty of the Vridi Canal.

RESTRICTIONS: Ships may enter or leave Abidjan only between certain time limits. These limits can be obtained from the Pilot Station on Channel 12 or from the local Agent no more than 3 or 4 days ahead of time.

MAX. SIZE: Until now the largest vessel admitted was 243 m. in length. Vessels with a length of 250/260 m. may be able to be admitted ultimately. At the present time, the maximum permissible draft is 33 ft. For drafts over this limit, a special request should be addressed to the Port Authorities, who, after taking the tide and current into consideration, will decide whether or not the vessel should enter. Also see "Part B".

HEALTH: Request for Free Pratique is given by the Agent to Port Health Authority, who will board vessel on arrival.

RADIO: Masters must radio through Abidjan – Radio their ETA and draft, 24 hours and again 6 hours before their arrival, to the Port Commandant (COMPORT) or in his absence, to the consignee. For a night arrival, the telegram must arrive at the station before 1700 hrs.

When at anchorage off Vridi Canal, vessels should watch for signals from Vridi Signal Station, which keeps continuous watch, and advise them regarding the time the Pilot will board their ship. Port Captain's office and Vridi Signal Station keep a permanent watch on 156.6 MHz. and 156.8 MHz. Agents may be obtained through Abidjan Radio on 2182 kHz. Abidjan Radio answers on 1813 kHz.

VHF: Channels 16 and 12 are used: 16 for security and 12 for general traffic. It is strongly advised to use Channel 12. This Channel is strictly reserved for the harbour traffic and ships wishing to talk to each other should do so on a ship to ship Channel 8.

RADAR: Installed in the Harbour Master's office. Vessels can contact port radar by calling "Comport Abidjan" on VHF Channels 16, 12 and 11, or through Abidjan Radio, which keeps watch on Channel 16.

TUGS: Tugs join vessel at the port entrance. Towing lines are provided by the tug. Tugs work on VHF Channel 8.

BERTHING:

Bananier Quay: (Banana Carrier Quay): Length 350 m., 2 berths, depth 7 m.

North Quay: Length 775 m., 5 berths (Nos. 1–5) from East to West, depth 10 m.

West Quay: 1,525 m., 10 berths Nos. 6 to 15 from North to South, depth 10 m.

South Quay: 1,145 m., 6 berths Nos. 16 to 21 from North to South, depth 11.5 m.

Roll-on/Roll-off Berth: Length 200 m. Depth 12.5 m.

A temporary Roll-on/Roll-off berth is located at the North Quay of the fishing harbour, length of the quay 350 m., depth 7 m.

A quay 90 m. long, situated on the South bank of the lagoon between the access canal and the discharge canal (Bietri Canal) extended by a system of piles, permits the mooring of vessels 140 m. long and with 26 ft. draft. This Quay is called 'Siveng Quay' and is reserved for the Company of the same name.

Mooring buoys lined up in the North part of the port (Banco Bay) are used by vessels taking on timber.

The Quays of the port are not equipped with cranes, so loading and unloading operations are undertaken by vessels own gear.

SPECIALISED CARGO HANDLING FACILITIES:

Container Terminal: 4 Berths (No's 22, 23, 24 and 25) each 200 m. length are in service. A study with regard to equipping these quays with gantry cranes is being undertaken. The area of the container park is 60,000 sq.m. Loading and unloading of the containers is by ship's gear. Transport on the quays is made by trailers.

Ro/Ro Berth: This berth has a park of approximately 40,000 sq.m.

Details of the ramp of the temporary berth, situated on the North quay of the fishing harbour are as follows: Width 17 m., height above chart datum 1.5 m., permissible loading 20 tons by pulley. The height of the quay above datum is 1.8 m.

Vessels arriving with cereals destined for "Grand Moulins D'Abidjan" are received at Berth No. 1, or they are given a berthing priority. Handling is by means of suckers and conveyor, average rate of discharge 150 t.p.h. The capacity of the silos is 30,000 tons. The "Grand Moulins" are also equipped to load pellets in bulk at this berth. They can also receive cereals for third parties; in this case the transporting vessel still benefits from the mooring priority.

The handling companies Transafric and Socopao are also equipped with suckers (Vigan pumps) for discharge of cereals. Evacuation is then made either by tipper lorries (Transafric) or by direct discharge under hangar (Socopao). The vessels are then directed to the ordinary berths and do not benefit from any mooring priority. The rates of discharge are in the order of 50 to 70 t.p.h.

Palm oil is usually taken on board at Berth No. 16 where 2 pipelines come from the oil depots. The diameter of these pipelines are 4 in., and the flow rate is 250/280 t.p.h. Vessels mooring at this berth do not have priority. These oils may be taken on board at any other berth by tankers.

Wine in bulk is also received at the ordinary berths and also discharged by tankers.

The timber yard is situated in the North part of the port. It is bordered by a quay of 380 m. from which the timber is put in the water or loaded on barges before being towed to the vessel on which it is to be loaded. The equipment of this park (yard) is as follows: 1 gantry crane of 20 tons and 1 of 10 tons, 1 derrick of 20 tons, 3 fork lifts of 16 tons, 1 fork lift of 7 tons.

The park for discharged timber is situated between the West quays and the fishing port; it is bordered by a quay of 350 m. called "Quai de Chalandge" (Lighterage Quay), depth 2.5 m. The equipment for this park comprises: 5 fork lifts of 10 tons and 1 of 12 tons.

The port has 2 floating cranes: one with 150 tons capacity and one of 25 tons capacity.

Mooring of tankers at the wharves of the Vridi Canal is made at slack water and departure at the end of high tide. It is also to be noted that, in spite of reinforced moorings, the mooring to these wharves is sometimes rendered impossible because of the heavy swell which builds up in the canal.

Prime materials for manufacture of fertilizers are received in bulk at the "Siveng Quay" where discharge is by derricks and suckers.

The banana carrier quays are provided with air conditioned and stocking hangers as well as necessary equipment for loading.

SOGIP Shipping: Private quay for fishing vessels. Cold room with capacity of 2,200 tonnes at −20°C.

STEVEDORES: Gangs must be ordered before 1700 hrs. on the previous day.

MEDICAL: All medical services and hospitalisation can be arranged without difficulty. Crew members are obliged to have valid certificates against yellow fever.

TANKERS: 2 oil wharfs situated on the East bank of the access canal accommodate large vessels of more than 200 m. with a max. draft of 31 ft.

Also see "Ship's Officer's Report " dated August 1994, "Shipmaster's Report" dated December 1995 and Section (B).

DENSITY: Varies from 1025 in January to 1000 in November.

FRESH WATER: Supplied from the quay at the rate of 40 t.p.h. per hydrant. Can be supplied by barge.

FUEL: 1500 secs. fuel available from Abidjan Refinery. Advance notice required.

CONSULS: The following countries are represented locally:

Algeria
Argentina
Austria
Belgium
Benin
Brazil
Canada
Central African Republic
Chile
Colombia
Congo
Denmark
Egypt
Ethiopia
Finland
France
Gabon
Germany
Ghana
Guinea
Guinea Bissau
India
Israel
Italy
Japan
Korea
Lebanon
Liberia
Mali
Mauretania
Morocco
Netherlands
Nigeria
Norway
Poland
Romania
Russia
Senegal
Spain
Sudan
Sweden
Taiwan
Tunisia
United Kingdom
U.S.A.
Upper Volta
Vietnam
Yugoslavia
Zaire
Zambia.

REPAIRS: All types of repairs can be effected. There is a floating dock with lifting capacity 2,000 tons.

WATCHMEN: Services of shore watchmen are recommended. See "Notice".

PIRACY: February 1988: Whilst at anchor overnight awaiting berth vessel was boarded by armed pirates who threatened crew and stole stores and crew effects.

Vessel berthed in morning and worked from 0730 hrs. – 1930 hrs. During the night, whilst alongside, the vessel was again boarded and plundered.

HATCHES: Normally opened and closed by stevedores.
CUSTOMS ALLOWANCES: Each man allowed to retain 200 cigarettes and 1 bottle of alcohol.
REPATRIATION: Can be arranged.
AIRPORT: Local international airport with connections to all parts of the world.
TIME: GMT. No alterations during the year.
HOLIDAYS: 1st May and 7th December no work can be carried out. Other holidays which may be worked at overtime rates are: 1st January, Easter Monday, Whit Monday, Ascension Day, 1st November, Christmas.
POLICE/FIRE/AMBULANCE: Police, tel. 35.57.57; Fire, tel. 238/82; Ambulance, tel. 238/82.
TELEPHONES: Can be connected on board if requested for vessels moored at Quays No. 1, 2, 4 and 5.
SHORE LEAVE: Allowed without restriction. See "Notice" below.
IDENTIFICATION CARDS: Should be carried by crew going ashore.
DEVELOPMENTS: The port extension project of the Locodjro site (West bank of the Bay of Banco) to be constructed. Facilities to include container terminal, mineral terminal, additional fishing port, clinker berth and additional general cargo berths. 2×40 ton gantry cranes to be installed.
NOTICE: Agent's Notice to Masters: 1986.
REF: DOCUMENTS – SECURITY – WARNINGS.

In order to comply with the various local regulations and meet the different Port of Abidjan Authorities requirements, we give below, the necessary instructions, information and warnings.

(A) *Documents:* Upon arrival you will have to hand over the following documents to the corresponding authorities:

1. *To the Agent:* 4 Crew Lists, 4 Ports of Call Lists, 4 Passenger Lists, 1 Store List, 1 Animal List, 1 Crew Declaration List, 1 Drugs List, 1 Arms and Ammunition List, 2 full sets of Inward Manifests.
2. *To the Customs Officers:* 1 Crew List, 1 Ports of Call List, 1 Passenger List, 1 Store List, Crew Declaration List, 1 Drugs List, 1 full set Inward Manifest.
3. *To the Police Officers:* 1 Crew List, 1 Ports of Call List, 1 Passenger List, 1 Animal List, 1 Arms and Ammunition List.
4. *To the Health Officers:* 1 Crew List, 1 Ports of Call List, 1 Passenger List, 1 Animal List, 1 Vaccination List.
5. *Remarks:* We must stress that all these above documents must be correctly and accurately completed, your attention is especially drawn to the documents given to the Customs Officers: Store List, Crew Declaration List, Drugs List, which will be thoroughly checked and any discrepancies could lead to heavy fines to the vessel.

   Customs Regulations require that any item which is not absolutely necessary to the functioning of the ship must be declared. This concerns mainly any television, radio, video, or other electrical apparatus belonging to the ship which have to be mentioned on the Store List together with all items usually declared.

   Also for exchange control operations, Customs require that any amount of foreign currency which is either personal to a crew member or belonging to the ship's funds in excess of CFA150.000 per man (approx. U.S.$335.00) must be declared on the Provisions or Crew Declaration List.

(B) *Security:* You are hereby advised that security wise, Abidjan Port is quite unsafe these days, and Master must protect his ship against the following:
Robberies and Pilferage of Cargo and Vessel Property: Police Officers watch is compulsory on vessel discharging foodstuffs. However, additional watchmen (private or police) are recommended to avoid robberies and pilferage of cargo. Please discuss this matter with your Agent who can order the necessary watchmen at your request and for your account.

It is further recommended to keep all cabins closed and keep a watch at the entrance to the living quarters.
Prostitution: Even though they are not allowed to enter the port area, prostitutes board vessels either from shore or lagoon side.

You are hereby informed that such practices are strictly prohibited and vessel will be prosecuted and fines levied by police in case prostitutes are found on board your vessel.

(C) *Warnings/Smuggling:* We draw your attention on the strictness of the local Customs Regulations and hereby warn you and your crew of the heavy risks taken in case of any attempt at smuggling.

We strongly warn crew members not to deal with anyone trying to sell local produce (such as cocoa or coffee) or to buy any part of your cargo or personal effects (such as radios, televisions, videos, watches, sugar, rice, fish, etc.). Please note that some of these "dealers" are "Agent Provocateurs" and the Customs usually prosecute the vessel with fines out of all proportions.

You are also reminded that crew members are not allowed to carry in and out the port any personal effects or provisions of any value.

SHIPMASTER'S REPORT: October, 1983.
Documents: Customs are very strict on Crew Declaration and Crew Lists. Fines in case of differences are very high.

In case you are notified of a fine you should contact your P & I Club through your Agent.

Yellow Fever Certificates not compulsory.
Anchorages: Many ships that have had to anchor inside the harbour have been boarded by armed thieves – it is preferable to wait 30 miles off coast drifting rather than anchoring inside harbour waiting for berth.
Radio: "Comport" must be advised 24 hours prior to arrival. Arrival/departure is governed by Vridi Channel. Navigational opening times advised by Agent. Inward bound ships are advised to arrive 30 minutes after advertised opening times as outward ships have Pilot Priority.
Berthing: Max. draft at Banana Loading Pier is 7.5 m. We always berth port side to using starboard anchor. 140,000 boxes fruit usually loaded in a 40 hour working period. Labour works as cargo is available. For bananas/pineapples, holds are pre-cooled to +8°C for survey.

Average rate of general/frozen cargo discharge at General Cargo Piers is max. 15 t.p.h. depending on transport available.
Fresh Water: No difficulties at General Cargo Quays, but only available at Banana Quay by barges (whose services are unreliable). Always preferable to give as much notice as possible.
Watchmen: 2 ships' watchmen on duty at night plus 2 shore watchmen. The latter are regulars appointed by Ship's Master.
Regulations: Please note that security net under gangway is compulsory. The lack of it would result in a heavy fine from the Port Authority.

If unauthorised persons are allowed on board this may result in heavy fines by the Port Authority.
Crew Safety: It is advisable to take a taxi when proceeding ashore.

It cannot be too stongly emphasised that NO person should venture ashore on his own either by day or night.

SHIPMASTER'S REPORT: February 1985.
Customs: It is advisable to declare all valuable goods such as television sets, video-recorders, video tapes, radios and binoculars, also soft drinks and beer, as it is common for Customs to impose fines of $1,000 – $2,000 if incorrect declaration is made.

The Ship's Stores List/Provisions List must also be correct otherwise fines will be imposed.

SHIPMASTER'S REPORT: August 1991.
Tanker berth in Vridi Canal: (See Plan)

Neither the pilot or Port Authority give any idea as to what can be expected at this berth, and they tend to moor the vessel with bare minimum of mooring ropes.

There is always some kind of swell in this channel, which surges the ship and causes mooring ropes to part frequently, moreover the ebb current from 3 hours after H.W. to L.W. is very strong. Although the tide is only 1 m., this channel is the only main outlet for the water in the large lagoon and river, hence it is absolutely essential to have as many ropes leading forward as possible, and preferably port anchor dropped well ahead before berthing, so that it can take weight of the vessel.

SHIP'S OFFICER'S REPORT: August 1994.

Vessel ordered to discharge part of cargo at S.I.A.P. Berth (Texaco-Total-Agip) in Vridi Canal (Also see "Plan").
Vessel's Characteristics: Double hull tanker. LOA 135 m. Beam 20 m. Draft at berth 6.50 m. Bow propeller and pitch propeller. 11,380 d.w.t. Total cargo on board on arrival at Abidjan 8,200 tonnes Avogas 100 LL.
Anchorage: Vessel anchored in position Lat. 05° 12.8' N., Long. 04° 02.4' W., 1.6 miles from land, and waited for berth. During the night, it is recommended to keep a good watch to prevent possible actions against vessel and crew. All doors of the living quarters were closed, except the bridge entrance. Also, all the doors to deck stores were secured, including engine room external entrance, so the vessel was completely safe. It is also recommended to clear all the equipment from lifeboats and close the free-fall launch, if vessel is equipped with one. To discourage boarders, we suggest illumination of the sea every 15/20 minutes with the searchlight. During the night, there were 2 persons on watch and nothing occurred to the ship and crew.
Berthing: The Pilot boards on the starboard side close to the entrance of the Vridi Canal. It is recommended to leave the Q.R. Whis "AN" Buoy on port side as the ship proceeds for berthing with inward tide. The tug joins the vessel in Vridi Canal and the towing line is provided by ship. When in position, drop port anchor (useful for unberthing), and start mooring operations with head/stern line (only one by mooring boats). As soon as possible arrange for springs and breast lines, and when the ship is well positioned, complete mooring operation of 3/2/2 at Total. Pay attention when vessel is close to the circular cement dolphins, as they are not well equipped with fenders. Berthing is always starboard side alongside. Gangway with net to be supplied by the ship. Hoses of 6 in., 8 in. and 10 in. are fitted by shore personnel. It is recommended to have other ropes ready as Vridi Canal is the access to the port, and when vessels of deep draft transit the Canal, ranging at the berth occurs. When alongside, keep all doors and bridge closed, to prevent stowaways entering accommodation.
Documents: Before arrival prepare following documents:

10 copies Crew List.
4 copies Stores and Provisions List.
4 copies Deck/Engine Stores List (See "Appendix").
4 copies Animal List.
4 copies Stowaway List.
4 copies Narcotics List, with expiry dates.
4 copies Arms and Ammunition List.
4 copies Vaccination List (Cholera and Yellow Fever compulsory).
4 copies List of Ports of Call.
4 copies Cargo Manifest List (including cargo even if in transit).
4 copies Crew Effects Declaration (any items such as Radios/Cameras/Hi-Fi/Gold/Watches/Souvenirs/Currency/etc.).
4 copies Ship's Currency List.

Immigration, Port Health Authority, Fire Brigade, Customs and many shipchandlers, the Agent and 4 watchmen board on arrival. It is very important to cooperate with authorities, especially (repeat especially) with Customs.

No difficulties encountered and no fines occurred to the ship and authorities were very friendly.
Leaving the Berth: Pilot joins vessel from shore. Make sure that stowaway check is done.

The anchor and tug (ship's line) used to shift vessel from berth, and as soon as the anchor is clear, tug leaves the ship and remains for assistance only. Ship turned in Vridi Canal, near the berth, using the bow propeller only and making optimum use of the outward current/tide. Pilot leaves ship from port side as vessel leaves Vridi Canal.

Appendix:

Port .... Date ....

Ship's Manifest of Deck and Engine Stores

Televisions .....
Video Rec.Player .....
Radio Cass.Player .....
Video Tape .....
Electr.Calculator .....
Typewriter .....
Copy Machine .....
Binoculars .....
Walkie-Talkie .....
Safety Shoes (new) .....
Work Suit .....
Rain Coat .....
Gas Tester .....
Sounding Line .....
Oxygen Detector .....
Cell Batteries .....
Explosimeter Cal.Kit .....
Explosimeter .....
Work Gloves .....
Rubber Gloves .....
Eskimo .....
Company Flags (new) .....
Wipping Waste .....
Neon Tube .....
Small Cup .....
Saucer .....
Table Knife .....
Coffeespoon .....
Nutcracker .....
Laddle .....
Tin Opener .....
Hot Plate .....
Oil & Vinegar Cruet .....
Cheese Bowl .....
Soup Tureen .....
Single Sheet .....
Pillow Slip .....
Napkin .....
Bed Cover .....
Baker Shovel .....
Engine Oil .....
Fuel Oil .....

Interface .....
Interface Sample .....
Flash Light (new) .....
Flash Light (used) .....
Lantern .....
Cell for Lantern .....
Cement .....
Rags .....
Tow .....
Soda .....
Sawdust .....
Mooring Ropes .....
Wire Ropes .....
Whip .....
Paint .....
Solid Soap .....
Liquid Soap .....
Powder Soap .....
Line .....
Thinning .....
Paint Brush .....
Paint Roll .....
Ipoc.Sodium .....
Elec.Bulb .....
Cup .....
Coffeepot .....
Spoon .....
Fish Knife .....
Peppermill .....
Saucepan .....
Glasses .....
Plates .....
Sugar Bowl .....
Ice Bucket .....
Towel .....
Double Sheet .....
Table Cloth .....
Mess Jacket .....
Blankets .....
Cutlery Kit .....
Diesel Oil .....

Plus anchors, chains, nautical instruments, cabin furniture, kitchen utensils, deck and engine equipment/furniture for navigation.

Signed ....
MASTER

SHIPMASTER'S REPORT: December 1995.
Vessel: 41,000 d.w.t.
Terminal: Societe Ivoirienne de Raffinage.
Berth: Petro Ci ("T" type Jetty).
Cargo: Gasoline (Transhipped to vessel at next berth via shoreline).
Connection: 1×8 in. hose.
General: Pilot boards at stated pilot station, one Pilot for all operations. Vessel moored starboard side to (3,2,2) and used port anchor. Leads for moorings are good, both forward and aft. Springs sent from poop without problem. Mooring boats used forward and aft. Two tugs used, pushing alongside only, without making fast.

Shore gangway used, good position and manoeuvrable. Jetty surrounded by security fencing and both jetty and gate manned at all times.

Jetty is in Canal de Vridi and strong currents can be experienced, especially during rainy season. Maximum current encountered 1 knot.

Agents were very helpful and can be contacted via VHF throughout. Company mail received onboard and crew changes carried out without many problem. We were warned that Customs Authorities are most particular about Stores Declaration, down to the number of drums of grease onboard. We were advised to conduct meeting with Customs in crew messroom as opposed to General Office. All other officials were very courteous, congenial and prompt. Customs did not attend vessel.

Information obtained from Loading Master is that if loading cargo at this berth, only 1×10 in. Chicksan is available for each grade and the normal loading rate given is 800 cu.m./hr.

There is a vast amount of weed and grass floating in and out of the canal on the tide. This becomes choked alongside jetty and around the vessel, giving the appearance of being moored in a field.

Vessel berths and sails on slack water.

Pirates: Whilst waiting at anchorage, this vessel was attacked by pirates. Pirates also attacked another tanker at anchor in ballast condition.

AUTHORITY: Port Autonome D'Abidjan, BP. V85, Abidjan, Ivory Coast. *Tel:* 32-01-66, 33-14-24. *Telex:* 22778 Dgpaa CI. *Contact:* Director General.

AGENT: Socopao Cote d'Ivoire, Km. 1, Boulevard de Marseille, 01 B.P. 1297, Abidjan 01, Ivory Coast. Tel: (225) 241314, 240903, 242546. Telex: 43261 Freight. Cables: Freight Abidjan. Fax: (225) 242130.

(B) SBM/MBM

LOCATION: Multi-Buoy Mooring Terminal (MBM): Located about 1 nautical mile in a 170° direction from Port Bouet Lighthouse (Lat. 5° 14' N., Long. 3° 57.5' W.).

Single Buoy Mooring Terminal (SBM): Located about 1.2 nautical miles in a 210° direction from Port Bouet Lighthouse (Lat. 5° 13.7' N., Long. 3° 58' W.).

DOCUMENTS: *Boarding Formalities:* The Port of Abidjan Pilot is commissioned by Health Authorities for Health Declarations.

For Customs and Police formalities, contact your shipping Agent. Also see Section (A).

PILOTAGE: Pilotage is carried out by the Pilots of the Port of Abidjan. Signals for Pilot are international code signals. A Pilot may be obtained through VHF Channels 12 or 16. Pilotage is compulsory for mooring and sailing. On the request of the Master, the Pilot remains on board during the ship's call. Boarding point shall be either at temporary anchoring point or, if the ship can moor on arrival, between 2 miles and 3 miles South of the Vridi Canal Entrance.

Please note that "pilotage consists of assistance given to Masters for the leading of vessels entering and leaving the pilotage area or for moving within this area by staff commissioned by the Port Authority".

The attention of Masters is drawn to the fact that they are at any time fully responsible for any damage or accident caused, by night or day, by the leading and manoeuvring of their vessels.

Also see "Tugs".

ANCHORAGE: *Temporary Anchorage:* Between 2.5 miles and 3 miles × 235° from the Vridi Canal Entrance, ships anchor without assistance.

NAVIGATION AIDS:
(a) Port Bouet Lighthouse: Square white tower with a black top, with flashing light, 34 m. high.
Position: Lat. 5° 14.9' N., Long. 3° 57.5' W.
The range of the light is 23 nautical miles and characteristic are 3 flashes every 15 seconds.
(b) Light Buoy "SL", located South of the MBM Terminal.
Position: Lat. 5° 13.40' N., Long. 3° 58.15' W.
The range of the light is 8 nautical miles and characteristics are 2 flashes every 6 seconds.
(c) IMODCO SBM Terminal light.
Position: Lat. 5° 13.85' N., Long. 3° 58.15' W.
The range of the light is 5 nautical miles and characteristics are 2 flashes every 3 seconds.

MAX. SIZE: *MBM:* 30,000 d.w.t. – 80,000 d.w.t., LOA 170 m. – 250 m. and max. draft 13.7 m. (45 ft.).
SBM: 80,000 d.w.t. – 250,000 d.w.t., minimum LOA 200 m. and max. draft 21.0 m.

RADIO/VHF: *Abidjan Radio Coast Station:*
Call sign: "PUA".

Times (GMT)			
0800 hrs. – 0900 hrs.	8,465	kHz	W/T-HF
1000 hrs.	13,060.2	kHz	W/T-HF
1100 hrs. – 1500 hrs.	16,947.6	kHz	W/T-HF
at night	4,343	kHz	W/T-HF

Call sign: "BLU".

4,413.2	kHz	R/T-HF
6,512.6	kHz	R/T-HF
8,784	kHz	R/T-HF
13,113.2	kHz	R/T-HF
17,335.2	kHz	R/T-HF
22,670.4	kHz	R/T-HF

VHF: Harbour Master on Channels 12 and 16. Tugs on Channel 6. Terminal's stand-by tug ("Coral Fish") on Channel 14.

Private Frequencies: SIR has the free use of 2 private frequencies for its operations, 155.850 MHz and 155.875 MHz (Priority on 155.850 MHz).

A permanent radio link is established by SIR Agent with the refinery during vessel's call with portable sets.

ETA: ETA must be radioed to shipping Agents in Abidjan 72 hours and 24 hours prior to arrival.

The vessel must keep Agent informed of any change of ETA. The message must give the following information:
Ship's Name, Call Sign and Flag.
ETA (GMT).
Maximum loading/unloading rate.
Time for deballasting/ballasting (clean ballast).
Maximum draft.
Length overall.
Displacement.

The Master must also cable the Abidjan Port Master, the day before arrival on the Vridi Roadstead and at least 6 hours prior to arrival, to confirm ETA (GMT) and fore and aft drafts (Cable address: "COMPORT ABIDJAN". Telex: 23674/23476 COMPORT).

TUGS: Towage and stand-by security are compulsory at both berths (MBM and SBM). The Terminal's tug ("Coral Fish") can be called through VHF Channel 14. Towage and stand-by security expenses are incurred by the ship.

The local towage station "Union des Remorqueurs d'Abidjan (URA)" can be called through VHF Channel 6.

Mooring Service/Boat Service: Mooring is carried out by a launch and personnel designated by SIR. These personnel remain at the Shipmaster's disposal during the time necessary for manoeuvring.

A Company Loading Master and a mooring gang will board the tanker at either the anchorage area or other agreed location to take her to her assigned berth. The Loading Master will advise the ship's Master on the proper approach to the Terminal, mooring and unmooring operations, connecting and disconnecting of hoses.

Tug(s) and/or launch(es) assist in berthing vessels. Such tug(s) or launch(es) are under the direct control and supervision of the Loading Master. Any service and/or facilities provided by SIR, including but not limited to, the services of Loading Masters, tug(s) and/or launch(es) and their crews, or berthing and loading/unloading equipment are provided entirely at the risk and the responsibility of the vessel without any liability from SIR.

BERTHING: *Multi Buoy Mooring Terminal (MBM):* This Terminal is designed to provide loading facilities for heavy fuel oil, and discharging facilities for heavy fuel oil and crude oil.

It can accommodate ships from 30,000 d.w.t. to 80,000 d.w.t. Length 170 m. (min.) to 250 m. (max.). Max. draft 13.7 m. (45 ft.). Derrick to have minimum S.W.L. of 8 tonnes. Diameter of manifold 12 in.

A 24 in. nominal flow line connects the Terminal to the refinery (approximately 5 km.). The underwater hose system consist of 2 hose strings of 12 in. which do not float (each 60 m. long). They are on the sea bed (16 m. – 20 m. depth).

This Terminal consists in 8 moorings as follows:

(a) 2×7 tons anchors and 2×80 mm. × 30 m. chains (except No. 8, which only has one anchor).
(b) A 90 m. (3×30 m.) master chain, 80 mm. thick on sea bed.
(c) A 21 m. (9 m.+12 m.) chain line linking the master chain to mooring buoy.
(d) A 5 ton cylindrical mooring buoy (except No. 8).
(e) A steel mooring cable (46 mm.×200 m.) for Buoys No. 1, 2, 3, 4 and (46 mm.×300 m.) for Buoys No. 5, 6, 7 and 8.

When not in use, the cables are laid on sea bed. The cable ends end with a 22 mm. cable with a marking buoy.

Vessel will berth at SIR MBM with both anchors out and 8 terminal wires secured as follows:

(a) Four around the stern.
(b) 2 on the main deck forward.
(c) 2 on forecastle (Necessary to have 2 winches aft).

Vessel must have ready on arrival:

(a) 4 messenger lines.
(b) 2 wire line stoppers.

The Terminal can provide 8 wire rope stoppers.

Mooring at MBM: Mooring at MBM can only be carried out by day, in specific meteorological conditions (Time is fixed by the Port Authority), with the assistance of a tug as follows:

(a) Approach according to Pilot's instructions.
(b) Drop starboard anchor first, then port anchor.
(c) Moor aft, then forward, lines hooked up from SIR mooring launch.
(d) Make fast mooring lines and chains.

In favourable weather conditions, mooring may take 2 hours to 4 hours. Mooring lines are provided by SIR and consist of 46 mm. steel cables supported by buoys on 22 mm. cables.

Single Buoy Mooring Terminal (Swivel Buoy) – SBM: This Terminal is designed to provide discharging facilities for crude oil. It accommodates vessels from 80,000 d.w.t. to 250,000 d.w.t., with single mooring point on the bow.

Diameter of manifold is 16 in.

S.W.L. of derrick to be minimum of 10 tonnes.

Bow to centre manifold distance to be maximum of 150 m.

A 42 in. nominal diameter 5 km. long line connects the SBM Terminal to the refinery.

The underbuoy hose system is divided into 2 lines of 24 in., which do not float.

The floating hose system tied to the loading point is made up of:

(a) A 190 m.×24 in. floating hose string.
(b) 1 T-shaped reduction piece 24 in./16 in.
(c) 2×35 m. × 16 in. floating hoses to be connected to the tanker's port manifold.

Water depth at the Terminal is 49 m. in a 400 m. radius. Water depth varies between 30 m. and 80 m.

The Terminal consists of a 12.5 m. diameter IMODCO buoy, with a circular fender projecting approximately 1.5 m. beyond the hull diameter under the water line. The buoy is moored by 6 chain legs spaced at 60° intervals and 6×20 ton anchors within a 300 m. radius.

The mooring system consists of:

(a) A single nylon 450 mm. hawser (minimum) with breaking strength of 430 tons (950,000 lbs.), 46 m. long (150 ft.) with 20 pocket hawser floats.
(b) A hard rubber anti-chafing chain (67 mm.×9 m.), supported by a buoy.
(c) A polypropylene messenger line (254 mm.×61 m.).
(d) An emergency mooring aid system consisting of a hawser pipe and 3 mooring bitts, located on the mooring arm and allowing the ship to send 3 doubled-up bow lines.

Mooring at Single Buoy Mooring on Swivel Buoy: Mooring on the swivel buoy is done in daytime only, with assistance of a tug as follows:

(a) Approach according to Pilot's instructions.
(b) Floating hoses hooked by SIR service launch.
(c) Messenger line taken to vessel's bow by SIR service launch.
(d) Mooring.

During calls, the assistance of a tug is compulsory to keep vessel clear of buoy in case of violent change of current.

Vessels required to anchor on arrival will anchor between 2.5 miles and 3 miles × 235° from Vridi Canal Entrance, or as otherwise instructed by Port Authority.

Ship's anchor without Pilot's assistance.

Vessels are advised to anchor only in the stated area due to the existence of submarine pipelines in other areas.

With the exception of the anchoring required under control of the Pilot at the MBM berth, anchoring is forbidden in any other area outside the stated area.

LOADING/DISCHARGING: *Notice:* The Notice of Readiness must be addressed to SIR.

Connection: General: The tanker's port side derrick (S.W.L. 10 tonnes at SBM and 8 tonnes at MBM) must be rigged before mooring is completed.

During connection and disconnection of hoses, the assistance of the vessel's crew is necessary, in particular to operate winches and derrick.

During the vessel's call at the Terminal, a SIR Agent will act as Loading Master, with the assistance of a SIR crew, and will remain in VHF contact with the refinery and the launch service.

Permanent access on board the tanker must be provided (ladder or gangway).

MBM: Connection at the Multiple Buoy Terminal is carried out with 2 strings of underwater hoses, 60 m. long (180 ft.) × 12 in. nominal diameter, ending with a valve and a flange (150 ASA series). SIR cannot provide any reduction pieces.

SBM: Connection at the swivel buoy is carried out with 2 hose strings, 35 m. long (120 ft.) × 16 in. nominal diameter, ending with a valve and a flange (150 ASA series). SIR cannot provide any reduction pieces.

Pumping: General: Tank inspections, ullage reports, sampling before and after loading or discharging are carried out in the presence of the Loading Master, representing SIR and any other Agent commissioned to survey loading or discharging.

When loading, the officer on duty will inform SIR Agent 20 minutes before completion to allow pumping to be stopped in due time.

The vessel's Master is fully responsible for valve operation on board and for security.

Masters are warned of the serious consequences of closing or partially closing valves against the oil flow from the Terminal. Should damage to the Terminal's loading equipment result from such malpractice, costs of all direct and consequential damage shall be for vessel's account.

When discharging, operations can only start after SIR's agreement has been radioed to Loading Master who informs the officer-in-charge. Loading may start only after the Safety Check List has been fully covered and approved jointly by vessel and Loading Master acting as SIR Agent. This Check List must be dated and signed by both parties before operations may start.

MBM: Vessel must receive and segregate on arrival SIR line displacement of about 2,000 cu.m. of LCO (Light Cycle Oil) or Fuel Oil 180 CST and pump it back on completion of discharging/loading.

After discharging/loading, the vessel can be required to put water in hoses.

Loading: Heavy fuel is loaded at a rate of 800 cu.m./hr. – 1,200 cu.m./hr., according to the nature and temperature of the product.

Discharging: Heavy fuel and crude oil are discharged so that pressure at the vessel's manifold does not exceed 10 bars which corresponds to:

1,500 – 2,500 cu.m./hr. for heavy fuel or
2,500 – 3,500 cu.m./hr. for crude oil.

The vessel is requested to maintain discharging pressure at the manifold at about 10 bar without dropping under 7 bar. Any drop under a 7 bar pressure will be reported and be the subject of a letter of reservation on any possible demurrage.

SBM: Crude oil will be discharged so that pressure at vessel's manifold will not be higher than 10 bar, approximately 8,000 cu.m./hr.

The vessel is requested to maintain a discharging pressure of 10 bar, without dropping under 7 bar. Any drop under 7 bar in discharging pressure will be the subject of a letter of reservation on possible demurrage.

After discharging, the vessel can be required to put water in the hoses.

BALLAST: *Deballasting:* Port Bouet Terminals have no ballast reception or slop disposal facilities, and therefore vessels arriving in ballast must ensure that the ballast is clean and suitable for pumping directly to the sea. Vessels arriving with ballast unsuitable for pumping to the sea will be rejected for loading, or will be required to keep on board that portion of their ballast unsuitable for discharge to the sea, and SIR will not entertain any claim for delay and/or deadfreight so caused.

Pollution: The Master is responsible for ensuring that no petroleum is discharged or spilled from his ship into the waters of the Terminal. Drip pans shall be in place at all times under all manifold connections and all overside deck scupper pipes or openings on the loading (and/or transfer) decks, shall be securely closed and oiltight.

Any vessel causing pollution of the waters of the Terminal or sighting such pollution shall immediately inform the SIR representative.

In the event that any ship should discharge or spill any dirty ballast, petroleum, contaminated water, bilge water or petroleum waste in the waters of the Terminal, SIR shall have the right (but without prejudice to any other rights it may have) to take any action which in its opinion is necessary to clean up or remove any contamination or pollution resulting from discharge or spill.

The vessel will be responsible for all payments, cost and expenses made or incurred by SIR in cleaning up or removing any such contamination or pollution, as well as all charges and losses of any kind whatsoever in respect to time lost whilst cargo operations at the Terminal involving the vessel in question, and all other vessels and operations are stopped.

MEDICAL: There are 3 hospitals (Treichville University Hospital, Cocody University Hospital and Yopougon University Hospital, locally referred to as "CHU de Treichville", "CHU de Cocody" and "CHU de Yopougon"), many private clinics, general practitioners, specialists, surgeons and dentists available.

In case of emergency, SIR may provide transportation, but takes no responsibility whatsoever.

FRESH WATER/FUEL: Bunkers and drinkable water are available at Port Bouet Terminals.

Bunkering and drinkable water supply are carried out by a small tanker of 4,200 tonnes d.w.t.

Supply varies according to certain conditions (Vessel to moor upon arrival, vessel to anchor and await instructions or vessel to bunker before or after loading/unloading).

Notice must be given before vessel's arrival time and Master must contact his shipping Agent.

AIRPORT: Felix Houphouet Boigny International Airport is located 10 km. from the centre of Abidjan and the Port. Many daily flights to Africa and Europe and many weekly flights to the U.S.A.

REPAIRS: Abidjan has sufficient naval works to carry out repairs on board (Contact Agent for details).

TIME: Local time is GMT.

CURRENCY: The legal tender is the CFA Franc. 1 FF (French Franc) = 100 F.CFA.

GENERAL: *Provisions:* There is a variety of ship chandlers in Abidjan, but the distance to the Port Bouet Terminals makes supply difficult.

SIR will under no circumstances take orders or carry supplies.

Publications: French charts issued by the Marine Hydrographic Department No. 5853, 6126, 6127.

French Nautical Instructions, Volume V, Series C, Africa West Coast.

Book of Lights and Fog Signals, Series C.

Ferry to Abidjan: There is no regular ferry link between the Port Bouet Terminals and the Port of Abidjan. SIR boats and launches cannot be used by tanker's crew.

Territorial Waters: The sovereignty of the Republic of Cote d'Ivoire extends to 12 miles from the lowest sea water mark along coast.

SAFETY: *General:* SIR is firmly committed to a policy of maximum safety in all areas of its operations, and demands compliance whithin the Terminal limits.

Safety requirements, as a minimum, are those specified in the International Guide for Oil and Terminals (ISGOTT).

Prior to any loading/unloading operations, the Master's agreement to cooperate and enforce all the safety requirements set out in the Safety Check List is mandatory. In order to ensure compliance with these safety requirements, the SIR representative and one of the tanker's officers will, prior to loading operations and at periodic intervals, thereafter make a routine inspection to verify each item on the Safety Check List.

The Master will be fully responsible for security onboard during the call at the Oil Terminal.

The Master must:

Maintain on board sufficient crew to deal with an emergency.

It is essential that at all times there should be at least one member of the tanker's crew on duty on deck near or within sight of the manifold and another on the forecastle when the tanker moors to the SBM.

Ensure that hawsers are not subjected to undue stress.

Ensure that loading/unloading hoses are not subjected to undue wear or chopping which might deteriorate them.

Ensure that the vessel will not ride over the buoy.

Readiness to Move: No engine repairs will take place whilst at the MBM/SBM. The vessel's main engine and auxiliaries must remain ready with full power for immediate use.

Firefighting Measures: It is strictly prohibited to:

Smoke, use naked lights or tools causing sparks outside the security zones where normally allowed on a tanker.

Leave the anchors cockbill.

Make repairs or handle goods on deck.

Test the propellers.

Use equipment and tools not approved for use in a dangerous zone by a competent authority.

SIR reserves for itself the right to take any measure deemed useful in case of danger, and in particular to stop loading or discharging.

During loading or discharging:

(a) All hull valves when not in use (water circulation) must be closed and sealed.

(b) All scuppers must be plugged.

(c) Two fire hoses will be connected fore and aft, fire pumps must be kept under pressure.

(d) All doors and port holes facing loading deck will be kept closed.

(e) In case of a storm, the Loading Master may decide to stop loading/discharging if deemed necessary.

(f) In case of fire on board the moored vessel, Master must sound the alarm (at least 5 short siren calls at short intervals). Additionally, the Master must immediately inform Port Authority on VHF Channels 12 or 16.

He must use technical and human means to fight the fire and maintain his vessel's stability and security. He must take all measures to sail if required to do so.

WEATHER: *Seasons:* The long dry season is from December to April, the long rainy season from May to mid-July, the short dry season from mid-July to September and the short rainy season October to November.

Winds: As a rule, there are very few violent winds. Prevailing winds are S.W./N.E. (Force 2 to 4). Violent tropical storms may occur in April-May and October-November. The Harmattan, a dry wind from N.E., may blow from December to February.

Temperatures: Air temperature: Average maximum: 29.17°C. Average minimum: 23.5°C.

Water temperature (Surface down to 20 m.): Maximum 29°C. Minimum 17°C.

Rains: Annual average level = 2.0 m.

Tides: Semi-diurnal, uneven, from 0.4 m. to 1.3 m. (average level 0.7).

Swell: Swell is permanent from S.S.W., average amplitude 1.5 m., time period is 10 seconds. However, from May to July it may reach a 2 m. – 3 m. amplitude.

Currents: Mainly tide currents, they are influenced by coast and sea bottom as well as by the Vridi Canal, linking the ocean and the lagoon.

The two prevailing directions are 110° and 275°, mainly (due) East like the main Gulf of Guinea currents and under the influence of S.W. prevailing winds.

Current's average speed is 1 knot, but may reach 2 knots to 3 knots.

Visibility: Although generally good (8 – 12 miles), it may be reduced to 1 mile when the Harmattan blows (December to February).

Morning mists may lessen visibility during the same period (December to February).

During the rainy season, visibility is reduced according to rainfall.

SHIPMASTER'S REPORT: *The Sea Line Berth at Port Bouet near Abidjan.*

(a) Introduction: Vessel ordered to part discharge 21,000 tons of crude. With a max. draft of 48 ft. 6 in., this was the largest vessel to use these facilities; the previous largest being about 60,000 d.w.t. (1973).

(b) Approach from sea: Coast line is low with few distinguishing marks. Outline picked up at about 18 miles range (using Marconi Raymark), at about the same time as 100 fathom line was crossed. Coast is very steep-to with a pronounced rift in sea bed leading to canal entrance in Abidjan.

(c) Anchorage: Vessel anchored about 2 miles from sea line terminal at Port Bouet. The usual anchorage is to West of canal, which would permit a more suitable approach to the berth.

(d) Berth: The sea berth is situated about 1 mile S.S.E. of Port Bouet light. According to chart prepared by terminal authorities Societe Ivoirienne de Raffinage (SIR), the depths of water in the berth are 16 m. aft and 19 m. for'd, at chart datum. Members of the diving team and terminal representatives are of the opinion that there is greater than 1 m. more water than indicated; this is backed up by observed soundings of for'd depth of 21 m., with a rise of tide of 0.5 m.

Moorings consist of four 6 in. shore wires from buoys aft; 4 similar wires for'd, 2 from buoys, 2 from the sea bed; both anchors are used with about 8 or 9 shackles of cable on each.

Hoses are connected on port side, 2×12 in. leading to a 1×24 in.×5 km. sea line. Back pressure is limited to 7 kg./sq.cm. (about 100 lb./sq.in.). Berth is aligned to head into the prevailing Southwesterly wind. Unfortunately this places the vessel beam on to the current which is unpredictable in both magnitude and direction. After 9 years' experience at the berth, the diving team are unable to predict for a particular time if the current will run at all, or in what direction or at what strength. Current velocities of up to 2.5 knots are normal. If the current starts to run at this strength at an early stage of a berthing operation it is probable that the operation will have to be abandoned.

(e) Berthing: Approach to the berth is made on a heading of 145° in line with buoys A and B on SIR chart. During much of the approach the vessel is within 5 cables of the shore, but, with one exception, the depth of water is adequate.

When the vessel was between 1 and 2 ship's lengths from Buoy A, in Grid reference position 579.030 393.280 on SIR chart, the under keel clearance was 15 ft., for several minutes. There was a very low, barely discernable, swell running, but the approach to the berth runs with this swell directly abeam, causing the vessel to roll an estimated 5°; the effect of this was to give a min. bilge clearance of 10 ft.

Berthing operation is routine, with some shore labour assisting with wires. No carpenters' stoppers are provided for wires, but two each end can be made fast on to the storage drums of the winches.

(f) Discharging: Limiting back pressure maintained by two cargo pumps running at 1,200 r.p.m. Discharge rate achieved was 2,237 t.p.h., which is usual for this berth.

(g) Bunkering: Bunkers are available in the berth in amounts greater than 500 tons. As bunkers are taken via the same sea line as cargo is discharged, the operation is somewhat clumsy and time consuming: crude in the sea line is displaced by fuel oil; the hose is shifted to bunker connection; bunkers are taken; the hose is re-connected to cargo manifold; the fuel oil in the sea line is displaced by crude oil. This sequence of operations took a total of eight hours. If a total discharge was planned, it might be advisable to take bunkers in the middle of the discharge, in order to obviate the need to use stripping pumps to displace the fuel oil in the sea line, amounting to some 1,200 tons.

Notice: *Information for the attention of the Masters of tankers mooring at the S.I.R. sea-line of Port Bouet:*

The conditions at this sea-line necessitate the presence on board of the following personnel during operations of mooring and connection of the hoses.

1 Superintendent who combines the duties of Mooring Master, Loading Master and chief diver.

2 Divers who also assist in the mooring and the connecting operations.

2 Seamen for the refinery's launch.

2 Assistants for the mooring and connecting operations.

These personnel will be present until pumping starts. We would be glad if you would provide meals for them during this period (from 8 to 12 hours normally).

Usually the Superintendent and the refinery's representative eat in the officers' mess and the rest in the crew's mess.

Once pumping has started the following personnel stay on board. The Superintendent; the refinery's representative; 2 seamen; 1 assistant.

We would be grateful if you can provide cabins and meals in the officers' mess for the Superintendent and refinery's representative and sleeping quarters and meals for the 3 other persons until the tanker's departure.

The refinery's launch, the "Sirius", helps during the mooring and connecting operations and serves as a liaison launch between the tanker and the refinery. Would you reserve a mooring berth on the starboard side of the tanker with pilot's ladder for access aboard? The mooring ropes are provided by the refinery and should be reserved for the launch "Sirius". The Agent's launch or any launch other than the "Sirius" should moor forward of this berth and should be provided with its own pilot's ladder.

We thank you in advance for your kind cooperation in this matter and wish you a satisfactory stay on the sea-line.

Signed: General Manager, Societe Ivoirienne de Raffinage.

SHIPMASTER'S REPORT: September 1995.

The following telex was received by the Master.

Quote:

Customs Formalities:

In order to enjoy your call and avoid problems with Customs Authorities, be instructed as follows: Make one (1) list with at least four (4) copies of each list: Crew List – Ports of Call – Passengers – Stowaways – Animals – Narcotics – Firearms and Ammunition – Dangerous Goods – Crew Effects Declaration – Stores List – Bonded Stores.

Regarding Stores and Bonded Stores List, you should declare everything correctly. Pay special attention to following items: Spirits, beers, soft drinks, cigarettes, TV and video cassettes, lub oil in bulk and in drums, No. of drums, paints, thinner, varnish, extra ropes, freon bottles, gas bottles, all purpose... chemical products.

Be careful not to make any misdeclaration or wrong declaration, as this will be subject to fine. Therefore, for paints you should take the following layout: Declare used paints as well as full drums and specify. Full drums will be according to the quantity (example 5 drums of 2 litres) and used paints according to the number of used drums.

Please confirm the above is received and understood.

Unquote.

OPERATOR: Ste. Ivoirienne de Raffinage, 01 B.P. 1269, Abidjan 01, Republique de Cote d'Ivoire. *Tel:* 27-01-60, 27-04-27. *Telex:* 42399 Dirsir, 43317 Sir, 43352 Sirlog, 43442 Sirfin. *FAX:* 27-17-98, 27-32-17.

SAN PEDRO: 04.44 N. 06.38 W. (See Plan)

LOCATION: The Port of San Pedro is located at the old mouth of the river bearing the same name. The river has been diverted and now comes into the sea to the East of the hill on which a light is located.

DOCUMENTS:

3 copies Crew List.
3 copies List of Ports of Call.
1 copy Passenger List.
1 copy Declaration of Arms and Ammunition.
3 copies Kroo List.
1 copy Health Declaration.
6 copies of Manifest.
2 copies Bills of Lading.
3 copies List of Hazardous Cargo, disembarking or in transit.

APPROACHES: *In Clear Weather:* The first recognisable Port characteristics are:

1. The lighthouse to the N.E. of the Port on a hill (Lat. 4° 44' 55" N., Long. 6° 36' 00" W.) – which is a four-sided pylon 26.8 m. high on the top of which is a square metal shelter with horizontal red and white stripes and on its middle part on the Southern side is a white sphere. The height of the light is 160.3 m.

2. Hertzien Relays: Cylindrical telecommunications tower, grey in colour and 59.3 m. high. It is located 1,100 m. – 268° from the light of the Eastern Jetty on a hill dominating the Port. Its height in relation to sea level, is 127 m. At the top of it is a metal aerial mast.

In Misty Weather: There is an aeronautical radio beacon (Lat. 4° 46' 12" N., Long. 6° 38' 58" W.) operating during the day from 0730 hrs. to 1830 hrs. and at night on request (frequency 330 A1 call sign "SAP".). The request for night operation must be made to ASECNA at Abidjan.

PILOTAGE: Pilotage is compulsory for entering and leaving and for moving within the pilotage limits, defined by a circle of 4 miles radius centred on the base of the Western Jetty (Pointe Quiquerez).

All vessels wishing to enter the pilotage area of the Port must send at least 24 hours prior to arrival, a telegram or a telex stating ETA, overall length, draft, nature and tonnage of goods to be loaded or unloaded.

The telegram or telex should be sent for the attention of the Port Commandant, or otherwise to the Consignee.

The pilot boat is a cutter which has a black hull and white superstructures marked "Pilote San Pedro". The usual summoning signals for the Pilot are also supported by 2 long and 1 short (G) audible signals on the siren.

Pilotage is available day and night for leaving the port and for movements at the quay. Berthing at the buoys only possible during daylight hours. Departures are announced at the daily port conference.

Pilot service not available 24th & 31st December (1800 – 0800 hrs.).

Three hours before sailing, the ship's Agent must confirm or modify the time for sailing as is expected.

The vessel must confirm again its departure 1 hour before sailing (by VHF or by any other means if the vessel does not have VHF).

RESTRICTIONS: Tides impose no restriction. However vessels drawing 34 ft. (the authorised maximum) operate during HW to facilitate their movements.

MAX. SIZE:

Berth	*Max. LOA* (m.)	*Max. Draft* (m.)
Oil Berth	90	5.5
Berth No. 1	155	10.5
Berth No. 2	200	10.5
Berth No. 3	190	10.2
Berth No. 4	195	10.5
Berth No. 5	140	10.5
Berth No. 6	150	8.5
South Quay	150	8.5
West Quay	586	10.5

RADIO: Vessels anchored can communicate with the Port Captaincy on VHF (Channel 16 and 12 with permanent watch). There is permanent radiotelephone watch on 2182 kHz, as well as communication by light signals.

TUGS: One tug of 1,300 h.p.

BERTHING: The port protection structures comprise of a Western breakwater 265 m. long and a breakwater to the East of 145 m. length. Access is by means of a 120 m. wide channel dredged to 12.50 m. The entrance passage is 200 m. wide. A heading of 291.5° leads to the port.

The channel gives access to a manoeuvring basin of 400 m. diameter dredged to 11.8 m. depth.

South Quay: Length 155 m., depth 9 m.
West Quay: Length 181 m., depth 11 m. and 405 m., depth 12 m.
Service Quay: Length 109 m., depth 4 m.

There are 5 loading points at buoys for loading timber: 2 to the North of the Western Quay, and 3 to the North of the Eastern Breakwater, which can take vessels with a maximum length up to 140 m. at 3 buoys and 200 m. at 2 buoys. Depth 11 m.

Cement Handling Berth: Length 200 m. Vessels berth against dolphins and secure to buoys fore and aft. Depth of water 11 m.

There is also inside the Port a small tanker berth for vessels not exceeding 100 m. on the Eastern Breakwater. The areas located to the North and East of these berths are used for storing timber.

Also see "Max. Size".

STEVEDORES: Work around the clock.

MEDICAL: There is a hospital with limited facilities at San Pedro. For serious cases, patients are taken by medical plane to Abidjan (which is 1 hour's flight away).

EQUIPMENT: No quay cranes, cargo handled by ships gear.

One mobile crane, capacity 60 tons. One 30 ton "Challenger" for handling containers. Lighters of 200 ton and 300 ton capacity.

FRESH WATER: Available at the quays, rate 30 t.p.h. Also available at the buoys by barge, capacity 300 tons, rate 25 t.p.h.

FUEL: Available alongside at the quays by road tanker.

CONSULS: France.

REPAIRS: There are several workshops for effecting small repairs. The Port Authority also undertakes repairs, contact Harbour Master.

T.S.M. workshop: Welding, painting, engine maintenance, etc. Tel. 71-16-65.

CUSTOMS ALLOWANCES: 200 cigarettes and 1 bottle of spirits.

AIRPORT: Daily air link with Abidjan

TIME: GMT.

HOLIDAYS: *Public:* December 7th, (Independence Day); May 1st, (May Day).

Legal Holidays: The following legal holidays are considered public holidays with pay unless they fall on a Sunday:

January 1st; End of Muslim's Lent (Ramadan); November 1st, All Saints' Day; Ascension Day; Assumption; Easter Monday; Whit Monday; December 25th.

It should also be noted that when December 7th and May 1st fall on a Sunday the following day is considered a public holiday. The same when December 7th falls on a Tuesday or Friday, the preceeding or following day is considered holiday.

POLICE/AMBULANCE/FIRE: Police Tel: 71-13-43; Ambulance Tel: 71-10-25; Hospital Tel: 71-11-21 and 71-16-01.

GARBAGE DISPOSAL: There is no special collection service. Vessel's garbage is retained on board in plastic bags and removed by lorry hired by agent.

WASTE OIL DISPOSAL: No local service available. In case of absolute necessity, contact ship's agent.

SEAMAN'S CLUBS: None.

CURRENCY: C.F.A. Franc (CFA Fr).

GENERAL: *Tides & Currents:* The maximum tidal range is 1.5 m. (about half an hour ahead of the tidal times at Abidjan).

The slight S.W'ly current at the Port entrance of 0.5 to 1 knot is negligible inside the Port.

There is a slight tidal rip at the South Quay. But in the whole port and particularly at the South Quay, there is a considerable undertow between the months of June and September.

Weather: The tropical climate with tradewinds is rather mild (maximum 30°C, minimum 20°C, the absolute minimum being in January 15°C).

The rain seasons go from May to August; the region is irrigated by tornadoes from April to May and September to October. The average rate of rainfall reaches 1,600 mm./year.

Fresh Food: Only available in small quantities.

Roads: A tarmacadam road connects with Abidjan, distance 450 km.

Port Officials: The Port Captaincy, the pilotage and tug control are all in the Captaincy building which is a two storey structure, raised on a circular dias located at Pointe Quiquerez. The Customs are within the Port to the South of the Western Quay.

DEVELOPMENTS: In order to cater for increased exports and imports, the Port will have 4 anchorage points and 7 quay berths, one of which will be multi-purpose. This will involve extending the Port to the North and enlarging the Northern Dock, creating an Inner Port, extension of dredging, creation of open storage areas and construction of quays. In all, the plan, from a long term aspect, is to have 10 km. of quay, 500 hectares of port industrial area and 200 hectares of commercial areas.

AUTHORITY: Port Autonome de San Pedro, B.P.340, San Pedro, Ivory Coast. *Tel:* 71.20.80 or 71.14.79. *Telex:* 9910, 9911 Comport-CI. *Fax:* 712785. *Cables:* Comport San Pedro. *Contact:* Mr. Ogou Attemene, Director General. Camara Tiegbe Jean, Commercial/Operations Director. Captain Dakoury Gnagrah, Harbour Master (VHF Channel 16 or 2182 kHz). Tel: 71-16-65.

AGENT: Socopao Cote d'Ivoire, B.P. 370, San Pedro, Ivory Coast. Tel: 711133, 711363. Telex: 99104 Freight CI. Fax: 711567.

Jamaica

KINGSTON: 17.59 N. 76.50 W. (See Plan)

PORT LIMITS: The area of the sea to the Northward of the Palisadoes extending from Harbour Head to Port Royal and a straight line from Port Royal to the jetty at Small Point.

Charts: General Chart of Jamaica No. 446. Kingston Harbour No. 454.

DOCUMENTS:

For Customs:

2 Crew Declarations.
Clearance from the Last Port of Call.
1 Ship's Register, i.e. Ship's Information.
2 Stores Lists.
2 Dangerous Cargo Lists.
International Certificates of Vaccination for each Crew Member.

For Immigration

2 Passenger Lists.

For Agent

Bills of Lading covering all cargo on board.
2 Crew Lists.
2 Stores Lists.
5 Manifests.
Ship's Register, Safety Certificate and Load Line Certificate.

For Quarantine

1 Crew List.
Maritime Declaration of Health signed by Master.
1 Derat Certificate.
International Certificates of Vaccination for Crew Members.

PILOTAGE: Pilotage is compulsory. A minimum of six (6) hours advance notice from the Master or Agent for the services of a Pilot. Pilots usually board the vessel two (2) miles S.E. of Plumb Point Lighthouse or East Middle Ground Buoy.

VHF contact with the Pilot Office is made through Channel 11.

ANCHORAGES: There are 5 anchorages namely A, B, C, D and E which are reserved. Reservation for the use of these anchorages should be made through the Harbour Master.

The 5 reserved anchorages are:

A. 210° Distant from R.C. Cathedral Dome 12.2 cables.
Position: Lat. 17° 57' 17" N., Long. 76° 57' 12" W.
B. 186.5° Distant from R.C. Cathedral Dome 10.9 cables.
Position: Lat. 17° 57' 14" N., Long. 76° 47' 12" W.
C. 162.5° Distant from R.C. Cathedral Dome 12.1 cables.
Position: Lat. 17° 57' 14" N., Long. 76° 46' 40" W.
D. 118.5° Distant from R.C. Cathedral Dome 28.4 cables.
Position: Lat. 17° 57' 00" N., Long. 76° 44' 30" W.
E. 124° Distant from R.C. Cathedral Dome 24.4 cables.
Position: Lat. 17° 57' 07" N., Long. 76° 45' 00" W.

In addition there is unlimited anchorage space available toward the Eastern end of the Harbour.

Entry – Day or Night.

RESTRICTIONS: Entry – day or night. Rise and fall of tide, average range 10 in., occasionally 16 in. Strength of current in harbour 1.5 knots (in some places). Main direction and average speed of prevailing winds E.S.E. 20 m.p.h. Months of max. rainfall (i) April/May, (ii) Sept., Oct. and Nov. Hurricane period June 15th – November 15th.

MAX. SIZE: Recommended max. draft into Port Royal 40 ft. for vessels of unlimited size. Main ship channel max. recommended draft of 36 ft. 6 in. and is 800 ft. wide at its narrowest point. Depth 39 ft. at MLW. Newport West has recommended draft of 32 ft. 6 in. with a turning basin of 1,500 ft. Esso Terminals has recommended max. draft of 34 ft. 6 in. Max. recommended draft of 32 ft. 6 in. to proceed Eastwards, from Esso Terminals, in harbour to anchorage or berths. Newport East has max. recommended draft of 27 ft. 6 in.

HEALTH: See "Documents".

Radio Pratique may be granted.

Crew not allowed to take fruit ashore.

Pratique Procedure: The Customs Officer who boards the vessel to check all documents will after he has placed excess tobacco and liquor under bond indicate to the Master when Pratique has been granted.

If a vessel obtains Pratique at Kingston, automatic Pratique granted to proceed to any other port in Jamaica.

RADIO: Cable Agents giving ETA, Draft, Passengers (if any), cash required. Call sign "KNRDO 6YI".

Tankers: ETA messages to state arrival time at Pilot Station, maximum draft on arrival, last port(s) of call, number of crew, date Derat Certificate expires, confirm crew possess valid vaccination certificates, cash, stores and laundry requirements, details of diseases if any and request Radio Pratique.

VHF: VHF Channel 16 – Kingston Radio. VHF Channel 11 – Pilotage.

TUGS: Available and compulsory for berthing and unberthing. Two tugs of 2,800 h.p. Tugs join incoming vessel near berth. In case of emergency tug joins vessel wherever requested by Master. Tugs on VHF Channel 16 (24 hours). Usually ship's lines used, but if tug's lines used there is no extra cost.

BERTHING: At the Public Wharves there are 11 existing berths and their specifications are as follows:

Berth No.	*Length*	*Depth*	*Max. Draft*
No. 1	525 ft.	25 ft.	22 ft. 6 in.
No. 2	600 ft.	30 ft.	27 ft. 6 in.
No. 3	600 ft.	33 ft.	30 ft. 6 in.
No. 4	600 ft.	34 ft.	31 ft. 6 in.
No. 5	600 ft.	33 ft.	30 ft. 6 in.
No. 6	600 ft.	32 ft.	29 ft. 6 in.
No. 7	600 ft.	33 ft.	30 ft. 6 in.
No. 8	600 ft.	31 ft.	28 ft. 6 in.
No. 9	600 ft.	34 ft.	31 ft. 6 in.
No. 10	600 ft.	39 ft.	36 ft. 6 in.
No. 11	600 ft.	39 ft.	36 ft. 6 in.

In the immediate vicinity of these berths the clear turning is 1,500 ft.; elsewhere there is adequate swinging room for the largest vessel. At Berths 1 – 8 there are the following:

4,725 ft. of berth frontage 3,247,000 sq. ft. of open storage
467,000 sq. ft. transit shed 67,000 sq. ft. of cold storage

Tractors, cranes and forklifts are used to move cargo from ship's side.

Ro/Ro facilities are located at Berth No. 1, where there is an 80 ft. concrete ramp. There is a floating barge/ramp at Berth No. 8. Full container facilities are available at Berths 9, 10 and 11; and in addition there are approx. 50 acres of terminal area with storage space for 5,000 containers and a Container Freight Station of 45,000 sq. ft.

There are no specialised berths on the public wharves for handling bulk cargo. However, when necessary, consignees make their own discharging and storage arrangements.

Dangerous Cargo: 1. Vessels wishing to transit any Jamaican Port with dangerous cargo/goods on board are required through the Master or Agent to apply to the Harbour Master for permission to make such a transit.

The application should be made not less than 48 hours before the vessel's ETA and must include:

(a) The I.M.O. number assigned to the cargo as per I.M.O. Dangerous Goods Code;
(b) The volume of the cargo;
(c) The port for which the cargo is destined.

2. Vessels loading dangerous cargo for intended discharge in a Jamaican port must before loading such cargo apply to the Harbour Master for permission to go alongside for the purpose of discharging same. The application must include:

(a) The I.M.O. number assigned to the cargo as per I.M.O. Dangerous Goods Code;
(b) The volume of the cargo;
(c) The nature of the cargo and storage;
(d) The name of the intended port of discharge.

Equipment: Five portainer cranes (40 ton), 9 Karrilifts, Heavy forklifts (max. 32 ton), for handling empty containers and several tractors and chassis.

The portainer gantry cranes are capable of moving 20 ft., 35 ft. and 40 ft. containers at a rate of 30 an hour; the 9 Karrilifts can handle similar size containers.

Developments: Rails on Berth 11 have been extended by 200 ft. Adjacent to this extension it is proposed to erect a 100 ft. berthing platform for handling Ro/Ro vessels.

BULK HANDLING FACILITIES: *National Gypsum & Quarries Limited:* National Gypsum and Quarries Limited operates a wharf at Harbour Head for the export of gypsum rock only.

There are 3 steel and concrete dolphins and 1 wooden dolphin. The concrete and steel dolphins are the principal docking structures. They are 161 ft. apart. The min. draft currently available is 26 ft., but this could be increased at short notice to 29 ft. Vessels of 440 ft. length and 64 ft. beam are normally loaded. Bulk rock loading facilities capable of loading crushed gypsum at an average rate of 700 t.p.h. – 1000 t.p.h. are available.

Wherry Wharf Limited: Wherry Wharf Limited maintains a pier at Newport East for loading and unloading lumber, corn and animal feed ingredients.

The wharf is 200 ft. long with a depth of 29 ft. It has a free-flow access road and a 200 ft.×60 ft. apron.

Shell Company (W.I.) Limited: Shell Company (W.I.) Limited has bulk cargo facilities at Harbour Head used primarily by Jamaica Flour Mills.

STEVEDORES: To enable Agent order gangs important to obtain accurate ETA from vessels. Time: 1200 hrs. the working day before vessel arrives. Shifts: 0700 – 1400 hrs., 1400 – 2100 hrs., 2100 - 0500 hrs. Saturdays, Sundays and public holidays attract premium rates.

Stevedores normally rig and open, but crew open MacGregor hatches. All necessary gear supplied by stevedores except rain tents and special lifts requiring special gear, which vessel must supply. Average unloading rate 10/15 tons per gang hour for general cargo.

MEDICAL: Agents to be advised before arrival of vessel if emergency medical attention required. Hospital facilities available. If inoculation required Master to advise Agents prior arrival of vessel.

TANKERS: No specific requirements applicable to oil carriers. Reducers available to fit 12 in. – 4 in. load/discharge lines. Slop (residue) discharge facilities available taking maximum 500 gallons. Gas free certificate required for tankers laying alongside Public Wharves in Kingston.

Texaco Caribbean Inc.: Texaco Caribbean Incorporated operates 1 wharf which is situated at Harbour Head and is known as the Eastern Terminal. The jetty is 325 ft. long and will accommodate vessels up to 18,000 tons (gross). Max. draft at low tide is 28 ft. Berth is used for receival of bulk petroleum products and for bunkering vessels with gas oil, marine diesel and fuel oil. No packaged goods are handled at this berth. Fresh water supplies are available.

Esso Marketing Terminal: Max. length of vessels 600 ft. Max. safe draft –31 ft. Draft forward restricted to 28 ft. only with vessel moored portside alongside. Both day and night berthing possible. Fresh water is available. Bunkers available here are heavy fuel oil (Bunker C), marine diesel, marine gas oil and a wide range of intermediate bunkers.

Esso Refinery Marine Dock: Max. length of vessels 743 ft. Max. safe draft 36 ft. 6 in. Fresh water is available and day and night berthing possible. The Esso Refinery Pier is used for receiving crude petroleum from tankers as feed stock for the Refinery through a 20 in. under sea pipeline. A wide range of finished products is also delivered into tankers for export as well as for discharge at other ports on the island.

Esso Refinery Dry Cargo Dock: Max. length of vessels – 400 ft. (Freighters) and 475 ft. (Tankers). Drafts alongside vary from 25 ft. - 27 ft. Draft forward restricted to 17 ft. 6 in. with vessel moored portside alongside only. Fresh water is available. This dock is used for loading and unloading packaged and drummed lubricating oil on freighters for export to various countries throughout Central America and the Caribbean.

Other materials exported here are lubricating oil in bulk and various grades of asphalt in drums.

DENSITY: Average density 1026.
FRESH WATER: Fresh water available at berth. Average delivery rate 20 t.p.h.
FUEL: All grades (viscosities) available. At least 2 days' notice required. *Bunkering Depot – Newport West:* The Shell Company (W.I.) operates bunkering facilities at Newport West.

A hydrant system with outlets at each berth provides a complete range of bunkers.

Esso bunkering facilities are available at Newport West. Pipe-lines run from the nearby Esso Kingston Terminal to the berth at Newport West providing Heavy Fuel Oil and intermediate ranges of bunkers. Marine Gas Oil is also available Monday through Friday by tank truck.

Texaco Caribbean Incorporated also has facilities for bunkering vessels with gas oil, marine diesel and fuel oil.
FIRE PRECAUTIONS: Fire boat available equipped for fighting harbour fires 24 hours per day. Also equipped fire engines situated within easy reach of docks available 24 hours a day.
CONSULS: Consuls not available on Saturdays and Sundays, except by special request.

	Kingston *Tel. No.*
High Commissions	
British Information Service	69050
Canadian High Commissioner	61500
Trinidad and Tobago High Commissioner	65739, 65730
Embassies	
American Embassy	63645
Argentine Embassy	65588
Chinese Embassy	70860
Cuban Embassy	74362-3
Dominican Embassy	66676
French Chancery Embassy	79811
German Embassy	66728
Israeli Embassy	68768
Mexican Embassy	66891
Netherlands Embassy	69026-8
Panamanian Embassy	70042
Russian Embassy	41048
Venezuelan Embassy	65519-0
Consular Offices	
Argentine Consulate	77616
Austrian Consulate General	25623
Belgium and Luxembourg Consulate	64295
Colombian Consulate General	42004
Costa Rican Consulate General	67285
Danish Consulate	36737
Finnish Consul	23006, 22519
German Embassy – Consular Section	66728
Greek Consul	23685
Guatemalan Consul	42966
Haitian Consulate General	77595
Honduran Consul Ad Honorem	67285
Italian Consul	66981
Jordanian Consulate	82661
Lebanon Consulate	76465
Liberian Consul	27169
Mexican Consulate	66891
Nicaraguan Consul	22856
Norwegian Consul	39811-4
Peruvian Consul	76565
Salvadorian Consul	25780
Spanish Consul	22856
Swedish Consulate	36737
Swiss Consulate General	23347

REPAIRS: Minor deck and engine repairs possible by 2 firms. Pre-advice of 3 days recommended.
DRY DOCKS: Dry dock facilities available for small vessels only.
SURVEYORS: Lloyd's Register, A.B.S., B.V., G.L., Det Norske Veritas.
GANGWAY/DECK WATCHMEN: Services of watchmen are recommended.
OPENING/CLOSING HATCHES: Hatches covered by pontoon and hatch boards opened and closed by stevedores. MacGregor hatches handled by crew.
CERTIFICATES:
Safety Certificate.
Ship's Register.
Load Line Certificate.
Test Certificates for derricks and cargo handling gear.
CUSTOMS ALLOWANCES: Tobacco, 2 oz. tobacco in any form (2 oz. pipe tobacco or 40 cigarettes) per day. Wine and/or spirits, 6 oz. or 0.5 reputed pint of spirit per day. 1 pint wine allowed Master and Officers only or as stated in the Articles under flag they fly.
CARGO GEAR: The usual certificates covering testing and inspection of all gear and equipment as required under Docks Regulation 1934 of Great Britain or by International Labour Organisation, will be acceptable.
REPATRIATION: Facilities available for effecting crew changes.
AIRPORT: Norman Manley International Airport – approximately 10 miles – served by many airlines.
TIME: Local time is GMT minus 5 hours.
HOLIDAYS: Days when work is performed only on overtime rate: New Year's Day; Ash Wednesday; Easter Monday; National Heroes Day (third Monday in October); Boxing Day. Days when ports closed, no work performed: Good Friday; National Labour Day (May 23rd); Independence (first Monday in August); Christmas Day.
POLICE/AMBULANCE/FIRE: Emergency tel. numbers: Police 119; Ambulance 110; Fire 110. Commissioner of Police 79858–0. Radio Control Room 81261–2. Fire Brigade 22121. Fire Boat Station 27018.
TELEPHONES: Arrangements exist for placing telephones on board. The Jamaica Telephone Company to be advised by Agents 2/3 days before vessel arrives.
SERVICES: Compass adjusting services available. Although routine repairs to radar, radios and other electrical equipment are possible, technical services generally limited.
SHORE LEAVE: Crew members allowed on shore after vessel cleared by Immigration. Vessels arriving from some countries require special Government approval before shore leave permitted, but no restrictions are normally placed on vessels arriving from Western European, American or African countries.
IDENTIFICATION CARDS: No Identification Cards required.
REGULATIONS: Dogs are not permitted to land unless they have undergone quarantine or are imported from United Kingdom.
GARBAGE DISPOSAL: Only available to naval vessels.
WASTE OIL DISPOSAL: Only available to vessels using Petrojam Refinery.
SEAMAN'S CLUBS: None.
CURRENCY: Jamaican Dollar (JA$).
DELAYS: Normally there are no delays to vessels calling at the port.
GENERAL: *Ship's Chandlers:* 3 ship's chandlers available.
Communications: Regular air services daily to London, New York and other European and American cities, and is therefore in excellent position to offer emergency facilities to vessels requiring urgent spares, crew replacements, etc. Vessels can anchor at Port Royal close by airport.
Customs: Vessels are searched thoroughly by Customs for *firearms* and contraband. Masters are held responsible by Customs for security of bonded stores, etc. Masters are therefore alerted to check security arrangements and to keep watch on bond whilst in port.
AUTHORITY: Port Authority of Jamaica, Harbours Department, P.O.Box 116, Newport East, Kingston, Jamaica. *Tel:* (809) 922-6766, 967-1043. *Telex:* 2386 Portops Jamaica. *FAX:* (809) 922-6419. *Contact:* Captain H.C. De Lisser, Vice-President – Harbours and Port Services. Captain E.R. Myers, Harbour Master. Captain G. Mendes, Manager – Marine Services.

MONTEGO BAY: 18.30 N. 77.56 W. (See Plan)

DOCUMENTS, PILOTAGE and all general information: Refer to "Kingston".
ANCHORAGE: There is one anchorage in Montego Bay which must be booked through the Harbour Master in Kingston. Depth 5 to 6 fathoms.
RESTRICTIONS: Entry – day and night. Rise and fall of tide, average range 10 in. No current in harbour. Main direction and speed of prevailing wind, N.E., 10 m.p.h. Subject in January-February to occasional 2 – 3 day spells of squalls with driving rain known as Northers which makes lying at the anchorage uncomfortable, but there is virtually no swell alongside the berths.
MAX. SIZE: Unlimited water at anchorage. The 1,500 ft. long 400 ft. wide straight channel has a minimum depth of 34 ft. MSL, as does the 1,600 ft. diameter turning basin.
CLEARANCE: Customs, Health, Immigration Offices are maintained at the port.
BERTHING:
Montego Freeport is a new port developed with 3 berths operated by Montego Wharves Limited.

Berth No. 2 – 600 ft. long, 34 ft. minimum depth alongside, 7.5 ft. above water line.

Berth No. 3 – 588 ft. long, 25 ft. minimum depth alongside, 6.5 ft. above water line.

Berth No. 4 – 387 ft. long, 25 ft. minimum depth alongside, 6.5 ft. above water line.

These berths are reached through a 1,500 ft. long straight channel 400 ft. wide dredged to a min. depth of 34 ft. There is 23,000 sq.ft. warehouse and an 87,000 cu.ft. cold storage facility adjacent to berth 2 with a wharf apron of 75 ft. Berths 3 and 4 are designed for Roll-on/Roll-off with 13 acres of bonded storage space adjacent. Berth 4 is used principally by cruise ships and is connected to a 5 acre duty free shopping complex by a 200 ft. long tree-lined walkway.

Montego Freeport Limited intends to build Berth No. 1 in the next few years which will be a continuation of Berth No. 2, creating 1,300 ft. of continuous berth face with ample space behind for expansion. The cold storage is planning on doubling its capacity.
STEVEDORES: The Port is open 24 hours of the day. To enable Agents to order gangs, it is important to obtain accurate ETA from vessels. Time: 1200 hrs. the day before the vessel arrives. Shifts: 0700 – 1400 hrs., 1400 – 2100 hrs. Mondays to Fridays with option to extend the first shift to 1700 hrs. at single time; 0700 – 1200 hrs. Saturdays, thereafter at overtime. Details can be obtained from Montego Stevedoring Limited, P.O. Box 303, Montego Bay.
MEDICAL: All facilities at St. James's Hospital. Advise Agent in advance.
TANKERS: No specific requirements applicable to oil carriers. Reducers available to fit 12 in. – 4 in. load/discharge lines. Slop (residue) discharge facilities available taking maximum 500 gallons. One tanker berth, Berth No. 2 minimum depth alongside 34 ft. MSL. Gas-Free Certificate required for tankers laying alongside.
CONSULS: No consular offices in Montego Bay. See "Kingston".
REPAIRS: There are no dry dock facilities, but minor repairs can be effected alongside.
DENSITY: Average density 1026.
FRESH WATER: Can be supplied from the dock. 30 t.p.h.
FUEL: All grades (viscosities) available. At least 4 days notice required.
FIRE PRECAUTIONS: Equipped fire engines situated within easy reach of docks 24 hours per day.

SECURITY: Under the jurisdiction of the Montego Bay Police and also 24-hour patrols in the port area by private security guards.
AIRPORT: 5 miles from port. Donald Sangster International Airport served by regular airlines.
POLICE/AMBULANCE/FIRE: Police, Tel: 119; Ambulance, Tel: 110; Fire, Tel: 110.
IDENTIFICATION CARDS: Recommended for crew.
AUTHORITY: *Operator:* Montego Freeport Limited, P.O.Box 303, Montego Bay, Jamaica. *Telex:* 5329 Moport.

OCHO RIOS: 18.25 N. 77.07 W.

REYNOLDS PIER

GENERAL: Reynolds Jamaica Mines act as Agents for all cargo vessels using the pier at Ocho Rios. *(a)* Tel. Ocho Rios 603. *(b)* Cable address is "Mines" Ocho Rios, Jamaica. *(c)* 72 hour and 24 hour ETA requested. *(d)* Radio telephone 2738 kHz open when calls expected at 0700, 1100, and 1500 hrs. local zone time.
PILOTAGE: Compulsory. Pilot meets vessel 1 mile N.E. of Sea Buoy. On rare occasions when a local Pilot is not available expenses and detention must be paid for an outside Pilot.
MAX. SIZE: Max. LOA 850 ft. Depth alongside pier 38 ft. Recommended draft 35 ft.
FRESH WATER: 50 c. per ton supplied from pipelines on the pier.
FUEL: Bunker "C" Fuel Oil – daily prevailing rate Kingston Harbour. Diesel Fuel Oil – per oil company suppliers Kingston.
REGULATIONS: (1) If any Master of any vessel or any other person shall throw or deposit, or permit to be thrown or deposited *(a)* any rubbish, earth, mud, stone, sand, ballast or other similar matter; or *(b)* any oil or mixture containing oil or oil residues, in any channel leading into or out of any harbour, or in any place within the limits of any harbour other than such place therein as shall be set apart for such purpose he shall be liable to a penalty not exceeding one thousand dollars.

(2) No siren or steam whistle shall be sounded on any vessel in any harbour except for the purpose of making signals as laid down in the regulations for preventing collisions at sea, provided that any vessel may sound one warning blast of not more than five seconds duration before sailing. Any person committing a breach of the rules is liable for a penalty not exceeding 1,000 Dollars.
CARGOES: The Reynolds Jamaica Mines Pier is occupied about twice each week by ore carriers for 8 to 12 hours and about twice a month by sugar ships for indefinite periods.
SHIPMASTER'S REPORT: October 1991.
Type of Vessel: Bulk Carrier.
Length of Stay: 5 days.
Cargo Loaded: 22,531 tonnes of bauxite.
Max. Sailing Draft: 32 ft. 06 in. (S.W.)
General: The bauxite mines are running under the control of the government (Bauxite & Alumina Trading Co., Jamaica Ltd.) which re-opened the bauxite installations at Ocho Rios after 7 years of inactivity.
Pilotage: Compulsory.
Tugs: None available.
Berthing: Vessel berthed with pilot's assistance only, at ex-Reynolds Pier which is 850 ft. in length and is equipped with 2 mechanical loaders. Clearance height from water line to top of hatch coamings is 48 ft. Depth alongside 36 ft. (approx.). Attention must be paid to the loaders when berthing. Loaders are movable.

Two mooring buoys are positioned opposite the pier's ends. Two good ropes are made fast for assisting unberthing operations.
Deballasting: Only clean and segregated ballast can be pumped out as Ocho Rios is a tourist resort.
Cargo: Bauxite loaded in moist/wet condition as mined. Drying system was out or order. Loading rate normally 1,000 tonnes per hour (approx.), in our case loading rate was 250 tonnes per hour with one loader. Working hours are around the clock.

Cargo loaded on board calculated by draft reading (draft survey) and quantities per hold estimated.
Delays: Can be expected when passenger ships occupy the bauxite pier.
Density: 1024 – 1025.
Fresh Water: Available.
Time: GMT minus 5 hours.
Communications: Bauxite Pier office on VHF Channel 16.
Clearance: Port authorities boarded on arrival, bond lockers sealed.
Repatriation: Can be arranged by agent.
Shore Leave: Allowed, but care must be taken at night time in lonely/dark streets.

CRUISE SHIP PIER

LOCATION: Lat. 18° 24' 26.4" N., Long. 77° 06' 44.3" W.
PILOTAGE: Compulsory.
ANCHORAGE: Anchorage can be arranged depending on length and draft of vessel.
MAX. SIZE: Max. LOA 650 ft., depth alongside pier is 35 ft. (MLW). Recommended draft for vessel 35 ft.
TUGS: Not available.
CLEARANCE: Customs, Health and Immigration Offices are maintained at Port.
BERTHING: Used principally by cruise ships.
FRESH WATER: Fresh water available.
SECURITY: 24-hour patrols in Port area by private security guards. There is also a Police Post in the Terminal Building.
IDENTIFICATION CARDS: Recommended for crew.
AUTHORITY: Port Authority of Jamaica, 15-17 Duke Street, Kingston, Jamaica. *Tel:* 92-20290/8. *Telex:* 2386 Portops Jamaica. *FAX:* 92-49437.

PORT ANTONIO: 18.11 N. 76.27 W. (See Plan)

SHIPMASTER'S REPORT: June 1983.

DOCUMENTS: See "Kingston".
PILOTAGE: Compulsory. 24 hours' notice to be given via Agent.

The Pilot boarded from a small outboard motorboat about 2 miles N.E. of Folly Point. There is a VHF but on this occasion it was not working. The Pilot identified himself by flashing the word 'Pilot' by light.

Ladder normally required on the starboard side on arrival and port side on departure.

The Pilot is extremely competent and experienced.
ANCHORAGES: No anchorage outside harbour due to depth of water.
MAX. SIZE: Banana Pier (Boundbrook Wharf): LOA 511 ft. 2 in., beam 70 ft., draft 25 ft.
HEALTH: Quarantine examination when alongside.
RADIO: Kingston Radio.
VHF: Pilot uses Channel 16 (not operational June 1983).
TUGS: None available or required.
BERTHING: *Boundbrook Wharf:* The entrance channel (0.65 miles long) is very narrow, all navigational lights were lit. Least depth 29.5 ft. Rise of tide, 1 ft. 4 in. When clear of the channel the ship is headed towards the South end of the wharf and the port anchor let go in such a position that, when the ship is alongside, 7 shackles of cable will have been veered. When approaching the wharf the cable is used to swing the ship.

A boat takes the headrope to a bollard on the South face of the wharf. When the ship has swung sufficiently the boat then takes the stern rope to a bollard on the North face.

The pier is only 300 ft. long, it may be necessary to use a pilot ladder for access to the vessel should the stern overhang the pier. Vessels can berth and unberth 24 hours a day.

In the summer months the winds are generally light and from the South but in the winter they are Northerly and strong with a consequent swell in the harbour and, in those conditions it is considered that berthing at Boundbrook wharf would be difficult.

When unberthing, moorings are singled in to one stern rope to the North face of the wharf. The ship is then moved, whilst still alongside, so that the North knuckle of the wharf is abreast the lower gangway platform, it is necessary to have a fender handy in this position. The anchor cable is then hove in swinging the ship's head off the wharf. At the same time a steady strain is maintained on the stern rope so that the ship pivots about the knuckle and the stern swings into the cut on the North side of the wharf. When nearly at right angles to the wharf the engine is moved ahead with the rudder to starboard thus swinging the stern clear of the knuckle, the stern rope is cast off and the anchor weighed so that the ship moves clear of the wharf and continues to swing to port so as to be heading more or less for the channel.

The Pilot disembarks in a position abeam of Folly Point with the ship's head North.
CRANES: None. The pier is fitted with portable conveyors for loading bananas through side doors. Ship's gear is not required for rigging conveyors.
SPECIALISED CARGO HANDLING FACILITIES: Boundbrook Wharf used solely for loading bananas. No facilities for Ro/Ro vessels. Forklifts available for handling of pallets of bananas. However, there is inadequate storage space for palletised cargo.
STEVEDORES: Adequate numbers for loading bananas.
MEDICAL: Doctor and hospital available.
DENSITY: 1025.
FRESH WATER: Available.
FUEL: Not available.
CONSULS: Nearest Consuls at Kingston.
REPAIRS: Small repairs can be undertaken.
DRY DOCKS: None.
SURVEYORS: Nearest Lloyd's Surveyor at Kingston.
AIRPORT: At Kingston.
GENERAL: *Provisions:* Small amounts of fresh provisions available. No groceries or meat available.
Laundry: No service available.
AUTHORITY: Port Authority of Jamaica.

PORT ESQUIVEL: 17.53 N. 77.08 W. (See Plan)

GENERAL: Vessels proceed through a dredged channel approximately 1.5 miles long with a minimum depth of 12.2 m. The wharf is situated in a basin at the inner end of the channel and can take vessels up to 198.12 m. long with a maximum draft of 11.58 m.
DOCUMENTS:
6 Crew Lists.
6 Passenger Lists.
Customs Documents:
4 Stores Lists.
Crew's Manifest of Declaration outside of Personal Effects.
4 Load Line Certificates.
4 Small Parcels Lists.
4 Customs Clearance from last port of call.
Fire Arms List.
Narcotics List.
List of live animals and meats on board vessel.
Health Documents:
International Certificate of Vaccination of all Crew members.
Maritime Declaration of Health (signed by Master).
Crew's Declaration of Health.
6 Manifests.
4 Bills of Lading.

Ship's Documents:

1 copy Ship's Particulars.
1 copy International Tonnage Certificate.
3 Stowage Plans of Cargo.
2 Deadweight Surveys (Bulk carriers only).
Charter Party and any other specific documents of instructions relating to the loading or discharging of cargo.

Also see "Shipmaster's Report".

PILOTAGE: Pilotage compulsory. Compulsory pilotage limit 2 miles to seaward of line drawn from Polink Point to Bare Bush Cay to Portland Cay to Portland Point. Cable advice 48 and 24 hours ahead of vessels ETA at Pilot Station must be sent to vessel's Agent at Kingston, Jamaica.

One pilot boat *Silver Spray,* launch equipped with ship-to-shore radio communication: (One General Electric VHF – FM 30-watt output multi-channel set).

VHF shore set manned 24 hours per day. Contact with Port or launch can be made on three international Channels – 16, 10, 11 and 12.

Also see "Shipmaster's Report".

ANCHORAGES: *(a)* Seaward to East of Pilot Station, depth in excess of 12.2 m. *(b)* Leeward of Pigeon Island – depth 12.2 m. min. *(c)* Eastward of entrance of main channel – depth 12.2 m.

RESTRICTIONS: Restriction of permissible draft to max. of 11.58 m. MSL.

MAX. SIZE: Max. permissible length 198.12 m. and draft 11.58 m.

HEALTH: Pratique procedure requires presentation of undermentioned health documents: *(a)* International Certificate of Vaccination of all crew members. *(b)* Maritime Declaration of Health. *(c)* Crew's Declaration of Health. In event any suspected communicable disease or fever on board, Master required to advise Agents in advance.

RADIO: JAMINTEL "KNRDO 6YI".

TUGS: No tugs. Pilot boat will be on standby during berthing of all vessels to assist in placing ship's lines on to pier if requested by the Pilot.

BERTHING: *Western Berth:* Bulk loading alumina – vessels max. length 198.12 m., breadth of 28.04 m., max. draft 11.58 m. Length of Bulk Wharf 198.12 m. Depth of water 12.2 m. MSL. Average tide 30.48 cm. Silo capacity: 72,800 tonnes (5 silos).

Minimum depth of water in Channel and/or approaches 12.2 m. MSL. Bulk alumina vessels and hydrate vessels given priority on Western Berth.

During loading of hydrate vessels, no break bulk cargo handled on Eastern berth or mini berth.

Eastern Berth: General Cargo – max. length of vessel 198.12 m., breadth 18.29 m., max. draft 11.58 m. Length of General Cargo Wharf 198.12 m. Depth of water 11.58 m. MSL. Average tide 30.48 cm.

Mini Berth: Situated on the S.W. shoreline, used to handle small bulk grain and other small cargoes. Depth of water 6.06 m.

Equipment available:

(a) Shiploader – Travelling Gantry Type – part of conveyor system for loading bulk alumina only.

Max. travel 126.49 m. – maximum outreach for loading purposes 14.63 m. Clearance height from wharf level 8.53 m. from water level 10.67 m. Rate of loading per hour = 1,000 metric tons.

(b) One Galion crane, one 660 P & H crane, one 790 P & H crane and one P & H 8115 crane. Forklift trucks. Launch service.

There is no extra charge for the use of shore equipment during overtime hours and will remain at a flat rate for all hours worked.

SPECIALISED CARGO HANDLING FACILITIES: Eastern and Western berths equipped to handle receival of bulk cargoes, e.g. grain, soya meal, soya beans, etc., by using shore crane with grabs, vessel discharging by grabs. Bulk liquids handled as shown under "Tankers". Additional berth on Southwestern shoreline now being used to handle small bulk grain, soya meal and soya bean carriers, and can be utilised for handling of Ro/Ro traffic and containerised cargo.

STEVEDORES: Cable advice to Agents in Kingston, Jamaica, 48 and 24 hours ahead of vessel's ETA at Pilot Station for arrangements to provide stevedore and dock labour. Also see "General – Working Hours".

MEDICAL: Agents to be advised 48 hours ahead of vessel's ETA Pilot Station of medical attention required, details of inoculations, vaccination/fever certificates, etc. Free ambulance service provided. Nearest hospital approximately 15 miles.

TANKERS: Both sides of pier equipped to handle receival and delivery of Bunker "C" oil, caustic liquor and molasses. Diameters of the load/discharge lines are:

Bunker C Oil	8 in. (20.32 cm.)
Caustic liquor	10 in. (25.40 cm.)
Molasses	12 in. (30.48 cm.)
Water	4 in. (10.16 cm.)

Max. permissible draft 11.58 m. below MSL.

Note: For vessels loading and discharging fuel oil and caustic/liquor max. length 198.12 m., breadth 28.04 m., max. draft 11.58 m.

Notice to Tankers: It is important for all vessels discharging fuel oil or caustic soda to strictly adhere to the following specific limits:

Fuel Oil: Maximum temperature 150°F, minimum 125°F, with maximum pressure of 100 psi to a minimum of 75 psi.

Caustic Soda: Maximum temperature 110°F, to a minimum of 90°F, with maximum pressure of 100 psi and a minimum of 60 psi.

The above specifications are for security purposes and for protection of pipelines, and official readings are those on charts on the dock.

Tank Capacities:

Oil Tanks (bbls.):

1	80,000
2	150,000
3*	100,000
Total	330,000

* Owned by Jamaica Public Service Company.

Caustic (tonnes):

1	10,000
2	10,000
2	10,000
Total	30,000

DENSITY: 1025 subject to slight variation during heavy rainfall.

FRESH WATER: Max. of 300 metric tons available. Delivery made from storage tank at a rate of 40 to 50 metric t.p.h.

FUEL: Bunker "C" fuel oil is available from dock. Application to be made to Shell Company (W.I.) Ltd. or Texaco Caribbean Inc., through ship's Agent for supply of bunkers. Pumping rate from truck is about 30 tonnes/hr.

Specification:

(i) API 9.0 min – 10.0 max.
(ii) Ash percent wt. 0.12 max.
(iii) Flash point pmcc 150°F. min.
(iv) Viscosity SSF at 122°F. 120 min. – 200 max.
(v) Pour point 60°F. max.
(vi) Vanadium ppm 475 max.

FIRE PRECAUTIONS: Strategically located fire hydrants throughout port and on pier. No special precautions apart from "No Smoking" rule. One fire truck located at Port Esquivel.

CONSULS: No consuls are available. Consular Offices are located in Kingston approximately 30 miles away.

REPAIRS: Limited repairs may be undertaken.

DRY DOCKS: None.

GANGWAY/DECK WATCHMEN: Service of watchman optional but not necessary. During time vessel is in port there is Customs guard on pier and strict security measures are carried out by port Security Force on personnel entering or leaving port compound which is surrounded by a chain-link security fence. The Customs guard prevents unauthorised boarding/disembarking of goods or persons 24 hours a day.

OPENING/CLOSING HATCHES: For bulk alumina vessels, opening and closing of hatches is done by crew members. For general cargo vessels, opening and closing of hatches may be done by crew members or on request to Agents, by stevedores.

SHIP CERTIFICATES:

Load Line Certificate.
Registration Certificate.

CUSTOMS ALLOWANCES: Tobacco: Each crew member including ship's officers, normally allowed by local customs authority 2 oz. of tobacco or 2 pk. of 20 or 25 cigarettes per day released from bond. Wine and/or Spirit: No limitations to use of wine on board. For spirits each crew member is allowed a part bottle per man.

CARGO GEAR: Local Agents provide necessary cargo gear. These are tested every 6 months in accordance with Factory Law and certificates issued for respective maximum lifting capacities.

REPATRIATION: Upon request, local Agents arrange crew changes and any necessary repatriation.

AIRPORT: Norman Manley International Airport approximately 40 miles away.

TIME: GMT minus 5 hours.

HOLIDAYS: New Year's Day (1st January); Ash Wednesday (in accordance with calendar); Good Friday (in accordance with calendar); Easter Monday (in accordance with calendar); Labour Day (23rd May); Independence Day (first Monday in August); National Heroes Day (third Monday in October); Christmas Day (25th December); Boxing Day (26th December). These holidays are sometimes subjected to change in accordance with Government Proclamations.

1. No work is carried out on Good Friday and Christmas Day.
2. Work on vessels loading bulk alumina and discharging Bunker C oil and caustic liquor is usually carried out on other public holidays.
3. For general cargo vessels work is optional on public holidays and only carried out on Master's request or in accordance with Terms of Charter Party, except on Good Friday and Christmas Day.

POLICE/AMBULANCE/FIRE: Old Harbour Constabulary Tel: 983-2255; Old Harbour Fire Brigade Tel: 983-2276. Port Esquivel also has its own fire brigade. An ambulance service is available for any crew member requiring medical attention. Several qualified doctors within a 6-mile radius of port. There is also a fire station.

TELEPHONES: Facilities do not exist for placing of telephones on board ship other than Magneto telephones. Telephones mounted on both sides of pier for easy access. International telephone services available and scale of rates is as per schedule listed in Jamaica Telephone Company's Directory.

SERVICES: Special services are limited. Arrangements can be made through vessel's Agents for the port or local contractors to undertake these jobs.

SHORE LEAVE: Crew members usually granted shore leave by Immigration Authority for period vessel remains in port. Immigration Authority can, however, withdraw permission of shore leave to any individual crew member who, in their opinion, may be a security risk.

IDENTIFICATION CARDS: Not necessary as the Passport will serve this purpose. Also see "Shipmaster's Report".

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Jamaican Dollar (JA$).

REGULATIONS: No unusual regulations.

DELAYS: The normal delays in berthing, loading or discharging or bunkering can be expected when the two berths are occupied.

GENERAL: *Working Hours:* Port normal working hours Monday-Friday 0800 – 1630 hrs. Overtime in excess of 8 hours per day or 40 hours per week, Monday-Friday at time and a half normal rate; Saturday between midnight and midnight time and a half normal rate, double time for hours worked on Sundays and three times for hours worked on public holidays, between midnight and midnight. Rail facilities exist on Western side of the pier. Distance from fender to centre of rail line 17 ft. 9 in. Ship chandlering or any other requirements may be acquired through local Agents.

Notice of Readiness: In addition, Alcan Jamaica Company will not be responsible for any delays vessel incurs in arriving at a safe berth due to unsafe wind conditions as stated by the Pilot Body.

Acceptance of Notice of Readiness is therefore dependent on the rules and regulations as laid down by the Jamaican Government and the Port Authority of Jamaica, which governs the Pilot Body.

For acceptance, vessel must first be cleared by Customs, Quarantine and Drug Enforcement Officers and brought to a safe berth by the Pilot Body.

SHIPMASTER'S REPORT: November 1986 (Updated 1996).
Pilot: The Pilot Station is off Buoy Nos. 1 and 2, however, Pilot normally boards off Port Esquivel Fairway Buoys. Only at the request of the ship's Master, will the Pilot board at Pilot Station, which might be the case when no proper charts are on board.

Entrance to Portland Bight, through the fairway, proved not to be difficult, as the leading line on Pigeon Island was very useful and all the buoys were in place (and all alight).

Made entrance, as well as departure, during daylight. The front leading light tower on Pigeon Island proper was visible, however, the rear leading light structure on the reef, North of Pigeon Island, was less discernible, due to the chimneys of the power plant on the main shore.

Formalities: Papers required:
Customs:
1 Clearance from Last Port.
1 Stores List.
1 Crew's Effects List.
1 Crew List.
Quarantine:
1 Maritime Declaration of Health. (Preferable on Jamaica Form, otherwise on International Form.)
1 Vaccination List.
1 Crew List.
1 Ship's Declaration on Meat and Livestock. (On Jamaica Form, otherwise on self made form).
Agents:
2 Crew Lists.
1 Stores List.
1 Crew's Personal Effects List.
1 Ship's Particulars.
1 International Tonnage Certificate.
Manifests and other available cargo papers.

Both the Agent and the Custom's Officer require the date of expiry of the International Load Line Certificate only. No copies of said Certificate were required.

No ship's papers (Certificates) were taken ashore for presentation to the Authorities.

All the Authorities were very friendly and with all the required papers ready upon arrival, clearance was obtained within 15 minutes of boarding.

A paper had to be signed that 3 meals a day (and also a midnight snack) had to be provided for 1 Custom's Officer. However, the Custom's Officer made no use of this.

Bonded stores are placed under seal.

Identification Papers: Not required to take passport ashore. Crew members wishing to go ashore will be given a shore pass at the gate. A copy of the ship's crew list is posted at the gate by the Agent. The shore pass will be collected on returning from shore to the vessel.

AUTHORITY: *(a)* Alcan Jamaica Company, P.O. Box 2, Old Harbour P.O. St.Catherine, Jamaica, West Indies. *Tel:* 983-2289, 983-2314/6. *Cables:* Esquivel, Kingston, Jamaica. *FAX:* 983-2215. *Contact:* F.J. Pearson, Port Operations Manager.

(b) Port Authority of Jamaica, 15-17 Duke Street, Kingston, Jamaica. *Tel:* 92-20290/8. Telex: 2386 Portops Jamaica. *FAX:* 92-49437.

PORT KAISER: 17.52 N. 77.37 W.

DOCUMENTS:
6 Crew Lists.
4 Stores Lists.
Declaration of Crew Personal Effects.
Customs Clearance from Last Port.
Maritime Declaration of Health.
Vaccination Certificates for all crew members.
Cargo Documents.

PILOTAGE: Compulsory. Pilot boards about 1 mile seaward of the jetty. International Code Pilot Signals used.

ANCHORAGE: Recommended 1.5 to 2 miles off end of finger pier from South to S.W.

MAX. SIZE: Tankers up to 40 ft. draft.

HEALTH: Pratique granted by Customs Officers who board on arrival, after Master has completed Maritime Declaration of Health, and Crew's Declaration of Health. All crew members require valid Vaccination Certificates. In event of suspected disease or fever on board Agent should be advised full particulars by radio before arrival.

RADIO: "KNRDO 6Y1."

TUGS: None available.

BERTHING: Tanker berth at the end of a finger pier. Pier head is adequately fendered and a holding off buoy is utilised if necessary because of swell. Vessels berth portside to the jetty. Both anchors used.

Finger pier is 610 ft. long. The berth is being dredged to 50 ft. depth.

TANKERS: Fuel and gas oil discharged, 8 in. hoses. No slop facilities.

DENSITY: 1025.

FRESH WATER: Not available.

FUEL: Not available.

CONSULS: Nearest at Kingston.

CUSTOMS ALLOWANCES: 25 cigarettes and part bottle spirits per day per man.

SHORE LEAVE: Allowed.

SHIPMASTER'S REPORT: October 1978.
Documents:
6 Crew Lists.
3 Store Lists.
2 Curio Lists.
1 Vaccination List.
1 Maritime Declaration of Health.
Load Line Certificate.
Derat Certificate.
Clearance from Last Port.
4 Notices of Readiness.

Pilotage: Pilot available and compulsory. Pilot station 1 mile S.W. of Pier.

Restrictions: Day and night berthing possible.

Max. Size: LOA, 650 ft. Beam 90 ft. Max. draft 36 ft.

Tugs: No tugs available. In an emergency nearest tugs at Kingston.

Berthing: Length of pier 700 ft. 1 shiploader, max. outreach 90 ft. and max. clearance under loader 46 ft. 2 chutes load 1 hatch (port and starboard). Loader movable along dock for 600 ft. Max. loading rate 1,100 short t.p.h. or 25,000 tons daily for bulk carriers. Loading carried out 24 hours a day.

Berth not very satisfactory in heavy swell and ship's side rails are very prone to damage when loaded as large fenders (tractor tyres doubled up) hang over main deck and damage rails. Stevedores refuse to accept this damage.

Vessel only broke 1 mooring rope. Shore gangway used, of light aluminium construction which must be tended throughout. A hazard to get ashore or onboard.

When strong Westerly current running and Easterly winds blowing, Pilot informed me that it sometimes takes up to 7 hours to berth ships. When very heavy seas running, it is best to leave berth and return when weather improves.

Medical: 2 hospitals at Mandeville but seamen usually sent to Nursing Home.

Tankers: Fuel oil, diesel oil, sodium sulphate, caustic soda and sulphuric acid handled at the tanker berth.

Density: 1025 – 1026.

Fresh Water: Not available.

Fuel: Not available.

Time: GMT minus 5 hours. Except during Daylight Saving Time GMT minus 4 hours.

Repatriation: Reliefs and repatriation can be arranged through Kingston which is about 87 miles away by road. Reliefs flying out through Miami all lost their luggage for a while as it was booked right through to Jamaica. Advisable to book luggage to Miami, collect and clear through Customs and then re-check it in. U.S. visa also required even for transit through U.S.A.

Current: Usually Westerly at 2.5 to 3 knots.

The current runs at right angles to the steel girder type berth on stilts and makes it difficult to get the stern alongside so a powerful tug would have been of great assistance.

Tidal Range: 1.5 ft.

Publications/Charts:
B.A. 260 Pedro Bank to the South Coast of Jamaica.
B.A. 258 Ports and Anchorages on the South Coast of Jamaica.
B.A. 446 Jamaica.
USA 26124 Portland Bight to Great Pedro Bluff (with plan of Port Kaiser).
NP 70 West Indies Pilot (N.W. Part) Vol. 1 with Supp. No. 4.

Working Hours: Office hours 0800 – 1600 but 24 hours when vessel in port.

Officials: Customs, Quarantine and Immigration Officials boarded on arrival. The Quarantine Official lives on board whilst vessel in port to ensure nothing is thrown into the sea.

Survey: Holds surveyed before loading for cleaniness and Certificate of Cleanliness issued. Draft survey taken before and after loading (6 ft. swell and rough seas at the time).

Laundry: Can be arranged but takes 2 – 3 days.

Provisions: Fresh provisions available from nearest country market at Mandaville. Market days – Wednesday, Friday and Saturday. Main stores can be ordered from Kingston but very expensive and trucking charge $150.

VHF: Channel 16 said to be monitored in Agents office at Port Kaiser, pilot boat and Dock Office Port Kaiser but not able to make contact when inward bound.

SHIPMASTER'S REPORT: August 1994.
Chart: B.A. Chart No. 258.

Vessel: 40,000 d.w.t., draft 8.50 m., LOA 176 m., beam 32 m. Single screw vessel with no bow thruster.

Cargo: 21,000 tonnes of caustic soda.

Tugs: No tug assistance available.

Weather: Heavy swell and wind and current of 1 knot – 3 knots can be expected when berthing.

Cargo Operations: Discharging of caustic soda is through 2×8 in. hoses leading to a 12 in. pipeline. No back pressure. Discharge rate about 1,500 tonnes/hr.

Berthing: On arrival, Agent advised vessel to anchor 1.5 miles S.W. of pier head. There were no difficulties, and holding ground was good.

On heaving anchor, vessel proceeds to 1 mile S.W. of pier head, where Pilot boards.

If vessel's first visit, recommend Master not to heave anchor until Pilot boards and berthing manoeuvres have been discussed with Pilot. Pilot normally skilled with good local knowledge.

Vessel was ordered to berth on West side of pier (610 ft.), port side alongside, head out where max. draft is 36 ft. (11.0 m.).

Vessel approached the pier head at an angle of 100° (course 060°) at dead slow ahead (about 2 knots) with both anchors on stand-by. Current normally against at 1 knot – 3 knots (sets West) as well as breeze from E.S.E.

When vessel's bow about 150 m. from pier head, starboard anchor is let go and the chain is kept moderately slack until 5 shackles in the water. When the 5 shackles are out, the vessel should be approximately 90° to the pier (heading 077°) and the bow at a distance of 50 m. off pier head. When the Officer on the forecastle can see the East side of the pier, port anchor is dropped to 1 shackle in the water and brake left open. The line boat (same as pilot boat) then takes 2 lines from port bow to the outer dolphin on the pier head.

As soon as these breast lines are fast, rudder hard-to-starboard and dead slow ahead is ordered. Port anchor still with open brake, start heaving on starboard anchor, and vessel will come slowly alongside. According to the Pilot, it can take several hours if the Westerly current is strong. The vessel turns on the breast lines (which become spring lines) and heaves on starboard anchor. Port anchor is only security if the lines brake (observed numerous pieces of broken mooring lines on the hooks/bollards along the pier). Make sure vessel uses good new lines (type atlas).

When the vessel has turned to 45° towards the pier, a stern line is sent ashore as fast as possible. It has to be of good length and of good strength (they only take one line at the time). When stern line fast, start heaving the vessel alongside, while still going dead slow ahead on the breast/spring lines. Send ashore additional stern lines as fast as possible. Due to the current, the engine has to be used ahead until the vessel is moored alongside. If the vessel has to go astern for the connection, this should not be done until the vessel is well moored alongside and then the lines slowly slacked when engine dead slow astern. When slacking the lines, vessel drifts out immediately, due to the current. When alongside, port anchor had 2 shackles in the water (at 10 o'clock) and starboard anchor 4 shackles in the water (1 o'clock). In normal conditions sufficient moorings are: Forward 4+2 (both anchors still down) and Aft 4+3 (no more hooks on the pier).

When very heavy seas running, it is best to leave berth and return when weather improves.

Unberthing: When due to unberth, the Pilot was not available, but ship allowed to sail without Pilot. There is no problem if the wind and current still push the vessel to the West, clear from the pier. The port anchor must be taken up prior to the vessel leaving the pier, and thus prior to any lines being let go. The port anchor should be heaved as much as possible. If not possible, vessel to single up to 2+2 (fore and aft) and move slowly ahead until port anchor is away. When port anchor away, engine 100% stand-by and let go all lines, heave on starboard anchor and go dead slow ahead. Vessel starts to drift very fast with the Westerly current/S.E. wind. If problem to heave anchor, vessel should not stop doing headway as it might drift aground West of the pier basin. In that case, headway should be kept, and if the anchor is not away, then it should be slowly dragged until vessel is clear from the shoals. As our winches are quite slow, we had to do that, without any damage to chain or anchor (soft bottom).

General: Berthing and unberthing should not be attempted if there are strong winds from N.W.-W.-S.W.

According to the Pilot, the current may then change as well and set East and thus the vessel, when berthing, might be turned by the wind and current, with her stern to East which will twist the anchor cables, and then the vessel may end up on the shoals S.E. of the pier head. According to the Pilot, this has happened and ships have also been forced to drag their twisted anchors out to deep water and then cut the cables.

Even if the weather is good (i.e. gentle breeze from E./S.E. and moderate swell), caution should be taken to approaching rain squalls which increase wind and current and, according to the Pilot, it can also bring sudden shear in wind and current. Also when it starts raining, according to the Pilot, the linesmen disappear inside the port building and refuse to come out until the rain stops???

When berthing, we noticed a rain squall approaching in our direction just when approaching the pier, so the Pilot advised that he wanted to go out to sea again until the squall had past, so we did.

Normal berthing time is 3 hours to 4 hours, but according to Pilot, it can also take up to 7 hours.

The Pilot was skilled and knew what he was doing.

Normally berthing/unberthing undertaken 24 hours a day.

Strongly recommend vessels not to berth without a Pilot (compulsory).

AUTHORITY: Port Authority of Jamaica.

PORT RHOADES, Discovery Bay: 18.29 N. 77.24 W.

(See Plan)

DOCUMENTS:
5 Crew Lists.
2 Stores Lists.
1 Customs Clearance from last port.
2 Declaration of Crew Personal Effects.
1 Maritime Declaration of Health (available on arrival).
Vaccination Certificates for all crew members.
1 Copy of each cargo document.

PILOTAGE: Compulsory. ETA's should be cabled to "Kaisbaux Discovery Bay", 48, 24, and 12 hours before arrival.

Pilot will board vessel on arrival 2 miles outside channel, if berth is available.

Pilot requires combination ladder on starboard side of vessel, 1.0 m. above water level.

ANCHORAGES: No designated anchorage. If berth is occupied, vessels will remain within a 3-mile area of the channel until berth is available. Docking instructions are given by VHF.

The area around the harbour to a depth of 60 m. is a marine reserve for study. Positively no anchoring on surrounding reefs.

RESTRICTIONS: Entry may be at any time of day or night throughout the year.

MAX. SIZE: Max. permissible length, 700 ft.
Max. permissible breadth, 92 ft. – 104 ft.
Max. permissible draft, 37 ft. 6 in.

PRATIQUE: Pratique inspection and clearance given on berthing. Notify "Kaisbaux, Discovery Bay" as soon as possible before arrival full details of any suspected disease or fever on board.

There is no Radio Pratique.

RADIO: Route all ETA's and cables via Kingston Radio or nearest radio station.

VHF: Channel 16, 24 hours a day. Channels 12, 13, 26 and 28 also available. Range 30 miles.

TUGS: None available. Pilot launch will assist in taking ship's lines during docking if required.

BERTHING: One finger pier, (Position 18° 28' 45" N., 77° 24' 20" W.) adequate fenders, used by bauxite ships and tankers alike.

Ships loading bauxite must dock with the top of the hatch covering of the first hold to be loaded not more than 35 ft. above sea level.

Bauxite loading rate 4,000 t.p.h.

All loading hatches to be opened for inspection if weather permits.

Gangway to be rigged ready for lowering immediately on berthing. safety net must be attached to the gangway.

Hawse pipes to be securely sealed as soon as berthing is completed. Draft reading and other ladders are to be kept hauled up at all times while the ship is berthed.

Rat guards to be installed on lines at all times when at berth. Washboards are to be installed over starboard wing tank outlets, so as not to discharge on pier.

STEVEDORES: All arrangements are made by Kaiser Bauxite Company for unloading/loading any general cargo.

MEDICAL: Medical facilities and hospital available in the vicinity.

TANKERS: Two fuel lines, hose 8 in. (pipeline 12 in.) diameter. Back pressure 150 lb. One gas oil line, hose 8 in. (pipelines 6 in.) diameter. Back pressure 150 lb.

Tankers use same berth as bauxite vessels. It may be necessary at times for tankers to wait on bauxite vessels loading, or arriving, and tankers may have to vacate the berth before completion of discharging to make way for bauxite vessels which have absolute priority.

DENSITY: 1025.

FRESH WATER: Available.

FUEL: Not available.

FIRE PRECAUTIONS: Usual non-smoking precautions with respect to tankers. Portable fire extinguisher available on pier.

CONSULS: Nearest Consuls are in Kingston, 80 miles distant.

DRY DOCKS: No facilities in Jamaica for other than the smaller types of vessel (e.g. tug).

GANGWAY/DECK WATCHMEN: To be provided by vessel.

OPENING/CLOSING HATCHES: To be done by ship's crew.

CERTIFICATES:
Load Line Certificate.
Registration Certificate.
Derat Exemption Certificate.

CUSTOMS ALLOWANCES: Tobacco: Each crew member, including officers, normal allowance 2 oz. tobacco or 2 packets of 20 cigarettes per day released from bond. Wine: no limitations on use of wine on board. Spirits: Officers only are allowed part bottle.

REPATRIATION: Can be arranged through ship's Agent.

AIRPORT: Montego Bay, 40 miles away; Kingston, 90 miles away.

Both are international airports, with several scheduled flights per day to U.S.A. and Europe.

TIME: GMT minus 5 hours.

TELEPHONES: No arrangements for ship-board connections.

IDENTIFICATION CARDS: Not required.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: Gift shops, church services, football matches, dances, mini-bus, postage facilities, lawn and table tennis and badminton available at Port Rhoades Employees Sports Club.

CURRENCY: Jamaican Dollar (JA$).

GENERAL: *Buoyage:* IALA system "B".

SHIPMASTER'S REPORT: March 1984.

SatCom has been used successfully in giving the 48, 24 and 12 hour ETAs.

Call on Channel 16 VHF when 20 miles off.

Pilot will board about 1.5 miles to the N.E. of the entrance. Some Pilots do not like to dock vessel at night and delays may be encountered.

If awaiting berth drifting 8 – 12 miles off to the N.N.E. seems to be the most satisfactory. There is about a 0.5 knot West drift depending on weather conditions.

This vessel has a 93.2 ft. beam and is loaded without difficulty but a close eye must be kept so as not to get a starboard list that will be very hard to correct.

When docking, the approach will be at right angles to the dock. At about 200 yards away the port anchor will be let go and 2 lines sent to the farthest inshore bollard at the head of the dock. The vessel will then be worked alongside using small kicks ahead until it is fast alongside, starboard side too. All vessels dock starboard side in a very sheltered berth. When fast alongside there will be 6 – 7 shackles out on the anchor. When making the approach have the 2 headlines married with a gantline and the pilot boat will have an easier time. Docking with strong offshore winds can be very difficult.

When departing the vessel heaves up on her anchor pulling herself in to the channel. Care must be taken not to speed so as to squat the vessel when going out loaded, especially in swells. There have been reports from other Masters of touching bottom in the channel and the divers in the local marine laboratory have confirmed anti-fouling paint on the reefs on the channel bottom.

Limited diving work can be arranged through Kaiser from the Marine Laboratory located in Discovery Bay.

Port officials are very friendly and helpful. Vessels bound for the States must keep a sharp watch for stowaways and smugglers.

AUTHORITY: *Operator:* Kaiser Bauxite Company, Discovery Bay, P.O., St. Ann, Jamaica. *Tel:* 973-2221/5, 973-2388. *Telex:* 7404. *Cables:* Kaisbaux. *FAX:* 973-2226. *Contact:* Leopold Cover, Shipping Supervisor. Carlyle Lynton, Plant Manager.

SALT RIVER, including Rocky Point: 17.50 N. 77.10 W.

DOCUMENTS: Health Certificate. Crew List. Manifest. Bills of Lading and other ship's papers for cargo shipped, prepared by Wisco Wharves Limited, a subsidiary of The West Indies Sugar Company Limited.
PILOTAGE: Latest 12 hours prior arrival off Pilot Station. Cable "Monymusk Lioneltown" giving name of vessel, ETA, date of arrival. Pilotage – optional, Barebush Cay; Compulsory, Pigeon Island; pilot boat at Salt River.
ANCHORAGE: Lat. 17° 49.58' N., Long. 77° 08.40' W.
RESTRICTIONS: No restrictions.
MAX. SIZE: Draft 30 ft.
HEALTH: Customs grant Pratique.
RADIO: Cable Agents via Kingston Radio/6YI.
TUGS: Not applicable.
BERTHING: No berthing facilities.
STEVEDORES: 48 hours notice prior arrival of vessel. Commodity bulk sugar. Loading rate approximately 1,800 tons per day.
MEDICAL: No advance notice required.
TANKERS: See "Shipmaster's Report".
FRESH WATER: Can be arranged if given sufficient notice.
FUEL: None available at port but can be arranged.
CONSULS: None.
REPAIRS: Not possible.
GANGWAY/DECK WATCHMEN: Customs guards.
OPENING/CLOSING HATCHES: Normally done by crew.
SHIP CERTIFICATES: Registered Tonnage Certificate on first call. Master's and Chief Engineer's Certificates of Competency, also Load Line Certificate.
CUSTOMS ALLOWANCES: Tobacco, determined by Customs. Wine and/or Spirit, determined by Customs.
REPATRIATION: Can be arranged.
AIRPORT: Palisadoes International approximately 50 miles away and served by regular airlines.
TIME: GMT minus 5 hours.
HOLIDAYS: New Year's Day; Ash Wednesday; Good Friday; Easter Monday; Labour Day (23rd May); National Heroes Day; Independence Day; Christmas Day (25th December); Boxing Day. Work can be arranged on all public holidays except Good Friday and Christmas Day.
POLICE/AMBULANCE/FIRE: Police Vere 233; Ambulance Vere 337; No port fire brigade.
TELEPHONES: Radio communication ship to wharf can be arranged.
SHORE LEAVE: Crew members are allowed ashore.
IDENTIFICATION CARDS: Not required.
DELAYS: Delays can be expected.

SHIPMASTER'S REPORT: August 1994.
Rocky Point: Lat. 17° 49' N., Long. 77° 08.5' W. (B.A.Charts No. 257 and 457).

Tanker of 40,000 d.w.t. loaded with 7,000 tonnes of caustic soda. Draft 7.0 m., LOA 176 m. and beam 32 m. Single screw, fixed propeller (rh), no bow thruster.

No tug assistance is available, and current runs at 1 knot – 2 knots, also wind and swell can be expected when berthing.

This port is situated in Portland Bight, close to Port Esquivel (Lat. 17° 53' N., Long. 77° 08' W.). The information listed on Port Esquivel regarding the approach from seaward to Pigeon Island is useful (Also see "Port Esquivel").

First contact regarding pilotage is made through Kingston Port Control on VHF Channel 11. Agent also gives information on Channel 16.

Pilot did not board at pilot station (Lat. 17° 42.2' N., Long. 77° 02.6' W.) as swell too heavy. Instead he boarded about 1 mile off the pier when vessel approached. As no berthing at night-time, there is no reason to enter Portland Bight by night, especially if no proper chart onboard. We anchored in late evening, 2.5 miles S.W. of the pilot station (good holding ground). We started to heave anchor at 0530 hrs. the next morning and were underway at 0550 hrs. Entrance to Portland Bight, through the fairway, proved not to be difficult. A moderate W'ly current (2 knots – 3 knots) setting vessel until passing Bare Bush Cay. All the buoys were in place according to the chart.

Vessel to berth port side alongside, head in. Length of pier approximately 600 ft. Max. draft 40 ft. (according to chart).

Berthing: On arrival, Agent instructed vessel on Channel 16 to anchor 2.5 miles N.W. of Pigeon Island and wait for berthing instructions (no good holding ground). Later, Agent reverted and informed us that pilot boat was broken, and that no Pilot could board until it had been repaired. We offered to send ship's rescue boat ashore to pick-up pilot. Unfortunately the Pilot had already left to go back to Kingston. At 1500 hrs. same day, Agent informed us that pilot boat repaired, but still no Pilot available. At 1730 hrs., Agent informed us that Pilot was on his way. At 1810 hrs., Pilot called from pilot boat situated 0.5 miles N.E. of the pier and instructed us to heave anchor and proceed towards the berth, as the pilot boat was not in good mechanical condition. We heaved anchor and proceeded dead slow ahead towards the pier with both anchors on stand-by. Westerly current pushed on stern and headway had to be kept constantly to stay on course. At 1840 hrs., pilot onboard 0.6 miles N.E. of the pier. Vessel proceeded North, at dead slow ahead until in line with the pier. Due to the Westerly current, the vessel had no steering at speed below 3 knots. Approached in line with pier, manoeuvring dead slow ahead/stop engine/dead slow astern, vice versa to stop headway and keep in line with pier. When bow passed outer pierhead, starboard anchor dropped one shackle in the water, vessel's headway decreased, but stern swings in towards pier. Wheel hard to port and half ahead kicked out the stern. When vessel's bow in line with Chicksan arms (1850 hrs.), 2 spring lines were sent ashore from port bow and connected to the inner pier bollard. These must be held tight to keep port quarter clear from pier (quite good fendering). When stern kicked out, with ahead manoeuvre, vessel moved fast ahead, so thereafter half astern full astern ordered to stop headway. But due to propeller, port quarter swings over towards the pier, so stop engine and make stern lines fast, thereafter hard to port and slow ahead to kick out port quarter, stop engine, vessel gently alongside. When all fast, starboard anchor heaved up without any problems (mud). As strong East winds during the night (2200 hrs. – 0400 hrs.), the vessel should be well moored in case wind veer to South (i.e. forward 3+2+2, aft 4+4+2).
Unberthing: No unberthing allowed at night-time as the wind increases during the night. Vessels should try to unberth as soon as possible after daybreak, as the wind normally increases again in the morning.

Vessel to let go all lines except the 2 short spring lines from the port bow. Wheel hard port and engine dead slow head on these lines, the bow will touch the dolphin, but there is no problem as fendering is good. Vessel swings out with stern in to the pier basin until 80° of the pier, then let go spring lines and slow astern. Vessel should then proceed astern while slowly swinging to port with her stern due to the propeller (when rh). When clear of the pier basin, vessel to go ahead with starboard rudder, when heading S.E., Pilot disembarked and vessel proceeded out of Portland Bight through the fairway without any problems.
NOTE: When we left the berth at 0620 hrs., while going dead slow ahead on spring lines, a sudden wind from N.E. increased and pushed the vessel towards the pier. When vessel was 45° to pier, one of the spring lines broke and decision was taken to let go the last spring line and go astern. As this particular vessel is designed (short and wide) she reacts very quickly to the propeller (especially when light) and swings very fast to port with her stern and thus astern manoeuvre had to be stopped as approaching shallow water. Instead we took advantage of the vessel's short turning radius, with the wheel hard to starboard and slow ahead, we turned the vessel inside the pier basin well off the pier and Salt Island Southern reefs. When vessel headed S.E. at a position 0.5 miles N.E. from the pier, the Pilot disembarked. For this type of manoeuvre, this vessel is very good.
General: There is no reason to enter Portland Bight by night as no berthing at night-time.

Berthing and unberthing should not be attempted if there is strong wind from E.-S.E.-S.-S.W. or W. Caution should be exercised when approaching, as rain squalls can cause increases and change in wind and current.

Good new lines, Atlas type, should be used as first spring lines. These are very important as they will hold in port bow and counteract the force created by the starboard anchor which swings vessel's stern towards the pier.

Try to arrange Pilot boarding not closer than 1.5 miles — 2.0 miles off the pier to enable manoeuvres to be discussed.

Berthing time is 1 hour – 2 hours (Pilot onboard to first line ashore was 10 minutes).

Pilot was quite skilled and had good local knowledge, although he did not really understand that the ship had limited power of manoeuvring. This must be monitored by the Master as everything happens very quickly and there is no time available to recharge vessel's starting air.

Adequate fendering (springy rubber type), but bad in some places.

Agent, Port Authorities and Surveyor very helpful. We discharged caustic soda through 1×10 in. Chicksan arm, leading into a 12 in. pipeline. Discharge rate about 1,500 tonnes/hr. No back pressure.

AUTHORITY: *Operator:* The West Indies Sugar Co. Ltd.
AGENT: The West Indies Sugar Company Limited, 5 Trevennion Park Road, P.O.Box 174, Kingston 5, Jamaica, W.I. Tel: 65927–8. Telex: 13. Cable address: Head Office: "Wisco Kingstonja". Home Office: "Monymusk Lioneltown".

SAVANNA LA MAR: 18.12 N. 78.09 W.

DOCUMENTS: Declaration of Health Certificate forms obtainable from Supercargo. 4 copies Crew List, Stores List. Manifest, Bills of Lading and other ship's papers for cargo shipped prepared by Sugar Shipping Limited, a subsidiary of The West Indies Sugar Company Limited.
PILOTAGE: Latest 12 hours prior arrival off Pilot Station. Cable "Wicaro Frome" giving name of vessel, ETA, date of arrival, cash required. Diesel powered 88 h.p. launch painted black hull, red deck, white wheelhouse. District – Compulsory and Optional.
ANCHORAGE: Lat. 18° 11.27' N., Long. 78° 08.20' W.

RESTRICTIONS: No night entry or sailing.
MAX. SIZE: Draft 19 ft.
HEALTH: Maritime Declaration of Health prepared by Master and lodged with Customs. MOH is notified of any suspected illness and action taken. Pratique automatic.
RADIO: Cable Agents via Kingston Radio 6YI.
TUGS: Not applicable.
STEVEDORES: No particular ETA advice required. Commodity, bulk sugar. Average loading rate 1,500 tons per day.
MEDICAL: No advance notice required. Hospital facilities available.
FRESH WATER: No facilities.
FUEL: No port facilities, but can be arranged.
CONSULS: None.
REPAIRS: Not possible.
GANGWAY/DECK WATCHMEN: Customs guards.
OPENING/CLOSING HATCHES: Normally done by crew.
SHIP CERTIFICATES: Registered Tonnage Certificate on first call. Master's and Chief Engineer's Certificates of Competency, also Load Line Certificate.
CUSTOMS ALLOWANCES: Tobacco, determined by Customs. Wine and/or Spirit, determined by Customs.
CARGO GEAR: No additional requirements. In use, grabs operated by ship's winches.
REPATRIATION: Can be arranged.
AIRPORT: Montego Bay International approximately 32 miles away and served by regular airlines.
TIME: GMT minus 5 hours.
HOLIDAYS: See "Kingston".
POLICE/AMBULANCE/FIRE: Police Savanna la Mar 621; Ambulance 533; Fire 666 and 540.
TELEPHONES: Radio communication ship to wharf can be arranged during day only.
SHORE LEAVE: Crew members are allowed ashore.
IDENTIFICATION CARDS: Not required.
DELAYS: Delays can be expected.
AUTHORITY: *Operator:* The West Indies Sugar Co. Ltd.

AGENT: The West Indies Sugar Company Limited, 5 Trevennion Park Road, P.O.Box 174, Kingston 5, Jamaica, W.I. Tel: 65927–8. Telex: 13. Cable address: Head Office: "Wisco Kingstonja". Home Office: "Wicaroo Frome".

NOTES

Please also advise Shipping Guides Ltd.

Japan

GENERAL (See Plan)

KANMON KAIKYO: Traffic Advisory Service/Reporting Procedures: (See Plan)

Traffic Advisory Service: Kanmon Kaikyo Traffic Advisory Service provides information and traffic control for vessels entering, leaving or navigating within the Kanmon Kaikyo area and its approaches.
Call: Kanmon MARTIS.
Location: Traffic Advisory Service Centre (33° 53.63' N., 130° 55.27'E.).
Telephone: 093-372-0099.
FAX: 093-381-4499.
Telex: 7123 28 KMTASC.
Telegraph: KANMON KAIKYO TASC TLX 7123 28.
Frequency: VHF Channels 16, 13, 14 and 22.
Hours: 24 hours.

Procedure: The following procedures apply to vessels of 3,000 g.r.t. or more, intending to navigate within the Kanmon Kaikyo area (1,000 g.r.t. if intending to navigate the Tobata Fairway).

(1) Advance Report:

(a) Vessels of 3,000 g.r.t. and over, intending to navigate within the Kanmon Radar Service Area should send, to the Centre, a report 3 hours before crossing the first reporting line. Vessels leaving a port or weighing anchor within the area, 3 hours before departure. Vessels of 1,000 g.r.t. and over, intending to enter or leave Seitetsu-Tobata Hakuchi through Tobata Fairway, should send report by 1200 hrs. of the previous day.

Additionally vessels over 300 g.r.t. entering or leaving the Wakamatsu or Okudokai Fairways should report to the Wakamatsu Port Control Office. Vessels over 3,000 g.r.t. may send this report through the Centre.

(b) Reports may be made by VHF through Moji MSA Station, in writing to Kanmon Kaikyo Traffic Advisory Service Centre, Matsubara 2 chome 10-11, Moji-ku, Kita-Kyushu-City, or by Telephone, Telex, Telegraph (see above). Any changes of more than 15 minutes, to previously notified times, should be reported immediately by those vessels over 1,000 g.r.t. intending to enter or leave Seitetsu-Tobata Hakuchi, through the Tobata Fairway, together with any other amendments. All other vessels should report changes of more than 15 minutes to estimated time of crossing first reporting line (or weighing anchor within the area), and any other changes as soon as possible. All reports of changes should be prefixed by the word "Amendment".

(c) The report should include the following information:

1. Name of addressee.
2. Name of vessel and g.r.t.
3. Call sign.
4. LOA.
5. Max. draft.
6. Description of dangerous cargoes and amounts (if any).
7. Port of departure.
8. Port of destination.
9. Name of position reporting line.
10. ETA and date of crossing (9).
11. Intended channel (fairway) to be navigated.
12. ETA channel (fairway) or ETD berth.
13. Scheduled anchorage (and ETD anchorage).
14. Estimated speed.
15. Means of communication with MSA.
16. Pilotage arrangements.
17. Name and address of message sender.
18. Remarks.

(2) All vessels should maintain a continuous listening watch on VHF Channel 16 within the Radar Service Area from 3 hours before crossing the first reporting line (or on leaving a berth), until they leave the area (vessels should listen on 500 kHz or 2182 kHz if Channel 16 is not available).

(3) All vessels are requested to report their position on crossing the first reporting line in the Radar Service Area (or on leaving a berth in the Kanmon Port area) stating:

(a) Name of vessel.
(b) Time of crossing reporting line (or time of departure from berth) (Japanese Standard Time).
(c) Identity of reporting line (MN, SS, etc.) (or code number of berth).

Reporting Points:

Name of Reporting Line	*Abbreviation*	*Description*
North of Mutsure Shima	MN	A line bearing 000°×6,930 m. from Mutsure Shima Lt. (33° 58.5' N., 130° 52.2' E.) thence 90° to Kurumi Se Lt. Bn. (34° 02.2' N., 130° 53.8' E.).
South of Aino Shima	AS	A line joining the South point of Aino Shima (33° 58.94' N., 130° 49.41' E.) with North point of Kata Shima (33° 57.96' N., 130° 50.88' E.).
South of Shira Su	SS	A line bearing 180° from Shira Su Lt. (33° 58.82' N., 130° 47.65' E.) to the shore.
North of Wakamatsu	WN	A line bearing 310° from Wakamatsu Dokai Entrance Breakwater Lt. (33° 56.28' N., 130° 51.18' E.) to the Kanmon Harbour limit (N.E. of Lt. Buoy No.6). A line joining the above light and the following points (all bearing and distance from the light) 159°×730 m.; 233°×1,680 m.; 223.25°×1,780 m.; 221.25°×1,630 m. and 152°×1,050 m., thence to the point bearing 087°×580 m. from the Sunatsu Breakwater Lt. (33° 53.42' N., 130° 53.78' E.).
South of Kanmon Fairway	KS	A line from Moji Saki Lt. (33° 57.54' N., 130° 57.93' E.), following the Southern limit of the Kanmon Fairway to a point 144.5°×1,185 m. from Kanenotsuru Misaki Lt. (33° 54.47' N., 130° 54.79' E.).
North of Kanmon Fairway	KN	A line from a point 219°×405 m. from Hiroyamasita Stream Signal Station (33° 57.89' N., 130° 57.83' E.) following the Northern limit of the Kanmon Fairway to a point 240.25°×365 m. from Daiba Hana Lt. (33° 56.77' N., 130° 52.56' E.).
North of Shin Moji	SN	A line from Takeno Hana (33° 54.13' N., 131° 00.50' E.) to a point 90°×2,150 m. from Shin Moji Hakuchi Breakwater Lt. (33° 52.20' N., 131° 00.75' E.).
East of Shin Moji	SE	A line from a point 90°×2,150 m. to a point 90°×8,150 m. from Shin Moji Hakuchi Breakwater Lt. (33° 52.20' N., 131° 00.75' E.).
South East of He Saki	HS	A line from a point 90°×8,150 m. from Shin Moji Hakuchi Breakwater Lt. to a point 215°×3,950 m. from Ryuo San Triangulation Point (33° 57.18' N., 131° 10.24' E.).
West of Onoda	OW	A line from a point 215°×3,950 m. to a point 240°×4,350 m. from Ryuo San Triangulation Point.
South of Chofu	CS	A line joining Manju Shima Lt. (33° 59.51' N., 131° 01.74' E.), and the Southern point of Kanju Shima (33° 59.43' N., 131° 00.65' E.).
North of Tanoura	TN	A line from He Saki Lt. (33° 57.36' N., 131° 01.52' E.) to a point 10.5°×820 m. from the light, thence to a point where a line 315.5° from the light intersects with the port limit, thence to a point where a line 67.5° from Moji Saki Lt. (33° 57.54' N., 130° 57.93' E.) intersects the port limit, thence to the Moji Saki Lt.

Information Broadcasts: On 1,651 kHz, every H + 00 to H + 15 and H + 30 to H + 45 (comprising information about transit of large and other vessels, weather warnings, meteorological information, fishing activities, alterations to navigational aids and construction works). Special broadcasts are also made in the event of a maritime accident or other restriction to navigation within the area. Navigational information may also be obtained by telephone (093-372-0099). Passage information is provided on VHF to those vessels who already have made a position report.

Radar Service Area: Covers the whole of Kanmon Kaikyo, including the Western and Eastern approaches, together with the area North and East of Mutsure Shima.

Radar Assistance: Available on request from the Traffic Advisory Centre as follows:

(1) Own vessel's position: Report vessel's approximate position to the Centre. Position of vessel will be given by bearing and distance from radar conspicuous objects within the area.

(2) Position of another vessel: Vessel should report own position and approximate bearing and distance of vessel for which information is requested. Information given comprises relative position, course and speed, and, if known name, tonnage and destination. If vessel is involved in construction work, details will be given.

(3) During periods of limited visibility, information on the relative positions of other vessels, their course and speed, is provided.

Warning Service: The Traffic Advisory Centre provides information on VHF to vessels which have previously submitted a position report, in the event of any of the following:

(1) To prevent collision: If there appears to be a danger of collision, vessels will receive the following details:
  (a) Approximate position.
  (b) Name, type, g.r.t. and destination of other vessel.
  (c) Estimated time and location of possible collision.

(2) To warn a vessel proceeding with incorrect course and/or speed.

(3) To warn a vessel approaching a dangerous area (shoal water, site of a recent accident, etc.).

Advice will also be provided from the Centre for those vessels anchoring in the area East of Mutsure Shima.

Restrictions: *Notice on Navigational Restrictions in Kanmon Passage under poor Visibility:* Under poor visibility, navigational restrictions in Kanmon Passage are brought into effect on and after June 21st 1992.

On navigating in Kanmon Passage, vessels are advised to keep watch on VHF Channel 16 and radio, etc., on which navigational information will be broadcast by "Kanmon Martis" and a coastal radio station, and to confirm navigational restrictions as mentioned below:

1. The area of restrictions:
   The whole area of Kanmon Passage. However, for the area or areas where the visibility is confirmed clear, restrictions will be partly released.
2. The vessels of restrictions:
   All vessels which intend to navigate in Kanmon Passage.

3. Contents of restrictions:

(a) First step – "Precaution against poor visibility", in case of visibility 1,000 m. or less.

When the visibility in Kanmon Passage being 1,000 m. or less, "Precaution against poor visibility" is to be issued.

Vessels which intend to navigate in the area are advised to navigate with great caution, and keep a sharp lookout.

(b) Second step – "Requisition to avoid entering the Passage", in case of visibility 500 m. or less.

When the visibility in Kanmon Passage being 500 m. or less, "Requisition to avoid entering the Passage" is to be issued.

Vessels, which intend to enter Kanmon Passage to transit the area, are required to avoid entering the Passage, and to proceed to a haven in the vicinity as soon as possible, and to wait until the restrictions are released.

Vessels under way in Kanmon Passage are required to navigate with great caution, or to wait in a haven outside the Passage, and to inform "Kanmon Martis" of relevant information, such as the vessel's name, location, etc.

4. Methods of notification:

Information of issue and cancellation of navigational restrictions mentioned above are notified by means of the following ways:

(a) Notice by "Kanmon Martis": VHF Channel 16, radio (1,651 kHz), * telephone service (093-381-3399) and * by light signal board.

(b) Notice by "Moji Sea Patrol Radio/JNR": F1B 518 kHz Navtex, * SSB 2, 182 kHz, and VHF Channel 16.

(c) Notice by Patrol Craft: Patrol craft are stationed in and around the area of Kanmon Passage.

* In Japanese only.

5. Inquiry on details of navigational restriction:

For details on navigational restrictions, contact MSA stations at the following number:

Moji Maritime Safety Office
093-321-0398
093-321-3215.
Kanmon Kaikyo Traffic Advisory Service Center (Kanmon Martis)
093-372-0099.

NOTE:

1. Kanmon Martis, when necessary, provides navigational information and gives navigational advice to individual vessels. Vessels equipped with VHF Channel 16 and/or conventional telephone are advised to keep the lines open.
2. While "Precaution against poor visibility" or "Requisition to avoid entering the Passage" are being issued, vessels are advised to take the necessary steps such as keeping sharp lookout, placing engine on stand-by, etc.
3. Vessels should, while underway, fly International Code Flags to indicate their destinations under the provisions of Port Regulations Law (otherwise they will be advised from patrol craft to do so).

The Passage through the Seto Inland Sea by Foreign Vessel: The Government of Japan has treated the Seto Inland Sea as "Internal Waters" for many years, and Article 2 of the Law on the Territorial Sea of Japan, which has been enacted and enforced in 1977, confirms such legal status of the Seto Inland Sea as the internal waters of Japan.

Under International Law, foreign vessels do not basically enjoy the right of innocent passage through internal waters, such as the Seto Inland Sea of Japan, which has been treated as "internal waters" for many years.

Therefore, the Government of Japan has basically taken a policy of advising foreign vessels not to navigate through the Seto Inland Sea, with the exception that destinations are in the Inland Sea Area, or where such navigation is deemed to be of emergent necessity due to storm and other emergency situations.

HEALTH: See "Late Reports".

POLLUTION: Effective 1975, the Marine Pollution Prevention Law requires any tanker of 150 tons gross and above which is loaded with an oil cargo to have materials for oil removal either on board, or aboard escort boats, or at a depot base. Depot bases are understood to have been established, and in this connection Owners, Time Charterers, or Masters are strongly recommended to contact their Agents at least 10 days prior to vessels' arrival Japan.

Pollution Reports by Radio:

1. Vessels navigating in Japanese coastal waters are requested to notify the Japan Maritime Safety Agency (JMSA), through the nearest coast radio station, in cases of discharge of oil, noxious liquids or other harmful substances in container/packaged form.

Reports should include the following details:

(a) Time, date and place of discharge.
(b) Type, quantity and condition of dispersion.
(c) Type, quantity and condition of the containers/packaging.
(d) Condition of wind and sea.
(e) Measures already taken to prevent maritime pollution.
(f) Name, type, g.r.t. and port of registry of vessel.
(g) Name or title and address of vessel's owner.
(h) Type and quantity of oil, etc., loaded on vessel.
(i) Type and quantity of containers/packages loaded on vessel.
(j) Type and quantity of materials carried on board for the prevention of marine pollution.
(k) Location and extent of damage to the vessel if this was the cause of discharge.

2. When a collision, grounding, engine failure or other maritime accident occurs, and results in the possibility of oil, noxious liquid substances or harmful substances discharging, the Master must notify the JMSA of the following:

(a) Items (f), (g), (h) and (j) of the preceding list.
(b) Time, date and place of the accident.
(c) Area likely to be affected by discharge, spillage, etc.
(d) Condition of wind and sea.
(e) Action to be taken to prevent marine pollution.
(f) Type and quantity of containers/packages loaded on the vessel (in the case of imminent discharge of harmful substances).

3. Vessels discovering dispersed oil slicks, etc., must report the fact to the JMSA without delay.

PILOTAGE: *Compulsory Pilot waters surrounding Japan:* Pilot compulsory ports, channels and straits:

I-A. Harbour: Vessels over 300 G/T. Hibikinada, Kawasaki, Kobe, Kokura, Moji, Naha, Sasebo, Shimonoseki, Tobata, Wakamatsu, Yawata, Yokohama, Yokosuka.

I-B. Harbour and Bay: Vessels over 10,000 G/T. Chiba, Funabashi, Kisarazu (Kimitsu), Tokyo and Tokyo Bay, Mizushima.

II. Channels and Straits: Vessels over 10,000 G/T. Kanmon Kaikyo (Strait), Uraga Suido (Channel), Akashi Kaikyo (Strait), Bisan Seto, Irago Suido, Kurushima Kaikyo (Strait). (Large vessels, oil tankers, liquefied gas tankers and vessels carrying dangerous cargo should arrange for watching-boats to guard their course until their safe navigation is confirmed even after they leave the traffic route.)

The Maritime Safety Agency has requested that all foreign flag vessels and vessels carrying dangerous cargo employ Pilots in order to maintain the safety of shipping traffic in the above-mentioned waters surrounding Japan.

The Agency has also requested that vessels take Pilots on board when they navigate the Yura Seto (Tomogashima Suido).

CREW JOINING:

Requirements of Travelling Documents to Japan for Crew/ Superintendent:

Crew Joining vessel

Max. Stay ashore	Travelling Document	Visa	Remarks
(1) Ordinary Case			
within 5 days	Seaman's Book or Passport	No	Special Landing Permit issued but valid for crew travelling direct to port where crew join ship.
over 5 days	Passport	Req'd	See names of Countries for which visa exempted
(2) New building			
within 30 days	Seaman's Book or Passport	No	See (1) Remarks
over 30 days	Passport	Req'd	See names of Countries for which visa exempted
(3) Purchase/Delivery			
Crew arrival before ownership changed within 10 days	Seaman's Book or Passport	No	Max. 10 days stay ashore permitted subject to Agents' submission of Sale of Contract and Export Licence. See (1) Remarks
Crew arrival before ownership changed over 10 days	Passport	Req'd	See names of Countries for which visa exempted
Crew joining ship before ownership changed	Passport	Req'd	See names of Countries for which visa exempted
Crew arrival after ownership changed		Same as (1)	Ordinary case
Superintendent *(4) All cases*			
	Passport	Req'd	See names of Countries for which visa exempted

Names of countries for which visa not required:

Within 30 days: New Zealand.

Within 90 days: Argentina, Bangladesh, Belgium, Canada, Chile, Colombia, Costa Rica, Cyprus, Denmark, Dominican Republic, El Salvador, Finland, France, Greece, Honduras, Iceland, Iran, Israel, Italy, Luxembourg, Malta, Netherlands, Norway, Pakistan, Peru, Portugal, San Marino, Singapore, Spain, Sweden, Tunisia, Turkey, Uruguay, Yugoslavia.

Within 180 days: Austria, Germany, Ireland, Mexico, Switzerland, United Kingdom.

Remarks: The above schedule is made out by a ship's agent on general understanding with Immigration Authorities. However, the above details are not expressly stated in the text of the law but based on Immigration Control Order Article 16 which reads:

Article 16. Permission for landing for Re-shipping.

1. The Immigration Inspector may, in case an alien crewman desires to pass through Japan in order to re-ship on board another vessel in another port of entry in Japan, upon application of the carrier operating the vessel on which the alien crewman has arrived, and in case the alien crewman desires in order to become a crewman of a vessel in Japan, to land from another vessel, etc. and pass through Japan, upon application of the carrier operating the vessel in Japan, permit the landing for re-shipping respectively.

2. In case the permission provided for in the preceding paragraph is given, the Immigration Inspector shall issue a permit for landing for re-shipping to the crewman concerned.

3. In case the permission provided for in paragraph 1, is given, the Immigration Inspector may impose upon the crewman such restrictions regarding period of stay in Japan, route to be followed in transit, and any others which he may deem necessary in accordance with Ministry of Justice Ordinance.

In view of the foregoing, the contents of the schedule is not absolute and may be altered. In order to ensure that crew members are permitted to land Japan to join ships, please send Agent information well in advance on personal data of crew member such as Full Name, Rating, Date of Birth, Passport or Seaman's Book Number together with Flight No. and Ship's ETA/calling port.

CURRENCY: Japanese Yen (J.P.Y.) J.P.Y. 105 = U.S.$1.00 (March 1996).

SAFETY: The following telex was received from Japan regarding safety regulations for LPG carriers at Japanese ports.

Quote:

The Receiving Terminal Clause (LPG Tankers).

In order to prevent marine pollution by oil and ensure safety in cargo operations, Owner, Master and Crew shall abide by international and/or national laws and regulations.

Especially at discharging port(s) in Japan, Owner, Master and Crew shall observe "Marine Pollution and Marine Disaster Prevention Law" and other relevant law(s).

Moreover, Owner, Master and Crew are strongly requested to observe and/or take actions in accordance with the clauses stipulated hereunder.

(a) Before arrival at the first discharging port, the vessel shall complete undermentioned operations:

1. The following pumps and lines shall be flushed and kept clean:
   Vessel's pumps: fire pump and G.S. pump
   The lines: bilge lines in engine room
   fire lines and G.S. lines.
2. Reliquefaction units shall be checked to see whether they are in good working condition.
3. Cargo handling equipment on board shall be tested in accordance with the instructions given by Charterer; especially, the pressure test of cargo and vapour lines shall be done with a pressure of more than 5 kg./sq.cm. Lubricating lines for cargo pumps (if equipped) and other lines connected with above mentioned lines shall be tested at working pressure prior to the vessel's arrival at the discharging port.
   Safety valves of cargo tanks and cargo lines shall be checked to see whether they are in good condition.
4. Upper deck shall be kept clean and free from oil.
5. The faces of manifolds for connecting with shore lines shall be kept clean.
6. Mooring winches, derricks, cargo control equipment and engine (main engine, generator, boiler, etc.) shall be checked to see whether they are in good working condition.
7. Vessel shall send the Charterer the result of the operations stipulated in this clause (from items (a)-1 to (a)-6) by radio in accordance with Charterer's instructions 3 days or more prior to ETA at the first discharging port.

(b) During berthing operation and while the vessel is alongside the pier, the vessel shall comply with the terminal safety regulations hereunder:

1. While the vessel is alongside the pier, the following work shall be prohibited:
   i. Transferring of bunkers.
   In a case of emergency, however, such work shall be done after obtaining permission from the terminal representatives by checking the work to be done.
   ii. The operations for which fire is used and those which are likely to cause fire.
   iii. The work which will make the vessel unable to move under its own power.
2. During cargo operation, necessary numbers of watchmen for ensuring safety shall be on deck, besides Officers on duty, so that they may watch the vessel and the adjacent areas to eliminate any type of accident.
3. While the vessel is in port, the boil off gas shall not be exhausted.
4. The pressure of the lubricant oil at the stern tube after seal shall be kept lower than that of sea water outside the vessel.
5. While the vessel is alongside the pier, gas detection shall be made at regular intervals in the following places:
   i. Around the valves of each tank dome.
   ii. Around the manifolds.
   iii. Around the compressor room.
   The Crew of the vessel shall be prepared for cargo leakage and/or gas leakage which might happen aboard the vessel.

(c) If there is any indication of cargo leakage and/or gas leakage during cargo operation, the vessel shall stop all pumping operations and notify the Terminal Representatives and/or Charterer's Supervisor(s) to that effect.

The vessel shall not resume cargo operation unless a thorough investigation is made, appropriate remedies are taken, and permission from the Terminal Representatives is obtained.

(d) When Charterer sends their Supervisor(s) to the vessel to check the vessel or to assist cargo handling operation in the case of necessity, Owner, Master and Crew shall agree to cooperate with him or them.

At all times, however, the full responsibility for cargo operation shall still lie with the vessel.

(e) Owner shall send the Safety Marine Supervisor(s) to the vessel to attend the vessel's cargo operation at all times and he or they shall also be requested to attend the meeting for securing safety which is held prior to commencement of cargo operation.

Unquote.

REPORT: 1984.

Providing information of an anchored vessel at time of the approach of a typhoon in Tokyo Bay.

The Regional Maritime Safety Headquarters and the relative authorities have issued a notice, the contents of which is summarised as follows:

In Tokyo Bay, there are 2 congested areas with anchoring vessels at the time of the approach of a typhoon and cases of dragging anchor and collisions will occur. We, therefore, will try to provide the following information concerning the situation of anchoring vessels when a typhoon approaches these areas of Tokyo Bay for the time being, make effective use of the anchorage and prevent accidents to anchoring vessels.

1. Office to provide information . . . Tokyo Wan Traffic Advisory Service Centre (Tokyo MARTIS or VTS Tokyo)

2. Time of commencing/ending information provision . . . The time when the recommendation of refuge is established/withdrawn by Captains of the Ports in Tokyo Bay.

3. Individual information . . . The number of anchoring vessels at 10 minutes to every hour will be informed in English and Japanese by VHF (Call by Channel 16, communicate with Channel 14 or 22) or telephone (Telephone Number: 0468-43-8622-8624) upon request of vessels.

Anchoring vessels in Tokyo Bay are requested to pay careful attention to the following subjects when stormy weather such as a typhoon is expected.

– Anchoring vessels are requested to keep watch continuously on VHF Channel 16.

– Vessels should keep the main engine on standby-by at all times.

SHIPMASTER'S REPORT: August 1978.

It is possible to have the latest changes in ETA relayed by VHF to Inland Sea Pilot stations, for:

1. Wadamisaki via Kobe Port Radio on Channel 16, call "Kobe-Port", or Osaka Port Radio on Channel 16, call "Osaka-Port".
2. Sekisaki via Oita Port Radio on Channel 16, call "Oita-Port".
3. Hesaki, via Shimonoseki Port Radio on Channel 16, call "Shimonoseki Port".

These stations are very co-operative and they immediately give the latest information concerning boarding-time and place, as well as requirements concerning the pilot ladder.

ABASHIRI: 44.01 N. 144.17 E. (See Plan)

LOCATION: Situated on the N.E. coast of Hokkaido Island on the Sea of Okhotsk.

PORT LIMITS: Circular centre is Lighthouse of Kakoutottei (Lat. 44° 01' 17" N., Long. 144° 17' 04" E.), with radius 2,100 m.

DOCUMENTS:

Ship's Register (and International Tonnage Certificate, if Register does not show gross and net tonnages).
Last Port Clearance.
6 copies Crew List, including Passport numbers.
3 copies Passenger List.
2 copies Stores List.
2 copies Declaration of Crew Baggage.

PILOTAGE: Not compulsory. Pilots are available from Kushiro with advance notice.

ANCHORAGES: (Quarantine Anchorage) Circle with 300 m. radius centred on Lat. 44° 01' 37" N., Long. 144° 18' 08" E.

RESTRICTIONS: Port entry is permissible at all times, but pilots are only available during daytime.

Draft limitation in the channel is 12.0 m.

MAX. SIZE: LOA 199 m., draft 12.0 m. and 30,000 d.w.t.

HEALTH: Radio Pratique is available. Ordinary quarantine inspection takes place at Quarantine Anchorage.

Also see "Late Reports".

RADIO: Vessels should use Nagasaki Radio. Working hours of the station are continuous throughout 24 hours. Inmarsat is becoming increasingly popular for direct communication between ship and Agent. All Agents offices are equipped with telex.

TUGS: 1×450 h.p., 1×550 h.p., 2×800 h.p., 1×1,600 h.p. and 1×2,000 h.p.

BERTHING:

Name of Berth	*Length* (m.)	*Depth* (m.)	*Capacity* (g.r.t.)
No. 1 Pier	181	5.5	2× 2,000
No. 2 Pier 1	100	5.5	1× 2,000
2	135	7.5	1× 5,000
No. 3 Pier 1	180	5.5	2× 2,000
2	130	7.5	1× 5,000
No. 4 Pier 1	185	10.0	1×15,000
2	240	12.0	1×30,000
No. 5 Pier	260	7.5	2× 5,000
Dolphin (Shinko)	153	8.0	1× 5,000

CRANES: No floating cranes.

STEVEDORES: Normal working hours 0800 – 1700. Labour available on Sundays and holidays when required.

Log gangs available.

MEDICAL: Full hospital facilities available without prior notice. Abashiri Chuo Hospital – Tel: (0152) 44-8611.

FRESH WATER: Available. Connections are 75 mm. Cost Y430/ton.

FUEL: Only domestic oil is locally available. Bonded oil available from Muroran or Hakodate with sufficient advance notice.

REPAIRS: Small repairs possible.

AIRPORT: Nearest airport is Memanbetu Airport. Flights to Chitose (Sapporo) Airport – 4 flights a day. Flights to Haneda (Tokyo) Airport – 4 flights a day. Flights to Kansai (Osaka) Airport – 1 flight a day. Flights to Nagoya Airport – 1 flight a day.
TIME: Plus 9 hours.
HOLIDAYS: New Year's Day (January 1st); Coming-of-Age Day (January 15th); National Foundation Day (February 12th); Vernal Equinox Day (March 21st); Greenery Day (April 29th); Constitution Day (May 3rd); Children's Day (May 5th); Marine Day (July 20th); Respect-for-the-Aged Day (September 15th); Autumnal Equinox Day (September 23rd); Health-Sports Day (October 10th); Culture Day (November 3rd); Labour Day (November 23rd); The Emperor's Birthday (December 23rd).
POLICE/AMBULANCE/FIRE: Police Tel: (0152) 43-2167; Ambulance and Fire Department Tel: (0152) 43-2221.
BANKS: Hokkaido Bank, Nishi 1, Minami 4, Abashiri City 093. Tel: (0152) 43-2161.
Hokkaido Takusyoku Bank, Higashi 2, Minami 4, Abashiri City 093. Tel: (0152) 43-2111.
North Pacific Bank, Nishi 2, Minami 4, Abashiri City 093. Tel: (0152) 43-3161.
Hokuriku Bank, Higashi 1, Minami 4, Abashiri City 093. Tel: (0152) 43-3171.
SEAMAN'S CLUBS: None.
GENERAL: *Lightering:* Not possible.
Shipchandlers: Provisions and stores are available with advance notice.
Immigration: The authorities come from Kushiro.
AUTHORITY: City of Abashiri, Port and Harbour Division, Higashi 6, Minami 6, Abashiri City 093, Hokkaido, Japan. *Tel:* 0152-44-6111. *FAX:* 0152-43-6151. *Contact:* Tomoaki Yoshida, Port and Harbour Manager.

AIOI: 34.46 N. 134.28 E. (See Plan)

PORT LIMITS: A line drawn between Kama-Saki and Kane-Ga-Saki defines the seaward limit of the port.
DOCUMENTS:
Ship's Register/International Tonnage Certificate.
2 Voyage Memorandum (List of ports of call).
Last Port Clearance.
3 Crew Lists, including Passport Numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist watch, radio, firearms/swords, etc., (only at first port of call in Japan).
Ship's Agents will prepare: Inward/Outward Declaration. 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agents should be provided with necessary information about details of cargoes in advance.
PILOTAGE: Inland Sea Pilotage should preferably be arranged through Agent by cable via Nagasaki Radio giving 72 hours' notice. Urgent correction of ETA outside business hours should be cabled direct to Pilot Station. Inland Sea Pilot Association covers all inland sea ports. Pilotage compulsory for vessels of 10,000 g.r.t. and over, and recommended for smaller vessels in view of number of islands and difficult channels causing navigational hazards. Pilots obtained from one of three Pilot Stations dependent upon vessels last port of departure and at Master's discretion. Pilotage available throughout 24 hours and 72 hours advance notice preferred, thereafter advising any alterations. Most Inland Sea Pilots also act as Harbour Pilots up to berth or anchorage at destination.
Note: VHF communication available with Inland Sea Pilot Stations. Also see "Shipmaster's Report" before first port.
1. Wadamisaki, at entrance to Kobe (vessels transitting Kii Straits). Position 34° 34.09' N.; 135° 11' E. Telegraphic address: "Anjin Kobe".
2. Sekisaki, 3 miles South of Sekisaki lighthouse. (Vessels transitting Bungo Channel.) Position 33° 13' N.; 131° 54' E. Telegraphic address "Anjin Saganoseki". In event bad weather, recommended vessels proceed for shelter as near as possible having due regard to safety, to Sekisaki Pilot Station.
3. Hesaki, at East side of Kanmon (Shimonoseki) Straits. Position 33° 56' 24" N.; 131° 03' 12" E.
Aioi Dock Master not licensed to pilot vessels from outer harbour and boards at anchorages outside Aioi Bay.
ANCHORAGES: 9 anchorages outside Aioi Bay and 2 anchorages inside the Bay as follows:
North: True bearing 342° from Kasamatsu Iwa, distance 1,340 m.
South: True bearing 335° from Kasamatsu Iwa, distance 860 m.
MAX. SIZE: See "Berthing".
HEALTH: See "Late Reports".
RADIO: Recommended Master communicates with Agents through Nagasaki Radio which covers all ports in Japan.
TUGS: Normally join vessel at anchorage inside Aioi Bay. Tug's lines always used without charge.
BERTHING:

Wharf No.	*LOA* (m.)	*Max. Draft at LW* (m.)
7	340	7.0
8	340	5.5
9	290	6.5
10	340	5.5
11	230	5.5
12	350	7.5

MEDICAL: Full hospital facilities available without prior notice.

TANKERS: Must be fully gas-freed before entering the port. No facilities for tank cleaning or gas freeing in the port. Barge for slop disposal can be arranged by Agents.
DENSITY: Average 1025/1026 Winter, and 1018/1020 Summer.
FRESH WATER: Available from jetty/dock.
FUEL: All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, Osaka Bay and Kanmon Port. At all other ports bunkers will be lightered from the nearest bunker stock ports at max. 7 days prior notice.
CONSULS: None.
DRY DOCKS:
Restrictions: Vessels may anchor any time day or night. Draft and trim to be adjusted to enter dry dock per dockyard recommendation as follows:

Name of Dock	*Max. Draft at L.W.*	*Max. Trim*	*Min. Trim*
No. 1 D.	5.50 m.	$\frac{LOA}{200}+1.50$ m.	$\frac{LOA}{200}+0.10$ m.
No. 2 D.	4.50 m.	$\frac{LOA}{200}+1.50$ m.	$\frac{LOA}{200}+0.10$ m.
No. 3 D.	5.50 m.	$\frac{LOA}{300}+1.50$ m.	$\frac{LOA}{300}+0.10$ m.

Deeper draft available at HW.
Max. Size: Max. size of ships to be accommodated as follows:

	LOA	LBP	Breadth	d.w.t. (LT)
No. 1	238 m.	230 m.	33 m.	73,000
No. 2	151.5 m.	143.8 m.	19.5 m.	14,000
No. 3	341 m.	328 m.	54.5 m.	300,000

REPAIRS: Dockyard port. All repairs available. Specialist technicians obtainable from Kobe/Osaka area.
SURVEYORS: Surveyors available from Kobe or Aioi.
CUSTOMS ALLOWANCES: Only allowed cigarettes for personal use, but no spirits.
AIRPORT: Osaka (Itami).
TIME: GMT plus 9 hours. Permanent.
POLICE/AMBULANCE/FIRE: Police 110 or Aioi 2–0740; Ambulance/Fire 119 or Aioi 2–7128.
EMERGENCY CO-ORDINATION CENTRE:
Marine Safety Agency, Himeji Branch office: Tel: 0792 - 34 - 1016.
Marine Safety Agency, Kobe Office: Tel: 078 - 331 - 0111. Call sign: JGD/Kobe Hoan.
TELEPHONES: Placed aboard at IHI shipyard.
SERVICES: No special services at Aioi, but available from Kobe/Osaka.
SHORE LEAVE: There is no restriction on crew's shore leave if they carry shore pass issued by local immigration office (Himeji).
AUTHORITY: Kamigori Doboku (Public works) Office, 500 – 5, Aza Maruogami, Kamigori, Kamigori-Cho, Ako-Gun, Hyogo Pref. *Tel:* (07915) 2-5111.

AKITA: 39.45 N. 140.03 E. (See Plan)

DOCUMENTS:
Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
5 Crew Lists including Passport Numbers.
5 Passenger Lists or "Nil" Lists.
1 Stores List.
2 Ports of Call Lists (Dates of arrival and departure for previous ports).
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist watch, radio, firearms/swords (only at first port of call in Japan).
Ship's Agents will prepare Inward/Outward Declaration. 1 Cargo Manifest and Through-Cargo Manifest, using specific forms. Ship's Agents should be provided with necessary information about details of cargoes in advance.
PILOTAGE: Not compulsory but recommended as port policy under MSA's guidance. Pilot available in daylight only. Boards at 39° 46' N., 140° 00' E. (1 mile 270° from Akita lighthouse) or off Funakawa 1 mile 140° from breakwater end light if required. 2 Pilots board if ship's gross tonnage exceeds 18,000. Cost 170% of pilotage.
ANCHORAGE: Off Akita, 2 miles 270° – 280° from Akita Lighthouse. Depth exceeds 20 m. Bottom is soft clay with mud. No buoys. Beware of anchor dragging in strong winds.
MAX. SIZE: Min. depth at extreme low water (in Fairway) 10.0 m. At Anchorage 20.0 m. Tidal range 20 cm. – 30 cm.

Wharf	*Max. Draft* (m.)	*LOA* (m.)	*Remarks*
1. Gaiko Pier	12.0	200	
2. Ohama No. 1	9.0	150	
5. Ohama No. 2	9.2	175	
6. Ohama No. 3	9.4	160	
9. Nakajima No. 1	8.5	175	If LOA is more than 170 m., port side alongside only.
8. Nakajima No. 2	9.4	175	
7. Nakajima No. 3	9.5	175	
15. Terauchi Pier	6.5	100	
16. Mukaihama No. 1	6.8	105	If LOA is more than 110 m., port side alongside only.
17. Mukaihama No. 2	6.8	105	
18. Mukaihama No. 3	9.5	175	If LOA is more than 170 m., starboard alongside only.
19. Mukaihama No. 4	9.5	175	
20. Mukaihama No. 5	9.5	175	

Wharf	Max. Draft (m.)	LOA (m.)	Remarks
Private:			
Akita Power Station			
No. 3 Dolphin	12.0	240	
Tohoku Seishi			
Wood Chip Dolphin	9.5	205	

This maximum draft is allowed during berthing only. That is, the vessel must have more water under keel at all times while underway.

HEALTH: Quarantine anchorage 39° 51' N. 139° 53' E. When impossible to inspect at Funakawa, i.e. during bad weather, officers attend off Akita.

Also see "Late Reports".

RADIO: Nagasaki Radio.

VHF: VHF Channel 16 – 156.8 MHz. Operated by Regional Maritime Safety Agency Headquarters (Harbour Master).

No port VHF available.

TUGS: 1 tug 3,200 h.p. available, owned by local government.

3 tugs (3,600 h.p., 3,000 h.p. and 600 h.p.) available, privately owned.

1 tug 4,000 h.p. will be commissioned in November 1996.

BERTHING:

Berth No.	Wharf	Length (m.)	Depth (m.)	Capacity (g.t.)	Discharging
1	Gaiko Pier 1	185	13.0	50,000	Zinc Concentrates, Bulk Cargo
2	Ohama No. 1	185	10.0	15,000	G.C.
5	Ohama No. 2	185	10.0	15,000	Cement, G.C.
6	Ohama No. 3	185	10.0	15,000	G.C.
9	Nakajima No. 1	161	9.0	10,000	G.C.
8	Nakajima No. 2	185	10.0	15,000	G.C., Bulk
7	Nakajima No. 3	185	10.0	15,000	Zinc, Cement, G.C.
15	Terauchi Pier	200	7.5	5,000	Grain, Plaster, Cement
16	Mukaihama No. 1	130	7.5	5,000	Logs, G.C.
17	Mukaihama No. 2	130	7.5	5,000	Logs, G.C.
18	Mukaihama No. 3	185	10.0	15,000	Logs
19	Mukaihama No. 4	185	10.0	15,000	Logs
20	Mukaihama No. 5	185	10.0	15,000	Logs
Private					
	Akita Power Stat. No. 3 Dolphin	313	13.0	50,000	Crude Oil
	Tohoku Seishi Wood Chip Dolphin	210	10.0	35,000	Wood Chips

STEVEDORES: Working time 0830 hrs. – 1630 hrs. every day. Overtime possible for bulk cargoes.

Grain in bulk: 150 – 170 t.p.h. by shore crane, 40 – 60 t.p.h. by ship's gear.

Logs/lumbers: 200,000 BM per gang per day (Nanyozai), 80,000 – 100,000 per gang per day (Beizai).

Potash in bulk: 150 t.p.h. by shore crane, 60 – 80 t.p.h. by ship's gear.

Plaster: 300 t.p.h. by shore crane.

Zinc concentrate in bulk: 300 – 350 t.p.h. by shore crane. 100 – 120 t.p.h. by ship's gear.

MEDICAL: Hospital and treatment available.

TANKERS: See "Berthing".

Discharge rate 3,000 – 3,300 kl./hr. No facilities for slop discharge.

DENSITY: 1017 – 1023, depending on river stream.

FRESH WATER: Available at every wharf. Rate 25 – 30 t.p.h. Cost Yen 412/ton.

FUEL: Domestic bunkers available. If bonded bunkers required, brought from Muroran, Tokyo or Kawasaki area.

CONSULS: No Consuls, but 2 notary public offices.

REPAIRS: Minor repairs only.

GANGWAY/DECK WATCHMEN: Not compulsory, but available if required.

OPENING/CLOSING HATCHES: Stevedores open and close hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting charges.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector to check ship's registered gross and nett tonnages with new Tonnage Certificate. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance seems poor.

CUSTOMS ALLOWANCES: Only 50 cigarettes to take ashore. No spirits.

REPATRIATION: Possible.

TIME: GMT plus 9 hours. No alterations during year.

AIRPORT: Flights to Tokyo/Osaka/Nagoya/Hakodate/Sapparo, 4 times per day. 35 km. from port area.

HOLIDAYS: Local holidays: January 2nd, 3rd; August 13th, 14th; December 30th, 31st; 1st, 3rd and 5th Sunday of each month also non-working.

POLICE/AMBULANCE/FIRE: Contact through Agents. Contact through M.S.A. office in an emergency.

SERVICES: Hold cleaning not available. Surveyor arrangable. Ship's telephone not available. Radio/radar, minor repair available depending on makers. Other services available from Tokyo area.

SHORE LEAVE: Local Immigration Offices issue shore pass valid for only 3 days.

DEVELOPMENT: A berth which has 260 m. length and 13.0 m. depth will be completed at Gaiko Pier in September 1997.

A berth which has 240 m. length and 12.0 m. depth will be completed at Mukaihama in 1998.

AUTHORITY: Akita Port Administration Office, 7-1 Nishi 1-Chome, Tsuchizaki-Minato, Akita City, Japan. *Tel:* (0188) 45-2021/0042.

AGENT: Senwa Shipping Agency, c/o Akita Kairiku Unso Co.Ltd., 5-9 Nishi 2-chome, Tsuchisaki-Minato, Akita-Shi, Akita 011, Japan. Tel: 0188-45-0185/9. Fax: 0188-45-4229. Telex: 9422-24. Cables: Kairiku Akita.

AMAGASAKI: 34.42 N. 135.24 E. (See Plan)

DOCUMENTS:

Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
3 Crew Lists including Passport Numbers and date of birth.
3 Passenger Lists or "Nil" List.
1 Stores List.
1 Declaration of Crew's Baggage i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agents will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agents should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Usual for Pilot to embark at Kobe (Wada Point); however, if Master does not require a Pilot between Wada Point and Amagasaki, Pilot embarks off Amagasaki.

Cables: "Hanshinpilot Osaka" and "Hanshinpilot Kobe". One day's notice ETA required. Telephone through VHF. 3 Pilot boats at Osaka and 6 boats at Kobe with wireless communication with Pilot Station. Pilot boards Kobe, Wada Point (Kobe quarantine anchorage). Amagasaki, 2.5 – 3 miles off Amagasaki. In case bad weather unable to take Pilot. Safe Pilot ladder required. Vessel waits for Pilot at anchorage as above.

ANCHORAGE: No quarantine anchorage; quarantine inspection only available at Kobe (Wada Point). Safe anchorage (approx.) position 34° 39' 30" N., 135° 20' 18" E. Draft 12.8 m.

RESTRICTIONS: Pilot not available after sunset.

MAX. SIZE:

	Kobe Steel Works (Ohgimachi Wharf)	Kobe Steel Works (Ohama Wharf)
Max. LOA	230.0 m.	176 m.
Max. breadth	No Limitation	No Limitation
Max. draft	11.70 m.	10.4 m.

	Public Wharf
Max. LOA	176 m.
Max. breadth	No Limitation
Max. draft	9.8 m.

Daikyo Oil Jetty. Max. LOA 198 m., beam no restrictions, max. draft 10.6 m.

HEALTH: See "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

TUGS: 1 tug × 2,200 h.p. Additional tugs available from Kobe. Tug usually joins vessel at anchorage off Amagasaki. Tug's line used for operation free of charge.

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by radio.

Public Berths:

No. 1	Length 165 m.	Depth 10.0 m.	Permissible draft on H.W. 9.8 m.
No. 2	Length 150 m.	Depth 10.0 m.	
No. 3	Length 180 m.	Depth 10 m.	

Kobe Steel (Ohama): Max. d.w.t. 25,000. Berth length 364 m. Depth 10.4 m. Products handled, ore and coal. 3 cranes×200 t.p.h.

Kobe Steel (Ohgimachi): Max. d.w.t. 35,000 or 55,000 with part load. Berth length 220 m. Depth 12.0 m. Product handled, coal. 3 cranes× 300 t.p.h.

CRANES: 3×10 ton cranes at the public wharves.

STEVEDORES: At least 24 hours' prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew. Overtime surcharges 1700–1900 hrs. 50% additional of basic stevedorage; 2100–0500 hrs. next morning 130% additional; Sundays/holidays 60% additional.

MEDICAL: No advance notice required unless urgent.

TANKERS: Daikyo Oil Jetty suitable for up to 33,000 d.w.t. Discharge rate 1,500 t.p.h. through one 10 in. pipe.

DENSITY:

	Ohgimachi Wharf	Ohama Wharf	Public Wharf
Winter	1023.5 – 1025.0	1020 – 1025	1025 – 1119
Summer	1022.0 – 1025.0	1013 – 1025	1017 – 1025

FRESH WATER: Available at any time.

	Kobe Steel Works Wharfs	Public Wharf
Methods	Shore line	Shore line
Sunday, Holiday	Daytime 40% up	40% up
	Before midnight 50% up	50% up
	After midnight 100% up	50% up

Daikyo Oil Jetty. Only available by barge from Kobe.

FUEL: All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, Osaka Bay and Kanmon Port. At all other ports bunkers will be lightered from the nearest bunker stock ports at maximum 7 days prior notice.

Bunkering at Oil Jetty prohibited.

CONSULS: No consulates in Amagasaki area.

REPAIRS: No dockyard. Minor repairs can be carried out on vessel alongside wharf.

GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.

Compulsory for tankers working cargo at oil jetty.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear's maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 50 cigarettes to take ashore but no spirits.
REPATRIATION: Possible.
AIRPORT: International airport Osaka, 15 miles from Amagasaki.
TIME: GMT plus 9 hours. No alterations made to clocks during year.
HOLIDAYS: Kobe Steel (Ore/Coal) Nil. Public Wharf (Scrap) 20th July.
POLICE/AMBULANCE/FIRE: Police 110; Ambulance 119; Fire 119.
TELEPHONE: No telephone installation service on board.
SERVICES: Compass adjustment can be carried out at anchorage.
SHORE LEAVE: Local Immigration Officers issue shore pass valid for only 3 days, but 3 days extensions possible if ship stays longer.
AUTHORITY: Amagasaki Port Administration Office, 21, Doi-cho 7-chome, Amagasaki City, Hyogo Pref. *Tel:* (06) 412-1361/5.

ANAN (Tachibana): 33.52 N. 134.40 E. **(See Plan)**

DOCUMENTS: For all general information, refer to "Niihama".
PILOTAGE: Not compulsory officially, but pilotage strongly recommended for berthing/unberthing, due to the many fishing boats in the area. Pilot available from Komatsushima.
ANCHORAGES: Lat. 33° 53' 30" N., Long. 134° 43' 30" E. Only available for a few days.
RESTRICTIONS: Berthing/unberthing operations only during daytime.
MAX. SIZE: Max. draft 10.50 m., limited by channel depth.
HEALTH: Closed port. If arriving directly from abroad, vessel should proceed to Shimotsu or Komatsushima for health clearance. Immigration authorities attend from Komatsushima if required.

Also see "Late Reports".

RADIO: See "Komatsushima".
TUGS: 2 tugs available from Komatsushima.
BERTHING: Nippon Denko Wharf, length 200 m., depth alongside 11 m. Unloading capacity: Soda ash in bulk – 90 tonnes/hr. by 2 pneumatic unloaders. Manganese in bulk – 500 tonnes/hr. with one shore crane.
STEVEDORES: See "Komatsushima".
MEDICAL: No advance notice required, unless urgent.
TANKERS: No facilities.
FRESH WATER: Available from shore hydrants only.
FUEL: By barge from Hanshin area only.
CONSULS: None locally. See "Kobe".
REPAIRS: Minor repairs possible.
DRY DOCKS: Tachibana Senpaku Tekko – Slipway No. 1, capacity 4,800 g.r.t.
SURVEYORS:

(1) Cargo surveyors available from Tokushima.
(2) Classification Society surveyors available from Sakaide, Kure and Kobe.

GANGWAY/DECK WATCHMEN: Not required.
OPENING/CLOSING HATCHES: Normally carried out by crew, due to most vessels being bulk carriers.
REPATRIATION: Available. Immigration formalities handled at Komatsushima.
AIRPORT: Tokushima Airport.
TIME: GMT plus 9 hours. No alteration to clocks in Summer.
POLICE/AMBULANCE/FIRE: Police 110. Ambulance 119. Fire 119.
TELEPHONES: No facilities for placing telephones on board.
SHORE LEAVE: Available with shore pass issued by local Immigration Inspector.
AUTHORITY: Anan Doboku (Public Works) Office, Aotani, Tomioka-cho, Anan City, Tokushima Pref. *Tel:* (08842) 2-3111.

AOKATA (Kamigoto Island): 32.59 N. 129.02 E.

LOCATION: The sea berth, in position Lat. 32° 59' 13" N., Long. 129° 01' 48" E., is for receiving crude oil for the Japanese government for stockpiling.

The stockpile base is located at Aokata Port at the Northern end of Goto Island, in the Kyushu District.

PILOTAGE: Pilotage is rendered by Nagasaki Pilot Association. The Pilot boards in a position 243° at a distance of 3 miles from Shugen-Shima (Island).
HEALTH: Nagasaki Quarantine Station conduct inspection onboard at Aokata.

Also see "Late Reports".

TUGS:

Vessel Size d.w.t.	*No. of Tugs* Required*
under 30,000	2
under 80,000	3
under 200,000	4
over 200,000	6

*Number of tugs required is based on a capacity of 3,000 h.p. for each tug.

BERTHING: *Kamigoto Oil Storage:*

Capacity: 5 floating tanks, each with a capacity of 880,000 cu.m. and dimensions 390 m. × 97 m. × 27.6 m. deep.

Berthing: Vessels berth starboard side alongside.

GENERAL:
Customs: Nagasaki Customs, Sasebo Branch Office, conducts inward and outward clearance onboard at Aokata.
Immigration: Fukuoka Immigration, Sasebo Branch Office, will issue shore passes for crew members.
M.S.A.: Under the jurisdiction of Nagasaki Maritime Safety Office.
Port Status: This port is a closed port.
AUTHORITY: Harbour Master, 7-29 Matsugae-Machi, Nagasaki, Japan. *Tel:* 0958-27-5133. *FAX:* 0958-27-5133.

AOMORI: 40.52 N. 140.45 E. **(See Plan)**

DOCUMENTS: Documents and all general information, refer to "Hachinohe".
PILOTAGE: Not compulsory. Harbour Pilot available at Quarantine Anchorage (Lat. 40° 52' N., Long. 140° 45.5' E.).
RESTRICTIONS: Port entry is permissible only during daytime. Sailing is permissible any time.
HEALTH: Both Radio Pratique and ordinary quarantine at anchorage are possible.

Also see "Late Reports".

TUGS: 1×3,400 h.p. More powerful tugs can be arranged from Muroran, Hachinhoe and Hakodate.
BERTHING: Public Berths:

Berth	*Length* (m.)	*Depth* (m.)	*Max. draft* (m.)	*Max. Size* (d.w.t.)
Okidate-Futo (A)	130	7.5	7.00	5,000
(B)	185	10.0	9.0	15,000
(C)	270	13.0	11.7	50,000
Tsutsumi-Futo (A)	250	7.5	6.75	5,000
(B)	185	10.0	9.0	15,000
No. 2 Wharf (No. 2)	178	9.0	8.1	10,000
(No. 3)	154	7.5	6.75	5,000
(No. 4)	146	9.0	8.1	10,000

TANKERS: Private – LPG Tanker Berth: Nonai L.G.T. Pier (No. 1): Max. draft 11.80 m. (or 12.20 m. using high tide), 57,000 d.w.t. Products handled: Propane and Butane. One liquid line 12 in. and one vapour line 8 in. Discharge rate: 2,000 cu.m./hr.
FRESH WATER: Available ex-shore line at all public wharves.
FUEL: Only domestic oil is available. Supply to take place alongside the wharf at a rate of 100 tonnes a day ex-barge. No bonded oil is available.
REPAIRS: No repair facilities.
GENERAL:
Lightering: Not possible.
Shipchandlers: None stationed at Aomori. With advance notice, chandlers can be arranged from Hachinohe port.
Floating Crane: Not available.
Log Gangs: Maximum of 4 gangs are available.
Concentrate Gangs: Maximum of 2 gangs with shore cranes are available (copper, zinc, lead, etc.).
Immigration: Stationed at the port.
Tidal Range: Maximum +0.85 m., minimum −0.15 m.
AUTHORITY: Aomori Port Administration Office, 5-5, Hon-cho 4-chome, Aomori City. *Tel:* (0177) 34-4101.
AGENT: Senwa Shipping Agency, c/o Nippon Express Co.Ltd., 8-9 Honcho 4-chome, Aomori-Shi, Aomori 030, Japan. Tel: 0177-34-6126/7. Fax: 0177-23-3879. Telex: 8129-90 NEXAOM J. Cables: Nexco Aomori.

ATSUMI: 34.40 N. 137.04 E. **(See Plan)**

PORT STATUS: Closed port.

Agents make necessary arrangement/procedures of Transport Ministry and the Customs prior to vessel's entry to this port.

DOCUMENTS: For general information, refer to "Nagoya".
PILOTAGE: Refer to "Nagoya".
ANCHORAGES: Not available, no designated areas for anchorage.
CLEARANCE: *Quarantine:* When a vessel calls directly from aboard:

1. Free Pratique by radio is applicable and obtainable before arrival, if vessel possesses valid Sanitary Inspection Certificate issued by Japanese Government.
2. If vessel does not hold the above certificate on board, ordinary quarantine is carried out on board upon berthing at Dolphin Pier.

Customs: Customs from Toyohashi attend on board when calling directly from a foreign port.
Immigration: Do not attend to vessels. Agents do inward/outward procedures at the Immigration Office in Toyohashi.

Also see "Nagoya" – "Pilotage: Shipmaster's Report".

RESTRICTIONS: *Entry:* Large vessels (designated/classified by Maritime Safety Agency) are to transit through Nakayama Suido East Traffic Route by daylight only.

Other vessels, except large vessels, proceed to the discharge pier via Nakayama Suido West Traffic Route. Vessels with draft less than 9.0 m. are free to transit this West Route at any time, but vessels with draft 9.0 m. – 10.0 m. are restricted by tidal height.

Departure: All vessels are to transit through Nakayama Suido West Traffic Route. Refer to "Entry" above, regarding vessel's draft.

Restrictions for Mooring/Unmooring:

1. Max. permissible d.w.t.: 79,900 d.w.t. In cases exceeding this 79,000 d.w.t., a vessel is allowed to moor to the berth with a cargo weight that is 50% of its deadweight tonnage.
2. Arrival draft: Under 12.5 m.
3. Sailing draft: Under 10.00 m.
4. Parallel body line: 40 m. either side of manifold.
5. Mooring and unmooring operation is carried out in daylight.

MAX. SIZE: *Dolphin Pier:* 79,900 d.w.t., LOA 354.5 m., max. draft 12.50 m.

SBM: 210,000 d.w.t., max. draft 13.00 m.

HEALTH: See "Late Reports".

TUGS: 3 tugs (about 9,600 h.p.) for mooring and 2 tugs (about 6,400 h.p.) for unmooring.

BERTHING: *Dolphin Pier No. 1:* Lat. 34° 39' 36" N., Lat. 137° 05' 06" E. 2.5 km. from installation. Depth 14.0 m.

SBM: Lat. 34° 39' 47" N., Long. 137° 03' 56" E. 2 km. from installation.

Shoreline: Dolphin Pier: 2×12 in., discharge rate 3,000 t.p.h.

SBM: 2×16 in., discharge rate 7,500 t.p.h.

Crude Oil Washing:

Step 1: Ship's owners or operators are requested to inform Chubu Electric Power Co.Ltd., of the C.O.W. work through cargo consignees in advance, and get permission.

Step 2: One week before the C.O.W. work, application papers are to be submitted to Techno Chubu Co.Ltd., Atsumi Office, to get approval from them.

MEDICAL: No facilities.

FRESH WATER: At Dolphin Pier: Available from pier.

At SBM: By barge.

FUEL: Bunkering is available at Dolphin Pier No. 1 through the bunker line that has access to the bunker barge alongside Dolphin Pier No. 2. No bunkering is allowed whilst discharging, or by night.

In order to take bunkers, advance notice of requirements should be submitted to Techno Chubu Co.Ltd., Atsumi, 7 days in advance.

DENSITY: 1025 at both berths.

REPAIRS: No repair shops at Atsumi.

WATCHMAN: Not compulsory.

TELEPHONES: No shore telephone available on board. For overseas calls, public telephone (payphone) is available on shore.

AUTHORITY: Chubu Electric Power Co.Ltd., No. 1 Toshin-Cho, Higashi-Ku, Nagoya, 461-91 Japan. *Tel:* (052) 951-8211. *Telex:* 444-4405 Chuden J.

CHIBA (including Ichihara and Funabashi): 35.36 N. 140.07 E. (See Plan)

DOCUMENTS:

Ship's Register. International Tonnage Certificate. Last Port Clearance. 3 Crew Lists including Passport Numbers, 3 Passenger Lists. 1 Stores List. 1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agents will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Harbour Pilots are available at the anchorage.

Pilot not available after sunset.

Also see "Pilotage" in "Japan – General".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

TUGS: 14 tugs, 2,600 h.p. – 3,200 h.p. Tugs join vessel at entrance of each waterway. Tug's line used.

MAX. SIZE: See "Berthing".

ANCHORAGES: Quarantine anchorage on Northern part of Tokyo Wan. Chart No. 1061, published by Maritime Safety Agency.

SIGNALS: Following signals exhibited at Chiba Lt. and Chiba Signal Station.

	By Night	*Remarks*
Chiba Route and Ichihara Route	W. flash 2 secs.	Over 500 GT outwards — STOP.
	R. flash 2 secs.	Over 500 GT entering — STOP
	R. and W. flash 3 secs.	Over 10,000 GT entering or outwards — STOP.
	3R. and 3W. flash 6 secs.	Entering or outwards STOP

RESTRICTIONS:

	Length (m.)	*Width* (m.)	*Depth* (m.)
Funabashi Route	9,000	300	−12
Chiba Route	14,720	350	−18
Ichihara Route	2,350	250	−12
Anegasaki Route	1,450	350	−16
Shiizu Route	2,200	300	−16
Kitasode Route	1,500	300	−10.5
Minamisode Route	1,500	350	−14

HEALTH: Radio Pratique available, requested through Agent. Quarantine Officers will attend vessel only from daylight to sunset and Master to show all Vaccination Cards, Derat Exemption Certificate. In case vessel arrives from cholera infected area within 10 days, Master must advise crew and passengers' health condition to respective Quarantine Office through ship's Agent prior to arrival and close all soil pipes before entering port.

Also see "Late Reports".

RADAR/VHF: No radar service. VHF call sign "Chiba Port Radio" Channel No. 12 156.6 MHz (Simplex), Channel 14 156.7 MHz (Simplex), Channel 16 156.8 MHz (Simplex), Channel 20 161.6 MHz (Duplex), Channel 22 161.7 MHz (Duplex).

BERTHING: Contact Agent for berthing arrangements on entry. No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by VHF ("Chiba Port Radio").

Name of Berth	*Length* (m.)	*Depth* (m.)	*Max.draft* (m.)	*Capacity* (d.w.t.)	*Remarks*
(Katsunan Area)					
(Public)					
Higashi Futo A,B	260	− 7.5	7.5	5,000	
Chuo Futo Kita B,C,D	390	− 7.5	7.5	5,000	
E,F,G	390	− 7.5	7.5	5,000	
H,I,J,K	260	− 7.5	7.4	5,000	
Note: Berth B – Max. draft 6.9 m.					
Keiyo Shokuhin Combinart	240	−12.0	10.8	38,084	
Chuo Futo Minami A,B,C	555	−10	9.0	29,999	
Chuo Futo Minami D,E	370	−10.0		29,999	
(Private)			9.0		
Kubota Iron Works	285	−11.5	11.0	30,000	
Honda Nisshin	346	−12.0	11.0	37,628	Car carriers
Nippon Tsuun Wharf	250	−12.0	11.0	37,391	
Hanwa Kogyo	280	−12.0	11.0	18,142	
Kami Futo	350	−12	10.5	30,000	
(Chiba Area)					
(Public)					
Dezu Futo A,B,C	430	− 7.5	7.5	5,000	
Dezu Futo E,F	1,045	− 5.7	5.5	3,000	
Chuo Futo A,B,C,D,E	1,000	−10	9.0	29,999	
Chuo Futo F,G,H	720	−12	11.0	39,999	
Ichihara Ganpeki A,B	240	− 7.5	7.2	5,000	
Note: Berth G for Container carriers only.					
(Private)					
Mitsubishi Pier	200	−12	11.6	45,000	
Nippon Silo Pier	160	−12	12.0	50,000	400 t.×3'
Sin Tozai Reizosoko Pier	120	−12	10.9	30,000	
Chiba Kyodo Silo Pier	150	−12	12.0	50,000	300 t.×3
Higashi Nippon Seito Pier	150	−12	10.9	20,000	330 t.×2
Newport Sangyo Pier	150	−12	10.9	40,000	
Keiyo Mokuzai Futo	120	−12	10.0	30,000	12 t.×2
Kozai Yard Wharf	200	− 7.5	7.5	2,000	20 t.×1
Onoda Cement Pier	55	−12	10.9	20,000	400 t.×1
Chiba Mokuzai Futo	180	−12	10.9	30,000	
Toyo Seiyu (Co. Berth)	160	−12	12.0	50,000	400 t.×2
Marubeni Oil	320	−14	12.6	54,000 (LPG) 57,000 (Jet)	500 – 2,400 kl./h.
Kawatetsu Wharf (A)	200	− 9.5	9.5	15,000	10 t.×1
(B)	150	−10.8	10.4	15,000	20 t.×2
(C)	138.7	−10.8	10.8	20,000	22 t.×1
(J)	268	−18	17.0	158,000	60 t.×2
(L.M)	310	−12	11.3	45,000	15 t.×2 16 t.×2
(E.B)	350	−18	17.0	158,000	et 60 t.×2
(E.A)	200	−11.5	11.4	50,000	
(OC)	245	−10.5	9.4	20,000	15 t.×2
Toden Chiba (S)	35.2	− 9.5		6,000	800 kl./h.
(Q)	22.5	− 7.5		6,000	250 kl./h.
Idemitsu Bulk Terminal No. 1	239 (LOA)		12.6	89,999	800 t.×1 (Unloader)
Idemitsu Bulk Terminal No. 2	106 (LOA)		6.8	7,200	1,300 t.×1 (Loader)
(Ichihara Area)					
Furukawa Dolphin	63	− 8		7,000	Nil
Yanan Yawata Futo	250	−10.5	9.4	20,000	80 t.×1
Mitsui Zosen No. 5	385	− 9		150,000	40 t.×1
No. 1	200	− 9.5		213,000	20 t.×1
No. 2	227	− 8		213,000	
No. 4	400	− 9		213,000	
	398	− 9		33,000	
Nissho-Iwai	228 (LOA)		10.9	46,134	Ship's gear
Showa Hatsuden Pier	36	− 9.5		3,000	500 kl./h.
Fuji Denki Pier	80	− 9.5		10,000	350 t.×1
Fuji Sogyo Wharf	80	− 9	9.0	10,000	Nil
Asahi Glass Pier	195	−12	11.8	50,000	500 t.×2
Export Pier	172	− 5.4	4.5	6,000	
Cosmo No. 2 Pier	230	−11.8		50,000	500 kl./h.
Sea Buoy (Imodco)		−16		100,000	500 kl./h.
Cosmo No. 10 Pier	270	−13	11.82	100,000	1,000 kl./h.
No. 15 Pier	151.4	− 8.5		8,000	1,000 kl./h.
No. 14 Pier	151.4	− 8.5		8,000	1,000 kl./h.
Kyowa Yuka Pier	150	−12	10.0	20,000	360 kl./h.
Ube Dolphin	250	−10		15,000	
Kyokuto Oil Pier	100	−16	14.0	80,000	3,000 kl./h.
	147	− 7.5		6,000	2,500 kl./h.
Idemitsu No. 1 Oil Pier	280	−16	14.5	100,000	14,800 kl./h.
No. 2	245	−15.5	13.9	80,000	10,200 kl./h.
No. 3	205	−10.5	9.5	20,000	2,100 kl./h.
Toden L.P.G. Berth	102	−14		50,000	
(Sodegawa Area)					
Chichibu-Onoda	140 (LOA)		8.1	10,000	250 t.×1 (Unloader)
Fuji Oil Pier	420	−16	14.55	120,000	7,700 kl./h.
Sumitomo O Pier	210	−10.5	9.5	30,000	
CND Pier	162	−10.5	9.0	22,000	
Nichirin A Pier	260	−10.5		30,000	375 t.×1
Itochu Berth	180	−12	10.5	44,000	Nil
To Gas L.P.G. Berth	533	−16		50,000	7,100 kl./h.
Keiyo Sea Berth (W&E)	470	−20.5	19.2	258,000	12,500 kl./h.

Name of Berth		Length (m.)	Depth (m.)	Max.draft (m.)	Capacity (d.w.t.)	Remarks
Togas LNG Berth No. (Tokyo Gas)	1			10.0	41,000	LOA 258 m.
	2			11.7 (LNG)	72,724	LOA 293 m.
	3			12.6 (LPG)	66,769	LOA 256 m.
				11.73(LNG)	75,000	LOA 280 m.
				11.7 (LNG)	72,724	LOA 293 m.
Kanzaki Seishi		206	−11.0	10.9	40,000	
Yoshino Sekko		190	−11.0	10.5	42,800	

*Pneumatic unloaders (average 300 ton/hr. per unit).

CRANES: Floating cranes, 50 ton – 600 ton, available from Yokohama.

STEVEDORES: At least 24 hours prior notice excluding Sundays and holidays required in order for Agents to arrange stevedores. Vessel must constantly keep her Agents advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gears not rigged on berthing, stevedores will do same for ship's crew at additional cost. Overtime surcharges 1700 – 1900 hrs. (60% additional of basic stevedorage) 2100 – 0500 hrs. next morning (130% additional) Sundays/holidays (100% additional).

TANKERS:

Berth	Product	Shorelines	Discharge Rate (t.p.h.)
Kyokuto	Naphtha	12 in.×2	5,000
	Crude Oil	12 in.×3	5,000
	Fuel Oil	12 in.×2	2,000
Cosmo No. 2	Fuel Oil	10 in.×1	800
	Crude Oil	10 in.×1	1,500
	Naphtha	10 in.×1	800
Cosmo No. 10	Fuel Oil	12 in.×1	1,300
	Naphtha	12 in.×2	3,000
Cosmo No. 14	Butadeine (Loading)	10 in.×1	400
Keiyo Sea Berth (W)	Crude Oil	16 in.×3	10,000
Keiyo Sea Berth (E)	Crude Oil	16 in.×3	10,000
Fuji Oil	Crude Oil	12 in.×3	4,000
	Fuel Oil	12 in.×3	1,500
	Propane	12 in.×1	300
	Butane	12 in.×1	300
Idemitsu Oil No. 1	Crude Oil	12 in.×2	5,000
	Minus Oil	12 in.×2	3,000
	Fuel Oil	12 in.×2	3,000
Idemitsu Oil No. 2	Crude Oil	12 in.×2	4,000
	Fuel Oil	12 in.×2	1,500
	Propane	12 in.×1	1,000
	Butane	12 in.×1	1,000
Idemitsu Oil No. 3	Fuel	8 in.×1	800
	Naphtha	6 in.×1	500
	Lub. Oil	6 in.×1	500

Berthing at Sea Berth: Berthing is limited to daylight hours only. Vessels always berth with the bow towards the N.E. end of the berth. In the normal berthing manoeuvre the vessel is brought parallel to the berth, at a distance of about 200/300 m., and then warped alongside. While approaching the berth, Pilots check the speed with shore targets and radar distance. Vessel is required to maintain the 3 cm. radar in operation. When coming alongside, speed is monitored by a Sonar doppler installed at the berth. The Pilot is advised by walkie-talkie if the berthing velocity exceeds the safety limits. The speed of approach for vessels up to 258,096 d.w.t. must be less than 15 cm./sec.

When berthing, sliding along the berthing dolphins should be avoided so as not to damage the rubber cell fenders.

The normal mooring configuration is:

4 head lines
3 breast lines forward
3 back springs forward
3 back springs aft
3 breast lines aft
4 stern lines

It is advisable to have ready a certain number of synthetic ropes.

The breasting dolphins are located quite close and the breasting lines are short and are at a steep angle.

A Terminal Port Captain remains on board during the entire operation and should be consulted with regard to mooring arrangements. Caution should be exercised for wash caused by passing ships.

Close co-ordination is maintained between the Terminal and the shore throughout the operation.

No repairs are permitted alongside. IOTTSG Safety and Pollution check lists are strictly observed.

Operator's Report: 1983.

Keiyo Sea Berth (Discharging Terminal): Operated by Keiyo Sea Berth Co. Ltd.

Terminal operates 24 hours per day, 7 days a week. Ships moored and unmoored daytime, weather or other circumstances permitting. Terminal will not be closed due to any holidays.

Location: Lat. 35° 30' 30" N., Long. 139° 56' 25" E.

Pilotage: Compulsory.

Anchorage: 236°, 5,000 m. and 305°, 3,200 m. off from centre of Keiyo Sea Berth.

Restrictions: Max. draft 19.2 m. but vessels whose draft exceeds 18 m. are tide controlled (full flood required when ships made fast).

Berthing: West Berth, starboard side alongside. East Berth, port side alongside.

Cargo Rates: Maximum rate 12,000 kl./hr. Maximum pressure 9 kg./sq.cm. at manifold.

LPG:(Chiba)					
Name	Chiba No. 2	Fuji Berth	Anegasaki	KPI Pier	Marubeni
Owner	Idemitsu	Fuji Sekiyu	Tokyo EP Co.	Kyokuto Sekiyu	Marubeni
Type	Dolphin	Dolphin	Dolphin	Dolphin	Dolphin
Max. Deadweight Berthed	80,000	120,000	60,000	100,000	57,000
Max. LOA Berthed (m.)	260	—	250	260	230
Max. Draft Berthed (m.)	13.9	15	12.5	13.5	12.5
Side Alongside	Port	Starboard	Port	Starboard	Port
Water Depth in Channel (m.)	16	15.7	16	15	18
Bore, Manifold (m.s.)	12/12	12/8	12/8	12/12	12/10
Storage Tanks, LPG (Thousand Kilolitres)	3×25.5 + 1×50	2×20	2×60 2×45	2×77.6	1×30 1×20
Storage Tanks, LBG (Thousand Kilolitres)	1×25.5 + 1×50	1×40 1×20	4×40	2×77.6	1×30
Derrick Necessary	No	Yes	No	No	Yes
Accommodation Ladder Necessary	Yes	Yes	No	No	No
Bunker from Shore	6 in.	8 in.	8 in.	10 in.	—
Bunker from Barge	No	No	Yes	No	
FW from Shore	Yes	Yes	Yes	No	Yes
Ship-Side Return Gas Blower Needed	Yes	Yes	No	Yes	Yes

FRESH WATER: Available by barge and shore line.

MEDICAL: No advance notice required unless urgent.

FUEL: Most grades available.

CONSULS: None.

REPAIRS: All major repairs possible.

DRY DOCK: Mitsui Ship Building Yard. 500,000 d.w.t. and 300,000 d.w.t. dry docks.

GANGWAY/DECK WATCHMEN: Recommended.

OPENING/CLOSING HATCHES: Carried out by stevedores.

SHIP'S CERTIFICATES: See "Tokyo".

CUSTOMS ALLOWANCES: Tobacco – 200 cigarettes. Wine and/or spirits – 1 bottle.

REPATRIATION: Possible.

AIRPORT: About 40 km. to New Tokyo Airport (Narita).

TIME: Japan Standard Time (135° E.) = GMT plus 9 hours. Permanent.

HOLIDAYS: New Year's Day (January 1st); Attaining the Age of Maturity Day (January 15th); State Foundation Day (February 11th); Vernal Equinox Day (March 21st); Green Day (April 29th); Constitution (May 3rd); Children's Day (May 5th); Respect Day for the Aged (September 15th); Autumnal Equinox Day (September 24th); Gymnastic Day (October 10th); Civilisation Day (November 3rd); Labour Thanksgiving Day (November 23rd); Emperor's Birthday (23rd December). Cargo work can be arranged at 50 – 100% extra on basic cost.

POLICE/AMBULANCE/FIRE: Police Tel: 110, Fire and Ambulance 119.

TELEPHONE: Facilities for placing telephones on board only at Chuo Pier.

SHORE LEAVE: Local Immigration Offices issue shore pass valid for only 7 days, but 15 days extensions possible if ship stays longer.

AUTHORITY: Chiba Port Administration Office, 6-1 Chuoko, 1-chome, Chiba City, Chiba Prefecture, Japan. *Tel:* (0472) (46)6201. *FAX:* 0472 (46) 6206.

Port Captain of Chiba (Chiba Maritime Safety Agency), No. 1-12-2, Chuoko, Chuo-ku, Chiba 260, Japan. *Tel:* 043-242-1805, 7329. *FAX:* 043-242-1810.

AGENT: Senwa Shipping Agency, c/o Daito Corporation Co.Ltd., 1-9-5 Chuoko, Chuo-ku, Chiba, 260 Japan. Tel: (043) 238-5111. Telex: 3722-131. Fax: (043) 238-5125. Cables: Daito Chiba.

Funabashi: Senwa Shipping Agency, c/o Daito Corporation Co.Ltd., 6-1 Shiomi, Funabashi-Shi, Chiba 273, Japan. Tel: 0474-37-1848. Fax: 0474-37-1841. Telex: 2938-333. Cables: Daito Funabashi.

ETAJIMA: 34.11 N. 132.29 E. (See Plan)

PORT STATUS: Closed Port.

LOCATION: Itochu Oil Terminal: Lat. 34° 11' 28" N., Long. 132° 29' 00" E.

Zen-Noh Berth: Lat. 34° 12' N., Long. 132° 29' 33" E.

DOCUMENTS:

Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
Declaration Inward/Outward of Vessel (Ship's Agent to prepare).
5 copies Ports of Call List.
6 copies Crew Manifest.
6 copies Passenger List.
1 copy List of Ship's Stores.
1 copy Declaration of Crew's Baggage.
Cargo Manifest (Ship's Agent to prepare).
1 copy Maritime Declaration of Health.

Customs Formalities: Formalities are to be carried out at the ship's last calling port in Japan or Kure port for entering Etajima (closed port), prior to proceeding to Etajima.

PILOTAGE: Inland Sea pilotage should preferably be arranged through Agent by cable via Nagasaki Radio, giving 72 hours notice. Urgent correction of ETA outside business hours should be cabled direct to Pilot Station. Inland Sea Pilot Association covers all Inland Sea ports.

Inland Sea pilot boards at the following positions:

1. Vessels transitting Bungo Channel:
   Inland Sea Pilot boards at Sekisaki Pilot Station (33° 13' N., 131° 56' E.). Telegraphic address "Anjin Saganoseki".
2. Vessels transitting Kanmon Strait:
   Kanmon Strait Pilot boards at Mutsure Pilot Station (33° 59.5' N., 130° 52.6' E.). Compulsory for vessels over 10,000 g.r.t. Telegraphic address "Kanmon Pilot Moji". Inland Sea pilot boards at Hesaki Pilot Station (33° 58.0' N., 131° 01.1' E.). Telegraphic address "Anjin Moji".
3. Vessels transitting Kii Strait:
   Osaka Bay Pilot boards at Tomogashima Pilot Station (34° 10' N., 135° 00' E.). Telegraphic address "Osakabay Pilot". Inland Sea pilot boards at Wadamisaki Pilot Station (34° 35' N., 135° 08' 24" E.). Compulsory for vessels over 10,000 g.r.t. Telegraphic address "Anjin Kobe".

Note: VHF communication with Pilot Station available as follows:

Name of Station	*Call/Answer Channel*	*Communication Channel*
Oita Port Radio (for Sekisaki)	16	14
Shimonoseki Port Radio (for Mutsure)	16	14
Kobe Port Radio (for Wadamisaki)	16	14

4. Most Inland Sea pilots act as harbour pilots up to the berth or anchorage at destination. If vessel requires only harbour pilot, harbour pilot boards at Kure Quarantine Anchorage.

ANCHORAGE: No anchorage. Vessel is able to anchor off Kure port, if vessel arrives at night time or if berth occupied by another vessel. Depth is 20.0 m.

RESTRICTIONS: Berthing/unberthing from one hour after sunrise to one hour before sunset. Portion of Nasami Strait (Hiroshima Bay) has 17.0 m. depth, so Maritime Safety Agency request bottom clearance of 10% of ship's draft plus 50 cm.

In the following cases Inland Sea pilot and Maritime Safety Agency request escort boat at Nasami Strait:

1. Tankers over 50,000 d.w.t., if vessel loaded with dangerous cargo.
2. Large vessels over 250 m. LOA.
3. If vessel's draft over 15.0 m.

MAX. SIZE: Itochu Oil Terminal: LOA 273 m., 120,000 d.w.t. (half cargo) and draft 14.0 m.

Zen-Noh Berth: LOA 220 m., 56,000 d.w.t. and draft 12.0 m.

HEALTH: See "Late Reports".

RADIO: Master is recommended to communicate with Agent through Nagasaki Radio, which covers all ports in Japan.

VHF: Hiroshima Port Radio on Channels 11, 12, 14 and 16.

RADAR: No radar station at Etajima.

TUGS: Available from 2,600 h.p. to 3,300 h.p. Tugs normally join off Kure Port and usually tug's line is used without extra charge.

BERTHING: Berthing/unberthing from one hour after sunrise to one hour before sunset.

Name of wharf : Zen-Noh Berth
Cargo : Fertiliser
Length/depth : 190 m./13.0 m.
Permissible draft & LOA : 12.0 m./220 m.
Cranes : 2×350 t.p.h.
Capacity : 56,000 d.w.t.

CRANES: Floating cranes (lifting capacity from 100 tonnes to 300 tonnes are available from Kure Port or Hiroshima Port.

BULK CARGO FACILITIES: See "Berthing".

SPECIALISED CARGO-HANDLING FACILITIES: No facilities at Etajima.

BRIDGES: No bridge restriction at Etajima (Hiroshima Bay area).

STEVEDORES: Discharging of fertiliser is on "Free in/out" basis, therefore stevedorage is to receiver's account.

MEDICAL: No advance notice required, except after office hours and Sunday or holidays. Vaccination against Cholera available.

TANKERS: *Wharf:* Itochu Oil Terminal.

Cargo: Crude oil.
Length/Depth: 118 m. × 15.5 m.
Permissible Draft & LOA: 14.0 m. draft, 273 m. LOA.
Capacity: 120,000 d.w.t. (half cargo).
80,000 d.w.t. (full cargo).
No. and Size of Manifold: 2 × 12 in.
No. and Size of Shore LIne: 1 × 24 in.
Max. Back Pressure on Shore Gauge: 7 kg./sq.cm.
Max. Speed for Discharging: 5,000 kl./hr.

Ballast: During ballast operations, shore personnel remain on board to check for dirty ballast and tug watches for same purpose. There are no slop tanks or facilities for dirty ballast ashore.

Storage: Capacity: Crude oil: 22,000 kl. × 5 tanks; 21,300 kl. × 3 tanks (total crude oil 173,900 kl.).

DENSITY: 1,023.

FRESH WATER: *Itochu Oil Terminal:* No water supply facilities at wharf. Water is available at anchorage by water barge (capacity 330 tonnes) from Hiroshima Port. 3 days advance notice required.

Cost:		
(1)	Daytime on weekday	Y 1,000 per tonne
	Overtime	Y 1,500 per tonne
(2)	Daytime on Sunday/holiday	Y 1,500 per tonne
	Overtime	Y 2,000 per tonne

Zen-Noh Berth: Available from shore pipeline.

Cost:		
(1)	Daytime	Y 400 per tonne.
(2)	Overtime, Sunday and holiday	Y 600 per tonne.

FUEL: Most grades of domestic and bonded oil are available by barge with 3 days advance notice (Itochu Oil Terminal: Unable to supply oil at wharf).

FIRE PRECAUTIONS: *Itochu Oil Terminal:* Following standard tanker berth regulations apply:

Vessel cannot use ship's crane for loading vessel's stores after berthing.

Vessel cannot use radar after berthing.

Barge cannot come alongside vessel for loading oil, water and store after berthing. No naked flames.

CONSULS: None at Etajima.

REPAIRS: *Itochu Oil Terminal:* Small repairs can be undertaken subject to berth owner's permission. However, major repairs and the use of fire at the pier is strictly prohibited by the Kure Maritime Security Board and berth owner.

Zen-Noh Berth: Minor repairs are possible (attend from Kure or Hiroshima).

DRY DOCKS: No dry docks at Etajima (available at Kure Port).

SURVEYORS: Cargo inspectors are available (attend from Kure).

Name of surveyors:
Japan Marine Surveyor and Sworn Measurers Association.
New Japan Surveyors and Sworn Measurers Association.

Registration Surveyors are available (attend from Kure).

Name of surveyors:
Lloyd's Register of Shipping.
American Bureau of Shipping.

GANGWAY/DECK WATCHMEN: Not required.

HATCHES: Hatch opening/closing by crew.

CUSTOMS ALLOWANCES: 60 cigarettes only allowed.

CARGO GEAR: Zen-Noh Berth: Unloading by shore cranes.

Itochu Oil Terminal: No shore cranes.

REPATRIATION: Possible.

AIRPORT: Hiroshima Airport – Distance from Kure approximately 65 km.

Hiroshima/Tokyo (Haneda Airport) – 11 flights per day (domestic airlines).

Hiroshima/Seoul – 7 flights per week (international airlines).

TIME: GMT plus 9 hours. No alteration made to clocks during year.

HOLIDAYS: Itochu Oil Terminal: Work on Sundays/holidays, except 1st January.

Zen-Noh Berth: No work on Sundays, holidays and year end/New Year, from 31st December – 3rd January.

POLICE/AMBULANCE/FIRE: Police Station (Emergency): Tel: 110. Ambulance/Fire: Tel: 119. Kure Maritime Safety Agency: Tel: 0823-21-0110.

TELEPHONES: No arrangements for placing telephones onboard.

SERVICES: All navigation apparatus can be serviced as required with 2 days advance notice.

Provisions available.

Laundry service available.

BANKS:

Hiroshima Bank, Kure Branch, 5-4, Hondori 3-chome, Kure, Japan. Tel: 0823-21-5141. Fax: 0823-24-5575.

Sumitomo Bank, Kure Branch, 1-14, Hondori 2-chome, Kure, Japan. Tel: 0823-22-4921. Fax: 0823-21-0724.

STORING: See "Prelims".

1. At Itochu Oil Terminal: Ship's stores loading by hand.
   At Zen-Noh Berth: Ship's stores loading by barge.
2. Possible to load ship's stores during discharging cargo.
3. Truck cannot proceed alongside at the berth.
4. Cannot use fork truck at berth.
5. Must obtain Customs clearance before loading ship's stores.
6. It is possible to employ riggers to assist with storing.

SHIP SUPPLY SERVICE: Makino Shipchandler, 5-1, Hondori 1-chome Kure, Japan. Tel: 0823-21-4443. Fax: 0823-21-4899.

No craft or helicopter at Etajima.

SHORE LEAVE: Kure Immigration Officers issue shore pass if crew members have valid Passports or Seaman's Books.

GARBAGE DISPOSAL: No service available.

WASTE OIL DISPOSAL: No service available.

SEAMAN'S CLUBS: None.

REGULATIONS: Special Regulations for tankers berthing at Itochu O Terminal.

Normal port regulations at Zen-Noh Berth.

DELAYS: If vessel arrives at night time, vessel must await berthing anchorage.

GENERAL: Etajima is local port which makes it difficult to arrange requirements. At least 3 days notice helpful.

AUTHORITY: Ohgaki Doboku (Public) Office, 25-3, Oaza Oha Ohgaki-cho, Saeki-Gun, Hiroshima Pref., Japan. *Tel:* 0823-57-343 *FAX:* 0-823-57-6698.

Operators: Etajima Oil Supply Terminal: Itochu Oil Terminal Co.Ltd., 1-1 Konan, 3-chome, Etajima-cho, Akigun, Hiroshima Pref., Japan. *Tel:* 0823-42-3131. *FAX:* 0823-42-3504. *Contact:* T. Shimizu, General Manager.

Zen-Noh Berth: 4319, Futatsuhama, Etajima-cho, Akigun, Hiroshima Pref., Japan. *Tel:* 0823-42-1890.

FUKUI: 36.12 N. 136.07 E. (See Plan)

DOCUMENTS: This port is defined as a "Closed Port", so all in-port formalities must be undertaken at previous Japanese port or at Tsuruga Port.

Ship's Register (and International Tonnage Certificate, if Register does not show Gross and Net Tonnages).
Last Port Clearance.
6 copies Crew List, including Passport numbers.
4 copies Passenger List.
2 copies Stores List.
2 copies Declaration of Crew Baggage.

PILOTAGE: Not compulsory, but available.

RESTRICTIONS: Draft limitation in the channel is 9.0 m.

HEALTH: Radio Pratique is not available. Ordinary quarantine inspection takes place at Quarantine Anchorage of Tsuruga Port or previous Japanese port.

TUGS: 1 tug ("Kyokuryu Maru"), 1,900 h.p.

BERTHING:

Name of Berth	*Length* (m.)	*Depth* (m.)	*Capacity* (d.w.t.)
North Pier No. 1 Wharf	185	10.0	15,000
North Pier No. 2 Wharf	185	10.0	15,000
North Pier No. 3 Wharf	185	10.0	15,000
North Pier No. 4 Wharf	130	7.5	5,000
North Pier No. 5 Wharf	130	7.5	5,000
Kokuden Dolphin No. 1	44	7.5	6,000
Hokuden Dolphin No. 2	44	7.5	6,000

STEVEDORES: Normal working time is 0800 hrs. – 1700 hrs. Sunday/holiday and overtime works are subject to negotiation.

FRESH WATER: Available.

FUEL: Bonded oil is brought from Moji, with sufficient notice.

GENERAL: *Immigration:* The authorities come from Tsuruga.
Lightering: Possible.
Shipchandlers: Provision and stores are obtainable.
Floating Crane: Not available.
Log Gangs: Not available.

AUTHORITY: The Marine Safety Agency, Mikuni Branch, 4-17 Minamihonmachi 3-chome, Mikuni, Sakai, Fukui Pref., Japan. *Tel:* 0776-82-4999. *FAX:* 0776-82-5321.

FUKUYAMA: 34.29 N. 133.26 E. (See Plan)

Located on central Northern coast of Setonaikai (Inland Sea) and on border of Hiroshima Prefecture and Okayama Prefecture.

DOCUMENTS:

Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
3 Crew Lists, including Passport Numbers.
3 Passenger Lists.
1 Stores List.
1 copy Voyage Memo (last 3 months).
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agents will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agents should be provided with necessary information about details of cargoes in advance.

APPROACHES: Main approach channel (leading to raw material discharging berths and pipe loading berth). Depth 16 m. (52 ft. 6 in). Width 350 m. (1,148 ft.). Distance from quarantine anchorage to "A" Berth, 9,500 m.

Pilot undertakes berthing vessels at "A", "B", "M" or "L" Berths, with draft up to 16 m. Vessels drawing over 15.5 m. may berth at high tide.

Branch channel (leading to loading berths except pipe berth). Depth 11 m. (36 ft.). Width 300 m. (984 ft.). Distance from quarantine anchorage to Export berth No. 1: 11,500 m.

ANCHORAGES: Quarantine anchorage position: Lat. 34° 22.5' N. and Long. 133° 26.3' E., an area of 750 m. radius.

PILOTAGE: Inland Sea Pilotage should preferably be arranged through Agent by cable via Nagasaki Radio giving 72 hours notice. Urgent correction of ETA outside business hours should be cabled direct to Pilot Station. Inland Sea Pilot Association covers all Inland Sea ports. Pilotage compulsory for vessels over 10,000 g.r.t. Pilots obtained from one of two Pilot Stations dependent upon vessel's last port of departure and at Master's discretion. Pilotage available throughout 24 hours and 72 hours advance notice preferred, thereafter advising any alterations. Most Inland Sea Pilots also act as Harbour Pilots up to berth or anchorage at destination.

Note: VHF communication available with Inland Sea Pilot Stations. Also see "Shipmaster's Report" before first port.

1. Wadamisaki, at entrance to Kobe (vessels transitting Kii Straits) Position Lat. 34° 34.09' N., Long. 135° 07.54' E. Telegraphic address "Anjin Kobe".

2. Sekisaki, 3 miles South of Sekisaki Lighthouse. (Vessels transitting Bungo Channel). Position Lat. 33° 13' N., Long. 131° 54' E. Telegraphic address "Anjin Moji". In event bad weather, recommended vessels proceed shelter as near as possible having due regard to safety, to Sekisaki Pilot Station.

RESTRICTIONS: Inland Sea (Setonaikai):

1. *Akashi Strait and Bisan Seto:* All vessels, over 200 m. LOA shall navigate on Bisan Seto in daytime only and also vessels over 250 m. LOA have to have an escort boat when navigating on Akashi Strait and Bisan Seto respectively in accordance with the Maritime Regulations. Permissible draft on arrival 16 m., but 12 m. on departure.

2. *Kurushima Strait:* The vessels, over LOA 200 m. shall navigate on Kurushima Strait at slack water in daylight and vessels over LOA 250 m. and up to 300 m. have to have an escort boat when navigating on Kurushima Strait.

The draft restrictions are as follows: The permissible draft for LOA from 200 m. up to 250 m. shall be less than 13 m. and LOA from 250 m. up to 300 m. shall be less than 11 m.

Escort Boat: 2 escort boats with VHF available. Max. speed 24 knots, cruising speed 18 knots.

MAX. SIZE:

Berth	*Max. LOA* (m.)	*Max. draft* (m.)
"A"	305	16.0
"B"	285	16.0
"F"	180	11.0
"E"	210	13.0
"L"	350	16.0

Also see "Berthing".

HEALTH: Radio Pratique available.
Also see "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

VHF: "Fukuyama Port Radio" on Channel 16 (0600 – 2000 hrs.).

TUGS: 5 tugs (3,600 h.p.) available in the Fukuyama Harbour. Additional tugs are available from other Inland Sea terminals.

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by radio. Berthing/unberthing not carried out during hours of darkness.

Nippon Kokan K.K. – Fukuyama Works. Private Berths.

Raw Material Berths (Discharging Berths).

Berth	*Length and depth in metres*	*Max. size of vessels acceptable in d.w.t.*	*Cargoes discharged*	*Remarks*
"L"	315 17.3	200,000	Coal and Ore	2 gantry cranes each with 1,500 t.p.h. discharging capacity. Average discharging rate per hour: Iron Ore 1,200 tons with 1 crane. Coal 800 tons with 1 crane.
"M"	250 17.0	200,000	Coal and Ore	
"A"	300 17	150,000	Coal and Ore	4 gantry cranes (available for both "A" and "B" Berths) each with 1,500 t.p.h. discharging capacity. Average discharging rate per hour: Iron Ore 950 tons with 1 crane. Coal 700 tons with 1 crane. Normally 2 cranes are used for a vessel
"B"	280 16	100,000	Coal and Ore	
"E"	210 14	75,000	Mainly Coal	2 gantry cranes each with 750 t.p.h. discharging capacity. Average discharging rate: Coal 600 t.p.h. with 1 crane.
"F"	180 11	20,000	Mainly Coal for coastal vessels	2 level-luffing cranes each with 300 t.p.h. discharging capacity. Average discharging rate: Coal 500 t.p.h. with 2 cranes.
"S"	249.5 12(max.draft)	35,000	Pig Iron and Scrap for discharging and loading	3 level-luffing cranes each with 15 tons lift capacity. Average discharging rate per hour: Pig Iron 350 tons with 3 cranes. Scrap 300 tons with 3 cranes.

Steel Product Loading Berths:

Name	*Berth No.*	*Length* (m.)	*Depth* (m.)	*Capacity* (d.w.t.)	*Cranes* (tonnes)	*Remarks*
Domestic	1 – 2	200	5	2,000	1×40, 1×250 (Derrick)	Construction Cargo
	3 – 8	600	5	2,000	1×20, 3×30 (LLC)	
	9 – 13	550	6 – 7	1,500 – 3,000	3×20, 1×30 (Gantry)	
	22 – 24	300	7	3,000	1×28 (Gantry)	
Export	1	234	11	20,000	5×30 (LLC)	
	2	230	13	35,000	1×20 (Gantry)	
	3	146	13	35,000		
	4	250	13	35,000	1×20, 1×30 (Gantry)	
	5	130	13	35,000	2×40 (LLC)	
Slag	N	181	7	5,000	1×600 tonnes/p.h. (Ship Loader)	Slag
Public Berths:						
Minooki	1	450	5.50	2,000		
	2	260	7.50	5,000		
	3	130	7.50	5,000		

STEVEDORES: Stevedores available from Monday to Saturday, except holidays and 30th December to 4th January, for loading/discharging.

All cargo loading/discharging by ship's gear or mobile crane. Working hours from 0800 hrs. – 1800 hrs. only.

For a berth term contract on loading, at least 24 hours' prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA.

If stevedores cannot commence loading at time notified by the Agents, the orderers must pay for waiting time. Discharging for all raw materials is on "Free In/Out" basis. Therefore, stevedorage is to receivers account. Loading/unloading is carried out by shore cranes. Ship's gear is not used.

MEDICAL: No advance notice required except on Sundays, holidays and in an emergency.

DENSITY: Summer 1016 – 1022. Winter 1025. The density not much affected by tide, which is maximum 3.84 m.

FRESH WATER: Available at any berth. Supply capacity about 11 t.p.h. Water barge also available, capacity 300 tons, minimum order 200 tons.

FUEL: Bunkers by lighter from Kobe, Mizushima, Tokuyama or Moji area. Advance notice required. Bunkering only during daytime. Oil fence required.
CONSULS: None.
REPAIRS: Only minor repairs.
DRY DOCK: None. Available at Innoshima or Mukayima and Tsuneishi.
GANGWAY/DECK WATCHMEN: Not specially required unless valuable cargo on board. Steel Mill's guard are on watch at all gates.
OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches for loading steel products. Charge is assessed according to tariff. Recommend request stevedores for this work unless crew can complete it before berthing. For discharging raw materials opening/closing hatches must be carried out by ship's crew before berthing.
CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear's maintenance appears to be poor.
CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore but no spirits.
REPATRIATION: Possible.
AIRPORT: Nearest airport is Okayama (70 km.), but Tokyo and/or Osaka are preferable due to convenience of traffic.
TIME: GMT plus 9 hours. No alterations made to clocks during year.
POLICE/AMBULANCE/FIRE: Report to Guardmen's office located at Middle Gate of Nippon Kokan.
TELEPHONES: No arrangements for placing telephone on board. Private telephones connecting with offices in the compound of the Fukuyama Works are placed at each of the raw material berths.

For vessels alongside export berths, private telephone available at foremen's office located on berth.
SERVICES: Hold cleaning.
SHORE LEAVE: Local Immigration Offices issue shore pass valid for 15 days.
GENERAL: Fukuyama is a local and new port, developed along with the expansion of Nippon Kokan, Fukuyama Steel Works.

Ship repairs (except small ones) for machinery, radio, radar, etc., are all arranged by firms located in Tokyo, Osaka and Kobe.
AUTHORITY: Fukuyama Public Works Office, 286-2 Miyoshi-Cho, Fukuyama City, Hiroshima Pref. *Tel:* (0849) 21-1311.

AGENT: Senwa Shipping Agency, c/o Nissan Senpaku K.K., Port Building, 1 Kokan-Cho, Fukuyama-Shi, Hiroshima 721, Japan. Tel: 0849-41-0535. FAX: 0849-43-1104. Telex: 643611/12. Cables: Nissan Fukuyama.

FUNAKAWA: 39.52 N. 139.52 E. (See Plan)

DOCUMENTS:
Ship's Register/Tonnage Certificate.
Last Port Clearance.
5 copies Crew List, including Passport numbers.
5 copies Passenger Lists or "Nil" Lists.
1 copy Declaration of Crew's Baggage.
2 copies Port of Call (date of arrival/departure for previous ports).
Copies of Bills of Lading, to show Customs Inspectors.
Ship's Agent will prepare Inward/Outward Declaration, so they should be provided with necessary information about details of cargoes in advance.

All Port Authorities (Customs/Immigration/Quarantine) will attend from Akita Office, which is 45 minutes away by car.
PILOTAGE: Pilot comes from Akita and boards off Funakawa in position 39° 51' N., 139° 53' E.
ANCHORAGE: Quarantine Anchorage (2,000 m. diameter) is 3,060 m. × 014° from lighthouse.
Note: Fishing nets stretch 6 km. along the shore from Akita and Funakawa. Vessel should be manoeuvred and/or drift without anchor, in case of heavy rough sea to avoid anchor dragging.
MAX. SIZE: Minimum depth at low water in fairway is 10.00 m. Tidal range 0.2 m. – 0.3 m. Also see "Berthing".
HEALTH: Inspectors attend from Akita and board at Quarantine Anchorage.

Also see "Late Reports".
RADIO: Nagasaki Radio. ETA advices should be sent to Agent's Akita Office.
VHF: Channel 16 operated by Regional Maritime Safety Agency Headquarters (Harbour Master).

No port VHF station.
TUGS: No tugs stationed at Funakawa. One or two tugs available from Akita (1×2,000 h.p. and 1×350 h.p.).
BERTHING:

Wharf	*Length* (m.)	*Depth* (m.)	*Max. Draft* (m.)	*Cargo*	*Capacity* (d.w.t.)
5,000 ton Pier	227	7.5	6.0	Oil	2×5,000
7,000 ton Pier	155	8.0	6.8	G.C./Logs	1×7,000
15,000 ton Pier	185	10.0	9.0	G.C./Logs	1×15,000
Japan Energy (Dolphin)		10.0		Oil	1×10,000
A.O.S. (Sea Berth)		19.0		Oil	1×180,000

STEVEDORES: Hours: 0830 hrs. – 1630 hrs. Overtime is available in daylight only.
MEDICAL: Hospital and treatment available.

TANKERS:
5,000 ton Pier: Discharge rate is 250 t.p.h. with one line.

Japan Energy – Dolphin:

(1)	Berth Operator:	Japan Energy Corp.
(2)	Maximum LOA:	130 m.
(3)	Maximum Beam:	N/A
(4)	Maximum Deadweight:	10,000 d.w.t.
(5)	Maximum Draft:	7.20 m.
(6)	Minimum Depth at Berth and required Underkeel Clearance:	10.0 m./10%
(7)	Minimum Depth in Approaches and required Underkeel Clearance:	10.0 m./10%
(8)	Water Density:	1025.
(9)	Any Limitations on Freeboard:	None.
(10)	Type of Berth:	Dolphin.
(11)	Minimum Size of Vessel:	LOA 100 m./2,900 d.w.t.
(12)	Lighterage:	Not available.
(13)	Night Berthing/Unberthing:	Not permitted.
(14)	Grades of Cargo Handled:	Heavy Oil/Crude Oil.
(15)	Tugs Available:	Tug and Line Handling Boat from Akita Port.
(16)	Availability of Bunkers and How Delivered:	Not available.
(17)	Availability of Dirty Ballast Facilities:	Not available.
(18)	Are Slops Accepted:	No.
(19)	Where is the Pilot Boarding Area:	39° 51' N., 139° 53' E. – off Funakawa (Quarantine Area).
(20)	Any Other Restrictions or Relevant Information:	None.

A.O.S. Sea Berth:

(1)	Berth Operator:	Akita Oil Storage Co.Ltd.
(2)	Maximum LOA:	300 m.
(3)	Maximum Beam:	52 m.
(4)	Maximum Deadweight:	180,000 tonnes d.w.t.
(5)	Maximum Draft:	16.5 m. (at any tide).
(6)	Minimum Depth at Berth:	19.0 m.
(7)	Minimum Depth in Approaches and required Underkeel Clearance:	N/A
(8)	Water Density:	1025.
(9)	Any Limitations on Freeboard:	Max. working height of Chicksan arm 22.6 m. above LWL.
(10)	Type of Berth:	Dolphin.
(11)	Minimum Size of Vessel:	-
(12)	Lighterage:	Not available.
(13)	Night Berthing/Unberthing:	Not permitted.
(14)	Grades of Cargo Handled:	Crude (Non-heated).
(15)	Number and Size of Tugs Available:	Tugs not stationed at Port. When required tugs to be called from Akita.
(16)	Availability of Bunkers and How Delivered:	Not available.
(17)	Availability of Dirty Ballast Facilities:	Not available.
(18)	Are Slops Accepted:	No.
(19)	Where is the Pilot Boarding Area:	3 miles South of Berth.
(20)	Any Other Information:	Berth for National Oil Storage.

DENSITY: About 1020.
FRESH WATER: Available. Supply rate 30 tonnes/hr. Cost Y.320/ton in daytime.
FUEL: Not available.
CONSULS: None.
REPAIRS: Minor repairs only.
GANGWAY/DECK WATCHMAN: Not compulsory, but available if required.
OPENING/CLOSING HATCHES: Possible by stevedores, but charges to ship as per tariff.
CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector, to check registered gross tonnage and net tonnage with New Tonnage Certificate. The check is possible on vessel if Customs Officer onboard, but it has to be brought to Akita Office if Officer not attending onboard.
REPATRIATION: Not recommended due to distance from Akita Airport. Also Customs and Immigration are not stationed here.
AIRPORT: No airports located nearby.
HOLIDAYS: Local holidays: January 2nd/3rd; July 20th; August 13th/14th, December 30th/31st. Also 1st, 3rd and 5th Sunday of each month are non-working days.
POLICE/AMBULANCE/FIRE: Contact through Agent.
SERVICES: Hold cleaning not available. Surveyor arrangeable. Ship's telephone not available. Radio/radar minor repairs possible, depending on make. Other services are mainly from Tokyo area.
SHORE LEAVE: Local Immigration Office, attending from Akita, issue shore passes.
AUTHORITY: Funakawa Port Administration Office, 134 Funakawa Aza-Sotogasawa, Funakawa-Minato, Oga-City, Japan 010-05.

FUSHIKI: 36.49 N. 137.03 E. (See Plan)

DOCUMENTS:
Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
6 Crew Lists, including Passport Numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agents will prepare Inward/Outward Declaration, Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Pilot available any time during daylight. Not compulsory. No telegraphic address of Pilot Station, therefore, direct advice to local Agent always required. Pilot meets vessels 209°, 2.5 miles off Fushiki West Breakwater Lighthouse, thence takes vessel to Quarantine Anchorage ground. Due to many fish-nets on both sides of fairway if requiring to come into Quarantine Anchorage without taking Pilot, necessary to advise Agent in advance. In case of bad weather and need to await outside port, recommend cruising in Toyama Bay until sea abates. Bay area too deep to anchor and also danger of fish-nets. When approaching position for Pilot, give exact ETA to Agent by using VHF to Fushiki Harbour Master. Small wooden pilot boat painted black and white. No particular light or sound signals required.

ANCHORAGE: No adequate anchorage at Fushiki but at Toyama Shinko, position 36° 46.8' N., 137° 08.5' E., however unavailable for larger vessels over 10,000 tonnes d.w.t.

RESTRICTIONS: Pilot not available during darkness. No restrictions on tide, because small tide in all seasons. If draft over port limitation, vessel enters port after making adjustment by lightening in Outer Harbour.

MAX. SIZE: Length 175 m., draft 29 ft. in Summer and 30 ft. in Winter. However, depth of port not always definite, being a river port and dredging operations always carried out to keep depth all year round. Tidal range is maximum 0.45 m. Dredging to 10.0 m. depth underway.

HEALTH: See "Late Reports".

RADIO: (Also see "Pilotage".) Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

TUGS: Tugs normally join vessel at port entrance, but sometimes in Outer Harbour for large vessels. Narita-Maru (3,000 h.p.) and Nihonkai-Maru (1,800 h.p.) provide lines, free of charge and Raicho-Maru (2,600 h.p.) uses ship's line. Used only when Pilot on board.

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agents mainly by radio.

Berth	*Length* (m.)	*Capacity* (g.t.)	*Cranes*
Left No. 1 Wharf	160	10,000	2×5 T
Left No. 2 Wharf	150	10,000	
Left No. 3 Wharf	185	15,000	
Left No. 4 Wharf	185	15,000	
Left No. 5 Wharf	90	1,000	
Right No. 1 Wharf	220	2×3,500	1×5 T
Right No. 2 Wharf	220	5,000	
Right No. 3 Wharf	185	15,000	1×8 T
Right No. 4 Wharf	175	15,000	
Right No. 5 Wharf	130	5,000	

Note: Depth becomes shallow with every rainfall. Therefore, recommended to contact the port authorities prior to vessel's call. See "Max. Size".

STEVEDORES: At least 24 hours' prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agents, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew at additional cost. Overtime surcharges 1700 hrs. – 2100 hrs. and 0600 hrs. – 0800 hrs. 60%; Sundays/holidays 100% additional.

MEDICAL: No advance notice required unless urgent.

DENSITY: Average density between 1015 and 1019 in all seasons.

FRESH WATER: Available, from Left Wharves No. 1, 2 and 3, and Right Wharves No. 3 and 4, average 45 t.p.h. Not available at other berths.

FUEL: All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, Osaka Bay and Kanmon Port. Bunkers will be lightered from the nearest bunker port at maximum 7 days' prior notice.

CONSULS: None.

REPAIRS: Minor repairs only.

DRY DOCKS: No dry docks.

GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches if requested.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear's maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 50 cigarettes to take ashore but no spirits.

REPATRIATION: Possible.

AIRPORT: Toyama Airport about 35 km. distance. 6 regular services to Tokyo daily.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

HOLIDAYS: All national holidays on calendar, also 2nd Saturday every month, 1st May and 30th December – 4th January.

POLICE/AMBULANCE/FIRE: Police, Fushiki Police Station, Takaoka (0766) 44-1500; Ambulance, Fushiki Fire Station, Takaoka (0766) 44-1122; or 119; Fire, Fushiki Fire Station, Takaoka (0766) 44-1122.

TELEPHONES: No facilities for placing telephones on board.

SERVICES: Hold cleaning available.

SHORE LEAVE: Local Immigration Offices issue shore pass valid for only 3 days, but 3 days extension possible if ship stays longer.

DEVELOPMENTS: Fushiki Outer Port Construction is scheduled for completion in 2000. If completed, max. depth will be 14.0 m. At that time, all the present berthing facilities will be shifted to the area.

AUTHORITY: Fushiki Port Administration Office, 5-15, Fushiki Minato-machi, Takaoka City, Toyama Pref., Japan. *Tel:* (0766) 44-0277.

GAMAGORI: 34.48 N. 137.14 E. (See Plan)

DOCUMENTS:
Ship's Register (and International Tonnage Certificate, if Register does not show gross and net tonnages).
Last Port Clearance.
3 copies Ports of Call List (Voyage Memo).
6 copies Crew List, including Passport numbers.
4 copies Passenger List.
2 copies Stores List.
2 copies Declaration of Crew's Baggage.

PILOTAGE: Compulsory for vessels exceeding 10,000 g.r.t. (this is applicable within Ise Bay). Pilot boards near Ise Buoy No. 1 (approximate Lat. 34° 30' 08" N., Long. 137° 03' 08" E.). For vessels under 10,000 g.r.t., pilotage is not compulsory.

Pilots are available at the anchorage for berthing.

ANCHORAGE: Quarantine Anchorage: Lat. 34° 44' 50" N., Long. 137° 12' 20" E.

RESTRICTIONS: Entry during darkness is prohibited.

Draft limitation in channel is 9.80 m.

HEALTH: Radio Pratique is available. Ordinary quarantine inspection takes place at the anchorage.

Also see "Late Reports".

TUGS: 3×3,500 h.p. and 1×3,200 h.p.

BERTHING:

Name of Berth		*Length* (m.)	*Permissible Draft/LOA* (m.)	*Capacity* (d.w.t.)
Takeshima Wharf	No. 1	80	6.0	3,000
	No. 2	131	7.5	5,000
	No. 3	134	7.5	5,000
Gamagori Wharf	No. 2	180	5.5	2,000
	No. 3	90	5.5	2,000
	No. 4	185	9.8/160	15,000
	No. 5	390	7.3/210	5,000
	No. 6	90	5.5	2,000
	No. 7	90	5.5	2,000
	No. 8	390	7.3/210	5,000
	No. 9	185	9.8/215	15,000
Hamacho Wharf	No. 1	185	9.8/170	15,000
	No. 2	130	7.3/130	5,000

STEVEDORES: Normal working time is 0830 hrs. – 1630 hrs.

FRESH WATER: Available.

FUEL: Bonded oil to be brought from Yokkaichi or Nagoya. Bunkering oil boom has to be arranged.

GENERAL: *Immigration:* The authorities are stationed at Toyohashi port.
Lightering: Not possible.
Floating Crane: Not available.
Log Gangs: Available.
Shipchandlers: Provisions and stores are obtainable.

HACHINOHE: 40.33 N. 141.33 E. (See Plan)

DOCUMENTS:
5 Crew Lists, including Passport Numbers.
5 Passenger Lists, if any.
1 List of Ship's Stores (specified Customs form).
3 Lists of Ports of Call.
1 Declaration of Crew's Baggage (only first port of call in Japan).
1 Maritime Declaration of Health (for Quarantine on specific form).
Ship's Register.
International Tonnage Certificate.
Port Clearance from previous Port.
Derat Certificate or Derat Exemption Certificate.
Passports or Seaman's Books.

Ship's Agent will prepare Inward/Outward Declaration, Cargo Manifest for discharge and Cargo Manifest in transit using specific forms.

PILOTAGE: Not compulsory.

Harbour Pilot is arranged by Agent at Master's request, therefore vessel has to ask Agent at latest 24 hours before arrival.

Pilot generally leaves by tug from Shirogane Pier, 30 minutes before boarding time, and tug flies a pilot flag "H". Vessel is able to contact pilot through VHF Channel 16 installed on the tug, just before pilot comes on board.

Vessel must keep Agents advised of her ETA in order to inform exact ETA to pilot.

Pilot ladder is required on the lee side of a vessel, and to be 10 ft. above sea level with manropes slightly shorter. Boat rope not required. Pilots are available from 0600 hrs. to 2200 hrs. for berthing and up to 2400 hrs. for sailing, and anytime in an emergency.

ANCHORAGES: Open sea anchorage with a sandy bottom. Depth of Quarantine Anchorage is 18 m. – 22 m., but this place is too close to the breakwater, therefore pilot recommends anchoring in vicinity of Lat. 40° 34' N., Long. 141° 33.5' E., in depth of about 22.0 m., soft sand bottom, where pilot comes on board even if weather is bad.

RESTRICTIONS: Max. draft limitation is 12.0 m., and LOA limitation is 230 m., no restriction on beam.

MAX. SIZE: See "Berthing".

HEALTH: At first port of call in Japan, vessel should obtain Free Pratique. If the vessel is qualified to apply for Japanese Radio Pratique, vessel has to send Radio Pratique Message (RPM) to Hachinohe Quarantine Station through Hachinohe Agents, within 36 hours prior to vessel's arrival. However, Saturday, Sunday and national holidays should be excluded when counting the hours, otherwise a quarantine official comes on board upon berthing, unless there is berth congestion.

Vessel must report to Quarantine Office, number of crew and passengers with health condition, also if there is a sick person on board, Master to report the illness condition in detail through the Agents.

Also see "Late Reports".

RADIO: Masters' telegrams via Nagasaki Radio are passed on to Agents.

Call sign: Nagasaki Radio JOS, JOT, JOU and JDB.

Inmarsat telex available.

VHF: There is no Radio Station in Hachinohe.

When vessel approaches Hachinohe, and in case of emergency, VHF (Channel 16, call sign "Shiogama Hoan") belonging to 2nd Regional Maritime Safety Headquarters, is available to inform Agents.

RADAR: No shore radar service, however harbour tugs are equipped.

TUGS: 5×3,200 h.p. and 1×3,600 h.p.

Pilot generally requests one tug if vessel less than 5,000 g.r.t., and 2 tugs if vessel more than 5,000 g.r.t., but depends on weather, berth and whether she is equipped bow thruster.

BERTHING: Public Wharves: Controlled by Aomori Pref.

Name	*Capacity*	*Length*	*Depth*	*Permissible*		*Cargo handled*
	(d.w.t.)	(m.)	(m.)	*LOA* (m.)	*Draft* (m.)	
Hattaro A	5,000	130	7.5	110	6.8	Steel, Bulk Cargo
Hattaro B	5,000	130	7.5	110	6.8	Steel, Bulk Cargo
Hattaro C	15,000	185	10.0	175	9.5	Bulk Cargo
Hattaro D	50,000	270	13.0	230	12.0	Bulk Cargo
Hattaro E	50,000	270	13.0	230	12.0	Bulk Cargo, Containers
Hattaro F	15,000	185	10.0	180	9.8	Logs, Bulk Cargo
Hattaro G	15,000	185	10.0	180	9.8	Logs, Bulk Cargo
Hattaro H	5,000	130	7.5	110	7.0	Cars, B/Cargo, Steel
Hattaro I	5,000	130	7.5	110	7.0	Cars, Bulk Cargo
Hattaro L	5,000	130	7.5	110	7.0	Bulk Cargo, General
Hattaro M	5,000	130	7.5	110	7.0	Steel, Bulk Cargo
Hattaro N	5,000	130	7.5	110	7.0	Steel, Bulk Cargo
Hattaro O	5,000	130	7.5	110	7.0	Steel, Bulk Cargo
Hattaro P	40,000	240	12.0	230	11.0	General Cargo, Cars
Kawaragi (Pier 1) No. 2	5,000	45	7.5	105	6.8	Petroleum Products
Kawaragi (Pier 1) No. 3	5,000	45	7.5	105	6.8	Petroleum Products
Kawaragi (Pier 1) No. 4	5,000	37	7.5	105	6.8	Petroleum Products
Kawaragi (Pier 1) No. 5	5,000	37	7.5	105	6.8	Petroleum Products
Kawaragi (Pier 1) No. 6	5,000	26	7.5	105	6.8	Propane/Butane Gas
Kawaragi Pier No. 2	50,000	280	14.0	230	12.7	Bulk Cargo
Shirogane A	10,000	160	9.0	160	8.2	Bulk Cargo, Cement
Shirogane B	15,000	185	10.0	175	9.3	Marine Products
Shirogane C	5,000	115	7.5	100	7.0	Cement, Fish Oil
Private Wharves:						
Mitsubishi Paper Mills Pier	50,000	240	12.0	230	11.0	Woodchip, Pulp, Kaolin, Pulp Logs
	15,000	150	10.0	130	9.5	Paper Products
Tohoku Grain Terminal Pier	50,000	305	13.0	230	11.9	Grain
Sumikin Kogyo Pier	20,000	285	11.0	175	9.7	Limestone, Cement

CRANES/BULK CARGO FACILITIES:

Hattaro A	Mobile Cranes.
Hattaro B/C	2 unloaders × 8 tons (clear height from water 16 m.).
Hattaro D/E	1 unloader × 19 tons (clear height from water 21 m.) and ship's gear if available.
Hattaro E	1 Container gantry crane with lifting capacity 30.5 tons.
Hattaro F/G	Mobile cranes and ship's gear if available.
Hattaro H/I/L/M/N/O	Mobile cranes and ship's gear if available.
Shirogane A	Mobile crane and 4 pipelines for cement.
Shirogane B	Mobile cranes and ship's gear if available.
Shirogane C	1 pipeline for cement and 2 lines for fish oil.

3 mobile tower cranes are available at Hattaro C/D/E/F/G, and lifting capacities are 1×25 tons and 2×15 tons. Clear height from high water level is more than 20 m. There is no heavy lift crane in Hachinohe.

2 mobile cranes available at Kawaragi Pier No. 2.

Mitsubishi Paper Mills Pier: Hopper and belt conveyor for woodchips and shore mobile crane for other cargoes.

Tohoku Grain Terminal Pier: 2 pneumatic unloaders (each 400 t.p.h.) for maize and sorghum, and 1 pneumatic unloader (130 t.p.h.) for soya bean meal.

Sumikin Kogyo Pier: 2 loaders (each 1,500 t.p.h.).

BRIDGES: If proceeding to a private berth in the channel, vessel has to pass under the bridge which has a minimum clearance from water of 30 m.

STEVEDORES: Stevedores are Hachinohe Kowan Unso Kaisha Ltd. Final exact ETA is to be advised by Master, at latest by noon the day before vessel's arrival on weekdays, in order to arrange gangs.

Main commodities handled: Nickel ore, coal, zinc/lead concentrates, woodchips, chrome ore, grain, logs, lumber, kaolin, fish meal in bag, etc.

Usual working hours and production:

Nickel Ore	0830 – 2000	10,000 tonnes.
Woodchips	24 hours	12,000 tonnes.
Grain	0830 – 1630	5,600 tonnes.

Following Sundays/holidays are not worked: Every 1st and 3rd Sunday; January 1st – 3rd (New Year Holiday); May 1st (Labour Day); August 1st (Hachinohe Festival); August 15th (Feast of Lanterns) and December 31st.

Other Sundays and national holidays are workable if requested by client.

Workable national holidays are January 15th (Adult's Day); February 11th (National Foundation Day); March 21st (Vernal Equinox Day); April 29th (Green Day); May 3rd (Constitution Memorial Day); May 4th (National Holiday); May 5th (Children's Day); September 15th (Respect for the Aged Day); September 23rd (Autumnal Equinox Day); October 10th (Health and Sports Day); November 3rd (Culture Day) and November 23rd (Labour Thanksgiving Day).

MEDICAL: 3 General Hospitals and Medical Specialists available. No advance notice required unless urgent.

TANKERS: Max. size 5,000 d.w.t., also see "Berthing".

DENSITY: About 1025.

FRESH WATER: There is no water barge, but water is available from shore by water hoses at about 30 – 35 t.p.h.

Cost per ton: Yen 410 at Public Pier, Yen 320 at Mitsubishi Pier, Yen 800 at Tohoku Grain Terminal Pier and Yen 480 at Sumikin Kogyo Pier.

FUEL: Domestic Marine Diesel obtainable by barge. Bonded oil is brought from Yokohama, Chiba, etc., with sufficient notice.

CONSULS: None.

REPAIRS: Minor repairs possible.

DRY DOCKS: For new buildings and repairs, Kitanihon Shipbuilding Co.Ltd. Tel: 0178-24-4171. Fax: 0178-22-7803.

New buildings (A): 8,500 g.r.t., LOA 140 m., breadth 25.65 m.
Repairs (B): 1,999 g.r.t., LOA 90 m., breadth 12.00 m.
Repairs (C): 8,000 g.r.t., LOA 140 m., breadth 26.50 m.

Dock C is now under construction, but will be available from September 1992.

SURVEYORS: No Classification Society at this port, but Marine Surveyors "Nippon Kaiji Kentei Kyokai" and "Nakajima Kentai Kyokai", licensed by the Japanese Government. Surveyors of NK, Lloyd's, ABS and NV normally come from Hakodate, Tokyo or Yokohama.

GANGWAY/DECK WATCHMEN: Not compulsory, but shore-based watchmen arrangeable at Master's request.

OPENING/CLOSING HATCHES: Stevedores will carry out hatch opening/closing at Master's request, in case of pontoon type hatches. Other types are opened/closed by crew.

CUSTOMS ALLOWANCES: Customs allow 200 cigarettes and 1 bottle of spirits per week.

CARGO GEAR: See "Cranes/Bulk Handling Facilities".

REPATRIATION: All facilities available for crew changes.

AIRPORT: Misawa Airport, distance Hachinohe/Misawa about 40 km.

Domestic flights: Misawa/Tokyo 4 flights and Misawa/Sapporo 1 flight per day.

TIME: GMT plus 9 hours.

HOLIDAYS: See "Stevedores".

TELEPHONES: It is not possible to place telephones on board.

There are telephone booths at every public pier for international telephone calls.

SERVICES: Following services are arrangeable: Tank cleaning, but small tanks only, removal of dirty oil, compass adjusting, radio and radar repairs, sea protest, safety equipment.

Extension of certificates are possible, but classification surveyor comes from Tokyo or Yokohama.

BANKS: Aomori Bank, Hachinohe Branch, 10-2, Ban-cho, Hachinohe City, Aomori Pref., Japan. Fax: 0178-46-0975.

STORING:

(A) Stores are delivered by truck which can come alongside ship-side, even when loading or discharging, but must arrange ferry boat or tug in case of Tohoku Grain Terminal Pier.

(B) Possible to deliver at any time with Customs permission, with ship's gear, shore crane can also be used.

(C) Local riggers can be employed to assist with storing.

POLICE/AMBULANCE/FIRE: Police 110; Ambulance and Fire 119.

SHIP SUPPLY SERVICE: Tohoku Senpaku Shoji Co.Ltd., 10-16, Kaigan, Kawaragi, Hachinohe City, Aomori Pref., Japan. Tel: 0178-28-8008. Fax: 0178-28-8009.

Stores supply is performed in port or at anchorage by boat.

SHORE LEAVE: Immigration issue shore-passes for ship's stay if crew have valid Passport or Seaman's Book.

IDENTIFICATION CARDS: Not required.

REGULATIONS: Vessel may sail anytime.

DELAYS: No delay normally but sometimes due to congestion of a specific berth.

DEVELOPMENTS: The Port Authority has a plan to increase the Fairway depth, extend the breakwater and construct new deep water berths. The expected dates of completion is within 7-8 years.

The following berths are planned, and 4 berths are already under construction:

Name	*Length*	*Depth*	
Kawaragi Pier No. 1	560 m.	14.0 m.	2 berths × length 280 m.
	260 m.	7.5 m.	2 berths × length 130 m. – under construction.
Hattaro Pier No. 2	540 m.	13.0 m.	2 berths × length 270 m. – under construction.

AUTHORITY: Hachinohe Port Administration Office, 1 – 131 Kitanuma, Kawaragi, Hachinhoe City, Aomori Pref., Japan. *Tel:* (0178) 28–2105. *FAX:* 0178-20-4746. *Contact:* General Manager.

Hachinohe Harbour Master, 16, Chikkogai 2-chome, Hachinohe City, Aomori Pref., Japan. *Tel:* 0178-33-1221. *FAX:* 0178-33-1223.

HAKATA: 33.36 N. 130.24 E. (See Plan)

DOCUMENTS:

Customs: When vessel arrives direct from foreign port, Customs Officials will board vessel for search. The following documents are to be submitted.

Crew List, Passenger List, Store List, Manifest of Crew Personal Effects (must be signed by individual crew member), Arms and Ammunition List, Narcotics List, List of Ports of Call on Current Voyage, Discharging Cargo Manifest, Through Cargo Manifest, Declaration Inward/Outward (Form No. C2000).

The following will be checked on board: Ship's Registry, Last Port Clearance, International Tonnage Certificate.

When vessel comes from Japanese port, Customs Officials will not attend on board, except special case. The Master or Agents are to attend at Customs House for entry formalities with the following documents:

Discharging Cargo Manifest, Through Cargo Manifest, Declaration Inward/Outward, Ship's Registry with International Tonnage Certificate (if on board), Last Port Clearance, Documents entrusted with the Master at previous port.

On vessel's departure, a clearance is issued by Customs, after confirming payment of tonnage dues.

Immigration: Immigration Officials board vessel in special cases, on her arrival in port to examine passports, discharge books and/or other equivalent travel documents and provide a 15 day Landing Pass for crew members. But in most cases, Agents are required to attend at their office carrying above documents and Inward/Outward Declaration, 2 copies of Crew List and Passenger List with 1 copy of Application of Issuance of Landing Pass. Receiving Crew List/Passenger List beforehand is a great help in expediting Immigration business. Extension of the Landing Pass is available, if the vessel stays over 15 days, on application.

In the event that crew members, without entry visas, are to be landed for repatriation or transfer, Immigration will not permit their landing unless passage, by either sea or air, ensuring the prompt departure from Japan (within 72 hours) of these men have been booked, or unless the vessels to which they are to be transferred, arrive in Japan within 5 days.

PILOTAGE: Not compulsory, but necessary unless Master well acquainted with locality. Pilot embarks at Quarantine Anchorage; position Lat. 33° 38' N., Long. 130° 19' 30" E. Request for Pilot made through ship's Agent, Master reporting ship's ETA by radio giving accurate time of arrival at least 24 hours prior arrival, also any subsequent change. Pilot on VHF Channel 16, 11 and 12. In the event of rough sea, harbour tug-boat will be used.

Shipmaster's Report: 1982: The Hakata-Bay Pilot is available on request off Genkai Island (Lat. 33° 42' N., Long. 130° 15.5' E.).

ANCHORAGE: No anchorage in port.

Anchoring at Quarantine Anchorage is feasible, subject to size/draft of vessel and requesting an Entry Procedure from Customs Officials.

RESTRICTIONS: No restrictions if vessel in Free Pratique and draft less than 10 m. No tide.

MAX. SIZE: No restrictions of length, breadth. Draft 11.10 m.

HEALTH:

(a) Quarantine Station: Sea area surrounded by the following lines:

1. The line connecting between the top of the Nokono-Shima and point "A" which is located on the sea in the direction of 90° and at the distance of 2,540 m. from the top of the Nokono-Shima. (The parallel of 33° 38' 00" N.)
2. The line connecting between point "A" and point "B" which is located on the sea in the direction of 000° and at the distance of 1,750 m. from point "A". (The Longitudinal line of 130° 20' 00" E.).
3. The line drawn towards the Nokono-Shima in the direction of 270° from point "B". (The parallel of 33° 37' 06" N.).
4. The coast line of the Nokono-Shima.

The centre of the Quarantine Anchorage: Lat. 33° 37' 30" N., Long. 130° 19' 30" E.

(b) Quarantine service is rendered from sunrise to 1 hour before sunset.

(c) "Q" flag should be hoisted until Free Pratique is granted.

(d) When vessel arrives from plague infected or suspected area within 10 days after she left such place, a 24-hour special quarantine is required. All sanitary scuppers must be closed and garbage not thrown overboard after vessel reaches 60 miles off inland sea areas.

(e) Radio Pratique is applicable.

Also see "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

VHF: Hakata Port Radio on Channels 11, 12, and 16. Power 50 watt. 24 hour operation.

TUGS: "Taiho Maru" 3,400 h.p., "No. 2 Kyoto Maru" 1,800 h.p., "Tetsuho Maru" 3,520 h.p., "Wakasugi Maru" 2,600 h.p., "Hakuun Maru" 3,400 h.p., "Hakata Maru" 3,840 h.p., "Kashii Maru" 3,840 h.p.

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by radio.

Wharf	*Berth* No.	*Length* (m.)	*Depth* (m.)	*Remarks*
Central Pier	2/3	166	9.00	The berths are mainly used by passenger ferries under priority.
	4	150	10.00	
	5	180	9.40	
	6	180	9.60	
	9/10	400	6.30	
Suzaki Pier	1	130	7.50	
	2	183	11.20	2 Panamax type of vessels can be accommodated using 2 berths.
	3	183	11.00	
	4	183	11.00	
	5/6	260	7.50	
Hakozaki Pier	1	130	6.90	
	2	130	7.50	
	3	130	7.00	
	4	185	9.90	
	5	240	11.80	Container Berth under priority.
	6	130	7.00	The berths are mainly used by feeders/car carriers under priority.
	7	130	7.00	
	8	130	7.00	
	9	130	7.00	
	10	130	7.00	
	11	130	7.00	
	12	240	12.00	
	13	240	12.00	
Lumber Wharf		175	8.50	
Higashi-Hama Pier		650	7.50	

CARGO HANDLING FACILITIES:

	Shore Facilities	*Production/Capacity*
Suzaki Pier:		
No. 2 Wharf No. 3 Wharf No. 4 Wharf	4 units of pneumatic unloaders.	300 t.p.h. – 350 t.p.h. each.
Hakozaki Pier:		
No. 5 Wharf	2 gantry cranes.	The gantry cranes are used for container operations with rate of 25/30 boxes/hr. and lifting capacity of 30 tons per crane.
No. 12 Wharf No. 13 Wharf	1 pneumatic unloader.	300 t.p.h. – 350 t.p.h.

Average Discharging Rates:

Grain Cargo : 300/350 tonnes/hr. per pneumatic unloader.
Grain Cargo : 50/60 tonnes/hr. by ship's gear.
Crude Rubber : 30/40 tonnes/hr. by ship's gear.
Sugar in bulk : 60/80 tonnes/hr. by ship's gear.
Lumber in bundles : 90,000/140,000 BMF/hr. per gang.
Logs : 120 cu.m./hr. per gang.
Frozen Cargo : 40/50 tonnes/hr. per gang.
Fresh Fruits : 50/55 tonnes/hr. per gang.

Average Loading Rate:

Loose Tyres : 70/90 cu.m./hr. per gang.

Grain silos:

Owner	*Location*	*Capacity* (tons)
Genkai Silo	Suzaki Pier	69,500
Hakata-Ko Silo	"	69,326
Kamigumi K.K.	"	36,800
Ishibashi Silo	"	25,110
Hatsumura Soko	"	25,415
Taiyo Seifun	"	11,245
Nissin Seifun	"	8,240
Suso Soko	"	9,800
Kamigumi K.K.	Hakozaki Pier	57,367
Hakozaki Futo	"	50,327
Riken Silo	"	11,000
Torigoe Seifun	"	4,600

STEVEDORES: At least 24 hours' prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew. Normal working hours: 0800 to 1700 hrs. Overtime work is possible by applying to Customs at the following fees:

0000–0500 hrs.	350 Yen per hour
0500–0830 hrs. 1700–2200 hrs. and Sundays and Holidays	300 Yen per hour
2200–2400 hrs.	350 Yen per hour

No work can be arranged for on 31st December to 3rd January.

1st and 3rd Sundays of each month are stevedores' non-working days per Union's Regulations.

FUEL: Bonded bunker oil is not available at this port, but is to be lightered from other port. An adequate notice should be given to the suppliers in order to avoid delay in replenishment. The rate of delivery from oil barge is 80 – 100 t.p.h.

Suppliers	*Installation*	*Required notice*
Shell Sekiyu K.K.	Shimonoseki	2 days
Esso Oil Co.	Shimonoseki	2 "
	Sakai	5 "
Mobil Oil Co.	Kokura/Moji	2 "
	Oita	3 "
Caltex Oil Co.	Shimonoseki	2 "
	Kudamatsu	3 "
Mitsubishi Shoji	Shimonoseki	2 "
	Iwakuni	3 "
	Kanokawa	3 "
C. Itoh & Co., Ltd.	Matsuyama	4 "
	Mizushima	4 "
Nissho Co.	Shimonoseki	2 "
	Matsuyama	4 "
Mitsui & Co., Ltd.	Oita	3 "
Nippon Mining Co.	Mizushima	4 days
Kanematsu Gosho	Kokura	2 "
	Tokuyama	3 "
Idemitsu & Co., Marubeni Iida Co. Sumitomo Shoji	Tokuyama	3 "

MEDICAL: Medical service available throughout 24 hours.
DENSITY: Winter: 1026 (approx.), Summer: 1018 (approx).
FRESH WATER: Supply available ex-shore hydrant at all berths at a rate of 20-25 t.p.h. No water barge is available unless a coastal water barge is brought from Kanmon (Moji) area with 2 days advance notice.
FIRE PRECAUTIONS: Modern chemical fire service boat "Hiryu Maru" (30 tons).
CONSULS:

American Consulate General, Fukuoka. Tel: 092-751-9331.
Hon. British Consulate, Moji. Tel: 093-331-1311.
Republic of China Consular Agency, Fukuoka. Tel: 092-473-6655.
Republic of Korea Consulate, Fukuoka. Tel: 092-771-0461
People's Republic of China Consulate, Fukuoka. Tel: 092-713-1121.
French Consular Agency, Fukuoka. Tel: 092-431-4400.
Hon. Malaysian Consulate, Fukuoka. Tel: 092-733-6400.

REPAIRS: Local workshop is available to arrange repair service, from Hakata and Moji areas, subject to type of repair.
OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.
CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear's maintenance appears to be poor.
CUSTOMS ALLOWANCES: Only allowed 50 cigarettes to take ashore but no spirits.
REPATRIATION: Possible.
AIRPORT: Fukuoka Airport: Distance: About 20 minutes from Hakata Port by car. A regular domestic airline service is available to most airports in Japan. A regular international airline service for U.S.A./Europe/East or South East Asia countries by various airlines is available.
TIME: GMT plus 9 hours. No alterations made to clocks during year.
POLICE/AMBULANCE/FIRE: Police/Ambulance Tel: 110; Fire 119.
TELEPHONES: Marine radio telephone is available at 3/4 days notice. Mobile telephone is available at 7 days notice.
SHORE LEAVE: Local Immigration Offices issue shore pass valid for 15 days, but 7 days extension possible if ship stays longer, good for any Japanese port.
AUTHORITY: Hakata Port and Harbour Bureau, 13-13, Sekijo-Machi, Hakata-ku, Fukuoka-city, Japan. *Tel:* (092) 291-0561. *FAX:* (092) 291-7144.

AGENT: Senwa Shipping Agency, c/o Green Shipping Ltd., 8-16 Shimo Kawabata-Cho, Hakata-Ku, Fukuoka-Shi, Fukuoka 812, Japan. Tel: 092-272-5513. Telex: 7222-24. Fax: 092-272-5519. Cables: Greenship Fukuoka.

HAKODATE: 41.47 N. 140.42 E. (See Plan)

DOCUMENTS:

Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
3 Crew Lists including Passport Numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agents will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.
PILOTAGE: Not compulsory, but in practice is necessary. Pilots available 24 hours a day and vessels able enter and leave port day and night. Pilots board about 1.5 miles S.W. of Breakwater Lighthouse. Pilot boat is small boat carrying flag "H".

The limit of Hakodate Piloting District is the sea area surrounded by a line drawn from Obana Misaki to Kattoshi Misaki and the coastline.
ANCHORAGES: Quarantine Anchorage outside breakwater and care should be taken not to foul fishing nets. Good anchorage inside breakwater at East side of Section 3 – depth 11 m. to 13 m.
RESTRICTIONS: Quarantine and Customs business between 0800 and 1700 hrs. only.
MAX. SIZE: Tankers up to 84,000 d.w.t. at SBM. Max. draft 14.5 m. Max. LOA 260 m.

Also see "Berthing".
HEALTH: Radio Agent for Free Pratique not less than 12 hours and not more than 36 hours before arrival, advising full details of vessel and health conditions on board. When Free Pratique is granted by radio, vessel will be required to submit the following documents to Quarantine Officer on arrival:

Maritime Declaration of Health.
Crew List.
Passenger List.

The following vessels will not be able to get Radio Pratique:

A vessel that has been in contact with an infected area or a suspected infected area within 15 days of arrival.

If a vessel has on board any case, or any suspected case of infectious disease, within 15 days of arrival.

If a vessel does not possess a valid Derat or Derat Exemption Certificate.

Also see "Late Reports".
RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

TUGS: 1×3,200 h.p. and 3×2,400 h.p.
BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agents mainly by radio.

Berth	*Length* (m.)	*Depth* (m.)	*Permissible Draft* (m.)	*Capacity* (d.w.t.)	*Shore Cranes and Pipelines*
Nishi Pier "E"	165	9.0	8.5	10,000	
Chuo Pier					
(North No. 1 Side)	171	9.0	8.5	10,000	
(North No. 2 Side)	165	9.0	8.5	10,000	
(South Side)	133	8.0	7.0	7,000	
Bandai Pier					
(Front Side)	180	10.0	9.0	15,000	Pneumatic unloader 1×2,000 tons/ day.
(South No. 1 Side)	130	7.5	7.0	5,000	
Kita Pier					
(North Side)	130	7.5	6.5	5,000	
No. 1 Buoy		9.0	8.0	15,000	
No. 2 Buoy		10.0	9.5	15,000	
No. 3 Buoy		10.0	9.5	20,000	
Imodoco Buoy		15.5	14.5	84,000	Cosmo Oil Co., Sea Berth (Pipelines).

CRANES: Hakodate Dock own 1×200 ton and 1×50 ton floating crane.
STEVEDORES: At least 24 hours' prior notice excluding Sundays and holidays required in order for Agents to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew at additional cost. Overtime surcharges 1700 – 1900 hrs. (50% additional of basic stevedorage) 2100 – 0500 hrs. next morning (130% additional) Sundays/holidays (60% additional).
MEDICAL: No advance notice required unless urgent.
TANKERS: *Single-Buoy Mooring:* Cosmo Oil Company, sea berth suitable for up to 84,000 d.w.t. and max. draft 14.5 m. at Imodco Buoy.
Position: Lat. 41° 48' 08" N., Long. 140° 40' 57" E.
Soundings: At site 15.5 m. In approaches to site, more than 15.5 m. The approach to terminal is free from obstructions.

There is one 20 in. crude line running 2,000 m. from shore to the buoy, and about 500 m. from shore line to the storage tanks.
Mooring: There is no night mooring. Unmooring is carried out from 0600 till 2400 hrs., and may be done by the Master of the ship without a Pilot.

A mooring/unmooring gang is provided for by Agent. Two launches and one tug are in attendance at the mooring. One launch will keep the hose clear while the other handles the lines. The tug is standing by and only pushes against bow or near the stern to keep the head of the vessel in position whilst mooring.

At least 6 good mooring lines are required, preferably each line to its own bollard. The lines are run single to the buoy. The position of the ship's bow from the buoy is about 40 m., when the distance from the buoy to ship's manifold is about 360 ft.

When mooring, it is requested that the propeller is completely stopped or otherwise turned astern.

Both bow anchors are to be hove well up in the hawse pipe and properly secured before reaching the buoy. Anchors are never to be used while on the buoy. They may foul the buoy's mooring cables and pipeline on the bottom if released.
Floating Hose: There is one set of 12 in. floating hose for the discharge of crude only. The floating hose is about 600 ft. long from the buoy's manifold. The last two lengths are floating in doughnut-shaped plastic floats. The end is marked with an unlit marker buoy.

The hose connections are always made to the port manifold and are lifted with ship's gear. The hose when full of cargo and equipment weighs over one and a half tons. Information is required of the distance from ship's bow to ship's manifold, and the distance from ship's side to ship's manifold prior to arrival.

Standard flanges are used on the hose. OD 19 in. diameter of bolt-circle 17 in. with 12 bolt-holes size 0.875 in.
Discharging: The discharging should be arranged in such a way as to be able to take sufficient ballast into ship's tanks, when about half way during discharge; to be able to get the ship's head down to prevent the vessel from veering too widely, and run over the hose near the buoy, in case of unfavourable conditions.

Maximum allowed back pressure by shore is about 10 kg./sq.cm. During the discharge the main engine must not be immobilised as it may be used to keep the vessel clear of the buoy.
Stand-by Men: While on the buoy, the vessel will be required to provide sleeping quarters for four men, this includes the foreman who will remain on board throughout the entire operation. It is requested that the discharge officer be provided with meals. The other men are supplied with food from shore.
Discharge Rate: 1,800 k/l per hour.
DENSITY: Average 1025.
FRESH WATER: Available at piers ex-hydrants and by barge at anchorage. Supplier, Hakodate Municipal Office.
FUEL: All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, and Kanmon Port. At all other ports bunkers will be lightered from the nearest bunker stock ports at maximum 7 days prior notice.

Fuel supplies for Hakodate are generally lightered from Tokyo Bay area and delays can be caused by weather conditions.
CONSULS: None.
REPAIRS: Hakodate Dockyard Co., undertakes hull and engine repairs.
DRY DOCKS: No. 1. Capacity 17,100 g.t., length 156 m., breadth 24 m. depth 6 m. No. 2. Capacity 9,000 g.t., length 140 m., breadth 21 m. depth 6 m.
GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.
OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work

stevedores charge ship for waiting. Recommended request stevedores for this work unless crew can complete it before berthing.
CERTIFICATES: Ship's Register and International Tonnage Certificate to show Custom Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear's maintenance appears to be poor.
CUSTOMS ALLOWANCES: Only allowed 50 cigarettes to take ashore but no spirits.
AIRPORT: Distant 20 minutes by car.
TIME: GMT plus 9 hours. No alterations made to clocks during year.
POLICE/AMBULANCE/FIRE: Police 110; Ambulance 119; Fire 119.
TELEPHONES: Arrangeable on board.
SHORE LEAVE: Local Immigration Officers issue shore pass valid for only 3 days, but 3 days extension possible if ship stays longer.
AUTHORITY: Port and Harbour Bureau, Hakodate City, 4-19 Suehiro-cho, Hakodate City, Hokkaido. *Tel:* (0138) 22-3101.

HAMADA: 34.52 N. 132.03 E. (See Plan)

PORT LIMITS: See "Plan".
DOCUMENTS: When vessel arrives direct from a foreign port, Customs Officials will board to search. The following documents are to be submitted:

Ship's Register.
International Tonnage Certificate.
3 Voyage "Memos" (ports of call).
5 Crew Lists, including Passport numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agents will prepare Inward/Outward Declaration, Cargo Manifest and Cargo Manifest in Transit, using specific forms. Therefore ship's Agents should be provided with necessary information about details of cargoes in advance.
APPROACHES: Ships approach the harbour entrance directly. Harbour entrance is between New West Breakwater and Yana Shima, depth 26 m. (85 ft. 4 in.), width 530 m. (1,739 ft.). Distance from harbour entrance to Nagahama No. 1 Wharf is 2,200 m. (7,218 ft.).
PILOTAGE: Harbour pilotage in/out not compulsory. Pilots are available at harbour entrance. Harbour pilotage should preferably be arranged through Agent, by cable.
ANCHORAGE: Quarantine Anchorage Position: Lat. 34° 53.3' N., Long. 132° 03.3' E. (400 m. circle).
RESTRICTIONS: See "Berthing".
MAX. SIZE: Max. d.w.t. 15,000 tons at Nagahama No. 1 Wharf, length 190 m., depth 10.0 m.
HEALTH: Radio Pratique available. At first port of call in Japan, vessel must obtain Free Pratique. Quarantine Officers come from Hiroshima Office, and will attend vessel from daylight to sunset, and Master to show all Vaccination Cards and Derat Exemption Certificate. In case vessel arrives from Cholera-infected area within 10 days, Master must advise crew and passengers' health condition to respective Quarantine Office, through ship's Agent prior to arrival, and close all soil pipes before entering port.

Sanitary Inspection available.

Also see "Late Reports".
RADIO: Recommended that Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.
VHF: Not available.
TUGS: 1 tug 3,100 h.p. Additional tugs are available from other ports.
BERTHING:

Name of Berth	*Length* (m.)	*Max.LOA* (m.)	*Depth* (m.)	*Max.Draft* (m.)	*Capacity* (d.w.t.)
Nagahama					
No. 1 Wharf	131	186	10.0	9.0	15,000
No. 2	131	186	7.5	7.0	5,000
No. 3	71		5.0		1,000
Fukui					
No. 1 Wharf	130	130	7.5	7.0	5,000
No. 2	90	90	5.5	5.0	2,000

CRANES: Not available.
STEVEDORES: At least 24 hours' prior notice, excluding Sundays and holidays, required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew at additional cost. Stevedores working hours are 0800 hrs. – 1700 hrs., except Sundays and holidays. Name of company: Hamada Koun Co.Ltd.
MEDICAL: No advance notice required except on Sundays, holidays and in an emergency. Cholera vaccination available.
DENSITY: 1024 – 1025 through the year.
FRESH WATER: Available at Nagahama Wharf and Fukui Wharf. Supply rate about 35 t.p.h.
FUEL: Bunkering not available. Lubricating oils available.
CONSULS: No local representatives. Marine Note of Protest can be attended to by local notary public.
REPAIRS: Only minor repairs possible.
GANGWAY/DECK WATCHMEN: Not specially required, unless passengers or valuable cargo on board.
OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work, unless crew can complete it before berthing.
DRY DOCKS: None.
REPAIRS: See "General".
CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid cargo gear certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.
CUSTOMS ALLOWANCE: Only allowed 60 cigarettes to take ashore, but no spirits.
REPATRIATION: Possible. The authorities are not stationed but will attend from Matsue City.
AIRPORT: Nearest is Izumo Airport, about 125 km. Iwami Airport (40 km.) is expected to open in 1993, but Tokyo, Osaka or Fukuoka are preferable, due to convenience of traffic.
TIME: GMT plus 9 hours. No alterations made to clocks during year.
POLICE/AMBULANCE/FIRE: Police 110, or 0855-22-0520. Ambulance and Fire 119.
HOLIDAYS: Authorities holidays are Sundays, National holidays and 2nd and 4th Saturday of month.
TELEPHONES: No facilities for placing telephones on board. International telephone booths are located on Nagahama Wharf.
SERVICES: Hold cleaning available.
STORING: Provisions and bonded stores can be obtained from shipchandlers on berthing.
SHORE LEAVE: Local Immigration Offices issue shore pass valid for only 15 days when Hamada is first port of call in Japan. Extension possible if ship stays longer.
DELAYS: An incoming foreign vessel is to be given priority, but delays will be expected when the quay is occupied by vessels.
GENERAL: Hamada port is mostly for import of round logs. Discharging and loading cargo operations carried out alongside berth. Ship's repairs (except small ones) for machinery, radio, radar, et. are all arranged by firms located in Kitakyushu, Hiroshima, Osaka and Kobe.
AUTHORITY: Hamada Public Works Office, 1785-7, Nagahama Cho, Hamada City, Shimane Pref., Japan. *Tel:* 0855-27-0088.

HIBI: 34.27 N. 133.56 E. (See Plan)

Also see "Uno".

DOCUMENTS: In addition to the documents required at "Uno", vessel must be provided with Customs' Closed Port Entrance Permission by Agents before entering Hibi, as it is a Non-Open Port.
MAX. SIZE: See "Berthing".
HEALTH: See "Late Reports".
BERTHING:

Berth	*Length* (m.)	*Depth* (m.)	*Draft (S.W.)* (m.)	*Cargo Handled*
Hibi Public Wharf	185.0	10.00	9.20	Not specified.
Mitsui Hibi Wharf	176.0	13.10	12.0	Copper concentrate (discharging).

CRANES: Hibi Public Wharf: No shore cranes installed. Ship's gear used.

Mitsui Hibi Wharf: One shore crane with capacity 10.0 tons.
BULK CARGO FACILITIES: See "Berthing".
STEVEDORES: Normal working hours: 0830 hrs. – 1630 hrs. (FIO basis), discharge rate 3,500 tonnes, or 0830 hrs. – 2030 hrs. (FIO basis), discharge rate 5,300 tonnes. Copper concentrate at Mitsui Hibi Wharf.

See "Uno" for Hibi Public Wharf.
FRESH WATER: Available from shore hose at Hibi Public Wharf, cost Yen 270/ton. Available from shore hose at Mitsui Hibi Wharf, cost Yen 300/ton.
FUEL: Bonded fuel is available from main port or oil station by barge at Hibi Public Wharf. Fuel oil and L.O. supply not available at Mitsui Hibi Wharf.
REPAIRS: All types of deck and engine repairs are possible at Hibi Public Wharf, but subject to smelters approval at Mitsui Hibi Wharf.

HIBIKINADA: 33.57 N. 130.50 E. (See Plan)

See "Kanmon-Ko".

LOCATION: The Port of Hibikinada is located in position Lat. 33° 56.7' N., Long. 130° 49.9' E. and is only protected by a breakwater. It has no other shelter and is exposed to strong winds from the North. The strongest winds are from the N.W. and if accompanied by swell, causes a dangerous surge in the port.
DOCUMENTS: When vessel arrives direct from a foreign port, Customs Officials will board to search, and the following documents are to be submitted:

Ship's Register.
International Tonnage Certificate.
Voyage "Memo" (Ports of Call).
3 Crew Lists, including Passport numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agents will prepare Inward/Outward Declaration, Cargo Manifest and Cargo Manifest in Transit, using specific forms. Therefore ship's Agents should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Kanmon Strait and Harbour Pilotage Association.

Pilotage compulsory. Pilot boards inbound vessel at Mutsure: Lat. 33° 58' 30" N., Long. 130° 52' 48" E. or at He Saki: Lat. 33° 56' 24" N., Long. 131° 03' 12" E.

ANCHORAGE: *Coming from West:* Mutsure Anchorage: Lat. 33° 59.5' N., Long. 130° 51.7' E. Depth 23 m.

Coming from East: He Saki Anchorage: Lat. 33° 56' N., Long. 131° 03' E. Depth 12.5 m.

If gale force winds blowing, it is possible with Coast Guard permission to shift to Mutsure Anchorage.

RESTRICTIONS: Berthing and unberthing only during daylight hours. Berthing undertaken at slack water only. Unberthing at any stage of the tide.

Vessels are permitted to transit Shimonoseki with a max. draft 30 ft. 6 in. at anytime and with a max. draft of 32 ft. 10 in. at HW.

Also see "Report".

Controlling Factors:

	Controlling Depth (MLW) (m.)	*Mean Tidal Range* (m.)	*Velocity Current* (knots)	*Nature of Bottom*
Entrance	20	1.0	3 max.	Mud
Channel	13.5	1.0	3 max.	Mud
Anchorage	21	1.0	3 max.	Mud
Berth	13.5	1.0	nil	Mud

MAX. SIZE: *Wharf A-1:* Max. LOA – 340 m. Max. draft 12.2 m. Max. 150,000 d.w.t.

Wharf A-2: Max. LOA 235 m. Max. draft 12.2 m. Max. 60,000 d.w.t.

Beam of vessel determined by hatch width.

HEALTH: At first port of call in Japan, vessel must obtain Free Pratique. Quarantine Officers will attend vessel between 0830 hrs. and 1630 hrs. at anchorage. Master to show all Vaccination Cards and Derat Exemption Certificate. In case vessel arrives from cholera infected area within 10 days, Master must advise crew and passengers' health condition to respective Quarantine Office, through ship's Agent, prior to arrival, and close all soil pipes before entering port.

Also see "Moji", and "Late Reports".

RADIO: Recommended that Master communicates with Agent through Nagasaki Radio, which covers all ports in Japan.

VHF: "Shimonoseki Port Radio" on Channels 16, 12, 14, 20 and 22. Pilot on Channel 13.

TUGS: There are 3 tugs available each 3,500 h.p. Use of all 3 tugs is advisable when docking and 2 tugs when undocking.

BERTHING: Vessels always dock port-side-to at A-1 Wharf, and starboard side to at A-2 Wharf. Ship's gangway used.

Moorings: Forward: 3 headlines, 1 breast line, 2 springs.

Aft: 3 stern lines, 1 breast line, 2 springs. Vessel berths against spring roller fenders.

CRANES: 2 unloaders available with 45 tons capacity.

BRIDGES: Kanmon Suspension Bridge was built in 1973 across Hayatomo Channel (narrowest place in Kanmon Strait, width of fairway 530 m.) between Shimonoseki and Moji. The height of the bridge from sea level is 61 m. Vessels over 59 m. high must give notice to Pilot Office.

STEVEDORES: At least 24 hours' prior notice, excluding Sundays and holidays, required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time.

MEDICAL: No advance notice required unless urgent. All kinds of doctors available.

TANKERS: No tanker berths available.

DENSITY: Average 1025.

FRESH WATER: Good fresh water supplied either from water barge or from hydrants, 2 days prior notice required.

FUEL: All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, Osaka Bay and Kanmon Port. At all other ports, bunkers will be lightered from the nearest bunker stock port at maximum 7 days prior notice.

CONSULS: See "Yawata".

REPAIRS: All types of repairs possible.

DRY DOCK: Mitsubishi Heavy Industries Ltd. 4 dockyards (No. 3 and 4 for small vessels).

	Dimensions of Docks			*Max. Size of Vessel*		
	Length (m.)	*Breadth* (m.)	*Draft* (m.)	*Length* (m.)	*Breadth* (m.)	*Draft* (m.)
No. 1 Dock	164.13	25.0	7.04	160.00	22.50	5.50
No. 2 Dock	150.10	20.0	6.88	143.00	19.30	5.00

GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid cargo gear certificate sometimes required by stevedores, when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCE: Only allowed 60 cigarettes to take ashore, but no spirits.

CARGO GEAR: See "Certificates", but no special requirements.

REPATRIATION: Possible.

AIRPORT: Nearest Fukuoka Airport, about 2 hours by train and taxi. Kitakyushu Airport about 40 minutes by taxi.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

POLICE/AMBULANCE/FIRE: Police 110. Ambulance and Fire 119. Public telephone booth available near by berth.

TELEPHONE: Possible to place telephone on board.

SHORE LEAVE: Local Immigration Offices issue shore pass valid for only 15 days if Hibikinada is first port of call in Japan. Extension possible if ship stays longer.

SERVICES: All services available.

CHARTS: B.A. 1578, B.A. 532, B.A. 127.

DEVELOPMENTS: Port will reclaim land of 590 ha. for redevelopment, industrial use, and for waste disposal. 2 berths on the domestic trade quay will also be improved.

REPORT: June 1985: It was found that, whilst the weather was severe and from a North/Northwesterly direction it was not abnormally severe. Had the vessel been able to moor in a symmetrical fashion, she would have been in no difficulty.

The berth was extended in 1976 to accommodate two vessels simultaneously. As a result, the vessel that moors to the Eastern end of the jetty can, depending upon the size of the two vessels on the jetty, overhang with their after end. The effect of this, as can be seen from the plan, is that vessel has nowhere to put out proper stern mooring lines except to a shore mooring post (See "X" on "Plan"). On our vessel, the mooring lines were in the order of 130 m. long, and some four times the length of the headlines. It is well known that mooring lines should be symmetrical at either end of the vessel.

The only place for the larger vessel on the "Plan" to moor safely is some 50/60 m. ahead of her diagrammatical position. It is, of course perfectly feasible for a vessel to moor ahead of that shown in the plan. If this was the case, we would consider her to be perfectly safe.

SHIPMASTER'S REPORT: January 1994.

Communications: Communications with Pilots and Quarantine were all made through the Agents. Due to the approaching New Year weekend, the Radio Pratique Quarantine message was sent 5 days before arrival. This was too early and had to be re-sent 2 days before arrival, and Radio Pratique was granted the following day.

Anchorage: Anchorage for awaiting Pilots and Quarantine only, was advised by the Agent to be 'North of a line 090° from Koshiki Iwa for daylight arrivals and in the area contained by a line 000° from Mutsure Shima Light and a line 310° from a position 000° × 1.4 miles from Mutsure Shima Light at night'.

Approaches: Approaches were found to be as charted on B.A. Charts No. 524 and 1578.

Berthing: Berth No. 1: The berth, as charted on the North side of Wakamatu, is well fendered and is served by 2×40 ton gantry cranes for grab discharge of bulk cargo, either to hoppers close to the quay side feeding conveyor belts for coal cargo, or onto the dock about 30 m. from the quay edge for other cargoes, where it is picked up by payloaders and removed by lorries.

This vessel was discharging gypsum, and achieved a rate of 296.3 tonnes per crane per hour discharging to the dock. This rate could probably be doubled if discharging to the hoppers due to the shorter grab travel required.

Crane outreach is in excess of 30 m. and airdraft is adquate for all vessels.

Discharging is on a 24 hour basis.

Berthing is port side to using a tug on the starboard bow and quarter, made fast with tug's lines. Mooring boats are used to carry the head and stern lines ashore.

Unberthing is also with 2 tugs made fast.

Both operations are controlled by tidal currents as regards to timing.

Pilotage: Pilots board from a small launch at the charted Pilot Station. Vessels are called in from anchorage by VHF. Boarding will probably be advised by telex from the Agents some days in advance.

Shore Leave: Passes are issued to each crew member and visaed by the Immigration Department. This is arranged by the Agent.

Access to the shore is direct to the dockside by ship's gangway. Taxis to the nearest town can be arranged by the Agent at a quoted price of U.S.$ 27.00 for 3 to 4 passengers, to the nearest Customs Office, where shore-going crew are requested to report on their way ashore and before returning.

Crew members going ashore were able to negotiate better terms through the stevedores.

Clearance: Inward and Outward Clearance is mainly carried out by the Agent, but the Customs' Agents may also attend and a Customs search was carried out.

Services: All services including bunkers, provisions, stores, fresh water, medical and repatriation are available, but are generally more expensive than average prices elsewhere.

Swell: The berth, in spite of a breakwater to the North, is exposed to swells from the Northeast. During the first day on the berth, the vessel was rolling alongside in spite of the fact that no breakers could be seen on the breakwater or shore, which gave the impression of some underwater tidal effect as though the sea surface appeared the same. After the vessel had been lightened, she lay quietly alongside.

AUTHORITY: Kitakyushu Port and Harbour Bureau, 2-7 Nishi-Kaigan, 1-chome, Moji-Ku, Kitakyushu City, Fukuoka Pref., 801 Japan. *Tel:* (093) 321-5941. *FAX:* (093) 321-5915.

HIKARI: 33.57 N. 131.56 E. (See Plan)

DOCUMENTS: When vessel arrives direct from a foreign port, Customs Officials will board to search, and the following documents are to be submitted:
Ship's Register.
International Tonnage Certificate.
Voyage Memo (Ports of Call).
3 Crew Lists, including Passport numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agents will prepare Inward/Outward Declaration, Cargo Manifest and Cargo Manifest in Transit, using specific forms. Therefore, ship's Agents should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Harbour pilotage not compulsory, but it is recommended to take pilot at Pilot Station (Lat. 33° 54' N., Long. 131° 56' E.). Pilot boards from 0700 hrs. for berthing and up till 1800 hrs. for unberthing. Inland Sea Pilot undertakes harbour pilotage.

Inland sea pilotage should preferably by arranged through Agent by cable via Nagasaki Radio, giving 72 hours' notice. Urgent correction of ETA outside business hours should be cabled direct to Pilot Station. Inland Sea Pilot Association covers all inland sea ports. Pilotage compulsory for vessels over 10,000 g.r.t. Pilots obtained from one of three Pilot Stations, depending upon vessel's last port of departure and at Master's discretion. Pilotage available throughout 24 hours, and 72 hours' advance notice prefered, thereafter advising any alterations. Most Inland Sea Pilots also act as harbour pilots up to berth or anchorage at destination.

Note: VHF communication available with Inland Sea Pilot Stations.

1. Wadamisaki, at entrance to Kobe (vessel transiting Kii Straits). Position Lat. 34° 34' 09" N., Long. 135° 11' E. Cable address: "Anjin Kobe".
2. Sekisaki, 3 miles South of Sekisaki Lighthouse (vessel transiting Bungo Channel). Position Lat. 33° 13' N., Long. 131° 54' E. Cable address: "Anjin Moji". In event bad weather, recommended vessel proceeds for shelter as near as possible, having due regard to safety, to Sekisaki Pilot Station.
3. Hesaki, at East side of Kanmon (Shimonoseki) Straits. Position Lat. 33° 56' 24" N., Long. 131° 03' 12" E.

ANCHORAGES: Pilot station, 2 miles South of Ominae-Shima (Island). If the vessel cannot go alongside directly at Hikari Wharf, due to congestion, wait at Kudamatsu Anchoring section.

RESTRICTIONS: Entry and departure is not available after sunset. Depth of water in channel 11.20 m.

MAX. SIZE: See "Berthing".

HEALTH: At first port call in Japan, vessel must obtain Free Pratique. Quarantine Officers will attend vessel from 0830 hrs. to 1630 hrs. at anchorage of Tokuyama, as there is no Quarantine Office at Hikari. Master to show all Vaccination Cards and Derat Exemption Certificate. In case vessel arrives from cholera infected area within 10 days, Master must advise crew and passengers' health condition to Quarantine Office through ship's Agent, prior to arrival, and close all soil pipes before entering port. Radio Pratique available.

Also see "Late Reports".

RADIO: Recommended that Master communicates with Agent through Nagasaki Radio, which covers all ports in Japan.

VHF: No VHF service.

TUGS: Available as required, but come from Tokuyama or Kudamatsu Port.

BERTHING: Only one berth operated by Nippon Steel Corporation.

Steel Export Wharf: Length 232 m. Depth 11.6 m. Max. LOA 200 m. Max. draft 11.20 m. Max. size 30,000 d.w.t.

Loading Facility: One shore gantry crane (lifting capacity 15 tonnes). Outreach: 22 m. from front leg of the crane. Height: 17 m. from the quay. Span: 28 m. (longitudinally forward/aft). Air draft: 20.10 m. at MLW.

Loading Rate: Approximately 1,500 – 2,000 tons through night by 2 gangs (gantry and ship's gear).

BRIDGES: None.

STEVEDORES: At least 24 hours prior notice, excluding Sundays and holidays, required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gears not rigged on berthing, stevedores will do same for ship's crew at additional cost. Overtime surcharges 1700 hrs. – 1900 hrs. 50% additional of basic stevedorage; 2100 hrs. – 0500 hrs. next morning 130% additional; Sunday/holiday 60% additional.

TANKERS: No tanker berth.

MEDICAL: No advance notice required, unless urgent.

DENSITY: Average 1025.

FRESH WATER: Good fresh water supplied from hydrants. Delivery rate 50 t.p.h.

FUEL: All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, Osaka Bay and Kanmon Port. At all other ports, bunkers will be lightered from the nearest bunker stock ports at maximum 7 days prior notice.

CONSULS: No consuls. Marine Note of Protest possible at local Notary public.

REPAIRS: Only minor repairs available. Others from Moji, Tokuyama or Kobe.

DRY DOCKS: Shin Kasado Dockyard in Kudamatsu-Wan, entrance 3 miles East of Tokuyama-Wan entrance. Largest dry dock for 90,000 tonners and two other dry docks/building docks.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work, unless crew can complete it before berthing.

GANGWAY/DECK WATCHMEN: Not specially required, unless passengers or valuable cargo on board.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificate sometimes required by stevedores, when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore, but no spirits.

CARGO GEAR: See "Certificates". No special requirements.

REPATRIATION: Possible.

AIRPORT: Hiroshima Airport about 40 minutes by Shinkansen. Ube about 40 minutes by Shinkansen and taxi.

TIME: GMT plus 9 hours. No alterations to clocks during year.

POLICE/AMBULANCE/FIRE: Police 110, Ambulance/Fire 119.

EMERGENCY CO-ORDINATION CENTRE: Maritime Safety Agency, Tokuyama Office in Tokuyama City. Tel: 0834-31-0110.

TELEPHONES: Not possible to place telephones on board.

SHORE LEAVE: Local Immigration Offices issue shore passes, valid for only 15 days, when Hikari is first port of call in Japan. Extension possible if ship stays longer.

SERVICES: All services available from Moji and Tokuyama.

AUTHORITY: Shunan Port Administration Office, 111, Chikko-cho, Tokuyama City, Yamaguchi Pref., Japan. *Tel:* 0834-21-1787.

HIMEJI (including Hirohata, Shikama, Mega and Aboshi): 34.47 N. 134.41 E. (See Plan)

DOCUMENTS:
Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
3 Crew Lists including Passport Numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agents will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

PILOTAGE: See "Kobe". Vessels take Inland Sea Pilot off Wada, Hesaki or Sekisaki; or from ports of Inland Sea. No exact Pilot Station and no checking point at port of Himeji (Mega, Shikama, Hirohata and Aboshi) but Agents arrange Pilot when vessel approaches upon receiving cable giving 24 hours advance notice. Pilot boarding positions as follows: Mega Lat. 34° 44' N., Long. 134° 42' 15" E. Shikama Lat. 34° 45' N., Long. 134° 39' E. Hirohata Lat. 34° 44' N., Long. 134° 37' E. Aboshi Lat. 34° 44' N., Long. 134° 34' 10" E.

No strict location of anchorage for vessel awaiting a Pilot in Himeji area, but should be as close as possible to port according to draft and communication.

ANCHORAGE: No strict boundary areas for anchorages. Anchor as close as possible to the port according to draft.

RESTRICTIONS: At ports of Mega, Shikama, Aboshi and Hirohata, no Pilot boarding between sunset to sunrise.

MAX. SIZE: Draft restrictions as follows:

Mega 11.80 m., Shikama 11.0 m., Hirohata 13.2 m. (80,000 d.w.t. or 110,000 d.w.t. part load) for Central Pier, 8.50 m. for Kamota Pier (Piers No. 3 – 6), 9.5 m. for Tsuruta Pier (Pier No. 10). 16 m. (160,000 d.w.t. or 270,000 d.w.t. part load) for No. 18 Pier. Aboshi 9.0 m.

Sea buoy mooring, max. draft 19.2 m. Max. 254,000 d.w.t.

HEALTH: See "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

TUGS: Tug(s) normally join vessel when approaching, or at anchorage. Always use tug's lines without charges.

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by radio.

Berth	Wharf Length (m.)	Max. LOA (m.)	Max. Draft (m.)
Shikama			
Public Pier No. 2	135		7.00
Public Pier No. 3	170		8.80
Public Pier No. 4	170		8.80
Public Pier No. 5	170		8.80
Public Wharf No. 6	170		8.80
Public Wharf No. 7	230		10.00
Public Pier No. 8	250		11.00
Public Pier No. 9	250		11.00
Nakajima Wharf	390		5.00
Sembagawa Wharf	360		5.00
Buoy No. 2	220	150	7.70
Aboshi			
Seibu Pier No. 1	130	115	7.00
Seibu Pier No. 2	185	180	9.00
Buoy No. 1 – 2	250	175	9.00
Buoy No. 2 – 3	270	180	9.00
Hirohata			
Higashihama Quay (A-1)	110		11.00
Higashihama Quay (A-2)	220		11.00
Yumesaki Quays (No.1 – 2)	420		7.50
Kamoda Quays (No. 3 – 6)	525		8.50
Central Quay (No. 9)	315		13.20
Tsuruta Quay (No. 10)	305		9.50
Genryo Quay (No. 18)	300		16.00
Buoys			9.50

CRANES:

Hirohata:

Higashihama Quay (A-1)	1×20 ton
Higashihama Quay (A-2)	2×30 ton
Yumesaki Quays (No. 1 – 2)	1×10 ton, 1×20 ton
Kamoda Quays (No. 3 – 6)	2×9 ton
Central Quay (No. 9)	2×25 ton, 1×38 ton
Tsuruta Quay (No. 10)	2×9 ton
Genryo Quay (No. 18)	2×45.5 ton

Shikama:

2×5 ton and 1×10 ton at Public Wharves (No. 1 – 9).

STEVEDORES: At least 24 hours prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew at additional cost. Overtime surcharges 1630 – 2130 hrs. 60% additional of basic stevedorage; 2130 – 0830 hrs. next morning 130% additional; Sundays/holidays 100% additional.

MEDICAL: No advance notice required unless urgent.

TANKERS: Idemitsu Kosan Co. Ltd., Himeji Oil Jetty where 1 berth only and max. draft 11.8 m. allowed. Shore discharging facilities 3×12 in. diameter hose connections which connect to 18 in. diameter line for tank hoses. Acceptable max. 5 kg/sq.cm. on hose gauge, discharge rate approximately 2,000 long tons per hour.

Note: Idemitsu Kosan Co. Ltd., Himeji, require following information prior to arrival for smooth berthing and connecting hoses: Height from sea to deck; Length from vessel's side to underneath of hose connections; Height from deck to connection of line; Diameter of connection.

Operator's Report: 1983.

Idemitsu Kosan Hyogo Sea Berth (Discharging terminal) is operated by Idemitsu Kosan Co. Ltd.

SBM Berth. Berthing equipment to OCIMF standard.

SBM operates 24 hours per day, 7 days a week. Ships moored and unmoored at daytime, weather and other circumstances permitting. SBM will not be closed due to any holidays.

Area around the SBM with radius of 410 m. is an open port for Customs' Regulations. Therefore supplies, disembarkation, etc. should be handled by related regulations.

Location: Lat. 34° 42' 37" N., Long. 134° 39' 54" E.

Pilotage: Not compulsory.

Anchorage: Himeji port is not an open port. Ships can anchor at the following points.

Point "A" Lat. 34° 42' 58" N., Long. 134° 39' 02" E., depth 21 m.
Point "B" Lat. 34° 42' 10" N., Long. 134° 40' 48" E., depth 21 m.
Point "C" Lat. 34° 41' 30" N., Long. 134° 41' 00" E., depth 23 m.

Anchorage "A" and "B" are for tankers of less than 18.5 m. draft.

Restrictions:

(a) Berthing Master comes on board 3 miles South from the line joining Kurakake Id. and Kami Id.
(b) Ship's Master has to arrange tug boats both sides and aft (total of 3 tugs).
(c) Ship proceeds at moderate speed taking into consideration tide and wind and any other circumstances. When approximately 1,000 m. from SBM vessel reduces her speed to avoid risk of touching SBM.
(d) Ship has to stop completely 200 m. from the SBM.

Max. size:

Maximum draft 19.20 m.
Maximum d.w.t. 254,000 tons

Berthing:

From bow to manifold 145 m. – 186 m.
Derrick capacity SWL in excess of 10 tons.

Mega:

Berth	*Depth* (m.)	*Pipelines*
Idemitsu Jetty No. 1 – Berth No. 1 – No. 4	5.0 – 7.0	4×8 in.
Idemitsu Jetty No. 2 – Berth No. 5	7.0	8 in.
Idemitsu Jetty No. 3 – Berth No. 6	12.2	12 in. and 8 in.
Idemitsu Jetty No. 4 – Berth Nos. 7 – 8	7.0	2×8 in.
Idemitsu Jetty No. 5 – Berth No. 9 – No. 12	5.0 – 7.0	4×8 in.
LPG Jetty – Berth No. 22	6.0	4 in. and 2 in.
Monoageba	6.0	—
Sea Berth	19.0	—
Kanden LNG Jetty	14.0	—

DENSITY: Average density between 1025 and 1026 in Winter season and 1018 and 1020 in Summer season.

FRESH WATER: Idemitsu Oil Jetty, Shikama Public Pier and Hirohata Pier able to supply fresh water from shore, but *No Water Barge available at Port of Himeji* therefore not able to supply fresh water at Satetsu Pier (Shikama), Shikama Buoy, Aboshi Buoy or outside anchorage.

Port	*Average rate of delivery*
Mega	20 – 30 tonnes/p.h.
Shikama	25 – 30 tonnes/p.h.
Hirohata	15 – 20 tonnes/p.h.

FUEL: All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, Osaka Bay and Kanmon Port. At all other ports bunkers will be lightered from the nearest bunker stock ports at maximum 7 days prior notice.

CONSULS: No consuls at Himeji, Shikama or Hirohata.

REPAIRS: Most minor deck and engine repairs available at port of Himeji; in case special technician required, should be called from Kobe.

DRY DOCKS: No dry dock available at port of Himeji. Nearest dry dock Ishikawajima-Harima Heavy Industries Co. Ltd., Aioi, who have following dry docks. Also see "Aioi".

	LOA	*LBP*	*Breadth*	*Depth*	*Capacity*
Dock No. 1	238 m. (780'9")	230 m. (754'7")	33 m. (108'3")	5.5 m. (18')	73,000 d.w.t. (LT)
Dock No. 2	156.1 m. (512'1")	145 m. (475'8")	19.5 m. (63'11")	4.5 m. (14'9")	14,000 d.w.t. (LT)
Dock No. 3	341 m. (1,118'9")	328 m. (1,076'1")	54 m. (177'1")	6 m. (19'8")	300,000 d.w.t. (LT)

GANGWAY/DECK WATCHMEN: Not specially required unless passenger or valuable cargo on board.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear's maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 50 cigarettes to take ashore but no spirits.

CARGO GEAR: See "Certificates" but no special requirements.

REPATRIATION: Possible.

AIRPORT: About 60 km. to Itami Airport. Regular services.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

HOLIDAYS: At Aboshi, no work on 1st and 3rd Sunday. At Shikama, shore crane, no work on 1st and 3rd Sunday but gangs available for discharging and loading.

POLICE/AMBULANCE/FIRE: Police (Shikama) Tel: 35-1441; Ambulance (Shikama) 119 or 35-0119; Fire (Shikama) 119 or 35-0119.

TELEPHONE: No facilities for placing telephones on board.

SERVICES: Tally, laundry, daily provisions by ship chandler available locally. All other service from Kobe or Osaka.

SHORE LEAVE: Local Immigration Offices issue shore pass valid for 9 days, but 3 days extension possible if ship stays longer.

GENERAL: No quarantine available at port of Himeji, therefore pratique to be obtained at other ports.

AUTHORITY: Himeji Port Administration Office, 294, Suka, Shikama-ku, Himeji City, Hyogo Pref. *Tel:* (0792) 35-0176.

AGENT: Hirohata: Senwa Shipping Agency, c/o Nittetsu Transport Service Co.Ltd., 4-9-6 Seimondouri, Hirohata-Ku, Himeji-Shi, Hyogo-Ken, 671-11 Japan. Tel: 0792-38-1116. Telex: 5772-450. Fax: 0792-37-2851. Cables: NTS Himeji.

HIMEKAWA: 37.02 N. 137.51 E. (See Plan)

DOCUMENTS:

Ship's Register (and International Tonnage Certificate, if Register does not show gross and nett tonnages).
Last Port Clearance.
6 Crew Lists, including Passport numbers.
4 Passenger Lists.
2 Stores Lists.
2 Declarations of Crew's Baggage.

PILOTAGE: Not compulsory, but recommended. Pilots board in position Lat. 37° 03' 03" N., Long. 137° 51' 30" E.

ANCHORAGE: Position: Lat. 37° 11' 45" N., Long. 138° 14' E., within radius 700 m.

RESTRICTIONS: Entry and sailing during darkness is permissible, but pilots are only available during daytime. Draft limitation in the channel is 8.20 m.

HEALTH: Radio Pratique is available. Ordinary quarantine inspection takes place at the anchorage.

Also see "Late Reports".

TUGS: No tugs are stationed at the port, but they can be arranged, 1×3,000 h.p. from Niigata and 1×1,300 h.p. from Naoetsu.

BERTHING:

Name of Berth	*Length* (m.)	*Depth* (m.)	*Max. Draft* (m.)	*Capacity* (d.w.t.)	*Shore Cranes* (tons)
Centre Pier No. 1	130	7.5	6.8	5,000	4×35 3×80
No. 2	130	7.5	6.8	5,000	
No. 3	130	7.5	6.8	5,000	
No. 4	130	7.5	6.8	5,000	
No. 5	165	9.0	8.2	10,000	
West Pier No. 1	90	5.5	5.0	2,000	
No. 2	130	7.5	6.8	5,000	
North Pier No. 1 (Dolphin)	23	7.5	6.8	5,000	

Note: Centre Pier No. 1, 2, 3 and 4: Summertime permissible draft 6.9 m.

Centre Pier No. 5: Ships cannot use ship's generator during stay at this pier, as it causes noise pollution to a neighbouring party. Ships must therefore use electric supply equipment from shore (in future this is to be applied to all piers).

STEVEDORES: Normal working time 0830 hrs. to 1630 hrs.

Overtime and Sundays/holidays (except 1st and 3rd Sunday) are available, but subject to negotiation.

Log gangs are available.

FRESH WATER: Available.

FUEL: Domestic oil is available.

GENERAL: *Immigration:* The authorities come from Naoetsu.

Floating Crane: Not available.

Lightering: Not possible.

Ship Chandlers: Provisions and stores are obtainable.

HIROSHIMA: 34.20 N. 132.25 E. (See Plan)

DOCUMENTS: See "Yokohama".

PILOTAGE: Inland Sea pilotage should preferably be arranged through Agent by cable via Nagasaki Radio giving 72 hours' notice. Urgent correction of ETA outside business hours should be cabled direct to Pilot Station. Inland Sea Pilot Association covers all Inland Sea ports. Pilotage compulsory for vessels over 10,000 g.r.t. Pilots obtained from one of three Pilot Stations dependent upon vessel's last port of departure and at Master's discretion. Pilotage available throughout 24 hours and 72 hours' advance notice preferred, thereafter advising any alterations. Most Inland Sea Pilots also act as Harbour Pilots up to berth or anchorage at destination.

Note: VHF communication available with Inland Sea Pilot Stations. Also see "Shipmaster's Report" before first port.

1. Osaka Bay Pilot boards at Tomogashima Pilot Station (Lat. 34° 10' N., Long. 135° 00' E.). Cable address "Osaka Baypilot".
2. Wadamisaki, at entrance to Kobe (vessels transitting Kii Straits). Position Lat. 34° 34.09' N., Long. 135° 11' E. Telegraphic address "Anjin Kobe".
3. Sekisaki, 3 miles South of Sekisaki Lighthouse (vessels transitting Bungo Channel). Position Lat. 33° 13' N., Long. 131° 54' E. Telegraphic address "Anjin Saganoseki". In event bad weather, recommended vessels proceed for shelter as near as possible having due regard to safety, to Sekisaki Pilot station.
4. Hesaki, at East side of Kanmon (Shimoneseki) Straits. Position Lat. 33° 56' 24" N., Long. 131° 03' 12" E.

ANCHORAGES:

Anchorage	*From Ujina Lighthouse Bearing*	*Distance (m.)*	*Radius of Anchorage (m.)*	*Conditions*
"G"	127°	1,640	200	Draft – below 12 m. Max. d.w.t. 3,000 tons.
"H"	133°	2,160	200	Draft – below 17 m.
"I"	158°	900	300	Draft – below 16 m.
"J"	162°	1,500	300	Draft – below 16 m.
"K"	122°	3,280	300	Draft – below 16 m.
"L"	132°	3,430	300	Draft – below 18 m.
"M"	258°	6,130	300	Draft – below 13.5 m.
"N"	262°	3,840	300	Draft – below 15 m.
No. 1	150	3,000		
No. 2	160	3,000		
No. 3	200	2,000		
No. 4	230	5,000		
No. 5	240	5,000		

Ujina Lighthouse is at South of Ujina-islet Lat. 34° 20' 14" N., Long. 132° 27' 55" E.

Use anchor with caution as there are oyster beds in the area.

RESTRICTIONS: Depth of approach to berth about 10 m. Pilots not available after sunset.

MAX. SIZE: Max. size of vessel that can enter Hiroshima is restricted by its draft (Max. 9.0 m.) and displacement (21,000 – 50,000 tons at Gaibo Wharf), also deadweight (Max. 30,000 d.w.t. at Hatsukaichi).

HEALTH: Usually vessels anchor at the quarantine anchorage, where the authorities board and grant Free Pratique.

Also see "Late Reports".

VHF: Port Radio Station on Channels 16, 11, 12 and 14. Call sign is "Hiroshima Port Radio".

TUGS: 21 Tugs, 2,400 h.p. – 3,600 h.p. Join vessel at quarantine anchorages. Tug's lines used.

BERTHING:

Berth	*Length (m.)*	*Depth (m.)*	*Max. Displacement (tons)*
Gaibo Wharf No. 1	200	10.0	50,000
Gaibo Wharf No. 2	150	10.0	21,000
Gaibo Wharf No. 3	150	10.0	21,000
Gaibo Wharf No. 4	230	10.0	28,000
Gaibo Wharf No. 5	185	10.0	47,000
Hatsukaichi			*Max. d.w.t.*
Shonan Wharf	370	10.0	15,000
Dolphin No. 1	240	12.0	30,000
No. 2	185	10.0	15,000
No. 3	200	10.0	15,000
No. 4	200	10.0	15,000

CRANES: 6 floating cranes, 40 ton – 450 ton.

CONTAINER FACILITIES: *Kaita Container Terminal:* Length 650 m., depth 7.5 m. 2×30.5 ton gantry cranes, 1 jib crane and 3 transfer cranes. Storage capacity 2,500 TEU.

Note: Vessels entering Kaita Container Terminal are restricted by vessel's airdraft (less than 28 m.), as they have to pass under Kaita Bridge.

STEVEDORES: Working hours: 0830 – 2100 hrs.

TIDES: Max. (spring tide) 3.9 m. Min. (neaps) 0.57 m.

Rate of current at flood tide generally 0.25 knot to N.E.; 0.5 knot at ebb tide to S.W. South area of Togeshima and Kannonsaki 0.25 knot at flood to S.S.E., and 0.5 knot at ebb tide to N.N.W.

FRESH WATER: By water barge (capacity: 330 tonnes available). Additional charges made for overtime i.e. after 1700 hrs., and Sunday, holidays and Saturday afternoon.

FUEL: Most grades of domestic and bonded oil available, delivered by barge.

CONSULS: No consuls in Hiroshima. Nearest Osaka or Kobe. Marine note of protest can be attested by local notary public.

REPAIRS: All types of deck, electrical and engine repairs.

DRY DOCKS: Largest dry dock Taibi Dry Dock, length 154 m., breadth 22.00 m., 10,300 g.r.t. Kanawa Dry Dock available for 3,500 g.r.t.

AIRPORT: Hiroshima Airport, mainly domestic airlines every hour (0800 hrs. – 2000 hrs.) to Tokyo.

POLICE/AMBULANCE/FIRE: Police (for emergency) 110; Ambulance 119; Fire 119.

TELEPHONE: No arrangements for placing telephones on board.

SERVICES: Any navigational apparatus can be serviced on request, Cargo holds cleaning services can also be carried out, but tank-cleaning and other services are to be arranged from Kobe.

REGULATIONS: Many seaweed and oyster beds near anchorages, therefore oil pollution precautions strictly observed.

AUTHORITY: Hiroshima Port and Harbour Promotion Bureau, 23-53, Ujina Kaigan 2-chome, Minami-ku, Hiroshima City. *Tel:* (082) 251-7117.

AGENT: Senwa Shipping Agency, c/o Naigai Unyu Co.Ltd., 23-35 Ujina Kaigan 2-chome, Minami-Ku, Hiroshima-Shi, Hiroshima 734, Japan. Tel: 082-254-2427. Fax: 082-255-1042. Telex: 652-963. Cables: Naigai Hiroshima.

HITACHI: 36.30 N. 140.37 E. (See Plan)

DOCUMENTS, and all general information, refer to "Onahama".

PILOTAGE: Not compulsory. Pilot boards in approximate position Lat. 36° 28' N., Long. 140° 39' E. (Quarantine Station). Pilot not available after sunset.

MAX. SIZE: Draft 8.50 m. limited by channel depth.

HEALTH: Radio Pratique available.

Also see "Late Reports".

TUGS: 1 × 2,600 h.p. available. A 2,000 h.p. tug will be brought from Kashima if required.

BERTHING:

Berth	*Length (m.)*	*Depth (m.)*	*Max. Draft (m.)*	*Capacity (d.w.t.)*	*Shore Cranes*
No. 1 Pier					
1-Dolphin	7	5.0	4.2	1,000	Nil
1-B	121	7.5	6.8	5,000	Nil
1-C	130	7.5	6.8	5,000	Nil
1-D	185	10.0	8.5	15,000	Unloader 2×230 t.p.h.
1-E	121	7.5	6.8	5,000	1×250 tons
1-F	80	4.0	3.5	500	Nil
No. 2 Pier					
2-A	130	7.5	6.8	5,000	Nil
2-B	165	9.0	8.5	10,000	Nil
2-C	130	7.5	6.8	5,000	Nil
2-D	130	7.5	6.8	5,000	Nil
2-E	90	5.0	4.5	1,000	Nil
2-F	90	5.0	4.5	1,000	Nil
No. 4 Pier					
4-B	70	5.0	4.2	1,000	Nil
4-C	130	7.5	6.8	5,000	Container Crane 1× 30.5 tons
4-D	185	10.0	8.5	15,000	
4-E	240	12.0	10.9	30,000	Nil
Private Berth (Hitachi)	185	10.0	8.5	15,000	Nil
No. 5 Pier					
5-A	130	7.5	6.8	5,000	No cranes Logs and Timber
5-B	185	10.0	9.5	15,000	
5-C	185	10.0	9.5	15,000	

STEVEDORES: Working hours: 0815 – 1630 hrs., except Sundays.

FRESH WATER: Available from shore.

FUEL: Domestic oil is available; bonded oil will be brought from Yokohama, when required.

REPAIRS: Minor repairs can be undertaken.

DEVELOPMENTS: The Port of Hitachinaka is under construction a few miles to the South of Hitachi, and will become operational in 1998. On completion, there will be over 40 berths available with depth of 5.5 m. – 18.0 m. for vessels up to 130,000 d.w.t.

AUTHORITY: Hitachi Port Administration Office, 3-21 Kuji-cho 1-chome, Hitachi City, Ibaraki Pref. *Tel:* (0294) 52-4000.

Ibaraki Prefecture Government, Department of Public Works, Ports and Harbours Division, 1-5-38 Sannomaru, Mito City, Ibaraki Pref., Japan. *Tel:* 0292-24-8027. *FAX:* 0292-28-6870.

HOSOSHIMA: 32.25 N. 131.41 E. (See Plan)

DOCUMENTS: When vessel arrives direct from a foreign port, Customs Officials will board to search, the following documents are to be submitted:

Ship's Register.
International Tonnage Certificate.
Voyage "Memo" (ports of call).
Last Port Clearance.
3 Crew Lists, including Passport Numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Not compulsory. Telegraphic address of Pilot Station "Pilot Hososhima". 48 and 24 hours' advance notice of ETA required, and any change in ETA. Pilot boards at Hososhima Quarantine Anchorage location, Hosohima Lighthouse N.E. 1 mile off, position Lat. 32° 25' 50" N., Long. 131° 41' 53" E.
ANCHORAGE: Refer to Japanese Chart No. 1223 (Ozue-wan and Hososhima-Ko).
RESTRICTIONS: Strictly no entry or departure after sunset.
MAX. SIZE: Max. permissible LOA 170 m., draft 31 ft. 10 in. (9.7 m.)
HEALTH: See "Late Reports".
RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.
TUGS: Tugs normally join vessel in position Lat. 32° 26.5' N., Long. 131° 39.5' E. Tugs lines to be used. 2 tugs, 1×2,900 h.p. and 1×2,700 h.p.
BERTHING:

Wharf	*Berth Length* (m.)	*Max. Draft* (m.)	*Cranes*
Industrial Port			
No. 1	175	9.50	1×8 ton
No. 2	196	9.30	
No. 3	100	5.00	
No. 4	180	5.00	
No. 5	130	7.00	
No. 6	185	9.70	
Shirahama Port			
No. 8	90	5.50	
No. 9	260	7.00	
No.10	185	9.70	
Hyuga Refinery's Wharf	260	9.90	2×18 ton
Sugar Plant Wharf (Dolphin)	150	9.30	
Commercial Port			
No. 1	230	5.80	
No. 2	250	6.80	

STEVEDORES: At least 24 hours' prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew at additional cost. Overtime surcharges 1630 – 2130 hrs. (60%) additional of basic stevedorage; 2130 – 0500 hrs. next morning 130% additional; Sundays/holidays 100% additional.
MEDICAL: No advance notice required unless urgent.
DENSITY: Average 1025 in Winter, 1020 in Summer, subject to weather and tide current.
FRESH WATER: Available from dock, 20/30 t.p.h.
FUEL: All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, Osaka Bay and Kanmon Port. At all other ports, bunkers will be lightered from the nearest stock ports at maximum 7 days' prior notice.
CONSULS: No local representatives. Notary Public available for Noting Protest.
REPAIRS: No facilities.
GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.
OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.
CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and net tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear's maintenance appears to be poor.
CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore, but no spirits.
REPATRIATION: Possible.
AIRPORT: Nearest, Miyazaki Airport about 2 hours drive from Hososhima. JAL and ANA lines.
TIME: GMT plus 9 hours. No alterations made to clocks during year.
POLICE/AMBULANCE/FIRE: Police 110; Ambulance 119; Fire 119. Public telephone booth available near by the berth.
TELEPHONES: No facilities for placing telephones on board.
SHORE LEAVE: Local Immigration Officers issue shore pass valid for 15 days when Hososhima is first port of call in Japan. Extension possible if ship stays longer.
AUTHORITY: Hososhima Port Administration Office, No. 17371-2 Shinkai, Hichiya, Hyuga City, Miyazaki Pref., Kyushu, Japan. *Tel:* 09825-2-5366. *Cables:* Port Authority Hyuga. *Contact:* Mr. Ogata.

AGENT: Senwa Shipping Agency, c/o Hakko Unyu Co.Ltd. (under control by Greenship Moji), 731 Hososhima, Hyuga-Shi, Miyazaki 883, Japan. Tel: 09825-2-2185. Telex: 7766-77. Fax: 09825-3-6755. Cables: Hakko Hososhima.

IHO: 34.45 N. 134.46 E.

NO VESSELS CALLING AT THE PRESENT TIME – FACILITIES NOT IN USE SINCE 1973.

IMABARI (Imahuru): 34.04 N. 133.00 E. (incl. Mategata). (See Plan)

DOCUMENTS:
Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
5 Crew Lists, including Passport Numbers.
3 Passenger Lists.
1 Stores List.
3 Voyage "Memo".
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.
PILOTAGE: Inland Sea pilotage should preferably be arranged through Agent giving 72 hours notice. Urgent correction of ETA outside business hours should be cabled direct to Pilot Station. Inland Sea Pilot Association covers all Inland Sea ports. Pilotage compulsory for vessel over 10,000 g.r.t. Pilots obtained from 1 of 3 Pilot Stations dependent upon vessels last port of departure and at Master's discretion. Pilotage available throughout 24 hours and 72 hours advance notice preferred, thereafter advising any alterations. Most Inland Sea Pilots also act as Harbour Pilots up to berth or anchorage at destination.
Note: VHF communication available with Inland Sea Pilot Stations. Also see "Shipmaster's Report" before first port.
1. Wadamisaki, at entrance to Kobe (vessels transitting Kii Straits) Position Lat. 34° 35' N., Long. 135° 08' 24" E. Telegraphic address "Anjin Kobe".
2. Sekisaki, 3 miles South of Sekisaki Lighthouse. (Vessels transitting Bungo Channel), Position Lat. 33° 13' N., Long. 131° 55' 38" E. Telegraphic address "Anjin Saganoseki". In event bad weather, recommended vessels proceed for shelter as near as possible having due regard to safety, to Sekisaki Pilot Station.
3. Hesaki, at East side of Kanmon (Shimonoseki) Straits. Position Lat. 33° 57' N., Long. 131° 03' E.
MAX. SIZE: See "Berthing".
ANCHORAGE: Anchorage outside breakwater, sufficient water, but on account fast current deemed not safe anchorage. Anchorage inside breakwater generally shallow, and sea area narrow for large vessels.
RESTRICTIONS: No entry after dark.
HEALTH: Vessel should obtain Pratique at Matsuyama or any other Quarantine port. Quarantine Officers will attend vessel only from daylight to sunset and Master to show all Vaccination Cards and Derat Exemption Certificate. In case vessel arrives from cholera-infected area within 10 days, Master must advise crew and passengers' health condition to respective Quarantine Office through ship's Agent prior to arrival and close all soil pipes before entering port.
Also see "Late Reports".
RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.
TUGS: 6 tugs available, 1,050 h.p. – 4,000 h.p. Kurashiki Wharf: Join vessel at sea anchorage, using tug's line with charge.
BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by radio.

Kurashiki Wharf:	*Section*	*Length* (m.)	*Depth* (m.)	*Max.Draft* (m.)
	1	165	9.0	8.10
	2	140	7.5	6.75
	3	180	5.5	
	4	270	5.5	
Toryu Wharf:				
	1	180	5.5	

Tomioka Wharf:	*Length* (m.)	*Depth* (m.)	*Max. Size* d.w.t.
(New wharf)	240	12.0	30,000
	185	10.0	15,000

CRANES: Floating crane available from Kure.
STEVEDORES: At least 24 hours prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew at additional cost. Overtime surcharges (0700 hrs. – 0830 hrs., 1630 hrs. – 2130 hrs.) 60% additional of basic stevedorage; 2130 hrs. – 0700 hrs. next morning 120% additional; Sundays/holidays 100% additional.
MEDICAL: No advance notice required unless urgent.
DENSITY: Temposan Wharf 1015.
FRESH WATER: Fresh water available by barge from Mizushima or Marugate with 3 days advance notice.
FUEL: All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, Osaka Bay and Kanmon Port. At all other ports bunkers will be lightered from the nearest bunker stock ports at maximum 7 days prior notice.
CONSULS: See "Kobe".
DRY DOCKS: Imabari Ship Building Co.Ltd.:

No. 1 Shipway	1×16,800 g.r.t.
No. 1 Dry dock	1×53,000 g.r.t.
No. 2 Dry dock	1×80,000 g.r.t.
Hashihama Dockyard Co.Ltd.:	
No. 1 Dry dock	2,800 g.r.t.
No. 2 Dry dock	6,200 g.r.t.
No. 3 Dry dock	3,300 g.r.t.
Oshima Works	20,000 g.r.t.

There are also some small dockyards.

REPAIRS: Only minor repairs.
OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.
GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.
CERTIFICATES: Ship's Register and/or International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear's maintenance appears to be poor.
CUSTOMS ALLOWANCES: Only allowed 50 cigarettes to take ashore but no spirits.
REPATRIATION: Possible. Immigration Office at Niihama.
AIRPORT: No airport. Nearest airports are Matsuyama and Takamatsu where are All Nippon Airways.
TIME: GMT plus 9 hours. No alterations made to clocks during year.
POLICE/AMBULANCE/FIRE: Police Tel. 110; Ambulance 119; Fire 119.
TELEPHONES: No facilities for placing telephones on board.
SERVICES: None.
SHORE LEAVE: Local Immigration Offices issue shore pass valid for only 7 days, but 7 days extension possible if ship stays longer.
AUTHORITY: Imabari Port Administration Office, 2 Katahara-cho, 1-chome, Imabari City, Ehime, Pref. *Tel:* (0898) 22-4120.

IMARI: 33.18 N. 129.49 E. (See Plan)

(A) IMARI
(B) LPG TANKERS

(A) IMARI

DOCUMENTS: When vessel arrives direct from a foreign port, Customs Officials will board to search, and the following documents are to be submitted:
Ship's Register.
International Tonnage Certificate.
Voyage Memo (ports of call).
4 Crew Lists, including Passport numbers.
3 Passenger Lists.
1 Last Port Clearance.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agents will prepare Inward/Outward Declaration, Cargo Manifest and Cargo Manifest in Transit, using specific forms. Therefore ship's Agents should be provided with necessary information about details of cargoes in advance.
PILOTAGE: There are 2 Pilot Stations. One is for Bay Pilot boarding Lat. 33° 26.4' N., Long. 129° 42.7' E., and the other is for Harbour Pilot boarding at Quarantine Station at Lat. 33° 20.15' N., Long. 129° 48.74' E. (from Uranosaki Light 93° × 1,630 m.). Both pilots available to board any time if the Master requires, through Agent, and pilot not compulsory. Pilot uses tug as pilot boat, so the Master can contact tug by VHF Channel 16 in daytime, except Sundays/holidays.
ANCHORAGE: No restrictions, except dangerous cargo ships and draft. Depth of inner harbour anchorage is about 10 m. – 17 m.
RESTRICTIONS: No restrictions on entry/departure, available day and night.
MAX. SIZE: LOA 248.50 m., beam 43.00 m., d.w.t. 88,309 tons. Minimum under-keel clearance 10% of draft required (See "Berthing").
HEALTH: Formalities will be carried out at anchorage. Quarantine Station is 096° × 1,300 m. (200 m. circle) from Uranosaki Lighthouse in position Lat. 33° 20' 06" N., Long. 129° 48' 32" E.
Also see "Late Reports".
RADIO: Recommended Master communicates with Agent through Nagasaki Radio.
VHF: No port radio.
TUGS: 3 tugs available, 2×3,000 h.p. and 1×3,100 h.p. Additional tugs available from Sasebo and Nagasaki.
BERTHING:

Name of Berth		*Length* (m.)	*Max. Draft* (m.)
Buoy No. 1			9.0
Buoy No. 2			9.9
Buoy No. 3			11.7
Kubara North Pier	No. 2	130	6.8
	No. 3	185	9.0
Kubara South Pier	No. 1	270	5.0
	No. 2	260	6.8
	No. 3	370	9.0

CRANES: Mobile cranes available if required.
BULK CARGO FACILITIES: None.
SPECIAL CARGO HANDLING FACILITIES: See "Section B".
BRIDGES: None.
STEVEDORES: 2 gangs for general cargoes and/or 10 gangs for logs available.
MEDICAL: Notice not necessary, full hospital facilities available.
DENSITY: 1025 salt, generally at all tides.
FRESH WATER: Available 24 hours a day at 50 t.p.h. from shore only. Cost Yen 700/ton.
FUEL: Domestic oil is available. Bonded oil will be brought from Moji, Oita or Tokuyama area with sufficient notice, when required.
FIRE PRECAUTIONS: None, except LPG tankers (See "Section B").
CONSULS: No local representatives.
REPAIRS: The shipyard is capable of carrying out all kinds of fitting-out and repair work.
DRY DOCKS: One dry dock of 460 m. length and 70 m. width (New building only).
SURVEYORS: Available for cargo and class survey (NK, BV, RL, NV, etc.).
GANGWAY/DECK WATCHMEN: Not specifically required unless passengers or valuable cargo on board.
OPENING/CLOSING HATCHES: Hatch operation by crew.
CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid cargo gear certificate sometimes required by stevedores when cargo gear maintenance appears to be poor.
CUSTOMS ALLOWANCE: Only allowed 60 cigarettes to take ashore, but no spirits.
REPATRIATION: Facilities exist for repatriation of crew.
AIRPORT: Fukuoka Airport 80 km. from Imari. Served by domestic and overseas airlines.
TIME: GMT plus 9 hours. No alterations made to clocks during year.
HOLIDAYS: January 1st – 3rd; August 15th – 16th.
POLICE/AMBULANCE/FIRE: Police 110; Ambulance and Fire 119.
EMERGENCY CO-ORDINATION CENTRE: VHF Channel 16 call "Moji Hoan". Tel: 0955-73-4999. 24 hours service.
TELEPHONES: Not available.
SERVICES: Almost all services available.
BANKS: The Bank of Saga Ltd., Imari Branch Office. Tel: 0955-23-3111. Fax: 0955-22-5908.
STORING: Vessels can store by barge, truck and forklift at any time, except LPG tankers.
SHIP SUPPLIERS: *Provisions:* Sasebo Trading Co.Ltd. Tel: 0956-32-1211. Fax: 0956-33-4868.
Matsuda Shintoh Trading Co.Ltd. Tel: 0956-22-7220. Fax: 0956-22-7225.
SHORE LEAVE: Local Immigration Offices issue shore passes valid for only 15 days when Imari is first port of call in Japan. Extension possible if ship stays longer.
REGULATIONS: Normal port regulations.
DEVELOPMENTS: Dredging inner harbour to 10 m. One grain berth 13 m. depth and 400 m. length is under construction.

(B) LPG TANKERS

LOCATION: Kyushu LPG Fukushima Terminal Co.Ltd. (Lat. 33° 29' N., Long. 129° 40' E.).
DOCUMENTS: When vessel arrives direct from a foreign port, Customs Officials will board to search, and the following documents are to be submitted:
Ship's Register.
International Tonnage Certificate.
Voyage Memo (ports of call).
4 Crew Lists, including Passport numbers.
3 Passenger Lists.
1 Last Port Clearance.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agents will prepare Inward/Outward Declaration, Cargo Manifest and Cargo Manifest in Transit, using specific forms. Therefore ship's Agents should be provided with necessary information about details of cargoes in advance.
PILOTAGE: There are 2 Pilot Stations. One is for Bay Pilot boarding (Lat. 33° 26.4' N., Long. 129° 42.7' E.), and the other is for Harbour Pilot boarding (Lat. 33° 29' N., Long. 129° 40' E.). Both pilots available to board any time if the Master requires, through Agent, and pilot is compulsory. Pilot uses tug as pilot boat, so the Master can contact tug by VHF Channel 16 in daytime, except Sundays/holidays. Boat's name is "Mezura Maru".
ANCHORAGE: Same as Pilot Station (Lat. 33° 29' N., Long. 129° 40' E.). Depth of inner harbour anchorage is about 10 m. – 17 m.
RESTRICTIONS: Entry is allowed after sunrise to 4 hours before sunset.
Also see "Berthing".
MAX. SIZE: Max. draft 14.0 m. Max. d.w.t. 70,000 tons.
HEALTH: See "Late Reports".
RADIO: Recommended Master communicates with Agent through Nagasaki Radio. No radio station so if vessel equipped with telex, send to Agent's Office (Telex: 7479-33 Nagai J).
VHF: When approaching the port, contact pilot boat "Mezura Maru" on Channel 16.
RADAR: No radar at port.
TUGS: 3 tugs available, 3×3,000 h.p. 3 tugs required for berthing, and 2 tugs required for unberthing.
BERTHING: Vessel may berth either side alongside, although Terminal prefer portside alongside. Local regulations prohibit the commencement of discharging after sunset. Normal mooring configuration is 3,3,2, with lines on quick release hooks. Mooring boats in attendance. A shore gangway is provided.

The following restrictions apply to berthing:
1. Max. wind force allowed: Less than 10 m./sec.
2. Max. wave height allowed: Less than 1.0 m.
3. Visibility allowed: Over 1.0 sea miles.
4. Max. docking speed allowed: Less than 10 cm./sec.
5. Max. docking angle allowed: Less than 6°.
6. When coming alongside berth, the ship's manifold to be used shall be clearly marked with "Flag N", so as to be easily distinguished by the Terminal Berthing Master on the jetty.

CARGO HANDLING FACILITIES:

	Propane (L)	*Propane* (V)	*Butane* (L)	*Butane* (V)
Receiving Capacity (cm./hr.)	2,000	2,700	2,000	2,300
Max. Pressure (kg./sq.m.)	10	10	10	10
Allowable Temp. (C)	−45	−45	−10	−10
Hose Flange Size (in.)	12	10	12	10

Note: Unloading cargo operation of Propane and Butane shall be carried out at the same time.

Shore arms arrangement: If berthing port side to, from bow BV-BL-PL-PV.

BRIDGES: None.

MEDICAL: Notice not necessary, but advisable if treatment required. Full hospital facilities available, also cholera vaccinations.

DENSITY: 1025 salt, generally at all tides.

FRESH WATER: Available from the berth, but minimum of 7 days notice is required for this service. Tank capacity 350 cu.m., supply rate 19 cu.m./hr.

FUEL: Domestic oil is available. Bonded oil will be brought from Moji, Oita or Tokuyama area with sufficient notice, when required. Must be taken at anchorage.

FIRE PRECAUTIONS: In operation.

CONSULS: No local representatives.

REPAIRS: The shipyard is capable of carrying out all kinds of fitting-out and repair work.

DRY DOCKS: One dry dock of 460 m. length and 70 m. width (New building only).

SURVEYORS: Available for cargo and class survey (NK, BV, RL, NV, etc.) from Moji or Nagasaki.

GANGWAY/DECK WATCHMEN: Whilst alongside at the Terminal berth, a responsible member of crew shall be stationed at the ship's gangway to advise visitors on safety regulations and to check visitors and crew members.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages.

CUSTOMS ALLOWANCE: Only allowed 60 cigarettes to take ashore, but no spirits.

REPATRIATION: Facilities exist for repatriation of crew.

AIRPORT: Fukuoka Airport 80 km. from Imari. Served by domestic and overseas airlines.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

HOLIDAYS: Unloading cargo operations will be carried out every day.

POLICE/AMBULANCE/FIRE: Police 110; Ambulance and Fire 119.

EMERGENCY CO-ORDINATION CENTRE: VHF Channel 16, call "Moji Hoan". Tel: 0955-73-4321, 24 hours service.

TELEPHONES: Not available.

SERVICES: Most services available.

BANKS: The Bank of Saga Ltd., Imari Branch Office. Tel: 0955-23-3111. Fax: 0955-22-5908.

STORING: Stores shall be loaded before unloading from a barge.

SHIP SUPPLIERS: Provisions: Sasebo Trading Co.Ltd. Tel: 0956-32-1211. Fax: 0956-33-4868.

Matsuda Shintoh Trading Co.Ltd. Tel: 0956-22-7220. Fax: 0956-22-7225.

SHORE LEAVE: Local Immigration Offices issue shore passes valid for only 15 days when Imari is first port of call in Japan. Extension possible if ship stays longer.

REGULATIONS: Cargo handling operations shall be stopped and the vessel shall be shifted to safe anchorage under such conditions as follows:

1. When Harbour Master or Maritime Safety Agencies give order.
2. Wind force is forecast to increase to more than 15 m./sec.
3. Wave height is forecast to be more than 1.0 m.
4. Visibility is less than 200 m.
5. Thunderstorm is forecast and approaching.
6. When LPG vapour accumulation is present on the deck.
7. When a fire occurs either on the vessel or in the vicinity.
8. When warning of approaching tidal wave is received.

Smoking shall be prohibited onboard when Chicksan arms are being connected or disconnected.

Fire wires shall always be lowered to sea level over the off-side bow and quarter to enable tugs to connect up rapidly in an emergency.

Lubricant pressure of stern tube shall be maintained lower than sea water pressure.

SHIPMASTER'S REPORT: November 1984.

Location: The terminal is a fairly new facility situated deep within Imari Bay on the N.W. coast of Kyushu – some 12 miles or so North of Sasebo. It is owned by Kyushu L.P.G. Fukushima Terminal Company Limited and was built in August 1982.

It is used solely for LPG discharge and there is a coastal tanker loading berth immediately adjacent.

Approaches: BA. 1527 is the only British chart to cover the area from the South and is barely adequate. Japanese Charts 166 and 1256 will give a better indication of the geography of the bay and immediate approaches.

On this occasion we arrived from the Arabian Gulf and chose to approach to the East of the Goto Retto, through Aizaki Seto and thence North to pass between Azuchi O Shima and Taku Shima, i.e. through Oshima Seto.

Navigation presents no problem with the high land providing excellent radar returns. Because of the strong tidal streams it will be necessary to time the passage of Aizaki Seto on the flood; if this cannot be managed then passage through to the East of Eno Shima is recommended.

There are the usual huge concentrations of fishing vessels in the area and, on arrival, the Pilot advised strongly against attempting another passage of Oshima Seto. (We had transited on a Sunday morning and the passage was entirely clear. On departure, however, it was thick with fishing vessels). A passage to the North of Azuchi O Shima is therefore recommended.

From Safety Regulations:

(i) Master should proceed carefully in Imari Bay to prevent grounding in shallow water (from Aoshima S.E. 1.3 miles, depth 12.4 m.–13.8 m., Nohtori Asase depth 15.5 m.).

(ii) Under keel clearance shall be kept to more than 10% of maximum ship's draft.

(iii) Entering bay is prohibited under the following conditions:
   1. Wind force is forecasted to increase to more than 10 m./sec.
   2. Wave height is forecasted to be more than 1.0 m.
   3. Visibility is forecasted to decrease to less than 1.0 mile.

(iv) Boil-off gas blowing is prohibited in Imari Bay.

(v) Master shall be requested to proceed through Imari Bay during period from sunrise to sunset.

(vi) Master will be requested to keep ship's speed less than 8 knots while proceeding in Imari Bay.

(vii) The vessel should keep a good lookout by radar and sight.

Pilotage: Pilot compulsory for LPG tankers over 10,000 gross tons. The pilot boarding position is 33° 29' N., 129° 40' E., although this is not marked on the BA charts. The Pilot boarded from a tug and required the pilot ladder 2.0 m. from the water. Boarding daytime only. The vessel is then escorted to her berth by 2 or 3 tugs, one of which stations itself over a shoal (12.0 m.) patch within the bay as a marker. There is a 4 knot speed restriction in this area. Pilot guarded Channel 16 and worked Channel 6 VHF.

Length of pilotage about 1.5 hours to quarantine anchorage and thence to berth.

Restrictions: See "Approaches" and "Berthing".

Max. Size: 70,000 d.w.t., max. draft 15.5 m.

Health: If the vessel has a valid Sanitary Certificate the quarantine anchorage may be dispensed with and the vessel will be cleared alongside.

VHF: See "Pilotage".

Tugs: See "Pilotage".

Berthing: Vessels may berth either side alongside although they prefer to berth port side to, presumably to save time on arrival. Local regulations prohibit the connection of cargo lines after sunset.

Normal mooring configuration of 3, 3, 2, with lines on quick release hooks. Mooring boats in attendance.

A shore gangway is provided, length 15 m., extension ability 5 m.–9 m., can operate to 33° above horizontal and to 17° below horizontal.

The following restrictions apply to berthing:

1. Max. wind force allowed: less than 10 m./sec.
2. Max. wave height allowed: less than 1.0 m.
3. Visibility allowed: over 1.0 sea mile.
4. Max. docking speed allowed: less than 10 cm./sec.
5. Max. docking angle allowed: less than 6°.

From Safety Regulations:

1. Should be port side alongside in principle.
2. Should use tugboat for berthing and unberthing.
3. Should keep berthing speed less than 10 cm./sec., berthing angle less than 6°.
4. Should use line boat for berthing.
5. When coming alongside berth, the ship's manifold to be used shall be clearly marked with "Flag N" so as to be easily distinguished by the Terminal Berth Master on the jetty.
6. Should be careful not to damage the berth facilities.

Discharging: Normal cargo survey procedure. However, the shore carry out their own determination of cargo S.G. and will use this figure for their own calculations.

Normal Japanese Safety Inspections and procedures. There is supposed to be a 4 hourly safety check throughout discharge.

The discharge presented no problems with a rate of 1,200 t.p.h. being achieved with 4 pumps.

A back pressure of 3.0 bar was stipulated but we worked constantly at about 3.2 bar without any complaint, tonnage rate apparently being their main consideration at the time.

Chicksans are purged with Nitrogen on completion.

Cargo Operation Specifications:

	Propane (Liq.)	*Propane (Vap.)*	*Butane (Liq.)*	*Butane (Vap.)*
Receiving capacity (cu.m./hr.)	2,000	2,700	2,000	2,300
Allowable max. pressure kg./sq.m.	10	10	10	10
Allowable temperature (°C)	−45	−45	−10	−10
Hose flange size from		All 150 ASA		
shoreside (inches)	12	10	12	10

Remarks: Unloading cargo operation of Propane and Butane shall be carried out at the same time.

Chicksan Arm Arrangements: From left to right looking shoreward: Propane vapour, Propane liquid, Butane liquid and Butane vapour.

This being the usual Japanese configuration of V.L.L.V. with dedicated lines.

Shore Vapour Blower Capacity:

Propane:	Max. pressure 2,400 mm. Aq. Max. quantity 5 t.p.h.
Butane:	Max. pressure 2,400 mm. Aq. Max. quantity 5.8 t.p.h.

Shore Tank details:

for Propane:	Tank capacity 40,000 tons×2 Tank pressure 0.15 kg./sq.cm. Tank temperature −45°C
for Butane:	Tank capacity 40,000 tons×2 Tank pressure 0.15 kg./sq.cm. Tank temperature −10°C

Nitrogen Supply:

Tank capacity:	27 cu.m. (in liquid)
Supply rate:	3,000 cu.m./hr.
Flange size:	1.0 in.

Flare capacity: 3,500 cu.m./hr.×1

Communications: Communication is by means of a telephone placed on board in the CCR. Level of English rather poor and an Agent is invariably in attendance to assist.

Ship's Tel. No.: 380.

Shore Cargo Control Room Tel. Nos.: 350, 351, 352.

Fresh Water: Available from the berth but a minimum of 7 days' notice was quoted for this service.

Tank capacity 350 cu.m, supply rate 17.5 cu.m./hr., Hose flange size 2.5 in.

Water may also be taken by barge (prohibited during cargo operations).

Fuel: Available by barge and must be taken at anchor.

Repairs: The main engines and other equipment for ship's manoeuvring shall be in an operable condition and in a state of immediate readiness while alongside the berth.

There are a number of contractors available for minor repairs, with the usual restrictions on hot work and the movement of large metal objects. There is a large shipyard within the area which could presumably handle emergency repairs.

Surveyors: Nearest Lloyd's Surveyors are at Nagasaki and Moji.

Gangway/Deck Watchmen: Whilst alongside at the terminal berth, responsible member of crew shall be stationed at the ship's gangway to advise visitors of safety regulations and to check visitors and crew members.

Storing: Stores may be loaded from the quay but not whilst working cargo.

Shore Leave: Ship's crew and visitors shall take the route through the terminal shown on the map in the terminal information booklet.

Ship's crew should carry Landing Permit which is issued by Japanese Immigration Officer.

No smoking shall be allowed in the terminal.

When taking photographs of the terminal, permission should be obtained from the Terminal Representative.

Regulations: Following are extracts from the Terminal Safety Regulations.

Cargo handling operation shall be stopped and the vessel shall be shifted to a safe anchorage under such conditions as follows:

1. When Harbour Master or Maritime Safety Agencies order ship's Master to shift vessel.
2. Wind force is forecasted to increase to more than 15 m./sec.
3. Wave height is forecasted to be more than 1.0 m.
4. Visibility is poor (less than 200 m.).
5. Thunderstorm is forecasted to be approaching.
6. When LPG vapour accumulation is present on the deck.
7. When a fire occurs either on the vessel or in the vicinity.
8. When warning of approaching tidal wave is received.

Smoking shall be prohibited onboard when Chicksan arms are being connected or disconnected.

Fire wires shall always be lowered to sea level over the off-side bow and quarter to enable tugs to connect up rapidly in an emergency.

Lubricant pressure of stern tube shall be maintained lower than sea water pressure.

SHIPMASTER'S REPORT: February 1995.

Chart: B.A. Chart No. 3514.

Location: About 30 miles S.W. of Fukuoka, the regional capital, on the West coast of Kyushu.

The Terminal is in a sheltered bay on the island of Fukushima.

Anchorage: Anchorage can be found about 3 miles West of Kurushima Island. Anchorage in approximate position Lat. 33° 27' N., Long. 129° 39' E., in 50 m. The anchorage is exposed to Northerly winds, and there is a lot of crossing traffic.

Inside in Imari Wan, anchorage for large LPG ships is not allowed, although numerous smaller vessels, including LPG, observed at anchor.

Tugs: Escort tug from pilotage ground to and from berth. Three powerful tugs berth/unberth large LPG ships. Tug's lines fore and aft plus, one pushing.

Tugs join vessel about 1.5 miles N.W. of berth.

Pilot: Pilot boards LPG ships over 10,000 d.w.t. from 0630 hrs. to 1600 hrs., and only daytime sailing up to 1600 hrs. (a bit longer in Summer).

Pilot boarded off Izushima as marked on B.A. Chart No. 3514, not generally as the official outer position is Lat. 33° 29' N., Long. 129° 40' E., from an escort tug.

Escort tug listens to VHF Channel 16 when a vessel is expected.

It it about 1 hour pilotage to the berth.

Aoshima Suido (under pilotage) has a large amount of fish havens.

Pilot is competent and speaks good English.

Berthing: Officially not possible with wind speed over 10 m./sec. We entered bay with wind at 15 m./sec. Vessels normally berth port side alongside, although starboard side alongside is possible.

The berth has Doppler landing speed indicator board.

Berth: The concrete pile construction (as per B.A. Chart No. 3514 and Inset), is situated on South side of Fukushima Island and is capable of taking the largest LPG carriers.

The tanker type 'T' jetty has breasting/mooring dolphins extending both sides of the jetty and is connected by catwalks. Good fenders are available. Moorings were 3,2,2 each end. Moorings handled by mooring boat.

Depth at berth is 20.0 m.

Discharge: 4×40,000 tonne refrigerated storage tanks and pressure spheres available.

Refrigerated discharge arms West to East:

C3 (Propane) – Vapour – 10 in./150 ASA.
C3 (Propane) – Liquid – 12 in./150 ASA.
Draining by N2 blowback ashore.
C4 (Butane) – Liquid – 12 in./150 ASA.
Draining by N2 blowback ashore.
C4 (Butane) – Vapour – 10 in./150 ASA.

Slow rate of discharge at commencement – about 300 cu.m./hr.

Maximum discharge rate C3/C4 – 2,000 cu.m./hr.

Vapour return offered, but not compulsory. Ship's tank pressures to be maintained between 60 mb. to 100 mb.

30 minutes notice of completion of discharge required.

A modern efficient Terminal.

Shore walkie-talkies given to Officer-of-watch.

Terminal telephone placed in ship's Control Room.

Fresh Water: Available from metered line on Chicksan platform, just West of C3 vapour arm.

Gangway: Shore powered gangway, which lands just aft of manifold.

General: Safety meeting on arrival with Terminal management concerning Procedures and Check List, followed by walk around.

To N.E. of Ocean berth are 2 smaller jetty berths for coastal LPG ships loading from pressure spheres.

Shore leave only by taxi through the Terminal (arranged by Agent).

Stores by tug on vessel's arrival, but before cargo starts. The hire of the tug is Yen 60,000, making the operation expensive. In any case, stores are very expensive.

Nearest airport is Fukuoka, about 45 miles to N.E. by road, with domestic and international flights.

AUTHORITY: Japan Maritime Safety Agencies, Imari Branch Office, 2976-31, Kubara, Yamashiro cho, Imari City, Saga Pref., Japan. *Tel:* (0955) 28-3388.

INNOSHIMA: 34.17 N. 133.11 E. (See Plan)

DOCUMENTS:

Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
3 Crew Lists, including Passport Numbers.
3 Passenger Lists.
1 Stores List.
1 copy Voyage Memo (last 3 months).
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords etc. (only at first port of call in Japan).

Ship's Agents will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in Transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Inland Sea Pilotage should preferably be arranged through Agent by cable via Nagasaki Radio giving 72 hours' notice. Urgent correction of ETA outside business hours should be cabled direct to Pilot Station. Inland Sea Pilot Association covers all Inland Sea ports. Pilotage compulsory for vessels over 10,000 g.r.t. Pilots obtained from one of three Pilot Stations dependent upon vessel's last port of departure and at Master's discretion. Pilotage available throughout 24 hours and 72 hours' advance notice preferred, thereafter advising any alterations. Most Inland Sea Pilots also act as Harbour Pilots up to berth or anchorage at destination.

Note: VHF communication with Inland Sea Pilot Stations. Also see "Shipmaster's Report" before first port.

Wadamisaki, at entrance to Kobe (vessels transitting Kii Straits) Position Lat. 34° 34.09' N., Long. 135° 11' E. Telegraphic address "Anjin Kobe".

Sekisaki, 3 miles South of Sekisaki Lighthouse (vessels transitting Bungo Channel). Position Lat. 33° 13' N., Long. 131° 54' E. Telegraphic address "Anjin Moji". In event bad weather, recommended vessels proceed for shelter as near as possible, having due regard to safety, to Sekisaki Pilot Station.

Kanmon Pilot boards at Mutsure (Lat. 33° 58' 15" N., Long. 130° 53' 43" E.) for passing Shimonoseki Strait to Hesaki where Pilot will be changed to Inland Sea Pilot.

Hesaki, at East side of Kanmon (Shimonoseki) Straits. Position Lat. 33° 56' 24" N., Long. 131° 03' 12" E.

ANCHORAGE: No. 1, 14 m. deep, 1.4 miles off Hyakkan Island 180°. No. 2, 9 m. deep, 1.5 miles off Hyakkan Island 290°.

RESTRICTIONS: In general, mooring/unmooring and/or dry-docking in-and-out carried out in daytime only.

MAX. SIZE:

	Length	*Breadth*	*Draft*
(1) For mooring only	320 m.	× 50 m.	× 7 m.

(2) Max. draft for entering port: 9 m.
(3) Max. draft for mooring: 5 m. – 7 m. according to quay.

Current is N.E. at high tide, and S.W. at low tide at max. 2.5 knots.

HEALTH: In event vessel proceeding Innoshima direct from foreign port, vessel to receive Pratique at Quarantine Anchorage Kobe or Hososhima (Lat. 32° 25' 50" N., Long. 131° 41' 53" E.) or Matsuyama (Lat. 33° 51' 00" N., Long. 132° 41' 00" E.) or Mutsure (Lat. 33° 59' N., Long. 130° 53' E.).

At first port of call in Japan, vessel must obtain Free Pratique. Quarantine Officers will attend vessel only from daylight to sunset and Master to show all Vaccination cards, Derat Exemption Certificate. In case vessel arrives from cholera-infected area within 10 days, Master must advise crew and passengers' health condition to respective Quarantine Office through ship's Agent prior to arrival and close all soil pipes before entering port.

Also see "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

TUGS: 6 tugs available, 320 h.p. – 3,500 h.p. Ship taken into port by Dock Master who joins ship at anchorage with tug-boat. Usually tug's lines used.

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by radio.

Berth	*Depth* (m.)	*Length* (m.)	*Capacity* d.w.t.	*Capacity* g.r.t.
Hitachi Innoshima Yard				
Repair Berth				
No. 1	7.0	160	12,000	9,500
No. 2	4.0	120	8,000	5,000
No. 3	7.0	220	55,000	35,000
No. 4	7.5	240	130,000	80,000
No. 5	7.0	300	130,000	80,000
No. 6	7.0	380	10,000	7,000
No. 7	10.0		220,000	140,000
No. 8 (West)	10.0	435	220,000	140,000
(East)	7.0		55,000	35,000
No. 9	9.0	300	80,000	50,000

MEDICAL: No advance notice required unless urgent. Hospital facilities available.
TANKERS: Tank cleaning station operated by Kamtec Tank Cleaning Company, can receive slops up to rate of 250 t.p.h.
FUEL: All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, Osaka Bay and Kanmon Port. At all other ports bunkers will be lightered from the nearest bunker stock ports at maximum 7 days prior notice.
FRESH WATER: Available by barge or pipelines at shipyard.
CONSULS: None.
REPAIRS: All facilities for major repairs.
DRY DOCKS: Hitachi Zosen:

	Length (m.)	*Width* (m.)	*Depth* (m.)	*Capacity* (d.w.t.)
Dock No. 1	175.00	25.60	9.10	21,000
Dock No. 2	282.50	47.00	11.30	130,000
Dock No. 3	260.00	57.00	11.10	100,000

GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.
CUSTOMS ALLOWANCES: Only allowed 50 cigarettes to take ashore but no spirits.
AIRPORT: Hiroshima Airport or Okayama Airport (domestic only). About 2 hours by car from both airports. Crew joining or leaving use Osaka International Airport.
TIME: GMT plus 9 hours. Permanent.
TELEPHONES: Telephone is available: Shipyard installs one telephone in accommodation and another one in engine room.
SERVICES: The following services are available: Tank cleaning, discharge of tank washings, compass adjustment, ship's chandler.
SHORE LEAVE: Local Immigration Offices issue shore pass valid for only 3 days, but 3 days extension possible if ship stays longer.
AUTHORITY: Mihara Doboku (Public Works) Office, 1834-65, Enichicho, Mihara City, Hiroshima Pref. *Tel:* (08486) 4-2322.

ISHIKARI BAY NEW PORT: 43.11 N. 141.17 E. (See Plan)

DOCUMENTS:
Ship's Register.
International Tonnage Certificate.
5 copies Crew List.
3 copies Port of Call List.
1 copy Stores List.
1 copy Baggage List.
PILOTAGE: Not compulsory, but recommended for arrival only. Working hours are from one hour after sunrise to one hour before sunset. Arrangements made at Port of Otaru (Otaru Pilot Association. Tel: 0134-22-5380). Request for Pilot must be made at least 3 days in advance through Agent's Office by telegram or telex. Pilot will board from a tug.
ANCHORAGE: Bottom is sand. Draft limitation 9.00 m. No quarantine anchorage available.
RESTRICTIONS: Usually no entry after sunset, sailing possible.
MAX. SIZE: See "Berthing".
HEALTH: Radio Pratique available. Formalities will be carried out at Quarantine Office at Otaru.
Also see "Late Reports".
RADIO: No station.
VHF: No facilities.
RADAR: Not available.
TUGS: 1×2,000 h.p. tug at the port. 2 tugs × 2,600 h.p. can be arranged from Otaru, when required. Tugs join the vessel outside of the breakwater. Tug's lines will be used.
BERTHING:

Name of Berth	*No. of Berth*	*Length* (m.)	*Draft* (m.)	*Max.Size* (d.w.t.)
Tarukawa Wharf	2	370	10.00	15,000
Tarukawa Wharf	3	390	7.50	5,000
Bannaguro Wharf	2	370	10.00	15,000
Bannaguro Wharf	3	390	7.50	5,000
East Wharf	1	185	10.00	15,000
West Wharf	2	260	7.50	5,000
Central Wharf (Oil & Gas) (Private)	6	865	7.50	5,000

CRANES: 1×50 ton mobile crane. Extra mobile cranes up to 150 tons available, if necessary.
BULK CARGO FACILITIES: No facilities available.
SPECIALISED CARGO HANDLING FACILITIES: None.
BRIDGES: None.
STEVEDORES: Requests must be made by 1600 hrs. the previous day. Working hours:
Weekdays: 0800 to 1630 hrs. Overtime 1630 to 2030 hrs.
Sundays: 0830 to 1630 hrs.
Holidays: 0830 to 1630 hrs. (Except December 30th (1600 hrs.) to January 4th (0830 hrs.)).
MEDICAL: Full hospital facilities available without prior notice. Dentists available during normal working hours.
TANKERS: See "Berthing".
DENSITY: Average 1025.
FRESH WATER: Available from shore pipeline. Cost: Y.780/ton in Summer (April 1st – November 30th) and Y.1,000/ton in Winter.
FUEL: Bonded oil available, supplied by barge (heavy oil, grades A,B,C).
FIRE PRECAUTIONS: Ship's watchmen to be on duty.
CONSULS: None.
REPAIRS: No facilities.
DRY DOCKS: None.
SURVEYORS: Cargo Inspectors available from Sapporo. Classification Society surveyors available from Muroran and Hakodate.
GANGWAY/DECK WATCHMEN: Not specially required.
HATCHES: Ship's crew normally open and close hatches.
REPATRIATION: Crew changes possible.
AIRPORT: Nearest airport is New Chitose International Airport (60 km. from Ishikari).
TIME: GMT plus 9 hours, no alterations made to clocks during year.
HOLIDAYS: From 30th December to 4th January.
POLICE/AMBULANCE/FIRE:
Police: Sapporo Kita Police Station. Tel: 011-74-8611, or emergency (110).
Hospital: Ishikari Hospital. Tel: 0133-74-8611, or emergency (119).
Fire: Ishikari Fire Station. Tel: 0133-74-7111, or emergency (119).
EMERGENCY CO-ORDINATION CENTRE: Otaru Marine Safety Agency contactable directly by VHF Channel 16.
TELEPHONES: Calls can be made from telephone box on shore. International telephone booths at Tarukawa Wharf and Bannaguro Wharf.
SERVICES: None.
BANKS: Money changing service at: Hokkaido Takushoku Ginko. Tel: (0133) 74-3131.
Hokkaido Bank. Tel: (0133) 74-2121.
Sapporo Shinkin Bank. Tel: (0133) 72-3131.
STORING: Provisions and stores are available. Ishikari Ship Chandler Association. Tel: (0133) 64-7271. Vessel will be stored by trucks.
SHORE LEAVE: Crew member are allowed ashore.
IDENTIFICATION CARDS: Shore passes are issued by local Immigration Office at Otaru.
GARBAGE DISPOSAL: No service is provided.
WASTE OIL DISPOSAL: No service is provided.
SEAMAN'S CLUBS: None.
CURRENCY: Yen.
REGULATIONS: All vessels are expected to follow the fixed course for protecting inshore fishery. Deflecting point 9 km. off shore.
DELAYS: None.
GENERAL: Agent for every shipping company open. Information centre in the port, with TV set, video and free rental service for bicycles.
DEVELOPMENTS: Port Plan (1996-2005) includes 12 m. and 14 m. deep quay walls at the West Wharf, all-weather berth at the bottom of the fairway and CFS facilities, etc.
AUTHORITY: Ishikari Bay New Port Authority (Ishikariwan Shinko Kanri Kumiai), Shinko-chuo 1-chome, Ishikari-shi, Hokkaido, 061-32 Japan. *Tel:* 0133-64-6661. *FAX:* 0133-64-6666.

ISHINOMAKI: 38.23 N. 141.19 E. (See Plan)

PORT LIMITS: Within the area of points A, B, C, D, E and F.

(A)	38° 24.70' N.	141° 20.05' E.
(B)	38° 23.87' N.	141° 21.14' E.
(C)	38° 23.74' N.	141° 19.30' E.
(D)	38° 22.90' N.	141° 19.30' E.
(E)	38° 22.55' N.	141° 15.33' E.
(F)	38° 24.50' N.	141° 14.67' E.

DOCUMENTS Necessary documents for speedy clearance are as follows:
5 Crew Lists.
5 Passenger Lists, if any.
Health Declaration.
Voyage Memo.
Ship's Stores List.
Crew's Baggage List.
Ship's Register.
International Tonnage Certificate.
Derat Exemption Certificate.
Bill of Lading.
Last Port Clearance.
PILOTAGE: Address: 35-8 Ban, 1-Choume Teizandoori, Shiogama City, Miyagi Pref., Japan. Tel: 022-364-1727.
Pilot's boarding and leaving positions:
Pilot boarding – 1.5 nautical miles off Hibarino breakwater.
Pilot leaving – around lighthouse off Hibarino breakwater.

Pilot not compulsory. Pilot requirement to be made by Agent on previous day. Tug normally used as pilot boat, and it can be contacted on VHF Channel 16 in daytime. Pilot ladder must be 2.0 m. above water. Pay attention to fishing nets around the Pilot Station.

ANCHORAGES: Quarantine Anchorage: Depth 11 m. – 14 m. Bottom is mud and sand. Anchorage is within the area surrounded by points A, B, C and D.

(A)	38° 23.25' N.	(B)	38° 22.94' N.
	141° 19.00' E.		141° 19.05' E.
(C)	38° 22.74' N.	(D)	38° 23.06' N.
	141° 17.00' E.		141° 16.95' E.

RESTRICTIONS: If Master requests a pilot for entry, pilot is available from 0630 hrs. to 1600 hrs. Winter time, and from 0600 hrs. to 1800 hrs. Summer time.

Draft restriction: Channel depth 10.0 m. at LW.

MAX. SIZE: Limited by draft. Minimum under-keel clearance of 10% of ship's draft required.

HEALTH: Normally Quarantine Officials board upon ship's arrival in daytime only. If ship arrives after calling at another port in Japan, Pratique is automatic.

Also see "Late Reports".

RADIO: Nagasaki Radio. If ship is equipped with telex, it can be used to contact receivers.

VHF: No radio station at Ishinomaki. Only tug has VHF Channel 16.

RADAR: No port radio service at Ishinomaki.

TUGS: 2 tugs, 2,600 h.p. and 3,000 h.p.

BERTHING:

Berth	*Length* (m.)	*Depth* (m.)	*Draft* (m.)	*Capacity* (d.w.t.)	*Shore Cranes and Pipelines*
Minamihama Wharf No.1 (for Chip Carriers)	165	10.0	9.70	15,000	
Minamihama Wharf No.2	165	9.0	8.70	10,000	
Minamihama Wharf No.3	130	7.5	7.20	5,000	
Hiyori Wharf No.6	165	9.0	8.70	10,000	
Hiyori Wharf No.7	185	10.0	9.70	15,000	3 pneumatic unloaders
Ohte Wharf No.1 & 2	260	7.5	7.20	5,000	2 berths
Ohte Wharf No.3, 4 & 5	320	5.5	5.20	2,000	3 berths
Nakajima Wharf No.1	130	5.5	5.20	2,000	
Nakajima Wharf No.2 & 3	370	10.0	9.70	15,000	2 berths

CRANES: 10 truck cranes available, capacity 35 tons. Vessels are required to use own gear.

BULK CARGO FACILITIES: Nakajima Wharf No. 2 and 3 and Hiyori Wharf No. 7 are available for bulk cargoes. Discharging rate at Nakajima by ship's gear:

Grain = 1,000 tons/gang/day.
Coal = 1,200 tons/gang/day.
Fertiliser = 750 tons/gang/day.
Sulphur = 750 tons/gang/day.

Discharging rate at Hiyori Pier No. 7 by pneumatic unloader:

Grain = 2,000 tons/gang/day.

SPECIALISED CARGO HANDLING FACILITIES: No cargo handling facilities for containers, Ro/Ro traffic or others.

BRIDGES: None.

STEVEDORES: ETA advice requests 1400 hrs. of the day before arrival, for gang arrangements.

MEDICAL: No advance notice of medical attention necessary. Hospital and dentist available, also inoculations and vaccinations available.

TANKERS: No tanker berth for ocean going vessels.

DENSITY: 1023 (salt) nearly all of the time.

FRESH WATER: Available at berth. Cost: Yen 700/ton.

FUEL: Not available at Ishinomaki. Barge brings fuel from Tokyo area.

FIRE PRECAUTIONS: None.

CONSULS: No consuls at Ishinomaki.

REPAIRS: Only minor repairs possible.

DRY DOCKS: Yamanishi Shipbuilding and Iron Works Ltd., 1-2 Nishihama-cho, Ishinomaki City, Miyagi Pref., Japan. Tel: 0225-82-5551. Telex: 8628-42 Yamazo J. Fax: 0225-83-2713.

Facilities of Main Yard:

(a) New Building Berth : 22.0 m. × 108.2 m. (4,900 g.r.t.)
22.5 m. × 117.4 m. (4,900 g.r.t.)
11.0 m. × 67.0 m. (1,100 g.r.t.)
(b) Repairing Dry Dock : 30.0 m. × 145.0 m. (8,000 g.r.t.)
Slipways : 1,000 g.r.t., 500 g.r.t., 300 g.r.t.

SURVEYORS:

(1) Cargo surveyors not available.
(2) N.K.K. surveyors available from Shiogama Port.

GANGWAY/DECK WATCHMEN: Not necessary.

HATCHES: Depends on charter party.

CUSTOMS ALLOWANCE: 60 cigarettes available for taking ashore.

CARGO GEAR: 3 pneumatic unloaders at Hiyori Pier No. 7. For discharging rate see "Bulk Cargo Facilities".

REPATRIATION: Local Agent carries out repatriation formalities.

AIRPORT: 60 km. to Sendai Airport. Served by regular airlines (2 flights a day to Seoul and Guam).

TIME: Japanese Standard Time is U.T.C. plus 9 hours. No alterations during the year.

HOLIDAYS: Every Sunday. 29th December to 4th January (New Year's Holidays); 15th January (Coming of Age Day); 11th February (National Foundation Day); 20th March (Vernal Equinox Day); 29th April (Green Day); 5th May (Children's Day); 1st/2nd August (Local Summer Festival-River Carnival); 15th September (Respect for the Aged Day); 23rd September (Autumnal Equinox Day); 10th October (Health-Sports Day); 3rd November (Culture Day); 23rd November (Labour Thanksgiving Day); 23rd December (Emperor's Birthday).

Cargo work possible, except 1st and 3rd Sundays and New Year's Holiday (29th December to 4th January), if order given.

POLICE/AMBULANCE/FIRE: Police: Tel. 110 or 0225-95-4141. Ambulance: Tel. 119 or 0225-95-7111. Fire: Same as Ambulance.

EMERGENCY CO-ORDINATION CENTRE: No Emergency Co-ordination Centre at Ishinomaki.

TELEPHONES: No arrangement for placing telephones on board.

SERVICES:

Tank cleaning: Not available.
Tank washing: Not available.
Compass adjusting: Touhoku Hakuyo Service Ltd., 5-5-7, Kadonowaki, Ishinomaki City. Tel: 0225-96-1897.
Charts: Mitui Ltd., 1-21-47, Niihama-cho, Shiogama City. Tel: 022-366-3521.
Nautical publications: Not available.
Sounding paper: Not available.
Course recorder paper: Not available.
Notice to Mariners: Not available.
Safety equipment: Not available.
Extension of certificates: Not possible.

BANKS:

The 77 Bank Ltd., Ishinomaki Branch, 2-5-12, Tachimati, Ishinomaki City. Tel: 0225-95-3111.

The Touhoku Bank Ltd., Ishinomaki Branch, 2-2-48, Yamashita, Ishinomaki City. Tel: 0225-93-8821.

The Tokuyo City Bank Ltd., Ookaido Branch, 2-2-48, Yamashita, Ishinomaki City. Tel: 0225-93-1681.

The Ishinomaki Shoko Shinyo Kumiai Ltd., Ookaido Branch, 1-408, Kadonowaki-Sanbanyachi, Ishinomaki City. Tel: 0225-95-3331.

STORING: See "Prelims".

(1) By truck.
(2) –
(3) Possible.
(4) Possible.
(5) Need permission before storing.
(6) Possible.

SHIP SUPPLY SERVICE: No service at Ishinomaki.

SHORE LEAVE: Possible after permission from Immigration.

IDENTIFICATION CARDS: Shore pass or Seaman's Book is sufficient.

DELAYS: Waiting to be expected due to congestion.

GENERAL: *Officials:* All are located at the same address as Customs.

Customs: 15-2, Nakajima-cho, Ishinomaki City. Tel: 0225-22-4649.
Immigration: Tel: 0225-96-1933.
Quarantine: Tel: 0225-22-9413.
Marine Safety: Tel: 0225-22-8088.
Plant Quarantine: Tel: 0225-95-0216.
Animal Quarantine: Tel: 0225-22-9413.

AUTHORITY: Ishinomaki Port Administration Office, 17-2 Nakajima, Ishinomaki City, Miyagi Pref. *Tel:* (0225) 95-6271.

IWAKUNI, Yamaguchi Bay: 34.10 N. 132.14 E. (See Plan)

DOCUMENTS: When vessel arrives direct from a foreign port, Customs Officials will board to search, and the following documents are to be submitted:

Ship's Register.
International Tonnage Certificate.
Voyage Memo (Ports of call).
Last Port Clearance.
3 Crew Lists, including Passport numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agents will prepare Inward/Outward Declaration, Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Not compulsory. Pilots available at Quarantine Anchorage, when required. Inland Sea Pilot not compulsory from Sekisaki to Iwakuni.

Inland Sea Pilotage should preferably be arranged through Agent by cable via Nagasaki Radio giving 72 hours' notice. Urgent correction of ETA outside business hours should be cabled direct to Pilot Station. Cable address "Ansin Moji". Inland Sea Pilot Association covers all Inland Sea ports.

Pilots obtained from 1 of 3 Pilot Stations dependent upon vessel's last port of departure and at Master's discretion. Pilotage available throughout 24 hours and 72 hours' advance notice preferred, thereafter advising any alterations. Most Inland Sea Pilots also act as Harbour Pilots up to berth or anchorage at destination.

Note: VHF communication available with Inland Sea Pilot Stations. Also see "Shipmaster's Report" before first port.

1. Wadamisaki, at entrance to Kobe (vessels transitting Kii Straits). Position Lat.. 34° 34.09' N., Long. 135° 11' E. Telegraphic address "Anjin Kobe".

2. Sekisaki, 3 miles South of Sekisaki Lighthouse (vessels transitting Bungo Channel). Position Lat. 33° 13' N., Long. 131° 54' E. Cable address "Anjin Moji". In event bad weather, recommended vessels proceed for shelter as near as possible having due regard to safety, to Sekisaki Pilot station.

3. Hesaki, at East side of Kanmon (Shimonoseki) Straits. Position Lat. 33° 56' 24" N., Long. 131° 03' 12" E.

ANCHORAGES: 7 anchorages, one for "Quarantine" and repairing, etc., others for discharging logs.

(a) Quarantine, Lat. 34° 11' 12" N., Long. 132° 14' 21" E. minimum depth 27 m.

(b) Discharging area as follows:

	Vessel under 5,000 g.r.t. depth 23 m.		Vessel over 5,000 g.r.t. depth 24 m.
No.1	34° 11' 26" N., 132° 16' 00" E.	No.A	34° 10' 34" N., 132° 15' 54" E.
No.2	34° 11' 10" N., 132° 16' 10" E.	No.B	34° 10' 07" N., 132° 16' 06" E.
No.3	34° 10' 48" N., 132° 16' 18" E.	No.C	34° 09' 42" N., 132° 16' 45" E.

Nature of bottom mud. Minimum bottom width no limit.

RESTRICTIONS: Day and night entry possible.

HEALTH: Radio Pratique available. At first port of call in Japan, vessel must obtain Free Pratique. Quarantine Officers will attend vessel only from daylight to sunset and Master to show all Vaccination Cards, Derat Exemption Certificate. In case vessel arrives from cholera-infected area within 10 days, Master must advise crew and passengers health condition to respective Quarantine Office through ship's Agent prior to arrival and close all soil pipes before entering port.

Also see "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

TUGS: Tugs normally join vessel at Quarantine area. Tug's lines to be used free of charge. 3 tugs available, 1×3,000 h.p., 1×3,200 h.p. and 1×3,400 h.p.

BERTHING: No berthing from sunset to sunrise. At least 2 hours notice of arrival necessary to reach berth, in event of direct arrival from foreign country.

Berth	*Length* (m.)	*Depth* (m.)	*Permissible Draft* (m.)	*LOA* (m.)	*Capacity* (d.w.t.)
North No. 3 Wharf	185	10.0	9.0	170	20,000 (Public)
S.K.P. C-1 Pier Pier	130	9.2	9.2	110	15,000 (Private)
S.K.P. Pulp Chip Pier	230	11.5	11.5	230	40,000 (Private)
S.K.P. Log Pier	75	7.6	7.6	65	(Private)
Bussen Futo	185	10.0	10.0	165	20,000 (Public)
Shin Minato Wharf	370	10.0	10.0	340	(Public)
Shin Minato Wharf	260	7.5	7.5	230	
Log Water Pool Wharf	205	10.0	10.0	185	

STEVEDORES: Working time is 0830 hrs. to 1630 hrs. Overtime work available until sunset only, due to no lights on the shore. Saturday work available, but no work on Sundays and holidays. Only 3 stevedore gangs available.

MEDICAL: No advance notice required unless urgent.

TANKERS: Max. 150,000 d.w.t. Slop discharge pipelines available.

	Max. d.w.t.	*Max. LOA*	*Max. safe draft*	*No. and diameter hoses*
Koa Oil Crude Pier	150,000	No limit	16.50 m.	12"×3
Koa Oil No. 3 Pier	25,000	200 m.	10.00 m.	8"×1
Kenei North No. 3 Pier	35,000	230 m.	9.00 m.	12"×2

Discharge rates:

Koa Oil Crude Pier	(Crude Oil)	6,000 t.p.h.
Koa Oil No. 3 Pier	(Low sulphur Fuel Oil)	600 t.p.h.
Kenei North No. 3 Pier	(Crude Oil)	500 t.p.h.

DENSITY: 1020.

FRESH WATER: Available at:

Koa Oil Private Crude Oil Pier.
Koa Oil Private Products Pier No. 3.
All Public Wharves and Piers.
S.P.K. Pulp/Log/Chip Private Piers.

Water barge arrangeable from Onomichi.

FUEL: Available ex-wharf, but not ex-barge. All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, Osaka Bay and Kanmon Port. At all other ports bunkers will be lightered from the nearest bunker stock ports at maximum 7 days prior notice.

CONSULS: No consul but Marine Note of Protest can be attended by local notary public.

REPAIRS: Minor repairs possible.

GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gears maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 50 cigarettes to take ashore but no spirits.

CARGO GEAR: See "Certificates" but no special requirements.

REPATRIATION: Possible.

AIRPORT: Hiroshima Airport 45 km. (about 2 hours).

For Osaka (JAS Airline) 0900 hrs., 1415 hrs., 1725 hrs., 2000 hrs.

For Tokyo 0750 hrs., 1100 hrs., 1355 hrs., 1510 hrs., 1755 hrs., 1905 hrs.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

POLICE/AMBULANCE/FIRE: Police 110 (just dial); Ambulance 119 (just dial); Fire 119 (just dial).

TELEPHONES: No arrangements available, except Koa Oil.

SHORE LEAVE: Local Immigration Offices issue shore pass valid for only 15 days. Extension possible if ship stays longer.

AUTHORITY: Iwakuni Port Administration Office, 557-15 Shozoku, 6-chome, Iwakuni City, Yamaguchi, Pref., Japan. *Tel:* 0827-22-2271.
Contact: Hirohiko Sugitani, General Manager.

IZUHARA: 34.11 N. 129.17 E. (See Plan)

DOCUMENTS: The following documents are to be submitted on arrival:

Ship's Register and/or International Tonnage Certificate.
Last Port Clearance.
5 Crew Lists and Passenger Lists, if any.
3 Voyage Memos (Ports of call covering last 2/3 months).
1 Declaration of Health.
1 Ship's Stores List.
1 Declaration of Crew's Baggage.

Inward/Outward Declaration, Cargo Manifest and other necessary papers will be prepared by ship's Agents, using Customs forms. A vessel is, therefore, requested to provide Agents in advance with necessary information regarding cargoes, etc.

PILOTAGE: Not available.

ANCHORAGE: Lat. 34° 11.3' N., Long. 129° 18.2' E.

RESTRICTIONS: No restriction on entry into and/or departure from anchorage during daytime or night time.

MAX. SIZE: No restrictions on length or breadth for any vessel entering port, but max. safe draft is under 5.2 m.

HEALTH: Radio Pratique is available provided vessel possesses valid Derat Exemption Certificate.

Radio Agent for Free Pratique not more than 36 hours before arrival, advising full details of vessel and health condition on board. When Free Pratique is granted by radio, vessel will be required to submit the following documents to Quarantine Office on arrival alongside the berth:

Maritime Declaration of Health.
Crew List, Passenger List and Voyage Memo.
Derat Exemption Certificate (copy).
Declaration Inward.

The following vessels will not be able to obtain Radio Pratique:

(i) A vessel that has been in contact with an infected area or a suspected infected area within 15 days of arrival.
(ii) If a vessel has on board any case, or suspected case, of infectious disease within 15 days of arrival. If a vessel does not possess a valid Derat Exemption Certificate.
(iii) If vessel arrives from cholera infected area within 10 days, Master must advise crew and passenger's health condition to respective Quarantine Office through ship's Agent, prior to arrival, and close all soil pipes before entering port.

Also see "Late Reports".

RADIO: Recommended that Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

VHF: No VHF service available.

TUGS: No tug available, but tugs can be brought from nearby ports (Hakata/Imari/Sasebo), if required.

BERTHING:

Name of Berth	*Length* (m.)	*Max. Permissible Draft* (m.)
Izuhara No. 1	105	5.0
Izuhara No. 2	180	5.2
Kuta Wharf	180	5.2

BRIDGES: None.

STEVEDORES: Not available. Cargo consignees will arrange gangs.

TANKERS: No facilities.

MEDICAL: Facilities available, but advance notice required.

FRESH WATER: Available from hydrants at Izuhara Wharves No. 1 and 2.

FUEL: Domestic and bonded fuels available with sufficient advance notice.

CONSULS: No consuls locally. Marine Note of Protest can be made at local Notary Public.

REPAIRS: No facilities locally. Technician despatched from Moji, if required.

DRY DOCKS: None.

GANGWAY/DECK WATCHMEN: None.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages.

CUSTOMS ALLOWANCE: Only allowed 60 cigarettes to take ashore, but no spirits.

CARGO GEAR: No special requirements. See "Certificates".

REPATRIATION: Possible.

AIRPORT: Fukuoka Airport, about 40 minutes by car and 1 hour by ferry.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

POLICE/AMBULANCE/FIRE: Police 110; Ambulance and Fire 119.

TELEPHONES: Not possible to place telephones on board.

SHORE LEAVE: Local Immigration Offices issue shore passes valid for 15 days, when Izuhara is first port of call in Japan. Extension is possible if ship stays longer.

SERVICES: All services available from Moji, if required.

GENERAL:

Customs: Stationed at Moji Customs, Izuhara Branch Office. Tel: 09205-2-1112.

Immigration Office: Stationed at Fukuoka Immigration Office, Izuhara Port Office. Tel: 09205-2-0432.

Quarantine Office: Stationed at Hakata Quarantine Office, Izuhara Hitakatsu Office. Tel: 09205-2-0089.

Maritime Safety Agency: Stationed at Izuhara Maritime Safety Agency. Tel: 09205-2-1100.

Port Authority: Stationed at Tsushima Branch Office, Nagasaki Pref. Tel: 09205-2-2961.

Tidal Range: Average HWL (+) 2.3 m.

AUTHORITY: Mayor's Office, 224 Miyatani, Izuhara-Cho, Shimoagata-Gun, Nagasaki, Japan. *Tel:* 09205-2-2961. *FAX:* 09205-2-7027.

KAGOSHIMA: 31.35 N. 130.33 E. (See Plan)

DESCRIPTION: Port situated in Kagoshima Bay, the Southern part of Kyushu and consists of 7 sections as follows:

Kita Futo (Honko-Ku District): Newly reclaimed land with wharf accommodation since 1994. There is a Ferry Terminal for Okinawa, Tanegashima, Yakushima, Toshima and Mishima Islands to Southern islands. Outer harbour (open roads) where large size vessels lie at anchor (off breakwater).

Shinko-Ku: Adjacent to Honko District on South side. This section also sheltered by breakwater. Ferries of 6,000 g.r.t. can be accommodated at South wharves. There are 3 ferry services to Amami, Oshima and Okinawa.

North wharves for domestic cargo freighters up to 3,000 d.w.t.

Kamoikeko-Ku: Located 7 km. away from Honko-Ku on South side. There is a ferry terminal to Osumi Peninsula.

Chuo-Ku: Located about 8 km. away from Honko-Ku on South side and used for coasters (iron scrap, sand, oil barges).

Mokuzaiko-Ku: Located about 11 km. away from Honko-Ku on South side, and used for log carriers of 15,000 g.r.t.

Taniyama-Ikku (Taniyama District No. 1): Located about 14 km. away from Kita Futo on South side. Facilities include warehouses for feed storage and docking area for international passenger ships. Handy type vessels can be accommodated with arrival draft less than 8.0 m., in case of vessel docking at Public Wharf. Private grain silo dolphin can accommodate Panamax type vessels with arrival draft less than 11.8 m.

Taniyama-Niku (Taniyama District No. 2): Located about 16 km. away from Kita Futo on South side. Used for domestic oil storage. 10,000 d.w.t. vessels can be accommodated. Repairs possible to 10,000 g.r.t. vessels.

New Project: Nippon Gas Co.Ltd., Kagoshima, starting LNG operations in April 1996, with 36,000 K/L (one tank only) and imports from Indonesia of 20,524 tons/4 trips a year.

Hirakawa: Located about 21 km. away from Kita Futo on South side. For yachts and local fishing boats.

DOCUMENTS:

Customs: When vessel arrives direct from foreign port, Customs Officials board for arrival formalities and make an inspection of vessel if required by Customs.

Crew List.
Passenger List.
Manifest of crew personal effects (must be signed by individual crew member).
Baggage List (Leaving crews).
Stores List.
Arms and Ammunition List.
Narcotics List.
List of ports of Call on current voyage.
Discharging Cargo Manifest.
Through Cargo Manifest.
Declaration inward/outward.

Following will be checked on board: Ship's Registry; International Tonnage Certificate; Last Port Clearance.

When vessel comes from Japanese port, Customs Officials will not attend on board, except in special case.

Master or Agents to attend Custom House for entry formalities with following documents:

Discharging Cargo Manifest.
Through Cargo Manifest.
Declaration inward/outward.
Ship's Registry.
Last Port Clearance.
Documents entrusted with the Master by Customs at previous port.

On vessel's departure, a clearance is issued by Customs, after confirming payment of tonnage dues.

Ship's Agent will prepare Inward/Outward Declaration, Cargo Manifest and Cargo Manifest in Transit, using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

Immigration: Immigration Officials will not attend onboard. They will check Passports/Seamen's Books at their office and will issue shore passes for maximum of 15 days, in case of vessels calling at 2 or more ports in Japan. Supernumeries will only be issued with a shore pass if they have a visa. If vessel only calling at one port in Japan, shore passes are issued for 7 days, and will be renewed every 7 days if vessel stays longer.

Immigration Officials require the following documents:

Inward/Outward Declaration.
Crew List/Passenger List.
Passports or Seamen's Books (with validity dates).

PILOTAGE: Though pilotage is not compulsory, it is recommended that a Harbour Pilot be employed for berthing and unberthing operations. Advance notice at least 24 hours prior to the vessel's arrival is required as Kagoshima Pilots Association has to assign Duty Pilot to the vessel.

ANCHORAGE: Quarantine Anchorage: Lat. 31° 33' N., Long. 130° 35.5' E., depth of water 20 m. – 30 m. Anchorage is used for vessel's Quarantine procedure, if the vessel comes from foreign port, and by vessels waiting for orders.

Off Taniyama (Lat. 31° 30.5' N., Long. 130° 34' E.) depth of water 20 m. – 30 m. Anchorage is used by vessels waiting for a pilot and for orders.

RESTRICTIONS: Berthing and unberthing during daylight hours only. If weather is good, unberthing is possible up to 2100 hrs.

Coast Guards require, for safety reasons, arrival draft be kept to 10% less than depth at the assigned berth.

HEALTH: Radio Pratique message will be accepted if vessel has a valid Derat Exemption Certificate.

If vessel calling from Cholera infected area within 5 days, then Radio Pratique not to be accepted and Quarantine attend onboard for inspection at Quarantine Anchorage.

It is requested that Radio Pratique message must be sent within 36 hours before arrival Kagoshima, and be sure to send message addressed to "Chief, Kagoshima Quarantine" through your Port Agents (message will be accepted within 36 hours before arrival, Saturday/Sunday excluded). When Pratique is granted by radio, vessel will be required to submit the following documents to Quarantine Office upon your arrival:

Maritime Declaration of Health.
Crew List.
Passenger List.

The following vessels will not be accepted for Radio Pratique:

A vessel that has been in contact with an infected area, or a suspected infected area, within 15 days prior to arrival.

For Cholera	5 days before arrival.
For Pest	6 days before arrival.
For Smallpox	14 days before arrival.
For Yellow Fever	6 days before arrival.

Also see "Late Reports".

RADIO: Recommended that Master contacts Agent through Nagasaki Radio which covers all ports in Japan.

TUGS:

"Nikko Maru"	Twin diesel vessel 2,860 h.p.
"Kiire Maru No.8"	Twin diesel vessel 3,200 h.p.
"Eiko Maru"	Twin diesel vessel 3,200 h.p.
"Meiko Maru"	Twin diesel vessel 3,400 h.p.

BERTHING:

Berth	*Length* (m.)	*Depth* (m.)	*Max.Draft* (m.)	*Remarks*
Kita-Futo (Honko-ku)	360	9.0	8.50	Domestic ferries
	310	7.5	7.00	Domestic ferries
Shinko-ku	165	9.0	8.50	Domestic ferries
	260	7.5	7.00	Domestic ferries
	125	7.5	7.00	For cargo liner for Amami-Oshima.
Mokuzai-ko ku	185	10.5	9.00	Log Carriers only.
Taniyama Ikku	239	14.0	11.50	South Japan Grain Terminal (Private). Available to accommodate Panamax type vessels – Max. LOA 230 m..
Wharf No. 1	250	12.0	11.00	Public Wharves
No. 2	260	7.5	7.00	
No. 3	270	5.5	5.00	
No. 5	180	5.5	5.00	
No. 6	180	5.5	5.00	
No. 7	260	7.5	7.00	
No. 8	240	12.0	11.00	
Taniyama Niku				
Wharf No. 6	260	7.5	7.00	Public Wharf
No. 7	390	7.5	7.00	Public Wharf

STEVEDORES: Working hours are 0830 hrs. – 1630 hrs. Overtime working is normally only for finishing cargo. No work on Sundays or holidays.

Discharge rates:

Bagged cargo (meal products) – 300 tonnes per gang/day.
Bulk cargo (meal products) – 700 tonnes per gang/day.
Bulk cargo (corn/sorghum at Grain Silo Dolphin) – 4,000 tonnes per gang/day.
Logs – 5,000 cu.m. per gang/day.

MEDICAL: Municipal Hospital, Imakyurei Hospital, Chuo Hospital, Kagoshima Seikyo Hospital, Yotsumoto Dental Plant, Takagi Dental Plant, Igo Oculist. No advance notice required unless urgent.

TANKERS: No tanker berths at Kagoshima. See "Kiire".

FRESH WATER: One 200 ton water barge available with advance notice. Hydrants at public wharves in main harbour. Rate of delivery: 50 t.p.h. from hydrants at Honko-Taniyama Districts No. 1 and 2; 20 – 30 t.p.h. from hydrants at New Harbour.

FUEL: Not available. Lightered from another port. Ample notice so that necessary lighterage can be arranged.

REPAIRS: Minor hull/engine repairs are available at Kagoshima Dockyard and Iron Works. Radar and radio repairs possible.

GANGWAY/DECK WATCHMEN: Not specifically required unless passengers or valuable cargo on board.

English speaking watchmen are available but advance notice is required.

OPENING/CLOSING HATCHES: Crew open/close hatches.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear's maintenance appears poor.

CUSTOMS ALLOWANCES: 60 cigarettes per day. No spirits allowed.

REPATRIATION: Possible on weekdays.

AIRPORT: Kagoshima International Airport. Located to the North, 50 minutes' drive from centre of Kagoshima City. Flights available to Fukuoka, Osaka, Tokyo, Okinawa, Hong Kong and Seoul.

TIME: GMT plus 9 hours. No alterations to clocks during year.

HOLIDAYS: See "Tokyo".

WIND/TIDE: N.W. wind prevails in Winter season and Easterly wind in Summer. Wet seasons in June and July. Average tidal range 2.74 m. In the outer harbour. Flood tide sets to North and ebb to South. Maximum speed of current 2 – 3 knots. Current in inner harbour is less than 1.0 knots.

SHORE LEAVE: Local Immigration Offices issue shore passes valid for 7 days if calling at one port in Japan, and 15 days if calling at more than one port. Extensions are available if staying longer.

Also see "Regulations".

GARBAGE DISPOSAL: Available.

WASTE OIL DISPOSAL: Available. Barge available from Nagasaki for vessels at anchorage.

SEAMAN'S CLUBS: None. However, there is an inn called the Kagoshima Port and Harbour Labor Welfare Center (Kagoshima Kowan Loudo Fukushi Center in Japanese) for seafarers, which provides accommodation and meals only. Meals are provided at extra cost. The overnight charge at Yen 1860 is reasonable. Address: 22-1 Jyonan-cho, Kagoshima City. Tel: (099) 226-0626.

CURRENCY: Yen.

There is no local currency restrictions placed upon seafarers.

REGULATIONS: Immigration Officials board vessel on arrival to examine Passports, Discharge Books and/or other equivalent travel documents and provide 72 hour landing passes for crew members and passengers. 1 copy each of crew list and passenger list required by them. Providing ship's Agent with a Crew List beforehand will be a great help in expediting immigration business on vessel's arrival. When vessel stays in port more than 72 hours, the landing passes may be extended 72 hours on application. In the event that crew members, without entry visas, are to be landed for repatriation or transfer, Immigration will not permit their landing unless passage, by either sea or air, ensuring the prompt departure from Japan (within 72 hours) of these men has been booked, or unless vessels to which they are to be transferred, arrive in Japan within 5 days.

SERVICES: Cargo survey, provisions and stores.
AUTHORITY: Kagoshima Port and Harbour Office, 18-6 Izumi-Cho, Kagoshima City, 892 Japan. *Tel:* (099) 223-3277. *FAX:* (099) 224-2832. *Contact:* Kenichi Uezono, Director.

AGENT: Senwa Shipping Agency, c/o Kyoshinguni Co.Ltd. (under control by Greenship Moji), Nanei-Cho 4-43, Kagoshima-Shi, Kagoshima 862, Japan. Tel: 0992-60-6411. Fax: 0992-60-3706. Telex: 7822-46. Cables: Kyoshinguni Kagoshima.

KAKOGAWA (Including Higashi-Harima): 34.42 N. 134.50 E. **(See Plan)**

Port is for sole use of the Kobe Steel Co. Ltd. Declared open port as of 1st May 1970, but vessels should first call off Kobe to obtain Free Pratique, Customs clearance and Pilot.

Also see "Shipmaster's Report" dated June 1985.

DOCUMENTS:
- Ship's Register.
- International Tonnage Certificate.
- Last Port Clearance.
- 3 Crew Lists, including Passport Numbers.
- 3 Passenger Lists.
- Stores List.
- 1 Declaration of Crew's Baggage, i.e. tobacco wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).
- 1 List of Ports of Call, for Customs.

Ship's Agent will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

Also see "Shipmaster's Report" dated June 1985.

PILOTAGE: Pilot will board at Tomogashima Pilot Station (Lat. 34° 10' N., Long. 135° 00' E.) due to compulsory pilotage. Pilot will be arranged by Agent subject advance request and usual ETA advices.

Also see "Shipmaster's Report" dated June 1985.

ANCHORAGES: There are 6 anchorages off Kakogawa. However anchorage is treated as Non-Open port, so nobody can visit the vessel, and nobody can come ashore from vessel during her stay at anchorage, except in an emergency.
RESTRICTIONS: Mooring/unmooring conducted daylight hours only.
MAX. SIZE: Kobe Steel, Berth No. 4: 165,000 d.w.t. (or 320,000 d.w.t., LOA 330 m. with part load).
HEALTH: See "Late Reports".
RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.
BERTHING:

	Length	*Depth*	*Max. Size*
Pier W-5	240 m.	11.90 m.	35,000 d.w.t.
Pier W-6	275 m.	11.90 m.	35,000 d.w.t.
LPG Dolphin	77 m.	16.00 m.	70,000 d.w.t.
Scrap Pier	250 m.	11.10 m.	25,000 d.w.t.
South Pier	450 m.	6.80 m.	—

Depth at low water is 17 m. in the fairway which is 400 m. wide.

Kobe Steel:

Berth	*Length* (m.)	*Depth* (m.)	*Max.LOA* (m.)	*Max.Draft* (m.)
E-5 *	450	17.0	330	16.0
E-4	400	17.0	330	16.0
E-3	300	14.5	239	14.5
E-2	200	14.0	190	12.5

* Lay-by berth, not available for discharging cargo.

Products Handled Coal and ore.

Cranes: 4 × 1,500 t.p.h. at E.4; 1×700 t.p.h. at E.3; 2×35 ton at West Wharf (No. 5) and 2×35 ton at West Wharf (No. 6).

MEDICAL: Treatment has to be arranged at Kakogawa.
FRESH WATER: Available from quay. Rate 30 – 40 t.p.h.
FUEL: All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, Osaka Bay and Kanmon Port. At all other ports bunkers will be lightered from the nearest bunker stock ports at maximum 7 days prior notice.

Bunkers supplied by barge at berth under the following conditions:
- (a) Supply limited to 80% of tank capacity.
- (b) Supply only during following times:
  - (i) May – August, 0900 hrs. – 1600 hrs.
  - (ii) September – April, 0900 hrs. – 1400 hrs.
- (c) Two surveyors must be present during bunkering.

REPAIRS: Arranged from Kobe.
GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.
OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.
CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear's maintenance appears to be poor. Ship's Register and International Tonnage Certificate must be shown to stevedores.
CUSTOMS ALLOWANCES: Only allowed 50 cigarettes to take ashore but no spirits.
REPATRIATION: Possible, through Kobe. Nearest airport is Osaka.
TIME: GMT plus 9 hours. No alterations made to clocks during year.
SHORE LEAVE: Local Immigration Offices issue shore pass valid for only 7 days, but 7 days extension possible if ship stays longer.

SHIPMASTER'S REPORT: When the vessel anchors off Kobe in the Roads, "Kobe Harbour Control" will call on VHF Channel 16 and ask for anchoring time and position from Kobe Headlight.

The maximum draft at Higashi Harima is 16.0 m.

Vessels always berth port side alongside. The gangway should be lowered as soon as possible to let the officials aboard.

The vessel loaded 112,000 metric tons in 60 hours, previously the same amount had been loaded a little quicker.

Bilge water, oil or garbage should never be thrown overboard because owners have to pay compensation to the Fishermen's Union.

Berthing takes place 2 hours before high water.

SHIPMASTER'S REPORT: June 1985.
Pilotage/Sanitary Inspection: If vessel in possession of valid Japanese Sanitary Inspection Certificate and has been granted Radio Free Pratique, the Inland Sea Pilot boards 5 miles S.S.W. of Kobe Lt. This Pilot berths the vessel at Kakogawa.

Customs clearance and other formalities, in this event are carried out after berthing at Kakogawa.

Pollution: Penalties and mandatory compensation are particularly severe for any form of pollution. A floating save-all barrier is placed around the ship. This would appear to be as much for identifying offenders, as for preventing the spread of pollution.

When discharging coal, petroleum-coke or ore at the West Wharf (Kobe Steel Co.), scuppers must be efficiently plugged to prevent overside pollution in the event of rain or ballasting overflows. One selected scupper outlet is connected to a shore drainage hose.

Shore Leave: At West Wharf and LPG Jetty, ship's personnel are not permitted to traverse the wharf or any other roadway or part of the steelworks on foot.

Kobe Steel Ltd., Kakogawa Works, does not provide any form of transport inside the complex, so a taxi schedule must be arranged through the Agent, between ship and Kakogawa (JNR) railway station. Frequent trains to Kobe – about 35 minutes. Kakogawa, itself has reasonable shopping facilities in the vicinity of the railway station.

SHIPMASTER'S REPORT: May 1991.

Vessels arriving on maximum draft of 16.00 m. usually berth at No. E4, and then lighten to 13.5 m. before shifting to No. E3. The shore personnel say that 13.5 m. draft is ideal, but vessels may be 14.0 m. or maximum 14.5 m. for shifting. The cost of this shift is borne by Kobe Steel. Normally 3 tugs and 1 pilot are used, 1 tug each end at break of forecastle and starboard quarter, and 1 tug amidships just pushing.

Usually 2 pilots are used for berthing at this port. From anchorage, 4 tugs (1 each bow and 1 each quarter) are made fast before anchor is hove up. When inside the breakwater, the port side tugs let go and put up lines on the starboard side. A boom is put around the ship. The 2 pilots are a regulation, but only one pilot undertakes pilotage duties. "N" flag on the jetty indicates where the bridge front should be. For positioning the ship, for the last few metres the tugs are used and not the engines.

Crew signing off must be cleared through Immigration before the vessel departs from Japan. This is especially important during the "Golden Week", when the Immigration Office is closed on several days.

Kakogawa is a good place for shopping, especially around Kakogawa Central Station. Shop prices vary considerably, and it pays to look around.

We arrived in Japan just at the start of the "Golden Weekend". I am not sure if it is Golden Week or Golden Weekend. I received conflicting reports locally. It does apparently mean about 10 days of holidays for the local non-essential workers. The Emperor's birthday refers to the last Emperor. (I believe the new Emperor's birthday is 27th December). It seems every day is a holiday from 27th April to 6th May, except for the 2nd and 3rd of May, which were ordinary working days.

On the official holidays, telephone calls to the U.K. are 20% cheaper, about U.S.$ 2.00 per minute.

SHIPMASTER'S REPORT: February 1995.
Chart: B.A. Chart No. 640.
Location: An industrial port on the N.E. coast of the Inland Sea, some 20 miles West of Kobe. The port is also known as Higashi Harima (Steel works – Kobe Steel).
Quarantine: If vessel has a valid Sanitary Certificate, she can proceed direct to Kakogawa, otherwise vessel has to anchor off Kobe and be cleared by Quarantine Officer between 0800 hrs. and 1700 hrs.

Presently, due to the earthquake, formalities are conducted at Shimotsu, 11 miles S.E. of Tomogashima Strait, near the steel city of Wakayama.

For LPG ships, Quarantine Officer and Agent board between 0800 hrs. to 1400 hrs., from a white launch. They sight all ship's papers and require 2 copies Crew List, Cargo Manifest, Crew Declaration and Stores Declaration, after which Quarantine Certificate given.

Vessel can anchor in exact position Lat. 34° 08.0' N., Long. 135° 06.2' E., given by Harbour Authority, or alternatively the vessel can drift. We arrived at the required time and drifted for 30 minutes, due to a warning from Agent that if vessel's anchor damages seabed fishing pots, fines of several million Yen can be imposed.

Pilot: Compulsory. Pilotage inward and outward for LPG ships is only in daylight hours. Generally first movements are at 0630 hrs. and last movements at 1400 hrs. inwards from Tomogashima or leaving berth outwards.

Osaka Bay Pilot is taken 6 miles South of Tomogashima Strait (B.A Chart No. 3615) from fast red hulled cutter based at Yurako Awaji Shima VHF as per Admiralty List of Radio Signals.

Agent arranges Pilot and should be given 3 hours notice by VHF.

Time from Tomogashima to Kakogawa is about 4 hours.

Send standard message to "Osaka Martis" (E3403 ALRS) before arrival at pilot station.

Pilot changes off Kobe for Inland Sea Pilot, who boards from green hulled cutter, and pilots vessel to Kakogawa Berth.

Signals: Standard Japanese signals for large and dangerous cargo vessels. A guard launch is compulsory through Akashi Kaikyo Strait (Entrance to Inland Sea).

Channel: Harima Channel has a depth of 17.0 m., although we found 18.0 m. C.D. Vessels over 9.5 m. have to proceed South and West around Shikano Se West Cardinal Buoy. Vessels under 9.5 m. can proceed over Takakura Se shoals.

Tugs: For large LPG vessels, 4×4,000 h.p. tugs are used. Tug's lines used. One tug forward, 2 tugs amidships and one tug aft. Tugs join vessel at Buoys No. 1 and No. 2.

Berth: LPG vessels berth alongside Dolphin Berth at West Breakwater, port side to (starboard side to berthing is possible). The berth is a "T"shaped tanker jetty with breasting fenders 70 m. apart.

Ship's gangway to be turned in before berthing.

Shore gangway lifted onboard by ship's derrick.

Discharge: Discharge is through 12 in. 150 ASA Chicksans into 2×30,000 tonne Butane tanks.

Vapour return compulsory (8 in. 150 ASA).

Maximum discharge rate 2,000 cu.m./hr. Maximum pressure 10 kg.

Discharge commenced 1.5 hours after berthing.

Moorings: 3-2-2 each end by mooring boat to hooks. The mooring gang is fast and efficient.

Stores: Only hand carried stores allowed down jetty.

Any major storing must be by boat before or after cargo operations.

Fresh Water: Not available from berth. Only by water barge before or after cargo operations.

General: Stand-by tug in attendance whilst LPG ship alongside.

Shore leave by minibus/taxi through Terminal from end of Dolphin Berth to Kakogawa Railway Station. The service is arranged by Agent at specific times.

U.S.Dollars are not accepted ashore, only Yen or Visa card.

Due to the recent earthquake, facilities from Kobe are minimal and Agent advises against personnel transfers to/from Osaka Airport. Same applies for airfreight.

Opening of New Bridge over Akashi Kaikyo from mainland to Awaji Shima Island put back several years, due to earthquake and possible damage to foundations.

Our next port was Imari in Kyushu, and I enquired about Inland Sea transit. This turned out to be prohibitive due to pilotage fees, transit regulations and delays. Pilotage fees for large LPG ships could be in excess of U.S.$40,000.

AUTHORITY: Kakogawa Doboku (Public Works) Office, 97-1, Tenjingi, Jike-machi, Kakogawa City, Hyogo Pref. *Tel:* (0794) 21-1101.

AGENT: Senwa Shipping Agency, c/o Shinko Kakogawa Koun Co.Ltd., 35 Kanazawa-cho, Kakogawa-Shi, Hyogo 675-01, Japan. Tel: 0794-35-1281. Telex: 5654-568. Fax: 0794-37-2552. Cables: Koun Kakogawa.

KAMAISHI: 39.16 N. 141.55 E. (See Plan)

DOCUMENTS:

Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
6 Crew Lists including Passport Numbers.
4 Passenger Lists.
1 Stores List.
2 Lists of Ports of Call.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Pilot not compulsory, but arrangeable at Master's request. Pilot arranged by Agent and vessel required to radio Agent ETA 24 hours before ship's arrival. Pilot boat has no facility to communicate, nor particular light or sound signals, but flies Pilot flag "H". Pilot boards at Lat. 39° 16' N., Long. 141° 59' E. About 1 mile N.N.E. of Osaki Point. No alternative area in event bad weather.

ANCHORAGE: Up to 4×30,000 d.w.t. vessels can safely anchor. Max. size at anchorage 120,000 d.w.t. Depth of water: 31 m. – 43 m. at Quarantine Anchorage.

RESTRICTIONS: Vessel free in and out anytime.

MAX. SIZE: Draft 14 m. and LOA 300 m. (915 ft.) Breadth no restriction.

HEALTH: *Quarantine Anchorage:* Located in Western semi-circle of 500 m. radius with centre at Lat. 39° 15' N., Long. 141° 55' E. This area is also used for urgent anchorage.

Also see "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

TUGS: Tugs (2) join vessel at anchorage and tugs' lines used free of charge.

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by radio.

Berth		*Length* (m.)	*Depth* (m.)	*Permissible Draft* (m.)	*Capacity* (d.w.t)	*Shore Cranes*
Public Wharf		130	7.5	7.5	5,000 g.r.t.	
South Pier						
NSC No. 3	Old	230	8.4	8.4	13,000	1×7 T, 1×17 T
	New	288	13.5	13.0	25,000	Unloader 700 t.p.h.
NSC No. 4	Old	230	8.7	8.7	20,000	2×7 T, 1×17 T
	New	288	14.0	13.0	160,000	Unloader 700 and 900 t.p.h.
North Pier						

NSC Nos. 1 & 2 not suitable for the vessel more than 5,000 g.r.t.

STEVEDORES: At least 24 hours prior notice excluding Sundays and holidays required in order for Agents to arrange stevedores. Vessel must constantly keep Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew. Overtime surcharges 1630 – 2130 hrs. 60% additional of basic stevedorage; 2100 – 0500 hrs. next morning 130% additional; Sundays/holidays 100% additional.

MEDICAL: No advance notice required unless urgent.

DENSITY: Winter 1026-1027. Summer 1023-1024.

FRESH WATER: Available from wharf by hose. Rate of delivery: about 10 t.p.h. – 15 t.p.h. No water barge.

FUEL: Domestic diesel oil (Bunker A) is available. Bonded oil will be brought from Sendai, Yokohama and Kashima with sufficient advance notice.

CONSULS: None.

REPAIRS: Minor repairs such as welding, piping, lathing works, etc. only.

DRY DOCKS: None.

CUSTOMS ALLOWANCES: Only allowed 50 cigarettes to take ashore but no spirits.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear's maintenance appears to be poor.

REPATRIATION: Possible.

AIRPORT: Hanamaki, distance 100 km. (2 hours by car). Toa Domestic Airlines (TDA); 3 flights between Hanamaki/Tokyo everyday, 2 flights between Hanamaki/Osaka everyday and 1 flight between Hanamaki/Sapparo every day.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

POLICE/AMBULANCE/FIRE: Police 2-4536 (Headquarters) and 2-3828 (Water Police Station); Ambulance 119; Fire 119.

TELEPHONES: No facilities for placing telephones on board.

SERVICES: Surveyor, tally, hold cleaning, tank cleaning.

GENERAL: Discharging ex-gearless vessel not possible at anchorage.

SHORE LEAVE: Local Immigration Offices issue shore pass valid for only 3 days, but 3 days extension possible if ship stays longer.

AUTHORITY : Port and Harbour Dept, Iwate Prefecture Government, 10-1 Uchimaru, Morioka City, Iwate Pref., 020 Japan. *Tel:* (0196) 51-3111. *Contact:* Masanao Takeda, Director, Port & Harbour Department.

KANAZAWA: 36.37 N. 136.35 E. (See Plan)

DOCUMENTS:

Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
5 copies Crew List.
5 copies Passenger List (if passengers onboard).
1 copy Stores List.
1 copy Declaration of Crew's Baggage (only at first port of call in Japan).
Voyage Memo (last 3 months).
Crew Member's Passports/Seaman's Books (only at first port of call).

Ship's Agent will prepare Inward/Outward Declaration, Cargo Manifest and Manifest in Transit, using specific forms, therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

Inward/Outward Declaration and Application of Crew Members Landing Permits will be prepared by Ship's Agent.

PILOTAGE: Pilotage should preferably be arranged through Agent by telegram, telex or telephone, 36 hours prior to vessel's arrival.

Pilot requests amendment to ETA at least 4 hours prior to vessel's arrival, but only during the daytime.

Pilot boarding position: 36° 37' 51" N., 136° 35' 10" E. (near Quarantine Anchorage).

In case of bad weather, and pilot cannot board at boarding position, which is located outside of breakwater, pilot will give advice to Master. Vessel will proceed to inner breakwater or change the boarding position, etc. Vessel will be advised by VHF radio.

ANCHORAGES: See "Pilotage".

RESTRICTIONS: Anchoring at Inner Harbour (breakwater) is prohibited. But in emergency cases, vessel should contact Maritime Safety Agency.

Passage inward or outward to/or from Inner Harbour at night time is not advisable.

MAX. SIZE: Max. LOA: No special requirements, but refer to Port Office when necessary.

Max. draft: 10% U.K.C. required when berthing at pier.

For Oil (Sekiyu) Pier: Draft must be under 6.20 m.

HEALTH: Radio Pratique is available. Master must submit following documents to Quarantine Officer after entering the port (through ship's Agent):

Maritime Declaration of Health, Derat Certificate, Sanitary Inspection Certificate, Crew List, Inward Declaration by Ship's Agent.

At first port of call in Japan, if Radio Pratique is not available, Quarantine Officers attend vessel, only from daylight to sunset, and Master to show all Vaccination Lists/Cards and Derat Exemption Certificate.

In case vessel arrives from cholera infected area within 10 days, Master must advise crew and passenger's health condition to the Quarantine Officer.

Also see "Late Reports".

RADIO: Recommended that the Master communicates with Agent through Nagasaki Radio, which covers all ports in Japan.

VHF: No Port Radio Station at Kanazawa. In emergency cases, vessel should contact "Fushiki Hoam" (Maritime Safety Agency) on VHF Channel 16, but communication is limited to Port Regulation matters. However, pilot can talk to you from pilot boat or from the pier (by pilot owned VHF-radio). When approaching or when within radio range or whilst at the anchorage, vessel should maintain listening watch on VHF Channel 16.

TUGS: 1 tug of 2,700 h.p. is available ("Inuwashi Maru", owned by Prefectural Government). Usually tug's line is used for berthing and unberthing. Additional tugs are not available.

BRIDGES: None.

MEDICAL: No advance notice required, except on Sundays, holidays and in an emergency.

DENSITY: Average 1022. The density is not affected by tide.

FRESH WATER: Available from pipeline on piers. Cost: Yen 340/ton.

FUEL: No bunker supply facilities.

BERTHING:

Name of Berth	*Length* (m.)	*Depth* (m.)	*Permissible Draft* (m.)	*LOA* (m.)	*Capacity* (d.w.t.)
Sekiyu Pier	600	7.0	6.2	600	6× 5,000 (Tanker)
Muryoji Tottei	270	5.5	5.0	80	3× 2,000
Muryoji Pier	390	7.5	7.5	390	3× 5,000
Tomizu Pier	370	9.0	8.3	370	2×15,000
Gokuden Pier	370	9.7	8.7	370	2×15,000
Gorojima Pier	220	9.0	8.3	240	1×10,000

Usually load/discharge is done by ship's own gear.

CRANES:

Type of Crane	*Owner*	*Working Load*	*Number*
Mobile Rail Mounted Crane	Ishikawa Prefecture	140 tons	1
Tower Crane	Kanazawa Koun Co.	20 tons	1
Truck Crane	Kanazawa Koun Co.	50 tons	1
Truck Crane	Ishikawa Prefecture	50 tons	1
Truck Crane	Kanazawa Koun Co.	80 tons	1
Truck Crane	Ishikawa Prefecture	200 tons	1

BULK CARGO FACILITIES: No facilities available.

SPECIALISED CARGO HANDLING FACILITIES: Facilities for handling L.P.G. at Sekiyu Oil Pier No. 5 and 6.

STEVEDORES: Stevedores available in daytime on weekdays, except on national/local and stevedores' holidays.

At least 24 hours prior notice, excluding Sundays and holidays required in order for Agent to arrange stevedores.

TANKERS: See "Berthing".

3 oil fences are available at both ends and centre of the Sekiyu Pier.

FIRE PRECAUTIONS: Night time working is prohibited. Cars and trucks require permission from Fire Department to enter.

CONSULS: None.

REPAIRS: Only minor repairs possible.

DRY DOCKS: None.

SURVEYORS: None locally, can be arranged from Tokyo, Yokohama and Kobe area.

GANGWAY/DECK WATCHMEN: Not specially required.

HATCHES: Stevedores will open and close hatches if requested, but normally undertaken by crew.

CUSTOMS ALLOWANCES: Under Customs law, 200 cigarettes and 1 bottle of whisky for each crew member a week to be held out of bond.

REPATRIATION: Possible.

AIRPORT: Distance from Kanazawa Port to Komatsu Airport is about 50 km. Regular domestic flights: Komatsu – Tokyo: 6 flights a day. Komatsu – Fukuoka: 2 flights a day. Komatsu – Sapporo: 1 flight a day. Komatsu – Sendai: 1 flight a day (suspended during Winter). Komatsu – Okinawa: 1 flight a day.

International flights: Komatsu – Seoul (Republic of Korea): 2 flights a week (Tuesday and Friday). Seoul – Komatsu: 2 flights a week (Monday and Thursday).

TIME: GMT plus 9 hours. No alterations made to clocks during year.

HOLIDAYS: Sundays, national holidays, local holidays, New Year's Holidays. Other provisional holidays arranged by stevedores.

POLICE/AMBULANCE/FIRE: Police Tel: 110. Ambulance/Fire Tel: 119.

TELEPHONES: No arrangements for placing telephones on board.

SERVICES: Radar repairs possible, but depends on manufacturer.

BANKS: Hokkoku Bank (Toiya/machi Branch), 66, Toiya-machi, 2-chome. Tel: 37-6404.

SHORE LEAVE: Local Immigration Officers issue shore passes valid for 15 days.

EMERGENCY CO-ORDINATION CENTRE:

Sea accident (Maritime Safety Office): 67-4999.

Port Fire Department: 38-1300.

STORING: See "Prelims".

(1) Vessel will be stored by truck.

(2) Consultation needed with stevedores, in case of dangerous cargo stored on the pier or fumigation of logs going on at the pier. Trucks will be regulated by law (Harbour Master and Plant Quarantine Laws, etc.).

(3) Trucks can proceed alongside the berth, but only when stevedores are not working onboard or at the pier (after working hours, lunch time, stevedore's holiday, etc.).

(4) Forklift trucks not used on the jetty for storing.

(5) Must receive Customs permission before storing (Declaration of Loading of Ship's Stores).

(6) No local riggers available.

GENERAL: Kanazawa Port is an artificial river port, designed at the mouth of the Ono River. Since outside of the breakwater is open sea, Master is requested to pay attention to safety while at the outside anchorage, particularly during Winter season. Also, requested to be very careful about fishing nets and fishing boats.

During and after the rain, a large quantity of river water flows into the port, and current near the pier becomes fast, about 1.5 knots, so Master must take it into account.

Official: Kanazawa Branch Customs: Tel. 68-7420.

Detached Office of Niigata Quarantine Station: Tel. 68-0062.

Plant Protection Station: Tel. 68-0001.

Kanazawa Maritime Safety Office: Tel. 68-0329.

Kanazawa-Nishi (West) Government Office, 12-103 Gaiku, Sainen, Kanazawa.

Immigration Office of Kanazawa: Tel. 22-2450.

The Port Office of Kanazawa, 12, 4-chome, Minato, Kanazawa. Tel. 68-1201.

Kanazawa West-Police Office, 1-1-1, Kanaiwa-machi, Kanazawa. Tel. 67-1241.

AUTHORITY: Kanazawa Port, Government Office Building, 13, 4-chome, Minato, Kanazawa.

KANDA: 33.47 N. 131.00 E. (See Plan)

LOCATION: Kanda Port is located in the Southern part of Moji Port. N.E. side of this port is sheltered by the Suo-Nada open sea. Located at the port are Nissan Motor Vehicle's motor pool and export wharf, and some cement maker's wharves. Imported coal in bulk and export cement in bulk also handled.

DOCUMENTS: When vessel arrives direct from a foreign port, Customs Officials will board to search, and the following documents are to be submitted:

Ship's Register.

International Tonnage Certificate.

Voyage Memo (ports of call)

3 Crew Lists, including Passport numbers.

3 Passenger Lists.

1 Stores List.

1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agents will prepare Inward/Outward Declaration, Cargo Manifest and Cargo Manifest in Transit using specific forms. Therefore ship's Agents should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Pilotage in/out not compulsory. Cable address of Pilot Station "Anjin Moji". 48 hours and 24 hours advance notice of ETA required, and any change in ETA. Pilot boards off Kanda Anchorage (Lat. 33° 48' 03" N., Long. 131° 03' 02" E.). Inland Sea Pilots are available from Sekisaki, Hesaki or Mutsure, if required.

ANCHORAGE: Kanda Anchorage (See "Pilotage").

RESTRICTIONS: Strictly no entry after sunset.

MAX. SIZE: Max. permissible LOA 210 m., max. draft 10.0 m. (9.7 m.)

HEALTH: Pratique available at Hesaki, Mutsure Anchorages or Ube Anchorage. If vessel from East, formalities will be carried out at the Hesaki Anchorage or Ube Anchorage. If vessel from West, formalities will be carried out at the Mutsure Quarantine Anchorage. After Free Pratique granted, vessels have to pass the Kanmon Channel enroute to Kanda.

Radio Pratique available (See "Late Reports"). Send cable to Agent within 36 hours of arrival.

RADIO: Recommended that Master communicates with Agent through Nagasaki Radio, which covers all ports in Japan.

VHF: Master should call "Kanda Port Radio" on Channel 16. Service range 50 miles from port area.

TUGS: Tugs normally join vessel at Kanda Anchorage. 4 tugs available. 1×3,100 h.p. and 3×3,000 h.p.

BERTHING:

Public Wharves:

Berth No.	*Length* (m.)	*Depth* (m.)	*Remarks*
No. 1	370	10.0	2×15,000 d.w.t.
No. 2	130	7.5	1×5,000 d.w.t.
No. 3	110	6.5	1×3,000 d.w.t.
No. 4	150	5.5	2×2,000 d.w.t.
No. 5	386	4.5	6×700 d.w.t.
No. 6	?	4.5	1×700 d.w.t.
No. 7	130	7.5	
No. 8	260	7.5	
No. 9	440	4.5	
No. 10	370	10.0	
No. 11	185	10.0	

Private Facilities:

Berth No.		*Length* (m.)	*Depth* (m.)
No. 15	Kyusyudenryoku Wharf	18	3.0
No. 16	Kyusyudenryoku Wharf	104	7.5
No. 17	Aso Cement Wharf	35.4	7.5
No. 18	Aso Cement Wharf	28	7.5
No. 19	Aso Cement Wharf	74	6.0
No. 20	Ube Kosan Wharf	86	7.5
No. 21	Ube Kosan Wharf	46	6.0
No. 22	Ube Kosan Wharf	33.5	4.5
No. 23	No. 1 Mitsubishi Kogyo Cement Wharf	55.4	4.5
No. 24	No. 2 Mitsubishi Kogyo Cement Wharf	19	6.0
No. 25	No. 3 Mitsubishi Kogyo Cement Wharf	48	7.5
No. 26	No. 4 Mitsubishi Kogyo Cement Wharf	190	11.0
No. 27	Yutaka Kozai Wharf	55	6.0
No. 28	Ube Kosan Wharf	49	7.5

Remarks: In case of vessel's draft exceeds 9.0 m., entry/departure only practicable at HW.

STEVEDORES: At least 24 hours prior notice, excluding Sundays and holidays, required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew at additional cost.

Overtime surcharges: 1630 hrs. – 2120 hrs. (60%) additional of basic stevedorage. 2130 hrs. – 0500 hrs. next morning, 130% additional. Sundays/holidays 100% additional.

MEDICAL: No advance notice required, unless urgent.

DENSITY: Average 1025 in Winter.

FRESH WATER: Available from barge and hydrant.

FUEL: All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, Osaka Bay and Kanmon Port. At all other ports, bunkers will be lightered from the nearest bunker stock ports at maximum 7 days prior notice.

CONSULS: No local representatives. Marine Note of Protest can be attended by local notary public.

REPAIRS: All kinds of repairs can be undertaken by Moji repairers.

DRY DOCK: Mitsubishi Heavy Industries, Koyo Dockyard at Shimonoseki.

GANGWAY/DECK WATCHMEN: Not specially required, unless passengers or valuable cargo on board.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work, unless crew can complete before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificate sometimes required by stevedores when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCE: Only allowed 60 cigarettes to take ashore, but no spirits.

REPATRIATION: Possible.

AIRPORT: Nearest Fukuoka Airport, about 2 hours by train and taxi. JAL, ANA and overseas airlines operate services.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

POLICE/AMBULANCE/FIRE: Police 110; Ambulance and Fire 119. Public telephone booth available near by the berth.

TELEPHONE: No facilities for placing telephones on board.

SHORE LEAVE: Local Immigration Offices issue shore passes valid for only 15 days when Kanda is first port of call in Japan. Extension possible if ship stays longer.

SHIPMASTER'S REPORT: January 1994.

Radio: Communications as for "Hibikinada" were all made through the Agent, who advised the pilot boarding time some days in advance.

Anchorage: Anchorage recommended by the Agent was about 2 miles West of the channel entrance buoys. A number of vessels anchor in this area and there is no specific anchorage position.

Cleaning: Hold cleaning is not permitted in the Inland Sea or at Mutsure Anchorage. The Vessel was advised to go 50 miles offshore in order to clean the holds prior to loading.

Approaches: Found to be as charted on B.A. Chart No. 3225, except as follows:

Buoy No. 9: Green pillar buoy has been added in position 0.73 miles from the South Breakwater Head F.Fl (2) G light on the pecked dredged channel line.

Two additional buoys marking a channel for small vessels between the South and Outer Breakwaters in the following approximate positions – Red pillar buoy 085° × 0.27 miles and Green pillar buoy 103° × 0.39 miles from the South Breakwater Light.

The tower in position 081° × 0.53 miles from the South Breakwater Light has been partly demolished.

Pilotage: Pilotage is not compulsory, but recommended both inward and outward. The Pilot will board from a tug just off Buoys No. 1/2, and will leave by tug at any point after Buoys No. 5/6.

Berth: The vessel berthed port side to the Mitsubishi Berth in approximate position 33° 47.5' N., 131° 00' E.

The berth is well fendered. Berthing was port side to. The vessel turned off the berth with the assistance of 2 tugs made fast with tug's lines on the starboard bow and quarter. Line boats are used to run the head and stern lines, and the tugs hold the vessel alongside until mooring is finished.

Unberthed with 2 tugs pulling the vessel off the berth.

The berth is for loading cement and cement clinker, with small specialised cement carriers arriving and leaving regularly at berths forward and aft equipped with cement loaders.

Cement clinker is loaded through a dust protected spout lowered into the hold from a movable gantry. Loading rate for 38,500 tonnes was 895.35 tonnes/hr. overall, including shifting times for the gantry between holds.

The cargo comes in hot and loading is continuous, even in rain. The Charterers give a letter requesting the vessel not to stop loading for rain.

Airdraft under the loader is given as 12.0 m., but it was estimated that under the spout end it was about 1.0 m. more than this.

There is plenty of clearance under the gantry arm for side opening hatch covers.

Depths: The vessel was given a maximum permissible draft of 11.0 m. and sailed at 10.58 m. (aft), 2 hours before H.W. predicted at 2.9 m.

There is plenty of water in the harbour, the governing depths being in the Approach Channel at Buoy No. 9 (0.73 miles from the South Breakwater Head).

Clearance: Clearance inward and outward is carried out by the Agent. The port is restricted and no contact is permitted with ships at anchor, except normal radio communications.

Shore Passes: Shore passes issued at a previous port can be updated and will be collected at the final port in Japan.

Shore Leave: Shore leave is permitted, but access to the shore is by launch from the offshore gangway. Ship's personnel are not permitted to pass through the shore installation.

Fresh Water: Available by barge.

Services: All available at higher than average prices.

AUTHORITY: Kanda Port Administration Office (Fukuokaken Kandakomusho), 29 Banch Minato-machi, Kanda-machi, Fukuoka Pref. *Tel:* (093) 434-0585. *Contact:* Katsuaki Yano, General Manager.

KANMON-KO (Kanmon Harbour). (See Plan)

According to Japanese Harbour Area Regulations, Moji, Shimonoseki, Kokura, Tobata, Wakamatsu and Yawata are respective sections included in one port namely Kanmon Harbour. The expression of the port as "Kanmon" has been used in charter parties, where these 6 ports are considered to be one port. Vessel's movements within these ports is treated as shifting berth in the same port. Therefore, if vessel calls at more than 2 ports within this area, such calls are covered by one payment of tonnage dues. However, at Tobata, Wakamatsu and Yawata, port dues are levied in addition to tonnage dues.

Entry/departure procedures to Customs, Immigration and/or Harbour Master should be effected at each port, as those officials are stationed individually at each port.

Pilotage is compulsory for vessels over 10,000 g.r.t. passing through Kanmon Channel.

Also see "General" before first port.

Wakamatsu included in area of Hibikinada.

AUTHORITY: Kitakyushu Port and Harbour Bureau, 2-7 Nishi-Kaigan, 1-chome, Moji-Ku, Kitakyushu City, 801 Japan. *Tel:* (093)-321-5951. *FAX:* (093) 321-5953.

Shimonoseki Port and Harbour Bureau, 1-7-1 Higashi, Yamato-Machi, Shimonoseki City, Yamaguchi Pref., 750 Japan. *Tel:* (0832) 66-3150. *FAX:* (0832) 67-7555.

KANOKAWA: 34.11 N. 132.26 E. (See Plan)

(PORT STATUS: CLOSED PORT)

DOCUMENTS:

Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
5 Port of Call Lists (for Iwakuni and Kanokawa).
1 Maritime Declaration of Health.
10 Crew Lists including Passport Numbers. (For Iwakuni and Kanokawa.)
10 Passenger Lists. (For Iwakuni and Kanokawa.)
2 Stores Lists. (For Iwakuni and Kanokawa.)
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

Customs: Formalities are to be carried out at the ship's last calling port in Japan or Iwakuni Port for entering Kanokawa Port (Closed Port) prior to proceeding to Kanokawa Port.

PILOTAGE: Inland Sea pilotage should preferably be arranged through Agent by cable via Nagasaki Radio or Choshi Radio, giving 72 hours' notice. Urgent correction of ETA outside business hours should be cabled direct to Pilot Station. Inland Sea Pilot Association covers all Inland Sea ports. Pilotage compulsory for vessels over 10,000 g.r.t. Pilots obtained from 1 of 3 Pilot Stations dependent upon vessels last port of departure and at Master's discretion. Pilotage available throughout 24 hours and 72 hours' advance notice preferred, thereafter advising any alterations. Most Inland Sea Pilots also act as Harbour Pilots up to berth or anchorage at destination.

Note: VHF Communication available with Inland Sea Pilot stations. Also see "Shipmaster's Report" before first port.

Inland Sea Pilots board at the following positions:

1. Vessels transitting Bungo Channel:
Inland Sea Pilot boards at Sekisaki Pilot Station (33° 13' N., 131° 56' E.). Telegraphic address: "Anjin Saganoseki".

2. Vessels transitting Kanmon Strait:
Kanmon Strait pilot boards at Mutsure Pilot Station (33° 59.5' N., 130° 52.6' E.) (compulsory over 10,000 g.r.t.). Telegraphic address: "Kanmon Pilot Moji".

Inland Sea Pilot boards at Hesaki Pilot Station (33° 58.0' N., 131° 01.1' E.). Telegraphic address: "Anjin Moji".

3. Vessel transitting Kii Strait:
Osaka Bay Pilot boards at Tomogashima Pilot Station (34° 10' N., 135° 00' E.). Telegraphic address: "Osakabay Pilot".

Inland Sea Pilot boards at Wadamisaki Pilot Station (34° 35' 00" N., 135° 08' 24" E.) (compulsory over 10,000 g.r.t.). Telegraphic address: "Anjin Kobe".

Note: VHF communication with Pilot Station available as follows:

Name of Station	*Call/Answer Channel*	*Communication Channel*
Oita Port Radio (for Sekisaki)	16	14
Shimonoseki Port Radio (for Mutsure)	16	14
Kobe Port Radio (for Wadamisaki)	16	14

4. Most Inland Sea Pilots act as harbour pilots up to berth or anchorage at destination. If vessel requires only harbour pilot, harbour pilot boards off Kanokawa in approximate position: 34° 08' 00" N., 132° 24' 30" E.

ANCHORAGES: No anchorage at Kanokawa Port. Vessel is able to anchor off Kanokawa Port in approximate position Lat. 34° 08' N., Long. 132° 24' 30" E., if vessel arrives at night time, or if berth occupied by preceeding vessel. Depth is 25.0 m.

RESTRICTIONS: No berthing or unberthing from one hour after sunset to one hour before sunrise.

MAX. SIZE: Length 270 m., draft 14 m., deadweight 125,000. See "Tankers".

HEALTH: Usually vessels anchor at Iwakuni Quarantine Anchorage, where the authorities board and grant Free Pratique.

Also see "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan. Telex communication available with Agent if vessel equipped.

VHF: Hiroshima Port Radio. Channels 11, 12, 14 and 16.

RADAR: No radar station at Kanokawa Port.

TUGS: All kinds of tugs available, from 2,600 h.p. to 3,300 h.p. Tugs normally join off Kanokawa Port, and usually tug's lines used, without extra charge.

BERTHING: See "Tankers".

CRANES: None.

BULK HANDLING FACILITIES: None.

BRIDGES: No bridge restrictions.

STEVEDORES: None.

MEDICAL: No advance notice required, except after office hours and on Sundays and holidays. Vaccination against cholera available.

TANKERS: *MC Terminal:* (Private wharf).

Wharf No. 1:
Length/Depth: 99 m./12.2 m.
Permissible Draft/LOA: 11.2 m./240 m.
Capacity: 30,000 d.w.t.
Number and Size of Manifolds: 1 × 6 in.
Number and Size of Shore Lines: 1 × 8 in.
Max. Back Pressure on Shore Gauge: 3.0 kg./sq.cm.
Max. Rate for Discharging: 350 kl./hr.
Cargo handled: Ethanol.

Wharf No. 3:
Length/Depth: 159 m./15.4 m.
Permissible Draft/LOA: 14.0 m./270 m.
Capacity: 125,000 d.w.t.

	Crude Oil	Ethanol
Number and Size of Manifold:	2 × 12 in.	1 × 6 in.
Number and Size of Shore Line:	1 × 24 in.	1 × 8 in.
Max. Back Pressure on Shore Gauge:	5.0 kg./sq.cm.	3.0 kg./sq.cm.
Max. Rate for Discharging:	3,000 kl./hr.	350 kl./hr.

DENSITY: 1023.

FRESH WATER: Available at berth, ex-pipeline. Average delivery rate – 20 t.p.h. Cost per ton: Daytime Yen 600. Overtime, Sundays and holidays Yen 800.

FUEL: Most grades of domestic and bonded oil are available by barge only at anchorage after completion of discharge, with 3 days' advance notice (Anchorage is also Closed Port, therefore the "Closed Port Dues" will be assessed as same as entering Kanokawa Port).

FIRE PRECAUTIONS: Following standard tanker berth regulations apply:

(a) Cannot use ship's crane for loading vessel's stores.
(b) Cannot use radar after berthing.
(c) Barge cannot come alongside vessel for loading oil or storing after berthing.
(d) Cannot use fire.

CONSULS: No consuls at Kanokawa Port.

REPAIRS: Small repairs can be undertaken, subject to berth owner's permission. However, major repairs and the use of fire at the pier is strictly prohibited by the Hiroshima Maritime Security Board and the berth owner.

DRY DOCKS: No dry docks at Kanokawa Port.

SURVEYORS: Cargo inspections are available (attend from Kure Port). Name of surveyors:

Japan Marine Surveyor and Sworn Measurers Association.
New Japan Surveyors and Sworn Measurers Association.

Registration surveys are available (attend from Kure). Name of surveyors:

Lloyd's Register of Shipping.
American Bureau of Shipping.

GANGWAY/DECK WATCHMEN: Not required.

HATCHES: No cargo vessels enter Kanokawa Port (only tankers).

CUSTOMS ALLOWANCES: Allowed 60 cigarettes only.

REPATRIATION: Possible.

AIRPORT: Hiroshima Airport, approximately 60 km. from Kanokawa.

Hiroshima/Tokyo (Haneda Airport), 11 flights per day (domestic airlines).

Hiroshima/Seoul, 7 flights per week (international airlines).

TIME: GMT plus 9 hours. No alterations made to clocks during year.

HOLIDAYS: Port works on Sundays and national holidays, except 1st January.

POLICE/AMBULANCE/FIRE: Police Station (emergency), Tel: 110; Ambulance/Fire, Tel: 119; or Hiroshima Maritime Safety Agency, Tel: 082-253-3111.

EMERGENCY CO-ORDINATION CENTRE: Hiroshima Maritime Safety Agency. Tel: 082-253-3111.

TELEPHONES: No arrangements for placing telephones on board.

SERVICES: All navigation apparatus can be serviced as required with 2 days advance notice.

BANKS:

Hiroshima Bank, Kure Branch, 5-4, Hondori 3-chome, Kure, Japan. Tel: 0823-21-5141. Fax: 0823-24-5575.

Sumitomo Bank, Kure Branch, 1-14, Hondori 2-chome, Kure, Japan. Tel: 0823-22-4921. Fax: 0823-21-0724.

SHIP SUPPLY SERVICE: Makino Shipchandler, 5-1, Hondori 1-chome, Kure, Japan. Tel: 0823-21-4443. Fax: 0823-21-4899.

No craft/helicopter at Kanokawa Port.

STORING: See "Prelims".

1. Ship's stores loaded by hand.
2. Loading of ship's stores during discharging of cargo is possible.
3. Truck cannot proceed alongside at the berth (truck is to remain about 200 m. from ship).
4. Cannot use fork truck at berth.
5. Must obtain Customs clearance before loading ship's stores.
6. Riggers available to assist with storing.

SHORE LEAVE: Kure Immigration Officer issues shore passes, if crew members have valid Passport or Seaman's Book.

REGULATIONS: Special regulations for tankers apply for tankers berthing at MC Terminal.

DELAYS: If vessel arrives at night time, it must wait at the anchorage.

GENERAL: Kanokawa Port is local port, which makes it difficult to arrange all requirements. At least 3 days notice helpful.

AUTHORITY: Ohgaki Doboku (Public) Office, 25 – 3 Oaza Ohara, Ohgaki-Cho, Saiki-Gun, Hiroshima Pref., Japan. *Tel:* 0823 – 57 – 3434. (*Note:* This is a Closed Port, therefore there is no Port Authority.)

KASAOKA: 34.23 N. 133.26 E. (See Plan)

Located on central Northern coast of Setonaikai (Inland Sea) and on border of Hiroshima Prefecture and Okayama Prefecture.

DOCUMENTS:
Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
3 Crew Lists, including Passport Numbers.
3 Passenger Lists.
1 Stores List.
1 copy Voyage Memo (last 3 months).
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agents will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in Transit, using specific forms. Therefore ship's Agents should be provided with necessary information about details of cargoes in advance.

APPROACHES: Main approach channel (leading to raw material discharging berths and pipe loading berth). Depth 16 m. (52 ft. 6 in). Width 350 m. (1,148 ft.). Distance from quarantine anchorage to "A" Berth, 9,500 m.

Pilot undertakes berthing vessels at "A", "B", "M" or "L" Berths, with draft up to 16 m. Vessels drawing over 15.5 m. may berth at high tide.

Branch channel (leading to loading berths except pipe berth). Depth 11 m. (36 ft.). Width 300 m. (984 ft.). Distance from quarantine anchorage to Export Berth No. 1: 11,500 m.

PILOTAGE: Inland Sea Pilotage should preferably be arranged through Agent by cable via Nagasaki Radio, giving 72 hours notice. Urgent correction of ETA outside business hours should be cabled direct to Pilot Station. Inland Sea Pilot Association covers all Inland Sea ports. Pilotage compulsory for vessels over 10,000 g.r.t. Pilots obtained from one of two Pilot Stations dependent upon vessel's last port of departure and at Master's discretion. Pilotage available throughout 24 hours and 72 hours advance notice preferred, thereafter advising any alterations. Most Inland Sea Pilots also act as Harbour Pilots up to berth or anchorage at destination.

Note: VHF communication available with Inland Sea Pilot Stations. Also see "Shipmaster's Report" before first port.

1. Wadamisaki, at entrance to Kobe (vessels transitting Kii Straits) Position Lat. 34° 34.09' N., Long. 135° 07.54' E. Telegraphic address "Anjin Kobe".

2. Sekisaki, 3 miles South of Sekisaki Lighthouse. (Vessels transitting Bungo Channel). Position Lat. 33° 13' N., Long. 131° 54' E. Telegraphic address "Anjin Moji". In event bad weather, recommended vessels proceed shelter as near as possible, having due regard to safety, to Sekisaki Pilot Station.

ANCHORAGES: Quarantine anchorage position: Lat. 34° 22.5' N. and Long. 133° 26.3' E., an area of 750 m. radius.

RESTRICTIONS: Inland Sea (Setonaikai):

1. *Akashi Strait and Bisan Seto:* All vessels, over 200 m. LOA shall navigate on Bisan Seto in daytime only and also vessels over 250 m. LOA have to have an escort boat when navigating on Akashi Strait and Bisan Seto respectively in accordance with the Maritime Regulations. Permissible draft on arrival 16 m., but 12 m. on departure.

2. *Kurushima Strait:* The vessels, over LOA 200 m., shall navigate on Kurushima Strait at slack water in daylight and vessels over LOA 250 m. and up to 300 m. have to have an escort boat when navigating on Kurushima Strait.

The draft restrictions are as follows: The permissible draft for LOA from 200 m. up to 250 m. shall be less than 13 m. and LOA from 250 m. up to 300 m. shall be less than 11 m.

Escort Boat: 2 escort boats with VHF available. Max. speed 24 knots, cruising speed 18 knots.

MAX. SIZE: *Pipe Berth:* LOA 220 m., max. draft 11.0 m.

Also see "Berthing".

HEALTH: See "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

VHF: "Fukuyama Port Radio" on Channel 16 (0600 – 2000 hrs.).

TUGS: 5 tugs (3,600 h.p.) available in the Fukuyama Harbour. Additional tugs are available from other Inland Sea terminals.

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by radio. Berthing/unberthing not carried out during hours of darkness.

Nippon Kokan K.K. – Fukuyama Works. Private Berths.

Pipe Berth: Length 399 m., depth 11.00 m., capacity 43,000 d.w.t. Cranes: 3 × 38 tons.

Public Berth at Kasaoka: Terama Berth: Length 180 m., depth 5.50 m., capacity 2,000 d.w.t.

STEVEDORES: *Pipe Berth:* Stevedores available for loading pipes, except Sundays and 30th December – 4th January.

For berth term contract on loading, at least 24 hours prior notice, excluding Sundays and holidays, is required, in order for Agent to arrange stevedores.

If stevedores cannot commence loading at the time notified by the Agent, the orderers must pay for waiting time.

Terama Berth: Stevedores available from Monday to Saturday, except holidays and 30th December – 4th January, for loading/discharging.

All cargo loading/discharging by ship's gear and mobile crane.

Working hours are from 0800 hrs. to 1800 hrs. only.

MEDICAL: No advance notice required except on Sundays, holidays and in an emergency.

DENSITY: Summer 1016 – 1022. Winter 1025. The density not much affected by tide, which is maximum 3.84 m.

FRESH WATER: Available at any berth. Supply capacity 10 t.p.h. Water barge also available, capacity 300 tons. Minimum order 200 tons.

FUEL: Bunkers by lighters from Kobe, Mizushima, Tokuyama or Moji area. Advance notice required, bunkering allowed at loading/discharging berth, daytime only. Oil fence required during bunkering.

CONSULS: None.

REPAIRS: Only minor repairs. For machinery, radio, radar, etc., are all arranged by firms located in Tokyo, Osaka and Kobe.

DRY DOCK: None. Available at Innoshima or Mukayima and Tsuneishi.

GANGWAY/DECK WATCHMEN: Not specially required unless valuable cargo on board. Steel Mill's guard are on watch at all gates.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches for loading steel products. Charge is assessed according to tariff. Recommend request stevedores for this work unless crew can complete it before berthing. For discharging raw materials opening/closing hatches must be carried out by ship's crew before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear's maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore but no spirits.

REPATRIATION: Possible.

AIRPORT: Nearest airport is Okayama (70 km.), but Tokyo and/or Osaka are preferable due to convenience of traffic.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

POLICE/AMBULANCE/FIRE: Report to Guardmen's office located at Middle Gate of Nippon Kokan.

TELEPHONES: No arrangements for placing telephone on board. Private telephones connecting with offices in the compound of the Fukuyama Works are placed at each of the raw material berths.

For vessels alongside export berths, private telephone available at foremen's office located on berth.

SERVICES: Hold cleaning.

SHORE LEAVE: Local Immigration Offices issue shore pass valid for 15 days.

GENERAL: Kasaoka is a local and new port, developed along with the expansion of Nippon Kokan, Fukuyama Steel Works.

AUTHORITY: Kasaoka Public Works Office, 2-5 Rokuban-cho, Kasaoka City, Okayama Pref., Japan. *Tel:* (08656) 3-5252.

KASHIMA: 35.54 N. 140.42 E. (See Plan)

DOCUMENTS:
Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
6 Crew Lists including Passport Numbers.
6 Passenger Lists.
1 Stores List.
1 Crew Declaration List, i.e. cigarettes, wine, spirits and others, at 1st port only.
3 Lists of Port of Calls, covering last 3 months.
Other documents will be prepared by Agents.

APPROACHES: Normally the approaches to Kashima are not as congested as some of the other ports of Japan, but in good weather a large number of fishing and pleasure craft may be met. Also, many fishing nets are placed on the sea bottom throughout the year.

Being free of off-lying dangers the approach to the Pilot Boarding ground (except fishing nets) do not present any difficulty, however, the presence of swell very often hampers the manoeuvre of the tugboat carrying the Pilot. A convenient lee is required to enable the Pilot to board.

Approaches to Kashima Oil Co. Terminal: The berth approach is made only during daylight hours. Pilots board, at the latest, one hour before sunset.

All traffic for entering into or departing from the port, and all movements inside the port are controlled from the signal station at the centre of the port. For the signals shown please refer to H.O. PUB No. 156 or B.A. Japan Pilot Vol. 1 (No.41). The type of control is "one way" for larger vessels. The signal station is not equipped with radar or VHF, but may contact a vessel via telephone and Ibarki Port Radio.

The harbour entrance is marked by two buoys.

Leading lights, 183.5°, are exhibited for steaming up the channel. The depths in the outer channel are 24 m. and in the inner part 22 m. below chart datum. Tidal currents in the channel are weak, less than 0.5 knots.

No entry is made if wind velocity from Northerly directions is 7 m./sec. or over, or from other directions 10 m./sec. or more. Also, berthing operations are suspended if the wave height is 1.5 m. or more.

The tug that brings the Pilot(s) on board joins the vessel immediately. Other tugs join inside the breakwater.

During periods of Northerly swell the entry channel is fully exposed. Vessels at low speed generally have difficulty in steering therefore, laden VLCCs are also required to attain a speed up to 6 knots until as close as 0.75 miles from C.O.P. (Crude Oil Pier) No. 1. The full power of five tugs is normally sufficient to timely reduce the headway but at times vessels engines are also called for prompt and strong astern action.

PILOTAGE: Pilot called through Agent. Pilot boards about 3 miles to N.E. from the end of South Breakwater, in vicinity of Lat. 36° 00.5' N., Long. 140° 45' E.

ANCHORAGE: No suitable anchorage at present. Quarantine Anchorage indicated on chart is not used for quarantine purposes, as it is too close to the channel. Vessel can choose her anchoring point herself, but should keep enough distance from the South Breakwater, and Northerly directions from the breakwater is recommended. Quarantine Officials board vessel upon berthing, but if requested by Agents, and sea condition is good, Quarantine Officials can also board vessel at the Anchorage, using a tug. Transportation between the Anchorage and shore is only by tug. Nothing is supplyable at the Anchorage. Generally, anchor holding ground is not good and often causes dragging of anchor.

RESTRICTIONS: Pilots board vessel from 0600 hrs. to one hour before sunset for inward operations, and from 0600 hrs. to 2100 hrs. for outward operations. But for vessels of more than 50,000 gross tons, pilots board only during daytime.

Passages:

Name	*Width* (m.)	*Depth* (m.)
Central Passage	400 – 600	19 – 13
South Passage	300 – 430	12 – 10
North Passage	300	13 – 12
Outport Passage	480 – 540	24 – 22

MAX. SIZE: *Tankers:*

Berth	*Max. d.w.t.* (tons)	*Max. L.O.A.* (m.)	*Max. Safe Draft* (m.)
C.O.P. No. 1 (Crude Oil Pier)	250,000	340	19.0
C.O.P. No. 2	100,000	258	13.8
C.O.P. No. 3	80,000	238.5	12.4

Bulk carriers have entered with draft up to 44 ft.

HEALTH: Radio Pratique is available if application is made in accordance with Japanese Regulations. Quarantine Officers will attend vessel only from daylight. Master to show all Vaccination Cards, Derat Exemption Certificate, Ship's Register and Crew List. In case vessel arrives from cholera-infected area within 10 days, Master must advise crew and passengers' health condition to respective Quarantine Office through ship's Agent prior to arrival and close all soil pipes before entering port.

Also see "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

VHF: 50 Watt powered base station operates at Oh-aza Igiri, Kamisu-machi, using call sign "Ibaraki Port Radio", continuous watch is maintained 24 hours on Channel 16, all calling should be on Channel 16, and working Channels 14 and 12. Tugs (including Pilots) work on 400 mHz.

Station handles all traffic about pilotage, etc. Station not yet mentioned in List of VHF stations (Radio Holland). Agents pay fee per ship per port call for using the station.

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent, mainly by radio.

Name	*Depth* (m.)	*Length* (m.)	*Number of Berths*	*For Ships* (d.w.t.)	*Major Cargo Handled*
*Fuka-Shiba Public Wharf Berths	– 5.5	300	3	2,000	Sundries
*South Public Wharf Berths	–10.0	800	4	15,000	Sundries
*South Public Wharf Berth	– 7.5	520	4	5,000	Sundries
(a) Heavy Oil & Sundries Berth	– 7.5	130	1	5,000	Heavy oil, Sundries
Raw Materials Berths	–16.0	451	3	5,000×2 80,000×1	Coal, iron ore
Raw Materials Berths	–19.0	749	2	150,000	Iron ore, coal
Slab Berth	–14.0	300	1	50,000	Sand, gravel, iron and steel
Manufactured Goods Berths	–12.0	1,210	6	50,000×5	Iron and steel
Manufactured Goods Berths	– 7.5	572	5	3,000×1 5,000	Iron and steel
Sundries Berth	– 6.0	175	1	3,000	Sundries
All-Weather Berths	– 7.5	410	3	5,000	Sundries
West Spiral Berth	– 6.0	127	1	3,000	Sundries
(b) Crude Oil Pier No. 1	–22.0	129	1	200,000	Crude oil
Crude Oil Pier No. 2	–16.0	76.8	1	100,000	Crude oil, LPG
Crude Oil Pier No. 3	–14.0	39.6	1	80,000	Crude oil, heavy oil, Naphtha
Shipping Piers	– 6.0	94	2	3,000	LPG
Shipping Piers	– 6.0	588	12	3,000	Petroleum products
Shipping Piers	– 6.0 – 9.0	659	6	3,000	Petroleum products
(c) Heavy Goods Berth	– 5.0	120	1	1,000	Sundries
5,000-ton Dolphin	– 7.5	50	1	5,000	Heavy oil
(d) 100,000-ton Pier	–16.0	232	1	100,000	Raw salt, Naphtha
(e) 65,000-ton Pier	–13.0	280	1	65,000	Cereals
Shipping Berths (Pier)	– 6.3 to – 9.2	575	5	500×1 2,000×1 3,000×3	Cereals
(f) 65,000-ton Pier	–13.0	281	1	65,000	Cereals
Shipping Berths (Pier)	– 6.3	370	3	2,000×1 3,000×2	Cereals
(g) Kanto Grain Terminal Berth	–13.0	280	1	65,000	Cereals
(h) Manufactured Goods Berth	–10.0	70	1	1,600	Machinery
(i) High-pressure Gas Dolphin	– 7.5	29	1	3,000	Chemicals
(j) No. 8 berth	–10.0	195	1	15,000	Chemicals
No. 9 berth	– 6.0	28	1	3,000	Chemicals
(k) Dangerous Cargo & High-Pressure Gas Berths	– 6.0	336	4	3,000	Chemicals
(l) Manufactured Goods Berth	– 7.0	145	1	3,000	Chemicals
(m) Raw Materials Berths	– 6.0	150	1	1,500	Chemicals
Joint Berth for Two Companies (A)	– 7.0	140	1	3,000	Chemicals
(n) Raw Materials-Manufactured Goods Berths	–10.0	400	2	15,000	Silicon Sand
(o) Raw Materials-Manufactured Goods Berths	– 7.5	255	2	5,000	Chemicals
Joint Berths for Four Companies (B)	– 7.0	230	2	3,000	Chemicals
*Landing Stages at the Central Vessel Basin	– 4.0	458	—	—	—
*Waste Oil Dolphin	– 5.5	27.2	2	3,000	—
*Landing Stages at the Basin for Small Vessels	– 2.5 – 2.5 to – 6.0	500	—	—	—
*Igiri Berths	– 4.5 – 5.0	939	—	—	—
*Ikemuko Berths	– 5.0	113	—	—	—

(a) Sumitomo Metal Industries Ltd.
(b) Kashima Oil Co. Ltd.
(c) The Tokyo Electric Power Co. Inc.
(d) Kashima Chlorine & Alkali Co. Ltd.
(e) Showa Sangyo Co. Ltd.
(f) Zen-Noh Silo Co. Ltd.
(g) Kanto Grain Terminal Co. Ltd.
(h) —
(i) The Shin-Etsu Chemical Industry Co. Ltd.
(j) Mitsubishi Petrochemical Co. Ltd.
(k) Mitsubishi Petrochemical Co. Ltd.
(l) Japan Synthetic Rubber Co. Ltd.
(m) Takeda Chemical Industries Ltd.
(n) & (o) Asahi Glass Co. Ltd.
(A) Asahi Glass Co. Ltd.
Mitsubishi Gas-Chemical Co. Inc.
(B) Asahi Denka Kogyo K.K.,
Kuraray Co. Ltd.,
Mitsubishi Gas-Chemical Co. Inc.,
Kanegafuchi Chemical Industry Co. Ltd.

*Public Berth.

TUGS: Usually joins vessel at anchorage where Pilot boards; Tug's lines used.

MEDICAL: No advance notice required unless urgent.

TANKERS: Requirements prior to arrival: Manifold position, number and external and internal diameters. Reducer: type (ASA or JIS, etc.) and external and internal diameters. Ship's ETA and draft are to be reported in advance. ETA is to be advised if any changes.

Berthing Procedure and Mooring at C.O.P. No. 1: Normally 3 to 5 tugs attend and are employed in a combination of "alongside" and "on the hook".

Vessels always berth port side to. The normal procedure is to bring the vessel to a stop, parallel to the berthing face, at a distance of 100 m. – 150 m., and then warp her alongside with the tug assistance. The sequence for handling ship's lines is: Spring lines, breast lines, and then bow and stern lines. 2 mooring launches are used.

Since the breasting dolphins at C.O.P. No. 1 used for the spring lines are rather a long distance apart, conventional spring lines from the main deck are frequently very short and often break when a swell is running. Therefore, it is advisable to try using longer springs from the forecastle and poop decks.

The normal mooring configuration is: 4 bow lines, 4 stern lines, and 4 breasting lines and 2 spring lines both forward and aft.

The berth is equipped with a sonar docking system.

Discharge Rates:

Berth	*Product*	*Discharge Rate* (Kl./Hr.)
C.O.P. No. 1	Crude Oil	14,000
	Naphtha	5,000
C.O.P. No. 2	Crude Oil	5-7,000
	L.P.G.	2,400
C.O.P. No. 3	Crude Oil	5,000
	Naphtha	2,000
	Kerosene	2,000

LPG:

Berth: Kashima Oil.
Max. LOA: 258.16 m.
Max. size: 100,000 tonnes s.d.w.t. (59,134 g.r.t.)
Max. draft: 13.43 m.
Cargo lines: 1×12 in. ASA 150 for Propane and 1×12 in. ASA 150 for Butane.
Vapour lines: 1×10 in. ASA 150 for Propane and 1×10 in. ASA 150 for Butane.
Line alignment: From right to left: PV-PL-BL-BV
(Butane and Propane lines can be interchanged).
Discharge rates: Butane and Propane 1,200 cu.m./hr.
Max. manifold pressure 9 kg./sq.cm.
Cargo temperatures: Propane −40°C – −45°C. Butane −2°C – −4°C.
Vapour pressure: 0.05 – 0.1 kg./sq.cm.
Shore tank capacity: Propane 2×35,000 cu.m., 1×43,000 cu.m. and 1×10,000 cu.m. Butane 1×37,000 cu.m. and 1×44,000 cu.m.
Fuel: Fuel by shore line (stems through Kyodo Oil or Kashima Oil direct) MDO by barge in daytime only and before or after discharging operations.
Fresh water: Available ex-shoreline at 30 cu.m./hr.

DENSITY: 1025.

FRESH WATER: Fresh water is available at all berths, except Asah Glass, where the line is very poor and pumping rate is quite low. 20 t.p.h. at Kashima Oil.

FUEL: All grades of bonded bunkers are stocked in Tokyo Bay, from where bunkers are lightered at maximum 7 days' prior notice. Depending on the case, bunkers are available from Kashima Oil, but bunker barge mostly comes from Tokyo Bay area.

FIRE PRECAUTIONS: No special precautions, but water curtain made alongside dolphin in case of fire, and there is a fire boat (15 gross tons, and airfoam system).

CONSULS: None.

REPAIRS: Hot work on deck is not allowed.

Electronic engineers for radar, radio, Inmarsat, etc., are available from Yokohama area.

GANGWAY/DECK WATCHMEN: Kashima Oil: 24 hour watch on dolphins.

Sumitomo Metal: If ship's gangway is located next to the discharging cargo hold (ore/coal berths), watchman stands by and controls the operation during discharging from the relative hold.

CERTIFICATES: Ship's Register and International Tonnage Certificate for Customs purposes.

CUSTOMS ALLOWANCES: 200 cigarettes and 1 bottle of spirits per person per week.

Sealing: Customs will seal guns and pornographic tapes and books. Cigarettes and alcohol are not sealed.

AIRPORT: Narita Airport (New Tokyo International Airport), 1 hour by car.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

POLICE/AMBULANCE/FIRE: Police Tel. 110; Ambulance/Fire Tel. 119.

TELEPHONES: Not available for placing on board.

SERVICES: No equipment or facilities, but service engineers arrangeable from Yokohama.

SHORE LEAVE: Local Immigration Office issues shore passes for Kashima Town and Kamisu Town, valid for 7 days, extension is possible, if necessary.

IDENTIFICATION CARDS: Not required, but shore pass is always to be carried.

DEVELOPMENTS: This artificial port started its construction in 1963, and is still under construction. When completed, total length of wharves will be about 17 km. for about 30 large industries, such as steel mill, oil refinery, chemical works, grain terminals and general cargoes.

AUTHORITY: Kashima Port Administration Office, 13 Oh-aza Higashi Fukashiba, Kamisu-City, Kashima-Gun, Ibarak-Ken, Japan. *Tel:* 0299-92-2111.

Ibaraki Prefecture Government, Department of Public Works, Ports and Harbours Division, 1-5-38 Sannomaru, Mito City, Ibaraki Pref., Japan. *Tel:* 0292-24-8027. *FAX:* 0292-28-6870.

AGENT: Senwa Shipping Agency, c/o Maruzen Showa Unyu Co.Ltd., 22-8 Higashi-Fukashiba, Kamisu-Machi, Kashima-Gun, Ibaraki, Japan. Tel: 0299-93-0288. Telex: 3658925. Fax: 0299-93-0289. Cables: Maruzen Kashima.

KAWASAKI: 35.32 N. 139.46 E. (See Plan)

LOCATION: Kawasaki Port is located in the Northwest of Tokyo Bay, connected with Yokohama Port (11 km. by land, 2 nautical miles by sea) in the West, and Tokyo Port (18 km. by land, 10 nautical miles by sea) in the North.

PORT LIMITS: The boundary of the Kawasaki Port consists of: The position of the central outfall of the border canal (Sakai Canal) of Ohkawa-cho, Kawasaki-ku, Kawasaki City and Anzen-cho, Tsurumi-ku, Yokohama City. From this position to a point of 151° 30', 3,460 m. and from this latter position to a point of 126°, 2,310 m. The position of 136°, 5,150 m. from the Tamagawa River Haneda Light Beacon, the line drawn from the end point of the Tamagawa River administrative boundary border line and the sea surface which covers the shore. The water surface of the following canals: Sakai Canal (beyond the East of the administrative boundary border line), Siraishi Canal, Tanabe Canal, Minami Watarida Canal, Asano Canal, Ikegami Canal, Sakurabori Canal, Iriezaki Canal, Mizue Canal, Shiohama Canal, Yako Canal, Chidori Canal, Daishi Canal, Suehiro Canal and Tama Canal. The water surface of the area of Siraishi-cho No. 2, Asano-cho No. 1, Yako No. 3-1, Yako No. 1-1 and Ukishima-cho No. 100 of Kawasaki-ku, Kawasaki City and the downstream water surface of Kannongawa Iriebashi. The water surface area of Tamagawa River (beyond the West of the administrative boundary border line), downstream of the line drawn 43° 30' from the S.E. side of Tono machi Kawasaki-ku, Kawasaki City.

DOCUMENTS:

Maritime Declaration of Health.
Certificate of Registry.
International Tonnage Certificate.
1 List of Crew's Personal Effects (to be signed by each crew member).
1 Ship's Stores List.
3 Lists of Port of Call (last 4-6 months).
7 Crew Lists.
7 Passenger Lists.

PILOTAGE: See "Yokohama".

RESTRICTIONS:

(A) Berthing/unberthing from sunrise (or after 0630 hrs.) till sunset. At Container Berth, berthing is possible at anytime.
(B) Max. draft in Kawasaki Fairway (or Kawasaki Passage) and Tsurumi Fairway is 12.0 m.
(C) Max. airdraft to be kept to less than 40 m. for tankers for berthing/unberthing at Tonen/NPRC Gas/General Sekiyu/Toyu (Tokyo Yuso), MC Terminal (Mitsubishi) and Showa GATX.

MAX. SIZE: Main Dry Cargo Berths:

Name of Berth	*Max. D.W.T.* (tons)	*Max. LOA* (m.)	*Max. Draft* (m.)	*Max. Airdraft* (m.)
NKK Ohgishima E – A	200,000	360	19.0	19.0
NKK Ohgishima E – B	100,000	240	17.0	19.0
Toyo Futo (Coal Berth)	50,000	230	12.0	14.5
Main Tanker Berths:				
Keihin Kawasaki Sea Berth	250,000	300	30.0	
Tonen Ohgishima Sea Berth	250,000	300	26.0	
Tonen Ukishima Sea Berth	100,000	250	16.6	
Tokyo Electric Ohgishima LNG Berth	65,000	—	17.0	

HEALTH: Radio Pratique message can be sent by Master to ship's Agents between 6 hours and 36 hours prior to arrival as per specific format.

Following vessel not applicable for Radio Pratique:

(A) Vessel's navigation days to Japan less 7 days after departure from port designated as 'infected area'.
(B) If ship's crew suffered from infectious disease within 15 days before ETA in Japan.

Kawasaki Quarantine Inspector boards vessel at Kawasaki Quarantine Anchorage for Pratique.

Also see "Late Reports".

RADIO: Nagasaki Radio.

VHF:

(A) VHF range is about 50 miles away from Bay Pilot Station at entrance of Tokyo Bay.
(B) Berthing information for next day can be obtained from Kawasaki Port Radio at 1500 hrs. by Channel 16.

RADAR: Traffic Control Centre (Tokyo Wan Traffic Advisory Service Centre) keeps watch round-the-clock for vessels within the radar service area. Vessels can make contact with the Traffic Control Centre on Channel 16.

TUGS: See "Yokohama".

BERTHING: In addition to the berths below, there are many with less water.

Public Berths:

Name of Berth	*Length* (m.)	*Depth* (m.)	*Capacity* (d.w.t.)	
Chidori Pier				
No. 1	120	7.3	3,000	
No. 2	172	9.0	10,000	
No. 3	190	10.0	15,000	
No. 4	220	10.0	15,000	
No. 5	211	10.0	15,000	
No. 6	209	10.0	15,000	
No. 7	180	10.0	15,000	
Higashi-Ohgishima				
No. 1	185	10.0	15,000	
No. 2	185	10.0	15,000	
No. 3	240	12.0	30,000	
No. 4	240	12.0	30,000	
No. 5	240	12.0	30,000	
No. 6	240	12.0	30,000	
No. 7	240	12.0	30,000	
No. 8	240	12.0	30,000	
Container Berth				
No. 1	350	14.0	50,000	2×40 ton cranes

Private Berth: (Dry Cargo)

Name of Berth	*Length* (m.)	*Depth* (m.)	*Capacity* (d.w.t.)	*Cargo Handled*
Mitsui Futo (Coal Wharf)	200	10.0	22,000	Coal, Ferro Silicon
Mitsui Futo (South Pier)	186	12.0	30,000	Coal, Iron, Steel
Toyo Futo (Coal Wharf)	230	12.0	50,000	Coal, Grain
Nissin Seifun Pier	225	12.0	50,000	Grain
NKK Ohgishima East-A	360	19.0	200,000	Coal, Iron Ore
NKK Ohgishima East-B	240	17.0	100,000	Coal, Iron Ore
Private Berths: (Tankers)				
Idemitsu Kosan No. 1 Pier	103	10.0	20,000	Petroleum Products
Kawasaki Kasei Chidori Pier	122	9.9	10,000	Chemicals
Showa GATX Pier	170	9.36	19,000	Chemicals
General Sekiyu A-1 Pier	230	10.9	44,000	Petroleum Products
Toa/Kyodo Sekiyu Pier	231	10.8	45,700	Petroleum Products
Tonen No. 1 Pier	224	10.8	68,000	Petroleum Products
Tonen Ukishima Sea Sea Berth	250	16.6	100,000	Crude Oil
Tonen Ohgishima Sea Berth	300	26.0	250,000	Crude Oil
Tokyo Electric Ohgishima LNG Berth	467	17.0	65,000	LNG
Toyu No. 1 Pier	208	10.8	40,100	Petroleum Products
Nippon Petroleum Gas-Main Pier	230	10.9	58,300	Petroleum Products
Liquified Gas Terminal No. 1	225	9.7	48,900	Petroleum Products
Keihin Kawasaki Sea Berth	300	30.0	250,000	Crude Oil
MC Terminal	189	10.8	42,000	Chemicals
Mitsubishi Oil No. 1 Pier	249	10.8	69,000	Crude Oil

STEVEDORES: Ordering of labour gangs is by 1600 hrs. on the previous day.

MEDICAL: Contact Agent to arrange medical attention. Agent must present Arrival Notice to Quarantine Station in advance of vessels arrival. Hospital facilities available.

TANKERS: Also see "Berthing".

Berth	*Product*	*Shorelines*	*Discharge Rate* t.p.h.
Keihin Kawasaki Sea Berth	Crude Oil	20 in.×2	10,000 (max.) or manifold pressure 7 bar
Tonen Ohgishima Sea Berth	Crude Oil	16 in.×4	13,500
Tonen Pier	Fuel Oil	12 in.×2	5,000
Tonen Ukishima Sea Berth	Crude Oil	12 in.×3	5,000
Toa Oil No. 3 Factory	Crude Oil	12 in.×3	1,400
Toa Oil No. 1 Pier	Crude Oil	10 in.×2	1,670
General Sekiyu Seisei	Crude/Fuel	12 in.×2	3,000
Mitsubishi Oil	Crude Oil	12 in.×2	4,000
	Fuel Oil	8 in.×1	1,500
MC Terminal	Fuel Oil	8 in.×2	800
Toyu	Fuel Oil (C)	12 in.×1	1,000
	Fuel Oil (A)	10 in.×1	800

Toyu: The berth consists of an "L" shaped jetty with a roadway and a pipe trestle 20 m. long. It is provided with 2 breasting dolphins which are connected to the platform by trestles. 2 bollards are installed on the dolphins. Other bollards are installed ashore along the face of the quay.

No capstans are provided and so it is difficult to send heavy wires ashore. Therefore, it is advisable to have a number of synthetic ropes readily available.

The back springs which are made fast to the bollards located on the dolphins, have a very short lead and are at a steep angle.

The 2 dolphins are provided with resilient buffer fender systems having hollow rubber tubes. No sonar doppler is provided.

The normal mooring configuration is:
3 head lines,
2 breast lines forward,
2 back springs forward,
2 back springs aft,
2 breast lines aft,
3 stern lines.

The terminal does not use hard arms. Rubber hoses are used, generally consisting of a string of 3 lengths of 10 in. JLS flanges, connected with bolts and nuts.

The vessel's derrick must be used for handling the hoses.

High pour fuels are generally handled at this terminal but vessel's assistance is no longer required at the end of each discharge for flushing the hoses and shore lines. The terminal now flushes back into the ship the line's contents.

No gangway is provided.

Bunkers and fresh water are not available at this berth.

Berth A-1: Berth A-1 is designed to accommodate tankers up to about 65,000 d.w.t. in light loaded condition. The berth consists of a T-shaped jetty with a roadway and pipe trestle 40 m. long, and is provided with 2 breasting dolphins positioned at a distance of 80 m. and connected to the platform by trestle. The dolphins are provided with small bollards which are seldom used for ship's lines. Usually the lines, including the springs are run ashore to bollards having adequate strength.

There are no capstans for pulling the lines ashore and some difficulties may be experienced, particularly when handling heavy wires. It is advisable to have ready a certain number of synthetic ropes.

2 smaller berths are located in the inner side of the jetty face. These berths are left vacant when a tanker is alongside Berth A-1. The structure on these berths may interfere with the vessel's mooring arrangement and may create difficulties when sending the vessel's lines ashore.

The dolphins are provided with rubber cell fenders (diamond shaped). Sliding along the dolphins should be avoided so as not to damage the rubber fenders.

The berth is provided with a sonar doppler to monitor the berthing speed. The pilot is advised by walkie-talkie if the berthing velocity exceeds the safety limit.

The normal mooring configuration is:
3 head lines,
2 breast lines forward,
2 back springs forward,
2 back springs aft,
2 breast lines aft,
3 stern lines.

3 hard arms are installed on the platform. 2×12 in. diameter are used for discharging crude and fuels and 1×12 in. is used for the discharge of LPG liquid. No LPG vapour return line is installed on the jetty. Arms are connected by means of nuts and bolts. The flanges are ASA 150 p.s.i. for bunker fuel, the others for lubricating oil. Bunker can be supplied simultaneously with vessel discharge operations.

Esso controlled tonnage generally discharges fuel and diesels oils at Berth A-1. High pour fuels are also handled at this berth and the terminal may require vessel's assistance for flushing the arms and the lines after each discharge. No slop or deballasting facilities are provided.

A heavy and bulky gangway is provided which has to be lifted by the vessel's derrick.

The hooks on the end of the gangway are narrow and cannot grip the ship's sheer strake so have to be laid on the ship's handrail. On several occasions, vessel's handrails have been damaged by the gangway hooks. Fresh water is available at this berth through a 2.5 in. outlet.

TIDAL CURRENT: The littoral current running Westward along reclaimed industrial area of city is very slow and has rate of about 0.3 m. around the head of municipal wharf when tide is on the ebb.

FRESH WATER: Supplied at piers and by water barges, overtime on Sundays and legal holidays.

	Barge	*Loading Capacity* (ton)	*Remarks*
Water Barge	Hoei Maru No. 12	350	Operated by Water Bureau of Kawasaki City
	Kosie Maru	300	

FUEL: All grades available.
CONSULS: See "Yokohama".
REPAIRS: All repairs possible.
DRY DOCKS: Hitachi Dockyard.

Dry Dock	*Max. d.w.t.*	*Max. LOA*
No. 1	60,000	228 m.

Wet Basin No.	*Max. d.w.t.*	*Max. LOA*
A	25,000	163 m.
B	60,000	258 m.
C	60,000	246 m.

SURVEYORS: Lloyd's, ABS, BV, DNV, Salvage Association and U.S.Salvage from Yokohama. GL available from Kobe.
GANGWAY/DECK WATCHMEN: Normally not required.
OPENING/CLOSING HATCHES: Normally carried out by ship's crew.
CERTIFICATES: See "Yokohama".
CUSTOMS ALLOWANCES: *Daily Consumption allowed aboard by Customs:*
Cigarettes: 2 packets.
Beer: 1.3 litres.
Whisky: 144 ml.
REPATRIATION: Possible.
AIRPORT: Kawasaki to Haneda Airport (20 minutes by taxi). Kawasaki to Narita Airport (2 hours by taxi and limousine bus).
TIME: GMT plus 9 hours. Permanent.
HOLIDAYS: See "Yokohama".
POLICE/FIRE/AMBULANCE: Police Kawasaki 110; Ambulance and Fire Kawasaki 119.
EMERGENCY CO-ORDINATION CENTRE:
Maritime Safety Agency Kawasaki (Coast Guard): Tel. 044-266-1591.
Kawasaki Rinko Police Station: Tel. 044-266-9161.

Master of the vessel can also contact Kawasaki Port Radio by VHF Channel 16 for urgent matters.
TELEPHONES: Telephone can be placed onboard at most public berths.
SERVICES: Most services can be provided if advance notice given.
BANKS: Bank of Yokohama, 1-1-17 Isago Kawasaki-ku, Kawasaki. Tel: 044-222-5521. Hours: 0900 hrs. – 1500 hrs., Monday to Friday.
STORING: *Dry Cargo Vessels:*
Public Berths: Vessel can be stored by truck.
Private Berths (Dolphin Berths): Vessel can be stored by barge.
Private Berths (non-dolphin): Vessel can be stored by truck.

Tankers: Stores/bunkers/lubes can only be supplied at anchorage. Small quantities of stores can be delivered onboard by hand at the terminal.
SHIP SUPPLY SERVICE: See "Yokohama".
SHORE LEAVE: See "Yokohama".
IDENTITY CARDS: See "Yokohama".
GARBAGE DISPOSAL: See "Yokohama".
WASTE OIL DISPOSAL: See "Yokohama".
SEAMEN'S CLUBS: See "Yokohama".
SAFETY: *Voluntary Separation Scheme:* A voluntary separation scheme is in existence South of the Uraga Channel, and is an extension of the mandatory scheme. Northbound vessels keep to the East side of the channel, and Southbound vessels keep to the West side of the channel. Coasters do not comply with this scheme.

Signals for Large/Dangerous Cargo Carriers: Large vessels (LOA over 200 m.) require following placed onboard:

By day: Two black cylindrical shapes placed vertifically (0.6 m. × 1.2 m. or larger).

By night: One all-round green light, flashing at regular intervals, at a frequency between 180 and 200 times per minute.

Vessels carrying dangerous cargo require following placed onboard:

By day: "First Substitute" flag over "B".

By night: One all-round red light, flashing at regular intervals, at a frequency between 120 and 140 times per minute.

Restrictions on Overtaking: Large vessels and other particular vessels as prescribed by the Maritime Traffic Safety Law, and vessels of 10,000 g.r.t. or more should, if the circumstances of the case permit, avoid overtaking a vessel of 500 g.r.t. or more in the traffic routes.

Restriction on Speed: A vessel should not navigate at a high speed within the Bay.

Restriction on Entry into the Traffic Route in poor Visibility: Unless otherwise instructed by the Tokyo Wan Traffic Advisory Service Centre, vessels of 10,000 g.r.t. or more should not enter the traffic route when the visibility in the traffic route and its vicinity is less than 1,000 m.

Restriction on Use of Auto-Pilot: A vessel navigating in Tokyo Bay should not use auto-pilot.

Preparation of Emergency Wires: A vessel carrying dangerous cargo prescribed by the Maritime Traffic Safety Law should prepare emergency fire wires at the bow and the stern for immediate use in case of emergency.

The Pledge for Safety Measures: The owner or operator should submit "The Written Pledge for Safety Measures" to the Maritime Safety Agency, and fulfil its requirements when a tanker of 220,000 d.w.t. or more carrying dangerous cargo enters Tokyo Bay for the first time, and a liquified (natural petroleum) gas tanker of 25,000 g.r.t. or more enters Japanese waters for the first time.

Notification of Traffic Routes and Notification of Change:

(a) Vessels of 10,000 g.r.t. or more should report the "Notification of Traffic Routes" and the "Notification of Change" to the Tokyo Wan Traffic Advisory Service Centre at Kannon Saki in the same way as in the case of a large vessel.

(b) With the "Notification of Traffic Routes", following items should be reported:
(i) Port of destination and section of the port, when they are known.
(ii) Port of departure and section of the port, in case of a departing vessel.
(iii) Whether a pilot is arranged or not.
(iv) Whether a special vessel with foam-type or powder-type fire fighting facilities is arranged or not.

Communication with the Centre: Vessels equipped with VHF radiotelephone (Channel 16) should keep watch on VHF while navigating within the radar service area, since information might be provided by the Centre.

Preparation of Charts: Vessels navigating in Tokyo Bay should prepare at least some of the following charts issued by Hydrographic Department of the Maritime Safety Agency and published by Japan Hydrographic Association, and obtain recent information of ports in advance:

Chart No.	Title
90	Tokyo Wan
1062	Middle Part of Tokyo Wan
1081	Uraga Suide
H-301B, H-302B	Maritime Traffic Information Chart for Tokyo Wan

SHIPMASTER'S REPORT: *The Tonen Ohgishima Sea Berth:*

1. Suggest Mikimoto Lighthouse used for end of passage as from there inwards to Uraga Channel (58 miles) heavy concentrations of traffic frequently experienced.
2. Entry to Uraga Channel for VLCC's permitted only during daylight (i.e. sunrise to sunset).
3. Pilot boards in vicinity Uraga No. 1 Buoy from 1 of the 2 tugs which escort the vessel to Yokohama/ Kawasaki and requires fire fighting tug standing by at Uraga Buoys Nos. 1–6.
4. Deep draft signal to be displayed including the red flashing light and Code "First Substitute over Flag 'B'" and 2 black cylindrical shapes (0.6 m. × 1.2 m.) placed vertically (refer Maritime Traffic Safety Law).
5. ETAs (No. 1 Buoy Uraga) should be updated as promptly as possible. Considerable importance attached to the vessel's arrival/sailing time by Tokyo Wan Traffic Advisory Service Centre (TWTASC).
6. Vessel must anchor at Kawasaki Anchorage where Port Health boards (pilot hoist used).
7. Berthing/Unberthing Ohgishima Sea – berth during daylight only (sunrise to sunset).
8. Berthing pilots (2) embark at Quarantine Anchorage, 6 tugs all using nylon tow ropes with eye on bitts. Always port side alongside. Refer mooring diagram for details. No additional mooring ropes available on loan or hire from berth. Shore gangway, Chicksan arms 4×16 in. connections.
9. A spill boom completely surrounds the vessel on the berth. A comprehensive book (in English) of the Terminal Regulations placed on board on arrival. Tonen Company require a tape recording concerning oil pollution to be broadcast throughout the vessel's p/a system before cargo discharge commences.
10. Ullaging is witnessed by Oil Co. representative. Samples taken from all tanks necessitating the opening of tank hatches. All tanks dipped after discharging completed.
11. The loading of stores, provisions, etc. (either by crane or derrick) is not permitted on this berth. No restrictions on items being *carried* on board via the gangway, e.g. laundry. Necessary to anchor after discharging/ballasting to take on stores.
12. During severe weather conditions tug assistance was requested to stand by the vessel on the berth. Tugs cannot approach unless the spill boom is removed and this will only be removed if cargo discharge ceases and Chicksan arms disconnected.
13. A shore liberty boat was arranged through Agent. This service is to Yokohama, approx. 1 hour journey. A boat service to nearby Kawasaki is permitted and take 40 minutes. All boat services suspended when weather deteriorates. Shore passes issued by Immigration Authorities on board and must be collected in before vessel leaves berth.

SHIPMASTER'S REPORT: December 1991.

Charts: B.A. Charts No. 3548, 3108 and 3109.

Documents:

First Port:
*4 copies Crew List.
*2 copies Stores List.
*1 copy Maritime Declaration of Health.
*1 copy Crew Effects List.
1 copy Ports of Call List.
* These must be completed on Japanese forms (Japanese version of IMO forms).

At subsequent ports the following are required:
1 copy Crew List.
1 copy Stores List.
1 copy Ports of Call List.

In addition the "Riders" from the first port should also be available.

Formalities: Sanitary Certificate/Pratique: Vessels without a Sanitary Certificate can obtain temporary pratique but must undergo a sanitary inspection. The galley, toilets, showers and void spaces under bunks and settees are checked for dirt and vermin.

The vessel must be in possession of rat traps, rat guards, rat bait, water purification liquid, disinfectant and a spray. The certificate lasts from 1 – 3 years, depending on cleanliness. Prior to arrival at the first port a standard message prefixed by "RPM" must be sent.

Approaches: The high headlands and islands to the South of Uraga Channel are easily identified visually and by radar. There is the usual volume of traffic and fishing vessels around the coast. Vessels should keep a good lookout for ferries when about one mile South of the 'OE' Racon Buoy which marks the Southern end of the Uraga Channel. The buoy is large and conspicuous.

A voluntary separation scheme is in existence South of the Uraga Channel and is an extension of the mandatory scheme. Northbound vessels keep to the East side of the channel and Southbound vessels keep to the West side of the channel. Coasters do not comply with this scheme.

Pilotage: The Uraga Channel pilot boards in position Lat. 35° 10' N., Long. 139° 47' E. from a tug boat with a boarding platform forward. The pilot is based at Kurihama Wan which is about 2.2 miles South of Kannon Saki.

Pilotage is compulsory for vessels over 10,000 g.r.t. It is also recommended that foreign vessels under 10,000 g.r.t. take a pilot into Tokyo Bay.

Within Keihin (Yokohama, Kawasaki area) harbour pilotage is compulsory. Uraga Pilot is on VHF Channel 13.

Traffic Control: Vessels over 10,000 g.r.t. must report to "Tokyo Martis Control" as per Admiralty List of Radio Signals.

Visibility: Uraga Channel is closed to vessels over 200 m. LOA when visibility falls below one nautical mile and is closed to vessels over 10,000 g.r.t. when visibility is below 0.5 nautical miles. Ships with dangerous cargo may be restricted depending on their circumstances and size of vessel.

Anchorages: There are numerous anchorages in the area. Foreign vessels inside Tokyo Bay anchor in accordance with instructions from pilot and/or "Tokyo Martis Traffic Control". A favoured waiting anchorage is Naka-No-Se which is centred on Lat. 35° 23' N., Long. 139° 45' E. in a depth of 14 m. – 18 m.

We used Yokohama No. 5 area (Lat. 35° 22.5' N., Long. 139° 41' E.) for discharging lub oil additives into coasters. Anchorage position given by "Tokyo Martis". In this area vessels should beware of the depths, as to the S.E. of the anchorage depth increases sharply from 15 m. to 40 m., so plenty of cable is required.

Berth: Vessel berthed portside to at Nippon GATX in Kawasaki (Lat. 35° 29.2' N., Long. 139° 42.8' E.) The max. draft allowed is 7.7 m.

This is a typical tanker type pier and projects out into the channel. The berth face has a length of 30 m. and is equipped with Chicksans and hoses. There are breasting dolphins 20 m. each side of the jetty face which are used for backsprings. Headlines and sternlines are sent to shore bollards, the berth is well fendered.

As a brow gangway only is possible we used a pilot ladder and the offshore gangway for the launch service.

Cargo: When at the anchorage we discharged into 2 coasters using 6 in. flexi-hoses. The coasters can receive as fast as the ship can pump.

When alongside we discharged additives with 6 in. shore hoses. The plant also handles other chemicals. There was negative back pressure. Discharge of Amoco Grade A8083 went very slowly into the shore tanks, about 30 tonnes/hr.

There are plenty of surveyors available and total safety was given by safety boat.

Fresh Water: Not available at the GATX berth. Water can be obtained by barge either alongside or at the anchorage. The minimum supply is 50 tonnes and the cost is Yen 3,285 per tonne.

Shore Leave: Shore leave is not allowed through the plant so a launch is used when alongside and at the anchorage.

Launch cost: 0800 hrs. – 1700 hrs. – Yen 18,000.
1700 hrs. – 2200 hrs. Yen 27,000.
2200 hrs. – 0600 hrs. Yen 36,000.
0600 hrs. – 0800 hrs. Yen 27,000.

Yellow shore passes are required and they have to be surrendered on return from ashore.

Shifting: Vessels with dangerous cargoes cannot move at night (between sunset and sunrise) and this includes shifting from berth to berth, moving from anchorage to berth or sailing outwards.

Transit: Vessels normally transit Keihin Unga Fairway Kawasaki in an Easterly direction. Most vessels enter through Tsurumi and leave through Kawasaki entrances.

The bridge across Tsurumi Fairway is not yet completed.

Stores: Prices for fresh food are high but quality is good. Stores can be supplied by barge while at the anchorage or whilst alongside. By prior arrangement small amounts of spares or stores can be delivered to the quayside but only up to 70 m. from the ship.

AUTHORITY: Port & Harbour Bureau of Kawasaki City, 1 Miyamoto-cho, Kawasaki-ku, Kawasaki City, 210 Japan. *Tel:* 044-200-2111. *FAX:* 044-222-9355. *Contact:* Yousuke Ikeda, Director.

AGENT: Senwa Shipping Agency, c/o Sumitomo Warehouse Co.Ltd., 18 Nihon Ohdori, Naka-Ku, Yokohama-Shi, Kanagawa 231, Japan. Tel: 045-681-8562. Fax: 045-681-2281. Telex: 3822-141. Cables: Sumitomosoko Yokohama.

KIIRE: 31.23 N. 130.32 E. (See Plan)

DOCUMENTS:

Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
5 Crew Lists including Passport Numbers.
5 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in Transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

PILOTAGE: No particular regulations for navigating in Kagoshima Bay. Suggest enter Bay on course close to Osumi Peninsula. 3 Light Beacons South of oil piers for ships approaching and manoeuvring. Bay Pilots not provided but Mooring Master provided for assistance to Master for berthing without charge. No VHF available for ship-shore communication.

ANCHORAGES: Anchorage area ranges in depth from 30 m. to 60 m. Holding ground in these areas only fair; recommended vessels lie to long scope of chain. Locally tide rise approximately 3 m. in springs and 1.5 m. neaps. Maximum tide currents Northerly 0.32 knots, Southerly 0.47 knots. Ample anchorage and manoeuvring area N.E. of terminal.

Since the holding ground in Kagoshima Bay is not very good, most vessels prefer to proceed to the open sea, outside the bay, if a typhoon is predicted to pass nearby.

RESTRICTIONS: Night entry and departure permitted subject to weather conditions. However, Harbour Master will not permit vessels loaded with oil cargoes to berth between sunset and sunrise.

MAX. SIZE:

Berth	*Max. LOA* (m.)	*Max. Draft* (m.)	*D.W.T.* (tons)
1	300	16.2	33,000–150,000
2	300	16.2	33,000–150,000
3	400	25.2	33,000–450,000
4	450	30.6	up to 500,000

HEALTH: Radio Pratique available. Quarantine Officers board the vessel either at the Quarantine Anchorage or at the pier, depending on availability of berth.

Also see "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

TUGS: Mooring and unmooring assistance provided by 4×3,200 h.p. tugs.

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by telex.

MEDICAL: Advance notice required if arriving at weekend.

TANKERS: (Crude oil only).

Berth No.	*Connections*	*Discharge Rate*
1	4×12 in.	10,000 k/l (loading/unloading)
2	4×12 in.	10,000 k/l (loading/unloading)
3	6×16 in.	27,600 k/l (unloading) 12,000 k/l (loading)
4	2×16 in. 3×24 in.	9,200 k/l (loading/unloading) 30,000 k/l (unloading) 12,000 k/l (loading)

Berthing Procedures and Mooring: The counter current in the bay is anti-clockwise and in the berthing area runs in a S.E. to South-Southeasterly direction, parallel to the berthing face of the berths, at a rate of about 0.5 knots. As a result, vessels always berth port side to.

The normal berthing procedure is to bring the vessel to a stop at a position about 150 m. off the berth, parallel to berthing face, and then to warp her alongside with tug assistance.

Since all berths are surrounded by submersible oil booms, anchors cannot be used when close to the berths.

Berth No. 4 has been designed to permit safe berthing of a 500,000 d.w.t. tanker with a berthing velocity of 20 cm./sec., but normally the berthing velocity is less than 10 cm./sec.

The sequence of bringing out mooring lines depends on tide and wind direction, but normally spring lines first (heaving lines first) and then the other lines (direct in the launch). 2 mooring launches attend (115 h.p. and 165 h.p.)

The usual mooring configuration at Berth No. 4 is forward: 4 headlines, 3 breast lines, 3 spring lines; aft: 4 stern lines, 3 breast lines, 3 spring lines. (A total of 20 lines). During the Winter Northwesterly storm periods, it is usual to add forward and aft each one breast line and one spring line, making a total of 24 lines. At Berth No. 3 under normal conditions, 18 lines are used and in Winter, 18 lines. During the Winter Northwesterly storm periods moorings at Berth No. 3 moorings are same as Berth No. 4.

Tension winches must be set to manual operation and the brakes must be securely applied.

All mooring lines will be inspected by the terminal prior to commencing cargo operations and they have to be in good condition. Also, regular inspections of moorings are carried out during the cargo operations.

DENSITY: 1025.

FRESH WATER: Water obtainable at berth on oil piers at rate of 30 t.p.h.

FUEL: Domestic oil is available from Kagoshima and bonded oil will be lightered from Moji area, when required.

FIRE PRECAUTIONS: Very strict Safety Regulations.

Disregard of regulations will result in stopping all loading or unloading operations and the vessel being ordered off berth for appropriate action to be taken.

CONSULS: None.

REPAIRS: Minor repairs, including equipment/instrument service, can be carried out by Tokyo Tanker Kikoh Co.Ltd. Advance notice required.

DRY DOCKS: None.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear's maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 50 cigarettes to take ashore but no spirits.

REPATRIATION: Possible.

AIRPORT: Distance from airport about 2 hours by car. ANA, JAL and JAS (TDA) airlines serve daily.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

POLICE/AMBULANCE/FIRE: Police station Tel: 110; Fire brigade station is located at terminal and Ambulance available at that station.

TELEPHONE: Telephone placed on board at Terminal free of charge for inter-office communication.

SERVICES: All services available.

SHORE LEAVE: Local Immigration Offices issue shore pass valid for only 3 days, but 3 days' extension possible if ship stays longer.

GARBAGE DISPOSAL: Service not available.

WASTE OIL DISPOSAL: Service not available.

SEAMAN'S CLUBS: Kiire Seamen's Club, 1033 Nakamyo, Kiire-Cho, Kagoshima, 891-02 Japan. Tel: 0993-45-0156. Facilities: International telephone and public bar.

AUTHORITY: Nippon Oil Staging Terminal Co., Ltd., 2856-5 Uenohama, Nakamyou Kiire-Cho, Ibusuki-gun, Kagoshima, Japan.

Kiire Port Office, Public Works, 301 12-Cho, Takanohara, Ibusuki City, Kagoshima Pref., Japan. *Tel:* 0993-22-2171. *FAX:* 0993-22-3344.

KIKUMA: 34.03 N. 132.51 E. (See Plan)

LOCATION: Sea Berth: Lat. 34° 03' 34.2" N., Long. 132° 51' 52" E. Dolphin Berth: Lat. 34° 03' 24" N., Long. 132° 51' 25" E.

DOCUMENTS:

Ship's Register.
International Tonnage Certificate.
3 Voyage Memos (Ports of call).
Last Port Clearance.
5 Crew Lists, including Passport Numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Inland Sea Pilotage should preferably be arranged through Agent, giving 72 hours' notice. Urgent correction of ETA outside business hours should be cabled direct to Pilot Station. Inland Sea Pilot Association covers all Inland Sea ports. Pilotage compulsory for vessels over 10,000 g.r.t. Navigating in Kurushima Channel and Bisan Seto traffic routes. Pilots obtained from 1 of 3 Pilot Stations dependent upon vessel's last port of departure and at Master's discretion. Pilotage available throughout 24 hours' and 72 hours' advance notice preferred, thereafter advising any alterations. Most Inland Sea Pilots also act as Harbour Pilots up to berth or anchorage at destination.

Note: VHF communication available with Inland Sea Pilot Stations. Also see "Shipmaster's Report" before first port.

1. Wadamisaki, at entrance to Kobe (vessels transitting Kii Straits) Position: Lat. 34° 35' N., Long. 135° 08.24' E. Telegraphic address "Anjin Kobe".

2. Sekisaki, 3 miles South of Sekisaki Lighthouse. (Vessels transitting Bungo Channel). Position: Lat. 33° 13' N., Long. 131° 55' 38" E. Telegraphic address "Anjin Moji". In event bad weather, recommended vessels proceed for shelter as near as possible having due regard to safety, to Sekisaki Pilot Station.

3. Hesaki, at East side of Kanmon (Shimonoseki) Straits. Position: Lat. 33° 57' N., Long. 131° 03' E.

ANCHORAGE: Lat. 34° 03' N., Long. 132° 51' E. Water depth: 15 – 30 m. Anchorage located about 350 m. off beach. Holding ground good and Port faces Iyo-Nada and located Bungo Channel. Current at berth and off shore very strong. During Winter months strong N.W. wind prevails.

RESTRICTIONS: Mooring and unmooring daytime only and to be carried out on flood tide.

MAX. SIZE: *Dolphin Berth:* 88,500 d.w.t., LOA 250 m. and max. draft 14.5 m.

Sea Berth: 132,700 d.w.t., LOA 280 m. and max. draft 20 m.

HEALTH: Closed port. Vessels should obtain Pratique at Matsuyama and Sekisaki, also Radio Pratique available in this port.

Also see "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

TUGS: Join vessel at sea anchorage, always using tugs line without charge. 2 to 4 tugs are required for berthing, depending on size of vessel. 3 tugs are normally used for unberthing.

BERTHING: Vessels berth one hour before slack tide in daytime.

MEDICAL: No advance notice required unless urgent.

TANKERS: *Taiyo Oil Co. Terminal.* 2 tanker berths available.

Berth	*Depth* (m.)	*Type Cargo & diameter/Number of shore pipes*	*Discharge rate* Kl.p.h.
Dolphin Berth	16.0	Crude oil 24 in.×1(12 in.×2)	4,500
		Motor Gasoline 18 in.×1(12 in.×1)	1,600
		Kerosene, gas oil 12 in.×1 (10 in.×1)	800
Sea Berth	20.0	28 in.×2	–

Also see "Report" dated January 1995.

DENSITY: Anchorage 1021. Berth 1021.

FRESH WATER: Fresh water not available but usually brought by barge from Marugame or Mizushima with 3 days advance notice (about 6 hours run to Kikuma). Rate of delivery 80 tons to 200 t.p.h. dependent on barge.

FUEL: Can only be supplied by barge from Hanshin and Kanmon area, provided 5 days notice is given. All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, Osaka Bay and Kanmon Port. At all other ports bunkers will be lightered from nearest bunker stock ports at maximum 7 days prior notice.

CONSULS: No consuls. The nearest Consulates in Kobe.

REPAIRS: Only minor repairs.

GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.

CUSTOMS ALLOWANCES: Only allowed 50 cigarettes to take ashore but no spirits.

REPATRIATION: Possible. Nearest Immigration Office situated at Matsuyama.

AIRPORT: Nearest Matsuyama, distance 50 km.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

POLICE/AMBULANCE/FIRE: Police 110; Ambulance 119; Fire 119.

TELEPHONES: No facilities for placing telephones on board.

SERVICES: See "Kobe".

SHORE LEAVE: Local Immigration Offices issue shore pass valid for only 7 days, but 7 days extension possible if ship stays longer.

GARBAGE DISPOSAL: Not compulsory.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Japanese Yen.

GENERAL: As this port is a closed port, the undermentioned procedures required: In conformity with regulations vessel required to obtain special permission to enter from Shikoku Transport Bureau.

Customs request vessel call at Kikuma to obtain special permission for entering at preceding port, by paying the charge at the same rate of tonnage dues.

Prior to arrival of a vessel, the above procedures will be undertaken by Agent.

No quarantine available, the nearest quarantine station is located at Matsuyama.

No Immigration Office at this port (coming from Matsuyama).

REPORT: January 1995 (Updated 1996).
From: Terminal Operator.
To: Vessel Operator.
Details of Taiyo Oil Sea Berth (5 Buoys) and Mooring Plan (See "Plan Section"):
We wish to express shore details (Sea Berth) and tentative mooring plans as requested.

(A) Shore details (5 buoys – 2 buoys forward and 3 buoys aft):
1. Max. acceptable deadweight and LOA: 132,000 tonnes/280 m.
2. Max. draft: 20.0 m. (Depth in approach 25 m.).
3. Connection: Connecting 2 shore submarine hoses, whose sizes are 12 in. ASA each.
4. Flow rate: 5,000 cu.m./hr.
5. Max. pressure permitted at manifolds: 5.5 kg./sq.cm.
6. Berthing: Available only 2 hours prior to slack tide in daytime, and unmooring under slack tide in day.
7. No quarantine located at Kikuma, therefore vessel should call at Matsuyama Quarantine Anchorage (33° 51' 00" N., 132° 41' 00" E.) for Free Pratique, but Radio Pratique is applicable with valid Derat Exemption Certificate on board.

(B) Mooring Buoys: See "Plan Section".
2 Buoys (No. 1 and 2) – Forward.
3 Buoys (No. 3, 4 and 5) – Aft.
Distance from forward buoy to aft buoy – approximately 445 m.
Distance from Buoy No. 1 to Buoy No. 2 – approximately 80 m.
Distance between No. 3, 4 and 5 – approximately 70 m. each.
Distance between ship's bow and Buoy No. 1 or No. 2 – approximately 60 m. – 70 m.
Distance between ship's stern and Buoy No. 3, 4 and 5 – approximately 80 m. – 90 m.
Number of mooring lines required to each buoy:
6 lines to Buoy No. 1 – using starboard side anchor (approximately 6.5/7 shackles).
7 lines to Buoy No. 2
6 lines to Buoy No. 3
3 lines to Buoy No. 4
6 lines to Buoy No. 5

(C) Mooring Plan (Line arrangements – See "Plan Section").
Berthing Master tentatively made the following plan according to initial information of ship's lines (Will place 12 shore lines (65 mm.×20 m.) – 5 ropes forward and 7 ropes aft – on board at anchorage prior to berthing).

Buoy No. 1:

2 wires on drum to Buoy No. 1	2 lines
2 shore lines using in double 2×2	4 lines
Total	6 lines

Buoy No. 2:

2 wires on drum to Buoy	2 lines
2 shore lines using in double 2×2	4 lines
1 shore line using in single	1 line
Total	7 lines

Buoy No. 3:

1 wire on drum to Buoy	1 line
2 ship's free ropes to Buoy	2 lines
3 shore lines in single to Buoy	3 lines
Total	6 lines

Buoy No. 4:

2 wires on drum to Buoy	2 lines
1 shore line to Buoy	1 line
Total	3 lines

(To be warping-end at ship's side)

Buoy No. 5:

1 wire on drum to Buoy	1 line
2 ship's free ropes to Buoy	2 lines
3 shore lines to Buoy	3 lines
Total	6 lines

Remarks: We now understand full details of ship's mooring lines. Therefore supply of shore ropes might be minimised forward. The above said "double" rope means two eyes of each rope's end to be hooked on Buoy.

(D) Please advise the following when vessel sails from loading port:
1. Estimated arrival and departure draft at Kikuma.
2. Tankwise stowage.
3. How many hours are you planning for discharge of whole cargo here?
4. Next port (after Kikuma) if you already know.

We would appreciate if you could give us some comments, or confirm and acknowledge aforesaid mooring plans. Meanwhile, we will revert with final line arrangements (i.e. number of shore lines supply and respective position of shore and ship's lines later on, when we will confirm in conjunction with Berthing Master).
From Taiyo Kosan Co.Ltd. (Telex: 5845582 Taikou J. Fax: 0898 542522. Tel: 0898 542908. Cables: Taiyokosan Kikuma).

AUTHORITY: Taiyo Oil Company Ltd., Kikuma Refinery, 63 Tane, Kikuma-Cho, Ochi-Gun, Ehime-Prefecture, Japan. 799-23. *Tel:* 0898-54-5170. *Telex:* 584-5542. *FAX:* 0898-54-5367. *Contact:* Manager of Oil Handling Section.

KIN WAN (Okinawa): 26.22 N. 127.58 E. (See Plan)

DOCUMENTS:
Customs:
Required upon vessel's arrival by:
Customs Officer: Okinawa Customs Branch, Henza Sub-Branch Office. Location: 2972 Aza Henza Yonashiro-Son, Okinawa (Tel: 09897-7-8558).

1. When ship arrives direct from foreign port, Customs Officer will board vessel for search. Following documents to be submitted.

5 copies Crew List.
3 copies Passenger List.
1 copy Stores List.
1 copy Crew's Baggage List.
4 copies Ports of Call List.
1 copy International Health Declaration.
Ship's Register.
International Tonnage Certificate.
International Load Line Certificate.
Last Port Clearance.
Bill of Lading.

Ship's Agent will prepare Inward Declaration, one Cargo Manifest, Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

2. When ship comes from Japanese port, Customs Officer will not attend on board except special case. Agent to attend Customs House for entry formalities with following documents.

Crew List and Passenger List.
Stores List.
List of ports of call on current voyage.
(Last Port Clearance and Documents entrusted with the Master by Customs at previous port).

Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

Immigration:
Required upon vessel's arrival by:
Immigration: Naha Immigration Kinwan Sub-Branch Office.
Location: 2628-2 Ishikawa City, Okinawa (Tel: 09896-4-2858).

1. When ship arrives direct from foreign port, Immigration Officer will board vessel for check. Following documents to be submitted.

Crew List	2 copies
Passenger List	2 copies

Please collect the Crew Seaman's Book in order such as No. 1, No. 2 . . . till the end as per Crew List stated.

Please collect the passports in order such as No. 1, No. 2 . . . till the end as per Passenger List stated.

Ship's Agent will prepare Inward Vessel Declaration, one application for shore pass, one application for extension of the area of movement using specific forms.

2. When ship comes from Japanese port, Immigration Officer will not attend on board, except special cases. Agent to attend Immigration Office for entry formalities with following documents.

Crew List	2 copies
Passenger List	2 copies
Seamens' Books	
Passports	

Documents (Shore Passes) entrusted with the Master by Immigration at previous port. Ship's Agent will prepare Inward Declaration, one application for Shore Pass, one application for Extension of the Area of Movement using specific forms.

APPROACHES: See "Berthing" – Report dated 1983.

PILOTAGE: Also see "Approaches".

Berthing Masters will normally board from a tug having a blue hull and cream upperworks, with a tall mast bearing a number (1, 2, 3 or 4). Since the tugs have a fairly high freeboard, pilot ladders should be rigged with the bottom step about 6 ft. (2 m.) above the water level, otherwise the lower steps may be crushed or damaged. Vessels with a freeboard exceeding 30 ft. are requested to rig the pilot ladder in conjunction with an accommodation ladder in the approved manner.

Masters of calling vessels are reminded of their obligation to comply with statutory rules and are requested to comply with International recommendations concerning pilot ladders. If the ladder is not safe, the Berthing Master may refuse to board and thus cause unnecessary delay to the ship.

ANCHORAGES: Recommended anchorages: Also see "Berthing" – Report dated 1983.

For mammoths in order of arrival:

K1: Lat. 26° 24' 00" N., Long. 127° 57' 48" E.
K2: Lat. 26° 23' 30" N., Long. 127° 57' 12" E.
KE: Lat. 26° 25' 00" N., Long. 127° 58' 10" E.
KW: Lat. 26° 25' 12" N., Long. 127° 55' 24" E. (for vessels over 100,000 g.r.t. and requiring long stay).

(Subject Japanese Coastguard M.S.A. approval is obtained by Agent.)

For vessels 50,000 d.w.t. – 150,000 d.w.t.

KS: Lat. 26° 23' 06" N., Long. 127° 56' 43" E.
S1: Lat. 26° 22' 30" N., Long. 127° 56' 48" E.
S2: Lat. 26° 22' 00" N., Long. 127° 56' 48" E.

Products anchorage: The area bounded by a line joining the following positions:

1. Lat. 26° 22' 00" N., Long. 127° 56' 29" E.
2. Lat. 26° 22' 13" N., Long. 127° 56' 33" E.
3. Lat. 26° 22' 00" N., Long. 127° 57' 19" E.
4. Lat. 26° 21' 51" N., Long. 127° 57' 05" E.

The holding ground is good in anchorages, but depths in the first groups between 22 and 25 fathoms; it is therefore recommended that at least 1 shackle of chain be walked back on the windlass before letting go the anchor.

Depths in the product anchorage vary between 10 and 14 fathoms.

Prior to anchoring, vessel must obtain permission from Nakagusuku Maritime Safety Agency Office, who designates the anchoring position.

Prohibited Anchorage: Owing to the existence of underwater pipelines, telephone cables and obstructions, anchoring is prohibited anywhere S.E. of a line joining the following 2 positions:

1. Lat. 26° 22' 31" N., Long. 127° 58' 08" E. (i.e. the N.E. dolphin of the Sea Island)
2. Lat. 26° 21' 37" N., Long. 127° 56' 44" E. (i.e. the N.E. dolphin of No. 3 Berth on the Products Pier)

For berthing, Masters of vessels are requested to have the propeller submerged and vessel in a reasonable trim for ship-handling purposes (not exceeding 3.5 m.).

RESTRICTIONS: Berthing operation is permitted during daylight only. Unberthing operations take place throughout 24 hours.

There are no specific restrictions on draft, but in order to ensure safe handling characteristics it is recommended that vessels arriving in ballast arrange that the propeller is fully submerged, with a stern trim not exceeding about 10 ft. Vessels which do not meet this requirement may be delayed in berthing until additional ballast has been run in.

MAX. SIZE: 5 berths are available for calling tankers. Berth No. 1 can accommodate vessels up to 500,000 d.w.t., and Berth No. 2 vessels up to 150,000 d.w.t. These 2 berths are situated at the offshore platform. Berths No. 3, No. 4, No. 5 are situated at the Product Dock. (Also see "Berthing").

Berth No.	*Max. d.w.t.*	*Least depth of water below datum*	*Remarks*
Sea Berth 1	500,000	102 ft.	
Sea Berth 2	150,000	90 ft.	
Prod. Pier 3	60,000	50 ft.	Max. dist. stern to manifold 320 ft.
Prod. Pier 4	20,000	36 ft.	
Prod. Pier 5	10,000	30 ft.	

In addition to the above tanker berths a dry-cargo berth is also available. This berth is 110 m. in length and has a least depth of 22 ft. below Okinawa Datum.

HEALTH: Quarantine Office: Naha Quarantine Office.
Location: Naha Godo Chosha Bldg., 11-1, 2-chome, Minato-Machi, Naha, Okinawa (Tel: 0988-68-1674).

At first port of call in Japan, vessel may obtain Free Pratique.

Quarantine Officer will attend vessel only from daylight to sunset, and Master to show all vaccination cards and Derat Exemption Certificate. If vessel arrives from infected area crew and passengers' health condition to be cabled to Quarantine Officer through ship's Agent prior to arrival, and close all soil pipes before entering port.

(1) *Radio Pratique:* Free Radio Pratique Telegrams to Quarantine Station not less than 12 hours and not more than 36 hours before arrival, advising full details of vessel and health condition on board. When Free Pratique is granted by radio, vessel will be required to submit the following documents to Quarantine Officer on arrival.

Maritime Declaration of Health	1 copy
Crew List and Passenger List	1 copy
Vaccination List	1 copy

(2) The following vessels will not be able to obtain Radio Pratique.

A vessel that has been in contact with an infected area or a suspected infected area within 15 days of arrival.

If a vessel has onboard any case, or any suspected case, of infectious disease within 15 days of arrival.

If a vessel does not possess a valid Derat or Derat Exemption Certificate.

Also see "Late Reports".

RADIO: When on route to the Kin Wan Port at Okinawa a vessel's ETA must be communicated to his Agent, 72, 48 and 24 hours prior to arrival. If VHF is not available arrival information can also be passed to your Agent by "Ship Telephone Service". Naha: 09885-4-5155.

It is important that ETAs are confirmed 12 hours before expected arrivals and amendments communicated when known.

VHF station "Kin Wan Tug" located on Henza Island keeps a 24 hour listening watch on Channel 16 (156.800 MHz) and Channel 13 (156.650 MHz). Tel: 09897-7-8341 is also manned 24 hours per day.

RADAR: The port is not equipped with radar. Poor visibility may occur in heavy rain, but fog is rare. Coastlines and buoys within the bay give good echo returns on ship's radar. All tugs are fitted with radar, and on occasions vessels have been guided into the port by them in heavy rainstorms, the tug keeping close alongside within sight of the bridge, and communicating by VHF.

TUGS: 4 tugboats are stationed at the Terminal. The Berthing Master in consultation with the Master will decide the number of tugs required for each berthing operation and as stand-by tugs during the vessel's stay in port.

Vessels are berthed with the assistance of up to 4 tugs according to the vessel's size and weather conditions. Such tugs will either secure alongside, "American style", or will secure forward or aft by their towing hooks. Tugs' lines are always used. The tugs are 2×3,400 h.p. Z-peller, 2×2,600 h.p. Z-peller and 2 small twin-screw tugs 400 h.p., and are manned by highly skilled crews. It should be noted that the port charges for vessels are a fixed amount based on deadweight tonnage, and this charge is not affected by the number of tugs used or not used. Masters may thus follow the Berthing Master's recommendations regarding tug requirements without having to consider what could be dangerous economies.

READINESS: A vessel is "arrived" for Notice of Readiness purposes, when the Berthing Master boards or, if vessel proceeds to anchorage without a Berthing Master, when she drops her anchor.

BERTHING: In normal circumstances no lines are run out until the vessel is alongside the berth and in position. Tugs will hold her there whilst the mooring takes place, springs usually being run first, followed by breastlines, then head- and stern-lines. On the larger berths all lines except springs are lowered to the water and taken to the dolphins by line-handling boats, where they are secured to quick-release hooks. Nothing is required in the way of pennants, tails or shackles. Springs are passed direct to the dolphins by heaving-lines.

Owing to the depth of water, anchors are not normally used when berthing at the sea-berth. However, the outboard anchor should in all cases be ready for emergency use.

Weather permitting, vessels secure starboard side alongside at Berth No. 3. At Berths No. 4 and 5 vessels can only berth starboard side to the pier, owing to the construction of the berths. Therefore if wind conditions do not permit of berthing in this way, the berthing will be delayed until the wind is suitable. At the sea-berth, mammoth vessels normally berth port side to the pier, but this is only to reduce the time taken for the operation, and they can be berthed starboard side to if conditions require it. Smaller vessels are berthed either way according to requirements and conditions.

The Marine Office is equipped with a Weather Facsimile Recorder, and Masters can obtain the latest information regarding possible storm conditions by contacting the Berthing Master on VHF Channel 13 or by calling 580 on the internal telephone system from the berths. When typhoons are imminent all cargo operations cease and vessels are required to vacate the berths and are recommended to proceed to sea.

Berth No. 1: Also see "Report" dated 1983 (below).

Owners: Okinawa Terminal Company Ltd.

Position: Lat. 26° 22' 25" N., Long. 127° 58' 01" E.

Depth: 30 m. (MLWS).

Max. Size: 385 m. LOA, 70 m. beam, 26 m. draft. 500,000 d.w.t.

Services: Fresh water not available.

Loading Rates: Bunkers/HFO 3,000 kl/h, product 2,000 kl/h. Crude 12,000 kl/h., Ballast 4,000 kl/h. Max. pressure 250 p.s.i.

Berth No. 2: Also see "Report" dated 1983 (below).

Owners: Okinawa Terminal Company Ltd.

Position: Lat. 26° 22' 25" N., Long. 127° 58' 01" E.

Depth: 28 m. (MLWS).

Max. Size: 305 m. LOA, 45 m. beam, 20 m. draft. 150,000 d.w.t.

Services: See Berth No. 1.

Loading Rates: See Berth No. 1.

Berth No. 3

Owners: Okinawa Sekiyu Seisei K.K.

Position: Lat. 26° 21' 34" N., Long. 127° 56' 40" E.

Depth: 15.5 m. (MLWS).

Max. Size: 240 m. LOA, 35 m. beam, 13.5 m. draft.

Services: Fuel oil (bunkers) available, 70 kl/h. 6 in. hoses used. Fresh water available, but not fit for drinking.

Loading Rates: Aviation, JP4 and Naphtha, 500 kl/h × 2 low sulphur FO 1,000 kl/h × 3. Fuel oil and diesel 1,000 kl/h. Max. pressure 15 kg./sq.cm.

Vessels normally berth starboard side to.

Berth No. 4

Owners: Okinawa Sekiyu Seisei K.K.

Position: Lat. 26° 21' 29" N., Long. 127° 56' 48" E.

Depth: 11.5 m. (MLWS).

Max. Size: 175 m. LOA, 22 m. beam, 10 m. draft limiting condition 90 m. stern to manifold.

Services: Fuel oil available, rate 70 kl/h. Chicksan used. Fresh water available, but not fit for drinking.

Loading Rates: Aviation, JP4, JP1, kerosene 500 kl/h × 2. Low sulphur F.O. 600 kl/h. diesel 1,000 kl/h, fuel oil "A" 1,000 kl/h. Maximum pressure 15 kg./sq.cm.

Vessels berth starboard side to.

Berth No. 5

Owners: Okinawa Sekiyu Seisei K.K.

Position: Lat. 26° 21' 28" N., Long. 127° 56' 58" E.

Depth: 10 m. (MLWS).

Max. Size: 110 m. LOA, 17 m. beam, 8.5 m. draft limiting condition 10,000 d.w.t.

Services: Fuel oil, 6 in. hose, 70 kl/h diesel, 6 in. hose, 700 kl/h. Fresh water available, but not fit for drinking.

Loading Rates: JP4, JP1, kerosene, diesel and fuel oil "A" 700 kl/h. Max. pressure 20 kg./sq.cm. sulphur, 120 kl/h, max. pressure 15 kg./sq.cm. low sulphur fuel, 600 kl/h max. pressure 20 kg./sq.cm. LPG 200 kl/h max. pressure 27 kg./sq.cm.

Vessels berth port side to.

Operator's Report: 1983.

Okinawa Terminal Co. Ltd. (OTC) Sea Berth (Discharging and loading terminal): Operated by OTC.

Terminal operates 24 hours per day, 7 days a week. Ships moored and unmoored at anytime, weather or other circumstances permitting. Terminal will not be closed on any holidays.

Location: Lat. 26° 22' 25" N., Long. 127° 58' 01" E.

Pilotage: Compulsory.

Anchorage: (See "Plan") Anchorages are in the following positions. Approval of The Captain of the Port of Kim-Nakagusuku must be obtained through Agent prior to arrival

K1: Within a radius 700 m. Lat. 26° 24' 00" N., Long. 127° 57' 48" E. For vessels of 100,000 g.r.t. or over.

K2: Within a radius 700 m. Lat. 26° 23' 30" N., Long. 127° 57' 12" E. For vessels of 100,000 g.r.t. or over.

KE: Within a radius 700 m. Lat. 26° 25' 00" N., Long. 127° 58' 10" E. For vessels of 100,000 g.r.t. or over.

KW: Within a radius 700 m. Lat. 26° 25' 12" N., Long. 127° 55' 24" E. For vessels of 100,000 g.r.t. or over.

KS: Within a radius 600 m. Lat. 26° 23' 06" N., Long. 127° 56' 43" E. For vessels of maximum 100,000 g.r.t.

S1: Within a radius 400 m. Lat. 26° 22' 30" N., Long. 127° 56' 48" E. For vessels of maximum 10,000 g.r.t.

S2: Within a radius 400 m. Lat. 26° 22' 00" N., Long. 127° 56' 48" E. For vessels of maximum 10,000 g.r.t.

Approaches: For the purpose of Traffic Separation and Control, the approach to Kin Bay is divided by a channel centre line joining the following positions. Lat. 26° 26' 00" N., Long. 128° 02' 00" E. and Lat. 26° 24' 47" N., Long. 127° 59' 26" E.

Vessel should make for position Lat. 26° 26' 00" N., Long. 128° 04' 00" E. off the East coast of Okinawa and from there steer to the West, passing Menguisho light beacon abeam to port at a distant of about 1.25 miles. The Berthing Master will board VLCC's (150,000 d.w.t. or over) or any ship which is on a first visit to the port.

When vessels are abeam of the beacon (but if circumstances should prevent this, the ship should continue on the Western course for one mile past the beacon) alter course to 242°, after about 1.4 miles on this new course the ship will be at the inner pilot boarding area.

Berthing:

Maximum rate 4,000 kl/h

West side of sea berth (No. 1 berth)

Max. size 500,000 d.w.t., Max. draft 26.0 m.

East side of sea berth (No. 2 berth)

Max. size 150,000 d.w.t., Max. draft 20.0 m.

Ballast: Disposal of dirty ballast water over the side is strictly prohibited by the Authorities and any pollution of the sea will result in heavy claims and fines.

No ballast is to be taken from the bay unless required for the ship's segregated clean ballast system. Ballast for cargo tanks will be supplied by the terminal.

LOADING: Loading lines at the berths are as follows: (*Note:* Hoses are listed from N.E. to S.W.)

Berth No.	*Dia.* (in.)	*To handle*	*Type*
1	16	Products	Chicksan arm with Q/C
	16	Crude/HFO	Chicksan arm with Q/C
	16	Crude/ballast	Chicksan arm with Q/C
	16	Crude/ballast	Chicksan arm with Q/C
	16	Crude	Chicksan arm with Q/C
	16	Ballast	Chicksan arm with Q/C
2	16	Product	Chicksan arm with Q/C
	16	Crude/HFO	Chicksan arm with Q/C
	16	Crude/ballast	Chicksan arm with Q/C
	16	Crude/ballast	Chicksan arm with Q/C
	16	Crude	Chicksan arm with Q/C
3	4	Bunkers (DO, FO)	Flexible hose
	10	Ballast	Mechanical arm
	10	Naphtha/JP4/kero.	Mechanical arm
	10	Naphtha/JP4/kero.	Mechanical arm
	12	Ballast/LSFO	Mechanical arm
	12	Low sulphur fuel	Mechanical arm
	12	Low sulphur fuel	Mechanical arm
	6	Bunkers (DO, FO)	Flexible hose
4	10	Ballast	Mechanical arm
	10	JP4, Jet A1, kero., naph.	Mechanical arm
	10	JP4, Jet A1, kero., naph.	Mechanical arm
	10	Automotive or marine diesel	Mechanical arm
	10	Low Sulphur (FO)	
	6	Bunkers (DO, FO)	Flexible hose
5	6	Auto/marine diesel, kero.	Flexible hose
	4	LPG vapour return	Flexible hose
	6	LPG/propane/butane	Flexible hose
	6	Liquid sulphur	Mechanical arm
	6	Bunkers (FO, DO)	Flexible hose

During cargo transfer or ballast operation all vessels shall show signal flag "B" during the day, and a red light during the night.

Transfer operation shall not be started, or if started shall be discontinued by either the duty officer of the vessel or the Terminal supervisor, when any of the following conditions come to his attention:

(*a*) During severe electrical storms.
(*b*) If a fire occurs on the pier or on the vessel.
(*c*) If there is not sufficient competent personnel aboard the vessel or on the pier to safely handle cargo operation in progress.
(*d*) Should any condition develop which represents a hazard to the vessel or Terminal installation.

MEDICAL: Agents should be given advance notice of medical or dental attention required. Clinic and hospital facilities are available, and in emergencies helicopter evacuation is possible. There is also a Company ambulance on Henza Island, for emergencies only. Tel: 119. If no answer, or at night, telephone 318. Or contact C.C.D. (Central Control Desk) on VHF Channel 16 or 13 or Tel: 580.

DENSITY: The bay is open to the sea, and normal density is 1025.

FRESH WATER: Available at Berth Nos. 3, 4 & 5, but not fit for drinking.

FUEL: All grades of bunkers are available at Nos. 3, 4 and 5.

FIRE PRECAUTIONS: Smoking and use of naked lights is strictly prohibited on board vessels alongside the berths, except in those enclosed spaces aboard ship specifically designated by the Master as "Smoking Areas".

Fire wires of steel must be hanging over the side of the offside bow and quarter whilst alongside to enable tugs to connect readily in an emergency situation. The towing eyes should be maintained at water level.

Boiler tubes must not be blown whilst vessel is alongside and every precaution must be taken to prevent sparks and soot particles escaping from the funnel.

Mooring of boats or craft with mechanical propulsion alongside a vessel loading/discharging crude oil or in the process of ballasting, is not allowed, unless special permission has been given by the Terminal.

In case of a fire aboard a vessel alongside the pier the following sequence of procedure should be adhered to:

(*a*) "Kin Wan Tug" to be informed immediately.
(*b*) All cargo operations to cease forthwith.
(*c*) MOV's and gate valves on loading arms, nitrogen and battery limit valves to be closed as soon as possible.
(*d*) Dock personnel to stand-by for disconnecting loading arms, unberthing or fire-fighting in accordance with instructions issued by the Berthing Master or "Kin Wan Tug".

During an emergency situation on board a vessel alongside, the Berthing Master will be in charge of organising the preliminary fire-fighting assisted by "Kin Wan Tug". He is to make use of all available means at his disposal, such as tugboats, launches, personnel, terminal equipment and other facilities to assist the vessel and protect lives and Terminal installations. Should the Berthing Master be unavailable or unable to communicate, "Kin Wan Tug" will direct the preliminary fire-fighting.

Kin Bay area comes under the jurisdiction of the 11th District of the Japanese Coast Guard and lies in Kin Nakagusuku Port. The telephone number of the Captain of the Port-Coast Guard Offices, 11th District is 098895-4874 or 5439.

CONSULS: At present the only Consulates on Okinawa are those of U.S.A., Korea and Philippines.

REPAIRS: Only minor repair facilities are available in Kin Wan, for such small components as can be sent ashore, e.g. repairing of valves or piping, re-winding of electric motors.

DRY DOCKS: None.

GANGWAY/DECK WATCHMEN: Shore gangways are fitted at Nos. 1, 2 and 3, and are supplied free of charge. Ship's gangways must be provided at Nos. 4 and 5. Watchmen are not required since access to the berths is controlled by the Company's security guards at the installation gates.

REPATRIATION: Crew changes and/or repatriation can be arranged by the Agent.

AIRPORT: Kin Wan Port is about 2 hours by car from Naha Airport (depending on traffic conditions) from where there are frequent services by several major airlines to all parts of the world via Tokyo, Honolulu, Taipei or Hong Kong.

TIME: Local time is 9 hours ahead of GMT, unchanged throughout the year.

HOLIDAYS: Local holidays do not normally affect operations in the port. Bank Holidays are now basically the same as those in other Japanese ports.

POLICE/AMBULANCE/FIRE: Ambulance 119 after hours or 580 (C.C.D.) or VHF 16; Fire 119 after hours or 580 (C.C.D.) or VHF 16; Police inform C.C.D. by VHF Ch. 16 or Tel: 580, or Berthing Master Tel: 578.

TELEPHONES: Telephones are not placed on board, but for urgent ship's business arrangements can be made for calls to be placed through the Company switchboard.

SERVICES: Tank-cleaning alongside is prohibited, but facilities for discharge of tank washings are available. See "Pollution Control".

SHORE LEAVE: For reason of safety the Terminal and the Off-Shore Platform are restricted areas. However, ship's personnel and visitors to ships are permitted to disembark and embark via the dolphins, which are also the personnel landing areas. Loitering at the loading platform will not be permitted.

Unauthorised or apparently intoxicated or disorderly persons shall be prohibited from entering the pier and the Terminal.

Shore passes will be issued by the Agent. These passes must be surrendered to the Agent prior to the ship's departure, unless the vessel is bound for another port in Japan when they can, after stamping, be used in the second port. The pass is sufficient, and no other means of identification need be carried when ashore.

POLLUTION CONTROL: Gas-freeing is not allowed on tankships alongside the pier.

To minimise the chances of pollution *all* ballast, whether clean or dirty, *must* be discharged ashore, except that which is contained in independent "permanent" ballast tanks. Also all ballast loaded into cargo tanks must be taken from ashore, and not from the Bay. The shore ballast tank has a capacity of 550,000 barrels and is connected to all tanker berths.

Caution: The sea berth is surrounded by a new type of sink/float oil fence to contain any oil that may be spilled on the sea. This fence is moored in place by 36 anchors and ropes. Vessels are therefore warned against approaching this fence or using any anchors in the vicinity of the sea berth. Nor should they throw overboard any old wires, ropes or other rubbish which may foul or damage the fence or its moorings.

The Terminal will, in case of an oil spill, take such steps as may be deemed necessary to fight the pollution before it spreads. If the spill is due to faulty equipment or materials on the vessel or to negligency on the part of ship's personnel, the Terminal shall be indemnified for any expenses incurred in connection with the preventive action taken.

No ballast is to be taken from the Bay unless required for the ship's clean permanent ballast system. Ballast for cargo tanks will be supplied by the Terminal.

AUTHORITY: Okinawa Prefectural Government, 1-2-32, Izumisaki, Naha, Japan 900. *Contact:* Nobuo Oshiro, Chief of Port Division.

KINUURA: 34.50 N. 136.56 E. (See Plan)

DOCUMENTS:
Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
3 Crew Lists, including Passport Numbers.
3 Passenger Lists.
2 Ports of Call Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Compulsory in Isewan (including Mikawawan) for vessels exceeding 10,000 g.r.t.

When pilot required, cable Agent at least 1 day before arrival with ETA Pilot Station. Pilot boards at/off Irago No. 1 Buoy (Lat. 34° 30.8' N., Long. 137° 06.9' E.) when coming from East, or Lat. 34° 28.3' N., Long. 137° 03.8' E. when coming from West or South, and Kinuura Harbour Anchorage (Lat. 34° 48.1' N., Long. 136° 57.3' E.). If there is any change, cable "Handakoun Handa", who pass messages to pilot.

Also see "Nagoya" – Pilotage: "Shipmaster's Report".

ANCHORAGE: Kinuura Anchorage located in position Lat. 34° 49' N., Long. 136° 57' E. Depth of anchorage: Outside high tide bank about 38 ft. – 39 ft., inside high tide bank about 32 ft. – 33 ft.

RESTRICTIONS: *Depth in Channel:*
South of Central Roads: 12.0 m.
North of Central Roads: 10.0 m.

MAX. SIZE: See "Berthing".

HEALTH: Radio Pratique available. Formalities will be carried out at Lat. 34° 48.7' N., Long. 136° 57.24' E. or in a position with Taketoyo Lighthouse bearing 155° × 5,000 m.

At first port of call in Japan, vessel must obtain Free Pratique. Quarantine Officers will attend vessel only from daylight to sunset and Master to show all Vaccination Cards, Derat Exemption Certificate. In case vessel arrives from cholera-infected area within 10 days, Master must advise crew and passengers health condition to respective Quarantine Office through ship's Agent prior to arrival, and close all soil pipes before entering port.

Also see "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by radio.

Name	*Type*	*Length* (m.)	*Depth* (m.)	*Capacity* (d.w.t.)	*No.*
Taketoyo Area					
Chuden Quay	Private	660	12.0	75,000	2
Asahi Glass Quay	Private	218	5.5	2,000	4
Nippon Kagaku Quay	Private	116	9.0	10,000	1
Nakayama Jetty	Private	50	5.5	1,000	1
Nakayama No.1 Quay	Private	108	4.5	700	1
Nakayama No.2 Quay	Private	250	6.0	5,000	1
Tokai Carbon Jetty	Private	5.4	4.5	700	1
Nippon Lubrizoil Jetty	Private	21	4.5	700	1
Kawatetsu No.1 Quay	Private	500	6.0	3,000	4
Kawatetsu No.2 Quay	Private	550	10.8	40,000	2
Taketoyo Quay	Public	180	4.5	700	3
Taketoyo North Quay (Coal)	Public	255	7.5	5,000	2
Handa Area					
Chuo Wharf W. No.1 Quay	Public	300	4.0	2,000	4
Chuo Wharf W. No.2 Quay	Public	520	7.5	5,000	3
Chuo Wharf W. No.3 Quay	Public	185	10.0	15,000	1
Chuo Wharf W. No.4 Quay	Public	185	10.0	15,000	1
Chuo Wharf W. No.5 Quay	Public	240	12.0	30,000	1
Chuo Wharf W. No.6 Quay	Public	240	12.0	30,000	1
Chuo Wharf W. No.11 Quay	Public	300	4.0	500	6
Kamesaki Pier Quay	Public	555	10.0	15,000	2
				30,000	1
Chuo Wharf W. Mooring Buoys (2)	Public	—	10.0	10,000	1
Dow Chemical Jetty	Private	210	9.0	28,000	1
Takahama Area					
Takahama No.1 Quay	Public	180	4.5	700	3
Takahama No.2 Quay	Public	130	7.5	5,000	1
Asai Jetty	Public	21	5.0	1,000	1
Hekinan Area					
Chuo Wharf E. No. 1 Quay	Public	630	5.5	2,000	7
Chuo Wharf E. No. 2 Quay	Public	130	7.5	5,000	1
Chuo Wharf E. No. 3 Quay	Public	185	7.4	15,000	1
Chuo Wharf E. No. 4 Quay	Public	240	12.0	30,000	1
Toyota Quay	Private	300	6.5	5,000	3
C. Itoh Quay	Private	195	12.0	70,000	1
Nakanihon (Dolphin)	Private	162	12.0	70,000	1
Nichikinko Quay	Private	12	5.5	2,000	2
Keizairen Quay	Private	100	10.0	500	2
Ishibashi Quay	Private	170	8.2	15,000	1
Mazada Quay	Private	70	5.5	2,000	1
Onoda Quay	Private	52	8.0	6,000	1
Shell Quay (LPG)	Private	224	12.0	55,900	1
Shell Quay	Private	72	5.5	1,500	1
Shell Quay	Private	65	5.5	1,000	1
Shinkawa No.1 Quay	Public	100	4.5	700	2
Shinkawa No.2 Quay	Public	150	4.0	500	3

BULK HANDLING FACILITIES: Public Wharves:

Berth and Cargo	*Max.Size* (d.w.t.)	*Max.Safe Draft* (m.)	*LOA* (m.)	*Remarks*
Grain, pig iron, scrap, etc.:				
Chuo Wharf, West				
No.3 and No.4	15,000	9.50	155	
No.5 and No.6	30,000	11.80	200	
Chuo Wharf, East				
No.3	15,000	7.40	155	
No.4	30,000	11.80	170	
Taketoyo Wharf	5,000	9.80	155	Under repair
Takahama Wharf	5,000	6.00	105	
Logs, venner, etc.:				
Kamezaki Wharf				
No.1	15,000	9.80	170	
No.2	30,000	9.90	150	
Private Wharves:				
Grain, sugar and molasses:				
Nakanihon Dolphin	70,000	11.80	225	Pneumatic Pipe. Grain silo capacity 75,520 tons.
C.Itoh Dolphin	70,000	11.80	225	Shore crane. Grain Silo capacity 43,980 tons. Sugar Silo capacity 8,840 cu.m. Molasses Tank capacity 7,000 k/l.
Chemicals:				
Shell Sekiyu Hekinan Dolphin	55,900	10.50	250	LPG
Dow Chemical Kinuura Dolphin	28,000	8.50	159	P.O.
Nippon Chemical Taketoyo Dolphin	10,000	9.00	116	Yellow Phosphor
Coal:				
Chuden Hekinan Dolphin	75,000	11.40	250	Unloader. Coal yard 680,000 tons.
Steel (Export):				
Kawatetsu Wharf	40,000	10.20	185	Shore Crane.

VHF: Mikawawan Port Radio on Channels 16, 11 and 12. Irago Pilot on Channels 13 and 16.

TUGS: No tug required when vessels enter anchorage, only alongside wharves. 2×3,500 h.p., 1×3,400 h.p., 1×3,200 h.p. and 1×1,460 h.p.

STEVEDORES: At least 24 hours' prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew at additional cost.

MEDICAL: No advance notice required unless urgent.

DENSITY: About 1023 – 1027.

FRESH WATER: Water available alongside by pipeline (rate 75 t.p.h.) at Kawatetsu Wharf; Chuo Wharf East No. 2, 3 and 4, and Chuo Wharf West No. 4; Chuden Dolphin and Kamezaki Wharf No. 1 and 2.

FUEL: All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, Osaka Bay and Kanmon Port. At all other ports bunkers will be lightered from the nearest bunker stock ports at maximum 7 days' prior notice.

Domestic oil also available.

CONSULS: None.

REPAIRS: Minor repairs possible.

GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear's maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 50 cigarettes to take ashore but no spirits.

AIRPORT: No airport locally.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

HOLIDAYS: 20th July.

POLICE/AMBULANCE/FIRE: Police 110; Ambulance/Fire 119.

TELEPHONES: No telephones available to place on board.

SHORE LEAVE: Local Immigration Offices issue shore passes valid for 15 days.
AUTHORITY: Kinuura Port Office, 1-1, 11-Gochi, Handa-shi, Japan. *Tel:* (0569) 21-2451.

AGENT: Senwa Shipping Agency, c/o Handa Kouun Kaisha Ltd., 1-4 11-Gochi, Handa-Shi, Aichi 475, Japan. Tel: 0569-23-2307. Fax: 0569-24-0068. Telex: 4563-626. Cables: Handakoun Handa.

KISARAZU (Kimitsu): 35.22 N. 139.52 E. (See Plan)

PORT LIMITS: Refer to Marine Chart No. 1067. Published by Surveys of the Hydrographic Department M.S.A., Japan.
DOCUMENTS: Arrival
Quarantine Service:
Maritime Declaration of Health – WHO Form, 1 copy.
Crew List – free form, 1 copy.
Passenger List (if any) – free form, 1 copy.
Derat (Exemption) Certificate, presentation.
Immigration Service:
Crew List – free form, 1 copy.
Ports of Call List – free form, 1 copy.
Passenger List (if any), – free form, 1 copy.
Passport or Seamen's Book (all of them), presentation.
Customs Inspection:
Ship's Register, presentation.
International Tonnage Certificate.
Last Port Clearance, presentation.
Ports of Call List – free form, 1 copy.
Crew List – free form, 1 or 2 copies.
Passenger List (if any) – free form, 1 copy.
Stores List (Japanese Customs form required).
Declaration of Crew's Baggage, (Japanese Customs Form required) i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan.)
List of ports of call including last foreign port.
Ship's Agent will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.
PILOTAGE: *Berthing Pilot:* Compulsory for foreign trade vessels over 10,000 g.w.t. Application to be made to Yokohama Pilot Office, via local Agent. Pilot boards on Kisarazu Quarantine Station or entrance of approaching passage.
(1) Ore/Coal vessels:
Entry/Berthing – From sunrise from anchorage to 30 minutes before sunset.
Departure – 30 minutes before sunrise to 30 minutes before sunset.
(2) Export/Steel products vessels:
Entry – From sunrise from anchorage to 1900 hrs.
Departure – 30 minutes before sunrise to 2000 hrs.
Bay Pilot: Uraga & Nakanose on entering: Bay Pilot became compulsory in January 1977 for foreign trade vessels over 10,000 g.w.t. Application required 3 hours prior to entering by VHF to Anjin Yokosuku through Agent or direct, and by cable if ETA changes. Pilot boarding position located on point 5.0 miles and 161° from Kannon Zaki L.H. Available any time, if any delay, change must be cabled to Anjin Yokosuka.
On leaving: Application same as on Entering. Pilot boarding on pier or off harbour.
ANCHORAGE: Refer to Japanese Chart No. 1062 (middle part of Tokyo Bay). Kisarazu Quarantine Anchorage boundary.
RESTRICTIONS: See "General".
HEALTH: At first port of call in Japan, vessel must obtain Free Pratique. Quarantine Officers will attend vessel only from daylight to sunset and Master to show all Vaccination Cards, Derat Exemption Certificate. In case vessel arrives from cholera-infected area within 10 days, Master must advise crew and passengers health condition to respective Quarantine Office through ship's Agent prior to arrival and close all soil pipes before entering port. A vessel may be berthed without a stay at the anchorage if Radio Pratique system used and permission of Chief of Quarantine Office. If Pratique formalities carried out locally vessel anchors 1.5 miles off No. 1 Entrance Buoy in position: Lat. 35° 21' 54" N., Long. 139° 50' 35" E.
Also see "Late Reports".
RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.
VHF: Port Radio Station at Yokohama works 24 hours. Channel 16. Call sign "Yokohama Port Radio".
RADAR: Radar station at Kannonzaki which controls all vessels in Uraga Channel.
TUGS:
4 tugs belonging to Kimitsu tug boat station:
3×3,600 h.p. and 1×4,000 h.p.
Another 16 tugs listed belonging to Yokohama tug boat station.

2,000 h.p. – 2,500 h.p.	4 tugs
2,500 h.p. – 3,000 h.p.	8 tugs
3,000 h.p. – 3,500 h.p.	4 tugs

Tug's lines used free of charge.

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by VHF.
Public: Kisarazu Quay E. Max. draft 7.5 m. at high tide. Length 260 m. Capacity 5,000 d.w.t.
Private: Kisarazu Lumber Association dolphin pier. Max. draft 10.0 m. Length 250 m. Capacity 25,000 d.w.t.
Kimitsu Works of Nippon Steel Corporation.
Centre Pier:

No. 1–4	Coastal chemical tanker, tug boat basin.
No. 5	Coastal Raw material discharging berth.
No. 6	Discharging berth of iron ore and coal. Max. draft 16.0 m. at high tide. Length of berth 304 m. Capacity 150,000 d.w.t. or 270,000 d.w.t. (Part load). Dischage rate for coal 25,000 tonnes per day.
No. 7	Discharging berth of iron ore and coal. Max. draft 18 m. at high tide. Length of berth 350 m. Capacity 200,000 d.w.t. Discharge rate for ore 30,000 tonnes per day.
No. 8	Discharging berth of iron ore and coal. Max. draft 18 m. at high tide. Length of berth 422 m. Capacity 310,000 d.w.t. Discharge rate for ore 30,000 tonnes per day.
No. 10	Coastal Limestone carrier berth.
No. 11, 12	Coastal tanker berth.

Centre Pier unloader at No. 6 & 7 – 4 units each capacity 1,500 t.p.h.
Centre Pier unloader at No. 8 – 1 unit capacity 2,500 t.p.h.
Also see "Shipmaster's Report" dated December 1991.
West Pier:

No. 1–6	Coastal small ships only.
No. 7	Loading berth of steel products. Max. draft 11 m. Length of berth 250 m. Capacity 30,000 d.w.t. Shore crane 1 unit 20 tons, 1 unit 30 tons.
No. 8	Loading berth of steel products. Max. draft 11 m. Length of berth 250 m. Capacity 30,000 d.w.t. Shore crane 1 unit 30 tons, 1 unit 20 tons.
No. 9	Loading berth of steel products. Max. draft 11 m. Length of berth 285 m. Capacity 30,000 d.w.t. Shore crane 1 unit 30 tons, 1 unit 35 tons.
No. 10	Loading berth of steel products. Max. draft 11 m. Length of berth 230 m. Capacity 40,000 d.w.t. Shore crane 2 units each 30 tons.
Public Berth:	New Public Berth (See "Plan") as yet unnamed. Length 240 m., depth 12 m. Max. size 30,000 d.w.t.

East Pier:

No. 2	Loading berth of steel pipes. Max. draft 11 m. Length of berth 240 m. Capacity 30,000 d.w.t. Shore crane 3 units on Berths No. 2 & No. 3 berth 30 ton.
No. 3	Loading berth of steel pipes. Max. draft 11 m. Length of berth 240 m. Capacity 30,000 d.w.t. (See No. 2 Berth).
No. 4–13	Coastal ships only used for loading wire rod, angle bar, etc. and discharging materials.
Futtsu Berth:	Public Wharf (See "Plan"). Depth 7.5 m. Max. size 5,000 d.w.t. Pilot attends from Yokosuka.

CRANES: See "Berthing".
BULK CARGO FACILITIES: See "Berthing".
SPECIALISED CARGO-HANDLING FACILITIES: See "Berthing".
BRIDGES: None.
STEVEDORES: At least 24 hours' prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew at additional cost.

Average loading rates:	Coils 75 t.p.h.
	Plates 50–60 t.p.h.
	Pipes 40 t.p.h.
	Angle 40 t.p.h.
	Wire rods 15–25 t.p.h.
Average discharging rates:	Coal 700 t.p.h.
	Iron ore 750–800 t.p.h.
	1,500–1,600 t.p.h. (2,500 ton unloader)
	Manganese ore 600 t.p.h.
	Iron sand 900 t.p.h.
	Coke 700 t.p.h.

MEDICAL: No advance notice required unless urgent.
TANKERS: Only coastal tankers.
DENSITY: Summer 1020, Winter 1025·5.
FRESH WATER: Available from shore line. Rate of delivery 40-50 t.p.h.
FUEL: All grades of bonded bunkers are stocked in Tokyo Bay. Bunkers will be lightered from the nearest bunker stock ports (Yokohama and Chiba) at maximum 7 days' prior notice. Supply prohibited at anchorage.
CONSULS: None.
REPAIRS: Minor repairs only.
DRY DOCKS: 500,000 d.w.t. dry dock at Chiba.
SURVEYORS: Nippon K.K.K., Kimitsu Branch.
GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.
OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches except steel hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.
CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear's maintenance appears to be poor.
CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore but no spirits.
CARGO GEAR: Usually load/unload by shore cranes.
REPATRIATION: Possible.
AIRPORT: Narita (Tokyo) International Airport is about 2 hours by car or railway.

TIME: GMT plus 9 hours. No alterations made to clocks during year.
HOLIDAYS: No cargo loaded on January 1st. Cargo discharged on all holidays.
POLICE/AMBULANCE/FIRE: Kisarazu Police Station tel. 0438-23-4011; Kisarazu Fire Brigade and Fire Station tel. 0438-23-7121.
TELEPHONES: No telephones installation direct to vessels alongside wharf.
SERVICES: Provisions, laundry, ship's stores, garbage, hold cleaning, navigation aids. Special service are called from Chiba, Yokohama and Tokyo.
SHORE LEAVE: Local Immigration Offices issue shore pass valid for only 7 days, but 7 days' extension possible if ship stays longer in Japan (up to 15 days if vessel calling at 2 or 3 ports).
IDENTIFICATION CARDS: Shore Pass issued by Immigration should be in crew's possession when going ashore.
GARBAGE DISPOSAL: Not available.
WASTE OIL DISPOSAL: Not available.
SEAMAN'S CLUBS: None.
CURRENCY: Japanese Yen.
REGULATIONS: See "General".
GENERAL: Notification to Maritime Safety Agency ("Tokyo Martis"):

According to Maritime Traffic Safety Law, The Master of large vessel (over 200 m. in LOA and 10,000 g.w.t.) is required to give to Regional Maritime Safety Agency an advance report of estimated time passing the traffic route and other matters and also required to obey the instruction given by the Agencies.

Notification cable definitely to be given by 1200 hrs. (JST) on the day prior to entering, directly from Master or through local Agent. Any change in reported matters, to be reported 3 hours before the time of entering by radio communication or telephone.

Seaweed cultivation to be carried out in the vicinity of Nippon Steel Corporation Kimitsu Works so Master's co-operation with regards to the following items would be appreciated.

1. The discharge of oil or oily waste into the water is strictly prohibited by Marine Pollution Law and other related ordinance.
2. Proceeding to the cultivation area is prohibited.
3. Numerous buoys each exhibiting flashing yellow lights have been established to mark the outer side-line of the seaweed cultivation area.
4. Bunkering possible daytime only whilst in berth (sunrise to 1 hour before sunset) in the Port of Kimitsu. Bunkering not possible at anchorage.

SHIPMASTER'S REPORT: December 1991.
Vessel: 188,000 d.w.t.
Berth: Kimitsu Works – Central Pier – Berth No. 8.
Tugs: Vessel used 4 tugs for berthing and 3 tugs for unberthing. Tugs make fast between Buoys No. 5 and 6.

When berthing, the two starboard side tugs let go and push on the port side.
Signals: Inbound vessels fly intention signals and berth signal. Outward bound vessels do not fly any signals.
Pilot: The undocking pilot will normally use the accommodation ladder.
Moorings: Order of moorings: Headlines, forward breasts, forward springs, after breasts, after back springs and finally stern lines, which are passed by mooring boat which comes from forward.

AUTHORITY: Kisarazu Port and Harbour Office, 3-13-34, Kaifuchi, Kisarazu City, Chiba Pref. 292, Japan. *Tel:* (0438) 25-5141.
Contact: Atsuko Nojima, Director.

AGENT: Kimitsu: Senwa Shipping Agency, c/o Seitetsu Unyu K.K., 1 Kimitsu, Kimitsu-Shi, Chiba 299-11, Japan. Tel: 0439-52-2320. Fax: 0439-52-5744. Telex: 3785-861. Cables: Tetsuun Kisarazu.

KOBE: 34.40 N. 135.12 E. **(See Plan)**

DOCUMENTS:
Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
1 Stores List.
1 Declaration of Crew's Baggage.
4 Crew Lists.
4 Passenger Lists (if any).

Ship's Agents will prepare other documents such as Inward/Outward Declaration, Cargo Manifest, etc., using Japanese Custom's Forms.
PILOTAGE: Osaka Bay Pilot is compulsory for vessels over 10,000 g.r.t. Pilot boarding point is 7 miles South of Tomogashima Lighthouse (approximately Lat. 34° 10' N., Long. 135° 00' E.). Cable address: "Baypilot Kobe". If Bay Pilot is required, inform them 24 hours prior to vessel's arrival at Tomogashima Pilot Station.
Harbour Pilot: Pilot boards at Quarantine Anchorage at Wada-Misaki Point. Cable address: "Pilot Kobe". 24 hours' prior notice is required. When vessel moors to buoy, chain cable should be prepared.
ANCHORAGES: Quarantine Anchorage: Lat. 34° 38' N.; 34° 38.6' N.; Long. 135° 10' E.; 135° 11' E.

All vessels requiring anchorage for awaiting berth, repairs, bunkering, etc., must obtain anchoring position from Harbour Master for period within 3 days.
RESTRICTIONS: Quarantine officials are available during daylight hours. Berthing is not permitted after 2000 hrs., except full container vessels.

Draft limitation in channel:
1st Fairway: 8.70 m.
2nd Fairway: 11.80 m.
3rd Fairway: 11.40 m.

MAX. SIZE:

Name of Berth	*Max. LOA* (m.)	*Max. Safe Draft* (m.)	*Depth at Berth* (m.)
Showa Sangyo	230	10.45	12.60
Tomen Silo	230	10.45	12.40
Zenno Silo	223	10.45	12.20
Kohnan Silo	250	10.82	12.20
Hanshin Silo	240	10.36	11.60

HEALTH: Quarantine Officials board vessel from daylight to sunset at Quarantine Anchorage.

Radio Pratique is available (See "Late Reports").
Documents Required: Derat Exemption Certificate, Crew List, Passenger List, Maritime Declaration of Health and Vaccination Cards.
RADIO: Recommend Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.
Kobe-Radio details:

	Security and Port message	*Port message*	*Public message*
Call sign	JGD	Kobe Port Radio	JCK
Name of Station	Coast Station or Special Service Station	Kobe Port Radio	Kobe Radio
Station Owner	5th Regional Maritime Safety Headquarters	Kobe Municipality (its Port & Telegraph Harbour Bureau)	Kobe Central Office
Frequency	444 kHz. 500 kHz. 500 kHz. 512 kHz. International VHF Channels 12, 16	International VHF Channels 16, 12, 11, 18, 20. 24-hour service.	134.9 kHz. 143 kHz. 416.5 kHz. 487.5 kHz. 500 kHz. 512 kHz. 425 kHz.

TUGS: Join vessel at entrance of fairway. Tug's lines used without extra charge. 35 tugs available (900 h.p. – 3,600 h.p.).
BERTHING: Chains must be used in mooring to a buoy. Ship must not drop anchor near a buoy when it is moored to one. Ship brought head in alongside pier except in special cases. Some berths impossible to reach after sunset, i.e. dolphin berths. This is why ships need to arrive outside breakwater before sunset.

Name	*Length* (m.)	*Depth* (m.)	*Max. Draft* (m.) *(Irrespective*	*Max. LOA of tide)* (m.)	*Main Cargoes Handled*
Shinko Pier 1					
A	160	9.00	8.27	160	
C	150	9.00	8.27	150	
D	160	8.20	7.70	160	
EF	150	8.40	7.90	150	
End	92	9.00	8.27	92	
Shinko Pier 2					
G	160	8.50	8.00	160	
H	150	8.50	8.00	150	
I	160	8.60	8.10	160	
J	150	9.00	8.27	150	
End	92	7.60	7.10	92	
Shinko Pier 3					
K	160	8.70	8.20	160	
L	150	8.80	8.30	150	
M	160	9.20	8.52	160	
N	150	8.60	8.00	150	
End	92	6.90	6.40	92	
Shinko Pier 4					
O1	160	10.00	9.00	160	Passenger Ships
O2	150	9.60	8.89	150	"
P	130	8.70	8.20	130	"
Q1	160	10.50	9.72	160	"
Q2	160	10.60	9.81	160	"
R	160	9.00	8.50	160	
Shinko Pier 5					
S	170	10.80	10.00	170	
T	170	8.50	7.80	170	
U	170	8.70	8.20	170	
V	170	9.00	8.50	170	

Note: The water between Shinko Pier No. 5 and No. 8 will be reclaimed.

Name	*Length* (m.)	*Depth* (m.)	*Max. Draft* (m.)	*Max. LOA* (m.)	*Main Cargoes Handled*
Shinko Pier 8					
E	170	8.10	7.60	170	
F	170	8.40	7.90	170	
Hyogo Pier 1					
A-B-C	140	6.00	5.50	140	
D	65	5.30	4.80	65	
E-F	120	6.50	6.00	120	
G	145	6.20	5.90	145	
H	62	5.50	5.00	62	
I	155	8.80	8.00	155	
J-K	120	7.00	6.50	120	
Hyogo Pier 2					
M-N	105	6.00	7.90	105	
O	155	7.30	8.00	155	
P	115	8.10	7.60	115	
Q	160	9.00	8.18	160	
Hyogo Pier 3					
T	160	9.00	8.09	160	
U	150	7.50	7.00	150	

Name	Length (m.)	Depth (m.)	Max. Draft (Irrespective of tide) (m.)	Max. LOA (m.)	Main Cargoes Handled
Maya Pier 1					
A	170	10.10	8.64	170	
B	165	9.80	8.64	165	
C	165	9.20	8.51	165	
D	170	8.80	8.30	170	
E	170	10.10	8.55	170	
Maya Pier 2					
G	170	7.10	6.60	170	
H	170	8.80	8.30	170	
Maya Pier 4					
O	250	12.00	10.91	250	Container Berths
P	250	12.00	10.91	250	
Q	250	11.60	10.74	250	
RS	250	9.70	8.98	250	
Dolphin 1	175	9.70	8.98	175	
2	175	9.50	8.80	175	
3	175	9.10	8.50	175	
4	175	8.50	8.00	175	
5	175	10.40	9.09	175	
6	175	10.10	9.09	175	
7	175	10.90	9.18	175	
8	175	10.50	9.45	175	
9	175	12.00	10.45	175	
Port Island (Container Berths) (* Private):					
P.C. 1	300	11.90	10.73		Navix
P.C. 2	300	11.90	10.73		Navix/Nedlloyd
P.C. 3	300	12.00	10.91		NYK
P.C. 4	300	12.00	10.91		NYK
P.C. 5	250	12.80	11.64		A.P.L.
P.C. 7	300	12.00	10.73		MOL/Swire
P.C. 8	300	12.10	10.73		MOL
P.C. 9	300	12.00	10.73		MOL
P.C.11	350	12.00	10.91		NYK
P.C.12	350	12.00	10.91		
P.L. 1	200	10.00			Kamigumi*
P.L. 2	200	10.00			Nitto*
P.L. 3	200	10.00			Mitsubishi*
P.L. 4	200	10.00			Mitsui*
P.L. 5	200	10.00			Uni-x*
P.L. 6	200	10.00			Sumitomo*
P.L. 7	200	10.00			
P.L. 8	200	10.00			
P.L. 9	200	10.00			Taiyo Unyu*
P.L.10	200	10.00			Nihon Hoso*
P.L.11	200	10.00			Nihon Hoso*
P.L.12	200	10.00			Nickel & Iron*
P.L.13	200	10.00			Nickel & Iron*
P.L.14	200	10.00			Nisshin*
P.L.15	200	10.00			Sankyu* Tatsumi*
Rokko Island (Container Berths):					
R.C. 1	350	13.10	11.82		Sealand
R.C. 2	350	13.20	11.82		Sealand
R.C. 3-W	350	13.20	11.82		K-Line
R.C. 3-S	350	14.00	12.73		K-Line
R.C. 4	350	14.00	12.73		Maersk
R.C. 5	350	14.00	12.73		Maersk
R.C. 6	350	14.00			NYK/Mitsui O.S.K.
R.C. 7	350	14.00			NYK/Mitsui O.S.K.
A		7.60	7.10		
L1		12.60			
S-BC		13.00	11.82		
L2(S)		14.00	12.73		
C		9.60	8.89		
D		10.30	9.54		(D – L: Preferential berths for cargo by type).
E		10.20	9.44		
F		10.00	9.26		
G		9.70	8.98		
H		9.40	8.70		
I		9.40	8.70		
J		9.00	8.80		(J – M: Multi purpose berths).
K		9.80	9.07		
L		10.00	9.26		
M		9.80	9.07		
N		8.80	7.80		Ferry berth
O		9.00	8.00		Ferry berth
P		10.20	9.26		Ferry berth
Q		10.20	9.44		Ferry berth
R		10.20	9.44		
S		10.40	9.44		
T		10.20	9.35		
U		10.20	9.35		
V		10.40	9.35		
W		11.40	10.56		
X		12.00	10.91		
Y		12.10	10.91		
Z		11.60	10.74		
Buoy 6		9.50	8.27	155	
Buoy 8		10.00	8.91	175	
Buoy 12		10.80	10.00	200	
Mitsui Pier					
W	158	9.00	8.50	158	
E	167	8.20	7.70	167	
M.K.S.	240	11.70	10.83	240	Fuel Oil
Shell	250	14.00	12.73	250	Fuel Oil
Nippon GATX	170	9.00	8.50	170	Chemicals

Name	Length (m.)	Depth (m.)	Max. Draft (Irrespective of tide) (m.)	Max. LOA (m.)	Main Cargoes Handled
Kobe Steel					
KS1	200	8.40	7.90	200	
KS2	200	9.80	8.45	200	
KS3	260	13.00	11.82	260	
KS4	200	9.40	8.70	200	
KS5	200	9.40	8.70	200	
M.C.Terminal (West)	150	8.20	7.70	150	Chemicals
South Dolphin	230	11.80	10.45	230	Chemical/LPG
Showa Sangyo	230	12.20	10.45	230	Grain
Tomen Silo	230	12.40	10.45	230	Grain
Zen-Noh Silo	223	12.20	10.45	223	Grain
Shinko Chemical	100	5.40	4.90	100	Domestic
Kansai Electric	71	7.10	6.60	71	Domestic
Hanshin Silo	240	11.60	10.36	240	Grain
Konan Futo	250	12.00	10.82	250	Grain
Toray Industries	70	4.80	4.30	70	Domestic
Mitsubishi Cement	90	6.10	5.60	90	Domestic
Tokuyama Cement	65	6.80	6.27	65	Domestic
Japan Port Industries	250	10.60	9.45	250	

Mooring Buoys:

Section	Owners	Buoy No.	Depth (m.)	Max. Draft (m.)	Max. LOA (m.)
No. 2	Kobe City Government	6	9.50	8.27	155
		8	10.00	8.91	175
		12	10.80	10.00	200

CONTAINER HANDLING FACILITIES: Also see "Berthing".

	Terminal	Berths	Container Cranes (tons)
Port Island	PC. 1	1	2 – 30.5
	PC. 2	1	2 – 30.5
	PC. 3	1	4 – 30.5
	PC. 4	1	
	PC. 5	1	2 – 30.5
	PC. 7	1	6 – 30.5
	PC. 8	1	
	PC. 9	1	
	PC. 11	1	2 – 30.5
	PC. 12	1	2 – 30.5
Maya	OPQ	5	1 – 25.4
	RS		2 – 30.5
Rokko Island	RC – 1	1	2 – 40.0
	RC – 2	1	2 – 40.0
	RC – 3	1	3 – 40.0
	RC – 4	1	3 – 40.0
	RC – 5	1	
	RC – 6	1	3 – 40.0
	RC – 7	1	2 – 40.0

BULK HANDLING FACILITIES: Hanshin Silo Company Berth, 11.60 m. depth alongside available for vessels up to 50,000 tons d.w.t. Discharge effected by 2 pneumatic unloaders with capacity 400 t.p.h. per unit.

Kohan Silo Berth, length 214 m., depth alongside 12.2 m. equipped with 2 discharging units which can be used for grain, sugar, or general cargo, also 1 pnuematic unloader, with capacity 300 t.p.h. and 2 grab buckets with capacity 500 t.p.h. per unit.

Kobe Steel, Berth No. 3: Length 334 m., depth 13.0 m., max. LOA 260 m., beam 40.0 m., draft 11.82 m. 2 cranes available for coal and ore. Discharge rate 1,400 tonnes/p.h.

In the current development programme a total of 7 container berths are to be provided at Kobe.

TANKERS:

Name of Berth	Max. d.w.t. (approx.)	Max. LOA (m.)	Max. safe Draft (m.)	Mooring–Pipeline–discharging rate
Shell. Bunkers ex-barge only. No slop discharge facilities.	70,000	250	12.6	To 4 buoys. 1×24", 1×12" for F.O., D.O. Minas/Seria Waxy Residue. Average discharge rate (1 Pipe) 1,000 t.p.h. Max. (2 Pipe) 3,000 t.p.h. (mooring possible when tide runs towards West)
MKS. Bunkers ex-barge only.	40,000	234 (breadth 33)	11.20	To 3 buoys. 2×16" for F.O. and D.O. Average discharge rate 1,000 t.p.h. Max. 1,300 t.p.h. mooring possible when tide runs towards West)
MC Terminal (ex-Mitsubishi Shoji) (for L.P.G.tankers).	62,000	231 m.	10.48 m.	Alongside Pier.

Liquid: 12 in. (2 for Butane and 1 for Propane).
Vapour: 1×8 in. and 1×6 in. rubber hose.

Line alignment based on port side to, from ship's bow: PV-PL-PL-BL-BV.

Discharge rate: Propane 600 t.p.h. with max. manifold pressure 5 kg./sq.cm. Butane 800 t.p.h. with max. manifold pressure 5 kg./sq.cm.

MKS Buoy Berth (Noda Terminal): When approaching the berth, the vessel heads straight for the middle of the berth, taking into account the direction and velocity of the tidal stream. Vessels can berth either heading East or West, depending on the direction of the tidal stream, and always use only 3 of the 4 buoys and 2 bow anchors. When heading East the manoeuvre is as follows: When the bow approaches the line connecting the 2 Southerly buoys, drop starboard anchor, swing to starboard paying out about 8 or 9 shackles. When the vessel is about half its length past the 2 Easterly buoys, drop port anchor. Then work vessel astern, paying out port chain and heave in starboard chain to about 4 shackles. Send ropes to 3 buoys, 2 or 3 ship ropes to each buoy, depending on weather and then secure the 40 mm. preventer wires. In this case the Southeasterly buoy is not used. 2 or 3 tugs attend. When heading West, the manoeuvre is similar, but first drop anchor, swing over to port, drop starboard anchor. In this case the Southeasterly buoy is not used. Normally 2 mooring launches are used.

STEVEDORES: At least 24 hours' prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores.

MEDICAL: No advance notice unless urgent. Hospital available.

TIDE: Mean height of tide 1.030 m. Some of tanker berths in West part of port affected by tide. Currents less than 1 knot inside harbour.

DENSITY: Winter: 1023 – 1026. Summer: 1018 – 1022.

FRESH WATER: Supplied from the quays at rates of 40 to 50 cu.m./hr. Three water barges available, largest with capacity 325 cu.m., can supply vessels at rates up to 300 cu.m./hr.

Possible to supply fresh water at anchorage weather permitting. 24 hours' prior notice is required.

FUEL: All grades are obtainable from major oil companies and supplied by barge.

FIRE PRECAUTIONS: LPG tankers instructed by Maritime Safety Headquarters to strictly observe safety rules. Example: checking on what is carried by those who go aboard; banning ship's stores to be loaded on to ship which is working.

CONSULS: The following countries are represented by Consuls in Kobe and Osaka area:

Argentina
Australia
Austria
Belgium
Bolivia
Brazil
Canada
Central African Rep.
Chad
Chile
China
Colombia
Costa Rica
Denmark
El Salvador
Finland
France
Gabon
Germany
Greece
Guatemala
India
Indonesia
Italy
Ivory Coast
Jordan
Korea
Luxemborg
Madagascar
Mexico
Netherlands
Norway
Pakistan
Panama
Philippines
Portugal
Russia
Singapore
Spain
Sri Lanka
Sweden
Switzerland
Thailand
Turkey
United Kingdom
U.S.A.

REPAIRS: All repairs possible.

DRY DOCKS:

Owner	*Name*	*Overall length* (m.)	*Width* (m.)	*Depth* (m.)	*Remarks*
Mitsubishi Heavy Industry Ltd.	Dock No. 4	290.0	41.2	13.0	Capacity 150,000 d.w.t.
Kawasaki Heavy Industry Ltd.	Dock No. 1	160.0	22.0	8.83	The largest ship docked: 215 m.× 30.5 m.×6.8 m. Capacity of No. 4 – 50,000 d.w.t.
	Dock No. 2	94.0	15.4	14.8	
	Dock No. 3	172.8	26.0	13.0	
	Dock No. 4	215.0	33.5	11.0	

(Number of docks in Kobe)

Kobe Dockyard Engine Works Co. Ltd.	3 floating docks
Ishihara Shipyard Co. Ltd.	1 floating dock
Mitsubishi Heavy Industries Ltd.	3 floating docks 1 dry dock
Kawasaki Heavy Industries Ltd.	2 floating docks 2 dry docks

SURVEYORS: Lloyd's Register, Germanischer Lloyd, American Bureau of Shipping, Bureau Veritas, Norske Veritas, Nippon Kaiji Kyokai.

WATCHMEN: Available but not compulsory.

OPENING/CLOSING HATCHES: By Stevedores or crew, ship's option.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector for registered gross and nett tonnage. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Tobacco (per passenger or crew member). Temporary shore-leave up to 50 cigarettes (duty free); Disembarkation up to 200 cigarettes (duty free). Maximum allowable (only in case of disembarkation) up to 800 cigarettes duty free (however, 600 cigarettes – taxable).

Wines and/or Spirits: Crew member: When the ship at sea for more than 1 month, up to 6 bottles (1 bottle – duty free); less than 1 month up to 6 bottles (no duty free). Passengers: When a passenger travels for less than a fortnight up to 12 bottles (1 bottle – duty free); more than a fortnight up to 12 bottles (up to 3 bottles – duty free).

REPATRIATION: Possible.

AIRPORT: Osaka International Airport about 1 hour by car.

Domestic: Following regular airlines, Japan Air Lines, All Nippon Air Lines, Nippon Air System and Air Nippon.

International: For Far East: Japan Air Lines 27 flights per a week, Thai International Air Lines 7 flights per a week, Cathay Pacific Air Lines 21 flights per a week, China Air Lines 5 flights per a week, Korean Air Lines 28 flights per a week, Japan Asia Airways 18 flights per week.

For Europe: Lufthansa 4 flights per week, British Airways 2 flights per week.

For U.S.A.: Japan Air Lines 13 flights per week, North West Airlines 15 flights per week, United Airlines 18 flights per week.

TIME: GMT plus 9 hours. No alteration to clocks throughout year.

HOLIDAYS: 1st January (New Year's Day); 15th January (Coming-of-Age Day); 11th February (National Founding Day); 21st March (Spring Equinox Day); 29th April (Green Day); 3rd May (The Constitution Day); 5th May (Children's Day); 15th September (Respect for the Aged Day); 23rd September (Autumn Equinox Day); 10th October (Health Sports Day); 3rd November (Culture Day); 23rd November (Labour Thanksgiving Day), 23rd December (Emperor's Birthday).

POLICE/AMBULANCE/FIRE: *Police:* 110; Water Police Station 331-2351, 331-2354, Ikuta Police Station 331-0044, Fukiai Police Station 231-4441, Hyogo Police Station 551-0051.

Ambulance: 119.

Fire: 119; Water Fire Department 331-9951, Fukiai Fire Department 291-0401.

TELEPHONES: Possible to place telephone on board.

SERVICES: Compass adjusting, radio/radar services, etc.

SHORE LEAVE: Crew members free to go ashore with landing passes issued by Immigration Authorities.

DELAYS: 1. Weather condition (where strong wind prevents ships entering port). 2. Tide (berths in West part of port). 3. Berths where no ships permitted berth alongside at night. 4. Where a quarantine officer or Pilot being awaited. 5. Shortage of gangs, weather.

GENERAL: When typhoon approaching, Port Captain requires ships to proceed outside breakwater.

DEVELOPMENTS: 5 additional berths (P.C. 13 – 17), each 350 m. length and depth 15 m. are planned for the Port Island in 1996.

3 additional berths, each 300 m. LOA and depth 12 m. planned for Maya Piers.

SHIPMASTER'S REPORT: February 1980 (Updated 1992).

Sakai to Kobe:

Transit: For LPG ships this can only be accomplished in daylight.

Pilots: In normal conditions Sakai Pilot will depart at about No. 5 Buoys Hamadera Passage and vessel proceed to Kobe No. 6 Breakwater embarking Pilot at No. 3 Buoy. In weather with poor visibility take 'Bay' Pilot, no movements with visibility less than 1 mile.

Kobe:

Pilot: For vessels proceeding to Mitsubishi Storage Terminal, Pilot is embarked at No.3 Buoy and leaves at same.

Anchorage: Outside Kobe Breakwaters in areas marked on Japanese Chart. We anchored in Lima 3 area, very congested.

Best to obtain up to date Japanese Hydrographic Office Charts of Kobe and Osaka Bay as frequent changes, also BA. charts do not have incidentals like anchorage areas, Tomogashima traffic routes, lava beds, etc.

VHF: Kobe Port Radio.

N.O.R.: 1st Line ashore.

Tugs: Two powerful tugs join vessel just inside No.7 Breakwater. Cost of one tug Yen 101,700 per hour.

Terminal:

Moorings: 3,2,2, each end, Line boat available.

Tanker type jetty with mooring dolphins each end connected by catwalks.

Berth situated West end of No.2 Industrial area.

Port side to.

Gangway can be difficult to land on narrow catwalk.

No transport near ship, about 5 minutes walk to gate.

Depth: 12.50 m.

Connections: Chicksans: 12 in. liquid, 8 in. vapour return. The forward vapour return line has a right angle elbow in it. Connection and disconnection by shore personnel, can take 1.5 to 2 hours.

Quite often a vapour mixture is returned to the vessel if discharging two grades, generally acceptable if propane and butane.

Max. Rate: About 700 tonnes/p.h. both grades.

Surveyor: NKKK in attendance.

Microbus: We hired microbus for 20 persons on contract hire for 9 hours at Yen 70,000 – about £125. Easy to arrange through Agent.

Doctor: Obtainable, about £40 per visit.

Fresh Water: From the pier through Mitsubishi – will only give what Master has ordered. At 20 t.p.h. Difficult to connect American couplings. Yen 500 per tonne.

Stores: Nil on berth.

Facilities: All repairs off berth.

Walport Film and Video exchange through Agent.

Safety: Normal requirements plus fire axes each end at moorings.

General: As usual the shore line is continually changing and care is required in taking positions.

BA. 2265: Kobe Ko. New breakwater marked by temporary light buoys from Breakwater No. 6 in position 34° 39.99' N., 135° 14.86' E. to 34° 39.63' N., 135° 15.19' E. in direction 324° – 144° for 830 m.

BA. 3614: Osaka Bay. New Osaka International Airport Buoy 34° 26.9' N., 135° 16.15' E. in a Southerly direction for 3.5 miles and Westerly direction for 2.5 miles with causeway to shore in approx. position 34° 24.5' N., 135° 18.2' E. Many barges crossing from Awaji Shima.

Also see "SAKAI – Shipmaster's Report" – Kobe was 2nd Port of Call.

SHIPMASTER'S REPORT: December 1991.

Charts: B.A. Charts No. 2265, 3615 and 3614.

Documents: We arrived from Yokohama so the agent required:
1 copy Crew List.
1 copy Stores List.
1 copy Previous Ports List.
and the "Rider" from Yokohama.

Pilotage: Osaka Bay Pilot is compulsory for all vessels over 10,000 g.r.t. and is recommended for all foreign vessels due to the traffic density in Tomogashima Straits and from Lat. 34° 30' N., which is very busy with traffic from the Inland Sea.

Pilots are based at Sumoto on Awaji Shima which is 12 miles from the boarding position. On departure the pilot disembarks off Olshino Hana which is at the tip of Awaji Shima in Tomogashima Straits, The pilot boat is a large craft painted orange. Vessels should call "Bay Pilot Kobe" on VHF Channel 68, they speak good English.

Approaches: Currents through Tomogashima Straits can be strong. Osaka Bay is closed to LNG/LPG vessels if the visibility falls below 0.5 miles.

Anchorage: We anchored in Area "M5" to discharge cargo into barges, the depth of water was 14.0 m. and we used 4 shackles.

Cargo Operations: Vessels discharge into coasters as fast as the pumps can handle. We used 4 in. flexi-hoses. The coasters have good fenders. Cargo Safety Personnel and Surveyors are in attendance.

Fresh Water: Fresh water is available by barge between 0900 hrs. and 1800 hrs.

The minimum supply is 50 tonnes and the cost is Yen 3,000 per tonne.

Shore Leave: A shore leave boat is available but was not used on our visit.

AUTHORITY: Port and Harbour Bureau, Kobe City Government, 5-1 Kano-Cho, 6 Chome, Chuo-Ku, Kobe, 650 Japan. *Tel:* 078-331-8181. *Telex:* 78548 Kobeport. *FAX:* +81-78-322-6142/6120. *Cables:* Japangate. *Contact:* Promotion Division.

Kobe Port Terminal Corporation, 5-1-14 Hamabe-Dori, Chuo-Ku, Kobe, Japan. *Tel:* 078-231-2401. *FAX:* 078-231-2960. *Contact:* A. Sugiyama (Operators of Container Terminals P.C. 1-12 and R.C. 1-7, and Conventional Liner Terminals P.L. 1-15).

Port Captain's Office, 7-7 Hatoba-Cho, Chuo-ku, Kobe 650, Japan. *Tel:* +81-78-331-6747.

AGENT: Senwa Shipping Agency, c/o Sumitomo Warehouse Co.Ltd., 6-4 Shinko-Cho, Chuo-Ku, Kobe-Shi, Hyogo 650, Japan. Tel: 078-331-7822. Fax: 078-332-3234. Telex: 5624-130. Cables: Sumitomosoko Kobe.

KOCHI: 33.31 N. 133.34 E. (See Plan)

LOCATION: Located on central Southern coast of Kochi Prefecture of Shikoku Island, and on border of Ehime Prefecture and Tokushima Prefecture.

DOCUMENTS:
Ship's Register.
Last Port Clearance.
International Tonnage Certificate.
5 copies Crew List, including Passport numbers.
2 copies Passenger List.
1 copy Stores List.
1 copy Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agents will prepare Inward/Outward Declaration, Manifest of Cargo for Discharge at Kochi and Manifest of Cargo onboard in Transit. Therefore, ship's Agents should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Not compulsory, but necessary unless Master well acquainted with locality, because the fairway, channel in vicinity of the Harbour Entrance is regularly dredged, but the channel is long and narrow and the tidal streams are strong. Kochi Harbour Pilot should preferably be arranged through Agent by cable via Nagasaki Radio because VHF communication is unavailable.

The pilot is available at Lat. 33° 28.5' N., Long. 133° 35.2' E. for vessels requiring pilot services.

APPROACHES: *Channel:* Dog-leg channel: Width 170 m. (557 ft.), depth 7.00 m. (23 ft.) – 7.50 m. (24 ft. 7 in.) under the Chart No. 110 (Port of Kochi). Therefore, draft limitation not more than max. 7.00 m. (23 ft.), regardless of tidal conditions, even if high tide.

ANCHORAGES: *Quarantine Anchorage and Waiting Station:* Lat. 33° 28.5 ' N., Long. 133° 35.2' E. The Anchorage is Quarantine and Pilot Boarding Point and also Ship's Waiting Point (There is no waiting anchorage at inner port).

RESTRICTIONS: The length overall of the vessel must be less than 180 m., because the channel is long, narrow and bending, and the tidal streams are strong.

The draft restrictions are as follows: The permissible draft for LOA over 130 m. at Niida Berth (5-1/5-2), forward shall be less than 5.30 m. and aft shall be less than 7.00 m., and at Ushioe Berth (1-7), fore and aft draft of less than 6.80 m., may berth, except at low tide.

MAX. SIZE:

Ordinary Berths	*Length* (m.)	*Max.LOA* (m.)	*Max.Draft* (m.)	*Remarks*
Niida (5-1)	130	130	7.00	Cargo only
Niida (5-2)	140	140	5.00-5.30	Cargo only
Ushioe (1-4)	364	80	6.00	Cargo and Ferry
Ushioe (1-6)	315	110	6.00-6.80	Cargo and Ferry
Ushioe (1-7)	260	135	6.80	Cargo only

Special Berths (as one Berth)	*Max.LOA* (m.)	*Max.Draft* (m.)
Niida (5-1) + (5-2)	180	(F.) 5.30
Shifting not necessary	port side alongside	(A.) 7.00
Ushioe (1-7) + (1-6)	160	6.80

Shifting vessel/ferry and advance notice to the ferry necessary; port alongside only.

HEALTH: Radio Pratique available, except vessels arriving from infected area, pest (plague), cholera, etc., under Quarantine law, but Derat (or Exemption) Certificate necessary. Ordinary Quarantine will be attended at Quarantine Anchorage, from daylight to sunset, as usual.

Also see "Late Reports".

RADIO: Recommended that Master communicates with Agent through Nagasaki Radio, which covers all ports in Japan.

VHF: No port radio, except Kochi Harbour Master's Office on Channel 16, but only in an emergency.

RADAR: None.

TUGS: 2 tugs (2,200 h.p.) available in Kochi Port. Tug's lines to be used.

BERTHING: No specific requirements. Pilot boarding time will be notified by vessel's Agent mainly by radio.

Berth No.	*Cargoes*	*Remarks* (per day)
Niida (5-1) + (5-2)	American logs	700,000 Scr.
Ushioe (1-4)	Domestic cargo	
Ushioe (1-6)	Domestic cargo	
Ushioe (1-7)	Coal	2,000-3,500 tonnes

Also see "Max. Size".

BRIDGE: Urado Bridge (Arch-type): Centre of the bridge is more than 39 m. from sea level, but the height from sea level to top of ship's mast must be less than 39 m., regardless of tidal conditions, because the bridge height is 39 m. under the Chart No. 110.

STEVEDORES: Log gangs (2-3 gangs) available. Working time: 0800 hrs. to 1700 hrs., excluding Sunday and holidays.

MEDICAL: No advance notice required, except on Sundays, holidays and in an emergency.

DENSITY: 1019, average in the port.

FRESH WATER: Available from shore hydrants, except at Niida Berths (5-1, 5-2). Rate of delivery about 30 t.p.h. Water not available at Niida Berths or to log carriers, as water barge has been scrapped.

FUEL: Bonded oil will be brought from Kobe or Shimotsu. Domestic oil is available. Advance notice required.

CONSULS: None.

REPAIRS: No facilities.

DRY DOCKS: None.

GANGWAY/DECK WATCHMEN: Not specially required, unless valuable cargo on board.

HATCHES: Opening/closing normally carried out by crew.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector vessel's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCE: Only allowed 60 cigarettes to take ashore, but no spirits.

REPATRIATION: Possible. Kochi/Osaka by airplane about 50 minutes, and ferry about 10 hours.

AIRPORT: From Agent to Kochi Airport about 30 km. (40 minutes by car), and connects with nearest international airport (Osaka Airport). For Osaka 12 flights, and others 10 flights (Tokyo, Nagoya, Fukuoka and Miyazaki) per day.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

POLICE/AMBULANCE/FIRE: Report to Minami-Sho, nearest Police, and inform your vessel's and Agent's name and reason for call. Emergency Tel: 0888-31-1233 (Minami-Sho Police). They know how to contact Agent in case of emergency.

TELEPHONES: No arrangements for placing telephone on board.

SERVICES: Supply of Japanese charts available.

SHORE LEAVE: Local Immigration Office issues Landing Permit (Crew Pass), valid for 15 days.

REGULATIONS: Normal port regulations.

GENERAL: *Traffic Signals:* Vessels of over 1,000 g.r.t. and tankers of 500 g.r.t., entering/departing Kochi Port are controlled by Katsurahama and Urado Signals. Contact by VHF: Channel 12 via VHF Channel 16 (Kochi Maritime Safety Office), call sign "Kochi Hoan Katsurahama Shingosho", or by telephone No. 0888-42-6493 direct to the Signal Office, under Kochi Port Signal Regulations.

DEVELOPMENTS: Kochi new berths and new breakwater under construction, reclamation, etc., since 1988.

AUTHORITY: Kochi Maritime Safety Office, 5-4-55, Sanbashi-dori, Kochi City 780, Japan. *Tel:* 0888-32-7111. *Contact:* Harbour Master.

KOKURA: 33.54 N. 130.53 E. (See Plan)
Also see "Kanmon-Ko".

LOCATION: Kokura is situated between Moji and Tobata. On the East is contiguous to Moji Port, on the West to Tobata Port and on the North it opens to the Kanmon Straits.

DOCUMENTS: When vessel arrives direct from a foreign port, Customs officials will board to search, and the following documents are to be submitted:
Ship's Register.
International Tonnage Certificate.
Voyage Memo (ports of call).
Last Port Clearance.
3 Crew Lists, including Passport Numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Inland Sea Pilotage should preferably be arranged through Agent by cable via Nagasaki Radio, giving 72 hours' notice. Urgent correction of ETA outside business hours should be cabled direct to Pilot Station. Inland Sea Pilot Association covers all Inland Sea ports. Pilotage compulsory for vessels over 10,000 g.r.t. Pilots obtained from one of three Pilot Stations dependent upon vessel's last port of departure and at Master's discretion. Pilotage available throughout 24 hours and

72 hours' advance notice preferred, thereafter advising any alterations. Most Inland Sea Pilots also act as Harbour Pilots up to berth or anchorage at destination.

Note: VHF communication available with Inland Sea Pilot Stations. Also see "Shipmaster's Report" before first port.

1. Wadamisaki, at entrance to Kobe (vessels transitting Kii Straits) Position Lat. 34° 34.09' N., Long. 135° 11' E. Telegraphic address: "Anjin Kobe".

2. Sekisaki, 3 miles South of Sekisaki Lighthouse (vessels transitting Bungo Channel). Position Lat. 33° 13' N., Long. 131° 54' E. Telegraphic address "Anjin Moji". In event bad weather, recommended vessels proceed for shelter as near as possible having due regard to safety, to Sekisaki Pilot Station.

3. Hesaki, at East side of Kanmon (Shimoneseki) Straits. Position Lat. 33° 56' 24" N., Long. 131° 03' 12" E.

Also see "Moji".

ANCHORAGE: Anchorage not in use as the area is being dredged for the purpose of navigation fairway.

RESTRICTIONS: Vessel enters port only within 1 hour before and after slack tide in daytime. Night departure available up to 2200 hrs. at Hiagari Wharves No. 1-7 for vessels up to 2,000 g.r.t., but departure for East side only from Nos. 5-7 for vessels up to 10,000 g.r.t., vessel moored port side alongside.

MAX. SIZE: See "Berthing".

HEALTH: At first port of call in Japan, vessel must obtain Free Pratique. Quarantine Officers will attend vessel only from 0830 hrs. to 1630 hrs. at anchorage. Master to show all Vaccination Cards and Derat Exemption Certificate. In case vessel arrives from cholera-infected area within 10 days, Master must advise crew and passengers' health condition to respective Quarantine Office through ship's Agent prior to arrival and close all soil pipes before entering port.

Also see "Moji" and "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

VHF: Shimonoseki Port Radio Station on Channels 16, 12, 14, 20 and 22. Pilots on Channel 13.

TUGS: See "Moji".

BERTHING:

Name of Berth	*Length* (m.)	*Depth* (m.)	*Permissible draft* (m.)	*Capacity* (g.r.t.)
Murasaki				
Kawajiri Wharf	225	10.0	10.0	20,000
Sunatsu				
West Wharf	366	8.2	8.2	13,000 (LOA 170 m.)
Sumitomo Metal*				
West No. 1	175	7.5	6.0	10,000
West No. 2	163	7.5	7.0	10,000
Hiagari Wharf				
No. 3	180	11.0	10.0	25,000
No. 4	180	11.0	10.0	25,000
No. 5	180	11.0	10.0	25,000
No. 6	224	11.0	10.0	20,000**
No. 7	225	10.0	11.0	20,000†
Kanematsu				
Oil Pier	170	6.5	6.5	18,000 d.w.t.

*2 cranes – capacity 1,000 t.p.h. each.

** for container vessels – Max. LOA 225 m.

† for container vessels – Max. LOA 250 m.

BRIDGES: Kanmon Suspension Bridge was build in 1973 across Hayatomo Channel (narrowest place in Kanmon Strait, width of fairway 530 m.), between Shimonoseki and Moji. The height of the bridge from sea level is 61 m. High vessels over 59 m. must give advance notice to Pilot Office.

STEVEDORES: At least 24 hours' prior notice, excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew at additional cost. Overtime surcharges 1700 hrs. – 1900 hrs. 50% additional of basic stevedorage; 2100 hrs. – 0500 hrs. next morning 130% additional; Sundays/holidays 60% additional.

(a) A maximum of 6 gangs are available.

Stevedores, regular employees 116, temporary labourers 109. Longshoremen 459.

(b) Lighters: SKK Logistics Service Co.Ltd., lighters 25, tonnage 8,900 tons.

(c) Shore cranes:

No.	*Capacity*		*Location*	*Owners*
2	10 tons		Sunatsu Wharf	Sumitomo Metal
1	6 tons		Sunatsu Wharf	SKK Logistics
3	12 tons	outreach 18 m.	Sumitomo Metal Wharf	Sumitomo Metal
3	35 tons		Hiagari Wharves No. 6 and 7	Shin Nihon Steel Corp.

(d) Floating crane: Arrangeable from Moji.

(e) Average performance of loading/discharging:

Discharging: Iron ore 40/50 t.p.h./gang/hatch (by ship's gear). 200 t.p.h./gang/hatch (by shore crane). Coal 40/50 t.p.h./gang/hatch (by ship's gear). 100/150 t.p.h./gang/hatch (by shore cranes). Ordinary 10 t.p.h./gang/hatch (by ship's gear). Bulky 5 t.p.h./gang/hatch (by ship's gear). Loading: Steel under 20 ft. long 25–30 t.p.h./gang/hatch, over 20 ft. long 15–20 t.p.h./gang/hatch.

(f) 2 shifts: 0800 to 1700 hrs. and 1700 to 0700 hrs. Normal working hours: 0800 to 1700 hrs. Refer to Moji for further information.

MEDICAL: No advance notice required, unless urgent.

TANKERS: At Kanematsu-Goshi Oil Refinery 1×6 in. line, rate 900 t.p.h. (Fuel/diesel oil). No slop facilities available. Also see "Berthing".

DENSITY: Average 1025.

FRESH WATER: Good quality fresh water supplied either from water barge or from hydrants. From hydrants at Sunatsu and Sumitomo Metal Wharves, the rate of delivery per hour is 30 tons per hydrant.

FUEL: All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, Osaka Bay and Kanmon Port. At all other ports bunkers will be lightered from the nearest bunker stock ports at maximum 7 days' prior notice.

CONSULS: Korea, Tel: 0832-66-5341. Also see "Moji".

GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.

REPAIRS: All types of repairs possible.

DRY DOCKS: Mitsubishi Heavy Industries Ltd. 4 dockyards (No. 3 and No. 4 for small vessels).

	Dimensions of Docks			*Max.Size of Vessel for Docking*		
	Length (m.)	*Breadth* (m.)	*Depth* (m.)	*Length* (m.)	*Breadth* (m.)	*Draft* (m.)
Dock No. 1	164.13	25.0	7.04	160.00	22.50	5.50
Dock No. 2	150.10	20.0	6.88	143.00	19.30	5.00

Towa Shipbuilding K.K. 1 dockyard (max. 1,000 g.r.t.).

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore but no spirits.

REPATRIATION: Possible.

AIRPORT: Fukuoka, about 2 hours by train and taxi. Kitakyushu Airport about 40 minutes by taxi.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

POLICE/AMBULANCE/FIRE: Police 110; Ambulance 119; Fire 119. Public telephone booth available near by the berth.

TELEPHONES: Possible to place telephone on board.

SHORE LEAVE: Local Immigration Offices issue shore pass valid for only 15 days when Kokura is first port of call in Japan. Extension possible if ship stays longer.

SERVICES: All services available.

SHIPMASTER'S REPORT: 1975 (Updated 1992).

Vessel discharged iron ore at Sumitomo Metal Industries.

Pilotage: Arriving from East. He Saki: Lat. 33° 56' 24" N., Long. 131° 03' 12" E.

Arriving from West. Mutsure: Lat. 33° 58' 30" N., Long. 130° 53' 00" E.

Anchorage:

He Saki: Lat. 33° 56.2' N., Long. 131° 02.9' E. Depth 6.7 m. – 16.7 m.

Mutsure: Lat. 34° 00.0' N., Long. 130° 52.5' E. Depth 19.0 m.

Departing from He Saki anchorage to arrive to port of destination in Kanmon Straits in Slack Water and only in daylight.

Normally Pilot boarding 1 hour before tide change. Allowable drafts to transit Kanmon Straits, max. 30 ft. anytime. Max. 32 ft. 10 in. at HW.

Radio Pratique: Obtained if in possession of valid Sanitary Certificate and all Certificates valid. Send cable to Agent with prefix RPM following the standard text.

Docking: Always starboard side.

Anchor: Port anchor ready for emergency.

Fenders: Prismatic rubber.

Gangway: Ship's accommodation ladder.

Discharging Facilities: 3 cranes – capacity 180 t.p.h. each.

Departure from Dock: Undocking only in daylight and about 1 hour before slack water. 3 tugs are necessary for turning the vessel in the narrow basin to head out.

Under construction 2 unloaders, cantilever bridge type, with capacity of 1200 t.p.h. each.

AUTHORITY: Kitakyushu Port and Harbour Bureau, 2-7 Nishi-Kaigan, 1-chome, Moji-ku, Kitakyushu City, Fukuoka Pref., 801 Japan. *Tel:* (093)-321-5914. *FAX:* (093) 321-5915.

KUDAMATSU: 34.00 N. 131.52 E. (See Plan)

DOCUMENTS: When vessel arrives direct from a foreign port, Customs Officials will board to search, and the following documents are to be submitted:

Ship's Register.
International Tonnage Certificate.
3 Voyage Memos (Ports of call).
Last Port Clearance.
5 Crew Lists including Passport Numbers.
5 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Inland Sea Pilotage should preferably be arranged through Agent via Nagasaki Radio, giving 72 hours' notice. Urgent correction of ETA outside business hours should be cabled direct to Pilot Station. Inland Sea Pilot Association covers all Inland Sea ports. Pilotage not compulsory from Sekisaki or Hesaki to Kudamatsu, but compulsory for vessels over 10,000 g.r.t. from Wadamiski. Pilots obtained from 1 of 3 Pilot stations dependent upon vessel's last port of departure and at Master's discretion. Pilotage available throughout 24 hours and 72 hours' advance notice preferred, thereafter advising any alterations. Most Inland Sea Pilots also act as Harbour Pilots up to berth or anchorage at destination.

Note: VHF communication available with Inland Sea Pilot Stations. Also see "Shipmaster's Report" before first port.

1. Wadamisaki, at entrance to Kobe (vessels transitting Kii Straits) Position Lat. 34° 34.09' N., Long. 135° 11' E. Telegraphic address "Anjin Kobe".

2. Sekisaki, 3 miles South of Sekisaki Lighthouse (vessels transitting Bungo Channel). Position Lat. 33° 13' N., Long. 131° 54' E. Telegraphic address "Anjin Moji". In event bad weather, recommended vessels proceed for shelter as near as possible having due regard to safety, to Saganoseki Pilot Station.

3. Hesaki, at East side of Kanmon (Shimonoseki) Straits. Position Lat. 33° 56' 24" N., Long. 131° 03' 12" E.

ANCHORAGE: Kudamatsu loading anchorage Lat. 33° 59' 40" N., Long. 131° 51' 20" E.

RESTRICTIONS: No restriction for entry into and/or departure from anchorage during night and daytime. But berthing/unberthing effected during daytime only.

MAX. SIZE: No restriction on length, breadth, and draft for any vessel entering port, but maximum safe draft for Nippon Oil Jetty 19 m., 178,000 d.w.t, Hitachi Seisakusho 9.5 m. and Toyo Kohan Wharf 9.0 m.

HEALTH: Radio Agent for Free Pratique not more than 36 hours before arrival, advising full details of vessel and health condition on board. When Free Pratique is granted by radio, vessel will be required to submit the following documents to Quarantine Officer on arrival at Kudamatsu Anchorage or after berthing.

Maritime Declaration of Health.
Crew List.
Passenger List.
Voyage Memo.

The following vessels will not be able to obtain Radio Pratique:

(a) A vessel that has been in contact with an infected area or a suspected infected area within 15 days of arrival.
(b) If a vessel has on board any case, or suspected case, of infectious disease within 15 days of arrival.
(c) If a vessel does not possess a valid Derat or Derat Exemption Certificate.

If vessel is unable to obtain Radio Pratique, it should proceed to Tokuyama Quarantine Anchorage (Lat. 34° 00' N., Long. 131° 45' E.).

Also see "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

VHF: Vessels wishing to contact Agent prior to arrival should contact Tokuyama Kudamatsu Port Radio on Channel 16.

TUGS: Tugs normally join vessel proceeding to Nippon Oil Refinery Wharf at Lat. 33° 58' 20" N., Long 131° 53' 30" E. and proceeding to Toyo Kohan Wharf at Lat. 33° 59' 30" N., Long. 131° 51' 23" E. Tug's line used and charges for line's use is included in tug-boat operation charge. 8 tugs available, 2,000 h.p. – 4,000 h.p.

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by radio.

	LOA (m.)	*Depth* (m.)	*Capacity* (d.w.t.)	*Cargo*
Hitachi Wharf	170	9.5	15,000	Plant/Carrier
Toyo Kohan Wharf	200	9.0	20,000	Steel Plate
Kudamatsu Public Wharf No. 2	130	7.5	5,000	General Cargo
Kudamatsu Public Wharf No. 2	185	10.0	15,000	General Cargo

TANKERS: Nippon Oil Refinery:

Berth	*Max. d.w.t.*	*Max. LOA* (m.)	*Max. draft* (m.)
Nippon Petroleum East	178,000	300	19.0
Nippon Petroleum West	Not in use.		

Berth	*Products*	*Shoreline*	*Discharge rate* (t.p.h.)	*Hoses*
Nippon Oil (East K-1)	Crude Oil	16"×2	5,000 (1 line)	Chicksan Arm

Berthing and unberthing in daytime only.
Tugs power must be more than 8% of vessel's deadweight.
Berthing usually port side alongside.

MEDICAL: No advance notice required unless urgent.

STEVEDORES: At least 24 hours' prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew at additional cost. Overtime surcharges 1630 – 2130 hrs. 60% additional of basic stevedorage; 2130 – 0800 hrs. next morning 120% additional; Sundays/holidays 100% additional.

DENSITY: Average 1025.

FRESH WATER: Available at Kudamatsu Public Wharf No. 2 (Rate 20 t.p.h.) and Toyo Kohan Wharf (Rate 10 t.p.h.).

A water barge will be brought from Tokuyama, when required, minimum quantity is 150 tons.

FUEL: Major oil companies are represented and all grades of marine oil can be delivered, usually by barge.

CONSULS: No local representatives. Marine Note of Protest can be attended to by local notary public.

REPAIRS: Small repairs possible.

DRY DOCKS: Shin Kasado Dockyard Co. Ltd.

Repair Dry Docks:

Dry Dock	*Length* (m.)	*Breadth* (m.)	*Max. Draft* (m.)	*Capacity* g.t.	*Capacity* (d.w.t.)	*Cranes*
No. 1	140.7 (153.6)	20.9 (22.2)	6.25	7,500	10,000	5t, 10t
No. 3	227.0	37.0	6.8	37,000	70,000	20t, 60t, 60t
No. 5	243.8 (255.0)	44.8 (50.0)	6.4	51,000	90,000	60t, 100t, 120t

Mooring Quays:

Quay	*Length* (m.)	*Depth* (m.)	*Cranes* (tons)
No. 1	130	11.0	5
No. 2	180	9.0	60
No. 3	90	5.0	
No. 4	100	5.0	4
No. 5	30	5.0	
No. 6	180	9.0	120
No. 7	110	11.0	100
No. 8	180	6.0	5×2
P-1	70	6.0	5
P-2	70	6.0	

Floating Cranes: 10 tons and 15 tons.

GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore but no spirits.

REPATRIATION: Possible.

AIRPORT: Ube Airport 20 minutes by Shinkansen (from Ogori Station to Tokuyama Station) and 20 minutes by taxi. Hiroshima Airport 40 minutes by Shinkansen (from Hiroshima Station to Tokuyama Station) and 20 minutes by taxi.

Fukuoka Airport 60 minutes by Shinkansen (from Hakata Station to Tokuyama Station) and 20 minutes by taxi.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

POLICE/AMBULANCE/FIRE: Police: 110. Ambulance and Fire: 119.

Public telephone booth available near by the berth.

TELEPHONES: No arrangements exist for placing telephones on board.

SHORE LEAVE: Local Immigration Offices issue shore pass valid for only 7 days when Kudamatsu is first port in Japan, but if next port in Japan, will issue 15 day shore pass. Extension possible if ship stays longer.

AUTHORITY: Shunan Port Administration Office, 13-23 Chikko-cho, Tokuyama City, Yamaguchi Pref., 745 Japan. *Tel:* (0834) 21-1787. *FAX:* 0834-32-5090.

KURE (including Hiro Bay): 34.14 N. 132.32 E. (See Plan)

DOCUMENTS:

Ship's Register.
International Tonnage Certificate.
5 copies Ports of Call.
Last Port Clearance.
6 copies Crew List, including Passport numbers.
6 copies Passenger List.
1 Stores List.
Maritime Declaration of Health.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc., (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Inland Sea pilotage should preferably be arranged through Agent via Nagasaki Radio, giving 72 hours' notice. Urgent correction of ETA outside business hours should be cabled direct to Pilot Station. Inland Sea Pilot Association covers all Inland Sea Ports. Pilotage compulsory for vessels over 10,000 g.r.t.

Inland Sea Pilots board at the following positions:

1. Vessels transitting Bungo Channel:

Inland Sea Pilot boards at Sekisaki Pilot Station (33° 13' N., 131° 56' E.). Telegraphic address "Anjin Saganoseki".

2. Vessels transitting Kanmon Strait:

Kanmon Strait Pilot boards at Mutsure Pilot Station (33° 59.5 ' N., 130 ° 52.6' E.) (compulsory over 10,000 g.r.t.). Telegraphic address "Kanmon Pilot Moji", and Inland Sea Pilot boards at Hesaki Pilot Station (33° 58' N., 131° 01.1' E.). Telegraphic address "Anjin Moji".

3. Vessel transitting Kii Strait:

Osaka Bay Pilot boards at Tomogashima Pilot Station (34° 10' N., 135° 00' E.). Telegraphic address "Osakabay Pilot", and Inland Sea Pilot boards at Wadamisaki Pilot Station (34° 35' N., 135° 08' 24" E.) (compulsory over 10,000 g.r.t.). Telegraphic address "Anjin Kobe".

Note: VHF communication with Pilot Station available as follows:

Name of Station	Call/Answer Channel	Communication Channel
Oita Port Radio (for Sekisaki)	16	14
Shimonoseki Port Radio (for Mutsure)	16	14
Kobe Port Radio (for Wadamisaki)	16	14

4. Most Inland Sea Pilots act as harbour pilots up to berth or anchorage at destination. If vessel requires only harbour pilot, harbour pilot boards at Kure Quarantine Anchorage (approx. 34° 13' 30" N., 132° 31' 00" E.).

Also see "Shipmaster's Report" before first port.

ANCHORAGES:

Anchorage	*Position* *Latitude*	*Longitude*	*Depth* (m.)
C	34° 13' 51" N.	132° 31' 30" E.	21.0
D	34° 13' 29" N.	132° 31' 45" E.	20.0
Y-1	34° 14' 50" N.	132° 31' 08" E.	20.0
Y-2	34° 14' 54" N.	132° 31' 35" E.	17.0

C, D & Y-1 For vessels of less than 200 m. LOA.
Y-2 For vessels of less than 150 m. LOA.

RESTRICTIONS: Berthing and unberthing from one hour after sunrise to one hour before sunset.

Portion of Nasami Strait (Hiroshima Bay) has depth of 17.0 m., therefore Maritime Safety Agency request bottom clearance 10% of ship's draft plus 0.5 m.

In the following cases, Inland Sea Pilot and Maritime Safety Agency request escort tug at Nasami Strait:

1. Tankers (over 50,000 d.w.t.), if vessel loaded with dangerous cargo.
2. Large vessels (LOA over 250 m.).
3. If vessel's draft over 15.0 m.

MAX. SIZE: Nisshin Steel Wharf: LOA 360 m., 276,000 d.w.t., draft 17.40 m. (as per tidal condition).

HEALTH: Vessel must obtain Free Pratique at first port of call in Japan. Ordinary Pratique takes place at Kure Quarantine Anchorage.

Also see "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan. If vessel fitted with telex, they may communicate direct with Agent.

VHF: Hiroshima Port Radio on Channels 11, 12, 14 and 16.

RADAR: No port radar.

TUGS: Tugs normally join vessel at quarantine anchorage area, and tug's lines used at no extra charge (2,600 h.p. – 3,300 h.p.).

BERTHING: Berthing and unberthing from one hour after sunrise to one hour before sunset.

Nisshin Steel Wharf (Private Wharf):
Cargo : Iron ore and coal.
Length : 330 m.
Depth : 18.00 m.
Permissible LOA : 360 m.
Permissible Draft : Under 200,000 d.w.t. – 17.00 m. (draft available – 17.40 m. as per tidal condition).
Over 200,000 d.w.t. – 16.30 m.
Cranes : 2×1,500 t.p.h.
Capacity : 276,000 d.w.t.

Kawaraishi South Wharf (Public Wharf):
Length : 370 m.
Depth : 10.00 m.
Permissible Draft : 9.00 m.
Capacity : 2×15,000 d.w.t.
Cranes : None.

Kawaraishi West Wharf (Public Wharf):
Length : 260 m.
Depth : 7.50 m.
Permissible Draft : 6.70 m.
Capacity : 4,000 d.w.t.
Cranes : None.

Hiro Bay:

Hiro is a part of Kure Port and Port Authorities such as Customs and Immigration will attend from Kure.

Quarantine Anchorage: Lat. 34° 11' 57" N., Long. 132° 36' 33" E.

Anchorage: Anchorage A: Lat. 34° 12' 00" N., Long. 132° 37' 00" E. Depth 18.0 m.

Anchorage B: Lat. 34° 12' 03" N., Long. 132° 37' 26" E. Depth 40.0 m.

For vessels of less than 200 m. LOA.

Berthing: Berthing and unberthing from one hour after sunrise to one hour before sunset.

Name of wharf : Oji Paper Dolphin
Length : 89 m.
Permissible LOA : 195 m.
Permissible Draft : 9.0 m.
Capacity : 36,600 g.r.t.

Restrictions: Passage from anchorage to dolphin has depth of 8.0 m., therefore berthing about 2 hours before high tide.

Other conditions same as Kure.

CRANES: Floating cranes (lifting capacity from 100 tonnes to 300 tonnes) and mobile cranes (lifting capacity from 20 tonnes to 120 tonnes) are available.

BULK CARGO FACILITIES: See "Berthing".

SPECIALISED CARGO HANDLING FACILITIES: None.

BRIDGES: No bridge restrictions at Kure Port (Hiroshima Bay area).

STEVEDORES: At least 24 hours' prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep Agent advised of ETA. If stevedores cannot commence loading/unloading at time notifed by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew at additional cost. Overtime surcharges 1630 hrs. – 2130 hrs. approx. 60% additional of basic stevedorage; 2130 hrs. – 0430 hrs. next morning 130% additional; Sundays/holidays approx. 100% additional.

Discharging of raw materials is on "Free in/out" basis. Therefore stevedorage is to receiver's account.

MEDICAL: No advance notice required, except after office hours, Sundays and holidays. Vaccination against cholera available.

TANKERS: No facilities.

DENSITY: 1023.

FRESH WATER: Nisshin Steel Wharf: No water supply facilities at Wharf. Water available by barge (capacity 330 tonnes) from Hiroshima Port. 3 days advance notice required.

Cost per tonne:

(1) Daytime on weekday Yen 1,000. Overtime Yen 1,500.

(2) Daytime on Sundays/holidays Yen 1,500. Overtime Yen 2,000.

Public Wharf: Available from shore pipeline.

Cost per tonne: Daytime Yen 300. Overtime/Sundays/holidays Yen 450.

FUEL: Most grades of domestic and bonded oil are available, by barge with 3 days advance notice.

CONSULS: No consul available at Kure.

REPAIRS: All types of deck and engine repairs are possible.

At Nisshin Steel Wharf, small repairs can be undertaken subject to berth owner's permission.

DRY DOCKS: Ishikawajima-Harima Heavy Industries Co.Ltd.

Dry Dock	*Length* (m.)	*Width* (m.)	*Depth* (m.)	*Capacity* (g.r.t.)
No. 2	268	48.0	6.81	91,000
No. 3	370	68.0	8.96	251,000
No. 4	273	41.7	12.80	69,000

Docks No. 2 and No. 3 are building docks, and Dock No. 4 is a repair dock.

SURVEYORS: Japan Marine Surveyor & Sworn Measurers Association and New Japan Surveyors and Sworn Measurers Association available for cargo inspections.

Lloyd's Register of Shipping and American Bureau of Shipping available for registration surveys.

GANGWAY/DECK WATCHMEN: Not specially required, unless passengers or valuable cargo on board.

OPENING/CLOSING HATCHES: Usually opened by crew.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector for confirmation of ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore, but no spirits.

REPATRIATION: Possible.

AIRPORT: Hiroshima Airport, distance from Kure approximately 35 km. Hiroshima/Tokyo (Haneda Airport) 11 flights per day (domestic airline). Hiroshima/Seoul 7 flights per week (international airline).

TIME: GMT plus 9 hours. No alterations made to clocks during year.

HOLIDAYS: Nisshin Steel Wharf: No stoppages, unless charter party says "excluding from the laydays January 1st".

Public Wharf: No working at year end (New Year from 31st December to 3rd January), daytime only on 30th December and 4th January. Sunday and holiday working, if required, at additional charge.

POLICE/AMBULANCE/FIRE: Police Station (emergency) Tel: 110. Ambulance/Fire Tel: 119. Kure Maritime Safety Agency Tel: 0823-21-0110.

TELEPHONES: No arrangements available for placing telephones aboard.

SERVICES: All navigational apparatus can be serviced as required with minimum 48 hours' advance notice.

BANKS: Hiroshima Bank, Kure Branch, 5-4, Hondori 3-chome, Kure, Japan. Tel: 0823-21-5141. Fax: 0823-24-5575.

Sumitomo Bank, Kure Branch, 1-14, Hondori 2-chome, Kure, Japan. Tel: 0823-22-4921. Fax: 0823-21-0724.

STORING: See "Prelims".

1. At Nisshin Steel Wharf, ship's stores loading by barge.
2. Available to load ship's stores during discharge of cargo.
3. At Nisshin Steel Wharf, trucks cannot proceed alongside the berths.
4. At Nisshin Steel Wharf, cannot use forklift trucks at berth (usually load ship's stores direct to vessel by ship's crane).
5. Must obtain Customs Clearance before loading ship's stores.
6. Riggers available to assist with storing.

SHIP SUPPLY SERVICE: Makino Shipchandler, 5-1, Hondori 1-chome, Kure, Japan. Tel: 0823-21-4443. Fax: 0823-21-4899.

No craft/helicopters at Kure Port.

SHORE LEAVE: Kure Immigration Officers issue shore passes, if crew members have valid Passports or Seaman's Books.

REGULATIONS: Normal port regulations.

DELAYS: If vessel arrives at night-time, it must wait for berth at anchorage.
GENERAL: Kure Port is a local port which makes it difficult to arrange all requirements. At least 3 days' notice helpful.
AUTHORITY: Port and Harbour Dept. – Kure City, 1-6 Chuo 4-chome, Kure City, Hiroshima Pref. *Tel:* (0823) 25-3336.

KUSHIRO: 42.58 N. 144.21 E. (See Plan)

DOCUMENTS:
Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
6 Crew Lists including Passport Numbers.
4 Ports of Call Lists.
4 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).
Maritime Declaration of Health.

Ship's Agent will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.
PILOTAGE: No telegraphic address. Previous advance notice, minimum 8 hours' advance notice ETA and any alterations. Contact pilot boat through Harbour Office/tug boats with wireless telephones. Pilot boat has no radio telephone. Pilot boat waits at Quarantine Anchorage (1,000 m. off and 280° from North Breakwater white light), and entrance of breakwater during winter period (December–March).
ANCHORAGE: Bottom sand and mud. Minimum depth 9 m. in passage and 7.5 m. in anchorage. Depth over 29.5 ft. 162,075 sq.m., Section 2; Depth over 24.5 ft. 690,000 sq.m., Section 2 and 3; Depth under 24.5 ft. 393,600 sq.m., Section 3. Tidal range, average high-tide plus 1.533 m., average low-tide plus 0.154 m., average tidal difference plus 0.953 m.
RESTRICTIONS: Vessel allowed to enter and sail day and night. Pilot assistance officially not compulsory but in practice necessary, and Pilot service available sunrise to sunset for entry and up to 2100 hrs. for sailing.
MAX. SIZE: See "Berthing".
HEALTH: Radio Pratique available. Formalities will be carried out at the anchorage. Quarantine Station 1,200 m. – 293° off Kushiro Breakwater Red Lighthouse.
Also see "Late Reports".
RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.
VHF: Kushiro Port Radio on Channel 16.
TUGS: Usually join vessel at entrance of breakwater and ship's lines to be used. 1×3,300 h.p., 1×3,200 h.p., 1×1,700 h.p. and 1×1,100 h.p.
BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by radio. All berths limited by depth in entrance channel.

Berth	*Length* (m.)	*Depth* (m.)	*Capacity* d.w.t.
Central Pier No. 1 & 2	340	9.0	10,000×2
No. 3	180	10.0	15,000×1
No. 4	130	7.5	5,000×1
No. 5	130	7.5	5,000×1
No. 6	130	7.5	5,000×1
North Pier No. 1 & 2	383	8.0	10,000×2
North Pier No. 3	148	8.0	5,000×1
New South Pier	130	7.5	5,000×1
South Pier	91	5.4	2,000×1
South Pier	218	7.5	5,000×1
Tanker Berth No. 1	130	7.5	6,000×1
West Pier No. 1 – 1	90	5.5	6,000×1
West Pier No. 1 – 2 & 3	330	9.0	10,000×2
West Pier No. 1 – 4	240	12.0	40,000×1
West Pier No. 1 – 5	185	10.0	15,000×1
West Pier No. 1 – 6	165	9.0	10,000×1
West Pier No. 1 – 7	165	9.0	10,000×1 (use with car ferry)
West Dolphin	260	7.5	6,000×4 (tanker only)
West Pier No. 2 – 8	90	5.5	2,000×1
West Pier No. 2 – 9	180	7.5	5,000×1
West Pier No. 2 – 10	185	10.0	15,000×1
West Pier No. 2 – 11 & 12	480	12.0	30,000×2
West Pier No. 2 – 13	165	9.0	10,000×1 g.r.t.
West Pier No. 2 – 14	130	7.5	5,000×1 g.r.t.

CRANES: None.
BULK CARGO FACILITIES: West Port No. 2 – 11 and No. 2 – 12: 3 shore grain unloaders. Rate: 400 tonnes/hr. per unit.
SPECIALISED CARGO HANDLING FACILITIES: West Port No. 2 – 9: Tankers discharge molasses in bulk.
BRIDGES: None.
STEVEDORES: At least 24 hours' prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gears not rigged on berthing, stevedores will do same for ship's crew at additional cost. Overtime surcharges 1630 – 2130 hrs. 60% additional of basic stevedorage; Sundays/holidays 100% additional; Saturdays 10% additional.
MEDICAL: No advance notice required unless urgent.
TANKERS: West Dolphin: 4 berths for 6,000 d.w.t. Hose diameter 10 in., 12 in. and 6 in.
South New Pier – 1 berth for 6,000 d.w.t. Hose diameter 10 in.×1.
DENSITY: Average 1025 inner breakwater HW and average 1022 LW.
FRESH WATER: Direct supply from the wharves only.
Cost per tonne: Yen 370 (1st April – 30th November), Yen 555 (1st December – 31st March).
FUEL: Domestic oil is available; bonded oil will be brought from Hakodate or Muroran with sufficient advance notice.
FIRE PRECAUTIONS: Ship's watchman to be on duty.
CONSULS: None.
REPAIRS: Ordinary deck, engine and electrical repairs arrangable by the local factory.
DRY DOCKS: None; nearest located in Hakodate and Muroran ports.
SURVEYORS: N.K.K.K. available.
GANGWAY/DECK WATCHMEN: Not required.
OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.
CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.
CUSTOMS ALLOWANCES: Only allowed 50 cigarettes to take ashore but no spirits.
REPATRIATION: Possible.
AIRPORT: Kushiro airport about 40 minutes taxi or direct connection bus from port area. Flight service daily, 6 flights for Tokyo and 4 flights for Sapporo.
TIME: GMT plus 9 hours. No alterations made to clocks during year.
HOLIDAYS: 1st May, 20th July, 30th December to 4th January.
POLICE/AMBULANCE/FIRE: Police HQ 23–7111 or emergency 110; Hospitals Kushiro Grand Hospital 41–6121, Kushiro Red-Cross Hospital 22–7171; Fire HQ 22–2156 or emergency 119.
EMERGENCY CO-ORDINATION CENTRE: Contact Kushiro M.S.A. on VHF Channel 16.
TELEPHONES: No systems for arranging on board.
SERVICES: Provisions, store supply and compass adjusting possible.
BANKS:
Hokkaido Takushoku Bank, Kushiro Branch. Tel: (0154) 23-5111.
The Fuji Bank, Kushiro Branch. Tel: (0154) 22-2131.
SHORE LEAVE: Local Immigration Offices issue shore pass valid for 7 days or 15 days, but 5 days' extension possible if ship stays longer.
SHIP SUPPLY SERVICE: None.
IDENTIFICATION CARDS: Shore passes are issued by local Immigration Officer.
REGULATIONS: Normal port regulations.
DELAYS: None.
AUTHORITY: Port & Harbour Dept. – Kushiro City, 5, Kurogane-cho, 7-chome, Kushiro City, Hokkaido. *Tel:* (0154) 23-5151.

MAIZURU: 35.27 N. 135.19 E. (See Plan)

DOCUMENTS:
International Tonnage Certificate.
Ship's Register.
Last Port Clearance.
3 Crew Lists including Passport Numbers.
3 Passenger Lists.
2 Voyage Memo.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agents should be provided with necessary information about details of cargoes in advance.
PILOTAGE: Not compulsory. Pilots are available at the anchorage near Kanegasaki for vessels requiring Pilot services.
Pilot station: Lat. 35° 32' 00" N., Long. 135° 18' 30" E.
ANCHORAGE: Section 2, Depth 9 m., Section 3, 17 m.
RESTRICTIONS: Channel depth 12.0 m.
MAX. SIZE: See "Berthing".
HEALTH: Radio Pratique available. Vessels usually anchor at the outer harbour where the authorities board and grant Free Pratique.
No. 1 Quarantine Anchorage (Outer) Lat. 35° 30' 15" N., Long. 135° 20' 42" E.
No. 2 Quarantine Anchorage (Inner) Lat. 35° 29' 15" N., Long. 135° 20' 32" E.
Also see "Late Reports".
RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.
TUGS: Both ship's and tug's lines used. 2 tugs available, 1×2,750 h.p. and 1×1,500 h.p.

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by radio.

Berth	*Length* (m.)	*Depth* (m.)	*Permissible draft* (m.)	*Capacity* (g.r.t.)
No. 2 Pier No. 1 Wharf	130	7.6	7.25	3,000
No. 2 Wharf	185	10.0	9.50	15,000
No. 3 Wharf	255	8.3	7.90	15,000
No. 4 Wharf	105	7.3	6.5	—
No. 3 Pier No. 1 Wharf	185	9.8	9.35	15,000
No. 2 Wharf	185	9.7	9.25	15,000
No. 4 Pier	185	9.4	8.95	15,000
Kita Pier No. 1 Wharf	130	7.5	7.20	3,000
No. 2 Wharf	240	12.0	11.50	20,000

Buoy	*Location*	*Depth* (m.)	*Capacity* (g.r.t.)
Ohgimi Dolphin	Lat. 35° 30' 28" N., Long. 135° 23' 34" E.	10.2	15,000
Katsura Buoy	Lat. 35° 28' 38" N., Long. 135° 20' 27" E.	13.0	20,000
No. 1	Lat. 35° 30' 01" N., Long. 135° 23' 27" E.	7.9	6,000
No. 2	Lat. 35° 30' 17" N., Long. 135° 23' 31" E.	14.0	15,000
Taira Dolphin	Lat. 35° 30' 10" N., Long. 135° 23' 58" E.	10.0	10,000

STEVEDORES: At least 24 hours' prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew at additional cost. Overtime surcharges 1600 hrs. – 2130 hrs. 60% additional of basic stevedorage; Sundays/holidays 100% additional.
MEDICAL: No advance notice required unless urgent.
DENSITY: 1025.
FRESH WATER: Available from wharf and by barge.
FUEL: Domestic Marine Diesel Oil is available; bonded oil will be brought from Moji, with sufficient advance notice.
CONSULS: None.
REPAIRS: Possible.
DRY DOCKS: 246 m.×33.5 m.×12.5 m. Two others.
GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.
OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.
CERTIFICATES: Ship's Register and Internatinal Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.
CUSTOMS ALLOWANCES: Only allowed 50 cigarettes to take ashore but no spirits.
REPATRIATION: Possible.
AIRPORT: None.
TIME: GMT plus 9 hours. No alterations made to clocks during year.
POLICE/AMBULANCE/FIRE: Police 07736-5-0810; Ambulance 07736-5-2174; Fire 07736-5-2174.
TELEPHONES: Not possible to place telephones on board.
SERVICES: None.
SHORE LEAVE: Local Immigration Offices issue shore pass valid for only 3 days, but 3 days' extension possible if ship stays longer.
AUTHORITY: Maizuru Port Administration Office, 19-5, Koaza Shimazaki, Aza Matsukage, Maizuru City, Kyoto Pref. *Tel:* (0773) 75-1174.

MARUGAME: 34.18 N. 133.47 E. (See Plan)

DOCUMENTS: See "Sakaide".
PILOTAGE: See "Sakaide".
Pilot Boarding Position: Lat. 34° 19' N., Long. 133° 46' E.
ANCHORAGES: There are no suitable anchorages for awaiting berth, the vessel is to adjust arrival time to day-break for berthing. Sakaide is customarily used as a waiting place.
RESTRICTIONS: No restrictions, but pilots are not available for berthing/unberthing operations after sunset.
MAX. SIZE: See "Berthing".
HEALTH: Radio Pratique not available.
RADIO: See "Sakaide".
VHF: No facilities.
TUGS: See "Sakaide".
BERTHING:

Berth	*Capacity* (g.r.t)	*Length* (m.)	*Depth* (m.)	*Max. Draft* (m.)	*Remarks*
Showa-Cho Wharf	4,000	185	9.40	8.80	Logs
Horai-Cho Wharf (West)	15,000	160	9.00	8.60	Logs
Horai-Cho Wharf (East)					
1. Okura Kogyo	4,000	155	7.5	6.80	Plywood
2. Funairi Ryoko	3,000	140	7.5	6.80	Grain

STEVEDORES: See "Sakaide".
MEDICAL: See "Sakaide".
TANKERS: No facilities.
FRESH WATER: Available at Showa-Cho Wharf by shore line, rate 50 t.p.h. Available at other berths by barge.
FUEL: See "Sakaide".
FIRE PRECAUTIONS: No specific precautions.
CONSULS: See "Kobe".
REPAIRS: Only minor repairs possible.
DRY DOCKS: Imabari Zosen Co., Marugame Yard.
No. 1 Dry Dock for 100,000 d.w.t. vessel, 270 m. × 45 m. (building).
No. 2 Dry Dock for 150,000 d.w.t. vessel, 290 m. × 57 m. (building).
No. 1 Shipway for 70,000 d.w.t. vessel, 240 m. × 34 m. (building).
GANGWAY/DECK WATCHMEN: See "Sakaide".
OPENING/CLOSING HATCHES: See "Sakaide".
CUSTOMS ALLOWANCES: See "Sakaide".
SURVEYORS: See "Sakaide".
REPATRIATION: Possible.
AIRPORT: See "Sakaide".
TIME: See "Sakaide".
POLICE/AMBULANCE/FIRE: See "Sakaide".
TELEPHONES: No facilities for placing telephones on board.
BANKS: See "Sakaide".
SHORE LEAVE: See "Sakaide".
AUTHORITY: Marugame Harbour Office, 127-16 Fukushima-Cho, Marugame City, Kagawa, Japan. *Tel:* 0877-22-2710. *Contact:* Port Captain.

MATEGATA: 34.06 N. 132.55 E. (See Plan)

DOCUMENTS: See "Imabari".
PILOTAGE: See "Imabari".
ANCHORAGES: Port of Mategata faces Aki-Nada and is located near West entrance of Kurushima Channel, where holding ground is good and depth of water 12.0 – 20.0 m.
MAX. SIZE: No limit.
HEALTH: Vessel should obtain Pratique at Matsuyama or other nearby way port before arrival.
RADIO: See "Imabari".
TUGS: See "Imabari".
BERTHING: In the past, the port was used for loading logs from the water, but currently port not in use.
CRANES: Floating crane is available from Kure.
STEVEDORES: See "Imabari".
MEDICAL: See "Imabari".
DENSITY: 1015.
FRESH WATER: Available by barge from Onomichi.
FUEL: See "Imabari".
CONSULS: See "Kobe".
REPAIRS: Only minor repairs possible.
DRY DOCKS: See "Imabari".
GANGWAY/DECK WATCHMEN: See "Imabari".
OPENING/CLOSING HATCHES: See "Imabari".
CERTIFICATES: See "Imabari".
CUSTOMS ALLOWANCES: See "Imabari".
REPATRIATION: See "Imabari".
AIRPORT: See "Imabari".
TIME: See "Imabari".
POLICE/AMBULANCE/FIRE: See "Imabari".
TELEPHONES: See "Imabari".
SERVICES: See "Imabari".
SHORE LEAVE: Local Immigration (Niihama) issue shore passes valid for 7 days only, but 7 days extension possible, if ship stays longer.
GENERAL: Due to Mategata being a "Closed Port", to conform with regulations, vessel obtains permission from Shikoku Transport Bureau to enter.

Customs request vessel calling Mategata to obtain permission to enter at preceeding port of call by paying charge at same rate of tonnage dues prior to vessel's arrival. The above formalities undertaken by Agents.

No quarantine available, nearest station at Matsuyama. Immigration at Niihama.
AUTHORITY: See "Imabari".

MATSUSHIMA: 32.56 N. 129.36 E. (See Plan)

DOCUMENTS: When vessel arrives direct from a foreign port, Customs Officials will board to search, and the following documents are to be submitted:
Ship's Register.
International Tonnage Certificate.
3 Voyage Memo (Ports of Call).
5 Crew Lists, including Passport numbers.
3 Passenger Lists.
1 Declaration of Health.
1 Last Port Clearance.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agents will prepare Notice of Readiness, Inward/Outward Declaration, Cargo Manifest and Cargo Manifest in Transit, using specific forms. Therefore, ship's Agents should be provided with necessary information about details of cargoes in advance.

Crew List shall be submitted to Agent (EPDC Marine) 5 days prior to arrival.

In case of first call, ship's General Arrangement and Capacity Plan shall be sent in advance.

PILOTAGE: Pilotage is compulsory for all vessels over 10,000 gross tons by the private regulation of Electric Power Development Co. Ltd., Matsushima Terminal Power Station.

Berthing Master boarding area is normally 2 miles × 300° from Matsushima Breakwater Lighthouse. Lat. 32° 57' 49" N., 129° 34' 14" E.

Berthing Master is employed by EPDC Marine Co.,Ltd., Matsushima Kouwan Service Center.

Berthing Master boarding time:

Berthing: From one hour after sunrise (usually 0700 hrs.) until 1.5 hours before sunset.

Unberthing: From one hour after sunrise (usually 0815 hrs.) until one hour before sunset.

The pilot ladder must be rigged in accordance with the provision of the Navigation (SOLAS) Regulations.

ANCHORAGES: The recommended anchorage at Matsushima is in position Lat. 32° 58.52' N., Long. 129° 35.28' E. (Radius 800 m., 228° – 5,650 m. from Kabutoshima Lighthouse – Fl. 3 sec. 24 m. 12 M.).

RESTRICTIONS: Pilot available daylight hours only for berthing and unberthing (See "Pilotage").

Weather/Sea Conditions for Berthing/Unberthing:

Wind Velocity	Less than 13 m./sec.
Wave Height	Less than 1.5 m.
Visibility	More than 1.0 mile.

MAX. SIZE: Matsushima Harbour is designed for Panamax type, but in general following sized vessel is acceptable:

LOA	235 m.
Beam	38 m. (Experienced beam 43 m. as maximum in past).
Deadweight	87,000 tons
Max. Draft	14.00 m.

Minimum Sailing Draft required:

Deadweight	Fore Draft	Aft Draft
80,000 d.w.t. Class	6.00 m.	8.00 m.
60,000 d.w.t. Class	5.00 m.	7.00 m.
20,000 d.w.t. Class	3.00 m.	5.00 m.

(Propeller to be submerged completely, and trim to be less than 1% of LOA.)

HEALTH: Radio Free Pratique can be obtained by sending a message to the Quarantine Office in Nagasaki via Agent (not more than 36 hours and not less than 12 hours prior to arrival), after which the vessel can proceed directly to Matsushima. If vessel is not in possession of Japanese Sanitary Certificate, it has to call at Nagasaki or Sasebo for ordinary quarantine service, Customs and Immigration formalities, etc.

If vessel is to proceed to Nagasaki for quarantine, the pilot will anchor the vessel at the outer roads (Anchorage A, Harbour Section No. 6), in position Lat. 32° 42' N., Long. 129° 48' E.

Quarantine formalities are possible between 0830 hrs. and 1600 hrs., therefore the vessel has to arrive at Nagasaki Roads before 1600 hrs., otherwise vessel will have to stay overnight in the roads. As soon as formalities are completed, the vessel may sail for Matsushima without a pilot.

In case of call at Nagasaki or Sasebo on Saturday, Sunday or holiday, pre-arrival notice should be made via Agent, otherwise vessel has to wait until Monday or next office opening hours.

Also see "Late Reports".

RADIO: Recommended that Master communicates with Agent through Nagasaki Radio, which covers all ports in Japan.

Advice of Arrival: The Port of Matsushima is a first port of entry, and all ships bound for this port to discharge send their message by telex to Telex No. 754788, addressed to EPDC Marine (A/B EPDCMS J).

Note: Arrival Notice should be made on sailing from loading port, thereafter 72, 48, 36, 24 and 12 hours prior to arrival and/or whenever ETA alters by 3 hours or more from last ETA.

On sailing from loading port, please advise the following:

(a) Ship's name and nationality.
(b) Crew nationality and the number of persons on board.
(c) Loading port and sailing time/date.
(d) ETA Matsushima and arrival draft expected (fore/aft).
(e) Cargo type and quantity hatch-wise.
(f) Other necessary information if any.

In Notices prior to arrival, please advise the following:

(a) Ship's name.
(b) Present position.
(c) ETA Matsushima.
(d) Other necessary information or request if any (Bunkering, crew change, ship's provisions/stores/spare parts, fresh water, vaccinations, repairs, re-issuing Japanese Sanitary and Derat Exemption Certificate, etc.).

24 hours prior to arrival state firm ETA at Matsushima.

VHF: Call sign: "Matsushima Kouwan Service Centre".

Frequencies: Channels 16, 12, 6 (via "Tomi Maru").

Continuous Watch: Channel 16.

Vessels should commence a listening watch on Channel 16, 2 hours before arrival and while at anchor, during office hours.

TUGS: Tugs shall be arranged on the following basis:

Deadweight	Berthing	Unberthing
Over 60,000 d.w.t.	more than 3 tugs	more than 2 tugs
Over 30,000 d.w.t.	more than 2 tugs	more than 1 tug
Over 10,000 d.w.t.	more than 1 tug	more than 1 tug

Tug "Tomi Maru" (3,600 h.p.) based at Matsushima, and other tugs assist from Sasebo or Nagasaki.

BERTHING:

Name of Berth	*Length* (m.)	*Max.Draft* (m.)	*Capacity* (d.w.t.)
P-1	255	14.00	60,000
P-2	114	8.00	5,000
P-3	114	8.00	2,000
P-4	114	8.00	2,000 (oil berth)

Matsushima is a small island with an electric plant of the Electric Power Development Co.Ltd. It is a well organised plant with its own port. The concrete berth is well fendered, and there are ample mooring bollards and additional storm bollards. Off the Northern end of the wharf, there is a dolphin joined to the shore by a 65 m. long catwalk. The Northern end of the berth will accept vessels over 60,000 d.w.t. (depth 16.0 m.). The Southern end is for vessels of 5,000 d.w.t., 2,000 d.w.t. and 2,000 d.w.t. respectively.

It is the Custom of the Port to berth port side alongside, but if requested by the Master, vessel may berth starboard side alongside.

The berthing pilot, who is a EPDC Marine Co. employee, hands over a berthing plan when he arrives, which contains information about mooring lines, depth alongside and strength and numbers of bollards. All the bollards are painted and are numbered. The plant and the berth are always kept clean.

There is an approach velocity meter on the quay, and tugs are fitted with receivers.

On average, 4 vessels over 60,000 d.w.t. and 30 vessels of less than 5,000 d.w.t. a month call at Matsushima.

CARGO HANDLING FACILITIES: There are 4 grab unloaders with capacity of 23 tons each. Discharging rate with grabs is 700 t.p.h. maximum each crane (max. daily rate 28,000 tons). The average discharging rate is 1,600 t.p.h. The unloader's travelling distance is 345.0 m. Maximum outreach from fender face 22.00 m. Vessel must keep air draft within 16.50 m.

Normal working hours are from 0630 hrs. to 2130 hrs. (Lunch break 1210 hrs. – 1310 hrs.), 7 days a week, including holidays. The only day not worked is January 1st (New Year's Day).

MEDICAL: There is a hospital at Oseto Cho. 2 days advance notice necessary to Agent before arrival. Only cholera vaccination available.

DENSITY: 1025 (salt).

FRESH WATER: Available. Rate 10 t.p.h. (daytime) and 15-20 t.p.h. (night-time). Cost is Yen 450 per kilolitre.

FUEL: Possible by barge. Bonded oil (fuel and diesel) will be brought from Seto Island port.

CONSULS: No local representatives. Marine Note of Protest can be attended by local notary public at Nagasaki City or Sasebo.

REPAIRS: Minor repairs possible.

DRY DOCKS: Nearest dry dock is Oshima Dockyard, which is 6 miles from Matsushima.

SURVEYORS: All surveyors, such as Lloyd's Register, American Bureau, Bureau Veritas, Nippon Kaiji Kyokai, etc., available. They will attend from Sasebo or Nagasaki.

GANGWAY/DECK WATCHMEN: Compulsory. One watchman on board to attend to the telephone, which is placed on board on arrival. The watchman remains on board until vessel's departure.

OPENING/CLOSING HATCHES: Hatch operations by crew.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid cargo gear certificates sometimes required by stevedores, when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore, but no spirits.

REPATRIATION: Immigration Office is located at Nagasaki City. 5 days advance notice of crew replacement requested by Agent.

AIRPORT: Nagasaki Airport, 70 km. from Matsushima, about 1.5 hours by taxi.

Domestic services: Tokyo (9 flights), Osaka (7), Kansai (3), Nagoya (3), Miyazaki (3), Sapporo (2), Kagoshima (2) and Okinanwa (1) flights daily.

International services: Shanghai – One flight on Monday and Friday, Seoul – One flight on Monday, Wednesday and Friday.

Flights are also available from Fukuoka International Airport, about 4 hours by taxi/train.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

POLICE/AMBULANCE/FIRE: Police 110; Ambulance and Fire 119.

TELEPHONE: Compulsory to have telephones placed on board during stay. Cost Yen 10,500 for setting up lines onboard, and rental rate Yen 1,060 per day.

SHORE LEAVE: Local Immigration Office issues shore passes, valid for only 15 days when Matsushima is first port of call in Japan. Extension possible if ship stays longer. Shore passes are issued for Matsushima and Oseto town only. Oseto town is opposite Matsushima Island. There is a ferry boat service between 0700 hrs. and 2200 hrs. Crew must be back to ship by 2230 hrs. when EPDC main gate closes.

In case Master needs to go to Nagasaki City, for example, Sea Protest or other kind of shipping business, special permission must be obtained.

SERVICES: All special services available, except tank cleaning equipment and facilities for discharge of tank washings.

Ship Supplier: Mazda Shinto Senpaku Co.Ltd., 5-5 Hizukushi-machi, Sasebo City, Nagasaki Pref., Japan. Tel: 0956-33-9106. Fax: 0956-33-6231.

WEATHER/TIDES: *Weather:* The Port of Matsushima is situated in the North of Kyushu. An incidence of about 2 typhoons per year can be expected during the typhoon season between July and October.

Prevailing winds are Northwesterly, and velocities in excess of 27 knots (15 m./sec) are infrequent.

The port facilities are sheltered from swell by the breakwater and island. However, prolonged Westerly winds of more than 20 knots can occasionally make conditions unsafe for boarding/unboarding of Pilot, and Masters are advised to order Pilot and tugs in sufficient time, should these conditions occur.

Tides: Tidal streams are generally weak, reaching strength of 1.5 knots at Spring tides.

The flood tide sets North and the ebb sets South. With the direction of stream, however, near the breakwater tidal stream set to almost Southerly.

Tidal height/hour of Port of Matsushima is calculated by tidal data of Port of Nagasaki (Standard Port).

Tidal Time: Add 5 minutes.

Tidal Height: 1.06 times.

Tidal Range: Max. + 3.5 m.
Min. – 0.6 m.
Mean High Water Interval: 7 hours 59 minutes.
Mean Sea Level above Chart Datum: 1.73 m.
Spring Rise: 3.00 m.
Neap Rise: 2.20 m.

REGULATIONS: Normal port regulation (strictly prohibited to discharge bilge oil and other kinds of oil during stay in this port). No smoking on the deck or in port area. No fishing allowed.

GENERAL: *Chart:* Japanese Chart No. 1230 and Approach Chart No. 204.

SHIPMASTER'S REPORT: May 1988 (Updated 1996).

Health: If vessel is to proceed to Nagasaki for quarantine the Pilot will anchor the vessel at the outer roads (Anchorage A, Harbour Section No. 6) in position 32° 42' N., 129° 48' E. The mooring buoy with a red light on BA. Chart No. 2815 in position 32° 41.8' N., 129° 47.45' E. is no longer in existence.

Tugs: In general, vessels over 60,000 d.w.t. use 3 tugs and vessels under 60,000 d.w.t. use 2 tugs. On departure 2 tugs are used for unberthing. Tugs tow lines are used. The port tugs have a blue hull with white superstructure and orange mast.

Berthing: Moorings consisted of 4 head/stern lines, 1 breast line and 1 or 2 spring lines at each end. On approaching the berth, 2 headlines can be sent away at one time by the line boat.

On average 5 vessels a month call at Matsushima.

General: Provisions: It is possible to obtain stores at the port.

Hotels: There is no hotel accommodation at Matsushima or Oseto.

Tax Free Shop: Should crew wish to buy electrical goods, the Master should contact Kaijima Company in Sasebo City via the Agent. It is suggested that a cable/telex is sent well in advance in order that a salesman may be sent aboard on arrival.

AUTHORITY: Electric Power Development Co.Ltd., Matsushima-Uchigo, Oseto-cho, Nishisonoki-gun, Nagasaki Pref. 857-25, Japan. *Tel:* 0959-22-2111. *FAX:* 0959-22-2118, (0959) 23-3707. *Contact:* Captain S. Furukawa, Marine Superintendent.

MATSUURA: 33.21 N. 129.41 E. (See Plan)

LOCATION: Lat. 33° 21.5' N., Long. 129° 41.5' E.

The port is located on the Northern coast of Nagasaki Pref. and at South Western part of Imari Bay.

DOCUMENTS: The following documents are to be submitted on arrival for formalities:

Ship's Register and/or International Tonnage Certificate.
Last Port Clearance.
5 Crew Lists and Passenger Lists, if any.
3 Voyage Memo (Ports of Call covering last 2/3 months).
1 Declaration of Health.
1 Ship's Stores List.
1 Declaration of Crew's Baggage.

Inward/Outward Declaration, Cargo Manifest and other necessary papers will be prepared by ship's Agents, using Customs forms. A vessel is therefore requested to provide Agents in advance with necessary information regarding cargoes, etc.

PILOTAGE: A vessel berthing or unberthing at Matsuura Coal Berth (CB-1) has to take a pilot (Berthing Master).

Pilot boarding position is around Lat. 33° 28' N., Long. 129° 41' N., which is about 340° × 2.85 miles from Ogonoshima Lighthouse.

Inward pilot boards vessel on lee side at the above position from tug "Kyoei-Maru" (3,000 h.p., based in Matsuura), and outward pilot boards at the berth.

ANCHORAGES: No quarantine anchorage in Matsuura.

Proper anchoring area outside of Imari Bay on night arrival or for waiting berth is located about 1.5 miles – 3.0 miles N.W. of Izu-Shima.

Special attention to the many fishing boats and nets should be paid when the vessel approaches the port.

RESTRICTIONS: Entry into Imari Bay (passing Aoshima Strait) is prohibited during night time.

Berthing/unberthing will be carried out during daylight hours only.

Pilot boarding time will be advised by ship's Agents through VHF, telex and/or radio.

MAX. SIZE: Acceptable cape size vessel (approx. 130,000 d.w.t.) with max. draft 16.30 m., LOA 270 .00 m. and beam 47.00 m.

HEALTH: Radio Pratique only acceptable if the vessel holds valid Derat Exemption Certificate.

Also see "Late Reports".

RADIO: Recommended that Master communicates with Agents through Nagasaki Radio, which covers all ports in Japan.

VHF: "Matsuura Port Radio" on Channel 16 from 0600 hrs. – 2000 hrs.

TUGS: 4 tugs (about 3,000 h.p.) required for vessels over 100,000 d.w.t. for mooring, and 3 tugs for unmooring. Vessels over 60,000 d.w.t. require 3 tugs for mooring and 2 tugs for unmooring. Vessels over 10,000 d.w.t. require 2 tugs for mooring/unmooring, under normal weather conditions.

One tug ("Kyoei-Maru" 3,000 h.p.) available in the Matsuura Port. Other tugs are available from Imari, Sasebo and Nagasaki.

BERTHING:

Name of Berth	*Length* (m.)	*Max.Draft* (m.)	*Capacity* (d.w.t.)
CB-1	370	16.30	130,000
CB-2	370	16.30	130,000 (completion expected December 1996)
D-3	105	7.30	2,000
D-4	126	7.30	5,000
K-5	126	7.30	5,000
K-6	105	5.30	2,000

CB-1 and CB-2 are the berths for discharging coal only. Others are utility berths for discharging/loading oil, chemicals, etc.

All berths are privately owned and belong to Kyushu Electric Power Co.Inc., Matsuura Power Station Electric Power Development Co.Ltd. and Matsuura Thermal Power Station.

Vessels are usually required to dock starboard side alongside, unless there is a special reason.

STEVEDORES: Normal working hours are between 0800 hrs. and 2130 hrs. with 2 gangs by 2 unloaders with capacities up to 1,800 tons per hour each.

MEDICAL: No advance notice required, except Sundays, holidays and in emergency cases.

FRESH WATER: Available from shore connection, rate about 20 t.p.h. Charge is Yen 500/cu.m.

FUEL: Possible to supply bonded oil (IFO/MDO) by barge from Kanmon area.

CONSULS: None.

REPAIRS: Only minor repairs possible.

GANGWAY/DECK WATCHMEN: Not specially required, but possible to arrange.

HATCHES: Opening/closing must be done by ship's crew.

CERTIFICATES: Ship's Register or International Tonnage Certificate to show Customs Inspector ship's gross and nett tonnages.

REPATRIATION: Possible, but a few days advance notice of crew replacement to Agents required, since Immigration Office is located in Imari City and Customs House in Sasebo City.

AIRPORTS: International airport is in Fukuoka, distance about 120 km., and local airport is in Nagasaki, distance about 100 km. from Matsuura.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

POLICE/AMBULANCE/FIRE: Report to Security's Office located at West end of Berth "CB-1".

TELEPHONES: No arrangements for placing telephones on board vessels. Calls may be made from telephone in power station.

SHORE LEAVE: Local Immigration Offices issue Crew Landing Permit valid for 7 days and for Matsuura City only. Special permission is required in case of crew going outside of the city limits for ship's official business.

AUTHORITY: Kyushu Electric Power Co.Ltd., Matsuura Power Station Electric Power Development Co.Ltd., Matsuura Thermal Power Station.

Nishikyushu Kyodo Kowan Co.,Ltd., 458-1, Aza-Sezaki, Shirahama-Men, Shisa-Cho, Matsuura City, Nagasaki Pref., Japan 859-45. *Tel:* 0956-72-5353. *Telex:* 7482-28. *FAX:* 0956-72-4808. *Contact:* Marine Superintendent.

MATSUYAMA: 33.52 N. 132.42 E. (See Plan)

DOCUMENTS:

Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
6 Crew Lists including Passport Numbers.
6 Passenger Lists.
1 Stores List.
3 Ports of Call Lists.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Inland Sea Pilotage should preferably be arranged through Agent via Nagasaki Radio giving 72 hours' notice. Urgent correction of ETA outside business hours should be cabled direct to Pilot Station. Inland Sea Pilot Association covers all Inland Sea ports. Pilotage compulsory for vessels over 10,000 g.r.t. when passing Osaka Bay, Akashi Route, Bisan Seto Route and/or Kurushima Channel. Pilots obtained from 1 of 3 Pilot Stations dependent upon vessel's last port of departure and at Master's discretion. Pilotage available throughout 24 hours and 72 hours' advance notice preferred, thereafter advising any alterations. Most Inland Sea Pilots also act as Harbour Pilots up to berth or anchorage at destination.

Note: VHF communication available with Inland Sea Pilot stations. Also see "Shipmaster's Reports" before first port.

1. Wadamisaki, at entrance to Kobe (vessels transitting Kii Straits) Position Lat: 34° 35' N., Long: 135° 08' 24" E. Telegraphic address "Anjin Kobe".

2. Sekisaki, 3 miles South of Sekisaki lighthouse (vessels transitting Bungo Channel). Position Lat: 33° 13' N., Long: 131° 55' 38" E. Telegraphic address "Anjin Moji". In event bad weather, recommended vessels proceed for shelter as near as possible, having due regard to safety, to Sekisaki Pilot Station.

3. Hesaki, at East side of Kanmon (Shimonoseki) Straits. Position Lat: 33° 57' N., Long: 131° 03' E.

4. Tomogashima Pilot Station: Lat. 34° 10' N., Long. 135° 00' E.

ANCHORAGE: The port faces Iyo-Nada and located near Bungo Straits. Entrance open to Iyo-Nada towards West, but port protected by West breakwater and small island off Northern part of approaches where holding ground good. During Winter months strong N.W. wind prevails causing heavy swell at anchorage. Depth of water 17 m. – 25 m.

RESTRICTIONS: *Oil tanker berth:* Vessel drawing less than 11.5 m. can moor and unmoor at half-flood during daytime but vessels drawing 11.5 m. or more advised to await high water.

Dry cargo is logs only and cargo working carried out at anchorage of Umaiso and Yura Bay.

Yura Bay: Vessels no longer than 110 m. can berth. Daytime entry only regardless of tide and current.

MAX. SIZE: *Cosmo Matsuyama Oil Co. Ltd., Matsuyama Factory, Genyu Sambashi:* Max. 50,000 d.w.t. Max. LOA, 240 m. Max. safe draft 12.0 m.

Umaiso Bay: Length of vessel 160 m.; breadth no limit; draft 15 m.

Yura Bay: Length 110 m.; breadth no limit; draft 10 m.

Also see "Berthing".

HEALTH: Radio Pratique available. At first port of call in Japan, vessel must obtain Free Pratique. Quarantine Officers will attend vessel only from daylight to sunset and Master to show all Vaccination Cards, Derat Exemption Certificate. In case vessel arrives from cholera-infected area within 10 days, Master must advise crew and passengers' health condition to respective Quarantine Office through ship's Agent prior to arrival and close all soil pipes before entering port.

Also see "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

TUGS: For tankers: Join vessel at Quarantine anchorage, using tug's lines without charge. For dry cargo vessel, no tug required for berthing and unberthing in normal conditions.

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by radio.

Name	*Length* (m.)	*Depth* (m.)	*Max. Draft* (m.)	*Capacity* (g.r.t.)	*Main Cargoes Handled*
Ohkaga 10,000 ton Wharf					
Gaiko No. 1	370	10.0	9.0	10,000	General, logs.
Gaiko No. 2	390	7.5	7.5		General.
Ohkaga 5,000 ton Wharf	230	5.5	5.5	4,000	
Zaimoku Wharf	370	10.0	10.0	16,000	Logs.

(Imazu Wharf) – See "Note".

Note: Closed port Lat. 33° 46.79' N., Long. 132° 41' 49.06 " E. Permission for entry granted by Ministry of Transport. Customs formalities are to be done at anchorage of open port area prior to berthing at Zaimoku Wharf.

STEVEDORES: At least 24 hours' prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gears not rigged on berthing, stevedores will do same for ship's crew at additional cost. Overtime surcharges 0630 hrs. – 0830 hrs., 1630 hrs. – 2130 hrs. 60% additional of basic stevedorage; 2130 hrs. – 0600 hrs. next morning 120% additional; Sundays/holidays 100% additional.

MEDICAL: No advance notice required unless urgent.

TANKERS: *Cosmo Berth:* Length 400 m., depth 12.0 m.

Manifold: 1×12 in. for loading/discharging Naphtha and Kerosine (rate 1,800 cu.m./hr.). 1×12 in. for loading/discharging diesel oil and fuel oil (rate 1,100 cu.m./hr.). 3×6 in. (rubber hoses) for loading/discharging Mono-Ethylene Glycol (rate 300 cu.m./hr.).

DENSITY: Anchorage 1015. Berth 1015.

FRESH WATER: *Cosmo Matsuyama Oil Co.Ltd., Genyu Sambashi:* Can be supplied by shore line with capacity 25 t.p.h.

Anchorage: Can be supplied by 60 ton barge with capacity 60 t.p.h. Strong winds prevail during Winter months, when no water can be supplied.

FUEL: All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, Osaka Bay and Kanmon Port. At all other ports bunkers will be lightered from the nearest bunker stock ports at maximum 7 days' prior notice. Also see "Moji - Fuel".

CONSULS: Consulates in Kobe.

REPAIRS: Only minor repairs.

DRY DOCKS: None. Nearest at Kawasaki Heavy Industries Ltd., Sakaide; Hitachi Shipbuilding & Engineering Co. Ltd., Innoshima and Mukaishima, dimensions of those docks as follows:

Kawasaki Heavy Industries Ltd., Sakaide. Dock No. 2 for 500,000 d.w.t. vessel 450 m.×72 m.×12.3 m. Only used presently for shipbuilding and after services.

Hitachi Shipbuilding & Engineering Co. Ltd., Innoshima Dockyard. Dock No. 1 for 20,000 d.w.t. vessel 175 m.×25 m.×25.62 m.×9.10 m. Dock No. 3 for 130,000 d.w.t. vessel 282.50 m.×47 m.×11.33 m.

Hitachi Shipbuilding & Engineering Co. Ltd., Mukaishima Dockyard. Dock No. 1 for 3,000 d.w.t. vessel 86.18 m.×13.60 m.×6.80 m. Dock No. 2 for 8,500 d.w.t. vessel 125 m.×18 m.×7.40 m. Dock No. 3 for 25,000 d.w.t. vessel 175 m.×29 m.×9 m.

GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless ship's crew can complete it before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 50 cigarettes to take ashore but no spirits.

REPATRIATION: Possible.

AIRPORT: Matsuyama Airport. Services to Tokyo, Osaka and Nagoya by ANA and JAL. Services to Fukuoka, Miyazaki and Kagoshima by Japan Air Systems.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

POLICE/AMBULANCE/FIRE: Police 110; Ambulance 119; Fire 119.

TELEPHONES: No facilities for placing telephones on board.

SERVICES: Only at Kobe.

SHORE LEAVE: Immigration issue shore passes valid for 7 days if vessel only calling at one port in Japan or 15 days if vessel calling at more than 2 ports in Japan, further extension possible.

AUTHORITY: Matsuyama Marine Safety Agency, Kaikan-Dori, Matsuyama, Japan. *Tel:* (089) 951-1197. *Contact:* Port Captain.

MATSUZAKA: 34.37 N. 136.34 E. (See Plan)

Status: Closed Port.

LOCATION: Located at centre of Mie Prefecture, about 55 km. South from Yokkaichi in position Lat. 34° 36' 47" N., Long. 136° 33' 51" E.

Closed port (not open port) for Japanese Customs and Maritime Laws. Foreign flag ships are not allowed to enter the port directly, and vessel is requested to obtain the permission of Maritime Transport Bureau and Customs' House at one of the open port in Japan before proceeding to Matsuzaka.

DOCUMENTS: Also see "Entry Formalities".

To Yokkaichi Transport Bureau: The vessel must obtain permission to enter "Closed-Port" beforehand.

Application for Permission to enter Closed-Port. – 1 original and 4 copies.
Ship's Register – 1 copy.
Crew List – 1 copy.
Cargo Manifest – 1 copy.
Bills of Lading – 1 set of copies.

At Yokkaichi Anchorage: If vessel comes directly from foreign port (Agents board for formalities after Free Pratique).

To Yokkaichi Transport Bureau:
Ship's Register – 1 original.
Crew List – 1 copy.

* Yokkaichi Transport Bureau issues Permission for Entry into Closed-Port.

To Yokkaichi Customs:
Ship's Register – 1 original.
International Tonnage Certificate – 1 original.
Inward/Outward Declaration – 1 copy/2 copies (Prepared by Agents).
Ports of Call List – 1 copy.
Crew List – 1 copy.
Crew's Baggage List – 1 copy.
Ship's Stores List – 1 copy.
Free Pratique Certificate – 1 original.
Permission for Entry into Closed-Port – 1 original.
Application for Permission for Entry into Closed-Port – 3 sheets (prepared by Agent).
Application for Exemption Tonnage Dues Payment. – 3 sheets (prepared by Agent).

To Yokkaichi Quarantine: At anchorage, Quarantine Inspector boards to issue Free Pratique.
Declaration of Health – 1 copy.
Vaccination List – 1 copy.
Crew List – 1 copy.
Ports of Call List – 1 copy.
Ship's Register – original.

Matsuzaka Berth:

To Yokkaichi Immigration (issuing Shore Pass):
Inward/Outward Declaration (Prepared by Agent) – 2 copies for arrival/departure.
Crew List – 1 copy.
Ports of Call List – 1 copy.

To Tsu Customs:
Nearly same as Yokkaichi Customs above.

To Matsuzaka Port Authority and Yokkaichi Maritime Safety Agency: (For each Authority):
Inward/Outward Declaration – 1 copy.
Crew List – 1 copy (M.S.A. only).

* Agents carry out above formalities.

Entry Formalities:

Customs: (a) If vessel is coming from a foreign port to Matsuzaka directly, Customs formalities must be done at Yokkaichi Anchorage. After entry and paying "Closed-Port Dues" at Yokkaichi Customs, the vessel is allowed to proceed to Matsuzaka. After berthing in Matsuzaka, entry to Matsuzaka is done at Tsu Customs. Agents carry out the above entry formalities.

(b) If the vessel is coming from a Japanese port, Customs entry is done at Tsu Customs, after berthing, by Agents.

Immigration: Yokkaichi Immigration Office only.

M.S.A.: Maritime Safety Agency at Yokkaichi has jurisdiction at Matsuzaka.

PILOTAGE: Daytime service for berthing/unberthing. Pilot is compulsory for vessels of 10,000 g.r.t. or more. Vessels of less than 10,000 g.r.t. take a pilot at Master's option.

Pilot boarding point for Irago Bay Pilot:

Entering Ise Bay: Lat. 34° 30.8' N., Long. 137° 06.9' E. (Coming from East). Lat. 34° 28.3' N., Long. 137° 03.8' E. (Coming from South).

Unberthing: Pilot boards at berth. Pilot comes from Morozaki Pilot Station.

Harbour Pilot for berthing/unberthing: Harbour Pilot comes on board from Yokkaichi or Nagoya, by tug or car.

ANCHORAGES: In vicinity of Lat. 34° 38' N., Long. 136° 36' E., sand or mud bottom.

APPROACHES: Matsuzaka Port Fairway is 130 m. wide and has a depth of 7.5 m.

Tidal Range: H.W.L. + 2.102 m. L.W.L. + 0.144 m.

HEALTH: No quarantine station at Matsuzaka. Ships calling at Matsuzaka directly from a foreign port have to call Yokkaichi first, where Quarantine Anchorage is located in vicinity of Lat. 34° 56' 15.5" N., Long. 136° 40' 40.0" E., where Free Pratique is granted, after which vessel proceeds to Matsuzaka.

Also see "Documents" and "Late Reports".

VHF: No VHF service in Matsuzaka. Nagoya Port Radio on VHF Channel 16.

RADAR: No radar service in Matsuzaka.

TUGS: No tugs stationed in Matsuzaka. Tugs come from Yokkaichi, Nagoya or Mikawa Bay Station.

Two tug companies in service:

Tug charge by Sanyo Kaiji Co.Ltd.
  Yen 448,400/day/tug.
  Yen 685,700/two days or more/tug.

Tug charge by Nishinihon Eisen Co.Ltd.
  Yen 240,000 + (tug charge/hr. × hrs.) for one day's work.
  Yen 240,000 × 1.5 + (tug charge/hr. × hrs.) two days' or more.

Line Handling: Available in Matsuzaka.

BERTHING: 16 public berths available.

Name of Berth	*Depth* (m.)	*Length* (m.)	*Capacity* (d.w.t.)	*No.of Berths*
Ohguchi	7.5	390.0	5,000	3
North	5.5	86.5	2,000	1
North	4.5	476.9	700	7
Central	4.5	306.0	700	5

CRANES: No shore cranes at the wharves. Mobile crane available locally.

BRIDGES: None.

STEVEDORES: This service is rendered from Yokkaichi or Nagoya.

MEDICAL.: Hospital and clinics are located in Matsuzaka.

FRESH WATER: Available at all berths by pipeline.

REPAIRS: Only minor repairs possible.

CONSULS: No consuls in Matsuzaka.

SURVEYORS: No surveyors in Matsuzaka. Surveyors are available from other cities.

CUSTOMS ALLOWANCES: Tobacco, wine and spirits are not sealed in ship's bonded store by the Customs. Each crew can consume freely on board the vessel (effective as from 18th February 1991).

REPATRIATION: Possible. Due to no Immigration Office in Matsuzaka, legal formalities must be undertaken at Yokkaichi in advance.

AIRPORT: Nagoya Airport, about 3.5 hours from Matsuzaka by car/train.

TIME: GMT plus 9 hours. No alterations to clocks during year.

POLICE/AMBULANCE/FIRE: Police 110. Ambulance/Fire 119.

EMERGENCY CO-ORDINATION CENTRE: If emergency (fire, pirates, robbery, etc.) breaks out, contact the 4th Regional Maritime Safety Headquarters by the following:

1. VHF Channel 16: "Nagoya Hoan".
2. Cables: Code J.N.T.
3. Telex: 4934961 Jmsana.
4. Distress call: 2182 kHz.
5. Tel: 052-661-1611 (0900 hrs. – 1700 hrs., Monday to Friday), 052-661-1616 (outside office hours).

GENERAL:

Shore Pass: Yokkaichi Immigration Office issues shore passes. The Agent brings all passports of crew members, application and Inward Declaration to Yokkaichi.

Immigration: No Immigration Office at Matsuzaka. The service is available from Yokkaichi.

Master is requested to send the latest Crew List to Agents in advance.

Shipchandler: Available from Yokkaichi.

Customs: No Customs Office located in Matsuzaka.

Telephone Numbers:

Customs:	
Yokkaichi	0593-52-3829
Tsu	0592-34-4161
Immigration:	
Yokkaichi	0593-52-5695
Port Authority:	
Matsuzaka	0598-52-1111 or 0598-51-3482
Pilots:	
Irago Bay	0569-21-7487
Harbour (Nagoya)	052-651-9111
Harbour (Yokkaichi)	0593-52-6816
4th Regional M.S.A.	
Nagoya	052-661-1611
Yokkaichi	0593-51-3161
Transport Bureau:	
Yokkaichi	0593-52-2883

MIIKE: 33.00 N. 130.23 E. (See Plan)

DOCUMENTS: When vessel arrives direct from a foreign port, Customs Officials will board to search, and the following documents are to be submitted:

Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
4 Crew Lists, including Passport Numbers.
4 Passenger Lists.
4 Ports of Call Lists (Voyage Memo).
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Compulsory; Pilots board at the point Lat. 32° 59' N., Long. 130° 23' E.

Shimabara Bay Pilot (Kuchinotsu Pilot) not compulsory. Pilots board 1 mile South of Kuchinotsu Lighthouse, Lat. 32° 35' N., Long. 130° 12' E. (Advise ETA Kuchinotsu 48 hours prior to arrival.)

Vessel should proceed to Miike Anchorage by itself in case of Pilot not being arranged.

Bay pilot boat time restricted to 0600 hrs. – 2200 hrs.

ANCHORAGES: Lat. 32° 59' N., Long. 130° 23' E. Harbour limit within circle of 2,700 m. radius centering on lighthouse at West end of Northern Breakwater. Roadstead affords safe anchorage, mud and sand.

RESTRICTIONS: Vessel shall dock or depart on HW. Ebb stream begins about 30 minutes before HW and runs to South for 6 hours. Max. current 3 knots at entrance of channel. Flood stream begins at about LW time and runs to North for 6 hours. Maximum of 3 knots at lighthouse. Channel 1,800 m. long, 137 m. broad from jetty to jetty, 45.7 m. width at bottom. 7.3 m. depth at LWOST.

MAX. SIZE: No limitation for breadth and length, but max. drafts are as follows: 29 ft. 6 in. up to 20,000 d.w.t.; 26 ft. 4 in. up to 25,000 d.w.t.; 24 ft. 6 in. up to 30,000 d.w.t.

HEALTH: At first port of call in Japan, vessel must obtain Free Pratique by radio, otherwise Quarantine Officiers attend from Hakata on arrival. Master to show all Vaccination Cards and Derat Exemption Certificate. In case vessel arrives from cholera infected area within 10 days, Master must advise crew and passengers' health condition to respective Quarantine Office through ship's Agent prior to arrival, and close all soil pipes before entering port.

Formalities will be carried out 2 miles off lighthouse (Lat. 33° 0' 8" N., Long. 130° 23' 50" E.). Radio Pratique available.

Also see "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

TUGS: 3 tugs available. 2×1,100 h.p.; 1×800 h.p.

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by radio.

Berth	*Length* (m.)	*Depth* (m.)	*Draft* (m.)	*Capacity*	*Shore cranes & pipelines*
North Quay (No. 6, 7, 8)	520	10.7	10.0	2 ×20,000 1 × 5,000	1×10 tons 1 unloader*
Dock Pier	90	8.5	8.2	1 × 8,000	1×10 tons
Dock Quay	421	8.5	8.2	2 × 8,000	2 coal loaders
Quay No. 5	92	10.7	10.0	1 ×10,000	1 coal loader
New Quay No. 5	68	10.7	10.0	1 ×10,000	1 coal loader

*One shore unloader at North Quay No. 8. Mainly used for vessels over 5,000 d.w.t.

STEVEDORES: At least 24 hours' prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew at additional cost. Overtime surcharges 1700 – 1900 hrs. 50% additional of basic stevedorage; 2100 – 0500 hrs. next morning 130% additional; Sundays/holidays 100% additional.

MEDICAL: No advance notice required unless urgent.

DENSITY: Average 1025 in Winter, 1020 in Summer, subject to weather and tide current.

FRESH WATER: Available at wharf only. Delivery 20 t.p.h. – 25 t.p.h.

FUEL: All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, Osaka Bay and Kanmon Port. At all other ports, bunkers will be lightered from the nearest bunker stock port, at maximum 7 days' prior notice.

CONSULS: No local representatives. Marine Note of Protest can be attended to by local notary public.

REPAIRS: Minor repairs only.

DRY DOCKS: See "Moji".

GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches (according to charter party). If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 200 cigarettes to take ashore but no spirits.

SURVEYORS: (1) NKKK cargo inspectors available. (2) Lloyd's Register, American Bureau and Bureau Veritas in Miike.
REPATRIATION: Possible.
AIRPORT: Nearest airport is Fukuoka Airport, about 2 hours drive from Miike. Served by many international and national carriers.
TIME: GMT plus 9 hours. No alterations made to clocks during year.
HOLIDAYS: 15th August and 1st January are stevedores holidays.
POLICE/AMBULANCE/FIRE: Police 110, Ambulance/Fire 119.
Public telephone booth available near the berth.
TELEPHONES: No facilities for placing telephones on board. KDD Overseas public telephone booth in the port.
STORING: See "Prelims".

1. By truck.
2. Barge storing only when loading steel products.
3. Trucks can proceed alongside at berth.
4. Fork lift trucks available.
5. If any regulations in force agent will arrange documents.
6. Only a few riggers available. Extra riggers come from Moji or Kobe.

GARBAGE DISPOSAL: Not available.
WASTE OIL DISPOSAL: Not available.
SEAMAN'S CLUBS: None.
CURRENCY: Japanese Yen (Y).
SHORE LEAVE: Local Immigration Offices issue crew permit valid for only 15 days, but 15 days' extension possible if ship stays longer.
AUTHORITY: Miike Port Office, Mitsui Mining Co., Ltd., 1 Shinkomachi, Omuta, Fukuoka 836, Japan. *Tel:* (0944) 57-3126. *Telex:* 744405 Omtmpo J. *Cables:* MPO Omuta. *FAX:* (0944) 57-3126. *Contact:* Takamoto Tajima, General Manager.

Miike Maritime Safety Agency Office, 1 Shinko-machi, Omuta-Shi, 836 Fukuoka Japan. *Tel:* (0944) 53-0521. *FAX:* (0944) 56-7339. *Contact:* Yoshio Obata, Harbour Master.

MINAMATA: 32.11 N. 130.21 E. (See Plan)

PORT LIMITS: The sea surrounded by the circular arc with a radius of 1,700 m. centred upon Myojin-Zaki (Lat. 32° 11' 59" N., Long. 130° 22' 30" E.), and the line from the point of Myojin-Zaki to Tsutsuwa-Zaki (Lat. 32° 10' 50" N., Long. 130° 22' 27" E.) and the coast.
DOCUMENTS: When vessel arrives direct from a foreign port, Customs Officials will board to search, and the following documents are to be submitted:
Ship's Register.
International Tonnage Certificate.
Voyage Memo (Ports of Call).
3 Crew Lists, including Passport numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc., (only at first port of call in Japan).

Ship's Agents will prepare Inward/Outward Declaration, Cargo Manifest and Cargo Manifest in Transit, using specific forms. Therefore ship's Agents should be provided with necessary information about details of cargoes in advance.
PILOTAGE: Not compulsory, inward or outward. Pilot station Lat. 32° 11' N., Long. 130° 04' E. (1 mile South of Toshima-Lighthouse of Ushibuka). (Acting also as an Agent for foreign vessels). Senko Co. Ltd., Minamata Branch, located at 2-34 Umedo-Cho 1-chome, Minamata City, Kumamoto Pref. Tel: 09666-3-4117. Telex: 764941 Senko J.
ANCHORAGE: Within port limits.
RESTRICTIONS: A Pilot is not available after dark for an outgoing vessel but around-the-clock for incoming vessels. Availability of pilot is dependent on the tidal conditions.
MAX. SIZE: Max. d.w.t. 40,000 tons at anchorage – Length 190 m., depth 10.5 m. Max. d.w.t. 10,000 tons at Hyakken Wharf – Length 220 m., depth 6.5 m. The tidal difference between high and low water (spring tides) is 4.1 m.
HEALTH: At first port of call in Japan, vessel must obtain Free Pratique. Quarantine Officers will attend vessel only from daylight to sunset, and Master to show all Vaccination Cards and Derat Exemption Certificate. In case vessel arrives from cholera infected area within 10 days, Master must advise crew and passengers' health condition to respective Quarantine Office through ship's Agent prior arrival, and close all soil pipes before entering port.

Ordinary quarantine must be undertaken at the Minamata-Yatsushiro Branch Office of the Nagasaki Quarantine Station. Quarantine inspection will be carried out in position Lat. 32° 12' 30" N., Long. 130° 20' 40" E. This position is about 20 minutes by boat from the port.

Radio Pratique available. Quarantine Office: Tel. 0966-62-4016.

Also see "Late Reports".
RADIO: Recommended that Master communicates with Agent through Nagasaki Radio, which covers all ports in Japan.
VHF: Not available.
TUGS: 2 tugs available. 1×2,300 h.p. and 1×200 h.p. Owned by Senko Co. Ltd.
BERTHING: Hyakken Midori Pier: Length 220 m., depth 6.5 m.

Also see "Developments".
CRANES: Not available. A vessel is required to use her own gear alongside the quay.
STEVEDORES: At least 24 hours' prior notice, excluding Sundays and holidays, required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew at additional cost. Overtime surcharges 1630 hrs. – 2130 hrs. 60% additional of basic stevedorage; 2130 hrs. – 0500 hrs. next morning 130% additional; Sunday/holiday 100% additional. Name of company: Senko Co.Ltd., Minamata Branch.
MEDICAL: Advance notice required.
FRESH WATER: Available from hydrant of Hyakken Midori Pier, rate approx. 150 – 200 t.p.h.
CONSULS: None. Marine Note of Protest can be undertaken by local notary public.
REPAIRS: Only minor repairs possible.
DRY DOCKS: Not available.
SURVEYORS: Will attend from Miike (N.K.K.K.).
GANGWAY/DECK WATCHMEN: Not specially required, unless passengers or valuable cargo on board.
OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work, unless crew can complete it before berthing.
CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificate sometimes required by stevedores, when cargo gear maintenance appears to be poor.
CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore, but no spirits.
REPATRIATION: Minamata Branch Office of the Fukuoka Immigration Office arranges necessary repatriation.
AIRPORT: Nearest is Kumamoto Airport, about 2 hours drive from Minamata. ANA and JAS for domestic service.
TIME: GMT plus 9 hours. No alterations made to clocks during year.
POLICE/AMBULANCE/FIRE: Police 110, Ambulance and Fire 119. The Minamata Police Station located at 2-4 Tenjin, Minamata City. Tel: 09666-3-2171.

Minamata Fire Department, 523, Jinnai-Kitazono, Minamata City. Tel: 09666-3-1191.
TELEPHONES: There are no arrangements for placing telephones on board.
SHORE LEAVE: Local Immigration Offices issue shore passes valid for only 15 days, when Minamata is first port of call in Japan. Extension possible if ship stays longer.
DELAYS: An incoming foreign vessel is to be given priority, but delays will be expected when the quay is occupied by vessels.
DEVELOPMENTS: Hyakken New Wharves (7.5 m. and 10 m. depth).
AUTHORITY: Minamata Port Office, 2-21 Minatomachi, 3-Chome, Minamata City, Kumamoto Pref., Japan. *Tel:* 0966-63-2449.

MISHIMA-KAWANOE: 34.00 N. 133.30 E. (See Plan)

LOCATION: Located on central Southern coast of Setonaikai (Inland Sea), and on border of Ehime Prefecture and Kagawa Prefecture.
DOCUMENTS:
Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
3 Voyage Memo (Last 3 months).
5 Crew Lists, including Seaman's Book number and expiry date.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc., (only at first port of call in Japan).

Ship's Agents will prepare Inward/Outward Declaration, Cargo Manifest and Cargo Manifest in Transit, using specific forms. Therefore, ship's Agents should be provided with necessary information about details of cargoes in advance.
PILOTAGE: Inland sea pilotage should preferably be arranged through Agent by cable or telex, giving 72 hours notice. Urgent correction of ETA outside business hours should be cabled direct to Pilot Station.

Inland Sea Pilot Association covers all inland sea ports. Pilotage compulsory for vessels over 10,000 g.r.t. Pilots obtained from one of two Pilot Stations, depending upon vessel's last port of departure and at Master's discretion. Pilotage available throughout 24 hours, and 72 hours advance notice preferred, thereafter advising any alterations. Most inland sea pilots also act as harbour pilots up to berth or anchorage at destination.
Note: VHF communication available with Inland Sea Pilot Stations.

Also see "Shipmaster's Report" before first port.

1. Wadamisaki, at entrance to Kobe (vessels transiting Kii Straits). Position Lat. 34° 34.09' N., Long. 135° 07.54' E. Telegraphic address "Anjin Kobe".

2. Sekisaki, 3 miles South of Sekisaki Lighthouse (vessels transiting Bungo Channel). Position Lat. 33° 13' N., Long. 131° 54' E. Telegraphic address "Anjin Moji". In event of bad weather, recommended that vessels proceed for shelter as near as possible, having due regard to safety, to Sekisaki Pilot Station.
ANCHORAGES: Quarantine Anchorage Position: Lat. 33° 59.40' N., Long. 133° 31.36' E.
RESTRICTIONS: Inland Sea (Setonaikai):

1. Akashi Strait and Bisan Seto: All vessels over 200 m. LOA shall navigate in Bisan Seto in daytime only, and also vessels over 250 m. LOA to have an escort boat when navigating in Akashi Strait and Bisan Seto respectively, in accordance with the Maritime Regulations. Permissible draft on arrival 16 m., but 12 m. on departure.

2. Kurushima Strait: Vessels over LOA 200 m. shall navigate in Kurushima Strait at slack water in daylight, and vessels over LOA 250 m. and up to 300 m. to have an escort boat when navigating in Kurushima Strait.

The draft restrictions are as follows: The permissible draft for LOA from 200 m. – 250 m. shall be less than 13.0 m., and LOA from 250 m. – 300 m. shall be less than 11.0 m.

Escort boat: 2 escort boats with VHF available. Max. speed 24 knots, cruising speed 18 knots.

MAX. SIZE:

Berth/Wharf	*Approx. Max. LOA* (m.)	*Max. draft* (m.)
Muramatsu No. 1	120	6.8
Muramatsu No. 2	290	13.5
Muramatsu No. 3	80	5.0
Muramatsu No. 4	120	6.8
Muramatsu No. 5	180	13.5
Muramatsu No. 6	290	13.5
Muramatsu No. 7	120	6.8
Muramatsu No. 8	180	10.8
Ohe No. 1	80	8.0
Ohe No. 2	200	10.8
Ohe No. 3	70	10.8
Ohe No. 4	180	10.8
Daio Dolphin	180	9.0

HEALTH: Radio Pratique available. At first port of call in Japan, vessel must obtain Free Pratique. Quarantine Officers will attend vessel only from daylight to sunset. Master to show all Vaccination Cards and Derat Exemption Certificate. In case vessel arrives from cholera infected area within 10 days, Master must advise crew and passengers' health condition to respective Quarantine Office, through ship's Agent, prior to arrival, and close all soil pipes before entering port.

Also see "Late Reports".

RADIO: Recommended that Master communicates with Agent through Nagasaki Radio, which covers all ports in Japan.

TUGS: 1 tug available in Mishima-Kawanoe Harbour. Additional tugs are available from other inland sea terminals.

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by telex. Berthing/unberthing not carried out during hours of darkness.

Berth	*Length* (m.)	*Depth* (m.)	*Max.Size* (d.w.t.)	*Cargoes*
Muramatsu No.1	260	7.5	5,000×2	Paper, Pulp and oil.
Muramatsu No.2	350	15.0	100,000×1	Wood chips, Paper and Pulp.
Muramatsu No.3	90	5.5	2,000×1	Paper and Pulp.
Muramatsu No.4	260	7.5	5,000×2	Paper, Pulp and Containers.
Muramatsu No.5	240	15.0	60,000×1	Wood chips, Coal, Paper and Pulp.
Muramatsu No.6	350	15.0	100,000×1	Wood chips, Coal, Paper and Pulp.
Muramatsu No.7	260	7.5	5,000×2	Paper, Pulp and Containers.
Muramatsu No.8	240	12.0	30,000×1	Pulp.
Ohe No.1	110	9.0	3,000×1	Oil.
Ohe No.2	240	12.0	30,000×1	Wood chips.
Ohe No.3	72	12.0	3,000×1	Coal.
Ohe No.4	220	12.0	30,000×1	Pulp logs.
Daio Dolphin	180	8.0	10,000×1	Wood chips.

STEVEDORES: Stevedores available at all times for loading paper products and discharging forest products, raw materials, etc.

MEDICAL: No advance notice required, except in an emergency.

DENSITY: The density is not affected by water from the river.

FRESH WATER: Available at all berths.

FUEL: Bunkers by barge from Osaka, Mizushima, Tokuyama, or Sakaide area. Advance notice required.

CONSULS: None.

REPAIRS: Daio Kaiun Ltd. provide repair services.

DRY DOCKS: None.

OPENING/CLOSING HATCHES: For discharging raw materials, opening/closing hatches must be carried out by ship's crew before berthing.

CERTIFICATES: Ship's Register to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificate sometimes required by stevedores, when cargo gear maintenance appears to be poor.

REPATRIATION: Can be arranged.

AIRPORT: Nearest domestic airports are at Takamatsu (80 km.) and Matsuyama (90 km.), but Tokyo and/or Osaka are preferable, due to convenience of international flights.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

TELEPHONES: No arrangements for placing telephones on board. There is a public international telephone booth near Muramatsu No. 5 Berth.

SHORE LEAVE: Local Immigration Offices issue shore passes, valid for 7 days, which is extendable if ship stays longer.

AUTHORITY: Marine Safety Agency, Mishima-Kawanoe Branch Office, 6-45 Kamiya-Cho, Iyimishima City, Ehime Pref., 799-04 Japan. *Tel:* (0896) 24-4498. *FAX:* (0896) 24-4498. *Contact:* Shizuo Demoto, Harbour Master.

MISUMI: 32.38 N. 130.27 E. (See Plan)

PORT LIMITS: The sea surrounded by the line from Seto-no-hana to the lighthouse on Oyano Island, the line from Togasaki on the same island to Daishiro-bana on Chizoku Island, the line from Daishiro-bana to Usagi-bana on Tobase Island, the line West to Tobase Bridge, and the coast.

DOCUMENTS: When vessel arrives direct from a foreign port, Customs Officials will board to search, and the following documents are to be submitted:

Ship's Register.
International Tonnage Certificate.
Voyage Memo (Ports of Call).
3 Crew Lists, including Passport numbers.
3 Passenger Lists.
1 Stores List.
1 Bill of Lading (only for discharge).
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc., (only at first port of call in Japan).

Ship's Agents will prepare Inward/Outward Declaration, Cargo Manifest and Cargo Manifest in Transit, using specific forms. Therefore, ship's Agents should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Not compulsory for berthing or unberthing. Pilot station (acting also as an Agent for foreign vessels).

Misumi Branch Office of the Nippon Tsuun K.K. located at Higashiko 1, Misumi-machi, Uto-gun, Kumamoto Pref. Tel: 0964 (52) 3121/3125.

Misumi Kaiun K.K. located at Higashiko 1, Misumi-machi, Uto-gun, Kumamoto Pref. Tel: 0964 (52) 3562 or 3278.

ANCHORAGES: Within port limits.

South Quarantine Anchorage:
Lat. 32° 33' 18" N., Long. 130° 29' 39" E.
North Quarantine Anchorage:
Lat. 32° 37' 39" N., Long. 130° 27' 05" E.

RESTRICTIONS: A pilot is not available after dark, also his availability depends on the tidal conditions.

MAX. SIZE: Maximum d.w.t. 15,000 tons from North entrance (Lat. 32° 38' N., Long. 130° 27' E.). 27,000 tons from South entrance (Lat. 32° 33' 18" N., Long. 130° 29' 39" E.). The tidal difference between high and low water is great (4 m).

HEALTH: Radio Pratique available.

At first port of call in Japan, vessel must obtain Free Pratique. Quarantine Officers will only attend vessel from daylight to sunset. Master to show all Vaccination Cards and Derat Exemption Certificate. In case vessel arrives from cholera infected area within 10 days, Master must advise crew and passengers' health condition to respective Quarantine Office through ship's Agent prior arrival, and close all soil pipes before entering port.

Also see "Late Reports".

RADIO: Recommended that Master communicates with Agent through Nagasaki Radio, which covers all ports in Japan.

VHF: Not available.

TUGS: 2 tugs owned by the Misumi Kaiun K.K., (1×1,100 h.p. and 1×400 h.p.).

BERTHING:

Quay	*Length*	*Depth*	*Capacity*
A	137 m.	8 m.	8,000 g.r.t.
B	160 m.	9 m.	10,000 g.r.t.
C	165 m.	9 m.	10,000 g.r.t.

CRANES: Nippon Tsuun owns 1 shore crane with capacity 65 tons. Misumi Kaiun owns 3 shore cranes with capacities 37 tons, 45 tons and 50 tons.

Vessels are sometimes required to do so, at the time of loading and discharging.

STEVEDORES: At least 24 hours' prior notice, excluding Sundays and holidays, required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedroes cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew at additional cost. Overtime surcharges 1630 hrs. – 2120 hrs. 60% additional of basic stevedorage; 2130 hrs. – 0500 hrs. next morning 130% additional; Sunday/holiday 100% additional.

MEDICAL: No advance notice required, unless urgent.

FRESH WATER: Available from the water supply facilities operated by the Kumamoto Prefecture.

FUEL: Not available.

CONSULS: None.

REPAIRS: Only light repairs possible.

DRY DOCKS: Small docks for less than 1,000 tons.

SURVEYORS: Available.

GANGWAY/DECK WATCHMEN: Not specially required, unless passengers or valuable cargo on board.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work, unless crew can complete it before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificate sometimes required by stevedores, when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore but no spirits.

REPATRIATION: Possible. Kumamoto Branch Office of the Fukuoka Immigration Office arranges necessary repatriation.

AIRPORT: Nearest is Kumamoto Airport, about 60 km. It is only served by domestic airlines to Tokyo, Osaka, and other Japanese airports.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

POLICE/AMBULANCE/FIRE: Police 110, Ambulance/Fire 119. The Oyano Police Station Misumi Police Box located at Higashiko, Misumi-machi, Uto-gun, Kumamoto Pref. Tel: 0964-52-3110. Nishi Branch Station of UKI Fire Department located at Nakamura, Misumi-machi, Uto-gun, Kumamoto Pref. Tel: 0964-52-2222.
EMERGENCY CO-ORDINATION CENTRE: Misumi Kaijo Haonbu (Misumi Maritime Safety Office) Tel: 09645 (2) 3103.
TELEPHONES: There are no arrangements for placing telephone on board.
STORING: Trucks may proceed alongside. Fork lift trucks not available. Contact Agent if riggers required.
SHORE LEAVE: Local Immigration Offices issue shore passes, valid for only 15 days, when Misumi is first port of call in Japan. Extension possible if ship stays longer.
DELAYS: Delays will be expected when quays are occupied by vessels or a Pilot cannot go on board because of the tidal conditions.
AUTHORITY: Misumi Port Office of the Kumamoto Prefecture, 1160 – 39, Oaza Misumiura, Misumi-machi, Uto-gun, Kumamoto Pref. *Tel:* 0964-52-2079. *Contact:* Port Director.

MITSUKOJIMA: 34.11 N. 132.31 E. (See Plan)

Port Status: Closed Port.

DOCUMENTS:
Ship's Register.
International Tonnage Certificate.
Last Ports Clearance.
Declaration Inward/Outward of Vessel (Agent will prepare).
5 copies Port of Call List.
6 copies Crew Manifest.
6 copies Passenger List.
1 copy List of Ship's Stores.
1 copy Declaration of Crew's Baggage.
Cargo Manifest (Agent will prepare).
1 copy Maritime Declaration of Health.
Customs Formalities: Formalities are to be carried out at ship's last port of call in Japan or Kure Port for entering Mitsukojima (Closed Port), prior to proceeding Mitsukojima Port.
PILOTAGE: Inland sea pilotage should preferably be arranged through Agent, by cable via Nagasaki Radio, giving 72 hours notice. Urgent correction of ETA outside business hours should be cabled direct to Pilot Station.
Inland Sea Pilot Association covers all inland sea ports.
Inland Sea Pilot boards at the following positions:
1. Vessels transiting Bungo Channel: Inland Sea Pilot boards at Sekisaki Pilot Station (33° 13' N., 131° 56' E.). Telegraphic address "Anjin Saganoseki".
2. Vessels transiting Kanmon Strait: Kanmon Strait Pilot boards at Mutsure Pilot Station (33° 59.5' N., 130° 52.6' E.) (compulsory for vessels over 10,000 g.r.t.). Telegraphic address "Kanmon Pilot Moji". Inland Sea Pilot boards at Hesaki Pilot Station (33° 58.0' N., 131° 01.1' E.). Telegraphic address "Anjin Moji".
Note: VHF communication with Pilot Station available as follows:

Name of Station	Call/Answer Channel	Communication Channel
Oita Port Radio (for Sekisaki)	16	14
Shimonoseki Port Radio (for Mutsure).	16	14

3. Most Inland Sea Pilots also act as harbour pilots up to berth or anchorage at destination. If vessel only requires harbour pilot, harbour pilot boards at Kure Quarantine Anchorage.
ANCHORAGES: No anchorage at Mitsukojima.
Vessel is able to anchor off Kure Port, if it arrives at night-time, or if berth is occupied by preceeding vessel. Depth is 20 m.
RESTRICTIONS: Berthing/unberthing from one hour after sunrise to one hour before sunset.
A portion of Nasami Strait (Hiroshima Bay) has a depth of 17.0 m. The Maritime Safety Agency request bottom clearance 10% of ship's draft plus 50 cm.
In the following cases, Inland Sea Pilot and Maritime Safety Agency request escort tug boat at Nasami Strait:
1. Tankers (over 50,000 d.w.t.), if vessel loaded with dangerous cargo.
2. Large vessels (LOA over 250 m.).
3. If vessel's draft over 15.0 m.
MAX. SIZE: LOA 303.59 m., 156,649 d.w.t., draft 17.40 m. (as per tidal condition).
HEALTH: At first port of call in Japan, vessel must obtain Free Pratique.
Radio Pratique is available.
Also see "Late Reports".
RADIO: Recommend that Master communicates with Agent through Nagasaki Radio, which covers all ports in Japan. Communication available with Agent, if vessel equipped with telex.
VHF: Hiroshima Port Radio on Channels 11, 12, 14 and 16.
RADAR: No radar station at Mitsukojima.
TUGS: Available from 2,600 h.p. to 3,300 h.p.
Normally tugs join off Kure Port, and usually tug's line used without extra charge.
BERTHING: Berthing/unberthing from one hour after sunrise to one hour before sunset.
Name of Wharf: Mitsukojima Wharf (private wharf).
Cargo: Salt.
Length/Depth: 192 m./17.0 m.
Permissible Draft/LOA: 16.5 m./303.59 m., draft of 17.4 m. available, depending on tidal conditions.
Capacity: 76,000 g.r.t.
CRANES: No cranes at Mitsukojima. Floating cranes (lifting capacity from 100 tonnes to 300 tonnes) are available from Kure or Hiroshima.
BULK CARGO FACILITIES: See "Berthing".
Discharge is by vessel's belt conveyor.
SPECIALISED CARGO HANDLING FACILITIES: None.
BRIDGES: No bridge restriction at Mitsukojima (Hiroshima Bay area).
STEVEDORES: Discharging of salt is on "Free in/out" basis. Therefore stevedorage is to receiver's account.
TANKERS: No facilities.
MEDICAL: No advance notice required, except after office hours, Sundays and holidays. Vaccination against cholera available.
DENSITY: 1023.
FRESH WATER: Available by water barge (capacity 330 tonnes) from Hiroshima port, 3 days' advance notice required.
Cost per tonne:
(1) Daytime of weekday Yen 1,000/tonne, overtime Yen 1,500/tonne.
(2) Daytime on Sundays/holidays Yen 1,500/tonne, overtime Yen 2,000/tonne.
FUEL: Most grades of domestic and bonded oil are available by barge with 3 days advance notice.
CONSULS: None.
REPAIRS: Minor repairs possible (attend from Kure or Hiroshima).
DRY DOCKS: No dry docks available (available at Kure port).
SURVEYORS: Cargo inspection is available (attend from Kure). Name of surveyors: Japan Marine Surveyor & Sworn Measurers Association, and New Japan Surveyors and Sworn Measurers Association.
Registration surveys are available (attend from Kure). Name of surveyors: Lloyd's Register of Shipping, American Bureau of Shipping.
GANGWAY/DECK WATCHMEN: Not required.
HATCHES: Opening/closing by crew.
CUSTOMS ALLOWANCES: Allowed 60 cigarettes only.
CARGO GEAR: No shore cranes at Mitsukojima port. Discharge is by vessel's belt conveyor.
REPATRIATION: Possible.
AIRPORT: Hiroshima Airport, distance from Kure approximately 35 km. Hiroshima/Tokyo (Haneda Airport), 11 flights per day (domestic airline). Hiroshima/Seoul, 7 flights per week (international airlines).
TIME: GMT plus 9 hours. No alterations made to clocks during year.
HOLIDAYS: Working possible on Sundays and national holidays, except New Year's Holidays (1st, 2nd and 3rd January).
POLICE/AMBULANCE/FIRE: Police Station (emergency) 110; Ambulance/Fire 119; or Kure Maritime Safety Agency (See below).
EMERGENCY CO-ORDINATION CENTRE: Kure Maritime Safety Agency. Tel: 0823-21-0110.
TELEPHONES: No arrangements for placing telephones on board.
SERVICES: All navigation apparatus can be serviced as required with 2 days advance notice.
BANKS: Hiroshima Bank, Kure Branch, 5-4, Hondori 3-chome, Kure, Japan. Tel: 0823-21-5141. Fax: 0823-24-5575.
Sumitomo Bank, Kure Branch, 1-14, Hondori 2-chome, Kure, Japan. Tel: 0823-22-4921. Fax: 0823-21-0724.
STORING: See "Prelims".
1. Ship's stores loaded by barge.
2. Available for loading ship's stores during discharging cargo.
3. Trucks cannot proceed alongside at the berth due to Mitsukojima being an island.
4. Cannot use forklift trucks at berth (usually loading ship's stores direct to vessel by ship's crane).
5. Must obtain Customs Clearance before loading ship's stores.
6. Available to employ riggers to assist with storing.
SHIP SUPPLY SERVICE: Makino Shipchandler, 5-1, Hondori 1-chome, Kure, Japan. Tel: 0823-21-4443. Fax: 0823-21-4899.
No craft or helicopters at Mitsukojima port.
SHORE LEAVE: Kure Immigration Officers issue shore passes, if crew members have valid passports or Seaman's Books.
REGULATIONS: Normal port regulations.
DELAYS: If vessel arrives at night-time, vessel must wait at anchorage.
GENERAL: Mitsukojima is a local port, which makes it difficult to arrange all requirements. At least 3 days notice required for most services.
AUTHORITY: Mitsukojima Transshipment Co.Ltd., 24-1, Tonoko 2-chome, Ondo-Cho, Akigun, Hiroshima Pref., Japan. *Tel:* 0823-52-2711.

MIYAKO: 39.39 N. 141.58 E. (See Plan)

DOCUMENTS:
For Quarantine
1 Statement by Ship's Master.
1 Crew List.
1 Passenger List (if any).
Yellow cards for all.
1 Derat Certificate.
For Immigration
1 Declaration of Inward Vessel.
Passport or Seamen's Book for all.
1 Crew List.
1 Application for shore pass.
For Customs
1 Last Port Clearance.
1 Declaration of Inward Vessel.
1 Crew List.
1 List of Crew's Baggage.
1 List of Ship's Store.
2 Cargo Manifest (Discharging).
1 Cargo Manifest (Through).
1 Certificate of Ship's Registry.

For Port Management Office
1 Declaration of Inward Vessel.
For Maritime Safety Base
1 Declaration of Inward Vessel.
1 Crew List.
1 Cargo Manifest (Discharging).
1 Cargo Manifest (Through).

Above documents to be prepared by Master before arrival.

Master to telegraph ETA and crew's health condition directly to Quarantine Miyako before arrival.

PILOTAGE: Not compulsory, but arrangeable at the Master's request. Pilot ordinarily boards at/around Quarantine anchorage, also available boarding at the Master's request at outer harbour which position is Heisaki light Northward 1.5 miles (Lat. 39° 40.5' N., Long. 142° 1.2' E.).

ANCHORAGES: Quarantine anchorage located at Lat. 39° 37.82' N., Long. 141° 59.3' E. Depth 16 m. – 22 m. Bottom mud and sand. Outside breakwater, care should be taken not to foul fishing nets.

Depth in inner anchorage 12 m. – 15 m.

RESTRICTIONS: Night entry and departure permitted subject to weather conditions.

MAX. SIZE: Draft 12 m. and LOA 240 m., breadth no restrictions.

Also see "Berthing".

HEALTH: Radio Pratique available.

Also see "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

TUGS: Normally join vessel on passage from anchorage. Tug's line used. One tug available 2,400 h.p. Additional tugs available from Kamaishi.

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by radio.

Berth	*Max.LOA* (m.)	*Max.Draft* (m.)	*Capacity* (d.w.t.)
Fujiwara Wharf			
F1, 2	260	7.5	2×5,000
F3	240	12.0	30,000
F4	180	4.5	2×700
F5	130	7.5	5,000
F6	130	7.5	5,000
F7	180	10.0	15,000
F8, 9	555	10.0	20,000
F10	390	7.5	5,000 (under construction)
F11	270	13.0	40,000 (under construction)

STEVEDORES: At least 24 hours' prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew at additional cost. Overtime surcharges 1700 – 1900 hrs. 50% additional of basic stevedorage; 2100 – 0500 hrs. next morning 130% additional; Sundays/holidays 60% additional.

MEDICAL: No advance notice required unless urgent.

TANKERS: No facilities.

DENSITY: Average 1019.

FRESH WATER: Available from wharf about 50 t.p.h. but no water barge. In case vessel urgently requires water at anchorage, tug-boat arrangeable for this purpose.

FUEL: Domestic oil is available; Bonded oil will be brought from Tokyo or Sendai, when required.

CONSULS: None.

REPAIRS: Minor deck and engine repairs available.

DRY DOCKS: None.

GANGWAY/DECK WATCHMEN: Not especially required unless passengers or valuable cargo on board.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommended request stevedores for this work unless crew can complete it before berthing.

CERTIFICATES: Ship's Register, International Tonnage Certificate, Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: 60 cigarettes to take ashore but no spirits.

REPATRIATION: Possible.

AIRPORT: Hanamaki Airport distant 150 km. from Miyako (2.5 hours by car). 1 flight between Hanamaki/Tokyo Monday/Thursday/ Friday and Saturday and 2 flights Tuesday/Wednesday and Sunday by Toa Domestic Air Lines (TDA).

TIME: GMT plus 9 hours. No alterations made to clocks during year.

POLICE/AMBULANCE/FIRE: Police 62-5011 (Headquarters) and 62-6037 (Water Police Station); Ambulance 119; Fire 119.

TELEPHONES: No facilities for placing telephones on board.

SERVICES: Surveyor, Tally, Hold cleaning, Tank cleaning.

SHORE LEAVE: Local Immigration Office issues shore pass valid for only 3 days; 3 days' extension possible if ship stays longer. If vessel advises longer stay in port on arrival, Immigration can issue shore pass for 9 days.

GENERAL: Discharging ex-gearless vessel at wharf not possible as no shore crane for discharge.

AUTHORITY: Miyako Port Administration Office, 114, Fujiwara 3-chome, Miyako City, Iwate Pref. *Tel:* (0193) 62-1471.

MIYAZU: 35.32 N. 135.12 E. (See Plan)

DOCUMENTS:
Ship's Register (and International Tonnage Certificate, if Register does not show gross and nett tonnages).
Last Port Clearance.
6 Crew Lists, including Passport numbers.
4 Passenger Lists.
2 Stores Lists.
2 Declarations of Crew Baggage.

PILOTAGE: Not compulsory. Pilots board at Kurosaki Anchorage.

ANCHORAGES: See "Plan".

RESTRICTIONS: Draft limitation in the channel is about 10.0 m. Berthing is only allowed during daytime. Unberthing and sailing is permissible at night-time, subject to advance notice (and pilot's consent if employing a pilot).

HEALTH: See "Late Reports".

TUGS: 3×330 h.p., 1×80 h.p. and 1×50 h.p.

BERTHING:

Name of Berth	*Length* (m.)	*Depth* (m.)	*Permissible Draft/LOA* (m.)	*Capacity* (g.r.t.)	*Shore Cranes & Pipelines*
Wharf No.2	210	5.3	5.0/100	1,000	1×2 tons
Tsuruga Wharf	140	5.0	5.0/100	500	
Anchorage					
Section 1		13.0/14.0		15,000	
Section 2		14.0 (Not used at present)			
Buoy No.1			12.0		

STEVEDORES: Working hours: 0830 hrs. – 1630 hrs.

FRESH WATER: Available by barge at 160 tonnes/hr.

FUEL: Bonded oils available from Moji.

GENERAL: *Immigration:* The authorities come from Maizuru.
Lightering: Not possible.
Shipchandlers: Provisions obtainable.

MIZUSHIMA: 34.31 N. 133.45 E. (See Plan)

DOCUMENTS:
Ship's Register (Certificate of Nationality).
International Tonnage Certificate.
Last Port Clearance.
6 Crew Lists including Numbers and expiry dates of Passports and Seaman's Books.
3 Passenger Lists.
1 Stores List.
2 Ports of Call Lists (Last 3 months).
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

PILOTAGE: *(a)* Osaka Bay pilotage should preferably be arranged through Agent by cable via Nagasaki Radio or Inmarsat telex, giving 72 hours' notice. Urgent correction of ETA outside business hours should be cabled direct to Pilot Station. Pilotage compulsory for vessels over 10,000 g.r.t. Pilotage available throughout 24 hours and 72 hours' advance notice preferred, thereafter advising any alterations.

Note: VHF communication available with Osaka Bay Pilot Station by calling "Bay Pilot Kobe" through Channel 16 (Telex 5622617 Baykobe J).

Position of Pilot Station: Lat. 34° 10' 00" N., Long. 135° 00' 00" E., 7 miles off South of Topmogashima Lighthouse.

(b) Inland sea pilotage should preferably by arranged through Agent by cable via Nagasaki Radio or Inmarsat telex, giving 72 hours notice. Urgent correction same as Osaka Bay Pilot. Inland Sea Pilot Association covers all inland sea ports. Pilotage is compulsory for vessels over 10,000 g.r.t. Pilots available at one of 3 Pilot Stations, depending on vessel's last port of departure, and at Master's discretion. Pilotage available throughout 24 hours, and 72 hours' advance notice prefered, thereafter advising any alterations. Most inland sea pilots also act as harbour pilots up to berth or anchorage at destination.

Note: VHF communication available with Inland Sea Pilot Station via Kobe Port Radio by Channel 16.

1. Wadamisaki, at entrance to Kobe (vessel transiting Kii Straits). Position Lat. 34° 37' 50" N., Long. 135° 10' 00" E. Telegraphic address "Anjin Kobe". Telex: 5623011 Anjin J.

2. Sekisaki, 3 miles South of Sekisaki Lighthouse (vessel transiting Bungo Channel). Position Lat. 33° 13' 00" N., Long. 131° 56' 00" E. Telex: 751345 Anjin J.

In event of bad weather, recommended vessels proceed for shelter as near as possible, having due regard to safety, to Sekisaki Pilot Station.

3. Hesaki, at East side of Kanmon (Shimoneseki) Straits. Position Lat. 33° 56' 24" N., Long. 131° 03' 12" E. Telex: 715303 Anjin J.

(c) There is a draft/LOA restriction for passing Kurushima Channel which is located between Sekisaki/Hesaki and Mizushima, as follows:
Max. LOA is 285 m. for tankers and 300 m. for cargo vessels.
Max. allowable draft is:
For tankers of LOA less than 230 m.: 12 m.
285 m.: 11 m.
For cargo vessels of LOA less than 250 m.: 13 m.
300 m.: 11 m.

Tidal restriction is also applied at Kurushima for vessels of LOA more than 200 m., i.e. such vessel is forced to transit Kurushima with following current of less than 3 knots.

(d) Harbour Pilot: Pilots of the Inland Sea Pilots Association are also employed for this pilotage, if required, and pilot boards at Mizushima Quarantine Anchorage (Lat. 34° 26' 30" N., Long. 133° 34' 30" E., approximate centre position of quarantine area). However, if an Inland Sea Pilot is employed at the above mentioned Pilot Station, the same pilot acts for Harbour Pilotage.

ANCHORAGES: Anchorages inside Mizushima port available only for vessels of 3,000 g.r.t. or less. Mizushima Quarantine Anchorage is located outside of Mizushima port and, being treated as "Closed Port", i.e. non-open port, is allowed use by vessels of less than 50,000 d.w.t. and LOA less than 200 m. Other large vessels waiting for berthing can anchor off Kobe with depth 43 m. – 47 m., under approval of MSA Kobe, for limited period, i.e. maximum period of 6 hours for tankers and a maximum of 3 days for cargo vessels.

RESTRICTIONS: *(a)* Entering and departing from port shall be in accordance with instructions to be given by Signal Station.

(b) No restriction imposed upon entering or leaving port during night-time, nevertheless such movements are next to impossible in consideration of the nature of the structures of the port. In addition Pilots refuse to board during night-time.

(c) Tidal restriction is applied for passing Mizushima Traffic Route by pilots as follows for entering (not leaving):

D.w.t. less than 30,000 : Any time
D.w.t. 30,000 – 50,000 : 2.0 hours either side of slack water.
D.w.t. 50,000 – 100,000 : 1.0 hour either side of slack water.
D.w.t. more than 100,000 : 0.5 hour either side of slack water.

Draft restriction is also applied for passing Mizushima Traffic Route, especially super-size vessels with deep draft (14.5 m. or more) can enter only with high water. 10% of draft plus 0.5 m. of UKC is required basis depth 16.00 m. Height of tide can be added.

MAX. SIZE: See "Berthing".

BERTHING:

Max. d.w.t.	*Max. LOA*	*Max. safe draft*	*Discharging facilities*	*Discharge rate per hour/gang or unit*
Coal, Iron Ore and Scrap				
(A) *Tokyo Seitetsu*				
(i) A Berth – 215 m.				
	210 m.	11.0 m.	Shore cranes 1×23 t.,2×15 t.	Scrap 250 tons Pig Iron 300 tons
(ii) B and C Berths – 300 m.				
20,000	150 m.× 2	9.5 m.	Shore cranes 2×10 t.,1×30 t.	Loading
(B) *Kawasaki Steel Corp., Mitzushima Works*				
C Berth – 690 m.				
	210 m.	11.0 m.	Shore cranes 8×23-28 t.	Loading
Takahashi-gawa Berth – 850 m.				
	210 m.	11.0 m.	Shore cranes 5×15-35 t.	Loading
D Berth – 220 m.				
30,000	No limit	11.5 m.	Shore crane 1×15 t.	Loading/unloading various cargoes
E Berth – 660 m.				
240,000	325 m.	16.5 m.	4×750 t.	Iron ore Coal
F Berth – 320 m.				
240,000	325 m.	16.5 m.		
D Berth – 263 m.				
135,000	315 m.	16.5 m.	2×750 t.	Coal
Grain				
(A) *Nishi Nihon Grain Centre Mizushima Works*				
Nishinihon Wharf (Dolphin)				
Panamax	165 m.	11.99 m.	Pneumatic unloader×2 Simporter × 1	400 tons per unit 800 tons
(B) *Seto Futo Co. Ltd.*				
Seto Futo				
76,000	261 m.	12.35 m.	Pneumatic unloader×1 Level luffing crane×2 Silo capacity 21,000 tons	400 tons per unit 500 tons per unit
General				
(C) *Nishi-Futo*				
(i) 1 berth				
23,000	185 m.	10.0 m.	Ship's gear	Motor vehicles, CKD, Concrete piles, Chemical products, etc.
(ii) 2 berth				
10,000	130 m.	9.0 m.	Ship's gear	
Oil				
(A) *Mitsubishi Oil Co Ltd., Mizushima Refinery*				
(i) No 5 Pier (Dolphin)				
70,000	No limit	12.0 m.	Crude oil 12 in.×1 Fuel oil 12 in.×1 Naphtha 12 in.×1 Kerosine/Gas oil 12 in.×1	2,500 tons 1,000 tons 1,700 tons 1,200 tons
(ii) No. 6 Pier (Dolphin)				
240,000	324 m.	16.5m.	Crude oil 12 in.×4 Naphtha 12 in.×1	10,000 tons 2,800 tons
(B) *Japan Energy Corporation, Mizushima Refinery*				
(i) No. 1 Pier (Dolphin)				
69,999	250 m.	13.0 m.	Crude oil 12 in.×2 Fuel oil 12 in.×1 Naphtha 12 in.×1	4,000 tons 1,500 tons 1,200 tons
(ii) No. 2 Pier (Dolphin)				
259,999	340 m.	16.5 m.	Crude oil 12 in.×4 LPG 12 in.×2 Fuel oil 12 in.×1 Naphtha 12 in.×1	8,000 tons 900 tons 1,500 tons 1,500 tons
(C) *Asahi Kasei K.K. Mizushima Works*				
C-8 Pier (Dolphin)				
18,270	155 m.	7.9 m.	Chemical (vapour line 4 in.×1) (cargo line 6 in.×1)	100/200 tons

HEALTH: Radio Pratique available. Formalities will be carried out at Quarantine Anchorage – Lat. 34° 26' N., Long. 133° 44' E.

Also see "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

TUGS: Tugs normally join the vessel at the Quarantine Anchorage area. Usually tug's lines used free of charge.

STEVEDORES: At least 24 hours' prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew at additional cost. Overtime surcharges 1630 hrs. – 2130 hrs. 60% additional of basic stevedorage; 2130 hrs. – 0830 hrs. next morning, unacceptable in principle. Sundays/holidays 60% additional.

MEDICAL: No advance notice required unless urgent.

TANKERS: See "Berthing".

DENSITY: Entrance channel Summer average 1020, Winter average 1023. Harbour channel Summer average 1019, Winter average 1025.

FRESH WATER: Available at berth, ex-pipeline. Average delivery rate 20 k/t/hour. Water barges available, sent from Sakaide. Delivery rate approximately 50 k/tons per hour.

FUEL: Most grades available.

FIRE PRECAUTIONS: *(a)* Whenever necessary to repair vessel, the rule of "Strictly and Completely No Fire" is to be observed. *(b)* To keep sufficiently powered tugboat alongside vessel at all times when engine is under repair. *(c)* A written pledge to be submitted to Oil Company, promising to take full responsibility and to pay full indemnity by ship's Owners (in case of repairing vessel) if any accident has occurred by fault of the vessel.

CONSULS: No consul available, but Marine Note of Protest can be attested by the local notary public.

REPAIRS: All types of deck and engine repairs possible by Mitsui Shipbuilding and Engineering Co. Ltd., Tamano Works. Minor repairs possible by Nojima Senpaku Co. Ltd., Mizushima Works.

DRY DOCKS: *Sanoyasu Dockyard Co. Ltd., Mizushima Shipyard:* Dimensions of longest drydock. Length 630 m., width 63 m., depth 13 m.

Mitsui Shipbuilding and Engineering Co. Ltd., Tamano Dock:

Dock No. 1: 175 m. × 81 m. × 11.5 m.
Dock No. 2: 282 m. × 57 m. × 23 m.
Dock No. 3: 210 m. × 31 m. × 10.9 m.

GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate, if onboard, to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gears maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 50 cigarettes to take ashore but no spirits.

AIRPORT: Okayama Airport is the nearest from Mizushima, distance approximately 50 km. and takes about 1 hour by car. Domestic regular airlines to Tokyo available, 4 flights a day, and international regular airlines available to Seoul, 4 flights a week, on Monday, Wednesday, Friday and Saturday.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

POLICE/AMBULANCE/FIRE: Police 110; Ambulance 119; Fire 119.

TELEPHONES: No telephone installation service on board.

SERVICES: All navigational apparatus can be served, as requested, but technicians are to be sent from Kobe.

SHORE LEAVE: Local Immigration Offices issue shore pass valid for 7 days for one port call or 15 days for more than 2 port calls, extension possible if ship stays longer.

REGULATIONS: Quarantine Anchorage is outside harbour limits therefore (a) no persons allowed ashore from this anchorage, (b) No supplies permitted to vessels and, (c) No Agency services available.

REPORT: (Ship's Agent) 1984 (Updated 1992).

As you are aware, a vessel over 200 m. in length or 50,000 d.w.t. is not allowed to anchor off Mizushima whilst waiting for a berth or other purposes as the space in the Roads is narrow. Therefore, if a berth is not available at the expected time of ship's arrival, the ship has to anchor off Kobe, which is the nearest available place to wait for berthing turn. However, anchoring period is limited to 3 days for cargo vessels, and 6 hours for tankers. During vessel's stay in Kobe Roads, quarantine service from Kobe Quarantine Station is not available except in an emergency as this service is available at Mizushima. The Customs entry which requires payment of tonnage dues is not made at Kobe. Furthermore, if time for waiting berth is longer than period allowed to stay off Kobe, a vessel is obliged to drift in open sea, keeping 12 nautical miles off coast (normally off Kii Suido, but at Master's option), for adjusting time embarking Osaka Bay Pilot.

In the above circumstances, we, in order to protect the Owners interests, have been instructing the Masters of the vessels to tender Notice of Readiness when they arrived off Kobe or drifting position as customary waiting area for Mizushima for waiting berth, although most Receivers or Charterers only accept the NOR when Free Pratique is granted at Mizushima if the vessel is not qualified to obtain Radio Pratique.

It is apparent that when calculation of laytime is made controversy arises between Shipowners and Charterers as to who is to bear the risk of waiting off Kobe or drifting position, for a discharging berth. The Charterers may contend that the Master is not allowed to tender NOR without Free Pratique and Customs clearance whilst the Owners rebut that the ship was lying at a place for waiting berth solely for Receivers/Charterers convenience, being her voyage ended.

In order to avoid a dispute of this kind, we would respectfully suggest modifying the charterparty clause for a vessel of the above category calling at Mizushima as follows:

Quote:

If berth is not available on arrival at discharging port, vessel shall be allowed to tender Notice of Readiness from place of anchorage ordered by Port Authorities or drifting position whether in berth or not, whether in port or not, whether Customs cleared or not, whether in Free Pratique or not. Time for shifting from a waiting area to discharging berth not to count.

Unquote.

AUTHORITY: Mizushima Port & Urban Development Bureau, Okayama Pref. 1-12, Mizushima Fukuzaki-cho, Kurashiki City, Okayama Pref. *Tel:* (0864) 44-7141.

AGENT: Senwa Shipping Agency, c/o Naigai Unyu Co.Ltd., 2-1 Mizushima Kaigan-Dori, Kurashiki-Shi, Okayama 712, Japan. Tel: 086-444-5211. Fax: 086-444-5229. Telex: 5933-330. Cables: Naigai Kurashiki.

MOJI (Kitakyushu): 33.57 N. 130.58 E. (See Plan)
(See "Kanmon-Ko").

LOCATION: Moji port is located in the Kanmon Straits between Shimonoseki on Honshu Island and Moji at the Northeast tip of Kyushu and is well sheltered from the open sea by steep hills on all sides. According to the Harbour Regulations, the port is one of the sections in Kanmon Harbour which consists of Moji, Shimonoseki, Kokura and Dokai (Tobata, Wakamatsu and Yawata). In 1963, five cities, Moji, Kokura, Tobata, Wakamatsu and Yawata situated in North-Eastern part of Kyushu were combined in one city, as Kitakyushu.

Moji is now known as Moji-ku of Kitakyushu City.

DOCUMENTS: When ship arrives direct from foreign port, Customs Officials will board to search vessel. Following documents to be submitted:

Crew List, including Passport numbers.
Passenger List.
Ship's Stores List.
Manifest of crew personal effects (must be signed by individual crew member).
Arms and Ammunition List.
Narcotics List.
Voyage Memo (Ports of Call).
Discharging Cargo Manifest.
Through Cargo Manifest.
Declaration Inward/Outward (Form No. C2000).

The following will be checked on board:

Ship's Registry.
Last Port Clearance.
International Tonnage Certificate.

When ship comes from Japanese port, Customs Officials will not attend on board, except special case. Master or Agent to attend Custom House for entry formalities with following documents:

Discharging Cargo Manifest.
Through Cargo Manifest.
Declaration Inward/Outward.
Ship's Registry.
Last Port Clearance.

Documents entrusted with the Master by Customs at previous port. On ship's departure, clearance issued by Customs, after confirming payment of tonnage dues.

PILOTAGE: (1) *Harbour Pilotage:* Compulsory for entry, departure and when vessel passing through Straits if G/T exceeds 10,000 tons. Pilots embark Eastbound vessels at Mutsure Quarantine Anchorage position half mile East Mutsure L.H. Lat. 33° 58' 15" N., Long. 130° 53' 18" E. and Westbound vessels at Hesaki Quarantine Anchorage position 125°, 1,500 m. from Hesaki L.H. Lat. 33° 56' 24" N., Long. 131° 03' 12" E. Two Pilots embark vessels exceeding 30,000 gross tons for entry and departure charging double pilotage (×85%).

(2) *Sea Pilotage:* Vessels approaching from East can obtain Pilots by radio request made at least 24 hours in advance. Pilot embarks at position 3 miles South from Sekisaki L.H. Lat. 33° 13' 00" N., Long. 131° 56' E.

(3) Pilots should be kept closely advised of vessel's accurate ETA at Pilot Station. If any change in vessel's movements, Master requested to immediately communicate by radio or VHF to pilot offices directly or through Agent reporting revised ETA. Cable addresses of pilot offices are: Harbour Pilot "Kanmonpilot Moji", Inland Sea Pilot "Anjin Moji".

(4) *VHF:* Vessels keep in direct contact with port authorities with regard to arrival, berthing instructions and Pilot's requirements through VHF as follows:

(a) Call sign: Kitakyushu Port Radio (or Shimonoseki Port Radio).
(b) Location of Radio facilities: Transmitting and receiving station located at the top of Mt. Hinoyama, Shimonoseki.
(c) Type of wave: Channel: Simplex 16 (calling, responding); Simplex 12 (communicating); Simplex 14 (communicating); Duplex 20 and 22 (communicating). Output 50 W.
(d) Operating hours: 0000 – 2400 hrs.
(e) Communicating range: Within a radius of 50 miles from the Hinoyama Station.
(f) Communicating language: Japanese/English.

ANCHORAGE:

Tanoura No. 1 Anchorage (83° from Moji Saki Light Buoy, 1,340 m.). Draft 9.1 m.

Tanoura No. 2 Anchorage (83° from Moji Saki Light Buoy, 1,770 m.). Draft 9.1 m.

Tanoura No. 3 Anchorage (80° from Moji Saki Light Buoy, 2,300 m.). Draft 9.1 m.

WIND, TIDE: Easterly winds prevail in warm seasons. N.W. winds prevail in Winter season. Dense fog frequently prevails in Spring and Autumn.

Tidal range 3.07 m. Current near entrance of port runs Westward at flood and Eastward at ebb. Speed of current in vicinity of narrowest section of Straits sometimes reaches 7 – 8 knots. In stream of port, it is about 3 – 5 knots.

RESTRICTIONS: *(a)* Berthing: During daytime only. Occasionally large vessels drawing deep draft made to await high water and/or suitable current to berth alongside wharves.

(b) Departure: With adequate notice, no restrictions from anchorage and/or buoys. Night departure from wharves generally practicable, except vessels over 20,000 g.r.t. Night departure from Tachinoura Container Berth (Wharf No. 7, 8, 30, 31 and 32) is practicable, regardless of size of vessel. However, only permitted against the tide.

(c) Tug assistance may be required at Pilot's discretion for large vessel mooring to and/or unmooring, depending upon efficiency of engine and conditions of weather, tidal current, etc.

(d) Vessels with draft over 10.0 m. (33 ft.) but not exceeding 11 m. can pass through Kanmon Straits with favourable tide.

MAX. SIZE: *Tankers:* 1 tanker berth, Mitsui & Co. Berth "B". Max. d.w.t. 33,000 tons. Max. LOA, 200 m. Max. safe draft 9.10 m.

Also see "Berthing" and "Tankers".

HEALTH: Radio Agent for Free Pratique not more than 36 hours before arrival, advising full details of vessel and health conditions on board. When Free Pratique is granted by radio, vessel will be required to submit the following documents to Quarantine Officer on arrival:

Declaration Inward.
Voyage Memo (Port of Call).
Maritime Declaration of Health.
Crew List.
Passenger List.
Derat Certificate (copy).

The following vessels will not be able to get Radio Pratique:

A vessel that has been in contact with an infected area or a suspected infected area within 15 days of arrival.

If a vessel has on board any case, or any suspected case of infectious disease, within 15 days of arrival.

If a vessel does not possess a valid Derat or Derat Exemption Certificate.

(a) Quarantine Station at Western entrance: Half mile East from Mutsure Lighthouse Lat. 33° 58' 15" N., Long. 130° 53' 43" E.

(b) Quarantine Station at Eastern entrance: 125°, 1,500 m. from Hesaki Lighthouse Lat. 33° 56' 24" N., Long. 131° 30' 12" E.

(c) Quarantine inspection not allowed inside port except when weather or other special reasons prevent quarantine boat from approaching ship at anchorage.

(d) "Q" flag should be hoisted until ship is in Free Pratique.

(e) Vessels exceeding 20,000 gross tonnage may undergo quarantine on application when they berth inside port.

(f) Quarantine service is rendered from 0830 hrs. – 1630 hrs.

(g) When ship arrives from plague infected or suspected area within 10 days after she left such place, a 24 hour special quarantine is required. All sanitary scuppers must be closed and garbage must not be thrown overboard after ship reaches 60 miles off Japanese coast.

(h) Radio Pratique is obtainable according to the Radio Pratique Regulations.

Also see "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

VHF: See "Pilotage".

TUGS: Normally join vessel at suitable position for mooring in judgment of Pilot and tug. In operation, tug's line to be used for mooring and unmooring without any charge. 10 tugs, 1,500 h.p. – 3,520 h.p.

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by radio.

Name of berth	*Length* (m.)	*Depth* (m.)	*Permissible Draft* (m.)	*Capacity* g.t.	
Nishikaigan Wharf (public)					
No. 1 (No. 1-2)	450	8.7	8.5	No Limit	Subject to draft and length
2		9.0	9.0	No Limit	
3 (No. 3-7)	877	9.3	9.3	No Limit	
4		10.0	9.3	No Limit	
5		10.0	9.0	No Limit	1×crane for grain cargo
6		10.0	9.3	No Limit	
7		10.0	9.0	No Limit	
8 (No. 8–10)	527	11.0	9.2	12,000	
9		11.0	9.2	12,000	
10		11.0	9.0	9,000	
11	195	11.0	9.0	LOA 180 m.	
12 (No. 12–13)	345	9.0	8.5	No Limit	2×pneumatic suckers
13		9.0	8.5	No Limit	2×pneumatic suckers

No. 11, 12 and 13 also known as Shinhama Wharf.

Larger size vessel (maximum 25,000 g.r.t. and 220 m. LOA) can be accommodated at Nos. 3-4 and 12-13 wharves, using 2 berths.

Name of berth	*Length* (m.)	*Depth* (m.)	*Permissible Draft* (m.)	*Capacity* g.t.	
Tanoura Wharf					
No. 1	105	7.5	7.2		Banana centre
2	105	7.5	7.2		
3 (3-4)	370	10.0	9.6	No Limit	Container berth
4					
5	170.4	9.0	9.0	No Limit	Subject to draft and length
6	170.3	9.0	9.0	No Limit	Subject to draft and length
7	181.1	10.0	9.4	No Limit	Subject to draft and length
8	185	10.0	9.4	No Limit	Subject to draft and length

Name of berth	*Length* (m.)	*Depth* (m.)	*Permissible Draft* (m.)	*Capacity* g.t.	
Tanoura Anchorage No. 1, 2 and 3		9.1	9.1	20,000	
Tanoura Oil Berth (dolphin)		10.0	9.0	33,000 d.w.t.	Mitsui & Co.
Tachinoura Wharf					
No. 1	120	4.5			
2	185	10.0	9.6		
3	185	10.0	9.6		
4	185	10.0	9.6		
5	185	10.0	9.6		
6	185	10.0	9.6		
7 8	620	12.0	10.8	40,000	Container berth
9	376	10.0		40,000	Container berth
28 29	370	10.0			
30 31 32	555	10.0	9.1	30,000	Container berth
33	185	9.1			
34	185	9.1			

When using No.30-31 for 1 berth, limit 30,000 g.r.t., LOA 220 m.

When using No.31-32 for 1 berth, limit 30,000 g.r.t., LOA 244 m.

Shinmoji: Shinmoji Wharf is equipped to handle raw materials and goods used in the Shinmoji marine industrial area. The second term reclaiming construction has been carried out, so that it will be able to function as an intensive centre for middle-distance and long-distance ferrying in the future. Depths alongside 4.5 m.–10.0 m.

Developments: See "Developments".

CONTAINER HANDLING FACILITIES:

Tanoura Container Terminal

Total area:	61,100 sq.m.
Area per berth:	One berth only Sea depth: 10 m. under low water level (LWL) Length of wharf: 300 m. Marshalling yard: 46,894 sq.m. CFS: 3,390 sq.m. Office, control tower: 596 sq.m.
Gantry crane:	Single/twin: Single Height of span above quay: 9.2 m. Max. outreach: 36 m. Max. backreach: 7.5 m. Lifting capacity: 37.5 tons Spreader sizes: Capable of handling containers of ISO-IS & IC also Matson type Width of rail: 30 m.
Reefer plugs:	220 V×12
Illumination:	3 (25 Lux) 1 kW×28
Track scale:	Scaling maximum 50 tons
Straddle carriers:	3

Tachinoura No. 1 Container Terminal:

Total area:	128,720 sq. m.
Area per berth:	Two berths Sea depth: 12 m. under low water level (LWL) Length of wharf: 620 m. Marshalling yard: 96,665 sq. m. CFS: 818 sq. m.
Gantry crane:	Single/Twin: Twin (4 cranes) Height of span above quay: 10.8 m. Max outreach: 38 m. Max. backreach: 11 m. Lifting capacity: 48.6 tons Spreader sizes: Capable of handling containers of 180-ISO and IC, also Matson type Width of rail: 16 m.
Reefer plugs:	220 V×68
Illumination:	4 (25 Lux)
Track scale:	Scaling maximum 50 tons
Straddle carriers:	14

Tachinoura No. 2 Container Terminal

Total area:	118,720 sq.m.
Area per berth:	Three berths Sea depth: 10 m. under low water level (LWL) Length of wharf: 555 m. Marshalling yard: 108,110 sq.m.
Gantry crane:	Single/Twin: Single (3 cranes) Height of spain above quay: 10.8 m. Max. outreach: 37.2 m. Max. backreach: 11.0 m. Lifting capacity: 48.1 tons Spreader sizes: Capable of handling containers of 180–ISO and IC, also Matson type Width of rail: 16 m.
Reefer plugs:	220 V × 40
Illumination:	4 (25 Lux)
Track scale:	Scaling maximum 50 tons
Straddle carriers:	13 (common use with Tachimoura No. 1 Container Terminal).

STEVEDORES: At least 24 hours prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew.

Average loading/discharging:

Bulk cargo:	Coal	50	t.p.h./gang/hatch	(dis)
	Iron ore	45–50	t.p.h./gang/hatch	(dis)
	Grain	50	t.p.h./gang/hatch	(dis)
Baled cargo:	Cement	50	t.p.h./gang/hatch	(load)
	Fertilisers	40	t.p.h./gang/hatch	(load)
	Grain	30–50	t.p.h./gang/hatch	(dis)
	General	40	t.p.h./gang/hatch	(load)
Steel cargo:	Under 20 ft. long	25–30	t.p.h./gang/hatch	(load)
	Over 20 ft.	15–20	t.p.h./gang/hatch	(load)
Scrap steel:	Pressed	20	t.p.h./gang/hatch	(dis)
	Ordinary	10	t.p.h./gang/hatch	(dis)
	Bulky and awkward	5	t.p.h./gang/hatch	(dis)
Lumber/logs:	Lumber	15–20	t.p.h./gang/hatch	(dis)
	Logs	30	t.p.h. gang/hatch	(dis)

2 shifts; 0800 to 1700 hrs. and 1800 to 0500 hrs. Normal working hours 0800 to 1700 hrs. Overtime work is possible by applying to Customs. No work can be arranged on 31st December and during New Year holidays (1st to 3rd January). No work on 1st and 3rd Sunday of each month.

BRIDGE: Kanmon Bridge – Clearance 61 m. Over 59 m. must advise Pilot Office in advance.

MEDICAL: No advance notice required unless urgent.

TANKERS: No slop discharge facilities. Mobil Oil Berth situated at Okubo, near Tanoura. In the vicinity of the berth, the current runs towards West nearly all the time. Maximum rate of current 3 knots. Vessels berthed during period that tide sets to West, in daytime only. Mooring berth consists of 1 oil pier (length 80 m. width 5 m.) and 2 dolphins. Two 10 in. pipes connected to vessel; discharge rate 1,000 t.p.h. (Fuel and diesel oil).

Also see "Max. Size".

FRESH WATER: Good fresh water supplied from water barges to vessels lying at anchorage; from hydrants to those alongside wharves. The rate of delivery per hour is 20 – 40 tons from hydrant and 50 tons from barge.

FUEL: All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, Osaka Bay and Kanmon Port. At all other ports bunkers will be lightered from the nearest bunker stock ports at maximum 7 days prior notice.

Bonded bunker oil is supplied by oil barges. The rate of delivery: 80 t.p.h. – 100 t.p.h.

Suppliers	*Delivery agents*	*Installation*	*Required notice* days
Shell Sekiyu K.K.	Uyeno Unyu	Shimonoseki	1
Esso Oil Co.	General Bussan	Mutsure or Sakai	1
Mobil Oil Co.	Nisshin Tanker	Kokura/Moji	4
Caltex Oil Co.	Shimazu Kaiun	Shimonoseki	1
Mitsubishi Shoji Kaisha	Nisshin Tanker	Mutsure	1
	Asahi Tanker	Iwakuni	3
	Tsurumi Yuso	Kanokawa	3
C. Itoh & Co.	Asahi Tanker	Matsuyama	3
	Chikko Kogyo	Mizushima	3
Nissho Co.	Nisshin Tanker	Mutsure	1
	Tsurumi Yuso	Matsuyama	3
Mitsui & Co.	Chikko Kogyo	Oita	2–3
Nippon Mining Co.	Nippon Tanker	Mizushima	3
Idemitsu & Co.	Nagai Kaiun	Tokuyama	2
Sumitomo Shoji Kaisha	Asahi Tanker		
Marubeni Corp.	Nagai Kaiun	Kokura	1
Kanemutsu Gosho Co.	Asahi Tanker	Tokuyama	1

CONSULS: Honorary British Consulate concurrent with Honorary Swedish Consulate.

REPAIRS: Mitsubishi Heavy Industries, Ltd. Shimonoseki; Daiki Industries Co., Ltd. Moji; Kitakyushu Iron Works, Wakamatsu.

DRY DOCKS: Refer "Shimonoseki".

GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommended request stevedores for this work unless crew can complete it before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore, but no spirits.

REPATRIATION: Possible.

AIRPORT: Fukuoka Airport 2 hours by train and taxi.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

POLICE/AMBULANCE/FIRE: Police station (tel. 110) and Fire/Ambulance (tel. 119).

TELEPHONE: Telephone placed on board.

SERVICES: All services available, including hold cleaning and grain fitting.

SHORE LEAVE: Immigration Officials board vessel on her arrival in port to examine passports, discharge books and/or other equivalent travel documents and provide 15 day landing passes for crew members and passengers. One copy each of Crew List and Passenger List are required by them. Providing ship's Agent with a Crew List beforehand will be a great help in expediting Immigration business on ship's arrival. When ship stays in port more than 15 days, the landing passes may be extended every 15 days on application. In the event that crew members without entry visas are to be landed for repatriation or transfer, Immigration will not permit their landing unless passage, by either sea or air, ensuring the prompt departure from Japan (within 72 hours) of these men, has been booked, or unless the ships to which they are to be transferred arrive in Japan within 5 days.

DEVELOPMENTS: Dredging work is being carried out for deepening the draft to 13 m. and extending the pier aprons.

Masters are to keep in close contact with Agent on this work, as sometimes vessels cannot pass through Kanmon Channel, due to dredging materials.

Shirashima District: As a part of the national plan for the storage of petroleum, a storage base with a capacity of 5.60 million Kl. will be constructed on the ocean. This will be the first of its kind in the world.

AUTHORITY: Kitakyushu Port and Harbour Bureau, 2-7 Nishi-Kaigan, 1-chome, Moji Ward, Kitakyushu City, Fukuoka Pref., 801 Japan. *Tel:* (093) 321-5941. *FAX:* (093) 321-5915.

AGENT: Senwa Shipping Agency, c/o Green Shipping Ltd., 9-7 Minato-machi, Moji-ku, Kitakyushu-Shi, Fukuoka 801, Japan. Tel: 093-321-4261. Telex: 7153-11. Fax: 093-321-4288. Cables: Greenship Moji.

MONBETSU: 44.21 N. 143.22 E. (See Plan)

DOCUMENTS:

Ship's Register (and International Tonnage Certificate, if Register does not show gross and nett tonnages).
Last Port Clearance.
6 Crew Lists, including Passport numbers.
4 Passenger Lists.
2 Ship's Stores Lists.
2 Declarations of Crew's Baggage.

PILOTAGE: Not compulsory. Pilot available from Kushiro with sufficient advance notice.

ANCHORAGES: See "Plan".

RESTRICTIONS: Draft limitation in the channel is 7.5 m.

Berthing/unberthing is permissible at any time, but pilot is only available during daytime.

HEALTH: Radio Pratique is available, and ordinary quarantine inspection takes place at the Quarantine Anchorage.

Also see "Late Reports".

TUGS: 1×1,500 h.p., 1×1,000 h.p., 1×750 h.p., 1×720 h.p., 1×550 h.p., 1×460 h.p., 1×360 h.p., 1×340 h.p. and 1×250 h.p.

BERTHING:

Name of Berth	*Length* (m.)	*Depth* (m.)	*Capacity* (d.w.t.)
No. 1 Pier East Wharf	131	7.5	1×5,000
South Wharf	90	5.5	1×2,000
No. 2 Pier North Wharf	130	6.0	1×3,000
East Wharf	390	7.5	1×5,000
South Wharf	130	7.5	1×5,000

STEVEDORES: Normal working time 0830 hrs. – 1700 hrs. Log gangs available.

FRESH WATER: Available.

FUEL: Domestic oil is available. Bonded oil to be brought from Hakodate or Muroran with sufficient advance notice.

GENERAL: *Immigration:* The authorities come from Wakkanai.

Lightering: Not possible.

Shipchandlers: Provisions obtainable.

MURORAN: 42.20 N. 140.58 E. (See Plan)

DOCUMENTS:

Ship's Register.
International Tonnage Certificate.
Derat Exemption Certificate.
3 Port of Call Lists (Voyage Memo).
Last Port Clearance.
6 Crew Lists, including Passport Numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agent will prepare 2 Inward/Outward Declarations, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Not compulsory, but advisable for VLCC's. Arranged by Agent subject receipt of ETA advice at least 24 hours prior arrival. Pilot boarding area in vicinity of 250° × 1.5 miles from South Breakwater Lighthouse (never drop anchor North or area above 270°, due to fouling when anchoring).

Also see "Restrictions".

ANCHORAGES: Outside harbour limits: Subject to notice having been given to Authorities prior arrival.

Inside harbour limits: Permitted in any part.

RESTRICTIONS: Berthing must be finished 1 hour before sunset on VLCC's and oil tankers. Unberthing possible daytime only.

Pilots usually work from 0600 hrs. to 1 hour before sunset in Summer season, and from 0730 hrs. to 1 hour before sunset in Winter season.

Vessels over 30,000 g.r.t. usually have 2 pilots onboard for operations.

MAX. SIZE: *Nisseki Pier (Nippon Petroleum):*

Max. d.w.t.	*Max. LOA*	*Max. Safe Draft*	*Max. Beam*
*59,200 (*35,600 g.r.t.)	240 m.	9.90 m.	33.0 m.
Sea Berth (258,374)	321.45 m.	15.00 m.	58.0 m.

*For vessels of deadweight tons, gross tons and LOA in excess of above limits, it is necessary to obtain entry permission from the Harbour Master, Pilot and the Refinery in advance.

Ore Carriers: Max. LOA 313 m., max. draft 16.0 m.

HEALTH: Radio Pratique available. Vessels usually anchor at Muroran, where the authorities board and grant Free Pratique.

Also see "Late Reports".

RADIO: Suitable radio station to communicate with Agents is Sapporo Radio.

VHF: Harbour Master "Muroran Hoan" is usable via "Otaru Hoan", only in case of emergency or official use. Agents can contact Master by using VHF Channel 16 of tug.

TUGS: 8 tugs, up to 3,200 h.p. Usually meet vessel near Inner Harbour breakwater. 10% additional charge if tug's lines used.

BERTHING: Pilot boarding time will be notified by ship's Agent mainly by radio.

Name of Berth	*Length* (m.)	*Depth* (m.)	*Max. Draft** (m.)	*Capacity* (d.w.t.)	*Shore Cranes* (tons)
N.P.R.C. "Sea Berth"	110	16.5	15.0	260,000	
N.P.R.C. "H-1 Jetty"	67	11.0	9.9	33,000	
Motowanishi Wharf G	176	9.0	8.5	12,000	
Nippon Steel Wharf					
No. 15, 16 and 17	540	8.0	7.7	10,000	
No. 14	160	8.6	8.3	10,000	
No. 18	250	13.8	13.7	100,000	1×45
No. 19	300	17.0	16.0	150,000	2×40
North No. 5	245	12.0	11.4	40,000	2×30
North No 1 and 2	250	9.0	8.7	10,000	
Nittsu Pier No. 6	160	9.0	8.7	10,000	1×15 1×20
Center Pier No. 1, 2	310	8.4	8.0	10,000 6,000	
West Pier No. 1-1, 2	257	7.0	6.7	5,000	
West Pier No. 2-1	175	8.9	8.6	10,000	
West Pier No. 2-2	185	10.0	9.7	15,000	
West Pier No. 2-3	150	6.0	5.7	5,000	
West Pier No. 2-4, 5	257	6.6	6.3	5,000	
West Pier No. 3-1	125	7.0	6.7	5,000	
West Pier No. 3-2	185	8.4	8.1	10,000	
West Pier No. 3-3	135	7.4	7.1	5,000	
West Pier No. 3-4	195	8.8	8.5	10,000	1×8
Nikko Pier No. 1	140	7.9	7.6	8,000	1×70
Nikko Pier No. 2	135	7.9	7.6	7,000	2×600
Sakimori Wharf					
No. 1, 2 and 3	555	10.0	9.7	15,000	
No. 4 and 5	480	12.0	11.7	30,000	1×10 1×12
No. 7	185	10.0	9.7	15,000	
Shukuzu Wharf					
No. 1 and 2	370	12.0	11.7	15,000	1×20

* Permissible draft by pilot at H.W. (need 10% clearance in other cases).

STEVEDORES: At least 24 hours' prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew. Overtime surcharges 1630 hrs. – 2130 hrs. 60% additional of basic stevedorage; 2130 hrs. – 0500 hrs. next morning 100% additional; Sundays/holidays 100% additional.

MEDICAL: No advance notice required unless urgent. Hospital facilities available.

TANKERS: See "Max. Size". N.P.R.C. Muroran Refinery. Discharge berth. About 25% of deadweight required in ballast.

Berth	*Product*	*Pipeline*	*Max. Rate*
59,200 d.w.t.	Heavy Fuel, Diesel Oil, Kerosene, Gasoline, Naphtha.	4×10 in.	1,000 kl./hr. for white products. 2,200 kl./hr. for heavy fuels.
258,374 d.w.t. (Sea Berth)	Crude Oil, Diesel Oil	4×12 in.	10,000 kl./hr. (by 12 in.×3) Crude Oil, 800 kl./hr. (by 12 in.×1) Diesel Oil

DENSITY: Average 1025.

FRESH WATER: Delivery at piers: Average rate about 30 t.p.h. Delivery by barge: Rate about 60 t.p.h.

FUEL: Available.

CONSULS: None.

REPAIRS: Only minor repairs available, but Hakodate Dockyard able undertake all types of repairs.

GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore but no spirits.

AIRPORT: Sapporo International Airport is situated only 100 km. from the port. International direct flights are available to Hong Kong, Seoul, Honolulu and Guam Island. Domestic flights every 30 minutes to Tokyo and other places every day.
TIME: GMT plus 9 hours. Permanent.
POLICE/FIRE: Police Muroran 24-0110. Fire Muroran 22-2111.
TELEPHONES: May only be connected on board at No. 2–2 West Pier.
SHORE LEAVE: Local Immigration offices issue shore pass valid for 15 days. Extension possible if ship stays longer.
SERVICES: Shipchandler, laundry services, diver and cargo and hull surveyor are arrangeable.
AUTHORITY: Port & Harbour Bureau, Muroran City, Mubanchi, 20-30 1-chome, Kaigan-cho, Muroran City, Hokkaido, Japan. *Tel:* (0143) 22-3191. *FAX:* 0143-22-6069.

NAGASAKI: 32.45 N. 129.52 E. (See Plan)

DOCUMENTS:
Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
5 Crew Lists, including Passport/Seaman's Book Numbers.
5 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in Transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.
PILOTAGE: Not compulsory, but necessary unless Master well acquainted with locality. Pilot embarks in vicinity of Ioshima Lighthouse, Lat. 32° 43' 20" N., 129° 46' 43" E. Pilot available any time, subject to adequate notice (no VHF system). All communication with Pilot through Agent. Pilot boat carries International signals. "G" flag in daytime and "Morse" signals at night to call Pilot. In event bad weather Pilot boards at anchorage off Megami.
ANCHORAGES: Megami Anchorage located in Harbour Division No. 3 (within line between Kagenoo Lighthouse and West end of Kogo Wharf) 60 ft. depth and capacity of 3 vessels of 20,000 d.w.t. Safe anchorage.
Onaka Anchorage, Harbour Division No. 6: Located in line between Onaka Seto Beacon and Tan Saki, having ample space with 140 ft. depth, accepting 500,000 d.w.t. tankers.
RESTRICTIONS: *Berthing:* During daytime only, except for emergency purposes. Entering into anchorage at Megami is generally permitted anytime with Harbour Master's permit.
Departure: No restriction from buoy or wharf with adequate notice.
MAX. SIZE: Max. permissible length 1,200 ft., breadth 120 ft., draft 15.0 m.
Tankers:

Berth	*Max. d.w.t.*	*Max. LOA*	*Max. Safe Draft*
Zengyoren (Kozaki Depot)	8,000	100 m.	7.00 m.
Hayashikane Oil Co. (Doinokubi Depot)	8,000	100 m.	7.00 m.

HEALTH:
(a) Quarantine Station: Sea area surrounded by the following lines:
1. From Senbonyama Beacon to Megami Beacon.
2. From Megami Beacon to Naginata Lighthouse.
3. From Senbonyama Beacon to Takaboko Island.

(b) Quarantine service is rendered from sunrise to one hour before sunset.
(c) Radio Pratique is effective (See "Late Reports").
RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.
TUGS: Tugs normally join vessel at anchorage for swinging and/or at berth for assisting vessel. Tugs available: 3×3,200 h.p. owned by Dokai Tug Co.; 3×3,500 h.p., 3,000 h.p., 2,880 h.p. and 2×2,400 h.p. owned by Kowa Kogyo Co.
BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by radio.

Wharf	*Length*	*Depth*	*Capacity*	*Remarks*
Dejima	413 m.	9 m.	10,000 g.r.t. × 2 vessels	
Yanagi (Western)	270 m.	12 m.	46,000 g.r.t. × 1 vessel	
Yanagi (Southern)	185 m.	10 m.	7,000 g.r.t. × 1 vessel	
Yanagi (Northern)	185 m.	10 m.	7,000×1	
Matsugae	275 m.	12 m.	50,000 g.r.t. × 1 vessel	Passenger ships

Buoy	*Ship's Length (O.A.)*	*Permissible draft*	*Capacity g.r.t.*
Nos. 1 – 2	270 m.	14 m.	105,000 × 1
Nos. 2 – 3	250 m.	14 m.	50,000 × 1
Nos. 3 – 4	200 m.	14 m.	20,000 × 1
Nos. 4 – 5	175 m.	14 m.	6,000 × 1
Otao Nos. 1 – 2	347 m.	21 m.	150,000 × 1
MHI MC–MD	256 m.	10 m.	25,000 × 1

CRANES: *Floating Cranes:* 120 tons owned by Kowa Kogyo Co.; 330 ton floating crane available with adequate prior notice which originally located in Moji area.
STEVEDORES: At least 24 hours' prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew at additional cost. Overtime surcharges 1630–2130 hrs. 60% additional of basic stevedorage; 2130–0500 hrs. next morning 150% additional; Sundays/holidays 100% additional.
MEDICAL: No advance notice required unless urgent.
TANKERS:

Berth	*Product*	*Shoreline*	*Discharge Rate (t.p.h.)*
Zengyoren (Kozaki Depot)	Diesel Gas Oil	10 in.×1 6 in.×1	1,000 1,000
Hayashikane Oil (Doinokubi Depot)	Diesel/Gas/ Lube	6 in.×1	700

A slop discharge station operated by Nishi Nippon Tanker Service located at Ioshima.
DENSITY: 1025.
FRESH WATER: Capacity of water barges: 500 tons and 300 tons. 2 barges in total. Rate of delivery: 100 t.p.h. Wharf hydrants at Yanagi, Matsugae and Dejima.
FUEL: Available ex-barge only. 3–5 days' prior notice required by oil company.
FIRE PRECAUTIONS: No specific precautions.
CONSULS: People's Republic of China, Consul-General. Tel. 49-3311.
REPAIRS: All types of repair can be carried out.
DRY DOCKS:

	Length	*Width*	*Depth*	*Capacity (g.r.t.)*
Koyagi Dock (MHI)	400 m.	100.0 m.	14.5 m.	250,000
No. 2 Dock (MHI)	335 m.	54.0 m.	9.5 m.	165,000
No. 3 Dock (MHI)	268 m.	37.2 m.	8.8 m.	65,000

SURVEYORS: Cargo surveyors able to attend from Moji or other areas if prior notice given. LR, ABS and BV are available in Nagasaki. Salvage Association or U.S. Salvage are able to attend from Moji to Nagasaki.
GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.
OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.
CERTIFICATES: Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.
CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore, but no spirits.
REPATRIATION: Possible.
AIRPORT: Distance 54 km. (centre of town to air terminal). Time 1.5 hours by car. All Nippon Airways have regular daily service with 6 flights for Tokyo and Osaka, Japan Air System have regular daily service with 2 flights for Tokyo and Japan Airlines have regular daily service with 1 flight to Tokyo.
Overseas services: Japan Air Lines (JAL) and General Administration of Civil Aviation of China (CAAC) have regular service with 2 flights a week to Shanghai, China. Japan Airlines and Korean Airlines (KAL) have regular service with 3 flights for Seoul and Busan, Korea.
TIME: GMT plus 9 hours. No alterations made to clocks during year.
POLICE/AMBULANCE/FIRE: Police 22-2141; Ambulance/Fire 22-3211 (Fire station).
EMERGENCY CO-ORDINATION CENTRE: Contact Harbour Master.
TELEPHONE: Shore telephone can be installed on board vessel at wharves of Yanagi, Matsugae and Dejima. Vessels at Mitsubishi Yards can communicate via shipyards' switchboard with town.
STORING: See "Prelims".
1. Yes.
2. No restrictions, vessel can store at anytime if adequate notice given.
3. Trucks can proceed alongside at the berth.
4. Yes.
5. No special regulations, but a simple style application must be made to Customs before storing.
6. Yes.

SHORE LEAVE: Local Immigration Officers issue shore pass valid for only 15 days. Extension possible if ship stays longer.
AUTHORITY: Nagasaki Port Authority, 2-11 Dejima, Nagasaki City. *Tel:* (0958) 22-1257. *FAX:* 0958-22-2265 (Head office).
Harbour Master (Maritime Safety Agency): 7-29 Matsugae, Nagasaki. *Tel:* (0958) 27-5133.

NAGOYA: 35.02 N. 136.51 E. (See Plan)

LOCATION: Situated at Northern head of Ise Bay. Harbour protected by breakwater 7.6 km. in length stretching from Chita Peninsula to bank of Kiso River at opposite side of harbour.
DOCUMENTS:
(a) Quarantine (only when arriving at first port of Japan from a foreign port): One copy of each.
Maritime Declaration of Health.
Crew List.
List of Passengers.
Cargo Manifest.
Declaration Inward (required when vessel granted Radio Free Pratique and prepared by Agent).
Also Log Book and Ship's Register should be readily available.

(b) Customs: One copy of each.
Declaration Inward/Outward with Ports of Call (prepared by Agent).
Ship's National Registry.
Ship's International Tonnage Certificate.
Last Port Clearance.
Stores List (including arms and narcotics).
Cargo Manifest (Discharge/through).
Crew List.
Passenger List.
Crew's Baggage List (the first port of call in Japan).
List of Ports of Call.
(c) Immigration: One copy of each.
Declaration Inward with Ports of Call (prepared by Agent).
Crew List.
Notification of Arrival (prepared by Agent).
Application for Crew's Shore Passes.
Passenger List.
Report on Departure.
Declaration Outward (prepared by Agent).
(d) Harbour Master:
1 Crew List.
1 Declaration Inward/Outward.
(e) Port Authority:
1 Declaration Inward/Outward.

PILOTAGE: Pilotage is compulsory in Ise and Mikawa Wan Bays (where Nagoya, Yokkaichi and other ports located) for vessels of 10,000 g.r.t. or more.

Irago Bay Pilot: Pilotage from entrance of Irago Suido up to Nagoya Anchorage, vise-versa.

Irago Pilot is arranged by Agents, and Master of vessel is requested to maintain contact with Irago Pilot Station, and advise ETA to Irago Pilot by the following means of communication:
(a) Telex: 4563668 Iragop.
(b) Cables: Iragopilot Handa.
(c) VHF: Channel 16, then turn to Channel 13, call sign "Irago Pilot".
(d) Telephone: 0569-21-7489.

Vessel should make contact 3 hours and 1.5 hours prior to arrival at Pilot Station.

Boarding Points:
(a) 34° 30.8' N., 137° 06.9' E., when coming from Eastward.
(b) 34° 28.3' N., 137° 03.8' E., when coming from Westward and Southward.
(c) 34° 24.8' N., 137° 03.8' E., L.N.G. tankers.
(d) 34° 24.6' N., 137° 00.1' E., deep draft vessels (14.0 m. or more).

Requirements for vessel when taking a pilot:
1. Pilot ladder: To be fitted with spreaders in accordance with Solas Convention, Chapter V, Reg. 17, on ship's lee side, and kept clean and in good order. The lowest rung to be 1.0 m. above the water.
2. Manropes: 3.5 in. manilas to be rigged when pilot disembarking.
3. A ring buoy with a self-igniting buoy should be provided.
4. Speed: Keep vessel's head way at about 7 knots.
5. Light: Sufficiently illuminate the ladder at night.

Harbour Pilot: Agents arrange harbour pilot, and Master of vessel is requested to contact Harbour Pilot Station through Nagoya Port Radio by VHF Channel 16.

Boarding point: Vicinity of Buoy No. 6 in East Passage.

ANCHORAGES: Quarantine Anchorage, located outside High Tide Breakwaters, between No. 1 and No. 2 Harbour Fairways, offers safe anchorage for vessels awaiting Pilot or quarantine service. Depth of this anchorage area ranges from 10.0 m. to 20.0 m. Sea bed is silty clay. Vessels loaded with dangerous cargo are to be anchored by Harbour Master's instructions.

Anchoring places are:
Crude oil carriers – 2 miles × 180° from Isewan Sea Berth.
LPG carriers – 3 miles × 200° from Isewan Sea Berth.
LNG carriers – 3 miles × 186° from Isewan Sea Berth.

The above three kinds of vessels must obtain anchoring permission from Harbour Master in advance.

RESTRICTIONS: Vessels (LOA 200 m. or more, carrying dangerous cargo, draft 13.20 m. or more, or g.r.t. 20,000 and over) are restricted to enter the fairways of Nagoya Port, and advance permission for entry/departure must be obtained from Harbour Master. Agents do the necessary procedures, and all Master has to do is adhere to the signal control.

Also at Irago Suido Traffic Route, the following vessel size is restricted to enter the route and the permission for entry must be obtained in advance from Maritime Safety Agency (Irago Traffic Signal Control).
1. LOA 200 m. and over.
2. G.r.t. 1,000 or more with dangerous cargo.
3. G.r.t. 300 or more with 80 tons or more of ammunition, or 200 tons or more of organic peroxides.

MAX. SIZE:

	Berth	*Capacity* (d.w.t.)	*Depth* (m.)	*Length* (m.)
Tanker	Isewan Sea Berth (Max.LOA 350 m., max.draft 20 m.	250,000×2	25.5	500
Ore Carrier	Nippon Steel Corp.	100,000×1	14.0	350
Container Ship	Public Berth No.94	50,000×1	14.0	350
Car Carrier	Toyota	30,000×2	11.0	500
General Cargo	Nisshin Seifun	50,000×1	12.0	150
	Toyo Grain	50,000×1	12.0	255
	Oji Seishi	50,000×2	12.0	227+249

HEALTH: Vessels must obtain Free Pratique from Quarantine Authorities at the first port of call in Japan from a foreign country.

Ordinary quarantine inspection will be undertaken by officials in Quarantine Anchorage at Nagoya. Quarantine Office hours: 0900 hrs.–1700 hrs., Saturday, Sundays and holidays included for this service.

However, Radio Free Pratique is applicable and obtainable, so that vessel can save time and get cargo work underway in port. The mentioned Radio Pratique is given only if vessel holds a valid Derat Exemption Certificate, issued by Japanese Government. If so, Master is requested to send Pratique message to quarantine station through Agent within 36 hours before arrival, except for 1200 hrs. – 2400 hrs. on the 2nd and 4th Saturdays of each month, and Sundays and holidays.

Vessel will not be able to obtain Radio Free Pratique in some cases (e.g. If vessel has been in an infectious area or a suspected area within 15 days of arrival).

Also see "Late Reports".

RADIO: Call sign: JHY, range 200 km. (24 hour service).
Frequency: 500 kHz., working frequency 429.5 kHz.

This station is not in service of sending international cable messages to Agent's office. To despatch ship's message to Agents, Nagasaki Radio is available.

VHF: Nagoya Port Radio (also as call sign), covering 110 km. from Kamishima Island with 24 hour service. Call on Channel 16, working on Channels 12 or 20.

TUGS: Usually join at point where vessel directs course toward allocated berth. Tug's lines normally used without charge.

Tugs are available at any time but advance notice should be given to the service companies and Port Authority by Agent.

BERTHING: Public Wharves: (With a depth of 4.5 m. or more).

Name	*Wharf* (No.)	*Length* (m.)	*Depth* (m.)	*Capacity × No. of Vessels* (d.w.t.)	*Cargo handled*
Garden Pier	1	245	4.5-10.0	700×1	General cargo
				15,000×1	General cargo
	2	185	10	15,000×1	General cargo
	3	210	10	20,000(g/t)×1	Passenger
	5	65	4.5	500(g/t)×1	Passenger
	8	185	10	15,000×1	Wool, Cotton, Grain, General cargo
	9	120	4.5	700×2	
	10	185	10	15,000×1	
Inaei Pier	16	170	9	15,000×1	Wool, Cotton, Grain, General cargo
	17	226	9	15,000×1	
Inaei Pier No. 2	22 – 24	540	10.0	15,000×3	Automobiles, General cargo
	25	200	10.0	15,000×1	
	26	140	4.5	700×2	
Area No. 10 Pier	27 – 29	405	5.5 – 10	2,000×1	Coal
				5,000×1	Coal
				15,000×1	Coal
	31	60	4.5	700×1	Coal, Mineral products
	32	130	7.5	5,000×1	Coal, Mineral products
	33	185	10.0	15,000×1	Coal, Mineral products
Area No. 4 Pier	11 – 12	260	7.5	5,000×2	General cargo
Area No. 5 Pier	36	183	5.5	2,000×2	Sand and stone, General cargo
Area No. 6 Pier	38	185	10	15,000×1	Automobiles, Heavy cargo, General cargo
	39	213	9	15,000×1	
Area No. 7 Pier	40 – 41	240	7.3	5,000×2	Fertiliser, Chemicals
Area No. 8 Pier	43 – 45	420	5.5	700×1	Silica, Sand and stone
				2,000×4	
	46 – 48	571	5.5	700×1	
				2,000×5	
Area No. 9	BX	200	4.5	700×20	Small oil tanker facilities
Iron Scrap Pier	50	180	10	15,000×1	Scrap iron, other non-metallic minerals
	51	120	4.5	700×2	
Area No. 11 (West)	70	360	5.5	2,000×4	General Cargo
Kinjo Pier	52 – 53	497	12	35,000×2	Automobiles
	54 – 57	800	10	15,000×4	Automobiles
	58 – 62	1,000	10	15,000×5	Automobiles, General cargo
	63 – 67	1,000	10	15,000×5	General cargo
	71	450	5.5	2,000×5	General cargo
	72 – 75	520	7.5	5,000×4	General cargo
	76 – 79	800	10.5	10,000×1	Containers
				15,000×1	Containers
				20,000×2	Containers
	80 – 81	400	10	15,000×2	Automobiles, General cargo
	82 – 84	600	10	15,000×3	General cargo
	85	280	12	50,000(g/t)×1	General Cargo
Sorami Wharf	95 – 97	540	5.5	2,000×4	Steel
				1,500×1	
				700×1	
West 3 Section					
(South)	7	240	11	30,000×1	General cargo, Automobiles
(East)	88 – 89	260	7.5	5,000×2	Timber, General cargo
West 4 Section (East)	90 – 92	620	10 – 12	15,000×1	
				35,000×2	Containers
	94	350	14	50,000×1	Containers
West 4 Section (West)	98 – 99	370	10	15,000×2	Timber
South 1 Section (North)	68 – 69	260	7.5	5,000×2	General cargo
Yokosuka Pier	86	420	4.5	700×7	Building materials
South 3 Section (North)	87	240	4.5	700×4	Light materials
Ferry Terminal (private)	V1,V2,V3	663	7.5	7,000×1 10,000(g/t)×2	Passenger, Fresh food, etc.
Nagoya Container Berth (private)	R1,R2,R3	850	12	35,000×3	Containers

Also there are 17 mooring buoys, for vessels up to 27,000 d.w.t. Total capacity 249,000 d.w.t.

Private Wharves: (With a depth of 10.0 m. or more).

Name	*Wharf** No.	*Depth* (m.)	*Length* (m.)	*Capacity* (d.w.t.)	*General Use*
Takara Oil Pier	B6*	10.0	35.0	3,000	T
Nippon Oil Co.Pier No.2	B7*	10.0	167.9	30,000	T
No.3	BA	10.0	73.0	2,000	T
Sunlux Oil Pier	B8*	10.0	45.0	3,000	T
Toyotsu Oil Center Pier	BB*	10.0	35.8	3,000	T

*See Key overleaf.

Name	*Wharf** No.	*Depth* (m.)	*Length* (m.)	*Capacity* (d.w.t.)	*General Use*
Standard Oil Pier	BC	10.0	175.0	20,000	T
Cosmo Oil South Pier	BD	10.0	85.0	3,000	T
Mitsui & Co.Nagoyo Pier	BE*	10.0	74.0	30,000	T
Kanematsu Oil Pier	BG*	10.0	74.6	20,000	T
Rinoru Yushi Pier	BH	10.0	182.0	34,000	GC/B
	BH2	10.0	182.0	25,000	GC/B
M.C. Terminal BI Pier	BI	10.0	84.5	34,000	T
Itochu Pier	BK*	10.0	179.0	20,000	T
Fujiki Pier No.2	BQ	10.0	164.8	8,000	GC/B
BQ2 Pier	BQ2	10.0	165.0	10,000	GC/B
Toray Wharf	C4	10.0	175.0	15,000	GC/B
Nippon Steel Co. Wharf	F5	10.0	195.0	20,000	GC/B
	F6-8	12.0	678.0	50,000×3	GC/B
	F11	14.0	350.0	100,000	IO
	F12	13.0	250.0	70,000	IO
	F13	13.0	250.0	70,000	IO
	F14	13.0	140.0	50,000	IO
Nisshin Seifun Pier	G1	12.0	150.0	50,000	GC/B
Ishikawajima-Harima Co. Pier	G3*	12.0	450.0	450,000	SE
Toyota Pier	12	11.0	200.0	20,000	RR
	15, 16	11.0	500.0	30,000×2	RR
Chita Futo Co.	J4*	12.0	81.0	5,000	T
	J5	12.0	185.0	35,000	GC/B
Japan Energy Pier	J7*	12.0	128.0	50,000	T
	J8, 9*	12.0	250.0	5,000×2	T
	J16-19*	12.0	400.0	5,000×4	T
Zenno Silo	JS*	12.0	190.0	65,000	GC/B
Toyo Grain Terminal Pier	JT*	12.0	255.0	50,000	GC/B
Idemitsu Chita No.1 Pier	K1, 2*	14.0	253.0	1,500+750	T
	K3, 4*	14.0	253.0	1,500+750	T
No.2 Pier	K5*	14.0	433.0	100,000	T
LNG Pier	L1*	14.0	420.0	100,000	T
Chita LNG No.2 Pier	L2*	14.0	460.0	65,000	T
Yura Pier	N1,N2	10.0	250.0	15,000	GC/B
Chichibu Pier	N3	10.0	73.0	12,000	C
Ube Cement Pier	S4*	10.0	78.0	14,000	GC/B
Toho Gas Sorami Pier	S5*	10.0	63.0	5,000	T
	S6	10.0	144.0	25,000	GC/B
Oji Paper Pier	U1	12.0	249.0	50,000	GC/B
Dolphin	U2*	12.0	227.0	50,000	GC/B
West-4 Toyota Pier	U3	11.0	250.0	65,000	GC/B
Oil Pier (Showa, Nippon, Marubeni)	U5*	12.0	280.0	30,000	T
Chubu Electric Power Co.	U6*	12.0	97.0	5,000	T
Pier	U7*	12.0	107.0	5,000	T
Isewan Sea Berth	*	25.5	500.0	250,000×2 2,000	T

Key: * = Dolphin Berth. IO = Iron ore
T = Tanker SE = Ship Equipping
GC = General cargo RR = Ro-Ro
B = Bulk C = Cement

CONTAINER – RO/RO FACILITIES: The public container terminal at West-4 has 4 berths (W90, W91, W92 and W94). W94 has a quay length of 350 m. with a depth alongside of 14.0 m. and a terminal area of 13.3 ha. There are 50 points for refrigerated containers. It is equipped with 3×55 ton post-Panamax gantry cranes. W90, W91 and W92 have a quay length of 620 m. with a depth alongside of 10.0 m. – 12.0 m., and a terminal area of 17.2 ha. There are 80 points for refrigerated containers. The terminal is equipped with 3 container gantry cranes of 46.4 tons, 48 tons and 49.1 tons capacity. Straddle carriers are shared with the Nagoya Container Terminal.

Another 4 public container berths (W76, W77, W78 and W79) located at Kinjo Pier have a combined quay length of 800 m., and a depth of 10.5 m. and a terminal area of 17.6 ha. There are 32 points for refrigerated containers. It is equipped with 1×37.5 ton and 3×47.7 ton gantry cranes. There are also 12 straddle carriers.

Nagoya Container Berth Terminal (NCB) has a quay length of 850 m. with a depth alongside of 12.0 m. Comprising of 3 berths (R1, R2 and R3), the total area is 28.5 ha. It is equipped with 2×51.1 ton, 2×48.6 ton and 2×46.1 ton gantry cranes. Other handling equipment includes 59 straddle carriers.

Toyota Pier with its 5 berths is for the exclusive use of Ro/Ro vessels for loading and discharging vehicles. Ro/Ro vessels also berth alongside some of the public wharves for loading vehicles.

Gantry Cranes:

Quantity	*Berth* No.	*Crane* No.	*Manufacturer*	*Capacity under spreader* (tons)	*Outreach* (m.)
1	W78	1, 2	Mitsui	47.7	38.5
1	W78	3	NKK	47.7	38.5
1	W77	4	Sumitomo	37.5	35.0
1	W76	5	Sumitomo	37.5	35.0
1	W92	1	Mitsui	46.4	35.5
1	W91	2	IHI	48.0	35.5
1	W92	3	Kawatetsu	49.1	37.0
3	W94	1,2,3	NKK	55.0	44.5
2	R1	1, 2	Mitsubishi	51.5	35.5
2	R2	3, 4	Mitsubishi	46.1	35.5
2	R3	5, 6	Mitsubishi	46.1	35.5

BULK CARGO FACILITIES: Iron ore and coal are discharged at Area No. 10 (See "Berthing" – Public Wharves) and Nippon Steel Co. Pier (See Wharf F11-14 in "Berthing" – Private Wharves).

Grain cargo facilities with efficient discharging equipment are available at private wharves of Rinoru Yushi Pier (BH and BH2), Nisshin Seifun Berth (G1), Zenno Silo Berth (JS), Toyo Grain Terminal (JT), and Chita Futo Dolphin (J5).

STEVEDORES: Stevedores arranged by Agents by 1500 hrs. on the day prior to the working day.

Normal working hours: 0830 hrs. – 1630 hrs.

Overtime work is possible from 1630 hrs. – 2130 hrs. with overtime fee 60% of basic charge. 2130 hrs. – 0830 hrs. with overtime fee 130% of basic charge. Saturday: Overtime fee 60% of basic charge. Sundays and holidays: Overtime fee 100% of basic charge (0830 hrs. – 1630 hrs.).

At private berths, working hours of stevedores vary from berth to berth.

MEDICAL: Hospitals conveniently located near port.

Medical clinics for vessel's crew also available in port, and they take crew to the medical offices from vessel, and vice-versa. Advance notice to Agent is preferable.

TANKERS:

Berth	*Depth* (m.)	*Length* (m.)	*Max.Draft* (m.)	*Capacity* (d.w.t.)
Idemitsu Chita (K-5) (Owner: Idemitsu Kosan Co.Ltd.)	14.0	433	12.72	100,000
Isewan Sea Berth (East and West Berths) (Owner: Idemitsu Kosan Co.Ltd. and Japan Energy	25.5	500×2	20.00	250,000×2 Max. LOA 345 m. approx.
Japan Energy(J7)	12.0	128	10.80	50,000
Chita LNG Terminal (L1)	14.0	420	12.60	100,000
Chita LNG Terminal (L2)	14.0	460	12.60	65,000
Chubu Electric Plant (U6)	12.0	97	10.00	5,000
Chubu Electric Plant (U7)	12.0	107	10.00	5,000
Showa Petroleum (U5) (Nippon Petroleum, Marubeni & Showa Shell as owners.)	12.0		10.80	30,000 LOA restriction 94.11 m.

Also see "Berthing".

Isewan Sea Berth: Location: Lat. 34° 55.2' N., Long. 136° 44.36' E.

Isewan Sea Berth is operated by Isewan Seaberth Co.Ltd.

Terminal operates 24 hours a day, 7 days a week. Ships are moored and unmoored during daytime. Discharging commences during daytime.

Berthing/unberthing is prohibited when wind velocity over 15 m./sec. or height of waves is over 0.8 m. and/or visibility under one nautical mile. Discharging is suspended when height of waves is over 1.5 m. or wind velocity over 15 m./sec.

Loading arms (4 arms) 4,500 kl./arm, max. rate 18,000 kl./hr. and max. pressure 10.0 kg./cm. at manifold.

Berth Depth: 25.0 m.

Max. Size: Draft 20.0 m.; max. d.w.t. 280,000; max. LOA 345 m. (approx.).

Berth Length: 500 m. each, West and East.

No. of Berths: Two.

Side Alongside: Usually portside alongside at East berth, and starboard side at West berth.

Pilotage: Vessels over 10,000 g.r.t. must use a pilot.

Tugs: Terminal requests that vessels use tugs for berthing and unberthing. Tugs horse power is calculated as follows:

For berthing: Ship's d.w.t. × (6% – 8%) = Required h.p.
For unberthing: Ship's d.w.t. × (4% – 5%) = Required h.p.

Guard Boat: Cargo consignee arranges guard boat.

DENSITY: 1019 – 1020.

FRESH WATER: Water supplied direct from pier or by barge.

FUEL: Most grades of domestic and bonded oil are available.

Important Notice: Bunkering at anchorage can be carried out within harbour limit line. If a vessel finds safe anchorage only outside the harbour limit line, bunkering is not allowed without special permission from Nagoya Customs and Ministry of Transport.

Firstly, the permission from Transport Ministry should be obtained, and secondly, the Closed-Port-Dues in substitution for tonnage dues for the Customs should be paid. With those legal procedures done, a vessel outside the limit line can take bunkers.

CONSULS: Australia, Bangladesh, Belgium, Brazil, Canada, Costa Rica, Denmark, Ecuador, France, Germany, Korea, Mexico, Netherlands, New Zealand, Portugal, Singapore, Sri Lanka, Sweden, Thailand, U.S.A. and Yugoslavia.

REPAIRS: All types of repairs possible. Repairs by Ishikawajima-Harima Heavy Industries Co. Ltd., Aichi Works.

DRY DOCKS: Ishikawajima-Harima Heavy Industries Co. Ltd., Aichi Works. (IHI), length 810 m., width 92 m. Capacity: Repair 161,000 g.r.t., build 95,000 g.r.t.

SURVEYORS:

1. Cargo inspectors, bunker soundings, hulls for delivery, etc., by Japanese Government Sworn Surveyors, S.N.K.K. (Shin-Nihon Kentei Kyokai) and N.K.K. (Nippon Kaiji Kentei Kyokai).
2. Class Surveyors: Lloyd's Register, American Bureau, Nippon Kaiji.

Other class surveyors should be arranged in advance as their offices are not located in Nagoya.

GANGWAY/DECK WATCHMEN: Not compulsory but available.

OPENING/CLOSING HATCHES: Normally carried out by crew.

CUSTOMS ALLOWANCES: Tobacco, wine and spirits are not sealed in ship's bonded stores by the Customs, and each crew member can consume freely on board the vessel. This arrangement of the Customs service came into effect in February 1991.

REPATRIATION: Facilities available, but the legal procedures are required to be carried out during the Immigration office hours only (0900 hrs. – 1700 hrs. from Monday to Friday).

The Immigration Office of Nagoya Port is not open outside office hours or Saturdays, Sundays and holidays.

AIRPORT: Nagoya Airport, 1 hour and 10 minutes by car from the airport to the Immigration Office (Nagoya Port), depending on traffic.

TIME: JST (Japan Standard Time), 9 hours ahead of GMT.

HOLIDAYS: Cargo work not arranged on the following day: July 20th (Maritime Day).

Stevedores' no-working days: 2 Sundays in each month, Year End/ New Year holidays.

National holidays: January 15th; February 11th; March 21st; April 29th; May 3rd, 4th, 5th; July 20th; September 15th, 23rd; October 10th; November 3rd, 23rd; December 23rd.

It is getting difficult to arrange stevedores even on these national holidays, due to the recent labour shortage. Negotiations with stevedores required in advance, in order to arrange for cargo work.

POLICE/AMBULANCE/FIRE: Police 110, Ambulance 119, Fire 119.

EMERGENCY CO-ORDINATION CENTRE: If emergency (fire, pirates, robbery, etc.) breaks out, contact Nagoya Maritime Safety Agency by the following ways:
1. VHF: Channel 16, call sign "Nagoya Hoan".
2. Cable: Code J.N.T.
3. Telex: No. 4934961 Jmsana.
4. Distress: Call 2182 kHz.
5. Telephone: No. 052-661-1611 (0900 hrs. – 1700 hrs., Monday to Friday, or 052-661-1616 (outside office hours).

TELEPHONES: Shore telephone available on board at most public piers.

SERVICES: Hold cleaning and tank cleaning available.

Local repair shop for radio and radar available but advance notice preferable, in order to get spare parts for repairs.

Supply of Japanese Charts available at Asahi Service Co.Ltd. For British Admiralty and other charts, advance notice required.

Shipchandlers, laundry, garbage disposal and Notary Public for Marine Note of Protest available.

SHIP SUPPLY SERVICE: Launch service for crews:
Ferry, speed boat/bus service:
Nagoya Ship Service Co.Ltd. Tel: 052-661-1322. Fax: 052-651-7401.
Speed boat service to anchorage:
Chita Boat Co.Ltd. Tel: 052-653-0127.
Heisei Marine Co.Ltd. Tel: 052-653-1505.
Delivery of ship's parts/machinery:
Heisei Marine Co.Ltd. See above.
Fujita Sagyosho. Tel: 052-661-1117.
Shipchandlers/parts and machinery:
Fuji Trading Co.Ltd. Tel: 052-652-0241.
Chita Senshoku. Tel: 0562-55-3888.

BANKS: Tokai Bank, Nagoyako Branch, 1-17-11, Meiko Minato-ku, Nagoya, 455 Japan. Tel: 052-653-2111.

SHORE LEAVE: Allowed with shore passes issued by Immigration.

IDENTIFICATION CARDS: Shore passes to be issued by Immigration at the first port of call in Japan, so either Seaman's Book or Passport (valid) required for issuing of shore passes.

GARBAGE DISPOSAL: Authorised Marine Disposal Companies:
Genyo-Kosan Co. Ltd. Tel: (052) 661-6050.

WASTE OIL DISPOSAL: Contact: Daiko Marine Co. Ltd. Tel: (052) 681-3887.

SEAMAN'S CLUBS: None.

CURRENCY: Japanese Yen.

DEVELOPMENTS: A new deepwater container berth (W93) is being constructed to the North of Berth W94 in West-4 Section, and is scheduled to be in operation in 1997. These two berths will be equipped with 5 post-Panamax gantry cranes, three of which are presently being used at W94. Construction of 5 berths in West-5 Section is also planned. One of them will have a quay length of 350 m. with a depth of 14.0 m. and a terminal area of 17.5 ha. and is due to be operational in 1997.

AUTHORITY: Nagoya Port Authority, 8-21, Irifune, 1-Chome, Minato-Ku, Nagoya, 455-91 Japan. *Tel:* (052) 654-7840. *FAX:* (052) 654-7995. *Contact:* Akio Someya, Executive Vice-President.

AGENT: Senwa Shipping Agency, c/o The Tokai Transport Co.Ltd., 1-20-10 Irifune, Minato-Ku, Nagoya-Shi, Aichi 455, Japan. Tel: 052-651-1271. Fax: 052-653-3857. Telex: 446-31456. Cables: Trapt Nagoya.

NAHA, Okinawa: 26.12 N. 127.40 E. (See Plan)

DOCUMENTS:
Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
5 Crew Lists, including Passport or Seaman's Book numbers.
5 Passenger Lists, including nationality, if any on board.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wines/spirits, camera, wrist-watch, radio, firearms/swords, etc. (Only at first port of call in Japan.)

Ship's Agent will prepare Inward/Outward Declaration, 1 Cargo Manifest, Cargo Manifest in transit using specific forms. Therefore Ship's Agent should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Pilot service is compulsory when entering Naha Port (Naha Wharf), but not compulsory for Shinko Wharf (New Wharf). Pilot boards in position Lat. 26° 13' 49" N., Long. 127° 38' 20" E.

When entering Naha Wharf, signal controls will apply, and the vessel must hoist and fly following flags:
1. Entering Naha Wharf: Hoist No. 2 and "N" flag.
2. Entering Shinko Wharf (New Wharf): Hoist No. 2 and "S" flag.
3. Sailing out from Naha Wharf or Shinko Wharf: To Touguchi Entrance – hoist No. 1 and "T" flag.
4. Sailing out from Naha Wharf or Shinko Wharf: To Yamatogichi Entrance – hoist No. 1 and "Y" flag.

RESTRICTIONS: Vessels entering Naha Port are controlled by the limiting depth in the entrance channel of 11 m. Entry and departure possible 24 hours.

MAX. SIZE: Length and beam not limited. Max. draft 11 m. If vessel over 30,000 g.r.t., it should be discussed with Maritime Safety Agency and Port Office.

HEALTH: Radio Pratique available (See "Late Reports"). Quarantine formalities carried out at the Quarantine Anchorage (Lat. 26° 14' 18" N., Long. 127° 38' 57" E.) from 0830 hrs. to 1700 hrs.

RADIO: Recommended communicate with Agent through Nagasaki Radio, which covers all ports in Japan.
Also see "VHF".

VHF: Vessels may call Naha Hoan (Japanese Maritime Safety Agency) on Channel 16, especially when there is an emergency.

TUGS: 3 tugs available, 2,000 h.p. – 3,000 h.p.

BERTHING:

Berth	*Length* (m.)	*Depth* (m.)	*Capacity* (d.w.t.)
Naha Wharf			
No. 1	204	9.0	1×10,000
No. 2	195	9.0	1×10,000
No. 3	164	9.0	1×10,000
No. 4	70	5.0	1× 1,000
No. 5	78	5.0	1× 1,000
No. 6	150	7.5	1× 5,000
Shinko Wharf (New Wharf)			
No. 1	474	7.5	3× 5,000
No. 2	70	5.0	1× 1,000
No. 3	420	7.5	3× 5,000
No. 4	420	7.5	3× 5,000
No. 5	420	11.0	2×20,000
No. 6	450	11.0	2×20,000
No. 7	451	11.0	2×20,000

STEVEDORES: At least 24 hours' prior notice excluding Sundays and holidays required, in order for Agent to arrange stevedores.

MEDICAL: All medical and hospital facilities available.

TANKERS: No facilities.

FRESH WATER: Fresh water available alongside and at anchorage by barge.

FUEL: All grades of fuel available.

OPENING/CLOSING HATCHES: Usually opening and closing hatches done by crew, but may, upon request, be done by stevedores, after discussion with stevedores through Agent.

REPAIRS: Facilities available for minor repairs.

CUSTOMS ALLOWANCES: Each man allowed take 60 cigarettes ashore, but no spirits.

TIME: GMT plus 9 hours all year round.

SHORE LEAVE: Local Immigration Office issues shore pass valid for 7 days. Extension possible if ship stays longer.

DEVELOPMENTS: Large scale developments underway with completion expected in 1996 – 2000.

AUTHORITY: Port & Harbour Bureau:
Naha Wharf: 95 Tondo-cho, Naha City, Okinawa 900, Japan. *Tel:* 098-868-1843.
Shinko Wharf: 1-2, Minato Machi, Naha City, Okinawa 900, Japan. *Tel:* 098-862-2339.

NAKANOSEKI: 34.00 N. 131.34 W. (See Plan)

Port Status: Open Port (Mitajiri-Nakanoseki Port).

DOCUMENTS: When vessel arrives direct from a foreign port, Customs Officials will board to search, and the following documents are to be submitted:
Ship's Register.
International Tonnage Certificate.
Voyage Memo (Ports of Call).
3 Crew Lists, including Passport numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agents will prepare Inward/Outward Declaration, Cargo Manifest and Cargo Manifest in Transit, using specific forms. Therefore, ship's Agents should be provided with necessary information about details of cargoes in advance.

Officials:
Customs: Stationed in Nakanoseki.
Maritime Safety Office: Stationed in Nakanoseki.
Quarantine: Not stationed in Nakanoseki. Free Pratique is to be obtained through Tokuyama, Ube or Mutsure Quarantine Station prior to proceeding to Nakanoseki.
Immigration: Official stationed at Tokuyama Office.
Port Authority: Stationed in Nakanoseki.

PILOTAGE: Not compulsory for berthing or unberthing.
Also see "Shipmaster's Report".

ANCHORAGE: See "Shipmaster's Report".

RESTRICTIONS: Berthing is carried out between sunrise and sunset. Unberthing is carried out between sunrise and one hour before sunset.

MAX. SIZE: No. 3 Wharf: LOA 220 m., draft 9.5 m.

HEALTH: See "Documents" – "Officials".
Also see "Late Reports".

RADIO: Recommended that Master communicates with Agent through Nagasaki Radio, which covers all ports in Japan.

TUGS: Available as required. Stationed at Tokuyama, Ube and Moji. Usually using 2 tugs on berthing and 1 tug for unberthing.

BERTHING:

Wharf Name	*Length* (m.)	*Max.Draft* (m.)	*Capacity* (d.w.t.)	*Cargoes*
Pier No. 1	360	5.50	2,000	Domestic cargo.
No. 2	260	7.40	5,000	CKD, Steel products, etc.
No. 3	480	9.50	30,000	Mazda vehicles, CKD, plant.

STEVEDORES: At least 24 hours prior notice, excluding Sundays and holidays required, in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew at additional cost.

For loading Mazda CKD/vehicles:
Nippon Express Co.Ltd., Hofu Branch.
Mazda Logistics Service Co.Ltd., Hofu Branch.
Naigai Unyu Co.Ltd., Hofu Branch.

Loading rate: Approximately 80 units per hour per gang, subject to stowage.

Labour: Basically 3 or 4 gangs, but a maximum of 6 gangs are available.

MEDICAL: No advance notice required, unless urgent.

FRESH WATER: Available from shore hydrant, rate approximately 10 tons per hour. The basic charge is 297 Yen per ton. Barge supply is also available, but this must be brought up from Tokuyama.

FUEL: All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, Osaka Bay and Kanmon Port. At all other ports, bunkers will be lightered from the nearest bunker stock ports at maximum 7 days prior notice.

CONSULS: No local representatives. Marine Note of Protest can be attended by local notary public.

REPAIRS: No facilities.

GANGWAY/DECK WATCHMEN: Not specially required, unless passengers or valuable cargo on board.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work, unless crew can complete it before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores, when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore, but no spirits.

REPATRIATON: Possible.

AIRPORT: Nearest Ube Airport, about 2 hours drive from Nakanoseki, JAS and ANA Lines.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

POLICE/AMBULANCE/FIRE: Police 110; Ambulance/Fire 119.
Public telephone booth available near by the berth.

TELEPHONES: No facilities for placing telephones on board.

SHORE LEAVE: Local Immigration Offices issue shore passes, valid for only 15 days, when Nakanoseki is first port of call in Japan. Extension possible if ship stays longer.

SHIPMASTER'S REPORT: December 1988.

Documents:
Ship's Register.
Last Port Clearance.
5 copies of Crew List, including Passport Numbers.
3 copies of Lists of Ports of Call.
1 copy Stores List.
1 copy Through Cargo Manifest.

Please note that Nakanoseki was not the first Port of Call in Japan. If such is the case then at least one Declaration of Crew's Baggage and one Maritime Declaration of Health will probably be required.

Pilotage: Available, but not compulsory.

According to information received by the vessel prior to arrival off the port, Harbour Pilot boards in the vicinity of a 250 m. radius circle (true bearing 159°, 1,590 m. from Nakanoseki Lighthouse), depth of water approximately 11.10 m. This boarding area is used for vessels with a deadweight in excess of 10,000 tons or if the LOA exceeds 150 m.

Information was also received from the vessel's Agent prior to arrival regarding the pilot boarding area. They advised me that the Pilot would board in position Lat. 33° 58' N., Long. 131° 33' E. (090°, 2.0 miles from Saba Shima Lighthouse). In my opinion this is the more practical of the 2 boarding areas as it keeps the vessel well clear of the numerous fish havens in the vicinity of the channel entrance and allows plenty of room to manoeuvre to seaward should the vessel have to drift and await the Pilot during periods of high winds.

If required, Inland Sea Pilotage service is available either from Sekisaki, Kobe, Hesaki, Tokuyama and/or Kadamatsu Pilot Station.

The Pilot boarded the vessel using one of the local tugs.

The Pilot advised me that during flood tide a current of up to 1.2 knots can be experienced across the channel entrance, flowing from East to West. During ebb tide the flow is in the opposite direction.

Anchorages: There is no suitable waiting anchorage for vessels of this size (PCC/Lumber Carrier, 33,000 g.r.t.). Vessels are requested to adjust their ETA so that they arrive at the Pilot Station without having to anchor. I questioned the Pilot as to why it was not permissible to anchor in the vicinity of the Pilot boarding ground and he advised me that it was because of the numerous fishing havens in the area and objections received from local fishermen.

Should the vessel be compelled to anchor for any reason, the Pilot advised a position 138°, 3,000 m. from Ryugu Saki Light. Care must be taken when anchoring in this position due to the close proximity of underwater cables.

Max. Size: Dependent on height of tide. Vessel must have 10% under keel clearance in the approaches, where the depth of water is 10.50 m.

VHF: During the early morning approach to the port the vessel was unable to contact the Pilot by VHF.

Tugs: Available as required. Stationed at Tokuyama Port. This vessel used 2 tugs for berthing and 1 tug for unberthing. Vessel is equipped with bow thruster and was berthed starboard side to, head out.

Berthing: Nakanoseki Wharf No. 3 (Owned/Controlled by Yamaguchi Prefecture).

The berth is used exclusively for Mazda vehicles/CKD but occasionally for Log/Plant carriers.

Depth of water in approaches:	10.50 m.
Depth of water alongside:	12.00 m.
Length of Wharf:	240 m.
Side alongside:	Basically port side to, but starboard side to is also acceptable.

The berth is very exposed to the W/N.W. and strong winds blowing from this direction could prove to be a problem for high-sided PCC type vessels.

Stevedores: For loading Mazda cars/CKD.
Nippon Express Company Limited, Hofu Branch.
Mazda Logistics Service Company Limited, Hofu Branch.
Naigai Unyu Company Limited, Hofu Branch.

Loading Rate: Approximately 80 units per gang hour, subject to stowage.

Labour: Basically 3 or 4 gangs, but a maximum of 6 gangs are available.

General: Charts: There is no large scale BA. Chart of the area available at present. For the purpose of our visit, Japanese Chart No. 1134 was purchased.

NAMIKATA: 34.07 N. 132.55 E. (See Plan)

Port Status – Closed Port.

DOCUMENTS:
Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
3 Ports of Call Lists.
3 Crew Lists, including Passport Numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage.

PILOTAGE: Inland Sea Pilotage should preferably be arranged through Agent giving 72 hours' notice. Urgent correction of ETA outside business hours should be cabled direct to Pilot Station.

Inland Sea Pilot Association covers all Inland Sea ports. Pilotage not compulsory for vessels under 10,000 g.r.t., but recommended in view of great number of islands causing navigational hazards. Pilot obtained from one of three Pilot Stations dependent upon vessel's last port of departure and at Master's discretion. Pilotage available throughout 24 hours and 72 hours' advance notice preferred, thereafter advising any alterations. Most Inland Sea Pilots also act as Harbour Pilots up to berth.

1. Wadamisaki. (In this case Pilots compulsory if over 10,000 g.r.t.) Position: Lat. 34° 35' N., Long. 135° 08' 24" E. Cable address: "Anjin Kobe".
2. Sekisaki. Position: Lat. 33° 13' N., Long. 131° 55' 38" E. Cable address: "Anjin Moji".
3. Hesaki. Position: Lat. 33° 57' N., Long. 131° 03' E. Cable address: "Anjin Moji".

ANCHORAGE: No anchorage at Namikata.

RESTRICTIONS: Mooring and unmooring daytime only with slack tide.

MAX. SIZE: Oil tankers: 125,000 d.w.t. Gas tankers: 67,000 d.w.t.

HEALTH: Closed port. Vessels should obtain Pratique at Matsuyama.

RADIO: Recommended Master communicates with Agent through Nagasaki Radio.

TUGS: Join vessel off Namikata, always using tug's line without charge. 2 to 4 tugs are required for berthing, depending on size of vessel.

BERTHING: Berthing time will be notified by ship's Agent by radio.

MEDICAL: No advance notice required unless urgent.

TANKERS: *Namikata Terminal Co. Ltd.* only. Located approximate position Lat. 34° 07' 07" N., Long. 132° 54' 32" E. See "Max. Size".

FRESH WATER: Available by shore line. Rate of delivery: 20 t.p.h.

FUEL: Not available.

REPAIRS: Not possible.

CUSTOMS ALLOWANCES: Only allowed 50 cigarettes to take ashore but no spirits.

REPATRIATION: Possible. Nearest Immigration Office situated at Niihama.

AIRPORT: Nearest at Matsuyama.

TIME: GMT plus 9 hours.

POLICE/AMBULANCE/FIRE: Police 110; Ambulance 119; Fire 119.

TELEPHONE: No facilities for placing telephones on board.

SHORE LEAVE: Crew members free to go ashore by designated micro-bus with landing passes issued by Immigration Authorities.

GENERAL: As this port is a Closed Port, special permission to enter into closed port is required from Shikoku Transport Bureau.

No quarantine available, the nearest Quarantine Station at Matsuyama.

No Immigration Office at this port (Officials come from Niihama).

The above procedures of Quarantine/Customs and Shikoku Transport Bureau will be undertaken by Namikata Agent.

SHIPMASTER'S REPORT: May 1987 (Updated 1996).

Pilotage: Inland Sea Pilot from Seki Saki inwards who also undertakes berthing/unberthing, etc. Inland Sea can be traversed by day or night although daylight is preferable.

Pilot should be ordered in advance, telexes sent to "Anjin Moji" (Telex No. 7153-03) or via Agent and confirmed by VHF when within range of Oita Radio.

Restrictions: Berthing/unberthing daylight only when current is less than 0.5 knots for LPG tankers and 1.0 knots for other tankers.

Vessels must proceed to Matsuyama Anchorage for Quarantine and Immigration clearance and to await suitable berthing conditions.

Anchorage: No anchorage off Namikata, waiting vessels must anchor off Matsuyama.

Obstructions: There is a 10 m. patch just North West of Kazitori-No-Ha.

Tugs: 3 tugs used for berthing and 2 tugs used for unberthing with the usual guard tug in attendance inwards and outwards from Matsuyama and whilst vessel alongside.
Berth: Berth is of modern construction and design. Vessels usually berth starboard side to with 4 head/stern lines, 2 breast lines and 2 springs fore and aft. Arms: Liquid 2 × 12 in. ASA. Vapour return line 1 × 8 in. ASA. Discharge rate 1,800 tonnes/hour. Shore gangway provided.
Fuel: No bunkering allowed at Namikata, however can be supplied off Matsuyama where additional tonnage dues must be paid.

SHIPMASTER'S REPORT: September 1991.
Vessel: 83,800 d.w.t., 244.5 m. LOA and 12.00 m. arrival draft.
Cargo: 27,000 tonnes of Naphtha.

API	78.5
Gravity	0.65 – 0.70
Flash Point	43°C
Boiling Point	2.3
Fire Point	390°C

Safety Measures:

(1) The route to be tanken to/from oil terminal at Seto Naikai (Inland Sea):
Bungo Suido (Suido means narrow channel) – Iyo Nada – Tsurishima Suido – Aki Nada and reach to Namikata Terminal, and return to Bungo Suido.

(2) General measures for safety navigation in Inland Sea:
The vessel shall take the following safety measures in accordance with the maritime traffic law for safety navigation and with the assistance of a pilot.
1. When in poor visibility, the vessel shall maintain the safety speed and also keep the maritime traffic laws. If necessary, the vessel shall anchor and wait for favourable conditions.
2. The vessel shall arrange fire wires and auxiliary ropes at the bow and the stern of the vessel for immediate use.
3. The vessel shall pay careful attention to the crossing ferryboats.
4. The vessel shall not manoeuvre by auto-pilot except in Suo-Nada.
5. The vessel shall proceed by the maritime traffic law and also keep to the right of the recommended course shown on the chart.
6. The vessel shall take appropriate steps to ensure safe navigation, including maintaining safe speed in addition to the observation of laws and keep a radar watch and also, the vessel has to arrange sufficient watchmen if required.
7. The vessel shall listen for all notices given by coast guard and international VHF radio.
8. The vessel shall check the weather forecast closely and always be ready for unexpected weather changes. Furthermore, the vessel shall navigate safely.
9. When visibility is poor and may interfere with safe navigation, the vessel shall anchor in a safe place, avoiding the fishing area and recommended course and wait until weather/visibility improves.

(3) Passing Hayasui-Seto:
1. This channel is frequently congested with vessels, ferryboats and fishing boats. The vessel will not pass through this channel in fog if visibility is less than one mile.
2. When passing through this channel, the vessel shall keep to the righthand side of the centre line on a course of North Northwest (South Southeast).
3. The vessel shall not overtake another vessel whose g.r.t. is greater than 500 tons, except in an emergency case, and she shall not pass another vessel during the night.
4. The vessel shall not pass through this channel during the night, if possible.

(4) Passing Iyo-Nada:
The vessel shall pay attention to the prevailing Westerly winds, especially to the seasonal wind in Winter.

(5) Passing Eastern area of Aoshima:
The vessel shall pay special attention to safety and navigation during the night at this area.

(6) Passing Tsurishima Suido:
The vessel shall take the following safety measures for passing Tsurishima Suido and/or narrow channel which is often congested with vessels.
1. When visibility is poor, the vessel shall take appropriate steps to ensure safe navigation and/or anchor temporary until favourable weather returns.
2. Concurrently with enforcement of visual watch on the vessel, radar shall be used effectively to see the surrounding traffic conditions.
3. The vessel will not overtake another vessel whose g.r.t. is greater than 500 tons, except in an emergency.
4. The vessel shall pass the Tsurishima Suido according to the recommendations of the 6th Regional Maritime Safety Headquarters which was issued on November 1st 1977 (See "Approaches" below).

(7) Passing Aki-Nada:
The vessel shall proceed along the recommended course with Aki-Nada Light Beacons No. 2, 3 and 4 on the port side, and confirm passing Ogon-Shou (Reef).

(8) Navigation from Aki-Nada to Namikata Terminal Main Berth:
1. The vessel shall reduce her speed to approximately 4 knots and rendezvous with tugs at Aki-Nada No.4 Light Beacon.
2. The vessel shall proceed to Namikata Terminal Main Berth with forward escort tug which possesses foam fire fighting equipment.
3. The vessel shall approach Namikata Terminal Main Berth after passing Ogon-Sho (Reef).

(9) General safety measures in port:
The vessel shall take the following safety measures in port in keeping with the Japanese Port Regulation Laws.
1. The vessel shall take a harbour pilot for mooring and/or unmooring.
2. Berthing and unberthing shall not take place in adverse weather, such as strong winds (wind speed 15 m./sec.), poor visibility (less than 1 mile), etc.
3. The vessel shall maintain a necessary and ample under keel clearance during stay in port.
4. Concurrently with taking sufficient fire control measures, a strict watch over the area shall be maintained for approach of any vessel suspected of having an insufficient fire control system, and if necessary a warning shall be given to such approaching vessel.
5. Fire fighting equipment furnished onboard shall be inspected and prepared for immediate use.
6. During the cargo operation, the vessel will not carry out any bunkering, otherwise special safety measures will be taken.
7. Prior to start of the cargo operations, the operational procedures and the accident prevention measures shall be fully agreed between the cargo handling parties concerned and the safety check shall be carried out in accordance with a check list.
8. The vessel shall fully carry out safety measures generally taken by vessels carrying general inflammable dangerous cargoes, including arranging fire wires and auxiliary ropes on her bow and stern for immediate use.
9. The ballasting operation shall be carried out during daytime, as far as possible.
10. The vessel shall arrange sufficient duty staff in order to discover oil leakages as soon as possible.
11. A communication system for emergency cases will be organised (communication table will be given to Master).
12. The vessel shall follow all safety measures issued by berth owner and Maritime Safety Headquarters.

(10) Safety measures at Namikata Terminal:
The vessel shall take the following safety measures at Namikata Terminal in addition to the aforesaid safety measures.
1. The vessel shall take a harbour pilot for mooring and/or unmooring.
2. The berthing and unberthing shall not take place under the following weather conditions:
   (a) When average wind speed is 10 m./sec. and /or max. 15 m./sec.
   (b) When wave height is likely to reach 1.5 m.
   (c) When visibility is likely to become less than 1 mile.
   (d) When thunderbolt strike is likely.
   (e) When tidal current is over 0.5 knots.
   (f) When the vessel is recommended to take shelter by Chief of Imabari Maritime Safety Agency due to typhoon approaching.
   (g) When berth owner and/or Master judges that conditions of weather and sea are too poor.
3. Berthing/unberthing available from sunrise to sunset.
4. The approach speed to berth shall be less than 10 cm./sec.
5. The vessel shall use sufficient tug assistance for berthing and/or unberthing.
6. The berthing and/or unberthing shall not be at the same time as coaster operations.
7. When approaching Namikata Terminal Main Berth, the vessel shall refer to current table near the berth.
8. Linehandlers shall be positioned at the forward and after end of terminal dock apron. Linehandling boat is also used.

The adjustment of vessel's position between shore connection and ship's manifold shall be done with utmost careful attention.

(11) Notice of arrival/navigation:
The vessel shall keep in close communications with Namikata Terminal prior to entering the Terminal for her safety, and the Terminal shall notify Imabari Maritime Safety Agency of vessel's schedule in advance.

(12) Waiting and/or anchoring:
The vessel shall adjust arrival at Namikata Terminal at sea in order to berth on arrival, however in cases of an emergency, the vessel shall proceed to anchorage, where Master shall report position to Imabari Maritime Safety Agency.

(13) Gas purge operation:
The vessel will not carry out gas-purge operation as a rule, however if it is necessary, she shall carry it out only at sea and in following conditions:
1. In favourable weather and good visibility.
2. When wind speed is over 5 m./sec.

(14) Pilotages and towage:
1. Inland Sea Pilot shall embark/disembark at Sekisaki Pilot Station.
2. The vessel shall arrange sufficient tugs in accordance with the towage requirement scale prepared by licensed inland/sea pilot (See "Tugs/Tides" below).

Approaches: Recommendation for Traffic in Turushima Suido (Set Naikai Western Part): (See Plan).

Issued by 6th Regional Maritime Safety Headquarters. Dated 1st November 1977.

Keep on the starboard side in Turushima Suido.

A vessel proceeding along the course of Turushima Suido shall keep near to the outer limit on the channel which lies on her starboard side not less than 150 m. distant from a line drawn from Akinada Minam Koro Light Buoy No.1 (33° 57.3' N., 132° 43.1' E.) to Turushima Ligh Buoy (33° 54.4' N., 132° 38' E.).

Tugs/Tides: Towage scale and restrictions for mooring/unmooring operations:

Towage scale at Namikata Terminal Main Berth:

Vessel (d.w.t.)	*No. of Tugs and H.P. for Mooring*	*No. of Tugs and H.P. for Unmooring*
Under 6,000	1 Tug (over 1,000)	1 Tug (over 1,000)
6,000 – 20,000	2 Tugs (over 2,000)	2 Tugs (over 2,000)
20,000 – 35,000	2 Tugs (over 2,500)	2 Tugs (over 2,000)
35,000 – 70,000	3 Tugs (over 2,500)	2 Tugs (over 2,500)
70,000 – 100,000	2 Tugs (over 2,500) 1 Tug (over 3,000)	3 Tugs (over 2,000)
100,000 – 125,000	4 Tugs (over 2,500) (Based Z-type propeller tugboat)	3 Tugs (over 2,500)

Restriction of tidal current for mooring and/or unmooring operations:

1. Mooring Operation:
   Vessel's D/W
   Under 10,000 – Tidal current is less than 1.0 knots (against).
   Over 10,000 – Tidal current is less than 0.5 knots (against).
2. Unmooring Operation:
   Vessel's D/W
   Under 35,000 – Tidal current is less than 1.0 knots.
   35,000 – 50,000 – Tidal current is less than 0.7 knots.
   Over 50,000 – Tidal current is less than 0.5 knots.

NANAO: 37.02 N. 136.58 E. **(See Plan)**

LOCATION: Located on the East side of Noto Peninsula in Ishikawa Pref., in the Southern part of Nanao Bay. Arrival of vessel is to be considered the anchoring time in port, or the starting time of waiting for pilot outside the port.

DOCUMENTS:

Ship's Register and International Tonnage Certificate, if available.
Last Port Clearance.
4 Crew Lists and Passenger Lists, if any on board.
1 Stores List on arrival.
1 Declaration of Crew's Baggage (only at first port of call in Japan).
1 Maritime Declaration of Health (only at first port of call in Japan).
Inward/Outward Declaration and Cargo Manifests for Discharging and Transit shall be prepared by ship's Agents.

Necessary blank forms will be provided by ship's Agents, if required.

PILOTAGE: Ordered by cable via Choshi Radio, or by telex, possible to request local ship's Agents to arrange pilot, informing ETA accurately. For entering and berthing, pilot boards in position Lat. 37° 06' 50" N., Long. 137° 04' 30" E., or 2 – 3 miles off from this position on bearing 259°, for vessel over 10,000 g.r.t. Anchoring outside port is very difficult, due to stationary fishing nets. If vessels arrive at night-time, it is better for large vessels to drift at about 10 miles off the coast and wait for pilot. Pilot also available at inward Quarantine Station for berthing. It is only possible to contact pilot one hour before berthing (VHF Channel 16).

ANCHORAGES: Quarantine Anchorage position: Lat. 37° 05' 40" N., Long. 136° 59' 16" E., with depth 16.0 m. and radius 400 m.

RESTRICTIONS: Large LPG vessels are prohibited to enter or sail at night-time, and are also prohibited from anchoring inside the bay.

MAX. SIZE: Draft 12.5 m., length 232 m., and d.w.t. 60,000 tonnes.

HEALTH: At first port of call in Japan, vessel must obtain Free Pratique. Radio Pratique available. Quarantine Officer will attend vessel at Quarantine Anchorage or soon after berthing, during official working hours, from Kanazawa Quarantine Office. Sanitary inspection for Radio Pratique shall be carried out by Quarantine Officers, attending from Kanazawa Office. In case any patient aboard, inform local ship's Agents the condition of patient.

Also see "Late Reports".

RADIO: Master is able to send cable to local ship's Agents via Nagasaki Radio. Telex communication also available by Inmarsat, even at great distances.

VHF: Contact "Fushiki Hoan" (name of local Maritime Safety Agency) on Channel 16 at any time there is an emergency.

TUGS: 1×2,000 h.p., 1×320 h.p. and 1×200 h.p. In case of necessity, other large tugs come from Toyama or Niigata.

BERTHING: Berthing not carried out in night-time, but unberthing is possible in night-time with pilot, if weather permits.

Berth	*Length* (m.)	*Depth* (m.)	*Permissible Draft* (m.)	*LOA* (m.)	*Capacity* (g.r.t.)
Wharf No. 1 West	230	7.5	7.0	135	5,000
Wharf No. 2 East	210	9.0	8.5	165	8,000
Ohta Bussen Futo	185	10.0	9.5	180	15,000
Ohta No. 2 Pier	185	10.0	9.5	180	15,000
Ohta Dolphin	200	8.0	7.5	150	8,000
LGT Nanao Jetty (LPG)	270	14.0	12.5	230	60,000

CRANES: Crawler cranes of 50 tons and 45 tons, and truck crane of 50 tons available. Heavy lift shore cranes or floating crane with greater capacity can be arranged if requested in advance.

STEVEDORES: 5 log gangs available if working by ship's gear. Log gangs available in daytime 0730 hrs. – 1730 hrs. in Summer, but for bulk cargo available up to 2130 hrs.

MEDICAL: No advance notice required, except on Saturdays, Sundays and holidays, also available in emergency. Dental treatment and vaccinations available on usual working hours.

TANKERS: One jetty for LPG vessels only. Discharging lines: 4 flexible rubber hoses (2 liquid and 2 vapour). Flange size: 12 in. for liquid and 8 in. for vapour, both Ansi 150 PSI. Max. flow rate: 2,000 cu.m./hr. for liquid and 3,000/cu.m./hr. for vapour. Temperature: −42° for Propane and −2° for Butane. Pressure: Propane and Butane 0.100 kg./sq.cm. Storage on shore for Propane and Butane, each 30,000 k/t.

DENSITY: 1021 – 1023. Density is not affected by tide.

FRESH WATER: Available at pier, except Ohta Dolphin and LGT Jetty, at about 20 tonnes/hr. Cost Yen 470/per tonne. (1992) At Ohta Dolphin or at inner anchorage available by barge. One barge with max. capacity 80 tonnes. Cost Yen 700/tonne, plus Yen 180/km. of distance. Not available for LPG vessels.

FUEL: Delivered by small vessel or tank lorry from the neighbouring port of Fushiki. Bonded oil not available. Advance notice required.

CONSULS: None locally.

REPAIRS: Small repairs can be undertaken.

DRY DOCKS: None.

SURVEYORS: Staff of Japan Marine Surveyors and Sworn Measurers' Association available from Toyama.

GANGWAY/DECK WATCHMEN: Usually not required. But if requested, watchmen can be arranged.

HATCHES: Hatch operations by stevedores, if requested.

CUSTOMS ALLOWANCES: Same as other ports in Japan.

REPATRIATION: Possible.

AIRPORT: Nearest local domestic airport is Komatsu (100 km.). Flights to Tokyo take 50 minutes, and there are 7 flights per day.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

HOLIDAYS: National holidays: January 1st; February 11th; March 21st; April 29th; May 1st, 3rd, 5th; September 15th, 23rd; October 10th; November 3rd, 23rd; December 23rd. End Year holidays December 30th and 31st. New Year holidays January 2nd – 4th; City Festival May 14th; Port Festival July 20th.

In some cases holidays are workable with additional charges.

POLICE/AMBULANCE/FIRE: Police 110; Ambulance/Fire 119. All stations are in Nanao City. In an emergency, contact local Maritime Safety Agency. Tel: 52-4999. If at sea, contact "Fushiki Hoan" by VHF Channel 16.

TELEPHONES: No arrangements for placing telephones on board. Calls can be made from office on shore near the pier within 5 minutes walk.

SERVICES: Hold cleaning possible.

BANKS: Two banks for exchange of currency in Nanao, Hokkoku Bank and Hokuriku Bank.

STORING: See "Prelims".

1. Available by barge or truck.
2. At LGT Jetty available only by barge after discharging and in daytime.
3. Possible, except Ohta Dolphin and LGT Jetty.
4. Not available.
5. Formalities of Customs required for loading.
6. Local riggers available to assist with storing.

SHIP SUPPLY SERVICE: Provisions and some ship's stores available to be supplied by local shipchandlers, but impossible to arrange craft or helicopter for transfer.

SHORE LEAVE: Crew members only allowed ashore with valid shore passes, issued by Immigration at the first port in Japan. Shore passes available at Nanao, but for renewal have to attend Kanazawa Immigration Office.

GENERAL: Many fishing nets located near the shore at the outer port, within about 3 miles off coast line. If entering or sheltering near shore, proceed with caution, especially at night-time.

DEVELOPMENTS: New dolphin for coal carriers available. Permissible max. draft 12.5 m. and capacity 60,000 d.w.t.

AUTHORITY: Ishikawa Prefectual Port Administration Office of Nanao, Yatashin-Machi, Nanao City, Ishikawa Pref., 926 Japan. *Tel:* 0767-53-0440.

NAOETSU: 37.11 N. 138.14 E. (See Plan)

DOCUMENTS:

International Tonnage Certificate.
1 Inward Declaration of Vessel.
1 Cargo Manifest.
1 Through Cargo Manifest.
1 List of Provisions and Stores.
1 List of Tobacco and Personal Effects.
7 Crew Lists (preferably airmailed or by Fax in advance).
2 Passenger Lists.

PILOTAGE: Pilot embarks at Quarantine Anchorage to take vessel directly to berth during daytime. All transmitting and receiving through Niigata Radio Station (call sign JCF, Type of Wave: 438454) or Nagasaki Radio Station. Cable Agent 1 week's notice of ETA and accurate ETA 24 hours before arrival, thereafter advising any change in arrival time.

ANCHORAGES: Half-circle drawn at a point of Lat. 37° 11' 31" N., Long. 138° 13' 59" E. (lighthouse) with radius 1,600 m.

RESTRICTIONS: Berthing and unberthing daytime only.

MAX. SIZE: 50,000 d.w.t. Max. draft 11.7 m.

HEALTH: Radio Pratique available. Formalities will be carried out at the anchorage. Quarantine Station 321° – 2,200 m. (Lat. 37° 11' 45" N., Long. 130° 14' E. 700 m. radius) from Naoetsu Lighthouse.

Also see "Late Reports".

RADIO: Niigata Radio Station: JCF. Nagasaki Radio Station: JOS.

VHF: Channel 16.

TUGS: Normally join vessel at entrance of port. Tug's lines used. One tug 1,300 h.p. Additional tugs will be brought from Niigata when required.

BERTHING:

Berth	*Length* (m.)	*Depth* (m.)	*Permissible Draft* (m.)	*Capacity* (d.w.t.)	*Remarks*
West Wharf No. 1	174	10.0	9.0	15,000	1 Unloader
West Wharf No. 2	185	10.0	9.0	15,000	
South Pier No. 1	170	7.5	5.0	6,000	Passengers
Centre Pier No. 1	130	7.5	7.0	5,000	Tower Cranes (240 t.p.h.)
Centre Pier No. 2	185	10.0	9.0	15,000	
Lumber Pier	185	10.0	9.0	15,000	
Kohsanhin Pier	270	13.0	11.7	50,000	
East Pier No. 1	185	10.0	9.0		
East Pier No. 2	185	10.0	9.0	15,000	Passengers
East Pier No. 3	185	10.0	9.0	15,000	Passengers

STEVEDORES: ETA, draft and hatch cargo quantities to be advised before arrival. Main bulk equipment: Tower cranes (4) 240 t.p.h.

MEDICAL: No notice required except in emergency, and attendance on Sundays/holidays.

DENSITY: 1023 – 1025.

FRESH WATER: Available from shore. Rate 30 t.p.h.

FUEL: Domestic oil is available. Bonded oil will be brought from Moji or Hakodate, with sufficient advance notice.

CONSULS: None.

REPAIRS: Minor repairs only.

GANGWAY/DECK WATCHMEN: No professional watchmen available.

OPENING/CLOSING HATCHES: Stevedores, if Owner guarantees payment of operation charges.

CUSTOMS ALLOWANCES: Tobacco: Each crew member allowed to retain for his private use 60 cigarettes, 15 cigars, 75 grams of tobacco, etc. Wine/and/or Spirits: 1 bottle of liquor, to last 1 month.

REPATRIATION: Necessary documents to be submitted to Immigration and Customs Authorities in Naoetsu.

AIRPORT: Niigata. 2 hours by train for flights to Seoul, Vladivostok, Khabarovsk and Irkutsk. Tokyo is 4 hours by train.

TIME: GMT plus 9 hours. Permanent.

HOLIDAYS: No work 30th/31st December and 1st, 2nd, 3rd and 4th January. Subject to gangs on other holidays.

POLICE/AMBULANCE/FIRE: Police 110; Ambulance/Fire 119.

TELEPHONE: No facilities for placing telephones on board.

SERVICES: Technicians for repair and/or adjustment of radar or wireless despatched from Niigata or Tokyo. Hold and/or tank cleaning operations by shorehands available, however gangs are from Niigata.

SHORE LEAVE: Crews allowed ashore within limit of Joetsu City.

IDENTIFICATION CARDS: Passport and/or Seaman's Book required.

DELAYS: Due to port congestion.

GENERAL: During Winter and bad weather, hire of nylon ropes (100 mm.) desirable in order to avoid hull damage. Ropes owned by Naoetsu Agency Association. Charge made for use.

AUTHORITY: Naoetsu Port Administration Office, 11-2 Minato-cho, 1-chome, Joetsu City, Niigata Pref., Japan. *Tel:* (0255) 43-4167.

NAOSHIMA: 34.28 N. 133.58 E. (See Plan)

Port Status: Closed Port.

DOCUMENTS: In addition to the documents required (See "Uno"), vessel must be provided with Customs's Closed Port Entrance Permission by Agents before entering Naoshima, as it is a non-open port.

PILOTAGE: Not compulsory in the port. However, for vessels over 10,000 g.r.t., Inland Sea Pilot is compulsory, especially through navigation routes like Akashi, Bisan-Seto, etc., as defined by Japanese Maritime Traffic Safety Law.

RESTRICTIONS: No restrictions on entering or sailing, even night-time, but pilot is only available during daytime.

MAX. SIZE: 20,000 g.r.t., LOA 180 m., max. draft 9.7 m.

HEALTH: Radio Pratique not available. Vessels usually anchor at Wada-Misaki (off Kobe) or nearest quarantine port, where the authorities board and grant Free Pratique.

TUGS: None. Tugs from Mizushima are available.

BERTHING: Naoshima Materials Wharf: Length 160 m. Depth 10.2 m. Outreach of crane 14.4 m. Distance to stockyard 500 m. Cargo unloaded is copper concentrate. Copper slag is loaded.

Lightenning can be undertaken at anchorage of port of Uno, located in vicinity to Naoshima, in which case one set of port charges will be incurred additionally.

When the berth is congested and cargo is urgently needed, the receivers, Mitsubishi Materials, sometimes arrange for lightering at Uno Anchorage of which depth of water is about 29.0 m.

STEVEDORES:

Hours	*Copper Concentrate discharged per shift*	*Copper Slag loaded*
0800 – 1700	2,500 tonnes	
0800 – 1800		3,000 tonnes
0800 – 1900	3,000 tonnes	
0800 – 2200	3,500 tonnes	

FRESH WATER: Water barge will be used, when required.

Cost: Up to 100 tonnes – Yen 1,500/tonne; over 100 tonnes – Yen 900/tonne.

FUEL: Domestic oil is available. Bonded oil will be brought from oil station ports, when required.

REPAIRS: Small repairs can be undertaken.

HOLIDAYS: See "Uno". No work on local holidays, but usually work on national holidays.

AUTHORITY: Mitsubishi Materials Corporation – Naoshima Smelter, 4049-1 Naoshima-cho, Kagawa Pref., Japan. *Tel:* 0878-92-2117. *FAX:* 0878-92-4091.

NIIGATA-NISHI: 37.54 N. 139.04 E. (See Plan)
NIIGATA-HIGASHI: 38.01 N. 139.13 E.

DOCUMENTS:

Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
3 Ports of Call Lists.
7 Crew Lists including Passport Numbers.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in Transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Not compulsory. Pilot embarks at Quarantine Anchorage (Lat. 37° 58' N., Long. 139° 03' E.) to take vessel directly to berth during daytime. All transmitting and receiving normally effected through Niigata Radio Station (call sign: JCF, Wave: 438454), or Nagasaki Radio Station. Radio ETA 1 week's notice and accurate ETA at least 24 hours before arrival. Notify any changes to ETA.

ANCHORAGES: Anchorage is a rectangle located N.W. of lighthouse at West Breakwater at a distance of 1,600 m. covering an area of about 160,000 sq.m. Lat. 37° 57' 37" N., Long. 139° 04' 00" E. Depth: 18-24 m. Bottom: fine sand.

Safe Anchoring: Warning and instructions have been given by Niigata Harbour Master to secure safety of vessels anchoring off Niigata Port especially in Winter season, when the port is greatly affected by N.W. gale.

1. Vessels anchoring outside the breakwater within the Harbour limit must maintain their position West side of N.W. line drawn from Niigata Lighthouse (Fl. R. 3 sec. 15 m. 11 miles) and must avoid the vicinity of the mouth of the Shinano River or Showa Sekiyu K.K. Sea-berth (which is connected with shore facilities by submerged pipelines).

2. Vessels anchoring outside the breakwater must maintain their positions in the sea area where the depth of water is 25 m. or more. This rule does not apply to vessels waiting for quarantine inspection and/or Pilot. Vessels under 10,000 gross tons should also keep a sufficient distance from shore.

3. Vessels over 10,000 gross tons with dangerous cargoes or oil anchoring outside the breakwater must advise their positions to the Harbour Master by radio.

4. Vessels anchoring outside the breakwater must keep a bridge watch unless they are equipped with radio. (According to the governing law, any vessel staying outside the breakwater is treated as a navigating vessel even if she is within the harbour limit).

5. Vessels waiting at anchorage must keep watching weather forecast. In case bad weather is reported, the following necessary actions should be taken; namely, officers on duty, confirmation of ship's position, engines on standby, the use of extra anchors, sheltering, etc.

6. In case a vessel requires shelter from N.W. wind in Winter, it is suggested that such vessel proceed to Sado Island and anchor off Ryotsu Port, Akadomari Port, Sado Island South Coast or Sado Channel

7. When approaching the entrance of the port, a vessel can be drawn too close to the East Breakwater or the shallows existing East of the port entrance by force of N.W. gale, N.E. current and river flow. Therefore, vessel must enter from N.W. of Niigata Lighthouse, approaching from Quarantine Anchorage and alter course as West Breakwater Lighthouse and Niigata Port Light Beacon are seen in a line. It is dangerous for vessel to anchor at any areas East of Shinano River.

8. Prior to arrival, Japanese Charts No. 1155A, 1155B, 122 and 1197 or substitutes should be provided on board. Charts 1181, 1198 may also be needed.

RESTRICTIONS: Berthing and unberthing anytime. Entry and/or departure at time authorised by Port Authority. Shinano Fairway from port entrance to Rinko Wharves, maintained depth 10.5 m.

MAX. SIZE: *Tankers:*

Berth	*Max. Size* (d.w.t.)	*Max. LOA* (m.)	*Max. Safe Draft* (m.)
Niigata-Nishi:			
Oil Wharf (F-1)	38,000	Dolphin	9.00
Showa Shell Sekiyu Sea Berth	130,000	Sealine Buoy	17.00
Rinko Wharf (B-2, 3)	60,000	210	10.00
Rinko Wharf (C-1, 2, 3)	60,000	210	10.00
Rinko Wharf (E-1)	10,000	120	9.00
Rinko Wharf (E-2)	5,000	100	6.50
Rinko Wharf (E-3)	5,000	100	5.50
Niigata-Higashi:			
Niigata LNG Berth	65,000	Dolphin	12.50
East Pier No. 1	50,000	Dolphin	11.60
East Pier No. 3	50,000	Dolphin	11.60
Kaiyo Un-yu Quay	35,000	175	10.49
Zen-Noh Oil Base	5,000	Dolphin	7.50
West Pier No. 1	5,000	Dolphin	6.75
West Pier No. 2	5,000	Dolphin	6.75
Nisseki Gas A Berth	3,000	150	6.00

HEALTH: Radio Pratique available. Vessels usually anchor at the point Lat. 37° 58' N., Long. 139° 03' E., where the authorities board and grant Free Pratique.
Also see "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.
Also see "Pilotage".

TUGS: Tugs normally join vessel at position of fairway. Towing operations are done by tug's lines. 8 tugs, 3,000 h.p. – 3,400 h.p.

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by radio.

Niigata-Nishi:

Berth	*Max. Size* (d.w.t.)	*Max. LOA* (m.)	*Max. Draft* (m.)	*Remarks*
Rinko Wharf (A-1,2,3)	60,000	210	10.00	
Rinko Wharf (B-2,3)	60,000	210	10.00	
Rinko Wharf (C-1,2,3)	60,000	210	10.00	
Rinko Wharf (D-1)	15,000	138	8.00	
Rinko Wharf (D-2,3)	50,000	200	9.50	
Rinko Wharf (E-1)	10,000	120	8.00	
Rinko Wharf (E-2)	5,000	100	6.50	
Rinko Wharf (E-3)	5,000	100	5.50	
Oil Wharf (F-1)	38,000	Dolphin	9.00	
North Wharf (F-2)	10,000	150	8.50	
East Wharf (G)	5,000	120	6.90	
Central Wharf (H)	10,000	150	8.50	
Central Wharf (I)	5,000	120	6.90	
Central Wharf (J)	5,000	120	6.90	
South Wharf (K)	5,000	120	6.90	
Yamanoshita Wharf (Y-1)	10,000	150	8.10	
Niigata-Higashi:				
Central Wharf (West)	55,000	180	11.80	Unloader 300 t.p.h.×1
Zen-Noh Berth	55,000	180	11.80	Unloader 400 t.p.h.×1
West Wharf Quay No.1	5,000	130	7.50	Gantry cranes
No.2	15,000	185	9.00	40 t.×2
South Wharf Timber Quay	15,000	140	9.00	
East Wharf No.1	55,000	180	12.00	
Central Wharf (East)	55,000	180	12.00	Unloader 800 t.p.h.×1
East Pier No. 1	50,000	Dolphin	11.60	
East Pier No. 3	50,000	Dolphin	11.60	
Niigata LNG Berth	65,000	Dolphin	11.80	
Kaiyo Un-yu Quay	35,000	175	10.49	
Zen-Noh Oil Base	5,000	Dolphin	7.50	
Nisseki Gas A Berth	3,000	150	6.00	

CRANES: See "Berthing".

STEVEDORES: At least 24 hours' prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew at additional cost. Overtime surcharges 1630 – 2130 hrs. 60% additional of basic stevedorage; 2130 – 0830 hrs. next morning 100% additional; Sundays/holidays 100% additional.
Working Hours: Ordinary day: 0830 hrs. – 1630 hrs.
Sundays: 1st and 3rd week – No work.
Saturdays: 2nd week – No work.

MEDICAL: No advance notice required unless urgent.

TANKERS: Slop (residues): No discharge facilities.
LNG Berth recently completed.

Berth	*Product*	*Shoreline*	*Discharge Rate* (t.p.h.)
Niigata-Nishi:			
Oil Wharf	Crude Oil	1×10 in.	1,500
	Fuel Oil	1×10 in.	700
	Gas Oil	1× 8 in.	350
	Lub oil	1× 6 in.	80
	Petrol	1× 8 in.	300
	Kerosene	1× 8 in.	450/800
Showa Shell Sekiyu Sea Berth	Crude Oil	1×16 in.	3,000
Rinko Wharf (C-1,2,3)	Crude Oil	2×12 in.	1,500
	Gas Oil	1×12 in.	1,500
	Kerosene	1×10 in.	1,500
Rinko Wharf (E-1)	Crude Oil	1× 8 in.	700
	Fuel Oil	1× 8 in.	600
	Gas Oil	1× 8 in.	400
	Petrol	1× 8 in.	300
	Kerosene	1× 8 in.	500
Rinko Wharf (E-2)	Fuel Oil	1× 8 in.	600
	Gas Oil	1× 8 in.	400
	Petrol	1× 8 in.	300
	Kerosene	1× 8 in.	500
Rinko Wharf (E-3)	LPG	1× 8 in.	500
Niigata-Higashi:			
East Pier No. 1	Crude Oil	3×12 in.	2,000
	Fuel Oil	3×12 in.	1,500
East Pier No. 3	Crude Oil	1×16 in.	6,000
	Fuel Oil	1×16 in.	2,000
	LPG	1×12 in.	900
West Pier No. 1	Crude Oil	1× 8 in.	500
	Fuel Oil	1×10 in.	700/1,000
	Gas Oil	1×10 in.	700/1,000
	Petrol	1×10 in.	700/1,000
	Kerosene	1×10 in.	700/1,000
West Pier No. 2		Same as West Pier No. 1.	
Kaiyo Un-Yu Quay	Methanol	2×12 in.	2,000
	Acetone	1× 8 in.	600
Zen-Noh Oil Base	Fuel Oil	1×12 in.	1,000
	Gas Oil	1×10 in.	1,000
	Diesel Oil	1×10 in.	700
	Kerosene	1×10 in.	1,000
Nisseki Gas A Berth	LPG	1× 8 in.	200

DENSITY: Average in Municipal Wharves in Niigata-Nishi (approx.) 1002. Average in Niigata-Higashi (approx.) 1024.

FRESH WATER: Available from all wharves. Cannot be supplied at anchorage.

FUEL: Domestic oil is available. Bonded oil will be brought from Hakodate or Moji with 7 days' advance notice.

CONSULS: Republic of Korea and Russia.

REPAIRS: Various repair shops are capable of carrying out minor repairs.

DRY DOCKS: No facilities for ocean going vessel.

GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore, but no spirits.

REPATRIATION: Possible.

AIRPORT: 5 km. from Niigata-Nishi. 2 km. from Niigata-Higashi. Domestic and international airlines.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

HOLIDAY: 2nd – 4th January; 1st May; 9th August; 15th August; 30th – 31st December.

POLICE/AMBULANCE/FIRE: Water Police 244-2269 in Niigata-Nishi, 256-3474 in Niigata-Higashi; Ambulance Station 119; Fire Station 119; Main Police Station 110.

TELEPHONES: No facilities for telephones on board available.

SERVICES: Hold cleaning by longshoremen available.

SHORE LEAVE: Local Immigration Offices issue shore pass valid for only 7 days, but 7 days' extension possible if ship stays longer.

REGULATIONS: Oil carriers can receive bunker by oil barge and/or shoreline except when discharging cargo.

DEVELOPMENTS: An additional container berth will be available from 1996.

AUTHORITY: Niigata Port Administration Office, 6-3, Ryugashima 1-chome, Niigata City. *Tel:* (025) 247-9131.

NOTES

Please also advise Shipping Guides Ltd.

NIIHAMA: 33.58 N. 133.16 E. (See Plan)

DOCUMENTS:

	No. of copies
For Quarantine	
*1. Declaration of Health	1
*2. Crew List	1
*3. Passenger List (if any)	1
*4. Yellow Cards for all Crew Members	
*5. Derat Certificate	
For Immigration	
1. Declaration of Inward Vessel	1
*2. Passport or Seamen's Book for all Crew Members	
3. Crew List	2
4. Application for Shore Pass	1
For Customs	
1. Declaration of Inward Vessel	1
*2. Crew List	1
*3. List of Crew's Baggage (first port only)	1
*4. List of Ship's Stores	1
5. Cargo Manifest (Discharging)	1
*6. Cargo Manifest (Through)	1
*7. Certificate of Ship's Registry	1
*8. Ship's International Tonnage Certificate	1
*9. Voyage Memo (Ports of Call)	3
For Harbour Master	
1. Declaration of Inward Vessel	1
*2. Crew List	1
For Harbour Office	
1. Declaration of Inward Vessel	1

*To be prepared by Master before arrival. Others to be made up by Agent with assistance of Master on arrival.

PILOTAGE: Inland Sea Pilotage should preferably be arranged through Agent giving 72 hours' notice. Urgent correction of ETA outside business hours should be cabled direct to Pilot Station. Inland Sea Pilot Association covers all Inland Sea ports. Pilotage compulsory for vessels over 10,000 g.r.t. Pilots obtained from one of three Pilot Stations dependent upon vessel's last port of departure and at Master's discretion. Pilotage available throughout 24 hours and 72 hours' advance notice preferred, thereafter advising any alterations. Most Inland Sea Pilots also act as Harbour Pilots up to berth or anchorage at destination.

Note: VHF communication available with Inland Sea Pilot Stations. Also see "Shipmaster's Report" before first port.

1. Wadamisaki, at entrance to Kobe (vessels transitting Kii Straits) Position Lat. 34° 34.35' N., Long. 135° 08' 24" E. Telegraphic address "Anjin Kobe".

2. Sekisaki, 3 miles South of Sekisaki Lighthouse (vessels transitting Bungo Channel). Position Lat. 33° 13' N., Long. 131° 55' 38" E. Telegraphic address "Anjin Moji", Telex No. 715303. In event bad weather, recommended vessels proceed for shelter as near as possible having due regard to safety, to Sekisaki Pilot station.

3. Hesaki, at East side of Kanmon (Shimonoseki) Straits. Position Lat. 33° 57' 00" N., Long. 131° 03' 00" E. Telegraphic address: "Kanmonpilot Moji". Telex No. 715313.

4. Bay Pilotage-Tomogashima/Wada is also compulsory for vessels over 10,000 g.r.t. Pilot boarding position: Lat. 34° 10' N., Long. 135° 00' E. Telegraphic address: "Baypilot Kobe". Telex No. 5622617.

Inland/Sea Pilotage: Pilotage at Kurushima Channel/Bisan-Seto/Akashi Channel is compulsory for ships over 10,000 g.r.t. Pilot boarding position unchanged, namely, Sekisaki/Hesaki/Wada, even if ship requires only foregoing area's service.

ANCHORAGES: Approved anchorage area just inside harbour limit. A circle drawn at a point Lat. 33° 59' 18" N., Long. 133° 16' 31" E. with radius of 430 m. where holding ground good and depth of water 12 m. – 15 m. No buoy moorings. Harbour protected by breakwater.

TIDE: (Springs) Max. 263 cm.; min. −9 cm. (Neaps) max. 182 cm.; min. 136 cm.

RESTRICTIONS: Pilot does not take vessel in during darkness. Vessel has to wait if depth during LW 8.50 m. is insufficient to pass channel.

MAX. SIZE: See "Berthing".

BERTHING: Harbour Pilot operates during day.

Berth	*Length*	*Depth*	*Berthing Restrictions*
"A"	Anchorage	8.0 m.	Draft 7.5 m. LOA 100 m.
"B-3" Wharf	103 m.	10.0 m.	Draft 9.2 m. LOA 180 m.
"K-4" Wharf	120 m.	9.1 m.	Draft 8.7 m. LOA 160 m.
"K-6" Wharf	200 m.	14.0 m.	Draft 13.0 m. LOA 250 m.
"N-4" Wharf	80 m.	7.0 m.	Draft 5.1 m. LOA 110 m.
"N-8" Wharf	110 m.	9.3 m.	Draft 7.3 m. LOA 170 m.
Juki	85 m.	5.0 m.	Draft 5.5 m. LOA 100 m.
Isoura Public Wharf	130 m.	7.5 m.	
Isoura Public Wharf	180 m.	5.5 m.	
Habu No.2 Wharf	130 m.	7.5 m.	
Besshi Isoura Berth	188 m.	12.00 m.	Draft 11.0 m. LOA 186 m.

Berth A: Public berth for general purposes, no buoy, just anchorage. However, vessel anchoring at this berth sometimes ordered by port authority to shift in order vessel approaching or leaving Berth No. 4 may pass.

HEALTH: Quarantine Inspectors go aboard during day. Master to keep waste until Quarantine inspected in event of any suspected disease or fever on board after entered Japan.

Also see "Late Reports".

RADIO: Nagasaki Radio.

TUG: Joins vessel at Quarantine Anchorage or Section II, always using tug's lines without charge. "Niihama Maru" 2,600 h.p. If more powerful tugs required, can be obtained from Matsuyama or Mizushima.

CRANES:

Berth "B3"	1× 5 tons
Berth "K4"	1× 5 tons
Berth "K6"	2×25 tons
Besshi Isoura Berth	1×19 tons

MEDICAL: Hospitals and medical facilities available weekdays only.

TANKERS: Sulphuric acid loaded at Besshi Isoura Berth. Anhydrous ammonia discharged at "N-8" Wharf.

DENSITY: Entrance 1023 (rate of tide, 1 knot); channel 1022; anchorage 1021.

FRESH WATER: Water is available from the Berth "K-6" and Besshi Isoura Berth only after normal working hours – 10 t.p.h. Water is not available from any other berths.

FUEL: Bunkers in bond available from main ports or oil stations in tranship. 2 days' notice.

CONSULS: None. Nearest in Kobe.

REPAIRS: Minor repairs only. Main engine piston overhauling possible.

DRY DOCKS: None. For nearest see "Imabari".

GANGWAY/DECK WATCHMEN: Not necessary.

OPENING/CLOSING HATCHES: Stevedores.

LOADING/DISCHARGE RATES:

Average rate of Discharging Cargo:	
Coal	1,000 – 1,100 t.p.h. by 2 shore cranes
Bauxite	700 – 800 t.p.h. by 2 shore cranes
Chemical Oil	200 – 250 t.p.h. by ship's pump
Copper Concentrates	450 – 500 t.p.h. by shore crane
Logs	600,000 – 800,000 BFM/day by ship's gear
Salt in bulk	500 t.p.h. by 2 shore cranes
Average Rate of Loading Cargo:	
Alumina in bags	80 – 90 t.p.h. by ship's gear
Fertiliser in bags	50 – 60 t.p.h. by ship's gear
Fertiliser in bulk	80 – 100 t.p.h. by ship's gear

CUSTOMS ALLOWANCES: Only 60 cigarettes to take ashore. No spirits.

CARGO GEAR: Valid Cargo Gear Certificate sometimes required by stevedores when cargo gear maintenance appears to be poor.

REPATRIATION: Arranged by Agent.

AIRPORT: None. Nearest at Matsuyama and Takamatsu. Matsuyama/Tokyo 8 flights; Matsuyama/Osaka 9 flights; Takamatsu/Tokyo 4 flights and Takamatsu/Osaka 7 flights daily.

TIME: GMT plus 9 hours. Permanent.

HOLIDAYS: National Holidays: New Year's Day, January 1st; Adult's Day, January 15th; Foundation Day, February 11th; Vernal Equinox Day, March 23rd; Green Day, April 29th; Constitution Memorial Day, May 3rd; Children's Day, May 5th; Marine Memorial Day, July 20th; Respect-for-age Day, September 15th; Autumnal Equinox Day, September 23rd; Physical Culture Day, October 10th; Culture Day, November 3rd; Labour Thanksgiving Day, November 23rd; Emperor's Birthday, December 23rd.

Local holidays: New Year, December 31st – January 3rd; January 30th; May Day, May 1st; Memorial Day of the Sea, July 20th; Bon Festival (Lunar Calendar), August 8th; Autumnal Festival, October 16th-18th.

Vessels may enter/leave *except* January 1st, and cargo work can be done as usual at overtime rates on above national/local holidays.

Vessels may enter/leave port at overtime rates and cargo work will be done up to 1700 hrs. (daytime) against surcharges.

No cargo will be handled *Niihama* (December 31, January 1, 2, 3, and October 17, 18). No ship's movement (as well as cargo handling) can be done on January 1st.

POLICE/AMBULANCE/FIRE: Police 110; Ambulance/Fire 119.

TELEPHONES: No facilities for placing telephones on board.

SHORE LEAVE: Crew allowed ashore with pass, by ferry boat.

GENERAL: *Quarantine:* Hiroshima Quarantine Office, Niihama Detached Office, Nishibara-cho, Niihama, Tel: Niihama 32-3966.

Customs: Kobe Customs, Niihama Branch Customs, Nishibara-cho, Niihama, Tel: Niihama 32-3405.

Immigration: Niihama Port Station, Takamatsu Immigration Office, Nishibara-cho, Niihama, Tel: Niihama 32-2672.

Maritime Bureau: Sanbashi-dori, Niihama, Tel: Niihama 32-2855.

Maritime Safety Agency: Nishibara-cho, Niihama, Tel: Niihama 33-0055.

Emergency Procedure: No Harbour Master radio available, therefore cable Agent. Telephone sub-agent since one person will be in attendance even during night, who in turn will contact person in charge.

Salvage: No salvage tug stationed, nearest from Kure.

AUTHORITY: Niihama Marine Safety Agency, Nishibara-Cho, Niihama. *Tel:* (0897) 33-0055. *Contact:* Port Captain.

AGENT: Senwa Shipping Agency, c/o Taisei Kaiun Kaisha Ltd., 2-5 Subiraki-Cho, Niihama-Shi, Ehime 792, Japan. Tel: 0897-37-1101. Fax: 0897-37-1105. Telex: 5844-432. Cables: Taiseikaiun Niihama.

NISHIHARA (Nakagusuku Wan), Okinawa: 26.14 N. 127.50 E. **(See Plan)**

LOCATION: The Nansei Sekiyu Ltd. Refinery (NSS) is located in Nishihara Town on the East coast of Okinawa, towards the Southern end of Nakagusuku Bay. Also see "Max. Size".

DOCUMENTS:

3 Manifests
8 Crew Lists
2 Passenger Lists
2 Stores Lists
2 Personal Effects Lists
3 Ports of Call Lists
(Voyage Memo...past 3 months)
2 Transit Cargo Manifests
2 International Health Declarations
Ship's Register
International Load Line Certificate
International Tonnage Certificate
Safety Equipment Certificate
Derat Certificate
Last Port Clearance.

Each Crew member will be issued with an Official Pass, which must be returned prior to vessel sailing.

PILOTAGE: Normally vessels will be expected to enter Nakagusuku Bay through entrance marked Tatsu Kuchi, and pick up Berthing Master inside bay at Lat. 26° 13' N., Long. 127° 52' E. Inside bay Berthing Master requests that vessel keeps South of buoy marking Chikunigaa Shoal. Berthing shall be carried out at day time only.

A safe convenient pilot ladder is to be provided for the Berthing Master. Berthing Master stays aboard vessel throughout discharge, except vessel berthed at the pier.

ANCHORAGES: Navigation and anchorage in the waters near the NSS Product Pier and Crude Berth will in so far as possible be restricted to those ships directed into these waters by Berthing Master. In the interests of safety, ships will not enter the restricted area unless so directed by Berthing Master.

RESTRICTIONS: *Shipmaster's Report:* March 1992: Berthing in daylight only, up to 1500 hrs.

MAX. SIZE: For crude vessels a single point mooring (SALM – Single Anchor Leg Type Mooring), capable of handling vessels from 90,000 d.w.t. to 270,000 d.w.t. is established in approximate position Lat. 26° 14' N. Long. 127° 50' E., about 2.5 miles offshore.

Products are shipped from a pier connected to the shore – the pier has 2 berths, one for vessels up to 97,000 d.w.t. and one for small vessels up to 4,000 d.w.t.

HEALTH: Port Officials will board the vessel after berthing.

Also see "Late Reports".

RADIO: Crude vessels discharging at Nishihara should report ETA at Pilot Station (Lat. 26° 13' N., Long. 127° 52' E.) 72, 48, 24 and 12 hours prior arrival. Berthing instructions and time of Pilot boarding will be relayed by a telegraph appointed Agent. Refinery has no VHF radio.

Weather reports essential – particularly during typhoon season. Naha Radio – JCX medium wave 500 kHz. Traffic lists broadcast at odd hours GMT. Short wave 6470 kHz, traffic lists broadcast at even hours GMT.

TUGS: 2 tugs and a launch are available for assisting with mooring and unmooring. The Berthing Master in consultation with the Master will decide the number of tugs required for the berthing operation and for standby during the time at berth.

CRUDE BERTH: Single buoy mooring with vessel secured by 2×130 mm.×60 m. lines from buoy. Lines connected to chains through bow mooring lead and secured inboard. Chains secured direct to Brega Pin (bow stopper). There is 74 ft. of water at buoy position. Vessels may remain in berth in winds of up to 30 m.p.h.

Floating Hoses: 1×24 in. into 2×20 in. connected to 2×16 in. are connected on vessel's port side. There is a 42 in. line from buoy to shore. The maximum pumping rate is 75,000 b.p.h.

PRODUCT PIER: A 110° – 290° orientated pier allows tankers to approach the berth in a ballasted condition in either of 2 opposite directions. Vessels of 4,000 d.w.t. size and above will be handled at Berth No. 1 and smaller vessels at Berth No. 2

The water depth at the pier is approximately 47 ft. The extreme tidal variation is +7.9 ft. to −1.0 ft. and maximum storm tide will add approximately 3 ft. The maximum current is less than 1 knot.

Berth No. 1 is equipped with 1×12 in. loading arm for clean products and 2×12 in. loading arms for dark products. Each of these all-metal hydraulically controlled loading arms is fitted with a remotely operated coupling device to connect to a nominal 10 in. ASA flanged connection without bolting.

Berth No. 2 is equipped with 2×6 in. loading arm for dark and clean products. These arms are part metal, part hose and are fitted with flanges to be bolted to a nominal 6 in. ASA, DIN or BS flanged connection.

Each berth is provided with a gangway.

Vessels will deballast through the loading arms into a 24 in. ballast water line leading to refinery tankage. Under no circumstances should vessel discharge any ballast water directly into the bay.

Fire protection at the pier consists of a foam concentrate tank and proportioning pump, a fire water pump and distribution system, fixed combination water-foam monitors and air-foam play-pipes.

OIL POLLUTION WARNING: We wish to alert all vessels entering this port of the extreme sensitivity on the part of the community and governmental authorities regarding any incident involving oil pollution of the seas. Any oil spill, regardless of size, is considered a criminal act, and offenders are dealt with accordingly. We urge all vessels to make complete pre-arrival checks for cargo and ballast system tightness, and to strictly adhere to all pollution prevention practices, procedures and policies while discharging or deballasting at this port. Officers and crews should be extremely alert during all phases of vessel operation for potential oil spill risks and seek assistance from shore representatives should any unusual risk arise.

FUEL: No facilities available.
TIME: GMT plus 9 hours. Summertime is not used. All ETAs and other messages should be made in local time.
SHORE LEAVE: Shore leave is permitted – launch service may be arranged but is at vessel's expense.

No person will be given permission to enter the refinery unless they are in the microbus which will be provided by ship's Agent.
AUTHORITY: Nansei Sekiyu K.K., 858 Aza Onaha, Nishihara-Cho, Okinawa, 903-01 Japan. Postal Address: P.O.Box 525, Naha, Okinawa, 900-91 Japan. *Tel:* 098-945-3220.

Captain of the Port: Kin-Nakagusuku, 46 Yagihamabara, Nakagusuku-Son, Okinawa, Japan. *Tel:* 098-895-4999. *FAX:* 098-895-5439.

NOSHIRO: 40.13 N. 140.00 E. (See Plan)

DOCUMENTS:
Ship's Register/International Tonnage Certificate.
Last Port Clearance.
5 Crew Lists, including Passport numbers.
5 Passenger Lists, or "Nil" Lists.
1 Declaration of Crew's Baggage.
2 Ports of Call Lists (date of arrival/departure for previous ports).
Copies of Bills of Lading to show Customs Inspectors.
Ship's Agent will prepare Inward/Outward Declaration.
Ship's Agent should be provided with necessary information about details of cargoes in advance.
All Port Authorities (Customs/Immigration/Quarantine) will attend from Akita Office. Akita/Noshiro 55 km., 1.5 hours by car.
PILOTAGE: Pilot boards off Noshiro. Pilot attending comes from Akita. Present pilot boarding position: 40° 11' N., 139° 57.5' E.
Note: VHF communication not available. Communication only available through Nagasaki Radio, which covers this area. Vessel should wait or shelter at Funakawa Anchorage (39° 51' N., 139° 53' E.), if heavy/rough weather from N.W., or manoeuvre without anchor in order to avoid anchor dragging.
ANCHORAGE: Off Noshiro about 1 mile from breakwater. No buoys and no lighthouse. Depth exceeds 30.0 m. Bottom is soft clay with mud.
RESTRICTIONS: Berthing/unberthing in daylight only.
MAX. SIZE:

	LOA (m.)	*Max.Draft* (m.)	*Remarks*
15,000 ton Pier	130	9.4	
Nakajima No.1	110	6.8	Portside alongside
Nakajima No.2	110	6.8	Portside alongside

HEALTH: See "Late Reports".
RADIO: Nagasaki Radio. Inmarsat/telex available through Agent.
VHF: No port radio station. No VHF communication available.
RADAR: No radar service available.
TUGS: 2×500 h.p. Tugs also available from nearby ports.
BERTHING:

Wharf	*Length* (m.)	*Depth* (m.)	*Capacity* (d.w.t.)	*Cargo*
15,000 ton Pier	185	10.0	15,000	Lumber, General cargo
Nakajima No.1	130	7.5	5,000	Logs, General cargo
Nakajima No.2	130	7.5	5,000	Logs, General cargo

Ship's gear used for cargo operations.
CRANES: Truck crane arrangeable. No heavy lift cranes available.
BULK CARGO FACILITIES: Discharge of coal undertaken at Noshiro Power Station.
STEVEDORES: Overtime work available in daylight. Rate for timber is 1,000 cu.m./day.
MEDICAL: Hospital and treatment available.
DENSITY: 1015 – 1018, depending on river stream.
FRESH WATER: Available at wharves. Cost Yen 256/ton in daytime.
FUEL: Not available.
CONSULS: None. Notary Public available.
REPAIRS: Minor repairs possible.
GANGWAY/DECK WATCHMEN: Not compulsory or available.
OPENING/CLOSING HATCHES: Possible by stevedores, but ship is charged as per tariff.
CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages and New Tonnage Certificate. The check is possible on vessel if Customs Officers onboard, but it has to be brought to Akita Office, if Officer not attending onboard.
CUSTOM ALLOWANCES: Only 50 cigarettes to take ashore, no spirits.
REPATRIATION: Only possible in special cases.
AIRPORT: No airport locally.
TIME: GMT plus 9 hours. No alterations during year.
HOLIDAYS: Local holidays: January 2nd and 3rd; July 20th; August 13th and 14th; December 30th and 31st. Also 1st, 3rd and 5th Sundays of each month are non-working.
POLICE/AMBULANCE/FIRE: Contact through Agent.
SERVICES: Hold cleaning not available. Surveyor arrangeable. Ship's telephone not available. Radio/Radar repairs arrangeable from Tokyo area.
SHORE LEAVE: Local Immigration Office issues shore passes. Officials attend from Akita on ship's arrival.
AUTHORITY: Noshiro Port Administration Office, 1-2, Aza-Oomoriyama, Noshiro City, Japan 016. *Tel:* 0185-54-8246.

NUMAZU: 35.05 N. 138.51 E. (See Plan)

Port Status: Closed Port.

PILOTAGE: Not compulsory. Pilot available at Tagonoura.
RESTRICTIONS: No restrictions, but pilot not available after sunset.
Draft limitation in channel 7.5 m. Tidal range: +1.99 m. to −0.26 m.
HEALTH: Radio Pratique available. All formalities carried out at Shimizu.
Also see "Late Reports".
TUGS: Available from Tagonoura and Shimizu.
BERTHING:

Name of Berth	*Length* (m.)	*Depth* (m.)	*Capacity* (d.w.t.)
North Wharf No. 1	130	7.5	5,000
North Wharf No. 2	90	5.5	2,000
East Wharf	180	5.5	2×2,000
No. 1 Dolphin	23.7	5.5	2,000
No. 2 Dolphin	27.8	5.5	2,000

STEVEDORES: Working hours: Weekdays 0830 hrs. – 1630 hrs. (extension possible if required).

Stevedores available at weekends (except 1st and 3rd Sundays) and holidays (except December 31st – January 3rd).

Log gangs available.
FRESH WATER: Available.
FUEL: Domestic oil is available. Bonded oil will be brought from Yokohama or Tokyo, with sufficient advance notice.
REPAIRS: No facilities.
GENERAL: *Lightering:* Not possible.
Shipchandlers: Provisions and stores can be obtained.
Grain Fitting: Not available.
Hold Cleaning Facilities: Not available.
Floating Cranes: Not available.

OFUNATO: 39.03 N. 141.44 E. (See Plan)

PORT LIMITS: On the line between Goishi Si. Lighthouse (38° 58' 59.5" N., 141° 44' 42" E.) and Kori Si. Lighthouse (39° 00' 53" N., 141° 45' 42" E.).
DOCUMENTS:
Ship's Register.
International Tonnage Certificate.
3 Ports of Call Lists.
1 Maritime Declaration of Health.
Last Port Clearance.
5 Crew Lists, including Passport Numbers.
5 Passenger Lists.
1 Stores List.
1 Declaration Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.
PILOTAGE: Not compulsory but strongly recommended by Port Management as many fishing obstructions in the harbour, and many accidents and collisions with the wharf have occurred when no pilot onboard. Pilot boards vessels under 5,000 g.r.t. in position Lat. 39° 00.4' N., Long. 141° 45.1' E., and vessels over 5,000 g.r.t. in position Lat. 39° 00.3' N., Long. 141° 45.4' E., during daylight only.
APPROACHES: Proceed to point Lat. 38° 59.2' N., Long. 141° 47.3' E. in order to avoid stationary fishing nets.
ANCHORAGES: In vicinity of pilot boarding ground, in depth of 40 m. – 50 m. Anchorage not suitable in strong Easterly or Southerly winds.
RESTRICTIONS: Depth of water at entrance of passage 14 m. Entry/sailing not recommended at night.
MAX. SIZE: Channel: LOA 190 m., beam 30 m. and draft 14.0 m.
Also see "Berthing" and "Tankers".
HEALTH: Radio Pratique available.
Also see "Late Reports".
RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan. Vessels equipped with telex may contact Agent direct.
VHF: No VHF at the port. Vessels approaching port should keep watch on Channel 16, as Agent may use VHF of a ship in port to contact an approaching vessel.
TUGS: Small tugs 800 h.p. and 600 h.p. available. Large tugs (3,200 h.p. and 2,900 h.p.) can be arranged from Kamaishi with advance notice, they usually join vessel about 2,000 m. – 2,500 m. in front of jetty and discharging wharf. Ship's lines used if necessary.
BERTHING:
Public Berths:

Berth	*Length* (m.)	*Depth* (m.)	*Max.Draft at L.W.* (m.)
Chayamae 10,000 ton Wharf	330	9.0	9.0
Chayamae 3,000 ton Wharf	210	6.0	5.0
Nonoda 40,000 ton Wharf	270	13.0	13.0
Nonoda 5,000 ton Wharf	260	7.5	7.5

Foreign trading cargo vessels only berth at above public berths.

Nonoda Wharf available for handling only clean cargo for food factory nearby.

CRANES: No shore cranes or floating cranes available. Mobile crane up to about 50 tons available with advance notice.

BULK HANDLING FACILITIES: Coal, petroleum coke, gypsum, iron ore and quartz handled at public berths. Discharging by ship's gear to portable shore hopper and carried by truck to stockyard. Maximum discharging rate about 1,000 tons/gang per day (0800 hrs. – 1900 hrs.).

SPECIALISED CARGO HANDLING FACILITIES: None.

BRIDGES: None.

STEVEDORES: At least 24 hours prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. Normal working hours 0830 hrs. – 1630 hrs. Overtime surcharges 1630 hrs. – 2130 hrs. 60% additional of basic stevedorage; Sundays/holidays 100% additional.

MEDICAL: No advance notice required unless urgent. Cholera vaccination available at hospital.

TANKERS: *Kamei Pier:* Max. size 35,000 d.w.t. Max. draft 9.0 m. Loading Arm: 1×8 in. Diesel oil only handled at 600 t.p.h. No slop (residue) discharge facilities available.

DENSITY: Average density 1022 – 1024.

FRESH WATER: Available only by shore hydrant. 24 hours advance notice required, excluding Saturdays, Sundays and holidays. Delivery capacity about 10 t.p.h. – 25 t.p.h. Cost is about Yen 253/ton in daytime. Overtime surcharge of about 30%.

FUEL: Domestic diesel oil is available. Bonded oil will be brought from Yokohama or Hakodate, with sufficient advance notice.

CONSULS: None.

REPAIRS: Minor deck and engine repairs available.

DRY DOCKS: None.

SURVEYORS: Available from Tokyo with advance notice.

GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board. Usually ship's crew.

OPENING/CLOSING HATCHES: Usually ship's crew.

CERTIFICATES: Ship's Register to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 20 cigarettes to take ashore, but no spirits.

REPATRIATION: Possible via Tokyo by train.

AIRPORT: Nearest is Hanamaki Airport, about 97 km. from Ofunato by taxi. Hanamaki/Osaka 2 flights/day; Hanamaki/Sapporo 2 flights/day; Hanamaki/Nagoya 1 flight/day; Hanamaki/Tokyo no flights.

Use of Hanamaki Airport is not recommended.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

HOLIDAYS: National holidays: January 1st and 15th; February 11th; March 20th (changing); April 29th; May 3rd, 4th and 5th, July 20th, September 15th and 23rd (varies); October 10th; November 3rd and 23rd; December 23rd.

Local holidays: January 2nd and 3rd; August 14th, 15th and 16th; December 31st.

National holidays and local holidays available for working after discussions with stevedores.

POLICE/AMBULANCE/FIRE: Police 110 (emergency); Ambulance/Fire 119 (emergency).

EMERGENCY CO-ORDINATION CENTRE: Maritime Safety Agencies:

Shiogama Hoan. VHF Channel 16. Tel: 022-362-4999 (24 hours).

Kamaishi Hoan. VHF Channel 16. Tel: 0193-22-4999.

TELEPHONES: No facilities for placing telephones on board.

SERVICES: No tank cleaning equipment; no facilities for discharge of tank washings; compass adjusting difficult; radio and radar repairs available by travel from other port, with advance notice; supply of charts available by sending from Tokyo area, with advance notice; nautical publications, sounding paper, course recorder paper, Notice to Mariners, Safety equipment available, only by sending from Tokyo area, with advance notice; extension of certificates available by surveyor travelling from Tokyo area, with advance notice.

Provision/stores supply available, but deck/engine stores not available at Ofunato. Laundry available if long stay in port.

STORING: Public Berth: Trucks proceed alongside and can use forklifts.

Kamei Pier: Truck can proceed to within 70 m. and then only by hand. No forklift available.

Anchorage: Difficult and dangerous due to ocean/bay.

Customs permit required for all storing.

Local riggers can be employed to assist with storing.

SHIP SUPPLY SERVICE: No craft or helicopters for transfer of stores. Ferry service available to anchorage, weather permitting.

SHORE LEAVE: Possible.

IDENTIFICATION CARDS: Immigration issue shore passes on Master's application. Valid for 7 days to 15 days, and possible extension.

REGULATIONS: Normal port regulations.

GENERAL: Be aware of dense fog during April through to August. Be aware of fishing vessels operating in the neighbourhood and fishing nets and tackle. Be aware of continuous blowing of seasonal strong N.-N.W. wind during Winter season, so prepare many good lines for mooring to berths.

AUTHORITY: Iwate-Ken Ofunato Doboku-Jimusho, 6-1, Maeda, Ikawa-cho, Ofunato-shi, Iwate-ken, 022 Japan. *Tel:* 0192-27-9919.

Port Branch Office: *Tel:* 0192-27-2449.

OITA: 33.17 N. 131.40 E. (See Plan)

DOCUMENTS: When vessel arrives direct from a foreign port, Customs officials will board to search the vessel.

The following documents are to be submitted:

Quarantine: (Tel: 0975-21-2394)

See "Health".

Customs: (Tel: 0975-2-2691)

Crew Manifest (1) (state full name/rank/passport nos./date of birth).

List of Ship's Stores (1) (to be attached Arms/Ammunition and Narcotics List).

Declaration of Crew's Baggage (1).

Inward/Outward Declaration (1) (Ship's agents will prepare).

Cargo Manifest for Discharging (1) (Ship's agents will prepare).

Cargo Manifest for Through (1) (Ship's agents will prepare).

Declaration for Payment of Tonnage Dues (1) (Ship's agents will prepare).

The following ship's documents will be checked by Customs:

Ship's Register.

International Tonnage Certificate.

Last Port of Clearance.

Immigration: (Tel: 0975-27-3754)

Crew Manifest (2).

Ports of Call List (1).

Inward/Outward Declaration (1).

1st Japanese port: Ship's agent is to take Passports and/or Seaman's Books to Immigration Office and obtain the Crew Landing Passes.

Harbour Master: (Tel: 0975-21-0115)

Crew Manifest (1)

Inward/Outward Declaration (1).

Vessel's with dangerous cargo: Application for Permission for ship's stay in port and Application for Permission for dangerous cargo work to be obtained from the M.S.A. in daytime.

Port Authority: (Tel: 0975-58-5111)

Inward/Outward Declaration (1).

PILOTAGE: Inland Sea Pilots' Association, Moji office. (Tel: 093-332-7191).

(a) Harbour and Sea pilotage are not compulsory, but foreign vessels are recommended to employ pilots in view of the many fishing boats/nets in the area between Sekisaki/Oita (via Bungo Suido) and/or Hesaki/Oita (via Kanmon Strait).

(b) Request for pilot must be made at least 24 hours in advance and Pilot should be kept closely advised of vessel's ETA at the Pilot Station.

(c) Sekisaki Pilot Station, 3 miles South of Sekisaki Lighthouse (vessel transitting Bungo Channel). Position: Lat. 33° 13.5' N., Long. 131° 58' E., for VLCC's Lat. 33° 13' N., Long. 131° 58' E.

(d) Hesaki Pilot Station at East side of Kanmon (Shimonoseki) Straits. Position: Lat. 33° 56' 24" N., Long. 131° 03' 12" E.

(e) Communication with Pilot: VHF Channel 16 through Oita Port Radio. Tel: 093-332-7191. Telex: 715313 Anjin J. Cable Address: "Anjin Moji".

Shipmaster's Report: April 1988.

Inland Sea Pilot not compulsory in the Inland Sea from Se Saki to Oita or from Oita to He Saki (entrance to Kanmon Kaikyo)

Nor is pilotage compulsory from Se Saki (Bungo Suido) to He Saki.

In the Inland Sea, pilotage is compulsory for vessels over 10,000 g.r.t. in Kurishima Kaikyo, Bisan Seto and Akashi Kaikyo.

At Oita, Harbour Pilot is not compulsory, however it is advisable to make use of the services of a Harbour Pilot as the tug Captains do not speak English, which might cause language problems if no Harbour Pilot is employed.

ANCHORAGES:

No.	*Depth* (m.)	*Capacity* (g.r.t.)	*Position*
No. 1	37–38	Under 20,000	Lat. 33° 16.5' N., Long. 131° 38.7' E. (265°, 3,400 m. from Tsurusaki Hakuchi Breakwater East Lighthouse "A" point, within radius of 100 m. from the centre).
No. 2	52–53	No limit	Lat. 33° 17.2' N., Long. 131° 42' E. (59°, 1,960 m. from "A" point).
No. 3	45–46	Under 50,000	Lat. 33° 16.8' N., Long. 131° 42.8' E. (80°, 2,870 m. from "A" point).
No. 4	31	Under 20,000	Lat. 33° 16.4' N., Long. 131° 43.4' E. (93°, 3,800 m. from "A" point).
No. 5	26–27	Under 30,000	Lat. 33° 15.7' N., Long. 131° 44.7' E. (286° 2,740 m. from Hiyosibaru Hakuchi Breakwater East Lighthouse "B" point).
No. 6	23–24	Under 20,000	Lat. 33° 15.5' N., Long. 131° 45.8' E. (294°, 1,000 m. from "B" point).
No. 7	31–32	No limit	Lat. 33° 15.9' N., Long. 131° 45.3' E. (304°, 2,050 m. from "B" point).
Shin Nittetsu off Anchorage		5,000×3 3,000×3	(Area encircled by 4 points of: (a) 278°, 1,310 m. (b) 249°, 1,200 m. (c) 219°, 170 m. (d) 330°, 550 m. from Otozu Breakwater West Lighthouse).
Quarantine Anchorage	25 m. – 43 m.		Lat. 33° 16' N., Long. 131° 46' E.

*It is necessary to obtain permission from Harbour before vessel's arrival.

RESTRICTIONS:
Berthing: During daytime only (Summer: 0600 hrs. – 1800 hrs.; Winter: 0700 hrs. – 1700 hrs).

Tankers and LPG Carriers must be berthed in time to start cargo operations before sunset.

Departure: Night departure from wharves is generally impracticable, except for dry cargo vessels at N.S.C. Sea-Berth and Seihin Berth which can depart up to 2000 hrs. However, this will depend upon condition of weather, etc.

Fishing Nets: Fishing nets are laid during the night between August and December, even in fairway and approaches.

MAX. SIZE: See "Berthing" and "Tankers".

HEALTH: Tel: 0975-21-2394.

(a) Quarantine Station: Lat: 33° 16' 00" N., Long: 131° 46' 00" E.

(b) Quarantine inspection is not allowed inside port except when weather or other special reasons prevent the quarantine boat from approaching ship at anchorage.

Quarantine is effected in berth for vessels of more than 10,000 g.r.t., provided the vessel possesses valid (i) Derat Exemption/Fumigation Certificate. (ii) all crew/passengers are healthy. (Radio message from ship's Master for these items are required 2 days in advance).

(c) Quarantine service is rendered between 0830 hrs. – 1700 hrs. in Summer and between 0830 hrs. – 1600 hrs. in Winter.

(d) "Q" flag should be hoisted until ship has Free Pratique.

(e) When ship arrives from plague infected or suspected area within 10 days after she left such place, a 24 hour special quarantine is required.

(f) Radio Free Pratique is possible, provided the ship has valid Derat Exemption.

The Master has to radio or telex the Quarantine Office via ship's agent 36 hours prior to arrival, except Saturday, Sunday and holidays, in compliance with rules.

The following documents are to be submitted:
Declaration Inward/Outward.
Crew List.
Maritime Declaration of Health.
Ports of Call list.

Also see "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

VHF: Vessel can keep in direct contact with port authorities in regard to their arrival, berthing instructions and Pilot's requirements, etc., through VHF, the details of which are as follows:–

(a) Call sign: Oita Port Radio. Tel: 0975-75-1819.

(b) Location of radio facilities: The transmitting and receiving station is located at the top of Mount Tohmiyama, Saganoseki (Sekisaki)

(c) Channel: Simplex 16 (Calling)
12 (Communicating)
14 (Communicating)
Antenna power: 50 W.

(d) Operating Hours: 24 hours.

(e) Communicating range: Within a radius of 100 km. from the station at sea.

TUGS:

Tug	*H.P.*	*Tel.*	*Chemical Fire Extinguisher*
Yuhi Maru	3,400	3-2166	Class 3, 4
Koho Maru	3,400	6-2334	Class 3, 4
Kota Maru	3,400	2-6212	Class 3, 4
Arita Maru	3,500	2-6441	Class 3, 4
Yoshida Maru	2,400	2-6964	Class 3, 4
Hikita Maru	3,200	3-2341	Class 3, 4
Nippo Maru	3,400	3-4522	Class 3, 4
Ryusei Maru	2,400	6-2854	Class 2
Udo Maru	2,000	2-5071	
Yusho Maru	2,600	4-3441	
Kakuho Maru	3,200	2-8702	Class 3, 4
Kunisaki Maru	3,500	2-9193	Class 3, 4

It is a practice to use tug's line for berthing/unberthing.

BERTHING:
Public Berth:

District	*Berth*	*Depth* (m.)	*Length* (m.)	*No. of Berths*	*Remarks*
Nishi-Oita	No. 1 Wharf	4.5	295	5	Coasters
	No. 2 Wharf	7.3	245	2	
	No. 3 Wharf	6.0	45	1	
	No. 4 Wharf	6.0	160	2	
	Ferry Pier	6.0	80×2	2	Passenger Terminal
Sumiyoshi	No. 1 Wharf	10.0	370	2	Ocean going (15,000 d.w.t.)
	No. 2 Wharf	6.0	469	5	Coasters
	No. 3 Wharf	5.0	100	1	
	No. 4 Wharf	4.5	570	7	
	No. 5 Wharf	6.0	105	1	
Otozu	No. 1 Wharf	7.5	390	3	Ocean/Coasters
	No. 2 Wharf	5.5	180	2	
Tsurusaki	West Wharf	4.5	240	4	Coasters
	West Wharf	5.5	180	2	Coasters
	East Wharf	4.5	480	8	Coasters
Ohzai	−5.5 Wharf	5.5	560	6	Ocean/Coasters
	−7.5 Wharf	7.5	680	5	Ocean/Coasters
	−10.0 Wharf	10.0	185	1	Ocean going (15,000 d.w.t.)
	−12.0 Wharf	12.0	240	1	Ocean going (30,000 d.w.t.)
Hiyosibaru	−5.5 Wharf	5.5	270	3	Coasters
	−7.5 Wharf	7.5	260	2	Ocean/Coaster

Private Berth: For Ocean-going vessels.

Company	*Name & Type of Berth*	*Max. Safe Draft* (m.)	*Length* (m.)	*Capacity* d.w.t.	*Remarks*
Kyushu Oil	No. 1 Dolphin	21.30	480	270,000	
Sonar is installed on main platform for control of ship's manoeuvring.					
	No. 8 Wharf	6.9	113	6,000	
	No. 10 Wharf	6.9	113	6,000	
Showa Denko	Sea-berth	15.3	300	99,999	65,094 g.r.t.
Sonar is installed on main platform for control of ship's manoeuvring.					
	No. 1 Dolphin	4.5	89	1,300	1,557 g.r.t
	No. 4 Dolphin	6.75	125	5,500	7,667 g.r.t.
	No. 6 Dolphin	5.94	100	3,500	2,939 g.r.t.
	No. 12 Wharf	6.5	110	5,300	3,335 g.r.t.
	No. 13 Wharf	5.85	100	3,500	3,070 g.r.t.
Oita Terminal Industries	Sea-berth	15.3	300	99,999	65,094 g.r.t.
	No. 6 Dolphin	5.94	100	3,500	2,939 g.r.t.
(Oita also share Showa Denko facilities).					
Nippon Steel	Sea-berth N-1	22.00	435	200,000	Coal/ore
	Sea-berth N-2	25.00	450	300,000	Coal/ore
Sonar is installed on wharf at fender side for control of ship's manoeuvring.					
	Otozu E-3	11.0	240	30,000	Steel products
	E-4	11.0	200	30,000	
	E-5	12.0	200	50,000	
	E-6	12.0	200	50,000	
	E-7	12.0	200	50,000	
Larger size vessels (maximum 50,000 d.w.t. and 250 m. L.O.A.) can be accommodated at the wharves, using 2 berths.					
Nippon Steel Chemical	No. 1 Dolphin	4.76	100	2,213	1,339 g.r.t.
	No. 2 Dolphin	6.18	100	3,250	1,596 g.r.t.
	No. 3 Dolphin	4.71	90	1,832	697 g.r.t.
Mitsui Zosen	D Quay	4 – 8	150	10,000	
	E Quay	2 – 8	150	8,000	
At these berths it is necessary to use pontoons (10 m.×30 m.×3 m.) between ship and quay.					
Oita LPG J.Stockpiling	Kyobi Gaiko	13.10	360	66,769	
Sonar is installed on main platform for control of ship's manoeuvring.					
Oita LNG	LNG berth	11.4	272	70,000	
Sonar is installed on main platform for control of ship's manoeuvring.					

STEVEDORES/CARGO HANDLING FACILITIES:
Public Wharves: For Ocean-going vessels.

District	*Stevedores*	*Facilities*
Sumiyoshi	Tsurusaki	Warehouses No. 1 and No. 2 (3,400 sq.m.).
	Sealand	Cargo handling area: 13,583 sq.m.
	Nippon Express	No shore crane, but truck crane available.
	Oita Kairiku	Working hours: 0800 hrs. – 1700 hrs. (No work on Sunday and holidays).
Otozu	Tsurusaki	Warehouse of 1,600 sq.m.
	Sealand	Cargo handling area of 8,047 sq.m. No shore crane, but truck crane available.
Ohzai	Tsurusaki	Warehouses No. 1, No. 2 and No. 3 (7,500 sq.m.).
	Sealand	Cargo handling area of 77,114 sq.m.
	Nippon Express	Cargo stock yard of 68,081 sq.m.
	Oita Kairiku	No shore crane, but truck crane available.
Hiyoshibaru	Tsurusaki	No warehouse.
	Sealand	Cargo handling area of 23,570 sq.m.
	Nippon Express	Cargo stock yard of 3,104 sq.m.
	Oita Kairiku	No shore crane, but truck crane available.

Private Berths: For Ocean-going vessels.

Company	*Stevedores*	*Facilities*
Kyushu Oil	Tsurusaki Sealand	No. of arms; 4 lines for crude oil, 1 line for F.O. Diameter; 12 in. for (C.O. & F.O.) 8 in. for Gasoline, Kerosene and G.O. Discharging rate; 10,000 kl./hr. for C.O. 2,500 kl./hr. for F.O. 1,200 kl./hr. for Gas.Kero.Gas.
Showa Denko	SDK	Sea Berth: Naphtha: 2 unloading arms (12 in./ANSI 150) 5000 kl./hr. by 2 arms (Max. pressure 5.0 kg. at Manifold). Propane/Butane: 2 unloading Liquid arms (Propane and Butane) – 12 in./ANSI 150. 2 unloading Vapour arms (Propane and Butane) - 8 in./ANSI 150 2,000 kl./hr. (Max. pressure 5.0 kg. at Manifold. No. 4 Dolphin: Ethylene: 1 loading Liquid arm (6 in./ANSI 150) and 1 Vapour arm (4 in.ANSI 150) 200-220 tonnes/hr. Propylene: 1 loading Liquid arm (6 in./ANSI 150) and 1 Vapour arm (4 in./ANSI 150) 110-130 tonnes/hr.
Oita Terminal Industries	SDK	Sea-berth: LPG Number of unloading arms; 2 Liquid, 2 Vapour. Diameter; 12 in. ASA (ANSI) Discharging rate; 2,500 kl./hr.
Nippon Steel	Tsurukai Nittetsu Trans. (Seihin Berth)	Shore cranes for loading steel products: 50 Ton×2, 35 Ton×1, 30 Ton×3, 20 Ton×3 Loading rate; (Coils) 200 tons per hr./gang/hatch. Working hours: 0700 – 1500, 1500 – 2200, 2200 – 0700.
	Kamigumi (Raw material)	Shore crane for discharging Ore/Coal, etc. 81 Ton×3. Discharging rate: Ore: 1,600 t.p.h./crane/hatch. Coal: 1,300 t.p.h./crane/hatch. Working hours; 0600 – 1400, 1400 – 2200, 2200 – 0600.
Nippon Steel Chemical	Tsurukai	Berth No. 1 Cargo out (See Note 1) 4 in.×1: 300 t.p.h. Cargo in (See Note 2) 6 in. JIS×1: 300 t.p.h. Berth No. 2 Cargo in (See Note 2) 8 in. JIS×1: 300 t.p.h. Berth No. 3 Cargo out (See Note 1) 8 in. JIS×1: 400 t.p.h.

Note 1: Stylene Monomer, Benzene, Tolene and Xylene.
Note 2: Crude Benzene.

Company	Stevedores	Facilities
Oita LPG	Oita LPG	Number of arm: 3 liquid, 2 vapour. Diameter: 12 in. ANSI. Discharging rate: 2,500 kl./hr.
Oita LNG	Oita LNG	Number of arms: 3 liquid, 1 vapour. Diameter: 16 in. ANSI. Discharging rate: 11,000 kl./hr.

MEDICAL: No advance notice required except on Sundays, holidays and in an emergency.

Oka Hospital (appointed by Immigration Authorities)	22-3131.
Higuma Hospital (appointed by Immigration Authorities)	34-2658.
Kageyama occulist	27-5409.
Jinkei Dental office	27-2743.
Yoshimura, ear, nose & throat hospital.	

TANKERS: See "Berthing" and "Stevedores/Cargo Handling Facilities".

Oil Fence: It is compulsory to stretch an oil fence around the vessel during its stay at Sea-berth of Nippon Steel Corporation and No. 1 Dolphin berth of Kyushu Oil Co., (submarine type of rubber oil fence is being installed) from arrival until departure.

Port Fire Precautions: Each tug is equipped with a fire extinguishing system for attending to emergency cases on request.

Kyushu Oil Co. owns a special boat equipped with an extinguishing system and is ready to stand-by when a tanker is berthing or unberthing, at vessel's expense.

Dirty Ballast Facilities: Facilities have been constructed by the Oita New Industries City Development Bureau at No. 2 Reclaimed Land.

The facilities can accommodate 2 ships (1 berth, length 60 m. × depth 4.5 m. and 1 berth, length 100 m. × depth 5.5 m.) of maximum 3,000 g.r.t. and 2 tanks capable of storing 600 cu.m. each, also 2 sets of separators for oily water.

The fixed charge is 170 Yen per ton for ballast water and 1,700 Yen per ton for bilge water.

Additional charge for overtime is 50%.

DENSITY: (Average):
1023 in Summer season at Sumiyoshi.
1023 in Summer season at Sea-Berth.
1021/1023 in Summer season at Otozu Hakuchi.
1024 in Winter season at Sumiyoshi.
1025 in Winter season at Sea-Berth.
1021/1025 in Winter season at Otozu.

FRESH WATER:

Public Wharves:

District	*Rate of Delivery* t.p.h.	*No. of Hydrants*	*Vendor*
Sumiyoshi	15	8	Oita Kairiku. Tel: 32-3156.
Otozu	20	3	Tsurukai. Tel: 21-1135.
Ohzai	20	13	Tsurukai Unyu. Tel: 92-2266.
Hiyoshibaru	20	4	Tsurukai Unyu. Tel: 92-2266.

150 ton water barge available at Oita (Tsurukai. Tel: 21-1135).

Private Berths:

Kyushu Oil	25/30	1	Kyuseki.
Showa Denko	25/30	1	Shoden.
N.S.Chemical	1	1	Shinnikka.
Nippon Steel			
Sea-berth	30	6	Oita Rinkai.
Seihin	30	21	Oita Rinkai.
Oita LPG	30	1	Kyobi Service.
Oita LNG		None	

FUEL: Bonded bunkers are supplied by oil barges (except vessels at Kyushu Oil No. 1 dolphin where rate of delivery is 450 kl./hr.). No LFO at Kyusho Oil. Notice of 5-6 days required for bunkers.

The rate of delivery: 200/500 t.p.h.

Suppliers	*Delivery Agents*	*Installation*
Shell Sekiyu K.K.	Ueno Unyu	Shimonoseki
Esso Oil Co.	Nisshin Tanker	Shimonoseki
Mobil Oil Co.	Nisshin Tanker	Shimonoseki/Oita
Caltex Oil Co.	Shimazu Kaiun	Shimonoseki/Oita
Mitsubishi Corp.	Sanem Shoji	Mutsure/Iwakuni Kanokawa
Mitsui & Co.	Chikko Kogyo	Oita
C. Itoh & Co.	Asahi Tanker Chikko Kogyo	Matsuyama Oita
Nissho-Iwai Co.	Nisshin Tanker	Mutsure Matsuyama
Nippon Mining Co.	Nippon Tanker	Mizushima
Idemitsu & Co. Sumitomo Shoji Marubeni Corp.	Asahi Tanker	Tokuyama
Kanematsu-Gosho Co.	Nagai Kaiun Asahi Tanker	Kokura Tokuyama

Fuelling is permitted only during the hours of daytime, observing as always the strict precautions against oil spills into the harbour.

CONSULS: There are no consuls in the Oita District. A Notary Public is available for Noting Protest, etc. Contact: Tatsuji Nakano, Tel: 0975-35-0888.

REPAIRS: Minor repairs for Deck and Engine can be undertaken by Kitakyushu Marine Industries Co., Ltd., Oita factory (Tel: 58-2888).

Repairs to navigation equipment and tools have to be despatched to Kitakyushu and Kobe, repectively.

DRY DOCKS: None.

GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board. Available from Moji.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnage.

Sometimes, MSA Officer will attend the vessel for inspection of safety operation and validity of all ship's certificates.

CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore, but no spirits.

SURVEYORS:

(a) Classification Societies:

Nippon Kaiji Kyokai	(Moji)
Lloyd's Register of Shipping	(Nagasaki or Shimonoseki)
American Bureau of Shipping	(Nagasaki)
Bureau Veritas	(Fukuoka)
Norske Veritas	(Kokura)

(b) Cargo Surveyors:

Lloyd's Agents	093–331–1311
Nippon Kaiji Kentei Kyokai NKKK	0975 – 58 – 3951
Shin Nippon Kentei Kyokai	0975 – 27 – 4111
Far East Superintendence Co., Ltd.	0975 – 58 – 9225
Japan Inspection Co.	0975 – 58 – 7020

REPATRIATION: Possible.

AIRPORT: Oita Airport: approx. 56 km. to the airport via land. Approx. 16 miles to the airport via sea (hovercraft). Hovercraft run between Oita City and the New Oita airport. Domestic line only, Japan Air System – JAS (Tel: 09786-7-1191) and All Nippon Airways – ANA (Tel: 09786-7-1161).

TIME: GMT plus 9 hours. No alteration made to clocks during year.

POLICE/AMBULANCE/FIRE: Police tel. 110; Ambulance and Fire 119.

TELEPHONES: Telephones can be placed on board at 3-4 days notice.

SHORE LEAVE: Local Immigration Offices issue shore pass valid for only 7 days, but 15 days' extension possible if ship stays longer or is visiting more than one port.

According to Customs regulation, ship's crew members are requested to land ashore by designated Mini bus or launch from ship at Sea-berth and by launch from ship at Seihin wharves via Customs House.

GENERAL: *Japan Maritime Disaster Prevention Centre:*

Tsurusaki Sealand Transportation Co. Ltd. is appointed by the Japan Maritime Disaster Prevention Centre as 2 hours base, in regard to the stockpiling and use of the materials for removal of discharged oil by the Marine Pollution Prevention Law (Law No. 136 of 1970).

Oil recovery boat "Yunoshio" is under the management of Oita Rinkai Kogyo.

Restrictions: It is prohibited to pump out bilges, to throw overboard sweepings, waste or garbage of any kind and cleaning dust out of holds, whilst the vessel is in port or in pilotage waters according to regulations. Also, not permitted to wash ship's deck and painting ship's outside shell platings.

SERVICES:

Tally:

Japan Cargo Tally Corporation	0975-58-0704.
All Nippon Checkers Corporation	0975-34-1749.

Provisions, Stores and Charts:

(a) Fresh and sea provisions and deck and engine stores are obtainable.
Provisions: Tsurusaki Sealand Transportation Co., Tel: 0975-21-1135; Maruman Senshoku Co., Tel: 21-6161; S.U. & Co. Ltd. (Moji); Kanaya & Co. Ltd. (Moji).
Stores: Toyo Ship Chandler Co. Ltd., Tel: 0975-21-2333; Machine Co. (Moji).
Dunnage: Mitsubishi Corporation, Tel: 0975-58-7101.

(b) Charts: Oita Rinkai Kogyo, Tel: 0975-58-9588. Only Japanese charts are available locally. B.A. and H.O. charts can be obtained from Kobe and Yokohama, repectively, with adequate notice.

Crew Handling Service, Watchmen and Hold Cleaning:

(a) Crew Handling Service: Oita Marine Service Co., Tel: 0975-21-5178.

(b) Hold Cleaning: Koei Shokai and Ginyo Shoji Co. Ltd., (Moji).

(c) Watchmen: Can be arranged.

Ferry and Mini-Bus Service: Tsurusaki Sealand Transportation Co. Ltd., tel: 0975-21-1135.

Laundry: Sanyo Cleaning Co., Ltd., Tel: 0975-27-4366.

Fumigation: Koei Shokai and Toyo Fumigation Co. Ltd. (Moji).

Car Ferry:

(a) Diamond Ferry boats are in regular service between Oita and Kobe via Matuyama, two trips a day.

(b) Kansai Kisen Ferry is in regular service between Beppu and Kobe-Osaka, 3 trips a day.

DEVELOPMENTS:

(a) Oita Prefectural Office plans to develop Marine Recreation Zone at Nishi Oita District (Port Renaissance 21: Water front plan) which will contain a yacht harbour, artificial beach, ocean traffic zone and marine terminal, etc.

(b) Showa Denko is developing 201,000 sq.m. for petrochemical industries on reclaimed land at Berths No. 6A and 6B.

(c) Nippon Shokubai is developing 337,000 sq.m. on reclaimed land at Berth No. 6C. for manufacturing catalyst.

(d) Nissan Automobile Co. is developing 690,000 sq.m. on reclaimed land at Berth No. 6C for manufacturing car engines.

(e) Mitsui Zosen, already located on reclaimed land at No. 7A, is planning to build new factories for expanding their present business.

(f) The Oita Port Authorities have a plan to build new wharves of 13 m. depth and 520 m. length, 10 m. depth and 170 m. length and 7.5 m. depth and 130 m. length, at Ohzai District, thereby revising an original plan.

AUTHORITY: Shin Sangyotoshi Kaihatsu-Kyoku, Ohita Pref., 3-33, Mukaibaru Nishi 1-chome, Ohita City *Tel:* (0975) 58-5111.

AGENT: Senwa Shipping Agency, c/o Green Shipping Ltd., 934 Jihama, Kaibara, Oita-Shi, Ohita 870-01, Japan. Tel: 0975-21-3015. Fax: 0975-22-2136. Telex: 7722-84. Cables: "Greenship Oita".

OMAEZAKI: 34.36 N. 138.13 E. (See Plan)

DOCUMENTS:
Ship's Register (and International Tonnage Certificate, if Register does not indicate gross and nett tonnages).
Last Port Clearance.
6 Crew Lists, including Passport numbers.
4 Passenger Lists.
2 Stores Lists.
2 Declarations of Crew's Baggage.

PILOTAGE: Not compulsory. Pilots are available at position Lat. 34° 38' 05" N., Long. 138° 14' 07" E.

RESTRICTIONS: Draft limitations in the channel is 11.0 m.

Entry and berthing are allowed in daytime only. Unberthing and sailing may be allowed up to 2100 hrs.

HEALTH: Radio Pratique is available and ordinary quarantine inspection takes place at anchorage or at berth.

Also see "Late Reports".

TUGS: 1×1,660 h.p.

BERTHING:

Name of Berth	*Length* (m.)	*Depth* (m.)	*Permissible Draft* (m.)	*LOA* (m.)	*Capacity* (d.w.t.)
Chuo Futo No. 1	130	7.5	6.8	110	5,000
Chuo Futo No. 2	130	7.5	6.8	110	5,000
Nishi Futo No. 1	240	12.0	11.3	220	30,000
Nishi Futo No. 2	240	12.0	11.3	220	30,000

STEVEDORES: Normal working time is 0800 hrs. to 1600 hrs. Overtime available from 1600 hrs. to sunset for logs, and up to 2100 hrs. for coal.

Sunday/holiday work is limited from 0800 hrs. to 1600 hrs. with no work on 1st and 3rd Sundays. Log gangs available.

FRESH WATER: Available from shore.

FUEL: Domestic oil is available. Bonded oil to be brought from Yokohama, with sufficient advance notice.

REPAIRS: Minor repairs possible.

GENERAL: *Immigration:* The authorities come from Shimizu.

Lightering: Not possible.

Shipchandlers: Provisions are obtainable.

OMISHIMA (Ohmishima), Inokuchi Port: 34.16 N. 133.00 E.

Refinery closed in 1988.

ONAHAMA (Iwaki City): 36.56 N. 140.55 E. (See Plan)

The port is protected by breakwater, 7,910 m. long and is open to the South.

DOCUMENTS:
Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
3 Voyage Memo (Ports of Call).
4 Crew Lists including Passport Numbers.
4 Passenger Lists including Passport Numbers.
1 Stores List.
1 Declaration of Crew's baggage, i.e. tobacco wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, Cargo Manifest and Cargo Manifest in Transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

PILOTAGE: No means of communication with Pilots and vessels should arrange pilotage by advising Agent of ETA. Not compulsory; Pilots are available at the anchorage (Lat. 36° 53' 05" N., Long. 140° 54' E.) for vessels requiring Pilot services.

For Tankers at Lat. 36° 52' 05" N., Long. 140° 54' 00" E.

ANCHORAGES: Just outside No. 1 West Breakwater. Depth of water 14 m. – 22 m.

RESTRICTIONS: Restriction only by ship's draft. Depths of water alongside wharves 9 m. and 10 m. at low tide, and rise of tide is about 1.40 m. highest. Berthing daylight only. Unberthing at Pilot's option.

MAX. SIZE: *Tankers:* Sea Berth: Max. 99,999 d.w.t. Depth 15.0 m. Max. safe draft, 13.50 m. (Also see "Berthing").

HEALTH: Radio Pratique available. Formalities will be carried out mainly after berthing.

Also see "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio, which covers all ports in Japan.

TUGS: Normally join vessel on passage from anchorage. Vessel's lines used. 3 tugs available, 1×3,600 h.p., 1×3,000 h.p and 1×2,600 h.p.

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by radio.

Name of Pier		*Length* (m.)	*Depth* (m.)	*Permissible Draft* (m.)	*Capacity* (d.w.t.)	*Shore Cranes*
No. 1 Pier	No. 5	130	7.5	7.0	5,000	
	No. 6	100	5.0	4.5	1,000	
	No. 7	100	5.0	4.5	1,000	
No. 2 Pier	No. 1	165	9.0	9.0	10,000	8t×1
	No. 2	185	10.0	9.75	15,000	8t×1
	No. 3	130	7.5	7.0	5,000	
	No. 4	130	7.5	7.0	5,000	
No. 3 Pier	No. 1	175	10.0	9.7	15,000	8t×1
	No. 2	175	10.0	9.75	15,000	8t×1
	No. 3	175	10.0	9.75	15,000	8t×1
	No. 4	175	10.0	9.75	15,000	8t×1
No. 4 Pier	No. 1	90	4.5	4.0	1,000	
	No. 2	200	10.0	9.7	15,000	
	No. 3	200	10.0	9.5	15,000	
	No. 4	100	6.0	5.5	3,000	
	No. 5	100	6.0	5.5	3,000	
	No. 6	100	6.0	5.5	3,000	
No. 7 Pier	No. 1	270	13.0	11.3	50,000	20t×1
	No. 2	270	13.0	11.3	50,000	20t×1
	No. 3	185	10.0	9.75	15,000	
	No. 4	185	10.0	9.75	15,000	
	No. 5	130	7.5	7.0	5,000	
Fujiwara Pier (Logs Discharge)						
	No. 1	185	10.0	9.7	15,000	
	No. 2	185	10.0	9.7	15,000	
	No. 3	185	10.0	9.7	15,000	
	No. 4	130	7.5	7.0	5,000	
Ohtsurugi Pier						
	No. 1	130	7.5	7.0	5,000	
	No. 2	130	7.5	7.0	5,000	
	No. 3	185	10.0	9.75	15,000	
	No. 4	185	10.0	9.75	15,000	
	No. 5	130	7.5	7.0	5,000	
	No. 6	130	7.5	7.0	5,000	
	No. 7	130	7.5	7.0	5,000	
	No. 8	130	7.5	7.0	5,000	
Sea Berth (Dolphin)		360	15.0	13.5	99,999	

STEVEDORES: At least 24 hours prior notice excluding 2nd and 5th Sundays and holidays required in order for Agent to arrange stevedores. 1st, 3rd and 4th Sundays shall be non-working days. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew at additional cost. Overtime surcharges 1630–2130 hrs. 60% additional of basic stevedorage; 2130–0800 hrs. next morning 120% additional; Sundays/holidays 100% additional.

MEDICAL: No advance notice required unless urgent.

TANKERS: Sea Berth: Product handled, Naphtha and Crude Oil. Shoreline 16 in.×2. Discharge rate 9,000 k/l per hour. Bunkers not available ex-pipeline.

DENSITY: 1025.

FRESH WATER: Available from shore lines, at about 30 t.p.h.

FUEL: Domestic oil is available. Bonded oil will be brought from Yokohama with sufficient advance notice, when required.

CONSULS: None.

REPAIRS: Minor repairs only.

DRY DOCKS: None.

GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.

OPENING/CLOSING HATCHES: By ship's crew.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnage. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 50 cigarettes to take ashore but no spirits.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

POLICE/AMBULANCE/FIRE: Iwaki (0246); Police 54-1111; Ambulance and Fire, 119.

TELEPHONES: No facilities for connecting on board.

AUTHORITY: Onahama Port Construction Office, 38-1, Onahama Tatsumi-cho, Iwaki City, Fukushima Pref. *Tel:* (0246) 54-2411.

AGENT: Senwa Shipping Agency, c/o Onahama Kairiku Unso Kaisha Ltd., 312-2 Takayama, Iwaki-shi, Fukushima 971, Japan. Tel: 0246-53-3225. Telex: 8922-80 Onakai J. Fax: 0246-54-8225. Cables: Onakai Iwakionahama.

ONODA: 33.58 N. 131.10 E. (See Plan)

Port Status: Closed Port.

Permission to enter and depart from Onoda Port should be obtained at the nearest open port prior to proceeding to Onoda (i.e. Ube Port and/ or Shimonoseki).

DOCUMENTS: See "Ube".

Officials:
Customs : Not stationed at Onoda, formalities should be undertaken at Ube Customs House.
Immigration : Not stationed at Onoda, Officials attend the vessel from Ube Port Office, as necessary.
Quarantine : Free Pratique should be obtained at Ube or Mutsure Quarantine Stations.
Port Authority : Stationed in Onoda (Yamaguchi Prefecture).
Maritime Safety Office : Stationed in Ube Port.

PILOTAGE: Not compulsory, but it is recommended that pilot is taken at one of the following points:

1. Sekisaki Sea Pilot Station: Lat. 33° 13' N., Long. 131° 56' E., 3 miles S.S.E. of Sekisaki Lighthouse.
2. Ube Pilot Station (Quarantine Station): Lat. 33° 53' 20" N., Long. 131° 13' 15" E.
3. Hesaki Pilot Station: Lat. 33° 56' N., Long. 131° 03' E.
4. Onoda Harbour Pilot Station: In the vicinity of Lat. 33° 55' 40" N., Long. 131° 07' 54" E., about 500 m. South West of Onoda Light Buoys No. 1 and 2.

RESTRICTIONS: Berthing and unberthing possible in daytime only (30 minutes after sunrise until 1 hour before sunset).

BERTHING:

Wharf	*Length* (m.)	*Depth in Approaches* (m.)	*Depth alongside* (m.)
Onoda Public Wharf			
No. 2	130	6.00	7.60
No. 3	180	5.60	5.70

No. 3 Wharf is exclusively used for domestic carriers only.

Maximum permissible draft at No. 2 Wharf is 5.50 m. for vessels having LOA of between 125 m. and 129 m., and in the event of LOA of vessel below 125 m., deeper draft is acceptable, which depends upon tidal allowance, since the pilot always requires 1.0 m. or 10% draft whichever greater for under-keel clearance.

Starboard side alongside is prefered, but port side alongside is acceptable.

CARGO HANDLING: *Number of Gangs:* Two.

Discharge Rate: Approximately 70 tonnes per gang hour (working period is basically 0800 hrs. until sunset.

Shore mobile cranes are used for discharging, subject to type of vessel.

Cargo Receiver: Yamaguchi Kyoei Industry Co.Ltd., Onoda. Tel: 08368-3-5485. Person in charge: Mr.Harima, Manager.

Stevedores: Kyodo Sangyo Co. Tel: 0836-83-2920. Person in charge: Mr. Ishida.

FRESH WATER: Available from hydrant at 15 tonnes/hr. Cost is Yen 670/tonne, minimum supply 20 tonnes.

AUTHORITY: Ube Maritime Safety Station, 1-5-7 Minato-Machi, Ube City, Yamaguchi Pref., Japan. *Tel:* 0836-21-2410. *FAX:* 0836-21-2410.

ONOMICHI-ITOZAKI (including Matsunaga, Mihara, Mukaishima): 34.20 N. 133.16 E. **(See Plan)**

DOCUMENTS:

International Tonnage Certificate.
Ship's Register.
Last Port Clearance.
3 Crew Lists including Passport Numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).
1 copy Voyage Memo (last 3 months).

Ship's Agent will prepare Inward/Outward Declarations, 1 Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Inland Sea pilotage should preferably be arranged through Agent by cable via Nagasaki Radio giving 72 hours' notice. Urgent correction of ETA outside business hours should be cabled direct to Pilot Station. Inland Sea Pilot Association covers all Inland Sea Ports. Pilotage compulsory for vessels over 10,000 g.r.t. Pilots obtained from one of three Pilot Stations dependent upon vessel's last port of departure and at Master's discretion. Pilotage available throughout 24 hours and 72 hours advance notice preferred, thereafter advising any alterations. Most Inland Sea Pilots also act as Harbour Pilots up to berth or anchorage at destination.

Note: VHF communication available with Inland Sea Pilot Stations. Also see 'Shipmaster's Report' before first port.

1. Wadamisaki, at entrance to Kobe (vessels transitting Kii Straits). Position Lat: 34° 34.09' N., Long: 135° 11' E. Telegraphic address "Anjin Kobe".
2. Sekisaki, 3 miles South of Sekisaki Lighthouse (vessels transitting Bungo Channel). Position Lat: 33° 13' N., Long: 131° 54' E. Telegraphic address "Anjin Moji". In event bad weather, recommended vessels proceed for shelter as near as possible, having due regard to safety, to Sekisaki Pilot Station.
3. Hesaki, at East side of Kanmon (Shimoneseki) Straits. Position Lat: 33° 56' 24" N., Long: 131° 03' 12" E.

Inland Sea Pilot also berths vessels at anchorage berth (if Matsunaga Bay – logs), or pier in Itozaki district (Mihara section).

Pilot boards for berthing from 30 minutes after sunrise until 30 minutes before sunset.

ANCHORAGES: Draft limitations: Itozaki-Mihara 7.5 m. Matsunaga Bay 8.5 m. Tidal range: Maximum (+) 3.91 m. Minimum (−) 0.09 m. Capacity for 3×20,000 ton vessels.

HEALTH: Radio Pratique available. Quarantine formalities normally carried out at Mutsure (off Moji) when vessel comes from West through Kanmon Strait, Matsuyama when vessel comes from West through Bungo Channel (Sekisaki Pilot Station) and Fukuyama when vessel comes from East (Wadamisaki Pilot Station).

Also see "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

TUGS: Tugs available at Onomichi at any time with 24 hours notice. 7 tugs of 2,000 h.p. – 3,000 h.p. available.

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by radio.

Berth	*Length* (m.)	*Depth* (m.)	*Permissible Draft and Length overall* (m.)	*Capacity* (d.w.t.)
Onomichi:				
Municipal Nishigosho Pier	402	7.5	6.5×130	5,000
Municipal Shinhama Pier	466	5.5	5.5× 90	2,000
Mihara:				
Municipal Kohama Pier	185	5.5	5.0× 90	2,000
Municipal Itozaki Pier	320	8.5	7.5×130	7,000
		10.0	9.0×180	10,000
Municipal Wada Pier	270	4.5	4.0×180	700
		5.5	5.0× 90	2,000
Matsunaga				
Municipal Minamimatsunaganishi Pier	305	4.5	4.0× 60	700
		10.0	9.0×180	10,000
Matsunaga Bay (Anchorage)		10.0		

Itozaki Pier: Cargo handled from Mitsubishi and Hitachi Works, cement in bags, steel and logs.

STEVEDORES: At least 24 hours prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew. Overtime surcharges 1700 – 1900 hrs. 50% additional of basic stevedorage; 2100 – 0500 hrs. next morning 130% additional; Sundays/holidays 60% additional.

MEDICAL: No advance notice required unless urgent.

TANKERS: No facilities.

FRESH WATER: Available. Method of delivery (1) Barge. (2) Pier. Additional charge for overtime work and in event of bad weather.

FUEL: Domestic oil is available, Bonded oil will be brought from Kobe, Kanokawa, Hirohata or Moji.

CONSULS: None.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 40 cigarettes to take ashore but no spirits.

REPAIRS: Repairs possible for vessels up to 100,000 g.r.t.

REPATRIATION: Possible.

AIRPORT: Nearest domestic airport at Hiroshima. Nearest international airport for crew joining/repatriation is Osaka International Airport.

TIME: GMT plus nine hours. Permanent.

POLICE/AMBULANCE/FIRE: Police 110; Ambulance/Fire 119.

TELEPHONES: No arrangements for placing telephones on board.

SHORE LEAVE: Local Immigration Authority issue shore passes valid for 15 days if vessel calling at more than one port in Japan and 7 days if vessel only calling at a single port. (If only calling Onomichi-Itozaki, Immigration issue 7 day pass).

AUTHORITY: Hiroshima Prefectural Government, 10-52 Moto-machi, Naka-ku, Hiroshima City, 730 Japan. *Tel:* 86-82-228-2111. *FAX:* 86-82-223-2463.

OSAKA: 34.39 N. 135.26 E. **(See Plan)**

DOCUMENTS:

Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
4 Crew Lists including Passport Numbers.
4 Passenger Lists, if any on board.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, 1 Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Pilotage is compulsory for vessels of 10,000 gross tons or more. 24 hours' notice required. Telegraphic address: "Hanshinpilot Osaka" VHF contact with Osaka Port Radio on Channels 12, 16, 19, 20. Agents operate Channel 26. Three 15 ton Pilot boats with radio equipment to pilot office. Pilot boards anywhere within harbour limits. In event bad weather Pilot boards just inside breakwater when acknowledgement obtainable from Master. If awaiting Pilot, anchor inside harbour limits as near as possible to breakwater.

ANCHORAGES: Section Nos. 7 and 8. Section 7 is Quarantine Anchorage. Section 8 for other vessels. Captain of the Port allocates anchorage position prior vessel's arrival which radioed to Master by Agent. Max. draft about 14.0 m.

RESTRICTIONS: Vessels only permitted to enter from sunrise to 2100 hrs. Full container vessels permitted to enter from sunrise to 2400 hrs. and to depart at any time of the day. However, in order to avoid danger, some wharves (oil wharf, Nakayama Wharf and various shipyards where there is not enough space to conduct berthing operation), accept vessel only until sunset.

MAX. SIZE: Max. permissible length 250 m., draft 11.6 m. Also see "Tankers".

HEALTH: Vessel requiring Free Pratique requested cable directly to "Quarantine Station", Osaka informing ETA, date of departure from last port, name of last port, number of crew and health condition. At first port of call in Japan, vessel must obtain Free Pratique. Quarantine Officers will attend vessel only from daylight to sunset and Master to show all Vaccination Cards, Derat Exemption Certificate. In case vessel arrives from cholera-infected area within 10 days Master must advise crew and passengers health condition to respective Quarantine Office through ship's Agent prior to arrival and close all soil pipes before entering port.

Radio Pratique is available (See "Late Reports").

RADIO: Osaka Port Radio, 24-hour port operation service on VHF Channels 16, 12, 19 and 20.

RADAR: Osaka Harbour Radar has 24-hour navigation aid and weather information service and supplies information on ship movements, etc. Contact by VHF Channels 16, 14 and 22.

TUGS: 10 Port Authority tugs. Tugs join vessel just before harbour entrance. Tug's lines used, no extra charge.

BERTHING: No specific requirements. Pilot boarding time will be notified by VHF or radio.

Wharf	*Wharf Length (m.)*	*Water Depth (m.)*	*Mooring Capacity Gross tons*	*Mooring Capacity No. of Ships*	*Main Cargoes Handled*
Tsumeyoshi Wharf	360	5.5	1,000	4	General Cargoes
North Port Wharf 1	250	10.0	10,000 500	1 1	Coal
North West Wharf 2	120	5.5	1,000	1	Coal
Umemachi West Wharf	792	12.0 10.0	30,000 20,000 10,000	1 1 1	Coal, General Cargoes Oil, LPG
Umemachi Pier	395	10.0	10,000	2	Bulk, Oil
Sakurajima Wharf	535	10.0	7,000 10,000	1 2	General Cargoes
Ajikawa Pier North Wharf	482	5.5	1,700	5	Passengers, General Cargoes
Ajikawa Pier West Wharf	120	5.5	1,000 500	1 1	General Cargoes
Ajikawa Pier South Wharf	312	6.5 5.5	2,000 1,000	1 2	General Cargoes
Ajikawa Wharf 2	360	10.0	10,000 8,000	1 1	General Cargoes
Ajikawa Wharf 3	178	10.0	10,000	1	General Cargoes
Osaka Port Silo Wharf	210	11.0	13,000	1	Bulk Grains
Ajikawa Wharf 1	320	10.0	10,000 3,000	1 1	General Cargoes, Bananas
Tempozan Wharf	370	10.0	10,000	2	Passengers, General Cargoes
Central Pier North Wharf	210	11.0	13,000	1	General Cargoes
Wharf 1	437	10.0 5.5	10,000 700	2 1	General Cargoes
Wharf 2	341	10.0	10,000 5,000	1 1	General Cargoes
Wharf 3	315	10.0 7.5	10,000 3,000	1 1	General Cargo
Wharf 5	394	9.0	6,000 500	2 1	General Cargoes, Salt, Bulk Cement
Wharf 6	359	10.0	10,000	2	General Cargoes
Wharf 7	361	10.0	10,000	2	General Cargoes
Wharf 8	336	7.5	3,000 1,000	2 1	General Cargoes, Bulk Cement
Wharf 10	617	5.5–9.0	7,000 3,000 1,000	1 2 1	Iron and Steel
Wharf 11	290	5.5	1,000	3	Iron and Steel
Taisho Pier 1 North Wharf	450	5.5	1,000	5	General Cargoes
Wharf A	1,040	7.5	3,000	8	General Cargoes
Wharf B	550	7.5	3,000	4	Paper, Pulp, General Cargoes
Wharf D	580	7.5 5.5	3,000 1,000	2 3	General Cargoes, Cars
Wharf E	821	7.5 5.5	3,000 1,000	2 5	Passengers, Cars,
Wharf G	720	5.5	1,000	8	Steel, General Cargo
Wharf I	720	5.5	1,000	8	General Cargoes
Wharf J	720	12.0	20,000	3	Food
Wharf K	370	10.0	10,000	2	Passengers, General Cargoes
Containership Wharf No. 1 (C 1)	273	13.0	25,000 D/W	1	General Cargoes 2 Gantry Cranes
Containership Wharf No. 2 (C 2)	250	13.0	25,000 D/W	1	General Cargoes 2 Gantry Cranes
Containership Wharf No. 3 (C 3)	300	13.0	35,000 D/W	1	General Cargoes 2 Gantry Cranes
Containership Wharf No. 4 (C 4)	250	13.0	25,000 D/W	1	General Cargoes 3 Gantry Cranes
Containership Wharf No. 5 (C 5)	300	13.0	35,000 D/W	1	General Cargoes 1 Gantry Crane
Containership Wharf No. 7 (C 7)	300	12.0	35,000	1	2 Gantry Cranes
Containership Wharf No. 8 (C 8)	350	13.0	45,000	1	2 Gantry Cranes
Liner Wharves L 1	200	10.0	10,000	1	General Cargo
L 2	200	10.0	10,000	1	General Cargo
L 3	200	10.0	10,000	1	General Cargo
L 4	250	10.0	10,000	1	General Cargo
L 5	250	10.0	10,000	1	General Cargo
L 6	230	10.0	10,000	1	General Cargo
L 7	230	10.0	10,000	1	General Cargo
Ferry Wharf F 1	165	7.5	8,000	1	Passengers, Cars, General Cargoes
F 2	130	6.0	3,000	1	
F 3	148	6.0	3,000	1	
F 4	165	7.5	8,000	1	
F 5	165	7.5	8,000	1	
F 6	130	6.0	3,000	1	
F 7	240	8.5	10,000	1	
F 8	205	7.5	8,000	1	
Omni Terminal (Wharf R) R 1	185	10.0	10,000		Containers; Plant; Steel; Timber, etc. 3 Gantry Cranes 1×30.5 tons and 2×40.5 tons
R 2	240	12.0	20,000		
R 3	240	12.0	20,000		
R 4	185	10.0	10,000		
R 5	185	10.0	10,000		
Dolphins D-13	315	12.0	10,000	1	Logs
D-14	150	7.5	3,000	1	Steel, General Cargoes
D-15		7.5	3,000	1	Steel, General Cargoes
D-16		7.5	3,000	1	Steel, General Cargoes
D-21	230	9.9	10,000	1	Steel, General Cargoes
D-22		10.0	10,000	1	Steel, General Cargoes
Hokko Shiratsu Wharf HS-1	240	12.0	200	1	Steel
Private:					
Nippon Express Co. North Port Pier	256	6.5	5,000	1	Steel
Osaka Gas Co. Torishima Wharf	595	7.0 6.0	3,500 3,300	4 1	Coke, LPG
North Port Oil Jetty	64	6.0	2,300	2	Naphtha, LPG
North Port Wharf	525	7.0	5,000	3	Coal
Sumitomo Steel Centre Wharf	100	7.0	2,500	1	Steel
Hanwa Kogyo Sakurajima Steel Centre Wharf	150	7.0	2,500	1	Steel
Tatsumi Ajikawa Pier	107	10.0	13,000	1	Caustic Soda
Hosen Pier	82	8.5	7,000	1	Reefer
Nakayama Steel East Main Wharf	367	9.0	7,000	2	Iron Ore, Coal
West Main Wharf (P-1)	260	12.0	25,000	1	Iron Ore, Coal, Scrap
Kansai Electric Co. Coal Pier	200	9.0	7,000	1	Crude Oil
Oil Wharf	100	6.6	1,300	1	Crude Oil
Nihon Steel Pipe Wharf	120	5.5	1,000	2	Steel
Sumitomo Shoji Nanko Futo Wharf (J-5)	318	12.0	20,000	1	Lumber
C. Itoh South Port Lumber Wharf	208	12.0	20,000	1	Lumber
Osaka South Port Warehouse Steel Wharf	107	6.5	3,000	1	Steel
Kawasaki Steel Service Centre Wharf	250	5.5	1,000	3	Steel
Sumitomo Metal South Port Steel Centre Wharf	200	6.0	1,000	2	Steel
Hanwa Kogyo South Port Steel Centre Wharf	180	6.0	1,000	2	Steel

CONTAINER FACILITIES: Berths C1, C2, C3, C4, C5, C7, C8, R2, R3 and R4 each equipped with container handling gantry cranes. Berth C1 equipped to handle Ro/Ro. Also see "Developments".

STEVEDORES: At least 24 hours prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew. Overtime surcharges 1630 – 2130 hrs. 60% additional of basic stevedorage; 2130 – 0500 hrs. next morning 130% additional; Sundays/holidays 100% additional.

BRIDGES: 2 bridges under construction. Clearance 46.0 m. – 47.0 m.
MEDICAL: No advance notice required unless urgent. General and Seaman's hospitals available.
TANKERS: No slop discharge facilities. Wharf No. 49, Sakurajima Oil Wharf, max. LOA 250 m., max. safe draft 11.60 m. Product handled, fuel oil, diesel oil, Minas Waxy. Shoreline 12 in. Discharge rate 1,000 t.p.h.

Shipmaster's Report: December 1985.

Tankers are only taken alongside between 0930 hrs. and 1500 hrs. In Summer sometimes between 0900 hrs. and 1600 hrs., but it is not usual.

Sakurajima Wharf 49 has a max. safe draft of 11.60 m., however with such a draft entering only possible during HW. If high water does not fall between 0930 hrs. and 1500 hrs. vessel has to wait a few days.

We discharged 5,000 tons of Ethylene Dichloride at Sakurajima Wharf. Only one connection of 8 in. Discharging rate 700 cu.m.p.h.
DENSITY: Outside anchorage: 1023 – 1025. Near breakwater: 1020 – 1022. Average density inside breakwater 1020. Wharves near estuaries (Aji River, Shirinashi River, Kizu River and etc.): 1016 – 1020.
FRESH WATER: Methods of delivery: by barges or pipeline.
FUEL: All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, Osaka Bay and Kanmon Port. At all other ports bunkers will be lightered from the nearest bunker stock ports at maximum 7 days prior notice.
CONSULS: The following consulates available in Osaka:

Austria	France	Singapore
Australia	Korea	Switzerland
China, People's Rep. of	New Zealand	U.S.A.

REPAIRS: All grades repairs possible.
DRY DOCKS: Hitachi Zosen Co. Ltd., Chikko Ship Yard. No. 1 Dock: 247.5 m.×55.7 m., depth 11 m. No. 2 Dock: 355.0 m.×62.7 m., depth 11 m.

Namura Dock Co. Ltd., No. 1 Dock: 180 m.×27.5 mm., depth 9.3 m. No. 2 Dock: 149 m.×22 m., depth 9.3 m.

Sanoyas Co. Ltd., No. 1 Dock: 155 m.×21.7 m., depth 7.4 m. No. 2 Dock: 112 m.×17 m., depth 7m.
GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.
OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.
CERTIFICATES: Ship's Register to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.
CARGO GEAR: See "Certificates", but no special requirements.
CUSTOMS ALLOWANCES: Only allowed 50 cigarettes to take ashore, but no spirits.
AIRPORT: One hour required from Osaka Port to Osaka International Airport by car (about 25 km. distance). Regular airlines:

Overseas Lines: Japan Airlines, Cathay Pacific Airlines, China Airlines, Thai International Airlines, North West Airlines, United Airlines, British Airways, Korean Airlines, Lufthansa Airlines, Singapore Airlines, Air France.

Domestic Lines: Japan Airlines, All Nippon Airways, Nippon Air System.
TIME: GMT plus 9 hours. No alterations made to clocks during year.
HOLIDAYS: Every Sunday, May 1st, July 20th, December 31st to January 4th.
POLICE/AMBULANCE/FIRE: Police Tel. 110; Ambulance Tel. 119; Fire Tel. 119.
TELEPHONE: Wharf connections available.
SERVICES: All services available.
SHORE LEAVE: Local Immigration Offices issue shore pass valid for only 7 days, but 3 days' extension possible if ship stays longer.
DEVELOPMENTS: Container Berths No. 10, 11 and 12 under construction (each 350 m. × 14.0 m. depth). Completion expected 1996, 1997 and 1999 respectively.
AUTHORITY: Port and Harbour Bureau, City of Osaka, 2-8-24, Chikko Minato-ku, Osaka, 552 Japan. *Tel:* (06) 572-5121. *Telex:* 525-6320 OPPAJ. *Cables:* Omhbureau. *FAX:* (06) 573-5700. *Contact:* Hideo Igarashi, Manager of Promotions Department.
AGENT: Senwa Shipping Agency, c/o Sumitomo Warehouse Co.Ltd., 2-6-15 Kaigandori, Minato-Ku, Osaka-Shi, Osaka 552, Japan. Tel: 06-571-5002. Telex: 5254-452. Fax: 06-572-2215. Cables: Sumitomowharf Osaka.

OTARU: 43.12 N. 141.01 E. (See Plan)

DOCUMENTS:
Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
3 Crew Lists, including Passport Numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.
TUGS: Two tugs available. Tugs M/S "Sakura Maru" 194 g/t 2,600 h.p. M/S "Tateiwa Maru" 199 g/t 2,600 h.p. Both belong to the Port Authority.
PILOTAGE: Limit of Otaru Pilotage District is sea area surrounded by line drawn from Kayashiba-misaki to Horaiso-misaki and coast line. Licensed Pilots stationed in office from 0900 to 1700 hrs. Boarding place about 1 mile from North B.W. Lt. H. 70°. Pilot boat painted white and carries International Code flag "H" at forecastle deck.
ANCHORAGES: Depth of water inside breakwater is 3.6 m. to 17.0 m. and nearly everywhere is good anchorage. Sea area outside breakwater also good for anchorage, but be careful not to foul fishing nets. Around quarantine anchorage is best outside breakwater.
RESTRICTIONS: Quarantine and Customs business between 0900 hrs. and 1700 hrs. Pilot assistance not compulsory but in practice necessary.
MAX. SIZE:
Piers and Quays

	Berth No.	Length (m.)	Depth of water (m.)	Capacity (g/t)	Main usage
Pier No. 1:	1-3	400 310	7.5-12.0 14.0		Under Construction, ready 2000
	4-5	293	9.0	6,000×2	Grain
Pier No. 2:	7-8	293	9.0	6,000×2	Bananas
	9	126	9.0	3,000×1	General Cargo
	10-11	293	9.0	6,000×2	Corn
Pier No. 3:	13-14	343	9.0	6,000×2	General Cargo
	15	127	9.0	3,000×1	General Cargo
	16-17	362	10.0-9.0	15,000×1	General
Chuou Pier:	1-2	315	7.5-10.0	5,000×1 10,000×1	General Cargo Cement
	3	260	10	10,000×1	Ore
	4-5	380	7.5-12.0	20,000×1 3,000×1	Corn
Katsunai Pier:	1	260	13.0	30,000×1	Grain, Log
	2-3	370	10.0	10,000×2	General Cargo
	4-5	430	9.0	20,000×2	Ferries
Kitahama Wharf		251	5.5	1,000×1	General Cargo
Temiya Wharf		140	5.0	1,000×1	Grain
Sakai-machi Wharf		189	7.5	–	Under Construction, ready 2000
Umaya-machi Wharf		392	7.5	3,000×2	Oil, cement
Wakatake Dolphin		301	10.0	5,000×1	Floating Logs

HEALTH: See "Hakodate".
Also see "Late Reports".
RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.
BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by radio.
STEVEDORES: At least 24 hours prior notice required in order to arrange stevedores by Agent, excluding Sundays and holidays. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew at additional cost. Overtime surcharges 1630 – 2130 hrs. 60% additional of basic stevedorage; Sundays/holidays 100% additional.
MEDICAL: No advance notice required unless urgent.
TANKERS: Available berthing for small vessels only, 1,000 g/t and usual berthing 300 – 500 g/t. Japanese tankers only. Draft: Max. permitted 7.2 m. Discharging: about 500 tonnes p.h.
DENSITY: Average 1025.
FRESH WATER: Good drinking water at all piers and wharves, except Wakatake Dolphin. Cost Y 359/ton. Rate 30-50 t.p.h.
FUEL: All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, Osaka Bay and Kanmon Port. At all other ports bunkers will be lightered from the nearest bunker stock ports at maximum 7 days prior notice.
FIRE PRECAUTIONS: No smoking at tanker berth, Umaya-machi Wharf.
CONSULS:

American Consulate, Sapporo in Sapporo City only.
Tel: 011-221-5121.
Korean Consulate, Sapporo in Sapporo City only.
Tel: 011-621-0288.
Russian Consulate, Sapporo in Sapporo City only.
Tel: 011-561-3171.

REPAIRS: All type of deck and engine repairs are possible.
DRY DOCKS: None.
GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.
OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.
CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.
CUSTOMS ALLOWANCES: Only allowed 20 cigarettes to take ashore, but no spirits.
REPATRIATION: Possible.
AIRPORT: Distance to Sin-Chitose International Airport 80 km. (70 minutes by railroad or highway). More than 35 flights per day to Tokyo.
TIME: GMT plus 9 hours. No alterations made to clocks during year.
HOLIDAYS: Stevedores do not work on 1st May.
POLICE/AMBULANCE/FIRE: Tel: Police 110; Ambulance and Fire 119.
TELEPHONES: Arrangeable on board.

SHORE LEAVE: Local Immigration Offices issue shore pass valid for only 3 days, but 3 days' extension possible if ship stays longer.
AUTHORITY: Department of Ports and Harbours, 4-2 Minatomachi, Otaru, Hokkaido, 047 Japan. *Tel:* 0134-23-1107. *FAX:* 0134-23-1109. *Contact:* Y. Nakamura.

OWASE: 34.04 N. 136.15 E. (See Plan)

DOCUMENTS:
Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
5 Crew Lists, including Passport Numbers.
5 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan). Each person's signature is necessary in it.

Ship's Agent will prepare 2 Inward/Outward Declarations. 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.
PILOTAGE: Pilot station is 2 miles East from Togashira Island. Pilotage is not compulsory at this port but recommended to take pilotage by Toho Oil Co. Ltd.
ANCHORAGES: Quarantine Anchorage position is Lat. 34° 04.2' N., Long. 136° 16.8' E., with good holding ground. However, it is not advisable for vessels to stay there for a long time as there are many fishing boats nearby.
RESTRICTIONS: According to Agreement between Fishery Association and Oil Refinery, ship's movement is prohibited at night. See "Berthing".
MAX. SIZE: See "Tankers".
HEALTH: Radio Pratique available. Formalities carried out after entering the port.

Also see "Late Reports".
RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.
TUGS: Tugs usually join vessel at Outer Harbour (near Quarantine Anchorage) and tug's line is used. Tugs come from Nagoya. VHF Channel 16, 6, and 12.
BERTHING: Time limit of Pilot boarding for berthing to Toho Oil Terminal is 3 hours before sunset due to the agreement between Fisheries and Toho Oil Co. Ltd.
MEDICAL: No advance notice required unless urgent. Hospital facilities available.
TANKERS: Toho Oil – Owase Pier: Depth of water, 17.0 m., Max. d.w.t. 100,000, Max. LOA, 155 m. Max. safe draft 16.00 m. Product handled crude oil. Shoreline 2×12". Discharge rate, 4,500 k/l.p.h.

Toho Oil – Sea Berth: Depth of water, 21.0 m. Max. d.w.t. 210,000. Max. LOA 350 m. Max. safe draft 19.00 m. Product handled, crude oil. Shoreline 2×20". Discharge rate 7,000 k/l.p.h.
FRESH WATER: Fresh water can be supplied to the vessel from pipe at quay. Supply capacity 30 t.p.h.
FUEL: Domestic oils available. Bonded oil will be brought from Nagoya, Yokohama, Chiba or Kobe.
CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's gross and net registered tonnages.
CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore but no spirits.
CONSULS/REPAIRS/AIRPORT: None.
TIME: GMT plus 9 hours. Permanent.
TELEPHONES: Emergency numbers, Owase Police Office 22-0004; Owase Fire Station 22-2020; Owase Hospital 22-2118. No facilities for placing telephones on board.
SHORE LEAVE: Local Immigration Offices issue shore pass valid for only 3 days, but extension possible if ship stays longer.
AUTHORITY: Owase Doboku (Public Works) Office, 2-11, Hayashi-machi, Owase City, Mie Pref. *Tel:* (05972) 2-2017.

RUMOI: 43.57 N. 141.38 E. (See Plan)

SHIPMASTER'S REPORT: November 1985 (Updated 1996).

DOCUMENTS:
5 Crew Lists on Japanese forms.
1 Stores List.
3 Passenger Lists (if carried).
Last Port Clearance.
International Tonnage Certificate.
Ship's Register.
PILOTAGE: 24 hours notice required. Boarding position at Quarantine Anchorage if fine weather or inside lee of new breakwater. Pilot boat is a small tug with a white hull.
ANCHORAGE: Lat. 43° 57' 11" N., Long. 143° 37' 30" E. – Very poor holding ground, rock bottom. Exposed from N.W. to S.W. Numerous fishing floats, nets, etc., in approach to anchorage to about 3 miles offshore.
RESTRICTIONS: Daylight entry only, sailing reportedly to be allowed up to 2 hours after sunset.
MAX. SIZE: Maximum ship size 150 m. LOA, 25 m. beam and 10.0 m. draft.
HEALTH: See "Late Reports".
RADIO: *ETA:* Via Nagasaki Radio. This port has no VHF therefore ETA's can be given via Otaru Radio on VHF Channels 16 and 12 when coming from South.
TUGS: 1×1,900 h.p. Very expensive and poorly equipped and handled.
BERTHING: Depth alongside and in approaches 5.5 m. – 10.0 m.
STEVEDORES: Very good. Discharged boxes of frozen fish at average rate of 30 tons per working hour. Normal stevedoring hours 0800 – 1700 hrs. with overtime to 2100 hrs. if required.
MEDICAL: Hospital available.
FRESH WATER: Available.
FUEL: Available.
REPAIRS: Minor repairs possible.
GANGWAY/DECK WATCHMEN: Not compulsory.
OPENING/CLOSING HATCHES: Crew open and close hatches. Stevedores adjust derricks as required under ship's supervision.
REPATRIATION: Possible.
AIRPORT: Nearest airport 90 km. from town (subject to delays in Winter) ice, snow, fog, etc.
TIME: GMT plus 9 hours all year round.
TELEPHONE: In Agent's office, adjacent to wharf.
GENERAL: *Provisions/Laundry:* Available.

SAGANOSEKI: 33.15 N. 131.52 E. (See Plan)

DOCUMENTS: When a vessel arrives direct from a foreign port, Customs Officials will board to search, and the following documents are to be submitted:
Customs: (Tel: 0975-75-0350).
1 copy Crew Manifest (full name/rank/Passport No./date of birth).
1 copy List of Ship's Stores (Arms/Ammunition and Narcotics List to be attached).
1 copy Declaration of Crew's Baggage.
1 copy Ports of Call List (last 3 months).
1 copy Inward/Outward Declaration (ship's Agent will prepare).
1 copy Cargo Manifest for Discharging Cargo (ship's Agent will prepare).
1 copy Cargo Manifest for Through Cargo (ship's Agent will prepare).
1 copy Declaration for Payment of Tonnage Dues (ship's Agent will prepare).

The following ship's documents will be checked by Customs:
Ship's Register.
International Tonnage Certificate.
Last Port of Clearance.
Immigration: (Tel: 0975-27-3754) Oita Office.
2 copies Crew Manifest.
1 copy Ports of Call List.
1 copy Inward/Outward Declaration.

At first Japanese port, ship's Agent is to bring Passports and/or Seamen's Books to Immigration Office and obtain the Crew Landing Passes.
Quarantine (Tel: 0975-21-2394) Oita Office:
See "Health".
PILOTAGE: Inland Sea Pilots Association, Moji Office (Tel: 093-332-7191):
(a) Harbour and sea pilotage are not compulsory, but foreign vessels are recommended to employ a pilot, in view many fishing nets/boats in Sekisaki/Saganoseki area.
(b) Request must be made at least 24 hours in advance, and pilot should be kept closely advised of vessel's accurate ETA at certain Pilot Station.
(c) Sekisaki, 3 miles South of Sekisaki Lighthouse (vessel transiting Bungo Channel). Position Lat. 33° 13.5' N., Long. 131° 58' E.
(d) Hesaki at East side of Kanmon (Shimonoseki) Strait, position Lat. 33° 56' 24" N., Long. 131° 03' 12" E.
(e) Communication with pilot: VHF Channel 16 through Oita Port Radio (Tel: 093-332-7191. Telex: 715313 Anjin J. Cables: Anjin Moji).
ANCHORAGE: Waiting anchorage available at following 3 positions only:
Saganoseki "A" Anchorage, Lat. 33° 15' 39" N., Long. 131° 51' 25" E.
Saganoseki "B" Anchorage, Lat. 33° 15' 30" N., Long. 131° 51' 33" E.
Saganoseki "C" Anchorage, Lat. 33° 15' 48" N., Long. 131° 51' 16" E.
(Above Saganoseki Anchorage is assigned as Customs "Closed Port", so cash/mail/stores delivery, etc., whilst anchored not permitted, as per Customs Regulations).
RESTRICTIONS: Berthing/unberthing during daytime only.
MAX. SIZE: See "Berthing".
HEALTH:
(a) Ordinary quarantine inspection should be undertaken at Saganoseki Anchorage (See "Anchorage") by inspectors attending on board.
(b) Quarantine service is rendered between 0830 hrs. and 1700 hrs. in Summer season, and between 0830 hrs. and 1600 hrs. in Winter season.
(c) Radio Pratique available (See "Late Reports").
RADIO: Recommended that Master communicates with Agents through Nagasaki Radio, which covers all ports in Japan.
VHF: Oita Port Radio (Tel: 0975-75-1819). Channels 16, 12 and 14. Power 50 W. Operating hours: 24 hours.

TUGS: Tugs available to assist with berthing/unberthing through Oita Port (30 minutes by sea from Saganoseki).

BERTHING:

Berth	*Wharf Length* (m.)	*Max. LOA* (m.)	*Depth alongside* (m.)	*Depth in Approach* (m.)	*Max. Draft* (m.)
A Wharf	100	185	10.0	9.20	9.55
B Wharf	200	185	10.0	9.20	9.55
C Wharf	130	185	10.0	9.20	9.55

Note: Wharf length (A/B/C): 430 m. in total (same extension).

Max. deadweight: 31,406 tonnes (wharf strength), 39,200 tonnes (bitt strength).

Max. draft: 9.55 m., subject to tide allowance 10% of ship's draft as under-keel clearance.

CRANES: Company: Nippon Mining Co.Ltd.

Facilities:

Unloaders: 4.

Cargo handled: Copper concentrate in bulk.

Discharge Rate: About 160 – 170 tonnes/hr. and about 1,900 tonnes per day per unloader.
About 650 tonnes/hr. and about 7,800 tonnes/day by 4 unloaders.

Max. airdraft: 11.00 m.

Max. outreach: 25 m. × 2 unloaders.
27 m. × 2 unloaders.

Berth: To be used at Wharf "A" and "B".

BULK CARGO FACILITIES: See "Cranes".

SPECIALISED CARGO HANDLING FACILITIES: Company: Nippon Mining Co.Ltd.

Facilities:

Loading arms: 2.

Cargo handled: Sulphuric acid in bulk.

Loading rate: 1,000 tonnes/hr. by 2 arms.

Shore connection: 6 in./JIS Chicksan.

Max. pressure: 10 kg. at manifold.

Berth: To be used at Wharf "C".

STEVEDORES: Discharging of all raw materials is on "Free in/out" basis. Therefore, stevedorage is to receiver's account. Discharging is carried out by shore cranes. Ship's gear is not used.

MEDICAL: No advance notice required, except on Sundays, holidays and in an emergency.

TANKERS: See "Berthing" and "Specialised Cargo Handling Facilities".

DENSITY: Average: 1023 in Summer, 1024 in Winter.

FRESH WATER: Available from shore. Rate about 15 tonnes/hr.

FUEL: Bonded oil will be brought from Oita, Kanmon or Tokuyama.

CONSULS: There are not consuls in Saganoseki. Notary Public office is available for Marine Note of Protest (Nakano Notary Public office at Oita. Tel: 0975-35-0888).

REPAIRS: Minor deck and engine repairs can be undertaken by Oita workshop and/or Moji.

DRY DOCKS: None.

GANGWAY/DECK WATCHMEN: Not specially required, unless passengers or valuable cargo on board.

OPENING/CLOSING HATCHES: For discharging raw materials, opening/closing hatches must be carried out by ship's crew before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate, to show Customs Inspector ship's registered gross and nett tonnages.

CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore, but no spirits.

REPATRIATION: Possible.

AIRPORT: Oita Airport, 2 hours by taxi, 1.5 hours by hovercraft (Distance from centre of Oita town to Saganoseki is 25 km.).

A regular domestic airline service to most airports in Japan is available. A regular international airline service only to Seoul, South Korea (every Monday, Wednesday and Saturday).

TIME: GMT plus 9 hours. No alterations made to clocks during year.

POLICE/AMBULANCE/FIRE: Police 110, Ambulance/Fire 119.

TELEPHONES: Possible to place wireless telephone on board ex-Saiki. 3-4 days prior notice required.

SHORE LEAVE: Local Immigration Office (Oita Office) issues shore passes valid for 7 days only, if vessel only calling at one port in Japan, and 15 days, if vessel calling at more than one port in Japan. Extension possible if ship stays longer.

SERVICES: All services available.

SAIKI: 32.59 N. 131.55 E. **(See Plan)**

DOCUMENTS: When vessel arrives direct from a foreign port, Customs Officials will board to search, and the following documents are to be submitted:

Ship's Register.
International Tonnage Certificate.
Voyage Memo (Ports of Call).
3 Crew Lists, including Passport numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port in Japan).

Ship's Agents will prepare Inward/Outward Declaration, Cargo Manifest and Cargo Manifest in Transit, using specific forms. Therefore, ship's Agents should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Pilotage in and out of harbour not compulsory, but recommended to be taken at Quarantine Anchorage (Lat. 32° 59' N., Long. 131° 56' 50" E.). Inland Sea Pilot carries out harbour pilotage. Inland sea pilotage should preferably be arranged through Agent by cable via Nagasaki Radio, giving 72 hours notice. Urgent correction of ETA outside business hours should be cabled direct to Pilot Station. Inland Sea Pilot Association covers all inland sea ports. Pilotage compulsory for vessels over 10,000 g.r.t. Pilots obtained from one of three Pilot Stations, depending upon vessel's last port of departure, and at Master's discretion. Pilotage available throughout 24 hours, and 72 hours advance notice preferred, thereafter advising any alterations. Most Inland Sea Pilots also act as harbour pilots up to berth or anchorage at destination.

Note: VHF communication available with inland sea Pilot Station.

1. Wadamisaki, at entrance to Kobe (vessel transiting Kii Straits). Position Lat. 34° 34' 09" N., Long. 135° 11' E. Cable address "Anjin Kobe".

2. Sekisaki, 3 miles South of Sekisaki Lighthouse (vessel transiting Bungo Channel). Position Lat. 33° 13' N., Long. 131° 54' E. Cable address "Anjin Moji". In event of bad weather, recommended vessels proceed for shelter, as near as possible having due regard to safety, to Sekisaki Pilot Station.

3. Hesaki, at East side of Kanmon (Shimonoseki) Straits. Position Lat. 33° 56' 24" N., Long. 131° 03' 12" E.

ANCHORAGES: Same as Quarantine Anchorage (See "Pilotage").

RESTRICTIONS: Vessel can enter port and depart after sunset.

Depth of water in the passage is 11.0 m.

Tidal Range: Max. +1.7 m. Min. −1.3 m.

MAX. SIZE: See "Berthing".

HEALTH: At first port of call in Japan, vessel must obtain Free Pratique. Quarantine Officers will attend vessel from 0830 hrs. to 1630 hrs. at anchorage. Master to show all Vaccination Cards and Derat Exemption Certificate. In case vessel arrives from cholera infected area within 10 days, Master must advise crew and passengers' health condition to respective Quarantine Office through ship's Agent, prior to arrival, and close all soil pipes before entering port. Radio Pratique available.

Also see "Late Reports".

RADIO: Recommended that Master communicates with Agent through Nagasaki Radio, which covers all ports in Japan.

VHF: No VHF service.

TUGS: 1×1,000 h.p. and 1×800 h.p.

BERTHING:

Name of Berth	*Length* (m.)	*Depth* (m.)	*Max. Draft* (m.)	*Capacity* (g.r.t.)
Mejima Pier	370	10.0	10.0	2×10,000
Nihon Cement Pier	150	9.5	9.5	18,000 d.w.t. (1 unloader)
Kojin Dolphin	150	9.0	9.0	12,500 (Wood chip only)
Buoy		12.0	12.0	20,000 (Discharge logs)
Anchorage		12.0	12.0	4×10,000 (Discharge logs)

BRIDGES: None.

STEVEDORES: At least 24 hours prior notice, excluding Sundays and holidays, required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew at additional cost. Overtime surcharges 1700 hrs. – 1900 hrs. 50% additional of basic stevedorage; 2100 hrs. – 0500 hrs. next morning 130% additional; Sundays/holidays 60% additional.

TANKERS: No tanker berth.

MEDICAL: No advance notice required, unless urgent.

DENSITY: Average 1025.

FRESH WATER: Good fresh water supplied either from water barge or from hydrants. Capacity of water barge is 180 tons.

FUEL: All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, Osaka Bay and Kanmon Port. At all other ports, bunkers will be lightered from the nearest bunker stock ports at maximum 7 days prior notice.

CONSULS: No consuls. Marine Note of Protest possible at local Notary Public.

REPAIRS: Only minor repairs possible. Major repairs can be undertaken at Moji or Oita.

DRY DOCKS: None.

GANGWAY/DECK WATCHMEN: Not specially required, unless passengers or valuable cargo on board.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work, unless crew can complete it before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores, when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore, but no spirits.

CARGO GEAR: See "Certificates", but no special requirements.

REPATRIATION: Possible.

AIRPORT: Oita Airport about 2 hours by train and taxi. JAL, ANA and JAS airlines for domestic service.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

POLICE/AMBULANCE/FIRE: Police 110, Ambulance/Fire 119.

TELEPHONES: Not possible to place telephones on board.

SHORE LEAVE: Local Immigration Offices issue shore passes valid for only 15 days, when Saiki is first port of call in Japan. Extension possible if ship stays longer.

SERVICES: All services available from Moji and Oita.

AUTHORITY: Oitaken Saiki Doboku Office, 4-1 Nakamura Minami Machi, Saiki City, Fukuoka Pref., 876 Japan. *Tel:* 0972-22-3129. *FAX:* 0972-22-9543.

SAKAI (Including Senboku and Hannan Port):

34.34 N. 135.27 E. **(See Plan)**

DOCUMENTS:

Ship's Register.

Last Port Clearance.

7 Crew Lists, including Passport Numbers.

2 Passenger Lists.

1 Stores List.

1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (if first port of call in Japan).

Ship's Agent will prepare inwards/outward Declaration, 1 Cargo Manifest in transit using specific form. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Cable address "Hanshipilot Osaka". 24 hours' notice required. VHF (Osaka Port Radio), Channel 16, JBD Osaka Radio, Channels 25, 26 and 27. Three boats capacity 15 tons, 147 h.p. Pilot boards anywhere within harbour area, but preferably at Quarantine Anchorage – Sector No. 7. Bad weather: Unable to take Pilot. Boarding measures: Safe pilot ladder. Anchorage for vessel waiting Pilot: As Pilot Boarding Area.

Inland Sea Pilot cable address: "Anjin Kobe" can also be used for following wharves: Kansai Oil Co. Ltd., Sakai Wharf; Koa Oil Co. Ltd., Sakai Wharf.

ANCHORAGES: Quarantine inspection carried out at Quarantine Anchorage – Sector No. 7 where max. draft 10.0 m. Vessels with draft over 10.0 m. have to obtain Free Pratique at Safety Anchorage (max. draft 12.0 m.).

Anchorage location for larger vessels is designated on a grid system by the Captain of the Port. The instructions will be passed to the Master via the Agent.

RESTRICTIONS: Entry not possible after sunset. Sailing possible anytime but Pilots not available after sunset.

(a) Arrival notice for ships over 500 tons gross must be given to Harbour Master 48 hours prior to arrival.

(b) Entrance passage draft limitation: 11.20 m.

MAX. SIZE:

Name of Wharf (Jetty)	*Max. Draft* (m.)	*Max. LOA* (m.)
Nippon Steel Wharf 2-H	10.2	181
Ube Kosan Wharf (Export)	9.0	130
Ube Kosan Wharf (Import)	10.2	174
Public Wharf 3 & 6	9.0	160
Public Wharf 1, 2, 4, 5 only for vessel less than 500 tons		
Osaka Seiyosho Wharf	9.0	144

Tankers:

Name of Berth	*Max. d.w.t.*	*Max. LOA* (m.)	*Max. Safe Draft* (m.)
Cosmo Oil (South Berth)	259,999	333	14.50
(North Berth)	195,000	313	14.50
General Sekiyu	259,999	333	14.50
Koa Oil	150,000	276	14.50
Marubeni Oil	85,000	260	13.50
Iwatani Terminal (LPG)	66,000	270	14.50
Mitsuitoatsu (LPG)*	66,000	260	14.00
Osaka Gas (LNG) No.1	54,000	270	14.40
Osaka Gas (LNG) No.2	79,999	270	12.50
Ube Kosan (D)	20,000	170	9.20

*See "Shipmaster's Report".

HEALTH: Radio Pratique available. Vessels usually anchor at the Quarantine Anchorage in Osaka, where the authorities board and grant Free Pratique.

Also see "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

VHF:

	Call Sign	*Call On*	*Work On*
Osaka Bay Pilot	Osaka Bay Pilot	Channel 16	Channel allocated
Harbour Pilot	Hamshin Pilot	Channel 13	Channel 13
Port Radio	Osaka Radio	Channel 16	Channel allocated
Sakai MSA (Captain of the Port)	Sakai Hoan	Channel 16	

TUGS: Join vessel at anchorage under instruction or attending Pilot. Tug lines used, cost in tug hire.

BERTHING: (Berths with less depth or capacity not shown).

Berth	*No.*	*Water Depth* (m.)	*Total Length* (m.)	*No. of Berths*	*Ship Tonnage* (d.w.t.)
Sakai:					
Shiohama Wharf	1	7.0	120	1	5,000
Ohama Wharf	1	4.5	60	1	1,000
Ohama Wharf	2	5.5	270	3	3,000
Ohama Wharf	3	7.0	240	2	5,000
Ohama Wharf	4	9.0	165	1	12,000
Ohama Wharf	5	10.0	370	2	18,000
Ohama Wharf	6	7.5	130	1	6,000
Senboku:					
Matsunohama Wharf	1	5.5	540	6	2,000
Komatsu Wharf	1	5.5	360	4	3,000
Komatsu Wharf	2	7.5	390	3	6,000
Shiomi Wharf	1	4.5	480	7	1,000
Shiomi Wharf	3	10.0	555	3	18,000
Shiomi Wharf	4	7.5	260	2	6,000
Shiomi Wharf	5	10.8	200	3	30,000
Shiomi Wharf	6	9.0	150	2	15,000
Sukematsu	2	7.5	390	3	6,000
Hannan:					
Kishiwada Wharf	1	10.0	185	1	15,000
Mooring Buoys		12.0	260	1	20,000
Mooring Buoys		12.0	230	1	15,000
Mooring Buoys		12.0	190	1	10,000
Mooring Buoys		12.0	160	1	5,000
Kaizuka Wharf	1	6.5	202	2	2,000
Kaizuka Wharf	2	6.5	400	3	3,000

There are many additional berths with depth of 2 m. – 4 m.

STEVEDORES: At least 24 hours prior notice excluding Sundays and holidays required in order for Agents to arrange stevedores. Vessel must constantly keep her Agents advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agents, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew at additional cost. Overtime surcharges 1700 – 1900 hrs. 50% additional of basic stevedorage; 2100 – 0500 hrs. next morning 130% additional; Sundays/holidays 60% additional.

MEDICAL: No advance notice required unless urgent.

TANKERS: *Berthing Procedure at General Wharf:* Vessels may enter the Hamadera Passage during daylight hours only, from 0700 hrs. until about 2 hours before sunset. In addition, for mooring larger vessels a tellurometer is provided on bridge. No entry is made if wind speed is 15 m./sec. or over (for VLCC's 10 m./sec.), or if a typhoon is forecast.

Normally 4 tugs attend to a vessel of 160,000 d.w.t. and 6 tugs to larger vessels. The local rule is that total tug power is from 8% to 10% of the vessel's deadweight, depending on weather conditions.

The berthing manoeuvre is carried out by the attending tugs with very little assistance from the ship's engines. The vessel approaches the berth at a 5° angle until about 2 ship lengths away. Then, the vessel is brought parallel to the berth, about 200 ft. to 300 ft. off, and eased alongside by the tugs and mooring lines. The approach speed is approximately 0.5 knots until 1 ship length away. Currents in the basin are very weak.

Mooring: The 2 mooring launches have insufficient power to handle wires and consequently are slow. However, an additional large launch is made available to handle wires. The normal mooring sequence is forward back spring, aft back spring, bow line, stern line, and breast lines. In view of the underpowered mooring launches, it is advisable to use synthetic lines for the bow and stern lines. The normal mooring configuration is 4 bow lines, 2 forward breast lines, 2 forward back springs, 2 aft back springs, 2 aft breast lines and 4 stern lines. In view of the limited space available in front of the bow, care should be exercised not to overshoot the berth.

Berth	*Product*	*Shoreline*	*Discharge Rate* (t.p.h.)
Cosmo Oil (North)	Crude Oil	12 in.×3	6,000
	Fuel Oil	12 in.×1	600
	Propane	12 in.×1	1,000
	Butane	12 in.×1	1,000
(South)	Crude Oil	16 in.×2	8,000
	Fuel Oil	16 in.×1	600
General Sekiyu	Crude Oil	12 in.×3	7,500
	LPG	12 in.×1	1,000
Koa Oil	Crude Oil	12 in.×3	7,500
	Fuel Oil	12 in.×1	2,500
	Naphtha	12 in.×1	2,000
	LPG	12 in.×1	1,100
Marubeni Oil	Fuel Oil	10 in.×2	4,000
Iwatani (LPG)	Propane	12 in.×1	1,500
	Butane	12 in.×1	1,500
Mitsuitoatsu (LPG)	Propane	12 in.×1	700
	Butane	12 in.×1	1,300
Osaka Gas (LNG) No.1	LNG	12 in.×3	7,200 cu.m.
Osaka Gas (LNG) No.2	LNG	12 in.×3	12,500 cu.m.

FRESH WATER: Minami Hakuchi anchorage by barges. All other wharves by shore line.

DENSITY: Osaka Gas Wharf and Nippon Steel Corporation Wharves 1020 to 1025. All other wharves, 1010 to 1025.

FUEL: Most domestic and bonded fuels available.

CONSULS: None.

REPAIRS: See "Osaka".

DRY DOCKS: None.

GANGWAY/DECK WATCHMEN: Recommended and compulsory for tankers working cargo.

OPENING/CLOSING HATCHES: Stevedores open and close hatches with terms subject to charter party.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Each man allowed 200 cigarettes to take ashore but no spirits.

CARGO GEAR: See "Certificates" but no special requirements.

REPATRIATION: Possible.

AIRPORT: Kansai International Airport, 20 km. distant.

TIME: GMT plus 9 hours No alterations made to clocks during year.

POLICE/AMBULANCE/FIRE: See "Osaka".

TELEPHONES: Available except Nippon Steel Wharf and Public Wharf.

SHORE LEAVE: Local Immigration Officers issue shore leave pass valid for 3 days, but a 9 day pass is obtainable in case where a vessel stays in port for longer period.

DEVELOPMENTS: 29 berths under construction at Sakai-Senboku. Max. depth 12 m. 53 berths under construction at Hannan, depths from 4 m. – 12 m.

SHIPMASTER'S REPORT: February 1980 (Updated 1996). (L.P.G. Carrier).

Osaka Bay: Also see "Kobe" – "Shipmaster's Report".

Entry: No transit of Tomogashima Strait at night from Sunset to Sunrise. This is not a regulation but a Japanese Government request which for all intents and purposes is a requirement.

Pilotage: Bay Pilot is a recommendation for LPG carriers which again means a requirement. About 97% of overseas shipping and 60% of Japanese foreign going shipping use this service.

Lights: Flashing red over green to be permanently on day and night in Japanese waters if vessel over 200 m. length. Red is for dangerous cargo and flashes at 120 to 140 flashes per minute and green for vessels over 200 m. flashes at 180 to 200 flashes per minute.

Two black cylinders by day for over 200 m. length plus 1st substitute over 'B' for dangerous cargo.

Fire Wires/Mooring Line: To be rigged starboard side fore and aft, plus 1 mooring line at each end. In actual fact we kept the fire wires in during transit of Osaka Bay in case of slippage and getting caught in propeller. The Pilot approved.

Navigation: Sumoto – Oki Light Buoy: Lat. 34° 21.1' N., Long. 135° 00' E. must be left to port (North or South bound). This is not indicated on BA.3614 as a traffic separation buoy. The Pilot advised me that some foreign ships without Pilot leave this buoy on the wrong side, if JMSA catch any vessel doing this they are liable to prosecution. No navigation in visibility less than 1 mile and no berthing when wind speed exceeds 12 m./sec.

Pilot: Boards about 7 miles South of Tomogashima. Cable: 'Bay Pilot Kobe' 12 hours ETA, if any alteration cable 'Urgent Bay Pilot Kobe'.

Then by VHF through Kobe Port Radio – range 80 miles. Pilot nearly always starboard side. Boards from 3 fairly fast purpose built red hulled cutters based at Sumoto on Awaji Shima Island.

Pilot disembarks about 1 mile South of Tomogashima Strait.

Entry: For LPG carriers and certain other dangerous classification ships there is no night passage of Tomogashima Straits or Osaka Bay which means from about 1600 hrs. to 0600 hrs. there is no transit. Further complications are:

(1) At the berths themselves at Sakai and Kobe, LPG movements and berthing during darkness prohibited.

(2) If vessel has no Sanitary Certificate Free Pratique cannot be given which means anchoring at Osaka Quarantine anchorage for Pratique.

(3) The cost of an escort tug whilst vessel is at anchor is fairly costly about £100 per hour.

Therefore if Pratique is required (No Sanitary Certificate) and berthing that day is undertaken, arrival at Tomogashima Pilot Station can only be between 0600 to 0930 hrs. as the Quarantine service finishes for lunch time and if Pratique is not granted before lunch, entry is unlikely to take place that day.

If Sanitary Certificate is held, Pilot boarding at Tomogashima can be between 0600 to 1200 hrs.

Pratique: Free Pratique can only be given on proper notification by Radio 24 hours before arrival to Quarantine Service, prefixed by RPM through Agent. Current Sanitary Certificate must be held.

Pratique is granted whether or not Sanitary Certificate held but as above delay will be entailed. Granted at Osaka Anchorage between 0830 to 1200 hrs. and 1300 to 1700 hrs. Sanitary Certificate costs about £100 and is valid for 1 year. Application is made through Agent who arranges prior inspection by 'Rentokil' agency (£100) for any debugging and water testing and then followed by Government inspection which takes about 1.5 hours. Storerooms, fridges, galley, toilets, garbage bins, drinking water, etc., checked. This certificate entitles vessel to Free Pratique.

If the ship is not calling at Japan again within the 12 month period it is of little value, otherwise if likely to call, for an LPG ship with restricted entry the £200 could be well spent.

For Pratique, vessel anchors in Osaka Quarantine anchorage position Lat: 34° 37' N., Long: 135° 21.5' E. (approx.).

Escort Boat: A fire-fighting escort tug is required for Loaded LPG ships in port limits. An escort boat of smaller capabilities is required for LPG ships in Vapour taking on bunkers or Lub oil in port limits.

Approximate cost of firefighting tug is £100 per hour.

Therefore to anchor overnight to await berthing in loaded condition will require escort tug costing in region of £1,500. During cargo operations instant communication must be maintained with escort tug by VHF or Walkie Talkie.

Sakai:

Notice of Readiness: On anchoring at Quarantine anchorage or when Harbour Pilot boarding, whichever first.

Agent suggests tendering Tomogashima Pilot and seeing if receiver accepts.

Pilot: Harbour Pilot boards at Quarantine anchorage or at No. 1 and 2 Buoys Hamadera Passage channel as indicated on BA.3614.

Depth: Minimum depth in channel found to be 18 m.

V.H.F.: Kobe Port Radio, very powerful station – 80 miles range. Osaka Radio used for public correspondence.

Tugs: Two tugs join about half way down buoyed channel. Usual powerful Japanese type, tug's lines.

Berth: Mitsui Toatsu – Fertiliser berth: Position Lat 34° 32.45' N., Long 135° 25.6' E.

Port Side to.

Depth: 14.5 m.

Stern overhangs end of quay.

Gangway can be easily landed.

No stores on quay.

If wind speed exceeds 15 m./sec. no berthing and instant disconnection.

Vessel must be connected and have commenced pumping by sunset.

Solid concrete pile quay wall with ample fenders.

Lines: 3, 2, 2, each end. Line boat available, about 1.5 hours to tie up.

Connections: Rubber hoses for liquid and Vapour Return.

Propane line 12 in., Butane line 12 in. connection ASA 150.

Vapour 8 in. for both.

Shore labour with shore reducers.

Takes about 1.5 hours to connect.

Rate: Maximum able to accept: Propane: 800 m.t.p.h.
Butane: 1,300 m.t.p.h.

We were pumping at very close to this figure all the time with 3 pumps on each grade – shore restriction.

Cargo General: Little back pressure.

We had no surveyor, all tonnages on shore figures.

Plant capacity: Propane: 1 tank of 20,000 metric tons.
Butane: 3 tanks 12,000 metric tons.
1 tank 24,000 metric tons.

Approximately 15 m. of hose is used from shore manifold.

Fire axe required for moorings each end.

Watchman: English speaking watchman with telephone on board throughout 24 hours.

Departure/Arrival: Latest 1700 hrs.

Arrival: Hoses must be connected and discharge commenced before sunset.

Facilities: No stores alongside.

Water available, about Yen 700 per tonne.

Doctor will board vessel at minimum charge of Yen 20,000.

STD telephone to U.K. very expensive.

Crew changes: Via Kansai International Airport – no difficulties.

Repairs – Diawa (Company accredited Japan repair company).
Kobe H. Kajita (Konishi now in general office). Tel: 078–681–6001.
Telex: 5622–849 Daiwindus.

Documents: 1st Port:

1 Health Declaration
1 Vaccination List.
1 Application for Shore Pass.
3 Crew Manifests (Crew Declaration) – Japanese Form.
7 Crew List – Ship.
1 Declaration (Ship Information) – Japanese Form.
3 Ship's Stores.

If any crew changes new personnel must be added onto original crew list (Manifest).

Seal Bond only, leave Beer Room open.

Usual procedure with shore passes – all handed in on departure, bottom torn off if calling at 2nd port and re-application made.

For 2nd Port:
7 Crew Lists.
1 List Ship's Stores.

AUTHORITY: Sakai Port Administration Office, 1, Shiohama-cho, Sakai City, Osaka. *Tel:* (0722) 38-5241.

AGENT: Senwa Shipping Agency, c/o Asakawagumi Unyu Co.Ltd., Rinkai Center Building, Nishi-Machi 7, Ishizu Sakai-Shi, Osaka 592, Japan. Tel: 0722-43-0064. Fax: 0722-45-1743. Telex: 5374-349. Cables: Asakawa Sakai.

SAKAIDE: 34.19 N. 133.51 E. (See Plan)

DOCUMENTS:

1 Voyage Memorandum (List of Ports of Call).
Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
5 Crew Lists, including Passport Numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc (only at first port of call in Japan).

Ship's Agents will prepare Inward/Outward Declaration, Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Inland Sea pilotage should preferably be arranged through Agent 72 hours' notice. Urgent correction of ETA outside business hours should be cabled direct to Pilot Station. Inland Sea Pilot Association covers all Inland Sea ports. Pilotage is compulsory for vessels over 10,000 g.r.t. Pilots obtained from one of three Pilot Stations dependent upon vessel's last port of departure and at Master's discretion. Pilotage available throughout 24 hours and 72 hours advance notice preferred, thereafter advising any alterations. Most Inland Sea Pilots also act as Harbour Pilots up to berth or anchorage at destination. Also see "Shipmaster's Report" before first port.

1. Wadamisaki, at entrance to Kobe (vessels transitting Kii Straits) Position Lat. 34° 35' N., Long. 135° 08' 24" E. Telegraphic address "Anjin Kobe".

2. Sekisaki, 3 miles South of Sekisaki Lighthouse (vessels transitting Bungo Channel). Position Lat. 33° 13' N., Long. 131° 55' 38" E. Telegraphic address "Anjin Moji". In event bad weather, recommended vessels proceed for shelter as near as possible, having due regard to safety, to Sekisaki Pilot Station.

3. Hesaki, at East side of Kanmon (Shimonoseki) Straits. Position Lat. 33° 57' N., Long. 131° 03' E.

4. Tomogashima Pilot Station. Position Lat. 34° 10' N., Long. 135° 00' E.

ANCHORAGES: Port located on North coast at East part of Shikoku Island in Inland Sea.

Boundaries and Areas: Area bounded by line joined with three points, East corner of Sosha river mouth, Mamako-Hana of Semi Jima and Tako-Saki of Shotsuji-Yama.

Depth of water inside harbour limit: 9 m. Outside harbour limit: 13 m.

Agent's Report: 1996.

(1) Open Port – Sakaide (Position from Red Lighthouse on West Wharf):

0°× 600 m.	Ship's draft 8.5 m. (available draft 9.3 m. if ship uses high water).
47°×3,000 m.	Ship's draft 8.5 m. (available draft 9.3 m. if ship uses high water).
47°×3,500 m.	Ship's draft 8.5 m. (available draft 9.3 m. if ship uses high water).
47°×2,500 m.	Ship's draft 8.5 m. (available draft 9.3 m. if ship uses high water)
47°×2,000 m.	Permissible draft 8.0 m.
47°×1,000 m. & 1,500 m.	Permissible draft 7.0 m.

(2) Closed Port – Waiting Anchorage for Mitsubishi (Position from Red Lighthouse on West Wharf):

Q3:	Lat. 34° 21' 48" N., Long. 133° 53' 06" E.
Q1:	Lat. 34° 21' 10" N., Long. 133° 53' E.

Remarks: Usually anchor position for vessel calling to Misubishi Kasei is (Q3) Anchorage. However, if ship is adjustable, it could use (Q1) Anchorage.

RESTRICTIONS: Vessels entering and/or leaving during daytime only at wharves; but no restrictions day and night at sea anchorage provided favourable weather conditions prevail.

MAX. SIZE:

Berth	*Max. LOA* (m.)	*Max. Draft* (m.)	*Capacity* No.	d.w.t./g.r.t.
West Wharf		6.5	2	2,500 g.r.t.
Centre Pier No. 1	200	9.5	1	13,000 g.r.t.
Centre Pier No. 2		7.5	1	5,000 g.r.t.
Centre Pier No. 3		5.5	2	1,500 g.r.t.
Mitsubishi "A"	275	12.6	1	40,000 g.r.t.
Mitsubishi "B"	200	12.6	1	30,000 g.r.t.
Mitsubishi "C"	230	11.9	1	25,000 g.r.t.
Mitsubishi "L"	180	10.5	1	15,000 g.r.t.
Cosmo Oil No. 1 (Dolphin type)		19.6	1	130,000 d.w.t.
Cosmo Oil No. 2	240	11.0	1	50,000 d.w.t.
Hayashida Wharf				
(A)	180	10.5	2	30,000 d.w.t.
(B)	180	6.5	1	5,000 d.w.t.
(C)		5.0	1	2,000 d.w.t.
(D)		4.0	1	700 d.w.t.
Zen-Noh Fuel Terminal (LPG Terminal)	235	10.9	1	57,000 d.w.t.
Lion Wharf No.1	130	7.5	1	8,000 g.r.t.

HEALTH: At first port of call in Japan, vessel must obtain Free Pratique. Quarantine Officers will attend vessel only from daylight to sunset and Master to show all Vaccination Cards, Derat Exemption Certificate. In case vessel arrives from Cholera infected area within 10 days, Master must advise crew and passengers health condition prior to arrival and close all soil pipes before entering port.

Also see "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

VHF: Sakaide Port Radio is located on top of Seijima (Lat. 34° 21' N., Long. 133° 51' E.). Watch is kept from 0600 hrs. to 2000 hrs. each day on Channel 16.

TUGS: Wharves: Join vessel at Sea Anchorage, using tug's line without charge. Sea Anchorage: No tug required in normal conditions.

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agents mainly by radio.

Berth	*Length* (m.)	*Depth* (m.)	*Facilities/Main Cargo Handled*
West Wharf	274	7.0	Maize
Centre Pier No. 1	186	10.0	Grain, clay
Centre Pier No. 2	174	8.0	Stones, maize
Centre Pier No. 3	182	6.0	General
Mitsubishi "A"	275	13.0	} 2×1,500 t.p.h. cranes – coal
Mitsubishi "B"	200	13.0	2×500 t.p.h. cranes – coal
Mitsubishi "C"	207	12.2	1×350 t.p.h. loader – coke
Mitsubishi "L"	100	12.2	2×300 t.p.h. pipelines – alumina
Cosmo Oil No. 1 (Dolphin type)	120	19.6	2×16 in. manifolds (See "Tankers").
Cosmo Oil No. 2	105	12.4	2×12 in. manifolds (See "Tankers").
Hayashida Wharf			
(A)	380	12.0	Logs and grain
(B)	260	7.5	General
(C)	270	5.5	General
(D)	120	4.5	General
Zen-Noh (LPG Terminal)	300	12.0	Pipelines: Propane Gas Liquid 2,600 kl./hr. Gas 2,750 kl./hr. Butane Gas Liquid 2,540 kl./hr. Gas 2,700 kl./hr.
Lion Wharf No. 1	180	10.0	Palm oil

STEVEDORES: At least 24 hours prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew. Normal working hours: 0830 hrs. – 1630 hrs. Overtime surcharges 1630 hrs. – 2130 hrs. 60% additional of basic stevedorage; 2130 hrs. – 0700 hrs. next morning 120% additional; 0700 hrs. – 0830 hrs. 60% additional; Sundays/holidays 100% additional.

MEDICAL: No advance notice required unless urgent.

TANKERS: Cosmo Oil Co.Ltd. Pier No. 1 (Sea Berth): Max. size 130,000 d.w.t., depth alongside 19.6 m.; 2×16 in. connections for crude oil and fuel oil. Max. unloading rate 10,000 kl.p.h.

Cosmo Oil Co.Ltd. No. 2 Pier: Max. size 50,000 d.w.t. Max. LOA 240 m. Max. draft 11.0 m. 2×24 in. for crude (4,000 kl.p.h.); 1×16 in. for fuel (1,000 kl.p.h.); 2×14 in. for chemical products (10,000 kl.p.h.).

DENSITY: Inside harbour limit 1025. Outside harbour limit 1025.

FRESH WATER: Sea anchorage. No water barge available but usually brought from Mizushima or Marugame with 3 days advance notice (about 4 hours run to Sakaide). Rate of delivery 80 to 200 t.p.h. dependent on barge.

Centre Pier: Can be supplied by shore line with capacity 25 t.p.h.

Mitsubishi Kasei Wharf: Can be supplied by shore line with capacity 60 t.p.h.

FUEL: All grades of bonded bunkers are stocked in Tokyo, Ise Bay, Osaka and Kanmon Port. At all other ports bunkers will be lightered from the nearest bunker stock ports at maximum 7 days prior notice.

FIRE PRECAUTIONS: No specific precautions.

CONSULS: None. See "Kobe".

REPAIRS: Only minor repairs.

DRY DOCKS: Kawasaki Heavy Industries Ltd., Sakaide, which is suitable to dry dock. Dock No. 2 for 500,000 d.w.t. vessel, 450 m.×72 m.×12.3 m. Not yet in action for ship repairs. Only used at present for ship building and after services.

Floating dock with capacity 80,000 d.w.t. under construction.

GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificate sometimes required by stevedores when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 50 cigarettes to take ashore, but no spirits.

CARGO GEAR: See "Certificates", but no special requirements.

SURVEYORS:

1. Nippon Kaiji Kentei Kyokai is stationed at Sakaide.
2. Nippon Kaiji Kyokai (NK Class) and Lloyd's Register are stationed at Sakaide.

REPATRIATION: Possible.

AIRPORT: No airport. Nearest Takamatsu, All Nippon Airways 4 flights to Osaka and 3 to Tokyo and TOA domestic airlines to Tokyo/Fukuoka.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

HOLIDAYS: National Holidays – See "Niihama". Local Holidays: New Year's Day (Lunar Calendar).

No ship's movement can be effected on January 1st, 2nd and 3rd, August 8th and October 15th.

POLICE/AMBULANCE/FIRE: Police 110; Ambulance 119; Fire 119. Sakaide Maritime Safety Base, 0877-46-5999.

TELEPHONES: No facilities for placing telephones on board.

BANKS: No American/European banks. But it is possible to collect foreign currency, especially U.S. Dollars, at The 114th Bank, Ltd., Takamatsu.

STORING: See "Prelims".

1. Available by both, however, for Cosmo Oil by barge.
2. Available during cargo operations.
3. Available, however at Mitsubishi "A" or "B" berth – by barge for heavyweight goods.
4. No, however, at Centre Pier East/West they are available.
5. No special regulations.
6. Yes.

SHORE LEAVE: Local Immigration Offices issue shore pass valid for only 7 days, but extension for next 7 days possible if ship stays longer.

GENERAL: Mitsubishi Chemical Industries Co. Ltd., Sakaide Works. As wharf of above works located outer harbour limit of Sakaide port, the undermentioned procedures required: In conformity with regulations, vessel required to get special permission for entering into closed port, which will be given from Shikoku Transport Bureau (3 days in advance).

Customs request vessel calls Mitsubishi Chemicals Wharf to obtain special permission for entering. If tonnage dues paid prior arrival, this procedure will be attended to by Agent.

Waiting anchorage: Avoid Bisan Seto Boundary according to special water zone navigation order. Imperative to exclude water surfaces with established Fishery Privilege.

Vessels waiting to berth at centre pier are lightened at anchor.

AUTHORITY: Sakaide Port Administration Office, 1-5-32 Irifune-cho, Sakaide, Pref. of Kagawa, Japan. *Tel:* 0877-46-2518. *Contact:* Port Captain.

AGENT: Senwa Shipping Agency, Asia Kaiun K.K., 1-5-6 Irifune-Cho, Sakaide-Shi, Kagawa 762, Japan. Tel: 0877-46-6209. Fax: 0877-46-6224. Telex: 5825-689. Cables: Asia Marine Sakaide.

SAKAIMINATO: 35.32 N. 133.14 E. (See Plan)

DOCUMENTS:
Ship's Register (and International Tonnage Certificate, if ship's Register does not show gross and nett tonnages).
Last Port Clearance.
6 Crew Lists, including Passport numbers.
4 Passenger Lists.
2 Stores Lists.
2 Declarations of Crew's Baggage.

PILOTAGE: Not compulsory. Pilot available at position Lat. 35° 32' N., Long. 133° 17' E.

ANCHORAGE: Centre of anchorage about 1,000 m. off breakwater (See "Plan").

RESTRICTIONS: Berthing and unberthing only allowed in daytime.

Draft limitation in Passage No. 1 – 9.0 m., and in Passage No. 2 – 13.0 m.

HEALTH: Radio Pratique is available and ordinary quarantine inspection takes place at Quarantine Anchorage (See "Pilotage").

Also see "Late Reports".

TUGS: 1×300 h.p., 1×800 h.p. and 1×2,400 h.p.

BERTHING:

Name of Berth	*Length* (m.)	*Depth* (m.)	*Permissible Draft* (m.)	*Capacity* (g.r.t.)
Gaiko Berth No.1	370	9.0	8.3	2×10,000
Gaiko Berth No.2	260	7.5	7.1	2×5,000
* Chuo Berth No.1	200	7.0	6.5	2×3,000
* Chuo Berth No.2	91	5.5	5.3	1×1,000
* Chuo Berth No.3	273	6.4	6.2	2×3,000
Showa South Berth	270	13.0	11.5	1×40,000
Showa South Berth	185	10.0	9.5	1×15,000
* Eshima Berth	165	9.0	8.1	1×5,000
* Eshima Dolphin	180	9.0	8.1	1×10,000 d.w.t.
* Eshima Dolphin	360	9.0	8.1	1×10,000 d.w.t.

* Height restriction (top of mast to sea level) of 38 m. for vessels proceeding to Chuo Berths and Eshima Berths.

STEVEDORES: Log gangs available.

FRESH WATER: Available at berths. Only available by barge at Eshima Dolphin.

FUEL: Domestic oil is available. Bonded oil to be brought from Moji with sufficient advance notice. For bunkering, oil boom has to be arranged.

GENERAL: *Immigration:* Authorities stationed at the port.

Lightering: Not possible.

Provisions: Available.

SAKATA: 38.55 N. 139.48 E. (See Plan)

Located at mouth of Mogami River. Strong wind blows from Japan Sea November to March.

In Winter season, wave height between 3 m. to 5 m., length 70 m. to 80 m. and period 7 to 10 seconds. Current South to North along coastline.

TIDAL RANGE:

Highest high water level (HHWL)	+132 cm.
Mean monthly highest water level (HWL)	+ 41 cm.
Mean sea level	+ 21 cm.
Mean monthly lowest water level (LWL)	– 4 cm.
Lowest low water level (LLWL)	–192 cm.

DOCUMENTS:
Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
3 Crew Lists including Passport Numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc., (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Order Pilot through Agent. In bad weather, wait instructions from Agent.

ANCHORAGES: 1. All sea areas (except waterway) available for anchorage. No prohibited anchorage areas. Pilot station and quarantine anchorage position is the area in the 500 m. radius circle centre of which is 260° – 3,100 m. from Sakata Light Station.

2. In Winter season (1st Novmeber – 31st March), keep watch on VHF Channel 16 for notice about dragging anchor, issued by Akita Hoan.

RESTRICTIONS: Ship movements in daytime only.

MAX. SIZE: 70,000 tonnes d.w.t., LOA 230 m. and draft 11.8 m.

HEALTH: At first port of call Japan, vessel must obtain Free Pratique. Quarantine Officers will attend vessel only from daylight to sunset and Master to show all Vaccination Cards, Derat Exemption Certificate. In case vessel arrives from cholera infected area within 10 days, Master must advise crew and passengers' health condition to respective Quarantine Office through ship's Agent prior to arrival and close all soil pipes before entering port.

Also see "Late Reports".

RADIO: Recommended that Master communicates with Agent through Nagasaki Radio, which covers all ports in Japan.

TUGS: 1×2,900 h.p. and 2×3,000 h.p.

BERTHING: No particular requirements.

Agent communicates by means of ship's radio with respect to the exact time when the Pilot has to be taken on board.

No.	*Name*	*No. of Berths*	*Depth* (m.)	*Length* (m.)
1	Sodeoka Wharf	3	– 7.5	390
2	Suisan Wharf (No. 2)	–	– 5.5	215
3	Suisan Wharf (No. 2)	–	– 4.5	165
4	Suisan Wharf (No. 1)	–	– 4.5	140
5	East Wharf (Funa ba-cho No. 1)	4	– 5.5	360
6	East Wharf (Funa ba-cho No. 2)	3	– 4.5	195
7	East Wharf (Shin machi)	2	– 7.5	260
8	West Wharf	1	–10.0	185
9	West Wharf	1	– 4.5	53
10	West Wharf	2	– 5.5	180
11	Ohama Wharf (No. 2)	5	– 4.5	305
12	Ohama Wharf (No. 2)	1	– 5.5	90
13	Ohama Wharf (No. 1)	2	– 9.0	330
14	Sekiyukichi Pier (Private)-Oil	2	– 7.0	92
15	Kominato Wharf (No. 1)	1	–13.0	270
16	Kominato Wharf (No. 2)	1	–10.0	185
17	Kominato Wharf (No. 3)	1	–10.0	185
18	Kominato Pier	1	–10.0	253
19	Miyaumi Wharf (No. 4)	1	– 7.5	130
20	Miyaumi Wharf (No. 5)	1	– 7.5	130
21	Kyohatsu Wharf (Private)	1	– 7.5	160
22	Sumikei Wharf (Private)	1	–13.0	270
23	Kyohatsu Pier (Private)-Oil	2	– 7.5	324

STEVEDORES: In order to arrange stevedores, advance notice required by Agent at least 24 hours before, except Sundays and National Holidays,

Logs, 1,400 cu.m. per day are handled by ship's winches.

MEDICAL: No advance notice required unless urgent. Medical facilities available at Sakata City Hospital.

TANKERS: 2 berths. Depths 7.0 m. and 7.5 m.

FRESH WATER: Wharf feedwater only. No water boat.

FUEL: All kinds of bonded oil available at Bay of Tokyo, Bay of Ise and Port of Kanmon. Bunkers lightered from Hakodate provided at least 7 days' notice given.

CONSULS: Korean Consulate Tel: 0222-21-2751.

REPAIRS: Minor repairs only.

GANGWAY/DECK WATCHMEN: Not specially required, unless passengers or valuable cargo on board.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages.

Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: If voyage over 30 days – 200 cigarettes and one bottle of spirits per man.

REPATRIATION: Crew replacement conducted basis "landing for transfer to another vessel".

AIRPORT: Shonai Airport, situated 25 km. from Sakata, 2 flights a day to Tokyo and 1 flight a day to Osaka.

TIME: GMT plus 9 hours. No alterations.

HOLIDAYS: Public offices closed on Sundays and National holidays. Cargo work every day except Sundays and 30th December – 4th January.

POLICE/AMBULANCE/FIRE: Police (urgent) Tel: 110; (usual) Tel: 22-6611. Ambulance (urgent) Tel: 119; (usual) Tel: 22-3214. Fire (urgent) Tel: 119; (usual) Tel: 22-3214.

TELEPHONES: No facilities for placing on board.

SHORE LEAVE: Local Immigration Offices issue shore pass valid for only 15 days, extensions possible if ship stays longer.

GARBAGE FACILITIES: Available.

WASTE OIL FACILITIES: Available.

DEVELOPMENTS: A new container terminal (2 berths) with length 280 m. and depth 14.0 m. has been constructed. The first berth will be completed in 1998.

AUTHORITY: Sakata Port Office, 5-15 Funaba-Cho, 2-Chome, Sakata-Shi, Yamagata Pref., Japan. *Tel:* 0234-26-5635. *FAX:* 0234-22-5216. *Contact:* Tadashi Komagome, Sakata Port Office.

SASEBO: 33.10 N. 129.43 E. (See Plan)

DOCUMENTS: See "General – Customs and Immigration".

PILOTAGE: Compulsory. Vessel should keep Pilot closely advised through Agent, of ETA Pilot Station at least 24 hours prior arrival and any subsequent change. Pilot boards vessel 1.8 mile N.W. Kogosaki lighthouse. (Lat: 33° 06' N., Long: 129° 38' E.). In bad weather, Pilot will board at Lat: 33° 05' 48" N., Long: 129° 40' 24" E.

Telegraphic address of Port Captain "JNK" 500 kHz (Sasebo Maritime Safety Office).

ANCHORAGE: Ample good holding ground in inner harbour, but is controlled by U.S. Navy and only following anchorage available for commercial vessels: No. 3 Section, Depth 10 m. – 37 m. Capacity 20,000 g.r.t. and over × 10.

RESTRICTIONS: Entry and departure from sunset to sunrise only allowed under extenuating circumstances subject to Port Captain's special permission (U.S. Naval vessels excepted). No particular restrictions upon draft or tide conditions. Berthing during day only. Controlling depth of water – in the passage 23 m. – 54 m., at anchorage 10 m. – 37 m.

MAX. SIZE: See "Berthing". No particular limitation for entering port. For berthing however, acceptable length, draft and breadth will be decided case by case in accordance with conditions of each berth consulting with Pilots, U.S. Navy and Port Captain. No tanker installations outside port.

HEALTH: See "Moji". Quarantine station: Lat. 33° 05' 30" N., Long. 129° 42' 00" E. 1.5 miles East of Kogosaki Lighthouse. Vessels chartered by USN (GAA, T/C, CVC, V/C) shall be cleared by U.S. Navy Quarantine and service available after sunset also.

Also see "Late Reports".

RADIO: See "Yokohama".

TUGS: Normally join vessel about 0.5 – 1 hour prior berthing and tug's lines used. Charge for use of lines included in tug hire.

No. of Tugs	*Horse Power*	*Owner*
1	3,800	Nishi-Nippon Harbor Services Co.Ltd.
1	3,200	Nishi-Nippon Harbor Services Co.Ltd.
1	2,900	Nishi-Nippon Harbor Services Co.Ltd.
1	2,880	Nishi-Nippon Harbor Services Co.Ltd.
1	2,000	Nishi-Nippon Harbor Services Co.Ltd.
4	640	Nishi-Nippon Harbor Services Co.Ltd.

BERTHING:

Wharf	*Length (m.)*	*Depth (ft.)*	*Capacity (g.t.)*	*Cargo*	*Remarks*
Iorizaki	80.5	32	20,000×1	Oil	Under U.S. Navy's control
Motofune No. 1	79.5	32	20,000×1	,,	,, ,, ,,
Motofune No. 2	79.5	32	20,000×1	,,	,, ,, ,,
Akasaki No. 1 & 2	298.0	40	20,000×2	,,	,, ,, ,,
Akasaki No. 3	219.0	40	20,000×1	,,	,, ,, ,,
Yokose	88.0	45	20,000×1	,,	,, ,, ,,
India Berth No. 1	254.4	31	20,000×1		For repairs
,, ,, No. 2–3	363.5	31	20,000×2		Repairs
,, ,, No. 4–6	575.5	31	20,000×3		Repairs and general cargo
,, ,, No. 7–8	363.5	31	20,000×2		General cargo
,, ,, No. 9	151.5	31	20,000×1		General cargo

No. 1 is under control of U.S. Navy

No. 2-5: Exclusive use of SSK (Shipyard)

No. 6-9: Under control of the U.S. Navy. No. 6 and 7 Berths can be used for commercial vessels, subject to the U.S. Navy's permission.

Wharf	*Length (m.)*	*Depth (ft.)*	*Capacity (g.t.)*	*Cargo*	*Remarks*
Uragashira	260	24.5	5,000×2		General cargo
Maehata Gaibo No. 1	185.0	33	20,000×1		Grain and general cargo
Maehata Gaibo No. 2	190.0	36	25,000×1		Grain and general cargo
Ekiura Wharf	150.0	16	1,000×2		General cargo
Hizukushi Wharf	103.0	15	500×2		" "
Maehata Wharf	143.0	15	500×3		" "

No. of Buoy	*Depth*	*Capacity (g/t)*
10		Over 10,000
23	9 m. – 23 m.	5,000 to 10,000
7		Under 5,000

These buoys also controlled by U.S. Navy and their use for commercial purposes subject to U.S. Navy's permission, except following buoy which is free for commercial vessels:

	Depth	*Capacity (g/t)*
No. 9	27 ft.	5,000×1

STEVEDORES: Maximum 10 gangs available.

Classification	*Regular employees*	*Temporary labourers*
Stevedores	100	150
Longshoremen/Warehousemen	100	200

2 shifts: 0830 – 1630 and 1630 – 2130 hrs. Normal working hours: 0830 – 1630 hrs. Overtime work possible by applying to Customs. No work can be arranged during New Year holidays (1st to 4th January), 31st December and 1st May.

MEDICAL: Hospital: U.S. Station Hospital (for U.S. military personnel only). Sasebo Dojinkai Hospital. Tanaka Hospital. Bussaka Dental Hospital. Sasebo Municipal General Hospital. Chuo Hospital. Rosai Hospital.

TANKERS: Diameter of lines: 8 in. No slop (Residue) discharge facilities. Number of tanker berths as follows:

Berth	*Length (m.)*	*Depth (ft.)*	*Remarks*
Akasaki No. 1, 2, 3.	517	40	under U.S. Navy's control
Motofune No. 1 & 2.	159	32	under U.S. Navy's control
Iorizaki	80.5	32	under U.S. Navy's control
Yokose	88	45	under U.S. Navy's control

DENSITY: 1025.

FRESH WATER: Available by barge of 230 tons. Rate of delivery 100 t.p.h. Water from hydrant at India Berths No. 6, 7, 8 & 9 and Akasaki Berths No. 1, 2 and 3. Rate of delivery 25 t.p.h./hydrant.

FUEL: No stock of bonded oil, but lightered from other ports. Adequate notice required order avoid delay. Rate of delivery from barges 100/200 t.p.h.

Suppliers	*Installation*	*Notice required days*
Shell Sekiyu K.K.	Nagasaki	3
	Shimonoseki	4
Esso Oil Co.	Shimonoseki	4
	Sakai	6
Mobil Oil Co.	Kokura/Moji	4
	Oita	5
Caltex Oil Co.	Shimonoseki	4
	Kudamatsu	5
Mitsubishi Shoji Kaisha	Shimonoseki	4
	Kanokawa	5
C. Itoh & Co.	Matsuyama	5
	Mizushima	5
Nissho-Iwai Co.	Shimonoseki	4
	Matsuyama	5
Mitsui Bussan Kaisha	Oita	5
Kanematsu-Gosho Co	Kokura	4
Idemitsu Kosan Kaisha	Tokuyama	5
Marubeni-Iida Co.		
Sumitomo Shoji Kaisha	Tokuyama	5

CONSULS: None.

REPAIRS: All deck and engine repairs possible.

DRY DOCKS: Sasebo Heavy Industries Co. Ltd. No. 3, dry dock: Length 370 m. Width 70 m. Depth 15 m. Max. ship (d.w.t.) 300,000. Another 5 dry docks available.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 50 cigarettes to take ashore but no spirits. If leaving vessel for repatriation purposes, crew are allowed 400 cigarettes, 15 cigars and 3 bottles of spirits (750 ml. bottle).

CARGO GEAR: Shore cranes:

No.	*Capacity*	*Location*	*Owners*
1	250 tons	India Berth No. 5	S.S.K.
1	15 tons	India Berth No. 2 & 3	S.S.K.
2	15 tons	India Berth No. 4 & 5	S.S.K.
1	15 tons	India Berth No. 7 & 8	U.S. Navy
1 gantry	500 t.p.h.	Maehata Gaibo No. 1	Sasebo City

Floating Cranes:

No.	*Capacity*	*Owners*
1	80 tons	Nishi-Nippon Harbor Services Co.
1	10 tons	Nishi-Nippon Harbor Services Co.

AIRPORT: Itazuke Airport, Fukuoka, about 120 km. (about 120 minutes by taxi). Nagasaki Airport about 70 km. (80 minutes by taxi).

29 flights daily between Fukuoka/Tokyo (Haneda) (All Nippon Airways/Japan Airlines/Japan Air System).

1 flight daily between Fukuoka/Tokyo (Narita) (Japan Airlines).

6 flights daily between Fukuoka/Osaka (Itami), 6 flights daily Fukuoka/Osaka (Kansai) (All Nippon Airways/Japan Airlines).

9 flights daily between Nagasaki/Tokyo (Haneda) (All Nippon Airways/Japan Airlines/Japan Air System).

7 flights daily between Nagasaki/Osaka (Itami) (All Nippon Airways).

3 flights daily Nagasaki/Osaka (Kansai) (JAL, ANA).

TIME: GMT plus 9 hours. No alterations to clocks throughout year.

POLICE/AMBULANCE/FIRE: Police Station: Sasebo 23-0110 (if emergency: 110). Ambulance Sasebo 23-5121 (Sasebo Fire Station). Fire Sasebo 119 (Sasebo Fire Station).

TELEPHONES: No facilities exist for placing telephones on board.

SERVICES: Hold cleaning. Compass adjusting. Fumigation.

IDENTIFICATION CARDS: See "General – Immigration".

WEATHER: Southwesterly winds prevail in Summer, while Northerly blows frequently in other seasons. Max. wind velocity recorded 26.1 m./sec. In early Spring dense fog prevails, but renders navigation impossible only for 7 days or so.

Tidal range 2.6 m. Current rate max. 1.5 knots in vicinity of harbour entrance at rising tide. At ebb tide, it flows in opposite direction and is faster than during flood, but not so strong as to hinder navigation.

GENERAL: *Customs:* When vessel arrives direct from foreign port, Customs Officials board for search. Following documents to be submitted. Crew List, Passenger List, Store List, Manifest of Crew Personal Effects (must be signed by individual crew member). Arms and Ammunition List, Narcotics List, List of Port of Call on current voyage, Discharging Cargo Manifest, Through Cargo Manifest, Declaration inward/outward (Form No. C2000). Following will be checked on board. Ship's Registry, Last Port Clearance and International Tonnage Certificate.

When vessel comes from Japanese port, Customs Officals will not attend on board, except special case. Master or Agents to attend at Customs House for entry formalities with following documents. Discharging Cargo Manifest, Through Cargo Manifest, Declaration inward/outward, Ship's Registry, Last Port Clearance, International Tonnage Certificate documents entrusted with the Master by Customs at previous port.

On vessel's departure, clearance issued by Customs after confirming payment of tonnage dues.

Immigration: Immigration Officials board vessel on arrival to examine passports, discharge books and/or other equivalent travel documents and provide a 7 days landing pass for crew members and passengers. Two copies each of Crew List and Passenger List are required by them. Providing vessel's Agent with these documents beforehand will help in expediting Immigration business on arrival. When vessel in port more than 7 days, landing passes will be extended every 7 days on application.

In event that crew members, without entry visas, to be landed for repatriation or transfer, Immigration will not permit their landing unless passage, by either sea or air, ensuring prompt departure from Japan (within 72 hours) of these men has been booked, or unless vessels to which they are to be transferred, arrive in Japan within 5 days. Services are rendered from 0900 hrs. to 1700 hrs.

AUTHORITY: Port & Harbour Bureau, Sasebo City, 3-5, Yorozu-cho, Sasebo City, Nagasaki Pref., Japan. *Tel:* (0956) 22-6129.

Sasebo Maritime Safety Agency, Port Authority Building, 5th Floor, 4-1-5 Hizukushi-cho, Sasebo 857, Japan. *Tel:* 0956-31-6003. *Cables:* Sasebo Hoan. *FAX:* 0956-34-4137. *Contact:* Patrol and Rescue Dept.

SENDAI: 38.13 N. 141.06 E. (See Plan)

DOCUMENTS:
Ship's Register.
International Tonnage Certificate (1969).
Last Port Clearance.
3 Crew Lists, including Passport numbers and date of birth.
3 Passenger Lists.
1 Declaration of Crew's Personal Effects (Baggage List).
1 Stores List.
2 Lists of Port Calls (last 3 months).
1 Maritime Declaration of Health (if calling at first port in Japan).

Agents should be provided with necessary information to prepare Inward/Outward Declarations and Cargo Manifests.

PILOTAGE: Not compulsory, but Oil Terminal request vessels to take pilot. Pilot will be arranged through Agent, and approximately 1 hour before pilot arranged he can be contacted direct by VHF Channel 16 via tug. Pilot not available after dark. Pilot boards at Sendai Entrance Fairway Buoy (Position Lat. 38° 13' 15" N., Long. 141° 08' 15" E.).

ANCHORAGE: Depth 28 m. Bottom: Rock and sand. Anchorage not suitable in rough weather, and as no sheltered anchorage nearby, it is advisable for vessels to proceed offshore.

Anchorage positions:
(1) Quarantine Anchorage: 38° 13' 03" N., 141° 06' 42" E.
(2) Tanker Anchorage (Pilot Station) can also be used as Quarantine Anchorage. Quarter Circle Area covering 3 miles East and 3 miles South from position 38° 13' 15" N., 141° 08' 15" E.

RESTRICTIONS: Entry into and sailing from Sendai: Priority of entry and sailing from the port is given to ferries. Entry and sailing of other vessels is restricted to times outside ferry schedules. Entry of tankers controlled by Tohoku Oil Co.Ltd., under supervision of Harbour Master.

MAX. SIZE: See "Berthing" and "Tankers".

HEALTH: Radio Pratique available. Vessel to have valid Derat Exemption Certificate, in order to apply for Radio Pratique. Master should send Radio Pratique message (R.P.M.) by cable or telex to Quarantine Office through Agents, within 36 hours prior to vessel's arrival time (excluding Saturdays, Sundays and holidays). At first port in Japan, Master should obtain Free Pratique by radio or from attending Quarantine Officer at anchorage.

If vessel not applicable for Radio Pratique, Master should send crew's health condition to Quarantine Office at least one day (office day) prior to vessel's arrival, through Agents, by cable or by telex. Formalities will be carried out at the Quarantine Anchorage (38° 13' 03" N., 141° 06' 42" E.), or Tanker Anchorage (38° 13' 15" N., 141° 08' 15" E.).

Also see "Late Reports".

RADIO: Recommended that Master communicates with Agents through Nagasaki Radio by cable. Sellcall through Singapore Radio or Hong Kong Radio. Telex through satellites, if vessel equipped with Inmarsat.

Tankers are to advise receivers of arrival draft, cargo to be loaded/discharged and quantity/tank and vessel's mooring equipment.

VHF: Tugs on Channel 16.

RADAR: Not available.

TUGS: 4 tugs available (3,200 h.p., 3,000 h.p., 2,600 h.p. and 2,400 h.p. each). Also 3 tugs available (3,200 h.p., 3,000 h.p. and 2,600 h.p. each) from Ishinomaki and Shiogama.

BERTHING:

Name of Wharf	*Length* (m.)	*Depth* (m.)	*Max.Draft* (m.)	*Capacity* (d.w.t.)	*Shore Cranes*
Takamatsu Timber (Public)	240	12.0	11.5	30,000	None
Takamatsu (Public)	300	4.5	4.3	1,000	None
Nakano (Public) No. 1	240	12.0	11.5	30,000	**
Nakano (Public) No. 2 No. 3 No. 4	555	10.0	9.5	15,000	1×36 ton
Nakano (Public) No. 5	185	10.0	9.5	15,000	None
No. 6	185	10.0	9.5	15,000	None
Raijin (Public) No. 1 No. 2 No. 3	390	7.5	7.0	5,000	None
Takasago (Public)	270	12.0	11.5	30,000	Gantry crane* 1×30 ton
Koyo (Public)	240	12.0	11.5	30,000	None
Toa Steel (Private)	300	12.0	11.0	20,000	2×30 ton
	200	10.0	9.5	18,000	1×10 ton
Tohoku Steel (Private)	300	8.0	7.5	10,000	1×30 ton

* Gantry crane under construction.
** Pneumatic unloader – 200 t.p.h.

SPECIALISED CARGO HANDLING FACILITIES: Tohoku Oil LPG Pier:

Propane and Butane Flanges: Vapour 1×8 in., Liquid Propane 2×12 in., Butane 1×12 in.

Chicksan Loading Arms: Both grades acceptable simultaneously, 1,800 cu.m./hr. each, basis Butane vapour only. If discharging Propane only, 2,300 cu.m./hr. with vapour return.

Storage Capacity: Propane 1×45,000 tonnes and 2×35,000 tonnes. Butane 1×45,000 tonnes, 1×20,000 tonnes and 1×15,000 tonnes.

BRIDGES: No bridges at Sendai.

STEVEDORES: Stevedores available, usually arranged through Agent. At least 24 hours prior notice, excluding Sundays and holidays, required in order for Agents to arrange stevedores.

MEDICAL: Advance notice required, especially dentist. Hospital and dentist available. Cholera vaccination available, yellow fever unavailable.

TANKERS:

	Length (m.)	*Depth* (m.)	*Draft* (m.)	*Beam* (m.)	*Air Draft* (m.)	*Capacity* (d.w.t.)
Tohoku Oil Pier No. 1						
260,000 d.w.t. Class	339.5	17.0	15.45	60.0	25.5	262,138 tonnes
Others	350.0	17.0	15.45		25.5	233,945 tons
Tohoku Oil LPG Pier	250	17.0	13.00		20.0	60,963 tonnes

Tohoku Oil Pier No. 1:

Crude Oil Flanges: 2×16 in. Chicksan loading arms, each capable of receiving 6,000 cu.m./hr.

Gas Oil and Kerosene Flanges: 1×16 in. Chicksan loading arm, capable of receiving 3,000 cu.m./hr.

Heavy Oil Flanges: 1×16 in. Chicksan loading arm, capable of receiving 1,300 cu.m./hr.

There are no facilities for dirty ballast or slops.

Storage Capacity:
Crude Oil: 5×100,000 kl., 1×75,000 kl., 7×67,000 kl. and 2×55,000 kl.
Kerosene: 1×100,000 kl., 1×55,000 kl., 3×30,000 kl., 3×23,000 kl. and 3×12,000 kl.
Gas Oil: 1×27,000 kl., 1×23,000 kl., 3×20,000 kl. and 1×12,000 kl.
Heavy Oil: 3×30,000 kl., 2×23,000 kl., 1×12,000 kl. and 1×6,000 kl.

DENSITY: 1025.

FRESH WATER: Available by ex-pipe from Tohoku Oil Pier, rate 40 t.p.h.

FUEL: Domestic and bonded oil available from Tohoku Oil Pier. Fuel by ex-pipe. Diesel by barge.

FIRE PRECAUTIONS: No particular precautions.

CONSULS: Korean Consulate at Sendai City.

DRY DOCKS/REPAIRS: Tohoku Dock at Shiogama for vessels under 120 m. LOA and 16.5 m. beam, for repair only.

SURVEYORS: Recommend arranging through Tokyo or Yokohama.

GANGWAY/DECK WATCHMEN: Shore ladder available at Tohoku Oil Co.Ltd.

OPENING/CLOSING HATCHES: Generally by ship's crew.

CERTIFICATES: Ship's Register to show Customs Inspector ship's registered gross and nett tonnage.

CUSTOMS ALLOWANCES: According to local Customs Department.

REPATRIATION: Available. Sendai Airport (International) directly for Korea (Seoul and Busan) and Singapore, also connecting Tokyo by Bullet Train (2 hours). Osaka, Nagoya, Fukuoka, Sapporo and Naha Airports directly by air.

AIRPORT: Sendai Airport (Domestic and International) approximately 50 minutes by car. Domestic flights to Osaka, Nagoya, Fukuoka, Sapporo and Naha.

International flights:
Sendai to Peking, Dalian, China. 2 round trips a week.
Sendai to Seoul, Korea. 5 round trips a week.
Sendai to Pusan, Korea. 2 round trips a week.
Sendai to Guam, Saipan. 9 round trips a week.
Sendai to Singapore. 4 round trips a week.
Sendai to Hong Kong. 4 round trips a week.
Sendai to Honolulu. 3 round trips a week.

TIME: GMT plus 9 hours.

HOLIDAYS: Same as other Japanese ports.

POLICE/AMBULANCE/FIRE: Police Tel: 022-231-7171; Ambulance and Fire Tel: 022-259-3710.

EMERGENCY CO-ORDINATION CENTRE: Tokyo.

TELEPHONES: Not available.

SERVICES: Available from Tokyo or Yokohama.

BANKS:

The 77 Bank Ltd., Shiogama Office, 3-26, Miyamachi, Shiogama-Shi, Miyagi-Ken. Telex: 854-331.

The 77 Bank Ltd., Chikko Branch, 17-11, Ojima-Cho, Shiogama-Shi, Miyagi-Ken. Telex: 854-331.

STORING: Storing possible by tug prior to discharging and after discharging. Only items which can be hand-carried can be handled during discharging. Trucks and forklifts cannot proceed alongside. Vessel to obtain Customs Clearance, day before storing. Local riggers not available.

SHIP SUPPLY SERVICES: No off-harbour supply services.

SHORE LEAVE: Local Immigration Office issues shore passes valid for 15 days.

IDENTIFICATION CARDS: Shore passes are sufficient.

REGULATIONS: By Tohoku Oil Co.Ltd., under the supervision of the Harbour Master.

(1) Vessel's contact speed for berthing should be kept under 5 cm./sec.
(2) Moorings: Vessels over 100,000 d.w.t.: 20 lines (4 head/stern lines, 3 breast lines and 3 spring lines).

Vessels under 100,000 d.w.t.: 18 lines (4 head/stern lines, 3 breast lines and 2 spring lines).

DELAYS: Bad weather and berth congestion expected for tankers.

DEVELOPMENTS:

Wharf	*Length* (m.)	*Depth* (m.)	*Capacity* (d.w.t.)	*No. of Berths*
Private (LNG)	150	7.5		1
Public	700	15.0	50,000	2
Public	330	14.0	40,000	1
Public	330	12.0	30,000	2
Public	170	10.0	10,000	1

AUTHORITY: Sendai Port Administration Office, 3-8-20, Minato, Miyagino-Ku, Sendai, Miyagi, 983 Japan. *Tel:* 022-254-3131. *FAX:* 022-254-3136. *Contact:* H. Ariji, Director.

SHIBUSHI: 31.28 N. 131.07 E. (See Plan)

PORT LIMITS: An arc of one mile radius from position Lat. 31° 28.2' N., Long. 131° 06.7' E.

PILOTAGE: Not compulsory for berthing or unberthing. At present, pilotage is arranged by ship's Agent. Boarding only during daytime. Boarding position Lat. 31° 25' N., Long. 131° 05.5 ' E.

ANCHORAGE: No fixed locations, anchorage is safe in the bay.

RESTRICTIONS: Berthing and unberthing during daylight hours only.

MAX. SIZE: Max. permissible LOA 240 m., draft 11.5 m.

DOCUMENTS: When vessel arrives direct from a foreign port, Customs Officials will board to search, and the following documents are to be submitted:
Ship's Register.
International Tonnage Certificate.
Voyage Memo (Ports of Call).
3 Crew Lists, including Passport numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agents will prepare Inward/Outward Declaration, Cargo Manifest and Cargo Manifest in Transit, using specific forms. Therefore ship's Agents should be provided with necessary information about details of cargoes in advance.

HEALTH: At first port of call in Japan, vessel must obtain Free Pratique. Quarantine Officers will attend vessel only from daylight to sunset, and Master to show all vaccination cards and Derat Exemption Certificate. In case vessel arrives from cholera infected area within 10 days, Master must advise crew and passengers' health condition to respective Quarantine Office through ship's Agent, prior to arrival, and close all soil pipes before entering port.

Also see "Late Reports".

RADIO: Recommended that Master communicates with Agent through Nagasaki Radio, which covers all ports in Japan.

VHF: No VHF watch maintained.

TUGS: 3 tugs of 3,200 h.p. available at port for berthing and unberthing.

BERTHING:

Name of Berth	*Length* (m.)	*Depth* (m.)	*Capacity* (d.w.t.)	*Cranes*
Zen-Noh Silo Wharf	205	13.0	65,000	1×800 t.p.h., 2×400 t.p.h.
Shibushi Silo Dolphin	200	13.0	65,000	2×600 t.p.h.
Wakahama Chuo Wharf				
No. 1	240	12.0	30,000	
No. 2	165	9.0	10,000	
No. 3	75	8.0	5,000	
No. 4	315	7.5	5,000	
No. 6	180	5.5	2,000	

STEVEDORES:
(1) Working hours are 0830 hrs. to 1630 hrs.
(2) Overtime normally only for finishing cargo.
(3) No work on Sundays/holidays.
(4) Discharge Rate: Bagged Cargo – 300 tons per gang/day.
Bulk Cargo – 700 tons per gang/day.

MEDICAL: No advance notice required, unless urgent.

TANKERS: *Report:* February 1994.
Berth Name: Shibushi Oil Storage Terminal.
Berth Position: 31° 24.4' N., 131° 03.1' E.
Pilot Station: 31° 22' N., 131° 09' E.
Operators: Various.
Receivers: Shibushi Oil Storage Co. Ltd.
Minimum Water Depth in Approaches: 26.0 m.
Under-Keel Clearance in Approaches: 5.0 m.
Minimum Water Depth Alongside: 26.0 m.
Under-Keel Clearance Alongside: 5.0 m.
Maximum Draft Permitted: 21.0 m.
Maximum Summer Deadweight: 299,161 tons.
Minimum Summer Deadweight: 52,132 tons.
Maximum Length Overall: 345 m.
Minimum Length Overall: 211 m.
Maximum Beam: 60 m.
Maximum Bow to Manifold Distance: Not specified.
Minimum Bow to Manifold Distance: Not specified.
Maximum Stern to Manifold Distance: Not specified.
Minimum Stern to Manifold Distance: Not specified.
Maximum Height of Manifold Above Zero Rise of Tide: 34.0 m.
Minimum Height of Manifold Above Zero Rise of Tide: 3.0 m.
Airdraft: No restrictions.
Ballast Facility: Not available.
Products Handled: Crude only.

DENSITY: Average 1025 – 1027.

FRESH WATER: Available from hydrants on the jetty.

FUEL: All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, Osaka Bay and Kanmon Port. At all other ports, bunkers will be lightered from the nearest bunker stock ports, at maximum 7 days prior notice.

CONSULS: No local representatives. Marine Note of Protest can be attended by local notary public.

REPAIRS: No facilities available.

DRY DOCKS: None.

SURVEYORS: N.K.K.K. general surveyor's office stationed at port.

GANGWAY/DECK WATCHMEN: Not specially required, unless passengers or valuable cargo on board.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work, unless crew can complete it before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores, when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore, but no spirits.

REPATRIATION: Possible but inconvenient.

AIRPORT: Nearest Kagoshima Airport, about 2 hours drive from Shibushi (JAL, JAS and ANA lines).

TIME: GMT plus 9 hours. No alterations made to clocks during year.

POLICE/AMBULANCE/FIRE: Police 110; Ambulance/Fire 119.
Public telephone booth available near by the berth.

TELEPHONES: No facilities for placing telephones on board.

SHORE LEAVE: Local Immigration Offices issue shore passes valid for only 15 days, when Shibushi is first port of call in Japan. Extension possible if ship stays longer.

BANKS: Kagoshima Bank Ltd. Daily working hours 0900 – 1500. Closed on Saturdays and Sundays.

STORING: Passenger jetty and general cargo berth have plenty of open space available alongside for storing by trucks. Forklifts available and can work on jetty.

SHIPMASTER'S REPORT: April 1990.
Port Limits: An arc of one mile radius from position Lat. 31° 28.2' N., Long. 131° 06.7' E.
Documents: As per other Japanese ports.
Pilotage: At present it is arranged by Kagoshima Port Authority and only during daytime. Boarding position Lat. 31° 24' N., Long 131° 5.5' E.
Anchorage: No fixed locations, anchorage is safe in the bay.
Restrictions: None. Berthing and unberthing during daylight hours only.
Max. Size: LOA 240 m., draft 11.5 m.
Health: Normal pratique procedure.
Radio: As for Kagoshima.
VHF: No VHF watch maintained.
Tugs: Two tugs available at port for berthing and unberthing.
Berthing: Four berths available for medium sized ships, of which 2 berths are for ships carrying bulk grain, which is discharged with shore cranes assisted by conveyor belts into silos built for the purpose. One berth - Wakahama Central No.1, without installed shore cranes is available for general cargo. The fourth berth is for local passenger vessels which call at the port daily.

Mobile cranes are available locally to assist discharge if required.

Stevedores:
(a) Working hours are 0830 hrs. to 1630 hrs.
(b) Overtime normally only for finishing cargo.
(c) No work on Sundays.
(d) Discharge rate: Bagged cargo – 300 tonnes per gang/day.
Bulk cargo – 700 tonnes per gang/day.

Density: 1025.
Fresh Water: Available through hydrants on the jetty.
Consuls: None.
Repairs: No facilities available.
Dry Docks: None.
Surveyors: None available.
Gangway/Deck Watchman: Not required.
Hatches: Opening/closing normally by crew.
Customs Allowances: As per other Japanese ports.
Cargo Gear: Optional.
Repatriation: Possible but inconvenient.
Airport: See "Kagoshima".
Time: GMT plus 9 hours.
Holidays: As in other Japanese ports.
Telephones: Not available on board.
Banks: Bank of Kagoshima, daily working hours 0900 to 1500, Saturday 0900 to 1200.
Storing: Passenger jetty and general cargo berth have plenty of open space available alongside for storing by trucks. Fork lifts available and can work on jetty.
Shore Leave: No restrictions.
Identification Cards: Shore passes issued by immigration.
General: Charts: Japanese charts: Kyusyu East Coast – Sibusi Wan No.185 and Sibusi – Ko No.5850.

AUTHORITY: Shibushi-Wan Port Administration Office, 6617-17 Shibushi-cho, Soo Gun, Kagoshima Pref., 899-71 Japan. *Tel:* (994) 73-1651. *FAX:* (994) 73-1671.

Port and Harbour Division of Kagoshima Prefecture, 14-50 Yamashita-Cho, Kagoshima City, 892 Japan. *Tel:* (992) 22-7435. *FAX:* (992) 24-1759. *Contact:* Akira Uezono, Director.

SHIMIZU: 35.00 N. 138.30 E. (See Plan)

DOCUMENTS: *Quarantine* (only when arriving from a foreign port):
1 Voyage Memo (Names of ports and dates of departure for last 6 months).
1 Maritime Declaration of Health.
1 Crew List.
1 List of Passengers (if any on board).
Certificate of Vaccination and Derat Certificate (or Derat Exemption Certificate) should be readily available.

Customs:
1 Voyage Memo.
1 Declaration Inward/Outward of vessel.
1 Ship's Registry.
1 International Tonnage Certificate.
1 Last Port Clearance.
1 Stores List, including arms and narcotics.
1 Manifest of Cargo for Discharge.
1 Manifest of Through Cargo.
Crew List.
1 List of Passengers.
1 Declaration of Crew's Baggage (only necessary if crew members have to land personal effects ashore).
1 Parcel List.

Immigration:
2 Crew Lists.
1 Application for Shore-passes.
2 Lists of Passengers.
1 Declaration Inward/Outward of vessel.

Harbour Master:
1 Declaration Inward/Outward of vessel.
1 Crew List.

Port Authority:
1 Declaration Inward/Outward of vessel.

PILOTAGE: Pilotage should be arranged through Agent 24 hours prior to arrival or by Master via VHF (Shimizu Port Radio, Channels 16, 12, 14, 20), or vessels requiring Pilot should hoist signal flag "G". Pilot Station: on the point 043° – 1500 m. from Shimizu Lighthouse (the lighthouse: Lat. 35° 01' 02" N., Long. 138° 32' 42" E.)

ANCHORAGES: See Section 3 on Chart of Shimizu.

Outer Anchorage is defined as a "Closed Port", so no vessel is allowed to anchor there, except those waiting for berthing at the port.

MAX. SIZE: Dry-cargo: Max. draft 12 m. Length and breadth no restriction.

HEALTH: Free Pratique automatic calling at another Japanese port. Radio Pratique available (See "Late Reports").

VHF:

Name of Station	*Frequency (Channel No.)*	*Class & Power (W)*	*Type of Operation*	*Use*
Shimizu Port Radio	16	F3 50	Simplex	Call & Reply
	12		Simplex	Communication (priority for urgency)
	14		Simplex	Communication
	20		Duplex	Communication

TUGS: Normally join in-coming vessels near Pilot Station. Tug's lines usually used no extra charge.

BERTHING: See "Table" below.

SPECIALISED CARGO HANDLING FACILITIES:

Container Berth: Okitsu No. 2 Wharf No. 11 – No. 12, depth 12 m., length 440 m. (2 berths), 1 gantry crane (capacity 41.5 tons), 1 transtainer (capacity 30.5 tons).

Sodeshi No. 1 Wharf: Berth No. 6 – 8: Length 720 m., depth 12.0 m. 4 gantry cranes, capacity 45 tons ×1, 46.4 tons ×1, 48.6 tons ×1, 50 tons ×1. 8 transtainers, capacity 30.5 tons ×8, 40.5 tons ×1.

CARGO HANDLING FACILITIES:

Wharf	*Type*	*Capacity*	*Number*
Okitsu No. 2 Wharf	Gantry (travelling)	41.5 tons	1
	Transtainer (travelling)	30.5 tons	1
Sodeshi No. 1 Wharf	Gantry (travelling)	46.4 tons	1
		45.0 tons	1
		48.6 tons	1
		50.0 tons	1
	Transtainer (travelling)	30.5 tons	7
Sodeshi No. 2 Wharf	Unloaders	400 t.p.h.	2
Hinode Wharf	Jib Crane (fixed)	50 tons	1
Fujimi Wharf	Unloader (fixed)	400 t.p.h.	1
		180 t.p.h.	2
	Pneumatic unloader	300 t.p.h.	2
	(travelling)	600 t.p.h.	1
	Belt-conveyor	600 t.p.h.	3
	Cement Unloader	470 t.p.h.	1
		450 t.p.h.	1
Honen Corp. Dolphin	Pneumatic Unloader	160 t.p.h.	2
	Pneumatic Unloader	300 t.p.h.	1
Nihon Light Metal Wharf	Unloader	540 t.p.h.	2
	Air Slide	150 t.p.h.	1
	Loading Arm	1,400 t.p.h.	1
	Loading Arm	500 t.p.h.	2

STEVEDORES: Normally latest time to order gangs 1000 hrs. previous day.

MEDICAL: No advance notice required unless urgent.

TANKERS: Tonen (8 berths): Max. permitted draft 20.0 m., max. size 250,000 d.w.t.

DENSITY: 1023 – 1024.

FRESH WATER: Most berths supply by shore installations, otherwise barge.

FUEL: All grades of oil delivered by barge only.

FIRE PRECAUTIONS: Harbour fire-fighting corps with a fire-fighting boat.

CONSULS: None.

REPAIRS: Most repairs and overhauls possible.

DRY DOCKS: Kanazashi Shipyard, largest dry dock – 122 m.× 18.5 m., 5,700 tons. Floating dock – 65 m.×18 m. 1,000 tons.

Nippon Kokan Shipyard, floating dock – 135 m.×27.8 m. 7,900 tons.

Public: *Wharf*	*Berth*	*Depth (m.)*	*Length (m.)*	*Max. Size (d.w.t.)*	*Main Usage*
Okitsu No. 1 Wharf	No. 1 – No. 3	10.0	556	15,000	General Cargo
Okitsu No. 2 Wharf	No. 4 – No. 5	5.5	181	2,000	General Cargo
	No. 6 – No. 9	10.0	740	15,000	General Cargo
	No. 10	7.5	168	5,000	General Cargo
	No. 11 – No. 12	12.0	440	30,000	Containers
	No. 13 – No. 14	10.0	370	15,000	Cars
Sodeshi No. 1 Wharf	No. 1 – No. 4	4.5	240	700	Ballast, Steel materials
	No. 5	7.5	135	5,000	Logs
	No. 6 – No. 8	12.0	720	30,000	Containers
	No. 9 – No. 10	9.0	350	10,000	—
	No. 11	12.0	240	30,000	Logs
	No. 12 – No. 15	7.5	520	5,000	General Cargo
Sodeshi No. 2 Wharf	No. 16	10 – 12	330	30,000	Wood-chips
	No. 17	9.0	165	10,000	Petroleum
	No. 18	7.5	72	1,000	Petroleum
Ejiri Wharf	No. 1 – No. 5	6.5	472	3,000	Fish & Shell
	No. 6 – No. 7	4.5	149	700	Fish & Shell
	No. 8 – No. 12	4.5	340	700	Fish & Shell
	No. 13 – No. 16	4.5	262	700	Fish & Shell
	No. 17 – No. 18	6.5	185	3,000	Fish & Shell
Shimizu Wharf	No. 1 – No. 5	4.5	323	700	Steel materials
					Soyabean Meal, Waste Oil
Hinode Wharf	No. 1	4.5	180	700	General Cargo
	No. 2	7.5	130	5,000	General Cargo
	No. 3	7.5	130	5,000	General Cargo
	No. 4	12.0	240	30,000	General Cargo
	No. 5	12.0	240	30,000	General Cargo
Fujimi Wharf	No. 1 – No. 2	5.5	113	2,000	Hay
	No. 3	9.0	165	10,000	Woodchips
	No. 4 – No. 5	12.0	480	30,000	Grain, Cement
	No. 6 – No. 7	12.0	329	10,000	Sugar, Raw Cotton, Pulp
Anchorage Mooring Basin Buoy	Orido	5.0–10.5	344,100 sq.m. 3 Buoys	10,000 – 20,000	Logs
Private:					
National Railway Wharf		7.3	266	5,000	Cement
Tonen Sea-Berth No. 1		22.0	480	250,000	Naphtha, Gas Oil, Kerosene, LNG.
Tonen Sea-Berth (Coastal)		6.0–8.2	590	5,000	Naphtha, Gas Oil, Kerosene, Gasoline, Heavy Oil.
Honen Dolphin		11.0	210	40,000	Grain, Molasses
Suzuyo Warehouse Wharf		4.5	48	700	Grain
Suzuyo No. 1 Pier		5.0	27	1,000	Petroleum
Nihon Light Metal Wharf		9.0–11.0	365	32,000	Bauxite Ore, Alumina, Heavy Oil
Nakayama Steel-Works Wharf		5.0	41	1,000	Steel Materials
Nippon Kokan Wharf		5.5–6.5	895	24,000 g.r.t.	
Kanazashi Shipyard Wharf		4.5–5.5	471	20,000 g.r.t.	
Miho Shipyard Pier		5.5–6.0	277	8,000 g.r.t.	
Seiko Dock Pier		7.0	20	500 g.r.t.	

SURVEYORS: Japan Marine Surveyors & Sworn Measurers' Association, Shimizu Branch, 7-5, Irifune-cho, Shimizu, Japan. Tel: 52-0177.

Japan Oil Stuff Inspectors Corporation, Shimizu Branch, 1-28, Irifune-cho, Shimizu, Japan. Tel: 52-8549.

New Japan Surveyors & Sworn Measurers' Association, Shimizu Branch, 7-17, 1-chome, Minato-cho, Shimizu, Japan. Tel: 53-1290.

Japan Grain Inspection Association, Shimizu Office, 2-20, Hinode-cho, Shimizu. Tel: 53-1228.

GANGWAY/DECK WATCHMEN: Service of watchmen optional but not necessary.

OPENING/CLOSING HATCHES: Opening and closing of hatches may be done by Crew members or on request to Agent by stevedores.

CERTIFICATES: Ship's Register, International Tonnage Certificate, Radio and Safety Equipment Certificate, Derat Exemption Certificate, etc.

CUSTOMS ALLOWANCES: Tobacco: 60 cigarettes permitted. Wine or spirits, according to the length of voyage: None within 1 month voyage, 1 bottle over 1 month, 2 bottles over 3 months.

AIRPORT: 263 km. from Narita International Airport, 180 km. from Haneda.

TIME: GMT plus 9 hours. Permanent.

HOLIDAYS: No work from December 30th to January 4th and Maritime Day (7th July). Also the 1st and 3rd Sunday of every month, except containers.

POLICE/AMBULANCE/FIRE: Police 110; Ambulance 119; Fire 119; Water Police 52-0200.

TELEPHONE: Telephones can be arranged onboard at most berths by calling 64-2002.

SHIP SUPPLY SERVICE: Operated by Shimizu Port Service Ltd., 10-78 Hinode-Cho, Shimizu City, Shizuoka Pref., Japan.

SHORE LEAVE: Local Immigration Offices issue shore pass valid for only 7 days but 7 days' extension possible if ship stays longer.

IDENTIFICATION CARDS: Passport or Seaman's Book.

GARBAGE DISPOSAL: Contact Taikyu Kaiun Co.Ltd. (Tel: (0543) 51-1300). Hours: 0800 hrs. – 1600 hrs. Charges: Yen 7,000 per visit plus Yen 5,000 (Customs charge) plus Yen 500 per bag. Drums and skips provided at extra charge.

WASTE OIL DISPOSAL: A collection service is available from Kurenai Sangyo Co.Ltd. Tel: (0543) 34-1310.

2×1,500 kl. storage tanks, barges and tanker trucks available.

SEAMAN'S CLUBS: Shimizu Kaiin Kaikan, 10-25 Tsukiji-Cho, Shimizu City. Tel: (0543) 52-0795. Rooms for stay or rest are available.

AUTHORITY: Shimizu Port Administration Bureau, 9-25 Hinode-Cho, Shimizu City, Shizuoka Pref., Japan 424. *Tel:* Shimizu (0543) 53-2203. *FAX:* 0543-54-0380. *Contact:* Shohei Yamada, General Manager. Yozo Sakabe, Manager of Planning and Development Division.

AGENT: Senwa Shipping Agency, c/o Aoki Trans Corporation, 1-7-11 Minato-Cho, Shimizu-Shi, Shizuoka 424, Japan. Tel: 0543-53-6451. Fax: 0543-53-6562. Telex: 3965-875. Cables: Aoki Shimizu.

SHIMONOSEKI (including Mutsure): 33.57 N. 130.58 E. **(See Plan)**

(See "Kanmon-Ko")

DOCUMENTS: When vessel arrives direct from a foreign port, Customs Officials will board to search, and the following documents are to be submitted:

Ship's Register.
International Tonnage Certificate.
Voyage Memo (Ports of Call).
Last Port Clearance.
3 Crew Lists including Passport Numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agents should be provided with necessary information about details of cargoes in advance.

PILOTAGE: *Nissin Tanker Pier – Mutsure:* Pilotage is not compulsory but all vessels should take a Pilot. The Pilots reportedly are experienced, qualified and well organised.

If the vessel is coming from Westwards, the Pilot will board at the anchorage position N.N.E. of Mutsure-Sima.

If the vessel is coming from Eastwards, the same Pilot who navigated the vessel through the Kanmon Passage will bring the vessel to the berth if the tidal conditions are favourable and the berth is not occupied. Otherwise, the vessel should anchor off the terminal in an authorised anchorage.

Pilots meet vessels arriving from Eastward near the entrance approaches of Kanmon Passage off the Hesaki Lighthouse. However, this is not applicable when the vessel is coming from Seto Naikai.

Pilots have available heavy launches or tugs which generally have black and white superstructure.

The Port of Kanmon Ko is divided into several Districts, the most important of which are Shimomoseki, Moji and Wakamatsu. The anchorage is quite congested and the traffic is heavy. Also, many fishing boats, barges on tow, and other craft may be encountered, so extreme caution should be exercised.

Also see "Moji".

ANCHORAGES: Mutsure Anchorage: Undermentioned area is open port. The sea area surrounded by:

(*a*) Line connecting Daibahana on Takenoko Island and top of Wagora Island.
(*b*) Line connecting top of Wagora Island and Udonohama on Mutsure Island.
(*c*) Coastline between Udonohama and Unoishibana on Mutsure Island.
(*d*) Line connecting Unoishibana and Anse-no-Shiri in Shimonoseki.
(*e*) Line connecting Anse-no-Shiri and point at 370 m. from Daibahana on the line connecting Daibahana and top of Wagora Island.
(*f*) Line Long. 130° 54' E.

Anchorage includes a part of Quarantine Anchorage and Mutsure Oil Berth; depth 10 m. – 25 m.

RESTRICTIONS: See "Moji".

MAX. SIZE:

Wharf	*No.*	*Length* (m.)	*Depth* (m.)	*LOA* (m.)	*Max. Draft* (m.)	*Capacity* (g/t)
No. 1 Pier	10	330	9.0	200	10.0	10,000×2
	12	165	9.0	150	8.0	10,000×1
	13	165	9.0	150	8.5	10,000×1
No. 2 Pier	15	150	9.0	150	8.5	10,000×1
	16	160	10.0	150	8.5	15,000×1
	17	210	10.0	180	9.1	15,000×1
Hosoe Wharf	18	130	7.5	–	–	(Exclusively used by Kampu-Ferry)
Hanano-cho Pier	24*	185	10.0	150	10.0	15,000×1
	25*	185	10.0	150	10.0	15,000×1
	26	130	7.5	100	6.0	5,000×1
Fukuura Berth (for lumber discharge only)		120	7.2	–	–	5,500 d.w.t
Nishiyama Berth No. 3		199	12.0	–	–	30,000×1
Nishiyama Berth No. 4		74	5.0	–	–	

* For containers.

Note: If both Nos. 12 and 13 piers are used, LOA up to 160 m.
If both Nos. 15 and 16 piers are used, LOA up to 160 m.
If both Nos. 20 and 21 wharves are used, LOA up to 230 m.
If both Nos. 24 and 25 piers are used, LOA up to 230 m.

Also see "Tankers".

HEALTH: See "Moji", and "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

VHF: Shimonoseki Port Radio Station on Channels 16, 12, 14, 20 and 22. Pilots on Channel 13.

TUGS: See "Moji".

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by radio.

Mitsui Kinzoku Dolphin Pier: Max. d.w.t. 60,000. Max. LOA 230 m. Max. draft 11.90 m. 1 shore crane. Bauxite, zinc concentrate and phosphate handled.

Hanano-cho Container Terminal: 1×35.6 ton gantry crane; 52×220 volt reefer plugs; container depot capacity 1,000 TEU.

BRIDGES: Kanmon Suspension Bridge was built in 1973 across Hayatomo Channel (narrowest place in Kanmon Strait, width of fairway 530 m.) between Shimonoseki and Moji. The height of the bridge from sea level is 61 m. Vessels over 59 m. height must seek clearance from Pilot Office.

STEVEDORES: At least 24 hours' prior notice excluding Sundays and holidays required in order for Agents to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew. Overtime surcharges 1700 – 1900 hrs. 50% additional of basic stevedorage; 2100 – 0500 hrs. next morning 130% additional; Sundays/holidays 60% additional.

MEDICAL: No advance notice required, unless urgent.

TANKERS: Nissin Tanker Pier No. 1 located about 610 m. South of Mutsure Lighthouse. At this berth, West-going current stronger than East-going and ship taken to berth only on Westerly current, with stern towards South. Most suitable berthing time is 2 – 3 hours after commencement of West-going current. Max. dimension of vessel which can be accommodated at this berth is 95,000 d.w.t., LOA 245 m., draft 14 m. Product handled, fuel oil. Shoreline 3×12 in. Discharge rate 2,000 t.p.h. Berth Nos. 2 and 3 handle coastal tankers only.

Shell Oil Berth situated at Hikoshima, on Southwestern end of Honshu, facing Moji across Kanmon Strait. In vicinity of berth, flood tide sets to East, ebb tide to West. Current about 5 knots – 6 knots. Mooring berth consists of 4 buoys, approximately 140 m. offshore, space between buoys being approximately 270 m.

Max. dimensions of vessel which can be safely accommodated are 18,000 d.w.t., LOA 170 m., breadth unlimited, draft 9.0 m. Product handled: Fuel oil. Shore line 1×8 in. Discharge rate 500 t.p.h.

Vessels only berthed or unberthed when tide sets to West during daytime only. In approaching berth, as vessel comes against tide, full engine power and assistance required. One 10 in. pipe connected to vessel, discharge rate 500 – 600 kl./hr.

DENSITY: 1025.

FRESH WATER: Good fresh water supplied either from water barge or from hydrants alongside wharves. Rate of delivery from water barge 50 t.p.h. and from hydrants 40-50 tons.

FUEL: All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, Osaka Bay and Kanmon Port. At all other ports bunkers will be lightered from the nearest bunker stock ports at maximum 7 days prior notice.

CONSULS: Korean Consul, Tel. 0832-66-5341.

REPAIRS: All types of repairs possible.

Y DOCKS: Mitsubishi Heavy Industries Ltd. 4 dockyards (Nos. 3 & r smaller vessels).

subishi Heavy Industries Ltd.

ensions of Docks:

	Length (m.)	*Breadth* (m.)	*Draft* (m.)
No. 1 Dock	164.13	25.0	7.04
No. 2 Dock	150.10	20.0	6.88

x. Size of Vessel for Docking:

	Length (m.)	*Breadth* (m.)	*Draft* (m.)
No. 1 Dock	160.00	22.50	5.50
No. 2 Dock	143.00	19.30	5.00

owa Shipbuilding K.K. - 1 dockyard (Max. 1,000 g.t.).

NGWAY/DECK WATCHMEN: Not specially required unless sengers or valuable cargo on board.

ENING/CLOSING HATCHES: Stevedores carry out opening and sing hatches. If any time lost by ship's crew doing this work, vedores charge ship for waiting. Recommend request stevedores for work unless crew can can complete it before berthing.

RTIFICATES: Ship's Register and International Tonnage Certificate how Customs Inspector ship's registered gross and nett tonnages. d Cargo Gear Certificates sometimes required by stevedores when go gear maintenance appears to be poor.

STOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore, no spirits.

RGO GEAR: See "Certificates", but no special requirements.

PATRIATION: Possible.

PORT: Nearest is Fukuoka Airport (international), about 2 hours by n and taxi.

itakyushu Airport, about 40 minutes by taxi.

E: GMT plus 9 hours. No alterations made to clocks during year.

LICE/AMBULANCE/FIRE: Police 110; Ambulance/Fire 119.

ublic telephone booth available near by the berth.

LEPHONE: Possible to place telephone on board.

RVICES: All services available.

ORE LEAVE: Local Immigration Offices issue shore pass valid for 15 days, when Shimonoseki is first port of call in Japan. Extension sible if ship stays longer.

THORITY: Port and Harbour Bureau of Shimonoseki City ernment, 1-1 Nabe-cho, Shimonoseki City, Japan 751. *Tel:* (0832) 1111, ext. 545. *FAX:* (0832) 33-0860. *Contact:* Sousuke Kitazawa, ctor General.

IMOTSU (including Kainan): 34.06 N. 135.08 E.

(See Plan)

CUMENTS:

hip's Register.

nternational Tonnage Certificate.

oyage Memo (Ports of Call).

ast Port Clearance.

Crew Lists, including Passport Numbers, etc.

Passenger Lists.

Stores List.

Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

hip's Agent will prepare Inward/Outward Declaration, 1 Cargo nifest, including Transit Cargo. Therefore ship's Agents should be vided with necessary information about details of cargoes in advance.

OTAGE: Pilot request to be given to Pilot Station through Agent. vance notice of ETA: 72 hours and 24 hours before arrival. No VHF ilable. Pilot usually attends by tug boat. No special pilot boat. Pilot ards at Quarantine Anchorage in vicinity of Lat. 34° 07' 10.5" N., ng. 135° 06' 42" E., or at another anchorage which will be designated Harbour Master. No alternative area in event of bad weather. Location anchorage for awaiting pilot – Lat. 34° 07' 10.5" N., ng. 135° 06' 42" E., as Pilot Station.

CHORAGES: Quarantine Anchorage, 20 m. depth.

STRICTIONS: Anytime for entry to anchorage, but daytime only for thing and unberthing.

ra Bay: Vessels no longer than 110 m. berth. Daytime entrance only ardless of tide and current.

AX. SIZE:

	Max. d.w.t. tonnes	*Length* (m.)	*Draft* (m.)
nen O-1	260,000	349 m.	18.80 m.
nen E-1	70,000	234 m.	12.20 m.
akayama Sekiyu-Jetty 9 (Kainan)	78,000	247 m.	12.20 m.
akayama Sekiyu-Ohsaki Sea Berth	259,999	340 m.	21.00 m.

so see "Tankers".

EALTH: Radio Pratique available (See "Late Reports").

Formalities will be carried out at the undermentioned positions which l be specified by Harbour Master.

		From Tsubunehana Lighthouse
1.	Lat. 34° 09' 00" N., Long. 135° 06' 29" E.	330°×3,000 m.
2.	Lat. 34° 08' 33" N., Long. 135° 06' 49" E.	330°×2,000 m.
3.	Lat. 34° 08' 05.5" N., Long. 135° 07' 09" E.	330°×1,000 m.
4.	Lat. 34° 08' 25" N., Long. 135° 05' 47" E.	300°×3,000 m.
5.	Lat. 34° 08' 09.5" N., Long. 135° 06' 20.5" E.	300°×2,000 m.
6.	Lat. 34° 07' 54" N., Long. 135° 06' 54" E.	300°×1,000 m.

ADIO: Recommended Masters communicate with Agents through agasaki Radio which covers all ports in Japan.

TUGS: Tugs normally join at anchorage designated by Harbour Master, tug lines used.

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agents mainly by radio or telex.

MEDICAL: No advance notice required unless urgent.

TANKERS: There are no slop facilities.

Berth	*Product*	*Shorelines*	*Discharge Rate* (t.p.h.)
Tonen O-1 Jetty	Crude Oil	3×16 in.	13,500
	Fuel Oil/L.S.W.R.	1×12 in.	3,200
Tonen E-1 Jetty	Product *	2×12 in.	5,000
Wakayama Sekiyu Jetty 9 (Kainan)	Crude Oil Product	2×12 in.	5,000
Wakayama Sekiyu Ohsaki Sea Berth	Crude Oil	3×16 in.	13,500

* Gasoline, Naphtha, Gas Oil, Kerosene, etc.

Tonen O-1 Jetty: This berth consists of an unfendered central platform with access way and pipe trestle to the shore, having on each side 1 flexible and 2 rigid spring and main dolphins with catwalk connected to the central platform. There are 2 more rigid mooring dolphins for breasting lines located in a backward position relative to the breasting frontage and accessible by catwalk.

The spring lines are secured to either one of the rigid spring dolphins at each side of the central platform.

The original mooring buoys have been replaced with mooring dolphins standing off the central platform 251 m. and 241 m. thus extending the total mooring frontage to 492 m. All mooring and breasting dolphins are fitted with capstans and remotely operated quick release hooks.

Currents run parallel to the berthing face, maximum 2 knots each way.

The berth has been approved for accommodating tankers of about 260,000 d.w.t. Depth alongside the berth is about 20 m. below C.D.

Berthing Procedures and Mooring: The vessel is turned about 1 mile North of the berth and then backed down to the berth. The reason for this procedure is twofold. First, there is insufficient room at the berth for turning. Second, in the port of Shimotsu vessels are normally berthed heading out so that in case of an emergency they can depart with the least possible delay. Furthermore the passage South of Zi-no-Shima inland is very often obstructed with fishing nets.

The vessel is brought parallel to the berth, about 150 ft. – 300 ft. off, and then pushed alongside by the attending tugs. Mooring lines are only led when the vessel is very close in or resting against breasting dolphins. The normal sequence for handling ship's ropes is: spring lines, breasting lines, then bow and stern lines, and then the forward and aft breasting lines.

The mooring configuration for vessels less than 100,000 d.w.t. is: 3 bow lines, 3 stern lines, 2 forward breasting lines, 2 aft breasting lines, 2 forward back springs, 2 aft back springs. For vessels up to 200,000 d.w.t., an additional bow line and stern line is required. For vessels over 200,000 d.w.t., an additional breast line fore and aft is necessary. 2 mooring launches are used. The berth is equipped with a sonar docking system.

When very strong Southerly winds are experienced, the vessel will go port side to. This rarely happens.

DENSITY: Average density 1019.

FRESH WATER: Available at every berth except Fuji Kosan Sea Berth, by shore lines, rate about 25 tonnes per hour. Also available by barge.

FUEL: Most grades of domestic and bonded oil are available. If bunkering is carried out at anchorage, guard boat and oil fence will be required by harbour regulations.

CONSULS: None.

REPAIRS: Repairs possible at Shimotsu Anchorage. Only minor deck and engine repairs possible at berth with permission from Terminal. This permission must be obtained from the Terminal prior to arrival.

DRY DOCKS:

Yura Dockyard: Mitsui Shipping & Engineering Co. Ltd. have constructed a 350,000 d.w.t. new dockyard in Yura, 50 nautical miles South of Kobe Lat. 33° 57' 30" N., Long. 135° 07' 00" E. Vessels calling at Yura port are requested to note the following information:

Tonnage dues should be paid at Wakayama since Yura is closed port.

Dock Master boards at position 280° – 2,000 m. from Arijima Lighthouse for entering Yura and Pilot is not required.

Vessel is requested to wait at Wakayama Anchorage if dry dock or wet basin is not available.

Vessel is requested to call at Shimotsu for Free Pratique if necessary.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed one carton of cigarettes and one bottle of spirits (Sake, Whisky, etc.) to take ashore.

REPATRIATION: Possible.

AIRPORT: New Kansai International Airport.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

POLICE/AMBULANCE/FIRE: Police 110 and Ambulance/Fire 119 (in case of emergency).

TELEPHONES: No facilities for placing telephones on board.

SHORE LEAVE: Local Immigration Offices issue shore pass valid for only 7 days, but 7 days' extension possible if ship stays longer.

IDENTIFICATION CARDS: Not required.

AUTHORITY: Wakayama Shimotsu Port Administration Office, 22 Chikko 6-chome, Wakayama City, Japan. *Tel:* (0734) 31-7266. *FAX:* (0734) 31-7165. *Contact:* Sadami Maruta, Port Director.

SHINGU: 33.41 N. 135.59 E. (See Plan)

DOCUMENTS:
Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
3 Crew Lists, including Passport numbers.
3 Passenger Lists.
1 Stores List.
1 Voyage Memo (last 3 months).
1 Declaration of Crew's Baggage List (only at first port of call).

Ship's Agents will prepare Inward/Outward Declaration, Cargo Manifest and Cargo Manifest in Transit, using specific forms. Therefore, ship's Agents should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Not compulsory, but recommended by Harbour Master. Pilots are available at the anchorage from sunrise to one hour before sunset.

APPROACHES: Main approach channel (leading to discharging berth) depth 10.0 m.

ANCHORAGE: 3 locations:
1. Lat. 33° 39' 54" N., Long. 136° 00' 32" E.
2. Lat. 33° 40' 00" N., Long. 136° 01' 00" E.
3. Lat. 33° 40' 26" N., Long. 136° 01' 00" E.

MAX. SIZE: Wharf No. 4: Max. LOA 185 m., max. draft 9.6 m.

HEALTH: Free Pratique formalities will be carried out at nearest port (Owase, Shimotsu, etc.). Radio Pratique and Sanitary Inspection available from Quarantine Officer from Owase port.
Also see "Late Reports".

RADIO: Recommended that Master communicates with Agent through Nagasaki Radio.

VHF: Available on tug ("Shin-ei Maru").

RADAR: Not available.

TUGS: 1 tug (2,200 h.p.) available in the Shingu. Additional tugs available from Wakayama or Kochi.

BERTHING:

Berth	*Length* (m.)	*Depth* (m.)	*Permissible Draft / LOA* (m.)	(m.)	*Capacity* g.r.t.	*Shore Crane*
Wharf No. 4	216	10.0	9.60	185	20,000	None

STEVEDORES: 4 stevedore gangs available. Hours: 0730 – 1700, for logs every day (weekdays).

MEDICAL: No advance notice required except on Sundays, holidays and in an emergency.

FRESH WATER: Available from shore. Cost Yen 300/ton.

FUEL: Domestic and bonded oil will be brought from Shimotsu or Yokkaichi, etc.

FIRE PRECAUTIONS: None.

CONSULS: None.

REPAIRS: Crew can carry out minor repairs.

DRY DOCKS: None.

OPENING/CLOSING HATCHES: Opening/closing hatches must be carried out by ship's crew before work starts.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages.

CUSTOMS ALLOWANCES: 60 cigarettes, no alcohol.

REPATRIATION: Possible.

AIRPORT: Nearest airport is 200 km.

TIME: GMT plus 9 hours.

POLICE/AMBULANCE/FIRE: Not available.

TELEPHONES: Not available.

SERVICES: Immigration Officials attend from Wakayama port.

SHIOGAMA: 38.20 N. 141.03 E. (See Plan)

Note: The Port of Shiogama is divided into two districts, the District of Shiogama and the District of Sendai (Also see "Sendai").

DOCUMENTS:
Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
4 Crew Lists, including Passport Numbers.
4 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Personal Effects.

Agent should be provided with necessary information to prepare Inward/Outward Declarations and Cargo Manifests.

PILOTAGE: Not compulsory but can be arranged at request of Master. Pilot not available after dark. Pilot boards at position Lat. 38° 18' 12" N., Long. 141° 08' 52" E.

ANCHORAGES: Depth: 12 m. Bottom: Rock and sand. Anchorage not suitable in rough weather and as no sheltered anchorage nearby it is advisable for vessels to proceed offshore.

MAX. SIZE: See "Berthing".

HEALTH: Radio Pratique available.
Formalities will be carried out at the Quarantine Anchorage.
Also see "Late Reports".

RADIO: Nagasaki Radio.

BERTHING:

Berth	*Length* (m.)	*Depth* (m.)	*Permissible Draft & Length Overall* (m.)	(m.)	*Capacity* (g.r.t.)	*Shore Cranes*
Teizan No. 1 (T.1)	160	8.5	8.5	160	10,000	
No. 2 (T.2)	160	8.5	8.5	160	10,000	
No. 3 (T.3)	130	7.5	7.0	130	5,000	
No. 4 (T.4)	130	7.5	7.0	130	5,000	
Higashi Wharf (E.1,2,3)	330	7.5	7.0	330	3×3,000	1×3 t.
Naka Wharf	130	7.5	7.0	130	5,000	1×2 t.
(E. side)(M. 4,5,6)	140	4.5	4.0	140	2×1,000	
Naka (W. side)(M. 7,8)	197	4.5	4.0	—	2×1,000	
Naka (N. side)(MN)	169	5.5	5.0	—	2×2,000	
Nishi Wharf (W)	323	4.5	4.0	—	4×1,000	

TANKERS: Vessel discharges through 2×16 in. Chicksan loading arms each capable of receiving 4,000 t.p.h. Also 1×8 in. Chicksan loading arm for bunker.

There are no facilities for dirty ballast.

Storage Capacity:

Crude Oil:	102,000 Kl×5
	55,000 Kl×1
Fuel Oil:	31,000×5

FRESH WATER: Supplied by shore line at 40 t.p.h.

FUEL: Domestic oil is available; bonded oil will be brought from Yokohama or Sendai, when required.

TIME: GMT plus 9 hours. No alterations during the year.

AUTHORITY: Shiogama Port Administration Office, 7-13, Teizan-dori 1-chome, Shiogama City, Miyagi Pref. *Tel:* (02236) 2-3391. *FAX:* (022) 365-2072. *Contact:* Seishi Ito, Port Director.

SOMA: 37.50 N. 140.58 E. (See Plan)

DOCUMENTS:
Ship's Register (and International Tonnage Certificate, if Ship's Register does not show gross and nett tonnages).
Last Port Clearance.
6 Crew Lists, including Passport numbers.
4 Passenger Lists.
2 Stores Lists.
2 Declarations of Crew's Baggage.

PILOTAGE: Not compulsory but recommended. Pilot available at position Lat. 37° 52' N., Long. 140° 59' E.

RESTRICTIONS: Berthing and unberthing possible during daytime.
Draft limitation in channel is 7.2 m.

MAX. SIZE: See "Berthing".

HEALTH: Radio Pratique available through Onahama Quarantine Office.
Also see "Late Reports".

TUGS: 1×3,000 h.p. and 1×350 h.p.

BERTHING:

Name of Berth	*Length* (m.)	*Depth* (m.)	*Max. Draft* (m.)	*Capacity* (d.w.t.)
Soma 1-1	90	5.5	5.2	2,000
1-2	90	5.5	5.2	2,000
1-3	130	7.5	7.2	5,000
1-4	130	7.5	7.2	5,000
1-5	130	7.5	7.2	5,000
1-6	90	5.5	5.2	2,000
1-7	90	5.5	5.2	2,000
1-8	90	5.5	5.2	2,000
2-1	90	5.5	5.2	2,000
2-2	130	7.5	7.2	5,000
2-3	130	7.5	7.2	5,000

STEVEDORES: Working hours: 0830 hrs. – 1630 hrs.
Log gangs available.

FRESH WATER: Available from shore.

FUEL: Not available.

GENERAL:
Immigration: Authorities come from Onahama.
Lightering: Possible.
Stores: Provisions and stores available.

SUSAKI: 33.24 N. 133.18 E. (See Plan)

PORT LIMITS: *Arrival Position:* Within 800 m. radius of position Lat. 33° 19' N., Long. 133° 18' E.

DOCUMENTS:
Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
Quarantine Certificate.
Crew List.
Voyage Memo (last 3 months).
Stores List.
Narcotics List.
Declaration of Crew's Baggage.

The ship's Agents will prepare Inward/Outward Declaration and Cargo Manifest. Therefore ship's Agents should be provided with necessary information from the vessel, such as ship's nationality, port of registry, gross and nett tonnages, deadweight, owner's name, number of crew, nature and quantity of cargo.

PILOTAGE: The port does not have VHF, telegraphic or telephone communications, so ETA advice should be sent to the ship's Agent, who will contact the Pilot Station. The vessel will be advised of berthing and entry information by Agent by cable or telex.

Whilst awaiting pilot, vessel anchors in anchorage (See "Anchorage"). In the event of bad weather, there is no alternative anchorage, and pilot will not board. The Master should decide whether to proceed to sea or not.

ANCHORAGE: Lat. 33° 19' N., Long. 133° 18' E. Depth 40 m. – 50 m.

RESTRICTIONS: Vessels cannot enter Port Limits until Free Pratique has been granted (See "Health").

Berthing/unberthing throughout 24 hours.

MAX. SIZE: See "Berthing".

HEALTH: Free Pratique not available at Susaki. Nearest convenient quarantine port is Kochi (Lat. 33° 29' N., Long. 133° 35.5' E.), which is about 18 miles from Susaki.

Also see "Late Reports".

RADIO: It is recommended that vessels use Nagasaki Radio, which covers all ports in Japan.

VHF: No port VHF station. In an emergency, vessel can contact J.M.S.A. on Channel 16.

TUGS: 1×2,200 h.p. and 1×2,500 h.p.

BERTHING:

Diabo 10,000 ton Wharf: Public wharf for cement in bulk and clinker. Max. LOA 165 m. Max. beam 28.0 m. Max. draft 8.9 m. Clear height less than 13.0 m. Loading by shore conveyor belt. Rate: 650 tonnes/hr. for cement in bulk and 1,000 tonnes/hr. for clinker.

Diabo "A" Pier: Private pier for discharging coal in bulk. Max. LOA 125 m. Max. beam 15.0 m. Max. draft 7.5 m. Discharging rate by shore equipment 350 tonnes/hr.

Diabo "K" Pier: Private pier for cement in bulk and clinker. Max. LOA 125 m. Max. beam 15.0 m. Max. draft 6.20 m. Loading by shore conveyor belt at 650 tonnes/hr.

15,000 ton Wharf: Public wharf for logs and lumber. Max. LOA 185 m. Max. beam 32.0 m. Max. draft 8.70 m. Ship's gear used for discharging, rate 850 cu.m./day with 3 gangs working 0800 hrs. – 1700 hrs.

5,000 ton Wharf: Public wharf for domestic vessels.

3,000 ton Wharf: Public wharf for domestic vessels.

Minato Machi Wharf: Public wharf for domestic vessels.

Nittetsu Dolphin Pier: Private pier for limestone in bulk. Max. LOA 240 m. Max. beam 32.5 m. Max. draft 12.5 m. (even keel). Clear height less than 13.5 m. Limestone loading by shore conveyor belt and 2 loaders, rate 1,300 tonnes/hr.

BULK HANDLING FACILITIES: See "Berthing".

STEVEDORES: To be arranged by shipper/consignee against the shipping plan. Workable 24 hours for cement/limestone loading, including Sundays and holidays.

Discharging of logs, 0800 hrs. – 1700 hrs., except Sundays and holidays. No overtime possible.

MEDICAL: No advance notice required, except for Sundays and holidays and in an emergency.

DENSITY: 1018 – 1023, average throughout the year.

FRESH WATER: Available at berth. Rate 10 t.p.h.

FUEL: Supply prohibited under local port regulations, except in drums.

CONSULS: None.

REPAIRS: Only minor repairs.

DRY DOCKS: None.

REPATRIATION: Possible.

AIRPORT: Kochi Airport, about 70 km. 19 flights to Osaka, 2 flights to Nagoya and 5 flights to Tokyo daily.

TELEPHONES: Not available.

POLICE/AMBULANCE/FIRE: Contact Agent.

CUSTOMS ALLOWANCES: Only allowed to take 60 cigarettes ashore, but no spirits.

SERVICES: None.

SHORE LEAVE: Crew issued with shore passes valid for 15 days.

DELAYS: Sometimes there are delays in berthing and unberthing, due to fishing boats towing nets in the vicinity of harbour entrance, anchorage and channel.

GENERAL: Susaki is a complex port as the Fishing Union has strong powers, and demands that the following conditions are met:

1. Ships must use recognised anchorage.
2. Ships must berth within one day of anchoring.
3. Ships must not show too many lights at night.
4. Ships must not dispose of any waste into the sea (dust, scraps of food, any waste material or oily water) at anchorage or in inner harbour.

TAGONOURA: 35.08 N. 138.42 E. (See Plan)

PORT LIMITS: Commences. 5 cables from the harbour entrance. A vessel is considered an "arrived ship" at this point.

DOCUMENTS: Same as "Shimizu".

PILOTAGE: Ordered 24 hours in advance through Agents. If possible vessels should obtain Japanese Chart 1075 for the approaches and Japanese Harbour Plan No. (P) 98. Two fixed green leading lights visible 16 miles lead the ship through the entrance on a bearing of 323.5° True. Vessels should approach on this transit until 1 mile off the breakwater entrance which is marked by an Occ. G. 6 sec. 14.4 mile light on the West Breakwater and a Occ. R. 6 sec. 15 mile light on the East Breakwater. The Pilot will board from a tug (190° × 2 miles from West Breakwater Lighthouse). 2 tugs will attend for the entrance transit.

ANCHORAGES: Due to the steep nature of the coast no roadstead anchorages are available. In the event of having to wait for Pilot or weather to moderate it is necessary to steam outside the entrance or anchor and wait near Shimizu Quarantine Station.

RESTRICTIONS: The allowable draft should be verified with the Agents before arrival as this does vary, the average being 6.5 m. alongside the berth. The entrance channel has a minimum depth of 9 m. at high tide.

MAX. SIZE: LOA 600 ft., beam 100 ft. These extremes are likely to be increased as the port develops.

HEALTH: Radio Pratique is available (See "Late Reports").

RADIO: When nearing Shimizu a call can be made via Shimizu Radio VHF requesting them to telephone ETA to Tagonoura Pilot.

TUGS: 2 tugs normally required. These are ordered from Shimizu in advance by Tagonoura Agents. The same applies on departure.

BERTHING:

Berth	Length (m.)	Depth (m.)	Permissible Draft (m.)	Capacity (d.w.t)
Yoshiwara Wharf No. 1	167	9.0	9.0	1×10,000
2	125	7.5	7.5	1× 5,000
Chuo Wharf 1 & 2	410	9.0	9.0	2×10,000
3 & 4	250	7.5	7.5	2× 5,000
Asahi Kasei Wharf	170	9.0	9.0	1×10,000
(Private)	80	7.5	7.0	1× 5,000
Fuji Wharf No. 1, 2 & 3	375	7.5	7.5	3× 5,000
4	115	6.5	6.5	1× 3,000
Suzukawa Wharf	485	5.5	5.5	6× 2,000

SPECIALISED CARGO FACILITIES: Tagonoura handles bulk phosphates, etc. Also liquid chemical carriers and tankers.

BRIDGES: None.

STEVEDORES: Private arrangements. Working hours: Weekdays 0830 – 2130 hrs. Labour not available 1st and 3rd Sundays of each month or January 1st-4th or August 16th.

MEDICAL: Hospital and immediate services available.

TANKERS: One oil wharf. Max. permissible draft 5.5 m. Capacity 5×2,000 d.w.t. vessels.

DENSITY: 1021.

FRESH WATER: Unlimited. Available on the berth, rate less than 20 t.p.h. Cost Yen 400 per ton.

FUEL: All grades and lubricants available from Chiba, Toyko, Yokohama and Shimizu.

REPAIRS: Minor repairs only available.

DRY DOCK: None.

SURVEYORS: Cargo Inspectors and Surveyors of all societies are available through the Agents.

GANGWAY/DECK WATCHMEN: Available but not necessary.

HATCHES: Opened and closed by crew.

CUSTOMS ALLOWANCES: Same as "Shimizu".

CARGO GEAR: Ship's gear.

REPATRIATION: Possible. Frequent train services to Toyko.

AIRPORT: Narita Chiba Prefecture near Tokyo.

TIME: GMT plus 9 hours throughout.

EMERGENCY CO-ORDINATION CENTRE: Maritime Safety Agency Tagonoura Branch Tel: (0545) 32-0154.

TELEPHONES: Available near Chuo Wharf and Yoshiwara Wharf.

STORING: Vessels can be stored by trucks proceeding alongside the berth and can use fork lift trucks on the wharf to handle stores.

SERVICES: All services available at short notice from Shimizu or Toyko.

SHORE LEAVE: Possible.

IDENTIFICATION CARDS: 7 day passes issued, extended if needed.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Japanese Yen (Y).

AUTHORITY: Tagonoura Port Administration Office, 2-1 Suzukawa-cho, Fuji-shi, Shizuoka-ken, Japan 417. *Tel:* 0545-33-0495. *FAX:* 0545-33-1009. *Contact:* Mr.Taiji Kawaguchi, Director General. Mr.Takashi Nishijima, Manager.

TAKAMATSU: 34.21 N. 134.02 E. (See Plan)

DOCUMENTS: See "Niihama".

PILOTAGE: Inland Sea and Bay Pilotage should preferably be arranged through Agents with 72 hours notice. Urgent correction of ETA outside business hours should be cabled direct to Pilot Station. Inland Sea Pilot Association covers all inland sea ports. Pilotage is compulsory for vessels over 10,000 g.r.t. when passing Osaka Bay, Akashi Route and Bisan Route.

Pilots obtained from undermentioned Pilot Stations, depending upon vessel's last port of departure, and at Master's discretion. Pilotage available throughout 24 hours, and 72 hours advance notice preferred, thereafter advising any alterations. Most inland sea pilots also act as harbour pilots up to berth or anchorage at destination.

1. Tomogashima Pilot Station (entrance to Osaka Bay): Position Lat. 34° 10' N, Long. 135° 00' E. Cable address "Baypilot Kobe". Telex: 5622617.
2. Wadamisaki Pilot Station: Position Lat. 34° 35' N., Long. 135° 08' 24" E. Cable address "Anjin Kobe".
3. Sekisaki Pilot Station: Position Lat. 33° 13' N., Long. 131° 55' 38" E. Cable address "Anjin Moji". Telex: 715303.
4. Hesaki Pilot Station: Position Lat. 33° 57' 00" N., Long. 131° 03' 00" E. Cable address "Anjin Moji". Telex: 715303.

ANCHORAGE: Master must obtain permission to anchor from Harbour Master before arrival. Depth 9.0 m. – 10.5 m.
RESTRICTIONS: Vessels may enter and leave during daytime only.
MAX. SIZE: See "Berthing".
HEALTH: Radio Pratique not available, as no officials stationed at the port.
RADIO: Recommended that Master communicates with Agents through Nagasaki Radio, which covers all ports in Japan.
VHF: No service available.
BERTHING:

Name of Berth	*Length (m.)*	*Depth (m.)*	*Permissible Draft (m.)*	*Permissible Length (m.)*	*Capacity (g.r.t.)*
"F" Area (Public)					
F-East Pier (A)	300	7.0	7.0	180	20,000
F-East Pier (B)	100	5.5	5.5	100	5,000
F-West Pier	370	10.0	10.0	200	30,000
F-North Pier	300	7.5	7.5	180	20,000
Anchorage (Public)					
No. 1 Anchorage	200	11.0	10.5	200	10,000
No. 2 Anchorage	250	11.0	10.5	200	20,000
No. 3 Anchorage	250	10.5	9.0	200	20,000
No. 4 Anchorage	200	10.0	9.0	200	10,000

STEVEDORES: At least 24 hours prior notice, excluding Sundays and holidays, required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew.

Overtime surcharges: 1630 hrs. – 2130 hrs., 0700 hrs. – 0830 hrs. – 60% to be added. 2130 hrs. – 0700 hrs. – 120% to be added. Sundays and holidays – 100% to be added.
MEDICAL: No advance notice required, unless urgent.
TANKERS: No facilities.
DENSITY: 1025.
FRESH WATER: F-East Pier (A): Water can be supplied from pier.

Water barge available from Marugame and Onomichi.
FUEL: See "Sakaide".
FIRE PRECAUTIONS: No specific precautions.
CONSULS: None. See "Kobe".
REPAIRS: Only minor repairs possible.
DRY DOCKS: See "Sakaide".
GANGWAY/DECK WATCHMEN: See "Sakaide".
CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificate sometimes required by stevedores when cargo gear maintenance appears to be poor.
CUSTOMS ALLOWANCES: See "Sakaide".
CARGO GEAR: See "Sakaide".
SURVEYORS: See "Sakaide".
REPATRIATION: See "Sakaide".
AIRPORT: Takamatsu Airport.

4 flights Takamatsu/Tokyo by All Nippon Airlines.
7 flights Takamatsu/Osaka by All Nippon Airlines.
3 flights Takamatsu/Tokyo by Japan Air System.
4 flights Takamatsu/Sapporo by Air Nippon.
TIME: GMT plus 9 hours. No alterations made to clocks during year.
HOLIDAYS: National holidays: See "Niihama".

Local holidays: New Year (December 31st – January 3rd).
POLICE/AMBULANCE/FIRE: Police 110; Ambulance/Fire 119.
TELEPHONES: No facilities for placing telephones on board.
BANKS: No American/European banks. It is possible to collect foreign currency, especially U.S.Dollars, at the 114 Bank Ltd.
STORING: See "Prelims".

1. Available by barge and truck.
2. Available during cargo operations.
3. Trucks proceed alongside at the berth.
4. Available.
5. No special regulations.
6. Yes.

SHORE LEAVE: See "Sakaide".
AUTHORITY: Takamatsu Port and Administration, 1-30, Asahi-mach, Takamatsu City, Kagawa, Japan. *Tel:* 0878-21-7008. *Contact:* Harbour Master.

TAKUMA: 34.14 N. 133.41 E. (See Plan)

DOCUMENTS: See "Sakaide".
PILOTAGE: See "Sakaide".
RESTRICTIONS: No restrictions, but pilots are not available for berthing and unberthing after sunset.
MAX. SIZE: See "Berthing".
HEALTH: See "Sakaide".
RADIO: See "Sakaide".
VHF: No service available.
TUGS: See "Sakaide".
BERTHING:

Name	*Length (m.)*	*Depth (m.)*	*Max. Draft (m.)*	*Max. LOA (m.)*	*Capacity (d.w.t.)*	*Main Cargoes Handled*
Takuma Public Wharf:						
Quay No. 1	90	5.5	5.0	N/S	N/S	Steel coils
Quay No. 2	130	7.5	7.0	N/S	N/S	Logs/steel, coils
Maruichi Kosan Quay	130	7.5	7.0	N/S	4,000	Logs

(N/S – Not Specified)

Discharge Anchorage	*Position*	*Permissible Draft (m.)*
From Mitamaiwa Beacon:		
"A" (for American logs)	25°×650 m. 34° 15' 00" N., 133° 40' 41.0" E.	11.0
"B" (for American logs)	50°×1,000 m. 34° 15' 02.5" N., 133° 41' 01.0" E.	10.0
"C" (for Nanyozai logs)	70°×700 m. 34° 14' 49.0" N., 133° 40' 56.5" E.	8.0

Notes: LOA of vessels is restricted to less than 180 m. at "A" Anchorage, according to Pilot's orders. According to Takuma Fishery Union's restrictions, a maximum of 3 ships (2 American log carriers and 1 Nanyozai carrier) are allowed to be accommodated at the same time for discharging logs in each anchorage. If both "A" and "B' are vacant, "B" should be used. Nanyozai carriers may use "A" and "B" until American log carriers arrive.

Due to deposit of wooden bark at/around Public Wharf "Quay No. 2", tidal condition and ship's maximum draft to be carefully considered for berthing.
CRANES: Public Wharf No. 1: 1×20 ton crane.

Maruichi Kosan Quay: 1×30 ton crane.
STEVEDORES: See "Sakaide".
MEDICAL: See "Sakaide".
TANKERS: No facilities.
FRESH WATER: Available at Takuma No.2 Quay by shore line with capacity 40 t.p.h.

Available at anchorage by water barge from Marugame. Rate of delivery 100 t.p.h.
FUEL: See "Sakaide".
FIRE PRECAUTIONS: No specific precautions.
CONSULS: None. See "Kobe".
REPAIRS: Only minor repairs possible.
DRY DOCKS: None.
GANGWAY/DECK WATCHMEN: See "Sakaide".
OPENING/CLOSING HATCHES: See "Sakaide".
CUSTOMS ALLOWANCES: See "Sakaide".
SURVEYORS: See "Sakaide".
REPATRIATION: Possible.
AIRPORT: Takamatsu Airport (See "Sakaide").
POLICE/AMBULANCE/FIRE: See "Sakaide".
BANKS: See "Sakaide".
STORING: See "Sakaide".
SHORE LEAVE: See "Sakaide".
AUTHORITY: Takuma Harbour Office, 1328 Takuma, Takuma-Cho, Kagawa Pref., Japan. *Tel:* 0875-83-2373. *Contact:* Port Captain.

TANABE: 33.44 N. 135.21 E. (See Plan)

DOCUMENTS:
Harbour Master: Report of arrival and departure.
Wakayama Customs Office (Tanabe Branch): 1 copy each of the following.

Ship's Register
International Tonnage Certificate.
Last Port Clearance
3 copies Crew List
3 copies Passenger List
1 copy Stores List
1 copy Declaration of Crew's Baggage (First port only)
1 copy Cargo Manifest (Discharge & through cargo)
1 copy Declaration Inward of vessel
1 copy Parcel List

Osaka Immigration Office (Wakayama Branch):

1. Before ship's arrival: "Notice of Ship's Arrival" is to be submitted 24 hours before ship's arrival with Crew List (Name, Nationality, Date of Birth, Number of Passport or Seaman's Book, Rank).

2. On ship's arrival: "Report of Ship's Arrival" is to be submitted with Crew and Passenger Lists (if already submitted before ship's arrival, not required).

3. On Ship's Departure: "Report of Ship's Departure" to be submitted with Crew List if any changes.

Note: It is required that ship's Agent is able to guarantee the identification of crew.
PILOTAGE: Not compulsory, but if required Agent to be advised 72 hours prior arrival. No pilotage sunset to sunrise. Anchorage waiting for Pilot Lat. 33° 42' N., Long. 135° 19' E. Pilot station 2,200 m. 315° from Banshono-hana Lighthouse. Depth 38 m.
ANCHORAGES: (a) Lat. 33° 42' 05" N., Long. 135° 20' 34" E. (b) Lat. 33° 42' 08" N., Long. 135° 21' 01" E.

Depth 19 m. Bottom, sand and mud.

In Tanabe Port, there are many rocks, and therefore it is required to investigate the port passage sufficiently, according to the Chart of Tanabe Port which is issued by Maritime Agencies (Chart No. 74).

RESTRICTIONS: Max. draft 10.5 m.

When a vessel loaded with explosives or dangerous cargo is entering the port, she must obey the instructions issued by Port Master when outside the port.

There is no restriction for night arrival.

HEALTH: Vessels usually anchor in the port of Owase or Shimotsu, where the authorities board and grant Free Pratique.

Also see "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

Tanabe Maritime Safety Office, call sign: JNH.

The contents of communications must be concerned with ship's arrival and departure, and maritime safety.

VHF: Call: "Tanabe Hoan".

Communication to be concerned with ship's arrival and departure arrangements and port safety affairs.

Telephone number of Maritime Agencies: 0739-22-2000.

TUGS: Tugs can be arranged from Wakayama Port.

BERTHING: Buoy A: Depth 10.7 m., max. draft 10.5 m. Capacity 30,000 g.r.t. (logs only).

STEVEDORES: Available through Kinan Port Transport Union.

MEDICAL: No advance notice required unless urgent. In an emergency contact Maritime Agencies.

TANKERS: Proceed to Shimotsu.

DENSITY: About 1030.

TIDE: Tidal range: Maximum plus 2.13 m. Minimum minus 0.21 m.

FRESH WATER: Not available.

FUEL: Bonded oil will be brought from Shimotsu or Kobe, when required.

CONSULS: None.

REPAIRS: No facilities available.

GANGWAY/DECK WATCHMEN: Not necessary.

OPENING/CLOSING HATCHES: By ship's crew.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore but no spirits.

AIRPORT: Nanki Shirahama Airport about 25 km. distant. 2 Domestic flights daily to Tokyo.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

POLICE/AMBULANCE/FIRE: Tanabe police office, tel. 0739-22-1226; Ambulance, tel. 0739-22-0931; Fire department, tel. 0739-22-0931.

SERVICES: None available locally but obtainable from Osaka.

SHORE LEAVE: Local Immigration Offices issue shore pass valid for only 7 days, but 7 days' extension possible if ship stays longer.

AUTHORITY: Tanabe Doboku (Public Works) Office, 23-1, Asahigaoka, Tanabe City, Wakayama Pref., Japan. *Tel:* (0739) 22-1200.

TOBATA: 33.55 N. 130.51 E. (See Plan)

(See "Kanmon-Ko")

DOCUMENTS: When vessel arrives direct from a foreign port, Customs officials will board to search and the following documents are to be submitted.

Ship's Register.
International Tonnage Certificate.
Voyage Memo (Ports of call).
Last Port Clearance.
3 Crew Lists, including Passport Numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Compulsory. Harbour Pilots and Inland Sea Pilots are available at the Pilot Station or quarantine anchorage. Mutsure Pilot Station. Lat. 33° 59' 30" N., Long. 130° 53' 00" E.

Inland Sea Pilot Association covers all Inland Sea Ports. Pilotage compulsory for vessels over 10,000 g.r.t.

Pilots obtained from one of three Pilot Stations, dependent upon vessel's last port of departure and at Master's discretion. Pilotage available throughout 24 hours, and 72 hours' advance notice preferred, thereafter any alterations. Most Inland Sea Pilots also act as Harbour Pilots up to berth or anchorage at destination.

Note: VHF communication available with Inland Sea Pilot Stations.

1. Wadamisaki, at entrance to Kobe (Vessel transiting Kii Straits) Position Lat. 34° 34' 09" N., Long. 135° 11' E. Cable address: "Anjin Kobe".

2. Sekisaki, 3 miles South of Sekisaki Lighthouse (Vessel transiting Bungo Channel). Position Lat. 33° 13' N., Long. 131° 54' E. Cable address: "Anjin Moji".

In the event of bad weather, recommended vessels proceed for shelter as near as possible, having due regard to safety, to Sekisaki Pilot Station.

3. Hesaki at East side of Kanmon (Shimonoseki) Straits. Position Lat. 33° 56' 24" N., Long. 131° 03' 12" E.

ANCHORAGES: Mutsure Quarantine Anchorage (See "Health").

RESTRICTIONS:

(*a*) Vessels exceeding 20,000 tons gross may berth only within 1 hour before and/or after slack tide. Vessels under 20,000 tons gross may berth regardless of current, if it does not exceed 5 knots.

(*b*) Night entry: Vessels under 10,000 gross tons may berth at Nos. 1, 2, 3, 4 and 8 wharves until 2200 hrs. in Summer season and 2100 hrs. in Winter season, subject to Harbour Master's permission and Pilot's agreement.

(*c*) Night departure: Vessels under 20,000 gross tons allowed to sail from Nos. 1, 2, 3, 4 and 8 wharves until 2200 hrs., regardless of current, provided they are moored with bow outward.

(*d*) Least depth in channel, 17.0 m.

MAX. SIZE: No. 4 Ore Pier: 160,000 d.w.t. or 250,000 d.w.t. with part load.

HEALTH: Formalities will be carried out at the anchorage. Quarantine station 105° – 2,800 m., (800 m. square) from Mutsure Lighthouse. Radio Pratique available.

Also see "Moji" and "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

VHF: Shimonoseki Port Radio Station on Channels 16, 12, 14, 20 and 22. Pilots on Channel 13.

TUGS: Two tugs join vessel at entrance of harbour (in front of harbour signal station). Vessels exceeding 20,000 tons gross require 3 tugs, vessels exceeding 50,000 g.r.t. require 4 tugs and LNG/VLCC's require 5 tugs. One of them will join vessel at Mutsure leading into main harbour and 2 join vessel at entrance of port (in front of harbour signal station).

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by radio.

Berth	*Length* (m.)	*Depth* (m.)	*Permissible Draft* (m.)	*LOA* (m.)	*Shore Cranes*
(Ore Pier)					
Wharf No. 1	200	10.5	10.5	200	4×30 t.
2	200	11.0	11.0	200	
3	250	13.0	13.0	270	
4	405	17.5	16.0	327	
8	267	11.5	11.5	250	
9	267	9.5	9.5	170	
Loading Pier					
Uchiura No. 5 Wharf	190	9.5	9.5	190	1×25 t. 1×10 t.
Shoko Wharf					
Tobata	150	8.5	8.5	150	
Shin Nittetsu					
Kagaku (RI)	105	7.5	7.0	110	
Sakaigawa Public					
Wharf (RS)	299	7.5	7.0	120	

BRIDGES: Kanmon Suspension Bridge was built in 1973 across Hayatomo Channel (narrowest place in Kanmon Strait, width of fairway 530 m.) between Shimonoseki and Moji. The height of the bridge from sea level is 61 m. Vessels of 59 m. height must advise Pilot Office.

STEVEDORES: At least 24 hours prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew. Overtime surcharges 1700 – 1900 hrs. (50% additional of basic stevedorage), 2100 – 0500 hrs. next morning (130% additional), Sundays/holidays (60% additional).

MEDICAL: No advance notice required, unless urgent.

TANKERS: *Kita-Kyushu LNG. Co.:* Max. size 125,000 d.w.t. Max. LOA 286 m. Max. draft 12.0 m. 3×16 in. (LNG). Discharge rate 12,000 kl./hr. 1×16 in. (boil off oil) discharge rate 12,000 kl./Hr.

DENSITY: Average density in the port is about 1019 – 1021 in Summer season, 1025 – 1026 in Winter season.

FRESH WATER: Available in connecting lines from shore side at Wharf Nos. 1, 2, 3, 4, 8 and 9. At buoys: from barges, arranged from Wakamatsu. Rate of delivery: 55 – 70 t.p.h., ex-hydrant, 60 t.p.h., barge.

FUEL: All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, Osaka Bay and Kanmon Port. At all other ports, bunkers will be lightered from the nearest bunker stock ports, at maximum 7 days prior notice.

FIRE PRECAUTIONS: Each tug is equipped with fire extinguishing system for attending emergencies on request.

CONSULS: See "Yawata".

REPAIRS: All types of repairs possible.

DRY DOCK: See "Shimonoseki".

GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo aboard.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore but no spirits.

REPATRIATION: Possible.

AIRPORT: Nearest is Fukuoka Airport, about 2 hours by train and taxi. Kitakyushu Airport about 40 minutes by taxi.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

POLICE/AMBULANCE/FIRE: Police 110 (just dial). Ambulance and Fire 119 (just dial).

TELEPHONES: Possible to place telephone on board.

SHORE LEAVE: Local Immigration Offices issue shore pass valid for only 15 days when Tobata is first port of call in Japan, extension possible if ship stays longer.

WIND/TIDE: South-easterly winds prevail in the warm seasons and North-westerly winds in the Winter season. The maximum velocity recorded in the past being 18 m./sec. The tidal range is 2.145 m. The current at the channel leading to new port runs Southward at the flood and Northward at the ebb. The maximum speed of the current is about 3 knots. There is no current in the dock.
AUTHORITY: Kitakyushu Port and Harbor Bureau, 2-7 Nishi-Kaigan, 1-chome, Moji-Ward, Kitakyushu City, Fukuoka Pref., 801 Japan. *Tel:* (093) 321-5941. *FAX:* (093) 321-5915.

TOKACHI: 42.15 N. 143.18 E. (See Plan)

Port Status: Closed Port.

DOCUMENTS: This port is defined as a Closed Port, so in-port formalities have to be completed at the last calling port in Japan, or at a wayport such as Kushiro.
Ship's Register (and International Tonnage Certificate, if Ship's Register does not show gross and nett tonnages).
Last Port Clearance.
6 Crew Lists, including Passport numbers.
4 Passenger Lists.
2 Stores Lists.
2 Declarations of Crew's Baggage.
3 Voyage Memo (Ports of Call).
PILOTAGE: Not compulsory, but recommended. Pilots are available at the Quarantine Anchorage of Kushiro. 3 days notice of ETA is required.
ANCHORAGE: Bottom sand and mud. Minimum depth 8.00 m. In passage, depth is 9.00 m. No Quarantine Anchorage at Tokachi.
RESTRICTIONS: Vessels are allowed to enter day and night, but pilots are only available from sunrise to sunset.
Draft limitation in channel is 10.0 m.
MAX. SIZE: See "Berthing".
HEALTH: See "Documents".
Also see "Late Reports".
RADIO/VHF: Not available.
TUGS: Available from Kushiro or nearby port with sufficient advance notice.
BERTHING:

Name of Berth	*Length* (m.)	*Depth* (m.)	*Max.Size* (d.w.t.)
South Pier No. 1	90	5.5	1×2,000
South Pier No. 2 and 3	230	5.5	2×2,000
South Pier No. 4	130	7.5	1×5,000
No. 2 Wharf	260	7.5	2×5,000
No. 3 Wharf	185	9.0	1×15,000
No. 3 Wharf	130	7.5	1×5,000
No. 3 Wharf	90	5.5	1×2,000

CRANES: None.
BULK CARGO FACILITIES: None.
SPECIALISED CARGO HANDLING FACILITIES: None.
BRIDGES: None.
STEVEDORES: At least 24 hours prior notice, excluding Sundays and holidays, required in order for Agent to arrange stevedores. Vessel must constantly keep Agent advised of ETA.
Normal working hours: 0800 hrs. – 1700 hrs. Overtime: 1700 hrs. – 2100 hrs. Sundays and holidays subject to negotiation. Cement gangs are available.
MEDICAL: No advance notice required unless urgent.
TANKERS: No facilities.
DENSITY: Average 1025, HW and LW.
FRESH WATER: Not available.
FUEL: Not available.
FIRE PRECAUTIONS: Ship's watchmen to be on duty.
CONSULS: None.
REPAIRS: No facilities.
DRY DOCKS: None.
SURVEYORS: Cargo surveyors attend from Kushiro. No classification societies available.
GANGWAY/DECK WATCHMEN: Not specially required.
HATCHES: Opening/closing by ship's crew.
CUSTOMS ALLOWANCES: Crew may take 60 cigarettes ashore.
CARGO GEAR: No shore facilities.
REPATRIATION: Not possible.
AIRPORT: Obihiro Airport about 80 minutes by taxi. 4 daily flights to Tokyo.
TIME: GMT plus 9 hours. No alterations made to clocks during year.
HOLIDAYS: 14th to 16th August, 31st December to 6th January.
POLICE/AMBULANCE/FIRE: Police H.Q. 01558-2-2151, or Emergency 110. Hiroo General Hospital 01558-2-3111. Fire H.Q. 01558-2-2730, or Emergency 119.
EMERGENCY CO-ORDINATION CENTRE: Hiroo M.S.A. to be contacted directly on VHF Channel 16.
TELEPHONES: Not available.
SERVICES: None.
BANKS: None.
SHORE LEAVE: Local Immigration Officer of Kushiro issues shore passes valid for 15 days.
SHIP SUPPLY SERVICE: Not available.
IDENTIFICATION CARDS: Shore passes are issued by local Immigration Officer of Kushiro.
REGULATIONS: Closed Port, normal regulations.
DELAYS: None.

TOKUSHIMA-KOMATSUSHIMA: 34.00 N. 134.36 E. (See Plan)

DOCUMENTS:
Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
6 Crew Lists including Passport Numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).
Ship's Agent will prepare Inward/Outward Declaration, 5 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.
PILOTAGE: Not compulsory. 3 authorised licensed Pilots available.
ANCHORAGES: Situated at Western corner of Komatsushima Bay and port protected by three breakwaters, North, East and South covering 396,700 sq. m. Depths of water at anchorages as follows:
(a) Inside Breakwater 8 m. – 10 m.,
(b) Outside Breakwater 8 m. – 13 m.,
(c) Wharf 8.50 m.
RESTRICTIONS: Vessels must get permission and instructions where to anchor from Port Captain before arrival. Wharf and Inner Harbour: Entering and sailing usually only during day-time regardless tide and current. Outer Harbour: Entry and sailing anytime.
MAX. SIZE: Anchorage inside breakwater: Length 175 m., breadth no limit, draft 8.50 m.
Anchorage outside breakwater: Length 200., breadth no limit, draft 10.0 m.
Shinko Wharf: (Suitable 27,000 d.w.t.) Length 175 m. Draft 8.5 m.
Kanaiso Wharf. (Suitable 30,000 d.w.t.) Length 170 m. Draft 8.5 m.
Kanaiso Wharf. (Suitable 42,000 d.w.t.) Length 200 m. Draft 10 m.
Tsuda Bussen Wharf (Suitable *27,000 d.w.t.) Length 174 m. Draft 9.0 m.
Tsuda Dolphin Berth (Suitable *27,000 d.w.t.) Length 174 m. Draft 9.0 m.
* Approximate.
HEALTH: Quarantine Officers will attend vessel only from daylight to sunset and Master to show all Vaccination Cards, Derat Exemption Certificate. In case vessel arrives from cholera-infected area within 10 days, Master must advise crew and passengers health condition to respective Quarantine Office through ship's Agent prior to arrival and close all soil pipes before entering port.
Also see "Late Reports".
RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.
TUGS: Wharf and Inner Harbour: Join vessel at Sea Anchorage, always using tug's line without charge. Outer Harbour: No tug required in normal conditions. 1 × 3,000 h.p. and 1 × 2,400 h.p.
BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent generally by telegram.
(a) *Quays*

Port Area	*Name of Facility*	*Depth of Water* (m.)	*Length* (m.)	*No. of Berths*
Public				
	Shinko Wharf	9.0	150	1
	Kanaiso New Quay	11.0	200	1
	Kanaiso Quay	9.0	170	1
	Shinko West Quay	4.5	91	1
	Shinko South Quay	6.4	221	2
	Shinko North Quay	6.4	218	2
	Honko Ferry Jetty	6.5	260	1
	Okinosu Quay	5.5	108	1
	Suehiro Quay	5.0	300	4
	Tsuda Quay	5.5	270	3
	Tsuda Quay	10.0	185	1
	Bandai Chuo Quay	5.0	207	3
Private				
	Sanyo Kokusaku Pulp Jetty	6.5	50	1
	Nankai Ferry Jetty	5.5	85	1
	Ocean Ferry Quay	7.5	130	1
	Tokushima Hanshin Ferry Quay	6.4	112	1
	Tokushima Ferry Quay	4.0	88	1

(b) *Mooring Buoys, Dolphins:*

Harbour Area	*Name of Facility*	*Depth of Water* (m.)	*No. of Berths*
Public			
Komatsushima	Honko Buoy	9.0	1
Private			
	Tokuyama Cement Dolphin	6.4	1
	Sumitomo Cement Jetty	5.5	1
	Nokyo Shiryo Jetty	7.5	1

STEVEDORES: At least 24 hours' prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gears not rigged on berthing stevedores will do same for ship's crew at additional cost. Overtime surcharges 1630 – 2130 hrs. 60% additional of basic stevedorage; 2130 – 0500 hrs. next morning special additional; Sundays/holidays 100% additional.
MEDICAL: No advance notice required unless urgent.
DENSITY: 1015.

FRESH WATER: Alongside berth: Can be supplied by shore line with capacity of 25 t.p.h.

FUEL: All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, Osaka Bay and Kanmon Port. At all other ports bunkers will be lightered from the nearest bunker stock at maximum 7 days' prior notice.

CONSULS: None. Nearest consulates in Osaka.

REPAIRS: Only minor repairs up to 3,000 d.w.t.

DRY DOCKS: No dry dock. Nearest at Hitachi Shipbuilding & Engineering Co. Ltd., Chikko Works, Osaka; Kawasaki Heavy Industries Ltd., Kobe and Mitsubishi Heavy-Industries Reorganised Ltd., Kobe Shipyard & Engine Works.

GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 50 cigarettes to take ashore but no spirits.

AIRPORT: Nearest airport Tokushima (10 miles North) where Japan Air System, have 10 flights to Osaka, and 5 to Tokyo.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

POLICE/AMBULANCE/FIRE: Police Tel: 110; Ambulance 119; Fire 119.

TELEPHONES: No facilities for placing telephones on board.

SERVICES: None.

SHORE LEAVE: Local Immigration Offices issue shore pass valid for only 7 days, but 7 days' extension possible if ship stays longer.

AUTHORITY: Komatsujima Port and Harbour Office, No. 1-11 Sotobiraki, Komatsujima-cho, Komatsujima City, Tokushima Pref., Japan. *Tel:* (08853) 3-2245.

TOKUYAMA: 34.02 N. 131.48 E. (See Plan)

LOCATION: Port situated in Yamaguchi Prefecture on Western part of mainland, facing Seto Inland Sea. Surrounded by Oshima Peninsula on the East, by Otsu-Shima and Uma-Shima (islands) on the S.W. and by the land on the North forms a large bay with deep water suitable for shelter. Sen-Shima and Kurokami-Shima (islands) lying in harbour, divide it into Tokuyama Section and Tonda Section.

DOCUMENTS: When vessel arrives direct from a foreign port, Customs officials will board to search and the following documents are to be submitted.

Ship's Register.
International Tonnage Certificate.
Voyage Memo (Ports of Call).
3 Crew Lists, including Passport numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's agents will prepare Inward/Outward Declaration, Cargo Manifest and Cargo Manifest in Transit using specific forms. Therefore ship's agents should be provided with necessary information about details of cargoes in advance.

Immigration. Immigration Officials attend from Tokuyama. They board vessel on arrival to examine passports, Discharge Books and/or other equivalent travel documents, and provide 7 day landing passes for crew members and passengers. One copy each of Crew List and Passenger List are required by them. Providing ship's Agent with a Crew List beforehand will be a great help in expediting Immigration business on vessel's arrival. When vessel stays in port more than 7 days, the landing passes will be extended every 7 days on application. In event that crew members, without entry visas, are to be landed for repatriation or transfer, Immigration will not permit their landing unless passage, by either sea or air, ensuring the prompt departure from Japan (within 72 hours) of these men has been booked, or unless vessels to which they are to be transferred, arrive in Japan within 5 days. Also see "Shipmaster's Report".

PILOTAGE:

Inland Sea Pilot (Sekisaki/Tokuyama): Not compulsory. Agent gives 24 hours' notice to Pilot Association Moji, and advise if ETA changed. Master to cable "Anjin Moji" in case ETA changed and believes that his advice, if relayed by Agent, will not reach in good time; for example, at night before date of arrival at Sekisaki). Location: 3 miles South of Sekisaki Lighthouse (Lat. 34° 00' N., Long. 131° 54' E.). Pilot boards on vessel's arrival at Pilot Station day and night. No alternative area in event of bad weather. No VHF.

Harbour Pilot (Tokuyama Harbour or Tokuyama-wan): Not compulsory. Pilot boards in Tokuyama-wan at Quarantine Anchorage, or other anchorage to pilot to berth. Master who has not taken Pilot at Sekisaki should enter harbour without Pilot (no Pilot Station at entrance). Master to inquire position for anchoring from Agent prior arrival. Agent will advise Master in consideration of vessel's size, draft or number of other vessels, especially supertankers in port.

ANCHORAGES: Quarantine Anchorage, 34° 01' N., 131° 46' E., depth water 36 ft. Deeper water of more than 60 ft. about 2 miles S.W. of Quarantine Anchorage where Quarantine board supertankers. If harbour congested by vessels, especially supertankers, anchor Outer Harbour. In this case Quarantine go to Outer Harbour if advised by Master or Agent. In emergency or unable contact Agent, vessel can talk with Harbour Master by VHF, Channel 16, calling "Tokuyama Hoan". No restriction for entry into and/or departure from the anchorages after nightfall.

RESTRICTIONS: Strictly no entry or departure after sunset.

MAX. SIZE: Largest recorded vessel to enter 275,000 d.w.t.,19.5 m. draft.

Tankers: *Berth*	*Max. d.w.t.*	*Max. LOA (m.)*	*Max. Safe Draft (m.)*
Idemitsu Sea Berth	275,000	340	19.50
Idemitsu Ohura No. 3	50,000	250	12.00
Idemitsu Ohura No. 5	150,000	300	12.00
Idemitsu Ohura No. 7 (L.P.G. Terminal)	56,188	250	13.00
Idemitsu Center	50,000	220	11.10
Nippon Seiro Jetty	40,000	200	10.00

HEALTH: Radio Agent for Free Pratique not more than 36 hours before arrival, advising full details of vessel and health conditions on board. When Free Pratique is granted by radio vessel will be required to submit the following documents to Quarantine Officer on arrival:

Maritime Declaration of Health.
Crew List.
Passenger List.
Derat Certificate (copy).
Declaration Inward.
Voyage Memo (Ports of Call).

The following vessels will not be able to get Radio Pratique:

A vessel that has been in contact with an infected area or a suspected infected area within 15 days of arrival.

If a vessel has on board any case, or any suspected case of infectious disease, within 15 days of arrival.

If a vessel does not possess a valid Derat or Derat Exemption Certificate.

Also see "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

TUGS: Join inside harbour. For supertankers outer harbour if requested. Tugs' lines used. 8 tugs available, up to 4,000 h.p.

BERTHING: Also see "Tankers". No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by radio.

Wharf	*Length (m.)*	*Depth (m.)*	*Capacity (g/t)*	*Cargo*
Tokuyama Soda Salt Pier	117	12.0	45,000×1	Salt/Cement Clinker
Tokuyama Soda Cement Pier	145	11.0	38,000×1	Cement in bulk
Nisshin Seiko Pier	66	6.0	1,200×1	Steel products
Harumi Public Piers 1 and 2	260	7.5	5,000×2	General cargo
Harumi Public Piers 3 and 4	370	10.0	15,000×2	General cargo
Harumi Public Pier No. 7	240	12.0	—	Containers

STEVEDORES: At least 24 hours prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew. Overtime surcharges 1630–2130 hrs. (60% additional on basic stevedorage), 2130–0830 hrs. next morning (120% additional on basic stevedorage), Sundays/holidays (100% additional on basic stevedorage).

Loading/Unloading Facilities:

(a) Gangs: Maximum 40 gangs are available.

Classification	*Regular Employees*	*Temporary labourers*
Stevedores	200	230
Longshoremen	110	80

Stevedoring Companies: Tokuyama Kairiku Unso Kabushiki Kaisha; Kamigumi & Co. Ltd.; Toyo Koun Co. Ltd. and Nippon Express Co. Ltd.

(b) Lighters: No lighter is available, but coastal boat available for use as substitute for lighters. 8,000 d.w.t. arrangeable with notice of 2 weeks in advance.

(c) Shore Cranes:

Wharf	*Capacity grab (tons)*	*Max. discharge rate (t.p.h.)*
Tokuyama Soda Salt Pier	10	500
Harumi Public Pier No. 7	36	Containers

(d) Floating crane: Capacity, 100 tons available from Kudamatsu.

(e) Average performance of loading/unloading: Loading: Cement in bags, 55 – 65 t.p.h./gang; Soda ash in bags, 40 – 50 t.p.h./gang; Fertiliser in bags, 55 – 65 t.p.h./gang. Salt in bulk, 500 – 550 t.p.h./ship. Clinker in bulk, 180 – 200 t.p.h./ship. Chrome Ore in bulk, 65 – 75 t.p.h./gang.

Working Hours: 1 labour shift. Normal working hours: 0800 – 1700 hrs. Overtime is possible by applying to Customs. No work can be arranged for during New Year Holiday (1st to 3rd January) and Holiday (14th to 16th August).

MEDICAL: No advance notice required unless urgent.

Hospitals: Asanoumi Hospital, Asami Hospital, Ishikai Hospital, Chuo Hospital, Ono Dental, Ishida Dental.

TANKERS: No slop facilities.

Berth	*Product*	*Shoreline*	*Discharge Rate (t.p.h.)*	*Hoses*
Idemitsu Sea Berth	Crude Oil	36"×1 30"×1	10,000	16"×2 Flexible, 8 ton derrick for each hose.
Idemitsu Ohura No. 3	Crude Oil	18"×1	5,000	12"×2 Chicksan joint
Idemitsu Ohura No. 5	Crude Oil	24"×2	5,000	12"×2
	Fuel Oil	30"×1	4,000	Chicksan
	Naphtha	24"×1	3,000	
Idemitsu Ohura No. 7	LPG	12"×2	1,200	Chicksan joint 12"×2 (liquid)
	Butane	8"×2		8"×2 (vapour gas)
	Naphtha	24"×1	3,000	
Idemitsu Centre	Fuel Oil	18"×1	2,000	8"×2 Chicksan Joint.
Nippon Seiro Jetty	Raw Oil	12"×1	700	8"×1 Flexible
	Fuel Oil	10"×1	500	8"×1 Flexible

Idemitsu Sea Berth: Located in Tokuyama Bay at the position of Lat. 33° 59.5' N., Long. 131° 46.1' E., consisting of 7 mooring buoys. 275,000 d.w.t. tanker can be accommodated at this berth, being moored to buoys fore and aft. 4 powerful tug boats and 2 line boats are engaged in berthing/unberthing. Depth of water 20 m. Also see "Report" below.

Nippon Seiro Refinery: The mooring berth consists of 1 oil pier and 2 mooring buoys, to which vessel is moored fore and aft, port side alongside pier, there are also dolphins fore and aft.

Nippon Zeon Wharf (25 ft.) for LPG only.

Operator's Report: 1983.

Idemitsu Kosan Tokuyama Sea Berth (Discharging terminal):

Multiple buoy mooring system berth with 1 or 2 anchors.

Berth operates 24 hours per day, 7 days a week. Ships moored and unmoored at daytime, weather or other circumstances permitting. Berth will not be closed due to any holidays.

Location: Lat. 33° 59' 12" N., Long. 131° 46' 00" E.

Pilotage: Not compulsory.

Approaches: In order to make use of slack water berthing operations should be commenced 2 hours before slack water.

Berth is to be approached on a course of 075° after passing N.W. of Iwa Island, anchorage position visible from ship's bridge just after passing Sukumo Island abeam to starboard.

After letting go anchor (port), turn anti-clockwise with tug's assistance and let out 3 shackles and approach berthing position and take in slack anchor chain.

In Winter (from November-March) monsoons prevail, let go starboard anchor when heading about 320° and port anchor is out to 5 shackles then let out both chains, and move astern into berth.

1st line out should be taken to either No. 1 or No. 2 mooring buoy, whichever is the nearest.

Berthing:

(a) Vessel must not proceed to starboard of yellow buoy, because North of transit line No. 2 and 3 buoys area becomes shallow with depths 17 m. – 19 m.

(b) If port anchor let out too fast or too much, ship cannot return to manifold position, as anchor position designed for 8 – 9 shackles on port anchor when ship made fast.

(c) When Berthing Master comes on board, please advise him of number of shackles on each anchor and length from bow to manifold.

(d) Wire mooring lines are better than hawsers especially in case of No. 1, 2, 3, 4, 5, 7 buoys where wire should be used (each using 2 wires) as these wires are used to adjust the manifold position.

(e) Mooring arrangement:
Port anchor 8 – 9 shackles
Starboard anchor 2 – 3 shackles
No. 1 – 7 buoys 2 lines to each

DENSITY: 1025.

FRESH WATER: Water barges available, 1 each of 450 tons, 350 tons and 160 tons. Hydrants at Harumi Public Pier and Idemitsu Central Pier. The rate of delivery: 50 t.p.h. from barge, 20 t.p.h. from hydrant. (Public hydrant 30 t.p.h.).

FUEL: Major oil companies are represented and all grades of marine oil can be delivered, usually by barge. Notice of 7 days required.

CONSULS: None.

REPAIRS: Minor repairs only.

DRY DOCKS: Kasado Dockyard in Kudamatsu-wan, entrance 3 miles East of Tokuyama-wan entrance. Largest dry dock for 90,000 tonners and two other dry docks/building docks.

GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore but no spirits.

AIRPORT: Hiroshima (about 40 minutes by Shinkansen), Ube (about 40 minutes by Shinkansen and taxi).

TIME: GMT plus 9 hours. No alterations made to clocks during year.

POLICE/AMBULANCE/FIRE: Police, tel. 110; Ambulance and Fire, tel. 119.

TELEPHONES: No facilities for placing on board.

SERVICES: From Moji, Kobe or Osaka.

SHORE LEAVE: See "Documents - Immigration".

AUTHORITY: Shunan Port Administration Office, 111, Chikko-cho, Tokuyama City, Yamaguchi Pref. *Tel:* (0834) 21-1787.

TOKYO: 35.43 N. 139.46 E. (See Plan)

DOCUMENTS:
Ship's Register.
International Tonnage Certificate.
4 copies Inward/Outward Declaration – (Form C.2000 prepared by Agent).
1 copy Berth Application (normally prepared by Agent).
3 Cargo Manifest (Form C.2030 prepared by Agent).
1 List Ship's Stores (Form C.2040).
2 Parcel List.
5 Passenger Manifest (Form C.2070).
5 Crew Manifest (Form C.2060).
1 Statement by Master (Form C.2020).
1 Declaration for Payment Tonnage Dues (prepared by Agent).
1 Maritime Declaration of Health.
1 Application for Shore Passes (prepared by Agent).
2 Baggage Lists (Form 5370).

PILOTAGE: 12 hours advance notice of ETA required. Pilot boats named Musashi, Tsukuba and Atago. No light or sound signals, use ship's radio in case necessity arises. Address: Tokyo Pilot Association, 26-82 Kaigan, Minato-ku, Tokyo 108 (at the Southern tip of the Shibaura Terminal). Tel: 03-3453-1691.

Pilot boards vessel outside harbour. Vessel awaits Pilot around "Quarantine Anchorage".

Vessels requiring a Pilot for the Uraga Channel should radio request to Anjin Yokosuka advising ship's details and arriving time at No. 1 Uraga Channel Light Buoy. It is compulsory for vessels of 10,000 g.r.t. or more passing through the Uraga Channel, the entrance to Tokyo Bay, to have a pilot on board. Uraga Channel Pilot embarks 5 miles S.S.E. of Kannonsaki Lighthouse, and will disembark on arrival at destination port limits. Applications for Uraga Channel Pilot should reach pilot office 24 hours before vessels arrival at No. 1 Uraga Channel Light Buoy.

Vessels of 10,000 gross tons or more should give "Notification of Traffic" to ensure safety of their navigation in or near Uraga Suido and Nakanose traffic routes (normally by Agent).

ADVANCE APPLICATIONS: Passenger ships and large vessels using mooring facilities must submit applications for use of facilities to port managers (the Port and Harbour Bureau of Tokyo Metropolitan Government) through shipping firms or Agents 3 days before entry into port so that they may have berths designated.

When they want to use anchorage facilities, they must submit applications for use of anchorage areas to Tokyo-Yokohama Port Director (the Port and Harbour Section of the Tokyo Maritime Safety Agency) to have anchorage sites designated. Small vessels of less than 300 gross tons do not need to submit anchorage application.

When ships of over 500 gross tons want to enter port at night (from sunset to sunrise), must submit applications in advance to Port Director and receive permission. Copy of written permission given to Master of ship when ship has entered port.

A ship carrying explosives or any other dangerous cargo must submit 2 copies of application in advance for permission to use port to Port Director. Such ships required to stay outside port in No. 3 Area. However, they will be allowed to enter port when Port Director considers it allowable.

ANCHORAGES: See "Advance Applications".

Quarantine Anchorage on starboard hand of No. 1 Fairway.

Sector "A" is a triangular sea area formed by line passing through point 180° and 400 m. from Light Buoy No. 16 and point 105° and 240 m. from same light buoy. Accommodates one 1,000 ton class ship or 2 ships of 500 ton class or smaller.

Sector "C" (263,330 sq.m.) is a space between Harumi Wharf and Toyosu Wharf. Accommodates five 2,000 ton class vessels.

Sector "D" (141,350 sq.m.) sea area enclosed by line drawn from point 217° and 400 m. from Northwestern tip of Tsukishima Fishery Base through No. 8 Mooring Buoy. No. 15 Buoy and Southern tip of Tsukishima Fishery Base. Accommodates 5 vessels smaller than 1,000 tons, but 2 if vessels larger than 700 tons.

RESTRICTIONS: Tokyo West Passage (No. 1 Passage) is long and narrow (4,200 m. × 300 m.) and carries considerable traffic. Vessels under 500 tons not permitted use Fairway when vessel over 5,000 tons is in transit. Depth 12 m.

Container vessels to/from Ohi, Aomi and Shinagawa Container Wharves may enter and depart at any time. Entry at night-time is subject to and must conform to the standard for night entry permission as set forth by the Tokyo Maritime Safety Office.

For other vessels, in principle, entry/departure time is restricted from sunset to sunrise. Entering vessels shall start from outside the port not later than 30 minutes before sunset (the time the vessel takes to moor or berth before sunset).

The 3rd Regional Maritime Safety Headquarters requests vessels to take the following safety measures:

(1) Taking pilots on board: Foreign flag vessels and non-experienced Japanese vessels should take pilots.

(2) Restriction on overtaking: Vessels of 10,000 gross tons or more and other particular vessels in the traffic route should not overtake a vessel of 500 gross tons or more.

(3) Restriction on speed: Vessels should not navigate at a high speed within the Bay.

(4) Restriction on entry into traffic route in poor visibility.

(5) Restriction on use of auto-pilot.

(6) Maintenance of communication with the Tokyo Wan Traffic Advisory Service Center: VHF Call: Tokyo Martis, VHF Channel 16 or 156.8 MHz. Working frequency: VHF Channel 14 or 156.7 MHz and Channel 22 or 161.7 MHz.

MAX. SIZE: Draft: Passenger ships: 9.54 m. for Harumi. General cargo ship: 8.63 m. for Harumi and 9.09 m. for Shinagawa and Aomi, and 11.81 m. for Ohi.

Tankers for Tokyo Gas Wharf (Toyosu), max. deadweight 35,000 tons, bulkers for Toyosu 36,000 tons.

Timber carriers for Timber Wharf (Land-lot No.15), max. size is limited by length overall 170 m. and draft 11.0 m. with high water.

Tide: These drafts are applied for low water. The difference between high and low water level is about 2.0 m.

The tidal height will be considered to decide maximum draft to be accepted, subject to Agreement with Marine Safety Office.

HEALTH: Radio Agent for Free Pratique not less than 12 hours and not more than 36 hours before arrival, advising full details of vessel and health condition on board. When Free Pratique is granted by radio vessel will be required to submit the following documents to Quarantine Officer on arrival: Maritime Declaration of Health, Crew List, Passenger List.

The following vessels will not be able to get Radio Pratique:

A vessel that has been in contact with an infected area or a suspected infected area within 15 days of arrival.

If a vessel has on board any case, or suspected case, of infectious disease within 15 days of arrival.

If a vessel does not possess a valid Derat or Derat Exemption Certificate.

Medical inspection of plants: When a report is received in advance from a ship by telegraph or other means of communication, Tokyo Office of the Yokohama Plant Disease Prevention Station must be notified by telephone or verbally in request for an on-the-spot inspection of plant in question.

Medical inspection of animals: When a report is received from a ship in advance by telegraph or other means of communication, the Tokyo Branch or the Haneda Branch of Animal Disease Prevention Station must be notified by telephone or verbally in request for an on-the-spot inspection of the animals.

Also see "Late Reports".

RADIO: Vessels entering into Tokyo Bay are watched at all times at Torigasaki, the entrance gate to Tokyo Bay, and record of passing the point is taken. As each ship passes point, this is immediately communicated by VHF radio telephone to head office of Tokyo Signal Communications Company. From here news communicated on normal telephone or on exclusive direct call telephone to interested parties (Also see "VHF").

Vessels over 200 m. in length or 25,000 gross tons or more carrying liquified gas and 10,000 gross tons or more are requested to send following notifications directly to the Chief of Tokyo Wan Traffic Advisory Service Centre.

(1) Notification of traffic routes.
(2) Report of position.
(3) Notification of change.
(4) Maintenance of communications with the Centre. Notification should be given to the Chief of the Centre by noon of the day before the estimated date of entering a traffic route of Tokyo Bay.

Notification should be made by one of the following methods:

(a) Radio communication: Call sign and call name "JGC Yokohama Hoan", calling frequency 500 kHz., 2,182 kHz, Channel 16 and working frequency 444 kHz., 2,150 kHz., and Channel 12.
(b) Telegram: Notification can be sent by a telegram directly to the Centre. The address is "TWTASC".
(c) Telephone: Centre accepts calls directly, Tel: 0468-43-8622/4.
(d) Telex: Telex should be sent to the Centre in the form of radio communications. Telex: 3852-463 TWTASC.
(e) Method of Notification of change: Notification of change should be made by VHF radio telephone, calling frequency Channel 16, working frequency Channel 12, and in the case of telephone, Tel: 0468-43-8622/4.

Recommended Master communicates with Agents through Nagasaki Radio which covers all ports in Japan.

VHF:

A. Transmitting antenna:	Located 39° 26' N. 139° 39' E.
B. Type:	Single communication – Yagi type. Plural communication – Corner reflector type.
C. Direction:	Southern part of entrance to Tokyo Bay and Port of Tokyo.
D. Frequency class:	F3E.
E. Frequency:	Simplex communication – 156.55 MHz, Channel 11 156.6 MHz, Channel 12 156.65 MHz, Channel 13 156.7 MHz, Channel 14 156.8 MHz, Channel 16 (for calling, answering and safety) Duplex communications – 161.5 MHz, Channel 18 161.6 MHz, Channel 20 161.7 MHz, Channel 22
F. Antenna power:	50 W.
G. Call sign:	Tokyo Port Radio.
H. Range:	Approx. 100 km. (straight range) S.E. side – About 20 nautical miles South of Nojimazaki. S.W. side – About 5 nautical miles North of Oshima Island. North side – Tokyo Port and Chiba Port.
I. Operating time:	All hours.

Ship Telephone: Uses VHF and is a service between navigating or anchored ships and subscriber telephones on land, and between ships connected via base station on land. Communicating sphere approximately 50 km. to 100 km. from base station. Base stations located so as to allow communication with any ship sailing along Japanese coasts.

TUGS: Tokyo Tug Center, Shibaura Uwaya, 26-101, Kaigan 3-chome, Minato-ku, Tokyo. Tel: (3) 3451-1761. Upon notification, tugs will be waiting in neighbourhood of the scheduled berth.

Tugs available: 4×2,600 h.p., 4×3,000 h.p., 4×3,200 h.p., 1×3,500 h.p. 8 tugs are equipped with fire fighting facilities. Tug's lines used.

BRIDGES: Tokyo Harbour Bridge, connecting Shibaura Wharf and Ariake Terminal, completed in 1993. Maximum clearance to waterline is 52.4 m.

STEVEDORES: Advance advices should be made 24 hours at latest before vessel's arrival order arrange necessary gangs.

Discharge rates (approx.):

(a) Iron, steel and scrap, using crane or magnet, about 1,000 tons/day.
(b) Coal, crane and bucket, 1,500/2,000 tons/day.
(c) Ores, grabs and bulldozers, 1,000 tons/day.
(d) Timber, 1,000 tons/day.
(e) Grain, crane with bucket or suction, 1,000 tons/day.

BERTHING: Any vessel entering port required to:

(1) Submit 1 each of "Declarations Inward/Outward of Vessels" to TMG and TMSA. See "Documents".
(2) Submit "Application for Berth" to TMG. See "Documents".
(3) Submit "Application for Designation of Anchoring Site" to TMSA (Form No. 13) regarding anchoring area.

Berthing will be in order of arrival, passenger and special cargo vessels excepted.

Name of Berth	*Length* (m.)	*Depth* (m.)	*Max. d.w.t.*	*No. of Berths*
Shinagawa (Foreign)	586	10.0	15,000	3
Shinagawa (Domestic)	520	3.0-8.0	6,000	3
Shinagawa Container Terminal	574	10.0	15,000	3
Shibaura	740	7.4	5,000	5
Shibaura	90	5.5		1
Hinode	564	6.7	3,000	6
Takeshiba	465	7.5	5,000	3
Tsukishima	266	7.5	5,000	2
Harumi	1,444	9 – 10.0	20,000	11
Toyosu	800	7 – 10.0	15,000	4
Ariake Terminal	1,500	7.5	5,000	11
Oh-i Marine Products Wharf	450	12.0	30,000	2
Oh-i Foodstuff Terminal	229	12.0	30,000	1
No. 15 Lumber Wharf	720	10.0–12.0	25,000	3
Oh-i Container Terminal	2,300	12.0–13.0	40,000	8
Odaiba Terminal	1,800	10.0	15,000	9
Aomi Container Terminal	1,350	12.0-14.0	35,000	4

There are many private and domestic wharves and other smaller public wharves in use and under construction.

CARGO HANDLING FACILITIES: See "Table" on following page.

TANKERS: No slop discharge facilities (See "Services"). One tanker berth only. Products handled, Naphtha and crude oil. Shorelines, one 12 in. for each product. Discharge rates 1,000 t.p.h. (Naphtha) 900 – 1,000 t.p.h. (Crude).

FRESH WATER: Water supply from hydrant by Tokyo Metropolis, and waterboat by private management.

(a) Water supply on wharves		
Application	Bureau of Port and Harbour Offices in charge of each wharf.	
Work of water supply	Tokyo Port Service Association.	
(b) Water supply by water boat		
Extra charge	Overtime from 0600 to 0800	50%
	from 1700 to 2200	50%
	from 2200 to 0600	100%
	Special district	50%
	Festival day	50%

In the case of less than 20 tons per time, it will be considered 20 tons supply.

(c) Price (basic rate)	Yen 650 per ton ex-wharf.
	Yen 900 per ton ex-water barge.

FUEL: All grades available. 24 hours' notice required.

MEDICAL: Hospitals, clinics and all specified facilities. Advance notice not necessary.

FIRE PRECAUTIONS: (Tankers).

1. Must enter port at dead slow speed preceded by patrol boat of TMSA, 1 tug boat each side of vessel and followed by fire patrol boat.
2. Engine to be kept ready for immediate use in case of emergency.
3. Tow lines to be placed over bow and stern with eyes close to water surface.

Note: No vessels allowed alongside a tanker during loading or discharging of inflammable liquids.

DEPARTURE PROCEDURE: Ship over 300 tons departing must hoist signal in daytime and 2 white lamps at night and make 2 prolonged blasts of whistles or siren 30 minutes before starts to move and then act according to signals given by signal station on Shibaura Quay. Departure notice must be submitted to Maritime Safety Agency and port managers (operations Section of Port and Harbour Bureau). Foreign ships must submit required documents in addition to above notice to Tokyo Custom House, Immigration Control Office.

CONSULS: Most countries have embassies and consuls in Tokyo.

REPAIRS: *Ship Repairer:* Ishikawajima-Harima-Juko Co. Ltd. Tel: 03-3244-5111. Telex: J22232 (Ichico), has 2 dry docks for vessels of 16,750 g.r.t. and 7,000 g.r.t.

DRY DOCKS: Largest dry dock: length 180 m.; width 24 m.; depth 7.27 m. Capable of accommodating vessel of 16,750 gross tons.

Also 1 other dry dock for ocean-going vessels of 7,000 tons.

SURVEYORS: American Bureau of Shipping, Kiyoken Building, 12-6 Takashima-cho, 2-chome, Nishi-ku, Yokohama 220. Tel: 045-441-1000.

Lloyd's Register of Shipping, No. 32 Mori Bldg., 4-30 Shibakoen 3, Minato-ku, Tokyo 105. Tel: 03-3438-0481.

Nippon Kaiji Kyokai, 28-2, Hamamatsu-cho, 1-chome, Minato-ku, Tokyo 105. Tel: 03-3434-2341.

CARGO HANDLING FACILITIES:

Wharf/Terminal	*Equipment*	*Capacity* tons	*Cargo Handled*	*Remarks*
Oh-i Terminal	18 container gantries	30.5-40.6	Containers	Straddle carriers and transtainers available.
Shinagawa Container Terminal	1 container gantry 2 container gantries	37.5 49.0	Containers	Ro-Ro facilities, Straddle carriers available.
Shinagawa (Foreign Trade)	2 unloaders 1 belt conveyor	250 t.p.h. 600 t.p.h.	Machinery, sugar, fruit.	3 transit sheds (18,118 sq.m.) Open storage 14,451 sq.m.
Shibaura (Foreign Trade)			Paper, cement, fertiliser, feed grain	2 transit sheds (4,665 sq.m.) Open storage 2,104 sq.m.
Hinode Terminal			Salt, paper, soda ash.	9 transit sheds (19,583 sq.m.) Open storage 6,806 sq.m.
Tsukishima Terminal			Marine products	
Harumi Terminal	4 portal jib cranes	5	Sugar, wheat, fruit, marine products.	Passenger ship terminal at Berth "HL"
Toyosu Energy Terminal			Gas, steel, coal, general cargo.	
Ariake Terminal			Gravel, sand, lumber, construction materials.	Open storage 92,163 sq.m.
Odaiba Terminal	2 gantry cranes at Berth 2	10	General cargo, steel, timber, fruit.	9 warehouses (64,766 sq.m.)
Terminal 15			Timber.	Storage capacity 400,000 tons. Open storage yard 257,004 sq.m.
Aomi Container Terminal	8 gantry cranes	30.5-40.6	Containers	No. 1 and No. 2 Public Berth

GANGWAY/DECK WATCHMEN: Necessary only in the case of valuable cargo.

OPENING/CLOSING HATCHES: Normally by crew.

CUSTOMS ALLOWANCES: (Tobacco) 200 cigarettes a week. (Wine and/or spirits) 760 cc's per crew member per week.

AIRPORT: Distance to new Tokyo International Airport (Narita Airport), approx. 60 km.

TIME: GMT plus 9 hours. Permanent.

HOLIDAYS: National Holidays: New Year's Day (Jan. 1st); Adult Day (Jan. 15th); Foundation Day (Feb. 11th); Vernal Equinox Day (around March 21st); Green Day (April 29th); Constitution Commemoration Day (May 3rd); Children's Day (May 5th); Respect-for-Age Day (Sept. 15th); Autumnal Equinox Day (around Sept. 23rd); Physical Education Day (Oct. 10th); Culture Day (Nov. 3rd); Labour Thanksgiving Day (Nov. 23rd) and Emperor's Birthday (December 23rd).

No cargo work on 1st or 3rd Sundays of each month, and no work from 31st December to 3rd January inclusive. Cargo work can be arranged on all other days including National Holidays.

POLICE/AMBULANCE/FIRE: Tokyo Water Police, 5-8-36, Konan, Minato-ku, Tokyo. Tel. (433) 2411. Call Fire Stations for ambulances. Tokyo Water Fire Station, 5-1-23, Kachidoki, Chuo-ku, Tokyo. Tel. (534) 0119.

TELEPHONES: (Also see "VHF").

Installed on ships moored at piers or jetties to allow telephone communications between ships and subscriber telephones on land and between ships.

BANKS: Sumitomo Trust & Banking Co., Ltd. Tel: 03-3278-3131. Telex: J28631, 02226049.

Yasuda Trust & Banking Co. Ltd. Tel: 03-3278-8111. Telex: J2223828 Ysdtbt.

Dai-ichi Kangyo Bank, Ltd. Tel: 03-3596-1111. Telex: J22379, J22315.

The Kyowa Bank Ltd. Tel: 03-3287-2111. Telex: J24275.

Mitsui Bank, Ltd. Tel: 03-3501-1111. Telex: J22378, J22559, J22643.

Sanwa Bank Ltd. Tel: 03-3216-3111. Telex: J22384.

Mitsubishi Trust & Banking Corp. Tel. 03-3212-1211. Telex: J24259.

The Nippon Trust & Banking Co. Ltd. Tel: 03-3272-1261. Telex: J24197.

Toyo Trust & Banking Co. Ltd. Tel: 03-3271-7881. Telex: J22717. Tytbki.

Industrial Bank of Japan, Ltd. Tel: 03-3214-1111. Telex: J22325.

Long-Term Credit Bank of Japan, Ltd. Tel: 03-3211-5111. Telex: J24308.

Nippon Credit Bank, Ltd. Tel: 03-3263-1111. Telex: J26921.

Branch Offices of Foreign Banks:

North American:

Irving Trust Company (Tokyo Branch). Tel: 03-3595-1131.

Bank of America National Trust and Savings Association. Tel: 03-3214-0241.

American Express International Banking Corporation. Tel: 03-3504-3341.

Wells Fargo Bank, N.A. Tel: 03-3214-1771.

Crocker National Bank. Tel: 03-3211-7241.

Chemical Bank. Tel: 03-3214-1351/9.

Continental Illinois National Bank and Trust Company of Chicago. Tel: 03-3216-1661.

Seattle First National Bank. Tel: 03-3212-6481.

Security Pacific National Bank. Tel: 03-3214-2721.

Chase Manhattan Bank: Tel: 03-3214-3361.

Rainier National Bank. Tel: 03-3214-5781.

National Bank of Detroit. Tel: 03-3214-7301.

Bankers Trust Company. Tel: 03-3214-7171.

The First National Bank of Chicago. Tel: 03-3245-1021.

Citibank, N.A. Tel: 03-3279-5411.

The First National Bank of Boston. Tel: 03-3211-2611.

Manufacturers' Hanover Trust Company. Tel: 03-3242-6511.

Marine Midland Bank, N.A. Tel: 03-3216-0531.

Mellon Bank, N.A. Tel: 03-3216-5861/4.

Morgan Guaranty Trust Company of New York. Tel: 03-3214-2761/8.

First Interstate Bank of California. Tel: 03-3211-0751/9.

European:

The Chartered Bank. Tel: 03-3213-6541.

Grindlays Bank, P.L.C. Tel: 03-3271-1151.

National Westminster Bank, Ltd.

Barclays Bank International, Ltd. Tel: 03-3214-3611.

Hongkong and Shanghai Banking Corporation. Tel: 03-3211-6461.

Midland Bank, Ltd. Tel: 03-3284-1861.

Lloyds Bank International Limited. Tel: 03-3214-6771.

Banca Commerciale Italiana. Tel: 03-3242-3521.

Algemene Bank Nederland, N.V. Tel: 03-3211-1760/9.

Amsterdam Rotterdam Bank. Tel: 03-3284-0701/2.

Credit Suisse. Tel: 03-3215-1681.

Swiss Bank Corporation. Tel: 03-3214-1731.

Union Bank of Switzerland.Tel: 03-3214-7471.

Westdeutsche Landsbank Girozentrale.Tel: 03-3216-0581.

Commerzbank, A.G. Tel: 03-3502-4371.

Banque de Paris et des Pays-Bas S.A. Tel: 03-3214-5881.

Societe Generale de Banque. Tel: 03-3287-0481.

Deutsche Bank, A.G. Tel: 03-3214-1971/6.

Dresdner Bank, A.G. Tel: 03-3214-5961.

Bayerische Vereinsbank Aktengesellschaft. Tel: 03-3284-1341.

Credit Lyonnais. Tel: 03-3214-4561.

Societe Generale. Tel: 03-3503-9781.

Banque Nationale de Paris. Tel: 03-3214-2881.

Banque de L'Indochine et de Suez. Tel: 03-3582-0271.

Union de Banques Arabes et Francaises-U.B.A.F. Tel: 03-3241-5945.

Asian:

Bank of India.Tel: 03-3212-0911/3.

State Bank of India.

Bank Negara Indonesia.Tel: 03-3214-5621/5.

Oversea-Chinese Banking Corp., Ltd. Tel: 03-3214-2841.

SERVICES: Two tank cleaning companies available with barges of capacity 100 tons for disposal of residues. All other usual services available.

SHORE LEAVE: Crew members allowed ashore upon Ship Master's request to Tokyo Immigration Office if have valid Passports or Seaman's Pocket Ledgers. In case a crew member has a criminal record or has been expelled from Japan, he will not be allowed ashore.

IDENTIFICATION CARDS: Not required.

GARBAGE DISPOSAL: Contact Tokyo Harbor Marine Maintenance Corporation, 11-11, Ueno-Sakuragi, I-chome, Taito-ku, Tokyo 110. Tel: 3821-4404.

WASTE OIL DISPOSAL: Contact Tokyo Port Terminal Corporation, 6-1, Harumi, 3-chome, Chuo-ku, Tokyo 104. Tel: 3531-0280.

Charges for recovery of waste oils:

(1) Waste oil: Up to 100 ltr. Yen 550. More than 100 ltr. Yen 5.50/ltr.

(2) Bilge oil: Up to 100 ltr. Yen 550. More than 100 ltr. Yen 5.50/ltr.

(3) Ballast oil: Up to 1,000 ltr. Yen 2,750. More than 1,000 ltr. Yen 275 per 100 ltr.

(4) Sludge: Up to 10 kg. or 10 ltr. Yen 330. More than 10 ltr. or 10 kg. Yen 33 per 1 ltr. or 1 kg.

(5) Waste cloth: Up to 10 kg. Yen 330. More than 10 ltr. or 10 kg. Yen 33 per 1 ltr. or 1 kg.

SEAMAN'S CLUBS: Lodging, dining and gathering:

Harumi Mariners' House (110 rooms for 284 guests). Tel: 03-3531-2216.

Hamamatsucho Mariners' House (43 rooms for 87 guests). Tel: 03-3433-5688.

Tokyo Port and Harbor Workers' Center (7 rooms for 56 guests) Tel: 03-3452-6391.

Tokyo Port Aomi Service Center. Tel: 03-3520-0671.

Tennis grounds:

Ariake Tennis Forest Park (48 courts). Tel: 03-3529-3302.

Oh-i Terminal Central Seaside Park (14 courts). Tel: 03-3790-2378.

Track and field stadium:

Oh-i Terminal Central Seaside Park. Tel: 03-3790-2378.

PORT REGULATIONS: Maintenance of order in Port of Tokyo is under the responsibility of TMSA in accordance Port Regulation Law. In case of an occurrence of disaster, TMSA and the Tokyo Water Fire Station will take charge of refuge, rescue and fire fighting.

DELAYS: Congestion in the port. Bad weather.

DEVELOPMENTS: 48 public wharves, 2 car ferry berths, 5 passenger boat berths, 7 timber berths, 12 berths for dangerous cargo and 20 specialised berths to be constructed.

Orange juice terminal to be constructed.

AUTHORITY: Bureau of Port and Harbor of the Tokyo Metropolitan Government, 8-1 Nishishinjuku, 2-chome, Shinjuku-Ku, Tokyo 163-01, Japan. *Tel:* 03-5320-5547. *FAX:* 03-5833-1576. *Contact:* Toshibumi Kobayashi, Foreign Trade Development.

AGENT: Senwa Shipping Agency, c/o Tokyo Marine Service Co.Ltd., Ohi No. 4 Berth Kanrito 3F, 2-3-10 Yashio, Shinagawa-Ku, Tokyo 140, Japan. Tel: 03-3790-1980. Fax: 03-3790-4898. Telex: 246-6875. Cables: Marinesvc Tokyo.

TOMAKOMAI: 42.35 N. 141.35 E. (See Plan)

PILOTAGE: Basically not compulsory, but customarily compulsory in case of controlled ship's movements with special harbour signal by the Harbour Master for large sized vessels over 200 m. length, dangerous cargo vessels over 10,000 g.r.t. and the vessels over 170 m. length turning about at narrow places. Pilots board at the point of 500 m. off the breakwater.

RESTRICTIONS: Berthing and unberthing possible day and night, but pilots available 0500 hrs. – 2200 hrs.

MAX. SIZE: See "Berthing".

HEALTH: Radio Pratique available. Vessels usually anchor at Tomakomai, where the Authorities board and grant Free Pratique.

Also see "Late Reports".

RADIO: Suitable radio stations to communicate with port agents is Sapporo Radio.

VHF: Harbour Master's "Tomakomai Hoan" is usable via "Otaru Hoan" only in case of emergency or official use. Port agents can contact Master using Channel 16 of tugs.

TUGS: 8 tugs × 2,200 h.p. – 4,000 h.p.

BERTHING: Public Facilities:

Name of Berth	*No. of Berths*	*Length (m.)*	*Depth (m.)*	*Berthing Capacity (d.w.t.)*	*Principal goods handled*
Wharves: (Western District)					
East Wharf No. 1-3	3	495	9.0	10,000	Coal (capacity 520 t.p.h.)
East Wharf No. 4-6	3	425	9.0	10,000	Cement, iron, steel products
West Wharf No. 1-4	4	660	9.0	10,000	Paper, pulp, steel products, G.C.
North Wharf No. 1-2	2	260	7.5	5,000	Motor vehicles
North Wharf No. 3-4	2	180	5.5	2,000	Iron and steel products
South Wharf No. 1-2	2	370	10.0	15,000	Paper pulp, iron, steel products
South Wharf No. 3	1	195	11.0	20,000	Woodchips and pulp
Ferry Wharf No. 1-3	3	669	8.5	13,000	Passenger ferry service only
Harumi Wharf No. 1	1	240	12.0	30,000	Logs, lumber, machinery
Central North Wharf No. 1	1	185	10.0	15,000	Logs
Central North Wharf No. 2-4	3	350	7.5	5,000	Wood materials, iron, steel products
Central North No. 1 - East	1	240	12.0	30,000	Logs, lumber
Logs Dolphin No. 1	1	–	10.0	15,000	Lauwan logs
Yufutsu Wharf No. 1	1	280	12.0	30,000	Woodchips, paper pulp
Yufutsu Wharf No. 2	1	185	10.0	15,000	Container, vehicles
Yufutsu Wharf No. 3	1	130	7.5	5,000	Container, vehicles
Yufutsu Wharf No. 4	1	130	7.5	5,000	Containers
Yufutsu Wharf No. 5	1	240	12.0	30,000	Containers
Yufutsu Wharf No. 6	1	165	9.0	10,000	Containers
Central South Wharf No. 1	1	240	12.0	30,000	Grain
Central South Wharf No. 2	1	185	10.0	15,000	Limestone, grain, fertiliser
Central South Wharf West	1	165	9.0	10,000	Cement, fertiliser
Wharves: (Eastern District)					
Central Wharf No. 1-2	2	370	10.0	15,000	Machinery, plant materials

Private Facilities:

Name of Berth	*No. of Berths*	*Length (m.)*	*Depth (m.)*	*Berthing Capacity (d.w.t.)*	*Principal goods handled*
Wharves: (Western District)					
Dai Nippon Ink Wharf	1	185	7.5	5,000	Chemical Industrial products
Nikkei Tomakomai East Wharf	1	211	12.0	15,000	Aluminium ingot, coke, logs
Nikkei Tomakomai Central	1	200	14.0	65,000	Bauxite, coal in bulk
Kyodo Hatsuden Wharf	1	52	10.0	5,000	Machinery, heavy oil
Soda Group Wharf	2	490	11.0	15,000	Salt, logs, oil, chemical products
Tomakomai Chemical Wharf	2	330	10.0	15,000	Sulphuric acid and ore
Hinode Denka Wharf	2	500	10.0	15,000	Cement, fertiliser, steel and logs
Sumitomo Metal Wharf	1	165	7.5	5,000	Iron and steel products
Maruichi Steel Wharf	1	185	7.5	5,000	Iron and steel products
Nippon Steel Wharf	2	374	7.5	5,000	Iron and steel products
Nippon Kokan Wharf	1	185	7.5	5,000	Iron and steel products
Wharves: (Eastern District)					
Tomato Wharf No. 1	1	330	6.1	2,000	Plant materials
Tomato Wharf No. 2	1	280	14.0	60,000	Coal in bulk
Tomato Wharf No. 3	1	155	6.1	2,000	Plant materials
Hokuden Yohtan Pier	1	143	5.5	2,000	Coal in bulk

CRANES/EQUIPMENT:

Name of Wharf	*Type of Crane/ Equipment*	*Max. Capacity t.p.h.*	*No.*
South Wharf No. 1-2	Gantry Crane	30 t.	1
Yufutsu Wharf No. 4-6	Gantry Crane	40 t.	1
East Wharf No. 2-3	Loader (Coal)	520	1
Tomakomai Nikkei Central	Unloader (Bauxite/coal)	650	2
Tomakomai Nikkei East	Loader (Alumina)	400	1
Central South Wharf No. 1	Sucker unloader (Grains)	300	2
Tomakomai Chemical East	Unloader (ore)	200	1
Tomakomai Chemical West	Loader (Ore)	400	1
Hokuden Yohtan Pier	Unloader (Coal)	600	2
Tomato Wharf No. 2	Unloader (Coal)	1,200	2

TANKERS:

Name of Berth	*No. of Berths*	*Length (m.)*	*Depth (m.)*	*Berthing Capacity (d.w.t.)*	*Product handled*
Western District:					
Kyodo Oil Terminal	3	390	7.5	5,000	Petroleum products, heavy oil
Nikkei Tomakomai East Wharf	1	211	12.0	15,000	Heavy oil
Oji Heavy Oil Berth	1		7.5	5,000	Heavy oil
Kyodo Hatsuden Dolphin	1		7.5	5,000	Petroleum products
Idemitsu Private Pier	7		7.5	5,000	Petroleum products
Idemitsu West Jetty	1		14.0	70,000	Petroleum products
Sekiyu Haibun Kichi Pier	4		7.0	4,000	Petroleum products
Idemitsu Sea Berth	1		24.0	250,000	Crude oil
Eastern District:					
Kyobi Sea Berth	1		16.0	127,000	Crude oil

Report:

Idemitsu Hokkaido Sea Berth (Discharging Terminal):

Location: Lat. 42° 36' 10" N., Long. 141° 38' 50" E.

Operator: Idemitsu Kosan Co. Ltd.

Terminal operates 24 hours per day, 7 days a week. Ships moored and unmoored daytime weather or other circumstances permitting. Terminal will not be closed on any holidays.

Approaches: Clear and unimpeded from South. White and red striped high chimney (approx. position: Lat. 42° 38.1' N., Long. 141° 35.6' E.) makes a most conspicuous landfall. In poor visibility, in heavy fog or rain, radar reflector fitted at centre of Sea Berth can be located first by ship's radar and after that Sea Berth will be seen in direction from N.W. to S.E.

Westward of Sea Berth, there are many cargo vessels anchored.

Ships berthing starboard side alongside at the Sea Berth, proceed on course 314°, observing transit of chimney and East Breakwater Lighthouse.

Anchorage: No strict boundary areas for anchorage but Master recommended to anchor 1 mile to 2 miles S.E. from Sea Berth.

Holding ground is good and depth about 27 m. – 30 m.

Pilotage: Sea Berth requires Pilot for berthing, no strict location of anchorage for ships awaiting Pilot in Tomakomai area, but should be as close as possible to port in accordance with harbour draft and communications.

2 Pilots will board ships over 30,000 g.r.t. Pilot uses tug boat for boarding.

Important Features: Ships arriving in Winter season (November-March) should pay special attention to the cold, as average temperature in that season ranges from −3°C to 5°C.

MEDICAL: Hospitals, doctors, oculist, ear, nose and throat clinic and dentists available.

DENSITY: 1025.

FUEL: Domestic oil is available. Bonded oil will be brought from Idemitsu Refinery at Tomakomai, otherwise to be brought from Muroran or Hakodate port with sufficient advance notice, when required.

FRESH WATER: Clean drinking water available at public berths.

REPAIRS: Minor repairs possible.

AIRPORT: Sapporo International Airport is situated 25 km. from the port. International direct flights are available to Hong Kong, Seoul, Honolulu and Guam. Domestic flights, every 30 minutes to Tokyo and other places are available every day.

SHIP SUPPLY SERVICE: Ship chandler, stores supplier, laundry services, diver's inspector, cargo and hull surveyor are arrangeable.

GENERAL: *Signal Control:* Harbour Master controls ship's traffic by flashing white and red lights.

DEVELOPMENTS: The following wharves are projected for 1995 to 2000.

Wharf Name	*Depth* (m.)	*Length* (m.)	*No.*	*Cargo*	*Completion*
Foreign Container Berth	14.0	330	1	Containers	1995
Domestic Container Berth	9.0	320	2	Containers	1995
Common Container Berth	12.0	250	1	Containers	2000
Harumi Wharf No. 2	12.0	240	1	Logs/Lumber/Coal	1995
Harumi Wharf No. 3	10.0	170	1	Ro/Ro, G.C.	1995
Central South Wharf No. 2	12.0	240	1	Grain, G.C.	1995
Oji Paper Wharf	12.0	240	1	Woodchips, Coal	2000
Sanyo Kokusaku Wharf	12.0	280	1	Woodchips	2000
Toyota Automobile Wharf	10.0	200	1	Ro/Ro, Cars, Car Parts	1995
Idemitsu Kosan Oil Jetty	7.5		5	Petroleum Products	2000

AUTHORITY: Tomakomai Port Authority, 6-38, Minato-machi 1-chome, Tomakomai City, Hokkaido 053 – Japan. *Tel:* (0144) 34-5551. *FAX:* (0144) 34-5559. *Contact:* Satoru Aizawa, Executive Vice-President.

TONDA: 34.02 N. 131.44 E. (See Plan)

DOCUMENTS: When vessel arrives direct from a foreign port, Customs Officials will board to search, and the following documents are to be submitted:

- Ship's Register and International Tonnage Certificate.
- Voyage Memo (Ports of Call).
- 3 Crew Lists, including Passport numbers.
- 3 Passenger Lists.
- 1 Stores List.
- 1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agents will prepare Inward/Outward Declaration, Cargo Manifest and Cargo Manifest in Transit, using specific forms. Therefore, ship's Agents should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Harbour pilotage inward and outward not compulsory, but recommend vessel takes pilot at Pilot Station (Lat. 33° 54' N., Long. 131° 56' E.). Inland Sea Pilot carries out harbour pilotage.

Inland sea pilotage should preferably be arranged through Agent by cable via Nagasaki Radio, giving 72 hours notice. Urgent correction of ETA outside business hours should be cabled direct to Pilot Station. Inland Sea Pilot Association covers all inland sea ports. Pilotage compulsory for vessels over 10,000 g.r.t. Pilots obtained from one of three Pilot Stations, depending upon vessel's last port of departure, and at Master's discretion. Pilotage available throughout 24 hours, and 72 hours advance notice preferred, thereafter advising any alterations. Most Inland Sea Pilots also act as harbour pilots up to berth or anchorage at destination.

Note: VHF communication available with Inland Sea Pilot Stations.

1. Wadamisaki, at entrance to Kobe (vessel transiting Kii Straits). Position Lat. 34° 34' 09" N., Long. 135° 11' E. Cable address "Anjin Kobe".

2. Sekisaki, 3 miles South of Sekisaki Lighthouse (vessel transiting Bungo Channel). Position Lat. 33° 13' N., Long. 131° 54' E. Cable address "Anjin Moji".

In event of bad weather, recommended vessel proceed for shelter, as near as possible, having due regard to safety, to Sekisaki Pilot Station.

3. Hesaki at East side of Kanmon (Shimonoseki) Straits. Position Lat. 33° 56' 24" N., Long. 131° 03' 12" E.

ANCHORAGE: Berthing Pilot Station at Tokuyama Quarantine Anchorage (Lat. 33° 13' N., Long. 131° 40' E.).
RESTRICTIONS: Vessels enter port and depart during daytime only. Depth of water in the passage 9.00 m.
MAX. SIZE: See "Berthing".
HEALTH: At first port call in Japan, vessel must obtain Free Pratique. Quarantine Officers will attend vessel from 0830 hrs. to 1630 hrs. at anchorage of Tokuyama. Due to no quarantine office at Tonda, Master to show all Vaccination Cards and Derat Exemption Certificates. In case vessel arrives from cholera infected area within 10 days, Master must advise crew and passengers' health condition to respective Quarantine Office through ship's Agent prior to arrival, and close all soil pipes before entering port. Radio Pratique available.

Also see "Late Reports".

BERTHING:

Name of Berth	*Length* (m.)	*Depth* (m.)	*Permissible Draft* (m.)	*LOA* (m.)	*Capacity* (d.w.t.)
Toyo Soda Cement Wharf No. 1	120	9.0	8.50	160	10,000
Toyo Soda G.C.Wharf No. 1	170	9.0		170	15,000
Toyo Soda G.C.Wharf No. 2	65	7.5		100	5,000
* Toyo Soda Salt Wharf	190	10.5	9.0	180	

* Max. draft at Salt Wharf: Subject to tide allowance but require under-keel clearance of about 1.0 m. and/or 10% of ship's draft, whichever greater.

Also see "Shipmaster's Report".

Loading Facility: One shore gantry crane (lifting capacity 15 tons). Outreach: 22 m. from front leg of the crane. Height: 17 m. from the quay. Span: 28 m. forward and aft. Airdraft: 20.10 m. at MLW.
Loading Rate: Approximately 1,500 – 2,000 tons through night by 2 gangs (gantry and ship's gear).
RADIO: Recommended that Master communicates with Agent through Nagasaki Radio, which covers all ports in Japan.
VHF: No VHF service.
TUGS: 4 tugs are stationed at Tokuyama. 2×3,200 h.p., 1×2,600 h.p. and 1×2,300 h.p.
BRIDGES: None.
STEVEDORES: At least 24 hours prior notice, excluding Sundays and holidays, required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew at additional cost.
TANKERS: No tanker berths.
MEDICAL: No advance notice required, unless urgent.
DENSITY: Average 1025.
FRESH WATER: Good fresh water supplied from hydrants. Delivery rate 50 t.p.h.
FUEL: All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, Osaka Bay and Kanmon Port. At all other ports, bunkers will be lightered from the nearest bunker stock ports, at maximum 7 days prior notice.
CONSULS: No consuls. Marine Note of Protest possible at local Notary Public.
REPAIRS: Only minor repairs possible. Others from Moji, Tokuyama or Kobe.
DRY DOCKS: Shin Kasado Dockyard in Kudamatsu-Wan, entrance 3 miles East of Tokuyama-Wan entrance. Largest dry dock for 90,000 d.w.t. and two other dry docks/building docks.
GANGWAY/DECK WATCHMEN: Not specially required, unless passengers or valuable cargo on board.
OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work, unless crew can complete it before berthing.
CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores, when cargo gear maintenance appears to be poor.
CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore, but no spirits.
CARGO GEAR: See "Certificates", but no special requirements.
REPATRIATION: Possible.
AIRPORT: Hiroshima Airport, about 40 minutes by Shinkansen. Ube about 40 minutes by Shinkansen and taxi.
TIME: GMT plus 9 hours. No alterations made to clocks during year.
POLICE/AMBULANCE/FIRE: Police 110; Ambulance/Fire 119.
EMERGENCY CO-ORDINATION CENTRE: M.S.A. Tokuyama Office in Tokuyama City. Tel: 0834-31-0110.
TELEPHONE: Not possible to place telephones on board.
SHORE LEAVE: Local Immigration Offices issue shore passes valid for only 15 days, when Hikari is first port of call in Japan. Extension possible if ship stays longer.
SERVICES: All services available from Moji and Tokuyama.

SHIPMASTER'S REPORT: June 1983.
Toyo Soda Salt Pier:
Documents/Immigration: Landing passes are now valid for 1 week, but restricted to the immediate port area (Tokuyama) only. This restriction is enforced, and the Agent must make individually written application for any crew member required or desiring to leave the Tokuyama area. There are severe penalties (Yen 100,000 for being found ashore by the Authorities without a landing pass).
Pilotage: The Inland Sea Pilot who boarded at Sekisaki also acted as harbour pilot, boarding from a fast launch with the vessel making about 4 knots. Oita Port Radio, in the first Western bay of the inland sea, after passing through the Hayasui Seto Entrance, called on VHF Channel 16 to confirm the vessel's nationality and ETA.

For a vessel of our size (See "Berthing"), pilotage is at daylight H.W. only, using 3 tugs, and the Eastern dredged channel into Tonda port. Departure is during daylight hours only (pilot available apparently 0630 hrs. – 1830 hrs. during June, although ours was not ordered by the Charterer's Agents until 0800 hrs.). Vessel was swung off the berth by 2 tugs and proceeded to sea, again by the Eastern Channel, there being a substantial 'corner' to negotiate in the dredged channel on the Tokuyama Section of the port.

Health: We could not get Radio Pratique as the Authorities required the number of the vessel's Sanitary Certificate. However, after berthing, we were unable to ascertain just what this certificate was. The number of our Derat Exemption and type and make of the sewage system did not satisfy this question either.

Berthing: We were probably one of the larger vessels to berth at the Toyo Soda Salt Pier, discharging 31,536 metric tons of coal on dimensions – length 177 m., beam 27.8 m., draft 10.5 m. and of 20,096 gross tons.

With large engines-aft bulk carriers, there are problems with landing the gangway on the end of the jetty. A shore gangway cannot be used because of the travel of the portainer-type discharging crane. Stevedores use a vertical steel ladder clipped over the sheer strake for access.

Access ashore through the Toyo Soda Cement Factory is prohibited to ship's crew, and a launch service (Sampan) must be engaged, with the requisite timetable, for transport to Tokuyama, 15 minutes distant, the launch berthing at Customs Pier.

This launch is also used for the Agent, watchmen, etc., and it may well be preferable to lower the off-side gangway to near the water as a means of access. The only permitted access, to and from the launch via the vessel's gangway onto the wharf, is by a badly bent vertical steel ladder at the end of the jetty.

Fresh Water: Not available from Toyo Soda Salt Pier. Delivery can only be made by lighter.

Storing: Mobile cranes are not allowed onto the wharf to work ship's stores. E/R spares, etc., and if these cannot be coped with by the vessel's own gear or stores crane, floating plant would have to be hired.

AUTHORITY: Shunan Port Administration Office, 111, Chikko-cho, Tokuyama City, Yamaguchi Pref., Japan. *Tel:* 0834-21-1787.

TOYAMA: 36.46 N. 137.13 E. (See Plan)

DOCUMENTS:

- Ship's Register.
- International Tonnage Certificate.
- Last Port Clearance.
- 6 Crew Lists, including Passport Numbers.
- 6 Passenger Lists.
- 1 Stores List.
- 1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Not compulsory. No telegraphic address for Pilot Station, but Pilot arranged through Agent whom keep advised ETA which may be sent through Nagasaki Radio. Pilot boards about 1 mile off East Breakwater from small tug. In event bad weather recommend remain outside port until weather clears. Pilot available daytime only from sunrise to sunset.

ANCHORAGES: The harbour at the Jintsu river mouth is always calm. Covers about 125 acres, with depths of from 16.5 ft. to 33 ft. over mud and sand. Room at anchorage for at least 4 vessels over 5,000 gross tons. Anchoring position for ocean tankers is Lat. 36° 46.6' N., Long. 137° 14.4' E.

MAX. SIZE: Max. LOA 175 m., but may be extended by 2.0 m. – 3.0 m. if Pilot agrees.

Also see "Tankers".

HEALTH: Radio Pratique available. Formalities carried out at Quarantine Anchorage.

Also see "Late Reports".

RADIO: (Also see "Pilotage"): Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

TUGS: Usually join vessel at port entrance but can join outside harbour for large vessels. Used only when Pilot aboard.

"Narita Maru" – 3,000 h.p. uses own lines free of charge.
"Nihonkai Maru" – 1,800 h.p. uses own lines free of charge.
"Raicho" – 2,600 h.p. uses own lines free of charge.

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by radio.

Berth	*Length* (m.)	*Depth* (m.)	*Draft* (m.)	*Capacity* (d.w.t.)
Public:				
Wharf No. 1	185	10.0	9.5	15,000
2	185	10.0	9.5	15,000
3	185	10.0	9.5	15,000
4	160	9.0	8.5	10,000
5	180	5.5	5.0	2,000
6	90	6.0	5.5	3,000
7	130	7.5	7.0	5,000
8	185	10.0	9.5	15,000
9	90	5.0	4.5	1,000
10	130	7.5	7.0	5,000
No. 1 Dolphin	21	5.0		1,000
No. 2 ,,	12	6.0		3,400
No. 3 ,,	21	5.0		1,000
Private:				
Onoda Cement Silo	100	7.0		
Hokuden Dolphin	18	8.0		5,000

MEDICAL: No advance notice required unless urgent.

TANKERS: Max. size: 257,998 d.w.t., max. LOA, 340.8 m., and max. safe draft 20.78 m. for Sea Berth of Nihonkai Sekiyu K.K., Toyama. Pilot Boarding Position: 36° 48.5' N., 137° 12.5' E. Two lines, diameter 16 in. Reducing pieces supplied as necessary. Discharge rate 7,500 t.p.h.

DENSITY: 1015–1019 min./max.

FRESH WATER: Available ex-wharf at Nos. 1, 2, 3, 4 and 5 Wharves; average 40 t.p.h.

FUEL: Domestic oil is available. Bonded oil will be brought from Moji with sufficient advance notice when required.

DRY DOCKS: Shin Nihonkai Juko Co. Ltd., Toyama. No. 1 Dock, used for construction. No. 2 Dock, ship-building capacity: length, 104 m.; width 15 m.; depth, 1.8 m. Size of dock: length, 112 m.; width, 14.6 m.; depth, 4 m. Maximum building capacity, 4,000 g.r.t. No. 3 Dock, ship-building capacity: length, 150 m.; width, 20.8 m.; depth, 5 m. Size of dock: length 168.2 m.; width, 21.88 m.; depth, 9.2 m. Maximum building capacity, 10,750 g.r.t.

GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.

FIRE PRECAUTIONS: Nihonkai Oil Co., Toyama, issue Safety Regulations to Master on arrival tanker sea berth.

CONSULS: None.

REPAIRS: Minor repairs only.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 50 cigarettes to take ashore but no spirits.

AIRPORT: Toyama Airport, distance about 10 km. 6 daily flights to Tokyo.

TIME: GMT plus 9 hours. Permanent.

POLICE/AMBULANCE/FIRE: Police, Toyama North Police Station, Toyama (0764) 37–7171; Ambulance, Toyama Iwase Fire Station, Toyama (0764) 37–7141 or 119; Fire, Toyama Fire Station, Toyama (0764) 37–7141.

TELEPHONES: No facilities for placing on board.

SHORE LEAVE: Local Immigration Offices issue shore pass valid for only 15 days, but 15 days' extension possible if ship stays longer.

GARBAGE DISPOSAL: No service available.

WASTE OIL DISPOSAL: No service availble.

SEAMAN'S CLUBS: None.

CURRENCY: Japanese Yen.

AUTHORITY: Toyama Port Administration Office, 5, Kaigan-dori, Higashi-Iwasemachi, Toyama City. *Tel:* (0764) 37-7131. *Telex:* 5152256 Nextoy J. *Cables:* Nexco Toyamako. *FAX:* 0764-37-7169. *Contact:* K.Yamaguchi, Port Director.

AGENT: Senwa Shipping Agency, c/o Nippon Express Co.Ltd., 61 Higashi-Iwase-Cho, Toyama-Shi, Toyama 931, Japan. Tel: 0764-37-7111. Telex: 5152-256. Fax: 0764-37-9945. Cables: Nexco Toyamako.

TOYAMA SHINKO: 36.47 N. 137.10 E. (See Plan)

DOCUMENTS:

- Ship's Register.
- International Tonnage Certificate.
- Last Port Clearance.
- 6 Crew Lists including Passport Numbers.
- 3 Passenger Lists.
- 1 Stores List.
- 1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agents will prepare Inward/Outward Declaration, 2 Cargo Manifests and 1 Cargo Manifest in transit using specific forms. Therefore ship's Agents should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Pilot available any time during daylight. Not compulsory. No telegraphic address of Pilot Station, therefore, direct advice to local Agent always required. Pilot meets vessels 209° 2 miles off leading light of Fushiki Port, thence takes vessel to Fushiki Quarantine Anchorage ground, due to many fishing-nets on both sides of fairway. No Quarantine Anchorage ground established presently at Toyama-Shinko, therefore, every vessel obtains free pratique at Fushiki. If requiring to come into Quarantine Anchorage without taking Pilot, necessary to advise Agent in advance. In case of bad weather and need to await outside port, recommend cruising in Toyama Bay until sea abates. Bay area too deep to anchor and also danger of fishing-nets. When approaching position for Pilot, give exact ETA to Agent by using Niigata Radio and/or VHF to Fushiki Harbour Master. Small wooden pilot-boat painted yellow. No particular light or sound signals required. Even if the vessel already obtained Free Pratique in other port, need to approach the aforesaid position for Pilot, because of no Pilot position located in Toyama-Shinko.

ANCHORAGES: No anchorage at Toyama-Shinko, therefore, if vessel required to await for berth or some other reason, use Fushiki Outer Anchorage ground where safe at all seasons with depth from 8 m. to 11 m. Sand and clay bottom. Room at anchorage for at least 6 vessels over 5,000 gross tons.

RESTRICTIONS: Pilot not available during darkness. No restrictions on tide, because small tide in all seasons. If draft over port limitation, vessel enters port after making adjustment by lightening in Outer Harbour in Fushiki.

MAX. SIZE: Length 200 m., draft 34 ft. Tidal range is max. 0.45 m.

HEALTH: Formalities will be carried out at Fushiki quarantine anchorage.

Also see "Late Reports".

RADIO: (Also see "Pilotage"). Recommend Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by radio.

Berth	*Length* (m.)	*Depth* (m.)	*Draft* (m.)	*Capacity* (d.w.t.)
Public				
No. 1 Wharf	280	13.0	12.0	60,000
		(14.0 m. in near future)		
No. 2 Wharf	185	10.0	9.5	15,000
No. 3 Wharf	185	10.0	9.5	15,000
No. 4 Wharf	185	10.0	9.5	15,000

Berth	*Length* (m.)	*Depth* (m.)	*Draft* (m.)	*Capacity* (d.w.t.)
No. 5 Wharf	130	7.5	6.5	5,000
No. 6 Wharf	130	7.5	6.3	5,000
East Wharf No. 1	185	10.0	9.2	15,000
Private (Log carrier only)				
Toyama Sangyo	373	10.0	9.0	15,000
Toyama Chuo Mokuzai No. 1	200	10.0	9.0	15,000
Toyama Chuo Mokuzai No. 2	155	7.5	7.0	5,000
Toyama Chuo Mokuzai No. 3	210	8.0	7.5	8,000
Toyama Futo West	70	6.0	5.5	3,000
Toyama Futo Centre	170	8.0	7.0	5,000
Toyama Futo East	140	8.0	7.0	5,000
Koike Mokuzai	171	10.0	9.0	15,000
Hokuden	285	13.0	12.0	60,000

TUGS: Tugs normally join vessel at port entrance, but sometimes in Fushiki Outer Harbour for larger vessels. Maritia-Maru (2,060 h.p.) and Nihonkai-Maru (1,800 h.p.) provide lines, free of charge and Raicho-Maru (760 h.p.) uses ship's line. In case public tug, i.e. Nihonkai-Maru and Raicho-Maru used, always require Pilot on board.

STEVEDORES: At least 24 hours prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew. Overtime surcharges1700 – 1900 hrs. 50% additional of basic stevedorage; 2100 – 0500 hrs. next morning 130% additional; Sundays/holidays 60% additional.

MEDICAL: No advance notice required unless urgent.

DENSITY: Average density between 1015 and 1019 in all seasons.

FRESH WATER: Available, from wharves No. 1, 2, 3, 4, 5 and 6 average 10 t.p.h.

FUEL: Domestic oil is available. Bonded oil will be brought from Kanmon area, with 1 week advance notice, when required.

CONSULS: None.

REPAIRS: Minor repairs only.

DRY DOCKS: None.

GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 50 cigarettes to take ashore, but no spirits.

REPATRIATION: Possible.

AIRPORT: Toyama Airport about 25 km. distance. Two regular services a day. ANA only.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

HOLIDAYS: 1st May and New Year's Day, most probably from 31st December to 3rd January.

POLICE/AMBULANCE/FIRE: Police, Shinminato Police Station, Shinminato (07668) 2-3141; Ambulance, Shinminato Fire Station, Shinminato (07668) 2-3175; Fire, Shinminato Fire Station, Shinminato (07668) 2-3175.

TELEPHONES: No facilities for placing telephones on board.

SERVICES: Hold cleaning available.

SHORE LEAVE: Local Immigration Officers issue shore pass valid for only 3 days, but 3 days' extension possible if ship stays longer. Attending from Fushiki Immigration Office, Fushiki, due to no office in Toyama-Shinko.

AUTHORITY: Toyama Prefecture, 1-7 Shinsogawa, Toyama City, Toyama Pref., Japan. *Tel:* (0764) 31-4111.

TOYOHASHI: 34.43 N. 137.20 E. (See Plan)

LOCATION: The Port of Toyohashi is located in Mikawa Wan near Nagoya. It was opened in May 1972 as the 102nd international trading port in Japan.

Since then, the port has been rapidly growing in exporting, as it has been steadily improved in its facilities and access roads.

The Port of Toyohashi can be largely classified into three areas: One is Jinno Public Area, another Osaki Industrial Area, the other Tahara Industrial Area.

PILOTAGE: Compulsory for vessels exceeding 10,000 g.r.t. in Ise Wan, including Mikawa Wan. Pilot boards near Ise Buoy No. 1 (Lat. 34° 40.8' N., Long. 137° 03.8' E.).

Harbour pilots are also available at the anchorage.

(1) Application for Irago-Mikawa Wan Pilot: Please inform undermentioned items through your Agents.
  (A) Time for application:
    Inward vessels – 24 hours and 6 hours prior to ETA.
    Outward vessels – 12 hours and 6 hours prior to ETD.
  (B) Item:
    (a) Name of vessel.
    (b) Gross tonnage.
    (c) Deepest draft.
    (d) Length overall.
    (e) ETA or ETD.
    (f) Last port of call and destination.
    (g) Berthing schedule.
    (h) Kind of cargo (dangerous cargo).
    (i) Others (quarantine, any malfunction of engine, radar, compass, VHF, etc.).

(2) Office hours of Irago-Mikawa Wan Pilots: Service provided 24 hours a day (including Sundays, holidays and night-time).

(3) Channel, Bay and Harbour through Pilotage: Irago Suido-Mikawa Wan-Toyohashi.

(4) Communications:
  (a) Telex: 4563668 Iragop (directly or via Choshi Radio, or via Nagasaki Radio).
    (i) The message is sent by Master directly to the Pilot Office.
    (ii) The message is passed from the Radio Station to the Pilot Office in a few minutes.
  (b) Cable address: Iragopilot Handa.
    The message is passed from the Radio Station to the Pilot Office in about 30 minutes.
  (c) VHF: Irago Pilot (Channels 16 and 13).
    Masters of vessels who are required to take pilot are requested to contact "Iragopilot" by VHF, 4 hours and also 1.5 hours prior to arrival at Pilot Station.
  (d) On Sundays, holidays and during the night-time:
    Masters are requested to advise the Pilot Office directly of ETA or any amendment thereof by Telex or Cable, to avoid any delay in case of absence of the person-in-charge at the Agent's Office.

(5) Irago-Mikawa Wan Pilots are generally stationed at Handa (Kinuura) Office. It takes about 3 hours to board vessels, and therefore, if ETA or ETD is amended, please advise the Pilot Office of it as soon as possible by all means.

ANCHORAGE: See "Health".

RESTRICTIONS: Vessels may enter in daylight only. Unberthing is possible after sunset for pure car carriers, subject to pilot's approval.

Draft limitation in channel is 9.8 m. at H.W.

MAX. SIZE:

Berth	*Max. LOA* (m.)	*Max. Draft* (m.)
Osaki Buoys	150	9.8
Sogo Kaihatsu		
Akemi Pier No. 1	150	9.4
Akemi Pier No. 3	150	9.8
Akemi Pier No. 4	180	9.8
Kao's Wharf	180	9.8
Jinno Wharf No. 3	100	7.3
Jinno Wharf No. 4	150	9.8
Jinno Wharf No. 7 – 1	200	9.8
Jinno Wharf No. 7 – 2	200	9.8
Jinno Wharf No. 7 – 3	200	9.8
Topy Wharf	100	4.0
Toyota Wharf T – 1	200	9.8
Toyota Wharf T – 2	200	9.8
Toyota Wharf T – 3	200	9.8

HEALTH: Vessels usually anchor in the Quarantine Anchorage (Lat. 34° 43' 54" N., Long. 137° 13' 22" E.), where authorities board and grant Free Pratique.

Radio Free Pratique available (See "Late Reports").

RADIO: See "Pilotage".

TUGS: 4×3,200 h.p.

BERTHING:

Berth	*Length* (m.)	*Depth* (m.)	*Capacity* (d.w.t.)
Osaki Buoys	150	10.0	1 × 15,000
Sogo Kaihatsu			
Akemi Pier No. 1	150	10.0	1 × 15,000
Akemi Pier No. 3*	150	12.0	1 × 30,000
Akemi Pier No. 4	250	12.0	1 × 30,000
Kao's Wharf	250	12.0	1 × 30,000
Jinno Wharf No. 3	910	7.5	7 × 5,000
Jinno Wharf No. 4	740	10.0	4 × 15,000
Jinno Wharf No. 7 – 1	240	12.0	1 × 30,000
Jinno Wharf No. 7 – 2	240	12.0	1 × 30,000
Jinno Wharf No. 7 – 3	240	12.0	1 × 30,000
Topy Wharf	100	4.2	1 × 3,000
Toyota Wharf T – 1	250	10.0	1 × 15,000
Toyota Wharf T – 2	250	10.0	1 × 15,000
Toyota Wharf T – 3	250	10.0	1 × 15,000

* Grain unloader available.

Remark: Entry or sailing may be restricted during strong seasonal winds in Winter.

FRESH WATER: Available.

FUEL: Bonded fuel available from Yokkaichi or Nagoya.

REPAIRS: Minor repair services available from Yokkaichi or Nagoya.

POLICE/AMBULANCE/FIRE: Police 110; Ambulance/Fire 119.

Masters are able to call "Nagoya Hoan" by VHF Channel 16 if an emergency matter has occurred.

Note: "Nagoya Hoan" means Nagoya Maritime Safety Agency.

GENERAL: Provisions can be obtained.

AUTHORITY: Toyohashi Port Authority, 3-9 Jinno Futo-Cho, Toyohashi, Aichi Pref., Japan. *Tel:* (0532) 31-4155. *FAX:* (0532) 31-4400.

TSU: 34.40 N. 136.33 E. (See Plan)

DOCUMENTS: (1) When a vessel calls directly from abroad, it must firstly call at Yokkaichi Quarantine Anchorage for Pratique (Quarantine Anchorage: 34° 56.15' N., 136° 40.40' E.).

Quarantine Officers board to issue Pratique, and/or Agent boards to undertake Quarantine Pratique and Customs arrival/sailing formalities. Thereafter, the vessel is able to proceed to Tsu with Yokkaichi Customs Clearance.

(2) When a vessel calls from a Japanese port, it can proceed to Tsu direct.

Documents for Yokkaichi Quarantine: (See (1) above).
Health Declaration – 1 copy (Japanese form).
Vaccination List – 1 copy.
Crew List – 1 copy.
Ports of Call List – 1 copy.
Ship's Register – 1 original.
International Tonnage Certificate – 1 original.

Documents for Yokkaichi Customs: (See (1) above).
Inward/Outward Declaration – 1 copy/2 copies (Agent prepares).
Last Port Clearance – 1 original.
Ports of Call List – 1 copy.
Cargo Manifest – 1 each for discharge and through cargo.
Crew List – 1 copy.
Crew's Baggage List – 1 copy.
Pratique Certificate – 1 original.
Application for Exemption Tonnage Dues Payment – 3 copies (Agent prepares).
Ship's Register – 1 original.
International Tonnage Certificate – 1 original.
Yokkaichi Customs issue Yokkaichi Sailing Clearance.

For above formalities, Agent must attend vessel on arrival/sailing by a taxi boat.

Documents for Tsu Customs formalities: (Stationed at Tsu).
Formalities for documents are same as Yokkaichi Customs, and payment of tonnage dues is required.

Documents for Immigration formalities: (Stationed in Yokkaichi, not at Tsu).

(1) Yokkaichi Immigration Officers attend onboard at Tsu to issue shore passes, and following documents are required:
Inward/Outward Declaration – (Agent prepares).
Crew List – 2 copies.
Ports of Call List – 1 copy.
Application for Crew Landing Permit – (Agent prepares).
Passports or Seamen's Books for all crew members.

(2) Agent must attend Yokkaichi Immigration for arrival formalities, and documents required are as follows:
Inward/Outward Declaration – (Agent prepares).
Crew List – 2 copies.
Ports of Call List – 1 copy.
Shore Pass Envelope – 1 envelope.
Extension of Movement Area – 2 copies (Agent prepares).

PILOTAGE: Compulsory. Berthing Pilot available from Yokkaichi or Nagoya (See "Nagoya").

ANCHORAGE: No designated anchorage. Vessels usually anchor 1.5 miles S.W. of Igurazu Lighthouse, in depth of 20.0 m. with sand/mud bottom.

HEALTH: No quarantine station at Tsu. If Tsu first port in Japan, vessel has to call at Yokkaichi, then proceed to Tsu after Free Pratique granted (See "Documents").

Yokkaichi Quarantine Anchorage: Lat. 34° 56.16' N., Long. 136° 40.40' E.

Also see "Late Reports".

RADIO: No local radio station.

VHF: Nagoya Port Radio (24 hours), Channels 16, 12 and 20. Range 110 km. of Kamishima Island.

TUGS: Available from Yokkaichi and Nagoya, at special charge. Line handling available from Yokkaichi.

BERTHING: Two public berths for handling cargo, mainly gravel.
1. Length 90 m. Depth 5.5 m.
2. Length 60 m. Depth 4.5 m.

STEVEDORES: Available from Yokkaichi, distance 45 km. (1.5 hours by car).

CONSULS: None locally, see "Nagoya".

REPAIRS/DRY DOCKS: *Tsu Dockyard – NKK Tsu Works:*

Docks:

Name	*Length (m.)*	*Width (m.)*	*Depth (m.)*	*Max. Docking Draft (m.)*	*Use*	*Facilities*
Building Dock	500	75	11.8	6.2	New building	2×200 ton Goliath cranes.
Marine Dock	150	250	17.0	6.2	Multi-purpose	Access slope for transfer and crawler crane.
Repair Dock	500	75	14.1	6.2	Repairs, conversions and outfitting.	120 ton Jib crane.

Wharves for Outfitting and Repairs:

Name	*Length (m.)*	*Purpose*	*Facilities*	*Max. Docking Draft (m.)*
No. 1 Wharf (3 Berths)	425	Loading and Repairs	15 ton crane	1A: 4.5, 1B: 5.5, 1C: 8.0
No. 2 Wharf (2 Berths)	600	Outfitting and Repairs	15 ton crane	2A: 8.5, 2B: 9.0
No. 3A Wharf	375	Outfitting	15 ton crane	8.5
No. 3B Wharf	243	Outfitting and Repairs	120 ton crane	5.5

Dock Master: Joins vessel in front of NKK Drydock Gate.
Time of Docking/Undocking: All times arranged with Dock Master.
Tug Assistance and Line Handling: Arranged by NKK, Tsu Works.
Accommodation: NKK, Tsu Works, has available:

A. Chitose Club	for Superintendents, Surveyors, Masters and Chief Engineers, at their expense. 25 minutes by car to NKK.
B. Kumozu Club	for other officers and engineers, at their expense. 10 minutes by car to NKK.
C. Family House	Total of 6 houses are available for Superintendents, Surveyors, Masters and Chief Engineers, who wish to stay with familites. These are located near Chitose Club.

FRESH WATER: Available at shipyards. Also available by barge from Yokkaichi, at special charge.

FUEL: Only available to new building at shipyards.

SURVEYORS: Available from Nagoya.

REPATRIATION: Possible. Formalities completed at Yokkaichi during office hours.

AIRPORT: Nearest airport at Nagoya, 2.5 hours by train and car.

TIME: GMT plus 9 hours.

POLICE/AMBULANCE/FIRE: Police 110; Ambulance and Fire 119.

EMERGENCY CO-ORDINATION CENTRE: In case of emergency (fire, pirates, robbery, etc.), contact the 4th Regional Maritime Safety Headquarters by the following means:
1. VHF Channel 16: "Nagoya Hoan".
2. Cable: Code J.N.T.
3. Telex No.: 4934961 JMSANA.
4. Distress Call: 2182 kHz.
5. Telephone: 052-661-1611 (0900 hrs. – 1700 hrs. Monday/Friday, 0900 hrs. – 1200 hrs. Saturday).
   052-661-1616 (outside office hours).

GENERAL: *Immigration:* Located at Yokkaichi. Tel: 0593-52-5695.
Customs: Tsu: Tel. 0592-34-4161. Yokkaichi: Tel. 0593-52-3829.
Railway Station: Hisai Station of Kintetsu Railway is 20 minutes by taxi from port.
Floating Cranes: 120 ton crane available from Nagoya and 150 ton crane available from Yokkaichi.
Services: Most services available from Nagoya and Yokkaichi.

AUTHORITY: Tsu Port Administration. *Tel:* 0598-51-3482.

TSUKUMI: 33.05 N. 131.54 E. (See Plan)

DOCUMENTS: When vessel arrives direct from a foreign port, Customs officials will board to search and the following documents are to be submitted.
Ship's Register.
International Tonnage Certificate.
Voyage Memo (Ports of Call).
Last Port Clearance.
3 Crew Lists, including Passport Numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Not compulsory, but recommended unless Master well acquainted with locality. Pilot embarks vessel at anchorage, position Lat. 33° 05' 30" N., Long. 131° 54' 00" E. Request for Pilot made through Agent; Master to report ETA 24 hours prior arrival.

ANCHORAGES: Good holding anchorage available; depth of water about 25 m. Loading and/or unloading of cargo usually effected alongside wharves and in event of loading/unloading at anchorage, when rough weather prevails, difficulty sometimes experienced on account of swell from open sea. Therefore suggested that vessel anchor as close to shore as possible consistent with safety.

RESTRICTIONS: Berthing and unberthing at Onoda Cement Berths A, B and D:
Over 40,000 d.w.t. daytime only.
Over 15,000 d.w.t. until 2200 hrs.
Under 15,000 d.w.t. all day.

Other berths: Berthing and unberthing at any time, weather permitting and subject to Pilot's agreement.

MAX. SIZE: See "Berthing".

HEALTH: At first port of call in Japan, vessel must obtain Free Pratique. No Quarantine office located here so vessels usually anchor in the Bay of Saganoseki, Saiki, Oita or Mutsure Quarantine Anchorage at Kitakyushu for authorities to board and grant Free Pratique.

Also see "Late Reports".

RADIO: Recommended Master communicates with Agents through Nagasaki Radio which covers all ports in Japan.

TUGS: 1 × 1,800 h.p. and 2 × 3,000 h.p. Tugs usually used for berthing and unberthing.

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agents mainly by radio.

Berth		*Length* (m.)	*Depth* (m.)	*Max. Draft* (m.)	*Capacity* (d.w.t.)
Takada Pier No. 1	South	175	10.0	10.0	20,000
	North		9.0	9.0	10,000
No. 2	South	80	7.5	7.5	6,000
	North		5.0	5.0	3,000
Nittetsu Pier		155	10.5	10.5	23,000
Noshima Public Wharf		164	9.5	9.0	18,000
Onoda Cement	A	270	13.0	12.5	60,000
	B	168	16.0	15.0	100,000
	C	65	14.0	13.5	2,000
	D	185	13.0	12.0	60,000
	No. 1	82	7.0	6.5	6,000
	No. 2	121	8.0	8.0	8,000

STEVEDORES: At least 24 hours prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew. Overtime surcharges 1700 – 1900 hrs. (50% additional of basic stevedorage), 2100 – 0500 hrs. next morning (130% additional), Sundays/holidays (60% additional).

MEDICAL: No advance notice required unless urgent.

DENSITY: Average density about 1024.

FRESH WATER: Available from shore.

FUEL: All grades of bonded bunkers are stocked in and brought from Moji, Oita or Matsuyama, when required at anchorage. Maximum 7 days prior notice.

FIRE PRECAUTIONS: By Marine Security Guards.

CONSULS: No local representatives. Marine Note of Protest can be attended by local notary public.

REPAIRS: Local workshop available only for minor repairs.

GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo aboard.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.

CERTIFICATES: Ship's Register and International Tonnge Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore but no spirits.

REPATRIATION: Possible.

AIRPORT: Oita Airport; 1 hour from Tsukumi by train. Regular airlines are ANA and JAS, for domestic service.

TIME: GMT plus 9 hours. No alterations to clocks during year.

HOLIDAYS: 14th – 16th August.

POLICE/AMBULANCE/FIRE: Police, 110; Ambulance/Fire, 119.

TELEPHONES: No facilities for placing telephones on board.

SERVICES: No special services available, but if required will be arranged by Agent who calls from another port.

SHORE LEAVE: Local Immigration Offices issue shore passes, valid for only 15 days, when Tsukumi is first port of call in Japan. Extension possible if ship stays longer.

AUTHORITY: Usuki Doboku (Public Works) Office, 72-1, Aza Susaki, Oaza Usuki, Usuki City, Ohita Pref. *Tel:* 0972-63-4136.

TSURUGA: 35.40 N. 136.03 E. (See Plan)

DOCUMENTS:

Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
3 Crew Lists, including Passport Numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Daylight hours only. Pilot arranged through Agent. Await Pilot at quarantine anchorage (See "Anchorages").

ANCHORAGES: Quarantine Anchorage is best area for anchoring to avoid heavy weather (being protected from the North by mountains). Position Lat. 35° 40' 08" N., Long. 136° 02' 55" E.

HEALTH: Radio Pratique available. Formalities carried out at Quarantine anchorage.

Also see "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

TUGS: Join ship inside breakwater and use tug's line.

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by radio.

Berth	*Length* (m.)	*Depth* (m.)	*Max. Draft* (m.)	*Capacity* (d.w.t.)	*Shore Cranes* (tons)
Hokuriku Denryoku	280	14.0	12.6		2×1,100 t.p.h. (buckets)
Tsuruga Cement	250	10.0	9.0		2×18.5
Kanegasaki	205	9.5	8.6	18,000	1×6.4
Railway	163.6	8.5	7.8	6,000	1×30 1×5.0
Horai	390	7.3	6.8	2×4,000	
Kawasaki - Matsue	370	10.0	9.2	20,000	1×8.5
New Tsuruga – Hariyama North Section:					
Hariyama (A)	130	8.0	7.2	5,000	
Hariyama (B)	240	12.0	10.8	30,000	1×46.5
Hariyama (C)	240	12.0	10.8	30,000	

STEVEDORES: At least 24 hours prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew. Overtime surcharges 1630 hrs. – 2130 hrs. (60% additional of basic stevedorage), Sundays/holidays (100% additional). Rain/snow (10% additional of basic stevedorage).

MEDICAL: No advance notice required unless urgent.

TANKERS: No facilities for large tankers.

DENSITY: Average density through year 1023.

FRESH WATER: Available from wharf, and by barge.

FUEL: Bonded oil will be brought from Moji with sufficient advance notice, when required.

CONSULS: None.

REPAIRS: Minor repairs only.

GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspectors ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 50 cigarettes to take ashore but no spirits.

AIRPORT: Distance 1 hour by train. 2 flights daily to Tokyo.

TIME: GMT plus 9 hours. Permanent.

POLICE/AMBULANCE/FIRE: Police, 2–4000; Ambulance and Fire, 119.

TELEPHONES: Not available for placing on board.

SERVICES: Hold cleaning.

SHORE LEAVE: Local Immigration Offices issue shore pass valid for only 7 days, but extension possible if ship stays longer.

AUTHORITY: Tsuruga Port Administration Office, 2-1, Sakura-Machi, Tsuruga City, Fukui Pref. *Tel:* 0770-22-0369.

UBE: 33.56 N. 131.15 E. (See Plan)

(A) UBE PORT
(B) SEIBU SEKIYU SEA BERTH

(A) UBE PORT

DOCUMENTS: When vessel arrives direct from a foreign port, Customs Officials will board to search, and the following documents are to be submitted:

Ship's Register.
International Tonnage Certificate.
Voyage Memo (Ports of Call).
3 Crew Lists, including Passport numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, Cargo Manifest and Cargo Manifest in Transit, using specific forms. Therefore ship's Agents should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Harbour pilotage not compulsory but recommended unless Master well acquainted with area. No Harbour Pilot stationed at Ube but Inland Sea Pilot will attend.

Inland Sea pilotage should preferably be arranged through Agent by cable via Nagasaki Radio giving 72 hours' notice. Urgent correction of ETA outside business hours should be cabled direct to Pilot station. Inland Sea Pilot Association covers all inland sea ports. Pilotage compulsory for vessels over 10,000 g.r.t. Pilots obtained from one of three Pilot stations dependent upon vessel's last port of departure and at Master's discretion. Pilotage available throughout 24 hours and 72 hours' advance notice preferred, thereafter advising any alterations. Most Inland Sea Pilots also act as Harbour Pilots up to berth or anchorage at destination.

Note: VHF communication available with Inland Sea Pilot Stations. Also see "Shipmaster's Report" before first port.

1. Wadamisaki, at entrance to Kobe (vessels transiting Kii Straits). Position Lat. 34° 34.09' N., Long. 135° 11' E. Cable address "Anjin Kobe".

2. Sekisaki, 3 miles South of Sekisaki Lighthouse. (Vessels transitting Bungo Channel). Position Lat. 33° 13' N., Long. 131° 54' E. Cable address "Anjin Moji". In the event of bad weather, recommended vessels proceed for shelter as near as possible, having due regard to safety, to Sekisaki Pilot Station.

3. Hesaki, at East side of Kanmon (Shimoneseki) Straits. Position Lat. 33° 56' 24" N., Long. 131° 03' 12" E.

ANCHORAGE: Off Ube (Lat. 33° 51.2' N., Long. 131° 23.5' E.). Sea bottom is mud.

Depth	4 m. – 7.5 m.	7.5 m. – 10 m.
Sheltered	73,000 sq.m.	233,100 sq.m.
Unsheltered	12,175,500 sq.m.	680,000 sq.m.

RESTRICTIONS: Fairway: Dredged to 11.0 m. depth. Length 2.25 miles.

(a) Outer harbour: No restriction.

(b) Inner harbour: Berthing/unberthing is practicable only during daytime.

(c) Deep draft vessels may berth at high water only.

MAX. SIZE: See "Berthing" and "Tankers".

HEALTH: At first port of call in Japan, vessel must obtain Free Pratique. In case vessel arrives from cholera infected area within 10 days, Master must advise crew and passengers health condition to respective Quarantine Office through ship's Agents prior to arrival and close all soil pipes before entering port.

Radio Pratique available.

RADIO: Recommended Master communicates with Agents through Nagasaki Radio, which covers all ports in Japan.

VHF: No facilities.

TUGS: 4 tugs (2,600 h.p. – 3,200 h.p.) stationed at Ube. Other tugs available from Moji or Tokuyama. Tug's lines used at no extra charge.

RADAR: No port radar service.

BERTHING:

Berth	*Length* (m.)	*Depth* (m.)	*Remarks*
Public Okinoyama Wharf No.1/2	370	10.0	Permissible draft – subject to tidal allowance as under-keel clearance should be 10% of ship's draft.
Public Shinkawa Wharf	260	7.6	
Public Shibanaka East	160	8.4	Draft over 6.0 m., LOA below 150 m. Draft under 6.0 m., LOA below 160 m.
Public Shibanaka West	270	13.0	
Ube Kosan Wharf (No.1)	165	9.2	LOA 100 m. – 150 m.
Ube Kosan Wharf (No.2)	188	7.0	LOA less than 160 m.
Ube Kosan Wharf (No.3)	113	7.8	
Ube Kosan Wharf (No.5)	160	12.5	30,000 d.w.t., max. LOA less than 240 m.
Ube Kosan Wharf (No.6)	260	13.6	Max. LOA 240 m., 2×1,000 t.p.h. unloaders.
Shibanaka Wharf No.1	190	10.1	Max. LOA 170 m.
Shibanaka Wharf No.2/3	260	7.1	

CRANES: Mobile cranes up to 45 tons capacity available.

STEVEDORES: At least 24 hours' prior notice, excluding Sundays and holidays, required in order for Agent to arrange stevedores. Vessel must constantly keep her Agents advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agents, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew at additional cost. Overtime surcharges 1700 hrs. – 1900 hrs. (50% additional of basic stevedorage), 2100 hrs. – 0500 hrs. next morning (130% additional), Sundays/holidays (60% additional).

MEDICAL: No advance notice required, unless urgent.

DENSITY: 1025.

TANKERS: See Part "B".

FRESH WATER: Good fresh water supplied either from water barge or from hydrants. From hydrants at wharves delivery rate about 30 t.p.h. Cost Yen 670/ton. Minimum quantity 20 tons.

FUEL: All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, Osaka Bay and Kanmon Port. At all other ports bunkers will be lightered from the nearest bunker stock ports at maximum 7 days prior notice.

CONSULS: None. Marine Note of Protest possible at local Notary Public.

REPAIRS: All types of repairs possible.

DRY DOCKS: None.

GANGWAY/DECK WATCHMEN: Not specially required, unless passengers or valuable cargo on board.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work, unless crew can complete it before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and net tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore, but no spirits.

CARGO GEAR: See "Certificates", but no special requirements.

REPATRIATION: Possible.

AIRPORT: Ube Domestic Airport about 20 minutes by taxi. Only 5 flights daily to Tokyo.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

HOLIDAYS: Public Wharves: Sundays and national holidays, no work. Ube Kosan No. 5 and 6: No holidays.

POLICE/AMBULANCE/FIRE: Police 110; Ambulance/Fire 119.

Public telephone booth available near the berth.

TELEPHONES: Not possible to place telephone on board.

SHORE LEAVE: Local Immigration Offices issue shore passes valid for only 15 days, when Ube is first port of call in Japan. Extension possible if ship stays longer.

SERVICES: All services available.

AUTHORITY: Ube Port Administration Office, 1-5-7, Minato-machi, 1-chome, Ube City, Yamaguchi Pref., Japan. *Tel:* (0836) 31-3311. *FAX:* 0836-31-3310.

(B) SEIBU SEKIYU SEA BERTH

LOCATION: Lat. 33° 49' 48" N., Long. 131° 12' 58.8" E.

PORT LIMITS: Seibu Sekiyu's SBM is located to the South of the recommended route, at the central part of the Suo-Nada, and is connected with Seibu Oil Refinery by 11,400 m. of submarine pipes.

DOCUMENTS:

International Tonnage Certificate.
Ship's Register.
Last Port Clearance.
5 copies Crew List.
3 copies Passenger List.
1 copy Stores List.
3 copies List of Ports of Call (last 3 months).
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, Cargo Manifest for both discharge cargo and through cargo, using specific forms. Therefore, ship's Agent should be provided with necessary information about details of cargo in advance.

PILOTAGE: Not compulsory, but M.S.A. recommend that Master takes a pilot, unless Master well acquainted with area. Inland Sea Pilot and Harbour Pilot can be arranged through Agent by telex. Inland Sea Pilot boards at Lat. 33° 13' N., Long. 131° 58' E., about 4 miles S.E. of Sekisaki Lighthouse. In final stage (ETA Sekisaki Pilot Station), vessel must radio Pilot Office at Moji, Telex: 715303 (Tel: 093-332-7191). VHF communication available with Pilot Station. Urgent correction of ETA outside business hours should be cabled direct to Pilot Station. Harbour Pilot boards at anchorage.

ANCHORAGE: All vessels are requested to anchor about 1.0 miles – 1.5 miles off and 110° from SBM, and wait there until commencement of shifting for mooring. The anchorage of Seibu Sekiyu's SBM is in "The Open Port" area. Under Customs Law, the centre of isolated "Open Port", the circular range of which is radius of only 500 m. around SBM. Out of this "Open Port" is "The Closed Port", where vessel must comply with special Customs Law. While vessel is anchored, Ube Customs allows no traffic between shore and vessel before Customs formalities have been processed by Agent. Also the anchored vessel is not permitted to take on spare parts, food, bunkers, etc., until the vessel has entered "The Open Port".

MAX. SIZE: 259,999 tonnes s.d.w.t. Max. draft 19.6 m.

RESTRICTIONS: Traffic control and pre-notice are not required.

Berthing is practicable only during daytime and with Easterly stream, and unberthing is practicable during daytime.

Simultaneous ballasting and discharging of cargoes is permitted. However, a ballast pump with double segregation from cargo is required. Dirty ballasting into cargo tanks is in principle daytime only. Discharging of dirty ballast to shore tanks is not available.

HEALTH: At first port of call in Japan, vessel must obtain Free Pratique by radio, and the vessel's Master is required to show Derat Exemption Certificate, Ship's Register, Maritime Declaration of Health and Crew List.

Radio Pratique is available. In order to obtain Radio Pratique qualification, vessel's Master must have a Derat Exemption Certificate. In cases where a vessel arrives from cholera infected area within 10 days, Master must advise respective Quarantine Office of the crew and passengers health conditions through ship's Agent prior to arrival, and close all soil pipes before entering port.

RADIO: Telex communication is available. In the case of telegram, Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

TUGS: Two tugs of 3,000 h.p. for berthing and one tug for unberthing are used, in case of vessels less than 249,999 d.w.t. Three tugs of 3,000 h.p. for berthing and one tug unberthing are used, in case of vessels over 250,000 d.w.t.

In case of SBT tanker of 230,000 d.w.t. class, one tug will attend at her stern until sailing.

BERTHING: Berth is an SBM and vessel requires a Panama Lead, 450 mm. × 600 mm. (standard), 350 mm. × 450 mm. (minimum). Size of mooring rope is 130 mm. diameter × 55 m. × 2 lines, and size of chain is 76 mm. diameter × 7.4 m. × 2 chains.

Derricks: All vessels are requested to have port main derrick ready on arrival (Derrick capacity: More than 20 tonnes).

Floating Hoses: Connected by shore hands and arranged by refinery.

Discharging: Crude oil be discharged by 2×16 in. floating hoses at the ship's port side manifold. Capacity is 5,000 kl./hr. and max. rate is 10,000 kl./hr. (9.0 kg./sq.cm.). Flange is ANSI 16 in. 150 PSI, and connecting method is a Camlock.

Distance from bow to centre manifold is 130 m. to 170 m. (acceptable), 145 m. to 165 m. (standard). Distance from ship's side to manifold flange is 4.0 m. to 4.6 m. (acceptable), 4.5 m. (standard). Height of manifold centre from working platform is 0.9 m. Flange spacing is 2.5 m.

Vessel requires gas ejection of cargo lines by cargo oil circulation with pumps. The vessel is required to hold 15,000 kl. of fresh crude oil until final stage of cargo discharge, with which submerged line shall be flushed up to shore tank. Depth at berth is 20.2 m. Max. draft at SBM is 19.6 m., and further safety requirements shall be maintained. Also forward draft must be maintained deeper than 6.0 m. for 130,000 d.w.t. vessels, 7.0 m. for 200,000 d.w.t. vessels, 8.0 m. for 250,000 d.w.t. vessels, 8.5 m. for 230,000 d.w.t. to 259,999 d.w.t. with SBT, also mean draft of 10.5 m., and proper trim must be maintained.

MEDICAL: No advance notice required, except on Sundays, holidays and in an emergency.

DENSITY: 1025.

FRESH WATER: Arrangeable by barge at SBM from Moji. Cost Y. 1,190 kt. in daytime. Minimum order 100 kt.

FUEL: Bunkering prohibited by refinery.

REPAIRS: Some steel works and engineering companies can arrange minor repairs, but usually only parts are delivered at this port.

DRY DOCKS: None.

SURVEYORS: *Cargo Inspectors:* Nippon Kaiji Kentei Kyokai (Japan Marine Surveyors and Sworn Measurers Association), No. 1-5-5, Minatomachi 1-chome, Ube City, Yamaguchi Pref. Tel: 0836-32-6282.

Shin Nihon Kentei Kyokai (New Japan Surveyors and Sworn Measurers Association), No. 1-5-5, Minatomachi 1-chome, Ube City, Yamaguchi Pref. Tel: 0836-33-1036.

Class Surveyors: None at Ube.

GANGWAY WATCHMEN: Not necessary.

CUSTOMS ALLOWANCES: Each person may take 60 cigarettes ashore, but spirits may not be brought ashore.

REPATRIATION: Possible.

AIRPORT: 20 minutes to Ube Airport by taxi. 5 flights per day to Tokyo. Domestic flights only from Ube to Tokyo. International flights leave from Fukuoka International Airport.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

HOLIDAYS: Public offices (Customs, Immigration, etc.) have holiday on every Saturday, Sunday and usual Japanese national holidays.

POLICE/AMBULANCE/FIRE: Police 110, Ambulance and Fire 119.

EMERGENCY CO-ORDINATION CENTRE: Maritime Safety Association, Ube Branch. Tel: 0836-22-4999.

TELEPHONES: Temporary marine telephone can be installed at SBM.

SERVICES: Charts, designated governmental forms and documents, notary public, etc.

BANKS: Yamaguchi Bank, Onoda Branch, Nishi-Koendori, Onoda City, Yamaguchi Pref., Japan 756. Tel: 0836-83-2007.

SHIP SUPPLY SERVICE: Not available.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Shore passes can be arranged by the Ube Immigration Office through the vessel's Agent. Shore passes are valid for 15 days.

REGULATIONS: Special port regulations for tankers may be applied at SBM.

AUTHORITY: Ube Maritime Safety Station, 1-5-7 Minato-machi, Ube City, Yamaguchi Pref., Japan. *Tel:* 0836-21-2410. *FAX:* 0836-21-2410.

Operator: Seibu Sekiyu Co. Ltd., Yamaguchi Refinery, 5 Nishioki, Onoda City, Yamaguchi Prefecture. Tel: 0836-88-1111.

UCHIURA: 35.32 N. 135.30 E. (See Plan)

DOCUMENTS:

Ship's Register (and International Tonnage Certificate, if Ship's Register does not show gross and nett tonnages).
Last Port Clearance.
6 Crew Lists, including Passport numbers.
3 Passenger Lists.
2 Stores List.
2 Declarations of Crew's Baggage.

PILOTAGE: Not compulsory. Pilot available at Quarantine Anchorage in daytime hours only.

ANCHORAGE: Quarantine Anchorage located 232° × 1,000 m. from Oshimawashi Lighthouse (35° 32' 48" N., 135° 29' 44" E.), radius 400 m.

RESTRICTIONS: Entry permissible day and night.

Draft limitation in channel is 20.0 m.

MAX. SIZE: See "Berthing".

HEALTH: Radio Pratique available. Ordinary quarantine inspection takes place at anchorage.

Also see "Late Reports".

TUGS: 1×2,200 h.p.

BERTHING:

Berth	*Position:*	*Length* (m.)	*Depth* (m.)	*Capacity* (d.w.t.)
Public Berth No.1		160	9.0	15,000
Public Berth No.2		160	9.0	15,000
Buoy No.1	35° 31' 57" N., 135° 30' 07" E.		20.0	15,000
Buoy No.2	35° 31' 48" N., 135° 30' 12" E.		20.0	15,000

STEVEDORES: Normal working hours: 0830 hrs. – 1700 hrs.

Labour available on Sundays and holidays, if required.

Log gangs available.

FRESH WATER: Not available.

FUEL: Not available.

REPAIRS: Minor repairs possible.

GENERAL: *Immigration:* Attend from Maizuru.

Lighering: Not possible.

Stores: Available.

Floating Crane: Not available.

UNO: 34.29 N. 133.57 E. (See Plan)

DOCUMENTS:

Ship's Register.
International Tonnage Certificate.
1 copy Voyage Memo (last 3 months).
Last Port Clearance.
3 Crew Lists, including Passport numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Harbour pilotage is not compulsory, but recommended in view of rapid current. Pilotage compulsory in Osaka Bay, Inland Sea and Kanmon Straits for vessels over 10,000 g.r.t.

Pilots obtained from one of three Pilot Stations, dependent upon vessel's last port of departure, and at Master's discretion.

Most Inland Sea Pilots act as harbour pilots up to berth or anchorage at destination. Harbour pilots available from sunrise to sunset.

1. Tomogashima, entrance to Osaka Bay. Position Lat. 34° 10' N., Long. 135° 00' E. Osaka Bay Pilot boarding up to Wadamisaki. Telegraphic address: "Baypilot Kobe". Tel: (078) 321-2200. Telex: 5622-617. Advance ETA notice: 12 hours. VHF: Channel 16.

Wadamisaki, entrance to Kobe. Position Lat. 34° 35' 0" N., Long. 135° 08' 24" E. Inland Sea Pilot boarding up to destination. Telegraphic address: "Anjin Kobe". Tel: (078) 391-7191. Telex: 5623-011. Advance ETA notice: 24 hours. VHF: Channel 16.

2. Sekisaki, entrance from Bungo Channel. Position Lat. 33° 13' 0" N., Long. 131° 55' 38" E. Inland Sea Pilot boarding up to destination. Telegraphic address: "Anjin Moji". Tel: (093) 332-7191. Telex: 7153-03. Advance ETA notice: 24 hours. VHF: Channel 16.

3. Mutsure, entrance to Kanmon Straits. Position Lat. 33° 58' 30" N., Long. 130° 52' 12" E. Kanmon Pilot boarding up to Hesaki. Telegraphic address: "Kanmonpilot Moji". Tel: (093) 332-2384. Telex: 7153-13. Advance ETA notice: 24 hours. VHF: Channel 16.

Hesaki, East side of Kanmon Straits. Position Lat. 33° 57' N., Long. 131° 03' E. Inland Sea Pilot boarding up to destination. Telegraphic address: "Anjin Moji". Tel: (093) 332-7191. Telex: 7153-03. Advance ETA notice: 24 hours. VHF: Channel 16.

ANCHORAGE: Bottom: Sand or shell.

Harbour Anchorage	*Depth*	*Position from Tobisu Beacon*	*Max.LOA*
No. 1 Anchorage (off shipyard)	20.0 m.	323° – 700 m.	150 m.
No. 4 (Closed Port)	22.0 m.	165° – 1,000 m.	180 m.
No. 5 Anchorage	29.0 m	023° – 850 m.	180 m.

RESTRICTIONS: No restrictions on entry and berthing by Port Authorities, but with pilot, entry is restricted to daytime only, and berthing only at slack tide.

Draft restrictions are as follows:

Vessel's draft:	Over 12.0 m.	Bottom clearance at berth: 10%.
	9.0 m. – 12.0 m.	Bottom clearance at berth: 8%.
	Under 9.0 m.	Bottom clearance at berth: 5%.

MAX. SIZE: See "Berthing".

HEALTH: Vessels usually anchor at Wadamisaki (off Kobe), where the Authorities board and grant Free Pratique.

Quarantine Officials not stationed in the port, therefore, vessel has to pass a quarantine inspection at Kobe (Quarantine) Anchorage (Lat. 34° 38' 20" N., Long. 135° 10' 45" E.) when vessel coming through the Kii Channel, Matsuyama, Mizushima, Sakaide or any other "Q" port when coming through the Bungo Channel, or Mutsure "Q" Anchorage (Lat. 33° 59' 31" N., Long. 130° 53' E.) when vessel coming through the Japan Sea.

Vaccination is available at local hospital. If vessel requires sanitary inspection, Officials come from Mizushima.

Also see "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio, which covers all ports in Japan.

VHF: Nearby facilities are "Mizushima Port Radio" on Channel 16, and "Sakaide Port Radio" on Channel 16.

RADAR: Bisan Seto Traffic Advisory Service Centre, located at Lat. 34° 17' 59.8" N., Long. 133° 49' 26.1" E., provides mariners with navigational information on movement of vessels, weather conditions, marine notices, etc., and controls traffic flow in restricted waterways.

TUGS: Tugs join vessel at Outer Harbour area. Tug's lines used.

BERTHING:

Berth	*Length* (m.)	*Depth* (m.)	*Draft (Salt)* (m.)	*Cargoes handled*
Tai-A	240	12.0	10.9	Logs
Tai-B	240	12.0	10.9	Not specified
Tai-C	240	12.0	10.9	Not specified
Tai-D	185	10.0	9.2	Not specified
Uno No.3 Pier	185	10.0	9.2	Not specified

CRANES: No shore cranes installed, ship's gear used.

SPECIALISED CARGO HANDLING FACILITIES: None.

BRIDGES: None.

STEVEDORES: Orders for gangs must be given to stevedores by 1500 hrs. on day prior to working, excluding Sundays and holidays.

Normal working hours: 0830 – 1630. Overtime work depends on availability of gangs.

MEDICAL: Advance notice preferable. Hospital and dentist are available from 0900 hrs. – 1200 hrs., and 1500 hrs. – 1800 hrs. on weekdays, and in an emergency.

TANKERS: No facilities.
DENSITY: Summer – 1023, Winter – 1025.
FRESH WATER: Available from shore hose. Cost Yen 270/ton.
FUEL: Bonded fuel is available from main ports or oil station by barge.
FIRE PRECAUTIONS: No particular precautions.
CONSULS: No consuls. Marine Note of Protest can be attested by local notary public in Okayama.
REPAIRS: All types of deck and engine repairs are possible.
DRY DOCKS: Mitsui Tamano No. 3 Dock: Length 209 m. Beam 31.5 m. Depth 9.75 m. Max. size 46,000 d.w.t. (27,000 g.r.t.).
SURVEYORS: (1) General cargo inspectors in Japan: INTECO, S.G.S., NKKK and SK.
(2) Hull surveyors available from Kobe.
GANGWAY/DECK WATCHMEN: Not specially required.
HATCHES: Opening/closing is normally carried out by stevedores.
CERTIFICATES: Ship's Register to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.
CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore, but no spirits.
CARGO GEAR: Load/discharge effected by ship's gear.
REPATRIATION: Possible.
AIRPORT: 42 km. to Okayama Airport. Regular airline service to Korea only, 4 flights per week.
TIME: GMT plus 9 hours. No alterations made to clocks during year.
HOLIDAYS: National holidays: January 1st and 15th; February 11th; March 20th; April 29th; May 3rd and 5th; September 23rd; October 10th; November 3rd and 23rd.

Local holidays: Year End, New Year (about 5 days), around August 15th (about 3 days). Cargo work cannot be arranged on those days.
POLICE/AMBULANCE/FIRE: Police 110; Ambulance and Fire 119.
TELEPHONES: Telephones can be placed on board at 3 days notice. Cost of installation plus daily rental plus charges for calls.
SERVICES: Most services available from Kobe area.
BANKS: Chugoku Bank, Uno Branch, 1-10-10, Chikko, Tamano City, Okayama Pref.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Shore passes issued.
DELAYS: See "Restrictions".
DEVELOPMENTS: Passenger ship berths will be constructed in about 10 years: 30,000 gross ton class (10 m. depth, 280 m. length) and 3,000 gross ton class (5 m. depth, 120 m. length).
AUTHORITY: Uno Port Administration Office, 1-8-4, Uno, Tamano City, Okayama Pref., Japan. *Tel:* (0863) 31-3421. *FAX:* 0863-31-3423.

WAKAMATSU: 33.54 N. 130.48 E. (See Plan)

(See "Kanmon-Ko").

DOCUMENTS: When vessel arrives direct from a foreign port, Customs Officials will board to search, and the following documents are to be submitted:

Ship's Register.
International Tonnage Certificate.
Voyage Memo (Port of Call).
Last Port Clearance.
3 Crew Lists, including Passport numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, Cargo Manifest and Cargo Manifest in Transit, using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.
PILOTAGE: Compulsory. Harbour Pilots and Inland Sea Pilots are available at the Pilot Station or Quarantine Anchorage. Mutsure Pilots Station: Lat. 33° 59' 30" N., Long. 130° 53' 00" E. Inland Sea pilotage should preferably be arranged through Agent by cable via Nagasaki Radio giving 72 hours' notice. Urgent correction of ETA outside business hours should be cabled direct to Pilot Station. Inland Sea Pilot Association covers all Inland Sea ports. Pilotage compulsory for vessels over 10,000 g.r.t. Pilots obtained from 1 of 3 Pilot Stations dependent upon vessels last port of departure and at Master's discretion. Pilotage available throughout 24 hours and 72 hours advance notice preferred, thereafter advising any alterations. Most Inland Sea Pilots also act as Harbour Pilots up to berth or anchorage at destination.

Note: VHF communication available with Inland Sea Pilot Stations. Also see "Shipmaster's Report" before first port.

1. Wadamisaki, at entrance to Kobe (vessels transiting Kii Straits). Position Lat. 34° 34.09' N., Long. 135° 11' E. Telegraphic address "Anjin Kobe".

2. Sekisaki, 3 miles South of Sekisaki Lighthouse. (Vessels transiting Bungo Channel). Position Lat. 33° 13' N., Long. 131° 54' E. Telegraphic address "Anjin Moji". In event bad weather, recommended vessels proceed for shelter as near as possible having due regard to safety, to Sekisaki Pilot Station.

3. Hesaki, at East side of Kanmon (Shimoneseki) Straits. Position Lat. 33° 56' 24" N., Long. 131° 03' 12" E.
ANCHORAGES: Mutsure Quarantine Anchorage.
RESTRICTIONS: Pilots not available after sunset. Entry and Sailing are controlled by the one-way signals as follows:
Entry: 0800 to 1100 hrs.; 1300 to 1500 hrs. 1 hour before sunset to sunset.
Sailing: Sunrise to 0800 hrs.; 1100 to 1300 hrs.; 1500 hrs. to 1 hour before sunset. Sunset to 0800 hrs. Easterly winds prevail in warm season, dense fog prevails sometimes in Spring and Winter, but generally clears in a few hours in the morning. Tidal range about 1.5 m. and current in leading channel about 1.5 – 2.5 knots, but no current in port. Due to narrow channel leading to main harbour and shallow water at entrance of channel, length and draft of vessels are generally limited (See "Berthing").

Fairway leading into main harbour about 200 m. wide and 2 miles long, running parallel to a breakwater and reclaimed land. In this channel, as in main harbour and fairway, vessels observe only one-way traffic and on an outgoing signal from the shore, wait outside for outgoing vessel until channel is cleared. Vessels with draft of more than 8.5 m. can enter/depart only at high tide. Entry permitted only from sunrise and vessel to be berthed before sunset. Night departure prohibited, but at HD1-5 Wharf, vessel can depart at night up to 2200 hrs. This vessel must be less than 5,000 g.r.t., and moored port side alongside.
MAX. SIZE: See "Berthing".
HEALTH: At first port call in Japan, vessel must obtain Free Pratique. Quarantine Officers will attend vessel from 0830 hrs. to 1630 hrs., only at anchorage. Master to show all Vaccination Cards and Derat Exemption Certificate. In case vessel arrives from cholera infected area within 10 days, Master must advise crew and passengers' health condition to respective Quarantine Office through ship's Agent prior to arrival, and close all soil pipes before entering port.

Others see "Moji".

Also see "Late Reports".
RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.
VHF: Shimonoseki Port Radio Station on Channels 16, 12, 14, 20 and 22. Pilots on Channel 13.
TUGS: See "Moji".
BERTHING:

			Max. Size			
Name of Berth	*Length* (m.)	*Depth* (m.)	*Draft* (m.)	*LOA* (m.)	*Cargo Handled*	*Cranes*
Makiyama Asahi Glass	140	7.0	6.8	140	Dangerous cargo	1×3 tons, 2×2.3 tons
Makiyama Asahi Glass	150	8.5	8.5	166	Salt Wharf	1×3 tons, 1×2 tons
Tobata Shoko Public	150	8.5	8.5	150		
Mitsubishi Chemical OKI	160	8.4	8.4	160		2×4 tons
Mitsubishi Chemical OKR	180	8.3	8.3	160		1 shiploader
Kurosaki-Kokyo Wharf OD1	140	8.0	8.0	150		
Kurosaki-Kokyo Wharf OD2	120	7.0	7.0	120		
Dolphin Wharf HD1		10.0	9.0	190	Logs	
Dolphin Wharf HD2		10.0	8.4	170	Logs	
Dolphin Wharf HD3		10.0	9.0	162	Logs	
Dolphin Wharf HD4		10.0	9.0	162	Logs, scrap	
Dolphin Wharf HD5		9.0	8.2	144	General	

No capacity limits at berths, but subject to draft.
BRIDGES: Wakato Bridge. Height of mast limited to 38 m. for passing under bridge.
STEVEDORES: At least 24 hours prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew at additional charge. Overtime surcharges 1700 hrs. – 1900 hrs. (50% additional of basic stevedorage), 2100 hrs. – 0500 hrs. next morning (130% additional), Sundays/holidays (60% additional).
MEDICAL: No advance notice required unless urgent. All types of hospitals available.
TANKERS: No tanker berths.
DENSITY: Average density in port about 1019 – 1021 in Summer season; 1025/1026 in Winter season.
FRESH WATER: Fresh water supplied either from water barge or from hydrants. Rate of delivery: 50 t.p.h. – 60 t.p.h. ex-barge. Minimum quantity at all berths, 30 tons.
FUEL: All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, Osaka Bay and Kanmon Port. At all other ports, bunkers will be lightered from the nearest bunker stock port at 7 days prior notice.
CONSULS: See "Yawata".
REPAIRS: All types of repairs possible.
DRY DOCKS: Mitsubishi Heavy Industries Ltd., 4 dockyards (No. 3 and 4 for small vessels).

	Dimensions of Docks			*Max.Size of Vessel for Docking*		
	Length (m.)	*Breadth* (m.)	*Draft* (m.)	*Length* (m.)	*Breadth* (m.)	*Draft* (m.)
No.1 Dock	164.13	25.0	7.04	160.00	22.50	5.50
No.2 Dock	150.10	20.0	6.88	143.00	19.30	5.00

GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.
OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.
CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.

final stage of cargo discharge, with which submerged line shall be flushed up to shore tank. Depth at berth is 20.2 m. Max. draft at SBM is 19.6 m., and further safety requirements shall be maintained. Also forward draft must be maintained deeper than 6.0 m. for 130,000 d.w.t. vessels, 7.0 m. for 200,000 d.w.t. vessels, 8.0 m. for 250,000 d.w.t. vessels, 8.5 m. for 230,000 d.w.t. to 259,999 d.w.t. with SBT, also mean draft of 10.5 m., and proper trim must be maintained.

MEDICAL: No advance notice required, except on Sundays, holidays and in an emergency.

DENSITY: 1025.

FRESH WATER: Arrangeable by barge at SBM from Moji. Cost Y. 1,190 kt. in daytime. Minimum order 100 kt.

FUEL: Bunkering prohibited by refinery.

REPAIRS: Some steel works and engineering companies can arrange minor repairs, but usually only parts are delivered at this port.

DRY DOCKS: None.

SURVEYORS: *Cargo Inspectors:* Nippon Kaiji Kentei Kyokai (Japan Marine Surveyors and Sworn Measurers Association), No. 1-5-5, Minatomachi 1-chome, Ube City, Yamaguchi Pref. Tel: 0836-32-6282.

Shin Nihon Kentei Kyokai (New Japan Surveyors and Sworn Measurers Association), No. 1-5-5, Minatomachi 1-chome, Ube City, Yamaguchi Pref. Tel: 0836-33-1036.

Class Surveyors: None at Ube.

GANGWAY WATCHMEN: Not necessary.

CUSTOMS ALLOWANCES: Each person may take 60 cigarettes ashore, but spirits may not be brought ashore.

REPATRIATION: Possible.

AIRPORT: 20 minutes to Ube Airport by taxi. 5 flights per day to Tokyo. Domestic flights only from Ube to Tokyo. International flights leave from Fukuoka International Airport.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

HOLIDAYS: Public offices (Customs, Immigration, etc.) have holiday on every Saturday, Sunday and usual Japanese national holidays.

POLICE/AMBULANCE/FIRE: Police 110, Ambulance and Fire 119.

EMERGENCY CO-ORDINATION CENTRE: Maritime Safety Association, Ube Branch. Tel: 0836-22-4999.

TELEPHONES: Temporary marine telephone can be installed at SBM.

SERVICES: Charts, designated governmental forms and documents, notary public, etc.

BANKS: Yamaguchi Bank, Onoda Branch, Nishi-Koendori, Onoda City, Yamaguchi Pref., Japan 756. Tel: 0836-83-2007.

SHIP SUPPLY SERVICE: Not available.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Shore passes can be arranged by the Ube Immigration Office through the vessel's Agent. Shore passes are valid for 15 days.

REGULATIONS: Special port regulations for tankers may be applied at SBM.

AUTHORITY: Ube Maritime Safety Station, 1-5-7 Minato-machi, Ube City, Yamaguchi Pref., Japan. *Tel:* 0836-21-2410. *FAX:* 0836-21-2410.

Operator: Seibu Sekiyu Co. Ltd., Yamaguchi Refinery, 5 Nishioki, Onoda City, Yamaguchi Prefecture. Tel: 0836-88-1111.

UCHIURA: 35.32 N. 135.30 E. **(See Plan)**

DOCUMENTS:
- Ship's Register (and International Tonnage Certificate, if Ship's Register does not show gross and nett tonnages).
- Last Port Clearance.
- 6 Crew Lists, including Passport numbers.
- 3 Passenger Lists.
- 2 Stores List.
- 2 Declarations of Crew's Baggage.

PILOTAGE: Not compulsory. Pilot available at Quarantine Anchorage in daytime hours only.

ANCHORAGE: Quarantine Anchorage located 232° × 1,000 m. from Oshimawashi Lighthouse (35° 32' 48" N., 135° 29' 44" E.), radius 400 m.

RESTRICTIONS: Entry permissible day and night.

Draft limitation in channel is 20.0 m.

MAX. SIZE: See "Berthing".

HEALTH: Radio Pratique available. Ordinary quarantine inspection takes place at anchorage.

Also see "Late Reports".

TUGS: 1×2,200 h.p.

BERTHING:

Berth	*Length* (m.)	*Depth* (m.)	*Capacity* (d.w.t.)
Public Berth No.1	160	9.0	15,000
Public Berth No.2	160	9.0	15,000
	Position:		
Buoy No.1	35° 31' 57" N., 135° 30' 07" E.	20.0	15,000
Buoy No.2	35° 31' 48" N., 135° 30' 12" E.	20.0	15,000

STEVEDORES: Normal working hours: 0830 hrs. – 1700 hrs.

Labour available on Sundays and holidays, if required.

Log gangs available.

FRESH WATER: Not available.

FUEL: Not available.

REPAIRS: Minor repairs possible.

GENERAL: *Immigration:* Attend from Maizuru.

Lighering: Not possible.

Stores: Available.

Floating Crane: Not available.

UNO: 34.29 N. 133.57 E. **(See Plan)**

DOCUMENTS:
- Ship's Register.
- International Tonnage Certificate.
- 1 copy Voyage Memo (last 3 months).
- Last Port Clearance.
- 3 Crew Lists, including Passport numbers.
- 3 Passenger Lists.
- 1 Stores List.
- 1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Harbour pilotage is not compulsory, but recommended in view of rapid current. Pilotage compulsory in Osaka Bay, Inland Sea and Kanmon Straits for vessels over 10,000 g.r.t.

Pilots obtained from one of three Pilot Stations, dependent upon vessel's last port of departure, and at Master's discretion.

Most Inland Sea Pilots act as harbour pilots up to berth or anchorage at destination. Harbour pilots available from sunrise to sunset.

1. Tomogashima, entrance to Osaka Bay. Position Lat. 34° 10' N., Long. 135° 00' E. Osaka Bay Pilot boarding up to Wadamisaki. Telegraphic address: "Baypilot Kobe". Tel: (078) 321-2200. Telex: 5622-617. Advance ETA notice: 12 hours. VHF: Channel 16.

Wadamisaki, entrance to Kobe. Position Lat. 34° 35' 0" N., Long. 135° 08' 24" E. Inland Sea Pilot boarding up to destination. Telegraphic address: "Anjin Kobe". Tel: (078) 391-7191. Telex: 5623-011. Advance ETA notice: 24 hours. VHF: Channel 16.

2. Sekisaki, entrance from Bungo Channel. Position Lat. 33° 13' 0" N., Long. 131° 55' 38" E. Inland Sea Pilot boarding up to destination. Telegraphic address: "Anjin Moji". Tel: (093) 332-7191. Telex: 7153-03. Advance ETA notice: 24 hours. VHF: Channel 16.

3. Mutsure, entrance to Kanmon Straits. Position Lat. 33° 58' 30" N., Long. 130° 52' 12" E. Kanmon Pilot boarding up to Hesaki. Telegraphic address: "Kanmonpilot Moji". Tel: (093) 332-2384. Telex: 7153-13. Advance ETA notice: 24 hours. VHF: Channel 16.

Hesaki, East side of Kanmon Straits. Position Lat. 33° 57' N., Long. 131° 03' E. Inland Sea Pilot boarding up to destination. Telegraphic address: "Anjin Moji". Tel: (093) 332-7191. Telex: 7153-03. Advance ETA notice: 24 hours. VHF: Channel 16.

ANCHORAGE: Bottom: Sand or shell.

Harbour Anchorage	*Depth*	*Position from Tobisu Beacon*	*Max.LOA*
No. 1 Anchorage (off shipyard)	20.0 m.	323° – 700 m.	150 m.
No. 4 (Closed Port)	22.0 m.	165° – 1,000 m.	180 m.
No. 5 Anchorage	29.0 m	023° – 850 m.	180 m.

RESTRICTIONS: No restrictions on entry and berthing by Port Authorities, but with pilot, entry is restricted to daytime only, and berthing only at slack tide.

Draft restrictions are as follows:

Vessel's draft:	Over 12.0 m.	Bottom clearance at berth: 10%.
	9.0 m. – 12.0 m.	Bottom clearance at berth: 8%.
	Under 9.0 m.	Bottom clearance at berth: 5%.

MAX. SIZE: See "Berthing".

HEALTH: Vessels usually anchor at Wadamisaki (off Kobe), where the Authorities board and grant Free Pratique.

Quarantine Officials not stationed in the port, therefore, vessel has to pass a quarantine inspection at Kobe (Quarantine) Anchorage (Lat. 34° 38' 20" N., Long. 135° 10' 45" E.) when vessel coming through the Kii Channel, Matsuyama, Mizushima, Sakaide or any other "Q" port when coming through the Bungo Channel, or Mutsure "Q" Anchorage (Lat. 33° 59' 31" N., Long. 130° 53' E.) when vessel coming through the Japan Sea.

Vaccination is available at local hospital. If vessel requires sanitary inspection, Officials come from Mizushima.

Also see "Late Reports".

RADIO: Recommended Master communicates with Agent through Nagasaki Radio, which covers all ports in Japan.

VHF: Nearby facilities are "Mizushima Port Radio" on Channel 16, and "Sakaide Port Radio" on Channel 16.

RADAR: Bisan Seto Traffic Advisory Service Centre, located at Lat. 34° 17' 59.8" N., Long. 133° 49' 26.1" E., provides mariners with navigational information on movement of vessels, weather conditions, marine notices, etc., and controls traffic flow in restricted waterways.

TUGS: Tugs join vessel at Outer Harbour area. Tug's lines used.

BERTHING:

Berth	*Length* (m.)	*Depth* (m.)	*Draft (Salt)* (m.)	*Cargoes handled*
Tai-A	240	12.0	10.9	Logs
Tai-B	240	12.0	10.9	Not specified
Tai-C	240	12.0	10.9	Not specified
Tai-D	185	10.0	9.2	Not specified
Uno No.3 Pier	185	10.0	9.2	Not specified

CRANES: No shore cranes installed, ship's gear used.

SPECIALISED CARGO HANDLING FACILITIES: None.

BRIDGES: None.

STEVEDORES: Orders for gangs must be given to stevedores by 1500 hrs. on day prior to working, excluding Sundays and holidays.

Normal working hours: 0830 – 1630. Overtime work depends on availability of gangs.

MEDICAL: Advance notice preferable. Hospital and dentist are available from 0900 hrs. – 1200 hrs., and 1500 hrs. – 1800 hrs. on weekdays, and in an emergency.

TANKERS: No facilities.
DENSITY: Summer – 1023, Winter – 1025.
FRESH WATER: Available from shore hose. Cost Yen 270/ton.
FUEL: Bonded fuel is available from main ports or oil station by barge.
FIRE PRECAUTIONS: No particular precautions.
CONSULS: No consuls. Marine Note of Protest can be attested by local notary public in Okayama.
REPAIRS: All types of deck and engine repairs are possible.
DRY DOCKS: Mitsui Tamano No. 3 Dock: Length 209 m. Beam 31.5 m. Depth 9.75 m. Max. size 46,000 d.w.t. (27,000 g.r.t.).
SURVEYORS: (1) General cargo inspectors in Japan: INTECO, S.G.S., NKKK and SK.
(2) Hull surveyors available from Kobe.
GANGWAY/DECK WATCHMEN: Not specially required.
HATCHES: Opening/closing is normally carried out by stevedores.
CERTIFICATES: Ship's Register to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.
CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore, but no spirits.
CARGO GEAR: Load/discharge effected by ship's gear.
REPATRIATION: Possible.
AIRPORT: 42 km. to Okayama Airport. Regular airline service to Korea only, 4 flights per week.
TIME: GMT plus 9 hours. No alterations made to clocks during year.
HOLIDAYS: National holidays: January 1st and 15th; February 11th; March 20th; April 29th; May 3rd and 5th; September 23rd; October 10th; November 3rd and 23rd.

Local holidays: Year End, New Year (about 5 days), around August 15th (about 3 days). Cargo work cannot be arranged on those days.
POLICE/AMBULANCE/FIRE: Police 110; Ambulance and Fire 119.
TELEPHONES: Telephones can be placed on board at 3 days notice. Cost of installation plus daily rental plus charges for calls.
SERVICES: Most services available from Kobe area.
BANKS: Chugoku Bank, Uno Branch, 1-10-10, Chikko, Tamano City, Okayama Pref.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Shore passes issued.
DELAYS: See "Restrictions".
DEVELOPMENTS: Passenger ship berths will be constructed in about 10 years: 30,000 gross ton class (10 m. depth, 280 m. length) and 3,000 gross ton class (5 m. depth, 120 m. length).
AUTHORITY: Uno Port Administration Office, 1-8-4, Uno, Tamano City, Okayama Pref., Japan. *Tel:* (0863) 31-3421. *FAX:* 0863-31-3423.

WAKAMATSU: 33.54 N. 130.48 E. (See Plan)

(See "Kanmon-Ko").

DOCUMENTS: When vessel arrives direct from a foreign port, Customs Officials will board to search, and the following documents are to be submitted:

Ship's Register.
International Tonnage Certificate.
Voyage Memo (Port of Call).
Last Port Clearance.
3 Crew Lists, including Passport numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agent will prepare Inward/Outward Declaration, Cargo Manifest and Cargo Manifest in Transit, using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.
PILOTAGE: Compulsory. Harbour Pilots and Inland Sea Pilots are available at the Pilot Station or Quarantine Anchorage. Mutsure Pilots Station: Lat. 33° 59' 30" N., Long. 130° 53' 00" E. Inland Sea pilotage should preferably be arranged through Agent by cable via Nagasaki Radio giving 72 hours' notice. Urgent correction of ETA outside business hours should be cabled direct to Pilot Station. Inland Sea Pilot Association covers all Inland Sea ports. Pilotage compulsory for vessels over 10,000 g.r.t. Pilots obtained from 1 of 3 Pilot Stations dependent upon vessels last port of departure and at Master's discretion. Pilotage available throughout 24 hours and 72 hours advance notice preferred, thereafter advising any alterations. Most Inland Sea Pilots also act as Harbour Pilots up to berth or anchorage at destination.

Note: VHF communication available with Inland Sea Pilot Stations. Also see "Shipmaster's Report" before first port.

1. Wadamisaki, at entrance to Kobe (vessels transiting Kii Straits). Position Lat. 34° 34.09' N., Long. 135° 11' E. Telegraphic address "Anjin Kobe".

2. Sekisaki, 3 miles South of Sekisaki Lighthouse. (Vessels transiting Bungo Channel). Position Lat. 33° 13' N., Long. 131° 54' E. Telegraphic address "Anjin Moji". In event bad weather, recommended vessels proceed for shelter as near as possible having due regard to safety, to Sekisaki Pilot Station.

3. Hesaki, at East side of Kanmon (Shimoneseki) Straits. Position Lat. 33° 56' 24" N., Long. 131° 03' 12" E.
ANCHORAGES: Mutsure Quarantine Anchorage.
RESTRICTIONS: Pilots not available after sunset. Entry and Sailing are controlled by the one-way signals as follows:
Entry: 0800 to 1100 hrs.; 1300 to 1500 hrs. 1 hour before sunset to sunset.
Sailing: Sunrise to 0800 hrs.; 1100 to 1300 hrs.; 1500 hrs. to 1 hour before sunset. Sunset to 0800 hrs. Easterly winds prevail in warm season, dense fog prevails sometimes in Spring and Winter, but generally clears in a few hours in the morning. Tidal range about 1.5 m. and current in leading channel about 1.5 – 2.5 knots, but no current in port. Due to narrow channel leading to main harbour and shallow water at entrance of channel, length and draft of vessels are generally limited (See "Berthing").

Fairway leading into main harbour about 200 m. wide and 2 miles long, running parallel to a breakwater and reclaimed land. In this channel, as in main harbour and fairway, vessels observe only one-way traffic and on an outgoing signal from the shore, wait outside for outgoing vessel until channel is cleared. Vessels with draft of more than 8.5 m. can enter/depart only at high tide. Entry permitted only from sunrise and vessel to be berthed before sunset. Night departure prohibited, but at HD1-5 Wharf, vessel can depart at night up to 2200 hrs. This vessel must be less than 5,000 g.r.t., and moored port side alongside.
MAX. SIZE: See "Berthing".
HEALTH: At first port call in Japan, vessel must obtain Free Pratique. Quarantine Officers will attend vessel from 0830 hrs. to 1630 hrs., only at anchorage. Master to show all Vaccination Cards and Derat Exemption Certificate. In case vessel arrives from cholera infected area within 10 days, Master must advise crew and passengers' health condition to respective Quarantine Office through ship's Agent prior to arrival, and close all soil pipes before entering port.

Others see "Moji".

Also see "Late Reports".
RADIO: Recommended Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.
VHF: Shimonoseki Port Radio Station on Channels 16, 12, 14, 20 and 22. Pilots on Channel 13.
TUGS: See "Moji".
BERTHING:

Name of Berth	Length (m.)	Depth (m.)	Max. Size Draft (m.)	Max. Size LOA (m.)	Cargo Handled	Cranes
Makiyama Asahi Glass	140	7.0	6.8	140	Dangerous cargo	1×3 tons, 2×2.3 tons
Makiyama Asahi Glass	150	8.5	8.5	166	Salt Wharf	1×3 tons, 1×2 tons
Tobata Shoko Public	150	8.5	8.5	150		
Mitsubishi Chemical OKI	160	8.4	8.4	160		2×4 tons
Mitsubishi Chemical OKR	180	8.3	8.3	160		1 shiploader
Kurosaki-Kokyo Wharf OD1	140	8.0	8.0	150		
Kurosaki-Kokyo Wharf OD2	120	7.0	7.0	120		
Dolphin Wharf HD1		10.0	9.0	190	Logs	
Dolphin Wharf HD2		10.0	8.4	170	Logs	
Dolphin Wharf HD3		10.0	9.0	162	Logs	
Dolphin Wharf HD4		10.0	9.0	162	Logs, scrap	
Dolphin Wharf HD5		9.0	8.2	144	General	

No capacity limits at berths, but subject to draft.
BRIDGES: Wakato Bridge. Height of mast limited to 38 m. for passing under bridge.
STEVEDORES: At least 24 hours prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew at additional charge. Overtime surcharges 1700 hrs. – 1900 hrs. (50% additional of basic stevedorage), 2100 hrs. – 0500 hrs. next morning (130% additional), Sundays/holidays (60% additional).
MEDICAL: No advance notice required unless urgent. All types of hospitals available.
TANKERS: No tanker berths.
DENSITY: Average density in port about 1019 – 1021 in Summer season; 1025/1026 in Winter season.
FRESH WATER: Fresh water supplied either from water barge or from hydrants. Rate of delivery: 50 t.p.h. – 60 t.p.h. ex-barge. Minimum quantity at all berths, 30 tons.
FUEL: All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, Osaka Bay and Kanmon Port. At all other ports, bunkers will be lightered from the nearest bunker stock port at 7 days prior notice.
CONSULS: See "Yawata".
REPAIRS: All types of repairs possible.
DRY DOCKS: Mitsubishi Heavy Industries Ltd., 4 dockyards (No. 3 and 4 for small vessels).

	Dimensions of Docks			Max.Size of Vessel for Docking		
	Length (m.)	Breadth (m.)	Draft (m.)	Length (m.)	Breadth (m.)	Draft (m.)
No.1 Dock	164.13	25.0	7.04	160.00	22.50	5.50
No.2 Dock	150.10	20.0	6.88	143.00	19.30	5.00

GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.
OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.
CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore, but no spirits.
REPATRIATION: Possible.
AIRPORT: Nearest is Fukuoka Airport, which is about 2 hours by train and taxi. Kitakyushu Airport about 40 minutes by taxi.
TIME: GMT plus 9 hours. No alterations made to clocks during year.
POLICE/AMBULANCE/FIRE: Police 110; Ambulance and Fire 119.
Defence/Rescue Department: Tel. 093-761-4353.
Public telephone booth available near some berths.
TELEPHONES: Possible to place telephones on board.
SHORE LEAVE: Local Immigration Offices issue shore passes valid for only 15 days, when Wakamatsu is first port of call in Japan. Extension possible if ship stays longer.
SERVICES: All services available.
DEVELOPMENTS: Land reclamation N.E. Wakamatsu for discharge wharves (coal/iron ore). Depth to be 12 m.
AUTHORITY: Kitakyushu Port & Harbour Bureau, 2-7 Nishi-kaigan, 1-chome, Moji-ku, Kitakyushu-City, Fukuoka Pref., 801 Japan. *Tel:* (093) 321-5941. *FAX:* (093) 321-5915.

WAKAYAMA: 34.13 N. 135.08 E. (See Plan)

DOCUMENTS:
Ship's Register.
International Tonnage Certificate.
Last Port Clearance.
3 Crew Lists, including Passport Numbers
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).
Ship's Agent will prepare Inward/Outward Declaration, 1 Cargo Manifest and Cargo Manifest in transit using specific forms. Therefore ship's Agent should be provided with necessary information about details of cargoes in advance.
PILOTAGE: Wakayama-Shimotsu licensed Pilots. ETA advices to Agent. Pilot boards 1,500 m. – 2,500 m. off Wakayama Breakwater. Chart Nos. 1150 and 1143 (Japanese Maritime Safety Board). No pilot boat. Pilot boards from tug.
ANCHORAGES: For waiting Pilot and/or berth (nature of bottom, sand mixed with mud.) Four anchorage points for large vessels (ore carriers for Sumitomo Metal) over 30,000 tons gross are provided by the Port Authority. Agents must apply for one when required. The position of each from the lighthouse (flashing white) in the Southern sector of the port is as follows:

"A" – 3,000 m. – 255°
"B" – 3,500 m. – 272°
"C" – 4,100 m. – 283°
"D" – 4,800 m. – 292°

Other vessels are required to anchor in position (approx.) Lat. 34° 13' 30" N., Long. 135° 06' 30" E. or nearer the shore if possible. (Wakayama Log Carrier): 2,000 m. 245° and 230° from Red lighthouse; depth about 22 m.
RESTRICTIONS: Pilot available daytime only. Channel depth, (Southern Section) 9.0 m.; (Northern Section) 14.0 m.
MAX. SIZE: (Wakayama Log Carrier): South Section, LOA 160 m., 20,000 d.w.t. draft 9.0 m.; LOA 200 m., 35,000 d.w.t., draft 9.0 m. (Sumitomo Metal Pier, South Section): LOA 300 m., 100,000 d.w.t. or 150,000 d.w.t. with part load, draft 14.0 m.
HEALTH: Radio Agent for Free Pratique not less than 12 hours and not more than 36 hours before arrival, advising full details of vessel and health condition on board. When Free Pratique is granted by radio vessel will be required to submit the following documents to Quarantine Officer on arrival:
Maritime Declaration of Health.
Crew List.
Passenger List.
Vaccination List.
The following vessels will not be able to get Radio Pratique:
A vessel that has been in contact with an infected area, or a suspected infected area within 15 days of arrival.
If a vessel has on board any case, or suspected cases, of infectious disease within 15 days of arrival.
Also see "Late Reports".
RADIO: Recommended Master communicates with Agent through Nagasaki Radio or Kobe Radio which covers all ports in Japan.
TUGS: Tug assistance normally commences from outer harbour. Tug lines used and charge included in towage. 8 tugs available, up to 3,000 h.p.
BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by radio.

			Max. Size	
Berth	*Length* (m.)	*Depth* (m.)	*LOA* (m.)	*Draft* (m.)
Nakafuto No. 1	185	10.0	175	8.5
No. 2	185	10.0	175	8.5
No. 3	185	10.0	175	9.0
No. 4	185	10.0	175	9.0

BULK HANDLING FACILITIES: North Port:

Berth	Max. *d.w.t.*	*Length* (m.)	*Depth* (m.)	*Cranes*
Sumitomo Metal A	18,000	172	9.5	7×700 t.p.h. 1×1,000 t.p.h.
Sumitomo Metal B	160,000	365	14.0	
Sumitomo Metal C	160,000	274	14.0	
Sumitomo Metal D	40,000	215	12.0	
Sumitomo Metal E	26,000	218 (LOA)	11.00 (Max. draft)	2×20 tons
Sumitomo Metal F	18,000	180 (LOA)	9.30 (Max. draft)	

STEVEDORES: At least 24 hours prior notice excluding Sundays and holidays required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew. Overtime surcharges 1630 – 2130 hrs. (60% additional of basic stevedorage), 2130 – 0400 hrs. next morning (130% additional), 0400 – 0830 hrs. (60% additional), Sundays/holidays (100% additional).
MEDICAL: No advance notice required unless urgent.
TANKERS: *Wakayama Northport (LPG Dolphin):* Sumitomo Metal: Max. 48,000 d.w.t., Max. LOA 230 m., Max. draft 12.0 m., 1×12 in. (butane), rate 2,700 kl.
DENSITY: 1025 – 1030.
FRESH WATER: Available alongside and Water boat, capacity 90 tons.
FUEL: All grades of bonded bunkers are stocked in Tokyo Bay, Ise Bay, Osaka Bay and Kanmon Port. At all other ports bunkers will be lightered from the nearest bunker stock ports at maximum 7 days prior notice.
CONSULS: None.
REPAIRS: Minor repairs only. Suwa Shipyard Co., Ltd.
Tel. 0734-31-1694.
DRY DOCK: None.
GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo on board.
OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.
CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.
CUSTOMS ALLOWANCES: Only allowed 200 cigarettes to take ashore for one week but no spirits.
REPATRIATION: Possible.
AIRPORT: Itami, Osaka, about 3 hours by car.
TIME: GMT plus 9 hours. No alterations made to clocks during year.
POLICE/AMBULANCE/FIRE: Police, 110; Ambulance/Fire, 119.
SHORE LEAVE: Local Immigration Offices issue shore passes valid for only 15 days. Extension possible if ship stays longer.
DEVELOPMENTS: Public Wharf with depth 12.0 m. under construction in Southern Section (Minami-Ku).
AUTHORITY: Wakayama Shimotsu Port Administration Office, 22, Chikko 6-chome, Wakayama City. *Tel:* (0734) 31-7266.

WAKKANAI: 45.25 N. 141.42 E. (See Plan)

DOCUMENTS:
Ship's Register (and International Tonnage Certificate, if Ship's Register does not show gross and nett tonnages).
Last Port Clearance.
6 Crew Lists, including Passport numbers.
4 Passenger Lists.
2 Stores Lists.
2 Declarations of Crew's Baggage.
PILOTAGE: Not compulsory. Pilot is only available from Kushiro with sufficient advance notice.
ANCHORAGE: Quarantine Anchorage.
RESTRICTIONS: Draft limitation in channel is 8.0 m.
HEALTH: Radio Pratique available. Ordinary quarantine inspection takes place at the Quarantine Anchorage.
Also see "Late Reports".
TUGS: 1×1,500 h.p., 1×1,000 h.p., 1×450 h.p., 2×350 h.p. and 1×100 h.p.
BERTHING:

Name of Berth		*Length* (m.)	*Depth* (m.)	*Max.Size* (g.r.t.)
No. 1 Wharf		181	5.5	2×2,000
No. 2 Wharf	P. 1	100	5.5	1×2,000
	P. 2	135	7.5	1×5,000
No. 3 Wharf	P. 1	180	5.5	2×2,000
	P. 2	130	7.5	1×5,000
No. 4 Wharf	P. 1	185	10.0	1×15,000
Dolphin (Shinko)		153	8.0	1×5,000

STEVEDORES: Normal working hours: 0800 hrs. – 1700 hrs.
Log gangs available.
FRESH WATER: Available.
FUEL: Domestic oil is available. Bonded oil has to be brought from Hakodate or Muroran, with sufficient notice.
GENERAL: *Immigration:* Authorities come from Kushiro.
Lightering: Not possible.
Floating Crane: Not available.
Stores: Available.

YATSUSHIRO: 32.30 N. 130.05 E. (See Plan)

PORT LIMITS: The sea surrounded by the circle with a radius of 5,000 m. centred upon the triangulation point on Kagashima Island (28.7 m. high), the lines West to the respective bridges on the lowest Mae-kawa and Kuma-gawa, and the coast.

DOCUMENTS: When vessel arrives direct from a foreign port, Customs Officials will board to search, and the following documents are to be submitted:

Ship's Register.
International Tonnage Certificate.
Voyage Memo (Ports of Call).
3 Crew Lists, including Passport numbers.
3 Passenger Lists.
1 Stores List.
1 Declaration of Crew's Baggage, i.e. tobacco, wine/spirits, camera, wrist-watch, radio, firearms/swords, etc. (only at first port of call in Japan).

Ship's Agents will prepare Inward/Outward Declaration, Cargo Manifest and Cargo Manifest in Transit, using specific forms. Therefore, ship's Agents should be provided with necessary information about details of cargoes in advance.

PILOTAGE: Not compulsory for entering or leaving. Pilot station (acting also as an Agent for foreign vessels):

Yatsushiro Branch Office of the Nippon Tsuun K.K. located at 262-15 Minato-machi, Yatsushiro City, Kumamoto Pref. Tel: 0965-37-0011.

Kokoku Unyu K.K. located at 262 Minato-machi, Yatsushiro City. Tel: 0965-37-1101. Telex: 767503 Kounki J.

Yatsushiro Branch office of Kitakyushu Unyu K.K. located at 3-2 Tatema, Yatsushiro City. Tel: 0965-37-1221. Telex: 767592 Yatsushiro Kitakyuunma.

Yatsushiro Koun K.K. located at 9-4 Asahichuo-dori, Yatsushiro City. Tel: 0965-35-2233. Telex: 767506.

Bay Pilot boarding at Lat. 32° 11' N., Long. 130° 05' E.
Harbour Pilot boarding at Lat. 32° 28' N., Long. 130° 29' E.

ANCHORAGES: Within port limits.

RESTRICTIONS: A Pilot is not available after dark, also his availability depends on the tidal conditions.

MAX. SIZE: Max. d.w.t. 40,000 tons. The tidal difference between high and low water is 4.3 m.

HEALTH: At first port of call in Japan, vessel must obtain Free Pratique. Quarantine Officers will attend vessel only from daylight to sunset, and Master to show all Vaccination Cards and Derat Exemption Certificate. In case vessel arrives from cholera infected area within 10 days, Master must advise crew and passengers' health condition to respective Quarantine Office through ship's Agent prior to arrival, and close all soil pipes before entering port.

All the necessary procedures must be undertaken at the Yatsushiro-Minamata Branch Office of the Nagasaki Quarantine Station. Radio Pratique available (See "Late Reports").

RADIO: Recommended that Master communicates with Agent through Nagasaki Radio, which covers all ports in Japan.

TUGS: 3 tugs available. 1×500 h.p. owned by the Jonan Unyu K.K., 1×2,000 h.p. from Misumi, and 1×3,200 h.p. from Nagasaki.

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agents mainly by radio.

Name of Berth	*Length* (m.)	*Depth* (m.)	*Max.Draft* (m.)
Quary A	130	7.50	7.30
B	130	7.50	7.30
C	165	9.00	8.80
D	185×4	10.00	9.50
E	240	12.00	11.80

CRANES: 10 mobile cranes and 20 shovel loaders.

As a rule, when a vessel is secured alongside Quays A, B, C, D and E there is no need to use the ship's own gear. However, it may sometimes be necessary to use the ship's gear during loading and unloading.

STEVEDORES: At least 24 hours' prior notice, excluding Sundays and holidays, required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew, at additional cost. Overtime surcharges 1700 hrs. – 190 hrs. 50% additional of basic stevedorage; 2100 hrs. – 0500 hrs. next morning, 130% additional; Sundays/holidays 100% additional.

MEDICAL: No advance notice required, unless urgent.

FRESH WATER: Available from the water supply facilities operated by the Kumamoto Prefecture.

CONSULS: No local representation. Marine Note of Protest can be attended by local notary public.

REPAIRS: Not possible.

DRY DOCKS: Not available.

SURVEYORS: Not available.

GANGWAY/DECK WATCHMEN: Not specially required, unless passengers or valuable cargo on board.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches (according to charter party). If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work, unless crew can complete it before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores, when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore, but not spirits.

REPATRIATION: Yatsushiro Branch Office of the Fukuoka Immigration office arranges necessary repatriation.

AIRPORT: Kumamoto Airport (about 70 km. distance). Domestic flights only (ANA and JAS).

TIME: GMT plus 9 hours. No alterations made to clocks during year.

HOLIDAYS: 1st January, 15th August.

POLICE/AMBULANCE/FIRE: Police 110; Ambulance and Fire 119.
Public telephone booth available near by the berth.

EMERGENCY CO-ORDINATION CENTRE: Yatsushiro Branch Office of the Misumi Maritime Safety Department. Tel: 0965-37-1477.

TELEPHONES: There is no arrangement for placing telephone on board.

STORING: See "Prelims".

1. Yes.
2. Yes.
3. Yes.
4. Yes.
5. Yes.
6. Yes.

SHORE LEAVE: Local Immigration Offices issue shore passes valid for only 15 days, when Yatsushiro is first port of call in Japan. Extension possible if ship stays longer.

GARBAGE DISPOSAL: Not available.

WASTE OIL DISPOSAL: Not available.

SEAMEN'S CLUBS: None.

DELAYS: Delays will be expected when quays are occupied by vessels or a Pilot cannot go on board because of the tidal conditions.

AUTHORITY: Yatsushiro Port Office of the Kumamoto Prefecture, 249 Minato-Machi, Yatsushiro City, Kumamoto Pref., Japan. *Tel:* 0965-37-0632. *Contact:* Port Office Superintendent.

YAWATA: 33.52 N. 130.49 E. (See Plan)
(See "Kanmon-Ko")

DOCUMENTS: When ship arrives direct from a foreign port, Customs Officials will board to search, and the following documents are to be submitted:

3 Crew Lists, including Passport numbers.
3 Passenger Lists.
1 Stores List.
Manifest of Crew Personal Effects (must be signed by individual crew members).
Arms and Ammunition List.
Narcotics List.
Voyage Memo (Ports of Call).
Discharging Cargo Manifest.
Through Cargo Manifest.
Declaration Inward/Outward (Form No. C-2000).

The following will be checked on board:

Ship's Register.
Last Port Clearance.
International Tonnage Certificate.

When ship comes from Japanese port, Customs Officials will not attend on board, except in special cases. Master or Agent to attend Customs House for entry formalities with following documents:

Discharging Cargo Manifest.
Through Cargo Manifest.
Declaration Inward/Outward.
Ship's Register.
Last Port Clearance.
Documents entrusted with the Master by Customs at previous port.

On ship's departure, clearance issued by Customs, after confirming payment of Tonnage Dues.

PILOTAGE: *(1) Harbour Pilotage:* Compulsory for entry, departure and when passing through Straits if vessel exceeds 10,000 g.r.t.

Pilots embark Eastbound vessels at Mutsure Quarantine Anchorage, position 0.5 miles East Mutsure Lighthouse, Lat. 33° 58' 15" N., Long. 131° 53' 18" E., and Westbound vessels at Hesaki Quarantine Anchorage (position 125° × 1,500 m. from Hesaki Lighthouse, Lat. 33° 56' 24" N., Long. 131° 03' 12" E.). Two pilots embark vessels exceeding 30,000 g.r.t. for entry and departure, charging double pilotage × 85%.

(2) Sea Pilotage: Vessel approaching from East obtain Pilot by radio request made at least 24 hours in advance. Pilot embarks 3 miles South from Sekisaki Lighthouse; Lat. 33° 13' N., Long. 131° 56' E.

(3) Pilots should be kept closely advised of vessel's accurate ETA at Pilot Station. If any change in vessel's movements, Master requested to immediately communicate by VHF to pilot office direct or through Agent, reporting revised ETA. Cable address of pilot offices are: Harbour Pilot – "Kanmonpilot Moji". Inland Sea Pilot – "Anjin Moji".

(4) VHF: Vessels keep in direct contact with Port Authorities with regard to arrival, berthing instructions and pilot's requirements through VHF as follows:

(a) Call Sign: Kitakyushu Port Radio (or Shimonoseki Port Radio).
(b) Location of Radio facilities: Transmitting and receiving station located at the top of Mt. Hinoyama, Shimonoseki.
(c) Type of Wave: Channel: Simplex 16 (calling, responding), Simplex 12 (communicating), Simplex 14 (communicating), Simplex 20 and 22 (communicating). Output 50 W.
(d) Operating hours: 0000 hrs. – 2400 hrs.
(e) Communicating Range: Within a radius of 50 miles from the Hinoyama Station.
(f) Communicating Language: Japanese/English.

ANCHORAGES: No anchorage at Yawata, but quarantine anchorage used in essential cases. See "Health".

RESTRICTIONS:
(a) Because of narrow channel leading to Yawata and shallow water at entrance of channel, length and draft of vessel limited, except for berthing at Nishi-Yawata Wharf, where 20,000 gross tonnage with 200 m. length overall and 8.3 m. draft may be accommodated.

Limits:	*Wharf*
Length (overall)	166 m.
Draft	8.5 m.
Gross tonnage	10,000 tons

Vessel slightly exceeding above may be berthed at the Pilot's discretion, subject weather conditions and efficiency of engine, steering, etc.
(b) Fairway leading into main harbour about 200 m. wide and 2 miles long, running parallel to breakwater and reclaimed land. In this channel, as in main harbour and fairway to Yawata, vessels observe one-way traffic and, on a "not-clear" signal from shore, wait outside for outgoing vessels to clear channel. Vessels with draft of more than 7.0 m. can enter/depart only at high tide.
(c) Entry permitted only from sunrise and vessels to be berthed before sunset. Night departure prohibited.
(d) Wakato Suspension Bridge crosses channel between Tobata and Wakamatsu. Height of bridge from water line at fairway 42.675 m. at spring high tide; height of mast of vessels passing under bridge limited to 38 m.
(e) Easterly winds prevail in warm season. N.W. winds in Winter. Dense fog sometimes in Spring and Winter, but generally clear in morning. Tidal range about 1.2 m. Tidal current in channel about 1.5 to 2.5 knots, but no current in port.
(f) Port privately owned and controlled by Nippon Steel Corp.

MAX. SIZE: See "Berthing".

HEALTH: Radio Agent for Free Pratique not more than 36 hours before arrival, advising full details of vessel and health conditions on board. When Free Pratique is granted by radio, vessel will be required to submit following documents to Quarantine Officer on arrival:
Declaration Inward.
Voyage Memo (Ports of Call).
Maritime Declaration of Health.
Crew List.
Passenger List.
Derat Certificate (copy).
The following vessels will not be able to obtain Radio Pratique:
A vessel that has been in contact with an infected area or a suspected infected area within 15 days of arrival.
If a vessel has on board any case, or any suspected case, of infectious disease, within 15 days of arrival.
If a vessel does not possess a valid Derat or Derat Exemption Certificate.
Also see "Late Reports".

Quarantine Regulations:
(a) Quarantine station at Western entrance: 0.5 mile East of Mutsure Lighthouse Lat. 33° 58' 15" N., Long. 130° 53' 43" E.
(b) Quarantine station at Eastern entrance: 125°, 1,500 m. from Hesaki Lighthouse Lat. 33° 56' 24" N., Long. 131° 30' 12" E.
(c) Quarantine inspection not allowed inside port except when weather or other special reasons prevent quarantine boat from approaching ship at anchorage.
(d) "Q" flag should be hoisted until ship in Free Pratique.
(e) Vessels exceeding 20,000 gross tonnage may undergo quarantine on application when they berth inside port.
(f) Quarantine service is rendered from 0830 hrs. to 1630 hrs.
(g) When ship arrives from plague infected or suspected area within 10 days after she left such place, 24 hours special quarantine required. All sanitary scuppers must be closed and garbage must not be thrown overboard within 60 miles of Japanese coast.
(h) Radio Pratique is obtainable according to the Radio Pratique Regulations.

RADIO: Recommended that Master communicates with Agent through Nagasaki Radio which covers all ports in Japan.

VHF: See "Pilotage".

TUGS: 2 tugs join vessel at corner of fairway leading into main harbour. Ship's lines used when vessel berths.

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent, mainly by radio.

Berth	*Length* (m.)	*Depth* (m.)	*Permissible Draft* (m.)	*Permissible Length* (m.)	*Shore Cranes* (tons)
Steel Export					
Wharf No. 14	150	9.0	8.0	180	—
15	150	9.0	8.5	180	—
16	150	9.0	8.5	180	6×32
17	150	9.0	8.5	180	—
18	179	9.0	8.5	180	—
Nishiyawata					
Wharf No. O.B.	220	9.0	8.5	200	—

Note: Capacity for the above, no limit subject to draft and length.

BRIDGE: See "Restrictions".

STEVEDORES: At least 24 hours prior notice, excluding Sundays and holidays, required in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew, at additional cost. Overtime surcharges 1700 hrs. – 1900 hrs. (50% additional of basic stevedorage), 2100 hrs. – 0500 hrs. next morning (130% additional), Sundays/holidays (60% additional).

MEDICAL: No advance notice required unless urgent.

TANKERS: No tanker berth.

DENSITY: Average density in port about 1020 – 1022 in Summer season, 1024 – 1025 in Winter season.

FRESH WATER: Water barges available from Wakamatsu, rate of delivery about 50 t.p.h. At wharves: (No. 16, 17, 18, 19, 20 and Nishi-Yawata Wharf.) From hydrants: 25 t.p.h. – 40 t.p.h. For supply at Nishi-Yawata Wharf, 1 day prior notice required.

FUEL: Domestic oil is available. Bonded oil will be brought from Moji, Ube or Oita with sufficient advance notice, when required.

FIRE PRECAUTIONS: Each tug is equipped with fire extinguisher system for attending emergency cases.

CONSULS: British Consul, who is also acting Swedish Consul, is stationed with Holme Ringer, Moji (tel. 093-331-1311). American Consul stationed at Fukuoka (tel. 092-751-9331). Korean Consul stationed at Fukuoka (tel. 092-771-0461).

REPAIRS: All types of repairs possible.

DRY DOCKS: No dry dock available.

GANGWAY/DECK WATCHMEN: Not specially required unless passengers or valuable cargo aboard.

OPENING/CLOSING HATCHES: Stevedores carry out opening and closing hatches. If any time lost by ship's crew doing this work, stevedores charge ship for waiting. Recommend request stevedores for this work unless crew can complete it before berthing.

CERTIFICATES: Ship's Register and International Tonnage Certificate to show Customs Inspector ship's registered gross and nett tonnages. Valid Cargo Gear Certificates sometimes required by stevedores when cargo gear maintenance appears to be poor.

CUSTOMS ALLOWANCES: Only allowed 60 cigarettes to take ashore but no spirits.

REPATRIATION: Possible.

AIRPORT: Fukuoka Airport, about 2 hours by train and taxi. Kitakyushu Airport, about 40 minutes by taxi.

TIME: GMT plus 9 hours. No alterations made to clocks during year.

POLICE/AMBULANCE/FIRE: Police 110, Ambulance and Fire 119.

SERVICES: All types of services available.

TELEPHONES: Possible to place telephone on board.
Nippon Senpaku Tsushin K.K. available at Moji (tel. 093-331-1089). In case of Mutsure anchorage, extra boat charge and personnel expenses will be incurred. Due to insufficient number of telephones require adequate advance notice for installation. Suitable ship's electrical voltage; DC – 22/28 v. AC – 100 v. 110 v. 120 v. (to keep at least within 10 v.).

SHORE LEAVE: Local Immigration Offices issue shore passes valid for only 15 days, when Yawata is first port of call in Japan. Extension possible if ship stays longer.

GENERAL: Whenever vessel takes bunkers in port, advisable to close deck scuppers' holes before pumping in order to avoid overflow oil into sea.

AUTHORITY: Kitakyushu Port and Harbour Bureau, 2-7 Nishi-kaigan, 1-chome, Moji-ku, Kitakyushu City, Fukuoka Pref., 801 Japan. *Tel:* (093) 321-5941. *Fax:* (093) 321-5915.

YOKKAICHI: 34.57 N. 136.38 E. (See Plan)

DOCUMENTS:
Ship's Register.
Last Port Clearance.
International Tonnage Certificate.
1 Maritime Declaration of Health (only at first port of call in Japan).
1 Declaration of Crew's Baggage (only at first port of call in Japan).
5 Crew Lists.
1 Stores List (including Narcotics and Firearms).
4 Lists of Ports of Call.

PILOTAGE: Compulsory for vessels exceeding 10,000 g.r.t. in Isewan (including Mikawawan).

1. Irago Pilot: (From vicinity Ise-Wan No. 1 Buoy to Yokkaichi Road).
Boarding Position:

1. For vessels coming from West or from South	34° 28.3' N., 137° 03.8' E
2. For vessels coming from East	34° 30.8' N., 137° 06.9' E
3. For LNG Tankers	34° 24.8' N., 137° 03.8' E
4. For vessels with deep draft (14.0 m. or more)	34° 24.6' N., 137° 00.1' E

Communications:
1. Telex: 4563668 (A/B IRAGOP J).
2. VHF: VHF F3E 40W VHF Channel 16 (Working Channel 13).
3. Telephone 0569-21-7487.
4. Cable address: "IRAGOPILOT HANDA".

Time Application:
Inward – 24 hours and 6 hours prior to ETA.
Outward – 12 hours and 6 hours prior to ETD.
Remarks: Two Pilots board vessels exceeding 100,000 g.r.t. when vessel under command of a Master other than Japanese.

2. Harbour Pilot: Compulsory for vessels exceeding 10,000 g.r.t.
Boarding Position:
1. For LNG/LPG/VLCC Tanker: from Ise-Wan Seaberth 200°×3 miles
2. Others: from Ise-Wan Seaberth 300°×1 mile.

Communications:
1. VHF communication is available through "Yokkaichi Port Radio" Channel 16 (Working Channel 14), 24 hours working any day.
2. Telex is available through the Agents.
3. Telephone: 0593-52-6818.

Time Application:
Inward – 24 hours and 6 hours prior to ETA.
Outward – 12 hours and 6 hours prior to ETD.
Remarks: Two Pilots board vessels exceeding 35,000 g.r.t.
Also see "Nagoya" – "Pilotage: Shipmaster's Report".

ANCHORAGES: *Quarantine:* Vessels anchor in position Lat. 34° 55.15' N., Long. 136° 40.85' E. where Authorities board and grant Free Pratique; Max. depth 13 m.

Tankers: Anchorages for oil tankers and/or LNG/LPG tankers designated by Yokkaichi Port Master.

For Oil Tankers:

1. Lat. 34° 58' 06" N., Long. 136° 42' 36" E., Code "A".
2. Lat. 34° 56' 57" N., Long. 136° 41' 36" E., Code "B".
3. Lat. 34° 56' 15" N., Long. 136° 41' 00" E., Code "C".
4. Lat. 34° 56' 04" N., Long. 136° 43' 10" E., Code "D".
5. Lat. 34° 55' 04" N., Long. 136° 43' 08" E., Code "E".
6. Lat. 34° 54' 36" N., Long. 136° 41' 54" E., Code "F".
7. Lat. 34° 54' 15" N., Long. 136° 42' 54" E., Code "G".
8. Lat. 34° 53' 36" N., Long. 136° 41' 31" E., Code "H".

For LNG/LPG Tankers:

1. LNG – from Ise-Wan Seaberth 201°×4.2 miles, Code "LB".
2. LPG – from Ise-Wan Seaberth 200°×3.0 miles, Code "C2".

RESTRICTIONS: Entry restricted by vessel's draft and Pratique. Max. draft inside port 12 m. Quarantine Authority attend vessel usually from dawn to sundown on any day. Berthing daytime only. Unberthing any time except tankers daytime only.

MAX. SIZE: Max. permissible draft inside port 12 m.

Tankers:

Berth	*Max. d.w.t.*	*Max. LOA (m.)*	*Max. Safe Draft (m.)*
Showa Outer SBM	275,000	335	18.00
Showa Inner SBM	170,000	300	15.00
Showa Wharf "E"	45,000	183	10.50
Cosmo SBM	259,999	–	19.80
Cosmo Oil 'U-1'	90,000	250	11.80
Cosmo Oil 'U-9'	60,000	250	11.80
LPG Terminal 'K-9'	67,000	260	11.00

HEALTH: Quarantine Officer usually boards at Quarantine Station in daytime. Radio Free Pratique is available under possession of valid Japanese Sanitary Certificate. Animal Quarantine Office and Plant Quarantine Office stationed at the port.

Also see "Late Reports".

RADIO/VHF: Wireless station for communicating with entering ships and for other port business, call signal JCZ. Radio wave in use is A1.A2 500 kHz and A1.A2 486 kHz, output A1 50 W. and A2 110 W. Zone of communication about 100 km.

Yokkaichi Signal Station equipped for assigning berths to entering ships and for other port business. VHF communication available, call signal Yokkaichi Port Radio, Channel 16. Working Channel 14, 24 hours.

BERTHING:

Name	*Length (m.)*	*Depth (m.)*	*Max. Draft (m.)*	*Max. LOA (m.)*	*Capacity (d.w.t.)*	*Main Cargoes handled*
Pier No. 1:						
Wharf No. 1	161	8.1	6.2	141	8,000	General Cargo
No. 2-3	245	8.5	7.8	185	25,000	Talc, Cotton
No. 4-5	215	8.8	8.0	185	25,000	Cotton, GC
Pier No. 2:						
Wharf No. 8	190	9.5	8.7	185	25,000	Rice, Cotton
No. 9	200	10.0	9.0	185	25,000	Cotton, Plywood
No. 10	200	5.5	5.0	90	2,000×2	Cotton (domestic)
Wharf No. 11	200	10.0	9.0	185	25,000	Grain
No. 12	140	5.0	4.5	60	1,000×2	Vehicles (Domestic)
No. 19-21	210	5.0	4.5	60	1,000×3	Vehicles, Steel (Domestic)
Pier No. 3:						
Wharf No. 13	245	12.0	10.9	225	65,000	Grain (Pneumatic Unloaders×2)
No. 14	220	10.0	9.0	190	30,000	Grain, GC
No. 15	220	10.0	9.0	190	30,000	Grain, GC
Wharf No. 7 (Tanker)	125	7.5	6.3	105	5,000	Styrene Monomer
Buoy No. 1-2	300	12.0	10.9	225	40,000	Grain
No. 2-3	250	10.0	9.0	190	15,000	Grain
Kasumigaura Wharf						
No. 25	240	12.0	10.9	225	65,000	Vehicles
No. 24	240	12.0	10.9	225	65,000	Salt, Grain (Unloader×2)
No. 22	280	14.0	10.9	250	65,000	Coal (Unloader×1)
Container Berth (Y.C.B)						
No. 26	330	12.0	10.9	250	25,000	(Gantry Crane×2)
Showa Oil Pier						
SD	200	8.9			45,000	Tankers
SE	200	10.6	10.5	183	45,000	Tankers
Showa Oil Sea Berth						
Outer Sea Berth (O.S.B.)		20.0	19.99	–	275,000	Tankers
Inner Sea Berth (I.S.B.)		17.0	16.5	–	170,000	Tankers
Cosmo Oil Sea Berth		20.8	19.8		259,999	Tankers
Cosmo Oil Pier						
Umaokoshi (U.1)		12.1	11.8	250	90,000	Tankers
(U.9)		12.0	11.8	250	60,000	Tankers
LPG Terminal (K-9)		13.0	11.0	260	67,000	Tankers

TUGS: 1×3,400 h.p. "Chitose Maru" owned by Yokkaichi Port Authority.
1×3,500 h.p. "Kamiji Maru" owned by Yokkaichi Eisen K.K.
1×3,100 h.p. "Suehiro Maru" owned by Yokkaichi Eisen K.K.

20 additional tugs are available from Isewan Harbour Tug Association and are available to assist berthing/unberthing. Service is provided by Yokkaichi Port Authority through the Agents.

Tugs normally join vessel with Harbour Pilot. Tug's lines normally used.

SPECIALISED CARGO HANDLING FACILITIES:

Bulk Cargoes: Wharf No. 13 has a cereal silo which can store 56,840 tons of imported grain. 2 pneumatic unloaders with unloading capacity of 300 t.p.h. per machine at the Northern berth of the pier to connect the silo with conveyors. Normal working hours 0830 – 1630 hrs., and daily average unloading production is about 4,000 tons by 2 unloaders.

Containers: One deep-sea container berth of 280 m., quay length and minimum water depth of 12 m., incorporating a Ro-Ro ramp. Two 37.5 ton and 44.5 ton Hitachi container cranes. Container yard and marshalling yard area of 58,750 sq.m. Five TCM straddle carriers, 4 forklift trucks (20 tons – 40 tons), 15 tractors, 35 trailers. Container freight stations at Asake 5,940 sq.m. Wool centre 46,768 sq.m.

Facilities of Container Terminal:

1. Total area 58,750 m.
2. Container berth: Length 280 m., depth 12 m., mooring capacity 25,000 d.w.t.×1 berth.
3. Cargo handling equipment: Ramp-way 1 unit, container cranes 2 sets, 1×44.5 tons, 1×37.5 tons.
4. Transport machine: Straddle carrier, 5×40 ft. units,; fork lift 4, 2×40 tons, 1×20 tons, 1×20/40 tons.
5. Container yard: Container yard 6 yards, 29,730 m. refrigerated container yard, one yard 1,275 m.
6. Other relevant facilities: Chassis yard 5,740 m.; wool centre 46,768 m.; cold store 4,664 m.; meat centre 3,335 m.

New container berth: Berth No. 26: Berth for vessels up to 25,000 d.w.t. 1×48.5 ton and 1×48 ton container crane. Container yard 64,000 sq.m.

LPG Carriers:

Operator: Yokkaichi LPG Terminal Co. Ltd.
Berth: Yokkaichi LPG Terminal – "K9".
Location: Lat. 34° 58' 10" N., Long. 136° 39' 55" E.
Max. Mooring Capacity: 67,000 d.w.t.
Depth of Water: Passage: 13 m.
Berth: 14 m.
Max. Acceptable Length: 260 m.
Max. Acceptable Draft: 11.00 m.
Tidal Range: Zero to plus 2.36 m.
Side Berthing: Starboard
Type of Unloader: Chicksan Arms.
No. of Receiving Lines: 2 liquid and 2 vapour.
Size of Manifold Flange: Liquid 12 in., vapour 8 in. ASA-150.
Manifold Configuration: From forward to aft – PV-PL-BL-BV and changeable to BV-BL-PL-PV if sufficient notice given to terminal.
Discharge Rate: 2,500 cu.m./hr. with pumping pressure at ship's manifold 9.0 kg./sq.m.

Remarks:

1. Safety Pledge letter has to be filed with Maritime Safety Agency for vessel 25,000 g.r.t. or more.
2. Supply of Nitrogen is not available.
3. Supplying of stores/provisions/fresh water is only permitted before commencement or after completion of cargo discharge.
4. Pilot/Tugs:
   35,000 g.r.t. or more = On berthing 2 Pilots and 3 tugs.
   = On unberthing 1 Pilot and 2 tugs.
   Under 35,000 g.r.t. = On berthing/unberthing 1 Pilot and 2 tugs.

LNG Carrier:

Operator: Chubu Denryoku K.K.
Berth: Yokkaichi LNG Terminal "K-9".
Location: Lat. 34° 58' 10" N., Long. 136° 39' 55" E.
Acceptable max. size of the ship:
D.w.t.: 72,000 (125,000 cu.m.).
Draft: 11.00 m.
Depth of water:
Passage 13.00 m.
Berth 14.00 m.
Side Alongside: Starboard (head-in).
Type of Unloader: Chicksan arms.
No. and size of receiving lines:
Liquid – 16 in. × 3
Vapour – 16 in. × 1.
Discharge Rate: 12,500 cu.m./hr.

Remarks:

1. Safety Pledge Letter has to be filed with Maritime Safety Agency for vessel 25,000 g.r.t. or more.
2. Supply of Nitrogen/gas oil/bunker oil are available. Nitrogen 3 in.×1 / gas oil 3 in.×1 / bunker oil 8 in. ×1.
3. Supplying of stores and provisions is only permitted by designated boat before commencement of cargo discharge.
4. Tugs:
   125,000 cu.m. type vessel = Berthing 4 tugs/unberthing 3 tugs.
   87,000 cu.m. type vessel = Berthing 3 tugs/unberthing 2 tugs.

TIDE: Tidal current of Ise Bay runs Northward along East side of Mie Prefecture and turns round at mouth of Kiso River and runs Southward for Chita Peninsula.

Tidal level:	High tide	Tidal level (average)	+7.74 ft.
	Mean tide		+4.30 ft.
	Low tide		+0.00 ft.

STEVEDORES: At least 24 hours prior notice, excluding Sundays and holidays required, in order for Agent to arrange stevedores. Vessel must constantly keep her Agent advised of ETA. If stevedores cannot commence loading/unloading at time notified by the Agent, the orderers must pay for waiting time. If cargo gear not rigged on berthing, stevedores will do same for ship's crew at additional cost.

Stevedore's Working Hours:

Daytime 0830 – 1630 hrs., basic stevedorage.

Half-night 1630 – 2130 hrs., 60% additional to basic.

Sundays and Holidays: Subject to negotiation, except 1st Sunday which is not available. Log gangs are available.

TANKERS:

Berth	*Product*	*Shoreline*	*Discharge Rate (t.p.h.)*
Showa Outer SBM	Crude Oil	16 in.×2	8,350
Showa Inner SBM	Naphtha, LNG	12 in.×2	1,500
Showa Wharf "E"	Naphtha	12 in.×1	1,400
	Fuel Oil	12 in.×1	1,000
	Kerosene (Load)	10 in.×1	300/500
	Lub Oil (Load)	8 in./10 in.×1	200/300
	Waxy Raffinate (Discharge)	10 in.	600
Cosmo SBM	Crude Oil	16 in.×2	8,000
Cosmo 'U-1'	Crude Oil	12 in.×2	5,500
	L.S.W.R.	12 in.×1	3,000
	Fuel Oil	12 in.×1	2,000
	Naphtha	12 in.×1	3,000
	Kerosene	12 in.×1	3,000
Cosmo Oil 'U-9'	Crude Oil	12 in.×2	5,500
	L.S.W.R.	12 in.×1	3,000
	Naphtha	16 in./ 12 in.×1	3,000

Attention is drawn to the manual "Safety Standards on Discharge Operations for Crude Oil Tankers", which will be handed to the Master on arrival by the Berthing Master and which are to be strictly adhered to. Apart from request for the normal international safety precautions for tankers, it contains several regulations which could cause considerable delays to vessels if not taken into account when planning discharge/ballasting operations.

Such regulations are:

1. Ballasting operations shall commence between sunrise and 90 minutes before sunset.

2. Berthing operations shall be performed so that discharge operations can be commenced between sunrise and 90 minutes before sunset.

3. Unberthing shall be conducted only between sunrise and sunset.

4. Discharge operations shall be suspended when malfunctions occur to the vessel or discharge facilities or at other times when in the judgement of the Master and the Berthing Master, it is necessary to suspend operations.

It is therefore of utmost importance that the planning/timing of port operations are carefully drawn up and fully discussed with the Berthing Master prior to commencement in order to reduce delays to a minimum. The good operational conditions of ship's equipment (pumps, etc.) and awareness of personnel are of equal importance.

Flags:

Inward: Showa Berth: (1) 2nd substitute flag.
(2) Alphabetical flag "I".
(3) Alpahbetical flag "S".
Mitsubishi Berth: (1) 2nd substitute flag.
(2) Alphabetical flag "D".
(3) Alphabetical flag "M".
Outward: (1) 1st substitute flag.
(2) Numerical flag "1".

Also see "Specialised Cargo Handling Facilities" and "Regulations".

DENSITY: Average 1022.

MEDICAL: Full hospital facilities available. Pre-notice to the Agents is recommended, especially if dental treatment is required. Vaccination of Cholera is available, but Yellow Fever is not available.

FRESH WATER: Available, rate of delivery 50 t.p.h. from shore pipes at Government wharves; 100 tons from barge; before 2200 hrs. additional cost 50%; after 2200 hrs. additional cost 100%.

Tankers/Gas Carriers: Fresh water delivered to Oil/LPG tankers by the water barge (max. capacity 200 tonnes). For the vessel at 'SBM' and/or 'K-9' Berth, water can be delivered whilst alongside. For vessels at 'U-1'/'U-9' Berth, only possible to deliver at the anchorage. Hoses can be supplied by the water barge. Delivery rate is about 100 tonnes/hr. Cost per ton Y1,060.-/Y1,260.- at 'SBM'/anchorage (subject location) and Y840.- at 'K-9' Berth.

FUEL: Most domestic and bonded oil available, ex-barge.

Minimum 5 days' notice required.

FIRE PRECAUTIONS: At the Oil/LPG tanker berths:

1. Prohibition of use of fire: Fire in connection with work on board the vessel or work boats at the berth and in adjacent areas shall be prohibited.
2. Smoking: Smoking on board the vessel, only places designated by the vessel's Master shall be admitted as smoking places, provided that such places shall be approved by the Berth Master.
   The smoking room shall be equipped with a gas detector without exception. Smoking onboard work boats, etc., which come near to the vessel, shall be prohibited during cargo operations.
3. Prohibition of Sparks: On board the vessel and at the berth, operations shall be carried out with caution so that sparks may not be generated.

4. The emission of sparks and black smoke from the funnel is prohibited.

5. The power source shall be isolated from the radar sets and main radio transmitter.

CONSULS: None.

REPAIRS: Minor repairs only.

DRY DOCKS: No facilities.

SURVEYORS: Nippon Kaiji Kentei Kyokai and Shin Nihon Kentei Kyokai.

Most surveyors are available with 2-3 days notice.

GANGWAY/DECK WATCHMEN: Not specially required.

CUSTOMS ALLOWANCES: As per Japanese Customs Regulations.

REPATRIATION: Change of crew/repatriation can be arranged.

AIRPORT: No airport locally.

Nearest is Nagoya International Airport which is about 2 hours by car. It is served by regular airlines from/to main airports in Europe, U.S.A. and Asian countries.

Kansai (Osaka) International Airport is about 4 hours by train/taxi.

TIME: Local time is GMT plus 9 hours.

HOLIDAYS:

January 1st, New Year's Day.
January 15th, Adults Day.
February 11th, National Founding Day.
March 21st, Vernal Equinox Day.
April 29th, Greenery Day.
May 3rd, Constitution Memorial Day.
May 4th, National Holiday.
May 5th, Childrens' Day.
July 20th, Marines' Day.
September 15th, Respect for the Aged Day.
September 23rd, Autumnal Equinox Day.
October 10th, Health Sports Day.
November 3rd, Culture Day.
November 23rd, Labour Thanksgiving Day.
December 23rd, Emperor's Birthday.

POLICE/AMBULANCE/FIRE:

Ambulance: 119 and/or 52-8211, 52-4500.
Fire Dept.: 119 and/or 52-8211, 52-4500.
Police: 110 and/or 53-3300, 52-2121.
M.S.A.: 51-3121 (Maritime Safety Agency).

TELEPHONES: No connections at tanker berth. Telephones will be installed for LPG/LNG tankers at "K-9" Berth for communication in case of emergency (domestic only).

For overseas calls, there are telephone boxes located near the Ferry Boat Station (Vending machine for telephone cards is in the Ferry Boat Station).

SERVICES:

1. Technicians and/or service engineer for vessel's installation are available from other port/city, 2-3 days' notice required.
2. Supplying of nautical publications/charts are available, at least 2-3 days' notice required.
3. Extension of the certificates can be arranged, 2-3 days' notice required.
4. Crew members of oil/gas tanker berths require taxi boats for landing ashore.

SHORE LEAVE: Crew members are allowed ashore under possession of Landing Permit, which are issued by Port Immigration Office.

IDENTIFICATION CARDS: Landing Permit (Shore passes) will be issued by Japanese Port Immigration on arrival. It is recommended to send Crew List by telex/fax to vessel's Agents pior to arrival, in order that issuing on arrival is without delay.

GARBAGE DISPOSAL: The collection services of vessel's garbage will be available under pre-notice to vessel's Agents prior to arrival.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUB: None.

CURRENCY: Japanese Yen (J.P.Y). U.S.$ 1.00 = J.P.Y. 105 (3/96)

REGULATIONS: *Restrictions:*

1. Ships of 50,000 g.r.t. or more carrying Dangerous Cargo and/or a ship of 25,000 g.r.t. or more carrying Liquified Gas are prohibited to transit Irago Suido Traffic Route during darkness, available transit is between one hour before sunrise and sunset.

They are requested to hoist lights and/or shapes and to arrange firefighting boat when transitting Irago Suido Traffic Route (Japanese Maritime Safety Traffic Law).

2. Berthing and unberthing for the Oil/LPG tanker is possible in daytime only (Last Harbour Pilot for berthing is 3 hours prior to sunset so as to commence cargo work by the time of sunset).
3. Weather: No berthing will be available in case of bad weather forecast, such as typhoon approaching or thunderstorm, wind velocity more than 15 m./sec., wave height more than 1.5 m. and/or visibility less than 1 mile.
   Cargo work at the berth will be stopped if the wind velocity more than 13 m./sec. (10 m./sec. at "K-9" Berth and 15 m./sec. at SBM) and/or wave height exceeds 1.5 m. (1.0 m. at "K-9" Berth). The ship also has to be ready to leave the berth at any time.
4. U.K.C.: For berthing to Cosmo Oil 'U-1', 'U-9' and/or Cosmo Oil SBM, the ship shall have an under-keel clearance of at least 10% of her draft at all times. The tidal level may be taken into consideration, provided however the depth on chart shall not be exceeded.
   Ships berthing at LPG Terminal 'K-9' Berth shall have 2.0 m. on passage (depth 13.0 m.) and/or 3.0 m. at the berth (depth 14.0 m.).
5. Ships of 50,000 d.w.t. or more berthing to Cosmo Oil 'U-1' or 'U-9' through Fairway I and ships of 3,000 g.r.t. or more unberthing from Cosmo Oil 'U-1' or 'U-9' through Fairway II are requested to arrange fairway patrol boats.

GENERAL: *Lightening:* Not allowed, except for specified cargoes of oil which are permitted by Yokkaichi Port Master.

DEVELOPMENTS: New LNG berth will be ready in January 1997.

SHIPMASTER'S REPORT: May 1994 (Updated 1996).

Charts: B.A. Charts No. 2957, 2960 and 3650.

Approaches: Yokkaichi is situated just West of Nagoya in Ise Wan - South Honshu and is approached through Irago Suido, for which special restrictions apply. The high promontory to the East and islands to the West of the strait are easily discernible. Kami Shima Light and Racon shows up well.

Anchorage: Gas carriers awaiting daylight transit through Irago Suido normally drift well offshore, but within VHF range of the Pilot Station.

An anchorage centred in position Lat. 34° 32' N., Long. 137° 08' E. was evident (6 miles E.S.E. of Irago Suido). The anchorage is exposed, and depth is 20.0 m. Pilots advised that gas tankers would have to obtain special permission to anchor.

Ise Wan Inner Anchorage is about 2 miles S.S.W. of Ise Wan Sea Berth. LPG ships require guard boat if anchoring in this location.

Irago Suido: The buoyage is well defined, buoys being large, more like mini lightfloats and conspicuous.

Maximum speed of transit is 12 knots.

Gas carriers can only transit in and out during daylight, which means they must commence departing Yokkaichi Berth at least 3 hours before sunset and proceed inwards 5 hours before sunset. This imposes special constraints in Winter.

A guard tug meets vessel at Buoy No. 1 (gas carriers) and leaves the vessel at Buoy No. 1 as the Pilot departs.

Numerous fishing vessels are encountered.

Signals for gas carriers transitting Irago Suido:

Day: Two black cylinders vertically.
International code flag 'B' under '1st Substitute'.
Night: All round green flashing light.
All round red flashing light.

Pilots: Irago Suido Pilot boards about 1.5 miles South of Buoy No. 1 if coming from the South or, 1.5 miles East of Buoy No. 1 if coming from the East.

Pilot boards from fast red hulled cutter which is based at Irago Ko, just inside the Eastern Headland.

VHF as per "Radio Signals".

Call 3 hours, 1 hour and 30 minutes before arrival. Prior arrangements through the Agent. Transit time from Irago Pilot area to Ise Wan Sea Berth Pilot Change Area is about 2.5 hours.

One Pilot takes vessel to 1 mile S.S.W. of Ise Wan Sea Berth, where 2 Dock Pilots board (over 30,000 g.r.t.). For berthing at Yokkaichi LPG Terminal, the latest time Docking Pilot will board is 3 hours before sunset.

Tugs: Two tugs meet vessel off Ise Wan Sea Berth. Tugs lines used, and they usually secure Japanese style.

Yokkaichi LPG Berth: B.A. Chart No. 2960 – Yokkaichi, marked "Ocean Berth", in position Lat. 34° 58.2' N., Long. 136° 39.9' E. 'T' type tanker jetty of concrete construction built in 1983, with mooring dolphins each side connected by catwalks.

Depth alongside, minimum 13.0 m.
Berth is well fendered.
Maximum size of ship taken: 67,000 d.w.t.
Maximum length: 260 m.
Draft restriction: 11.00 m. (giving 2.0 m. U.K.C.).
Vessels always berth starboard side alongside.
No berthing if wind velocity over 10 m./sec.

Mooring: 3.3.2. forward and aft. Mooring boat each end. One Pilot at manifold to align vessel.

Actual mooring operation is quick.

Gangway: Terminal gangway lands just forward of manifold.

Ship's offside (port) gangway required to be turned out and lowered to water's edge for emergencies, plus pilot ladder.

Cargo: Propane and butane imported at maximum 2,500 cu.m./hr. at maximum back pressure of 9.00 kg. Normal back pressure is about 2.00 kg.

Chicksans – Japanese convention.

Arm arrangement – Propane Vapour-Propane Liquid-Butane Liquid-Butane Vapour. Can be changed with prior notice to BV-BL-PL-PV.

To agree with OCIMF standards, terminal will change to Butane Liquid-Propane Liquid with negative vapour connections as long as vessel can guarantee maximum pumping rate without vapour return.

Liquid connections, 12 in. ASA 150.
Vapour connections, 8 in. ASA 150.

Pumping is started at 200 cu.m./hr., rising to 500 cu.m./hr. then maximum rate after 35 minutes.

Survey before commencement normally takes 45 minutes with samples being analysed during discharged.

Liquid discharge arms have fine mesh "In Line" filters which can get easily clogged with impurities. Rising back pressure is good indication of clogging up.

Loading Master stays onboard and requires cabin.

On arrival, ship's tank pressure must be below 0.7 kg.

If vapour return is connected, return vapour is at about 3,000 cu.m./hr. at maximum 2.5 kg.

Hoist "M" flag at centre of cargo manifold prior to berthing.

There are 4 propane tanks of 68,000 cu.m. each, served by an 18 in. line, situated about 400 m. from the jetty and 2 butane tanks of 66,000 cu.m. and 75,000 cu.m., again served by 18 in. lines, about 400 m. from the jetty.

Fresh Water: Only available by barge before connection or after disconnection.

Barge crew do connection. Pumping rate is fast.
Cost is about U.S.$ 8.5 per tonne.
Arrange through Agent before arrival.

Stores: Very expensive, so only obtain essentials. Supplied by launch at U.S.$ 400.00 per launch trip. Taken before connection and after disconnection.

Bunkers/Oil: Can only be taken at anchorage (not alongside).

Shore Leave: Usual Japanese yellow landing permits required, and must be handed back on departure. Shore leave is by launch from jetty on discharging platform.

Fixed times available – from shore 0700, 0930, 1130, 1330, 1530, 1730, 1930, 2100, 2230 and from ship about 15 minutes later. No shore leave allowed after 2200 hrs. Rates about U.S.$ 150.00 per trip during day for sea berth (SBM), U.S.$ 100.00 for shore berth. Rates rise by 50% 1700 – 2200 hrs., at weekends daytime, on holiday daytime and during poor weather; by 100% 2200 – 0800 hrs. and at weekends/on holiday 1700 – 2200 hrs., by 150% at weekends/on holiday 2200 – 0800 hrs.

It takes about 10 – 15 minutes to pier, then 10 minutes in taxi to city centre at about U.S.$ 15.00 per taxi.

Telephones: None on cargo jetty. International telephones at boat station.

General: Entry papers required: (Japanese forms).

1 copy Maritime Declaration of Health.
1 copy Crew Effects Declaration (First port in Japan only).
4 copies Crew List.
1 copy Ship's Stores List.
2 copies Ports of Call List.

Agent handles all papers. Customs and Immigration do not normally board.

Agent requires Crew List to be faxed or telexed before arrival.

Radio Pratique: If holding Japan Sanitary Certificate, report 36 hours before arrival to Agent. If no Sanitary Certificate, vessel will be required to anchor to obtain one before berthing (not required after 1st April 1996).

Pollution: Authorities very strict. Be careful of hydraulic oil from winches washing into sea during heavy rain. Guard boat in attendance at all times.

Position Reporting: Vessel must comply with JASREP as per ALRS 1. As we found out with JASREP, JMSA rang vessel on Satcom to find out why no report had been sent. We were complying with AMVER with entry JASREP.

Also report to "Nagoya Hoan" 3 hours, 1 hour and 30 minutes before Irago Suido entry time.

Agent sends exact time of Pilot boarding and Irago Suido entry time.

Airport: Nearest airport is Nagoya, which the Agent advised us to use, either direct flight or change in Tokyo, otherwise train from Tokyo. Handling courier does all transfer arrangements.

AUTHORITY: Yokkaichi Port Authority, 9-1, Chitose-cho, Yokkaichi City, Mie Pref., 510 Japan. *Tel:* (0593) 54-6670. *FAX:* (0593) 54-6675.

Immigration Office Tel: (0593) 52-5695. Customs House Tel: (0593) 53-6421. Maritime Safety Agency (Port Master) Tel: (0593) 51-3161. Quarantine Office Tel: (0593) 52-3574. Animal Quarantine Office Tel: (0593) 52-6918. Plant Quarantine Office Tel: (0593) 52-3896. (All are stationed in Port Office Building, Chitose-cho, Yokkaichi City, Mie Pref., 510 Japan).

AGENT: Senwa Shipping Agency, c/o Japan Transcity Corporation, 2 Kasumi 2-chome, Yokkaichi-Shi, Mie 510, Japan. Tel: 0593-53-3724. Fax: 0593-53-3713. Telex: 4943-179 Yonso J. Cables: Trancy Yokkaichi.

YOKOHAMA (incl. Negishi and Tsurumi): 35.27 N. 139.38 E. (See Plan)

DOCUMENTS:

1 Maritime Declaration of Health.
Ship's Certificate of Registry.
1 Ship's International Tonnage Certificate.
1 List of Crew Personal Effects (to be signed by each crew member).
1 Ship's Stores List.
3 Lists of Ports of Call (last 4-6 months).
7 Crew Lists, including Passport numbers.
7 Passenger Lists.

PILOTAGE:

Bay Pilotage: Bay Pilot is compulsory for vessels over 10,000 g.r.t.

Bay Pilot boards vessel at entrance to Tokyo Bay (35° 10.24' N., 139° 45.54' E.), located 5 miles 161° from Kannon Saki Lighthouse. Bay Pilot boards vessel from a tug.

Request for Bay Pilot can be made by ship's Agents to Bay Pilot 2 days in advance.

24 hours and 6 hours notice of ETA to be made to Bay Pilot by Master of the vessel.

Communication with Bay Pilot can be made by the following:

Cables: Anjin Yokosuka.
Telex: 3852451.
VHF: Call Sign "Uraga Channel Pilot".

Amendment of ETA should be made to Bay Pilot whenever ETA changes.

Final confirmation or amendment of ETA should be made to Bay Pilot by VHF Channel 16, 3 hours before arrival, failing which Bay Pilot cannot board on time.

Restriction on Overtaking: Large vessels and other particular vessels, as prescribed by the Maritime Traffic Safety Law, and vessels over 10,000 g.r.t. should, if the circumstances of the case admit, avoid overtaking a vessel of over 500 g.r.t. in the traffic routes.

Restriction on poor Visibility: Vessels over 10,000 g.r.t. should not enter the traffic route when the visibility in the traffic routes and its vicinity is less than 1,000 m.

Preparation of Emergency Fire Wires: A vessel, carrying dangerous cargo, prescribed by the Maritime Traffic Law, should prepare emergency fire wires at the bow and the stern for immediate use, in case of emergency.

Communications with Tokyo Wan Traffic Advisory Service Centre: Vessels over 10,000 g.r.t. should keep watch on VHF Channel 16 while navigating within the radar service area, since information might be sent by Tokyo Wan Traffic Advisory Service Centre.

Contact with Tokyo Wan Traffic Advisory Service Centre can be made by the following:

Call Sign: "Tokyo Martis".
Calling Frequency: VHF Channel 16.
Working Frequencies: Channels 14 and 22.

Restriction on Navigation Period: LPG/LNG vessels of over 25,000 g.r.t. and tankers over 50,000 g.r.t. are prohibited from navigating in Uraga Channel between sunset and 1 hour before sunrise.

Harbour Pilotage: Yokohama Harbour Pilot is compulsory for vessels over 300 g.r.t. for berthing and unberthing.

Request for Harbour Pilot can be made by ship's Agents to Yokohama Harbour Bureau in advance.

Harbour Pilot boards vessel by launch at Yokohama Anchorage for berthing operations. If weather is rough, Harbour Pilot boards vessel by tug. Pilot's boat is painted grey with the word "PILOT" in white letters on each side, with "H" flag by day and lights by night, in accordance with international rules.

ANCHORAGES: 12 m. – 26 m. in Quarantine Anchorage, and 26 m. – 34 m. in other areas. For details refer to chart published by Hydrographic Division of Japan MSA.

RESTRICTIONS: (A) Conventional vessels can be berthed up to 2200 hrs. at public berths.

(B) Container vessels can be berthed at anytime at container berths.

(C) At most of the private berths, berthing and unberthing is from sunrise (or after 0630 hrs.) till sunset.

MAX. SIZE: *Main Dry Cargo Berths:*

Berth	*Max. d.w.t.*	*Max. LOA* (m.)	*Max. Draft* (m.)	*Max.Air draft* (m.)
Kokusai Futo	150,000	350	17.5	16.0
Nissin Seiyu	55,000	160	12.5	N/A

Tankers:

Berth	*Max. d.w.t.*	*Max. LOA* (m.)	*Max. Draft* (m.)
Keihin Yokohama (Sea berth)	200,000	No limit	21.00
Showa Shell Sea Berth	90,000	343	12.00
NPRC (Negishi) A	264,173	362	17.00
NPRC (Negishi) B	81,280	112	14.00
Tokyo Gas	75,000	173	14.00

HEALTH: 1. Radio Pratique is available.

Radio Pratique message can be sent by Master to ship's Agents between 6 hours – 36 hours prior arrival as per specific format.

2. Following vessels are not applicable for Radio Pratique:

(A) Vessels who are less than 7 days from Japan after departing a port which is designated an infected area.

(B) Where ship's crew have suffered from an infectious disease within 15 days before arriving in Japan.

Quarantine Inspector boards vessel at Yokohama Quarantine Anchorage for Pratique. Location of Yokohama Quarantine Anchorage: 35° 26.9' N., 139° 42.7' E.

Pratique is only required at first port of call in Japan.

Also see "Late Reports".

RADIO: Recommended that Master communicates with Agent through Nagasaki Radio, which covers all ports in Japan.

VHF: Call sign Yokohama Port Radio. (See details under "Kawasaki/VHF").

Berthing information for next day can be obtained from Yokohama Port Radio at 1500 hrs. by VHF Channel 16 (Range of Station approximately 50 miles).

RADAR: Traffic Control Centre (Tokyo Wan Traffic Advisory Service Centre) keeps watch round-the-clock for the vessels within the radar service area. Vessels can make contact with the Traffic Control Centre by VHF Channel 16.

TUGS: Tugs join vessel at Yokohama Anchorage. Number of tugs required is at discretion of the Harbour Pilot. Normally 2 tugs are used for berthing and unberthing. However, 4/5 tugs are used for large vessels or LPG/LNG/VLCC.

The following tugs are registered in the Yokohama/Kawasaki area for berthing/unberthing operations: 2×2,900 h.p., 19×2,600 h.p., 2×1,600 h.p., 2×1,800 h.p.

BERTHING: No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by radio.

Mooring Buoys:

District	*Mooring Capacity*	*No. of Berths*	*Buoys*	*Depth* (m.)
1st District	1,500	2	H1.H2	5.5 – 12.0
	2,000	1	H3	
	15,000	7	No.1.2.3.4.5.6.7.8.9.10	
2nd District	12,000	1	No.20.21	9.7 – 9.8
	15,000	1	No.22.23	
3rd District	1,000	3	N1.N2.N3.N4	6.5 – 12.0
	15,000	4	No.30.31.32.33.36.37.38	

Public Berths:

Berth Name		*Length* (m.)	*Depth* (m.)	*Capacity* (g.r.t.)	*Remarks*
Honmoku Pier	A-1	200	10.0	15,000	
	A-2	200	10.0	15,000	
	A-3	200	10.0	15,000	
	A-5*	300	12.0	35,000	Container Berth, 2 Gantry Cranes
	A-6*	300	12.0	35,000	Container Berth, 2 Gantry Cranes
	A-7*	250	12.0	25,000	Container Berth, 2 Gantry Cranes
	A-8*	250	12.0	25,000	Container Berth, 2 Gantry Cranes

* For exclusive use of Yokohama Port Development Public Corporation (YPDC).

Public Berths:

Berth Name		*Length* (m.)	*Depth* (m.)	*Capacity* (g.r.t.)	*Remarks*
Honmoku Pier	B-1	200	10.0	15,000	
	B-2	200	11.0	15,000	
	B-3	200	11.0	15,000	
	B-4	200	11.0	15,000	
	B-5	200	10.0	15,000	
	B-6	200	10.0	15,000	
	B-7	200	10.0	15,000	
	B-9	200	10.0	15,000	
Honmoku Pier	C-1	200	10.0	15,000	
	C-3	200	10.0	15,000	
	C-4	200	10.0	15,000	
	C-5	200	13.0	15,000	Container Berths, 5 Gantry Cranes
	C-6	200	13.0	15,000	
	C-7	200	11.0	15,000	
	C-8	200	11.0	15,000	
	C-9	200	11.0	15,000	
Honmoku Pier	D-1	200	11.0	15,000	Container Berths, 4 Gantry Cranes
	D-2	200	11.0	15,000	
	D-3	220	12.0	15,000	
	D-4**	300	13.0	40,000	Container Berth, 3 Gantry Cranes
Honmoku Pier	D-5**	300	13.0	40,000	Container Berth, 2 Gantry Cranes

** YPDC Berths.

Berth Name		*Length* (m.)	*Depth* (m.)	*Capacity* (g.r.t.)	*Remarks*
Yamashita Pier	No.1	180	10.0	15,000	
	No.2	200	12.0	20,000	
	No.3	220	12.0	25,000	
	No.4	180	10.0	15,000	
	No.5	180	10.0	15,000	
	No.6	180	10.0	15,000	
	No.7	180	10.0	15,000	
	No.8	180	10.0	15,000	
	No.9	180	10.0	15,000	
	No.10	180	10.0	15,000	
Ohsanbashi Pier	A	225	12.0	30,000	Passenger Ships
	B	225	12.0	30,000	Passenger Ships
	D	161	10.0	10,000	Passenger Ships
	E	161	10.0	10,000	Passenger Ships
	F	161	10.0	10,000	Passenger Ships
Shinko Pier	No.2	159	9.0	10,000	
	No.3	180	9.0	10,000	
	No.6	207	8.4	10,000	
	No.7	146	8.4	10,000	
	No.8	170	8.4	10,000	
	No.9	201	10.0	15,000	
Detamachi Pier	A	135	7.5	5,000	
	B	135	7.5	5,000	
	C	125	7.5	5,000	
	D	125	7.5	5,000	
Mizuho Pier	A	153	9.0		Used by U.S.Army
	B	156	9.0		
	C	190	10.0		
	D	190	10.0		
	E	190	10.0		
	F	190	10.0		
	G	190	10.0		
Daikoku Pier	L-1	200	10.0	15,000	Y.P.D.C. Berths
	L-2	200	10.0	15,000	
	L-3	200	10.0	15,000	
	L-4	200	10.0	15,000	
	L-5	200	11.6	15,000	
	L-6	200	11.6	15,000	
	L-7	200	11.6	15,000	
	L-8	200	11.7	15,000	
Daikoku Pier	P-1	260	7.6	5,000	
	P-2		7.6	5,000	
	P-3	260	7.5	5,000	
	P-4		7.5	5,000	
Daikoku Pier	T-1	240	12.0	30,000	Container Berths, 2 Gantry Cranes
	T-2	240	12.0	30,000	
	T-3	185	10.0	15,000	
	T-4	185	10.0	15,000	
	T-5	185	10.0	15,000	
	T-6	185	10.0	15,000	
	T-7	185	10.5	15,000	
	T-8	185	10.3	15,000	
	T-9	240	12.0	30,000	
Daikoku Pier	C-1	600	12.0	35,000	Y.P.D.C. Container Berths 4 Gantry Cranes
	C-2		12.0	35,000	
	C-3	350	14.0	50,000	
	C-4	350	14.0	50,000	
Kanazawa Timber Berth		185	12.0	15,000	
Buoy No.	1-2	210	12.0	12,000	
	2-3	240	12.0	15,000	
	4-5	240	10.2	15,000	
	5-6	230	9.5	15,000	
	6-7	220	9.7	15,000	
	8-9	200	9.4	15,000	
	9-10	230	9.8	15,000	
	20-21	200	9.8	12,000	
	22-23	220	9.7	15,000	
	30-31	260	12.0	15,000	
	32-33	260	11.9	15,000	
	36-37	200	10.0	15,000	
	37-38	200	10.0	15,000	

Private Piers (Deeper than 4.5 m. and capacity over 500 d.w.t.).

District	Piers and Wharves	Length (m.)	Depth (m.)	Mooring Capacity (d.w.t.)	Number of Berths	Kind of Cargo
TSURUMI-WARD				*=g.r.t		
	Asahi Glass Co. Ltd. Pier	50	4	700	2	Glass, Silica
		50	5.5	2,000	1	Glass, Silica
		58	5.5	1,000	1	Glass, Silica
	Ajinomoto Co. Ltd. Pier	115	9.2	15,000*	1	Grain
	Azuma Kaiun Pier	65	9.5	2,500	1	Steel Materials
	Ensuiko Berth	100	9	20,000*	1	Sugar Cane
	Osaka Cement Co. Ltd. Pier	95	8	3,000	1	Cement
	Kobe Steel Co. Ltd. Yokohama Pier	72	4.5	1,200	1	Steel Materials
	Showa Sangyo Co. Yokohama Pier	65	5	5,000*	1	Grain
	Showa Shell Sekiyu Co. Ltd. Super Tanker Berth	343	12	90,000	1	Oil Products
	Pier No. 1	106	12	20,000	1	Oil Products
	Pier No. 2	63	5.5	1,000	1	Oil Products
	Sakai Canal Pier	388	4	1,500	9	Oil Products
	Kawasaki Seiyuzyo Ogishima West Pier	70	7.8	5,000	1	Oil Products
	Daito Yugyo Co. Ltd. Yokohama Yusouzyo No. 1 Pier	92	7.6	4,000	1	Crude Oil
	No. 2 Pier	28	6	1,000	1	Heavy Oil
	No. 5 Pier	131	12.2	65,499	1	Crude Oil
	Daikoku Warehouse Co. Pier	104	6	1,100	1	Steel Materials
	Tokyo Electric Power Co. Ltd.					
	Yokohama Power Plant Pier No. 1	49	9	3,000	1	Heavy Oil
	No. 2	49	9	3,000	1	Naphtha
	Tokyo Gas Co. Ltd. Tsurumi Pier	223	6	2,000	1	Coal
	Tsurumi Pier	213	6.5	2,000	1	Coal
	Tsurumi Pier	141	7.5	650	2	Coal
	Toshiba Electric Co. Ltd. Pier No. 1	31	5	4,000	1	Electrical Machinery
	No. 2	47	6	2,000	1	Electrical Machinery
	Naigai Yuso Pier No. 1	41	4.5	2,000	1	Oil Products
	Pier No. 2	50	1.5	600	1	Oil Products
	Nippon Futo Warehouse Co. Ltd. Pier No. 1	26	6	2,500	1	Oil Products
	Pier No. 2	32	5	1,322	1	Oil Products
	Nitto Chemical Ind. Co. Ltd. Yokohama Pier No. 3	26	6.1	1,273	1	Sulphur
	No. 4	26	6.4	1,600	1	Chemicals
	Nippon Kokan Co. Ltd. Keihin Iron Works Wharf A	250	10	3,000	1	Steel Materials
	Ogishima Product Wharf B	266	10	20,000	1	Steel Materials
	C	267	12.5	30,000	1	Steel Materials
	D	250	12.5	30,000	1	Steel Materials
	Pier	119	4.5	1,000	3	Steel Materials, Coke
	Nippon Kokan Co. Ltd. Tsurumi Dock Yard					
	East Pier	264	9	96,000	1	For Outfitting
	West Pier	250	6	49,000	1	For Outfitting
	Centre Pier	247	8	5,000	1	For Outfitting
	Mitsubishi Mining & Cement Pier A	40	4.5	1,600	1	Cement
	B	130	7.1	7,000	1	Cement
	C	90	7	3,600	1	Cement
	Mobil Sekiyu Co. Ltd. Pier	113	10	30,000	1	Petroleum
	Mobil Sekiyu Co. Ltd. Pier	176.7	11.6	30,000	1	Oil Products
	Mobil Sekiyu Co. Ltd. Asahi Canal Pier	40	3.2	500	1	Oil Products
	Mobil Sekiyu Co. Ltd. Asahi Canal Pier	54.3	4.3	1,100	1	Oil Products
	Yokohama Sea Berth	S.B.M.	21	200,000	1	Crude Oil
	Nippon Gatx Co. Ltd. & Hashimoto Sangyo Co. Ltd. Pier	200	8.6	20,000	1	Oil Products
KANAGAWA-WARD						
	Keihin Kaseihin Center Co. Ltd. Pier	192	5.2	1,900	2	Sulphuric Acid
	Sangyo Shinko Co. Pier	32	6	2,000	1	Steel Materials
	Showa Denko Co. Ltd. Yokohama Work Pier	267	9	30,000	1	Ore
	Dolphin	72	9	5,000	1	Ore
	Nippon Flour Mills Co. Ltd. Pier	163	9	20,000	1	Grain
	Nissin Co. Ltd. Pier	244	9	20,000	1	General Cargo
	Nippon Kokan Co. Ltd. Asano Dock Yard A	109	5	1,800	1	For Outfitting
	E	225	8	68,000	1	For Outfitting
	H	170	7.5	20,000	1	For Outfitting
	Nippon Petroleum Refining Co. Ltd.					
	Yokohama Refinery Pier A	65	12	80,000	1	Crude Oil
	B	36	7	3,000	1	Oil Products
	C, C1	109	8	5,300	1	Oil Products
	D	35	7.3	5,300	1	Oil Products
	E	28	6	2,000	1	Oil Products
	F	10	7	1,700	1	Oil Products
	Yokohama Warehouse Co. Ltd.					
	Suzushige Pier No. 1	300	12	40,000	1	General Cargoes
	No. 2	99	10	20,000	1	General Cargoes
	No. 3	304	8	10,000	3	General Cargoes
	National Government Silo Pier	130	10	20,000	1	Grain
	NTT Pier	100	7.5	6,100	1	For Cable Ships
	KDD Ebisu Pier	148	7	5,200	1	For Cable Ships
NAKA-WARD						
	Kokusai Futo Co. A, B Berth	350	17.5	150,000	1	Salt, Silica, Grain
	C, D	190	7.5	3,000	1	Salt, Silica, Grain
	G	185	6.5	700	1	Salt, Silica, Grain
	H Pier	80	7.5	3,000	1	Ore, Salt
	Sumikin Transport Service Co. Ltd. Pier	188	7	3,000	2	Steel Materials
	Nippon Express Co. Honmoko Pier	208	10	30,000	2	Steel Materials
	Nissan Honmoku Wharf No. 1 – 2	180	10	17,000	2	Cars
	No. 3	110	4.5	1,500	1	Cars
	Mitsui & Co. Ltd. Honmoku Wharf	208	11	30,000	1	Cars, Timber
	Mitsubishi Heavy Industries, Ltd.					
	Honmoku Works No. 1	335	9	60,000	1	For Outfitting
	No. 3A	204	9	38,000		
	No. 3B	208	9	38,000		
	No. 4	416	7	130,000	1	For Outfitting
	No. 6	250	10	15,000		For Outfitting
	No. 7	271	10	15,000		For Outfitting

District	*Piers and Wharves*	*Length (m.)*	*Depth (m.)*	*Mooring Capacity (d.w.t.)*	*Number of Berths*	*Kind of Cargo*
ISOGO-WARD						
	Ishikawajima-Harima Heavy Industries Co. Ltd.					
	Yokohama 2nd Works No. 1 Jetty (South)	224	9	150,000	1	For Outfitting
	(North)	182	9	20,000	1	For Outfitting
	No. 3 Jetty (South)	250	9	10,000	1	For Outfitting
	(North)	256	9	183,000	1	For Outfitting
	No. 4 Jetty (South)	205	17	100,000	2	For Outfitting
	Ube Kosan Co. Pier	80	7.5	12,000	1	Cement
	Mitsubishi Materials Co. Pier	12.5	5.8	499	1	Cement
	Kokan Kenzai Co. Pier	65	7	2,000	1	Steel Materials
	Electric Power Development Co. Ltd. Isogo Wharf	142	7.5	7,000	1	Coal
	Electric Power Development Co. Ltd.					
	Discharging Oil Wharf	21	7.5	1,000	1	Coal
	Tokyo Gas Co. Ltd. Negishi Tanker Wharf	173	14	75,000	1	L.N.G., Heavy Oil
	Nippon Petroleum Refining Co. Ltd.					
	Negishi Refinery Pier A	362	17	264,173	1	Crude Oil
	B	112	14	81,280	1	Oil Products
	C2 – 5	94	7	4,000	4	Oil Products
	C6	106	7	4,000	1	Oil Products
	D1 – 4	50	5.4	700	8	Oil Products
	H1 – 3	104	8	6,370	6	Oil Products
	H4 – 5	140	8	7,700	4	Oil Products
	L.P.G. – No. 1	23	6.2	2,000	1	L.P.G.
	L.P.G. – No. 2	20	5	2,200	1	L.P.G.
	Sulphur Pier	30	6.2	1,607	1	Sulphur
	700 ton Pier	8	5	700	1	Asphalt
	Nisshin Oil Mills Ltd. Isogo Pier	160	12.5	55,000	1	Grain
	Domestic Pier	83	12	1,500	1	Oil
	Domestic Pier	70	12	1,500	1	Oil
	Chichibu Cement Pier	105	5.5	2,000	1	Cement
	Chiyoda Refrigerator Co. Ltd. Pier	45	6	700	2	Fishery Products
KANAZAWA-WARD						
	Asahi Kigyo Co. Suzuegumi Warehouse Co. Pier	185	11	22,000	1	Alcohol, Cement
	Asahi Kigyo Co. Suzuegumi Warehouse Co. Pier	15	3.6	700	1	Alcohol, Cement
	Daikoku Soko Co. Pier	104	6	1,100	1	Steel Materials
	Suzuegumi Warehouse for Ocean-Going Ships	180.5	10.8	23,000	1	Phenol, Methanol
	Coastwise Ships	15	3.6	500	1	Phenol, Methanol
	Toyota Motor Pier No. 1	176	6.5	1,300	1	Cars
	No. 2	146	9.5	12,000	1	Cars
	No. 3	259	12.5	50,000	1	Cars
	Cosmo Oil Co. Ltd. Pier No. 1	120	7.2	5,000	1	Oil Products
	Yokohama Zenken Co. Pier	95.2	7.2	1,000	1	Industrial Waste
	Kawatetsu Warehouse Co. Ltd. Pier	75	6	1,000	1	Steel Materials
	Kawatetsu Warehouse Co. Ltd. Pier	145	6	3,000	1	Steel Materials
	Mitsubishi Heavy Industries, Ltd.					
	Kanazawa Works Dolphin	500	10.5	15,000	1	Diesel

CRANES: *Floating Cranes:*

Lift	*No.*
51 – 100 tons	2
101 – 150 tons	2
151 tons and over	4

Cargo Handling Machines:

(Private) Machines	*No.*	*Capacity*
Large Sized Machines – Cranes	52	19,003 t.p.h.
Others	31	8,800 t.p.h.
Jib Cranes and Bridge Cranes	164	5,531 t.p.h.
Mobile Cranes	98	16,269 t.p.h.
Fork Lifts	1,811	9,693 t.p.h.
Shovel Loaders	57	196 t.p.h.
Transtainers	10	184 t.p.h.
Straddle Carriers	69	1,951 t.p.h.

The Municipal Port and Harbour Bureau and the Yokohama Port Development Corporation.

Machines	*No.*	*Capacity (tonnes)*
Gantry Cranes	8	Each 40.6 (Rated Load)
Gantry Cranes	4	Each 33.5 (Rated Load)
Gantry Cranes	21	Each 30.5 (Rated Load)
Hammer Head Crane	1	Each 50.0 (Rated Load)
Level Luffing Crane	1	Each 30.0 (Rated Load)

BRIDGES: Yokohama Bay Bridge spanning Honmoku and Daikoku was completed in 1989 with highest clearance above water of 55 m.

STEVEDORES: There are 21 stevedoring companies in Yokohama. Orders for stevedore gangs are to be confirmed by 1200 hrs. day before, excluding Saturdays, Sundays and holidays.

Working Hours:

0830 hrs. – 1630 hrs.	Basic rate.
1630 hrs. – 2130 hrs.	60% additional charge.
2130 hrs. – 0400 hrs.	130% additional charge.
Holidays	100% additional charge.
Saturdays	60% additional charge.

MEDICAL: Hospital and clinic available. No advance notice required, unless urgent.

DENSITY: Average approx. 1023.

FRESH WATER: Available by pipeline at public berths and some private berths, and by barge at anchorage. 2 water barges with 350 tons capacity also available. 24 hours prior notice is required to supply on Sundays and national holidays.

TANKERS: Masters of tankers seldom requested to fit reducing pieces before arrival for connection of shore lines since oil installation have own appliances. Two slop disposal facilities, one in District No. 5 in Yokohama which is private enterprise and can dispose of dense residues, and one in District No. 1 in Kawasaki which is run by Kawasaki city and can dispose of diluted slop or oily ballast. (Also see "Max. Size").

Berth	*Product*	*Shoreline*	*Discharge Rate (t.p.h.)*
Keihin Yokohama Sea Berth	Crude	20 in.×2	8,000
Showa Shell Oil Main Jetty	Lub. Oil	8 in.×2	1,200 (Kl.p.h.)
		6 in.×2	1,200 (Kl.p.h.)
		4 in.×2	1,200 (Kl.p.h.)
	Fuel	8 in.×6	1,200 (Kl.p.h.)
	(Black Oil)	6 in.×1	1,200 (Kl.p.h.)
	Fuel	8 in.×8	1,200 (Kl.p.h.)
	(White Oil)	6 in.×1	1,200 (Kl.p.h.)
General Sekiyu (Tsurumi Terminal)	Fuel	10 in.×1	600
	Fuel	8 in.×1	600
	Fuel	6 in.×1	300
Mobil Oil (Tsurumi Terminal)	Lub. Oil	6 in.×10	300 (each)
	Fuel	12 in.×3	800 (each)
	Fuel	10 in.×4	600 (each)
	Chemical	12 in.×1	1,000
	Chemical	8 in.×2	500 (each)
Esso Sekiyu (Tsurumi Terminal)	Fuel	12 in.×1	600
	Lub. Oil	10 in.×1	200
	Lub. Oil	6 in.×2	150/100
	Kerosene	10 in.×1	500
	Soluent	6 in.×1	150
Asia Oil No. 5	Crude	10 in.×2	2,000
	Fuel-C	10 in.×2	2,000
	Fuel-A	6 in.×1	500
	Gasoline	6 in.×1	600
	Kerosene	6 in.×1	500
	LPG	6 in.×1	200
Nisseki Yokohama	Crude	12 in.×2	2,500 (Total)
Nisseki Negoshi A(E.)	Crude	12 in.×3	7,500
A(W.)	Crude	12 in.×3	7,500
B	Fuel/Crude	12 in.×2	5,000
Showa Shell (Sea Berth)	Fuel	12 in.×3	1,800 (Kl.p.h.)
Tokyo Gas	LNG	12 in.×2	5,000 (Kl.p.h.)
	LNG (Gas)	12 in.×1	9,000 (cu.m.p.h.)
	LPG	12 in.×1	2,400 (Kl.p.h.)
	LPG (Gas)	12 in.×1	3,000 (cu.m.p.h.)
	Naphtha	10 in.×1	2,000 (Kl.p.h.)
	Naphtha	6 in.×1	700 (Kl.p.h.)

FUEL: All grades of bonded bunkers are stocked in Tokyo Bay.

FIRE PRECAUTIONS: Oil installations in Yokohama/Kawasaki generally do not allow bunker barge to come alongside ships moored to the berths.

CONSULS: Argentina, Colombia, Denmark, El Salvador, Korea, Mexico, Netherlands, Norway, Paraguay, Philippines, Sweden and Thailand.
REPAIRS: Any kind of repairs can be effected at this port.
DRY DOCKS:

		Max. d.w.t.	Max. LOA
IHI Yokohama:			
Dry Dock:	Repair Dock	180,000	291 m.
	Floating Dock	100,000	240 m.
Wet Basin	No.1 (S)	N/A	215 m.
	No.1 (N)	N/A	150 m.
	No.3 (S)	N/A	240 m.
	No.3 (N)	N/A	330 m.
	No.4 (N)	N/A	240 m.
MHI Yokohama:			
Dry Dock	No.1	270,000	331 m.
	No.2	120,000	255 m.
	No.3	38,000	176 m.
Wet Basin	No.1	200,000	334 m.
	No.3A	25,000	196 m.
	No.3B	38,000	208 m.
	No.4	250,000	413 m.
	No.6	75,000	250 m.
	No.7	75,000	270 m.
NKK Asano Dock:			
Dry Dock	No.1	100,000	265 m.
	No.2	25,000	170 m.
Wet Basin	A	500	60 m.
	B	3,000	100 m.
	D	3,000	120 m.
	E	160,000	280 m.
	H	30,000	190 m.

SURVEYORS: Lloyd's, A.B.S., B.V., DNV, Salvage Association and U.S. Salvage are available. GL available from Kobe.
GANGWAY/DECK WATCHMEN: Normally not required.
HATCHES: Opening and closing normally carried out by ship's crew.
CUSTOMS ALLOWANCES: Daily consumption allowed aboard by Customs: 2 packets cigarettes, 1.3 litres beer and 144 ml. of whisky.
REPATRIATION: Possible.
AIRPORT: (A) Yokohama to Haneda Airport (25 km.). Limousine bus from Yokohama to Haneda takes 1 hour.
(B) Yokohama to Narita Airport (100 km.). Train (Narita Express) from Yokohama to Narita takes 1 hour. Limousine bus from Yokohama to Narita takes 2.5 hours.
TIME: GMT plus 9 hours. No alterations made to clocks during year.
HOLIDAYS: *National Holidays:*
January 1st, New Year Holiday.
January 15th, Adults' Day.
February 11th, Foundation Day.
March 21st, Vernal Equinox Day.
April 29th, Green Day.
May 3rd, Constitution Memorial Day.
May 4th, National Holiday.
May 5th, Children's Day.
September 15th, Respect for the Aged Day.
September 23rd, Autumnal Equinox Day.
October 10th, Physical Culture Day.
November 3rd, Culture Day.
November 23rd, Labour Thanksgiving Day.
December 23rd, Emperor's Birthday.
Local Holidays:
July 20th, Maritime Day.
If a holiday falls on a Sunday, the following Monday is observed as a holiday.
December 31st – January 3rd is considered as End of Year and New Year's Holidays, and the period is not workable for dry cargo vessels.
Sundays and holidays are not workable for dry cargo vessels.
Tankers can load and unload throughout the year.
POLICE/AMBULANCE/FIRE: Police 110; Ambulance and Fire 119.
EMERGENCY CO-ORDINATION CENTRE:
Maritime Safety Agency Yokohama (Coast Guard). Tel: 045-201-4522.
Yokohama Harbour Pilot Station. Tel: 045-681-4081.
Yokohama Harbour Police Station. Tel: 045-212-0110.
Police Tel: 110. Ambulance and Fire Tel: 119.
Master of the vessel can also contact Yokohama Port Radio by VHF Channel 16 for urgent matters.
TELEPHONES: Telephones can be placed on board at most public berths.
SERVICES: Most services can be provided, if advance notice is given.
BANKS: Bank of Tokyo Ltd., 3-17-1 Honcho, Naka-ku, Yokohama. Tel: 045-201-2515. Hours: 0900 – 1500, Monday to Friday.
STORING: *Dry Cargo Vessel:*
Public Berths: Vessel can be accessed by trucks.
Private Berth (dolphins): Vessel can be accessed by barge from sea.
Private Berth (non-dolphin): Vessel can be accessed by trucks.
Tankers: Stores, bunkers and lube oil can be supplied onboard at anchorage. Stores can be delivered onboard by hand at the terminals.
SHIP SUPPLY SERVICE: Japanese Coast Guard, 3rd Regional Maritime Safety Headquarters of Yokohama (Tel: 045-211-0771) can arrange craft or helicopters for picking up crew and sick personnel upon request.
The range, capacity and rendezvous points of supply craft and helicopters can be fixed case by case.
SHORE LEAVE: Crew members are allowed ashore, provided shore landing passes for each crew member are issued by local Immigration Authority.
Crew members are to be back onboard the vessel prior to ship's departure from port.
IDENTIFICATION CARDS: Shore landing passes are issued for crew members by local Immigration Authority.

GARBAGE DISPOSAL: Collection compulsory at public berths, and provided on request at private berths.
Service available from Yokohama Seiko-kai Corporation, 25 Yamashita-cho, Naka-ku, Yokohama. Tel: 45-661-0392.

	Basic Rates	Additional Charges/bag
Shore collection: 1 unit (3 bags)	Y 3,360	Y 1,120
Shipboard collection: 1 unit (3 bags)	Y 9,900	Y 3,300
Collection with drum cans: 1 drum	Y 12,560	—

Other charges shall be 50% over and above the basic rate in the following cases:
(a) Collection in rough water.
(b) Collection on Sundays, national and local holidays.
(c) Vessels moored outside breakwaters.

WASTE OIL DISPOSAL: Service available from Ships Waste Oil Treatment and Disposal Plant, City of Yokohama, 12-70 Daikoku-cho, Tsurumi-ku, Yokohama. Tel: 45-501-0434. Fax: 45-501-0435.
Charges:

1. Water ballast	Y 110/cu.m.
2. Bilge water	Y 1,100/cu.m.
3. Waste oil	Y 5,000/ton.

SEAMAN'S CLUBS:
United Seamen's Service Inc., 3 Honmoku Futo, Naka-ku, Yokohama, Japan. Tel: 045-623-2237. Facilities: Western style restaurant, bar, gift shop, games room, money exchange (U.S.$/DM/A$/£), overseas telephone, pool tables, darts, TV, library, book exchange, barber shop, money orders, postal services (stamps etc.), transportation to and from ships in port free of charge, information on sightseeing and shopping and doctors.

The Missions to Seamen, 194 Yamashita-cho, Naka-ku, Yokohama, Japan. Tel: 045-662-1871. Facilities: Souvenir shops, international telephone, chapel, postal services, bar, darts, games (chess and draughts), books/magazines, sightseeing information, TV & lounge, welfare, medical information.

Seamen's Service Centre, 1-1 Kaigan-dori, Naka-ku, Yokohama, Japan. Tel: 045-201-2177. Facilities: Waiting room, information on ship movements, hotel, hospital, etc.

CURRENCY: Japanese Yen (Y).

DEVELOPMENTS: *Minato Mirai 21 Project:* This project is designed to create an attractive city centre for Yokohama, one which will have the international and cultural qualities appropriate for a self-reliant, major city within the capital region of Japan, and also have the qualities appropriate for an international port city. This new urban centre is to be built in the inner port area (a total area of 186 hectares, about 110 hectares, inclusive of the already closed Takashima Pier and the Shinko Pier, and some partially reclaimed area of about 76 hectares).

The project began in 1983 and will be completed in 2000. In anticipation of its role in the 21st century, the plan calls for the building of facilities for international exchange: conference halls, green belts and facilities for the purpose of creating spaces with ample amenities for new port activities, daily life and places for people to interact and exchange goods and information.

Honmoku Pier Project: To keep up with this age of containerisation, D-4 Container Terminal started service in November 1984. This was followed by D-5 Container Terminal operating in December 1986 with a berth 300 m. long and a water depth of 13 m.

At C Jetty, the number of gantry cranes was increased to boost the capacity for handling containers with conventional, Ro-Ro and semi-container ships. At present 5 such cranes are in operation. There is also a plan to expand the container yard by reclaiming the space between B and C Jetties.

The newly reclaimed area at D Jetty completed in 1985 (about 70 hectares) has secured space for piers and port facilities to alleviate their shortage. It will also be developed as a green belt of about 20 hectares with various amenities and the Port of Yokohama Symbol Tower to serve as the centre of the area. The citizens began using this tower in July 1986.

Minami Honmoku Pier Project: The waters off the industrial zone of Honmoku Pier have a high development potential as an area for the distribution of goods because of the great water depth, its proximity to the Tokyo Bay Shore Expressway and other factors. The plan is to build deep-water, larger container terminals in order to respond to the expanding demand for container freight and the trend towards larger vessels.

We also intend to build a new comprehensive base at the Port of Yokohama for distribution of goods in the next century. We hope to establish facilities to meet both the diversified demands of and increasing complexities for goods distribution.

Daikoku Pier Project: This project envisages the construction of a modern pier by a 321 hectare reclamation project, which will be completed in two phases: Phase I includes 221 hectares, and Phase II is intended for 110 hectares near Daikoku Pier, Tsurumi Ward. The Phase I area was reclaimed in 1984. Some of the berths for ocean-going trampers were converted into multi-purpose berths to accommodate Ro-Ro ships and semi-container ships.

The reclamation work was finished in 1990 in the Phase II area where the construction of two large container berths is now in progress to cope with the expanding demand for container cargoes. We plan to improve a complex distribution terminal to be able to handle diverse cargoes in a unified, efficient manner, responding to the trend toward diversified distribution of goods. We also plan to secure areas for citizen recreation activities, as part of our program to improve the environment, by establishing large scale green and water areas (about 20 hectares), at the gateway to the Port of Yokohama.

Tokyo Bay Shore Expressway Project: This project calls for improving the160 km. long expressway along Tokyo Bay, stretching from Yokosuka to Futtsu through Yokohama, Tokyo, Chiba and Kisarazu. There is a plan to build a road within the Port of Yokohama linking Ogishima, Daikoku Pier and Honmoku Pier, stretching to Kanazawa and Yokosuka. When completed, this road will serve as a central network of highways, to markedly improve the port functions and alleviate traffic congestion within the city.

AUTHORITY: Port and Harbour Bureau, City of Yokohama, 2 Yamashita-cho, Naka-ku, Yokohama, 231 Japan. *Tel:* 045-671-2874/2888. *Telex:* 3822844 Green J. *FAX:* 045-671-7310. *Contact:* K. Mitsuda, Manager of Port Promotion Division.

AGENT: Senwa Shipping Agency, c/o Sumitomo Warehouse Co.Ltd., 2nd Floor, Maersk Building, 18 Nihon Ohdori, Naka-Ku, Yokohama-Shi, Kanagawa 237, Japan. Tel: 045-681-8562. Fax: 045-681-2281. Telex: 3822-141. Cables: Sumitomosoko Yokohama.

YOKOSUKA: 35.17 N. 139.39 E. (See Plan)

DOCUMENTS:

Customs:
- Ports of Call List (Voyage Memo).
- Cargo Manifest for Discharging and Through Cargo.
- Declaration of Crew's Baggage.
- Passenger List.
- Crew List.
- List of Ship's Stores.
- Ship's Register.
- International Tonnage Certificate.
- Arrival Notice.
- Last Port Clearance.
- Declaraton of Payment of Tonnage Dues and Special Tonnage Dues.
- Application for permission of:
  - Loading and/or unloading of goods outside office hours.
  - Traffic through place other than designated.
  - Traffic through place designated.
  - Traffic between vessel or aircraft coming and/or going between Japan and any foreign country and coasting vessel, etc.
- Application for Approval on Loading and/or Unloading of goods before Cargo Manifest is submitted.
- Declaration Inward/Outward of Vessel.

Immigration:
- Crew List.
- Passenger List.
- Application for Crew member's Landing Permit for Issuance of Crew Landing Pass, Crew Replacement and Repatriation.
- Application for Emergency Landing Permit in case of hospitalisation of crew members.
- Passport or Seaman's Identity Book.
- Declaration Inward/Outward of Vessel.

Quarantine:
- Notification for prior Quarantine Procedures.
- Radio Pratique Message from the Vessel.
- Delivery papers for Radio Pratique Message.
- Maritime Declaration of Health.
- Crew List.
- Passenger List.
- Ports of Call List (Voyage Memo).
- Notification for after Quarantine Acceptance.

Plant Protection Station:
- Application for Plant Importation Inspection.

Animal Quarantine:
- Importation Inspection not available.

Maritime Safety Agency:
- Declaration Inward/Outward of Vessel.
- Application for Permission of Movement in the Port.
- Application for Loading, Transfering and Unloading of Explosives and Combustibles.
- Application for Transportation of Explosives and Combustibles.

Port Authority:
- Application for use of Facility.
- Declaration Inward/Outward of Vessel.

PILOTAGE: In applying for pilot at time of entry and departure, Pilot Station should be contacted 24 hours in advance of beginning of pilotage through Agent. 106 pilots available.

Uraga Channel Pilots: Tel: 0468-35-6211. Telex: 3852-451.

VHF Call sign: "Uraga Channel Pilot", on Channel 16.

ANCHORAGES: At 4th District of Yokosuka Port. Depths 10 m. – 30 m.

RESTRICTIONS: The 1st, 2nd and 3rd District of Yokosuka Port under compulsory pilotage districts.

Possibilities of Entry or Sailing after Sunset:

Nagaura Pier:

Entry: If berthing alongside "Head In", the vessel may pass Yokosuka Ko North-East Breakwater (E) Lighthouse from sunrise to sunset.

If berthing alongside "Head Out", from sunrise until 30 minutes before sunset.

Sailing: If berthed alongside "Head Out", the vessel may leave quay from sunrise to 2200 hrs.

If berthing alongside "Head In", from sunrise until 30 minutes before sunset.

Shinko Wharf: Berthing normally "head-in".

Entry: The vessel may pass Yokosuka Ko (S) Light Buoy No. 1 from sunrise until midnight.

Sailing: The vessel may leave quay from sunrise until midnight.

Shinko Pier: Berthing normally "head-in".

Entry: The vessel may pass Yokosuka Ko (S) Light Buoy No. 1 from sunrise until 30 minutes before sunset.

Sailing: The vessel may leave quay from sunrise until 30 minutes before sunset.

During the evening rush hours in Uraga Suido Traffic Route (1600 hrs. – 2000 hrs. JST), a vessel of some 10,000 g.r.t. or more should normally avoid crossing the West Traffic Lane of the traffic route from or to the West, but if obliged to do so, should pursue safety in crossing by:

(a) Understanding the prevailing circumstances and conditions in and around the traffic route by keeping in close contact with the Tokyo Wan Traffic Advisory Service Centre.
(b) Faithfully obeying maritime traffic rules (particularly the rules on conduct of vessels and indications of their own routes under the Maritime Traffic Safety Law).
(c) At all times maintaining a proper lock-out (by sight and hearing) as well as all available means.
(d) At all times proceeding at a safe speed.
(e) Effectively using escort boats, tugs, etc.
(f) As far as practicable, maintaining a listening watch by VHF radio telelphone on Channel 16.

MAX. SIZE: See "Berthing".

HEALTH: Radio Pratique available. Authorities board at anchorage. Quarantine Station to be informed in advance of name of last port, ship's name, tonnage, number of crew, number of passengers, ship's nationality, etc. In event any suspected disease, Agent should be advised. When isolation of ship needed, it will be transferred to Quarantine Station Yokohama.

Also see "Late Reports".

RADIO: Local radio station.

TUGS: Can be arranged through Agent. Tugs normally join vessel in 3rd District, when vessel enters Nagaura and Shinko, and in 7th District, when it enters Kurihama. Tug's lines to be used. Charge for tug's lines included in charge for tug.

BERTHING: Agent submits application for berth to Port Authority (Nagaura and Kurihama Port Offices and Yokosuka Shinko Wharf Company).

Berth	*Depth* (m.)	*Length* (m.)	*Draft* (m.)	*Max. Size Length Tonnage*	*Remarks*
Nagaura Pier					
No. 1	8.0 7.4	150	8.18 7.64	200 m./ 15,000 g.r.t.	At 1.0 m. height of tide in good weather
No. 2	10.0 8.7	200	10.00 8.82	200 m./ 21,000 g.r.t.	
Shinko					
Pier No. 1	5.1	90	5.55	80 m./ 2,000 d.w.t.	
Pier No. 2	5.1	90	5.55	80 m./ 2,000 d.w.t.	
Pier No. 3	7.0	130	7.27	110 m./ 5,000 d.w.t	
Shinko					
Wharf No. 1	9.6	200	9.64	225 m./ 15,000 d.w.t.	
Wharf No. 2	9.7	200	9.73	225 m./ 15,000 d.w.t.	
Nagaura Buoys (* Approximate Distance between Sinkers).					
N2 – N6	7.2	130*	7.45	3,000 g.r.t.	
N6 – N6	7.0	84*	7.27	3,000 g.r.t.	
N14 – N14	7.0	80*	7.27	3,000 g.r.t.	
N5 – N5	6.1	84*	6.45	3,000 g.r.t.	
N16 – N16	6.1	91.5*	6.45	3,000 g.r.t.	
Kurihama					
No. 1 Pier (Nichiro)	5.5	220	5.91	8,000 g.r.t.	
No. 2 Pier (Shingan)	Works in progress.				

STEVEDORES: Agent will arrange stevedores.

MEDICAL: Agent can arrange medical doctor who understands foreign languages.

TANKERS: No berthing facility for commercial tankers. Only U.S. Naval Base, Yokosuka, has berthing facilities.

FRESH WATER: Available ex-wharf.

FUEL: Most grades of domestic and bonded oil are available from Yokohama or Kawasaki.

REPAIRS: Dockyards available for all repairs.

DRY DOCKS: 1– 475×19.5 ft.; 1 – 352×15.75 ft. 5 large-size slips; 1 rigging wharf.

GANGWAY/DECK WATCHMEN: Agent arranges watchmen.

OPENING/CLOSING HATCHES: Stevedores or crew.

CUSTOMS ALLOWANCES: Tobacco: 2 packets per day. Spirits: 144 ml. per day.

REPATRIATION: No facilities exist. If necessity occurs, contact Chief of Immigration for approval.

AIRPORT: 40 km. to Haneda Airport, Tokyo. 120 km. to Narita Airport. Tokyo.

TIME: GMT plus 9 hours. No alterations during year.

HOLIDAYS: Cargo work usually daytime. On Sunday, national holidays and December 31st, January 1st, 2nd and 3rd no cargo work.

POLICE/AMBULANCE/FIRE: Police, 110; Ambulance/Fire, 119.

TELEPHONES: Facilities now underway.

GENERAL: Port situated in city confines, a portion of port is used by JMSDF and also by the U.S. Navy according to Security Treaty.

AUTHORITY: Port and Harbour Dept., Yokosuka City, 11 Ogawa-cho, Yokosuka City, Japan. *Tel:* (0468) 22-4000. *FAX:* (0468) 26-3210.

Shinko Port Office, 13 Shinko-cho, Yokosuka City, Japan. *Tel:* (0468 25-5430.

Nagaura Port Office, Mubanchi, Tauraminato-cho, Yokosuka City Japan. *Tel:* (0468) 61-3419.

Kurihama Port Office, 8-17-22 Kurihama, Yokosuka City, Japan *Tel:* (0468) 36-0339.

Jordan

AQABA: 29.31 N. 35.01 E. (See Plan)

LOCATION: The commercial sea port of Aqaba is the only outlet to the Hashemite Kingdom of Jordan, and is situated at the top of the Gulf of Aqaba at Lat. 29° 31' N., Long. 35° 01' E.

The Passenger and Container Terminals lie approximately 3 miles to the South of the main port.

The New Oil Exporting Jetty lies approximately 8 miles to the South of the main port.

The Fertiliser Industry Terminal lies approximately 9 miles to the South of the main port.

PORT LIMITS: The Southern limit of the port is an imaginary line 270° from Al Derrah Point (Saudi Border); about 10 miles from the main port.

DOCUMENTS: *Documents required by the authorities for cargoes:*
1 copy of all dangerous goods on board showing IMO & UN numbers.
6 copies unfreighted Manifest, showing IMO & UN numbers for dangerous goods.
2 copies of unfreighted Manifest for Free Zone if vessel has Free Zone cargo.
1 set of non-negotiable Bills of Lading.

All Manifests should bear the following clause: "This is to certify that the above vessel has not called and is also not scheduled to call at any Israeli ports nor is owned by any Israeli Company, also it is not included in the Black List".

All the above documents are to be airmailed to the Agent's Head Office in Amman and not Aqaba.

Documents Required by the Authorities for Free Pratique:
7 copies Crew List.
7 copies Passenger List.
1 copy Stores List.
1 copy Crew Declaration List.
1 copy Vaccination List.

The Following Forms to be Filled:
2 copies of Maritime Declaration of Health.
1 Customs Declaration Form.
2 copies Vessel's Specification Form.
1 copy Pilotage Form.

The Following Documents to be Produced for Checking:
(a) Log Book.
(b) Ship's Registry Certificate. (Kept by the Port Authorities until departure).
(c) Derat Certificate.

Shipmaster's Report: November 1988.
Customs: 3 copies Crew List.
1 copy Bonded Stores List.
1 copy Crew Declaration.
Agent: 3 copies Crew List.
Quarantine: 3 copies Crew List.
1 copy Maritime Declaration of Health.
2 copies Vaccination List.
Immigration: Photograph for shore passes (compulsory).

PILOTAGE: Pilotage is compulsory for all vessels above 150 n.r.t. for berthing, unberthing and entering the anchorage area. Pilotage is obtained from the Harbour Master through Port Control. Ships in harbour requiring a Pilot should call the Pilot via Aqaba Port Control Radio (VHF Channel 16, working Channel 12) 1 hour before ship is ready to move. Advance notice of the ship's requirement of pilot service should be given to the Agent who should advise the Harbour Master or his representative.

It should be noted that vessels may proceed to sea from the anchorage without taking a Pilot, but for ships leaving the berths alongside, pilotage is compulsory. Sound signals are prohibited.

Ships intending to go to anchorage, cargo berths or phosphate export berths should wait for Pilot mile S.W. of these berths.

Ships intending to berth alongside the Floating Berths (Yarmouk) or Container Terminal should wait for Pilot 1 mile to the S.W. of these berths.

Ships intending to berth alongside the Fertiliser Berth or the Oil Jetty should wait for Pilot 1 mile to the S.W. of these berths.

The vessel has to supply the following information to the Pilot Station when requesting a Pilot:
(a) Name of vessel;
(b) Nationality;
(c) Agent's name;
(d) Overall length;
(e) Maximum draft;
(f) Gross and net tonnages;
(g) Cargo for Aqaba;
(h) Any special characteristics of vessel.

ANCHORAGES: About 0.6 miles from shore in depths of 15 – 30 fathoms. Ships awaiting discharge can easily anchor in deep water anchorage which can accommodate 8 vessels.

Anchorages 1-4 are called inner anchorage and are used for ships discharging cargo into barges. Anchorages 5-7 are used for ships waiting and Anchorage 8 is used for small vessels. All anchorages lie in the compulsory pilotage areas.

When anchored, all ships must keep 6 cables distance from the Royal Jetty.

RESTRICTIONS: The entry of ships to anchorage after sunset is not allowed. Berthing is prohibited during darkness at the oil terminal.

Ships' Masters are warned that contravention of above rules renders them liable to penalties of up to JD. 10,000 per ship.

MAX. SIZE: Up to 20,000 d.w.t. Max. draft 32 ft. for the cargo berths and 100,000 d.w.t. and 50 ft. draft for the phosphate loading berth. Also see "Berthing" and "Notice".

HEALTH: Health Officials board after vessel drops anchor or after vessel is secure alongside.

The Port Medical Officer is in charge of granting Free Pratique to all vessels on arrival, and of all medical matters concerning ships and seamen.

RADIO: Aqaba Radio Station, call sign JYO.

Watchkeeping hours are currently from 0500 hrs. to 1700 hrs. GMT. The station received all MF frequencies on: 500 kHz and 477 kHz and receives HF frequencies from 0700 hrs. to 0900 hrs. GMT only on 8728 kHz. The radio station listens on VHF Channel 16.

Weather forecasts: Twice daily, at 0730 hrs. and 1530 hrs. GMT.

The new radio station will work for 24 hours and will be able to receive all types of communications (Telegraphic, Telephonic, Telex, etc.)

Note: To all ships bound for Aqaba Port = In order to facilitate berthing and cargo handling at Aqaba Port, Masters of ships are kindly requested to cable Harbour Master in Aqaba via Aqaba Radio 72 hours and confirm 24 hours before arrival providing the following information:– Ship's name, Flag, Last Port, Next Port, Cargo for Aqaba, Tonnage and Type, Length, Breadth, GRT/NRT, Draft Forward/Aft, ETA, Aqaba Agent's Name, Liner or Charterer, Year built, and if Ro-Ro ship, the Ramp Location. Station Telex No. 62325 Aq Radio Jo. Station Tel. No. 315544 and 314321.

VHF: Aqaba Port Control at Harbour Master's Office listens 24 hours on VHF Channel 16, working Channels 10 and 12 for service messages. Pilots listen VHF Channels 9 and 12.

RADAR: There is no Port Control Radar, but tugs are equipped with radar and sounding apparatus.

TUGS: Compulsory. 7 tugs, 840 h.p. – 3,200 h.p., 9 mooring and 5 towing boats 80 h.p. – 380 h.p.

BERTHING: The Main – Port Berths: Includes 12 berths with a total length of 2,050 m. for handling general cargo, grain, phosphate and discharging lighters.

Berth No.		*Length of Berths* (m.)
1	receives ships up to 40,000 d.w.t.	160
2,5,6		180
3,4		180
7		150
8,9		150
Lighter Discharging Berth		150
Phosphate Berth A (With conveyor belts and shiploader of 1,000 t.p.h.)		210
Phosphate Berth B (With conveyor belts and two shiploaders of 2,200 t.p.h. each).		180 (Receives ships up to 100,000 d.w.t.)

Also see "Notices".

Container Berth: Total length of 540 m. and a depth of 15 m. which can receive 3 vessels at a time up to 100,000 d.w.t. each. It is equipped with 2×40 ton gantry cranes. Attached to this berth and with a depth of 10 m. is the Ro-Ro Berth with 40 m. length.

The Container Terminal has a container freight service, Container Freight Station (CFS) and a container and Ro/Ro storage area of 309,000 sq. m.

The capacity of the container storage area is 7,000 full containers and 5,000 empty containers (in TEUs).

The Terminal also has 24 power points for the supply of power to refrigerated containers.

Passenger Terminal and Yarmouk Floating Berth: Length 150 m. and depth 10 m. It specialises in passenger traffic and their vehicles, it also receives Ro-Ro and container ships.

Mo'ta Floating Berth: Recently fixed to the North of container berths with a length of 150 m. and a depth of 15 m. It is used for bagged cement, export purposes and Ro-Ro vessels. Max. size 35,000 d.w.t.

Moshterak Berth: Length 120 m. and depth of 11 m. Dolphin berth used as a pontoon, with a shiploader and conveyor belt fixed between dolphins for handling cement products. Also used for oil product exports. Max. size 120,000 d.w.t.

New Oil Export Jetty: Length of jetty 150 m. Depth alongside 25.0 m. There are 4 breasting dolphins and 4 mooring dolphins. Max. size 300,000 d.w.t. Max. monthly oil exporting capacity 300,000 tons.

Industrial Port: Jordan Fertiliser Industry Co. Ltd.

(A)	Timber berth (J.F.I) 1	*Sea Side*
	Max. draft permissible	6.8 m.
	Length of berth	80 m.
	Max. vessel width	—
	Max. vessel d.w.t.	5,000 tons
(B)	(J.F.I.) 2	*Shore Side*
	Max. draft permissible	1.75 m.
	Length	45 m.

There is possibility to use Berth No.1 and No.2 for Ro/Ro vessels of different sizes, with stern (straight) ramp of not less than 35 m. in length. The vessel will be moored 25 m. from the jetty.

(C)	Fertiliser berth	*Sea Side*	*Shore Side*
	Max. draft permissible	15 m.	11 m.
	Length	230 m.	190 m.
	Max. vessel width	27 m.	27 m.
	Max. vessel d.w.t.	50,000	40,000

2×2,000 t.p.h. shiploaders and 1×500 t.p.h. ship evacuator.
2 Potash stores, each 75,000 tons capacity.

CARGO EQUIPMENT: *Grain Silos:* Erected by Ministry of Supply on Berth No.1 with evacuators & conveyor belts with a capacity of 500 t.p.h., and storage capacity of 150,000 tons.

Storage Facilities:

Total Shedded Area	41,500 sq.m.
Closed Hangers Area	34,500 sq.m.
Paved Open Storage Area	450,000 sq.m.
Closed Cold Store	500 Tons
Container Terminal Area	309,000 sq.m.

Cargo Handling Equipment:
46 Cranes with a capacity of 2 tons – 5 tons.
13 Cranes with a capacity of 10 tons – 40 tons.
2 Cranes with a capacity of 45 tons.
2 Cranes with a capacity of 90 tons – 120 tons.
108 Forklifts with a capacity of 1.5 tons – 22 tons.
49 Tractors.
9 Straddle carriers for handling containers.
19 Tug Masters.
12 Top lifts of 5.0 tons – 30.5 tons.
2 Gantry cranes with a capacity of 40 tons each.
120 Trailers.
33 Barges with a capacity of 250 tons - 500 tons each, including 1 Water Barge, 1 Waste Collection Barge and 1 Oil Pollution combatting Barge.

STEVEDORES: Stevedoring is carried out by The Ports Corporation and their working hours are from 0700 – 1400, work must start at 0700 and end at 1400, therefore there is 1 hour overtime in the morning from 0700 – 0800. The second shift's working hours are 1700 – 0100 next morning and are counted as overtime hours.

Ships with homogenous cargoes of bags or steel may work four shifts per day – first shift 0700 to 1100, second 1100 to 1600, third 1600 to 2200 and fourth 2200 to 0500 next morning.

During the month of Ramadan the timing is 0700 – 1300 for the first shift and 2100 – 0300 next morning for the second shift, the four shift system is suspended during this month.

Cargo work is continuous throughout the year with the exception of 1 day at Eid-El-Fitr (the first day of the holiday) and 1 day at Eid-El-Adha (the first day of the holiday).

Friday is the official weekly holiday therefore the working hours during this day are treated as overtime hours at an extra cost of JD 37.5 per gang per day.

Ships' Working Hours: Ships can work around the clock depending on the Master's option and the number of ships in port. Opening of ships' hatches is allowed up to 2100 hrs. if Agent arranges for gangs beforehand.

The port meeting is held daily at 1000 hrs.

MEDICAL: The Health Department of Aqaba Port provides all medical services required and responds to any urgent calls by radio before arrival. A government hospital and 2 private hospitals are available and well-staffed.

TANKERS: Tankers loading fuel oil can be handled at the following berths:
Mushterak Berth: Consisting of 2 dolphins 120 m. apart from each other with a depth of 11.0 m.
New Oil Berth: The berth is currently used by a permanent local 100,000 ton tanker "Alazrak" as a storage vessel.
Port Restrictions:
1. No night berthing/unberthing.
2. Dirty ballast facilities are not available.
3. Pilot boarding area adjacent to the terminal.
4. Slops not accepted.
5. No limitation on freeboard.

Port Circulars:
Ref. No. 2/10/2/499
Date: 10/1/86
To Ocean Going Oil Tankers Arriving at Aqaba Oil Terminal:
Standard information from ocean going oil tankers arriving at Aqaba Oil Terminal must be sent by cable or letter to Ports Corporation at least 15 days before arrival.
1. Date/time of arrival to be confirmed 5, 4, 3, 2, 1 days before arrival.
2. Ships particulars – name/kind, date of building, d.w.t., draft, LOA, breadth.
3. Ballast condition, quantity of ballast, condition of ballast – segregated or clean ballast.
4. Slop quantity on board on arrival.
5. Condition of cargo tanks, crude oil washed, gas-free, etc.
6. All overboard ballasting, deballasting, lines condition flushed, cleaned.
7. Equipped with inert gas system, then percentage of oxygen in the cargo tanks on arrival and throughout cargo operations.

All information sent to Ports Corporation must be correct.
Ref. 2/10/2/521
Date: 29/1/86
Port Instructions and Regulations to receive and serve Oil Tankers:
All oil tankers arriving at Aqaba Oil Terminal should comply and perform with the international convention 1973 and 1978 (MARPOL) marine pollution protocol and with OCIMF/ICS for ship to ship transfer guide (petroleum) for the safety and preventing pollution at Aqaba Gulf, hereby:
1. Oil tankers are requested to have segregated ballast, only such capacity which will allow them to operate safely on ballast conditions and on manoeuvring purposes are accepted. No other ballast except the segregated will be, for any reason, discharged at sea - while there are no reception facilities available at Aqaba Oil Terminal.
2. Oil tankers will be allowed to come alongside the storage vessel only if fully inerted. They will be rejected if oxygen percentage is more than 8% and the inerted condition will be maintained throughout mooring and loading/discharging operations.
3. Oil tankers must have the cargo tanks dry, clean and suitable to receive cargo on arrival avoiding any kind of contamination.
4. The crude oil must be loaded by tankers of approximately 200,000 d.w.t. as per contract with Ports Corporation.
5. Tankers age should not be more than 10 years.
6. Oil tankers will be inspected by Ports Authority on arrival coming alongside the storage vessel and they will be rejected if not complying with the requirements mentioned here above.

Note: The storage vessel has left Aqaba Port and M/V "Al-Azraq" is currently berthed in its place.
Also see "Berthing".

DENSITY: Average density in the port is 1031.

FRESH WATER: Fresh water may be supplied to ships and water may be supplied alongside any of the berths.

FUEL: Bunker fuel is available in Aqaba.

CONSULS: All Consulates are in Amman, the capital, except for Hon. Danish Consulate, (Vice-Consul), at Kawar Building, Egyptian Consulate (Western Housing Area) and the German Consulate.

REPAIRS: Only minor repairs may be carried out above the waterline. Divers may be obtained and a private firm carries out repairs to Navigational Aids including radar, gyro compass, echo sounder, wireless equipment, etc.

DRY DOCKS: Slipway for maintaining port equipment.

SURVEYORS: Germanischer Lloyd, NKK, Bureau Veritas and Lloyd's Register are available in addition to other classification societies.

GANGWAY/DECK WATCHMEN: Customs provide a guard who has to be given full board and lodging. Ships are also supplied with local watchmen through Agents.

OPENING/CLOSING HATCHES: Normally handled by stevedores while alongside or by ships' crew before arrival.

CUSTOMS ALLOWANCES: 20 packets of cigarettes and 1 bottle of liquor for each crew member. Ships' store is locked and sealed by Customs while in port.

AIRPORT: Aqaba Airport links Aqaba with Amman International Airport 355 km. away. One flight daily.

TIME: GMT plus 2 hours.

HOLIDAYS: May Day (May 1st); Independence and Army Day (May 25th); Arab Reconaissance Day (July 4th); Crowning of King Hussein (August 11th); King Hussein's Birthday (November 14th).

The following dates change from year to year as they are reckoned in accordance with the lunar calendar consisting of 354 days.
1994: Eid El Maraj (January 10th); Eid El Fitr (March 11th-15th); Eid El Adha (May 21st-24th); New Year Hijriya (June 11th); Prophet's Birthday (August 20th).

NOTICE:
The Hashemite Kingdom of Jordan Port Corporation - Aqaba
No. 7/3/8787
Date: 1/11/1989

Circular No. 46 for the year 1989
to all Shipping Agents

Further to my Circular No. 26 for the year 1986, please note that a full sweeping of all berths has been made, and it was established that vessels with specifications listed hereunder can be received. Please take note and inform all your Principals, the Owners, Charterers and Managers of vessels calling to Aqaba under your agency in order to comply with.

Berth	*Draft* (m.)	*LOA* (m.)	*D.W.T.* (tonnes)	*Displacement* (tonnes)
Berth No. (1)	10.80	200	35,000	45,000
Berth No. (2)	10.00	180 (220)	35,000	45,000
Berth No. (3)	13.00	180 (220)	40,000	53,000
Berths No. (4, 5, 6)	11.50	180 (220)	40,000	53,000
Berth No. (7) X	8.00	150 (170)	80,000	14,000
Berth No. (8) XX	5.80	110	3,000	5,000
Berth No. (9) XX	5.40	110	3,000	5,000
Berth No. (10) + Tugs	1.50-3.50	60	400	500
Old Phosphate Berth (A)XXX	11.00	100 (200)	20,000	25,000
New Phosphate Berth (B)	14.40	220	100,000	125,000
Floating Motah Berth – West	20.00	200	40,000	53,000
Floating Motah Berth – North	9.00	150	10,000	15,000
Floating Motah Berth – South	10.00	150	10,000	15,000
Joint Berth	For	Cement	Exports	Uses
Ro/Ro Berth	10.00	180	10,000 +25,000	35,000
Containers Berths No. (1&2)	14.00	180 (240)	55,000	84,000
Containers Berth No. (3)	20.00	180 (240)	55,000	84,000
Yarmouk Floating Berth – West	9.00	150 (170)	–	–
Yarmouk Floating Berth – North	7.50	120	10,000	15,000
Yarmouk Floating Berth – South	6.00	120	10,000	15,000
Military Berth	13.30 (5.00)	70 (100)	1,000	1,500
Crude Oil Berth XXXX	24.00	370	300,000 +406,000	D.B.
Timber Berth – West	6.80	80 (120)	8,000	14,000
Fertilisers Berth – East	11.00	190	30,000	40,000
Fertilisers Berth – West	15.00	230	50,000	70,000
Fertilisers Berth No. (2) – West XXXX	1.50 (9)	40 (200)	25,000	–

( ): Possibility to exceed LOA, depending on occupancy of adjacent berths.
X: There is a rock at (7.60 m.) deep. It is (70 m.) to the North of the berth and (60 m.) West of East angle.
XX: Depth being (60 m.) wide East of the berth and (100 m.) long.
XXX: From the vessel loader to North end of the berth (100 m.) and (118 m.) to the South end.
XXXX: Barges and tugs could berth on the wharf. Also Ro-Ro vessels with (9.00 m.) draft could anchor at a distance not less than (25.00 m.) from the quay, provided the ramp is (25.00 m.) long and both bow anchors are used to keep vessel bow steady. 406,000 tonnes d.w.t. alongside plus 300,000 tonnes d.w.t. double banked alongside.

Signed:
Director General
The Ports Corporation/Aqaba.

GENERAL: *Weather:* Masters are warned that during the Winter months strong Southerly gales can develop within 2 hours followed by swell. In such a case it may be necessary for small vessels to unberth and proceed to sea, and also for vessels in the anchorage to weigh anchor and proceed to sea and remain at sea until the weather moderates.

Range of Tide: The range of tide is 1.2 m. at Spring tides.

Firefighting: The port has its own fire brigade, which includes 5 water and foam engines; 1 dry powder engine; 1 ladder engine; 3 water and rescue engine and 2 manual high capacity pumps, plus a variety of equipment such as breathing apparatus, etc.

The town of Aqaba has a highly efficient and well equipped fire brigade and it is 4 km. away from the port.

Aqaba Airport 11 km. away also has a fire brigade and assistance may be called for from any of these whenever needed.

Waste Matter and Pollution: No rubbish may be thrown overboard either at the anchorage or alongside the quays. A barge calls regularly at all anchorages to collect garbage. No vessel which has carried livestock may clean its holds while in port. No vessel may pump overboard any silage, fuel or water ballast liable to contaminate the port. This regulation refers particularly to substances mixed with oil.

Ships' Masters are warned that contravention of the above rule renders them liable to penalties of up to JD. 10,000 per ship.

DEVELOPMENTS: *Development Projects:*

1. Erection of a new Ro/Ro passenger terminal (completed).
2. Erection of a berth to serve the Ro/Ro passenger terminal (completed).
3. Developing Port's communication system and the coastal station (completed).
4. Project of prevention of pollution and firefighting (under consideration).
5. Computerisation is underway.

SHIPMASTER'S REPORT: July 1992.

Pilot is available throughout 24 hours to take vessel to anchorage or berth.

There are 8 designated anchorage spots. Any other vessels have to drift, if not berthing.

Health officials and Agent board whilst vessel is drifting.

Vessel's cargo was 13,000 tons of bagged sugar.

AUTHORITY: The Ports Corporation – Aqaba, P.O.Box 115, Aqaba, Jordan. *Tel:* 314024/8. *Telex:* 62262, 62352 Port Jo, 62235 Radio Jo. *FAX:* 316204. *Cables:* Port, Aqaba. *Contact:* Dr. Duraid Mahasneh, Director General.

AGENT: Gulf Agency Co. (Jordan) W.L.L., P.O.Box 1479, Aqaba, Jordan Tel: (962-3) 314218, 312909, After office hours: (961-6) 663939. Telex: 62343 GAC AQ JO. Fax: 313618. Cables: Gacship, Aqaba.

Contact via Amman Office: Tel: (962-6) 690891/2. Telex: 23954. Fax: (961-6) 690893.

NOTES

Please also advise Shipping Guides Ltd.

Kenya

MOMBASA: 04.04 S. 39.40 E. (See Plan)

DOCUMENTS:
Health Certificates: Forms obtainable from Pilot.
6 Crew Lists.
10 Passenger Lists.
Dangerous Cargo Lists.
Ship's Register.

Shipmaster's Report: 1981.
Declaration of Health (Form Med-284).
Port Health Clearance of Ships (Form GPK-160).
Set Vaccination Lists.
4 Crew Lists.
4 In-transit Passenger Lists.
4 Landing Passenger Lists.
Arrival Declaration for Passengers (Landing Only) (Form F1).
Stores List (Form C7).
Crew Declarations (Form C8).
Parcel Lists (Form C3).
Ship's Register (Copy).
Ship's Record & Master's Report (Form KPA/Rev. 92) (to Pilot).
Shore Passes (Company Forms).
Arrival & Sailing Reports (Agency Forms).

Shipmaster's Report: April 1984.

Please note that the "East African Countries" (Kenya, Tanzania, etc.) Customs Union does not exist any more and separate Customs Declarations are needed for each country. Consequently Bonded Stores seal can be broken after Mombasa or Dar Es Salaam.

PILOTAGE: ETA through ships' Agents, 48 hours' notice. VHF Channel 12 (Mombasa Radio VHF Channel 16). Pilot boat 72 ft. launch, international orange hull, white superstructure. No signals for Pilot – call on VHF Channel 12 (Mombasa Pilots) or by signal lamp to lighthouse. Pilot boat position 1 mile outside "Turning Buoy" on Ras Serani leads (301°). No special bad weather regulations. Pilot ladder 6 ft. from water – must have manropes – lit at night.

Tankers: For deep laden tankers, Pilot boards 1 hour before HW. Because of strong currents, deeply laden tankers must not attempt to "close" in before sighting pilot launch. Good lee and some headway recommended.

Special attention is drawn to the fact that ships bound for Kipevu must be in the agreed pilot embarkation position at the agreed time. The time agreed is chosen, such that, ships may transit the dredged channel with maximum advantage of the rising tide and arrive off the berth just before the ebb sets in. At that moment only little time is left to position the vessel and tie up sufficient moorings to hold vessel on to the jetty face, before the force of the ebb, diverted to an abeam direction by the jetty causeway, comes to bear on the ship's side.

Distance to Shimanzi Jetty, about 6 miles.
Distance to Kipevu Jetty, about 7 miles.

ANCHORAGES: No safe outer anchorage.

RESTRICTIONS:
Tankers:
1. By day: Max. length 850 ft.
   By night: Max. length 680 ft.
   Trim to be between 4 ft. to 6 ft.
2. Restrictions for night movements for Crude Oil or Black Oil ballasted vessels up to 850 ft. LOA provided: (Rigid requirements.)
   (a) movement takes place on last 3 hours of flood tide;
   (b) all anchorages between berth and sea are vacant;
   (c) the Duty Pilot holds a Master's Certificate;
   (d) ballast draft to be 18 ft. forward, 22 ft. aft.

No night movements are permitted for Low Flash White Oil product vessels. Masters of vessels ready to sail at night are strongly advised to notify the Authorities of the time of sailing; the vessel is to be ready to sail before 1600 hrs. and preferably before 1500 hrs. of the day in question.

This should be done by Radio direct to the Chief Pilot and through Agent. The Agent must also make the request in writing to the Harbour Authorities so that proof of requirements exists.

This is a standing regulation.

MAX. SIZE: Length 850 ft. Draft 43 ft. 06 in. Also see "Restrictions", "Berthing" and "Tankers".

HEALTH: Radio Port Health Officer, Mombasa, giving last port of departure, ETA Mombasa, condition of crew, any sickness on board, passengers. Must have "Q" Flag until doctor visits vessel.

RADIO/VHF: Mombasa Radio Coast Station M/F, H/F, W/T & R/T and VHF R/T Services:

Station 5ZF (W/T) 500 – 524 kHz; traffic list 0100, 0500, 0900, 1300, 1700, 2100; Continuous watch; listening freq. 500 kHz.

Station 5ZF2 (W/T) 8710.4 kHz; traffic list 2018; schedules 2018 – 2030, OBS only 0080 – 0030, 0600 – 0630, 1200 – 1230, 1800 – 1830; listening freq. 8354 – 8374 kHz.

Station 5ZF3 (W/T) 13065 kHz; traffic list 0448, 0830, 1518; schedules 0448 – 0530, 0830 – 0900, 1518 – 1545; listening freq. 12531 – 12561 kHz.

Station 5ZF4 (W/T) 17175.2 kHz; traffic list 1248; 1248 – 1315; listening freq. 16708 – 16748 kHz.

Station (R/T) 2595, 2181 kHz; traffic list 0603, 1203; schedules 0600 – 0630, 1200 – 1230; continuous listening watch outside schedules 2182 kHz; listening freq. 2182 kHz.

Station (R/T) 4409.4 kHz; traffic list 0533, 1303; schedules 0530 – 0600, 1300 – 1330; listening freq. 4104.4 kHz.

Station (R/T) 8805.6 kHz; traffic list 0633, 1233; schedules 0630 – 0700, 1230 – 1300; listening watch on 8255.6 kHz; 0330 – 1530 listening freq. 8255.6 kHz.

Mombasa Radio also provides continuous R/T service on VHF for the benefit of ships in and around Mombasa within radius of 30 miles. Channel 16 for calling and Channels 26 and 27 for working. All times in GMT.

TUGS: 3×4,000 h.p. Tugs join vessel inside harbour between Ferry and Kilindini Reef. Tug lines no additional charge.

BERTHING: All berths fendered. Nos. 8, 9 and 10 and Shimanzi Oil Terminal berths, no berthing on ebb tide, with range of 6 ft. or more. Kipevu Oil Terminal berthing on first of ebb with tankers over 650 ft.

Draft alongside Nos.	1 to 5	32 ft. at datum
" "	7	32 " " "
" "	8	31 " " "
" "	9	34 " " "
" "	10	31 " " "
" "	SOT	32 " " "
" "	11 to 14	30 " " "
" "	16 to 18	36 " " "
" "	Mbaraki	36 " " "
" "	KOT	44 " " "

Draft in Buoys varies from 24 ft. to over 60 ft. at datum

Channel depth 40 ft. at datum, plus tide. Therefore, max. draft given as 44 ft. as this is the controlling factor for KOT.

CARGO HANDLING: Berth No. 9 has been arranged for bulk export of soda ash. Berth for Roll-on/Roll-off traffic operates at Berth No. 14. Container berths at No. 16, 17 and 18. One 40 tonne container crane at No. 16. 3 ship-to-shore gantry cranes, 11 rubber mounted yard gantry cranes and 2 rail mounted gantry cranes available. Also see "Developments".

Mbaraki cement berth for bulk export of cement clinker and automated loading of cement in bags, also used for bulk import of coal.

Shimanzi oil terminal now handles all imports of bulk vegetable oil as well as all other oil products except crude oil.

Bulk Molasses exports handled at Berth No. 9 and Mbaraki.

Bulk cargoes are at present handled by grabs, railway wagons and lorries.

STEVEDORES: ETA preferably 48 hours in advance in order to arrange gangs. Advisable notify Harbour Master ETA and also give quantity of cargo to be loaded and/or discharged and other matters of importance.

Working Hours: Weekdays: 3 shifts, 0700 – 1500, 1500 – 230C and 2300 – 0600. Saturday and Sundays: One shift, 0700 – 1500.

Stevedoring carried out by Kenya Ports Authority.

MEDICAL: In emergencies necessary to receive advance notice. Hospital facilities available. Inoculations required – yellow fever (endemic zones in Africa and South America), cholera (all ships from Asia).

TANKERS: Discharge and load white oils at Shimanzi. Discharge and load Heavy oils at Kipevu.

Shimanzi Oil Terminal: T-head jetty with 200 ft. long berthing head. Depth alongside 32 ft. LWOST. Bunkers and fresh water available.

Kipevu Oil Terminal: T-head jetty with 225 ft. long berthing head. Tankers up to 65,000 d.w.t. berth at dolphins alongside jetty head; depth alongside 44 ft. LWOST. Max. length 820 ft. Max. draft 44 ft. (over 42 ft. by arrangement). Slop reception facilities for 3,000 tons.

At Kipevu, tankers normally berth starboard side to at slack tide, on the beginning of the ebb. Masters should assist Pilots to moor as quickly as possible, in view of the abeam current in a direction off the jetty, which is created by the jetty causeway configuration. This current will increase with the ebb tide and ships with all wire moorings are advised to use their first-ropes-ashore with priority. Mooring launches are low powered and can only handle 1 wire at a time, and mooring dolphins are not fitted with winches and require manual handling of wires. In view of the above, and in view of the accurate positioning required to connect to Chicksan arms, it is vital that the ship be brought against the breasting dolphins as soon as possible.

In cases where vessel's mooring is delayed by whatever reasons, Pilots may require extra tugs to assist in keeping the ship alongside.

Also see "Ship's Officer's Report", dated January 1996.

Report:

Approaches: The approaches to Mombasa either from North or South must be conducted with extreme caution as Andromache Reef on the S.W. side and Levin Reef on the N.E. side and a great number of shallow waters, all of them not detectable at HW, pose a threat to navigation.

Consideration should also be given to the very strong East African current, setting North, which reaches 4.5 knots during the months from April to November then declining to about 1.5 knots in February.

It is strongly suggested that no attempt should be made to negotiate the approach to the turning buoy without the Pilot on board, and that the positioning of the ship on the leading line to approach the turning buoy be taken at least 1.5 miles from the turning buoy, to properly evaluate the drift.

The suggested waiting area is in Lat. 04° 04' 12" S. and Long. 39° 42' 12" E. in about 20 fathoms of water.

Anchorages: (Outside). A suggested anchorage postion is in Lat. 04° 06' 12" S. and Long. 39° 42' 12" E. (same as suggested waiting area). The anchorage is not sheltered, rather exposed to currents, wind and sea, and bottom holding capacity is doubtful.

Anchoring is not suggested unless the ship has to wait for a long period of time. In this case, Pilots should be consulted on VHF Channel 12 for the most suitable position.

Anchorages: (Inside). There are 6 approved anchorages in the port area. 3 of which are located between Ras Mzimba and Kilindini Reef. The remaining are situated respectively 2 in Port Kilindini and 1 in Port Reitz.

The suggested anchoring point for all of them is along the leading line.

Tankers are usually not allowed to anchor inside the port, except for short waiting periods. VLCCs are sometimes moored on buoys to await berth.

Pilotage: Pilots hold Master's Certificate of Competency. Only Senior Pilots with Master's Certificates and at least 1 year's experience as Pilots in Mombasa Roads are authorised to Pilot large ships. There are currently 12 Pilots employed in Mombasa.

Some delays in obtaining the Pilot can be expected due to shortage of Pilots.

Pilots board the ship approximately in Lat. 04° 06' 12" S. and Long. 39° 42' 12" E. (waiting area) or up to 1.5 miles from the turning buoy, from an orange hull cutter with white superstructure on which 'Pilot' is painted in black.

When leaving the port, during the S.W. monsoon period with heavy swell affecting the port entrance, the Pilot disembarks just after the Ras Serani turn, before the turning buoy, but may be retained past turning buoy.

Both pilot hoist and pilot ladder are acceptable for boarding and leaving the ship although the ladder is preferred. Manropes obligatory.

Mombasa is a natural port and very well protected where navigation must be conducted with the utmost care and precision.

The port has recently been dredged to permit entrance by vessels with 1,100 ft. LOA.

Chart B.A. 666 is very well detailed and meets all necessary requirements for a safe in-port passage. A very recent Hydrographic Survey following major dredging activities will be added on a New Edition due 1985.

When the ship is set on the approaching leading line, up to the turning buoy the navigation should be checked with utmost care as this leading line sensitivity is rather poor, since the 2 Mackenzie Pt. beacons are too close to each other.

After having rounded the turning buoy navigation proceeds on the heading line 301° and in the area South of Ras Serani, the ship has to make a sharp turn to West to proceed on course 238°. In this turning area tidal currents set North and a good berth must be given to shallow waters, marked by a buoy which is well inside the 6 fathom line.

When on course 238° the ship approaches the narrowest passage in the port, about 600 ft. wide. This passage is marked by a buoy on the South side of the channel and a beacon on the North side.

After Ras Mzimba, when on course 309° another narrow passage must be negotiated before entering Port Kilindini. This passage, about 600 ft. wide, is usually well marked.

After this passage, navigation up to the oil jetty does not present any particular difficulty.

After Ras Serani up to Port Reitz the tidal currents run in the same direction as the channel.

The port navigation is controlled by VHF from the Harbour Master's office.

Shoals in the port area are marked by beacons. It may occur that some of them are missing without any warning. Caution should be exercised as in some areas leading line beacons could be obscured by growing vegetation or by anchored ships.

Also see "Shipmaster's Report" dated August 1993.

DENSITY: 1025.

FRESH WATER: Available at all berths; in stream ex-tug at Harbour Master's discretion or barge of 300 tons capacity. 30 t.p.h. on quay.

FUEL: *Main Quay Berths:* Marine fuel oil, viscosity 1500 secs. Marine diesel fuel. Gas oil cannot be delivered by pipeline at these berths but delivery can be made by bulk lorries up to only 10 tons at extra delivery cost. Minimum 48 hours' notice required. Quantities of 10 to 30 tons can be made by rail tank wagon if 48 hours' advance notice given. Thin fuel oil viscosity below 1500 secs. can be delivered at all berths through Fisher blender. Only 1 Fisher blender available and can deliver fuel to only 1 vessel at a time.

Shimanzi Oil Terminal: All grades, i.e. fuel oil, marine diesel, gas oil and thin fuel oil (through Fisher blender).

Cased Oil Jetty: Only marine diesel and gas oil can be delivered at this jetty.

Kipevu Oil Terminal: Only fuel oil of viscosity between 1500 secs. and 3500 secs. available. Fuel oil viscosity below 1500 secs. not available. At least three days' clear notice required by EA Oil Refineries for arranging bunker delivery. Not possible to deliver any marine diesel or gas oil either ex pipeline or rail tank-wagons/bulk lorries at this berth.

CONSULS: The following countries are represented in Mombasa: Belgium, Denmark, France, Germany, Greece, India, Italy, Netherlands, Norway, Sweden, USA.

REPAIRS:

1. See "African Marine" below.
2. Helmaco Engineering Company Ltd., P.O. Box 99111, Mombasa. Tel: 316776/7 or 316051/2. Telex: 21003, 21045 A/B COMARCO. Almost every aspect of repair work of vessels afloat can be undertaken. Slipway for small vessels.
3. Divecon Limited, P.O. Box 99111. Mombasa. Telephone and telex as for Helmaco. Underwater cleaning and repairs undertaken.
4. Comarco Communications Ltd., P.O. Box 99111, Mombasa. Telephone and telex as for Helmaco. Marine electronic repairs of all kinds carried out.

DRY DOCKS:

African Marine Dry Dock:

Principal Dimensions:

Length	590 ft. 00 in.	180.00 m.
Entrance width	80 ft. 10 in.	24.75 m.
Dock width	86 ft. 00 in.	26.40 m.
Minimum water depth LWS	13 ft. 00 in.	4.00 m.
Maximum water depth HWS	26 ft. 00 in.	7.90 m.

Cranage: 1×30 ton fixed, adjacent to the dock gate.

1×7 ton mobile on rails which can traverse the full length of the West side of the dock.

1×5 ton mobile on rails which can traverse the full length of the East side of the dock.

1×5 ton fixed at the jetty.

1×7 ton mobile.

1×12 ton mobile.

Berths: One piled jetty capable of mooring ships of up to 280 ft. length overall, with certain draft restrictions. A second berth capable of taking ships of up to 300 ft. length overall situated at the dock gate entrance for all but very deep drafted vessels.

Slipways: Two slipways capable of slipping barges, lighters and other small craft.

Tugs and Harbour Craft: For towing and transport. Paint pontoons, barges and catamarans, welding generators and air compressors (either self-propelled or 'dumb') which can be berthed alongside a 'gash' barge and a barge containing workshop facilities.

Electrical Shop: A fully equipped workshop (A/C and D/C).

Carpenter's Shop: Fully equipped to carry out all types of work.

Foundry: All types of castings in cast iron and non-ferrous metal. Maximum single pour in cast iron normally 15 c.w.t. with larger pours by special arrangement.

Paint Shop: All types of ship's paintwork.

Design Office: Chief Draftsman and Design Draftsmen undertake all types of work.

Air Conditioning and Refrigeration Workshop: Specialises in the installation, repair and servicing of General Electric air conditioning units and ship's refrigeration equipment.

General Labour: Gangs of men for cleaning, storing ship available at short notice.

Power Supplies: A/C and D/C power supplies are available at the alongside berths. Two power barges are available which contain: 1×400 KVA, 440 volt, 600/S 3-phase diesel generator; 1×210 KVA, 440 volt, 60 C/S 3-phase diesel generator; 3×60 kW, 220 amp 220 volt D/C diesel generators.

Machine Shops: Comprehensively equipped to handle all types of engineering work.

Plate Yard: For all types of ship repairs, ship construction and steel pre-fabrication work. A blacksmith's shop for forging and smithying work and a shop for sheet metal work.

Welding Shop: Electric arc welding, both in shop and in the port area. Approved to Lloyd's Register of Shipping standards.

GANGWAY/DECK WATCHMEN: Watchmen available for gangway and deck and recommended.

OPENING/CLOSING HATCHES: Normally done by stevedores except MacGregor type hatches.

CERTIFICATES: Normal port requirements for safety cargo equipment.

CUSTOMS ALLOWANCES: Tobacco, 200 cigarettes for each crew member for 8 days. Wine and/or Spirit, 8 small bottles of beer for each crew member for 4 days.

CARGO GEAR: All cargo gear supplied by stevedores.

REPATRIATION: Possible. Facilities available.

AIRPORT: About 7 miles from port. Served by regular airlines.

TIME: GMT plus 3 hours.

HOLIDAYS: New Year's Day; Good Friday; Easter Monday; Labour Day (1st May); Madaraka Day (1st June); First Monday in August; Kenyatta Day (20th October); Independence Day (12th December); Christmas Day; Boxing Day (26th December).

Also for persons belonging to Islamic Faith: Idd ul Azha and Idd ul Fitr. Christmas Day is normally only holiday on which port closed except for necessary pilotage of ships in and out and for dealing with mails, passengers and their baggage, livestock and perishables. On other public holidays restricted working at Mombasa may be carried out at overtime rates. Overtime rates also apply on Saturdays after 1500 hrs. and on Sundays, and to third shift between 2300–0600 hrs.

POLICE/AMBULANCE/FIRE: In Port Area – Police 567 444 and 374; Ambulance 33; Fire 333.

TELEPHONES: Telephones supplied on board. Charges include cost of local calls. Telephone essential per port regulations.

SERVICES: All solvents for tank cleaning available. Repairs to Gyro compass, radar and most other electronic aids to navigation. Compass adjusting by arrangement with port.

SHIP SUPPLY SERVICE: Kenya Ports Authority, P.O.Box 95009, Mombasa – Kenya. Tel: 312211. Telex: 21243 Bandari. Cables: Kenports.

Private Organisations:

Comarco Ltd., P.O.Box 99111, Mombasa – Kenya. Tel: 316776/7, 315319. Telex: 21245 Comarco.

Murri International Salvage Company, P.O.Box 82345, Mombasa – Kenya. Tel: 20822/3 – 24 hours. Tel: 24912 – Office hours. Telex: 21215 Kboat.

Allied Oil Services, P.O.Box 99570, Mombasa. Tel: 315627.

SHORE LEAVE: All crew members allowed ashore and to travel except those from Socialist countries who must stay on Mombasa Island.

IDENTIFICATION CARDS: Port passes issued by the Port Authority.

GARBAGE DISPOSAL: Drums provided alongside. Contact Tel: 312211 for details and charges.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: The Missions to Seamen.

CURRENCY: Kenya Shillings (KSH).

PORT REGULATIONS: White tankers and vessels carrying explosives enter port daylight only. No vessels carrying explosives or dangerous cargo allowed to berth at Main Quay.

DELAYS: Usually no waiting days.

NOTICE: *From the General Manager, East African Oil Refineries Ltd. To Ships' Masters.*

Spillage of Oil and Air Pollution:

I would like to draw your attention to the serious consequences which will arise from any spillage or discharge of oil into the waters of Kilindini Harbour. This part of the Kenya shoreline, with its famous coral reef, is an extremely beautiful and popular tourist attraction as well as providing a means of livelihood for many local people.

Any spillage of oil can harm the environment and raises a great deal of criticisms from the residents of the area. The same applies to excessive funnel smoke.

In the event of any spillage or leak from ship or jetty facilities, ship's officers should immediately warn refinery personnel, who will instigate emergency measures. If there is any delay in notifying the refinery, then any oil spillage or pollution into the sea must be reported to:

(1) Ras Serani Lighthouse (Mombasa Port Control) manned 24 hours. Telephone Mombasa 312895 (21211 ext. 357 office hours only). VHF Radio Channel 12.

(2) Manager Marine Operations Kipevu, Office hours telephone Mombasa 24864 or 312211 ext. 259. Other times telephone Mombasa 312895 or through signal station in (1).

I am sure you will agree that both you and your staff as well as ourselves should do all that we can to protect this part of the environment against pollution. Moreover, it is a firm belief that we should try our utmost to avoid adverse publicity for the oil industry of which we are both part.

NOTICE: *Notice from ship's Agent to Masters:*

Stowaways from Mombasa:

We wish to inform you that stowaways from the Port of Mombasa are a very serious problem and we have had a number of vessels leaving Mombasa with half a dozen stowaways on board causing the Owners considerable expense and inconvenience.

Please, therefore, take every precaution to ensure your vessel is not boarded by stowaways whilst in Mombasa. We would suggest you employ shore watchmen to guard the vessel and also perhaps to have members of your crew on duty at all times to protect the ship. Please, just before sailing, carry out a thorough search of the whole ship with your crew and the watchmen. We also suggest that once you have sailed and you are outside the port limits, you steam around the area for a few hours to give any stowaways the impression that the vessel is fully underway, and again during this period have your crew thoroughly search the ship.

If stowaways are found on board of non-Kenyan nationality then the authorities do not permit them to be landed in Mombasa. Most of the stowaways from Mombasa tend to be Tanzanians.

We would stress again that stowaways are a serious problem in Mombasa and it is up to you to ensure your vessel does not sail with stowaways on board. Please inform your crew about stowaways and that they should be on the look out at all times for any suspicious persons on board.

DEVELOPMENTS: New equipment installed includes additional gantry cranes (5×15 tons capacity) for container handling at Mombasa and inland container depot, now open at Embakasi, Nairobi.

Berths No. 16, 17 and 18 (total length 600 m.) have been modified to take the above mentioned cranes.

SHIPMASTER'S REPORT: July 1991.

1. The Approach Buoy is painted red and white (Fl. W. 5 s), and is located in position Lat. 04° 05' 34" N., Long. 39° 42' 46" E.
2. Strong N.E. currents in the pilot boarding area sometimes reach 5 knots. Pilots are often late to meet the vessels, and they reduce the speed of a pilot launch and order vessel to reduce speed to dead slow. This should not be done, as current will rapidly drive vessel on to the shoal to the East.
3. The rainy season lasts from May to June.
4. All berths are supplied with good fenders. A majority of the berths are provided with shore cranes.
5. In order to avoid filtering of stowaways on board, I recommend taking a local watchman.

   When staying at the roadstead at night time, a vessel should use maximum lights, including lamps for lighting ship's hull, and have 2 seamen on deck (forecastle and stern). The deck itself should be visible to the watch officer.

During our stay in the port, cases of theft took place on several vessels.

SHIPMASTER'S REPORT: August 1993.

Mombasa Approach Recommendations:

1. Arrive about 30 minutes earlier than the pilot boarding time.
2. Make a run along the harbour entrance on a course of approximately 212° from a position of approximately 2 to 3 miles off Ras Iwetine.

   This is extremely useful as you can familiarise yourself with the sightings, e.g. determine the strength of the current, check on the position of the entrance buoys and check on your approach to pipelines when on the leading line.
3. After passing the leading line of Ras Serani, set course for a position at least 3 miles S.E. of Buoy No. 2 and take the Pilot on board there. If you take the Pilot on board closer than that, first proceed to seaward again.
4. Go in at full speed, thus making the angle of compensation for the current as small as possible.
5. Determine a point of 'no return'.

We took the Pilot on board 4 miles S.E. of Buoy No. 2 on a Southerly heading.

I let the Pilot do the line up on the leading line, and after he started compensating for current with only 4°, I took over and took the ship in myself until the effect of the current could no longer be felt. This was about 2 cables to the seaward of Buoy No. 2.

We passed Buoy No. 2 with a speed of approximately 12 knots.

Buoy No. 1 and the turning buoy were not there. All other buoys were in position (this was also reported by the Harbour Control).

We calculated the current at that time to be approximately 2.5 knots.

As for the 10.20 m. depth near the leading line – we passed very close to this spot, but never had less than 2.0 m. of water under the keel.

When asking the in-going Pilot, he stated 'plenty of water'.

The out-going Pilot stated that the whole area between Buoys No.1/2 and 3/4 had been dredged to 13.0 m. Taking into account that we never had less than 2.0 m. under the keel, the vessel's speed and squat, this seems to be a possibility.

Note: I see Mombasa as a very high risk port for vessels of this size (80,000 d.w.t.), due to the very small margins of safety.

SHIPMASTER'S REPORT: January 1995.

Vessel: 33,900 d.w.t., LOA 182.6 m. and arrival draft 10.4 m.

Pilot: Pilot boarded 2 hours after H.W. Boarding ground is 1 mile seawards of the outer channel buoys.

Berths: Docked at Kipevu Oil Terminal. This now has facilities to discharge all grades of refined products, as well as heavy oils.

3×10 in. Chicksans available for refined products.

Slop line available.

Water can be supplied by barge only, but as there is a serious water shortage in Mombasa, it should be booked well in advance.

Maximum draft allowed 44 ft. (13.4 m.).

White Oil vessels discharging here will have to shift to Shimanzi, if a heavy oil vessel arrives. This appears to be the norm, with most vessels shifting at some time during the discharge.

It may be economically more sensible to arrive with a draft of 10.2 m. and berth direct at Shimanzi Oil Terminal.

Lights and Navigational Aids: All observed were operational and in good condition.

Documents:

Agency:
  2 copies Crew List.
  Cargo Manifest.
  Clearance from Last Port.
  Ship's Register.
Immigration:
  4 copies Crew List.
  Passenger List.
Customs:
  Crew List.
  Personal Declaration.
  Stores List.
  Parcels List.
  Bonded Stores List.
Port Health:
  Crew List.
  Vaccination List.
  Livestock List.
  Ports of Call List.
  Health Declaration.
Pilot:
  Ship's Record and Master's Report Form.

Anchorage: White Oil tankers with a short period to wait for the berth are permitted to anchor in Port Reitz.

VHF: Port works on Channels 16 and 12, and Pilots on Channel 12.

Departure: No night sailing for tankers.

Notice: Issued by Agent to Master:

Stowaways: Recently ships sailing from Mombasa have found several stowaways after steaming one or two days. Most of the stowaways are from the neighbouring countries, and the current Kenya Immigration Regulation *is not to allow* any stowaway who is not Kenyan to land at Mombasa.

If the stowaways claim to be Kenyans with no documents, his relatives here have to be interviewed by Immigration, and only after that proof would the stowaway be allowed to land. All other stowaways with or without documents will not be allowed to land in Kenya.

SHIP'S OFFICER'S REPORT: January 1996.

Berth: Kipeva Oil Terminal.

Moorings: 3:2:2 each end.

Two headlines from the starboard bow first by mooring boat. Aft springs from poop.

Tugs: One each end for berthing and unberthing. Tug's lines used.

Gangway: Used for access. Landed just forward of manifold.

Shore Lines: Shore has 10 in. lines for all grades. Four Chicksans are available, the aft one for Jet and the others for Mogas and Gas Oil. Shore do all connecting and disconnecting, though they do not connect until an hour before the sample results are out. Sample tests can take a very long time, so we spent a lot of time waiting.

Security: Shore provide security teams of 3 men during the day and 5 men at night. They also carry out a full stowaway search prior to departure. Shore firemen come onboard for meals.

We provided the shore with a radio, so we had some communication with the Loading Master, instead of shouting down to the jetty.

Discharge Rate: Maximum for all lines is 1,600 cu.m./hr. or 10 Bar, whichever comes first.

1st Call: Vessel has 32,000 tonnes of Gas Oil. The forward Chicksan was inoperative, so with 2 lines and 3 pumps we averaged about 2,700 cu.m./hr. Samples took 6 hours for testing.

2nd Call: (2 weeks later): Vessel had Mogas (Green and yellow line), Jet (blue line) and Gas Oil (red line). Again the forward Chicksan was inoperative, so one line for each grade. Connected up to Mogas and the Gas Oil. Jet discharged once the Gas Oil Chicksan disconnected. As it was a weekend, we had a long wait for samples and also delays whilst shore pumped cargo around to make ullage for Gas Oil and Jet. Mogas samples took over 12 hours. With only one pump on each grade, we were unable to make the maximum back pressure or rate, but still managed over 1,000 cu.m./hr. on each grade – Mogas 1,070 cu.m./hr.; Gas Oil 1,300 cu.m./hr.; Jet 1,100 cu.m./hr.

AUTHORITY: Kenya Ports Authority, P.O.Box 95009, Mombasa, Kenya. *Tel:* 312211. *Telex:* 21243 DIRKPA KE. *FAX:* 311867. *Cables:* Kenports. *Contact:* Managing Director or Manager Marine Operations.

AGENT: East African Commercial and Shipping Company Limited (E.A.C.S.), Notco House, Moi Avenue, P.O.Box 95103, Mombasa, Kenya. Tel. (254) 11-433.430, 433.457. Telex 21151 Kenship Ke Fax: (254) 11-432173.

Republic of Kiribati

BANABA (Ocean Island): 00.52 S. 169.35 E.

PHOSPHATE MINING HAS CEASED. ALL INSTALLATIONS HAVE BEEN DISMANTLED.

TARAWA (Betio): 01.25 N. 172.54 E. (See Plan)

DOCUMENTS:

Customs: Boards vessel at anchor.
Clearance from Last Port.
4 Crew Lists.
3 Passenger Lists.
1 Stores List.
1 Ship's Report Inward.
1 List of Unmanifested Cargo.
1 Crew's Stores List.
1 Marine Form.

Health:
Pratique granted by Health Department who board at anchorage with Customs.
Vaccinations against Cholera (if required can be carried out).
Name of ports visited and date of arrival at respective ports.

Immigration:
2 Crew Lists.
2 Passenger Lists.
Last Port of Call.
Next Port of Call.
Passports.
Final Destination.

Agent:
3 Bills of Lading.
5 Manifests.
Last Port.
Next Port.
1 Crew List.
1 Passenger List.

Agriculture:
Plants Certificates.
Animal Certificates.

PILOTAGE: Pilot available and must be informed of vessel's ETA 24 hours in advance through the Agent. Entering vessels are strongly advised to await Pilot one mile West of Fairway buoy. Pilot can be contacted by VHF on Channel 16. Pilot boards from small tug, painted yellow, which flies "H" flag at stern. Buoys in lagoon are likely to be missing. Also see "Radio".

ANCHORAGES: See Chart BA. 3269. Betio anchorage main anchorage. Inside the lagoon, safe in all weather although in rare strong winds it may not be possible to work vessel in the lagoon.

RESTRICTIONS: Vessels arriving after 1800 hrs. are advised not to enter the passage and should drift 5 miles away from the entry point.

MAX. SIZE: Any vessel drawing up to 26 ft. may enter at LWOST and 30 ft. HW. Length and breadth are not critical, however vessels over 600 ft. to navigate with extreme care.

HEALTH: See "Documents".

RADIO: Tarawa Radio (T3K) on 500 kHz, 2182 kHz and 6215 kHz. Contact Senior Pilot 4 hours before arrival on VHF Channel 16. Pilot will arrange all formalities, Customs, Health, stevedores, etc.

RADAR: No port radar service.

TUGS: 3 tugs (available for towing barges).

BERTHING: None (lighterage port).

CRANES: 1 × 20 ton container crane on wharf (stationary). 2 × 5 ton mobile cranes.

STEVEDORES: Available 24 hours. Discharging rate 12 t.p.h. Labour available weekends and holidays if required.

MEDICAL: Medical attendance could be obtained through the Agent during working hours. Hospital available where suspected disease could be medically examined.

TANKERS: Vessels drawing up to 14 ft. can anchor close to the jetty where lines are connected to shore pipes. Maximum working pressure 50 lb. No tanker berth and vessels must provide lines. Floats can be provided by Mobil Oil Agency with labourers if required.

DENSITY: Sea Water.

FRESH WATER: Available in limited quantities in an emergency only and delivered by water barge. Cost of water A$5.00 per 500 gallons. Delivery charge A$3.90 per 200 gallons. Water may be contaminated.

FUEL: Diesel only (in very short supply), in restricted quantities and delivered by barge in tanks. Refuelling cost A$11.20 per 500 gallons.

FIRE PRECAUTIONS: No special precautions other than normal precautions for tankers.

CONSULS: British and Australian High Commissioners and South Korean Honorary Consul stationed at Bairiki (Also see "General").

REPAIRS: Small but well equipped and capable workshop for light repairs.

DRY DOCK: Small patent slip, capable to slip ships of 150 tons displacement.

SURVEYORS: Marine Superintendent of the Ministry of Transport and Communications will also act as Lloyd's Sub-Agent and cargo surveyor.

WATCHMEN: Not required.

HATCHES: Opened and closed by Stevedores.

CUSTOMS ALLOWANCES: 25 cigarettes per day and 6 cans (310 ml.) beer per day.

REPATRIATION: All facilities available for crew changes.

AIRPORT: 13 miles from anchorage point. Air service to Nauru on Wednesday only, by Air Nauru, arrives from Nauru 0900 hrs. and departs 1000 hrs.; and to Honolulu once a week by Air Tungaru (the national airline) via Maduro, Marshall Islands.

TIME: GMT plus 12 hours.

HOLIDAYS: New Year's Day (January 1st); Good Friday; Easter Saturday; Easter Monday; Public Holiday (July 14th); Youth Day (first Monday in August); Christmas Day (December 25th) and Boxing Day (December 26th). No cargo work can be arranged.

POLICE/AMBULANCE: Police and Ambulance 999.

SERVICES: Ship's laundries.

BANK: Bank of Kiribati, P.O.Box 66, Betio. Tel: 26124.

SHORE LEAVE: All crew are allowed to go ashore after inward clearance is granted.

IDENTIFICATION CARDS: No shore passes issued. Passport or Seamen's Book are not required when on shore leave.

REGULATIONS: No food waste, ballast, engine oil to be discharged in the lagoon.

DELAYS: Expected delays can be caused by heavy rain and port congestion.

GENERAL: Tarawa is the main port of entry for Kiribati. Other entry port is Christmas Island.

Tarawa Atoll is roughly triangular in shape. A number of islets, separated by shallow passages, dry at low water, form the Southern and Eastern sides of the Atoll. The Eastern side is approximately 19 miles North and South and the Southern side is 16 miles in an East-West direction.

Causeways link up the islets along the Southern side and part of the Eastern side. On the Western side there is a barrier reef, most of which is sunken, enclosing a large lagoon navigable by vessels drawing 26 ft. at LWOST and 30 ft. at HW.

The President's and Main Government Offices are at Bairiki Islet which is connected by causeways to the Tungaru Central Hospital, Government Schools at Bikenibeu and the international airport at Bonriki and the Port of Betio.

DEVELOPMENTS: "L" shaped jetty with length 50 m. and width 8.0 m. at head to be constructed at North end of Eastern Mole. Depth alongside 5.5 m.

AUTHORITY: Ministry of Transport and Communications, Marine Division, P.O.Box 506, Betio, Tarawa, Republic of Kiribati. *Tel:* 26468. *Telex:* 77022 Mincomm. *Cables:* Harbour Master, Tarawa. *Contact:* Captain B. Highland, Harbour Master and Marine Superintendent.

AGENT: Shipping Corporation of Kiribati, P.O. Box 495, Betio, Tarawa, Republic of Kiribati. Tel: 26525, 26521. Cable Address: Portco Tarawa. Contact: Captain T. D. Murdoch, General Manager.

NOTES

Please also advise Shipping Guides Ltd.

Democratic People's Republic of Korea

GENERAL

ETA PROCEDURE: The Notice of ETA is applicable to the Owners (operators and charterers) and the Master of foreign vessels calling at ports of the D.P.R.K.

1. The Owners who fix vessels every month, provide the monthly fixture of ships to the Ocean Shipping Agency of the D.P.R.K. (Head Office) and Branches (herein after called the Agent) before 25th of the previous month and advise immediately if any change.
(a) Vessel's name, flag and call sign.
(b) ETA and port of call.
(c) Description and quantity of discharging and loading cargo.

2. The Owners send the Agent the following documents before arrival in the port: (1) Bill of Lading 3 copies, (2) Manifest 3 copies, (3) Stowage Plan 3 copies, (4) Charter party or handling terms, (5) Others if any.

3. The Owner or Master advise the Agent of the Notice of ETA at the Pilot Station 10 days and 3 days, 24 hours, 12 hours and 4 hours prior to arrival.
(A) 10 days' Notice:
(a) Vessel's name, flag and call sign.
(b) ETA and port of call.
(c) Vessel's particulars (g.r.t., n.r.t., d.w.t., number and size of hatches, derricks and their capacity, LOA, breadth, draft.)
(d) Numbers of crew, passengers and nationality.
(e) Description and quantities of discharging/loading, details of heavy lift if any.
(f) Copies of charter party or handling terms.
(g) Provisions, ship's stores, repair.
(h) Flag of the D.P.R.K.
(i) Last port and ship's position.
(j) Full address of Owner or Operator, payer of disbursements and banker.
(k) Others if any.
(B) 24 hours', 12 hours' and 4 hours' Notice of ETA at the Pilot Station; Ship's position and speed only.
(C) The Master should advise the Agent of the ship's position and the time when she passes the following line.
(a) Korea East Sea.
Lat. 42° 24' N., Long. 131° 10' E.
Lat. 41° 43' N., Long. 132° 20' E.
Lat. 38° 00' N., Long. 130° 00' E.
Lat. 38° 00' N., Long. 128° 45' E.
(b) Korea West Sea.
Lat. 39° 50' N., Long. 123° 20' E.
Lat. 37° 00' N., Long. 123° 20' E.
Lat. 37° 00' N., Long. 126° 30' E.
(D) The Master should navigate to the Pilot Station at least 15 miles from the coast after passing the above lines mentioned in item 3-(3).
(E) On arriving at the Pilot Station the Master should give the Agent the Notice and enter the port under pilotage.
(F) The Owner should deposit disbursement funds before ship's arrival at the port and inform the Agent of the following;
(a) Name, amount, date, No. and other details of T.T.
(b) Ship's name and port of call.

List of Agencies:

1. Head Office

Pyongyang	Name	Korea Ocean Shipping Agency,
	Address	Ginmauldong, Moranbong District, Pyongyang, D.P.R. of Korea.
	Telex No.	35059 kosa kp
	Cable Address	Kosa Pyongyang
	Telephone No.	(81-4100) 52984, 52472

2. Branch Offices

Nampho	Name	Korea Ocean Shipping Agency,
	Address	Huphodong, Hanggu Dist., Nampho City, D.P.R. of Korea.
	Telex No.	24051 np kosa kp
	Cable Address	Kosa Nampho
	Telephone No.	(850-2) 812471, 5701
Haeju	Name	Korea Ocean Shipping Agency,
	Address	Sohaedong, Haeju City, D.P.R. of Korea.
	Telex No.	24047 hj kosa kp
	Cable Address	Kosa Haeju
	Telephone No.	5310
Songrim	Name	Korea Ocean Shipping Agency,
	Address	Shingyangri, Songrim City, D.P.R. of Korea.
	Telex No.	24049 sr kosa kp
	Cable Address	Kosa Songrim
	Telephone No.	1100
Chongjin	Name	Korea Ocean Shipping Agency,
	Address	Sohang 2 Dong, Songpyong District, Chongjin City, D.P.R. of Korea.
	Telex No.	24039 ch kosa kp
	Cable Address	Kosa Chongjin
	Telephone No.	23229, 23227
Hungnam	Name	Korea Ocean Shipping Agency,
	Address	Kumbichdong, Haean District, Hamhung City, D.P.R. of Korea.
	Telex No.	24041 hn kosa kp
	Cable Address	Kosa Hungnam
	Telephone No.	2656
Wonsan	Name	Korea Ocean Shipping Agency,
	Address	Jangchondong, Wonsan City, D.P.R. of Korea.
	Telex No.	24045 ws kosa kp
	Cable Address	Kosa Wonsan
	Telephone No.	3008
Rajin	Name	Korea Ocean Shipping Agency,
	Address	Changpyong, Rajin City, D.P.R. of Korea.
	Telex No.	24043 rj kosa kp
	Cable Address	Kosa Rajin
	Telephone No.	693

CHUNGJIN: 41.43 N. 129.42 E. (See Plan)

DOCUMENTS:
8 Crew Lists.
2 Vaccination Certificates.
2 Lists showing currency, gold and valuables in possession of crew members.

The following information should be radioed to Port Authorities before arrival:
Number and nationality of crew.
Name of last port.
Ports called at during last month.

PILOTAGE: On reaching North Korean waters, vessels required to give a position report every 3 hours to KOSA Chungjin. Pilot and Port Authorities board in position 41° 30' N., 130° 05' E. where vessels should await Pilot. Water depth too deep to permit anchoring.

ANCHORAGES: No possibility of anchoring outside harbour limits.

CLEARANCE: On arrival in port, the radar, echo sounder, main and emergency transmitters and all optical equipment is sealed. An inspection team board the vessel to verify currency and valuables declarations. Seamen's Books required to be stamped with landing pass.

BERTHING: Berth No. 1, max. draft 24 ft. Berths No. 2 and 3, max. draft 27 ft. Berths No. 4 and 5, max. draft 28 ft.

CARGO GEAR: Vessels loaded and unloaded by ship's gear. At Berths 4 and 5 there is a conveyor belt facility for coal loading.

SHORE LEAVE: Seamen not allowed to visit other vessels, or leave the harbour area.

Unauthorised money changing forbidden, and it is prohibited to take Korean currency out of the country.

No bathing in harbour area.

SHIPMASTER'S REPORT: December 1980.
There are 2 harbours in Chungjin, the Western harbour and the Eastern harbour which are about 2.5 miles apart. Western harbour is mostly for export of coal and iron and Eastern harbour for import of general and bulk cargo.

The following port information is for the Eastern harbour:
Documents: Immigration, Customs and Quarantine Officials board the vessel at the Pilot Station. The Korean Authorities bring on board their own forms for ship's stores, currency, valuables, binoculars, cameras, etc., and fill these in by using the information contained in the ship's forms. However they also take the original of the ship's paper.
Papers required for entry:
5 copies Crew List (IMO Form).
1 copy Vaccination List (Cholera).
1 copy Crew's Effect Declaration (IMO Form).
1 copy List of Currency and Valuables (Free Form).
1 copy Ship's Stores Declaration (IMO Form).
1 copy Ports of Call List.
1 copy Maritime Declaration of Health.

A "General Information" sheet, containing such particulars as vessel's name, call sign, Port of Registry, official number and all the normal data contained in the ship's register, including cargo on board, amount and where loaded etc., was found to be of great help in filling out their forms and speeded-up the entry and clearance process. 5 copies of above should be made for distribution to Agent, Customs, Immigration, Harbour Master and Quarantine.

Master's Advice: It is important that all crew members strictly comply with the Rules and Regulations in Korea, especially concerning cameras and binoculars as photography and the use of binoculars is strictly prohibited in the harbour area as well as in the City and the surrounding area. If the Customs, during their second cabin check, find a camera or binoculars the matter will be treated very seriously.

For landing permit, Immigration will stamp the passports or the seaman's books. However I managed to persuade the Immigration Officer not to stamp the passports because of the trouble in certain countries when they see a D.P.R. Korean stamp but it took 2 days and higher Immigration Authorities to get this permission.

When filling out the Customs and Immigration Forms, the name North in North Korea should not be written on any of above mentioned forms or any other documents as well as on private letters. The Authorities don't accept a divided Korea and will cross out the name North, in any place it is written.

It is not necessary to take cash advance in Korean Won. American Dollars and Yen are most welcome.

Pilotage: Method of contact: VHF or radio contact not possible. Agent will inform the Pilot Station of vessel's ETA.

Boarding Position: Lat. 41° 42.8' N., Long. 129° 50.5' E. (4 miles S.S.E. of breakwater). Pilot is compulsory. Service Time: Daytime only.

Anchorage: From 0.5 miles – 4 miles S.S.W. of Chungjin Harbour in 8 – 30 fathoms. Good anchorage in mud/sand and protected from Northerly wind. However during strong South-westerly wind there is a heavy sea and swell.

Approaches: Simple and straightforward. Practically due North along Korea's East coast until abeam of Cape Kozakof, then straight for the Pilot boarding position or anchorage.

Restrictions: Entry: 30 ft. even keel on entry to the harbour.

Special Regulations: Vessel received orders by cable to navigate 15 miles off the Korean D.P.R. coast and pass through position41° 38.9' N., 129° 52' E. en route to the pilot boarding position.

Max. Size: Max. draft alongside at the grain and general pier was 28 ft. and in the harbour 30 ft.

Health: Radio Pratique not available.

Radio: Contact through Congjin Coast Radio Station, call sign "HMC" frequency; Call on 500, work on 428 kHz., ships work 425 kHz. Traffic list every hour plus 20 minutes. After initial call on 500 kHz., usually followed by QRU. MF only.

After arrival, radio station on board is sealed and there is no VHF in the port. However after arrival in the port, Agent will bring on board a small transmitter/receiver for daily communication between Master and Agent's office. The set working on 24 volts. Very few people speak English. I found only the Pilot and Agent had a fair command of English.

Arrival Notice: Five days then 72, 48 and 24 hours to Agent. Also 5 days and 3 days to receivers.

Tugs: Two tugs available, about 500 h.p. maximum. Tugs always take ship's line.

Berthing: Mooring Method: Vessels drawing more than 28 ft. must first lighten her draft at anchor in the inner harbour. Vessel is brought up in a North/South direction in the harbour and moored aft to the bollards on the breakwater with 4 lines and port and starboard anchor forward, 6 shackles in the water (Mediterranean Mooring).

Along the grain pier, which is only 150 m. long, a strong mooring is recommended partly because the after part of the vessel overhangs the end of the pier and partly because of the occasionally heavy swell along the pier.

Grain Wharves: Vessels only allowed alongside with draft of 28 ft., but a sounding with a line showed about 32 ft. It was not possible to get exact information of water depth alongside the general pier. I found the total wharves length to be about 1,500 m. The grain pier is 150 m. long. Certain wharves in the Eastern part of the harbour, which are shown on BA. Chart No. 1271, do not exist anymore as usable wharves.

Facilities for Bulk Carriers: There are a total of 8 cranes in the harbour, each of about 10 tons capacity. Two of the cranes are serving the grain pier and connected with a conveyor belt system. No difficulty with height of vessel.

Cargo Operations: At the harbour anchorage (Mediterranean mooring) the cargo is discharged by ship's gear. Stevedores operating the cranes. Operation is slow and there is often damage to the vessel with grabs due to inexperienced stevedores.

Two cranes serve the vessel alongside the grain pier. They are able to discharge about 3,000 tonnes per day but actual quantity discharged per day (taken over a 7 days period) was only 1,600 tonnes, mostly due to lack of stowage space, transportation problems and crane breakdowns.

Stevedores work 24 hours a day, 7 days a week.

The cranes bring the grain to a conveyor belt system which again brings the cargo to the store house. The store house has a maximum capacity of 12,000 tonnes.

There is a railroad system serving the grain and general pier. Stevedore damage must be reported to the foreman immediately. All damages are repaired before departure by shore repair workers.

Medical: Services available.

Density: 1026.

Fresh Water: Good quality fresh water available at the pier. Charge Won 2.75 per ton (U.S.$1.75). Fresh water can also be delivered by barge to the anchorage.

Fuel: Available but expensive.

Repairs: According to the Agent, all deck and machinery repairs can be carried out. I expect that to be correct as there is a big shipyard in Chungjin.

Surveyors: Local Surveyor only.

Customs: The Bonded Stores are not sealed but all cameras and binoculars are collected before entering the harbour and sealed in a locker. Radio room and echo sounder also sealed.

When the vessel has berthed alongside the pier, Customs will once more come on board and this time check thoroughly for binoculars and cameras throughout the ship. It is possible they will confiscate all cameras and binoculars found during the second check.

Time: GMT plus 9 hours.

Shore Leave: Crew members are not allowed outside the harbour area. Permission is only given for a visit to the Seaman's Club, just outside the gate, but only a walk, straight from the gate to the club. There is an armed guard at the gangway to whom crew members must present their Passport or Seaman's Book and also once more at the harbour gate. Shore leave is from 0800 hrs. to 2300 hrs. There is a new Seaman's Club near Western harbour (about 8 km. from Eastern harbour – by car about 10 minutes). Transportation to and from this club costs U.S.$7.00 per bus.

General: Current: Experienced a slight South-westerly set towards the shore in Kyongusogu Bay when approaching from the South.

Tide: Port not effected.

Charts: BA. 1271, 1316. J.A. 162.

Swell: A heavy swell can cause problems for vessels alongside the wharves, especially in July/August. At times the swell may cause vessels to leave the wharf and shift to the anchorage.

Distress: In case of distress a long blast followed by a short blast with the whistle and repeated 3 times, this will warn the Harbour Master who will take action.

Derat: Derat exemption certificate can be issued.

Laundry: Available and requires about 3 days. Laundry service is satisfactory.

Provisions: Available in limited quantities.

SHIPMASTER'S REPORT: January 1990.

Documentation/Officials: Quarantine and Immigration Officers board with the pilot. Documents necessary as per "Guide". In addition a blank form in English and Korean language is presented by Customs where Master should fill in number of cameras, binoculars, radios, tapes, televisions and sign. They also presented Korean forms for crew and ship's stores which Master only signed and attached IMO forms, which we already had prepared, without objection.

Four crew members are required to accompany the search party to search the deck, engine room, living quarters and provision stores. There is a representative of the Agriculture Ministry who inspects the dry provisions room for insects. They found 2 small cockroaches and ordered fumigation, which ship's crew carried out. All cameras and binoculars were placed under seal. Radio equipment, D/F, echo sounder were sealed but VHF and walkie talkies were not sealed and can be used throughout ship's stay at anchorage or alongside for daily communication with Agent. Bonded stores were sealed after berthing. There was no second search after berthing, only similar search prior to departure, where 2 Immigration Officers will remain onboard up to Pilot Station and disembark with pilot.

Pilotage: Pilot boards as indicated on the chart from a tug equipped with VHF.

Radio: Cable received from agents Korea Ocean Shipping Agency (KOSA) as follows: Please navigate 15 miles away from our coasts. Pass through 41° 23' N., 130° 08' E., thence to Pilot Station. Chongjin working frequency short wave as follows:

16,995 kHz.	from 0900 hrs. – 1800 hrs. (local time).
4,231 kHz.	from 0800 hrs. – 1800 hrs. (local time).
8,693 kHz.	from 0000 hrs. – 2400 hrs. (local time).

VHF: Chongjin Port Radio and KOSA are both equipped with VHF. Contact can be established on Channel 16.

Berthing: Vessel berthed in Western Harbour.

Cargo Work: Shore cranes were used. Working 24 hours a day, 7 days a week. We loaded steel billets and all cargo arrived by rail. Any damage by stevedores will be repaired by them.

Medical: All crew to have valid health card. Injection for Cholera will be done onboard if required.

Costs: 5 Won for each injection, plus 5 Won for each new card plus 10.Won for Doctor's visit.

Fresh Water: Available alongside by hose provided by water company.

Costs: 2.50 Won per ton, plus supply fee of 1 Won per ton plus Winter charge of 20% (Holiday charge is 125% and night charge is 75%).

Fuel: We received 20 tonnes of diesel oil 7 days after request.

Costs: 980 Won per ton, plus supply charge of 3 Won per ton, plus commission.

Surveyor: D.P.R.K. Register of Shipping surveyor will attend on request.

Repatriation: A vessel in port sent 20 crew to Manila via Pyongyang.

Shore Leave/Shore Pass: An armed guard is on duty at the gangway at all times. I requested Immigration not to stamp Seamen's Books or passports, which they accepted. Ready made shore passes are issued without names, only numbers. There is a U.S.$100.00 fine if shore pass is lost.

Shore leave possible from 0900 hrs. to 2100 hrs., but only within harbour area. Crew can only visit Seaman's Club which is about 2 km. from the gate, by using the bus provided by the Seaman's Club, through shipchandler. Single trip costs 10 Won (U.S.$1 = 2.22 Won).

Excursion tours can be arranged by Agent to museum or hotel. Shopping only possible from Seaman's Club or hotel, although there is a shop in Agent's building. Agent advised me there is an Agent's branch office near East Port.

Provisions: Provisions are very cheap and can be obtained through shipchandler. The supply of fresh provisions is very limited.

HAEJU (Haijuube): 37.59 N. 125.42 E.

SHIPMASTER'S REPORT: August 1978.

DOCUMENTS: Same as Nampo, but Korean Forms must also be filled in on arrival.

PILOT STATION: B.A. Chart 1258. Situated between following points:

37° 40' 30" N.	125° 35' 00" E.
37° 42' 00" N.	125° 35' 00" E.
37° 42' 00" N.	125° 32' 24" E.
37° 40' 30" N.	125° 32' 24" E.

The ship should anchor and wait. It is imperative to anchor within Pilot Station Area, which is used by North and South Korea, otherwise the Authority will not board the vessel. Approaches to Haeju are not covered by B.A. Charts, Korean (Nos. 15–1354, 1328, 1329) not obtainable. Pilot boards together with Quarantine and Immigration officer. The inspection starts immediately, all crew must have Seaman Book for identification. Food stores and pantries also inspected. Pilotage is carried out depending on tide and ship's draft, daytime only. Berthing at slack tide. After berthing arrival inspection continues (Harbour Master, Customs, Coast Guard).

ANCHORAGE: Ships sometimes complete loading at the Anchorage in position 37° 55.5' N., 125° 46' E., depth 11.4 m., but probably swinging space for one ship only. Ships waiting for berth anchor in the vicinity of the wharf. With no chart it makes the situation difficult, as there are no lights or light buoys. Position only obtained by radar. One anchor used due to strong tide which sometimes reaches 4 knots.

ARRIVAL ADVICE: The arrival notice to be sent to KOSA Haeju giving all particulars same as Nampo, first contact via Haeju Coast Radio Station, call sign HMJ, to be made 48 hours before arrival. Earlier contacts via Shanghai Radio.

RADIO: Haeju Radio, call sign HMJ.

BERTH: Old berth described in China Sea Pilot, Vol. III, page 540. Extension works in progress. Shore cranes. Depth at low water about 6.8 m.

EXPORTS: Zinc concentrates, cement from the new factory connected with Port by conveyor belt.

FRESH WATER: From hydrant alongside, at anchor by barge (dredger).

FUEL: In restricted quantities, price unknown.

SERVICES: Provisions and Laundry, available through Seamen's Club.

AUTHORITY: Port Master and Harbour Master.

HEUNGNAM (Hungnam): 39.50 N. 127.45 E. (See Plan)

SHIPMASTER'S REPORT: November 1983.

PILOTAGE: The Pilot Station is at Lat. 39° 44.8' N. and Long. 127° 41.0' E. When arriving at this position and no Pilot is available, vessels are ordered to anchor. Ships are also ordered to navigate at least 12 miles off the coast.

ANCHORAGE: The anchorage is secure and safe with a depth of water of at least 36 ft., however soundings were unobtainable because of the sealing of all equipment.

If vessels arrive with a draft of over 25 ft., cargo is discharged into barges at anchor approximately 1 mile South of the breakwater.

The white light at the end of the breakwater can be seen at a distance of approximately 5 miles.

MAX. SIZE: The minimum depth in the harbour is 28 ft. and ships of up to 25 ft. draft are allowed alongside.

BERTHING: The length and direction of the quays etc. in the harbour are reasonably accurate as they were obtained using radar (See Plan).

The berths are used as explained on the plan. Also the two cranes at the Southern end of the Pier "D" are used for the export of bulk cement.

GARBAGE DISPOSAL: Service is available. One compulsory collection is required for each vessel. Charges vary with n.r.t., from 50 won to 300 won per collection.

WASTE OIL DISPOSAL: Service is available provided oil is in drums.

SEAMAN'S CLUBS: Hungnam Foreign Seamen's Club provides facilities such as shopping, football, other games, cinema and restaurant.

CURRENCY: Local currency is the Won. Exchange rate varies.

NAMPO (Chinnampo): 38.43 N. 125.25 E. (See Plan)

SHIPMASTER'S REPORT No. 1.

ARRIVAL ADVICE: The following information should be radioed to KNSA Nampo before arrival:

(1) ETA Nampo Station, Lat. 38° 37' 30" N., Long. 124° 49' 30" E.
(2) Nationality.
(3) Gross Registered Tonnage.
(4) Net Registered Tonnage.
(5) Deadweight.
(6) Length overall.
(7) Height of Freeboard.
(8) Speed.
(9) Last Port of Call.
(10) Colour of ship's hull.
(11) Number of crew and passengers.
(12) Hatch Loading/Discharging cargo Plan.
(13) Draft.
(14) Ship's position together with ETA 24 hours before arrival within area connected positions Lat. 37° 00' N., Long. 124° 30' E., Lat. 38° 08' N., Long. 123° 35' E., and Lat. 39° 50' N., Long. 124° 07' E. Also vessel should advise position and time passing above connected lines.

DOCUMENTS:

8 Crew Lists.
2 Vaccination Lists.
2 Lists showing currency, gold and valuables in possession of crew.
Bonded stores must be declared but not sealed.

PILOTAGE/ANCHORAGE: Pilot and Port Authorities (Quarantine Officer and Immigration Officers) board at position Lat. 38° 37' 30" N., Long. 124° 49' 30" E. where vessels should anchor awaiting Pilot.

Night pilotage prohibited, according to port regulations.

CLEARANCE: After embarkation of Port Authorities at Nampo Station the Radar, Echo sounder, VHF, DF, Radio Room and all optical equipment is sealed. On arrival in Port, Customs Officers board the vessel and together with Immigration Officers search the whole ship.

Seamen's Books required to be stamped with landing pass and they are taken ashore by Immigration Authorities for formalities.

RADIO: Nampo Radio. Call sign HML.

BERTHING: Coal berth can accommodate vessels up to 20,000 d.w.t. There are 2 conveyor belts for coal loading but 1 only can work at a time. Conveyor belts are not movable, the vessel has to shift. Vessels loaded and unloaded mostly in the roads by ship's gear. There are 3 other berths but have no information.

FRESH WATER: Only available by barge.

TIME: GMT plus 9 hours.

SHORE LEAVE: Seamen allowed to go ashore by boat or bus only. Seamen are not allowed to leave harbour area. In order to visit other vessels in port, application should be made to Immigration Authorities.

GENERAL: *Currency:* It is prohibited to take Korean currency out of the country.

Bathing: Prohibited.

Fishing: Prohibited.

Provisions: Limited quantities available at the Seamen's Club.

SHIPMASTER'S REPORT No. 2.

Information covering Nampo, Democratic People's Republic of Korea, previously known as Chinnampo. See in connection with this B.A. Chart 1257 and 1656, China Sea Pilot III.

The following general information was produced by the navigating officers of a vessel in 1974.

NAVIGATIONAL INFORMATION: Pilot boarding point Lat. 38° 37' 5" N., Long. 124° 49' 5" E. Wreck at Lat. 37° 38' 2" N., Long. 124° 48' 2" E., 3 masts above water at all states of tide. Radar echo good at 6 miles. Buoy – old position Lat. 37° 37' 4" N., Long. 124° 51' 4" E., moved to Lat. 37° 37' 2" N., Long. 124° 50' 7" E.
Light Sei To – flash every 23 sec. Visible for 8 miles
Light buoy at Lat. 37° 37' 4" N., Long. 124° 53' 6" E., flashes 18 sec.
Light Shimai To flashes 18 sec.
Light San extinguished
Light Chiri extinguished
Light Hi To extinguished
Light at Lat. 38° 41' 7" N., Long. 125° 18' 1" E., (Bachishin) flashes 30 sec.
Light at Nanryoki extinguished
Light at Lat. 38° 43' 3" N., Long. 125° 24' 6" E., extinguished.

PILOTAGE, ANCHORAGES, INSPECTION AND CLEARANCE: The Pilot boarding point is at the same time the outer limit of Nampo Harbour and the clearing inwards point. To await Pilot and further instructions before proceeding into Nampo, vessels must wait here. Information can be obtained via coastal radio Nampo (details in Nautical Wireless Service Standing Instructions), VHF is not available.

The anchorage at the pilotage waiting point is good, and the bottom is a thin layer of grey mud with clay underneath it. With wind from the S.W., there is a slight swell. Depth of water between 25 m. and 26 m., vessels should anchor with a chain length of at least 100 m. on the capstan and calculate adequate room for swinging, since there is a very strong tidal flow at all states of the wind and weather, running up to 4 knots according to our observations.

The Pilot comes on board with clearance authorities. As pilot cutter (also no VHF) a normal tug is used, which in Winter is also used as an ice-breaker. The tug does not display a Pilot's flag, only the national flag. The hull of the tug is black, superstructure white with large Korean characters on the front of the bridge. Pilotage only available during daylight hours.

At clearance inwards point (pilotage boarding point) all binoculars, including bridge binoculars, and photographic equipment is gathered together and sealed for the total time in port. It is only released after the Pilot leaves the vessel on departure from the port. Likewise all echo-sounding, radar, direction finding equipment is sealed. The use of such equipment and filming and photography in Democratic People's Republic of Korea is completely forbidden.

From the clearance inwards point the journey to the anchorage in front of the town is usually at full speed for most of the way. The anchorage is selected by the Pilot. The Pilot gives a good impression and from our observations knows his job well. However, one can only expect very rudimentary English from him. The same applies to the clearance authorities who have only a very few words of English. Clearance proceeds slowly but is carried out very correctly.

GENERAL INFORMATION: When at anchor in front of the town, further official authorities come on board. These check the whole ship, and go through the deck and engine room areas accompanied by one chosen member of the crew. Whilst the ship is being examined, all other crew members must remain in their cabins. The crew member accompanying the authorities must have his Seaman's Book with him as identification. When the authorities leave the ship finally they take the log away, and bring it back after a few days. Going ashore is permitted, but normally only in the port area. There is a seaman's hostel there. Travel further inland is possible, but only by giving 24 hours prior notice to Immigration via the ship's Agent. Also from time to time it is possible for crew members to fly out, but this must be arranged via the state shipping Agent. Visits to other ships is also possible, but only by giving 24 hours prior notice to Immigration. Radios and cassette recorders may not be taken on land or even on deck. Their use is only permitted within the ship and cabins. Fresh water and fresh food are available. In the roads, water is delivered by water boats. Removal of rubbish is also possible by due notice through the Agent, and is even possible at the anchorage. Boat manoeuvring can likewise take place, but it must be reported, and may only take place in the vicinity of one's own ship.

For clearance inwards, the following documents are required:
7 Crew Lists.
1 List of Items in Possession of Crew divided into gold, valuables, money, signature.
1 Vaccination List.
1 Maritime Declaration of Health.
1 Passenger List, even if none on board.
1 Narcotics List.
1 List of Tobacco and Personal Goods.

The authorities bring a list of provisions with them and fill it out after declaration on board. Stores, such as alcohol and cigarettes are not sealed.

The Health Authorities place greatest score by cleanliness of toilets, refrigerators, food stores, kitchens, pantries, hospital and first-aid station.

Generally, it may be stated that the ship's broker and Agent speak and understand good English, but from the authorities normally one can expect no knowledge of Western languages.

The port roads offer anchorages for at least 15 sea-going vessels and enough room for swinging. However, in each case at least 170 m. chain should be allowed so that the vessel lies securely. The tidal current, in accordance with our observations, runs at a good 4 knots. The anchorage bottom is good and comprises grey mud. The depths of water shown in the charts are, in accordance with our observations, roughly correct.

To the West of the port on the town shore there is a large shipyard with a mobile gantry crane over a slipway under construction. The slipway is about 150 m. long. Normally, the crane is at night directly on the bank (high water mark) and is illuminated and thus constitutes a good bearing, particularly at night, since otherwise no long-range port lights are available.

Position of the crane is about Lat. 34° 43' 2" N., Long. 125° 24' 1" E. This area where the shipyard is located is designated as "Iron works" in Chart 1656, map of Chinnampo Ko. The waterside there no longer has an inlet, but has been straightened out, and building work is still in progress. See "Plan Section" of "Guide".

Likewise building works are in progress along the whole shore line between the shipyard and Nampo Ki. The shore line is also straightened here, and to all appearances has been developed as anchorage and repair yard for the Korean Navy. The 2 red/black buoys to the South of the iron works in the chart are no longer there. In this area there is only a small fixed buoy for guard boats and fishing craft.

In the middle of Shienshin Island there is a 9-storey white hotel, which is a good landmark by day.

The tidal pole in front of Nampo Ki is no longer available. On the Southern end Nampo Ki is a bunker with a small house on top. The lower part of the house is pink and the upper part white. The West pier of Hibatsu To has 5 mobile port cranes, with lifting capacity up to 5 tons. At the Southern end of the pier are 2 new large warehouses. A floating crane is available with a capacity of about 160 tons. On the Western pier is likewise a small warehouse and 2 mobile port cranes (up to 5 tons). At the Southern end of the Western pier, are two berths for deep sea freighters with a good 9 m. water depth N.W. alongside. At the Southern part of the Western pier there is a good 8 m. of water along a length of some 210 m. At Berth 1 (West pier, Southern berth), vessels up to 32 ft. draft can go alongside in normal water conditions. The depth of water in the inner part of the port could not be exactly determined, but judging by the vessels there must be about 5 m.

The old coal pier has a berth with at least 10 m. depth of water. East of this pier is also a further coal pier, equipped also with conveyor belts and about 10 m. depth of water alongside.

For berthing and unberthing there are one large and three small tugs available. The large tug acts as pilot craft and for the authorities to visit for clearance. It has been previously described.

From our observations, in the inner roads loading and unloading rarely takes place. There are only a few lighters available. As the port is overloaded, a long waiting time must always be allowed for (at least 14 days).

Medical care for crew members here is somewhat difficult, since one tries with all means to avoid having to have the crew member transferred beyond the confines of the port. In this connection, the doctor comes only once on board and a decision is taken as to whether or not a visit to hospital is necessary. For such a hospital visit one has further to go through the Agent to the authorities to obtain permission to go beyond the port area.

Below are some soundings of the roads. The vessel's draft = 8.35 m. First bearing is Nampo Ki, second bearing is the pier light, fixed red, in front of the East pier:

Weather (Wind)	*Bearing*	*Time* (GMT)	*Measured depth, taking into consideration vessel's draft* (m.)
15° 8 knots	344°, 38°	2330	21.15
100° 8 knots	355°, 42°	0130	19.93
360° 5 knots	355°, 39°	0715	15.97
340° 5 knots	343°, 37°	0900	18.41
070° 9 knots	340.5°, 38.5°	2330	21.15
060° 5 knots	343°, 39.5°	0100	21.46
Circulating 5 knots	324°, 41°	0430	16.88
270° 13 knots	339°, 37°	0000	21.46
300° 20 knots	357°, 40.5°	0300	19.93
290° 10 knots	345°, 40°	0840	18.43
Circulating 5 knots	360°, 45°	0640	16.58

The pier structures have shuttering walls at the bottom, and the upper part is composed of equal-shaped stone blocks. At the mooring points fenders are composed of car tyres strung together on wires. The pier itself is in a satisfactory condition. Rail connection is available, and lorries may run along it. Water connections are also available. As the two cranes on pier Berth No. 1 have very large beams, they are often positioned between two hatches and then work the two hatches alternately.

Loading and unloading is made difficult since it is not possible to obtain precise information as to the number of gangs, the time they will turn up for work, whether they will work with their own equipment or with cranes or with the mobile cranes available. It continually happens that suddenly port workers will appear or disappear, although shortly beforehand the Agent will inform to the contrary.

Telephone connections with Europe are possible. Connections can be obtained at the Seaman's Club in the port after 1600 hrs. On average it takes an hour to get through. It is advisable always to try to get a line to Moscow, and then ask for the required connection oneself in English from the Moscow operator. This noticeably hastens the connection. Comprehension is at times very bad, calculation of charges is dreadful, and one must be prepared to pay three or four times the price as would appertain for a similar call in Europe.

The local currency is the Won. U.S.$ 1.00 = approx. 2.15 Won. In the Seaman's Club all customary Western currencies can be changed into Wons.

Loading rigging can be positioned from the ship. If for example this has to be done at night, it must be discussed in advance with the Agent as to whether this has to be done by the ship or the port personnel. If the rigging is done by the port personnel, it must be checked carefully.

Clearance outwards occurs in the harbour roads and not at the pier. It takes a good 3 to 4 hours. Here also, all crew members must be in their cabins for checking purposes, and if the authorities require it, personnel must be available to guide them around the ship. On leaving the port, yet another list must be presented of currency which each crew member has spent in Korea.

They are only interested in foreign currency which has been exchanged for Wons in the Seaman's Club, since Wons may not be exported.

On the journey out from the port, the Pilot is accompanied by an assistant and member of the coastguard. The latter, shortly after coming on board, removes all seals from apparatus sealed when coming into port. The Pilot leaves the vessel at a position Lat. 38° 35' 5" N. and Long. 124° 55' 5" E.

Herewith some soundings, taking into consideration draft of vessel. First bearing – pier light East side Hibatsu To – fixed red. Second bearing chimney at Lat. 38° 44' 1" N. and Long. 125° 25' 9" E. (shown on the chart as Chy.)

GMT	*Weather*	*Bearing*	*Line sounding* (m.)
0030	Calm	338°	21.78
	1022 mb	43°	
0130	Calm	338°	
	1022	42°	24.79
0430	Changeable	335.5°	21.03
	1022	40°	
0530	250° 14 knots	312°	
	1022	38°	24.18

SHIPMASTER'S REPORT: No. 3

VHF: Agent "KOSA" can be contacted on Channel 16. Generally port (Pilot, etc.) do not communicate with the ship directly. All communications (VHF) to be done through "KOSA". General watch keeping time (VHF) – 0900 hrs. to 1030 hrs.; 1200 hrs. to 1300 hrs.; 1400 hrs. to 1630 hrs.; 1900 hrs to 2100 hrs. and 2330 hrs. to 0030 hrs.

FRESH WATER: Also available from shore connections alongside in Berths No. 1 and No. 2.

SURVEYORS: State surveyors of D.P.R.K. (Democratic People's Republic of Korea) available. Survey fees about U.S.$1,900.00 per visit.

REPAIRS: Facilities available.

New Dry Dock: is in operation which can handle ships over 180 m. in length. *Shipyard* builds ships (2 – 3 ships at a time) of moderate size (about 10,000 d.w.t.).

Dry Dock/Shipyard Workshop undertake ships repair. They have boat fully equipped with diving equipment and diver.

Factory Engineer/Technician (Electronic) undertake Radar/Echo-sounder/VHF repairs.

GENERAL:

Marine Note of Protest: No Notary Public or Court of Law. Masters wishing to lodge a "Note of Protest" can write to the Harbour Master who will endorse his (Master's) letter.

People strongly object calling their country "North Korea", it is to be called Democratic People's Republic of Korea.

Fresh Provisions: Fresh provisions also available through the ship chandlers (owned/controlled by the Government). It is advisable to take stores through the seaman's club, where quality can be checked before the provisions supplied on board.

SHIPMASTER'S REPORT: No. 4. May 1986.

Korean Regulations require foreign vessels to stay 15 miles off coast until abreast of port and we were tracked from 37° 00' N., Northwards to ensure that we did so. As well as ETAs at 5 days, 24 hours, 12 hours and 4 hours before arrival at Pilot Station, vessel required to report position and speed 24 hours before and on crossing Lat. 37° North.

Approached Sei To Island on course 075° on flood tide with very strong Northerly set and carrying 15° for set to clear shoals to the North. Passed Sei To at 1.1 miles and 7 cables North of Hoko To then course 050° between red can buoy marking Southern end of Chu Shu or Naka Su and black conical buoy marking Northern limit of Kashi or Shimo Su, then 055° to Pilot Station No. 1 and waiting anchorage North of Shimai To. Neither of the above buoys appeared to have lights and were poor radar targets, so approach at night not advisable.

Instructed by cable from Agents (KOSA) to anchor at No. 1 Pilot Station to await Pilot, who arrived unexpectedly after only 2 hours at anchor. We could hear Agents KOSA on VHF Channel 16 but they did not answer.

2 Pilots, 2 Immigration Officials and Port Health boarded from tug which came out from Shimai To. Clearance to enter procedure carried out here which included placing all cameras and binoculars in radio room and sealing the door, took about one hour. The 2 Immigration Officials stayed onboard for passage up river. Echo-sounder sealed but not radars.

Channel to locks at Hito Suido passes close Northwards of Shimai To, 067° through No. 2 Pilot Station and waiting area to 8 cables N.N.W. of San To, thence straight course to locks.

The damming of the river and the river sealed off from the sea was completed in April 1986. The old main channel (Hito Suido) South of Hi To Island closed with sluices and three locks. Two for large ships in way of the old deep water channel, of which the largest is 270 m.×36 m. and a small lock for fishing vessels close to the Southern shore. The 2 main locks are side by side with a large control tower and large swing bridge on the centre dividing islands, which is extended East and West by 100 m. long leading jetties on piles. Leading jetties have vertical wood fendering against piles and locks have floating wood fenders for full length, both sides. One tug available to assist large ships to enter lock.

East of locks, channel close to South bank to avoid shallow patch in mid-river for first 3 miles, after which appears to be plenty of water for virtually full width, expect changes in the future though, with silt washing down river which cannot pass dam.

We went straight on to berth and the rest of the entry procedure which took 2 hours carried out, normally this is done at anchor before berthing. Papers required were as previous Master's Reports in 'Guide to Port Entry'. All Cholera vaccinations must be valid and all foreign currency must be declared. Before sailing a list is required of all foreign currency changed, which is readily possible at the Seaman's Club, all Hotels and most of the shops in Nampo amd Pyongyang.

Officials searched ship thoroughly on arrival. They require 4 Officers/men to accompany searches, with their passports, and all other personnel have to be in their cabins. Even deck stores and engine room searched. The same procedure takes place before sailing, but this time they are looking for stowaways and Korean currency which it is illegal to take out of the country.

Shore leave for ship's crew is only allowed between 0700 hrs. and 2300 hrs. local time daily and only inside port area, which includes Seaman's Club. Even for this, shore passes and passports must be taken, which are checked by guard at foot of gangway, on and off. Special permission has to be obtained for visits to Nampo City or the capital Pyongyang. This is readily given, though always accompanied by an official guide from either the agency or the Seaman's Club. We were allowed cameras out of seal for a guided tour of Pyongyang, but they were returned under seal, immediately on return to the ship.

Taking of soundings with hand lead, making drawings or sketches of anything in port area, visiting other ships, taking radios or tape recorders on deck and taking anything ashore without declaring to Customs are all strictly forbidden.

Garbage is collected from ship every 3 days, which service has to be paid for (about 300 Won each time). All garbage must be kept in closed bins, and nothing must be thrown overside.

Very keen on rat guards and net under gangway.

Fresh water readily available by barge, in 90 tonne quantities. Seemed to be of good quality though quite expensive (4 Won per tonne).

The Seaman's Club provides chandlery and laundry services. Good fresh vegetables available.

Rate of exchange (May 1986) 2.2 Won to U.S. Dollar and 3.4 Won to Pound Sterling.

Bulk handling berth consisted of three large concrete dolphins on steel pillars and joined by steel girders, on which tracks for bulk handling equipment run. Connected to shore by narrow walkway only. Total length of berth about 150 m. so stern was overhanging.

Berth equipped to discharge grain and to load bulk cement (cement being the largest export from the port).

Cargo of bulk wheat was discharged by three methods:-

(1) By vertical belt lift to conveyor belt, thence to silo.
(2) By ship's grabs via hopper to conveyor belt, thence to silo.
(3) By ship's grabs to barges overside.

The majority of cargo being discharged by the latter two methods as, though the vertical lift belt was the fastest when working, it was continually breaking down. Also best work done at night as there was frequently a shortage of shore electrical power during the day.

Draft survey carried out to confirm quantity discharged and surveyor signed a statement to the effect that full B/L quantity discharged. Vessel not given clearance to sail until this had been done.

Although nearly everyone from the agency (KOSA) spoke good English, there was nobody from stevedores who did and consequently ship's personnel had very little control over which hatches were worked and when.

Agents: Korea Ocean Shipping Agency (KOSA) very attentive and said to have 24 hour Channel 16 VHF watch in their office, though this was not put to the test outside normal working hours. Requests for everything has to be by written application, i.e. money, fresh water, repair firm, etc.

SHIPMASTER'S REPORT: No. 5. August 1986.

ARRIVAL: *Pre-arrival notices:*

The state Agent, Korea Ocean Shipping Agencies, cable address "KOSA" will send by cable, instructions regarding reporting position at sea before arrival. In our case we had to send position 24 hours, 12 hours and 4 hours before arrival at Pilot Station together with course and speed.

The position is also to be sent when crossing a line joining the following positions:

Lat. 40° 00' N., Long. 123° 20' E.
Lat. 37° 00' N., Long. 123° 20' E.
Lat. 37° 00' N., Long. 126° 30' E.

The coast must be kept at a distance of 15 miles until the approach to the Island of Sei To (Lat. 38° 33' N., Long. 124° 46' E.)

Note: North of Lat. 37° 00' N., the ships are challenged by Korean Navy vessels either by VHF or Morse Lamp. They request ship's name, nationality, cargo on board, destination, port of origin. Sometimes they approach close to vessel (3 – 4 cables) to check the name with powerful projector.

PILOTAGE/APPROACHES: *Pilot boarding anchorage:*

After passing Sei To Island the ship proceeds to the pilot waiting anchorage bounded by the following positions:

A. Lat. 38° 41' 24" N., Long. 124° 59' 12" E.
B. Lat. 38° 41' 54" N., Long. 124° 58' 06" E.
C. Lat. 38° 43' 06" N., Long. 125° 00' 24" E.
D. Lat. 38° 42' 06" N., Long. 125° 01' 36" E.

The tide is very strong but the holding ground is good, pay out sufficient chain to avoid dragging.

Approaches: The red buoy on the SW end of Naka Su Shoal, to be left on the port side when entering, is in position 37° 36' 51" N., 124° 50' 42" E. (7 cables S.W. of charted position).

The black buoy, starboard hand, 2 miles N.E., is 3 cables W.S.W. of the charted position.

The black buoy 1 mile N.E. of Shimai To Lighthouse has been changed to red and is in position (A) of the waiting anchorage (38° 41.4' N., 124° 59.2' E.).

LOCKS: A dam has been erected across the river from a position (approx) 38° 43.4' N., 125° 14' E. in a SW direction to the '5 1/4' wreck East of Hi To Island, then in a 263° direction to the Datum Rock (38° 40.8' N., 125° 11' E.) The area between Datum Rock and Hi To Island has been reclaimed and a large esplanade built.

Another dam with gates join Hi To Island to the mainland in a SSW direction (198°). 3 locks have been built on the SSW part:

Lock No. 1: The SSW most, is used for barges.

Lock No. 2: In the centre, is for large vessels up to 50,000 d.w.t., the dimensions are 275 m.×36 m. A training wall extends on both ends of the lock on the Northern part. The walls of the training wall are protected with wooden fenders, the lock has floating wooden fenders.

Lock No. 3: The Northernmost is for medium size ships, the dimensions are length 225 m. and beam 26 m. 2 ships can be accommodated at the same time.

Note: The lack of co-ordination between the Lock Master and Authorities operating the gates of the dam is frightening, when the gates are opened a very strong current sets across the Western part of the lock and it is impossible to leave the lock as the ship is pushed toward the shallow water still existing just outside the lock. Small craft may try to enter the lock when the gate is opened.

A road and railway line on the dam and lock system through a swinging bridge.

2 tugs are available to assist large vessels to enter the lock.

We entered the lock in loaded condition with a draft of 10.00 m. without any difficulties. Our vessel is 37,500 d.w.t.

The locks have been operating since April and the Pilots do not have much experience.

A very tall monument stands on Hi To Island.

PORT: See "Plan". Since the building of the dam there is no tide in the port and the current is negligible.

Salinity is lowering. At the time of our stay it varied from 1009 to 1005, it is said that in future it will be completely fresh water.

5 new berths have been built over the last 5/6 years in addition to Berth No. 1 and No. 2 in Hibatsu To.

Berth No. 3 extends in a Northeasterly direction for 220 m. from the light in position 38° 43' N., 125° 24.6' E. There is about 11 m. depth alongside the berth 2 cranes of 5 tons are available.

Berth Nos. 4 and 5 are inside a basin just North of Berth No. 3 and are used by barges.

Berth No. 6 (NE of Berth No. 3) is formed by 3 large platforms is equipped with 2 discharges and one loader for grain. There are minimum depths of 11.5 m. on the inside part of this berth (where we discharged most of the cargo).

Berth No. 7 (Eastward of Berth No. 6) is about 340 m. long. Berth No. 7 has minimum depth of 6.0 m. at the Eastern part and is used for general cargo. It also has a fixed hopper connected by belt to a silo. The berth is equipped with 2 cranes of about 5 tons capacity.

Berth No. 8 is equipped with 3 special loaders for cement in bags. It probably has a minimum depth of 11 m. as we have seen vessels loading up to a draft of 10 m.

Berth No. 9 (further Northeastward) is a loading berth for coal and is about 180 m. in length with depth of more than 12 m.

One loader runs on the pier for loading of coal in bulk.

Note: Cranes and equipment for handling grain are locally built and subject to frequent breakdowns. Safety guidelines are absolutely ignored by the stevedores who use wires and equipment of poor quality.

Electric cable connections are exposed to the weather.

Regulations: Port Regulations must be strictly followed and ships are subject to heavy fines for non observance of the regulations. Pollution is strictly prohibited. In future the discharge of sewage into the water will be prohibited.

General: There is another berth further upriver to discharge iron ore at a steel factory but details are not known.

The Agent KOSA has a VHF radio operating day and night.

Binoculars, ship's radio station and echo sounder are sealed at waiting anchorage, Radars are left open for operation.

SHIPMASTER'S REPORT: No. 6. December 1986.

Vessel called at Nampo with a cargo of bulk wheat from India (about 22,400 tonnes).

1. The Nampo pilot ground has been established in an area enclosed by the positions:

(a)	Lat. 38° 41' 24" N.	Long. 124° 59' 12" E.
(b)	Lat. 38° 41' 54" N.	Long. 124° 58' 06" E.
(c)	Lat. 38° 43' 06" N.	Long. 125° 00' 24" E.
(d)	Lat. 38° 42' 36" N.	Long. 125° 01' 36" E.

2. The binoculars are put away under seal, also the use of transmitters and echo sounders beyond the lock gate is forbidden.

3. Vessel berthed at Berth No. 6, and the Pilot informed me that a 10 m. fresh water draft is safe.

4. Berth No. 6 is a mechanised berth serviced by 2 conveyor belts and claims of a discharge rate of 3,000 tonnes per day. There are, however, breakdowns and we managed about 1,000 tonnes per day with a high of 1,400 tonnes per day. A silo receives the wheat and has a capacity of 20,000 tonnes. Berth No. 6 is also the loading berth for bulk cement, serviced by one loader. Supposedly a load rate of 3,500 tonnes per day can be achieved. The storage facility for the bulk cement is a silo of 60,000 tonnes capacity.

5. Galley garbage is cleared every 3 days. The Harbour Authorities are strict and among other things are very particular about rat guards being in position and the satisfactory operation of sewerage treatment plants.

6. The Agents are co-operative and helpful, and going by earlier Masters' reports, I think there is vast improvement in telex and telephone facilities.

7. Agent's cable address: Kosa Nampo.

SHIPMASTER'S REPORT: No. 7. January 1992.

This information is to be read in conjunction with Guide to Port Entry, B.A.Chart No. 1257, China Sea Pilot Vol. 111 and Radio Signals Vol. 6, Part 2. This report gives the differences with information from above mentioned publications only.

DOCUMENTS: On arrival:

Declaration of total foreign currency on board, including crew member's currency.

List of radios on board (separate tuners and tape recorders).

If tuner and tape recorder is one set, show as tape recorder.

On departure:

Declaration of total foreign currency spent in the port.

RADIO: Telex No. 24051 (was advised by charterers) operated well, but Agent uses telex for receiving information only. Instructions were sent by Agent via Nampo Coast Radio (call sign – HML, frequency MW – 500, SW – 8736, 24 hours duty). This station replies in case of need to send Agent's instructions to vessel only.

VHF Channels 16 and 11 are used by KOSA. Communications with other parties via Agent only.

Use of SATCOM telephone is strongly prohibited in the port. In case of need, a 24 hour advance application is required via Agent to Immigration.

PILOTAGE: Pilot and Port Authorities board at Waiting Area No. 1 for foreign vessels, where ships have to drop the anchor as instructed by Agent. Sea and port pilots are experienced.

APPROACHES/ANCHORAGES: Vessel was instructed by Agent to navigate 12 miles off the coast of D.P.R.Korea. Waiting Area No. 1 for foreign vessels is indicated on B.A.Chart correctly. All buoys indicated on this chart in approaches and inside the river are missing. Electronic chart for Norcontrol Data Bridge 7 was used in approaches as prepared in good time. In this case, there were no difficulties with approaches. Awaiting Area No. 1 for foreign vessels, as an anchorage, is dangerous for ships in light condition, when N.W. wind increases to gale force or more. In case of a bad forecast, it is recommended to leave this anchorage.

LOCKS: Both times (on arrival and departure), vessel used Lock No. 3 (the biggest). Most wooden fenders are missing. There are small rubber fenders with wire ropes on the lock's walls. In loaded condition, vessel's freeboard was 4.5 m. All of these fenders were above ship's main deck when the lock was opened.

One tug with capacity 1,000 h.p. is available to assist the ship to enter the lock.

Locks' regulations: Vessel can pass through the lock if the wind is less than 7 m./sec., and waves less than 0.5 m., especially with swell from the West. Locks operated in daytime only.

TUGS: There are three old tugs in the port with 1,000 h.p. Usually pilots use these tugs for pushing only.

GENERAL:

(1) Radio-room, binoculars, navigation and photo equipment were not sealed.

(2) Discharging of sea water ballast and sewage is strictly prohibited after passing the lock. It is recommended to discuss this matter with Agent in good time, especially for ships which call at Nampo for loading.

(3) It is recommended to avoid mooring between sunset and sunrise, due to the fact that electric lights are missing in the port and very often on the berths.

(4) It is necessary to declare all audio equipment/radio tuners and tape recorders twice: First time, during Clearance inward procedure, which is carried out at Awaiting Area No. 1; and second time, on arrival at the port.
The local form for radio equipment has to be filled in very carefully. It is compulsory to declare all broken audio equipment, including those inside the store rooms, in order to avoid the fines from Immigration. Master signs this form before Officials search ship thoroughly. During this inspection, Immigration Officer counts all audio equipment.

(5) On arrival, the Quarantine Officer demanded the Certificates of Cholera Vaccination for all crew members, but after long "discussions" this demand was cancelled.

(6) The visit to the Seamen's Club is not restricted from 0900 hrs. to 2300 hrs., but is 24 hours a day. Application to Immigration via Agent is required for visit the town. The visit to another vessel in port is possible if vessel is same flag only.

(7) Large amounts of cigarettes were given out by Master as presents to representatives of local Authority.

(8) The permission to enter Government Waters was legalised by Protecting Agent, and number and date of issuance were advised by charterers.

(9) The vessel loaded coal. Average rate of loading is about 4,000 tonnes per day. As usual, cargo was collected in daytime and vessel was loaded in the night. The reason for this is lack of electricity in the port most part of time. The ship was shifted along the berth for loading Holds No. 1 and 2. The stowage factor of coal is around 36 cu.ft./ton. The trimming of cargo inside the holds is carried out by trough only.

SENBONG: 42.20 N. 130.24 E.

SHIPMASTER'S REPORT: March 1987.

DOCUMENTS:

8 copies Crew Lists (One additional copy required for each application for shore leave and an additional 2 copies on vessel's departure).
4 copies Vaccination List.
2 copies International Maritime Declaration of Health.
2 copies Crew Declaration.
2 copies List of Valuables and Currency.
1 copy Bills of Lading.

To be presented on arrival:

Vegetable form indicating quantities and country of origin.
Cameras and binoculars form.
Local health form.

PILOTAGE: Compulsory for foreign ships. There is no VHF response prior to arrival at Pilot Station. Pilot boards from tug.

ANCHORAGE: Bounded by following points:

(a) 42° 17' 00" N. 130° 26' 30" E.	(c) 42° 17' 00" N. 130° 19' 00" E.
(b) 42° 15' 30" N. 130° 26' 30" E.	(d) 42° 15' 30" N. 130° 29' 00" E.

Pilot and Health Officer board in this area.

RESTRICTIONS: VLCC movements only carried out at night and during poor weather conditions with the Harbour Master's permission.

HEALTH: No Radio Pratique. Doctor boards with Pilot and Immigration Officers. All vaccination certificates checked for validity, any expired inoculations given. For hygienic reasons, ship supplied disposable hypodermics. If any crew joined vessel within preceding month, all personnel to have temperature taken by Doctor.

RADIO: Call Radio Station HMR (Ragin) on 500 kHz between 0800 hrs. and 2400 hrs. (local time). When out of range, messages sent via VPS Hong Kong.

Arrival Advice: All communications for Port and Pilots to be sent via Agents (36 hour, 24 hour and 12 hour messages). Initial message to include present position, speed, DWT, GRT, NRT, LOA, Breadth, number of crew and confirm Democratic People's Republic of Korea flag on board. After initial report, send position reports every 4 hours.

VHF: We were informed after arrival that VHF contact is possible, but local operators only respond to Russian and Korean languages. We made very brief contact with Pilot when tug 0.5 miles off.

TUGS: 1 × 1,000 h.p. and 2 × 800 h.p. tugs available. Aft tug makes fast using ship's line, which should be of the floating type. One tug is used to keep buoy mooring lines coiled on deck.

BERTHING: S.P.M. located in approximate position 42° 18.3' N., 130° 25.5' E. and shows LF.2R.12s. There is an inner harbour for smaller vessels bunkering, size not known.

MEDICAL: Hospital and dental facilities available at Rajin. 24 hours notice required for Immigration.

TANKERS: S.P.M. has 1 × 16 in. hose string which is connected and disconnected by shore personnel. Maximum back pressure allowed at ship's rail is 9 kg. Loading rate averaged 1,300 t.p.h. Shore tanks of 20,000 tons capacity are located approximately 7 km. from the buoy. *Moorings:* Two buoy ropes of 130 mm. diameter are made fast on bitts. Ship lowers 2 mooring ropes with lashings and messengers to small line boat which then passes them to a tug near buoy.

DENSITY: 1025.

FUEL: I believe fuel is available to vessels using the port if advance notice given. There is an inner harbour draft restriction of 7.50 m. Barges not available.

FIRE PRECAUTIONS: Minimal, vessel carried out own checks.

CUSTOMS ALLOWANCE: 200 cigarettes, 1 bottle of spirits, no limit for beer. Bonded store not sealed.

TIME: GMT plus 9 hours.

STORING: Small amounts of fresh produce are available, depending on time of year. Payment in cash (U.S. Dollars) is preferred.

SHORE LEAVE: Application to be made to Immigration 24 hours in advance. Crew only allowed to visit Seamen's Club in Rajin. Bus takes crew from jetty to Club where crew must remain until return journey. Shore pass and Seaman's Book to be carried at all times. These are checked by Immigration on the ship and on jetty outward and on return.

GENERAL: The initial Quarantine and Immigration inspection takes two hours, therefore it is advisable to anchor.

Immigration Officials seal radio, cameras, binoculars and distress rockets. They also require radars and depth recorder to be sealed but were persuaded to leave this until vessel berthed for safety purposes.

Once berthed, Customs, Agent, Harbour Master, Receivers, S.P.M. Operators and Interpreter board, at which time there is a second Immigration and Customs inspection of whole ship.

Accommodation required for 11 persons and meals for 15 persons. Officials come and go daily.

Prior to departure there is a Customs and Immigration inspection. Once completed, Harbour Master issues Clearance Certificate.

Two Immigration Officials remain onboard until vessel drops Pilots in Quarantine Area.

Pilot remains on bridge throughout discharge and controls the tug which is secured at the stern to keep the vessel off the S.P.M.

Chart: BA. Chart No. 2431 (Unggi).

Agents: Korea Shipping Agency, Rajin Branch. Cables: "KOSA RAJIN". Telex: 6204 RJKP. Telex manned during office hours only.

NOTES

Please also advise Shipping Guides Ltd.

Republic of Korea

GENERAL:

FOREIGN FLAGS: Ministry of Transportation issued following instructions regarding entry and exit of foreign flag vessels in Republic of Korea waters.

Item 1: Director, local Marine Bureau shall not grant permission for entry of foreign flag vessels under ownership of North Korea, Vietnam and China.

Item 2: Director, local Marine Bureau shall not grant permission for entry of foreign flag vessel bound for North Korea or falling short of 90 days of departure from ports of North Korea.

Item 3: No restriction shall be applied for entry of foreign flag vessels unless same appertained to above clauses in accordance with internationally accepted practices.

ETA: The following requirements apply to vessels carrying dangerous cargoes, deep draft vessels and vessels and their tows exceeding 200 m. in length. Such vessels should inform the District Maritime and Port Authority, 12 hours in advance, of their name, tonnage and estimated time of entry into the designated area of the following ports: Yosu, Pusan and Ulsan.

HEALTH: Radio Pratique is available at Inchon, Busan, Yosu, Ulsan, Pohang, Masan, Mokpo, Gunsan, Chungmu, Tonghae and Cheju.

Masters are required by the Ministry of Health and Social Affairs to include in a telegram requesting Radio Pratique the following information in the order shown:

1. Notice in accordance with Art. 22 (RPM).
2. Name and nationality of vessel.
3. Number of sanitary certificate.
4. Date and place of departure.
5. All ports of call with dates.
6. Name of entry port and ETA (Korean time).
7. Name of issuing authority, date and validity of fumigation certificate.
8. Number of crew and passengers on board.
9. Any transhipment of crew or cargo within 7 days prior to arrival.
10. Name of any patient on board ill within 7 days of arrival and symptoms.
11. Any death on board within 7 days of arrival.
12. Discovery of infected rats, dead or alive.
13. Infection of cargo by quarantinable disease.
14. Any crew or passengers without valid WHO inoculation certificates.
15. Availability of doctor on board.
16. Name of Master.

TIME: GMT plus 9 hours all year round.

BUSAN (Pusan): 35.07 N. 129.02 E.

DOCUMENTS:

9 Cargo Manifests.
3 Transit Cargo Manifests.
8 Crew Lists.
8 Passenger Lists.
4 Passenger Baggage Lists.
4 Mail Lists (forms supplied by Agent).
5 Parcels Lists (forms supplied by Agent).
2 Arms-Narcotics Lists.
2 Tobacco Lists.
4 Currency Lists.
4 Stores Lists.
4 Crew Personal Effects Lists.

Immigration: All Seamen's Books examined and shore passes made out. These passes to be carried at all times when ashore.

Shipmaster's Report: November 1988.

3 copies Transit Cargo Manifest.
8 copies Crew List (Customs).
10 copies Crew List (Immigration).
8 copies Passenger List, (if any).
2 copies Arms/Narcotic List.
2 copies Currency List.
2 copies Stores List.
2 copies Crew Personal Effects List.
2 copies Ports of Call List.

Quarantine:

1 copy Maritime Declaration of Health.
1 copy Vaccination List.

Immigration: Keep record of times of departure and returning to the ship of all crew members for handing over to Immigration.

PILOTAGE: Professional Pilot service is available at Busan and contact can be made by telephone No. 44-1651. Necessary for arriving vessel to notify Pilots of arrival 24 hours in advance. VHF unavailable. Formal address is: 15 4-Ka, Jung Yang-Dong, Jung-Ku, Busan, Korea. Blast signal from vessel used to call Pilots. Pilot boarding position Lat. 35° 04.25' N., Long. 129° 07.17' E.

Pilotage is compulsory and available day and night. Pilot boards off the entrance to the outer harbour. Pilot boat is white launch with pilot signals. Tugs cannot be employed unless Pilot is on board.

ANCHORAGES:

Designation	*Depth*	*Capacity*
S-Anchorage	8-9 m.	4 vessels of 300-2,000 tons
E-Anchorage	11-12 m.	6 vessels of 8,000-12,000 tons

RESTRICTIONS: Vessel having called at Communist ports within 3 months of contemplated entry of Busan needs to obtain permission of authorities.

MAX. SIZE: Max. size 50,000 d.w.t. LOA 330 m. Max. draft 12.5 m.

HEALTH: Pratique granted to vessels anchored in a circular quarantine anchorage located in Outer Harbour. Quarantine Inspection can be arranged by day or night if sufficient advance notice given although regular hours are sunrise to sunset. Valid Cholera Certificates required. Inoculations against typhoid and typhus may be required depending on prevalent conditions.

Quarantine Anchorages:
(a) Lat. 35° 05.14' N., Long. 129° 07.34' E.
(b) Lat. 35° 04.78' N., Long. 129° 07.12' E.

RADIO: Busan Harbour Radio Station: call sign, "6MF".

Vessels to submit ETA to Busan Port and Maritime Authority 72 hours and 24 hours before vessel's arrival, message also to include name of Owner and Agent. 3 hours before arrival vessel must communicate with Busan Port Control.

Radio-Telegraphy: Calling 500 kHz (operating throughout 24 hours), working 520 kHz, 512 kHz.

Radio-Telephony: Calling 2183.4 (operating throughout 24 hours), working 1881.4 kHz, 2320 kHz.

VHF: Busan Harbour Control, calling on Channel 16, working Channel 12, 14, 20 and 22.

RADAR: A radar station is sited in the Harbour Office to assist vessels approaching the port in poor visibility.

TUGS: Tugs join an arriving vessel immediately inside the breakwater of Busan Harbour. Ship's own lines are used. Tugs can join large vessels outside the breakwater. 11 tugs, 1,000 h.p. – 3,200 h.p.

BERTHING: Normally in daylight only.

Pier	*Length of Quay* (m.)	*Depth of Water* (m.)	*Max. Size* (d.w.t.)
No. 1	407	8 – 9	8,000 7,000 500
No. 2	925	9 – 11	20,000 10,000 7,000 5,000 500
No. 3	1,145	9 – 11	10,000 8,000 5,000 3,000
No. 4	1,308	9 – 10	10,000 8,000 7,000 5,000 3,000 500
Central	646	9	8,000
No. 5			
(Container)	659	12.5	50,000
(Grain)	371	12.5	50,000
No. 6			
(Container)	603	12.5	50,000
No. 7			
(Coal)	127	10.5	6,000
(Scrap)	193	10.5	15,000
(Ore)	336	7.5 – 10.5	5,000
No. 8	535	10	15,000
	165	9	10,000
	130	7.5	5,000
	170	5	1,000
International	200	8.5	10,000
Passenger Terminal	120	7	3,000
			3,000
Coastal Terminal	575	6.5	1,000

CRANES: 80 cranes with capacity 10 tons – 100 tons. 4×20 t.p.h. cranes for scrap iron.

CONTAINER FACILITIES: 6×30.5 ton and 2×40.5 ton capacity gantry cranes at the container terminal (No. 5 and 6). 2×40.5 ton and 7×30.5 ton transtainers available. 354 reefer points available.

BULK HANDLING FACILITIES: Grain terminal located at Pier No. 5. Storage capacity 83,000 tonnes. 2×400 t.p.h. ship unloaders and 1×450 t.p.h. conveyor.

Coal handling facilities at Pier No. 7. 2×300 t.p.h. unloaders and 1×600 t.p.h. conveyor.

STEVEDORES: On basis using full gangs per day, the capacity is : 1,000 L/tons on general cargo.

MEDICAL: Service is available at short notice.

TANKERS: A T-head oil pier extends about 700 ft. on the S.E. side of the North Harbour. Least depth at pier head is 32 ft. Used by tankers servicing Korea Oil Corporation.

FRESH WATER: Available. Rate of water supply, 80 L/t.p.h. Supplied at pier, or by barge.

FUEL: Availability on Bunker "A", Bunker "C", LRFO, LO and diesel oil.

FIRE PRECAUTIONS: Port has separate anchorage for tankers. Port requests for compliance with regulation not to contaminate waters with inflammable substances, e.g. petroleum products. Tankers are prohibited to clean tanks in port.

CONSULS:

Consul, Republic of China	Tel: 23-3617
Consul, Japan	Tel: 43-9221

REPAIRS: All repairs can be effected.

DRY DOCKS:

Name of facility	g.r.t	*Capacity* d.w.t.	*Location*
Korea Ship Building Eng. Corp. No.1	3,000	6,000	Busan
Korea Ship Building Eng. Corp. No.2	20,000	60,000	Busan
Korea Ship Building Eng. Corp. No.3	80,000	150,000	Busan
Dae Sun Ship Building Corp.	2,000	4,000	Busan

GANGWAY/DECK WATCHMEN: This service is available.

OPENING/CLOSING HATCHES: Usually carried out by stevedores.

CERTIFICATES:

Derat Certificate or Exemption.

Inoculation and Vaccination Certificates for all crew members.

CUSTOMS ALLOWANCES: One carton cigarettes or 1 lb. of tobacco, and 1 bottle wine or spirits allowed, each man.

REPATRIATION: World wide connections are available from Busan via Seoul or Tokyo.

AIRPORT: Airport is at Kim Hey about 28 km. from Busan. Japan-bound plane takes off every 3rd day.

HOLIDAYS: 1st-3rd January; 1st March; 10th March; 5th April; 6th June; 17th July; 15th August; 3rd October; 9th October; 1st October; 24th December; Buddhist Birthday 8th April (by the Lunar Calender), Choo Sug (Thanksgiving Day), 15th August (by Lunar Calender).

POLICE/AMBULANCE/FIRE: Police, 22-0863/2497; Ambulance, Busan Quarantine Station, 44-0119/0619.

TELEPHONES: "Port Telephone Service" operates for purpose of serving communication on board-shore.

SERVICES: Adjustment of compass available.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Crew required to carry valid identification cards at all times.

DELAYS: Port congestion is experienced occasionally.

DEVELOPMENTS: An additional 3 berth container handling facility to be built. 6 container cranes will be available.

AUTHORITY: Pusan District Maritime and Port Authority, 1116-1 Jwadchun-dong, Dong-ku, Pusan, Republic of Korea. *Tel:* (051) 65-0933. *Telex:* K53377 Bdmpa.

AGENT: Shilla Shipping Corp., Room 1201, Chung Dong Building, 15-5 Chung-Dong, Choong-Ku, Seoul, Korea. Tel: 82-2-778-9200. Mobile: 82-11-313-3256. Fax: 82-2-778-1915, 82-2-778-1916. Telex: K23130. Cables: Shilla Seoul.

CHINHAI (Jinhae): 35.07 N. 128.42 E.

SHIPMASTER'S REPORT: 1977.

LOCATION: Lat. 35° 09' N., Long. 128° 40' E. (Town); Lat. 35° 07' N., Long. 128° 42' E. (Pier).

DOCUMENTS:

8 Cargo Manifests.
8 Crew Lists.
4 Stores Lists.
3 Lists of Crew's Personal Effects. Tobacco/Spirits.
1 Vaccination List.
1 Health Declaration.
2 Currency Lists.

All documents are Standard Form. Although currency lists are required, there are no restrictions on importing or exporting either Korean or other currencies.

PILOTAGE: Pilotage not compulsory but recommended. Pilots are ordered through Agents and board vessel about 10 cables West of Kadok Do Island. VHF not available. No pilotage during night hours. Pilot boat is a wooden launch exhibiting International pilotage signals.

ANCHORAGE: Recommended 7 cables in Northwesterly direction off Tongdu Mal Lt. Ho. (Kadok Do.). Depth 25 m. Good anchorage in sand and mud. Quarantine anchorage is located about 1 mile N.N.W. from Chori Som Island.

HEALTH: Radio Pratique not available. Pratique granted after inspection.

RADIO: Busan Radio, call-sign "HLP".

TUGS: Required for mooring and unmooring. 2 tugs available of 600 h.p. and 1,000 h.p.

BERTHING: Chinhai is a principal naval base. Vessels drawing up to 17 ft. can be accommodated alongside inner harbour.

A buoyed channel with a depth of 36 ft. MHW leads from East of Madang So, to the only berth available for deep-sea vessels about 1.5 miles N.E. The berth, about 660 ft. in length, belongs to the Chinhai Chemical Co. and can accommodate vessels with a maximum draft of 34 ft.

Depth-sounding alongside showed at least 43 ft. 3 in. at HW. (officially 34 ft.). Distance from HW level to deck of pier 2.10 m. Bottom thick mud, and density 1025.

Vessels not exceeding 34 ft. salt water draft berth 2 hours prior HW., and discharging commences immediately.

The berth is equipped with 1 grab only, and with conveyor-belt to nearby factory. The berth is used for discharging phosphate and potash, and very few general cargoes are handled. Discharge rate for phosphate is a maximum of 8,000 tons per 24 hours, with average of 6,200 tons.

Also see "Masan" – Bulk cargo facilities.

STEVEDORES: Work is continuous throughout 24 hours including Sundays, and without meal breaks.

MEDICAL: Attention available.

FRESH WATER: Available ex-barge from Masan, minimum 200 tons at U.S.$3.00 per ton.

FUEL: Available ex-barge from Masan.

CONSULS: Nearest at Busan.

REPAIRS: Minor repairs only.

GANGWAY/DECK WATCHMEN: Available and recommended.

REPATRIATION: Possible from Busan.

CUSTOMS ALLOWANCES: No restrictions. Stores remain unsealed.

SHIPMASTER'S REPORT: February 1979.

PILOTAGE: Pilotage for the Port of Chinhae is compulsory, Pilots only available during daytime.

Pilots board in position Lat. 35° 02' N., Long. 128° 47.5' E. Ships waiting for a Pilot should anchor in the recommended anchorage situated North-east of the recommended track 306°/126° and extending from about 1 mile West to about 2 miles S.E. of Yon Do Island.

PROHIBITED ANCHORAGE AREA: A "Prohibited Anchorage Area" is situated between the existing prohibited area (approx. position 35° 00' N., 128° 45' E.) and the Western shore of the Kadok To Island.

The Northern limit of the "prohibited anchorage" area consists of a line running from position Lat. 35° 01.4' N., Long. 128° 47.2' E. in a 070° direction to the Western shore of Kadok To Island.

The Southern limit consists of a line running from Lat. 34° 58' N., Long. 128° 47.3' E. in a 061° direction to the Southernmost point of Kadok To Island.

According to the naval authorities, anchoring within the above mentioned area is prohibited because of existing submarine cables.

BUOYS: The red conical Buoy "No. 14" in position Lat. 35° 04.9' N., Long. 128° 42.1' E. is reported non-existent.

The red conical lightbuoy in position bearing 135° and 8.5 cables from the above mentioned Buoy No. 14 is also reported non-existent.

The black conical lightbuoy Gp. Fl(2) 6 sec. in position Lat. 35° 04' N., Long. 128° 42.8' E. is to be moved 4 cables in a 043° direction.

AUTHORITY: Masan District Marine Bureau.

AGENT: Shilla Shipping Corp., Room 1201, Chung Dong Building, 15-5 Chung-Dong, Choong-Ku, Seoul, Korea. Tel: 82-2-778-9200. Mobile: 82-11-313-3256. Fax: 82-2-778-1915, 82-2-778-1916. Telex: K23130. Cables: Shilla Seoul.

DAESAN: 37.02 N. 126.21 E. (See Plan)

PORT LIMITS: *Harbour Limits:*

1. Lat. 37° 00' 30" N., Long. 126° 24' 56" E.
2. Lat. 37° 01' 18" N., Long. 126° 25' 27" E.
3. Lat. 37° 02' 55" N., Long. 126° 24' 48" E.
4. Lat. 37° 03' 02" N., Long. 126° 22' 53" E.
5. Lat. 37° 01' 42" N., Long. 126° 18' 42" E.
6. Lat. 37° 00' 27" N., Long. 126° 16' 04" E.
7. Lat. 36° 58' 33" N., Long. 126° 18' 24" E.
8. Lat. 36° 58' 15" N., Long. 126° 20' 14" E.
9. Lat. 36° 58' 03" N., Long. 126° 20' 00" E.

Also see Chart.

DOCUMENTS:

2 copies Stores List.
2 copies Provisions Stores List.
2 copies Personnel Effects List.
2 copies Crew List.
2 copies Ports of Call List.
1 copy Clearance from last Port.
2 copies Arms and Ammunitions List.
2 copies Narcotics List.
1 copy P & I Certificate.
1 copy International Tonnage Certificate.

PILOTAGE: Compulsory for any ocean-going vessel. Pilot station is located at Lat. 36° 52' 00" N., Long. 126° 08' 00" E. Vessels calling at Daesan must cable the exact ETA at the Pilot Station to ship's Agent. VHF channel for calling Agent and Pilot is Channel 15.

ANCHORAGES:

Anchorage	*Position*	*Radius*	*Max.Size*
Quarantine	37° 00' 30" N. 126° 17' 29" E.	800 m.	
A1	37° 01' 03" N. 126° 19' 00" E.	900 m.	100,000 d.w.t.
A2	37° 02' 04" N. 126° 24' 05" E.	475 m.	20,000 d.w.t.
A3	37° 01' 18" N. 126° 25' 00" E.	200 m.	1,000 d.w.t.

RESTRICTIONS: Depths not less than 30 m. at Chart Datum.

Berthing/Unberthing Times:

Month	*Berth/Unberthing*	*Time*
April-September	Berthing	0600 – 20000 hrs.
	Unberthing	0700 – 2100 hrs.
October/March	Berthing	0700 – 2000 hrs.
	Unberthing	0700 – 2100 hrs.

MAX. SIZE: 300,000 d.w.t. at SPM and 30,000 d.w.t. at Product Jetty

HEALTH:
1. Before proceeding to SPM, vessel must anchor at the Quarantine Station near Anchorage "A1" to obtain Free Pratique.
2. Master is required to complete Health Declaration when Officer boards the vessel on arrival.
3. Free Pratique is automatic when coming from another Korean port.
4. Quarantine inspection takes place during daylight.

RADIO: There is no radio station.

VHF: Daesan Port Control on Channel 16 one hour prior to arrival.

TUGS: 4 tugs available (2×3,600 h.p., 1×2,000 h.p. and 2×1,800 h.p.).

BERTHING:

Berth/Jetty		*Capacity* minimum (d.w.t.)	*Capacity* maximum (d.w.t.)	*Depth* (m.)	*Length* (m.)	*Remarks*
SGC Jetty	A	10,000	100,000	17.0	280.0	Petrochemicals
	B	1,000	10,000	10.0	140.0	Petrochemicals
	C	500	10,000	10.0	140.0	Petrochemicals
HPC Jetty	1	1,000	100,000	17.0	280.0	Petrochemicals
	2	600	10,000	10.0	140.0	Petrochemicals
HDO Jetty	1	500	3,000	7.0	130.0	Petroproducts
	2	400	5,000	7.0	140.0	Petroproducts
	3		400	5.0	90.0	New Extension
	4	1,000	20,000	11.0 (9.7)	215.0	(Low Water)
HDO-SBM			300,000	32.0		Crude Oil

CRANES: None.

BULK CARGO FACILITIES: None.

STEVEDORES: None.

BRIDGES: None.

MEDICAL: It is necessary for Agents to receive 24 hours advance notice of required medical attention.

Hospitals and dental facilities are available.

Inoculations and vaccinations can be carried out.

TANKERS:

Samsung General Chemicals Co.Ltd. (SGC):

Cargo		*Loading Arm* No.	*Loading Arm* Diameter (in.)	*Loading/ Discharging* Rate (cu.m./hr.)	*Shore Line* Diameter (in.)	*Shore Line* Distance (m.)
Jetty A:						
Butane	Liquid	1	6	400	10	1,750
	Vapour	1	3		8	
SM	Liquid	1	6	500	10	2,000
Naph (Gas Oil)		2	16	3,000	30	1,520
Jetty B:						
Naph		1	6	450	10	1,650
MEG		1	6	350	10	1,720
BZN		1	6	450	10	1,560
Butane	Liquid	1	6	400	10	1,720
	Vapour	1	3		8	
SM		1	6	500	10	2,000
Propylene	Liquid	1	6	450	10	1,660
	Vapour	1	4		8	
BD	Liquid	1	6	400	10	1,510
	Vapour	1	3		8	
Jetty C:						
Bunker C		1	10	660	14	1,390
Propylene	Liquid	1	6	450	10	1,760
	Vapour	1	4		10	
BD	Liquid	1	6	400	10	1,510
	Vapour	1	3		8	
Ethylene	Liquid	1	10	450	10	1,600
	Vapour	1	8		8	
SM		1	6	500	10	2,000
Butane	Liquid	1	6	400	10	1,720
	Vapour	1	3		8	

* N2 Purge: Available 2 lines (1,000 cu.m./hr., 4,000 cu.m./hr.) with variable connections of hose at Jetties A, B and C.
* Shore Ladder: Not available.
* Public Telephone: Available (phone card).

Hyundai Petrochemical Co. Ltd. (HPC):

Cargo		*Loading Arm* No.	*Loading Arm* Diameter (in.)	*Loading/ Discharging* Rate (cu.m./hr.)	*Shore Line* Diameter (in.)	*Shore Line* Distance (m.)
HPC-1 Jetty:						
VAM		1	6	200	8	
BZN		1	6	521	12	
SM		1	6	227	8	
MEG		1	6	243	8	all
Naph		2	16	2,750	30	4,000-5,000
Bunker C		1	8	483	18	
Gas		1	8	550	20	
Butane	Liquid	1	8	432	12	
	Vapour	1	4		10	
HPC-2 Jetty:						
SM		1	6	227	8	
MEG		1	6	243	8	
Gas Oil (RPG)		1	8	559	20	
BD	Liquid	1	8	430	10	
	Vapour	1	4		6	
Butene-1	Liquid	1	6	310	8	
	Vapour	1	3		6	all
ISO-BTN	Liquid	1	6	164	6	4,000-5,000
	Vapour	1	3		4	
Ethylene	Liquid	1	6	193	8	
	Vapour	1	3		10	
Propylene	Liquid	1	6	212	8	
	Vapour	1	3		10	
Octene-1,		1	6	260	8	
Hexene-1		1	6	194	8	

* N2 Purge: Not available.
* Shore Ladder: Not available.
* Public Telephone: Available (phone card).

Hyundai Oil Co.Ltd. (HDO):

Cargo		*Loading Arm* No.	*Loading Arm* Diameter (in.)	*Loading/ Discharging* Rate (cu.m./hr.)	*Shore Line* Diameter (in.)	*Shore Line* Distance (m.)
HDO-1 Jetty:						
RG, UG, PK		1	6	200	6	
HSD/LSD		1	6	200	6	
Propane	Liquid	1	6	450	8	
	Vapour	1	3		6	
Butane	Liquid	1	6	450	8	
	Vapour	1	3		6	
Sulfur		1	8	200	8	
HDO-2 Jetty:						
HSD/HSBC		1	6	500	6	all
JP-4		1	6		6	400-500
LSD/PN/DF-M		1	6	900	10	
UR/UG/RG		1	6		6	
HDO-3 Jetty:						
UG/PK		1	4	96	4	
HSD/LSD		1	4	96	4	
LBS		1	4	96	4	
HBS		1	4	96	6	
HDO-4 Jetty:						
DF-1/HSD/TN		1	6		6	
PK/PN/RN		1	12	750	10	
LSD		1	12	1,000	16	
HSBC		1	12		8	
AR		1	12		16	
JP-4		1	12		12	

* Shore Ladder: Not available.
* Public Telephone: Available (phone card).
* Naphtha Product Quantity: 15,000 bbls. daily, 450,000 bbls. monthly.

Also see "Shipmaster's Reports".

DENSITY: 1025.

FRESH WATER: Available by water barge only, but expensive.

FUEL: Available by bunker barge from Inchon.

FIRE PRECAUTIONS: No particular precautions.

CONSULS: None.

REPAIRS: No repair facilities.

DRY DOCKS: No dry docks.

SURVEYORS: SGS and Caleb Brett. Classification surveyors can be arranged from Inchon or Busan.

GANGWAY/DECK WATCHMEN: Not available.

CUSTOMS ALLOWANCES: Tobacco 1 carton. Spirits 1 bottle.

REPATRIATION: Crew changes and repatriation can be arranged.

AIRPORT: Kimpo International Airport (200 km., 4 hours by car).

TIME: Korean Standard Time is GMT plus 9 hours. There are no alterations during the year.

HOLIDAYS: 1st and 2nd January; 1st March; 5th April; 5th May; 6th June; 17th July; 15th August; 3rd October; 9th October; 25th December; 1st January (lunar calendar); 8th April (lunar calendar); 15th August (lunar calendar).

POLICE/AMBULANCE/FIRE: Seosan Police Station Tel: (0455) 6660118. Ambulance Tel: 119. Fire Station Tel: (0455) 650119.

EMERGENCY CO-ORDINATION CENTRE: No centre available.

TELEPHONES: Can be arranged via Agent (portable telephone).

SERVICES: All services available. Early notice before arrival should be given.

BANKS: Choheung Bank, 149 Daesan-ri Daesan-eub. Tel: (0455) 653682, 653683. Fax: (0455) 655708.

Sinhan Bank, 129-5 Daesan-ri, Daesan-eub. Tel: (0455) 655600. Fax: (0455) 640452.

SHIP SUPPLY SERVICE: Hanmi Supply Trading Co., 123-47 Dokgot-ri, Daesan-eub, Seosan-gun, Chungnam-do. Tel: (0455) 681-6770. Fax: (0455) 681-5034. Telex: K45560 Hanmi.

SHORE LEAVE: Allowed.

IDENTIFICATION CARD: Crew required to carry valid identification cards at all times.

REGULATIONS: No particular regulations.

DELAYS: VLCC: Berthing is done during daylight and on ebb tide. Unberthing is done at any time, except dense fog (vis. 0).
Product Carriers: Berthing is done on slack tide. Unberthing is done at any time, except dense fog.

DEVELOPMENTS: HDO (Hyundai Oil Refinery Co.Ltd.) SPM: Max. capacity has been upgraded from 250,000 d.w.t. to 300,000 d.w.t. since June 1994.

HDO Product Jetty: New jetty under construction (2 berths). One berth for 100,000 d.w.t. and one berth for 30,000 d.w.t. (See "Plan"). Expected date of completion 1996.

SHIPMASTER'S REPORT: October 1988 (Updated 1994).
Note: First vessel to call at Daesan S.B.M.

Pilot station for VLCCs proceeding to the SBM is located in the outer harbour of Daesan (Lat. 36° 51' 40" N., Long. 126° 08' 24" E.) in vicinity of 2 nautical miles South of Shin-do, where the Harbour Pilot boards to lead the vessel to Quarantine Station which is in the vicinity of 1 mile South of Kainso Lighthouse. Location of SBM is Lat. 37° 01' 46" N., Long. 126° 20' 50" E.

The vessel arrived at the pilot boarding area on October 13th and due to strong wind and rough sea the Pilot was unable to board. The anchor was dropped 4 nautical miles S.W. of Entrance Buoy No. 1 in a depth of 37 m., with good holding ground.

The Pilot boarded the next morning and the ship entered the buoyed channel approaching the SBM. The Pilot disembarked from the ship and the anchor was dropped at the same position as on arrival.

The Pilot boarded the ship the next morning and commenced approaching the SBM. When the vessel passed Buoy No. 1 a large number of fishing boats sailed from the shore and headed towards the vessel and within a short time stopped in front of the vessel very close to the bow. The vessel's engine was now on full astern in order to have her dead in the water. One man was on lookout forward as we were not able to see the fishing boats close to the bow from the bridge. The Pilot

REPAIRS: All repairs can be effected.

DRY DOCKS:

Name of facility	g.r.t	*Capacity* d.w.t.	*Location*
Korea Ship Building Eng. Corp. No.1	3,000	6,000	Busan
Korea Ship Building Eng. Corp. No.2	20,000	60,000	Busan
Korea Ship Building Eng. Corp. No.3	80,000	150,000	Busan
Dae Sun Ship Building Corp.	2,000	4,000	Busan

GANGWAY/DECK WATCHMEN: This service is available.

OPENING/CLOSING HATCHES: Usually carried out by stevedores.

CERTIFICATES:
Derat Certificate or Exemption.
Inoculation and Vaccination Certificates for all crew members.

CUSTOMS ALLOWANCES: One carton cigarettes or 1 lb. of tobacco, and 1 bottle wine or spirits allowed, each man.

REPATRIATION: World wide connections are available from Busan via Seoul or Tokyo.

AIRPORT: Airport is at Kim Hey about 28 km. from Busan. Japan-bound plane takes off every 3rd day.

HOLIDAYS: 1st-3rd January; 1st March; 10th March; 5th April; 6th June; 17th July; 15th August; 3rd October; 9th October; 1st October; 24th December; Buddhist Birthday 8th April (by the Lunar Calender). Choo Sug (Thanksgiving Day), 15th August (by Lunar Calender).

POLICE/AMBULANCE/FIRE: Police, 22-0863/2497; Ambulance, Busan Quarantine Station, 44-0119/0619.

TELEPHONES: "Port Telephone Service" operates for purpose of serving communication on board-shore.

SERVICES: Adjustment of compass available.

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Crew required to carry valid identification cards at all times.

DELAYS: Port congestion is experienced occasionally.

DEVELOPMENTS: An additional 3 berth container handling facility to be built. 6 container cranes will be available.

AUTHORITY: Pusan District Maritime and Port Authority, 1116-1 Jwadchun-dong, Dong-ku, Pusan, Republic of Korea. *Tel:* (051) 65-0933. *Telex:* K53377 Bdmpa.

AGENT: Shilla Shipping Corp., Room 1201, Chung Dong Building, 15-5 Chung-Dong, Choong-Ku, Seoul, Korea. Tel: 82-2-778-9200. Mobile: 82-11-313-3256. Fax: 82-2-778-1915, 82-2-778-1916. Telex: K23130. Cables: Shilla Seoul.

CHINHAI (Jinhae): 35.07 N. 128.42 E.

SHIPMASTER'S REPORT: 1977.

LOCATION: Lat. 35° 09' N., Long. 128° 40' E. (Town); Lat. 35° 07' N., Long. 128° 42' E. (Pier).

DOCUMENTS:
8 Cargo Manifests.
8 Crew Lists.
4 Stores Lists.
3 Lists of Crew's Personal Effects. Tobacco/Spirits.
1 Vaccination List.
1 Health Declaration.
2 Currency Lists.

All documents are Standard Form. Although currency lists are required, there are no restrictions on importing or exporting either Korean or other currencies.

PILOTAGE: Pilotage not compulsory but recommended. Pilots are ordered through Agents and board vessel about 10 cables West of Kadok Do Island. VHF not available. No pilotage during night hours. Pilot boat is a wooden launch exhibiting International pilotage signals.

ANCHORAGE: Recommended 7 cables in Northwesterly direction off Tongdu Mal Lt. Ho. (Kadok Do.). Depth 25 m. Good anchorage in sand and mud. Quarantine anchorage is located about 1 mile N.N.W. from Chori Som Island.

HEALTH: Radio Pratique not available. Pratique granted after inspection.

RADIO: Busan Radio, call-sign "HLP".

TUGS: Required for mooring and unmooring. 2 tugs available of 600 h.p. and 1,000 h.p.

BERTHING: Chinhai is a principal naval base. Vessels drawing up to 17 ft. can be accommodated alongside inner harbour.

A buoyed channel with a depth of 36 ft. MHW leads from East of Madang So, to the only berth available for deep-sea vessels about 1.5 miles N.E. The berth, about 660 ft. in length, belongs to the Chinhai Chemical Co. and can accommodate vessels with a maximum draft of 34 ft.

Depth-sounding alongside showed at least 43 ft. 3 in. at HW. (officially 34 ft.). Distance from HW level to deck of pier 2.10 m. Bottom thick mud, and density 1025.

Vessels not exceeding 34 ft. salt water draft berth 2 hours prior HW., and discharging commences immediately.

The berth is equipped with 1 grab only, and with conveyor-belt to nearby factory. The berth is used for discharging phosphate and potash, and very few general cargoes are handled. Discharge rate for phosphate is a maximum of 8,000 tons per 24 hours, with average of 6,200 tons.

Also see "Masan" – Bulk cargo facilities.

STEVEDORES: Work is continuous throughout 24 hours including Sundays, and without meal breaks.

MEDICAL: Attention available.

FRESH WATER: Available ex-barge from Masan, minimum 200 tons at U.S.$3.00 per ton.

FUEL: Available ex-barge from Masan.

CONSULS: Nearest at Busan.

REPAIRS: Minor repairs only.

GANGWAY/DECK WATCHMEN: Available and recommended.

REPATRIATION: Possible from Busan.

CUSTOMS ALLOWANCES: No restrictions. Stores remain unsealed.

SHIPMASTER'S REPORT: February 1979.

PILOTAGE: Pilotage for the Port of Chinhae is compulsory, Pilots only available during daytime.

Pilots board in position Lat. 35° 02' N., Long. 128° 47.5' E. Ships waiting for a Pilot should anchor in the recommended anchorage situated North-east of the recommended track 306°/126° and extending from about 1 mile West to about 2 miles S.E. of Yon Do Island.

PROHIBITED ANCHORAGE AREA: A "Prohibited Anchorage Area" is situated between the existing prohibited area (approx. position 35° 00' N., 128° 45' E.) and the Western shore of the Kadok To Island.

The Northern limit of the "prohibited anchorage" area consists of a line running from position Lat. 35° 01.4' N., Long. 128° 47.2' E. in a 070° direction to the Western shore of Kadok To Island.

The Southern limit consists of a line running from Lat. 34° 58' N., Long. 128° 47.3' E. in a 061° direction to the Southernmost point of Kadok To Island.

According to the naval authorities, anchoring within the above mentioned area is prohibited because of existing submarine cables.

BUOYS: The red conical Buoy "No. 14" in position Lat. 35° 04.9' N., Long. 128° 42.1' E. is reported non-existent.

The red conical lightbuoy in position bearing 135° and 8.5 cables from the above mentioned Buoy No. 14 is also reported non-existent.

The black conical lightbuoy Gp. Fl(2) 6 sec. in position Lat. 35° 04' N., Long. 128° 42.8' E. is to be moved 4 cables in a 043° direction.

AUTHORITY: Masan District Marine Bureau.

AGENT: Shilla Shipping Corp., Room 1201, Chung Dong Building, 15-5 Chung-Dong, Choong-Ku, Seoul, Korea. Tel: 82-2-778-9200. Mobile: 82-11-313-3256. Fax: 82-2-778-1915, 82-2-778-1916. Telex: K23130. Cables: Shilla Seoul.

DAESAN: 37.02 N. 126.21 E. (See Plan)

PORT LIMITS: *Harbour Limits:*
1. Lat. 37° 00' 30" N., Long. 126° 24' 56" E.
2. Lat. 37° 01' 18" N., Long. 126° 25' 27" E.
3. Lat. 37° 02' 55" N., Long. 126° 24' 48" E.
4. Lat. 37° 03' 02" N., Long. 126° 22' 53" E.
5. Lat. 37° 01' 42" N., Long. 126° 18' 42" E.
6. Lat. 37° 00' 27" N., Long. 126° 16' 04" E.
7. Lat. 36° 58' 33" N., Long. 126° 18' 24" E.
8. Lat. 36° 58' 15" N., Long. 126° 20' 14" E.
9. Lat. 36° 58' 03" N., Long. 126° 20' 00" E.

Also see Chart.

DOCUMENTS:
2 copies Stores List.
2 copies Provisions Stores List.
2 copies Personnel Effects List.
2 copies Crew List.
2 copies Ports of Call List.
1 copy Clearance from last Port.
2 copies Arms and Ammunitions List.
2 copies Narcotics List.
1 copy P & I Certificate.
1 copy International Tonnage Certificate.

PILOTAGE: Compulsory for any ocean-going vessel. Pilot station is located at Lat. 36° 52' 00" N., Long. 126° 08' 00" E. Vessels calling at Daesan must cable the exact ETA at the Pilot Station to ship's Agent. VHF channel for calling Agent and Pilot is Channel 15.

ANCHORAGES:

Anchorage	*Position*	*Radius*	*Max.Size*
Quarantine	37° 00' 30" N. 126° 17' 29" E.	800 m.	
A1	37° 01' 03" N. 126° 19' 00" E.	900 m.	100,000 d.w.t.
A2	37° 02' 04" N. 126° 24' 05" E.	475 m.	20,000 d.w.t.
A3	37° 01' 18" N. 126° 25' 00" E.	200 m.	1,000 d.w.t.

RESTRICTIONS: Depths not less than 30 m. at Chart Datum.

Berthing/Unberthing Times:

Month	*Berth/Unberthing*	*Time*
April-September	Berthing	0600 – 20000 hrs.
	Unberthing	0700 – 2100 hrs.
October/March	Berthing	0700 – 2000 hrs.
	Unberthing	0700 – 2100 hrs.

MAX. SIZE: 300,000 d.w.t. at SPM and 30,000 d.w.t. at Product Jetty

HEALTH:
1. Before proceeding to SPM, vessel must anchor at the Quarantine Station near Anchorage "A1" to obtain Free Pratique.
2. Master is required to complete Health Declaration when Officer boards the vessel on arrival.
3. Free Pratique is automatic when coming from another Korean port.
4. Quarantine inspection takes place during daylight.

RADIO: There is no radio station.

VHF: Daesan Port Control on Channel 16 one hour prior to arrival.

TUGS: 4 tugs available (2×3,600 h.p., 1×2,000 h.p. and 2×1,800 h.p.).

BERTHING:

Berth/Jetty		Capacity minimum	Capacity maximum (d.w.t.)	Depth (m.)	Length (m.)	Remarks
SGC Jetty	A	10,000	100,000	17.0	280.0	Petrochemicals
	B	1,000	10,000	10.0	140.0	Petrochemicals
	C	500	10,000	10.0	140.0	Petrochemicals
HPC Jetty	1	1,000	100,000	17.0	280.0	Petrochemicals
	2	600	10,000	10.0	140.0	Petrochemicals
HDO Jetty	1	500	3,000	7.0	130.0	Petroproducts
	2	400	5,000	7.0	140.0	Petroproducts
	3		400	5.0	90.0	New Extension
	4	1,000	20,000	11.0 (9.7)	215.0	(Low Water)
HDO-SBM			300,000	32.0		Crude Oil

CRANES: None.

BULK CARGO FACILITIES: None.

STEVEDORES: None.

BRIDGES: None.

MEDICAL: It is necessary for Agents to receive 24 hours advance notice of required medical attention.

Hospitals and dental facilities are available.

Inoculations and vaccinations can be carried out.

TANKERS:

Samsung General Chemicals Co.Ltd. (SGC):

Cargo		Loading Arm No.	Loading Arm Diameter (in.)	Loading/ Discharging Rate (cu.m./hr.)	Shore Line Diameter (in.)	Shore Line Distance (m.)
Jetty A:						
Butane	Liquid	1	6	400	10	1,750
	Vapour	1	3		8	
SM	Liquid	1	6	500	10	2,000
Naph (Gas Oil)		2	16	3,000	30	1,520
Jetty B:						
Naph		1	6	450	10	1,650
MEG		1	6	350	10	1,720
BZN		1	6	450	10	1,560
Butane	Liquid	1	6	400	10	1,720
	Vapour	1	3		8	
SM		1	6	500	10	2,000
Propylene	Liquid	1	6	450	10	1,660
	Vapour	1	4		8	
BD	Liquid	1	6	400	10	1,510
	Vapour	1	3		8	
Jetty C:						
Bunker C		1	10	660	14	1,390
Propylene	Liquid	1	6	450	10	1,760
	Vapour	1	4		10	
BD	Liquid	1	6	400	10	1,510
	Vapour	1	3		8	
Ethylene	Liquid	1	10	450	10	1,600
	Vapour	1	8		8	
SM		1	6	500	10	2,000
Butane	Liquid	1	6	400	10	1,720
	Vapour	1	3		8	

* N2 Purge: Available 2 lines (1,000 cu.m./hr., 4,000 cu.m./hr.) with variable connections of hose at Jetties A, B and C.
* Shore Ladder: Not available.
* Public Telephone: Available (phone card).

Hyundai Petrochemical Co. Ltd. (HPC):

Cargo		Loading Arm No.	Loading Arm Diameter (in.)	Loading/ Discharging Rate (cu.m./hr.)	Shore Line Diameter (in.)	Shore Line Distance (m.)
HPC-1 Jetty:						
VAM		1	6	200	8	
BZN		1	6	521	12	
SM		1	6	227	8	
MEG		1	6	243	8	all
Naph		2	16	2,750	30	4,000-5,000
Bunker C		1	8	483	18	
Gas		1	8	550	20	
Butane	Liquid	1	8	432	12	
	Vapour	1	4		10	
HPC-2 Jetty:						
SM		1	6	227	8	
MEG		1	6	243	8	
Gas Oil (RPG)		1	8	559	20	
BD	Liquid	1	8	430	10	
	Vapour	1	4		6	
Butene-1	Liquid	1	6	310	8	
	Vapour	1	3		6	all
ISO-BTN	Liquid	1	6	164	6	4,000-5,000
	Vapour	1	3		4	
Ethylene	Liquid	1	6	193	8	
	Vapour	1	3		10	
Propylene	Liquid	1	6	212	8	
	Vapour	1	3		10	
Octene-1,		1	6	260	8	
Hexene-1		1	6	194	8	

* N2 Purge: Not available.
* Shore Ladder: Not available.
* Public Telephone: Available (phone card).

Cargo		Loading Arm No.	Loading Arm Diameter (in.)	Loading/ Discharging Rate (cu.m./hr.)	Shore Line Diameter (in.)	Shore Line Distance (m.)
Hyundai Oil Co.Ltd. (HDO):						
HDO-1 Jetty:						
RG, UG, PK		1	6	200	6	
HSD/LSD		1	6	200	6	
Propane	Liquid	1	6	450	8	
	Vapour	1	3		6	
Butane	Liquid	1	6	450	8	
	Vapour	1	3		6	
Sulfur		1	8	200	8	
HDO-2 Jetty:						
HSD/HSBC		1	6	500	6	all
JP-4		1	6		6	400-500
LSD/PN/DF-M		1	6	900	10	
UR/UG/RG		1	6		6	
HDO-3 Jetty:						
UG/PK		1	4	96	4	
HSD/LSD		1	4	96	4	
LBS		1	4	96	4	
HBS		1	4	96	6	
HDO-4 Jetty:						
DF-1/HSD/TN		1	6		6	
PK/PN/RN		1	12	750	10	
LSD		1	12	1,000	16	
HSBC		1	12		8	
AR		1	12		16	
JP-4		1	12		12	

* Shore Ladder: Not available.
* Public Telephone: Available (phone card).
* Naphtha Product Quantity: 15,000 bbls. daily, 450,000 bbls. monthly.

Also see "Shipmaster's Reports".

DENSITY: 1025.

FRESH WATER: Available by water barge only, but expensive.

FUEL: Available by bunker barge from Inchon.

FIRE PRECAUTIONS: No particular precautions.

CONSULS: None.

REPAIRS: No repair facilities.

DRY DOCKS: No dry docks.

SURVEYORS: SGS and Caleb Brett. Classification surveyors can be arranged from Inchon or Busan.

GANGWAY/DECK WATCHMEN: Not available.

CUSTOMS ALLOWANCES: Tobacco 1 carton. Spirits 1 bottle.

REPATRIATION: Crew changes and repatriation can be arranged.

AIRPORT: Kimpo International Airport (200 km., 4 hours by car).

TIME: Korean Standard Time is GMT plus 9 hours. There are no alterations during the year.

HOLIDAYS: 1st and 2nd January; 1st March; 5th April; 5th May; 6th June; 17th July; 15th August; 3rd October; 9th October; 25th December; 1st January (lunar calendar); 8th April (lunar calendar); 15th August (lunar calendar).

POLICE/AMBULANCE/FIRE: Seosan Police Station Tel: (0455) 6660118. Ambulance Tel: 119. Fire Station Tel: (0455) 650119.

EMERGENCY CO-ORDINATION CENTRE: No centre available.

TELEPHONES: Can be arranged via Agent (portable telephone).

SERVICES: All services available. Early notice before arrival should be given.

BANKS: Choheung Bank, 149 Daesan-ri Daesan-eub. Tel: (0455) 653682, 653683. Fax: (0455) 655708.

Sinhan Bank, 129-5 Daesan-ri, Daesan-eub. Tel: (0455) 655600. Fax: (0455) 640452.

SHIP SUPPLY SERVICE: Hanmi Supply Trading Co., 123-47 Dokgot-ri, Daesan-eub, Seosan-gun, Chungnam-do. Tel: (0455) 681-6770. Fax: (0455) 681-5034. Telex: K45560 Hanmi.

SHORE LEAVE: Allowed.

IDENTIFICATION CARD: Crew required to carry valid identification cards at all times.

REGULATIONS: No particular regulations.

DELAYS: VLCC: Berthing is done during daylight and on ebb tide. Unberthing is done at any time, except dense fog (vis. 0).
Product Carriers: Berthing is done on slack tide. Unberthing is done at any time, except dense fog.

DEVELOPMENTS: HDO (Hyundai Oil Refinery Co.Ltd.) SPM: Max. capacity has been upgraded from 250,000 d.w.t. to 300,000 d.w.t. since June 1994.

HDO Product Jetty: New jetty under construction (2 berths). One berth for 100,000 d.w.t. and one berth for 30,000 d.w.t. (See "Plan"). Expected date of completion 1996.

SHIPMASTER'S REPORT: October 1988 (Updated 1994).
Note: First vessel to call at Daesan S.B.M.

Pilot station for VLCCs proceeding to the SBM is located in the outer harbour of Daesan (Lat. 36° 51' 40" N., Long. 126° 08' 24" E.) in vicinity of 2 nautical miles South of Shin-do, where the Harbour Pilot boards to lead the vessel to Quarantine Station which is in the vicinity of 1 mile South of Kainso Lighthouse. Location of SBM is Lat. 37° 01' 46" N., Long. 126° 20' 50" E.

The vessel arrived at the pilot boarding area on October 13th and due to strong wind and rough sea the Pilot was unable to board. The anchor was dropped 4 nautical miles S.W. of Entrance Buoy No. 1 in a depth of 37 m., with good holding ground.

The Pilot boarded the next morning and the ship entered the buoyed channel approaching the SBM. The Pilot disembarked from the ship and the anchor was dropped at the same position as on arrival.

The Pilot boarded the ship the next morning and commenced approaching the SBM. When the vessel passed Buoy No. 1 a large number of fishing boats sailed from the shore and headed towards the vessel and within a short time stopped in front of the vessel very close to the bow. The vessel's engine was now on full astern in order to have her dead in the water. One man was on lookout forward as we were not able to see the fishing boats close to the bow from the bridge. The Pilot

REPAIRS: All repairs can be effected.
DRY DOCKS:

Name of facility	*Capacity* g.r.t	d.w.t.	*Location*
Korea Ship Building Eng. Corp. No.1	3,000	6,000	Busan
Korea Ship Building Eng. Corp. No.2	20,000	60,000	Busan
Korea Ship Building Eng. Corp. No.3	80,000	150,000	Busan
Dae Sun Ship Building Corp.	2,000	4,000	Busan

GANGWAY/DECK WATCHMEN: This service is available.
OPENING/CLOSING HATCHES: Usually carried out by stevedores.
CERTIFICATES:
Derat Certificate or Exemption.
Inoculation and Vaccination Certificates for all crew members.
CUSTOMS ALLOWANCES: One carton cigarettes or 1 lb. of tobacco, and 1 bottle wine or spirits allowed, each man.
REPATRIATION: World wide connections are available from Busan via Seoul or Tokyo.
AIRPORT: Airport is at Kim Hey about 28 km. from Busan. Japan-bound plane takes off every 3rd day.
HOLIDAYS: 1st-3rd January; 1st March; 10th March; 5th April; 6th June; 17th July; 15th August; 3rd October; 9th October; 1st October; 24th December; Buddhist Birthday 8th April (by the Lunar Calender). Choo Sug (Thanksgiving Day), 15th August (by Lunar Calender).
POLICE/AMBULANCE/FIRE: Police, 22-0863/2497; Ambulance, Busan Quarantine Station, 44-0119/0619.
TELEPHONES: "Port Telephone Service" operates for purpose of serving communication on board-shore.
SERVICES: Adjustment of compass available.
SHORE LEAVE: Allowed.
IDENTIFICATION CARDS: Crew required to carry valid identification cards at all times.
DELAYS: Port congestion is experienced occasionally.
DEVELOPMENTS: An additional 3 berth container handling facility to be built. 6 container cranes will be available.
AUTHORITY: Pusan District Maritime and Port Authority, 1116-1 Jwadchun-dong, Dong-ku, Pusan, Republic of Korea. *Tel:* (051) 65-0933. *Telex:* K53377 Bdmpa.

AGENT: Shilla Shipping Corp., Room 1201, Chung Dong Building, 15-5 Chung-Dong, Choong-Ku, Seoul, Korea. Tel: 82-2-778-9200. Mobile: 82-11-313-3256. Fax: 82-2-778-1915, 82-2-778-1916. Telex: K23130. Cables: Shilla Seoul.

CHINHAI (Jinhae): 35.07 N. 128.42 E.

SHIPMASTER'S REPORT: 1977.

LOCATION: Lat. 35° 09' N., Long. 128° 40' E. (Town); Lat. 35° 07' N., Long. 128° 42' E. (Pier).
DOCUMENTS:
8 Cargo Manifests.
8 Crew Lists.
4 Stores Lists.
3 Lists of Crew's Personal Effects. Tobacco/Spirits.
1 Vaccination List.
1 Health Declaration.
2 Currency Lists.
All documents are Standard Form. Although currency lists are required, there are no restrictions on importing or exporting either Korean or other currencies.
PILOTAGE: Pilotage not compulsory but recommended. Pilots are ordered through Agents and board vessel about 10 cables West of Kadok Do Island. VHF not available. No pilotage during night hours. Pilot boat is a wooden launch exhibiting International pilotage signals.
ANCHORAGE: Recommended 7 cables in Northwesterly direction off Tongdu Mal Lt. Ho. (Kadok Do.). Depth 25 m. Good anchorage in sand and mud. Quarantine anchorage is located about 1 mile N.N.W. from Chori Som Island.
HEALTH: Radio Pratique not available. Pratique granted after inspection.
RADIO: Busan Radio, call-sign "HLP".
TUGS: Required for mooring and unmooring. 2 tugs available of 600 h.p. and 1,000 h.p.
BERTHING: Chinhai is a principal naval base. Vessels drawing up to 17 ft. can be accommodated alongside inner harbour.

A buoyed channel with a depth of 36 ft. MHW leads from East of Madang So, to the only berth available for deep-sea vessels about 1.5 miles N.E. The berth, about 660 ft. in length, belongs to the Chinhai Chemical Co. and can accommodate vessels with a maximum draft of 34 ft.

Depth-sounding alongside showed at least 43 ft. 3 in. at HW. (officially 34 ft.). Distance from HW level to deck of pier 2.10 m. Bottom thick mud, and density 1025.

Vessels not exceeding 34 ft. salt water draft berth 2 hours prior HW., and discharging commences immediately.

The berth is equipped with 1 grab only, and with conveyor-belt to nearby factory. The berth is used for discharging phosphate and potash, and very few general cargoes are handled. Discharge rate for phosphate is a maximum of 8,000 tons per 24 hours, with average of 6,200 tons.

Also see "Masan" – Bulk cargo facilities.

STEVEDORES: Work is continuous throughout 24 hours including Sundays, and without meal breaks.
MEDICAL: Attention available.
FRESH WATER: Available ex-barge from Masan, minimum 200 tons at U.S.$3.00 per ton.
FUEL: Available ex-barge from Masan.
CONSULS: Nearest at Busan.
REPAIRS: Minor repairs only.
GANGWAY/DECK WATCHMEN: Available and recommended.
REPATRIATION: Possible from Busan.
CUSTOMS ALLOWANCES: No restrictions. Stores remain unsealed.

SHIPMASTER'S REPORT: February 1979.

PILOTAGE: Pilotage for the Port of Chinhae is compulsory, Pilots only available during daytime.

Pilots board in position Lat. 35° 02' N., Long. 128° 47.5' E. Ships waiting for a Pilot should anchor in the recommended anchorage situated North-east of the recommended track 306°/126° and extending from about 1 mile West to about 2 miles S.E. of Yon Do Island.
PROHIBITED ANCHORAGE AREA: A "Prohibited Anchorage Area" is situated between the existing prohibited area (approx. position 35° 00' N., 128° 45' E.) and the Western shore of the Kadok To Island.

The Northern limit of the "prohibited anchorage" area consists of a line running from position Lat. 35° 01.4' N., Long. 128° 47.2' E. in a 070° direction to the Western shore of Kadok To Island.

The Southern limit consists of a line running from Lat. 34° 58' N., Long. 128° 47.3' E. in a 061° direction to the Southernmost point of Kadok To Island.

According to the naval authorities, anchoring within the above mentioned area is prohibited because of existing submarine cables.
BUOYS: The red conical Buoy "No. 14" in position Lat. 35° 04.9' N., Long. 128° 42.1' E. is reported non-existent.

The red conical lightbuoy in position bearing 135° and 8.5 cables from the above mentioned Buoy No. 14 is also reported non-existent.

The black conical lightbuoy Gp. Fl(2) 6 sec. in position Lat. 35° 04' N., Long. 128° 42.8' E. is to be moved 4 cables in a 043° direction.

AUTHORITY: Masan District Marine Bureau.

AGENT: Shilla Shipping Corp., Room 1201, Chung Dong Building, 15-5 Chung-Dong, Choong-Ku, Seoul, Korea. Tel: 82-2-778-9200. Mobile: 82-11-313-3256. Fax: 82-2-778-1915, 82-2-778-1916. Telex: K23130. Cables: Shilla Seoul.

DAESAN: 37.02 N. 126.21 E. **(See Plan)**

PORT LIMITS: *Harbour Limits:*
1. Lat. 37° 00' 30" N., Long. 126° 24' 56" E.
2. Lat. 37° 01' 18" N., Long. 126° 25' 27" E.
3. Lat. 37° 02' 55" N., Long. 126° 24' 48" E.
4. Lat. 37° 03' 02" N., Long. 126° 22' 53" E.
5. Lat. 37° 01' 42" N., Long. 126° 18' 42" E.
6. Lat. 37° 00' 27" N., Long. 126° 16' 04" E.
7. Lat. 36° 58' 33" N., Long. 126° 18' 24" E.
8. Lat. 36° 58' 15" N., Long. 126° 20' 14" E.
9. Lat. 36° 58' 03" N., Long. 126° 20' 00" E.

Also see Chart.
DOCUMENTS:
2 copies Stores List.
2 copies Provisions Stores List.
2 copies Personnel Effects List.
2 copies Crew List.
2 copies Ports of Call List.
1 copy Clearance from last Port.
2 copies Arms and Ammunitions List.
2 copies Narcotics List.
1 copy P & I Certificate.
1 copy International Tonnage Certificate.
PILOTAGE: Compulsory for any ocean-going vessel. Pilot station is located at Lat. 36° 52' 00" N., Long. 126° 08' 00" E. Vessels calling at Daesan must cable the exact ETA at the Pilot Station to ship's Agent. VHF channel for calling Agent and Pilot is Channel 15.
ANCHORAGES:

Anchorage	*Position*	*Radius*	*Max.Size*
Quarantine	37° 00' 30" N. 126° 17' 29" E.	800 m.	
A1	37° 01' 03" N. 126° 19' 00" E.	900 m.	100,000 d.w.t.
A2	37° 02' 04" N. 126° 24' 05" E.	475 m.	20,000 d.w.t.
A3	37° 01' 18" N. 126° 25' 00" E.	200 m.	1,000 d.w.t.

RESTRICTIONS: Depths not less than 30 m. at Chart Datum.
Berthing/Unberthing Times:

Month	*Berth/Unberthing*	*Time*
April-September	Berthing	0600 – 20000 hrs.
	Unberthing	0700 – 2100 hrs.
October/March	Berthing	0700 – 2000 hrs.
	Unberthing	0700 – 2100 hrs.

MAX. SIZE: 300,000 d.w.t. at SPM and 30,000 d.w.t. at Product Jetty

HEALTH:
1. Before proceeding to SPM, vessel must anchor at the Quarantine Station near Anchorage "A1" to obtain Free Pratique.
2. Master is required to complete Health Declaration when Officer boards the vessel on arrival.
3. Free Pratique is automatic when coming from another Korean port.
4. Quarantine inspection takes place during daylight.

RADIO: There is no radio station.

VHF: Daesan Port Control on Channel 16 one hour prior to arrival.

TUGS: 4 tugs available (2×3,600 h.p., 1×2,000 h.p. and 2×1,800 h.p.).

BERTHING:

Berth/Jetty		*Capacity* minimum (d.w.t.)	*Capacity* maximum (d.w.t.)	*Depth* (m.)	*Length* (m.)	*Remarks*
SGC Jetty	A	10,000	100,000	17.0	280.0	Petrochemicals
	B	1,000	10,000	10.0	140.0	Petrochemicals
	C	500	10,000	10.0	140.0	Petrochemicals
HPC Jetty	1	1,000	100,000	17.0	280.0	Petrochemicals
	2	600	10,000	10.0	140.0	Petrochemicals
HDO Jetty	1	500	3,000	7.0	130.0	Petroproducts
	2	400	5,000	7.0	140.0	Petroproducts
	3		400	5.0	90.0	New Extension
	4	1,000	20,000	11.0 (9.7)	215.0	(Low Water)
HDO-SBM			300,000	32.0		Crude Oil

CRANES: None.

BULK CARGO FACILITIES: None.

STEVEDORES: None.

BRIDGES: None.

MEDICAL: It is necessary for Agents to receive 24 hours advance notice of required medical attention.
Hospitals and dental facilities are available.
Inoculations and vaccinations can be carried out.

TANKERS:
Samsung General Chemicals Co.Ltd. (SGC):

Cargo		*Loading Arm* No.	*Loading Arm* Diameter (in.)	*Loading/ Discharging Rate* (cu.m./hr.)	*Shore Line* Diameter (in.)	*Shore Line* Distance (m.)
Jetty A:						
Butane	Liquid	1	6	400	10	1,750
	Vapour	1	3		8	
SM	Liquid	1	6	500	10	2,000
Naph (Gas Oil)		2	16	3,000	30	1,520
Jetty B:						
Naph		1	6	450	10	1,650
MEG		1	6	350	10	1,720
BZN		1	6	450	10	1,560
Butane	Liquid	1	6	400	10	1,720
	Vapour	1	3		8	
SM		1	6	500	10	2,000
Propylene	Liquid	1	6	450	10	1,660
	Vapour	1	4		8	
BD	Liquid	1	6	400	10	1,510
	Vapour	1	3		8	
Jetty C:						
Bunker C		1	10	660	14	1,390
Propylene	Liquid	1	6	450	10	1,760
	Vapour	1	4		10	
BD	Liquid	1	6	400	10	1,510
	Vapour	1	3		8	
Ethylene	Liquid	1	10	450	10	1,600
	Vapour	1	8		8	
SM		1	6	500	10	2,000
Butane	Liquid	1	6	400	10	1,720
	Vapour	1	3		8	

* N2 Purge: Available 2 lines (1,000 cu.m./hr., 4,000 cu.m./hr.) with variable connections of hose at Jetties A, B and C.
* Shore Ladder: Not available.
* Public Telephone: Available (phone card).

Hyundai Petrochemical Co. Ltd. (HPC):

Cargo		*Loading Arm* No.	*Loading Arm* Diameter (in.)	*Loading/ Discharging Rate* (cu.m./hr.)	*Shore Line* Diameter (in.)	*Shore Line* Distance (m.)
HPC-1 Jetty:						
VAM		1	6	200	8	
BZN		1	6	521	12	
SM		1	6	227	8	
MEG		1	6	243	8	all
Naph		2	16	2,750	30	4,000-5,000
Bunker C		1	8	483	18	
Gas		1	8	550	20	
Butane	Liquid	1	8	432	12	
	Vapour	1	4		10	
HPC-2 Jetty:						
SM		1	6	227	8	
MEG		1	6	243	8	
Gas Oil (RPG)		1	8	559	20	
BD	Liquid	1	8	430	10	
	Vapour	1	4		6	
Butene-1	Liquid	1	6	310	8	
	Vapour	1	3		6	all
ISO-BTN	Liquid	1	6	164	6	4,000-5,000
	Vapour	1	3		4	
Ethylene	Liquid	1	6	193	8	
	Vapour	1	3		10	
Propylene	Liquid	1	6	212	8	
	Vapour	1	3		10	
Octene-1,		1	6	260	8	
Hexene-1		1	6	194	8	

* N2 Purge: Not available.
* Shore Ladder: Not available.
* Public Telephone: Available (phone card).

Hyundai Oil Co.Ltd. (HDO):

Cargo		*Loading Arm* No.	*Loading Arm* Diameter (in.)	*Loading/ Discharging Rate* (cu.m./hr.)	*Shore Line* Diameter (in.)	*Shore Line* Distance (m.)
HDO-1 Jetty:						
RG, UG, PK		1	6	200	6	
HSD/LSD		1	6	200	6	
Propane	Liquid	1	6	450	8	
	Vapour	1	3		6	
Butane	Liquid	1	6	450	8	
	Vapour	1	3		6	
Sulfur		1	8	200	8	
HDO-2 Jetty:						
HSD/HSBC		1	6	500	6	all
JP-4		1	6		6	400-500
LSD/PN/DF-M		1	6	900	10	
UR/UG/RG		1	6		6	
HDO-3 Jetty:						
UG/PK		1	4	96	4	
HSD/LSD		1	4	96	4	
LBS		1	4	96	4	
HBS		1	4	96	6	
HDO-4 Jetty:						
DF-1/HSD/TN		1	6		6	
PK/PN/RN		1	12	750	10	
LSD		1	12	1,000	16	
HSBC		1	12		8	
AR		1	12		16	
JP-4		1	12		12	

* Shore Ladder: Not available.
* Public Telephone: Available (phone card).
* Naphtha Product Quantity: 15,000 bbls. daily, 450,000 bbls. monthly.
Also see "Shipmaster's Reports".

DENSITY: 1025.
FRESH WATER: Available by water barge only, but expensive.
FUEL: Available by bunker barge from Inchon.
FIRE PRECAUTIONS: No particular precautions.
CONSULS: None.
REPAIRS: No repair facilities.
DRY DOCKS: No dry docks.
SURVEYORS: SGS and Caleb Brett. Classification surveyors can be arranged from Inchon or Busan.
GANGWAY/DECK WATCHMEN: Not available.
CUSTOMS ALLOWANCES: Tobacco 1 carton. Spirits 1 bottle.
REPATRIATION: Crew changes and repatriation can be arranged.
AIRPORT: Kimpo International Airport (200 km., 4 hours by car).
TIME: Korean Standard Time is GMT plus 9 hours. There are no alterations during the year.
HOLIDAYS: 1st and 2nd January; 1st March; 5th April; 5th May; 6th June; 17th July; 15th August; 3rd October; 9th October; 25th December; 1st January (lunar calendar); 8th April (lunar calendar); 15th August (lunar calendar).
POLICE/AMBULANCE/FIRE: Seosan Police Station Tel: (0455) 6660118. Ambulance Tel: 119. Fire Station Tel: (0455) 650119.
EMERGENCY CO-ORDINATION CENTRE: No centre available.
TELEPHONES: Can be arranged via Agent (portable telephone).
SERVICES: All services available. Early notice before arrival should be given.
BANKS: Choheung Bank, 149 Daesan-ri Daesan-eub. Tel: (0455) 653682, 653683. Fax: (0455) 655708.
Sinhan Bank, 129-5 Daesan-ri, Daesan-eub. Tel: (0455) 655600. Fax: (0455) 640452.
SHIP SUPPLY SERVICE: Hanmi Supply Trading Co., 123-47 Dokgot-ri, Daesan-eub, Seosan-gun, Chungnam-do. Tel: (0455) 681-6770. Fax: (0455) 681-5034. Telex: K45560 Hanmi.
SHORE LEAVE: Allowed.
IDENTIFICATION CARD: Crew required to carry valid identification cards at all times.
REGULATIONS: No particular regulations.
DELAYS: VLCC: Berthing is done during daylight and on ebb tide. Unberthing is done at any time, except dense fog (vis. 0).
Product Carriers: Berthing is done on slack tide. Unberthing is done at any time, except dense fog.
DEVELOPMENTS: HDO (Hyundai Oil Refinery Co.Ltd.) SPM: Max. capacity has been upgraded from 250,000 d.w.t. to 300,000 d.w.t. since June 1994.

HDO Product Jetty: New jetty under construction (2 berths). One berth for 100,000 d.w.t. and one berth for 30,000 d.w.t. (See "Plan"). Expected date of completion 1996.

SHIPMASTER'S REPORT: October 1988 (Updated 1994).
Note: First vessel to call at Daesan S.B.M.

Pilot station for VLCCs proceeding to the SBM is located in the outer harbour of Daesan (Lat. 36° 51' 40" N., Long. 126° 08' 24" E.) in vicinity of 2 nautical miles South of Shin-do, where the Harbour Pilot boards to lead the vessel to Quarantine Station which is in the vicinity of 1 mile South of Kainso Lighthouse. Location of SBM is Lat. 37° 01' 46" N., Long. 126° 20' 50" E.

The vessel arrived at the pilot boarding area on October 13th and due to strong wind and rough sea the Pilot was unable to board. The anchor was dropped 4 nautical miles S.W. of Entrance Buoy No. 1 in a depth of 37 m., with good holding ground.

The Pilot boarded the next morning and the ship entered the buoyed channel approaching the SBM. The Pilot disembarked from the ship and the anchor was dropped at the same position as on arrival.

The Pilot boarded the ship the next morning and commenced approaching the SBM. When the vessel passed Buoy No. 1 a large number of fishing boats sailed from the shore and headed towards the vessel and within a short time stopped in front of the vessel very close to the bow. The vessel's engine was now on full astern in order to have her dead in the water. One man was on lookout forward as we were not able to see the fishing boats close to the bow from the bridge. The Pilot

advised me that an attempt to sail through the protesting fleet of fishing boats would have caused a serious and dangerous situation. Luckily they obstructed the vessel where the buoyed channel was wide and deep enough to turn around by her own power so again the vessel turned around, dropped off the Pilot and anchored 4 nautical miles S.W. of Buoy No. 1

October 16th was a Sunday and the Agent informed me that no berthing was possible on holidays and Sundays (1994: Berthing now possible on Sundays and holidays). He also informed the Agent to make sure the fairway was clear prior to lifting anchor and shifting to the SBM.

The Pilot boarded the vessel again on the morning of 17th October after receiving confirmation from the Agent that the fairway was clear. The vessel commenced shifting to the SBM and, this morning the buoyed fairway was clear.

En route to the SBM the vessel passed in the middle of the channel from Entrance Buoy No. 1 to the SBM. Navigational aids, lighted buoys, are located both sides of the channel.

After passing Kainso Lighthouse on the starboard side, the SBM can be seen 2 nautical miles ahead of the vessel.

Berthing at the SBM will take place from one to two hours before low water and approaching the buoy only from the West in a North Easterly direction. Distance from pilot boarding area to the SBM is 15 nautical miles.

As the SBM at Daesan is new, the Pilots had no experience in berthing in this area and no experience in SBM berthing.

The berthing, assisted by 2 large tugs, took longer than usual for SBM berthing, but without any difficulties.

There is only one mooring hawser from the SBM and the chafing chain was too short to reach the chain bow stopper so bollard strops and bow shackles were used as an alternative to secure the chafing chain. Two additional mooring ropes from the ship were connected to the SBM as one mooring hawser ws not considered to be safe due to a very strong current. I was told that a second mooring hawser and longer chafing chains will be fitted to the SBM in future. During mooring the Pilot was on the bridge and the Loading Master forward, to inform the Pilot and supervise the mooring (1994: SBM buoy has been replaced with a larger one in June 1990 and all mooring equipment fitted according to OCIMF recommendations).

Connecting of 2 × 16 in. floating hoses was carried out by shore workers. The hoses were connected to the ship's manifold by Camlock quick release system.

Whilst moored to the SBM one tug was on stand-by aft with a tug's line connected to the vessel. I believe the tug is necessary so as to keep the vessel clear of the SBM during the change of tide.

Maximum discharge rate was 6,000 tonnes p.h., but will later be increased to 8,000 tonnes p.h. Upon completion of discharge, the shore hoses were flushed with sea water for 30 minutes (1994: No need to flush with sea water, except after discharging waxy crude oil or just before dismantling cargo hoses).

The vessel unberthed without using tugs. The vessel commenced outward passage and the Pilot disembarked between Buoy No. 1 and Buoy No. 3.

At present there is no possibility for supply of food, fresh water, spare parts, etc. at this port (1994: Supply of provisions and spares is possible).

The SBM is operated by Hyundai Oil Co. Ltd., Daesan Refinery.

General information on the crude terminal (SBM):

The diameter of SBM is 12 m.
Maximum size of crude carrier is 300,000 d.w.t.
Minimum size of crude carrier is 30,000 d.w.t.
Depth (MLLW) is 30 m.
Bottom nature: Clay, sand with boulders.
Korean Charts HO No. 306, 307 and 353 cover the area from Buoy No. 1 to the SBM.

Information required by Daesan port prior arrival: ETA message to be sent at least 72 hours prior to arrival via Agent.

Quarantine Doctors boarded the vessel on completion of mooring and after inspection of the vessel, and gave Port Clearance for Customs and Immigration.

From the SBM to shore, to the Refinery, takes about 40 minutes by service boat. There is no housing in this part of the country apart from the Refinery and its related offices.

During normal conditions this new oil terminal is considered to be easy to approach and the weather is usually clear and fine.

As this was the first ship calling at this new port every operation took longer than usual, but I believe this is quite normal. The mooring, discharging and unmooring went on without any difficulties and with excellent co-operation between ship and shore.

SHIPMASTER'S REPORT: April 1989 (Updated 1994).
Location: Daesan is about 20 miles due South of Inchon pilot boarding area.
SBM: Position: Lat. 37° 1.8' N. Long. 126° 20.8' E. Light: Fl. (3) Y. 7 sec. Horn 30 sec.
Vessel: 155,000 d.w.t.
Documents:
2 copies Crew Effects List.
2 copies Bonded Stores List.
2 copies Stores List.
8 copies Crew List.
1 copy Maritime Declaration of Health.
1 copy Vaccination List.
2 copies Narcotics List.
2 copies Arms and Ammunition List.
Pilotage: Pilot boards VLCCs proceeding to the SBM 2 miles South of Sin Do or in position Lat. 36° 51.4' N., Long. 126° 8.24' E.
Restrictions: There are no restrictions. Depths not less than 30 m. at chart datum.
VHF: Pilot calls at Channels 16 or 15, working on Channel 12.
Berthing: Pilot boards about 2 hours before slack water at Uno Do in order to be at the SBM just after the tide has turned.

Vessel secures to buoy (SBM) with the aid of 2 tugs, one on each bow, using tugs lines. Vessel picks up mooring and secures to SBM with its chain on vessel's AKD Stopper.

When vessel is fast, one tug using tug's line makes fast aft and remains there until sailing time.

Cargo Operations: Hoses: 2 × 16 in. on port side.
Discharging Rate: Max. rate 50,000 bbls/hr.
Repatriation: No difficulties encountered. Seoul Airport is 4.5 hours by car.
General: Chart: B.A. Chart No. 1270.
Accommodation: Required for Mooring/Loading Master, Agent and Customs. If possible a rest room should be provided for up to 6 mooring personnel.

SHIPMASTER'S REPORT: March 1990 (Updated 1994).
Position: 37° 01.5' N., 126° 24.5' E.
Location: 30 miles South of Inchon.
Berth: Product Berth.

The port is under the jurisdiction of the port of Kunsan (Gunsan), some 60 miles further South.

Daesan is a newly developed industrial area, with amongst others an oil refinery. The refinery is operated by Hyundai Oil Company Ltd. The import (crude oil only) to the refinery is served by a SBM, which can accommodate the largest ships. About 30 ships call at the SBM each year, and the oil imports total about 40 million barrels per annum. All exports from the refinery are shipped through the jetty facilities. Water depths near the buoy and in the approaches are not less than 30 m.

Export of oil products is from a large jetty with 3 berths which can accommodate ships with a maximum length of 200 m. The jetty is a steel construction on steel pylons with concrete dolphins. The jetty runs in a 110° – 290° direction. A large catwalk connects the jetty with a 20 m. wide causeway. Each of the dolphins is fitted with 2 hydraulically operated steel quick release hooks and rope handling capstans. Steel wires are not permitted for mooring, due to the large tidal range which makes their handling almost impossible. All lines are handled by heaving lines and messengers. The least depth alongside is said to be 11.0 m.

During the approach and mooring, the vessel is assisted by 2 powerful tugs of the typical Japanese design. Both are identical 4,200 b.h.p. tugs, fitted with dual Schottel propulsion. Tugs lines are used from their bow with the 10 in. braided nylon ropes stowed onto the fore deck winch.

During the time the vessel is alongside, one of the tugs will remain alongside to cope with eventualities, caused by the large tidal range and strong tide of up to 4 knots.

The two dolphins on either side of the centre of each berth are fitted with 2 heavy wood lined fender boards, which extend from the dolphin tops to a few metres below water level.

Mooring is done with a fairly regular layout of 2 head/stern lines, 2 breast lines and 2 springs each end.

Vessels will dock heading into the tide, which means starboard side to on ebb and portside to on flood tide.

Berthing and unberthing is done during daylight only. Berth No. 4 is fitted with an approach control system with large digital readout, indicating separate values for bow and stern. The system however on this occasion was not used. No explanation was given whether it was operational or not. The larger ships use Berth No. 4. The maximum size handled so far is 35,000 d.w.t.

Each berth is fitted with 2×12 in. Chicksans. One is used for black product and ballast, the other for clean products. No confirmation could be obtained that shore lines were fitted with non-return valves, which could adversely affect clean product ships discharging ballast.

Products available are: Fuel Oils A, B and C, Gasoil, Kerosene, Unleaded, Premium and Regular Motor Gasolines, Naphtha, Solvent (TN), DF 1, JP4 and Jet A1. Loading rates are said to be 1,200 cu.m./hr. maximum.

Heavy Fuel Oils and fresh water are also available from the jetty. No information is available as to the grades of Heavy Fuel Oil and the rates, quality or price of fresh water.

Dirty ballast reception facility of 60,000 cu.m. All cargo ballast must be discharged to shore facility. Maximum back pressure allowed is 1.5 bar. Rates should be around 400 cu.m./hr., but only 225 cu.m./hr. was achieved. Segregated ballast may be discharged to sea after permission is granted by Loading Master. A document prepared by shore is to be signed, stating the amount of ballast water or slops that was actually pumped ashore.

There is no easy means of access to the shore. Use of ship's gangway is not recommended, due to the large tidal range and a shore gangway is not available. In way of the centre manifold, however, there is a steel stairway leading to the water level, which is used by all shore officials and personnel. We did not object to this situation, also because no permission is granted for shore leave. Even jetty access is denied by the police (1994: No restrictions on shore leave or jetty access).

The port lies in the Southern part of the delta where also the port of Inchon is situated.

The port as such is not indicated on the chart, but crude indication of the existence of a jetty is given on B.A. Chart No. 1270, Approaches to Inchon.

Initial approach is made using B.A. Chart No. 1258, Kyongnyolbi Yolto to Taechong Gundo.

Both B.A. Charts, although not part of the standard chart index, are absolutely required for a safe access to the port, and had to be supplied from the Japanese Admiralty Agent.

The approach channel is fairly wide and well marked with red and green light buoys of medium size. The paint is of the fluorescent type, which makes the buoys stand out even in the slight haze which was encountered. The lights on the buoys are not very strong and only switch on very late after sunset (1994: Lights on buoys are usually well maintained). Especially the channel entrance when lining up for the entry on a course of 039° must be given ample attention, as the tide sets in and out in a direction roughly parallel to the track, with maximum rates of about 5 knots.

Anchorage was obtained about 1 mile West of Kain So in a depth of 35 m. Vessel was brought up while heading into tidal stream of about 3 knots using 6 lengths of cable. Generally it can be said that ships will swing on their chains in a counter-clockwise direction with the turning of the tide. We experienced sudden quick veers halfway through the tides, but there was never any stress on the cable. The pilots claim that the tidal streams in this part of the channel never exceed 4 knots, which is confirmed by the information on B.A. Chart No. 1270.

Tides and currents all refer to Inchon (Standard Port). Generally HW and LW differences are +00.10 from Inchon. Off the jetty the tidal stream follows the direction of the channel with rates up to 3.5 knots, but there seem to be unpredictable sudden sets across.

Directions: B.A. Chart No. 1258, Kyongnyolbi Yolto to Taechong Gundo; and Korean Chart No. 306, An Do to Inchon Hang.

When approaching from the South, shape course to pass about 3 miles West of Ong Do Lt. (Racon Z), and about 3 miles East of Kadae Am Lt. (Racon X). Thence proceed to pass between the red and green buoys, marking the entrance of the channel just South of Sin Do, and about 5 miles South of An Do Lt. Once past the buoys steer 039° through the centre of the channel until passing Buoys No. 5 and No. 6, when course should be altered to 053°, proceeding up to a position between Buoy No. 7 and Kain So Lt., where the recommended anchorage is located.

As the tidal stream runs roughly parallel to the channel, only minor adjustments to ship's heading are necessary to allow for set.

From the anchorage steer 058° to pass between the SBM and Buoy No. 10. Thence continue on 070° and steer for the green Buoy No. 13. Speed should be reduced to about 3 knots. By this time tugs should have been engaged and ready for assisting. Thence alter course to starboard and steer around Buoy No. 12 until vessel is on a S.E.'ly course, and proceed slowly through the channel until off the jetty.

This channel has a least depth of 10.4 m., and is also used for anchorage by smaller vessels awaiting berth.

The two tugs will then assist in easing the vessel gently alongside.

The pilot vessel, which is a regular work boat, is fitted with VHF but the range is very small. Pilot communicates with tugs and pilot boat with handheld VHF radio. All communications were by telex via agents. The terminal is also equipped with VHF. Call local Agent on Channel 15.

Documents required:
- 5 Crew Lists.
- 3 Stores Lists.
- 3 Crew Personal Effects Lists.
- 1 Narcotics List.
- 1 Ports of Call List for last 90 days.
- 1 Arms and Ammunition List.
- 1 Vaccination List.
- 1 Passenger List.
- 1 Maritime Declaration of Health (Korean Form).

Vessel will be attended by Agents, Customs, Police and Quarantine Officers. All documents may be prepared on plain ships stationery.

Agents will try to help translate queries by other officers, who did not speak or understand English. All Seamen's Books will be checked against Crew List, and even minor differences in spelling are noticed and to be corrected, although differences between Seamen's Book and Passport entries are accepted. There is a minor sanitary inspection carried out by the Quarantine Officer, who specifically wants to inspect vegetable rooms. He will then make out a Korean version of the familiar Japanese Sanitary Certificate, where all quantities of the entries must be recorded. They are however not checked. Customs Officer will seal the bonded store, and will check the ship's narcotics. A Korean Health Form was presented and made out without any problem, and subsequently Free Pratique was granted as per special form.

Agents claim that Daesan is an "open port", and consequently no shore leave can be granted (1994: Shore leave granted). The nearest village seems to be 40 minutes drive away and the larger cities of Gunsan and Seoul, 2.5 hours and 4.5 hours drive respectively.

Only very limited quantities of vegetables and fruits are available from the local or nearby markets. Only cash payment is accepted, either Korean Won or U.S. Dollars (U.S.$ 1.0 = 810 Won (1994)). Quality of provisions was found to be excellent but prices rather high, because local market caters mainly for seasonal crops.

Problems: One of the major problems is that communication is very difficult. Only the agents had a minor working knowledge of English. Refinery and jetty personnel do not speak one single word of English, which proves particularly dangerous while handling cargo or in an emergency (1994: Some personnel can speak English). For reasons of safety, we kept a seaman on standby at the shore manifold to assist in conveying messages, and if need be to close the Chicksan valve during topping up. Suppliers personnel were very reluctant to sign letters of protest, mainly because nobody wants to accept any responsibility, and agents had to try to translate most of the wording before all were signed for receipt.

REPORT: October 1991.
Terminal: Samsung Terminal.
Position: Lat. 37° 00' 15" N., Long. 126° 20' 40" E.
Pilot Stations: Shindo Pilot Staton (not compulsory):
Lat. 36° 51' 40" N., Long. 126° 08' 24" E.
Gainseo Pilot Station (same as Quarantine Station):
Lat. 37° 00' N., Long. 126° 18' E.
Details of Samsung Jetty:

Jetty	*Length* (m.)	*LOA* (m.)	*Depth* (m.)	*Deadweight* tonnes
A	120	350	18.0	10,000 – 200,000
B	83	180	12.0	1,000 – 10,000
C	83	180	12.0	500 – 10,000

Products:

*Product**	*Jetty*	*Loading Arm* (in.)	*Rate* (t.p.h.)	*Remarks*
Naphtha/gas oil unloading arm	A	2 ×16	3,000	
LP Ethylene	C	1 × 6	450	Piggy back vapour return arm
Propylene	B/C	1 × 8	450	
Butadiene	B/C	2 × 8	400	
C4	A/B/C	2 × 8	40	
Benzene	C	2 × 8	450	
Meg	B	2 × 8	350	
Porolyss gasoline/ Naphtha	B	1 × 8	450	
Bunker C unloading arm	C	1 × 8	660	
SM/KB	A/B/C	3 × 8	500	

* Unloading arm unless otherwise stated.

SHIPMASTER'S REPORT: April 1992.
Documents:
- Clearance from last port of call.
- 6 copies Crew List.
- 3 copies Personal Effects List.
- 3 copies Stores List.
- 1 copy Narcotics List.
- 1 copy Passenger List.
- 1 copy No Arms and Ammunition List.

Note: Agent requires a new Crew List and Personal Effects List before departure, if new crew members have joined the vessel, stating names and personal effects of new crew members.

Pilotage: Pilot does not board for anchoring. Pilot boards for berthing and unberthing only. Pilot boards at the anchorage, after Free Pratique is granted. Pilot arrives with tug. Pilot launch also available.

Approaches: The approach channel to Daesan is narrow, however it is well marked by buoys and lights. We navigated in the approach channel during darkness only. Good radar identification from buoys, small islands (rocks) and adjacent coastline. Racons are present (refer to charts). There is plenty water in the buoyed channel (over 30 m.).

Anchorage: Agent advised vessel by telex to anchor in position Lat. 37° 01' N., Long. 126° 20' E. (approx. 1 mile West of SBM and1 mile of Samsung Terminal), in good holding ground.

Health: Radio Free Pratique is not granted, if vessel not in possession of Korean Sanitary Certificate.

Quarantine Officer and Agent board at the anchorage. No difficulties with documentation. No checks or inspections were made.

Berthing: Samsung Terminal (Alpha): Depth 18.0 m.

Two powerful tugs assisted (tug's lines). Approach control system, indicating separate values for bow and stern, operative.

Moorings: First 2 lines are springs by heaving lines.

Only one mooring boat available. It starts forward and afterwards moves aft to complete mooring.

Total lines: 3 lines, 3 breast lines and 2 springs at each end. Attention to be paid to position of ship's gangway due to change in height of tide.

Discharging (Naphtha): Chicksan arms, 16 in. connections (hydraulic clamps). Permitted back-pressure 9 bar. Max. rate 6,000 cu.m./hr. Length and diameter shoreline: 1.5 km. × 30 in. Labour available on jetty. Communication by means of ship's handy-talky.

Disconnecting and Unberthing: Disconnecting after discharge is possible on the falling tide, due to ship's freeboard.

Unberthing after sunset is possible, and took place approximately 1.5 hours before low water at Inchon, with assistance of 2 tugs.

Pilot disembarks off the jetty, when tugs are dismissed.

Shore Leave: Only if arranged via Agent. There is no transport organised by the Terminal and walking is prohibited.

General: Customs and Immigration: Board after vessel is alongside. Clearing is simple. Certificates were not checked. Bonded store was sealed by Customs.

Charts: B.A. Charts No. 1270, 913 and 1258.

Garbage Disposal: Not available.

Waste Oil Disposal: Cargo tank slops can be discharged by mixing with cargo. No other facilities available.

Seaman's Clubs: None.

Currency: Korean Won. U.S.$ 1.00 = 810 Won (August 1994).

AUTHORITY: Hyundai Oil Refinery Co.Ltd., 640-6, Daejook-ri, Daesan-eub, Seosan-gun, Chungchongnam-do, Korea. Postal address: Seosan-Kun Sanjeon, P.O.Box 10, Chungchongnam-do, Korea. *Tel:* (0455) 60-5114. *FAX:* (0455) 60-5118. *Contact:* Captain B.W. Won, Manager – Marine Affairs.

AGENT: Shilla Shipping Corp., Room 1201, Chung Dong Building, 15-5 Chung-Dong, Choong-Ku, Seoul, Korea. Tel: 82-2-778-9200. Mobile: 82-11-313-3256. Fax: 82-2-778-1915, 82-2-778-1916. Telex: K23130. Cables: Shilla Seoul.

DAIPORI (Daepo): 38.10 N. 128.36 E.

Vessels bound for Daipori to load iron ore must first call at Mukho for quarantine and customs clearance.

Pilotage from Mukho to Daipori, distance of 50 miles, is not compulsory, but recommended.

AGENT: See "Busan".

INCHON: 37.28 N. 126.37 E. (See Plan)

DOCUMENTS:
Arrival:
8 Crew Lists.
4 Cargo Manifests.
4 Stores Lists (Bond and shop).
4 Crew Customs Declaration.
4 Narcotics List.
4 Arms and Ammunitions List.
4 Ports of Call Lists (last 90 days).
Vaccination List.
2 Money Lists.
4 Passenger Lists (Marked "Nil").
Derat Certificate or exemption.

All the above lists are typed on ship's plain paper.

Coasting on Korean Coast: At each port after the first, one requires the same papers but only 2 copies of each, with the exception of the Crew List, of which 5 copies are required.

Vessels with hazardous cargo must complete application to carry hazardous cargo and an application for anchorage of hazardous cargo vessel.

PILOTAGE: There are 2 Pilot stations for entering Inchon (Tel: 883 8111/4): *Ando:* At the Ando Light 38 miles off Inchon, position Lat. 37° 03.9' N., Long. 126° 16.5' E. (good weather) and Lat. 37° 06.95' N., Long. 126° 19.6' E. (bad weather) located in entrance to channel approaching Inchon from the Yellow Sea. 48 hours advance notice to Agent required for vessels requesting to meet Pilot at Ando, customary boarding point for deep-draft vessels.

Palmido: Pilotage from Palmido to Inchon or Inchon to Palmido is compulsory. This Pilot Station is at Palmido Island and Light, 8 miles off Inchon, position Lat. 37° 21' N., Long. 126° 31' E.

ANCHORAGE: Anchorage is divided into 5 large areas according to cargoes of the vessels.
A 1 – 5 (Logs, pulp)
B 1 – 6 (Ships waiting for entry to the inner harbour)
B 7 – 10 (Oil tankers and ships unloading scrap. Coal)
C 1 – 8 (Small tankers, LPG ships)
D 1 – 3 (Logs)
E 1 – 5 (Ships waiting for entry to the inner harbour)

RESTRICTIONS: A peculiarity of Inchon Port is the wide tidal range, i.e. max. 30 ft. difference between the low and high tides. Because of the extreme tidal range in Inchon Harbour and the strong tidal currents which result, the importance of maintaining strict surveillance of the vessel's mooring lines is emphasised. In this regard, the ship's officers and crew must be diligent in the performance of their duties. All vessels to discharge or load commercial cargoes should invariably obtain prior permission for berthing/anchoring from the Inchon District Maritime and Port Authority at least 24 hours before arrival, then proceed to a nominated anchorage in the stream under direction of a compulsory Pilot.

Lock Particulars:

	For 50,000 d.w.t. Vessels	*For 10,000 d.w.t. Vessels*
Lock Chamber	1 base	1 base
Total length	381.0 m.	288.25 m.
Usable length to		
Inner gate	280.0 m.	183.00 m.
Outer gate	310.0 m.	208.00 m.
Width	36.0 m.	22.50 m.
Height	18.5 m. from sill	18.50 m. from sill
Height	19.0 m. from bottom	19.00 m. from bottom
Number of gates	3 sets	3 sets
Length of gates	38.0 m.	24.50 m.
Width of gates	8.3 m.	6.40 m.
Height of gate	18.5 m.	18.50 m.
Weight per gate	1,050 tons	590 tons
Time required for opening-closing	5 minutes	3 minutes

MAX. SIZE: Max. size 50,000 d.w.t. Max. LOA 302 m. Max. draft 13.0 m. Also see "Berthing" and "Tankers".

HEALTH: The Quarantine Anchorage is located outside the harbour in position Lat. 37° 22' 37" N., Long. 126° 32' 06" E. A vessel which sailed from an "Affected Zone" and not passed 10 days thereafter is compelled to receive 24 hours quarantine before entering the discharging anchorage. Quarantine is available only for the period from sunrise to sunset.

RADIO: Inchon Radio.

Call Sign	*Calling*	*Frequency* *Working*
6 MF3	MF 500 kHz	MF 512 kHz 520 kHz
or		
Inchon Harbour Control	VHF Channel 16	VHF Channel 12 Channel 14 Channel 20 Channel 22

TUGS: There are 17 tugs (1,000 h.p. – 3,200 h.p.). 2 – 3 tugs are required for each vessel.

All tugs are operated by private companies.

CRANES: 4 gantry cranes (35 ton class), 4 transtainers (30 ton class), 3 floating cranes (20 ton – 100 ton class), 101 land-based cranes (10 ton – 100 ton class).

BULK CARGO FACILITIES: No. 7 Pier is exclusively used for grain (Rate 800 t.p.h.) by 2 silo operators. Handling capacity is 4 million tons per year and storage capacity is 326,000 tons.

Taihan Bulk Terminal: Accommodates 2×50,000 d.w.t. vessels at dolphins. 2×700 t.p.h. pneumatic suction elevators at each berth. Storage capacity 138,000 tonnes.

BERTHING:

Pier No.	*Berth No.*	*Total Length (m.)*	*Depth (m.)*	*Capacity (d.w.t.)*	*Remarks*
1	11-13	964	8.0	4,500	Dry Cargo
	14-17		7.5	2,000	Dry Cargo
2	21-22	1,442	12.0	20,000	Dry/ Bulk Cargo
	23		12.0	30,000	
3	24-28	1,250	9.5	8,000	Bulk Cargo
	31-34		9.5	8,000	Steel and Heavy Cargo
	35-36		11.0	10,000	
	37		12.0	20,000	
4	41	1,160	12.0	10,000	Container Terminal and Bulk
	42		14.0	30,000	
	43		14.5	50,000	
	44		14.5	30,000	
	45		14.5	50,000	
5	51-52	604	14.0	50,000	Dry/Bulk Cargo
6	Under Development				
7	71-72	604	14.5	50,000	Grain Terminal
	73-74		14.5	50,000	
8	81-83		13.0	50,000	Scrap/Bulk

SPECIALISED CARGO HANDLING FACILITIES: No. 4 Pier (Berth Nos. 41-43 – (3 berths) – 625 m.; Berth No. 44 – 225 m. and Berth No. 45 – 310 m.) is used exclusively for containers. It has 2 container yards which are capable of storing 15,457 TEU. Ro-Ro ramp available.

STEVEDORES: There are 16 stevedoring companies with 105 fork-lifts and 17 cranes. Annual cargo handling capacity is 11,625,000 tonnes.

MEDICAL: Launch is provided in emergency call to evacuate sick men. Modernised hospital is available.

TANKERS: There are six private companies handling oil, LPG and liquids. Maximum quantity of LPG loaded in a single operation is 1,500 tons.

Kyung In Energy Co. Terminal:

Designed for 50,000 d.w.t. over 50 ft. depth at LW. The marine terminal is situated at Lat. 37° 30' 12" N., Long. 126° 36' 19" E. The face of the dolphin fendering system is on a bearing of approximately 347° true.

The vessel will be berthed alongside the main and secondary berthing dolphins with the vessel's hull against the fenders, which are an integral part of the dolphins. All the dolphins are equipped with electric capstans and quick-release mooring hooks. A navigation light and fog horn is located on the Southern Exterior Mooring Dolphin (Exterior Mooring Dolphin No. 1). A navigation light is also located on Exterior Mooring Dolphin No. 2 on the N. side of the terminal facilities. When a vessel of the 50,000 d.w.t. class is moored to the terminal, the bow and stern lines will perform the function of the breast lines. Therefore, the spring lines must be led out through the chocks on board which will provide sufficient leads ahead and astern to restrict the movement of the vessel along the face of the dolphins. In this regard, due consideration must be given to the rise and fall of the tide.

Loading Arms: There are 3 "Continental-Emsco" loading arms situated on the loading platform. The one to the extreme North and the middle one of the three are for the discharge of crude oil. Both are fitted with 16 in. swivel connections having 150 pound flanges. The loading arm to the extreme South is for the loading of naphtha and is fitted with a 12 in. 150 pound flange. The loading arms are designed for a working pressure of 100 p.s.i.

During the connecting and disconnecting of the loading arms to the vessel, the loading arms will be manipulated and positioned by shore personnel. During the period of time when the loading arms are connected to the vessel's manifold, they will be in the "float" position and will be self-adjusting.

General Information:

Under no circumstances should any member of the ship's crew activate or operate the controls for the loading arms. Authorised shore personnel will perform this function.

The "Continental-Emsco" loading arms will tolerate only a minimum amount of transverse movement by the vessel in either direction. In other words, the movement of the vessel along the face of the dolphins is restricted. For this reason, it is mandatory that the vessel be kept in position, and that the mooring lines be properly tended. It is the responsibility of the vessel to maintain sufficient deck crew on duty to properly tend the mooring lines, and to ensure that the vessel maintains proper position relative to the loading arms.

Discharging Crude Oil:

The distance from the loading platform to the tanks is approximately 2.2 km. (1.4 miles). A 30 in. block valve is situated near the location where the trestle joins the island causeway. Block valves are also installed in the pipeline system near the inlet to each of the crude oil storage tanks.

There are three crude oil storage tanks on Yul Do Island. Each has a capacity of 200,000 barrels. The tanks are 48 ft. in height with an overflow at 46 ft. There are no check valves in the crude oil pipeline system. Thus, the vessel must take precautions against back-filling due to head pressure on the system.

It may be necessary to discontinue the discharge of crude oil when changing from one tank to another ashore. The vessel will be given adequate notice for the stoppage of the ship's cargo pumps.

Ballast:

It is unlawful to discharge dirty or oily ballast water into the waters of Inchon Harbour. Severe penalties may be invoked against the vessel by the Republic of Korea in the event of pollution of harbour waters.

The centre loading arm provides a dual function. It is used for discharging ballast from the vessel as well as for the discharge of crude. The ballast flows through a 12 in. pipeline to the ballast storage tank on Yul Do Island. This tank has a capacity of 30,000 barrels, and is situated about 1.1 km. (0.68 miles) from the loading platform.

Loading Naphtha:

Naphtha is stored in two mainland storage tanks each of which has a capacity of 125,000 barrels. Three pumps provide the flow for shipping naphtha. Each pump has a capacity of 1,600 g.p.m. The pumps are on independent circuits. Thus, the loading rate of the naphtha can be governed by the number of pumps used.

The pipeline from the pumps to the loading platform is 18 in. and is reduced to 12 in. on the loading platform. A block valve is located in the 18 in. pipeline near the point where the island causeway joins the trestle. Another block valve is provided in the 12 in. pipeline on the loading platform.

The pumps which are used for shipping naphtha can be stopped from the Marine Terminal Loading Platform, but they must be started from the mainland. Under normal conditions the vessel's deck officer on watch should give the terminal personnel 10 minutes notice prior to requesting that the loading rate be reduced, and the same notification prior to the completion of loading. As previously stated, the pumps can be stopped from the loading platform in case of an emergency.

The approximate distance from the mainland naphtha storage tanks to the loading platform is 5.4 km. (3.35 miles).

Regulations:

1. A properly licensed deck officer is to be on duty at all times while a vessel is moored to the terminal. A sufficient number of crew members are to be on duty at all times to properly tend the mooring lines and ensure that the position of the vessel is maintained alongside of the dolphins.
2. Except in the case of an emergency, the deck officer on duty shall give the terminal personnel at least 10 minutes notice prior to changing the loading/discharge rate, and at least 10 minutes notice prior to the completion of loading or discharging.
3. Under no circumstances is the vessel's main propulsion engine to be disabled, or are any repairs to be undertaken while the vessel is moored to the marine terminal.
4. The vessel's fire-fighting equipment is to be kept ready for immediate use. A sufficient number of hoses shall be led out forward and aft to provide full deck coverage.
5. Lights must be provided by the vessel to illuminate the water area in the vicinity of the bow, stern and off-shore side.
6. Smoking will be permitted in such *Interior spaces* as may be designated by the vessel's Master. However, smoking will not be permitted on any open deck areas.
7. The loading of ship's stores and water will not be permitted during the time the vessel is moored to the marine terminal.
8. Tank cleaning and "Butterworthing" will not be permitted while the vessel is moored to the terminal.
9. Ullage hole screens are to be used at all times while ballasting and deballasting are in progress.
10. Galley ranges, unless electric, are not to be used while the vessel is loading naphtha.
11. Except for the period of time actually required for passengers to embark or disembark from a launch, no boats, launches, barges or vessels will be permitted to moor alongside a vessel which is berthed at the marine terminal.
12. Safety practices which are common to marine terminals on a world-wide basis will apply.

Honam Buoys: Lat. 37° 29' 00" N., Long. 126° 36' 03" E., draft acceptable 30 ft., at East side of A-3 Anchorage. This berth is the private facility of the Honam Oil Refinery Co. (joint company with Caltex) for discharge of their own petroleum products. Consisting of 4 mooring Buoys and sub-marine pipelines.

Union Oil Terminal: 42 ft. depth alongside. Berthing/unberthing in daytime slack water only.

Also see "Daesan" and "Shipmaster's Report" dated August 1992.

DENSITY: Varies between 1022 and 1024.

FRESH WATER: Can be supplied by lighter, max. quantity 500 tons.

FUEL: Available by barge only.

CONSULS: None locally. Many Consuls and Embassies in Seoul, 50 minutes by train from Inchon.

REPAIRS: Deck and engine repairs possible by Inchon Shipbuilding Company.

GANGWAY/DECK WATCHMEN: Ship security guard service is supplied by 2 companies.

OPENING/CLOSING HATCHES: Normally carried out by stevedores.

CUSTOMS ALLOWANCES: One carton cigarettes or 1 lb. of tobacco, and 1 bottle wine allowed, each man.

REPATRIATION: Facilities for crew changes or repatriation.

AIRPORT: Regular flights worldwide from new international airport.

HOLIDAYS: January 1st (New Year's Day); February 20th (Folklore Day, first day of first lunar month); March 1st (Independence Movement Day); April 5th (Arbor Day); May 5th (Children's Day); Buddha's Birthday (8th day of fourth lunar month); June 6th (Memorial Day); July 17th (Constitution Day); August 15th (Liberation Day); September (Thanksgiving Day, 15th day of eighth lunar month); October 1st (Armed Forces Day); October 3rd (National Foundation Day); October 9th (Korean Alphabet Day); December 25th (Christmas Day).

POLICE/FIRE/AMBULANCE: Police (883) 0011, Fire (882) 4069, Ambulance (73) 9000 (Inchon City Hospital).

TELEPHONES: Portable communication facility is available.

SHORE LEAVE: Launch service provided by 3 private companies.

IDENTIFICATION CARDS: Crew required to carry valid identification cards at all times.

ACCOMMODATION LADDER: Essential for Port Officials on entry. Also for tanker berth no access allowed through plant. Rig on port side.

DELAYS: Can be caused by bad weather.

GENERAL: Tide condition is critical, swift currents (high tide: 9 m. to 10 m.) special attention is required.

DEVELOPMENTS: Coal Terminal to be built in the outer harbour to accommodate vessels up to 100,000 d.w.t. Length of berth 240 m., depth 16 m.

NOTICES: Issued by The Inchon Maritime Police Station, Republic of Korea.

THE GUIDANCE FOR MARINE POLLUTION PREVENTION.

Welcome to Inchon Port.

Today, as an improvement has been remarkably made in the field of industries and marine transport traffic, there has been sudden increase in marine traffic, creating additional exposure to accidental spills.

Thereby, oil and other harmful waste from ships and off-shore facilities are being discharged into the ocean. Their effects are cumulative, the damage adds up year by year until it has reached a serious source of pollution.

As you see, oceans are a cradle of life and weather, a global store house of water and energy and wealth of nutritive and mineral resources.

Our nation, being conscious of the need to preserve the human environment in general and the marine environment in particular, desiring to achieve the complete elimination of the pollutants from the ocean for the protection of human health and property, has enacted the national marine pollution control law, stringently controlling the discharge of oil and waste from a ship or an off-shore facility.

I urge that you take to heart the following note of this guide that most of harmful pollution of shipboard origin is controllable.

This is your challenge; your success will be a victory for all of us.

Marine Pollution Prevention: Most spills from shipboard occur in port and at oil terminals during routine operations, such as cargo operations, bunkering, tank cleaning, bilge pumping and other operational functions, due to deliberate, negligent or accidental release of oil and harmful substances.

Prevention of Bilge Discharge: Prevent the mis-operation of valve by colour coding the related pipeline and post the bilge pipe arrangement in an easily seen place.

Make sure that all the unnecessary bilge pipeline valves are closed.

Use shore waste oil reception facilities when disposing of bilge water.

Prevention of Waste Pollution: Dumping of waste in the vicinity of the harbour area is prohibited.

Dispose of all waste material (trash, sewerage, impure water, etc.) to the stipulated area, according to the marine pollution control law.

Prevention Oil Spill Accidents during the Bunkering Operation: While bunkering, you must keep constant communication between the vessel and the oil barge, by means of radio or hand signals as appropriate, and also keep constant communication between the engine room and oil manifold, by means of ship's telephones.

Close all scuppers completely before starting bunker supply operations, to prevent oil spilling when the oil overflows at deck.

Put containers near air ventilators and pipe coupling flanges to receive leaking oil.

Take soundings at regular intervals.

Communicate to the supply side when the tank is close to a full condition in order not to let in air excessively.

Obligation of Report and Clean-up Response: In case of oil and waste material discharge or spill into the sea, immediately take emergency measures to prevent spreading of the discharged oil, to stop oil discharge and to remove the effluent. Report details of the incident without delay to the nearest Maritime Police as follows:

The date and place of oil spill accident.

The name of ship and off-shore facility.

The quantity and type of oil.

The situation of oil dispersion.

Penal Provisions: Any person who falls under any of the following categories shall be liable to Penal Servitude not exceeding 5 years or a fine not exceeding 50 million Won:

Spilling or discharging oil or waste from ship.

Not taking clean-up action when large amount of oil and waste spill does occur.

Refusing, impeding or evading orders and corrective measures, such as stopping the operation of, searching or detaining ships prescribed by the concerned authorities.

Fail to install the marine pollution prevention equipment or to operate in the normal condition.

Issued by Director General of Inchon Maritime and Port Authority.

PORT INFORMATION.

To: M/V ......

Dear Captain,

Very glad to see and welcome you and your crew members to the port of Inchon, Republic of Korea.

1. Please keep in your mind always attached "Port Regulation" which should be observed by National Law for preventing water pollution and protecting port facilities while your vessel is docked or/and at anchorage at Inchon port.
2. You might sometimes have sudden strong gusts without notice to weather condition at this port. Please have enough manning for duty watches while you stay here for preventing accidents on the ship.
3. While you stay dockside, please call 885-0313 Port Operations Division, if you have any requisitions and inconvenience.
4. When you wish to call outside, please pick up the ship's port telephone and dial telephone number (dial code 9 first and then telephone number).
5. If you want to call the ship from the city, please dial 400-7114 (port telephone) and ask operator for your ship. Please dial code 032 first when you are outside of Inchon.
6. When you need assistance and in case of emergency, please call your Agent or 885-0313 (Port Operations Division).

Issued by Director General of Inchon District Maritime and Port Authority.

IMPORTANT NOTICES.

We welcome your ship and your crew to our port.

The Republic of Korea is a participant of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto MARPOL '73/78 and your ship, while in this port, requires inspection by officials duly authorised by the Government of Korea, who are called Port State Control.

Port of Inchon within lock gate is a special area entirely closed by a lock gate due to the high tidal difference of sea and water within lock gate and has no self-clarifying capacity.

So your ship and your crew are strongly requested to observe the following in our port, to protect our port environment from pollution caused by large number of ships using our port and to provide you with a pleasant place.

1. Oil, oil-mixed liquid substances, sewage and garbage from ships should be cleared by the authorised agency. Please do not discharge these substances within the harbour limits.
2. When oil, oily mixture or noxious liquid substances are discharged, please take required emergency procedures immediately and inform Port Authority of the incident without hesitation.
3. Do not refuse, interrupt or evade the directions and/or orders relating to pollution control by the Port Authority.

Any violation of the above requirements is prohibited and stern sanctions will be given to the violators under the provisions of the Korean laws concerned.

Penalties can be an imprisonment of a maximum 5 years or a fine of 20,000,000 Won, as per ship/person.

SHIPMASTER'S REPORT: October 1986.

Pilot is quoted as being at Ando, as in Charterer's telexes, the actual Pilot Station is Chang-An-So, approximately 2.5 hours steaming to Inchon Anchorage. Pilot not compulsory, but unless vessel is a local trader, strongly recommend use of Pilot. Outside there is no draft problem, shallow patches to be avoided are well marked on charts.

Vessel anchored off Inchon Main Lock at 1930 hrs. on 10th October. Shortly after which 2 Berthing Pilots boarded. 4 tugs made fast, each bow and each quarter. There are strong currents. Lining-up for lock entrance not easy. Due to language it was not possible for Master to communicate with tugs. Max. draft for Inchon Lock, 12.5 m. at high tides and 12.2 m. at neap tides. Cleared lock and moved into container berth. Vessel berthed safely with no damage to or against vessel. All fast 2318 hrs. on 10th October.

Charterer's Agent attended vessel on arrival with Port Health for Pratique. At approximately 0900 hrs. next morning Customs, Immigration and other officials boarded and vessel was properly cleared. Inspection of ship followed. Accommodation spaces all found clear. Insects were found in holds in corn cargo so at 1100 hrs. was informed all but essential crew would be taken off for a day at 1400 hrs. for vessel to be fumigated. I remained on board with 2nd Officer, 3rd Engineer and 3 seamen. I requested to know what gas was being used and that some safety equipment be left on board. As only cargo space involved Charterers informed me, but not in writing, that they would bear all expenses.

Crew returned on board at 1400 hrs. on 12th October. Vessel still under fumigation. Crew then opened hatches. The actual fumigation was carried out in an efficient manner, but if something had gone wrong company would be responsible.

Discharge commenced 1905 hrs. on 12th October. Work is around the clock. But if a container ship comes in, the gantries are moved to her. Discharging also stops when it rains. There are 4 container gantries. All have grab facility, I noticed 40 tonne SWL on grabs.

The berth is well fendered, with adequate mooring bollards. Fresh water is supplied by barge. Medical facility appears to be good. Shore passes are issued and must be taken ashore. The guards at the dock gates are very strict. The dock system is large. No taxi or private car allowed in. This assists vessel to keep unauthorised people off ship.

Container berth also seems to discharge timber carriers and grain. The stevedore permanently on board, co-operated well with Chief Officer. Port Health came on board to renew Derat, no difficulties encountered.

SHIPMASTER'S REPORT: November 1989.

Vessel:

LOA	159 m.
Beam	22.85 m.
Type	Santa Fe 77.
G.R.T.	12,376 tons.
N.R.T.	8,369 tons.
D.W.T.	20,949 tonnes.
Cargo	15,730 tonnes of tapioca pellets in bulk.
Max. arrival draft	31 ft. 00 in.

Approaches: Pilot boarded about 1 mile off Changnanso Lighthouse in fair weather. No difficulties found when approaching, but much attention must be given to fishing boats and their fishing nets.

Both channels (inbound) East and (outbound) West, are well marked as on BA. Charts No. 1258 and 1270.

Inbound: Steaming about 3 hours from Changnanso Lighthouse (Pilot position) to Inchon anchorage with one Pilot only. Another Pilot used from the anchorage to lock and berthing.

Outbound: Only one Pilot used for unberthing, lockage and steaming in channel. Pilots are very good, co-operative and experienced.

Anchorage: The holding ground of Inchon anchorage is very good, even with strong currents. Waiting time at anchorage depends on berth congestion and fumigation. Port Authorities boarded at anchorage (Quarantine) for clearing the vessel. Accommodation and cargo inspection by quarantine officers. Cargo found without insects so no fumigation carried out. Very strict inspection of provisions, store rooms and galley. They are looking for cockroaches and rat excrement.

Boat service from anchorage to port is available but rates are very high.

Port: Outer Harbour: For tankers and dry cargo vessels with up-to-date loading/unloading facilities.

Inner Tidal Basin: For dry cargo vessels up to 50,000 d.w.t. and approximately 11 m. – 12 m. draft. All berths are well fendered.

Special attention must be given to standard port regulations in the tidal basin area as authorities are very strict on violators.

No chipping or painting permitted to the vessel's outer hull.

Tugs: 2 – 4 tugs used for berthing, unberthing and locking, depending on wind/weather, d.w.t. and draft of the vessel.

Lock: Special attention shall be given to the Safe Lockage Regulation and Inchon District Maritime and Port Authority Law No. 14, which is presented on arrival by the local Agents.

Actual tests to vessel's engines, steering gear, telegraphs, whistle, etc. must be carried out by the vessel prior to entering the lock.

All movable projections over vessel's side must be moved inboard and movable fenders are to be ready for use if necessary. Lock is well fendered.

For entering the lock, 3 tugs are used.

For safe lockage, trim and list (port/starboard) must be adjusted to proper conditions or as required by the authorities.

East side of the lock (tidal basin entrance) is under construction and large works are being carried out.

When entering the lock for mooring, use only polypropylene ropes (no wires) as they are easier for handling. Vessels are moored at the centre of the lock chamber.

Stevedores: Work round the clock and mostly use ship's gear. Bulk cargoes are discharged very quickly, rates from 2,000 tons – 3,000 tons per day, depending on number of gangs.

Fresh Water: Available by barge only, due to general repairs and renewal of piping system at the port. Cost is about U.S.$5.00 per ton.

Shore Passes: Crew members shall always carry their Passport or Seaman's Book and landing pass when going on shore leave.

Port Authorities are very strict, and in cases where landing passes are lost, heavy fines are imposed and have to be paid.

Density: Inner harbour tidal basin 1023.

Repatriation: Repatriation possible without difficulty. International connections are via Seoul which is 1.5 hours by car from Inchon.

SHIPMASTER'S REPORT: August 1992.

Kyung In Energy Co. Terminal:

Restrictions: Berth designed for 50,000 d.w.t. vessels, but now used regularly by 100,000 d.w.t. vessels, which makes mooring leads poor for vessels of our size. Breast lines were extremely short.

Vessels berth in daylight only on the first of the ebb, but can sail any time, usually planned for last of flood.

Present draft restriction in river is 12.0 m.

Pilotage: Vessels pick-up pilot at Chang So, enter using Eastern Channel, and depart using Western Channel.

SHIPMASTER'S REPORT: May 1995.

The Inchon Pilot Station is 410 – 425 nautical miles from Ulsan, depending on the route chosen. The outside route is preferred, if time is available, as less fishing traffic and gear are encountered. This is especially true in May through July when dense fog is common. The pilot station at Chang-anso (Lat. 37° 05.1' N., Long. 126° 17.6' E.) is 22 miles from Palmi-do Island and Inchon Harbour Limits. Hanwha Energy Dolphin No. 2 is 10 miles further North (Lat. 37° 30' N., Long. 126° 36' E.), past the locks to the inner harbour. One way traffic lanes lead in and out from pilot station to the port. However, lanes are often ignored, even by large ships.

The pilot station is approached by passing Chang-anso 0.5 miles to starboard (Pass halfway between light and 8 m. shoal 1.0 miles to N.W.). Avoid passing South of Chang-anso (due to fishing gear). Chang-anso Light has a Racon. Pilot will board between Chang-anso and Pu-do Island. Approach chart is Defense Mapping Agency Chart No. 95066. Good anchorage is available 3 – 4 miles W.S.W. from Chang-anso, if needed. Korean current table excerpts are available from the Agent in Ulsan or Yosu. Current and tide predictions for Inchon were very accurate.

Pilots are called on VHF Channel 16 and shift to Channel 10 working frequency. There is no pilot dispatcher. The Pilot contacted may be on an outbound ship and will coordinate your ETA with his. The boarding area gets crowded in the morning, as several ships are given same pilot time, and then at last moment delayed until Pilots coming out are available. Currents are very strong in pilot area (Up to 5 knots). Our pilot time was 0600 hrs., then changed to 0620 hrs. The Pilots encountered were competent and spoke better English than in Ulsan/Yosu. Pilotage is mandatory from Palmi-do, and recommended from Chang-anso. The port is officially open 24 hours, but in reality seems to stop from 0000 hrs. until 0400 hrs. The first Pilots inbound appear to be the Pilots taking the first ship out, leaving the port about 0400 hrs. Channel is narrow in places and busy, but well marked. Ships, coasters, tugs and fishing boats are numerous. Shallow areas are well marked on the charts.

Inchon Port Control is on VHF Channel 14. Inchon Radio (Marine Operator) is on VHF Channels 25, 26 and 27. Collect calls are easy and quick.

Anchorages for awaiting berth or for bunkering are numerous, with good holding ground, but very crowded.

Hanwha Energy Dolphin No. 2 is North of main port and locks (See "Plans"). Water depth is 14.0 m. alongside with good manoeuvring room. The berth can take ships up to 220 m. length and 50,000 tonnes d.w.t. We went starboard side to, but I believe port side to would provide better tie-up. Terminal is modern and well run. Dock personnel are very rigid and skeptical of ship's ideas regarding mooring and cargo transfer. Dock requires 3 head lines, 2 breast or short springs, 2 long springs forward and the same aft. A line boat runs head and stern lines. Tides ranged close to 30 ft., but currents did not exceed 3 knots. Two large tractor tugs assisted in docking. There appears to be no restrictions on when to dock or undock. Slack high water is preferred, but not required. Discharge rate was 385 tonnes/hr. at 7.5 kg. manifold pressure. Total discharged was 10,000 tonnes. Disconnect time was 1 hour, using a combination of hot gas and water hoses. Two former ship's captains were in charge of docking and cargo operations on the dock. A ship's radio was lent to one of the captains during cargo transfer. The dock loading arm connection was 8 in., but with 300 ASA flange. They were able to connect to our 8 in. 150 ASA flange with a series of reducers including reducing to 6 in. This did not appear to reduce the discharge rate.

Shore leave is by launch only. No access to the Terminal is available, except a gangway lowered for Terminal personnel.

Port officials were on the ship for less than 10 minutes.

Bunkers are taken at anchor. It took about 4 hours for 6,700 barrels. The Agents were polite, but not very helpful. I informed them at 0900 hrs. that we would be ready to shift to anchor at 1530 hrs. They said o.k., but later informed me that after talking to the Terminal, the shift was posted for 1800 hrs. As it turned out, the port was closed due to dense fog in the afternoon anyway, but they certainly listened more to the Terminal than to us. The Pilot boarded at 1842 hrs. When I tried to contact the agency during the afternoon to confirm the bunkering, his office telephones did not answer. I also requested a surveyor for the bunkering operation. When the surveyour did not show up, the Agent said he had cancelled him, because he did not think it was important. He may be right as we had no dispute over the bunker amount. However, this is not always the case. I think I impressed on him the need for good communications.

The sailing time was set for 0300 hrs., when the first Pilot would be available. He boarded at 0409 hrs., so they are not big on punctuality. However, once on board, they were very good. The Pilot leaves between Buoy No. 1 and Poran-do, about 15 miles from Palmi-do. Coasters, fishing boats, buoys and nets are plentiful outbound for several hours.

AUTHORITY: Inchon District Maritime and Port Authority, 1-17 Hangdang 7-ga, Jung-gu, Inchon, Republic of Korea. *Tel:* (032) 883-4061. *Telex:* K23380 Idmapa. *Contact:* Kyu Jin Whang, Director General.

AGENT: Shilla Shipping Corp., Room 1201, Chung Dong Building, 15-5 Chung-Dong, Choong-Ku, Seoul, Korea. Tel: 82-2-778-9200. Mobile: 82-11-313-3256. Fax: 82-2-778-1915, 82-2-778-1916. Telex: K23130. Cables: Shilla Seoul.

KUNSAN (including Changhang): 35.55 N. 126.45 E.

The Port of Kunsan is situated on the Southern mouth of the Kum River which flows into the Yellow Sea, and North Changhang.

DOCUMENTS:

6 copies Report (Entry/Departure).
6 copies Crew List.
6 copies Passenger List.
2 copies Crew Personal Effects List.
3 copies Passenger Luggage List.
2 copies Store List.
9 copies Manifest (Dis./Loading) only.

NOTICES: All vessels bound for Korean ports should give an ETA to the local Agents 27 hours prior arrival. This is essential to enable the Agents to notify the Port Authorities and arrange Pilot if necessary.

RESTRICTIONS: Vessels should enter during daylight hours only. Many small Korean fishing and cargo boats in this area display dim navigation lights or none at all at night. Pilot is not compulsory but all vessels calling at this port recommended employ a Pilot in view of the hazardous channel and tidal difficulties. Controlling depth 8 ft. at Bar. Keel clearance of 2 ft. required.

PILOTAGE: The Pilot Station is situated at the Southern side of Piun Do (Hiyo To) Island the correct position of which is at Lat. 35° 56′ N., Long. 126° 27′ E.

The boarding point near Piun Do is about 14 miles from Kunsan. Pilot to be ordered at least 24 hours in advance. Pilots cannot board in rough weather. Due to constantly changing bottom conditions, vessel should not attempt to enter without Pilot.

ANCHORAGE: Outer anchorage about 5.5 miles West of Kunsan for vessels drawing up to 28 ft.

Inner anchorage off Kunsan suitable for vessels of 21 ft. draft.

MAX. SIZE: Draft 18 ft. to 27 ft. dependent on height of tide.

RADIO: Kunsan Radio, call sign HLN operating on 500 and 484 kHz.

TUGS: 5 tugs with respective capacity of 300 h.p. (1) 150 h.p. (2) and 80 h.p. (2) are available. 1 floating crane with capacity of 30 tons owned and managed by the Korea Dredging Corp. is available.

BERTHING: The port is controlled by Kunsan District Marine Bureau and all vessels come under jurisdiction of Kunsan Custom House. The anchorages in stream inner harbour can accommodate 1 or 2 vessels less than 1,000 gross tons, and outer anchorage (Yubudo Anchorage) accommodates 1 ocean-going vessel drawing about 28 ft. There are 5 pontoon piers (3 for Kunsan and 2 for Changhang) each of which can accommodate an ocean-going vessel with maximum draft of 27 ft.

STEVEDORES: There is 1 stevedoring company with 14 wooden barges, 3 steel barges and 3 tug boats. Discharging capacities: average records per day of 24 hours: coal 1,500 tons; grain and wheat 1,600 tons; fertilizer 1,300 – 1,400 tons; cement 1,000 – 1,100 tons; lauan log 500,000 B/F. Daytime only.

MEDICAL: Crew members should be in possession of health certificate showing vaccinations for typhoid. In case health certificate has expired, the person(s) will be vaccinated/inoculated by a quarantine doctor.

CURFEW: In Korea the curfew is still effective from midnight to 0400 hrs. every day.

HOLIDAYS: Public Holidays – New Year (January 1-3); Independence Movement Day (March 1); Labour Day (March 10); Arbor Day (April 5); Memorial Day (June 6); Constitution Day (July 17); Liberation Day (August 15); Nation's Foundation Day (October 3); National Alphabet Day (October 9); United Nations Day (October 24); Christmas Day (December 25). (Can be worked if requested.)

Local Holidays. Work cannot be carried out on Lunar New Year's Day and the Moon Festival, about 15th August.

SHORE LEAVE: Crew shore passes will be issued by Port Immigration Office.

DEVELOPMENTS: Major developments underway.

AUTHORITY: Kunsan District Maritime and Port Authority. *Tel:* (0654) 3 4131/4. *Telex:* K66666 Gsdmpa.

AGENT: Shilla Shipping Corp., Room 1201, Chung Dong Building, 15-5 Chung-Dong, Choong-Ku, Seoul, Korea. Tel: 82-2-778-9200. Mobile: 82-11-313-3256. Fax: 82-2-778-1915, 82-2-778-1916. Telex: K23130. Cables: Shilla Seoul.

MASAN: 35.11 N. 128.35 E.

PORT LIMITS: *Port Boundary:* 35° 09′ North.

Arrived ship: A vessel is considered as "arrived" when in the Quarantine Anchorage.

Laytime: (Subject to Charter Party). Generally commences at 0800 hrs. if Notice of Readiness tendered p.m. day before and 1300 hrs. if tendered a.m. day of arrival.

DOCUMENTS:

11 copies of Crew Lists (inward and outward).
3 copies of Personal Effects.
3 copies of Stores List.
3 copies of Bonded Stores Lists.
11 copies of Passenger Lists.
3 copies of Narcotics Lists.
3 copies of Arms and Ammunition Lists.
4 copies of Manifests (entry clearance only, excluding manifest for consignee, stevedore, checker's firm and other related firms)
2 copies of Bill of Lading.
5 copies of Entry Report (only entry clearance).
Ship's Certificates and Seaman's Books or Passports.

PILOTAGE: Kaduk Pilot Station: Lat. 35° 02′ N., Long. 128° 47′ E. ETA required 24 hours prior to arrival. (Tel: 2-9225).

Two pilot boats "An Se" and "Be Yun". VHF to be installed in pilot boats.

At the present time contact with Pilot made through Agent or Masan Harbour Control on VHF. Vessels to display usual pilot signals.

In case of bad weather vessels wait for Pilot at the Pilot Station.

ANCHORAGE: Mooring capacity at anchorages: A-1, A-2, A-3 Depth 30 ft.; A-4, A-5, A-6 Depth 24 ft.; A-7, A-8 Depth 23 ft. Quarantine Station Depth 36 ft.

RESTRICTIONS: Should take Pilot's guidance as a Korean Navy base is located very close to Masan port.

MAX. SIZE: 20,000 d.w.t. LOA 210 m. Max. draft 11.0 m.

HEALTH: Crew members should be in possession of health certificate showing vaccination for typhoid. If the health certificate has expired, the person(s) will be vaccinated/inoculated by a Masan National Quarantine Doctor.

RADIO: Seoul Radio.

VHF: VHF at Masan District Maritime and Port Authority (Call "Masan Harbour Control").

RADAR: None.

TUGS: Two tugs, "Chung Ryong" (Government owned) 1,000 h.p. and "Yong Ma" (Private) 2,000 h.p. Generally, ship's lines used and tugs join vessel at Quarantine Anchorage.

BERTHING:

	Depth (m.)	*Length* (m.)	*Max. Size*	*No. of Berths*
Pier No. 1	8.0	445	8,000	2
Pier No. 2	5.0	385	500	2
Pier No. 3	11.0	210	20,000	1
	11.0	210	20,000	1
Pier No. 4	11.0	1,050	20,000	5
Dolphin	7.0	88	5,000	1
KHIK	11.0	240	20,000	1
Yukong	7.0	100	3,000	1

CRANES: Cranes with capacity 40 – 60 tons expected to be installed at Chang Won Pier. Cargo operation is generally by ship's own gear.

BULK CARGO FACILITIES: There are two bulk cargo piers (Nos. 1 and 3), average discharge rate is 1,500 – 1,800 tons (0800 hrs. – 2100 hrs.) a day, and sulphur is generally discharged at port of Chinhae, where there is a chemical firm.

Length of pier: 210 m. Depth (low tide) 11 m. and one gantry crane (capacity 6 tons bucket) discharging rate is approximately 5,000 tonnes a day (24 hours).

SPECIAL CARGO HANDLING FACILITIES: None.

BRIDGES: None.

STEVEDORES: Advise stevedores number of hatches, number of derricks and capacity, and supply stowage plan on arrival.

Average Discharging Rate by Commodities: (0800 – 2100 hrs.).

Coal	1,500 tonnes
Grain	1,500 tonnes
Wire Rods	700 tonnes
General Cargo	700 tonnes
Others	600 tonnes

MEDICAL: Masan National Quarantine Office is responsible for any matters relating to vaccinations. Master should prepare a medical report form for patients visiting Masan hospital.

TANKERS: No facilities (Transhipment if any, carried out by lighters).

FRESH WATER: Available at Masan.

FUEL: Available by grades.

FIRE PRECAUTIONS: One fire boat stands by 24 hours a day at Central Pier.

CONSULS: None.

REPAIRS: Available anytime (two companies).
DRY DOCKS: 3 minor dry docks.
SURVEYORS: Various survey firms located at Masan, but not Lloyd's or ABS.
HATCHES: Generally, first opening and last closing is by ship's crew and others by stevedores.
GANGWAY/DECK WATCHMAN: Available at Masan.
CUSTOMS ALLOWANCES: Daily consumption quantity only.
CARGO GEAR: Using of cargo gear (utilisation) depends on negotiation.
REPATRIATION: Possible. Application for transferring and reason required. Agent's guarantee letter (for Crew) also required.
AIRPORT: Kimhae Airport: 70 km. from Masan. Kimpo Airport: 436 km. from Masan. Regular services.
POLICE/AMBULANCE/FIRE: Telephone Numbers:
Police (Foreign Section) 2-1206; Fire 2-1334; Ambulance 2-1151.
HOLIDAYS: New Year's Day (January 1st); New Year's Day (by Lunar calendar) (January 1st), Independence Movement Day (March 1st); Labour Day (March 10th); Arbor Day (April 5th); Buddha's Birthday (Lunar calendar) (April 8th); Children's Day (May 5th); Memorial Day (June 6th); Constitution Day (July 17th); Independence Day (August 15th); Armed Forces Day (October 1st); National Foundation Day (October 3rd); National Alphabet Day (October 9th); Christmas Day (December 25th).

Cargo operations on the above days depend on negotiations.
TELEPHONE: Not available on board vessels.
SERVICES: Security guard, garbage disposal, line handling, shoring, launch, laundry and provision supply available at Masan.
SHORE LEAVE: Crew shore pass issued by Immigration and has to be extended every 120 hours.
IDENTIFICATION CARDS: Shore pass available from Immigration.
DELAYS: There are no delays for berthing or bunkering.
GENERAL: ETA to authorities concerned no later than 24 hours before arrival.
DEVELOPMENTS: A large container yard to be built.
AUTHORITY: Masan District Maritime & Port Authority. *Tel:* (0551) 31176. *Telex:* K53676 Msdmapa.

AGENT: Shilla Shipping Corp., Room 1201, Chung Dong Building, 15-5 Chung-Dong, Choong-Ku, Seoul, Korea. Tel: 82-2-778-9200. Mobile: 82-11-313-3256. Fax: 82-2-778-1915, 82-2-778-1916. Telex: K23130. Cables: Shilla Seoul.

MOKPO (Mogpo): 34.46 N. 126.24 E. (See Plan)

PORT LIMITS: A vessel is an "arrived ship" when within the harbour.
DOCUMENTS:
6 copies Report (Entry/Dèparture).
10 copies Crew List.
6 copies Passenger List.
3 copies Crew Personal Effects List.
3 copies Passenger Luggage List.
3 copies Stores List.
3 copies Arms, Ammunition and Explosives List.
3 copies Narcotics List.
9 copies Manifest (Dis./Loading only).
PILOTAGE: Pilots stationed at Kasado Island, 34° 27' N. 126° 04' E. 30 miles from Mokpo (Tel: 631-78-8473). 24 hours notice to Agent required to arrange Pilot. Although not compulsory, vessels strongly recommended not to enter without Pilot as there is a 9 m. shoal patch at Talipakji (Tallibakchi). Pilot boat is painted white with "Pilot" on both sides.

Pilot also available at Pulmugido (Bull Muu Key Do) Station, 34° 44' 24" N., 126° 14' 24" E., Daenorogdo (De No Lock Do) Station, 35° 07' 30" N., 126° 00' 00" E., and Oryongdo (O Long Do) Station, 34° 18' 18" N., 126° 27' 12" E.

One pilot available day and night.

All vessels bound for Korean ports should give an ETA to the local Agents 24 hours prior to arrival. This is essential to enable the Agents to notify the Port Authorities and arrange a Pilot if necessary.
APPROACHES: Vessels should keep clear of 1.3 m. depth (rock) in vicinity of Shihado Lighthouse which is marked by a buoy in position Lat. 34° 41' 30" N., Long. 126° 13' 35" E.

The "Wooden Wreck 1950" in position Lat. 34° 41' 58" N., Long. 126° 14' E. has rotted away and is no longer a danger to navigation.

The Entrance Channel is 570 m. wide and has a depth of 25.0 m. Strong currents can be expected, especially during spring and ebb tide, and can reach max. 8 knots. Turning point to Tallipakchi (Quarantine Anchorage) is 200 m. wide and 9.5 m. depth at L.W.

Also see "Pilotage".
ANCHORAGES: *Quarantine Anchorage:* In the position Lat. 34° 45' 10" N., Long. 126° 20' 17" E. in the Outer Harbour, outside harbour limits.
Anchorages: No. 1, 2 and 3 are for waiting (No. 1 and 2 for 10,000 d.w.t., and No. 3 for 30,000 d.w.t.). No. 4 and 5 for discharging whilst at anchor (for 30,000 d.w.t), and No. 6 for discharging and waiting for 10,000 d.w.t. Note: There are 6 anchorages in the Inner Harbour for sheltering in bad weather. No. 1 to No. 6 are for ocean-going vessels, 10.0 m. – 24.0 m. and for 10,000 g.r.t. – 40,000 g.r.t. Pay special attention at Anchorages No. 1 to No. 5 to under water cables and at No. 1 to strong currents. Pilot will assist in this matter.
RESTRICTIONS: *Overhead Cable:* There is an overhead cable at Mokpo-Gu in position Lat. 34° 45' 18' N., Long. 126° 18' 40" E., clearance is 59 m.
MAX. SIZE: Vessels of 45,000 d.w.t., LOA 230 m. and max. draft 12.0 m. can be accommodated in the Inner anchorage. Max. size at berth 38,000 d.w.t.

RADIO: Mokpo Radio – Call Sign "HLM".
M/F: 500, working 512 and 520 kHz.
SSB: 2183.4, working 1881.4 kHz.
VHF: Channel 16, work on Channels 12, 14, 20 and 22.
VHF: Pilots on Channels 12 and 16. Port Control on Channels 16 and 14.
TUGS: 1×2,000 h.p. tug stationed at Mokpo.

Vessels of 12,000 d.w.t. – 30,000 d.w.t. are required to use tug of 3,000 h.p. or more for berthing and unberthing, so an additional tug of 2,000 h.p. has to be hired from Kunsan (122 miles from Mokpo) at a cost of U.S.$ 6,500 for the round trip.
BERTHING:

Berth No.	*Length (m.)*	*Depth (L.W.) (m.)*	*Depth (Neaps) (m.)*	*Remarks*
11	168	8.4	9.5	Max. size 30,000 d.w.t. Ship's gear used.
12	250	10.5	11.5	Max. size 30,000 d.w.t. 1 level luffing crane for coal and logs.
13	240	10.5	11.5	Max. size 10,000 d.w.t. Ship's gear used.
14	180	–	–	Max. size 5,000 d.w.t. Ship's gear used.

Remarks: Usable length at Berth No. 12 is 230 m. and at Berth No. 13 200 m., as the pneumatic suction conveyor is sited at the berth. The discharging rate of level luffing crane is 450 t.p.h. (working hours 0800 hrs. – 2200 hrs.).
STEVEDORES: There are 3 general stevedores and one exclusive stevedore (Han Kook Flour Mills Industries Co. Ltd.).

1. Korea Express Co. Ltd.: 2 payloaders and 12 trucks (10 tons – 15 tons).
2. Dong-A Transport Co.: 2 mobile cranes (30 tons – 80 tons) and 2 payloaders.
3. Daijin Corp.: 10 mobile cranes (25 tons – 60 tons), 1 payloader, 2 forklifts, 3 trailers and 10 trucks (15 tons).
4. Han Kook Flour Mills Industries Co. Ltd.: Handle their own wheat in bulk only. 6 steel barges (total capacity 1,500 tons), 1×370 h.p. tug and 1 silo of 24,800 tons capacity. They also operate a pneumatic suction conveyor at Pier No. 13. Ships are unloaded into barges by ship's gear at Anchorage No. 5 which is 400 m. from the quay.

Cargo Handling Rates:

Cargo	*Daily Discharge Rate*	*Working Hours*	*Location (Pier)*	*Receiver*
Coal (anthracite)	6,000 tons	0800 – 2200	12	Dai Han Corp.
Coal (steam)	6,000 tons	0800 – 2200	12	Koryo Cement
American Logs	850,000 board ft.	0800 – 1800	12 13	Various companies.
New Zealand Logs	2,200 cu.m.	0800 – 1800	12 13	Various companies.
Chilean Logs	2,500 cu.m.	0800 – 1800	12 13	Sammi/Hyosung
Yellow Maize	1,300 tons	0800 – 1800	11	Samyangsa
U.S. Wheat	2,100 tons	0800 – 1800	Anchorage No. 5	Han Kook
Butanol/DOP	300 tons	0800 – 2200	11 13	Lucky Goldstar (Export)

Note: Night shift labour not available due to labour shortage.

Delays can be expected when wheat vessels and yellow maize vessel in port at the same time.
Discharge Rate: Grain and coal 4,000 tons/day, logs 2,000 tons(cu.m.)/day.
Working Hours (Gang Hour): 0800 hrs. – 1200 hrs., 1300 hrs. - 1800 hrs. No work on holidays and at night.
Cranes: Max. SWL 90 tons crane and various smaller cranes are available (owned by stevedoring companies). Level luffing crane is sited at the Wharf No. 12 (max. SWL 12.5 tonnes), for discharging coal 400 t.p.h.
MEDICAL: Hospital and Dentist available. Crew members should be in possession of Health Certificate showing vaccinations for typhoid. In case the Health Certificate has expired, the person(s) will be vaccinated/inoculated by a quarantine doctor.
TANKERS: Facilities for domestic vessels only.
FRESH WATER: A 50 ton barge can supply 100 tons a day. No pipelines on quay. 24 hours notice required. Cost U.S.$ 4.50 per ton.
FUEL: Duty free bunkers not available in Mokpo. Bunkers are supplied from Yosu, with 5 days notice to main Agent in Seoul.
DRY DOCKS/REPAIRS: Shipyard: Il Heung Shipbuilding Co.Ltd. (Tel: (631) 442411, 449531. Fax: (631) 449532) has a 1,000 d.w.t. class slipway, and Kwang Yang Shipbuilding Co.Ltd. (Tel: (631) 776111-4. Fax: (631) 770615) can build 5,000 g.r.t. ships, and has 4,000 g.r.t. class slipway, and can repair and build all kinds of ships.
SURVEYORS: Komsa and Kimsco.
AIRPORT: Domestic airline service (connected to Kimpo International Airport) is available at Mokpo Airport and Kwang-Ju Airport.
TIME: GMT plus 9 hours (no changes).
HOLIDAYS: Public Holidays; New Year (January 1st-3rd); Independence Movement Day (March 1st); Arbor Day (April 5th); Korea Veteran's Day (June 6th); Constitution Day (July 17th); Liberation Day (August 15th); Nation's Foundation Day (October 3rd); Korea Thanksgiving Day (varies – 3 days); Christmas Day (December 25th). Work can be arranged on all above holidays. Local Holidays; No work can be done on Lunar New Year or on the Moon Festival about August 15th.
SHORE LEAVE: Crew shore passes will be issued by Port Immigration Office. Shore Passes should be made for 5 days and can be extended.
GARBAGE DISPOSAL: Collection service is available. Skips are provided to the ship by disposal company. Tel: (0631) 42-6742. Fax: (0631) 42-4405. Collection time: Every 2 or 3 days if skips are full.
WASTE OIL DISPOSAL: Collection service is not available as there are no shore tanks, barges or tanker trucks.

SEAMAN'S CLUBS: No Seaman's Club available. Facilities available in the port: Shops, international telephone service, church services, minibus, postage facilities, games, indoor swimming pool, etc.

SERVICES: Seawoon Shipping Services Inc. (See "Agent") can arrange for crew repatriation, urgent fresh water supply, cranes, crew medicals/ambulance, ship's supply services, renewing Derat Certificate, Banks, crew shore leave, Maritime Rescue boat, etc., including urgent Agency assistance.

BANKS: Korea Exchange Bank. Tel: (0631) 72-8301. Fax: (0631) 74-3581.

Seoul Trust Bank. Tel: (0631) 42-4461. Fax: (0631) 42-4464.

Kwangju Bank. Tel: (0631) 42-5102. Fax: (0631) 43-6564.

AUTHORITY: Mokpo District Maritime and Port Authority, 80-7 Samhak-Do, Sanjong-Dong, Mokpo City, Chonnam, Korea. (530-350). *Tel:* (0631) 42-1301. *Telex:* K 66767 MPOSMPA. *FAX:* (0631) 43-1307. *Cables:* MPOSMPA Mokpo. *Contact:* Joo Jae Hwan, Port Director. Won-Myung Kim, Harbour Master. Kyu-Sang Choi, Port Manager. Captain I.C. Jung, Pilot.

AGENT: Shilla Shipping Corp., Room 1201, Chung Dong Building, 15-5 Chung-Dong, Choong-Ku, Seoul, Korea. Tel: 82-2-778-9200. Mobile: 82-11-313-3256. Fax: 82-2-778-1915, 82-2-778-1916. Telex: K23130. Cables: Shilla Seoul.

MUKHO: 37.33 N. 129.07 E. (See Plan)

PORT LIMITS: The port limit is established by lines joining the following points:

A. Lat. 37° 33' 12" N., Long. 129° 07' 25" E.
B. Lat. 37° 33' 12" N., Long. 129° 08' 12" E.
C. Lat. 37° 32' 00" N., Long. 129° 08' 23" E.
D. Lat. 37° 32' 00" N., Long. 129° 07' 02" E.

DOCUMENTS:

6 Crew Lists.
6 Passenger Lists (In case of any passenger aboard).
3 Stores Lists.
3 Personal Effect Lists.
3 Cargo Manifests (In case of any cargo on board).
2 Port Itinerary Reports (For the last 6 months).

PILOTAGE: Compulsory and 3 licensed Pilots are available from 0500 – 2200 hrs., and usually join ship in position Lat. 37° 32' 30" N., Long. 129° 08' 25" E.

VHF Radio is available for contacting Pilot Station (Tel: 2-2324/3740).

ANCHORAGE: Outer Harbour offers anchorages for the vessel awaiting docking order with a rocky and sandy bottom.

Vessels lying anchored in this anchorage which is open roads, are recommended to pay attention to weather conditions. The depths vary from 9 m. to 26 m.

RESTRICTIONS: Pilot for entering inner harbour is available from 0500 hrs. to 2200 hrs. due to close of port.

The max. available depth of inner harbour is 8.5 m. The max. tidal range is 0.4 m.

MAX. SIZE: The max. permissible length, breadth and draft for entering inner harbour is as follows:

Length – 180 m. Breadth – 25 m. Draft – 8.5 m.

HEALTH: Pratique is automatic. For Pratique it is necessary to prepare the following documents: Yellow cards. Derat Certificate and/or Derat Exemption Certificate. In the event of any suspected disease or fever on board it should be reported without delay to Quarantine Station and/or Agent in Mukho.

RADIO: Shore Radio Stations: Seoul Radio, Kangreung Radio, Busan Radio and Mokpo Radio.

Mukho harbour Network 6MF2.

VHF: Call sign "Mukho Radio" Channel 16 for calling station. Channel 26 for communication.

RADAR: None.

TUGS: 2 tugs of 1,000 h.p. each equipped with their own towline are available.

BERTHING: *No. 1 Pier.* (Exclusively for loading Coal/Graphite in bulk).

Berth A: Exclusively for loading Coal/Graphite in bulk. Length 100 m. Available draft at LW 7.5 m. 2 lines of belt conveyor and 2 loaders, height above HWL. 7 m. Loading rate per hour per loader 300 tonnes.

Berth B: Exclusively for loading Coal/Graphite in bulk. Length 110 m. Permissible draft at LW 8 m. 2 lines of belt conveyor and 2 loaders, height above HWL. 7 m. Loading rate per hour per loader 400 tonnes.

No. 2 Pier: Exclusively utilised for Naval and Coast Guard ships. Length 140 m. Depth available 4 m.

No. 3 Pier: For loading bulk cement, bagged cement and cement clinker in bulk, and loading/unloading general cargoes. Length 330 m. Available draft at LW 8.5 m. or 28 ft. 1 line of conveyor and 1 loader (air slider) for loading bulk cement. 2 lines of belt conveyor and 2 loaders for loading bagged cement. 1 line of belt conveyor and 1 loader for loading cement clinker in bulk. Available height above HWL 8 m. Loading Rate: Bulk cement 400 tonnes/p.h. Bagged cement 1,500 tonnes per day per loader. Cement clinker 350 tonnes/p.h.

Loading rate for General Cargo as follows:

Average discharging rate per hour/gang:

Steel material	Various	30 tonnes
Machinery	Case	30 tons
Grain	Bulk	25 tonnes
Gypsum	Bulk	25 tonnes
Coke	Bulk	15 tonnes
Fertiliser	Bag	20 tonnes

Average Loading Rate per hour/gang:

Iron Ore	Bulk	20 tonnes

No. 4 Pier: For loading bulk cement and loading/unloading general cargoes. Length 150 m. Permissible draft at LW 7.5 m. 1 line of belt conveyor and 1 loader (air sliding chute) for loading bulk cement. Height above HWL 8 m. Loading Rate: Bulk Cement 400 tonnes/p.h. Loading rate of general cargoes same as at No. 3 Pier. Discharging rate of general cargoes same as at No. 3 Pier.

Central Pier: For loading/unloading general cargoes. Length 120 m. Permissible depth at LW 6.5 m. No shore facilities. Loading/unloading general cargoes same as at No. 3 Pier.

CRANES: Mobile Cranes 1×20 ton and 1×30 ton.

STEVEDORES: Vessels bound for this port are to radio Agent Shipper/Consignee and Harbour Master, at least 24 hours prior to arrival, draft on arrival, description/quantity of cargo.

Average Discharge Rate per gang/hour:

Steel materials	Various Types	30 tons
Machinery	Case	30 tons
Grain	Bulk	25 tons
Ores	Bulk	25 tons
Fertiliser	Bag	20 tons

Average Loading Rate per gang/hour:
(Only with labourer hands – manually)

Ores	Bulk	20 tons

Average Loading Rate per gang/hour:
(By shore loading facilities)

Coal/Graphite	Bulk	350 tons
Cement	Bulk	350 tons
Cement	Bag	60 tons
Cement Clinker	Bulk	350 tons

BULK CARGO FACILITIES: No discharging facilities. Loading facilities see "Berthing".

MEDICAL: Several hospitals available.

TANKERS: No facilities.

DENSITY: Average salinity of water in the port is 1.025.

FRESH WATER: Supply of fresh water available by water barge and from shore water works.

Supply at pier	50 t.p.h.
Supply by barge	100 tons per day

FUEL: Most grades of domestic and bonded oil available with 4 days prior notice.

FIRE PRECAUTIONS: None.

CONSULS: None.

REPAIRS: None.

DRY DOCKS: None.

SURVEYORS: Classification Surveyors are in Seoul and/or Busan.

GANGWAY/DECK WATCHMAN: Owner's/Master's option.

HATCHES: First Opening/Final Closing by crew and intermediate handling by stevedores.

CUSTOMS ALLOWANCES: Cigarettes: 1 carton. Wine/Spirit: 2 bottles.

CARGO GEAR: Shore loading facilities, see "Berthing". No heavy lift cranes.

REPATRIATION: Possible.

AIRPORT: No airport locally, however there is an express bus service between Mukho and Seoul.

HOLIDAYS: *Official Holidays are as follows:*

The New Year Day	1st January	Work cannot be arranged
Independence Movement Day	1st March	Can be arranged
Memorial Day	6th June	Can be arranged
Constitution Day	17th July	Can be arranged
Independence Day	15th August	Can be arranged
National Foundation Day	3rd October	Can be arranged
Hangul (Korean Alphabet) Day	9th October	Can be arranged
Armed Forces Day	1st October	Can be arranged
Festival Days:		
Lunar Calendar New Year	1st January (Lunar)	Work not possible
Labour Day	10th March	Work possible
Children's Day	5th May	Work possible
Buddha's Birthday	8th April (Lunar)	Work possible
Moon Festival Day	15th August (Lunar)	Work not possible
Christmas Day	25th December	Work possible

POLICE/AMBULANCE/FIRE: Police – 3112. Ambulance – 3900. Fire – 119, 3005.

TELEPHONES: None.

SERVICES: None. Should be arranged from Busan/Inchon.

SHORE LEAVE: Possible.

IDENTIFICATION CARDS: Shore passes are issued for every Crew member who wishes to go ashore.

REGULATIONS: No particular regulations.

DELAYS: Normal delays.

GENERAL: None.

AUTHORITY: Donghae Maritime & Port Authority. *Tel:* (0394) 32-3631. *Telex:* K24336.

AGENT: Shilla Shipping Corp., Room 1201, Chung Dong Building, 15-5 Chung-Dong, Choong-Ku, Seoul, Korea. Tel: 82-2-778-9200. Mobile: 82-11-313-3256. Fax: 82-2-778-1915, 82-2-778-1916. Telex: K23130. Cables: Shilla Seoul.

OKKYE: 37.37 N. 129.03 E.

SHIPMASTER'S REPORT: April 1996.

LOCATION: The port of Okkye is located on the Eastern seaboard of the Korean Peninsula on Japan Sea, in position Lat. 37° 37' 08" N., Long. 129° 03' 40" E., 10 miles North of the port of Tonghae (Bukpyung).

DOCUMENTS: As required at Tonghae:
6 copies Crew List.
2 copies Arms List.
2 copies Drugs List.
2 copies List of Port of Call for past 6 months.
2 copies Personal Effects List.
3 copies Cargo Manifest.
2 copies Bonded Stores List.
2 copies Stores List.
1 copy Korea Maritime Declaration of Health.
Various Korea entry declaration forms.

CHANNELS: The channel is aligned 282° when entering. The depth is reported to be 15.0 m. and the width 200 m.

APPROACHES: B.A. Chart No. 882. It is best to sail 5 miles off the coast to avoid the patches. Then alter course to 280° towards the port anchorage.

PILOTAGE: Compulsory. Available in daytime only. Pilot launch painted white. Pilot ladder required 1.0 m. above the water line and on the lee side. The pilot boarding time can be checked with "Tonghae Control" as the Pilots operate at four ports (Tonghae, Mukho, Okkye and Samcheog (Sam Chuck)).

ANCHORAGES: The Quarantine and Pilot Anchorage is at Lat. 37° 37' 12" N., Long. 129° 06' 30" E. The depth at the anchorage is about 40 m.

HEALTH: The Quarantine Officer usually boards at the berth and inspects the store rooms, galley, etc. Derat Certificate sighted and Korea Maritime Declaration of Health made out. Free Pratique then granted. The Officer came from Tonghae.

RADIO: Seoul Radio.

VHF: All arrival information to be given to "Tonghae Port Control" on VHF Channels 16 and 12. They can be asked to give the information to the Agent.

Mukho Radio on Channel 16, can be used for long distance or overseas calls, a 24 hour watch is maintained, but difficult due to language.

TUGS: There is one tug "Halla 12" at this port. Large vessels have to order additional tugs from Tonghae, so usually 1-2 hours delay. Tugs make fast with tug's lines. The tugs join the vessel near the breakwater.

BERTHING: Ships generally berth port side alongside the coal wharf. The offshore anchor is used to prepare for emergency.

BULK HANDLING FACILITIES: The wharf belongs to the Halla Cement Co.

Coal: The coal terminal is in the West part of the basin. There is only one shore crane for discharge of cargo and transfer of coal to open ground. The discharging rate is about 6,500 – 7,000 tons per day. They use a bulldozer for the last cleaning of the holds, but swing the crab to discharge the cargo before reaching the bottom and often cause damage to the ship.

Cement: Cement in bulk loaded by shore loader and conveyor belt from factory.

Working Hours: The coal terminal working throughout 24 hours. Cement loading is only during daytime.

MEDICAL: Doctor and hospital available. Agent will arrange the car to transport crew members to and from doctors. Medical reports issued on request.

DENSITY: About 1025.

FRESH WATER: Available from shore at 12 hours advance notice. The price of fresh water is about U.S.$5.50 per ton.

SURVEYORS: Local Korean inspectors/surveyors are available for draft surveys, and on-off hire surveys, etc.

CUSTOMS: Attend on berthing. They check the Declaration List and Crew List. The bonded store was not sealed.

TELEPHONES: Available at foreman's office for local calls. Crew can make long distance or overseas calls at a small town (2 km.) or at Mckho (10 km.) by bus, using a telephone card.

SHORE LEAVE: After berthing, the Agent will take Crew List and Seaman's Books to Police office to get shore passes. The Police office is only open during office hours. The Police check the shore passes and the Seaman's Books on leaving and entering gate.

REPATRIATION: Possible via Seoul. There is an express bus service to Seoul.

AUTHORITY: Tonghae (Bukpyung) District Maritime and Port Authority.
Tel: (0394) 323631. *Telex:* K24336 MHDMPA.

POHANG: 36.01 N. 129.24 E. (See Plan)

PORT LIMITS: The sea within the line joining the position of Yeonam Southern Cape Long. 129° 25' E. to that of Lat. 35° 59' 50" N., Long. 129° 27' 30" E.

DOCUMENTS: See "Busan".

PILOTAGE: Compulsory, 4 licensed pilots available. Tel: 2-9221/2.

ANCHORAGE: 18 anchorages with depths 8.0 m. – 23.0 m. Bottom is mud and sand.

MAX. SIZE: See "Berthing".

Ship Operator's Report: Posco Mineral Quay:

July 1979: Vessel of 142,767 d.w.t., with 112,012 tons of cargo on board docked at No. 1 B-2 with a draft aft of 49 ft. 6 in. (15.08 m.). The officially accepted draft is 14.50 m.

HEALTH: Quarantine Anchorage: Lat. 36° 03' 47" N., 129° 26' 55" E. Radio Pratique to be requested 36 hours prior to arrival.

RADIO/VHF: Port Control on VHF Channel 16.

TUGS: 3 tugs available of 3,000 h.p. The tugs are stationed at the third pier.

BERTHING:

Pier No.	*Berth No.*	*Max. Draft (m.)*	*Max. LOA/Beam (m.)*	*Max. Airdraft (m.)*	*Max. Size (d.w.t.)*	*Remarks*
1	11	16.5	350/50	15.0	150,000	2×1,500 t.p.h. unloaders
	13	14.5	310/42	15.0	100,000	3×1,500 t.p.h. unloaders (outreach 30 m.)
	14	15.0	310/42	15.0	100,000	
2	23	11.2	310/40	13.0	50,000	2×1,000 t.p.h. unloaders and 1×700 t.p.h. unloader (outreach 23 m.)
	24	11.0	200/40	13.0	20,000	
	25	10.8	200/40	13.0	10,000	
3	31A	7.0	140/25	10.0	5,000	4×15 ton cranes
	31B	8.0				
	32	9.0	150/25	10.0	5,000	
	33	9.5	150/25	12.0	10,000	
4	41	10.4	225/35	15.0	30,000	2×30 ton cranes
	42	9.0	195/32	13.0	20,000	1×25 ton crane and 1×35 ton crane
5	51A	9.6	300/32	13	20,000	
	51B	9.1				1×25 ton crane
	52	10.0	170/30	13	10,000	1×25 ton and 1×30 ton crane
	53	6.0	150/25		5,000	
	54	6.0	150/25		5,000	
6	61	5.0	150/20		2,000	
	62	4.0	150/20		2,000	
7	73	9.0	240/25		10,000	
	74	11.0	245/35		30,000	
	75	11.0	245/35		30,000	
	76	10.0	300/35		20,000	
8	81	11.0	250/35		30,000	
	82	11.0	250/35		30,000	
	83	9.5	200/25		10,000	
	84	9.5	224/35		20,000	
	85	9.5	224/35		20,000	

CRANES: 12 Shore cranes. (Lifting capacities 3,138 t.p.h.)

MEDICAL: 2 hospitals available.

FRESH WATER: Can be supplied alongside the quay or by water barge.

FUEL: Available locally. For large quantities 48 hours notice required. All grades obtainable from oil companies.

CUSTOMS ALLOWANCES: Tobacco: 400 cigarettes. Wine: 1,500 cc.

REPATRIATION: All facilities available for crew changes.

AIRPORT: Kimpo 200 km., Kimhae 150 km.

HOLIDAYS: New Year's Day – 3rd January, 1st March, 5th April, 5th May, Buddha's Birthday, 6th June, 17th July, 15th August, 3rd October, 9th October, Christmas Day.

POLICE/AMBULANCE/FIRE: Police 2-3419. Fire 119. Ambulance 2-5269.

SERVICES: Sub-Agents. Ship's laundries, etc.

SHORE LEAVE: Crew members allowed ashore.

IDENTIFICATION CARDS: Seaman's Book is sufficient.

DEVELOPMENTS: Central breakwater under construction.

Works in progress to increase capacity at first pier to 150,000 d.w.t. and draft to 16.5 m.

SHIPMASTER'S REPORT: June 1980.

The port is situated in the S.E. part of the country at the head of a bay and fully exposed to any weather from between North and East. Approaching the port there are very few navigational hazards except numerous small fishing craft. The B.A. Chart No. 3666 covering the area is out of date and the inset showing Pohang gives insufficient detail. I would recommend that with only B.A. Chart No. 3666 entry to the port should be attempted in daylight only. Korean Chart Nos. 132 and 135 cover the port and approaches and appear to be more up to date.

The Korean Pilot Book Supplement No. 9 1978 on Page 71 gives information on minefields and swept channels for approaching the port but the Harbour Pilots have no knowledge of these swept routes. However, there is a large area within the bay that is dangerous to navigation and anchoring but not marked on the chart. Vessels should not pass between the shoreline and a line drawn through the positions of the following lighthouse and buoys:

Fl. G. Lt.	– Lat. 36° 05' 18" N., Long. 129° 33' 35" E.
Buoy RW	– Lat. 36° 05' 30" N., Long. 129° 30' 30" E.
Buoy RW	– Lat. 36° 03' 12" N., Long. 129° 28' 20" E.
Buoy	– Lat. 36° 01' 25" N., Long. 129° 27' 50" E.

Also it is advisable to pass at least 2 miles North of the lighthouse so as to avoid the numerous fishing vessels and fishing stakes off the port, enter the bay passing the buoys on the port hand.

The indicated Quarantine Anchorage has only a limited depth of water and larger vessels are permitted to anchor in the vicinity of the second buoy where the vessel will be cleared by Quarantine Officers before the Pilot boards.

The ore/coal berth is situated in the new harbour where there is still a vast amount of new building and reconstruction taking place. The maximum draft is 14.5 m. and the approach through a short buoyed channel which offers no problems. The berth lies in an 035° – 215° direction with a depth alongside of 16.0 m. for 950 m. and vessels berth starboard side alongside. Standard moorings of 4–2–2 at each end and the port anchor with about three shackles, the latter being used for heaving off when unberthing.

Cargo discharge facilities are three units, with two more under construction, which should be completed by 1981, all suitable for the discharge of ore or coal. Discharge rate was about 30,000 tonnes per day using 2–3 units continuously.

Four tugs are used for berthing and unberthing operations, two of which are modern tugs. The two older tugs are due to be replaced soon with more powerful modern units.

Bulldozers are used for clearing hold bottoms and some shore labour is engaged sweeping up excess fallout off hatches, etc. Food and some form of accommodation has to be provided for the shift foremen on a continuous basis.

Fresh stores and provisions of good quality and reasonable price were obtainable but no frozen foods of any description available. Laundry service available and fair results.

Fuel oil bunkers were available by previous arrangements with Owners.

Shore leave is by launch only. Launch lands personnel in the old harbour about 5 miles away outside the breakwaters of the new harbour. No shore gangways available. Accommodation ladders required on each side as Port Officials and Agents board via the quay and ship's personnel are not allowed to walk on quay.

Repatriation for 26 Officers and Crew was done with very little effort and minimum paperwork. Personnel travel by coach to Busan thence by air to Osaka and Tokyo for London.

Arrival papers were as those required for Pusan and some company forms readily accepted.

The present maximum draft for the port is 14.5 m. but this is expected to increase to 14.75 m. next year.

Port limits have been extended and now join the following positions: Lat. 36° 04' 30" N., Long. 129° 25' 20" E.; Lat. 36° 03' 00" N., Long. 129° 28' 00" E.; Lat. 36° 01' 12" N., Long. 129° 29' 54" E.

SHIPMASTER'S REPORT: September, 1982.
Health: Radio Pratique not possible.
VHF: 16 then 6 with Pilot boats; 16 with Pohang Port Authorities; 16, 25, 26 and 27 with Pohang Radio.
Tugs: Four modern tugs.
Berthing: Depth alongside Berth No. 1 is 17 m. Vessels berth either side alongside. Berthing in daylight only for large vessels.
Fuel: All grades of bunkers and lubricants available from Korea Marine Bunkering Co., Ltd. Cable address: K Bunker Seoul. Telex: K28412.
Repairs: Sae Won Marine Engineering Co., Ltd., Cable address: Sae Marine Pohang. Telex: K4395. Tel: (72) 5400-1 (riding crew are available for ship repairs on passage).

Sam Yang Marine Engineering Co., Ltd., Telex: Symeco K4415. Tel: (3) 2251-2, (3) 4451., Agent for Unitor Service.

AUTHORITY: Pohang District Maritime and Port Authority, 58-7 Hangku-Dong, Pohang, Republic of Korea. *Tel:* (0562) 421812/5. *Telex:* K54300 Hangman.

AGENT: Shilla Shipping Corp., Room 1201, Chung Dong Building, 15-5 Chung-Dong, Choong-Ku, Seoul, Korea. Tel: 82-2-778-9200. Mobile: 82-11-313-3256. Fax: 82-2-778-1915, 82-2-778-1916. Telex: K23130. Cables: Shilla Seoul.

PYEONG TAEK: 36.57 N. 126.01 E.

PILOTAGE: Pilot boards in position Lat. 36° 57' 05" N., Long. 126° 01' 00" E., which is 38 miles from the LNG Berth.
RESTRICTIONS: Vessels berth at daytime HW only.
MAX. SIZE: Berth designed for vessels 90,000 d.w.t. – 100,000 d.w.t.
BERTHING: The dolphin berth, for LNG only, is 480 m. long and has a depth of 14.0 m.
Storage: 4 tanks, each with a capacity of 110,000 cu.m.
AUTHORITY: *Owner:* Korea Electric Power Corporation.
Operators: Korea Maritime Port Authority and Korea Gas Corporation.
AGENT: See "Busan".

SAMCHEOG HAN (Sam Chuck): 37.30 N. 129.10 E.

(See Plan)

SHIPMASTER'S REPORT: June 1981

DOCUMENTS:
Ship's Register (1 copy required to be kept ashore)
Last Port Clearance.
10 Crew Lists.
3 Lists of Private Tobacco and Liquors.
4 Personal Effects Lists.
4 List of Foreign Money.
4 Stores Lists.
4 Ship's Property Declarations.
PILOTAGE: Pilot will board at Quarantine Anchorage.
After departure Sam Chuck vessel has to return Pilot to Tonghae.
During night time no pilotage.
HEALTH: On arrival Sam Chuck the vessel has to proceed to Tonghae, about 5 nautical miles North of Sam Chuck, and has to anchor at the Quarantine Anchorage in position: Lat. 37° 29' 36" N., Long. 129° 10' 30" E.

The Port Health Officers will board the vessel and arrange Free Pratique.

Documents Required:
1 Crew List.
1 Maritime Declaration of Health.
1 Vaccination List.
VHF: "Mukho Radio" calling Channel 16, communication Channel 26 (slight interference).
TUGS: One tug available, equipped with own tow line.
BERTHING: Conveyor pier, left side of port entrance, exclusively for loading cement clinker in bulk.

Draft allowed according to Pilot is 6.8 m. Other berths, draft allowed is 6.7 m.

One belt conveyor with a loading rate about 300 tonnes per hour.
DENSITY: 1027.
CUSTOMS ALLOWANCES: 200 cigarettes and 1 bottle of spirits. Bonded store will not be sealed, as long as the Master only has the key.

One Customs Officer will stay on board for the whole time at berth.
SHORE LEAVE: Possible, shore passes issued for every crew member, have to be returned before departure.
GENERAL:
Ship Chandler: Available from Mukho.

AGENT: Shilla Shipping Corp., Room 1201, Chung Dong Building, 15-5 Chung-Dong, Choong-Ku, Seoul, Korea. Tel: 82-2-778-9200. Mobile: 82-11-313-3256. Fax: 82-2-778-1915, 82-2-778-1916. Telex: K23130. Cables: Shilla Seoul.

SAMCHEON PO: 34.52 N. 128.05 E.

(See Plan)

SHIPMASTER'S REPORT: June 1983.

DOCUMENTS: Formalities similar to other Korean Ports, but local Authorities are not used to Foreign going ships yet and Port Clearance is very slow. All crew members issued with shore passes by Immigration Authorities, these passes are collected in again before sailing, to hand back to Immigration.
PILOTAGE: Although the Port Information Sheet states that pilotage is not compulsory, I feel that it would be unwise to attempt both berthing and sailing without the benefit of local knowledge. The streams can be very strong, we estimated up to about 4 knots whilst we were there.

Pilot boards at the Quarantine Anchorage. Pilot boarding regulations similar to those at other Korean ports.

Requests for a Pilot should be made through the vessel's local Agents.
ANCHORAGES: Quarantine Anchorage 34° 51' 56" N., 128° 05' 23" E. (600 m. radius). Good holding ground – yellow mud. Depth 17.2 m. Anchorage is open to South. Channel to quay dredged to 18 m. and is well buoyed.
RESTRICTIONS: Berthing/unberthing carried out at slack water, during daylight hours only.
MAX. SIZE: 100,000 tonnes deadweight. Max. depth alongside 18.1 m. Rise of tide 1.6 m.
TUGS: Two tugs are required. They come from Masan, 3 hours' notice required.
BERTHING: Wharf is 540 m. long and is divided into 2 berths. Principal commodity is coal for the power station.

	Length	*Depth*	*Max. Size*
Northwest end	270 m.	15.10 m.	50,000 d.w.t.
Southeast end	270 m.	18.10 m.	100,000 d.w.t.

Wharf is very well fendered, and has lrage rubber, 'Buffer', type fenders at regular intervals. There is a 2 m. high wall, which runs along the entire wharf frontage, the mooring bollards are set in breaks in this wall; but the set up is dangerous; very awkward for the linesmen, and virtually impossible to get a gangway out, ship to shore.
BULK CARGO FACILITIES: Two ship unloaders with 35 tonne grabs available for coal discharge. Capacity 1,500 t.p.h. each.
STEVEDORES: Working hours per day – 16 hours.
FRESH WATER: Not available.
FUEL: Not available.
CONSULS: Nearest Consuls at Busan.
REPAIRS: Limited repairs may be undertaken by local boat yard.
GANGWAY/DECK WATCHMEN: Three Watchmen and two Customs Officers on board at all times, and have to be fed and accommodated. The Watchmen will use one room, but the Customs want to be accommodated separately.
AIRPORT: Nearest at Pusan.
SHORE LEAVE: Shore leave by liberty boat only, takes crew to the small fishing port of Sam Cheon Po, itself about 1 mile further West. Crew members are not allowed to walk ashore through the power station, so only the liberty boat can be used.
IDENTIFICATION CARDS: See "Documents".
GENERAL: Fairly good quality fresh provisions may be obtained, Agent handles chandler's work as well. Agents very willing to be of assistance, but there are very grave language problems, hardly anyone speaks English, and those that do are usually very limited in what they understand.

SHIPMASTER'S REPORT: May 1984.

CHARTS: B.A. No. 127; American 95142; Korean 452.

DOCUMENTS:

- 9 copies Crew List.
- 1 Declaration of Health.
- 1 Vaccination List.
- 3 Passenger Lists (Nil return required).
- 2 Crew Declaration of Personal Effects.
- 2 Currency Lists.
- 2 Ship's Currency Lists.
- 2 Bonded Stores Lists.
- 2 Ship's Stores Lists (all foodstuffs on board to be declared).
- 1 List of Ports of Call (previous 9 months ports and countries).
- 2 Ammunition and Firearms List.
- 2 Narcotics Lists (sealed once checked).
- 7 Reports of Entrance/Departure (Agent supplies and completes).

ARRIVAL: 2 Customs and 2 Immigration officials and 1 army official board when vessel alongside, Agents assist.

PILOT: Boards in position Lat. 34° 50' N., Long. 128° 6.5' E., from small blue coloured boat. Advance notice of arrival important as Pilot comes from Masan (3 hours by bus) and there are no telex facilities in Samcheon Po. All messages in and out by telephone from/to respective radio stations. Best to use Seoul Radio. At least 24 hours notice after which it is too late to change. Pilot boards and takes vessel to Quarantine anchorage, waits onboard until vessel cleared, then berths vessel alongside, with the aid of 2 tugs.

BERTH: The berth is 1,550 m. long with depths of 14 m. at West end and 16 m. at East end. Very well fendered for whole length, but high due to very heavy swell during S.W. Monsoon, sufficient bollards along whole length.

There are 2 gantries for 2 berths with 20 ton grabs, onto conveyor belts to large storage yard. Air draft at least 25 m. from quay. Outreach about 30 m.

Only import at this berth is coal for power station (Korean Electric Company).

FRESH WATER/FUEL: Available by barge only. Bunkers by barge from Yusan or Busan. Fresh water obtained locally but costs U.S.$4.0 per ton.

PROVISIONS: Available locally, usual Korean standard.

SHORE LEAVE: Possible by launch from ship, nobody allowed through installation except Master.

SHIPMASTER'S REPORT: November 1985.

Approach easy from South. Straight up between Jang Got and Suu Do.

Approximately 16 m. of water in sheltered Quarantine Anchorage. Pilot not required for anchoring. VHF communication with Port Control just possible. Poor reception and language problem. Many small fishing boats and small buoys in the area. 2 tugs arrived by themselves and stood off. Unable to contact them, presumably they had come from Busan. Later a Pilot boarded who spoke a little English. Channel is well buoyed to the power station berth.

Vessel berthed at 1830 hrs. and commenced discharge at 1640 hrs. the following day.

A modern power station type berth, well able to cope with Panamax type vessels. Jetty well fendered with adequate mooring bollards. Unfortunately a wall 6 ft. (2 m.) high has been constructed along jetty edge with spaces left for bollards. The edges of which tend to chafe moorings. It also makes it hard to land gangway or accommodation ladder. This done by shore labour as crew not allowed to walk ashore. Boat service only, which ran to Si Racha.

There are guards on the jetty. Two modern grab dischargers available. There is no airdraft problem. Damage was done to hand rails in No. 4 hold, which ship repaired itself.

Cargo was completed at 0045 hrs. (56 hours after commencement) and vessel cleared at 0532 hrs.

AGENT: See "Busan".

TONGHAE (Bukpyung): 37.29 N. 129.08 E. **(See Plan)**

SHIPMASTER'S REPORT: June 1982

LOCATION: Tonghae (Lat. 37° 29.5' N., Long. 129° 08.5' E.) lies some 5 miles to the South of Mukho, it has been under construction for the past 4 years and now ranks as the third largest port (by tonnage) in Korea. The port consists of 2 breakwaters extending from the shore and has been constructed primarily for the export of cement in bulk, clinker and bagged forms.

The port is linked to the Donghai Cement Plant which in itself is the largest unit cement factory in the world with an annual production capacity of 8.7 million tons.

This report is mainly directed to the facilities associated with the export of cement, however where possible relevant information has been included which could prove useful to other vessels trading in the area.

PORT LIMITS: Approximately 1 mile radius off the port but mainly to the North of the E./W. Line, passing through the South Breakwater Light. Port limits are indicated on Korean Chart No. 141.

DOCUMENTS:

- 6 Crew Lists (on blank paper).
- 3 Vaccination Lists.
- 2 Port Itineraries for past 6 months.
- 2 Passenger Lists.
- 2 Arms Lists.
- 2 Drugs Lists.
- 3 Personal Manifests.
- 3 Cargo Manifests.
- 3 Stores Lists (including fuel on arrival).
- 3 Bonded Stores Lists.
- Korean Maritime Declaration of Health.
- Various Korean entry forms.

APPROACHES: B.A. Chart 882, also Korean Chart 141. Best to run up 5 miles off the coast to keep clear of 3.5 fathom patch reported in position Lat. 37° 28.5' N., Long. 129° 13.0' E., then alter course to 270° for approaches to anchor area off the port.

PILOTAGE: Generally operate from 0600 hrs. – 2100 hrs. 3 Pilots available and appear quite competent. As an exception they will sail vessels up to 2200 hrs. from the berth. Small pilot launch painted white. No VHF (1982). Pilot ladder required almost to the water, no manropes.

In heavy swell the Pilot refuses to come out to the vessel and no dispensation is given for the vessel to come under the lee of the North Breakwater to pick the Pilot up, even though there is ample room. Pilotage is relatively simple with a wide deep water entrance to the port and a large swinging basin.

ANCHORAGE: Recommended anchorage about 1 mile to 1.5 miles off the breakwater in about 12 fathoms to 14 fathoms of water. We anchored with South Breakwater Lt. Ho. bearing 180° (T)×1.27 miles, with 7 shackles down on the port anchor and happily rode out a day of winds in excess of 40 knots, though engines were kept on immediate notice. A confused back swell is sometimes thrown off the breakwater during strong onshore winds. Bottom mainly sandy with some rocks. Ample visual and radar targets available to check anchorage position.

MAX. SIZE: No limitations to length or beam. Max. draft 11.8 m. (SW).

HEALTH: Quarantine Officials generally attend at the anchorage and inspect store rooms, galley, etc. Derat sighted and Vaccination List required. Korean Maritime Declaration of Health made out. Pratique granted. Various vaccinations can be obtained at the Port Health Office at Tonghae. The doctor/nurse will not attend onboard to do injections. No specific vaccinations required for Tonghae unless vessel from infected area.

RADAR: No port radar at present.

VHF: Tonghae Port Radio operates on Channels 16 and 12. Daylight operations only. Initial contact is made via this station and arrival time and ships' particulars noted. Berthing instructions are generally relayed through Mukho Radio, VHF Channels 16 and 26 from Agents. Local and overseas calls are also possible through Mukho, with a 24 hour watch kept.

TUGS: Three available: 2×2,000 b.h.p. and 1×1,000 b.h.p. Make fast with tugs' lines with the tugs joining vessel just inside the breakwater. There are an additional 2 tugs at Mukho (5 miles to the North) and these will work at Tonghae if required. Communication with tugs is by walkie talkie.

BERTHING: Vessels generally berth port side alongside the South Pier (Ssangyong) and starboard side alongside the North Pier. Tugs join just inside the breakwater, the offshore anchor is used when off the berth. Boat takes the headlines only. The North Pier is more exposed than the South and a substantial tie up is recommended. The bollards are 25 m. apart and the jetties very well protected with modern horizontal rubber type fenders. The gangway can be swung out prior to berthing with no obstructions to cause damage. South Pier length 735 m., North Pier length 540 m.

Present Capacity: 4×30,000 d.w.t., 1×10,000 d.w.t. and 4×5,000 d.w.t.

Additional Future Capacity (1986): 6×50,000 d.w.t., 1×20,000 d.w.t. and 1×10,000 d.w.t.

BULK HANDLING FACILITIES: Coal: One coal berth lies at the seaward end of the South Pier, whilst the other berth is at the inner end of the North Pier. Vessels use their own cranes and grabs for discharging the coal onto the quayside, whereupon it is handled by payloaders and loaded into road trucks. Discharge rate is in the region of 5,000 tonnes per day but could improve if more payloaders were brought in to handle the quayside operation. Generally speaking, only two payloaders are used at any one time. Road trucks carry the coal to a stockpile 3 miles away and there appears to be ample supply of trucks available. The final few hundred tonnes in each hatch is shovelled by stevedores into savealls and rubber mats. No bulldozers are available for hatch work.

If a vessel is not equipped with her own grabs then the complete discharge is handled using savealls and manpower. Using this method a discharge rate of about 3,000 tonnes per day could be expected. The crane drivers are quite competent and stevedores helpful. Any damage to ship can be repaired on the spot and stevedores accept full liability.

Bagged Cement: Two companies export cement from Tonghae. Ssangyong Corporation, the largest, operate from the South Pier whilst Tongyan M&G work off the North Pier. Ssangyong have the facility for loading clinker/bulk and bagged cement by conveyors and loaders. Tongyan can only handle clinker and bulk cement by loader, any bagged cargo being handled by ship's gear.

The Ssangyong export terminal serves the largest unit cement plant in the world with an annual production capacity of 8.7 million tons. This main plant, situated a few miles away at Donghai, is linked to the port of Tonghae by an extensive conveyor system. Further conveyors link the storage facilities to 2 ship loaders (for bagged cargoes) and 2 spout loaders for clinker and bulk cargoes.

The bagged ship loaders were each rated at 150 tonnes per hour, though actual loading rate worked out at nearer 75 tonnes per hour, with both loaders suffering occasional breakdowns. In addition to the loaders, ship's cranes were also used to lift bagged cement directly from lorries. In all, 5 gangs were used (2 loader and 3 crane) and a daily load rate of about 4,000 tonnes experienced. The cement was bagged in triple skinned paper/polythene and very little breakage was observed, the loader however throws off some cement dust and the ship receives a liberal covering.

The bagged cement was initially ordered, by Charterers, in nett weight i.e. bags each weighing 50 kg. (gross 50.17 kg.), however as loading progressed it became obvious that the actual weight loaded was considerably more than that tallied aboard. On checking the actual weight of a number of bags, all were found to be in excess of 50.50 kg. (gross). Initial instructions from Charterers required the vessel to load a cargo geared to a limiting draft of 32 ft. at the discharge port, but when realising the full shore tally weight could not be lifted then authorisation was received to load the shore figure. By shore tally and Bills of Lading we loaded 490,000 bags cement at 50 kg. nett per bag equalling 24,500 tonnes.

Actual deadweight on board by draft survey showed some 24,886 tonnes of cargo. One per cent. of spare bags were also loaded with the cargo.

The bagged cement was pre-slung wherever possible in the hatch to facilitate a quick discharge, the discharge port, was not nominated however, this depending upon the number of cement ships discharging on the Indian coast. Ahjin intend sending a supercargo to India to assist in the discharge.

No problem exists with the loaders regarding height clearance over the coamings, however conversely if the vessel is too deeply ballasted then the base of the shoot cannot reach the tank top and it is then necessary to de-ballast to bring the ship up to the loader.

Cargo manifests, etc., were prepared, by the Agents, prior to sailing. Normal procedure is to authorise Agents to sign Bills of Lading on Master's behalf.

Stevedore companies: Ssangyong Cement Co. Ltd., Tongyan M&G Co. Ltd., Korea Express Co. Ltd.

MEDICAL: Doctor and hospitals situated at Mukho some 5 miles away. Agents will arrange car to transport crew members to and from doctors. Medical attention is quite expensive. Medical reports issued on request. An ambulance service is available if required.

FRESH WATER: Available by barge in 100 tonne quantities.

FUEL: Supplied only by barge either alongside or whilst the vessel in the anchorage. The bunker barges are not equipped with heaters and consequently the pumping rate very slow (about 90 tonnes per hour for heavy oil and 120 tonnes per hour for diesel oil). Each barge has a capacity of about 400 tonnes; No blending on the barge, this being performed at the refinery. The barges generally sail up from Pohang and have to clear customs formalities at Tonghae. Fenders on the barges are virtually non-existent and if taking bunkers at the anchorage in any kind of weather extra tyres etc., should be used. We were supplied by Korean Marine Bunkering: Seoul 776-8531.

REPAIRS: Engine and general dock repairs possible from Donghai Marine Engineering Co. Ltd. The company has a staff of about 12 and are capable of handling most repairs. Welders are Korean registered. Various Customs formalities have to be completed before spare parts are removed from the port area. Prices appear reasonable though slightly higher than Ulsan and Inchon. Radar repairs can be arranged with ample notice. Chemical cleaning of heaters, etc., can be arranged.

SURVEYORS: Local Korean inspectors/surveyors are available at Mukho for draft surveys, on/off hire surveys, etc.

Lloyd's and Bureau Veritas are available from Seoul and will attend vessels at Tonghae if necessary, with ample notice.

WATCHMEN: Available from Sanghyup Kongsa (again) recommended mainly for their ability to use telephone especially with the Agency 5 miles away. Cost about £12 per day.

CUSTOMS: Attend on berthing. Quite casual and friendly. Spirits and cigarettes sealed though beer and wine left unsealed. Normal allowances per person and an issue available after vessel has been in port for 5 days. One Customs Officer remains on the vessel during the stay in port, he requires a cabin and meals. Drugs are also sighted and sealed.

REPATRIATION: No difficulties in this area. Seoul some 300 km. away is served by an express bus service. Sub-Agents liaise with main Agents and all repatriations seem to run smoothly. An overnight stay is normally arranged at Seoul for incoming and outgoing crew members though this depends on flight times. The journey between Tonghae and Seoul takes about 4.5 hours. It is necessary for joining crew members to fill out a personal manifest once aboard the vessel, this is collected prior to sailing.

HOLIDAYS: See "Inchon".

Arbor Day (April 5th) is also an official holiday at Tonghae. Work is possible during all holidays.

TELEPHONES: Available at all berths. Only local calls taken.

SHORE LEAVE: No restrictions, no curfew.

GENERAL:

Weather: Refer to Pilot Book.

During the latter part of March and April long periods of relatively calm weather were disturbed by severe Lows and Fronts causing strong on shore winds and high seas. During these periods the port remains closed for berthing vessels, though sailing is possible. Smaller ships in the anchorage generally steam offshore during these periods.

Stores: Fresh supplies and all chandlery items supplied by Sanghyup Kongsa Co. Ltd., Tonghae (the only chandler in the area). Fresh vegetables, fruit, fish, etc., are in plentiful supply locally. Deck and engine stores also available in the area, though more selective items can be obtained from Seoul. Local supplies are reasonably priced, though meat expensive. Bonded stores are also available. Medical supplies can be obtained from Seoul as well as current BA. Charts and Admiralty publications. These again are quite expensive.

Immobilisation: Possible with Port Authority approval.

Port Regulations: Tonghae also serves as a naval port and consequently no photography allowed. No written port regulations. Painting over the side not allowed for fear of pollution, similarly no painting allowed from the quayside.

Launch Service: A launch service is available from the anchorage and is useful for crew repatriation. It can also be used for shore leave, once vessel has been cleared, though price is unknown.

Garbage: Arranged by Agents, taken away from ship by road truck. Rubbish should be retained on board, even at the anchorage, various naval craft regularly patrol around the port area and anchorage.

Consuls/Notary: No Consular offices at Tonghae or Mukho, it being necessary to travel to Seoul for these purposes. It is also impossible to Note Protest at Tonghae or Mukho.

Laundry: Adequate laundry facilities exist at Mukho, again arranged by Sanghyup Kongsa Co. Ltd., a 24 hour service is available.

Cleaning Gangs: These are available and will clean hatches between cargoes. It is not possible to pump out hold residue whilst alongside. Cleaning gangs do not generally work at night so some pre-planning required if vessel to discharge and load at the same port. Work requires constant supervision. Labour for the gangs picked up off the street.

Immigration: All passports inspected: Shore passes issued for all crew members and these renewable every four or five days. No Curfew exists at Tonghae or Mukho. It is necessary to pass through Customs Office and Immigration Office before leaving the port area. Again all Immigration Officials most helpful and friendly and eager to practise their English. Shore passes collected prior to sailing before obtaining clearance.

Air Freight: Little difficulty in obtaining spare parts, air freight etc., from other countries. Main Agents at Seoul arrange necessary customs clearance and transport.

Agency: Main Agents at Tonghae: Chokwang Shipping Co. Ltd. They are sub-Agents for most of the main Korean Agencies. Their office is situated at Mukho. With the number of vessels entering and using Mukho and Tonghae they are kept extremely busy, however all Agency work is eventually attended to and their services are quite satisfactory. Telex and telephone facilities exist at their office, most telexes are directed through the main Agents in Seoul, however a direct line can be obtained if necessary.

SHIPMASTER'S REPORT: November 1985.

On British Admiralty Chart No. 882 Bukpyung. Name seems interchangeable on signs, etc.

The anchorage off the port between 0.5 – 0.75 miles W.N.W. of the South Breakwater Light seems good but exposed to E'ly weather. A good swell was running when we anchored off and vessel did not berth for 24 hours. Contact could be made with Agents through Mukho Radio on VHF Channel 16, switching to Channel 26. Language is a problem.

Panamax bulk carriers are the largest vessels taken at the port. Max. permitted draft 12.5 m. 2 moderate powered tugs and 2 small tugs. In bad weather would advise a panamax not to berth.

The commercial port is dominated by Ssang Yong cement works which exports over 2 million tons of cement a year. The bulk berth is clear and modern. Two grab dischargers are said to work 24 hours a day. But there are many stoppages. The jetty is well fendered, good bollards at approximately 100 ft. intervals. We would suggest 4 head/stern lines, 2 breast and 2 springs each end. Extra moorings in bad weather.

Pratique: Vessel was informed before arrival that Pratique was granted. After anchoring vessel was boarded and store rooms inspected, Derat not asked for. Pratique was again granted timed and dated.

Documents: Only Register asked for. Ship had made out stores, personnel goods, narcotic and arms lists on our paper and these were accepted. Only narcotics in Master's safe being checked. Shore passes were made out (by ship). These are required and checked at gate every time. Bond not sealed.

I was unable to Note Protest either here or at Mukho. No ABS surveyor available locally. Checked with Agent before lowering and running lifeboat for normal upkeep. I was informed that it was in order. A small naval craft wanted to arrest it shortly after it was lowered into the water and so we recovered it fast. Painting over the side is allowed.

Nearest airport at Seoul. There is an express bus service (5 hours) or train (6 hours) to Seoul.

Fresh water is available by barge. Bunkers, heavy fuels, diesel, lub oils, can be supplied if several days notice is given, I understand a coaster brings same from Busan.

SHIPMASTER'S REPORT: June 1993.

This vessel: Panamax size, LOA 225 m., 66,894 tonnes d.w.t.

The port's new name is Tonghae, and the old name Bukpyung is no longer used.

For approaching the anchorage, it is best to come on a parallel of Lat. 37° 30' N., about 4-5 miles from coast and approach anchorage on a course of 270°. In good weather, a large number of fishing trawlers are encountered which carry out sudden manoeuvres.

Radio Free Pratique is not granted and upon arrival, vessel has to anchor for Quarantine Inspection. Pratique is granted after inspecting provision stores, galley, mess room and garbage drums, etc.

Vessel was advised to anchor at Quarantine Anchorage (position Lat. 37° 30' N., Long. 29° 10' E.) (marked on chart), but this position is usually occupied by ships awaiting berth. There can be as many as 10 vessels at anchorage awaiting berth (usually small vessels up to 150 m. in length). Small vessels anchor within a 6 cable wide belt along breakwater and coast. In case anchorage is crowded, best place to anchor for large vessels will be N.E. corner of harbour limit, in 40 m. – 45 m. depth, or about 1.5 miles North of Breakwater Head Light.

Berthing of large ships (200 m. or more) is done during daytime only.

Pilot boards 2 miles East of red Breakwater Head Light. No appreciable affect of streams or current near breakwater.

Naval warships frequently move in and out of port and have to be watched for while approaching breakwater.

Visibility is usually bad during S.W. monsoon and considerable swell can build up.

For entering port, Pilot heads the vessel for a position 6 cables S.E. of Breakwater Light, and gradually aligns the head into the direction of Fairway.

Tugs meet vessel at breakwater. 3 tugs are used for Panamax sized ships, due to small turning basin. Max. permissible draft is 12.5 m.

Coal Pier has 2 unloaders and can achieve a discharge rate of up to 14,000 tonnes per day.

Nearest major business centre is Seoul.

All stores, charts and technicians, etc., are arranged from Seoul.

Regular bus service available for Seoul.

Fuel oil and fresh water supplied by barge.

Workshop is available.

Tonghae is a Naval port and the Northwest sector of port is occupied by a number of Naval vessels.

Pollution can invite big problems. After berthing, Coast Guard personnel board vessel to check Oil Record Book, IOPP Certificate and inspect Oil Water Separator and enquire about mode of disposing of oil sludge, etc.

AUTHORITY: Donghae (Bukpyung) District Maritime and Port Authority. *Tel:* (0394) 32 3631. *Telex:* K24336 Mhdmpa.

AGENT: See "Busan".

ULSAN (Including Onsan): 35.27 N. 129.23 E.

(See Plan)

(A) GENERAL CARGO FACILITIES and Onsan.
(B) YUKONG LIMITED – SBM.
(C) YUKONG LIMITED – DOLPHIN.

(A) GENERAL CARGO FACILITIES

LOCATION: Ulsan is located on the Southern part of Korea's East coast 65 km. by sea from Busan. It is the site of the Hyundai Heavy Industries yard.

PILOTAGE: Compulsory. Quarantine/Pilot Station situated in position Lat. 35° 27' 26" N., Long. 129° 24' 30" E.

VHF: Port Control on VHF Channel 16. Vessel's to advise requirements and ETA 3 hours prior to arrival.

TUGS: 7 tugs. 600 h.p. – 2,600 h.p.

BERTHING: The commercial port handles steel products, coal, and chemicals required by the Ulsan Industrial Complex, which is adjacent to the port area and houses a car factory, an oil refinery, and a number of other heavy industry and chemical plants.

Berth	*Length* (m.)	*Depth* (m.)	*Remarks*
No. 1	130	8.0	General cargo
No. 2	260	12.0	General cargo, coal, cars
No. 3	347	9.0	
No. 4	322	7.5 – 11.0	Fertiliser, cars
No. 5	220	11.5	General cargo
KPC Pier	100	7.0	LPG
Coal Pier	273	10.0	Coal

Onsan – see "Shipmaster's Reports", March 1987 and July 1995.

FRESH WATER: Available by barge at anchorage. Prohibited during stay at buoy.

FUEL: Available with 24 hours' notice.

GARBAGE DISPOSAL: Two companies provide these services: Kwangmyung Marine Service Co., Tel: 0522-74-5746, and Samhan Marine Enterprise Co., Tel: 0522-73-7895.

Collection charges:

1) Within 10 km. of Custom Gate:	62,480 Won/trip
2) 10 km. – 15 km. from Custom Gate:	117,180 Won/trip
3) 15 km. – 18 km. from Custom Gate:	149,630 Won/trip

Collection one per day.

Additional charges levied for holidays, Sundays or night work.

WASTE OIL DISPOSAL: Service available from Yusung Ltd. Tel: 0522-77-0671/2/3. Fax: 0522-77-0513. Capacity of shore tanks: 8,000 cu.m. Barge: Two barges available (1,500 cu.m. and 80 cu.m.). Tanker trucks of 16 cu.m. available. Basic charge: 200,000 Won for 3 cu.m. Additional charge: 80,000 Won/cu.m.

SEAMAN'S CLUBS: Seamen's Club, 2116 Mae-Am dong, Nam-ku, Ulsan, South Korea. Tel: 0522-40-6901, 24 hours service. Facilities available: Currency exchange, international telephone, shopping and bar service. Mini-bus service free of charge.

CURRENCY: Korean Won.

DEVELOPMENTS: Grain terminal under construction for handling vessels of 15,000 d.w.t. – 60,000 d.w.t. 2×750 t.p.h. ship unloaders will be available.

A coal import facility is to be built, Korea Oil Corporation will be the user.

CHIEF OFFICER'S REPORT: 1975 (Updated 1994).

Vessel's Particulars:

Length Overall – 162.18 m. Breadth – 22.8 m.

Summer Draft – 10.382 m. Summer d.w.t. 21,705 m./tons.

Anchorage: Local Agents generally wireless the Quarantine Anchorage position which is approx. 1.5 miles W.N.W. from the position shown on BA Chart No. 898. Care should be taken while anchoring as there are innumerable fishing floats, nets, etc. North of 35° 28' N., and West of 129° 23.7' E.

Restrictions: No pilotage between sunset and sunrise.

Pilotage & Berthing: The standard of pilotage was generally good. Pilot arranged by Agents and embarks at Quarantine Anchorage after vessel is cleared by Authorities. 1 anchor is used while going alongside. 1 tug of unknown h.p. and 2 mooring boats assist while berthing. 4 berths are available:

No. 1 Pier – Length 300 m. Depth variable.
No. 2 Pier – Length unknown. Depth supposed to be 36 ft.
No. 3 Pier – Length 165 m. Depth 29 ft.
No. 4 Pier – No details known.

Local Authorities themselves do not have any idea as to the actual depths alongside. It is advisable to sound the bottom twice daily especially at No. 1 Pier as the depths were found to vary almost every 10 ft. Cargo is loaded/discharged by vessel's cargo gear. Rate of loading bagged urea is approx. 400 m/tons per gang per day. Working hours are normally between 0700 hrs. and 1900 hrs. every day, Saturdays and Sundays included. Only on National Holidays no cargo is worked. Discharge of bulk sulphur and gas/product carriers is around the clock. A vessel carrying 28,000 tons of bulk sulphur was discharged in 5 days. There is 1 crane and conveyor belt on No. 1 Pier only for handling sulphur. It was observed that sometimes small coasters were loaded/discharged by mobile cranes.

Stevedores: Ulsan Port has a rule that a gang engaged for one particular hatch will only work that hatch from start to finish and will not work any other hatch, not even the other end of the hatch if the hatch has more than 1 set of derricks. Gangs have to be ordered before noon for the next day.

Medical: Local hospital used, patients normally taken there by watchmen.

Density: Apparently varies. Once 1016 was obtained while 10 days earlier 1020 was obtained.

Fresh Water: Available from barge whose capacity appears to be 150 tons. At least 24 hours notice necessary.

Fuel: Not available.

Repairs: Facility available but rates high.

Dry Docks: Hyundai Shipyard located at Ulsan builds VLCCs.

Watchmen: Not necessary on foreign vessels. Arranged by Agents if required by Master.

Hatches: As per charter party but suggest use own crew as labour are only experienced with wooden hatchboards.

Repatriation: Usually done through Seoul. We changed Radio Officers and experienced no difficulty.

Telephones: Placed on board, but only for collect calls via exchange (Tel:114).

Services: Only 1 ship chandler who handles everything including providing watchmen, laundrymen, etc.

Identity Cards: Shore pass issued for Ulsan valid for 15 days. To be renewed every fourth day. Usually done by Agent who collects all passes.

Surveyors: Lloyd's can be arranged from Busan or Ulsan (Hyundai Mipo Repair Yard).

General: Ulsan is a very busy port with a large amount of local and Japanese coastal traffic. Local Agents keep trying to shift bigger vessels ahead and astern to try and squeeze in small coasters. It is advisable to strictly adhere to the charter party rules at all times in this port to prevent delays and expense on vessel's account.

SHIPMASTER'S REPORT: May 1979 (Updated 1994).

Vessel: Summer d.w.t., 37,300; LOA, 194 m.; breadth, 28 m.; Summer draft, 36 ft.

Vessel loaded 30,000 tonnes of bagged fertiliser at No. 2 Berth using ship's cranes. The loaded departure draft was 33 ft.

Port Limits: As shown on Korean chart 119, arc passing through:

Lat. 35° 28' 29" N., Long. 129° 24' 25" E.
Lat. 35° 26' 00" N., Long. 129° 24' 23" E.
Lat. 35° 24' 13" N., Long. 129° 22' 00" E.

Documents: As per "Guide to Port Entry".

Pilotage: The Pilot was ordered through the Agent. The Pilot joins the ship in the anchorage from a white coloured pilot boat which has VHF. A portable VHF is carried by the Pilot for communication with tugs and Pilot Station. Only 2 Pilots are on duty each day and there are no movements in port between 1900 hrs. and 0600 hrs. The standard of pilotage was good.

Anchorage: The Quarantine Anchorage as shown on Korean Chart 119 is centred on Lat. 35° 27' 25" N., Long. 129° 25' 34" E. (Radius 400 m.)

Depth in this anchorage is 33 m. to 47 m. This anchorage is outside the harbour limits. A good anchorage was found 1 mile N.E. of No. 2 Imodco Buoy in 24 m. A boat service is available from the anchorage.

Restrictions: No night movements.

Max. Size: Not known.

Health: As per "Guide".

VHF: "Ulsan Radio" maintains a listening watch on Channel 16, contact is made on this Channel then switched to a working Channel. This station is used for local calls only.

Radar: No port radar.

Tugs: There are 2 tugs available of unknown horsepower. The tugs join the vessel off the berth and use their own lines.

Berthing: No. 2 Berth: Length approximately 250 m. The depth alongside was 11 m. with 13 m. offshore, the density varied but averaged 1006. There are no fixed shore facilities at this berth and it appears that it is often used by car carriers.

Cranes: Stevedores have 100, 60, 30 and 10 tonne mobile cranes available.

Bulk Cargo: 30,000 tonnes of bagged fertiliser was loaded using 4 ships cranes. Cargo was delivered to the berth in trucks and made up into slings on the jetty. The loading rate was 700 tonnes per hatch/day.

Stevedores: Gangs should be ordered before 1400 hrs. the previous day. There are a limited number of gangs available. Normal working hours are from 0700 – 1900 hrs. with 1 hour break. It is possible to shift gangs to different hatches under certain circumstances and night working is possible but not advised as same men work through to next day. The standard of cargo handling equipment supplied by stevedores is good.

Medical: Medical treatment and hospital facilities are available.

Hatches: Hatches should be opened before stevedores arrive on board or waiting time is incured.

Fresh Water: Fresh water is available and is delivered by barge.

Repatriation: Repatriation was carried out via Busan about 2 hours drive away without any problems. It can also be carried out via Ulsan.

Airport: Nearest airport Ulsan, regular daily flights to Seoul.

Telephones: A telephone is placed on board which is for local calls only via exchange. Overseas calls can be made from shore, these calls are collect, person to person, only with a waiting time of 2 hours (approximately).

Identity Cards: A shore pass is issued for Ulsan which is renewed every fifteenth day, usually done by Agent.

Stores: There are many ship chandlers, and all stores are ordered through them. The quality is poor and the prices high.

SHIPMASTER'S REPORT: Port of Onsan. March 1987.

This port is, to all intents and purposes, part of the Port of Ulsan – all services (tugs, Pilots, Agents etc.) – are from Ulsan.

The port itself consists of a dolphin jetty, with berths on both sides and is owned and operated by "Ssangyang Oil Co." (See B.A. Chart 898 (Ports on East Coast of Korea) "On San Hang").

Berthing/unberthing is during daylight only.

Normal berthing is on either side of the jetty, with ship's head to the N.E. (vessel swung before berthing). It is recommended that good moorings, and as many as possible are used, as the jetty is open to Easterly swells which are common during summer months.

No services are available at the berth. Any fresh water or bunkers come, by barge, from Ulsan.

Cargo Connections: There appear to be only 2 per berth (on our call we used 1×8 in. Chicksan attached to a flexible length of hose. Aft of the "deep sea" berths there are coaster berths which appear to have larger Chicksans.

Maximum draft on the berth is reputed to be 10.8 m.

Documents are as listed in the "Guide".

SHIPMASTER'S REPORT: April 1988.

Restrictions: Vessels carrying dangerous cargoes are not allowed to berth/unberth during hours of darkness.

Health: Quarantine deadline is 1700 hrs.

Currency: Currency Lists no longer required. Japanese Yen may be taken ashore.

Shore Leave: No restrictions.

SHIPMASTER'S REPORT: July 1995.

Port: Onsan.

Berth: Ssangyoung SBM: Lat. 35° 25.2' N., Long. 129° 23.2' E.

Documents:

10 copies Crew List.
1 copy International Declaration of Health.
1 copy Last Port Sanitary Permit of Departure.
3 copies Narcotics List.
3 copies Stores List.
3 copies Firearms List.
3 copies Crew Declaration.
3 copies Ports of Call in last 30 days.

Pratique: Radio Free Pratique is not available to ships which do not have a Korean Sanitary Certificate.

Pilots: Pilotage is compulsory. Call "Ulsan Pilots" who work on VHF Channel 13, 2 hours before arrival. Pilot boards vessel approximately 2 miles S.E. of the SBM.

Approach: A strong N.N.E.'ly set of about one knot affects the anchorages off Ulsan almost continuously. Collisions between ships trying to pass ahead of anchored ships are quite common, due to this set.

Around the SBM, the currents are very confused, so for this reason once moored to the SBM, the vessel's engines are required to be on immediate stand-by, and are frequently used to stop the vessel overriding the buoy. The bridge and engine room therefore have to remain manned throughout the discharge.

A new SBM lies approximately 1 mile S.S.W. of the Ssangyoung SBM. It is said to be coming into service in July this year, but is not charted on the B.A.Chart. It lies in approximate position Lat. 35° 24.7' N., Long. 129° 22.95' E.

Mooring Masters: Two Mooring Masters join the vessel with the mooring gang. They work shifts on the bridge throughout the discharge, and require accommodation and meals.

Mooring Gang: A team of 8 men board the vessel about 1 mile from the SBM. They assist with the mooring and hose connection. They keep in touch with the Mooring Master on the bridge and the watchman on the SBM on VHF Channel 71. The gang remains on board throughout the vessel's stay, and have to be accommodated and fed.

Tugs: Two tugs are made fast, one forward and one aft, to assist with the mooring. One tug is in attendance for unmooring.

Bunkers: Bunkers are not available from the SBM, and have to be taken after discharge, at anchorage from a barge. Port Regulations do not permit the barge to come alongside or to commence bunkering during the hours of darkness.

Shore Leave: Shore leave is permitted, cost of a liberty boat is approximately U.S.$150.00 per trip (out and back).

Hoses: 2×16 in. hoses with Camlock connections.

Discharge Pressure: Max. allowed is 8.5 kg. When vessel reaches this discharge pressure, the shore starts a booster pump, which reduces the manifold pressure to 7 kg., but no further increase in pumping rate is allowed.

Garbage Collection: This is compulsory. Even if vessel is fitted with an incinerator, vessel pays for service, whether it is used or not.

AUTHORITY: Ulsan District Maritime & Port Administration, 139-9, Maeam-Dong, Nam-Ku, Ulsan, Korea 680-050. *Tel:* 0522-61-4881/9. *Telex:* K 53425 USPORT.

AGENT: Shilla Shipping Corp., Room 1201, Chung Dong Building, 15-5 Chung-Dong, Choong-Ku, Seoul, Korea. Tel: 82-2-778-9200. Mobile: 82-11-313-3256. Fax: 82-2-778-1915, 82-2-778-1916. Telex: K23130. Cables: Shilla Seoul.

(B) YUKONG – SBM.

DOCUMENTS:

2 copies of Manifested Parcels on board.
2 copies of the Stores List.
2 copies of List of Narcotics on board.
2 copies of List of Arms and Ammunition on board.
2 copies of List of Vessel's Tobacco, Cigarettes, Spirits, etc.
11 copies of the Crew List.
2 copies of List of Crew's Personal Effects, Tobacco, Cigarettes, Spirits, etc.
Crew's Vaccination Certificates.
Derat Exemption Certificates.
Clearance from Last Port.
6 copies of List of Landing Passengers, if any.
6 copies of List of Passengers in Transit, if any.
2 copies of List of Passengers Baggage.

PILOTAGE: The seaward approaches to the Imodco Terminal mooring site are free of underwater obstructions, and existing landmarks and navigation aids are adequate. Depth of water not less than 65 ft. in approaches. The Imodco Terminal can be approached with the summit of Pongdae San bearing 333° true. When in position the following navigation fix will obtain at the mooring site:

Pongdae San (summit)	bearing	333° true	distance	2,915 yd.
Pongjin Hang Light (end of breakwater)	"	053° true	"	4,770 yd.
Chuck To (centre cut)	"	255° true	"	3,800 yd.

A good radar echo will be obtained from the tanks ashore at approximately 20 miles, the Imodco buoys at a distance of 8 miles, and the small buoys, marking the floating hose heading off the Imodco Buoy, at 1.5 miles.

Lights ashore, lights on the Imodco Buoys and on the small buoys appear to be unreliable.

After clearing Customs a Harbour Pilot will board the vessel to direct it to the buoy and conduct the mooring operations if required. There is no night mooring. However, unmooring is carried out during darkness as well as in daylight.

ANCHORAGE: Anchor the vessel about 1 mile S.E. of the buoy, if the weather permits. In this location it is less difficult to find vessel, when in fog. Do not anchor less than 1.5 miles from buoy, and under no circumstances can the anchors ever be used on approaching the buoy terminal, chain cables and pipelines are located at this site and anchoring is strictly prohibited.

RESTRICTIONS: No night mooring at any time at SBM. Unmooring possible at any time.

MAX. SIZE: Max. mooring capacity 325,000 d.w.t. Max. draft 64.5 ft.

HEALTH: Entry prediction to be supplied to Quarantine Authorities by vessel's Agent 24 hours before arrival. Master required to complete Health Declaration when officer boards on arrival. Free Pratique is automatic when coming from another Korean port.

RADIO: It is recommended that vessel communicates with Agent through Busan Radio or Ulsan Radio.

VHF: Communication available in Ulsan Port 24 hours a day.

"Ulsan Harbour Control" on Channels 14 and 16 for reporting vessel's arrival and departure.

"Ulsan Pilot" on Channels 13 and 16 and "Ulsan Port Radio" on Channel 16 for calling and working channels are Channels 24, 25, 26 and 27 for public messages.

TUGS: 2 workboats assist in mooring operations and 1 workboat assists with unmooring operation.

One tail tug with 3,600 b.h.p. engine is on stand-by during cargo operations on Terminal's account.

BERTH DESCRIPTION: 3 berths at single buoy moorings.

Yukong Terminal No. 1 SBM:

Position: Lat. 35° 27' 03" N., Long. 129° 23' 44" E.
Max. Size: 325,000 d.w.t.
Depth: 23.0 m.
Max. Draft: 64.5 ft. (19.66 m.).

Description: A 12.0 m. diameter yellow buoy installed in August 1988.

2×16 in. hoses with length 980 ft. and 945 ft. respectively installed. The hose connections are made to the port manifold of the vessel only and lifted one at a time for connection to the ship's manifold. Each hose when full of oil is over 10.5 tons in weight.

Light: Gp. Fl. 4 yellow, 8 seconds. Visibility over 5 miles on radar. On hoses: Same as Buoy No. 2 and Buoy No. 3.

Radar Reflector and Fog Horn: Radar reflector equipped, battery powered fog horn with a range in excess of 0.5 miles.

Yukong Terminal No. 2 SBM:

Position: Lat. 35° 26' 42" N., Long. 129° 23' 18" E.
Max. Size: 325,000 d.w.t.
Depth: 23.0 m.
Max. Draft: 64.5 ft. (19.66 m.).

Description: A 11.4 m. diameter yellow coloured buoy. Hose arrangement same as Buoy No. 1.

Lights: On buoy: Fl. Y. 6 secs. visibility over 5 miles. On hoses: 4 red winking marker lights equally spaced along the 980 ft. floating hoses, visible for 2 miles.

Radar Reflector and Fog Horn: Same as Buoy No. 1 and Buoy No. 3.

Yukong Terminal No. 3 SBM:

Position: Lat. 35° 25' 42" N., Long. 129° 23' 27" E.

Max. Size: 325,000 d.w.t.

Depth: 26.0 m.

Max. Draft: 69.1 ft. (22.65 m.).

Description: A 12.0 m. diameter yellow buoy installed in February 1996 and is scheduled to be in service in May 1996. 2×24 in. hoses (Also see Buoy No. 1).

Lights: On buoy: Fl. 4 yellow, 4 seconds. Visible on radar. On hoses: 4 red winking marker lights equally spaced along the 980 ft. floating hoses, visible for 2 miles.

Radar Reflector and Fog Horn: Radar reflector equipped, battery powered fog horn with a range in excess of 0.5 miles.

Weather: The berth is open to the weather and a short sharp swell is experienced when the wind is from the N.E.

BERTHING: 2 workboats (14 tons and 12 tons) are in attendance during mooring operations.

1 workboat will keep the hoses clear and the other handles the mooring ropes.

Both bow anchors are to be hove well up in the hawse pipes and properly secured before reaching the buoy.

Anchors are never to be used while at the buoy. They can foul buoy cables and pipeline on the bottom if released.

The vessel will be moored with chain (OCIMF recommended).

Onsan: See "Shipmaster's Report", dated March 1987, in Section (A).

HOSES: There are 2×16 in. hoses, 980 ft. and 945 ft. respectively in length at Buoys No. 1 and 2, and 2×24 in. hoses at Buoy No. 3. The hose connections are made to the port manifold of the vessel only and lifted one at a time to the ship's manifold. Each hose, when full of cargo is over 10 tons in weight.

Hose Mooring and Connection: Mooring and hose connection, disconnection will be carried out by Berthing Master and shore gangs, and while the vessel is at the buoy, 1 Berthing Master and 6 crew will remain on board during entire operations on the buoy. The vessel will be required to provide sleeping quarters and meals for them. They are mainly kept on board for emergency.

BUNKERS AND WATER: Available by barge at the anchorage. Bunkering is prohibited at SBM.

BALLASTING: After the vessel has discharged about half of her laden cargo, the vessel should be ballasted to a safe margin, to draw not less than 18 ft. forward.

This will avoid the vessel yawing widely on the buoy with strong winds and assist in avoiding contact with the buoy and hoses. Vessel will be moored at all times about 120 ft. from buoy.

REPAIRS/DRY DOCKS: All types of repairs possible at Hyundai Mipo Repair Yard, Hanjin Heavy Industry and Hyundai Heavy Industry. Seven docks available, largest being 380 m.×65 m.×12.7 m.

ENGINES: The ship's engines must remain ready with full power for immediate use and to keep the vessel a safe distance from the buoy. Any repair work or hot work prohibited without the Berth Master's permission.

CUSTOMS ALLOWANCES: One carton cigarettes or 1 lb. of tobacco, and one bottle wine or spirits allowed, each man.

REPATRIATION: Nearest facilities for crew repatriation are at Ulsan.

HOLIDAYS: 1st, 2nd January; 1st March; 5th April; 1st May; 5th May; 6th June; 17th July; 15th August; 3rd October; 25th December and New Year's Day, (Lunar Calendar Day 1st January); Buddha's Day (Lunar Calendar Day, 8th April); Moon Festival Day (Lunar Calendar Day, 15th August).

SHORE LEAVE: Allowed.

IDENTIFICATION CARDS: Crew required to carry valid identification cards at all times.

REGULATIONS:

Notice to Vessels Arriving at Yukong Limited – SBM Terminal at Ulsan

In the interest of your vessel and Yukong SBM, we wish to bring to your attention the pecularities that are most likely to occur while your vessel is moored to this terminal for discharge of cargo.

The buoy in its location is subject to wind, sea and tides and although the weather here is generally favourable we find that during each change of tide the vessel is quite frequently inclined to ride up on the buoy.

Our past experiences have taught us that *the best way to avoid this hazard is by use of the vessel's engine. In this instance we will require the co-operation of you and your officers.* The Berth Master who will assist you in mooring will also remain with the vessel throughout its entire discharge.

Tide or wind changes may cause the ship to ride up against the buoy. *In this case the Berth Master will anticipate the ship's movements and advise a dead slow bell astern to avoid ship's contact with the buoy. When the tide or other condition has again resumed its normal trend your engineers will be notified that the Berth Master is finished with the engine.*

During this period while the ship's engineer is on stand-by, one of your deck officers will be required to stand-by on the bridge, to pass the engine order from the Berth Master, who will be stationed on the ship's bridge to observe and direct this operation. The SBM's crew will stand-by at ship's bow and will inform of ship's movements to the Berth Master.

The seaward approaches to the Yukong Ltd. SBM terminal mooring site are free of underwater obstructions. Depth of water is more than 64.5 ft. in the approaches. Existing landmarks and navigation aids are adequate (Chart No. 119, published by H.O. of Korea is useful). A good radar echo will be obtained from the radar reflector located at buoy body.

Do not anchor within one mile of buoy and under no circumstances can anchors ever be used on approaching the buoy site and anchoring is strictly prohibited.

Vessels should be anchored 1.5 miles East of No. 2 SBM, where the vessel could be in sight of shore people and the people can board ship safely. Vessel should not be confused with the Yukong No. 2 Buoy and Ssangyong Refinery Buoy, which is located at Lat. 35° 25' 13.5" N., Long. 129° 23' 08.5" E. on the South side of Yukong No. 2 Buoy.

Use of Korean Government Pilots is compulsory. They will board the ship in daytime within the anchorage and before commencement of mooring operations. *There is no night-time mooring. Vessel unmooring is carried out day or night upon completion of cargo discharge.*

The Berth Master will board the ship while at anchorage and will take charge of mooring the vessel to the SBM. He will be stationed at the ship's forecastle during mooring.

Two tugs assist with mooring and one tug with unmooring operations. Two launches are in attendance, one launch will keep the hose string free of the vessel while the other launch handles the mooring ropes during mooring operations. If the bight of the floating hoses protrudes a considerable distance beyond the buoy, the above hoses will be tended to avoid fouling the mooring buoy system while unmooring.

In the event it becomes necessary to vacate the buoy due to inclement weather or any other emergency, we caution you not to turn the propeller because it may foul hoses drifting near the ship's stern. A boat in attendance will tow the hoses away and clear of your vessel so that the ship's propeller can be used.

To avoid undue strain on the buoy, anchors, floating hoses, mooring ropes and chains, it will be necessary to ballast your vessel while on the buoy. Approximately 40% of her deadweight may be required as ballast to prevent undue strain on the buoy system. Dirty ballast tanks should be selected before hoses are connected to the manifold so that discharge of cargo and ballasting can be carried out simultaneously without contamination of cargo. The vessel will moor about 120 ft. from the buoy which will assist in avoiding contact with the buoy.

When the cargo has been discharged, your tanks inspected and found dry and the hoses disconnected, we will then request that you vacate the buoy mooring. If you desire to take on ballast or more time is required to complete your vessel's business you may go to anchorage to do so.

Yukong Limited will provide you with a copy of our crude oil unloading procedures which provides information and instructions for safe unloading of the crude oil cargo. It will be necessary to release tank inert gas pressure after the tugs have left. *The Yukong procedure specifies certain methods for gauging, water cut, temperature reading, sampling cargo and calculation of cargo. These procedures will be strictly followed by the Yukong Supercargo together with Surveyor.*

If a VLCC is going to carry out crude oil washing, her equipment must satisfy Ulsan open sea buoy's crude oil washing regulations and peculiarities. Crude oil washing can be done under ship's responsibility and she must confirm to Yukong Ltd. not less than 7 days before her arrival that vessel's crude oil washing system is operational. Yukong Ltd. crude terminal provides booster pump to increase pumping rate, also an in-line sampler is installed in the shore line to monitor BS&W plus crude oil contamination with water.

The Berth Master is responsible for carrying out terminal's cargo unloading procedures. The Cargo Inspector will be on board for cargo inspection and will carry out cargo gauging and inspection of cargo compartments. Supercargo will also be on board prior to cargo unloading for sampling of cargo. Slop oil and BS&W shall be substracted from the quantity of cargo. When the Supercargo is satisfied that all obtainable crude oil cargo is discharged to shore tanks, he will inspect the ship and sign the ship's empty and dry certificate along with the appointed ship's officer and the independent Surveyor.

Health: ETA to be supplied to Korean Quarantine Authorities by the vessel's Agent 24 hours before ship's arrival. The Ship's Master is required to complete the Health Declaration upon arrival of the Korean Quarantine Officer. Free Pratique is automatic when the ship is coming from another Korean port.

Radio: It is recommended that the Master communicates with the ship's Agent through Pusan Radio, which covers Ulsan port.

VHF communication is available in Ulsan port 24 hours/day, every day. Call sign "Ulsan Port Radio", calling Channel 16, working Channels 25, 26, and 27. A small walkie-talkie can communicate with the shore by the attendant launch. Pilot office: Tel: 61-7703. Sunjin Tugs Co. Tel: 61-2311.

Ship's Repairs: Possible if arrangements with local shipyards are made prior to the vessel's arrival at Ulsan.

Identification Cards: Seaman's Book is sufficient, a ferry boat operates at all times.

SBM Team of Stand-by Men: While the ship is on the buoy, the vessel should provide sleeping quarters and linen for 7 men, this includes one Berth Master and Supercargo. The stand-by men connect and disconnect hoses, clear floating hoses when necessary and are mainly kept on board for emergency purposes. Under certain conditions should it become necessary, they may ask the vessel for meals.

Safety: All ships and their Agents or concerned persons shall follow good safety practices including, in particular, but not limited to, those described in the International Oil Tankers of Terminal Safety Guide as issued by the OCIMF.

1. The vessel's personnel are responsible for the safety of the vessel and must take all necessary precautions, whether or not so advised by the Berth Master, bearing in mind the weather conditions, or any other circumstances requiring special care or attention.
2. While the vessel is moored or within the vicinity of moorings, all vessel's personnel and vessel's operations must comply with or be in accordance with the following safety rules:

   One tail tug with 3,600 b.h.p. engine is on stand-by during cargo operations at Terminal's account, but ship's engines must remain ready with full power for immediate use.

   Not less than one deck officer and two seamen shall be available on deck at all times while vessel is in the moorings.

   Power must be available at all times on all deck winches and/or anchor windlass during vessel's stay at the buoy.

A good floodlight will be required to illuminate the area around the submarine and cargo hose connections during cargo transfer operations.

During the discharge of ballast at night, the sea area around the vessel must be adequately lighted.

Engine repair work is prohibited without the Berth Master's permission.

Hot work is strictly prohibited while cargo is being discharged.

Laundry service is available if requested prior to ship's arrival.

General: Many ship repair parts and equipment are obtainable in Ulsan, located some 40 miles away from Ulsan. Allow about 4 hours for their procurement.

OPERATOR: Yukong Limited, 26-4 Yoido-Dong, Youngdungpo-Gu, Seoul, Korea 150. (Postal Address: Yoido P.O.Box 548, Seoul, Korea). *Tel:* (02) 788-6085-8. *FAX:* 82-522-70-2895. *Contact:* Captain K.T. Hwang or Captain O.J. Lee.

Marine Affairs Team, Yukong Ulsan Complex, 110 Kosa-Dong, Nam-Gu, Ulsan, Korea 680-130. (Postal address: P.O.Box 4, Ulsan, Korea). *Tel:* +82-522-70-2890/2898. *Telex:* YKMAT K52686. *FAX:* +82-522-70-2899.

(C) YUKONG LIMITED – DOLPHIN.

BERTHING: Berthing operation is permitted during daylight only, and unberthing operation takes place throughout 24 hours in case of ballast voyage only.

Berths No. 3, No. 6 and No. 7 are equipped with a docking sonar system.

No specific requirements. Pilot boarding time will be notified by ship's Agent mainly by VHF or telex.

Berth	*Capacity* (d.w.t.)	*Berth Depth* (m.)	*Max. Draft* (m.)	*LOA Max.* (m.)	*LOA Min.* (m.)	*Commodity*	*Loading Arms*
Yukong No.1	3,000	7.0	6.3	120	30	Lubricant base oil	
Yukong No.2-1	500	4.0	3.6	100		Domestic supply only (petroleum product)	6 in. loading arm(s) fitted at all berths.
Yukong No.2-2	6,000	7.4	6.7	100			
Yukong No.2-4	6,000	7.8	7.0	100			
Yukong No.2-5	2,500	7.8	7.0	100			
Yukong No.2-6	4,000	8.0	7.0	100		Product/ ethylene/ LPG	As above
Yukong No.2-7	6,000	8.0	7.0	100			
Yukong No.3	35,000	11.2	10.2	230	120	Gas oil/ kerosene jet A-1/ reformate Fuel oil	2×10 in. 1×10 in.
Yukong No.4-1	10,000	9.4	8.6	160	90	Gas oil Fuel oil	1×10 in. 1×10 in.
Yukong No.4-2	2,000	9.1	8.3	120	80	Gas oil/ fuel oil	2× 8 in.
Yukong No.4-3	4,000	8.5	7.7	160	80	Gas oil/ fuel oil	2× 6 in.
Yukong No.5-1	2,000	6.0	5.4	90	50	Gas oil/ kerosene Fuel oil	1× 6 in. 1× 6 in.
Yukong No.5-2	2,000	6.0	5.4	90	50	Gas oil/ kerosene Fuel oil	1× 6 in. 1× 6 in.
Yukong No.5-3	4,000	7.0	6.3	120	80	Gas oil/ kerosene/ jet A-1/ gasoline	2× 8 in.
Yukong No.5-4	5,000	7.5	6.7	150	100	Gas oil/ kerosene Fuel oil	1× 8 in. 1× 8 in.
Yukong No.5-5	10,000	9.2	8.2	170	120	Gas oil/ kerosene/ jet A-1/ naphtha/ gasoline/ reformate Fuel oil	2× 8 in. 1×10 in. 1×10 in.
Yukong No.6	80,000	15.0	13.5	280	170	Gas oil/ kerosene naphtha Crude/ fuel oil	2×12 in. 1×12 in.
Yukong No.7	100,000	15.0	13.5	280	135	Gas oil/ kerosene/ jet A-1/ naphtha reformate/ gasoline Crude/ fuel oil	3×12 in. 1×12 in.
Yukong No.8	Under construction (See "Plan").						

YOSU (including Kwangyang): 34.44 N. 127.45 E.
(See Plan)

(A) CRUDE WHARF, LG CALTEX OIL CORPORATION
(B) PRODUCT WHARF, LG CALTEX OIL CORPORATION
(C) NAKPO WHARF, BERTHS NO. 1, 2, 3, 4 AND 5
(D) PIER, LUCKY ADVANCED MATERIALS
(E) DRY CARGO, YOSU HARBOUR
(F) LG CALTEX ENERGY
(G) KWANGYANG STEEL MILL, RAW AND PRODUCTS BERTHS

DOCUMENTS:
Last Port Clearance.
Register.
13 copies of Crew List.
12 copies of Passenger Manifest.
3 copies of Stores List.
3 copies of Bonded Store List.
3 copies of Arms and Ammunition List.
3 copies of Livestock List.
5 copies of Cargo Manifest.
1 copy of Vaccination List showing dates of last yellow fever vaccination, etc.

PILOTAGE: There are 2 Pilot Stations. Pilot station for vessels of less than 30,000 g.r.t. is located at Lat. 34° 44' N., Long. 127° 49' E., and for more than 30,000 g.r.t., such as crude tankers, is located at Lat.34° 39' N., Long. 127° 58' E.

RESTRICTIONS: 2 overhead power cables with clearance of 27 m. and 39 m. respectively in approximate position: Lat. 34° 44' N., Long.127° 45' E.

HEALTH: Before proceeding to respective berth vessels must anchor at the Quarantine Station to obtain Free Pratique.

RADIO: Yosu Port Radio Station, call sign 6MYS, operates on 500 kHz on 24 hour service.

The station's range is about 100/150 nautical miles and it is recommended that tanker Masters should contact the station giving their ETA at the Pilot Station.

Vessels calling at Yosu must cable the exact time of arrival at the Pilot Station to ship's Agent and Harbour Pilot's office. VHF Radio for calling Agent is Channel 16, name Agent and switch to Channel 26 to talk.

TUGS: 3×4,200 h.p., 4×3,000 h.p., 2×2,000 h.p. and 5×1,000 h.p.

MEDICAL: ETA to be supplied to quarantine authorities by vessel's Agent 24 hours before arrival. Master required to complete Health Declaration when officer boards on arrival. Free Pratique is automatic when coming from another Korean port.

There are medical facilities in Yosu town. Inoculations and vaccinations can be arranged by the quarantine doctor.

The Quarantine Stations are located at Lat. 34° 42.5' N., Long.127° 52.7' E., for deep drafted vessel and Lat. 34° 45.2' N., Long.127° 46.3' E., for less drafted vessel. The Quarantine inspection can be made at other than the above location depending on the situations. The inspection takes place during daylight.

DENSITY: 1025.

FRESH WATER: Fresh water is available for delivery to ships.

FUEL: Bunkers available by barge, subject to advance notice being given.

REPAIRS: There are repair facilities in Yosu.

CUSTOMS ALLOWANCES: One carton cigarettes or 1 lb. of tobacco, and one bottle wine or spirits allowed, each man.

REPATRIATION: Crew changes or repatriation can be arranged.

HOLIDAYS: 1st, 2nd January, 1st March, 5th April, 1st and 5th May, 6th June, 17th July, 15th August, 3rd October, 25th December. 1st and 2nd January (Lunar Calendar), 8th April (Lunar Calendar), 14th, 15th and 16th August (Lunar Calendar).

SHORE LEAVE: Shore leave for ship's personnel is arranged by ship's Agent and the local authorities.

IDENTIFICATION CARDS: Crew required to carry valid identification cards at all times.

CHARTS: Republic of Korea H.O. Charts No. 209, 241 and 242.

(A) CRUDE WHARF, LG CALTEX OIL CORPORATION REFINERY

GENERAL DESCRIPTION: The crude wharf is located at Lat.34° 51' N., Long. 127° 46' 55" E. running in a 336°/156° direction.

APPROACHES: En route to the wharf, at approximately Lat.34° 47.3' N., Long. 127° 48.8' E. vessels pass narrowest part of channel, Sam Gi, which has about 22.5 m. depth of water at MLLW, and marked by 5 light-buoys and one lighthouse. The course is laid midway between the 5 buoys.

PILOTAGE: Pilot station for crude tankers is located at outer harbour in positon: Lat. 34° 39' N., Long. 127° 58' E. in the vicinity of Tae Do Island, where the Harbour Pilot boards to lead the vessel to Quarantine Anchorage.

RESTRICTIONS: Berthing and operating restrictions are as follows:
1. Maximum approach angle: 10°
2. Maximum approach velocity: 0.15 m./sec.
3. Maximum current speed: 2.1 m./sec.
4. Winds
   (a) Non-operating conditions
   Maximum design velocity 38 m./sec.

(b) Operating Conditions (Moored at berth)
Maximum sustained velocity 18m./sec.
Maximum instant gust 27 m./sec.
(c) Maximum berthing wind velocity
13 m./sec. of Southerly wind
15 m./sec. of Northerly wind
(d) Berthing in daytime and slack H.W. for VLCC's.

MAX. SIZE: Crude Wharves No. 1 and 2:

Maximum crude carrier:	320,000 d.w.t.
Maximum products carrier (Clean):	80,000 d.w.t.
Maximum draft:	21 m.
Minimum crude carrier:	80,000 d.w.t.
Minimum products carrier (Clean):	30,000 d.w.t.

HEALTH: Normally vessels who could not be granted Radio Pratique anchor at the Quarantine Station which is located at around Lat. 34° 42.5' N., Long. 127° 52.6' E. At this anchorage, Quarantine doctors come on board. After quarantine inspection, the vessel should have port clearance of Customs, Immigration and so on.

BERTHING: *Approaching the Wharf:* It will be normal tanker practice that all tankers be berthed bow seaward to ensure a quick and uncomplicated departure in the event of an emergency. Main conditions for following this practice are as below:

1. Natural environment's conditions to be favourable.
2. Early passage of Sam Gi Channel prior to high tide to meet slack tide while berthing.
3. Vessel should swing to the North of Crude Wharf with the assistance of tug-boats and approaching course will be about 160°.

When the above is impracticable due to the limited effective manoeuvring space in the vicinity of the wharf, vessels will approach almost parallel to the wharf whose direction is about 336°.

All tugs will come alongside to the vessel's bow, mid-ship and quarter at No. 9 Buoy. At about half mile off the wharf, the vessel's speed should be 2 knots and when abreast of the wharf, the vessel should be stopped. When stopped, the abreast distance between vessel and wharf should be about 100 m. – 200 m.

Abreast distance will be reduced with the assistance of tugs. Closing speed must be 10 cm./sec. or less at a distance of 20 m. and less than 5 cm./sec. at a distance of 3 m. between the vessel and wharf. Distance and speed for both bow and stern will be displayed on the gangway tower of wharf upon vessel reaching about 160 m. from wharf.

Mooring: The wharf has 8 dolphins for mooring VLCCs as shown in the "Plan Section". Nos. 1 and 4 (or 6) dolphins are to be used for head and stern lines, Nos. 2 and 3 for breast lines, and Nos. 5, 6, 7 and 8 dolphins for fore and aft spring lines. Each dolphin has quick release hooks with a capstan and about 100 m. of 3 in. messenger lines to pick up mooring wires/ropes.

To monitor tanker approach, the wharf is equipped with docking sonars which detect distance and approaching speed, which are also displayed on top of the gangway tower with visibility of about 200 m.

Line handling service agency will render services to handle lines on the wharf. The agency will provide 2 launches relaying mooring lines from berthing vessel to the wharf and 9 men including a chief in charge of the team hooking mooring lines to the dolphins.

About 20 mooring lines for 200,000 d.w.t. tanker are required. Type and quality of mooring lines are in accordance with ISGOTT – i.e. "Preferably the mooring lines used to secure the tanker should all be of the same materials and construction. Wire ropes are recommended especially for larger tankers as they limit the tanker movement at the berth. Moorings composed entirely of fibres, especially synthetics, are not recommended as their high elasticity can allow excessive movement due to strong wind or current forces or passing ships. Wire ropes and fibre ropes should never be used together in the same direction because of the difference in their elastic properties".

Vessel puts out springs first, then breast lines and finally head or stern lines or vice versa. Normally breast and long lines will be relayed by launches to the wharf. While making fast spring lines, vessel should adjust centre of her manifolds to wharf loading arms at the request of shore operator. Vessels should be held tightly to breasting dolphins with the assistance of tug-boats, mainly by tug stationed midship, until mooring has been completed.

Anchoring in the vicinity of the wharf is not allowed except in an emergency.

Unberthing: Tugs will be stationed on seaward side of the vessel's bow, midship and quarter as necessary and will push the vessel so as to hold the vessel tightly to the breast dolphins while letting-go all mooring lines. Sequences of letting-go lines is the reverse of mooring. Therefore, long head and stern lines let go first, breast next and springs last.

DISCHARGING: *Prior to arrival:* Prior to arrival at the wharf, vessels should stand-by/warm-up her cargo pumps and designate 3 manifolds which are convenient for unloading cargo. The designated manifolds should be marked by rags or other materials so as to be able to identify them easily from the wharf and adjust the vessel's position correctly to loading arms of the wharf. All the vessel's manifolds should be kept blinded until vessel is moored. Also, all crude oil tankers must be equipped with 16 in. ASA type flanges on her manifolds.

Connection of hoses: Discharging arms are as follows:
Berth No.1: 3×16 in. for crude oils.
2×12 in. for clean oils.
Berth No.2: 3×16 in. for crude oils.
2×16 in. for clean oils.

After completion of berthing, terminal representative and wharf operators will come on board and check readiness to connect discharging arms, fire fighting equipment, drip pans and oil removing materials. The 3×16 in. discharging arms for crude oil are rotary counter-weighted marine arms with hydraulic quick connect couplings. Remote controlled hydraulic positioners are provided and wharf operators will position and connect the outboard flanges of the arms to the tanker manifold. The vessel's crew, consisting of one responsible officer and 4 other crew, standby at the manifolds, prepare manifolds to be used, and co-ordinate with wharf operators in adjusting, connecting and securing discharging arms.

Operating Envelope: Berth No. 1: The unloading arms have been designed for an operating-height envelope that accounts for the elevation changes due to tide and varying freeboard of the largest and smallest tankers for which berth is designed. The 16 in. unloading arms will accommodate a maximum 255,000 d.w.t. tanker and a minimum 80,000 d.w.t. tanker, or heights of 26.3 m. to 5.2 m. above the lowest water level. The 12 in. unloading arms will accommodate a maximum 80,000 d.w.t. tanker and a minimum 30,000 d.w.t. tanker, or heights of 19.6 m. to 4.6 m.

Berth No. 2: The 16 in. unloading arms will accommodate a maximum 320,000 d.w.t. tanker and a minimum 80,000 d.w.t. tanker, or heights of 25.73 m. to 3.83 m. above the lowest water level. The 16 in. Naphtha unloading arms will accommodate a maximum 160,000 d.w.t. tanker and a minimum 30,000 d.w.t. tanker, or heights of 22.33 m. to 3.83 m.

A longitudinal drift of ±5.0 m. and a lateral drift of ±4.57 m. have been allowed for both sizes of unloading arms.

Rates and Pressure: After hoses have been connected, all shore valves will be opened and vessel's Chief Officer informed of shore readiness. Vessel will open all valves necessary to discharge except manifolds' valves which will be opened just prior to start of discharge.

After confirming that the cargo is flowing into designated shore tank, tanker rail pressure for all vessel sizes shall be 140 p.s.i.g., and maximum discharging rates are:

Arab Medium Crude Oil	80,000 b.p.h.
High Pour Low Sulphur } Crude Oil	40,000 b.p.h.
Naphtha	30,000 b.p.h.

Crude Oil Washing (COW): Crude oil washing of cargo tanks using fixed tank washing machines in conjunction with fully inerted gas tanks is permitted on Master's acceptance of LG Caltex Oil's conditions to carry out COW at the crude wharf which will be delivered to the vessel. The vessel requiring COW should notify it to LG Caltex Oil in advance together with the information of previous COWs conducted and COW schedules to be carried out.

BALLAST: The ballasting operation should be discussed and agreed with the terminal representative regarding the approximate time of commencement and duration of ballasting both into permanent ballast tanks and cargo tanks.

To obtain quick turn around, the terminal encourages simultaneous handling of cargo and ballast, other than permanent ballast, if the vessel is so equipped. Ballasting should be minimum after discharging cargo.

FRESH WATER: Not available.

FUEL: Not available.

SERVICES: LG Caltex Oil provide the following services: Telex service every day from 0800 hrs. to 1800 hrs., except Saturdays when service is available from 0800 hrs. to 1300 hrs., and no service on Sundays and holidays.

Telephone service every day from 0800 hrs. to 1900 hours.

A list of emergency telephone numbers will be available at the wharf.

AUTHORITY: LG Caltex Oil Corporation, Yeochon Complex, P.O.Box 7, Yosu, Korea. *Tel:* 80-2114. *Telex:* 66762. *FAX:* 0662-686-3333. *Contact:* Kim Sa Bong, Port Captain.

Head office: Seoul. *Tel:* 787-1114. *Telex:* K-27234 or K-23261. *FAX:* 785-5451, 785-3584.

(B) PRODUCTS WHARF, LG CALTEX OIL CORPORATION

APPROACHES:

Navigation: The route for product tankers up through to Yosu Gulf is easy, without any navigational hazards. After passing the Nak-Po, vessels will steer in a Northwesterly direction for about one nautical mile and then Westerly, keeping within the 11.3 metre contours.

There are 11.3 metres' shallows at approximate LLW along Myodo Sudo, so vessel's draft limit to pass this channel on high tide will be up to 11.3 m. or more, depending upon tidal rises and in accordance with OCIMF.

The hydrographic charts for navigation and approaching to the Product Wharf area have been published by the Republic of Korea Hydrographic Office.

Approaching and mooring to the Wharf:

a. Pilotage is compulsory for vessels over 500 gross tons in accordance with Yosu Port Rules. Tankers calling at the Product Wharf of LG Caltex Oil for loading or unloading products should notify the latest ETA by radio to Port Authority and related Agents for Pilot.
b. The direction of tidal current stream in the vicinity of the wharf is nearly rectilinear and parallel to the wharf, running about 272° on flooding and 084° on ebbing at about 3 knots, the tidal range between maximum high and low water is about 4.0 m. The duration of ebb/flood is about 6.75 hours and 5.5 hours respectively.
c. Vessels are to be berthed with bow to seaward whenever possible, in order to facilitate unberthing as quickly as possible when an emergency situation arises. Use of anchors is not allowed while berthing, except in an emergency.

RADIO: See "Radio" in Section "A".

BERTHING: *Product Wharf:* The Product Wharf is located in approximate position Lat. 34° 51' 40" N., Long. 127° 44' 10" E.

The Product Wharf is designed to accommodate 7 tankers simultaneously. Berths No. 1 and No. 4 for approximately 5,000 d.w.t. Berth No. 2 for 2,000 d.w.t., Berth No. 3A for 35,000 d.w.t., Berth No. 5 for 50,000 d.w.t., Berth No. 6 for 5,000 d.w.t. and Berth No. 7 for 12,000 d.w.t. tankers, respectively.

The wharf is designed to moor and unmoor tankers on a 24 hour basis, depending on the tidal conditions at the time and the Master's judgement. The illumination for night work is satisfactory.

Cosmos Wharf: There is one berth located in position Lat. 34° 51' 20" N., Long. 127° 42' 45" E., designed to accommodate LPG and Chemical vessels of less than 5,000 d.w.t. Shallowest depths of water in the approach channel and wharf area are 3.2 m. and 6.2 m. respectively. Therefore, vessels approaching the wharf should choose high tide to pass through this channel. Illumination for night work is excellent.

Berth Assignment for Loading/Unloading: Berths will be assigned to the vessel after review of the vessel's size and types of product to be loaded. The berth designations will be advised in advance, to the vessel through vessel's Agent.

Flanges: LG Caltex Oil Refinery Wharves are equipped with ASA type flanges for loading arms and hoses.

LOADING:

Supervision: All cargo operations of loading, unloading, switching of tanks and topping-off should be supervised by a ship's responsible officer, and sufficient personnel should be on deck at all times to attend to the loading and/or unloading operations.

Loading Arm/Hose Connection: It is LG Caltex Oil Refinery's policy that vessel's crew shall be responsible for connecting/disconnecting loading arm/hoses to and from vessel's manifold. Also proper reducers and elbows to fit to wharf loading arm couplings must be connected and disconnected by ship's crew. Wharf operators are always on watch to handle loading arms and winches for loading hoses.

Sequences: After mooring at the berth, LG Caltex Oil Wharf Operators will come on board and check readiness to connect loading arms, fire fighting equipment, oil drip pans or oil removing materials. When the vessel is in all respects ready to connect loading arms/ hoses, the following loading procedure will apply:

a. The loading arms/hoses will be swung on board the vessel.
b. Connect loading arms/hoses by vessels's crew.
c. Notice must be given by the vessel to the wharf shift foreman one hour before the vessel completes deballasting.
d. Loading will be commenced by gravity. When the vessel advises wharf operator that the cargo is flowing into vessel's tanks, the loading rate will gradually be increased by pumping until the desired rate has been reached.
e. The vessel must give 30 minutes' notice to the wharf operator before starting "top-off", and shall advise if a decreased rate is desired.
f. The vessel must give 15 minutes' notice to the wharf operator prior to completion of loading at which time the wharf operator may reduce loading rate and/or stop loading pumps.
g. Ship's valves shall not be closed while loading pump is operating.
h. On completion of loading, loading arms/hoses must be drained and disconnected immediately. Samples must be taken upon completion of loading.

Loading Rates: The loading rates vary and depend upon kinds of products, sizes of loading arms and pipe lines, vessel conditions, etc. Detailed loading rates will be determined by close co-ordination between responsible vessel's officer and the wharf operator.

Each berth is equipped with counter weighted marine loading arms. Sizes of these arms' flanges are 6 in., 8 in., 10 in. and 12 in. ASA.

Deballasting: The discharge of dirty ballast within the territorial waters and entrance is strictly prohibited. Shore facilities for disposal of dirty/ oily ballast water is not available at LG Caltex Oil Refinery. The deballasting operation should be discussed and agreed with the Product Wharf representative regarding the approximate time of commencement and duration of deballasting.

FRESH WATER: Vessels requiring fresh water request required amount of water to ship's agent in advance.

REPAIRS: There are no repair facilities and also repairs are not allowed on the product wharf. In the event of emergency cases, LG Caltex Oil will assist in carrying out repairs under the supervision of refinery's safety personnel to expedite vessels from the wharf and a quick turn around.

AUTHORITY: LG Caltex Oil Refinery (See Part A).

(C) NAKPO WHARF, NAMHAE CHEMICAL CORPORATION

A straight berth which could accommodate one 50,000, one 30,000 and two 20,000 d.w.t. vessels is located at about Lat. 34° 51' 40" N., Long. 127° 44' 40" E. The wharf is handling raw material by 800 tons crane and product of fertiliser by 300 tons crane.

(D) PIER, LG ADVANCED MATERIALS, INC.

Located close to the product wharf of LG Caltex Oil Refinery at about Lat. 34° 51' 30" N., Long. 127° 44' 05" E. Maximum vessel size and draft are about 4,400 d.w.t. and 5.5 m. respectively.

(E) DRY CARGO, YOSU HARBOUR

PIERS: 3 piers are located in Yosu town at about Lat. 34° 44.3' N., Long. 127° 45.3' East and consist of No. 1, No. 2 and No. 3 Piers.

RESTRICTIONS: No. 1 Pier is used for only small vessels. No. 2 Pier for vessels of less than 20 ft. draft and max. draft at No. 3 Pier is 26 ft. At anchor draft up to 35 ft.

CARGO-HANDLING FACILITIES: Crane barge of 30 tons capacity is available.

(F) LG CALTEX ENERGY

LOCATION: 34° 51' 38.96" N., 127° 46' 10.91" E.

BERTH:

(1) Principals:

Max. size: 75,000 CBM., LOA 230 m.
Max. draft allowable: 13 m.
Required minimum U.K.C.: 2.5 m.

(2) Operating Condition:

(a) Allowable conditions for mooring:

Max. Wind Speed	*Wind Direction*
13 m./sec.	Southerly
15 m./sec.	Northerly

Max. wave height: 1.64 m.
Approach speed: 0.15 m./sec.
Tidal time for mooring: Mooring at slack tide.
Tugs will assist with berthing when strong tidal current.
Time limit: Berthing operation only carried out in daylight.

(b) Circumstances where unloading is not allowed:

Wind Speed: Over 18 m./sec.
Max. wave height: 0.93 m.
Speed of tidal current: Tugs will assist with berthing when there is a strong tidal current.
Time Limit: No restriction.
Other conditions: (1) Lightening.
(2) Lack of proper safety plan and safety regulations on board.

SHORE CONNECTION: For LPG tanker, cargo operation and shore facilities.

(1) Shore Connection: (P: Propane, B: Butane, L: Liquid, V: Vapour)

(a) Arrangement as seen from seaward (from right to left): BL, BV, PV, PL.

(b) Specification:

Standard of Flange	12 in. ASA 150	8 in. ASA 300	8 in. ASA 300	12 in. ASA 150
Use	BL	BV	PV	PL
Range of temperature	−9°C/0°C	−9°C/5°C	−50°C/5°C	−50°C/−30°C
Max. press.for operation	10 kg./sq.cm	5 kg./sq.cm	5 kg./sq.cm.	10 kg./sq.cm
Max. flow rate	2200 cu.m.p.h.	2200 cu.m.p.h.	2200 cu.m.p.h.	2200 cu.m.p.h.

(c) Movable range:

Limit angle: 60°
Max. distance for angle of depression: 0.9 m. – 10.6 m.
Height above sea level: 22 m. (Mean sea level)

(d) Required ship's manifold position:

– Distance between bow/stern and manifold: About 110 m.
– Distance between side plating and manifold: Minimum 1.0 m.
– Height above sea level: 20.5 m. (Mean sea level)
– Distance between each centre of flange: 2.0 m.

(e) Size and number of reducers with onshore facilities:
2×10 in. ASA 150 and 2× 8 in. ASA 300.

(2) Cargo Operation:

(a) Requirements of ship's cargo tank and liquid line for discharging:

	Propane	*Butane*
Tank pressure:	Not exceeding 0.25 kg./sq.cm.	Not exceeding 0.25 kg./sq.cm.
Line Temperature:	Not exceeding −42°C	Not exceeding −5°C

(b) Procedure for purging and cool down for connection (Arm and unloading line):

Procedure for purging before: 3 – 5 times vent with shore vapour.
Procedure for purging after: 3 – 5 times loading arm flushing with ship's hot gas.
Procedure for cool down: Not required.

(c) Procedure and Rate of Discharging:

	Series Discharging		*Parallel Discharging*	
	Propane	*Butane* (cu.m.p.h.)	*Propane*	*Butane*
Rate at start	500	500	500	500
Average Rate	1,200	1,200	1,200	1,200
Max. Rate	2,000	2,000	2,000	2,000
Rate of Finish	500	500	500	500
Vapour Return from Shore	6.9	8.9	6.9	8.9

(d) Discharging quantity for B/L: Ship's calculated figure.

(e) Circumstances when unberthing is requested:

– Wind speed: Over 30 m./sec.
– Wind direction: N.W., S.W.
– Max. wave height: 1.64 m.
– Other Conditions: (1) Typhoon.
(2) In case of emergency.

MOORING:

(a) Required numbers and quality of mooring ropes:

Fore lines:	4 wire and P.P. ropes.
Fore breast lines:	3 " " " "
Fore spring lines:	2 " " " "
After lines:	4 " " " "
After breast lines:	3 " " " "
After spring lines:	2 " " " "

(b) Additional mooring ropes from shore: None.
(c) Gangway: Shore gangway will be used.
(d) Ship's derrick: To be kept on stand-by.
(e) Indication of ship's manifold position: Required.
(f) Mooring facilities – requirements:

– Types of bitts: Quick release hooks.
– Distance between bitts: 50 m. (average).
– Location and types of oil fence: Not available.
– Availability and location of speedmeter for approaching speed: Docking sonar on No. 1 breasting dolphin.
– Place for bonding cable: Not necessary.

(g) Operation system at berth:

– Mooring personnel: At the bow: 5 persons.
At the stern: 5 persons.
– Connection of arms: 5 persons.
– Required time: 15 minutes for each arm.
– Disconnection of Arms: 4 persons.
– Required time: 15 minutes for each arm.

– Unmooring Personnel: At the bow: 3 persons.
At the stern: 3 persons.
– Communications: Shore can supply a walkie-talkie.
(h) Disaster prevention system:
– External System: None
– Internal System: Emergency shut down system.
Fire fighting system (fire hose).
– Disaster prevention facilities at the berth: E.S. system – fire fighting system (monitor).
– Availability of sea water pollution prevention facilities: None.

SHORE FACILITIES:
(a) Shore liquid lines: (Distance from tank (heater) to ship's connection, diameter and max. pressure).
– Propane: 1,600 m. (600 m.) – 18 in. – 23 kg./sq.cm.
– Butane: 1,800 m. (600 m.) – 18 in. – 14 kg./sq.cm.
(b) Flare stack capacity: Nil.

SUPPLIES AND SERVICE:
(1) Drinking water and bunkers:
(a) Supply place: Yosu Anchorage.
(b) Method of supply: Barge.
(c) Advance notice: Advise Agent.
(d) Average rate: Bunkers: 100 – 200 t.p.h.
Water: 800 tons per day.
(2) Provisions:
(a) Available.
(b) Method of supply: From barge.
(c) Advance notice: Advise Agent.
(d) Kind of provisions available: Meat, fish, vegetables, etc.
(3) Medical:
(a) Preventive injection: Cholera available.
(b) Advance notice: Advise Agent.
(4) Landing: Possible.
(5) Ship's repairs availability:
(a) Hull
(b) Machinery } Only at anchorage.
(6) Surveyor/Diver: Available.

BERTH SAFETY REGULATIONS:
Pier I: (Ocean and Coastal Tanker).
(1) Vessel size:
Ocean: Max. 75,000 CBM.
Min. 30,000 CBM.
Coastal: Max. 3,500 CBM.
Min. 1,000 CBM.
Pier II: (Only Coastal Tanker).
(1) Vessel size – Max.: 3,500 CBM.
Min.: 1,000 CBM.
(2) Loading Arms:
2 self-standing for liquid LPG, equipped with 8 in. ASA 300 RF manual quick release couplings.

(G) KWANGYANG STEEL MILL, RAW AND PRODUCTS BERTH

LOCATION: 34° 54' N., 127° 45' E.
GENERAL: Port under construction.

Pohang Steel Co. discharge will handle vessels of 250,000 d.w.t. at a 900 m. length berth with depth of 20 m. The loading berth of 700 m. will accept vessels of 50,000 d.w.t.

2×2,000 t.p.h. grab unloaders and 1×2,000 t.p.h. shiploader will be available in the initial stages.

A 280 m. long quay is to be constructed to accommodate container vessels up to 50,000 d.w.t. Container handling equipment and other facilities will be available.

SHIPMASTER'S REPORT: July 1988.

Pohang Iron & Steel Company's complex is built on about 9 square kilometres of reclaimed land on the North side of Kwangyang Hang. It started production in May 1987 and at present manufactures about 5.5 million tons of steel products annually, with 8 million tons planned for 1991. The wharf fronting this area runs in a 101°/281° direction with an eventual length of 5.4 km. by 1991.

At the Eastern end a causeway running North and South has been built connecting Chijin Do Island with the complex.

Charts: B.A. Chart No. 3391. Korean Chart No. 241.

Documents:
10 copies Crew List.
5 copies Stores List.
5 copies Personal Effects List.
3 copies Arms & Ammunition List (See "Notice").
3 copies Narcotics List.
2 copies Ports of Call List (previous 3 months).
5 copies Cargo Manifest.
5 copies Through Manifest (where applicable).
1 copy Maritime Declaration of Health.
Last Port Clearance.
Ship's Register.
Derat Exemption Certificate.

Pilotage: There are 5 licensed Pilots available at the present time. Vessels exceeding 30,000 g.r.t. embark their Pilots at 34° 39' N., 127° 58' E., and vessels under 30,000 g.r.t. at 34° 39' N., 127° 29' E. Pilots should be contacted on VHF Channels 16 and 14, 2 hours before arrival. This message should be repeated to Yeosu Harbour Control at the same time. There are no overhead power lines or bridges in the buoyed channel, but many fishing vessels operate in the area and they are usually cleared out of the way by a tug steaming ahead of the ship from the Quarantine Anchorage to the berth. When in ballast southbound, the Pilot leaves in the vicinity of the Quarantine Anchorage and the ship should stay outside the buoyed channel.

Anchorages: Large vessels are usually instructed by Yeosu Harbour Control to anchor in the vicinity of Tae Do Island, there is plenty of water and good holding ground (mud) here. The Pilot takes the ship up to the Quarantine Anchorage for Clearance by Port Officials from Yeosu. No mail is delivered unless requested. No Radio Pratique available.

Max. Size: 250,000 d.w.t. LOA 1,030 m. Beam 50 m. Draft 20.0 m.

Tugs: Tugs usually start to make fast off Nakpo Gak Light, using tugs' ropes. This ship (loaded inbound) used 4 tugs, both for berthing and unberthing. The Pilot communicates with the tugs on VHF Channel 14.

The following tugs are available: 3 × 4,200 h.p., 1 × 3,400 h.p., 1 × 3,200 h.p., 1 × 2,600 h.p., 1 × 1,900 h.p. and 2 × 1,200 h.p.

Berthing: Most ships using the Bulk Handling Berth are moored port side to (i.e. head out). This ship, 141,000 d.w.t. used 4 headlines, 4 sternlines, 2 breastlines each end and 2 back springs each end. 2 mooring boats are used to run the first ropes. On the quay is a digital readout giving the distance off for bow and stern and speed of approach.

There are no berthing or sailing operations during the hours of darkness.

Bulk Handling Berth: This is used for the import of iron ore, coal and limestone to feed the steelworks. Coal, via the conveyor system, also feeds the Coal Loading Berth for transhipping coal for coastal distribution. The berth is built on heavy steel piles, running 101°/281° with its present length of about 1.5 km. It is well fendered at 40 m. intervals with buffer type fenders having face pads 7 m. in width and 4 m. vertically, these keep vessel about 3 m. off the quay. The ship must provide its own brow for the gangway platform for access. The minimum depth alongside is 21.5 m. at MLWST, minimum keel clearance 1.5 m. Bottom is sand.

Discharging Facilities: 1×20 ton cantilever crane is situated at the Eastern end of the quay, usually the limestone berth.

Five electric gantry cranes with grab trolleys are mounted on rails which run the full length of the pier. Maximum air draft is 18 m. at HW. Outreach from the face of the fenders is 34.85 m. Grab capacity about 30 tonnes.

Discharging Rates: Maximum 40,000 t.p.d., normally 25,000 t.p.d. each.

Three separate conveyor belts run the full length of the pier to enable limestone, coal and ore to be discharged simultaneously.

Coal Loading Berth: This has been built into the Chijin Do Causeway and runs from the Eastern end of the Bulk Handling Berth, North and South, for about 350 m. It has a moving arm loader and handles ships of up to about 30,000 d.w.t., mainly coasters, the coal can come via the belt system either from the stock-pile or from larger ships discharging at the Bulk Handling Berth, at up to 20,000 t.p.d. There is a regular run down to Yeosu by coal barges.

Steel Products Berth: This lies about 2 km. West of the Bulk Handling Berth in the same line and will eventually make up the Western end of a continuous line of berths. It has 2 container type gantry cranes and 3×20 ton cantilever cranes. Main exports at present are steel coils.

Container Terminal: This is still under construction at Golyak-myon. The channel is being widened from 300 m. to 500 m. by dredging. There are up to 4 dredgers at a time working in different parts of the Bay.

Stevedores: Foremen, labour and crane drivers are in different Unions, this combined with language difficulties causes some confusion, hopefully over a period of time this will resolve itself.

Medical: Medical treatment and hospital facilities available.

Density: Ranges from 1022 to 1025, depending on the season.

Fresh Water: Available only by barge.

Fuel: Available only by barge, at least 2 day's notice required.

Repairs: Minor repairs are available at Yeosu, about 23 km. by launch, and divers are also available, but both are expensive.

Watchmen: From the time of obtaining Clearance to the time of sailing, a Customs Guard lives on board.

Repatriation: Possible. Normally by launch to Yeosu then by mini-bus to Yeosu Airport.

Time: GMT plus 9 hours.

Shore Passes: Necessary for aliens, renewed weekly. Korean crew have their Seaman's Books kept by Immigration until sailing time. As the dock gate is about 5 km. from ship and Kwangyang about 25 km., it is necessary to hire a mini-bus from the Agent at about U.S.$40 per trip.

Telephone: No telephones available from shore.

Stores: Local chandler can deliver alongside by truck. Western style meat and dry stores are usually imported and expensive, fruit and fresh vegetables plentiful in season. Spares are not easy to obtain.

Notice:

> Declaration of Weapons
>
> As you might know, the Republic of Korea is in a "Quasi-War" status with North Korea. Therefore, national security is of the utmost importance in our country.
>
> For the above mentioned reason, you must declare/report any guns, bullets, explosives, etc., to this country.
>
> At the time of your departure from this port, you will be permitted by the Custom's Office to take your weapons with you.
>
> For your own peace of mind, however, the overall security in Korea is well provided for and it is therefore unnecessary to carry weapons.
>
> Additionally, you are reminded that failure to properly declare/report your weapons is illegal and punishable by law.
>
> Thank you for your co-operation.
>
> Signed: .... Customs Director.

AGENT: Shilla Shipping Corp., Room 1201, Chung Dong Building, 15-5 Chung-Dong Choong-Ku, Seoul, Korea. Tel: 82-2-778-9200. Mobile: 82-11-313-3256. Fax: 82-2-778-1915, 82-2-778-1916. Telex: K23130. Cables: Shilla Seoul.

Kuwait

GENERAL

VISA REGULATIONS: *Crew Changes:* Crew members joining ships at Kuwaiti ports can enter Kuwait with a valid Seaman's Book, against a "Seaman's Guarantee Letter" from Agent, allowing 24 hour transit only to join a vessel in port.

For the preparation of a Seaman's Guarantee Letter (S.G.L.) and to arrange an "Airline's OK Board Telex" from Kuwait (to allow crew to board a flight to Kuwait without Kuwaiti visa), please telex the following particulars to vessel's Agent:

Full Name
Nationality
Seaman's Book Number/Date and Place of Issue
Age/Date of Birth
Profession
Flight Details

Once a seaman enters/joins vessel on S.G.L. as above, it is not permitted for him to sign off/leave the vessel in Kuwait due to Immigration restrictions applicable to seamen entering on S.G.L.

Visitors to ships, repairmen and business visitors should obtain a visa before travelling to Kuwait. It is also possible for the Agent to obtain a visitor's visa (N.O.C.) locally in Kuwait. However, visitors must send, 15 days prior to arrival, a photo-copy of the passport pages containing full passport particulars (imperative) and 3 passport size photographs to the Agent in order to apply for such a visa.

SPARES/MAIL: *Air Freight of Ship's Spares, Mail etc.:* Air-freighted spare parts and ship's mail should be addressed to the Master c/o the Agent, and marked: "Ship's Spares (Stores) in Transit" and be accompanied by packing list and commercial invoice and Certificate of Origin both in original, with name and address of manufacturer (imperative) and certified by Chamber of Commerce and legalised by any Arab Embassy/Consulate.

Contents and weight of consignment should be correctly stated in all documents and air way-bill.

Customs clearance formalities and delivery of air freight consignments in Kuwait will take 10-14 days. It is, therefore, advisable to despatch air freight parcels sufficiently well in advance of ship's arrival. The flight details and air way-bill number should be telexed to the Agent enabling the Agent to collect delivery order from the airline and commence clearance formalities immediately.

N.B.: No documents are needed for ship's mail. It is advisable to send ship's mail/printed matter/documents by air courier, due to faster handling at airport, and to avoid the lengthy procedures applicable to air freight consignments.

PACKING REGULATIONS: *Chemicals in Bags:* The following is from the Director General, Ports Public Authority.

"You will appreciate that chemical materials arriving in bags require careful and special handling to prevent tearing and contamination, and we would, therefore, request you to ask all Steamship Agents and Owners of vessels to give their best attention to shipments of this type of cargo, in an effort to ease its handling by the stevedoring labourers without obstacles.

The bags should properly be bundled and placed on pallets, covered by thick plastic and/or canvas covers for safety and security of the cargo and fast discharging.

It should be noted that unless this type of cargo is shipped on vessels under the condition mentioned above, the Ports Public Authority shall not permit discharging and the cargo will remain on board the on-carrying vessel".

In Transit and Kuwait Cargo Mixed Together in Ships' Holds: The Kuwait Ports Public Authority have reported a recent incident which occurred during discharge of cargo from a vessel.

The berthing of the vessel as usual was arranged according to the cable from the Master that Kuwait cargo was clear for discharge in all respects, but when the discharging operation was carried out, they observed that the in transit and Kuwait cargo in all hatches were mixed together. Such being the case the Ports Public Authority were compelled to move one truck out to receive Kuwait cargo, and then bring back the truck of receivers of the in transit cargo, and so on until the discharging was completed. This situation naturally entangled the work altogether and caused considerable delay in discharging the cargo from the vessel.

Therefore, the Ports Public Authority have requested that we draw Principals' attention to this and ask you to take good care in stowing cargo properly in ships' holds and that it not be mixed together.

MINA ABDULLA: 29.02 N. 48.11E. (See Plan)

LOCATION: Mina Abdulla bounded on South by parallel of Lat. 28° 56' N. on the East by Long. 48° 18' E. and on North by a line joining following points:

(1)	29° 01' 45" N.	48° 09' 25" E.
(2)	29° 01' 45" N.	48° 10' 06" E.
(3)	29° 02' N.	48° 10' 18" E.
(4)	29° 02' N.	48° 18' 00" E.

FLAG: Every merchant ship when entering or leaving port between sunrise and sunset shall fly her national flag and national flag of Kuwait and, when entering port, shall fly her signal letters. All vessels required to fly Kuwait flag on foremast during daylight hours. Flags may be obtained from Agent.

APPROACHES: Mina Abdulla is easily located as it is the Southernmost refinery of the group of refineries which form Ahmadi, Shuaiba and Mina Abdulla. A number of flares will be seen. The Sea Island is situated about 3 miles offshore of the refinery.

When a vessel is ready to enter at the same time as another vessel is ready to leave the port, the outgoing vessel shall have priority over the incoming vessel, subject always to the provisions of the International Regulations for Preventing Collisions at Sea and to the requirements of safe navigation.

DOCUMENTS: Before leaving Kuwait the Master shall be responsible for obtaining a Port Clearance Certificate. The documents necessary for vessels to enter and leave Mina Abdulla are:

Entry
Ship's Manifest.
Bill of Health.
Crew List.
Clearance from Last Port.
Light Dues Certificate.

Leaving
Register.
Load Line Certificate.
Radio Certificate.
Safety Certificate.
Last Port Clearance.

Masters and Agents of vessels shall, when called upon by a Customs Officer or Marine Officer, produce any documents relative to the landing or shipment of their vessel's cargo in the port. The Master or his representative is required to hand to the Company a written Notice of Readiness to load.

Discharging certificates of oil cargo loaded from Kuwait and Partitioned Zone ports are to be sent to vessels' local Agents immediately duly attested by the Customs Authorities and Arab Consulate covering full quantity as per Bill of Lading.

If a vessel which has not submitted the certificate for the previous voyage calls for the second time, she will be allowed to load and sail only after paying a cash deposit of KD 2,000.

In order to avoid delay in berthing, loading and outward clearance for vessels, all owners must give instructions to Agents at discharging ports to forward relevant cargo discharge certificates to Agents at loading ports without delay.

PILOTAGE: Pilot normally boards the vessel about 1.0 miles – 1.5 miles to the Eastward of the Sea Island. Vessels are requested to have pilot ladder of approved pattern, safely and securely rigged, and ready for immediate use. When it is necessary for a vessel to anchor before berthing, she should do so in the recommended anchorage area. At all times a Pilot will be available on the Sea Island.

Vessel with a Pilot on board shall display International Code Flag "H" in a prominent position whilst manoeuvring under his advice, and shall, if so instructed by Pilot, display a flag indicating berth to which vessel is proceeding.

ANCHORAGES: Vessels requiring to anchor for any reason in port limits should do so within area enclosed between positions:

29° 02' N.	48° 14.3' E.
29° 02' N.	48° 15.1' E.
29° 01.2' N.	48° 15.1' E.
29° 01.2' N.	48° 14.1' E.

or within reasonable proximity to the East if congestion arises in anchorage area.

All vessels and craft within the port shall be navigated with care and caution, at a speed, and in a manner which shall not endanger the safety of other vessels or craft. In particular, special care and caution is to be observed in passing vessels or craft of the following category: weight-lifting or deeply-laden craft, vessels or craft in tow and vessels or craft engaged on diving, dredging, grabbing, pile-driving or construction work, survey operations or the removal of obstructions.

All vessels within the port shall anchor, or moor and unmoor, when and where required by the Pilot, and shall be moved from place to place as required and by such means or appliances as may be ordered by the Marine Officer.

Vessels or craft shall not anchor near any submarine lines within the port limits, unless engaged on work which, in the opinion of the Pilot, necessitates their doing so.

MAX. SIZE: Mina Abdulla Sea Island consists of 2 berths, primarily for loading, although unloading facilities are also available. The offshore berth (No. 19) is designed to receive tankers up to 276,000 tonnes displacement in ballast to load products and can also accommodate loaded tankers of 35 ft. It is envisaged that loaded tankers will only be handled in an emergency.

The inshore berth (No. 18) is designed to receive tankers from 25,000 to 140,000 tonnes deadweight in ballast annd can also accommodate loaded tankers of 25,000 – 90,000 tonnes deadweight in emergencies.

The minimum depth of water at Berth No. 19 is 59 ft. and at Berth No. 18 minimum depth is 57 ft.

June 1993: Max. size 276,000 d.w.t. Max. draft 16.92 m. Max. LOA 350 m.

MOORING: Pilots may decline to moor any vessel if in his opinion it is not equipped with satisfactory mooring facilities, lines and gear, etc.

The Sea Island consists of 6 mooring dolphins and 8 breasting dolphins all connected to the loading platform by walkways.

Mooring hooks and capstans for handling ropes are provided. Hooks are of the quick release type, and in an emergency can all be immediately released from the Control Tower. A shore gangway is provided at each berth.

All vessels berthing at Mina Abdulla must be provided with a minimum of 8 mooring ropes forward and aft.

HEALTH: Quarantine regulations administered by Kuwait Government's Quarantine Medical Officer. Pratique granted at anchorage or berth.

Vessels calling at Mina Abdulla are requested to send following information to "Health Shuaiba Port" via Harbour Master at Mina Al-Ahmadi:

(1) Name of vessel.
(2) Last port of call.
(3) Health condition of crew.
(4) Validity of Cholera Certificates.
(5) Request for Free Pratique.

No craft, other than one having on board the Mooring Master or Port Health Officer, may approach any vessel entering the port and no other person may board any such vessel until Free Pratique has been granted.

Adequate covers shall be placed over all overside discharges.

Masters shall be responsible for ensuring that no unhealthy or offensive matter is deposited from their vessels on port premises. Any such matter so deposited that is, or becomes offensive, or, in the opinion of the Port Health Officer, injurious to health, may be removed, confiscated or destroyed and the place of deposit cleaned or disinfected on the direction of the Marine Officer at the expense of the Master responsible.

Any vessel, having on board offensive goods, or goods which, in the opinion of the Port Health Officer, are injurious to health, may be ordered to leave the port by the Marine Officer.

No ashes, refuse or other objectionable matter shall be thrown overboard from any vessel either on to any premises or into any waters of the port.

RADIO/VHF: All communications are to be made through the vessel's Agent, with the request that they be passed to K.O.C. Mina Al-Ahmadi, Harbour Master and Marine and Export Operations Department.

TUGS: 2×70 ton bollard pull tugs are available to assist in berthing and will operate to the Pilot's instructions, but will normally both be used while berthing, usually making fast on the starboard side, by means of 2 ropes each of which will be provided by the tug.

Both tugs are fully fitted with Fire Fighting and Dispersant spraying equipment.

LOADING: All products are loaded at the Sea Island by means of rigid loading arms. They are all fitted with hydraulically operated quick connect/disconnect couplings.

The black products are loaded by means of 10 in. connections and the white products by 16 in. connections.

The maximum loading rate will be approximately 2,000 t.p.h. for white oil and 1,500 t.p.h. for black oil.

Caution: The incoming oil stream is pumped from shore and it is extremely dangerous to close a ship's valve against the incoming oil stream. Such a procedure creates an excessive pressure, which may damage submarine lines, ship's pipelines or the terminal facilities. Vessels will be held liable for damages resulting from failure to observe this precaution.

Loading and discharging of petroleum vessels shall not be undertaken without permission of the Oil Movements Department.

Loading and discharging of petroleum vessels shall not commence until:

(1) Master or Chief Officer has certified to the Oil Movements Department that all necessary valves are open and that vessel is in proper condition to receive or discharge cargo.

(2) Master or Chief Officer has certified to the Oil Movements Department that all ship's sea valves are closed or blank flanged except those required for water circulation purposes, and that these regulations are being and will be observed.

(3) Ship's tanks have been inspected by an authorised inspector and passed as suitable for loading.

Throughout period of loading and discharging operations, following conditions shall be observed:

(1) A responsible Ship's Officer shall be on watch on board at a point near tanks which are receiving oil during process of loading. The company's staff have received instructions to stop loading immediately whenever this rule is disregarded.

(2) A capable member of ship's crew shall be stationed by ship's tank valves which are receiving oil during loading.

(3) All pipelines shall, while rigged for loading or discharging petroleum, be directly and continuously earthed and kept constantly under supervision.

(4) No petroleum shall be allowed to escape or overflow.

(5) The following signals will be observed, as well as the radio communications, between ship and shore:

Signal Flag by Day		*Light Signal by Night*
	Starting	
1 Red Flag	Slow Speed	1 Red Light
2 Red Flags	Full Speed	2 Red Lights
	Stopping	
1 Red Flag	Slow Speed	1 Red Light
All Flags Down	Stop	No Lights

(6) When normal ship-to-shore communication fails, the emergency signal to stop the oil flow will be a continuous blast on the ship's whistle until the oil ceases to flow. Steam or air should never be shut off from whistle during loading. When practical, means should be provided for blowing the whistle from the after section of the cat walk. Whenever an Emergency Whistle Signal is used, all loading operations in the berths will be shut down until normal communication is restored. For this reason it is requested that ships in the area refrain from using ship's whistle for other than essential purposes.

Load Lines: Masters are warned that their load lines are subject to scrutiny by the Port Officer from Mina-Al-Ahmadi on completion of loading or bunkering. It is in their own interest therefore, to observe the regulations, as vessels are liable to be delayed and have to pump ashore or be fined if overloaded, and Port Clearance withheld.

MEDICAL: Patients will in normal course of events be treated by Quarantine Medical Officer on board. Neither medical nor hospital facilities are provided by the Company. However, in cases of emergency those requiring urgent hospitalisation may be taken by vessel's Agent.

BALLAST: As soon as practicable after arrival, all vessel's tanks will be inspected for evidence of oil in ballast. During discharge of ballast, similar inspections will continue. If evidence of oil appears at any of these inspections, the ship must return at once to a point not less than 100 miles from the coastline and there clean tanks and segregate slops.

Masters will be required to sign a declaration certifying that any water ballast intended for discharge from vessel is clean and free from oil.

No deballast reception facilities are available.

POLLUTION: Cases of discharging dirty ballast or oil spillages will be investigated and vessels are liable to fines and/or detention. Vessels shall not discharge into the water of the port any part of the content of their cargo, slop, or ballast tanks or bilges which is liable to pollute these waters. Masters shall ensure that pipeline and equipment are clean before using them for discharging anything into the water of the port. Scuppers shall be plugged effectively and no leakage or spillage of petroleum on board shall be allowed to leak or be swept overboard.

The State of Kuwait has stringent laws in force concerning the pollution of the sea by oil. The following are 2 amended paragraphs of this law:

Paragraph 1, Art. 4. "A person responsible for any pollution as described in Articles 1 and 2 shall be punished by a fine of not less than 1,500 Dinars and not more then 40,000 Dinars. In the event of his committing a similar crime within a period of 1 year from the date of his conviction, such a person shall be punished by a fine of not less than 3,000 Dinars and not more than 40,000 Dinars, and in the event of his committing yet another crime within a year from this last conviction he shall be punished by a fine of not less than 6,000 Dinars and not more than 40,000 Dinars".

For each offence a bond of 40,000 Kuwaiti Dinars must be deposited prior to release of vessel.

Paragraph 3, Art. 6.. "The person responsible for pollution may suspend the detention order against the ship on payment, as a cash guarantee, of 40,000 Kuwaiti Dinars to the official entrusted with the execution of such order".

TIDE: The maximum tidal range is 10 ft. 6 in. and velocity of tide is from 0.5 to 2 knots.

DENSITY: 1025.

FRESH WATER: Cannot be supplied at Mina Abdulla. In case of utmost need Agent may hire a barge with a capacity of 100 tons of fresh water from Kuwait, and send to Mina Abdulla.

FUEL: Fuel oil bunkers can be loaded in either berth at a max. rate of 500 t.p.h, thus raising the max. loading rate of either berth by 500 t.p.h. for fuel oil cargoes only.

CONSULS: See "Shuwaikh". Consuls are situated just outside Kuwait town, some 30 miles from the terminal.

CERTIFICATES: There is no organisation for dealing with Derat Certificate at Mina Abdulla. Agents are responsible for presentation of Oil-discharging Certificate to Customs Authorities as guaranteed by them. All Cargo Discharge Certificates duly attested by the Arab Consulate are to be sent to Agents directly.

REPAIRS: No facilities.

CUSTOMS: Import of firearms and ammunition is forbidden. Under Kuwait Law No. 46, it is an offence to sell or trade liquor within the State of Kuwait. Any person convicted for selling, purchasing, giving away, accepting or acquiring in any manner, liquor or any intoxicating drinks for the purpose of trading and marketing shall be punished by a maximum 3 year's imprisonment and a maximum fine of KD. 300 or by only 1 of the 2 aforesaid penalties. Alcoholic beverage is strictly prohibited to be held out of bond. Master allowed to keep limited quantity in his cabin.

REPATRIATION: See "Visa Regulations" under General before first port.

AIRPORT: Kuwait.

TIME: GMT plus 3 hours.

PROVISIONS: K.O.T.C. does not provide any chandlering facilities. Masters of vessels calling at Mina Abdulla must arrange for supplies through ship's Agent. Foodstuffs, beverages, tobaccos, etc., are available from ship chandlers in Kuwait in limited kinds and quantities. Prices a little more expensive than in Kuwait due to long transportation. Ship's Agent should be advised by cable well in advance.

SHORE LEAVE: At present, crews not allowed ashore at Mina Abdulla, and this rule will be strictly adhered to.

GARBAGE DISPOSAL: Vessels have to retain garbage on board.

WASTE OIL DISPOSAL: No service available.

SEAMAN'S CLUBS: None.

CURRENCY: Kuwaiti Dinar.

REGULATIONS: Main engines shall always be kept ready for use. Steam pressure shall be maintained at minimum necessary to operate auxiliaries and to manoeuvre in case of need. Deck steam is to be maintained at all times.

Engine repairs which may prevent working of main engines may only be undertaken with written permission of the Oil Movements Department.

Master shall at all times retain on board sufficient crew to work vessels.

Vessels shall have both anchors ready for immediate use on arrival and departure.

Vessels berthed at sea terminals shall not carry out engine trials without permission of the Oil Movements Department.

No swimming in vicinity of vessels or from vessels in berth is allowed.

DEVELOPMENTS: The CBM berths formerly used have been removed but the pipelines and ground tackle remain in place. The former position of the CBM berths, which are about 1 mile South of the Sea Island, are marked by a navigation buoy and Masters are cautioned from anchoring in this area.

SHIPMASTER'S REPORT: September 1994.

Anchorage: On arrival, while awaiting berth or awaiting tide, vessel can anchor 2.0 – 2.5 miles East of Sea Island.

Berthing/Unberthing: Mina Abdulla Sea Island has 2 berths (No. 18 and No. 19). On both berths it is always port side alongside.

On Berth No. 19 (which is seaward), berthing and unberthing is always done during ebb tide, i.e. heading into a stream which is approximately S.S.E. going. Similarly, on Berth No. 18, docking/undocking is always during flood tide, i.e. heading into a stream which is approximately N.N.E. going. Max. rate of stream is about 2 knots. Two tugs are used for berthing. No tugs used for unberthing. Pilot boards about 1.5 miles E.S.E. of Sea Island for Berth No. 19, and usually 1.5 miles E.N.E. of Sea Island for Berth No. 18. Moorings used are 3-3-2 forward and aft. There are no mooring boats, and all lines are sent ashore to dolphins by heaving lines. Complete operation of positioning vessel, aligning manifolds and mooring takes a long time.

For undocking, Pilot boards from Terminal, but a ladder should be kept ready for his disembarkation as he leaves a few cables off Sea Island.

Ship-Shore Access/Communication: Shore gangway is always used. During cargo operations, ship's portable radio is kept by Terminal Control for ship/shore communication. Terminal Control also keeps continuous watch on VHF Channel 69.

Terminal Facility and Operations: Shore connections are of 12 in. All loading arms are Chicksans with quick connector couplings. Usual rate of loading is 2,000 tonnes/hr. Usually only one loading connection is provided. However, under exceptional circumstances, 2 connections can be given. Minimum rate of loading for topping-up is 500 tonnes/hr.

All white products (ATF, AGO, HSDO and SKO) are handled.

There is no slop reception facility at Terminal.

Surveyors/Sampling: Saybolt are usually the surveyors appointed on behalf of suppliers (KPC). "First Foot" sample is usually drawn from first ship's tank loaded. Colour specification is very important. If sample is not absolutely clear visually, loading is suspended for about one hour until sample is analysed in laboratory and found satisfactory and within specification.

Documentation: EDP is always followed after completion of loading. Vessel has to cast-off immediately if tide is available (i.e. ebb tide on Berth No. 19). If however tide is not available, vessel remains alongside and documentation can be completed there. If casting-off immediately, vessel can anchor 2.5 miles East of Sea Island and await documentation. If anchoring is not desirable, vessel can authorise Agents to sign documents and proceed on her voyage. Shore cargo figures are advised to vessel on VHF.

Terminal staff/Loading Master do not sign any papers (e.g. Cargo Nomination or Protest Letters, etc.), nor do they issue any Protest Letters. KPC representative boards vessel after completion of loading, either on berth if vessel stays on berth awaiting tide, or at anchorage if vessel anchors for documentation. He signs all documents "For Receipt" on behalf of KPC.

Agents: Agent board vessel once after berthing and once before unberthing, and hands over the Port Clearance. He must be given one hour's notice before completion of loading.

Bunkers: Bunkers are available ex-pipe and ex-barge. Sometimes, required grade is not available from Terminal ex-pipe, then vessel has to obtain required grade by barge at anchorage. Bunkering ex-pipe can be done concurrent with cargo loading. Barges are not allowed to come alongside when vessel is at berth. Barge supplies bunkers at a rate of approximately 300 tonnes/hr. If bunkering by barge, it is preferable to do it at anchorage after loading, as documentation is also accomplished while vessel receives bunkers.

Routeing: Deep Water Departure Channel (QCR 305) should be used for sailing out of Mina Abdulla, even if vessel can safely navigate through "QCR 302", as no inbound ships are allowed through "QCR 305". This channel is very wide and all buoys were found in position.

Regulations/Miscellaneous: Alcohol and "Magazines" must be sealed prior to arrival. Some of the European ladies fashion magazines can also be regarded as "pornographic". Cameras must also be sealed. Radio Free Pratique is not granted and "Q" Flag must be kept hoisted until Pratique granted after berthing. However, it is still recommended to send Radio Health/Pratique message to Shuaiba Health Office via Agent.

Shore leave has to be arranged by prior notice/permission. List of persons wishing to go ashore has to be sent to Agents prior to arrival, and they should also be in possession of a photograph. Persons needing medical attention can however be sent to doctor, even if no prior arrangements are made.

AUTHORITY: Kuwait National Petroleum Co. (KSC), Mina Abdulla Refinery, P.O.Box 69, Safat, 13001-Safat-Kuwait. *Tel:* (965) 3260233, Ext. 3232/3535. *Telex:* Kunpema 44204 Kt. *Cables:* Kunpetco-KWT-Marine, MAB. *FAX:* 3260280, 3261704. *Contact:* B.P.N. Sinha, Superintendent – Oil Movement.

All shipping movements are directed by Mina Al-Ahmadi Harbour Master. *FAX:* 3262265.

MINA AL-AHMADI: 29.04 N. 48.09 E. (See Plan)

OPERATORS: Kuwait Oil Company.

LOCATION: Port of Mina Al-Ahmadi is open roadstead situated on Western shores of the Gulf.

PORT LIMITS: From the shore at Lat. 29° 02' 50" N. Eastward to Long. 48° 09 ' 42" E. Thence in a S.E. direction to position Lat. 29° 02' 45" N., Long. 48° 09' 47" E. then in an Easterly direction towards Long. 48° 11' 30" E. and the Northerly limit Lat. 29° 10' 00" N. from the shore to Long. 48° 11' 30" E.

Note: Southern limits liable to slight modification due to Shuaiba Port expansion. Changes of no consequence to visiting vessels.

FLAG: National flag of Kuwait is to be flown at foremast head during vessel's stay in port.

DOCUMENTS:

1. To obtain clearance inwards, following documents required by Agents:
   (i) Ship's Register.
   (ii) Safety Equipment Certificate.
   (iii) Safety Radio Certificate.
   (iv) Load Line Certificate.
   (v) Last Port Clearance.
   (vi) Two copies of Crew List showing names, nationalities and Passport/Seaman's Book numbers.

Items (i) to (v) are returned to Master together with Port Clearance (valid 24 hours only) prior to sailing.

2. Customs boarding officers require following:
   (a) One copy of Crew List.
   (b) Log Books covering period from last visit.
   (c) Completed Customs Declaration Form (supplied by boarding officer).
   (d) List of Ports visited with arrival and departure dates since last visit (form also supplied by boarding officer).
   (e) Completed Ballast Form (form also supplied by boarding officer).
3. Immigration Officials require the following:
   (a) Valid Passport or Seamen's Book – the latter is preferable for landing.
   (b) Letter of Guarantee from Agents.
   (c) Two copies of Crew Lists.

4. Early Departure Procedure: KOC Documents Section are now operating an Early Departure Procedure to cut down delays in documentation. Masters may opt to use this scheme, full details of which can be obtained from KOTC. Those vessels not accepting this system of documentation are unberthed to anchorage to await documentation and therefore subject to delay in sailing until documents are ready and delivered onboard by launch. Weather conditions may prolong such delays on occasions.

5. Discharge Certificates: Discharging certificates of oil cargo loaded from Kuwait and neutral zone ports are to be sent to vessels' local Agent immediately, duly attested by Customs Authorities and Arab Consulate covering full quantity as per Bill of Lading.

If a vessel, which has not submitted the certificate for the previous voyage, calls for the second time, she will be allowed to load and sail only after paying a cash deposit of KD. 2,000.

In order to avoid delay in berthing, loading and outward clearance for vessels, all owners must give instructions to Agent at discharging ports to forward relevant cargo discharge certificates to Agent at loading ports without delay.

NAVIGATIONAL AIDS:
Current hydrographic information may be obtained by radio from the "Middle East Navigation Aids Service, Bahrain".

Lights and Fog Signals: A fog signal on the extreme South end of South Pier – MAA with characteristics of one 3-second blast every minute. Approx. position Lat. 29° 03' 42" N., Long. 48° 09' 42" E.

A fog signal situated on the North Pier with a characteristic of 2.5 second blast, 3 second silence, 2.5 second blast, 3 second silence, 2.5 second blast, 46.5 second silence, Approximate position Lat. 29° 07' 24" N., Long. 48° 09' 00" E.

A fog signal situated on MAA – KOC Sea Island with a characteristic of 2×3 second blasts every 90 seconds. Approximate position Lat. 29° 06' 48" N., Long. 48° 17' 29" E.

A fog signal situated on MAA – KOC Single Point Mooring with a characteristic of a 10 second blast every 60 seconds. Approximate position Lat. 29° 06.9' N., Long. 48° 19.2' E.

A fog horn situated on the Shuaiba Petroleum Products Pier – SPPP – with a characteristic of a 3 second blast every 17 seconds. Approximate position Lat. 29° 02' 46" N., Long. 48° 10' 46" E.

A fog horn situated on the Mina Abdullah Sea Island – MAB – with a characteristic of prolonged blast duration of 2 seconds on and 18 seconds intervals off. Followed by morse "LI". Approximate position Lat. 29° 01.5' N., Long. 48° 12' 45" E.

PILOTAGE: Vessels should arrive with sufficient clean ballast for safe manoeuvring under prevailing weather conditions. Under certain conditions the Pilot, after consulting the Harbour Master, may require additional ballast to be run in before berthing.

All berthing, unberthing and manoeuvring of vessels within the port limits, restricted area and prohibited anchorage must be done under the supervision of a KOC Pilot.

It is the duty of the Master to inform the Pilot of any special conditions, difficulties, or peculiarities whatsoever pertaining to his vessel which might impose hazards in connections with the handling, mooring, unmooring, loading or discharging of the vessel.

The Pilot boarding places for North Pier and Shuaiba Petroleum Products Pier (SPPP) are 2 miles East of the respective piers, and for the offshore terminals (MAA-SPM and MAB-Sea Island) 2 miles off the terminals, or any other place advised by the Duty Harbour Master.

Caution: Vessels are cautioned to keep well clear of the port area and on no account to pass within a distance of 2 miles of all terminals without a Pilot on board.

ANCHORAGES: The suggested anchorages in the Port of Mina Al-Ahmadi, SPPP and MAB-Sea Island have been laid out to facilitate shipping in general. These anchorage areas are outside of the port limits and clear of the prohibited anchorage and restricted areas. Depths in the anchorages range from 10 to 15 fathoms, the seabed is of sand and soft coral with mud patches and affords good holding ground.

Incoming vessels are assigned berths by the Harbour Master in accordance with time of arrival, type of cargo required, size of vessel and loaded draft. Endeavour is made to berth vessels on arrival and

Masters will be advised, prior to arrival, of the pier at which they will berth. If a berth is not available, vessels will be requested to anchor in one of the four anchorages as follows:

1. To the North-West or South-East of MAA-SPM.
2. To the East of the North Pier, outside of the port limits and to the North of the Prohibited Anchorage.
3. To the East of the South Pier, outside of the port limits and between the Southern limit of the Prohibited Anchorage and the Northern port limit of Shuaiba Port.
4. To the East of MAB-Sea Island (For both MAB-Sea Island and SPPP vessels).

To the East of the port limits exists a Prohibited Anchorage and a Restricted Area which embraces the MAA-Sea Island and submarine-feeder pipelines.

Positions of these areas are:

Prohibited Anchorage	29° 05' 00" N.		29° 05' 00" N.
	48° 11' 30" E.	to	48° 15' 00" E.
	29° 07' 00" N.		29° 07' 00" N.
	48° 11' 30" E.		48° 15' 00" E.
Restricted Area	29° 05' 00" N.	to	29° 05' 00" N.
	48° 15' 00" E.		48° 20' 00" E.
	29° 05' 00" N.		29° 05' 00" N.
	48° 15' 00" E.		48° 20' 00" E.

Prohibited anchorage for Mina Abdulla is the area formed by lines joining the following position:

1.	29° 02.0' N.	48° 13.0' E.
2.	29° 00.8' N.	48° 13.0' E.
3.	29° 00.8' N.	48° 09.5' E.
4.	29° 02.0' N.	48° 09.4' E.

HEALTH: Vessels calling at Mina Al-Ahmadi are requested to radio the following information to "Health Minahmadi Port":

(1) Name of vessel.
(2) Last port of call.
(3) Health condition of crew.
(4) Validity of Cholera Certificates.
(5) Request for Free Pratique.

Free Pratique will be considered at the discretion of the Quarantine Officer, and vessels must hoist the yellow flag unless they are informed by Agent or Harbour Control that Free Pratique has been granted.

Regulations.

(i) All vessels must exhibit quarantine signals until quarantine formalities are completed or Free Pratique granted. By day, International Code Flag "Q"; by night, red light over white light. No person other than the Pilot is allowed to board any vessel either alongside pier or at anchorage until pratique has been granted.
(ii) Valid Cholera Certificates will be required from travellers coming from infected areas with the exception of children under one year.
(iii) Ratguards must be fitted to all moorings – this is being rigidly enforced.
(iv) Maritime Declaration of Health Form (supplied by boarding Quarantine Officer) to be completed.
(v) One copy of Crew List containing dates of vaccination and inoculation is required.
(vi) International Certificates of Vaccination and Inoculation to be available for inspection if required.
(vii) Details of air-conditioning available in vessel (form supplied by boarding officer).
(viii) A valid Derat Certificate must be produced. Facilities are available locally for renewal.

RADIO:

1. *Station:* All radio communications to the Kuwait Oil Company should be quoted in Greenwich Mean Time and should be routed through Kuwait Coast Station 9KK, details of which are given below:

412G Al Kuwait (9KK) Lat. 29° 10' 09" N., Long. 47° 45' 42" E.

Frequency			*Hours*
(9KK) 430*, 450, 500	A1, A2	2 kW.	0300–2100
(9KK2) 4,287	A1	0.75 kW.	On request
(9KK3) 6,370	A1	0.75 kW.	On request
(9KK4) 8,525	A1	0.75 kW.	0300–2100
(9KK5) 12,895	A1	0.75 kW.	0300–2100
2,182, 2,200, 2,750	A3	0.1 kW.	0300–2100

*On request.

Procedure: Transmits traffic lists on 450 kHz each even hour; 8,525 and 12,895 kHz each odd hour plus 35, listens for 30 mins. thereafter: 2,750 kHz each odd hour plus 05.

2. *ETA:* 72 hours before arrival Masters should transmit to the Duty Harbour Master through the Agent the following information required by Kuwait Oil Company.

1. ETA.
2. Last port of call.
3. Deballasting time.
4. Loading capacity while deballasting.
5. Maximum loading rate.
6. Bunker type and quantity.
7. Arrival draft.
8. Sailing draft.
9. Maximum loaded draft.
10. LOA.
11. Beam.
12. Light freeboard.
13. Arrival displacement.
14. Sailing displacement.
15. Fully laden displacement.
16. Summer deadweight.
17. Year built.
18. G.r.t./n.r.t.
19. Flag.
20. Notice of any repairs which may immobilise vessel.

The ETA should be confirmed 24 hours before arrival. The Master should also provide Agent with following information prior to arrival:

1. ETA.
2. Last port of call.
3. Any sickness on board.
4. Number of crew members unprotected against Smallpox.
5. Number of crew to see doctor or dentist.
6. All requirements – provisions, supplies, lubricating oils, repairs, stores, machinery for landing, crew repatriation, etc.
7. Any special requirements regarding cargo documents.
8. Any repairs prior to loading.

VHF: A short range VHF Radio Telephone. Port control system is in operation and continuous watch is maintained on International Channel 16. Port working Channels are:

16	Port Control – Harbour Master.
69	Harbour Master, Pilots, tugs, North Pier, South Pier and SPPP Supervisors.
14	MAB S/I and craft, S/B and Operations channel.
67	SPM Operators.
71	MAB S/I Operations.
9	General port working.
10	General port working.
11	General port working.
12	General port working.
68	Operations.
70	Operations.
73	Operations.

Vessels bound for Mina Al-Ahmadi should make contact, as soon as they are within range, calling "Mina Al-Ahmadi Port Control" on Channel 69.

Note: As Channel 16 is reserved for calling, safety and emergency, stations should refrain from using this Channel unnecessarily.

NOTICE OF READINESS: Vessels are accepted for loading either by being given a range date or "As convenient". If a crude oil loading tanker arrives within her nominated range date (a 3 day period) her Notice of Readiness will be taken as the time of her arrival on anchorage area whether or not she is berthed on arrival. An LPG vessel is nominated an "Acceptance Date" plus 1 day and her Notice of Readiness will likewise be taken as the time of her arrival on anchorage area, whether or not she berths so long as her arrival time is within her range. If a vessel arrives "As convenient" or for lifting bunkers only then her notice of readiness will be taken as the time that the Pilot boards. Time of anchoring, together with position relative to any respective pier should be advised to the Harbour Master by VHF or as soon as possible. All vessels at anchor are required to be ready on receipt of 1 hour's notice from Port Control, this notice will be given by VHF and vessels should ensure an efficient watch is maintained to receive notice.

Cancellation of Notice of Readiness: In all cases, including vessels having Range Dates, if after having received 1 hour's notice a vessel is not ready to berth when Pilot boards, at the expiry of that notice the original Notice of Readiness will be cancelled and the Pilot withdrawn. The new Notice of Readiness will be the time the Pilot re-boards the vessel concerned. As vessels are normally berthed in strict Notice of Readiness sequence, a vessel could lose considerable time through not being ready and Master should ensure that delays of this nature do not occur.

RADAR: Damaged.

TUGS: K.O.C. maintain 5 diesel tugs for port use. They are 5,200 h.p. with a designated bollard pull of 70 tons. 2 tugs are normally on duty at all times. Hire charges for the services of Pilots, tugs and rope launches are covered by comprehensive port charges. Under normal operating conditions no tugs or other craft will come alongside the vessel before the Pilot boards. Ship's personnel must not signal for tugs or other boats to come alongside.

Tugs will make fast during all berthing operations, two lines will be given to the vessel. A messenger line is recommended for handling these lines from the tug to the vessel's deck. Tugs could also be used for vacating purposes.

MOORINGS: When at berth, vessels must be moored to entire satisfaction of Pilot. Vessels must be ready at all times to put out extra moorings as requested by pier personnel or dictated by weather changes.

Mina Al-Ahmadi is subject to sudden fierce squalls; winds of 70 knots have been recorded, therefore vessel's mooring lines must be checked frequently to prevent excessive movement of vessel in berth. Experience has shown that wholly synthetic moorings have too much elasticity and allow vessel to range or drift away from the berth during periods of adverse weather. Whilst these moorings are acceptable as head/stern ropes, it is felt that the ideal breast moorings should be of wire or a wire rope combination with the end being sent ashore fitted with a synthetic pennant or tail. This type of mooring provides the necessary elasticity while still being able to hold the vessel in position. All vessels moored with automatic tension winches must set the manual brakes on these winches.

BERTHING:

South Pier:

Max. Size:	80,000 tonnes d.w.t.
Max. Draft:	13.72 m. (Crude and products). 14.02 m. (LPG).
Max. LOA:	292.6 m.
Max. Beam:	No restriction.
Restrictions:	Height of manifold – 65 ft. (maximum)
Ballast Facilities:	None.

North Pier:

Max. Size:	300,000 tonnes d.w.t. (Part load – crude and fuel oil).
Max. Draft:	16.92 m.
Max. LOA:	454.3 m.
Max. Beam:	No restriction.
Restrictions:	Height of manifold – 85 ft. (maximum)
Ballast Facilities:	None.

SPM – No. 22:

Max. Size:	530,000 d.w.t.
Max. Draft:	27.43 m.
Max. LOA:	No restriction.
Max. Beam:	No restriction.
Ballast Facilities:	None.
Departure:	Vessel to utilise Deep Water Departure Channel on leaving, due to high sailing draft.

SBM – No. 21 and 22:

Calm Buoy No. 20:	Lat. 29° 08' 35.5" N. Long. 48° 19' 26.2" E.
Calm Buoy No. 21:	Lat. 29° 07' 32.9" N. Long. 45° 29' 55.1" E.
Maximum vessel size:	550,000 tonnes d.w.t.
Maximum draft:	27.43 m.
Minimum vessel size:	120,000 tonnes d.w.t.

Loading crude only and H.F.O. as bunker.

MAB S/I:

Max. Size:	276,000 tonnes d.w.t. (Berth No. 19).
Max. Draft:	16.92 m.
Max. LOA:	350.5 m.
Max. Beam:	No restriction.
Restrictions:	Height of manifold – 80 ft. (maximum).
Ballast Facilities:	None.

S.P.P.P.:

Max. Size:	100,000 tonnes d.w.t.
Max. Draft:	15.85 m.
Max. LOA:	427.8 m.
Max. Beam:	No restriction.
Restrictions:	Height of manifold – 65 ft.
Ballast Facilities:	None.

Vessels can berth at any time of the day and night. Berths are allocated by the Harbour Master depending on various factors and the berthing position is advised by VHF. All vessels must establish contact with Mina Al-Ahmadi Port Control before anchoring to ascertain position. Vessels should remain at 1 hour notice for berthing at all times and maintain a continuous listening watch on VHF Channel 16.

The Port facilities consists of 4 Piers, 1 Sea Island and 1 SPM.

South Pier: The South Pier is connected to the shore by an approach trestle, which leaves the shore in position Lat. 29° 04' N., Long. 48° 09' E., and runs seaward in an 071° 26' direction for a distance of 4,200 ft. (1,280 m.). The "T" head is formed by the oil pier running Northwards in a 341° 26' direction for 2,805 ft. (855 m.) and the South arm running in a 174° 26' direction for 1,076 ft. (328 m.). The pier is a steel piled structure with a wooden deck, 24 ft. above zero tide. The South Pier has 4 oil-loading berths and 2 L.P.G. berths. New fendering system independent of main structure installed to berths towards sea. Vessel to provide safe access between ship and terminal.

Bitumen Pier: A Bitumen Pier, for the export of Bitumen is located in an approximate position Lat. 29° 03.9' N., Long. 48° 09' E. The Pier approach projects out from the shore opposite the Bitumen plant in an 071° direction for approximately 600 m. The Pier head is 100 m. long and runs in a 341° – 161° direction. Water depth approximately 20 ft 6 in. (zero tide). Largest vessel to be accommodated 5,000 ton S.D.W.

North Pier – MAA: The North Pier is situated 3.5 nautical miles North of the South Pier – MAA and is connected to the shore by an approach trestle which runs seaward from Lat. 29° 07.1' N., Long. 48° 08.2' E. in a direction of 071° for a distance of 4,754 ft. (1,449 m.). The head is formed by the Oil Pier which runs Northward in a direction of 341° for a distance of 2,304 ft. (702 m.). The pier is a steel piled structure with a wooden deck, 20 ft. above zero tide. The North Pier has 4 oil-loading berths. An independent berthing dolphin and associated mooring dolphin have been installed as improved facilities at the South end of the Pier, together with an independent protective dolphin to improve docking facilities at the Northwest end of the Pier. Vessels to provide safe access between ship and terminal.

Multi-pile Single Point Mooring: A Single Point Mooring is located in position Lat. 29° 06.9' N., Long. 48° 19.2' E. approximately 1.5 nautical miles East of the Sea Island. The SPM is currently mothballed. The hose strings have been removed to store.

MAB – Sea Island: This terminal has 2 cargo handling berths. This terminal is for loading products only which are fed to the terminal by 4×24 in. white product lines and 1×24 in. black product line. This terminal is located in position Lat. 29° 0.175' N., Long. 48° 12.27' E., approximately 3.03 miles East of Mina Abdulla shoreline. The terminal is a steel piled structure in 59 ft. of water (zero tide), and lies in a 323° – 143° direction, 1,350 ft. in length. The height above Chart Datum (zero tide) of the loading platform is 42 ft. Shore gangways available on this terminal.

Shuaiba Petroleum Products Pier: This terminal has 4 product handling berths. It is approximately 1.1 miles East of Shuaiba Port and 1.3 miles South of Mina Al-Ahmadi South Pier. The terminal is connected to the shore by an approach trestle which leaves the shore at 29° 02' 25" N., 48° 09' 55" E. and runs seawards in an 062°T direction for distance of 997 m. The "T" head is formed by the oil piers running Northwest in a 331.5° T direction for 336.1 m. and Southwards in a 151.5° T direction for 453.7 m. Vessels to provide safe access between ship and terminal.

Limiting Depths and Berth Lengths:

Berth	*Depth at Zero Tide* (ft.)	*Nominal Length* (ft.)
South Pier – MAA		
1.	47	930
3.	47	930
4.	48.5	960
5.	41.5	765
6.	43	705
10.	49.5	1,050
North Pier – MAA		
11.	59	1,490
12.	59	1,152
15.	57	870
16.	57	840

Sea Island – MAA KOC (Out of commission – damaged). See "Note".

Note: Berth No. 20 and Berth No. 21, which were previously allocated at the Sea Island, have now been given to the newly installed SBM Calm Buoys, which are in the vicinity of the existing SPM Berth No. 22.

Loading Manifold, Loading Connection Sizes: South Pier: Berths 5 and 6 only are equipped with 10 in. cargo hoses and 8 in. bunker hoses – standard 150/ASA.

Berth 1 is equipped with	5×16 in. Cargo Arms. 2×12 in. Bunker Arms.
Berths 3 and 4 are equipped with	1×12 in. Cargo Arm, white products 2×16 in. Cargo Arms, white products 2×16 in. Cargo and Bunker Arms, black products
Berth 10 is equipped with	4×16 in. Cargo Arms. 2×12 in. Bunker Arms.
North Pier:	
Berths 11 and 12 Loading Arms	3×16 in. Cargo Arms. 2×12 in. Bunker Arms. 1×16 in. Chicksan for P.C.NA. (Berth 12)
Berths 15 and 16 Chicksan Units	4×12 in. Cargo Flanges. 2×8 in. Bunker Flanges. Standard 150/ASA.
SPM:	
Berth 22 Floating Hoses	2×16 Cargo Flanges. 1×12 in. Bunker Flanges. Standard 150/ASA.

Reducers: All vessels using the Port of Mina Al-Ahmadi should be equipped with reducing spools to fit these loading connections. These fittings should be in place, prior to berthing to help expedite the vessel's turn around.

Crude/Product Loading Rates: The following table shows the crude and products available at each berth and the nominal loading rates.

Grade	*Location*	*Nominal Rate* (t.p.h.)
Crude Oil	SPM	11,000
Crude Oil	North Pier	7,200
Crude Oil	South Pier	2,100
HFO Bunkers	SPM	1,000
HFO Bunkers	MAB S/I	1,000
HFO Bunkers	SPPP	300
HFO Bunkers	North Pier	500
HFO Bunkers	South Pier	500
HFO Cargo	North Pier	2,000
HFO Cargo	South Pier	2,000
HFO Cargo	MAB S/I	2,000
HFO Cargo	SPPP	3,000
LFO Bunkers	North Pier	500
LFO Bunkers	South Pier	500
LFO Bunkers	SPPP	400
LFO Cargo	South Pier	1,100
LFO Cargo	MAB S/I	2,000
LFO Cargo	SPPP	3,000
D.O. Bunkers	South Pier	500
D.O. Bunkers	MAB S/I	500
D.O. Bunkers	SPPP	150
Line Blend Fuel Oil	South Pier	1,200
Gas Oil & HSD	North Pier	2,600
Gas Oil & HSD	South Pier	1,500
Gas Oil & HSD	MAB S/I	2,200
Gas Oil & HSD	SPPP	1,300
LSFO	South Pier	2,600
LSFO	SPPP	3,000
ATK	N. & S. Piers	1,500
ATK	MAB S/I	2,200
ATK	SPPP	1,300
M.S.	N. & S. Piers	1,200
PCNA.	N. & S. Piers	2,600
PCNA	MAB S/I	2,200
PCNA	SPPP	1,300
Bulk L.P.G.	South Pier	2,000

HSD: High Speed Diesel.
L.S.F.O.: Low Sulphur Fuel Oil.
A.T.K.: Aviation Turbine Kerosene.
M.S.: Motor Spirit.
P.C.NA.: Petrol Chemical Naphtha.

Note: All blended cargoes containing crude oil as one of the components can be loaded at any crude berth.

K.O.C. are in the process of installing a new metering system for Exports.

Slops: A 10 in. slop-line is available on all berths on North and South Piers for reception of slops. For first 3 hours use of this facility is free, for each additional hour or part thereof, a charge is made. Reception of slops is necessarily slow and a vessel may be considerably delayed in having to pump slops ashore. Vessels are therefore expected to arrive with clean ballast and Masters are asked to certify that all tanks and lines have been thoroughly washed unless "Load on Top" techniques are being operated.

Also see "Shipmaster's Report".

MEDICAL: Patients will normally be treated at State Quarantine Clinic, where doctors are on duty between 0800 – 1200 hrs. and 1500 – 2000 hrs. daily. In emergencies doctors are available any time. Patients requiring hospital treatment will be transported by Agents to either KOC hospital in Ahmadi or to State hospital in Kuwait. Dental treatment can be arranged by Agents.

FRESH WATER: Fresh water is not available at Mina Al-Ahmadi. Vessels should contact their Agents for supply from alternative sources, such as Shuwaikh Anchorage, Shuaiba Port, etc.

FUEL: Heavy, light and diesel fuel can be supplied on all berths except SPM, where only heavy fuel is available and North Pier where diesel oil is not available. There are no bunkering facilities in the Bitumen Pier.

	API	*Viscosity*	*Sulphur content*
Heavy Fuel	15.2–15.8	2,900–3,400	4.0 or less
Light Fuel	19.0–20.0	600	3.5 or less
Diesel Fuel	35.5–36.5	36	1.5 or less

LUBRICATING OILS: The stock of marine products of BP, Shell and Gulf Oil are maintained at Mina Al-Ahmadi and requests indicating the quantities are to be made in advance. All drums are to be handled during deballasting or before loading. Vessels will not be allowed to load more than 9 drums after loading unless under special circumstances and depending on shipping congestion. No bulk luboil delivery service available in Kuwait.

CONSULS: Most friendly countries maintain Embassies or Consulates in Kuwait Town.

CUSTOMS: Customs Officials will board vessels to inspect log books to ascertain violation of Israeli Boycott Rules and seal the liquor bond during stay in berth. An accurate list of alcoholic drinks in *Bonded Store* only is to be presented to the officials sealing the bond and the seal is not to be broken until vessel leaves the port.

(i) Personal effects mainly required for personal use and not for re-sale or purpose of commercial gain are allowed free of duty. However, all other goods are subject to a 4% ad valorem duty (CIF value). Suppliers' invoices and Certificate of Origin are required for clearance.
(ii) Importation and the sale of alcoholic beverages is strictly prohibited.
(iii) All goods for landing from tankers must be declared to boarding Customs Officer and necessary documentation completed.
(iv) Israeli goods, goods made by companies having interest or branches in Israel, Israeli vessels and vessels trading with Israel are boycotted and not allowed entry into Kuwait.

IMMIGRATION:

(i) Nationals of all friendly countries normally allowed to land. Israelis forbidden entry into Kuwait.
(ii) Transit visas should be obtained from Kuwait Embassies and Consulates abroad. However, in emergencies entry visas can be arranged at airport.
(iii) Transit passengers having valid connecting airline ticket to next port are allowed to land without visas up to 24 hours, extendable to 48 hours if required.
(iv) Seamen of all friendly countries normally allowed to land in transit to join vessels, without visas but on Agents guarantee. Advance information regarding names, nationalities, age, sex, etc. is required by Agents in order to facilitate reception and immigration clearance. *N.B.* Thursdays and Fridays are Company holidays.
(v) Seamen allowed to land for hospitalisation, repatriation, transfer, etc., on a written undertaking that all expenses are met by Agents on behalf of Owners.
(vi) Passports must be valid for Kuwait for citizens of all countries. Stateless persons are required to have a visa before arrival in Kuwait.

Also see "Visa Regulations" in "General" before first port.

TIME: Kuwait State bases local time on the 45th meridian (GMT plus 3 hours). This time is in force the whole year.

STORING: Vessels can only be stored by barge at the anchorage. When storing alongside at the berth, trucks can only proceed to the head of the jetty. From this point hand carts are used to the berth. No fork lifts can be used on the jetty. The labour force is supplied by the Ship Chandler who also deals with the Customs Regulations.

DEEP WATER DEPARTURE CHANNEL: A comprehensive survey was carried out to determine the route of the Departure Channel for the larger and deep draft vessels leaving the port of Mina Al-Ahmadi in a loaded condition. This channel is some 28 miles in length; it extends from the Sea Island Terminal to Madira Reef and is marked by 21 light buoys and 2 light beacons, one established on Taylor Rock and the other on Madira Reef. In addition to the above aids, Madira Reef Light Vessel has been re-positioned further to the East and renamed Ahmadi to act as a fairway mark. Water depth in the departure channel is from 91 ft. to 100 ft. and above. Two shallow patches, one is about 9 miles from Sea Island with a minimum 91 ft. and the second is 14 miles from Sea Island with 92 ft. minimum water. Vessels which by reason of their draft are confined to this deep water channel and consequently hampered in their freedom to manoeuvre, will exhibit the following signals:

(i) *By day.* A black cylinder 4 ft. long by 2 ft. in diameter exhibited where it can best be seen.
(ii) *By night.* Four red lights vertically disposed spaced 3 ft. apart with an all round visibility of 4 miles exhibited where they can best be seen.

The exhibition of these signals in no way absolves any vessel from taking all appropriate action to avoid collision as required by the International Rules and Regulations for Preventing Collisions at Sea, but if a deep draft vessel is in doubt that an approaching vessel is not giving her sufficient room to manoeuvre she should indicate such doubt by giving at least 5 short and rapid blasts on her whistle.

Vessels having less draft should, when able to do so, give way to vessels exhibiting and sounding these signals and indicate this intention by giving 1 short blast followed immediately by 1 long blast on the whistle. Normal sound signals for vessels in sight of another should then follow.

Anchoring and fishing are forbidden within deep water Departure Channel.

The Departure Channel is marked by the following buoys and beacons conforming to the I.A.L.A. "A" system:

Number/ Letter	*Shape & Colour*	*Position*		*Character*	*Port/Starboard/ Special/Cardinal*
		N. Lat.	*E. Long*		
1	Conical G.	28° 57' 33"	48° 46' 18"	Qk. Fl. G	Starboard
2	Can R.	28° 56' 23"	48° 46' 04"	Int. Qk. Fl. R	Port
3	Pillar Y.B.	28° 57' 23"	48° 41' 52"	V. Qk. Fl.(6)+ L. Fl. W. 10 secs.	S. Cardinal
4	Can R.	28° 56' 41"	48° 41' 12"	Fl. R. 10 secs.	Port
5	Conical G.	28° 58' 23"	48° 39' 00"	Fl. G. 5 secs.	Starboard
6	Can R.	28° 57' 38"	48° 37' 49"	Fl. R. 5 secs.	Port
7	Conical G.	29° 00' 54"	48° 32' 59"	Fl. G. 10 secs.	Starboard
8	Can R.	29° 00' 09"	48° 32' 31"	Fl. R. 10 secs.	Port
9	Conical G.	29° 00' 38"	48° 31' 07"	Fl. G. 5 secs.	Starboard
10	Pillar B.Y.	29° 00' 27"	48° 31' 53"	V. Qk. Fl. W	N. Cardinal
11	Conical G.	29° 01' 20"	48° 28' 52"	Fl. G. 10 secs.	Starboard
12	Can R.	29° 00' 22"	48° 31' 27"	Fl. R. 5 secs.	Port
13	Pillar Y.B.	29° 02' 18"	48° 25' 34"	V. Qk. Fl. (6)+ L. Fl. W. 10 secs.	S. Cardinal
14	Can R.	29° 00' 13"	48° 30' 51"	Gp. Fl. (3) R. 10 secs.	Port
15	Pillar Y.B.Y	29° 05' 27"	48° 21' 25"	V. Qk. Fl. (9) W. 10 secs.	W. Cardinal
16	Can R.	29° 01' 40"	48° 26' 38"	Int. Qk. Fl. R.	Port
18	Can R.	29° 01' 46"	48° 25' 44"	Fl. R. 5 secs.	Port
20	Can R.	29° 01' 53"	48° 24' 50"	Gp. Fl. (3) R. 10 secs.	Port
22	Can R.	29° 03' 18"	48° 22' 53"	Fl. R. 5 secs.	Port
24	Can R.	29° 05' 05"	48° 20' 26"	Fl. R. 15 secs.	Port
A	Spherical Y.	29° 05' 38"	48° 11' 30"	Qk. Fl. Y.	Special
B	Spherical Y.	29° 05' 59"	48° 13' 15"	Qk. Fl. Y.	Special
C	Spherical Y.	29° 06' 21"	48° 15' 00"	Qk. Fl. Y.	Special
Taylor Rk.	Beacon	29° 01' 20"	48° 34' 33"	Int. Qk. Fl. W.	—
Madira Rf.	Beacon	28° 56' 03"	48° 46' 22"	Fl. R. 5 secs.	—
Ahmadi	Light Vessel	28° 50' 40"	48° 56' 01"	Fl. 12 secs.	Lt./Vl.
A1	—	29° 07' 00"	48° 09' 18"	Qk. Fl. Y.	Special
B1	—	29° 06' 06"	48° 09' 18"	Qk. Fl. Y.	Special
C1	—	29° 05' 06"	48° 09' 18"	Qk. Fl. Y.	Special
MAB A2	Buoy	29° 01' 04"	48° 11' 30"	Q. Fl. Y.	Sp. Mk.
MAB B2	Buoy	29° 01' 01"	48° 10' 20"	Q. Fl. Y.	Sp. Mk.
MAB C2	Buoy	29° 01' 00"	48° 12' 36"	Q. Fl. Y.	Sp. Mk.
Julaiya	Buoy	28° 54' 22"	48° 22' 20"	Q. Fl. Y.	Sp. Mk.
Shuaiba	Buoy 2	29° 01' 09"	48° 28' 48"	Q. R.	Can
Shuaiba	Buoy 4	29° 02' 15"	48° 10' 38"	Q. R.	Can
MAA SI	Terminal	29° 06' 48"	48° 17' 29"	Fl. R.	SI
MAA SPM	Terminal	29° 06' 54"	48° 19' 13"	Fl.	SPM
MAB SI	Terminal	29° 01' 45"	48° 12' 27"	Fl. R.	SI
MAB CBM	Buoy	29° 01' 00"	48° 12' 36"	Q. Fly. Y.	Sp. Mk.
Medina Is.	Lt. Ho.	29° 23' 08"	47° 59' 04"	Fl. 5 Sec.	Island

Buoys A1, B1 and C1 mark the submarine pipeline from shore to North Pier Terminal (See "Plan").

SHORE LEAVE: Ship's personnel and passengers not permitted ashore for any purpose whatsoever until pratique granted. All shore leave is contingent upon compliance with quarantine regulations and, under limited conditions and hours, shore leave may be granted. Masters should consult Agents to obtain the necessary passes.

SERVICES: To avoid delay all vessels advised to cable Agent of all their requirements in advance, giving full details.

Repairs:

(a) Ship Repair: All running repairs are undertaken through local contractors.

(b) Radar/Radio and Electronic Equipment: Maintenance service of this equipment is available through KOTC whose engineers/technicians are available for service on request.

Supplies: Supply of chemicals, paints, spare parts and provisions are available through local Agents.

Laundry: Laundry service is available on advance notice.

Oil Inspection: An independent oil inspection service is maintained at Mina Al-Ahmadi by the following: E. W. Saybolt & Co., B. & R. Redwood Ltd., and Chas. Martin.

Classification Societies: Lloyd's Register of Shipping has a Resident Surveyor in Kuwait and maintains an office with Kuwait Maritime & Mercantile Co., who attend marine and non-marine work. Other societies have non-exclusive surveyors and their services can be obtained through KOTC.

Divers: Divers' services are available, including underwater hull cleaning service, through KOTC.

REGULATIONS:

(a) Local Laws: The laws of Kuwait are in force at the Port of Mina Al-Ahmadi. Masters and crew members are advised for their own protection to abide by them. Comprehensive regulations governing the use of the port are promulgated in Law No. 21 of 1961. Masters of visiting vessels should acquaint themselves with this law.

(b) Pollution: The State of Kuwait has stringent laws in force concerning the pollution of the sea by oil. For information, the following are two paragraphs of this law:

Para 1, Art. 4: "A person responsible for any pollution as described in Articles 1 and 2 shall be punished by a fine of not less than 1,500 and not more than 40,000 Kuwaiti Dinars. In the event of his committing a similar crime within a period of one year from the date of his conviction such a person shall be fined not less than 3,000 and not more than 40,000 Kuwaiti Dinars, and in the event of his committing yet another crime within a year from the date of this last conviction he shall be punished by a fine of not less than 6,000 but not exceeding 40,000 Kuwaiti Dinars.

Para 3, Art. 6: The person responsible for pollution may suspend detention order against the ship on payment, as a cash guarantee, of 40,000 Kuwaiti Dinars to the official entrusted with the execution of such order".

(c) Certificates: All vessels must comply with International Safety Regulations and ensure that ship's certificates, i.e. Safety Radio, Safety Equipment and Load Line are valid. Facilities are available for renewal or extension providing proper notice is given. At least 48 hours should be allowed *excluding* Thursdays, Fridays or other local holidays.

(d) Load Line Regulations are strictly enforced, vessels overloaded will not be allowed to sail and subject to lengthy delay awaiting suitable

facilities for pumping ashore. No facilities for pumping cargo ashore from Sea Island and S.P.M. are available.

(e) A Cargo Discharge Certificate for cargo loaded from Kuwait each voyage is to be presented to the Customs and Ports in Kuwait through the Agents within 4 months from sailing and these certificates are to be signed and stamped by local Customs officials and authenticated by an Arab Embassy or Consulate in the country of discharge.

PORT TAX: Introduced by the State of Kuwait at the rate of 45.25 fils (KD. 0.4525) calculated on ship's N.R.T. and outward clearance is subject to payment of their dues before departure.

Declaration of g.r.t. and n.r.t. details essential to avoid overcharge.

SHIPMASTER'S REPORT: November 1994.

Gas Berth:

Documents:

Copies of all Safety Certificates.
Copy of Certificate of Registry.
Last Port Clearance.
Maritime Declaration of Health.
2 copies Crew List.
1 copy Crew Declaration.
1 copy Bonded Stores List.
1 copy Vaccination List.

Note: 6 men had to go ashore for Cholera vaccination which is still required in Kuwait, Vaccination Certificates checked.

Radio: Pre-arrival message received from Agent:

Quote:

For Master only.

Maximum stern trim for berthing operations not to exceed 3.0 m.

Please acknowledge and advise the following (please use metric units):

(1) ETA.
(2) Last port of call.
(3) Deballasting time, type and quantity to be discharged at Kuwait. Is oil discharge monitoring equipment operational?
(4) Loading capacity while deballasting.
(5) Maximum loading rate.
(6) Bunker type and quantity required.
(7) Arrival draft in meters (forward and aft).
(8) Sailing draft in meters (forward and aft).
(9) Maximum loaded draft in meters.
(10) LOA.
(11) Beam.
(12) Light freeboard.
(13) Arrival displacement in metric tons.
(14) Sailing displacement in metric tons.
(15) Fully laden displacement in metric tons.
(16) Summer deadweight in metric tons (as per Tonnage Certificate).
(17) Year built.
(18) G.r.t. and n.r.t. as per Tonnage Certificate.
(19) Flag.
(20) Date of last call to Kuwait.
(21) Ship's call sign.
(22) Your P&I Club and their local representative.
(23) All your requirements.
(24) Please advise unique Bill of Lading Identifier No., if required to insert in the original Bill of Lading documents.
(25) Please contact your Agents "Minatank" 6, 4 and 2 hours prior to your arrival at anchorage by VHF Channel 16, 20 or 21.
(26) For crew coming ashore, please advise 48 hours in advance, full name without initials, passport details, CDC No. groupwise, each group not to exceed 12 persons.
(27) For security reasons, using cameras/video cameras is strictly prohibited by Port Authorities when your vessel at anchorage/berth. Also while crew coming ashore, no crew should be in possession of pornographic magazines, alcoholic items, or any other obscene material, including weapon items, cameras/video cameras. Anybody breaking the law will be prosecuted.
(28) Please contact Mina Control, 2 or 3 hours prior arrival by VHF Channel 69 for berthing/anchoring instructions.
(29) In order to inform shippers/Owners/Charterers correct position of vessel, you are kindly requested to inform us the following details by telex everyday noon while you are loading:
  (a) Exact time of commencement of loading.
  (b) Estimated time of completion of loading.
  (c) Cargo quantity received on board.
  (d) Grade of cargo.
  (e) Balance cargo to be loaded.

N.B.: Failure in advising above details may cause unnecessary delays.

Please contact us on:
VHF Channel 16: Calling.
VHF Channel 20/21: Operating.
Telex: (496) 44201/44202.
Fax: (009650) 3921135/3922014.
Satcom: (583) 494190010.
Or our Head Office: Telex: (496) 22013/44766/44755/30850.
Fax: (00965) 2445693/2445907.

(30) We have pleasure to inform you that we have mobile telephone available on rental basis to communicate with all over the world. The rent is KD.15/day plus 20% of original invoice of "Ministry of Communications". Please advise if you require.
(31) Please fax or telex your Crew List prior to your arrival.

Quarantine: No inspection at anchor. Signal must be displayed, "Q" flag by day and "red above white" light during darkness.

Galley and storerooms inspected before Pratique granted.

Customs officers, cargo surveyor and shore gang will not board until Pratique is granted.

VHF: Call "Mina Al-Ahmadi Port Control" 5 hours before arrival on VHF Channel 16, working channels are 69 and 73.

Navigation: Approaches are through a swept route which is 50 miles long and has a minimum width of 1.5 miles. Outbound vessels use a separate swept route 50 miles long with minimum 1 mile width. Both are well buoyed and have sufficient fixed navigational marks with Racons to make the approach relatively simple. All Racons operational and buoys in charted position.

Minimum charted depth inbound 18.9 m. and outbound 20.2 m.

Anchorage: Anchorage for LPG vessels 2 miles East of Southern Pier in 20.0 m. Bottom is soft clay and good holding ground. Pilot not required for anchoring.

Berthing: Invariably starboard side alongside.

Pilot boards from pilot boat (accommodation ladder/pilot ladder combination required) in position 1.5 miles N.E. of North point of South Pier.

Tugs "Hazim" and "Bayan" used. Tugs make fast immediately on pilot boarding, forward tug at break of fo'cs'le port side, aft tug at front of accommodation block (port side). 2 tugs' lines used, tugs push only. Messengers should be used for tugs' lines as ropes are substantial.

Pilot stops ship 3 cables off, and lying parallel to berth. Tugs push vessel onto berth, ship's engines used to maintain position relative to loading arms. Tug Masters competent and quick to respond to instructions.

Mooring: All wires should be fitted with nylon pennants. Moorings sent by heaving line/messenger.

Ship sends heaving lines as soon as possible, shore bend on messengers which are heaved onboard. Shore pick-up on messengers using good capstans.

Final positioning is undertaken using 2 springs fore and aft, springs are first lines ashore and made fast before further moorings are run. Final moorings are 3 head/stern, 2 breasts, 2 springs. Breast and spring moorings should be wire. Head and stern moorings may be polyprop, nylon (spooler) and/or wire.

Mooring operation takes approximately 1 hour.

Berth: Lies 172° – 352°, and is well fendered with wooden fenders attached to shock absorbing pistons. All fenders in good condition.

Breast moorings are secured to quick-release hooks which are all operational. There is ample shore labour.

Springs and head/stern lines on bollards.

Gangway: There is no shore gangway, but if accommodation ladder is lowered, the shore place a "brow" gangway of aluminium construction from shore onto bottom platform of the accommodation ladder.

Loading Arms: Configuration from South (forward to aft starboard side alongside): Propane Vapour – Propane Liquid – Butane Liquid – Butane Vapour. All connections are 16 in. 150 ASA bolted flanges. Shore gang connect up.

Due to shore configuration, ship must fit conversion bends.

Loading: Jetty Operator is given ship's portable VHF radio (walkie-talkie).

Load Butane and Propane concurrently.
Propane specific gravity 0.5072 at 60°F.
Butane specific gravity 0.5774 at 60°F.

Propane loading temperature was −39°C, which caused excessive vapour generation and attendant difficulties for ship.

Butane loading temperature was −4.5C.

We received no information from shore regarding quantity loaded, etc. Understand from talking to SGS Surveyor that shore tanks require some maintenance with respect to gauging equipment and temperature probes.

Bills of Lading produced on arrival by Agent's Boarding Clerk. Bills of Lading indicate only 3 originals signed by Master, but in fact they are all originals. Seek guidance Charterers instructions.

EDP is mandatory at this port.

Agent and Loading Master do not board prior to sailing, so no signatures possible on 19 L or Letter of Protest.

On completion of loading, loading arms are drained to shore, so no requirement for ship to "hot gas" to shore, or for shore to push nitrogen into ship's system. Disconnection takes about 3 hours.

Sailing: On completion of disconnection, call Agent "Minatank" on VHF Channel 20, and they will order Pilot and tugs; takes about 20 minutes before Pilot boards.

In fair weather, tugs are not required for unmooring.

Pilot takes ship off berth and disembarks immediately.

At time of writing, 36 hours after sailing, Bill of Lading details have not been received.

AUTHORITY: Kuwait Oil Company (K.S.C.), P.O.Box 9758, Ahmadi-61008, Kuwait. *Tel:* Kuwait 3261558, 3262268. *Telex:* 44233 KT, 44293 KT. *Cables:* Kuoco Kuwait. *FAX:* 3262265. *Contact:* Captain Khalifa Al-Duaij, General Superintendent, Marine & Export Operations.

AGENT: For all tankers loading/discharging or sundry errands on a sole agency basis. Address: Kuwait Oil Tanker S.A.K. (Agency Branch), P.O. Box Fahaheel No. 7055, 64001 Kuwait. Telex: 44201, 44202. A/B Minatank Kwt. Tel. 3911811; 3914286; 3914276. Cables: "Minatank Kuwait".

KOTC Agency is also connected with direct short range telephone VHF system and continuous watch is maintained on Channel 16. Working channels are and can be reached by calling "Minatank". Channel 16, calling only. Channel 20, Agency Working. Channel 21, Agency Working.

MINA SAUD (Mina Al Zour): 28.45 N. 48.23 E.

(See Plan)

OPERATORS: Mina Al-Zour (Mina Saud) Marine Terminal operated by Saudi Arabian Texaco Inc., a subsidiary of Texaco (hereinafter referred to as the Company). Weather and other circumstances permitting, ships will be loaded, moored and unmoored at all hours of the day, 7 days a week. Company representatives available at all times to discuss with Master any problems affecting vessel turnaround.

LOCATION: Mina Al-Zour located just South of Ras Az Zaur approximately 23 miles 244° from Madira Light Vessel. Terminal connected to field and production centre at Wafra, 31 miles to N.W., by 16 in., and 10 in. oil pipelines, and 8 in. gas line.

The most conspicuous objects at the terminal to the navigator are:

Name	*Latitude*	*Longitude*	*Remarks*
Metocean Tower	28° 46' 00" N.	48° 26' 08" E.	Just North of Berth 2. A white pentagonal structure 6.0 m. above mean sea level. 4 Fl. ev. 5 secs.
Al Zour Beacon	28° 44' 28" N.	48° 23' 40" E.	A 30 ft. frame structure exhibiting Fl. ev. 5 secs.
Al Zour Power Station Two Chimneys	28° 39' 24" N.	48° 22' 24" E.	Red and white horizontal stripes with F. Red lights 192 m. high.

FLAG: All vessels required to fly Kuwait flag at foremast during daylight hours. Flags may be obtained from Agents.

APPROACHES/ANCHORAGE: Vessels on passage direct to Mina Al-Zour up the Arabian Gulf must adhere to traffic separation scheme and keep in the Mine Swept Areas as directed on the appropriate large scale Admiralty Chart for the area until the vessel reaches Mina Al-Zour (Mina Saud) Anchorage Area in 9 fathoms. The centre of the anchorage area recommended is in position East of Berth II starboard anchor marker buoy (Q. Fl. G) by 1.3 miles, which has good holding ground with mud and sand bottom.

A prohibited anchorage area is defined as follows:

Beginning at OC.WR.5s. – 061°×3.1 miles, thence 180°×1.8 miles, thence 270°×2.8 miles to shore.

Charts: British Admiralty Plan 1223. U.S.H.O. Charts No. 3685 and 6293.

DOCUMENTS: *Quarantine and Pratique:* Quarantine Office of the Kuwait Government is maintained at the port and a Quarantine Doctor or a Quarantine Officer boards the vessel accompanied by the ship's Agent.

The Master is requested to submit the following documents for the Quarantine Officer:

1 copy Crew List.
1 copy Derat Certificate.
1 copy Vaccination List.

If Free Pratique is granted through the Agent, the above copies will be required for dispatch through the Agent on arrival.

Customs Formalities: Customs Office of the Kuwait Government is maintained at the port, and a Customs Officer boards the vessel, accompanied by the ship's Agent upon arrival.

The Master is requested to submit the following documents for the Customs Officer:

1 copy Crew List.
1 copy Crew Declaration List (Personal Effects).
1 copy Stores List.
1 copy Bonded Stores List.
Last Port Clearance.
1 copy Ship's Registry.
1 copy Tonnage Certificate.

Customs Officer will seal the bonded stores* and might ask the ship's Master to sign a declaration that no intoxicating liquor or drugs will be landed.

* Ship's Master must make sure that any of the following articles, if on board, are collected and kept in the bonded stores before arrival: Alcoholic beverages, including beer, wine and liquor; pornographic literature; photographs, pictures and films; explosives; firearms or implements of war of any kind; and gambling devices.

Note: Permission of Kuwait Customs must be obtained before connection or disconnection of hoses.

Documentation and Early Departure Procedure: Normally, the Master is requested to sign blank cargo documents prior to completion of loading. On completion of cargo, the ship and shore figures are reconciled by radio/telephone contact. The documents are then completed, copied and sorted with minimum delay. Master's copies are dispatched to the ship and are usually received on board during unmooring, thus avoiding any delay in sailing.

Failure to follow this procedure will inevitably result in a further delay of at least 2 hours waiting at anchorage, plus additional launch charges.

Agency: There are no ship's Agents resident at Mina Al-Zour (Mina Saud). All agency work is at present carried out by established Agents from Kuwait or Fahaheel. Distance is about 90 km. to Kuwait and 55 km. to Fahaheel.

Ship's entry and clearance formalities are carried out by Kuwait Customs and Quarantine.

It is important to remind Owners and Master that all goods, either landed or embarked, must be cleared by the Agent through the local Kuwait Government Customs.

PILOTAGE: Vessels boarded by Mooring Master either on approach or at anchorage. Mooring Masters are Licensed Masters Foreign Going. They act in an advisory capacity to Master and have expert knowledge of local conditions.

Notice of Readiness: Notice of Readiness is normally signed as "received" by the Mooring Master at the time of boarding. Time of "Acceptance" of the Notice will be determined according to the terms and conditions of the relevant charter party.

RESTRICTIONS: Circumstances permitting, mooring and unmooring is carried out during day or night, as required, except at Berth 1, where mooring is allowed during daylight only.

Operating Parameters: Berthing: Ships are normally berthed on the ebb tide at wind speeds not to exceed 25 knots, to allow proper positioning of anchors.

Loading: Normal loading conditions are carried out at wind speeds not exceeding 40 knots (at the discretion of the Mooring Master on board the tanker) with 8-10 shackles of chain (1 shackle = 90 ft. of chain) deployed on each anchor.

MAX. SIZE: The maximum size of vessels using the berths is governed by the physical limits of stern to manifold distance (Max. 600 ft.) and draft.

Draft limits are governed by depth of 16.4 m. (53.8 ft.) in the exit channel, and the additional allowance for tidal loading, which can only be decided upon after careful consideration of all pertinent factors, including the following:

Probable delay/chartered freight rate/ship's discharge program cost evaluation.

Ship characteristics ("Squat" tendency, manoeuvrability, mooring arrangement, anchor handling ability, trim, T.P.I. immersion, draft, etc.).

Prevailing weather and tidal conditions (considering both predicted and anomalous possibilities).

Cargo availability and future loading program (possible congestion of the port).

Maximum available shore pumping rate and any special consideration (such as line packs, etc.).

Deep draft vessels leaving the berth should conduct their manoeuvres with extreme caution since depth of 15.0 m. (49.2 ft.) exists close West of the berth. The draft limit has been as much as 17.32 (56 ft. 10 in.) in suitable circumstances.

The tidal loading procedure can involve considerable delays, and is always subject to the discretion of the Mooring Master, whose prime consideration will be safety.

HEALTH: See "Documents".

RADIO/VHF: *Communications:* Messages should either be telexed direct (Fax: (965) 3950078 Marine or (965) 3951022 Management) or by cable via Kuwait Radio (call sign 9KK on 500 kHz) for onward transmission to Saudi Arabian Texaco Mina Al Zour (Mina Saud).

Kuwait Radio transmits traffic lists on 450 kHz at 25 minutes past every even hour, on 8,525 kHz and 12,895 kHz at 35 minutes past every odd hour, and on 2,750 kHz at 5 minutes past every odd hour.

VHF Service maintained by Mina Al-Zour (Mina Saud) Marine. Listening on Channel 16 (156.8 MHz). Operating hours: Continuous 24 hours a day, 7 days per week. Working Channels 1-88.

Masters are requested to advise ETA 96 hours and 72 hours before arrival, and to confirm this when 48 hours and 24 hours distant from the Port.

It will assist if the following information is passed to Mina Al-Zour before vessel's arrival.

Arrival draft fore and aft, expected sailing draft fore and aft.

Cargo requirements in long tons or U.S. bbls. at 60° F.

Confirmation that only clean ballast is to be discharged and expected deballasting time or concurrent loading with deballasting on VLCC or ULCC ships.

Confirmation that ballast and pipelines are clean, 2 ropes or wires and both anchors forward and 9 synthetic ropes or wires available aft.

When berthed at Mina Al-Zour (Mina Saud), contact with the shore is maintained by cellular telephone 00965-9042874 and VHF R/T portable units supplied by the Company through the Mooring Master on board.

TUGS: Two tugs are available to assist berthing and unberthing, also to stand-by for emergencies while vessels are in berth.

Tugs "Stark 6" and "Shark 8", both 45 tons bollard pull.

BERTHING: There are 2 loading berths with conventional buoy moorings, which are serviced by a 12 in. and 20 in. submarine line for loading cargo of crude oil. Normally loading takes place one berth at a time only.

The outer berth, with a minimum depth of 16.74 m. (55 ft.) at lowest low water 065°T by 4.63 km. from Marine Jetty, is equipped to take vessels of up to approximately 140,000 tons d.w.t. for full cargo and up to approximately 370,000 tons d.w.t. for part cargo. The maximum draft allowed is normally 15.85 m. (52 ft.), but tidal loading is allowed in exceptional circumstances.

The inner berth, 065°T by 3.52 km. from Marine Jetty, has a minimum depth of 13.4 m. (44 ft.) at lowest low water, and can accommodate vessels up to approximately 245 m. (800 ft.) in length. Maximum draft allowed is 12.5 m. (41 ft.) at LLW.

Vessels are moored (to the ebb tide stream at both inner and outer berths) heading North inside the berth using their 2 bow anchors, approximately 8-10 shackles on each and tied up to 4 mooring buoys on the stern. An additional mooring buoy is tied up on the port bow to assist the port anchor against occasionally strong Northwesterly wind.

Mooring Layout: Resilience in the mooring is achieved by the weight of the clump anchor and the catenary of the chain cable.

Spar buoys are established to mark starboard and port anchor dropping positions. The submarine line is marked by a permanent buoy at each berth, and marker buoys are fitted to all hoses.

Recovery of the flexible hoses is done with ship's tackle.

Mooring: Both port and starboard anchors should be lowered clear of the hawse pipes and ready for instant letting go from the brakes.

Ten good quality synthetic ropes or wires should be on reels or flaked ready for running from the stern. After anchoring, as the vessel proceeds astern in the berth, quarter lines are run by a Company launch and secured to the quick release hooks on the quarter buoys. Then 2 additional ship's ropes are run to a mooring buoy on the port bow.

When securely moored in the correct position for handling hoses, each anchor should have about 8-10 shackles out, and it is advisable that tankers using these submarine berths be provided with not less than 10×15 fathom lengths of cable on each anchor (12 lengths for Berth No. 2).

Masters are requested to ensure that power to deck machinery and sufficient seamen to operate it, are immediately available at all times when in the berth.

The port of Mina Al-Zour (Mina Saud) is an open roadstead, and ships must be prepared to use main engines, unmoor and leave at any time.

All mooring buoys at the outer berth (No. 2) can be released by remote control. The master control unit is held by the Mooring Master.

Tidal Loading Procedure: Assuming 1,000 ft. ship has berthed. Starboard anchor between 150 ft. and 300 ft. South of starboard anchor marker and one ship's length (1,000 ft.) inside, (Course made good 270°T). Starboard anchor ranged along bottom and port anchor let go when 10 - 11 shackles out on starboard. i.e. 1,000 ft. West of starboard (allowing for slack). Vessel would be in berth with between 8 – 10 shackles on each anchor.

When letting go at HW with ebb tide and heaving port anchor, vessel should manage to remain in at least 16.4 m. charted depth, heading about 340°T with stern in line with, or to seaward, of manifold marker buoy.

Every effort should be made to pick up port anchor without slacking too much on starboard anchor. Ideally, last shot of port cable is dragged home whilst starboard cable is fairly tight, so that when port anchor is aweigh vessel swings to starboard and presents her port side to the ebb, thus regaining a mid berth position. (Sometimes necessary to put engines ahead in order to clear manifold marker hose buoys).

Pilot should endeavour to have vessel heading North when starboard anchor is aweigh. Vessel should then steam North or slightly West of North in order to maintain a distance of approx. 1,000 ft. from starboard anchor marker buoy. Vessel should start turn to starboard (bearing in mind ebb tide) when abeam of starboard anchor marker buoy, and endeavour to turn on radius of about 1,000 ft. with starboard anchor marker buoy at centre. A course of 066°T should be made good until deep water is reached. If this procedure is followed, the minimum depth should be not less than 16.4 m. (chart datum).

Note: 16.4 m. exists in berth and on exit channel. Close attention must be paid to vessel's position, as depths of less than 16 m. are in close proximity to exit channel.

Vessel should finish loading cargo or bunkers at least 3 hours before HW thus ensuring maximum height of tide for bottom clearance plus ebbing tide for easier control. (Ebb tide usually commences 2 hours before HW). See "Tides".

16.4 m. must be reckoned governing depth.

Calculate thus: 16.4 + height of tide then subtract 1 m. Result will be max. allowable draft (only if weather conditions are ideal).

eg.

16.4 m.
+ 1.8 m. height of tide

18.2 m.
- 1.0 m. clearance

17.2 m. allowable draft (56 ft. 5 in.)

It must be borne in mind that mentioned clearances are the absolute minimum that can be tolerated in ideal conditions. Deeply laden vessels should proceed slowly to avoid "Squat". Larger clearances should be allowed for if conditions are less than "ideal".

Surveys indicate good anchor holding power potential throughout area.

LOADING: *Pipelines:* Berth No. 1 at 10,052 ft. and Berth No. 2 at 13,852 ft. from the pump station are served by 1×12 in. and 1×20 in. submarine pipelines.

Berth No. 1 is served by 2×12 in.×240 ft. hose strings from an "F" piece on the 20 in. line and 1×10 in.×270 ft. hose string on the 12 in. line.

Berth No. 2 is situated 12,475 ft. from the shore H.W. mark (Berth No. 1 is 3,800 ft. inshore of Berth No. 2).

Berth No. 2 is served by 2×12 in.×270 ft. hose strings from a "Y" piece terminating the 20 in. pipeline and a 10 in.×270 ft. hose string from a reducer terminating the 12 in. pipeline.

Submarine hose PLEM valves are of the ball valve type, isolation valves between Berth No. 1 and Berth No. 2 installed one of the Wafer type on the 20 in. line and one of the ball type on the 12 in. line.

Normally 2×10 in. tanker rail hoses are connected to the ship's manifold using quick release clamps. The hoses are slung from the ship's rail using snub lines of Manila and wire rope.

Pipeline Emergency Shut-Down System: Berth No. 2 is equipped with Gall Thompson Marine Breakaway Couplings (MBC's) on the 12 in. and 10 in. hose strings, and an over pressure sensor shuts down the cargo pumps when the pressure reaches 220 p.s.i. in the pump station ashore.

Ship's Equipment and Gear required for Handling Hoses: For handling 12 in. and 10 in. strings of hoses, ship's derrick should have a minimum safe working load of at least 5 tons. Outreach overside should be at least 5 ft.

Two lengths of 26 mm. diameter good quality nylon rope each of 50 m. in length should be available for use as slipropes when lowering hoses.

ASA 150 series reducers should be available for connection of 2×10 in. cargo hoses to ship's manifold at either berth on the port side.

The Company provides snub lines of manila and wire rope for hanging off the hoses.

Loading: "Ship's Stop" is the invariable rule at Mina Al-Zour (Mina Saud) Terminal, except in an emergency. The ship must give reasonable stand-by time to the Mooring Master (45 – 60 minutes), in order to alert Terminal staff on shore for closing gauges. Great care must be taken, especially when topping-off or tank switching, that ship's valves are not closed against shore pumps.

As Early Departure Procedure (EDP) is invariably the rule at Mina Saud, Masters will greatly assist Terminal staff by the prompt provision of ship's tank ullages on completion of loading.

Average loading rate is approximately 2,500 tons per hour for crude.

Equipment Required:

(a) Two reducers to 10 in. are required to take 2×10 in. hoses on to the ship's port side manifold (The Company can supply reducers if requested before arrival of vessel).

(b) 2×10 lb. bronze hammers as well as 2 fire axes and portable foam firefighting equipment, plus 50 m. of 1 in. diameter nylon messenger rope to be stationed at the manifold before loading commences.

(c) One derrick/crane of minimum 10 tons SWL to be on stand-by before ship's arrival.

Shore Crew: A shore crew of 5 men remain on board throughout the loading period in order to assist with hose connection/disconection, maintain fire/pollution watch and tend hoses/moorings. It will be appreciated if food be provided.

BALLAST: Vessels must have enough clean ballast to permit safe manoeuvring under reasonable conditions. All vessels, particularly VLCCs must retain ballast during early stages of loading and discharge ballast as necessary during latter stages of loading. There are no shore tanks for the disposal of dirty ballast at Mina Al-Zour (Mina Saud) and by international agreement, pollution of Arabian Gulf is prohibited.

Mooring Master will advise when ballast discharge may commence. Inspection of ship's tanks for suitability to receive cargo carried out by Mooring Master or by qualified petroleum inspectors if required.

Any pollution of local waters by the vessel will result in stoppage of all operations and considerable delay pending the investigation of attaching circumstances by Government Surveyors. A detention order is issued until a sizeable deposit is secured, usually followed by court prosecution and payment of clean-up costs, plus a heavy fine.

MEDICAL: Routine medical treatment is available from Kuwait Government Port Health Authorities at Shuaiba (50 km. distant). Emergency cases can be treated by Company doctors in onshore facilities at Mina Saud.

The Agents must invariably arrange for landing permits and transport for crew members visiting the doctor ashore.

FRESH WATER: Available in limited quantities.

FUEL: Available by barge, Agent to arrange.

FIRE PRECAUTIONS: Masters are responsible for enforcing "No Smoking" regulations for their vessels and Mooring Master will stop loading if he considers them to be inadequate or if they are not being obeyed. Smoking in Company craft in the berths is forbidden.

CONSULS: See "Kuwait."

REPAIRS: Major repair facilities are available at Kuwait shipyard. For emergencies, a maintenance barge equipped with underwater cutting gear, welding equipment and a full range of underwater tools are available with divers at rates to be arranged for the job and agreed by the Superintendent of Marine Operations, Mina Al-Zour (Mina Saud).

Repairs to main engines must not be carried out in the berth without permission of Superintendent of Marine and Terminal Operations. Normally vessels requiring to immobilise engines will be anchored well clear of other ships.

CUSTOMS: Alcoholic beverages strictly prohibited to be held out of bond.

It is important to remind Owners and Masters that all goods, either landed or embarked, must be cleared by Agent through local Kuwait Government Customs.

Import of firearms and ammunition forbidden.

REPATRIATION: Crew changes normally through Kuwait (85 km.).

Also see "Visa Regulations" in "General" before first port.

TIME: GMT plus 3 hours. Permanent.

STORES: Provisions and stores are available from Kuwait. Requirements should be arranged with Agents through Kuwait Radio prior to arrival at Mina Saud.

SHORE LEAVE: Can be arranged through Agent.

WEATHER: In Summer months of June, July and August light to moderate Northerly and North-westerly winds are general rule at Mina Al-Zour (Mina Saud). However, occasional strong N.W. winds of Force 6 or more Beaufort Scale, are experienced, the strength and duration being governed by the strength of the S.W. Monsoon blowing outside the Arabian Gulf.

During Autumn and early Winter months fine weather is generally experienced associated with moderate N.E. monsoon prevailing outside the Gulf. Occasional 'Shamals' (N.W. winds) occur.

In late Winter period and Spring, strong S.E. winds with moderately heavy seas frequently experienced at Mina Al-Zour (Mina Saud). These are due to approach of low pressure systems from Atlantic and Mediterranean Sea spreading Eastwards across Levant and Iraq.

Extremely violent local storms sometimes occur without warning, especially at change of seasons. Around April/May, these disturbances sometimes attain hurricane force and are accompanied by erratic changes in wind direction and poor visibility due to suspended sand.

TIDES: Tide cycle is combination of diurnal and semi-diurnal tides giving a Higher High, Lower High, Higher Low and Lower Low Waters during a 24 hour period. Range of tide is average 8 ft. at Springs and 5 ft. at Neaps.

The main direction of the flood and ebb streams 010° and 190° is extremely variable between the Lower High Water and Higher Low Water period. An average direction during the period is about 045°. Large variations in the direction of the ebb stream between HHW and LLW are also observed, necessitating strict attention to moorings and hoses.

Tides at Mina Al-Zour (Mina Saud) are affected by meteorological conditions and may be altered in height by up to plus or minus 0.6 m. (2 ft.), depending on the duration and intensity of either S.E. or N.W. winds respectively. Times of high and low water may be considerably affected.

Tidal anomalies causing heights to differ from those predicted by up to 1.0 m. (3.3 ft.) have been recorded. It is believed that relatively stationary high pressure over the Arabian Gulf and low pressure over the Arabian Sea can cause an outflow through the Straits of Hormuz, and so depress tide heights.

The reversal of the pressure systems can cause an inflow through the straits and accordingly increase tide heights.

AUTHORITY: Saudi Arabian Texaco Inc., P.O.Box 6, Mina Al Zour, 66051-Zour, Kuwait. *Tel:* (965) 3950444 (ext. 339) or 3950221 or 3950096. *FAX:* (965) 3950078 (Marine); (965) 3951022 (Management). *Cables:* Saudi Arabian Texaco. *Contact:* Larry Andersen, President. Captain Hadi M. Al-Abbas, Marine Superintendent.

SHUAIBA: 29.02 N. 48.10 E. (See Plan)

PORT LIMITS: From a point on the coastline in position:

(a) 29° 03' 09.7" N., 48° 09' 04.6" E. in direction 090° to
(b) 29° 03' 09.7" N., 48° 09' 27.58" E. thence 116° to
(c) 29° 02' 45" N., 48° 10' 24.6" E. thence 090° to
(d) 29° 02' 45" N., 48° 15' 09" E. thence 180° to
(e) 29° 02' 00" N., 48° 15' 09" E. thence 270° to
(f) 29° 02' 00" N., 48° 10' 16.8" E. thence 180° to
(g) 29° 01' 15" N., 48° 10' 16.8" E. thence 270° to a point on the coastline at
(h) 29° 01' 15" N., 48° 09' 29.4" E.

The above limits are shown on Admiralty Chart No. 1223, and the coordinates of the first two points are amended according to last agreement with KOC in May 1983.

Ships whilst in port limits during daylight hours shall fly their national flag at the after part of the ship and where a ship is of foreign registry also the Kuwait National Flag at the fore.

DOCUMENTS:

Manifest: 15 copies which should clearly indicate weights in metric tons and measurements in cubic metres and each copy should be duly signed and stamped by the loading port Agent.

The copies of the manifest may be photostat copies or carbon copies but it is imperative that the stamp and signature made by the loading port Agent is appearing in original on each copy.

If cargo is carried in-transit a separate Transit Cargo Manifest (15 copies) is also required in same fashion as above.

Bills of Lading: 5 sets of non-negotiable copies Bills of Lading, i.e. ordinary carbon copies of Bills of Lading. Photostat copies will not be accepted.

In addition the following documents are to be provided:

4 copies of Final Stowage Plan, duly signed and stamped on each copy by the loading port Agent. Photostat copies are accepted as long as same are signed and stamped.

4 copies of Hatch List as above.

If dangerous cargo is being carried 2 copies of a separate Dangerous Cargo List are also required and again each copy to be duly signed and stamped by the loading port Agent.

Also 2 copies of Crew List to be presented to Customs Office.

N.B. Since all cargo for discharging at Port of Shuaiba has to go on direct delivery, and Customs clearance has to be completed prior to berthing of a vessel, it is therefore imperative that all documents, as above, are in Agent's hands for submission to relative authorities at least 7 working days prior to vessel's ETA, otherwise berthing of vessel is likely to be delayed.

PILOTAGE: Pilotage is compulsory and requests for Pilots may be made to Shuaiba Port Communications Centre (call sign "Shuaiba Port"). The Port Communications Centre is equipped with VHF Channels 16, 9 and 13. Shuaiba Port Pilots, Fax: 3263825. All working around the clock.

ANCHORAGES: Ships bound for Shuaiba Port, with cargo to load or discharge, or intending to use facilities supplied in the port such as bunkering, will be permitted to use Shuaiba Port Anchorage between Lat. 29° 02.75' N. and Lat. 29° 02.00' N. and between Long. 48° 15.11' E. and Long. 48° 12.72' E. Ships are not permitted to anchor to the West of Long. 48° 12.72' E.

All other ships not falling in the categories listed in the first paragraph, such as vessels waiting for orders or which have not been nominated for bunkers, are not permitted to anchor in the Shuaiba Port Anchorage and must anchor well to the East of Long. 48° 15.11' E.

MAX. SIZE:

Dry Cargo Berth No.	*Max. Draft Permitted* (m.)	*Max. Ship LOA* (m.)
1	9.50	120
2	9.50	120
3	10.50	180
4	6.71	170
5	6.71	170
6	10.00	180
7	11.00	180
8	11.00	180
9	13.00	200
10	13.00	200
11	13.00	200
12	13.00	200
13	13.00	200
14	13.00	200
15	13.00	As these berths will be utilised by container and Ro/Ro vessels, no limitations and subject only to berth occupancy.
16	13.00	
17	13.00	
18	13.00	
19	13.00	200
20	13.00	200

The seaward side Berths No. 4, 5, 6, 7 and 8 are occasionally affected by bad weather.

Agents of vessels with dimensions in excess of the above must make due representation to the Port Authority for permission for these vessels to be accepted and ample notice is necessary when submitting such requests.

RESTRICTIONS: Ships whilst in port limits during daylight hours shall fly their national flag at the aft part of the ship and where a ship is of foreign registry also the Kuwait National Flag on the main mast at the fore.

Vessels over 250 m. LOA, berth/unberth during daylight hours only.

HEALTH: Vessels calling at Shuaiba are requested to send the following information to "Health Shuaiba Port".

(1) Name of vessel.
(2) Last port of call.
(3) Health condition of crew.
(4) Validity of Cholera Certificates.
(5) Request for Free Pratique.

Free Pratique will be considered at the discretion of the Quarantine Officer, and vessels must hoist the yellow flag unless they are informed by Shuaiba Port Communications Centre that Free Pratique has been granted.

RADIO: All vessels calling at Shuaiba Port are required to submit an initial ETA 72 hours and 36 hours prior to arrival followed by a firm ETA 12 hours before arrival. ETAs should be passed through Kuwait Radio (9KK) either to the ship's Agent or to the Harbour Master, Shuaiba.

Vessels equipped with VHF should contact Shuaiba Port Communications Centre when within range.

ETAs should contain details of arrival draft, LOA and beam.

TUGS: Three tugs of 4,000 h.p., 3,600 h.p. and 3,200 h.p. respectively. One of these is an ocean-going/salvage tug and equipped with Voith Schneider unit, and is 4,000 h.p. The use of tugs is mandatory whenever directed by the Pilot or Harbour Master.

BERTHING: The port is divided into 3 main component areas:

1. Dry Cargo Berths.
2. Small Craft Harbour.
3. Barge Harbour.

See "Max. Size" for LOA and draft restrictions.

Dry Cargo Berths: Berths No. 1 and 2 are entirely for the export of fertiliser (Urea), bagged and bulk, by means of a conveyor belt.

Berth No. 6 is entirely for the export of bulk sulphur, by means of a conveyor belt (No facilities since 1991, under repair since 1992).

Berth No. 14 is usually for the export of bulk petcoke, by means of a conveyor belt. Other general cargo can be discharged at Berth No. 14.

Berths No. 12 and 13 are equipped with shore cranes, each with 15 ton capacity and movable on rails.

Berths No. 3, 7 and 8 are entirely for general cargo, clinker and iron ore.

Berths No. 9, 10, 11, 12, 13, 19 and 20 are entirely for general cargo and equipment. No warehousing facility, direct delivery.

Small Craft Harbour: Entirely for small craft. 3 berths with a total length of 476.2 m.

New Barge Harbour: Entirely for tugs and barges. 4 berths with a total length of 936.23 m.

CONTAINER FACILITIES: Berths No. 15 – 18: A modern container terminal (S.A.C.T.) occupies Berths No. 15, 16, 17 and 18 with a total length of 880 m., and a total storage area of 31 hectares, equipped with 3×41 tons gantry cranes, straddle carriers, heavy duty forklifts, tractors and trailers.

Both LCL and reefer services available. Ro/Ro vessels accepted, gantry cranes can be supplied for discharging/loading of containers stowed on deck. Cargo discharged/loaded via vessel's stern ramp will be handled by S.A.C.T., provided it is mobile. No length restrictions for vessels; but subject to berth occupancy and prior Port Authority's acceptance.

Breakbulk cargo loaded on flat beds or flat racks can be handled by 20 ft. – 40 ft. container spreaders in conjuction with the port overheight gear.

STEVEDORES: Stevedores shall be nominated by Owner or Agent from a list of stevedores registered by the port for cargo handling operations. A common tariff published by the port applies.

Vessels will be required to maintain a minimum daily tonnage dependent on the type of cargo they are carrying.

Permission for the landing of heavy lifts on the quays must be obtained from the Port Management each time in advance.

MEDICAL: There is a medical centre ashore which provides a very efficient service for vaccinations. Advance notice required if medical attendance needed on board.

TANKERS: Facilities re-opened November 1993.

Petroleum Products Pier: Operated by KNPC. Located to the East of the Southern Quay Mole and consisting of 4 berths for the accommodation of tankers. Berths No. 1 and 3 comprise the Eastern Berths whilst Berths No. 2 and 4 are located on the Western side.

Berth No. 1 Length 350 m., draft 13.71 m.
Berth No. 2 Length 369 m., draft 12.19 m.
Berth No. 3 Length 369 m., draft 13.71 m.
Berth No. 4 Length 331 m., draft 12.12 m.

The above lengths are inclusive of mooring dolphins positioned Northward and Southward of the pier. Because of draft restrictions at Berths No. 2 and 4, tankers in excess of 230 m. in length will be subjected to the Port Authority's acceptance. Each berth is supplied with 2×20 in. fuel lines and 5×16 in. supply lines for naphtha, avtur and gas oil. All lines reduce to 12 in. at the loading arms. Additionally at Berth No. 2 there are lines for discharging lubricating oil and for loading liquid ammonia (See "Shipmaster's Report"). An 8 in. line for slops is available. Each berth at the Petroleum Products Pier is equipped to provide bunkers by means of 2×20 in. lines for fuel oil and marine diesel oil whilst light fuel oil is supplied by an 8 in. line.

DENSITY: 1028.

FRESH WATER: Available at all berths except Berths No. 6, 7 and 8.

FUEL: Bunkering facilities are available by means of a bunkership (barge), while the vessels are discharging/loading cargo alongside the berth, except to vessels loading/discharging dangerous cargo. Vessels at anchor can replenish bunkers as and when needed.

REPAIRS: Small repairs can be arranged if sufficient notice is given.

DRY DOCK: No arrangements at Shuaiba Port. Drydocking facility available with Kuwait Shipbuilding and Repairyard Co., Kuwait. Telex: 24438KT A/B DOCKYARD. Tel: 4835488.

CONSULS: Most countries represented.

SURVEYORS: Lloyd's, ABS and others are represented in Kuwait.

GANGWAY/DECK WATCHMEN: Watch to be maintained by ship's crew.

CERTIFICATES: All usual documents such as:

Ship's Manifest.
Crew List.
Clearance from Last Port.
Passenger Manifest.
Stores List.
Bonded Stores List.
SOLAS Certificates.
Bill of Measurements, etc.

CUSTOMS ALLOWANCES: Tobacco, no restrictions. Wine and/or Spirit, alcoholic beverage strictly prohibited to be held out of bond.

REPATRIATION: Can be arranged.

Also see "Visa Regulations" in "General" before first port.

AIRPORT: 35 km. to Kuwait International Airport.

TIME: GMT plus 3 hours.

HOLIDAYS: Every Friday, New Year's Day (1st January), Kuwait National Day (25th February).

The following Islamic holidays are celebrated but dates are subject to alteration: Prophet's Birthday, Prophet's Ascension, Eid Al Fitr, Eid Al Adha and 1st Muharram.

POLICE/AMBULANCE/FIRE: Port Security Police, Ambulance and Fire Department assistance available upon request.

TELEPHONES: There are presently no facilities for shipboard telephones but it is programmed to provide telephones for the use of ships in the future.

SPECIAL SERVICES: The services of Classification Society Surveyors, Tank Cleaning Operators, Compass Adjusters, Divers and Underwater Cleaning and D/F Calibration Adjusters are available in the area.

SHORE LEAVE: Permitted.

IDENTIFICATION CARDS: Passport or Seamen's Book necessary.

GARBAGE DISPOSAL: Skips can be provided and placed alongside a vessel. Requests for this service should be made to the Port Authority.

WASTE OIL DISPOSAL: Not available.

SEAMAN'S CLUBS: None.

CURRENCY: Kuwaiti Dinar (KD).

PORT REGULATIONS: The following are excerpts of some of the more important port regulations:

Fire fighting appliances to be kept in readiness for immediate use.

Pumping or discharging in any way into the sea oil fuel tanks, bilges, dirty ballasts, etc., is prohibited.

Disposal of garbage over the side of the ship into the harbour is prohibited.

The presence of a Pilot on board a vessel shall not relieve the Master of his responsibility regarding the safety of the vessel. The Port Authority shall have the right to claim against a vessel for any damage caused by that vessel to berths, shore installations, tugs, buoys, etc.

The Harbour Master or his deputy may order a vessel to leave the berth at short notice in the case of emergency, bad weather, etc.

Vessels carrying explosives or dangerous cargoes must declare quantities and categories of same when they report their ETA.

Crew members are prohibited from swimming within the harbour.

Lowering into the water of ship's life-boats, launches or life-rafts is prohibited without the written approval of the Harbour Master or his deputy.

Mooring of ship's life-boats, launches or life-rafts to navigational marks and buoys is prohibited.

Due regard shall be given to the safety of divers when they are working within the Port Limits. Engines should be stopped when approaching their working area at a circle of 150 m. The launch attending divers displays the International flag letter "Alfa" during diving operations.

SHIPMASTER'S REPORT: May 1980 (Updated 1994). Vessel loading ammonia.

Approaches: Charts B.A. 3773 and BAP1223. The complex lies about 1.5 miles South of the port of Mina Al-Ahmadi.

Approach is fairly straightforward with good positions being obtained by radar and from the various light floats and buoys that abound.

Currents appear to follow the trend of the coastline.

Anchorage: There is no night berthing allowed on the Ammonia Berth. Vessels arriving during the hours of darkness are asked to anchor about 2 miles due East of the berth.

Pilotage: Pilots will board the vessel about 1.5 miles due East of the berth, usually from a tug.

Call Port and Pilots on Channel 16 VHF, usually work 13 or 14 thereafter. Communication was good, fluent English. Vessel has the option of berthing either side alongside and, if not heavily loaded, would suggest starboard side to with the head out.

Two powerful tugs available for berthing, usually only one required for sailing. Tug's lines, lying alongside.

Length of pilotage about one and a half hours to being secured.

Berth: Consists of a "T" jetty, the head of which lies about 340°/160°. The stem of the "T" is 1,000 m. long and the head about 800 m. long.

The Ammonia Berth lies on the Northern side of the "T" and inside.

Quoted depth is 40 ft. which was borne out by soundings. The Pilots however quoted a max. sailing draft of 36 ft.

The Ammonia Berth itself is about 350 m. long. The concrete sections of the jetty are currently undergoing repair and this affected the mooring arrangements. Besides this there are lamp standards which may interfere with lines in the future. Usual mooring arrangements, 3 headlines, 2 breastlines and 2 springs.

Gangway: It is only possible to use ship's gangway when lying starboard side to as it fouls the Chicksan area when head in. Careful positioning and tending is required.

There is a group of Chicksans which handle oil products about halfway along the jetty and the ammonia Chicksans lie just South of these.

No VRL. No venting.

Shore personnel connected the Chicksan (bolted) and no reducer was necessary.

Cooldown: Charterers asked us to limit the amount of coolant taken to 300 tonnes.

Petrochemical Industries Company (who operate the berth) would have allowed us to take this coolant into more than one tank had it been possible or necessary. They were very conscious of us having to vent excess pressure (using 'cascade' system for atmospheres) and went to great lengths to ensure no ammonia vapour was discharged to atmosphere.

Control of cargo rate was very good.

Vessel has to anchor at least three miles off berth to complete cooling.

Notice of Readiness: Was tendered on arrival and again on completion of purging/cooling operations. Cable "Ammoniaship". This was not accepted until secured in the loading berth and ready to load.

Loading: Despite the length of pipeline from the refinery the product was reasonably cold and they have a recirculating system which enables stopping cargo at very little notice.

Berth operators were quite happy with bottom temperatures only at −32°. Loading rate is quoted at 1,000 t.p.h. but our overall average was only 605 t.p.h. at which the operators expressed themselves as satisfied.

Throughout the whole cooling and loading programme the vessel was under continual close scrutiny from shore personnel. The technical ability of these people was very high indeed (although very fair and practical minded). Pressure graphs and temperatures were checked and noted hourly together with hourly rates.

Redwoods attended as surveyors throughout. Bills of Lading are presented before sailing and are usually claused "Freight Prepaid".

Output of the plant is quoted as about 700 tonnes of liquid per day, but the fertiliser division apparently has first call on product which may result in short loading.

Note: The port office, which is situated at the junction of the "T", is very sensitive to ammonia smells and the personnel there test the atmosphere using Draeger tubes.

Bunkers: Diesel oil taken at this call and vessel has to position under the oil chicksans. This requires shifting ship to or from the loading chicksans.

Bunker suppliers, KNPC, will NOT accept bills signed over Time Charterer's stamp. Ask Owner for permission to sign the bills 'clean' prior to arrival.

General: Shore passes required. Prior arrangements to be made by sending necessary information to the agent concerned, at least 3 days prior to ship's arrival.

Transport: Necessary to get from jetty to shore. This is provided on a continual basis.

Alcohol: Customs will allow alcohol to be issued to bars. It is better to arrive with these emptied and ask for an allowance. As usual, it is a very grave offence to offer alcohol to shore personnel.

Fresh Water: Available but none taken.

Medical: There is a medical centre ashore which provides a very efficient service for vaccinations.

General: Service is available for radars and Decca Navigator.

No stores taken.

Items may be landed for despatch to UK after informing the Customs and providing a description of the packages, etc.

Personnel may be repatriated (no alcohol in baggage) and there is a frequent service to UK.

Agents: Kuwait Oil Tanker Company, cables 'Minatank Kuwait'.

In case of emergencies they have an office on the shore which is manned 24 hours. If necessary to telephone UK one has to go to the head office at Ahmadi. Agents usually work VHF Channel 26.

Departure: About four hours should be allowed for completion of paperwork before sailing. Vessel may leave the berth at night.

AUTHORITY: Kuwait Ports Authority, P.O. Box 3874, Safat, 13039 Safat, Kuwait. *Tel:* 4812623, 4833709. *Telex:* 22740 Hmshp Kt. *FAX:* 4819714. *Contact:* Captain A.R. Al Naibari, Director General.

Ibrahim A. Aziz Al-Fulaij, Shuaiba Port Director., Shuaiba Port., P.O.Box 10099, Shuaiba, 65451 Kuwait. *Tel:* 3260137. *FAX:* 3260114.

AGENT: Gulf Agency Company (Kuwait) Ltd., POB Safat 20637, 13067 Safat, Kuwait. Old KIC Building, 1st Floor, Safat Square, Ahmad al Jaber Street, Kuwait, State of Kuwait. Tel: (965) 4836465, after hours 5390567. Fax: (965) 4836375. Telex: 22396 (Answerback "Isatug Kt"). Cables: "Confidence, Kuwait".

In the case of tankers, agency services are provided by the Kuwait Oil Tanker Company.

SHUWAIKH (Kuwait Harbour): 29.21 N. 47.56 E.

(See Plan)

PORT LIMITS: According to the General Port Rules (1959) the Seaward Limits comprise all waters in the area confined by line drawn in direction 000° from Ras Al Ajuza, (Lat. 29° 23' 27" N., Long. 48° 00' 24" E.) to the parallel of Lat. 29° 30' 00" N. Hence in direction 230° to Ras Al Ashairij Lat. 29° 23' 15" N., Long. 47° 51' 00" E. For the seaward boundaries of the Port within which a vessel is considered to be on "arrived ship", refer to "Anchorage".

DOCUMENTS:
Manifest: 15 copies which should clearly indicate weights in metric tons and measurements in cubic metres and each copy should be duly signed and stamped by the loading port Agent.

The copies of the manifest may be photostat copies or carbon copies but it is imperative that the stamp and signature made by the loading port Agent is appearing in original on each copy.

If cargo is carried in transit a separate transit cargo manifest (15 copies) is also required in same fashion as above.

Bills of Lading: 5 sets of non-negotiable copy Bills of Lading i.e. ordinary carbon copy Bills of Lading. Photostat copies will not be accepted.

In addition the following documents are to be provided:

4 copies of Final Cargo Stowage Plan, duly signed and stamped on each copy by the loading port Agent. Photostat copies are accepted as long as same are signed and stamped.

4 copies of Hatch List as above.

If dangerous cargo is being carried 2 copies of a separate Dangerous Cargo List is also required and again each copy to be duly signed and stamped by the loading port Agent.

Also 2 copies of Crew List to be presented to Customs Office.

1 copy of Crew List, 2 copies of Passenger List, all Seaman's Books or Passports, 1 photograph of each crew member for the Immigration Office.

1 copy of Crew List, 1 copy of Vaccination List, all vaccination books for Quarantine Office. Immediately on berthing place the rat guards on mooring lines.

Ship's Registry, Load Line, Cargo Safety Equipment Certificate, Safety Radio Certificate and Last Port Clearance to be presented for port clearance.

APPROACHES: Vessels arriving at Shuwaikh port:

1. All vessels calling at Shuwaikh Port shall abide by taking their course at 000° from position: 28° 36' 02" N., 48° 54' E. up to one nautical mile North East of Ahmadi Light Vessel.
2. To observe its course through 294°, from one nautical mile towards North East Ahmadi Light Vessel, up to a distance of 3.8 nautical miles towards 160° from the Sea Island. From such position the vessel shall take the course and observe the direction leading it to Shuwaikh Anchorage.
3. Speed of vessels shall not be less than 10 knots until passing Ras Al Ard Lighthouse.

PILOTAGE: Pilotage service available and request for Pilot should be made to Port Signals Station, or to look-out Signal Station when in use. Ships proceeding through the dredged channel to Shuwaikh are boarded by the Pilot in the anchorage. Pilotage not compulsory in the Outer Anchorage.

MAX. SIZE: Max. draft at Berths No. 1 to 14, 9.5 m., and Berths No. 18 to 21, and dolphin berths, 8.0 m. Max. draft at Berths No. 15 to 17, 6.0 m. These drafts allow 0.6 m. of water under the keel. Tidal range is about 3.5 m. Berthing draft dependent upon tidal conditions at time of arrival.

ANCHORAGES: Ships may take up anchor berth in the Outer Anchorage, without the Pilot.

Because of congested anchorage, and for the benefit of all concerned, the Outer Anchorage (BA Chart 1214) was divided into areas, and the approach waterway of 3.0 miles in width from Ras Al Ardh to anchorage and vice versa, is left free for navigation.

Anchorage Areas:

(a) Anchorage area reserved for the national fleet.
(b) Waiting area for vessels which have received berthing instructions.
(c) Anchorage area for vessels with cargo to discharge in Kuwait.
(d) Anchorage area for vessels calling for fresh water, provision, crew changes, transhipment, or any reason other than discharging cargo.
(e) Temporary anchorage area for vessels awaiting entry to anchorage (D).

When the movement is confirmed the vessel should hoist:
By Day: "G" Flag over a Black Ball or Shape.
By Night: A White Light over a Red Light, visible all round.

Note: (1) The Master shall advise the Director of Marine Operations (D.M.O.) and/or the Pilot of any damage or disability to the ship under his command, *before berthing.*

Ship unable to comply with the berthing instructions, should notify the D.M.O. in ample time of their inability to do so, by VHF, or by Telex No. 22740 HMSHP KT/44800 TCRA KT or by Fax No. (0965) 4818472/4814196.

Any ship sailing from the outer anchorage for any reason, should notify the Kuwait Harbour Control that she is sailing and give the reason.

(2) The D.M.O. may direct any vessel to move from one berth to another, or vacate a berth as circumstances demand.

HEALTH: Vessels calling at Shuwaikh Port must send the following information to "Health Port Shuwaikh" by cable:

(1) Name of vessel
(2) Last port of call
(3) Health condition Crew members
(4) Validity of Cholera Certificates
(5) Request for Free Pratique

Vessels arriving at Outer Anchorage must hoist "Q" flag, and keep it hoisted until Free Pratique is granted.

Free Pratique will be granted usually at anchorage, and in some cases alongside, at the discretion of the Quarantine Officer.

No person, except the Pilot, shall board the vessel, before Pratique is granted.

RADIO/VHF: *Signal Station:* (Call Kuwait Harbour Control)
There is Lookout Signal Station at Ras Al Ajuza (Lat. 29° 23.3' N., Long. 47° 59.8' E.) and a Port Operation VHF/RT Service at the same position. The VHF/RT is a Single Frequency Simplex Service, operating on Channel 11 (156.550 MHz) and 12 (156.600 MHz). Working restricted to messages relating to the Movements and Safety of Ships.

All vessels arriving should establish contact with Kuwait Harbour Control as soon as possible by VHF. Tel: 2449154, 2435873.

Kuwait Coastal Station (9 KK) operates throughout 24 hours.

THE FOLLOWING SERVICES ARE PRESENTLY SUSPENDED:
Radio Station:

2182 kHz 8802.4 kHz
2765 kHz 13182.5 kHz
2750 kHz 17328.5 kHz
4434.9 kHz 22699.0 kHz
6518.6 kHz

Radio Telegraphy – 9 KK:

9 KK 9 KK 2 – 4299.4 kHz
500 kHz 9 KK 4 – 6381.4 kHz
450 kHz 9 KK 6 – 8525.4 kHz
9 KK 8 – 12895.4 kHz
9 KK20 – 12925.7 kHz
9 KK22 – 16995.7 kHz
9 KK23 – 22504.7 kHz

Marine Communications
This Service links the ship directly with their Agent or Principal in Kuwait and the Call for this Branch is "Kuwait Maritime".

The "Kuwait Maritime" Service covers all the ship's calls with Kuwait and abroad. The procedure is as follows:

Agent to Ship
Call by telephone No. 108 Kuwait Maritime, asking for connection, giving the Name of the Ship, and her Call Sign. The Kuwait Maritime operator will contact the ship for you on Channel 16 (156.800 MHz) and then transfer to vessel's frequency for communication.

Ship to Agent or Abroad
Call "Kuwait Maritime" on VHF Channel 16 (156.800 MHz) and ask to be connected to Agent or abroad.

TUGS: Join vessel entering dredged channel, Tug's lines used. The use of tugs by ships manoeuvring within Shuwaikh port limits under direction of D.M.O. or Pilots.

Charges:

(a) 75.000 K.D for over 750 h.p. tug per hour or a part of hour.
(b) 25.000 K.D for less than 750 h.p. tug per hour or a part of hour.
(c) Using of tug is compulsory, in the limit of port.
(d) Use of tugs is compulsory for ships over 63 m. length.

REGISTRATION PROCEDURE: Notification of vessel's arrival. According to port regulations a questionnaire issued by the D.M.O., duly filled in and signed by the Master of the vessel, is to be submitted to the port prior to berthing. In many cases vessels arrive and obtain berth immediately and thus there is no possibility of presenting the questionnaire to Authorities in time. In order avoid berthing delays Masters should cable following information to the D.M.O. directly, 48 hours before arrival:

(a) ETA.
(b) Total cargo for discharging Kuwait.
(c) Distribution quantity each hatch.
(d) Declaration hazardous, flammable and explosives cargo, and guns and ammunition.
(e) Declaration all vessel's winches in good working condition and cargo clear for discharging at Kuwait.
(f) Draft fore and aft.

We quote below specimen cable covering the above:
"Vessel XXX ETA Kuwait 21/8 0600 local quantity discharging 1,400 tons general hatch one 300 hatch two 300 hatch three 250 hatch four 300 hatch five 250 no hazardous, flammable explosives guns ammunition stop All winches derricks good working condition draft fore 7.0 m. Aft 8.0 m. Kuwait cargo clear for discharging".

The above cable sent to the D.M.O. will facilitate berthing vessel on time. ETA to be reconfirmed before 24 hours, if any change.

Also see "Shuaiba – Notice".

Also cable Health, Port of Shuwaikh: ETA, last port, crew health, validity of certificates, and request Free Pratique.

Apart from above, on dropping anchor contact Port Health, Tel: 4811344, through Kuwait Maritime Channel 16 and request Free Pratique, and on receiving same inform Agent by VHF or by cable.

When approaching the anchorage vessel should hoist her "Call Sign" and "Quarantine" flag.

On arrival at anchorage contact Harbour Control and standby VHF Channel 16 when at anchorage.

Also send acknowledgement to ship's Agent stating time cable sent to Director Marine Operations Department.

BERTHING/CRANES:

Berth No.	*Overall Length* (m.)	*Depth Below ACD* (m.)	*Max. LOA of vessel allowed to berth* (m.)	*Max. Permitted draft* (m.)	*Cranage*
1	186	10.06	175	9.6	Grain elevator 250 t/hr.
2, 3, 4, 5	180	10.06	175	9.6	
6, 7	180	10.06	175	9.6	3 cranes×3 tons capacity (For each berth) 1 crane×6 tons capacity (For each berth)
8	218	10.06	200	9.6	Cement elevator 350 t/hr. 3 cranes×3 tons capacity 1 crane×6 tons capacity
9, 10	200	10.06	220	9.6	2 cranes×3 tons capacity (For each berth) 2 cranes×6 tons capacity (For each berth)

Berth No.	Overall Length (m.)	Depth Below ACD (m.)	Max. LOA of vessel allowed to berth (m.)	Max. Permitted draft (m.)	Cranage
11	200	10.06	220	9.6	
12, 13	180	10.06	225	9.6	2 container gantry cranes 45 ton capacity under the spreader. 2 mobile cranes, 40 tons capacity under spreader and 100 tons each with hook.
14	200	10.06	220	9.6	3 cranes×3 tons capacity
18	185	8.53	200	8.0	
19, 20	200	8.53	220	8.0	2 cranes×3 tons capacity (For each berth)
21	200	8.53	220	8.0	3 cranes×3 tons capacity
15	185	6.7	180	6.0	2 cranes×3 tons capacity
16	140	6.7	110	6.0	1 crane×3 tons capacity
17	200	6.7	220	6.0	3 cranes×3 tons capacity
17A	75	6.7	50	6.0	
14A	80	10.06		9.6	For Ro/Ro ships only

Note: There are 2 Dolphin Berths with depth alongside of 8.53 m. below ACD and capable of taking vessels up to 185 m. in length and 8.0 m. draft.

Entrance channel is 150 m. breadth and 8.53 m. depth (below ACD). The Curvature of the channel has been recently widened, allowing vessels of 260 m. to pass through. Such vessels are allowed to berth provided that their draft is not greater than 9.6 m.

Closed Stores:

Store No.	Area (sq.m.)	Store No.	Area (sq.m.)
1	3,600	16	13,970
2	4,050	17	7,950
3	4,050	18	7,950
4	4,350	19	4,981
8	10,750	20	7,950
9	10,750	21	7,950
10	10,750	22	7,950
11	10,750	24	1,000
12	10,750	25	1,000
13	10,750	26	1,000
14	13,970	27	1,000
15	13,970		

Total area of closed stores: 171,191 sq.m.

Covered Stores:

Store No.	Area (sq.m.)
7	10,000
23	5,250

Total area of covered stores: 15,250 sq.m.

Open Storage Areas:

Open Storage Area No.	Area (sq.m.)	
2	6,800	
3	4,350	
4	8,600	
5	9,750	
6	6,700	
8	14,190	
9	28,200	
10, 11	47,700	Container operation area for Berths No. 12 and 13
Iron and Timber Area	44,000	
Areas North of Ghazali Street	260,000	

Total area of open storage: 488,600 sq.m.

Container Stacking Areas:

Container Terminal	120,000 sq.m.
New Extension	145,000 sq.m.
Total Container Stacking Area:	265,000 sq.m.

STEVEDORES: All stevedoring and transport inside the port is performed by an authorised contractor.

Container work is handled by Shuwaikh Container Terminal (SCT). Plans are under consideration for specialised container berth facilities.

There are four Cement Silos of capacity 14,000 tons each adjacent to Berth No. 8. Discharging rate is 350 tons per hour.

Working Hours: General Cargo Handling:

Winter (1st November – 31st March):	
Saturday – Wednesday	0700-1430 1430-2200
Thursday	0700-1230 1230-1800
Summer (1st April – 31st October):	
Saturday – Wednesday	0630-1400 1400-2130
Thursday	0630-1230 1230-1830

Overtime is compulsory for all vessels. On Fridays, only work on vessels which are to be completed during the day.

Container Terminal: 24 hour working.

MEDICAL: Masters to radio prior arrival if medical attendance required on board. Hospital facilities available.

A rescue vessel, 90 ft. and 20 knots speed, equipped with surgery, operating theatre and all medical appliances is maintained by the Ministry of Health.

DENSITY: 1028 (Winter); 1036 (Summer).

FRESH WATER: All berths except Berths No. 1 to 7, have fresh water connection, and water can be supplied by pipeline. Rate 20 to 25 t.p.h.

In addition to water available alongside the berths by pipeline and hose, water may be supplied by barge to ships alongside dolphin berths. There are 2 private companies supplying fresh water alongside and at anchorage by barge.

FUEL: Fuel oil and gas oil supplied by bunker tankers. For quality and prices please enquire from the Agents.

FIRE PRECAUTIONS: Shuwaikh Fire Brigade is responsible for all fire fighting in port areas and storage areas. There is also a fire station situated near the Small Boat Harbour, where the 3 fire fighting tenders are berthed. A salt water main for the fighting services is laid at all berths. There are two 90 ft. fire fighting tenders capable of pumping 5,000 gallons of water per minute from 4 nozzles. In addition they can pump 900 gallons of foam per minute. The 98 ft. fire fighting tender is capable of pumping 9,000 litres of water per minute and 650 litres of foam, and the capacity of her pump is 4,500 litres of water or 143.5 litres of oil. The tender has 8 nozzles for water and 2 nozzles for foam. These modern fire-fighting units are equipped with radio, radio-telephone, radar, etc.

CONSULS:

Embassies:

Afghanistan	5396913	Morocco	4813912
Algeria	2519987	Netherlands	5312650
Austria	2552532 2532761	Niger	5652943
		Nigeria	5380345
Bahrain	5318530	Norway	5323014
Bangladesh	4831620	Oman	2561962
Belgium	5722014	Pakistan	5327641
Bhutan	5388451	Philippines	5329315
Brazil	2561029	Poland	2510355
Bulgaria	5643893	Qatar	2513599
Canada	2563025	Romania	4843419
China	5333340	Russia	564271
Czech Rep.	2529015	Saudi Arabia	2400250
Denmark	2544685	Senegal	2542044
Egypt	2519955	Somalia	2555567
France	2571061	Spain	5325827
Finland	5312890	Sri Lanka	4837611
Germany	2520827	Sweden	2523588
Greece	5335861	Switzerland	2551876
Hungary	5323901	Syria	253116
India	2530600	Thailand	5317530
Indonesia	2514588	Tunisia	2526261
Iran	2560694	Turkey	2531466
Italy	2445120	U.A.E.	2528544
Japan	5312870	U.K.	2403334
Korea	2554206	U.S.A.	2424151
Lebanon	2562103/4	Venezuela	5324367
Libya	5329172	Yugoslavia	4813140
Malaysia	2564213		

Consulates:

Cyprus	2433075	Sweden	2426908
Paraguay	4814462	Egypt	5338935

EMERGENCY CALLS: (R = Residence, O = Office)

	Tel. No.
Director, Marine Operations Dept.	4817698 (O) 4819757 (O)
Asst. Director, Marine Operations Dept.	4816025 (O) 4835493 (O)
Berthing Master	4834931, 4834946
Signal Stations:	
Shuwaikh	4810446, 4818478
Ras Al Ajuza	2435873, 2449154
Fire Station Shuwaikh	4813500, 4817573, 4813692
Fire Boats	4816777
Quarantine Doctor	4811344
Hospital "SABAH" Exchange	4815000
Hospital "SABAH" Emergency Ward	4815000, 275, 500
Police Station, Shuwaikh	4813934
Coast Guard	4813711, 4816409
Immigration Shuwaikh	4813676
Customs Shuwaikh	4810319

REPAIRS: All deck, hull and machinery repairs can be carried out by local shipyard. Repair facilities available for Gyro, Radar and electronics.

DRY DOCK: Floating dock lifting capacity 35,000 tonnes, dimensions 190 m. × 32 m. Syncrolift rated lifting capacity 2,000, tonnes.

SURVEYORS: Lloyd's Register of Shipping (Kuwait): American Bureau of Shipping (Kuwait); Bureau Veritas (Kuwait); Norske Veritas (Bahrain).

OPENING/CLOSING HATCHES: Opening and closing of hatches is normally carried out by the stevedores on liners, and by ship's crew on charter vessels.

CERTIFICATES: A survey of life rafts may be carried out unless vessel's safety certificates indicate that life rafts were surveyed less than 12 months previously.

CUSTOMS ALLOWANCES: Tobacco: No restrictions. Wine and/or spirit allowance: Alcoholic beverage is strictly prohibited to be held out of bond. Master allowed to keep limited quantity in his cabin.

CARGO GEAR: Ship's gear and cranes used for discharging.

REPATRIATION: Can be arranged.

Also see "Visa Regulations" in "General" before first port.

AIRPORT: Served by regular airlines. Airport 17 km. from town.

TIME: GMT plus 3 hours.

HOLIDAYS: New Year's Day, Id Al Fitr, National Day (February 25th), Liberation Day (February 26th), Mount Arafat Day (Wakfa), Id Al Adha, New Hijra Year, Birthday of Prophet Mohammad, Isra walma'raj. The above days are subject to alteration.

TELEPHONES: Cannot be arranged on board.

SERVICES: Swedish Welfare for Seamen. Lloyd's Surveyor. Butterworth Tank Cleaning Machines and Equipment and also under-water cleaning.

PROVISIONS: All kinds of food available at reasonable prices.

SHORE LEAVE: Only permitted for Consular matters, medical reasons and making emergency telephone calls. Contact Agent for further information.

Shore passes are issued and must be returned to Immigration prior to departure, if not returned a heavy fine will be imposed. Crew members require a photograph but this is not returned.

IDENTIFICATION CARDS: Passport or Seaman's Book necessary.

GENERAL: The following is required from all vessels calling at Kuwaiti ports for the first time:

Quote:

The Harbour Master Department of the Kuwait Ports Authority, with immediate effect, request that Masters of vessels calling for the first time at Shuwaikh Port should give in their ETA cables, details of cargo on board, the length, width, number and condition of hatches, discharging facilities, and any other information which they may consider necessary in assisting the Ports Authority to allocate the vessels the best berth possible.

Such information will considerably help all concerned and at the same time prevent unnecessary delay and unjustified extra charges to owners, since in the event that the allocated berth is not suitable, the Harbour Master shall have no alternative but to shift that particular vessel to another suitable berth, or take it out to anchorage.

Furthermore, it has been observed some Masters of vessels are not indicating in their ETA cables to the Harbour Master the word "Kuwait" when indicating the tonnage figures of cargo onboard, clear and ready for discharging. It is imperative that the Master should say in his cable 'ETA . . . hours. Cargo for Kuwait . . . tons clear and ready for discharging draft . . . ft.

Unquote.

REGULATIONS: The State of Kuwait has stringent laws in force concerning the pollution of the sea by oil. The following are two amended paragraphs of this law:

Paragraph 1, Art. 4. "A person responsible for any pollution as described in Articles 1 and 2 shall be punished by a fine of not less than one thousand and five hundred and not more than forty thousand Dinars. In the event of his committing a similar crime within a period of one year from the date of his conviction, such a person shall be punished by a fine of not less than three thousand and not more than forty thousand Kuwaiti Dinars, and in the event of his committing yet another crime within a year from this last conviction he shall be punished by a fine of forty thousand Kuwaiti Dinars".

Paragraph 3, Art. 6. "The person responsible for pollution may suspend the detention order against the ship on payment, as a cash guarantee, of forty thousand Kuwaiti Dinars to the official entrusted with the execution of such order".

The Master shall advise the Harbour Master and/or Pilot of any special damage or disability to the ship under his command before berthing or unberthing.

A vessel in outer anchorage receiving a Movement Order in writing, by signal or VHF, and awaiting the Pilot, shall carry:

By Day: "G" Flag, over a black ball or shape.

By Night: A white light over a red light.

Ships that receive instructions to berth at specified hours and not adhering to these instructions could lose their turn and be liable to pay charges for the time lost at the berth, and facilities arranged for and not used due to such delay.

Ships that receive instructions to unberth at specified hours and not adhering to these instructions, i.e. retarding the movement of incoming ship, will be liable to pay charges for time lost at the berth and the facilities for the incoming ship, and not used, due to such delay.

Ships unable to comply with the berthing or unberthing instructions should notify the Harbour Master in ample time of their inability to so do by VHF, visual signals, personally or through Agent.

A ship entering or navigating within the dredged channel or inner basin shall have at least 1 anchor ready for immediate use.

The Master of a ship alongside Shuwaikh Wharf or dolphin berth, shall ensure that:

(a) Vessel not allowed to use VHF to any vessel except to call Kuwait Harbour Control or Kuwait Maritime.

(b) A safe and proper accommodation ladder to the quay is provided, adequately lit during the hours of darkness.

(c) A Quartermaster or watchman is stationed on deck, in charge of the ship's gangway, who shall inform the Master or the Duty Officer whenever required by the Port Authority Officials, and shall check that no authorised persons will enter the officer's or crew's accommodations. Gangway must be lifted up whenever vessel is not working, and at 2200 hrs. daily.

(d) The crew or watchman to attend the mooring ropes and lines, and shall cause their adjustment from time to time, as necessary on the rise and fall of the water.

(e) That no substance, matter or material is thrown overboard, either into the water or on to the wharf.

(f) That no engine repairs are undertaken which would prevent the movement of the vessel under her own power, without first obtaining the permission of the Harbour Master.

(g) That all pipe discharges on that side of the ship nearest to the wharf are either adequately and properly covered to prevent their effluent falling on to the wharf, or their use discontinued while the ship remains alongside.

(h) It is forbidden to jettison or ballast other than clean water or pump out the bilges or oil of any description within the port limits.

(i) All ships loaded with petroleum or crude oil at the wharf shall have the end of a steel hawser of sufficient strength, paid out to the water edge, at the offshore bow and quarter, to enable tugs to take the vessel to place of safety with the least possible delay.

(j) The Master shall at all times retain on board sufficient crew to work his ship.

(k) Ratguards to be fixed to all ship's mooring ropes.

(l) The Master shall not shift his vessel while alongside the wharf, prior to receiving permission from the Harbour Master or Berthing Master.

(m) The Master shall not connect water hoses to the water supply points and take water on board before receiving permission from the person in charge of water distribution.

(n) The Master shall report to the Harbour Master or Berthing Master any incident, accident or unusual happening on board his ship.

The Master not complying with the above-stated Port Rules, shall be liable to suffer the penalties prescribed for contravention.

Warning: Port tugs are supplied with nylon and polypropylene hawsers, which require particular attention when securing to ship's bollards, in order that they do not slip. Extra turns than normal on the bollards are recommended.

NOTICE:

Supplied to Ship's Master, on arrival, by Agent (October 1984).

1. One watchman to be kept regularly on gangway.
2. Immediately the labourers leave the vessel after each night shift the gangway should be taken up and not to be lowered before 0600 hrs. next working day.
3. Strictly forbidden to sell any alcoholic drinks onboard or to bring on to jetty.
4. Rat guards to be fixed properly on the ropes.
5. No cleaning of decks, painting of hull or welding on deck is allowed when vessel is alongside jetty, unless prior written approval is received from the Harbour Master.
6. Neither fresh nor dirty water should be pumped out alongside jetty for any reason and under any circumstances.
7. No garbage should be thrown either on jetty or in to sea at any time and under any circumstances.
8. Any pollution either during supply of bunkers or at any other time and for any reason is entirely your responsibility.
9. No repairs or dismantling of engines are allowed unless prior written approval from the Harbour Master is granted.
10. Vessel's draft should not exceed that draft on which she was allocated a berth.

Maximum drafts of/on various berths are:

Jetty Nos. 1 – 14 inclusive	31 ft. 6 in.
Jetty Nos. 18 – 21 inclusive	26 ft. 6 in.
Dolphins	26 ft. 6 in.
Jetty Nos. 15 – 17 inclusive	19 ft. 6 in.

AUTHORITY: Kuwait Ports Authority, State of Kuwait, P.O.Box 3874, 13039 Safat, Kuwait. *Tel:* (0965) 4819757. *FAX:* (0965) 4835233. *Contact:* Harbour Master's Office.

AGENT: Gulf Agency Company (Kuwait) Ltd., P.O.Box Safat 20637, 13067, Kuwait. Old KIC Building, 1st Floor, Safat Square, Ahmad al Jaber Street, Kuwait, State of Kuwait. Tel: (965) 4836465, after hours 5390567. Fax: (965) 4836375. Telex: 22396 (Answerback "Isatug KT"). Cables: "Confidence" Kuwait.

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Please also advise Shipping Guides Ltd.

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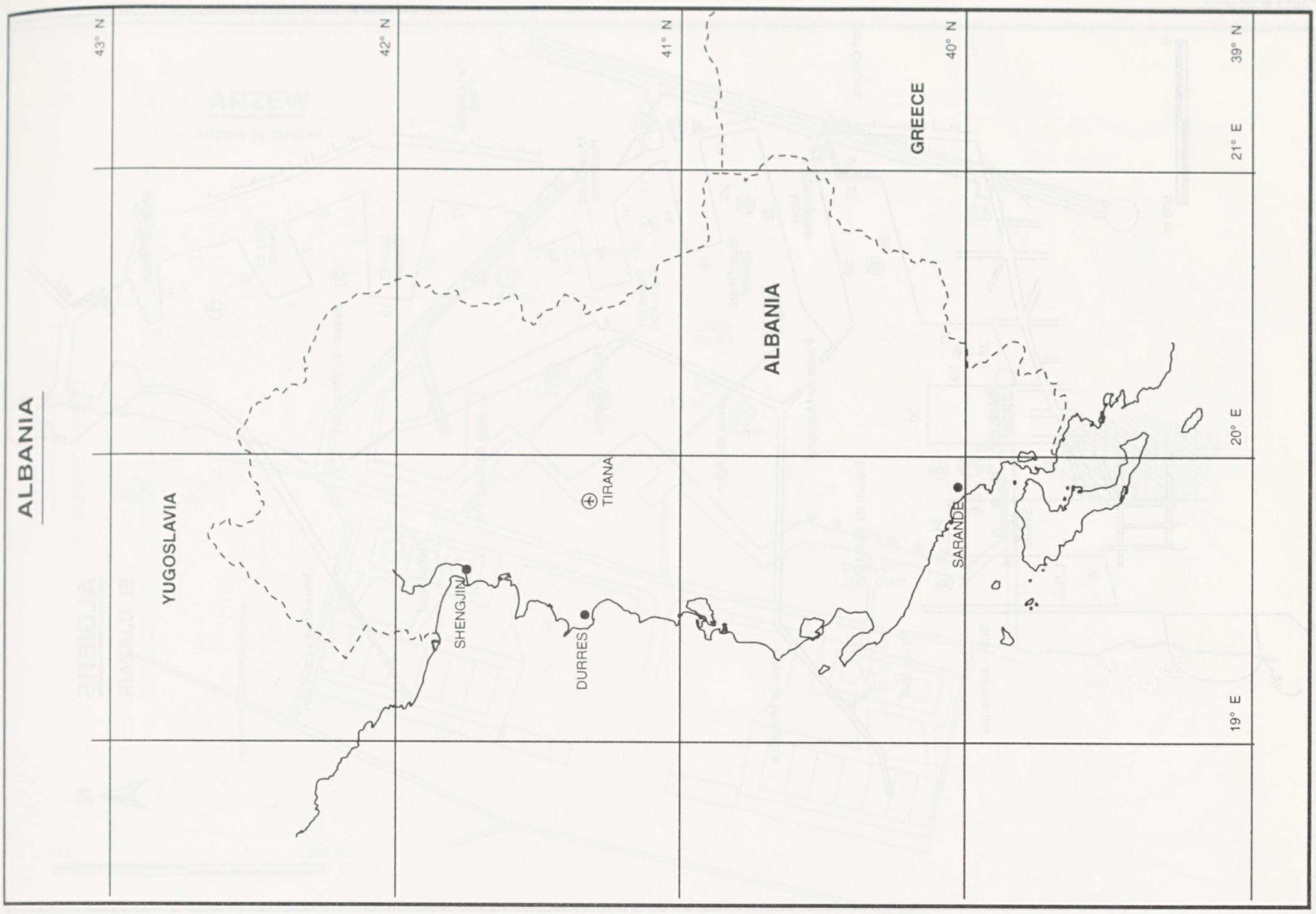
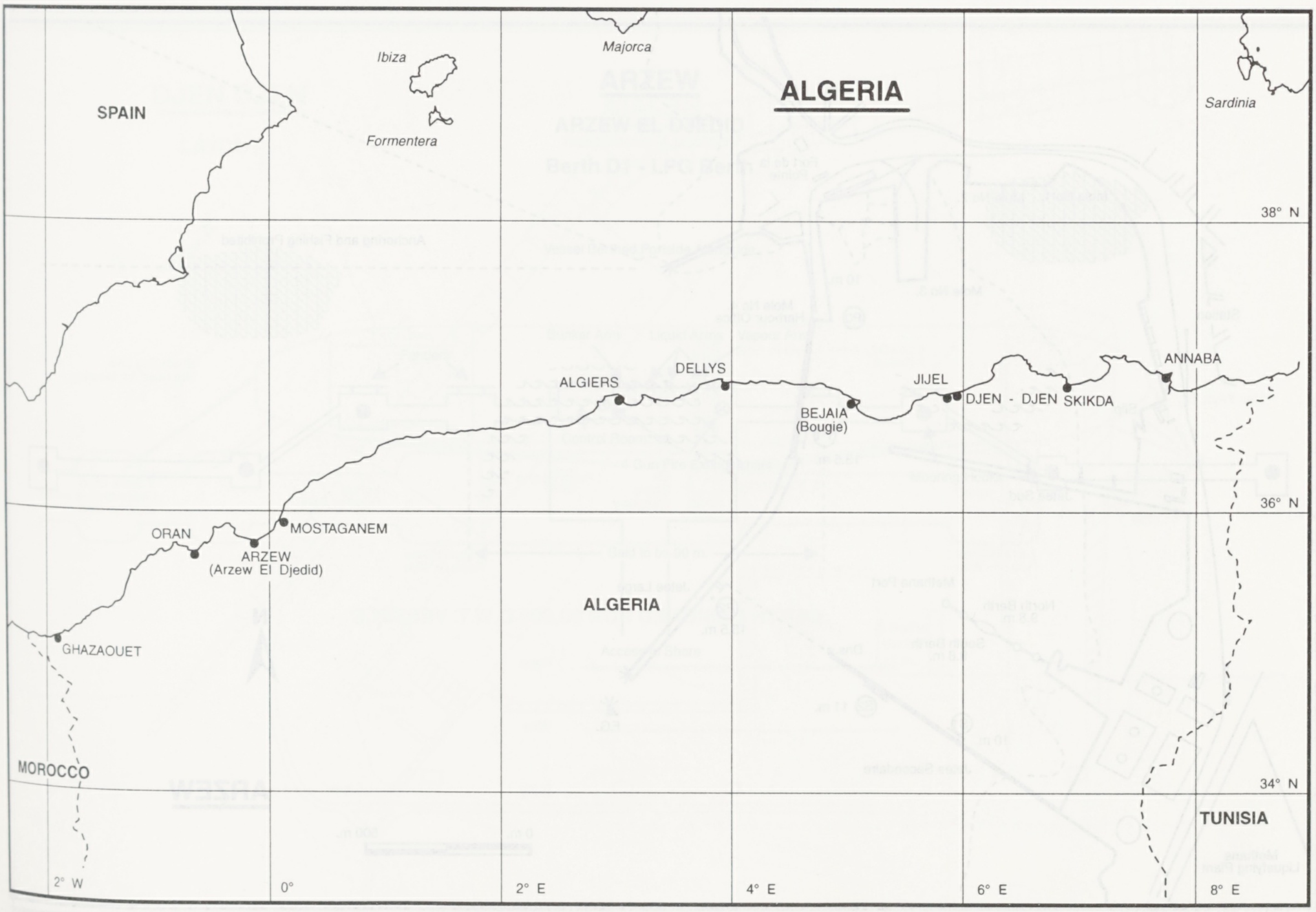
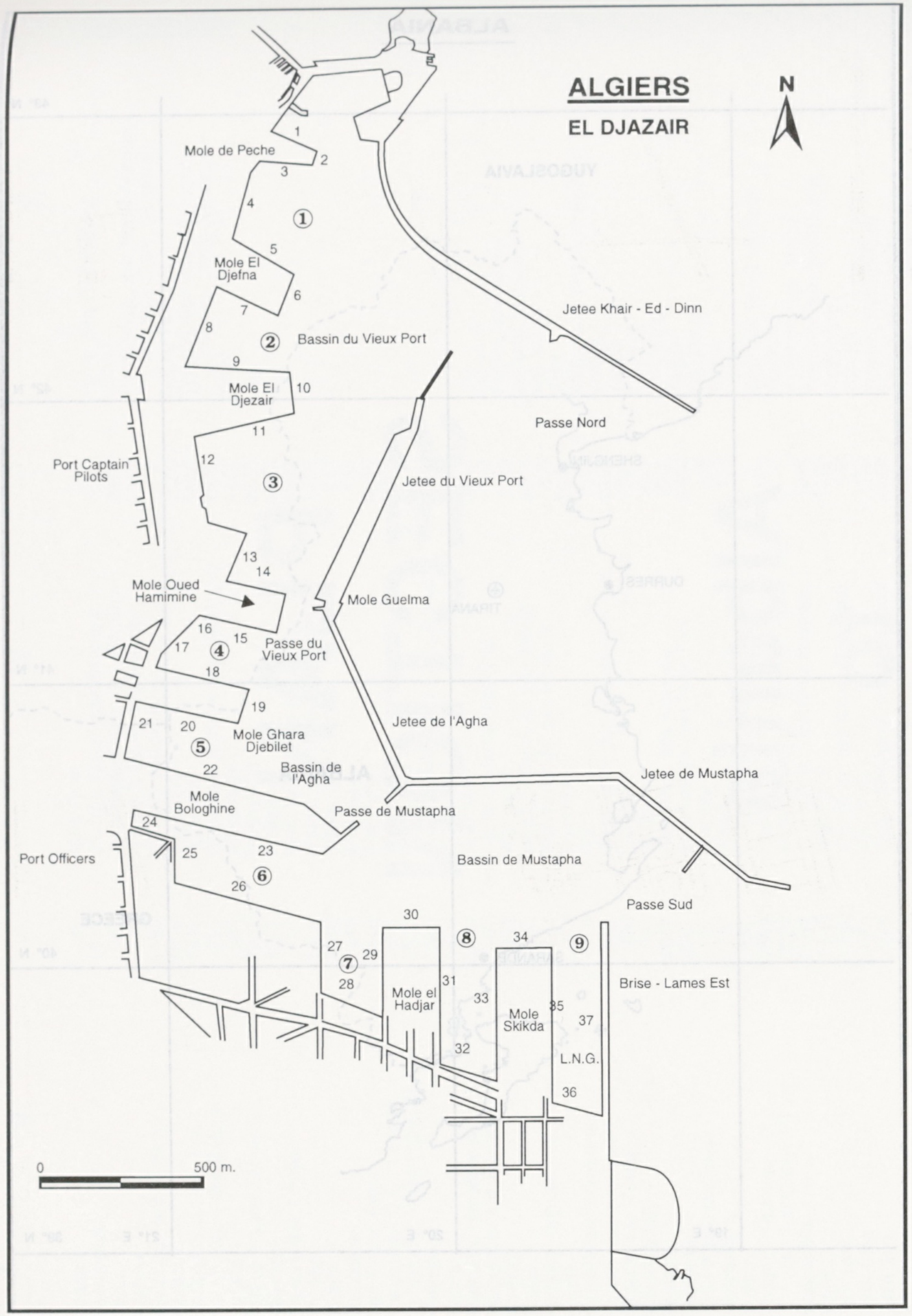
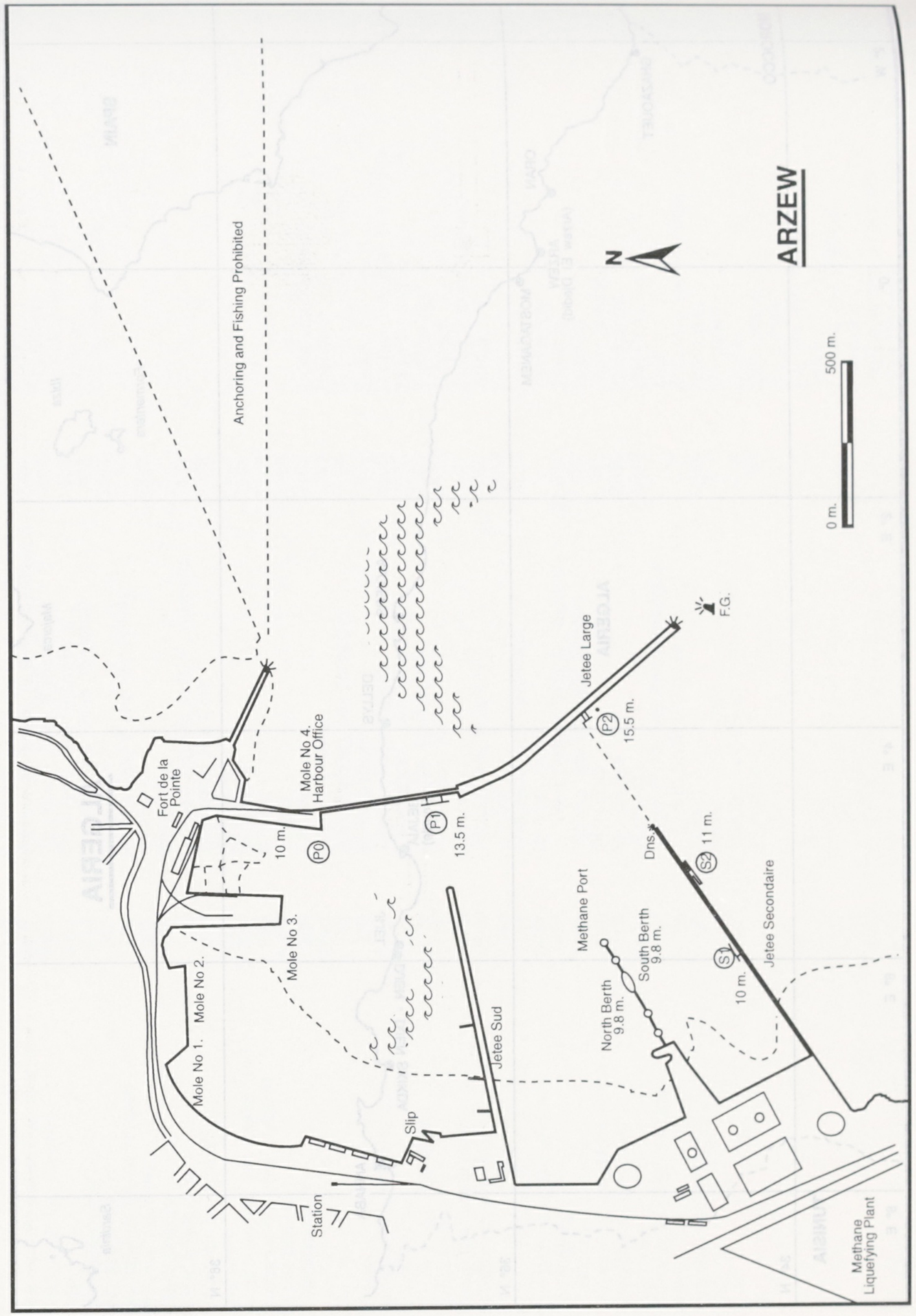
PLAN SECTION

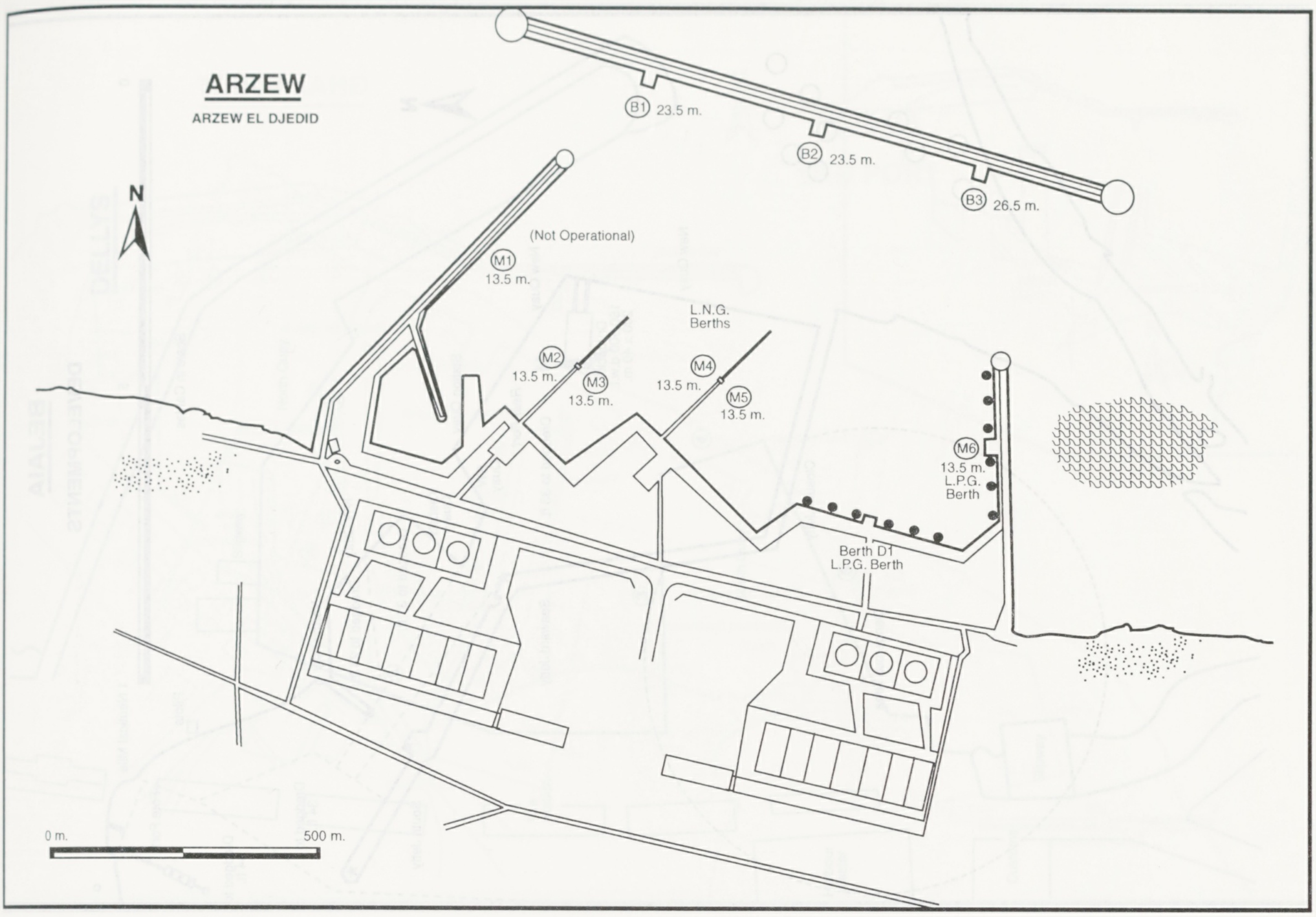
Albania
to
Kuwait


ALBANIA
YUGOSLAVIA
ALBANIA
GREECE
TIRANA
SHENGJIN
DURRES
SARANDE
43° N
42° N
41° N
40° N
39° N
21° E
20° E
19° E


ALGERIA
SPAIN
Ibiza
Formentera
Majorca
Sardinia
ALGIERS
DELLYS
BEJAIA
(Bougie)
JIJEL
DJEN - DJEN
SKIKDA
ANNABA
ORAN
ARZEW
(Arzew El Djedid)
MOSTAGANEM
GHAZAOUET
ALGERIA
MOROCCO
TUNISIA
38° N
36° N
34° N
2° W
0°
2° E
4° E
6° E
8° E


ALGIERS
EL DJAZAIR
N
Mole de Peche
Mole El Djefna
Bassin du Vieux Port
Mole El Djezair
Port Captain Pilots
Jetee Khair - Ed - Dinn
Passe Nord
Jetee du Vieux Port
Mole Oued Hamimine
Mole Guelma
Passe du Vieux Port
Mole Ghara Djebilet
Jetee de l'Agha
Bassin de l'Agha
Jetee de Mustapha
Mole Bologhine
Passe de Mustapha
Port Officers
Bassin de Mustapha
Passe Sud
Mole el Hadjar
Mole Skikda
Brise - Lames Est
L.N.G.
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
①
②
③
④
⑤
⑥
⑦
⑧
⑨
0
500 m.

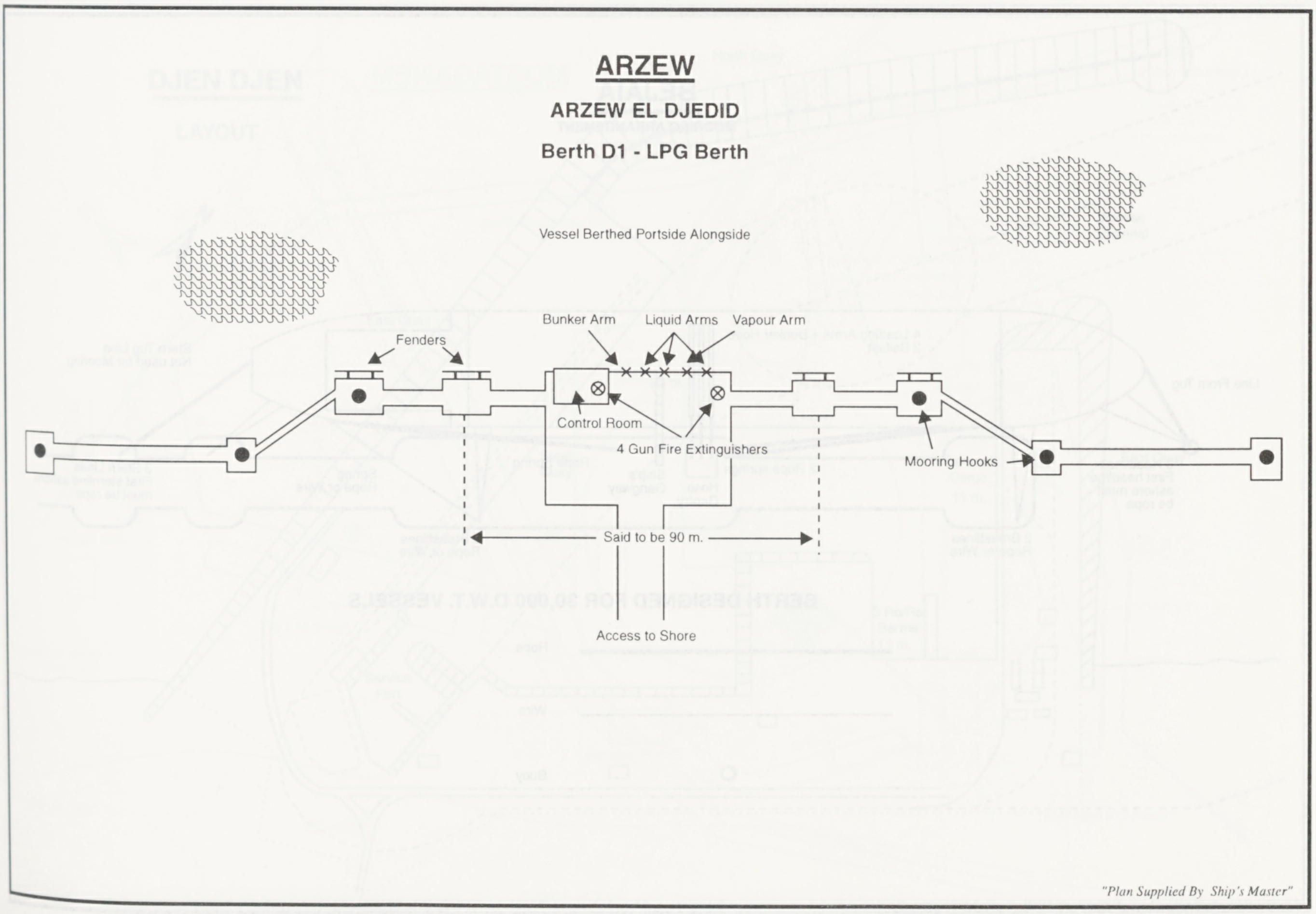

ARZEW
N
0 m.
500 m.
Anchoring and Fishing Prohibited
F.G.
Jetee Large
P2
15.5 m.
Mole No 4. Harbour Office
Fort de la Pointe
10 m.
P0
P1
13.5 m.
Dns.
S2
11 m.
Methane Port
South Berth 9.8 m.
North Berth 9.8 m.
S1
10 m.
Jetee Secondaire
Mole No 3.
Mole No 2.
Mole No 1.
Jetee Sud
Slip
Station
Methane Liquefying Plant



ARZEW

ARZEW EL DJEDID

N
B1 23.5 m.
B2 23.5 m.
B3 26.5 m.
(Not Operational)
M1 13.5 m.
L.N.G. Berths
M2 13.5 m.
M3 13.5 m.
M4 13.5 m.
M5 13.5 m.
M6 13.5 m. L.P.G. Berth
Berth D1 L.P.G. Berth
0 m.
500 m.



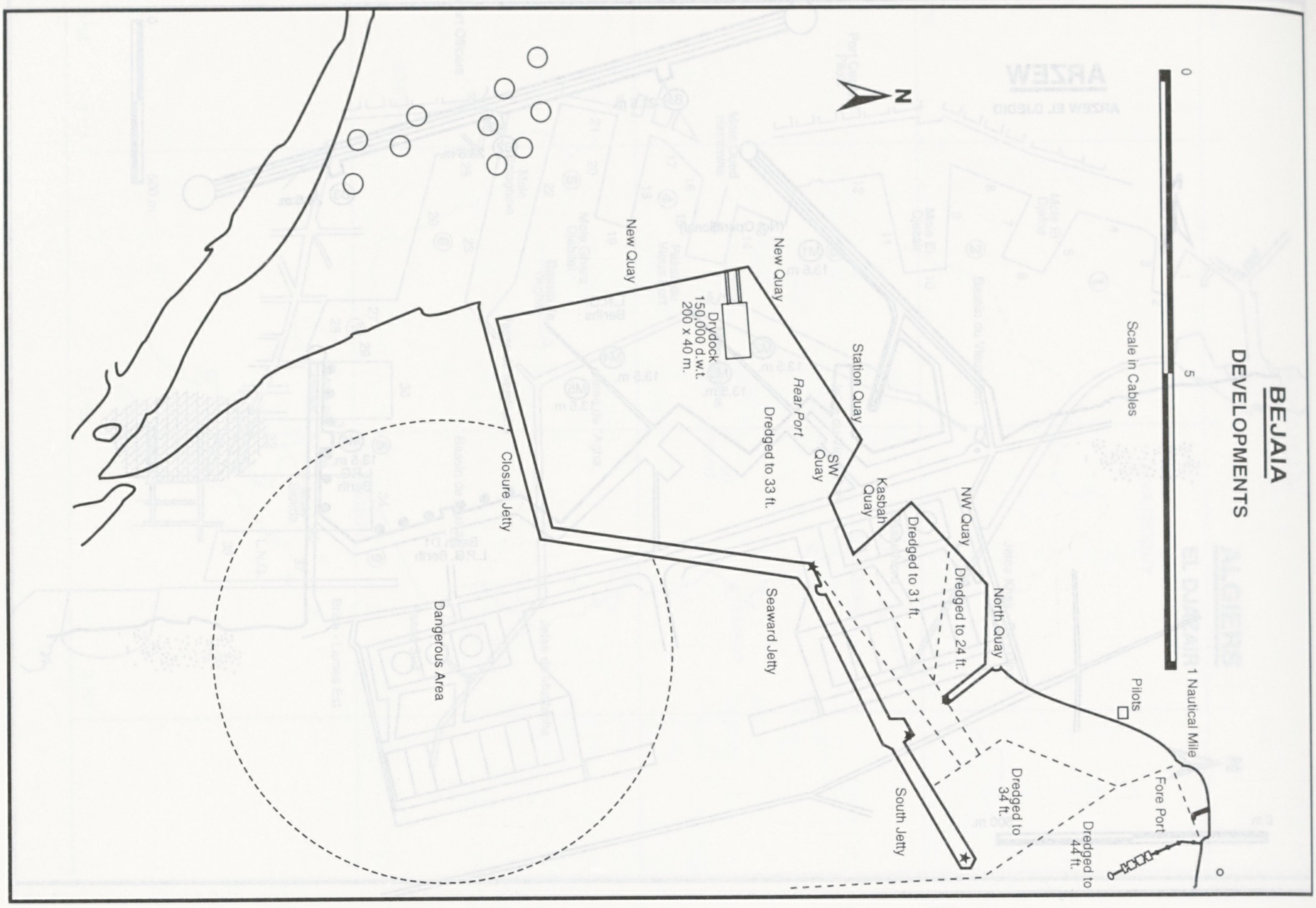
ARZEW

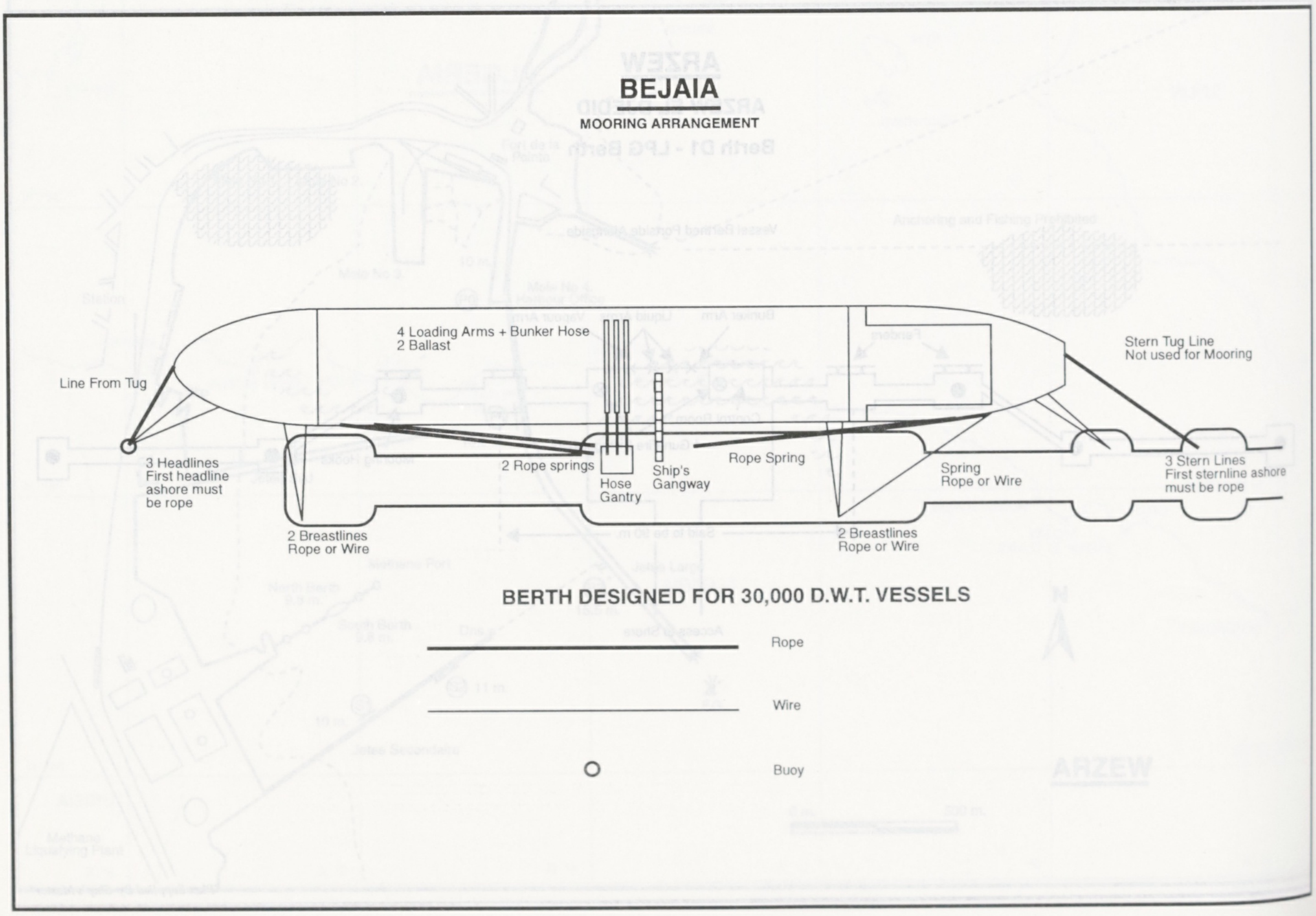
ARZEW EL DJEDID

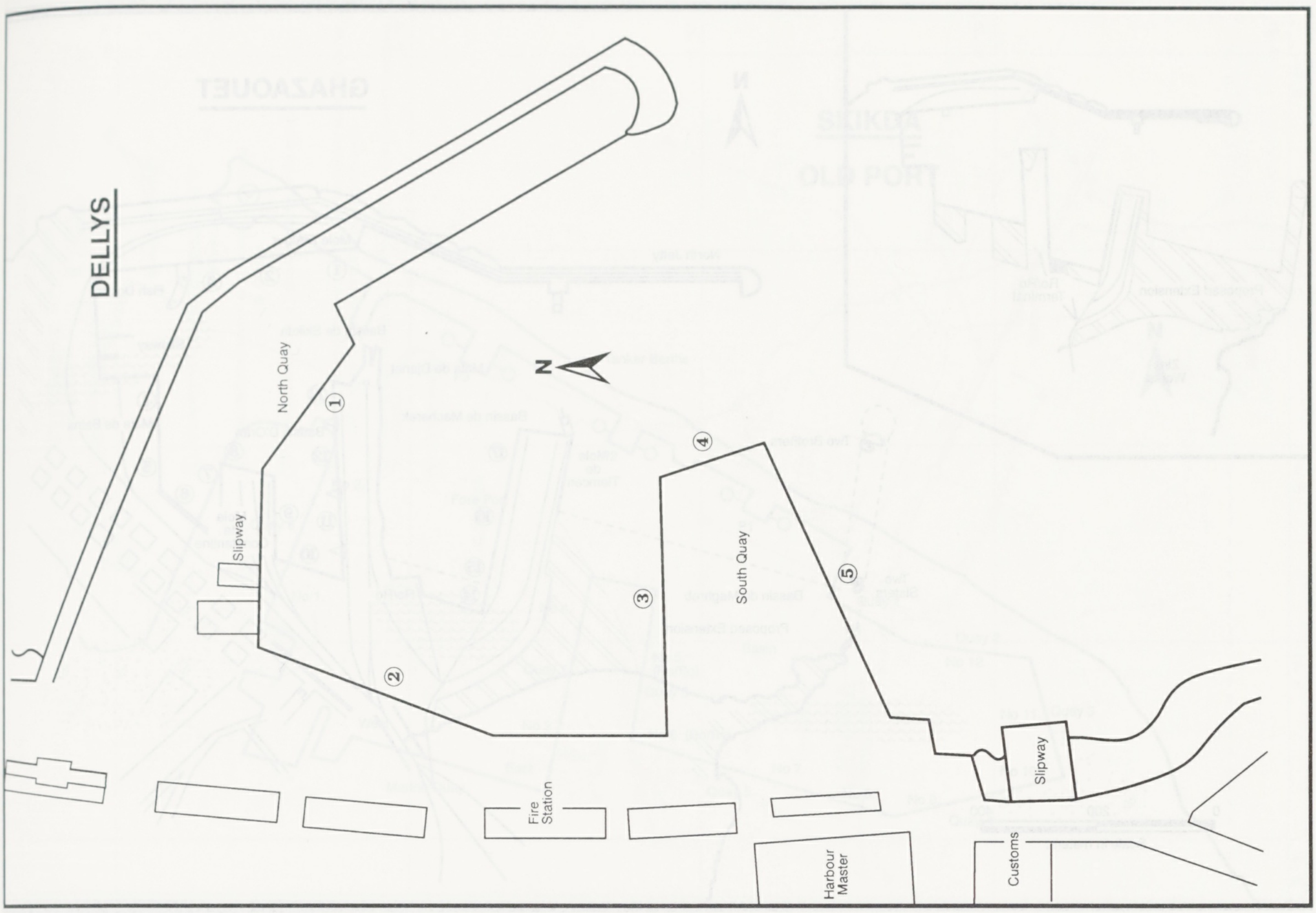
Berth D1 - LPG Berth

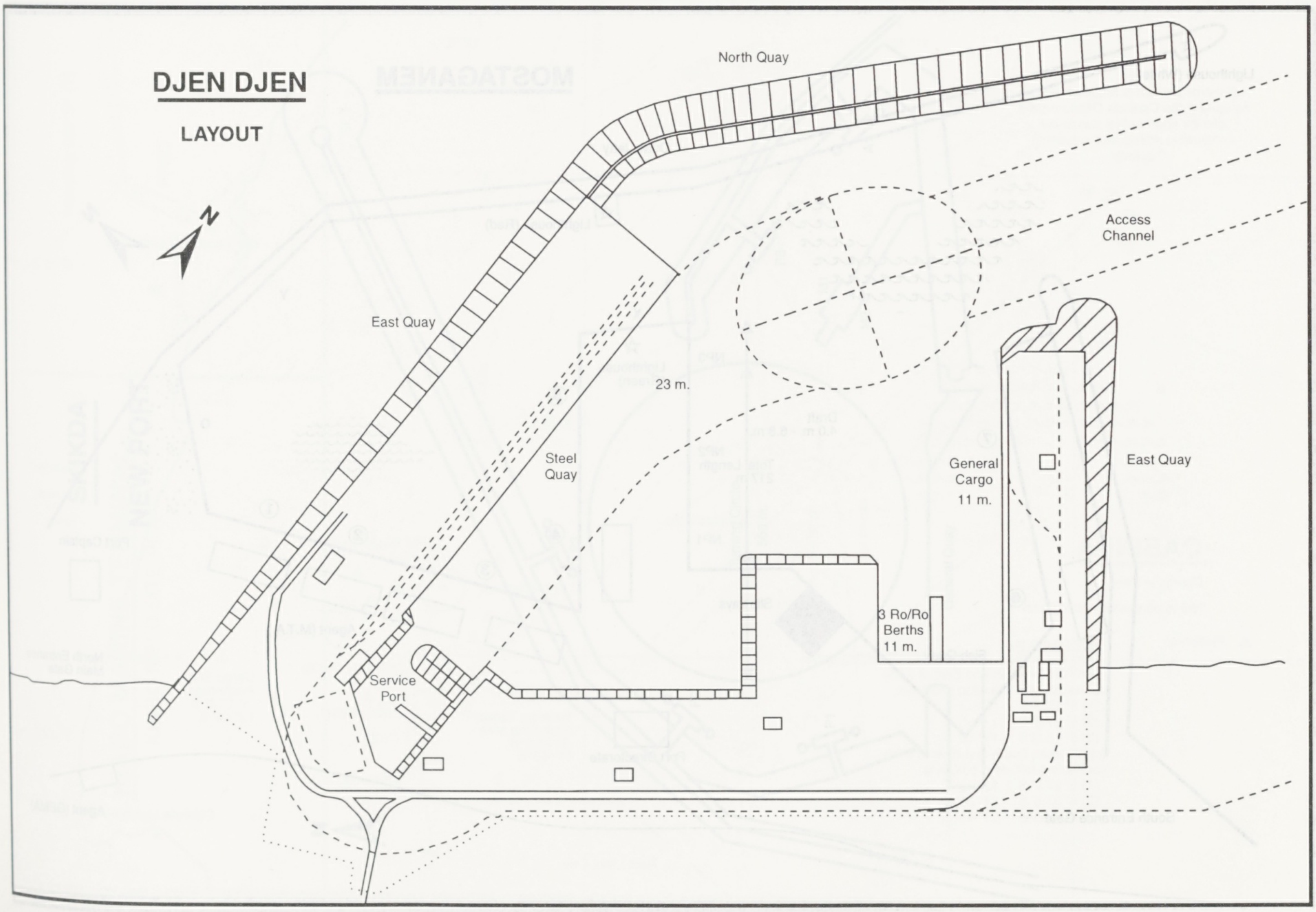
Vessel Berthed Portside Alongside
Bunker Arm
Liquid Arms
Vapour Arm
Fenders
Control Room
4 Gun Fire Extinguishers
Mooring Hooks
Said to be 90 m.
Access to Shore

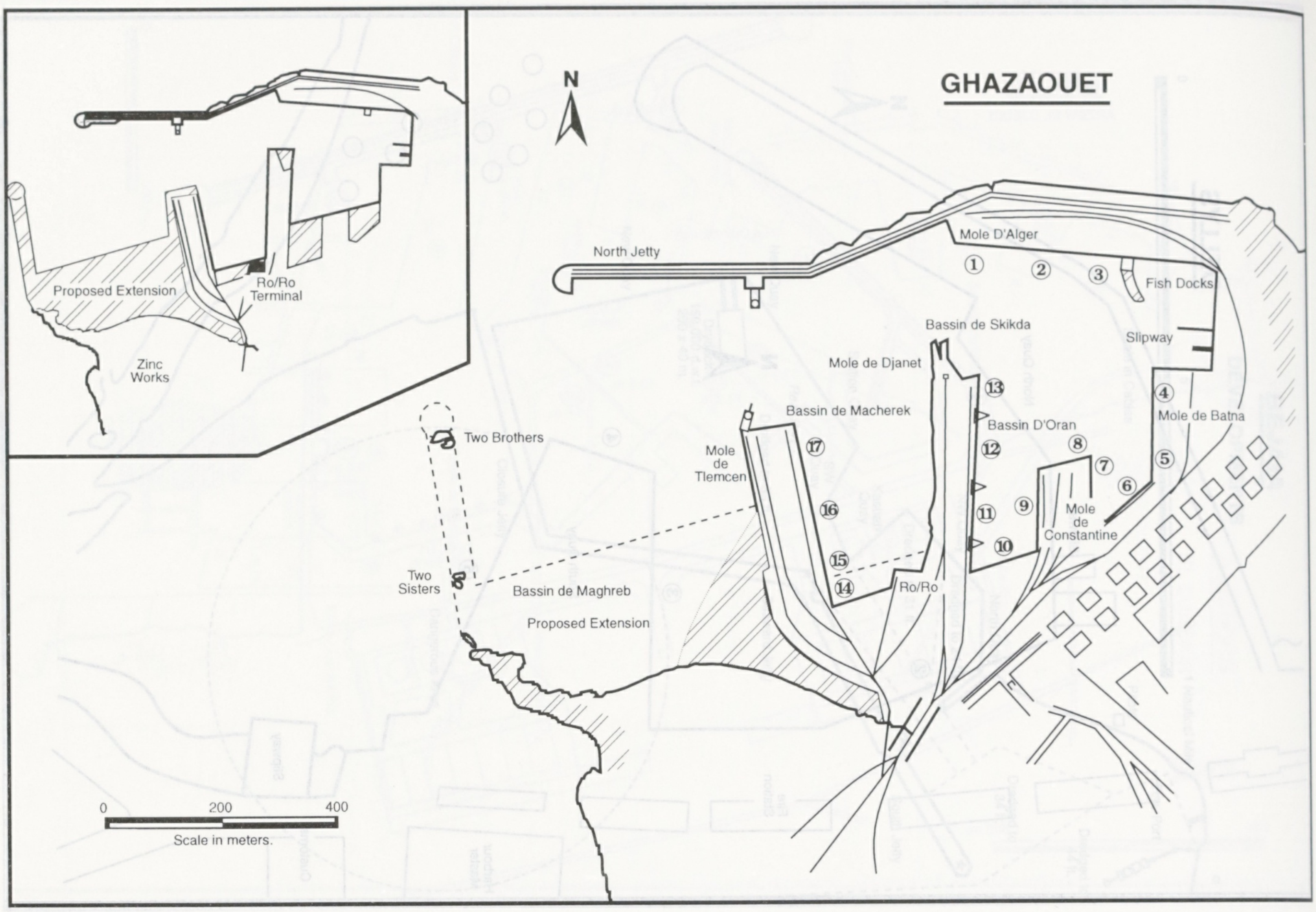
"Plan Supplied By Ship's Master"

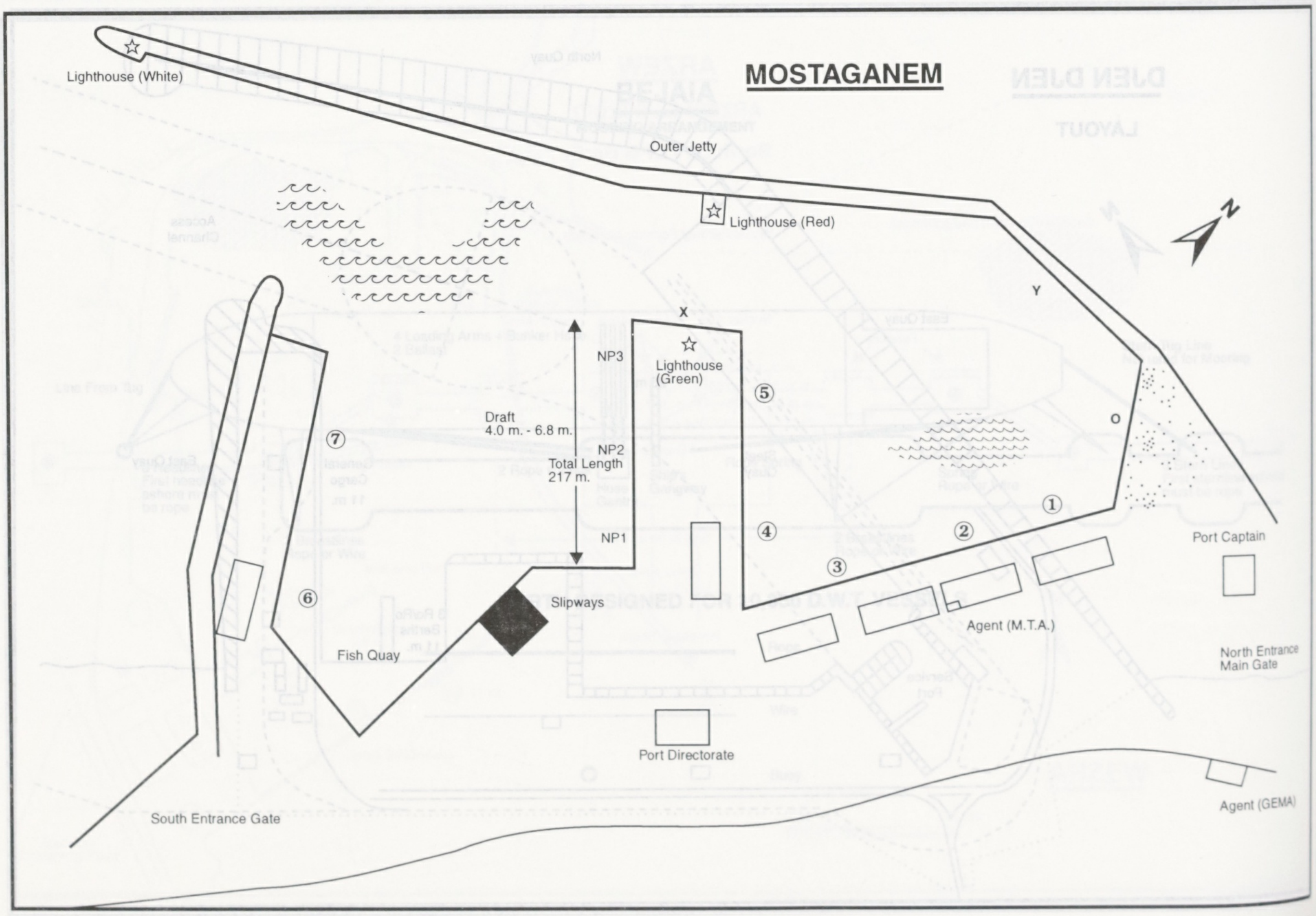

BEJAIA
DEVELOPMENTS
Scale in Cables
0
5
1 Nautical Mile
N
Pilots
Fore Port
Dredged to 44 ft.
Dredged to 34 ft.
North Quay
Dredged to 24 ft.
NW Quay
Dredged to 31 ft.
Kasbah Quay
SW Quay
Station Quay
Rear Port
Dredged to 33 ft.
New Quay
Drydock 150,000 d.w.t. 200 x 40 m.
New Quay
Closure Jetty
Seaward Jetty
South Jetty
Dangerous Area

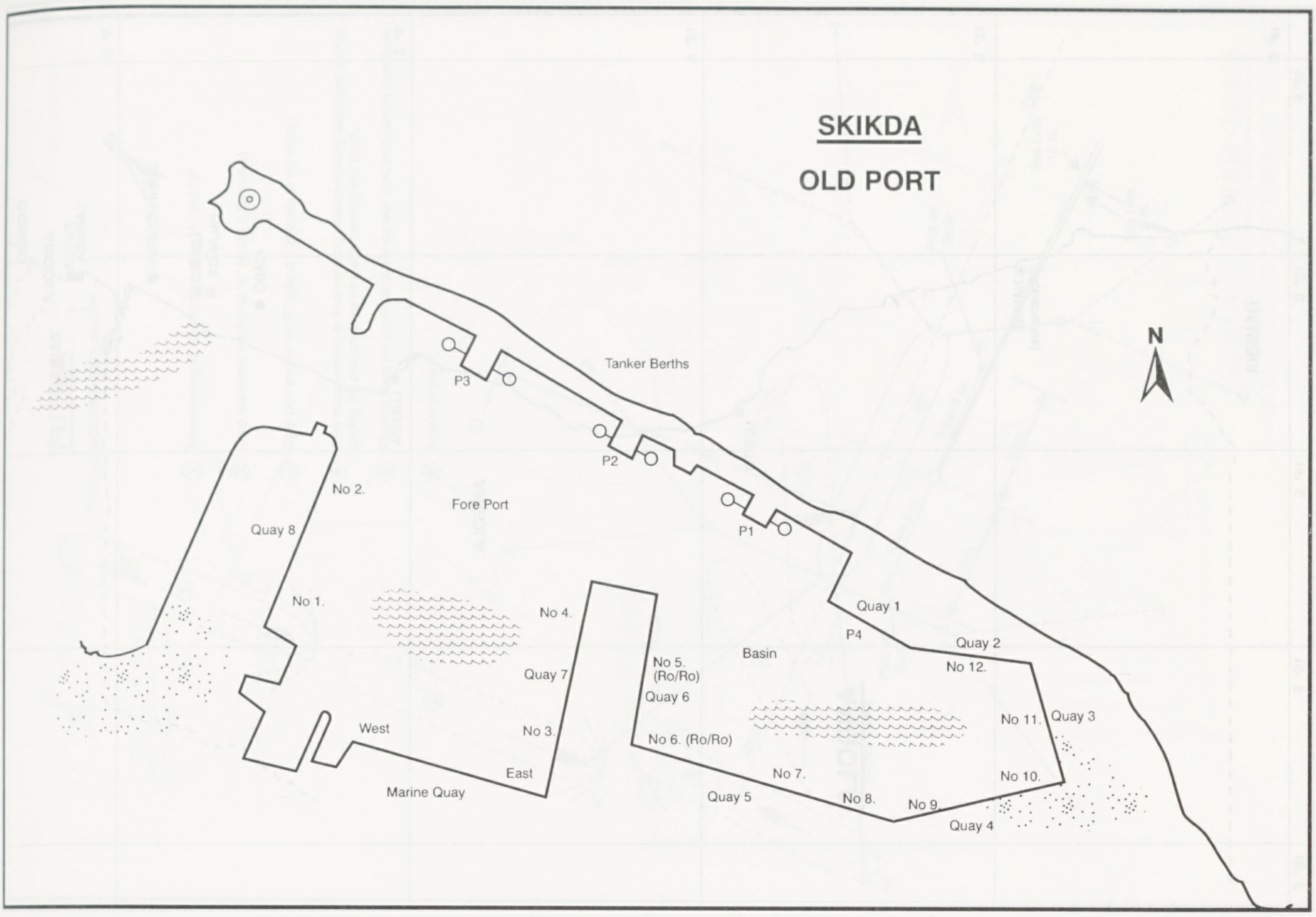

BEJAIA
MOORING ARRANGEMENT
4 Loading Arms + Bunker Hose
2 Ballast
Line From Tug
Stern Tug Line
Not used for Mooring
3 Headlines
First headline ashore must be rope
2 Rope springs
Hose Gantry
Ship's Gangway
Rope Spring
Spring Rope or Wire
3 Stern Lines
First sternline ashore must be rope
2 Breastlines Rope or Wire
2 Breastlines Rope or Wire
BERTH DESIGNED FOR 30,000 D.W.T. VESSELS
Rope
Wire
Buoy

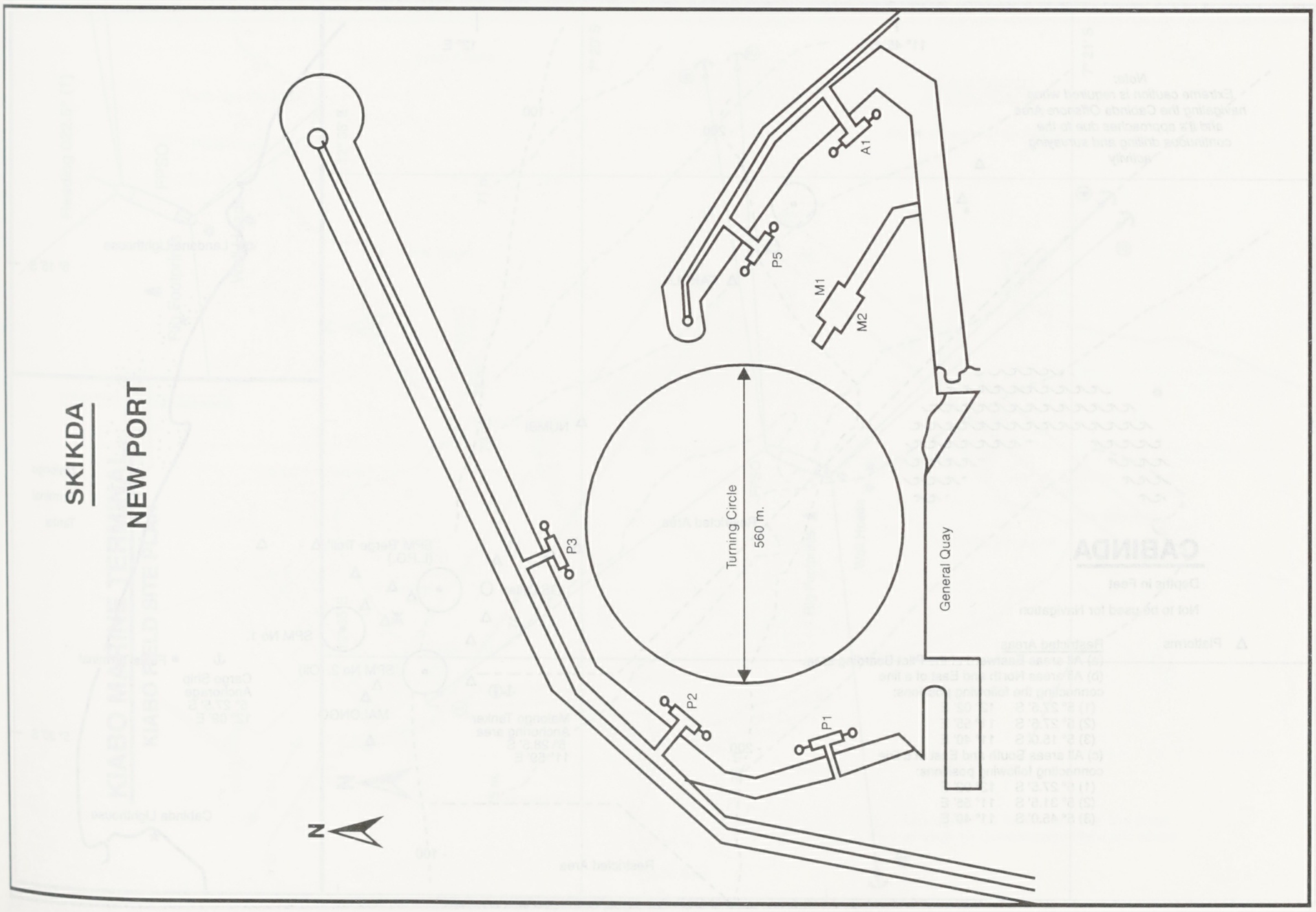

DELLYS
N
North Quay
①
②
③
④
⑤
Slipway
South Quay
Slipway
Fire Station
Harbour Master
Customs

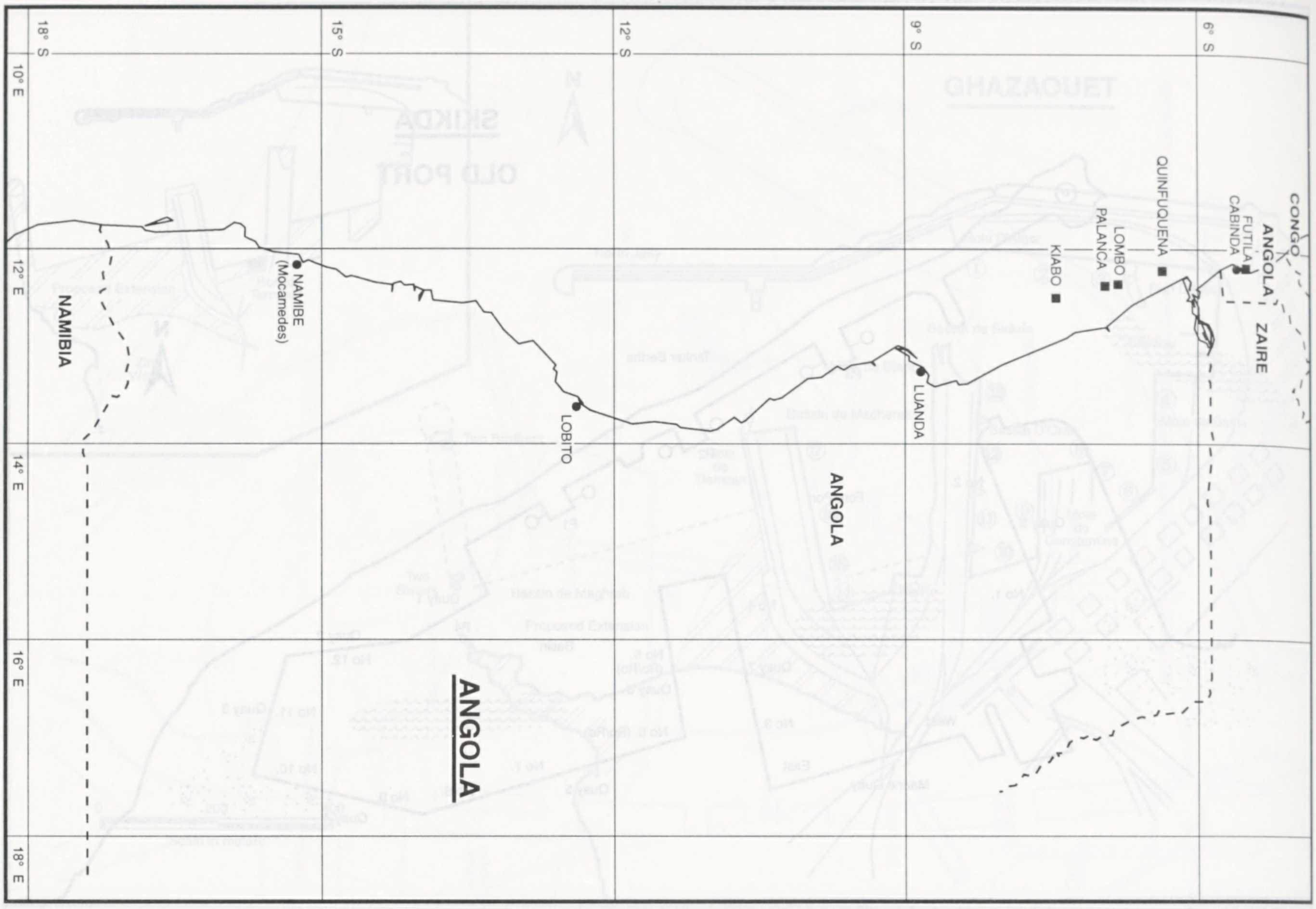

DJEN DJEN
LAYOUT
N
North Quay
Access Channel
East Quay
23 m.
Steel Quay
General Cargo
11 m.
East Quay
3 Ro/Ro Berths
11 m.
Service Port

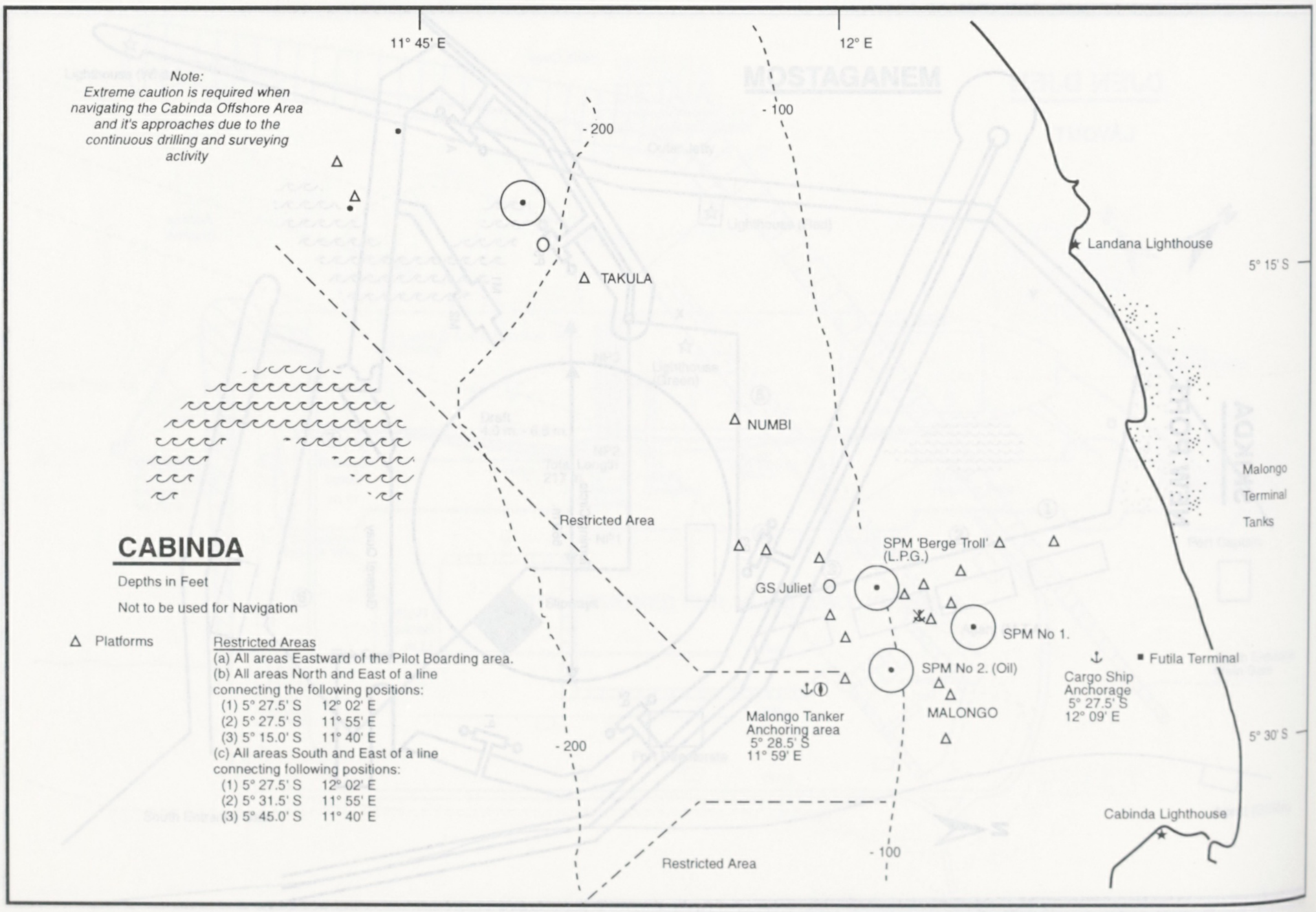

GHAZAOUET
N
North Jetty
Mole D'Alger
①
②
③
Fish Docks
Slipway
Bassin de Skikda
Mole de Djanet
⑬
Bassin D'Oran
Bassin de Macherek
④
Mole de Batna
⑫
⑧
⑦
⑤
⑥
Mole de Tlemcen
⑰
⑯
⑪
⑨
Mole de Constantine
⑩
⑮
⑭
Ro/Ro
Two Brothers
Two Sisters
Bassin de Maghreb
Proposed Extension
Proposed Extension
Ro/Ro Terminal
Zinc Works
0
200
400
Scale in meters.


MOSTAGANEM
Lighthouse (White)
Outer Jetty
Lighthouse (Red)
N
Y
X
Lighthouse (Green)
NP3
NP2
NP1
Draft
4.0 m. - 6.8 m.
Total Length
217 m.
⑤
⑦
O
①
②
④
③
⑥
Slipways
Fish Quay
Agent (M.T.A.)
Port Captain
North Entrance
Main Gate
Port Directorate
South Entrance Gate
Agent (GEMA)


SKIKDA
OLD PORT
N
Tanker Berths
P3
P2
P1
No 2.
Fore Port
Quay 8
No 1.
No 4.
Quay 7
No 5.
(Ro/Ro)
Quay 6
Basin
Quay 1
P4
Quay 2
No 12.
No 11.
Quay 3
No 3.
No 6. (Ro/Ro)
West
East
Marine Quay
No 7.
Quay 5
No 8.
No 9.
No 10.
Quay 4


SKIKDA
NEW PORT
A1
P5
M1
M2
Turning Circle
560 m.
General Quay
P3
P2
P1
N


18° S
15° S
12° S
9° S
6° S
10° E
12° E
14° E
16° E
18° E
NAMIBIA
NAMIBE (Mocamedes)
LOBITO
LUANDA
ANGOLA
KIABO
LOMBO
PALANCA
QUINFUQUENA
FUTILA
CABINDA
CONGO
ANGOLA
ZAIRE
ANGOLA


11° 45' E
12° E
5° 15' S
5° 30' S
- 200
- 100
- 200
- 100
TAKULA
NUMBI
Restricted Area
Restricted Area
SPM 'Berge Troll' (L.P.G.)
GS Juliet
SPM No 1.
SPM No 2. (Oil)
MALONGO
Malongo Tanker Anchoring area 5° 28.5' S 11° 59' E
Cargo Ship Anchorage 5° 27.5' S 12° 09' E
Futila Terminal
Landana Lighthouse
Malongo Terminal Tanks
Cabinda Lighthouse

Note:
Extreme caution is required when navigating the Cabinda Offshore Area and it's approaches due to the continuous drilling and surveying activity

CABINDA

Depths in Feet

Not to be used for Navigation

△ Platforms

Restricted Areas
(a) All areas Eastward of the Pilot Boarding area.
(b) All areas North and East of a line connecting the following positions:

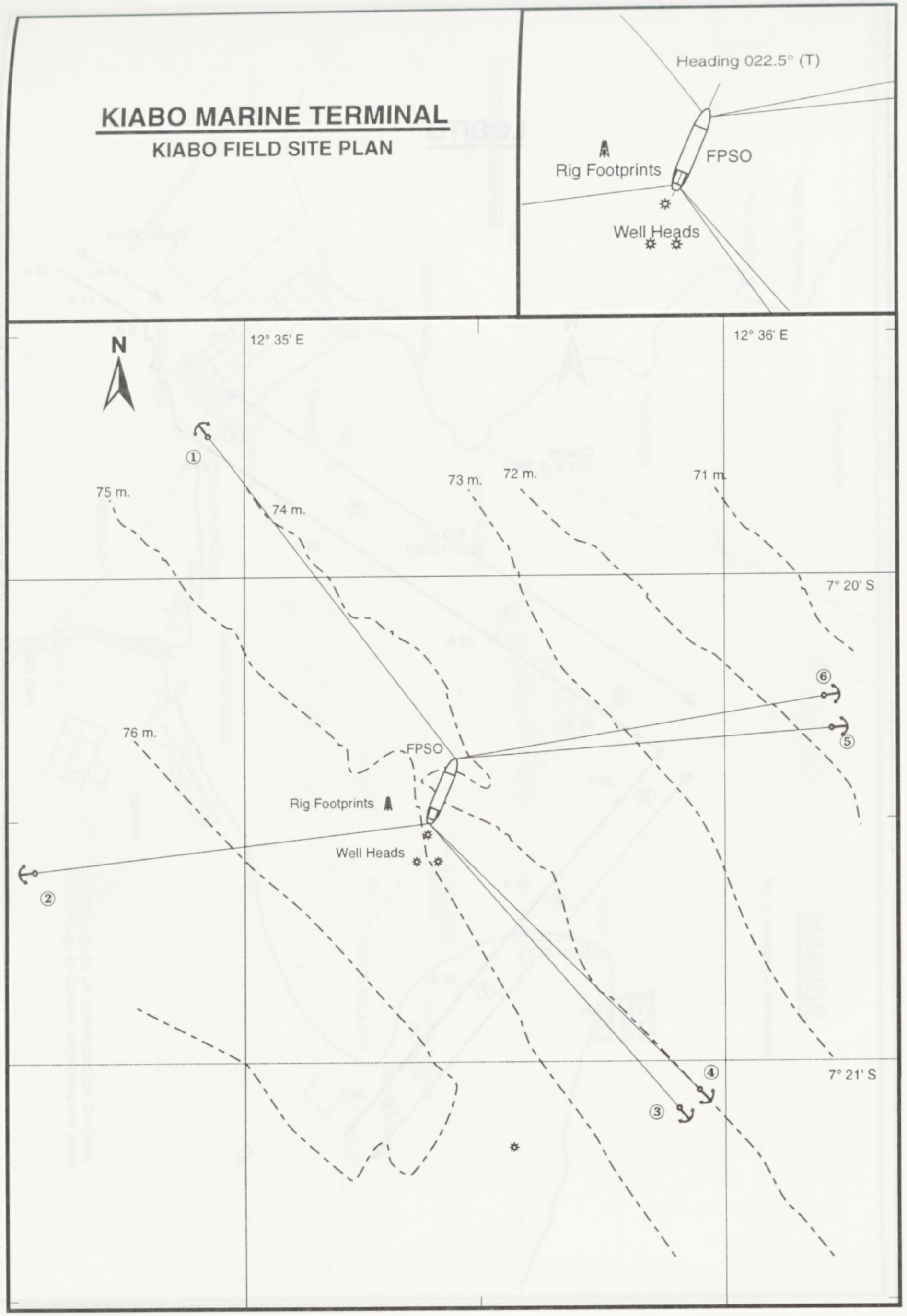
(1)	5° 27.5' S	12° 02' E
(2)	5° 27.5' S	11° 55' E
(3)	5° 15.0' S	11° 40' E

(c) All areas South and East of a line connecting following positions:

(1)	5° 27.5' S	12° 02' E
(2)	5° 31.5' S	11° 55' E
(3)	5° 45.0' S	11° 40' E

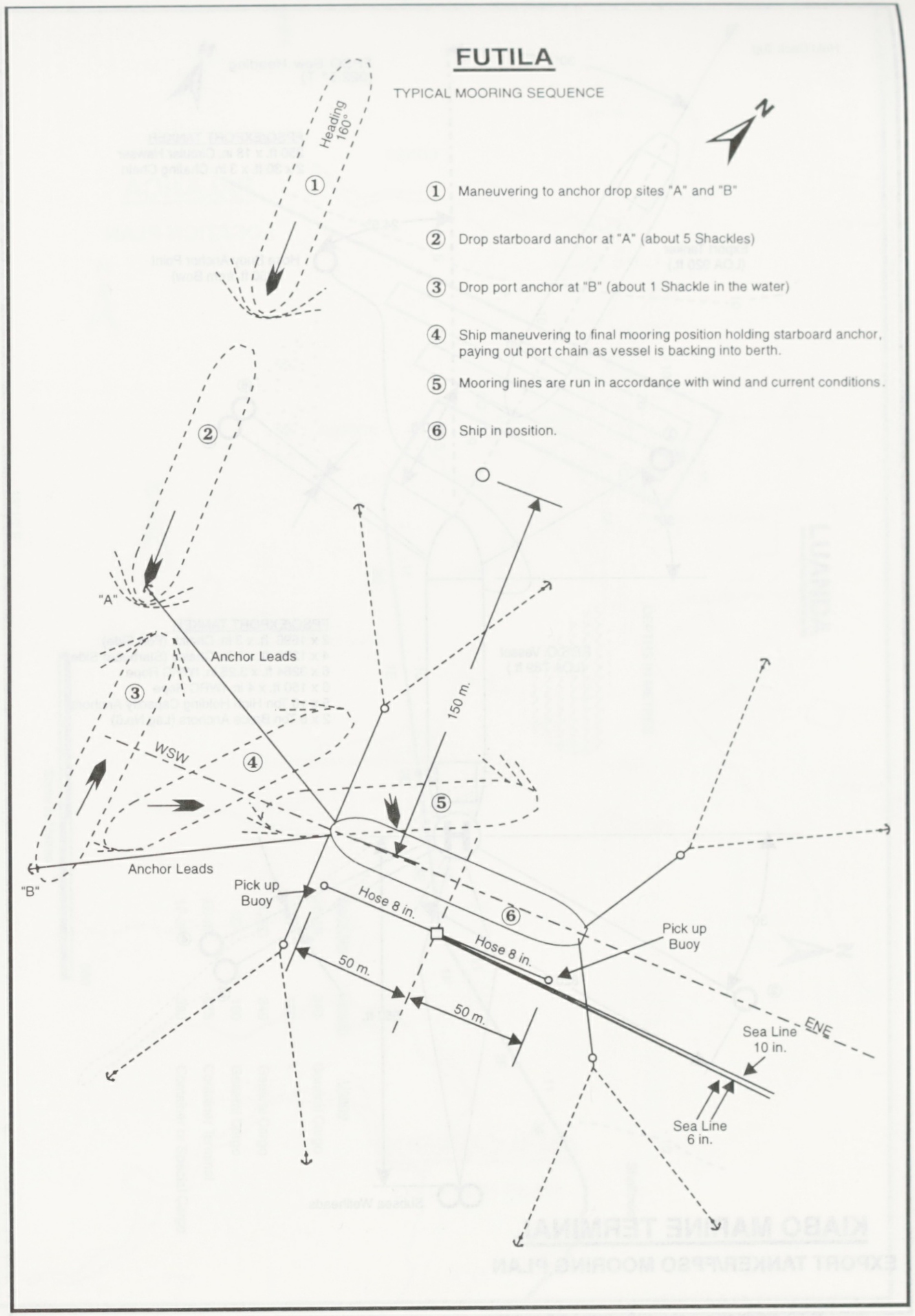
KIABO MARINE TERMINAL

KIABO FIELD SITE PLAN


Heading 022.5° (T)
Rig Footprints
FPSO
Well Heads
N
12° 35' E
12° 36' E
7° 20' S
7° 21' S
75 m.
74 m.
73 m.
72 m.
71 m.
76 m.
①
②
③
④
⑤
⑥
FPSO
Rig Footprints
Well Heads

FUTILA

TYPICAL MOORING SEQUENCE


N
Heading 160°
①
②
③
④
⑤
⑥
"A"
"B"
Anchor Leads
Anchor Leads
WSW
ENE
150 m.
Pick up Buoy
Pick up Buoy
Hose 8 in.
Hose 8 in.
50 m.
50 m.
Sea Line 10 in.
Sea Line 6 in.

① Maneuvering to anchor drop sites "A" and "B"

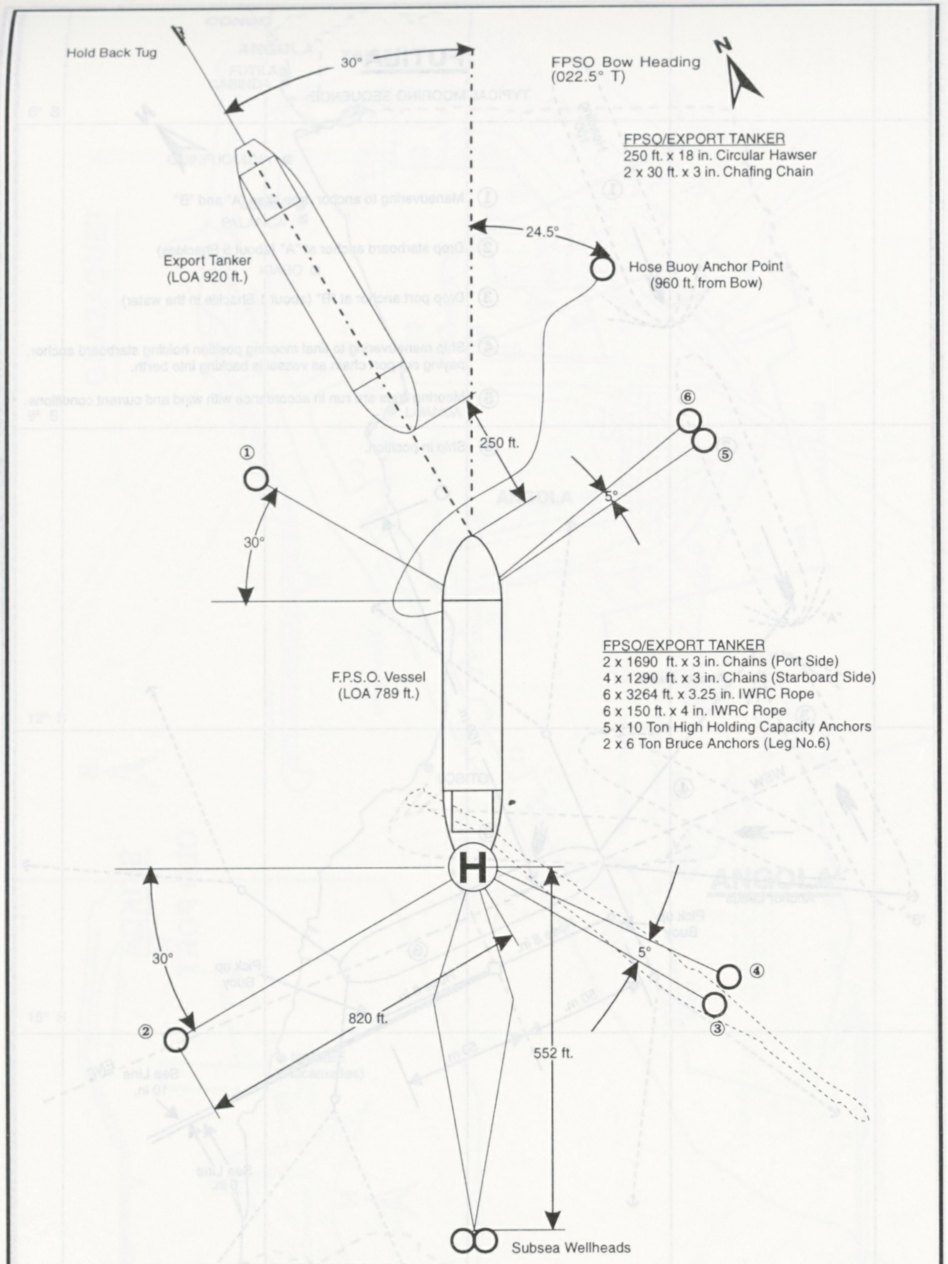
② Drop starboard anchor at "A" (about 5 Shackles)

③ Drop port anchor at "B" (about 1 Shackle in the water)

④ Ship maneuvering to final mooring position holding starboard anchor, paying out port chain as vessel is backing into berth.

⑤ Mooring lines are run in accordance with wind and current conditions.

⑥ Ship in position.


Hold Back Tug
30°
FPSO Bow Heading
(022.5° T)
N
24.5°
Hose Buoy Anchor Point
(960 ft. from Bow)
Export Tanker
(LOA 920 ft.)
250 ft.
①
②
③
④
⑤
⑥
30°
5°
F.P.S.O. Vessel
(LOA 789 ft.)
H
30°
820 ft.
552 ft.
5°
Subsea Wellheads

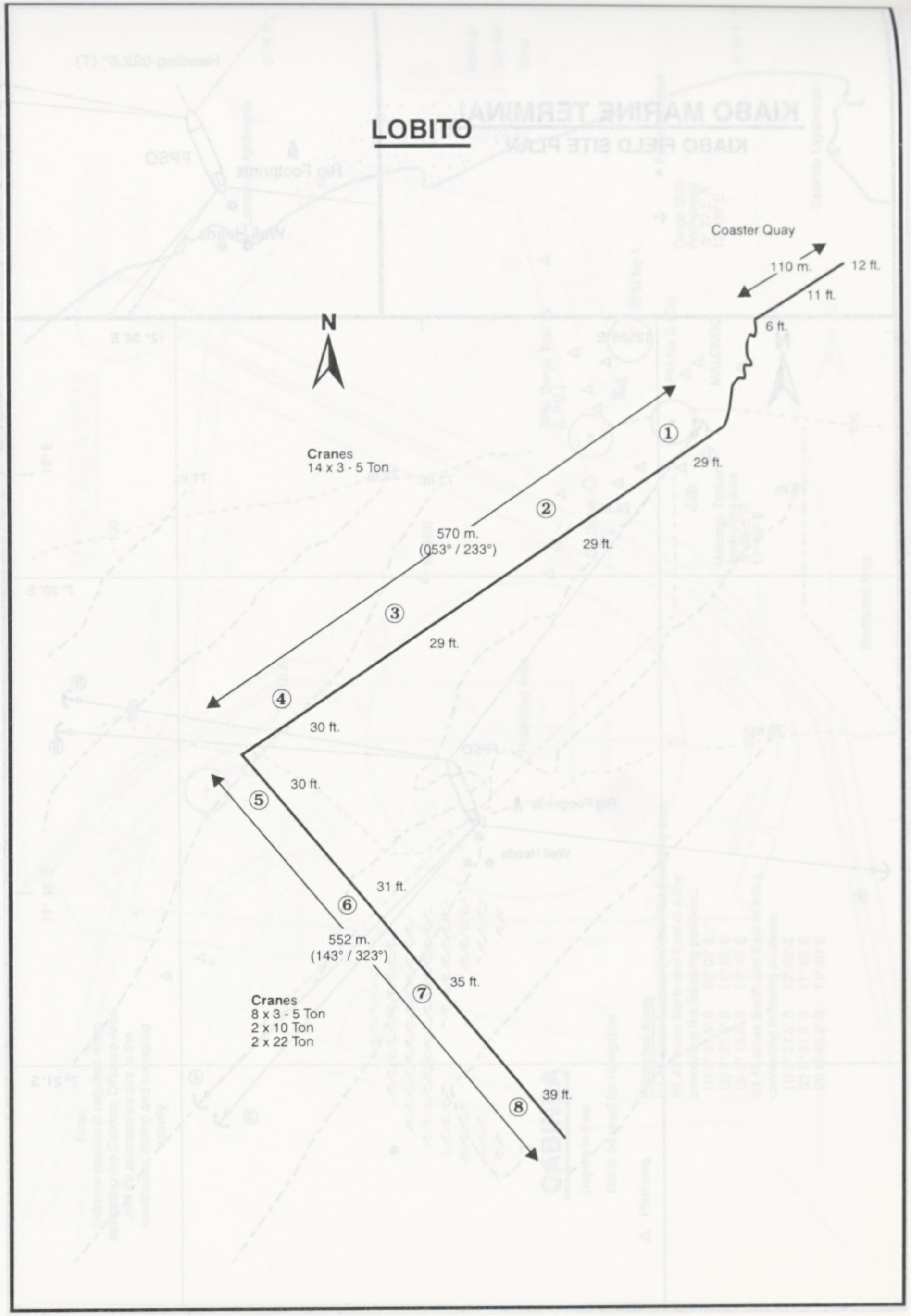
FPSO/EXPORT TANKER
250 ft. x 18 in. Circular Hawser
2 x 30 ft. x 3 in. Chafing Chain

FPSO/EXPORT TANKER
2 x 1690 ft. x 3 in. Chains (Port Side)
4 x 1290 ft. x 3 in. Chains (Starboard Side)
6 x 3264 ft. x 3.25 in. IWRC Rope
6 x 150 ft. x 4 in. IWRC Rope
5 x 10 Ton High Holding Capacity Anchors
2 x 6 Ton Bruce Anchors (Leg No.6)

KIABO MARINE TERMINAL

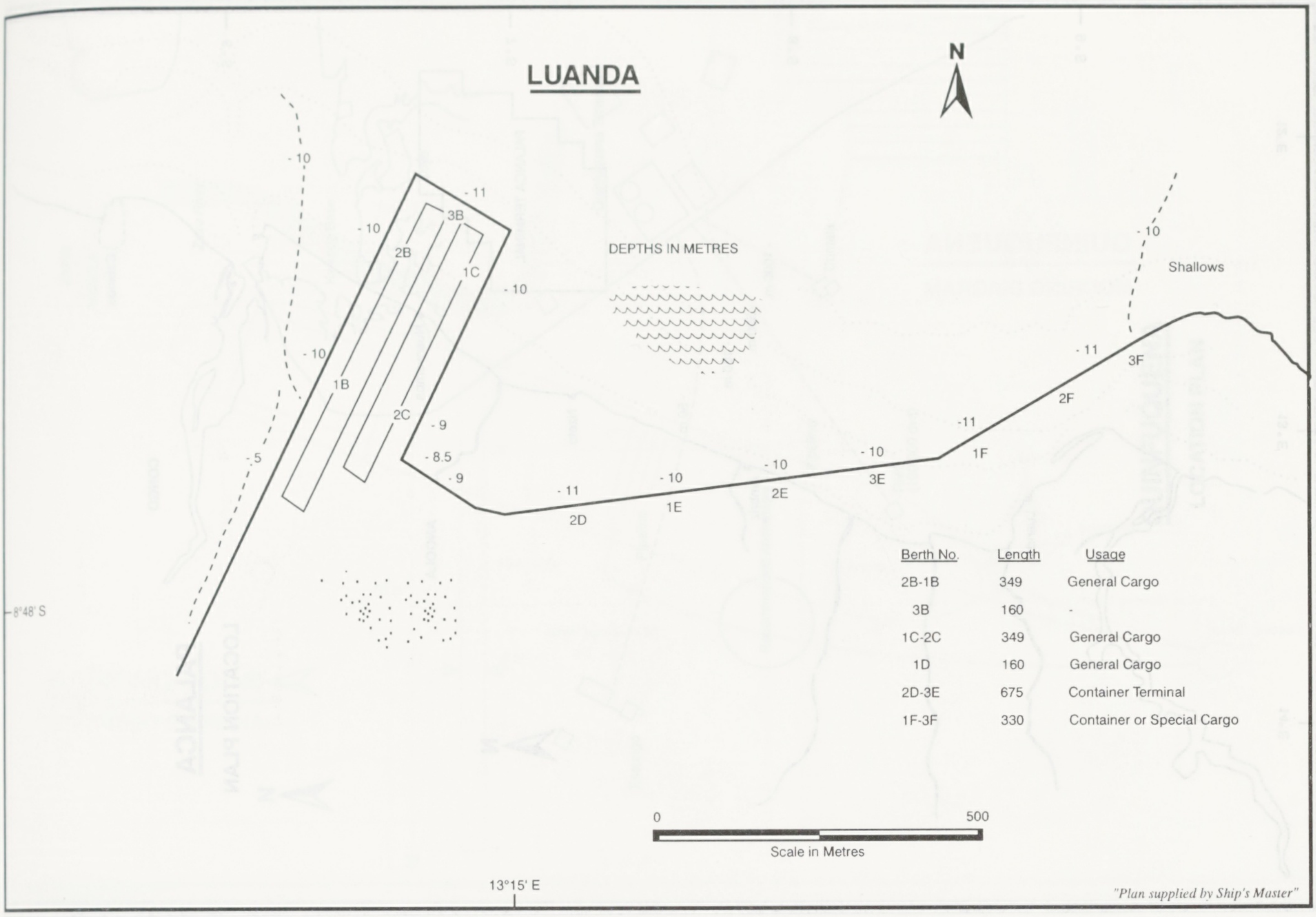
EXPORT TANKER/FPSO MOORING PLAN

LOBITO


N
Coaster Quay
110 m.
12 ft.
11 ft.
6 ft.
①
29 ft.
②
570 m.
(053° / 233°)
29 ft.
③
29 ft.
④
30 ft.
⑤
30 ft.
⑥
31 ft.
552 m.
(143° / 323°)
⑦
35 ft.
⑧
39 ft.

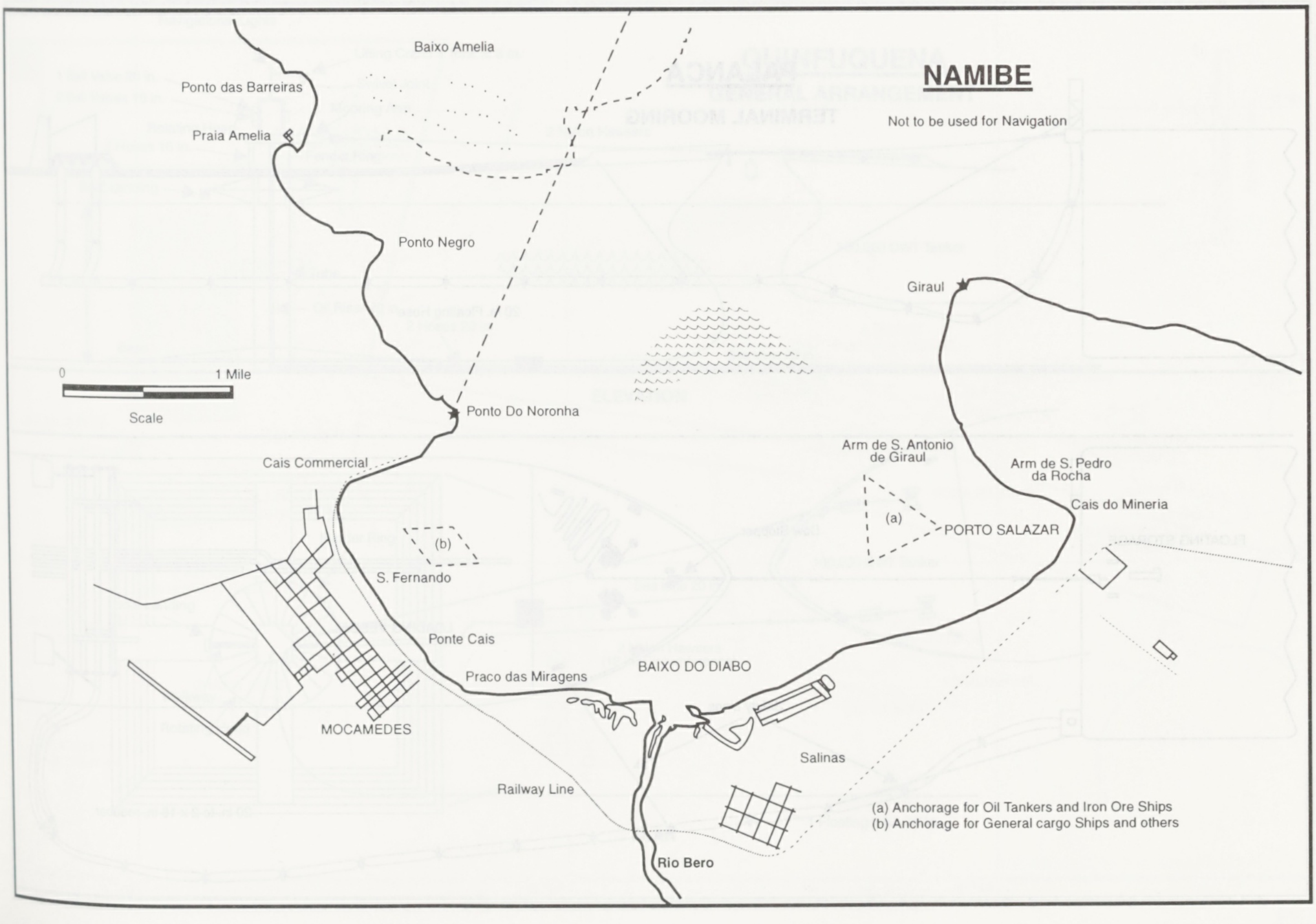
Cranes
14 x 3 - 5 Ton

Cranes
8 x 3 - 5 Ton
2 x 10 Ton
2 x 22 Ton

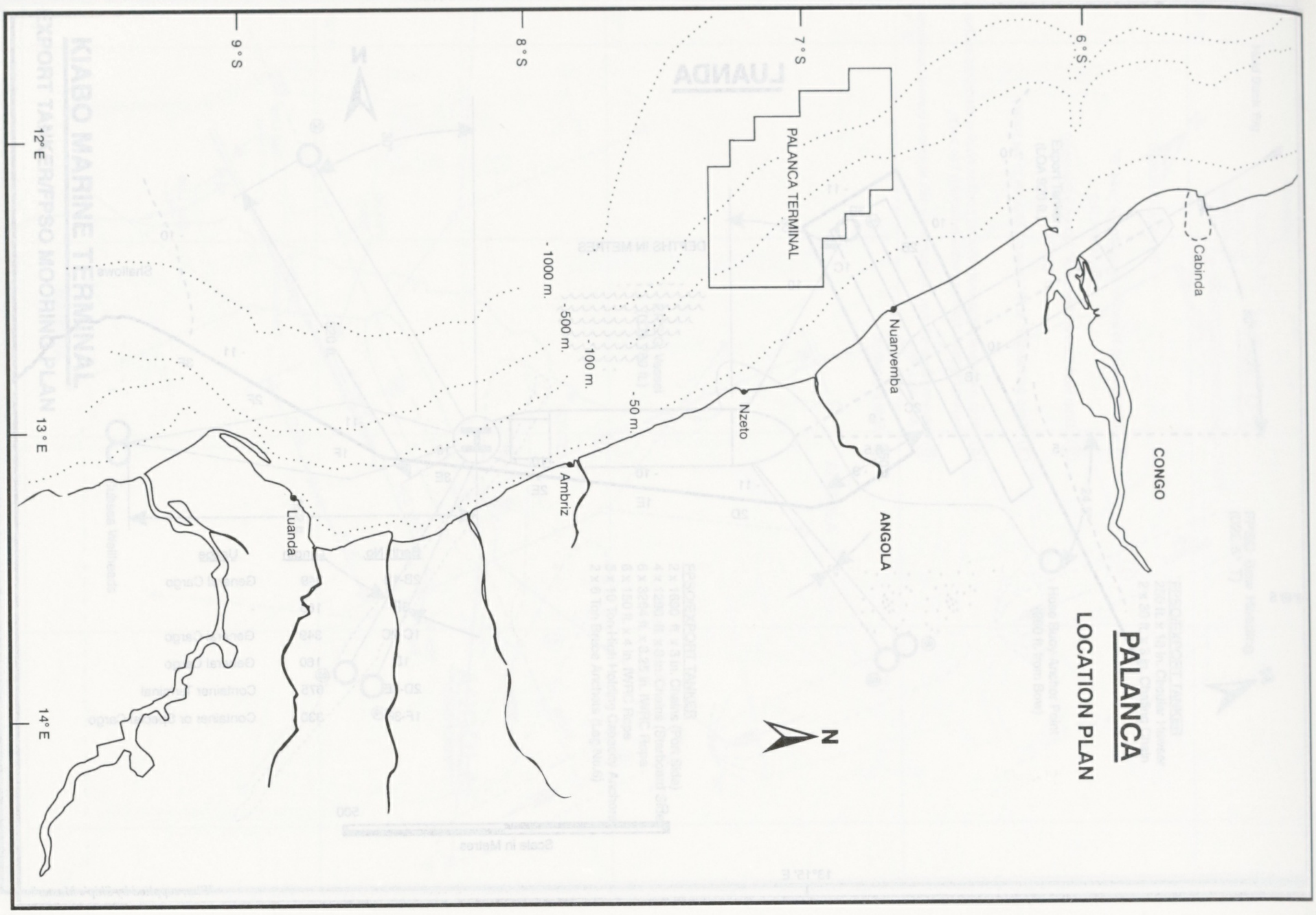

LUANDA
N
DEPTHS IN METRES
Shallows
3B
2B
1C
1B
2C
2D
1E
2E
3E
1F
2F
3F
- 10
- 11
- 9
- 8.5
- 5
8°48' S
13°15' E
0
500
Scale in Metres

Berth No.	Length	Usage
2B-1B	349	General Cargo
3B	160	-
1C-2C	349	General Cargo
1D	160	General Cargo
2D-3E	675	Container Terminal
1F-3F	330	Container or Special Cargo

"Plan supplied by Ship's Master"


NAMIBE
Not to be used for Navigation
Baixo Amelia
Ponto das Barreiras
Praia Amelia
Ponto Negro
Giraul
0
1 Mile
Scale
Ponto Do Noronha
Cais Commercial
Arm de S. Antonio de Giraul
Arm de S. Pedro da Rocha
Cais do Mineria
(a)
PORTO SALAZAR
(b)
S. Fernando
Ponte Cais
Praco das Miragens
BAIXO DO DIABO
MOCAMEDES
Salinas
Railway Line
Rio Bero

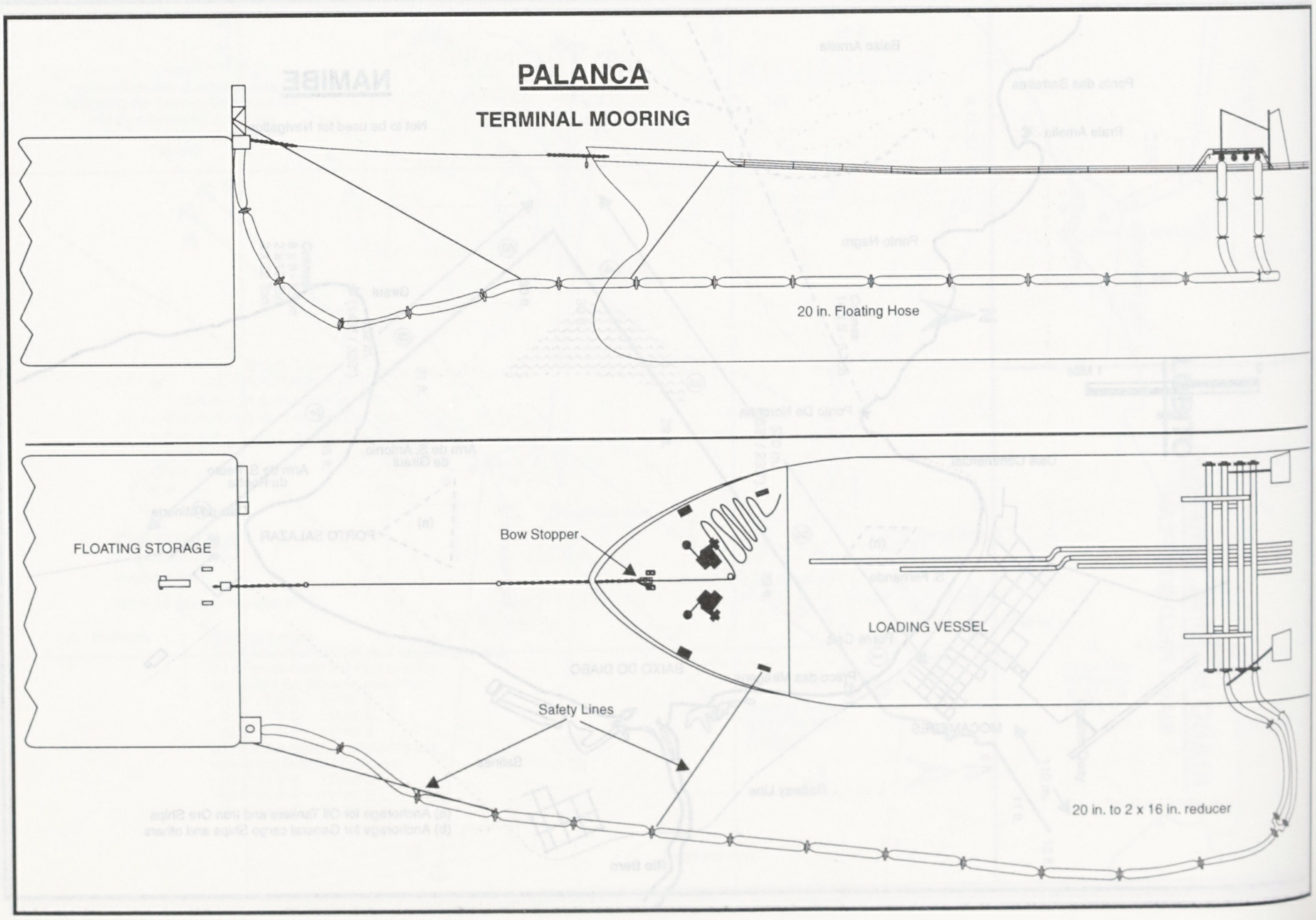
(a) Anchorage for Oil Tankers and Iron Ore Ships
(b) Anchorage for General cargo Ships and others



PALANCA

LOCATION PLAN

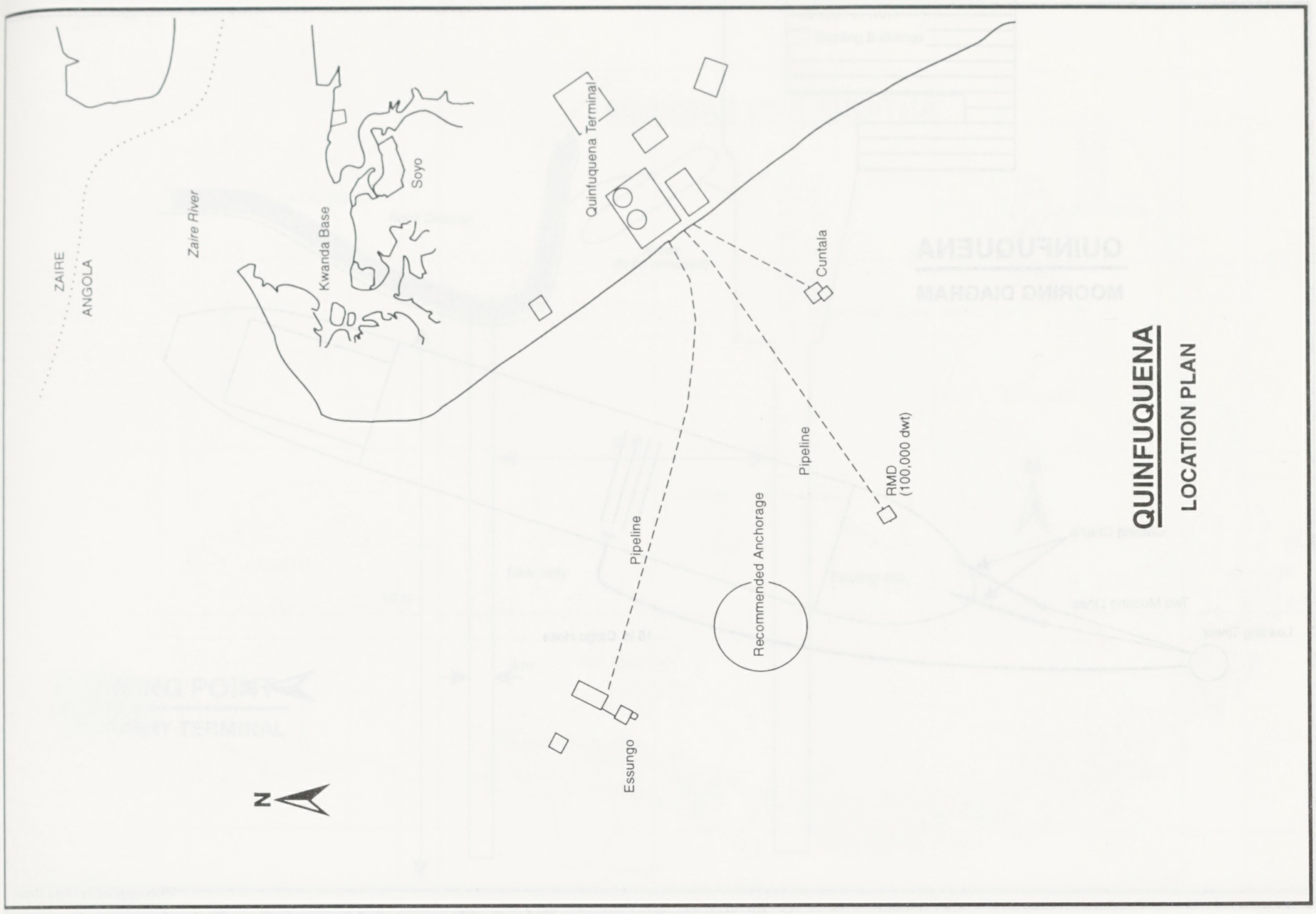
9° S
8° S
7° S
6° S
12° E
13° E
14° E
PALANCA TERMINAL
- 1000 m.
- 500 m.
- 100 m.
- 50 m.
Cabinda
CONGO
ANGOLA
Nuanvemba
Nzeto
Ambriz
Luanda
N

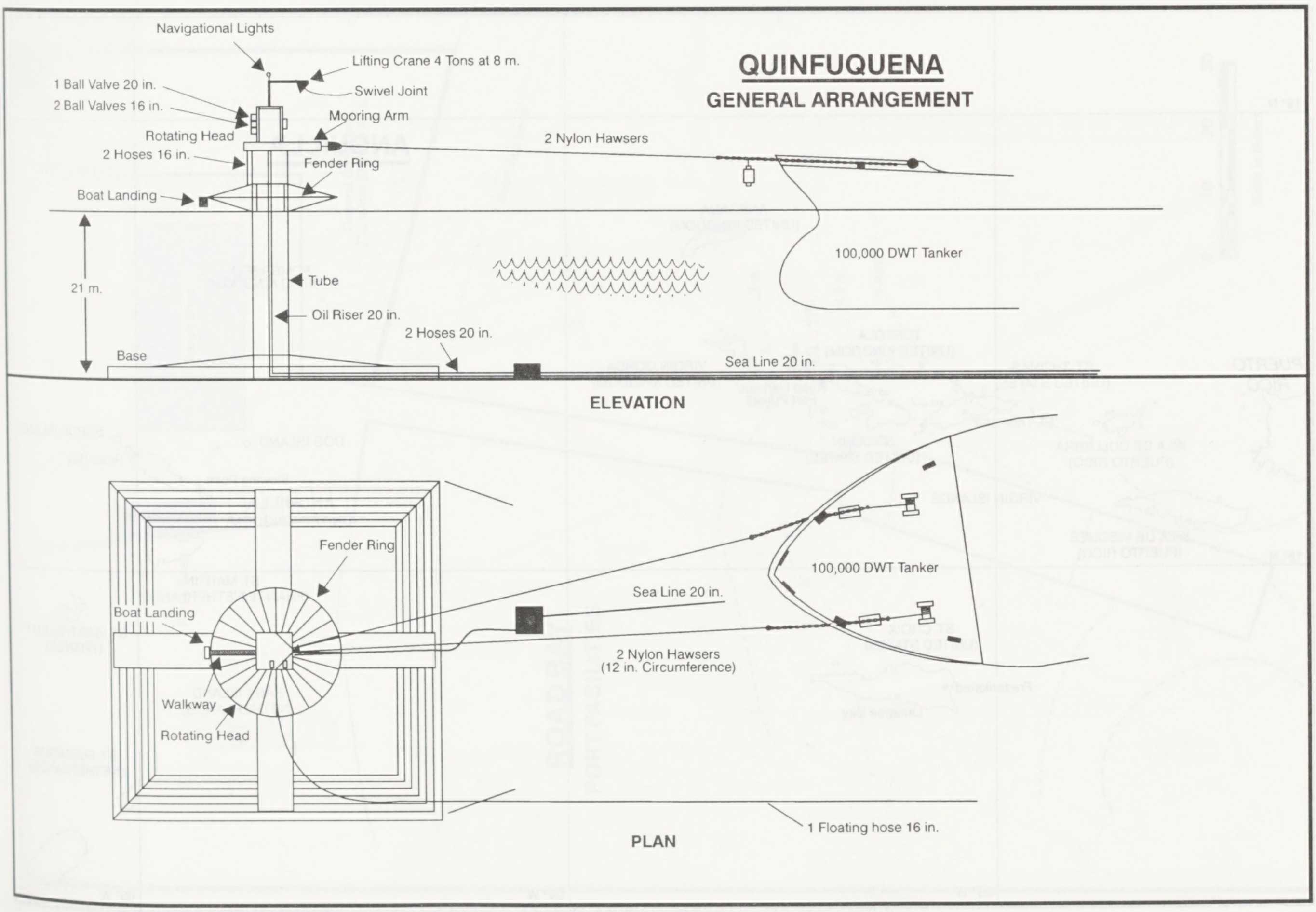


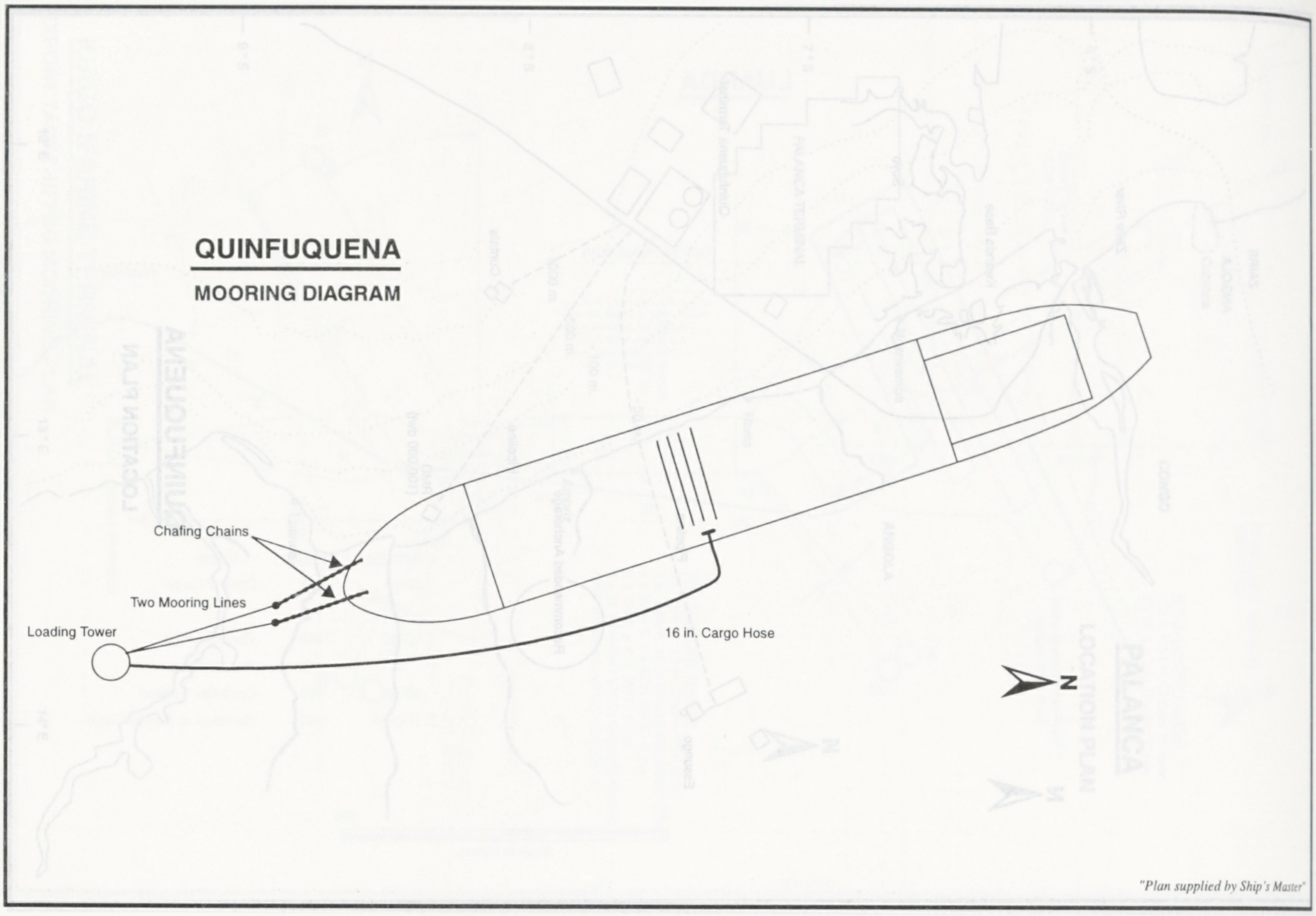
PALANCA

TERMINAL MOORING

20 in. Floating Hose
FLOATING STORAGE
Bow Stopper
LOADING VESSEL
Safety Lines
20 in. to 2 x 16 in. reducer


QUINFUQUENA
LOCATION PLAN
ZAIRE
ANGOLA
Zaire River
Kwanda Base
Soyo
Quinfuquena Terminal
Cuntala
Pipeline
RMD (100,000 dwt)
Recommended Anchorage
Pipeline
Essungo
N


QUINFUQUENA
GENERAL ARRANGEMENT
Navigational Lights
Lifting Crane 4 Tons at 8 m.
Swivel Joint
1 Ball Valve 20 in.
2 Ball Valves 16 in.
Mooring Arm
Rotating Head
2 Hoses 16 in.
2 Nylon Hawsers
Fender Ring
Boat Landing
100,000 DWT Tanker
21 m.
Tube
Oil Riser 20 in.
2 Hoses 20 in.
Base
Sea Line 20 in.
ELEVATION
Fender Ring
100,000 DWT Tanker
Boat Landing
Sea Line 20 in.
2 Nylon Hawsers
(12 in. Circumference)
Walkway
Rotating Head
1 Floating hose 16 in.
PLAN

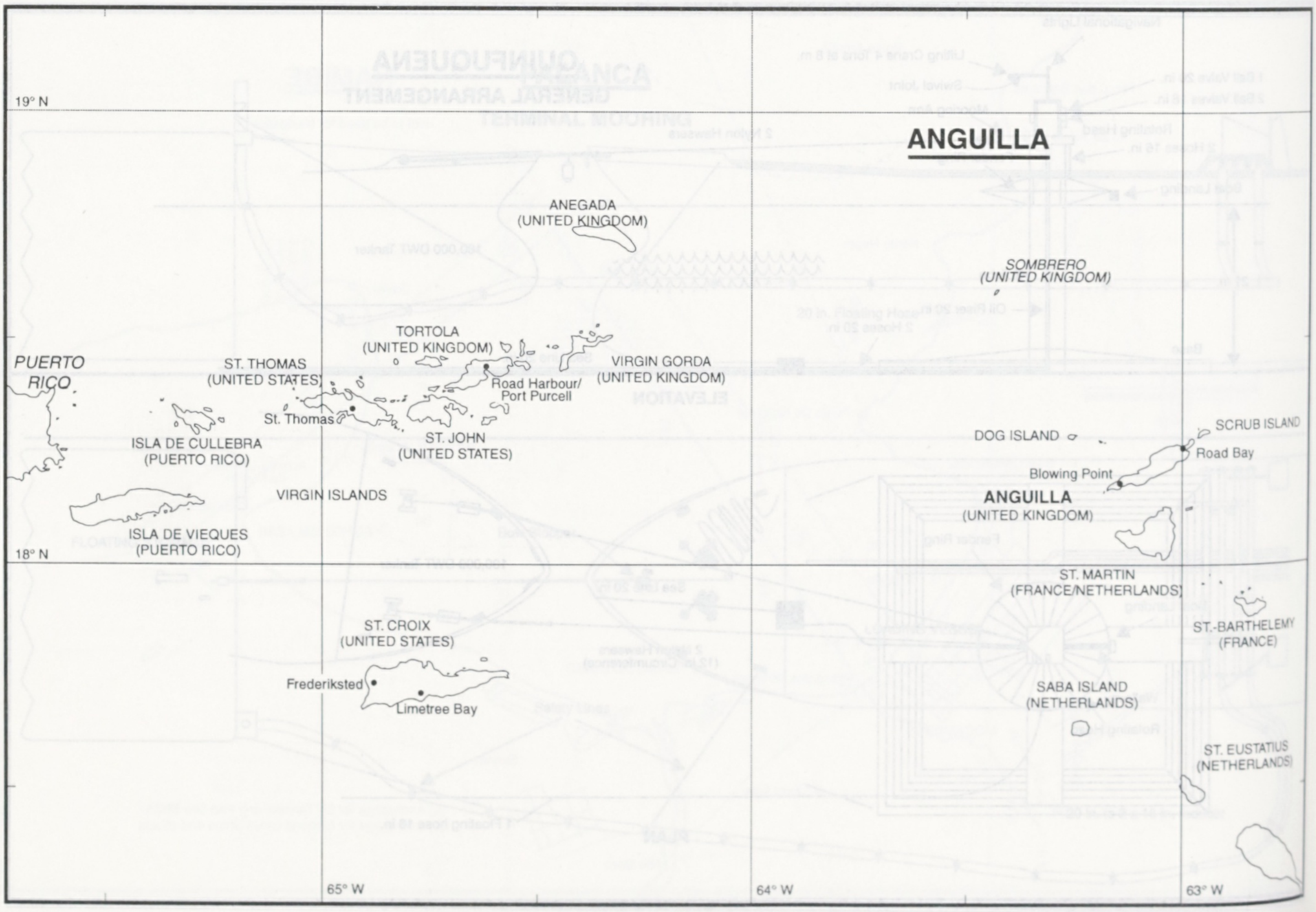


QUINFUQUENA

MOORING DIAGRAM

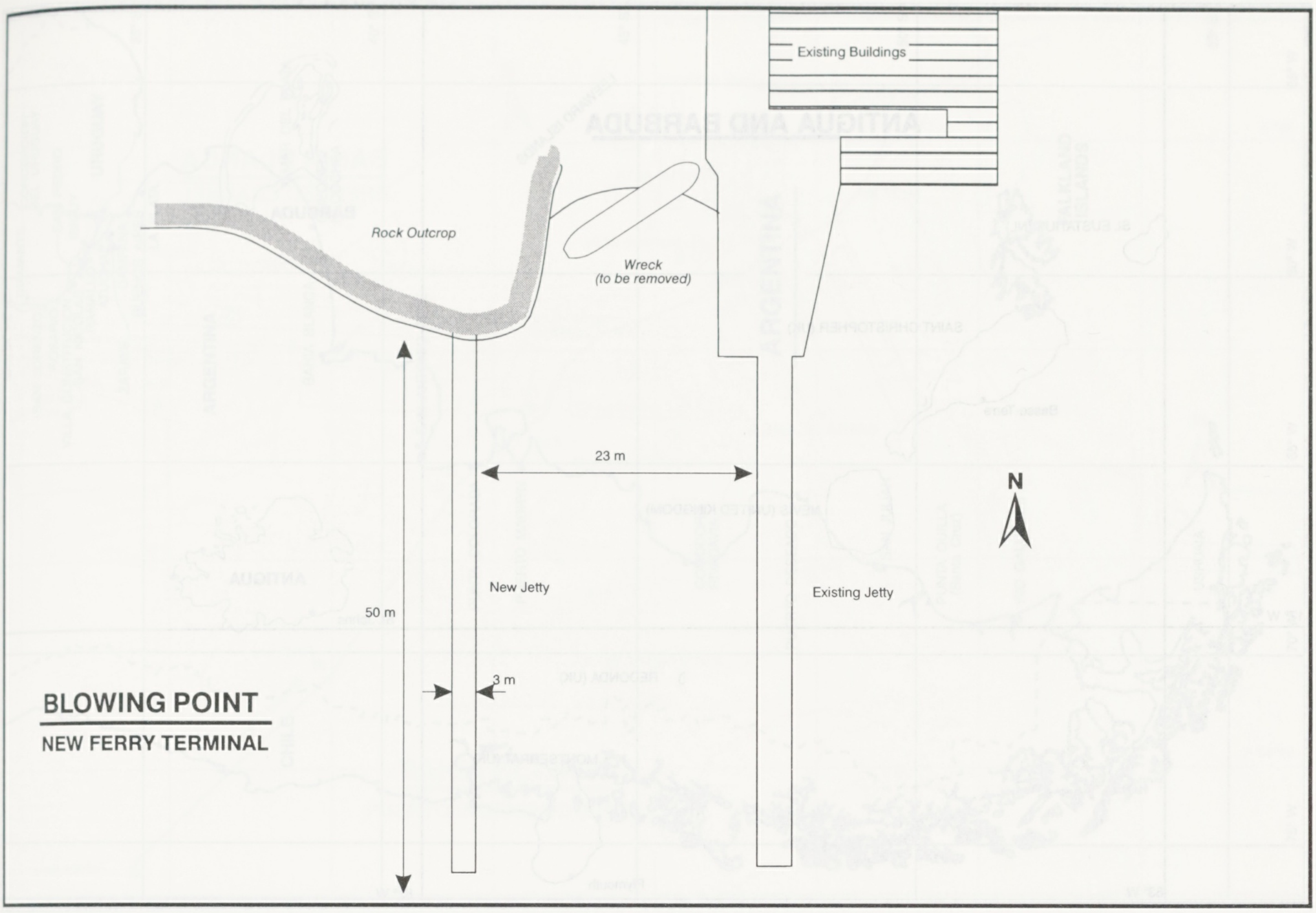
Chafing Chains
Two Mooring Lines
Loading Tower
16 in. Cargo Hose
N

"Plan supplied by Ship's Master"



ANGUILLA

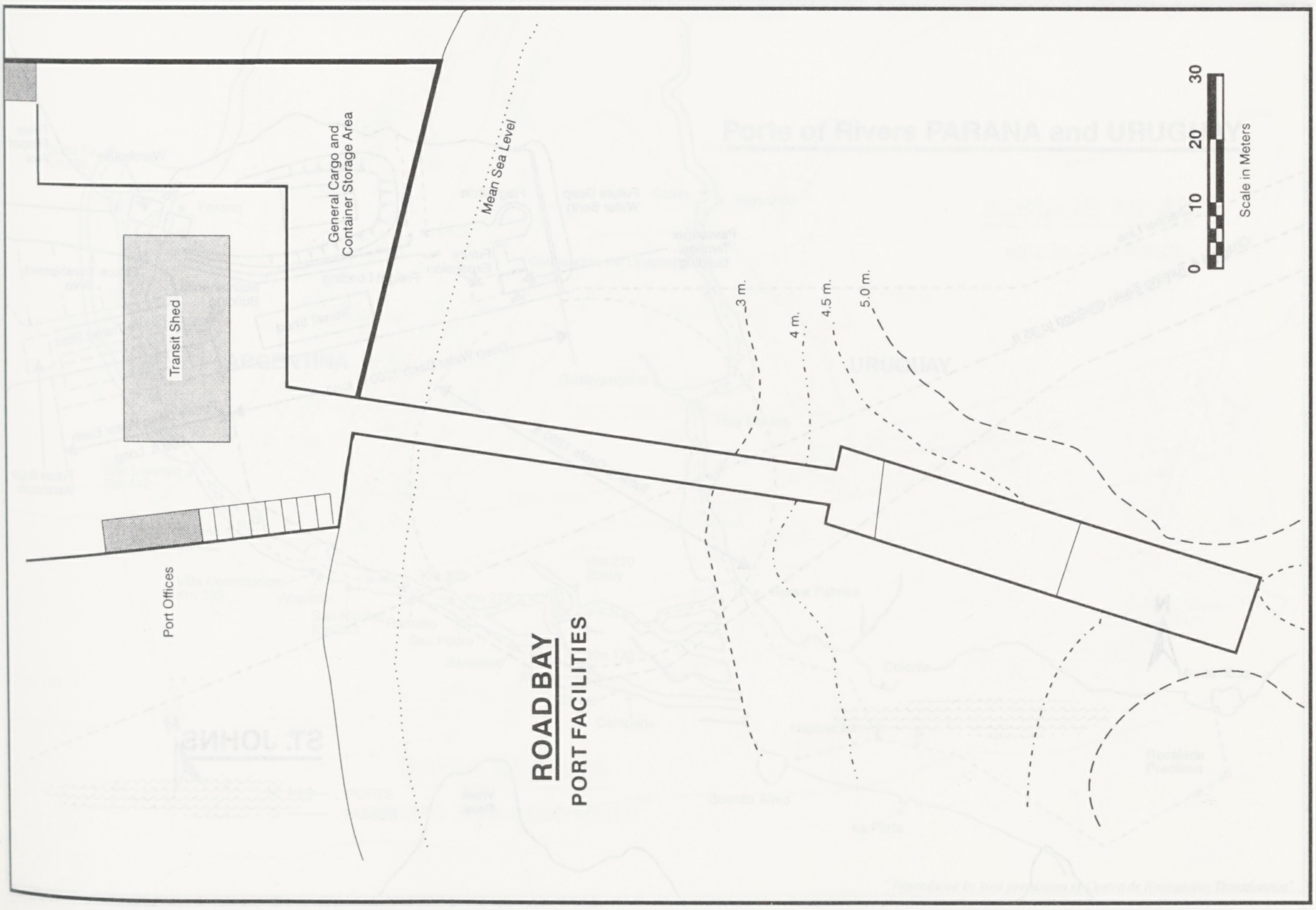
19° N
18° N
65° W
64° W
63° W
ANEGADA
(UNITED KINGDOM)
SOMBRERO
(UNITED KINGDOM)
TORTOLA
(UNITED KINGDOM)
PUERTO
RICO
ST. THOMAS
(UNITED STATES)
VIRGIN GORDA
(UNITED KINGDOM)
Road Harbour/
Port Purcell
St. Thomas
ST. JOHN
(UNITED STATES)
ISLA DE CULLEBRA
(PUERTO RICO)
VIRGIN ISLANDS
ISLA DE VIEQUES
(PUERTO RICO)
DOG ISLAND
SCRUB ISLAND
Road Bay
Blowing Point
ANGUILLA
(UNITED KINGDOM)
ST. MARTIN
(FRANCE/NETHERLANDS)
ST.-BARTHELEMY
(FRANCE)
ST. CROIX
(UNITED STATES)
Frederiksted
Limetree Bay
SABA ISLAND
(NETHERLANDS)
ST. EUSTATIUS
(NETHERLANDS)



BLOWING POINT

NEW FERRY TERMINAL

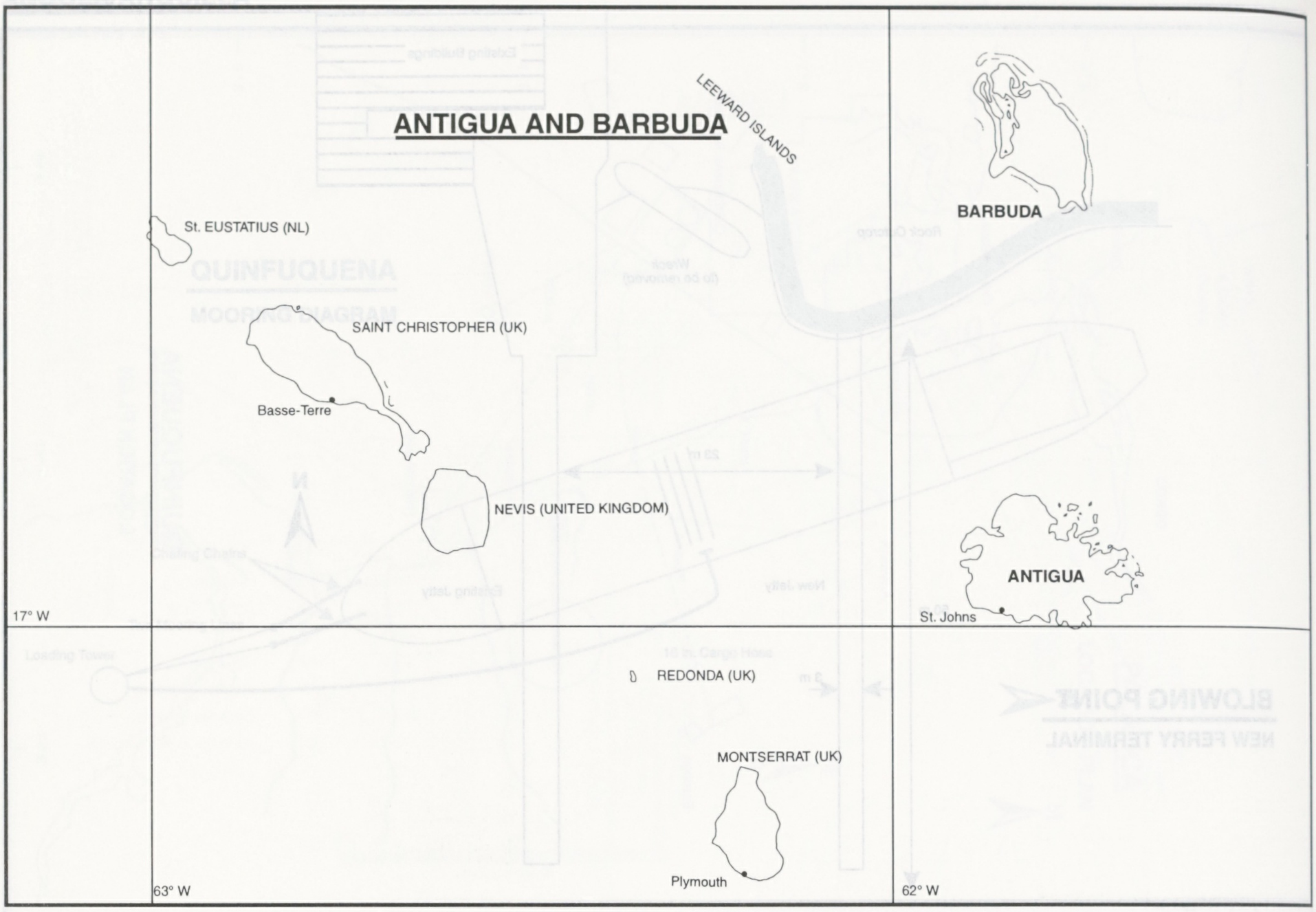
Existing Buildings
Rock Outcrop
Wreck
(to be removed)
23 m
N
New Jetty
Existing Jetty
50 m
3 m

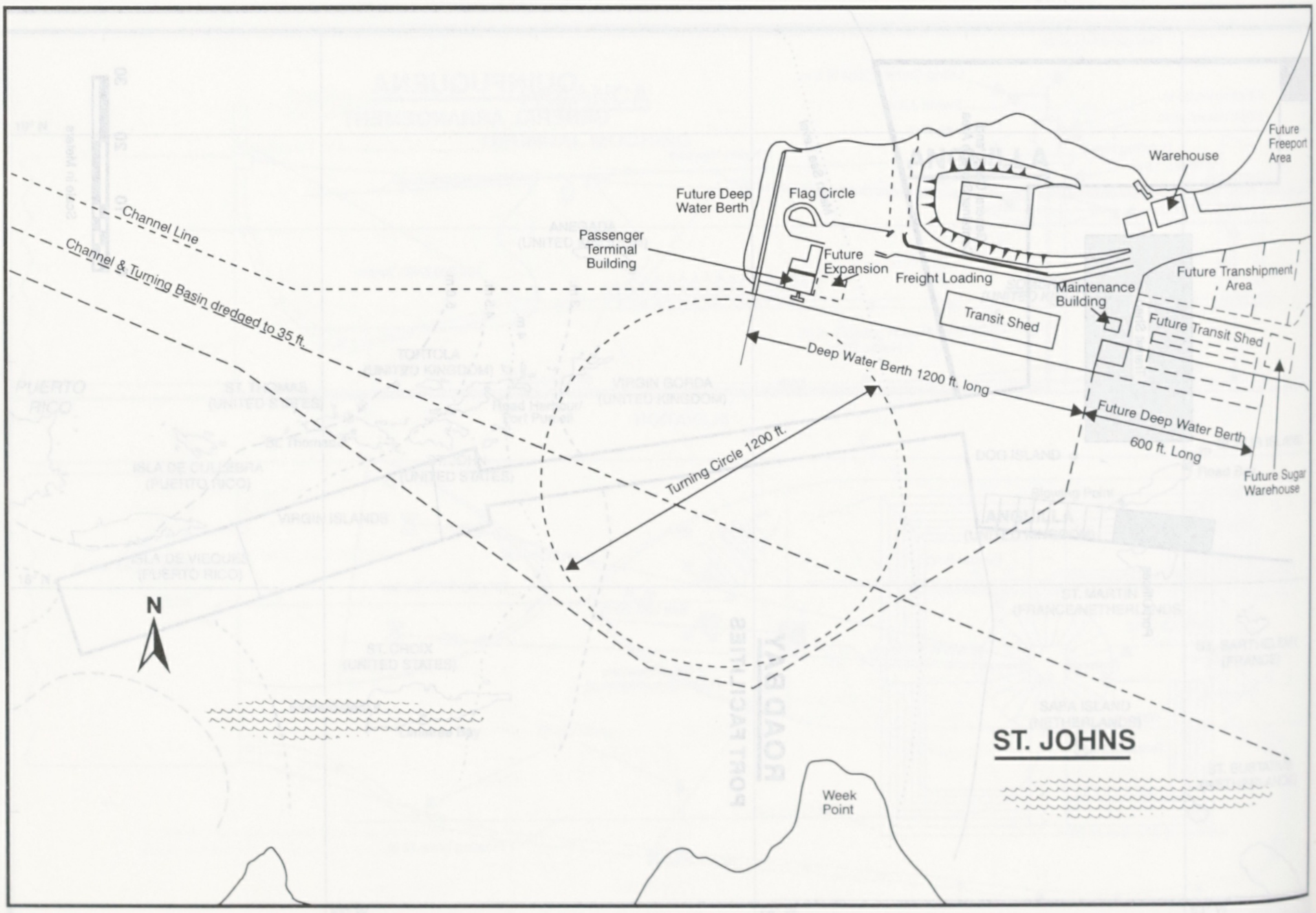


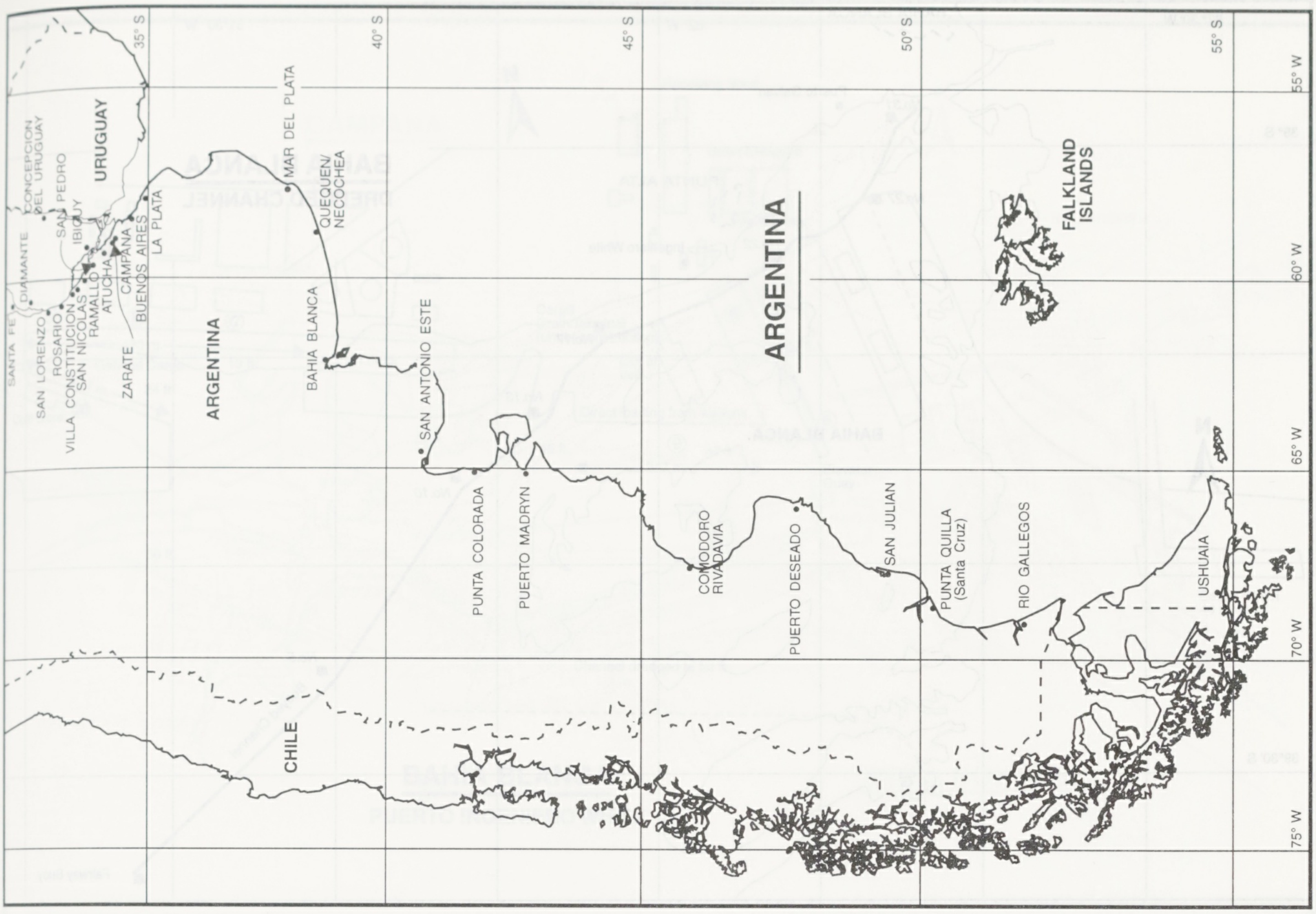
ROAD BAY

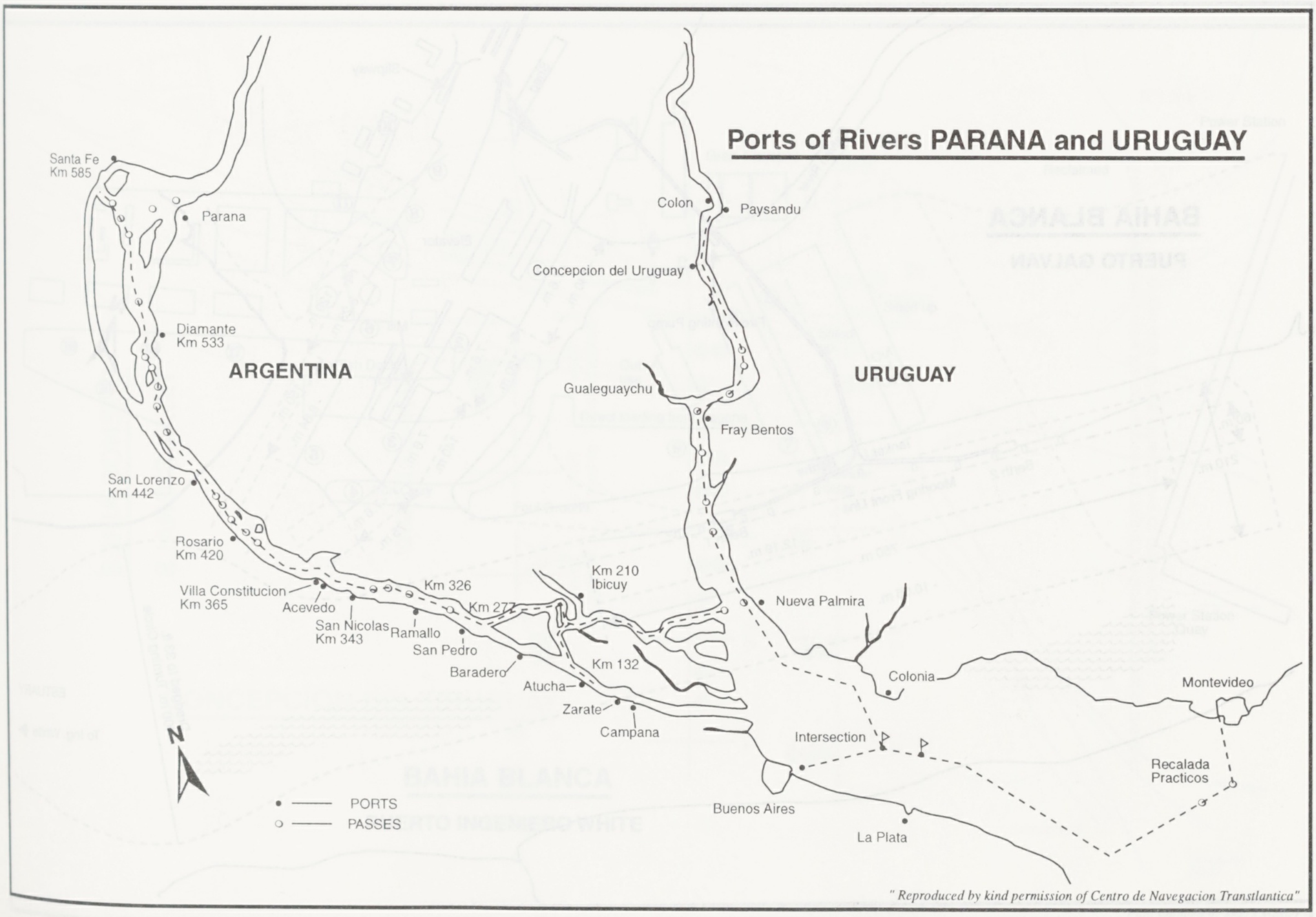
PORT FACILITIES

General Cargo and Container Storage Area
Mean Sea Level
Transit Shed
Port Offices
3 m.
4 m.
4.5 m.
5.0 m.
0
10
20
30
Scale in Meters


ANTIGUA AND BARBUDA
LEEWARD ISLANDS
St. EUSTATIUS (NL)
SAINT CHRISTOPHER (UK)
Basse-Terre
NEVIS (UNITED KINGDOM)
BARBUDA
ANTIGUA
St. Johns
17° W
REDONDA (UK)
MONTSERRAT (UK)
Plymouth
63° W
62° W


Future Freeport Area
Warehouse
Future Deep Water Berth
Flag Circle
Passenger Terminal Building
Future Expansion
Freight Loading
Channel Line
Channel & Turning Basin dredged to 35 ft.
Transit Shed
Maintenance Building
Future Transhipment Area
Future Transit Shed
Deep Water Berth 1200 ft. long
Future Deep Water Berth 600 ft. Long
Future Sugar Warehouse
Turning Circle 1200 ft.
N
ST. JOHNS
Week Point


35° S
40° S
45° S
50° S
55° S
55° W
60° W
65° W
70° W
75° W
SANTA FE
DIAMANTE
SAN LORENZO
ROSARIO
VILLA CONSTITUCION
SAN NICOLAS
RAMALLO
ATUCHA
ZARATE
CAMPANA
BUENOS AIRES
LA PLATA
IBICUY
SAN PEDRO
CONCEPCION DEL URUGUAY
URUGUAY
ARGENTINA
MAR DEL PLATA
QUEQUEN/ NECOCHEA
BAHIA BLANCA
SAN ANTONIO ESTE
ARGENTINA
FALKLAND ISLANDS
PUNTA COLORADA
PUERTO MADRYN
COMODORO RIVADAVIA
PUERTO DESEADO
SAN JULIAN
PUNTA QUILLA (Santa Cruz)
RIO GALLEGOS
USHUAIA
CHILE


Ports of Rivers PARANA and URUGUAY
Santa Fe Km 585
Parana
Diamante Km 533
ARGENTINA
San Lorenzo Km 442
Rosario Km 420
Villa Constitucion Km 365
Acevedo
San Nicolas Km 343
Ramallo
San Pedro
Baradero
Km 326
Km 277
Km 210 Ibicuy
Km 132
Atucha
Zarate
Campana
Colon
Paysandu
Concepcion del Uruguay
Gualeguaychu
Fray Bentos
URUGUAY
Nueva Palmira
Colonia
Montevideo
Intersection
Recalada Practicos
Buenos Aires
La Plata
N
PORTS
PASSES

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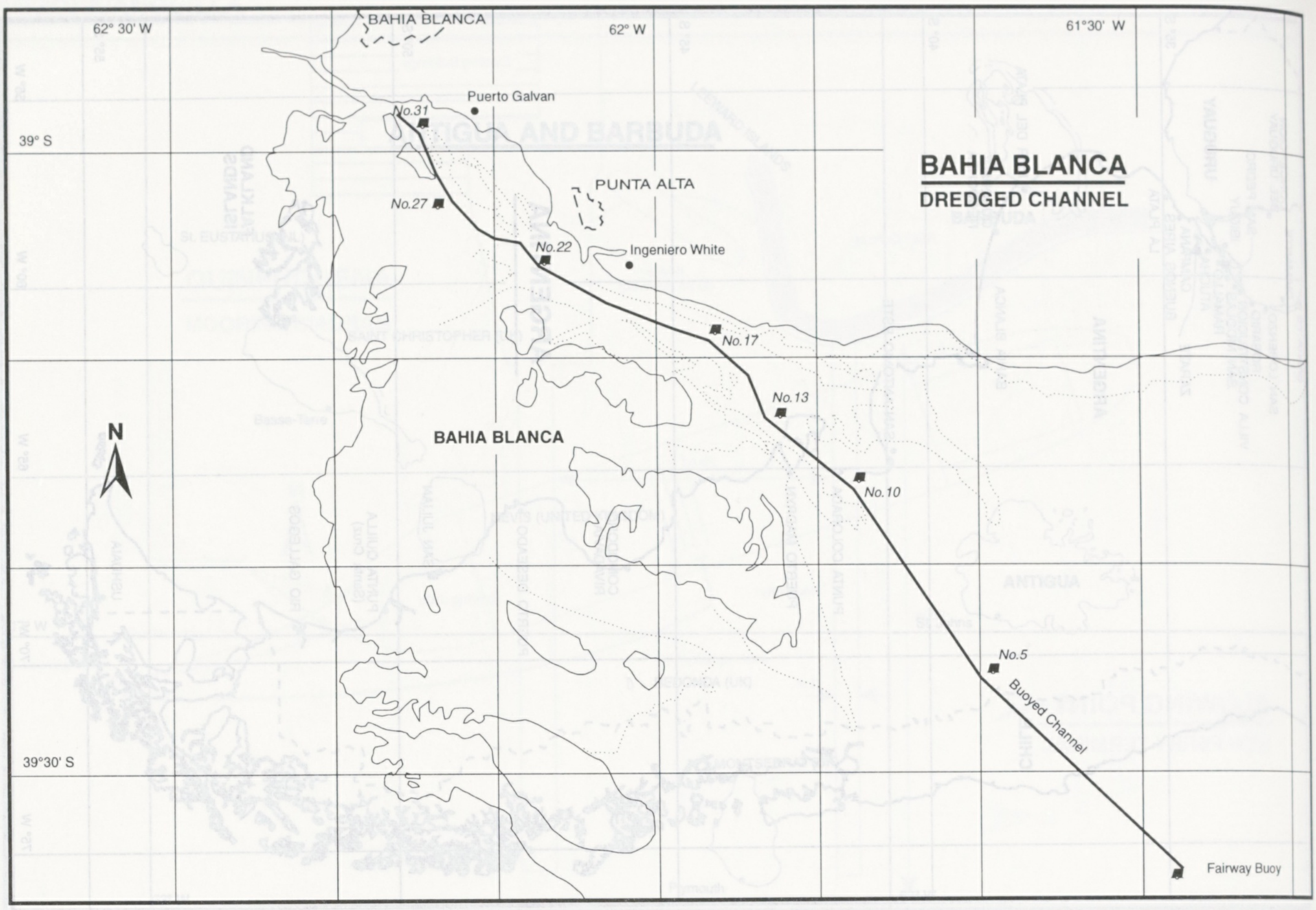
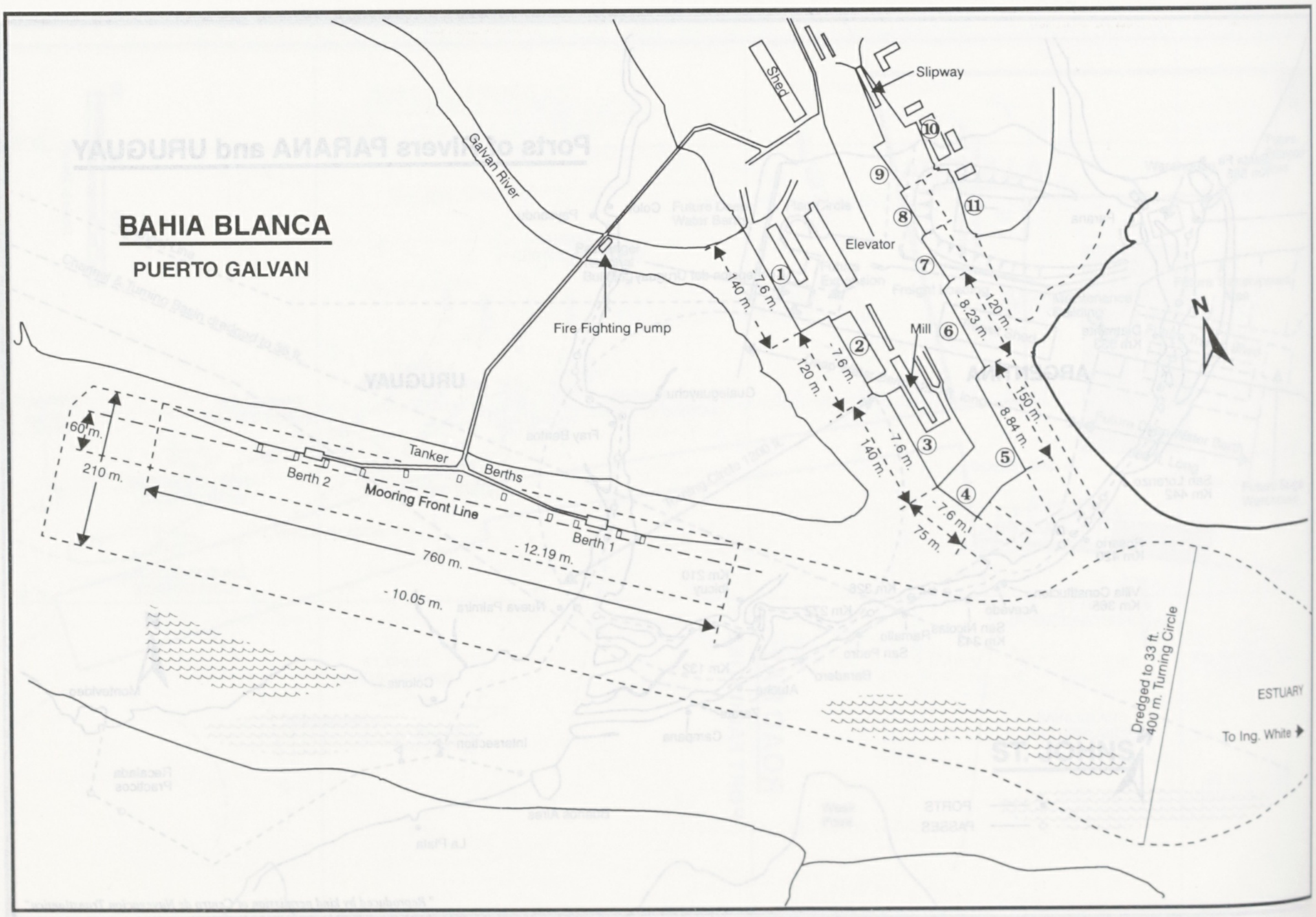


BAHIA BLANCA

DREDGED CHANNEL

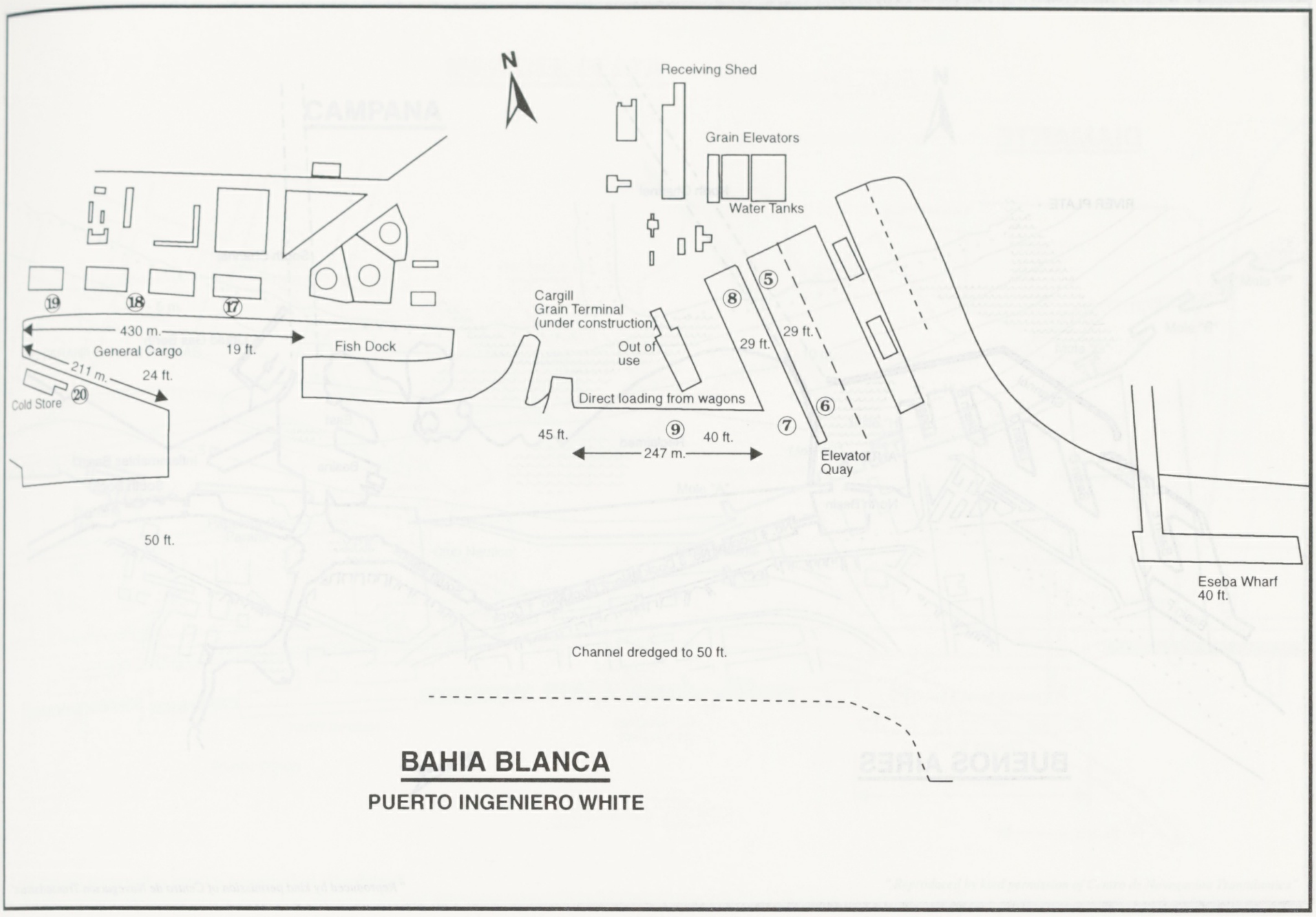
BAHIA BLANCA
62° 30' W
62° W
61°30' W
39° S
39°30' S
No.31
Puerto Galvan
PUNTA ALTA
No.27
No.22
Ingeniero White
No.17
No.13
BAHIA BLANCA
N
No.10
No.5
Buoyed Channel
Fairway Buoy



BAHIA BLANCA

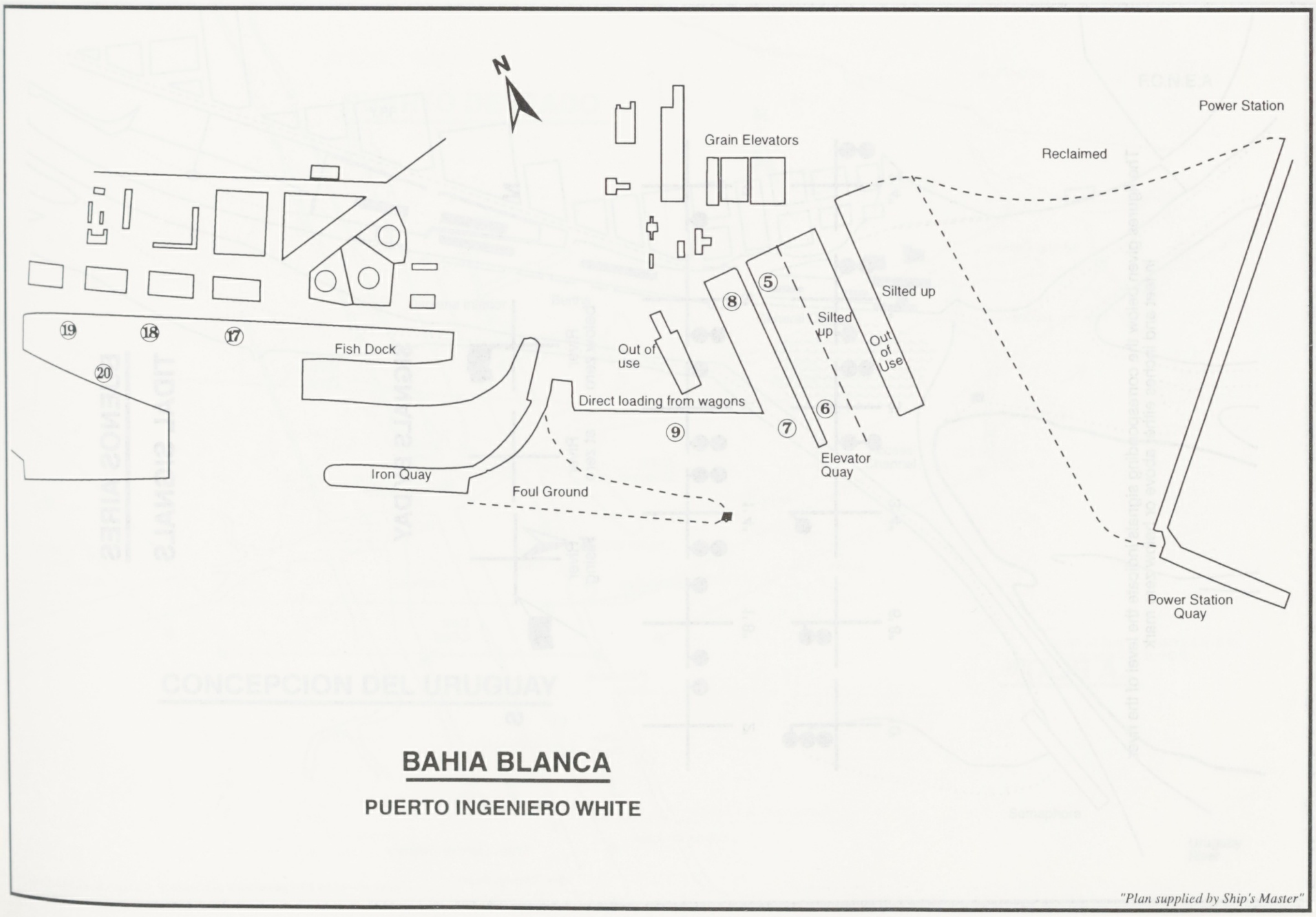
PUERTO GALVAN

Shed
Slipway
Galvan River
⑩
⑨
⑪
⑧
Elevator
⑦
①
7.6 m.
140 m.
120 m.
8.23 m.
Fire Fighting Pump
Mill
⑥
②
7.6 m.
120 m.
150 m.
8.84 m.
7.6 m.
140 m.
③
⑤
④
7.6 m.
75 m.
N
60 m.
210 m.
Tanker
Berths
Berth 2
Mooring Front Line
Berth 1
- 12.19 m.
760 m.
- 10.05 m.
Dredged to 33 ft.
400 m. Turning Circle
ESTUARY
To Ing. White


N
Receiving Shed
Grain Elevators
Water Tanks
Cargill
Grain Terminal
(under construction)
Out of
use
⑤
⑧
29 ft.
29 ft.
⑲
⑱
⑰
430 m.
General Cargo
19 ft.
Fish Dock
211 m.
24 ft.
Cold Store
⑳
Direct loading from wagons
⑥
⑦
45 ft.
⑨
40 ft.
247 m.
Elevator
Quay
50 ft.
Eseba Wharf
40 ft.
Channel dredged to 50 ft.

BAHIA BLANCA

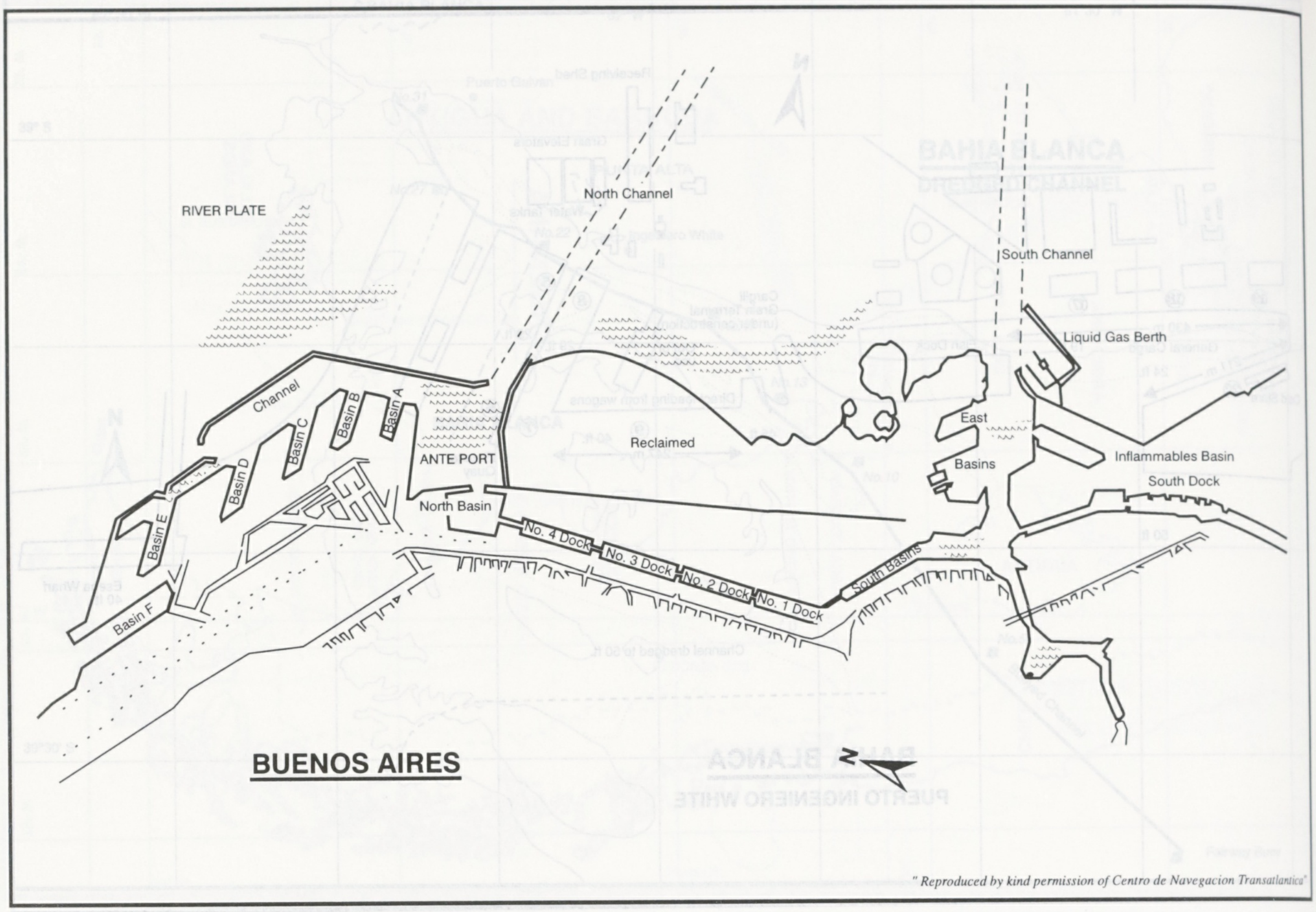
PUERTO INGENIERO WHITE


N
Power Station
Grain Elevators
Reclaimed
⑤
⑧
Silted up
Silted
up
Out
of
Use
⑲
⑱
⑰
Fish Dock
Out of
use
⑳
Direct loading from wagons
⑥
⑨
⑦
Elevator
Quay
Iron Quay
Foul Ground
Power Station
Quay

BAHIA BLANCA

PUERTO INGENIERO WHITE

"Plan supplied by Ship's Master"


RIVER PLATE
North Channel
Channel
Basin A
Basin B
Basin C
Basin D
Basin E
Basin F
ANTE PORT
North Basin
Reclaimed
No. 4 Dock
No. 3 Dock
No. 2 Dock
No. 1 Dock
South Basins
East
Basins
South Channel
Liquid Gas Berth
Inflammables Basin
South Dock
BUENOS AIRES

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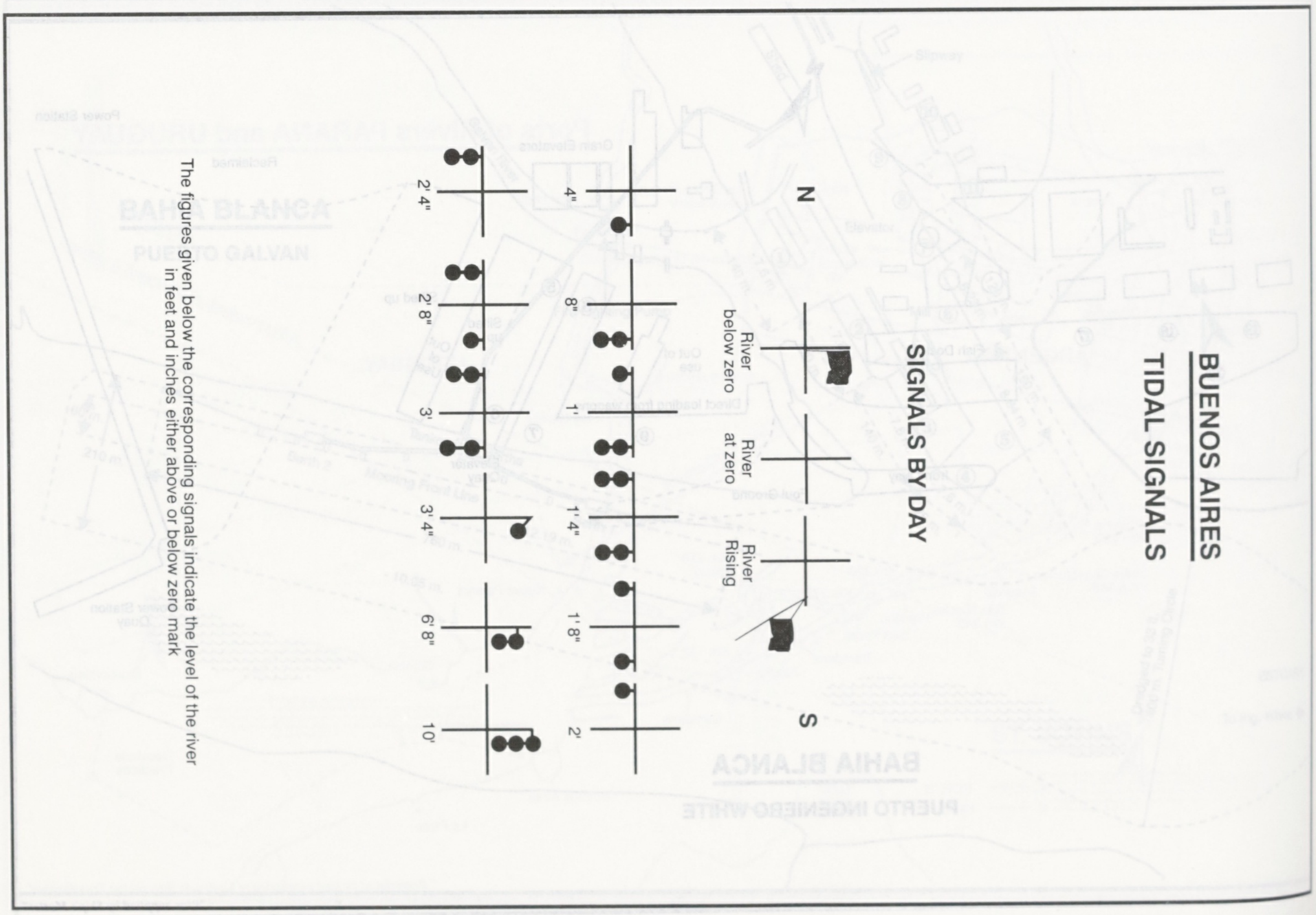
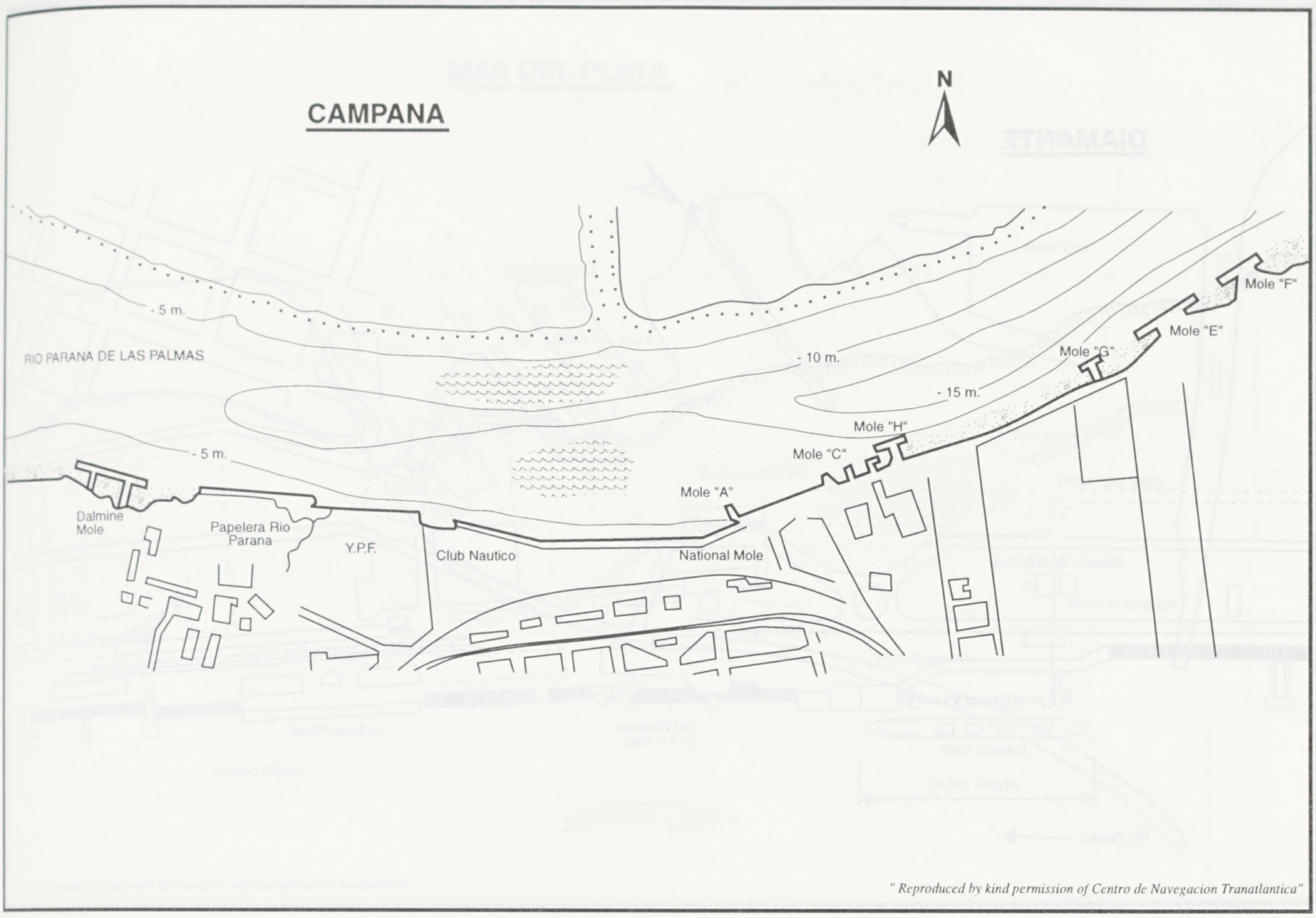


BUENOS AIRES TIDAL SIGNALS

SIGNALS BY DAY

N
S
River below zero
River at zero
River Rising
4"
8"
1'
1'4"
1'8"
2'
2'4"
2'8"
3'
3'4"
6'8"
10'

The figures given below the corresponding signals indicate the level of the river in feet and inches either above or below zero mark


CAMPANA
N
- 5 m.
RIO PARANA DE LAS PALMAS
- 10 m.
- 15 m.
- 5 m.
Mole "F"
Mole "E"
Mole "G"
Mole "H"
Mole "C"
Mole "A"
Dalmine Mole
Papelera Rio Parana
Y.P.F.
Club Nautico
National Mole

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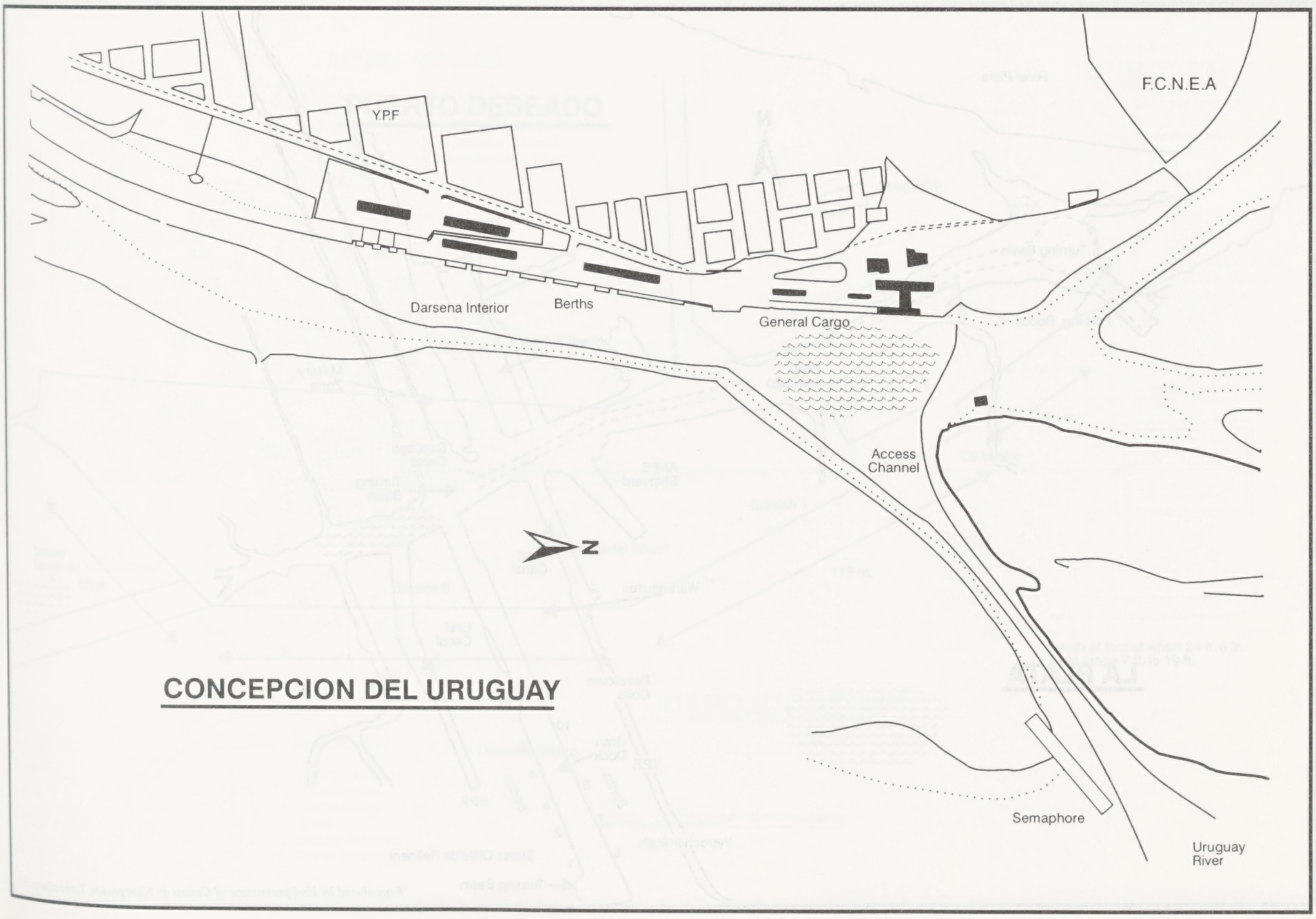
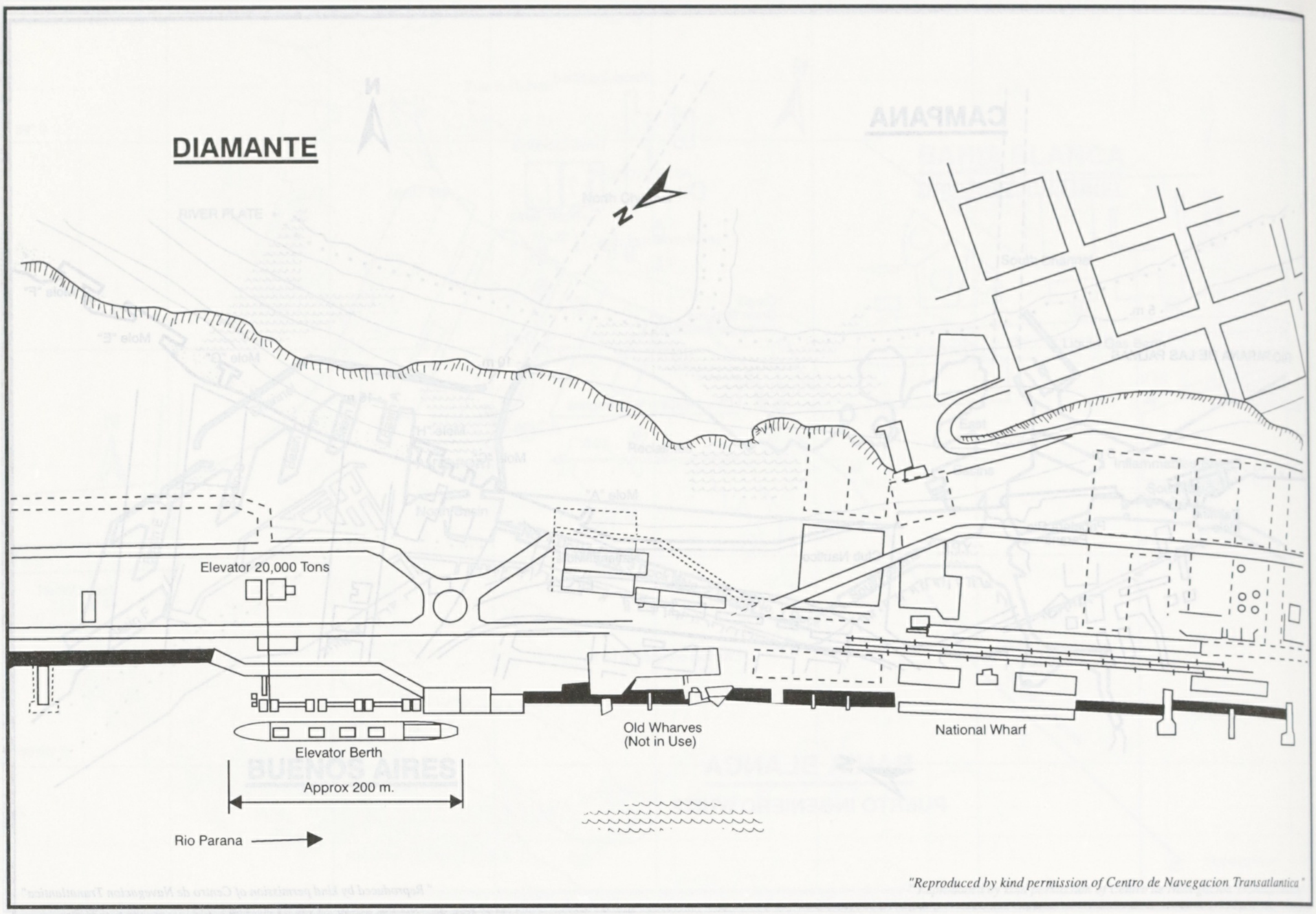

F.C.N.E.A
Y.P.F
Darsena Interior
Berths
General Cargo
Access Channel
N
CONCEPCION DEL URUGUAY
Semaphore
Uruguay River


DIAMANTE
Elevator 20,000 Tons
Elevator Berth
Approx 200 m.
Rio Parana
Old Wharves
(Not in Use)
National Wharf

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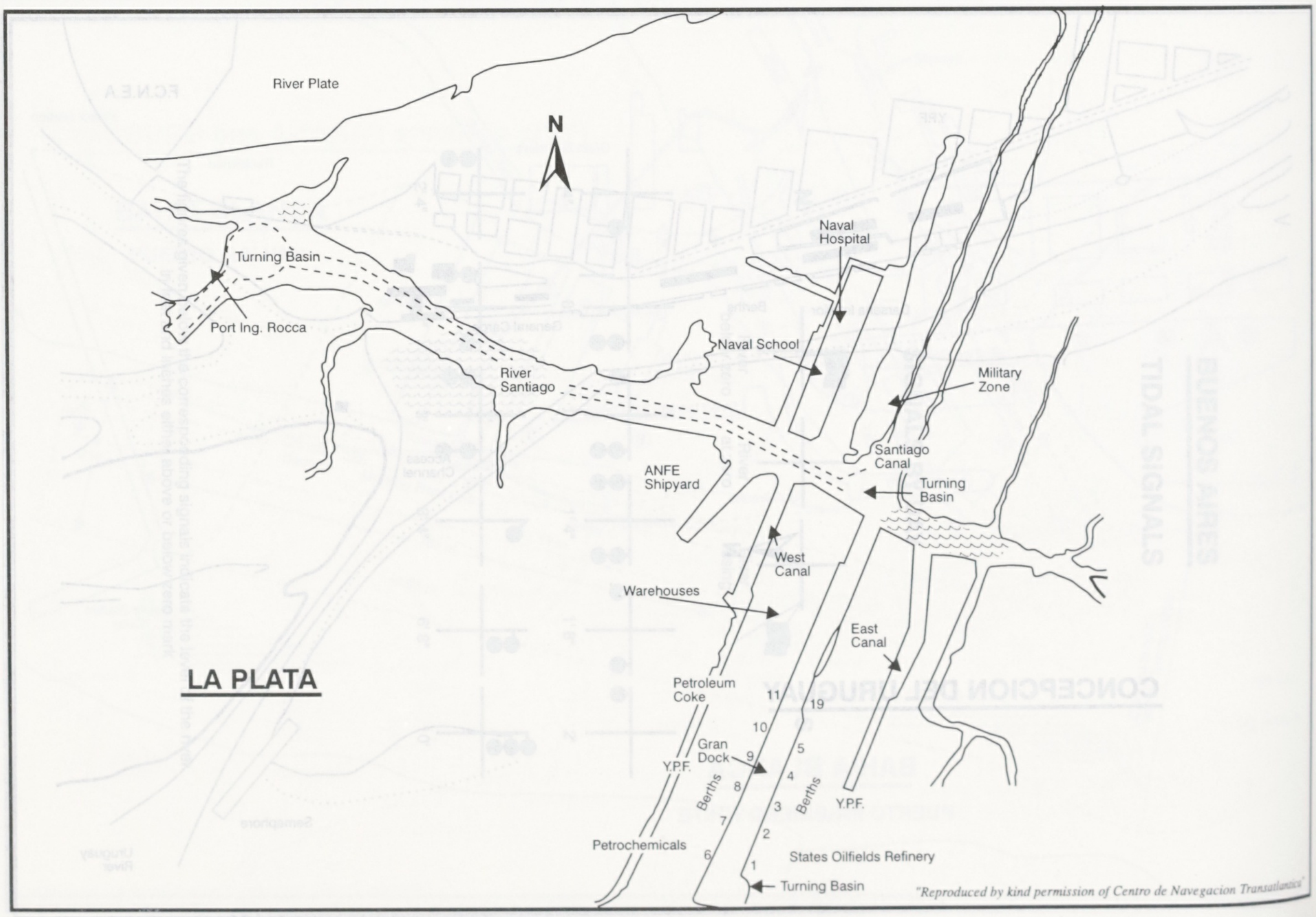
River Plate
N
Turning Basin
Port Ing. Rocca
River
Santiago
Naval
Hospital
Naval School
Military
Zone
Santiago
Canal
Turning
Basin
ANFE
Shipyard
West
Canal
Warehouses
East
Canal
LA PLATA
Petroleum
Coke
11
19
10
5
Gran
Dock
9
4
Y.P.F.
8
Berths
3
Berths
Y.P.F.
7
2
Petrochemicals
6
States Oilfields Refinery
1
Turning Basin

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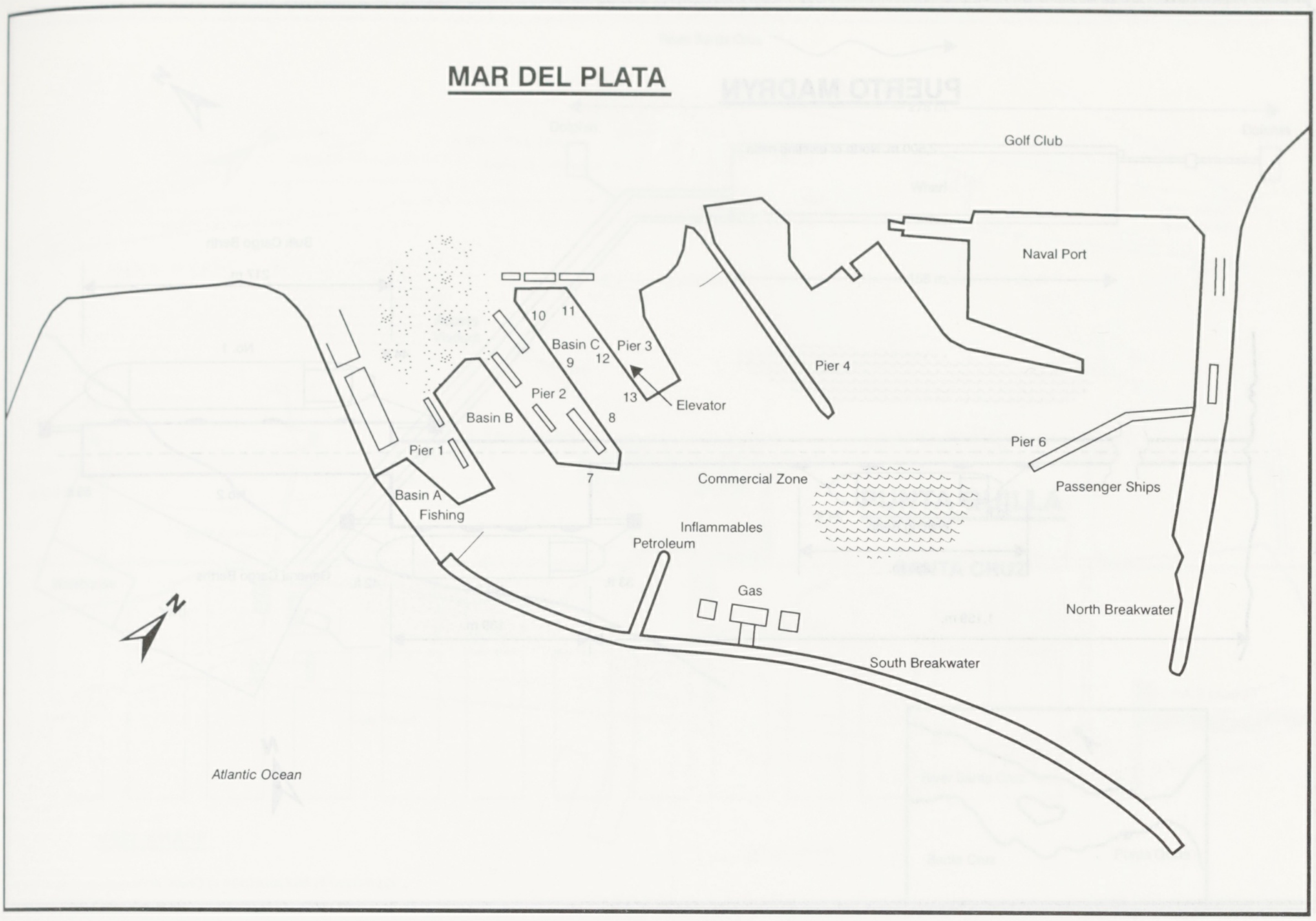
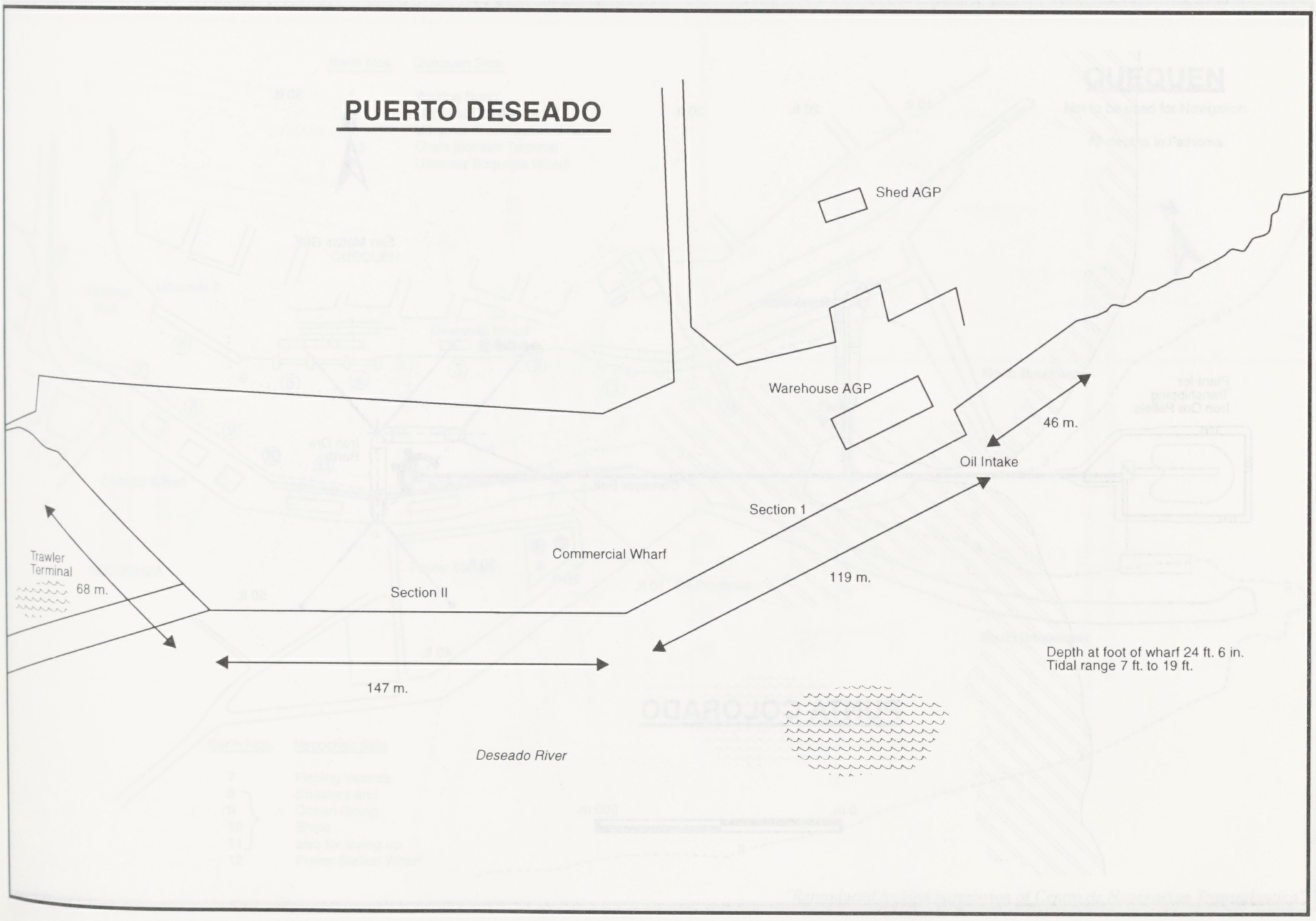
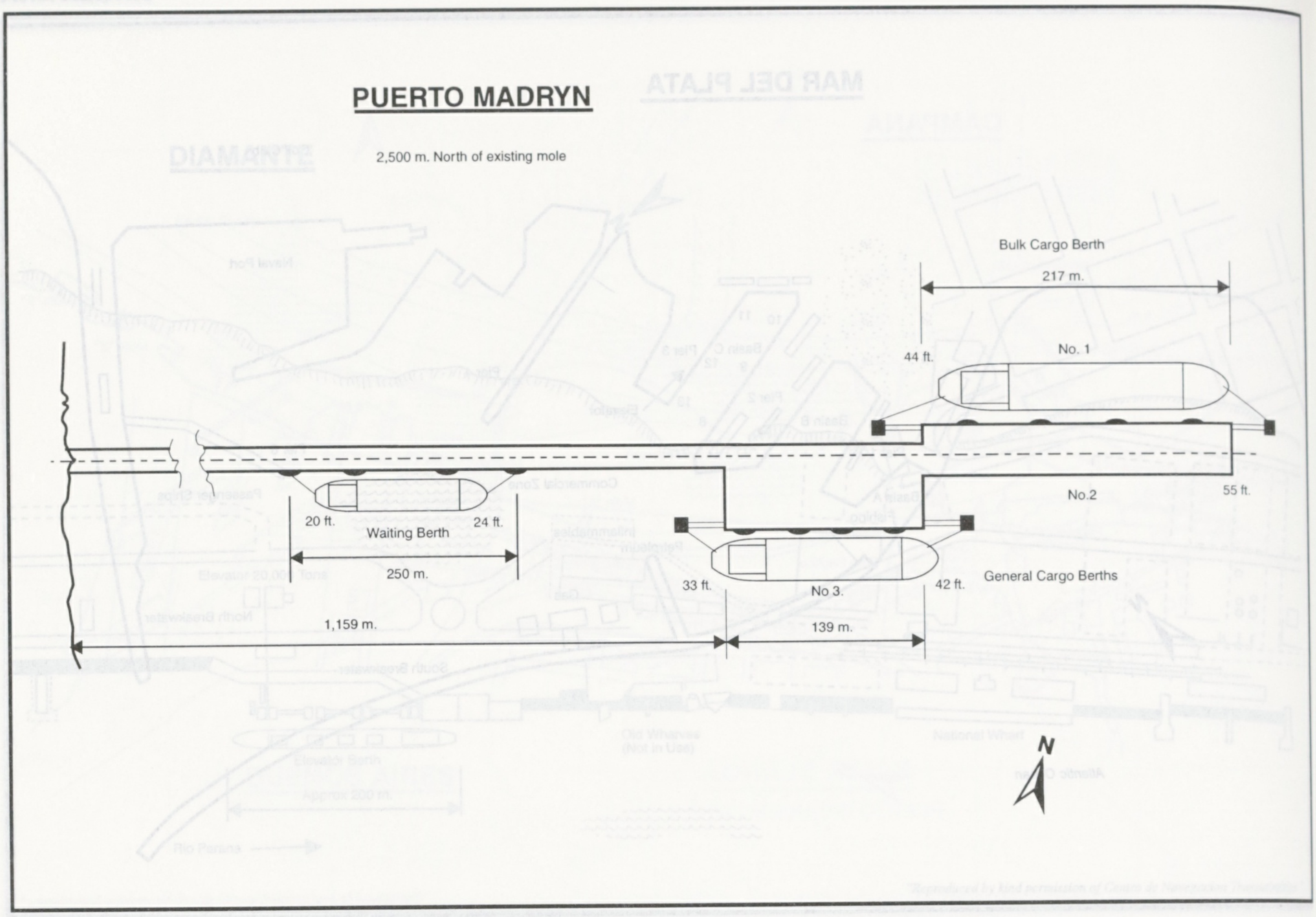
MAR DEL PLATA


Golf Club
Naval Port
10
11
Basin C
Pier 3
9
12
Pier 2
13
Elevator
Pier 4
Basin B
8
Pier 1
Pier 6
7
Commercial Zone
Basin A
Passenger Ships
Fishing
Inflammables
Petroleum
Gas
North Breakwater
South Breakwater
N
Atlantic Ocean

PUERTO DESEADO

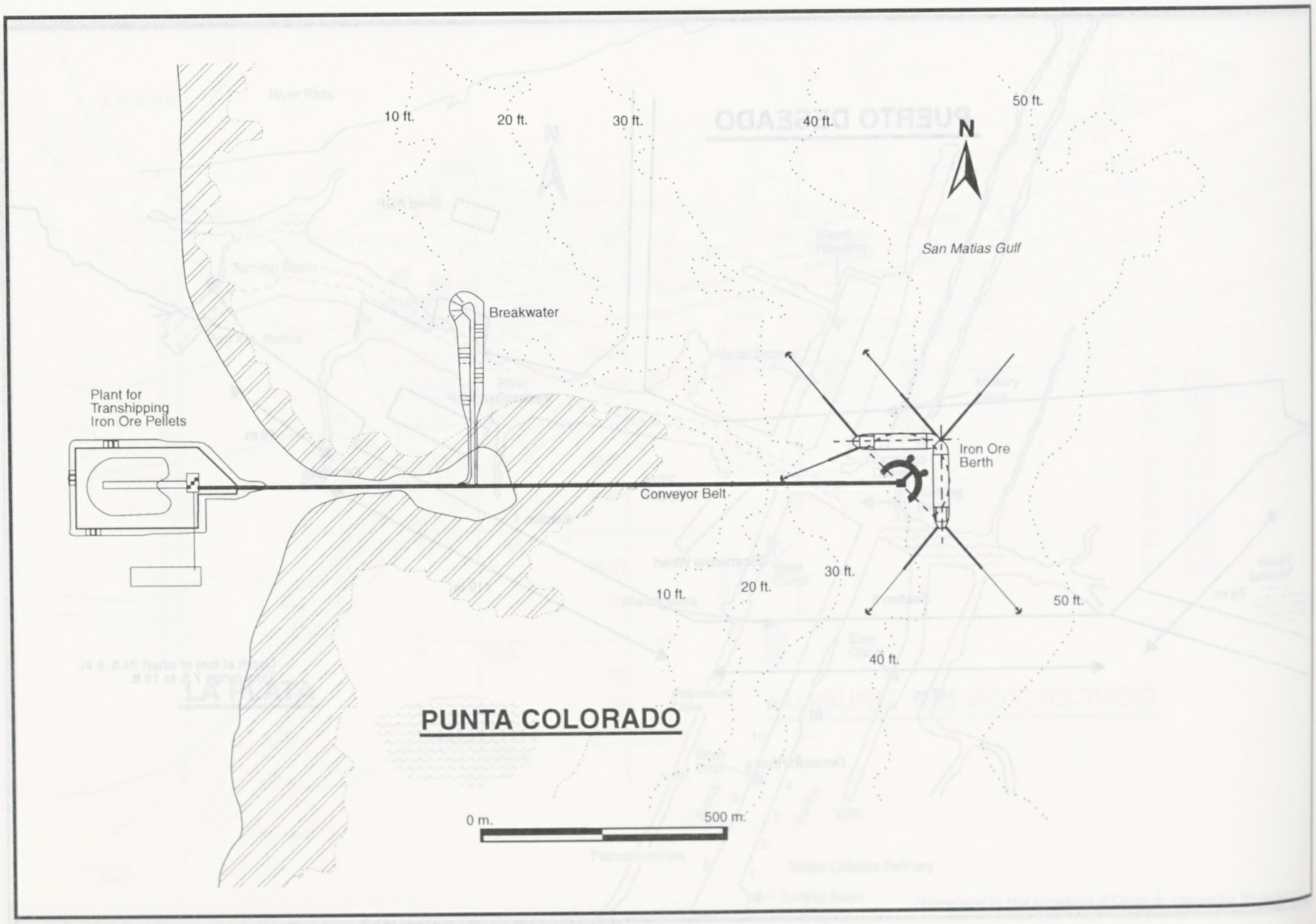

Shed AGP
Warehouse AGP
46 m.
Oil Intake
Section 1
Trawler Terminal
68 m.
Commercial Wharf
119 m.
Section II
147 m.
Deseado River

Depth at foot of wharf 24 ft. 6 in.
Tidal range 7 ft. to 19 ft.



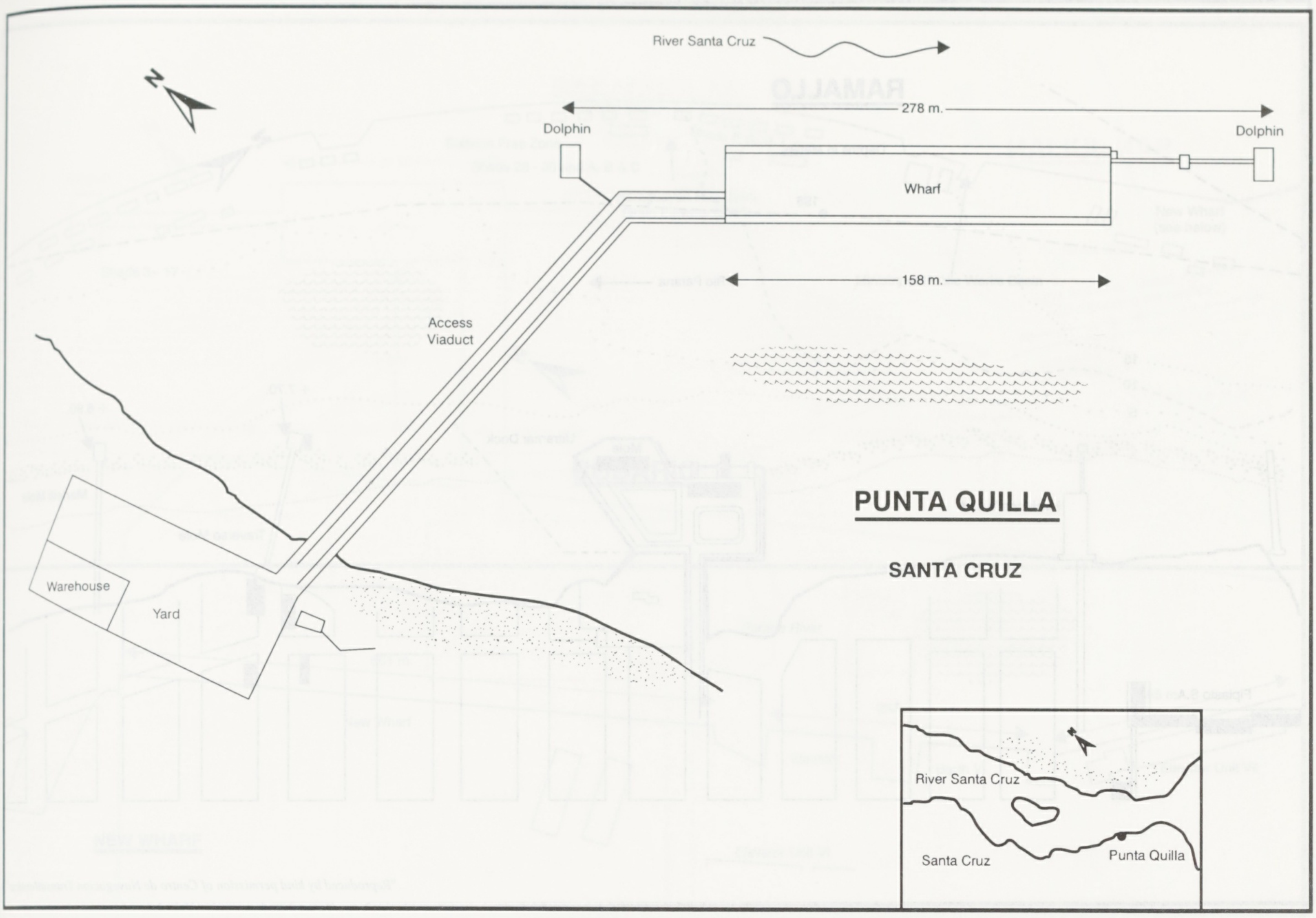
PUERTO MADRYN

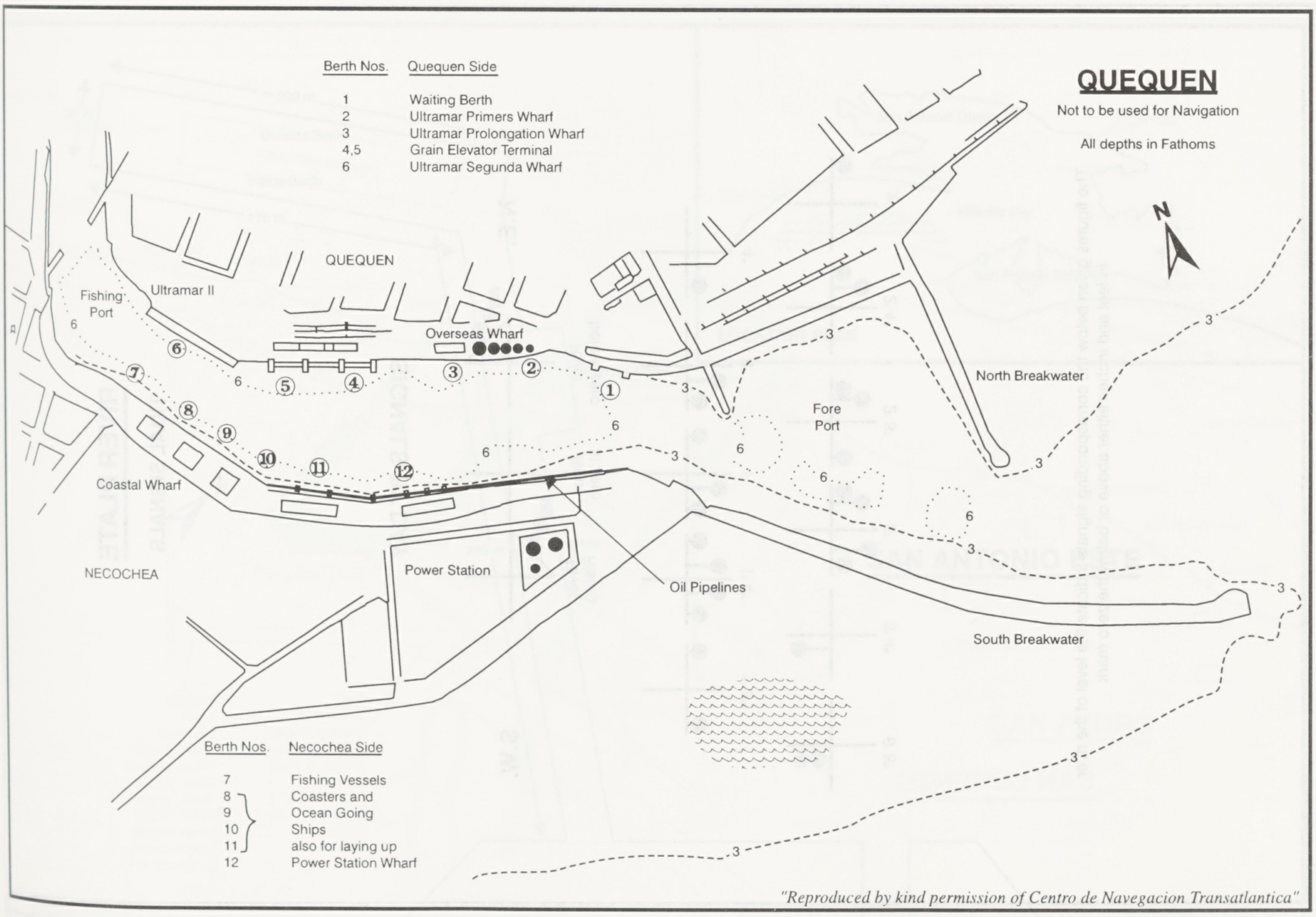
2,500 m. North of existing mole
Bulk Cargo Berth
217 m.
44 ft.
No. 1
No.2
55 ft.
20 ft.
24 ft.
Waiting Berth
250 m.
33 ft.
No 3.
42 ft.
General Cargo Berths
1,159 m.
139 m.
N



PUNTA COLORADO

10 ft.
20 ft.
30 ft.
40 ft.
50 ft.
N
San Matias Gulf
Breakwater
Plant for
Transhipping
Iron Ore Pellets
Conveyor Belt
Iron Ore
Berth
30 ft.
20 ft.
10 ft.
50 ft.
40 ft.
0 m.
500 m.


River Santa Cruz
278 m.
Dolphin
Dolphin
Wharf
158 m.
Access
Viaduct
PUNTA QUILLA
SANTA CRUZ
Warehouse
Yard
River Santa Cruz
Santa Cruz
Punta Quilla


QUEQUEN
Not to be used for Navigation
All depths in Fathoms
N
QUEQUEN
Fishing Port
Ultramar II
Overseas Wharf
Fore Port
North Breakwater
South Breakwater
Coastal Wharf
NECOCHEA
Power Station
Oil Pipelines
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫
3
6

Berth Nos.	Quequen Side
1	Waiting Berth
2	Ultramar Primers Wharf
3	Ultramar Prolongation Wharf
4,5	Grain Elevator Terminal
6	Ultramar Segunda Wharf

Berth Nos.	Necochea Side
7	Fishing Vessels
8 9 10 11	Coasters and Ocean Going Ships also for laying up
12	Power Station Wharf

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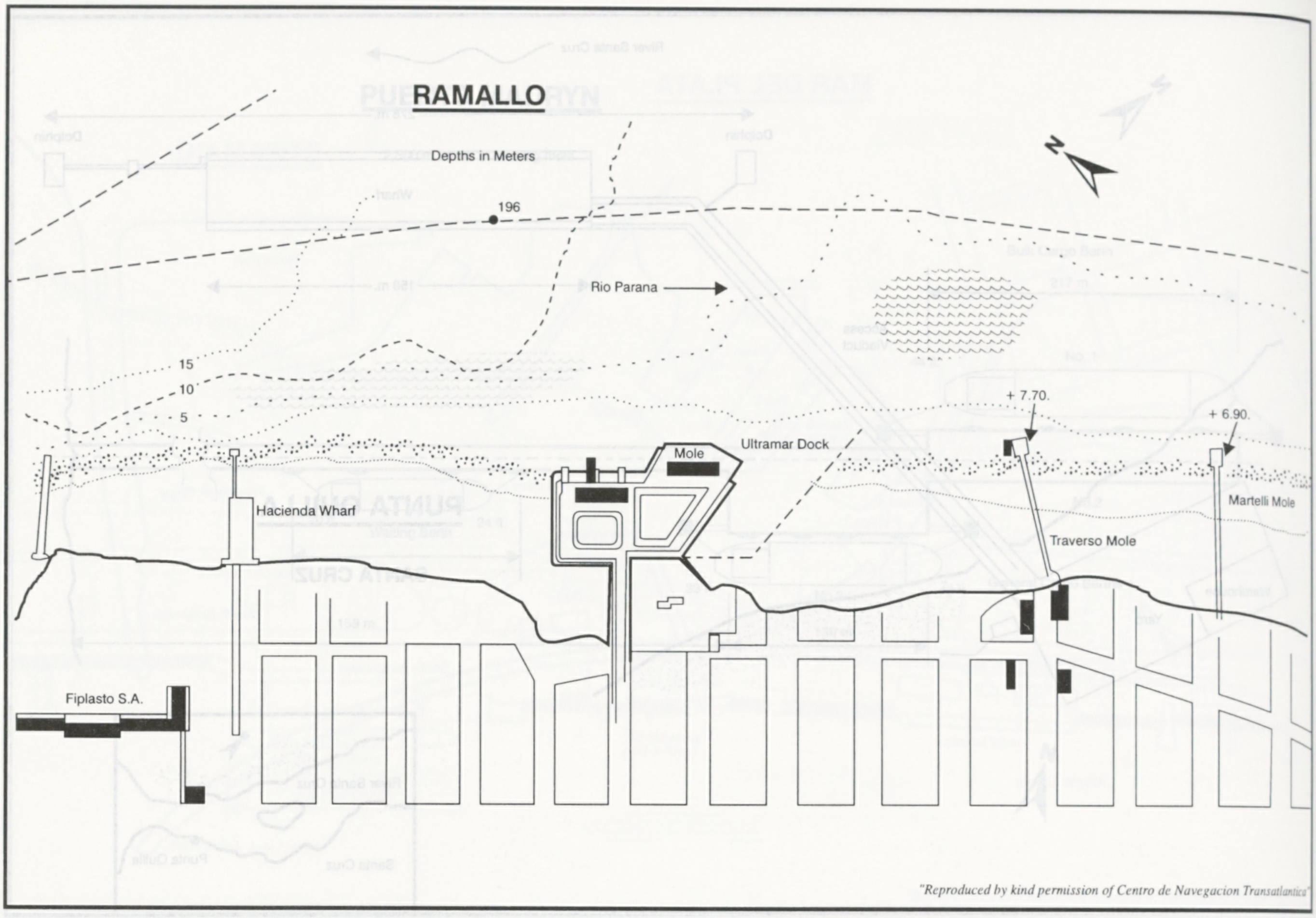
RAMALLO
Depths in Meters
196
Rio Parana
15
10
5
Ultramar Dock
Mole
Hacienda Wharf
+ 7.70.
+ 6.90.
Martelli Mole
Traverso Mole
Fiplasto S.A.

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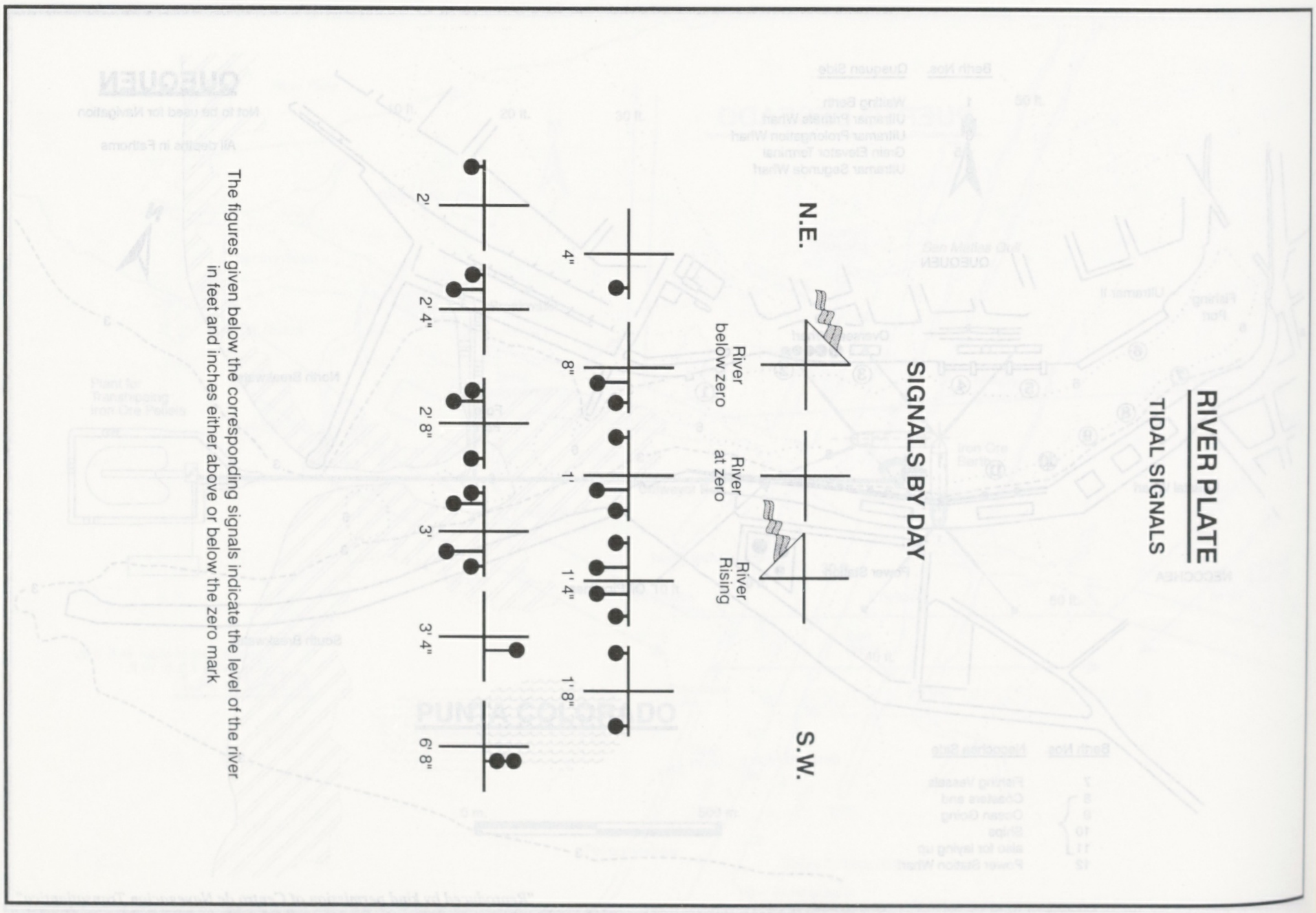
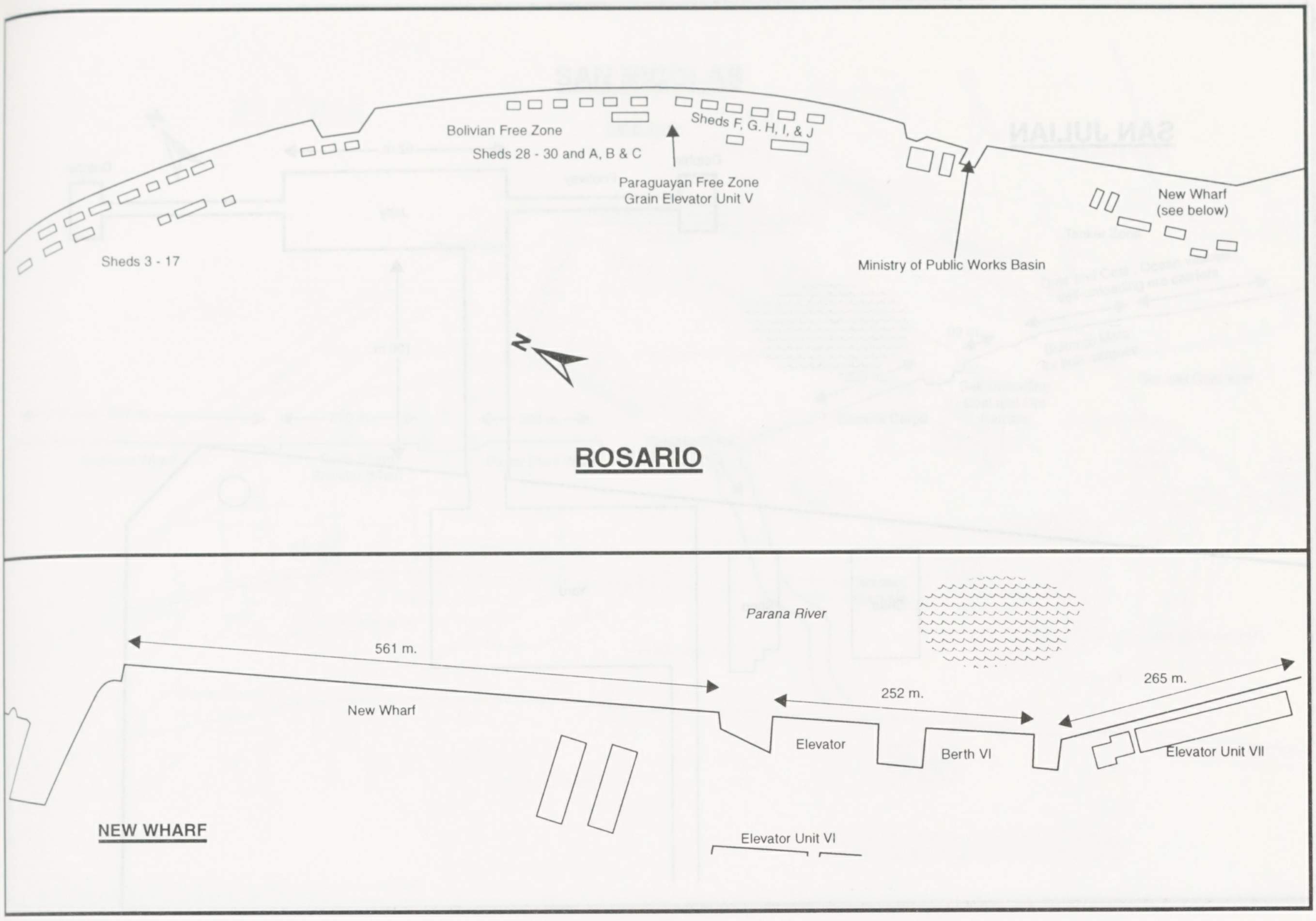
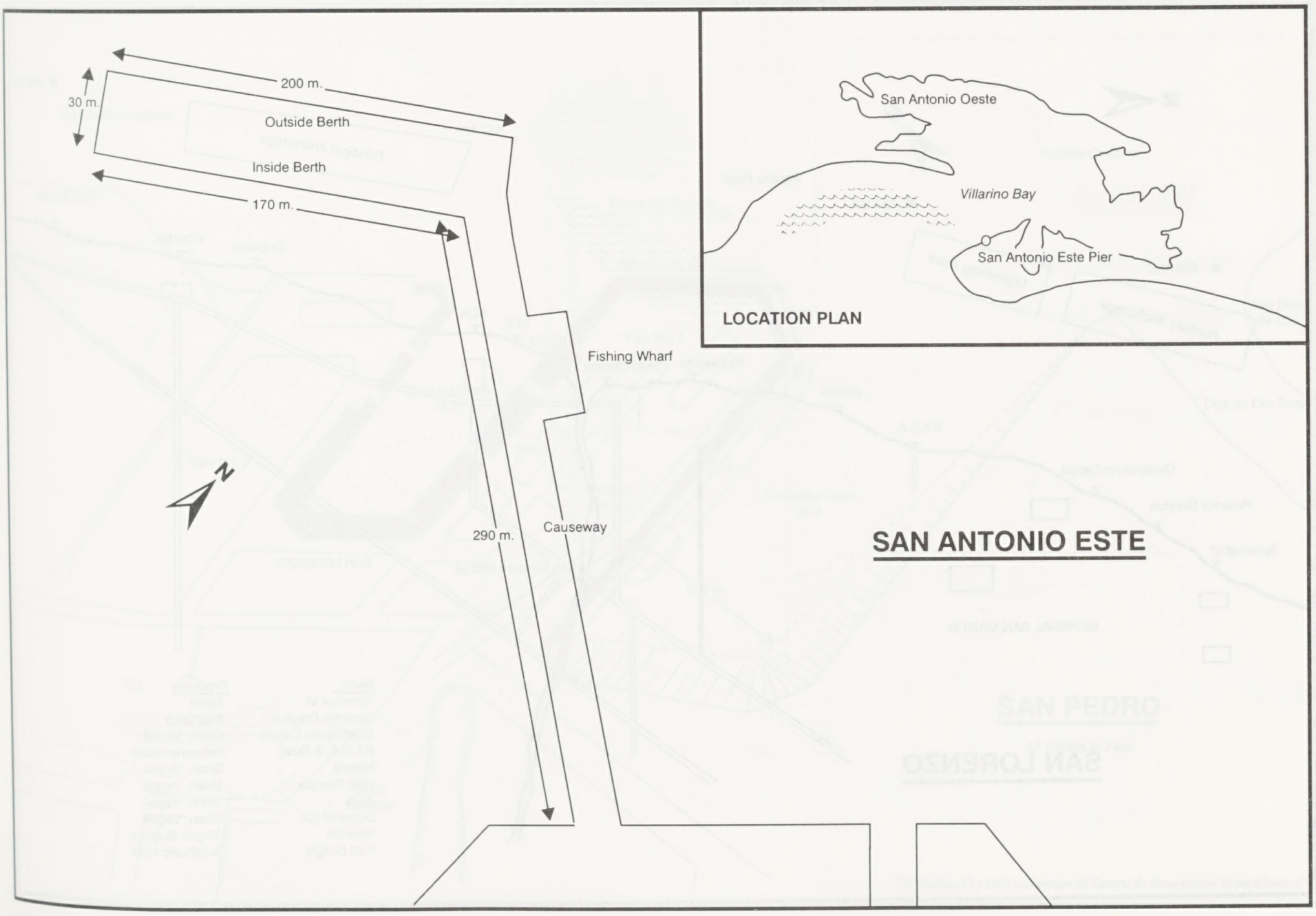
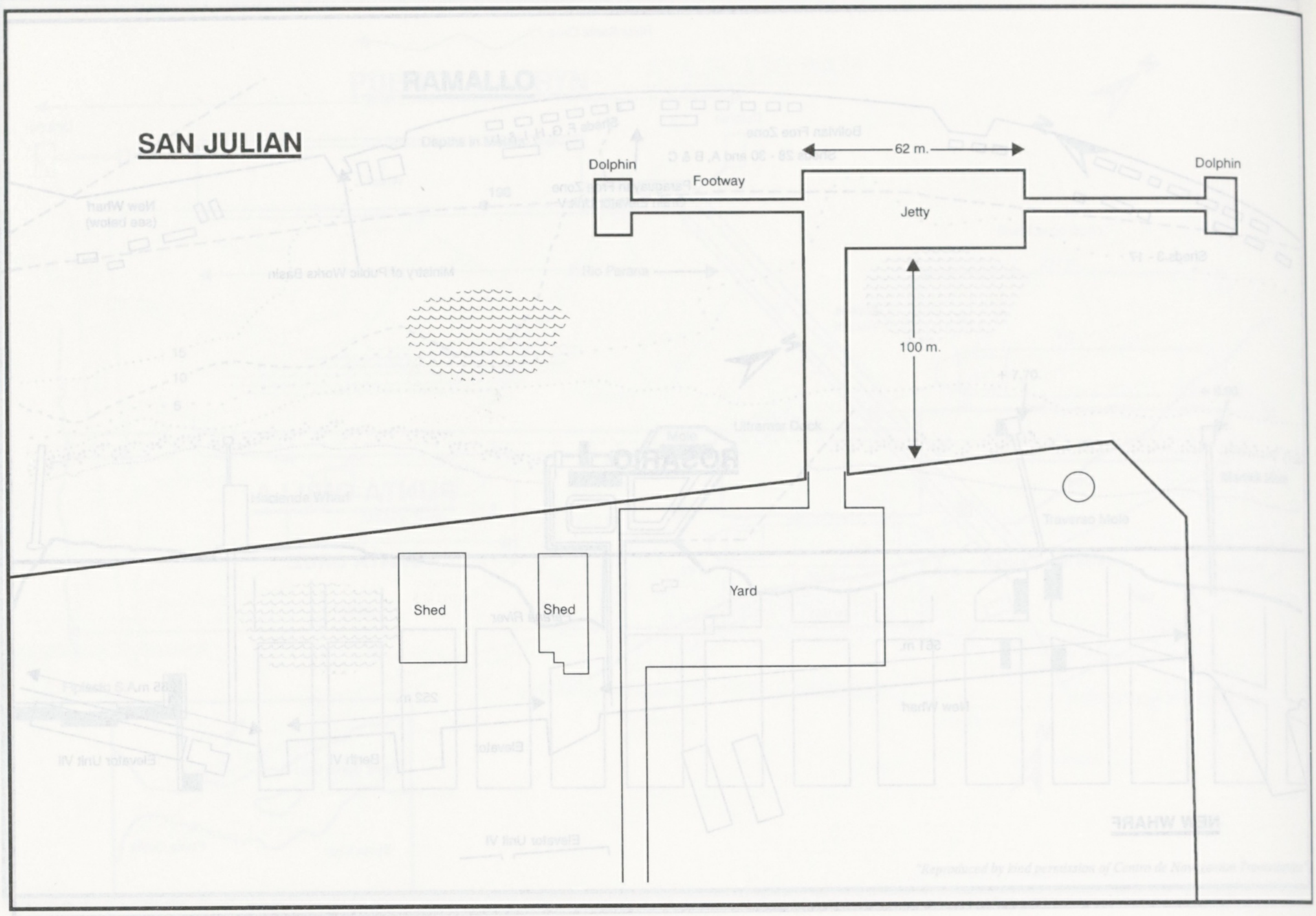

RIVER PLATE
TIDAL SIGNALS
SIGNALS BY DAY
N.E.
S.W.
River below zero
River at zero
River Rising
4"
8"
1'
1' 4"
1' 8"
2'
2' 4"
2' 8"
3'
3' 4"
6' 8"

The figures given below the corresponding signals indicate the level of the river in feet and inches either above or below the zero mark

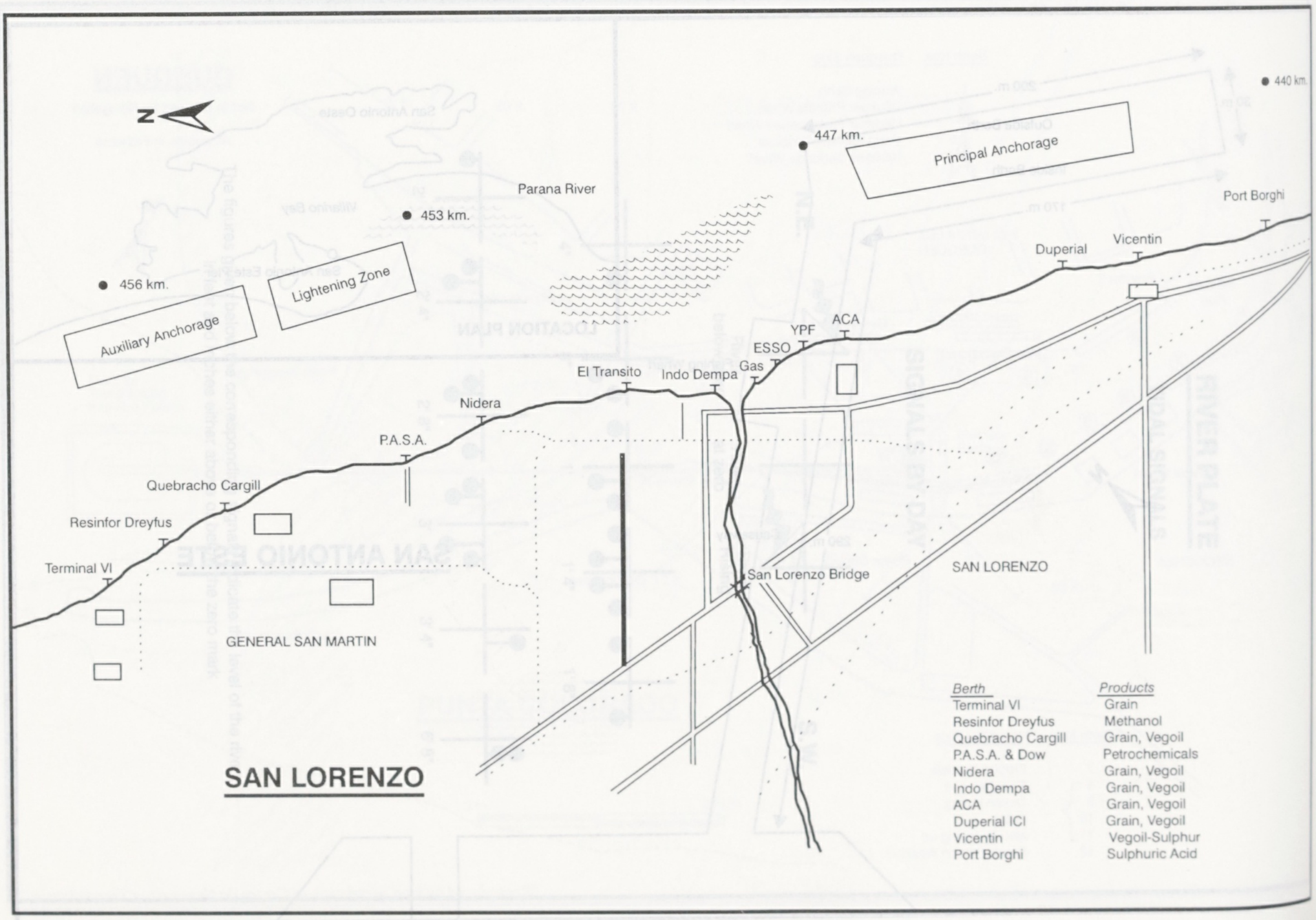

Bolivian Free Zone
Sheds 28 - 30 and A, B & C
Sheds F, G, H, I, & J
Paraguayan Free Zone
Grain Elevator Unit V
New Wharf
(see below)
Ministry of Public Works Basin
Sheds 3 - 17
ROSARIO
Parana River
561 m.
252 m.
265 m.
New Wharf
Elevator
Berth VI
Elevator Unit VII
Elevator Unit VI
NEW WHARF


200 m.
30 m.
Outside Berth
Inside Berth
170 m.
Fishing Wharf
290 m.
Causeway
San Antonio Oeste
Villarino Bay
San Antonio Este Pier
LOCATION PLAN
SAN ANTONIO ESTE

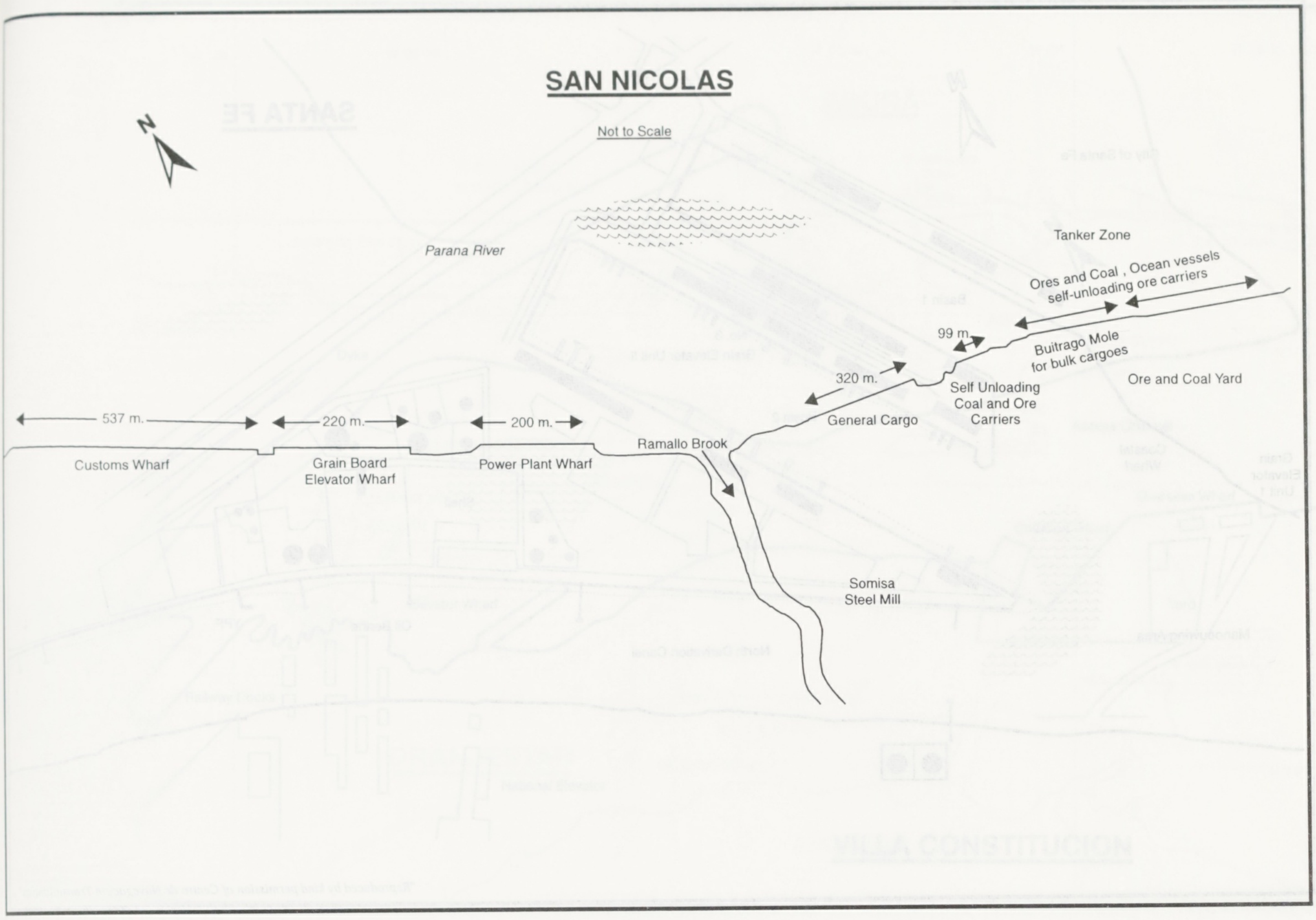
SAN JULIAN

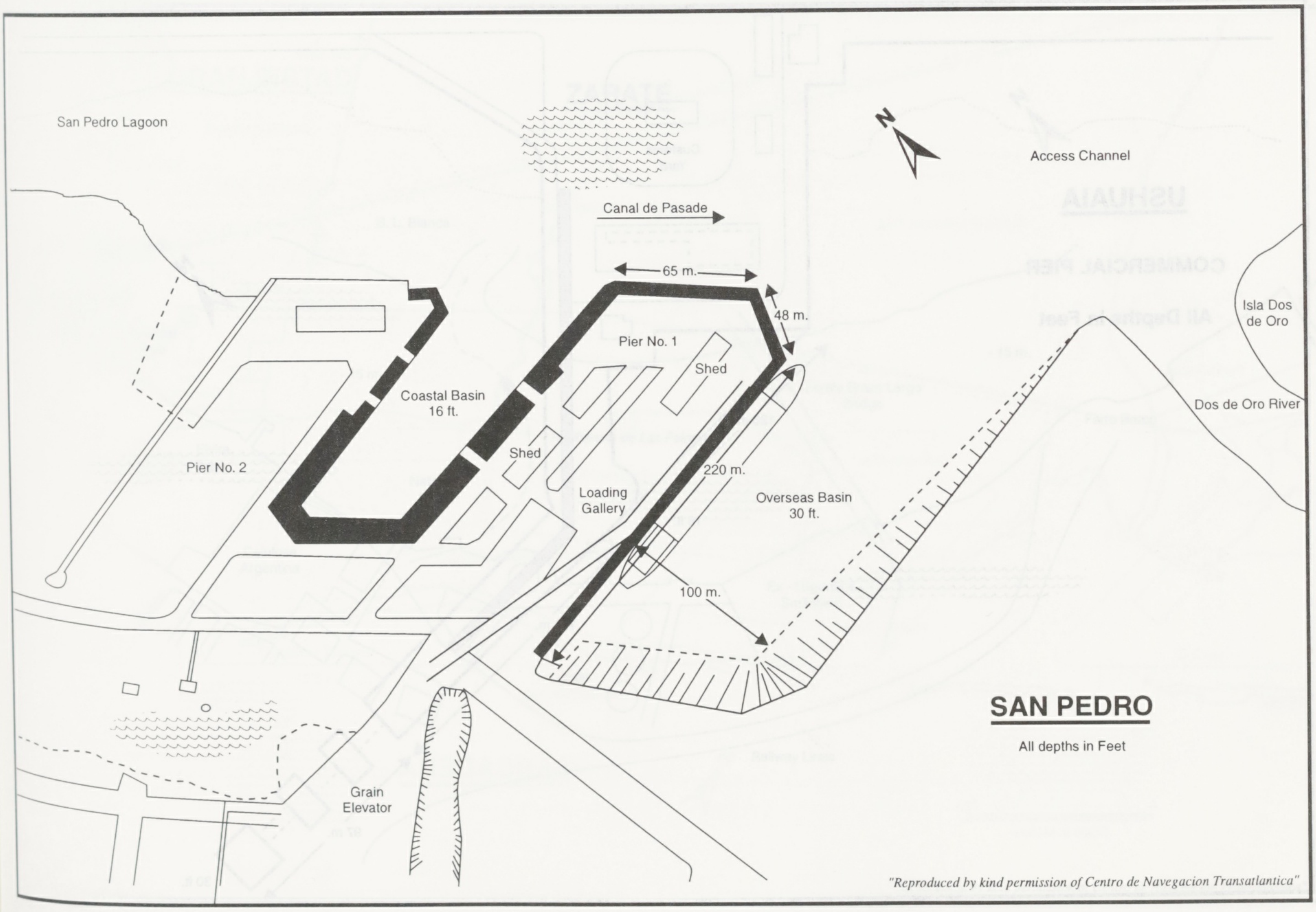

Dolphin
Footway
62 m.
Dolphin
Jetty
100 m.
Yard
Shed
Shed

SAN LORENZO


N
440 km.
447 km.
Principal Anchorage
Parana River
453 km.
456 km.
Lightening Zone
Auxiliary Anchorage
Port Borghi
Vicentin
Duperial
ACA
YPF
ESSO
Gas
Indo Dempa
El Transito
Nidera
P.A.S.A.
Quebracho Cargill
Resinfor Dreyfus
Terminal VI
GENERAL SAN MARTIN
San Lorenzo Bridge
SAN LORENZO

Berth	*Products*
Terminal VI	Grain
Resinfor Dreyfus	Methanol
Quebracho Cargill	Grain, Vegoil
P.A.S.A. & Dow	Petrochemicals
Nidera	Grain, Vegoil
Indo Dempa	Grain, Vegoil
ACA	Grain, Vegoil
Duperial ICI	Grain, Vegoil
Vicentin	Vegoil-Sulphur
Port Borghi	Sulphuric Acid


SAN NICOLAS
Not to Scale
Parana River
Tanker Zone
Ores and Coal , Ocean vessels self-unloading ore carriers
99 m.
Buitrago Mole for bulk cargoes
320 m.
Self Unloading Coal and Ore Carriers
Ore and Coal Yard
537 m.
220 m.
200 m.
General Cargo
Ramallo Brook
Customs Wharf
Grain Board Elevator Wharf
Power Plant Wharf
Somisa Steel Mill


San Pedro Lagoon
Access Channel
Canal de Pasade
65 m.
48 m.
Isla Dos de Oro
Pier No. 1
Shed
Dos de Oro River
Coastal Basin 16 ft.
Shed
Pier No. 2
Loading Gallery
220 m.
Overseas Basin 30 ft.
100 m.
SAN PEDRO
All depths in Feet
Grain Elevator

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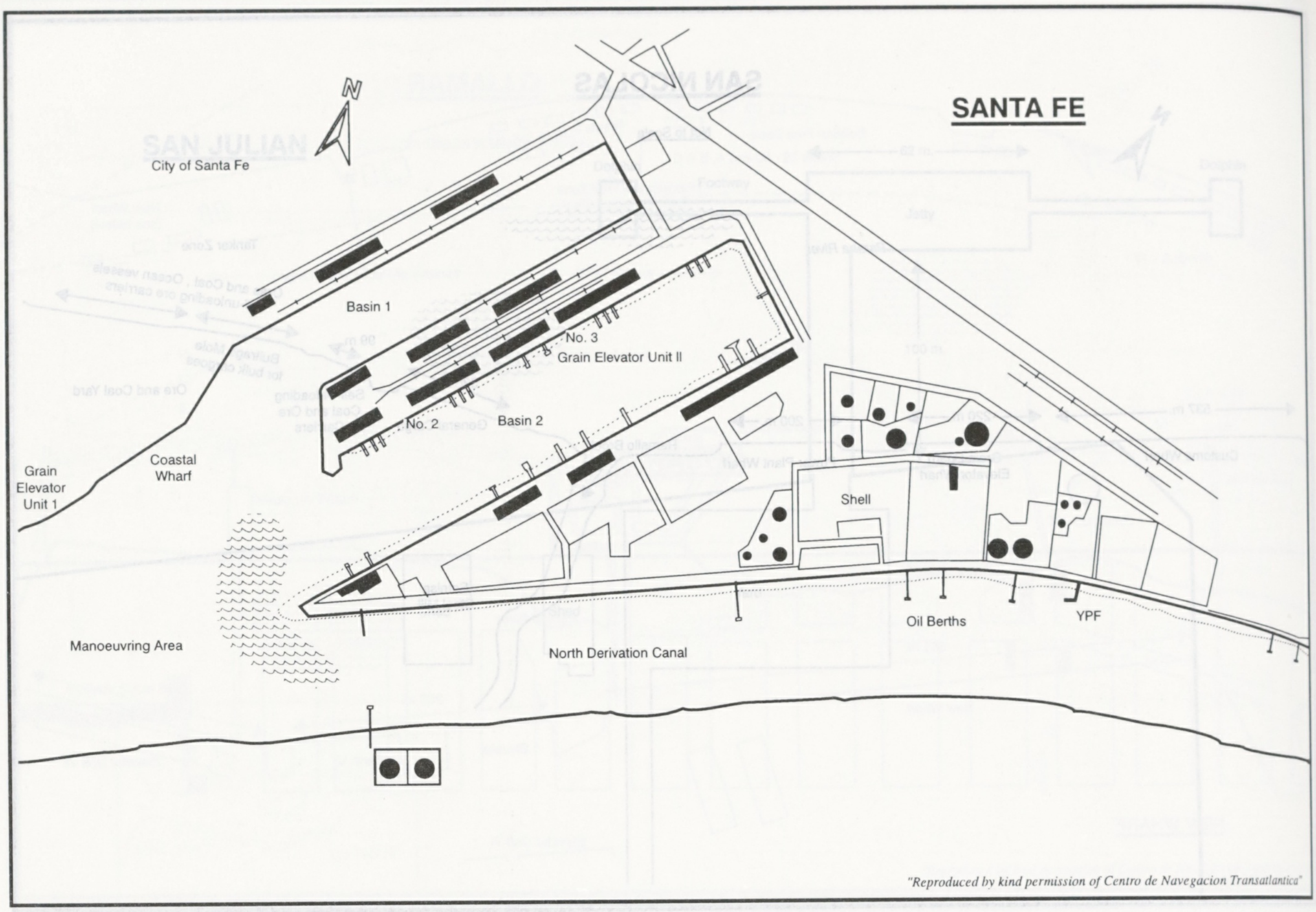
SANTA FE
N
City of Santa Fe
Basin 1
No. 3
Grain Elevator Unit II
No. 2
Basin 2
Grain
Elevator
Unit 1
Coastal
Wharf
Shell
Manoeuvring Area
North Derivation Canal
Oil Berths
YPF

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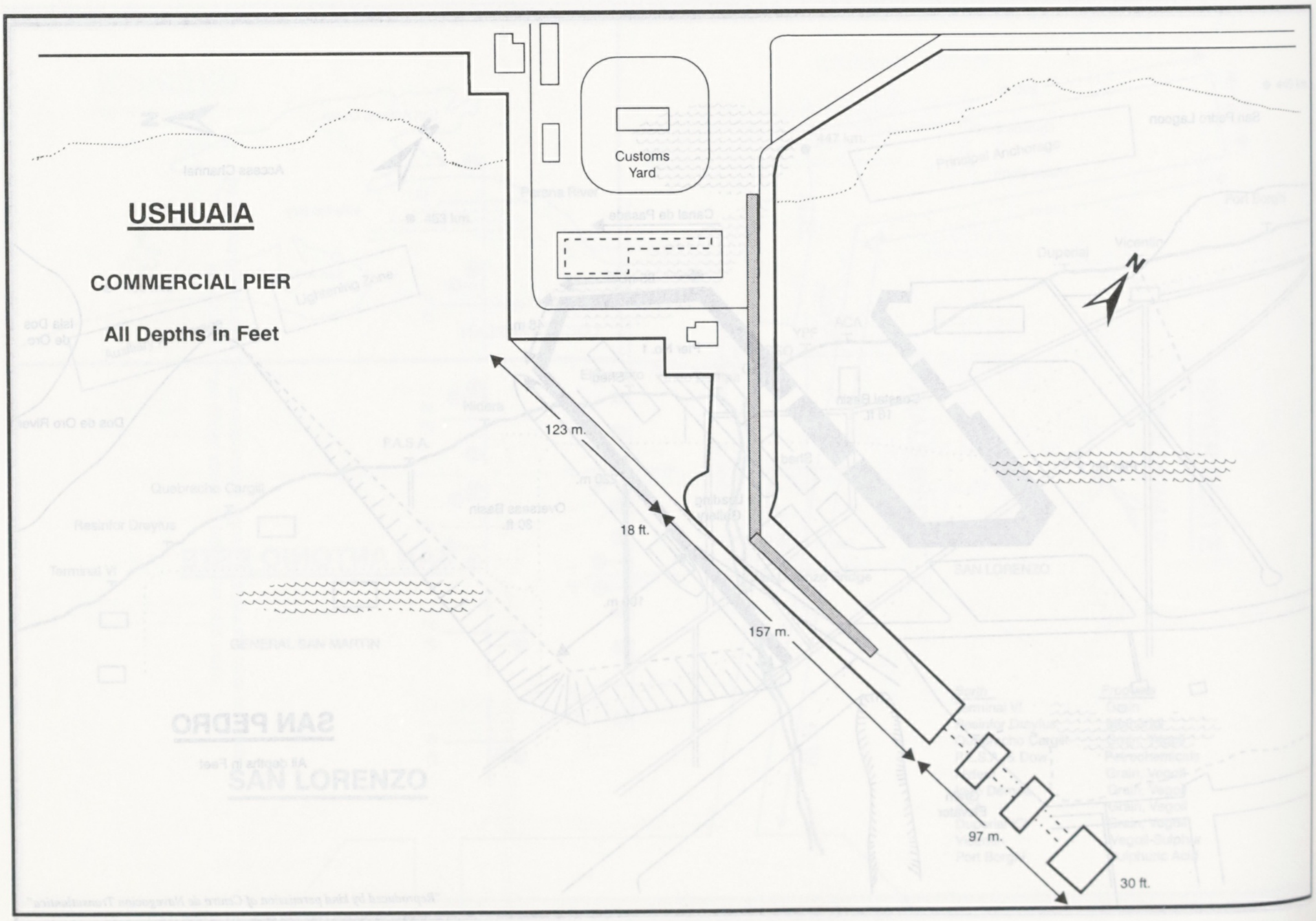
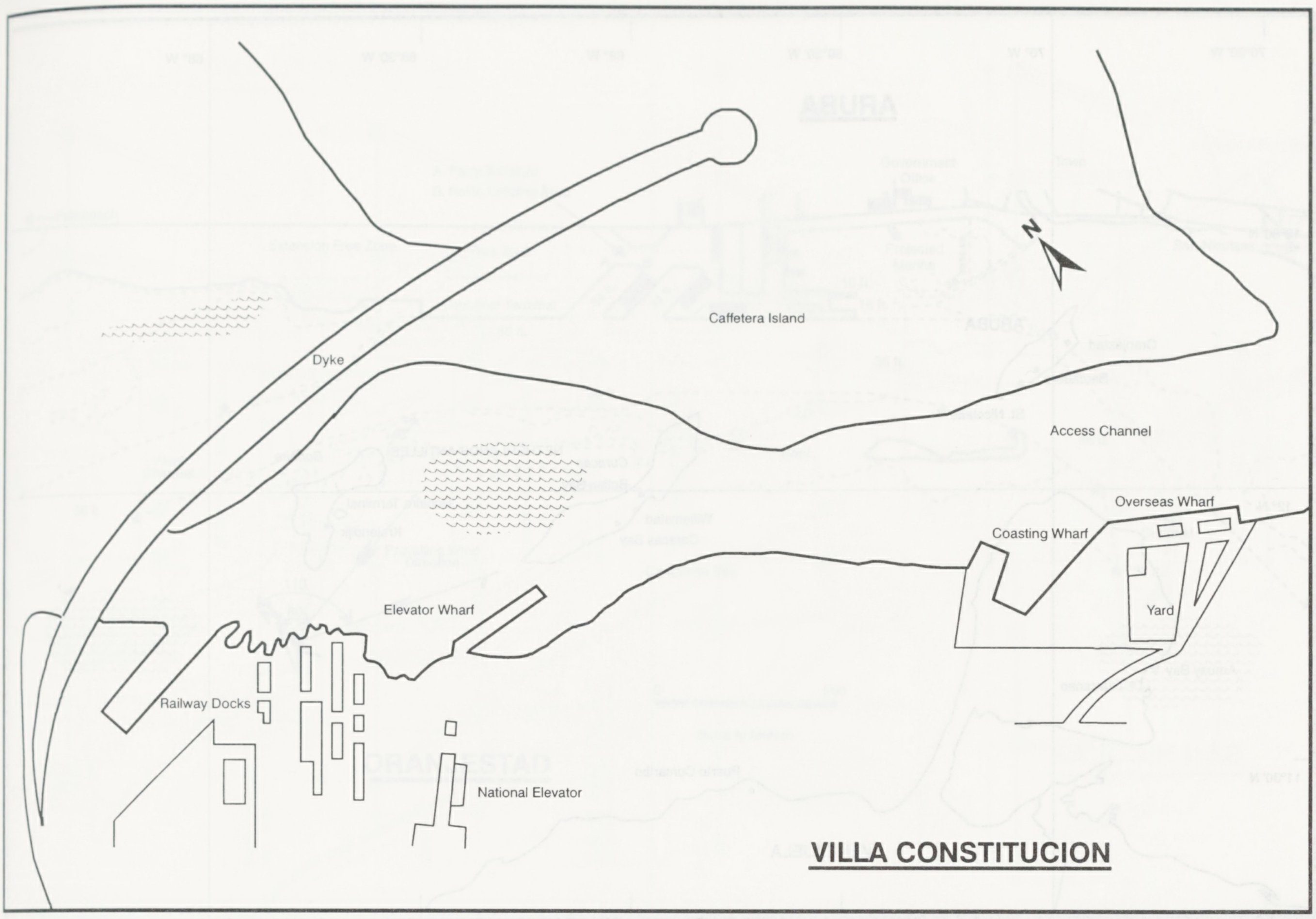
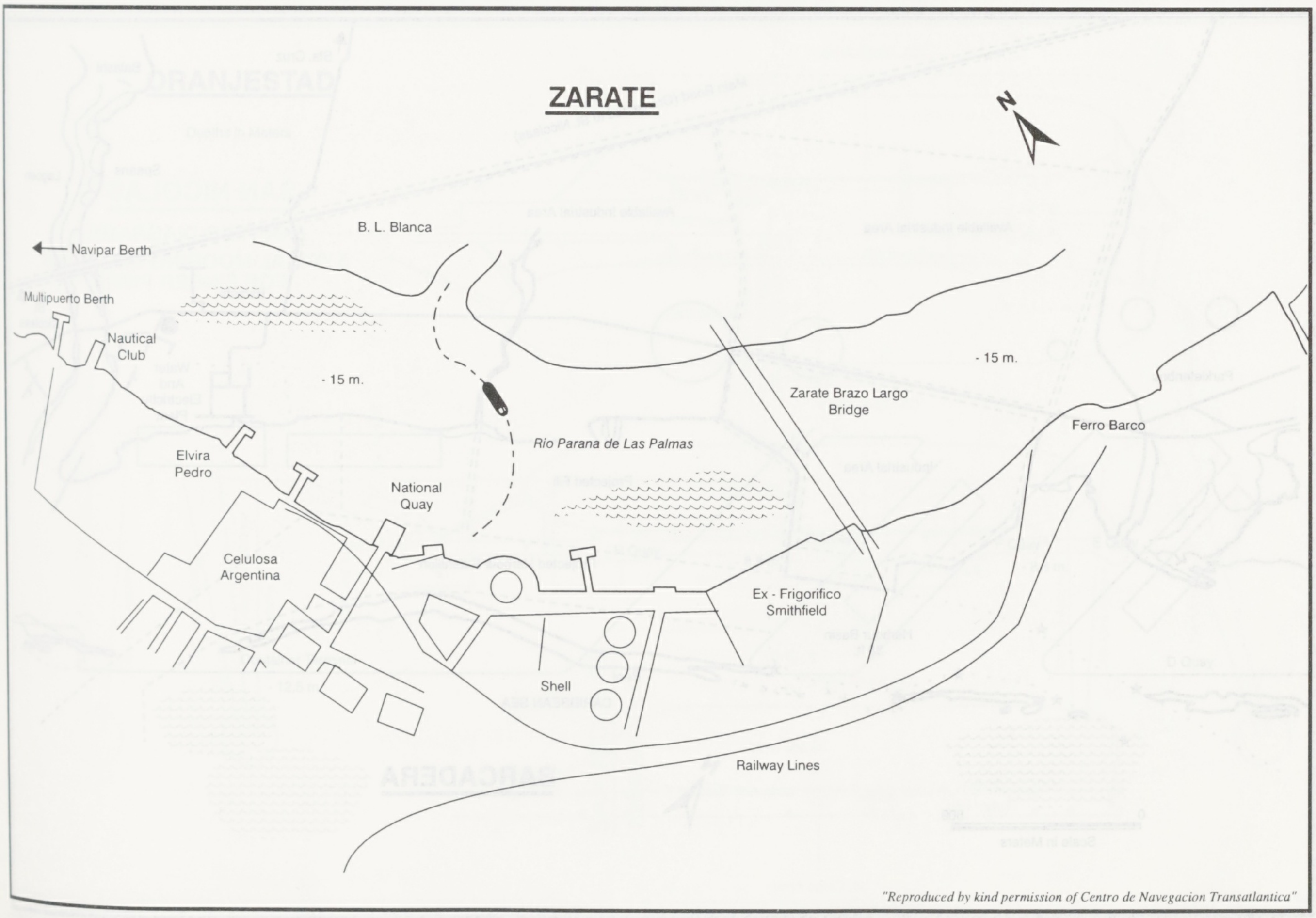

USHUAIA
COMMERCIAL PIER
All Depths in Feet
Customs
Yard
N
123 m.
18 ft.
157 m.
97 m.
30 ft.


Caffetera Island
Dyke
Access Channel
Overseas Wharf
Coasting Wharf
Elevator Wharf
Yard
Railway Docks
National Elevator
VILLA CONSTITUCION
N


ZARATE
N
B. L. Blanca
Navipar Berth
Multipuerto Berth
Nautical Club
- 15 m.
- 15 m.
Zarate Brazo Largo Bridge
Ferro Barco
Rio Parana de Las Palmas
Elvira Pedro
National Quay
Celulosa Argentina
Ex - Frigorifico Smithfield
Shell
Railway Lines

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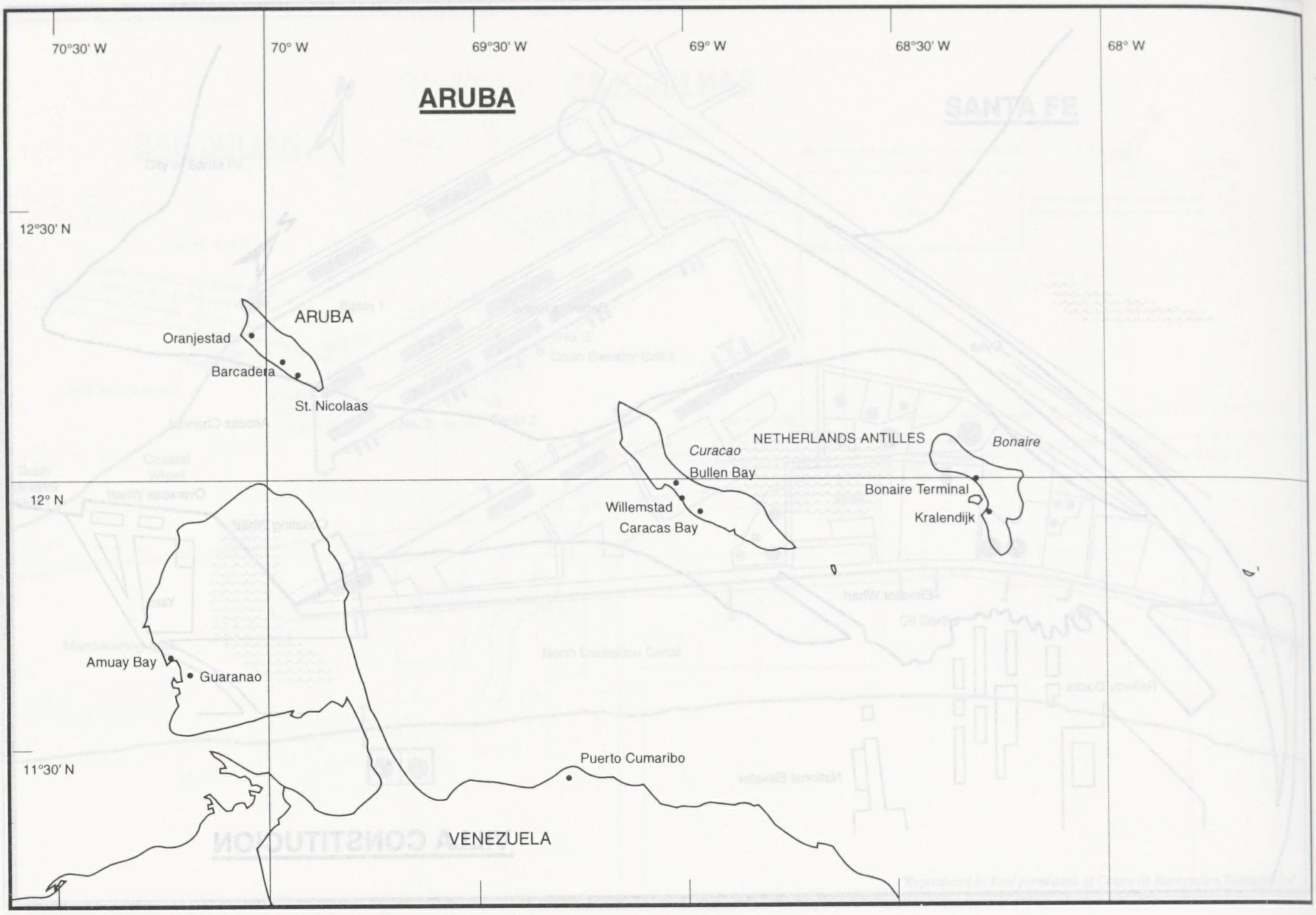
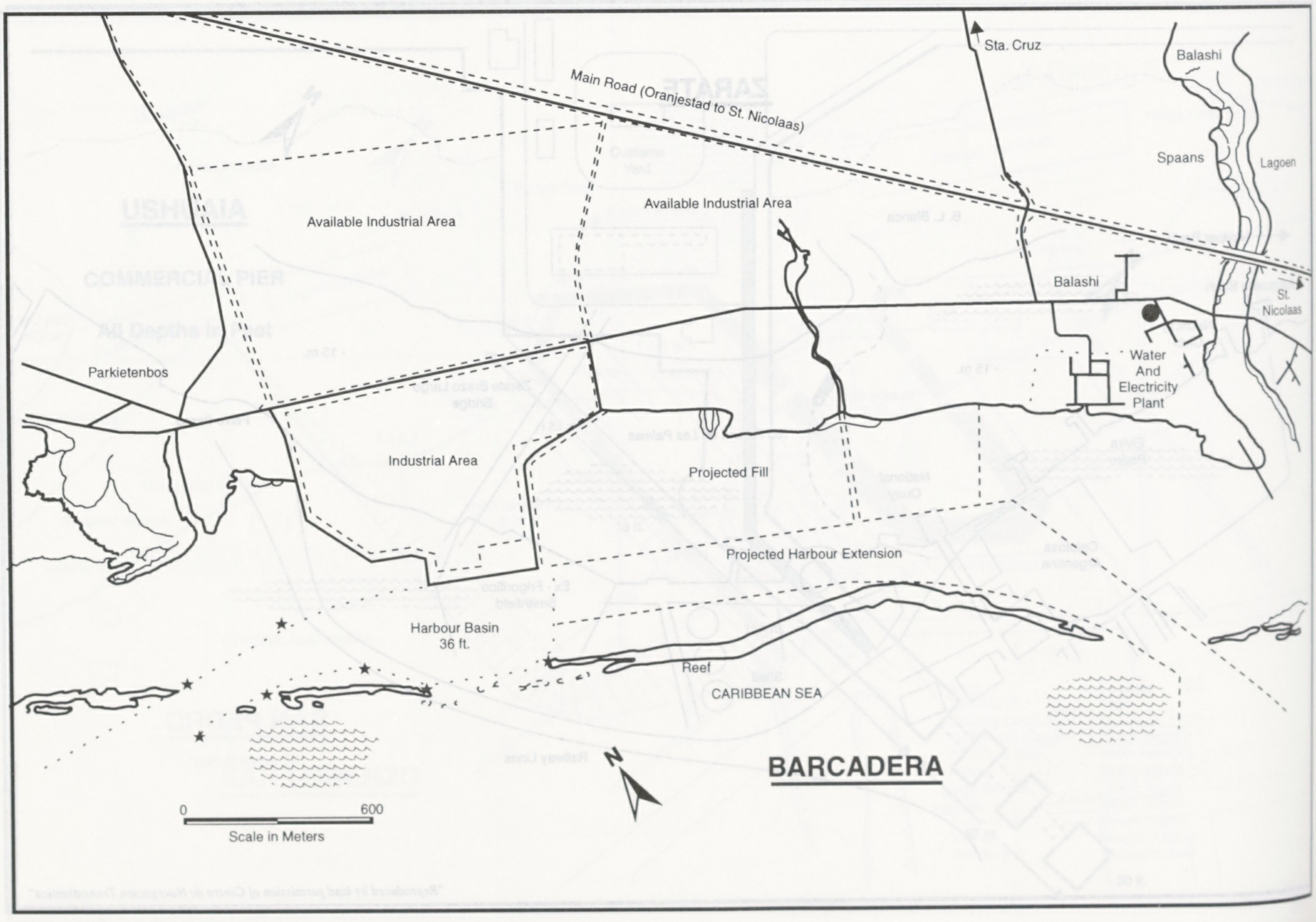
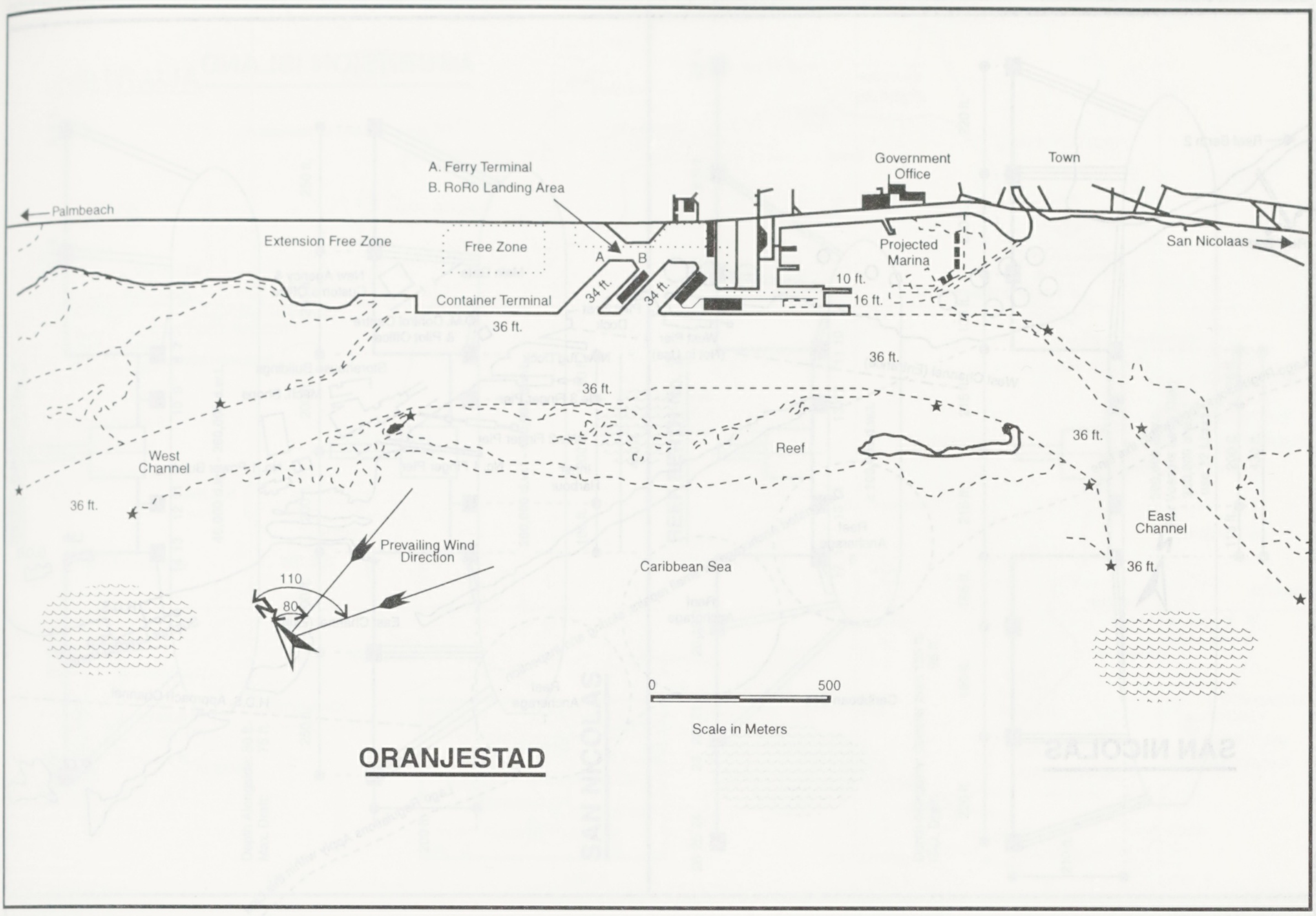
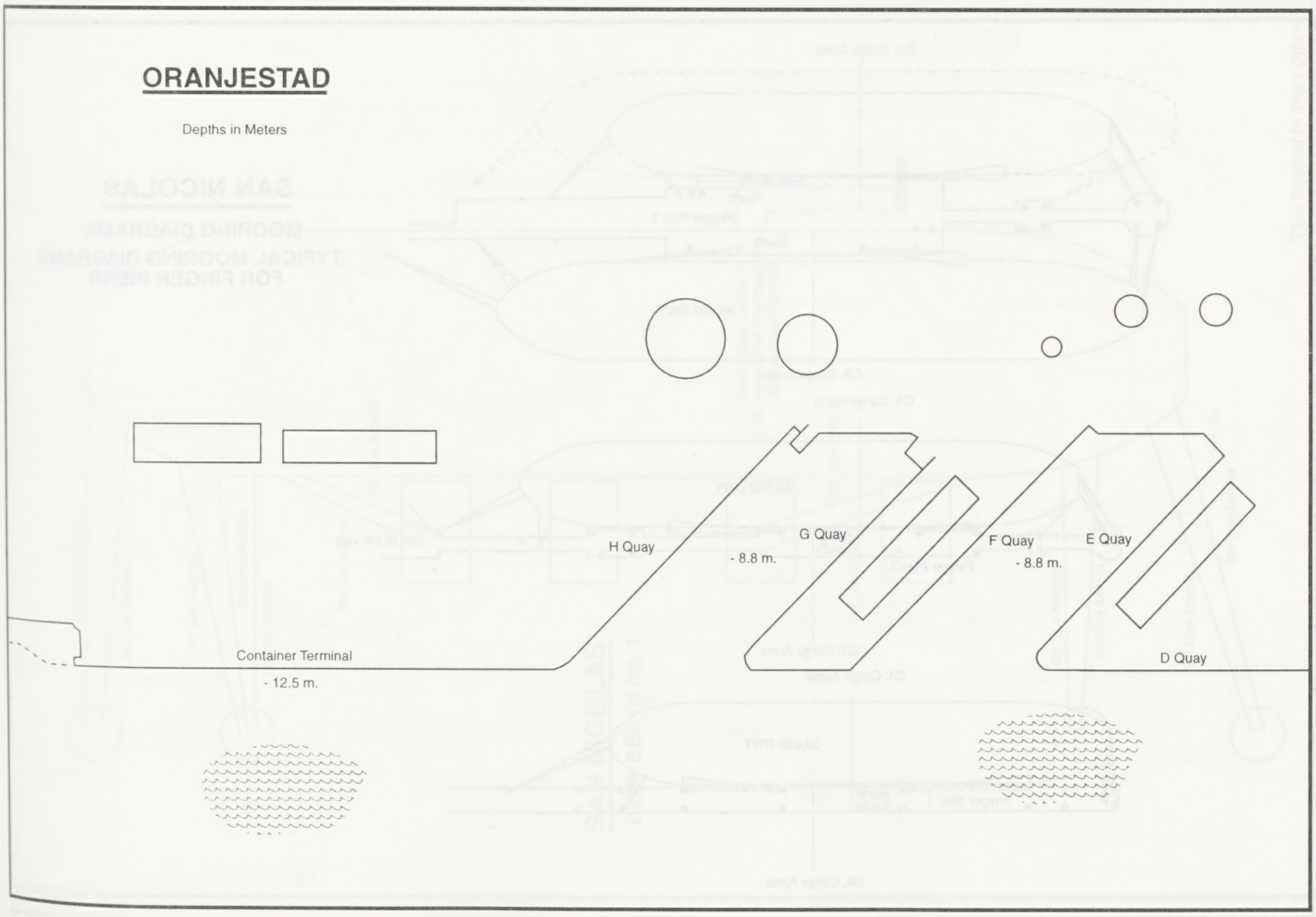
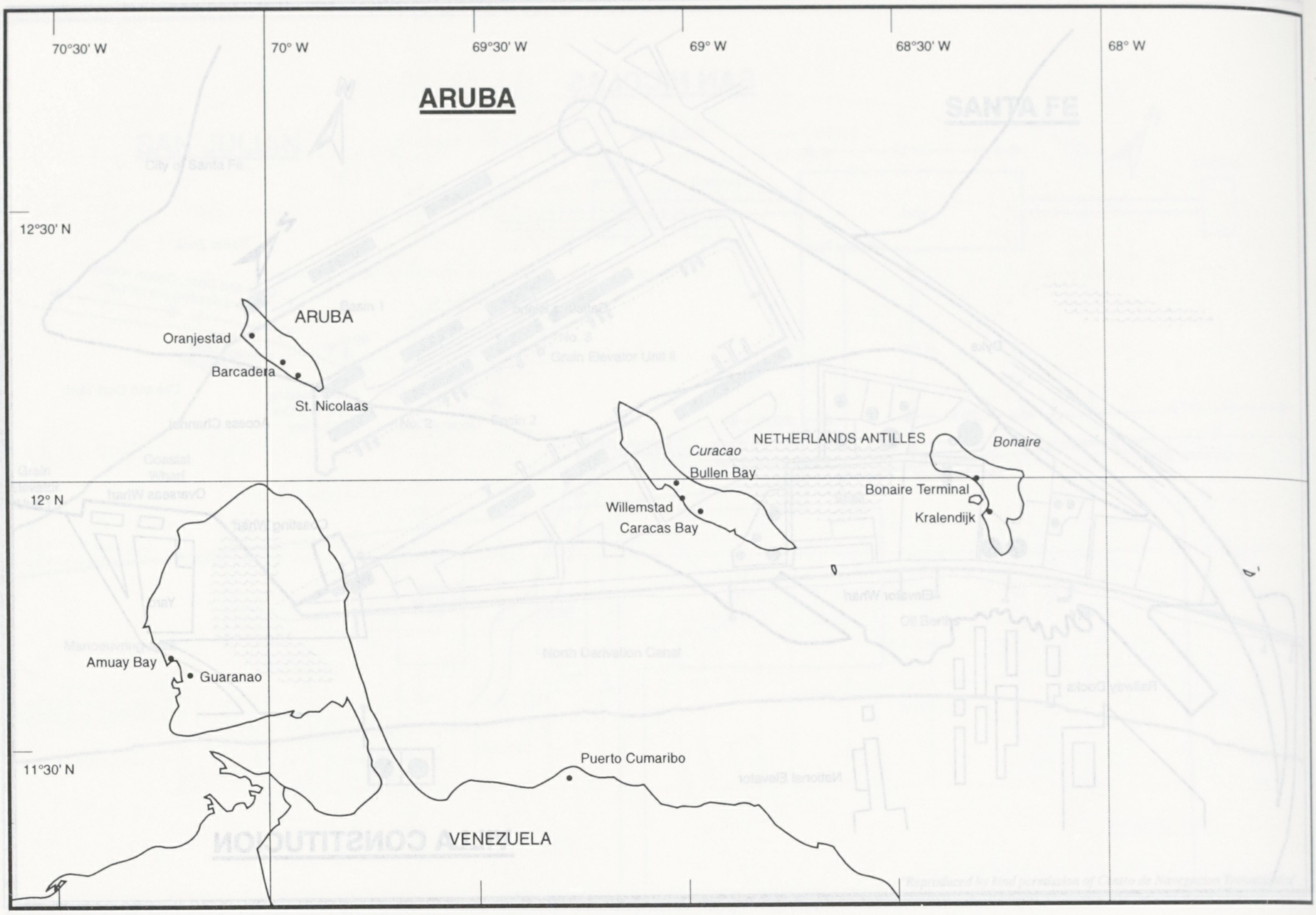
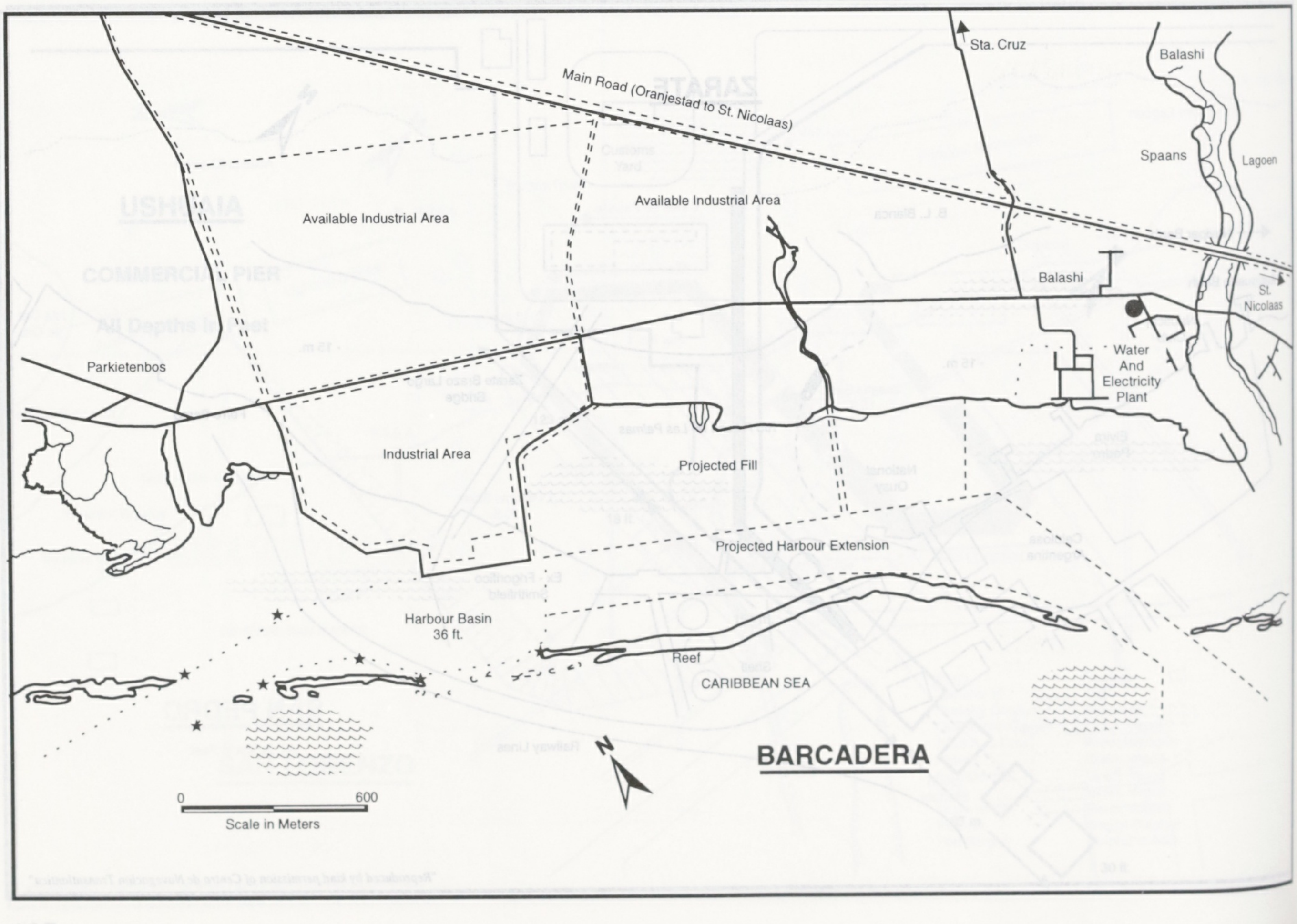

70°30' W
70° W
69°30' W
69° W
68°30' W
68° W
ARUBA
12°30' N
ARUBA
Oranjestad
Barcadera
St. Nicolaas
Curacao
NETHERLANDS ANTILLES
Bonaire
Bullen Bay
Bonaire Terminal
Willemstad
Kralendijk
Caracas Bay
12° N
Amuay Bay
Guaranao
Puerto Cumaribo
11°30' N
VENEZUELA

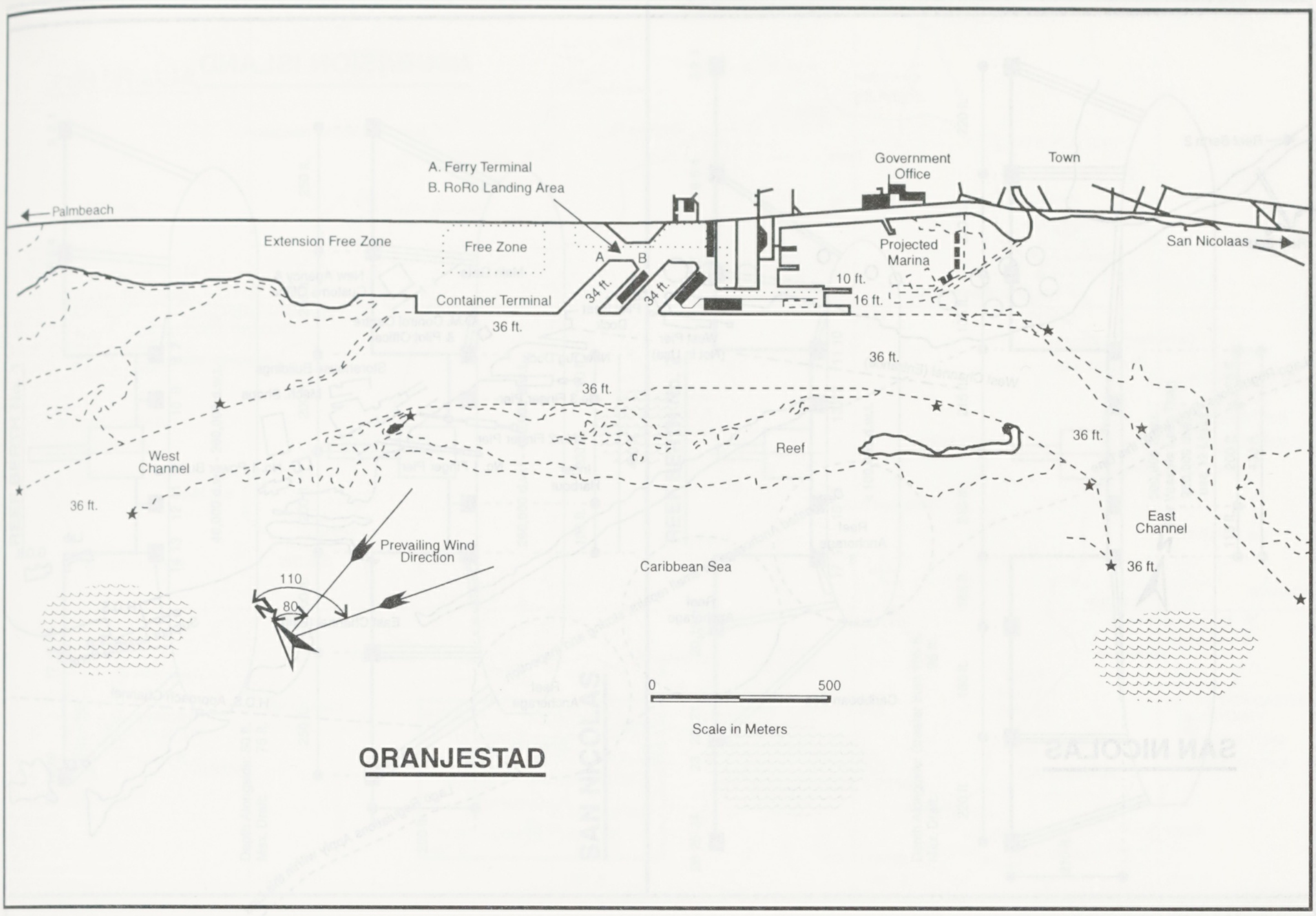

Sta. Cruz
Balashi
Main Road (Oranjestad to St. Nicolaas)
Spaans
Lagoen
Available Industrial Area
Available Industrial Area
Balashi
St. Nicolaas
Parkietenbos
Water And Electricity Plant
Industrial Area
Projected Fill
Projected Harbour Extension
Harbour Basin 36 ft.
Reef
CARIBBEAN SEA
N
BARCADERA
0
600
Scale in Meters

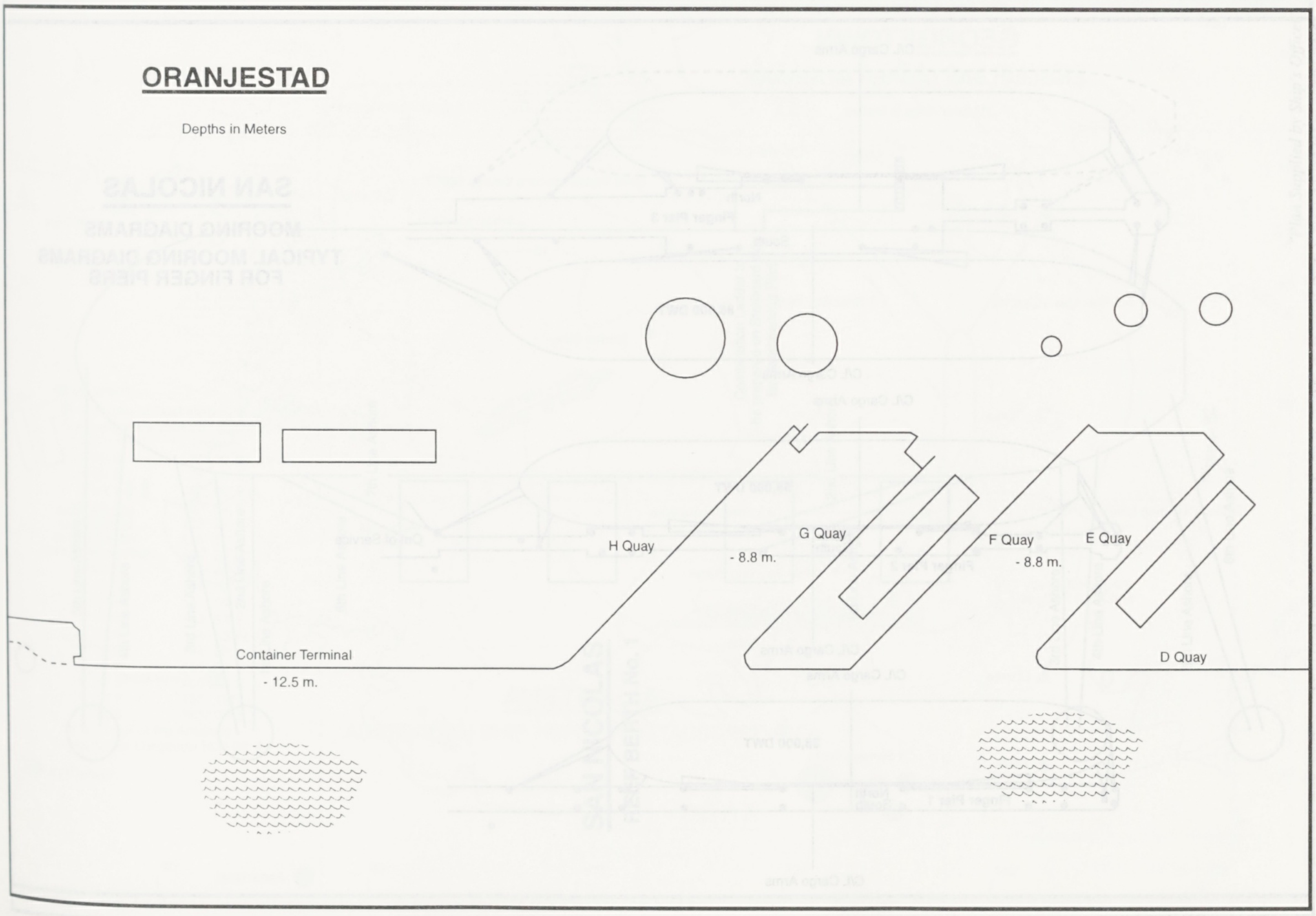

A. Ferry Terminal
B. RoRo Landing Area
Government Office
Town
Palmbeach
Extension Free Zone
Free Zone
A
B
Projected Marina
San Nicolaas
10 ft.
16 ft.
34 ft.
34 ft.
Container Terminal
36 ft.
36 ft.
36 ft.
Reef
36 ft.
West Channel
36 ft.
East Channel
36 ft.
Prevailing Wind Direction
110
80
Caribbean Sea
0
500
Scale in Meters
ORANJESTAD

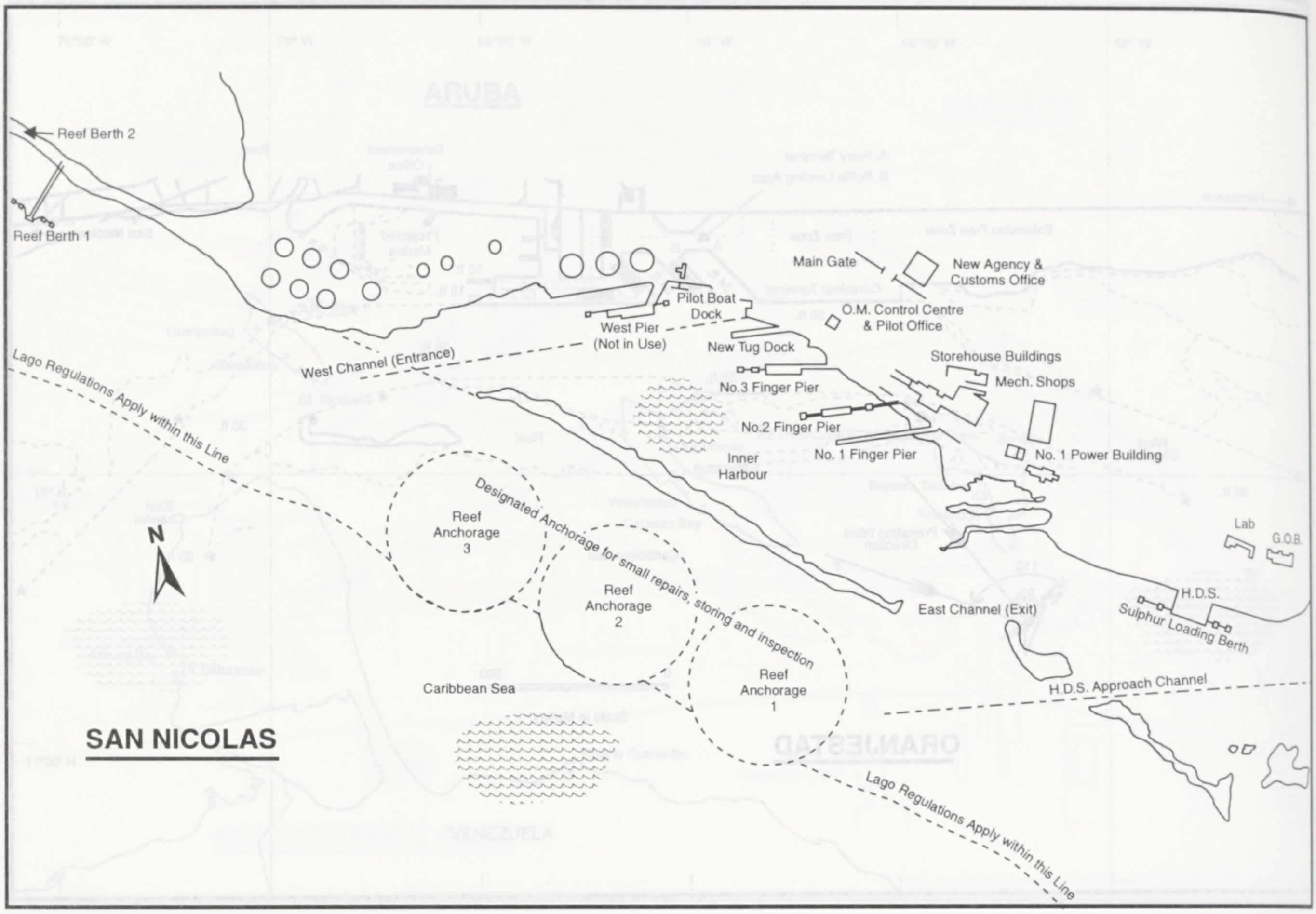

ORANJESTAD
Depths in Meters
H Quay
G Quay
- 8.8 m.
F Quay
- 8.8 m.
E Quay
D Quay
Container Terminal
- 12.5 m.

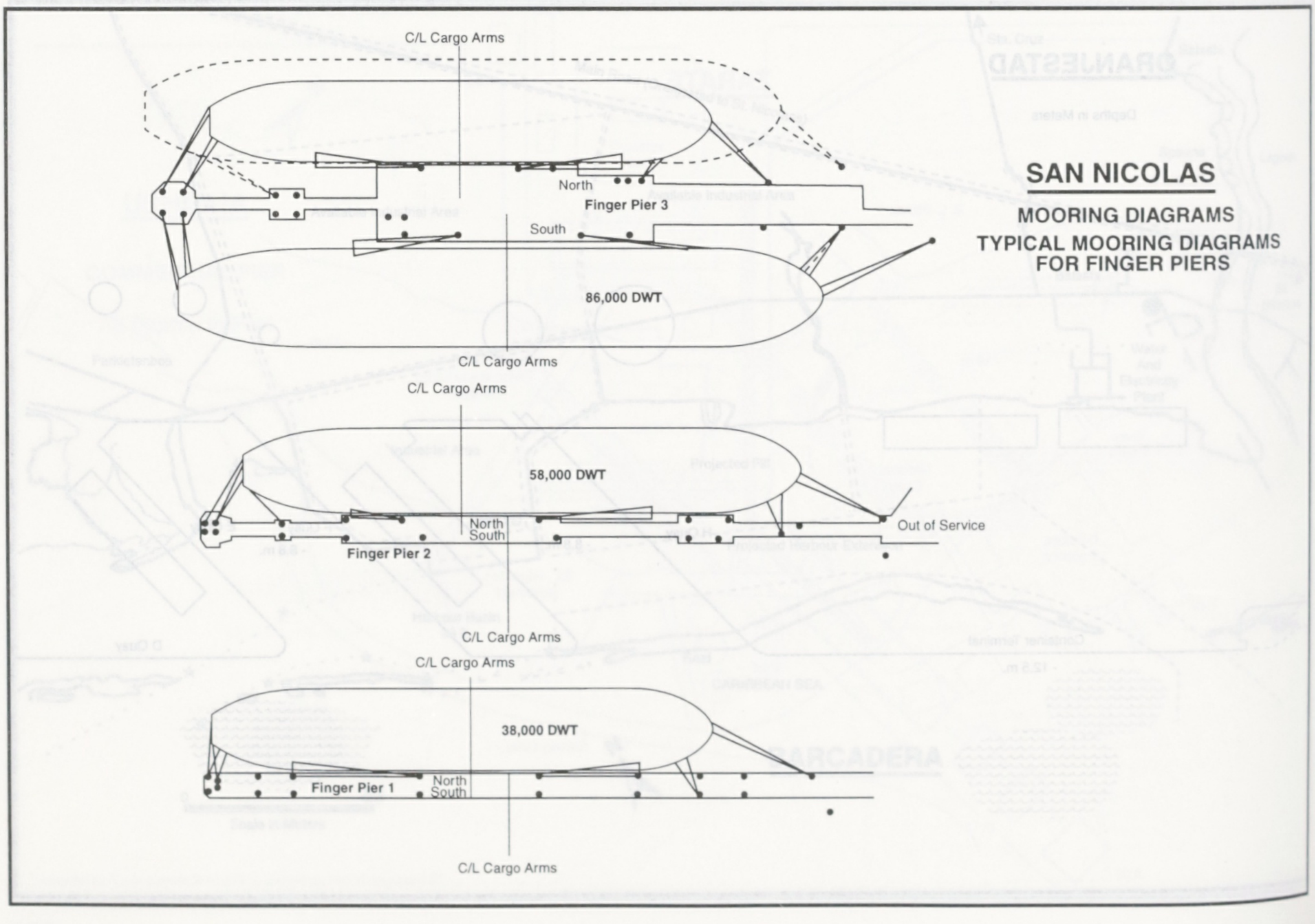

70°30' W
70° W
69°30' W
69° W
68°30' W
68° W
ARUBA
12°30' N
ARUBA
Oranjestad
Barcadera
St. Nicolaas
Curacao
NETHERLANDS ANTILLES
Bonaire
Bullen Bay
Bonaire Terminal
Willemstad
Caracas Bay
Kralendijk
12° N
Amuay Bay
Guaranao
11°30' N
Puerto Cumaribo
VENEZUELA

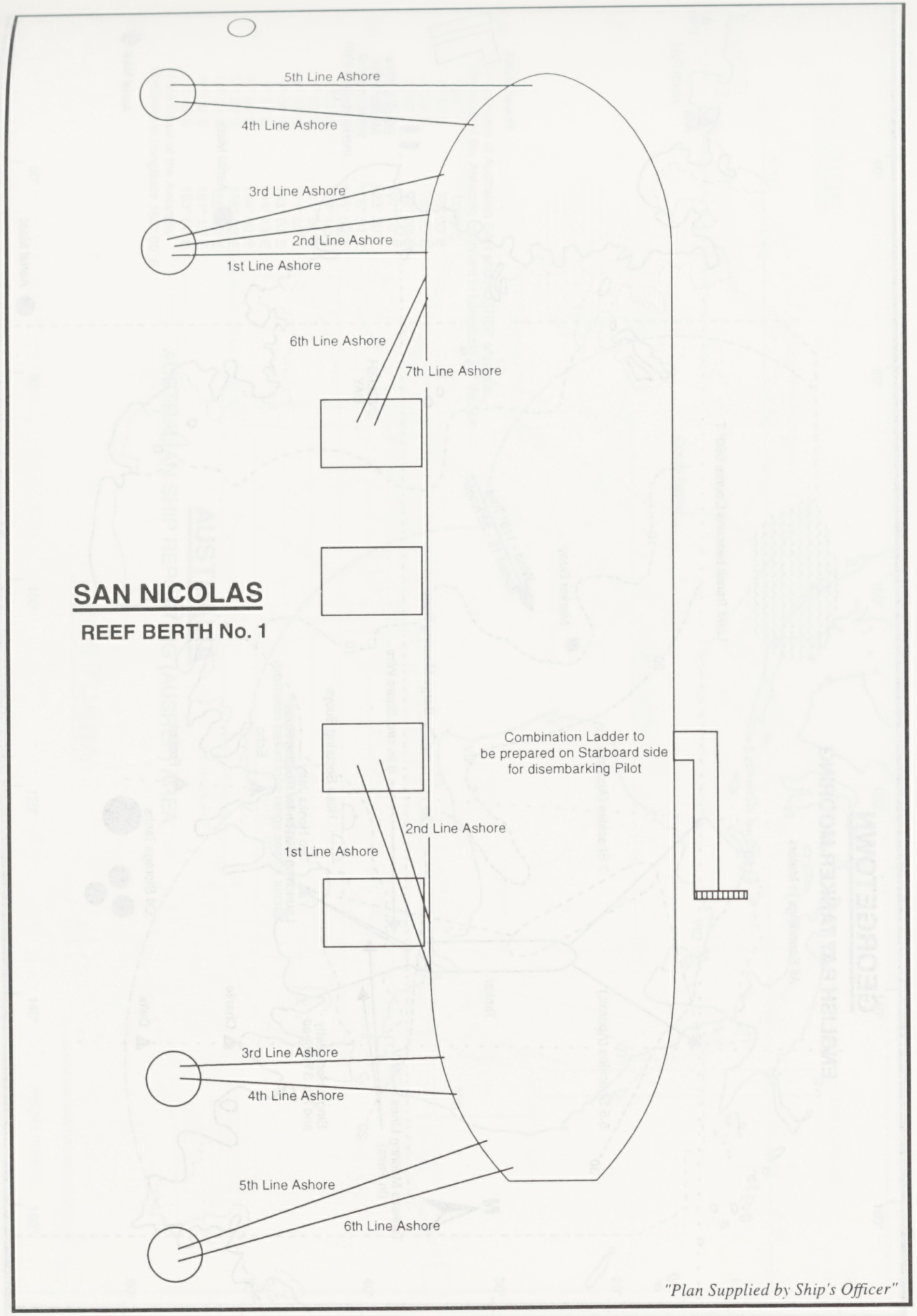

Sta. Cruz
Balashi
Main Road (Oranjestad to St. Nicolaas)
Spaans
Lagoen
Available Industrial Area
Available Industrial Area
Balashi
St. Nicolaas
Parkietenbos
Water And Electricity Plant
Industrial Area
Projected Fill
Projected Harbour Extension
Harbour Basin 36 ft.
Reef
CARIBBEAN SEA
BARCADERA
N
0
600
Scale in Meters


Palmbeach
A. Ferry Terminal
B. RoRo Landing Area
Government Office
Town
San Nicolaas
Extension Free Zone
Free Zone
A
B
Projected Marina
10 ft.
16 ft.
Container Terminal
34 ft.
34 ft.
36 ft.
36 ft.
36 ft.
West Channel
36 ft.
Reef
36 ft.
East Channel
36 ft.
Prevailing Wind Direction
110
80
Caribbean Sea
0
500
Scale in Meters
ORANJESTAD


ORANJESTAD
Depths in Meters
H Quay
G Quay
F Quay
E Quay
- 8.8 m.
- 8.8 m.
Container Terminal
- 12.5 m.
D Quay


Reef Berth 2
Reef Berth 1
Main Gate
New Agency &
Customs Office
Pilot Boat
Dock
O.M. Control Centre
& Pilot Office
West Pier
(Not in Use)
New Tug Dock
West Channel (Entrance)
Storehouse Buildings
Mech. Shops
No.3 Finger Pier
No.2 Finger Pier
No. 1 Finger Pier
No. 1 Power Building
Inner
Harbour
Lago Regulations Apply within this Line
Designated Anchorage for small repairs, storing and inspection
Reef
Anchorage
3
Reef
Anchorage
2
Reef
Anchorage
1
N
Lab
G.O.B.
H.D.S.
Sulphur Loading Berth
East Channel (Exit)
H.D.S. Approach Channel
Caribbean Sea
SAN NICOLAS
Lago Regulations Apply within this Line


SAN NICOLAS
MOORING DIAGRAMS
TYPICAL MOORING DIAGRAMS
FOR FINGER PIERS
C/L Cargo Arms
North
Finger Pier 3
South
86,000 DWT
C/L Cargo Arms
C/L Cargo Arms
58,000 DWT
North
South
Finger Pier 2
Out of Service
C/L Cargo Arms
C/L Cargo Arms
38,000 DWT
Finger Pier 1
North
South
C/L Cargo Arms



5th Line Ashore
4th Line Ashore
3rd Line Ashore
2nd Line Ashore
1st Line Ashore
6th Line Ashore
7th Line Ashore
2nd Line Ashore
1st Line Ashore
3rd Line Ashore
4th Line Ashore
5th Line Ashore
6th Line Ashore

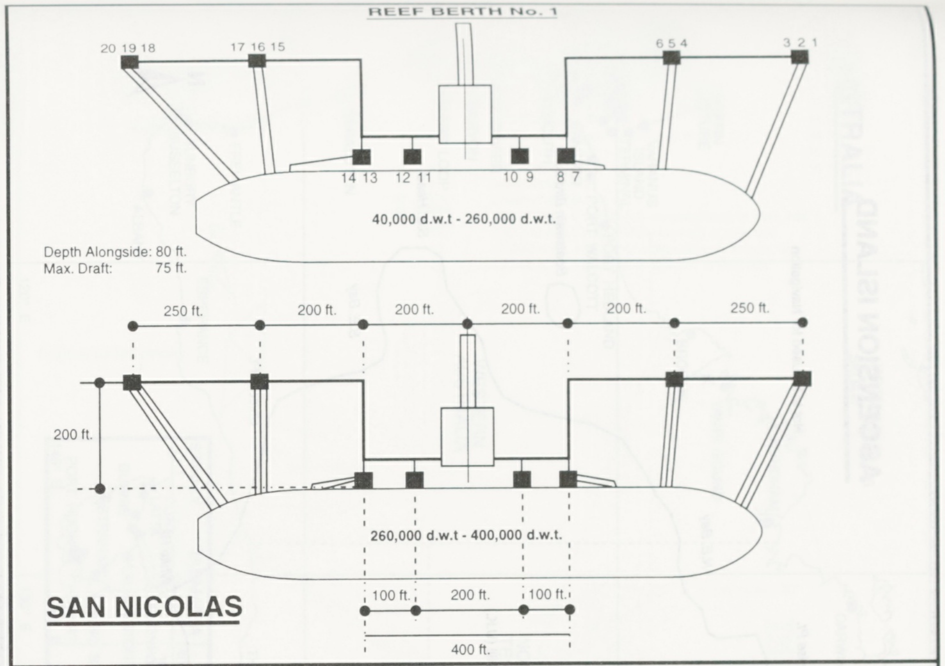
SAN NICOLAS

REEF BERTH No. 1

Combination Ladder to be prepared on Starboard side for disembarking Pilot

"Plan Supplied by Ship's Officer"

REEF BERTH No. 1

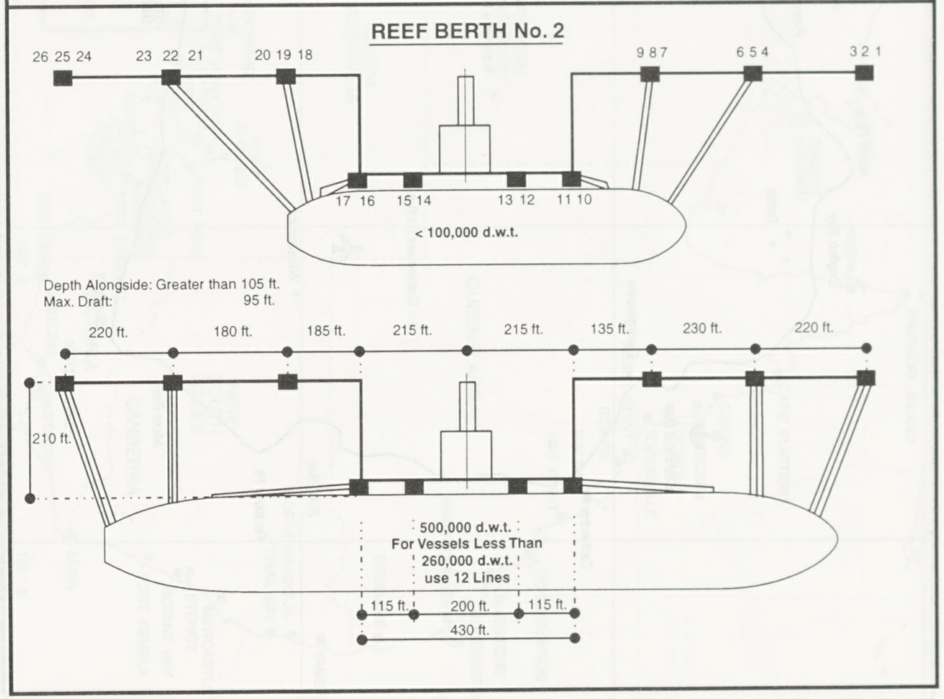


20 19 18
17 16 15
6 5 4
3 2 1
14 13
12 11
10 9
8 7
40,000 d.w.t - 260,000 d.w.t.
250 ft.
200 ft.
200 ft.
200 ft.
200 ft.
250 ft.
200 ft.
260,000 d.w.t - 400,000 d.w.t.
100 ft.
200 ft.
100 ft.
400 ft.

Depth Alongside: 80 ft.
Max. Draft: 75 ft.

SAN NICOLAS

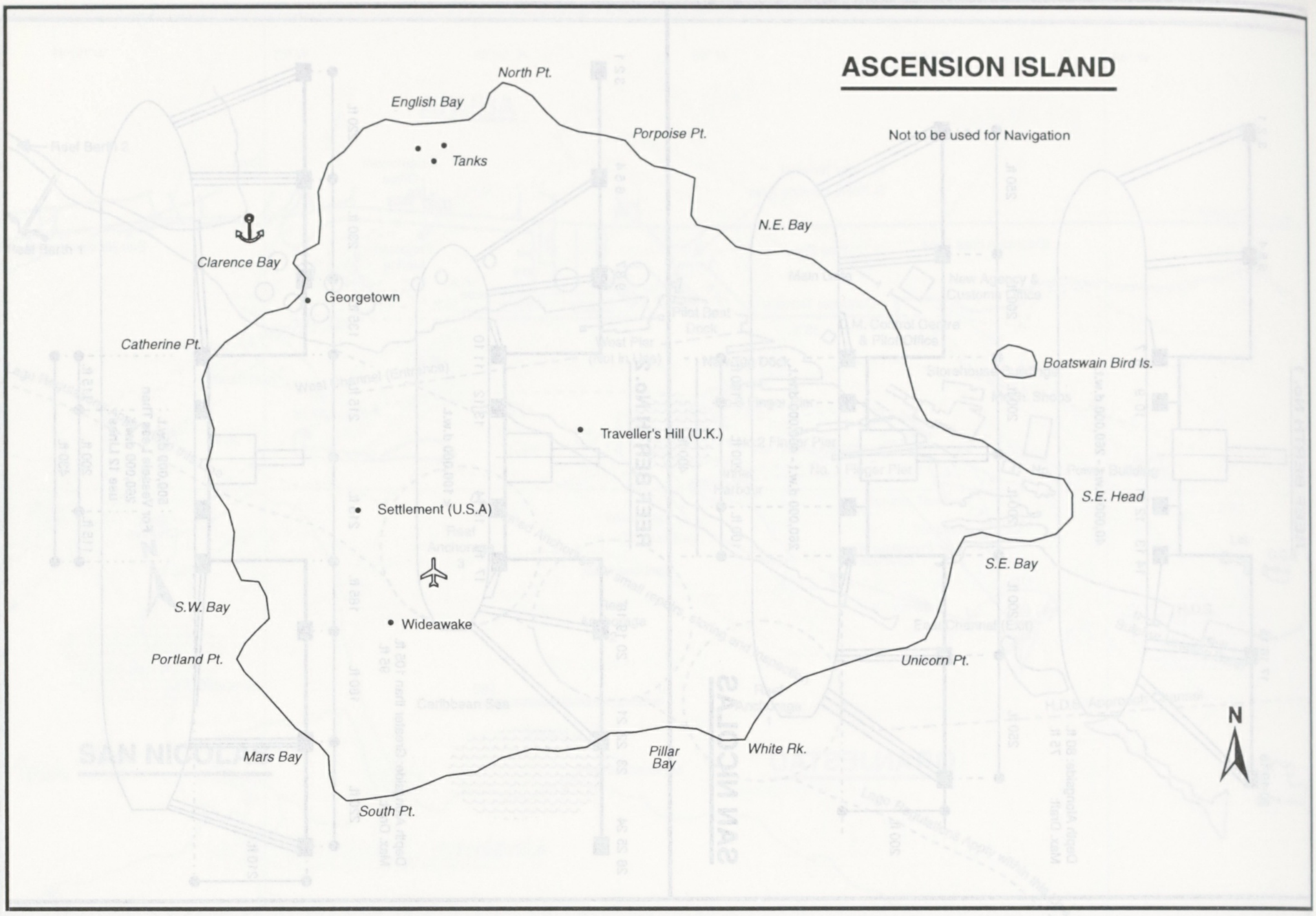
REEF BERTH No. 2

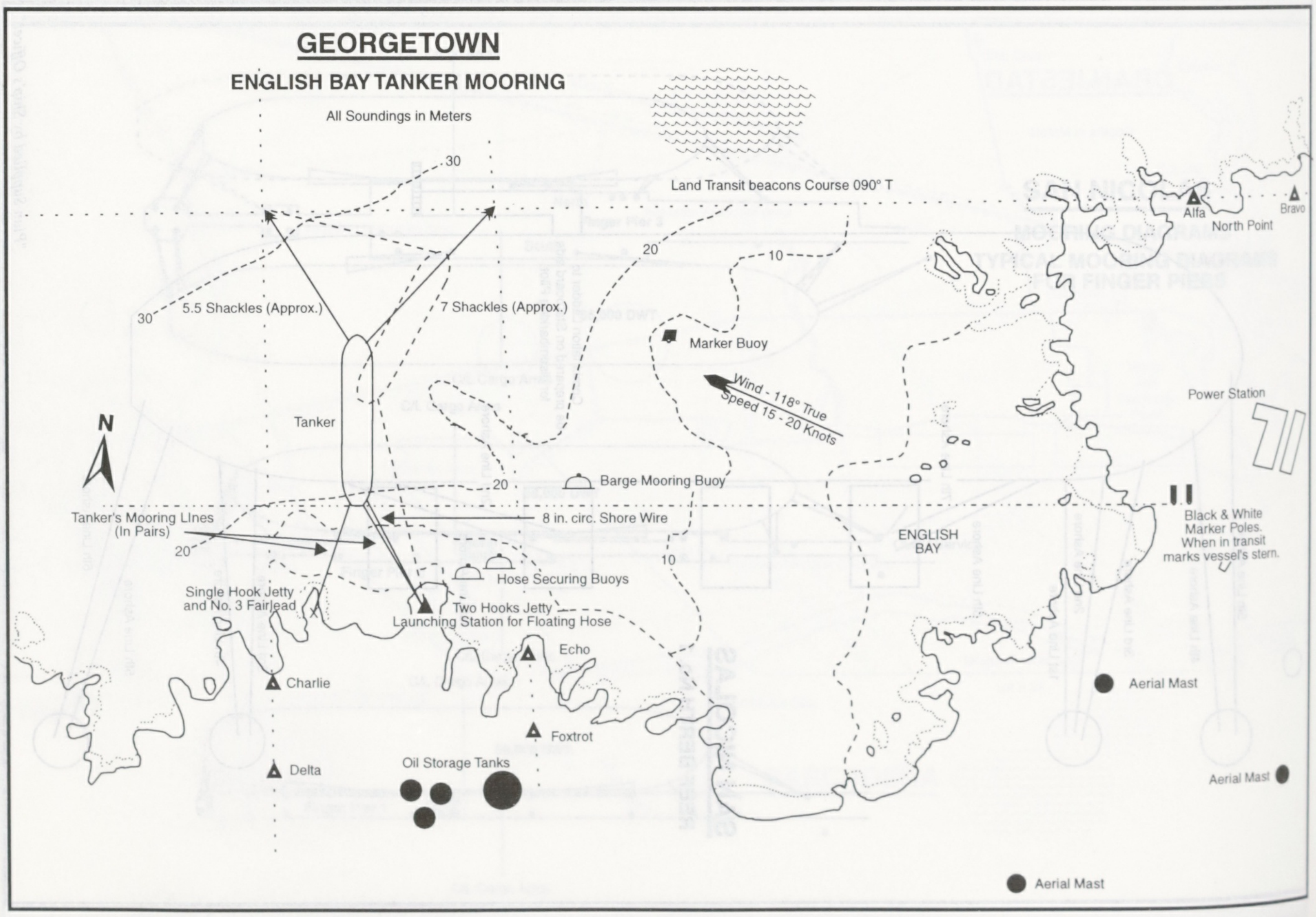


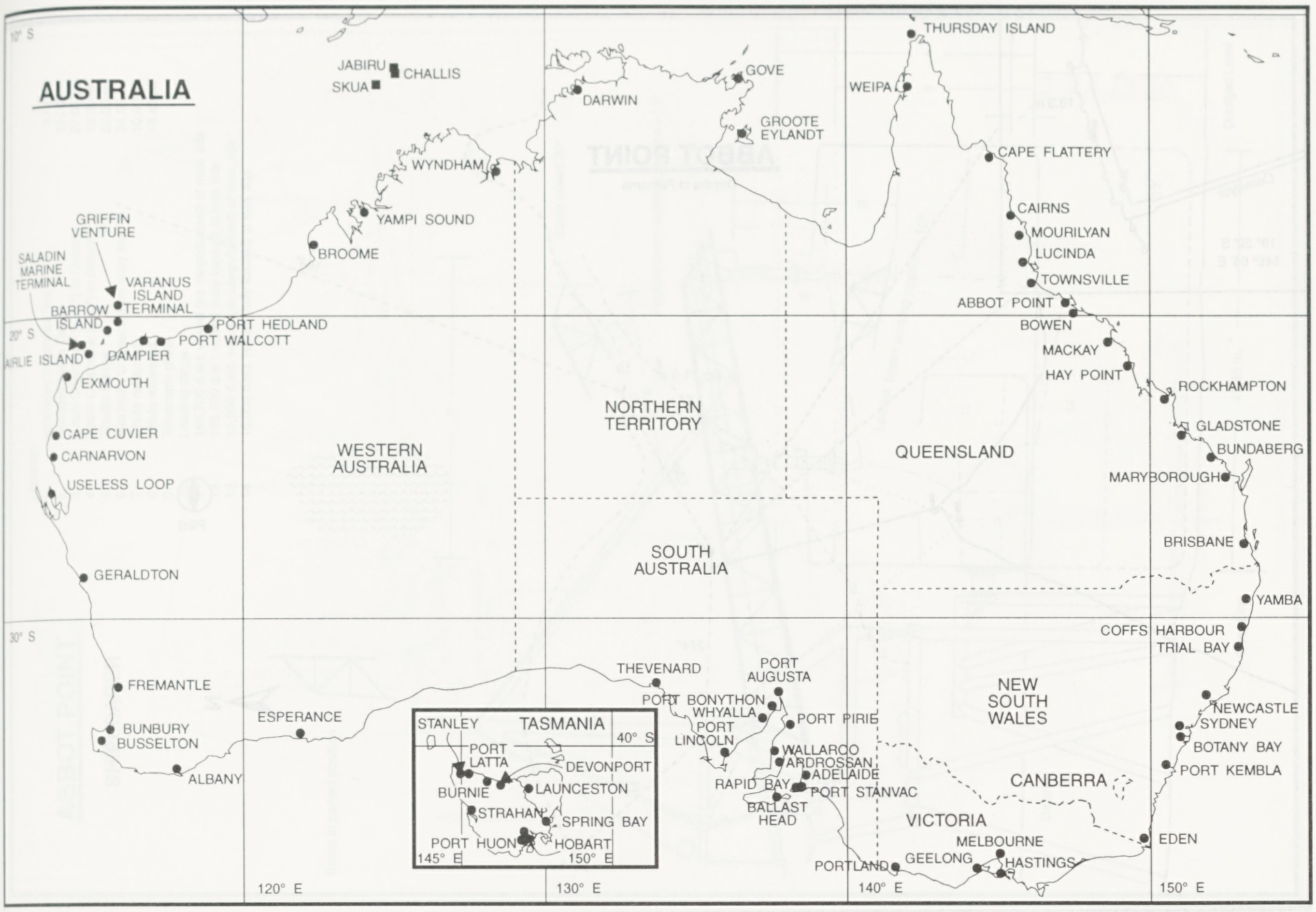
26 25 24
23 22 21
20 19 18
9 8 7
6 5 4
3 2 1
17 16
15 14
13 12
11 10
< 100,000 d.w.t.
220 ft.
180 ft.
185 ft.
215 ft.
215 ft.
135 ft.
230 ft.
220 ft.
210 ft.
115 ft.
200 ft.
115 ft.
430 ft.

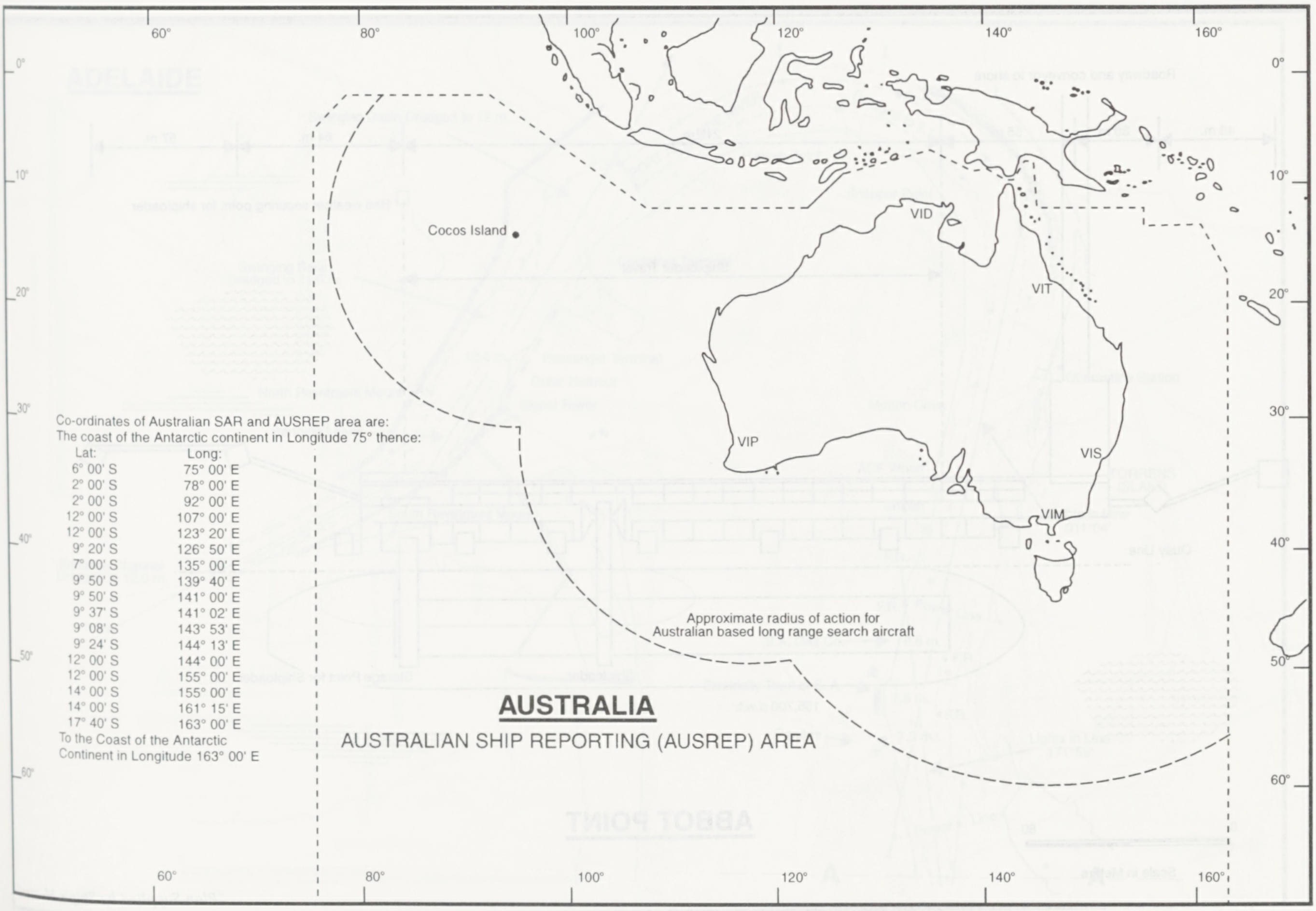
Depth Alongside: Greater than 105 ft.
Max. Draft: 95 ft.

500,000 d.w.t.
For Vessels Less Than 260,000 d.w.t.
use 12 Lines


ASCENSION ISLAND
Not to be used for Navigation
North Pt.
English Bay
Tanks
Porpoise Pt.
N.E. Bay
Clarence Bay
Georgetown
Catherine Pt.
Boatswain Bird Is.
Traveller's Hill (U.K.)
S.E. Head
Settlement (U.S.A)
S.E. Bay
S.W. Bay
Wideawake
Portland Pt.
Unicorn Pt.
N
Mars Bay
Pillar Bay
White Rk.
South Pt.


GEORGETOWN
ENGLISH BAY TANKER MOORING
All Soundings in Meters
30
Land Transit beacons Course 090° T
Alfa
Bravo
North Point
20
10
30
5.5 Shackles (Approx.)
7 Shackles (Approx.)
Marker Buoy
Power Station
Wind - 118° True
Speed 15 - 20 Knots
Tanker
N
20
Barge Mooring Buoy
Tanker's Mooring Lines
(In Pairs)
8 in. circ. Shore Wire
Black & White Marker Poles. When in transit marks vessel's stern.
20
10
ENGLISH BAY
Single Hook Jetty and No. 3 Fairlead
Hose Securing Buoys
Two Hooks Jetty
Launching Station for Floating Hose
Echo
Charlie
Aerial Mast
Foxtrot
Delta
Oil Storage Tanks
Aerial Mast
Aerial Mast


AUSTRALIA
10° S
20° S
30° S
40° S
120° E
130° E
140° E
150° E
145° E
150° E
JABIRU
CHALLIS
SKUA
DARWIN
GOVE
GROOTE EYLANDT
THURSDAY ISLAND
WEIPA
CAPE FLATTERY
CAIRNS
MOURILYAN
LUCINDA
TOWNSVILLE
ABBOT POINT
BOWEN
MACKAY
HAY POINT
ROCKHAMPTON
GLADSTONE
BUNDABERG
MARYBOROUGH
BRISBANE
YAMBA
COFFS HARBOUR
TRIAL BAY
NEWCASTLE
SYDNEY
BOTANY BAY
PORT KEMBLA
EDEN
CANBERRA
NEW SOUTH WALES
QUEENSLAND
NORTHERN TERRITORY
SOUTH AUSTRALIA
WESTERN AUSTRALIA
VICTORIA
MELBOURNE
HASTINGS
GEELONG
PORTLAND
WYNDHAM
YAMPI SOUND
BROOME
GRIFFIN VENTURE
SALADIN MARINE TERMINAL
VARANUS ISLAND TERMINAL
BARROW ISLAND
AIRLIE ISLAND
DAMPIER
PORT WALCOTT
PORT HEDLAND
EXMOUTH
CAPE CUVIER
CARNARVON
USELESS LOOP
GERALDTON
FREMANTLE
BUNBURY
BUSSELTON
ALBANY
ESPERANCE
THEVENARD
PORT AUGUSTA
PORT BONYTHON
WHYALLA
PORT LINCOLN
PORT PIRIE
WALLAROO
ARDROSSAN
ADELAIDE
PORT STANVAC
RAPID BAY
BALLAST HEAD
TASMANIA
STANLEY
PORT LATTA
DEVONPORT
BURNIE
LAUNCESTON
STRAHAN
SPRING BAY
PORT HUON
HOBART


60°
80°
100°
120°
140°
160°
0°
10°
20°
30°
40°
50°
60°
Cocos Island
VID
VIT
VIP
VIS
VIM
Approximate radius of action for Australian based long range search aircraft

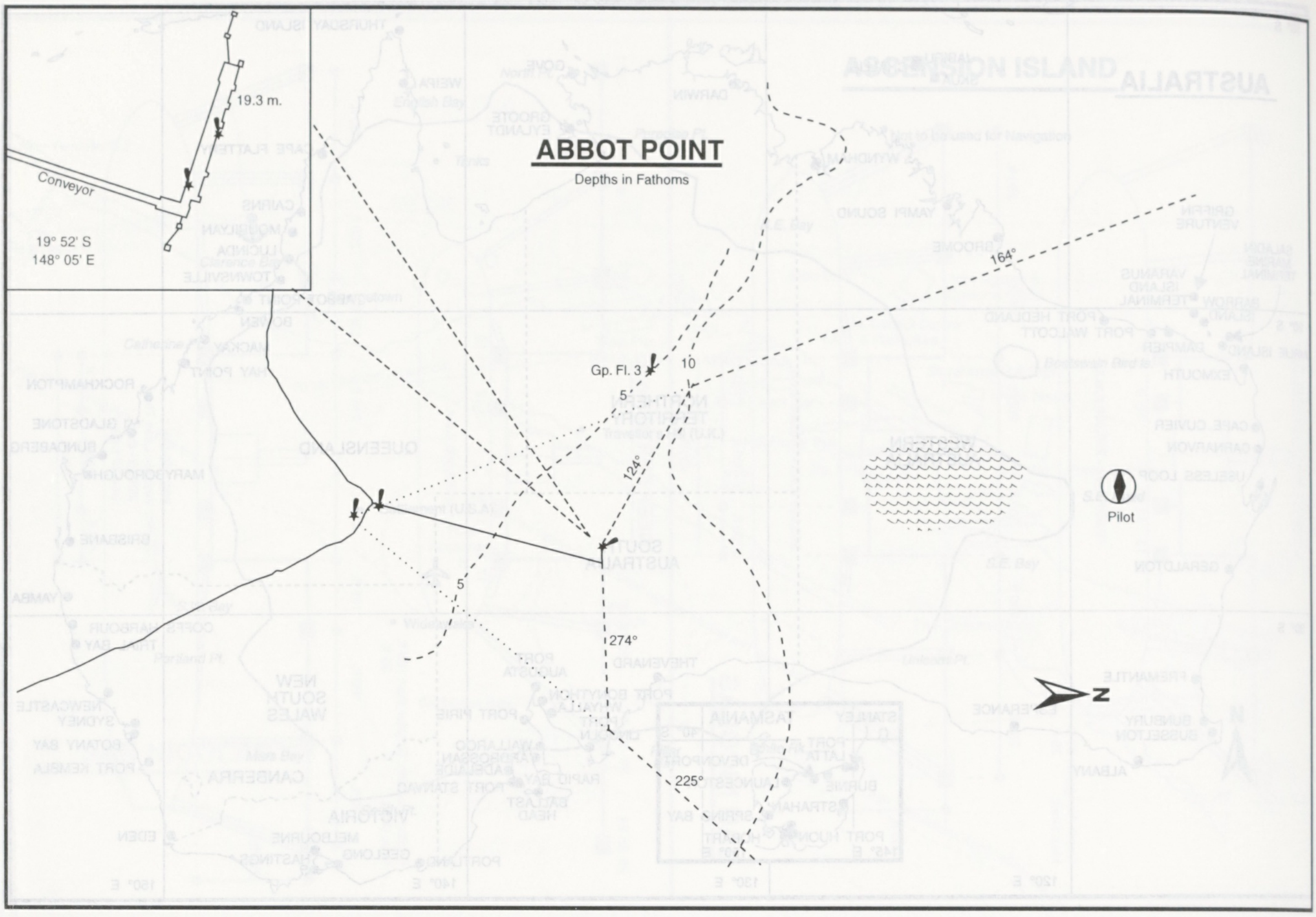
AUSTRALIA

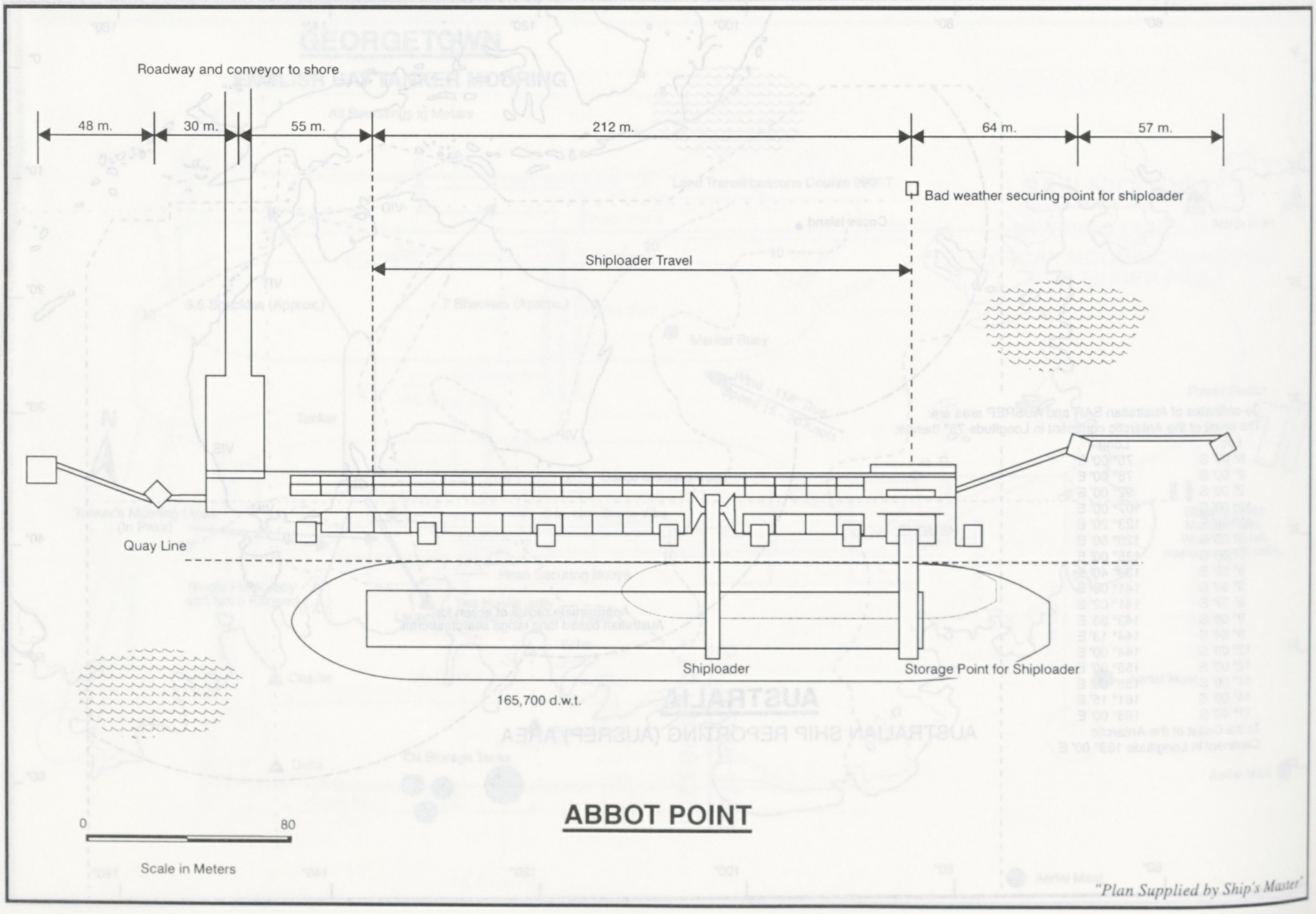
AUSTRALIAN SHIP REPORTING (AUSREP) AREA

Co-ordinates of Australian SAR and AUSREP area are:
The coast of the Antarctic continent in Longitude 75° thence:

Lat:	Long:
6° 00' S	75° 00' E
2° 00' S	78° 00' E
2° 00' S	92° 00' E
12° 00' S	107° 00' E
12° 00' S	123° 20' E
9° 20' S	126° 50' E
7° 00' S	135° 00' E
9° 50' S	139° 40' E
9° 50' S	141° 00' E
9° 37' S	141° 02' E
9° 08' S	143° 53' E
9° 24' S	144° 13' E
12° 00' S	144° 00' E
12° 00' S	155° 00' E
14° 00' S	155° 00' E
14° 00' S	161° 15' E
17° 40' S	163° 00' E

To the Coast of the Antarctic Continent in Longitude 163° 00' E

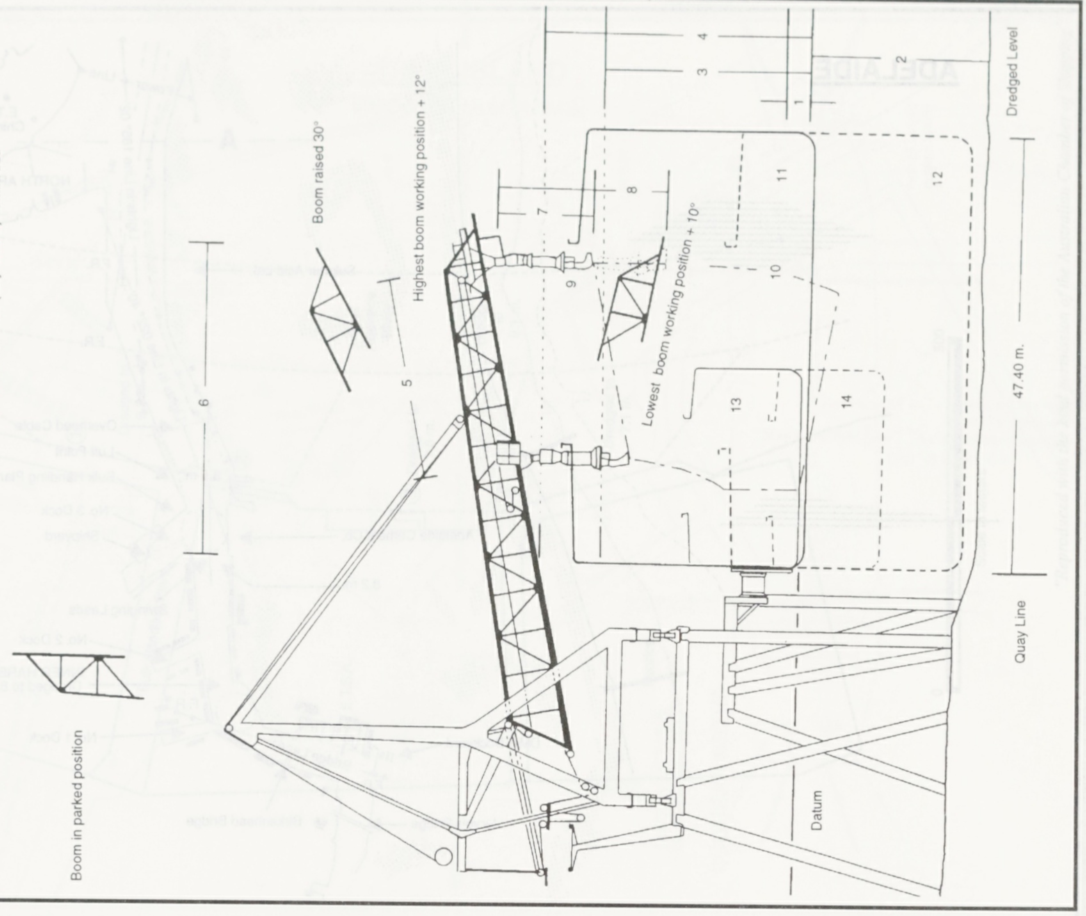

ABBOT POINT
Depths in Fathoms
19.3 m.
Conveyor
19° 52' S
148° 05' E
Gp. Fl. 3
10
5
164°
124°
5
274°
225°
Pilot
N


Roadway and conveyor to shore
48 m.
30 m.
55 m.
212 m.
64 m.
57 m.
Bad weather securing point for shiploader
Shiploader Travel
Quay Line
Shiploader
Storage Point for Shiploader
165,700 d.w.t.
ABBOT POINT
0
80
Scale in Meters

"Plan Supplied by Ship's Master"

ABBOT POINT

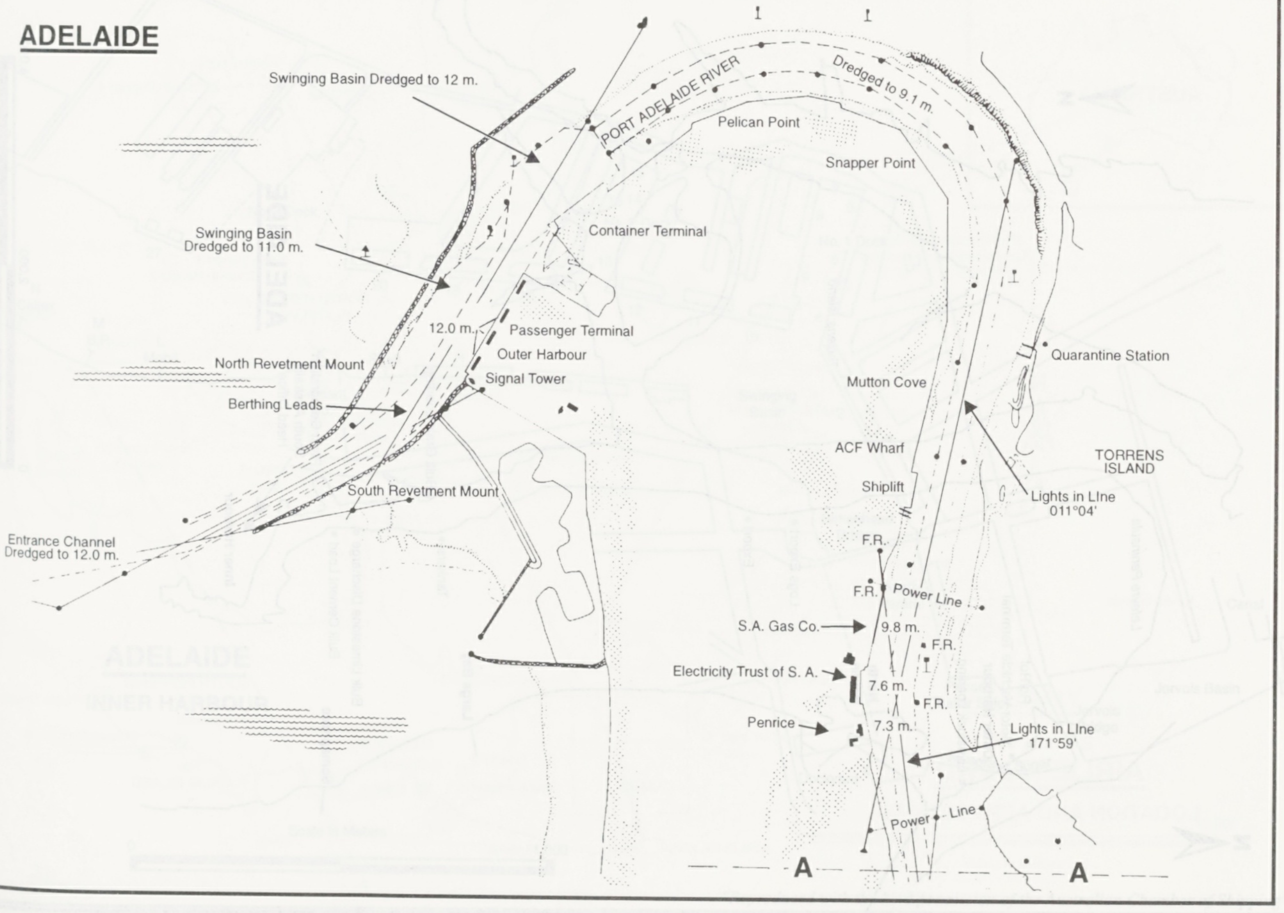
SHIPLOADER

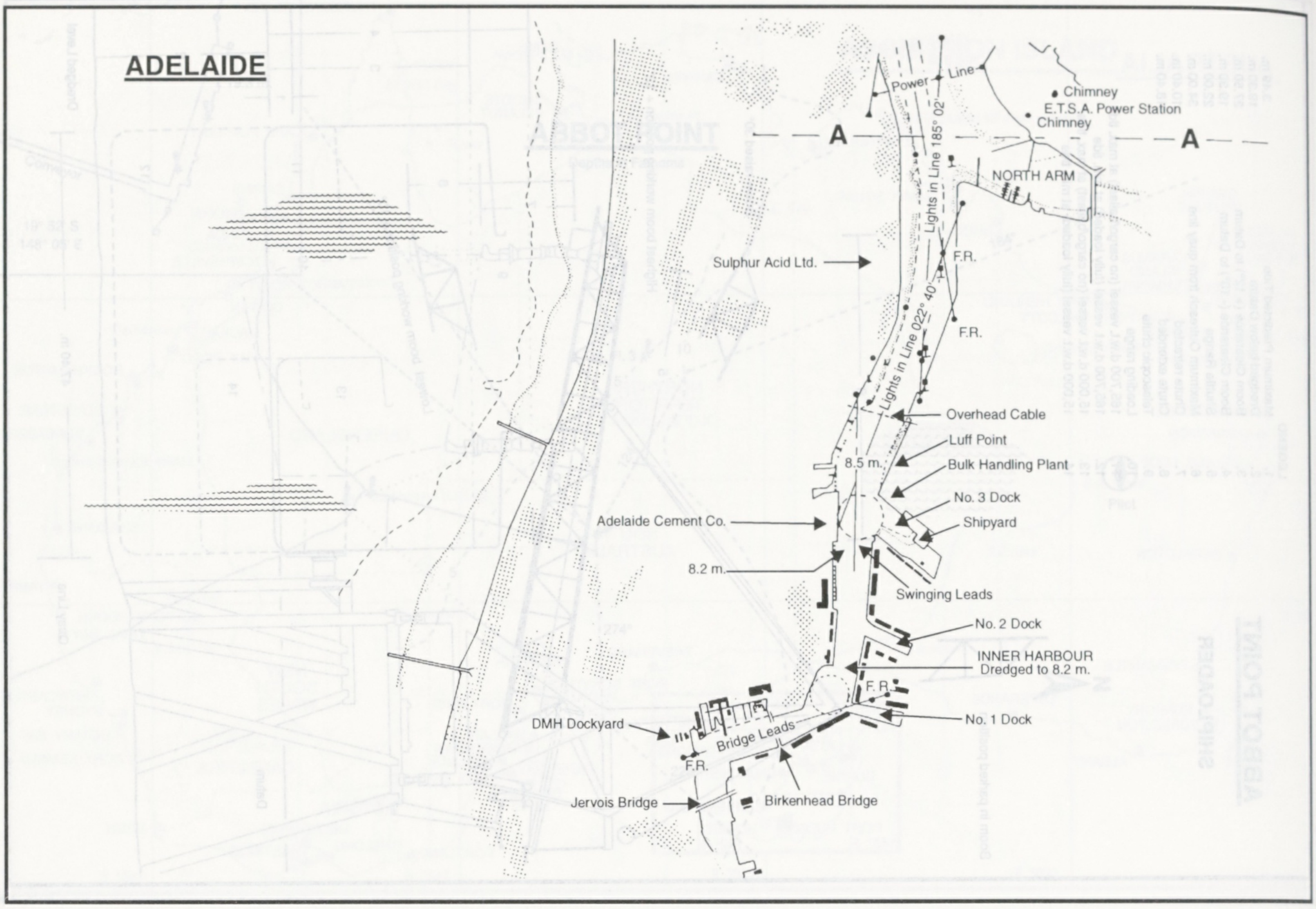

Boom in parked position
Boom raised 30°
Highest boom working position + 12°
Lowest boom working position + 10°
1
2
3
4
5
6
7
8
9
10
11
12
13
14
Datum
Quay Line
47.40 m.
Dredged Level
ADELAIDE

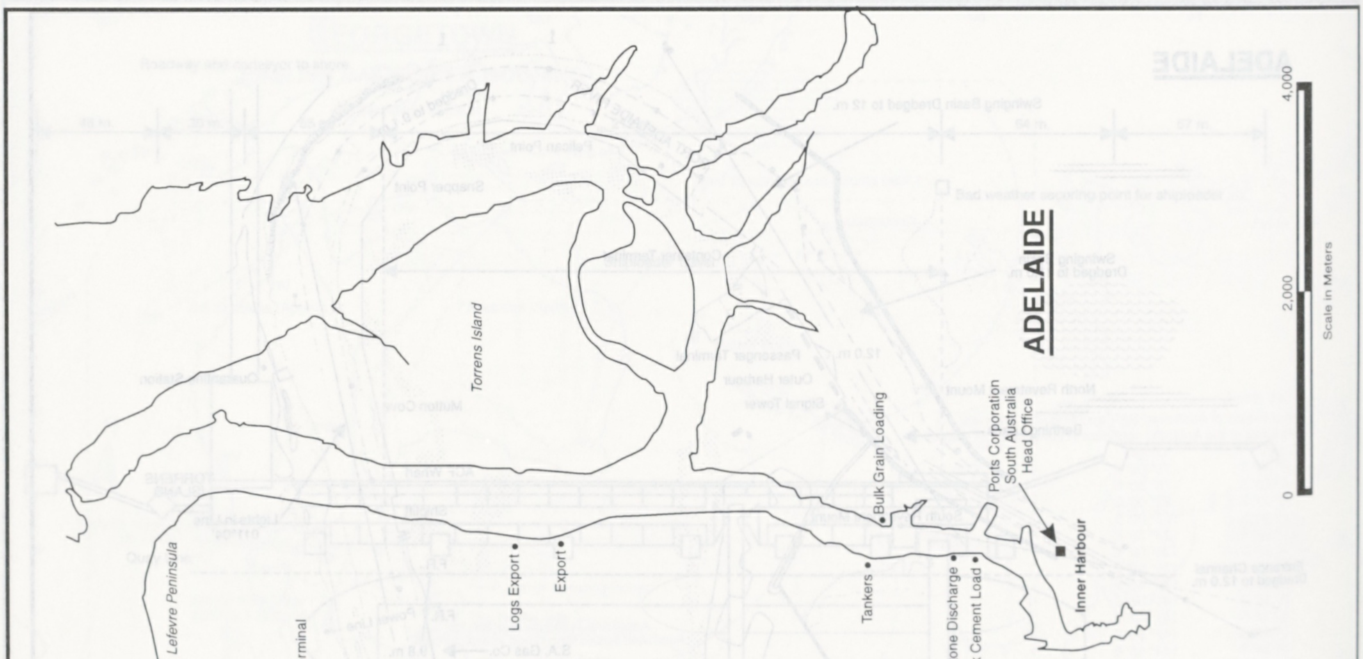
LEGEND

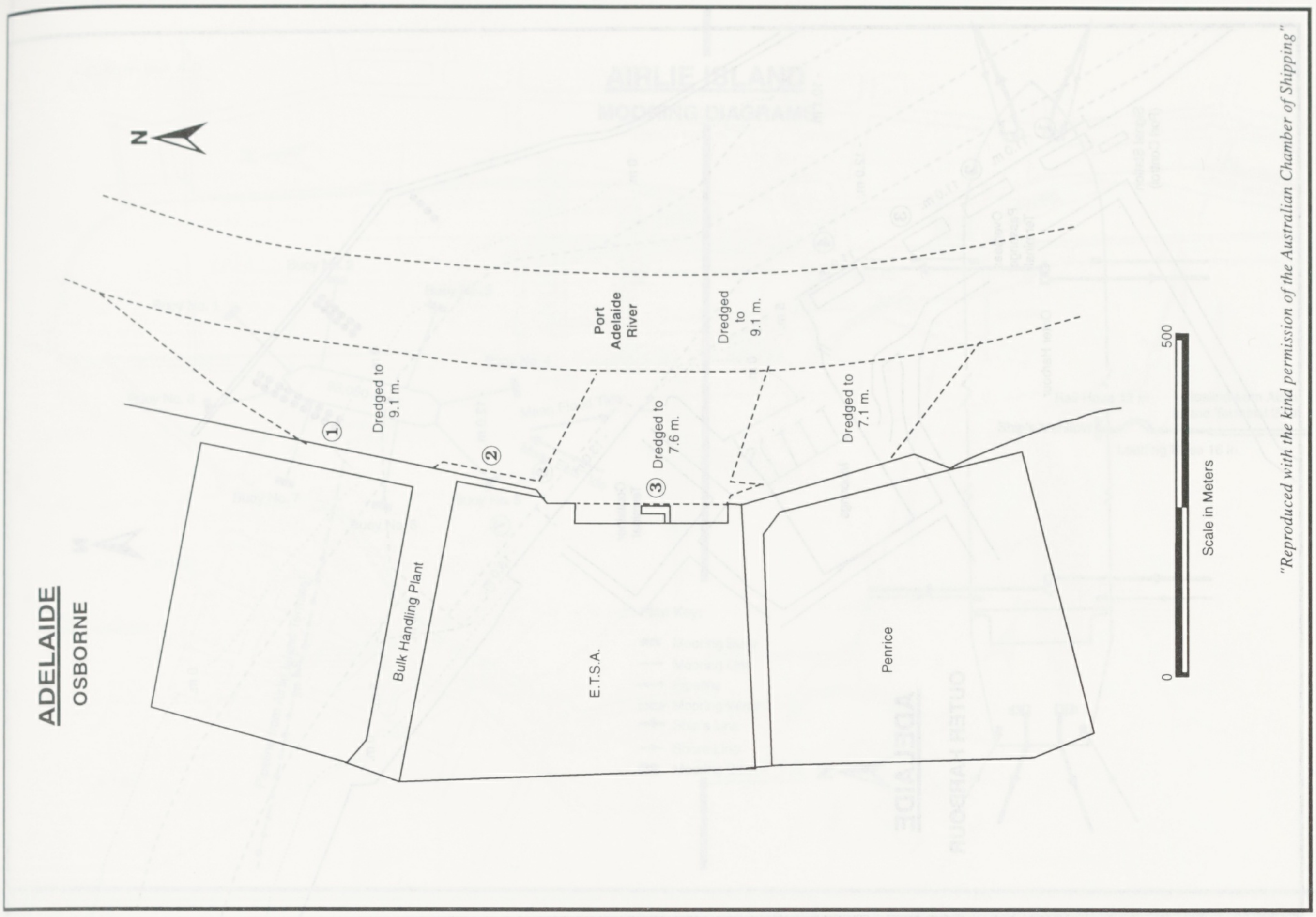
1.	Maximum Predicted Tide	3.49 m.
2.	Dredged below Datum	19.30 m.
3.	Boom Clearance (+ 12°) to Datum	27.50 m.
4.	Boom Clearance (- 10°) to Datum	19.30 m.
5.	Shuttle Range	22.00 m.
6.	Maximum Outreach from quay line	34.00 m.
7.	Chute retracted	10.40 m.
8.	Chute extended	18.40 m.
9.	Telescopic chute	
10.	Loading range	
11.	165,700 d.w.t. vessel (no cargo/ballast) at max. tide	
12.	165,700 d.w.t. vessel (fully loaded) at min. tide	
13.	15,000 d.w.t. vessel (no cargo/ballast) at max. tide	
14	15,000 d.w.t. vessel (fully loaded) at min. tide	

ADELAIDE


Swinging Basin Dredged to 12 m.
PORT ADELAIDE RIVER
Dredged to 9.1 m.
Pelican Point
Snapper Point
Swinging Basin Dredged to 11.0 m.
Container Terminal
12.0 m.
Passenger Terminal
Outer Harbour
Signal Tower
North Revetment Mount
Berthing Leads
Quarantine Station
Mutton Cove
ACF Wharf
TORRENS ISLAND
Shiplift
Lights in LIne 011°04'
South Revetment Mount
Entrance Channel Dredged to 12.0 m.
F.R.
F.R.
Power Line
S.A. Gas Co.
9.8 m.
F.R.
Electricity Trust of S. A.
7.6 m.
F.R.
Penrice
7.3 m.
Lights in LIne 171°59'
Power Line
A
A


ADELAIDE
A
A
Power Line
Chimney
E.T.S.A. Power Station
Chimney
NORTH ARM
Lights in Line 185° 02'
Sulphur Acid Ltd.
F.R.
Lights in Line 022° 40'
F.R.
Overhead Cable
Luff Point
8.5 m.
Bulk Handling Plant
No. 3 Dock
Shipyard
Adelaide Cement Co.
8.2 m.
Swinging Leads
No. 2 Dock
INNER HARBOUR
Dredged to 8.2 m.
F.R.
No. 1 Dock
DMH Dockyard
Bridge Leads
F.R.
Jervois Bridge
Birkenhead Bridge


ADELAIDE
Torrens Island
Lefevre Peninsula
Ro/Rof
Motor Vechicle Terminal
Outer Harbour
Livestock Loading
North Haven
Logs Export
Export
Tankers
Bulk Grain Loading
Largs Bay
Bulk Limestone Discharge
Bulk Cement Load
Semaphore
Ports Corporation South Australia Head Office
Inner Harbour
4,000
2,000
0
Scale in Meters
N


N
①
②
③
Dredged to 9.1 m.
Port Adelaide River
Dredged to 9.1 m.
Dredged to 7.6 m.
Dredged to 7.1 m.
Bulk Handling Plant
E.T.S.A.
Penrice
0
500
Scale in Meters

ADELAIDE
OSBORNE

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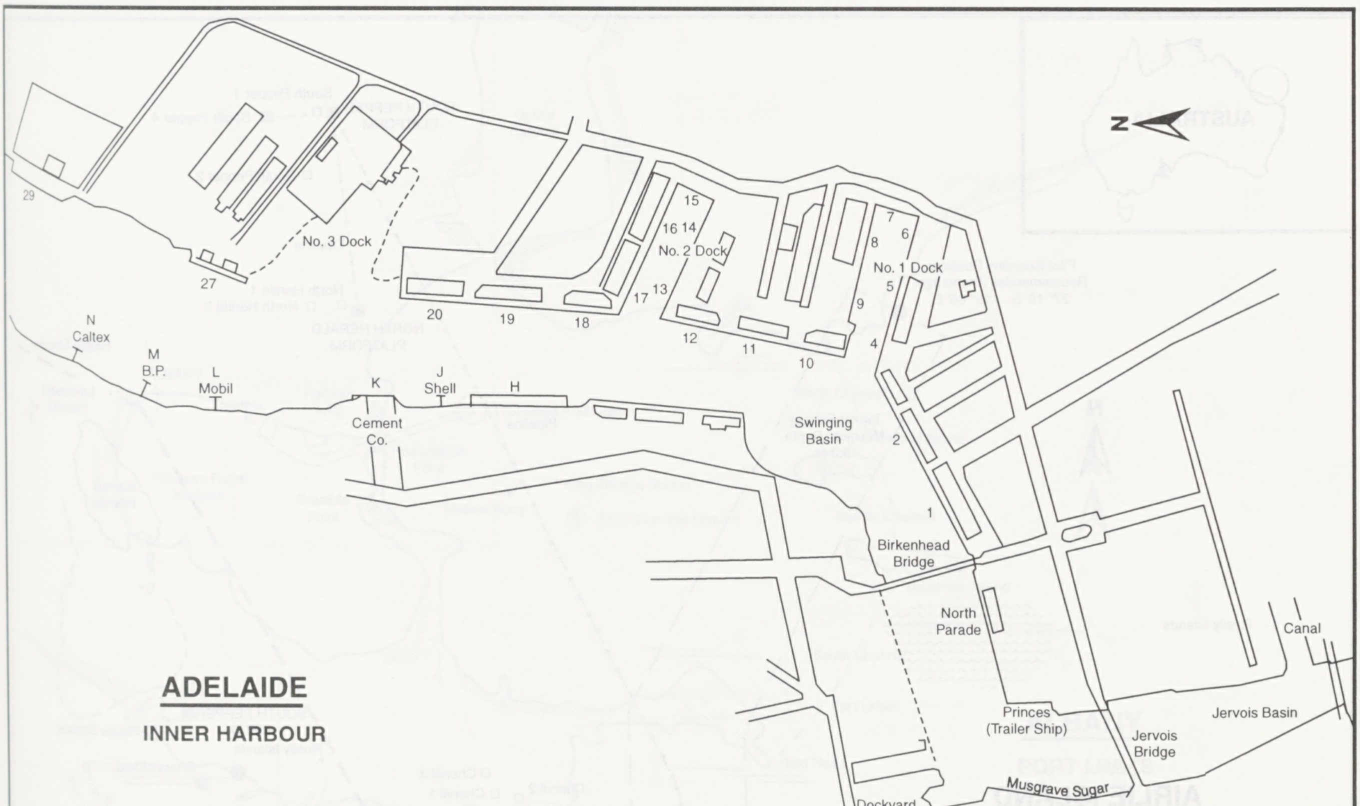
N
29
27
No. 3 Dock
20
19
18
17
13
15
16 14
No. 2 Dock
12
11
10
7
6
8
No. 1 Dock
5
9
4
N
Caltex
M
B.P.
L
Mobil
K
J
Shell
H
Cement Co.
Swinging Basin
2
1
Birkenhead Bridge
North Parade
Canal
Jervois Basin
Princes (Trailer Ship)
Jervois Bridge
Musgrave Sugar
Dockyard
Scale in Meters
0
1,000

ADELAIDE
INNER HARBOUR

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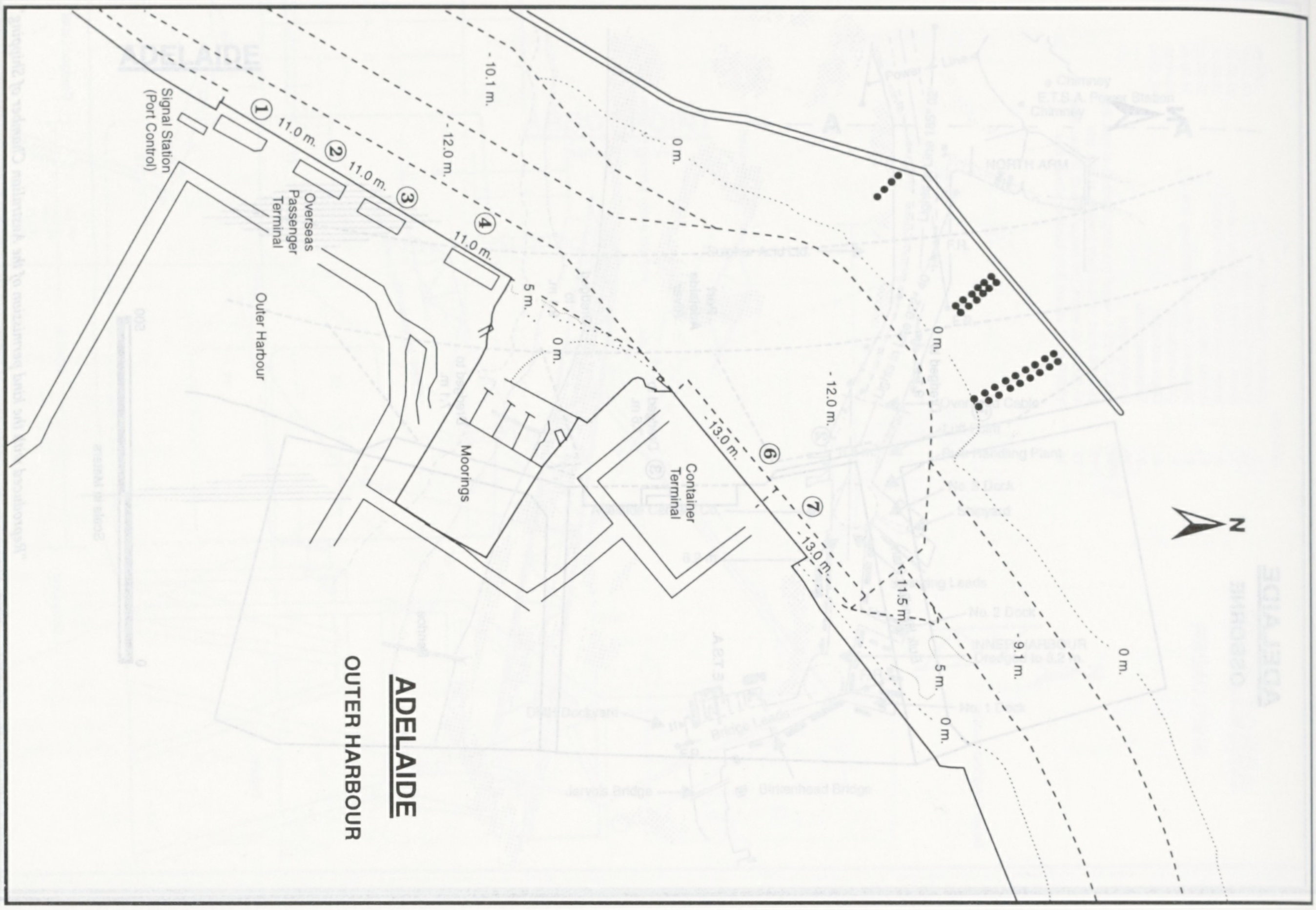
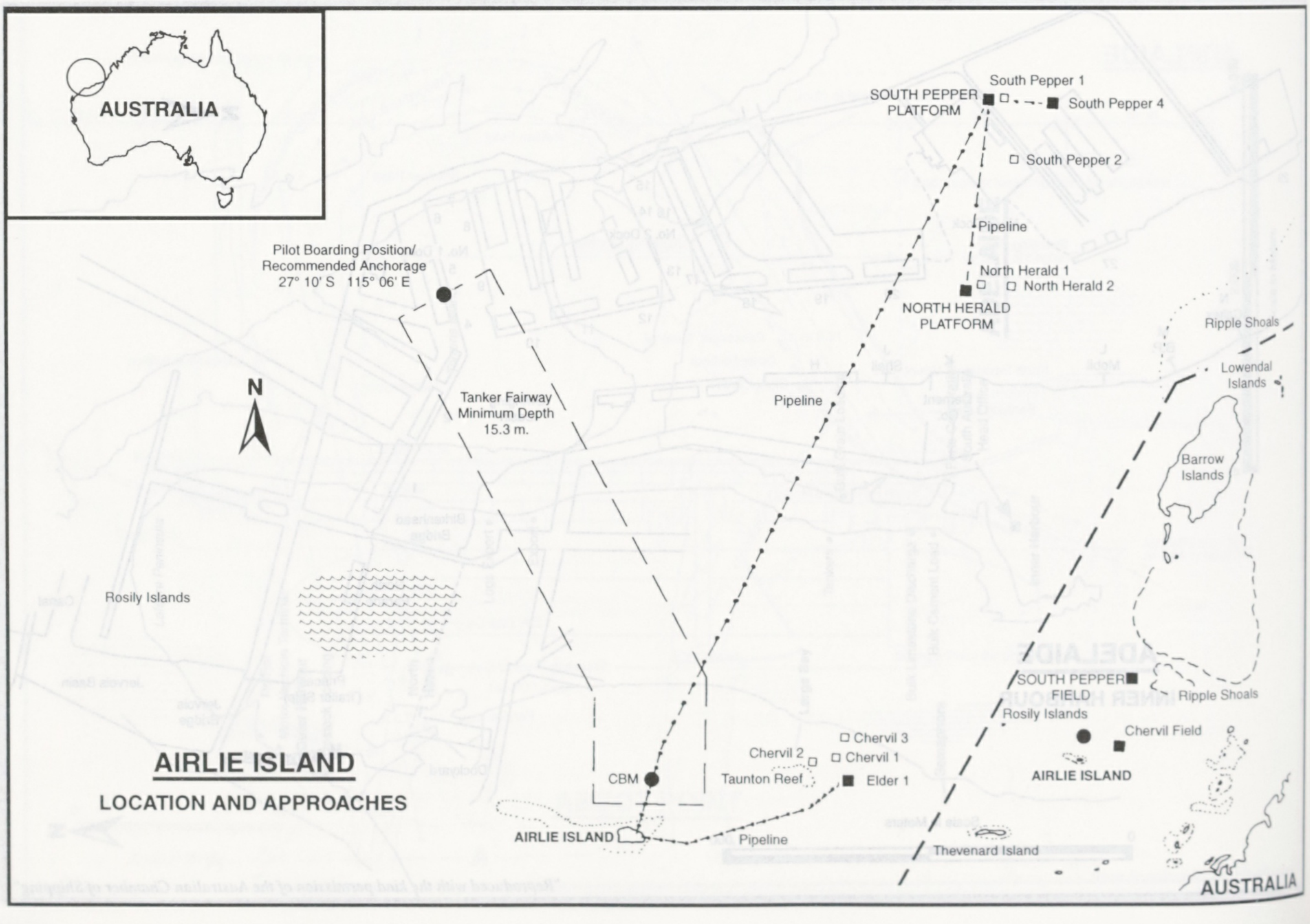
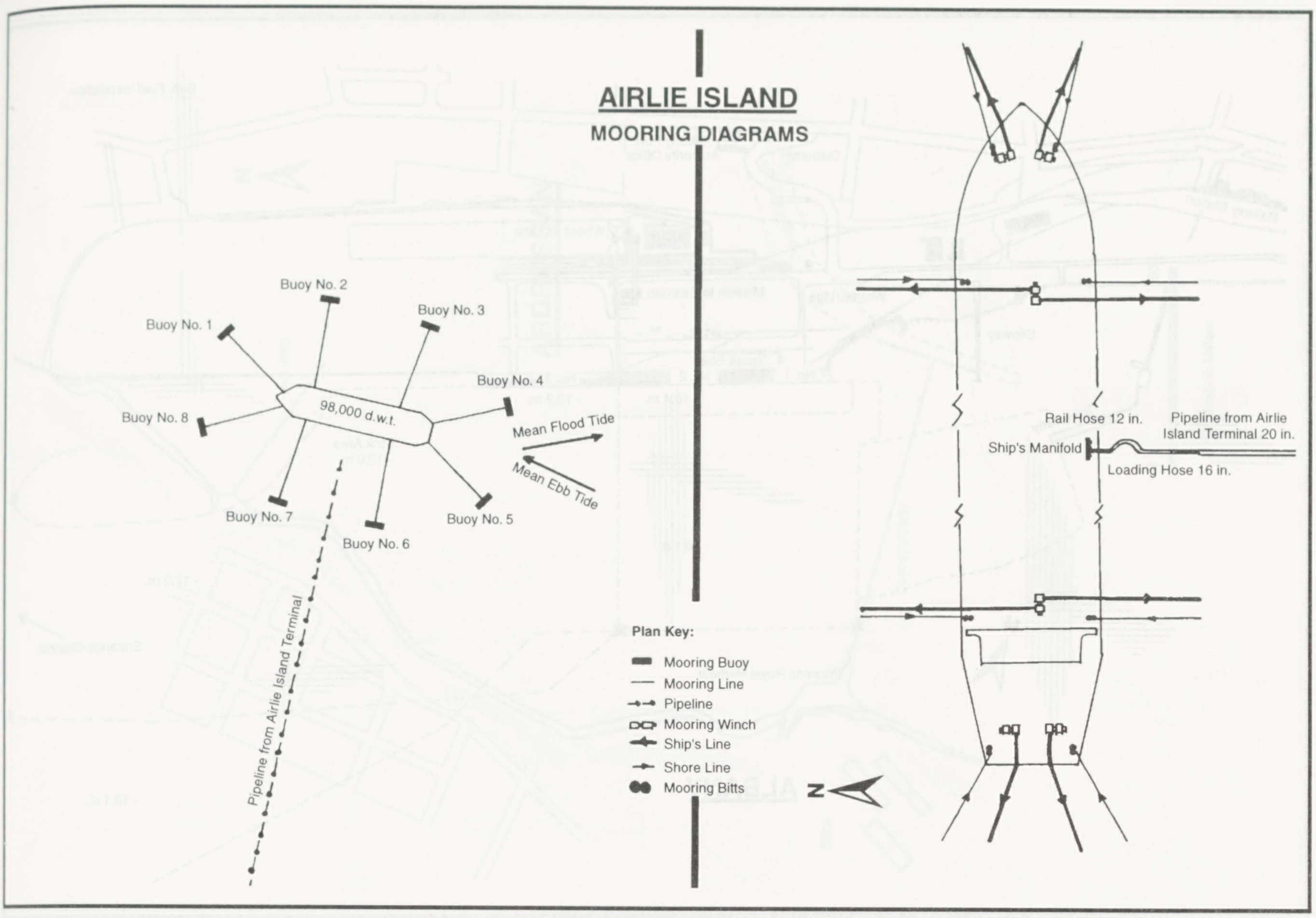

ADELAIDE
OUTER HARBOUR
Signal Station
(Port Control)
①
11.0 m.
②
11.0 m.
③
④
11.0 m.
Overseas
Passenger
Terminal
Outer Harbour
- 10.1 m.
12.0 m.
0 m.
5 m.
0 m.
Moorings
Container
Terminal
13.0 m.
⑥
⑦
13.0 m.
- 12.0 m.
0 m.
11.5 m.
5 m.
0 m.
9.1 m.
0 m.
N

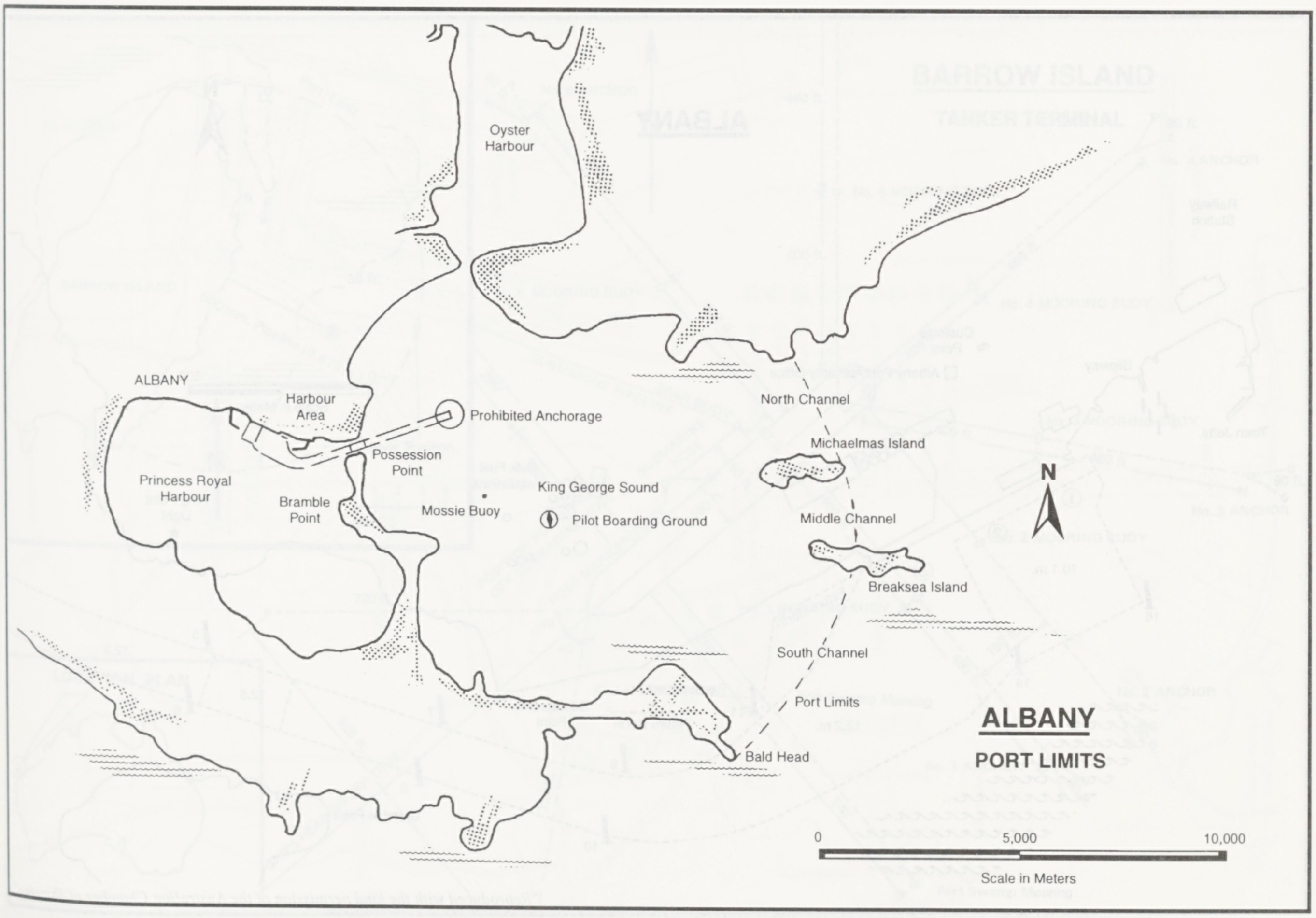

AUSTRALIA
AIRLIE ISLAND
LOCATION AND APPROACHES
N
Pilot Boarding Position/
Recommended Anchorage
27° 10' S 115° 06' E
Tanker Fairway
Minimum Depth
15.3 m.
SOUTH PEPPER
PLATFORM
South Pepper 1
South Pepper 4
South Pepper 2
Pipeline
North Herald 1
North Herald 2
NORTH HERALD
PLATFORM
Pipeline
Ripple Shoals
Lowendal
Islands
Barrow
Islands
Rosily Islands
SOUTH PEPPER
FIELD
Ripple Shoals
Rosily Islands
Chervil Field
AIRLIE ISLAND
Chervil 3
Chervil 2
Chervil 1
Taunton Reef
Elder 1
CBM
AIRLIE ISLAND
Pipeline
Thevenard Island
AUSTRALIA



AIRLIE ISLAND

MOORING DIAGRAMS

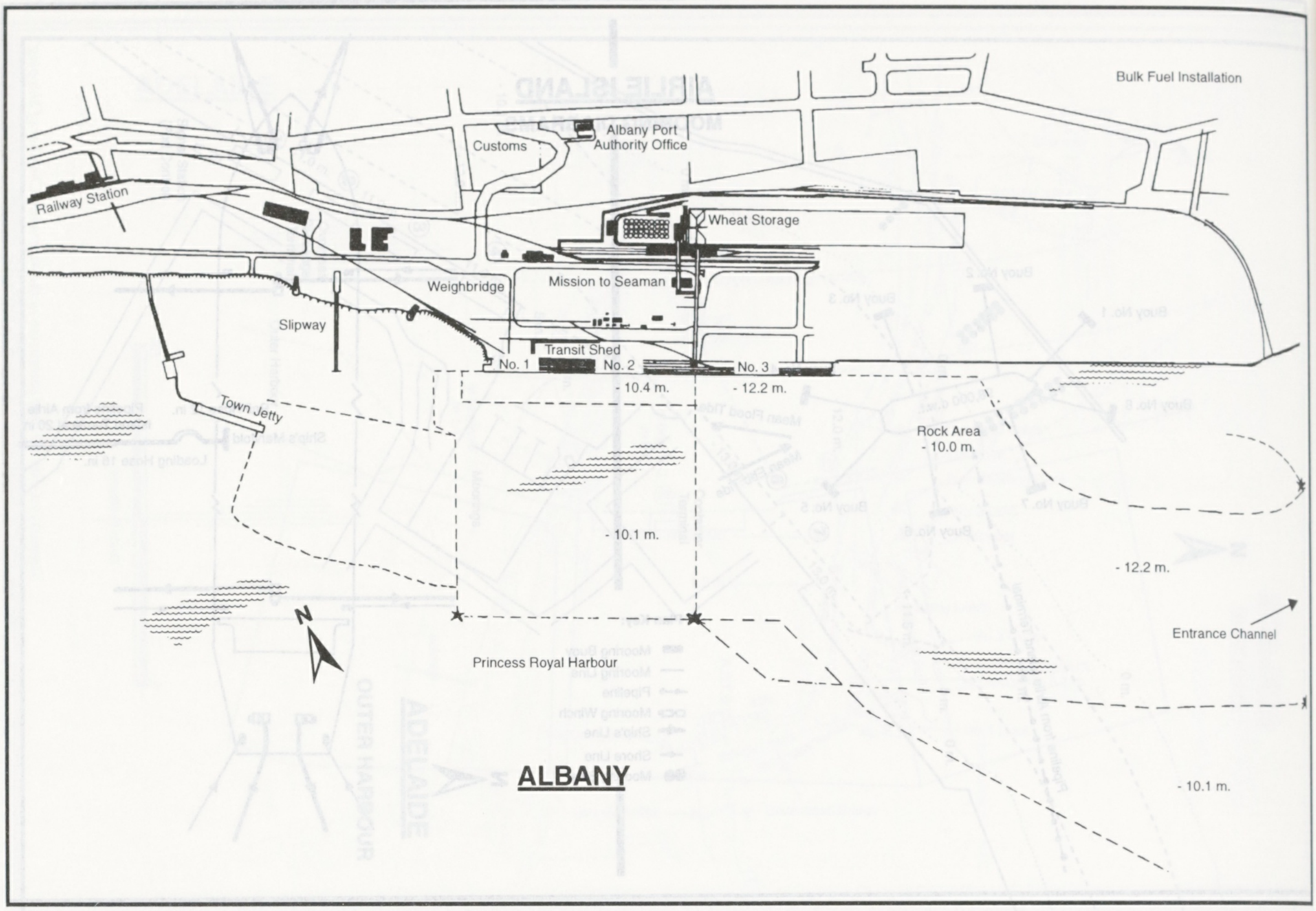
Buoy No. 1
Buoy No. 2
Buoy No. 3
Buoy No. 4
Buoy No. 5
Buoy No. 6
Buoy No. 7
Buoy No. 8
98,000 d.w.t.
Mean Flood Tide
Mean Ebb Tide
Pipeline from Airlie Island Terminal
Rail Hose 12 in.
Pipeline from Airlie Island Terminal 20 in.
Ship's Manifold
Loading Hose 16 in.
Plan Key:
Mooring Buoy
Mooring Line
Pipeline
Mooring Winch
Ship's Line
Shore Line
Mooring Bitts
N

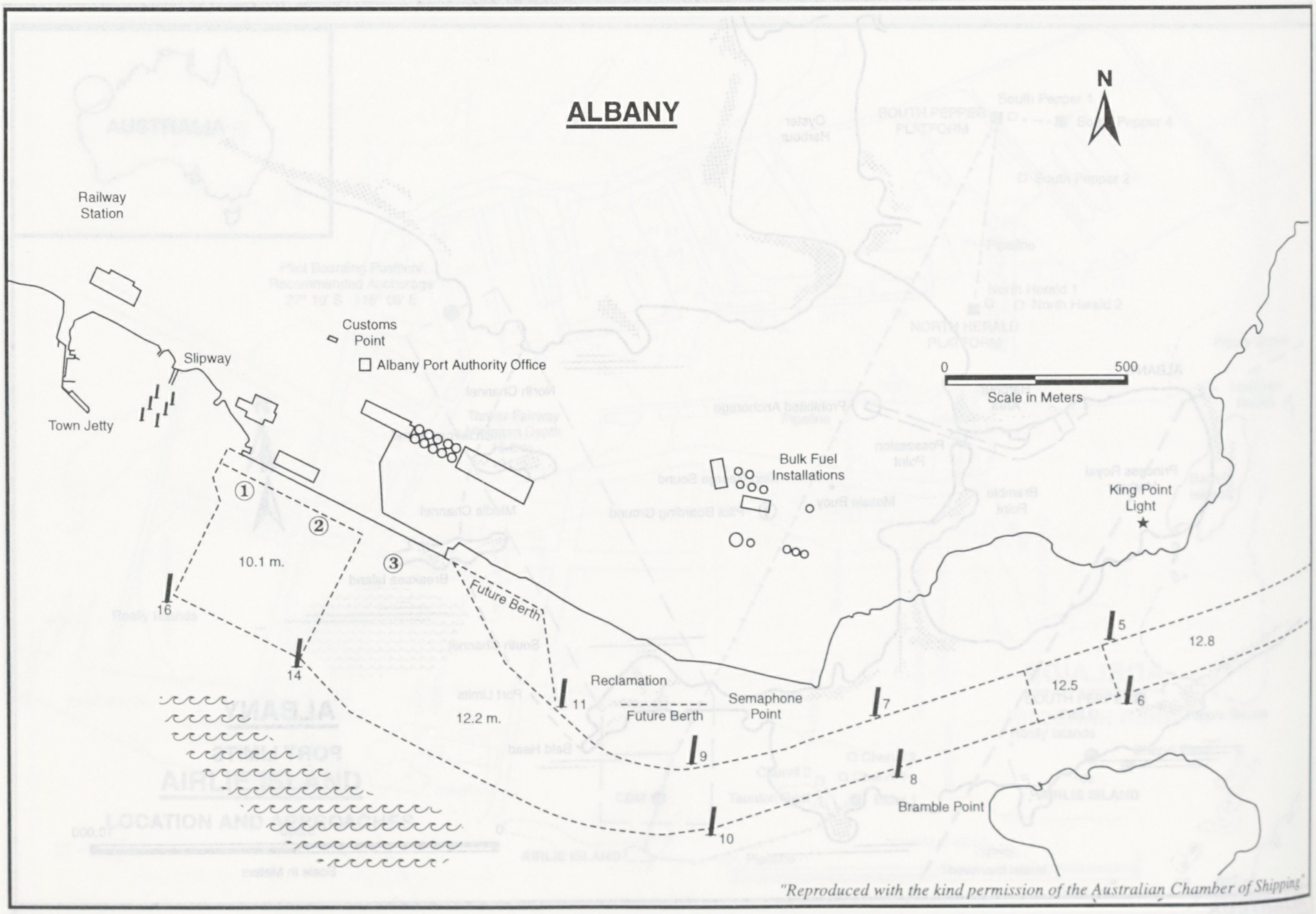


ALBANY

PORT LIMITS

Oyster Harbour
ALBANY
Harbour Area
Prohibited Anchorage
North Channel
Michaelmas Island
Possession Point
Princess Royal Harbour
Bramble Point
Mossie Buoy
King George Sound
Pilot Boarding Ground
Middle Channel
N
Breaksea Island
South Channel
Port Limits
Bald Head
0
5,000
10,000
Scale in Meters


Bulk Fuel Installation
Customs
Albany Port Authority Office
Railway Station
Wheat Storage
Weighbridge
Mission to Seaman
Slipway
Transit Shed
No. 1
No. 2
No. 3
- 10.4 m.
- 12.2 m.
Town Jetty
Rock Area - 10.0 m.
- 10.1 m.
- 12.2 m.
N
Entrance Channel
Princess Royal Harbour
ALBANY
- 10.1 m.


ALBANY
N
Railway Station
Customs Point
Albany Port Authority Office
Slipway
Town Jetty
0
500
Scale in Meters
Bulk Fuel Installations
King Point Light
①
②
③
10.1 m.
16
14
Future Berth
Reclamation
11
Future Berth
12.2 m.
Semaphore Point
9
10
7
8
Bramble Point
5
6
12.5
12.8

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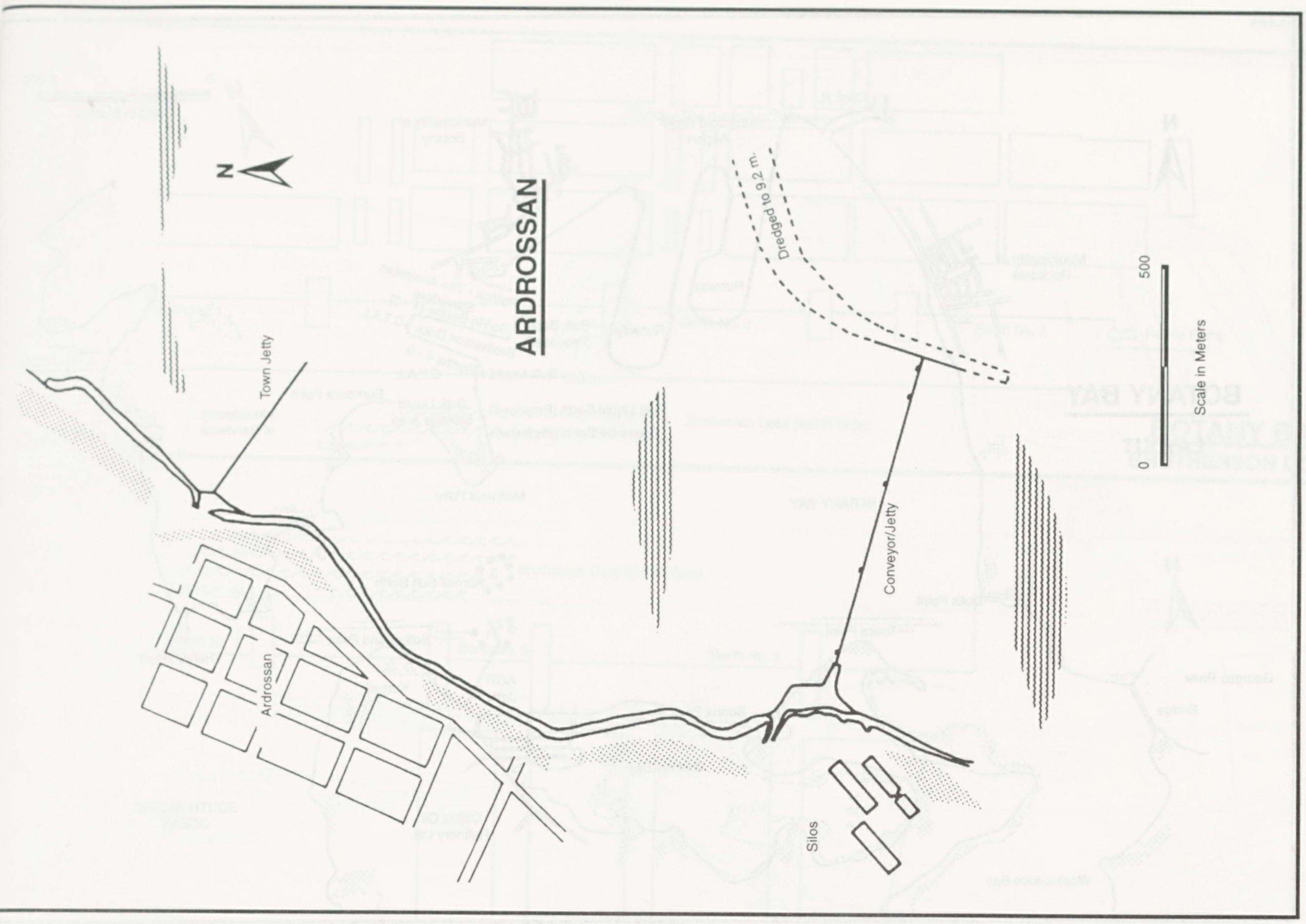
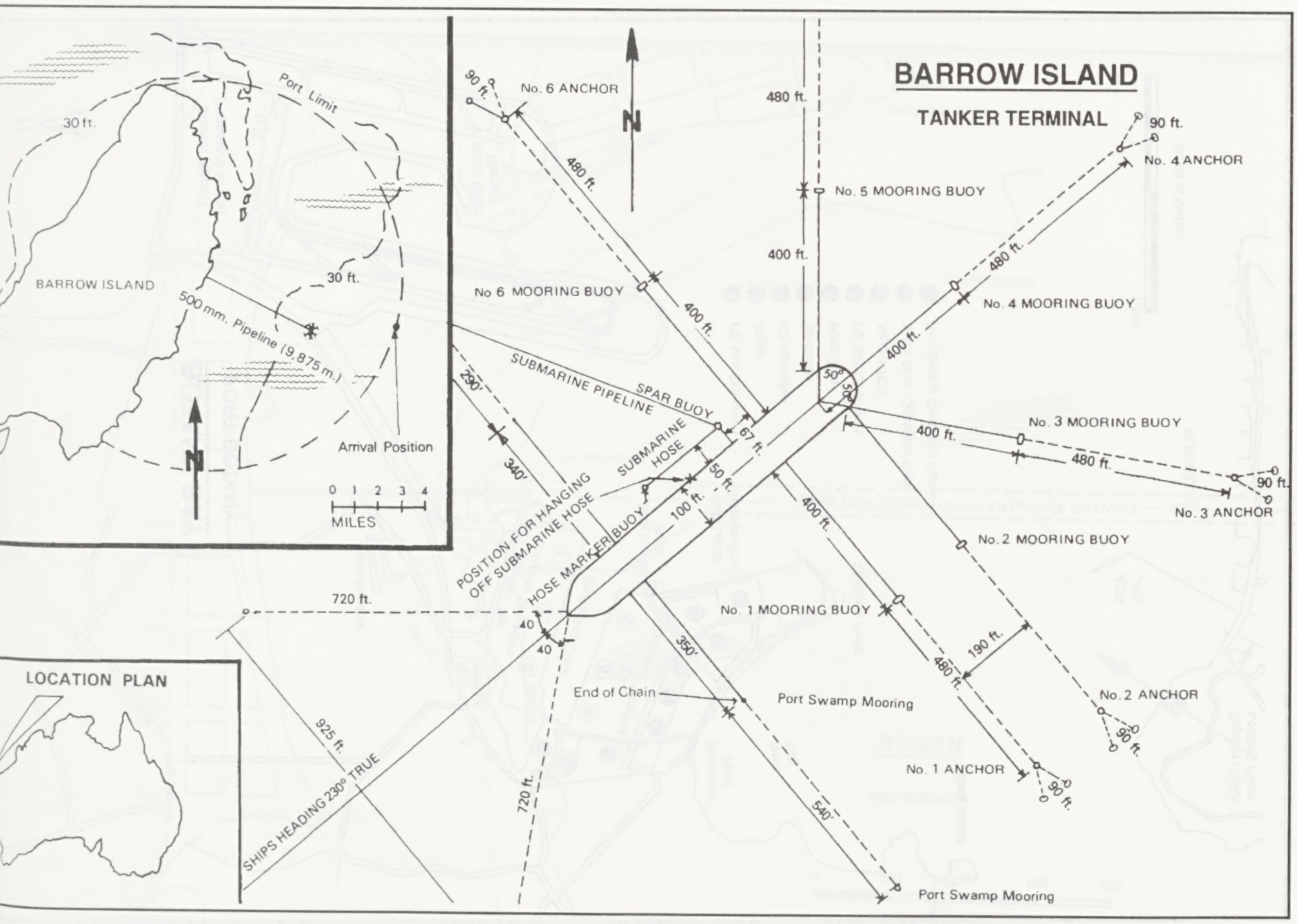
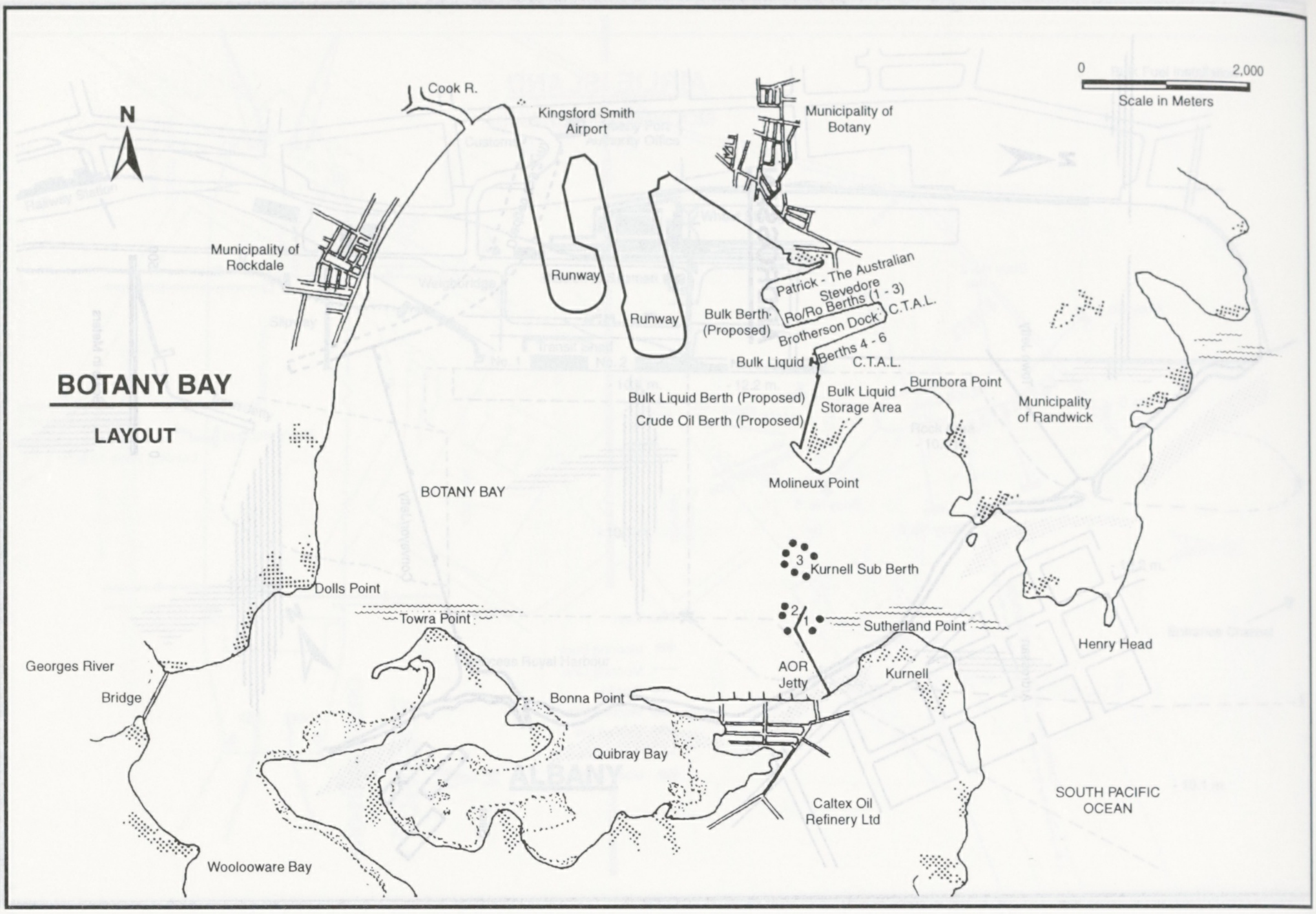
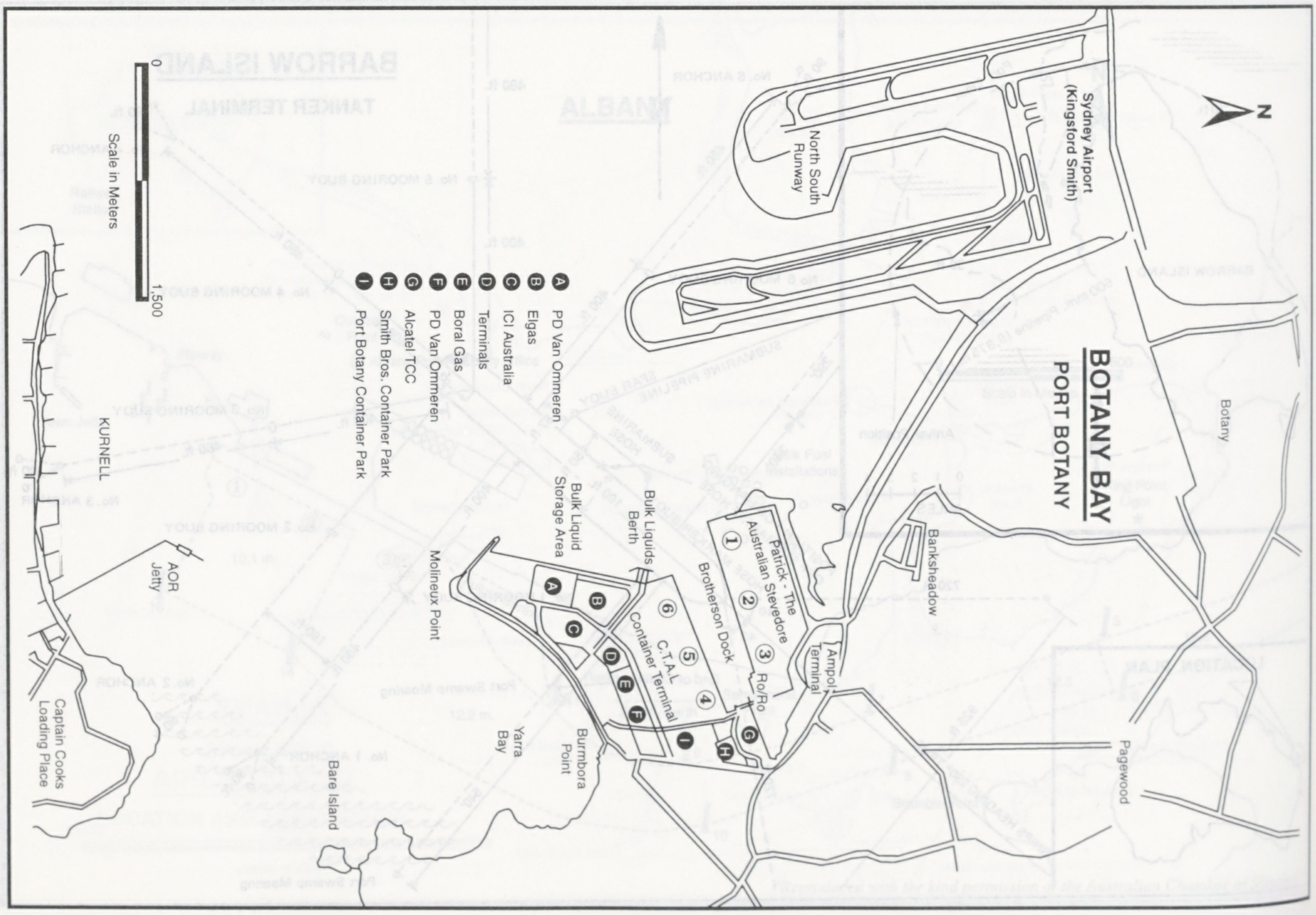
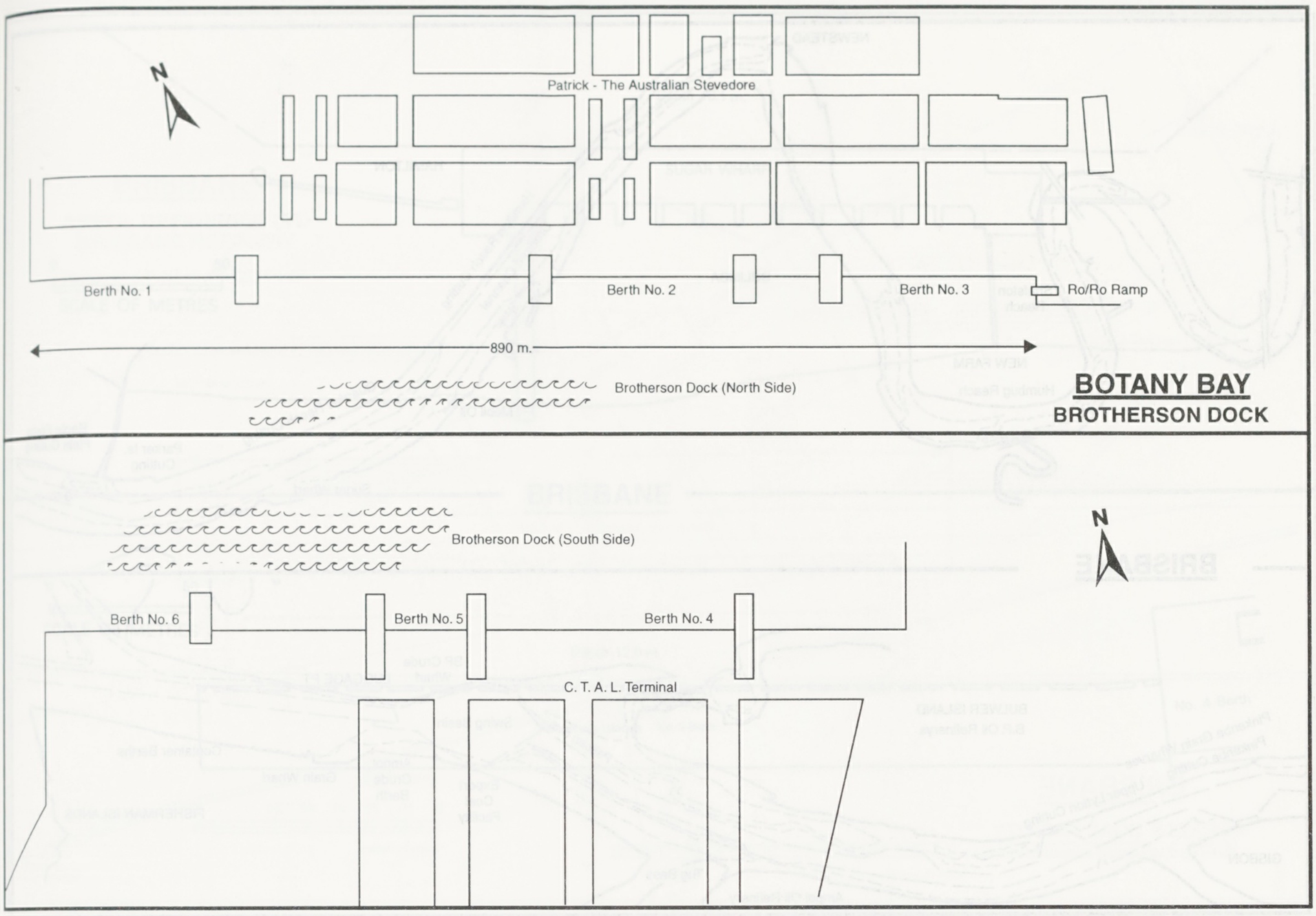

ARDROSSAN
N
Town Jetty
Ardrossan
Dredged to 9.2 m.
Conveyor/Jetty
Silos
500
Scale in Meters
0


BARROW ISLAND
TANKER TERMINAL
Port Limit
30 ft.
BARROW ISLAND
30 ft.
500 mm. Pipeline (9,875 m.)
Arrival Position
N
0 1 2 3 4
MILES
LOCATION PLAN
90 ft.
No. 6 ANCHOR
480 ft.
N
480 ft.
No. 5 MOORING BUOY
400 ft.
90 ft.
No. 4 ANCHOR
No 6 MOORING BUOY
400 ft.
480 ft.
No. 4 MOORING BUOY
400 ft.
50°
50°
SUBMARINE PIPELINE
SPAR BUOY
67 ft.
290'
340'
No. 3 MOORING BUOY
400 ft.
480 ft.
90 ft.
No. 3 ANCHOR
SUBMARINE HOSE
50 ft.
100 ft.
POSITION FOR HANGING OFF SUBMARINE HOSE
HOSE MARKER BUOY
No. 2 MOORING BUOY
400 ft.
720 ft.
No. 1 MOORING BUOY
40
40
350'
480 ft.
190 ft.
No. 2 ANCHOR
90 ft.
End of Chain
Port Swamp Mooring
No. 1 ANCHOR
90 ft.
925 ft.
SHIPS HEADING 230° TRUE
720 ft.
540'
Port Swamp Mooring


BOTANY BAY
LAYOUT
N
0
2,000
Scale in Meters
Cook R.
Kingsford Smith Airport
Municipality of Botany
Municipality of Rockdale
Runway
Runway
Patrick - The Australian Stevedore
Ro/Ro Berths (1 - 3)
Brotherson Dock
C.T.A.L.
Bulk Berth (Proposed)
Bulk Liquid
Berths 4 - 6
C.T.A.L.
Bulk Liquid Storage Area
Burnbora Point
Municipality of Randwick
Bulk Liquid Berth (Proposed)
Crude Oil Berth (Proposed)
Molineux Point
BOTANY BAY
3
Kurnell Sub Berth
2
1
Dolls Point
Towra Point
Sutherland Point
Henry Head
Georges River
Bridge
AOR Jetty
Kurnell
Bonna Point
Quibray Bay
Caltex Oil Refinery Ltd
SOUTH PACIFIC OCEAN
Woolooware Bay

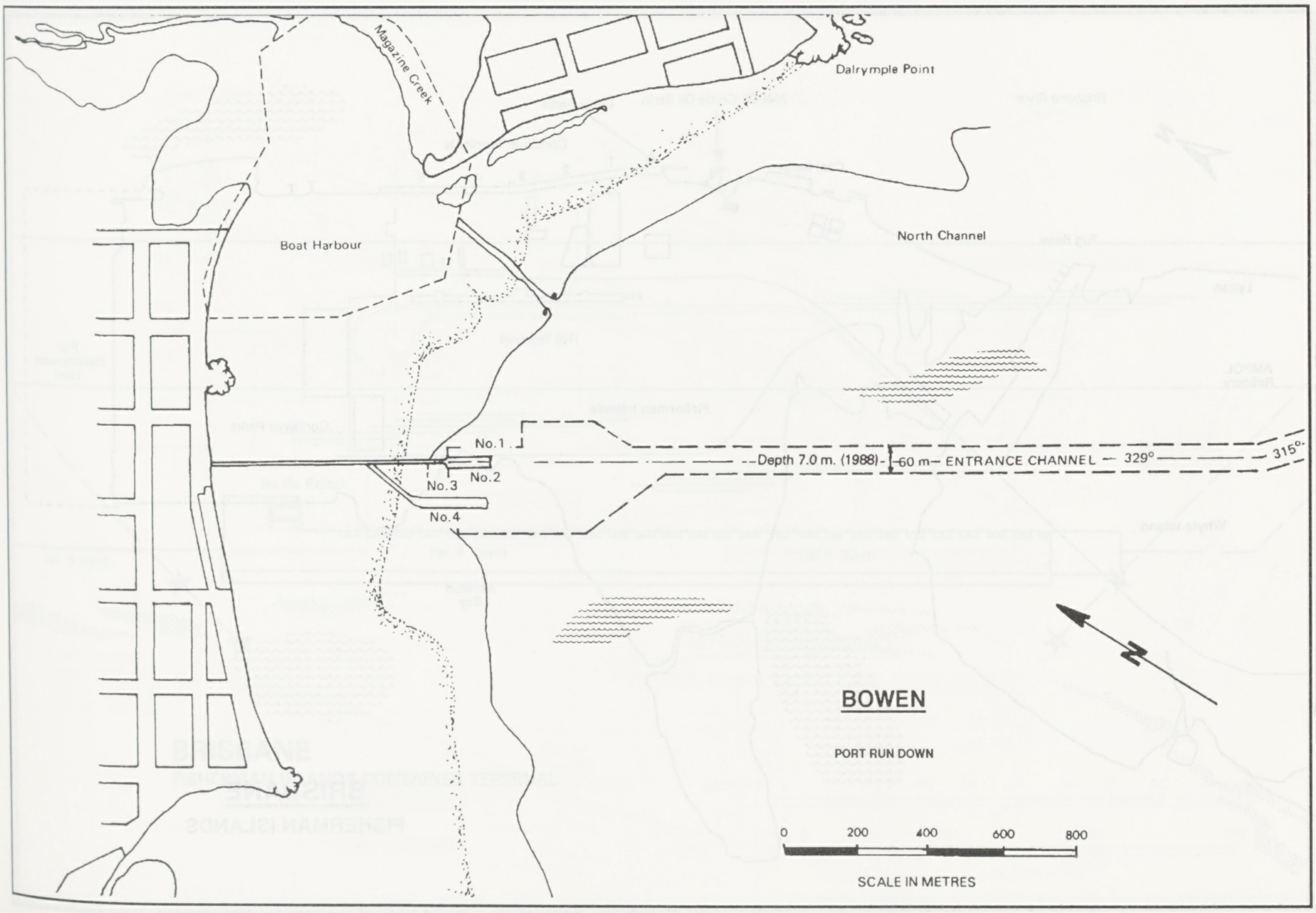

BOTANY BAY
PORT BOTANY
N
Sydney Airport (Kingsford Smith)
North South Runway
Botany
Banksheadow
Pagewood
0
1,500
Scale in Meters
A PD Van Ommeren
B Elgas
C ICI Australia
D Terminals
E Boral Gas
F PD Van Ommeren
G Alcatel TCC
H Smith Bros. Container Park
I Port Botany Container Park
Patrick - The Australian Stevedore
1
2
3
Ro/Ro
Ampol Terminal
Brotherson Dock
6
5
4
C.T.A.L. Container Terminal
Bulk Liquids Berth
Bulk Liquid Storage Area
A
B
C
D
E
F
G
H
I
Molineux Point
Burmbora Point
Yarra Bay
Bare Island
KURNELL
AOR Jetty
Captain Cooks Loading Place



BOTANY BAY

BROTHERSON DOCK

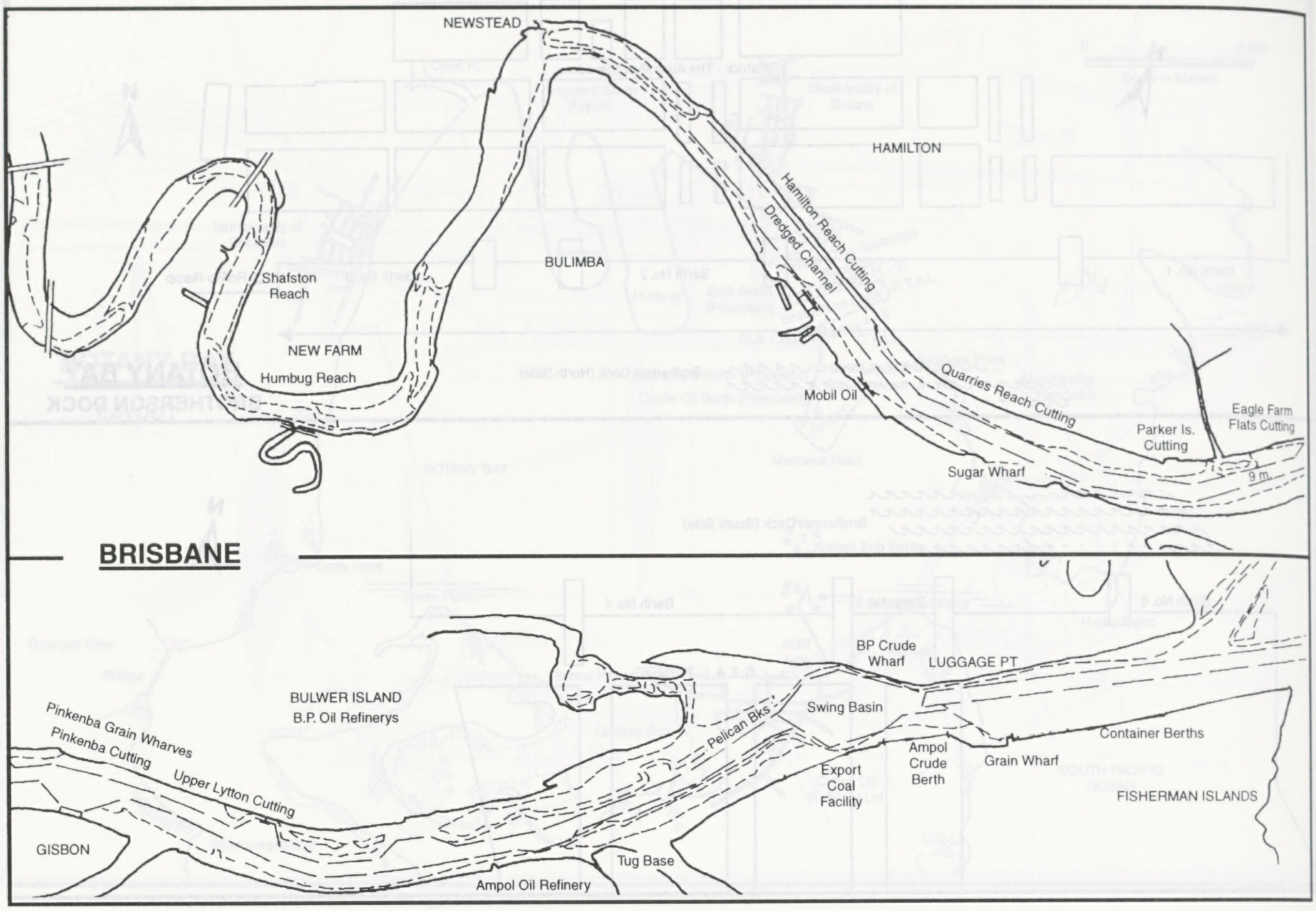
N
Patrick - The Australian Stevedore
Berth No. 1
Berth No. 2
Berth No. 3
Ro/Ro Ramp
890 m.
Brotherson Dock (North Side)
Brotherson Dock (South Side)
N
Berth No. 6
Berth No. 5
Berth No. 4
C. T. A. L. Terminal

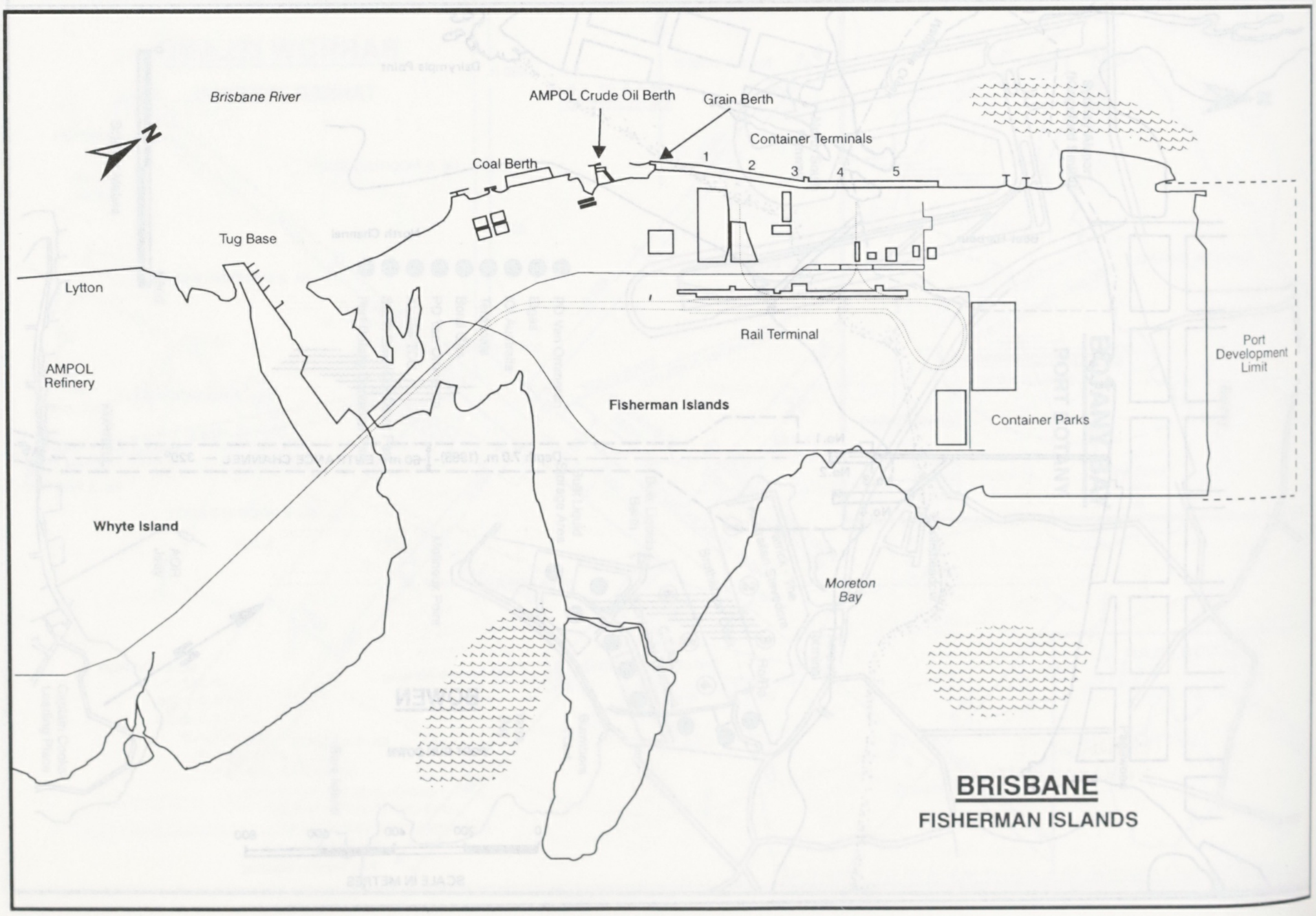


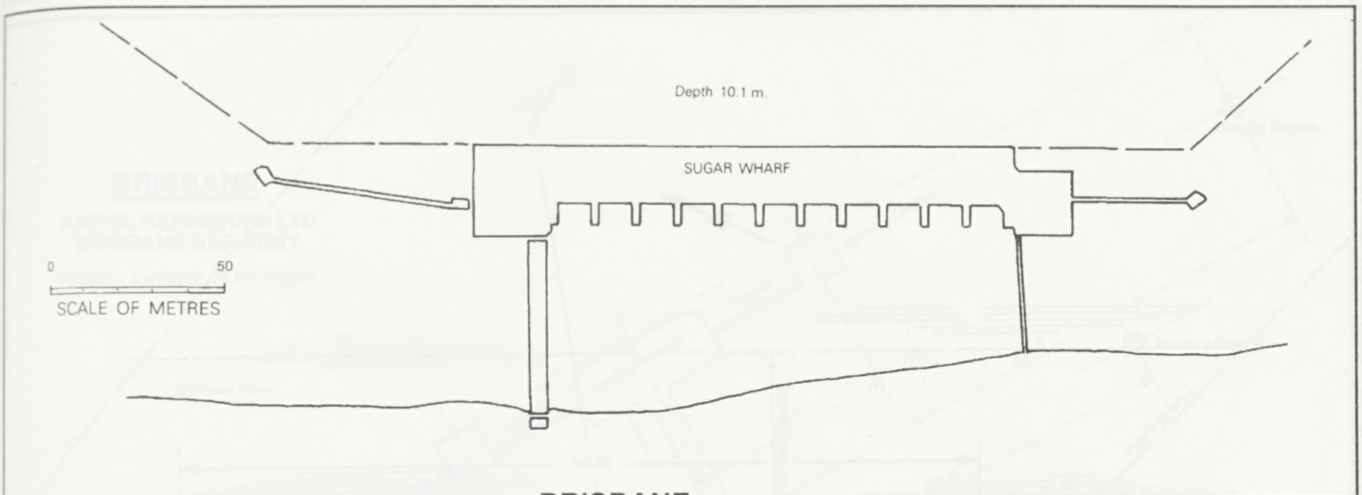
BOWEN

PORT RUN DOWN

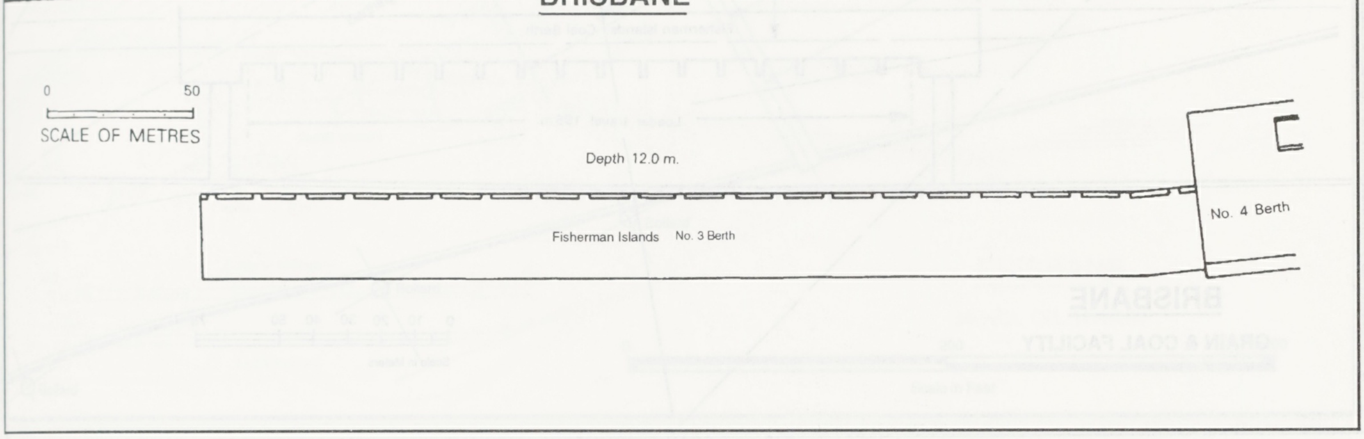
Magazine Creek
Dalrymple Point
Boat Harbour
North Channel
No. 1
No. 2
No. 3
No. 4
Depth 7.0 m. (1988)
60 m
ENTRANCE CHANNEL
329°
315°
N
0
200
400
600
800
SCALE IN METRES

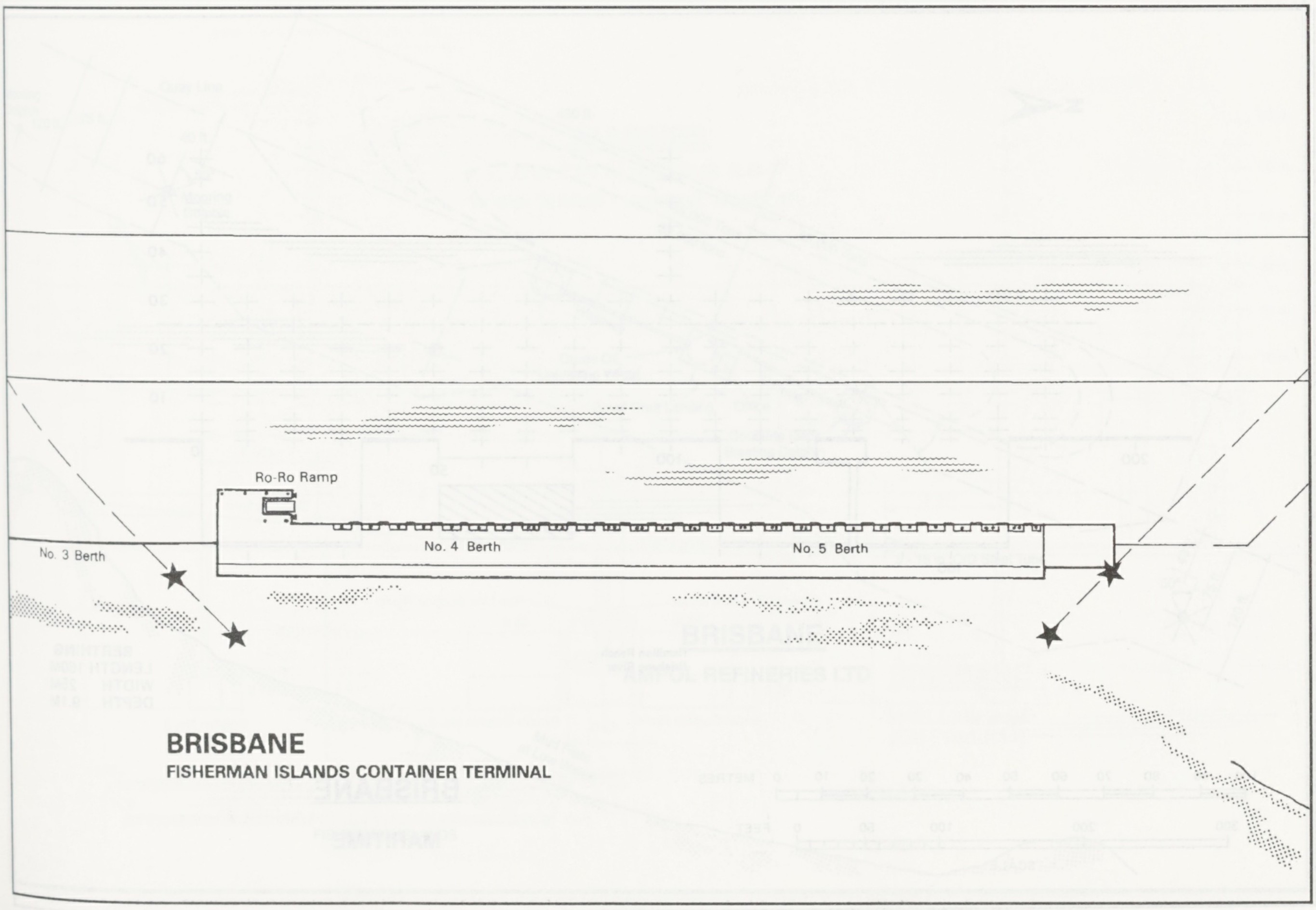

NEWSTEAD
HAMILTON
Hamilton Reach Cutting
Dredged Channel
BULIMBA
Shafston Reach
NEW FARM
Humbug Reach
Mobil Oil
Quarries Reach Cutting
Parker Is. Cutting
Eagle Farm Flats Cutting
9 m.
Sugar Wharf
BRISBANE
BP Crude Wharf
LUGGAGE PT
BULWER ISLAND
B.P. Oil Refinerys
Swing Basin
Pelican Bks
Pinkenba Grain Wharves
Pinkenba Cutting
Upper Lytton Cutting
Export Coal Facility
Ampol Crude Berth
Grain Wharf
Container Berths
FISHERMAN ISLANDS
GISBON
Tug Base
Ampol Oil Refinery


Brisbane River
AMPOL Crude Oil Berth
Grain Berth
Container Terminals
1
2
3
4
5
Coal Berth
N
Tug Base
Lytton
AMPOL Refinery
Rail Terminal
Port Development Limit
Fisherman Islands
Container Parks
Whyte Island
Moreton Bay
BRISBANE
FISHERMAN ISLANDS

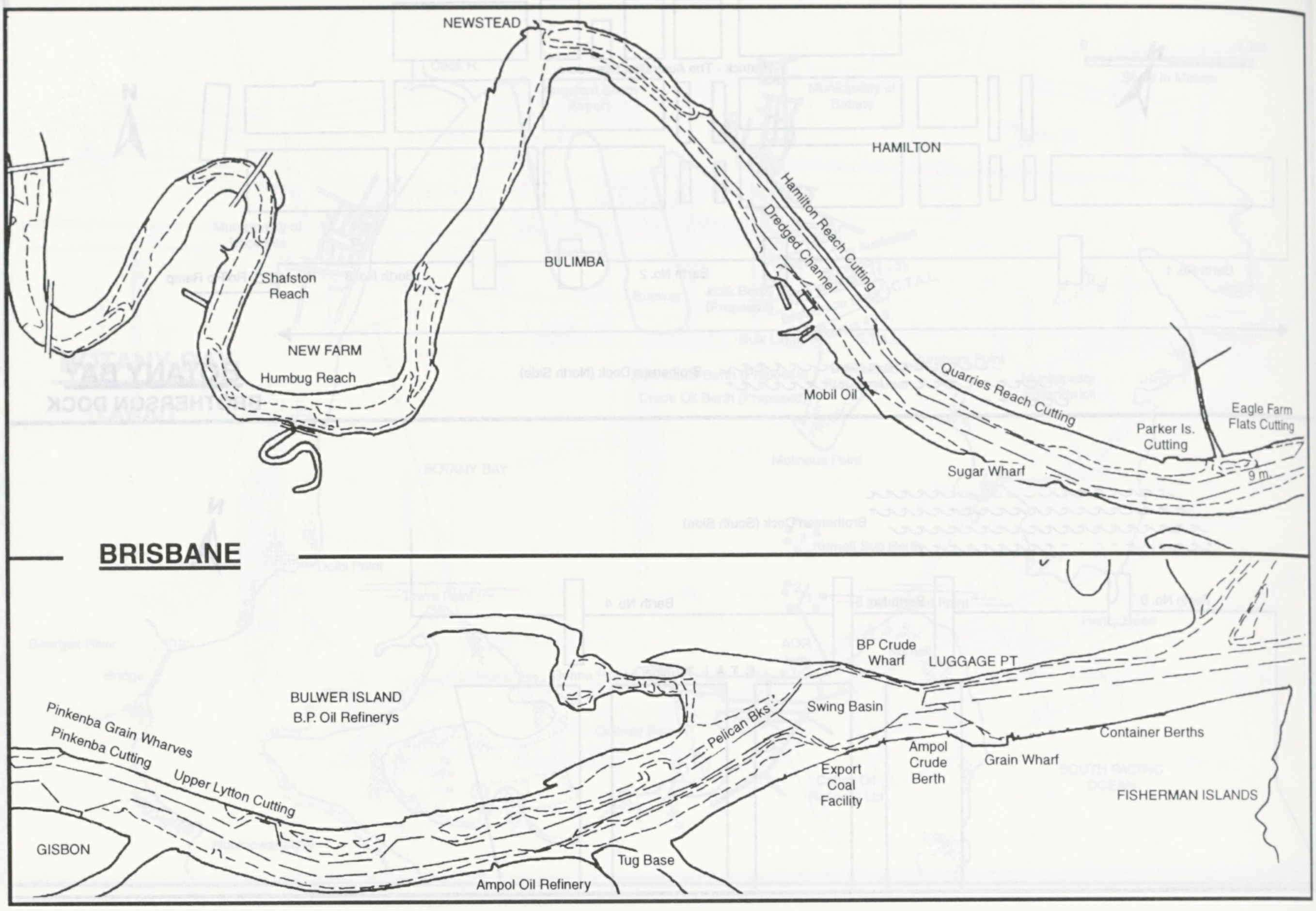

Depth 10.1 m.
SUGAR WHARF
0
50
SCALE OF METRES

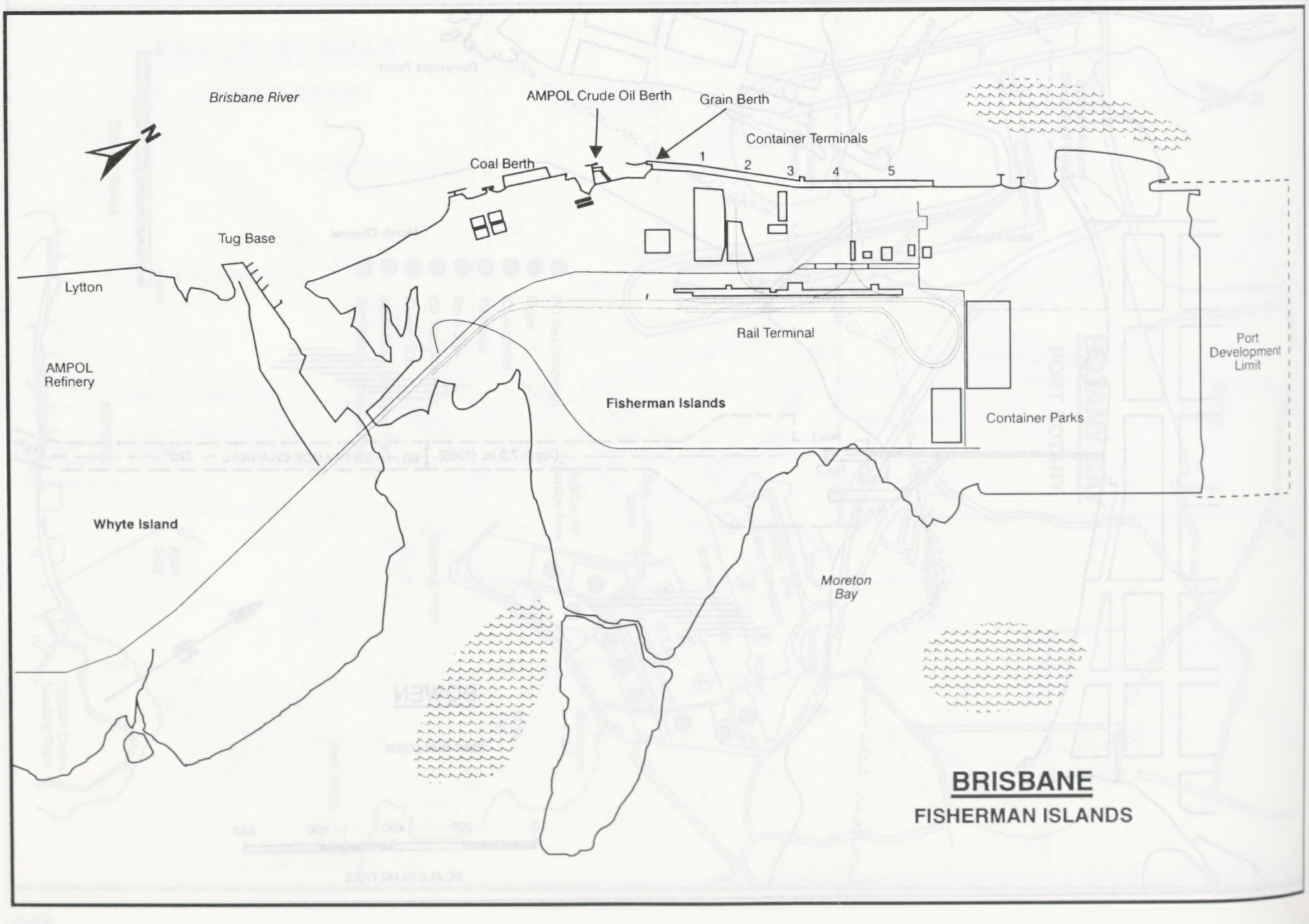
BRISBANE

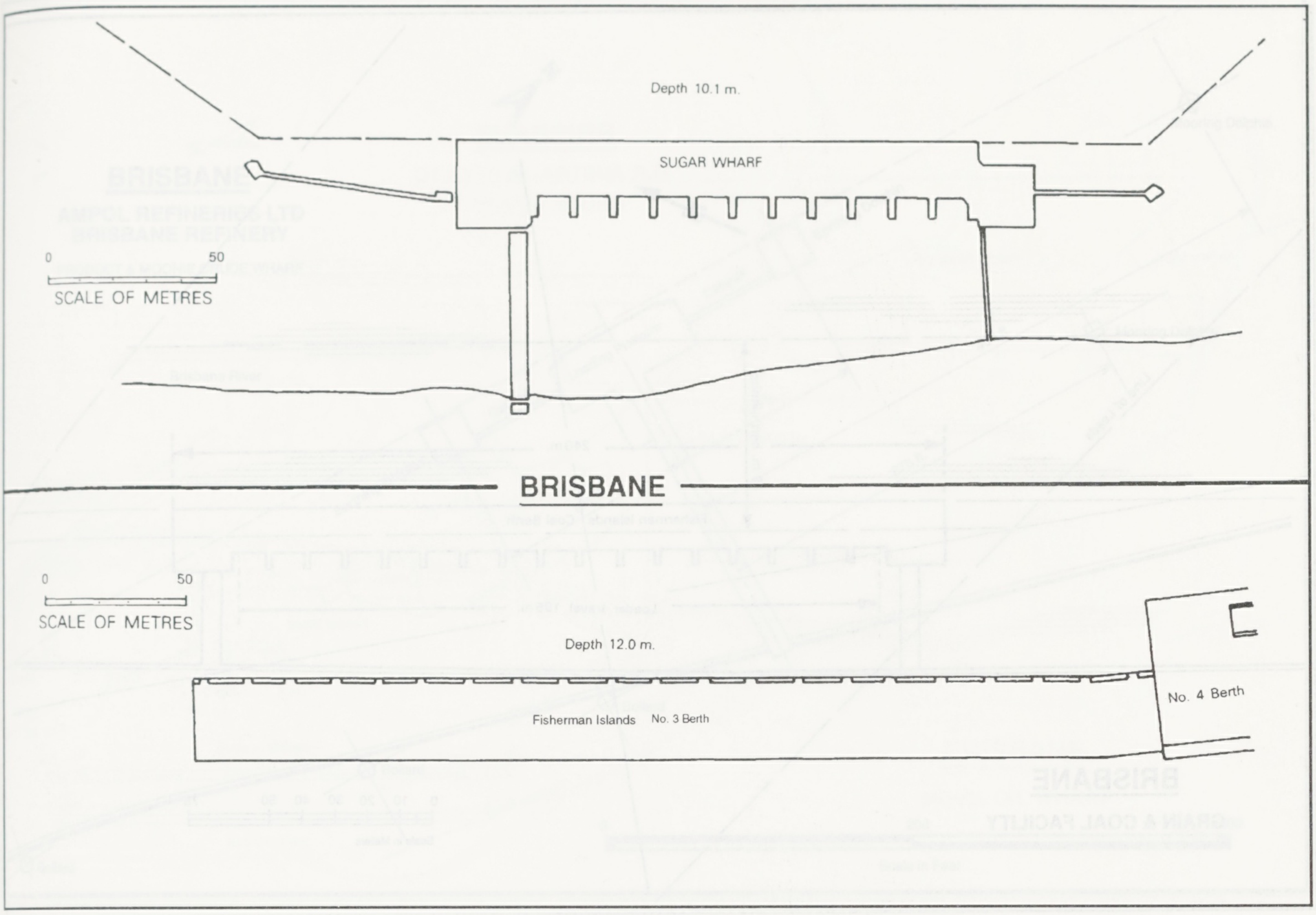

0
50
SCALE OF METRES
Depth 12.0 m.
Fisherman Islands
No. 3 Berth
No. 4 Berth

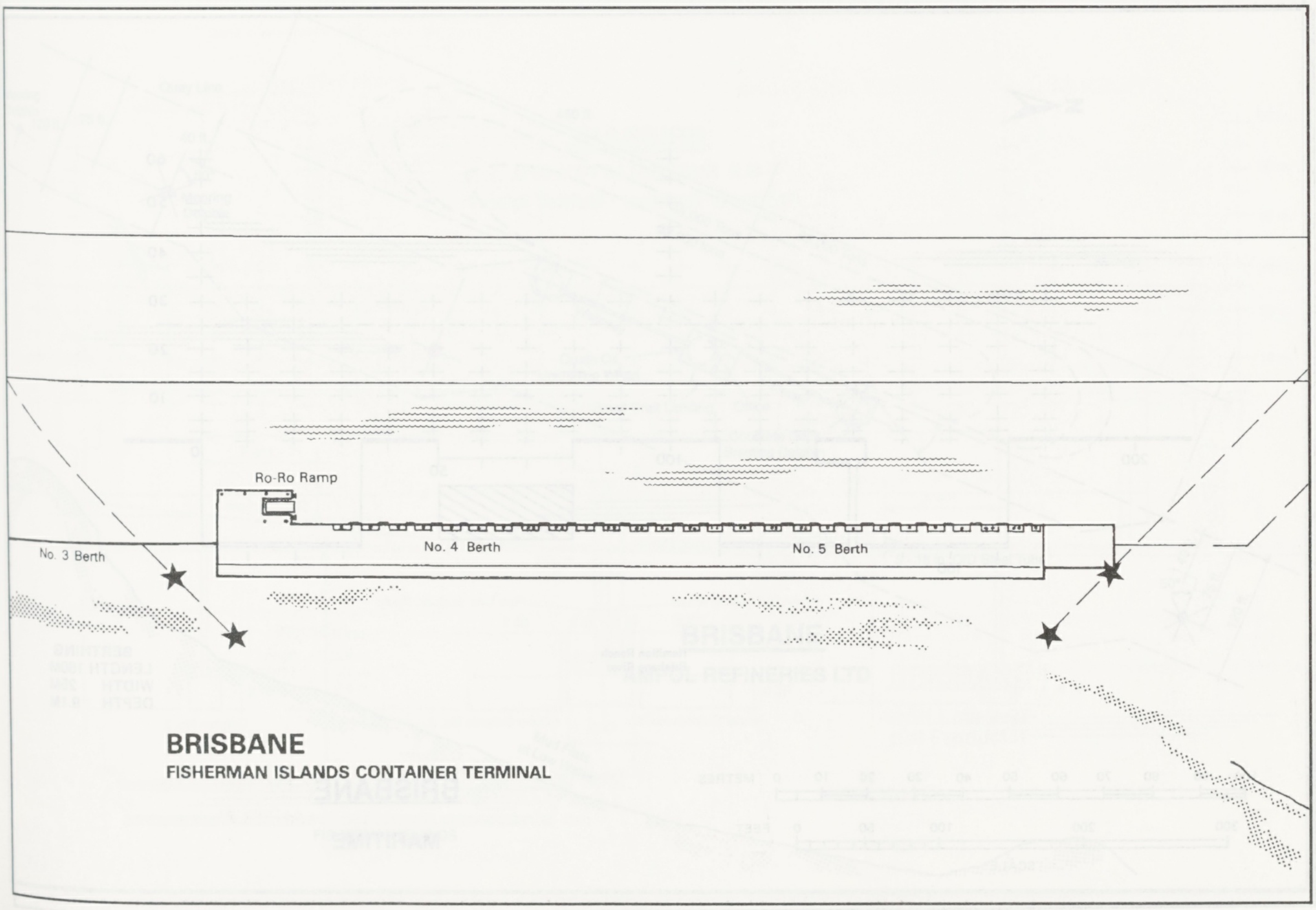

Ro-Ro Ramp
No. 3 Berth
No. 4 Berth
No. 5 Berth

BRISBANE
FISHERMAN ISLANDS CONTAINER TERMINAL

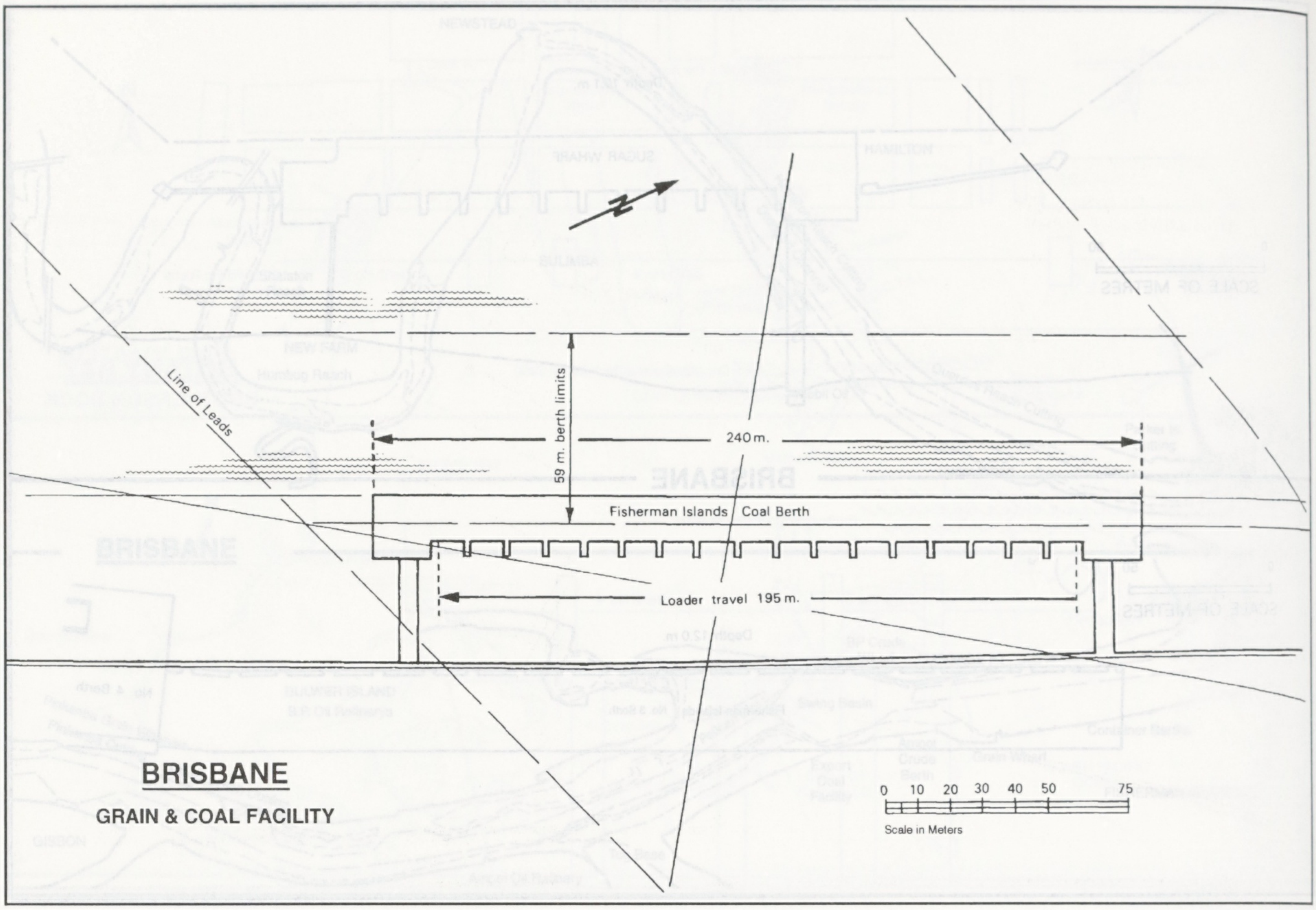

NEWSTEAD
HAMILTON
Hamilton Reach Cutting
Dredged Channel
Shafston Reach
BULIMBA
NEW FARM
Humbug Reach
Mobil Oil
Quarries Reach Cutting
Parker Is. Cutting
Eagle Farm Flats Cutting
9 m.
Sugar Wharf
BRISBANE
BP Crude Wharf
LUGGAGE PT
BULWER ISLAND
B.P. Oil Refinerys
Swing Basin
Pelican Bks
Pinkenba Grain Wharves
Pinkenba Cutting
Upper Lytton Cutting
Export Coal Facility
Ampol Crude Berth
Grain Wharf
Container Berths
FISHERMAN ISLANDS
GISBON
Tug Base
Ampol Oil Refinery


Brisbane River
AMPOL Crude Oil Berth
Grain Berth
Container Terminals
1
2
3
4
5
Coal Berth
Tug Base
Lytton
AMPOL Refinery
Rail Terminal
Port Development Limit
Fisherman Islands
Container Parks
Whyte Island
Moreton Bay
BRISBANE
FISHERMAN ISLANDS


Depth 10.1 m.
SUGAR WHARF
0
50
SCALE OF METRES
BRISBANE
0
50
SCALE OF METRES
Depth 12.0 m.
Fisherman Islands
No. 3 Berth
No. 4 Berth

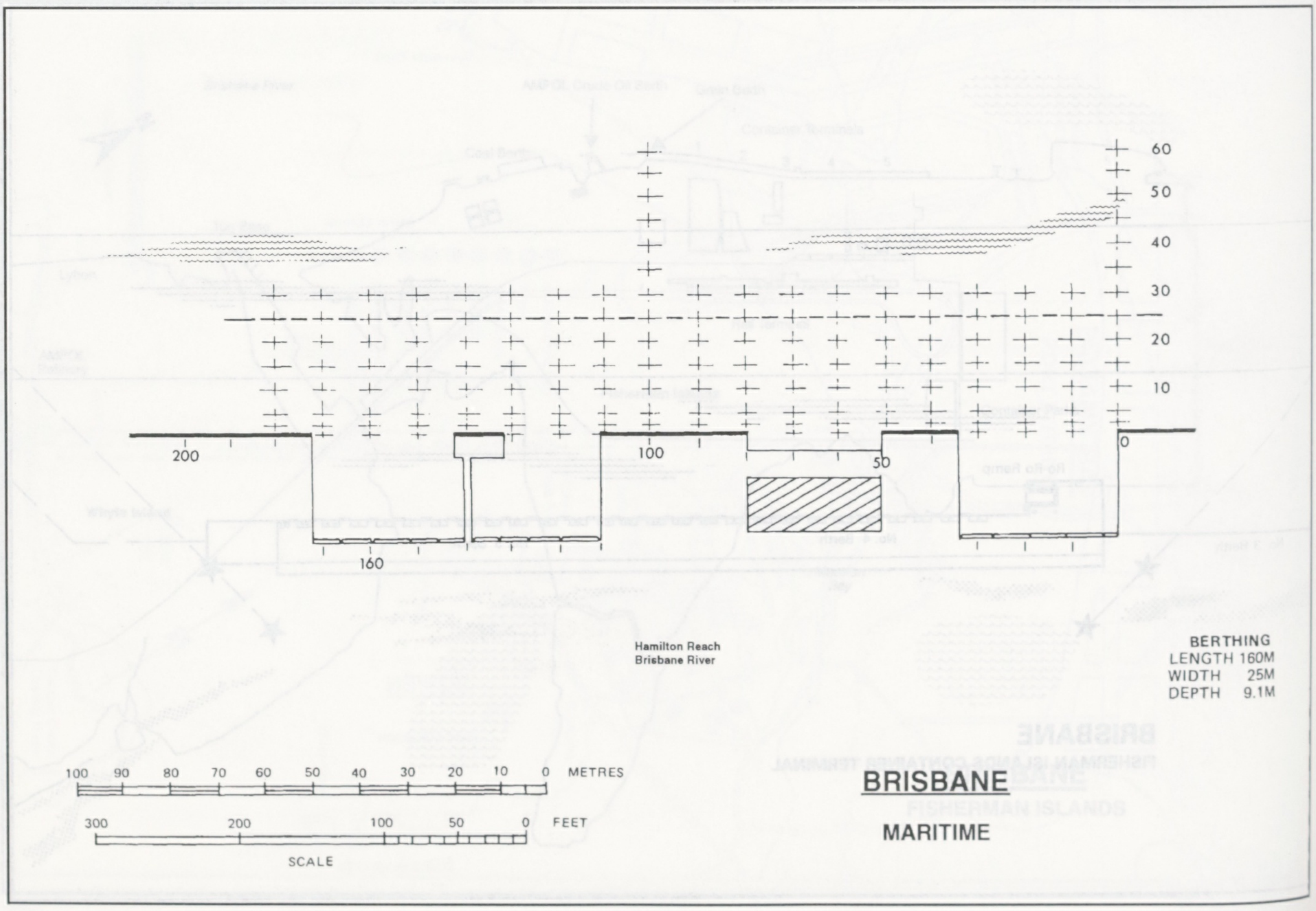

Ro-Ro Ramp
No. 3 Berth
No. 4 Berth
No. 5 Berth

BRISBANE
FISHERMAN ISLANDS CONTAINER TERMINAL


Line of Leads
59 m. berth limits
240 m.
Fisherman Islands Coal Berth
Loader travel 195 m.
0
10
20
30
40
50
75
Scale in Meters

BRISBANE

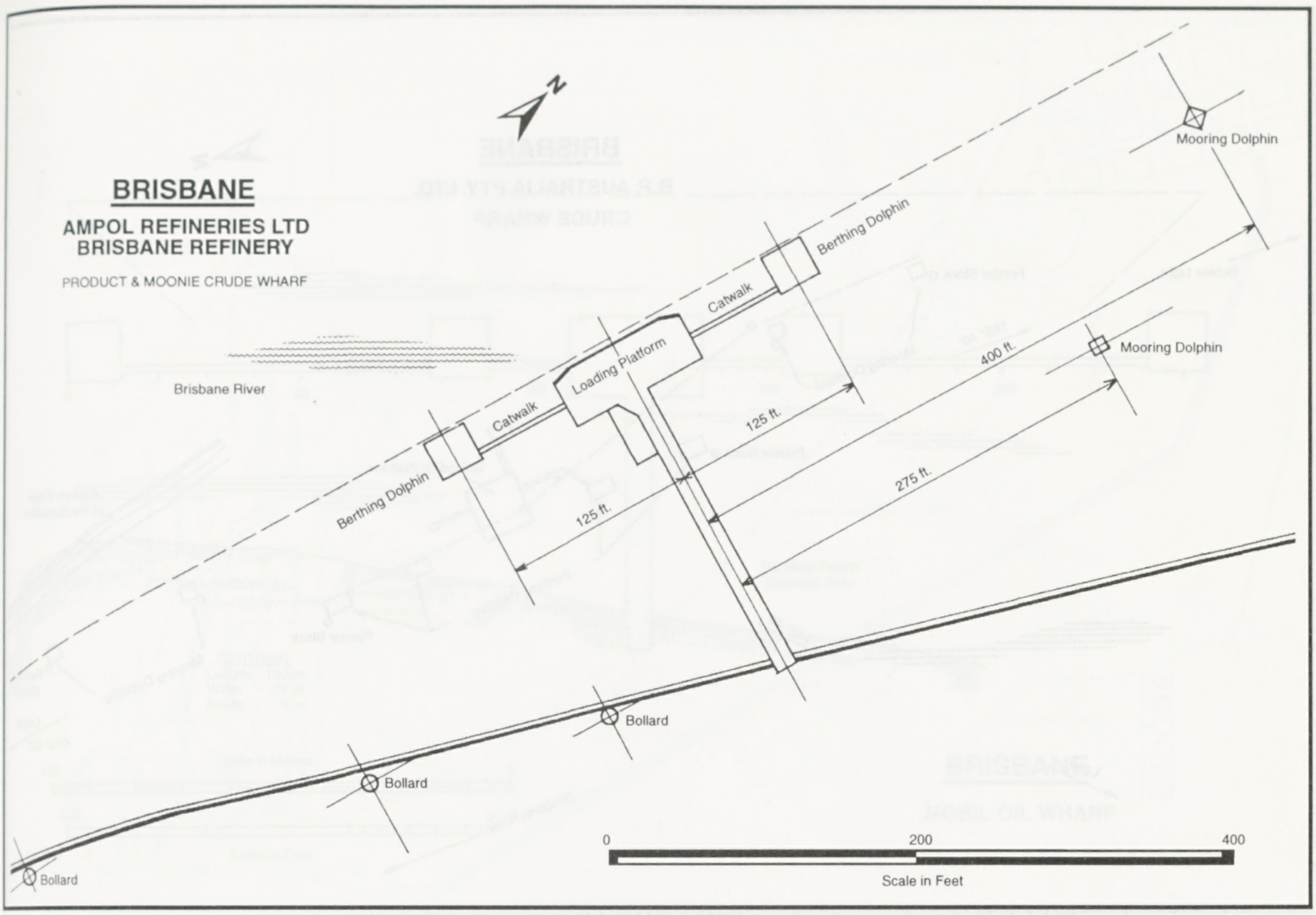
GRAIN & COAL FACILITY

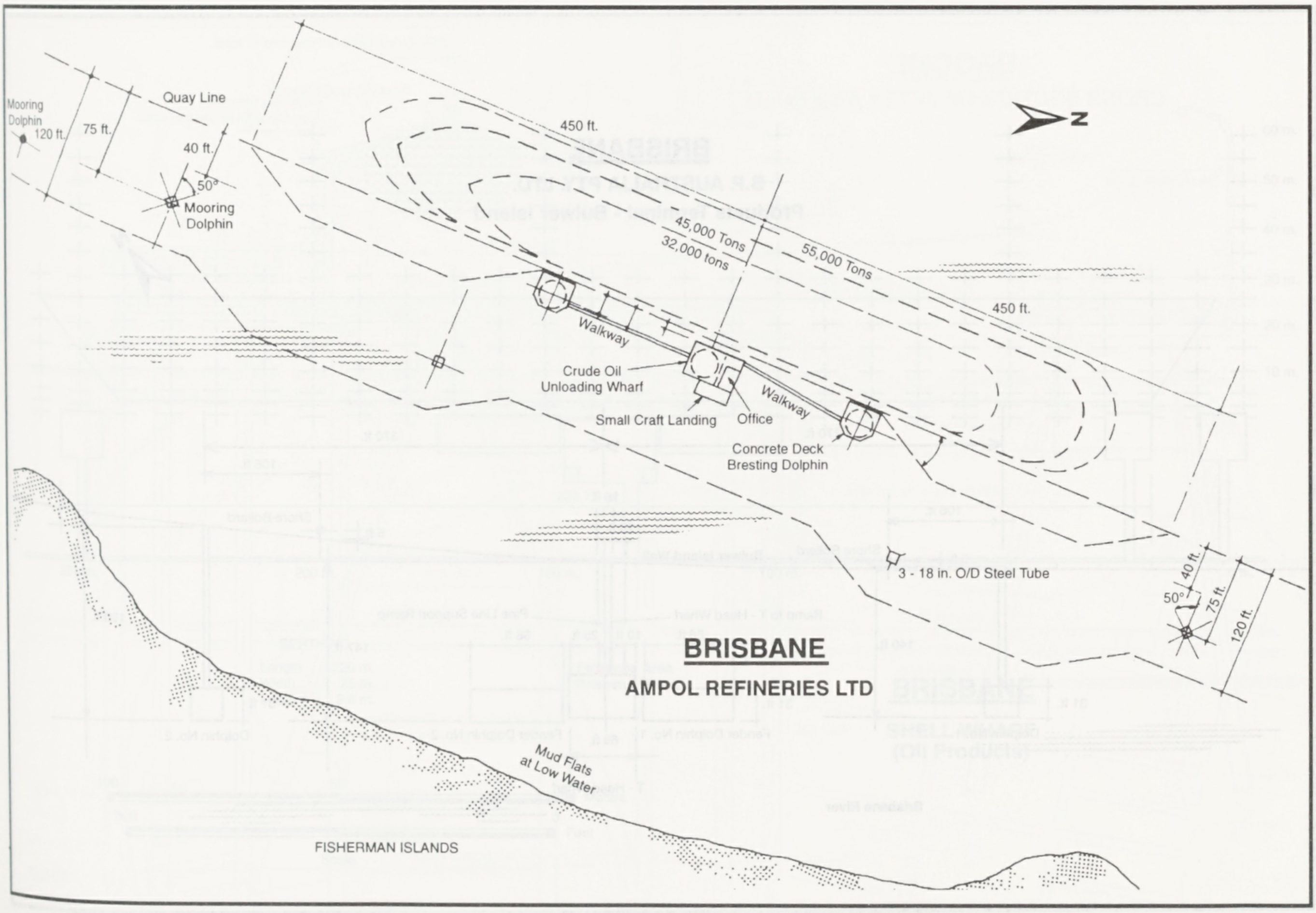

60
50
40
30
20
10
0
200
100
50
160
Hamilton Reach
Brisbane River
100
90
80
70
60
50
40
30
20
10
0
METRES
300
200
100
50
0
FEET
SCALE

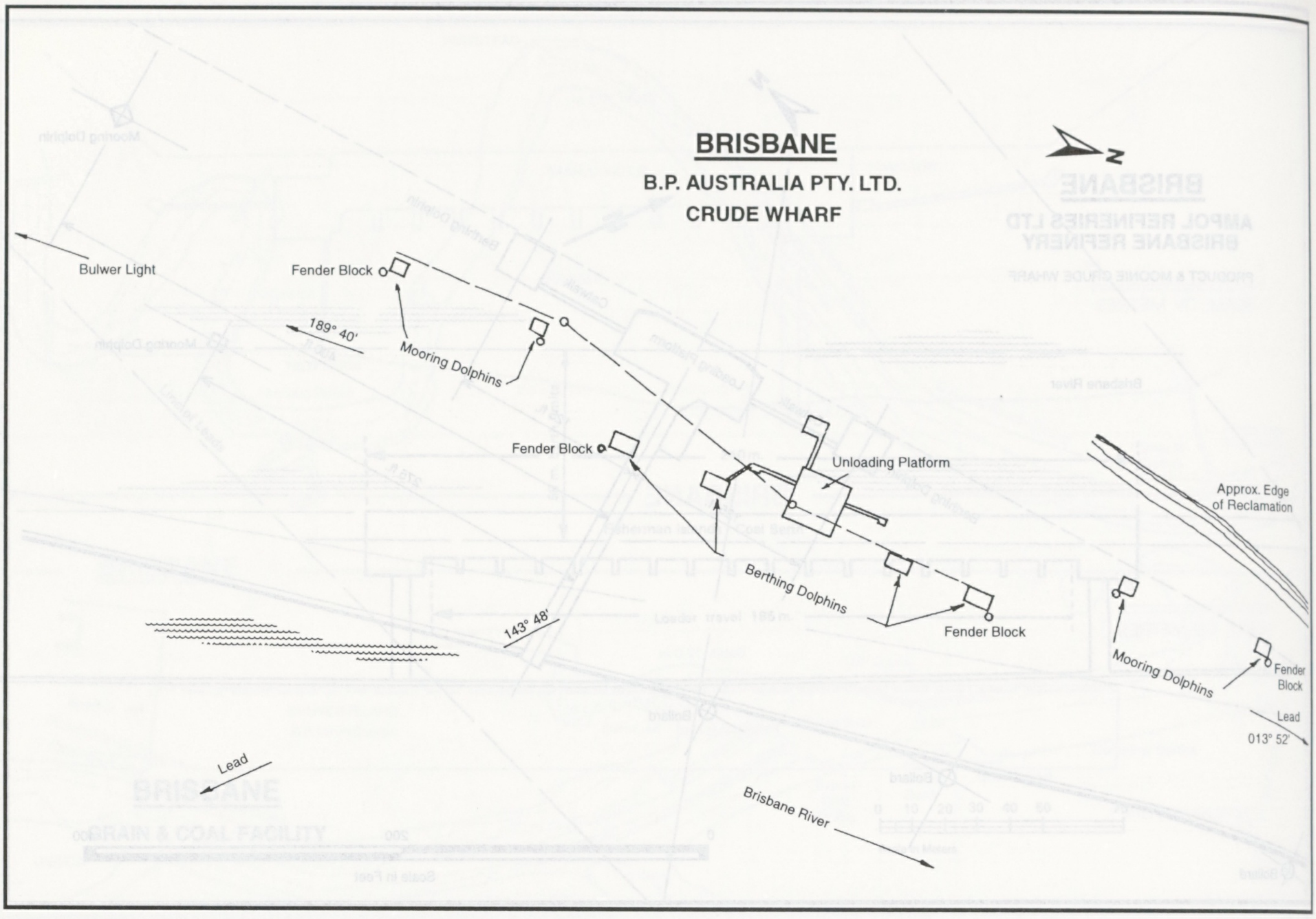
BERTHING
LENGTH 160M
WIDTH 25M
DEPTH 9.1M

BRISBANE

MARITIME


N
BRISBANE
AMPOL REFINERIES LTD
BRISBANE REFINERY
PRODUCT & MOONIE CRUDE WHARF
Brisbane River
Mooring Dolphin
Berthing Dolphin
Catwalk
Loading Platform
Catwalk
Berthing Dolphin
Mooring Dolphin
400 ft.
125 ft.
275 ft.
125 ft.
Bollard
Bollard
Bollard
0
200
400
Scale in Feet

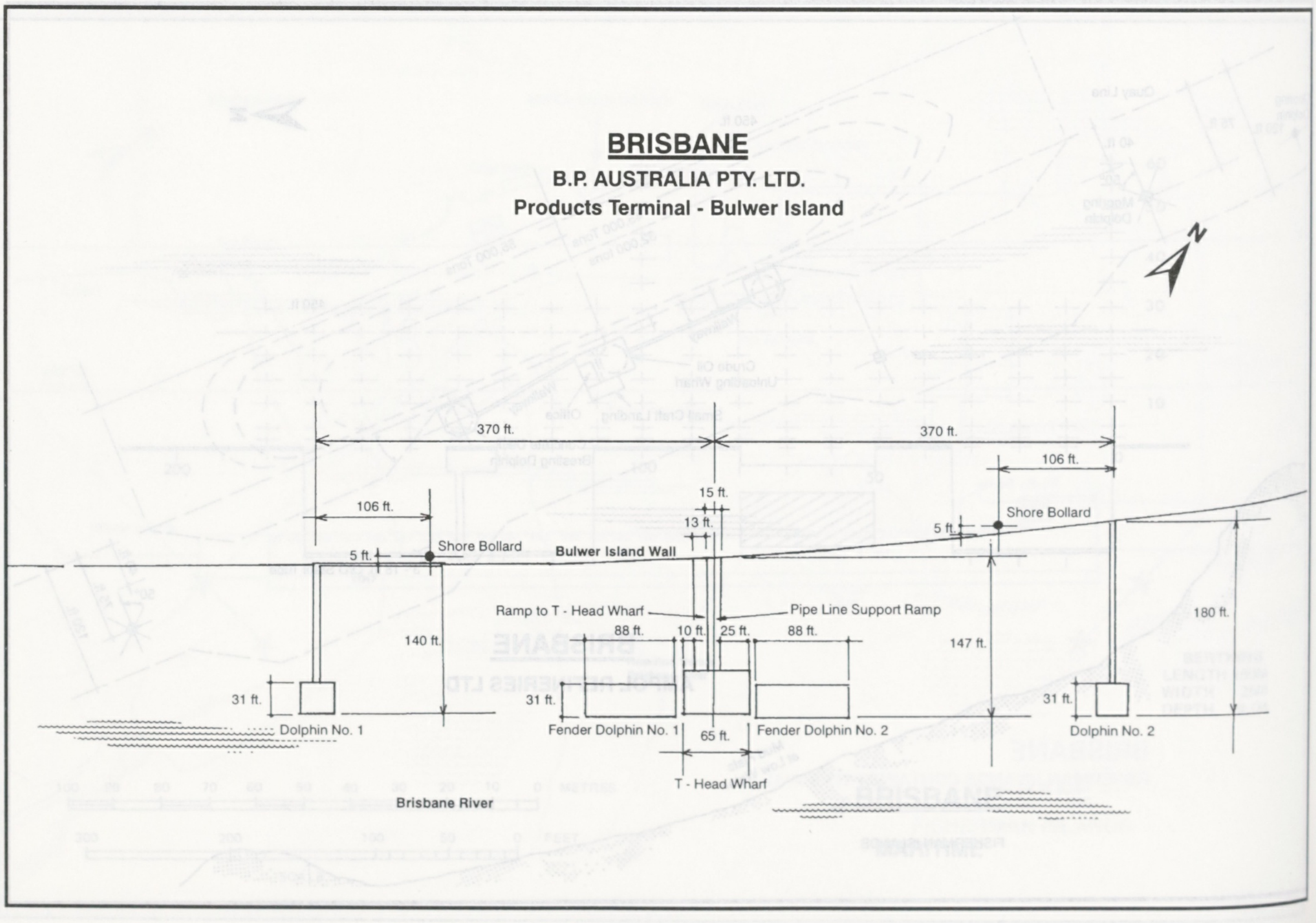

Mooring Dolphin
120 ft.
75 ft.
Quay Line
40 ft.
50°
Mooring Dolphin
450 ft.
N
45,000 Tons
32,000 tons
55,000 Tons
450 ft.
Walkway
Crude Oil Unloading Wharf
Small Craft Landing
Office
Walkway
Concrete Deck Bresting Dolphin
3 - 18 in. O/D Steel Tube
40 ft.
50°
75 ft.
120 ft.
BRISBANE
AMPOL REFINERIES LTD
Mud Flats at Low Water
FISHERMAN ISLANDS



BRISBANE

B.P. AUSTRALIA PTY. LTD.
CRUDE WHARF

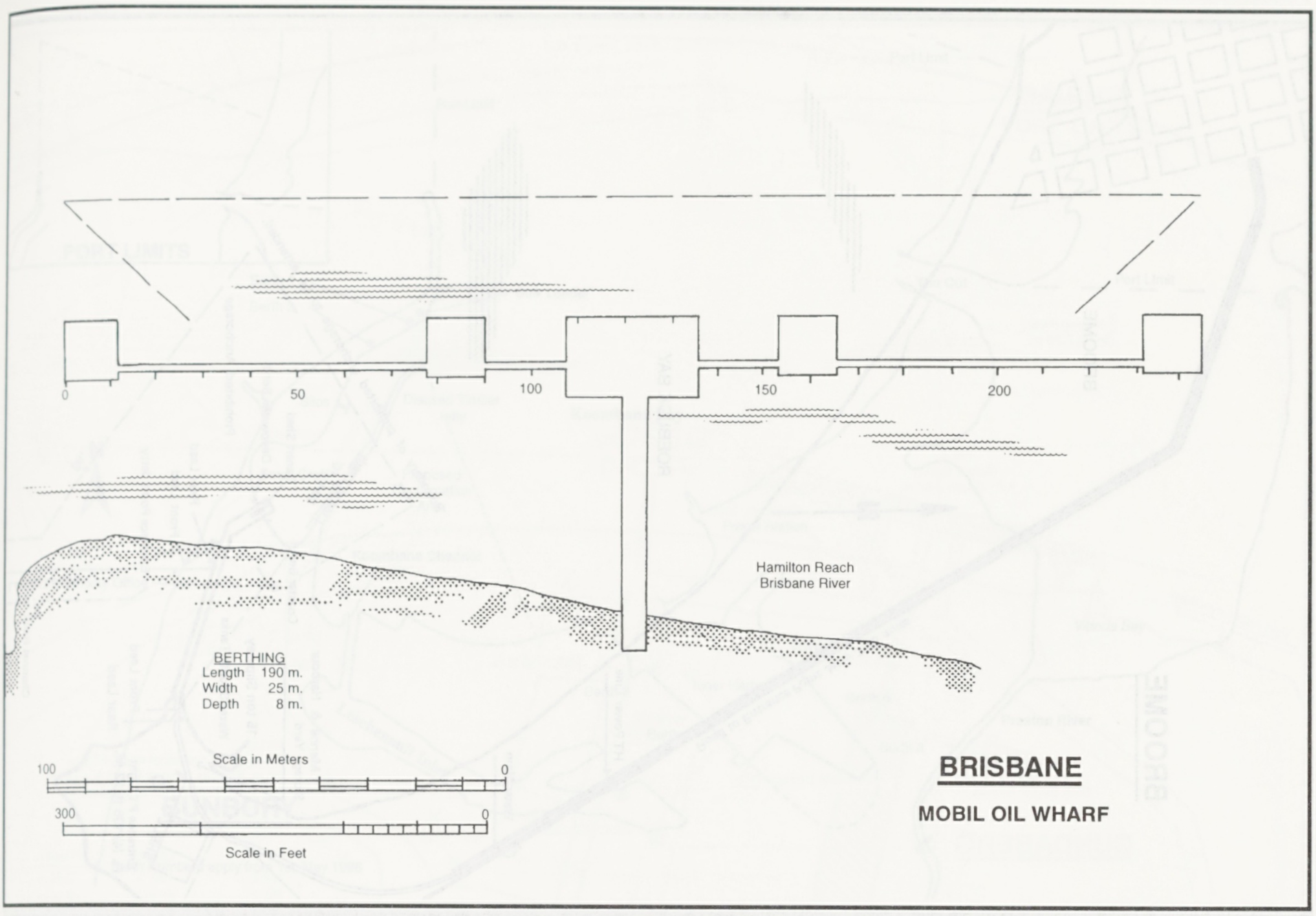
N
Bulwer Light
Fender Block
189° 40'
Mooring Dolphins
Fender Block
Unloading Platform
Approx. Edge of Reclamation
Berthing Dolphins
143° 48'
Fender Block
Mooring Dolphins
Fender Block
Lead
013° 52'
Lead
Brisbane River



BRISBANE

B.P. AUSTRALIA PTY. LTD.
Products Terminal - Bulwer Island

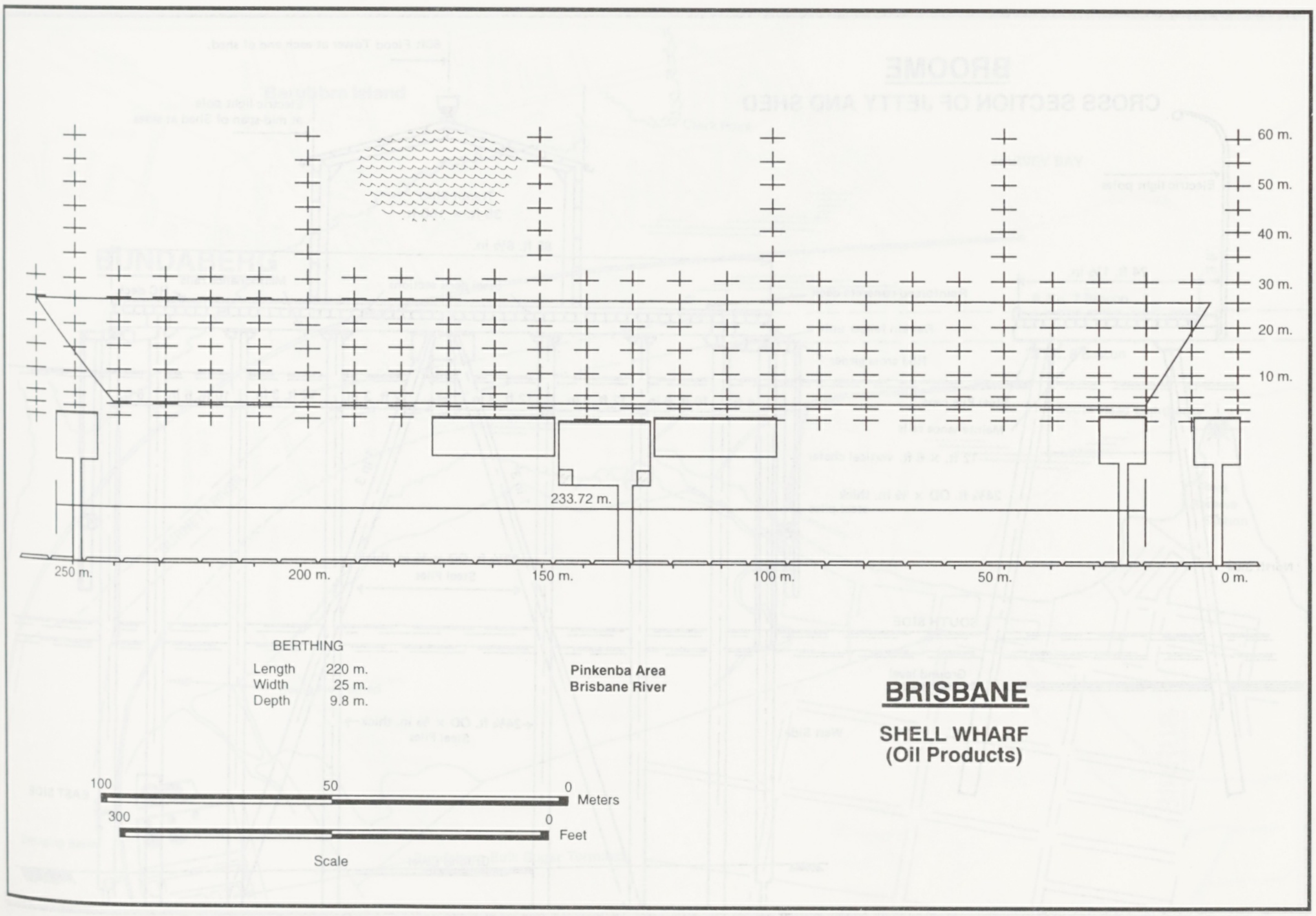
N
370 ft.
370 ft.
106 ft.
106 ft.
15 ft.
13 ft.
5 ft.
Shore Bollard
Bulwer Island Wall
5 ft.
Shore Bollard
Ramp to T - Head Wharf
Pipe Line Support Ramp
88 ft.
10 ft.
25 ft.
88 ft.
140 ft.
147 ft.
180 ft.
31 ft.
31 ft.
31 ft.
Dolphin No. 1
Fender Dolphin No. 1
Fender Dolphin No. 2
Dolphin No. 2
65 ft.
T - Head Wharf
Brisbane River


0
50
100
150
200
Hamilton Reach
Brisbane River
Scale in Meters
100
0
300
0
Scale in Feet

BERTHING
Length 190 m.
Width 25 m.
Depth 8 m.

BRISBANE

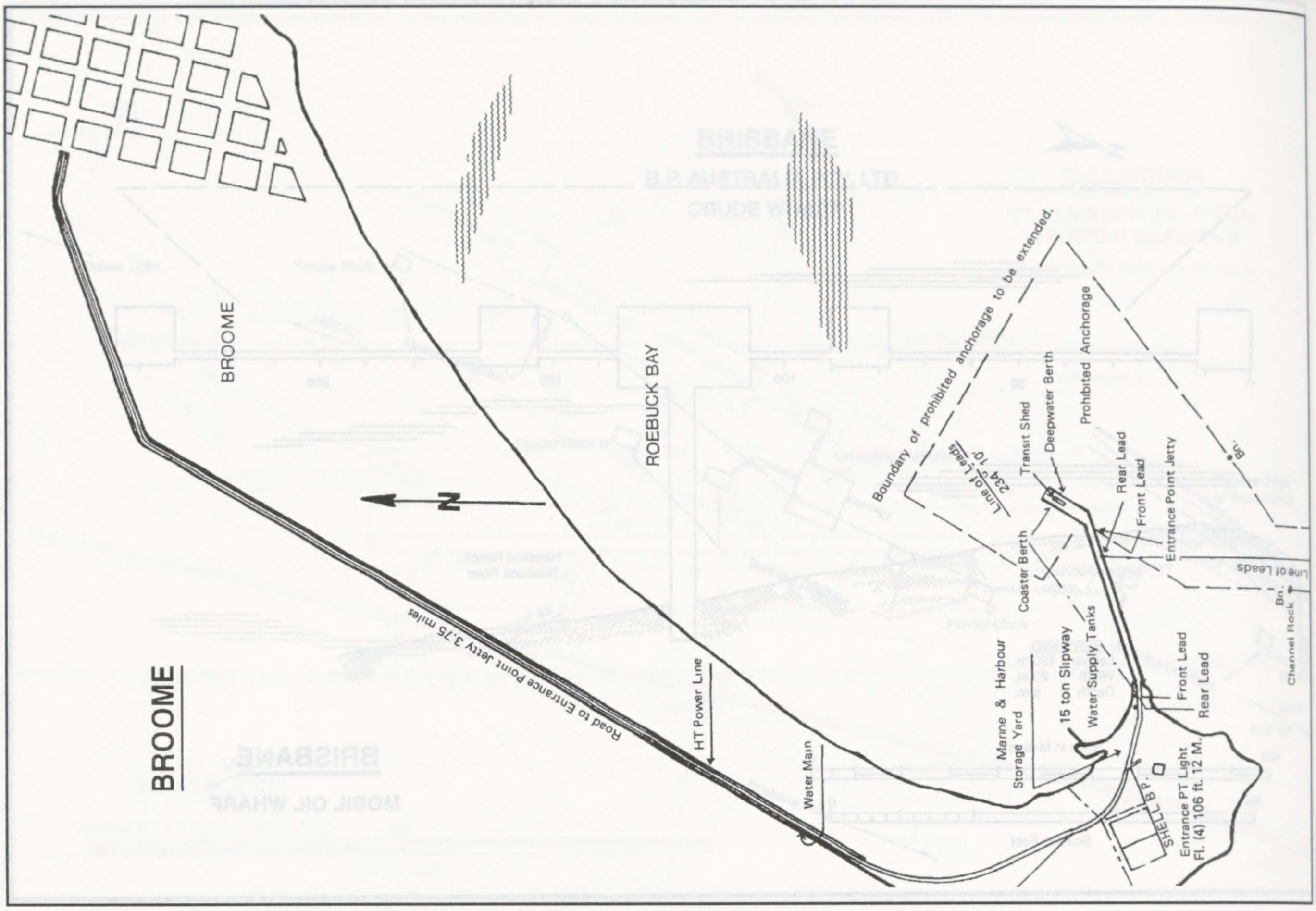
MOBIL OIL WHARF


60 m.
50 m.
40 m.
30 m.
20 m.
10 m.
233.72 m.
250 m.
200 m.
150 m.
100 m.
50 m.
0 m.
Pinkenba Area
Brisbane River
100
50
0
Meters
300
0
Feet
Scale

BERTHING
Length 220 m.
Width 25 m.
Depth 9.8 m.

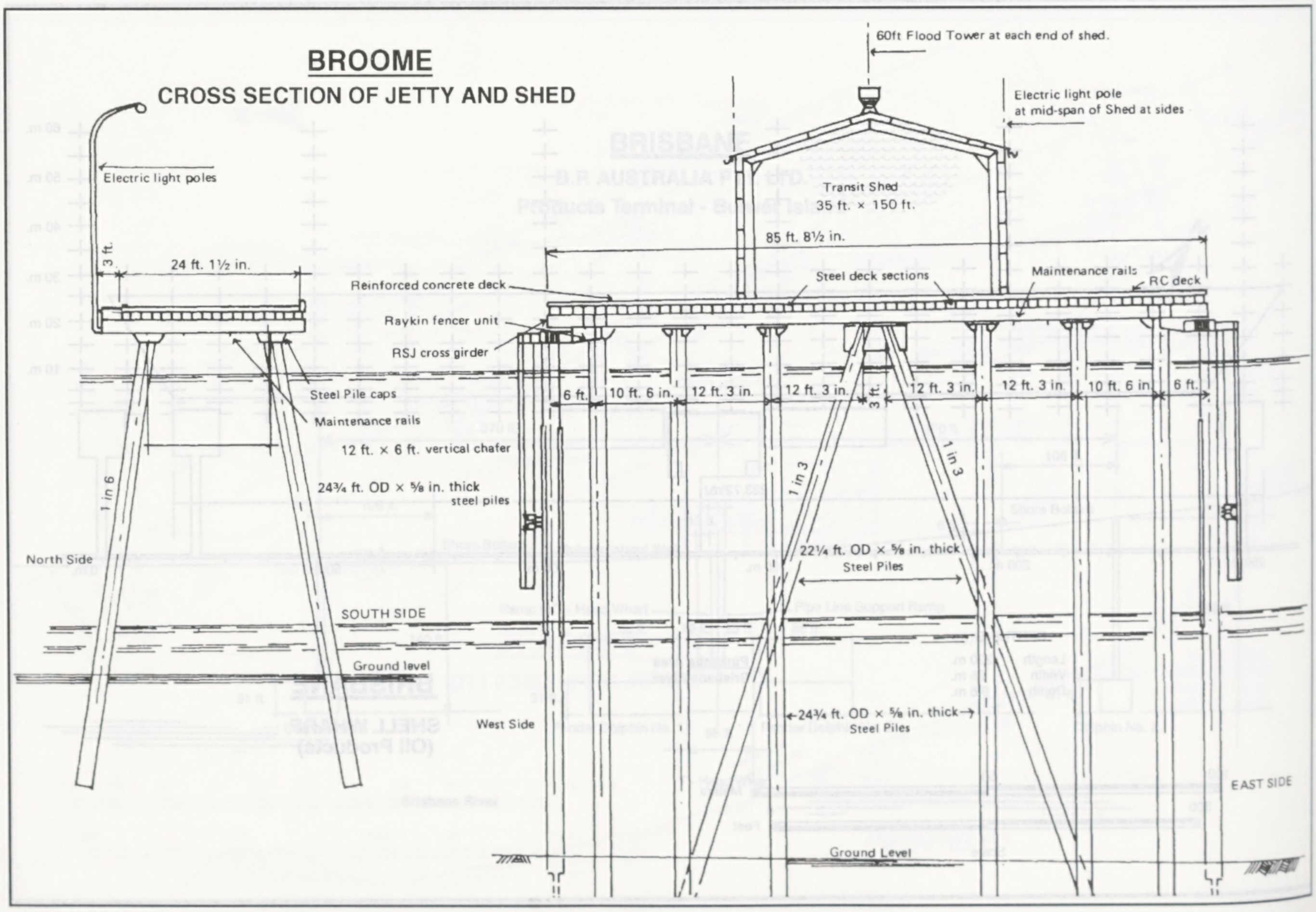
BRISBANE

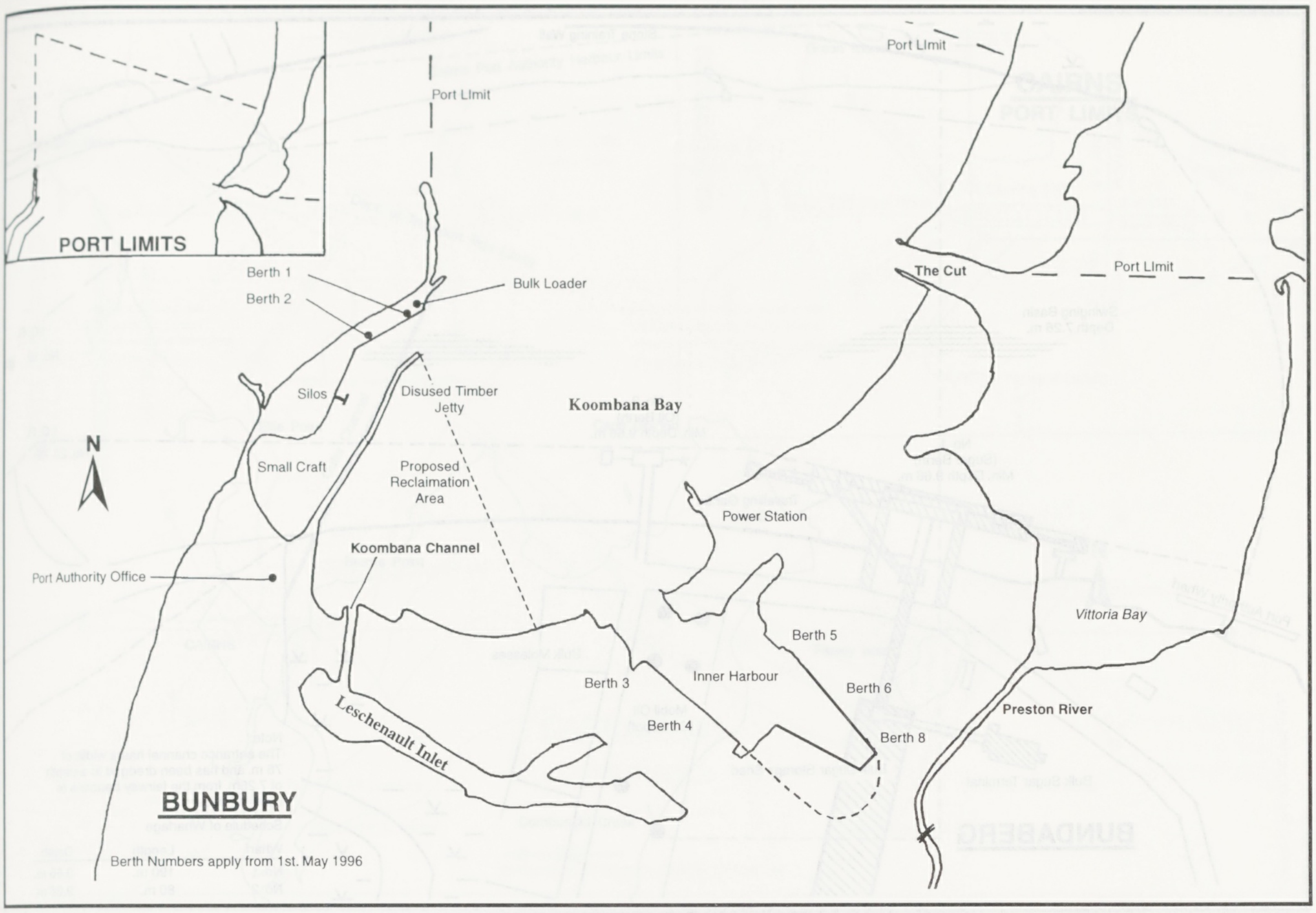
SHELL WHARF
(Oil Products)

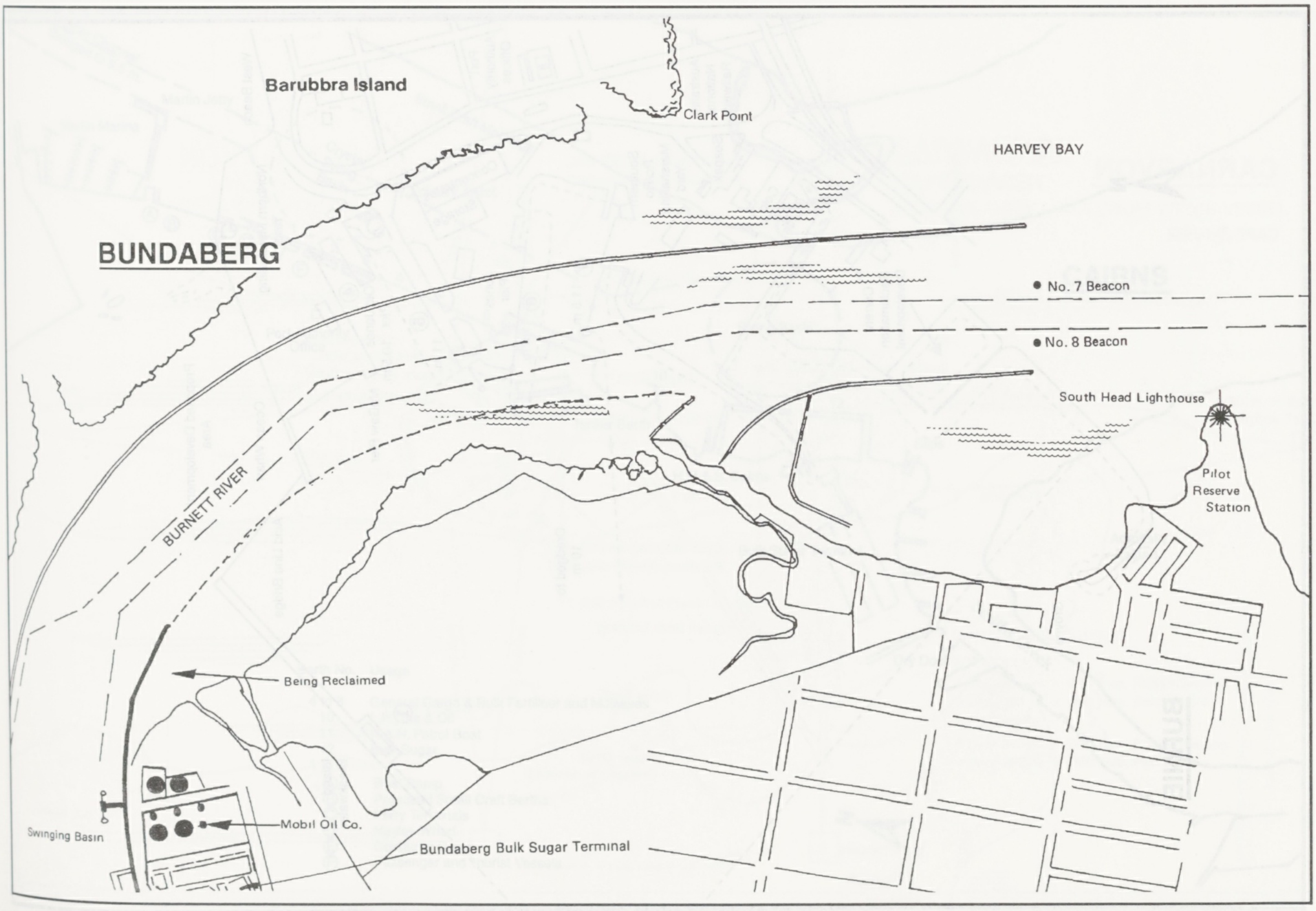

BROOME
BROOME
ROEBUCK BAY
N
Road to Entrance Point Jetty 3.75 miles
HT Power Line
Water Main
Boundary of prohibited anchorage to be extended.
Line of Leads 234° 10'
Transit Shed
Deepwater Berth
Prohibited Anchorage
Coaster Berth
Rear Lead
Front Lead
Entrance Point Jetty
Bn.
Line of Leads
Bn.
Channel Rock
Marine & Harbour Storage Yard
15 ton Slipway
Water Supply Tanks
Front Lead
Rear Lead
SHELL B.P.
Entrance PT Light Fl. (4) 106 ft. 12 M.

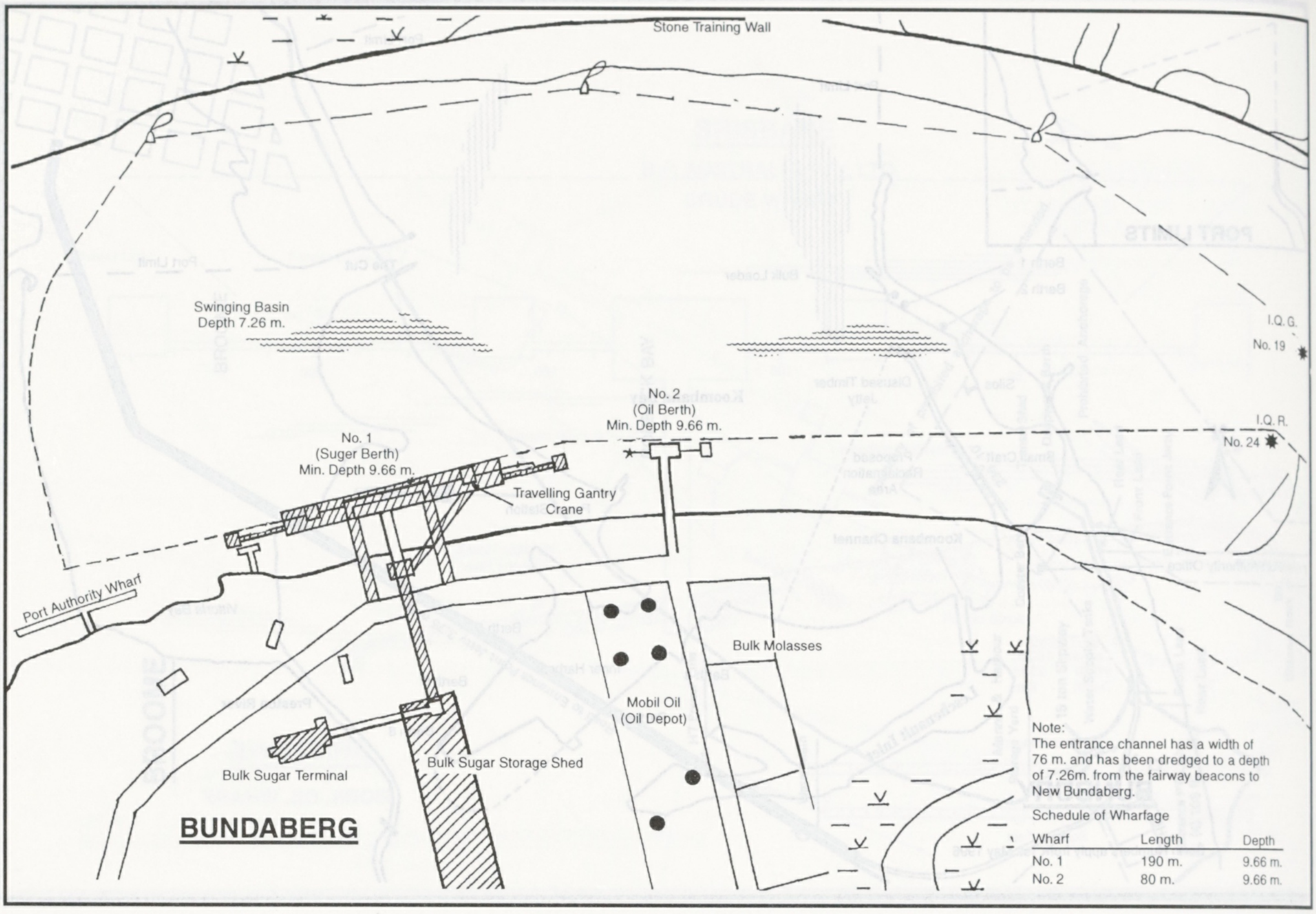
BROOME

CROSS SECTION OF JETTY AND SHED


60ft Flood Tower at each end of shed.
Electric light pole at mid-span of Shed at sides
Electric light poles
3 ft.
24 ft. 1½ in.
Transit Shed 35 ft. × 150 ft.
85 ft. 8½ in.
Reinforced concrete deck
Steel deck sections
Maintenance rails
RC deck
Raykin fencer unit
RSJ cross girder
Steel Pile caps
Maintenance rails
12 ft. × 6 ft. vertical chafer
24¾ ft. OD × ⅝ in. thick steel piles
1 in 6
North Side
SOUTH SIDE
Ground level
6 ft.
10 ft. 6 in.
12 ft. 3 in.
12 ft. 3 in.
3 ft.
12 ft. 3 in.
12 ft. 3 in.
10 ft. 6 in.
6 ft.
1 in 3
1 in 3
22¼ ft. OD × ⅝ in. thick Steel Piles
24¾ ft. OD × ⅝ in. thick Steel Piles
West Side
EAST SIDE
Ground Level


PORT LIMITS
Port Limit
Port Limit
Port Limit
The Cut
Berth 1
Berth 2
Bulk Loader
Silos
Disused Timber Jetty
Koombana Bay
N
Small Craft
Proposed Reclaimation Area
Power Station
Koombana Channel
Port Authority Office
Vittoria Bay
Berth 5
Inner Harbour
Berth 3
Berth 6
Leschenault Inlet
Berth 4
Preston River
Berth 8
BUNBURY
Berth Numbers apply from 1st. May 1996

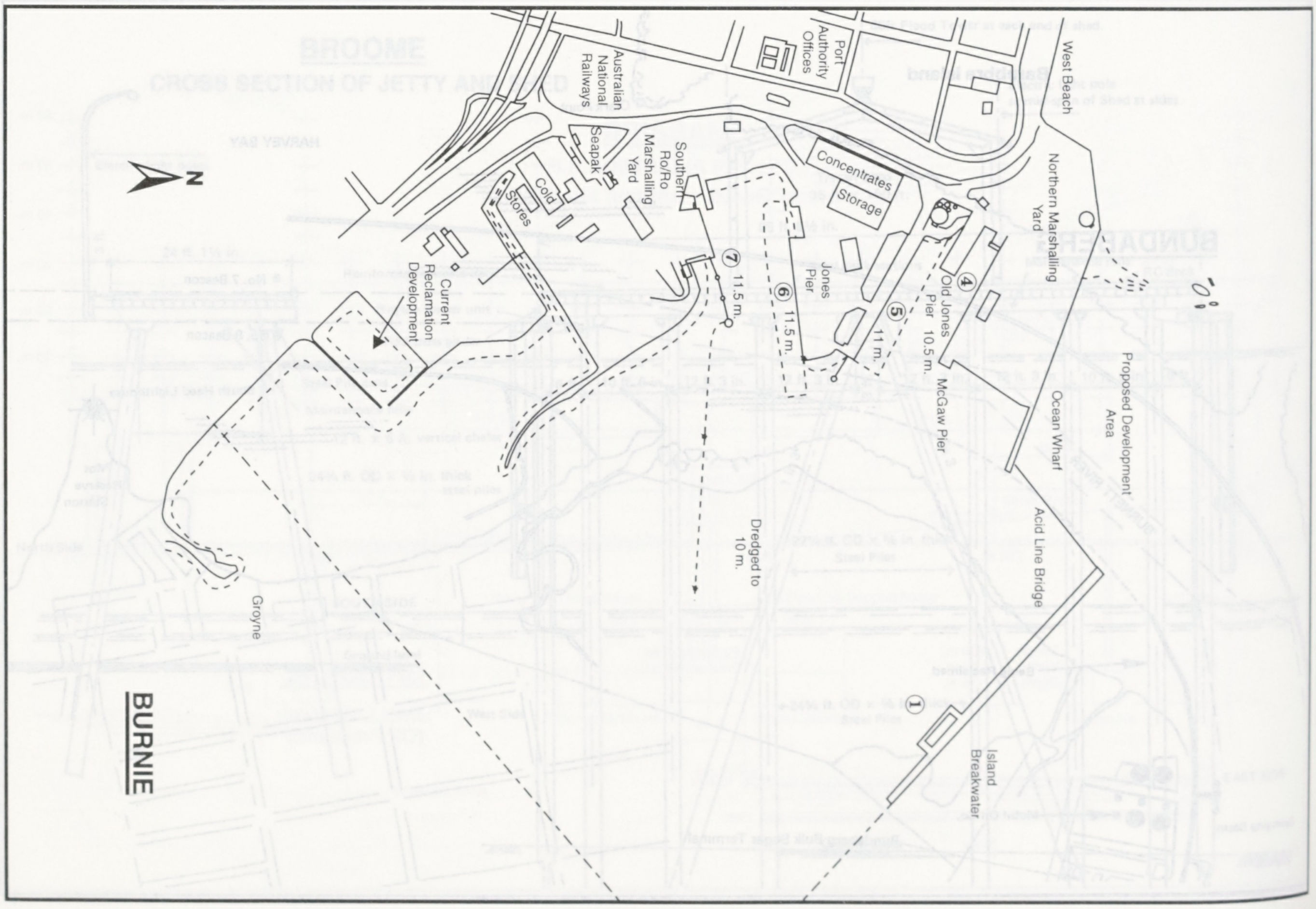

Barubbra Island
Clark Point
HARVEY BAY
BUNDABERG
No. 7 Beacon
No. 8 Beacon
South Head Lighthouse
Pilot Reserve Station
BURNETT RIVER
Being Reclaimed
Swinging Basin
Mobil Oil Co.
Bundaberg Bulk Sugar Terminal

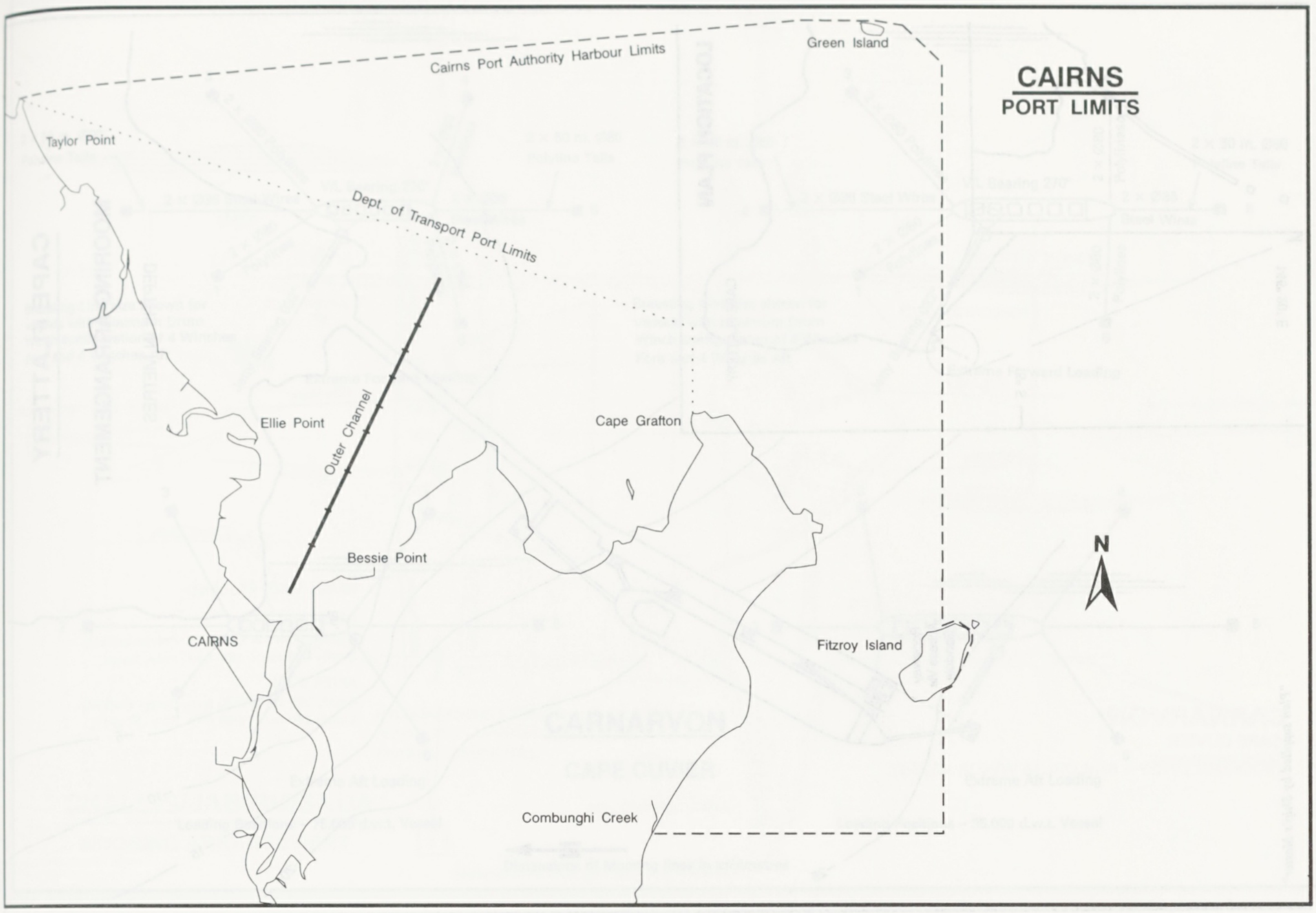

Stone Training Wall
Swinging Basin
Depth 7.26 m.
I.Q.G.
No. 19
No. 2
(Oil Berth)
Min. Depth 9.66 m.
I.Q.R.
No. 24
No. 1
(Suger Berth)
Min. Depth 9.66 m.
Travelling Gantry
Crane
Port Authority Wharf
Bulk Molasses
Mobil Oil
(Oil Depot)
Bulk Sugar Terminal
Bulk Sugar Storage Shed
BUNDABERG

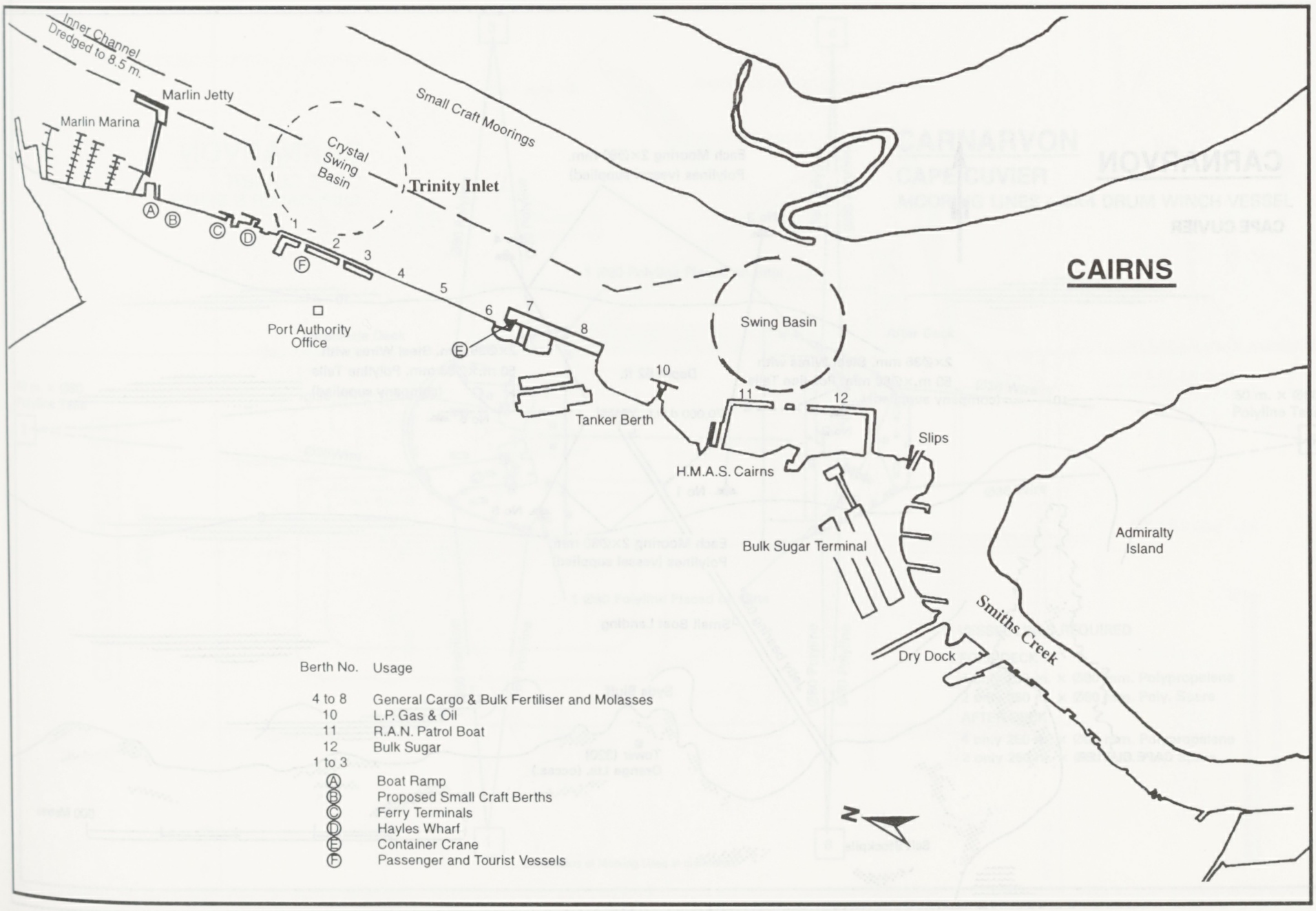
Note:
The entrance channel has a width of 76 m. and has been dredged to a depth of 7.26m. from the fairway beacons to New Bundaberg.

Schedule of Wharfage

Wharf	Length	Depth
No. 1	190 m.	9.66 m.
No. 2	80 m.	9.66 m.


Port Authority Offices
Australian National Railways
Seapak
Southern Ro/Ro Marshalling Yard
Concentrates
Storage
West Beach
Northern Marshalling Yard
N
Cold Stores
Current Reclamation Development
⑦ 11.5 m.
⑥ 11.5 m.
Jones Pier
⑤ 11 m.
④
Old Jones Pier 10.5 m.
McGaw Pier
Ocean Wharf
Proposed Development Area
Acid Line Bridge
Dredged to 10 m.
Groyne
①
Island Breakwater
BURNIE


CAIRNS
PORT LIMITS
Cairns Port Authority Harbour Limits
Green Island
Taylor Point
Dept. of Transport Port Limits
Outer Channel
Ellie Point
Cape Grafton
Bessie Point
CAIRNS
N
Fitzroy Island
Combunghi Creek

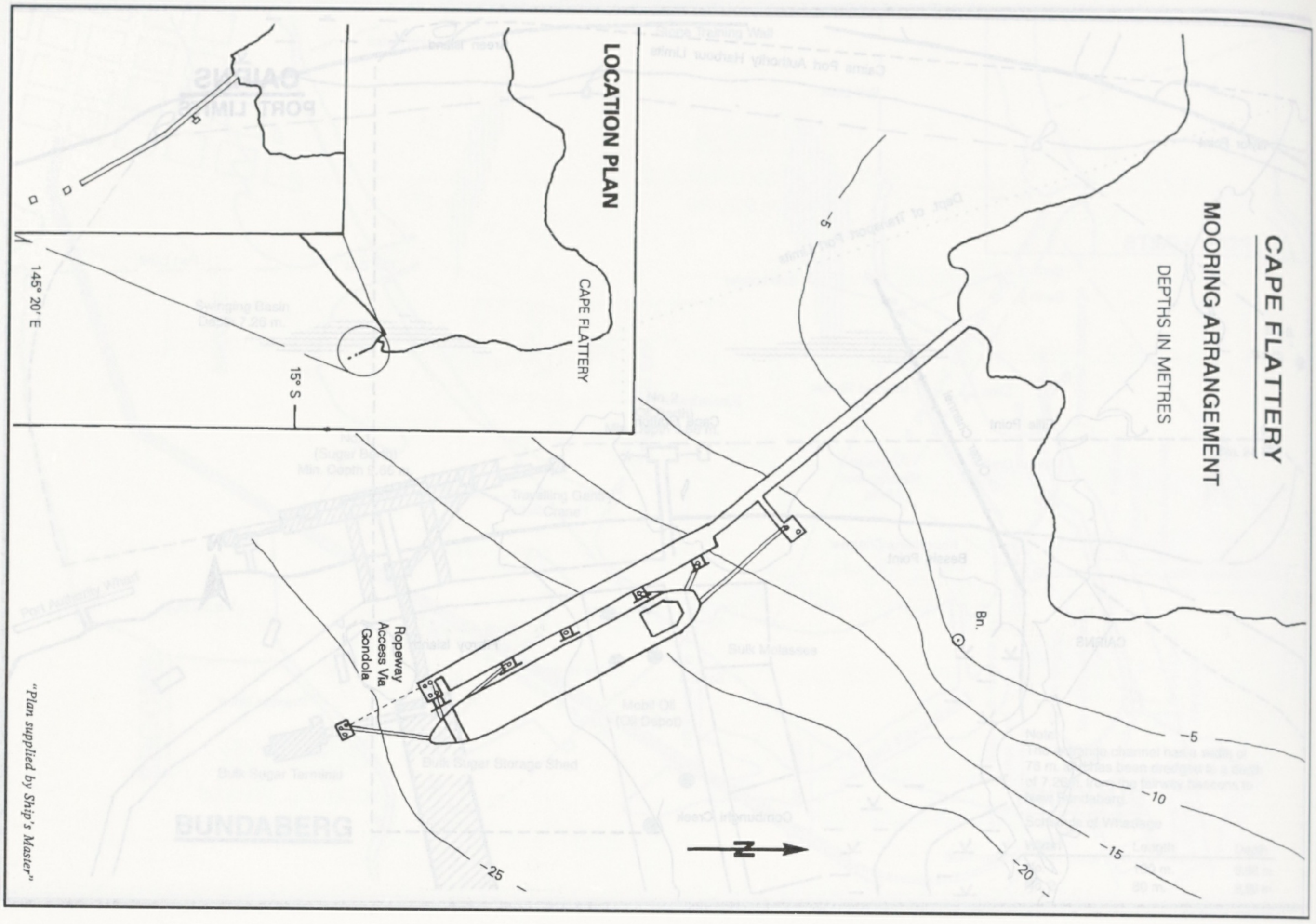

Inner Channel
Dredged to 8.5 m.
Marlin Jetty
Marlin Marina
Small Craft Moorings
Crystal Swing Basin
Trinity Inlet
CAIRNS
Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ
1
2
3
4
5
6
7
8
10
11
12
Port Authority Office
Swing Basin
Tanker Berth
H.M.A.S. Cairns
Slips
Bulk Sugar Terminal
Admiralty Island
Smiths Creek
Dry Dock
N

Berth No.	Usage
4 to 8	General Cargo & Bulk Fertiliser and Molasses
10	L.P. Gas & Oil
11	R.A.N. Patrol Boat
12	Bulk Sugar
1 to 3	
Ⓐ	Boat Ramp
Ⓑ	Proposed Small Craft Berths
Ⓒ	Ferry Terminals
Ⓓ	Hayles Wharf
Ⓔ	Container Crane
Ⓕ	Passenger and Tourist Vessels

CAPE FLATTERY

MOORING ARRANGEMENT

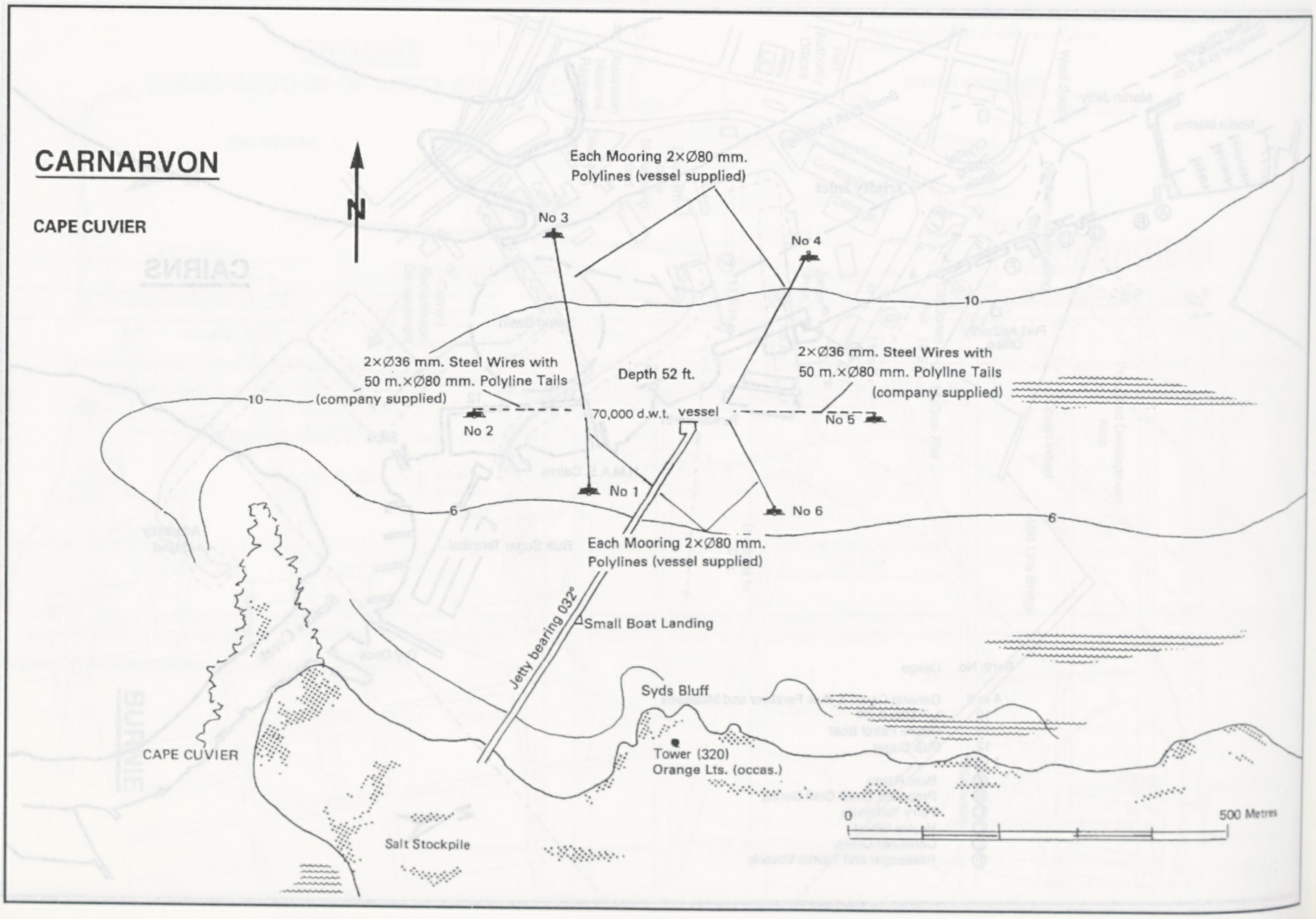
DEPTHS IN METRES

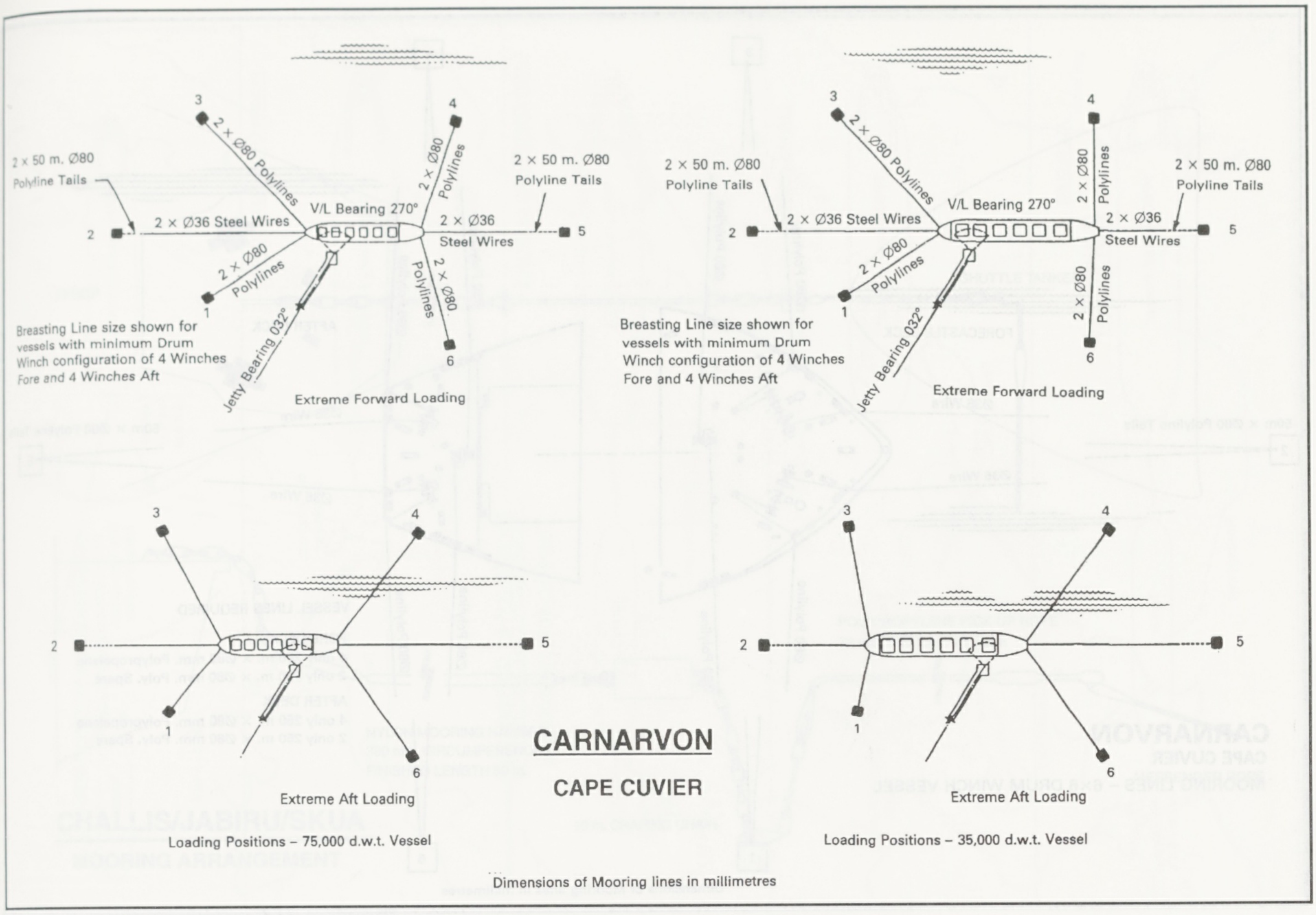

LOCATION PLAN
CAPE FLATTERY
145° 20' E
15° S
Ropeway
Access Via
Gondola
Bn.
5
-5
-10
-15
-20
-25
N

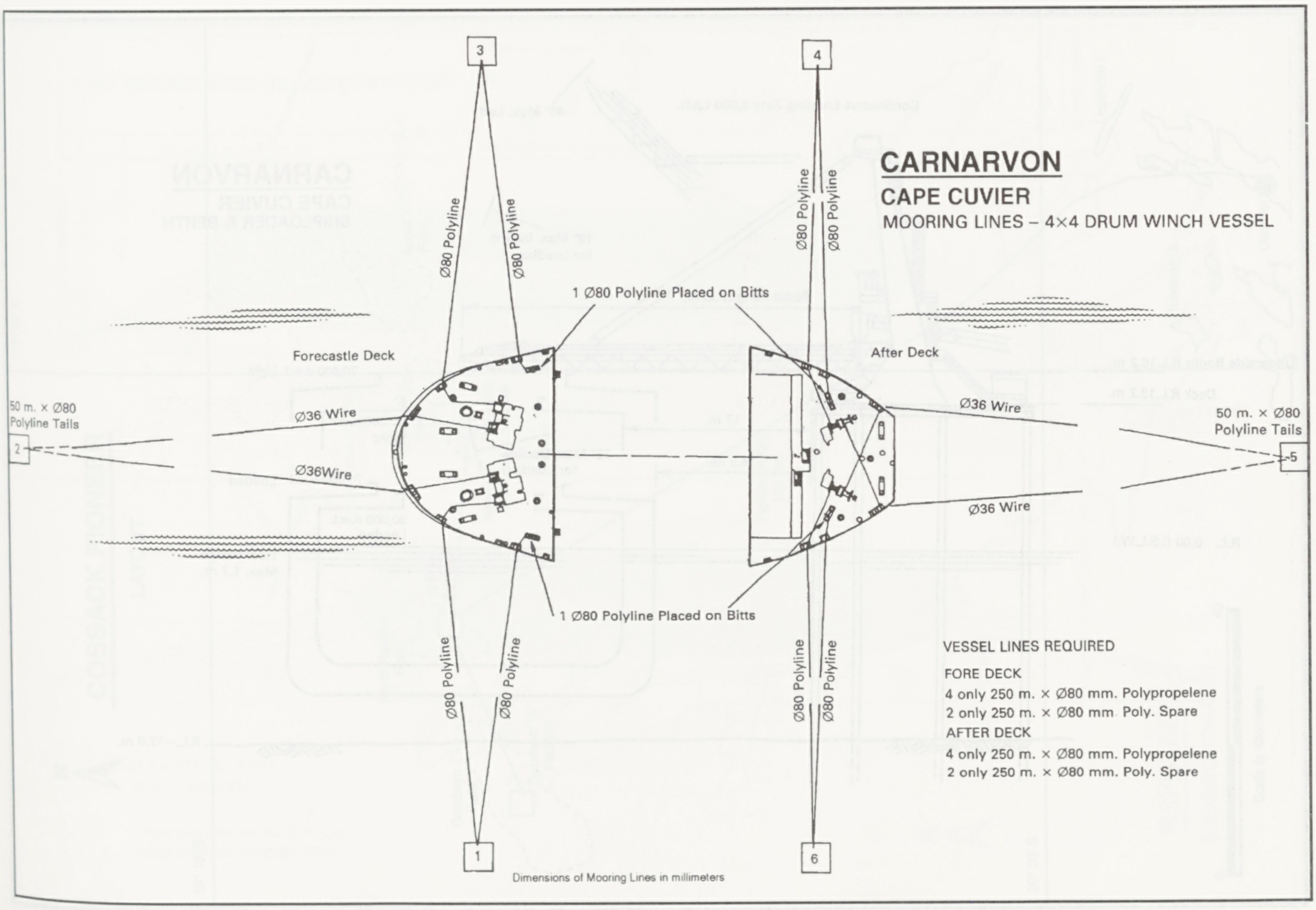
"Plan supplied by Ship's Master"

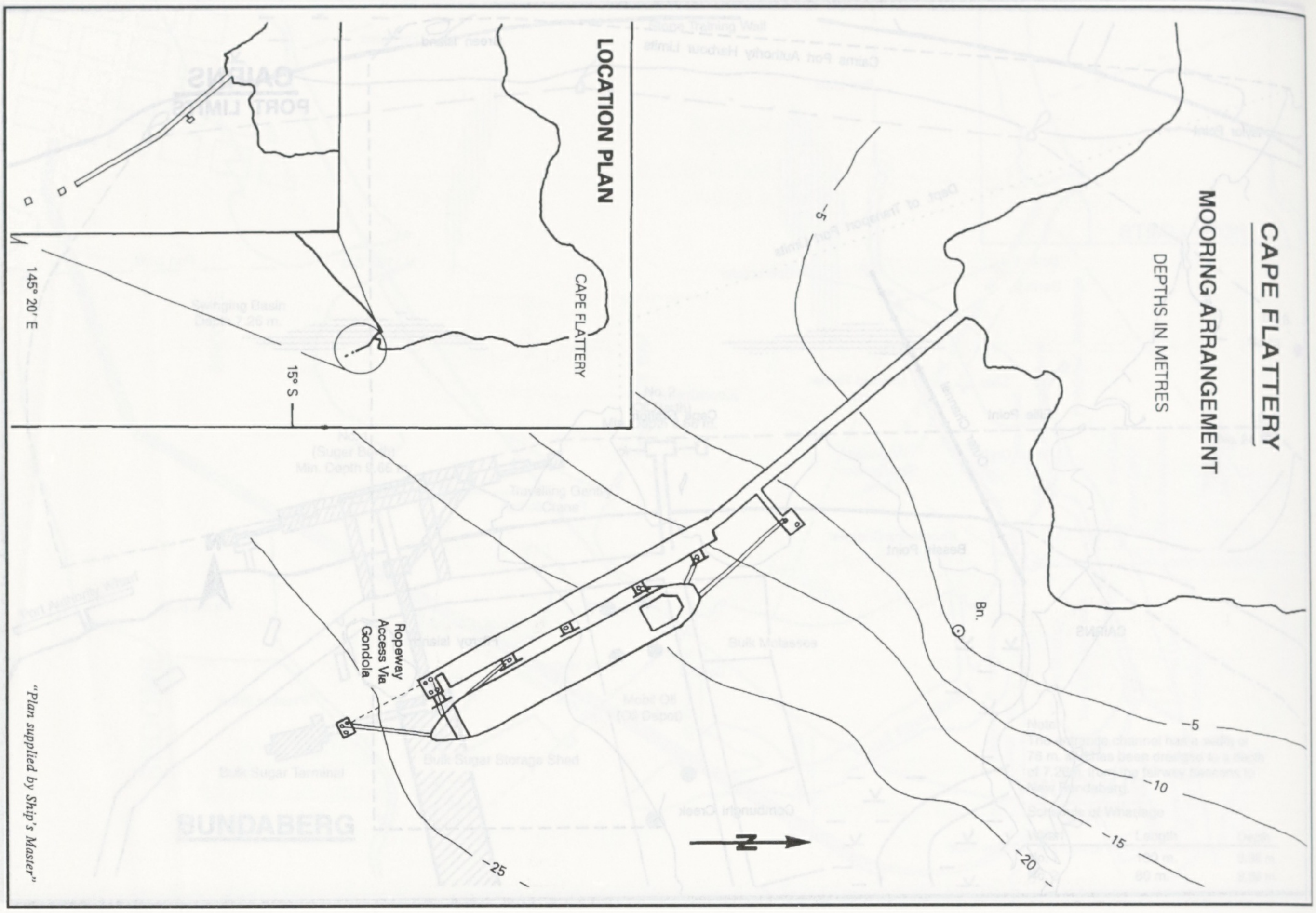
CARNARVON

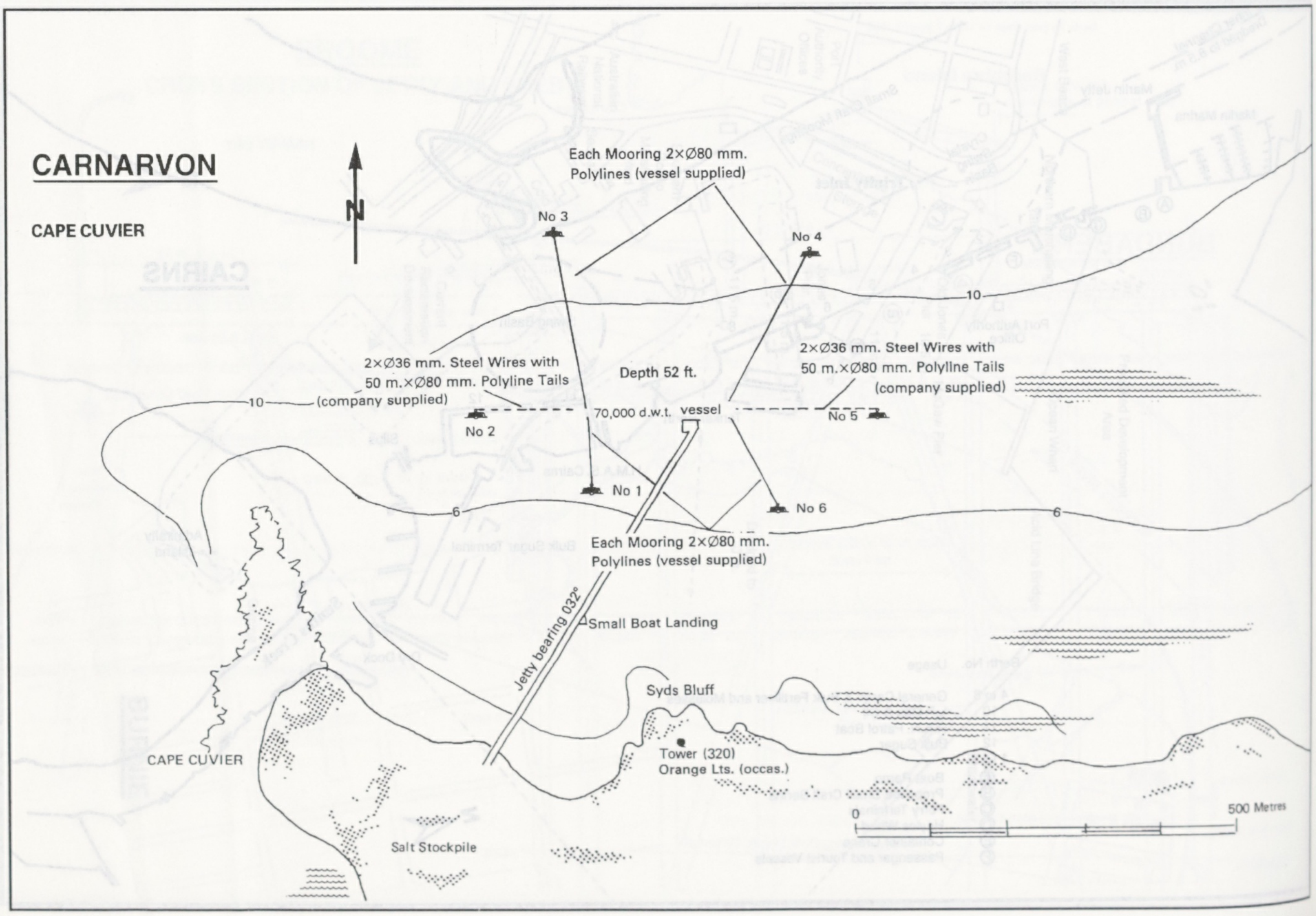
CAPE CUVIER

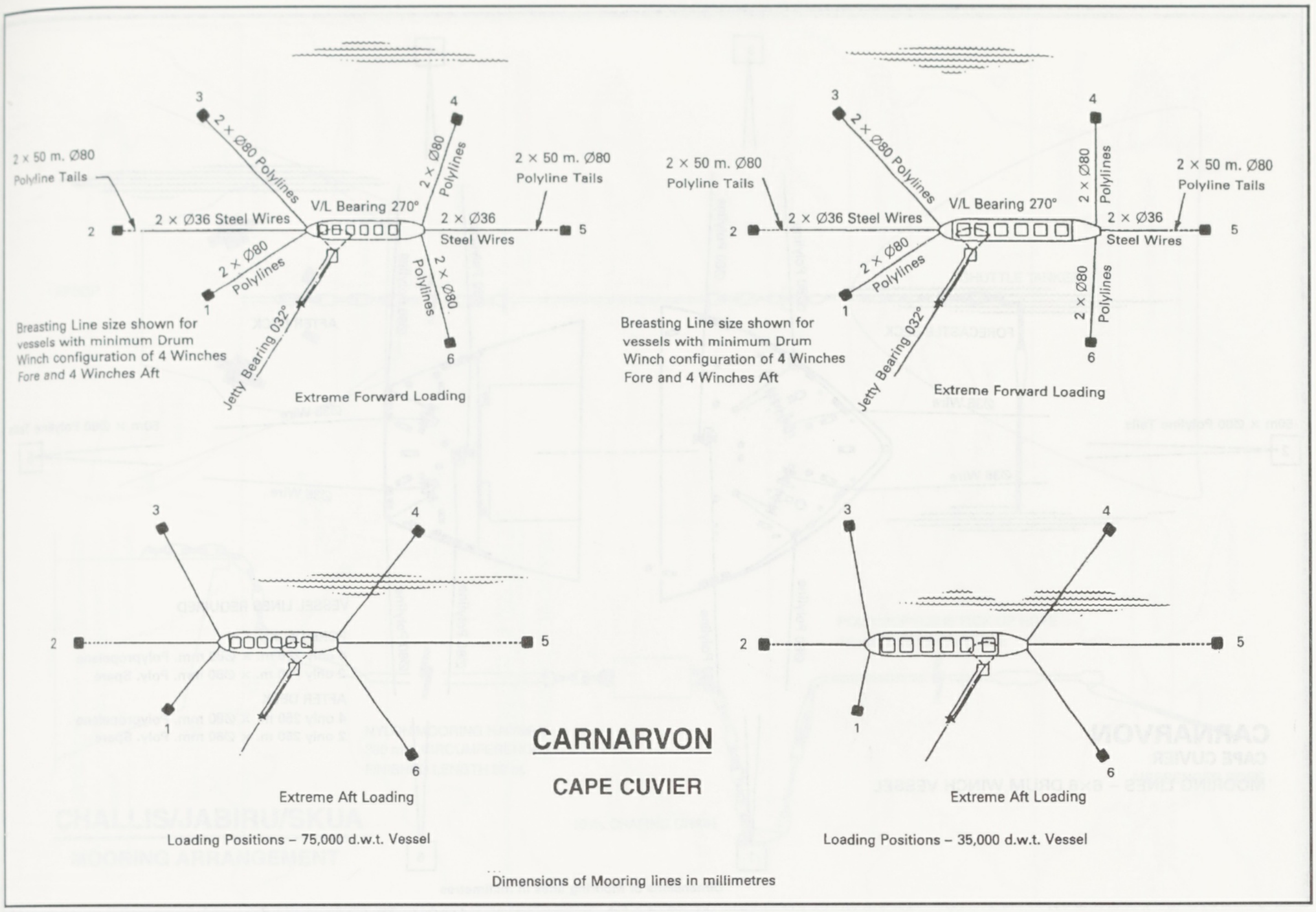

N
Each Mooring 2×Ø80 mm.
Polylines (vessel supplied)
No 3
No 4
10
2×Ø36 mm. Steel Wires with
50 m.×Ø80 mm. Polyline Tails
(company supplied)
Depth 52 ft.
2×Ø36 mm. Steel Wires with
50 m.×Ø80 mm. Polyline Tails
(company supplied)
70,000 d.w.t. vessel
No 2
No 5
No 1
No 6
6
Each Mooring 2×Ø80 mm.
Polylines (vessel supplied)
Jetty bearing 032°
Small Boat Landing
Syds Bluff
Tower (320)
Orange Lts. (occas.)
CAPE CUVIER
Salt Stockpile
0
500 Metres


3
4
2 × Ø80 Polylines
2 × Ø80 Polylines
2 × 50 m. Ø80 Polyline Tails
2 × 50 m. Ø80 Polyline Tails
V/L Bearing 270°
2
2 × Ø36 Steel Wires
2 × Ø36 Steel Wires
5
2 × Ø80 Polylines
2 × Ø80 Polylines
1
6
Jetty Bearing 032°
Breasting Line size shown for vessels with minimum Drum Winch configuration of 4 Winches Fore and 4 Winches Aft
Extreme Forward Loading
3
4
2 × 50 m. Ø80 Polyline Tails
2 × Ø80 Polylines
V/L Bearing 270°
2 × Ø80 Polylines
2 × 50 m. Ø80 Polyline Tails
2
2 × Ø36 Steel Wires
2 × Ø36 Steel Wires
5
2 × Ø80 Polylines
2 × Ø80 Polylines
1
6
Jetty Bearing 032°
Breasting Line size shown for vessels with minimum Drum Winch configuration of 4 Winches Fore and 4 Winches Aft
Extreme Forward Loading
3
4
2
5
1
6
Extreme Aft Loading
3
4
2
5
1
6
Extreme Aft Loading
CARNARVON
CAPE CUVIER
Loading Positions – 75,000 d.w.t. Vessel
Loading Positions – 35,000 d.w.t. Vessel
Dimensions of Mooring lines in millimetres


3
4
CARNARVON
CAPE CUVIER
MOORING LINES – 4×4 DRUM WINCH VESSEL
Ø80 Polyline
Ø80 Polyline
Ø80 Polyline
Ø80 Polyline
1 Ø80 Polyline Placed on Bitts
Forecastle Deck
After Deck
50 m. × Ø80 Polyline Tails
50 m. × Ø80 Polyline Tails
Ø36 Wire
Ø36Wire
Ø36 Wire
Ø36 Wire
2
5
1 Ø80 Polyline Placed on Bitts
Ø80 Polyline
Ø80 Polyline
Ø80 Polyline
Ø80 Polyline
VESSEL LINES REQUIRED
FORE DECK
4 only 250 m. × Ø80 mm. Polypropelene
2 only 250 m. × Ø80 mm. Poly. Spare
AFTER DECK
4 only 250 m. × Ø80 mm. Polypropelene
2 only 250 m. × Ø80 mm. Poly. Spare
1
6
Dimensions of Mooring Lines in millimeters


CAPE FLATTERY
MOORING ARRANGEMENT
DEPTHS IN METRES
LOCATION PLAN
CAPE FLATTERY
145° 20' E
15° S
Ropeway Access Via Gondola
Bn.
5
5
10
15
20
25
N
"Plan supplied by Ship's Master"


CARNARVON
CAPE CUVIER
N
Each Mooring 2×Ø80 mm. Polylines (vessel supplied)
No 3
No 4
10
2×Ø36 mm. Steel Wires with 50 m.×Ø80 mm. Polyline Tails (company supplied)
Depth 52 ft.
2×Ø36 mm. Steel Wires with 50 m.×Ø80 mm. Polyline Tails (company supplied)
10
No 2
70,000 d.w.t. vessel
No 5
No 1
No 6
6
6
Each Mooring 2×Ø80 mm. Polylines (vessel supplied)
Small Boat Landing
Jetty bearing 032°
Syds Bluff
CAPE CUVIER
Tower (320) Orange Lts. (occas.)
Salt Stockpile
0
500 Metres


3
4
2 × Ø80 Polylines
2 × Ø80 Polylines
2 × 50 m. Ø80 Polyline Tails
2 × 50 m. Ø80 Polyline Tails
V/L Bearing 270°
2
2 × Ø36 Steel Wires
2 × Ø36 Steel Wires
5
2 × Ø80 Polylines
2 × Ø80 Polylines
1
6
Jetty Bearing 032°
Breasting Line size shown for vessels with minimum Drum Winch configuration of 4 Winches Fore and 4 Winches Aft
Extreme Forward Loading
Extreme Aft Loading

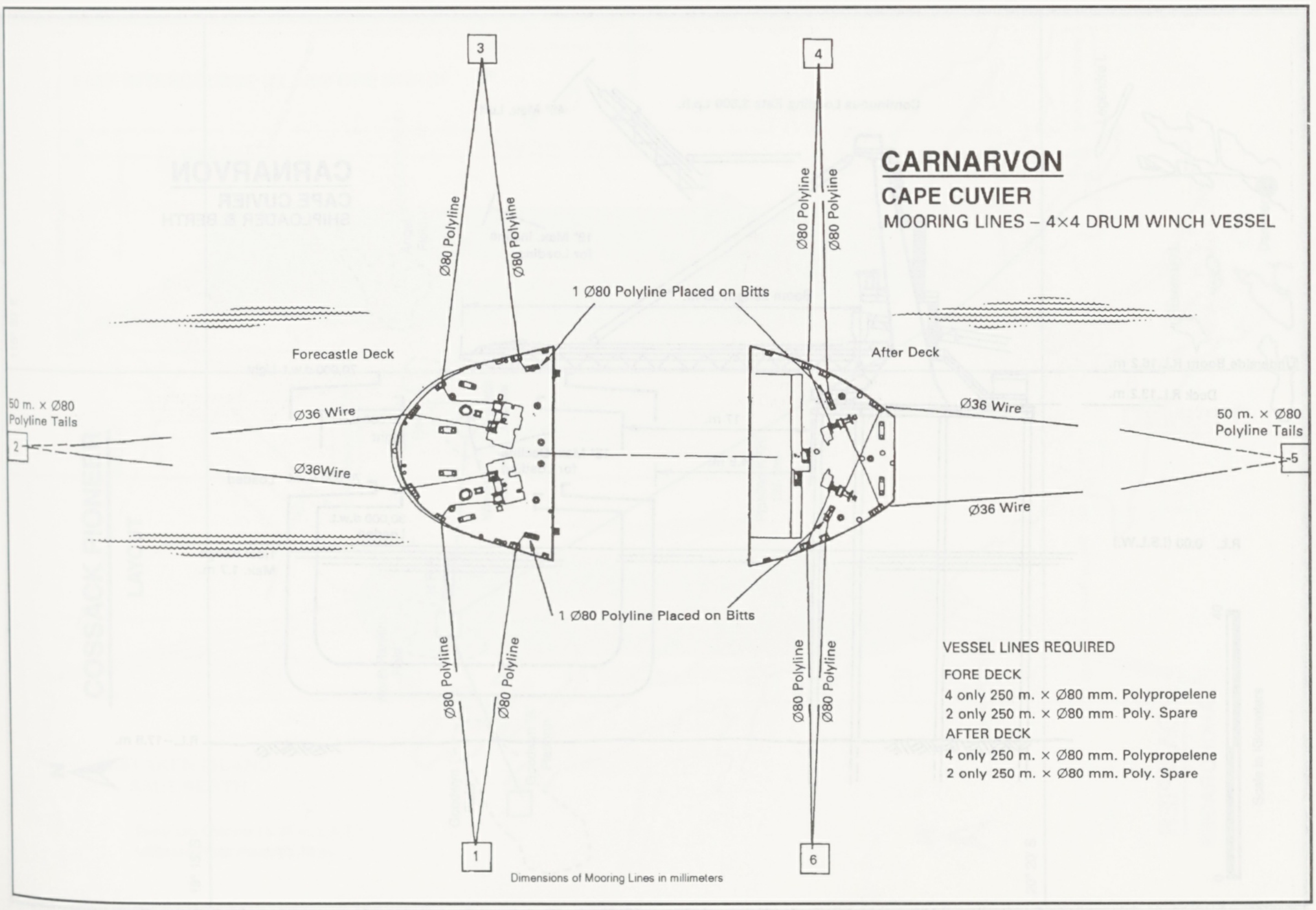
CARNARVON

CAPE CUVIER

Loading Positions – 75,000 d.w.t. Vessel

Loading Positions – 35,000 d.w.t. Vessel

Dimensions of Mooring lines in millimetres


3
4
Ø80 Polyline
Ø80 Polyline
Ø80 Polyline
Ø80 Polyline
1 Ø80 Polyline Placed on Bitts
Forecastle Deck
After Deck
50 m. × Ø80 Polyline Tails
50 m. × Ø80 Polyline Tails
2
5
Ø36 Wire
Ø36Wire
Ø36 Wire
Ø36 Wire
1 Ø80 Polyline Placed on Bitts
Ø80 Polyline
Ø80 Polyline
Ø80 Polyline
Ø80 Polyline
1
6

CARNARVON

CAPE CUVIER

MOORING LINES – 4×4 DRUM WINCH VESSEL

VESSEL LINES REQUIRED

FORE DECK

4 only 250 m. × Ø80 mm. Polypropelene

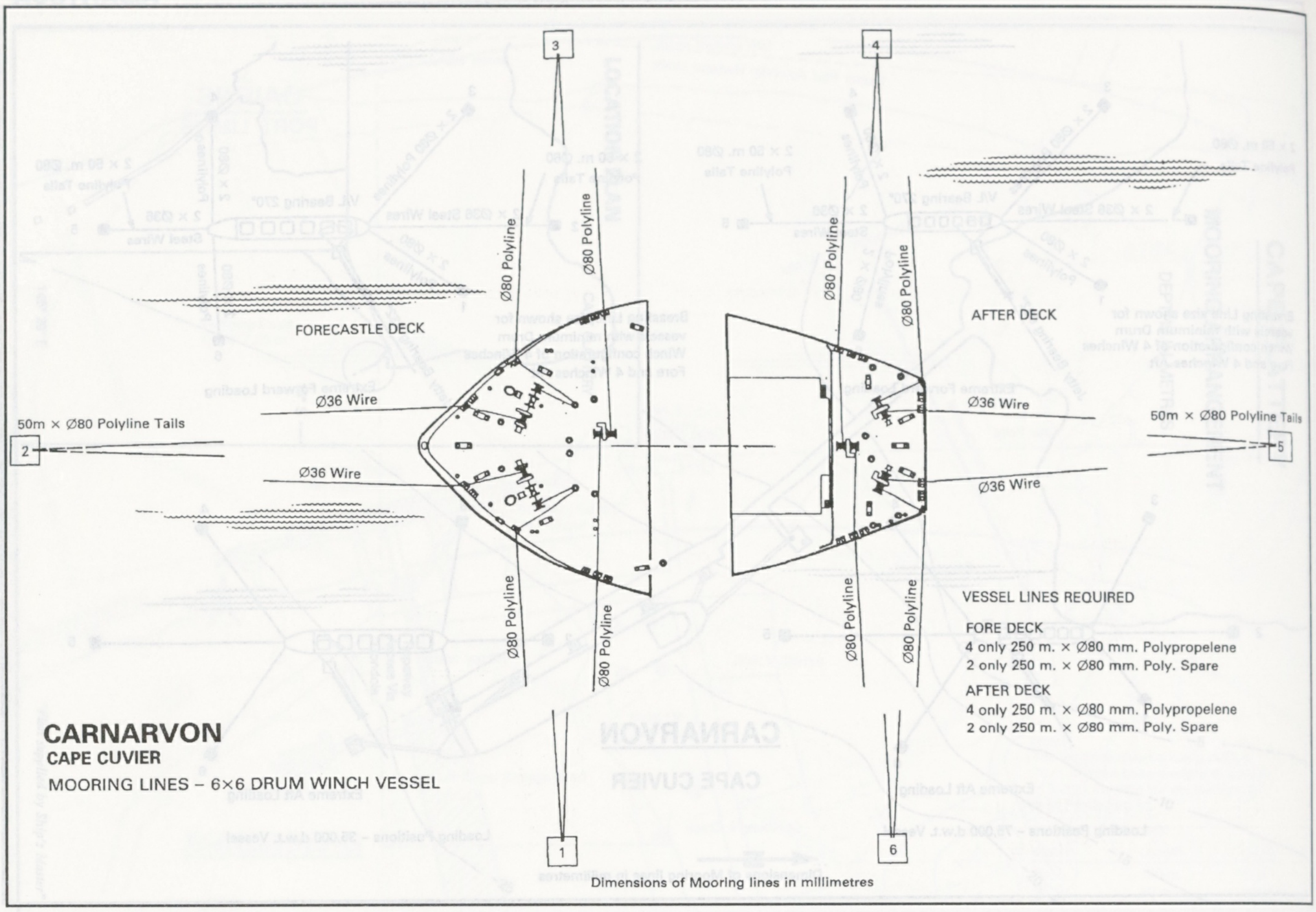
2 only 250 m. × Ø80 mm. Poly. Spare

AFTER DECK

4 only 250 m. × Ø80 mm. Polypropelene

2 only 250 m. × Ø80 mm. Poly. Spare

Dimensions of Mooring Lines in millimeters


3
4
Ø80 Polyline
Ø80 Polyline
Ø80 Polyline
Ø80 Polyline
FORECASTLE DECK
AFTER DECK
Ø36 Wire
Ø36 Wire
Ø36 Wire
Ø36 Wire
50m × Ø80 Polyline Tails
50m × Ø80 Polyline Tails
2
5
Ø80 Polyline
Ø80 Polyline
Ø80 Polyline
Ø80 Polyline
1
6

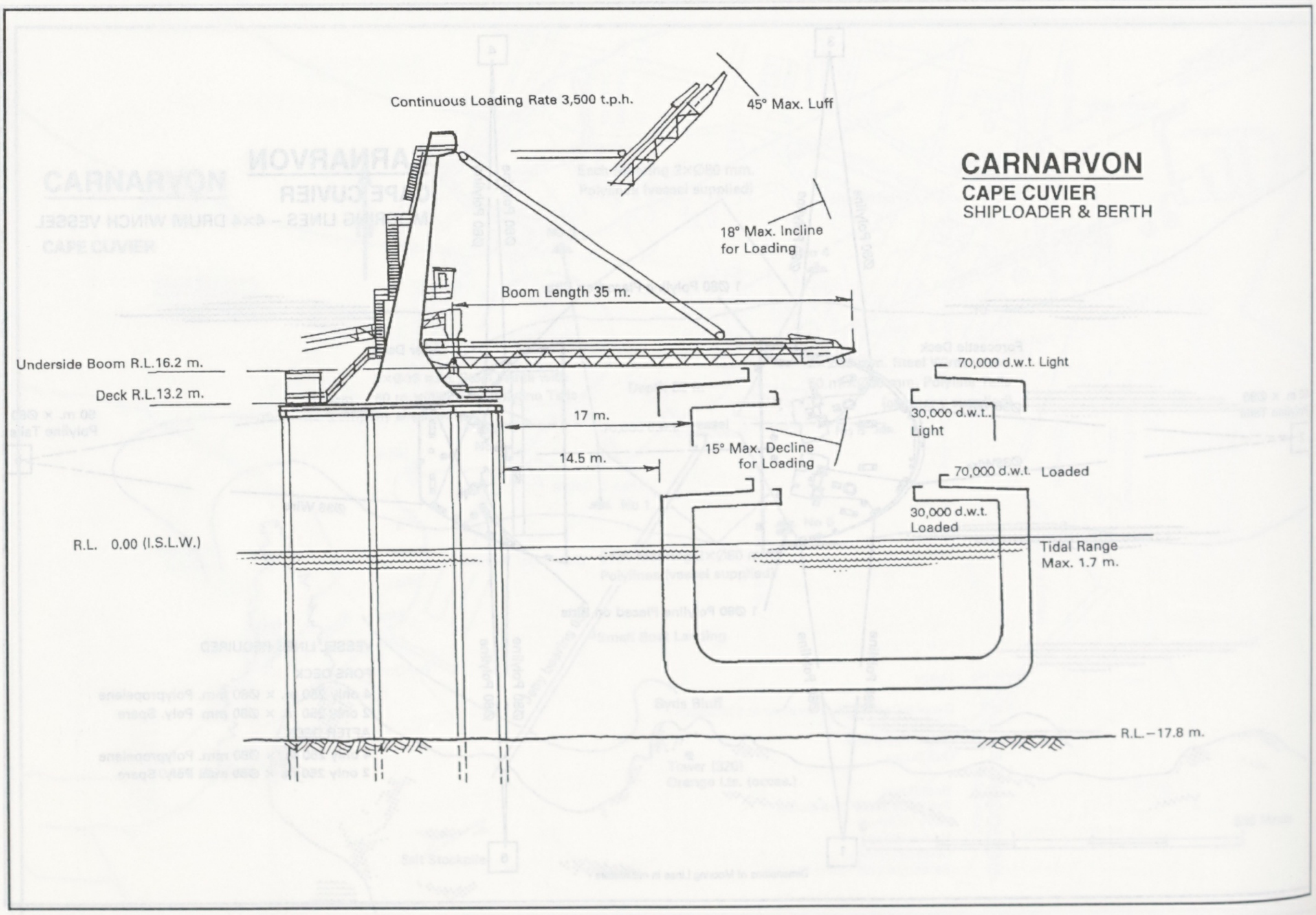
CARNARVON
CAPE CUVIER
MOORING LINES – 6×6 DRUM WINCH VESSEL

VESSEL LINES REQUIRED

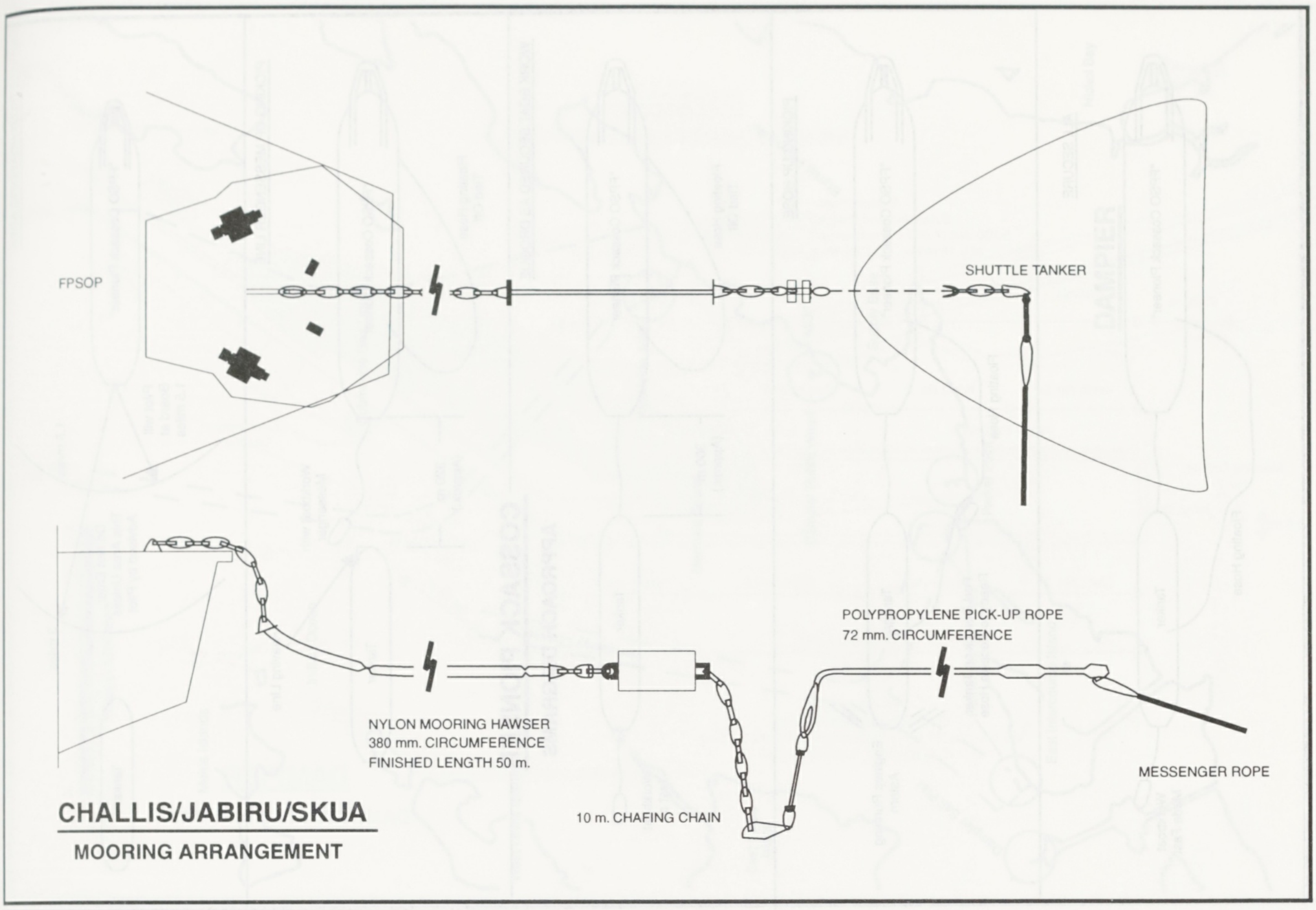
FORE DECK
4 only 250 m. × Ø80 mm. Polypropelene
2 only 250 m. × Ø80 mm. Poly. Spare

AFTER DECK
4 only 250 m. × Ø80 mm. Polypropelene
2 only 250 m. × Ø80 mm. Poly. Spare

Dimensions of Mooring lines in millimetres


Continuous Loading Rate 3,500 t.p.h.
45° Max. Luff
18° Max. Incline for Loading
Boom Length 35 m.
Underside Boom R.L.16.2 m.
Deck R.L.13.2 m.
17 m.
14.5 m.
15° Max. Decline for Loading
70,000 d.w.t. Light
30,000 d.w.t. Light
70,000 d.w.t. Loaded
30,000 d.w.t. Loaded
R.L. 0.00 (I.S.L.W.)
Tidal Range Max. 1.7 m.
R.L.–17.8 m.

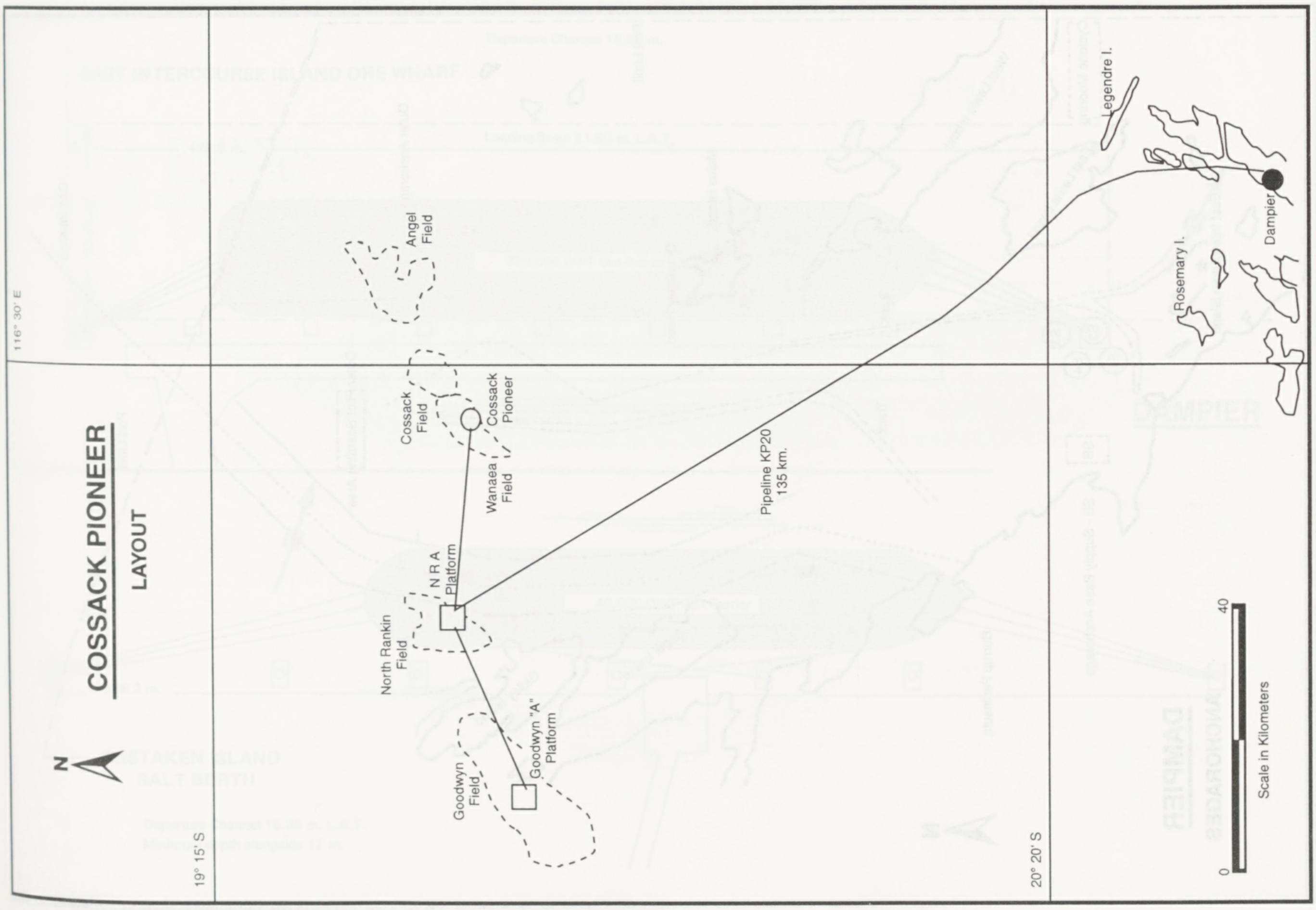
CARNARVON
CAPE CUVIER
SHIPLOADER & BERTH



CHALLIS/JABIRU/SKUA

MOORING ARRANGEMENT

FPSOP
SHUTTLE TANKER
POLYPROPYLENE PICK-UP ROPE
72 mm. CIRCUMFERENCE
NYLON MOORING HAWSER
380 mm. CIRCUMFERENCE
FINISHED LENGTH 50 m.
10 m. CHAFING CHAIN
MESSENGER ROPE



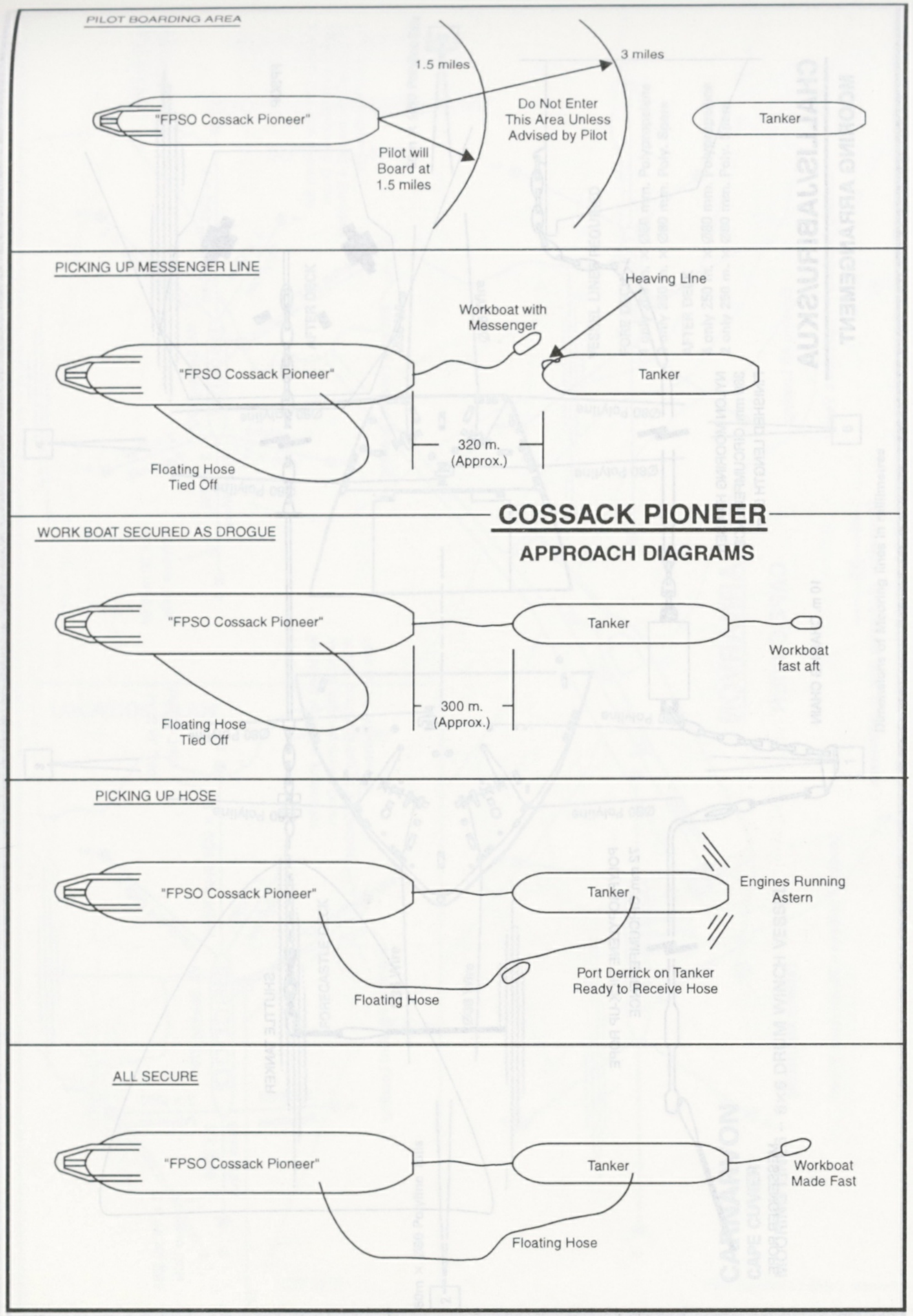
COSSACK PIONEER

LAYOUT

N
19° 15' S
20° 20' S
116° 30' E
Angel Field
Cossack Field
Cossack Pioneer
Wanaea Field
N R A Platform
North Rankin Field
Goodwyn "A" Platform
Goodwyn Field
Pipeline KP20
135 km.
Legendre I.
Dampier
Rosemary I.
0
40
Scale in Kilometers

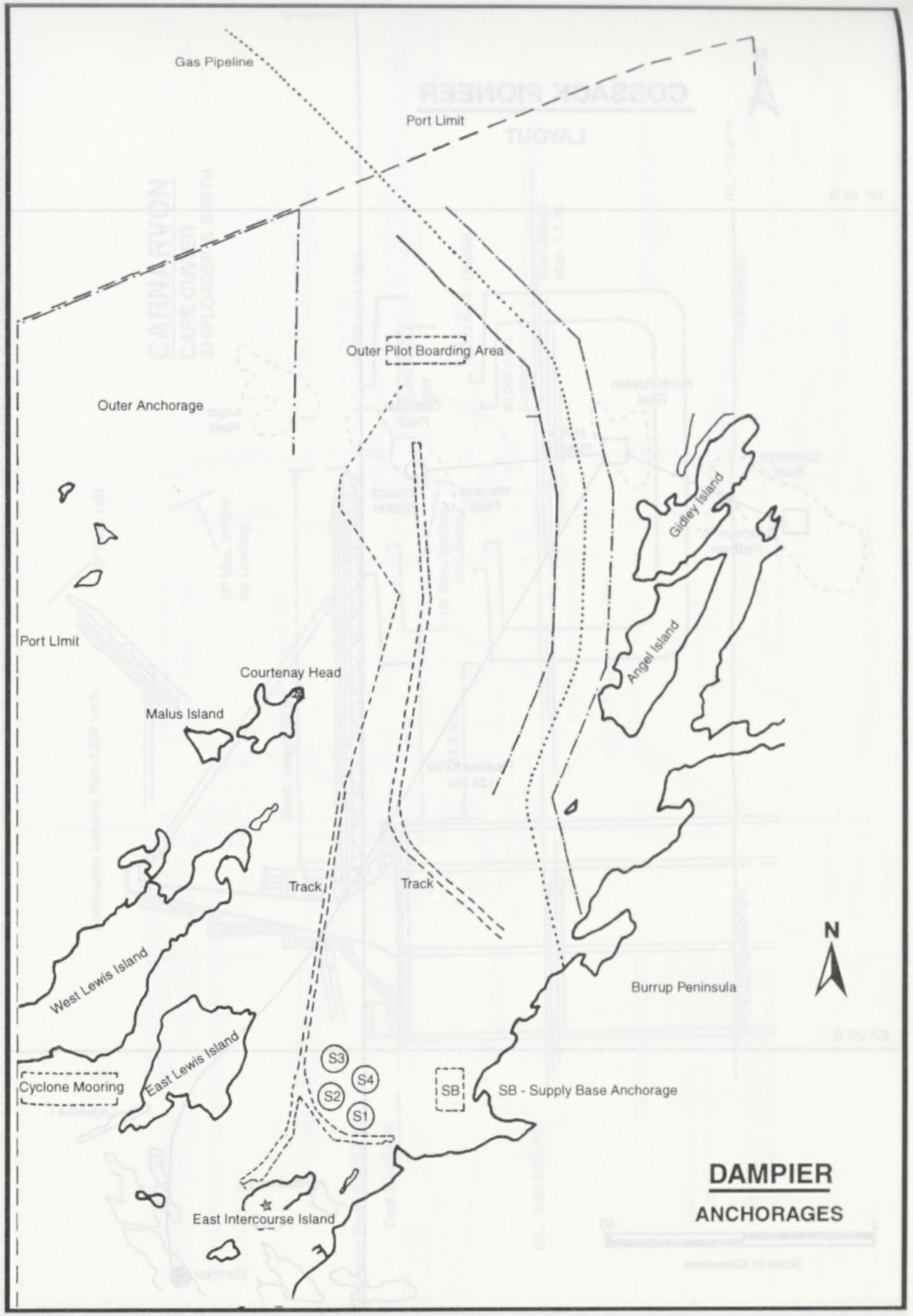
COSSACK PIONEER

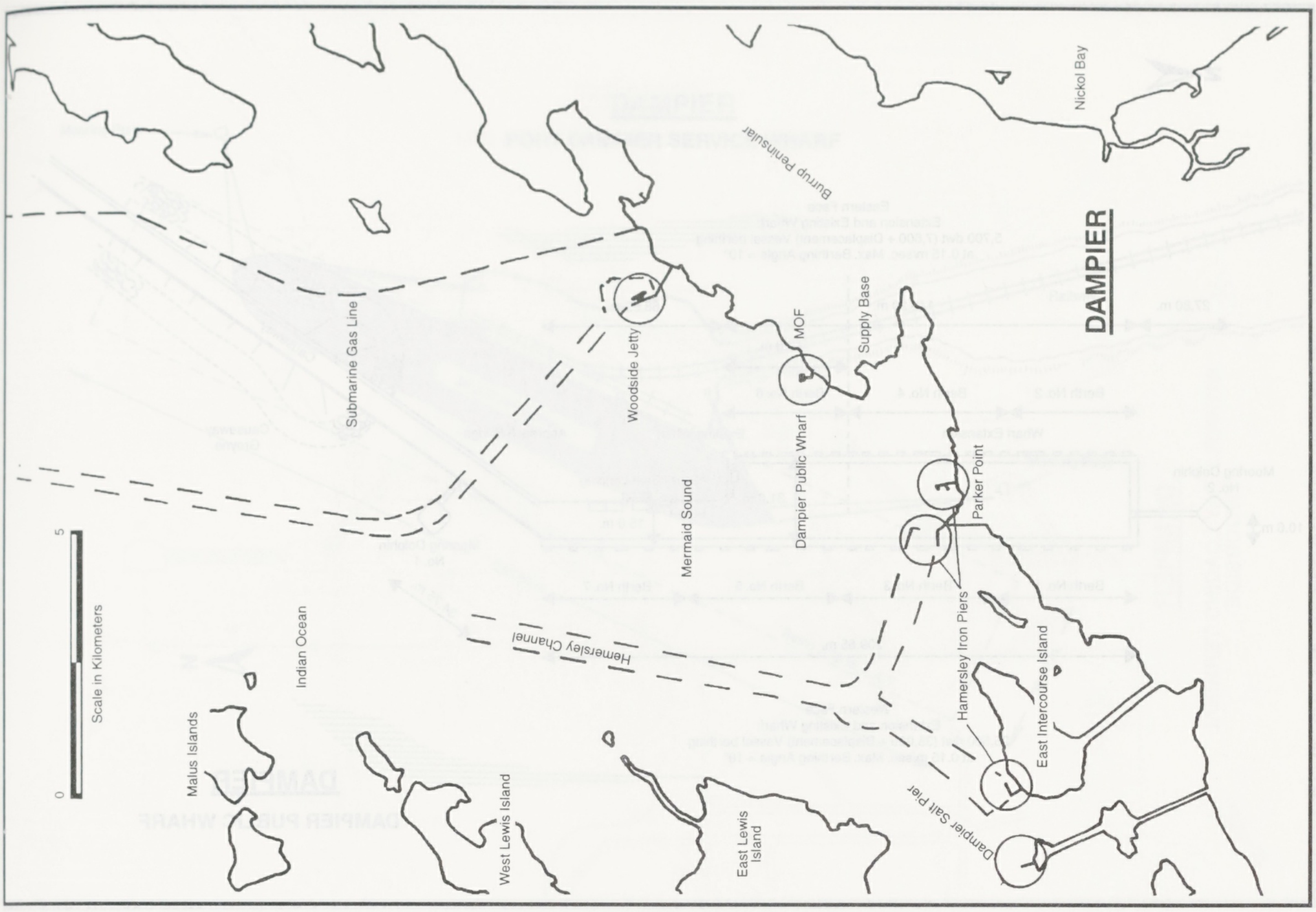
APPROACH DIAGRAMS

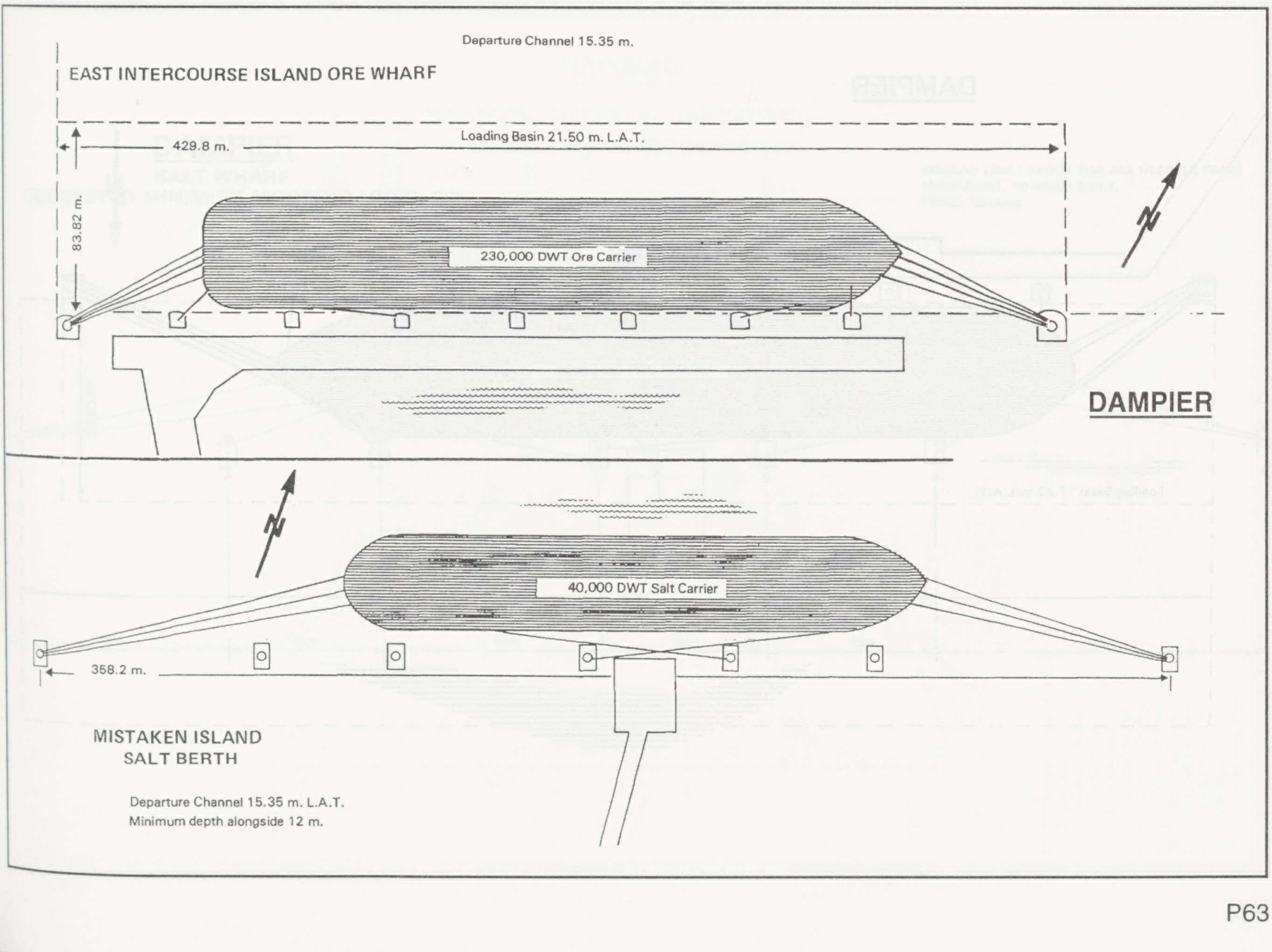

PILOT BOARDING AREA
1.5 miles
3 miles
"FPSO Cossack Pioneer"
Do Not Enter
This Area Unless
Advised by Pilot
Tanker
Pilot will
Board at
1.5 miles
PICKING UP MESSENGER LINE
Heaving LIne
Workboat with
Messenger
"FPSO Cossack Pioneer"
Tanker
320 m.
(Approx.)
Floating Hose
Tied Off
WORK BOAT SECURED AS DROGUE
"FPSO Cossack Pioneer"
Tanker
Workboat
fast aft
300 m.
(Approx.)
Floating Hose
Tied Off
PICKING UP HOSE
"FPSO Cossack Pioneer"
Tanker
Engines Running
Astern
Port Derrick on Tanker
Ready to Receive Hose
Floating Hose
ALL SECURE
"FPSO Cossack Pioneer"
Tanker
Workboat
Made Fast
Floating Hose

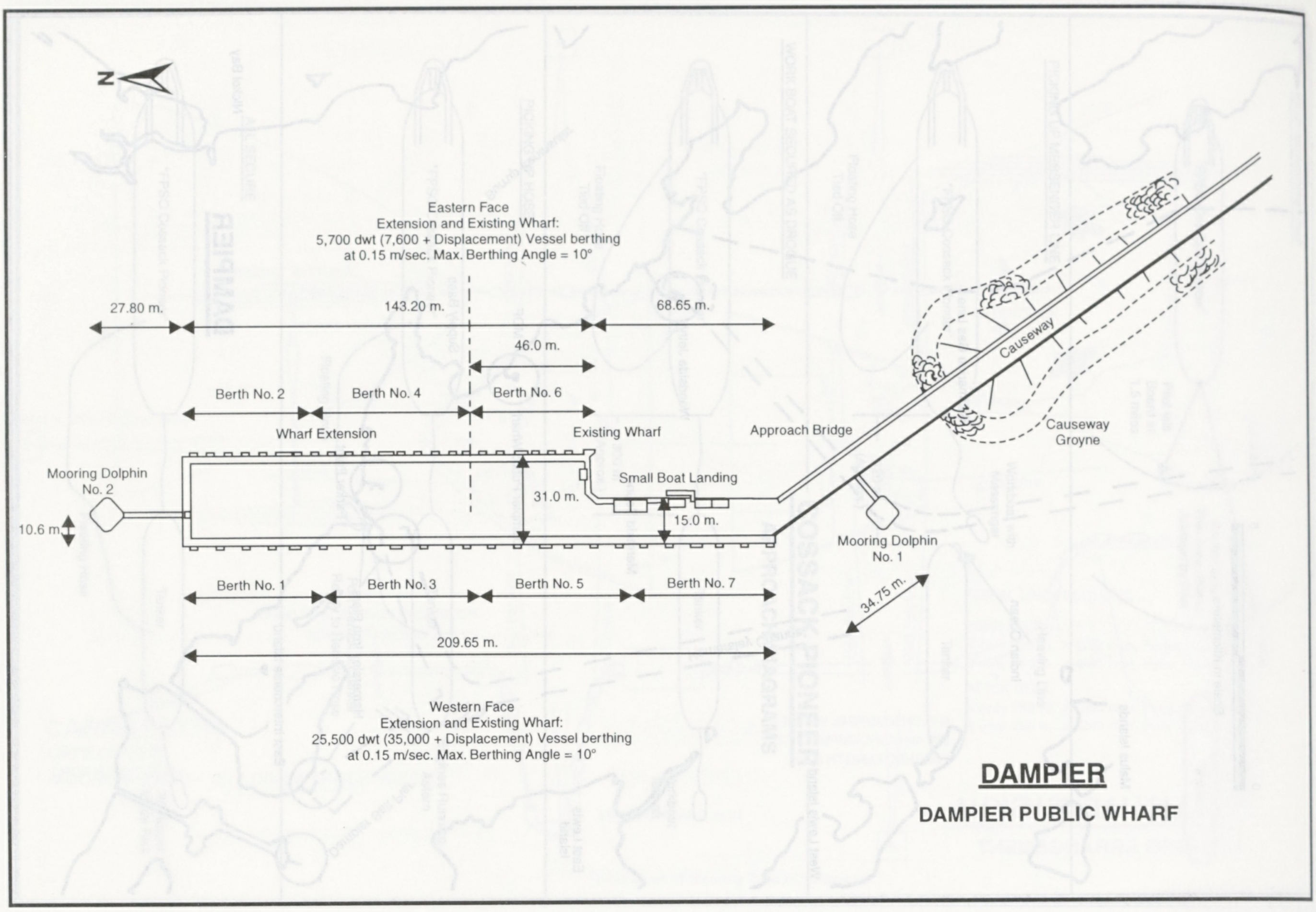
DAMPIER

ANCHORAGES


Gas Pipeline
Port Limit
Outer Pilot Boarding Area
Outer Anchorage
Gidley Island
Angel Island
Port LImit
Courtenay Head
Malus Island
Track
Track
N
West Lewis Island
East Lewis Island
Burrup Peninsula
S3
S4
S2
S1
SB
SB - Supply Base Anchorage
Cyclone Mooring
East Intercourse Island


0
5
Scale in Kilometers
Malus Islands
Indian Ocean
Submarine Gas Line
West Lewis Island
Hemersley Channel
Woodside Jetty
Mermaid Sound
East Lewis Island
Dampier Public Wharf
MOF
Burrup Peninsular
Supply Base
Dampier Salt Pier
Hamersley Iron Piers
Parker Point
East Intercourse Island
DAMPIER
Nickol Bay

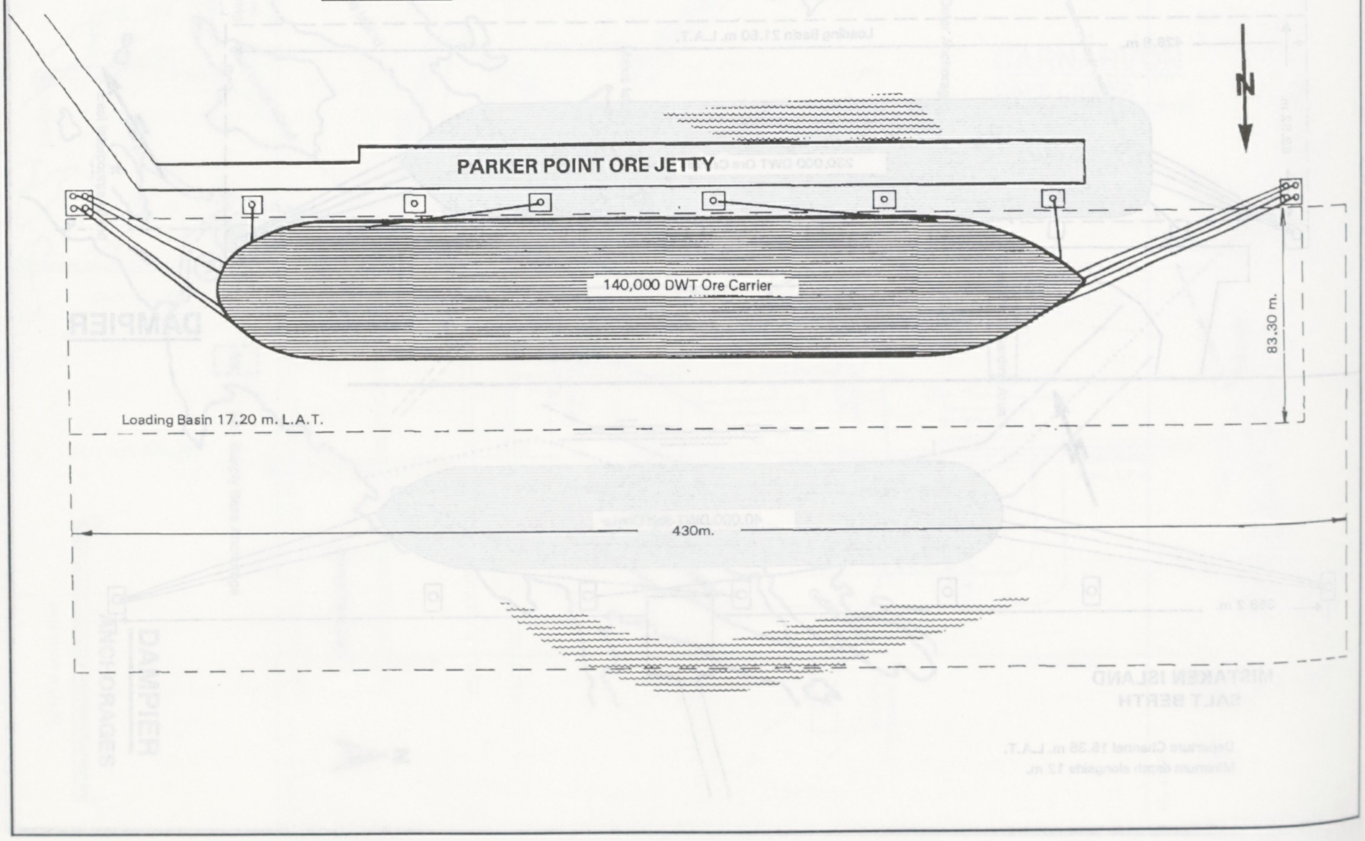

Departure Channel 15.35 m.
EAST INTERCOURSE ISLAND ORE WHARF
429.8 m.
Loading Basin 21.50 m. L.A.T.
83.82 m.
230,000 DWT Ore Carrier
DAMPIER
40,000 DWT Salt Carrier
358.2 m.
MISTAKEN ISLAND
SALT BERTH
Departure Channel 15.35 m. L.A.T.
Minimum depth alongside 12 m.


N
Eastern Face
Extension and Existing Wharf:
5,700 dwt (7,600 + Displacement) Vessel berthing
at 0.15 m/sec. Max. Berthing Angle = 10°
27.80 m.
143.20 m.
68.65 m.
46.0 m.
Berth No. 2
Berth No. 4
Berth No. 6
Wharf Extension
Existing Wharf
Approach Bridge
Causeway
Causeway
Groyne
Mooring Dolphin
No. 2
10.6 m.
31.0 m.
Small Boat Landing
15.0 m.
Mooring Dolphin
No. 1
Berth No. 1
Berth No. 3
Berth No. 5
Berth No. 7
34.75 m.
209.65 m.
Western Face
Extension and Existing Wharf:
25,500 dwt (35,000 + Displacement) Vessel berthing
at 0.15 m/sec. Max. Berthing Angle = 10°

DAMPIER

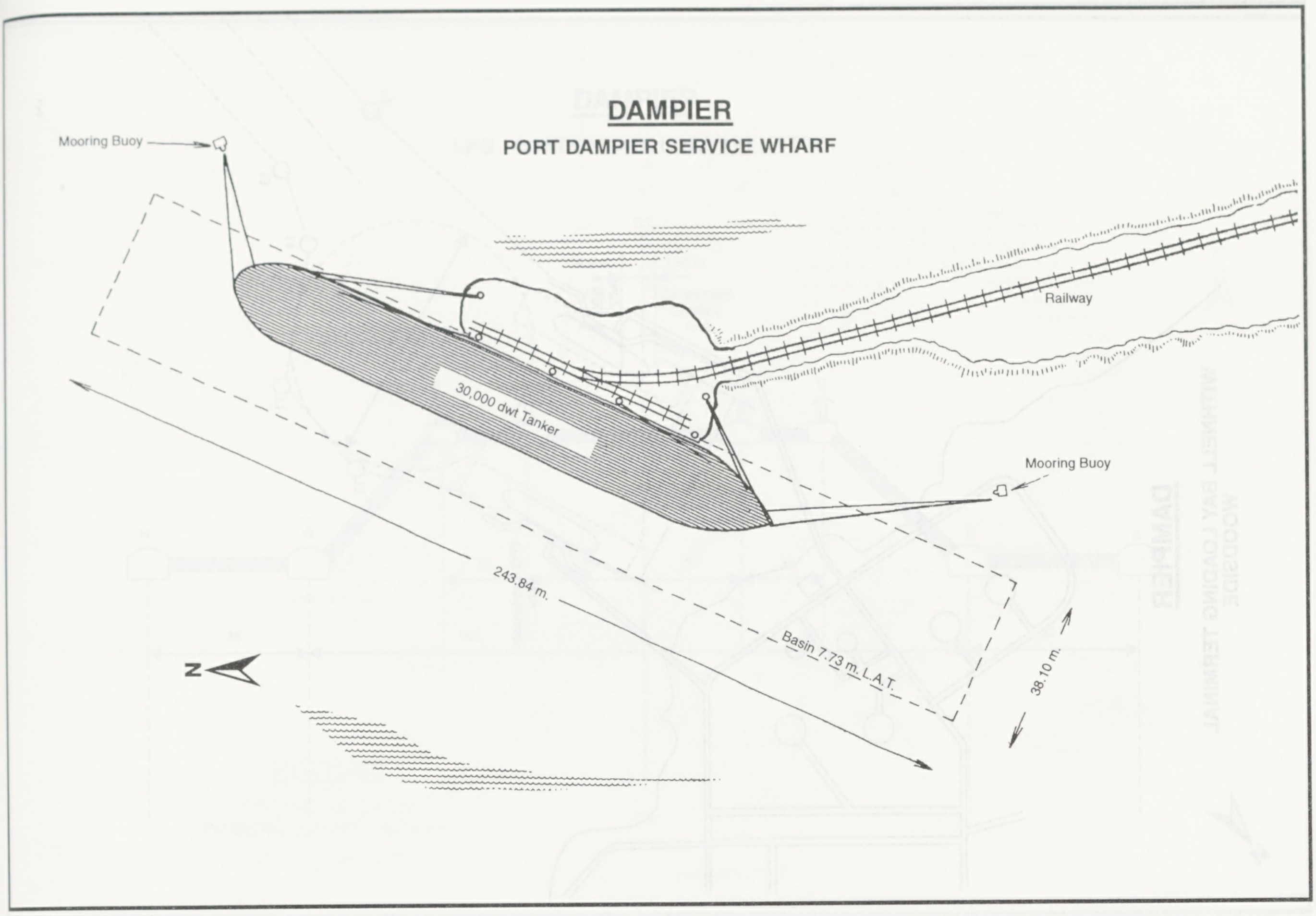
DAMPIER PUBLIC WHARF

DAMPIER


N
PARKER POINT ORE JETTY
140,000 DWT Ore Carrier
83.30 m.
Loading Basin 17.20 m. L.A.T.
430m.

DAMPIER

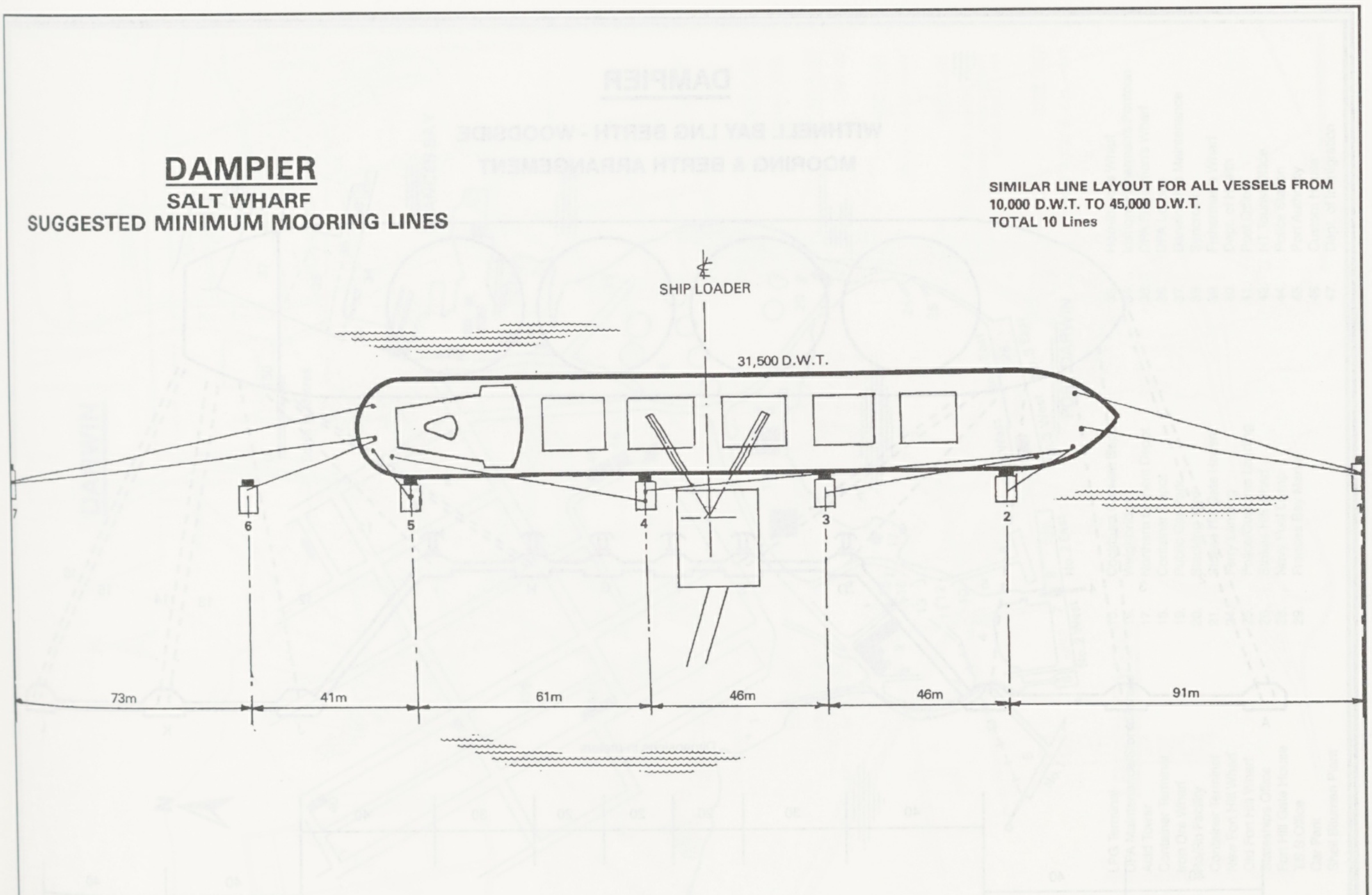
PORT DAMPIER SERVICE WHARF

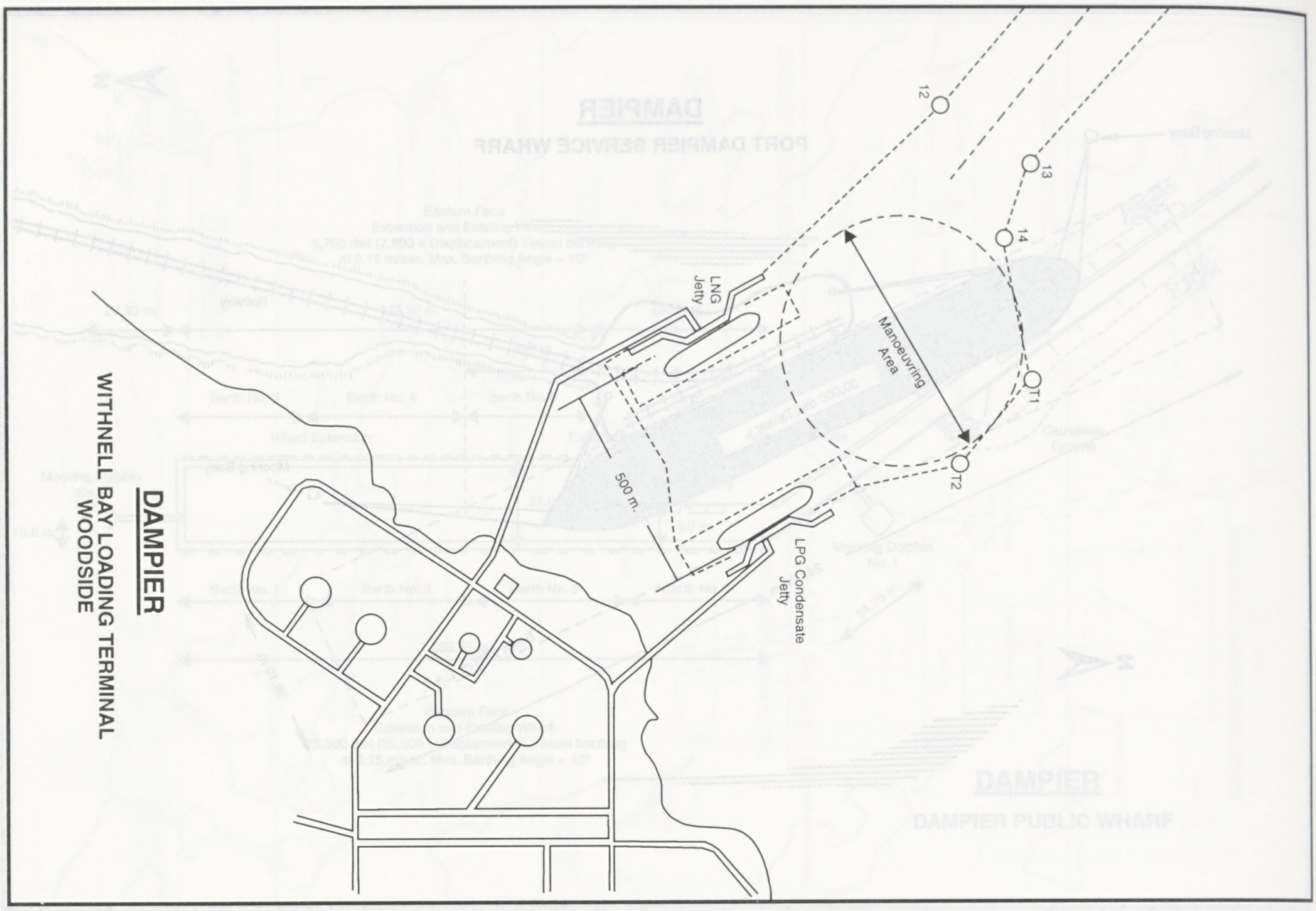

Mooring Buoy
Railway
30,000 dwt Tanker
Mooring Buoy
243.84 m.
Basin 7.73 m. L.A.T.
38.10 m.
N

DAMPIER

SALT WHARF
SUGGESTED MINIMUM MOORING LINES

SIMILAR LINE LAYOUT FOR ALL VESSELS FROM 10,000 D.W.T. TO 45,000 D.W.T.
TOTAL 10 Lines


SHIP LOADER
31,500 D.W.T.
7
6
5
4
3
2
1
73m
41m
61m
46m
46m
91m



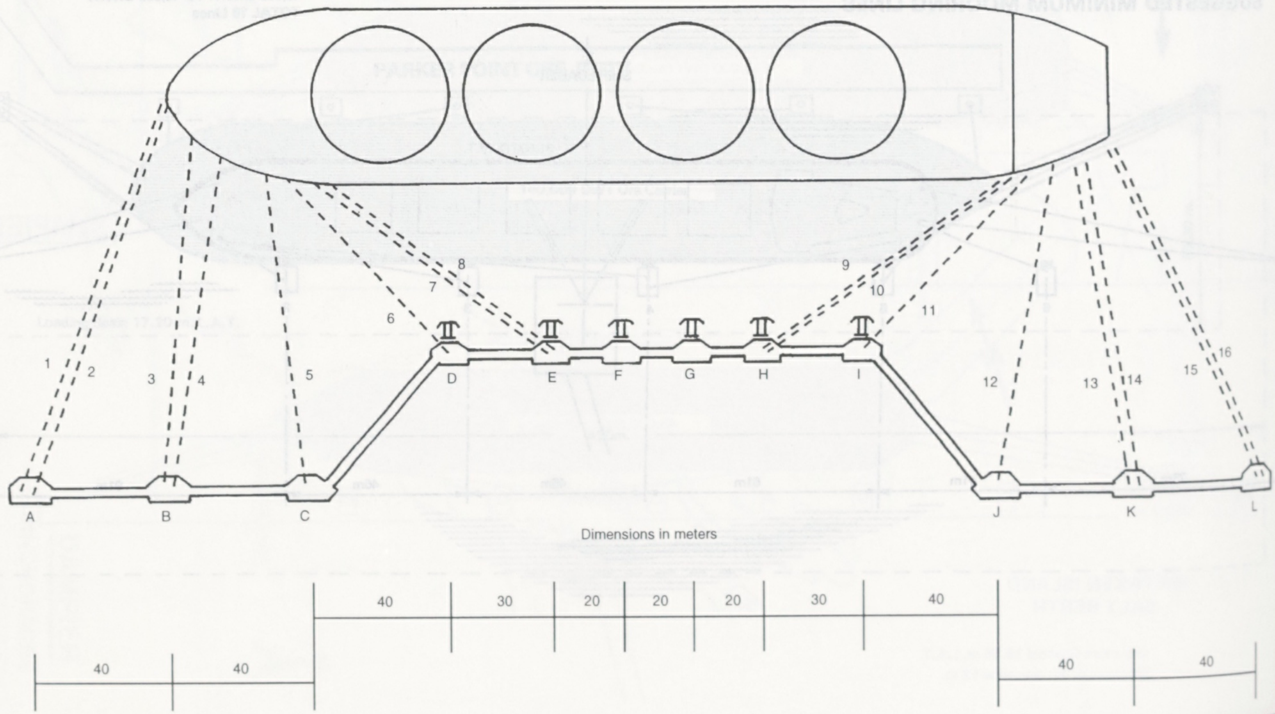
DAMPIER

WITHNELL BAY LOADING TERMINAL
WOODSIDE

12
13
14
T1
T2
LNG Jetty
Manoeuvring Area
500 m
LPG Condensate Jetty

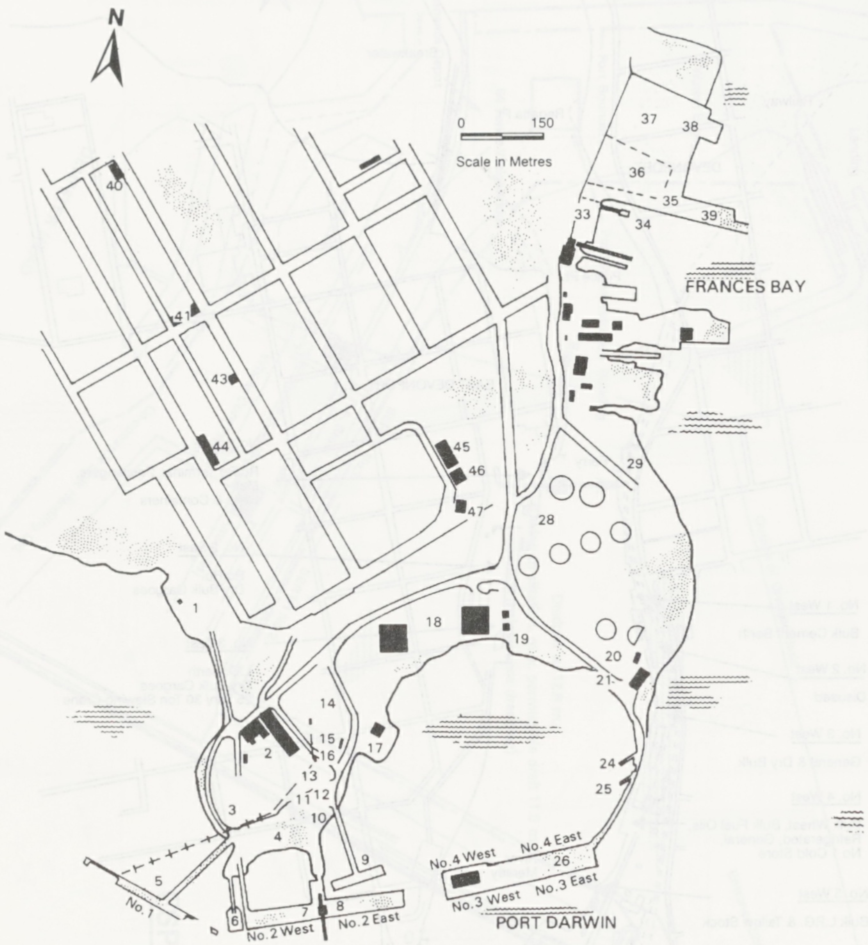
DAMPIER

WITHNELL BAY LNG BERTH - WOODSIDE
MOORING & BERTH ARRANGEMENT



1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
A
B
C
D
E
F
G
H
I
J
K
L
Dimensions in meters
40
30
20
20
20
30
40
40
40
40
40

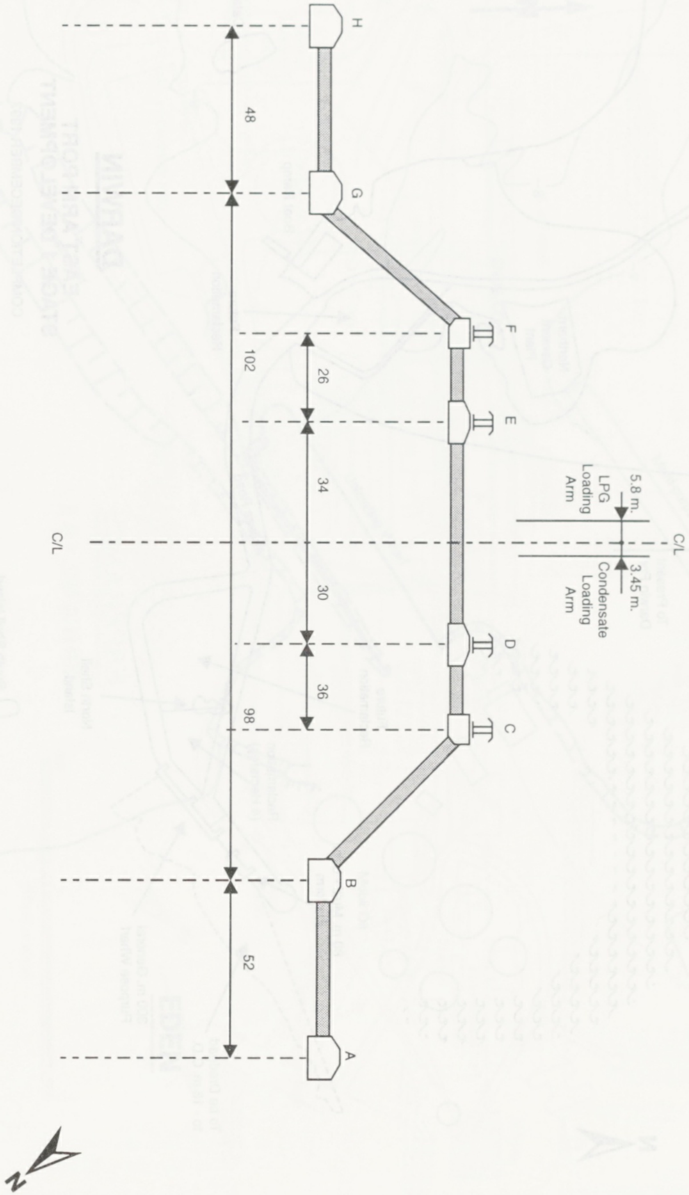
DARWIN

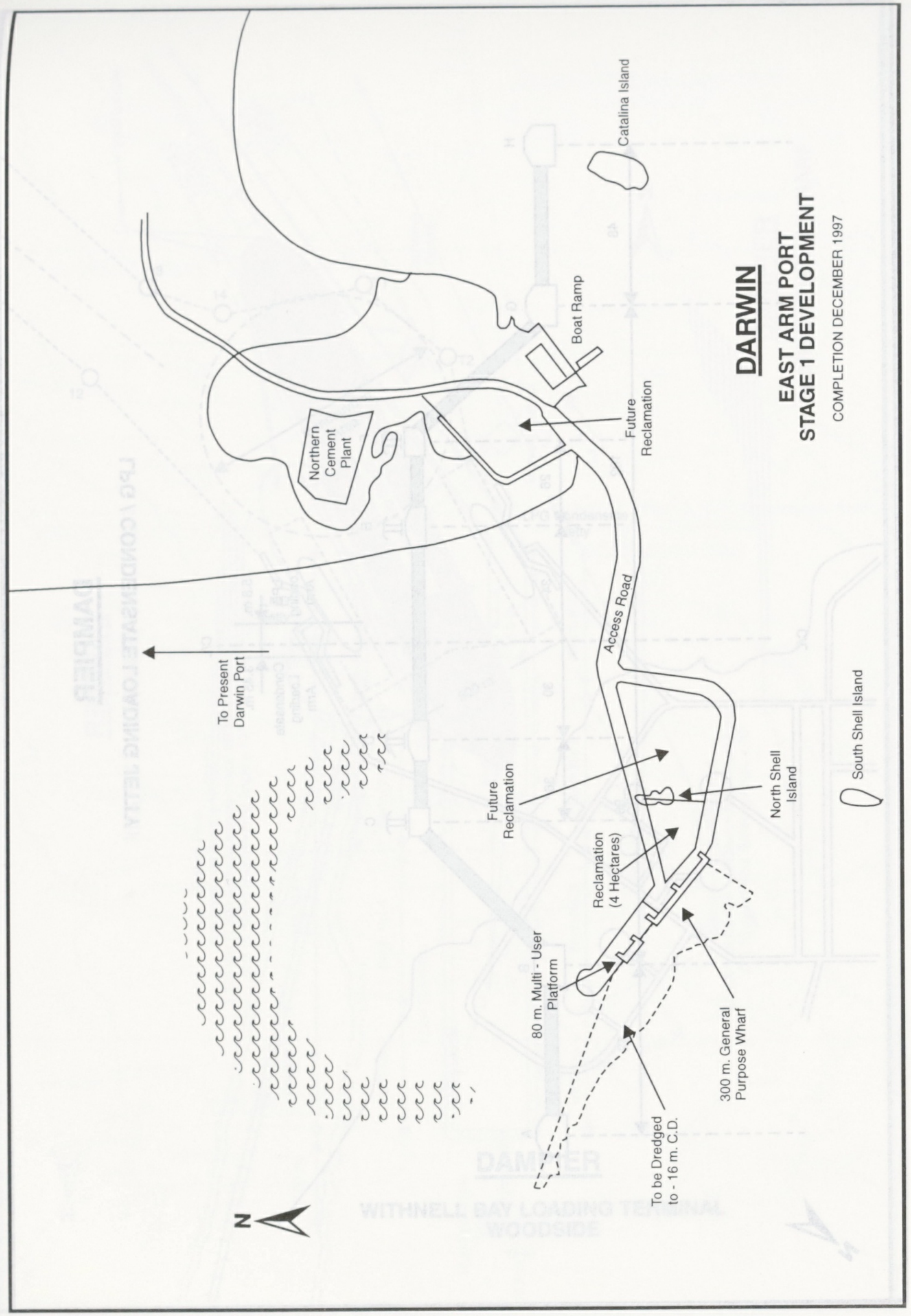

N
0
150
Scale in Metres
FRANCES BAY
PORT DARWIN
No.1
No.2 West
No.2 East
No.3 West
No.3 East
No.4 West
No.4 East
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
24
25
26
28
29
33
34
35
36
37
38
39
40
41
43
44
45
46
47

1. LPG Terminal
2. DPA Maintenance/Store/Garage
3. Acid Tower
4. Container Terminal
5. Iron Ore Wharf
6. Ro/Ro Facility
7. Container Terminal
8. New Fort Hill Wharf
9. Old Fort Hill Wharf
10. Stateships Office
11. Fort Hill Gate House
12. T.S.S.Office
13. Car Park
14. Shell Bitumen Plant
15. Cockburn Cement Depot
16. Weighbridge
17. Northern Cement Depot
18. Container Depot
19. Public Car Park
20. Stacking Yard
21. Stokes Hill Gate House
24. Ferry Landing
25. Police/Customs Landing
26. Stokes Hill Wharf
28. Navy Fuel Dump
29. Frances Bay Marine
33. Hornlbrooks Wharf
34. Inshore Fisherman's Pontoon
35. DPA Fisherman's Wharf
36. DPA Leases
37. Darwin Ship Maintenance
38. Syncrolift
39. Fisherman's Wharf
40. Dept. of Health
41. Post Office
43. NT Tourist Office
44. Police Station
45. Port Authority
46. Custom House
47. Dept. of Immigration

DAMPIER

LPG / CONDENSATE LOADING JETTY

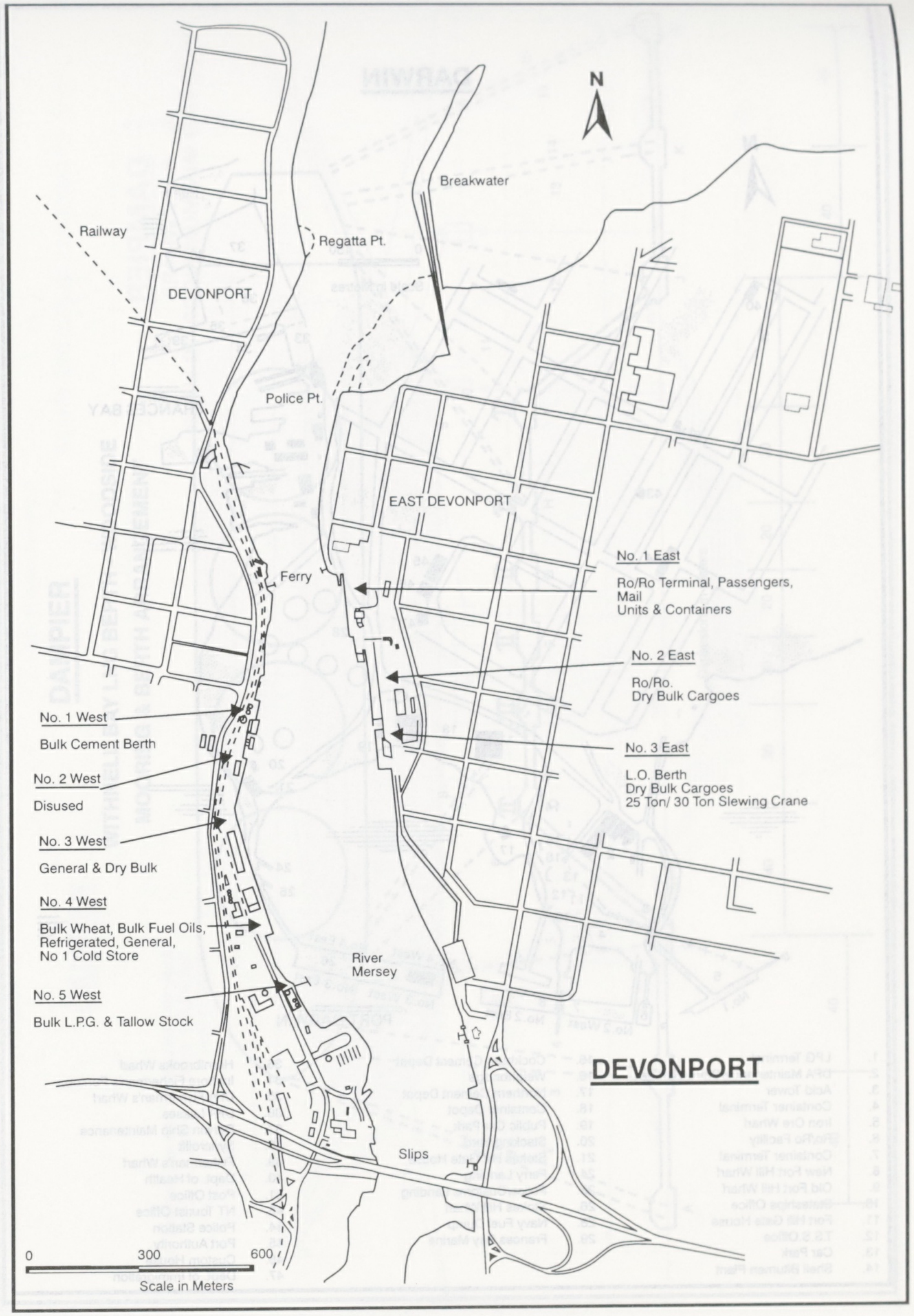

A
B
C
D
E
F
G
H
48
102
98
52
26
34
30
36
C/L
C/L
5.8 m.
LPG
Loading
Arm
3.45 m.
Condensate
Loading
Arm
N



DARWIN

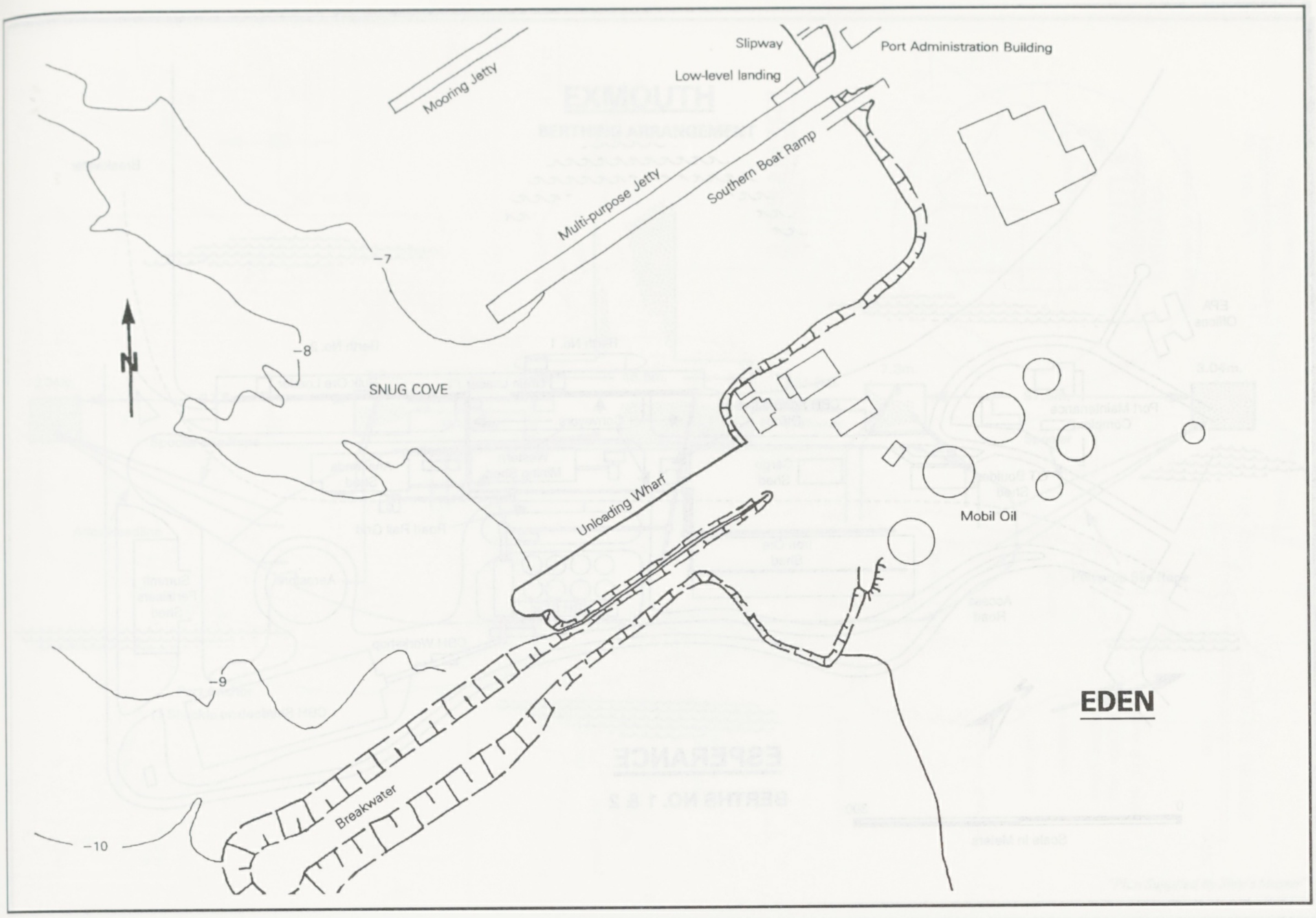
EAST ARM PORT
STAGE 1 DEVELOPMENT
COMPLETION DECEMBER 1997

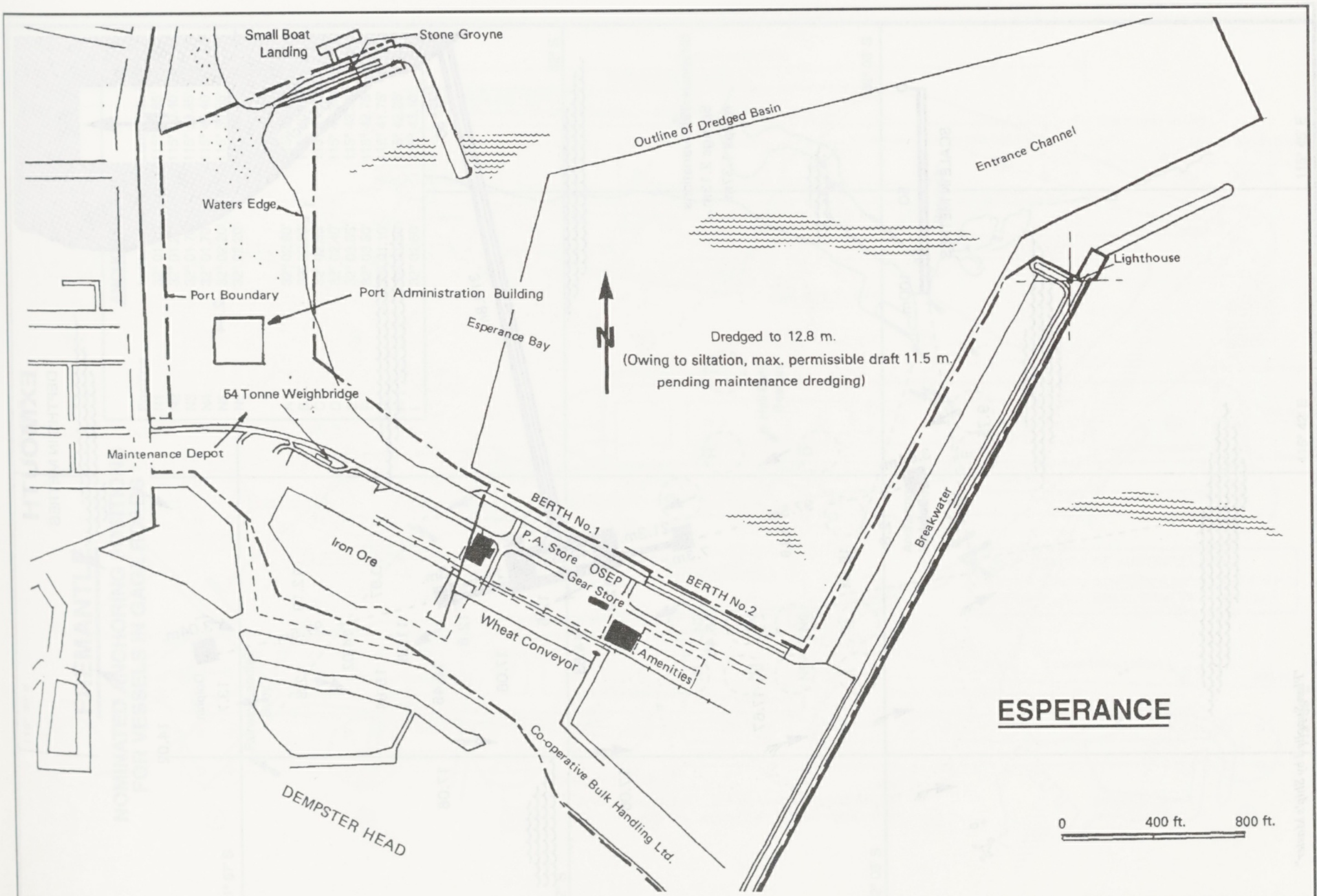
Catalina Island
Boat Ramp
Future Reclamation
Northern Cement Plant
Access Road
To Present Darwin Port
Future Reclamation
North Shell Island
South Shell Island
Reclamation (4 Hectares)
80 m. Multi - User Platform
300 m. General Purpose Wharf
To be Dredged to - 16 m. C.D.
N

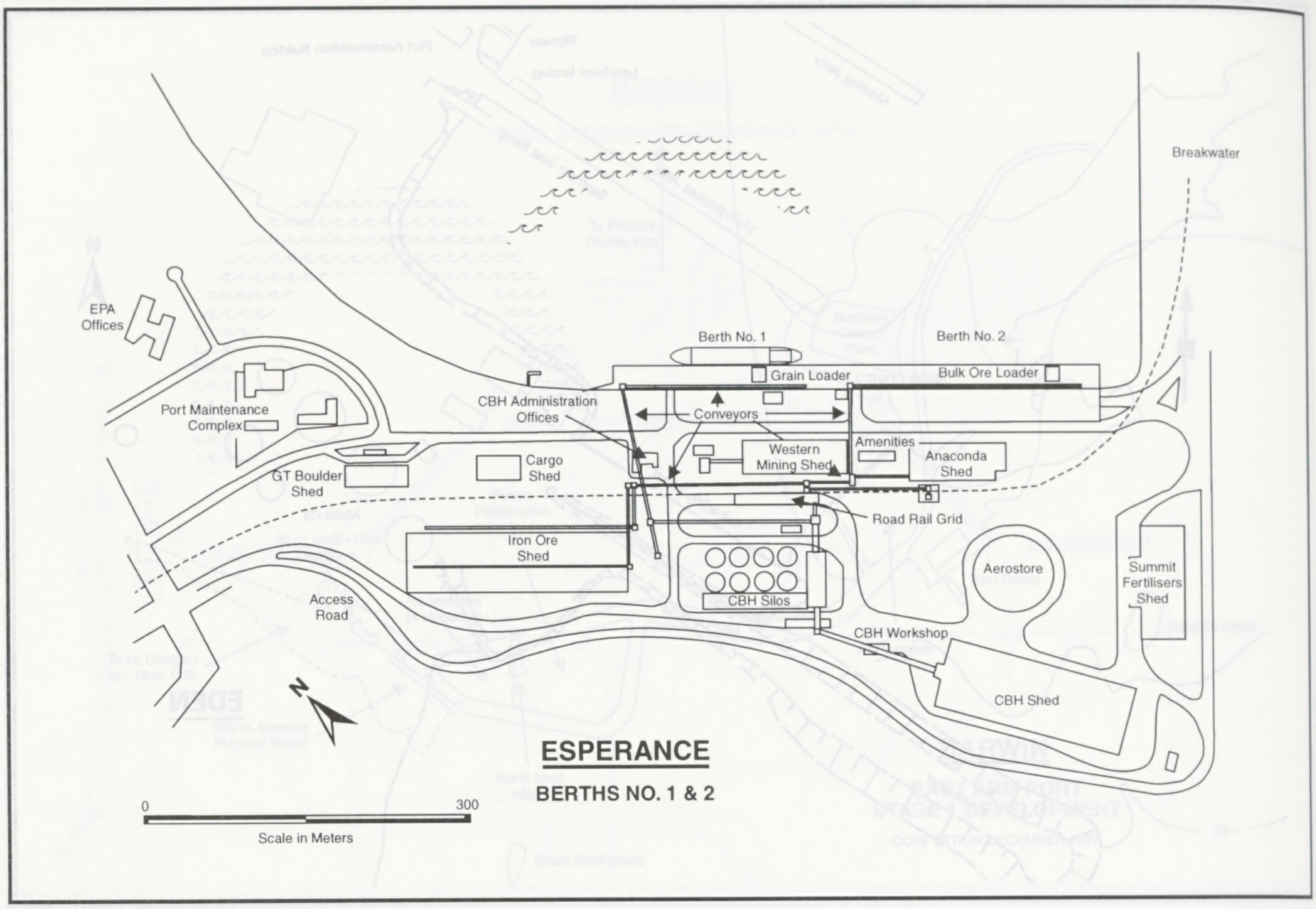


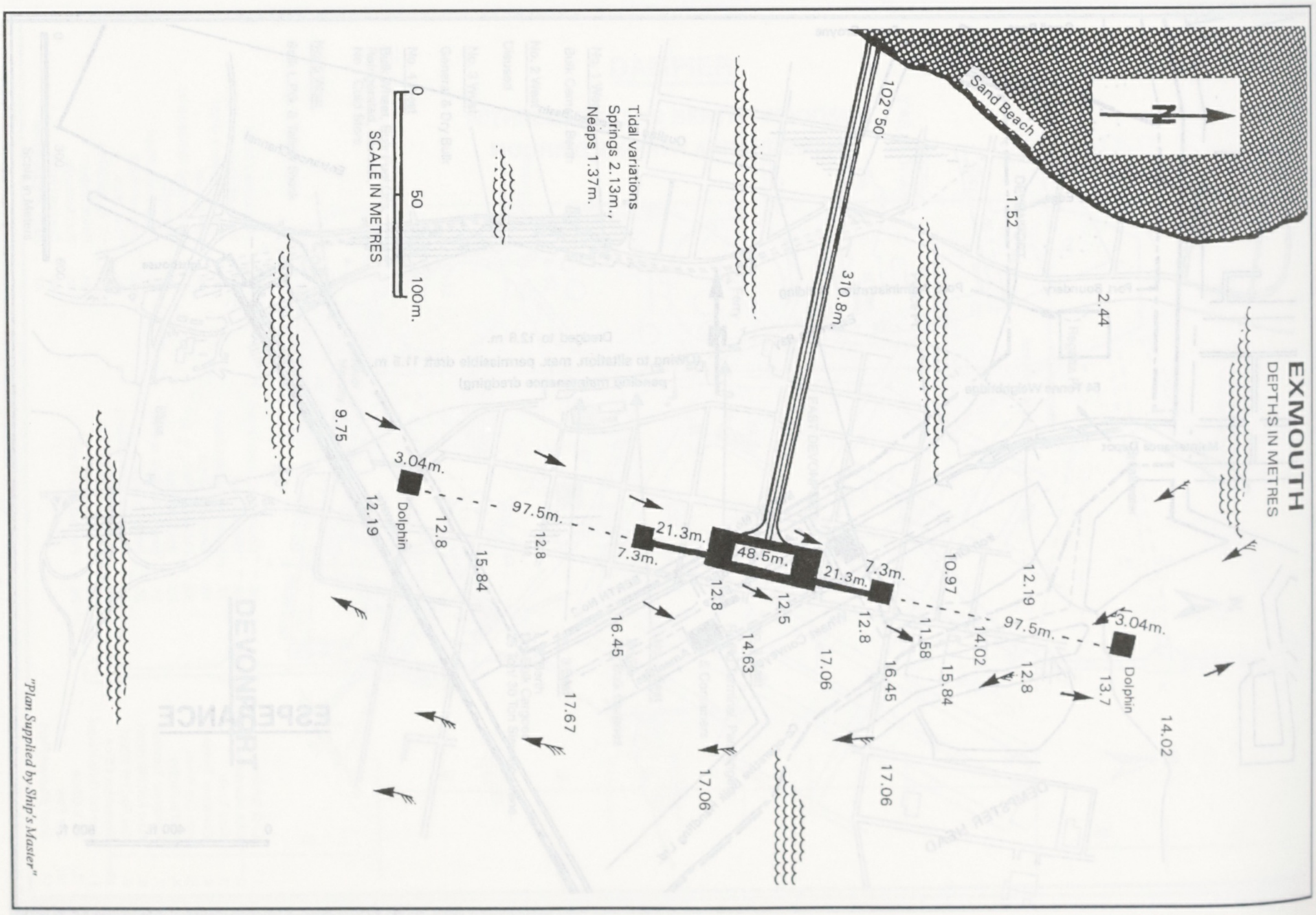
DEVONPORT

N
Breakwater
Railway
Regatta Pt.
DEVONPORT
Police Pt.
EAST DEVONPORT
Ferry
No. 1 East
Ro/Ro Terminal, Passengers, Mail
Units & Containers
No. 2 East
Ro/Ro.
Dry Bulk Cargoes
No. 3 East
L.O. Berth
Dry Bulk Cargoes
25 Ton/ 30 Ton Slewing Crane
No. 1 West
Bulk Cement Berth
No. 2 West
Disused
No. 3 West
General & Dry Bulk
No. 4 West
Bulk Wheat, Bulk Fuel Oils, Refrigerated, General, No 1 Cold Store
No. 5 West
Bulk L.P.G. & Tallow Stock
River Mersey
Slips
0
300
600
Scale in Meters


Slipway
Port Administration Building
Low-level landing
Mooring Jetty
Southern Boat Ramp
Multi-purpose Jetty
−7
N
−8
SNUG COVE
Unloading Wharf
Mobil Oil
−9
EDEN
Breakwater
−10

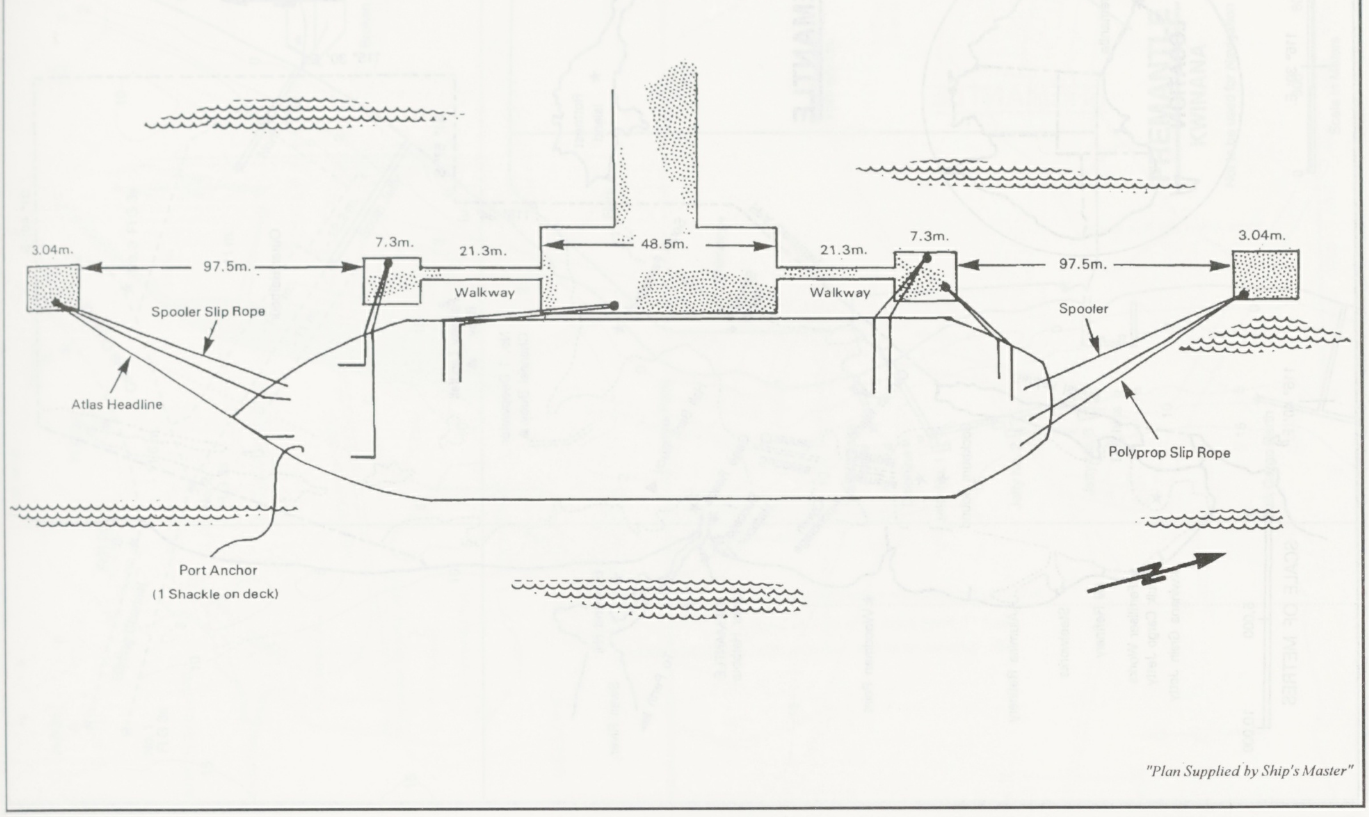

Small Boat Landing
Stone Groyne
Outline of Dredged Basin
Entrance Channel
Waters Edge
Lighthouse
Port Boundary
Port Administration Building
Esperance Bay
N
Dredged to 12.8 m.
(Owing to siltation, max. permissible draft 11.5 m.
pending maintenance dredging)
54 Tonne Weighbridge
Maintenance Depot
BERTH No.1
Iron Ore
P.A. Store
OSEP
Gear Store
BERTH No.2
Breakwater
Wheat Conveyor
Amenities
ESPERANCE
Co-operative Bulk Handling Ltd.
DEMPSTER HEAD
0
400 ft.
800 ft.


Breakwater
EPA Offices
Berth No. 1
Berth No. 2
Grain Loader
Bulk Ore Loader
CBH Administration Offices
Conveyors
Port Maintenance Complex
Amenities
Western Mining Shed
Anaconda Shed
Cargo Shed
GT Boulder Shed
Road Rail Grid
Iron Ore Shed
Aerostore
Summit Fertilisers Shed
CBH Silos
Access Road
CBH Workshop
CBH Shed
N
ESPERANCE
BERTHS NO. 1 & 2
0
300
Scale in Meters


EXMOUTH
DEPTHS IN METRES
N
Sand Beach
102° 50'
310.8m.
1.52
2.44
Tidal variations
Springs 2.13m.,
Neaps 1.37m.
0
50
100m.
SCALE IN METRES
9.75
3.04m.
Dolphin
12.19
12.8
97.5m.
15.84
12.8
21.3m.
7.3m.
48.5m.
21.3m.
7.3m.
12.8
12.5
12.8
16.45
14.63
17.06
11.58
16.45
10.97
15.84
14.02
12.19
97.5m.
3.04m.
12.8
13.7
Dolphin
14.02
17.67
17.06
17.06
"Plan Supplied by Ship's Master"

EXMOUTH

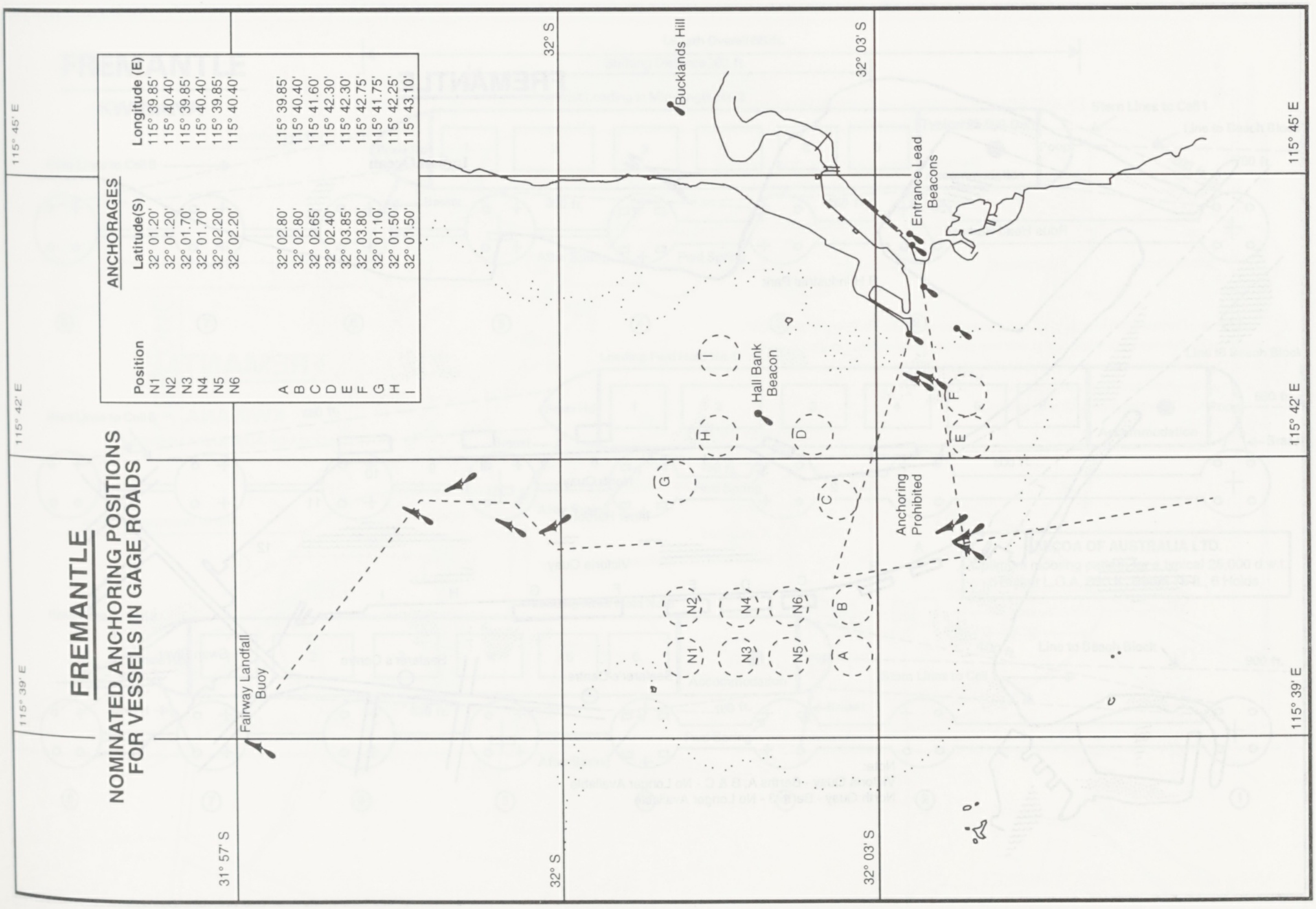
BERTHING ARRANGEMENT


3.04m.
97.5m.
7.3m.
21.3m.
48.5m.
21.3m.
7.3m.
97.5m.
3.04m.
Walkway
Walkway
Spooler Slip Rope
Atlas Headline
Spooler
Polyprop Slip Rope
Port Anchor
(1 Shackle on deck)

"Plan Supplied by Ship's Master"

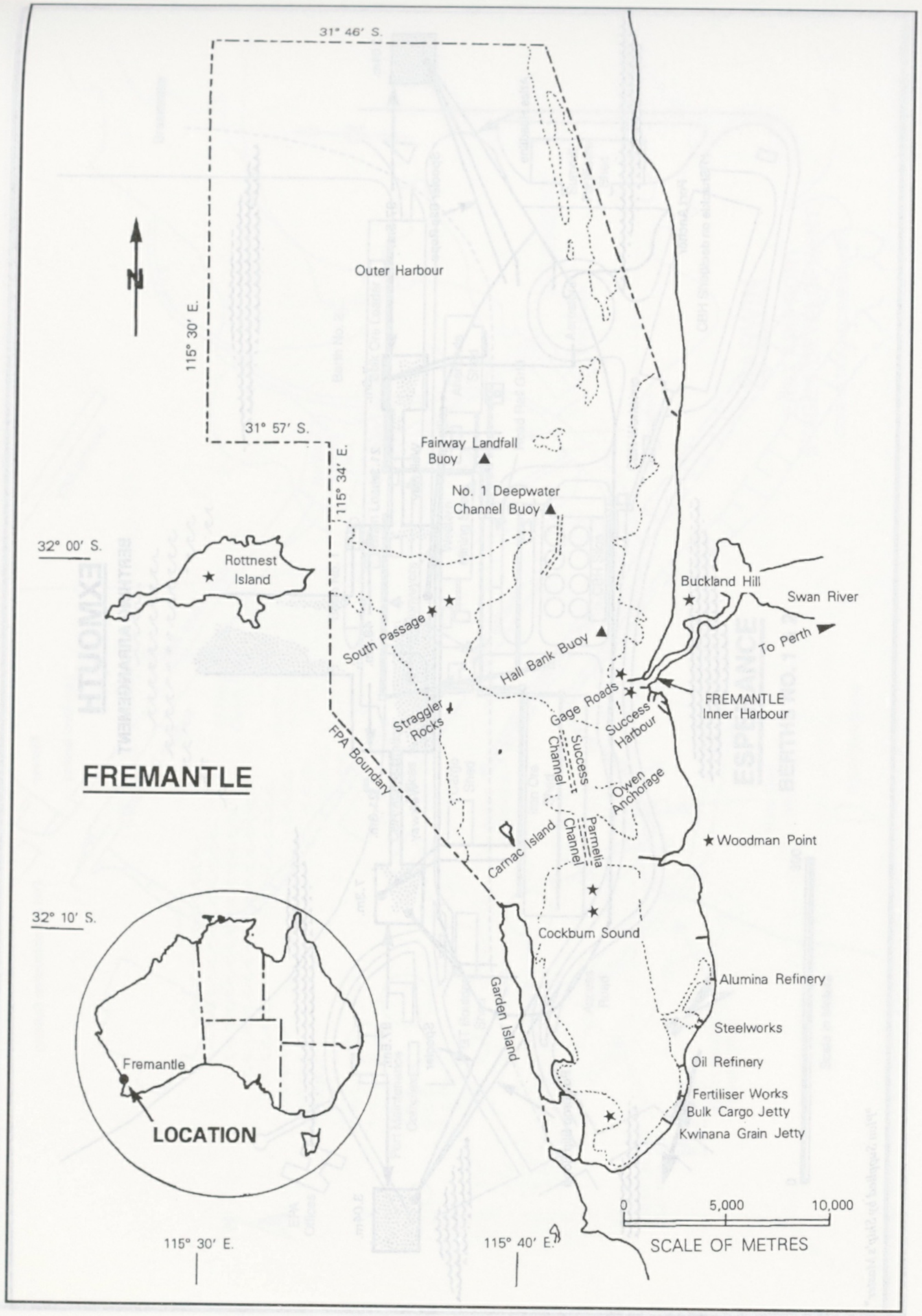
FREMANTLE

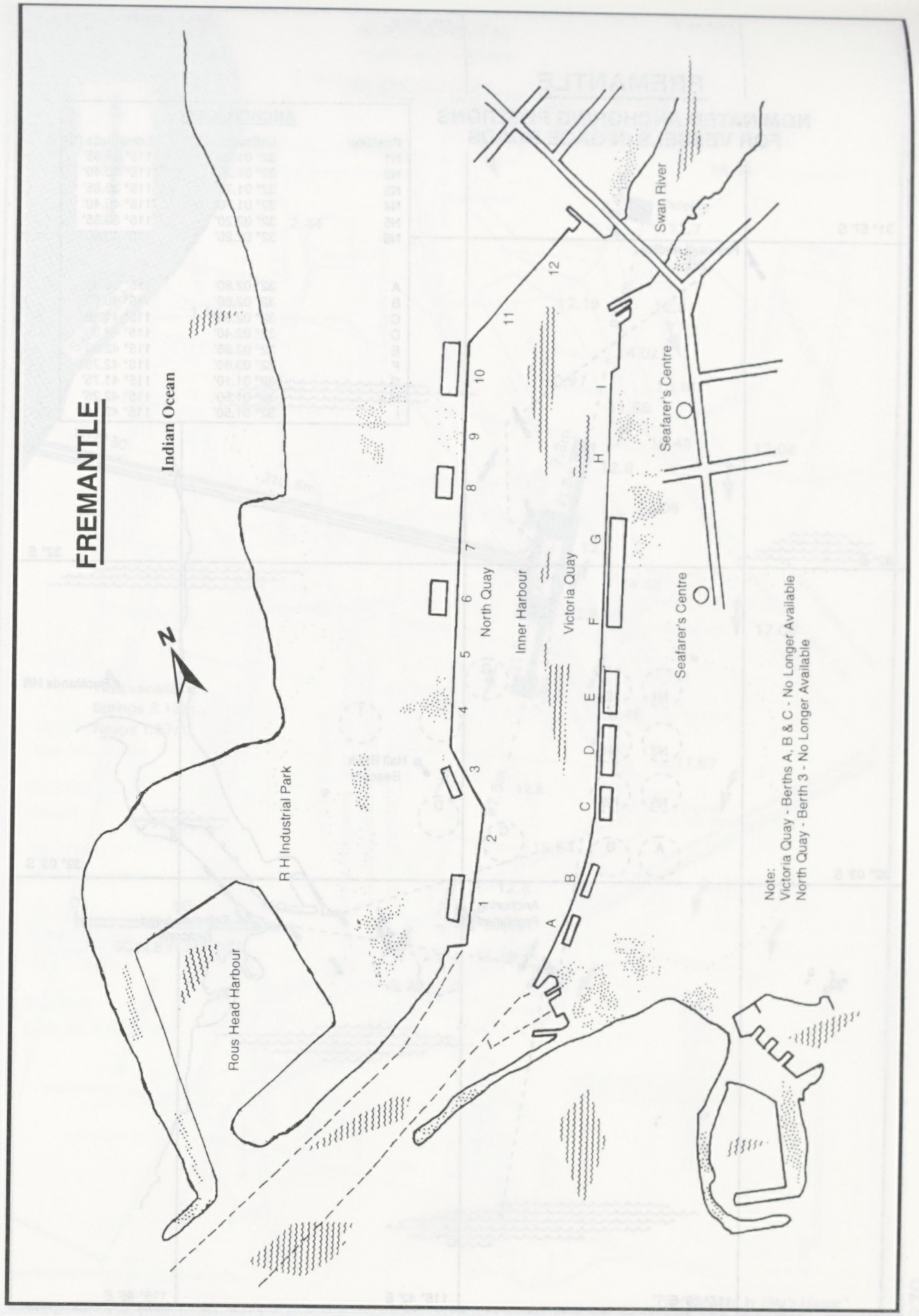
NOMINATED ANCHORING POSITIONS FOR VESSELS IN GAGE ROADS


115° 39' E
115° 42' E
115° 45' E
31° 57' S
32° S
32° 03' S
Fairway Landfall Buoy
Bucklands Hill
Hall Bank Beacon
Entrance Lead Beacons
Anchoring Prohibited
N1
N2
N3
N4
N5
N6
A
B
C
D
E
F
G
H
I

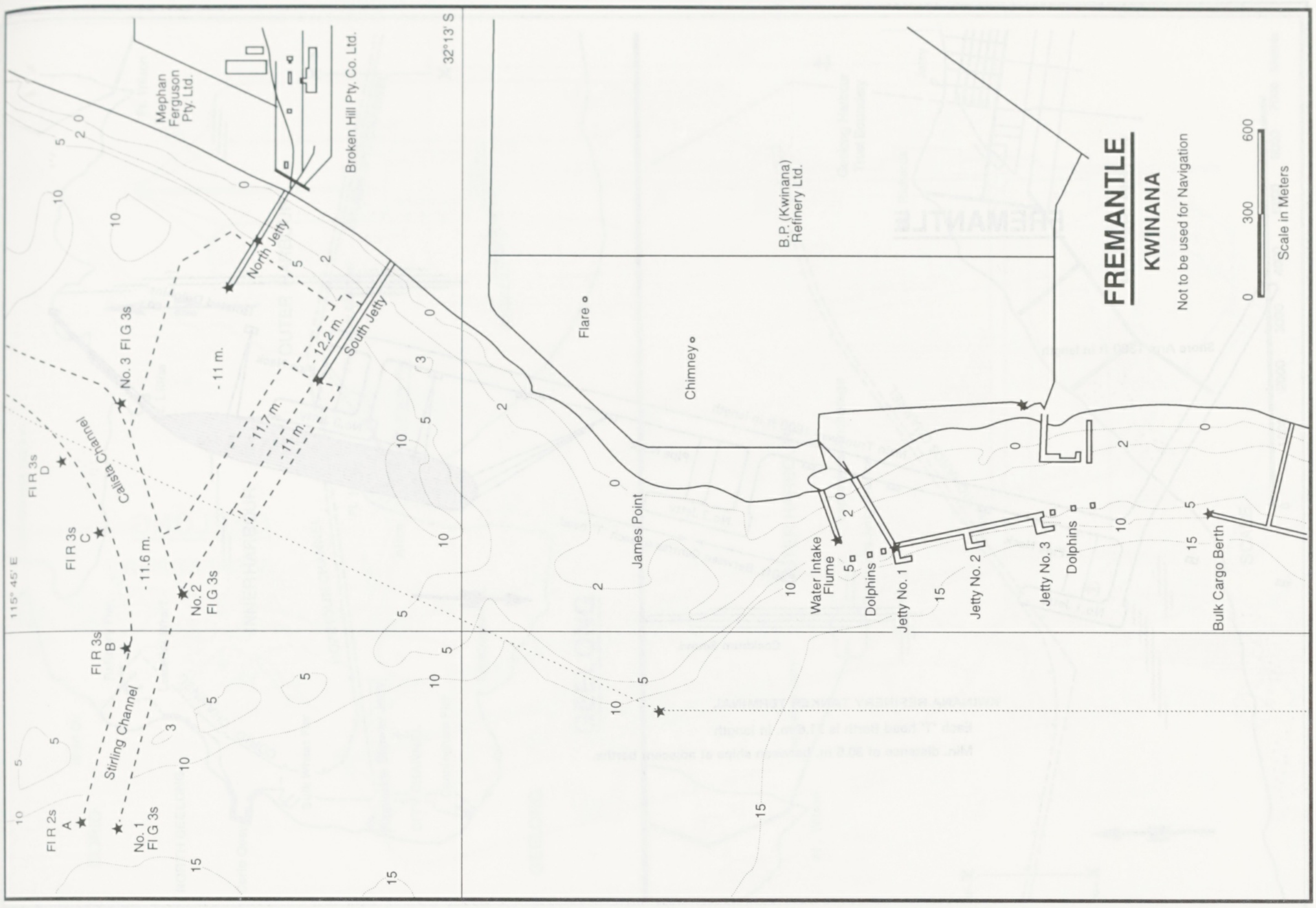
ANCHORAGES

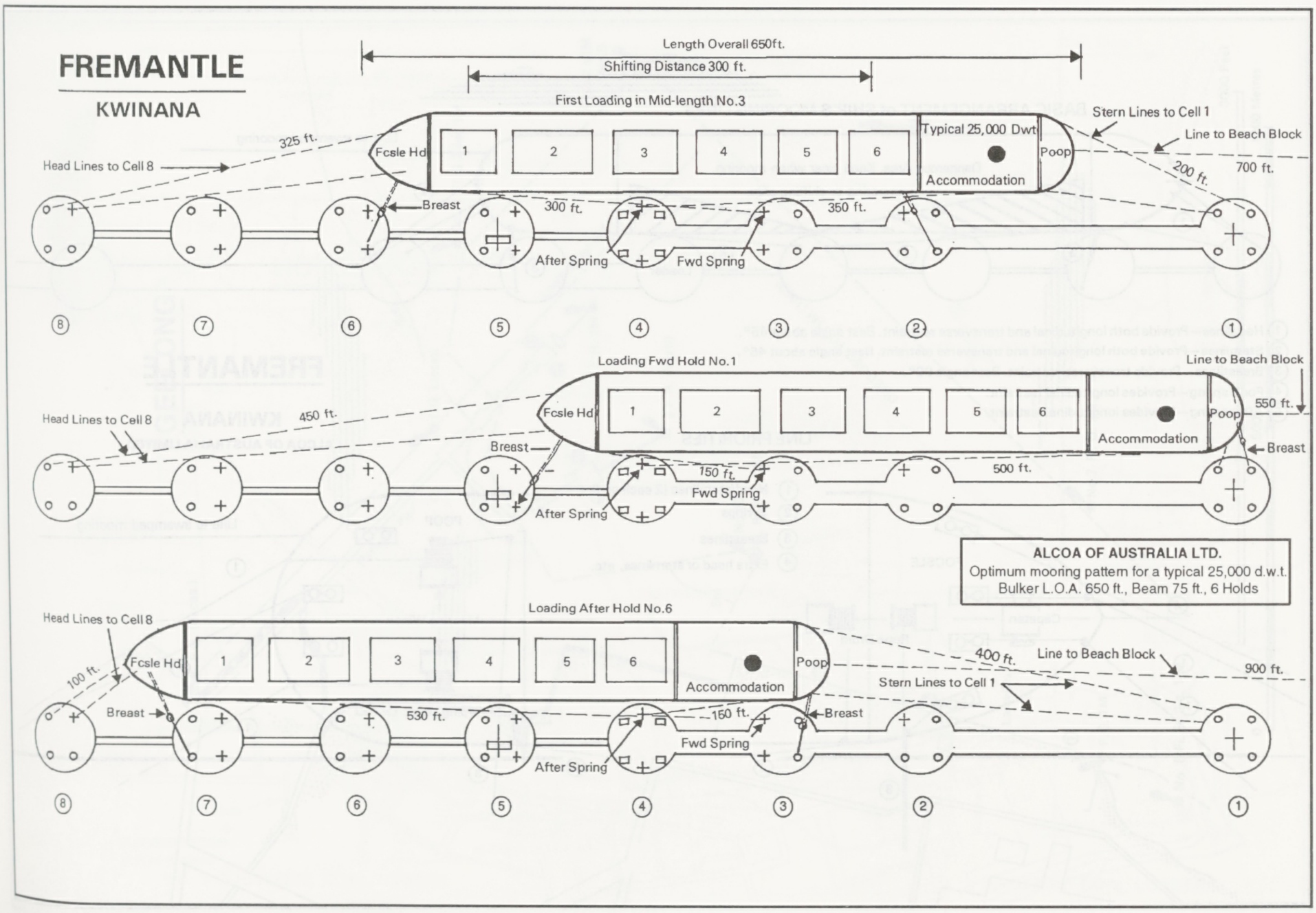
Position	Latitude(S)	Longitude (E)
N1	32° 01.20'	115° 39.85'
N2	32° 01.20'	115° 40.40'
N3	32° 01.70'	115° 39.85'
N4	32° 01.70'	115° 40.40'
N5	32° 02.20'	115° 39.85'
N6	32° 02.20'	115° 40.40'
A	32° 02.80'	115° 39.85'
B	32° 02.80'	115° 40.40'
C	32° 02.65'	115° 41.60'
D	32° 02.40'	115° 42.30'
E	32° 03.85'	115° 42.30'
F	32° 03.80'	115° 42.75'
G	32° 01.10'	115° 41.75'
H	32° 01.50'	115° 42.25'
I	32° 01.50'	115° 43.10'


31° 46' S.
N
115° 30' E.
Outer Harbour
31° 57' S.
115° 34' E.
Fairway Landfall Buoy
No. 1 Deepwater Channel Buoy
32° 00' S.
Rottnest Island
South Passage
Hall Bank Buoy
Buckland Hill
Swan River
To Perth
FREMANTLE Inner Harbour
Gage Roads
Success Harbour
Straggler Rocks
Success Channel
FPA Boundary
Owen Anchorage
Parmelia Channel
Carnac Island
Woodman Point
FREMANTLE
32° 10' S.
Cockburn Sound
Alumina Refinery
Garden Island
Steelworks
Oil Refinery
Fertiliser Works
Bulk Cargo Jetty
Kwinana Grain Jetty
Fremantle
LOCATION
0
5,000
10,000
SCALE OF METRES
115° 30' E.
115° 40' E.

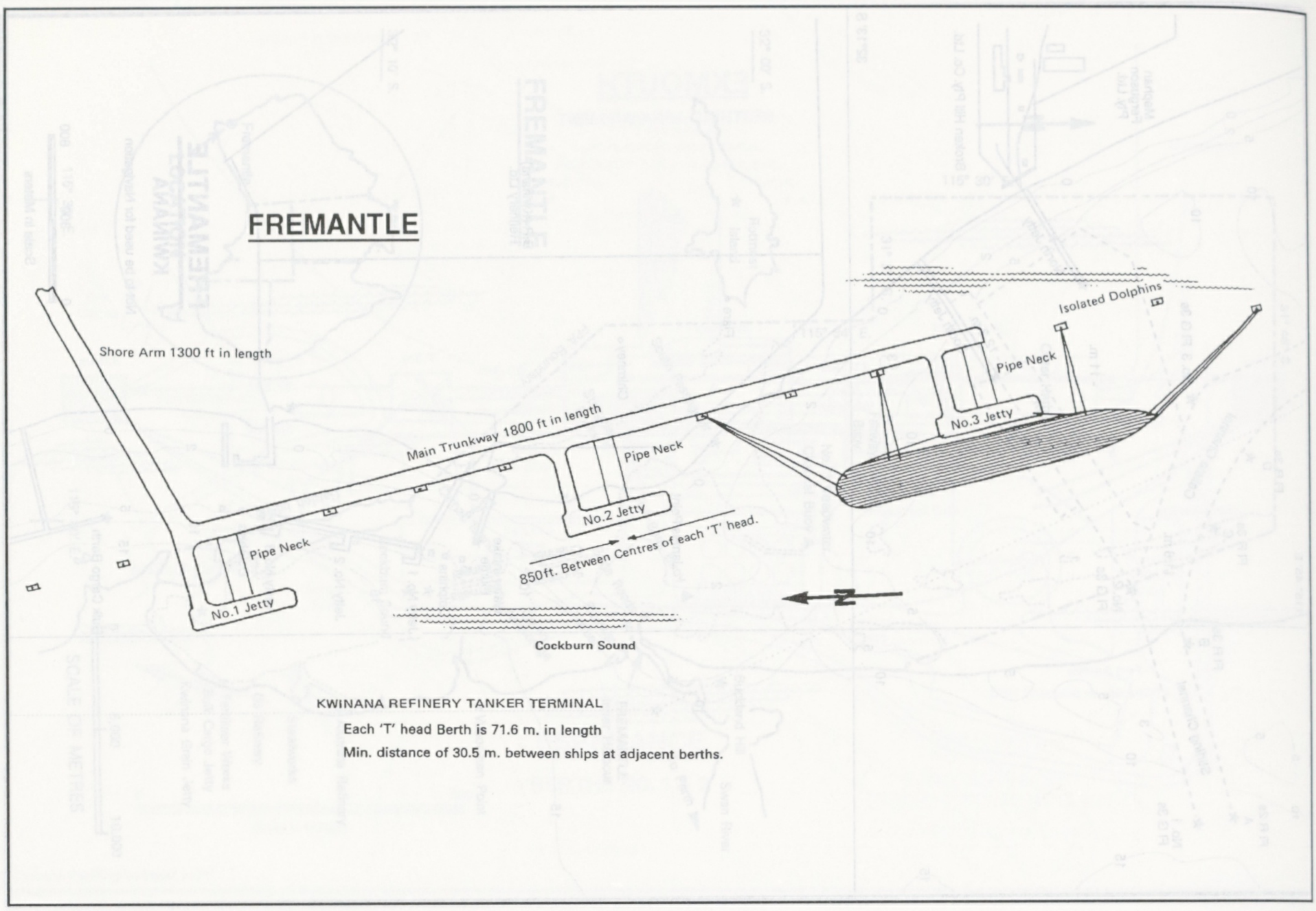

FREMANTLE
Indian Ocean
N
Swan River
12
11
10
9
8
7
6
5
4
3
2
1
North Quay
Inner Harbour
Victoria Quay
Seafarer's Centre
Seafarer's Centre
I
H
G
F
E
D
C
B
A
R H Industrial Park
Rous Head Harbour

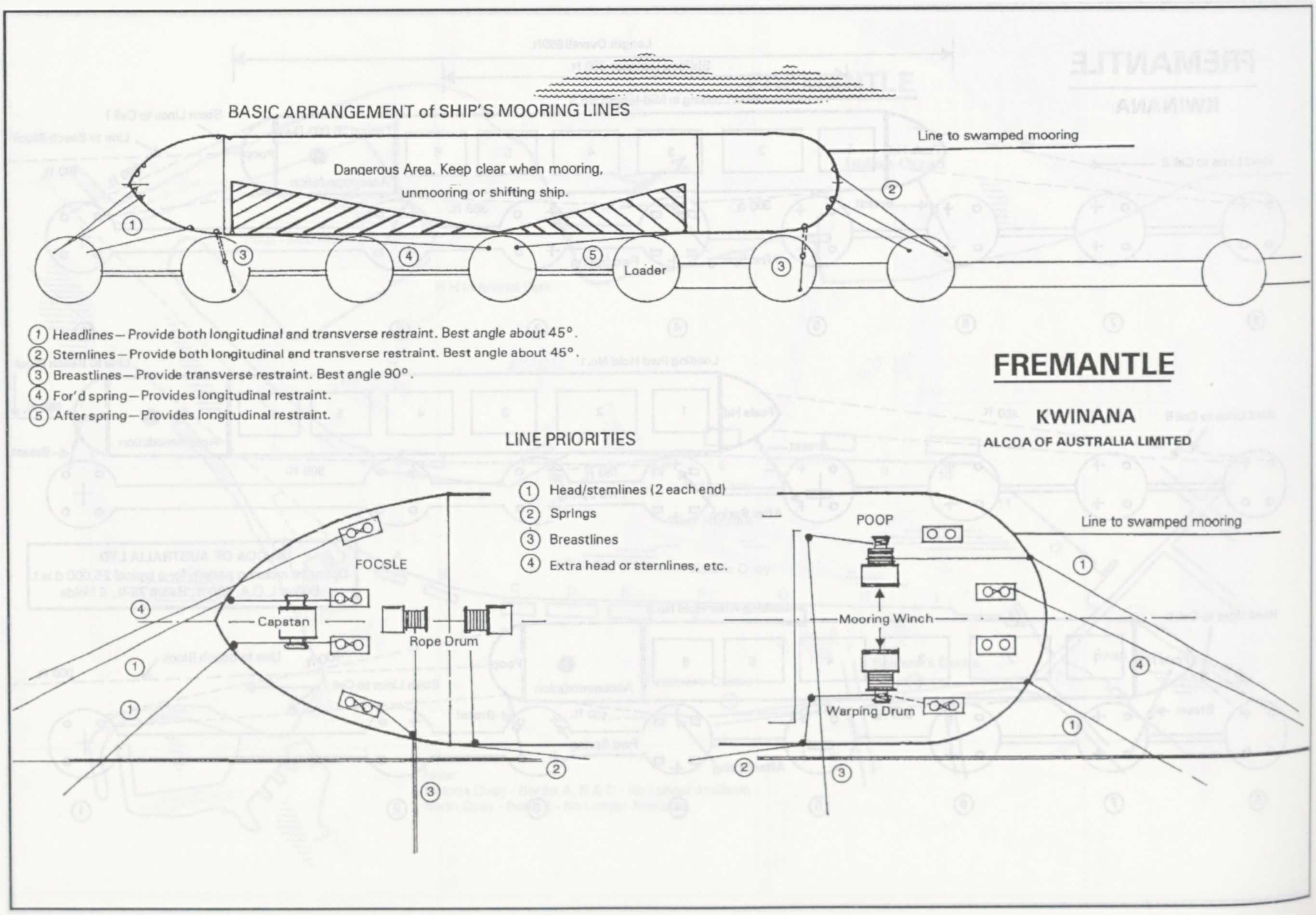
Note:
Victoria Quay - Berths A, B & C - No Longer Available
North Quay - Berth 3 - No Longer Available

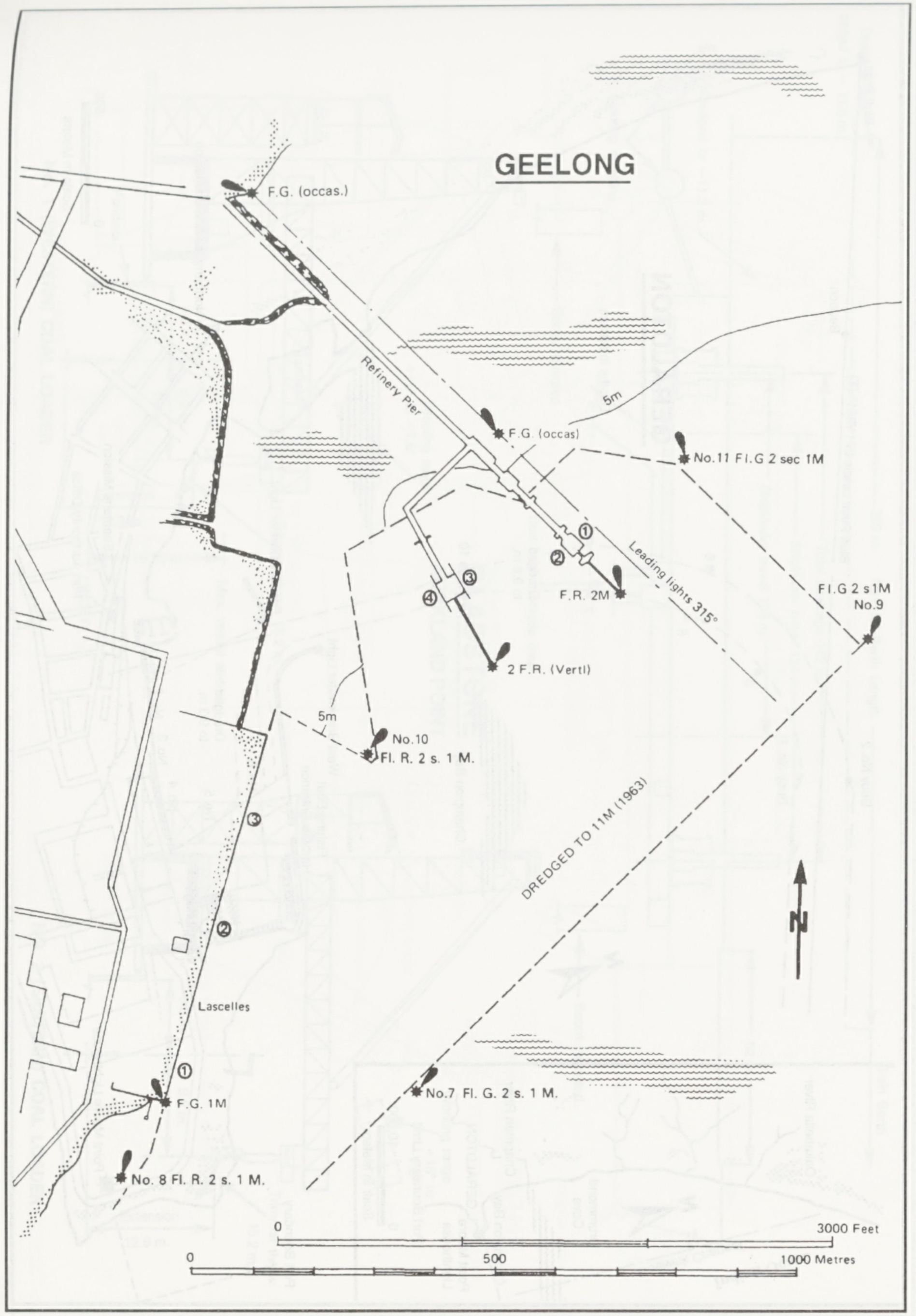

FREMANTLE
KWINANA
Not to be used for Navigation
0 300 600
Scale in Meters
32°13' S
115°45' E
Mephan Ferguson Pty. Ltd.
Broken Hill Pty. Co. Ltd.
B.P. (Kwinana) Refinery Ltd.
North Jetty
South Jetty
Flare
Chimney
James Point
Water Intake Flume
Dolphins
Jetty No. 1
Jetty No. 2
Jetty No. 3
Dolphins
Bulk Cargo Berth
Calista Channel
Stirling Channel
No. 3 Fl G 3s
No. 2 Fl G 3s
No. 1 Fl G 3s
Fl R 3s D
Fl R 3s C
Fl R 3s B
Fl R 2s A
-11 m.
-12.2 m.
11.7 m.
-11 m.
-11.6 m.

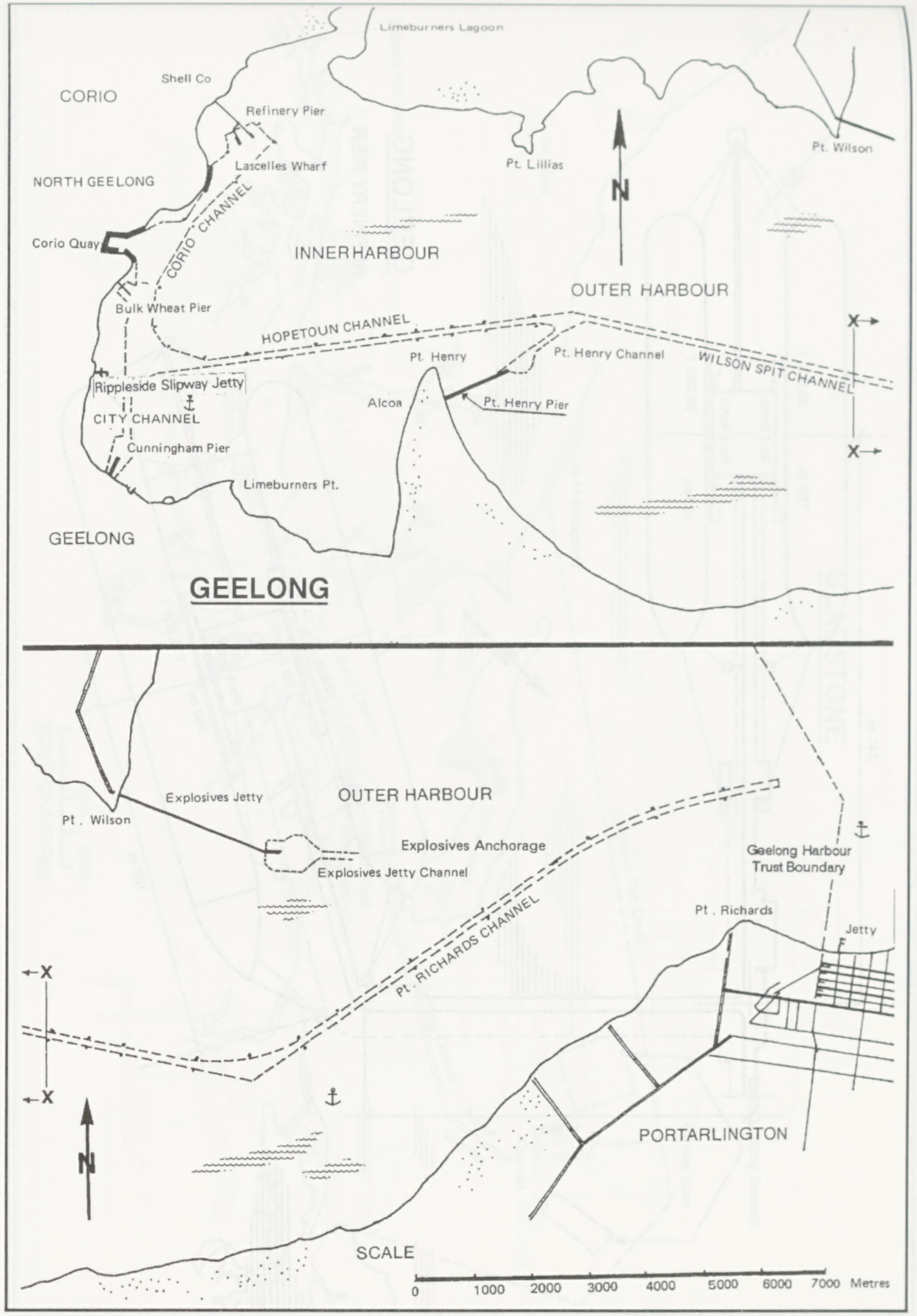

FREMANTLE
KWINANA
Length Overall 650ft.
Shifting Distance 300 ft.
First Loading in Mid-length No.3
Head Lines to Cell 8
325 ft.
Fcsle Hd
1
2
3
4
5
6
Typical 25,000 Dwt
Accommodation
Poop
Stern Lines to Cell 1
Line to Beach Block
200 ft.
700 ft.
Breast
300 ft.
350 ft.
After Spring
Fwd Spring
⑧ ⑦ ⑥ ⑤ ④ ③ ② ①
Loading Fwd Hold No.1
Line to Beach Block
Head Lines to Cell 8
450 ft.
Fcsle Hd
Accommodation
Poop
550 ft.
Breast
Breast
150 ft.
Fwd Spring
500 ft.
After Spring
Loading After Hold No.6
Head Lines to Cell 8
100 ft.
Fcsle Hd
Accommodation
Poop
400 ft.
Line to Beach Block
900 ft.
Stern Lines to Cell 1
Breast
530 ft.
150 ft.
Breast
Fwd Spring
After Spring
⑧ ⑦ ⑥ ⑤ ④ ③ ② ①

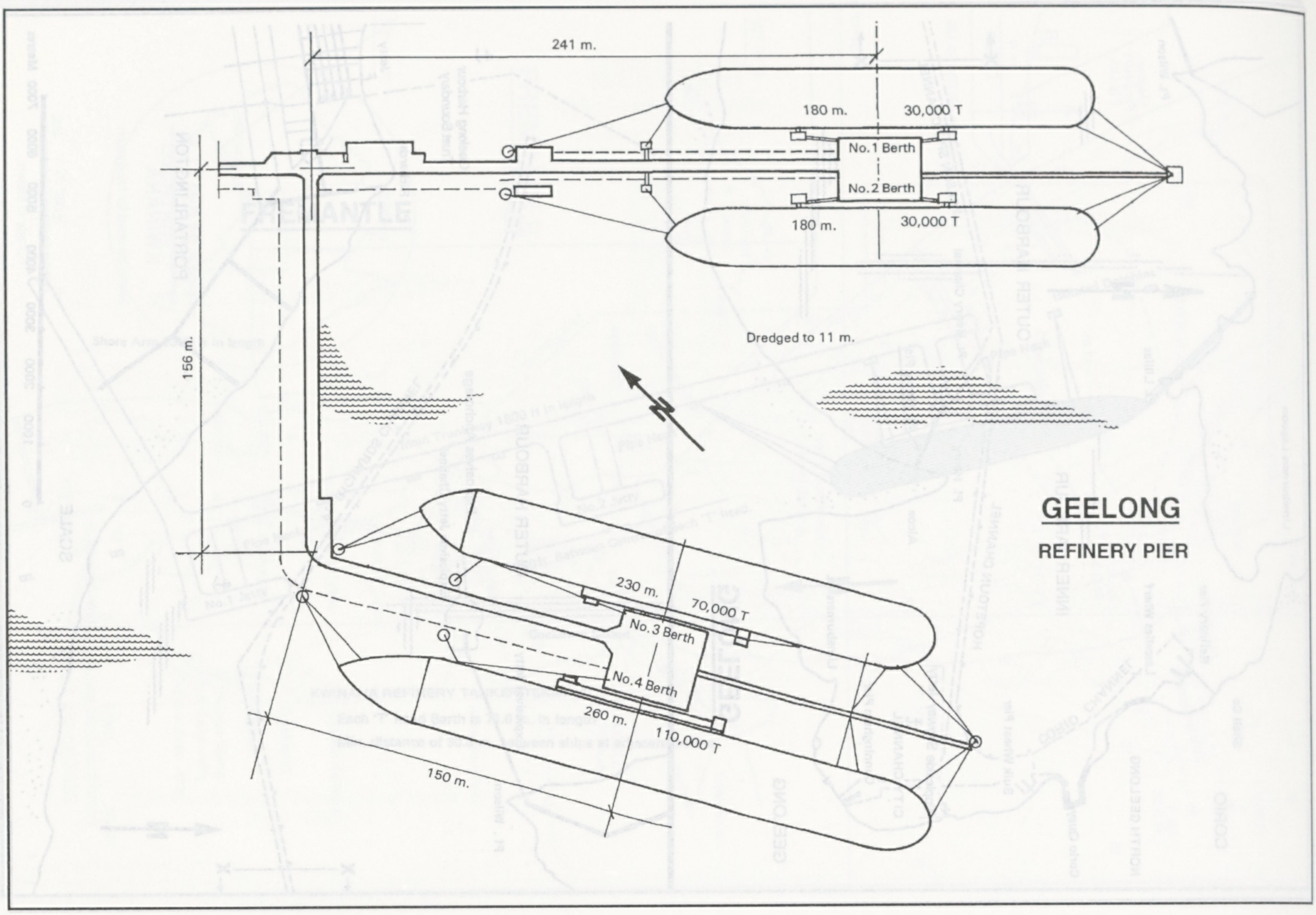
ALCOA OF AUSTRALIA LTD.
Optimum mooring pattern for a typical 25,000 d.w.t.
Bulker L.O.A. 650 ft., Beam 75 ft., 6 Holds

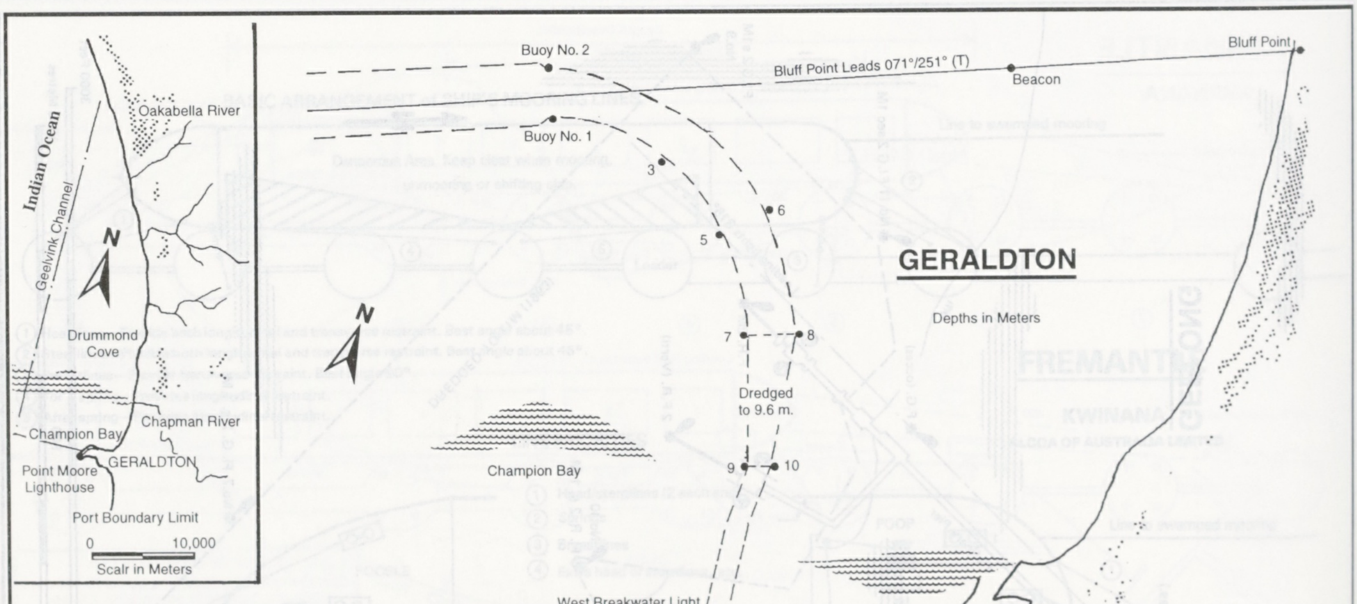

FREMANTLE
Shore Arm 1300 ft in length
Main Trunkway 1800 ft in length
Pipe Neck
No.1 Jetty
Pipe Neck
No.2 Jetty
850ft. Between Centres of each 'T' head.
Pipe Neck
No.3 Jetty
Isolated Dolphins
Cockburn Sound
KWINANA REFINERY TANKER TERMINAL
Each 'T' head Berth is 71.6 m. in length
Min. distance of 30.5 m. between ships at adjacent berths.

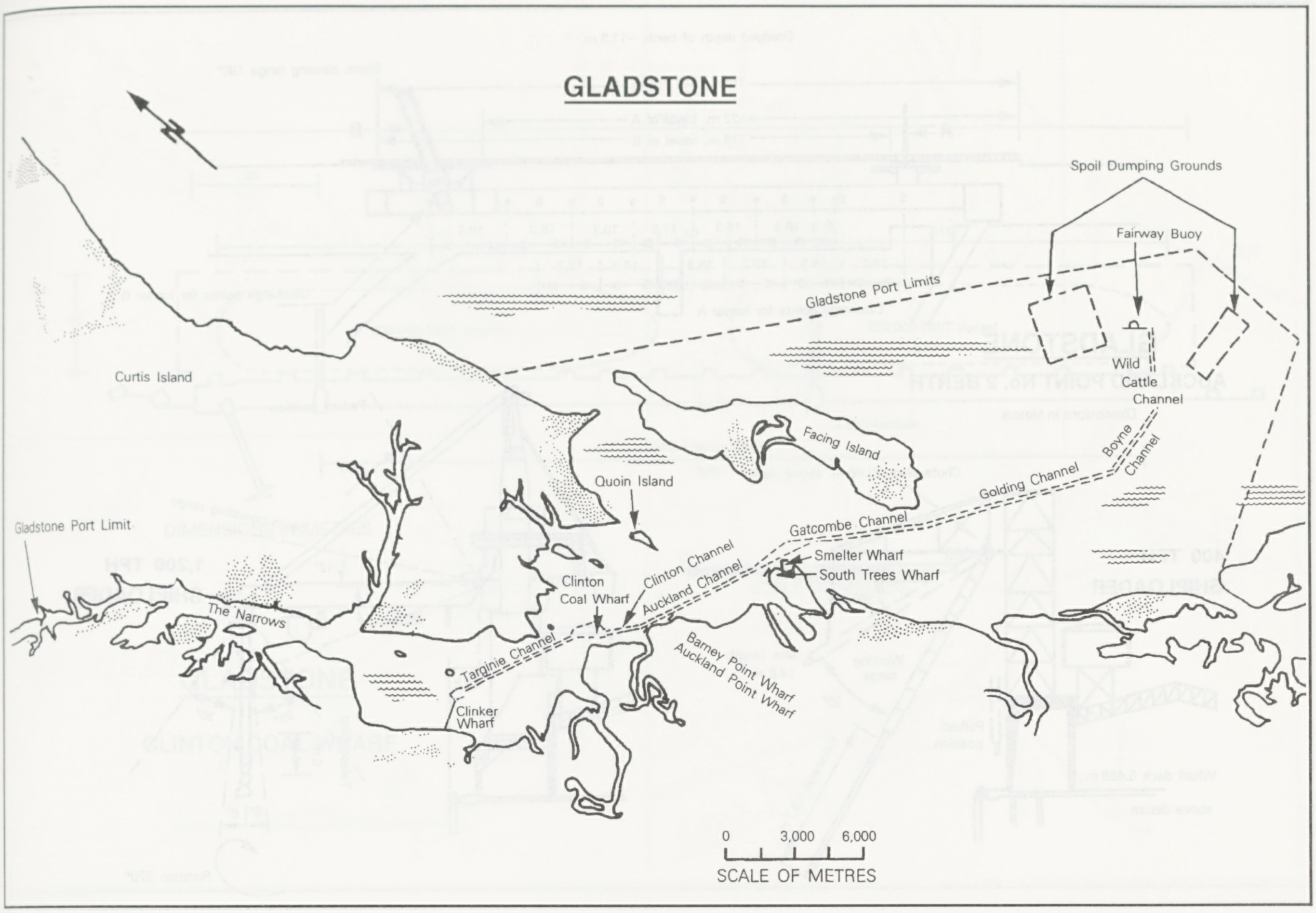

BASIC ARRANGEMENT of SHIP'S MOORING LINES
Dangerous Area. Keep clear when mooring, unmooring or shifting ship.
Line to swamped mooring
①
②
③
④
⑤
③
Loader
① Headlines—Provide both longitudinal and transverse restraint. Best angle about 45°.
② Sternlines—Provide both longitudinal and transverse restraint. Best angle about 45°.
③ Breastlines—Provide transverse restraint. Best angle 90°.
④ For'd spring—Provides longitudinal restraint.
⑤ After spring—Provides longitudinal restraint.
FREMANTLE
KWINANA
ALCOA OF AUSTRALIA LIMITED
LINE PRIORITIES
① Head/sternlines (2 each end)
② Springs
③ Breastlines
④ Extra head or sternlines, etc.
FOCSLE
Capstan
Rope Drum
④
①
①
②
③
POOP
Mooring Winch
Warping Drum
Line to swamped mooring
①
④
①
②
③

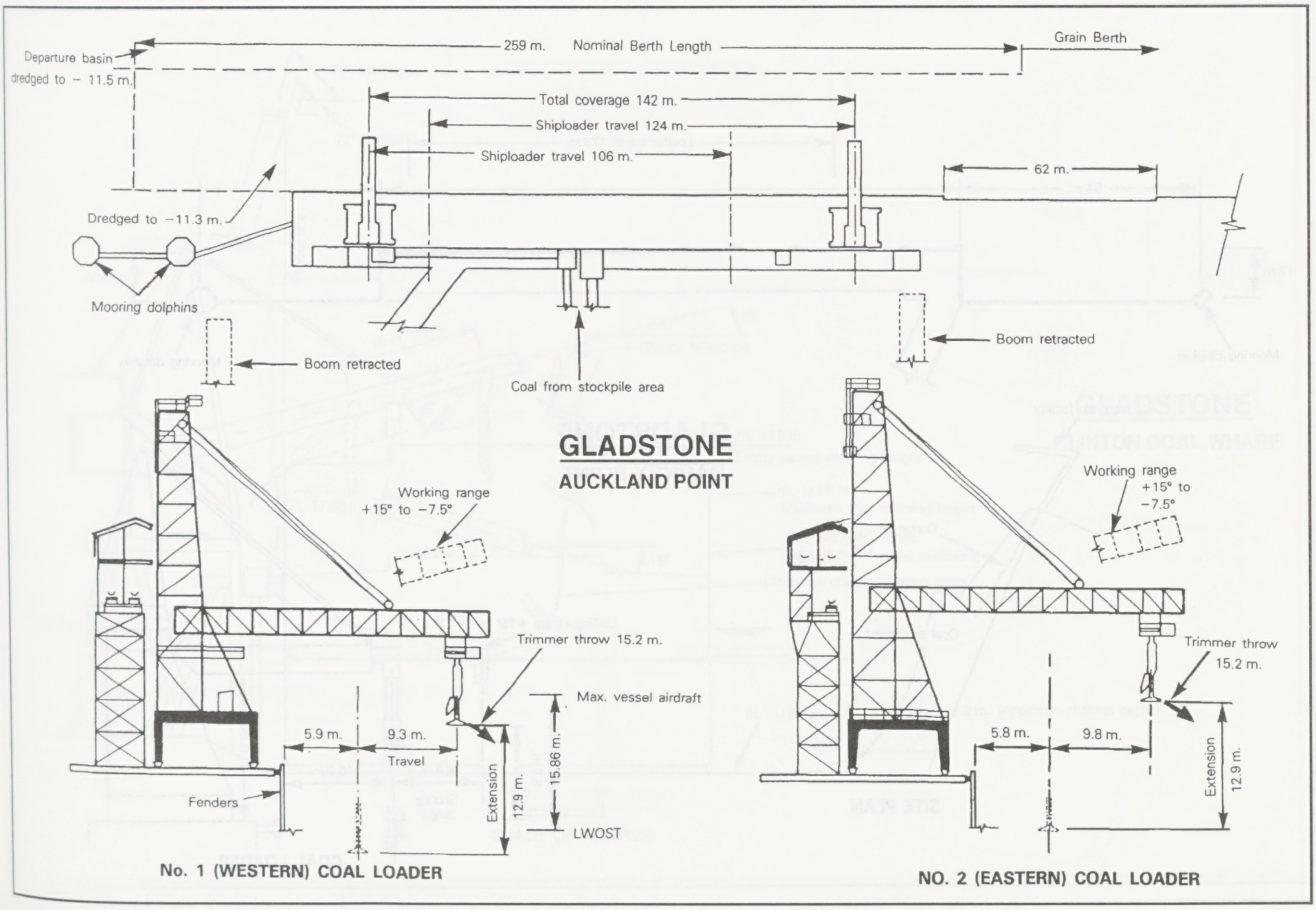

GEELONG
F.G. (occas.)
Refinery Pier
5m
F.G. (occas)
No.11 Fl.G 2 sec 1M
①
②
③
④
F.R. 2M
Leading lights 315°
2 F.R. (Vertl)
Fl.G 2 s1M
No.9
5m
No.10
Fl. R. 2 s. 1 M.
DREDGED TO 11M (1963)
N
③
②
Lascelles
①
F.G. 1M
No.7 Fl. G. 2 s. 1 M.
No. 8 Fl. R. 2 s. 1 M.
0
3000 Feet
0
500
1000 Metres

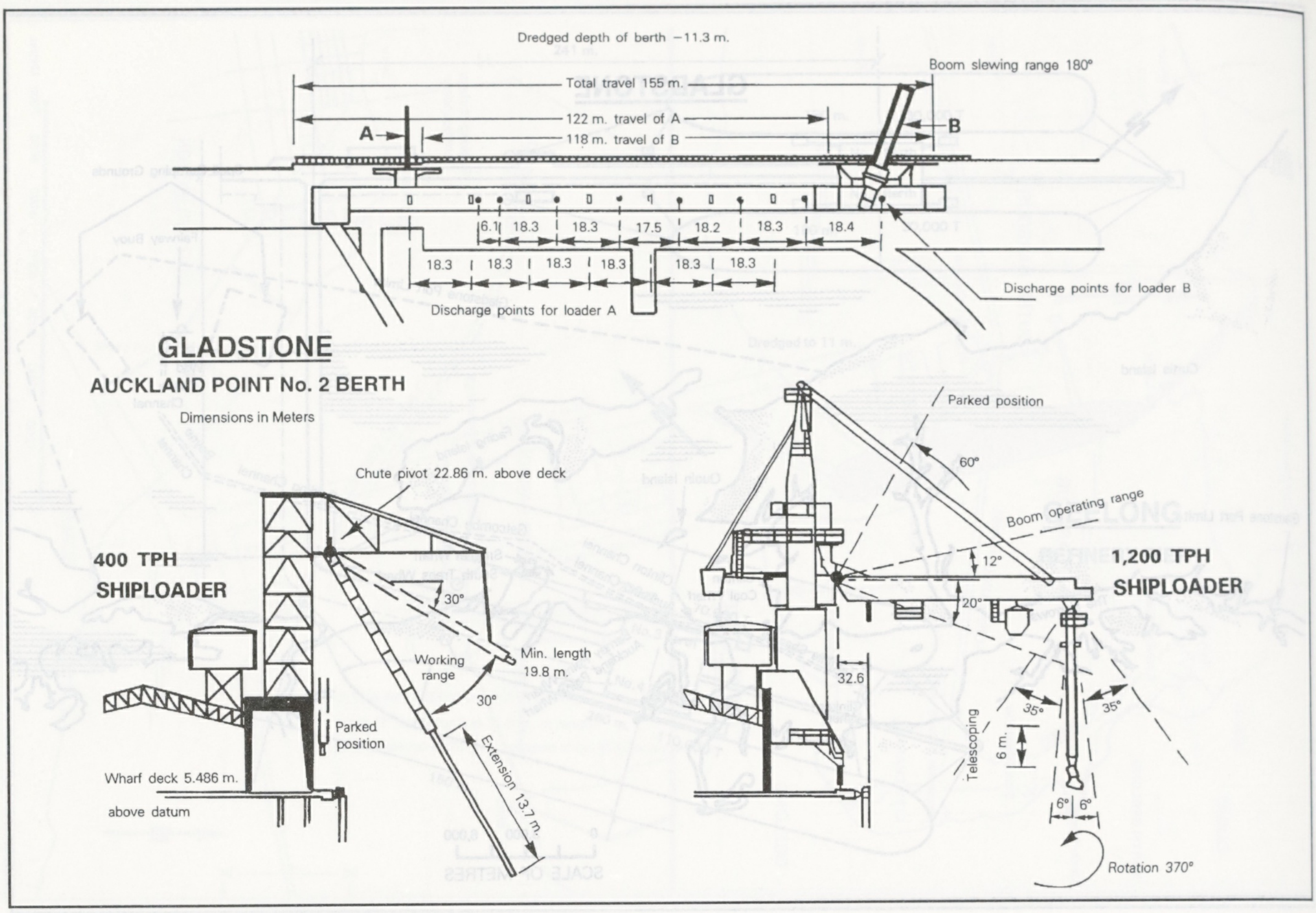

Limeburners Lagoon
CORIO
Shell Co
Refinery Pier
Lascelles Wharf
NORTH GEELONG
CORIO CHANNEL
Corio Quay
Pt. Lillias
N
Pt. Wilson
INNER HARBOUR
OUTER HARBOUR
Bulk Wheat Pier
HOPETOUN CHANNEL
X
Pt. Henry
Pt. Henry Channel
WILSON SPIT CHANNEL
Rippleside Slipway Jetty
Alcoa
Pt. Henry Pier
CITY CHANNEL
X
Cunningham Pier
Limeburners Pt.
GEELONG
GEELONG
Explosives Jetty
OUTER HARBOUR
Pt . Wilson
Explosives Anchorage
Explosives Jetty Channel
Geelong Harbour
Trust Boundary
Pt. RICHARDS CHANNEL
Pt . Richards
Jetty
X
X
N
PORTARLINGTON
SCALE
0
1000
2000
3000
4000
5000
6000
7000
Metres

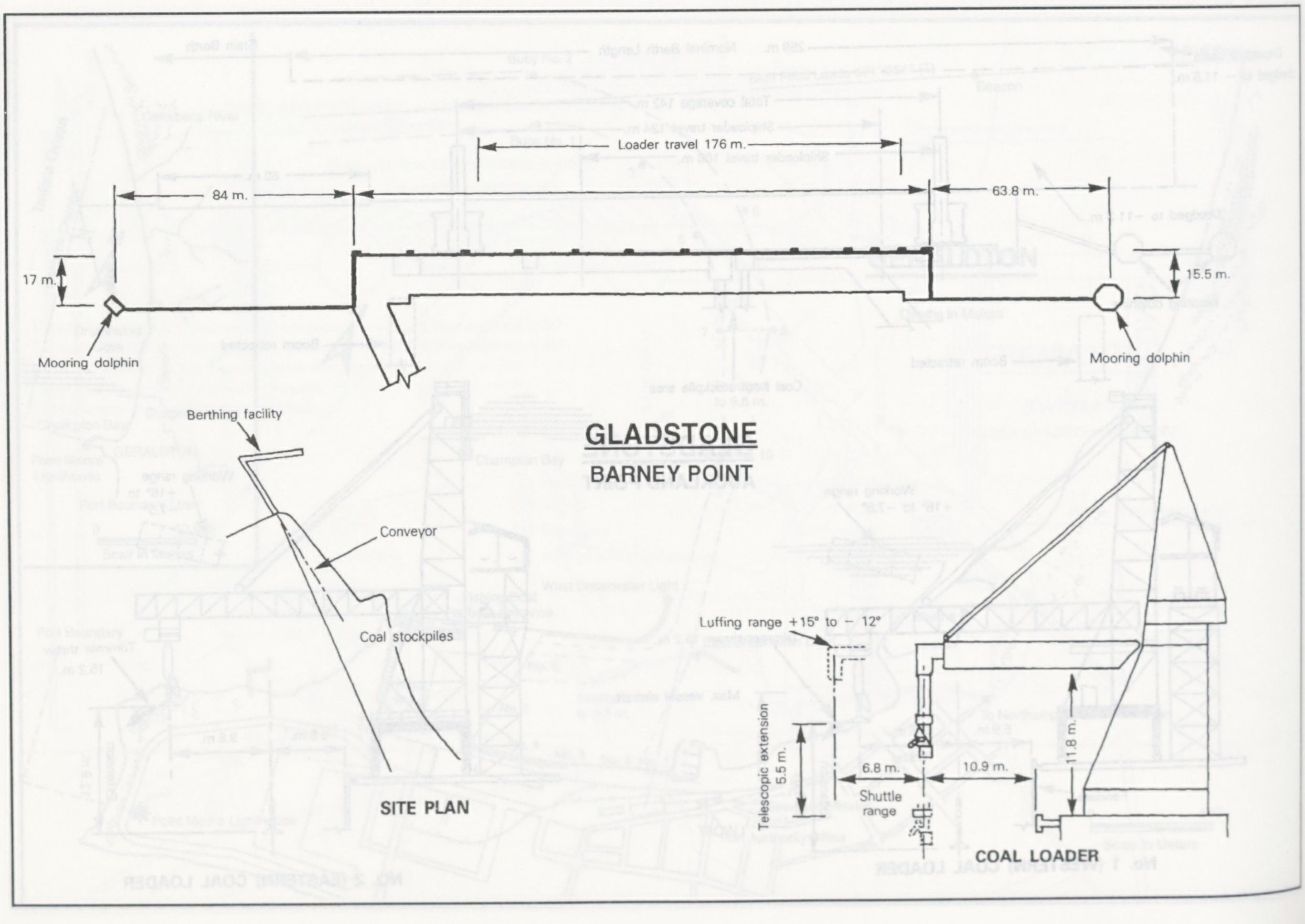

241 m.
180 m.
30,000 T
No.1 Berth
No.2 Berth
180 m.
30,000 T
156 m.
Dredged to 11 m.
N
GEELONG
REFINERY PIER
230 m.
70,000 T
No.3 Berth
No.4 Berth
260 m.
110,000 T
150 m.

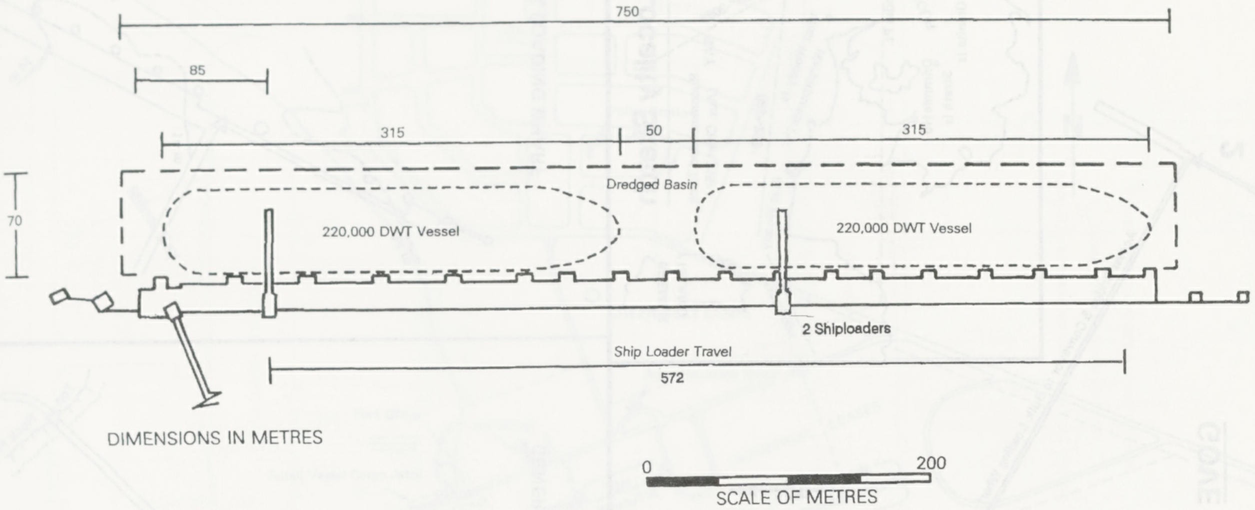

Indian Ocean
Geelwink Channel
Oakabella River
N
Drummond Cove
Champion Bay
Chapman River
Point Moore Lighthouse
GERALDTON
Port Boundary Limit
0
10,000
Scalr in Meters
Buoy No. 2
Bluff Point Leads 071°/251° (T)
Beacon
Bluff Point
Buoy No. 1
3
6
5
N
GERALDTON
Depths in Meters
7
8
Dredged to 9.6 m.
9
10
Champion Bay
Fishing Boat Harbour Entrance
West Breakwater Light
Port Boundary
East Breakwater Light
Marina
No. 6
No. 5
Dredged to 9.3 m.
Weighbridge
No. 4
No. 3
No. 2
No. 1
To Northampton and Carnarvon
Seamans Mission
Point Moore Lighthouse
Port Aurthority Office
0
500
Scale in Meters


GLADSTONE
Spoil Dumping Grounds
Fairway Buoy
Gladstone Port Limits
Wild Cattle Channel
Curtis Island
Facing Island
Boyne Channel
Golding Channel
Quoin Island
Gatcombe Channel
Gladstone Port Limit
Smelter Wharf
South Trees Wharf
Clinton Coal Wharf
Clinton Channel
Auckland Channel
The Narrows
Barney Point Wharf
Auckland Point Wharf
Targinie Channel
Clinker Wharf
0
3,000
6,000
SCALE OF METRES


Departure basin dredged to − 11.5 m.
259 m.
Nominal Berth Length
Grain Berth
Total coverage 142 m.
Shiploader travel 124 m.
Shiploader travel 106 m.
62 m.
Dredged to −11.3 m.
Mooring dolphins
Boom retracted
Coal from stockpile area
Boom retracted
GLADSTONE
AUCKLAND POINT
Working range +15° to −7.5°
Trimmer throw 15.2 m.
Max. vessel airdraft
5.9 m.
9.3 m.
Travel
15.86 m.
Extension
12.9 m.
Fenders
LWOST
No. 1 (WESTERN) COAL LOADER
Working range +15° to −7.5°
Trimmer throw 15.2 m.
5.8 m.
9.8 m.
Extension
12.9 m.
NO. 2 (EASTERN) COAL LOADER

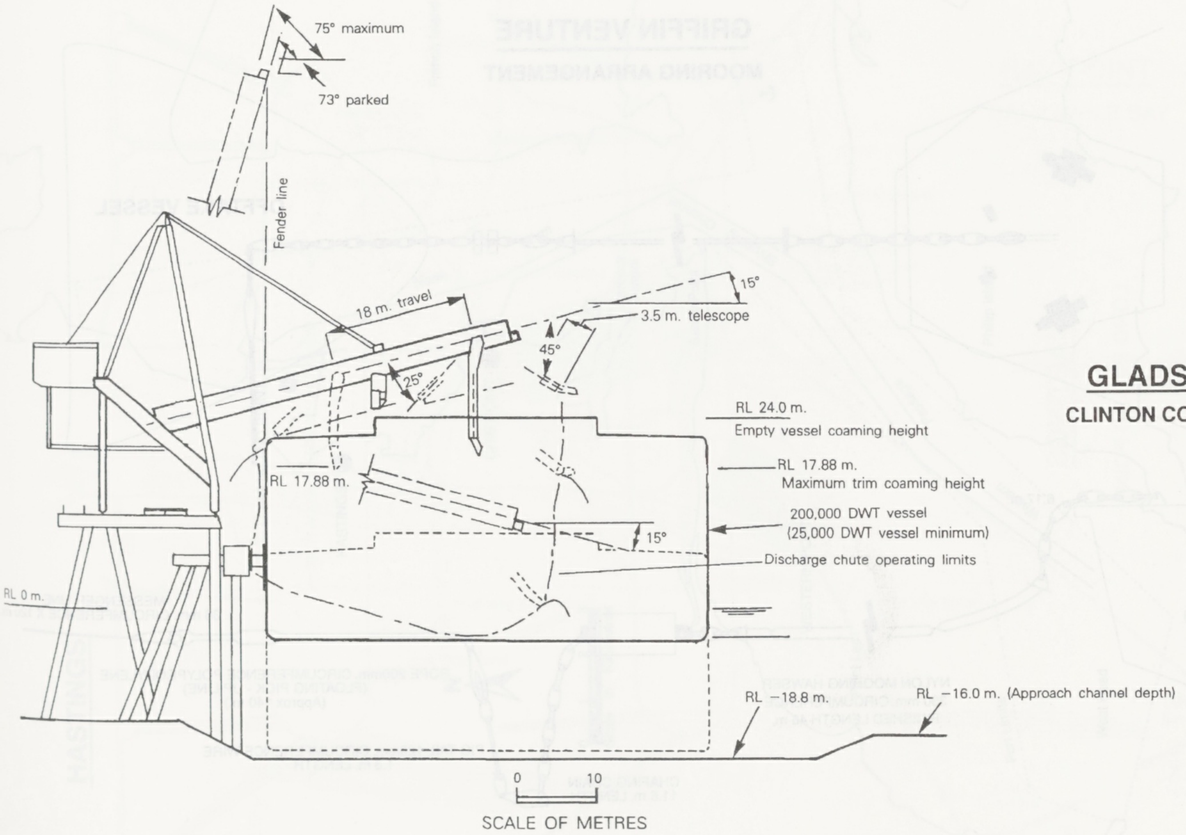

Dredged depth of berth −11.3 m.
Boom slewing range 180°
Total travel 155 m.
122 m. travel of A
118 m. travel of B
A
B
6.1
18.3
18.3
17.5
18.2
18.3
18.4
18.3
18.3
18.3
18.3
18.3
18.3
Discharge points for loader A
Discharge points for loader B
GLADSTONE
AUCKLAND POINT No. 2 BERTH
Dimensions in Meters
Chute pivot 22.86 m. above deck
400 TPH
SHIPLOADER
30°
Working range
Min. length 19.8 m.
30°
Parked position
Extension 13.7 m.
Wharf deck 5.486 m. above datum
Parked position
60°
Boom operating range
12°
20°
1,200 TPH
SHIPLOADER
32.6
35°
35°
Telescoping
6 m.
6°
6°
Rotation 370°


Loader travel 176 m.
84 m.
63.8 m.
17 m.
15.5 m.
Mooring dolphin
Mooring dolphin
Berthing facility
Conveyor
Coal stockpiles
SITE PLAN
GLADSTONE
BARNEY POINT
Luffing range +15° to − 12°
Telescopic extension 5.5 m.
6.8 m.
Shuttle range
10.9 m.
11.8 m.
COAL LOADER


750
85
315
50
315
70
Dredged Basin
220,000 DWT Vessel
220,000 DWT Vessel
2 Shiploaders
Ship Loader Travel
572
DIMENSIONS IN METRES
0
200
SCALE OF METRES

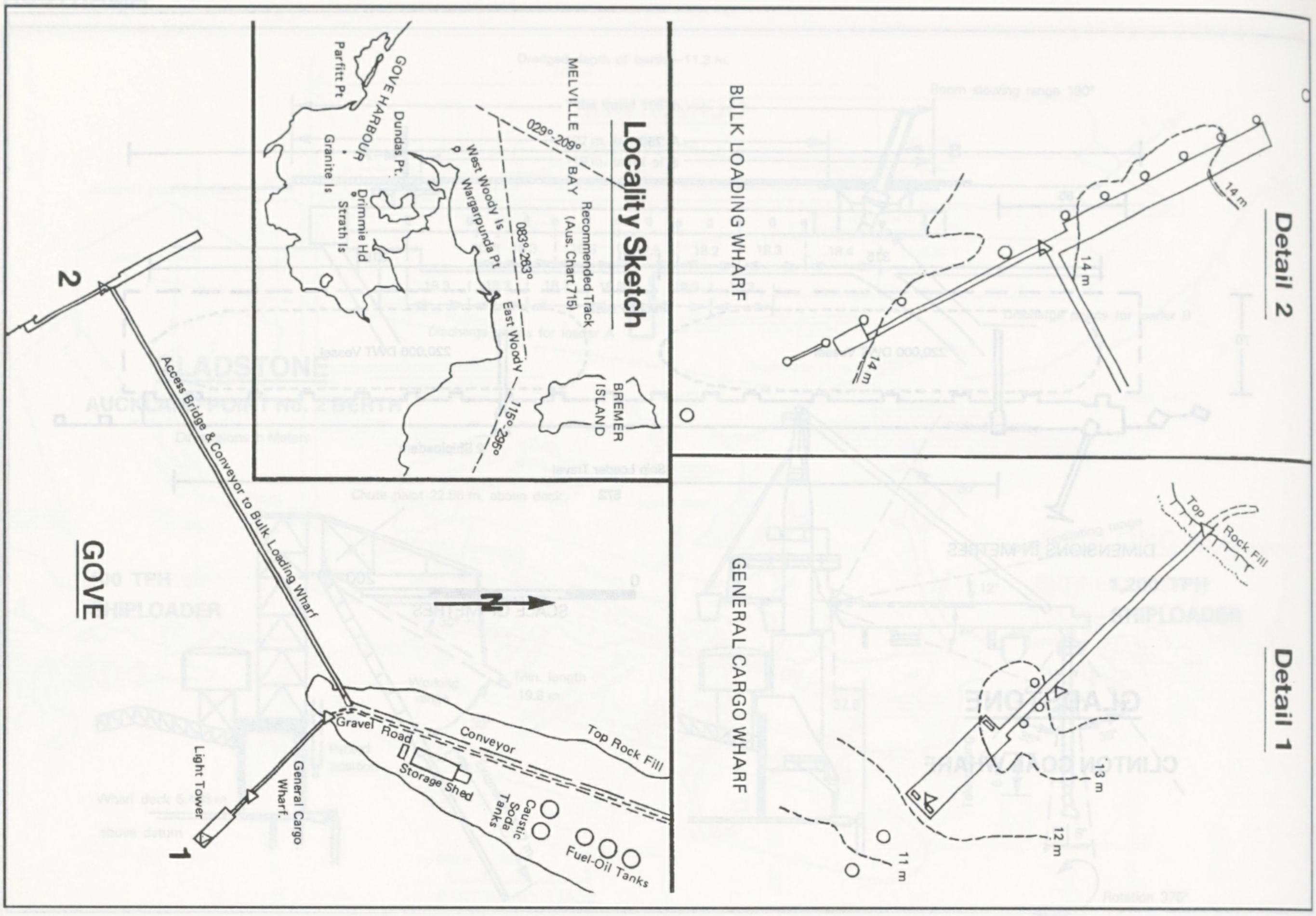
GLADSTONE

CLINTON COAL WHARF


75° maximum
73° parked
Fender line
18 m. travel
15°
3.5 m. telescope
45°
25°
RL 24.0 m.
Empty vessel coaming height
RL 17.88 m.
RL 17.88 m.
Maximum trim coaming height
200,000 DWT vessel
(25,000 DWT vessel minimum)
15°
Discharge chute operating limits
RL 0 m.
RL −18.8 m.
RL −16.0 m. (Approach channel depth)
0
10
SCALE OF METRES

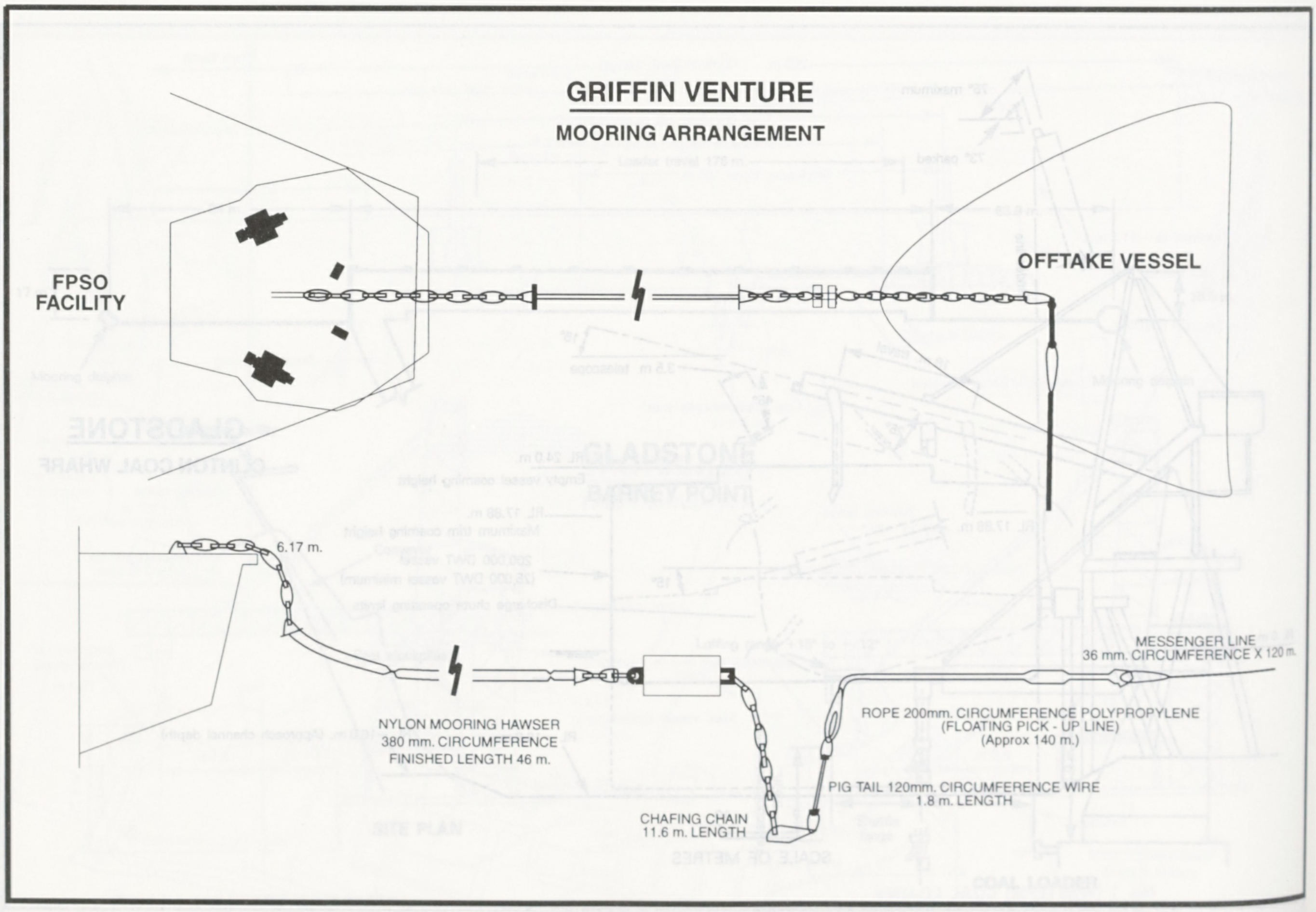
GLADSTONE

CLINTON COAL WHARF



GOVE

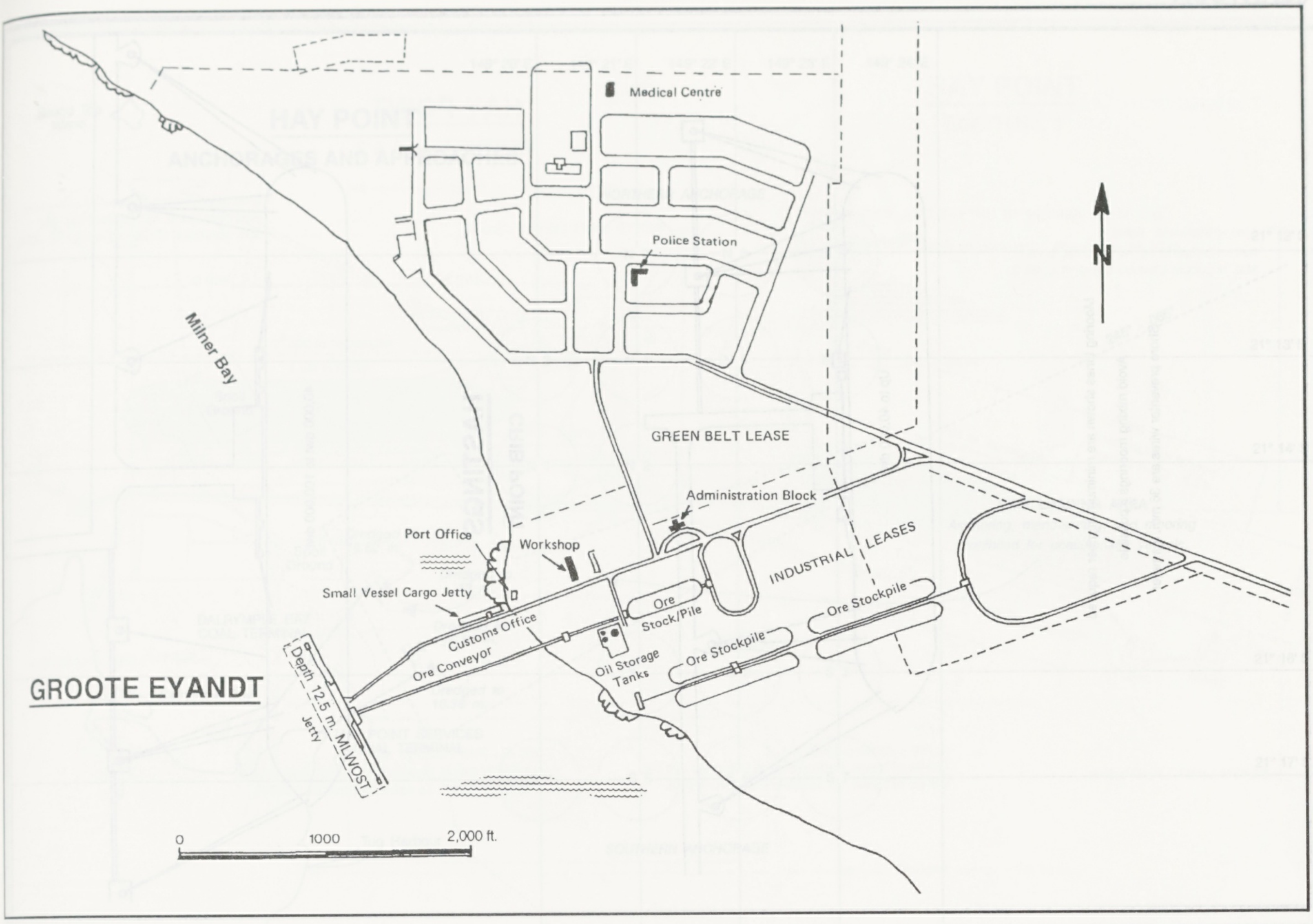
Locality Sketch
MELVILLE BAY
Recommended Track (Aus. Chart 715)
029°-209°
083°-263°
115°-295°
GOVE HARBOUR
Parfitt Pt
Dundas Pt.
Granite Is
Drimmie Hd
Strath Is
West Woody Is.
Wargarpunda Pt
East Woody
BREMER ISLAND
N
2
Access Bridge & Conveyor to Bulk Loading Wharf
Gravel Road
Conveyor
Top Rock Fill
Storage Shed
Caustic Soda Tanks
Fuel-Oil Tanks
Light Tower
General Cargo Wharf.
1
BULK LOADING WHARF
Detail 2
14 m
14 m
14 m
GENERAL CARGO WHARF
Detail 1
Top Rock Fill
13 m
12 m
11 m



GRIFFIN VENTURE

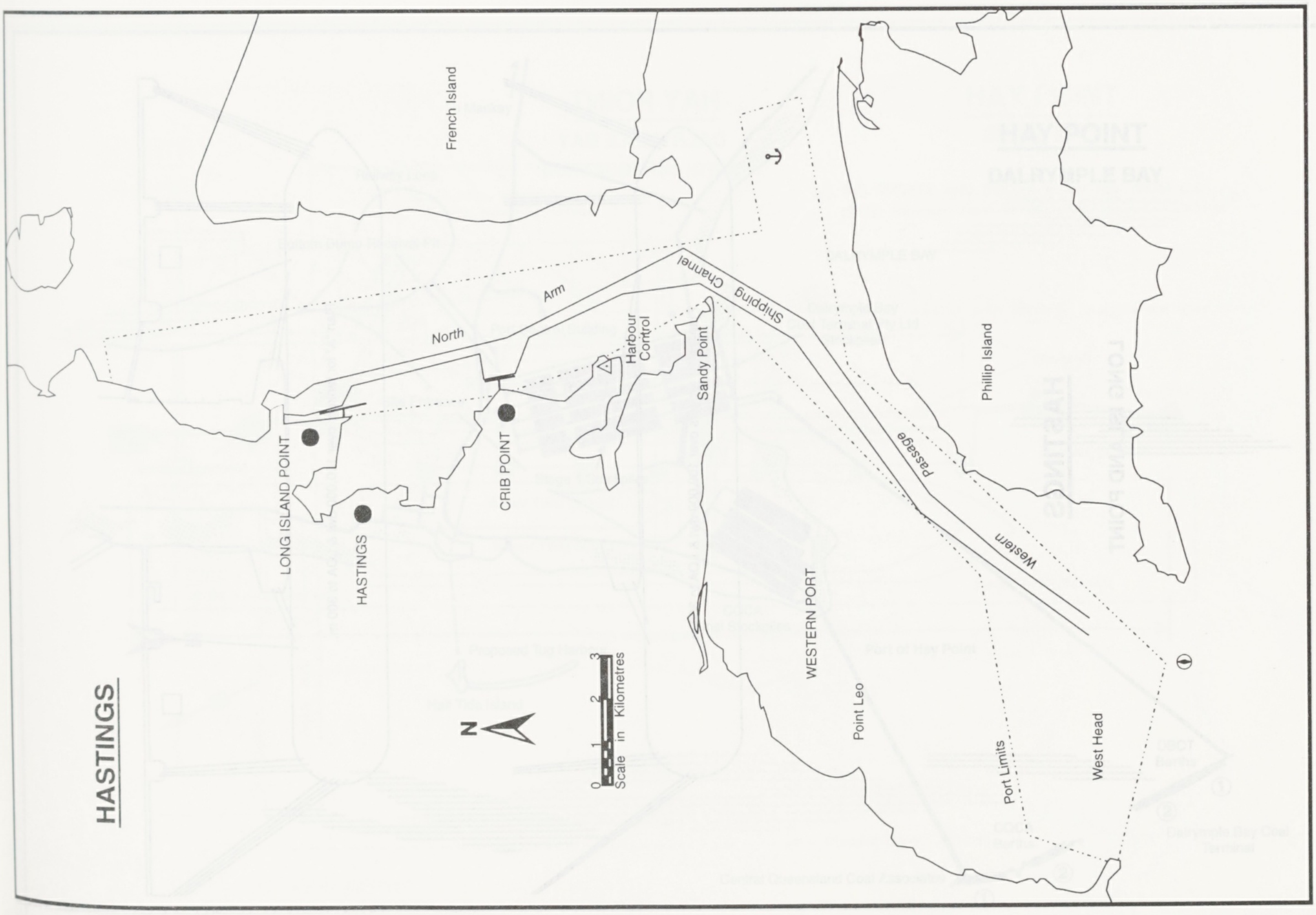
MOORING ARRANGEMENT

FPSO FACILITY
OFFTAKE VESSEL
6.17 m.
NYLON MOORING HAWSER 380 mm. CIRCUMFERENCE FINISHED LENGTH 46 m.
CHAFING CHAIN 11.6 m. LENGTH
PIG TAIL 120mm. CIRCUMFERENCE WIRE 1.8 m. LENGTH
ROPE 200mm. CIRCUMFERENCE POLYPROPYLENE (FLOATING PICK - UP LINE) (Approx 140 m.)
MESSENGER LINE 36 mm. CIRCUMFERENCE X 120 m.



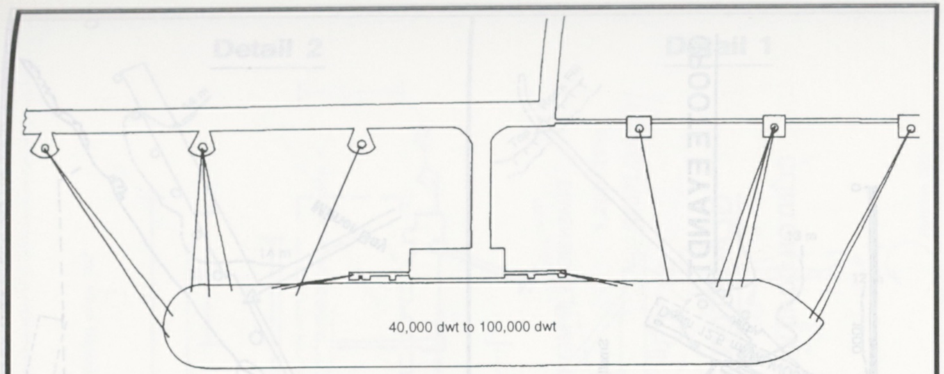
GROOTE EYANDT

Medical Centre
Police Station
N
Milner Bay
GREEN BELT LEASE
Administration Block
Port Office
Workshop
INDUSTRIAL LEASES
Small Vessel Cargo Jetty
Ore Stock/Pile
Ore Stockpile
Customs Office
Ore Conveyor
Oil Storage Tanks
Ore Stockpile
Depth 12.5 m. MLWOST
Jetty
0
1000
2,000 ft.



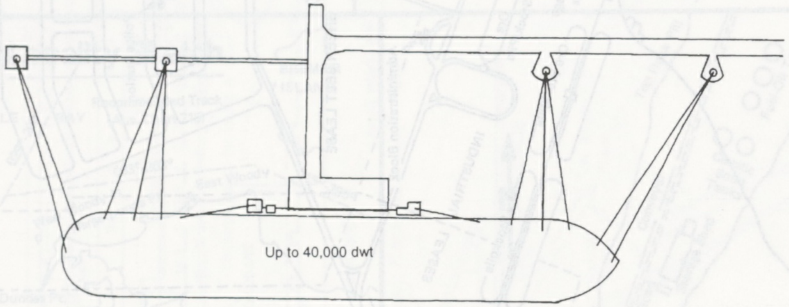
HASTINGS

French Island
North Arm
Shipping Channel
Harbour Control
Sandy Point
Phillip Island
LONG ISLAND POINT
HASTINGS
CRIB POINT
Western Passage
WESTERN PORT
Point Leo
Port Limits
West Head
N
0 1 2 3
Scale in Kilometres


40,000 dwt to 100,000 dwt

HASTINGS

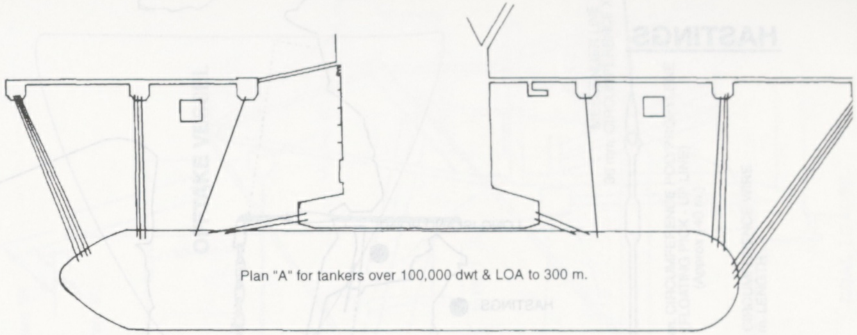
CRIB POINT

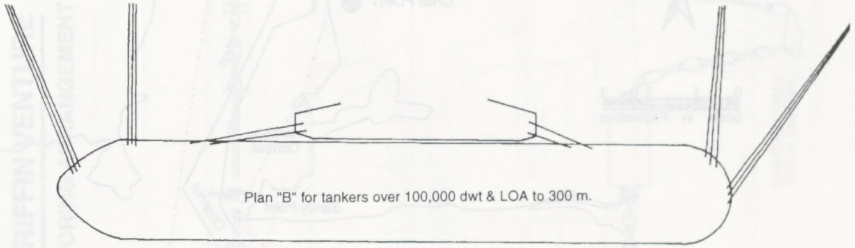

Up to 40,000 dwt

Mooring Lines shown are minimum number required

Avoid mixing moorings if possible

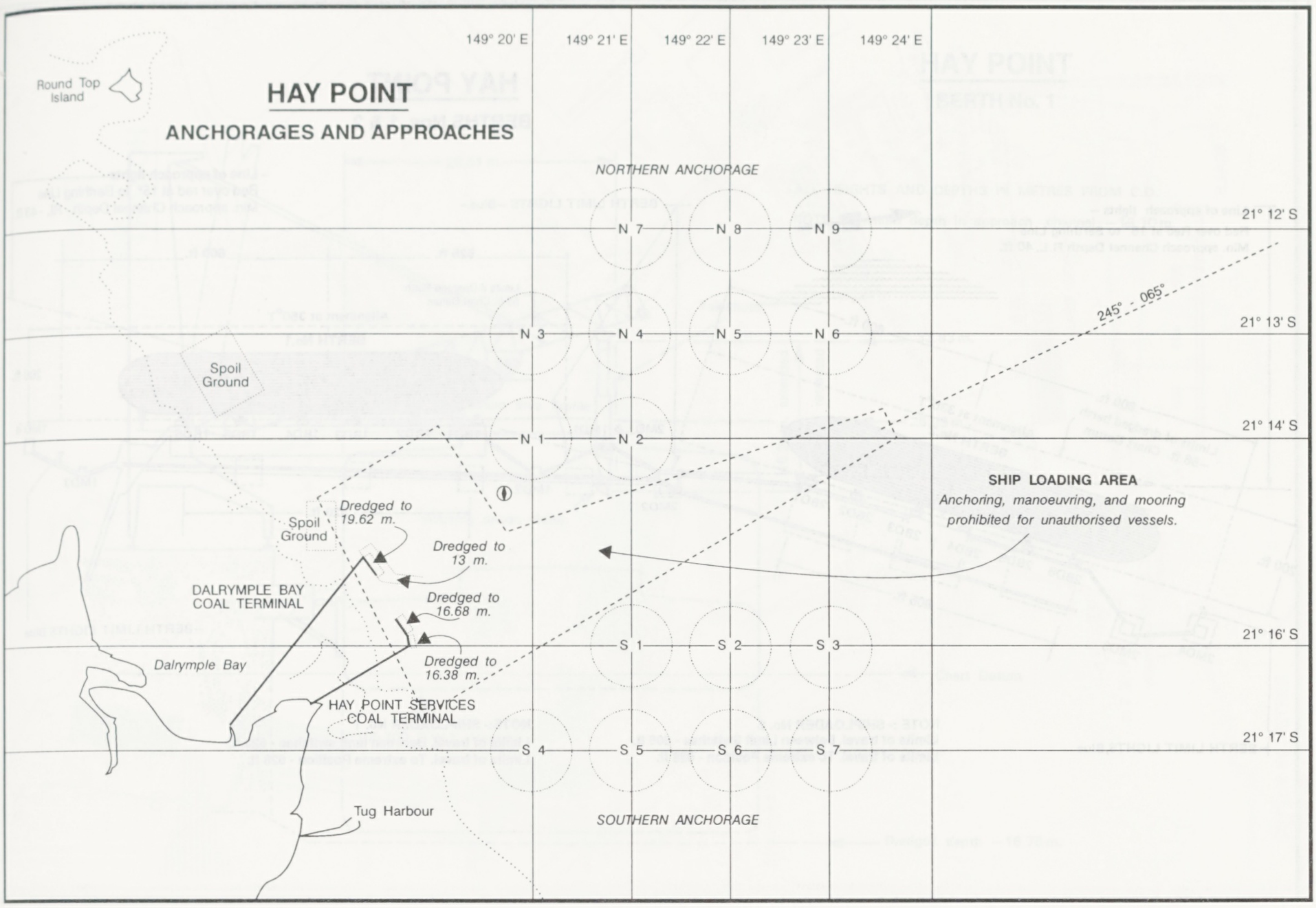
Shore preventer wires are 36 mm. diameter


Plan "A" for tankers over 100,000 dwt & LOA to 300 m.


Plan "B" for tankers over 100,000 dwt & LOA to 300 m.

HASTINGS

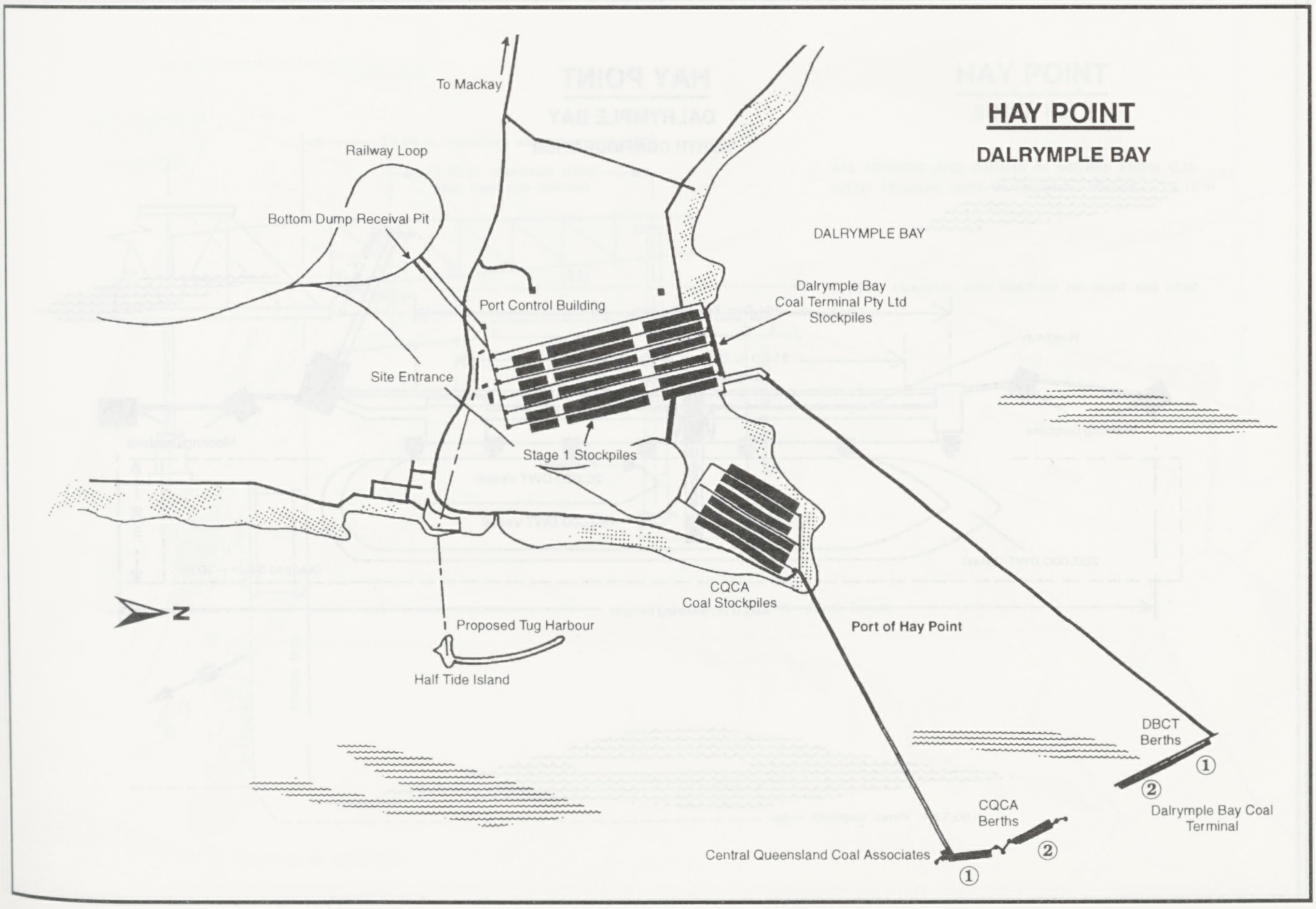
LONG ISLAND POINT



HAY POINT

ANCHORAGES AND APPROACHES

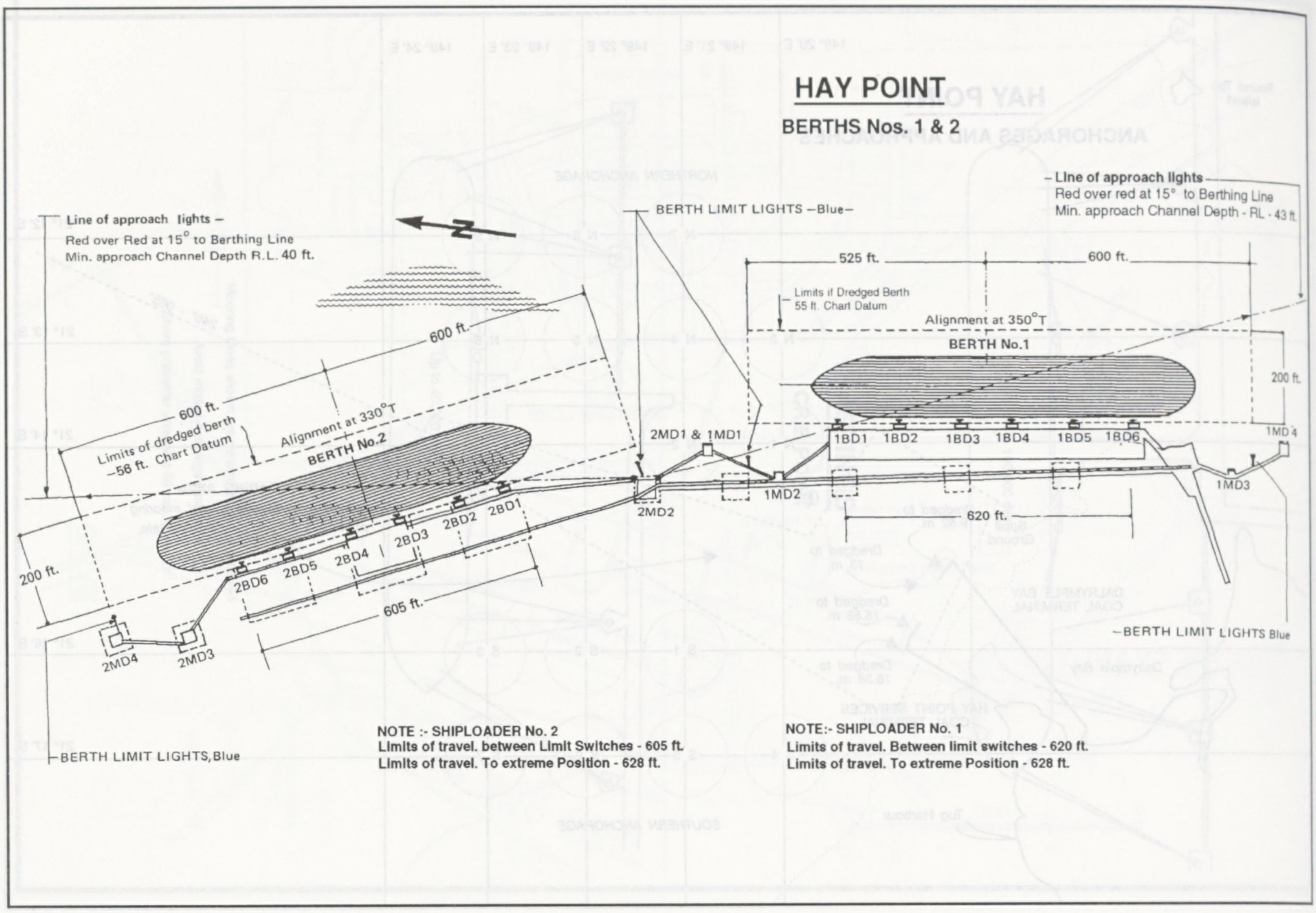
149° 20' E
149° 21' E
149° 22' E
149° 23' E
149° 24' E
21° 12' S
21° 13' S
21° 14' S
21° 16' S
21° 17' S
Round Top Island
NORTHERN ANCHORAGE
N 7
N 8
N 9
N 3
N 4
N 5
N 6
N 1
N 2
245° - 065°
Spoil Ground
Spoil Ground
Dredged to 19.62 m.
Dredged to 13 m.
Dredged to 16.68 m.
Dredged to 16.38 m.
SHIP LOADING AREA
Anchoring, manoeuvring, and mooring prohibited for unauthorised vessels.
DALRYMPLE BAY COAL TERMINAL
Dalrymple Bay
HAY POINT SERVICES COAL TERMINAL
S 1
S 2
S 3
S 4
S 5
S 6
S 7
Tug Harbour
SOUTHERN ANCHORAGE



HAY POINT

DALRYMPLE BAY

To Mackay
Railway Loop
Bottom Dump Receival Pit
Port Control Building
DALRYMPLE BAY
Dalrymple Bay Coal Terminal Pty Ltd Stockpiles
Site Entrance
Stage 1 Stockpiles
N
CQCA Coal Stockpiles
Port of Hay Point
Proposed Tug Harbour
Half Tide Island
DBCT Berths
①
②
Dalrymple Bay Coal Terminal
CQCA Berths
②
Central Queensland Coal Associates
①



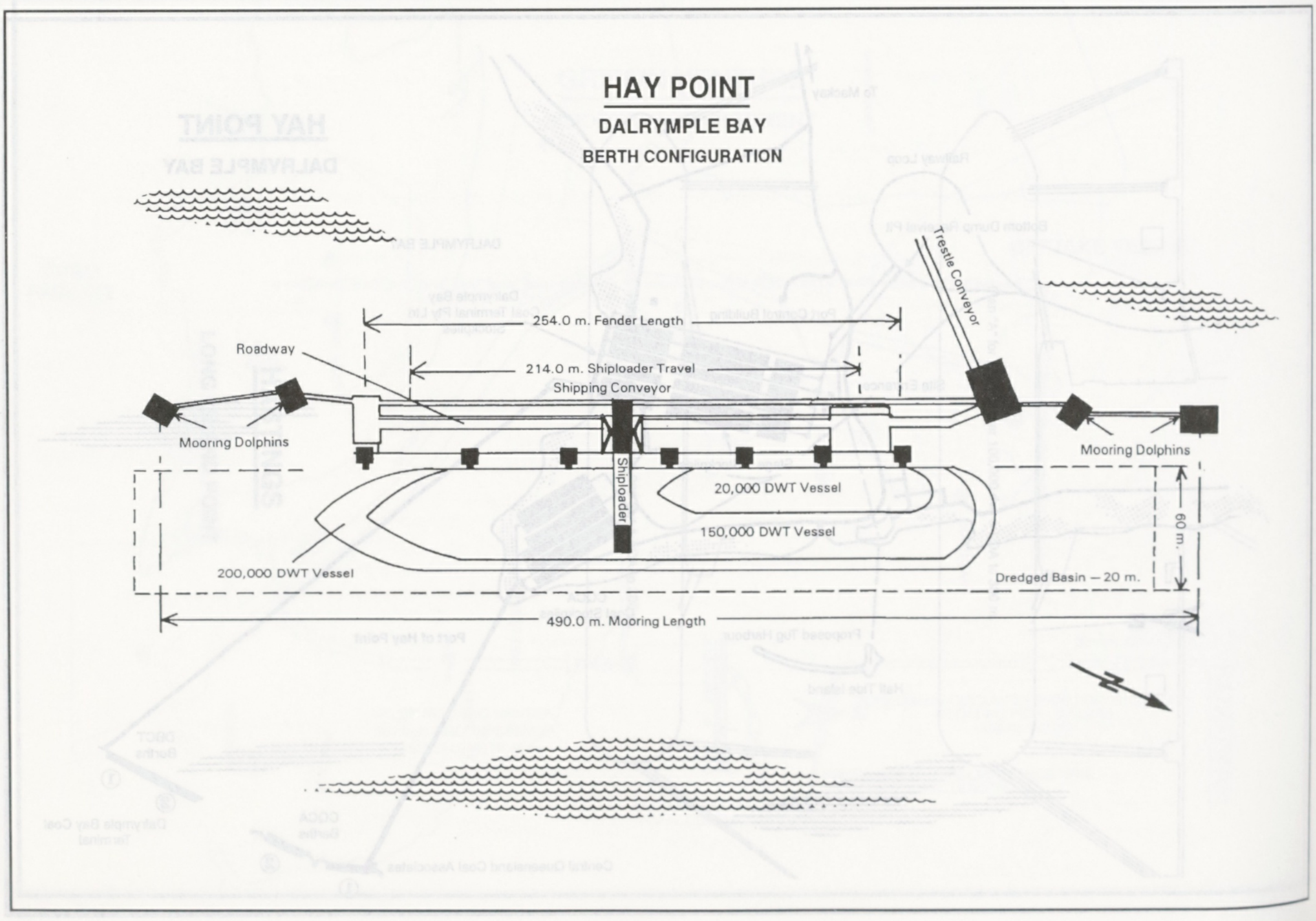
HAY POINT

BERTHS Nos. 1 & 2

Line of approach lights –
Red over Red at 15° to Berthing Line
Min. approach Channel Depth R.L. 40 ft.
BERTH LIMIT LIGHTS –Blue–
Line of approach lights
Red over red at 15° to Berthing Line
Min. approach Channel Depth - RL - 43 ft.
525 ft.
600 ft.
Limits if Dredged Berth
55 ft. Chart Datum
Alignment at 350°T
BERTH No.1
200 ft.
1BD1
1BD2
1BD3
1BD4
1BD5
1BD6
1MD4
1MD3
1MD2
2MD1 & 1MD1
2MD2
620 ft.
BERTH LIMIT LIGHTS Blue
600 ft.
600 ft.
Alignment at 330°T
BERTH No.2
Limits of dredged berth
–56 ft. Chart Datum
200 ft.
2BD1
2BD2
2BD3
2BD4
2BD5
2BD6
2MD4
2MD3
605 ft.
BERTH LIMIT LIGHTS, Blue

NOTE :- SHIPLOADER No. 2
Limits of travel. between Limit Switches - 605 ft.
Limits of travel. To extreme Position - 628 ft.

NOTE:- SHIPLOADER No. 1
Limits of travel. Between limit switches - 620 ft.
Limits of travel. To extreme Position - 628 ft.



HAY POINT

DALRYMPLE BAY

BERTH CONFIGURATION

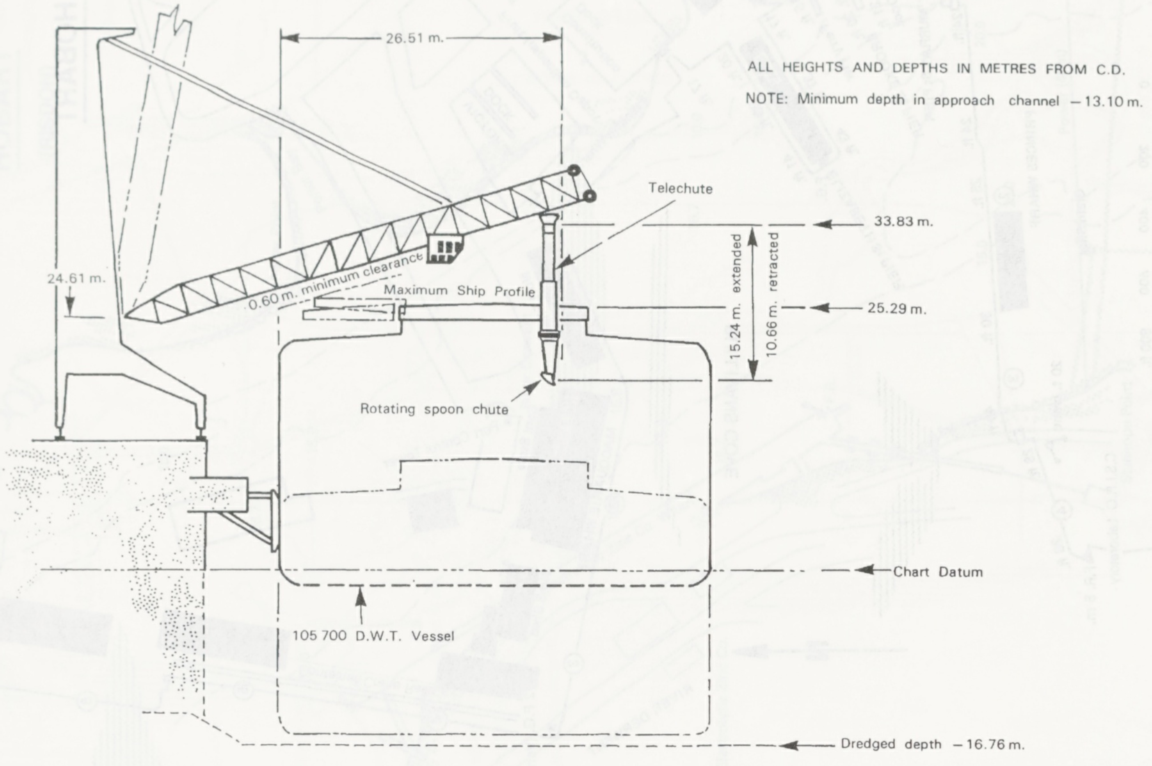
254.0 m. Fender Length
214.0 m. Shiploader Travel
Shipping Conveyor
Roadway
Trestle Conveyor
Mooring Dolphins
Mooring Dolphins
Shiploader
20,000 DWT Vessel
150,000 DWT Vessel
200,000 DWT Vessel
60 m.
Dredged Basin – 20 m.
490.0 m. Mooring Length

HAY POINT

BERTH No. 1

ALL HEIGHTS AND DEPTHS IN METRES FROM C.D.

NOTE: Minimum depth in approach channel −13.10 m.

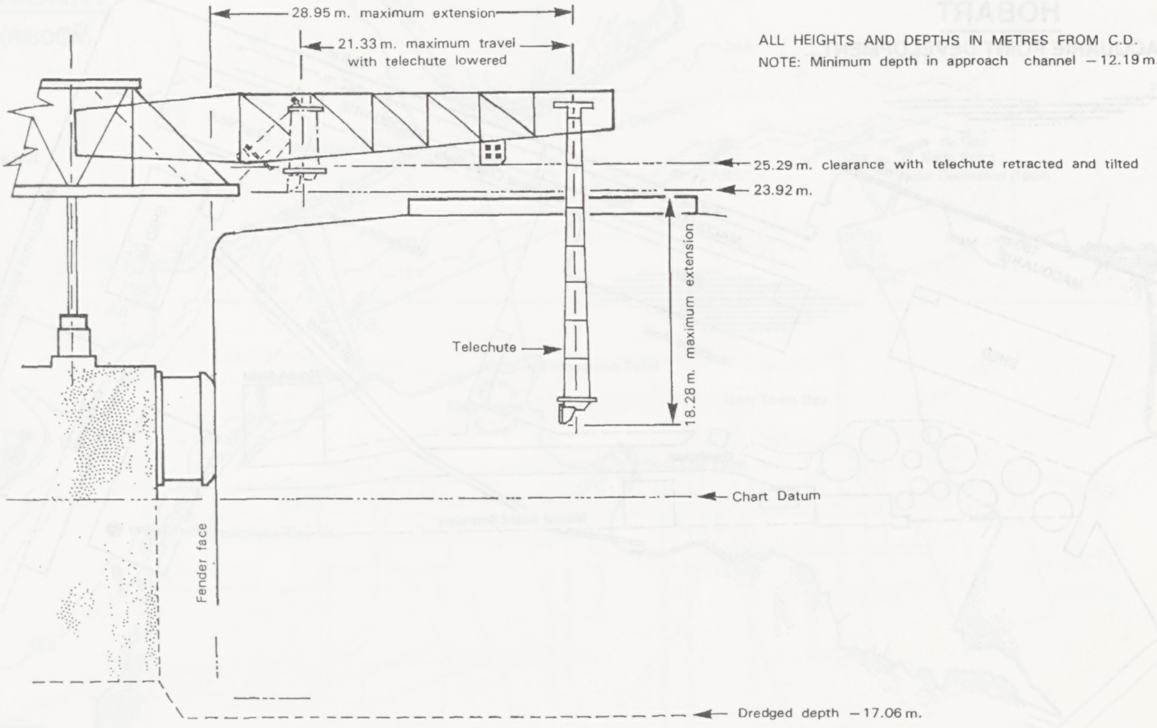

26.51 m.
Telechute
33.83 m.
24.61 m.
0.60 m. minimum clearance
Maximum Ship Profile
15.24 m. extended
10.66 m. retracted
25.29 m.
Rotating spoon chute
Chart Datum
105 700 D.W.T. Vessel
Dredged depth −16.76 m.

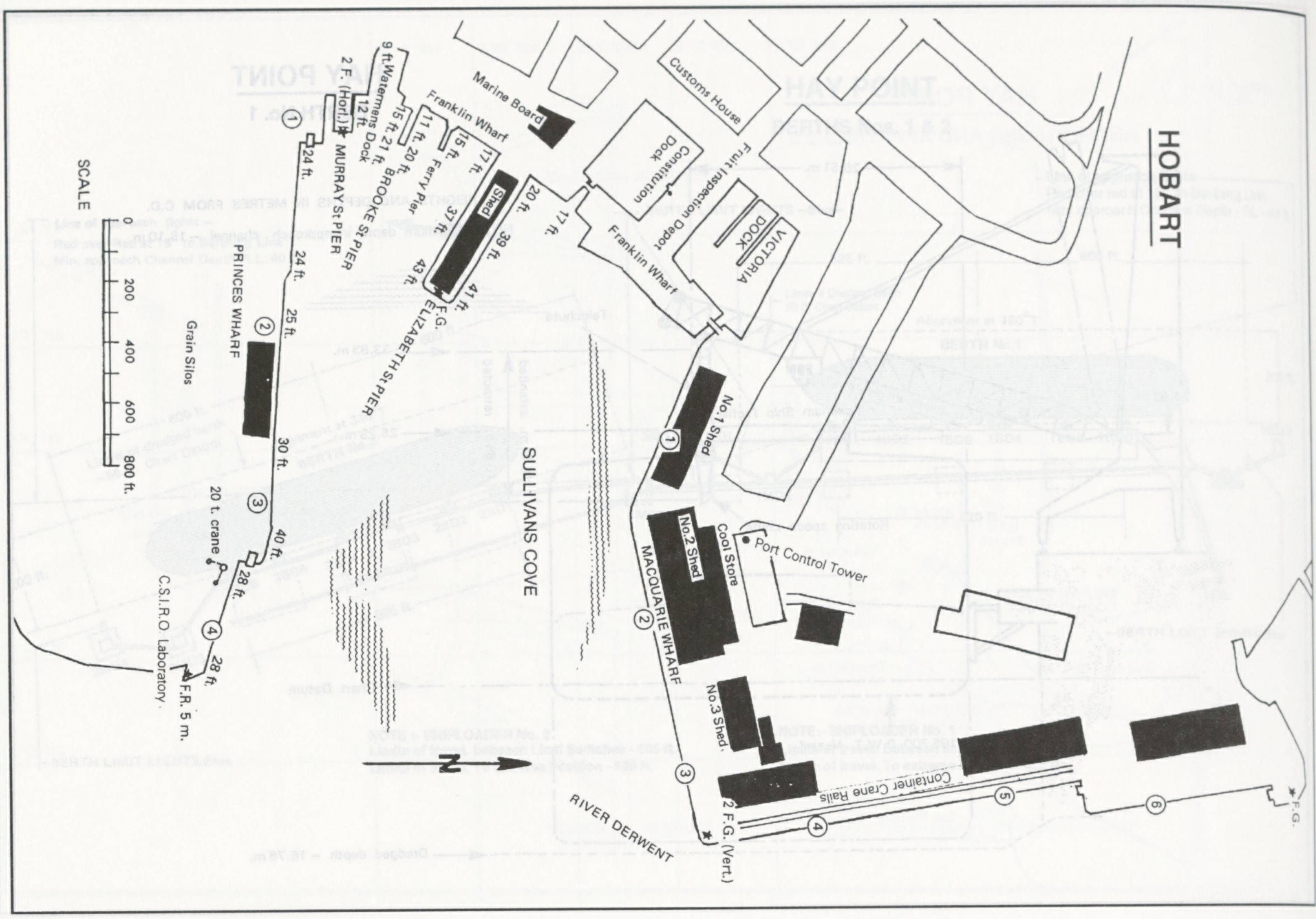
HAY POINT

BERTH No. 2

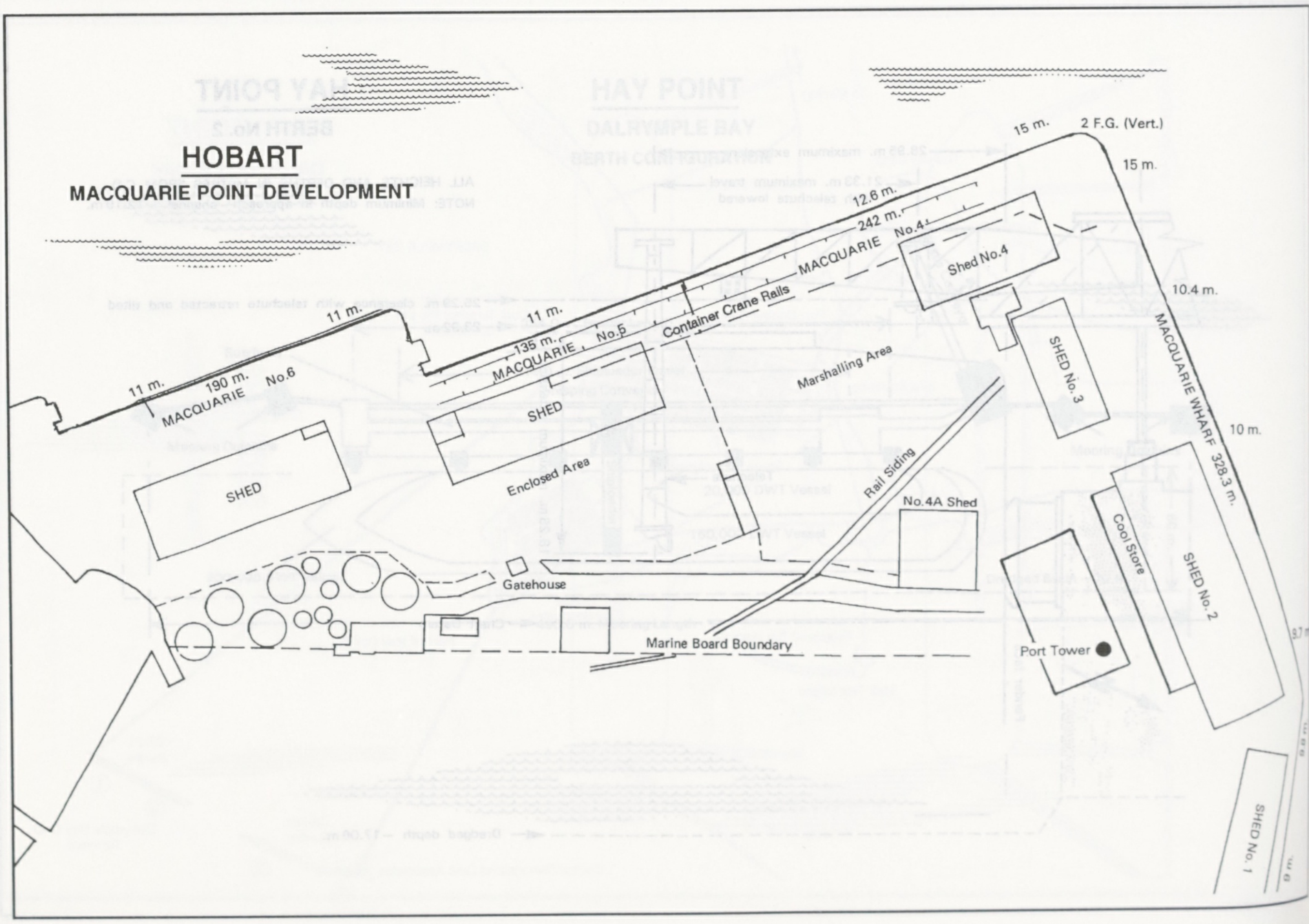
ALL HEIGHTS AND DEPTHS IN METRES FROM C.D.

NOTE: Minimum depth in approach channel −12.19 m.

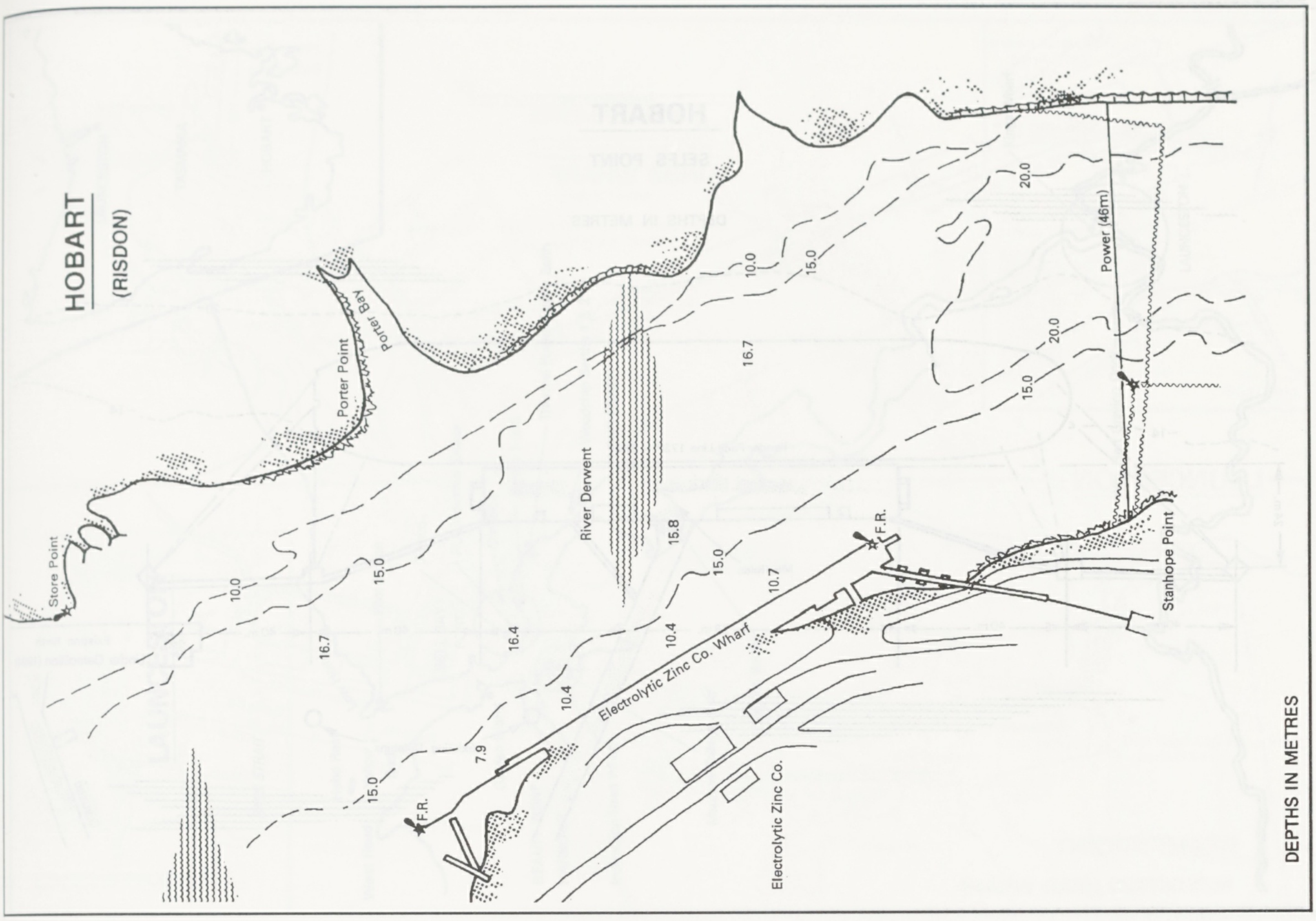

28.95 m. maximum extension
21.33 m. maximum travel with telechute lowered
25.29 m. clearance with telechute retracted and tilted
23.92 m.
18.28 m. maximum extension
Telechute
Chart Datum
Fender face
Dredged depth −17.06 m.

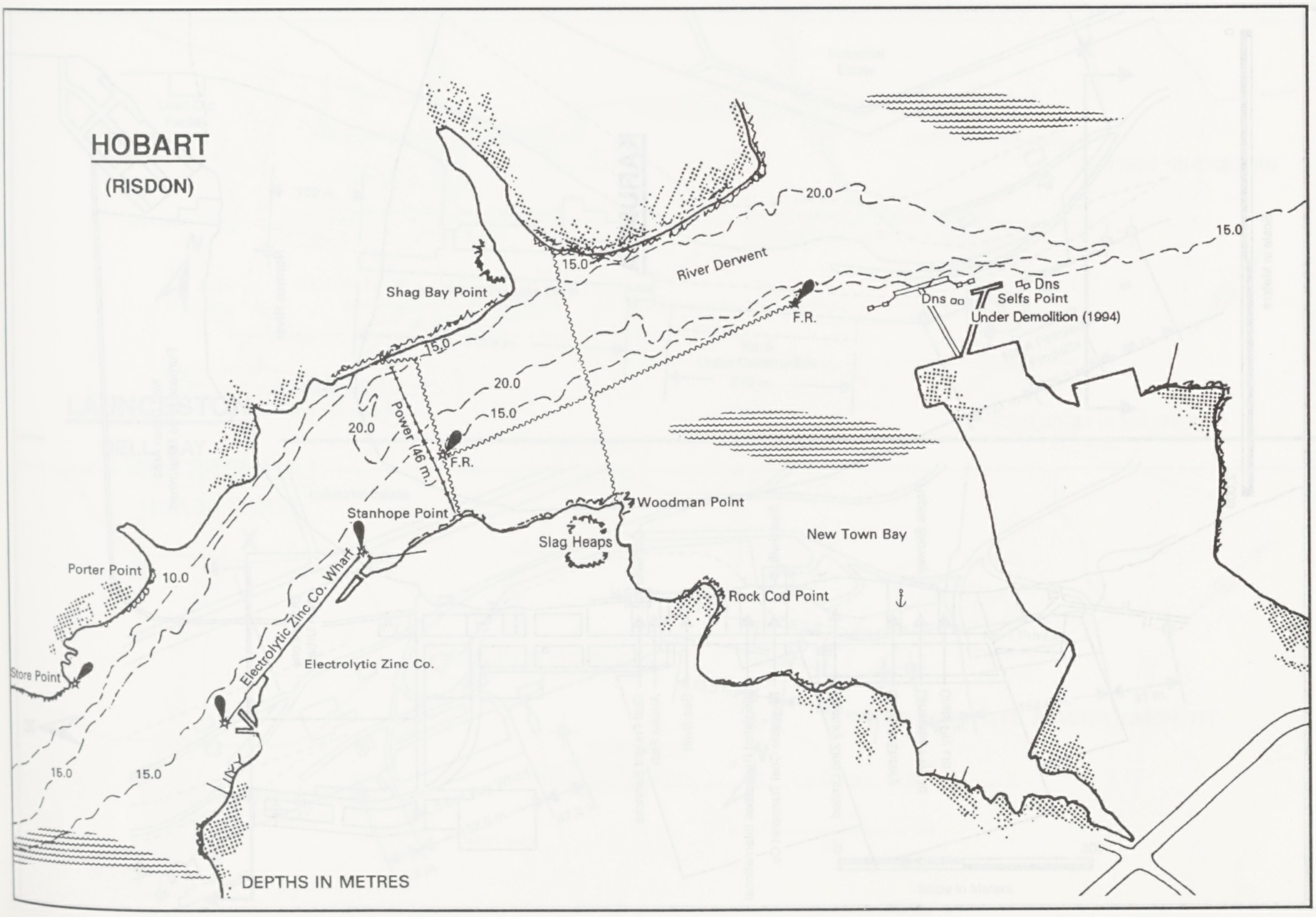


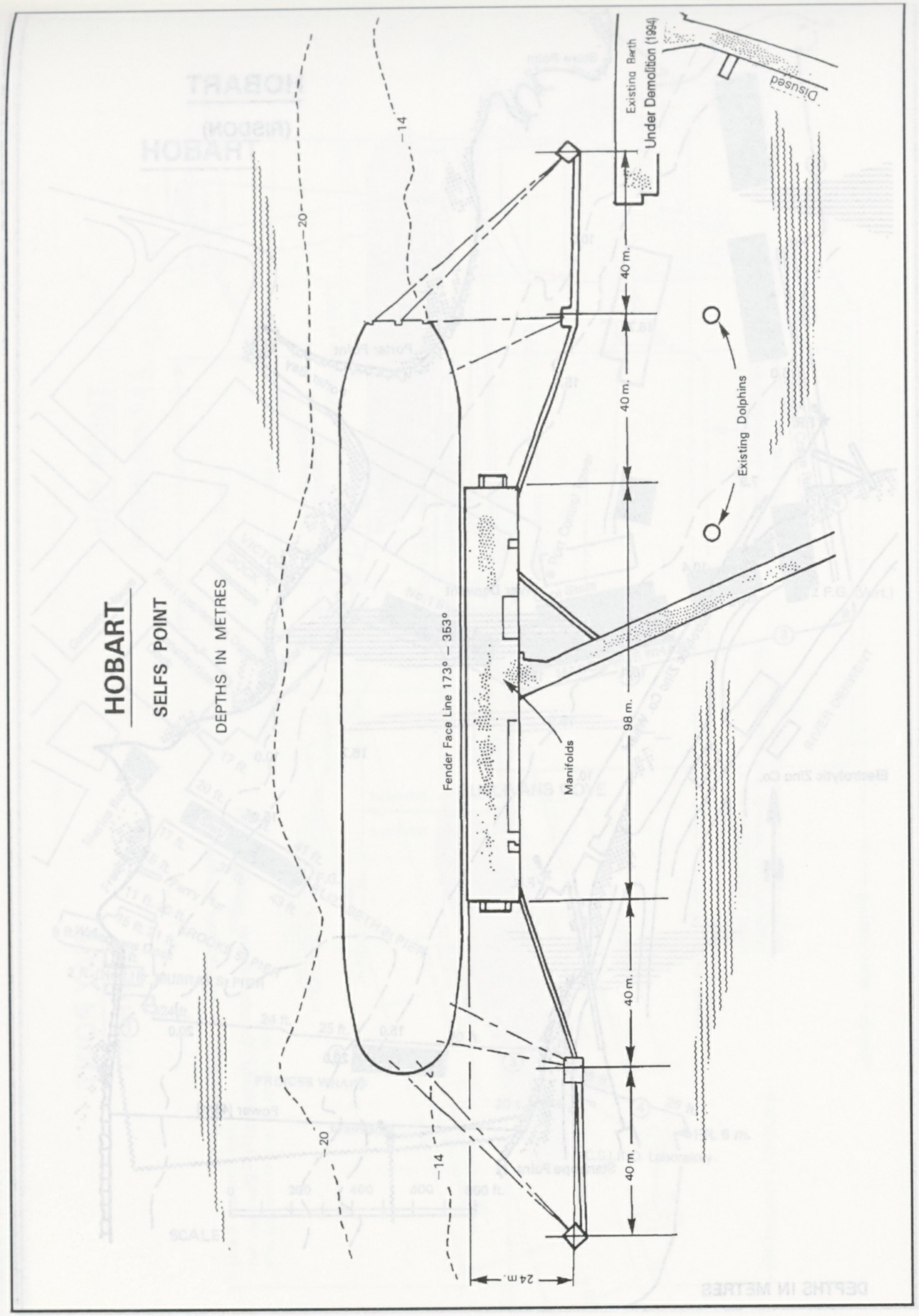
HOBART
SCALE
0
200
400
600
800 ft.
9 ft. Watermens Dock
12 ft.
2 F.(Hor.)
①
MURRAY St PIER
15 ft. 21 ft. 20 ft.
BROOKE St PIER
11 ft.
Ferry Pier
15 ft.
Franklin Wharf
17 ft.
Marine Board
Shed
37 ft.
39 ft.
43 ft.
41 ft.
F.G.
ELIZABETH St PIER
20 ft.
17 ft.
24 ft.
24 ft.
25 ft.
②
PRINCES WHARF
Grain Silos
30 ft.
③
40 ft.
20 t. crane
28 ft.
④
28 ft.
C.S.I.R.O. Laboratory
F.R. 5 m.
SULLIVANS COVE
N
RIVER DERWENT
Customs House
Constitution Dock
Fruit Inspection Depot
VICTORIA DOCK
Franklin Wharf
No.1 Shed
①
No.2 Shed
Cool Store
Port Control Tower
MACQUARIE WHARF
②
No.3 Shed
③
Container Crane Rails
2 F.G. (Vert.)
④
⑤
⑥
F.G.

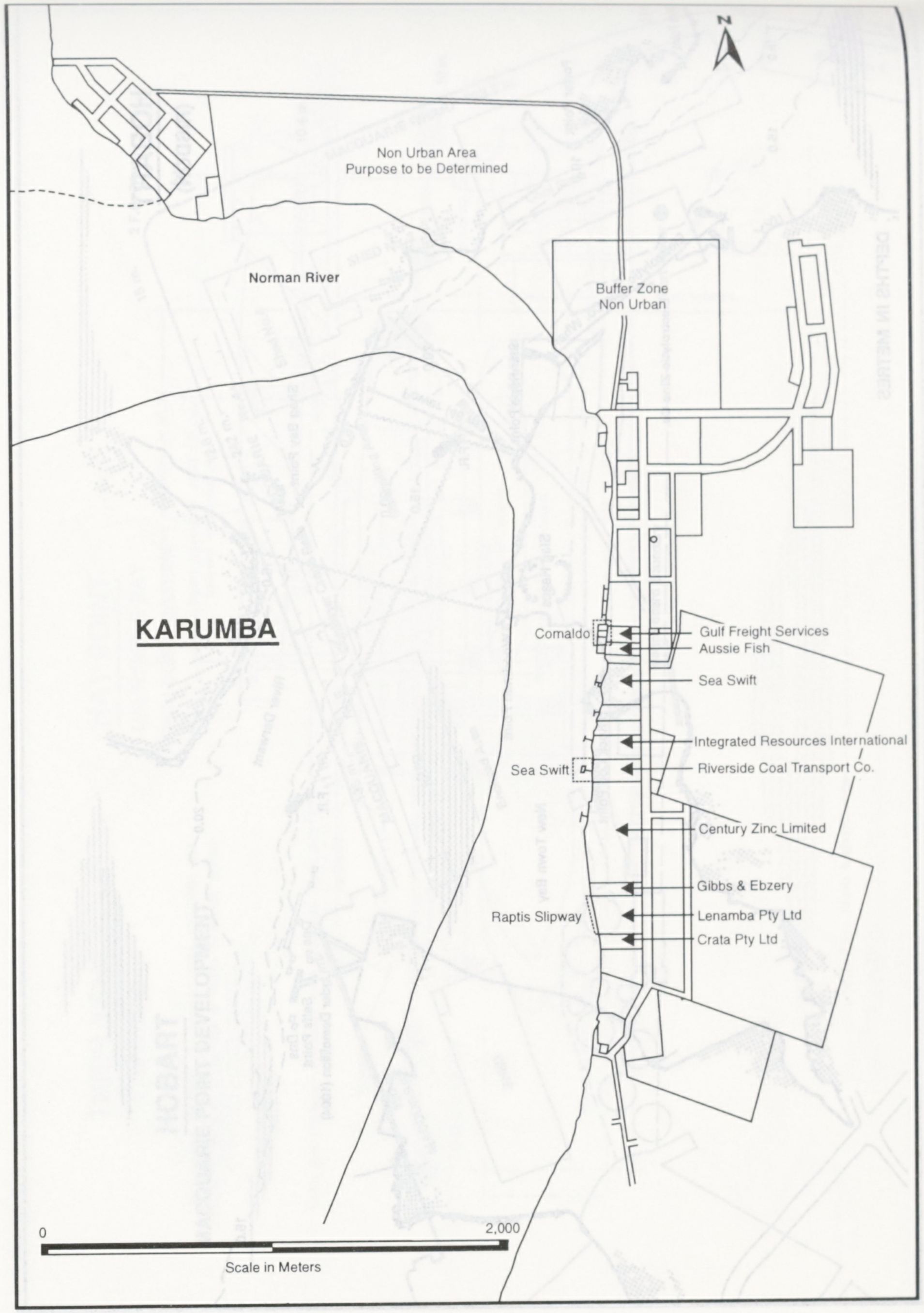


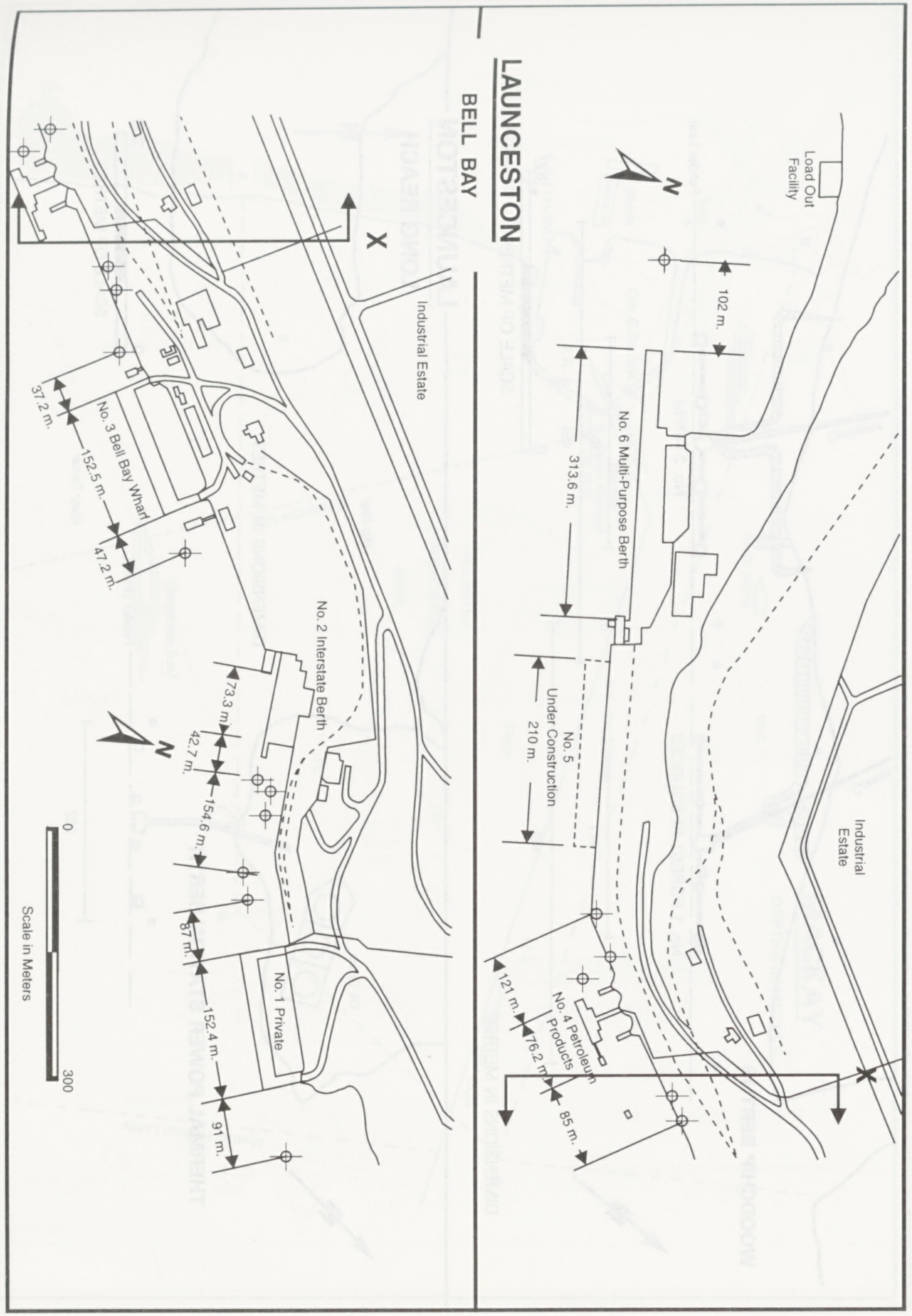
HOBART
MACQUARIE POINT DEVELOPMENT
15 m.
2 F.G. (Vert.)
15 m.
12.6 m.
242 m.
MACQUARIE No.4
Shed No.4
Container Crane Rails
11 m.
11 m.
135 m.
MACQUARIE No.5
SHED
11 m.
11 m.
190 m.
MACQUARIE No.6
SHED
Enclosed Area
Marshalling Area
SHED No.3
10.4 m.
MACQUARIE WHARF 328.3 m.
10 m.
Cool Store
SHED No. 2
Rail Siding
No.4A Shed
Gatehouse
Marine Board Boundary
Port Tower
SHED No. 1

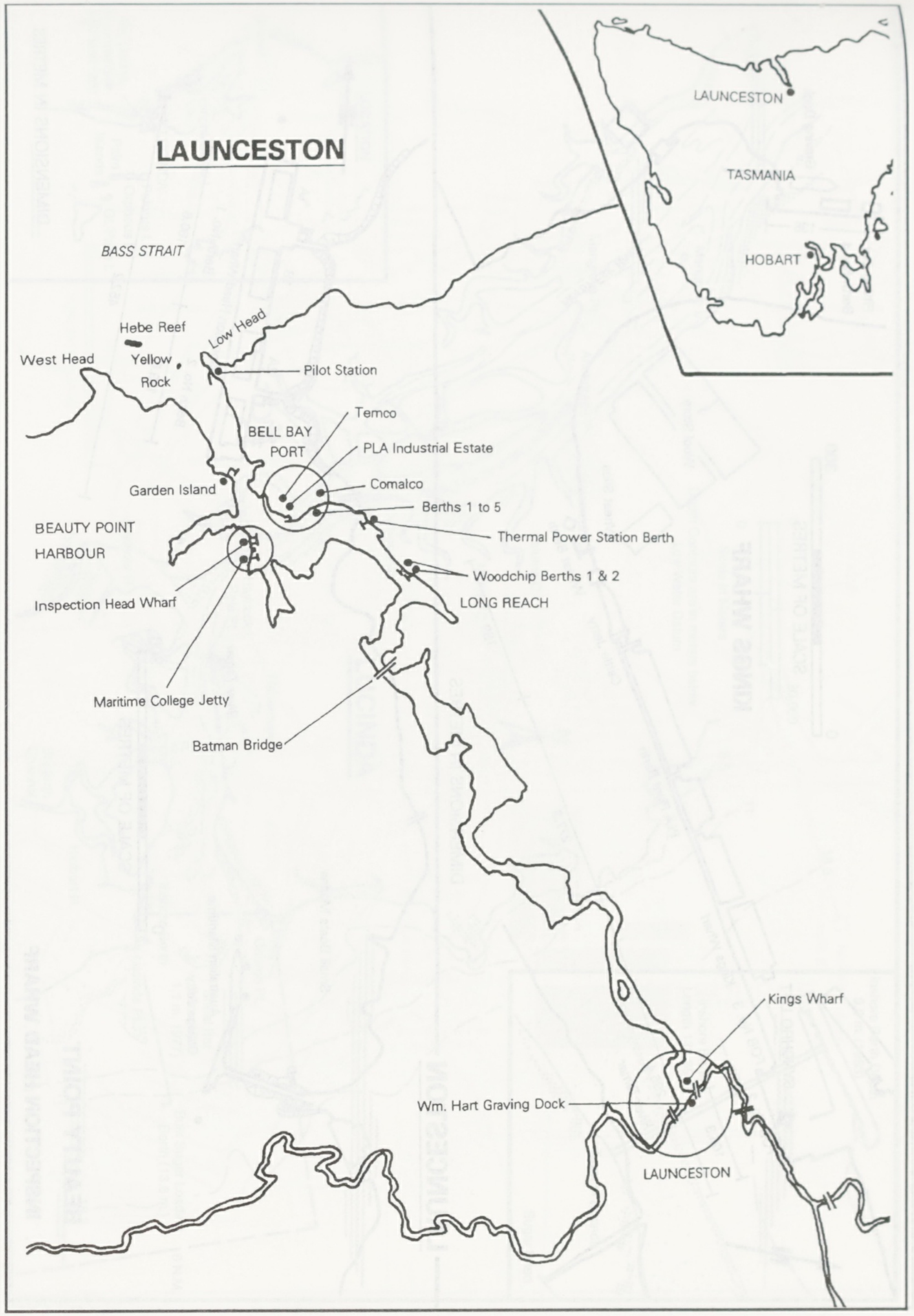

HOBART
(RISDON)
Store Point
Porter Point
Porter Bay
River Derwent
Electrolytic Zinc Co. Wharf
Electrolytic Zinc Co.
F.R.
F.R.
Stanhope Point
Power (46m)
10.0
15.0
16.7
15.0
16.4
10.4
7.9
15.0
15.8
15.0
10.4
10.7
10.0
15.0
16.7
20.0
20.0
15.0
DEPTHS IN METRES

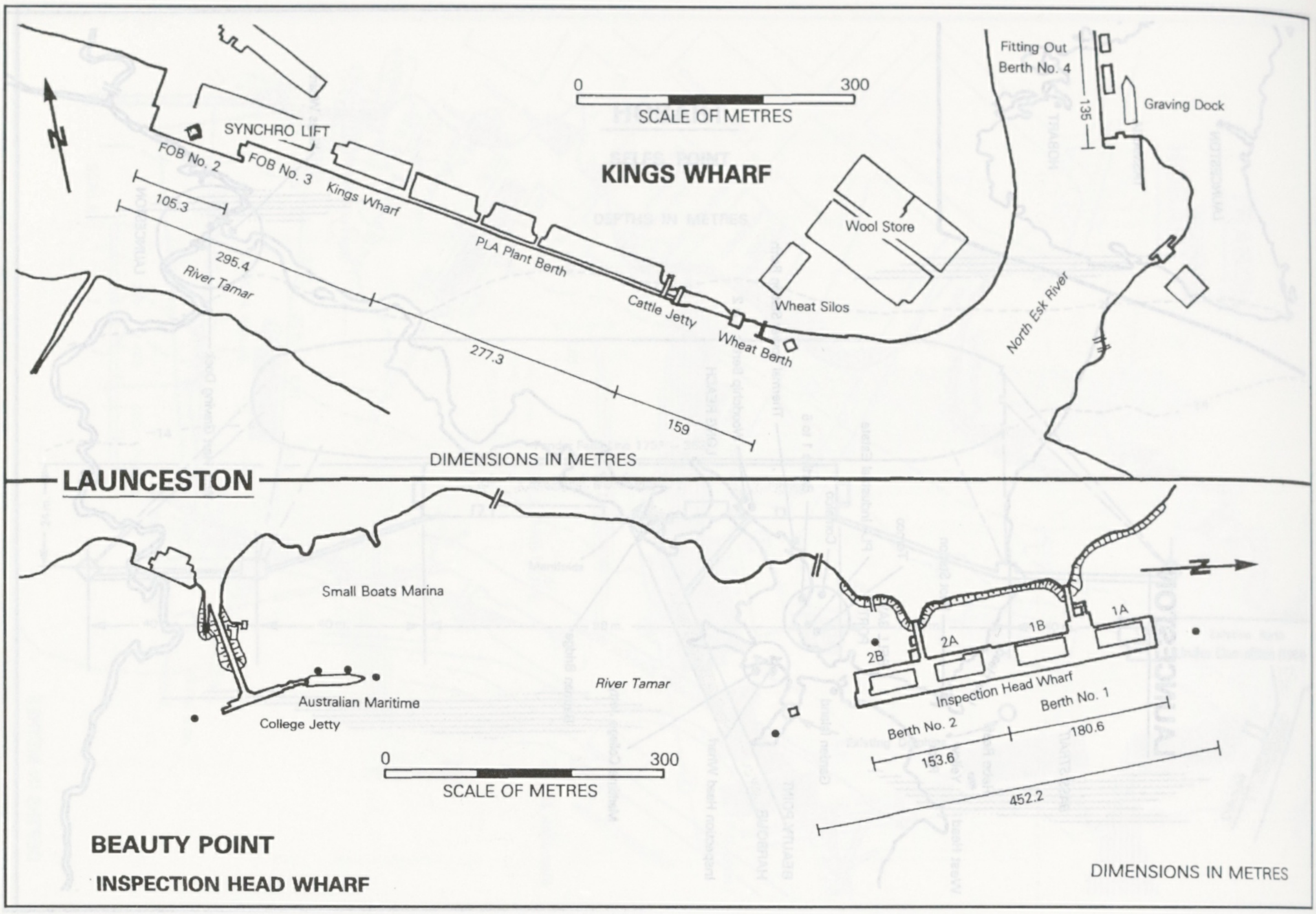

HOBART
(RISDON)
20.0
15.0
15.0
River Derwent
Shag Bay Point
15.0
20.0
15.0
20.0
F.R.
Dns
Dns
Selfs Point
Under Demolition (1994)
Power (46 m.)
F.R.
Stanhope Point
Woodman Point
Slag Heaps
New Town Bay
Rock Cod Point
Porter Point
10.0
Store Point
Electrolytic Zinc Co. Wharf
Electrolytic Zinc Co.
15.0
15.0
DEPTHS IN METRES


HOBART
SELFS POINT
DEPTHS IN METRES
Existing Berth
Under Demolition (1994)
Disused
40 m.
40 m.
98 m.
40 m.
40 m.
24 m.
Existing Dolphins
Fender Face Line 173° — 353°
Manifolds
20
14
20
14


N
KARUMBA
Non Urban Area
Purpose to be Determined
Norman River
Buffer Zone
Non Urban
Comaldo
Gulf Freight Services
Aussie Fish
Sea Swift
Integrated Resources International
Sea Swift
Riverside Coal Transport Co.
Century Zinc Limited
Gibbs & Ebzery
Raptis Slipway
Lenamba Pty Ltd
Crata Pty Ltd
0
2,000
Scale in Meters


LAUNCESTON
BELL BAY
Industrial Estate
Load Out Facility
N
102 m.
No. 6 Multi-Purpose Berth
313.6 m.
No. 5
Under Construction
210 m.
121 m.
No. 4 Petroleum Products
76.2 m.
85 m.
Industrial Estate
X
X
37.2 m.
No. 3 Bell Bay Wharf
152.5 m.
47.2 m.
No. 2 Interstate Berth
73.3 m.
42.7 m.
154.6 m.
87 m.
No. 1 Private
152.4 m.
91 m.
N
0
300
Scale in Meters


LAUNCESTON
LAUNCESTON
TASMANIA
HOBART
BASS STRAIT
Hebe Reef
Low Head
West Head
Yellow Rock
Pilot Station
Temco
BELL BAY PORT
PLA Industrial Estate
Comalco
Garden Island
Berths 1 to 5
BEAUTY POINT HARBOUR
Thermal Power Station Berth
Woodchip Berths 1 & 2
LONG REACH
Inspection Head Wharf
Maritime College Jetty
Batman Bridge
Kings Wharf
Wm. Hart Graving Dock
LAUNCESTON



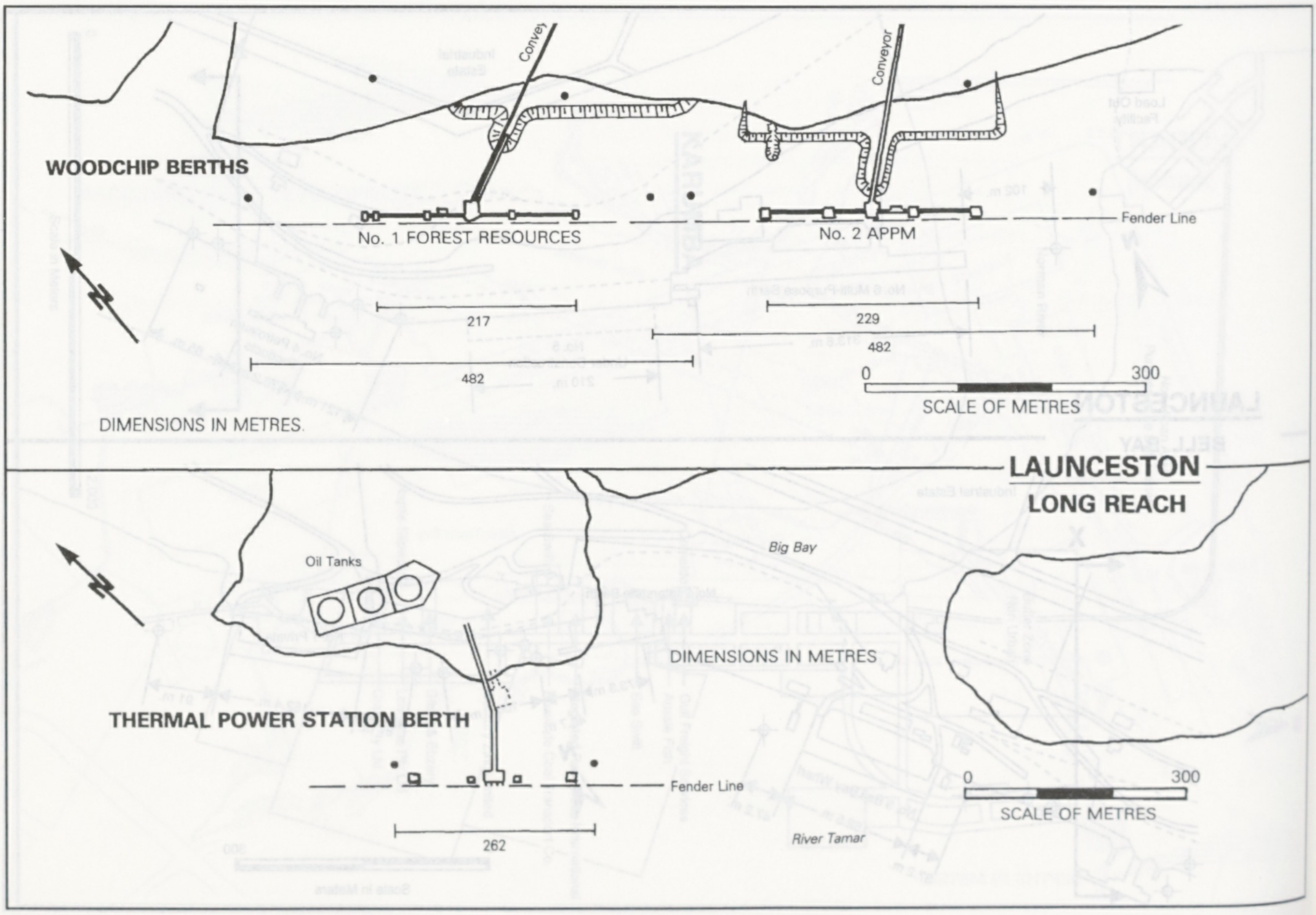
LAUNCESTON

KINGS WHARF

BEAUTY POINT

INSPECTION HEAD WHARF

0
300
SCALE OF METRES
SYNCHRO LIFT
FOB No. 2
FOB No. 3
Kings Wharf
105.3
295.4
River Tamar
PLA Plant Berth
Cattle Jetty
Wheat Berth
Wheat Silos
Wool Store
277.3
159
Fitting Out
Berth No. 4
135
Graving Dock
North Esk River
DIMENSIONS IN METRES
Small Boats Marina
Australian Maritime
College Jetty
River Tamar
2B
2A
1B
1A
Inspection Head Wharf
Berth No. 2
Berth No. 1
153.6
180.6
452.2
0
300
SCALE OF METRES
DIMENSIONS IN METRES



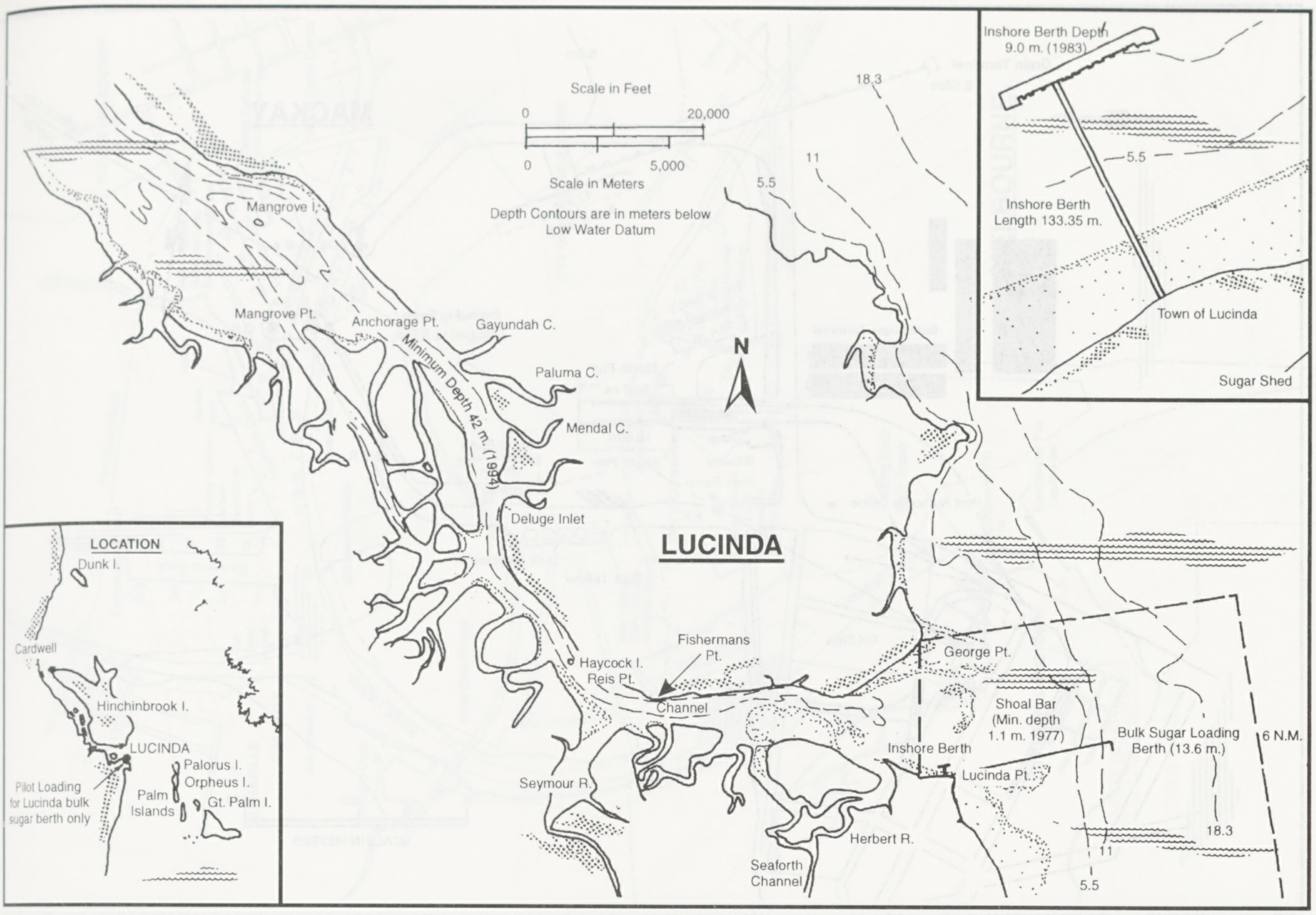
LAUNCESTON

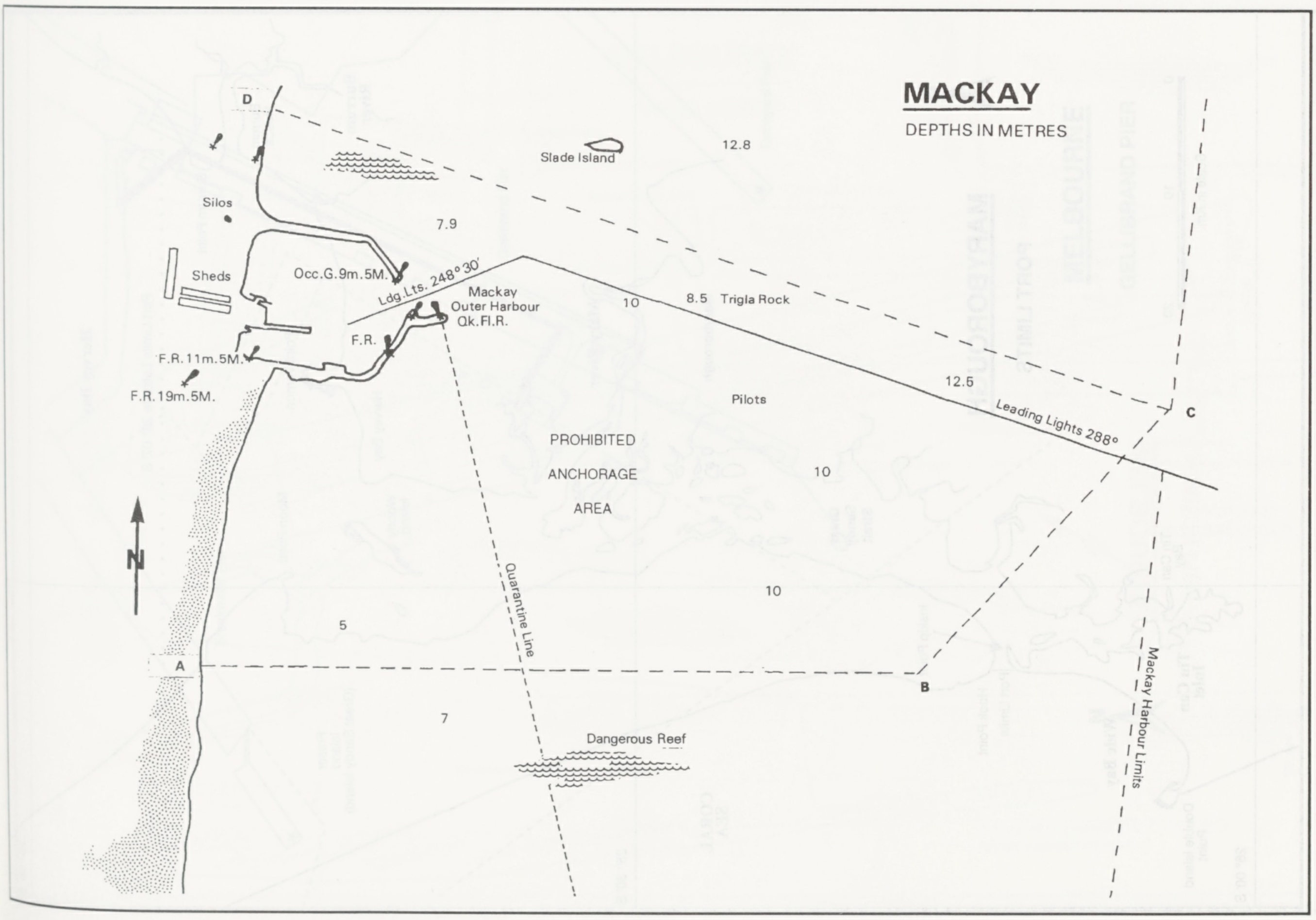
LONG REACH

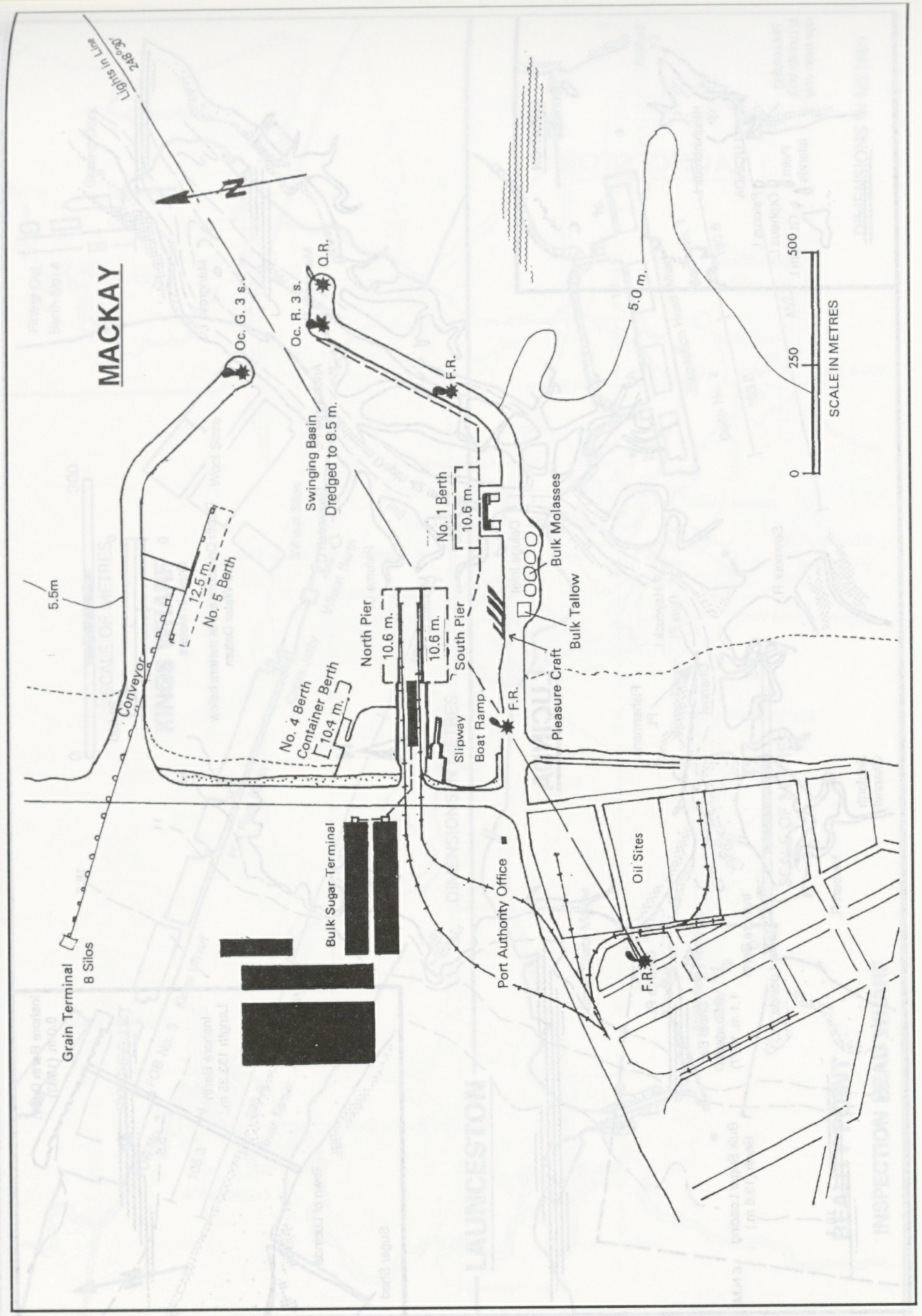
WOODCHIP BERTHS

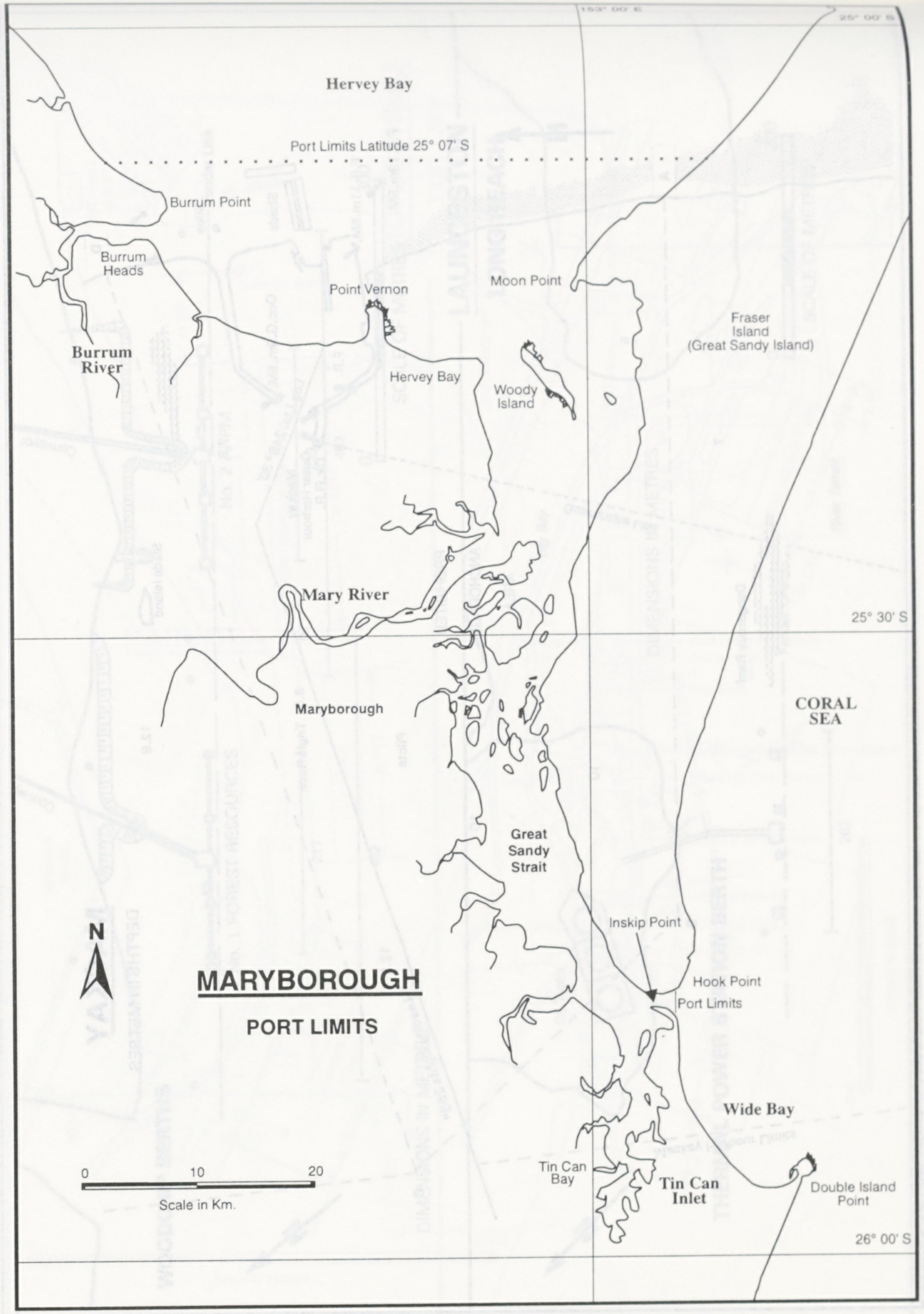
THERMAL POWER STATION BERTH

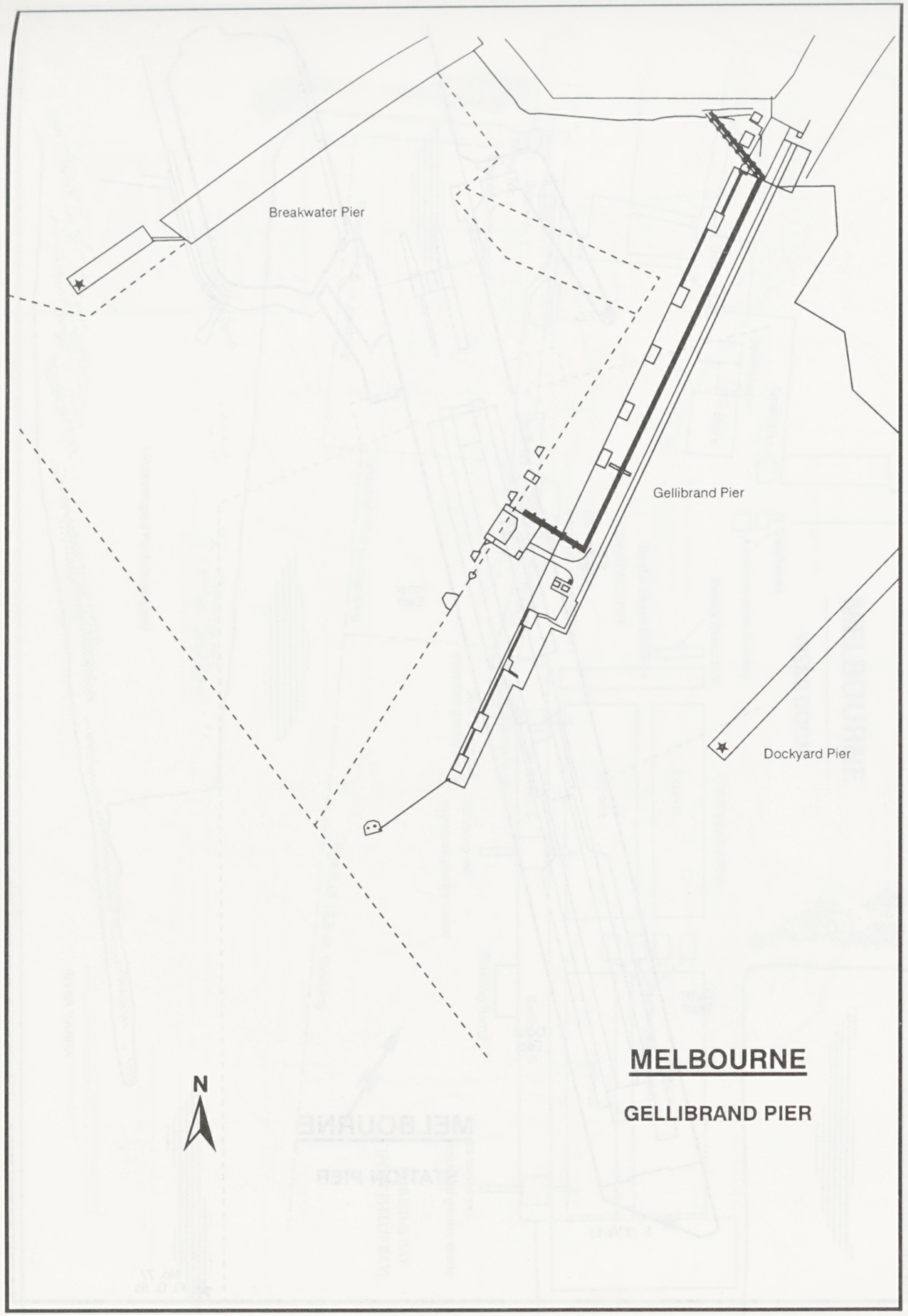
Convey
Conveyor
Fender Line
No. 1 FOREST RESOURCES
No. 2 APPM
217
229
482
482
0
300
SCALE OF METRES
DIMENSIONS IN METRES.
Oil Tanks
Big Bay
DIMENSIONS IN METRES
Fender Line
262
0
300
SCALE OF METRES
River Tamar

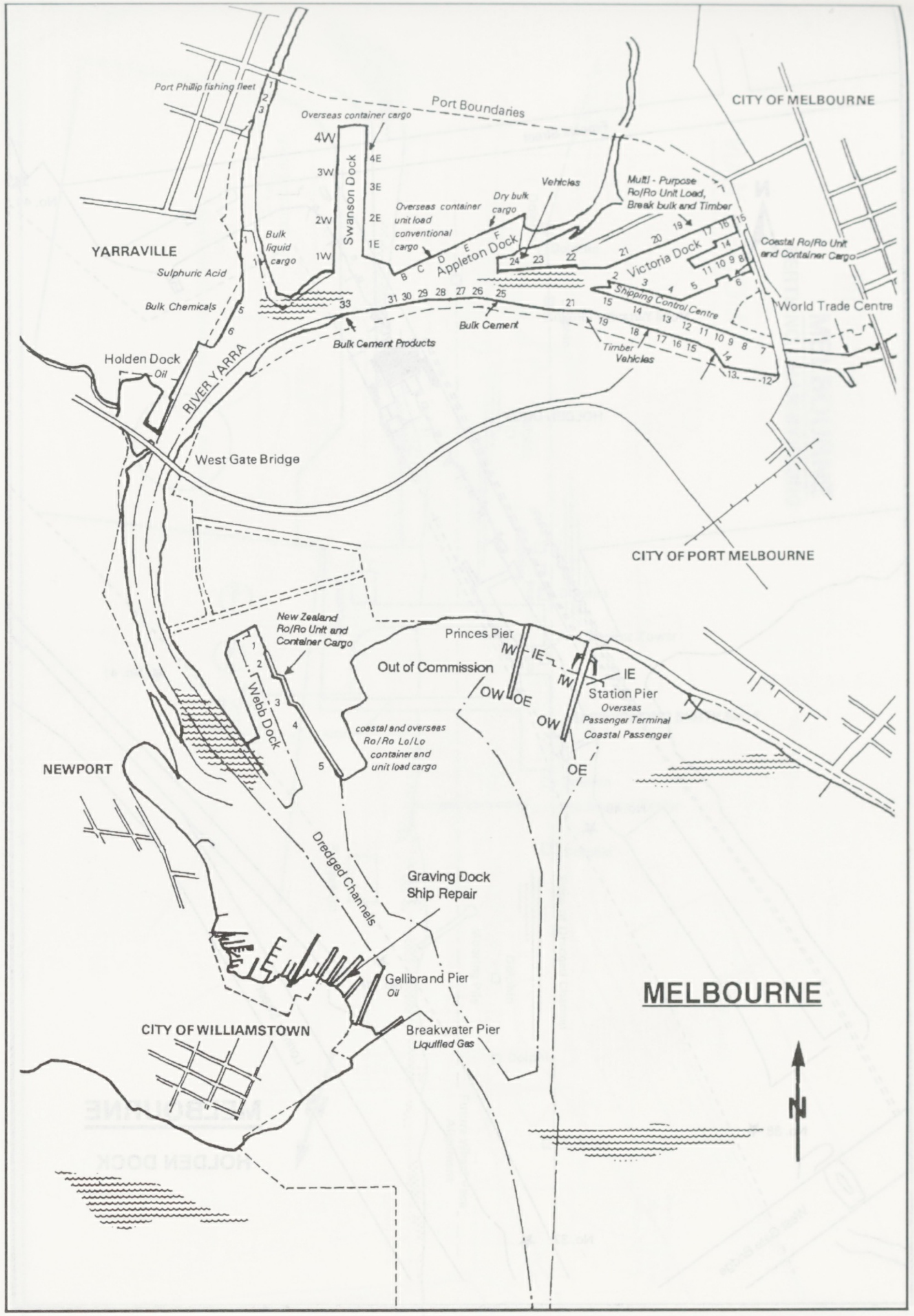

LUCINDA
Scale in Feet
0
20,000
0
5,000
Scale in Meters
Depth Contours are in meters below Low Water Datum
N
Mangrove I.
Mangrove Pt.
Anchorage Pt.
Gayundah C.
Paluma C.
Mendal C.
Minimum Depth 42 m. (1994)
Deluge Inlet
Fishermans Pt.
Haycock I.
Reis Pt.
Channel
Seymour R.
Herbert R.
Seaforth Channel
Inshore Berth
Lucinda Pt.
George Pt.
Shoal Bar (Min. depth 1.1 m. 1977)
Bulk Sugar Loading Berth (13.6 m.)
6 N.M.
18.3
11
5.5
Inshore Berth Depth 9.0 m. (1983)
Inshore Berth Length 133.35 m.
Town of Lucinda
Sugar Shed
LOCATION
Dunk I.
Cardwell
Hinchinbrook I.
LUCINDA
Palorus I.
Orpheus I.
Palm Islands
Gt. Palm I.
Pilot Loading for Lucinda bulk sugar berth only

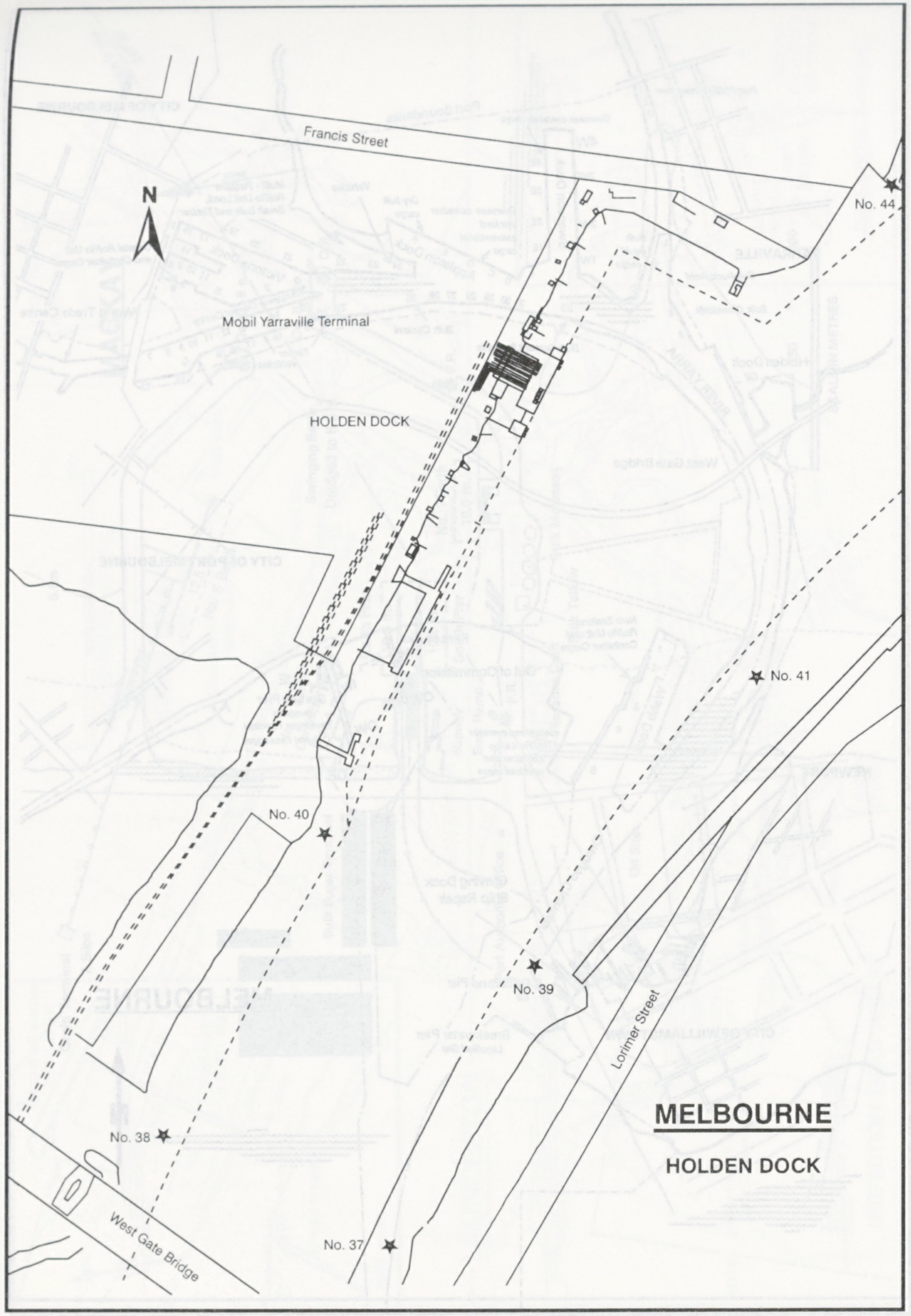

MACKAY
DEPTHS IN METRES
D
Slade Island
12.8
Silos
7.9
Sheds
Occ.G.9m.5M.
Ldg.Lts. 248° 30'
Mackay Outer Harbour Qk.Fl.R.
10
8.5
Trigla Rock
F.R.
F.R.11m.5M.
F.R.19m.5M.
12.5
Pilots
Leading Lights 288°
C
PROHIBITED ANCHORAGE AREA
10
N
10
Quarantine Line
5
A
B
7
Dangerous Reef
Mackay Harbour Limits

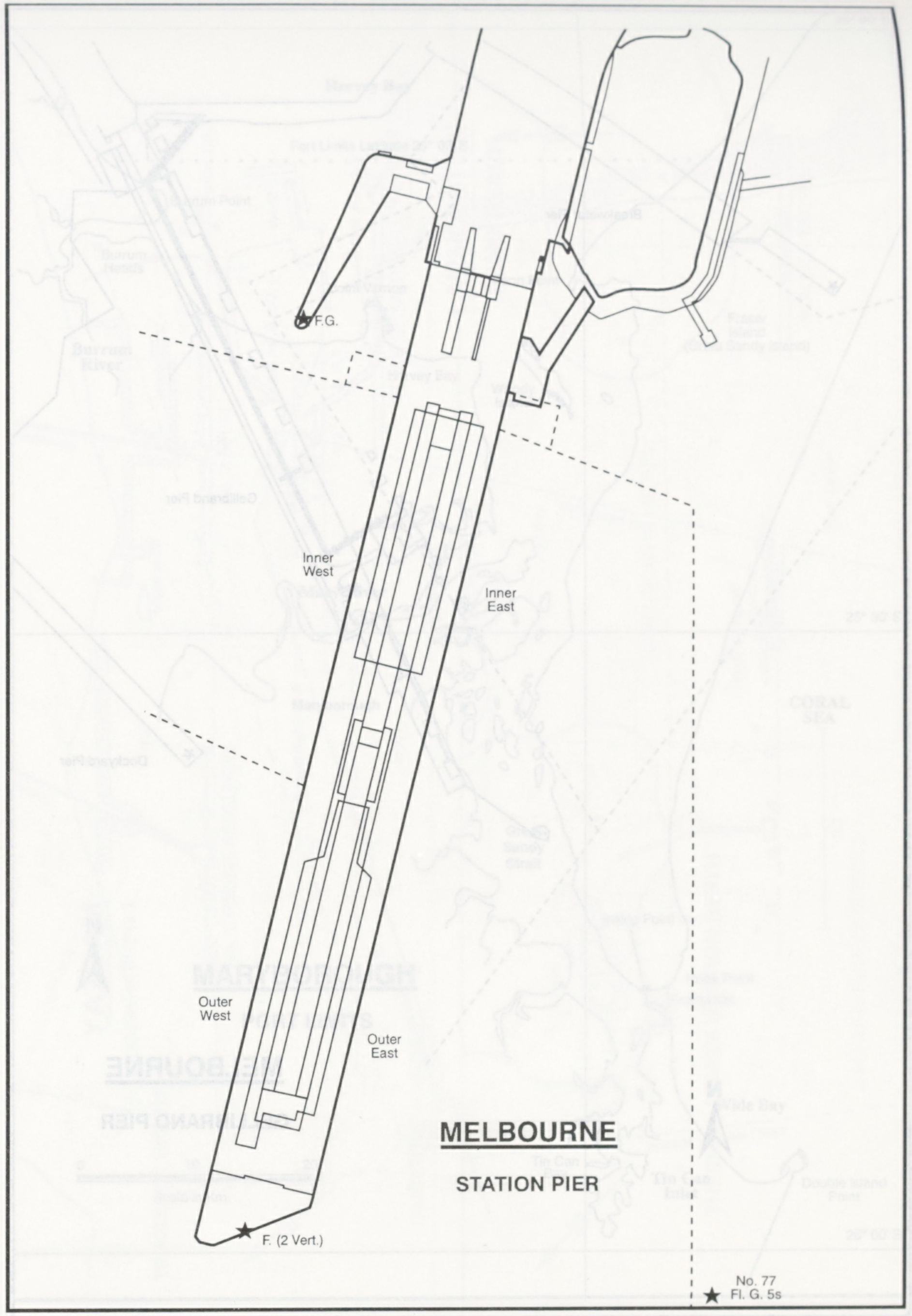

MACKAY
Lights in Line 248°30'
N
Oc. G. 3 s.
Oc. R. 3 s.
Q.R.
F.R.
5.0 m.
Swinging Basin
Dredged to 8.5 m.
No. 1 Berth
10.6 m.
Bulk Molasses
Bulk Tallow
North Pier
10.6 m.
10.6 m.
South Pier
Pleasure Craft
F.R.
Boat Ramp
Slipway
No. 4 Berth
Container Berth
10.4 m.
12.5 m.
No. 5 Berth
5.5m
Conveyor
Grain Terminal
8 Silos
Bulk Sugar Terminal
Port Authority Office
Oil Sites
F.R.
0
250
500
SCALE IN METRES


153° 00' E
25° 00' S
Hervey Bay
Port Limits Latitude 25° 07' S
Burrum Point
Burrum Heads
Burrum River
Point Vernon
Moon Point
Fraser Island
(Great Sandy Island)
Hervey Bay
Woody Island
Mary River
25° 30' S
Maryborough
CORAL SEA
Great Sandy Strait
Inskip Point
Hook Point
Port Limits
N
MARYBOROUGH
PORT LIMITS
Wide Bay
0
10
20
Scale in Km.
Tin Can Bay
Tin Can Inlet
Double Island Point
26° 00' S


Breakwater Pier
Gellibrand Pier
Dockyard Pier
MELBOURNE
GELLIBRAND PIER
N

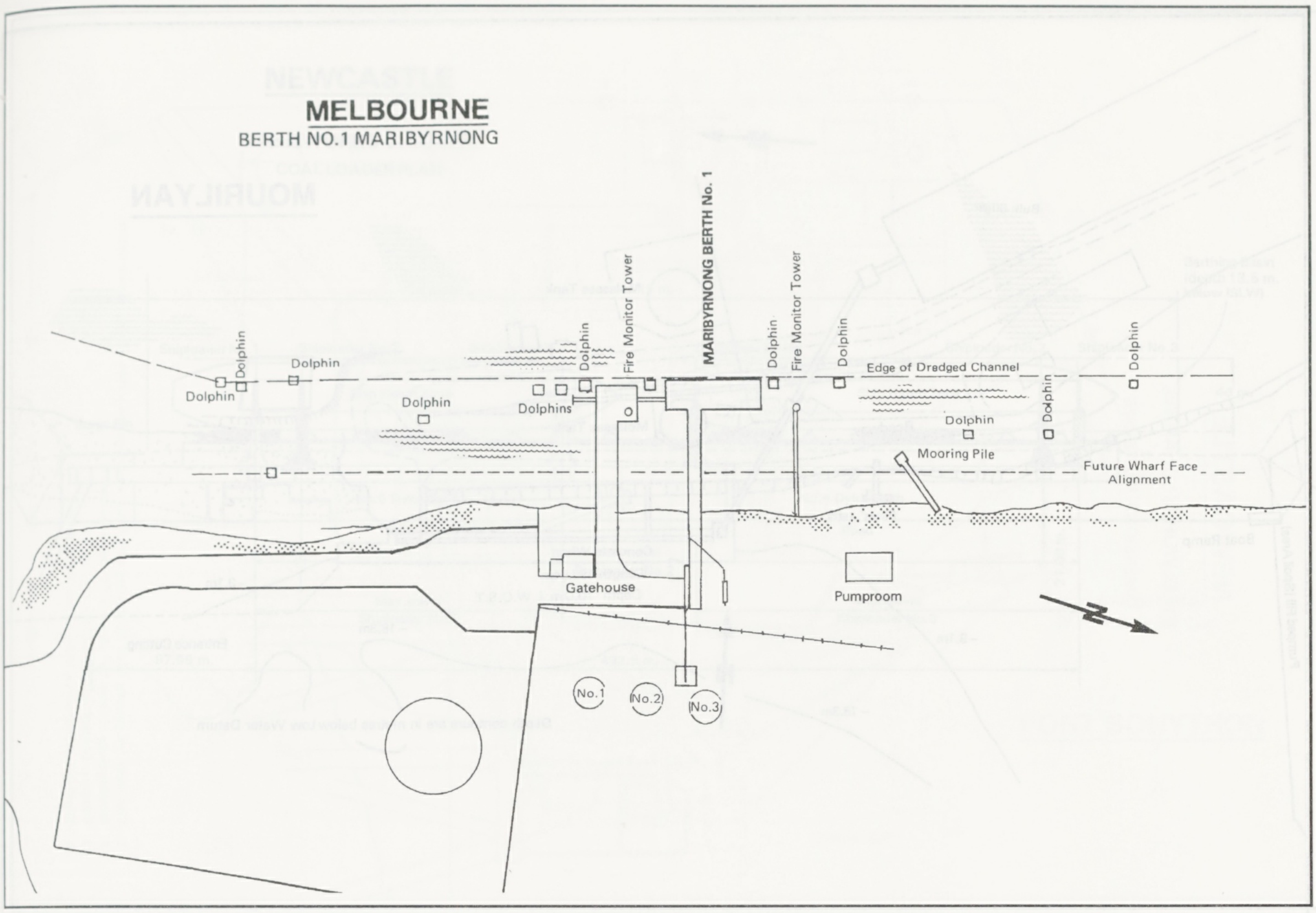

Port Phillip fishing fleet
Overseas container cargo
Port Boundaries
CITY OF MELBOURNE
4W
3W
2W
1W
4E
3E
2E
1E
Swanson Dock
YARRAVILLE
Sulphuric Acid
Bulk liquid cargo
Bulk Chemicals
Overseas container unit load conventional cargo
Dry bulk cargo
Vehicles
Multi - Purpose Ro/Ro Unit Load, Break bulk and Timber
Appleton Dock
Victoria Dock
Coastal Ro/Ro Unit and Container Cargo
Shipping Control Centre
World Trade Centre
Bulk Cement Products
Bulk Cement
Timber
Vehicles
Holden Dock
Oil
RIVER YARRA
West Gate Bridge
CITY OF PORT MELBOURNE
New Zealand Ro/Ro Unit and Container Cargo
Webb Dock
coastal and overseas Ro/Ro Lo/Lo container and unit load cargo
Princes Pier
Out of Commission
Station Pier
Overseas Passenger Terminal
Coastal Passenger
NEWPORT
Dredged Channels
Graving Dock
Ship Repair
Gellibrand Pier
Oil
Breakwater Pier
Liquified Gas
CITY OF WILLIAMSTOWN
MELBOURNE
N


Francis Street
No. 44
N
Mobil Yarraville Terminal
HOLDEN DOCK
No. 41
No. 40
No. 39
Lorimer Street
No. 38
No. 37
West Gate Bridge
MELBOURNE
HOLDEN DOCK


F.G.
Inner West
Inner East
Outer West
Outer East
MELBOURNE
STATION PIER
F. (2 Vert.)
No. 77
Fl. G. 5s

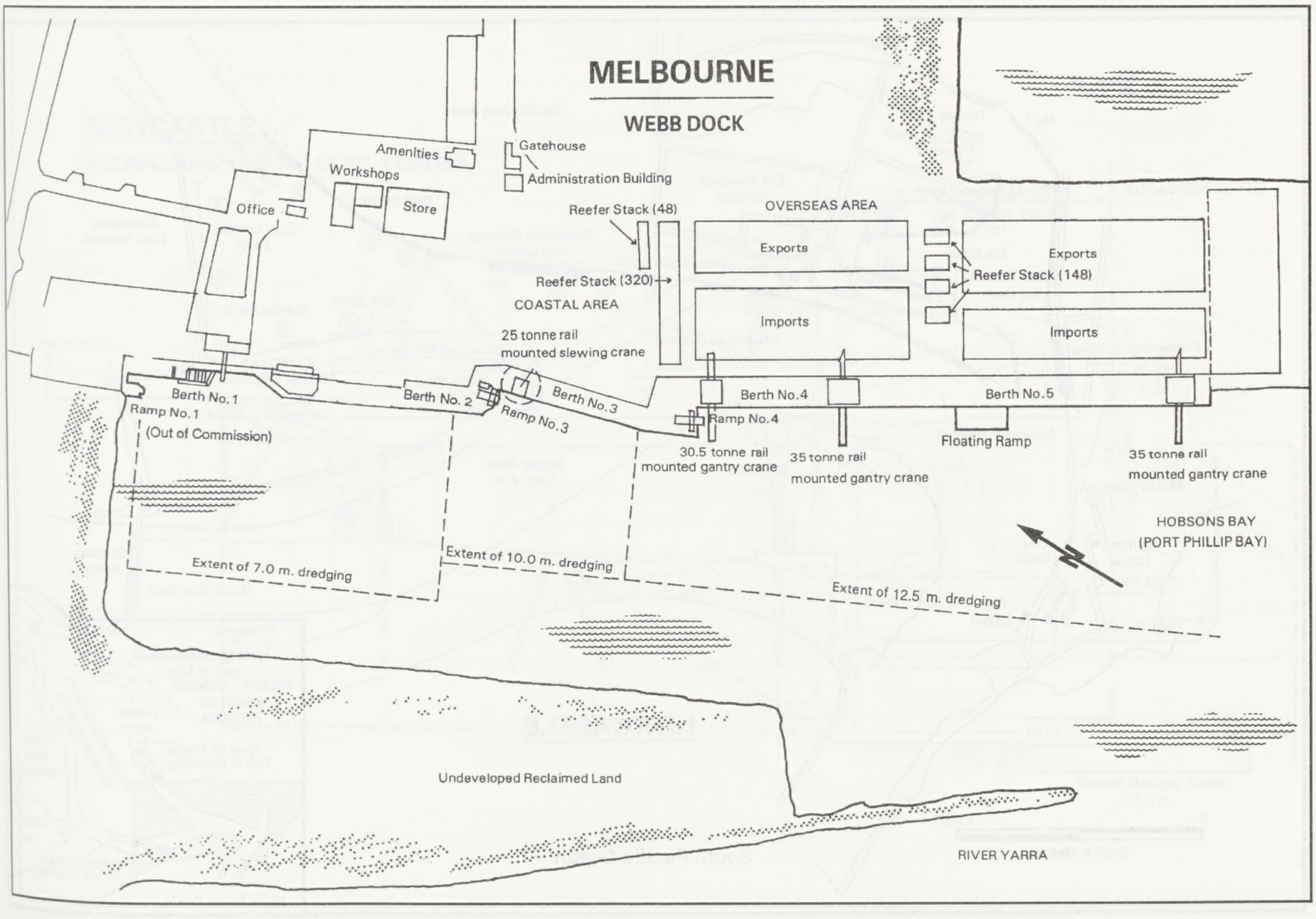
MELBOURNE

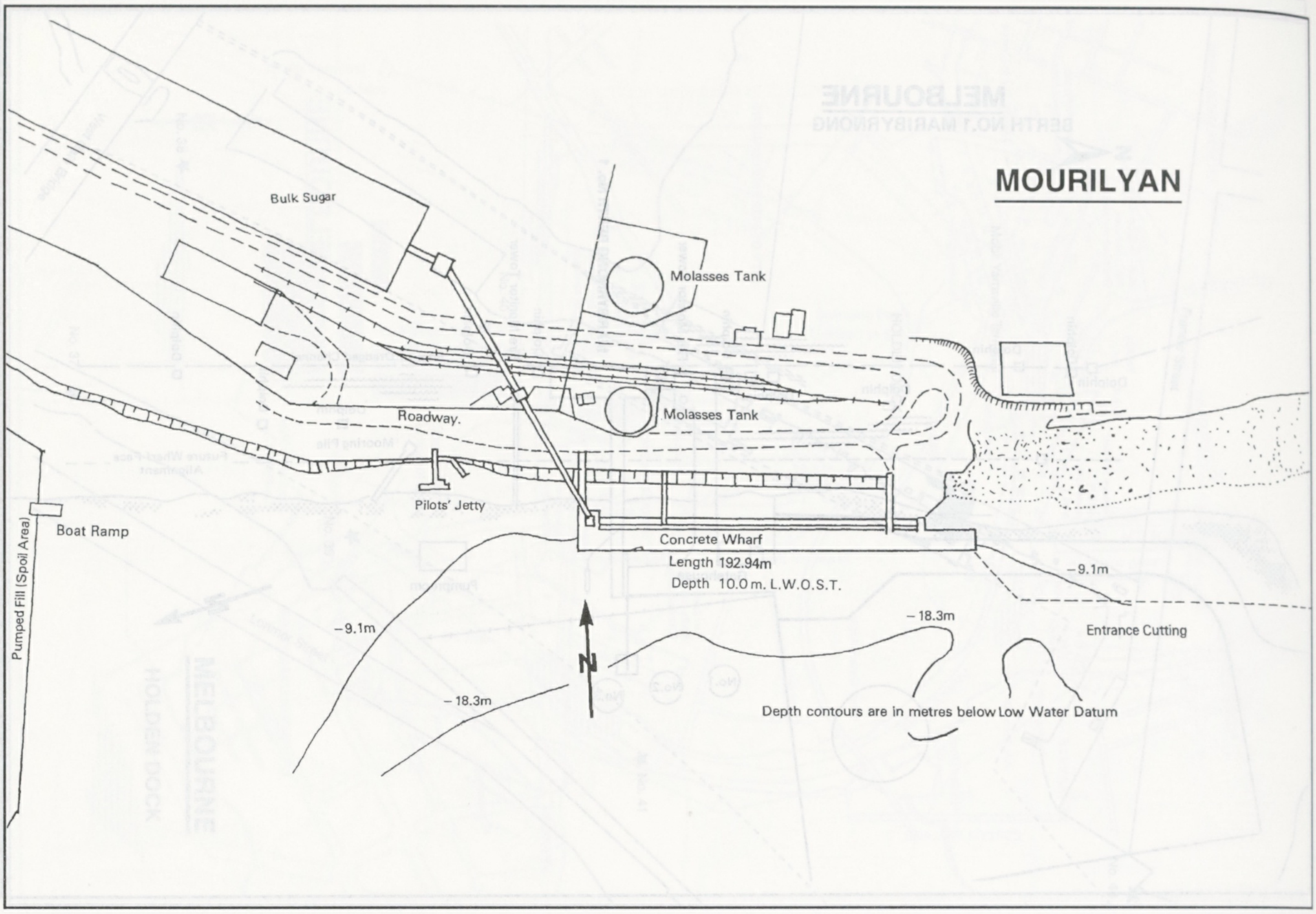
BERTH NO.1 MARIBYRNONG

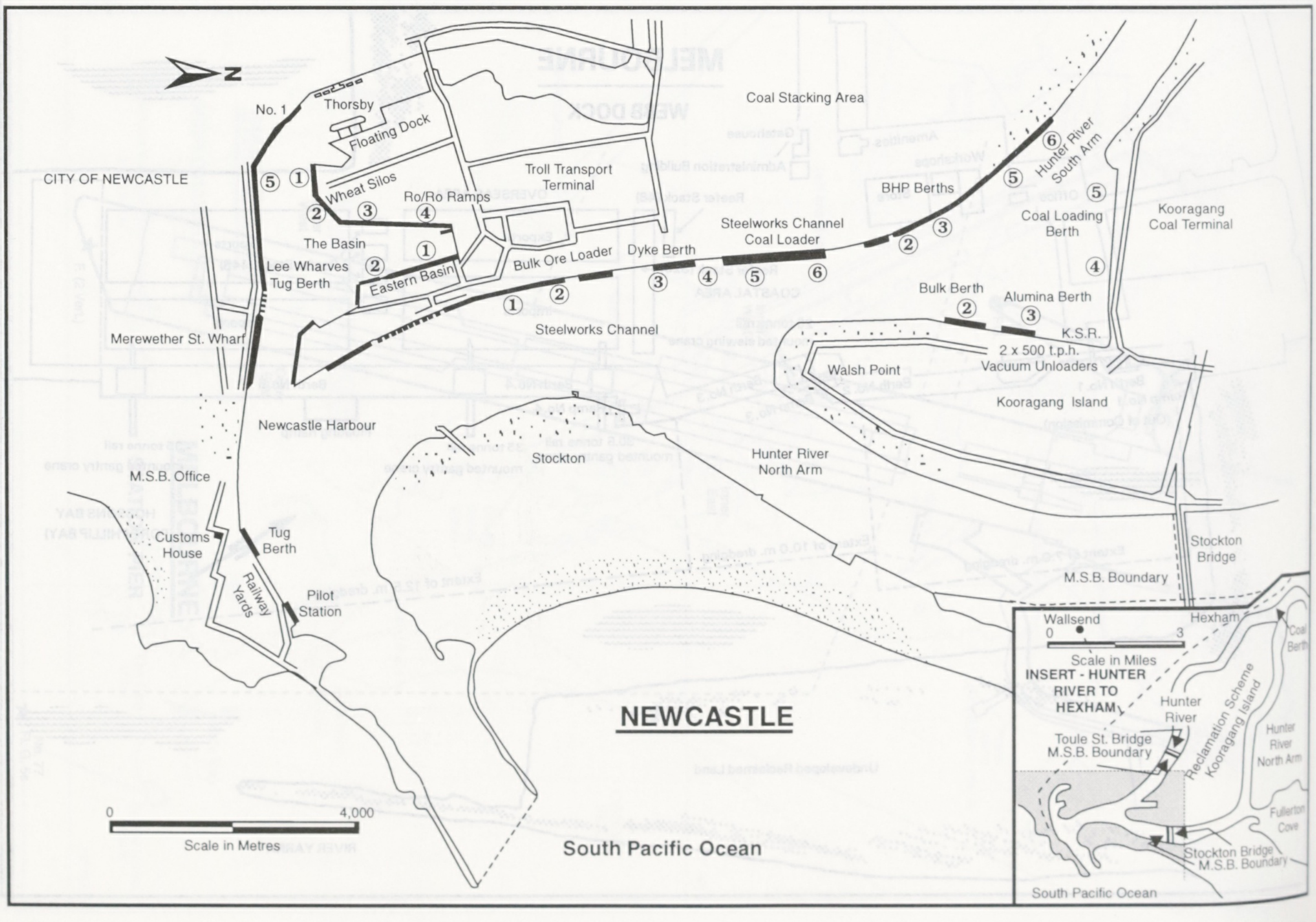

MARIBYRNONG BERTH No. 1
Dolphin
Dolphin
Dolphin
Dolphin
Dolphins
Dolphin
Fire Monitor Tower
Fire Monitor Tower
Dolphin
Dolphin
Edge of Dredged Channel
Dolphin
Dolphin
Dolphin
Mooring Pile
Future Wharf Face Alignment
Gatehouse
Pumproom
No.1
No.2
No.3

MELBOURNE

WEBB DOCK


Amenities
Gatehouse
Administration Building
Workshops
Office
Store
Reefer Stack (48)
OVERSEAS AREA
Exports
Imports
Reefer Stack (320)
COASTAL AREA
Exports
Reefer Stack (148)
Imports
25 tonne rail mounted slewing crane
Berth No.1
Ramp No.1
(Out of Commission)
Berth No. 2
Berth No. 3
Ramp No. 3
Berth No.4
Ramp No.4
Berth No.5
Floating Ramp
30.5 tonne rail mounted gantry crane
35 tonne rail mounted gantry crane
35 tonne rail mounted gantry crane
HOBSONS BAY (PORT PHILLIP BAY)
Extent of 7.0 m. dredging
Extent of 10.0 m. dredging
Extent of 12.5 m. dredging
Undeveloped Reclaimed Land
RIVER YARRA

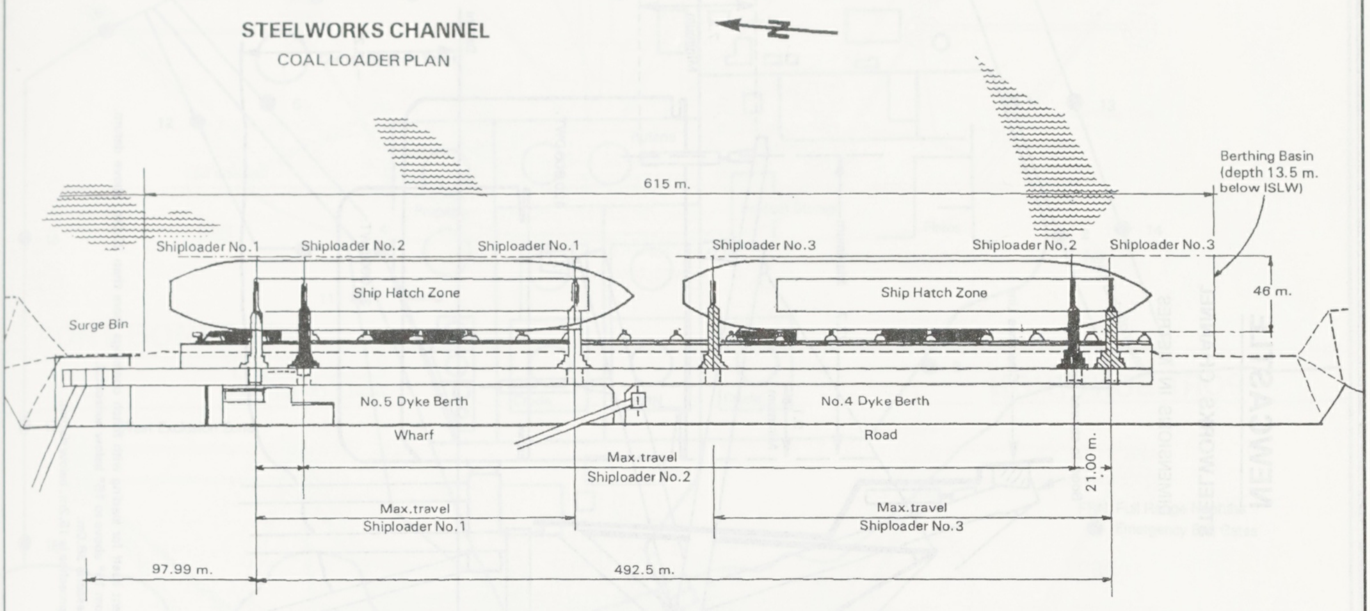

MOURILYAN
Bulk Sugar
Molasses Tank
Molasses Tank
Roadway.
Pilots' Jetty
Boat Ramp
Pumped Fill (Spoil Area)
Concrete Wharf
Length 192.94m
Depth 10.0 m. L.W.O.S.T.
–9.1m
–9.1m
–18.3m
–18.3m
Entrance Cutting
N
Depth contours are in metres below Low Water Datum


N
No. 1
Thorsby
Floating Dock
Wheat Silos
CITY OF NEWCASTLE
⑤
①
②
③
④
Ro/Ro Ramps
Troll Transport Terminal
Coal Stacking Area
The Basin
①
②
Eastern Basin
Lee Wharves Tug Berth
Bulk Ore Loader
Dyke Berth
Steelworks Channel Coal Loader
①
②
③
④
⑤
⑥
BHP Berths
②
③
⑤
⑥
Hunter River South Arm
⑤
Coal Loading Berth
Kooragang Coal Terminal
④
Steelworks Channel
Merewether St. Wharf
Bulk Berth
②
Alumina Berth
③
K.S.R.
2 x 500 t.p.h. Vacuum Unloaders
Walsh Point
Kooragang Island
Newcastle Harbour
M.S.B. Office
Stockton
Hunter River North Arm
Customs House
Tug Berth
Railway Yards
Pilot Station
Stockton Bridge
M.S.B. Boundary
NEWCASTLE
0
4,000
Scale in Metres
South Pacific Ocean
Wallsend
0
3
Scale in Miles
INSERT - HUNTER RIVER TO HEXHAM
Hexham
Coal Berth
Hunter River
Reclamation Scheme Kooragang Island
Hunter River North Arm
Toule St. Bridge M.S.B. Boundary
Fullerton Cove
Stockton Bridge M.S.B. Boundary
South Pacific Ocean

NEWCASTLE

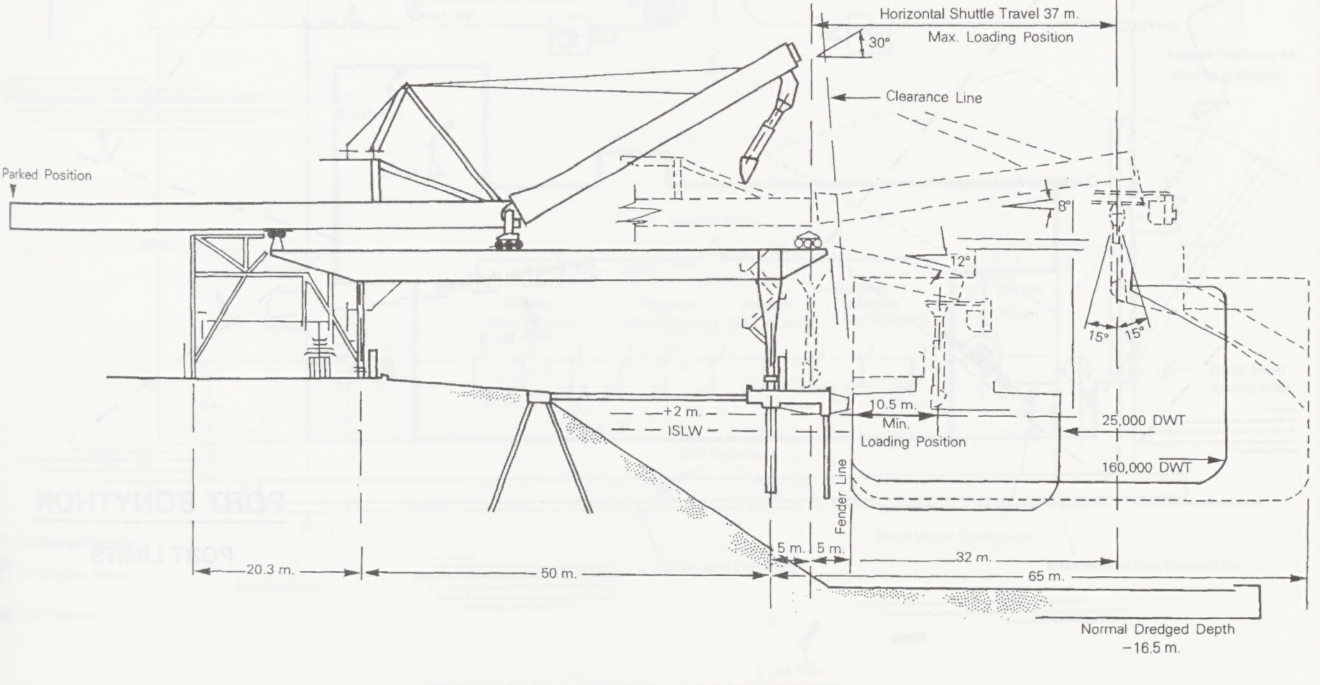
STEELWORKS CHANNEL

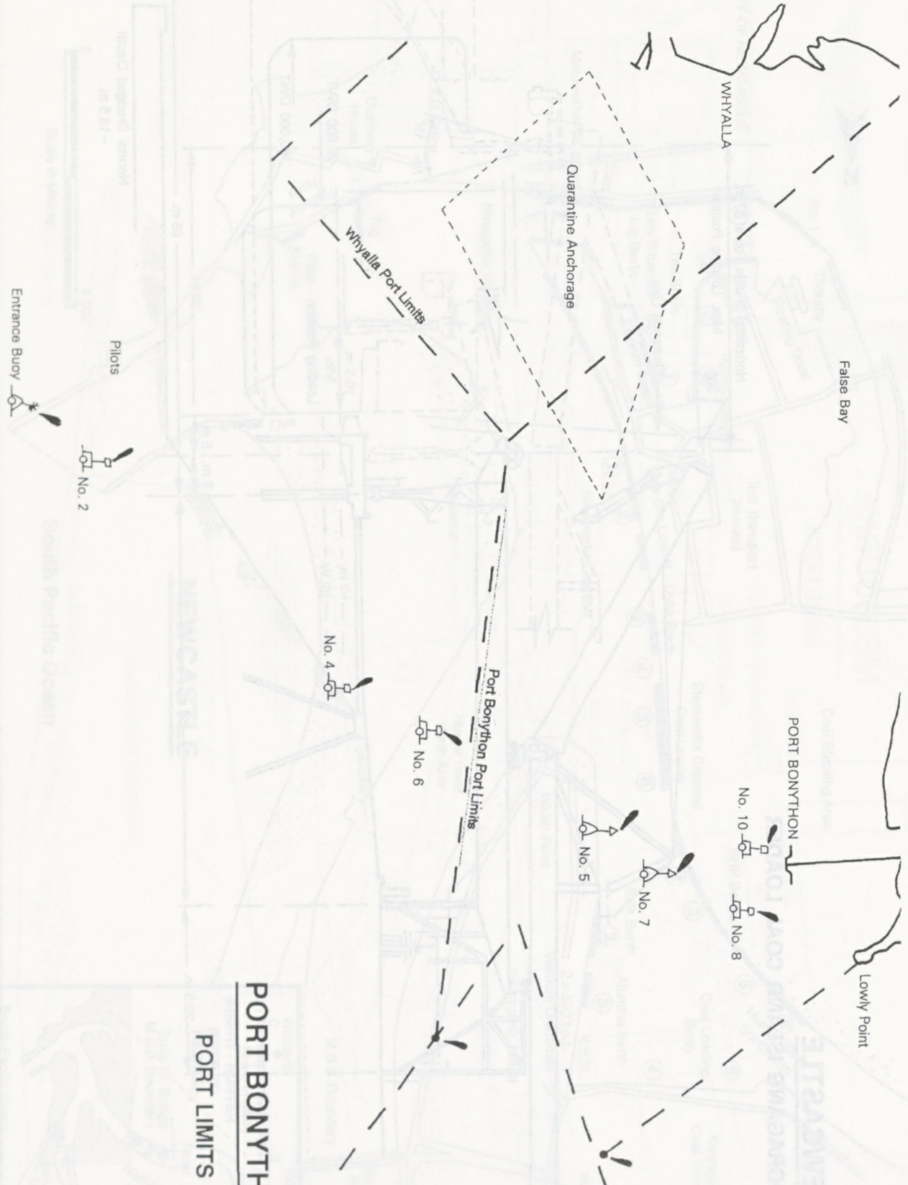
COAL LOADER PLAN


N
615 m.
Berthing Basin (depth 13.5 m. below ISLW)
Shiploader No.1
Shiploader No.2
Shiploader No.1
Shiploader No.3
Shiploader No.2
Shiploader No.3
Ship Hatch Zone
Ship Hatch Zone
46 m.
Surge Bin
No.5 Dyke Berth
Wharf
No.4 Dyke Berth
Road
Max.travel Shiploader No.2
21.00 m.
Max.travel Shiploader No.1
Max.travel Shiploader No.3
97.99 m.
492.5 m.

NEWCASTLE

KOORAGANG ISLAND COAL LOADER


Horizontal Shuttle Travel 37 m.
30°
Max. Loading Position
Clearance Line
Parked Position
8°
12°
15°
15°
+2 m.
ISLW
10.5 m.
Min. Loading Position
25,000 DWT
160,000 DWT
Fender Line
5 m.
5 m.
32 m.
20.3 m.
50 m.
65 m.
Normal Dredged Depth −16.5 m.

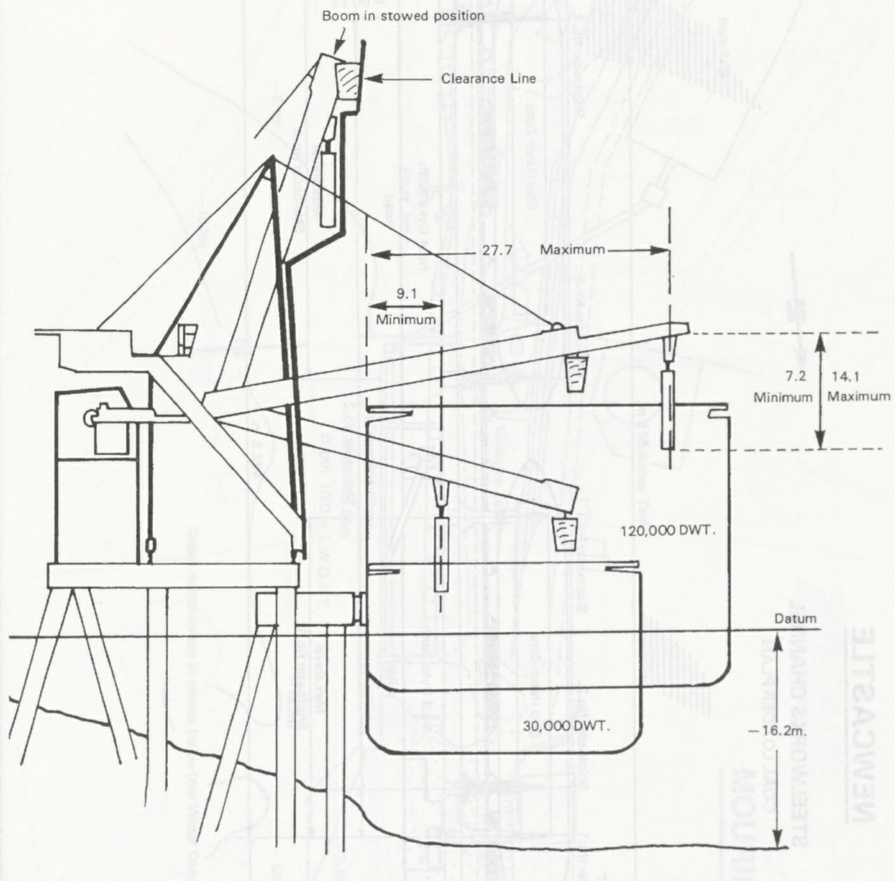

WHYALLA
False Bay
Quarantine Anchorage
Whyalla Port Limits
Pilots
Entrance Buoy
No. 2
No. 4
No. 6
Port Bonython Port Limits
PORT BONYTHON
No. 10
No. 5
No. 7
No. 8
Lowly Point

PORT BONYTHON
PORT LIMITS

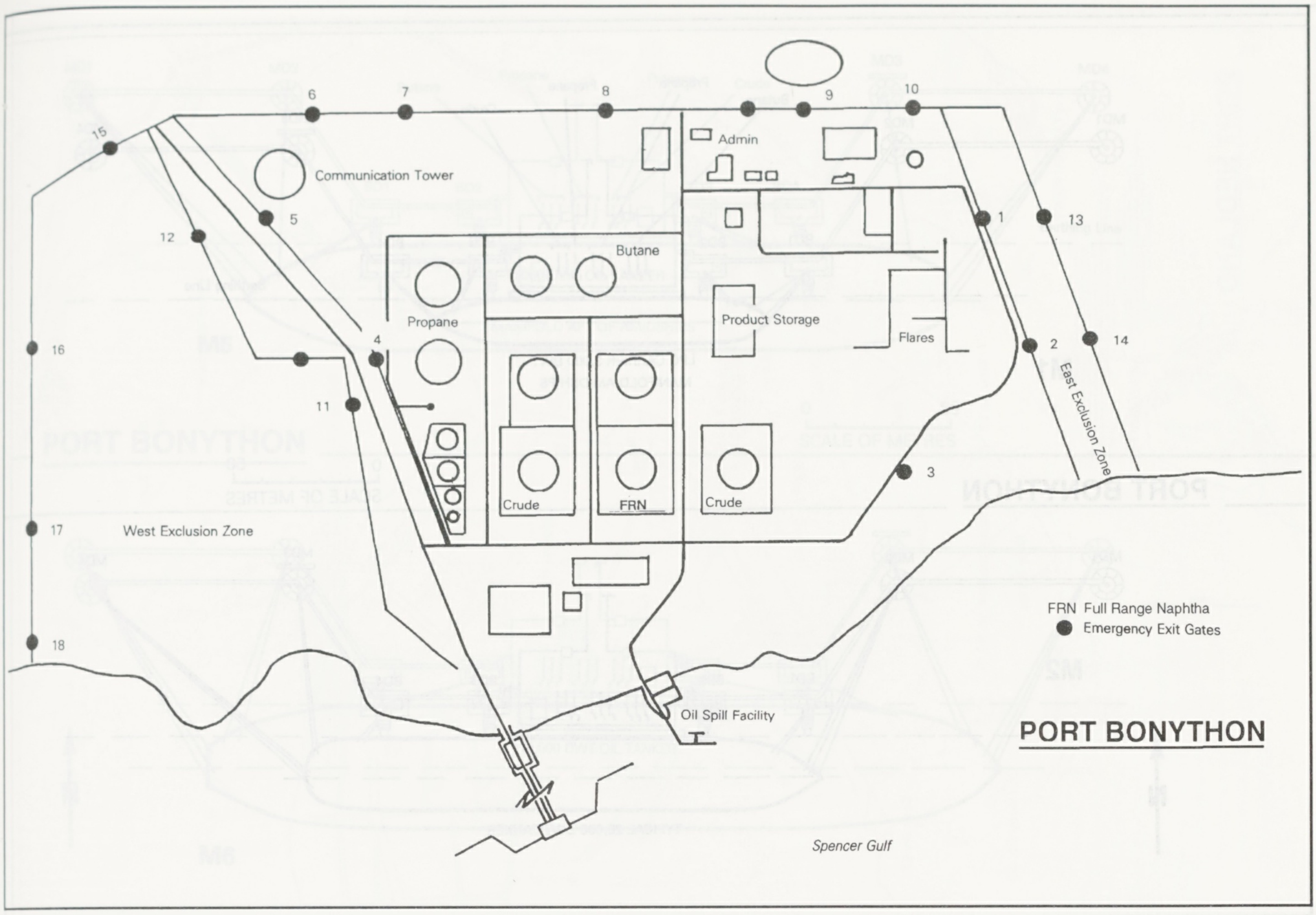
NEWCASTLE

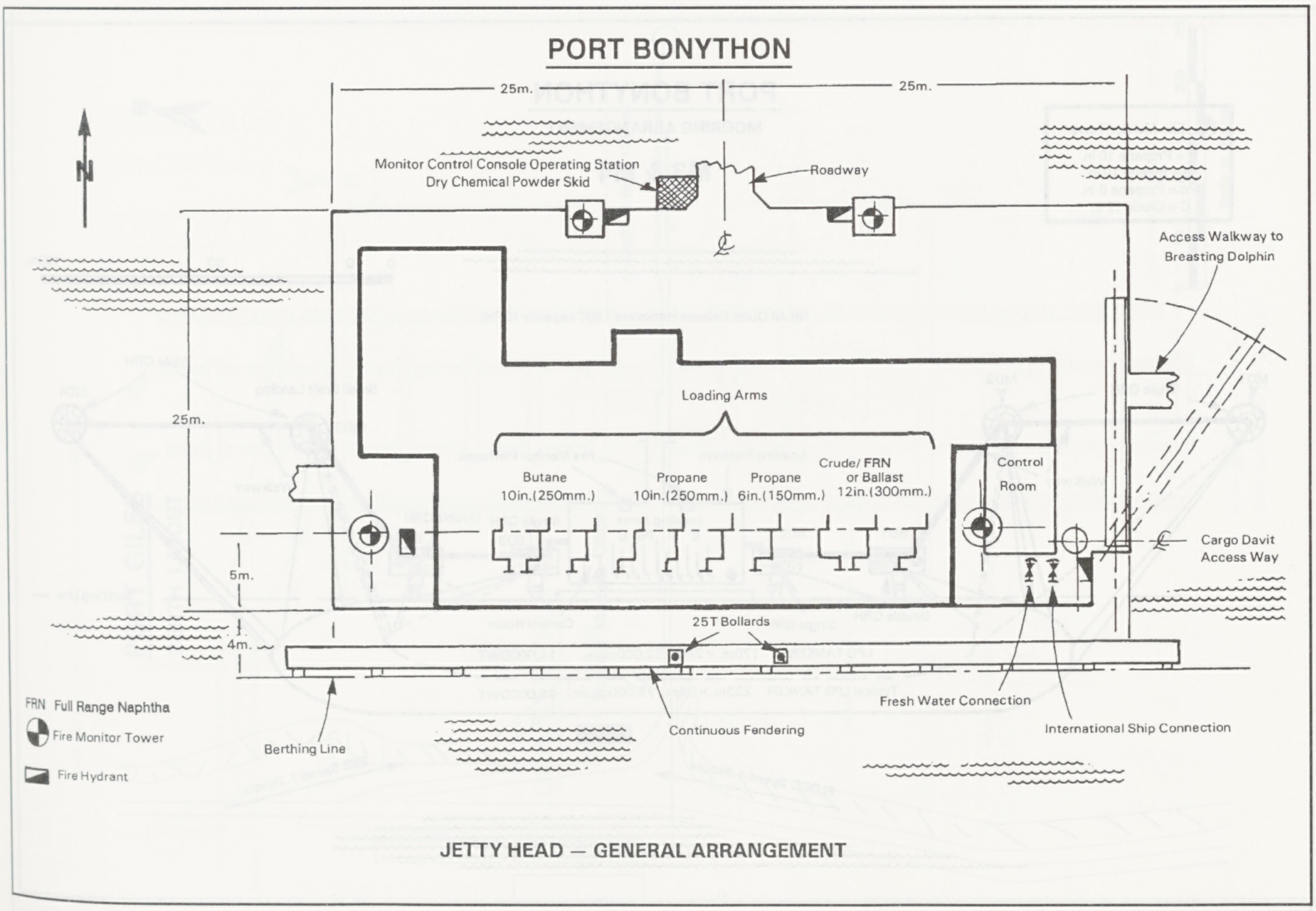
STEELWORKS CHANNEL

DIMENSIONS IN METRES

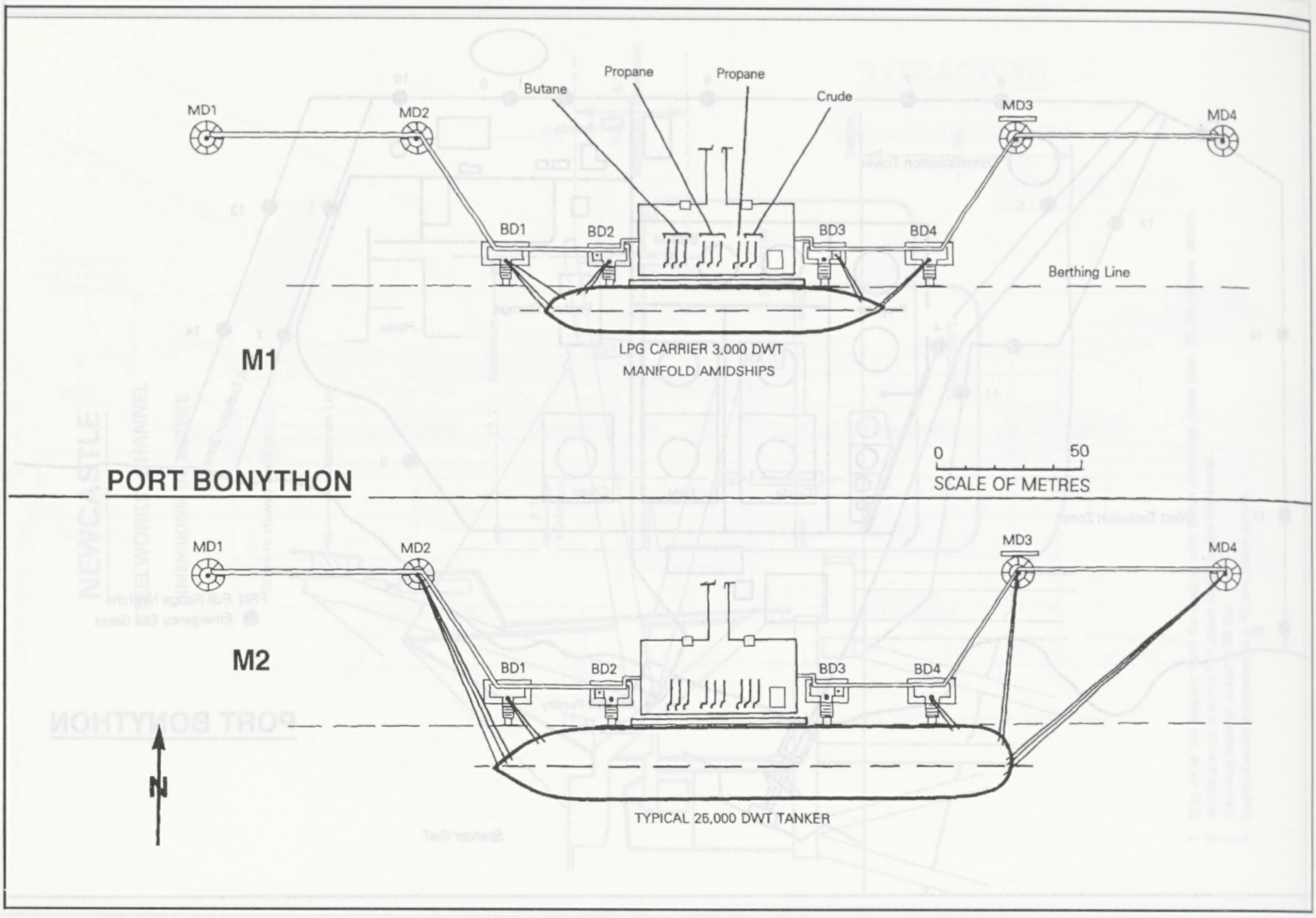

Boom in stowed position
Clearance Line
27.7
Maximum
9.1
Minimum
7.2
Minimum
14.1
Maximum
120,000 DWT.
Datum
30,000 DWT.
–16.2m.

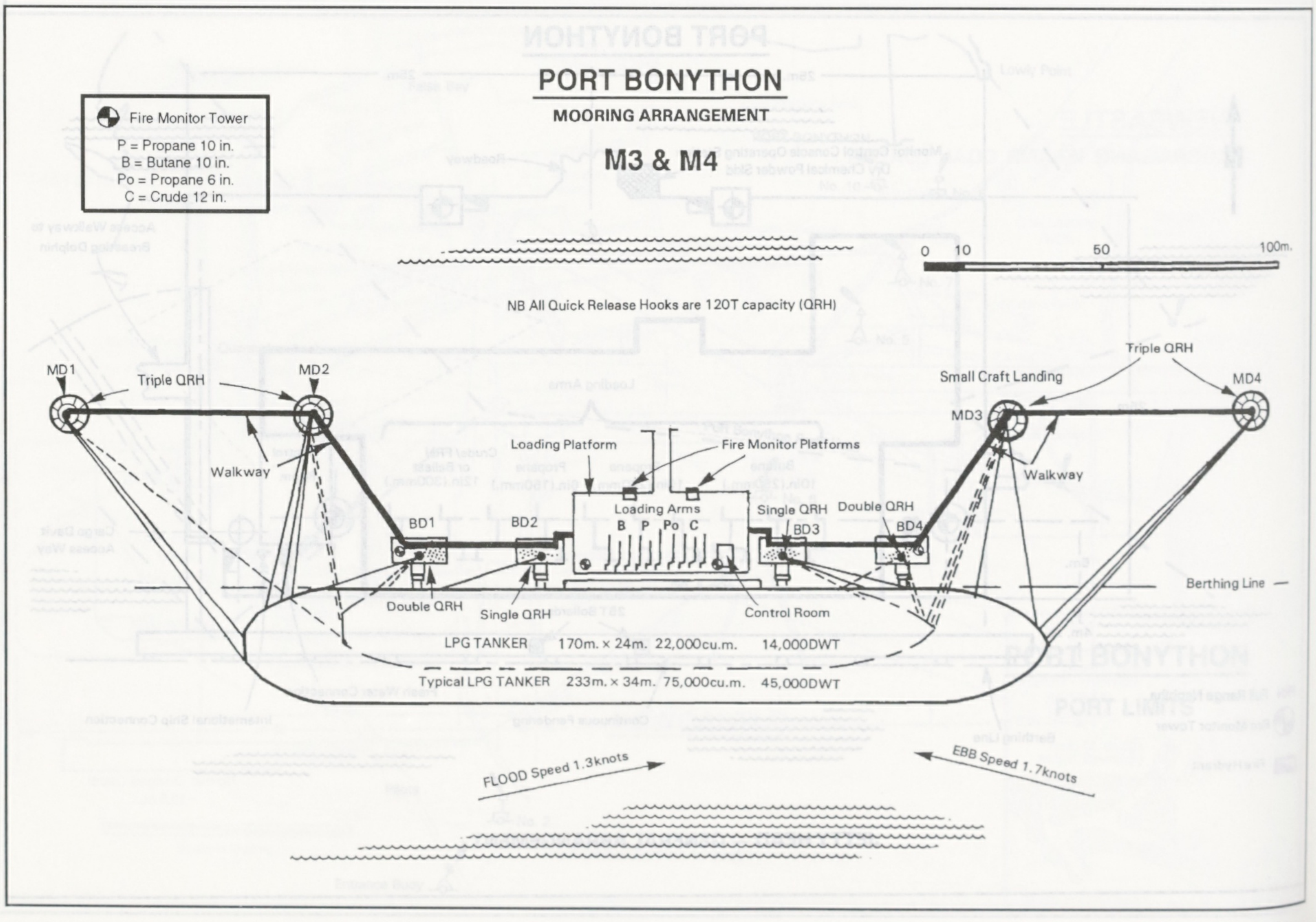
1 Ship must not present itself for loading with hatch coamings more than 20.0m. above datum.
2 Working range of boom 10° above to 15° below horizontal.
3 Maximum beam of vessel is 38.0m.
4 Depth of water in approaches is 15.2m. below datum.

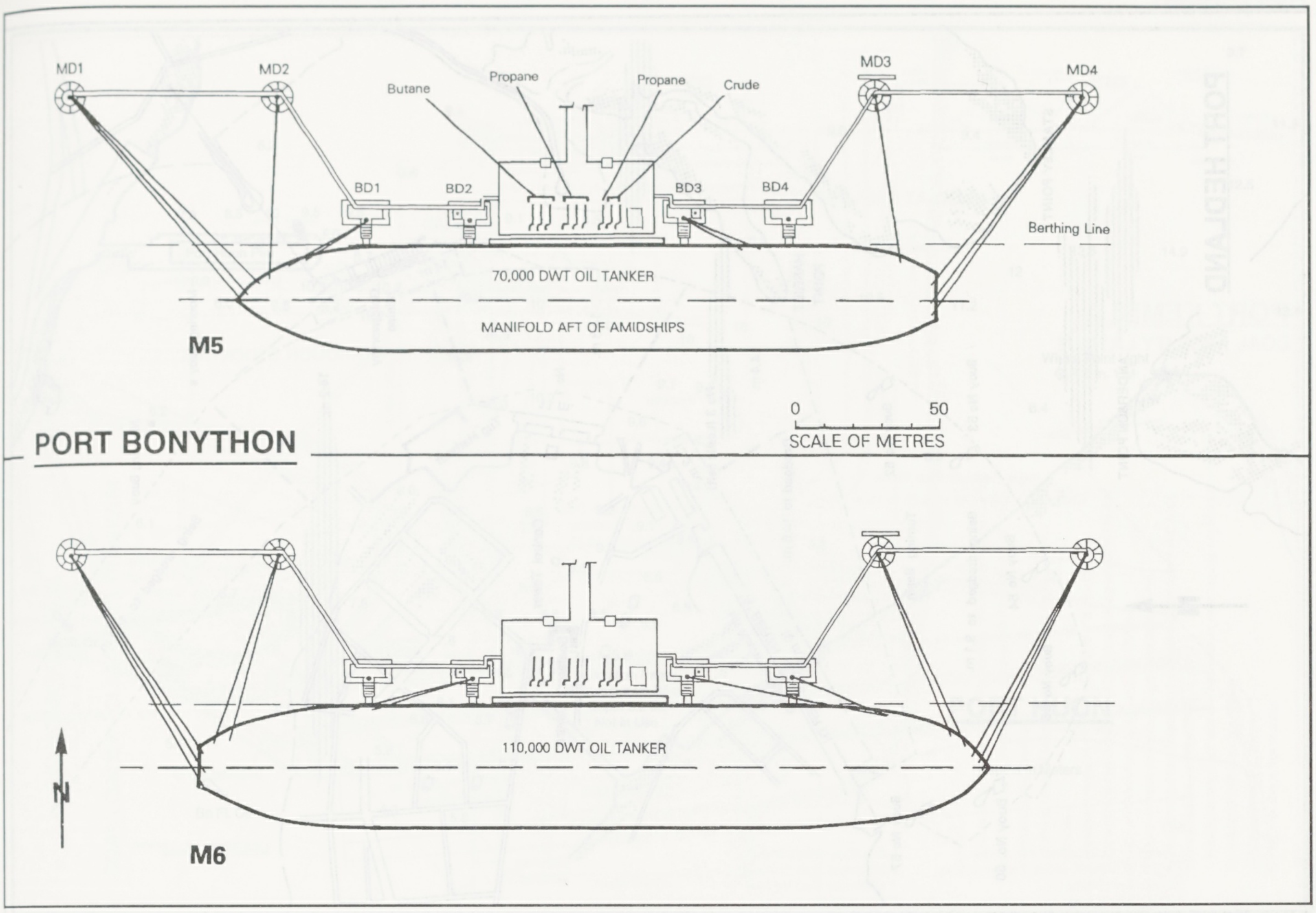

PORT BONYTHON
Communication Tower
Admin
Butane
Propane
Product Storage
Flares
Crude
FRN
Crude
West Exclusion Zone
East Exclusion Zone
Oil Spill Facility
Spencer Gulf
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
FRN Full Range Naphtha
● Emergency Exit Gates


PORT BONYTHON
N
25m.
25m.
25m.
5m.
4m.
Monitor Control Console Operating Station
Dry Chemical Powder Skid
Roadway
Access Walkway to Breasting Dolphin
Loading Arms
Butane 10in.(250mm.)
Propane 10in.(250mm.)
Propane 6in.(150mm.)
Crude/ FRN or Ballast 12in.(300mm.)
Control Room
Cargo Davit Access Way
25T Bollards
Fresh Water Connection
International Ship Connection
Continuous Fendering
Berthing Line
FRN Full Range Naphtha
Fire Monitor Tower
Fire Hydrant

JETTY HEAD — GENERAL ARRANGEMENT

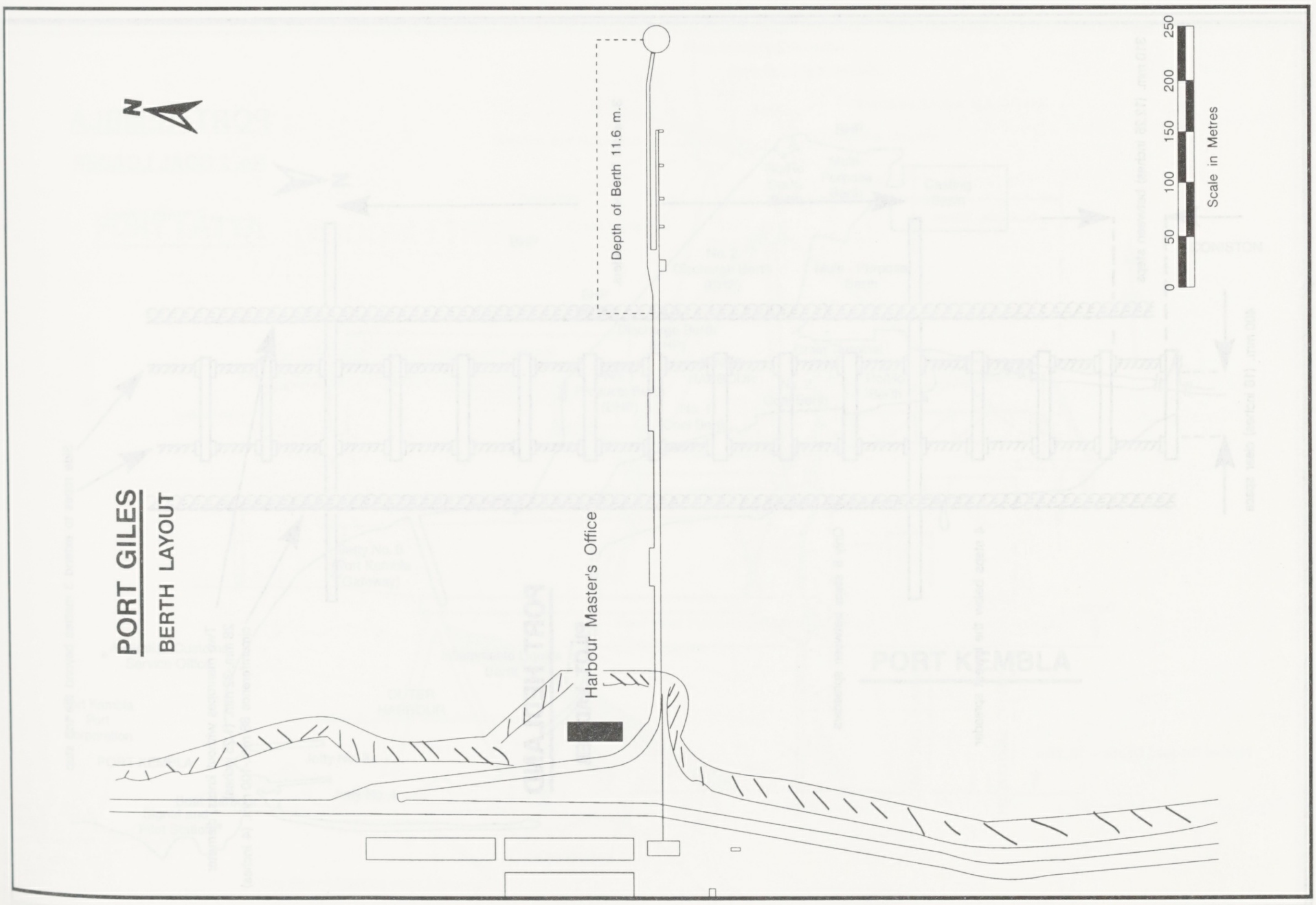

Propane
Propane
Butane
Crude
MD1
MD2
MD3
MD4
BD1
BD2
BD3
BD4
Berthing Line
LPG CARRIER 3,000 DWT
MANIFOLD AMIDSHIPS
M1
PORT BONYTHON
0
50
SCALE OF METRES
MD1
MD2
MD3
MD4
M2
BD1
BD2
BD3
BD4
N
TYPICAL 25,000 DWT TANKER


PORT BONYTHON
MOORING ARRANGEMENT
M3 & M4
Fire Monitor Tower
P = Propane 10 in.
B = Butane 10 in.
Po = Propane 6 in.
C = Crude 12 in.
0
10
50
100m.
NB All Quick Release Hooks are 120T capacity (QRH)
MD1
Triple QRH
MD2
Walkway
Small Craft Landing
Triple QRH
MD4
MD3
Walkway
Loading Platform
Fire Monitor Platforms
Loading Arms
B P Po C
Single QRH
Double QRH
BD1
BD2
BD3
BD4
Berthing Line
Double QRH
Single QRH
Control Room
LPG TANKER 170m. × 24m. 22,000cu.m. 14,000DWT
Typical LPG TANKER 233m. × 34m. 75,000cu.m. 45,000DWT
FLOOD Speed 1.3knots
EBB Speed 1.7knots



PORT BONYTHON

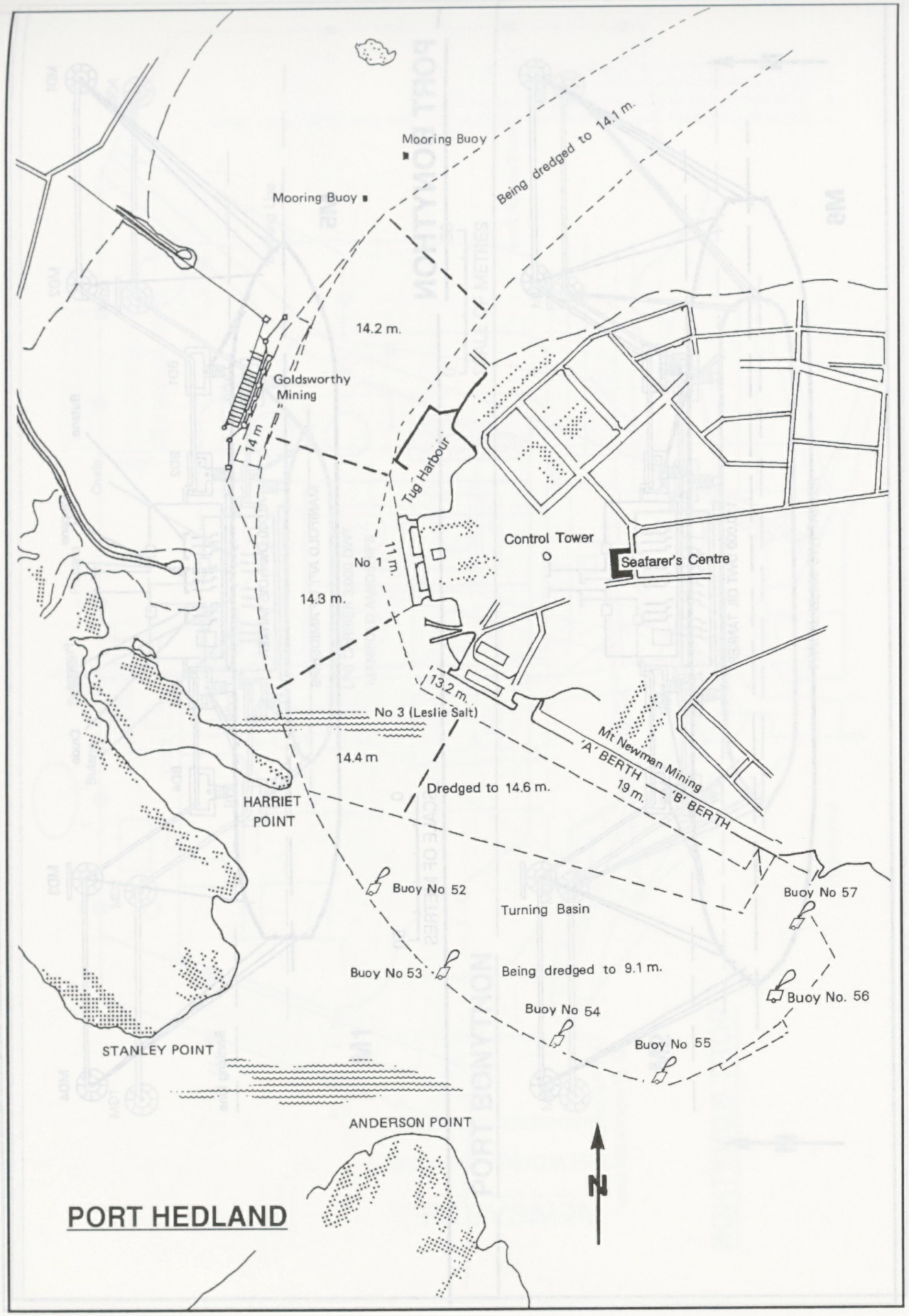
MD1
MD2
MD3
MD4
Butane
Propane
Propane
Crude
BD1
BD2
BD3
BD4
Berthing Line
70,000 DWT OIL TANKER
MANIFOLD AFT OF AMIDSHIPS
M5
0
50
SCALE OF METRES
110,000 DWT OIL TANKER
N
M6

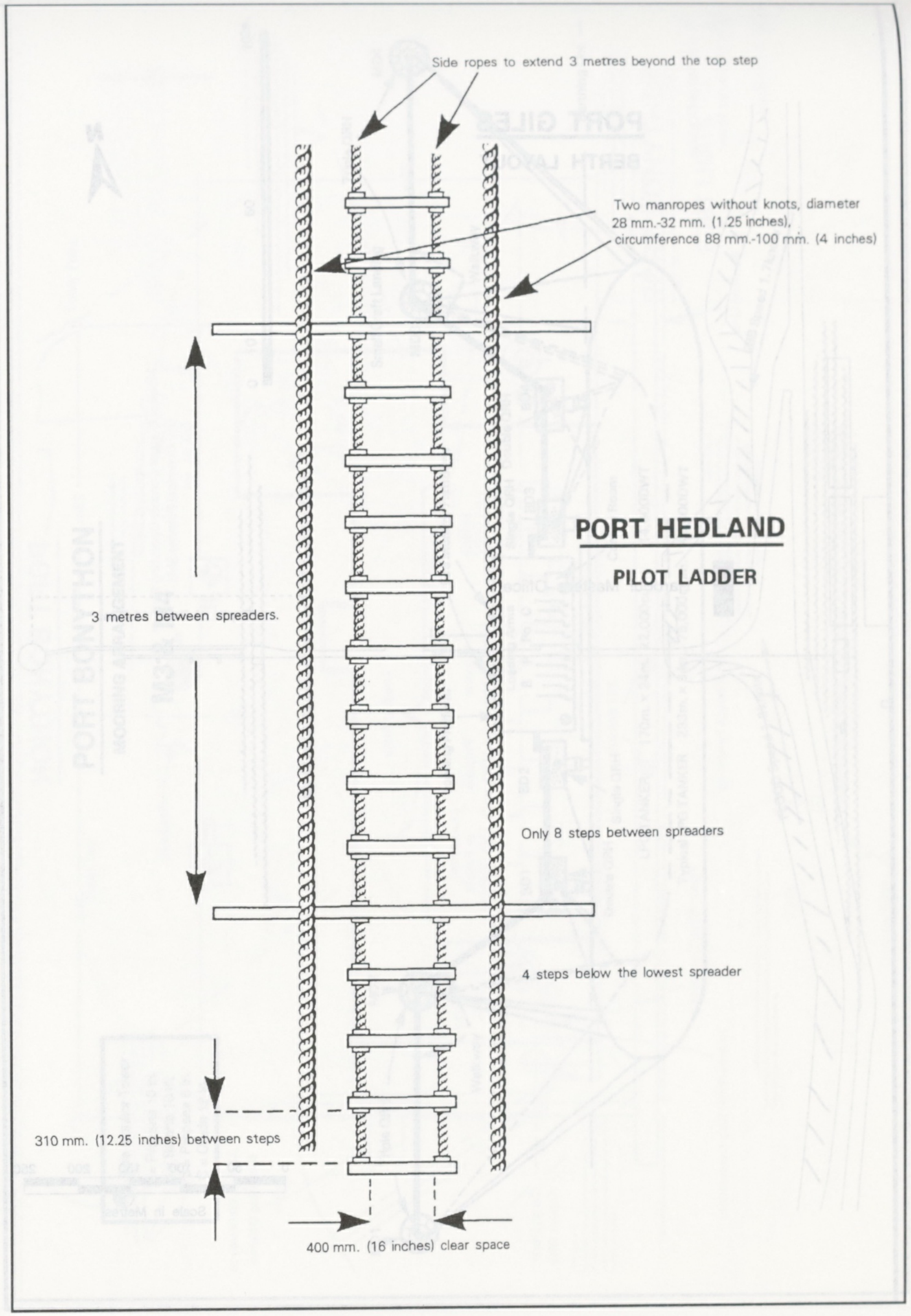


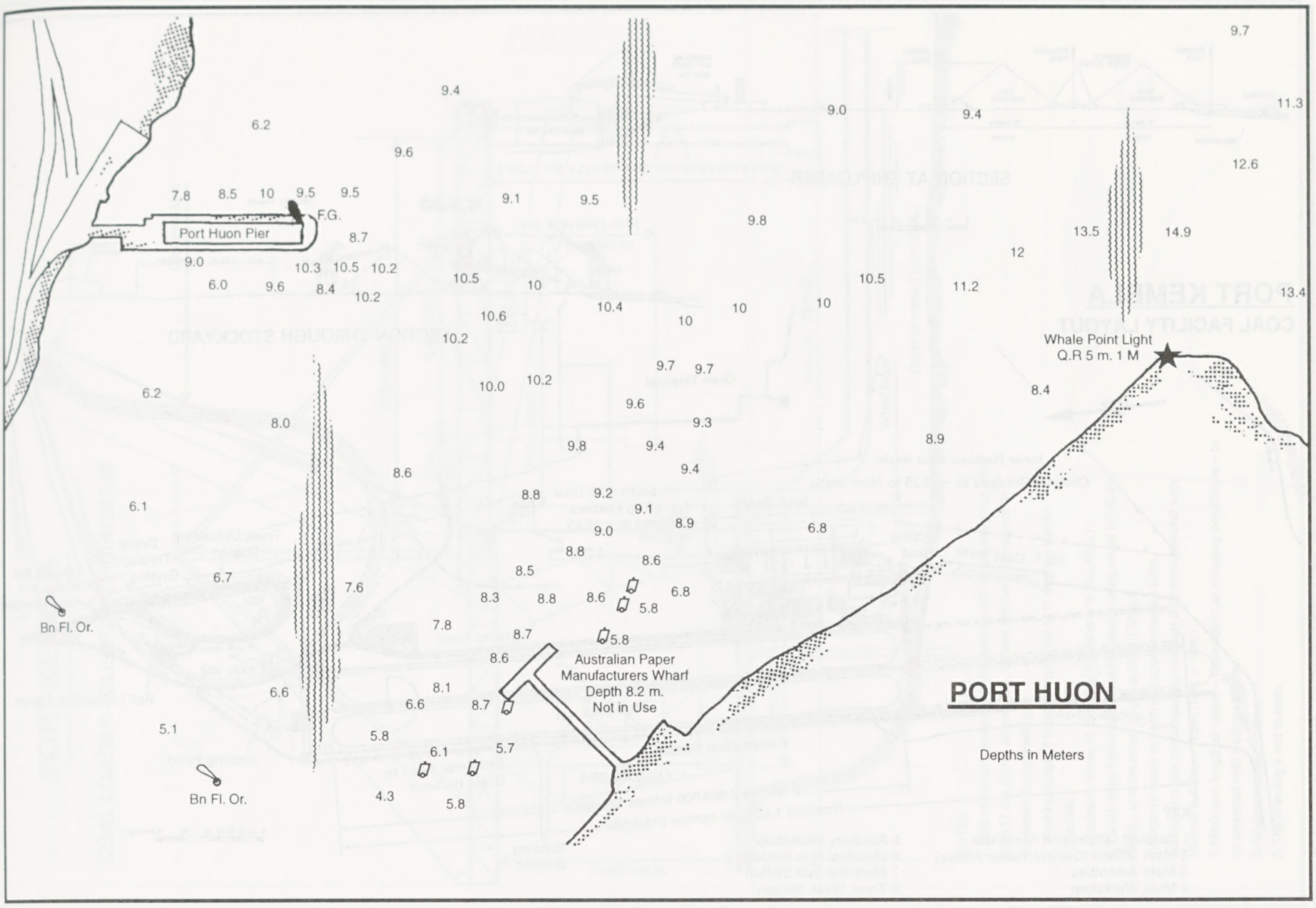
PORT GILES

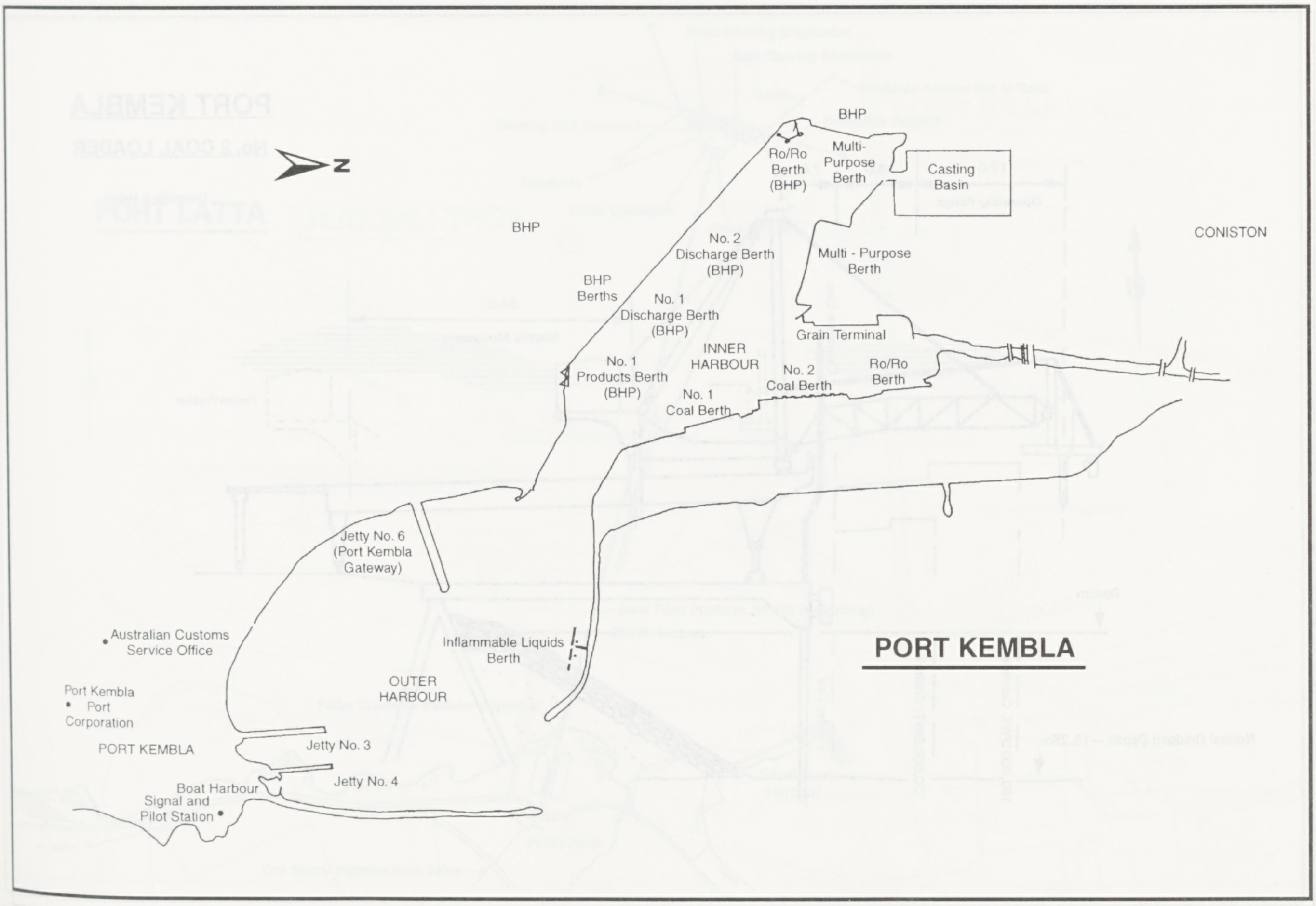
BERTH LAYOUT

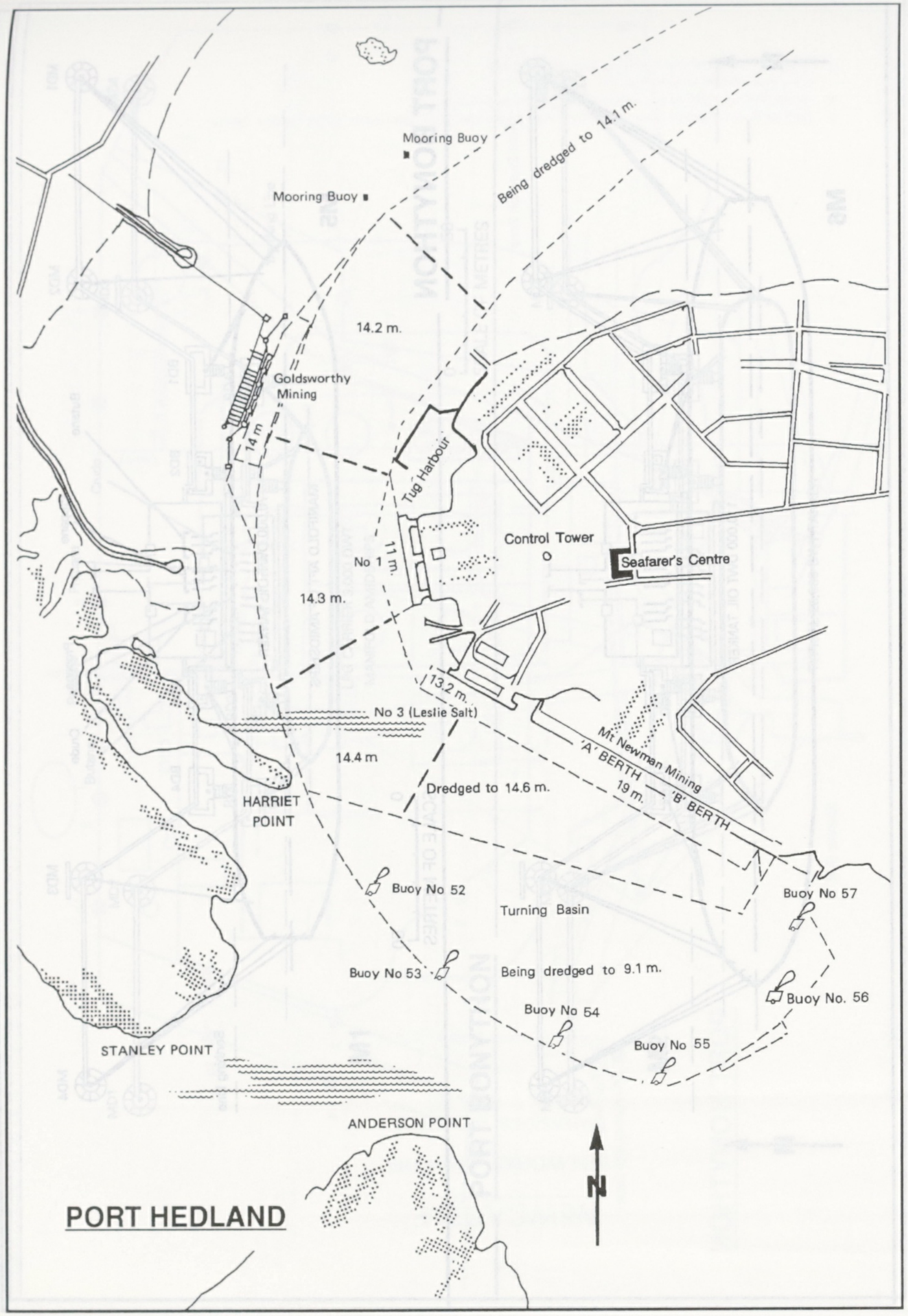
N
Depth of Berth 11.6 m.
Harbour Master's Office
0
50
100
150
200
250
Scale in Metres

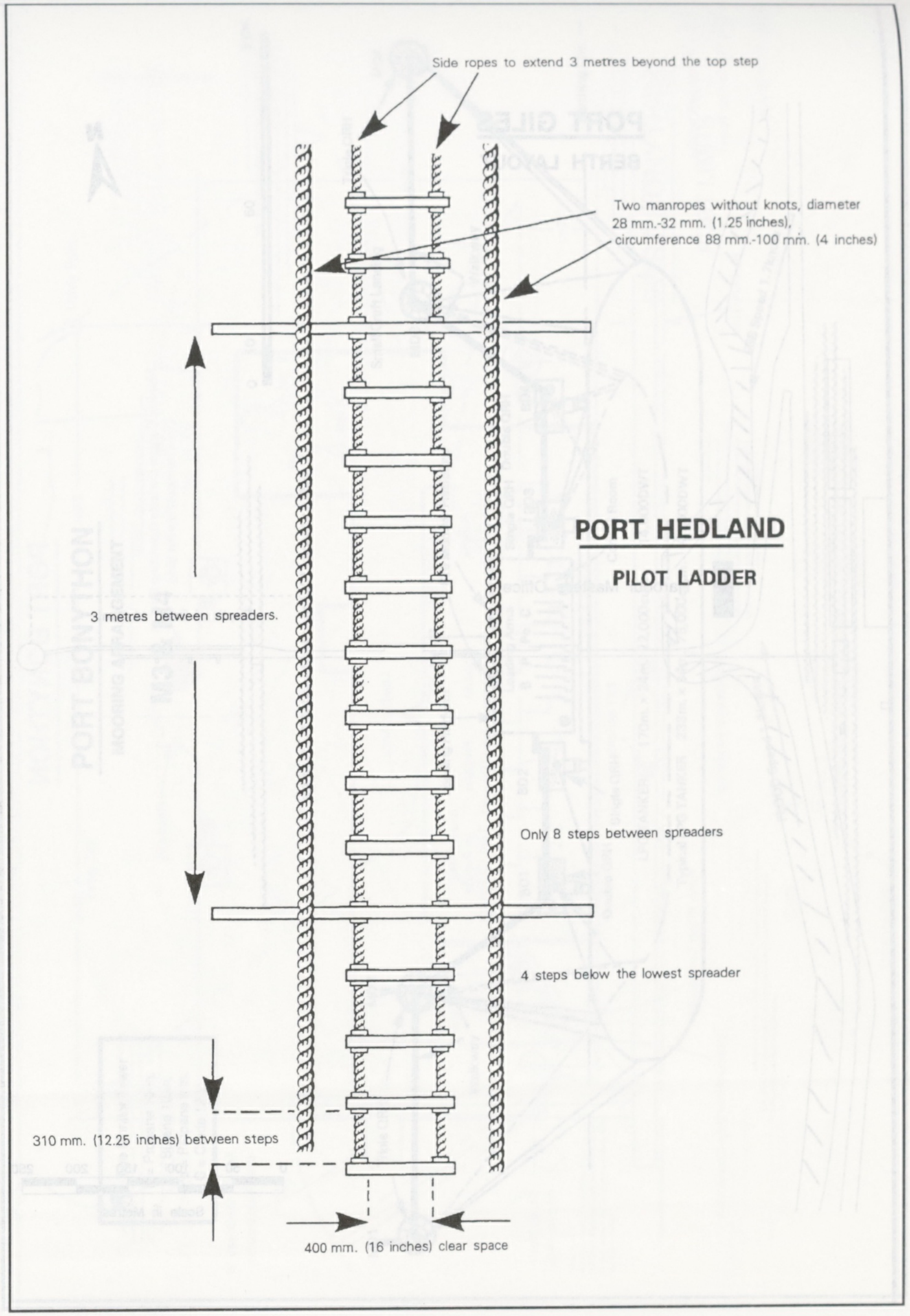

Mooring Buoy
Mooring Buoy
Being dredged to 14.1 m.
14.2 m.
Goldsworthy Mining
14 m
Tug Harbour
Control Tower
Seafarer's Centre
No 1
11 m.
14.3 m.
13.2 m.
No 3 (Leslie Salt)
Mt Newman Mining
'A' BERTH
'B' BERTH
19 m.
14.4 m
Dredged to 14.6 m.
HARRIET POINT
Buoy No 52
Turning Basin
Buoy No 57
Buoy No 53
Being dredged to 9.1 m.
Buoy No. 56
Buoy No 54
Buoy No 55
STANLEY POINT
ANDERSON POINT
N
PORT HEDLAND

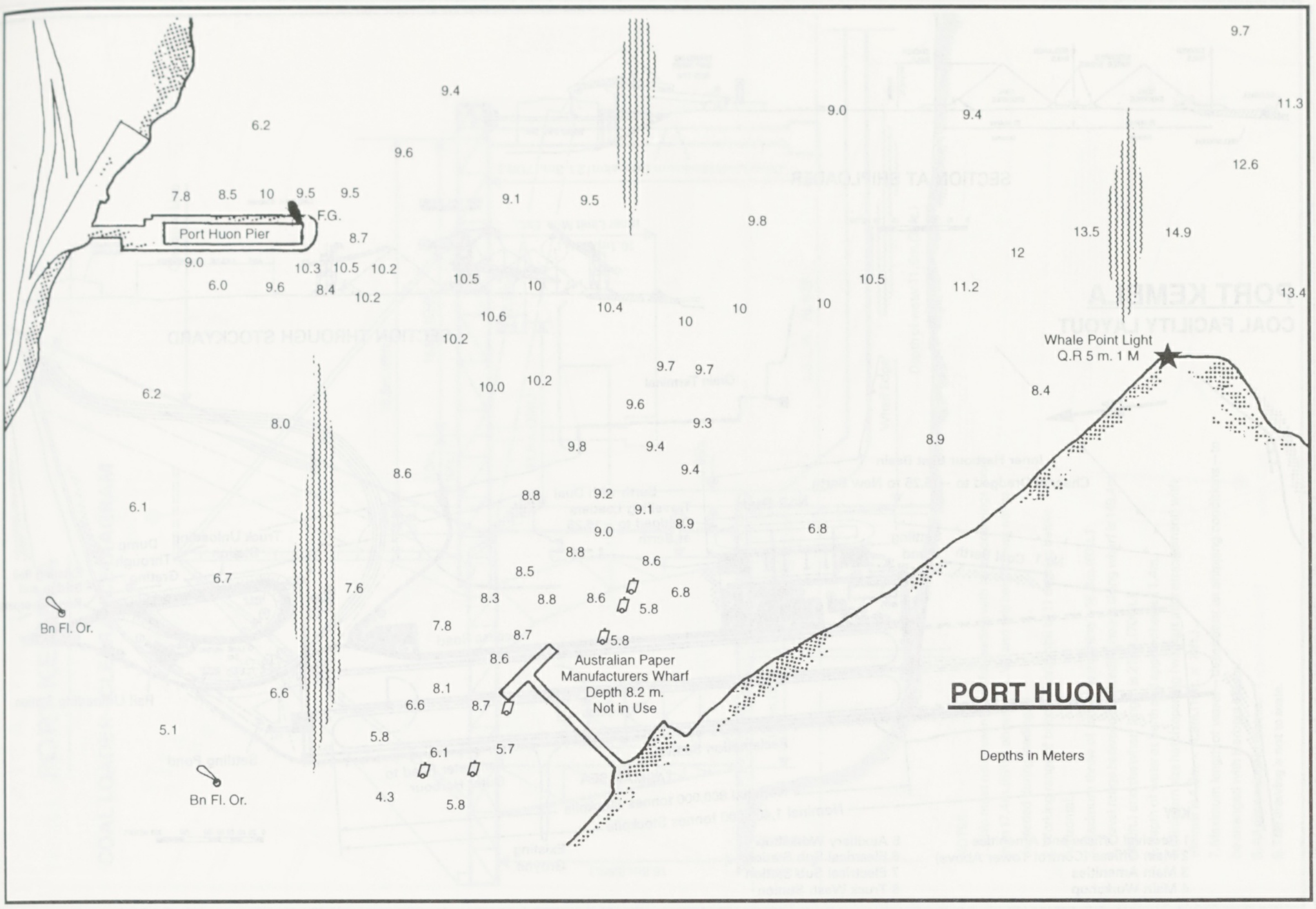

Side ropes to extend 3 metres beyond the top step
Two manropes without knots, diameter 28 mm.-32 mm. (1.25 inches), circumference 88 mm.-100 mm. (4 inches)
PORT HEDLAND
PILOT LADDER
3 metres between spreaders.
Only 8 steps between spreaders
4 steps below the lowest spreader
310 mm. (12.25 inches) between steps
400 mm. (16 inches) clear space

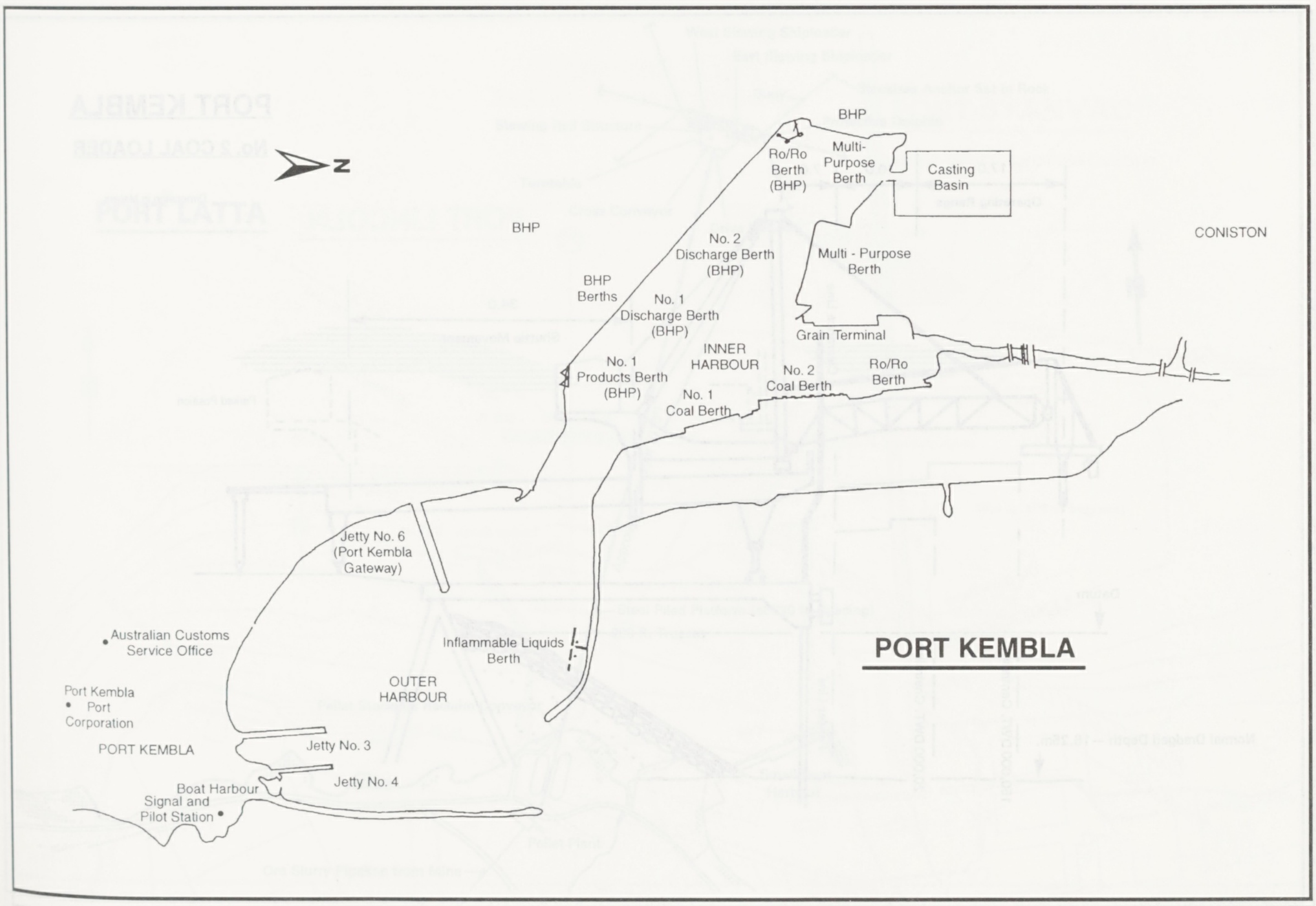

9.7
11.3
9.4
9.0
9.4
6.2
9.6
12.6
7.8
8.5
10
9.5
9.5
F.G.
9.1
9.5
Port Huon Pier
8.7
9.8
13.5
14.9
12
9.0
10.3
10.5
10.2
6.0
9.6
8.4
10.2
10.5
10
10.5
11.2
13.4
10.6
10.4
10
10
10
10.2
Whale Point Light
Q.R 5 m. 1 M
9.7
9.7
10.2
10.0
6.2
8.4
9.6
8.0
9.3
8.9
9.8
9.4
8.6
9.4
8.8
9.2
6.1
9.1
8.9
6.8
9.0
8.8
8.6
6.7
8.5
7.6
6.8
8.3
8.8
8.6
5.8
Bn Fl. Or.
7.8
8.7
5.8
8.6
Australian Paper
Manufacturers Wharf
Depth 8.2 m.
Not in Use
8.1
PORT HUON
6.6
8.7
6.6
5.1
5.8
6.1
5.7
Depths in Meters
Bn Fl. Or.
4.3
5.8

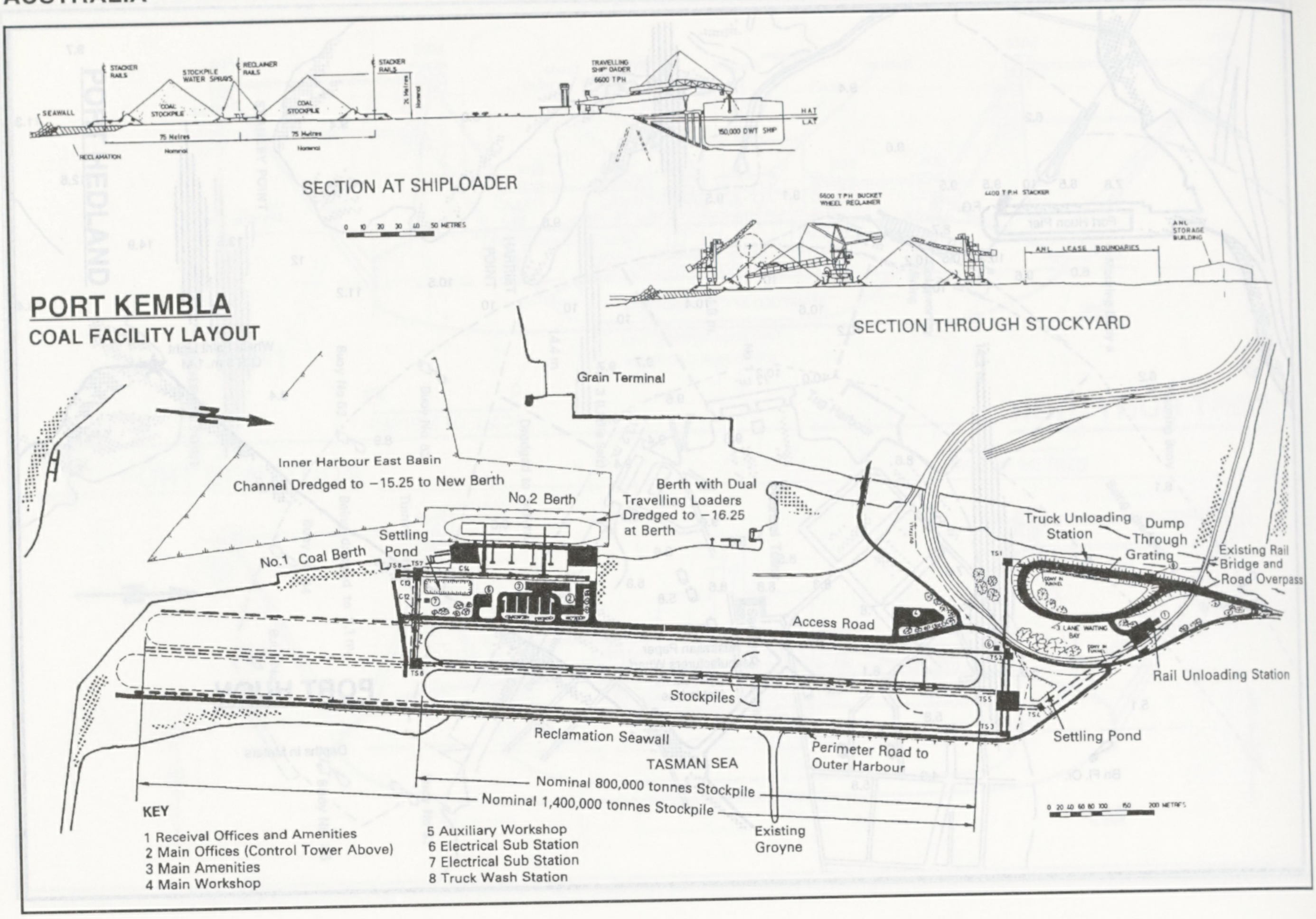

BHP
N
Ro/Ro Berth (BHP)
Multi-Purpose Berth
Casting Basin
BHP
CONISTON
No. 2 Discharge Berth (BHP)
Multi - Purpose Berth
BHP Berths
No. 1 Discharge Berth (BHP)
Grain Terminal
INNER HARBOUR
No. 1 Products Berth (BHP)
No. 2 Coal Berth
Ro/Ro Berth
No. 1 Coal Berth
Jetty No. 6 (Port Kembla Gateway)
Australian Customs Service Office
Inflammable Liquids Berth
PORT KEMBLA
Port Kembla Port Corporation
OUTER HARBOUR
PORT KEMBLA
Jetty No. 3
Boat Harbour
Signal and Pilot Station
Jetty No. 4


Mooring Buoy
Mooring Buoy
Being dredged to 14.1 m.
14.2 m.
Goldsworthy Mining
14 m
Tug Harbour
Control Tower
Seafarer's Centre
No 1
11 m.
14.3 m.
13.2 m.
No 3 (Leslie Salt)
14.4 m
Mt Newman Mining
'A' BERTH
'B' BERTH
19 m.
Dredged to 14.6 m.
HARRIET POINT
Buoy No 52
Turning Basin
Buoy No 57
Buoy No 53
Being dredged to 9.1 m.
Buoy No. 56
Buoy No 54
Buoy No 55
STANLEY POINT
ANDERSON POINT
N
PORT HEDLAND


Side ropes to extend 3 metres beyond the top step
Two manropes without knots, diameter 28 mm.-32 mm. (1.25 inches), circumference 88 mm.-100 mm. (4 inches)
PORT HEDLAND
PILOT LADDER
3 metres between spreaders.
Only 8 steps between spreaders
4 steps below the lowest spreader
310 mm. (12.25 inches) between steps
400 mm. (16 inches) clear space

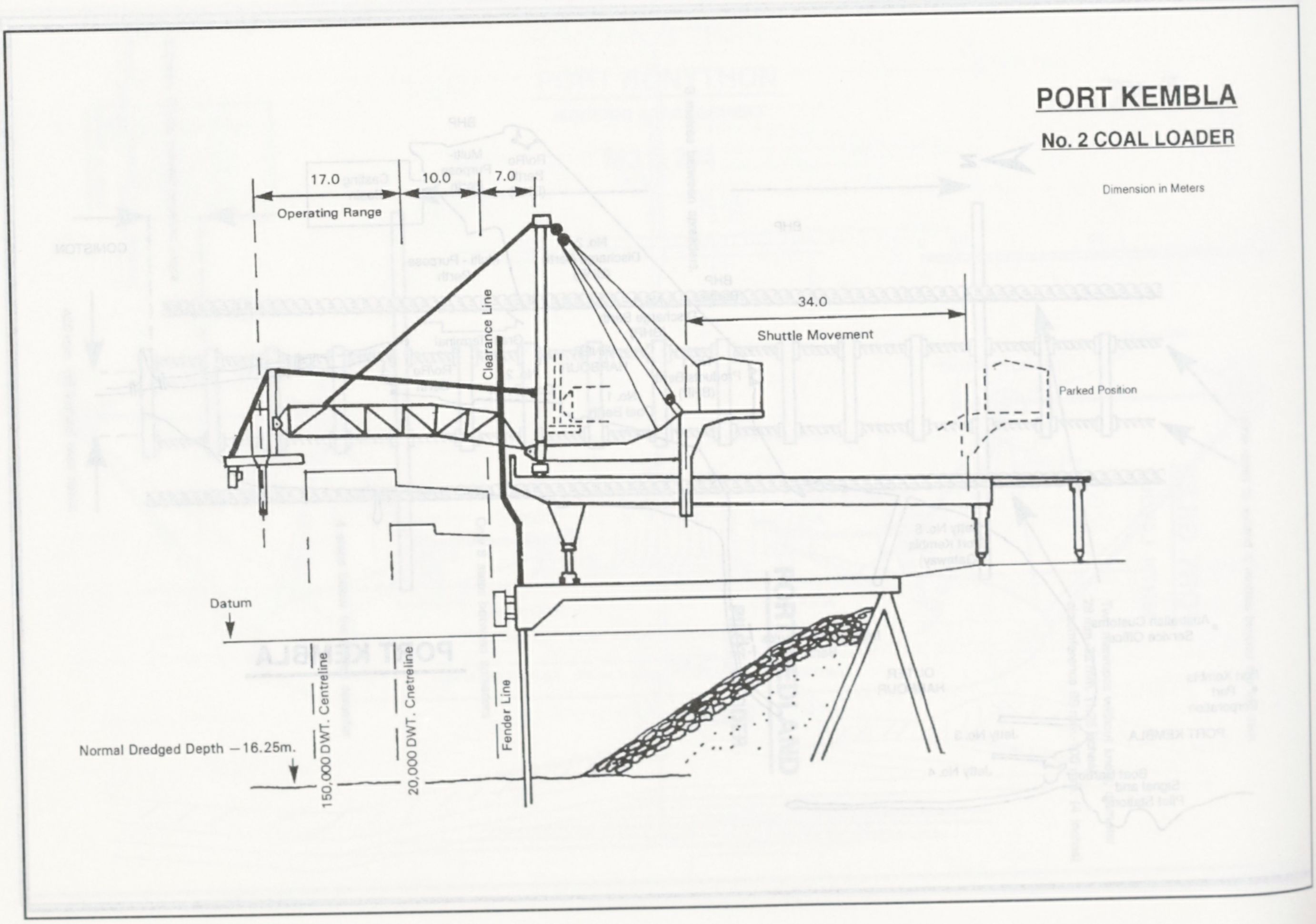

PORT HUON
Depths in Meters
Port Huon Pier
F.G.
Whale Point Light
Q.R 5 m. 1 M
Australian Paper
Manufacturers Wharf
Depth 8.2 m.
Not in Use
Bn Fl. Or.
Bn Fl. Or.
9.7
11.3
9.4
9.0
9.4
12.6
6.2
9.6
7.8
8.5
10
9.5
9.5
9.1
9.5
13.5
14.9
8.7
9.8
12
9.0
10.3
10.5
10.2
6.0
9.6
8.4
10.2
10.5
10
10.5
11.2
13.4
10.6
10.4
10
10
10
10.2
9.7
9.7
8.4
6.2
10.0
10.2
9.6
8.0
9.3
8.9
9.8
9.4
8.6
9.4
8.8
9.2
6.1
9.1
8.9
6.8
9.0
8.8
8.6
6.7
8.5
7.6
6.8
8.3
8.8
8.6
5.8
7.8
8.7
5.8
8.6
8.1
6.6
6.6
8.7
5.1
5.8
6.1
5.7
4.3
5.8


N
PORT KEMBLA
BHP
Ro/Ro
Berth
(BHP)
Multi-
Purpose
Berth
Casting
Basin
CONISTON
BHP
No. 2
Discharge Berth
(BHP)
Multi - Purpose
Berth
BHP
Berths
No. 1
Discharge Berth
(BHP)
Grain Terminal
INNER
HARBOUR
No. 1
Products Berth
(BHP)
No. 2
Coal Berth
Ro/Ro
Berth
No. 1
Coal Berth
Jetty No. 6
(Port Kembla
Gateway)
Australian Customs
Service Office
Inflammable Liquids
Berth
Port Kembla
Port
Corporation
OUTER
HARBOUR
PORT KEMBLA
Jetty No. 3
Jetty No. 4
Boat Harbour
Signal and
Pilot Station



PORT KEMBLA
COAL FACILITY LAYOUT

STACKER RAILS
STOCKPILE WATER SPRAYS
RECLAIMER RAILS
STACKER RAILS
SEAWALL
COAL STOCKPILE
COAL STOCKPILE
RECLAMATION
75 Metres Nominal
75 Metres Nominal
26 Metres Nominal
TRAVELLING SHIP OADER 6600 TPH
HAT
LAT
150,000 DWT SHIP
SECTION AT SHIPLOADER
0 10 20 30 40 50 METRES
6600 T P H BUCKET WHEEL RECLAIMER
4400 T P H STACKER
ANL LEASE BOUNDARIES
ANL STORAGE BUILDING
SECTION THROUGH STOCKYARD
N
Grain Terminal
Inner Harbour East Basin
Channel Dredged to −15.25 to New Berth
No.2 Berth
Berth with Dual Travelling Loaders Dredged to −16.25 at Berth
No.1 Coal Berth
Settling Pond
Truck Unloading Station
Dump Through Grating
Existing Rail Bridge and Road Overpass
Access Road
Rail Unloading Station
Stockpiles
Reclamation Seawall
TASMAN SEA
Perimeter Road to Outer Harbour
Settling Pond
Nominal 800,000 tonnes Stockpile
Nominal 1,400,000 tonnes Stockpile
Existing Groyne
0 20 40 60 80 100 150 200 METRES
KEY
1 Receival Offices and Amenities
2 Main Offices (Control Tower Above)
3 Main Amenities
4 Main Workshop
5 Auxiliary Workshop
6 Electrical Sub Station
7 Electrical Sub Station
8 Truck Wash Station

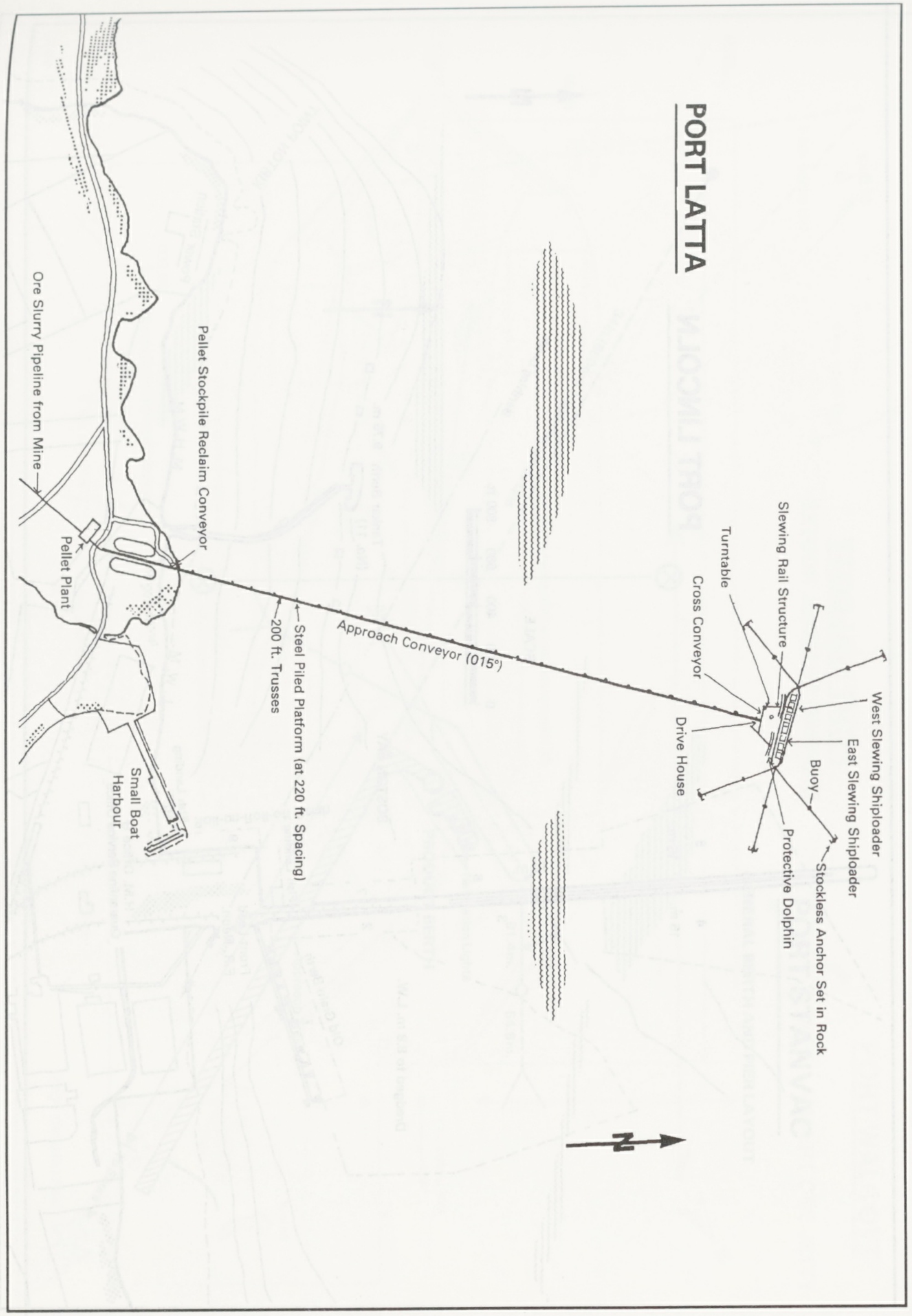


PORT KEMBLA
No. 2 COAL LOADER

Dimension in Meters

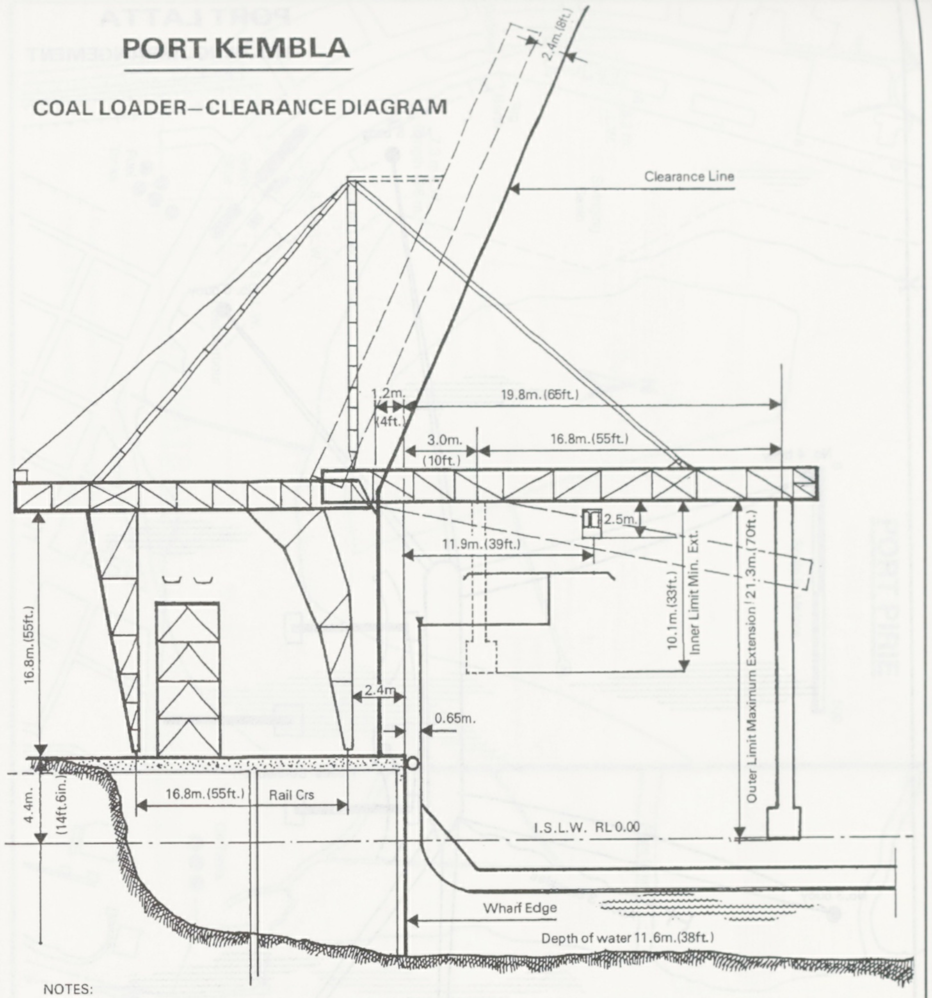
17.0
10.0
7.0
Operating Range
Clearance Line
34.0
Shuttle Movement
Parked Position
Datum
150,000 DWT. Centreline
20,000 DWT. Cnetreline
Fender Line
Normal Dredged Depth −16.25m.

PORT LATTA


Ore Slurry Pipeline from Mine
Pellet Plant
Pellet Stockpile Reclaim Conveyor
Approach Conveyor (015°)
Steel Piled Platform (at 220 ft. Spacing)
200 ft. Trusses
Small Boat Harbour
Turntable
Slewing Rail Structure
Cross Conveyor
Drive House
West Slewing Shiploader
East Slewing Shiploader
Buoy
Stockless Anchor Set in Rock
Protective Dolphin
N

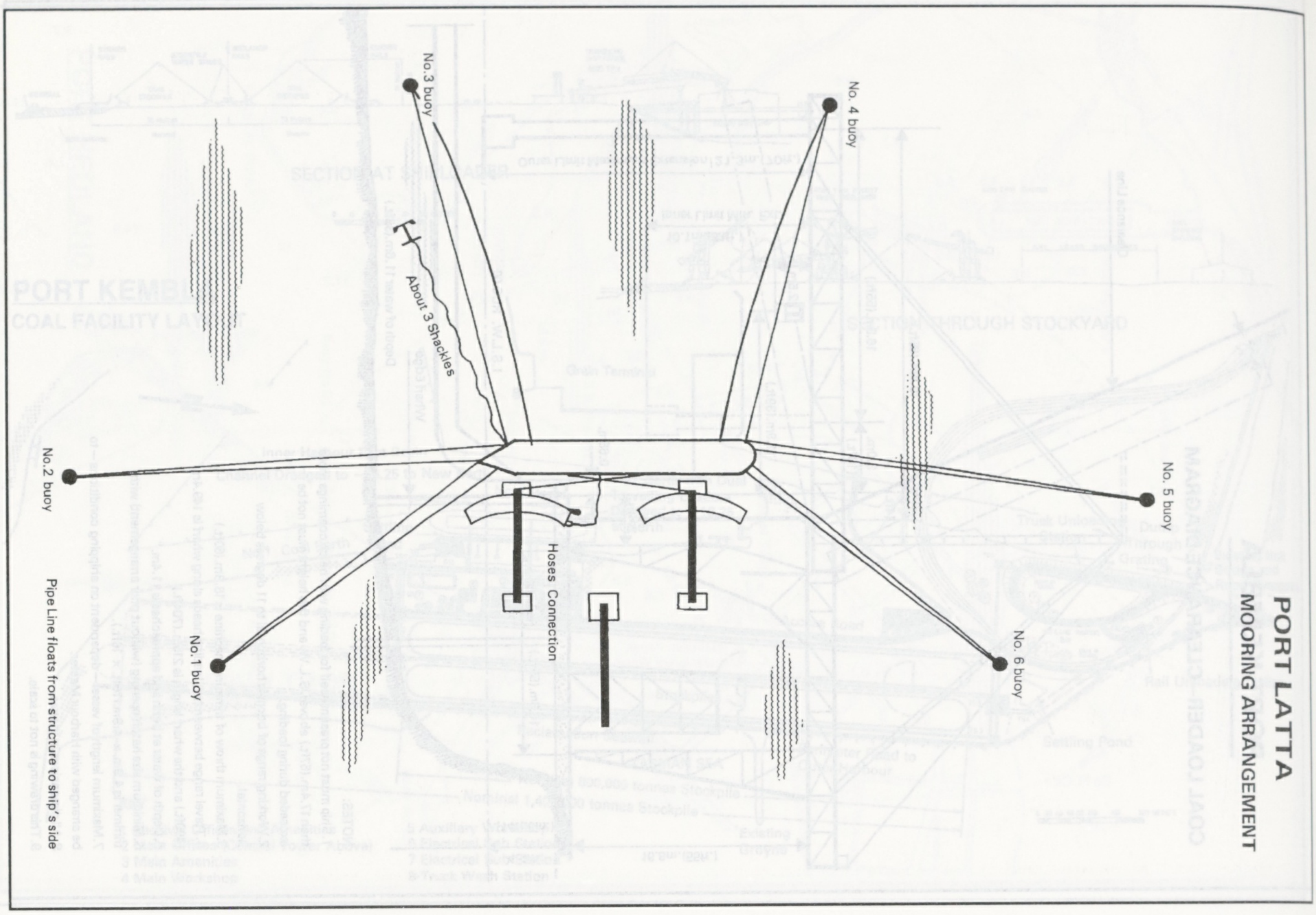
PORT KEMBLA

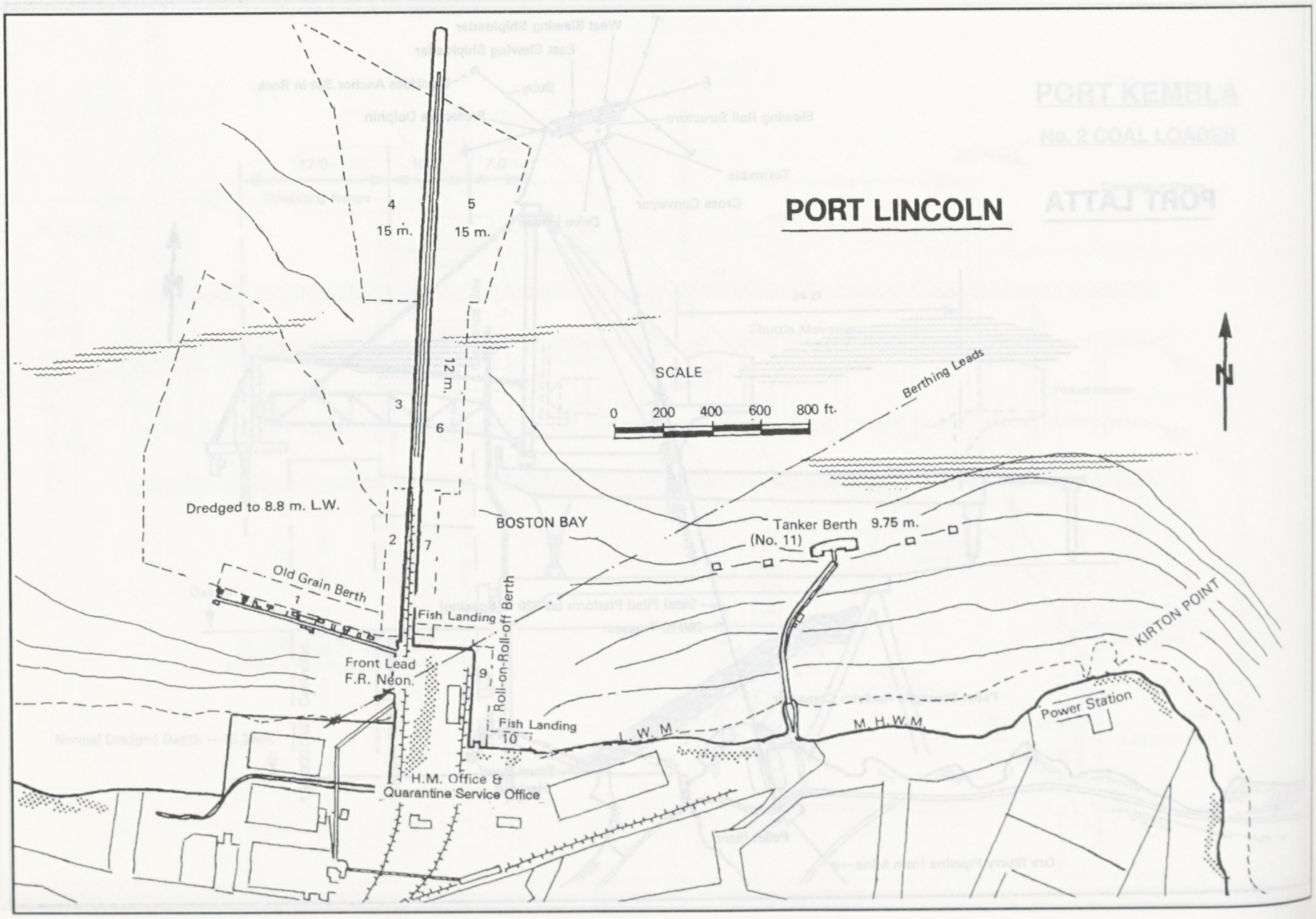
COAL LOADER—CLEARANCE DIAGRAM

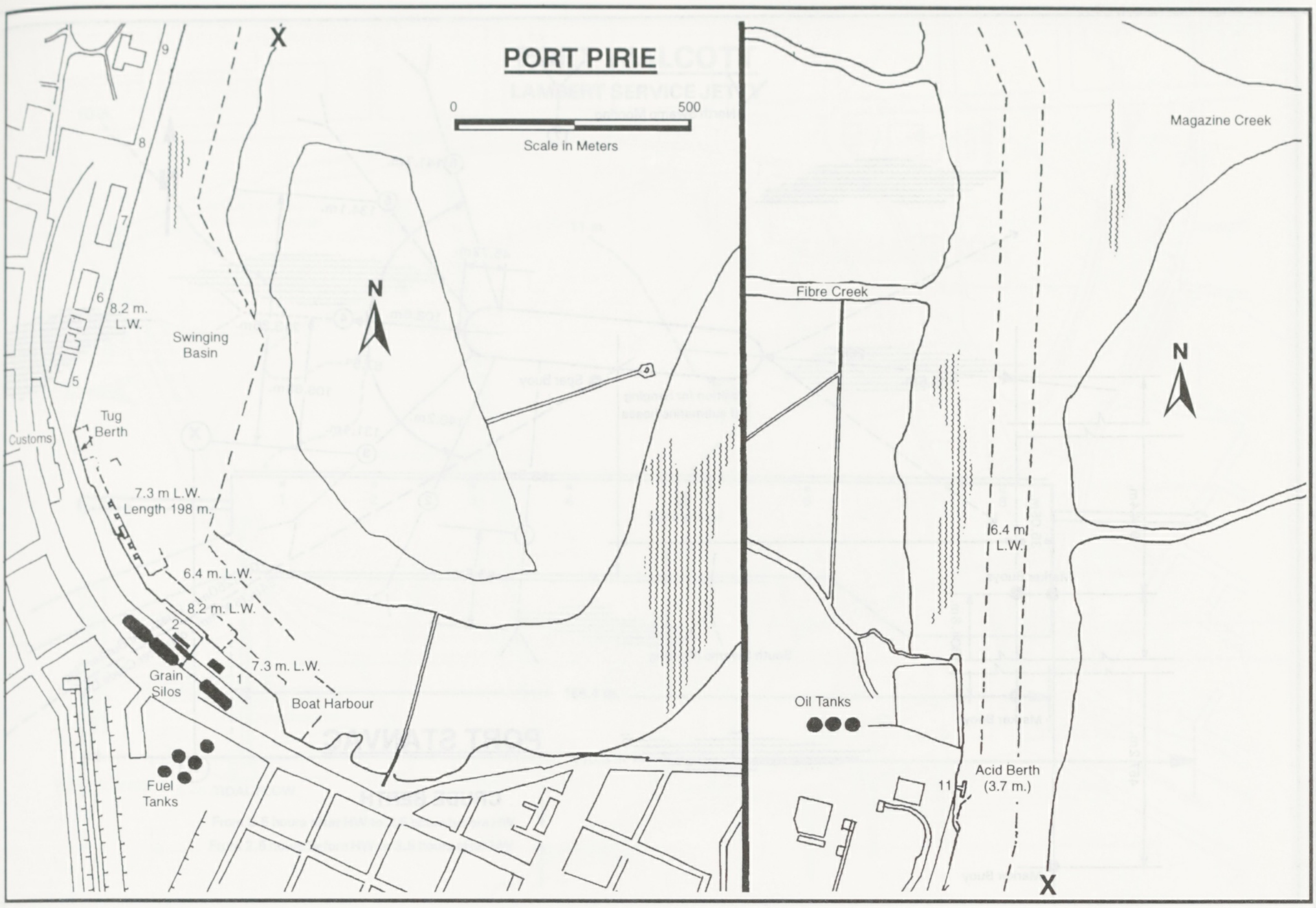

2.4m.(8ft.)
Clearance Line
1.2m.
(4ft.)
19.8m.(65ft.)
3.0m.
(10ft.)
16.8m.(55ft.)
2.5m.
11.9m.(39ft.)
10.1m.(33ft.)
Inner Limit Min. Ext.
Outer Limit Maximum Extension 21.3m.(70ft.)
16.8m.(55ft.)
2.4m
0.65m.
4.4m.
(14ft.6in.)
16.8m.(55ft.)
Rail Crs
I.S.L.W. RL 0.00
Wharf Edge
Depth of water 11.6m.(38ft.)

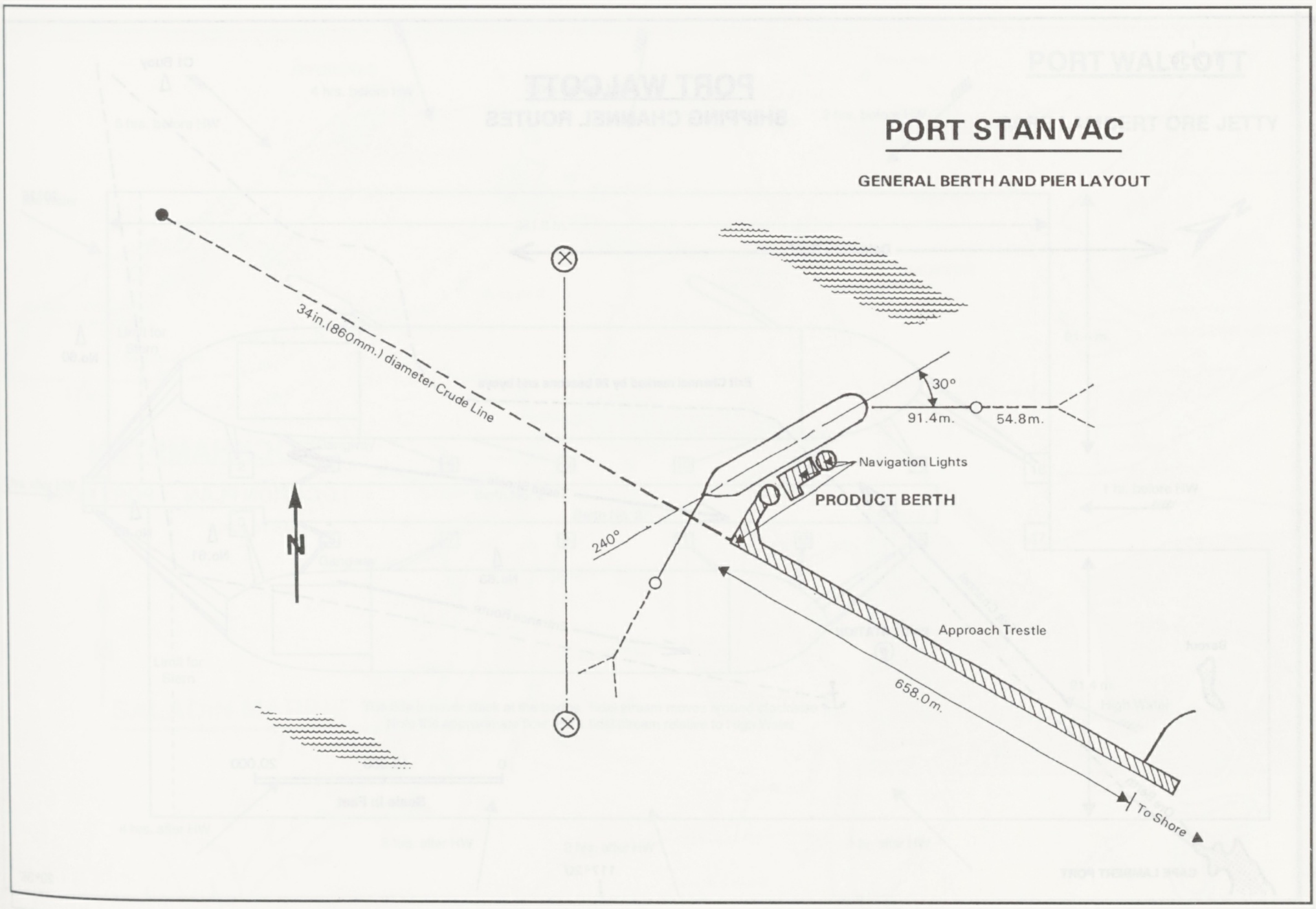
NOTES:

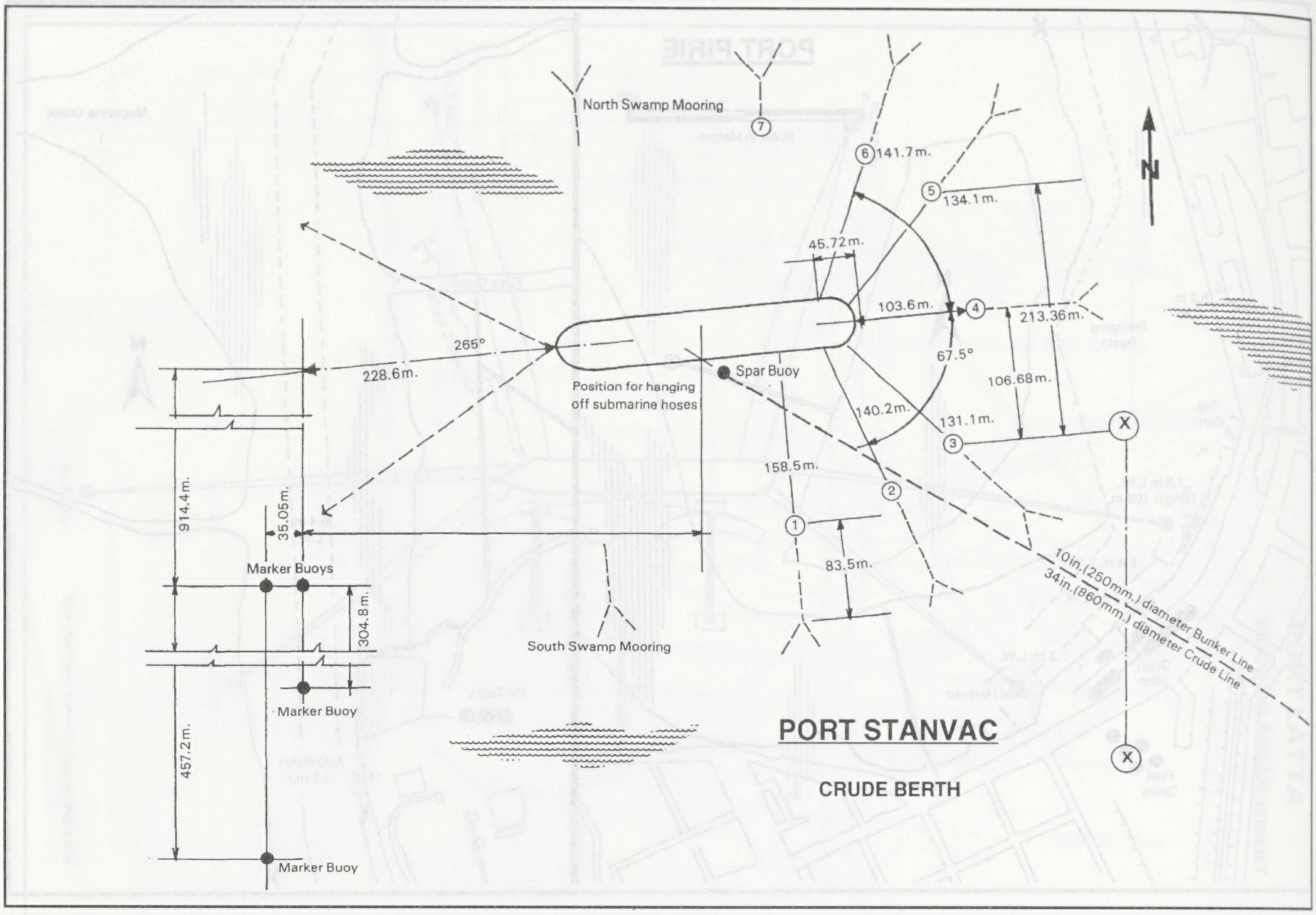
1. Ship must not present itself for loading with hatch coamings more than 17.4m.(57ft.) above I.S.L.W. and this height must not be exceeded during loading.
2. Working range of boom is horizontal to 11 degrees below horizontal.
3. Maximum throw of trimming machine is 18.3m.(60ft.)
4. Travel range between two loading heads along wharf is 149.4m. (490ft.) and the wharf length is 215m.(704ft.)
5. Depth of water at berth and approaches is 11.4m.
6. Minimum size hatch opening (without prior arrangement) with trimmer is 4.9m. × 4.9m.(16ft. × 16ft.).
7. Maximum length of vessel—dependent on shipping conditions—to be arranged with Harbour Master.
8. All dimensions in metres.
9. This drawing is not to scale.


PORT LATTA
MOORING ARRANGEMENT
No.3 buoy
No. 4 buoy
About 3 Shackles
No.2 buoy
No. 5 buoy
Hoses Connection
No.1 buoy
No. 6 buoy
Pipe Line floats from structure to ship's side


PORT LINCOLN
4
15 m.
5
15 m.
12 m.
3
6
SCALE
0 200 400 600 800 ft.
Berthing Leads
N
Dredged to 8.8 m. L.W.
2
7
BOSTON BAY
Tanker Berth
(No. 11)
9.75 m.
Old Grain Berth
1
Fish Landing
Roll-on-Roll-off Berth
9
Front Lead
F.R. Neon.
Fish Landing
10
L.W.M.
M.H.W.M.
Power Station
KIRTON POINT
H.M. Office &
Quarantine Service Office


PORT PIRIE
0
500
Scale in Meters
X
9
8
7
6
8.2 m.
L.W.
Swinging
Basin
5
Customs
Tug
Berth
7.3 m L.W.
Length 198 m.
6.4 m. L.W.
8.2 m. L.W.
2
7.3 m. L.W.
Grain
Silos
1
Boat Harbour
Fuel
Tanks
N
Fibre Creek
Magazine Creek
N
6.4 m
L.W.
Oil Tanks
Acid Berth
(3.7 m.)
11
X

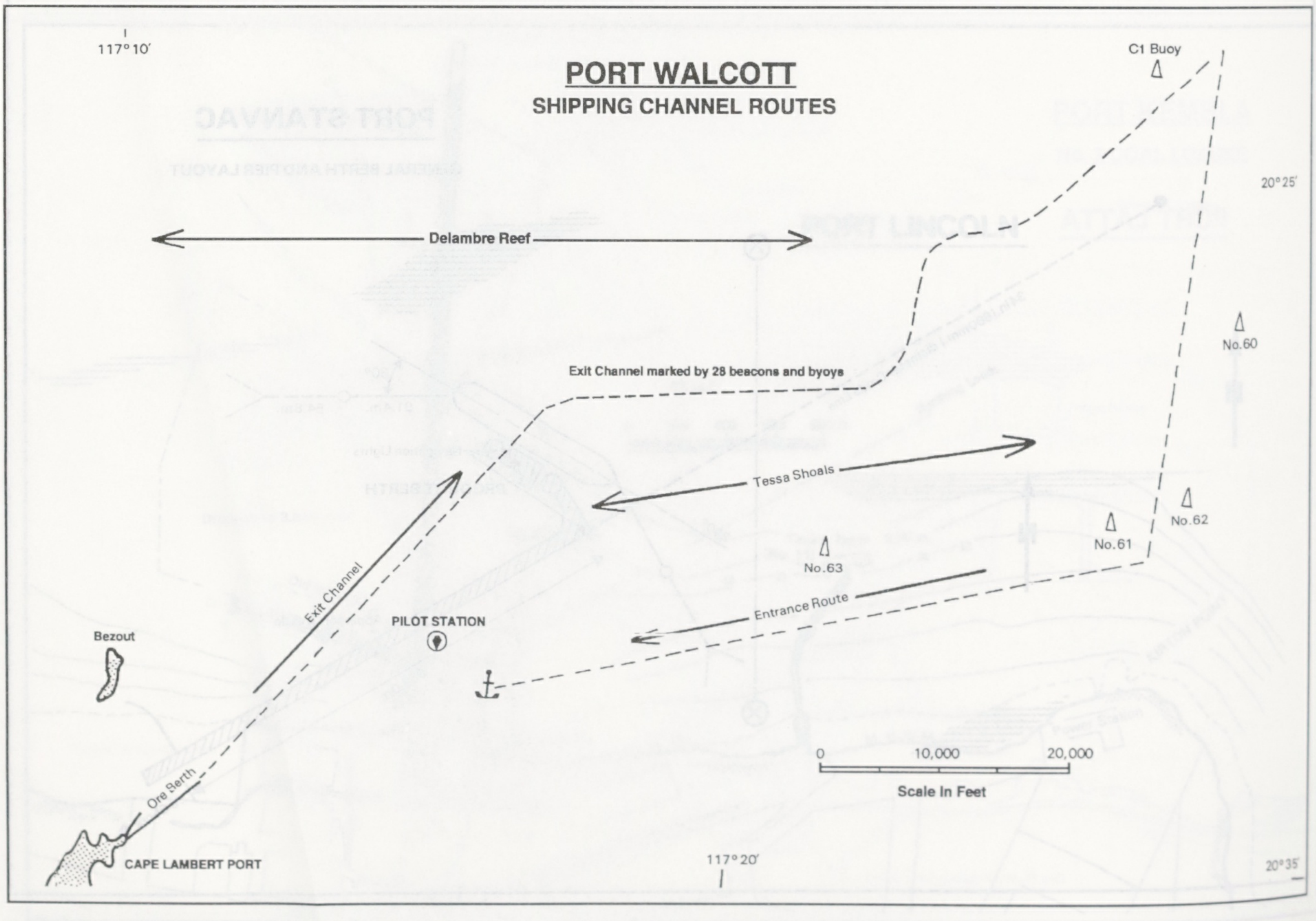

PORT STANVAC
GENERAL BERTH AND PIER LAYOUT
34in.(860mm.) diameter Crude Line
30°
91.4m.
54.8m.
Navigation Lights
PRODUCT BERTH
240°
N
Approach Trestle
658.0m.
To Shore



PORT STANVAC

CRUDE BERTH

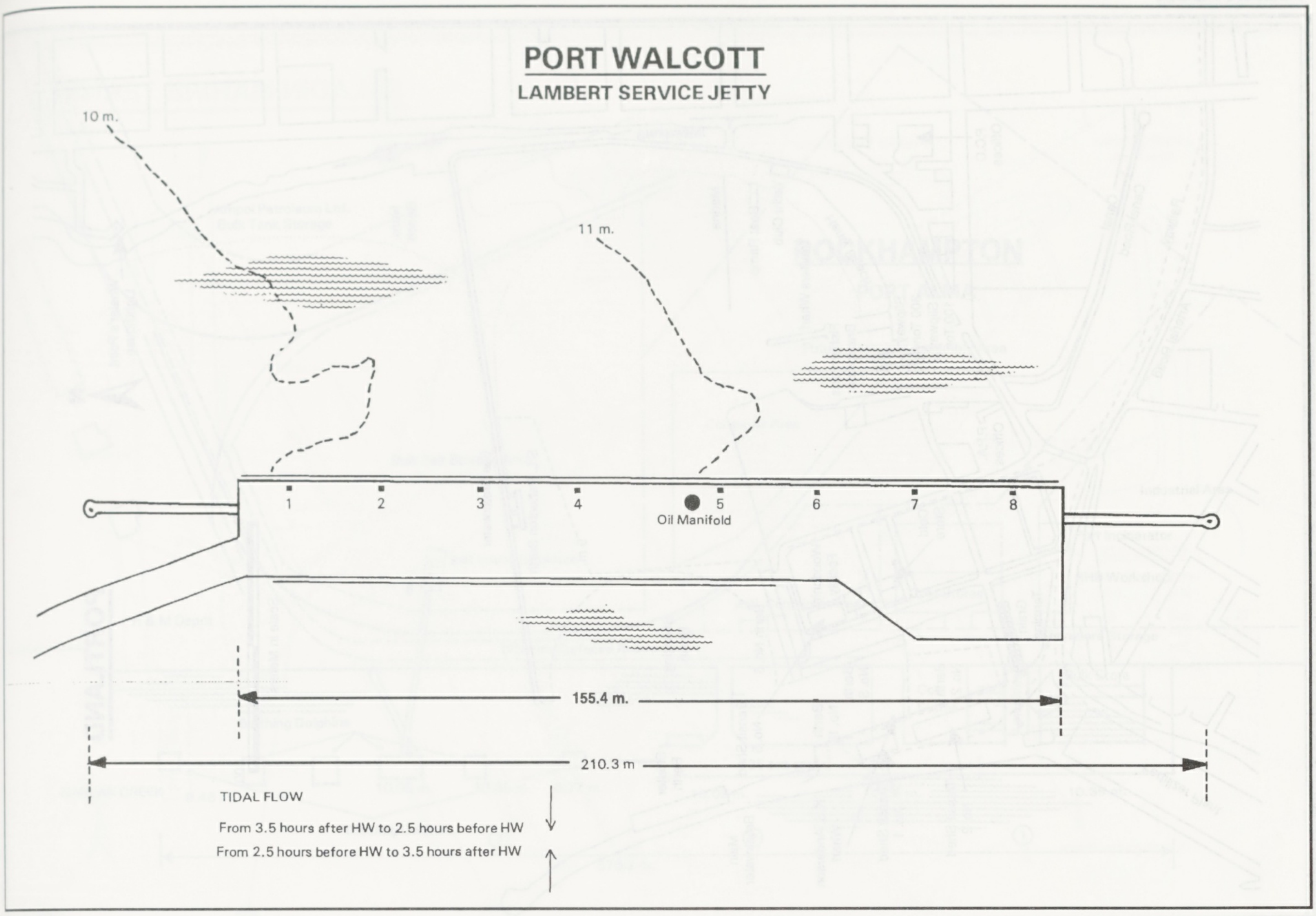
North Swamp Mooring
⑦
⑥ 141.7 m.
⑤ 134.1 m.
45.72 m.
103.6 m.
④
213.36 m.
67.5°
106.68 m.
265°
228.6 m.
Spar Buoy
Position for hanging off submarine hoses
140.2 m.
131.1 m.
③
②
158.5 m.
①
83.5 m.
914.4 m.
35.05 m.
Marker Buoys
304.8 m.
South Swamp Mooring
Marker Buoy
457.2 m.
Marker Buoy
10in.(250mm.) diameter Bunker Line
34in.(860mm.) diameter Crude Line
N
X
X



PORT WALCOTT

SHIPPING CHANNEL ROUTES

117° 10′
C1 Buoy
20° 25′
Delambre Reef
No.60
Exit Channel marked by 28 beacons and byoys
Tessa Shoals
No.62
No.61
No.63
Exit Channel
PILOT STATION
Entrance Route
Bezout
0
10,000
20,000
Scale In Feet
Ore Berth
CAPE LAMBERT PORT
117° 20′
20° 35′



PORT WALCOTT

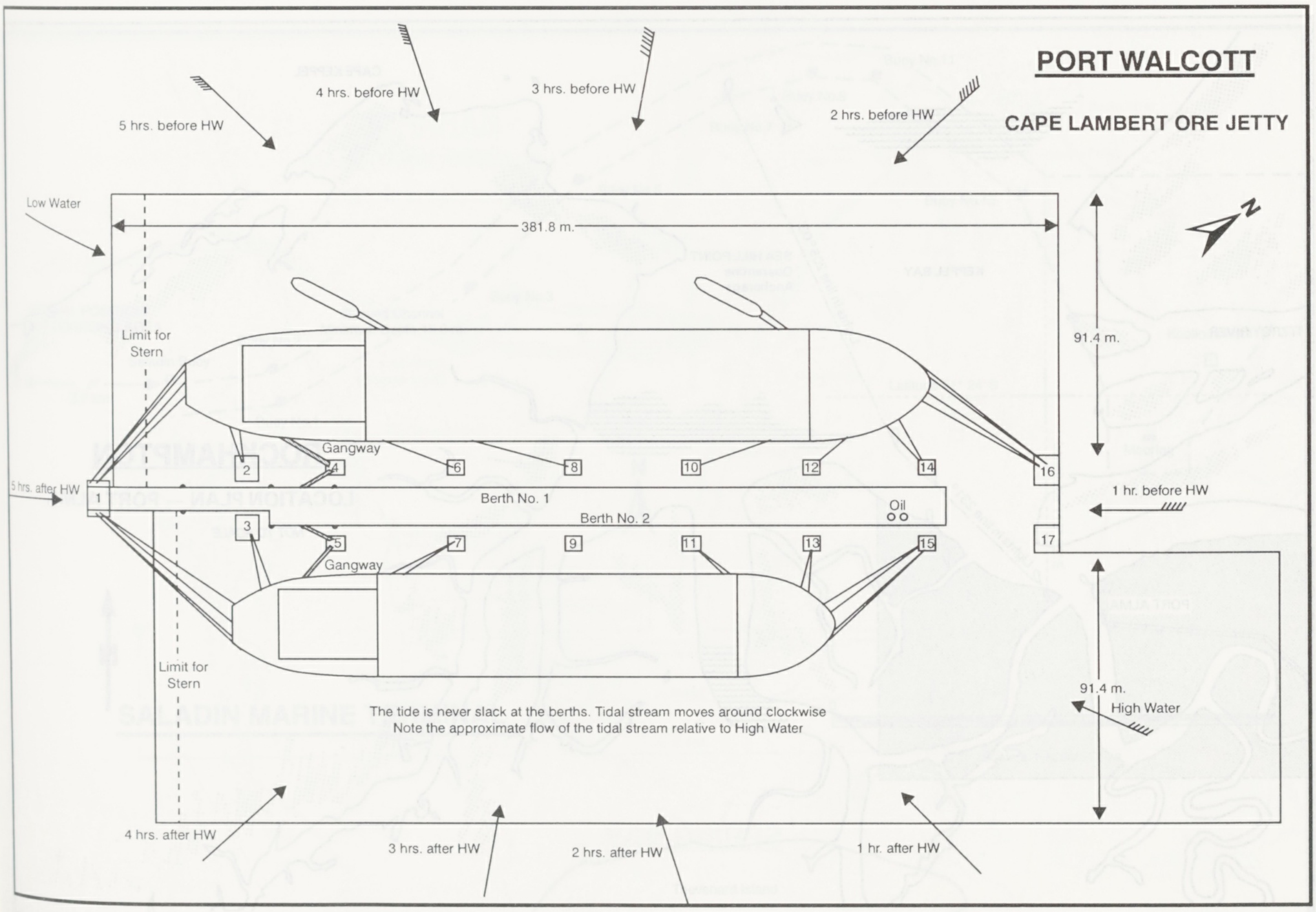
LAMBERT SERVICE JETTY

TIDAL FLOW

From 3.5 hours after HW to 2.5 hours before HW ↓

From 2.5 hours before HW to 3.5 hours after HW ↑

10 m.
11 m.
1
2
3
4
5
6
7
8
Oil Manifold
155.4 m.
210.3 m



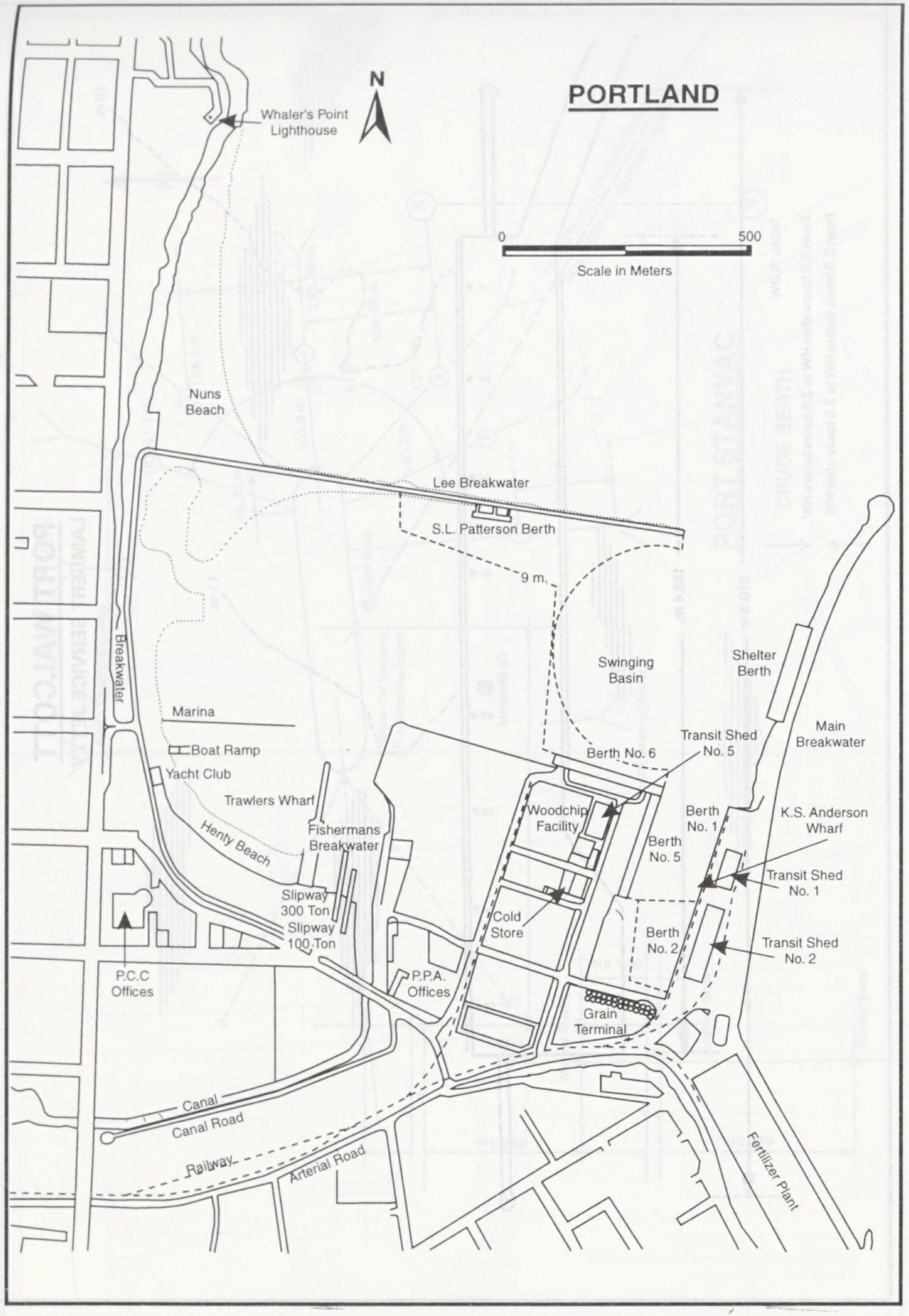
PORT WALCOTT

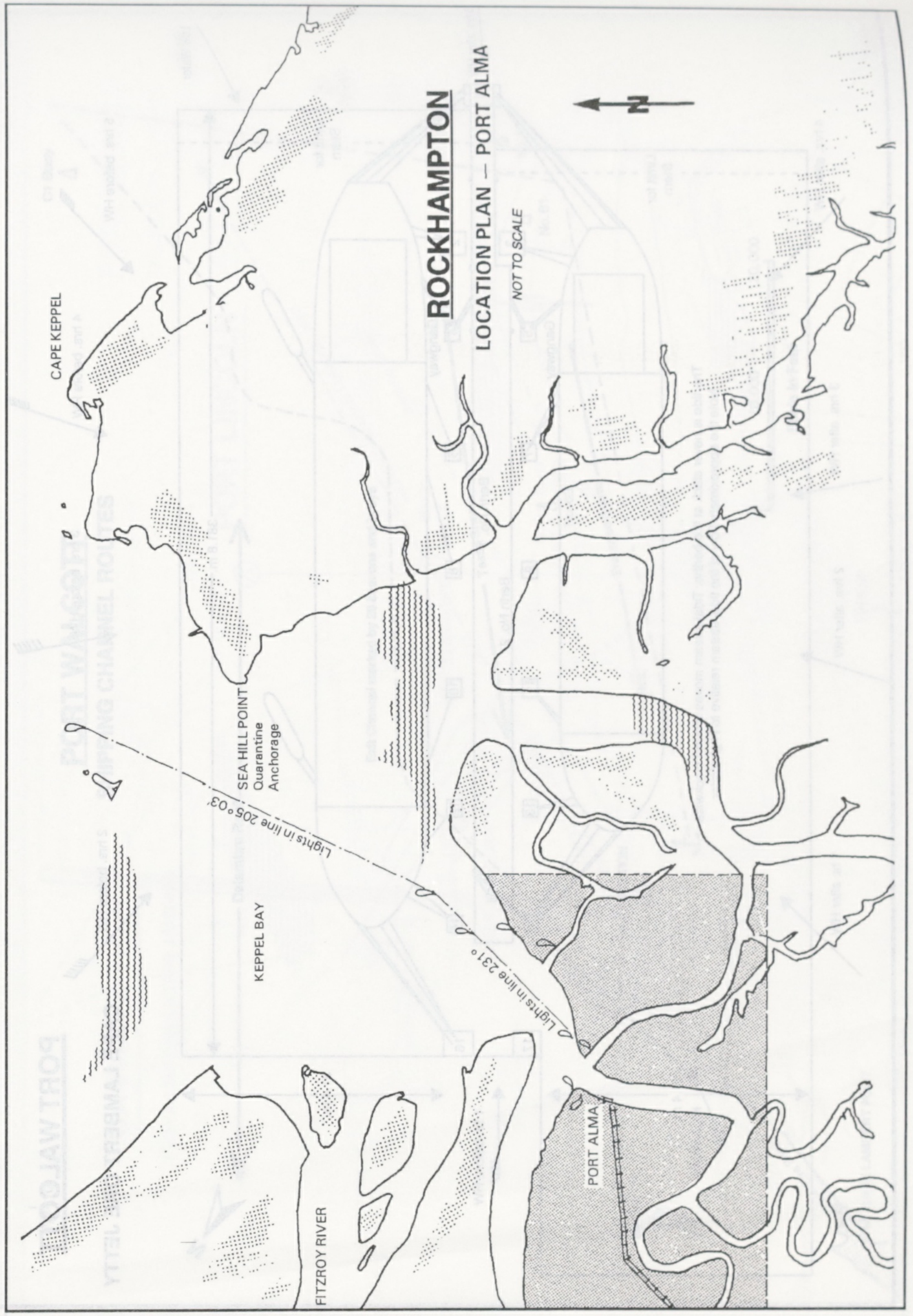
CAPE LAMBERT ORE JETTY

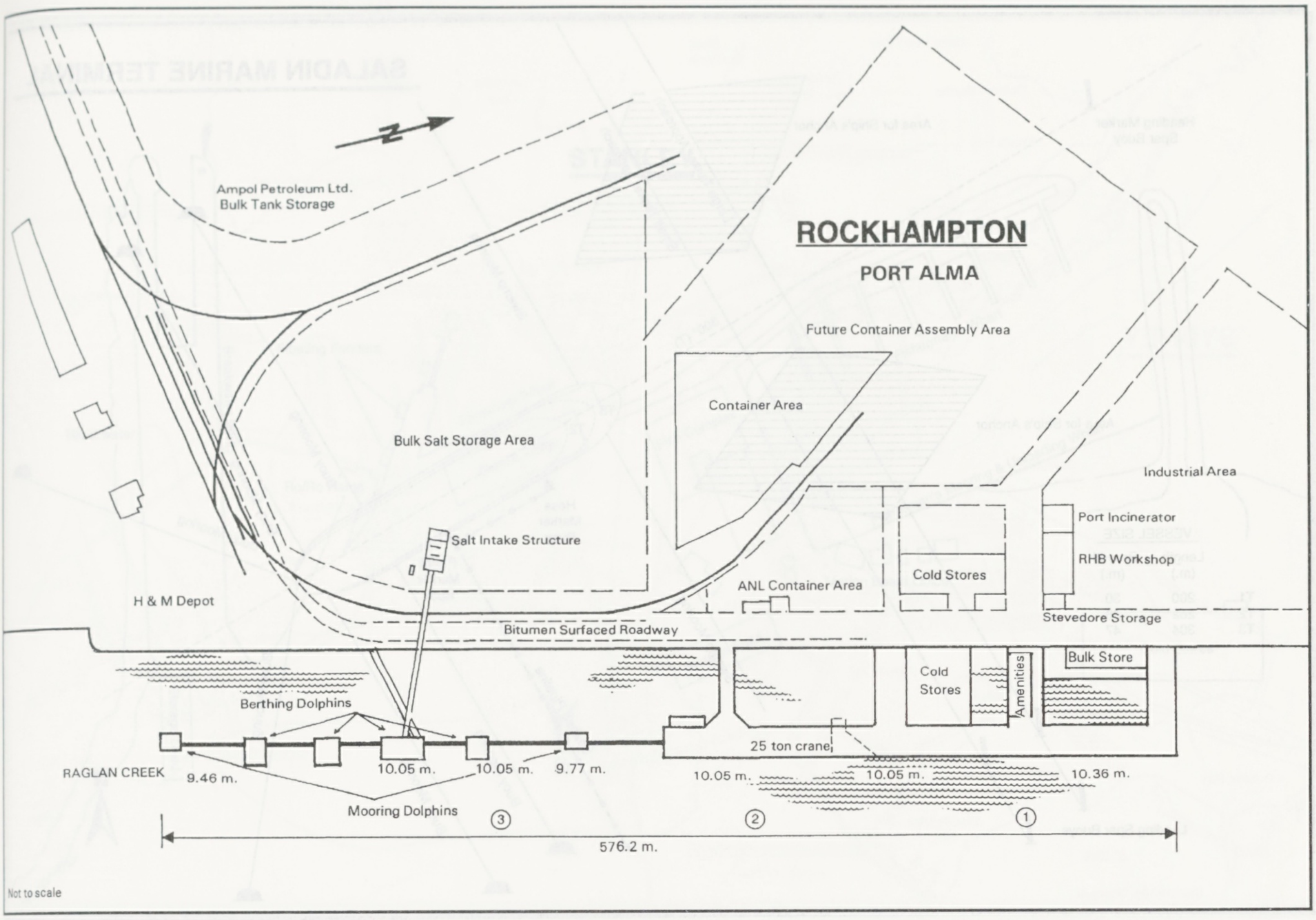
The tide is never slack at the berths. Tidal stream moves around clockwise

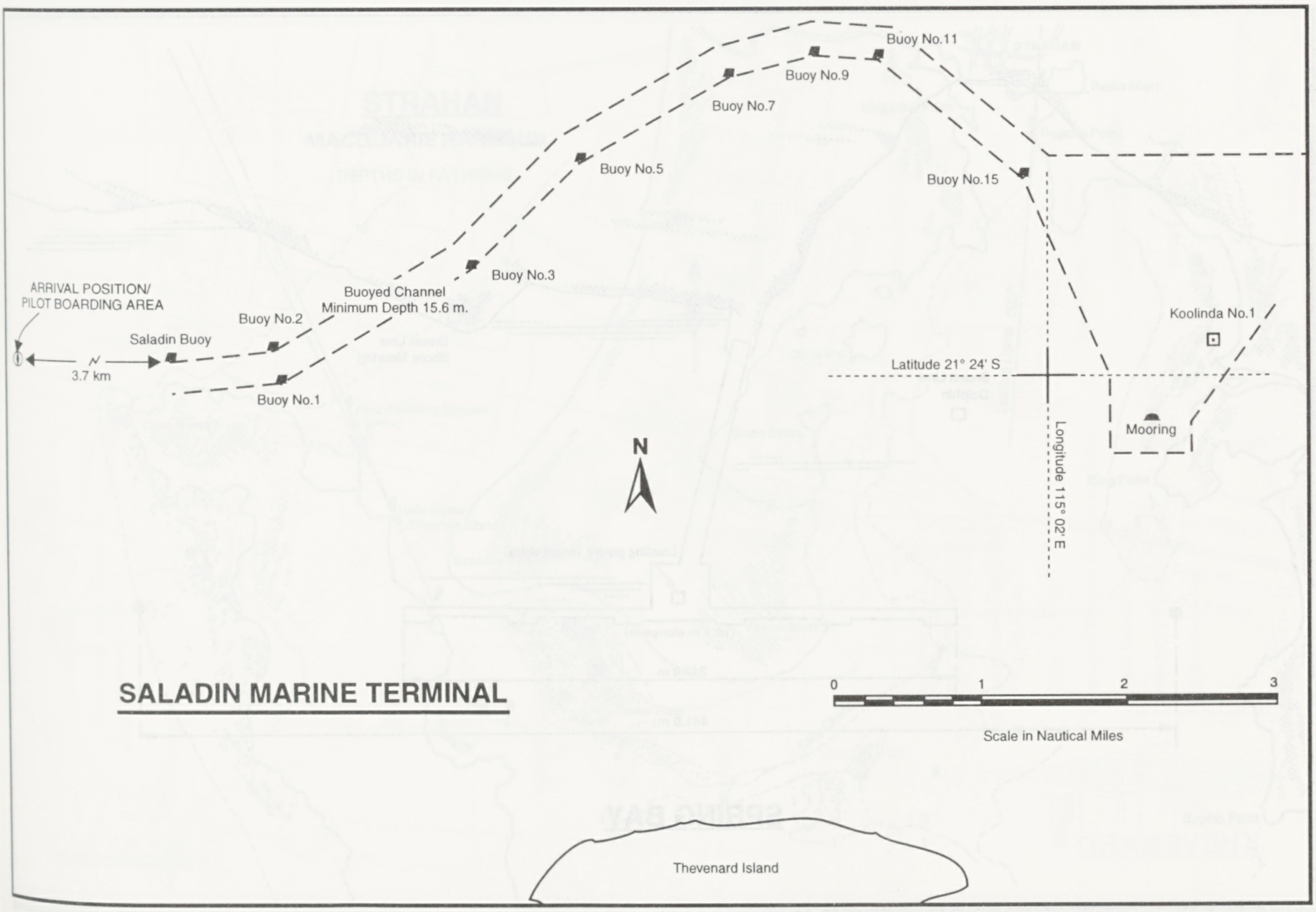
Note the approximate flow of the tidal stream relative to High Water

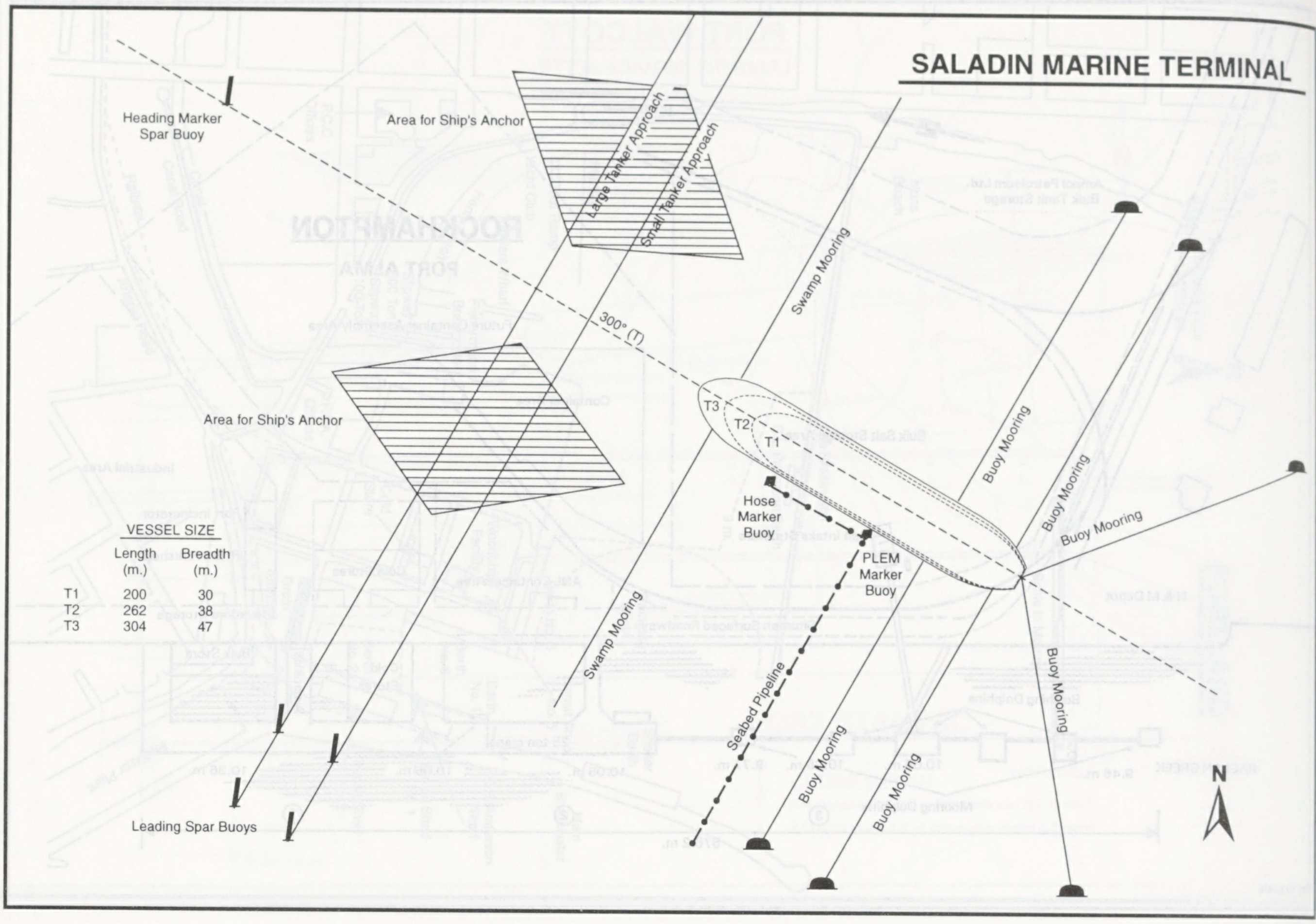
5 hrs. before HW
4 hrs. before HW
3 hrs. before HW
2 hrs. before HW
Low Water
381.8 m.
91.4 m.
Limit for Stern
Gangway
2
4
6
8
10
12
14
16
5 hrs. after HW
1
Berth No. 1
Berth No. 2
Oil
1 hr. before HW
3
5
7
9
11
13
15
17
Gangway
Limit for Stern
91.4 m.
High Water
N
4 hrs. after HW
3 hrs. after HW
2 hrs. after HW
1 hr. after HW


PORTLAND
N
Whaler's Point Lighthouse
0
500
Scale in Meters
Nuns Beach
Lee Breakwater
S.L. Patterson Berth
9 m.
Swinging Basin
Shelter Berth
Main Breakwater
Breakwater
Marina
Boat Ramp
Yacht Club
Trawlers Wharf
Henty Beach
Fishermans Breakwater
Slipway 300 Ton
Slipway 100 Ton
P.C.C Offices
P.P.A. Offices
Woodchip Facility
Cold Store
Berth No. 6
Transit Shed No. 5
Berth No. 1
Berth No. 5
K.S. Anderson Wharf
Transit Shed No. 1
Berth No. 2
Transit Shed No. 2
Grain Terminal
Canal
Canal Road
Railway
Arterial Road
Fertilizer Plant


ROCKHAMPTON
LOCATION PLAN — PORT ALMA
NOT TO SCALE
N
CAPE KEPPEL
SEA HILL POINT
Quarantine Anchorage
Lights in line 205°03
KEPPEL BAY
Lights in line 231°
FITZROY RIVER
PORT ALMA


ROCKHAMPTON
PORT ALMA
N
Ampol Petroleum Ltd.
Bulk Tank Storage
Future Container Assembly Area
Container Area
Bulk Salt Storage Area
Industrial Area
Port Incinerator
RHB Workshop
Salt Intake Structure
Cold Stores
H & M Depot
ANL Container Area
Stevedore Storage
Bitumen Surfaced Roadway
Cold
Stores
Amenities
Bulk Store
Berthing Dolphins
25 ton crane
RAGLAN CREEK
9.46 m.
10.05 m.
10.05 m.
9.77 m.
10.05 m.
10.05 m.
10.36 m.
Mooring Dolphins
③
②
①
576.2 m.
Not to scale


Buoy No.11
Buoy No.9
Buoy No.7
Buoy No.5
Buoy No.15
Buoy No.3
ARRIVAL POSITION/
PILOT BOARDING AREA
Buoyed Channel
Minimum Depth 15.6 m.
Buoy No.2
Saladin Buoy
3.7 km
Buoy No.1
Koolinda No.1
Latitude 21° 24' S
Mooring
Longitude 115° 02' E
N
SALADIN MARINE TERMINAL
0
1
2
3
Scale in Nautical Miles
Thevenard Island

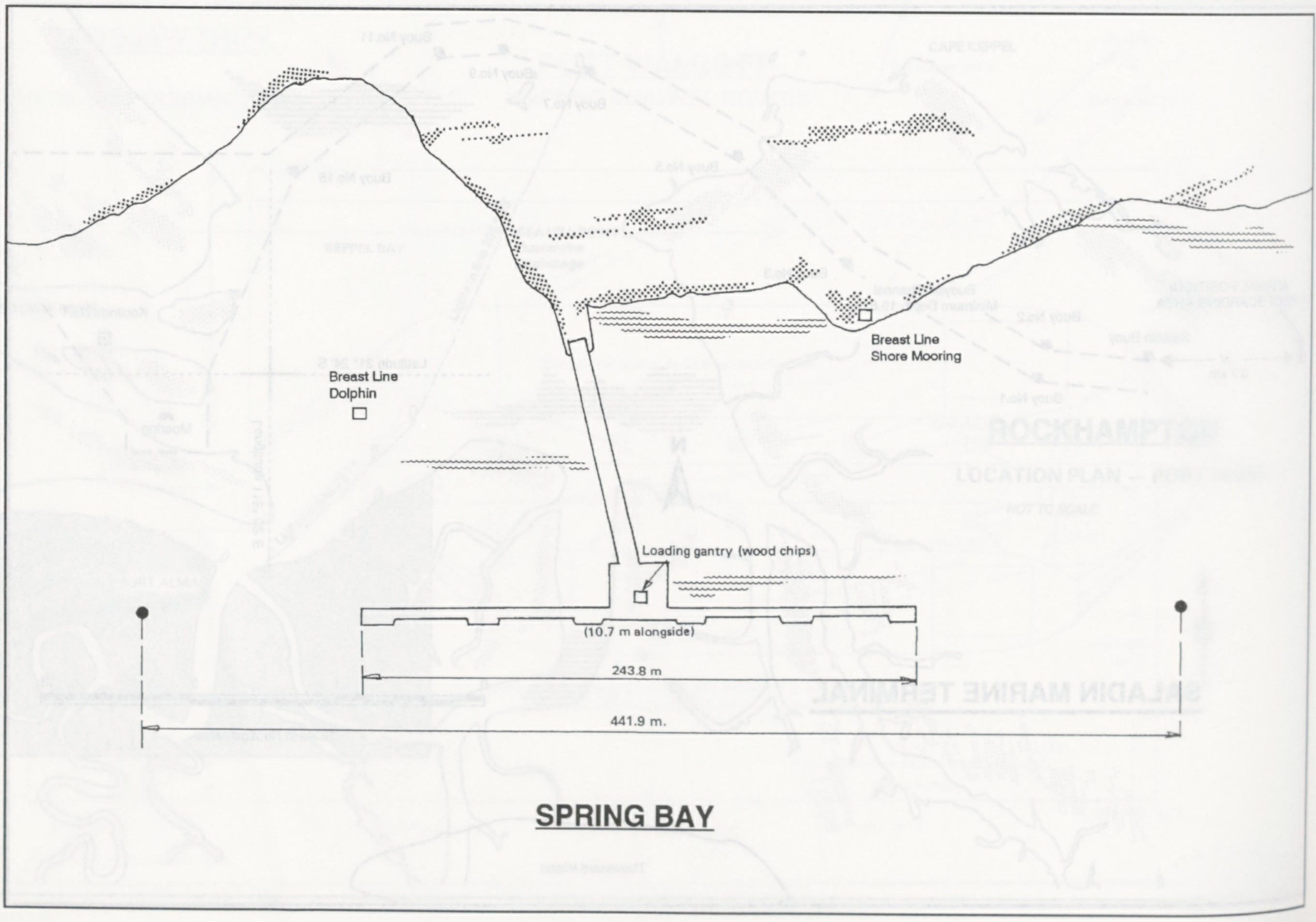


SALADIN MARINE TERMINAL

Heading Marker
Spar Buoy
Area for Ship's Anchor
Large Tanker Approach
Small Tanker Approach
300° (T)
Swamp Mooring
Area for Ship's Anchor
T3
T2
T1
Buoy Mooring
Buoy Mooring
Buoy Mooring
Hose
Marker
Buoy
PLEM
Marker
Buoy
Swamp Mooring
Seabed Pipeline
Buoy Mooring
Buoy Mooring
Buoy Mooring
Leading Spar Buoys
N

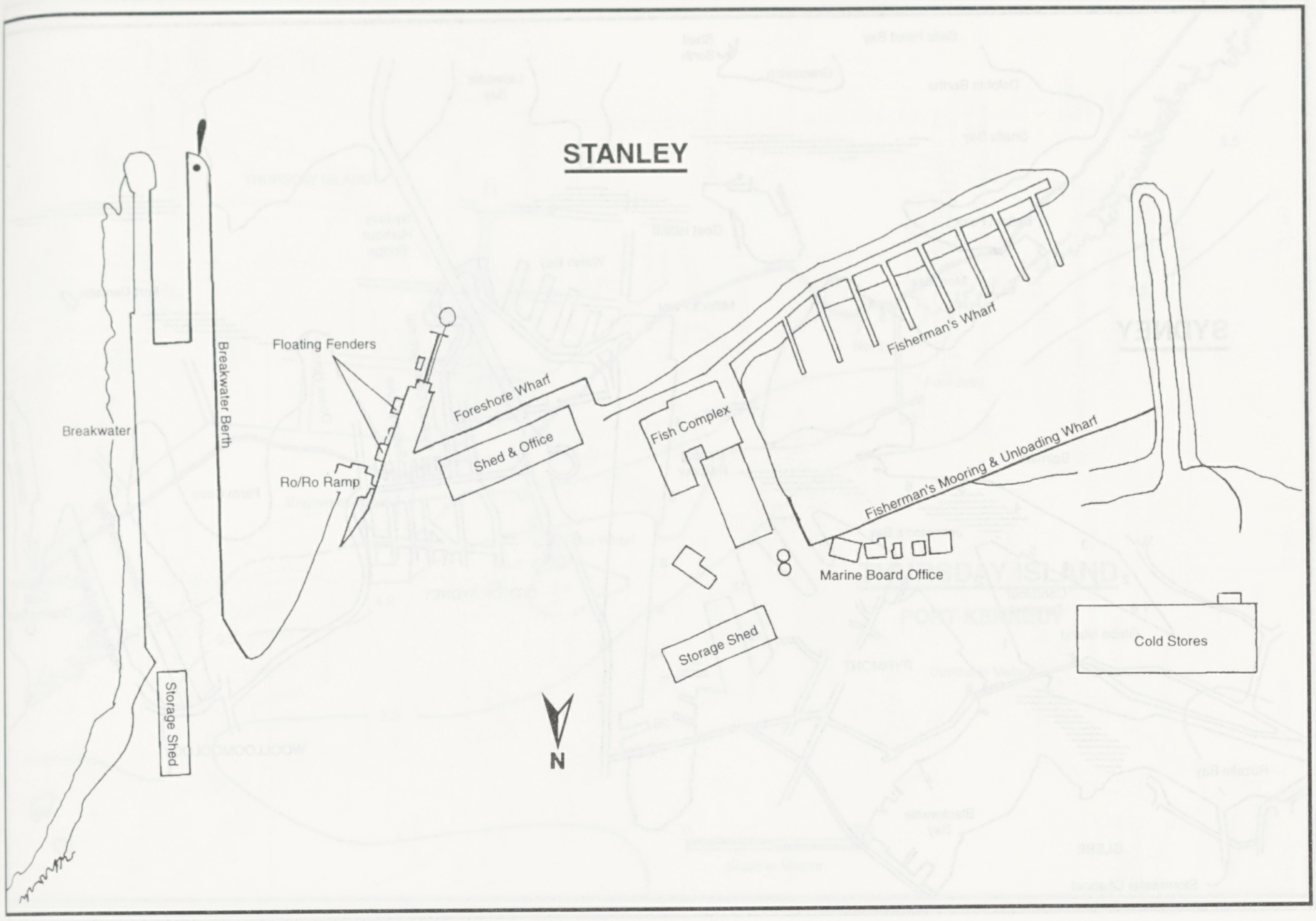
VESSEL SIZE

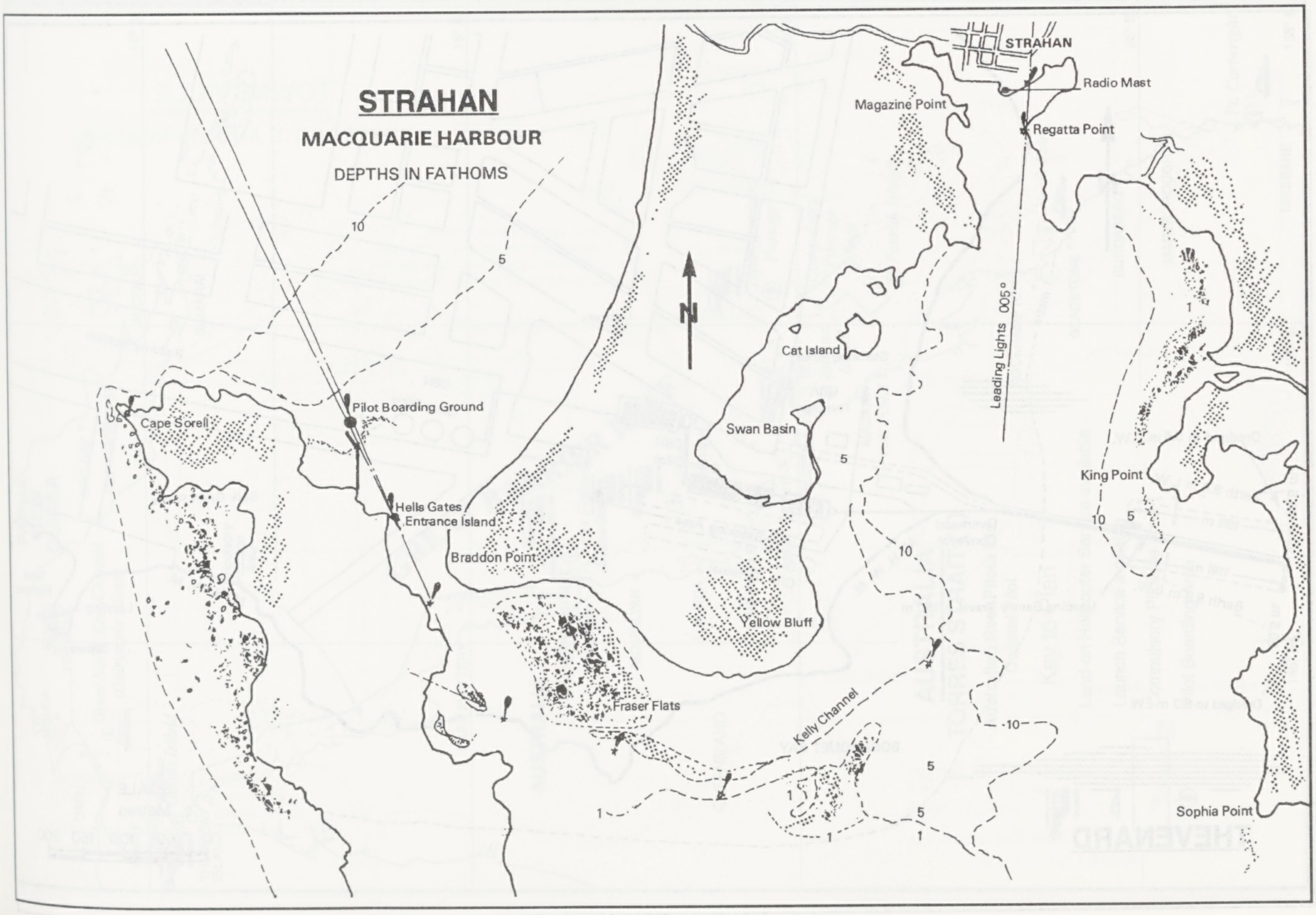
	Length (m.)	Breadth (m.)
T1	200	30
T2	262	38
T3	304	47

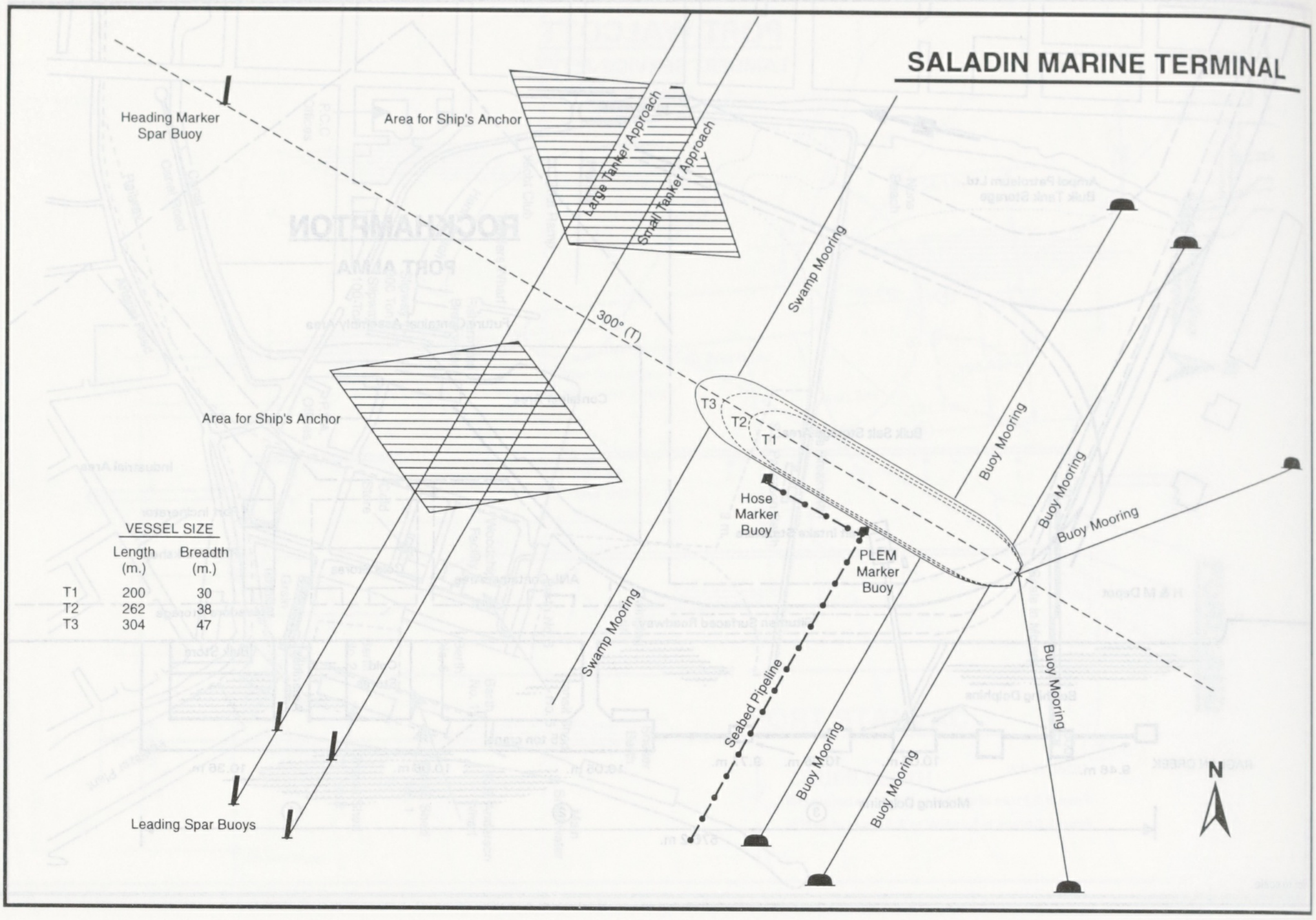


Breast Line
Shore Mooring
Breast Line
Dolphin
Loading gantry (wood chips)
(10.7 m alongside)
243.8 m
441.9 m.

SPRING BAY


STANLEY
Floating Fenders
Breakwater
Breakwater Berth
Ro/Ro Ramp
Foreshore Wharf
Shed & Office
Fish Complex
Fisherman's Wharf
Fisherman's Mooring & Unloading Wharf
Marine Board Office
Storage Shed
Storage Shed
Cold Stores
N


STRAHAN
MACQUARIE HARBOUR
DEPTHS IN FATHOMS
10
5
STRAHAN
Radio Mast
Magazine Point
Regatta Point
Leading Lights 005°
N
Cat Island
Swan Basin
5
Pilot Boarding Ground
Cape Sorell
Hells Gates
Entrance Island
Braddon Point
10
Yellow Bluff
1
King Point
10
5
Fraser Flats
Kelly Channel
-10-
5
1
1
5
1
1
Sophia Point

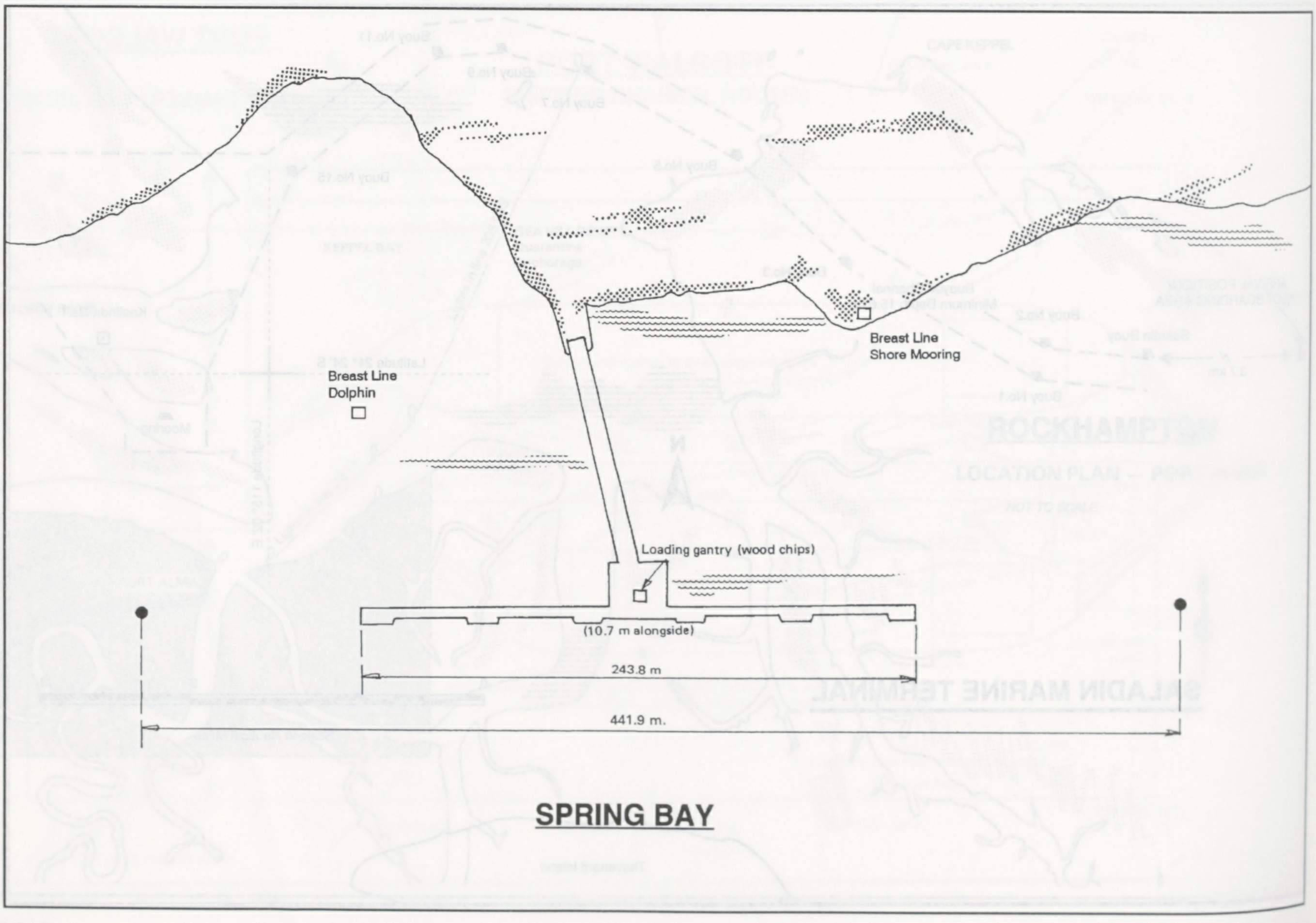


SALADIN MARINE TERMINAL

Heading Marker
Spar Buoy
Area for Ship's Anchor
Large Tanker Approach
Small Tanker Approach
Swamp Mooring
300° (T)
Area for Ship's Anchor
T3
T2
T1
Buoy Mooring
Buoy Mooring
Buoy Mooring
Hose
Marker
Buoy
PLEM
Marker
Buoy
Swamp Mooring
Seabed Pipeline
Buoy Mooring
Buoy Mooring
Buoy Mooring
Leading Spar Buoys
N

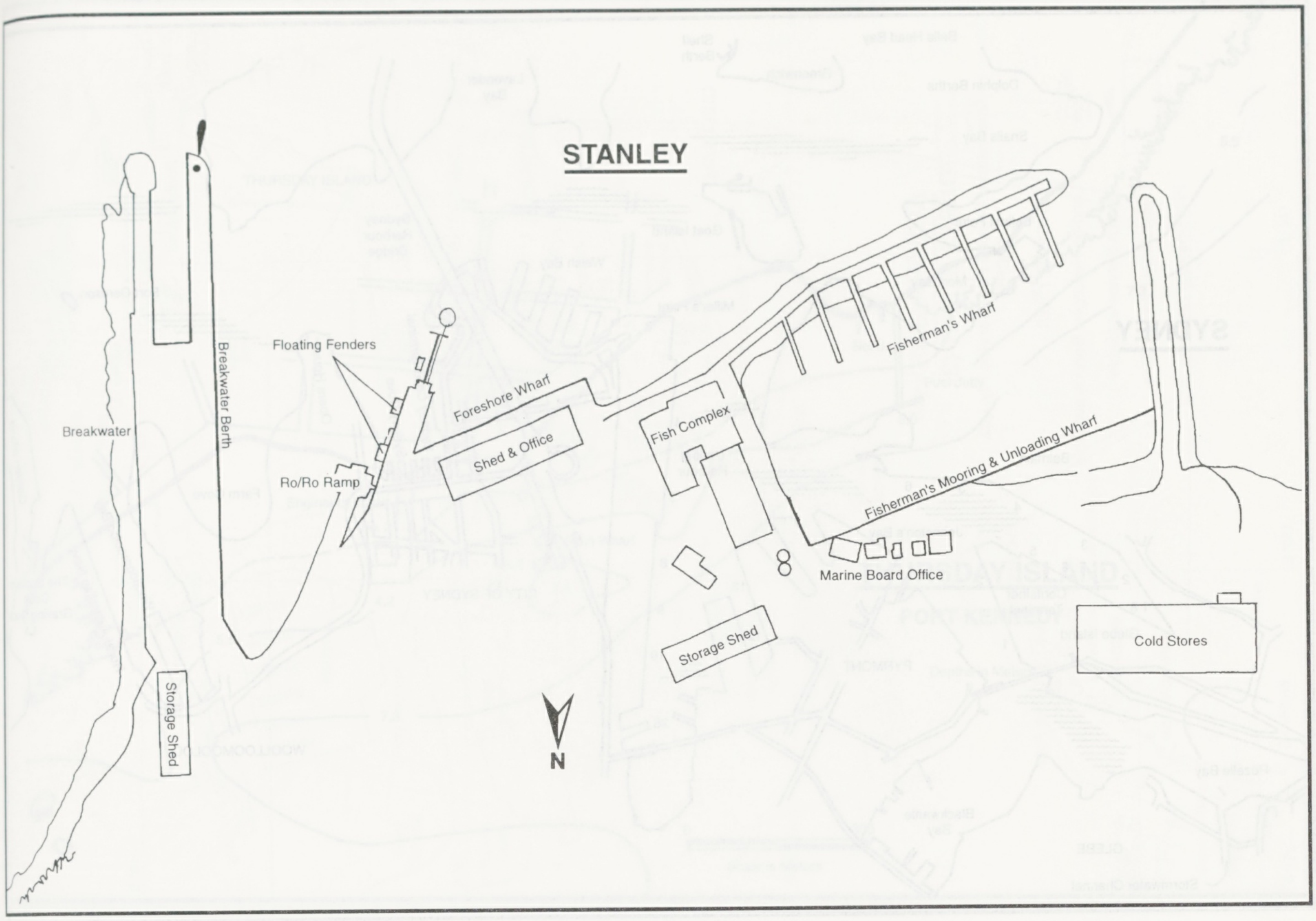
VESSEL SIZE

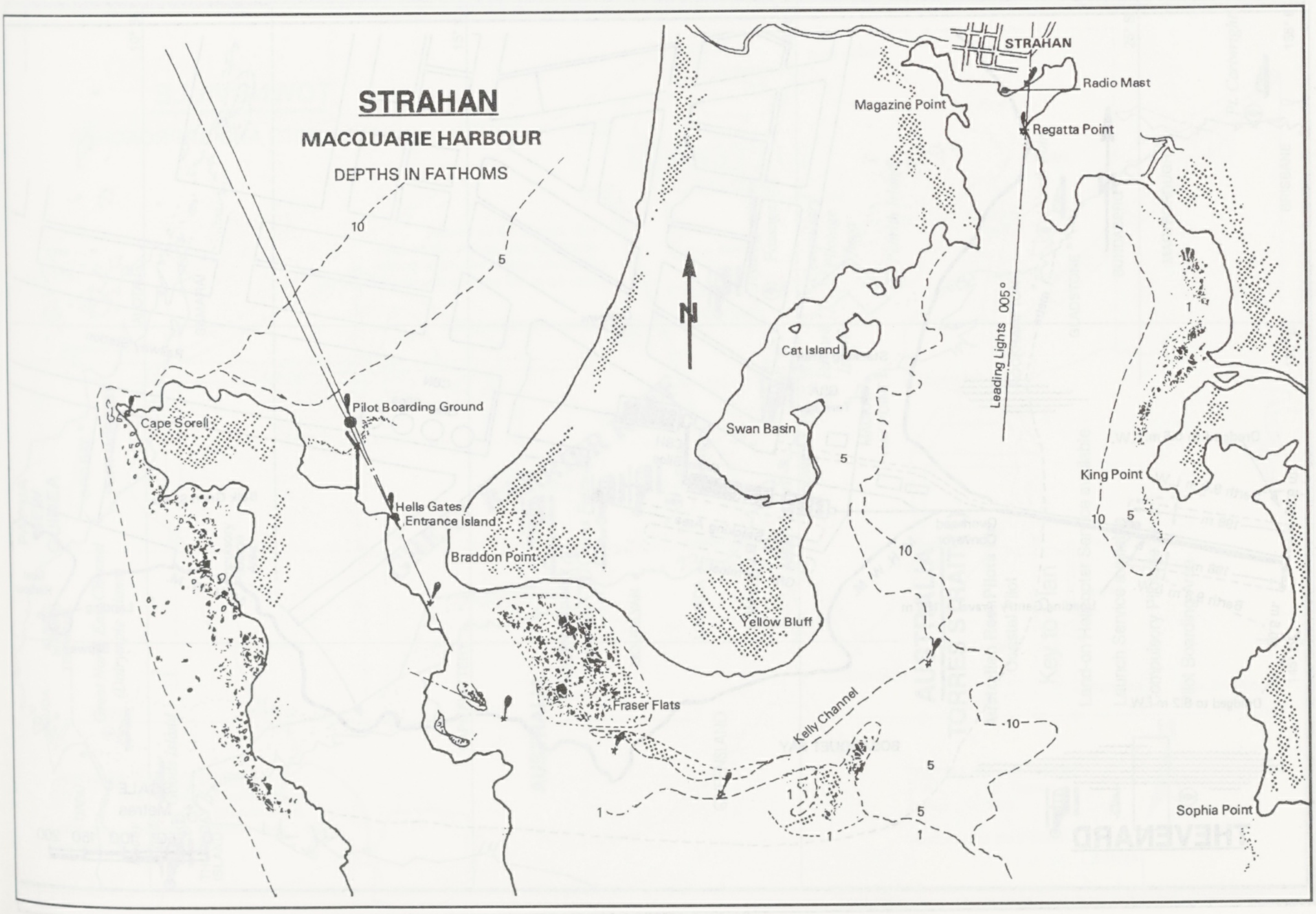
	Length (m.)	Breadth (m.)
T1	200	30
T2	262	38
T3	304	47

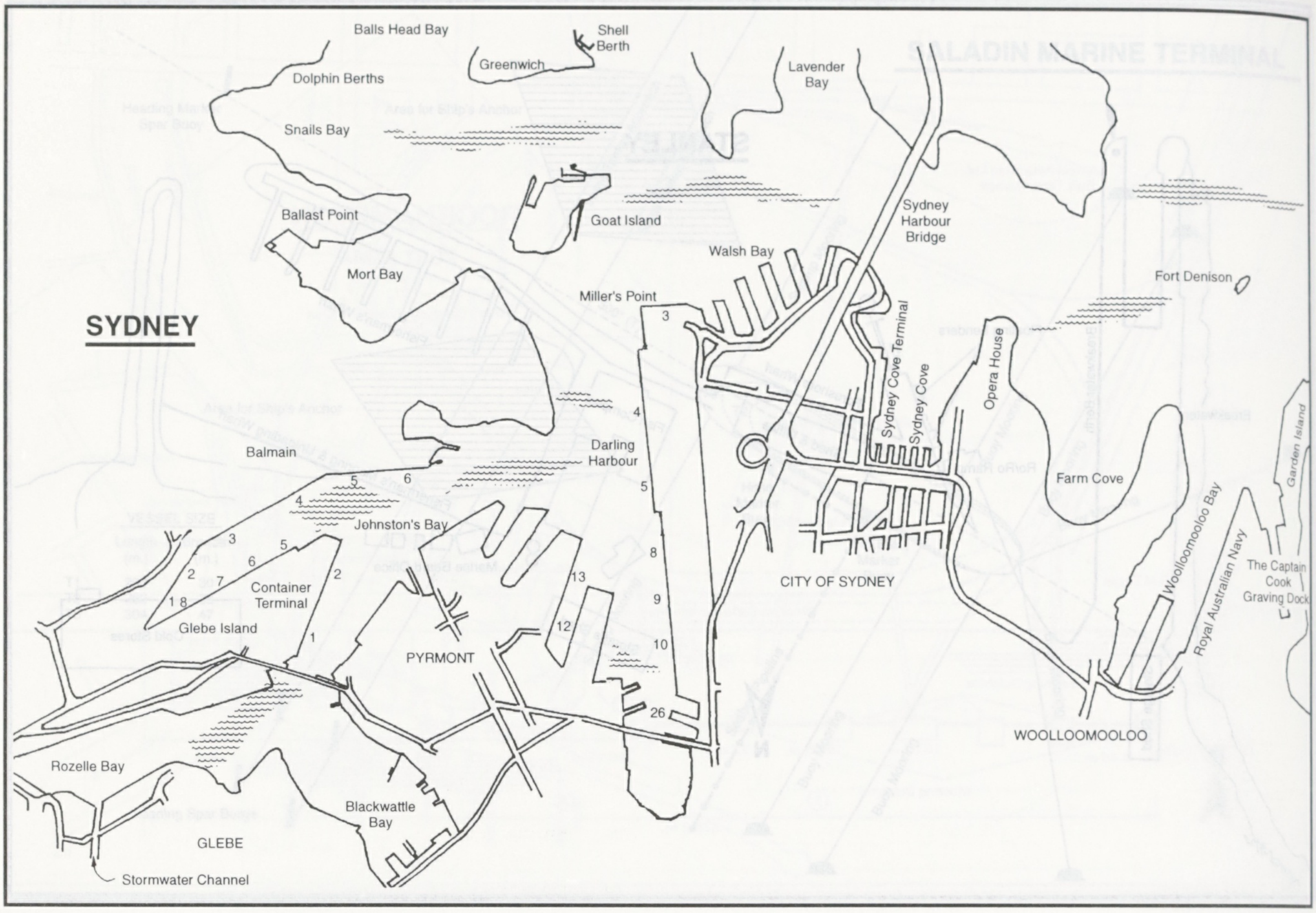


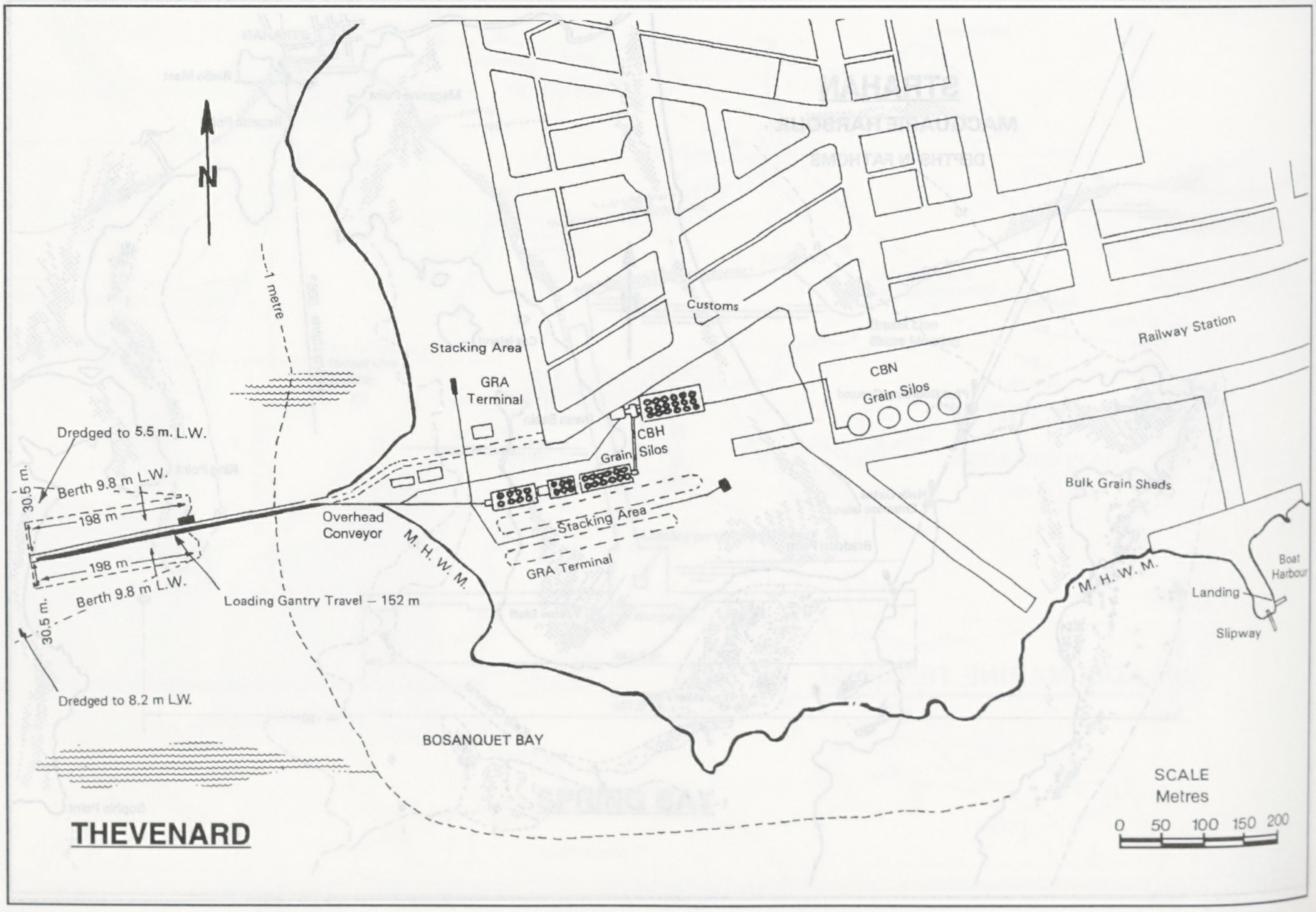
Breast Line
Dolphin
Breast Line
Shore Mooring
Loading gantry (wood chips)
(10.7 m alongside)
243.8 m
441.9 m.

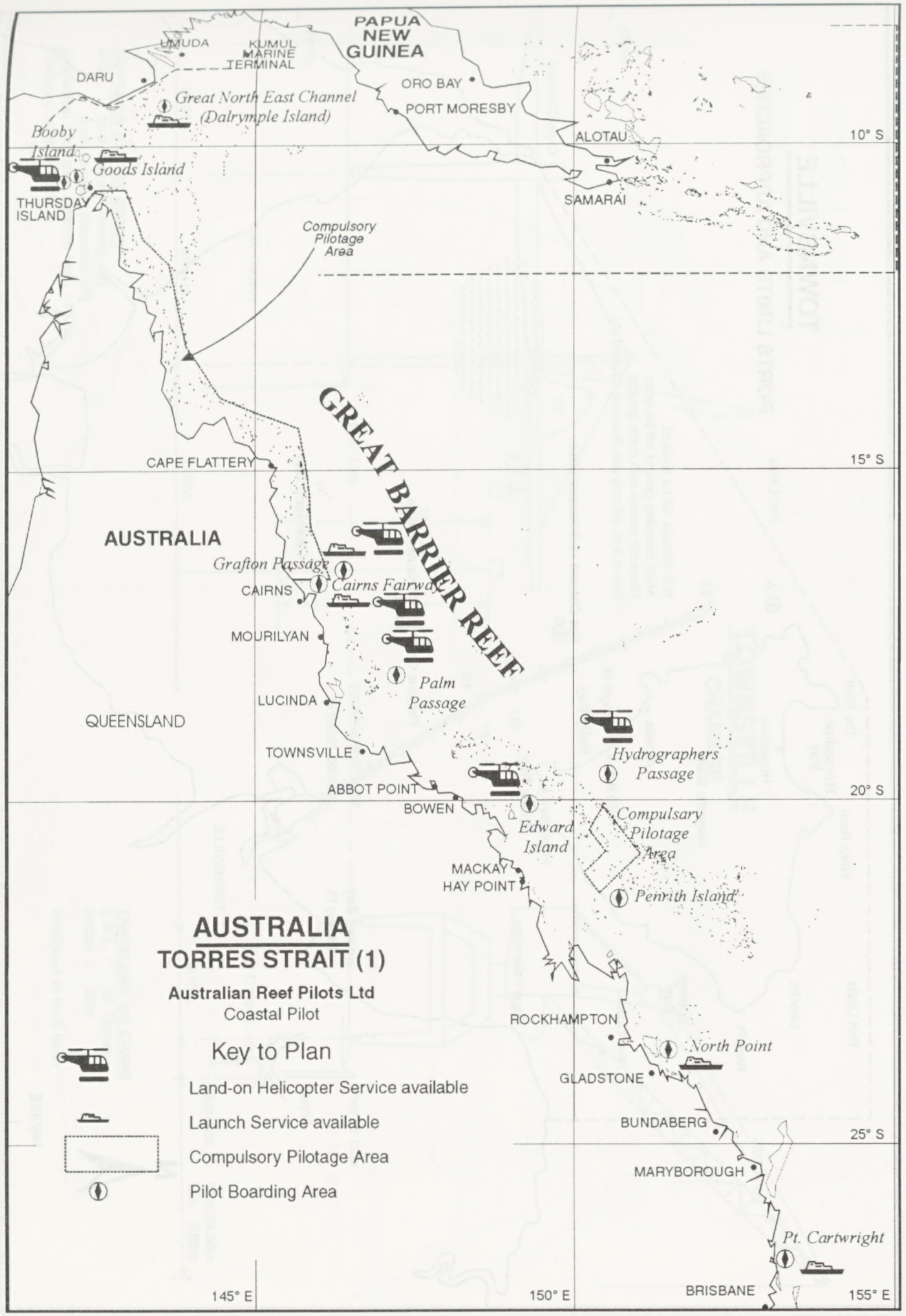
SPRING BAY

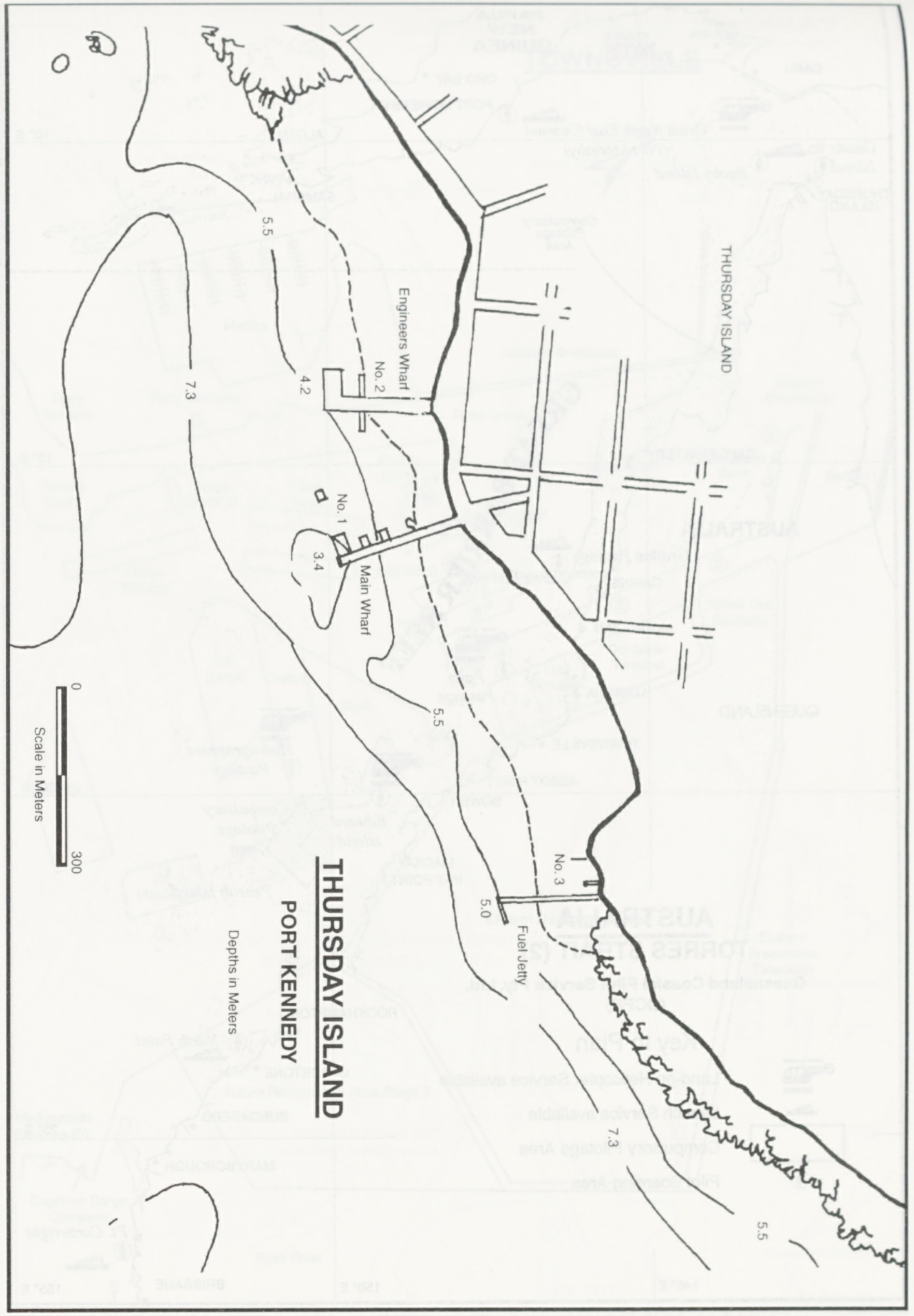

STANLEY
Breakwater
Breakwater Berth
Floating Fenders
Ro/Ro Ramp
Foreshore Wharf
Shed & Office
Fish Complex
Fisherman's Wharf
Fisherman's Mooring & Unloading Wharf
Marine Board Office
Storage Shed
Storage Shed
Cold Stores
N

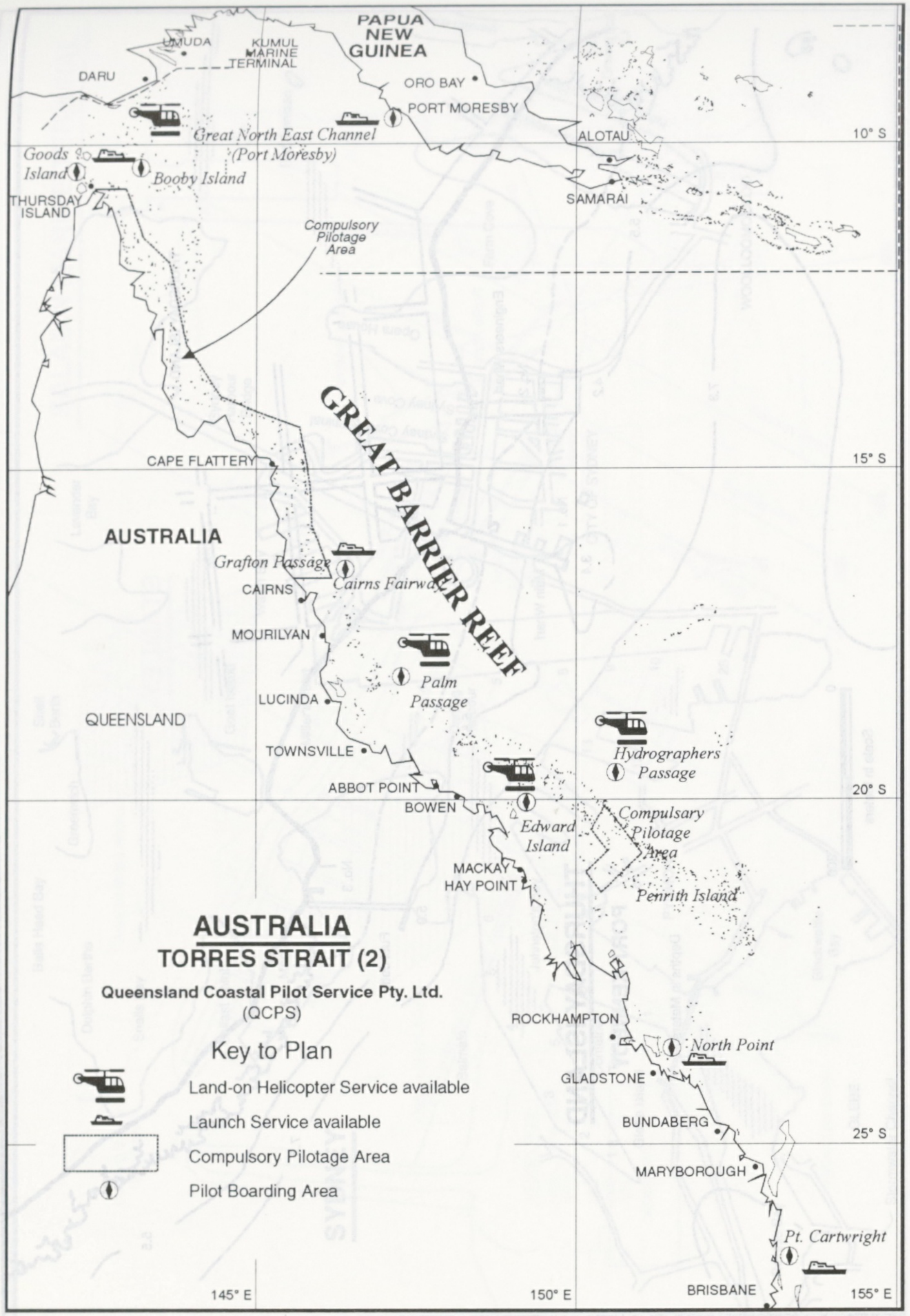

STRAHAN
MACQUARIE HARBOUR
DEPTHS IN FATHOMS
10
5
Pilot Boarding Ground
Cape Sorell
Hells Gates
Entrance Island
Braddon Point
Fraser Flats
Kelly Channel
Yellow Bluff
Swan Basin
Cat Island
Magazine Point
STRAHAN
Radio Mast
Regatta Point
Leading Lights 005°
King Point
Sophia Point
N
5
10
10
5
1
10
5
5
1
1
1
1

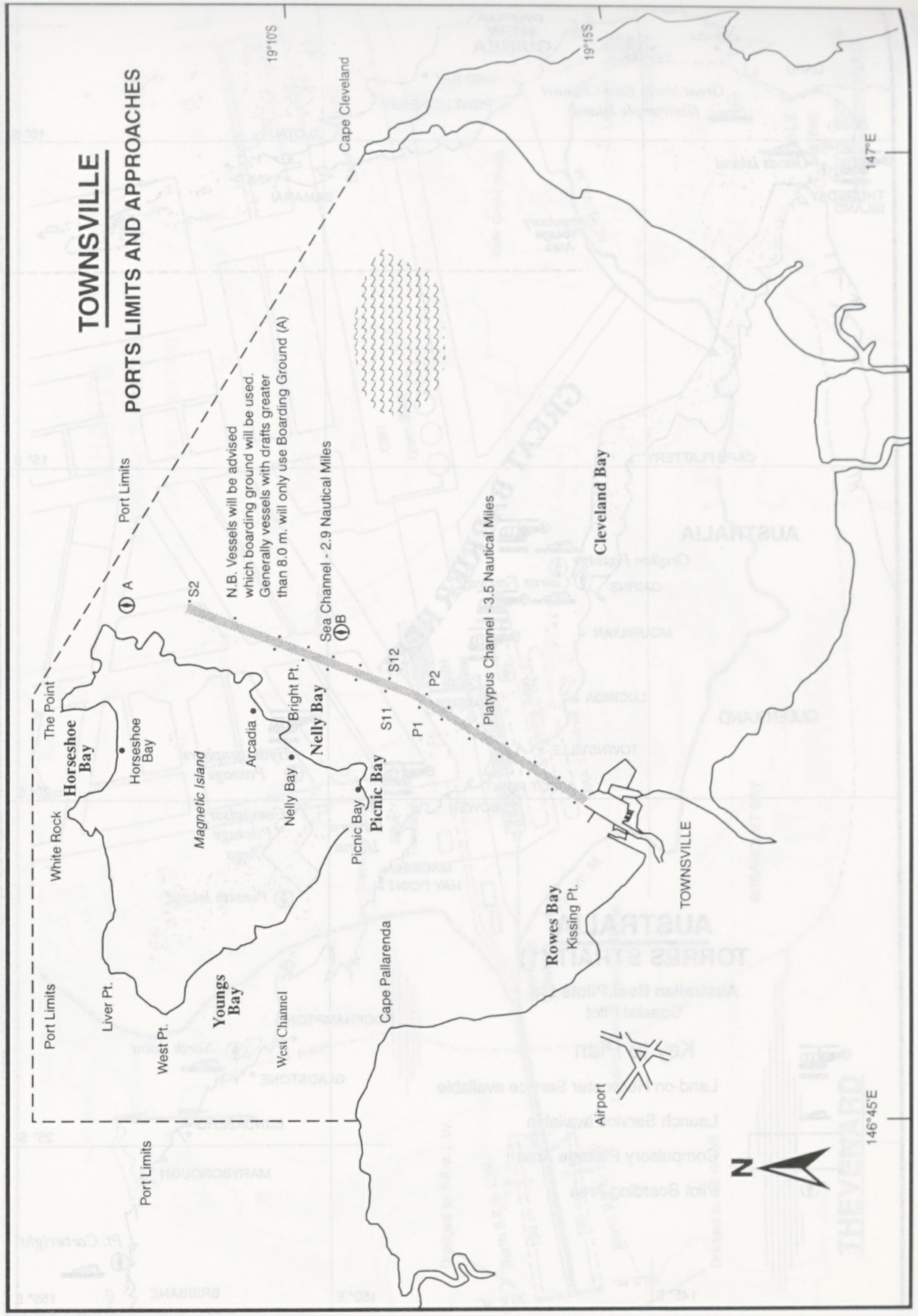

SYDNEY
Balls Head Bay
Shell Berth
Greenwich
Lavender Bay
Dolphin Berths
Snails Bay
Goat Island
Ballast Point
Sydney Harbour Bridge
Walsh Bay
Mort Bay
Fort Denison
Miller's Point
3
Sydney Cove Terminal
Sydney Cove
Opera House
Garden Island
4
Darling Harbour
Balmain
5
6
5
4
Johnston's Bay
Farm Cove
Woolloomooloo Bay
3
5
2
6
7
2
1
8
Container Terminal
Glebe Island
8
13
9
12
10
1
PYRMONT
CITY OF SYDNEY
Royal Australian Navy
The Captain Cook Graving Dock
26
WOOLLOOMOOLOO
Rozelle Bay
Blackwattle Bay
GLEBE
Stormwater Channel

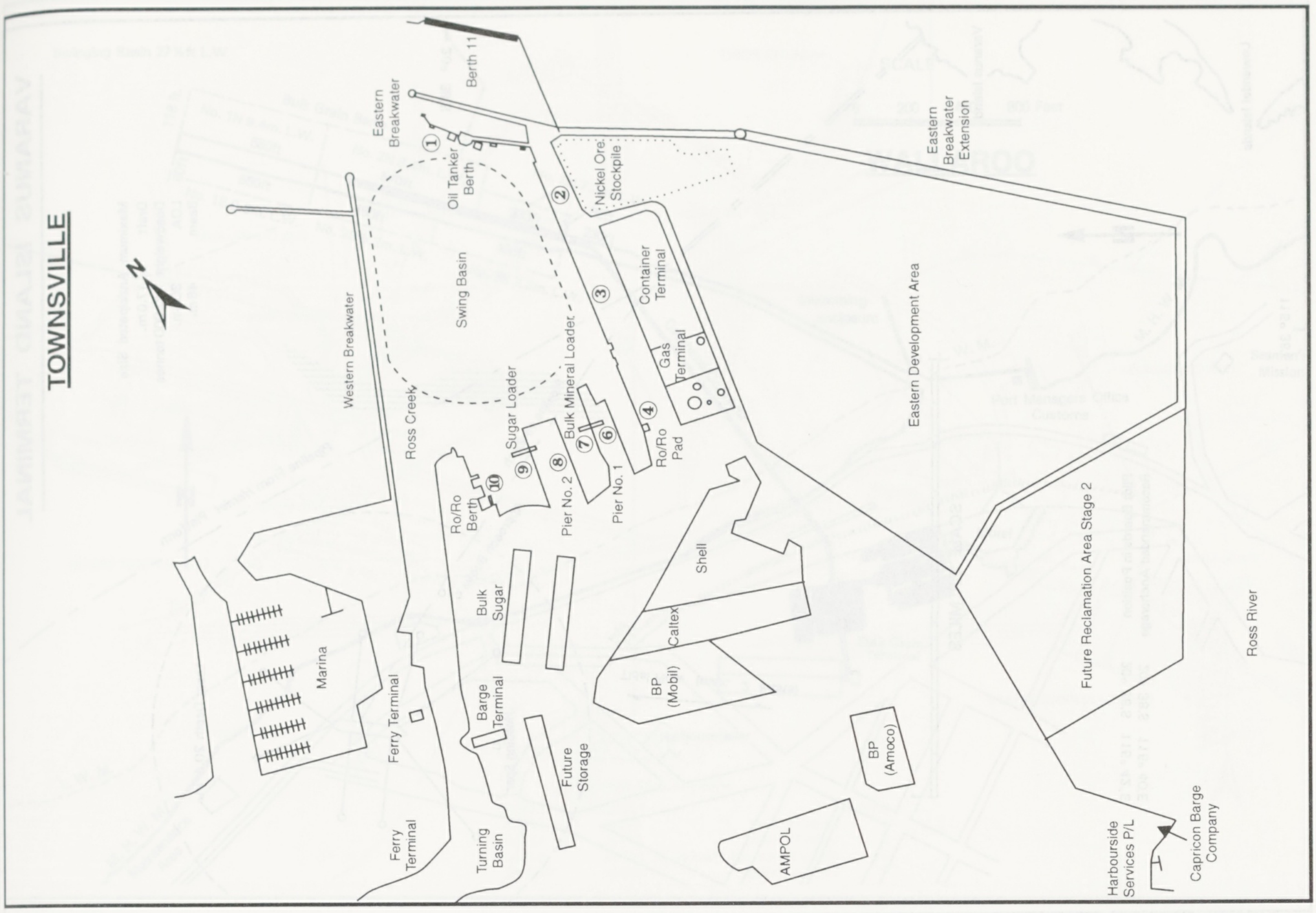

N
-1 metre
Customs
Railway Station
Stacking Area
CBN
Grain Silos
GRA Terminal
CBH Grain Silos
Dredged to 5.5 m. L.W.
30.5 m.
Berth 9.8 m L.W.
198 m
Overhead Conveyor
Stacking Area
Bulk Grain Sheds
198 m
Berth 9.8 m L.W.
M. H. W. M.
GRA Terminal
M. H. W. M.
Boat Harbour
Landing
30.5 m.
Loading Gantry Travel – 152 m
Slipway
Dredged to 8.2 m LW.
BOSANQUET BAY
SCALE
Metres
0
50
100
150
200
THEVENARD

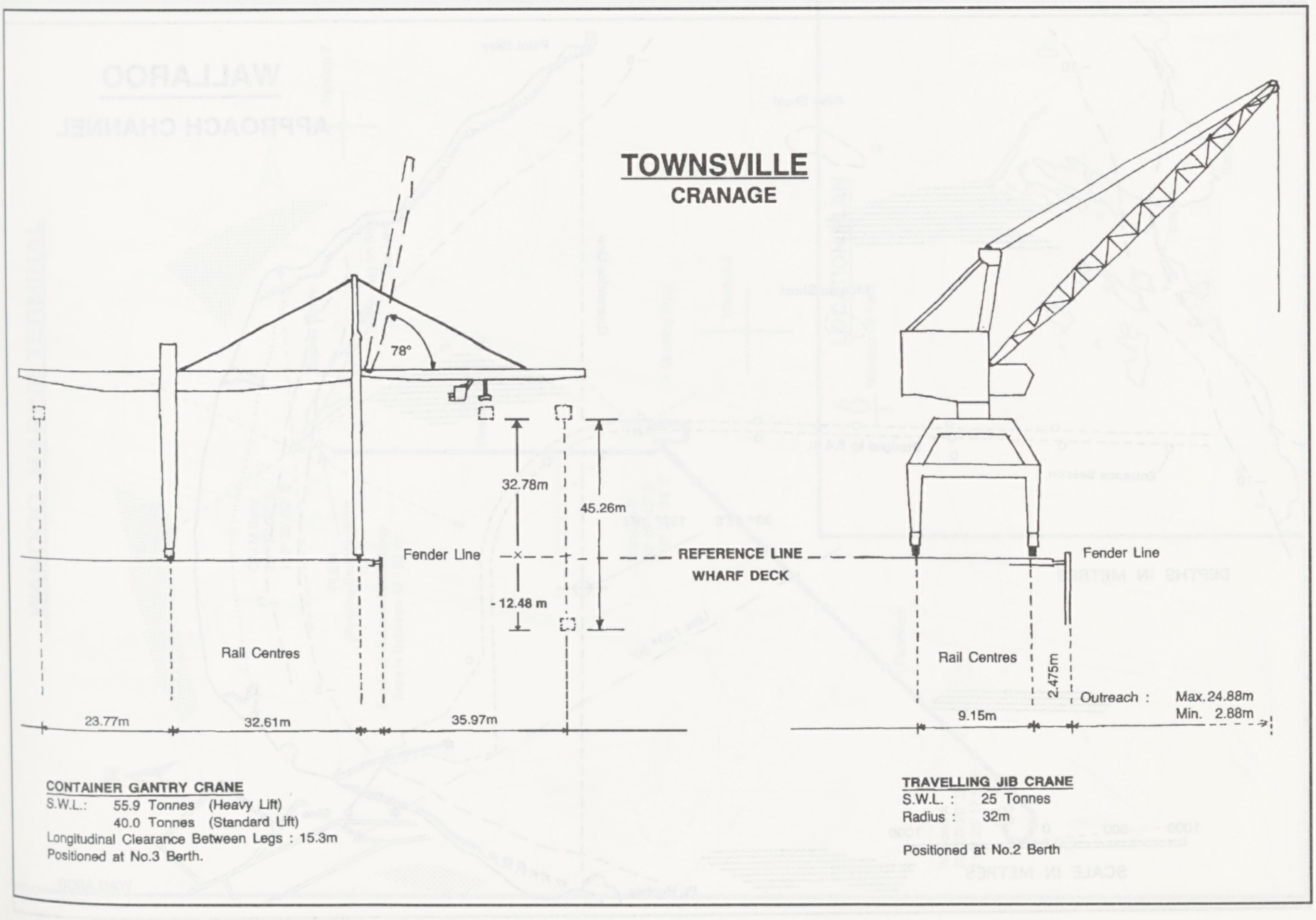

PAPUA NEW GUINEA
UMUDA
KUMUL MARINE TERMINAL
DARU
ORO BAY
PORT MORESBY
Great North East Channel (Dalrymple Island)
Booby Island
Goods Island
THURSDAY ISLAND
ALOTAU
SAMARAI
10° S
Compulsory Pilotage Area
GREAT BARRIER REEF
CAPE FLATTERY
15° S
AUSTRALIA
Grafton Passage
CAIRNS
Cairns Fairway
MOURILYAN
Palm Passage
LUCINDA
QUEENSLAND
TOWNSVILLE
Hydrographers Passage
ABBOT POINT
BOWEN
20° S
Edward Island
Compulsary Pilotage Area
MACKAY
HAY POINT
Penrith Island
ROCKHAMPTON
North Point
GLADSTONE
BUNDABERG
25° S
MARYBOROUGH
Pt. Cartwright
BRISBANE
145° E
150° E
155° E
AUSTRALIA
TORRES STRAIT (1)
Australian Reef Pilots Ltd
Coastal Pilot
Key to Plan
Land-on Helicopter Service available
Launch Service available
Compulsory Pilotage Area
Pilot Boarding Area


THURSDAY ISLAND
PORT KENNEDY
Depths in Meters
Scale in Meters
0
300
Engineers Wharf
No. 2
No. 1
Main Wharf
No. 3
Fuel Jetty
5.5
4.2
7.3
3.4
5.5
5.0
7.3
5.5


PAPUA NEW GUINEA
UMUDA
KUMUL MARINE TERMINAL
DARU
ORO BAY
PORT MORESBY
Great North East Channel (Port Moresby)
ALOTAU
10° S
Goods Island
Booby Island
THURSDAY ISLAND
SAMARAI
Compulsory Pilotage Area
GREAT BARRIER REEF
CAPE FLATTERY
15° S
AUSTRALIA
Grafton Passage
Cairns Fairway
CAIRNS
MOURILYAN
Palm Passage
LUCINDA
QUEENSLAND
Hydrographers Passage
TOWNSVILLE
ABBOT POINT
20° S
BOWEN
Edward Island
Compulsary Pilotage Area
MACKAY
HAY POINT
Penrith Island
AUSTRALIA
TORRES STRAIT (2)
Queensland Coastal Pilot Service Pty. Ltd. (QCPS)
Key to Plan
Land-on Helicopter Service available
Launch Service available
Compulsory Pilotage Area
Pilot Boarding Area
ROCKHAMPTON
North Point
GLADSTONE
BUNDABERG
25° S
MARYBOROUGH
Pt. Cartwright
BRISBANE
145° E
150° E
155° E


TOWNSVILLE
PORTS LIMITS AND APPROACHES
19°10'S
19°15'S
147°E
146°45'E
Cape Cleveland
Port Limits
N.B. Vessels will be advised which boarding ground will be used. Generally vessels with drafts greater than 8.0 m. will only use Boarding Ground (A)
Sea Channel - 2.9 Nautical Miles
Platypus Channel - 3.5 Nautical Miles
Cleveland Bay
A
B
S2
S12
S11
P1
P2
The Point
White Rock
Horseshoe Bay
Horseshoe Bay
Magnetic Island
Arcadia
Bright Pt.
Nelly Bay
Nelly Bay
Picnic Bay
Picnic Bay
Port Limits
Liver Pt.
West Pt.
Youngs Bay
West Channel
Cape Pallarenda
Rowes Bay
Kissing Pt.
TOWNSVILLE
Airport
Port Limits
N


TOWNSVILLE
N
Eastern Breakwater
Berth 11
Eastern Breakwater Extension
Nickel Ore Stockpile
Oil Tanker Berth
①
②
③
④
⑥
⑦
⑧
⑨
⑩
Swing Basin
Container Terminal
Gas Terminal
Eastern Development Area
Western Breakwater
Ross Creek
Sugar Loader
Bulk Mineral Loader
Ro/Ro Pad
Ro/Ro Berth
Pier No. 2
Pier No. 1
Shell
Future Reclamation Area Stage 2
Bulk Sugar
Caltex
BP (Mobil)
Marina
Ferry Terminal
Barge Terminal
Future Storage
BP (Amoco)
Ross River
Turning Basin
AMPOL
Harbourside Services P/L
Capricon Barge Company


78°
32.78m
45.26m
Fender Line
REFERENCE LINE
WHARF DECK
- 12.48 m
Rail Centres
23.77m
32.61m
35.97m
Fender Line
Rail Centres
2.475m
9.15m
Outreach :
Max.24.88m
Min. 2.88m

TOWNSVILLE
CRANAGE

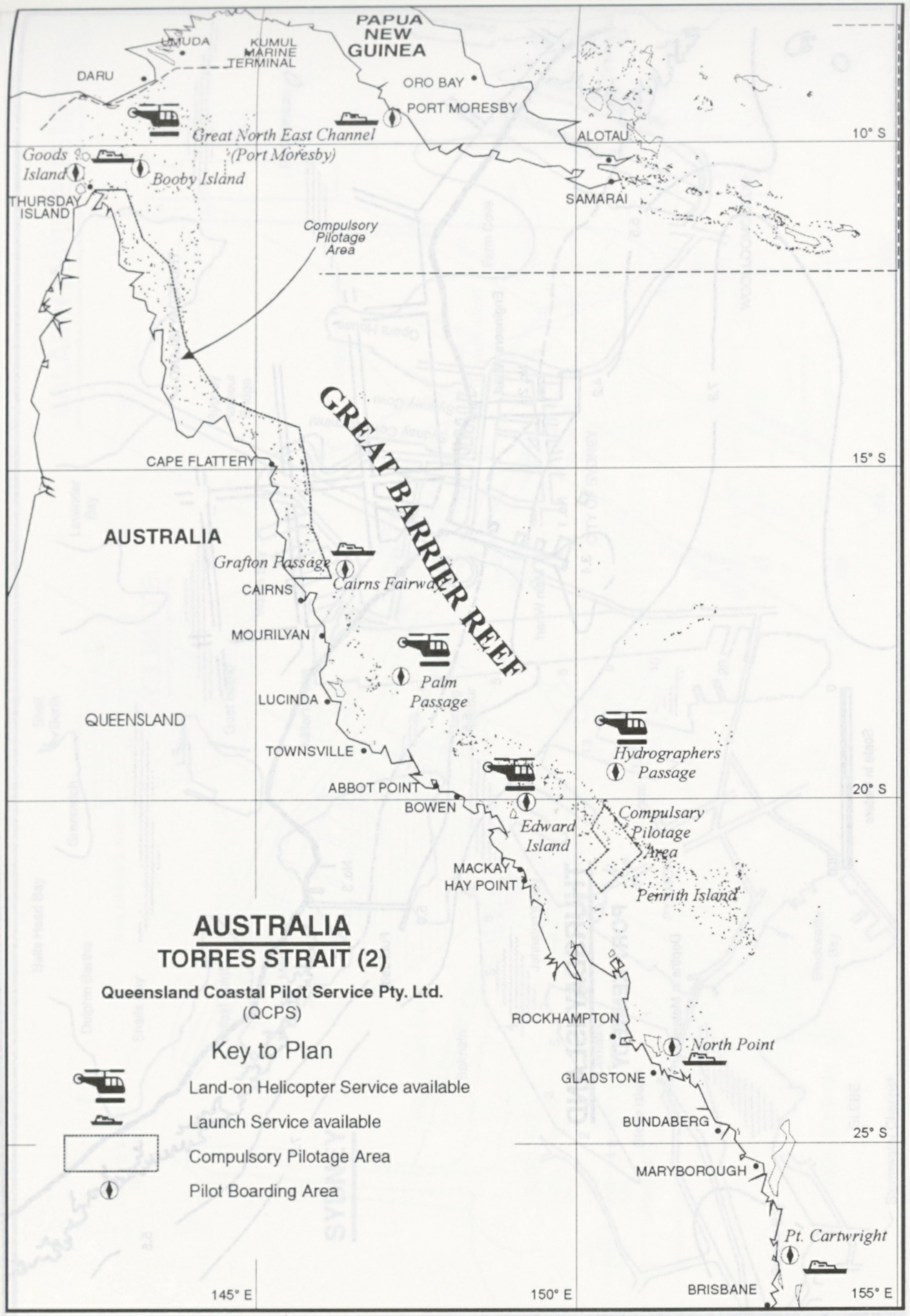
CONTAINER GANTRY CRANE

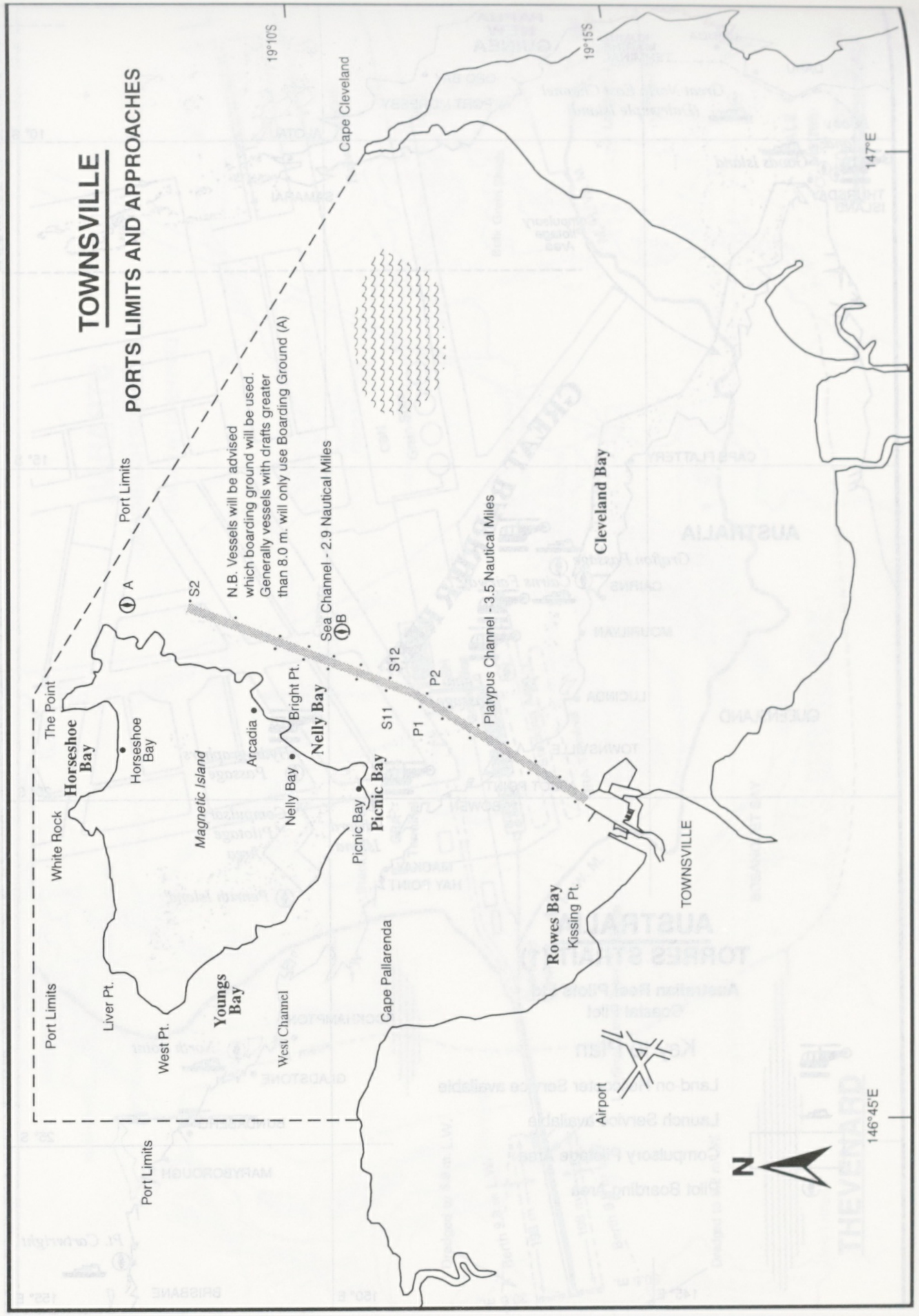
S.W.L.: 55.9 Tonnes (Heavy Lift)
40.0 Tonnes (Standard Lift)
Longitudinal Clearance Between Legs : 15.3m
Positioned at No.3 Berth.

TRAVELLING JIB CRANE

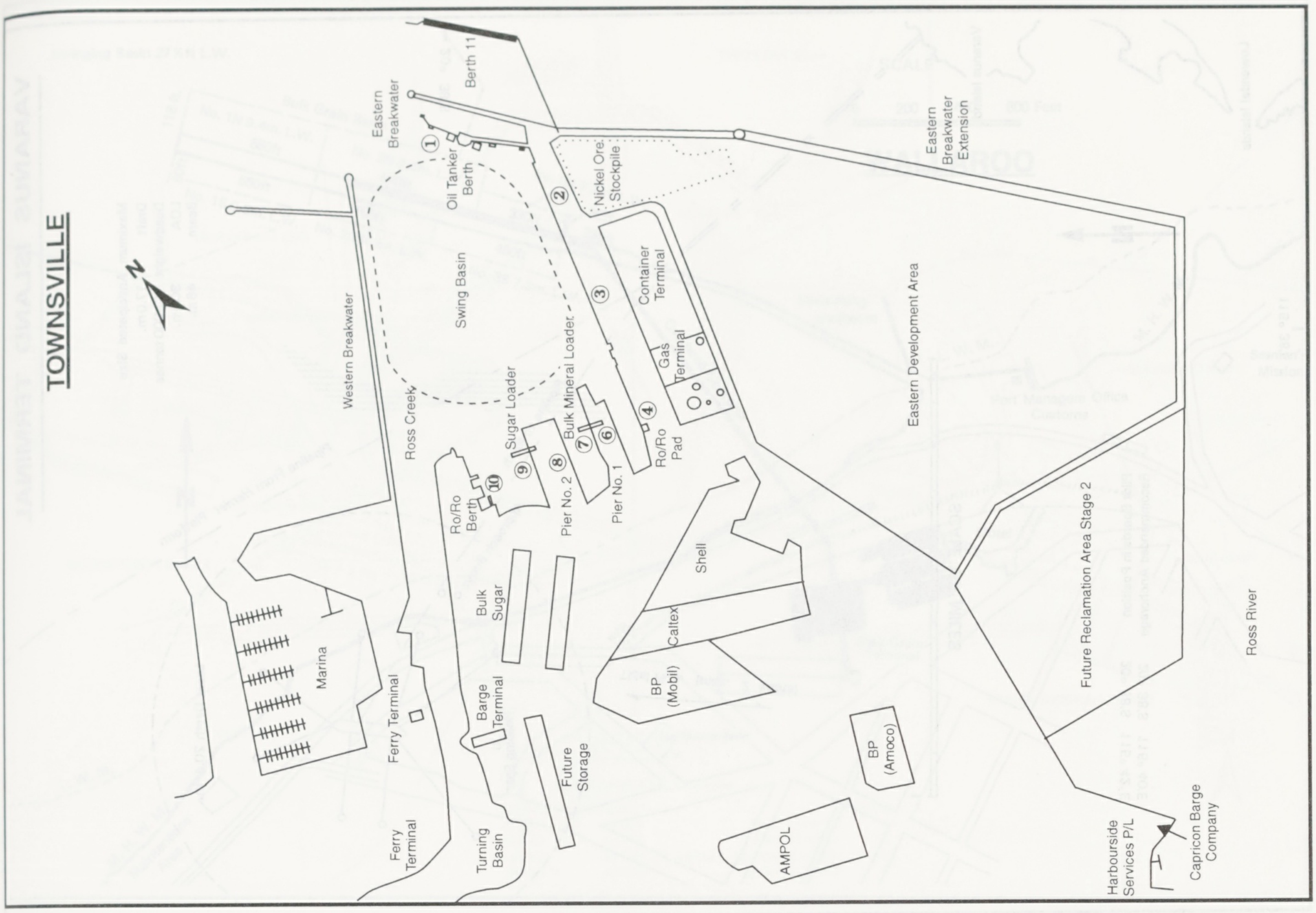
S.W.L. : 25 Tonnes
Radius : 32m

Positioned at No.2 Berth

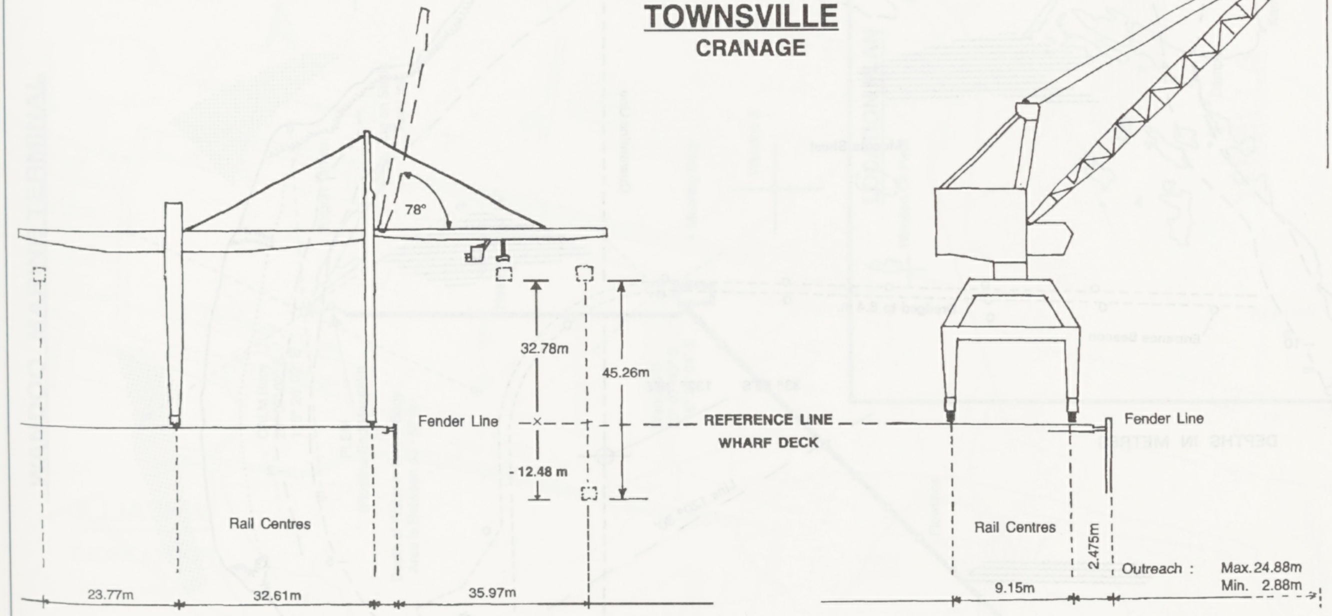

PAPUA NEW GUINEA
UMUDA
KUMUL MARINE TERMINAL
DARU
ORO BAY
PORT MORESBY
Great North East Channel (Port Moresby)
ALOTAU
10° S
Goods Island
Booby Island
THURSDAY ISLAND
SAMARAI
Compulsory Pilotage Area
GREAT BARRIER REEF
CAPE FLATTERY
15° S
AUSTRALIA
Grafton Passage
Cairns Fairway
CAIRNS
MOURILYAN
Palm Passage
LUCINDA
QUEENSLAND
Hydrographers Passage
TOWNSVILLE
ABBOT POINT
BOWEN
20° S
Edward Island
Compulsory Pilotage Area
MACKAY
HAY POINT
Penrith Island
AUSTRALIA
TORRES STRAIT (2)
Queensland Coastal Pilot Service Pty. Ltd.
(QCPS)
Key to Plan
Land-on Helicopter Service available
Launch Service available
Compulsory Pilotage Area
Pilot Boarding Area
ROCKHAMPTON
North Point
GLADSTONE
BUNDABERG
25° S
MARYBOROUGH
Pt. Cartwright
BRISBANE
145° E
150° E
155° E


TOWNSVILLE
PORTS LIMITS AND APPROACHES
19°10'S
19°15'S
147°E
146°45'E
Cape Cleveland
Port Limits
A
S2
N.B. Vessels will be advised which boarding ground will be used. Generally vessels with drafts greater than 8.0 m. will only use Boarding Ground (A)
Sea Channel - 2.9 Nautical Miles
B
S12
P2
S11
P1
Platypus Channel - 3.5 Nautical Miles
Cleveland Bay
The Point
Horseshoe Bay
Horseshoe Bay
Arcadia
Bright Pt.
Nelly Bay
Nelly Bay
Magnetic Island
Picnic Bay
Picnic Bay
White Rock
Port Limits
Liver Pt.
West Pt.
Youngs Bay
West Channel
Cape Pallarenda
Rowes Bay
Kissing Pt.
TOWNSVILLE
Airport
Port Limits
N

TOWNSVILLE


N
Berth 11
Eastern Breakwater
①
Oil Tanker Berth
②
Nickel Ore Stockpile
Eastern Breakwater Extension
Swing Basin
③
Container Terminal
Western Breakwater
Ross Creek
Sugar Loader
Bulk Mineral Loader
Gas Terminal
⑨
⑧
⑦
⑥
④
⑩
Ro/Ro Berth
Pier No. 2
Pier No. 1
Ro/Ro Pad
Eastern Development Area
Shell
Caltex
BP (Mobil)
Bulk Sugar
Marina
Barge Terminal
Ferry Terminal
Future Storage
Ferry Terminal
Turning Basin
BP (Amoco)
AMPOL
Future Reclamation Area Stage 2
Ross River
Harbourside Services P/L
Capricon Barge Company

TOWNSVILLE
CRANAGE

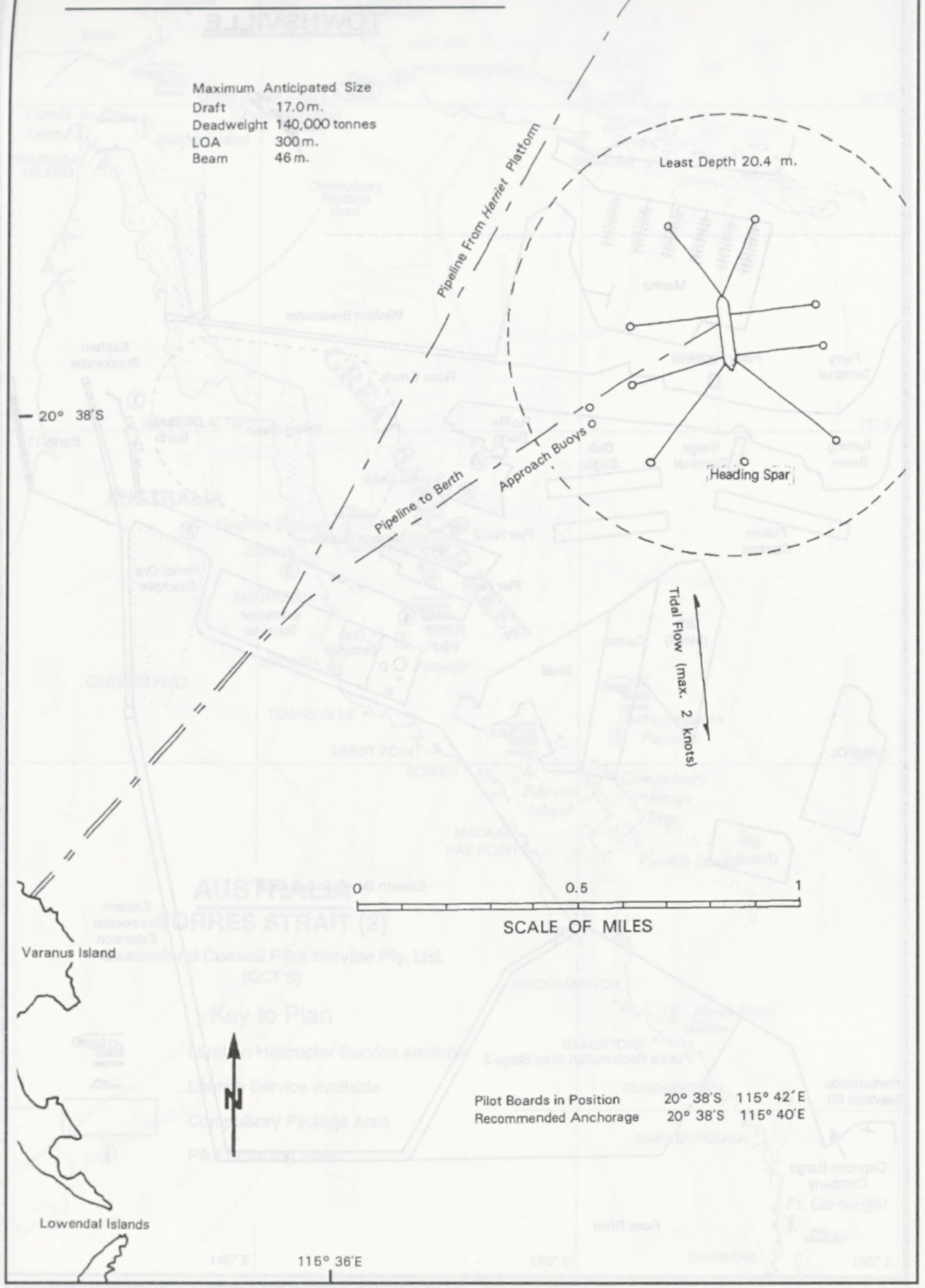

78°
32.78m
45.26m
Fender Line
REFERENCE LINE
WHARF DECK
- 12.48 m
Rail Centres
23.77m
32.61m
35.97m
Rail Centres
2.475m
Fender Line
Outreach : Max.24.88m
Min. 2.88m
9.15m

CONTAINER GANTRY CRANE
S.W.L.: 55.9 Tonnes (Heavy Lift)
40.0 Tonnes (Standard Lift)
Longitudinal Clearance Between Legs : 15.3m
Positioned at No.3 Berth.

TRAVELLING JIB CRANE
S.W.L. : 25 Tonnes
Radius : 32m

Positioned at No.2 Berth

VARANUS ISLAND TERMINAL

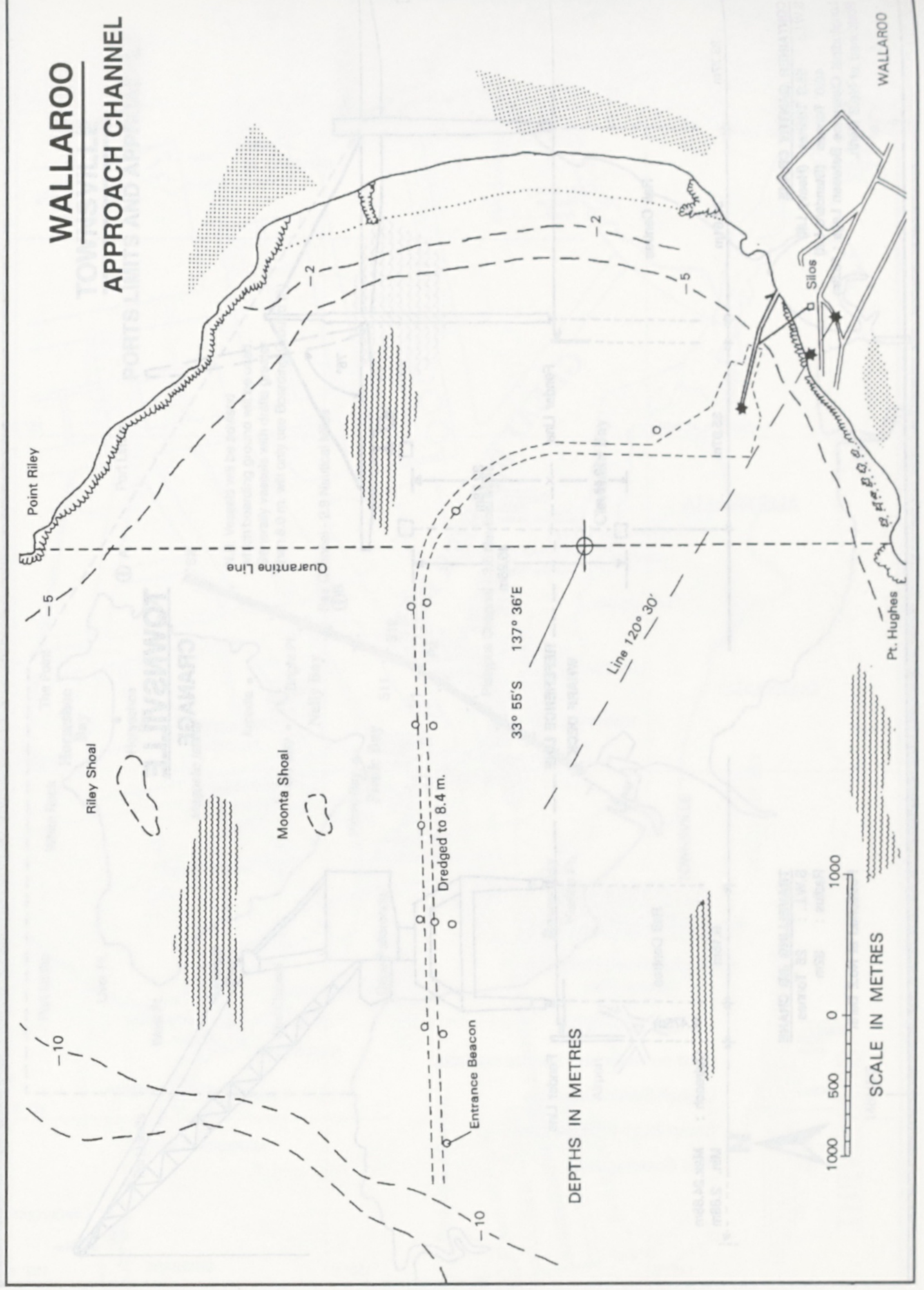

Least Depth 20.4 m.
Pipeline From *Harriet* Platform
Approach Buoys
Pipeline to Berth
Heading Spar
Tidal Flow (max. 2 knots)
20° 38'S
0
0.5
1
SCALE OF MILES
Varanus Island
Lowendal Islands
115° 36'E
N

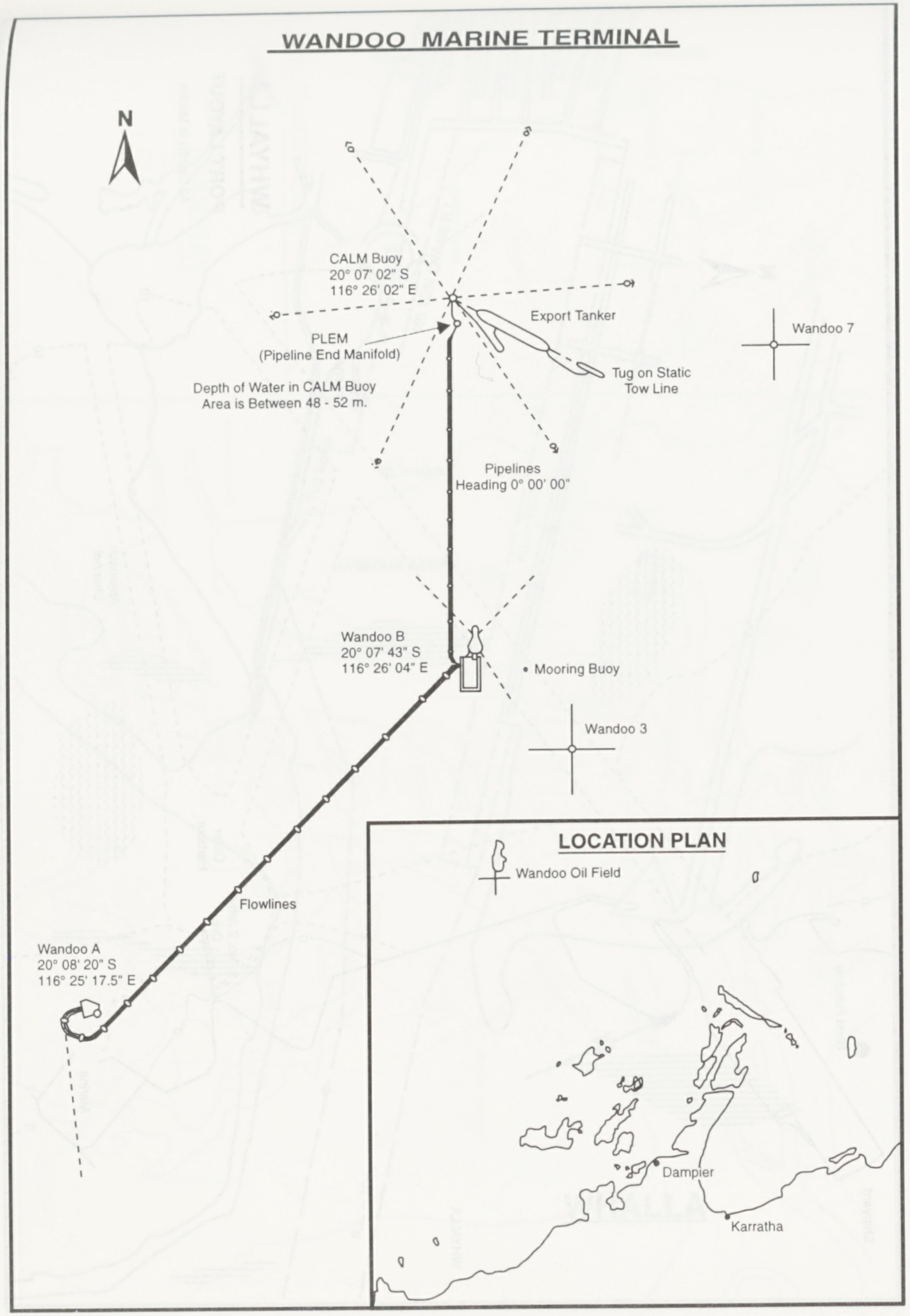
Maximum Anticipated Size

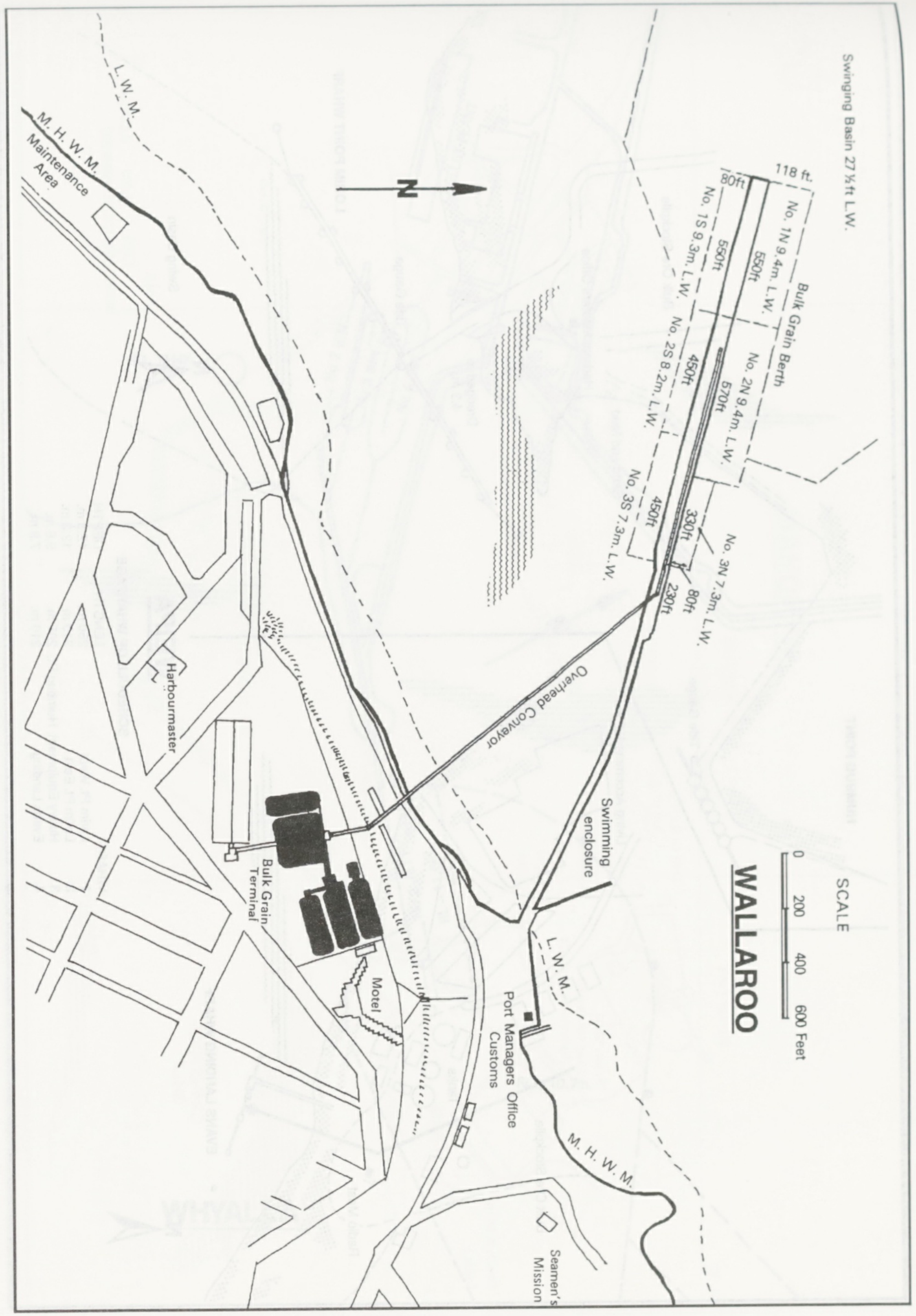
Draft	17.0 m.
Deadweight	140,000 tonnes
LOA	300 m.
Beam	46 m.

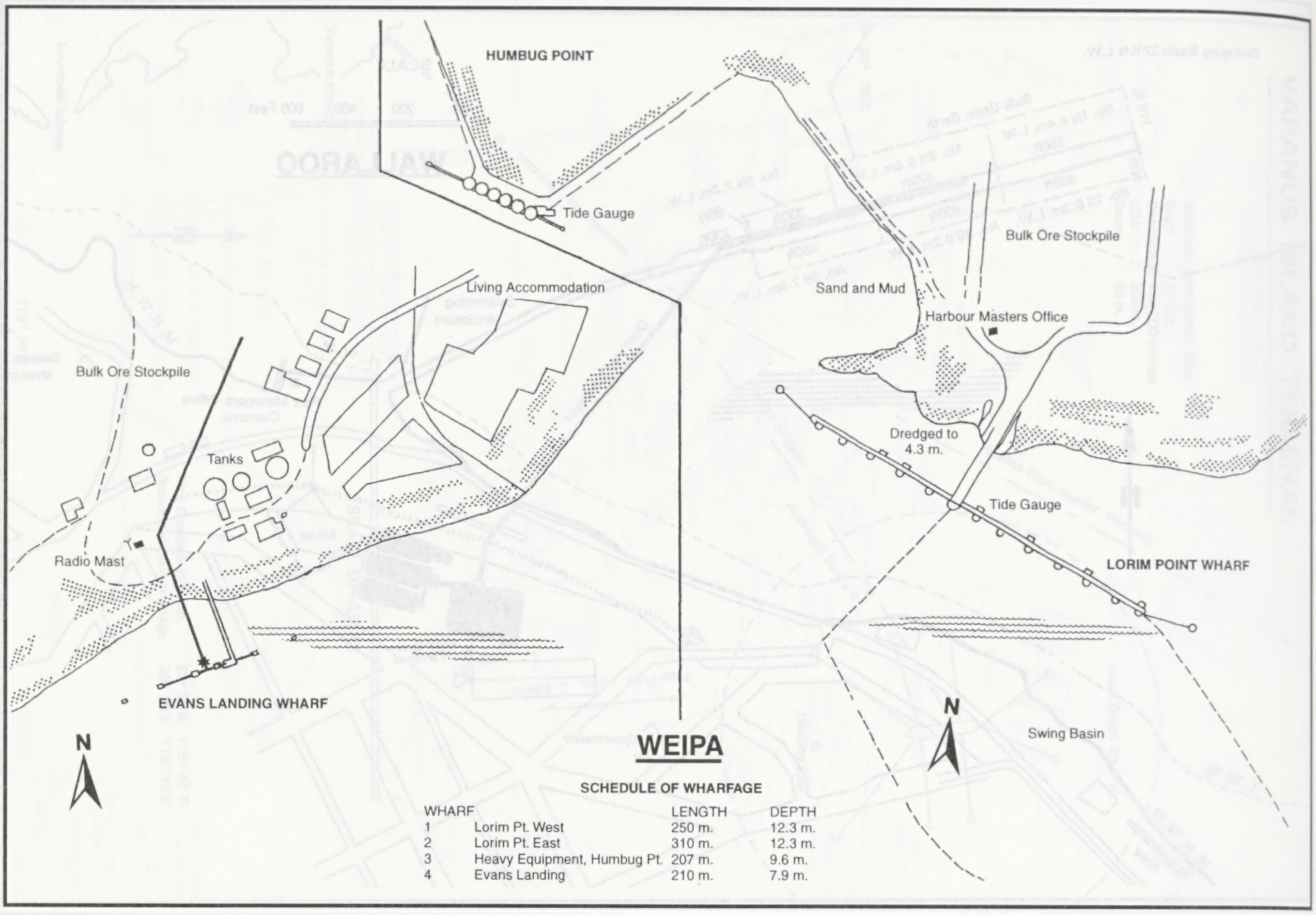
Pilot Boards in Position	20° 38'S	115° 42'E
Recommended Anchorage	20° 38'S	115° 40'E

WALLAROO
APPROACH CHANNEL


Point Riley
Quarantine Line
–5
–2
–5
–2
Silos
WALLAROO
Pt. Hughes
Line 120° 30'
33° 55'S 137° 36'E
Riley Shoal
Moonta Shoal
Dredged to 8.4 m.
Entrance Beacon
–10
–10
DEPTHS IN METRES
1000
500
0
1000
SCALE IN METRES


WANDOO MARINE TERMINAL
N
CALM Buoy
20° 07' 02" S
116° 26' 02" E
Export Tanker
PLEM
(Pipeline End Manifold)
Depth of Water in CALM Buoy
Area is Between 48 - 52 m.
Tug on Static
Tow Line
Wandoo 7
Pipelines
Heading 0° 00' 00"
Wandoo B
20° 07' 43" S
116° 26' 04" E
Mooring Buoy
Wandoo 3
Flowlines
Wandoo A
20° 08' 20" S
116° 25' 17.5" E
LOCATION PLAN
Wandoo Oil Field
Dampier
Karratha

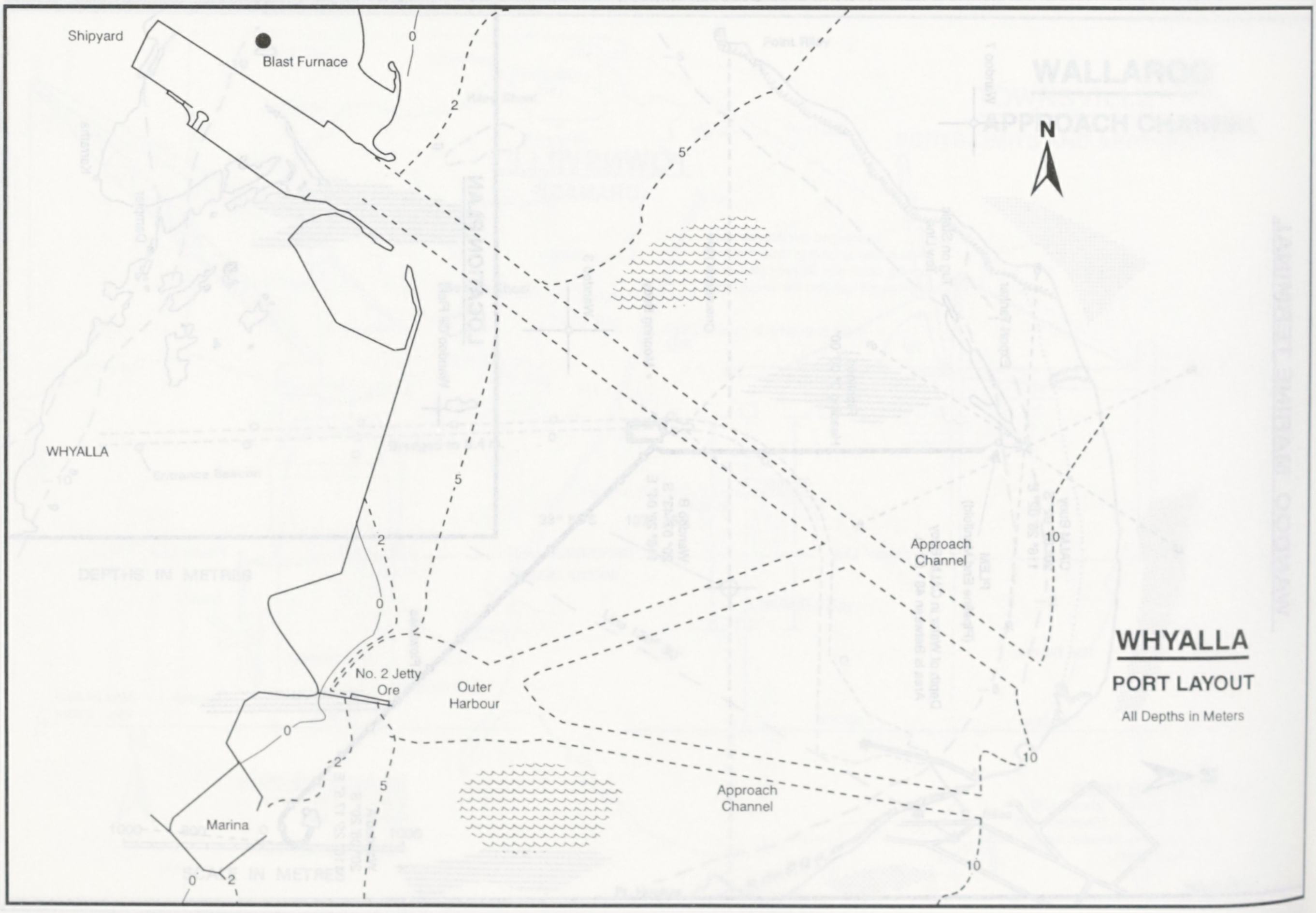

WALLAROO
SCALE
0
200
400
600 Feet
N
Swinging Basin 27½ ft L.W.
118 ft.
80ft
No. 1N 9.4m. L.W.
No. 1S 9.3m. L.W.
650ft
650ft
Bulk Grain Berth
No. 2N 9.4m. L.W.
No. 2S 8.2m. L.W.
450ft
570ft
No. 3S 7.3m. L.W.
450ft
330ft
No. 3N 7.3m. L.W.
80ft
230ft
Overhead Conveyor
Swimming enclosure
L. W. M.
M. H. W. M.
Maintenance Area
Harbourmaster
Bulk Grain Terminal
Motel
Port Managers Office
Customs
Seamen's Mission
M. H. W. M.
L. W. M.


HUMBUG POINT
Tide Gauge
Living Accommodation
Bulk Ore Stockpile
Tanks
Radio Mast
2
EVANS LANDING WHARF
N
Sand and Mud
Bulk Ore Stockpile
Harbour Masters Office
Dredged to 4.3 m.
Tide Gauge
LORIM POINT WHARF
Swing Basin
N

WEIPA

SCHEDULE OF WHARFAGE

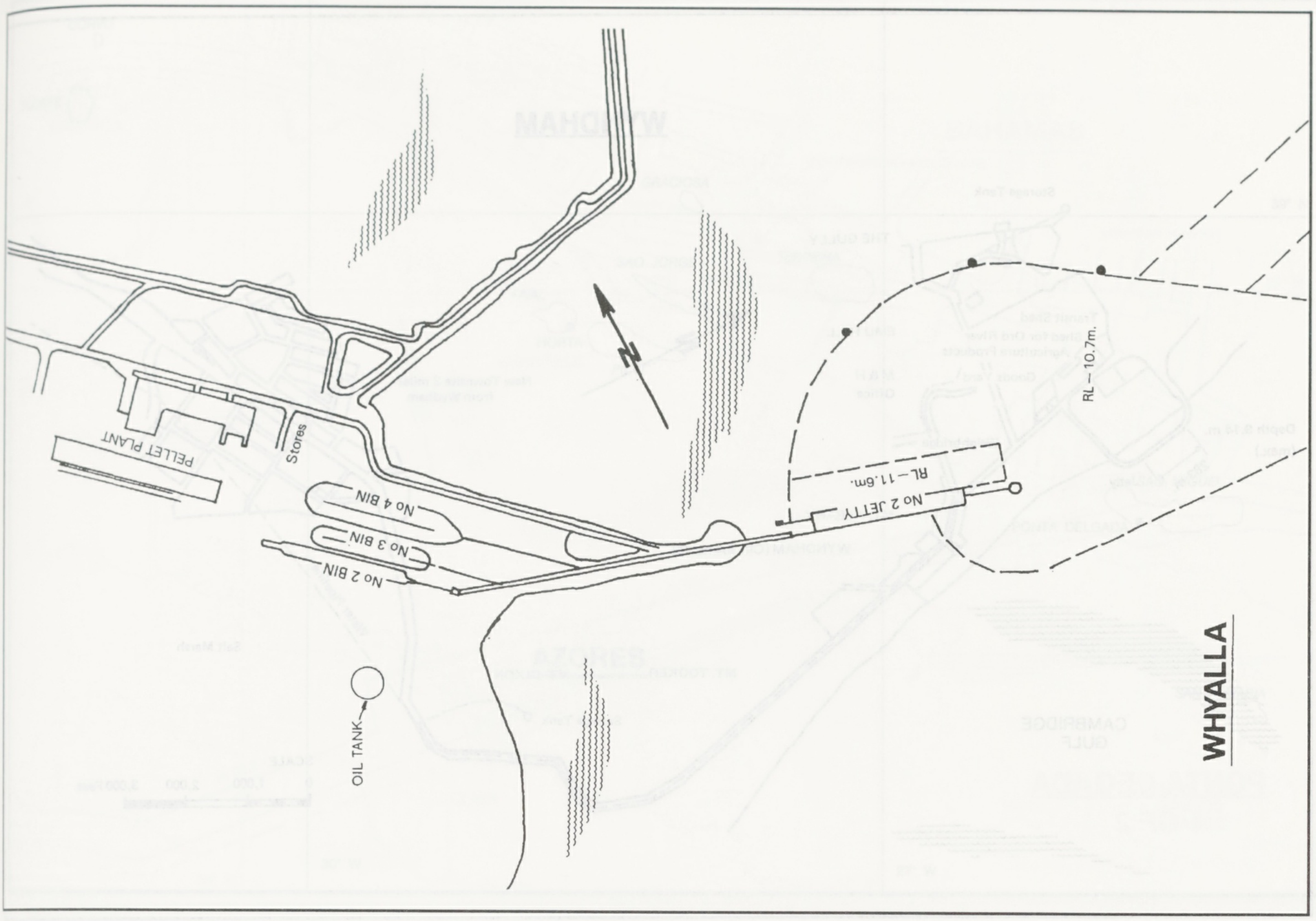
WHARF		LENGTH	DEPTH
1	Lorim Pt. West	250 m.	12.3 m.
2	Lorim Pt. East	310 m.	12.3 m.
3	Heavy Equipment, Humbug Pt.	207 m.	9.6 m.
4	Evans Landing	210 m.	7.9 m.

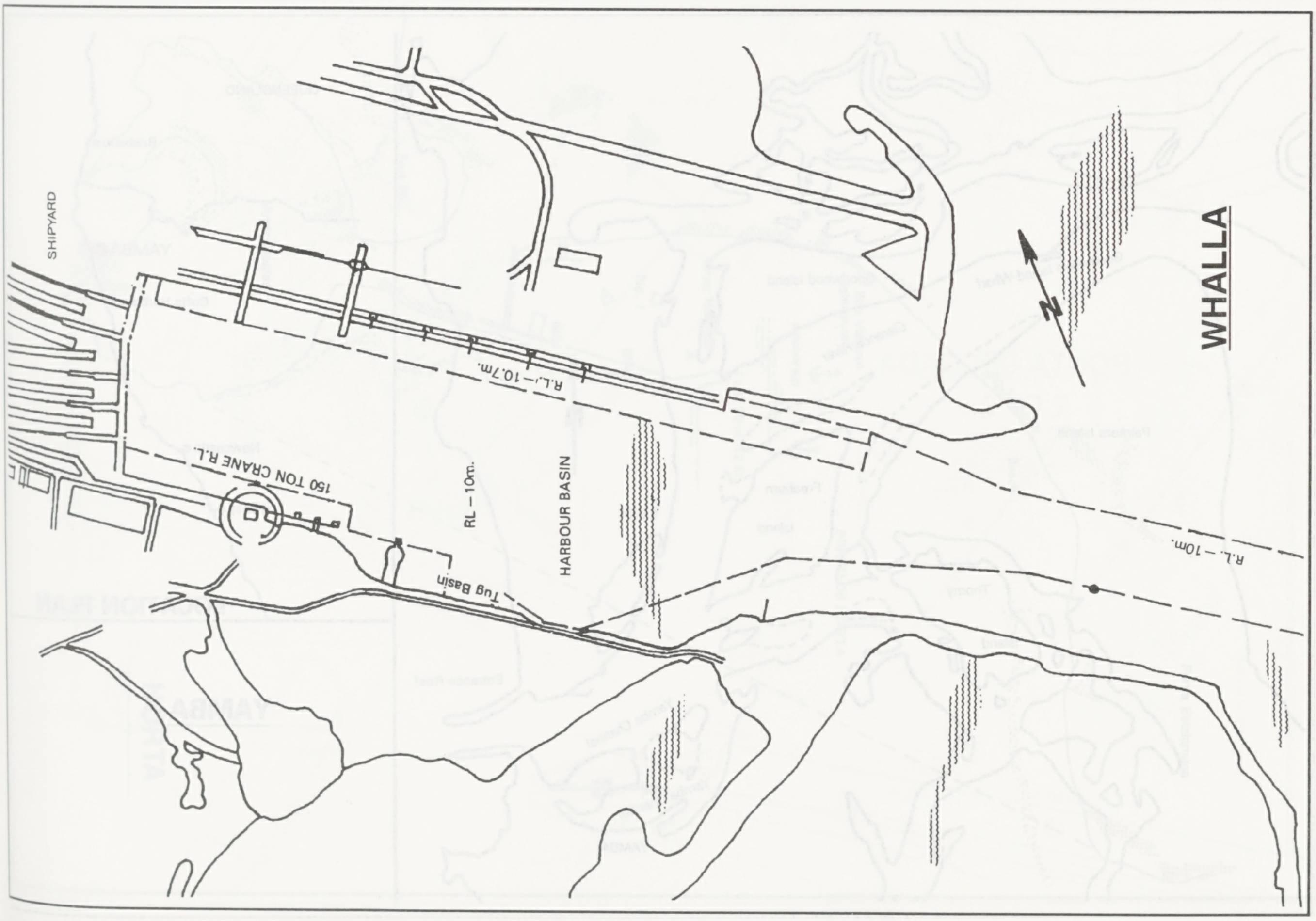

Shipyard
Blast Furnace
0
2
5
N
WHYALLA
5
2
0
No. 2 Jetty Ore
Outer Harbour
Approach Channel
10
10
Approach Channel
10
Marina
0
2

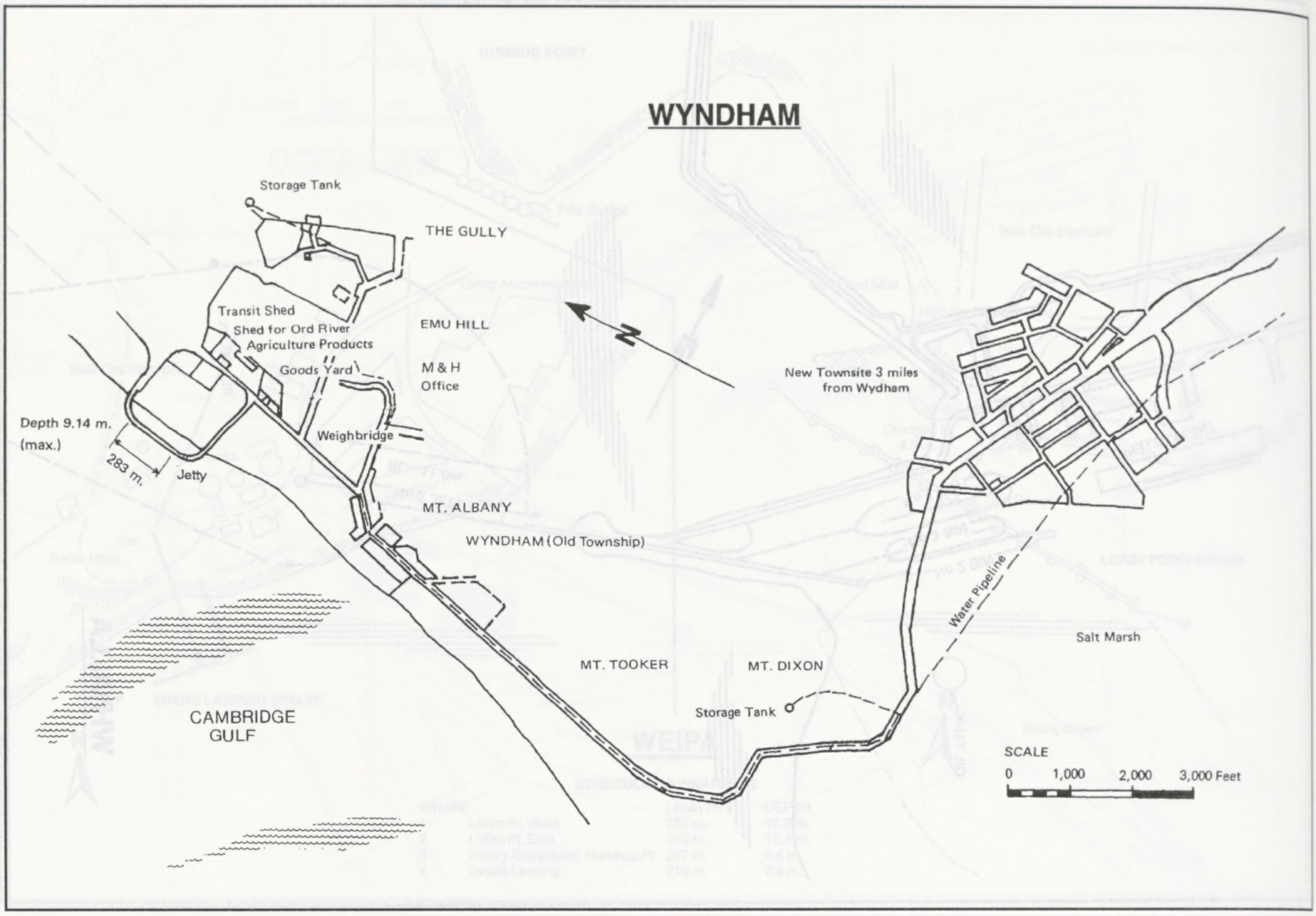
WHYALLA

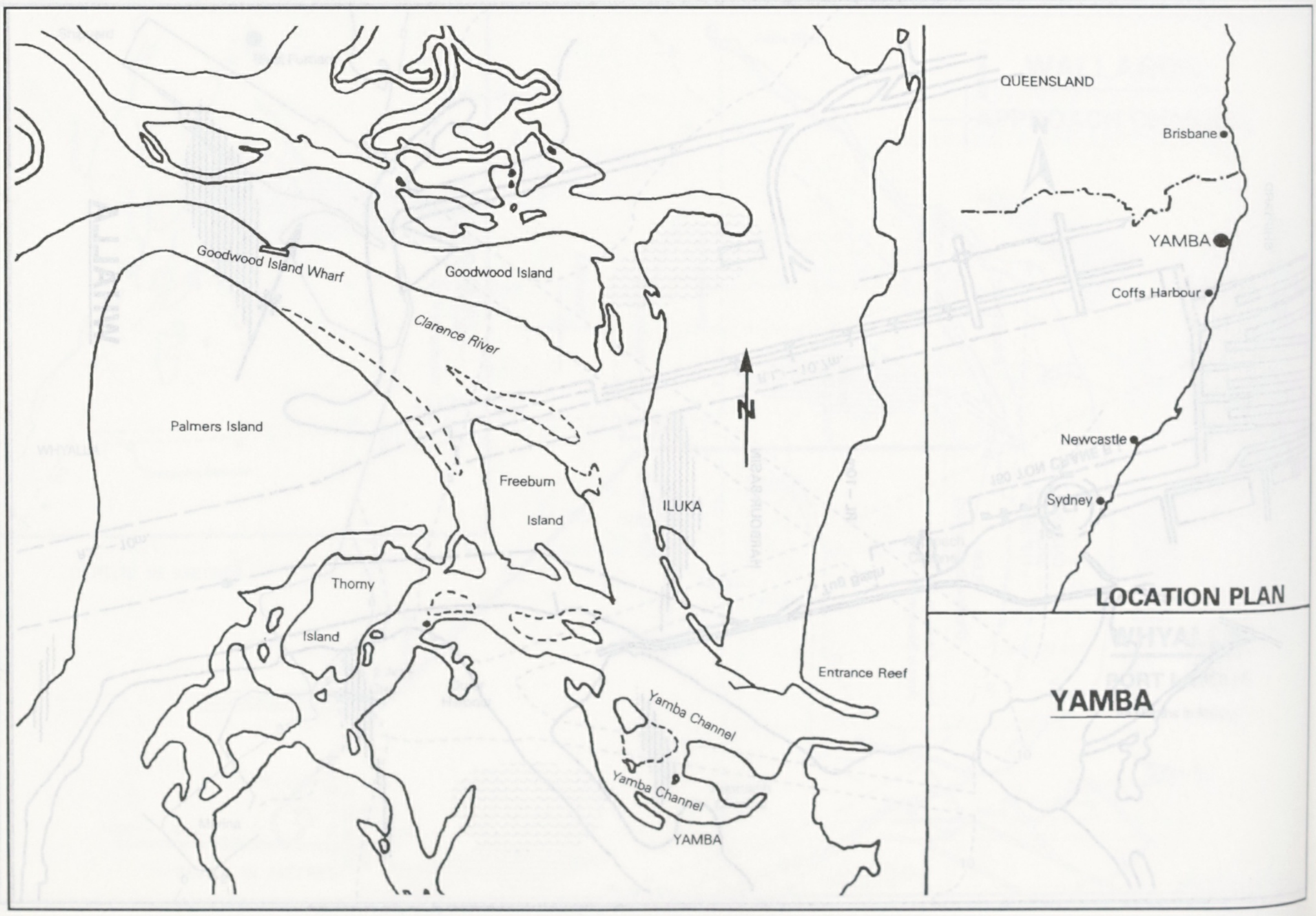
PORT LAYOUT

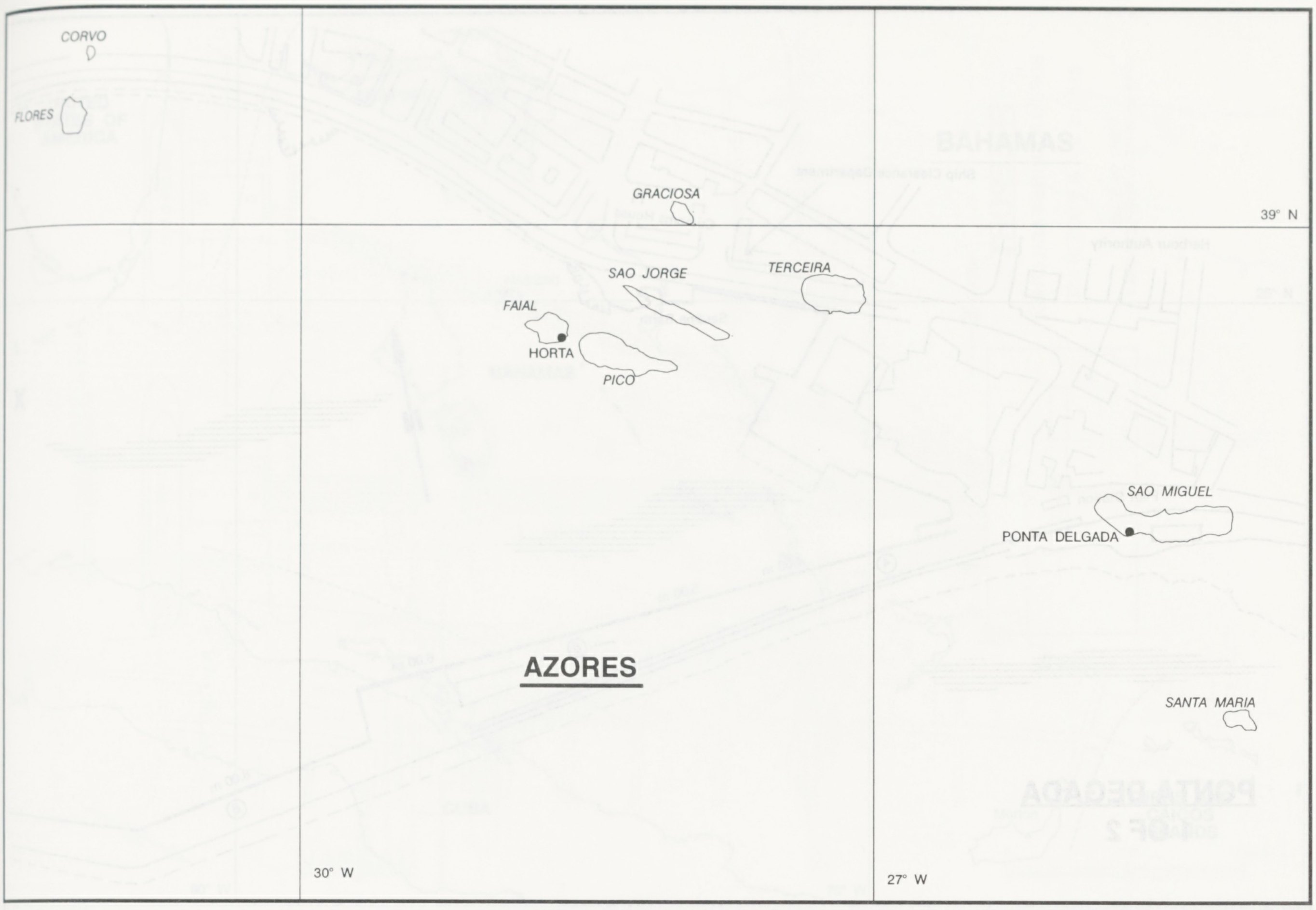
All Depths in Meters

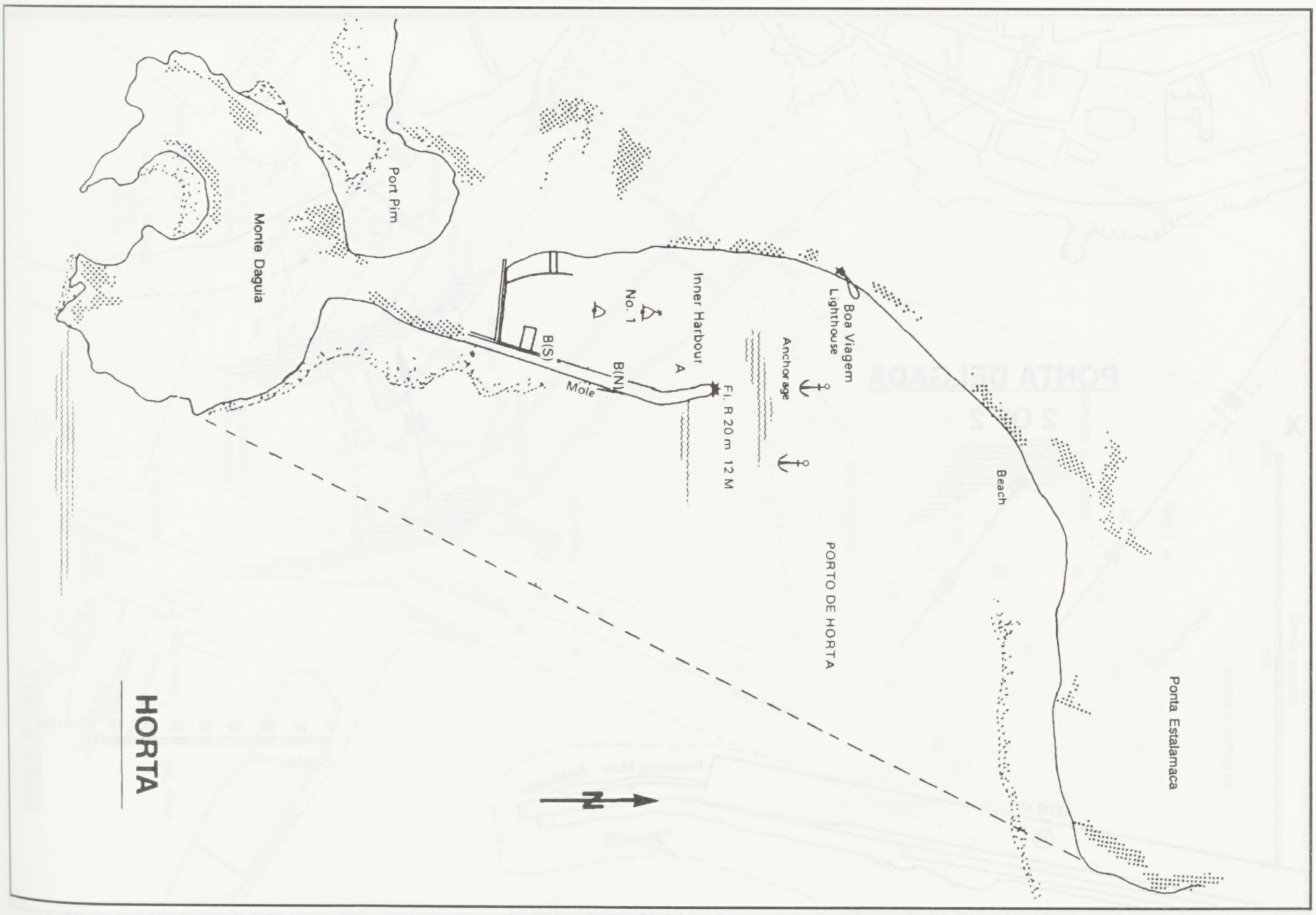

WHYALLA
N
PELLET PLANT
Stores
No 4 BIN
No 3 BIN
No 2 BIN
No 2 JETTY
RL – 11.6m.
RL – 10.7m.
OIL TANK

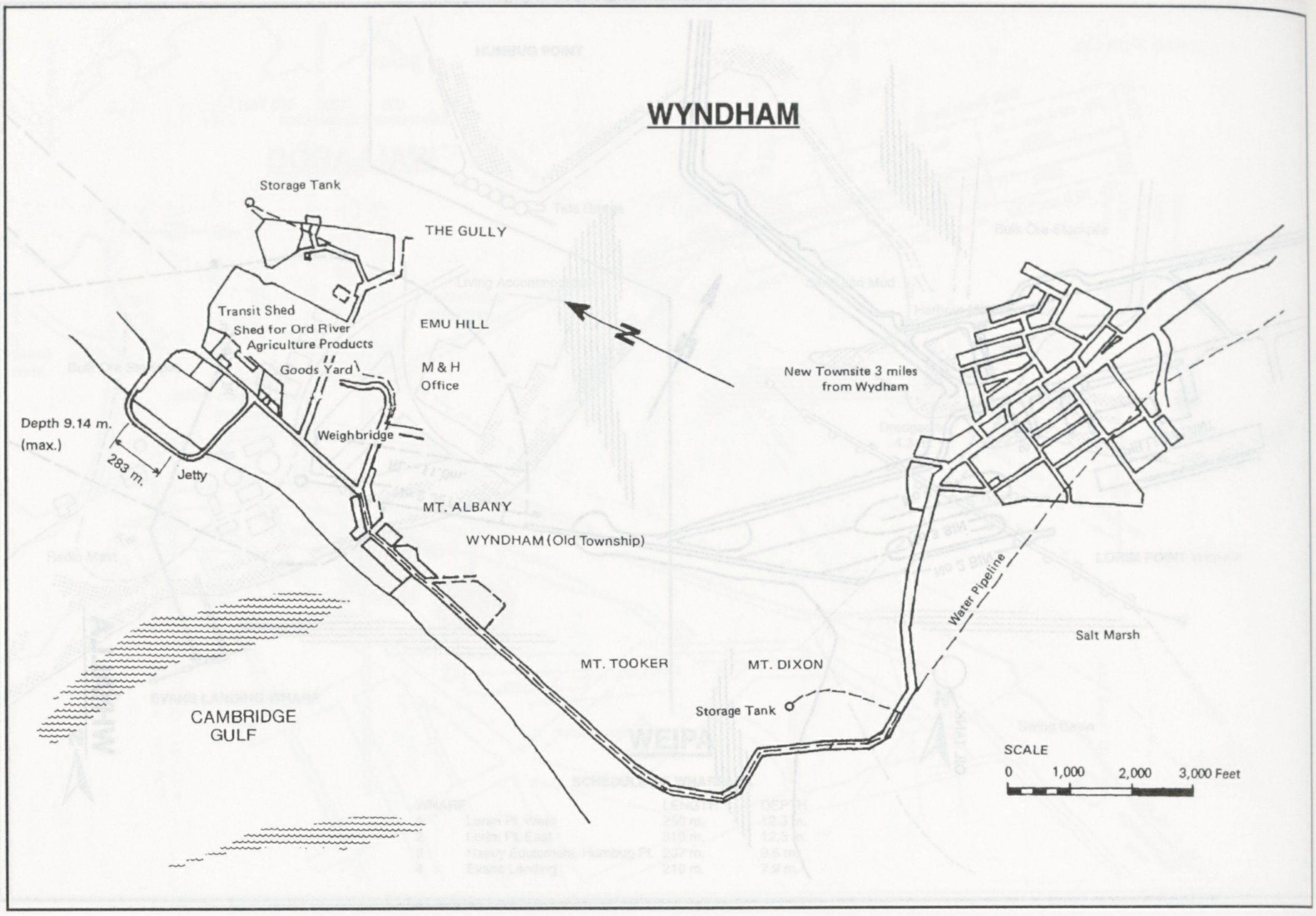

WHALLA
N
SHIPYARD
R.L. – 10.7m.
150 TON CRANE R.L.
RL – 10m.
HARBOUR BASIN
Tug Basin
R.L. – 10m.

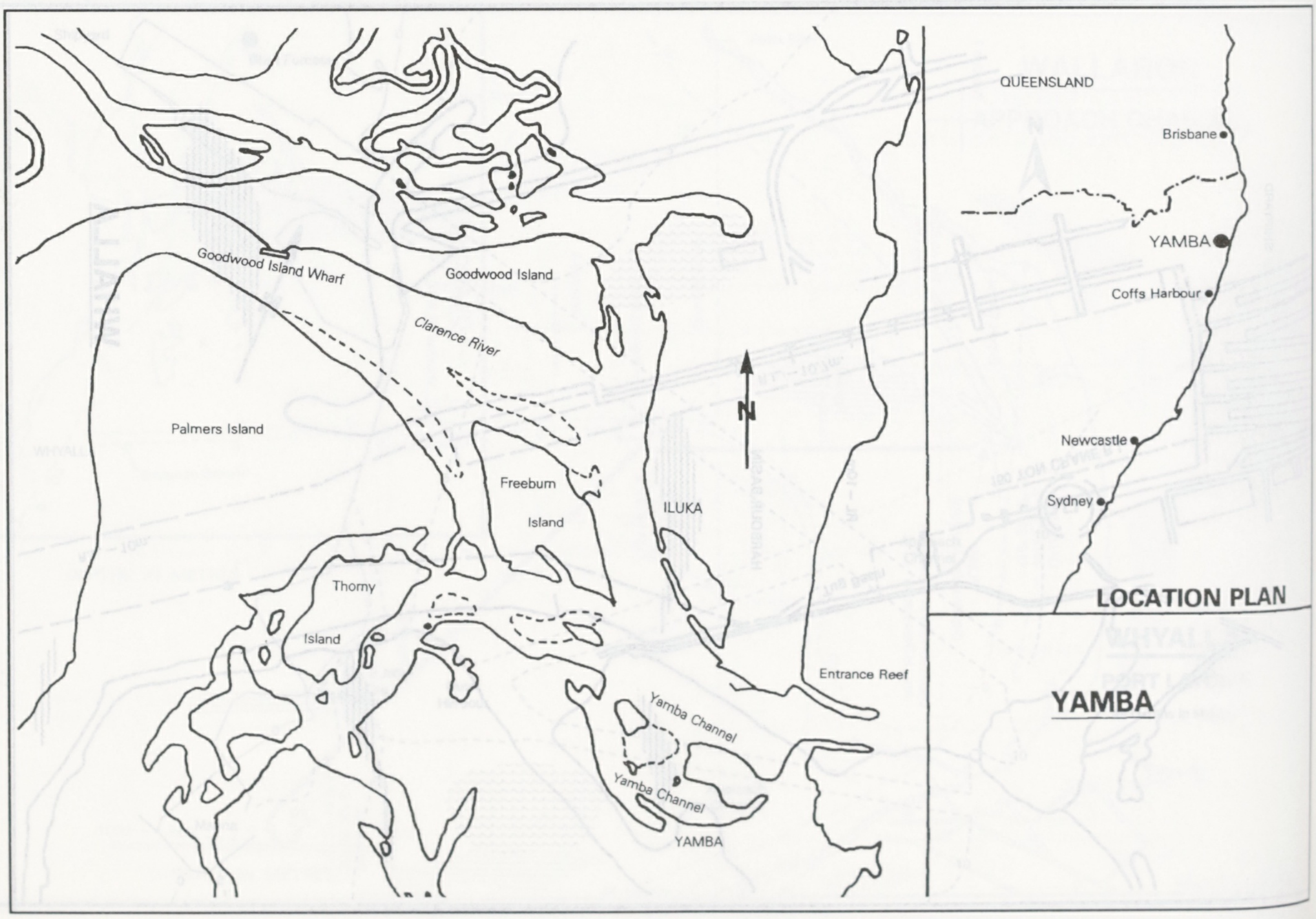

WYNDHAM
Storage Tank
THE GULLY
Transit Shed
Shed for Ord River Agriculture Products
EMU HILL
Goods Yard
M & H Office
Depth 9.14 m. (max.)
283 m.
Jetty
Weighbridge
MT. ALBANY
WYNDHAM (Old Township)
N
New Townsite 3 miles from Wydham
Water Pipeline
Salt Marsh
MT. TOOKER
MT. DIXON
Storage Tank
CAMBRIDGE GULF
SCALE
0
1,000
2,000
3,000 Feet

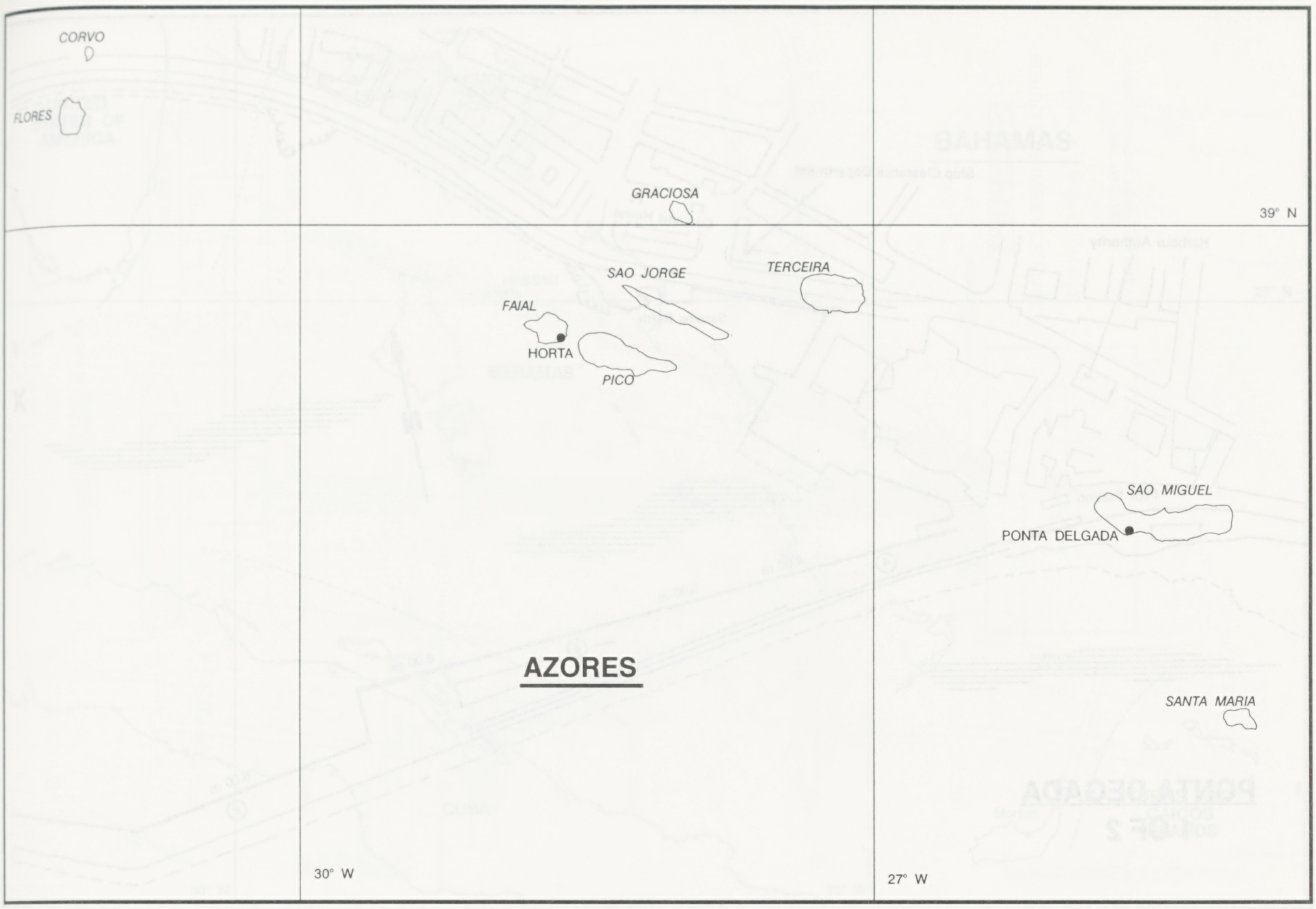

Goodwood Island Wharf
Goodwood Island
Clarence River
Palmers Island
Freeburn Island
ILUKA
N
Thorny Island
Entrance Reef
Yamba Channel
Yamba Channel
YAMBA
QUEENSLAND
Brisbane
YAMBA
Coffs Harbour
Newcastle
Sydney
LOCATION PLAN
YAMBA

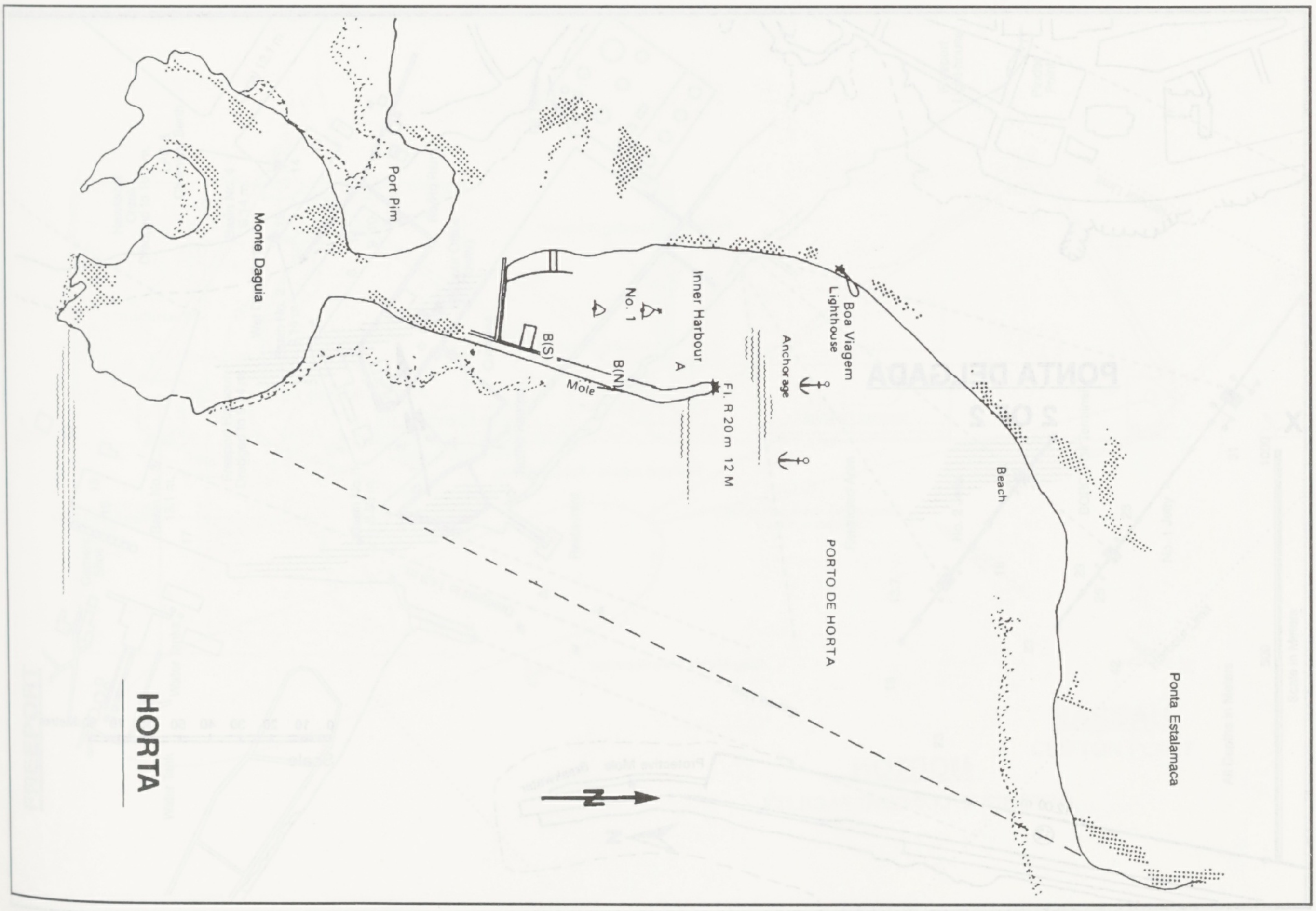

CORVO
FLORES
GRACIOSA
39° N
SAO JORGE
TERCEIRA
FAIAL
HORTA
PICO
SAO MIGUEL
PONTA DELGADA
AZORES
SANTA MARIA
30° W
27° W

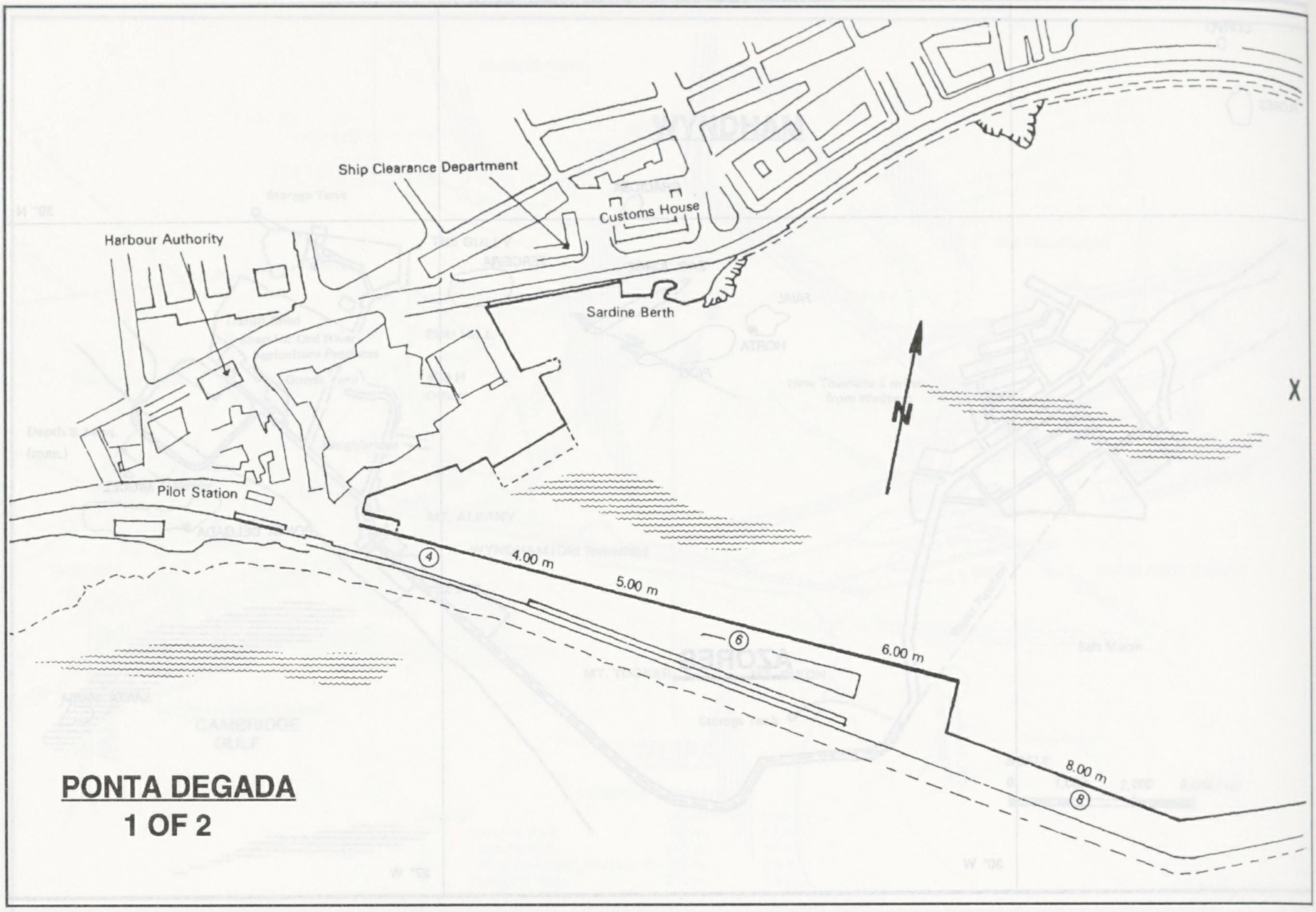

HORTA
Monte Daguia
Port Pim
Inner Harbour
No. 1
A
B(S)
B(N)
Mole
Fl. R 20 m 12 M
Boa Viagem Lighthouse
Anchorage
Beach
PORTO DE HORTA
Ponta Estalamaca
N


WYNDHAM
Storage Tank
THE GULLY
Transit Shed
Shed for Ord River
Agriculture Products
EMU HILL
Goods Yard
M & H
Office
N
Depth 9.14 m.
(max.)
283 m.
Jetty
Weighbridge
MT. ALBANY
WYNDHAM (Old Township)
New Townsite 3 miles
from Wydham
Water Pipeline
Salt Marsh
MT. TOOKER
MT. DIXON
Storage Tank
CAMBRIDGE
GULF
SCALE
0
1,000
2,000
3,000 Feet


Goodwood Island Wharf
Goodwood Island
Clarence River
N
Palmers Island
Freeburn
Island
ILUKA
Thorny
Island
Entrance Reef
Yamba Channel
Yamba Channel
YAMBA
QUEENSLAND
N
Brisbane
YAMBA
Coffs Harbour
Newcastle
Sydney
LOCATION PLAN
YAMBA

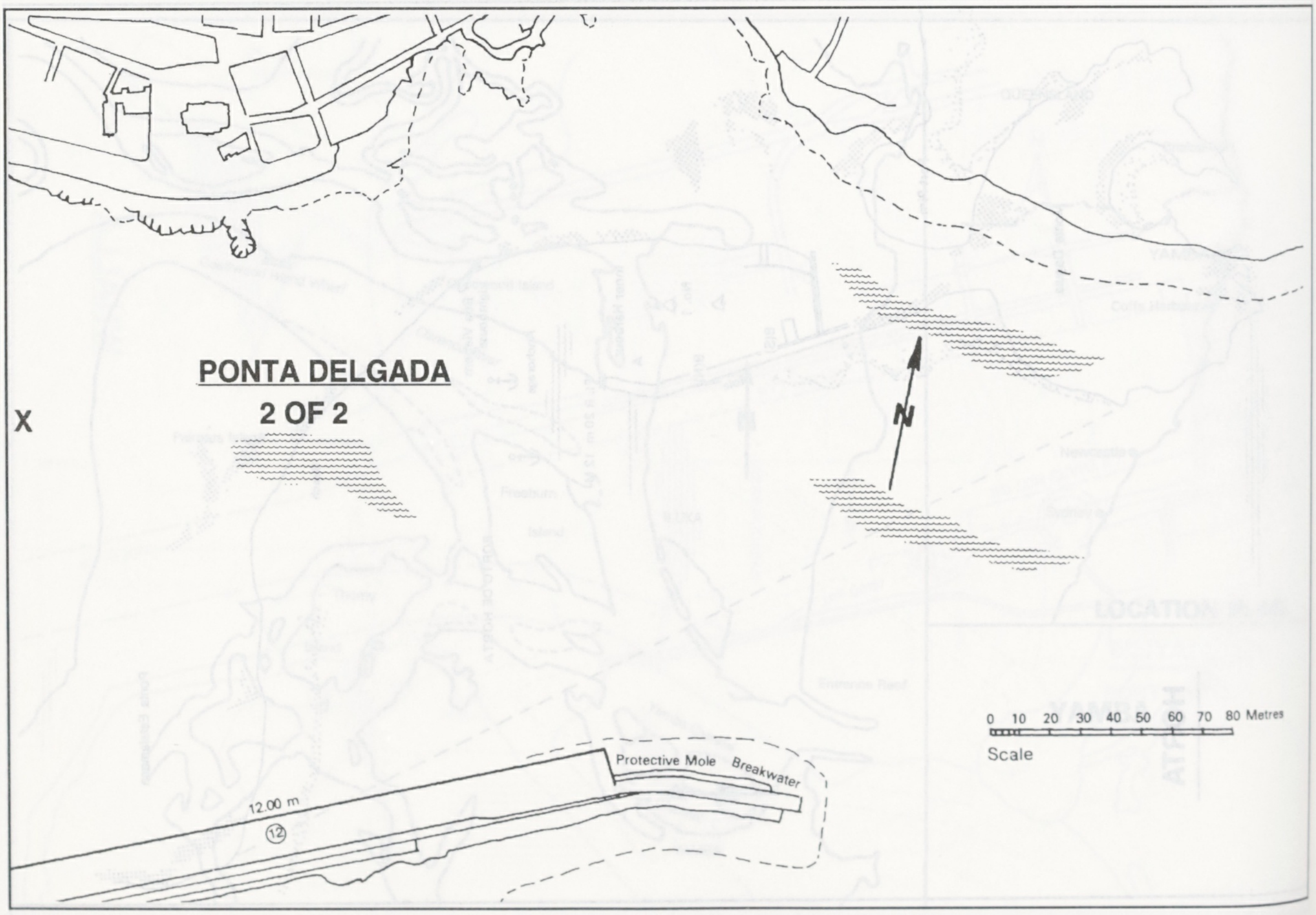

CORVO
FLORES
GRACIOSA
39° N
SAO JORGE
TERCEIRA
FAIAL
HORTA
PICO
SAO MIGUEL
PONTA DELGADA
AZORES
SANTA MARIA
30° W
27° W


Port Pim
Monte Daguia
Inner Harbour
No. 1
B(S)
B(N)
A
Mole
Fl. R 20 m 12 M
Boa Viagem Lighthouse
Anchorage
PORTO DE HORTA
Beach
Ponta Estalamaca
N
HORTA



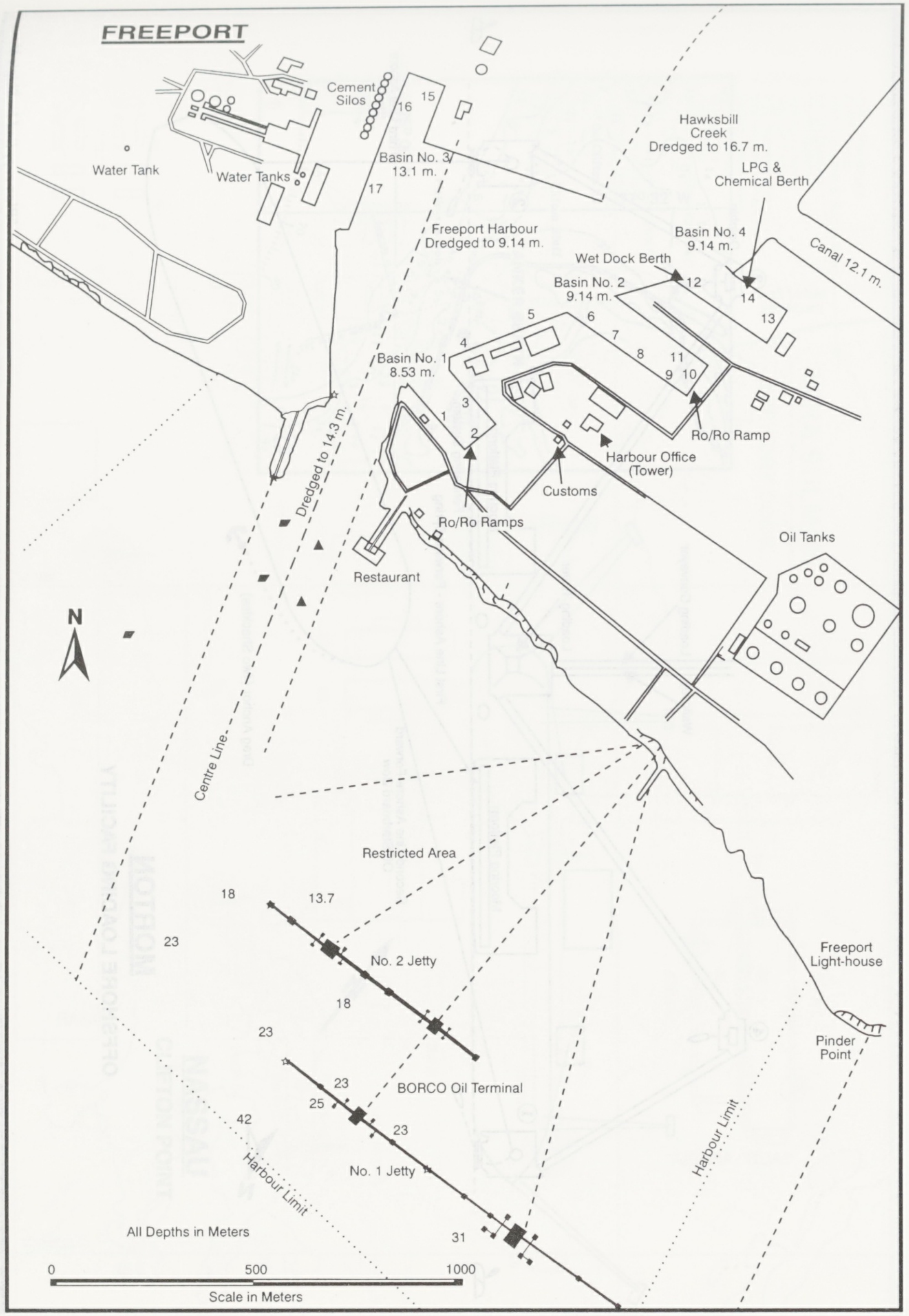
PONTA DEGADA
1 OF 2

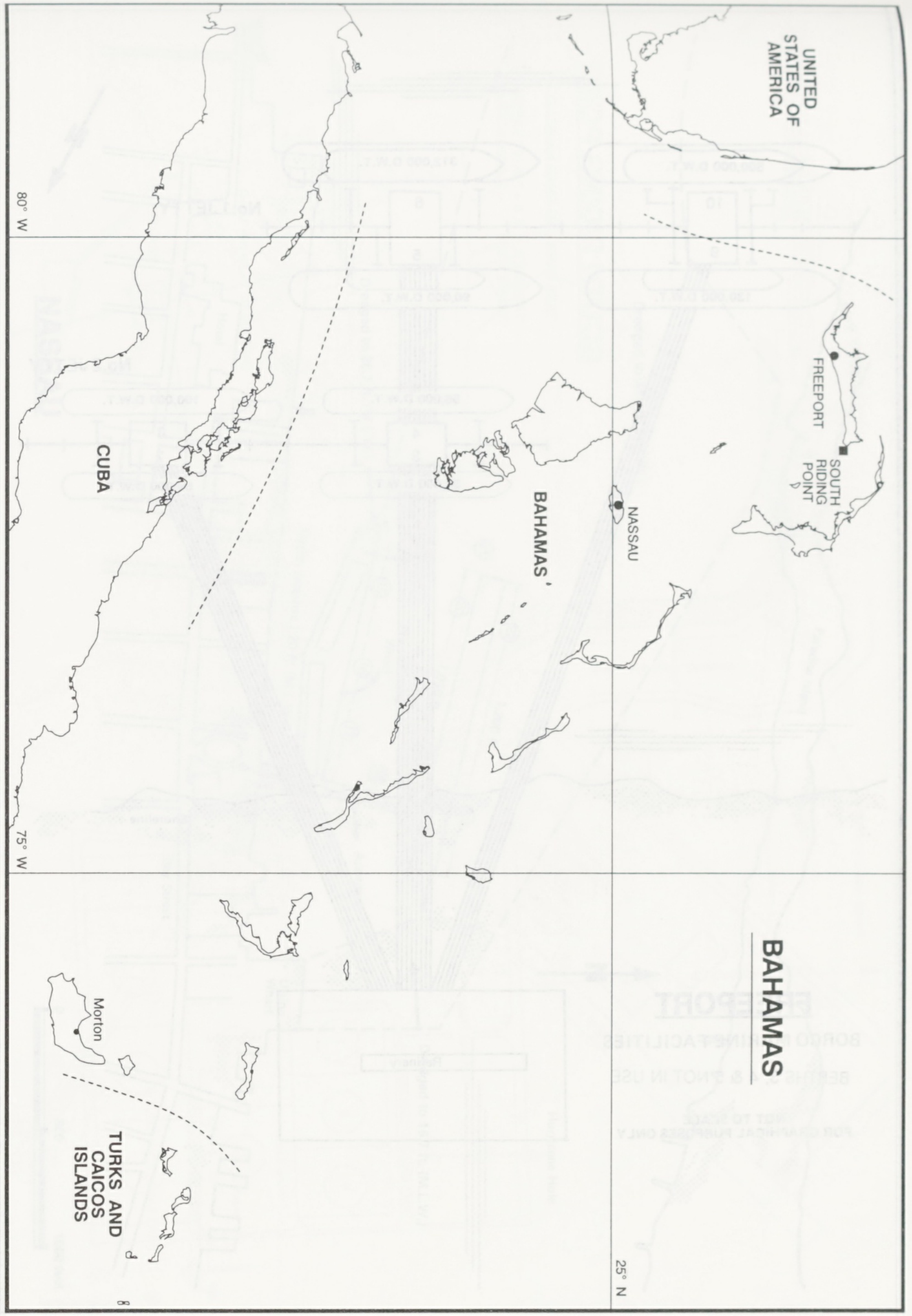
Ship Clearance Department
Customs House
Harbour Authority
Sardine Berth
Pilot Station
④
4.00 m
5.00 m
⑥
6.00 m
8.00 m
⑧
N
X

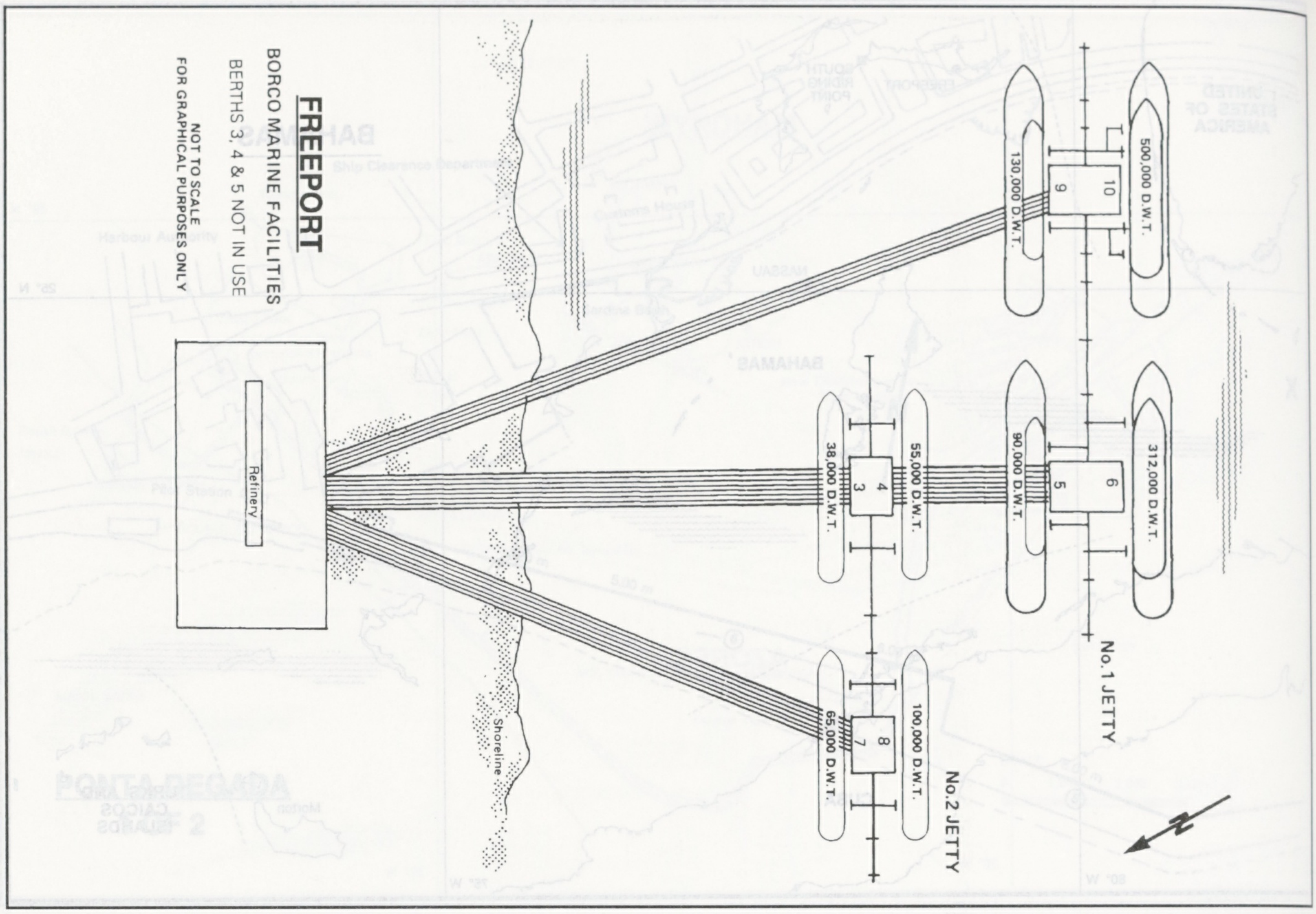


PONTA DELGADA
2 OF 2

X
N
12.00 m
⑫
Protective Mole
Breakwater
0 10 20 30 40 50 60 70 80 Metres
Scale


FREEPORT
Cement Silos
16
15
Water Tank
Water Tanks
Basin No. 3 13.1 m.
17
Hawksbill Creek Dredged to 16.7 m.
LPG & Chemical Berth
Freeport Harbour Dredged to 9.14 m.
Basin No. 4 9.14 m.
Canal 12.1 m.
Wet Dock Berth
12
14
13
Basin No. 2 9.14 m.
5
6
7
8
11
9
10
4
Basin No. 1 8.53 m.
3
1
2
Ro/Ro Ramp
Harbour Office (Tower)
Customs
Ro/Ro Ramps
Dredged to 14.3 m.
Restaurant
Oil Tanks
N
Centre Line
Restricted Area
18
13.7
No. 2 Jetty
23
18
23
23
25
BORCO Oil Terminal
23
42
No. 1 Jetty
Harbour Limit
Harbour Limit
Freeport Light-house
Pinder Point
31
All Depths in Meters
0
500
1000
Scale in Meters


UNITED STATES OF AMERICA
FREEPORT
SOUTH RIDING POINT
80° W
75° W
25° N
NASSAU
BAHAMAS
CUBA
Morton
TURKS AND CAICOS ISLANDS

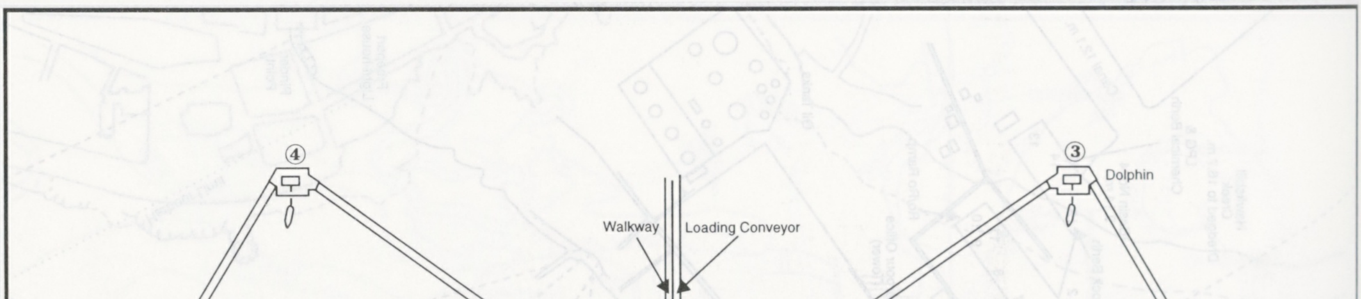


FREEPORT

BORCO MARINE FACILITIES
BERTHS 3, 4 & 5 NOT IN USE

NOT TO SCALE
FOR GRAPHICAL PURPOSES ONLY

No.1 JETTY
500,000 D.W.T.
10
9
130,000 D.W.T.
312,000 D.W.T.
6
5
90,000 D.W.T.
55,000 D.W.T.
4
3
38,000 D.W.T.
No.2 JETTY
100,000 D.W.T.
8
7
65,000 D.W.T.
Refinery
Shoreline

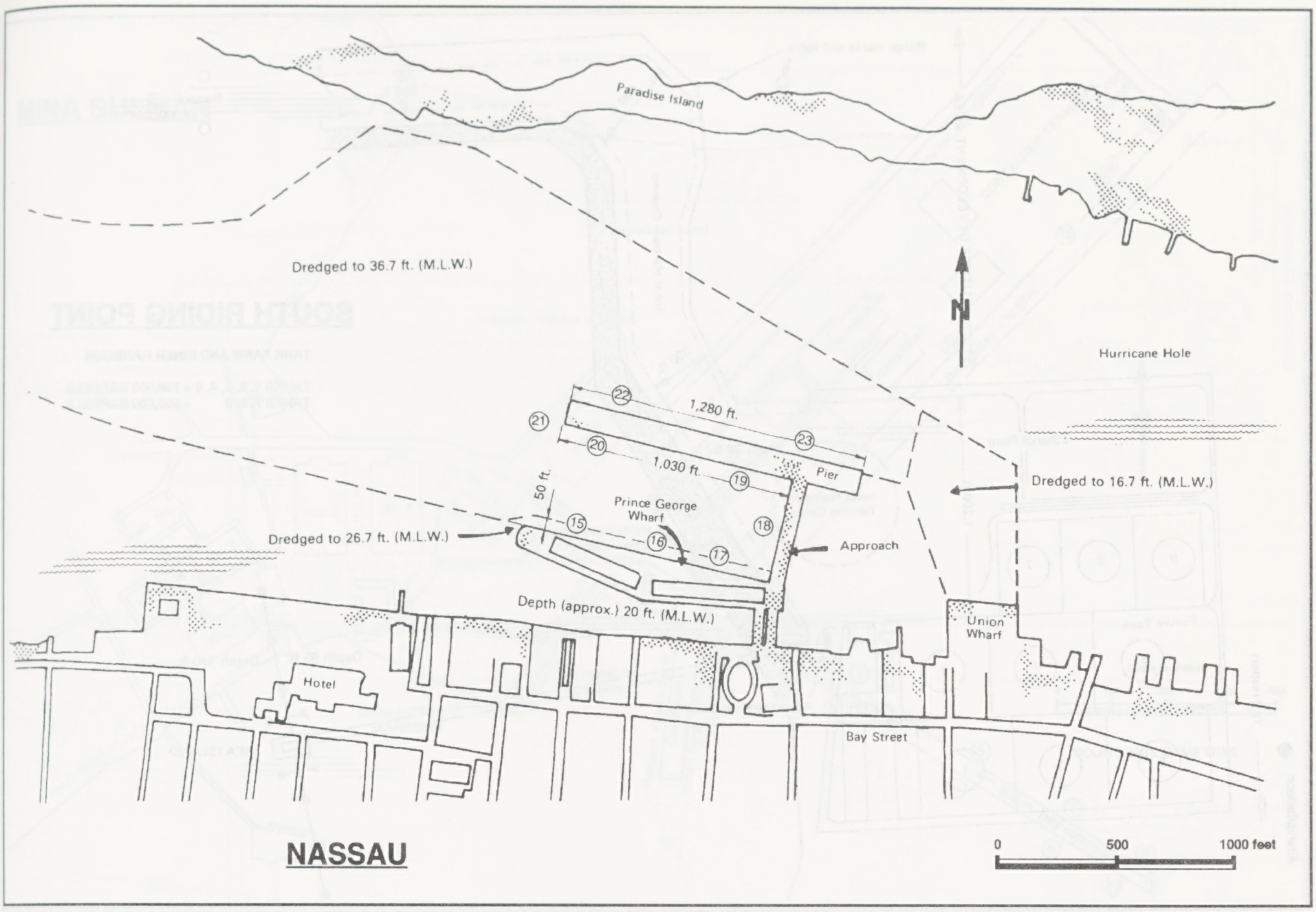


MORTON

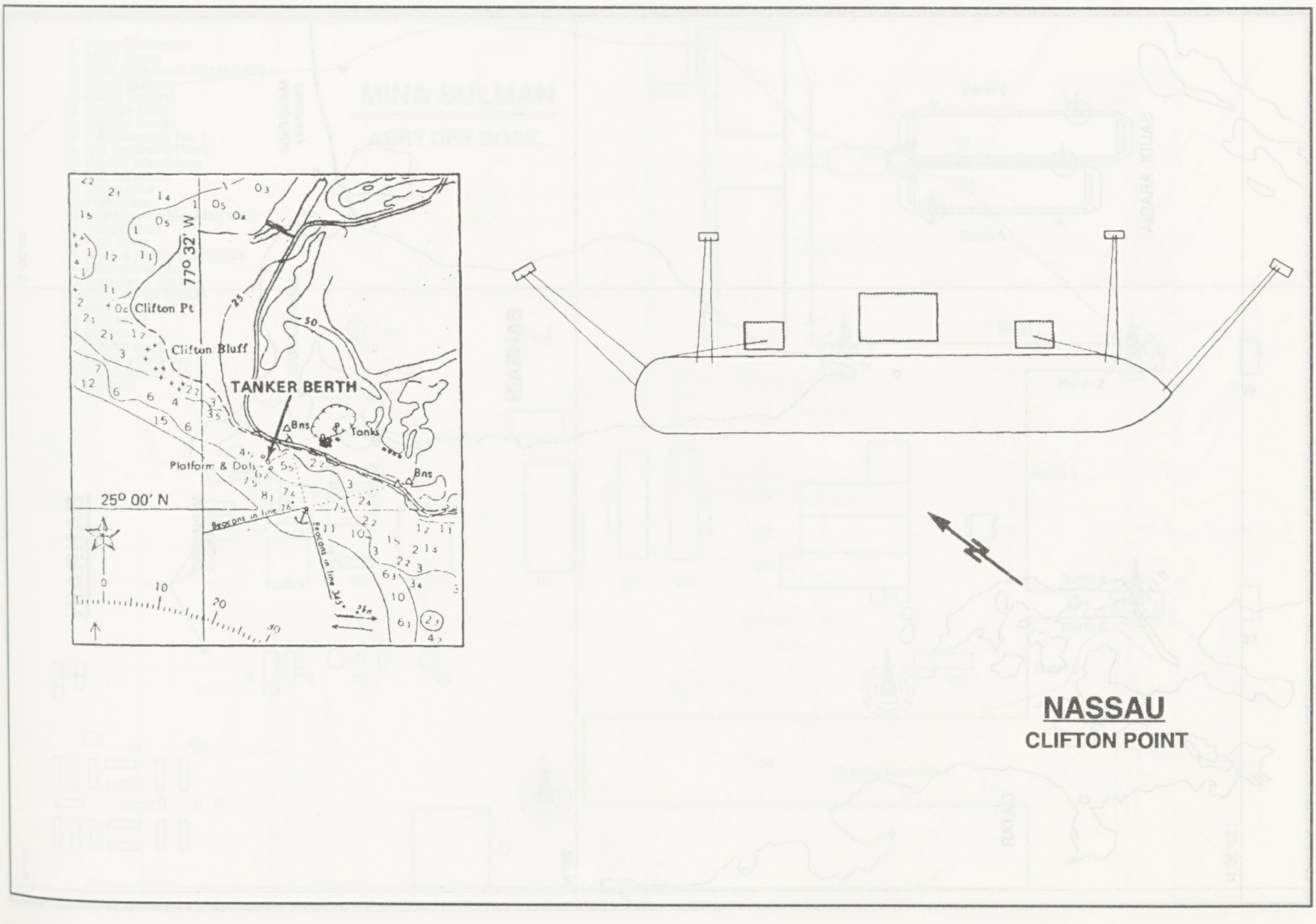
OFFSHORE LOADING FACILITY

④
③
Dolphin
Walkway
Loading Conveyor
Loading Tower
①
②
Mooring Platform
Mooring Platform
Fendering System
First Line Ashore - Forward Spring
Second Line Ashore Forward Off Starboard Bow
Third Line Ashore Stern
Drag Anchor (Two Shackles)

"Plan supplied by Ship's Master"

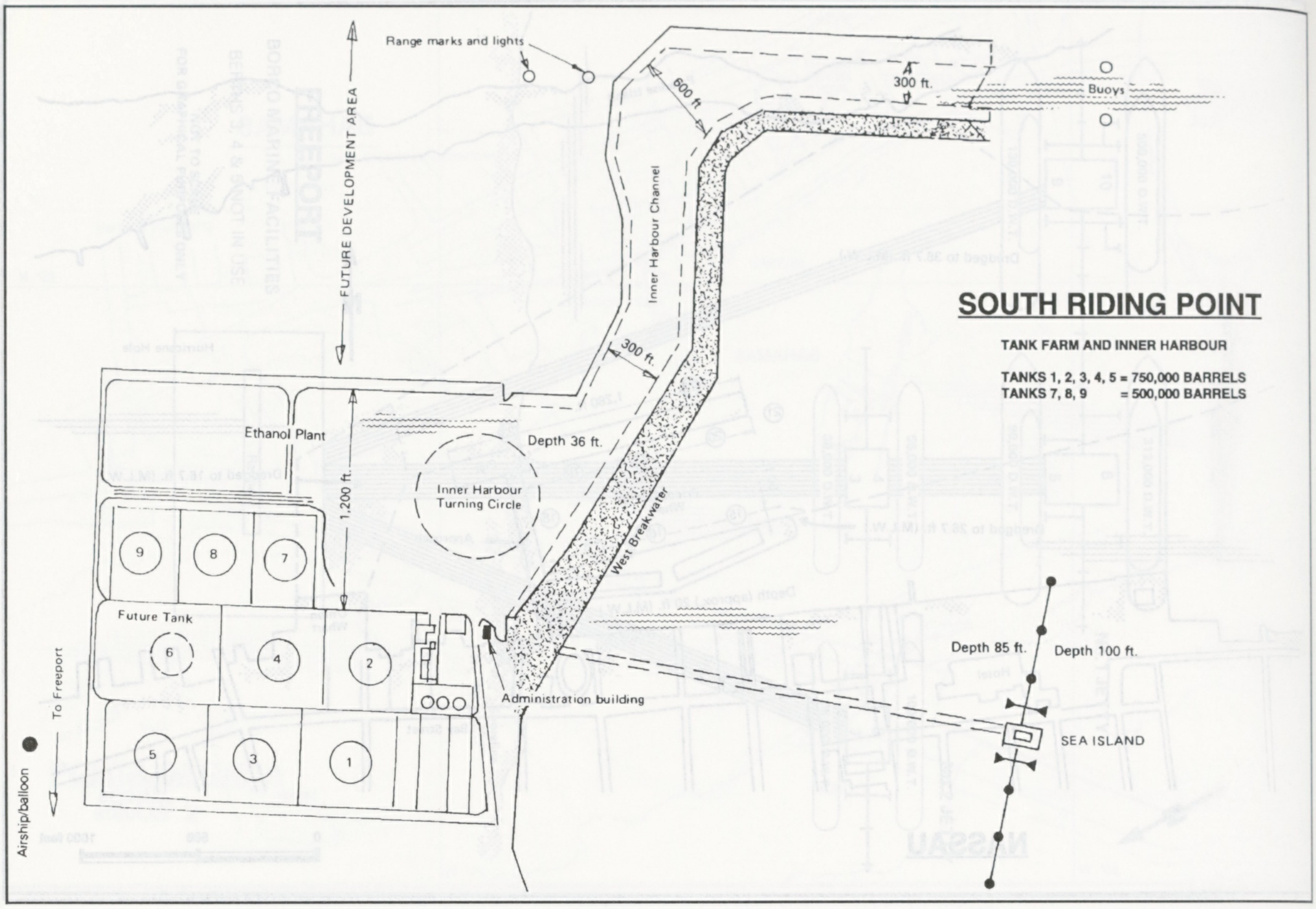

Paradise Island
Dredged to 36.7 ft. (M.L.W.)
N
Hurricane Hole
22
21
1,280 ft.
23
20
1,030 ft.
19
Pier
Dredged to 16.7 ft. (M.L.W.)
50 ft.
Prince George Wharf
15
16
17
18
Dredged to 26.7 ft. (M.L.W.)
Approach
Depth (approx.) 20 ft. (M.L.W.)
Union Wharf
Hotel
Bay Street
0
500
1000 feet

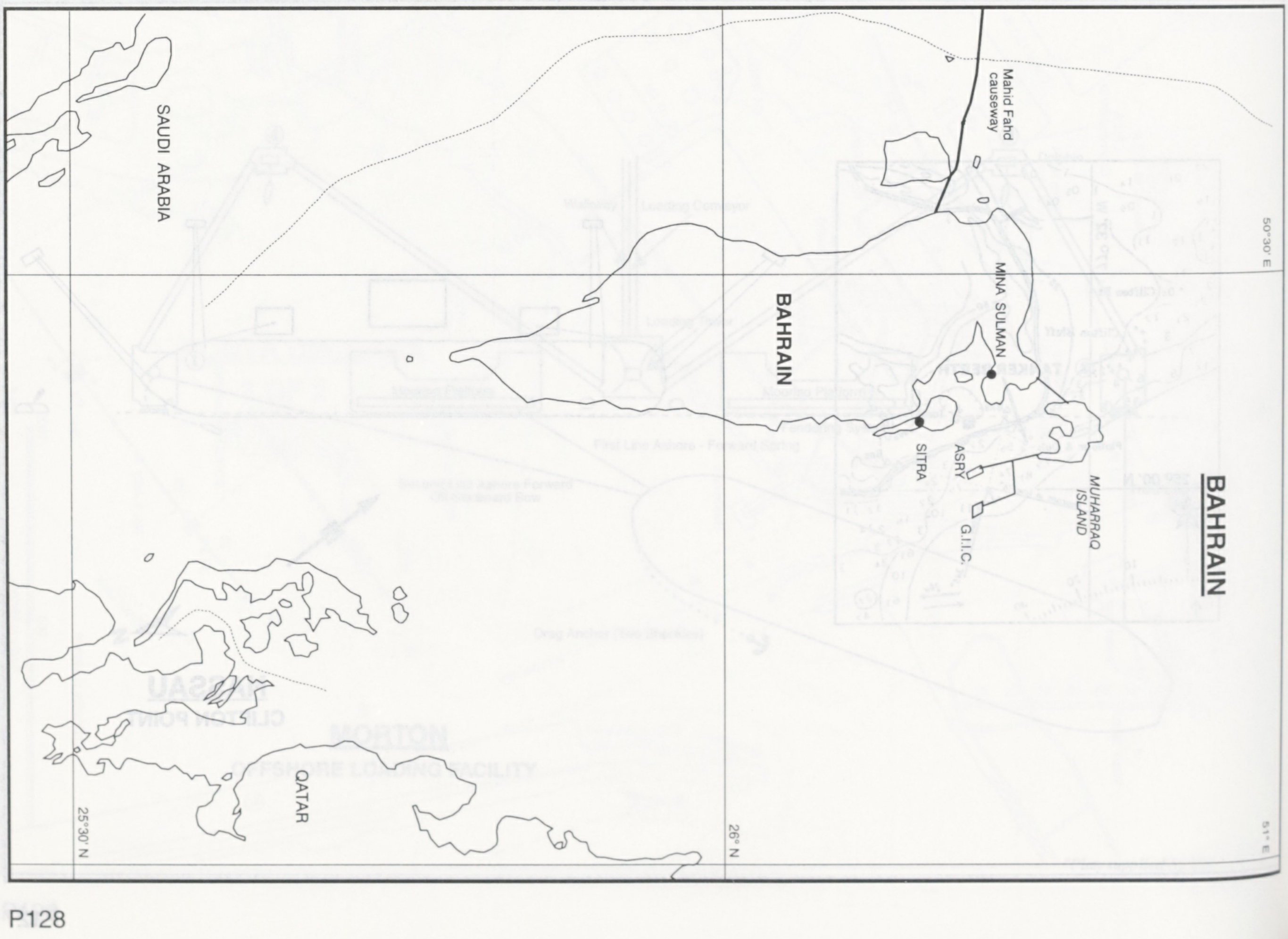
NASSAU

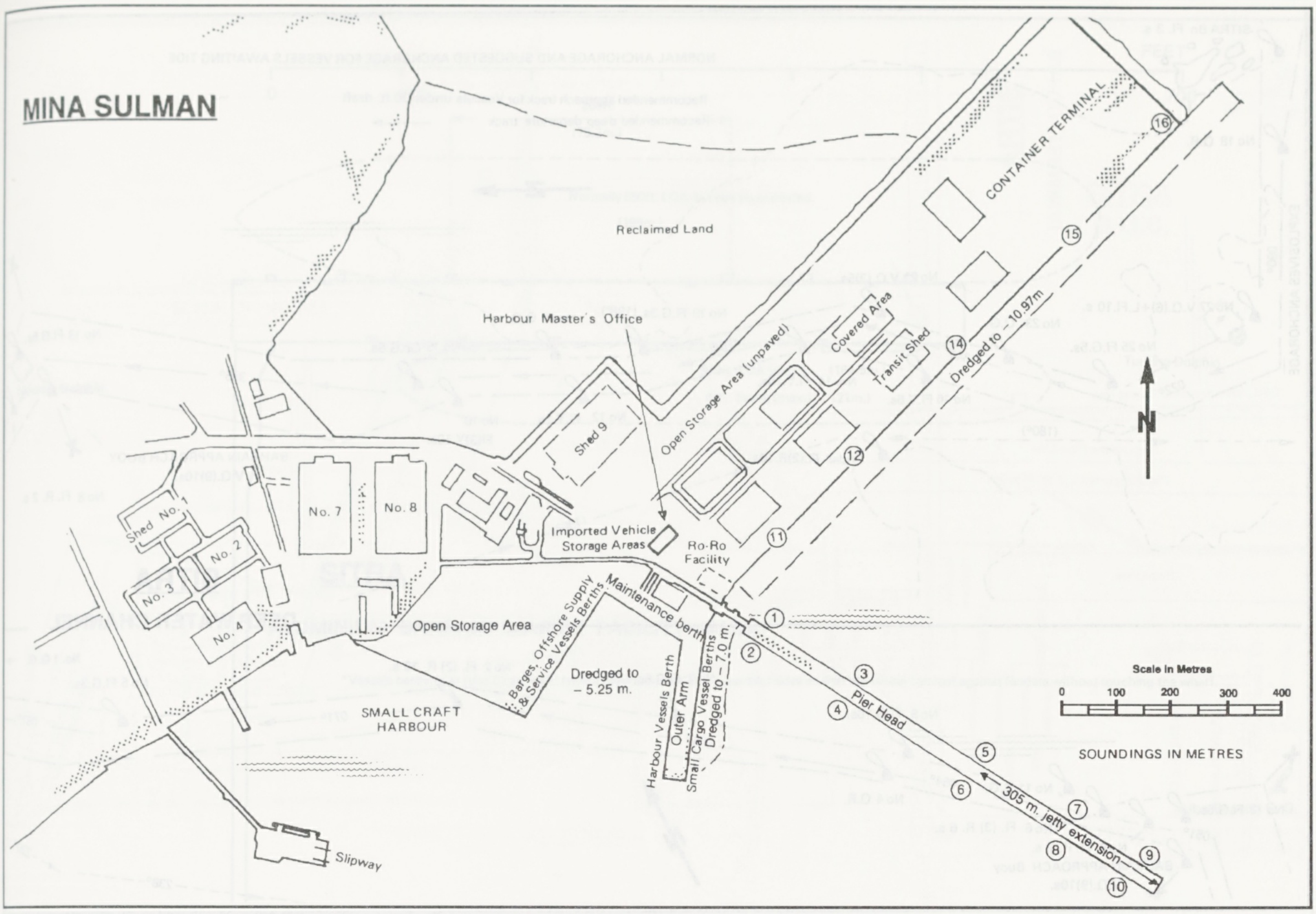

77° 32′ W
Clifton Pt
Clifton Bluff
TANKER BERTH
Bns
Tanks
Platform & Dols
Bns
25° 00′ N
Beacons in line
Beacons in line 345°
25
50
0
10
20
30

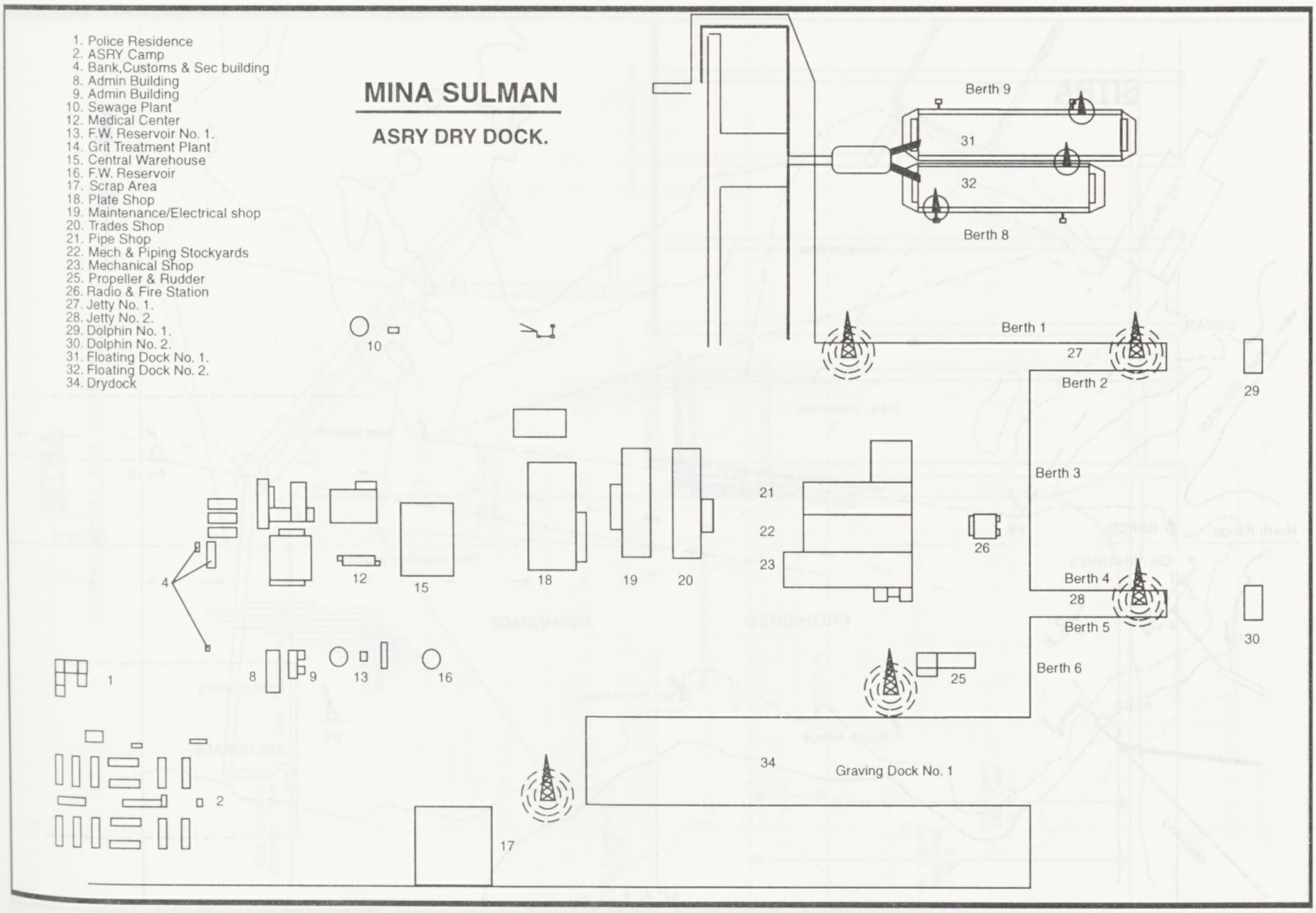
NASSAU

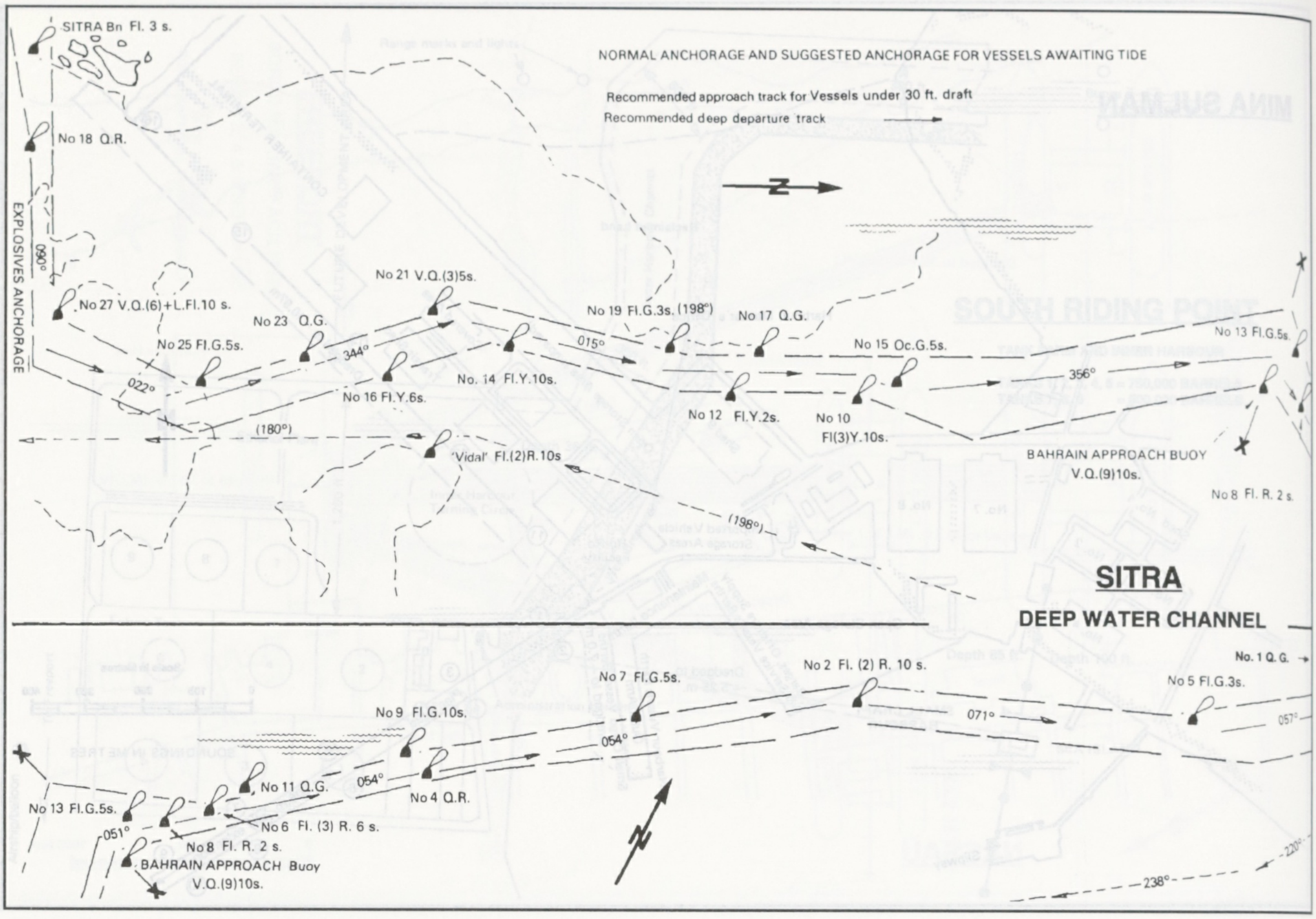
CLIFTON POINT

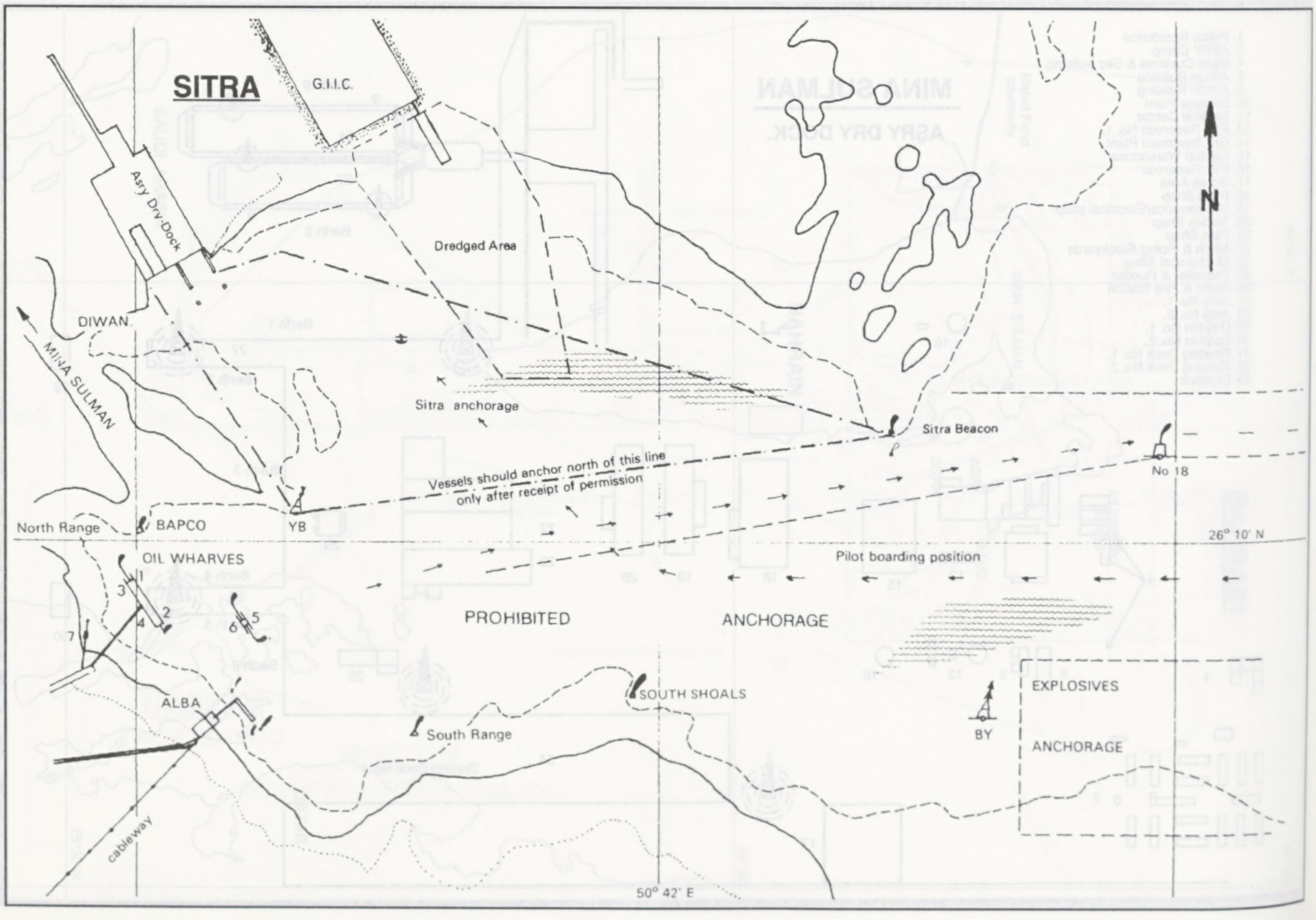

Range marks and lights
FUTURE DEVELOPMENT AREA
600 ft.
300 ft.
Buoys
Inner Harbour Channel
SOUTH RIDING POINT
TANK FARM AND INNER HARBOUR
TANKS 1, 2, 3, 4, 5 = 750,000 BARRELS
TANKS 7, 8, 9 = 500,000 BARRELS
300 ft.
Ethanol Plant
1,200 ft.
Depth 36 ft.
Inner Harbour Turning Circle
West Breakwater
9
8
7
Future Tank
6
4
2
Depth 85 ft.
Depth 100 ft.
Administration building
SEA ISLAND
5
3
1
To Freeport
Airship/balloon

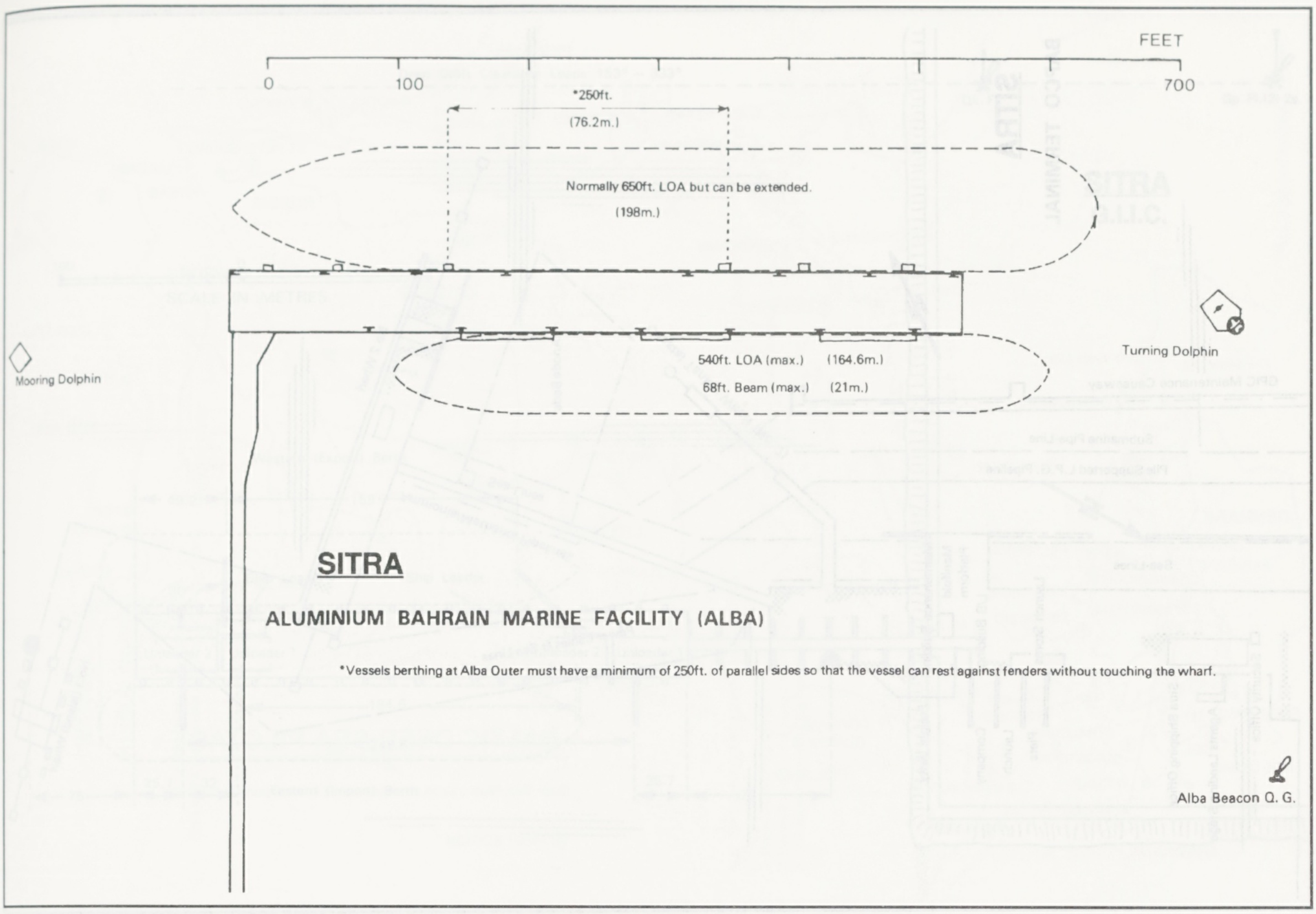

SAUDI ARABIA
Mahid Fahd causeway
50°30' E
MINA SULMAN
BAHRAIN
SITRA
ASRY
G.I.I.C.
MUHARRAQ ISLAND
BAHRAIN
QATAR
25°30' N
26° N
51° E


MINA SULMAN
Reclaimed Land
CONTAINER TERMINAL
Harbour Master's Office
Covered Area
Transit Shed
Open Storage Area (unpaved)
Shed 9
Dredged to – 10.97 m
N
Shed No. 1
No. 2
No. 3
No. 4
No. 7
No. 8
Imported Vehicle Storage Areas
Ro-Ro Facility
Open Storage Area
Barges, Offshore Supply & Service Vessels Berths
Maintenance berth
Dredged to – 5.25 m.
Harbour Vessels Berth
Outer Arm
Small Cargo Vessel Berths
Dredged to – 7.0 m.
SMALL CRAFT HARBOUR
Pier Head
305 m. jetty extension
Slipway
Scale in Metres
0
100
200
300
400
SOUNDINGS IN METRES
①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑫
⑭
⑮
⑯


1. Police Residence
2. ASRY Camp
4. Bank,Customs & Sec building
8. Admin Building
9. Admin Building
10. Sewage Plant
12. Medical Center
13. F.W. Reservoir No. 1.
14. Grit Treatment Plant
15. Central Warehouse
16. F.W. Reservoir
17. Scrap Area
18. Plate Shop
19. Maintenance/Electrical shop
20. Trades Shop
21. Pipe Shop
22. Mech & Piping Stockyards
23. Mechanical Shop
25. Propeller & Rudder
26. Radio & Fire Station
27. Jetty No. 1.
28. Jetty No. 2.
29. Dolphin No. 1.
30. Dolphin No. 2.
31. Floating Dock No. 1.
32. Floating Dock No. 2.
34. Drydock
MINA SULMAN
ASRY DRY DOCK.
Berth 9
31
32
Berth 8
Berth 1
27
Berth 2
29
Berth 3
Berth 4
28
Berth 5
30
Berth 6
Graving Dock No. 1
34
10
21
22
23
26
4
12
15
18
19
20
1
8
9
13
16
25
2
17


SITRA Bn Fl. 3 s.
NORMAL ANCHORAGE AND SUGGESTED ANCHORAGE FOR VESSELS AWAITING TIDE
Recommended approach track for Vessels under 30 ft. draft
Recommended deep departure track
No 18 Q.R.
EXPLOSIVES ANCHORAGE
090°
N
No 27 V.Q.(6)+L.Fl.10 s.
No 21 V.Q.(3)5s.
No 23 Q.G.
No 25 Fl.G.5s.
344°
No 19 Fl.G.3s. (198°)
No 17 Q.G.
015°
No 15 Oc.G.5s.
No 13 Fl.G.5s.
No 16 Fl.Y.6s.
No. 14 Fl.Y.10s.
022°
356°
No 12 Fl.Y.2s.
No 10
Fl(3)Y.10s.
(180°)
'Vidal' Fl.(2)R.10s
BAHRAIN APPROACH BUOY
V.Q.(9)10s.
No 8 Fl. R. 2 s.
(198°)
SITRA
DEEP WATER CHANNEL
No. 1 Q.G.
No 2 Fl. (2) R. 10 s.
No 7 Fl.G.5s.
No 5 Fl.G.3s.
071°
057°
No 9 Fl.G.10s.
054°
No 11 Q.G.
054°
No 4 Q.R.
No 13 Fl.G.5s.
No 6 Fl. (3) R. 6 s.
051°
No 8 Fl. R. 2 s.
BAHRAIN APPROACH Buoy
V.Q.(9)10s.
N
238°
220°


SITRA
G.I.I.C.
Asry Dry Dock
Dredged Area
N
DIWAN
MINA SULMAN
Sitra anchorage
Sitra Beacon
No 18
Vessels should anchor north of this line
only after receipt of permission
YB
North Range
BAPCO
OIL WHARVES
26° 10' N
Pilot boarding position
1
3
2
4
7
6
5
PROHIBITED
ANCHORAGE
SOUTH SHOALS
EXPLOSIVES
ANCHORAGE
BY
ALBA
South Range
cableway
50° 42' E


FEET
0
100
700
*250ft.
(76.2m.)
Normally 650ft. LOA but can be extended.
(198m.)
540ft. LOA (max.)
(164.6m.)
68ft. Beam (max.)
(21m.)
Mooring Dolphin
Turning Dolphin
Alba Beacon Q. G.

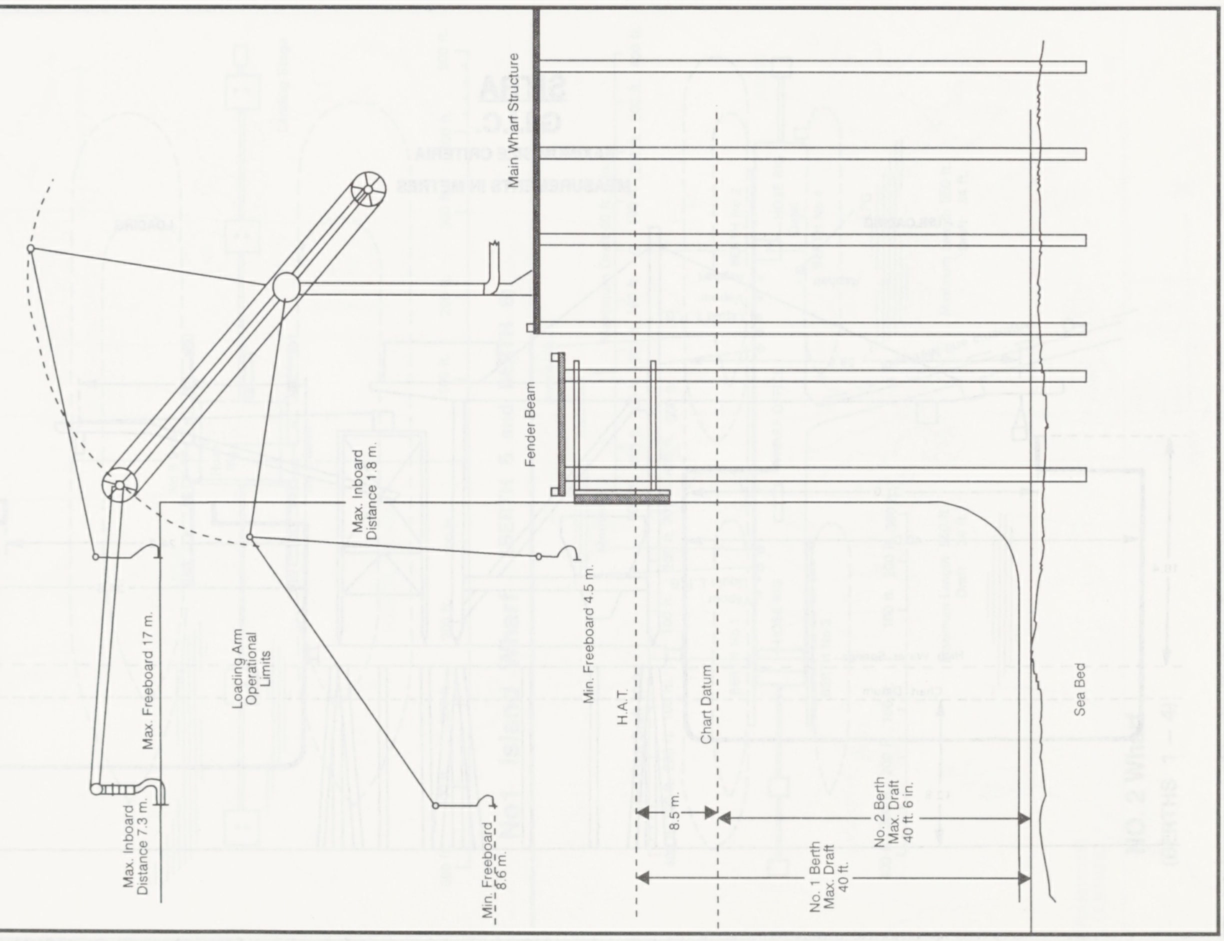
SITRA

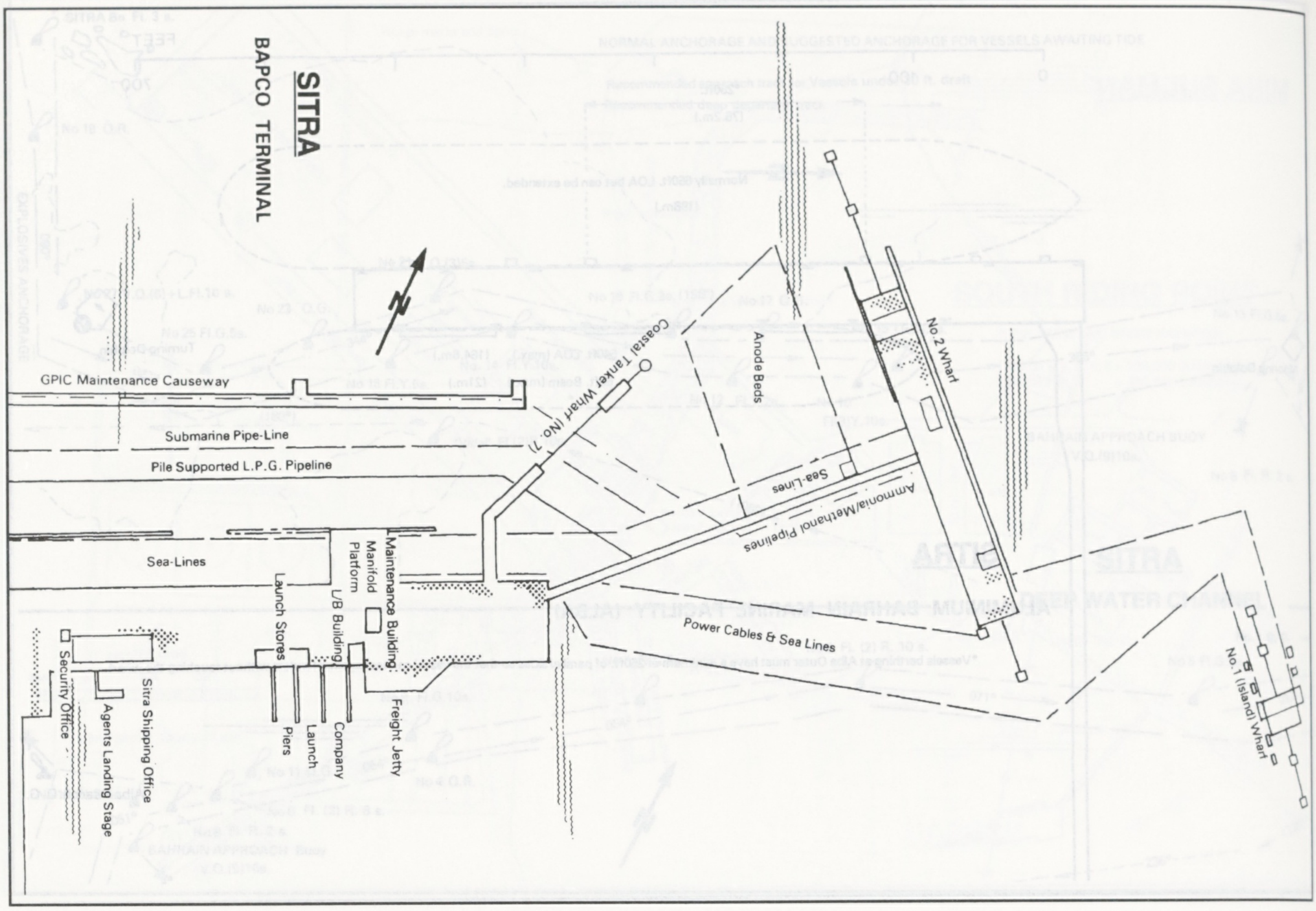
ALUMINIUM BAHRAIN MARINE FACILITY (ALBA)

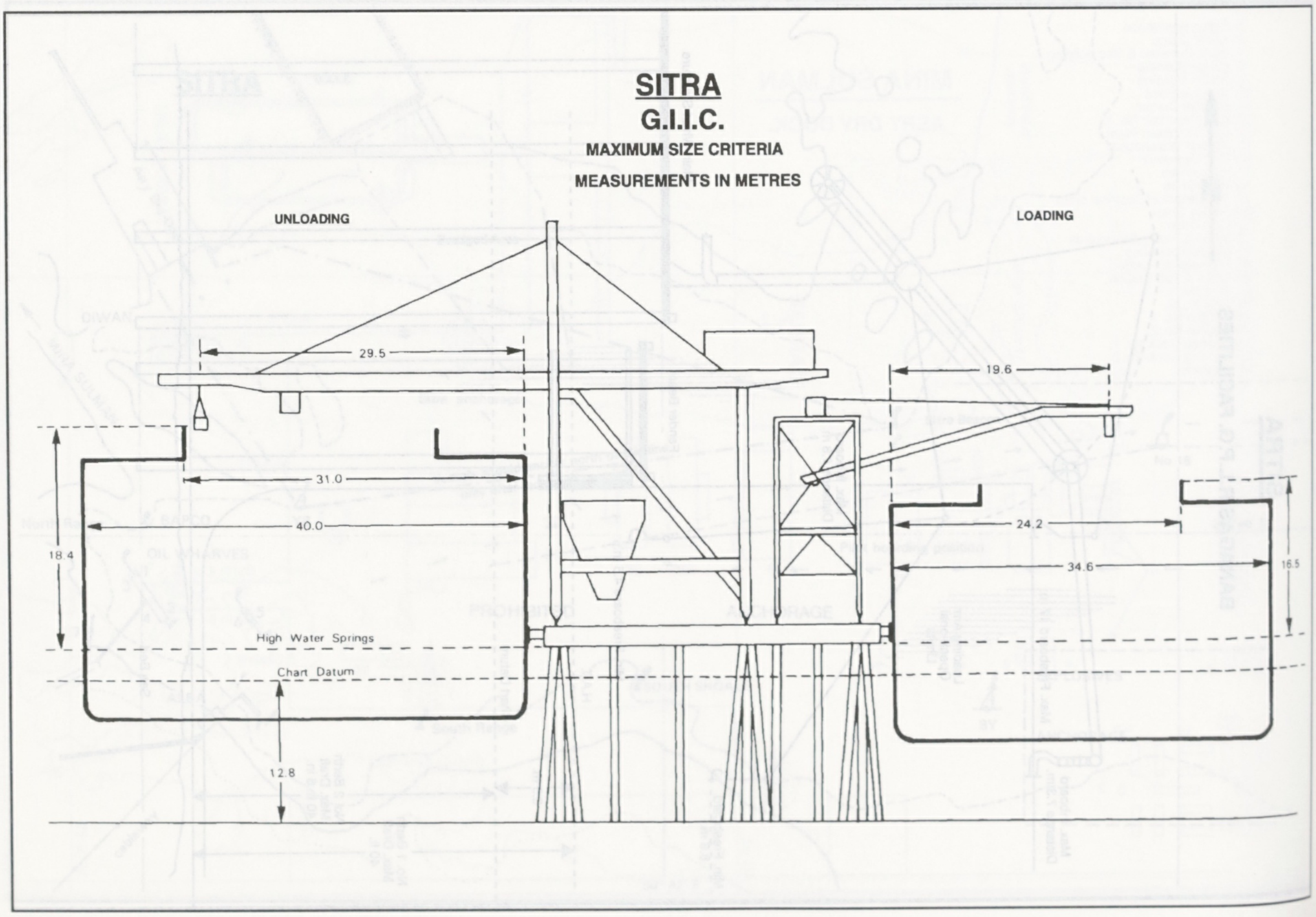
*Vessels berthing at Alba Outer must have a minimum of 250ft. of parallel sides so that the vessel can rest against fenders without touching the wharf.

SITRA

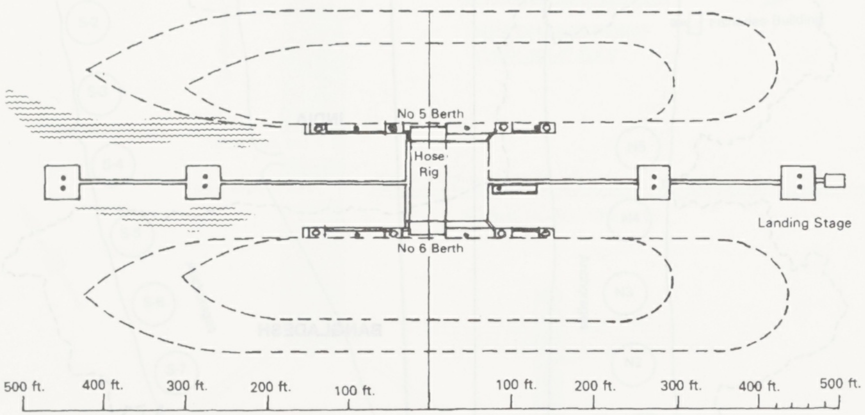
BANAGAS R.L.P.G. FACILITIES


Main Wharf Structure
Fender Beam
Max. Inboard Distance 1.8 m.
Min. Freeboard 4.5 m.
H.A.T.
Chart Datum
Sea Bed
Loading Arm Operational Limits
Max. Freeboard 17 m.
Max. Inboard Distance 7.3 m.
Min. Freeboard 8.6 m.
8.5 m.
No. 1 Berth Max. Draft 40 ft.
No. 2 Berth Max. Draft 40 ft. 6 in.

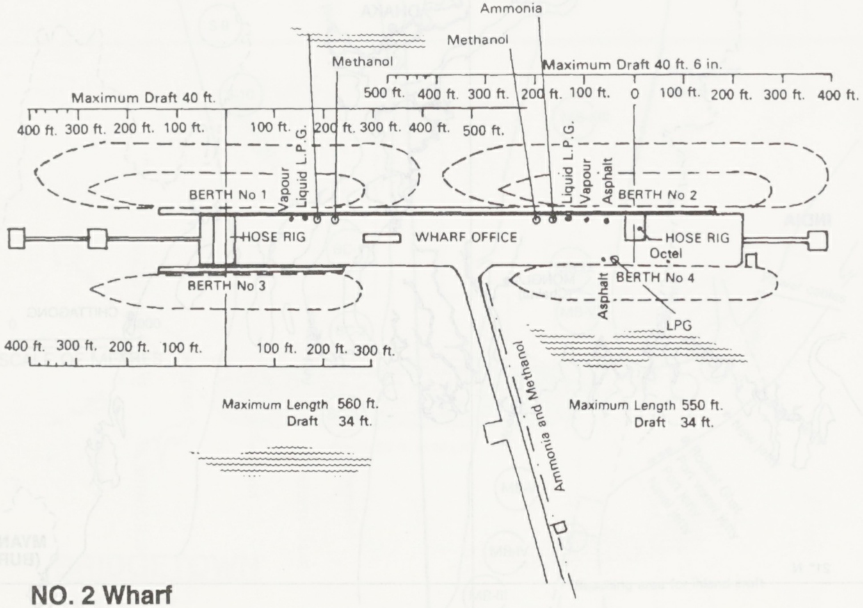

SITRA
BAPCO TERMINAL
GPIC Maintenance Causeway
Submarine Pipe-Line
Pile Supported L.P.G. Pipeline
Sea-Lines
Coastal Tanker Wharf (No. 7)
Anode Beds
No. 2 Wharf
Sea-Lines
Ammonia/Methanol Pipelines
Power Cables & Sea Lines
No. 1 (Island) Wharf
Maintenance Building
Manifold Platform
L/B Building
Launch Stores
Freight Jetty
Company Launch Piers
Security Office
Agents Landing Stage
Sitra Shipping Office


SITRA
G.I.I.C.
MAXIMUM SIZE CRITERIA
MEASUREMENTS IN METRES
UNLOADING
LOADING
29.5
31.0
40.0
18.4
High Water Springs
Chart Datum
12.8
19.6
24.2
34.6
16.5

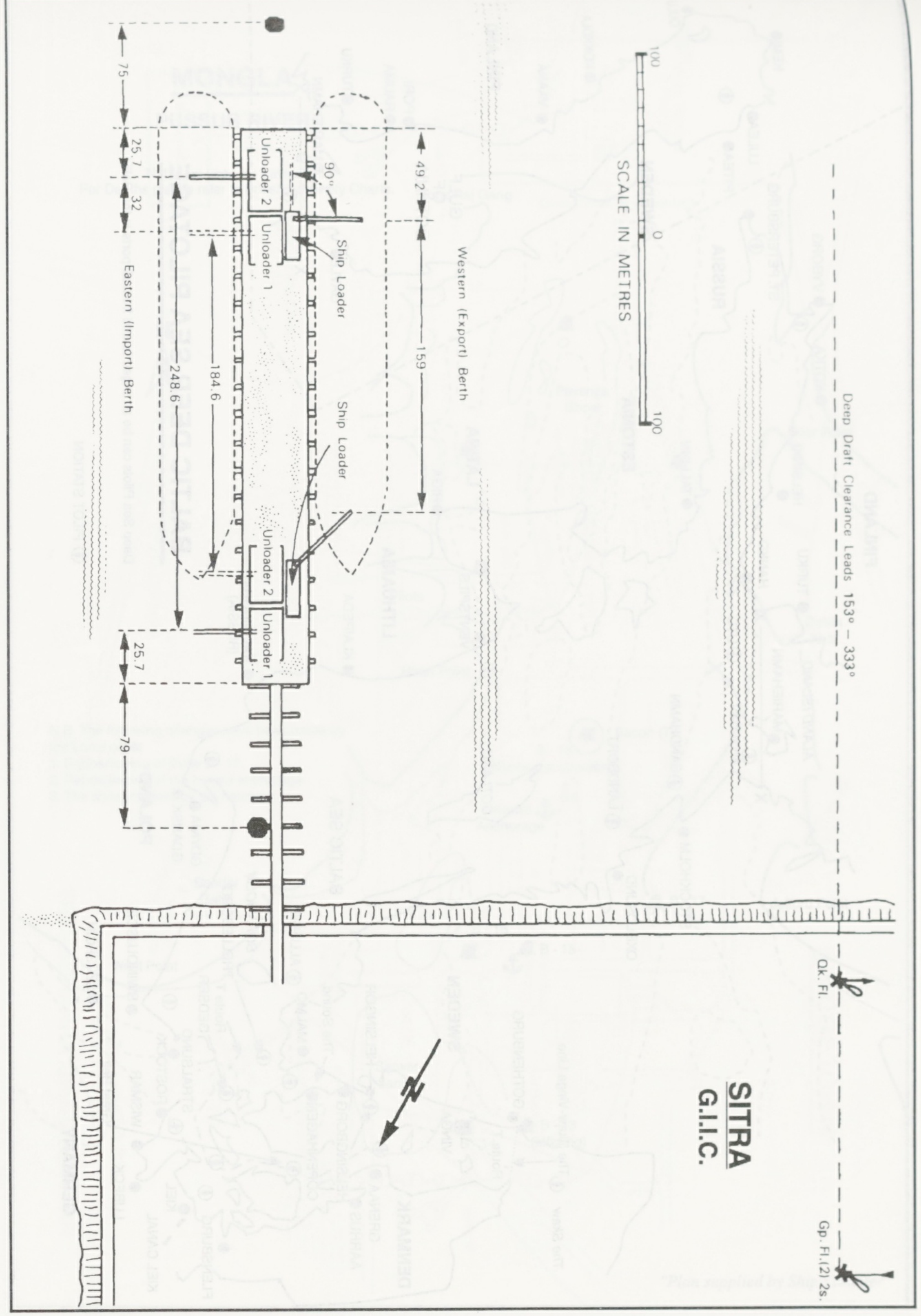
SITRA

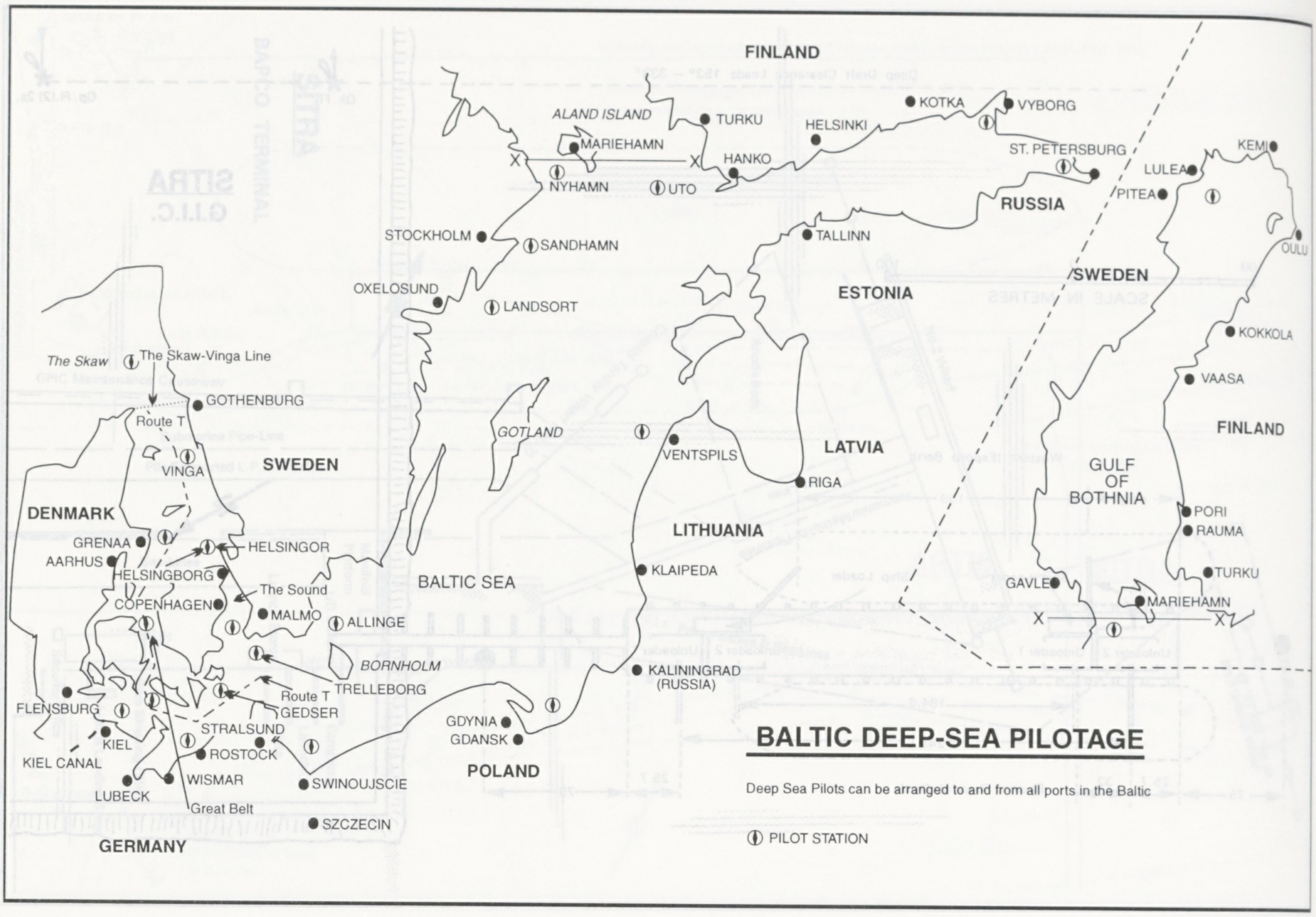

No 5 Berth
Hose Rig
No 6 Berth
Landing Stage
500 ft.
400 ft.
300 ft.
200 ft.
100 ft.
100 ft.
200 ft.
300 ft.
400 ft.
500 ft.

No1 Island Wharf (BERTH 5 and BERTH 6)


Ammonia
Methanol
Methanol
Maximum Draft 40 ft. 6 in.
500 ft. 400 ft. 300 ft. 200 ft. 100 ft. 0 100 ft. 200 ft. 300 ft. 400 ft.
Maximum Draft 40 ft.
400 ft. 300 ft. 200 ft. 100 ft. 100 ft. 200 ft. 300 ft. 400 ft. 500 ft.
Vapour
Liquid L.P.G.
Liquid L.P.G.
Vapour
Asphalt
BERTH No 1
BERTH No 2
HOSE RIG
WHARF OFFICE
HOSE RIG
Octel
BERTH No 3
BERTH No 4
Asphalt
LPG
400 ft. 300 ft. 200 ft. 100 ft. 100 ft. 200 ft. 300 ft.
Ammonia and Methanol
Maximum Length 560 ft.
Draft 34 ft.
Maximum Length 550 ft.
Draft 34 ft.

NO. 2 Wharf
(BERTHS 1 – 4)

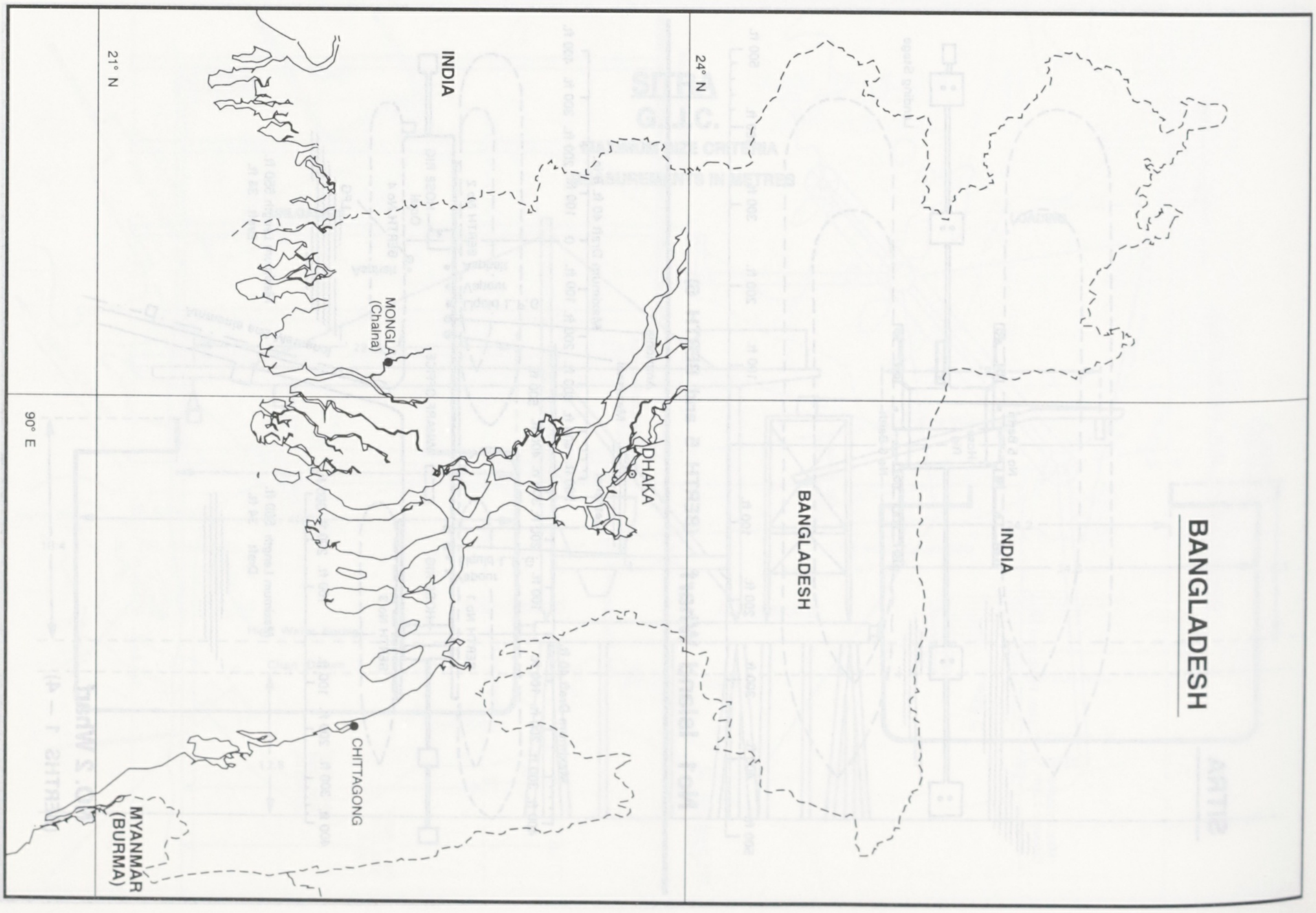

SITRA
G.I.I.C.
Deep Draft Clearance Leads 153° – 333°
SCALE IN METRES
100
0
100
Western (Export) Berth
Eastern (Import) Berth
49.2
159
90°
Ship Loader
Ship Loader
Unloader 2
Unloader 1
Unloader 2
Unloader 1
75
25.7
32
248.6
184.6
25.7
79
Qk. Fl.
Gp. Fl.(2) 2s.


FINLAND
ALAND ISLAND
MARIEHAMN
X
X
NYHAMN
UTO
TURKU
HANKO
HELSINKI
KOTKA
VYBORG
ST. PETERSBURG
RUSSIA
LULEA
KEMI
PITEA
OULU
STOCKHOLM
SANDHAMN
TALLINN
ESTONIA
SWEDEN
OXELOSUND
LANDSORT
KOKKOLA
VAASA
FINLAND
The Skaw
The Skaw-Vinga Line
GOTHENBURG
Route T
VINGA
SWEDEN
GOTLAND
VENTSPILS
LATVIA
RIGA
GULF OF BOTHNIA
PORI
RAUMA
DENMARK
GRENAA
AARHUS
HELSINGOR
HELSINGBORG
The Sound
COPENHAGEN
MALMO
ALLINGE
BALTIC SEA
LITHUANIA
KLAIPEDA
GAVLE
TURKU
MARIEHAMN
X
X
BORNHOLM
TRELLEBORG
Route T
GEDSER
KALININGRAD (RUSSIA)
FLENSBURG
STRALSUND
KIEL
ROSTOCK
KIEL CANAL
WISMAR
LUBECK
Great Belt
SWINOUJSCIE
GDYNIA
GDANSK
POLAND
SZCZECIN
GERMANY

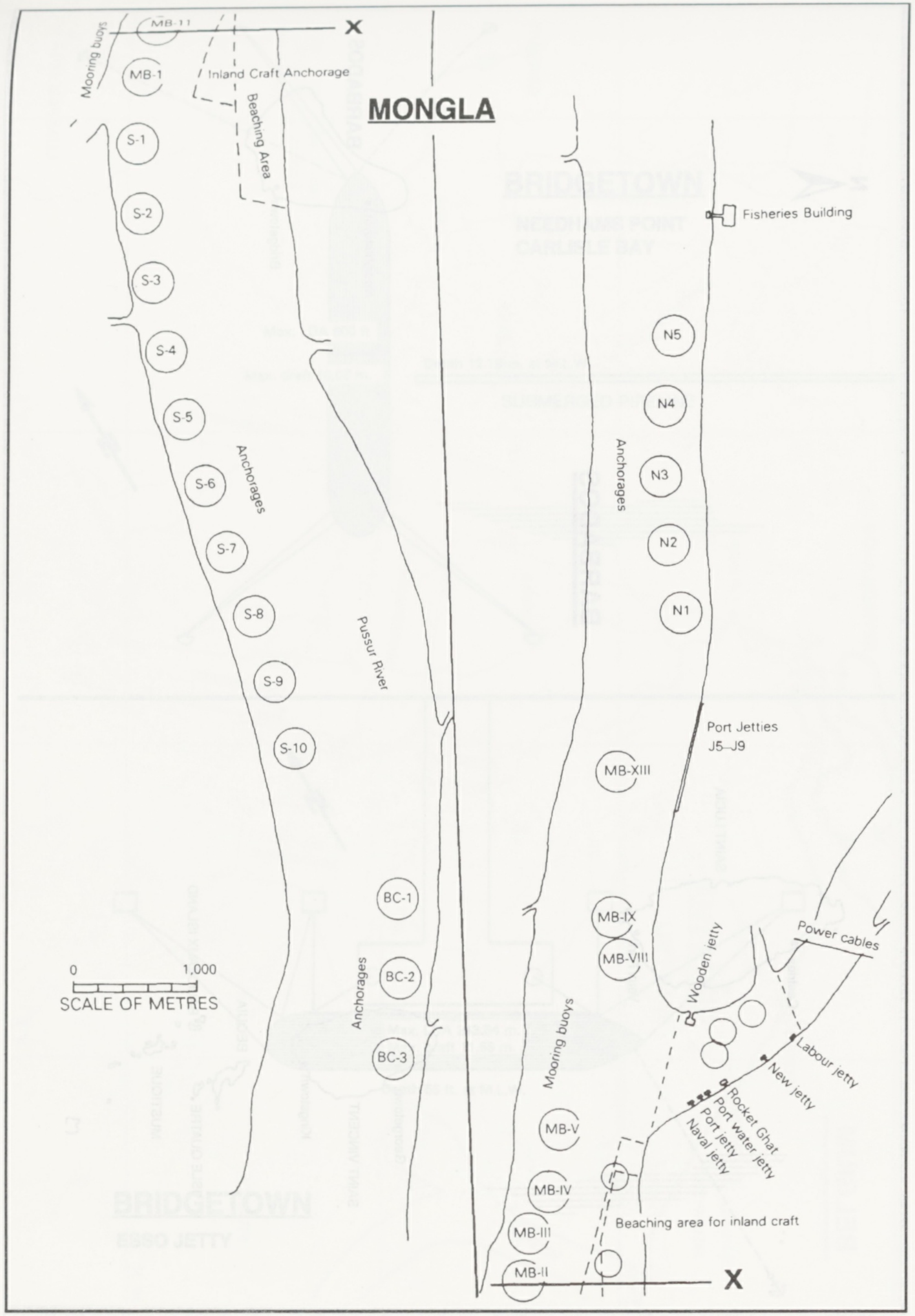
BALTIC DEEP-SEA PILOTAGE

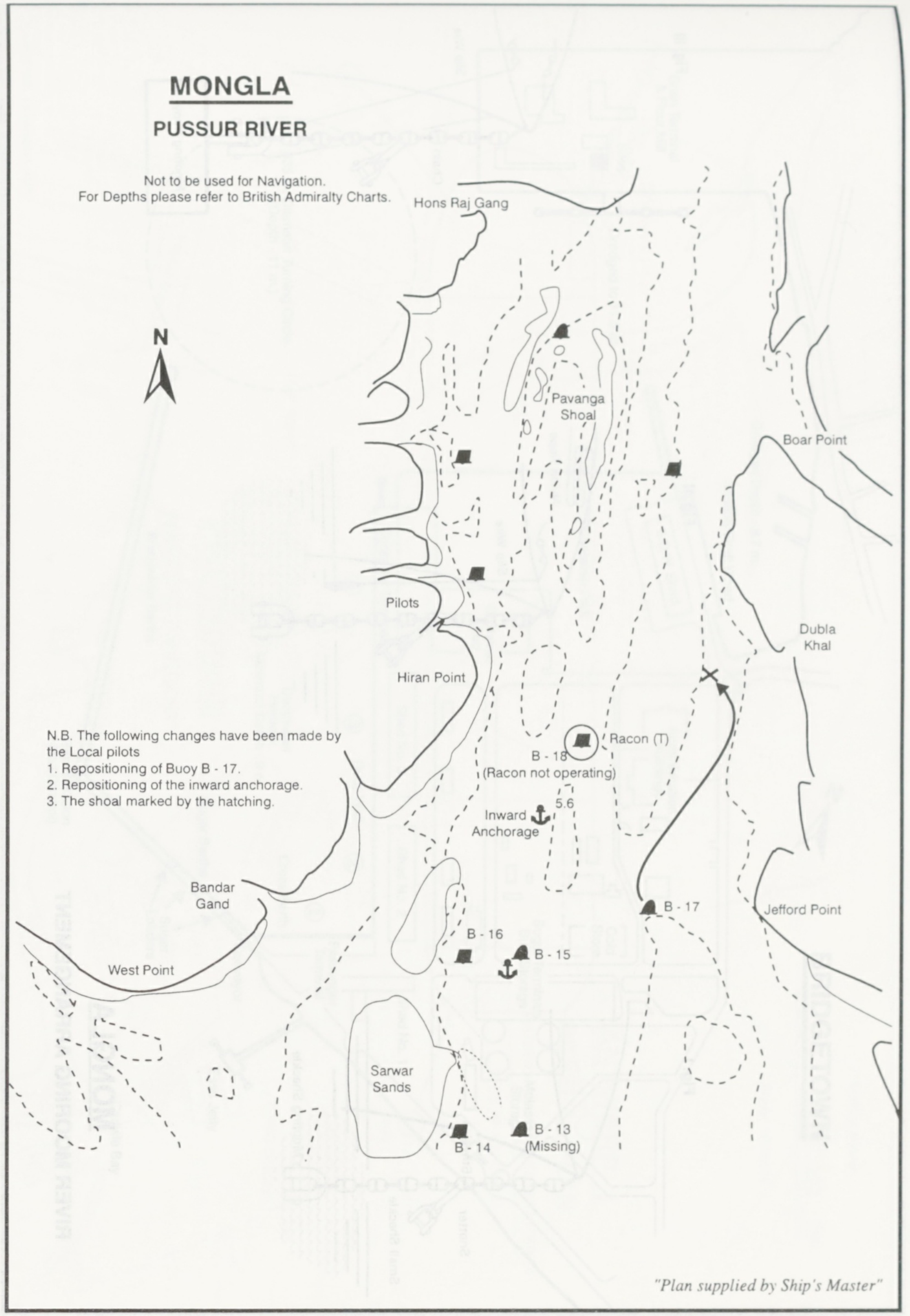
Deep Sea Pilots can be arranged to and from all ports in the Baltic

Ⓘ PILOT STATION


21° N
24° N
90° E
INDIA
MONGLA (Chalna)
DHAKA
BANGLADESH
INDIA
CHITTAGONG
MYANMAR (BURMA)

BANGLADESH


MONGLA
MB-11
X
Mooring buoys
MB-1
Inland Craft Anchorage
Beaching Area
S-1
S-2
S-3
S-4
S-5
S-6
S-7
S-8
S-9
S-10
Anchorages
Pussur River
Fisheries Building
N5
N4
N3
N2
N1
Anchorages
Port Jetties
J5–J9
MB-XIII
BC-1
BC-2
BC-3
Anchorages
MB-IX
MB-VIII
Wooden jetty
Power cables
Labour jetty
New jetty
Rocket Ghat
Port water jetty
Port jetty
Naval jetty
Mooring buoys
MB-V
MB-IV
MB-III
MB-II
Beaching area for inland craft
X
0
1,000
SCALE OF METRES


MONGLA
PUSSUR RIVER
N
Hons Raj Gang
Pavanga
Shoal
Boar Point
Pilots
Hiran Point
Dubla
Khal
Racon (T)
B - 18
(Racon not operating)
5.6
Inward
Anchorage
Bandar
Gand
B - 17
Jefford Point
West Point
B - 16
B - 15
Sarwar
Sands
B - 14
B - 13
(Missing)

Not to be used for Navigation.
For Depths please refer to British Admiralty Charts.

N.B. The following changes have been made by the Local pilots
1. Repositioning of Buoy B - 17.
2. Repositioning of the inward anchorage.
3. The shoal marked by the hatching.

"Plan supplied by Ship's Master"

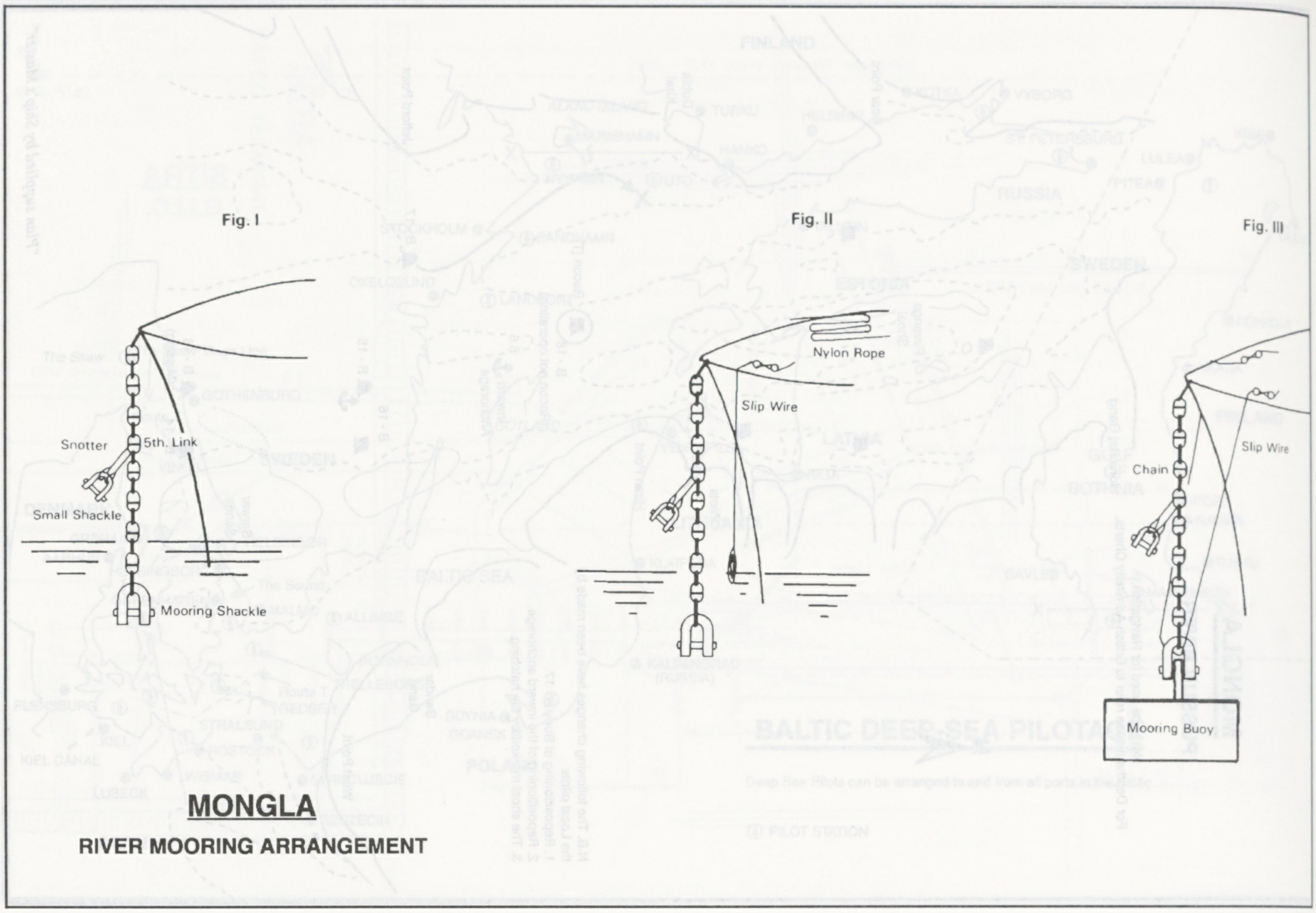
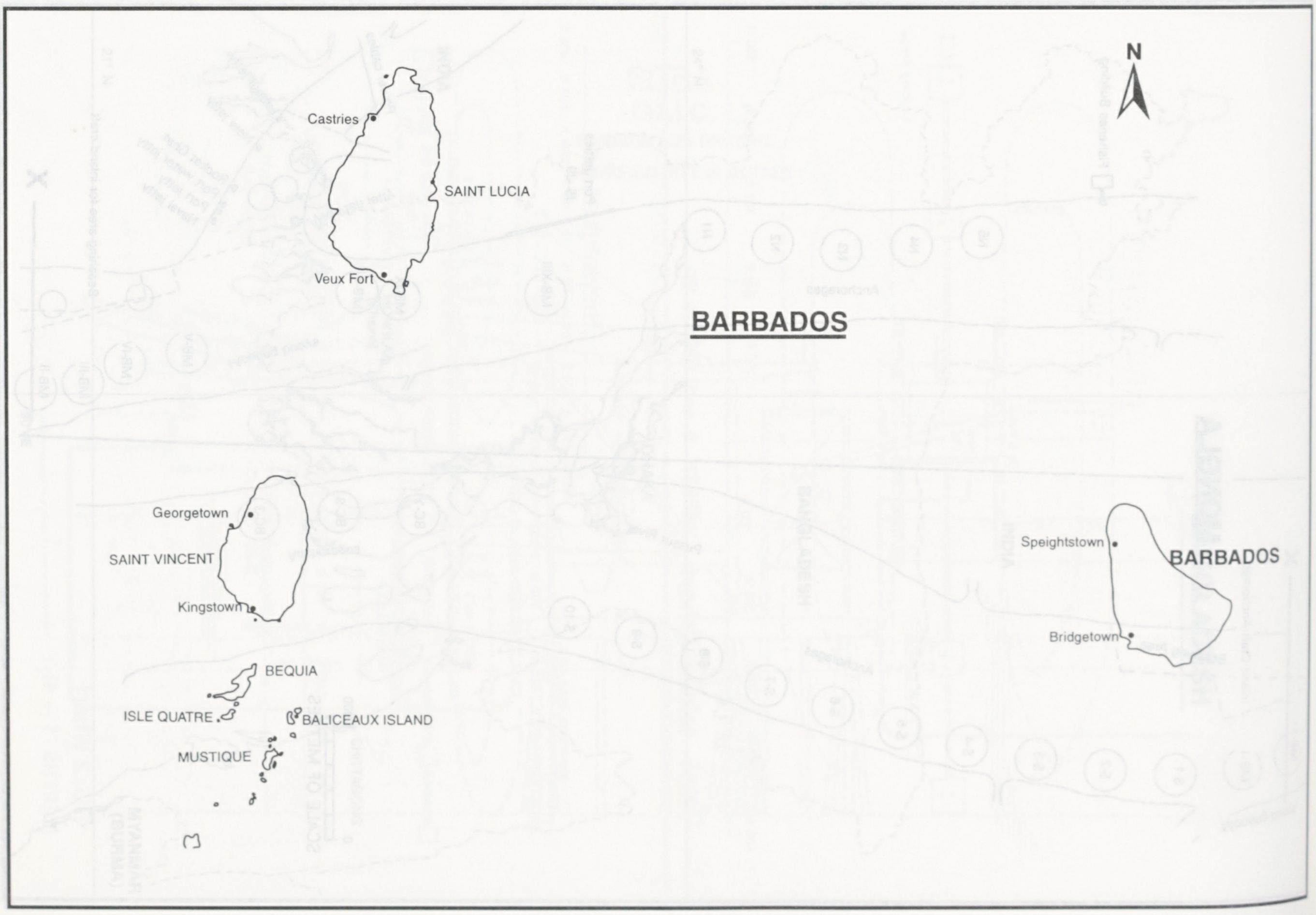


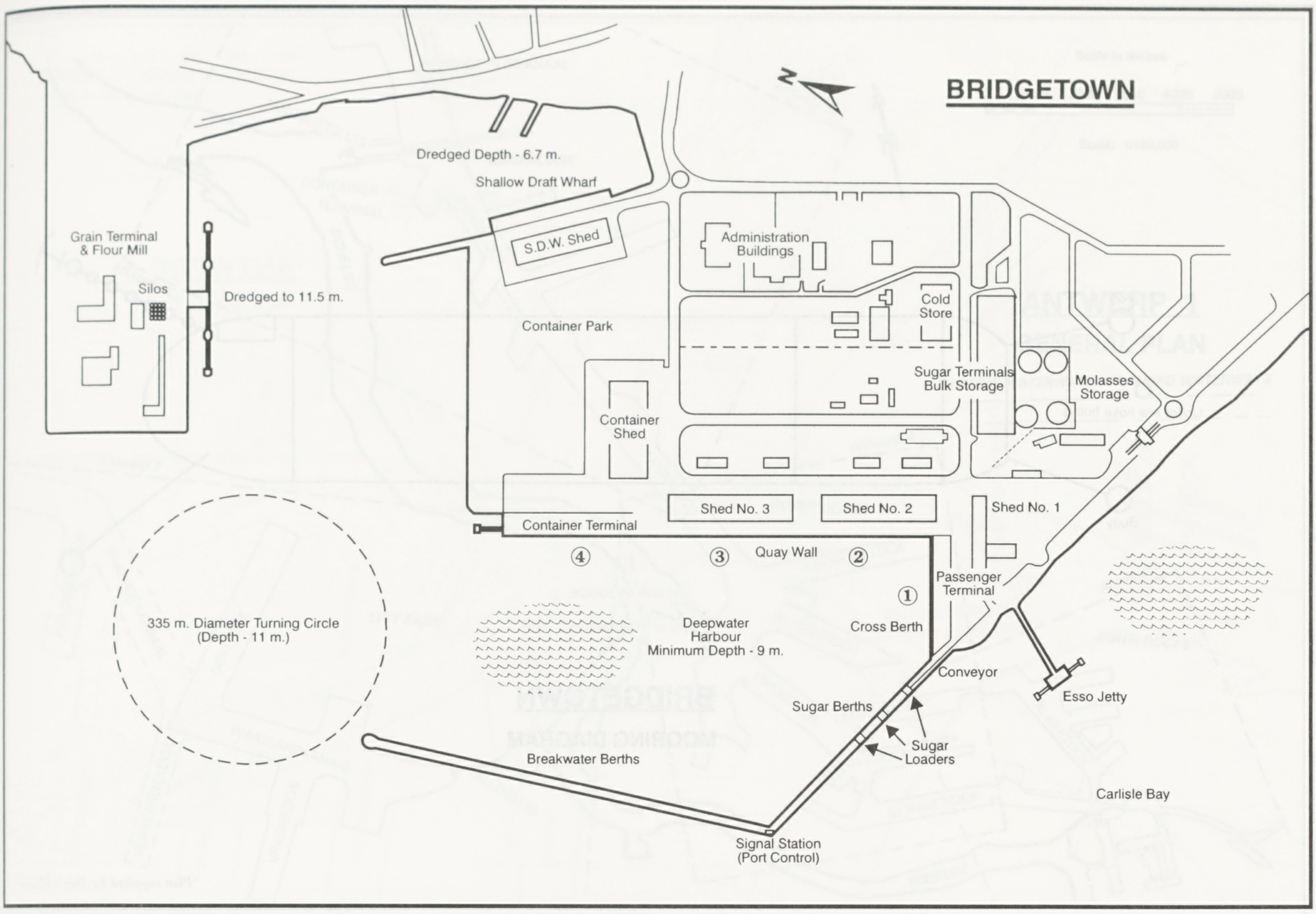
Fig. I
Snotter
5th. Link
Small Shackle
Mooring Shackle
Fig. II
Nylon Rope
Slip Wire
Fig. III
Chain
Slip Wire
Mooring Buoy

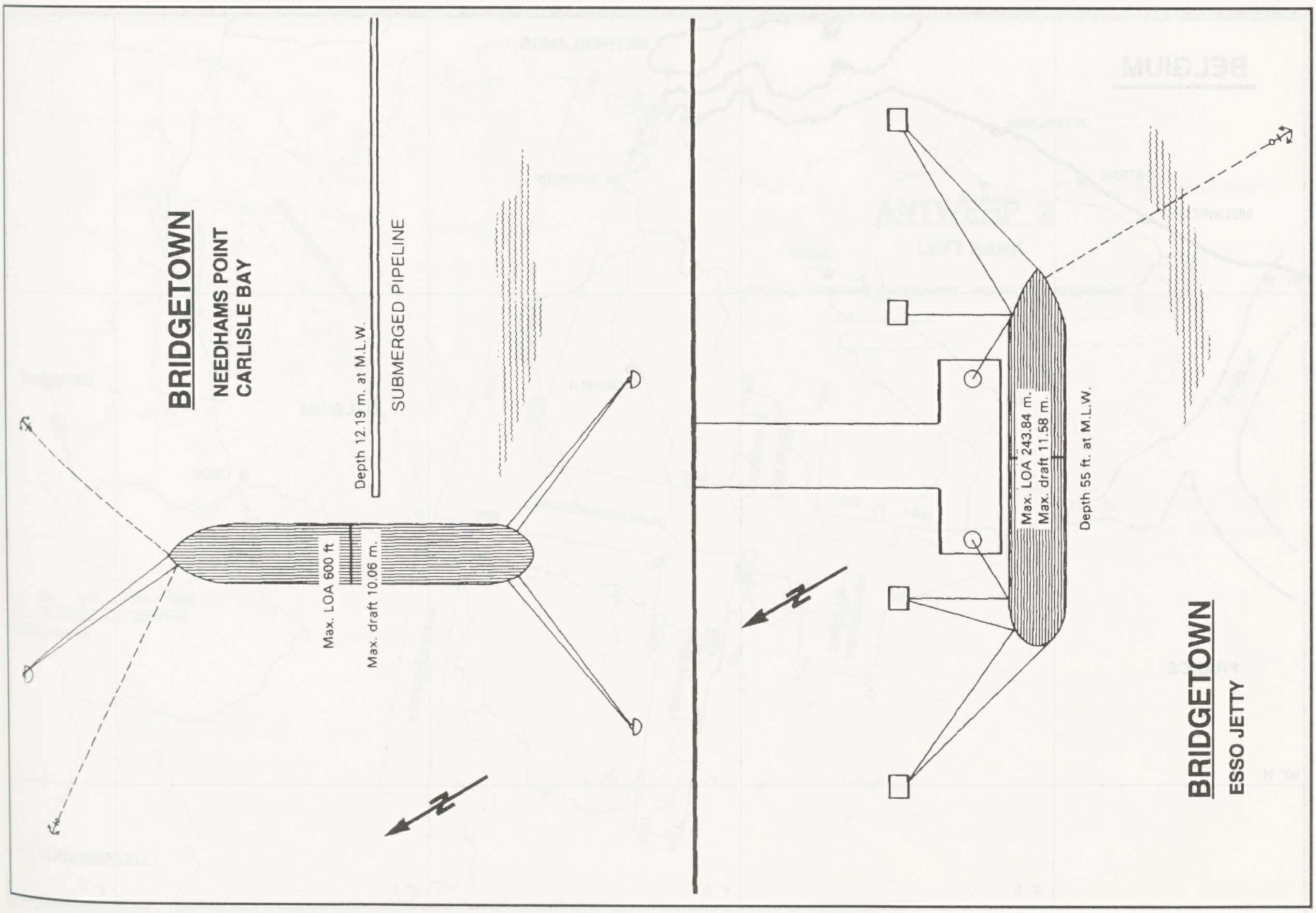
MONGLA

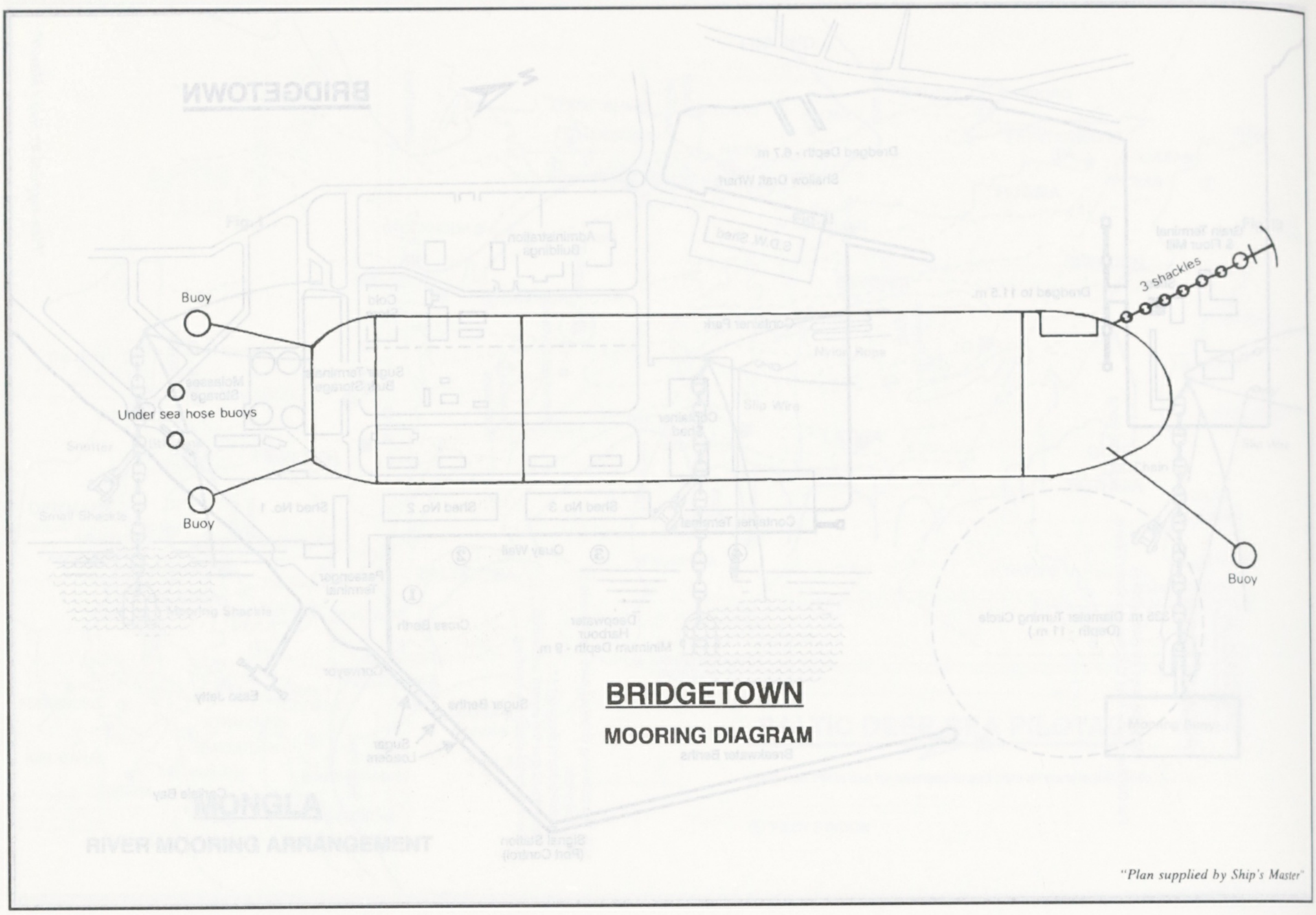
RIVER MOORING ARRANGEMENT


N
Castries
SAINT LUCIA
Veux Fort
Georgetown
SAINT VINCENT
Kingstown
BEQUIA
ISLE QUATRE
BALICEAUX ISLAND
MUSTIQUE
Speightstown
BARBADOS
Bridgetown

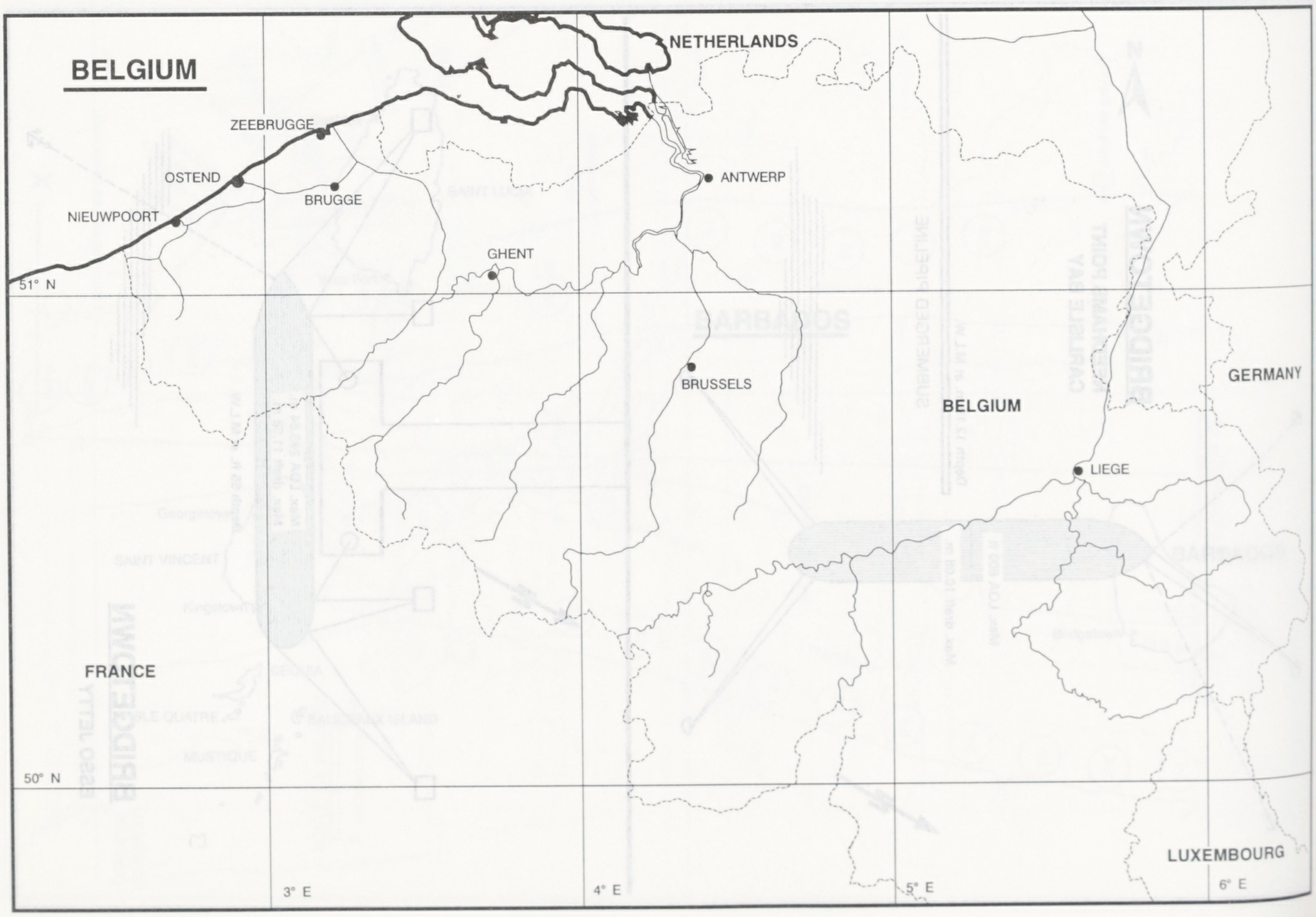
BARBADOS

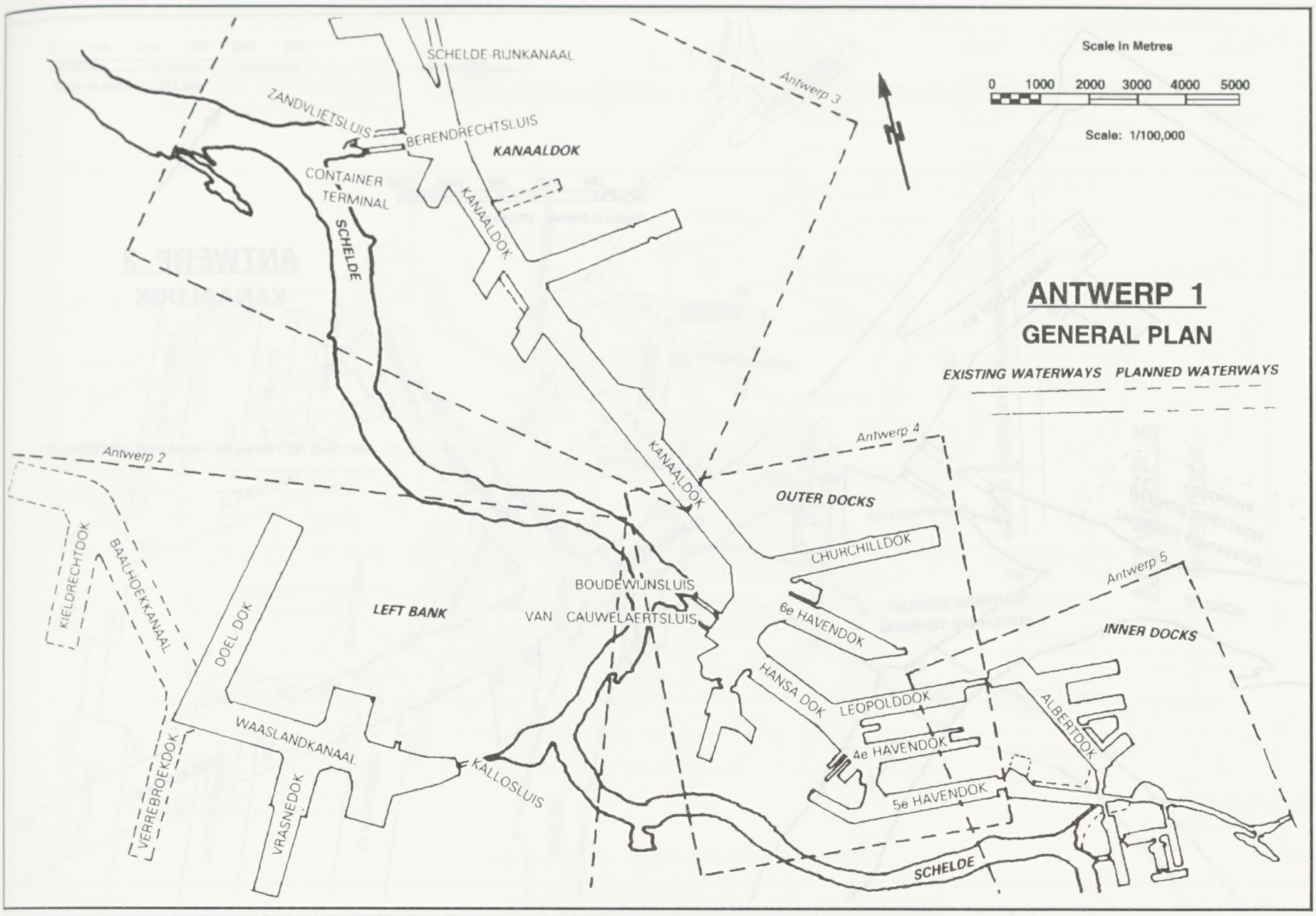

BRIDGETOWN
N
Dredged Depth - 6.7 m.
Shallow Draft Wharf
S.D.W. Shed
Grain Terminal
& Flour Mill
Silos
Dredged to 11.5 m.
Container Park
Administration
Buildings
Cold
Store
Sugar Terminals
Bulk Storage
Molasses
Storage
Container
Shed
Shed No. 3
Shed No. 2
Shed No. 1
Container Terminal
④
③
Quay Wall
②
①
Passenger
Terminal
335 m. Diameter Turning Circle
(Depth - 11 m.)
Deepwater
Harbour
Minimum Depth - 9 m.
Cross Berth
Conveyor
Esso Jetty
Sugar Berths
Sugar
Loaders
Breakwater Berths
Carlisle Bay
Signal Station
(Port Control)

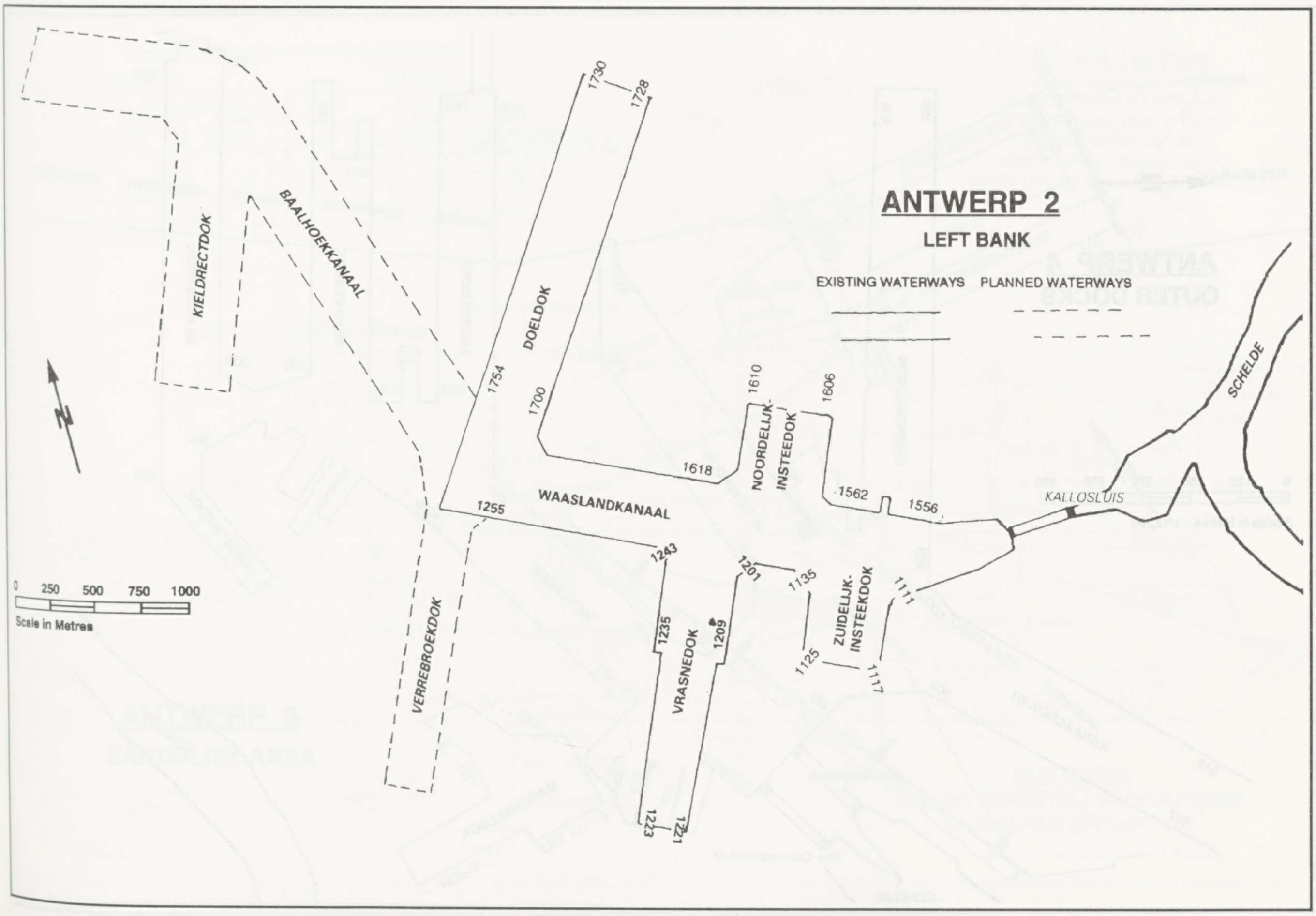

BRIDGETOWN
NEEDHAMS POINT
CARLISLE BAY
SUBMERGED PIPELINE
Depth 12.19 m. at M.L.W.
Max. LOA 600 ft
Max. draft 10.06 m.
N
Max. LOA 243.84 m.
Max. draft 11.58 m.
Depth 55 ft. at M.L.W.
N
BRIDGETOWN
ESSO JETTY

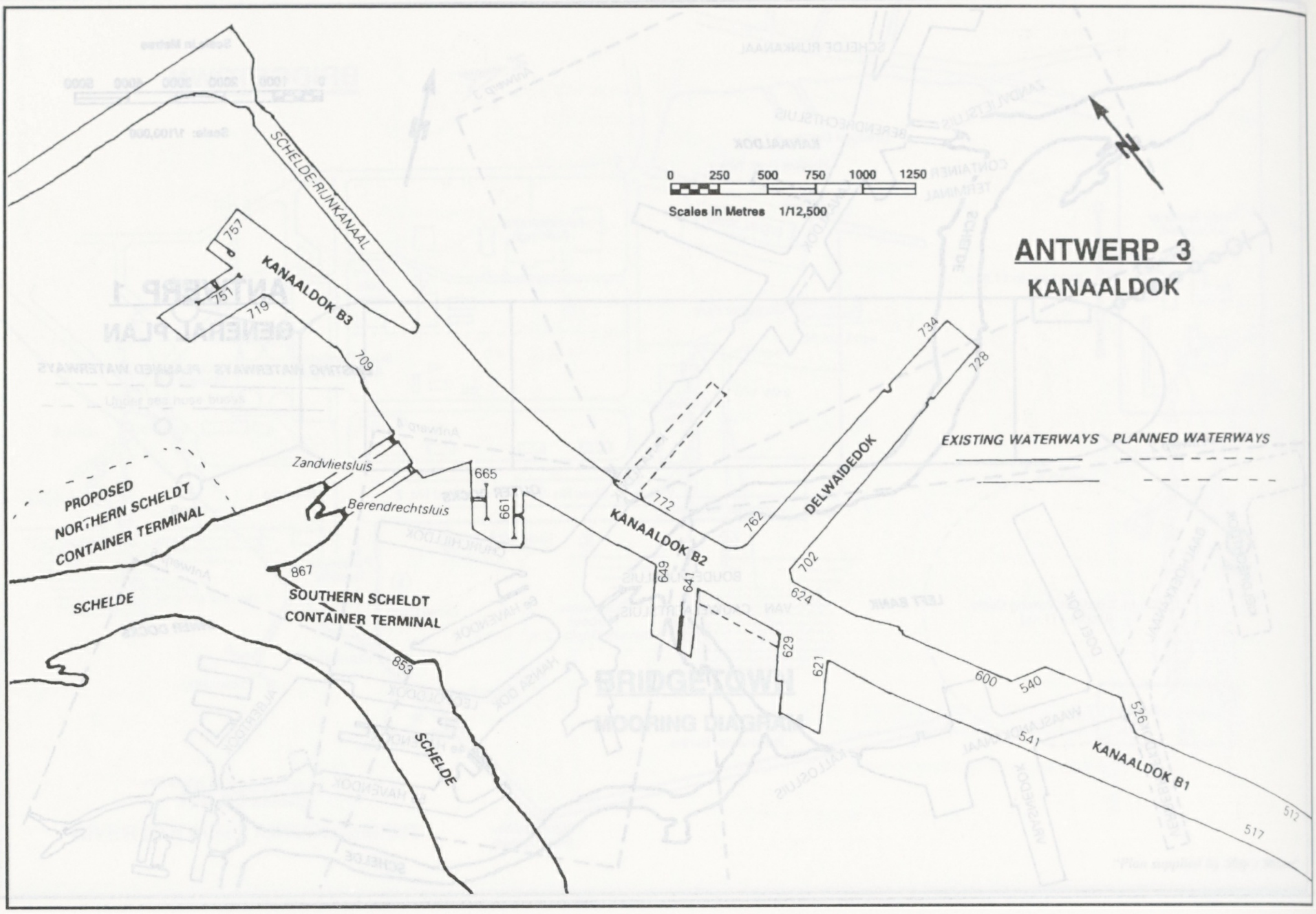

Buoy
Under sea hose buoys
Buoy
3 shackles
Buoy
BRIDGETOWN
MOORING DIAGRAM

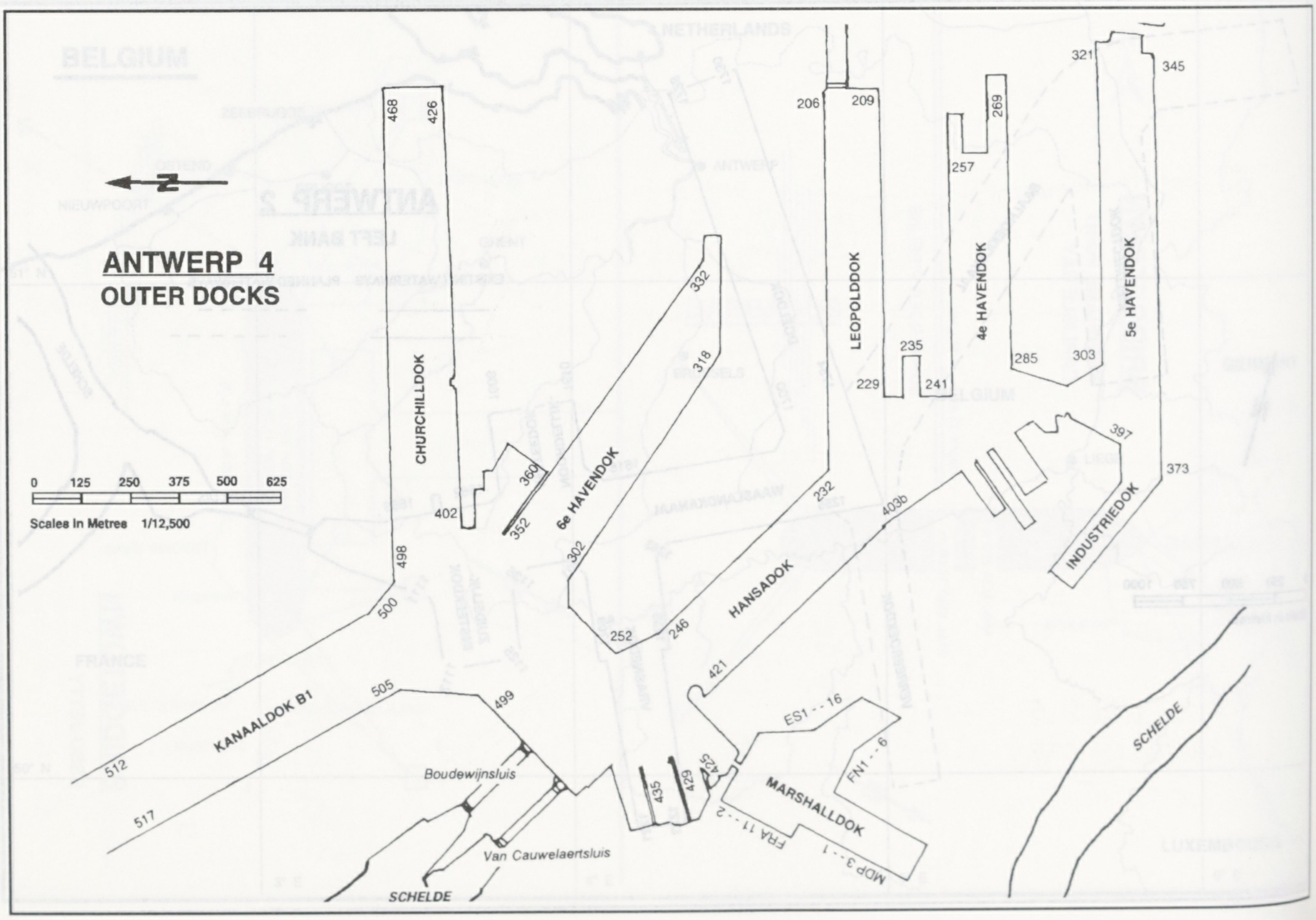
"Plan supplied by Ship's Master"

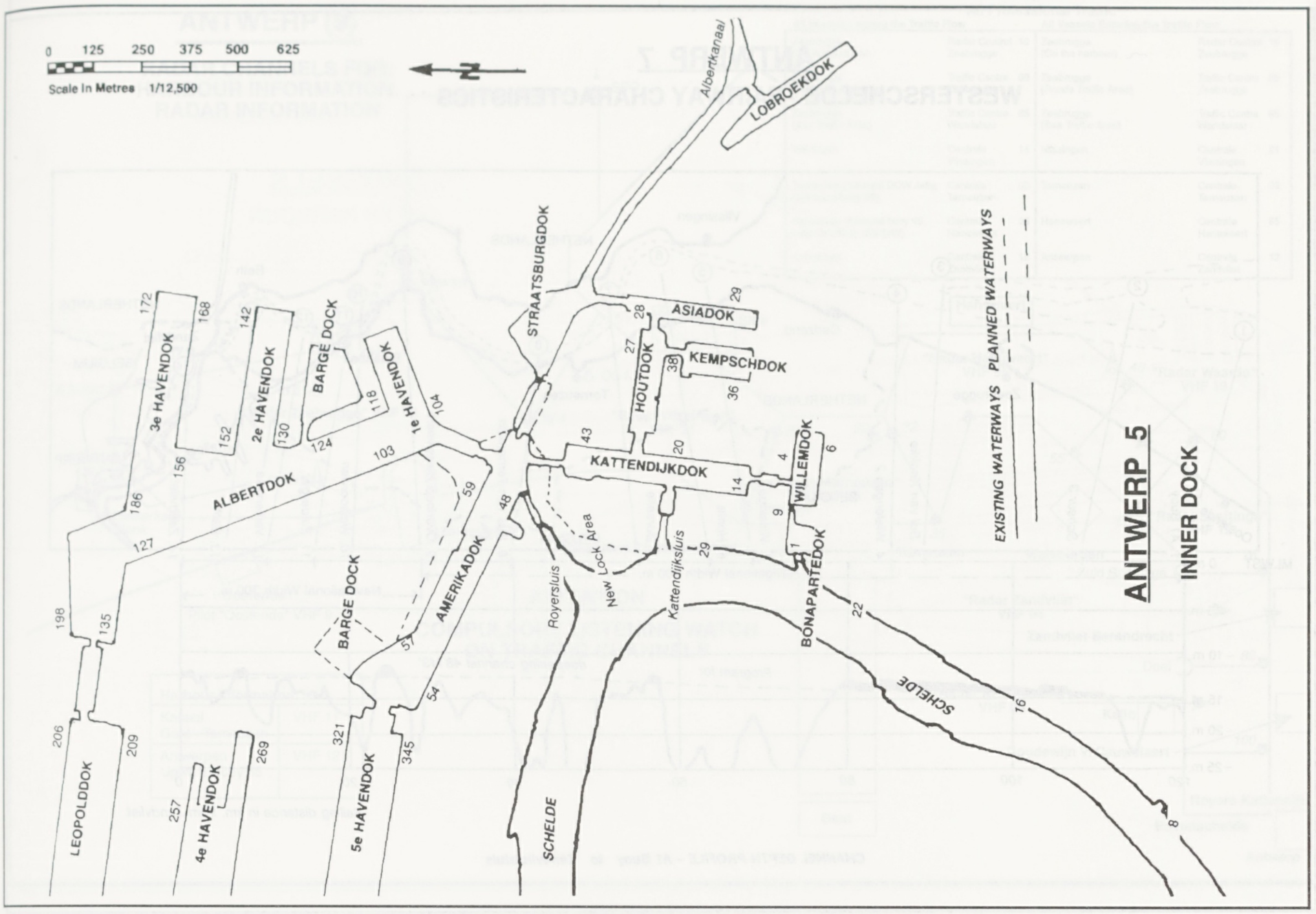

BELGIUM
NETHERLANDS
ZEEBRUGGE
OSTEND
BRUGGE
NIEUWPOORT
ANTWERP
GHENT
51° N
BRUSSELS
BELGIUM
GERMANY
LIEGE
FRANCE
50° N
LUXEMBOURG
3° E
4° E
5° E
6° E


ANTWERP 1
GENERAL PLAN
EXISTING WATERWAYS
PLANNED WATERWAYS
Scale in Metres
0
1000
2000
3000
4000
5000
Scale: 1/100,000
SCHELDE-RIJNKANAAL
ZANDVLIETSLUIS
BERENDRECHTSLUIS
KANAALDOK
CONTAINER TERMINAL
SCHELDE
KANAALDOK
Antwerp 3
Antwerp 2
Antwerp 4
Antwerp 5
KANAALDOK
OUTER DOCKS
CHUHCHILLDOK
6e HAVENDOK
BOUDEWIJNSLUIS
VAN CAUWELAERTSLUIS
LEFT BANK
KIELDRECHTDOK
BAALHOEKKANAAL
DOEL DOK
WAASLANDKANAAL
VERREBROEKDOK
VRASNEDOK
KALLOSLUIS
HANSA DOK
LEOPOLDDOK
4e HAVENDOK
5e HAVENDOK
ALBERTDOK
INNER DOCKS
SCHELDE


ANTWERP 2
LEFT BANK
EXISTING WATERWAYS
PLANNED WATERWAYS
KIELDRECTDOK
BAALHOEKKANAAL
DOELDOK
1730
1728
1754
1700
1618
WAASLANDKANAAL
1255
1243
NOORDELIJK-INSTEEDOK
1610
1606
1562
1556
KALLOSLUIS
SCHELDE
VERREBROEKDOK
VRASNEDOK
1235
1209
1201
1135
ZUIDELIJK-INSTEEDOK
1125
1111
1117
1223
1221
0
250
500
750
1000
Scale in Metres

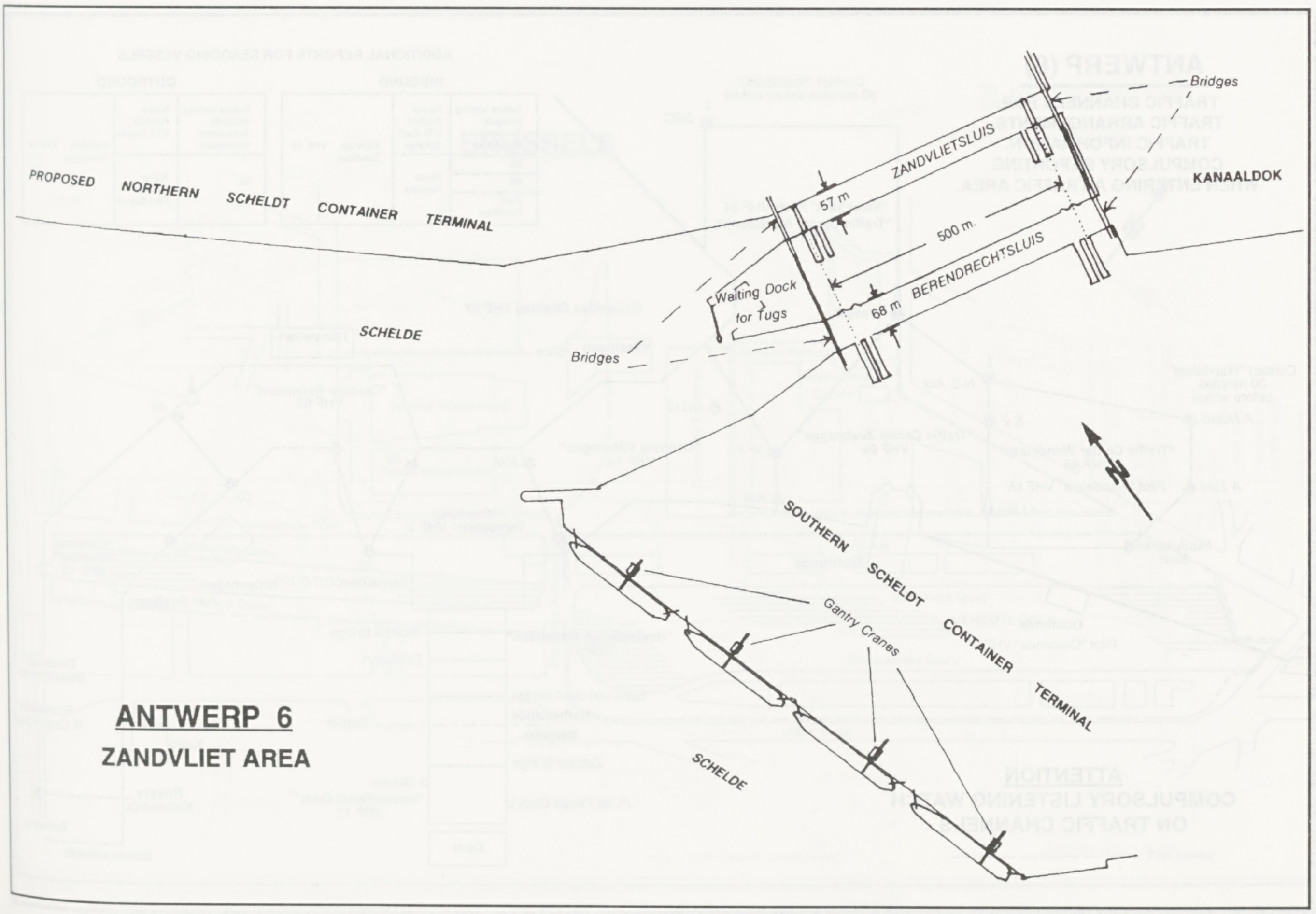

ANTWERP 3
KANAALDOK
0 250 500 750 1000 1250
Scales in Metres 1/12,500
N
EXISTING WATERWAYS
PLANNED WATERWAYS
SCHELDE-RIJNKANAAL
KANAALDOK B3
757
751
719
709
Zandvlietsluis
Berendrechtsluis
PROPOSED NORTHERN SCHELDT CONTAINER TERMINAL
SCHELDE
867
SOUTHERN SCHELDT CONTAINER TERMINAL
853
SCHELDE
665
661
KANAALDOK B2
772
762
649
641
629
621
624
702
DELWAIDEDOK
734
728
600
540
541
526
KANAALDOK B1
512
517


ANTWERP 4
OUTER DOCKS
N
0 125 250 375 500 625
Scales in Metres 1/12,500
468
426
CHURCHILLDOK
402
498
500
360
352
332
318
6e HAVENDOK
302
252
246
206
209
LEOPOLDDOK
235
229
241
232
HANSADOK
403b
421
257
269
4e HAVENDOK
285
303
321
345
5e HAVENDOK
397
373
INDUSTRIEDOK
KANAALDOK B1
505
499
512
517
Boudewijnsluis
Van Cauwelaertsluis
SCHELDE
435
429
425
ES1 - - 16
FN1 - - 6
MARSHALLDOK
FRA 11 - - 2
MDP 3 - - 1
SCHELDE


0 125 250 375 500 625
Scale In Metres 1/12,500
N
LEOPOLDDOK
206
209
198
135
127
186
ALBERTDOK
3e HAVENDOK
172
168
156
152
2e HAVENDOK
142
130
124
BARGE DOCK
118
1e HAVENDOK
104
103
4e HAVENDOK
257
269
5e HAVENDOK
321
345
BARGE DOCK
57
54
AMERIKADOK
59
48
STRAATSBURGDOK
Albertkanaal
LOBROEKDOK
ASIADOK
28
29
HOUTDOK
27
KEMPSCHDOK
38
36
43
KATTENDIJKDOK
20
14
WILLEMDOK
4
6
9
1
BONAPARTEDOK
Royersluis
New Lock Area
Kattendijksluis
29
22
SCHELDE
SCHELDE
16
8
EXISTING WATERWAYS
PLANNED WATERWAYS

ANTWERP 5

INNER DOCK

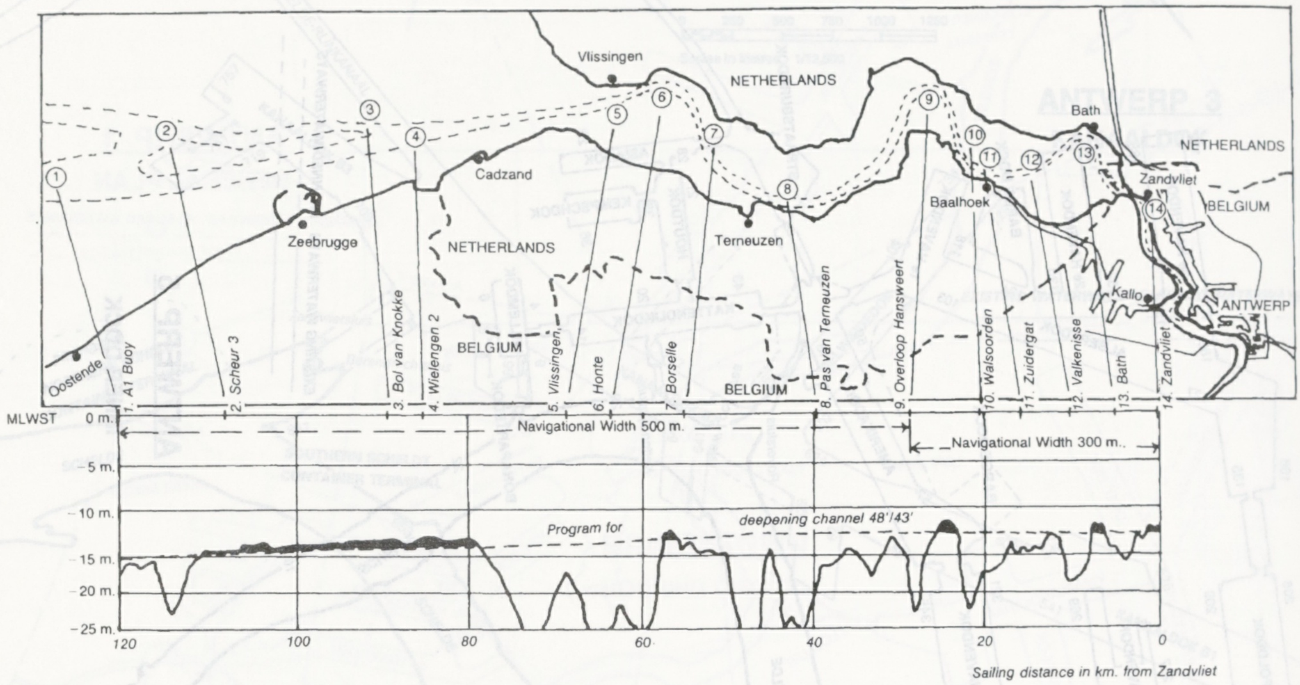

PROPOSED NORTHERN SCHELDT CONTAINER TERMINAL
SCHELDE
Bridges
Waiting Dock for Tugs
57 m
ZANDVLIETSLUIS
500 m.
68 m
BERENDRECHTSLUIS
Bridges
KANAALDOK
N
SOUTHERN SCHELDT CONTAINER TERMINAL
Gantry Cranes
SCHELDE

ANTWERP 6

ZANDVLIET AREA

ANTWERP 7

WESTERSCHELDE - FAIRWAY CHARACTERISTICS


Vlissingen
NETHERLANDS
Cadzand
Zeebrugge
NETHERLANDS
BELGIUM
Terneuzen
BELGIUM
Bath
NETHERLANDS
Zandvliet
BELGIUM
Baalhoek
Kallo
ANTWERP
Oostende
①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑫
⑬
⑭
1. A1 Buoy
2. Scheur 3
3. Bol van Knokke
4. Wielingen 2
5. Vlissingen
6. Honte
7. Borselle
8. Pas van Terneuzen
9. Overloop Hansweert
10. Walsoorden
11. Zuidergat
12. Valkenisse
13. Bath
14. Zandvliet
MLWST 0 m.
–5 m.
–10 m.
–15 m.
–20 m.
–25 m.
Navigational Width 500 m.
Navigational Width 300 m.
Program for
deepening channel 48'/43'
120
100
80
60
40
20
0
Sailing distance in km. from Zandvliet

CHANNEL DEPTH PROFILE – A1 Buoy to Zandvlietsluis

ANTWERP (8)

TRAFFIC CHANNELS FOR:
TRAFFIC ARRANGEMENTS.
TRAFFIC INFORMATION.
COMPULSORY REPORTING
WHEN ENTERING A TRAFFIC AREA.

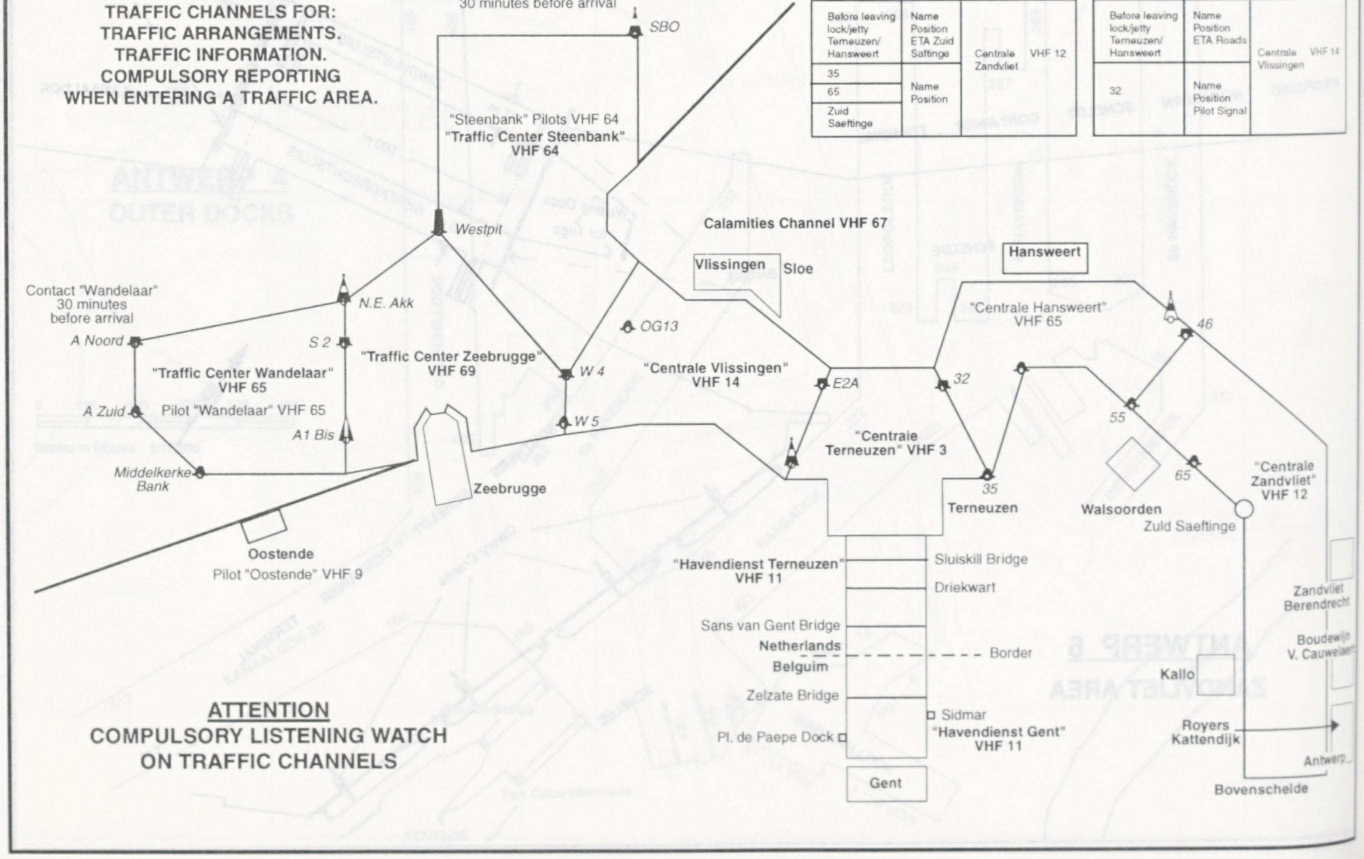
ADDITIONAL REPORTS FOR SEAGOING VESSELS

INBOUND

Before leaving lock/jetty Terneuzen/ Hansweert	Name Position ETA Zuid Saftinge	Centrale Zandvliet VHF 12
35	Name Position	
65		
Zuid Saettinge		

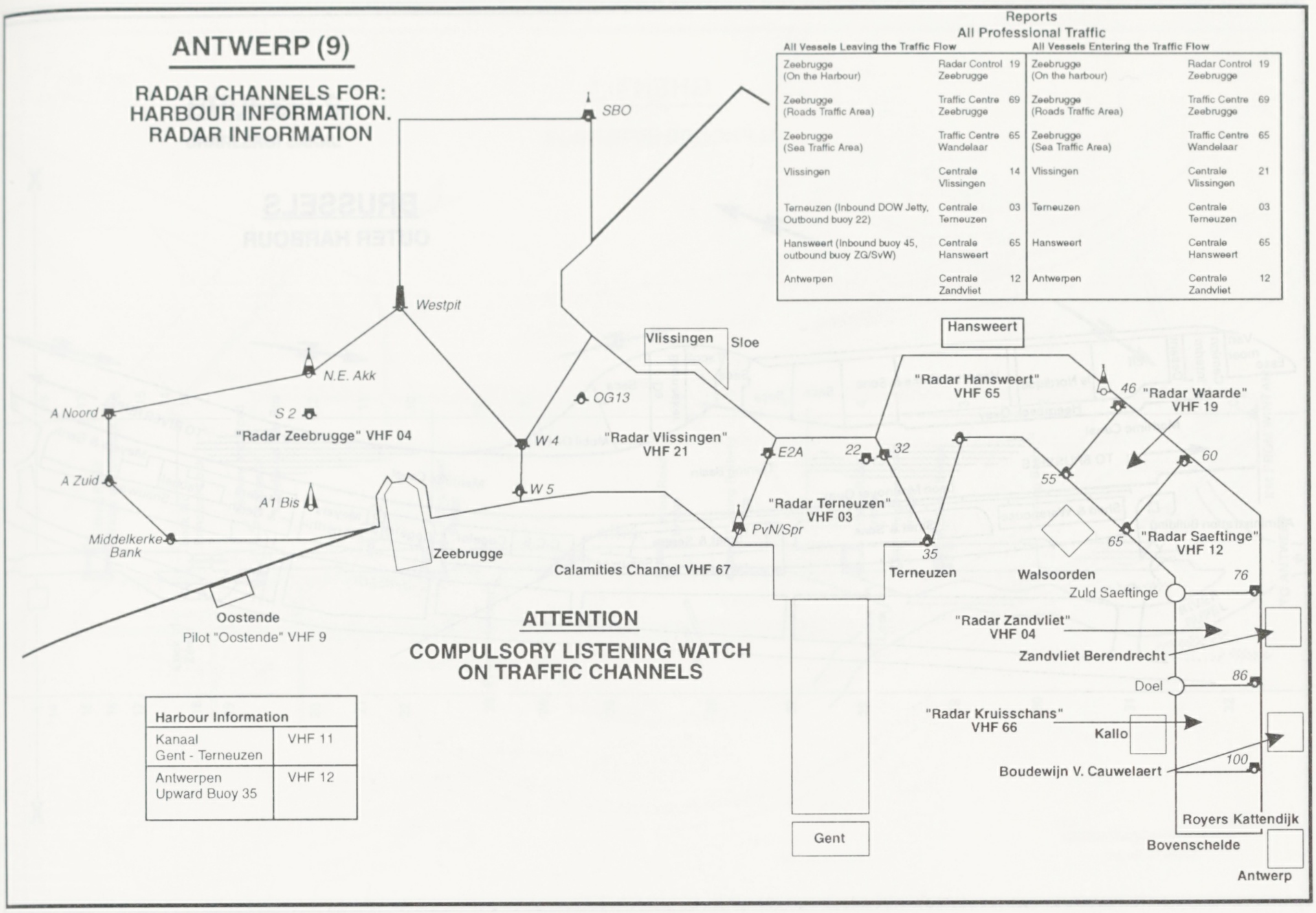
OUTBOUND

Before leaving lock/jetty Terneuzen/ Hansweert	Name Position ETA Roads	Centrale Vlissingen VHF 14
32	Name Position Pilot Signal	


Contact "Steenbank"
30 minutes before arrival
SBO
"Steenbank" Pilots VHF 64
"Traffic Center Steenbank"
VHF 64
Westpit
Calamities Channel VHF 67
Vlissingen
Sloe
Hansweert
Contact "Wandelaar"
30 minutes
before arrival
N.E. Akk
A Noord
S 2
OG13
"Traffic Center Zeebrugge"
VHF 69
"Traffic Center Wandelaar"
VHF 65
W 4
"Centrale Vlissingen"
VHF 14
E2A
32
"Centrale Hansweert"
VHF 65
46
A Zuid
Pilot "Wandelaar" VHF 65
A1 Bis
W 5
55
Middelkerke
Bank
Zeebrugge
"Centraie
Terneuzen" VHF 3
35
65
"Centrale
Zandvliet"
VHF 12
Terneuzen
Walsoorden
Zuld Saeftinge
Oostende
Pilot "Oostende" VHF 9
"Havendienst Terneuzen"
VHF 11
Sluiskill Bridge
Driekwart
Sans van Gent Bridge
Netherlands
Belguim
Border
Zelzate Bridge
Sidmar
"Havendienst Gent"
VHF 11
Pl. de Paepe Dock
Gent
Zandvliet
Berendrecht
Boudewijn
V. Cauwelaert
Kallo
Royers
Kattendijk
Antwerp
Bovenschelde

ATTENTION

COMPULSORY LISTENING WATCH ON TRAFFIC CHANNELS



ANTWERP (9)

RADAR CHANNELS FOR: HARBOUR INFORMATION. RADAR INFORMATION

Reports
All Professional Traffic

All Vessels Leaving the Traffic Flow			All Vessels Entering the Traffic Flow		
Zeebrugge (On the Harbour)	Radar Control Zeebrugge	19	Zeebrugge (On the harbour)	Radar Control Zeebrugge	19
Zeebrugge (Roads Traffic Area)	Traffic Centre Zeebrugge	69	Zeebrugge (Roads Traffic Area)	Traffic Centre Zeebrugge	69
Zeebrugge (Sea Traffic Area)	Traffic Centre Wandelaar	65	Zeebrugge (Sea Traffic Area)	Traffic Centre Wandelaar	65
Vlissingen	Centrale Vlissingen	14	Vlissingen	Centrale Vlissingen	21
Terneuzen (Inbound DOW Jetty, Outbound buoy 22)	Centrale Terneuzen	03	Terneuzen	Centrale Terneuzen	03
Hansweert (Inbound buoy 45, outbound buoy ZG/SvW)	Centrale Hansweert	65	Hansweert	Centrale Hansweert	65
Antwerpen	Centrale Zandvliet	12	Antwerpen	Centrale Zandvliet	12

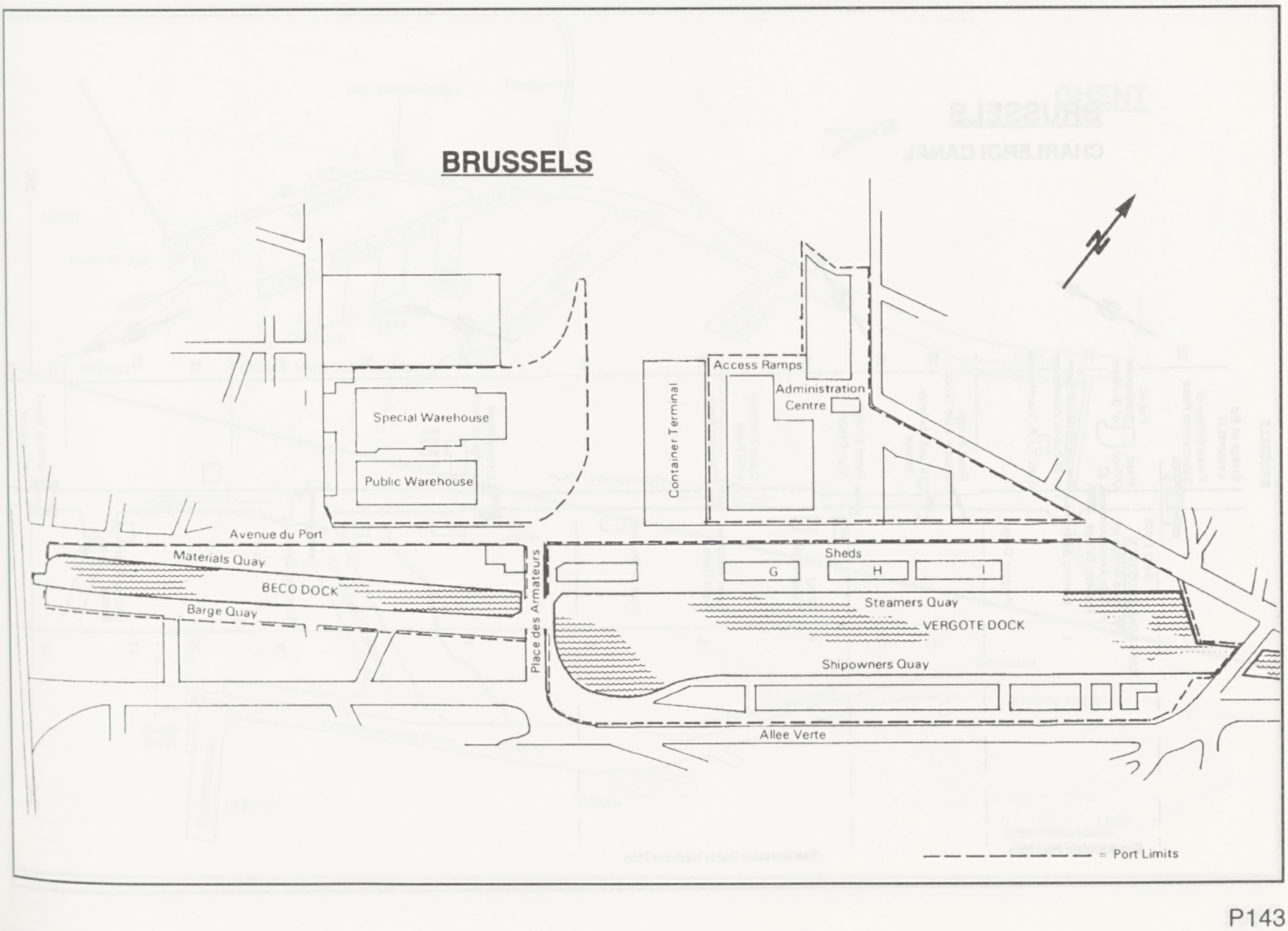
ATTENTION

COMPULSORY LISTENING WATCH ON TRAFFIC CHANNELS

Harbour Information	
Kanaal Gent - Terneuzen	VHF 11
Antwerpen Upward Buoy 35	VHF 12

SBO
Westpit
N.E. Akk
A Noord
S 2
"Radar Zeebrugge" VHF 04
A Zuid
A1 Bis
Middelkerke Bank
Oostende
Pilot "Oostende" VHF 9
Zeebrugge
W 4
W 5
OG13
Vlissingen
Sloe
"Radar Vlissingen" VHF 21
Calamities Channel VHF 67
E2A
PvN/Spr
"Radar Terneuzen" VHF 03
Gent
Hansweert
"Radar Hansweert" VHF 65
22
32
35
Terneuzen
46
"Radar Waarde" VHF 19
55
60
65
"Radar Saeftinge" VHF 12
Walsoorden
Zuid Saeftinge
76
"Radar Zandvliet" VHF 04
Zandvliet Berendrecht
86
Doel
"Radar Kruisschans" VHF 66
Kallo
100
Boudewijn V. Cauwelaert
Royers Kattendijk
Bovenschelde
Antwerp

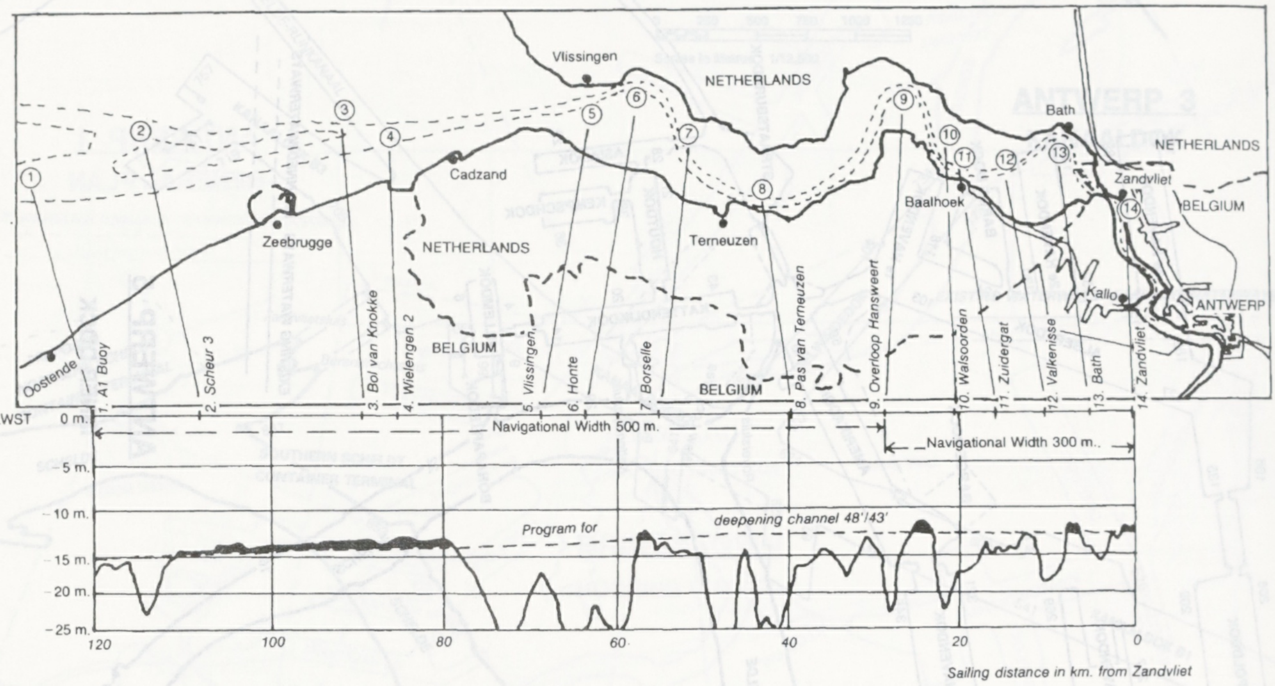
BRUSSELS



Special Warehouse
Public Warehouse
Container Terminal
Access Ramps
Administration Centre
Avenue du Port
Materials Quay
BECO DOCK
Barge Quay
Place des Armateurs
Sheds
G
H
I
Steamers Quay
VERGOTE DOCK
Shipowners Quay
Allee Verte
= Port Limits

ANTWERP 7

WESTERSCHELDE - FAIRWAY CHARACTERISTICS


Vlissingen
NETHERLANDS
Cadzand
Zeebrugge
Oostende
NETHERLANDS
BELGIUM
Terneuzen
BELGIUM
Baalhoek
Bath
NETHERLANDS
Zandvliet
BELGIUM
Kallo
ANTWERP
1. A1 Buoy
2. Scheur 3
3. Bol van Knokke
4. Wielingen 2
5. Vlissingen
6. Honte
7. Borselle
8. Pas van Terneuzen
9. Overloop Hansweert
10. Walsoorden
11. Zuidergat
12. Valkenisse
13. Bath
14. Zandvliet
MLWST 0 m.
-5 m.
-10 m.
-15 m.
-20 m.
-25 m.
Navigational Width 500 m.
Navigational Width 300 m.
Program for deepening channel 48'/43'
120
100
80
60
40
20
0
Sailing distance in km. from Zandvliet

CHANNEL DEPTH PROFILE – A1 Buoy to Zandvlietsluis

ANTWERP (8)

TRAFFIC CHANNELS FOR:
TRAFFIC ARRANGEMENTS.
TRAFFIC INFORMATION.
COMPULSORY REPORTING
WHEN ENTERING A TRAFFIC AREA.

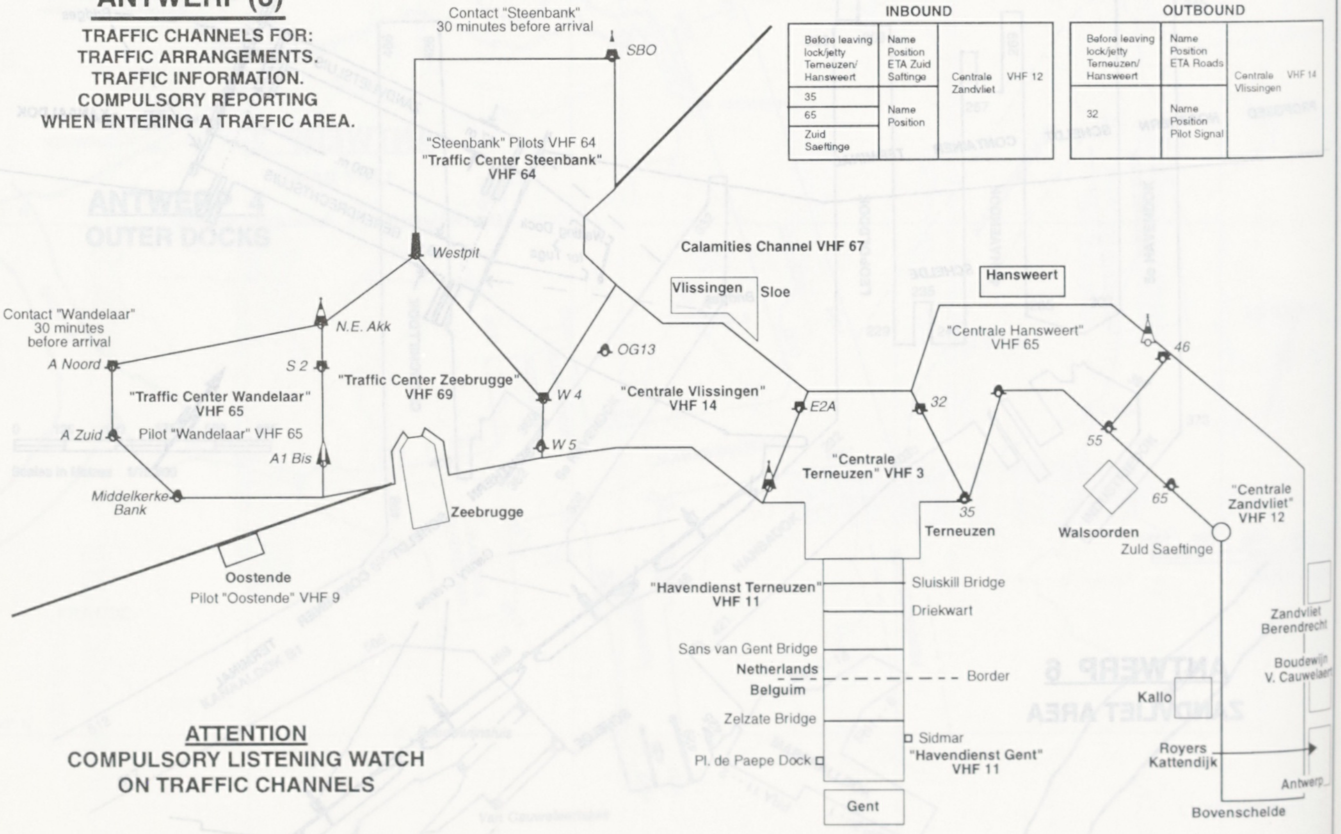
ADDITIONAL REPORTS FOR SEAGOING VESSELS

INBOUND

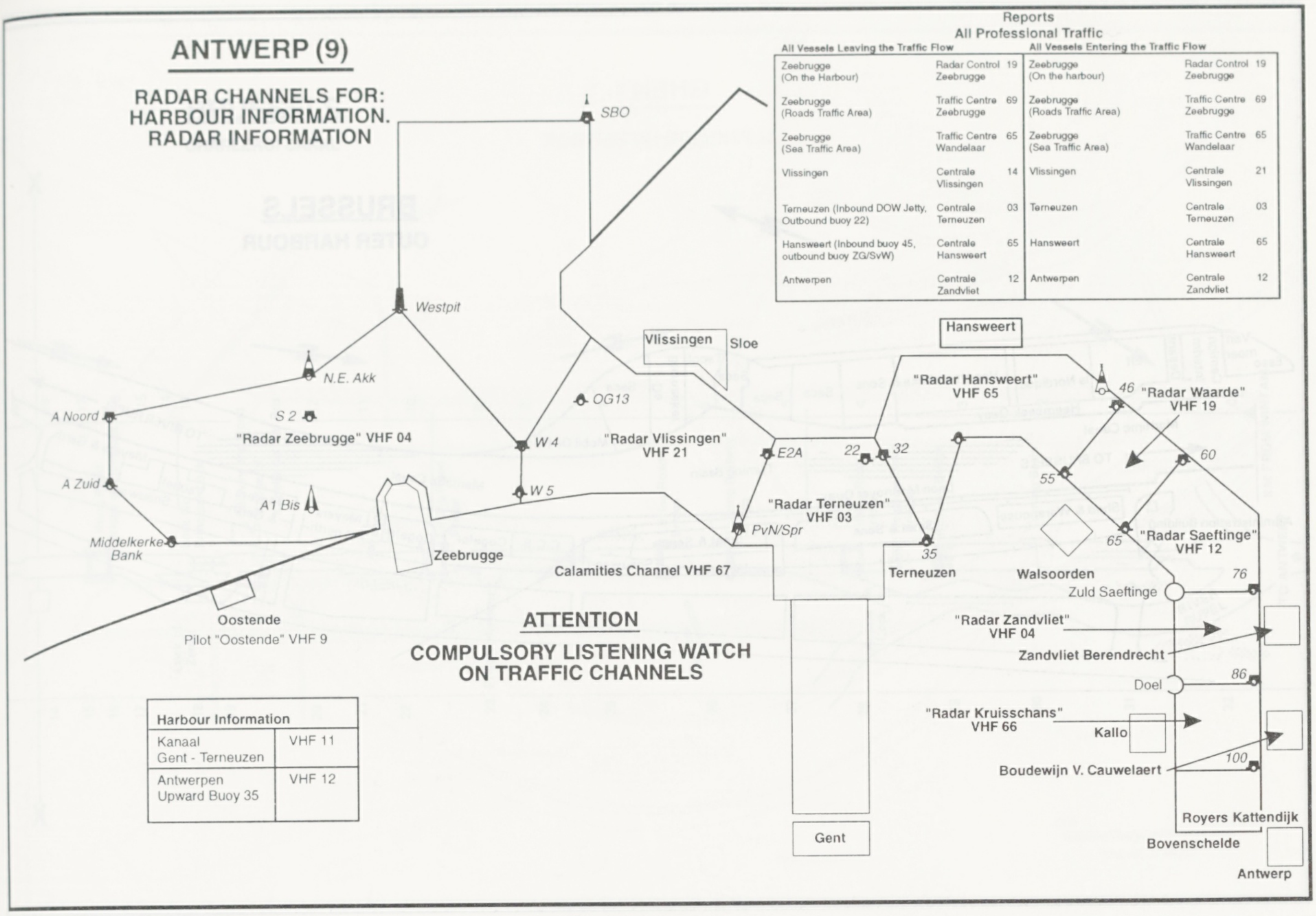
Before leaving lock/jetty Terneuzen/ Hansweert	Name Position ETA Zuid Saftinge	Centrale Zandvliet	VHF 12
35	Name Position		
65			
Zuid Saeftinge			

OUTBOUND

Before leaving lock/jetty Terneuzen/ Hansweert	Name Position ETA Roads	Centrale Vlissingen	VHF 14
32	Name Position Pilot Signal		


Contact "Steenbank" 30 minutes before arrival
SBO
"Steenbank" Pilots VHF 64
"Traffic Center Steenbank" VHF 64
Westpit
Calamities Channel VHF 67
Vlissingen
Sloe
Hansweert
Contact "Wandelaar" 30 minutes before arrival
N.E. Akk
A Noord
S 2
"Traffic Center Zeebrugge" VHF 69
OG13
"Centrale Hansweert" VHF 65
46
"Traffic Center Wandelaar" VHF 65
W 4
"Centrale Vlissingen" VHF 14
E2A
32
A Zuid
Pilot "Wandelaar" VHF 65
W 5
55
A1 Bis
"Centrale Terneuzen" VHF 3
Middelkerke Bank
Zeebrugge
35
65
"Centrale Zandvliet" VHF 12
Terneuzen
Walsoorden
Zuld Saeftinge
Oostende
Pilot "Oostende" VHF 9
"Havendienst Terneuzen" VHF 11
Sluiskill Bridge
Driekwart
Zandvliet Berendrecht
Sans van Gent Bridge
Netherlands
Border
Belguim
Boudewijn V. Cauwelaert
Kallo
Zelzate Bridge
Sidmar
Pl. de Paepe Dock
"Havendienst Gent" VHF 11
Royers Kattendijk
Antwerp
Gent
Bovenschelde

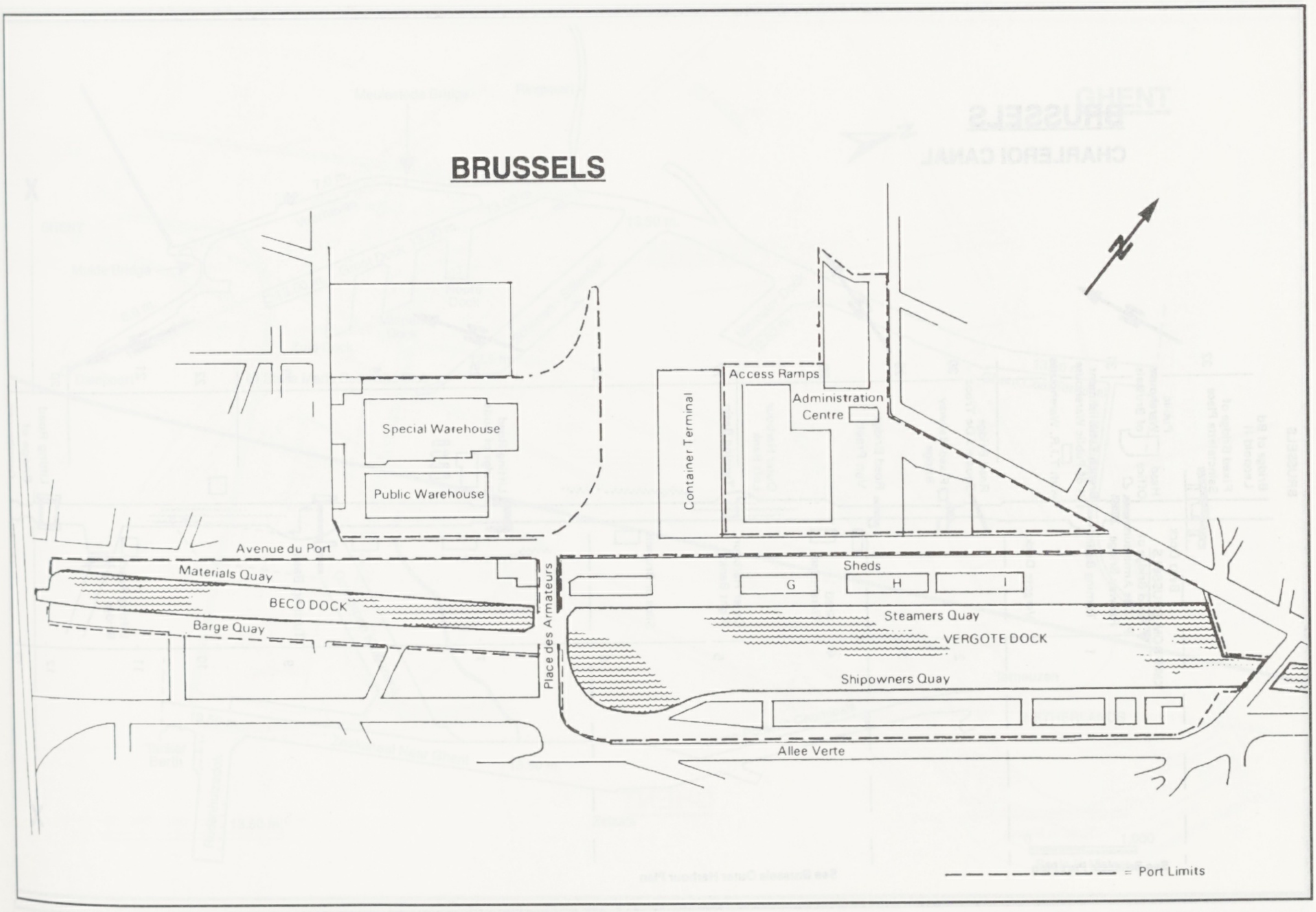
ATTENTION
COMPULSORY LISTENING WATCH ON TRAFFIC CHANNELS


ANTWERP (9)
RADAR CHANNELS FOR:
HARBOUR INFORMATION.
RADAR INFORMATION
SBO
Westpit
N.E. Akk
A Noord
S 2
"Radar Zeebrugge" VHF 04
A Zuid
A1 Bis
Middelkerke Bank
W 4
W 5
OG13
Vlissingen
Sloe
"Radar Vlissingen" VHF 21
E2A
PvN/Spr
"Radar Terneuzen" VHF 03
Zeebrugge
Calamities Channel VHF 67
Oostende
Pilot "Oostende" VHF 9
ATTENTION
COMPULSORY LISTENING WATCH ON TRAFFIC CHANNELS
Hansweert
"Radar Hansweert" VHF 65
22
32
35
Terneuzen
Gent
46
"Radar Waarde" VHF 19
55
60
65
"Radar Saeftinge" VHF 12
Walsoorden
Zuid Saeftinge
76
"Radar Zandvliet" VHF 04
Zandvliet Berendrecht
86
Doel
"Radar Kruisschans" VHF 66
Kallo
100
Boudewijn V. Cauwelaert
Royers Kattendijk
Bovenschelde
Antwerp

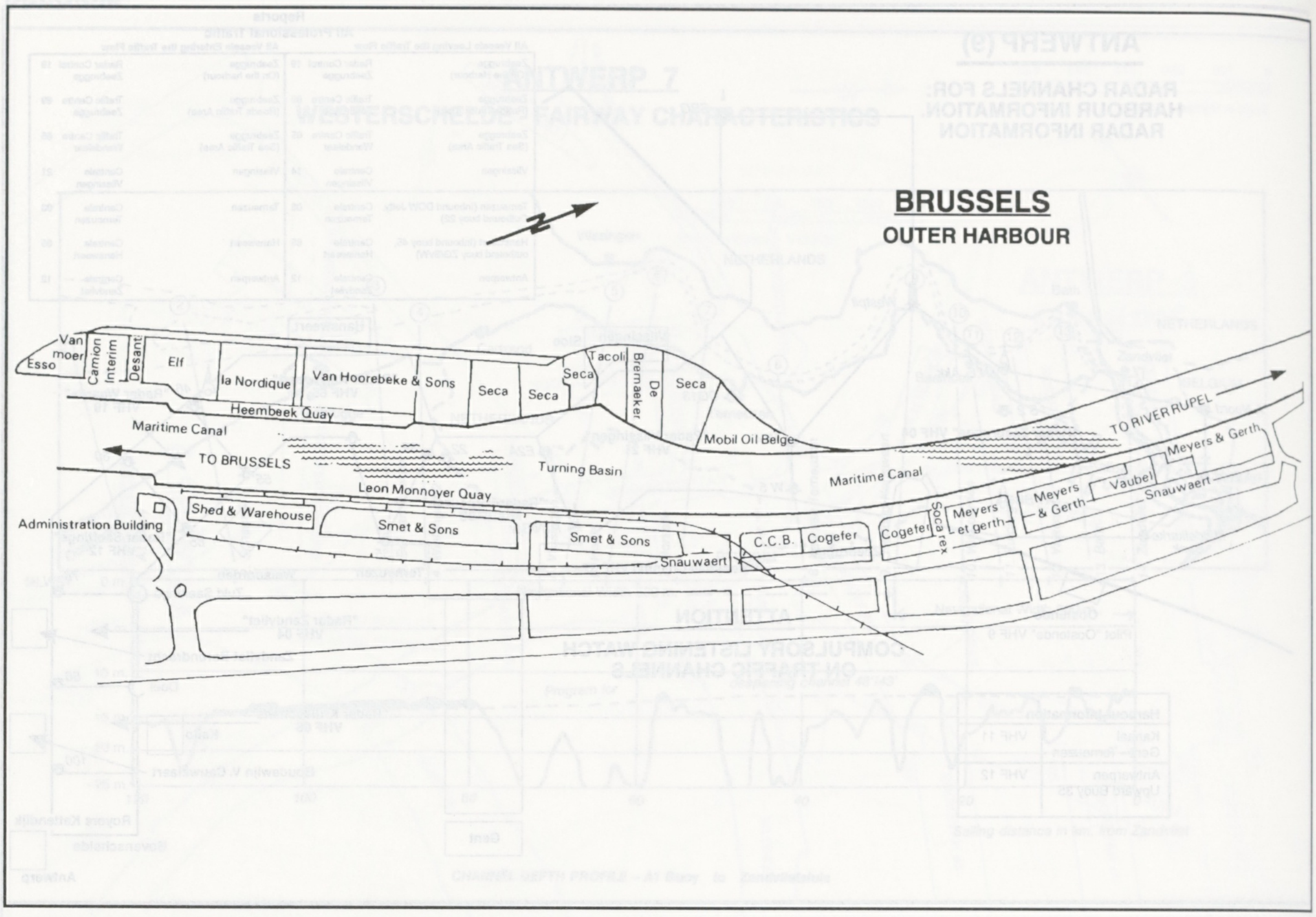
Reports
All Professional Traffic

All Vessels Leaving the Traffic Flow			All Vessels Entering the Traffic Flow		
Zeebrugge (On the Harbour)	Radar Control Zeebrugge	19	Zeebrugge (On the harbour)	Radar Control Zeebrugge	19
Zeebrugge (Roads Traffic Area)	Traffic Centre Zeebrugge	69	Zeebrugge (Roads Traffic Area)	Traffic Centre Zeebrugge	69
Zeebrugge (Sea Traffic Area)	Traffic Centre Wandelaar	65	Zeebrugge (Sea Traffic Area)	Traffic Centre Wandelaar	65
Vlissingen	Centrale Vlissingen	14	Vlissingen	Centrale Vlissingen	21
Terneuzen (Inbound DOW Jetty, Outbound buoy 22)	Centrale Terneuzen	03	Terneuzen	Centrale Terneuzen	03
Hansweert (Inbound buoy 45, outbound buoy ZG/SvW)	Centrale Hansweert	65	Hansweert	Centrale Hansweert	65
Antwerpen	Centrale Zandvliet	12	Antwerpen	Centrale Zandvliet	12

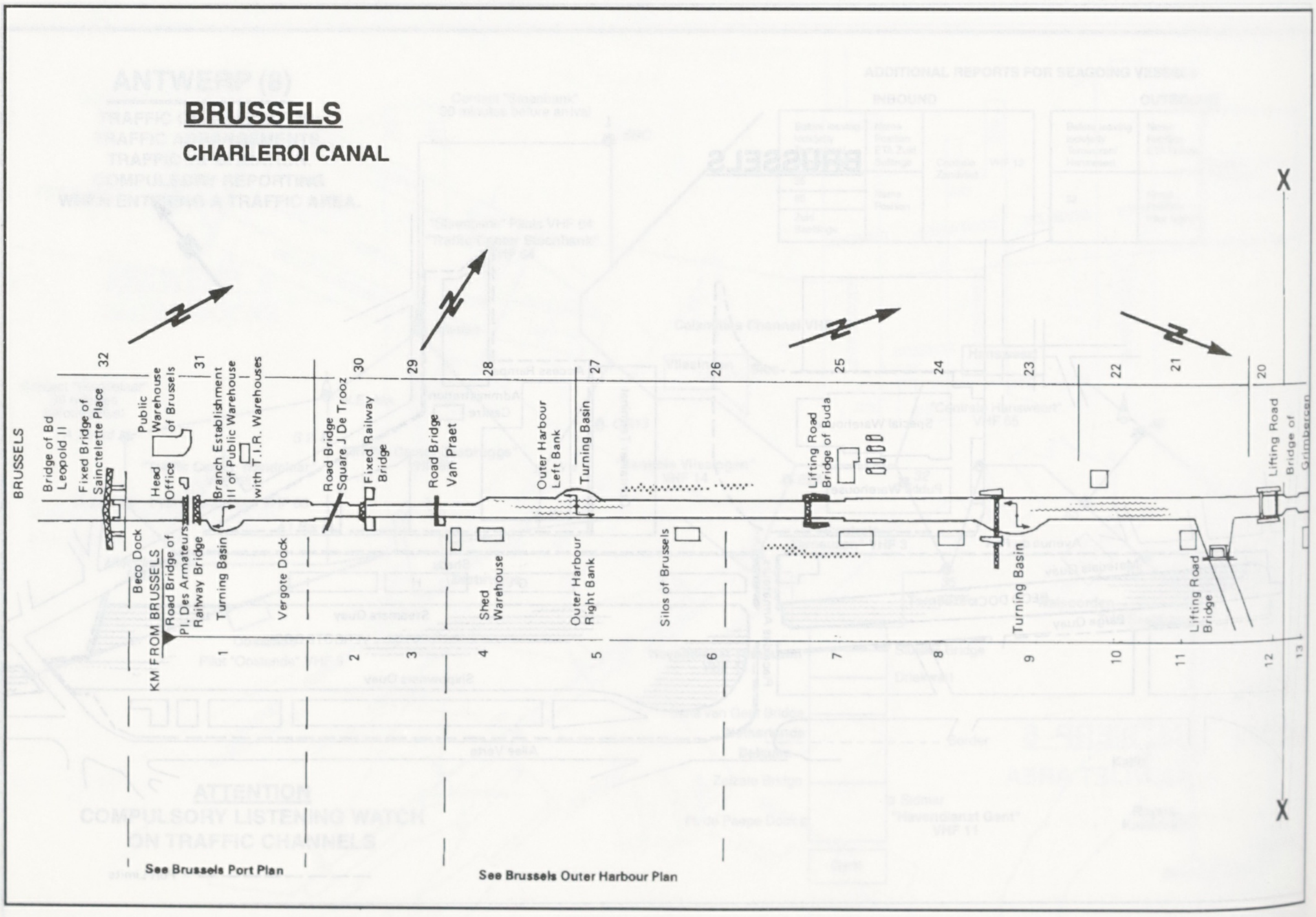
Harbour Information	
Kanaal Gent - Terneuzen	VHF 11
Antwerpen Upward Buoy 35	VHF 12

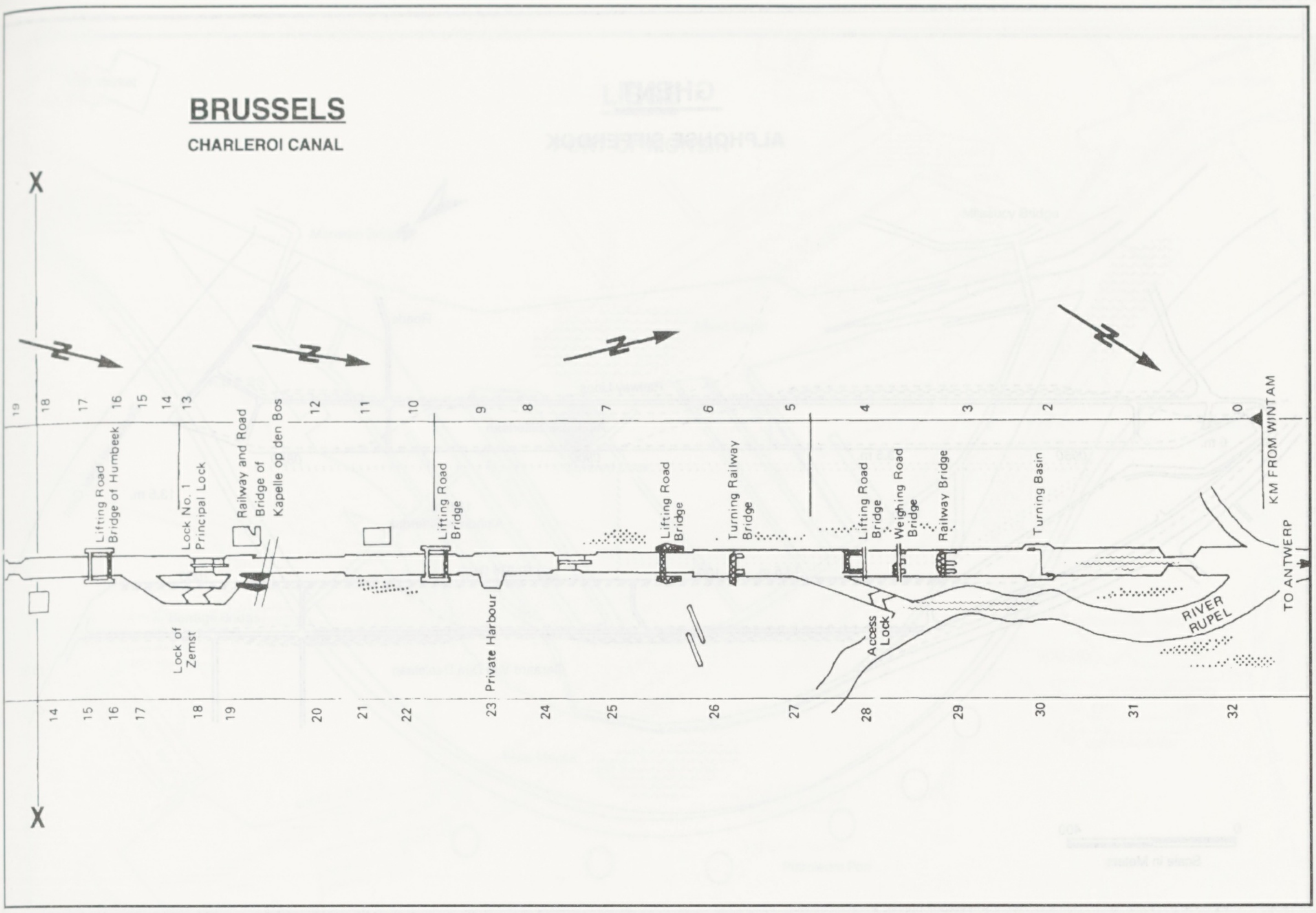

BRUSSELS
Special Warehouse
Public Warehouse
Container Terminal
Access Ramps
Administration Centre
Avenue du Port
Materials Quay
BECO DOCK
Barge Quay
Place des Armateurs
Sheds
G
H
I
Steamers Quay
VERGOTE DOCK
Shipowners Quay
Allee Verte
N
= Port Limits

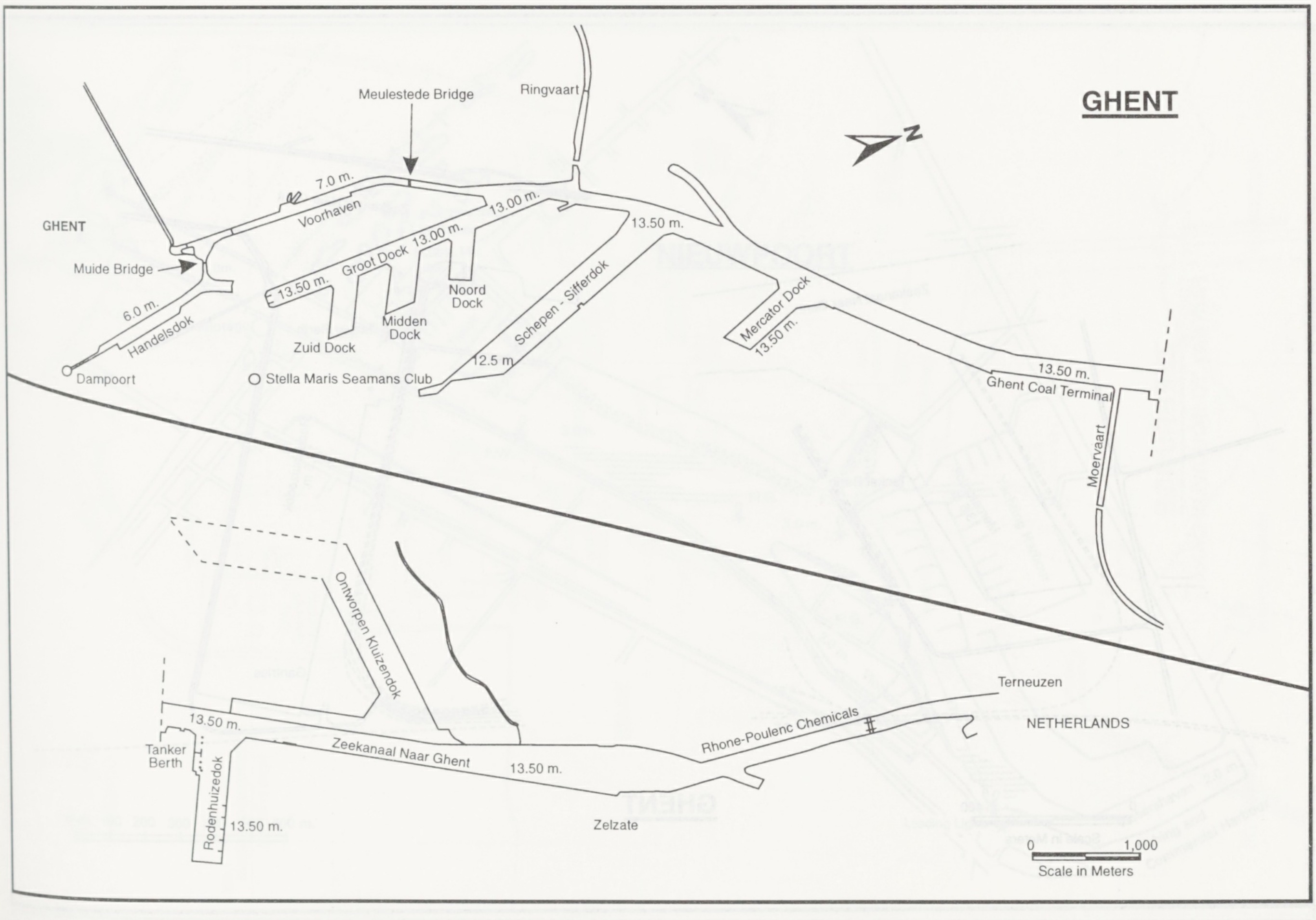
BRUSSELS
OUTER HARBOUR


Esso
Van moer
Camion Interim
Desant
Elf
la Nordique
Van Hoorebeke & Sons
Seca
Seca
Seca
Tacoli
De Bremaeker
Seca
Heembeek Quay
Maritime Canal
TO BRUSSELS
Mobil Oil Belge
Turning Basin
Leon Monnoyer Quay
Maritime Canal
TO RIVER RUPEL
Administration Building
Shed & Warehouse
Smet & Sons
Smet & Sons
Snauwaert
C.C.B.
Cogefer
Cogefer
Socatrex
Meyers et gerth
Meyers & Gerth
Vaubel
Snauwaert
Meyers & Gerth

BRUSSELS
CHARLEROI CANAL

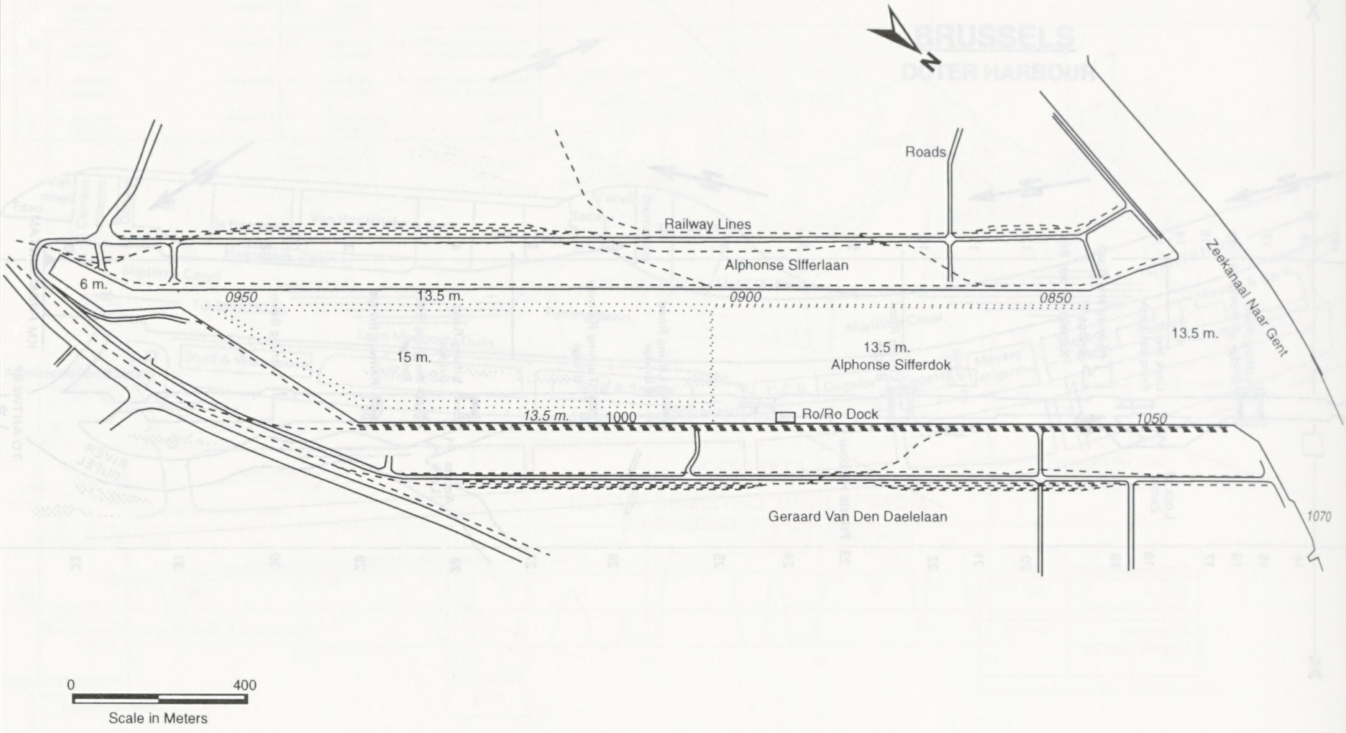

BRUSSELS
Bridge of Bd Leopold II
Fixed Bridge of Sainctelette Place
Public Warehouse of Brussels
Head Office
Branch Establishment II of Public Warehouse with T.I.R. Warehouses
Road Bridge Square J De Trooz
Fixed Railway Bridge
Road Bridge Van Praet
Outer Harbour Left Bank
Turning Basin
Lifting Road Bridge of Buda
Lifting Road Bridge of Grimbergen
Beco Dock
Road Bridge of Pl. Des Armateurs
Railway Bridge
Turning Basin
Vergote Dock
Shed Warehouse
Outer Harbour Right Bank
Silos of Brussels
Turning Basin
Lifting Road Bridge
KM FROM BRUSSELS
1
2
3
4
5
6
7
8
9
10
11
12
13
20
21
22
23
24
25
26
27
28
29
30
31
32
X
X
See Brussels Port Plan
See Brussels Outer Harbour Plan

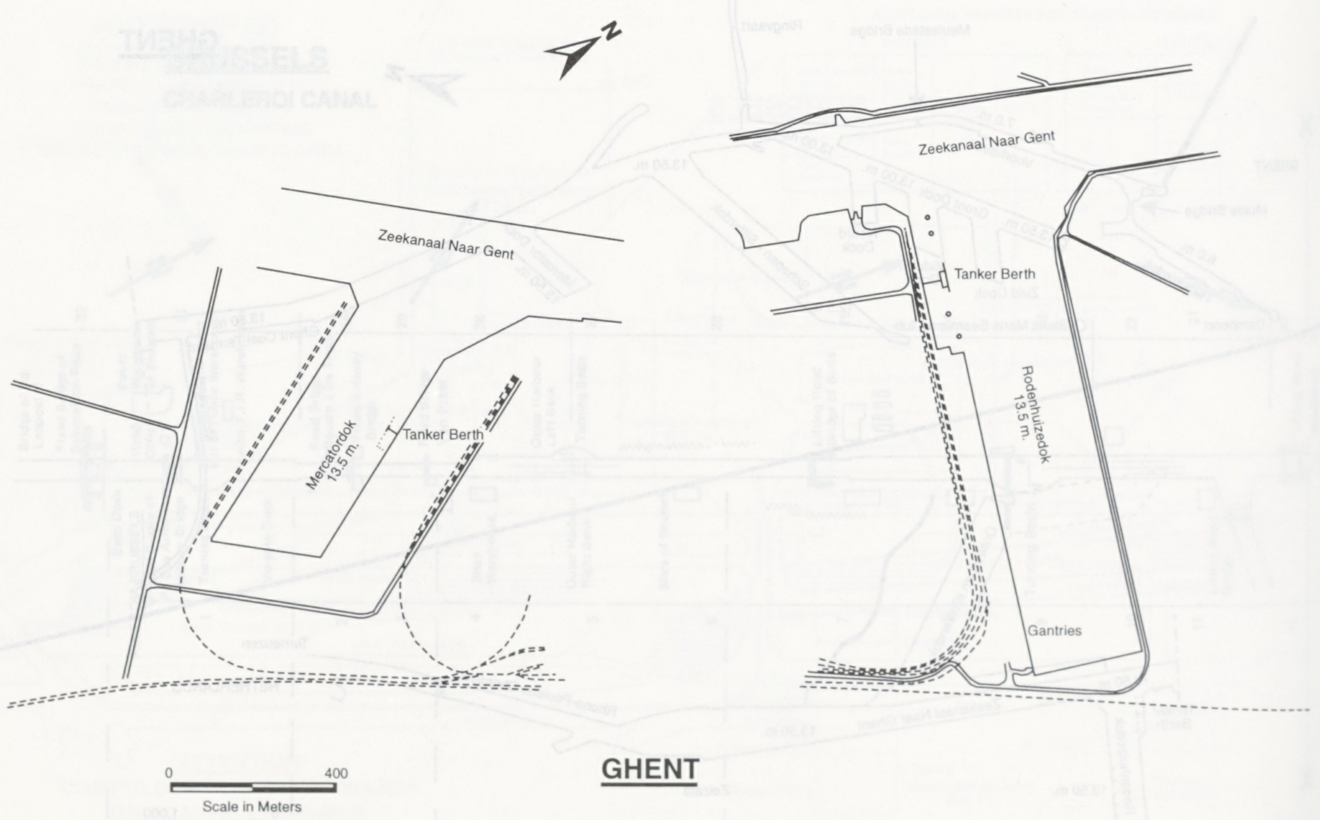

BRUSSELS
CHARLEROI CANAL
X
X
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
0
KM FROM WINTAM
Lifting Road Bridge of Humbeek
Lock No. 1 Principal Lock
Railway and Road Bridge of Kapelle op den Bos
Lifting Road Bridge
Lifting Road Bridge
Turning Railway Bridge
Lifting Road Bridge
Weighing Road Bridge
Railway Bridge
Turning Basin
Lock of Zemst
Private Harbour
Access Lock
RIVER RUPEL
TO ANTWERP
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

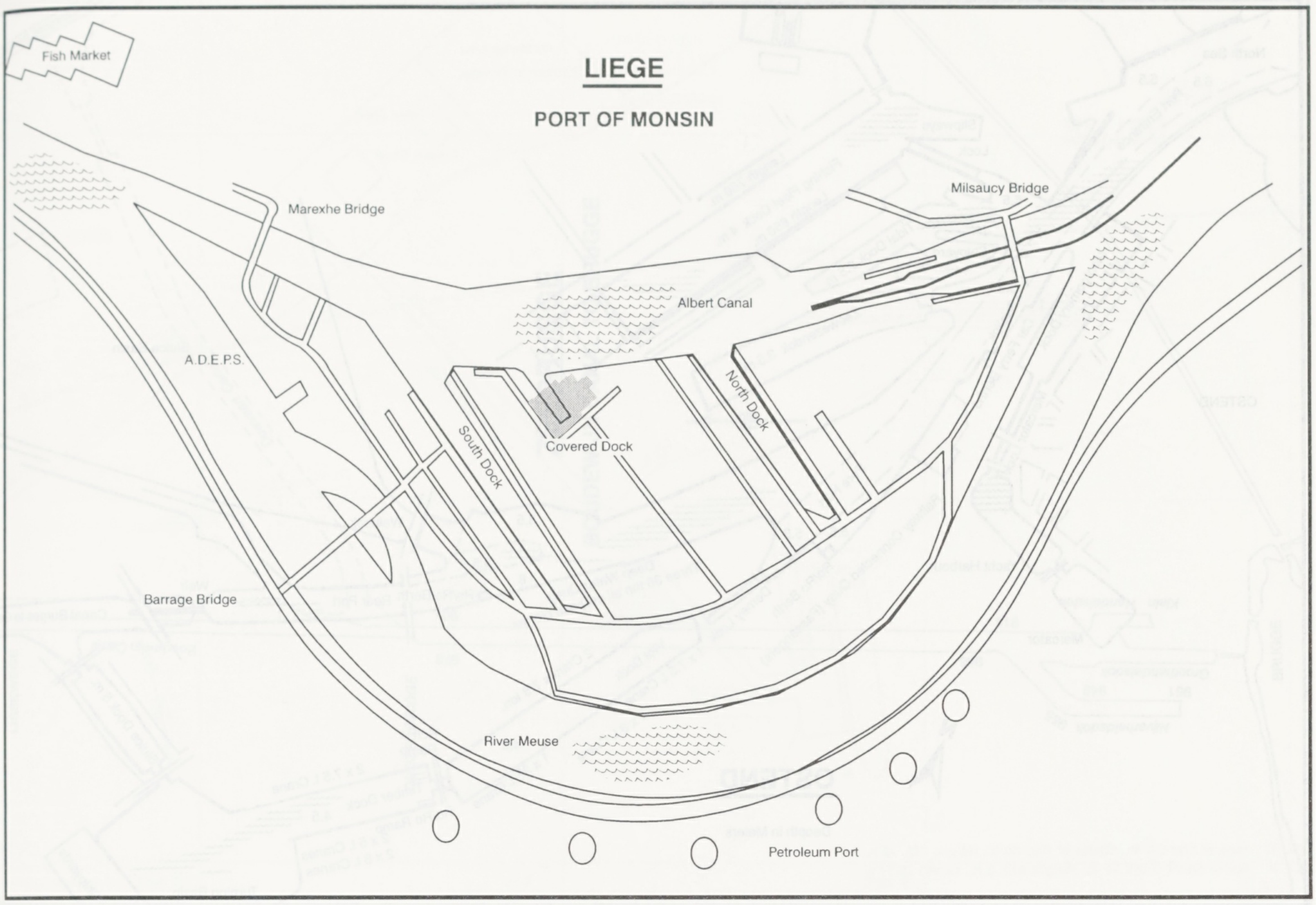

GHENT
Meulestede Bridge
Ringvaart
GHENT
7.0 m.
Voorhaven
13.00 m.
13.50 m.
Muide Bridge
Groot Dock
13.00 m.
13.50 m.
Noord Dock
6.0 m.
Handelsdok
Midden Dock
Zuid Dock
Schepen - Sifferdok
12.5 m
Mercator Dock
13.50 m.
13.50 m.
Ghent Coal Terminal
Moervaart
Dampoort
Stella Maris Seamans Club
Ontworpen Kluizendok
Terneuzen
NETHERLANDS
Rhone-Poulenc Chemicals
13.50 m.
Tanker Berth
Zeekanaal Naar Ghent
13.50 m.
Rodenhuizedok
13.50 m.
Zelzate
0
1,000
Scale in Meters

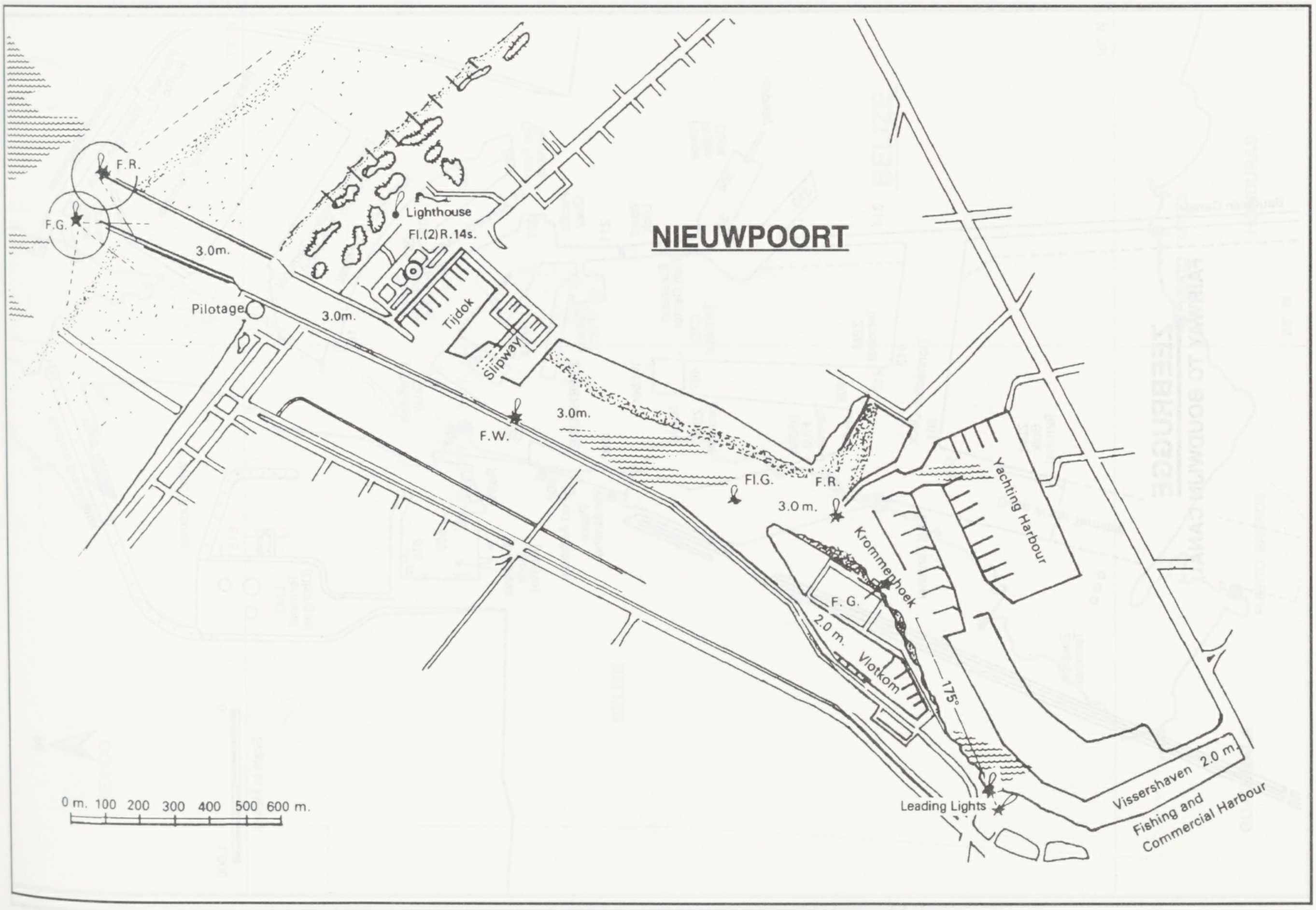
GHENT

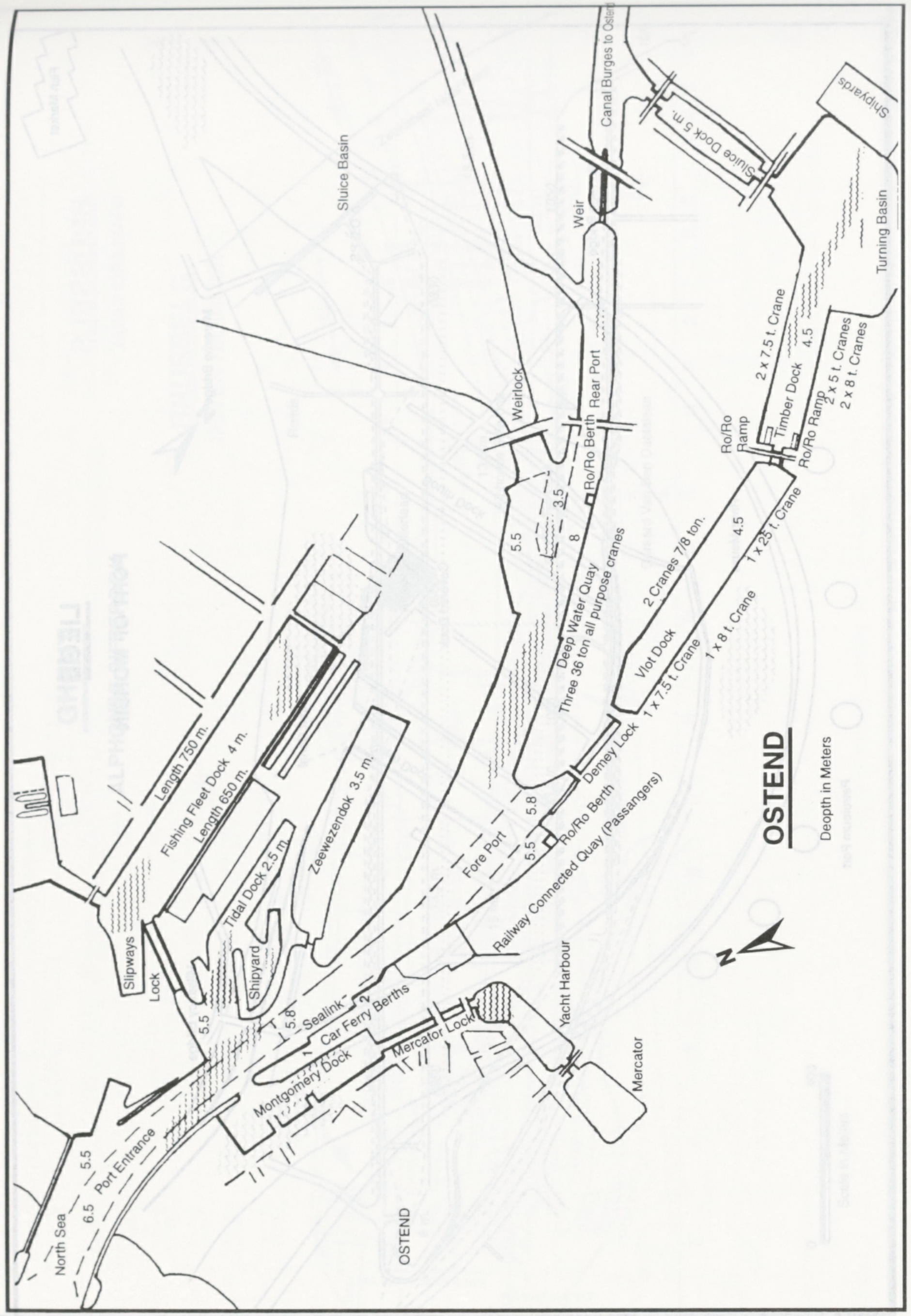
ALPHONSE SIFFERDOK

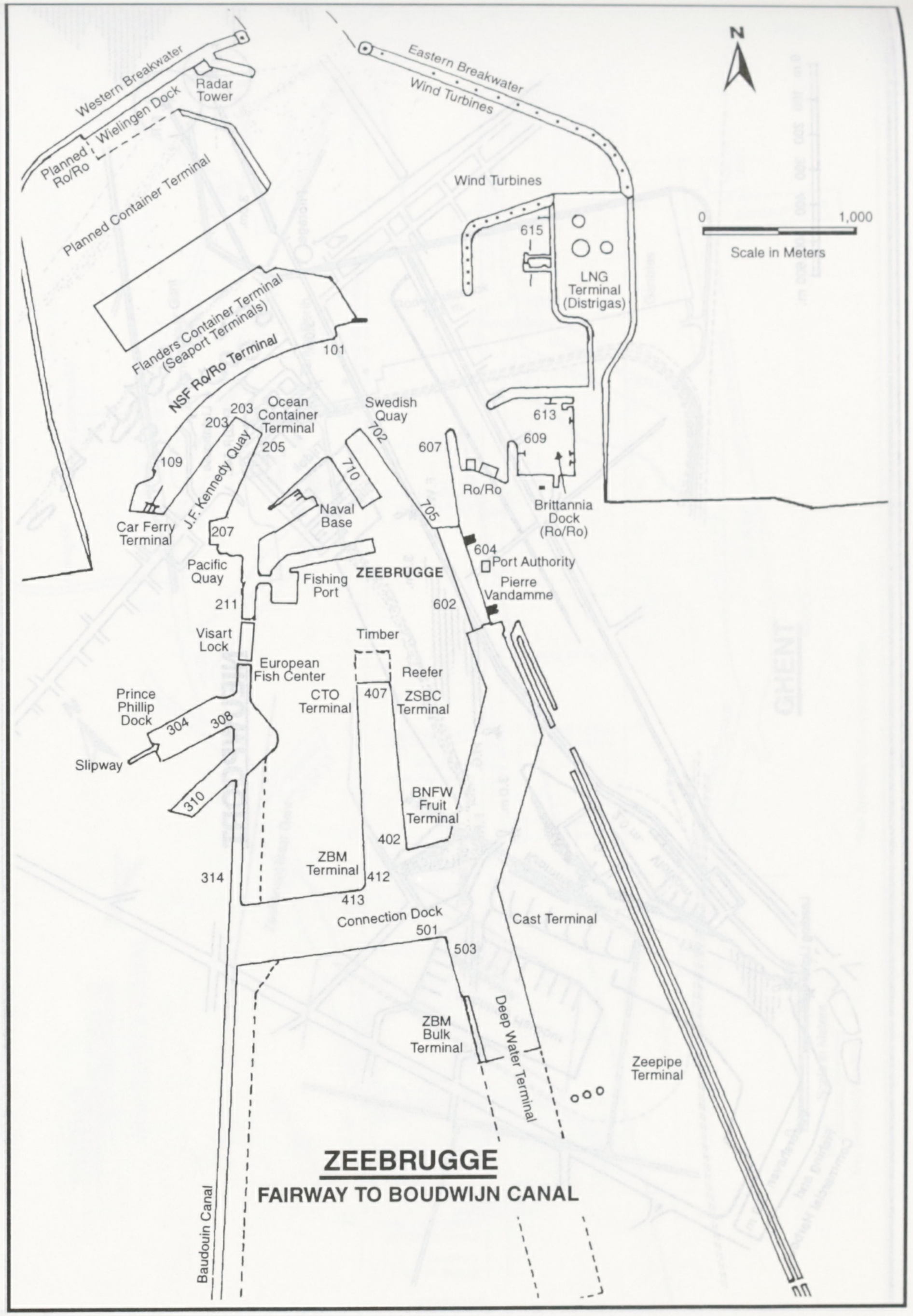

N
Roads
Railway Lines
Alphonse Sifferlaan
6 m.
0950
13.5 m.
0900
0850
13.5 m.
Zeekanaal Naar Gent
15 m.
13.5 m.
Alphonse Sifferdok
13.5 m.
1000
Ro/Ro Dock
1050
1070
Geraard Van Den Daelelaan
0
400
Scale in Meters

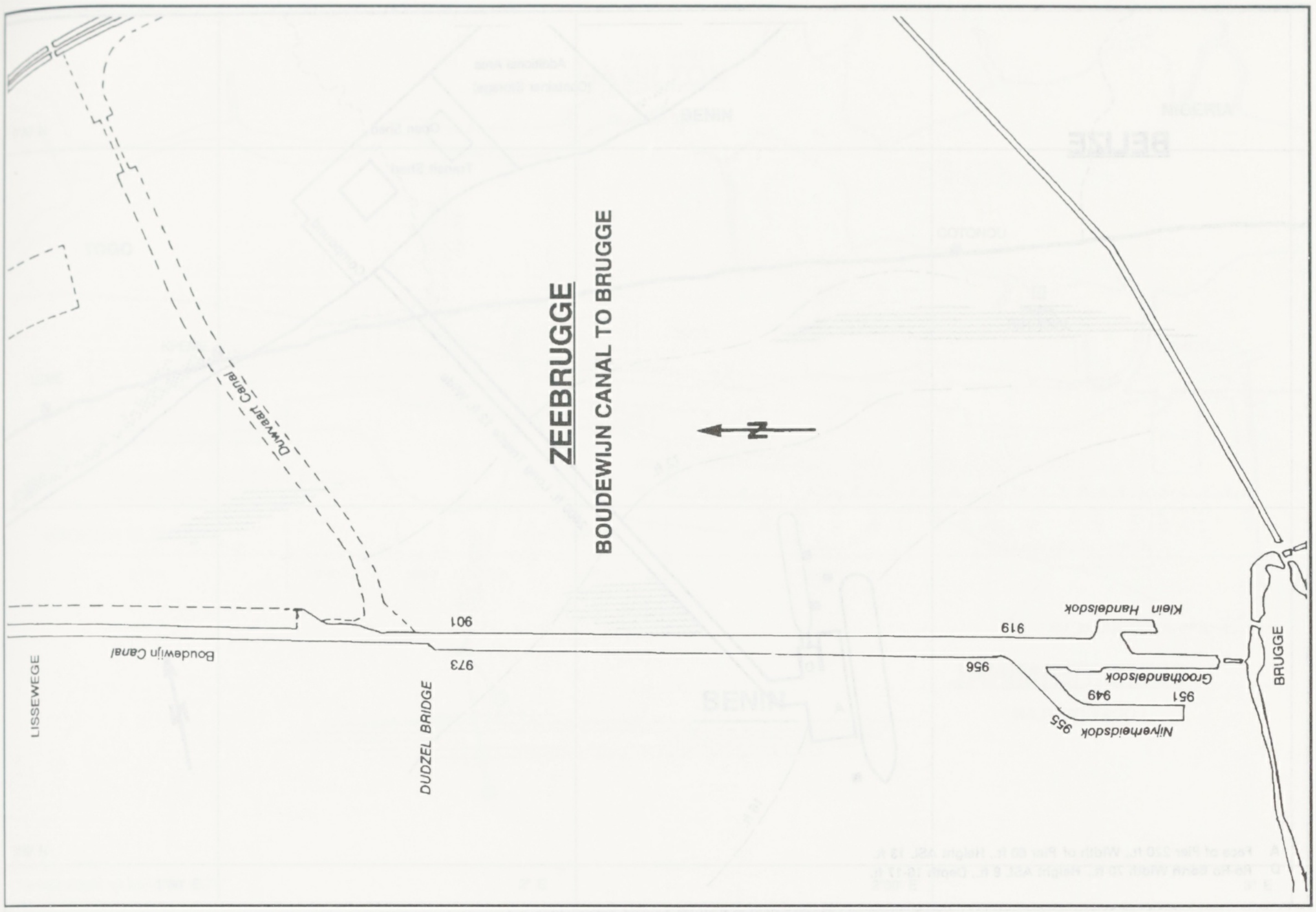

N
Zeekanaal Naar Gent
Zeekanaal Naar Gent
Tanker Berth
Mercatordok
13.5 m.
Tanker Berth
Rodenhuizedok
13.5 m.
Gantries
0
400
Scale in Meters
GHENT


LIEGE
PORT OF MONSIN
Fish Market
Marexhe Bridge
Milsaucy Bridge
Albert Canal
A.D.E.P.S.
South Dock
Covered Dock
North Dock
Barrage Bridge
River Meuse
Petroleum Port


NIEUWPOORT
F.R.
F.G.
Lighthouse
Fl.(2)R.14s.
3.0m.
Pilotage
3.0m.
Tijdok
Slipway
3.0m.
F.W.
Fl.G.
F.R.
3.0m.
Yachting Harbour
Krommenhoek
F.G.
2.0 m.
Vlotkom
175°
Leading Lights
Vissershaven 2.0 m.
Fishing and Commercial Harbour
0 m. 100 200 300 400 500 600 m.


OSTEND
Deopth in Meters
North Sea
Port Entrance
6.5
5.5
Sealink
Car Ferry Berths
Montgomery Dock
Mercator Lock
Mercator
Yacht Harbour
Railway Connected Quay (Passangers)
Ro/Ro Berth
Fore Port
Demey Lock
Vlot Dock
2 Cranes 7/8 ton.
1 x 7.5 t. Crane
1 x 8 t. Crane
1 x 25 t. Crane
Deep Water Quay
Three 36 ton all purpose cranes
Ro/Ro Berth
Rear Port
Weirlock
Weir
Canal Burges to Ostend
Sluice Dock 5 m.
Shipyards
Turning Basin
2 x 7.5 t. Crane
Timber Dock
Ro/Ro Ramp
2 x 5 t. Cranes
2 x 8 t. Cranes
Sluice Basin
Fishing Fleet Dock 4 m.
Length 750 m.
Length 650 m.
Zeewezendok 3.5 m.
Tidal Dock 2.5 m.
Shipyard
Slipways
Lock
5.5
5.8
3.5
8
4.5
OSTEND

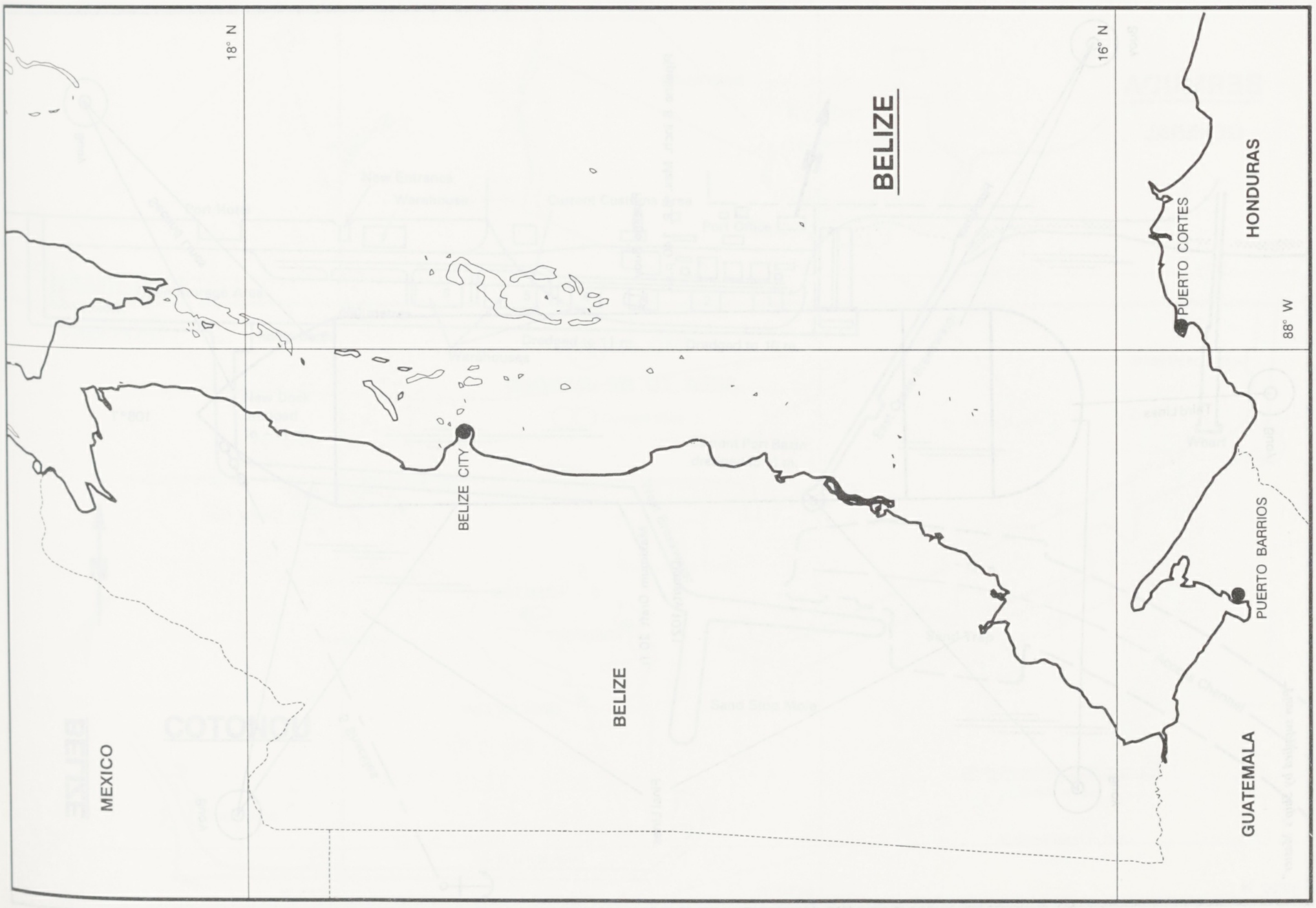

ZEEBRUGGE
FAIRWAY TO BOUDWIJN CANAL
N
0
1,000
Scale in Meters
Western Breakwater
Eastern Breakwater
Wind Turbines
Radar Tower
Wielingen Dock
Planned Ro/Ro
Planned Container Terminal
Flanders Container Terminal (Seaport Terminals)
NSF Ro/Ro Terminal
101
LNG Terminal (Distrigas)
615
613
609
Brittannia Dock (Ro/Ro)
Ro/Ro
607
Swedish Quay
702
710
705
Ocean Container Terminal
203
205
109
J.F. Kennedy Quay
Car Ferry Terminal
207
Naval Base
604
Port Authority
Pierre Vandamme
602
Pacific Quay
211
Fishing Port
ZEEBRUGGE
Visart Lock
Timber
European Fish Center
Reefer
CTO Terminal
407
ZSBC Terminal
Prince Phillip Dock
304
308
Slipway
310
BNFW Fruit Terminal
402
314
ZBM Terminal
412
413
Connection Dock
501
503
Cast Terminal
ZBM Bulk Terminal
Deep Water Terminal
Zeepipe Terminal
Baudouin Canal



ZEEBRUGGE

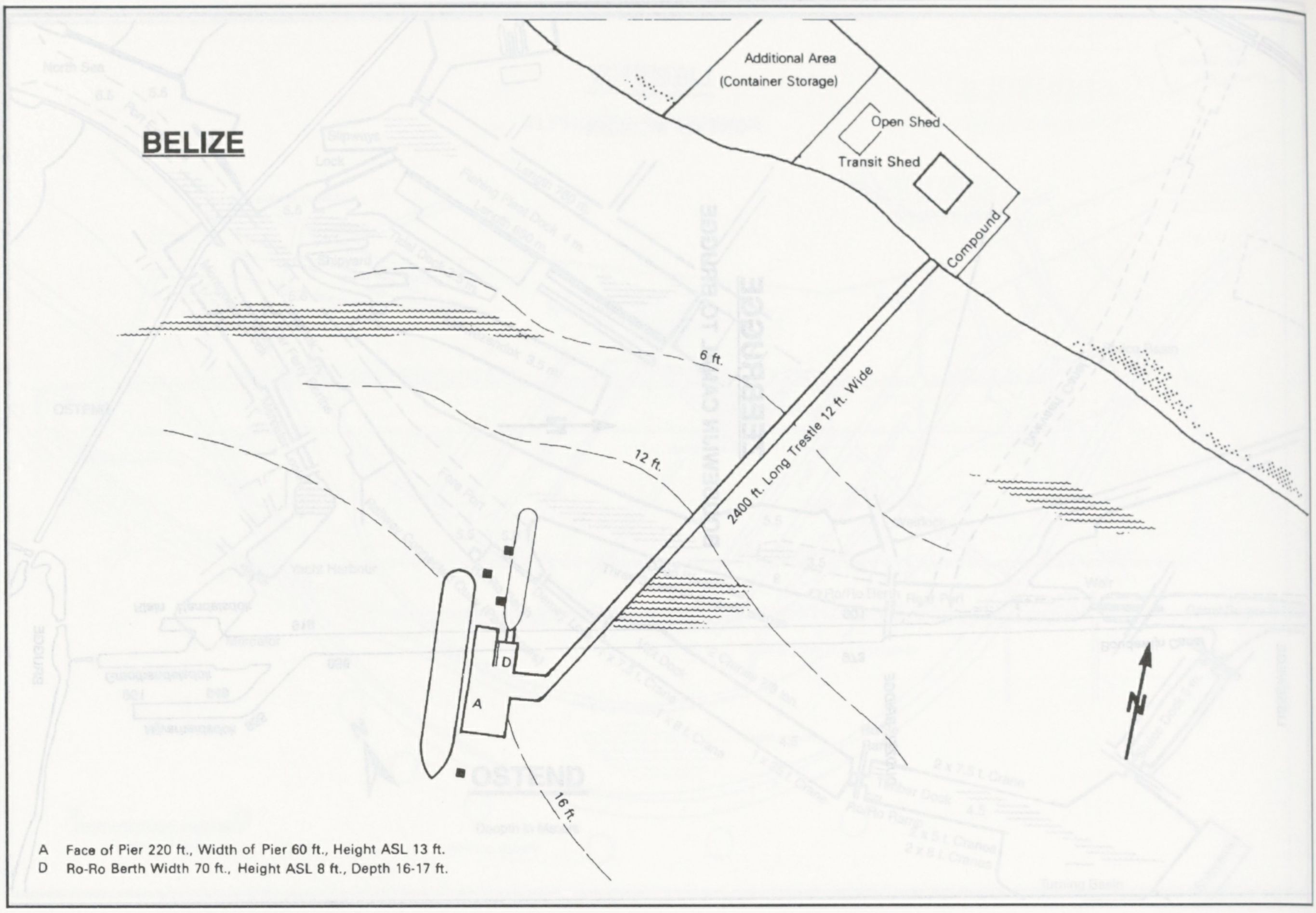
BOUDEWIJN CANAL TO BRUGGE

N
Duvvaart Canal
Boudewijn Canal
LISSEWEGE
DUDZEL BRIDGE
901
973
919
956
Klein Handelsdok
Groothandelsdok
949
951
955
Nijverheidsdok
BRUGGE

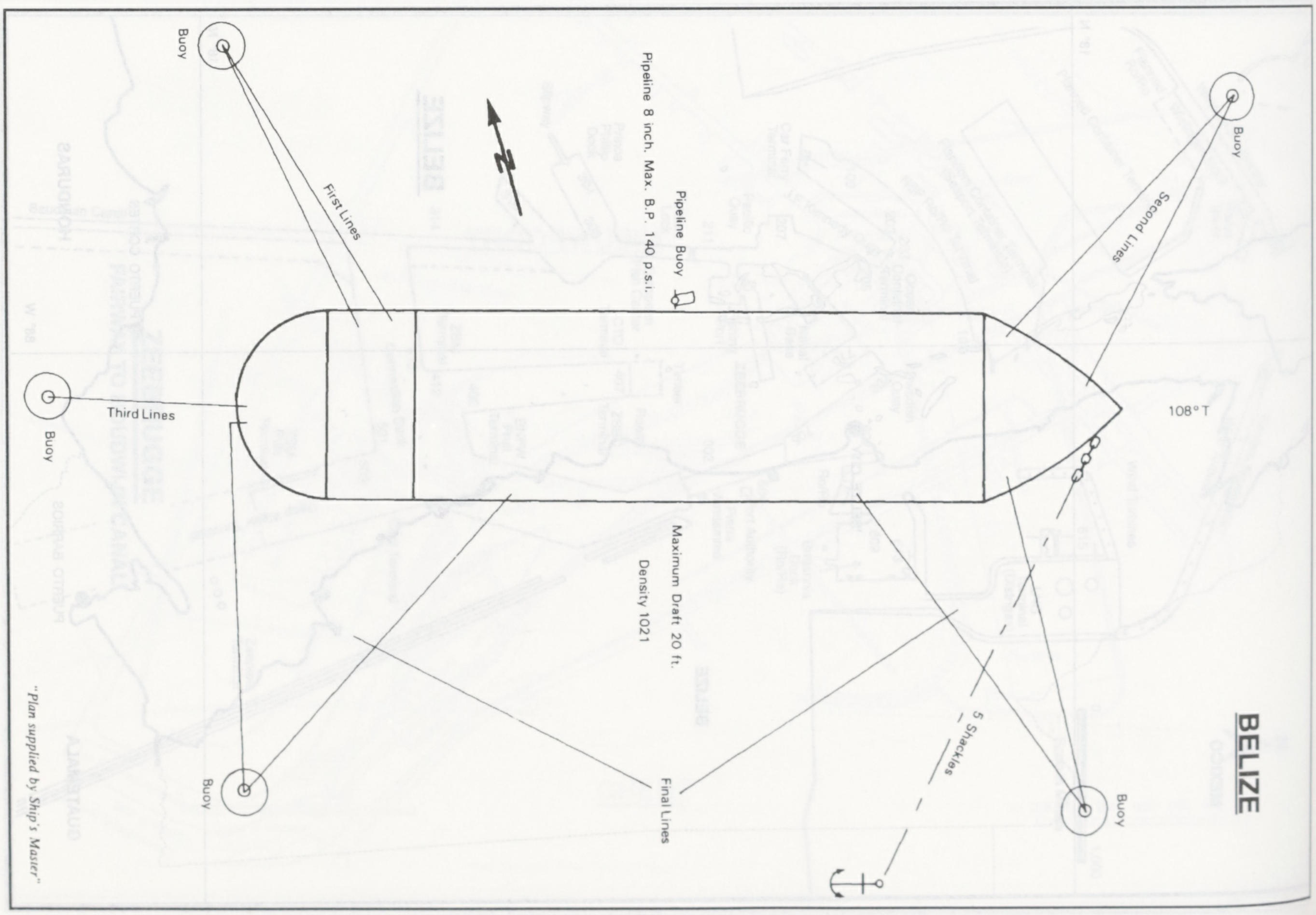


BELIZE

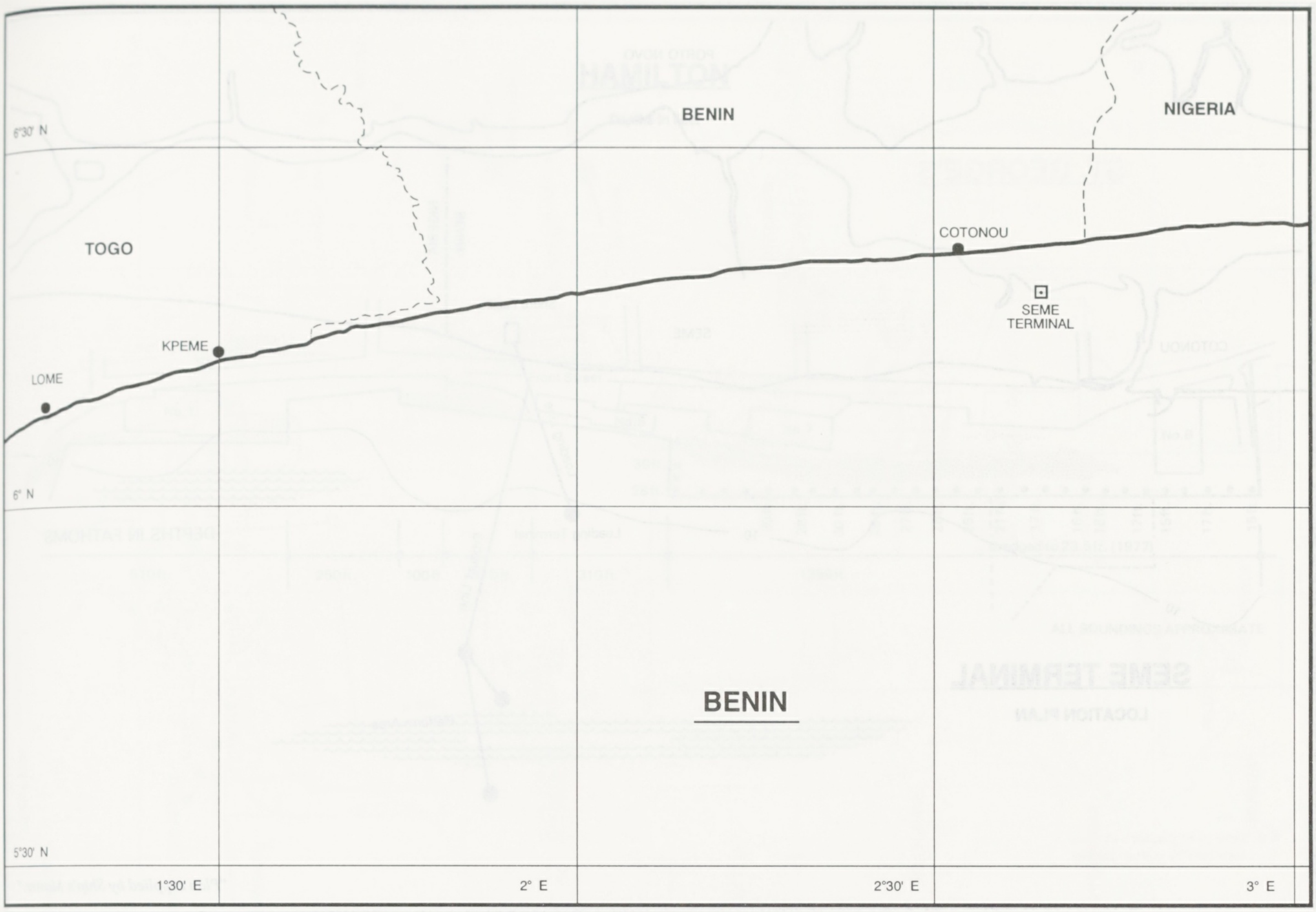
18° N
16° N
88° W
MEXICO
BELIZE
BELIZE CITY
PUERTO CORTES
HONDURAS
PUERTO BARRIOS
GUATEMALA

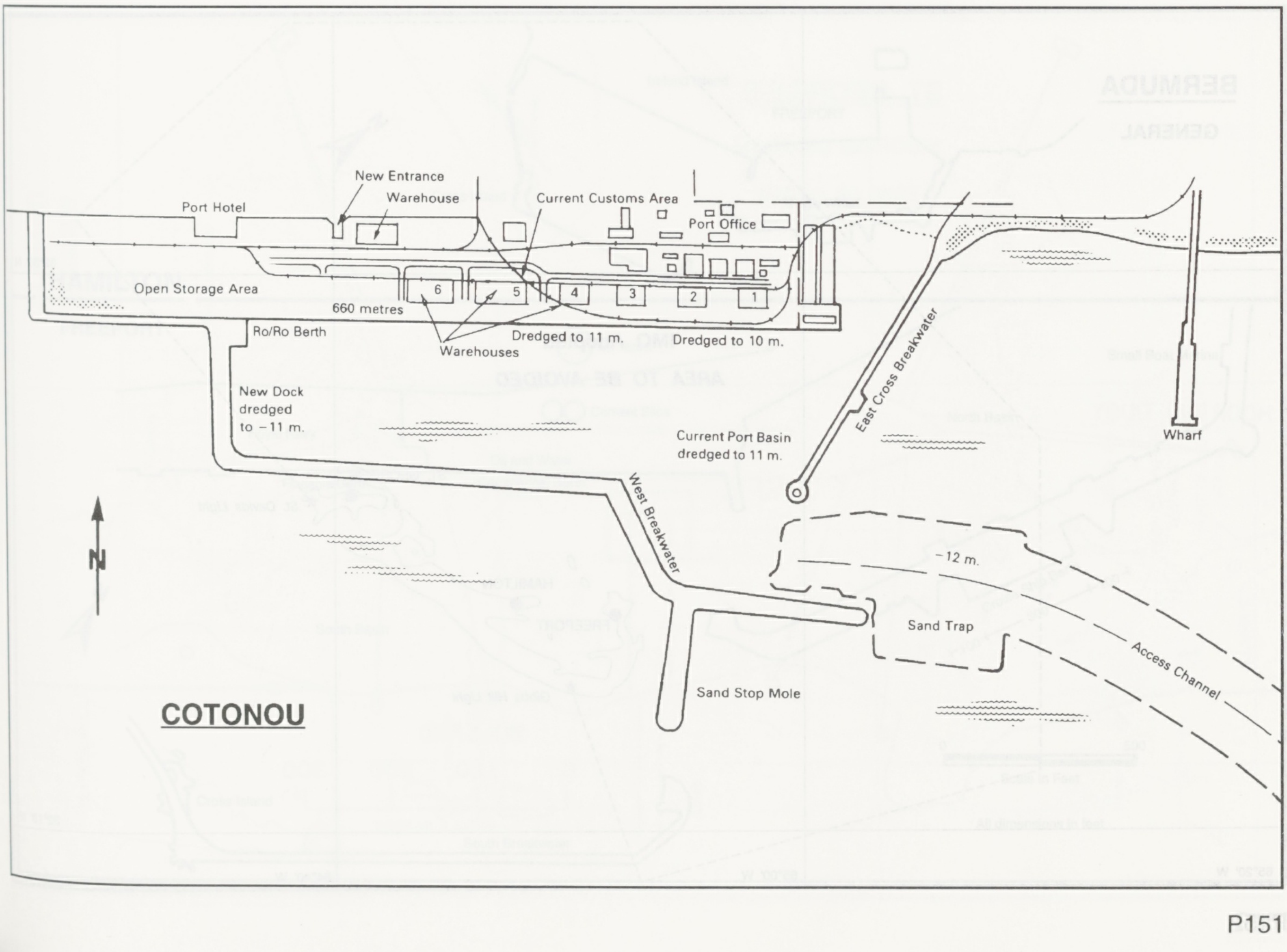

BELIZE
Additional Area
(Container Storage)
Open Shed
Transit Shed
Compound
6 ft.
12 ft.
2400 ft. Long Trestle 12 ft. Wide
D
A
16 ft.
N

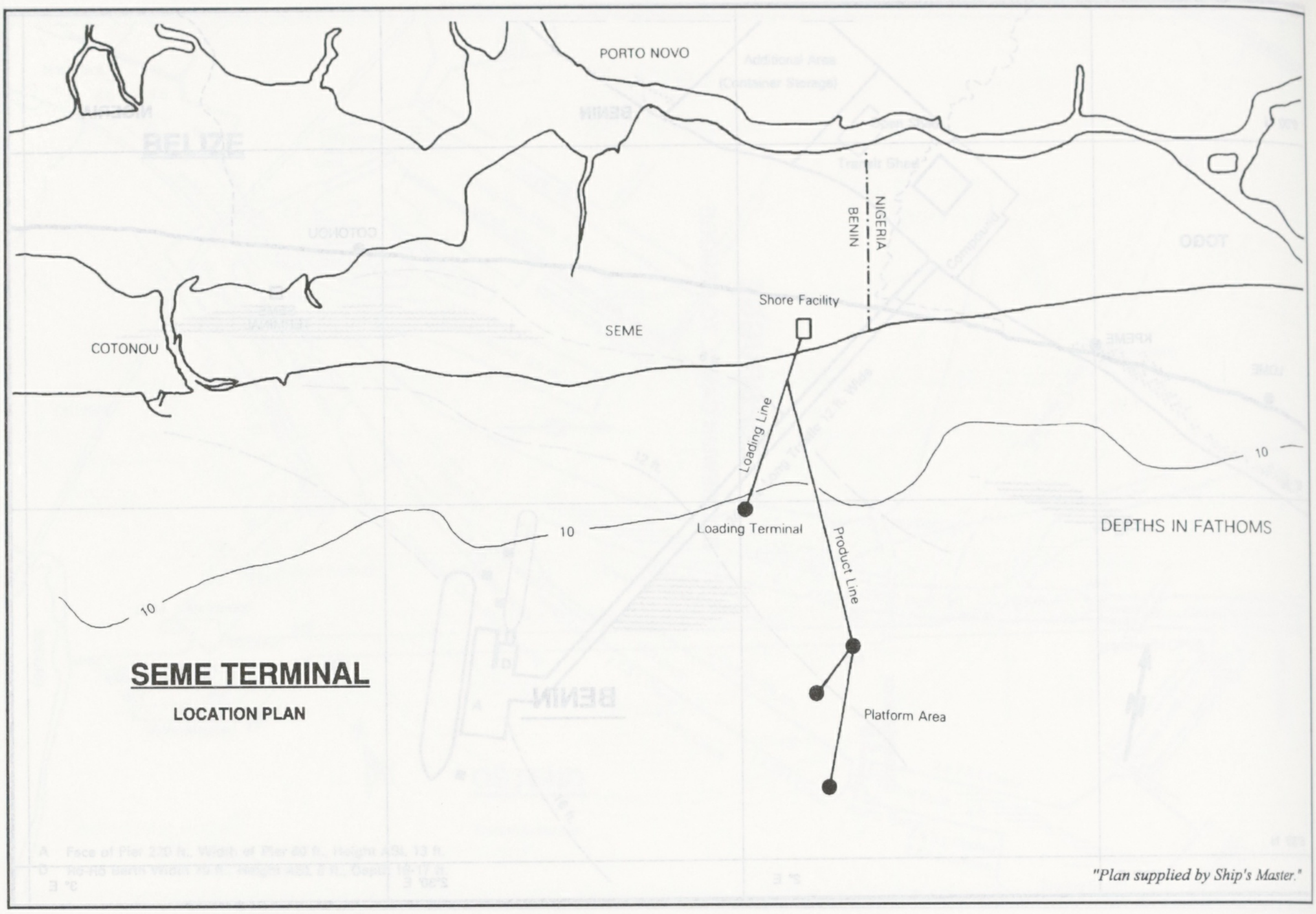
A Face of Pier 220 ft., Width of Pier 60 ft., Height ASL 13 ft.
D Ro-Ro Berth Width 70 ft., Height ASL 8 ft., Depth 16-17 ft.


BELIZE
Buoy
Second Lines
108° T
Pipeline Buoy
Pipeline 8 inch. Max. B.P. 140 p.s.i.
N
Buoy
First Lines
Third Lines
Buoy
Maximum Draft 20 ft.
Density 1021
5 Shackles
Buoy
Final Lines
Buoy

"Plan supplied by Ship's Master"


BENIN
NIGERIA
6°30' N
TOGO
COTONOU
SEME TERMINAL
KPEME
LOME
6° N
BENIN
5°30' N
1°30' E
2° E
2°30' E
3° E


New Entrance
Port Hotel
Warehouse
Current Customs Area
Port Office
Open Storage Area
6
5
4
3
2
1
660 metres
Ro/Ro Berth
Warehouses
Dredged to 11 m.
Dredged to 10 m.
East Cross Breakwater
New Dock dredged to −11 m.
Current Port Basin dredged to 11 m.
Wharf
West Breakwater
N
−12 m.
Sand Trap
Access Channel
Sand Stop Mole
COTONOU

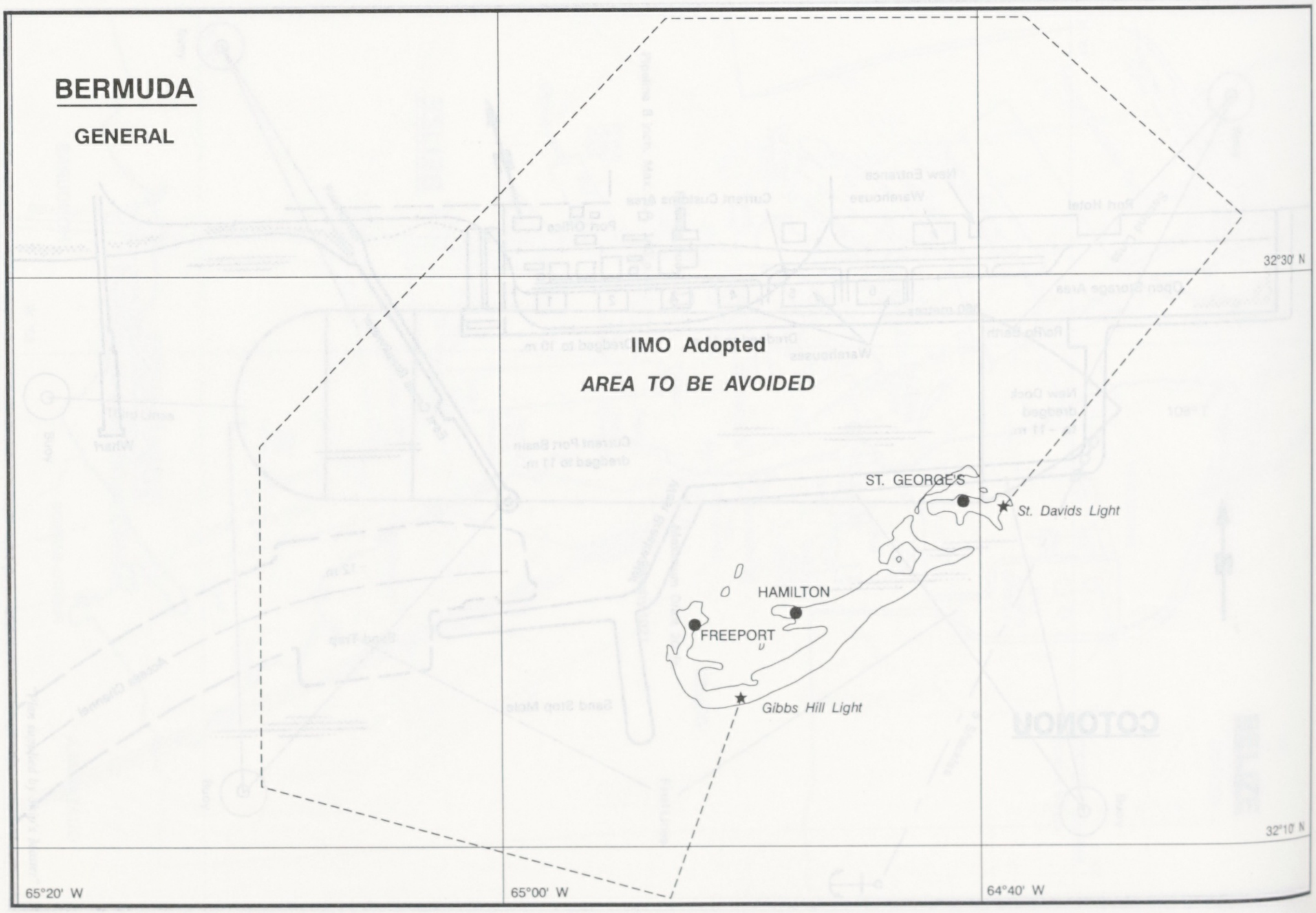


SEME TERMINAL

LOCATION PLAN

"Plan supplied by Ship's Master."

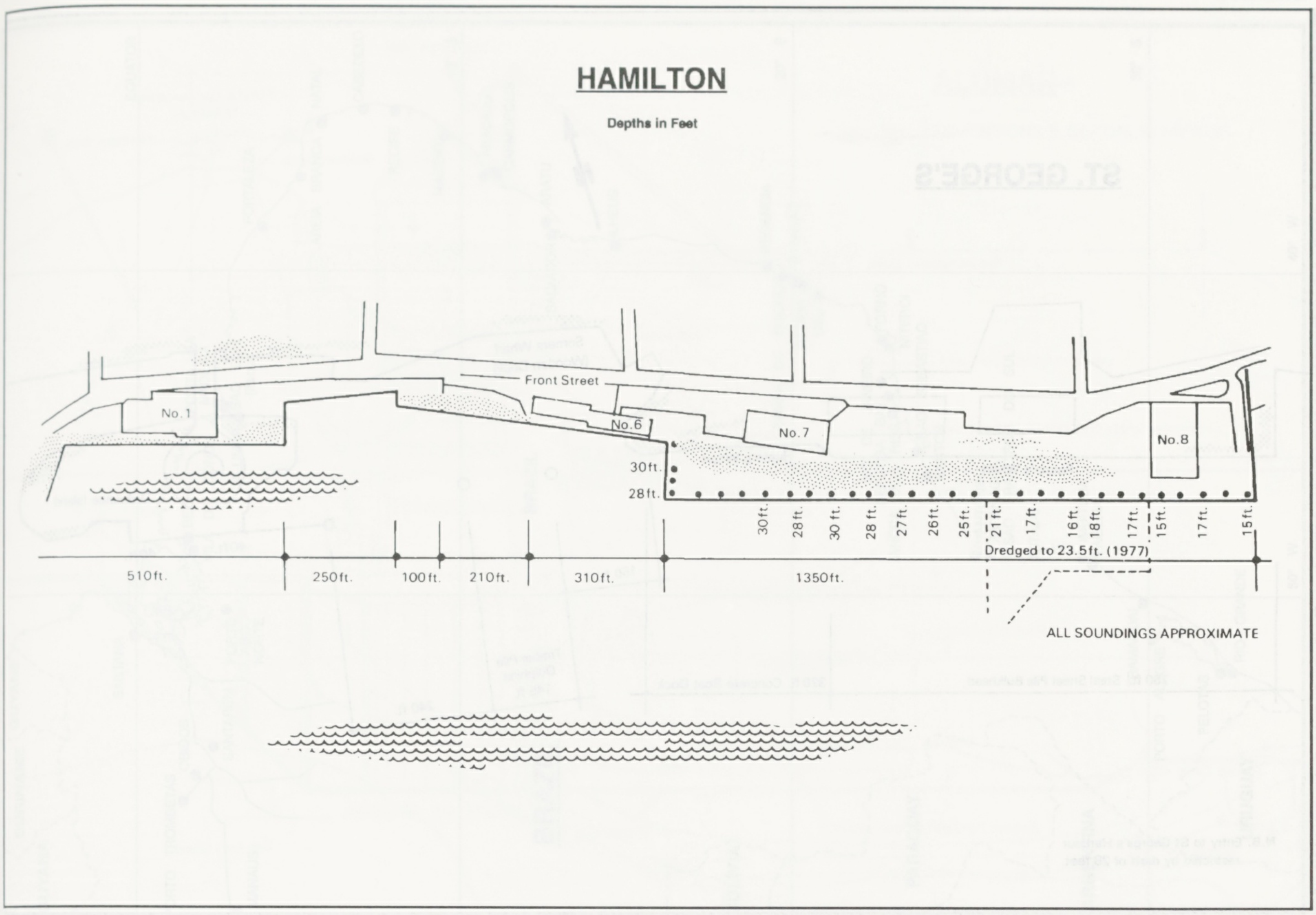
PORTO NOVO
NIGERIA
BENIN
Shore Facility
SEME
COTONOU
Loading Line
Loading Terminal
Product Line
10
10
10
10
DEPTHS IN FATHOMS
Platform Area

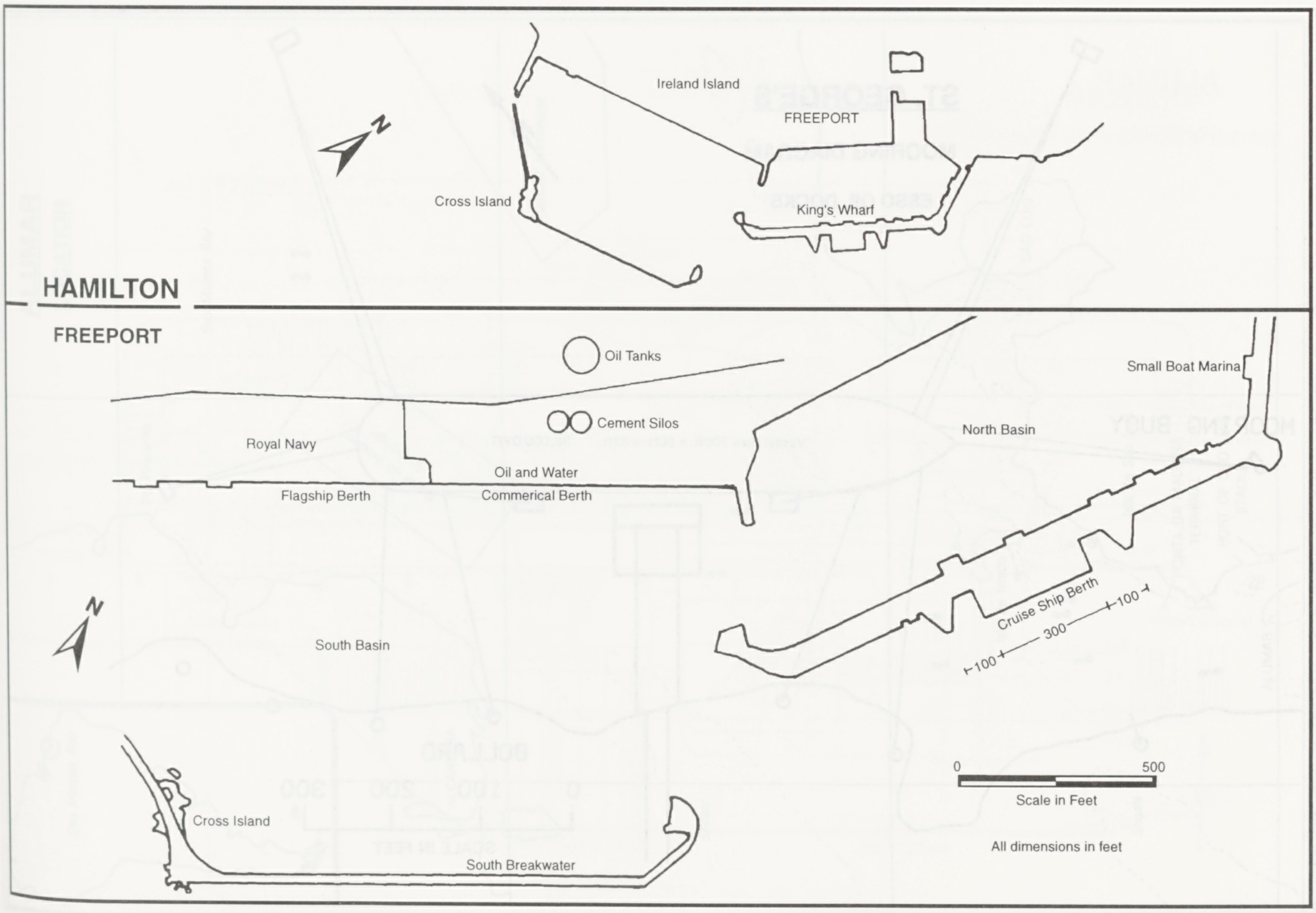


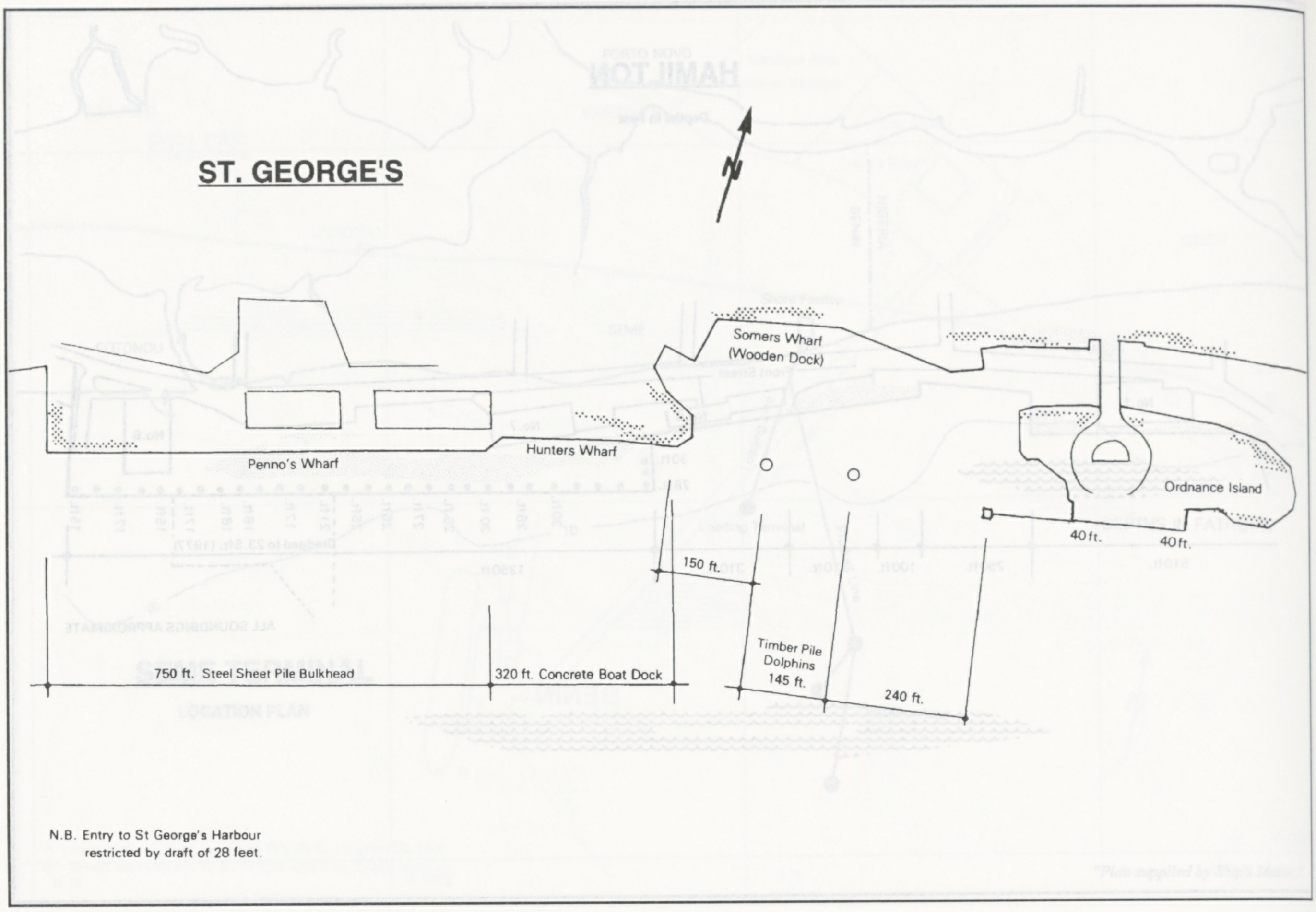
BERMUDA

GENERAL

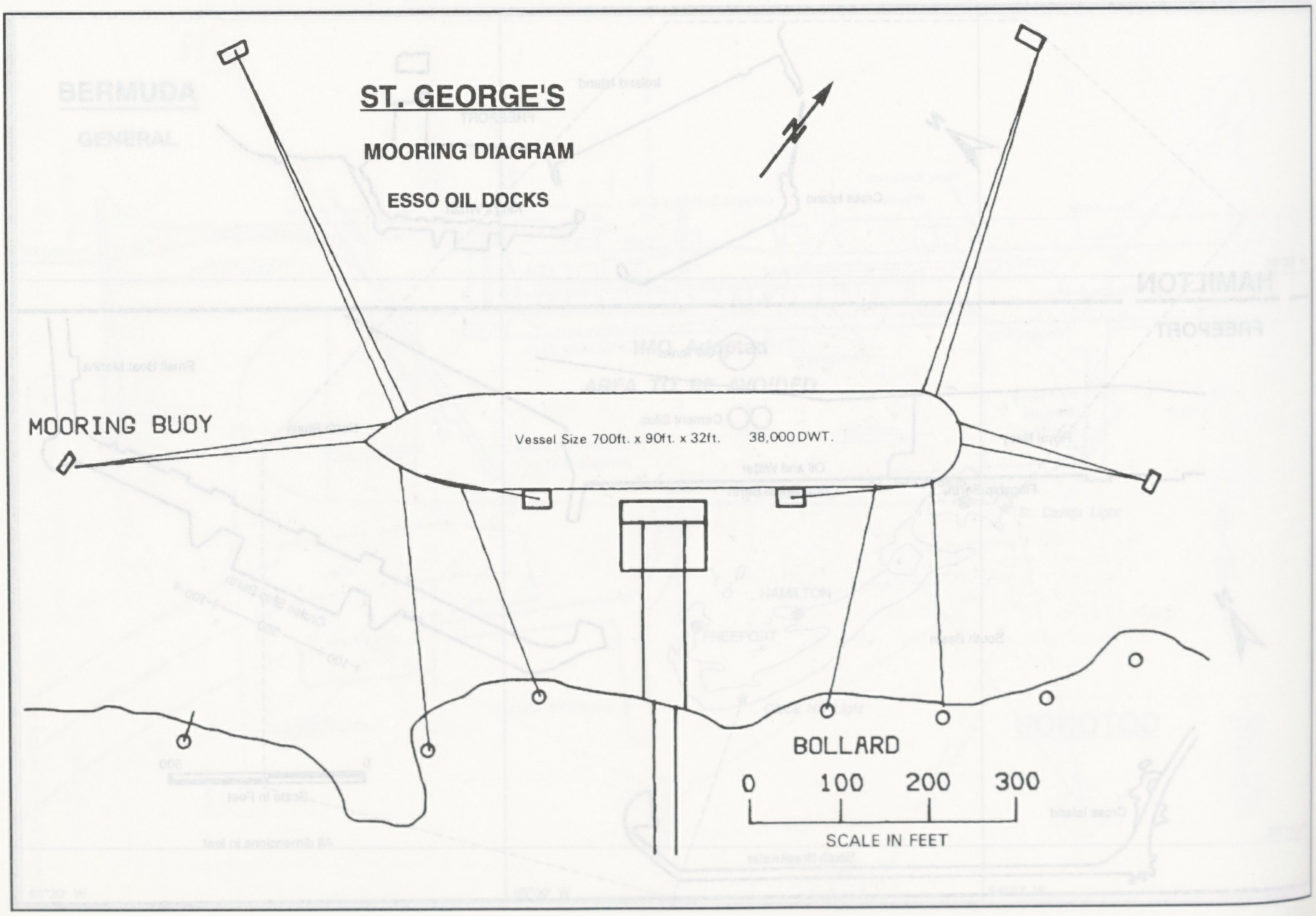
IMO Adopted
AREA TO BE AVOIDED
ST. GEORGE'S
St. Davids Light
HAMILTON
FREEPORT
Gibbs Hill Light
32°30' N
32°10' N
65°20' W
65°00' W
64°40' W

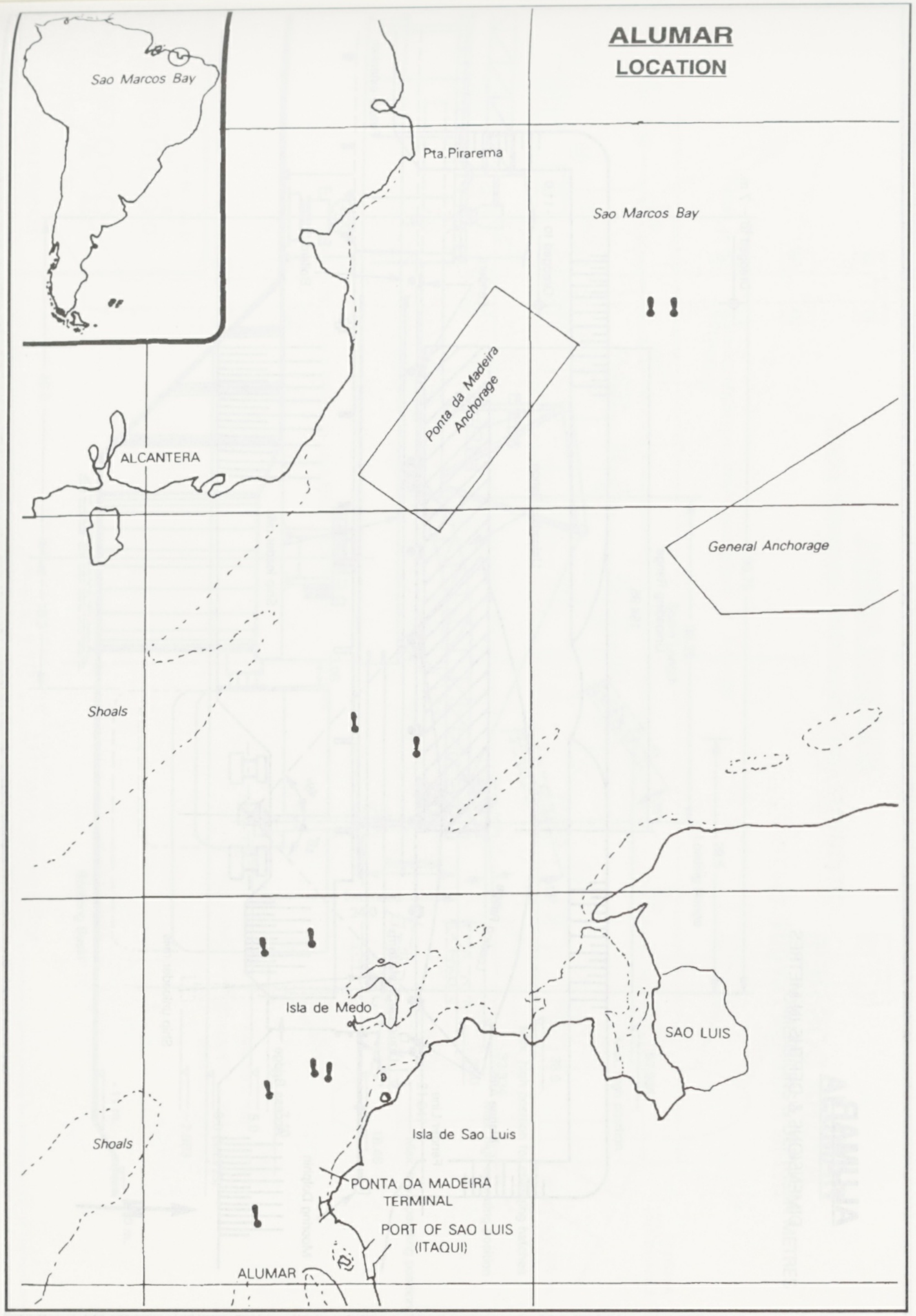

HAMILTON
Depths in Feet
Front Street
No. 1
No. 6
No. 7
No. 8
30ft.
28ft.
30ft.
28ft.
30 ft.
28 ft.
27ft.
26ft.
25ft.
21ft.
17ft.
16ft.
18ft.
17ft.
15ft.
17ft.
15ft.
Dredged to 23.5ft. (1977)
510ft.
250ft.
100ft.
210ft.
310ft.
1350ft.
ALL SOUNDINGS APPROXIMATE

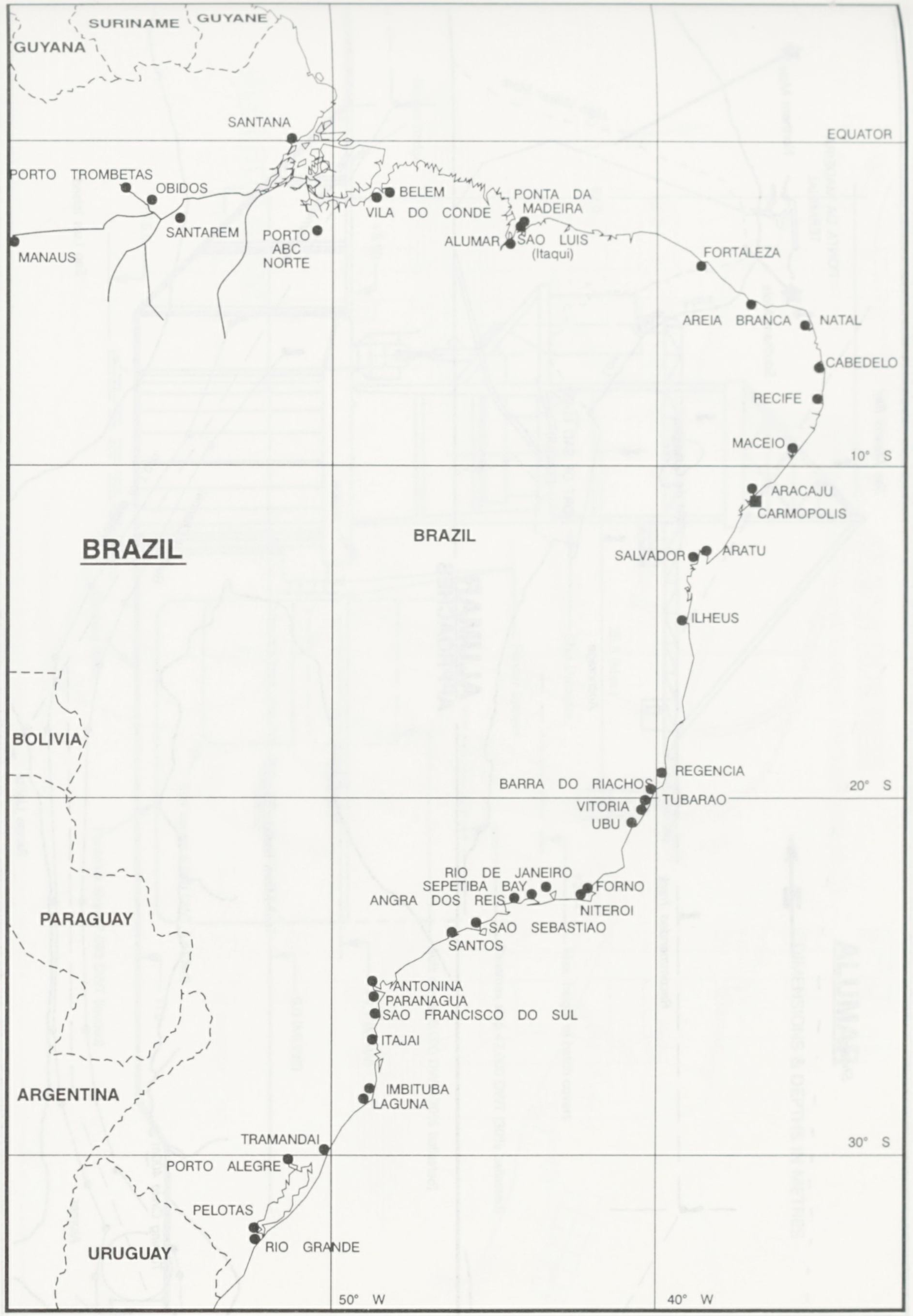

Ireland Island
FREEPORT
Cross Island
King's Wharf
N
HAMILTON
FREEPORT
Oil Tanks
Cement Silos
Small Boat Marina
North Basin
Royal Navy
Oil and Water
Flagship Berth
Commerical Berth
N
South Basin
Cruise Ship Berth
100
300
100
0
500
Scale in Feet
All dimensions in feet
Cross Island
South Breakwater

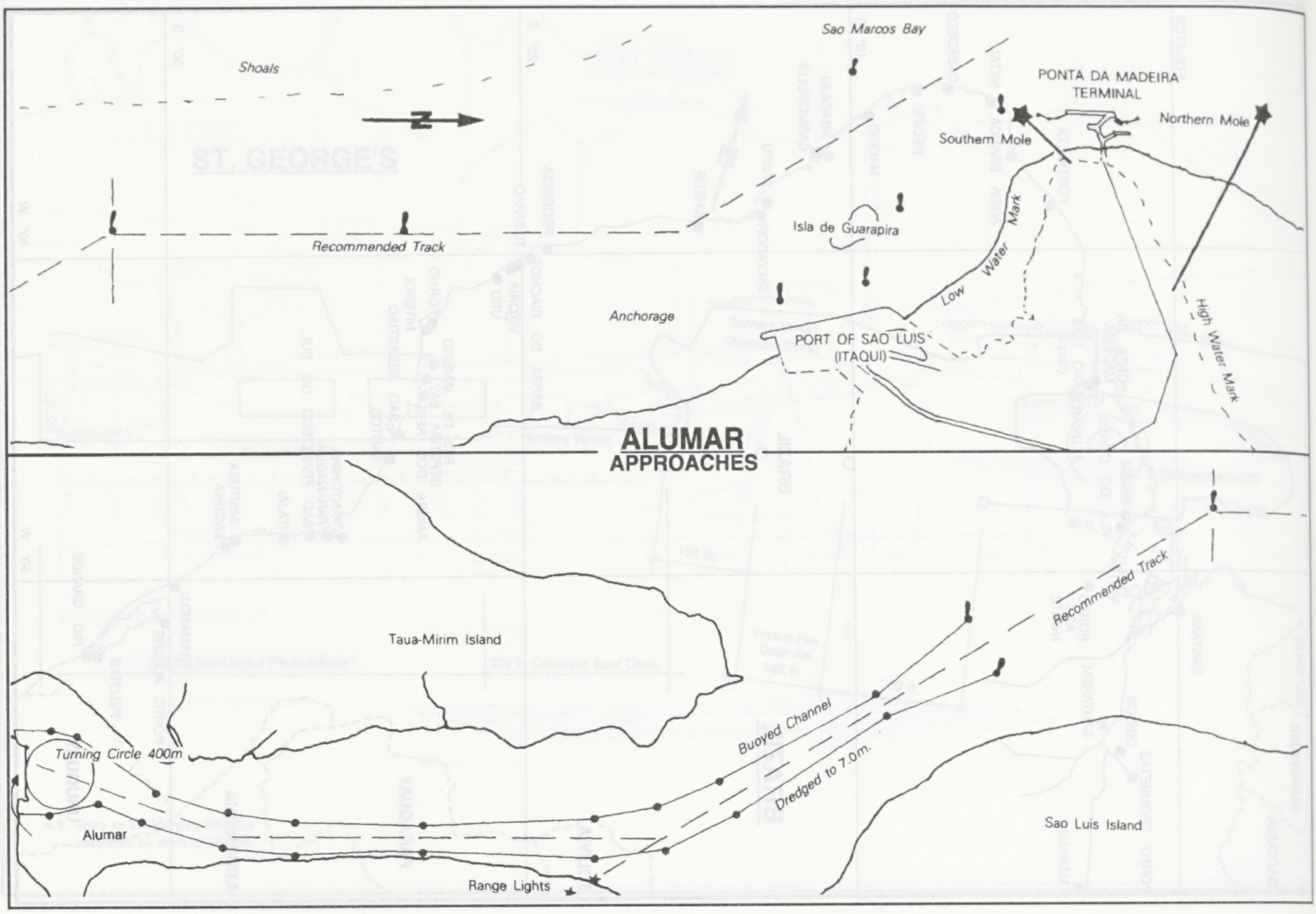

ST. GEORGE'S
Somers Wharf
(Wooden Dock)
Penno's Wharf
Hunters Wharf
Ordnance Island
40 ft.
40 ft.
150 ft.
Timber Pile
Dolphins
145 ft.
240 ft.
750 ft. Steel Sheet Pile Bulkhead
320 ft. Concrete Boat Dock

N.B. Entry to St George's Harbour restricted by draft of 28 feet.


ST. GEORGE'S
MOORING DIAGRAM
ESSO OIL DOCKS
MOORING BUOY
Vessel Size 700ft. x 90ft. x 32ft. 38,000 DWT.
BOLLARD
0
100
200
300
SCALE IN FEET

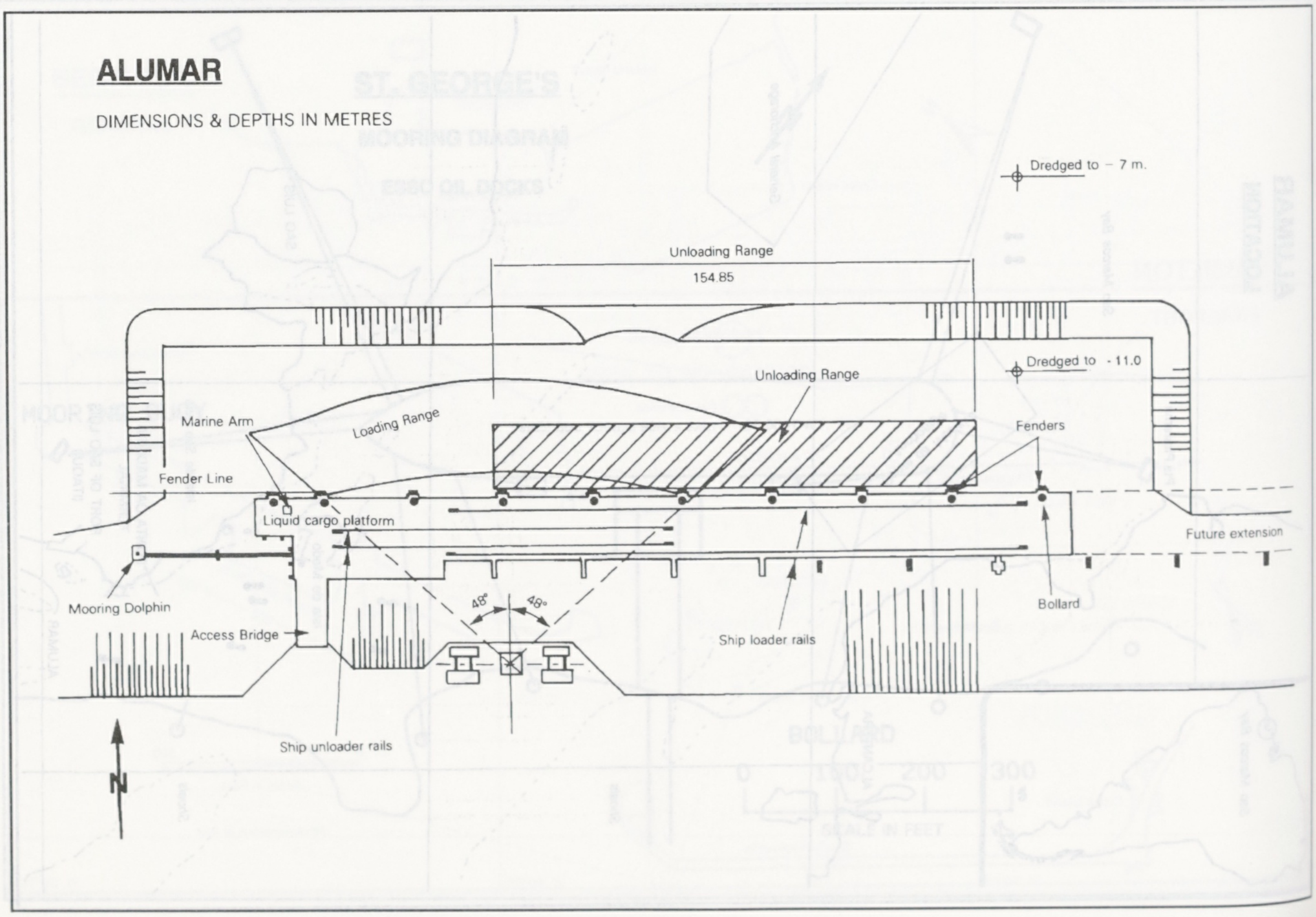

ALUMAR
LOCATION
Sao Marcos Bay
Pta.Pirarema
Sao Marcos Bay
Ponta da Madeira Anchorage
ALCANTERA
General Anchorage
Shoals
Isla de Medo
SAO LUIS
Isla de Sao Luis
Shoals
PONTA DA MADEIRA TERMINAL
PORT OF SAO LUIS (ITAQUI)
ALUMAR


SURINAME
GUYANE
GUYANA
SANTANA
EQUATOR
PORTO TROMBETAS
OBIDOS
BELEM
PONTA DA MADEIRA
VILA DO CONDE
SANTAREM
PORTO ABC NORTE
ALUMAR
SAO LUIS (Itaqui)
MANAUS
FORTALEZA
AREIA BRANCA
NATAL
CABEDELO
RECIFE
MACEIO
10° S
ARACAJU
CARMOPOLIS
BRAZIL
BRAZIL
SALVADOR
ARATU
ILHEUS
BOLIVIA
REGENCIA
BARRA DO RIACHOS
20° S
VITORIA
TUBARAO
UBU
RIO DE JANEIRO
SEPETIBA BAY
FORNO
ANGRA DOS REIS
NITEROI
PARAGUAY
SAO SEBASTIAO
SANTOS
ANTONINA
PARANAGUA
SAO FRANCISCO DO SUL
ITAJAI
IMBITUBA
LAGUNA
ARGENTINA
TRAMANDAI
30° S
PORTO ALEGRE
PELOTAS
RIO GRANDE
URUGUAY
50° W
40° W



ALUMAR APPROACHES

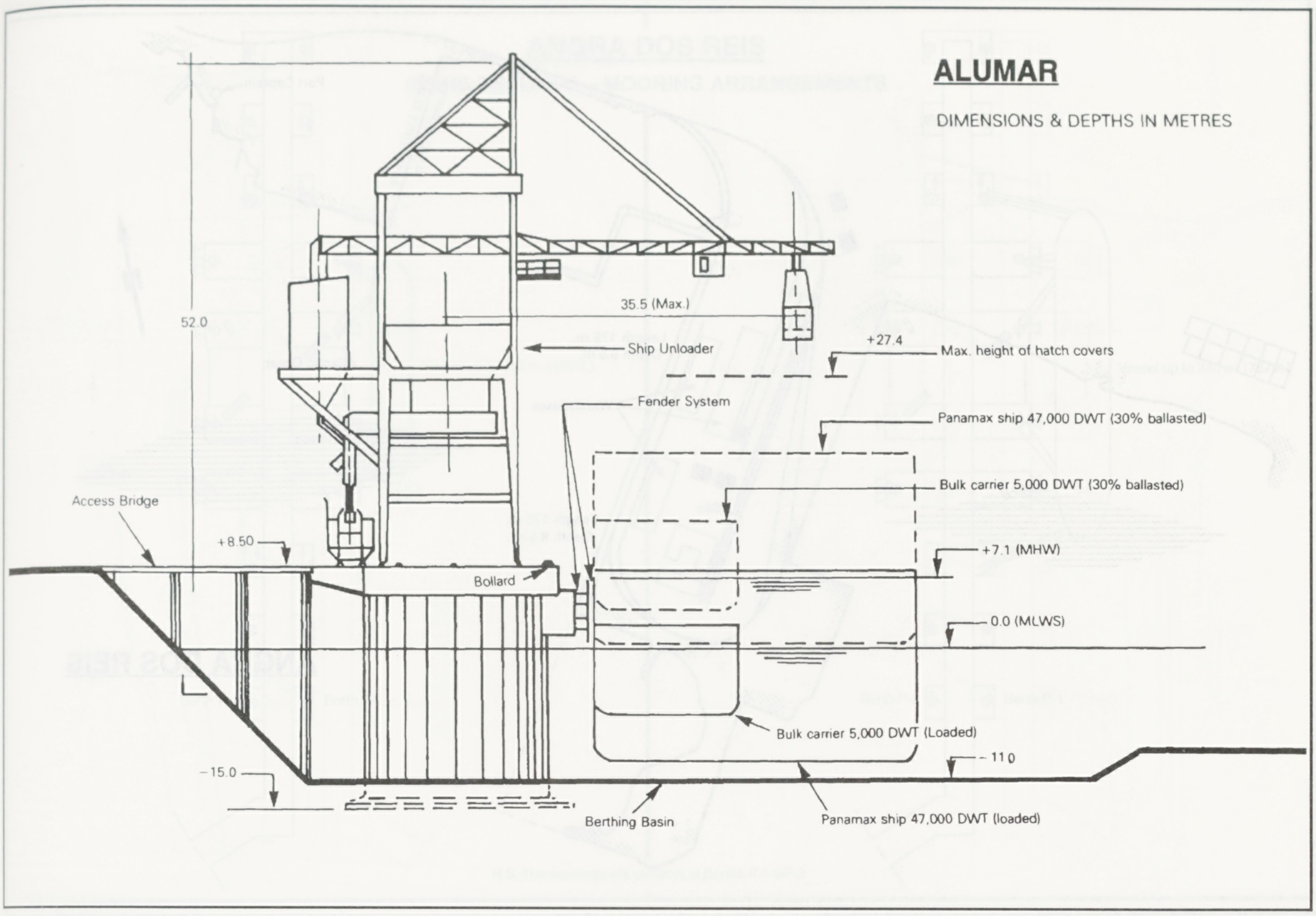
Shoals
Sao Marcos Bay
PONTA DA MADEIRA TERMINAL
Southern Mole
Northern Mole
Recommended Track
Isla de Guarapira
Low Water Mark
High Water Mark
Anchorage
PORT OF SAO LUIS (ITAQUI)
Taua-Mirim Island
Recommended Track
Turning Circle 400m
Buoyed Channel
Dredged to 7.0m.
Alumar
Sao Luis Island
Range Lights



ALUMAR

DIMENSIONS & DEPTHS IN METRES

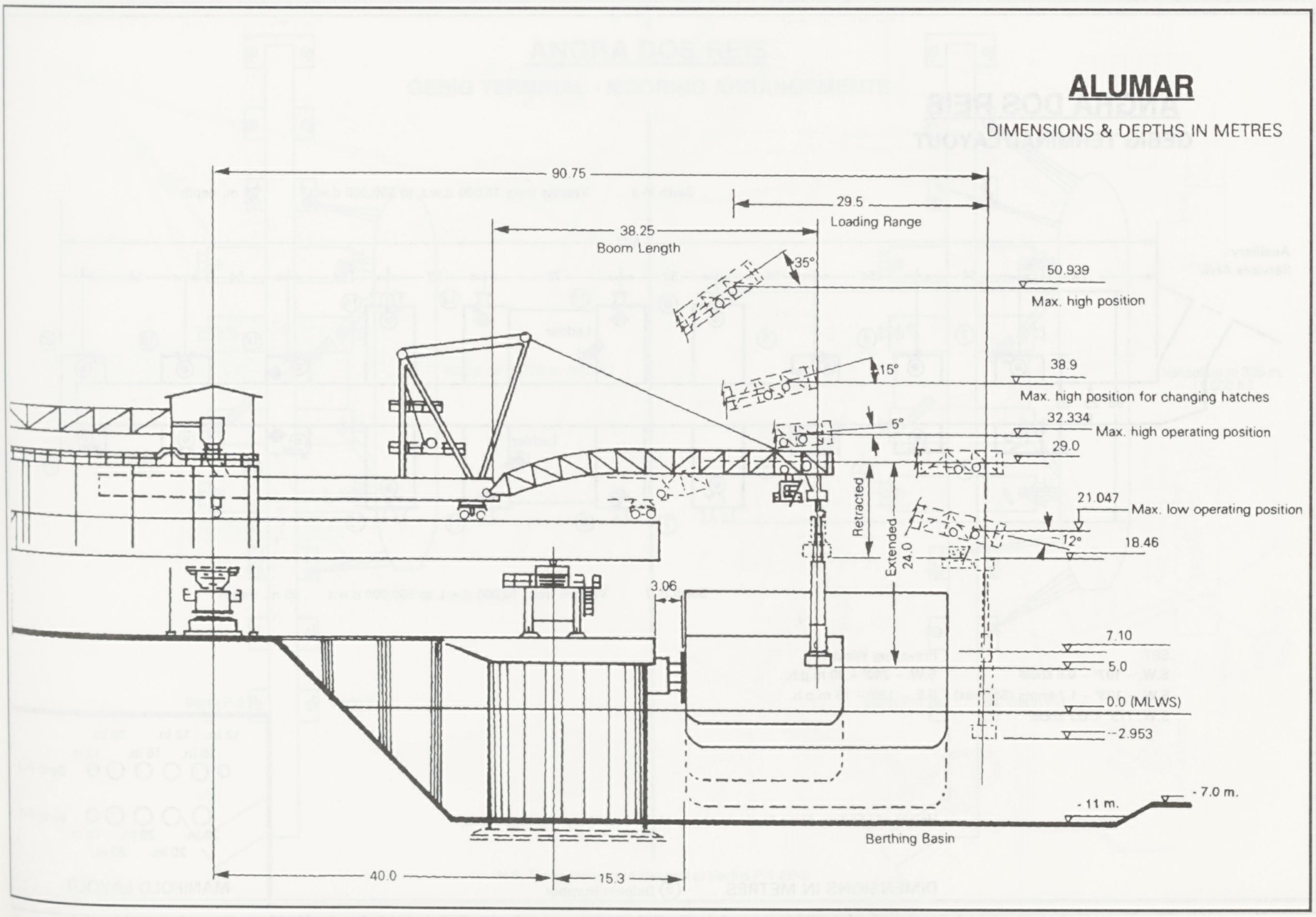
Dredged to – 7 m.
Unloading Range
154.85
Dredged to - 11.0
Unloading Range
Marine Arm
Loading Range
Fenders
Fender Line
Liquid cargo platform
Future extension
48°
48°
Mooring Dolphin
Access Bridge
Bollard
Ship loader rails
Ship unloader rails
N



ALUMAR

DIMENSIONS & DEPTHS IN METRES

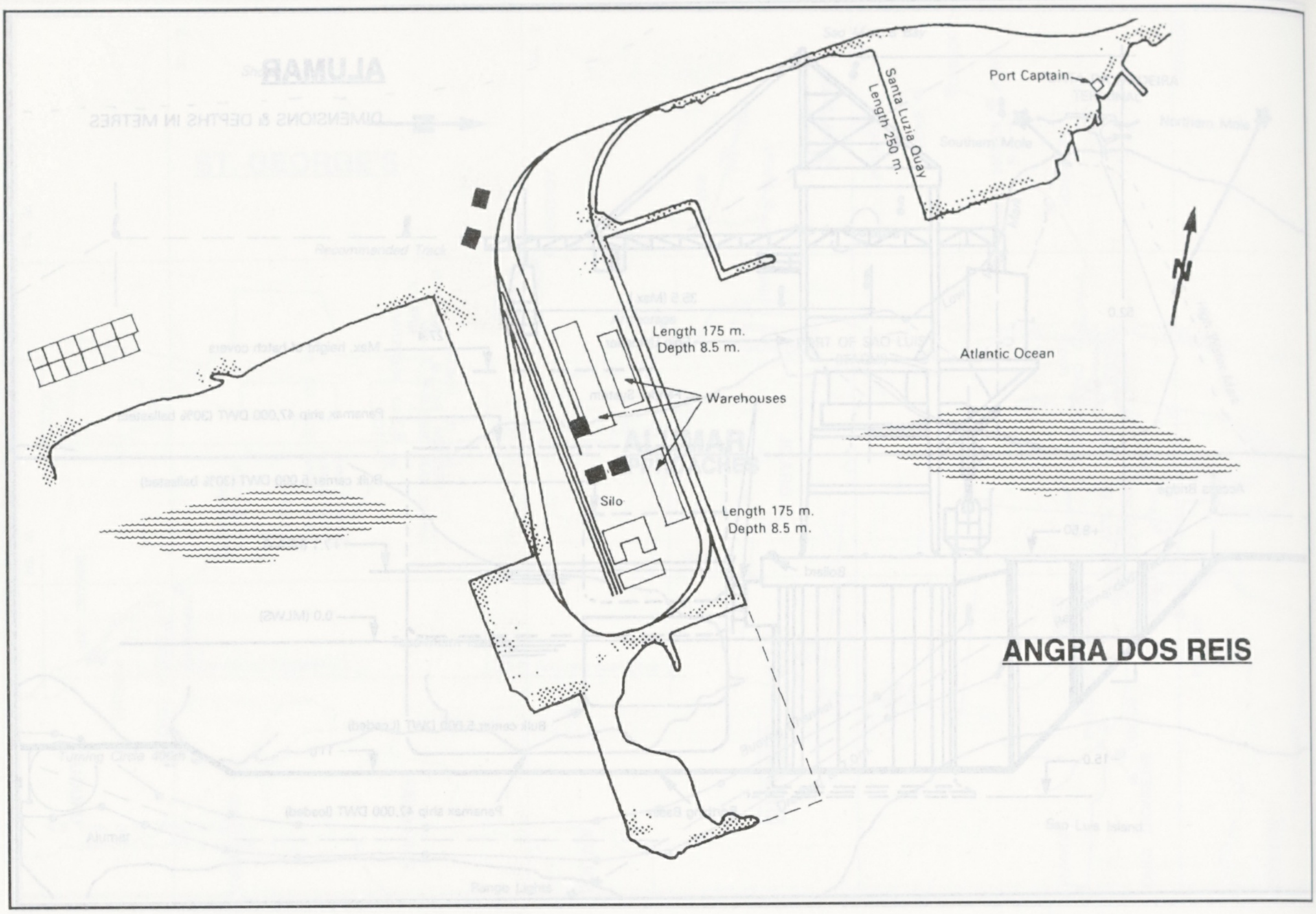
52.0
35.5 (Max.)
Ship Unloader
+27.4
Max. height of hatch covers
Fender System
Panamax ship 47,000 DWT (30% ballasted)
Bulk carrier 5,000 DWT (30% ballasted)
Access Bridge
+8.50
Bollard
+7.1 (MHW)
0.0 (MLWS)
Bulk carrier 5,000 DWT (Loaded)
−11.0
−15.0
Berthing Basin
Panamax ship 47,000 DWT (loaded)

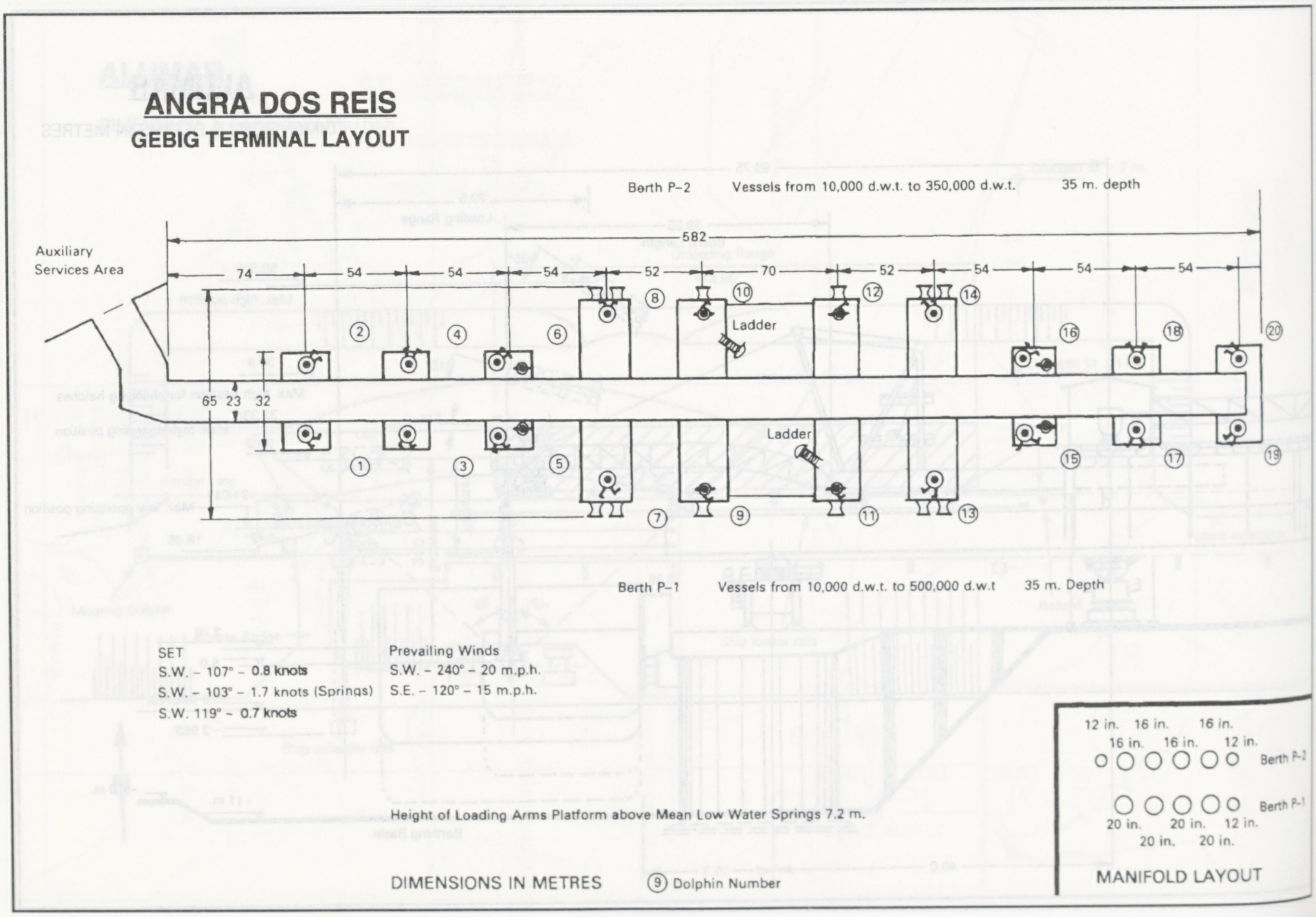


ALUMAR

DIMENSIONS & DEPTHS IN METRES

90.75
29.5
Loading Range
38.25
Boom Length
35°
50.939
Max. high position
15°
38.9
Max. high position for changing hatches
32.334
Max. high operating position
5°
29.0
Retracted
Extended
24.0
21.047
Max. low operating position
−12°
18.46
3.06
7.10
5.0
0.0 (MLWS)
−2.953
−7.0 m.
−11 m.
Berthing Basin
40.0
15.3


Port Captain
Santa Luzia Quay
Length 250 m.
Length 175 m.
Depth 8.5 m.
Warehouses
Atlantic Ocean
Silo
Length 175 m.
Depth 8.5 m.
N
ANGRA DOS REIS


ANGRA DOS REIS
GEBIG TERMINAL LAYOUT
Berth P–2
Vessels from 10,000 d.w.t. to 350,000 d.w.t.
35 m. depth
Auxiliary
Services Area
582
74
54
54
54
52
70
52
54
54
54
65
23
32
Ladder
Ladder
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
Berth P–1
Vessels from 10,000 d.w.t. to 500,000 d.w.t
35 m. Depth
12 in.
16 in.
16 in.
16 in.
16 in.
12 in.
Berth P-2
Berth P-1
20 in.
20 in.
12 in.
20 in.
20 in.
MANIFOLD LAYOUT
DIMENSIONS IN METRES
9 Dolphin Number

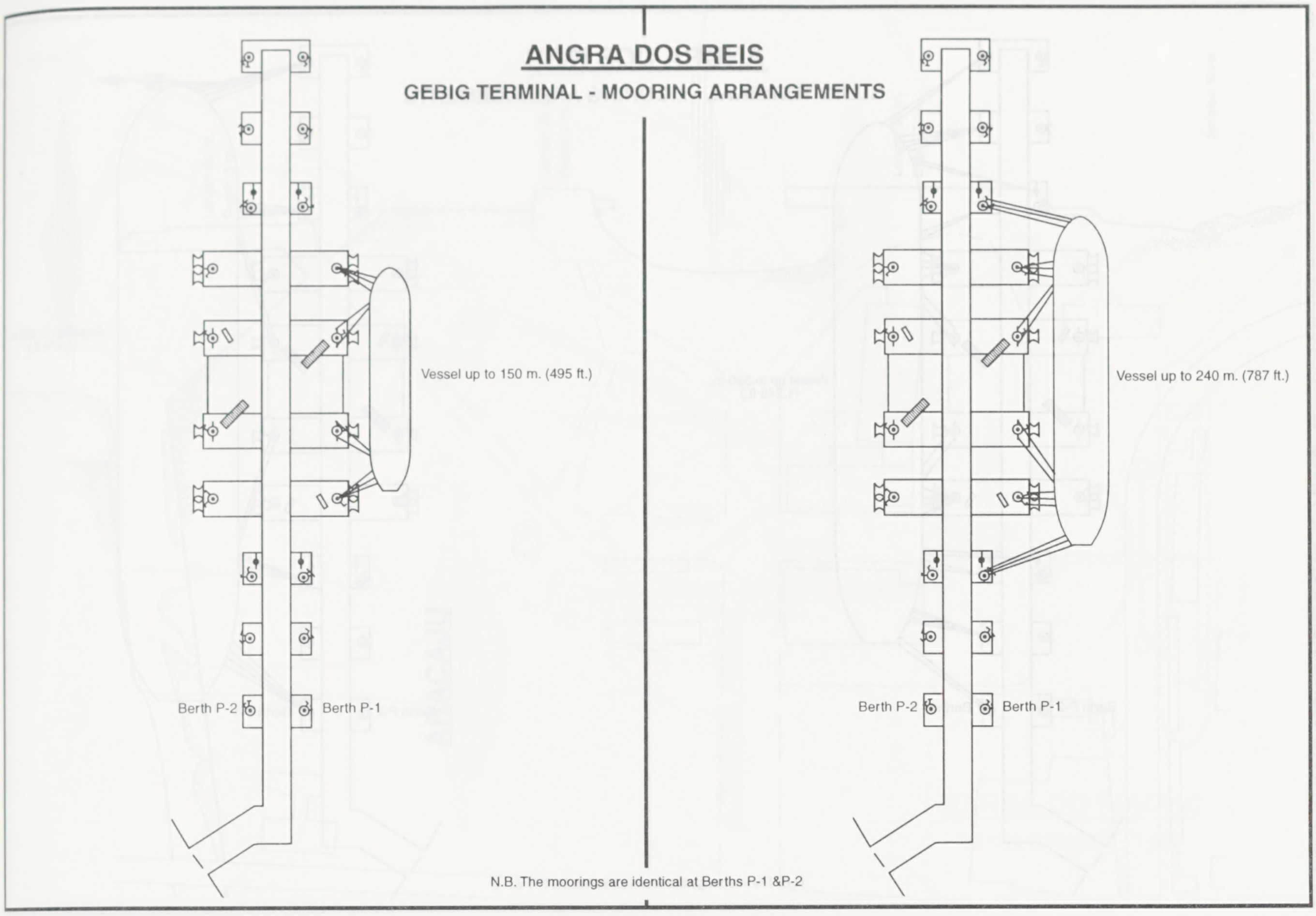
SET
S.W. – 107° – 0.8 knots
S.W. – 103° – 1.7 knots (Springs)
S.W. 119° – 0.7 knots

Prevailing Winds
S.W. – 240° – 20 m.p.h.
S.E. – 120° – 15 m.p.h.

Height of Loading Arms Platform above Mean Low Water Springs 7.2 m.

ANGRA DOS REIS

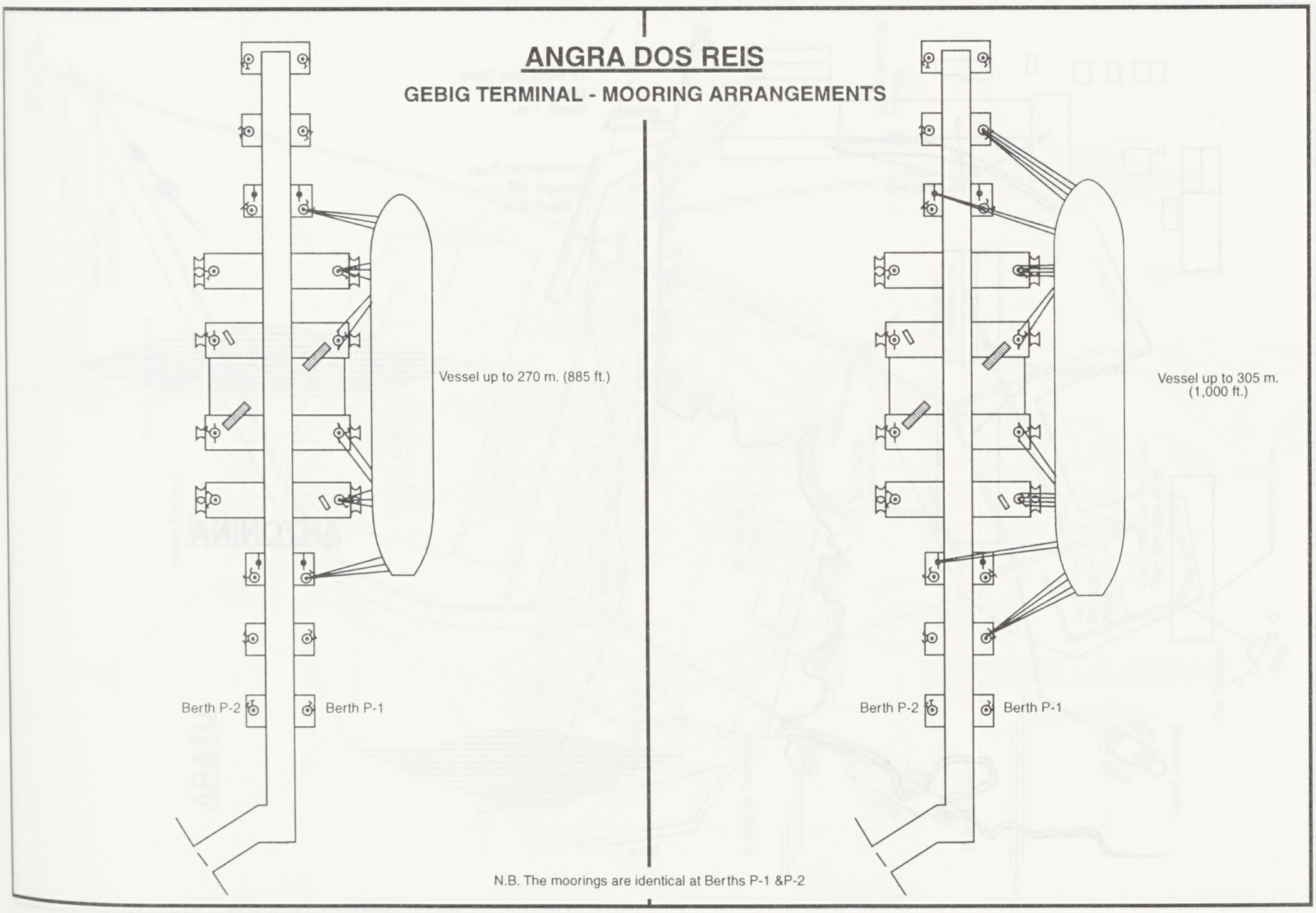
GEBIG TERMINAL - MOORING ARRANGEMENTS


Vessel up to 150 m. (495 ft.)
Berth P-2
Berth P-1
Vessel up to 240 m. (787 ft.)
Berth P-2
Berth P-1

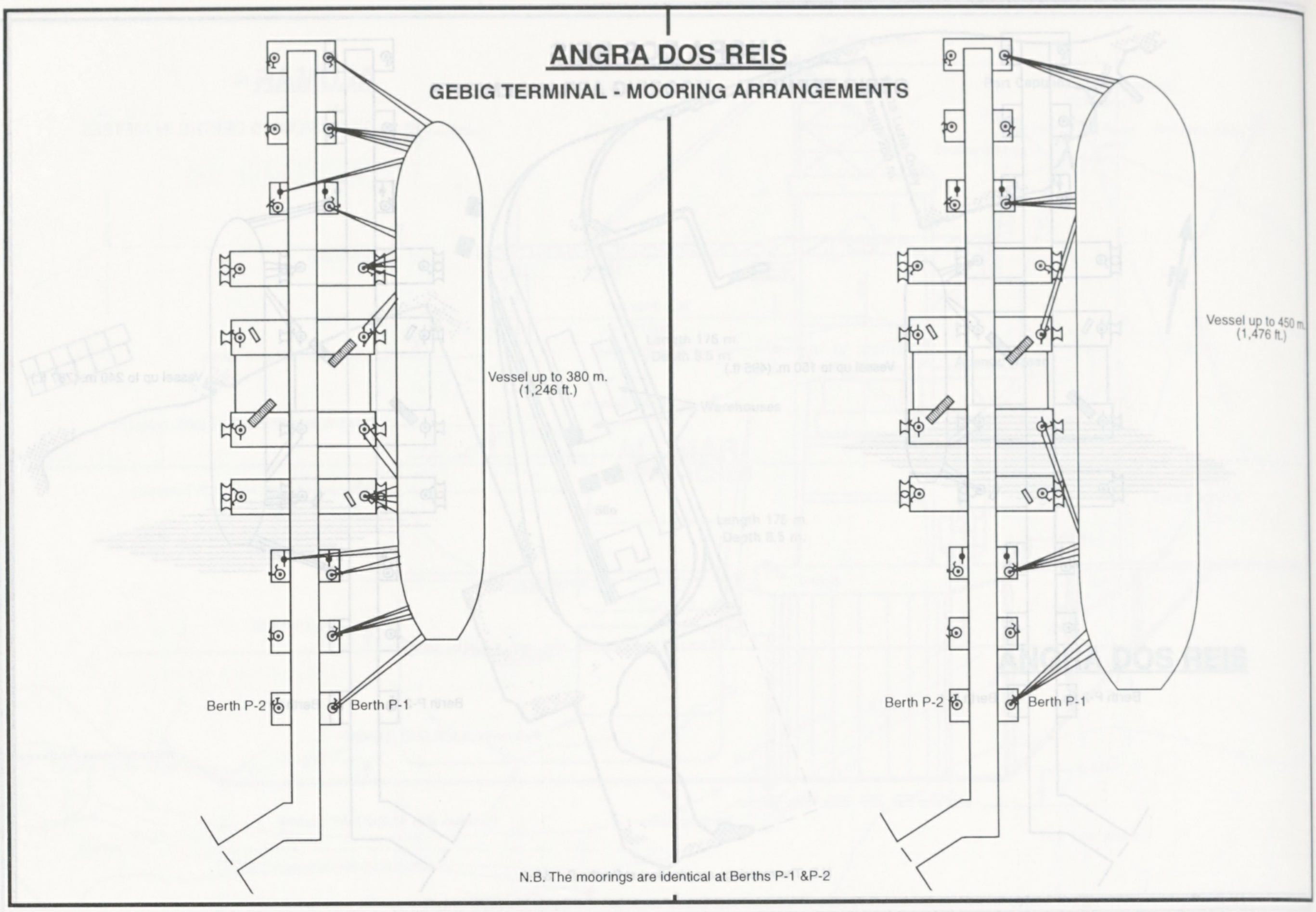
N.B. The moorings are identical at Berths P-1 &P-2

ANGRA DOS REIS

GEBIG TERMINAL - MOORING ARRANGEMENTS


Vessel up to 270 m. (885 ft.)
Berth P-2
Berth P-1
Vessel up to 305 m.
(1,000 ft.)
Berth P-2
Berth P-1

N.B. The moorings are identical at Berths P-1 &P-2

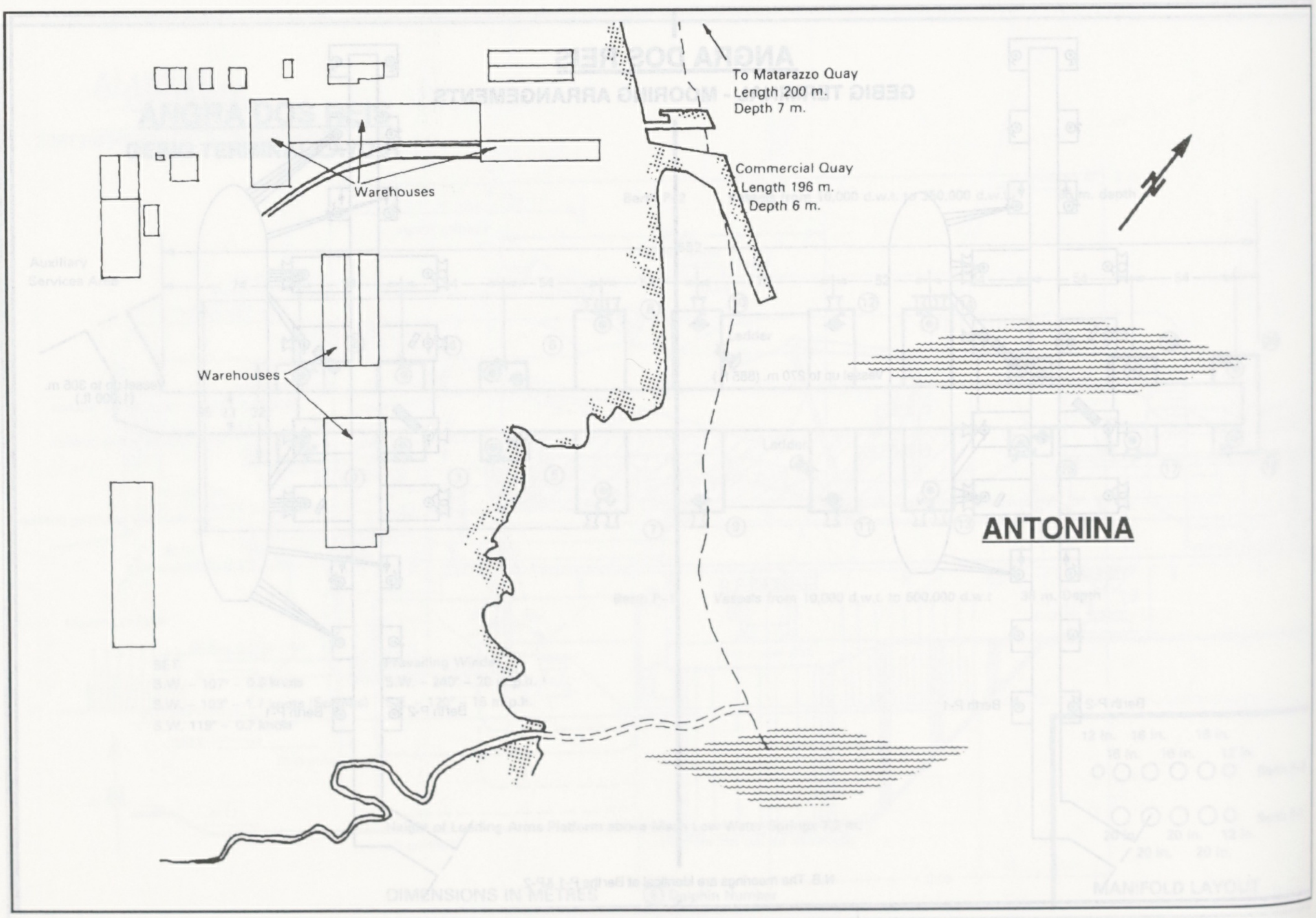


ANGRA DOS REIS

GEBIG TERMINAL - MOORING ARRANGEMENTS

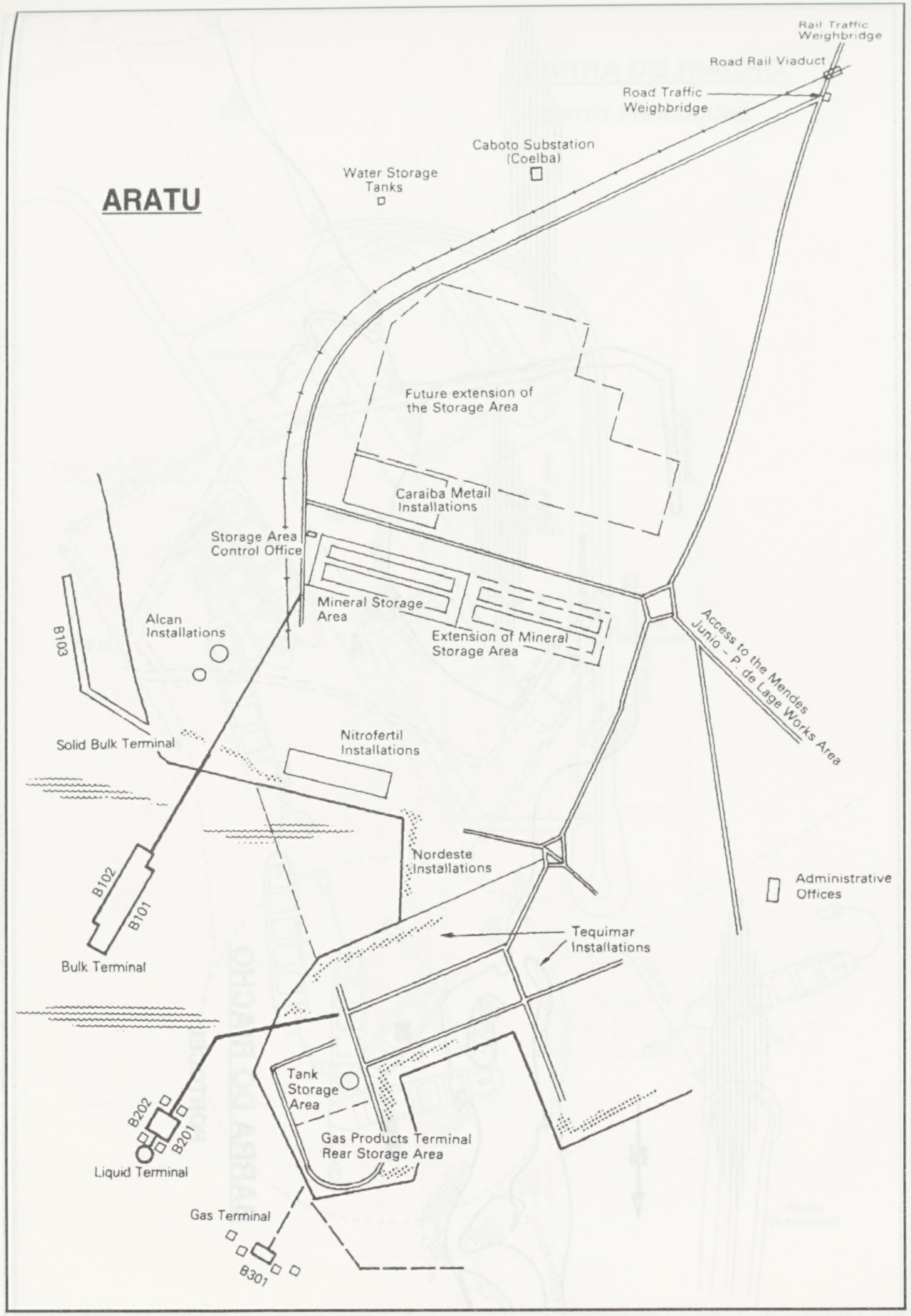
Vessel up to 380 m.
(1,246 ft.)
Vessel up to 450 m.
(1,476 ft.)
Berth P-2
Berth P-1
Berth P-2
Berth P-1

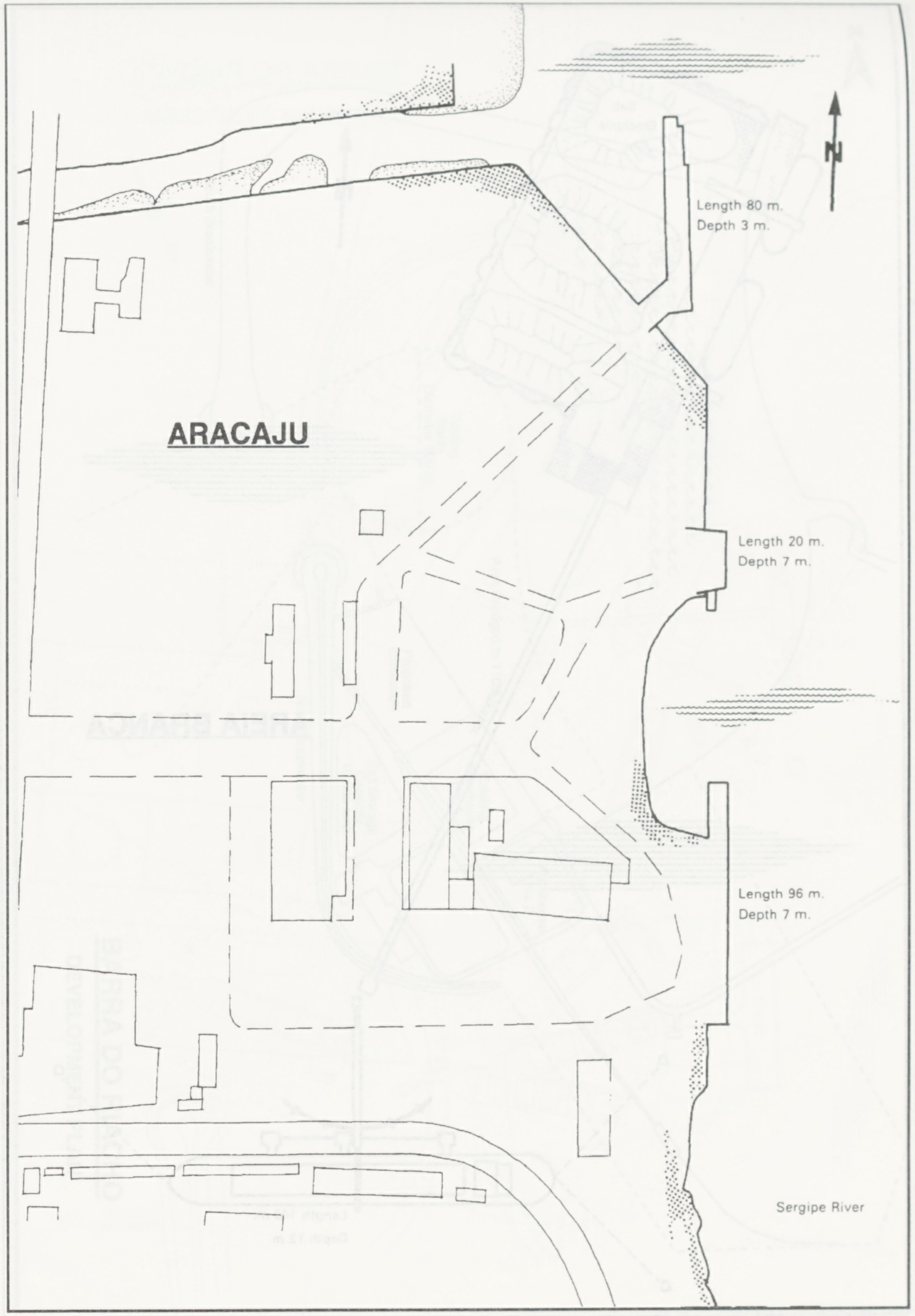
N.B. The moorings are identical at Berths P-1 &P-2

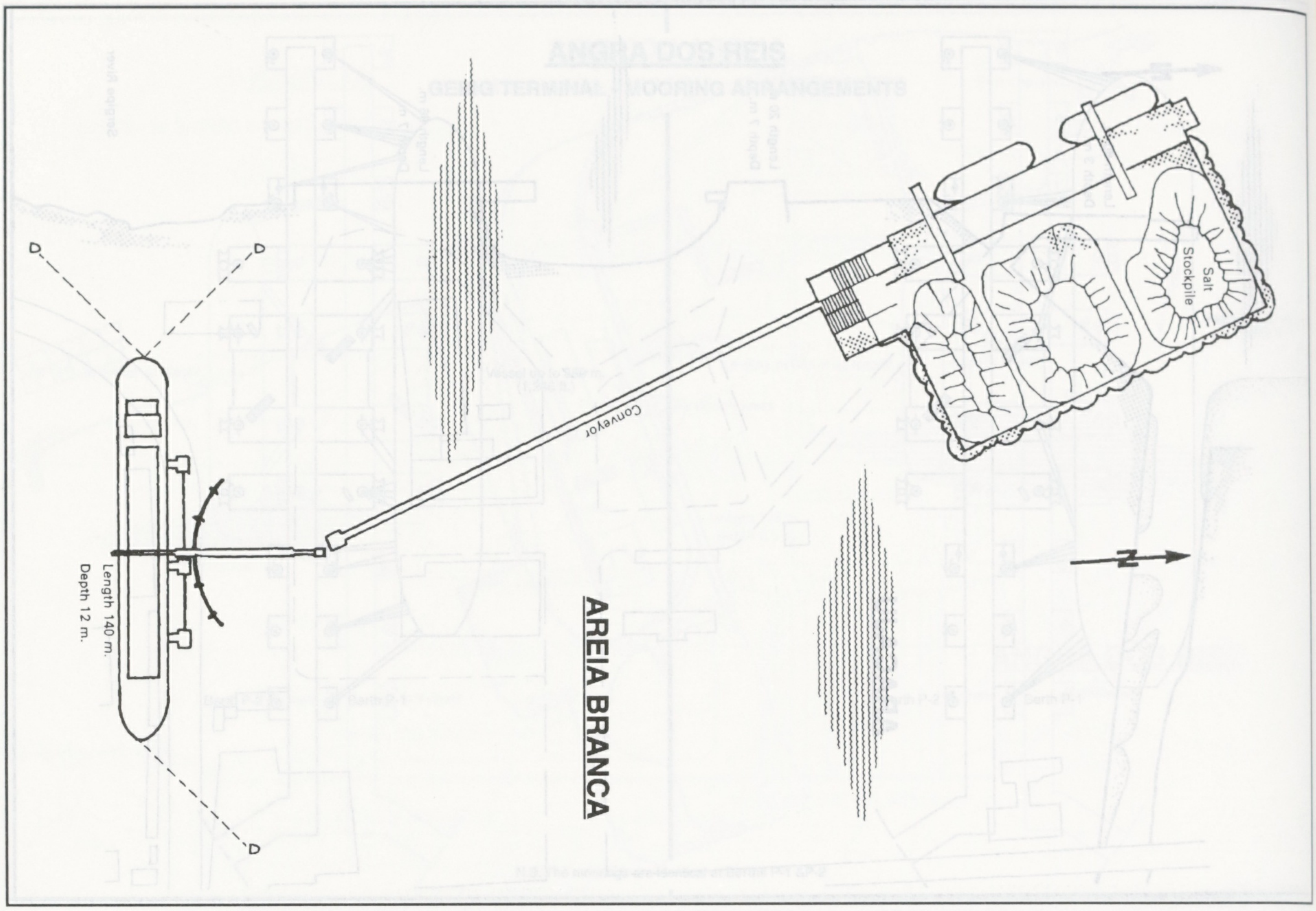


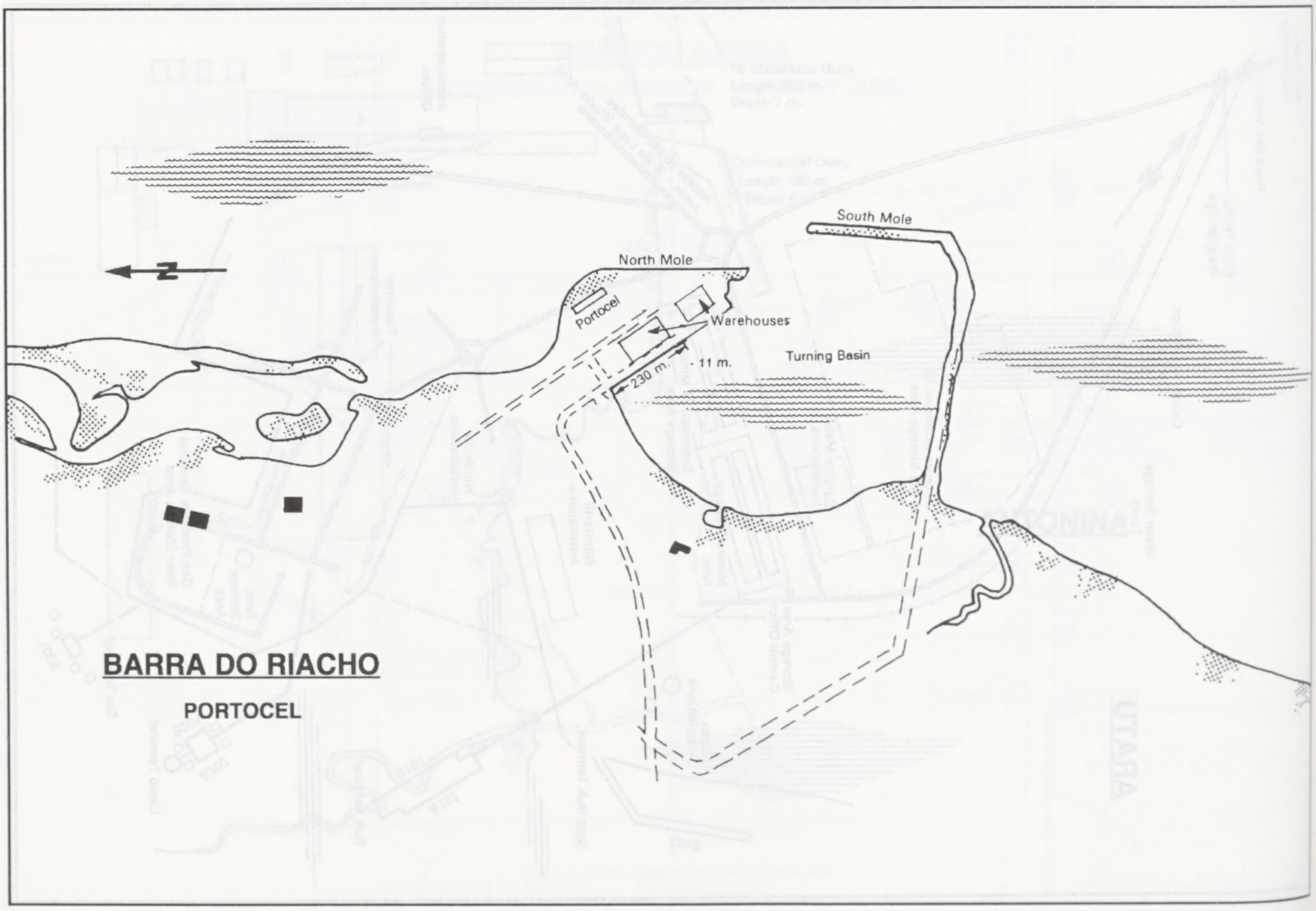
ANTONINA

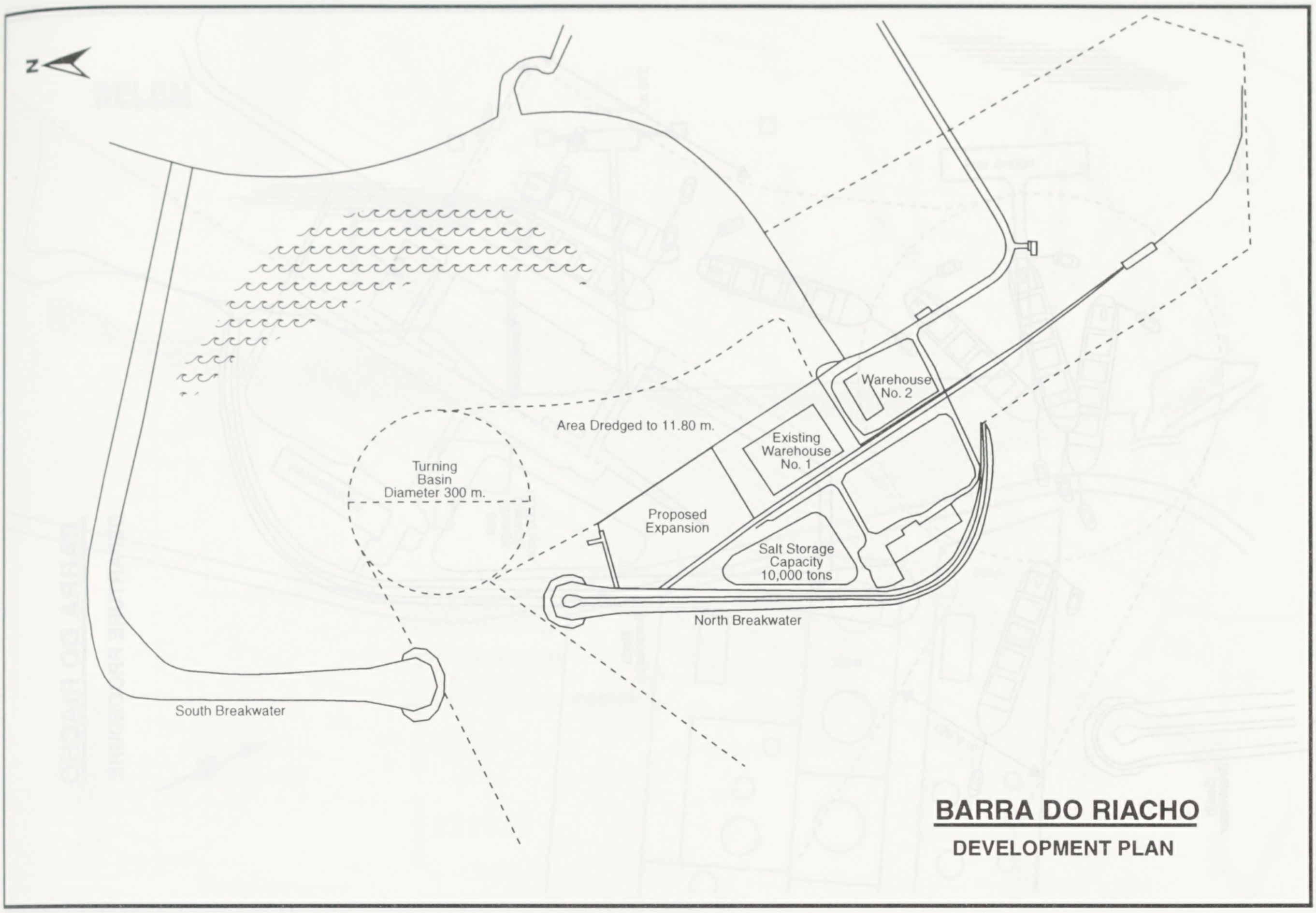
To Matarazzo Quay
Length 200 m.
Depth 7 m.
Commercial Quay
Length 196 m.
Depth 6 m.
Warehouses
Warehouses


ARATU
Rail Traffic Weighbridge
Road Rail Viaduct
Road Traffic Weighbridge
Caboto Substation (Coelba)
Water Storage Tanks
Future extension of the Storage Area
Caraiba Metal Installations
Storage Area Control Office
Mineral Storage Area
Extension of Mineral Storage Area
Access to the Mendes Junio - P. de Lage Works Area
Alcan Installations
B103
Solid Bulk Terminal
Nitrofertil Installations
Nordeste Installations
Administrative Offices
B102
B101
Bulk Terminal
Tequimar Installations
Tank Storage Area
B202
B201
Liquid Terminal
Gas Products Terminal Rear Storage Area
Gas Terminal
B301


ARACAJU
N
Length 80 m.
Depth 3 m.
Length 20 m.
Depth 7 m.
Length 96 m.
Depth 7 m.
Sergipe River


AREIA BRANCA
Salt Stockpile
Conveyor
Length 140 m.
Depth 12 m.
N

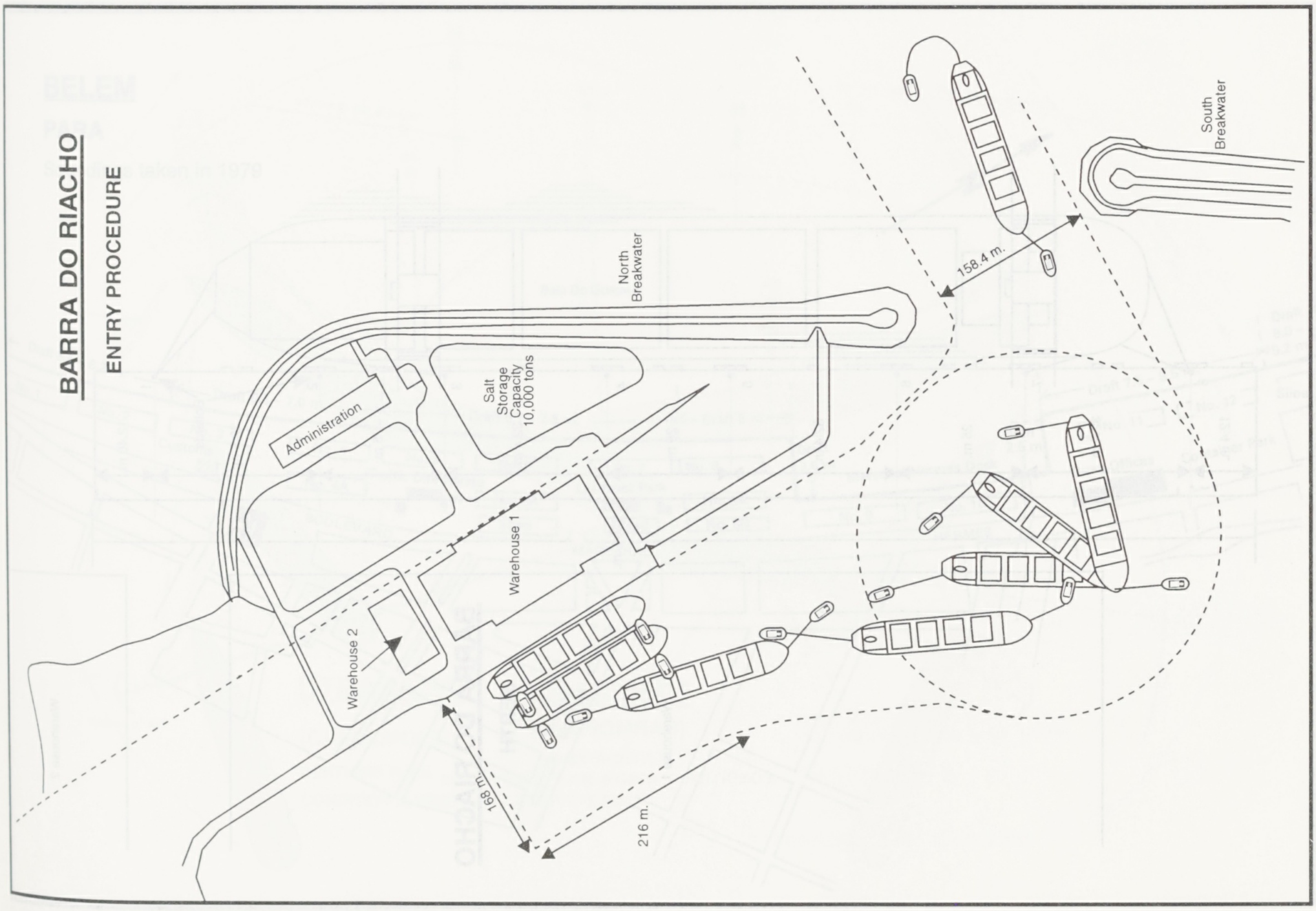

BARRA DO RIACHO
PORTOCEL
South Mole
North Mole
Portocel
Warehouses
11 m.
230 m.
Turning Basin
N



BARRA DO RIACHO

DEVELOPMENT PLAN

N
Warehouse No. 2
Area Dredged to 11.80 m.
Existing Warehouse No. 1
Turning Basin Diameter 300 m.
Proposed Expansion
Salt Storage Capacity 10,000 tons
North Breakwater
South Breakwater



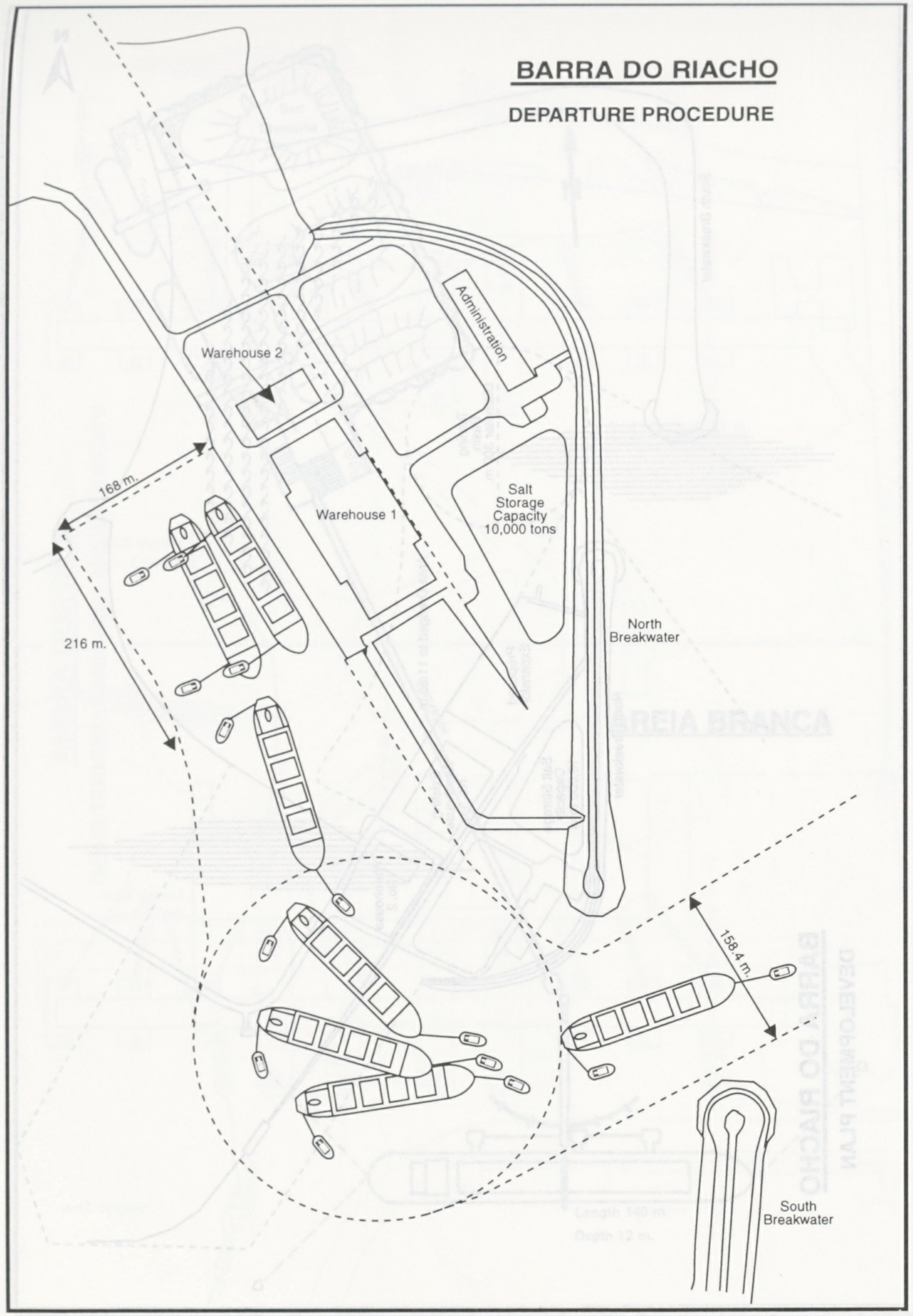
BARRA DO RIACHO

ENTRY PROCEDURE

South Breakwater
North Breakwater
158.4 m.
Salt Storage Capacity 10,000 tons
Administration
Warehouse 1
Warehouse 2
168 m.
216 m.

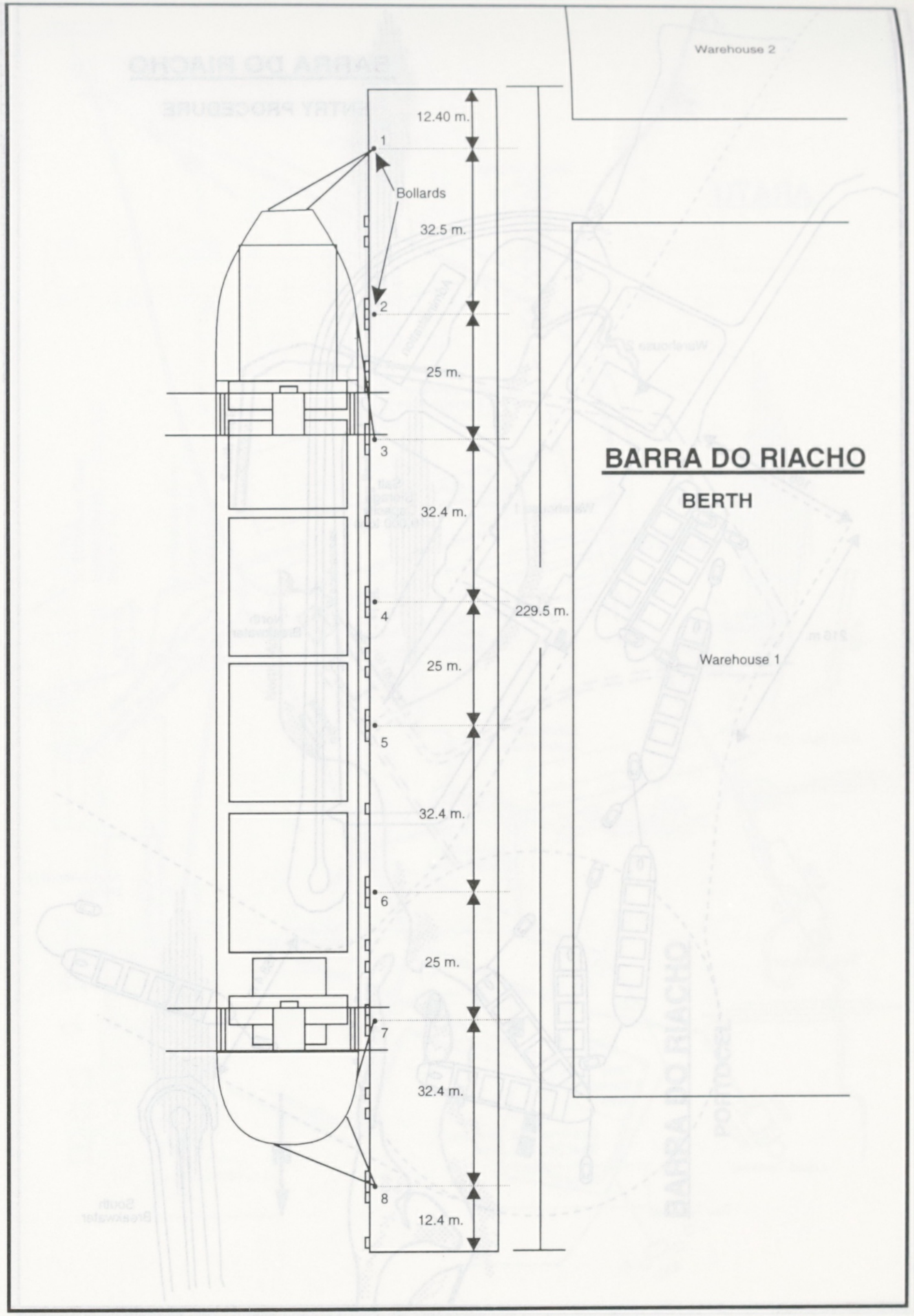
BARRA DO RIACHO

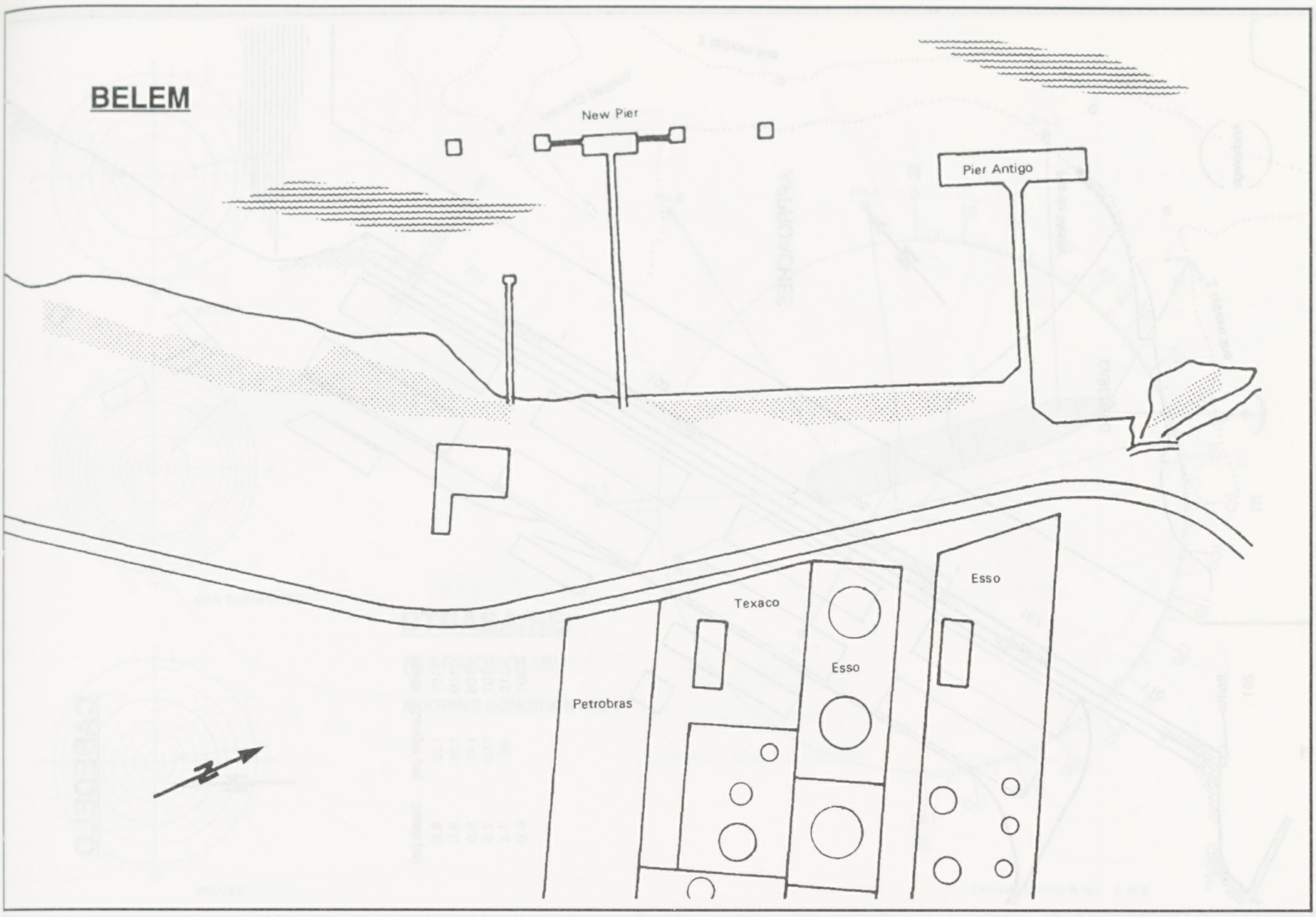
DEPARTURE PROCEDURE

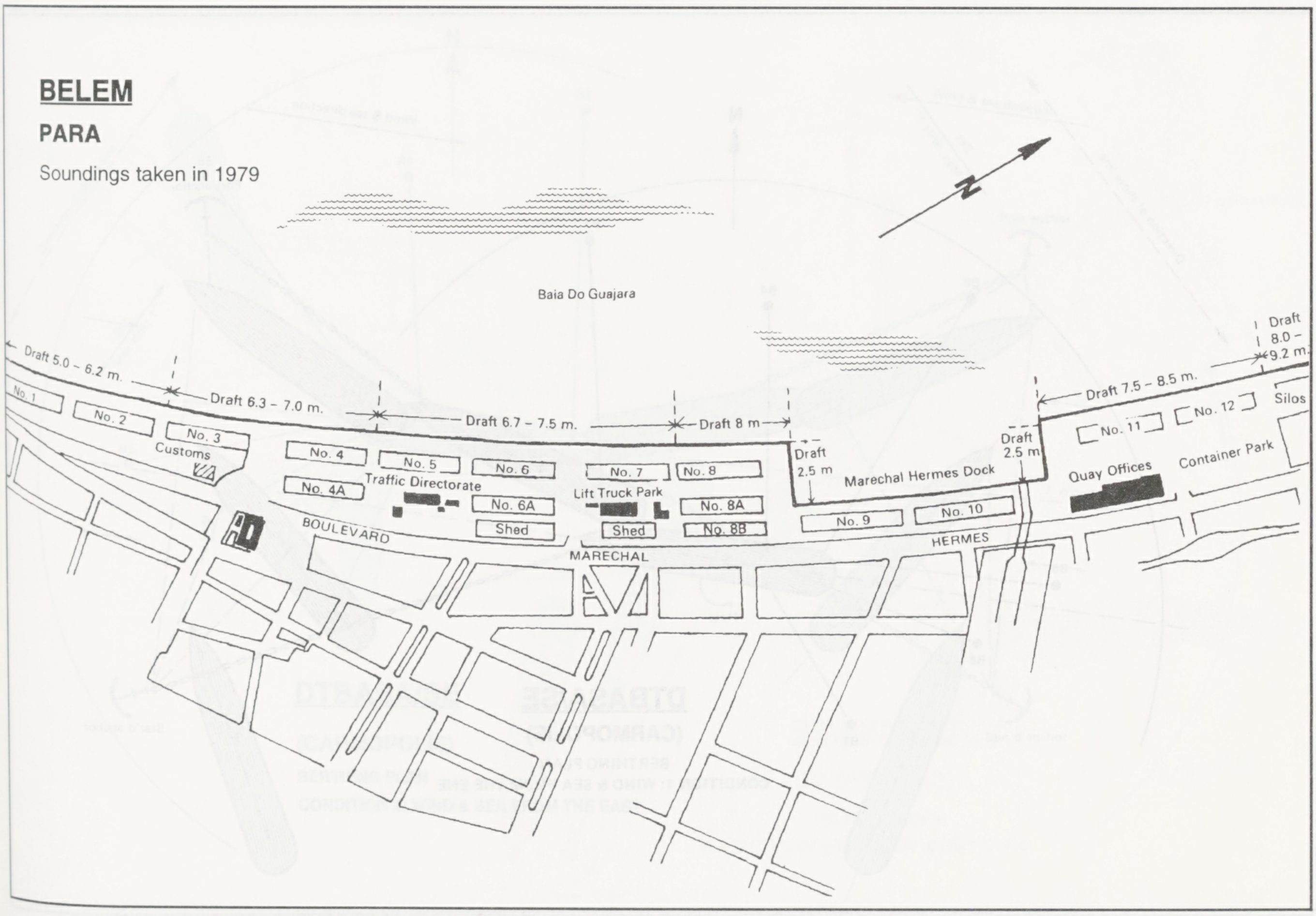

Warehouse 2
Administration
Warehouse 1
Salt Storage Capacity 10,000 tons
168 m.
216 m.
North Breakwater
158.4 m.
South Breakwater

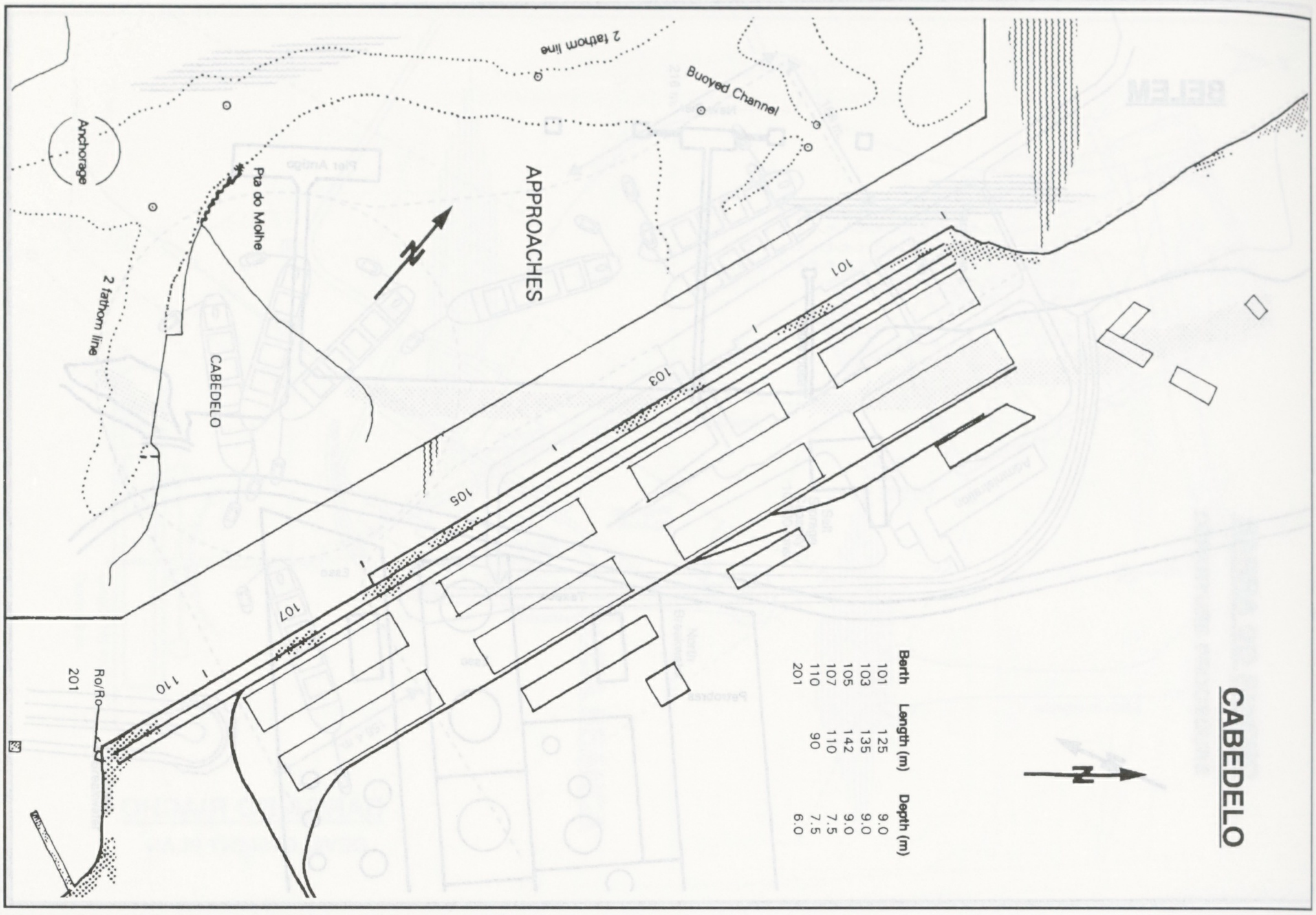
BARRA DO RIACHO

BERTH

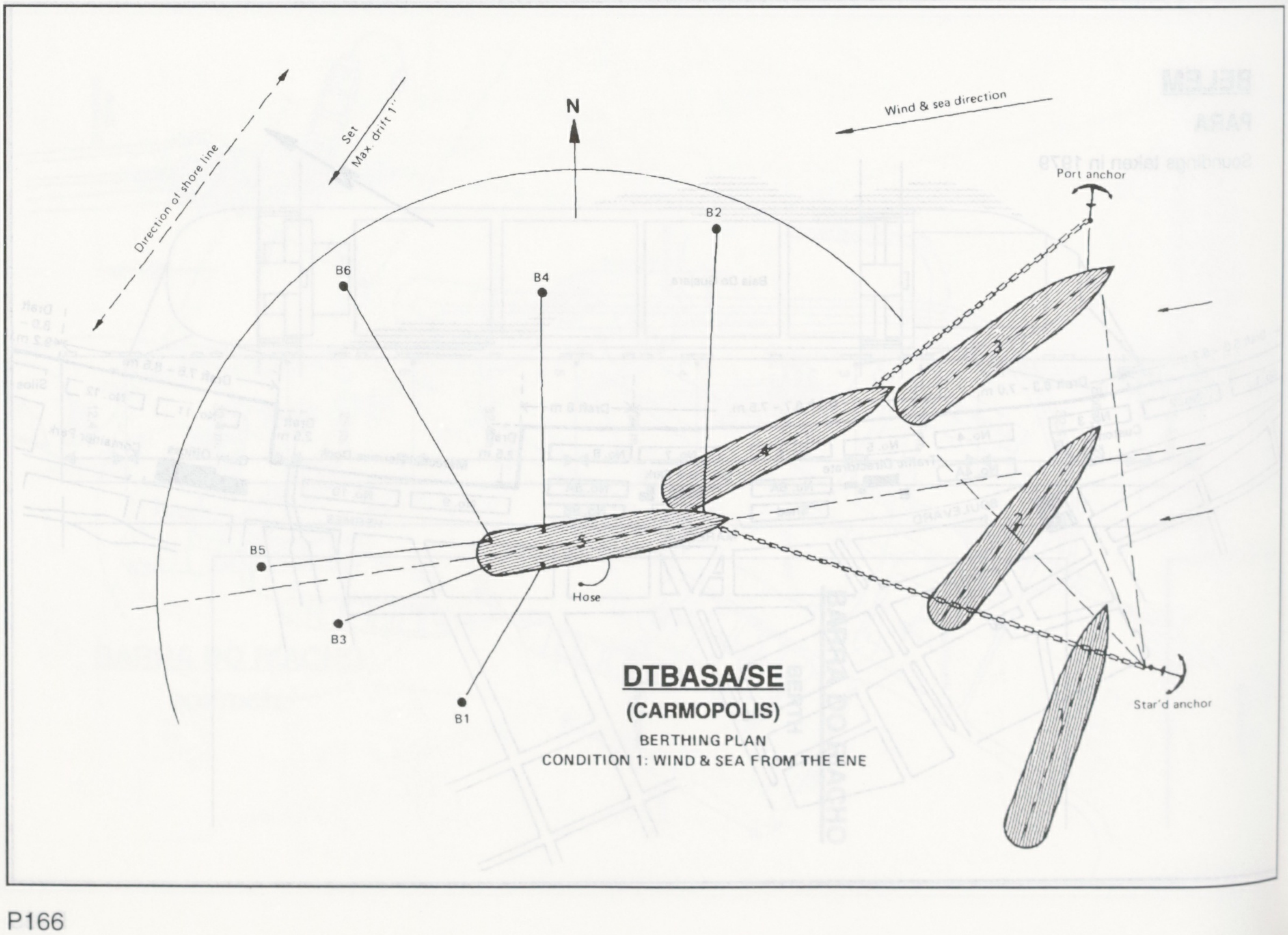

Warehouse 2
12.40 m.
1
Bollards
32.5 m.
2
25 m.
3
32.4 m.
4
229.5 m.
25 m.
5
32.4 m.
6
25 m.
7
32.4 m.
8
12.4 m.
Warehouse 1


BELEM
New Pier
Pier Antigo
Texaco
Esso
Esso
Petrobras
N


BELEM
PARA
Soundings taken in 1979
N
Baia Do Guajara
Draft 5.0 – 6.2 m.
Draft 6.3 – 7.0 m.
Draft 6.7 – 7.5 m.
Draft 8 m
Draft 2.5 m
Draft 2.5 m
Draft 7.5 – 8.5 m.
Draft 8.0 – 9.2 m.
No. 1
No. 2
No. 3
Customs
No. 4
No. 4A
No. 5
Traffic Directorate
No. 6
No. 6A
Shed
No. 7
Lift Truck Park
Shed
No. 8
No. 8A
No. 8B
Marechal Hermes Dock
No. 9
No. 10
No. 11
No. 12
Silos
Quay Offices
Container Park
BOULEVARD
MARECHAL
HERMES


CABEDELO
APPROACHES
2 fathom line
2 fathom line
Buoyed Channel
Anchorage
Pta do Molhe
CABEDELO
N
N
101
103
105
107
110
Ro/Ro
201

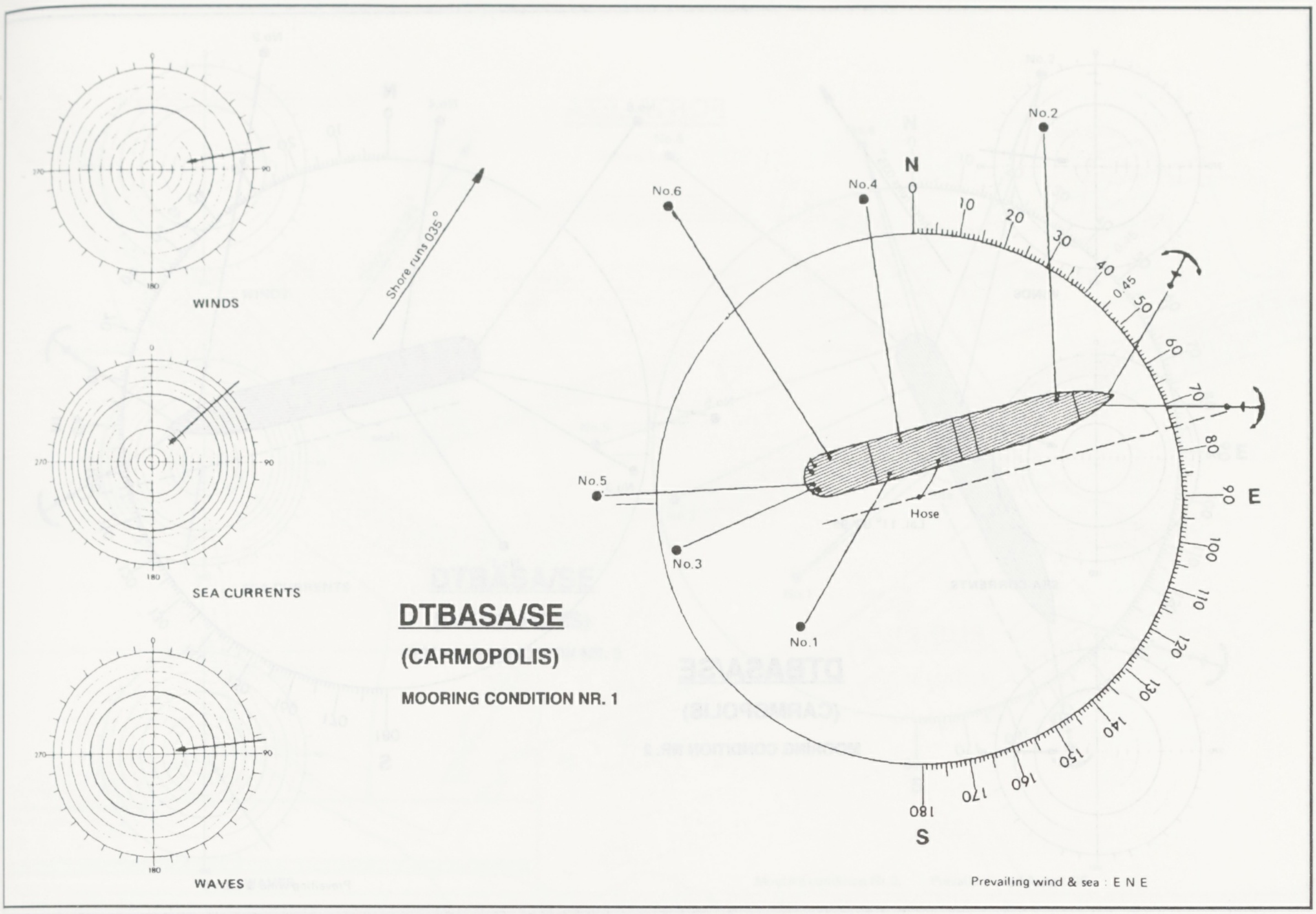
Berth	Length (m)	Depth (m)
101	125	9.0
103	135	9.0
105	142	9.0
107	110	7.5
110	90	7.5
201		6.0

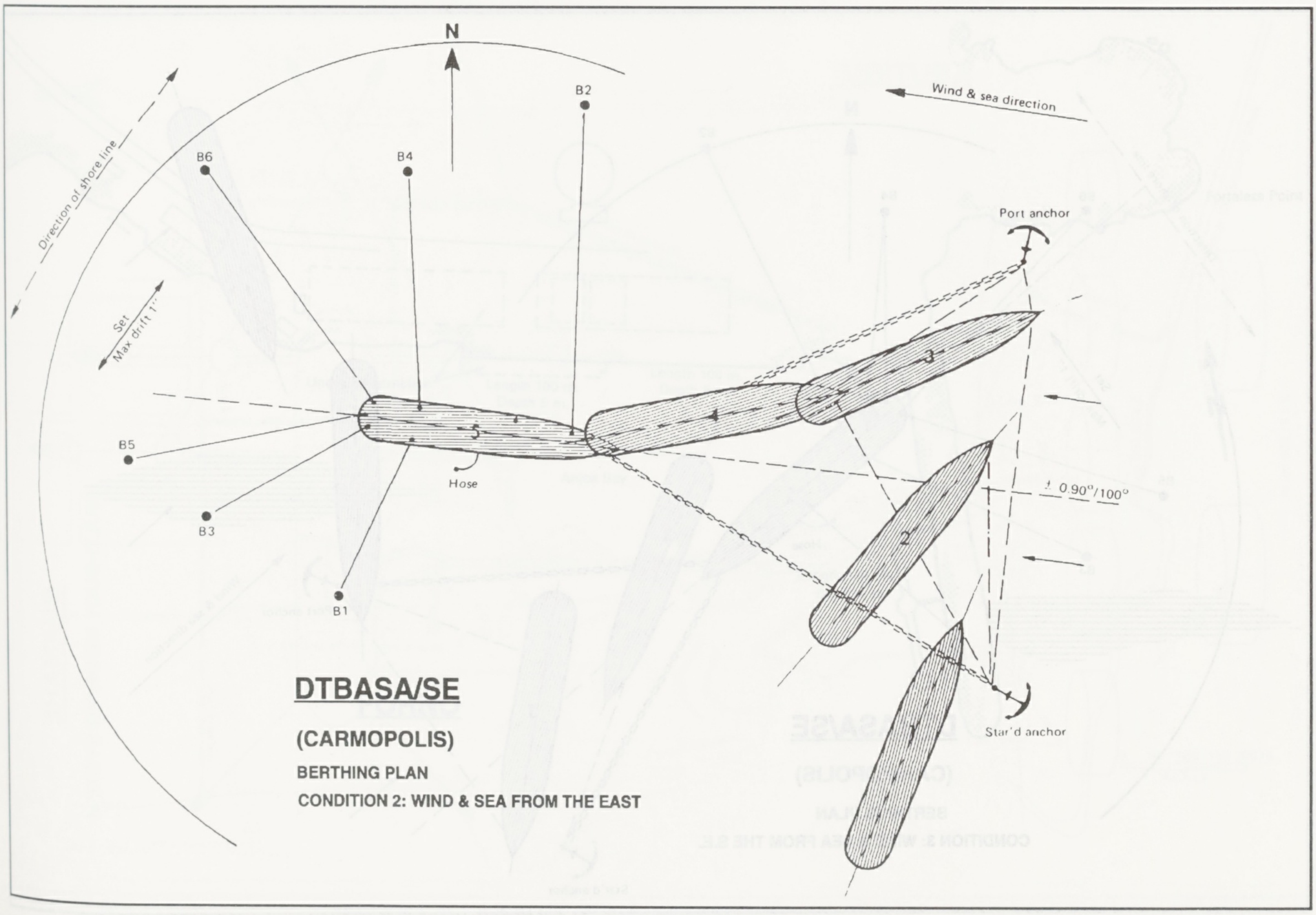

N
Wind & sea direction
Direction of shore line
Set
Max drift 1"
Port anchor
Star'd anchor
B1
B2
B3
B4
B5
B6
1
2
3
4
5
Hose

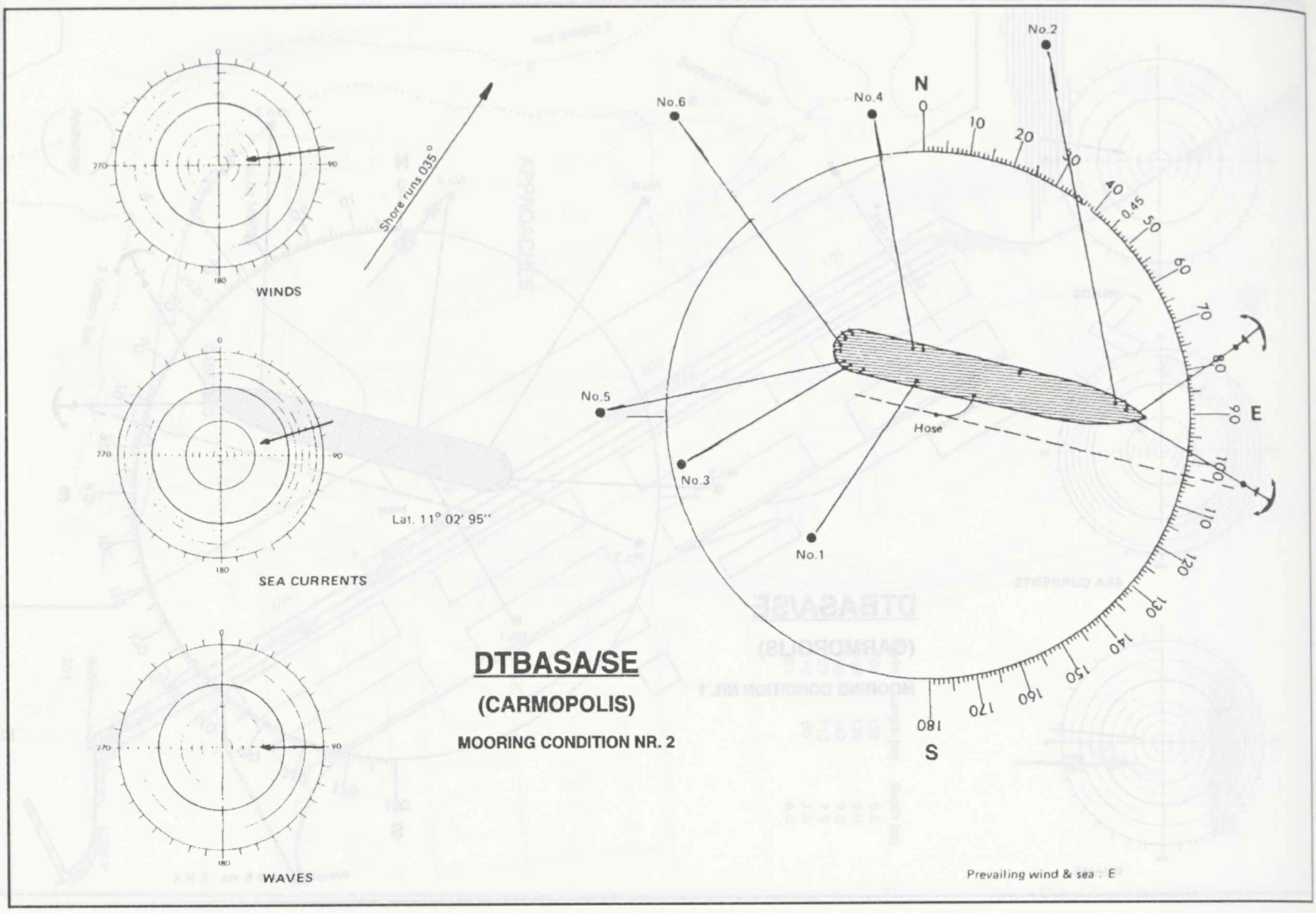
DTBASA/SE

(CARMOPOLIS)

BERTHING PLAN
CONDITION 1: WIND & SEA FROM THE ENE


WINDS
SEA CURRENTS
WAVES
Shore runs 035°
DTBASA/SE
(CARMOPOLIS)
MOORING CONDITION NR. 1
N
E
S
No.1
No.2
No.3
No.4
No.5
No.6
Hose
0.45
Prevailing wind & sea : E N E


N
B1
B2
B3
B4
B5
B6
Direction of shore line
Set
Max drift 1''
Hose
Wind & sea direction
Port anchor
Star'd anchor
± 0.90°/100°
1
2
3
4
5
DTBASA/SE
(CARMOPOLIS)
BERTHING PLAN
CONDITION 2: WIND & SEA FROM THE EAST

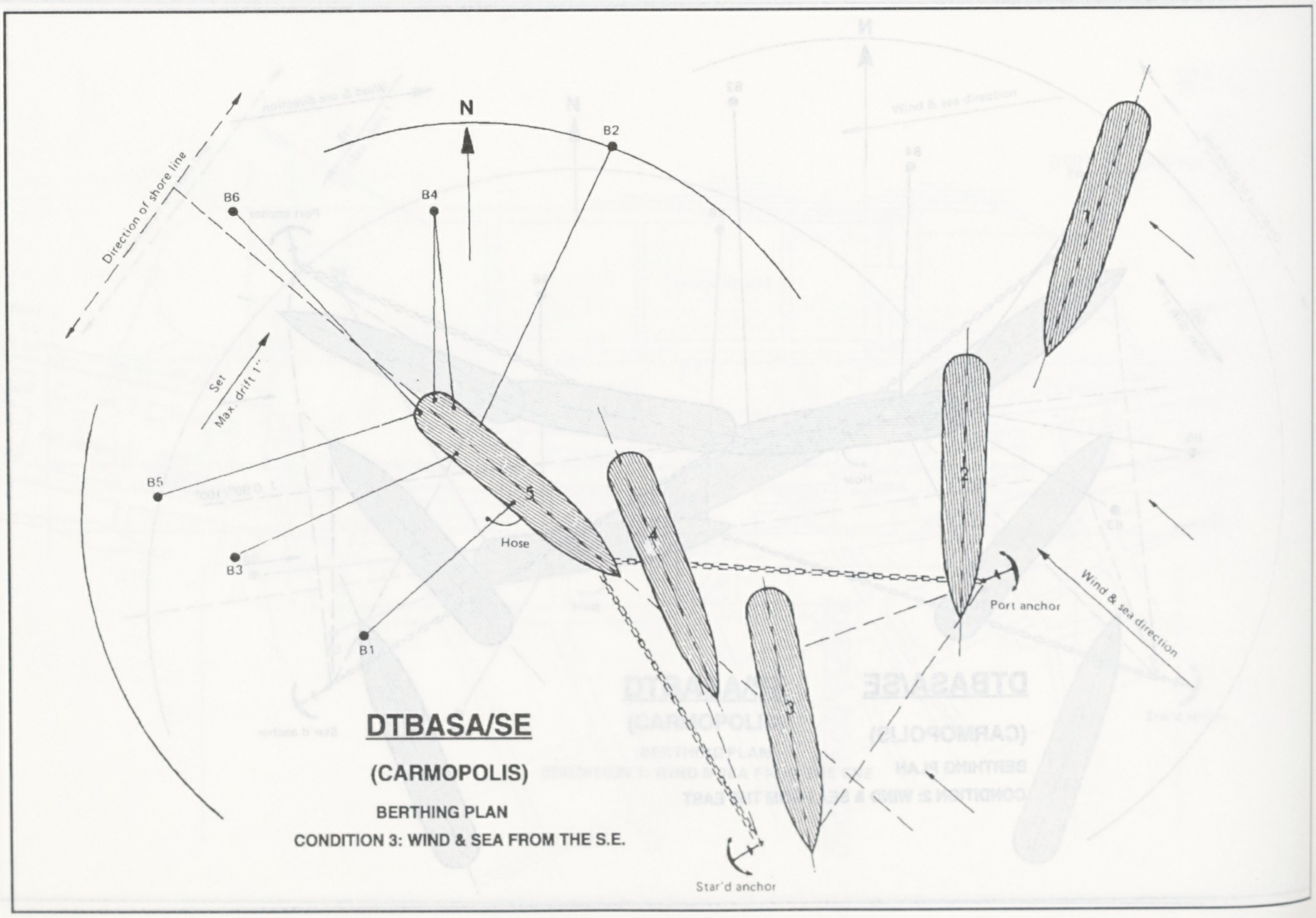


DTBASA/SE

(CARMOPOLIS)

MOORING CONDITION NR. 2

0
270
90
180
WINDS
0
270
90
180
SEA CURRENTS
0
270
90
180
WAVES
Shore runs 035°
Lat. 11° 02' 95''
No.2
No.6
No.4
N
0
10
20
30
40
0.45
50
60
70
80
90
E
100
110
120
130
140
150
160
170
180
S
No.5
Hose
No.3
No.1
Prevailing wind & sea : E



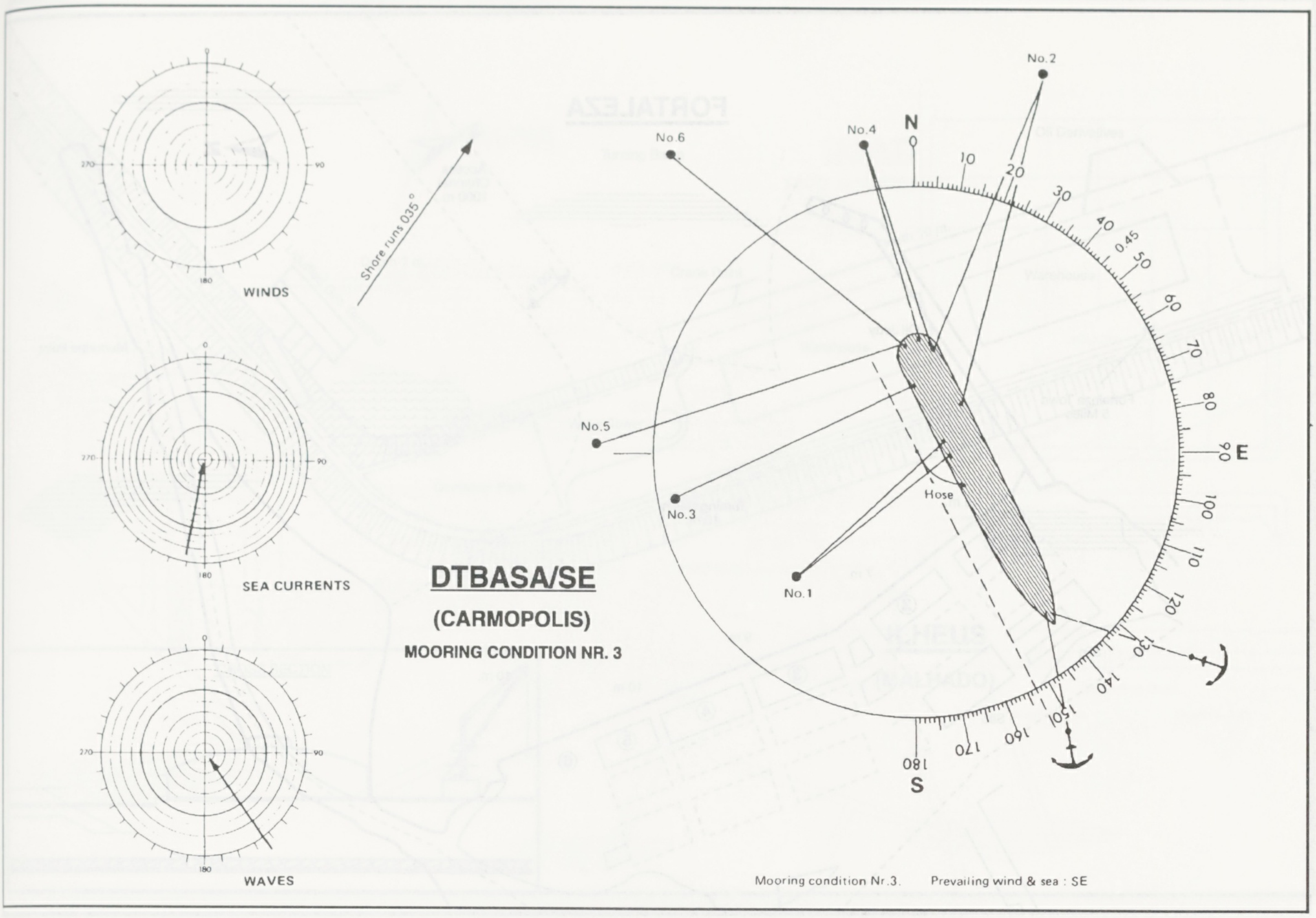
DTBASA/SE

(CARMOPOLIS)

BERTHING PLAN

CONDITION 3: WIND & SEA FROM THE S.E.

N
B2
Direction of shore line
B6
B4
Set
Max drift 1''
B5
5
Hose
B3
B1
4
3
1
2
Port anchor
Wind & sea direction
Star'd anchor

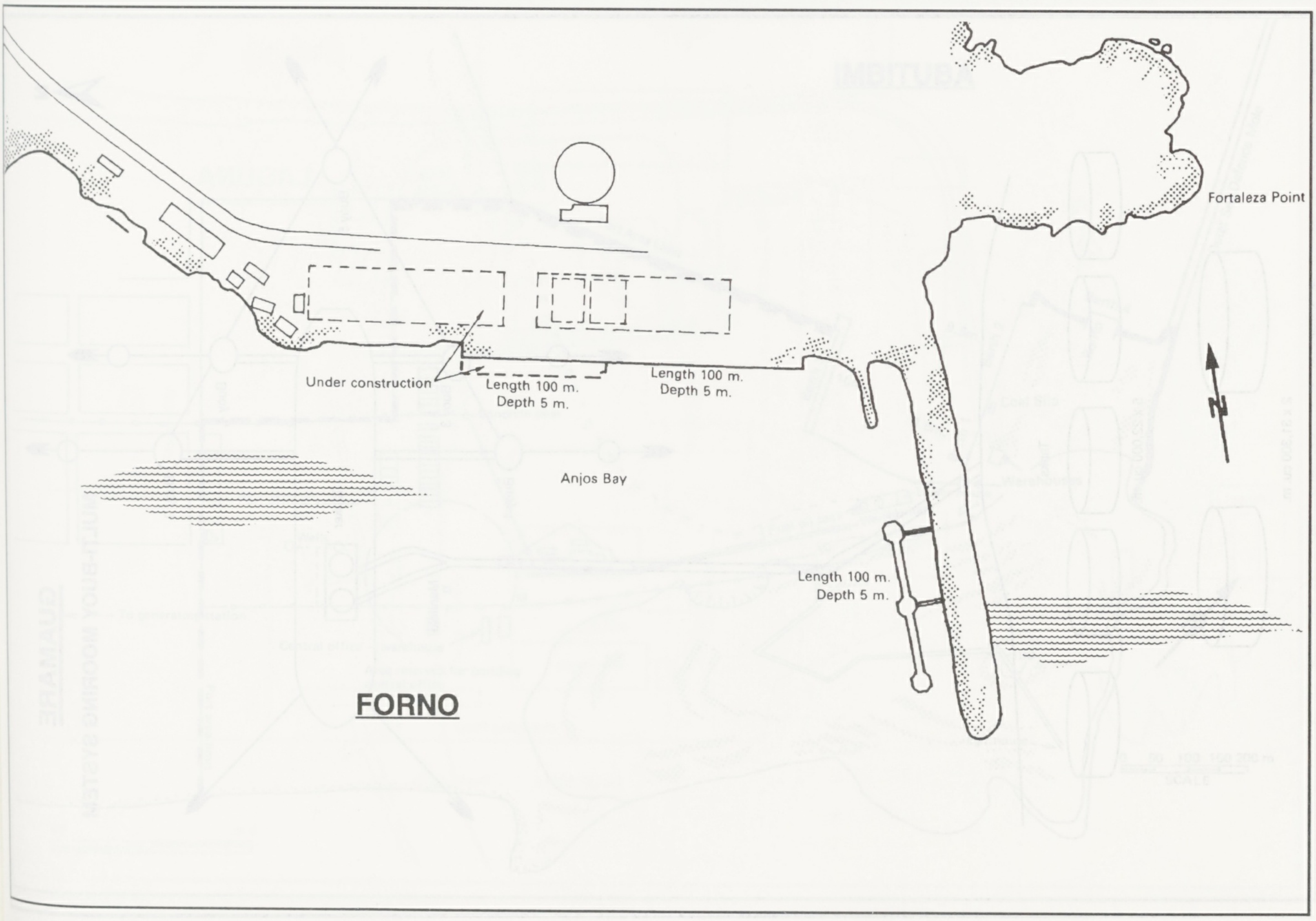

WINDS
SEA CURRENTS
WAVES
0
90
180
270
Shore runs 035°
No.1
No.2
No.3
No.4
No.5
No.6
Hose
N
E
S
0
10
20
30
40
0.45
50
60
70
80
90
100
110
120
130
140
150
160
170
180

DTBASA/SE

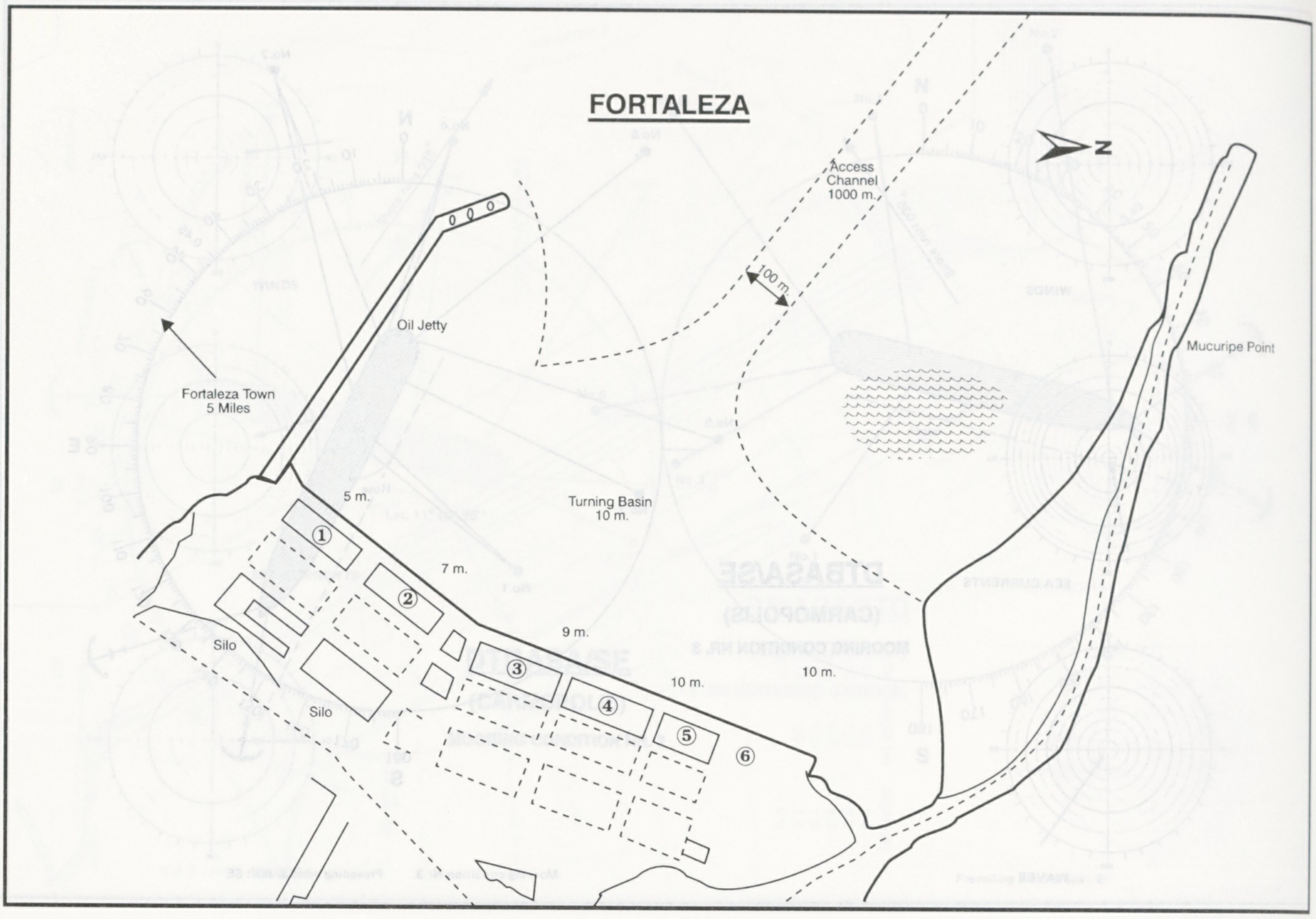
(CARMOPOLIS)

MOORING CONDITION NR. 3

Mooring condition Nr.3. Prevailing wind & sea : SE

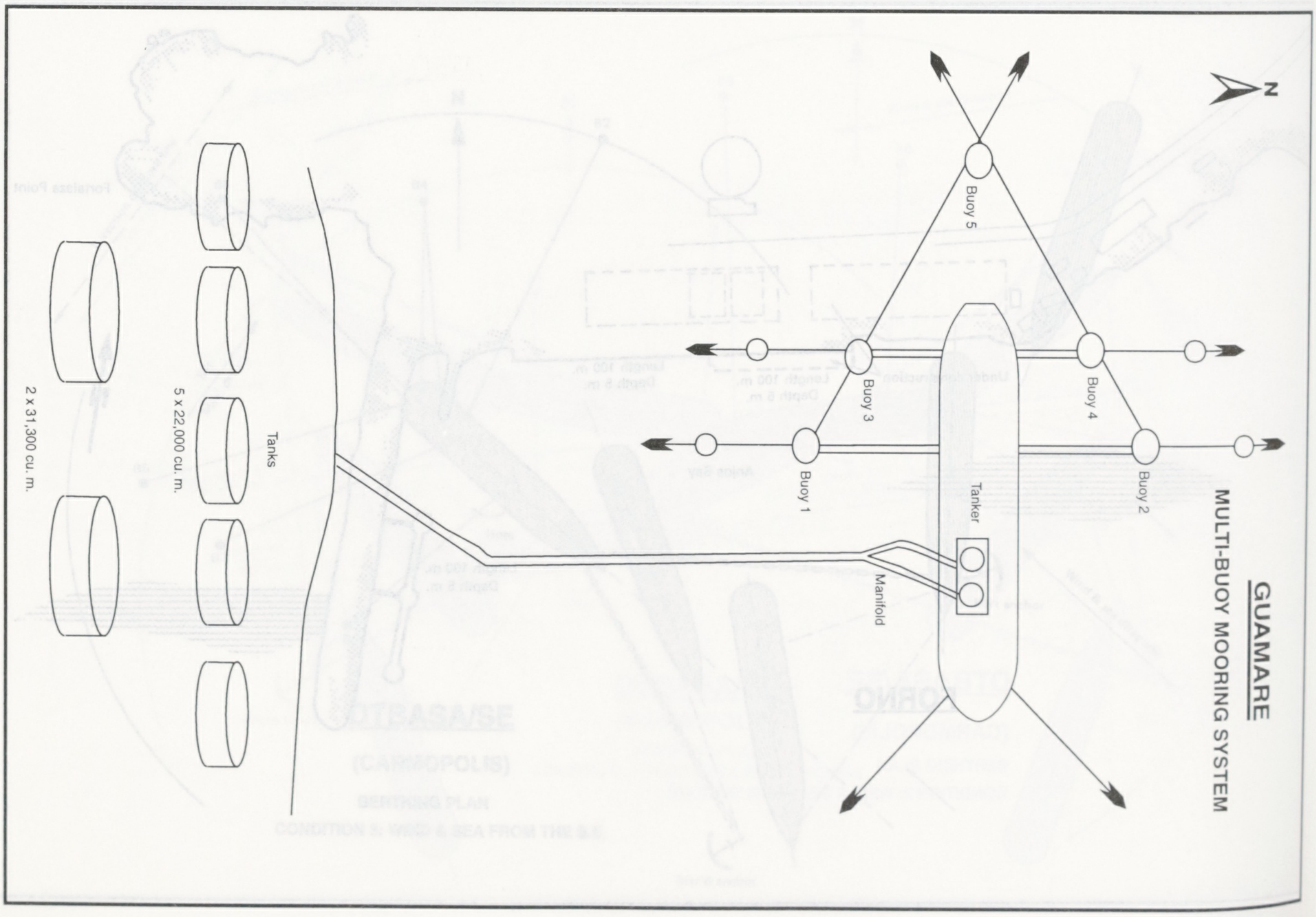

Under construction
Length 100 m.
Depth 5 m.
Length 100 m.
Depth 5 m.
Anjos Bay
Length 100 m.
Depth 5 m.
Fortaleza Point
N

FORNO



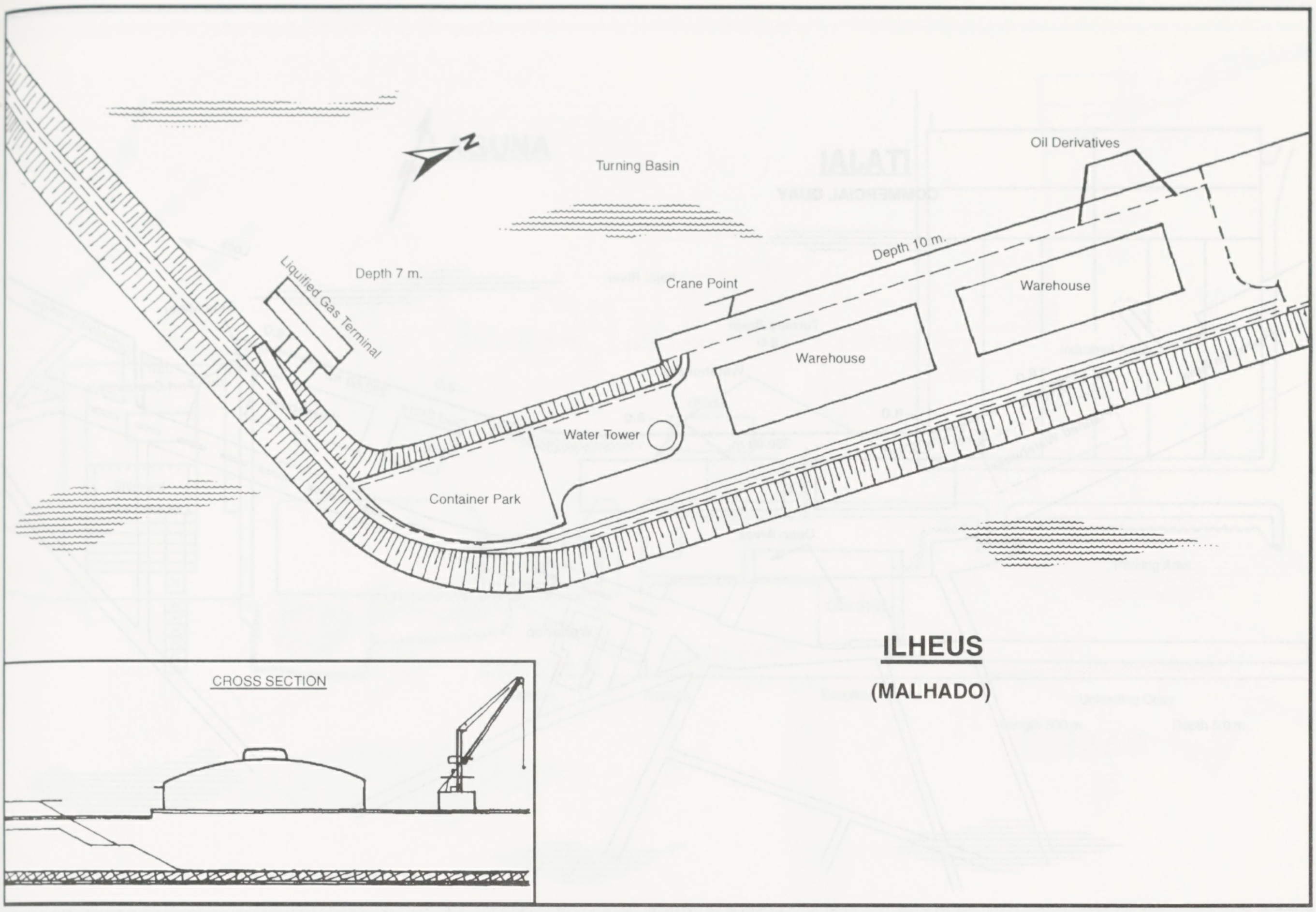
FORTALEZA

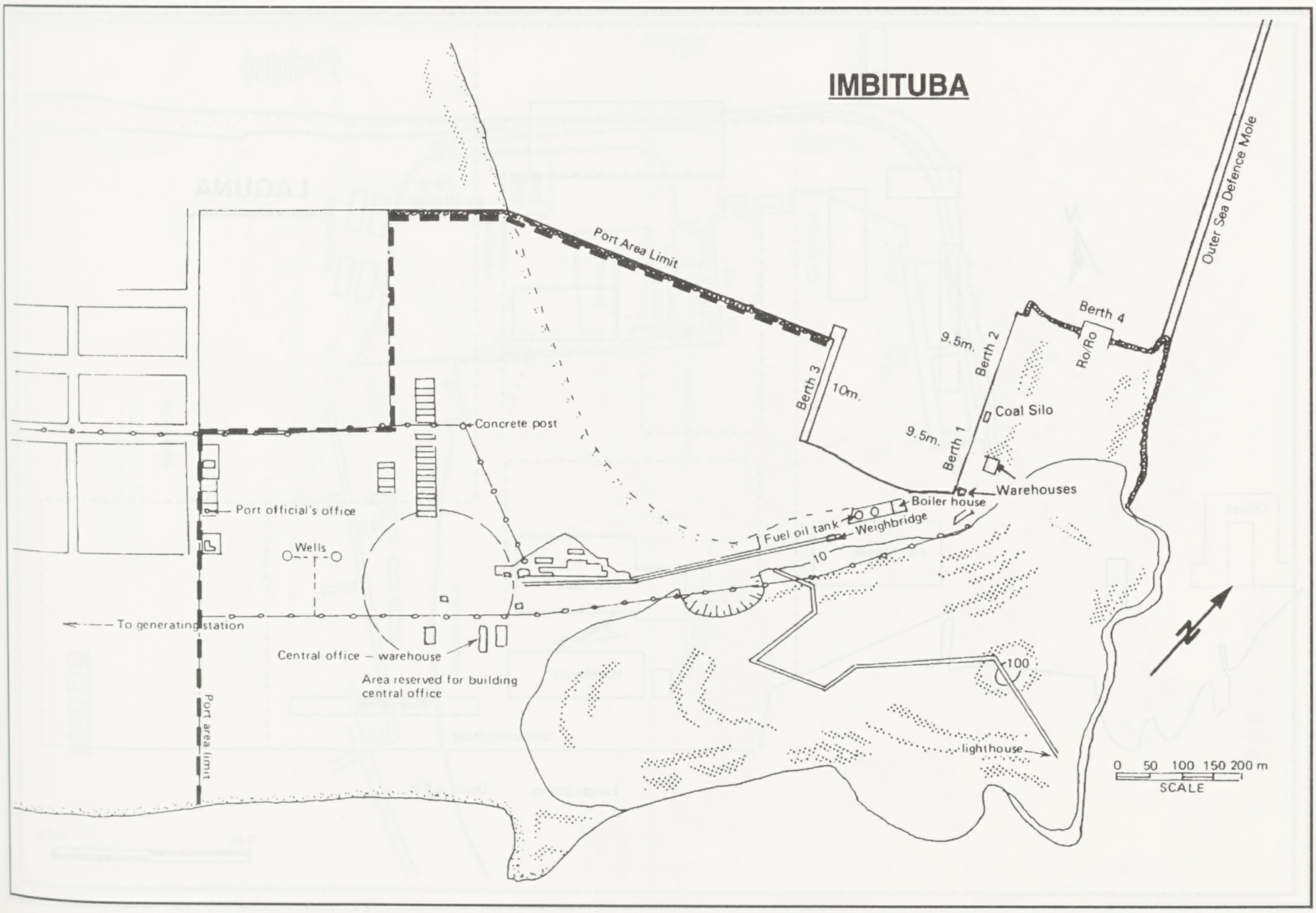
N
Access Channel 1000 m.
100 m.
Oil Jetty
Fortaleza Town 5 Miles
Mucuripe Point
5 m.
Turning Basin 10 m.
7 m.
9 m.
10 m.
10 m.
Silo
Silo
①
②
③
④
⑤
⑥

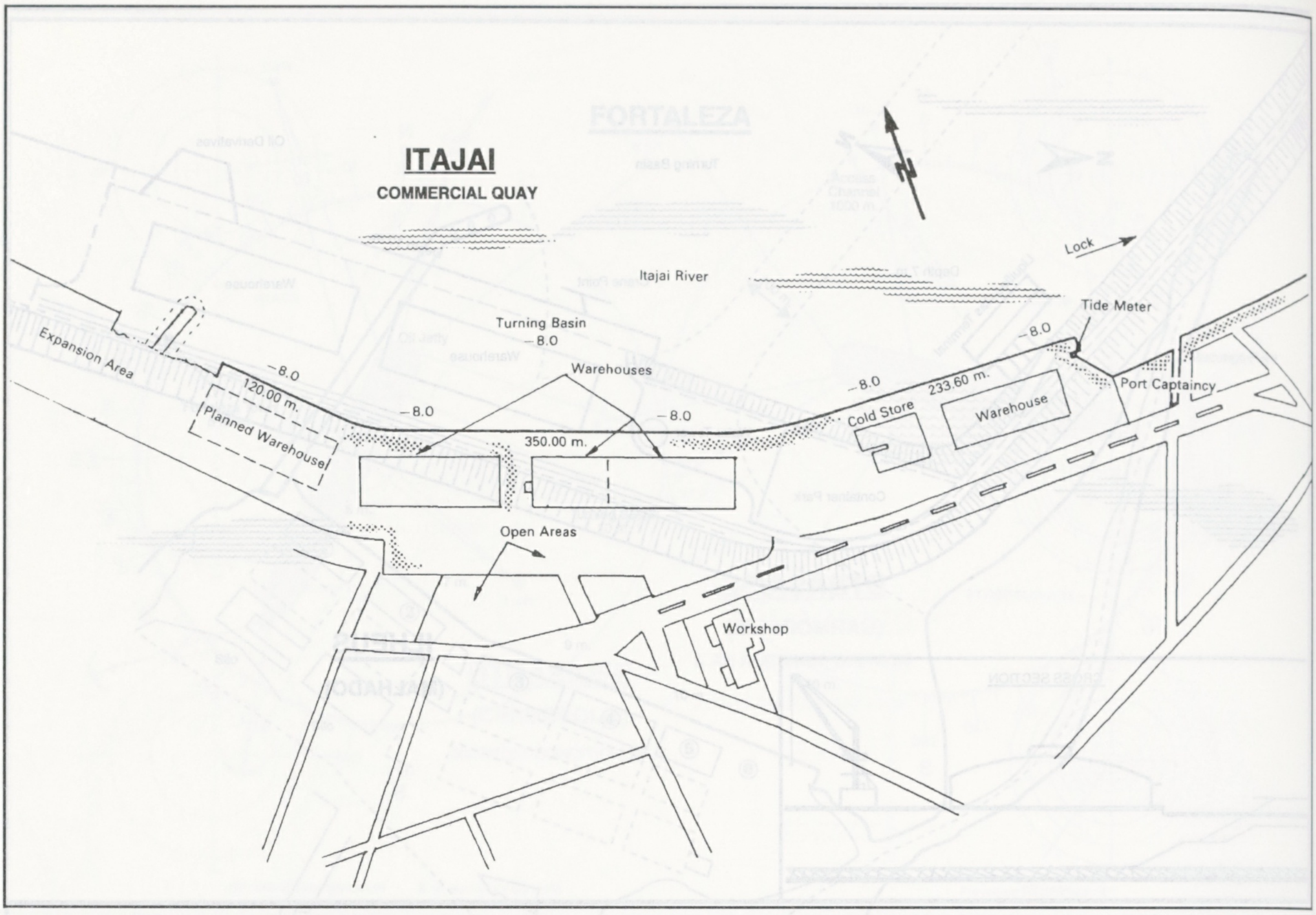


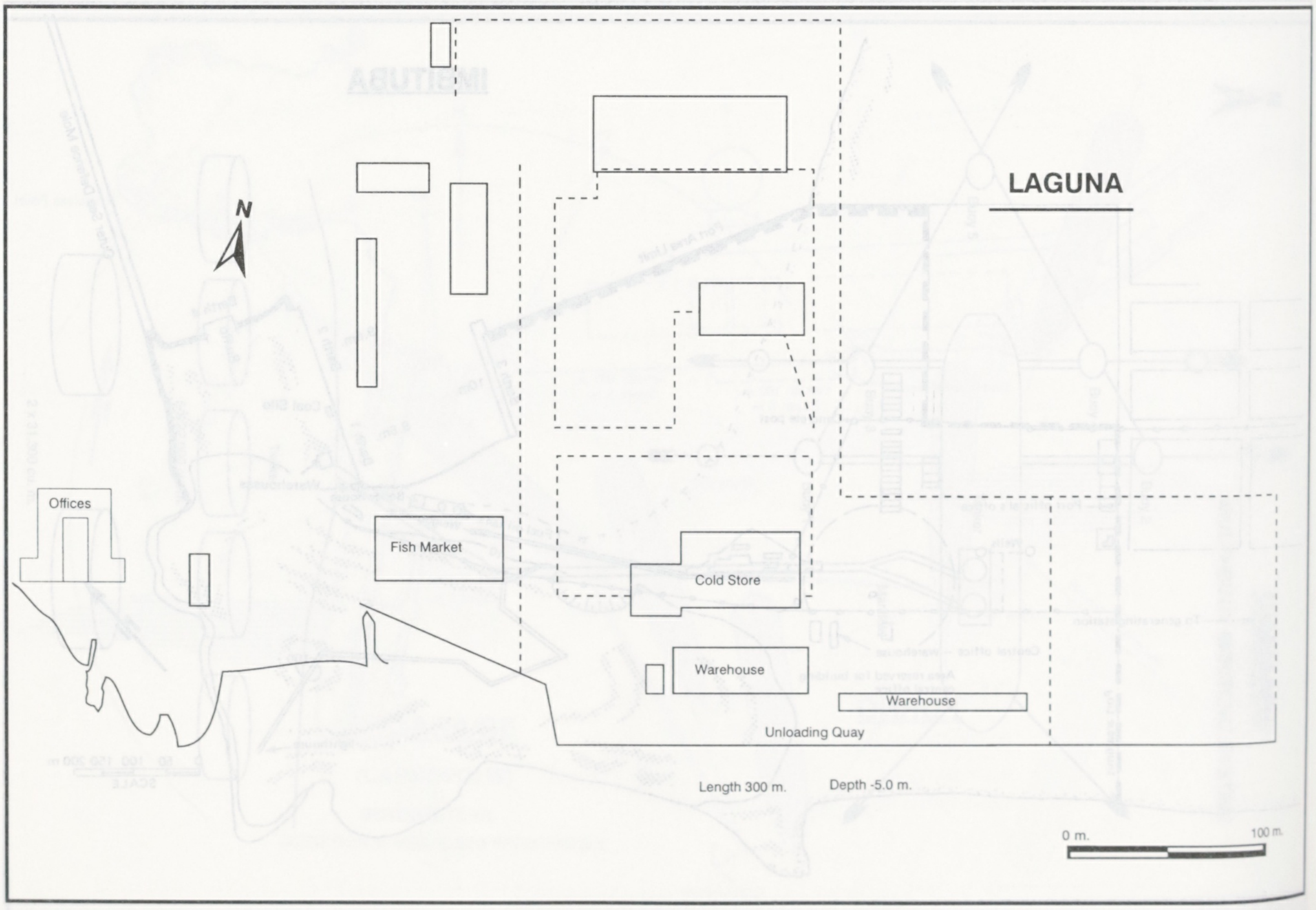
GUAMARE MULTI-BUOY MOORING SYSTEM

N
Buoy 5
Buoy 3
Buoy 4
Buoy 1
Buoy 2
Tanker
Manifold
Tanks
5 x 22,000 cu. m.
2 x 31,300 cu. m.

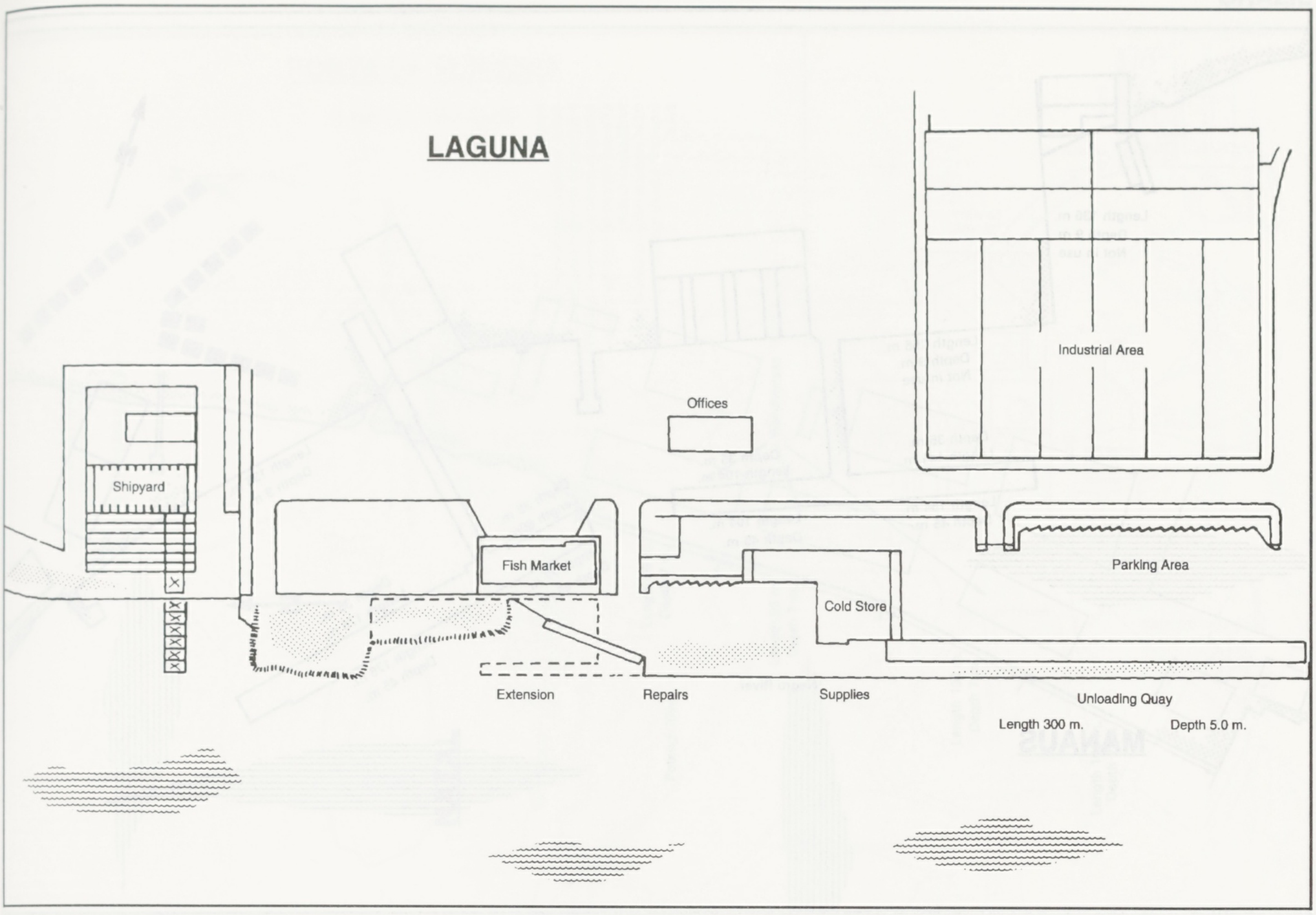

ILHEUS
(MALHADO)
N
Turning Basin
Oil Derivatives
Depth 10 m.
Depth 7 m.
Crane Point
Warehouse
Warehouse
Liquified Gas Terminal
Water Tower
Container Park
CROSS SECTION


IMBITUBA
Port Area Limit
Outer Sea Defence Mole
Berth 4
Ro/Ro
9.5m.
Berth 2
Berth 3
10m.
Coal Silo
9.5m.
Berth 1
Warehouses
Boiler house
Weighbridge
Fuel oil tank
10
Concrete post
Port official's office
Wells
To generating station
Central office – warehouse
Area reserved for building central office
Port area limit
100
lighthouse
N
0 50 100 150 200 m
SCALE

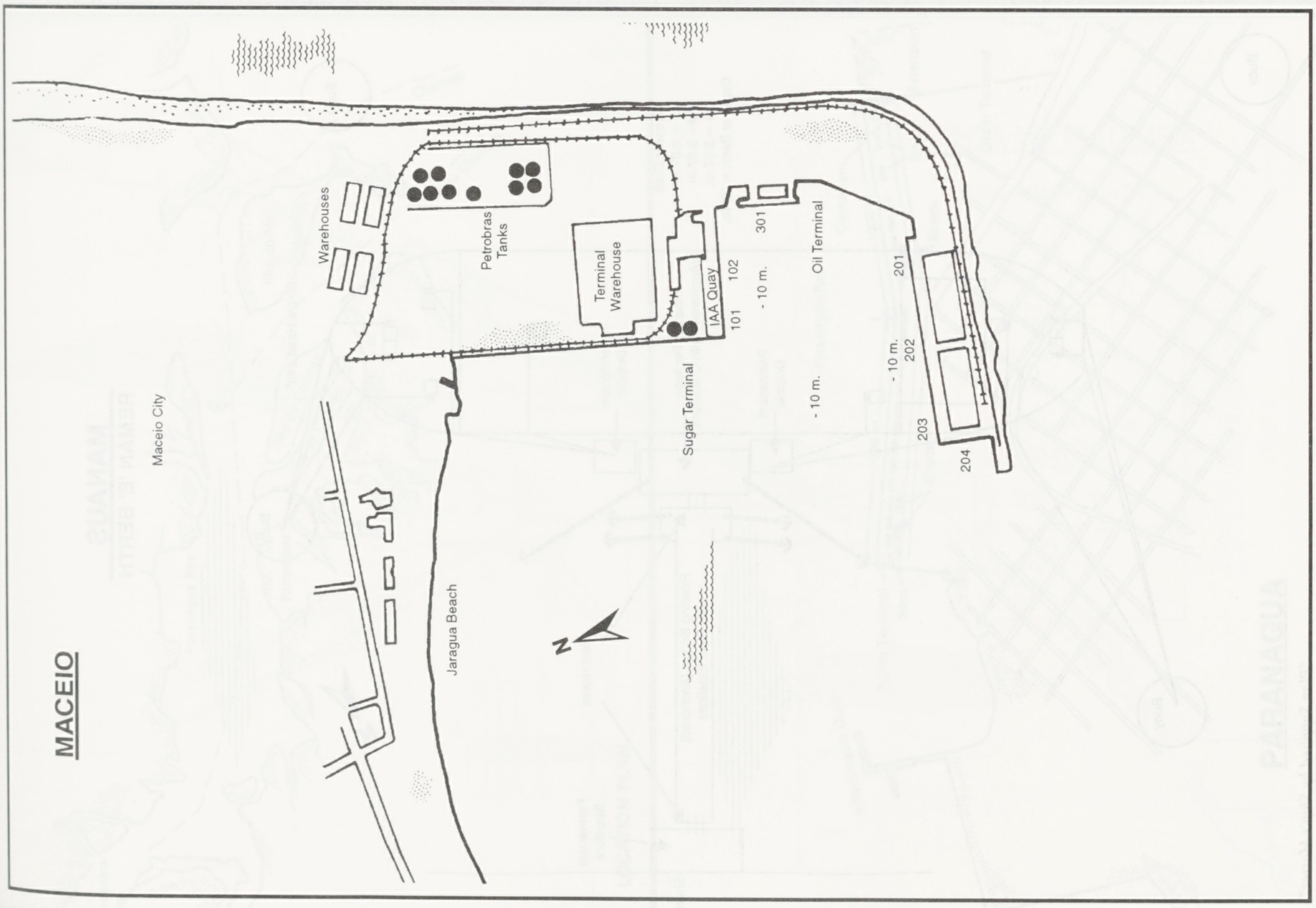

ITAJAI
COMMERCIAL QUAY
N
Lock
Itajai River
Turning Basin
–8.0
Tide Meter
–8.0
Expansion Area
–8.0
120.00 m.
Planned Warehouse
–8.0
Warehouses
–8.0
350.00 m.
–8.0
233.60 m.
Cold Store
Warehouse
Port Captaincy
Open Areas
Workshop

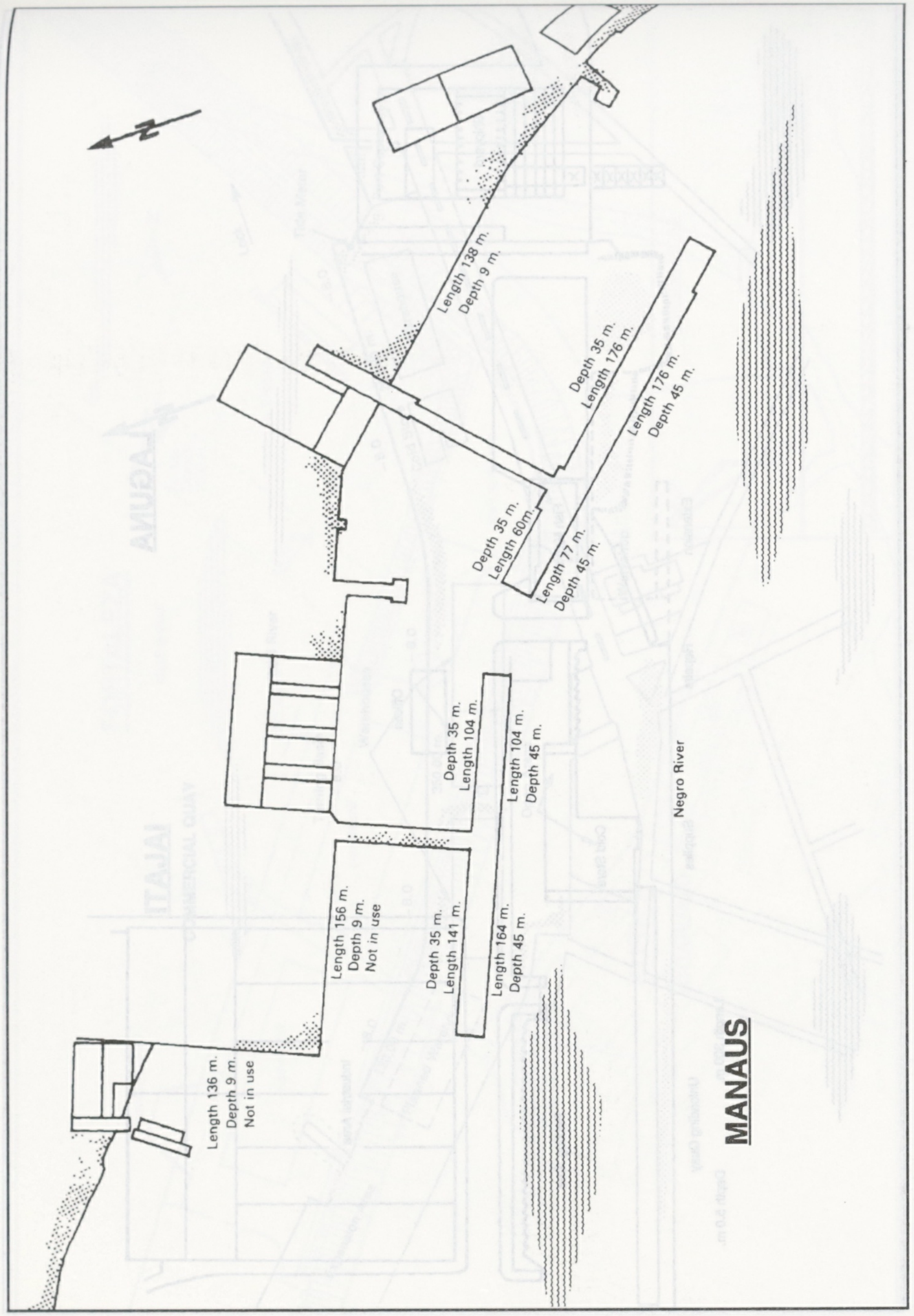

LAGUNA
N
Offices
Fish Market
Cold Store
Warehouse
Warehouse
Unloading Quay
Length 300 m.
Depth -5.0 m.
0 m.
100 m.

LAGUNA


Industrial Area
Offices
Shipyard
Fish Market
Parking Area
Cold Store
Extension
Repairs
Supplies
Unloading Quay
Length 300 m.
Depth 5.0 m.

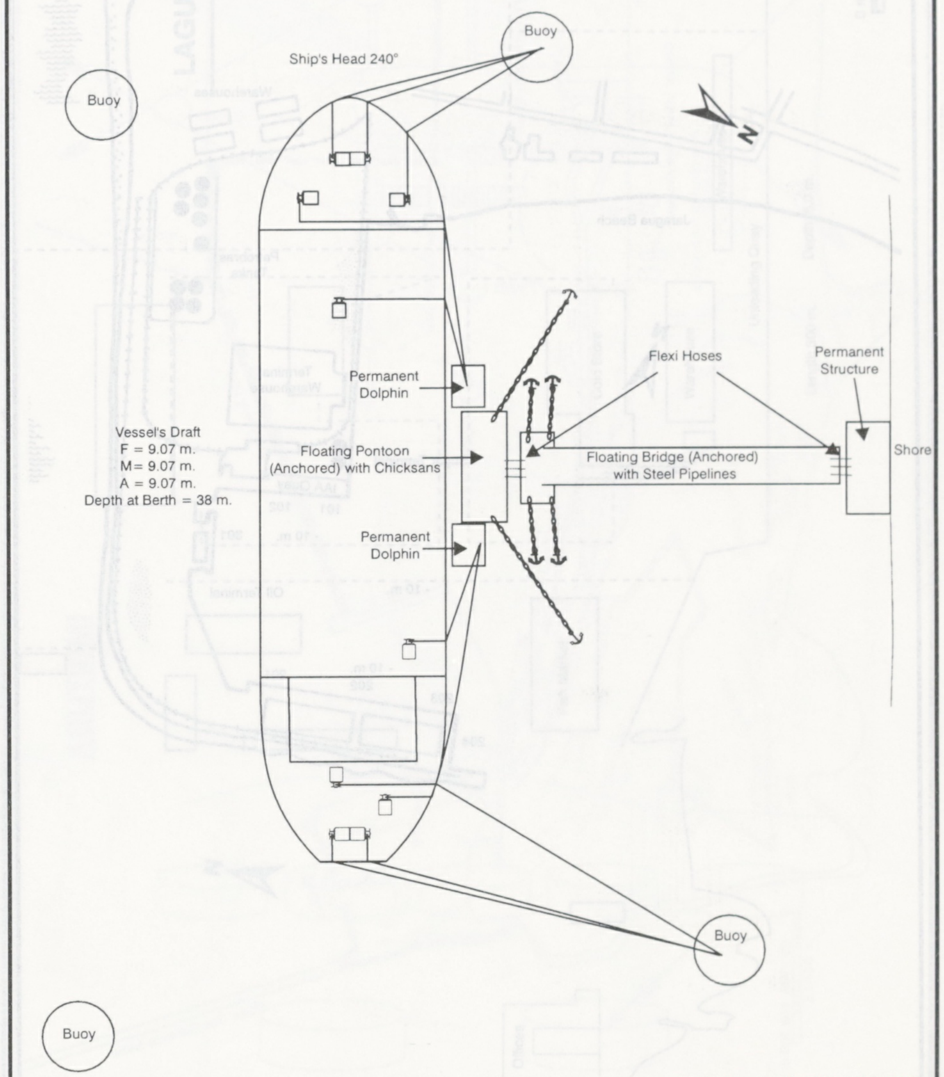
MACEIO


Warehouses
Petrobras Tanks
Terminal Warehouse
IAA Quay
101
102
- 10 m.
301
Oil Terminal
201
202
- 10 m.
203
204
Sugar Terminal
- 10 m.
Maceio City
Jaragua Beach
N

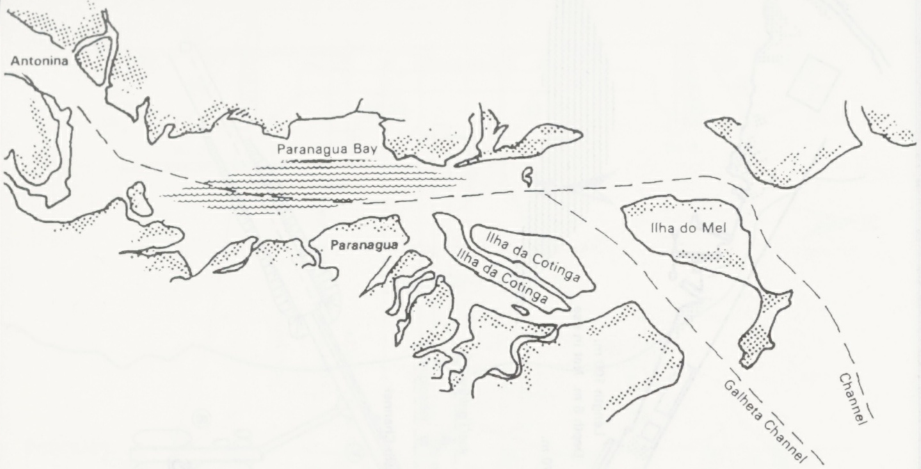

MANAUS
Negro River
Length 138 m.
Depth 9 m.
Depth 35 m.
Length 176 m.
Length 176 m.
Depth 45 m.
Depth 35 m.
Length 60m.
Length 77 m.
Depth 45 m.
Depth 35 m.
Length 104 m.
Length 104 m.
Depth 45 m.
Length 156 m.
Depth 9 m.
Not in use
Depth 35 m.
Length 141 m.
Length 164 m.
Depth 45 m.
Length 136 m.
Depth 9 m.
Not in use

MANAUS

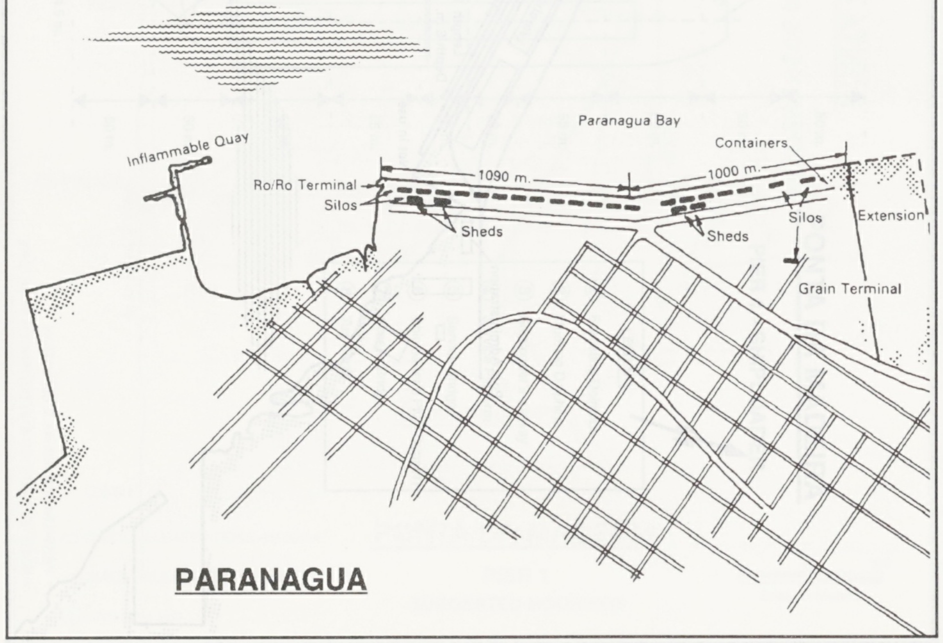
REMAN 'E' BERTH


Buoy
Ship's Head 240°
Buoy
N
Permanent Dolphin
Flexi Hoses
Permanent Structure
Vessel's Draft
F = 9.07 m.
M = 9.07 m.
A = 9.07 m.
Depth at Berth = 38 m.
Floating Pontoon (Anchored) with Chicksans
Floating Bridge (Anchored) with Steel Pipelines
Shore
Permanent Dolphin
Buoy
Buoy

"Plan Supplied by Ship's Master"

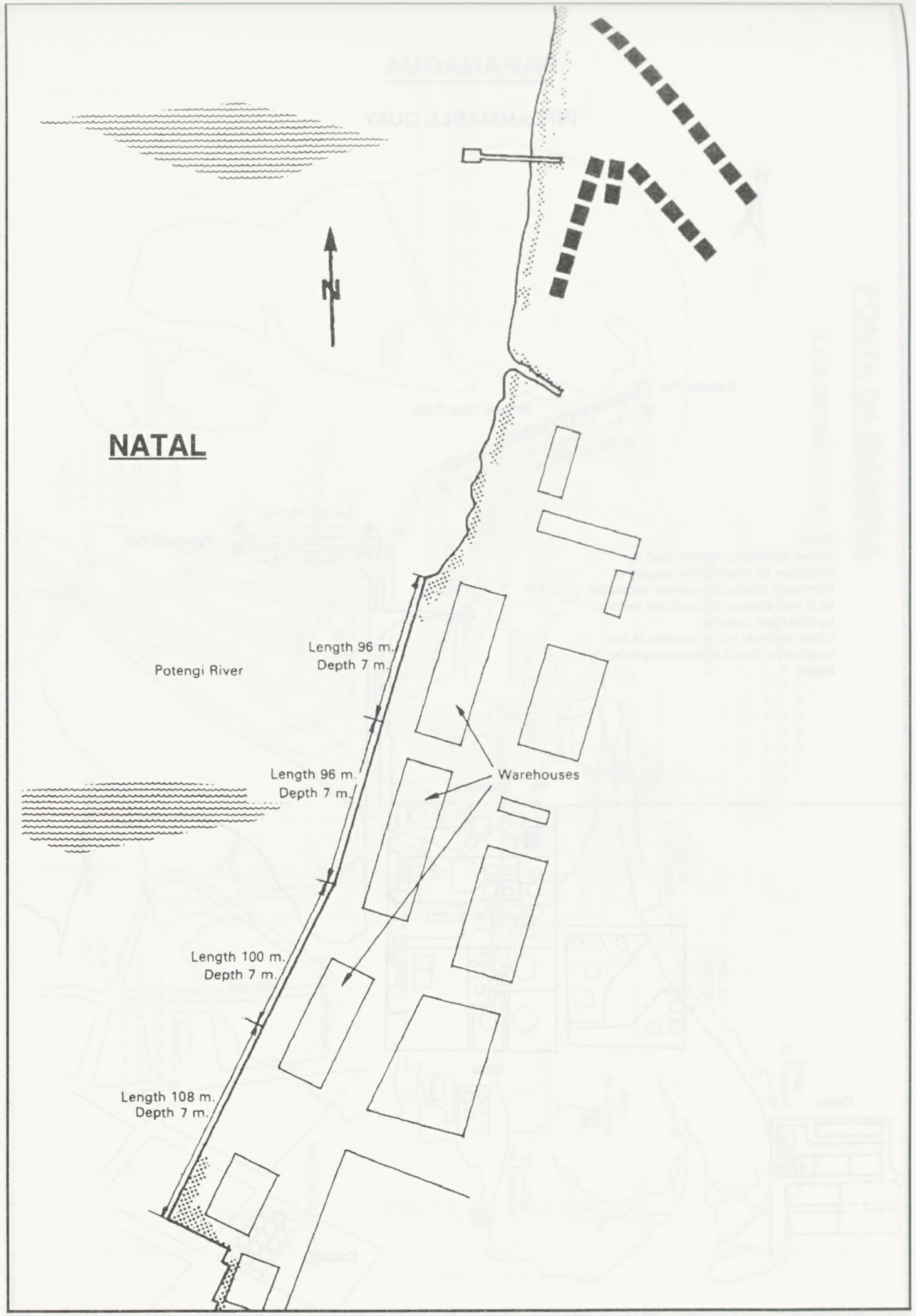

Antonina
Paranagua Bay
Paranagua
Ilha da Cotinga
Ilha da Cotinga
Ilha do Mel
Galheta Channel
Channel

LOCATION PLAN


Paranagua Bay
Inflammable Quay
Containers
Ro/Ro Terminal
Silos
1090 m.
1000 m.
Sheds
Sheds
Silos
Extension
Grain Terminal

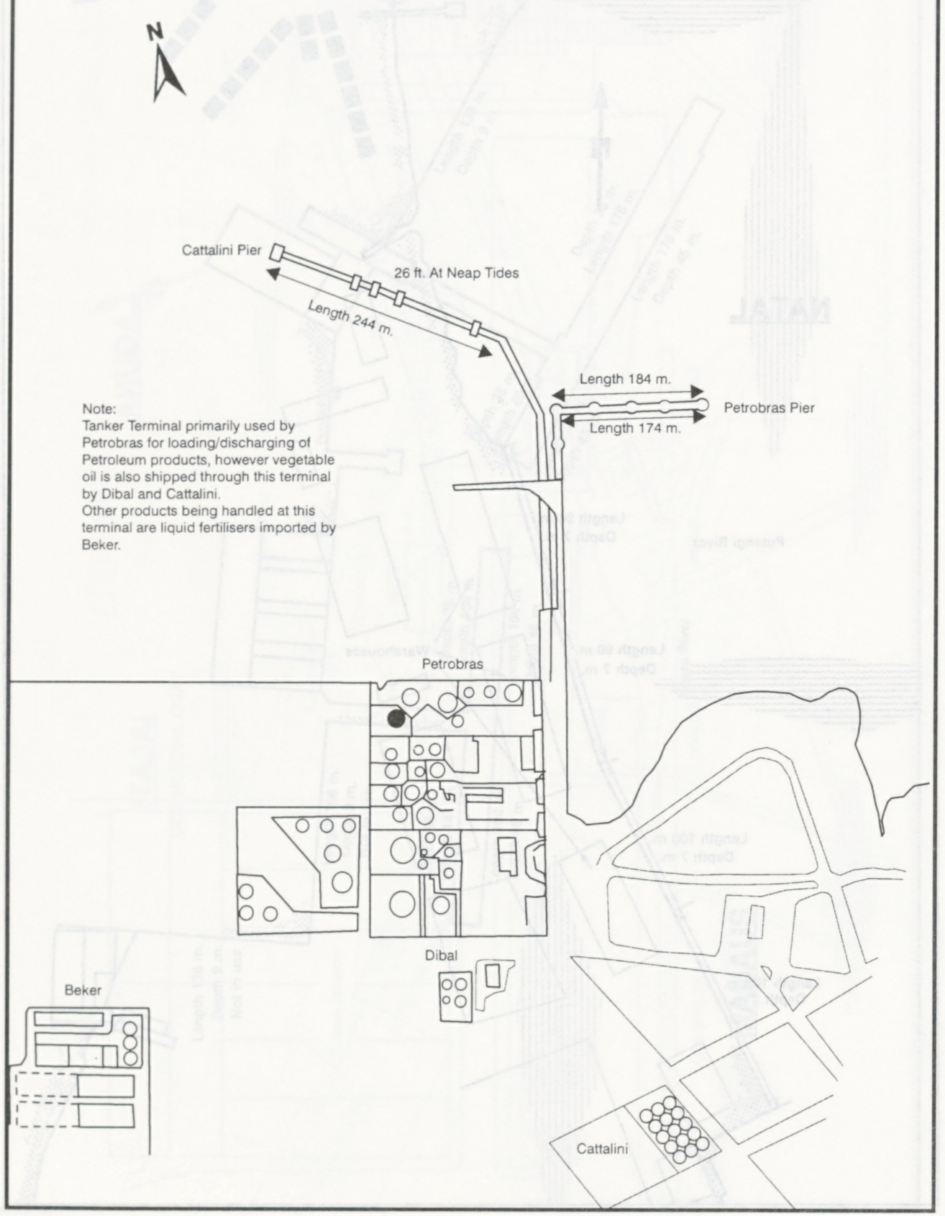
PARANAGUA

NATAL


N
Potengi River
Length 96 m.
Depth 7 m.
Length 96 m.
Depth 7 m.
Length 100 m.
Depth 7 m.
Length 108 m.
Depth 7 m.
Warehouses

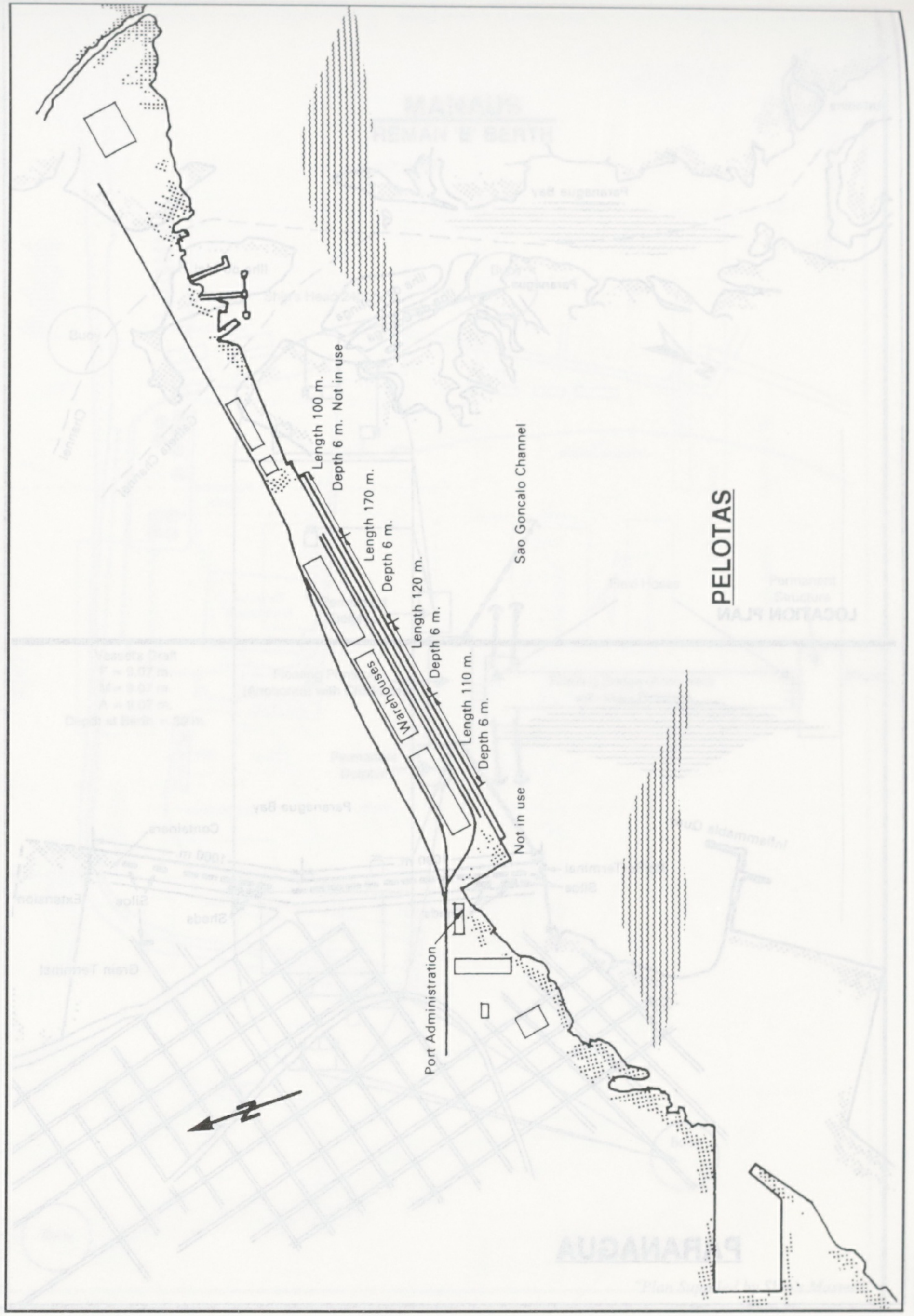
PARANAGUA

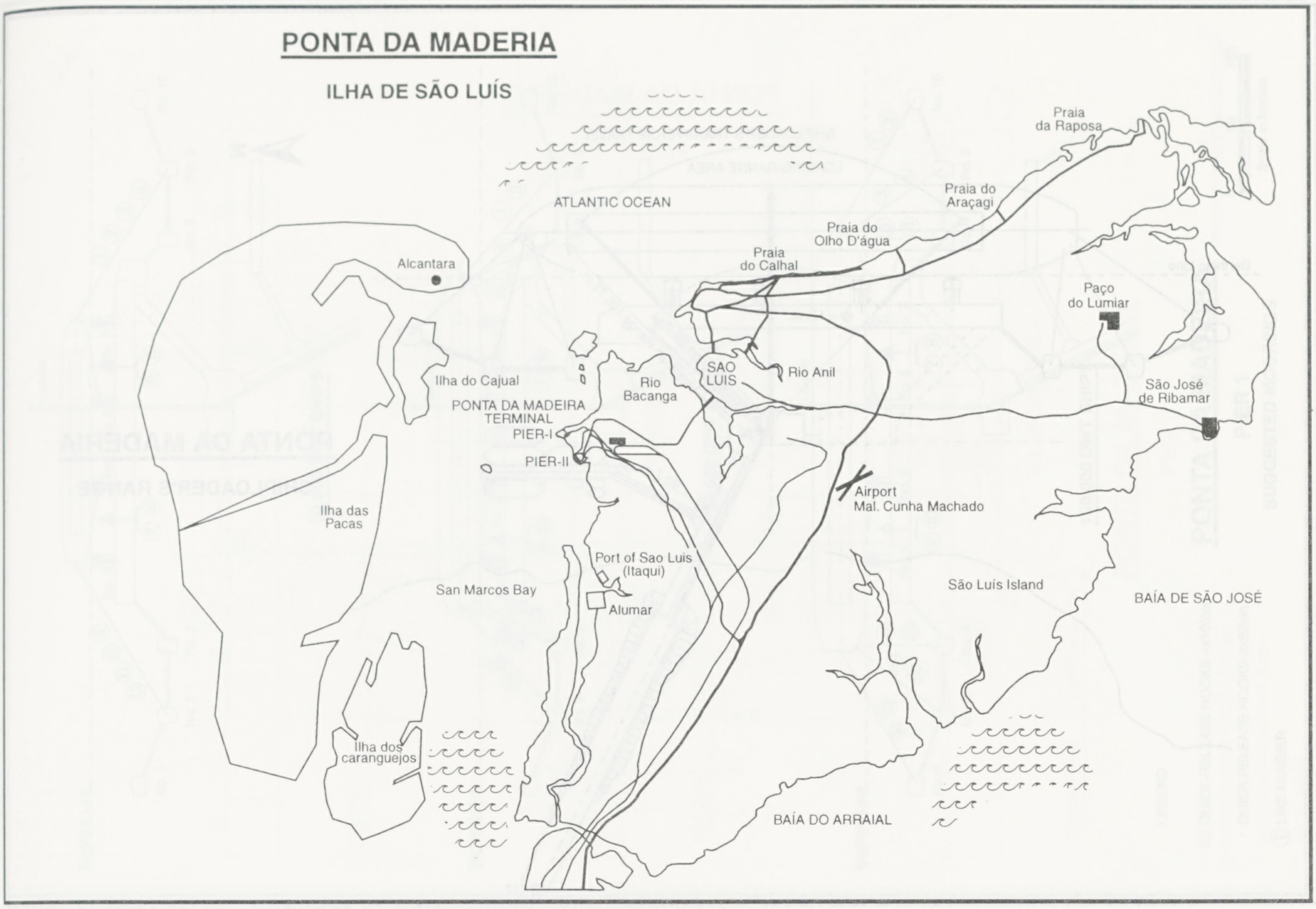
INFLAMMABLE QUAY


N
Cattalini Pier
26 ft. At Neap Tides
Length 244 m.
Length 184 m.
Petrobras Pier
Length 174 m.
Petrobras
Dibal
Beker
Cattalini

Note:
Tanker Terminal primarily used by Petrobras for loading/discharging of Petroleum products, however vegetable oil is also shipped through this terminal by Dibal and Cattalini.
Other products being handled at this terminal are liquid fertilisers imported by Beker.

PELOTAS

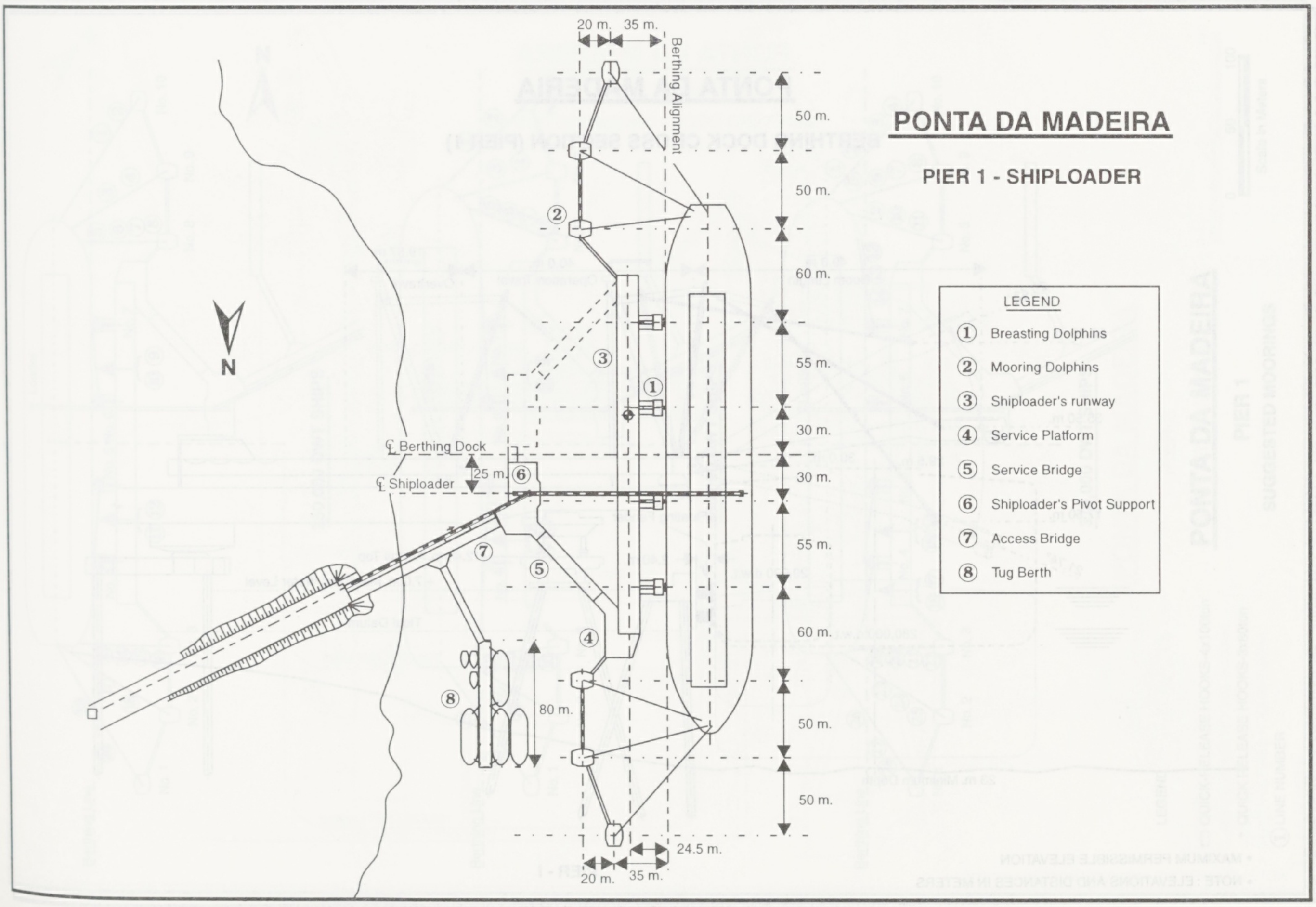

Length 100 m.
Depth 6 m. Not in use
Length 170 m.
Depth 6 m.
Length 120 m.
Depth 6 m.
Length 110 m.
Depth 6 m.
Warehouses
Sao Goncalo Channel
Not in use
Port Administration
N



PONTA DA MADERIA

ILHA DE SÃO LUÍS

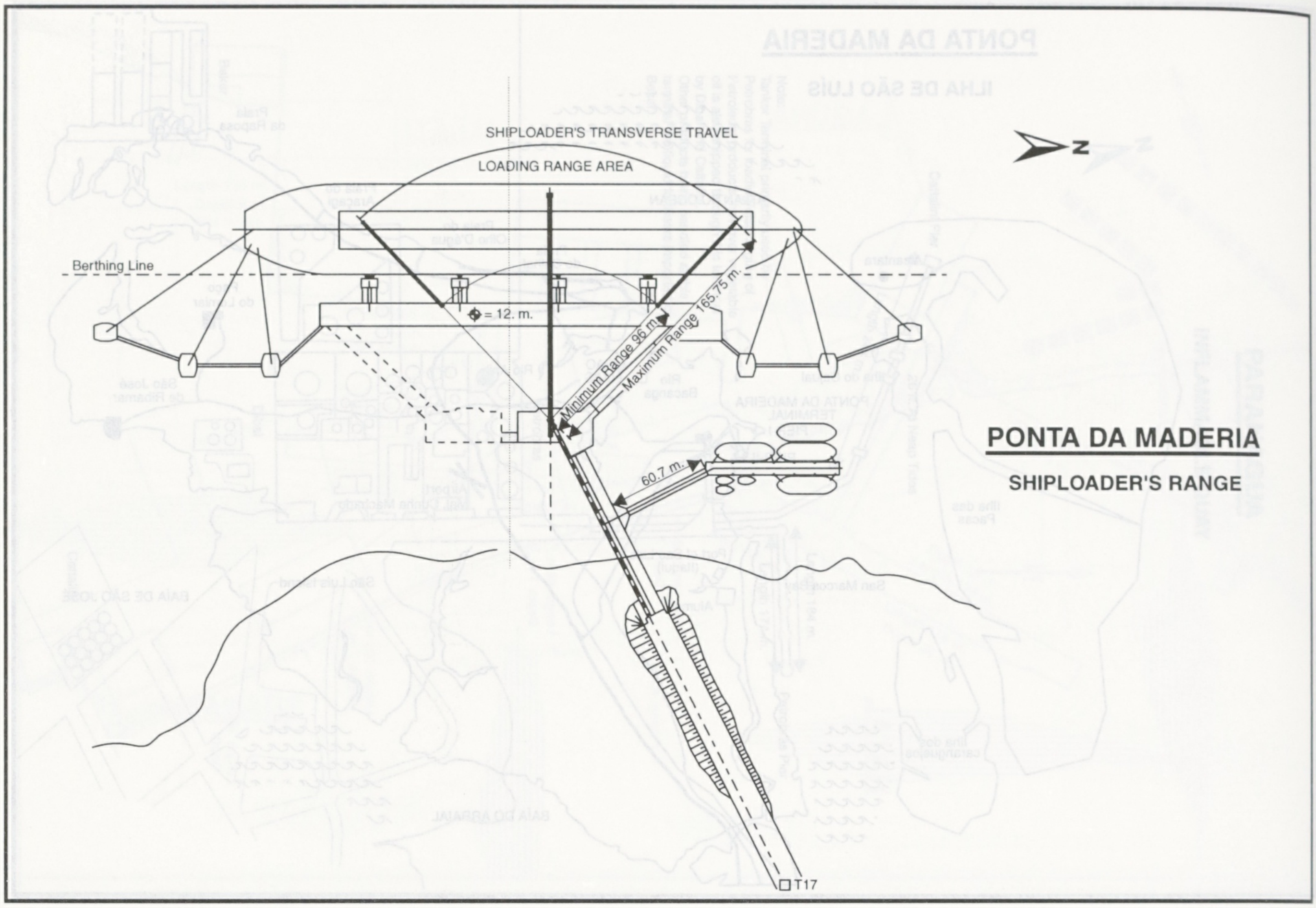
ATLANTIC OCEAN
Praia da Raposa
Praia do Araçagi
Praia do Olho D'água
Praia do Calhal
Alcantara
Paço do Lumiar
Ilha do Cajual
Rio Bacanga
SAO LUIS
Rio Anil
São José de Ribamar
PONTA DA MADEIRA TERMINAL
PIER-I
PIER-II
Airport Mal. Cunha Machado
Ilha das Pacas
Port of Sao Luis (Itaqui)
San Marcos Bay
Alumar
São Luís Island
BAÍA DE SÃO JOSÉ
Ilha dos caranguejos
BAÍA DO ARRAIAL



PONTA DA MADEIRA

PIER 1 - SHIPLOADER

20 m.
35 m.
Berthing Alignment
50 m.
50 m.
60 m.
55 m.
30 m.
30 m.
55 m.
60 m.
50 m.
50 m.
80 m.
24.5 m.
20 m.
35 m.
N
℄ Berthing Dock
℄ Shiploader
25 m.
①
②
③
④
⑤
⑥
⑦
⑧
LEGEND
① Breasting Dolphins
② Mooring Dolphins
③ Shiploader's runway
④ Service Platform
⑤ Service Bridge
⑥ Shiploader's Pivot Support
⑦ Access Bridge
⑧ Tug Berth

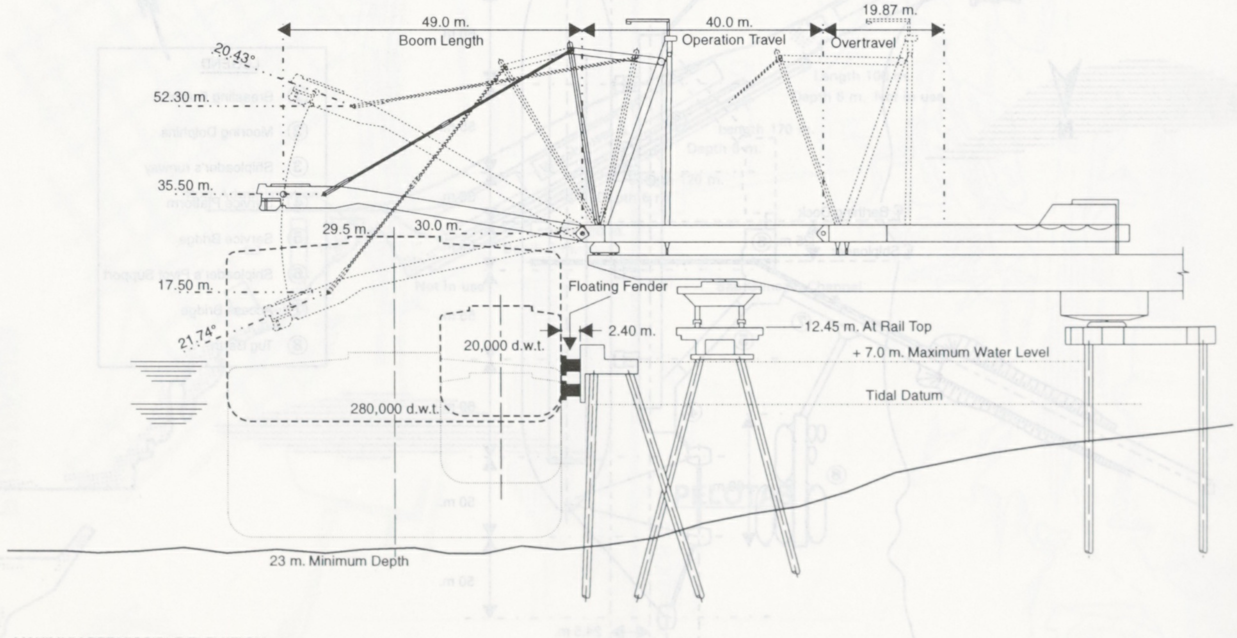

SHIPLOADER'S TRANSVERSE TRAVEL
LOADING RANGE AREA
Berthing Line
= 12. m.
Minimum Range 96 m.
Maximum Range 165.75 m.
60.7 m.
T17
N

PONTA DA MADERIA

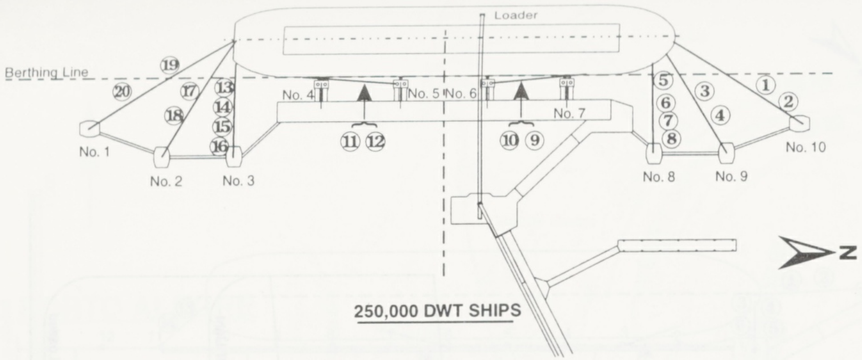
SHIPLOADER'S RANGE

PONTA DA MADERIA

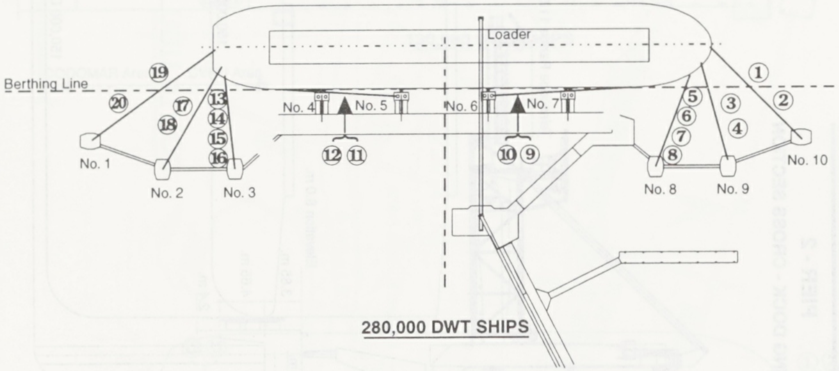
BERTHING DOCK CROSS SECTION (PIER 1)


49.0 m.
Boom Length
40.0 m.
Operation Travel
19.87 m.
Overtravel
20.43°
52.30 m.
35.50 m.
29.5 m.
30.0 m.
17.50 m.
21.74°
Floating Fender
2.40 m.
20,000 d.w.t.
280,000 d.w.t.
12.45 m. At Rail Top
+ 7.0 m. Maximum Water Level
Tidal Datum
23 m. Minimum Depth
PIER - I

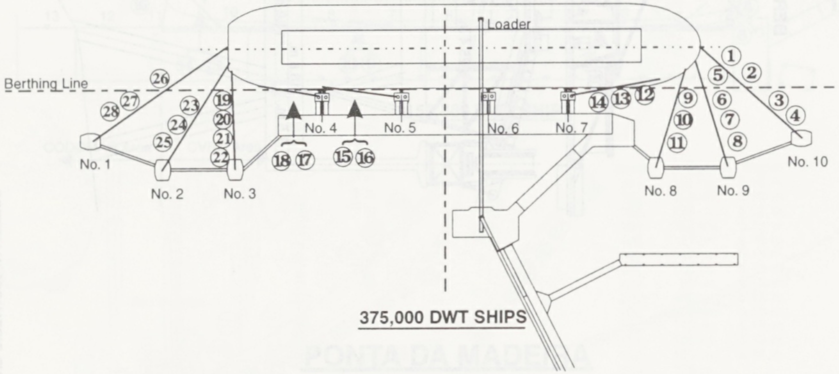
- MAXIMUM PERMISSIBLE ELEVATION
- NOTE : ELEVATIONS AND DISTANCES IN METERS


Loader
Berthing Line
No. 1
No. 2
No. 3
No. 4
No. 5
No. 6
No. 7
No. 8
No. 9
No. 10
N
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳

250,000 DWT SHIPS


Loader
Berthing Line
No. 1
No. 2
No. 3
No. 4
No. 5
No. 6
No. 7
No. 8
No. 9
No. 10
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳

280,000 DWT SHIPS


Loader
Berthing Line
No. 1
No. 2
No. 3
No. 4
No. 5
No. 6
No. 7
No. 8
No. 9
No. 10
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳ ㉑ ㉒ ㉓ ㉔ ㉕ ㉖ ㉗ ㉘

375,000 DWT SHIPS

LEGEND

▭ QUICK-RELEASE HOOKS-4x100ton

• QUICK RELEASE HOOKS-3x80ton

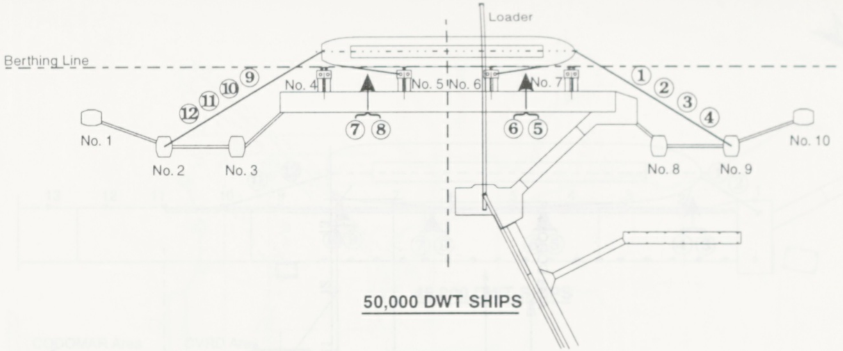
① LINE NUMBER

PONTA DA MADEIRA

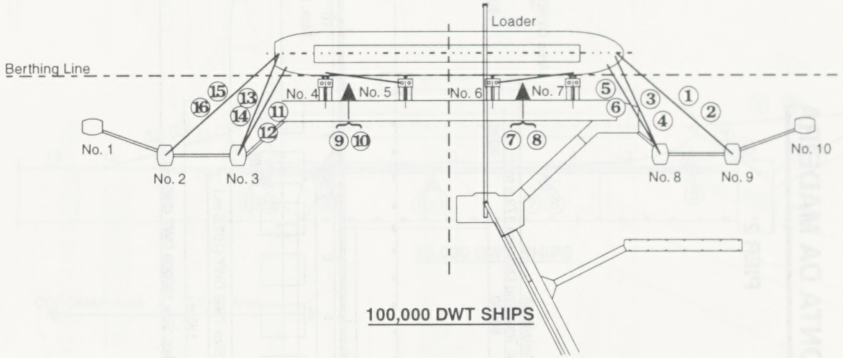
PIER 1

SUGGESTED MOORINGS

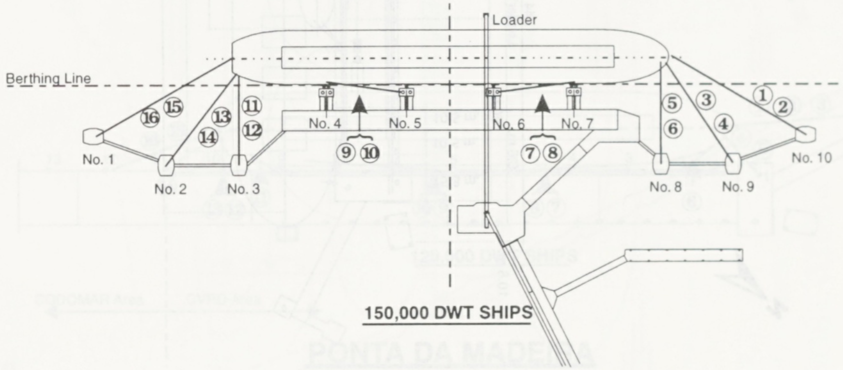
0 50 100
Scale in Meters


Loader
Berthing Line
No. 1
No. 2
No. 3
No. 4
No. 5
No. 6
No. 7
No. 8
No. 9
No. 10
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫

50,000 DWT SHIPS


Loader
Berthing Line
No. 1
No. 2
No. 3
No. 4
No. 5
No. 6
No. 7
No. 8
No. 9
No. 10
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯

100,000 DWT SHIPS


Loader
Berthing Line
No. 1
No. 2
No. 3
No. 4
No. 5
No. 6
No. 7
No. 8
No. 9
No. 10
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯

150,000 DWT SHIPS

LEGEND

▭ QUICK-RELEASE HOOKS-4x100ton

• QUICK RELEASE HOOKS-3x80ton

① LINE NUMBER

PONTA DA MADEIRA

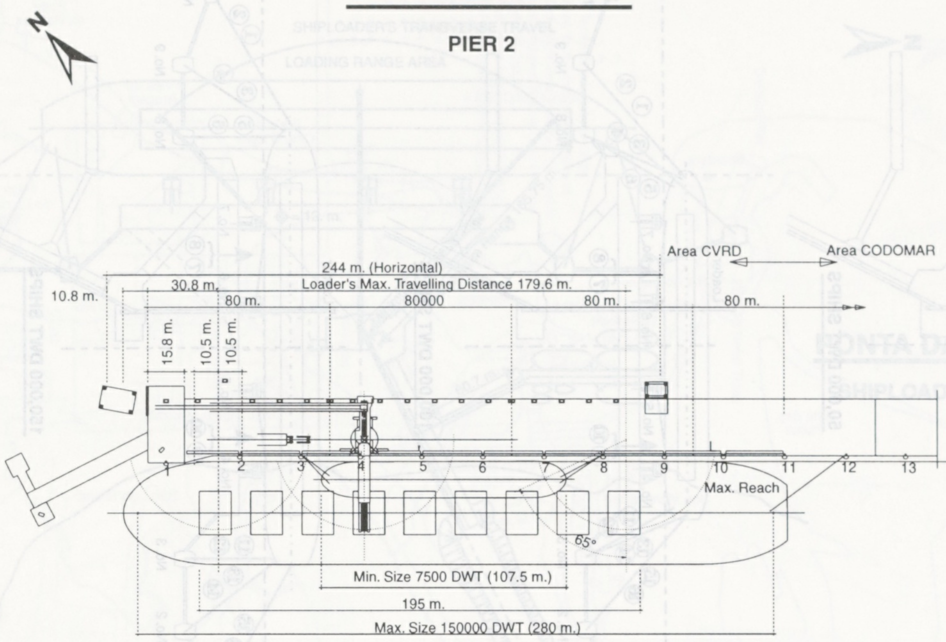
PIER 1

SUGGESTED MOORINGS

0 50 100
Scale in Meters

PONTA DA MADEIRA

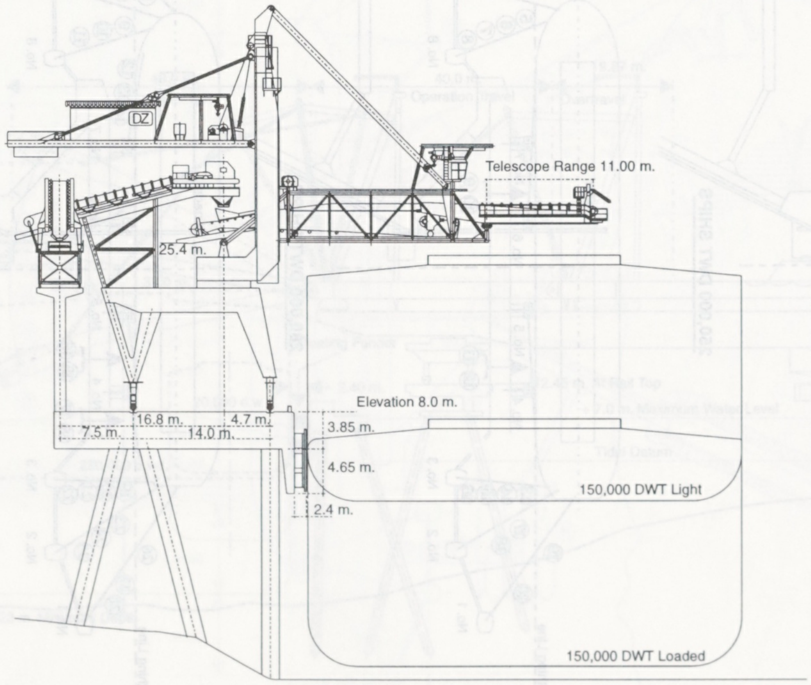
PIER 2


Area CVRD
Area CODOMAR
244 m. (Horizontal)
Loader's Max. Travelling Distance 179.6 m.
10.8 m.
30.8 m.
80 m.
80000
80 m.
80 m.
15.8 m.
10.5 m.
10.5 m.
1
2
3
4
5
6
7
8
9
10
11
12
13
Max. Reach
65°
Min. Size 7500 DWT (107.5 m.)
195 m.
Max. Size 150000 DWT (280 m.)

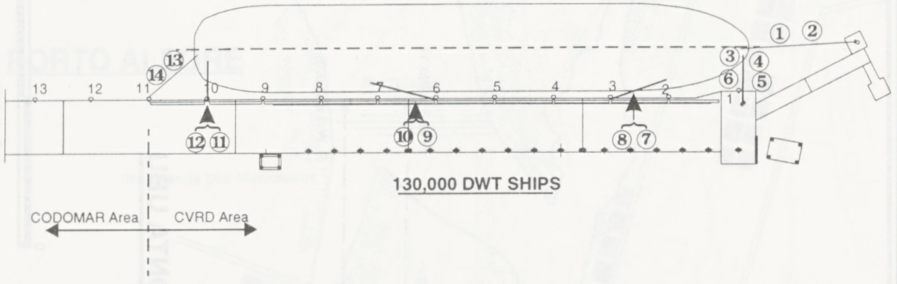
PONTA DA MADEIRA

PIER - 2

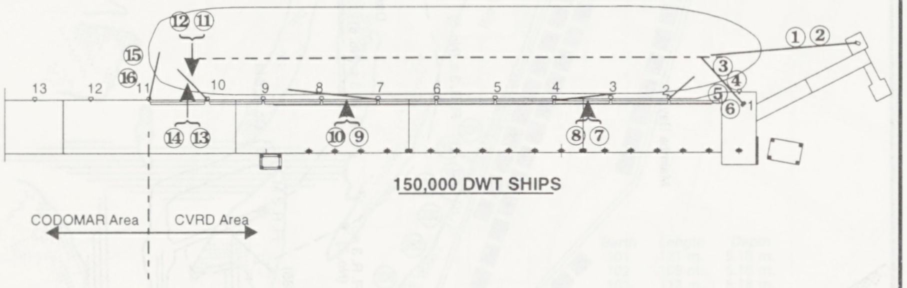
BERTHING DOCK - CROSS SECTION


DZ
Telescope Range 11.00 m.
25.4 m.
Elevation 8.0 m.
16.8 m.
4.7 m.
7.5 m.
14.0 m.
3.85 m.
4.65 m.
2.4 m.
150,000 DWT Light
150,000 DWT Loaded

NOTE : ELEVATIONS AND DISTANCES IN METERS


①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑫
⑬
⑭
13
12
11
10
9
8
7
6
5
4
3
2
1
CODOMAR Area
CVRD Area

130,000 DWT SHIPS


①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑫
⑬
⑭
⑮
⑯
13
12
11
10
9
8
7
6
5
4
3
2
1
CODOMAR Area
CVRD Area

150,000 DWT SHIPS

PONTA DA MADEIRA

PIER 2

SUGGESTED MOORINGS

LEGEND

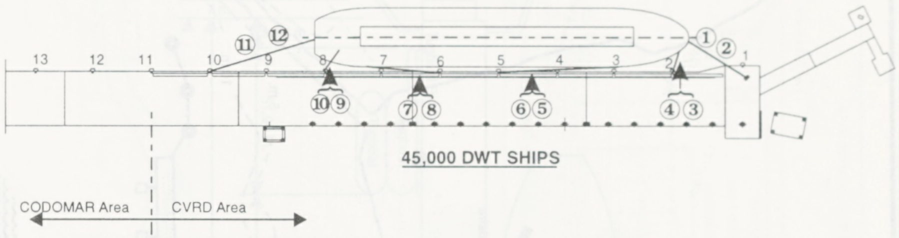
▭ QUICK-RELEASE HOOKS-4x100ton

• QUICK RELEASE HOOKS-3x80ton

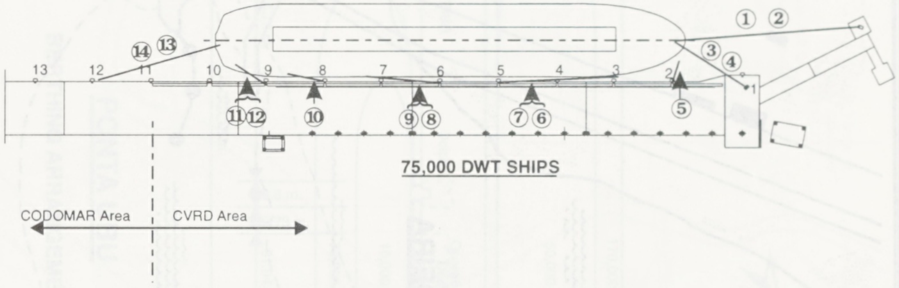
① LINE NUMBER

0 50 100

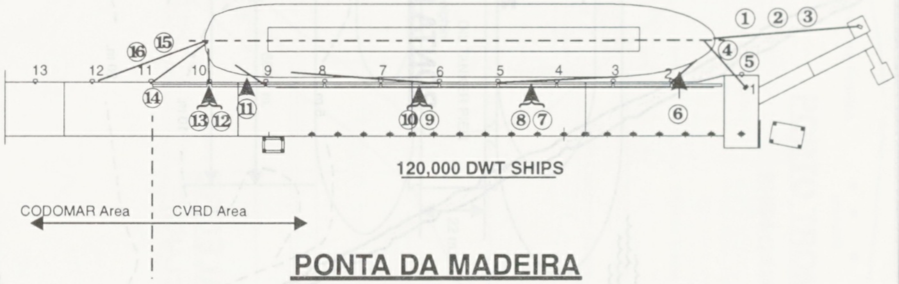
Scale in Meters


①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑫
13
12
11
10
9
8
7
6
5
4
3
2
1
CODOMAR Area
CVRD Area

45,000 DWT SHIPS


①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑫
⑬
⑭
13
12
11
10
9
8
7
6
5
4
3
2
1
CODOMAR Area
CVRD Area

75,000 DWT SHIPS


①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑫
⑬
⑭
⑮
⑯
13
12
11
10
9
8
7
6
5
4
3
2
1
CODOMAR Area
CVRD Area

120,000 DWT SHIPS

PONTA DA MADEIRA

PIER 2

SUGGESTED MOORINGS

LEGEND

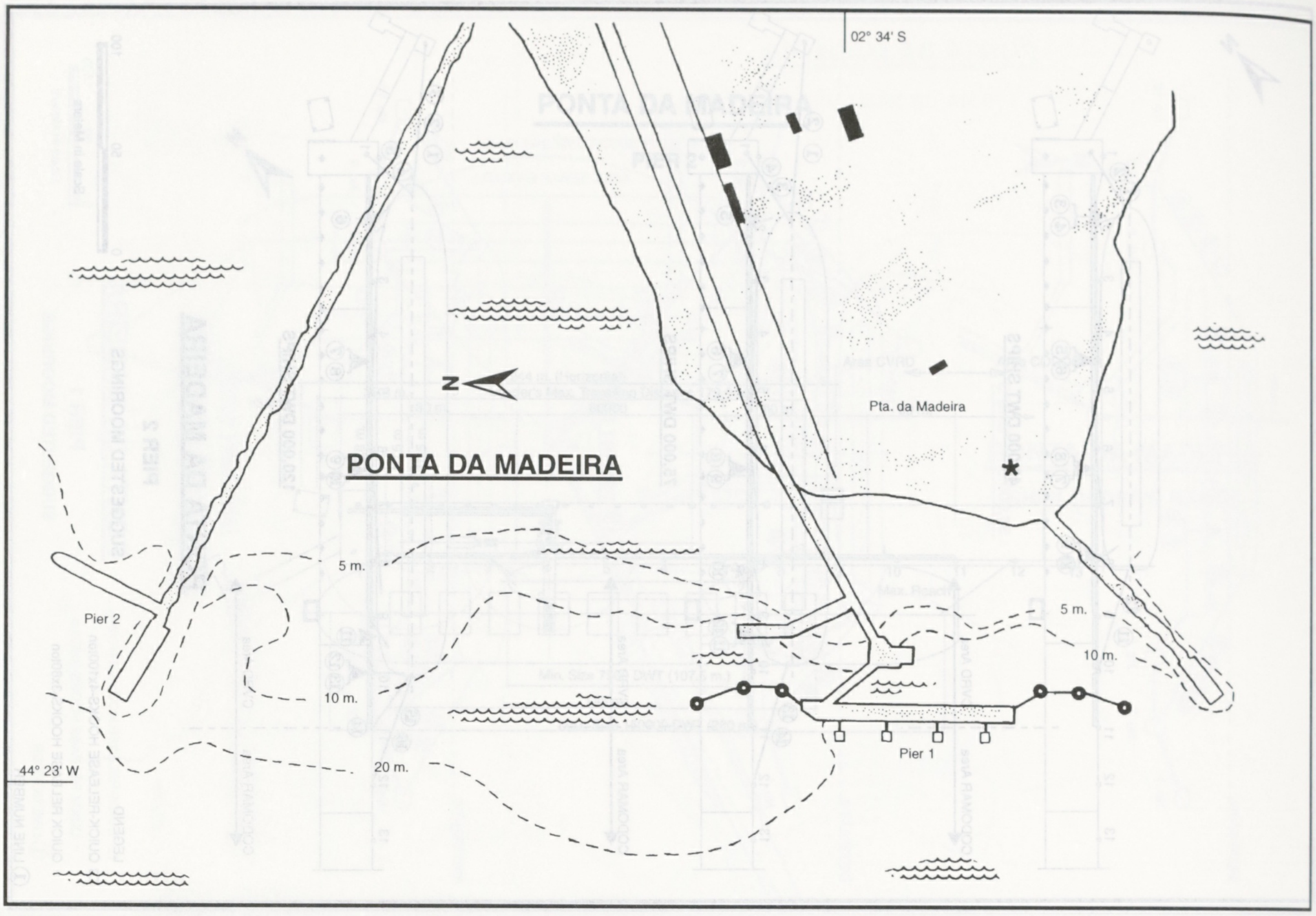
▭ QUICK-RELEASE HOOKS-4x100ton

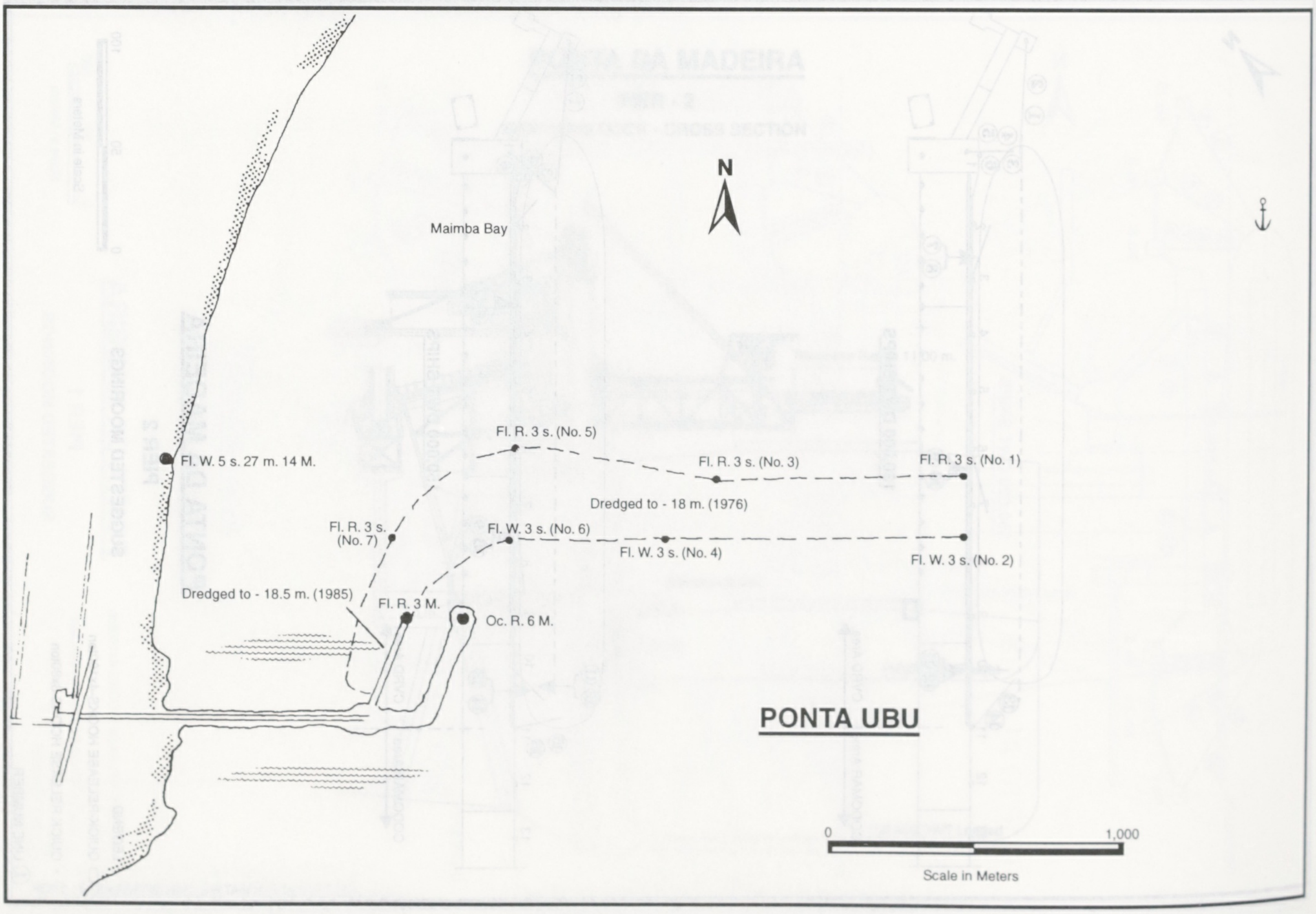
• QUICK RELEASE HOOKS-3x80ton

① LINE NUMBER

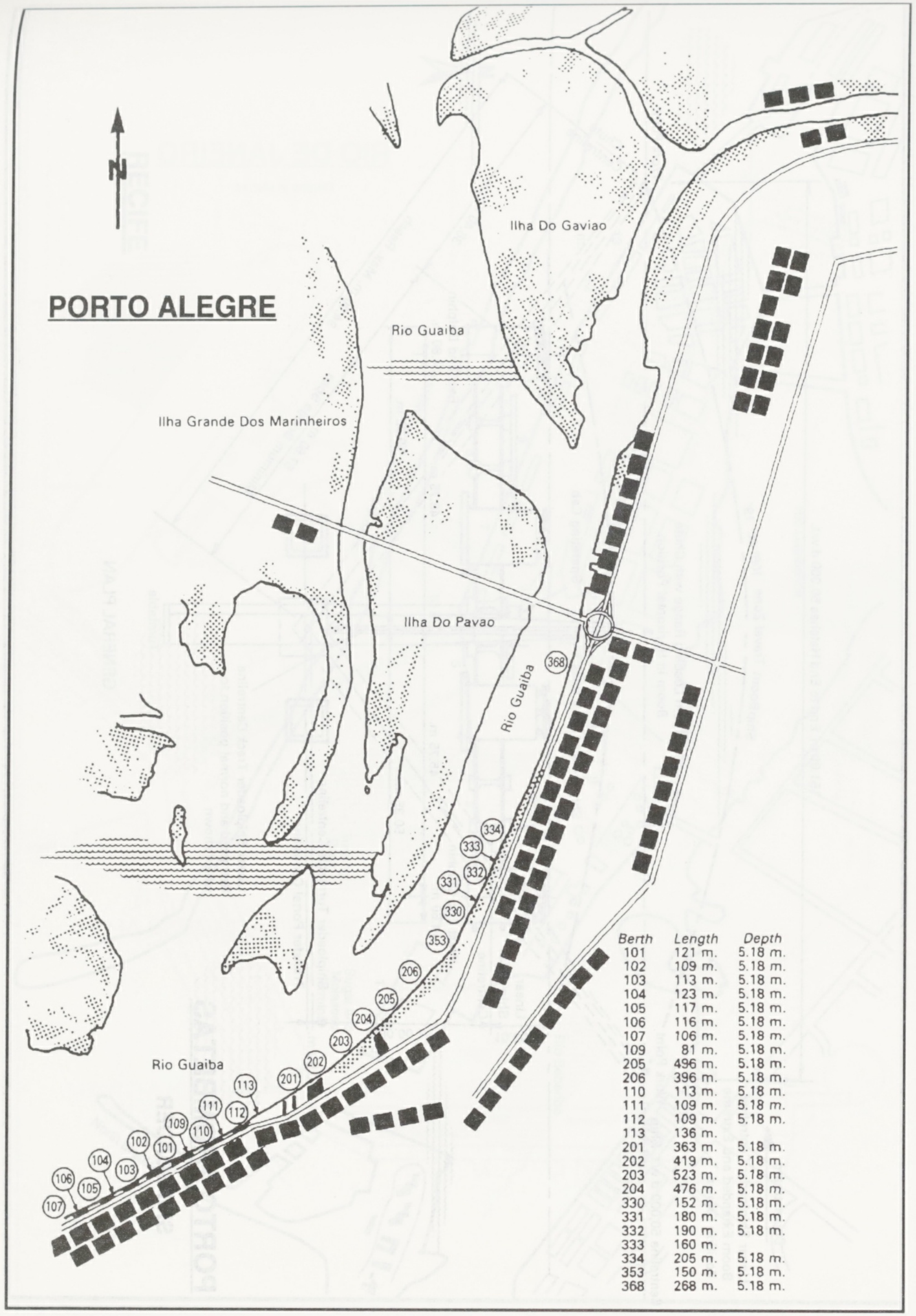
0 50 100

Scale in Meters


02° 34' S
N
PONTA DA MADEIRA
Pta. da Madeira
5 m.
10 m.
20 m.
Pier 2
Pier 1
44° 23' W


N
Maimba Bay
Fl. W. 5 s. 27 m. 14 M.
Fl. R. 3 s. (No. 5)
Fl. R. 3 s. (No. 3)
Fl. R. 3 s. (No. 1)
Dredged to - 18 m. (1976)
Fl. R. 3 s. (No. 7)
Fl. W. 3 s. (No. 6)
Fl. W. 3 s. (No. 4)
Fl. W. 3 s. (No. 2)
Dredged to - 18.5 m. (1985)
Fl. R. 3 M.
Oc. R. 6 M.
PONTA UBU
0
1,000
Scale in Meters

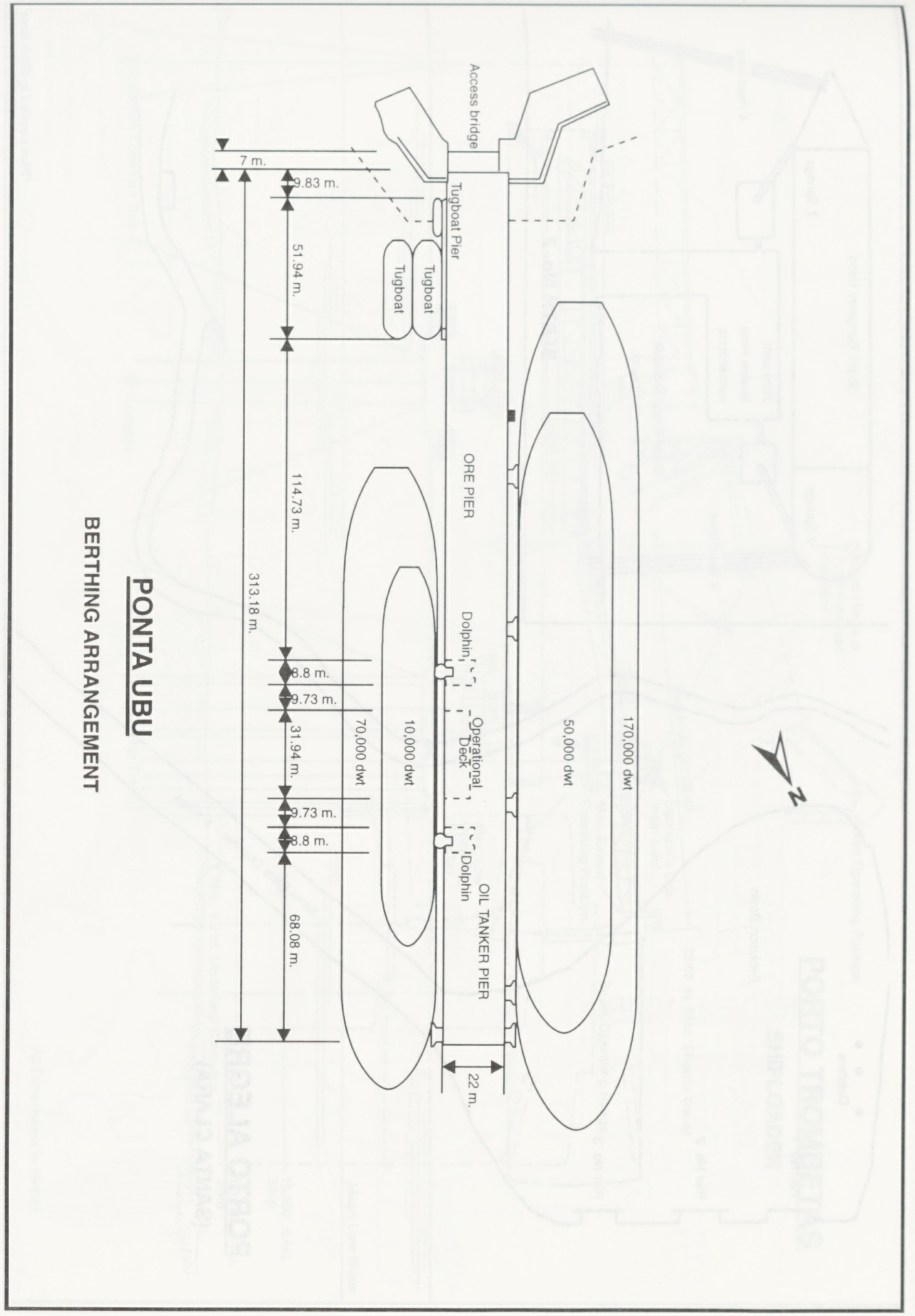
PORTO ALEGRE

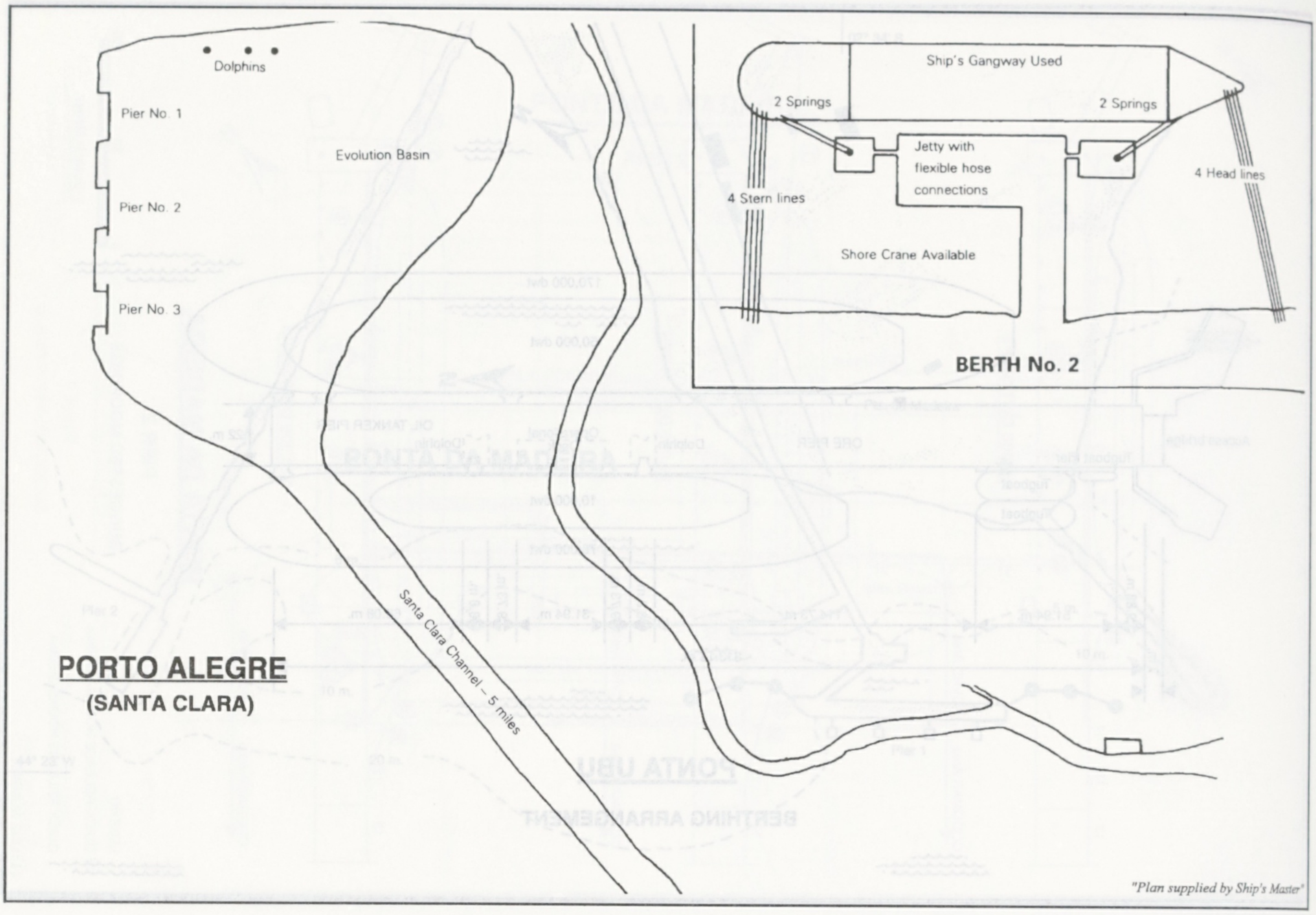

N
Ilha Do Gaviao
Rio Guaiba
Ilha Grande Dos Marinheiros
Ilha Do Pavao
Rio Guaiba
Rio Guaiba
368
334
333
332
331
330
353
206
205
204
203
202
201
113
112
111
110
109
102
101
104
103
106
105
107

Berth	*Length*	*Depth*
101	121 m.	5.18 m.
102	109 m.	5.18 m.
103	113 m.	5.18 m.
104	123 m.	5.18 m.
105	117 m.	5.18 m.
106	116 m.	5.18 m.
107	106 m.	5.18 m.
109	81 m.	5.18 m.
205	496 m.	5.18 m.
206	396 m.	5.18 m.
110	113 m.	5.18 m.
111	109 m.	5.18 m.
112	109 m.	5.18 m.
113	136 m.	
201	363 m.	5.18 m.
202	419 m.	5.18 m.
203	523 m.	5.18 m.
204	476 m.	5.18 m.
330	152 m.	5.18 m.
331	180 m.	5.18 m.
332	190 m.	5.18 m.
333	160 m.	
334	205 m.	5.18 m.
353	150 m.	5.18 m.
368	268 m.	5.18 m.

PONTA UBU

BERTHING ARRANGEMENT

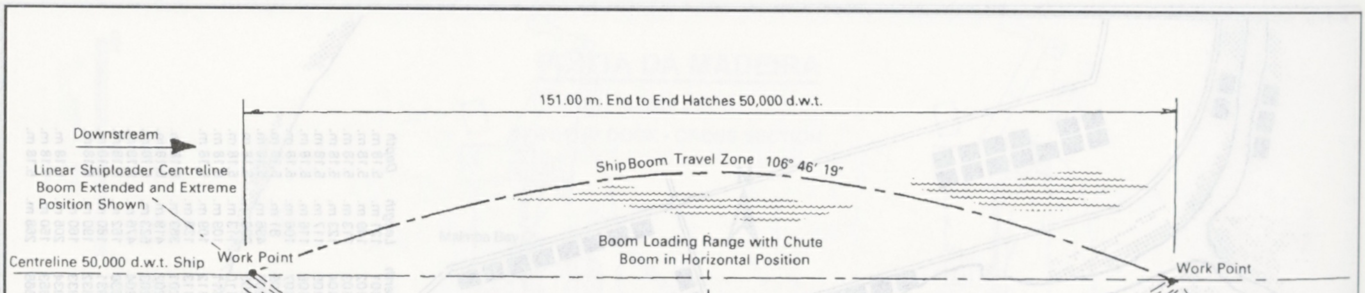

Access bridge
Tugboat Pier
Tugboat
Tugboat
7 m.
9.83 m.
51.94 m.
114.73 m.
313.18 m.
8.8 m.
9.73 m.
31.94 m.
9.73 m.
8.8 m.
68.08 m.
ORE PIER
Dolphin
Operational Deck
Dolphin
OIL TANKER PIER
70,000 dwt
10,000 dwt
50,000 dwt
170,000 dwt
22 m.
N



PORTO ALEGRE
(SANTA CLARA)

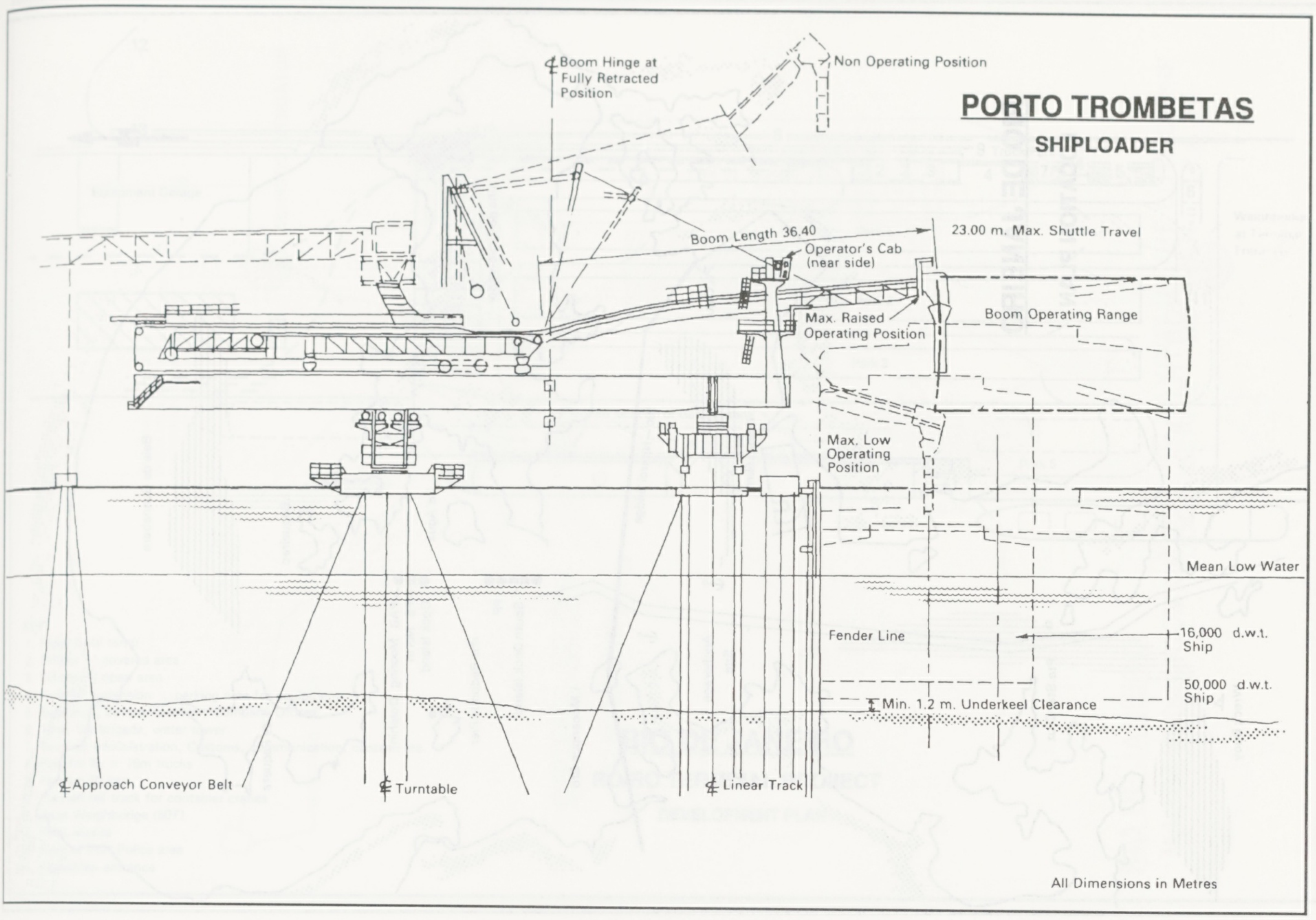
Dolphins
Pier No. 1
Evolution Basin
Pier No. 2
Pier No. 3
Santa Clara Channel – 5 miles
Ship's Gangway Used
2 Springs
2 Springs
Jetty with
flexible hose
connections
4 Stern lines
4 Head lines
Shore Crane Available
BERTH No. 2

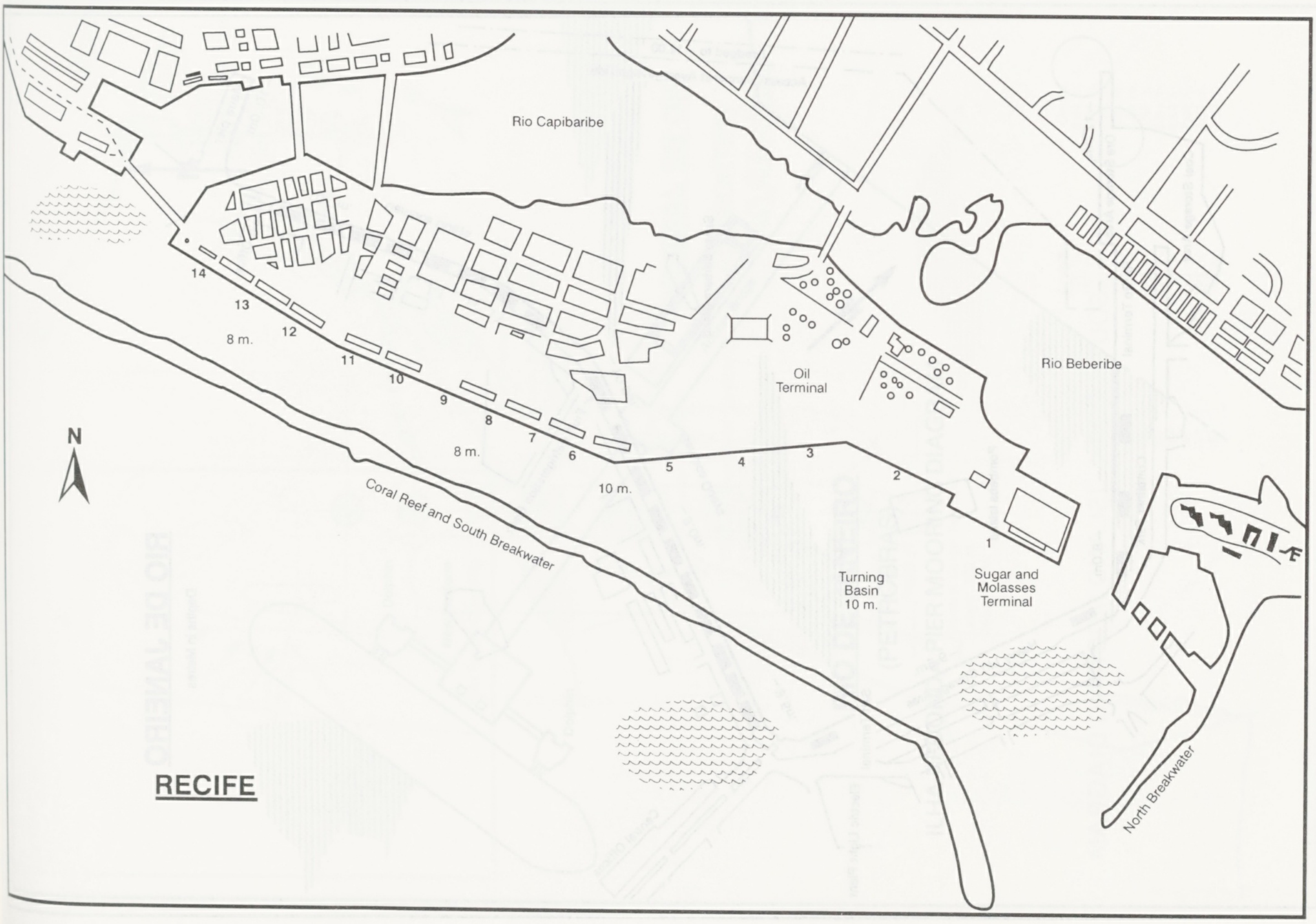
"Plan supplied by Ship's Master"

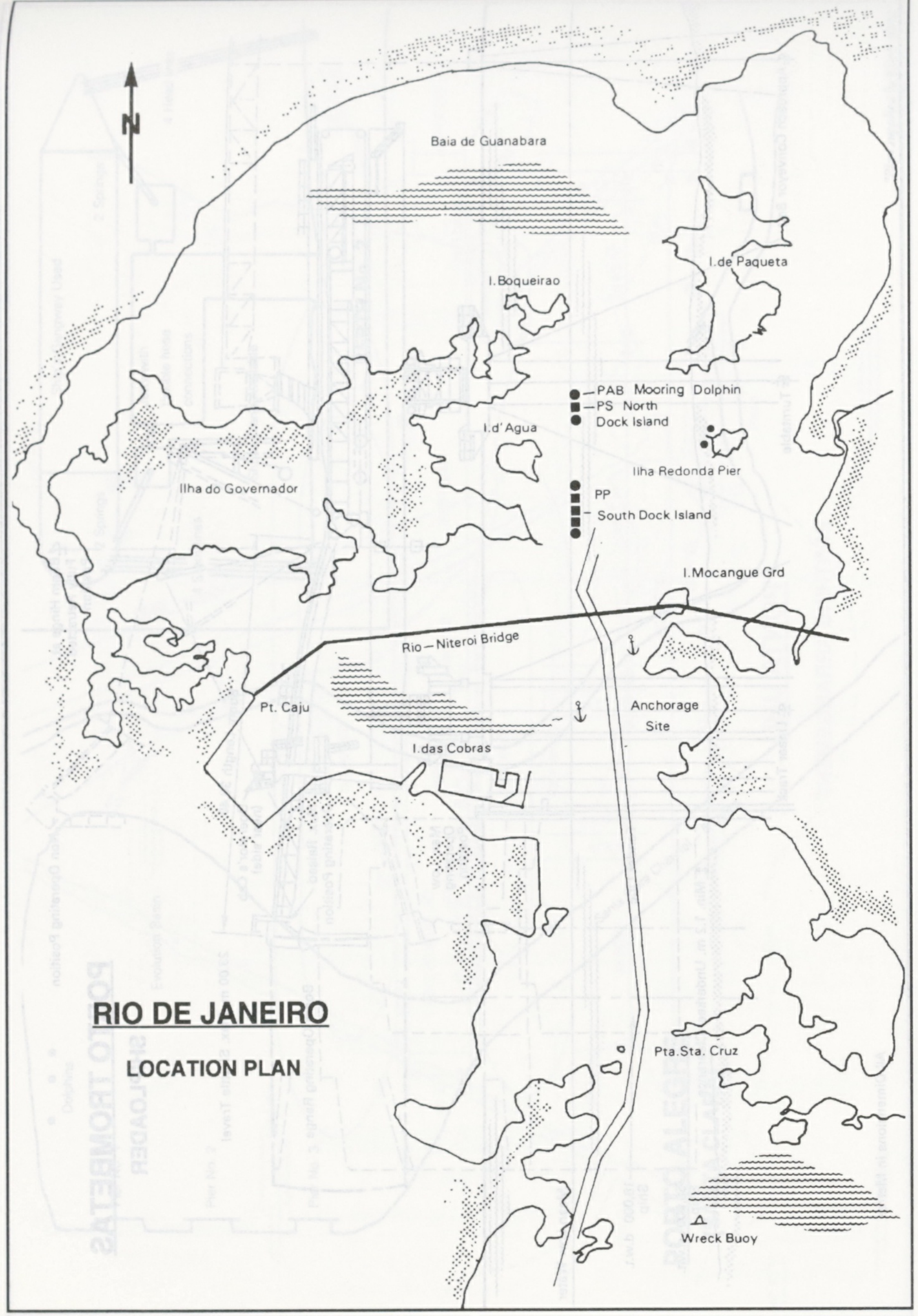


PORTO TROMBETAS
SHIPLOADER

151.00 m. End to End Hatches 50,000 d.w.t.
Downstream
Linear Shiploader Centreline
Boom Extended and Extreme
Position Shown
Ship Boom Travel Zone 106° 46' 19"
Boom Loading Range with Chute
Boom in Horizontal Position
Centreline 50,000 d.w.t. Ship
Work Point
Work Point
Chute Centreline
Shiploader Gantry Rails
Operating Cab
10.00 m.
Linear
Shiploader
Centreline
West End Dolphin
East End Dolphin
4.60 m.
45.75 m.
45.75 m.
4.60 m.
50.35 m.
50.35 m.
36.40 m.
30.00 m.
94.00 m. Max. Reach
57.60 m.
Minimum Bridge Span
Shiploader Turntable Centreline
0.50 m.
Transfer Portal Centreline
Linear Shiploader Track Centreline
Retracted and normal position to
wharf shown
Turntable
GENERAL PLAN


PORTO TROMBETAS
SHIPLOADER
Boom Hinge at Fully Retracted Position
Non Operating Position
Boom Length 36.40
23.00 m. Max. Shuttle Travel
Operator's Cab (near side)
Max. Raised Operating Position
Boom Operating Range
Max. Low Operating Position
Mean Low Water
Fender Line
16,000 d.w.t. Ship
50,000 d.w.t. Ship
Min. 1.2 m. Underkeel Clearance
Approach Conveyor Belt
Turntable
Linear Track
All Dimensions in Metres

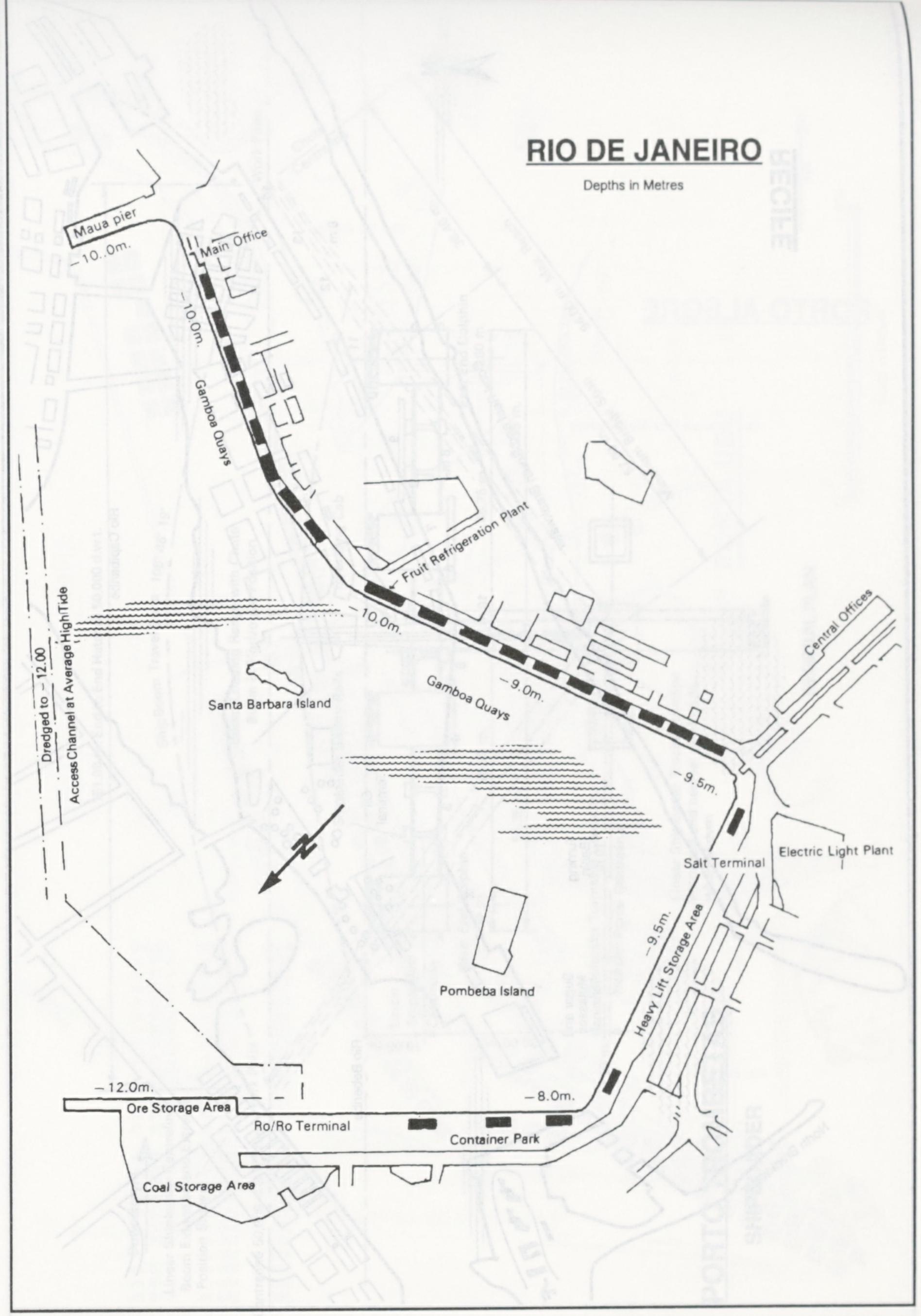

RECIFE
Rio Capibaribe
Rio Beberibe
Oil Terminal
14
13
12
11
10
9
8
7
6
5
4
3
2
1
8 m.
8 m.
10 m.
N
Coral Reef and South Breakwater
Turning Basin 10 m.
Sugar and Molasses Terminal
North Breakwater



RIO DE JANEIRO

LOCATION PLAN

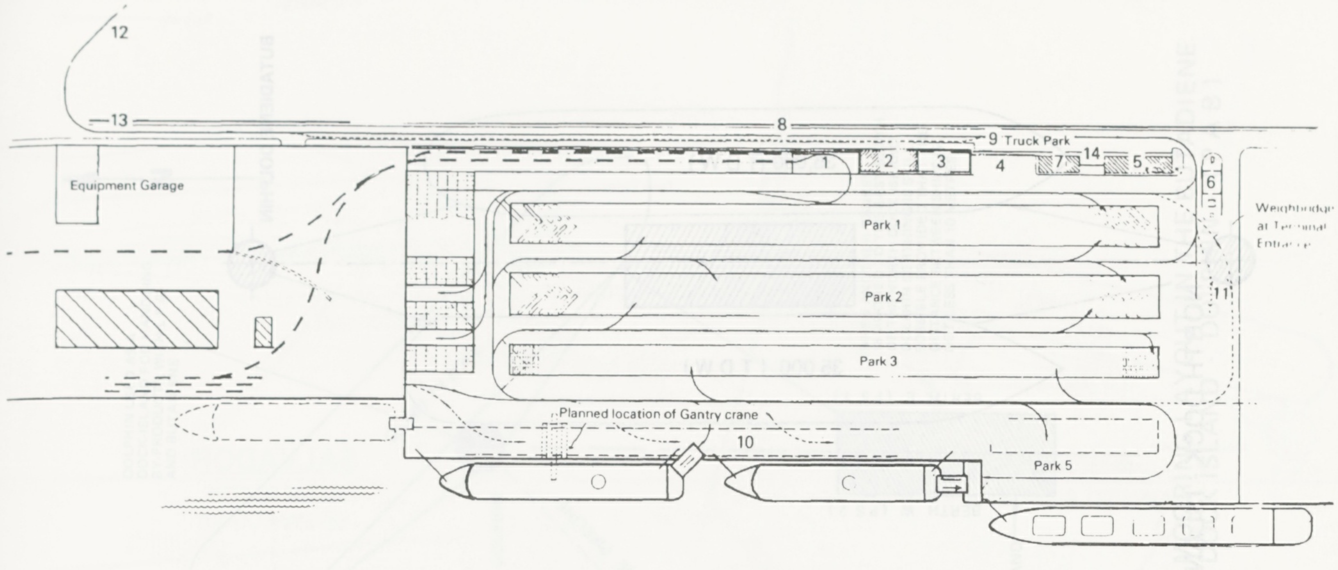
N
Baia de Guanabara
I.de Paqueta
I.Boqueirao
PAB Mooring Dolphin
PS North
Dock Island
I.d'Agua
Ilha Redonda Pier
Ilha do Governador
PP
South Dock Island
I.Mocangue Grd
Rio—Niteroi Bridge
Pt. Caju
Anchorage Site
I.das Cobras
Pta.Sta. Cruz
Wreck Buoy



RIO DE JANEIRO

Depths in Metres

Maua pier
−10.0m.
Main Office
−10.0m.
Gamboa Quays
Fruit Refrigeration Plant
−10.0m.
Central Offices
−9.0m.
Gamboa Quays
Santa Barbara Island
Dredged to −12.00
Access Channel at Average High Tide
−9.5m.
Electric Light Plant
Salt Terminal
N
Pombeba Island
−9.5m.
Heavy Lift Storage Area
−12.0m.
Ore Storage Area
−8.0m.
Ro/Ro Terminal
Container Park
Coal Storage Area

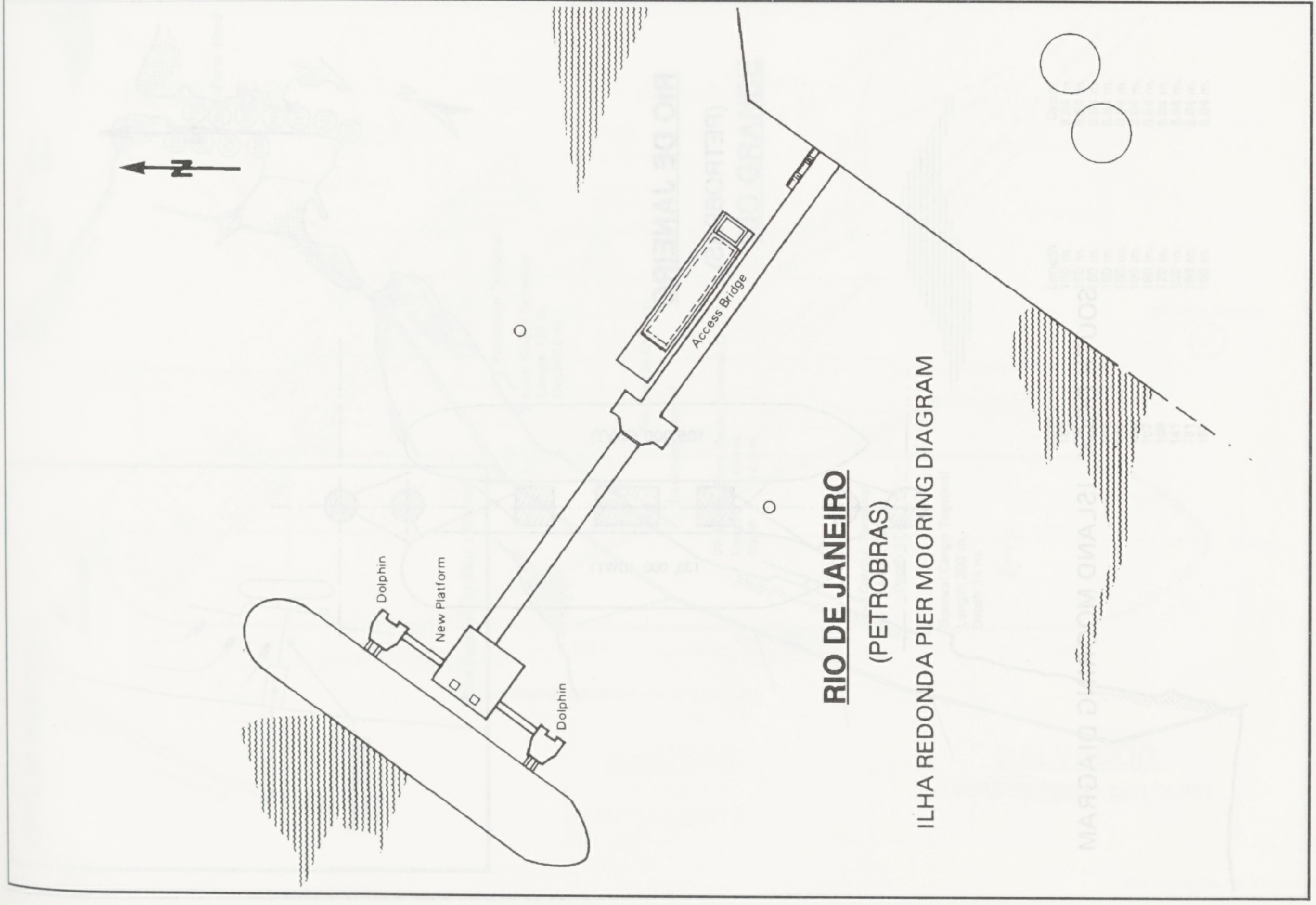

12
13
8
9 Truck Park
1
2
3
4
7
14
5
6
Equipment Garage
Park 1
Park 2
Park 3
Park 5
Weighbridge at Terminal Entrance
11
Planned location of Gantry crane
10

KEY:
1. Piggy-back ramp
2. Offices – covered area
3. Offices – open area
4. Area for expansion – parking area for equipment
5. Reception, accommodation, Company Offices
6. Tank, fire brigade, water tower
7. Terminal administration, Customs, communication, canteen etc.
8. Park for 25 × 16m trucks
9. Park for 60 cars
10. Planned rail track for container cranes
11. Road Weighbridge (50T)
12. Road access
13. Limit of Port Police area
14. Pedestrian entrance

RIO DE JANEIRO

RO/RO TERMINAL PROJECT

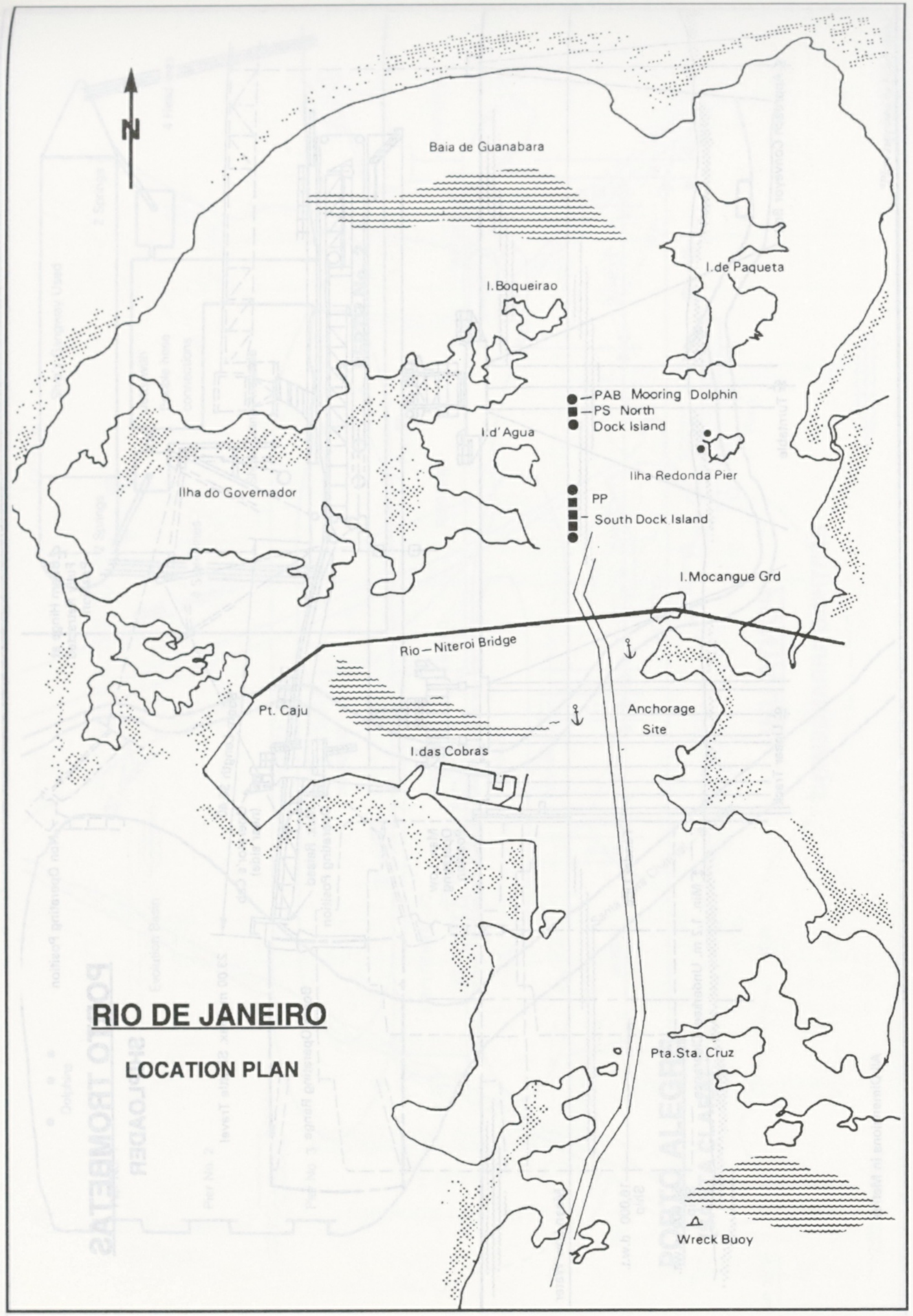
DEVELOPMENT PLAN


N
Access Bridge
Dolphin
New Platform
Dolphin

RIO DE JANEIRO

(PETROBRAS)

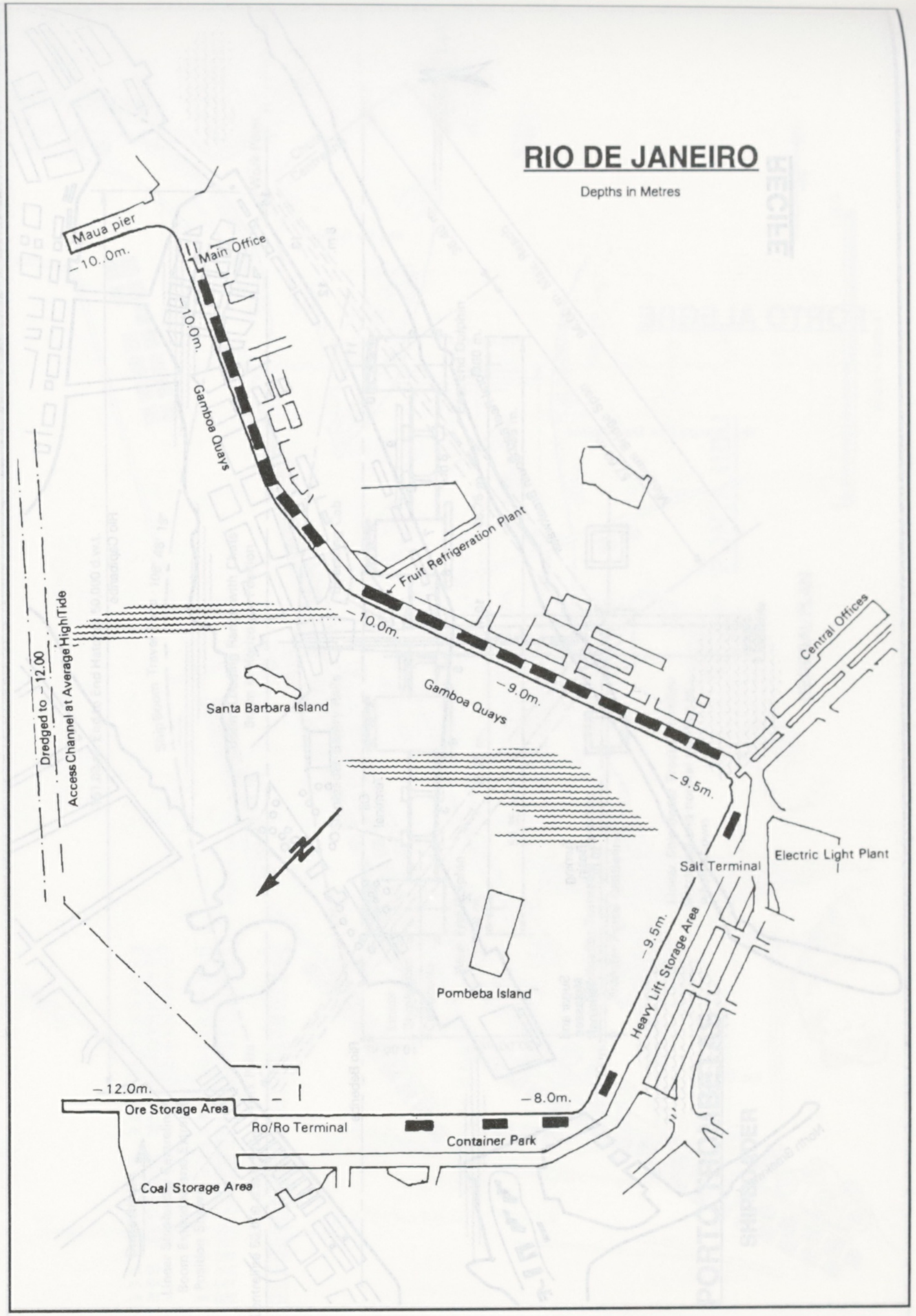
ILHA REDONDA PIER MOORING DIAGRAM



RIO DE JANEIRO

LOCATION PLAN

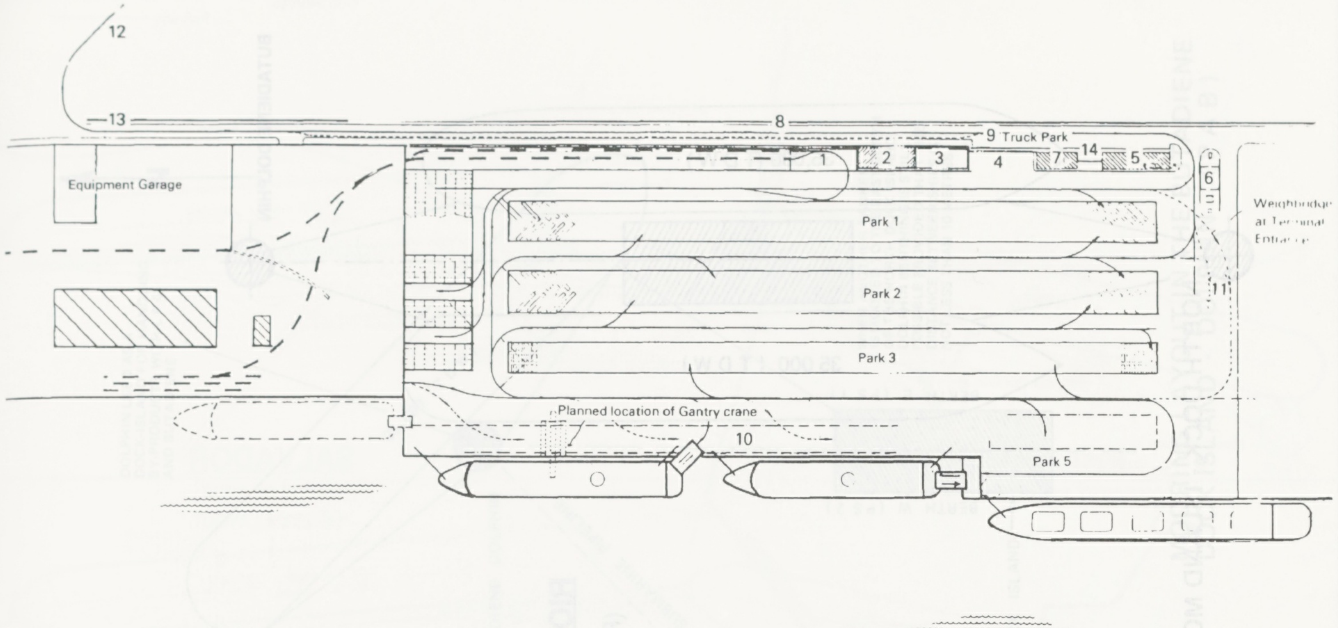
N
Baia de Guanabara
I.de Paqueta
I.Boqueirao
PAB Mooring Dolphin
PS North
Dock Island
I.d' Agua
Ilha Redonda Pier
Ilha do Governador
PP
South Dock Island
I.Mocangue Grd
Rio – Niteroi Bridge
Pt. Caju
Anchorage
Site
I.das Cobras
Pta.Sta. Cruz
Wreck Buoy



RIO DE JANEIRO

Depths in Metres

Maua pier
–10..0m.
Main Office
–10.0m.
Gamboa Quays
Fruit Refrigeration Plant
–10.0m.
Central Offices
–9.0m.
Gamboa Quays
Santa Barbara Island
Dredged to – 12.00
Access Channel at Average High Tide
–9.5m.
N
Salt Terminal
Electric Light Plant
–9.5m.
Heavy Lift Storage Area
Pombeba Island
–12.0m.
–8.0m.
Ore Storage Area
Ro/Ro Terminal
Container Park
Coal Storage Area

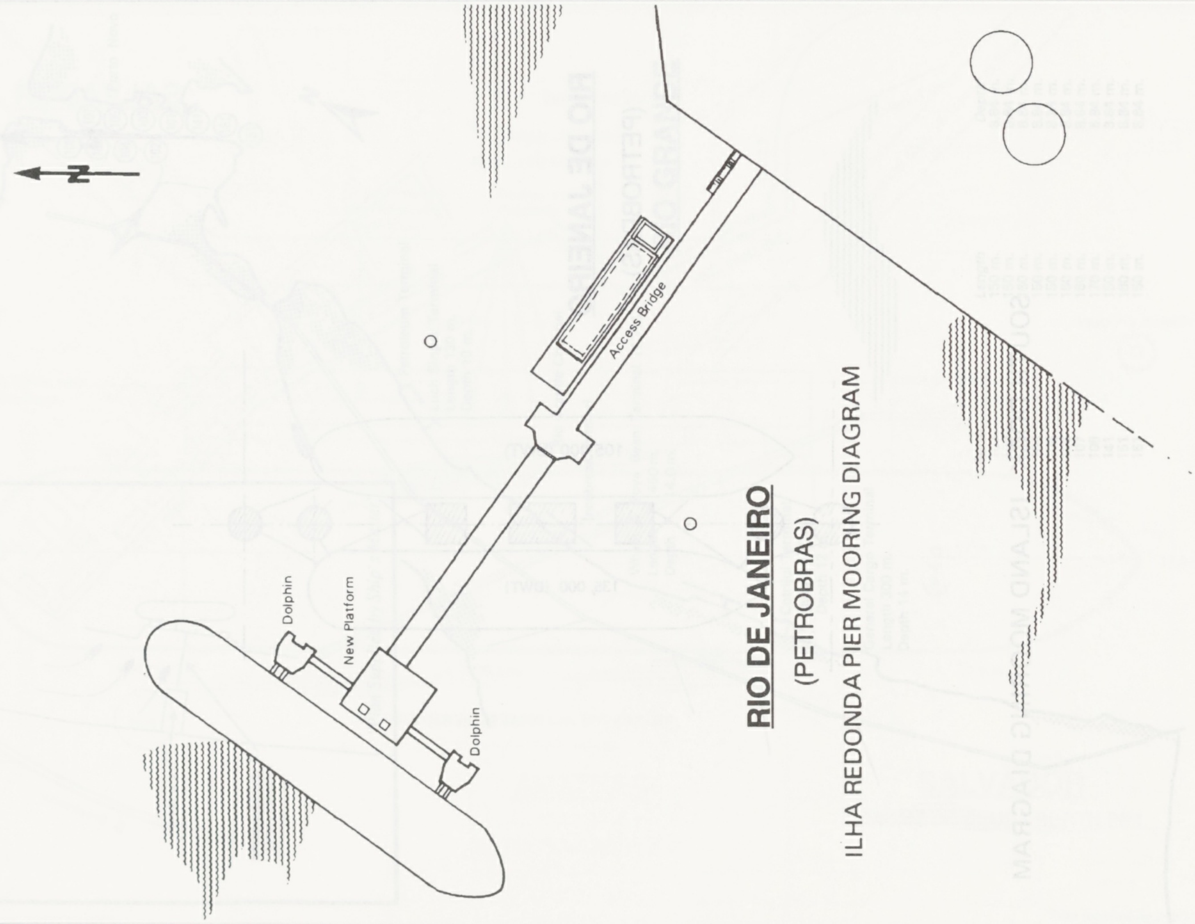

12
13
8
9 Truck Park
Equipment Garage
1
2
3
4
7
14
5
6
Weighbridge at Terminal Entrance
Park 1
Park 2
Park 3
11
Planned location of Gantry crane
10
Park 5

KEY:
1. Piggy-back ramp
2. Offices – covered area
3. Offices – open area
4. Area for expansion – parking area for equipment
5. Reception, accommodation, Company Offices
6. Tank, fire brigade, water tower
7. Terminal administration, Customs, communication, canteen etc.
8. Park for 25 × 16m trucks
9. Park for 60 cars
10. Planned rail track for container cranes
11. Road Weighbridge (50T)
12. Road access
13. Limit of Port Police area
14. Pedestrian entrance

RIO DE JANEIRO

RO/RO TERMINAL PROJECT

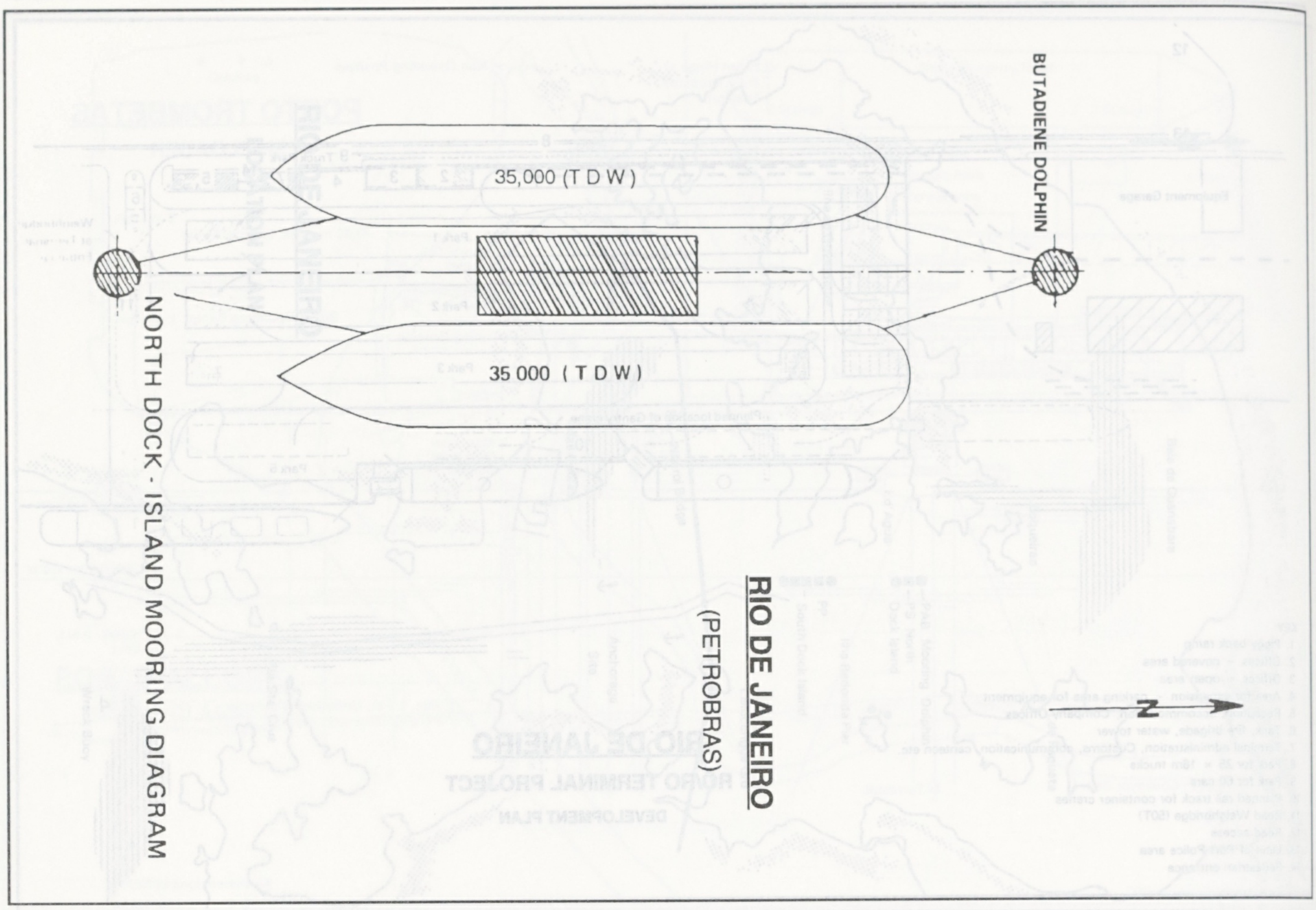
DEVELOPMENT PLAN


N
Access Bridge
Dolphin
New Platform
Dolphin

RIO DE JANEIRO

(PETROBRAS)

ILHA REDONDA PIER MOORING DIAGRAM

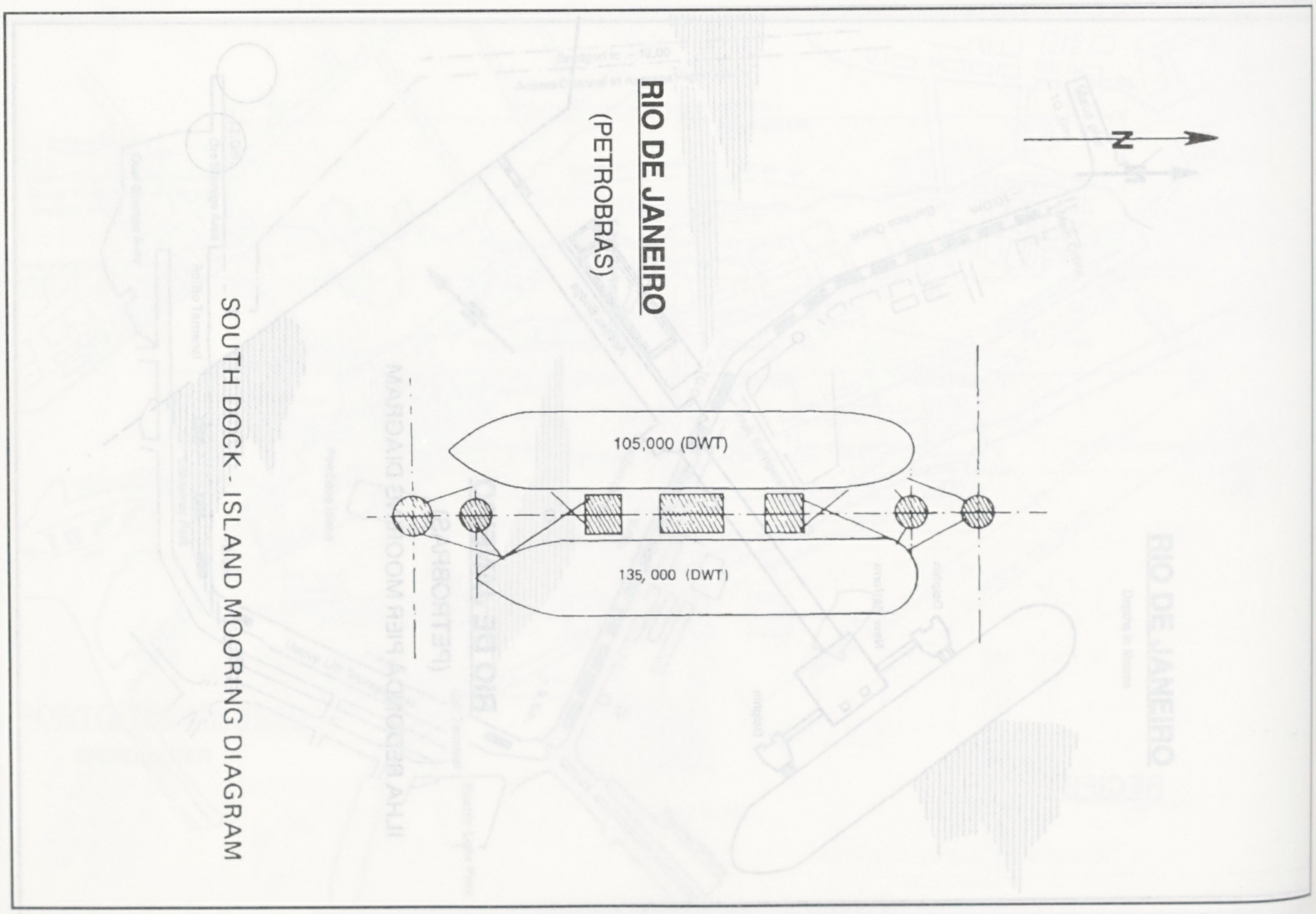


RIO DE JANEIRO

(PETROBRAS)

NORTH DOCK - ISLAND MOORING DIAGRAM

BUTADIENE DOLPHIN
35,000 (T D W)
35 000 (T D W)
N

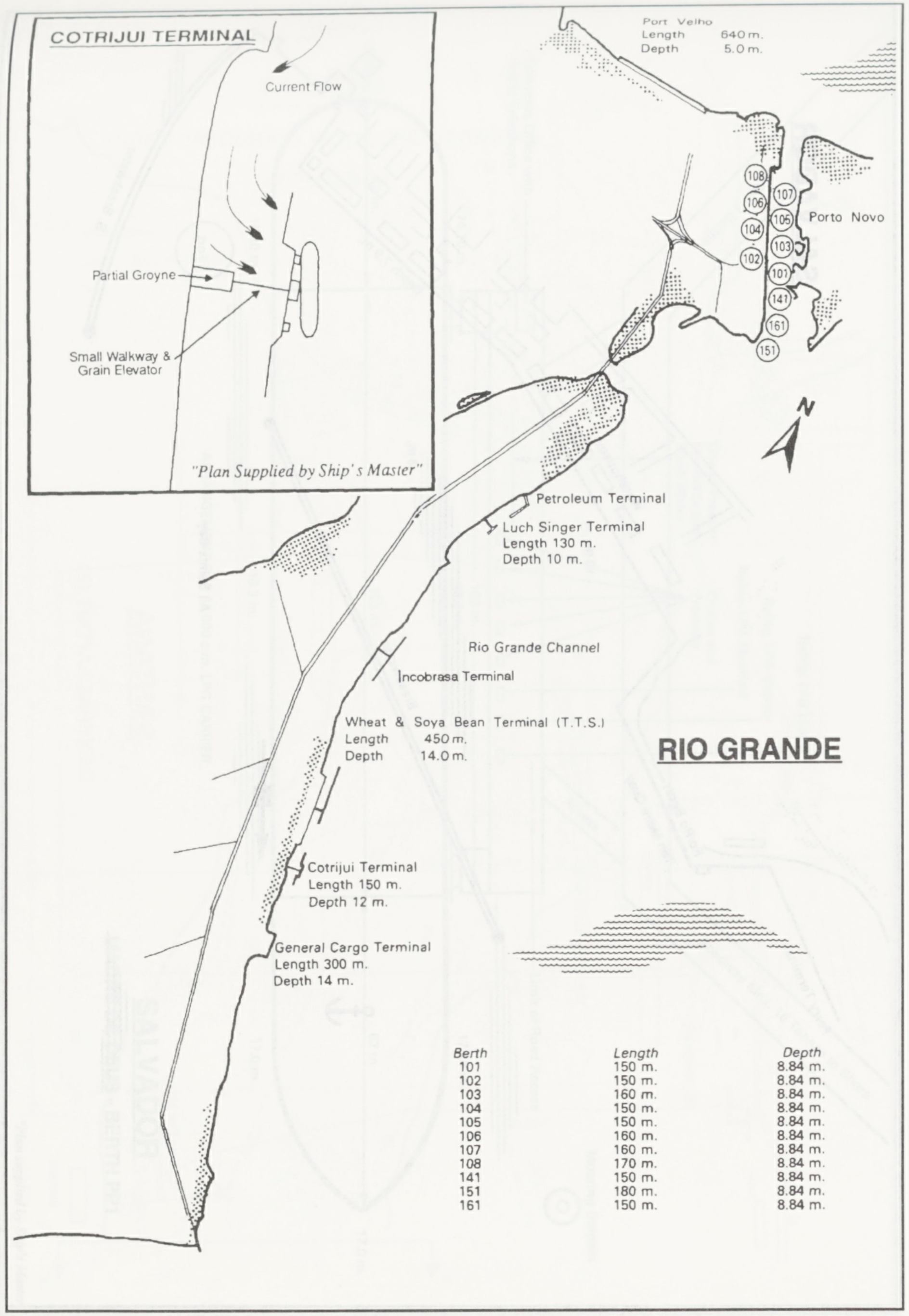


RIO DE JANEIRO

(PETROBRAS)

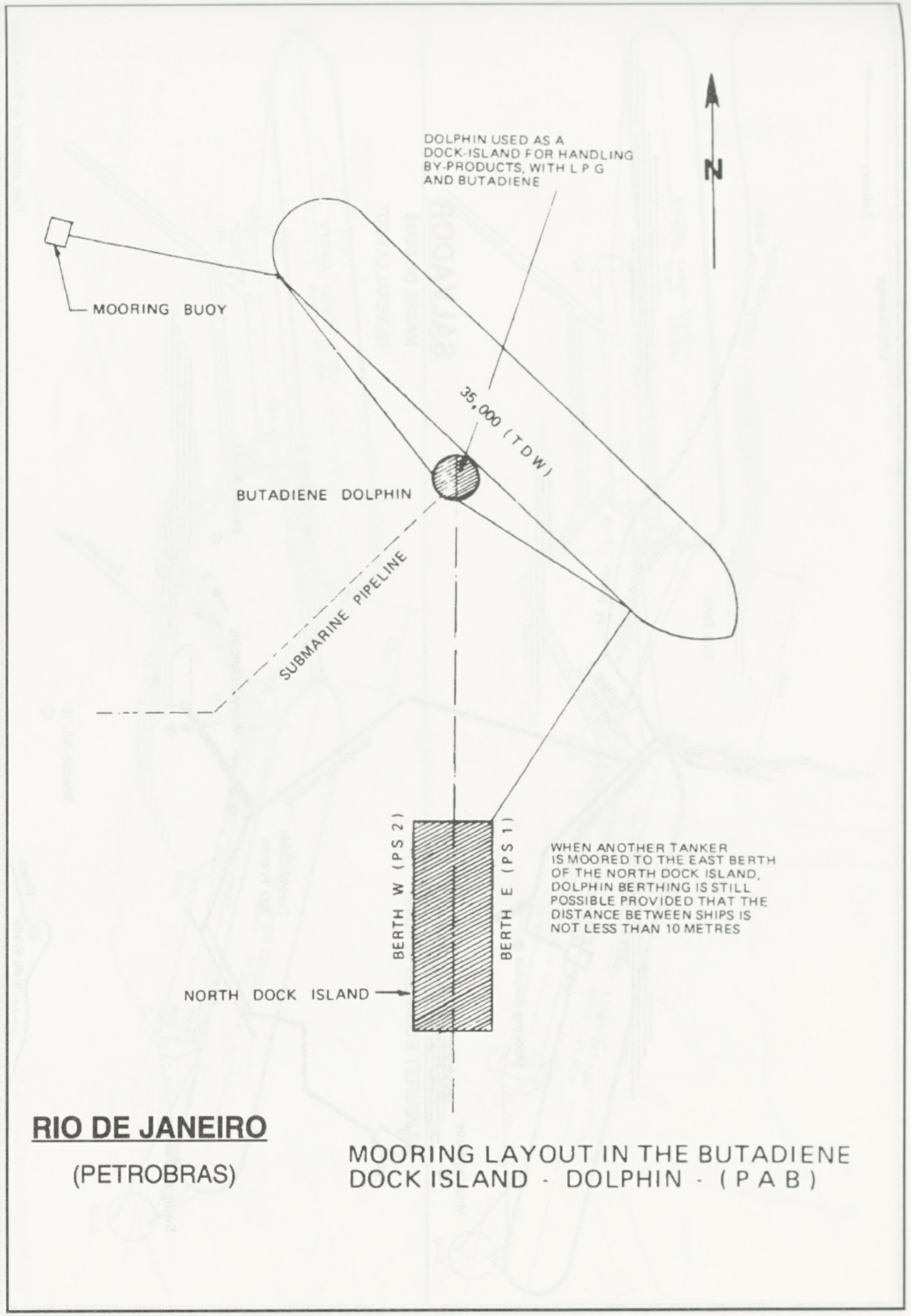
SOUTH DOCK - ISLAND MOORING DIAGRAM

N
105,000 (DWT)
135, 000 (DWT)


COTRIJUI TERMINAL
Current Flow
Partial Groyne
Small Walkway & Grain Elevator
"Plan Supplied by Ship's Master"
Port Velho
Length 640 m.
Depth 5.0 m.
108
106
104
102
107
105
103
101
141
161
151
Porto Novo
N
Petroleum Terminal
Luch Singer Terminal
Length 130 m.
Depth 10 m.
Rio Grande Channel
Incobrasa Terminal
Wheat & Soya Bean Terminal (T.T.S.)
Length 450 m.
Depth 14.0 m.
Cotrijui Terminal
Length 150 m.
Depth 12 m.
General Cargo Terminal
Length 300 m.
Depth 14 m.

RIO GRANDE

Berth	Length	Depth
101	150 m.	8.84 m.
102	150 m.	8.84 m.
103	160 m.	8.84 m.
104	150 m.	8.84 m.
105	150 m.	8.84 m.
106	160 m.	8.84 m.
107	160 m.	8.84 m.
108	170 m.	8.84 m.
141	150 m.	8.84 m.
151	180 m.	8.84 m.
161	150 m.	8.84 m.

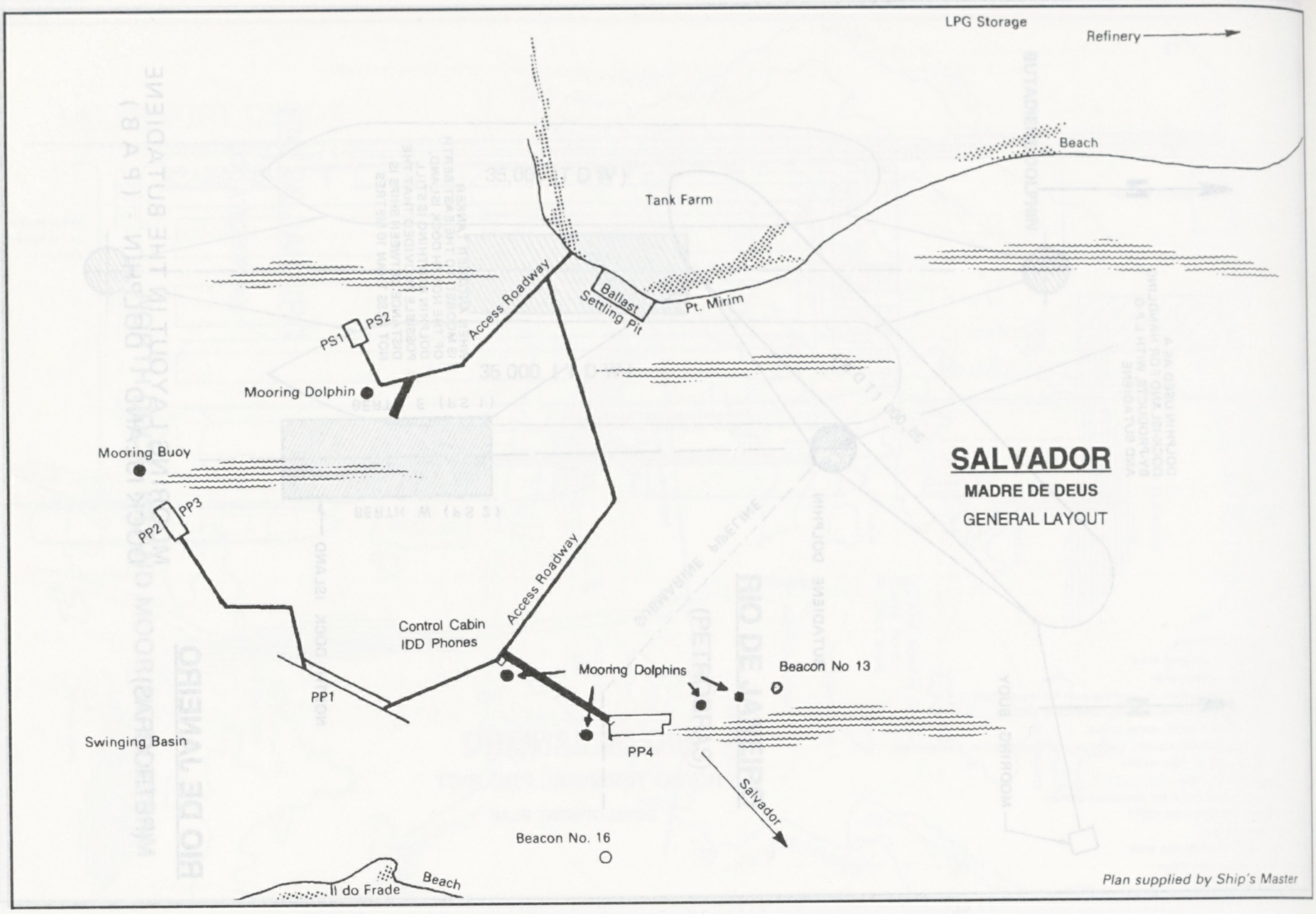

N
DOLPHIN USED AS A DOCK-ISLAND FOR HANDLING BY-PRODUCTS, WITH L P G AND BUTADIENE
MOORING BUOY
35,000 (TDW)
BUTADIENE DOLPHIN
SUBMARINE PIPELINE
BERTH W (PS 2)
BERTH E (PS 1)
NORTH DOCK ISLAND

WHEN ANOTHER TANKER IS MOORED TO THE EAST BERTH OF THE NORTH DOCK ISLAND, DOLPHIN BERTHING IS STILL POSSIBLE PROVIDED THAT THE DISTANCE BETWEEN SHIPS IS NOT LESS THAN 10 METRES

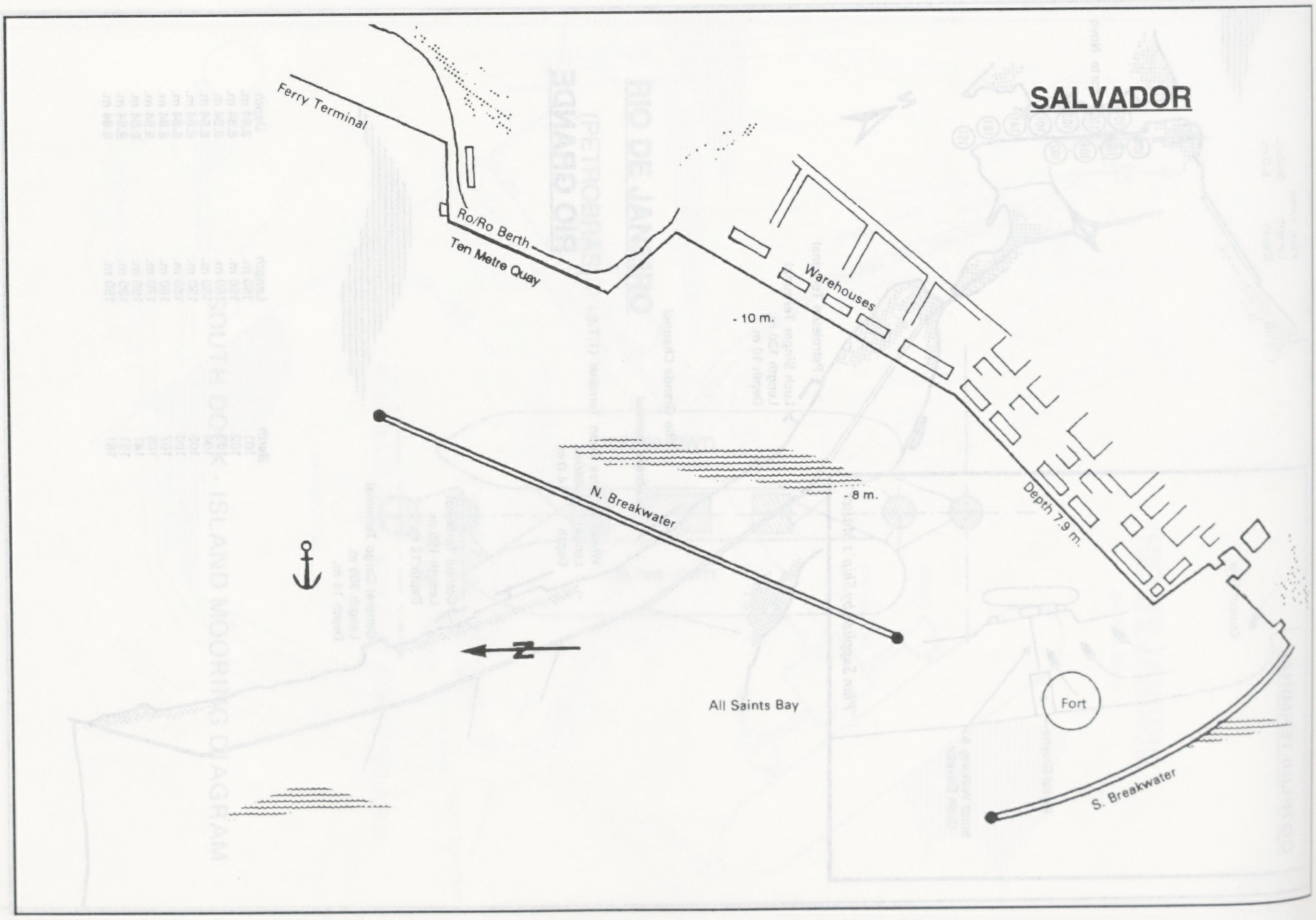
RIO DE JANEIRO

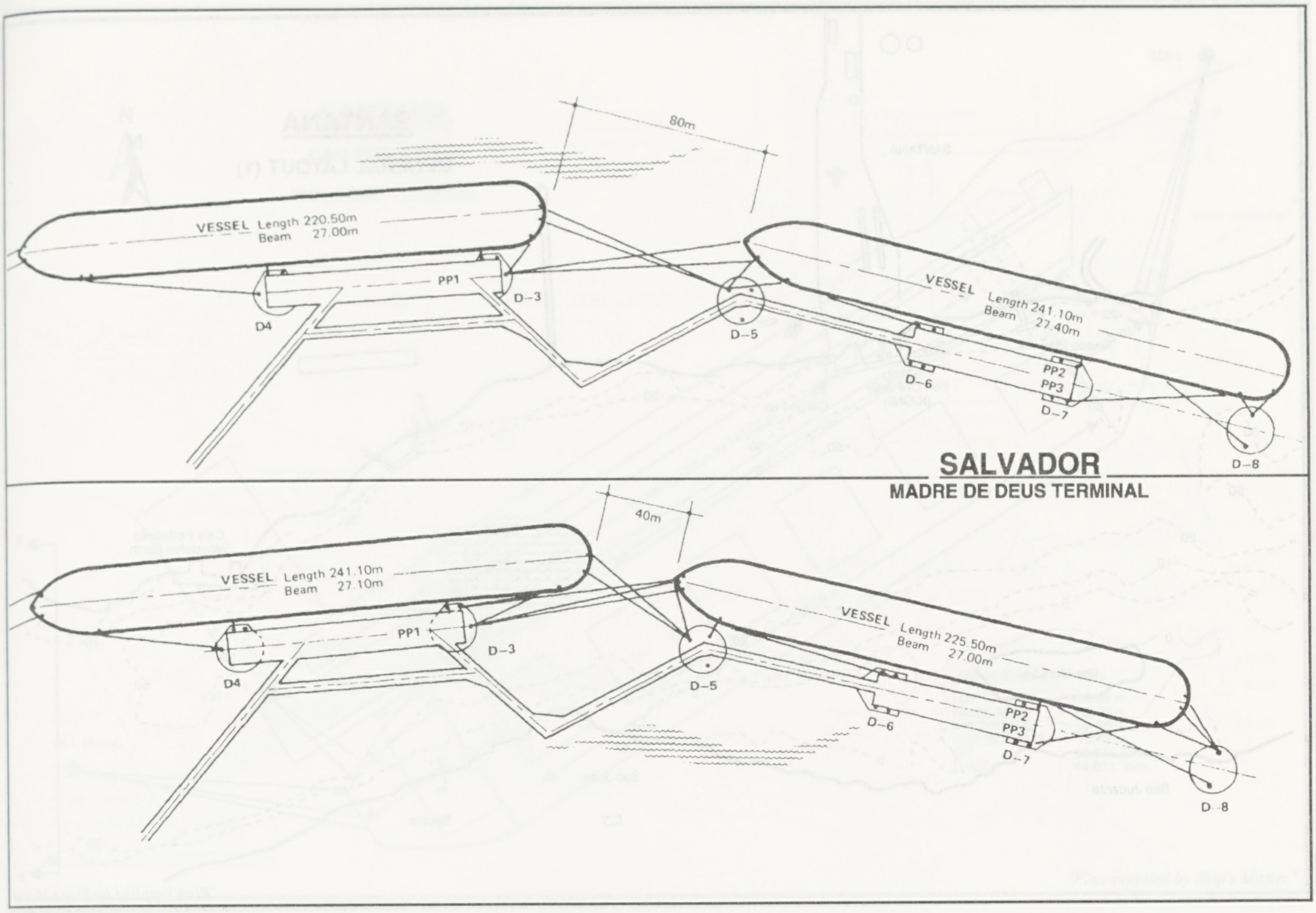
(PETROBRAS)

MOORING LAYOUT IN THE BUTADIENE DOCK ISLAND - DOLPHIN - (PAB)


LPG Storage
Refinery
Beach
Tank Farm
Ballast
Settling Pit
Pt. Mirim
Access Roadway
PS1
PS2
Mooring Dolphin
Mooring Buoy
PP2
PP3
SALVADOR
MADRE DE DEUS
GENERAL LAYOUT
Access Roadway
Control Cabin
IDD Phones
Mooring Dolphins
Beacon No 13
PP1
Swinging Basin
PP4
Salvador
Beacon No. 16
Il do Frade
Beach

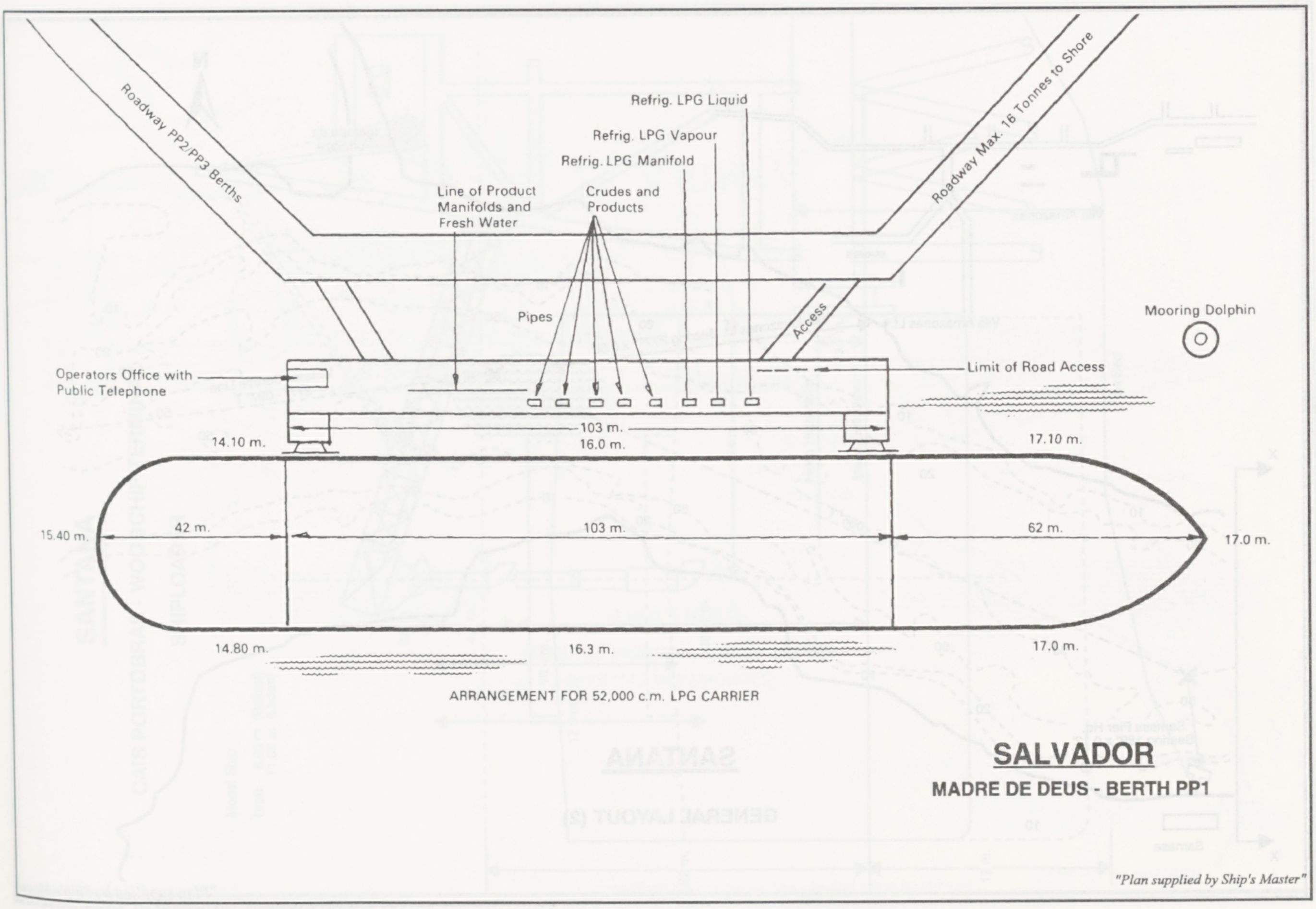
Plan supplied by Ship's Master


SALVADOR
Ferry Terminal
Ro/Ro Berth
Ten Metre Quay
Warehouses
- 10 m.
- 8 m.
N. Breakwater
Depth 7.9 m.
N
All Saints Bay
Fort
S. Breakwater


80m
VESSEL Length 220.50m
Beam 27.00m
PP1
D4
D-3
D-5
VESSEL Length 241.10m
Beam 27.40m
D-6
PP2
PP3
D-7
D-8
40m
VESSEL Length 241.10m
Beam 27.10m
PP1
D4
D-3
D-5
VESSEL Length 225.50m
Beam 27.00m
D-6
PP2
PP3
D-7
D-8

SALVADOR

MADRE DE DEUS TERMINAL

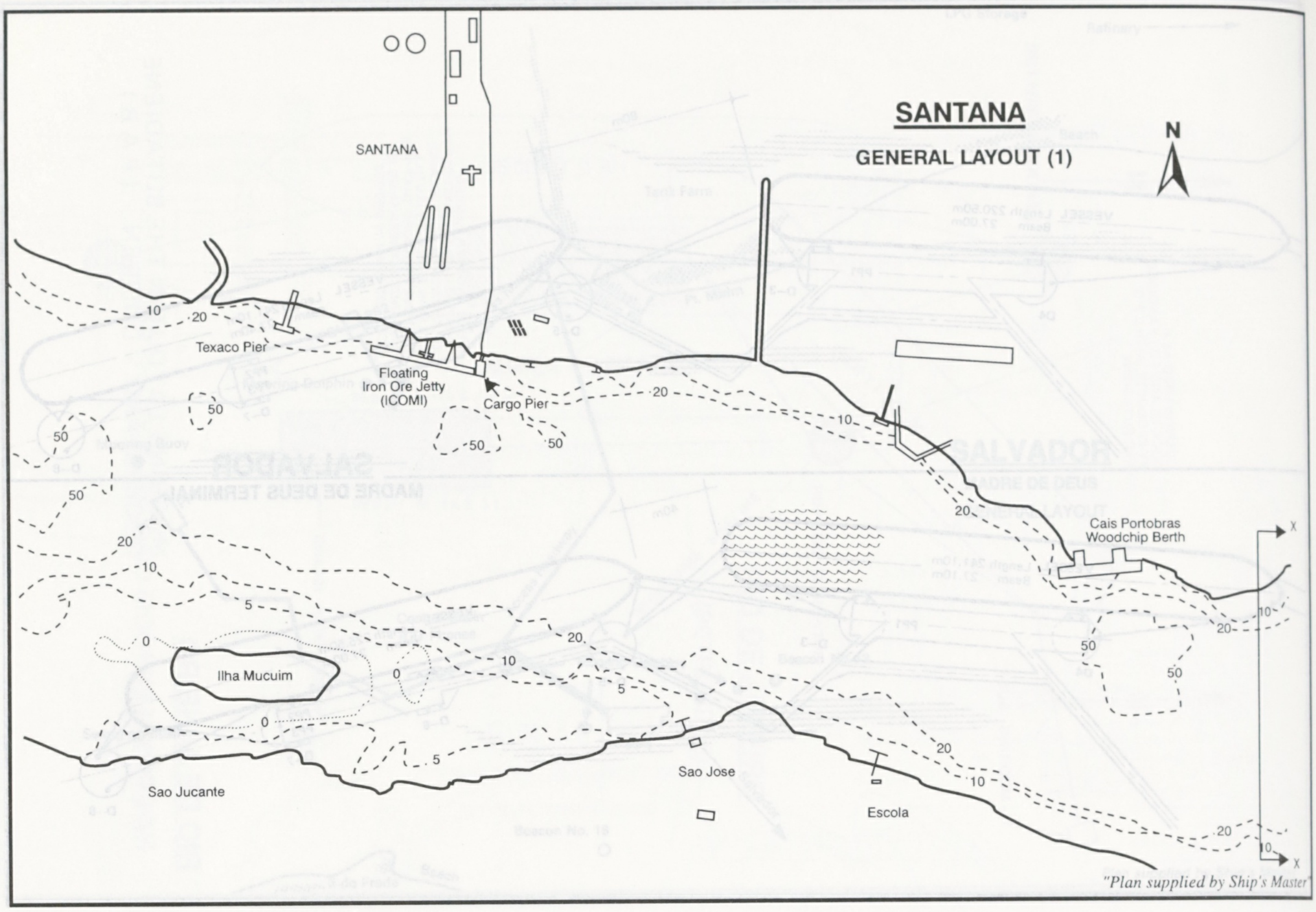

Roadway PP2/PP3 Berths
Roadway Max. 16 Tonnes to Shore
Refrig. LPG Liquid
Refrig. LPG Vapour
Refrig. LPG Manifold
Line of Product Manifolds and Fresh Water
Crudes and Products
Pipes
Access
Mooring Dolphin
Operators Office with Public Telephone
Limit of Road Access
103 m.
14.10 m.
16.0 m.
17.10 m.
15.40 m.
42 m.
103 m.
62 m.
17.0 m.
14.80 m.
16.3 m.
17.0 m.

ARRANGEMENT FOR 52,000 c.m. LPG CARRIER

SALVADOR

MADRE DE DEUS - BERTH PP1

"Plan supplied by Ship's Master"

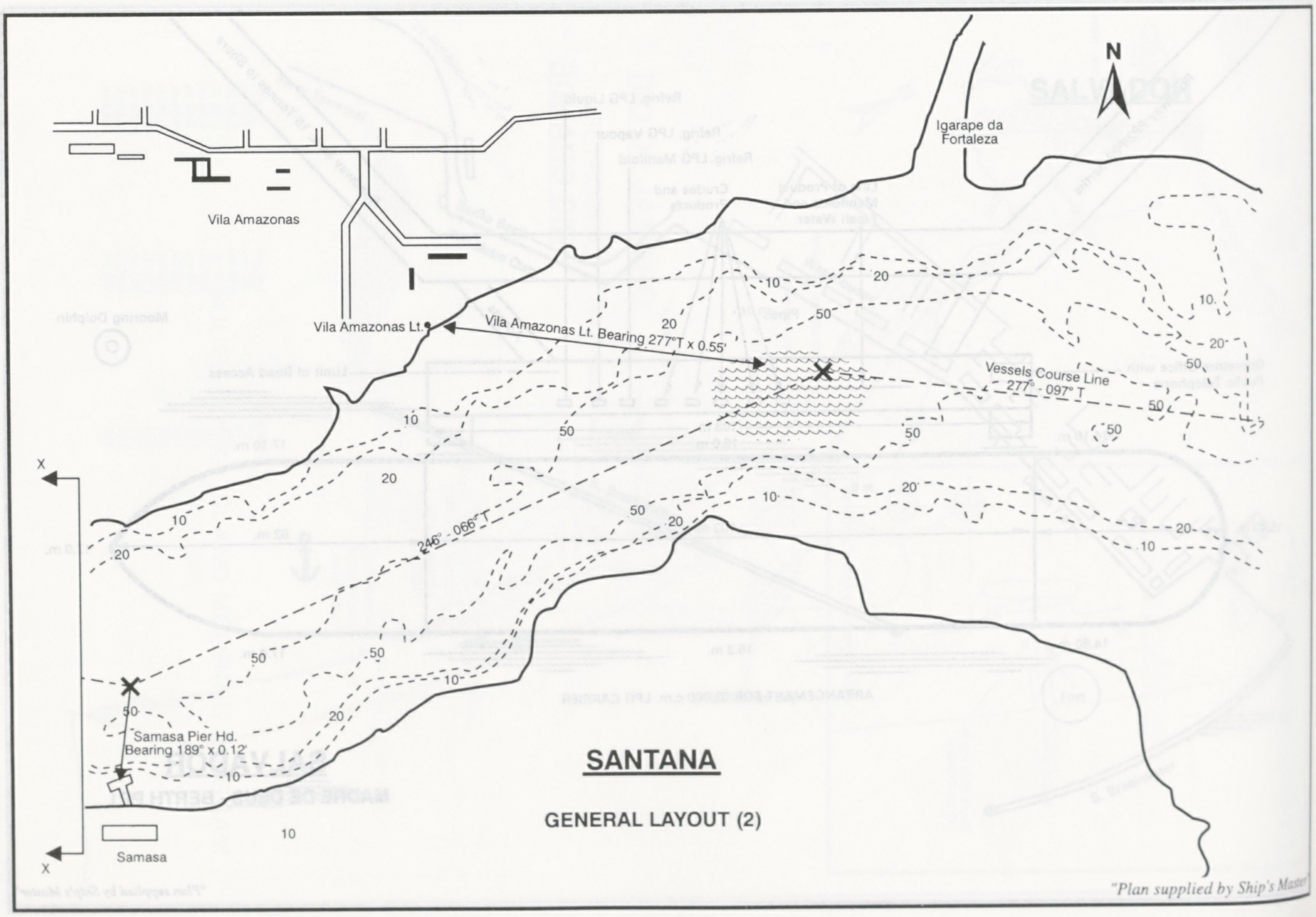


SANTANA

GENERAL LAYOUT (1)

"Plan supplied by Ship's Master"

N
SANTANA
Texaco Pier
Floating Iron Ore Jetty (ICOMI)
Cargo Pier
Cais Portobras Woodchip Berth
Ilha Mucuim
Sao Jucante
Sao Jose
Escola
X
X

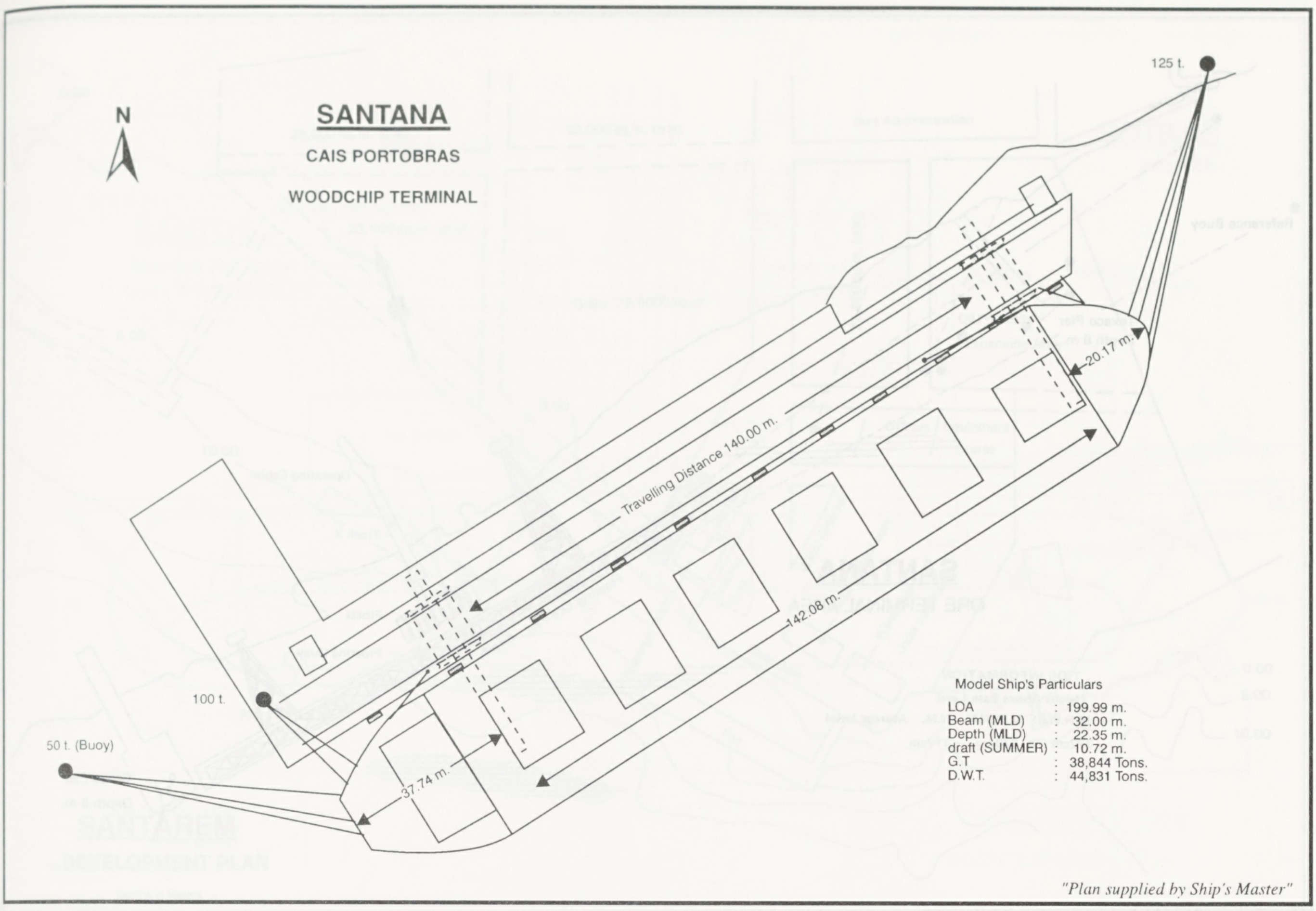


SANTANA

GENERAL LAYOUT (2)

"Plan supplied by Ship's Master"

N
Igarape da Fortaleza
Vila Amazonas
Vila Amazonas Lt.
Vila Amazonas Lt. Bearing 277° T x 0.55'
Vessels Course Line 277° - 097° T
246° - 066° T
Samasa Pier Hd. Bearing 189° x 0.12'
Samasa
X
X



SANTANA

CAIS PORTOBRAS

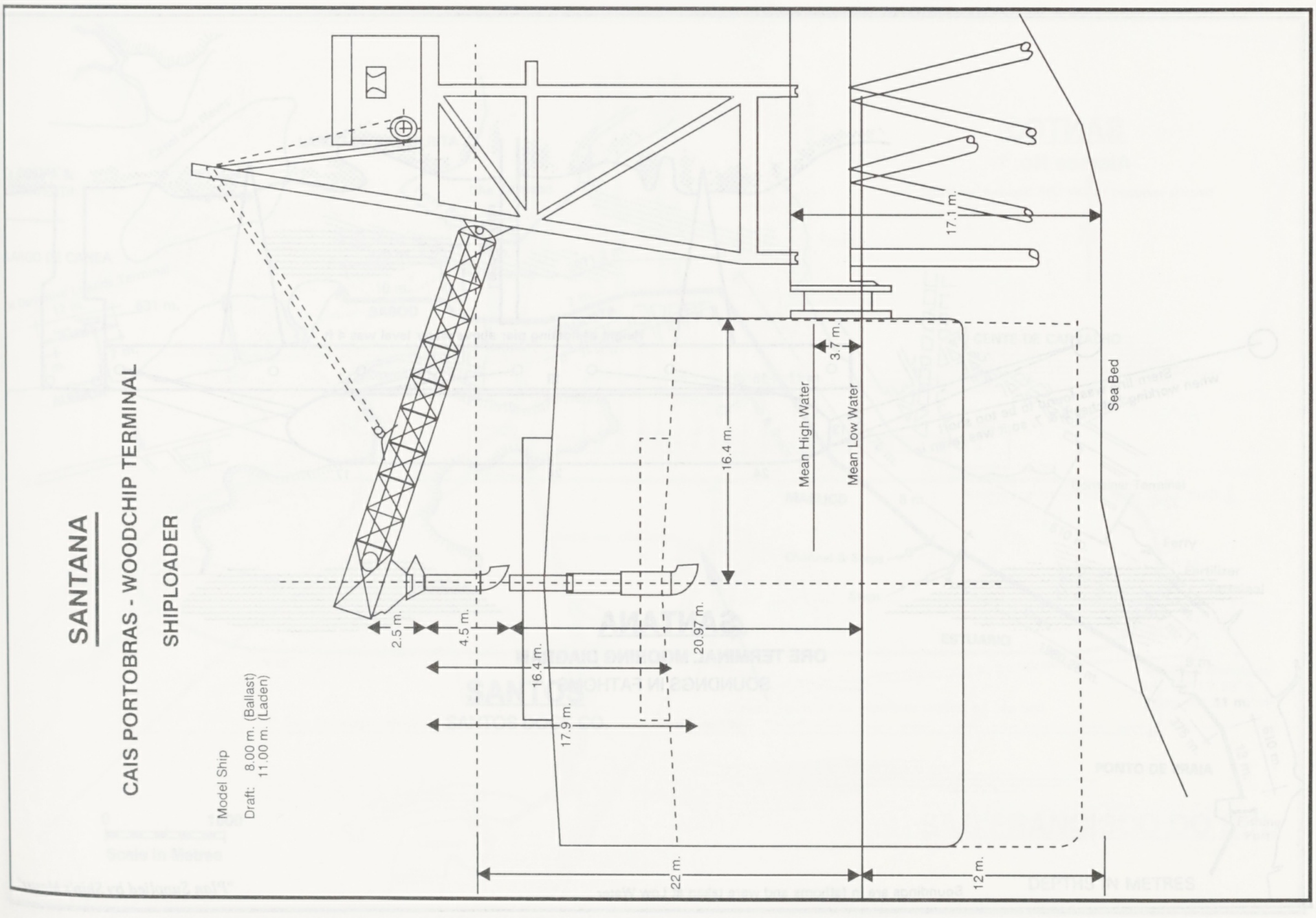
WOODCHIP TERMINAL

Model Ship's Particulars

LOA	:	199.99 m.
Beam (MLD)	:	32.00 m.
Depth (MLD)	:	22.35 m.
draft (SUMMER)	:	10.72 m.
G.T	:	38,844 Tons.
D.W.T.	:	44,831 Tons.

"Plan supplied by Ship's Master"

N
125 t.
100 t.
50 t. (Buoy)
Travelling Distance 140.00 m.
142.08 m.
37.74 m.
20.17 m.



SANTANA

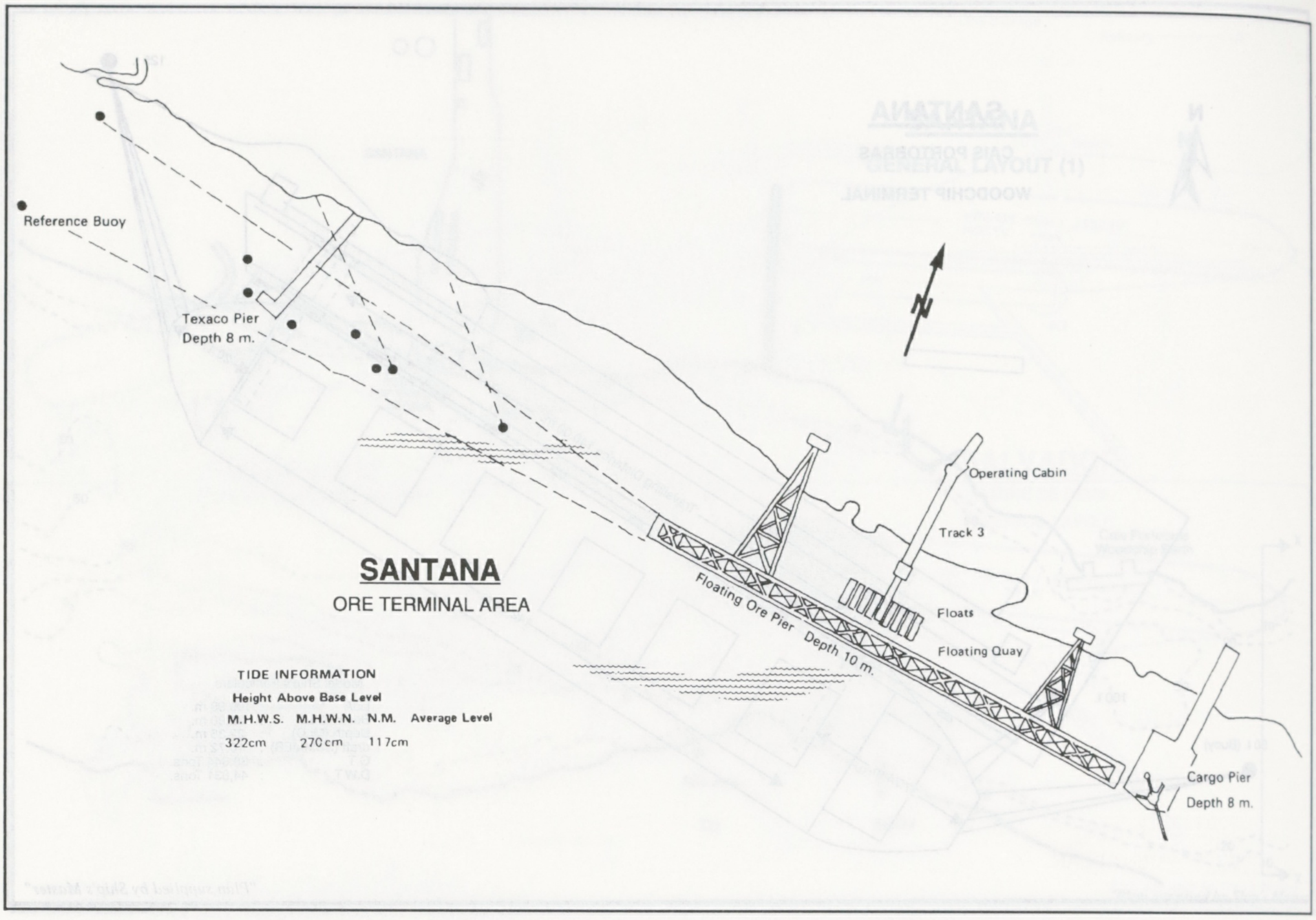
CAIS PORTOBRAS - WOODCHIP TERMINAL

SHIPLOADER

Model Ship

Draft: 8.00 m. (Ballast)
11.00 m. (Laden)

17.1 m.
3.7 m.
16.4 m.
Mean High Water
Mean Low Water
Sea Bed
2.5 m.
4.5 m.
20.97 m.
16.4 m.
17.9 m.
22 m.
12 m.


Reference Buoy
Texaco Pier
Depth 8 m.
Operating Cabin
Track 3
Floats
Floating Quay
Floating Ore Pier Depth 10 m.
Cargo Pier
Depth 8 m.

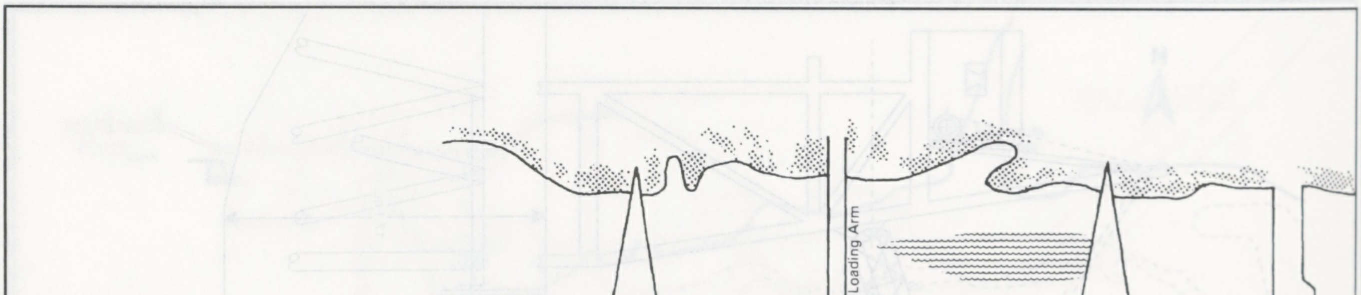
SANTANA

ORE TERMINAL AREA

TIDE INFORMATION

Height Above Base Level

M.H.W.S.	M.H.W.N.	N.M.	Average Level
322cm	270cm	117cm	


Loading Arm
Height of floating pier above water level was 4 ft.
15
13
12
13
24
24
17
Stern line was found to be too short when working hatches 5 & 7, so it was taken in

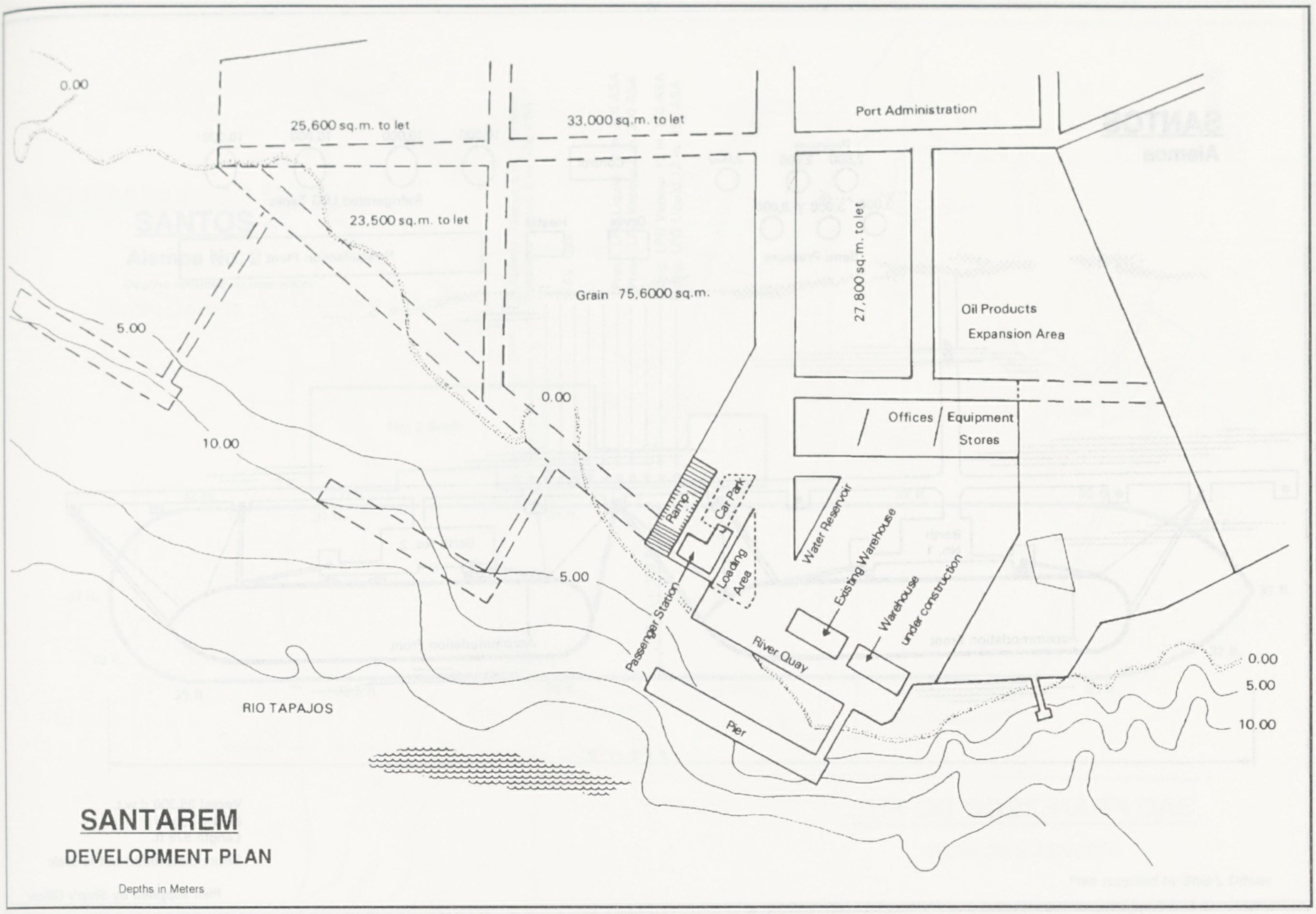
SANTANA

ORE TERMINAL MOORING DIAGRAM

SOUNDNGS IN FATHOMS

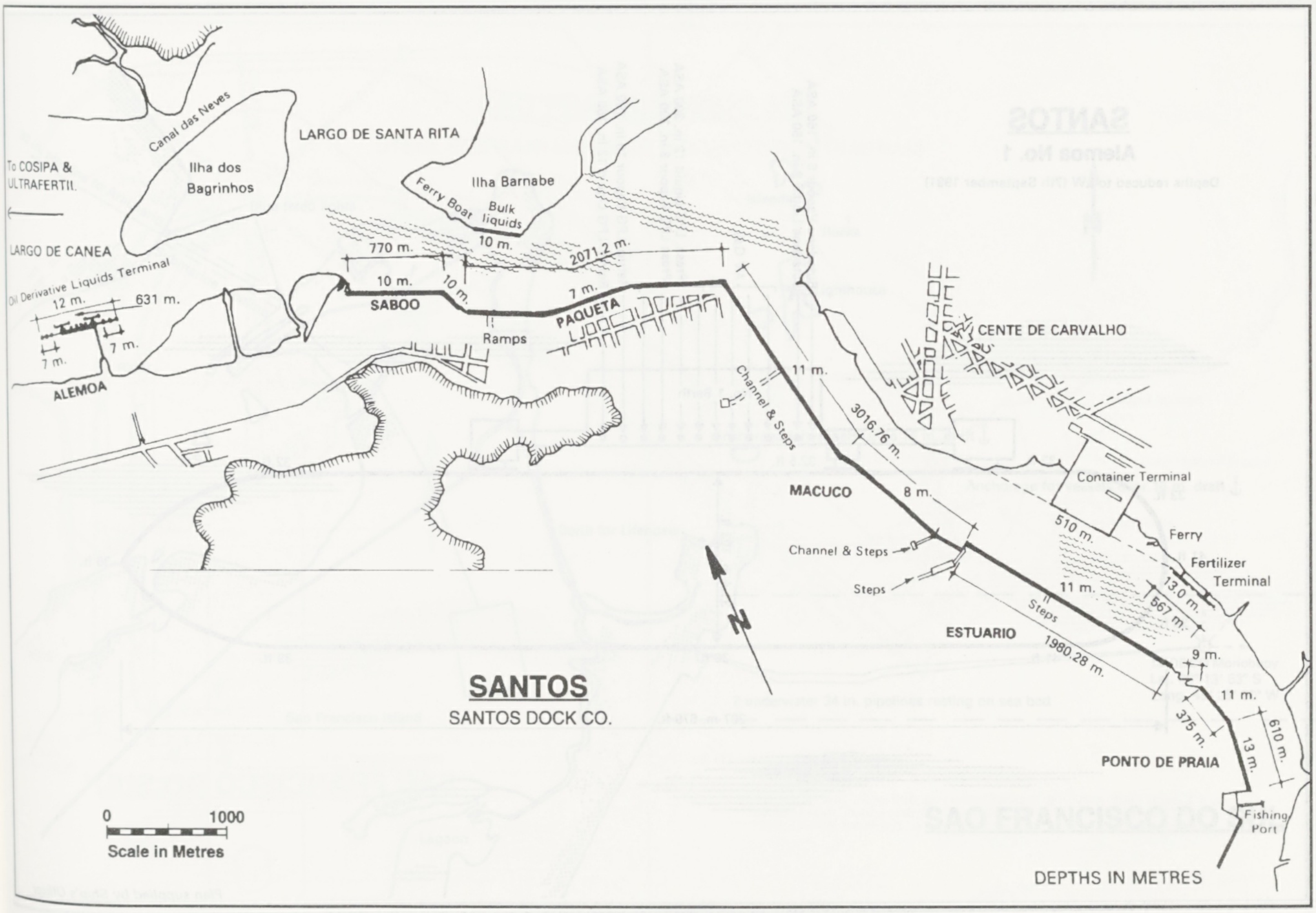
Soundings are in fathoms and were taken at Low Water

"Plan Supplied by Ship's Master"



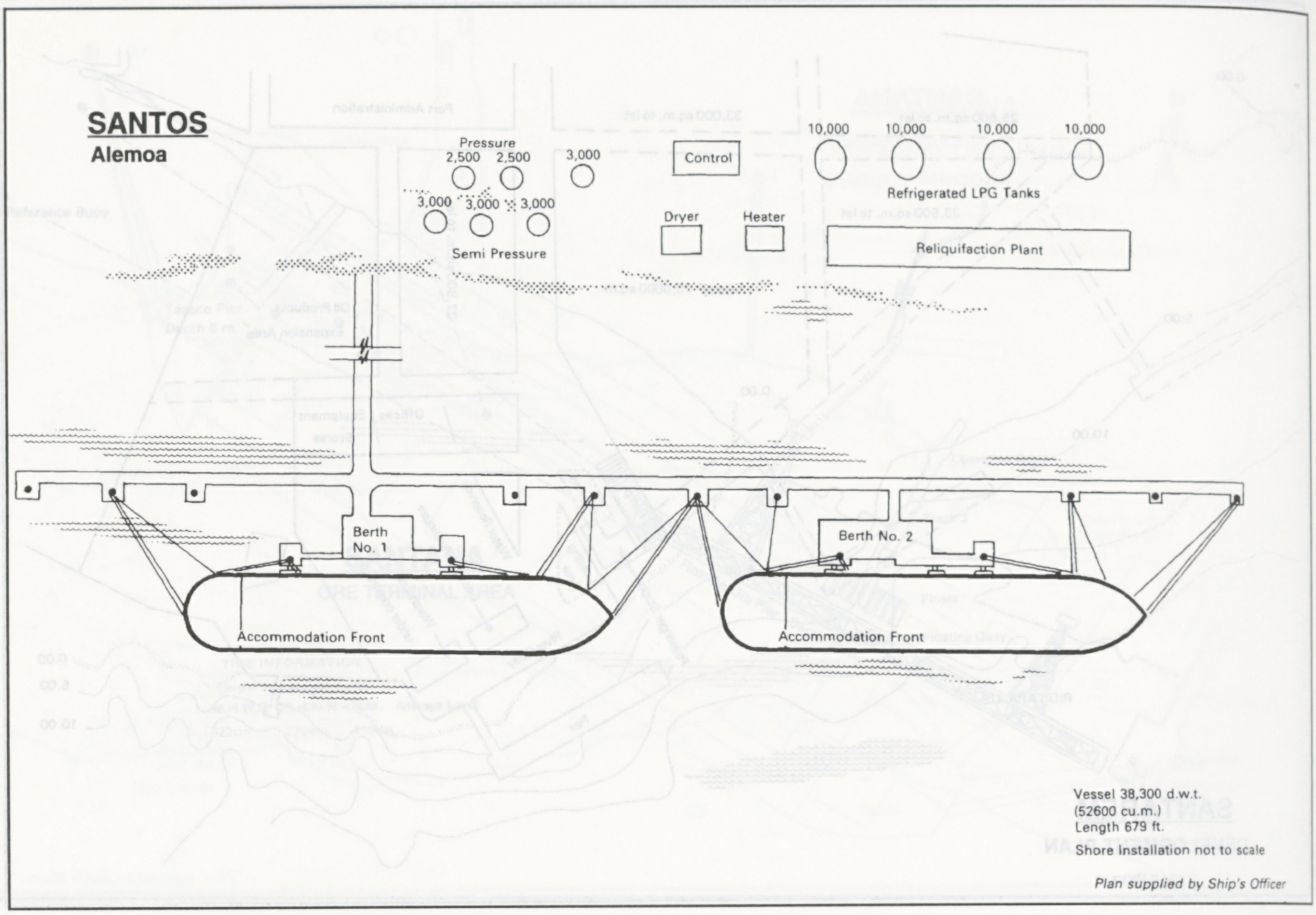
SANTAREM
DEVELOPMENT PLAN
Depths in Meters

0.00
25,600 sq.m. to let
33,000 sq.m. to let
Port Administration
23,500 sq.m. to let
27,800 sq.m. to let
Grain 75,6000 sq.m.
Oil Products
Expansion Area
5.00
0.00
Offices
Equipment
Stores
10.00
Ramp
Car Park
Loading Area
Water Reservoir
Existing Warehouse
Warehouse under construction
5.00
Passenger Station
River Quay
Pier
RIO TAPAJOS
0.00
5.00
10.00

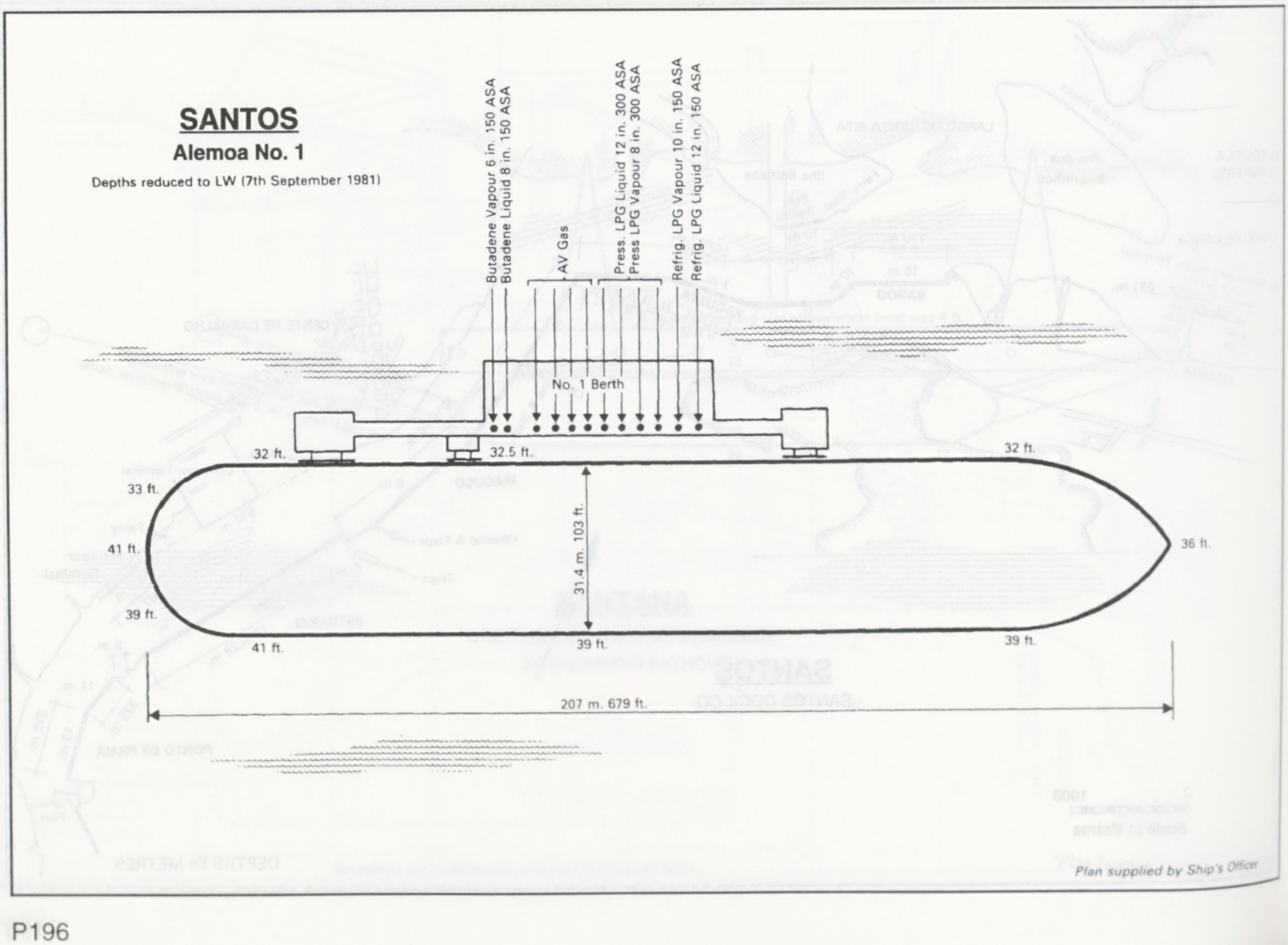


SANTOS
SANTOS DOCK CO.

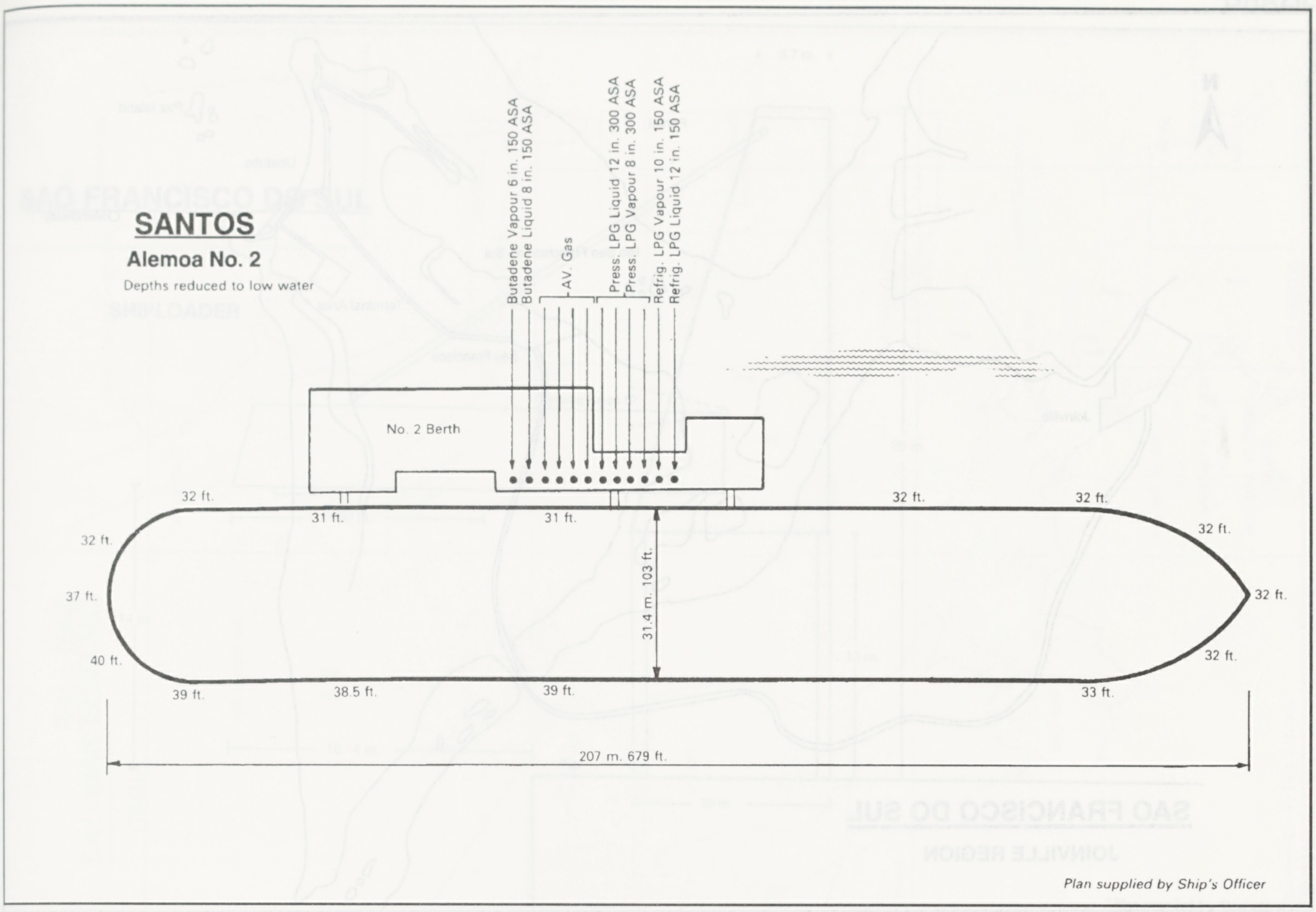
Canal das Neves
Ilha dos Bagrinhos
LARGO DE SANTA RITA
To COSIPA & ULTRAFERTIL
Ilha Barnabe
Ferry Boat
Bulk liquids
LARGO DE CANEA
770 m.
10 m.
2071.2 m.
Oil Derivative Liquids Terminal
12 m.
631 m.
10 m.
10 m.
7 m.
SABOO
PAQUETA
CENTE DE CARVALHO
7 m.
7 m.
Ramps
ALEMOA
11 m.
Channel & Steps
3016.76 m.
MACUCO
8 m.
Container Terminal
510 m.
Ferry
Fertilizer Terminal
Channel & Steps
Steps
11 m.
13.0 m.
567 m.
Steps
N
ESTUARIO
1980.28 m.
9 m.
11 m.
375 m.
13 m.
610 m.
PONTO DE PRAIA
Fishing Port
0
1000
Scale in Metres
DEPTHS IN METRES


SANTOS
Alemoa
Pressure
2,500
2,500
3,000
3,000
3,000
3,000
Semi Pressure
Control
Dryer
Heater
10,000
10,000
10,000
10,000
Refrigerated LPG Tanks
Reliquifaction Plant
Berth No. 1
Berth No. 2
Accommodation Front
Accommodation Front
Vessel 38,300 d.w.t.
(52600 cu.m.)
Length 679 ft.
Shore Installation not to scale

Plan supplied by Ship's Officer


SANTOS
Alemoa No. 1
Depths reduced to LW (7th September 1981)
Butadene Vapour 6 in. 150 ASA
Butadene Liquid 8 in. 150 ASA
AV Gas
Press. LPG Liquid 12 in. 300 ASA
Press LPG Vapour 8 in. 300 ASA
Refrig. LPG Vapour 10 in. 150 ASA
Refrig. LPG Liquid 12 in. 150 ASA
No. 1 Berth
32 ft.
32.5 ft.
32 ft.
33 ft.
41 ft.
39 ft.
41 ft.
39 ft.
39 ft.
36 ft.
31.4 m. 103 ft.
207 m. 679 ft.

Plan supplied by Ship's Officer



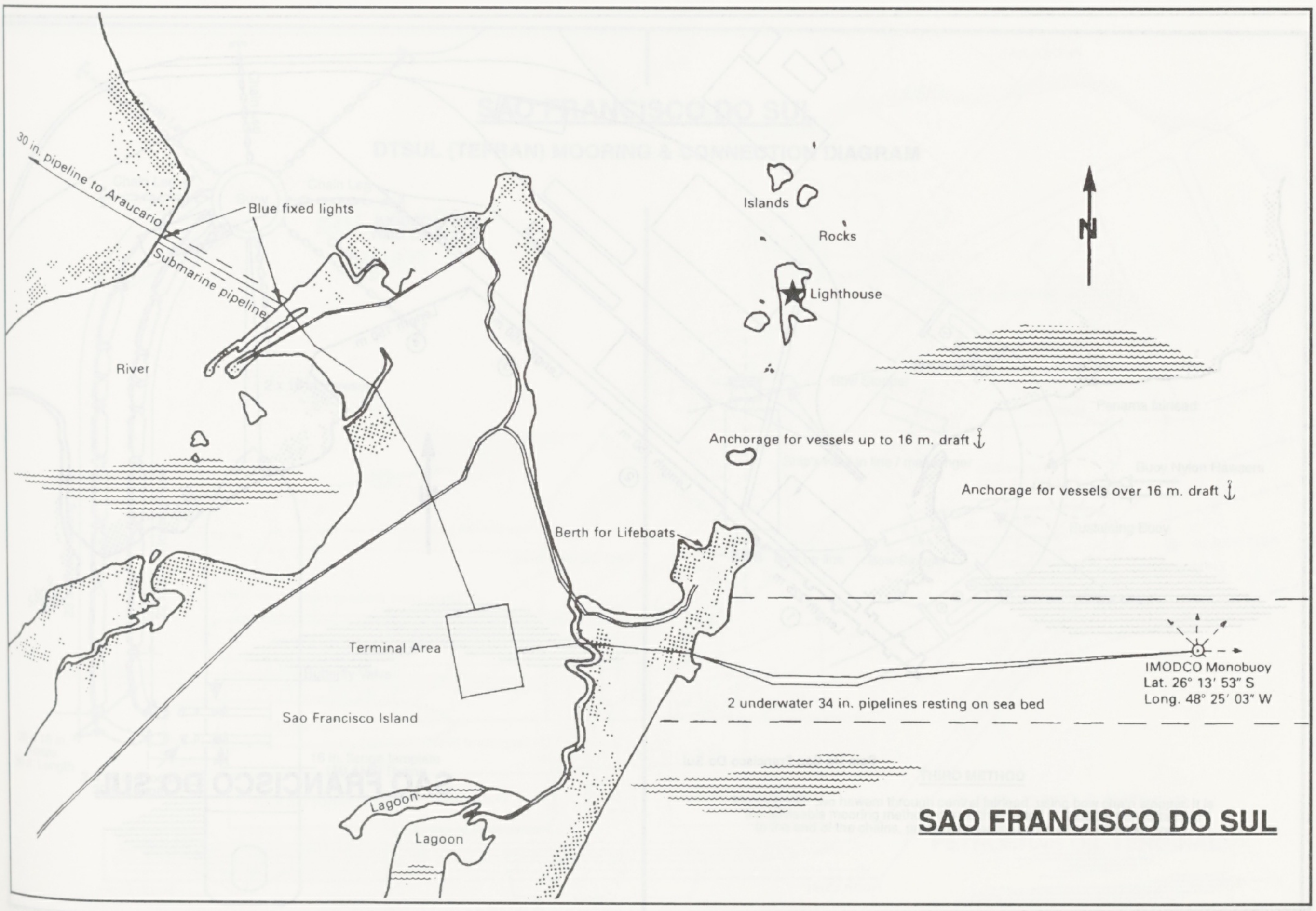
SANTOS

Alemoa No. 2

Depths reduced to low water

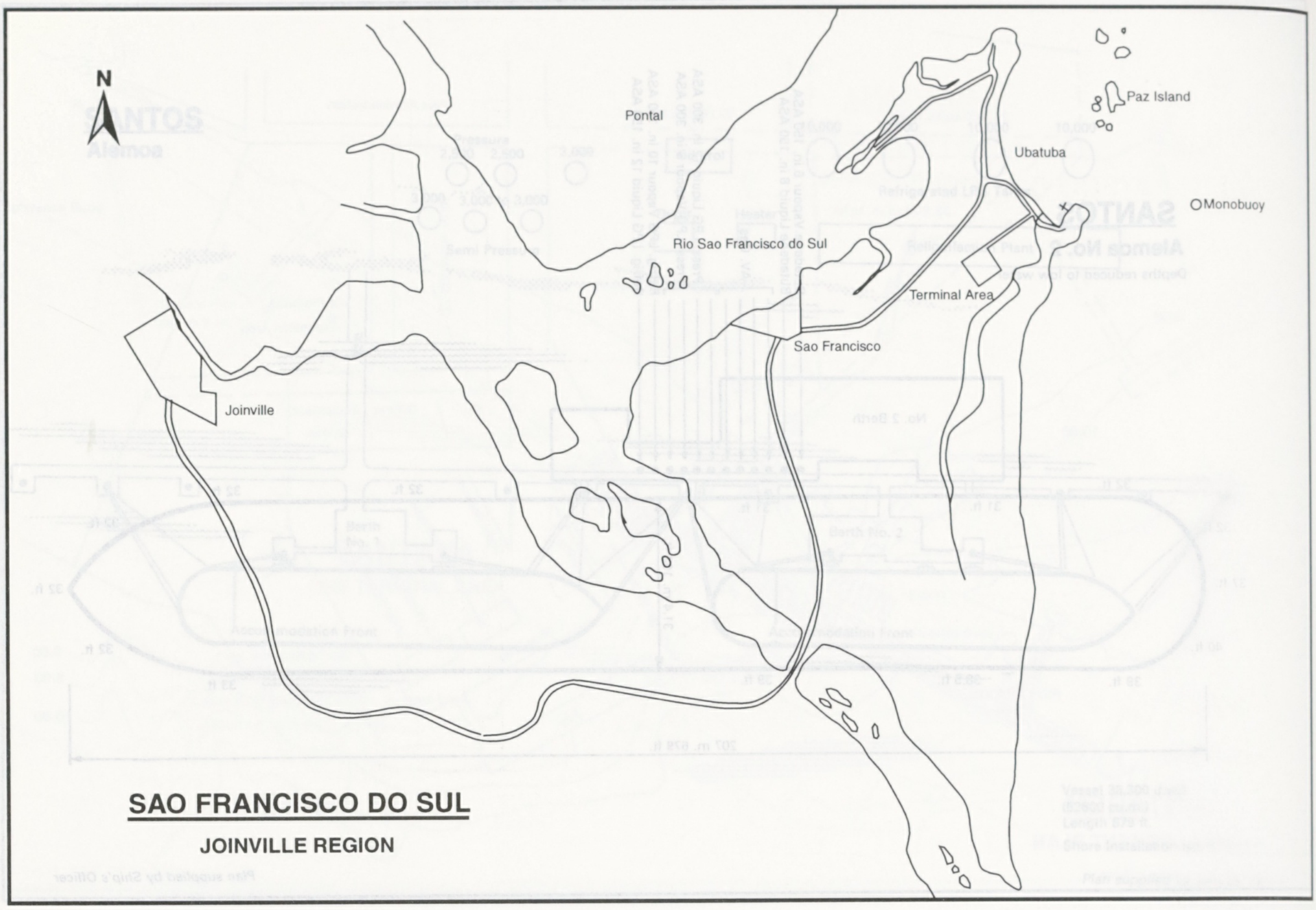
Butadene Vapour 6 in. 150 ASA
Butadene Liquid 8 in. 150 ASA
AV. Gas
Press. LPG Liquid 12 in. 300 ASA
Press. LPG Vapour 8 in. 300 ASA
Refrig. LPG Vapour 10 in. 150 ASA
Refrig. LPG Liquid 12 in. 150 ASA
No. 2 Berth
32 ft.
31 ft.
31 ft.
32 ft.
32 ft.
32 ft.
32 ft.
37 ft.
32 ft.
40 ft.
32 ft.
39 ft.
38.5 ft.
39 ft.
33 ft.
31.4 m. 103 ft.
207 m. 679 ft.

Plan supplied by Ship's Officer



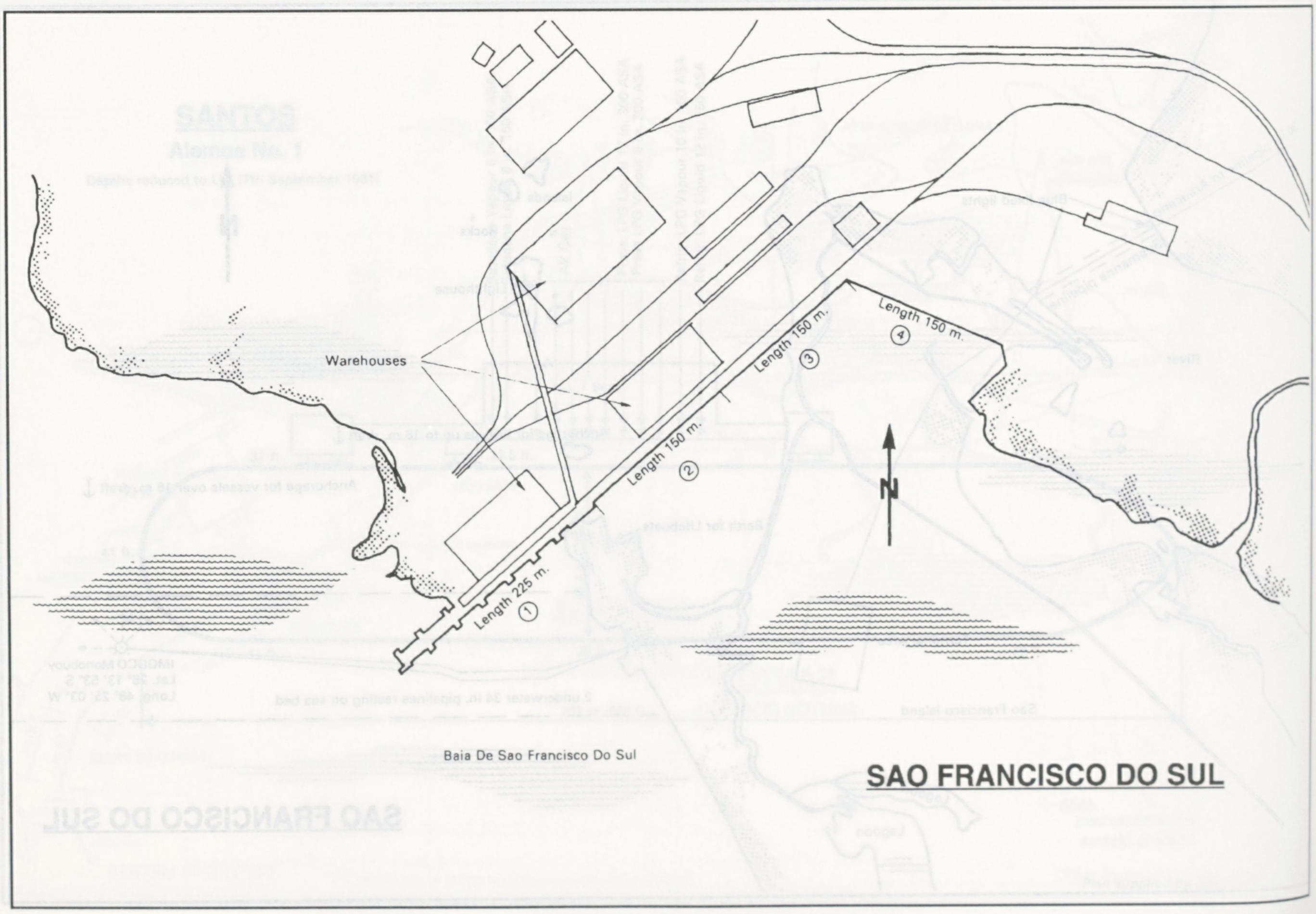
SAO FRANCISCO DO SUL

30 in. pipeline to Araucario
Blue fixed lights
Submarine pipeline
River
Islands
Rocks
Lighthouse
N
Anchorage for vessels up to 16 m. draft
Anchorage for vessels over 16 m. draft
Berth for Lifeboats
Terminal Area
Sao Francisco Island
IMODCO Monobuoy
Lat. 26° 13′ 53″ S
Long. 48° 25′ 03″ W
2 underwater 34 in. pipelines resting on sea bed
Lagoon
Lagoon

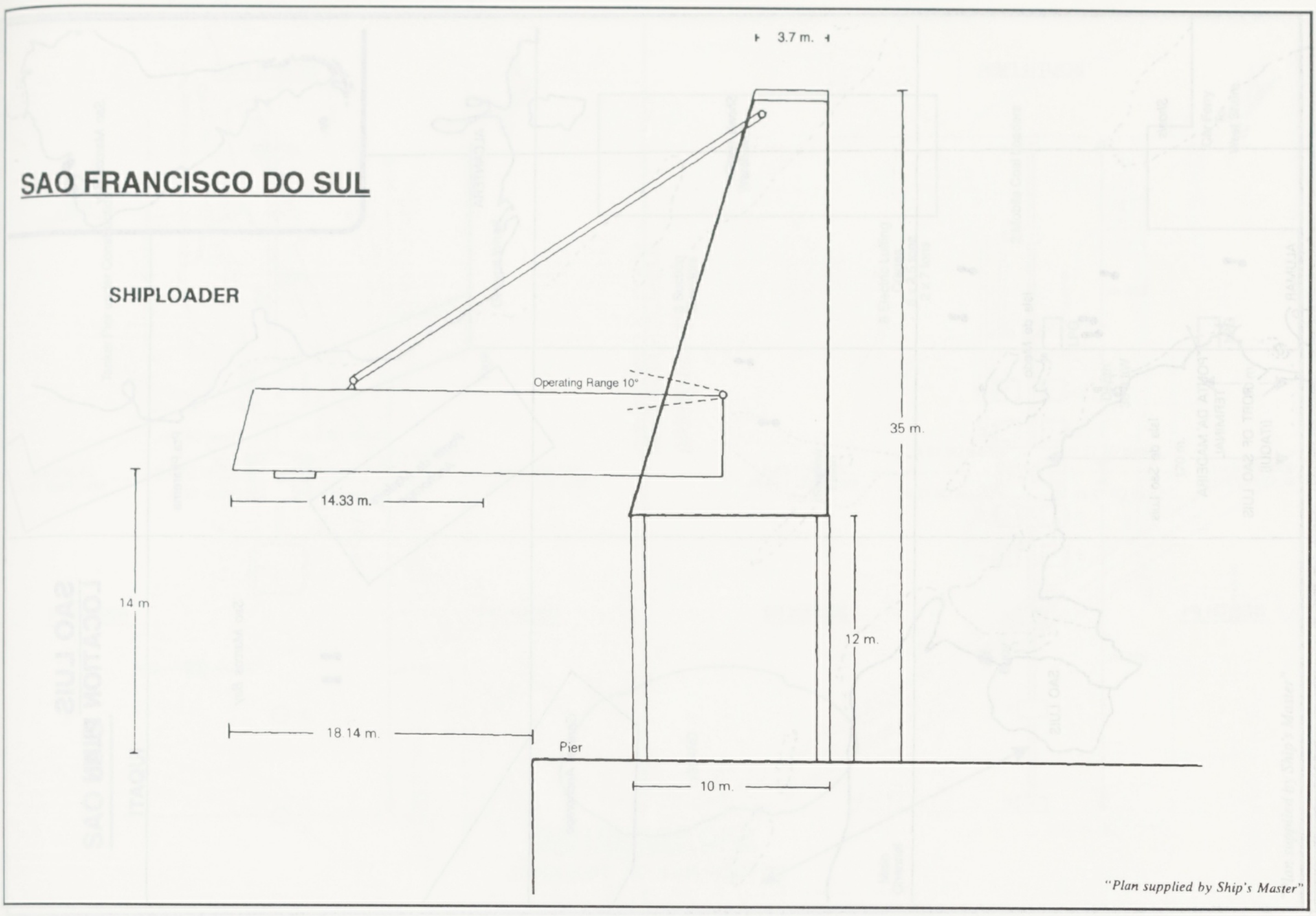

N
Pontal
Paz Island
Ubatuba
Monobuoy
Rio Sao Francisco do Sul
Terminal Area
Sao Francisco
Joinville

SAO FRANCISCO DO SUL

JOINVILLE REGION


Warehouses
Length 225 m.
①
Length 150 m.
②
Length 150 m.
③
Length 150 m.
④
N
Baia De Sao Francisco Do Sul

SAO FRANCISCO DO SUL

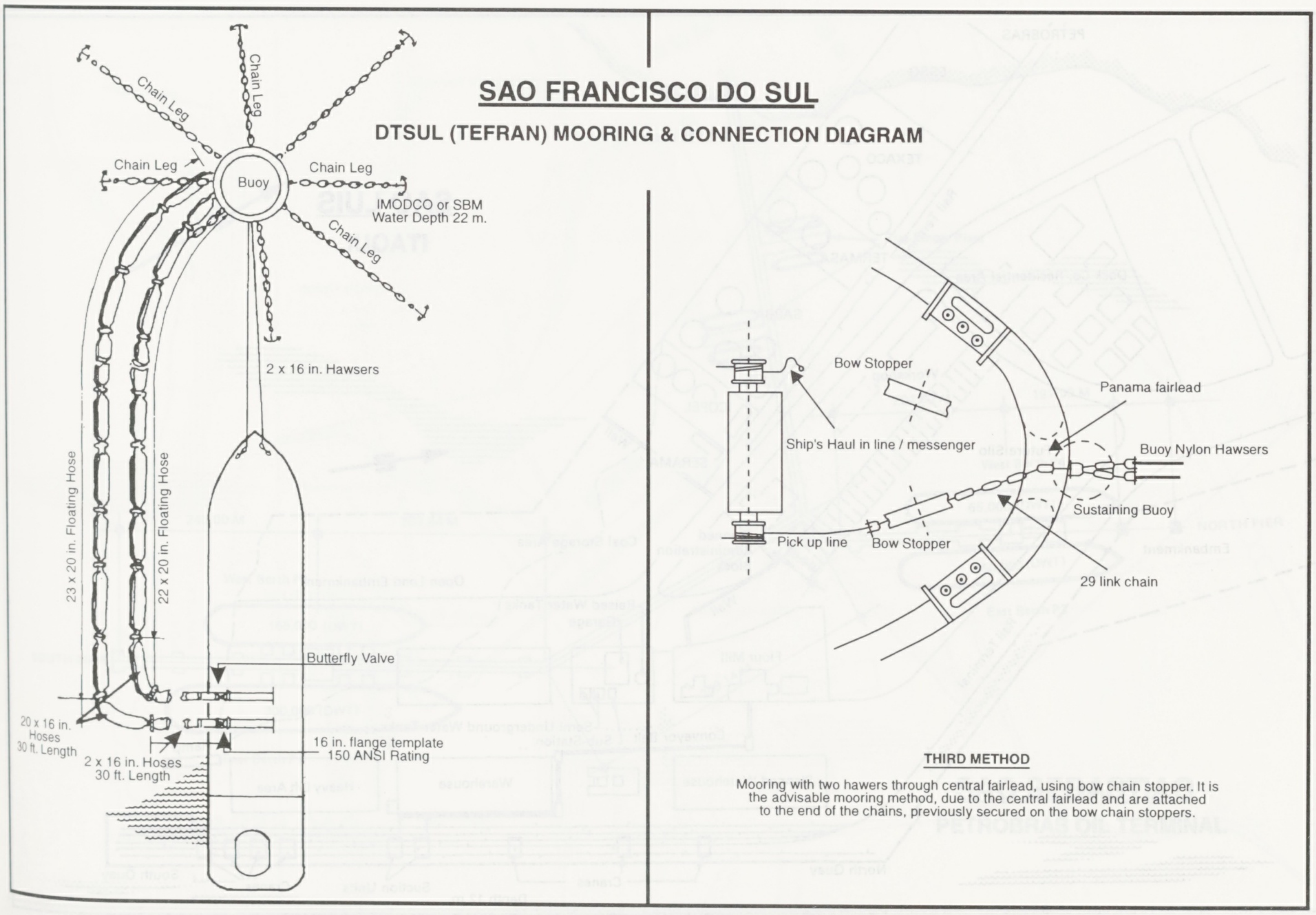


SAO FRANCISCO DO SUL

SHIPLOADER

3.7 m.
Operating Range 10°
35 m.
14.33 m.
14 m
12 m.
18 14 m.
Pier
10 m.

"Plan supplied by Ship's Master"



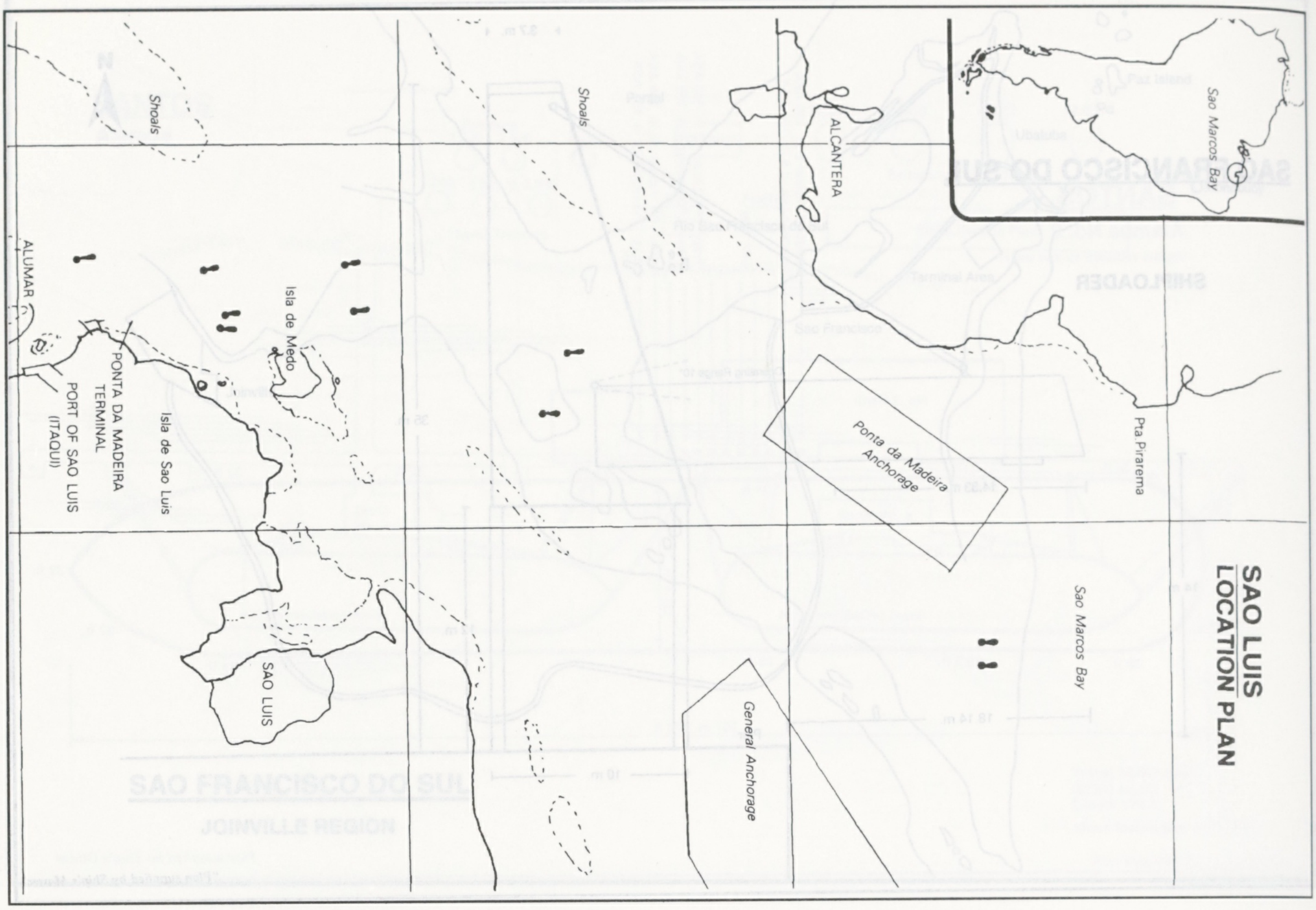
SAO FRANCISCO DO SUL

DTSUL (TEFRAN) MOORING & CONNECTION DIAGRAM

Chain Leg
Chain Leg
Chain Leg
Chain Leg
Chain Leg
Buoy
IMODCO or SBM
Water Depth 22 m.
2 x 16 in. Hawsers
23 x 20 in. Floating Hose
22 x 20 in. Floating Hose
Butterfly Valve
20 x 16 in. Hoses 30 ft. Length
2 x 16 in. Hoses 30 ft. Length
16 in. flange template 150 ANSI Rating
Bow Stopper
Ship's Haul in line / messenger
Panama fairlead
Buoy Nylon Hawsers
Sustaining Buoy
Pick up line
Bow Stopper
29 link chain

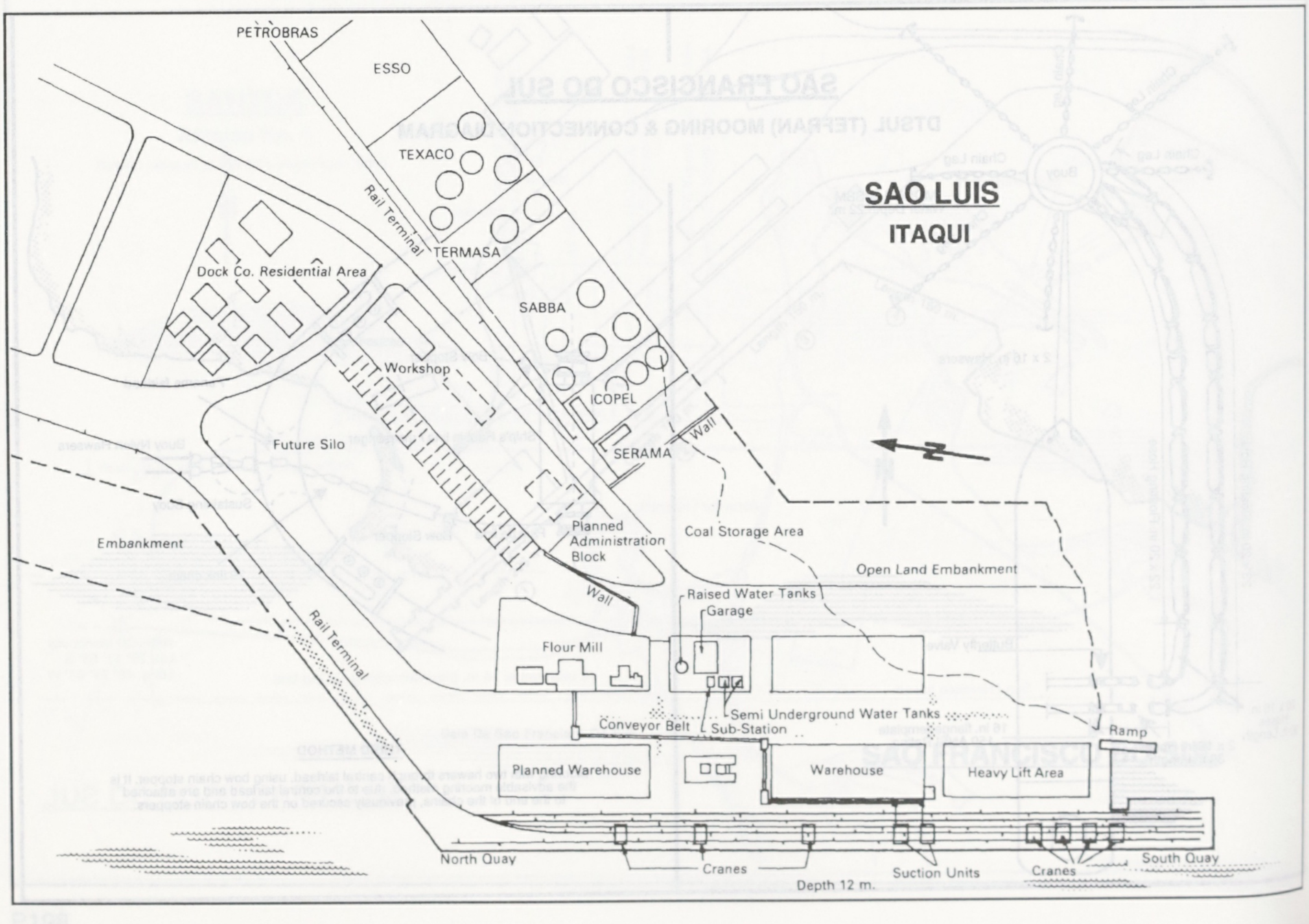
THIRD METHOD

Mooring with two hawers through central fairlead, using bow chain stopper. It is the advisable mooring method, due to the central fairlead and are attached to the end of the chains, previously secured on the bow chain stoppers.



SAO LUIS
LOCATION PLAN

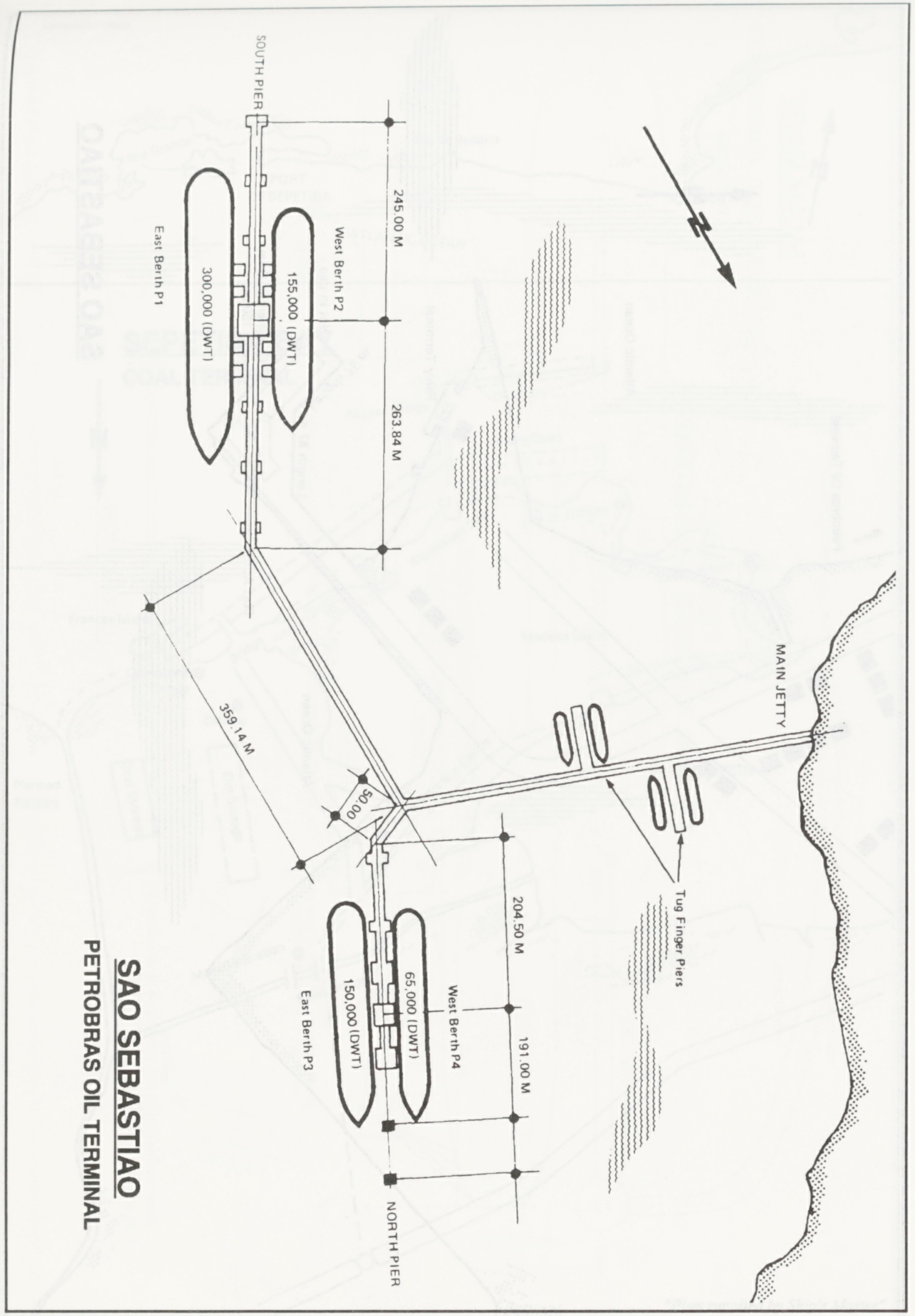
Shoals
Shoals
ALCANTERA
ALUMAR
Isla de Medo
PONTA DA MADEIRA TERMINAL
PORT OF SAO LUIS (ITAQUI)
Isla de Sao Luis
SAO LUIS
Ponta da Madeira Anchorage
General Anchorage
Pta Pirarema
Sao Marcos Bay



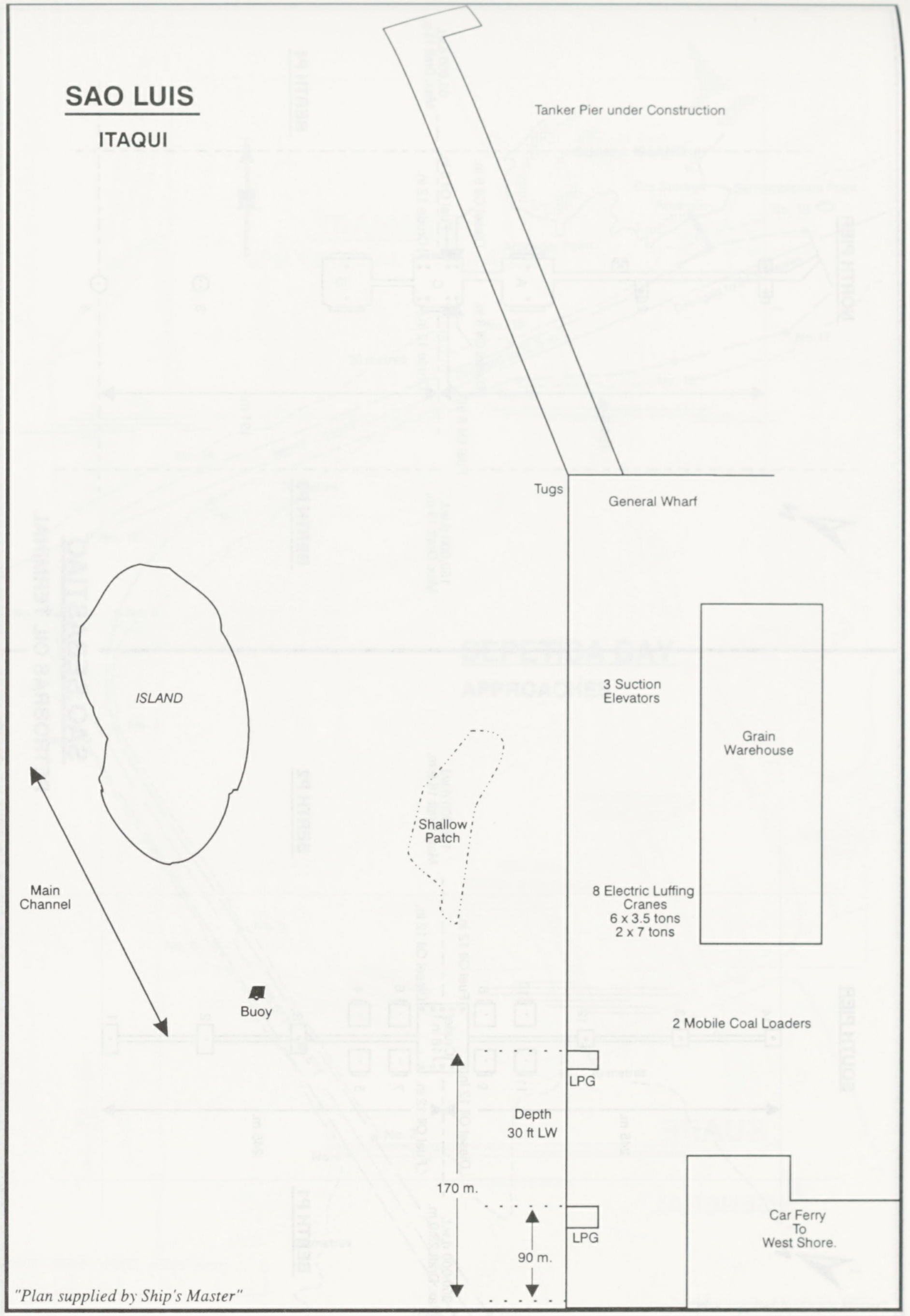
SAO LUIS
ITAQUI

PETROBRAS
ESSO
TEXACO
Rail Terminal
TERMASA
Dock Co. Residential Area
SABBA
Workshop
ICOPEL
Wall
SERAMA
N
Future Silo
Planned Administration Block
Coal Storage Area
Embankment
Open Land Embankment
Wall
Raised Water Tanks
Garage
Rail Terminal
Flour Mill
Semi Underground Water Tanks
Conveyor Belt
Sub-Station
Ramp
Planned Warehouse
Warehouse
Heavy Lift Area
North Quay
Cranes
Suction Units
Cranes
South Quay
Depth 12 m.

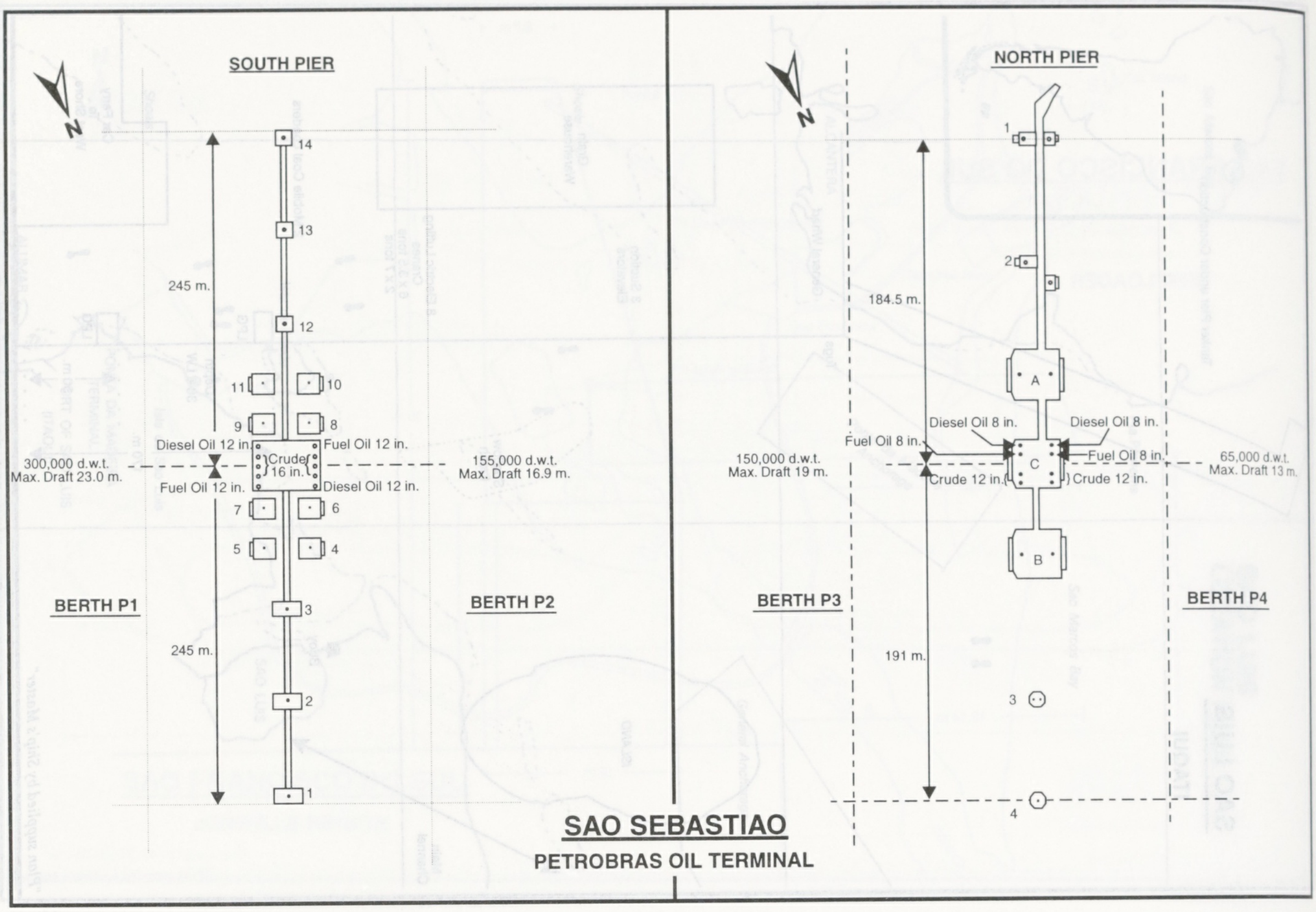
SAO SEBASTIAO
PETROBRAS OIL TERMINAL


SOUTH PIER
N
245.00 M
West Berth P2
155,000 (DWT)
East Berth P1
300,000 (DWT)
263.84 M
359.14 M
50.00
MAIN JETTY
Tug Finger Piers
204.50 M
191.00 M
West Berth P4
65,000 (DWT)
150,000 (DWT)
East Berth P3
NORTH PIER

SAO LUIS
ITAQUI

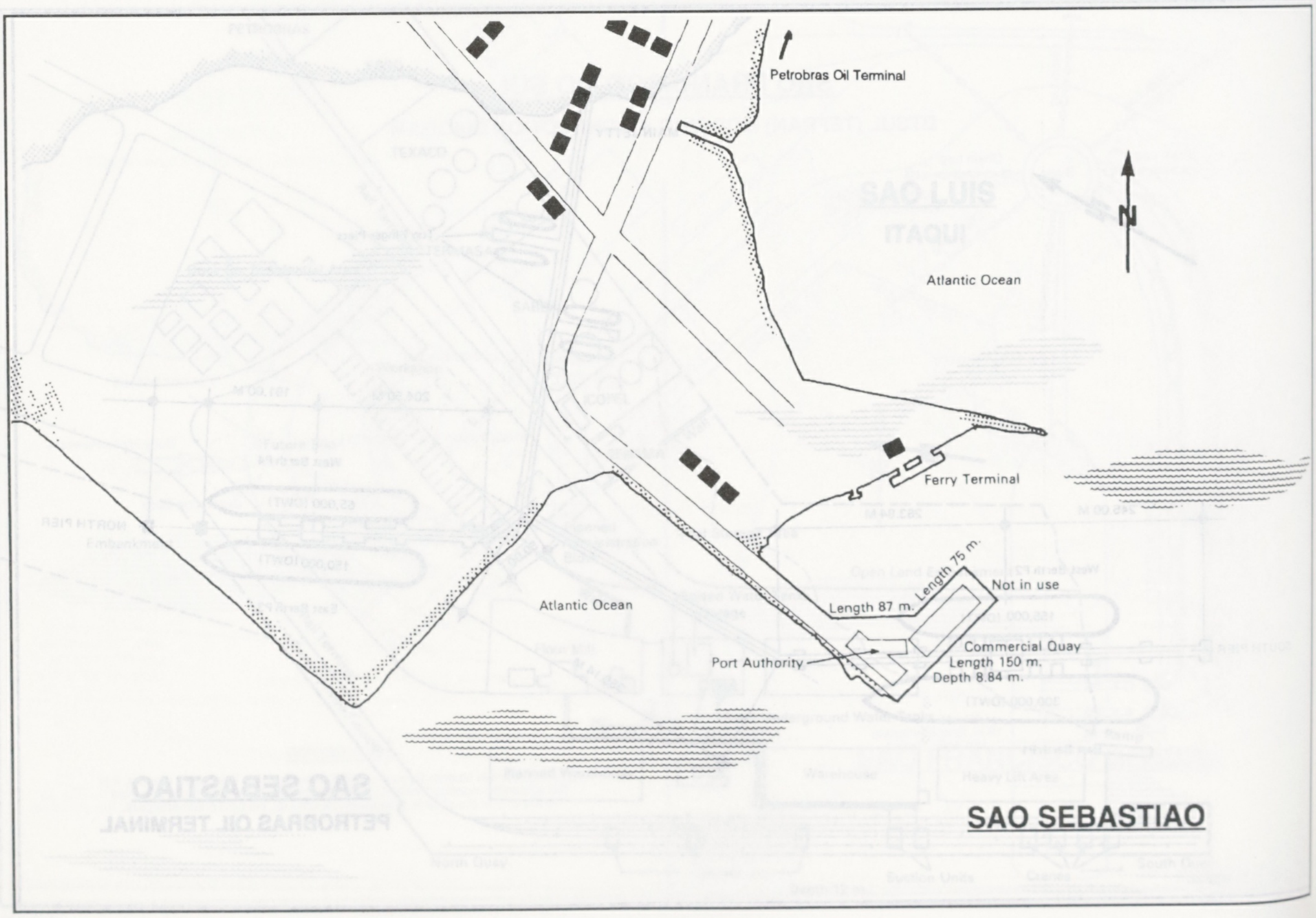

Tanker Pier under Construction
Tugs
General Wharf
ISLAND
3 Suction Elevators
Grain Warehouse
Shallow Patch
Main Channel
8 Electric Luffing Cranes 6 x 3.5 tons 2 x 7 tons
Buoy
2 Mobile Coal Loaders
LPG
Depth 30 ft LW
170 m.
LPG
90 m.
Car Ferry To West Shore.

"Plan supplied by Ship's Master"

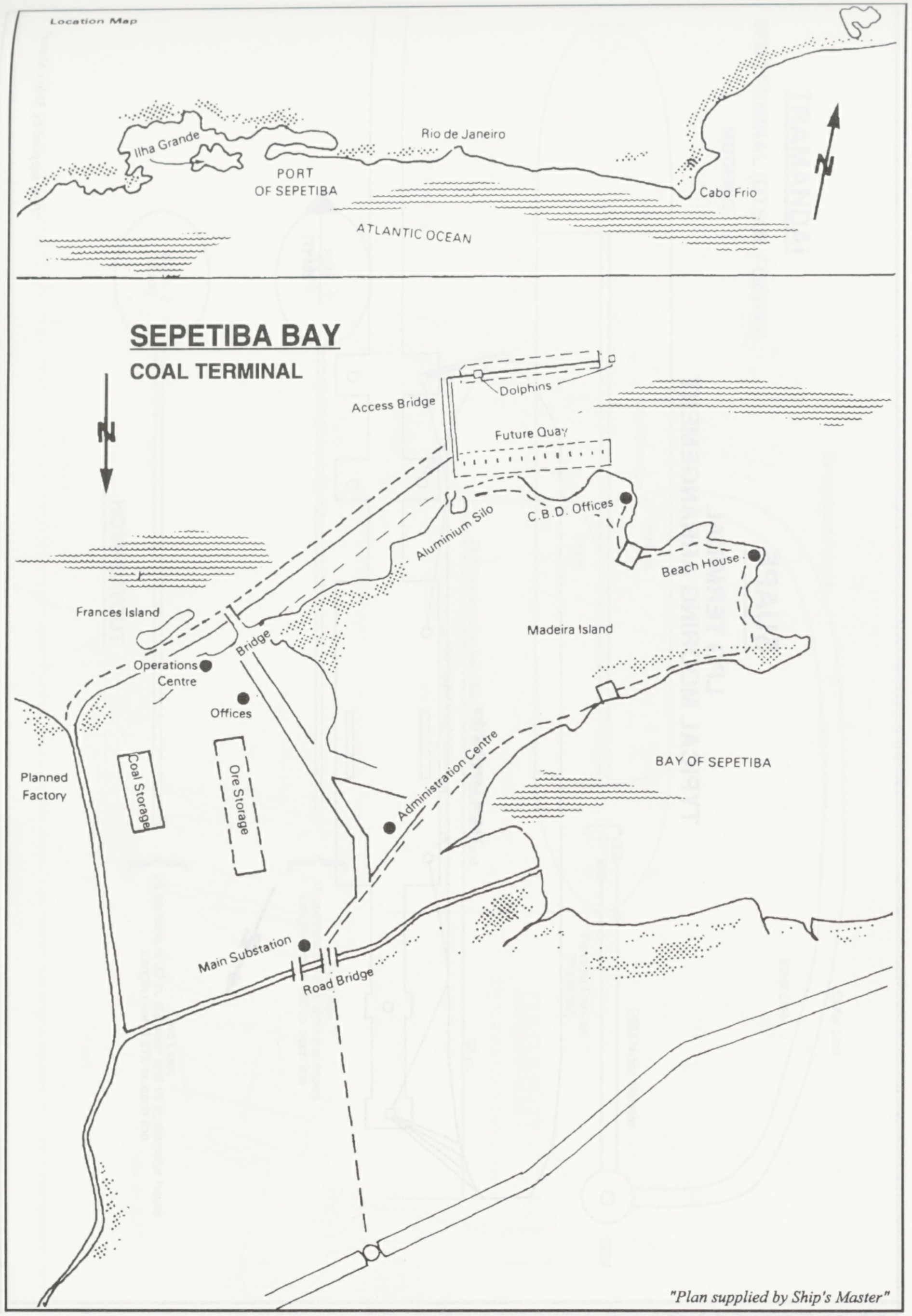

SOUTH PIER
N
14
13
12
11
10
9
8
7
6
5
4
3
2
1
245 m.
245 m.
Diesel Oil 12 in.
Fuel Oil 12 in.
Crude 16 in.
Fuel Oil 12 in.
Diesel Oil 12 in.
300,000 d.w.t.
Max. Draft 23.0 m.
155,000 d.w.t.
Max. Draft 16.9 m.
BERTH P1
BERTH P2
NORTH PIER
N
1
2
A
C
B
3
4
184.5 m.
191 m.
Diesel Oil 8 in.
Diesel Oil 8 in.
Fuel Oil 8 in.
Fuel Oil 8 in.
Crude 12 in.
Crude 12 in.
150,000 d.w.t.
Max. Draft 19 m.
65,000 d.w.t.
Max. Draft 13 m.
BERTH P3
BERTH P4

SAO SEBASTIAO

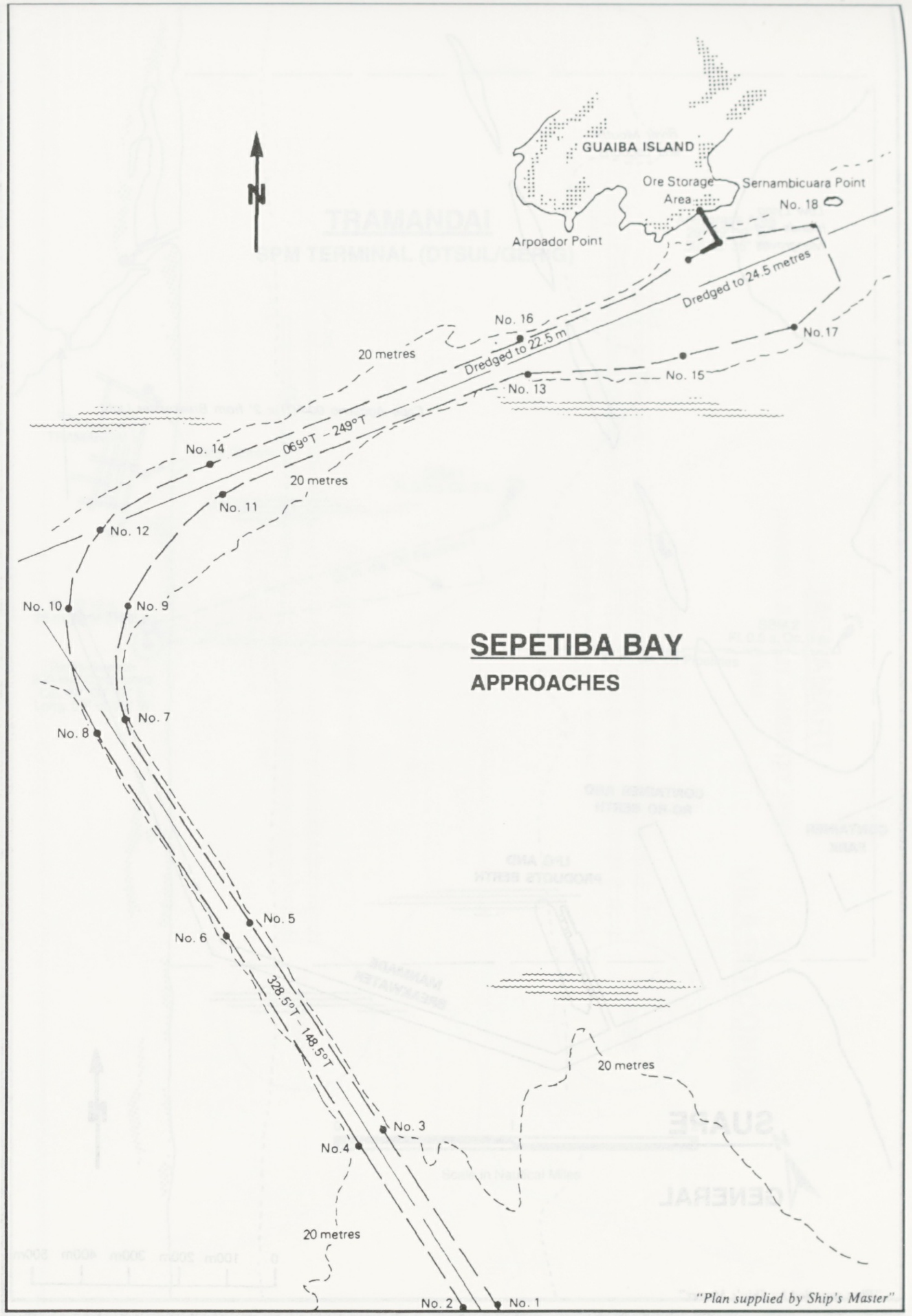
PETROBRAS OIL TERMINAL


Petrobras Oil Terminal
N
Atlantic Ocean
Ferry Terminal
Length 75 m.
Not in use
Length 87 m.
Atlantic Ocean
Commercial Quay
Port Authority
Length 150 m.
Depth 8.84 m.

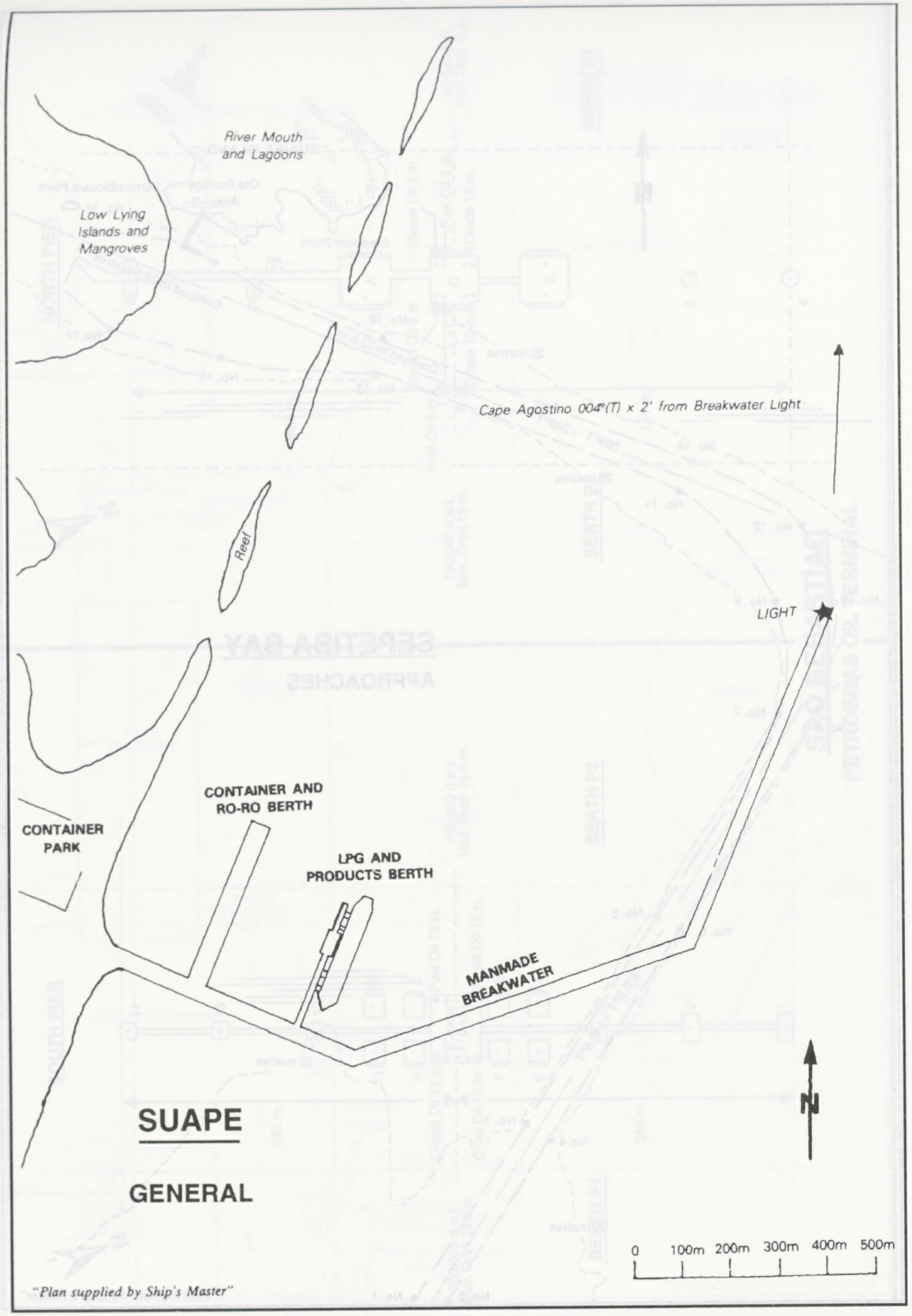
SAO SEBASTIAO


Location Map
Ilha Grande
Rio de Janeiro
PORT OF SEPETIBA
Cabo Frio
ATLANTIC OCEAN
N
SEPETIBA BAY
COAL TERMINAL
N
Access Bridge
Dolphins
Future Quay
Aluminium Silo
C.B.D. Offices
Beach House
Frances Island
Bridge
Madeira Island
Operations Centre
Offices
Planned Factory
Coal Storage
Ore Storage
BAY OF SEPETIBA
Administration Centre
Main Substation
Road Bridge

"Plan supplied by Ship's Master"


N
GUAIBA ISLAND
Ore Storage Area
Sernambicuara Point
No. 18
Arpoador Point
Dredged to 24.5 metres
No. 16
No. 17
20 metres
Dredged to 22.5 m
No. 13
No. 15
No. 14
069°T – 249°T
20 metres
No. 11
No. 12
No. 10
No. 9
SEPETIBA BAY
APPROACHES
No. 7
No. 8
No. 5
No. 6
328.5°T – 148.5°T
20 metres
No. 3
No. 4
20 metres
No. 2
No. 1

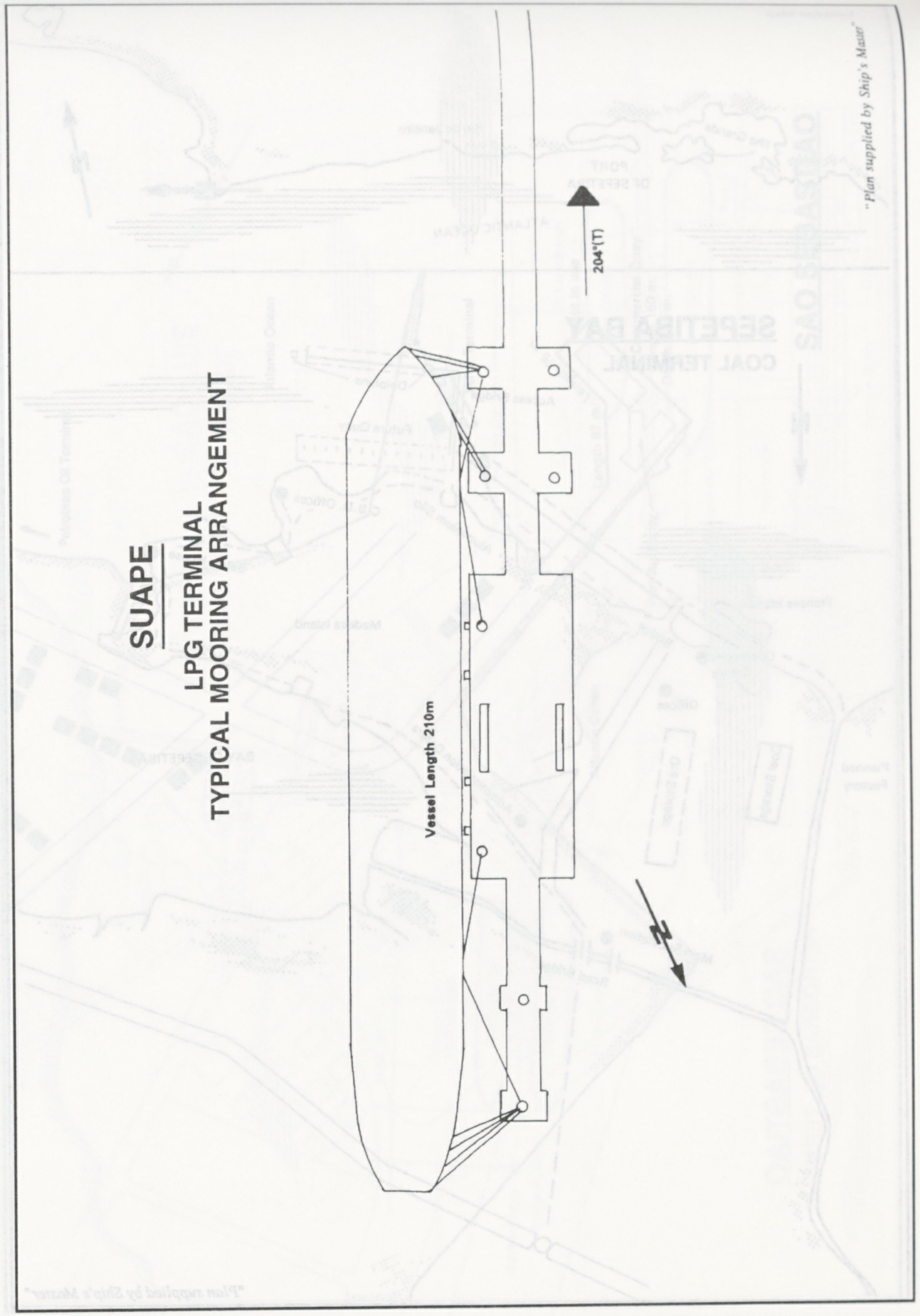
"Plan supplied by Ship's Master"


River Mouth and Lagoons
Low Lying Islands and Mangroves
Reef
Cape Agostino 004°(T) x 2' from Breakwater Light
LIGHT
CONTAINER AND RO-RO BERTH
CONTAINER PARK
LPG AND PRODUCTS BERTH
MANMADE BREAKWATER
N
0
100m
200m
300m
400m
500m

SUAPE

GENERAL

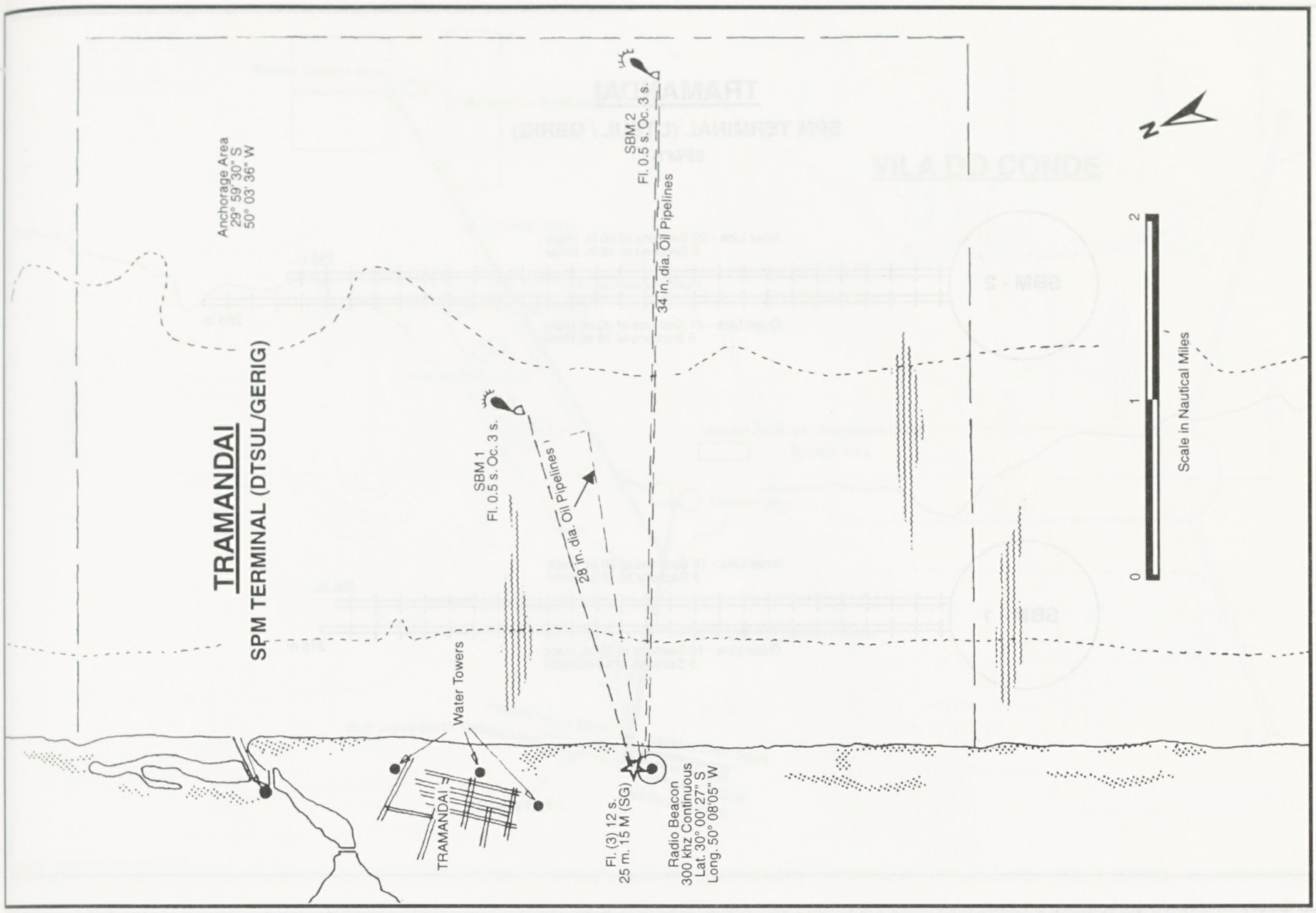
"Plan supplied by Ship's Master"

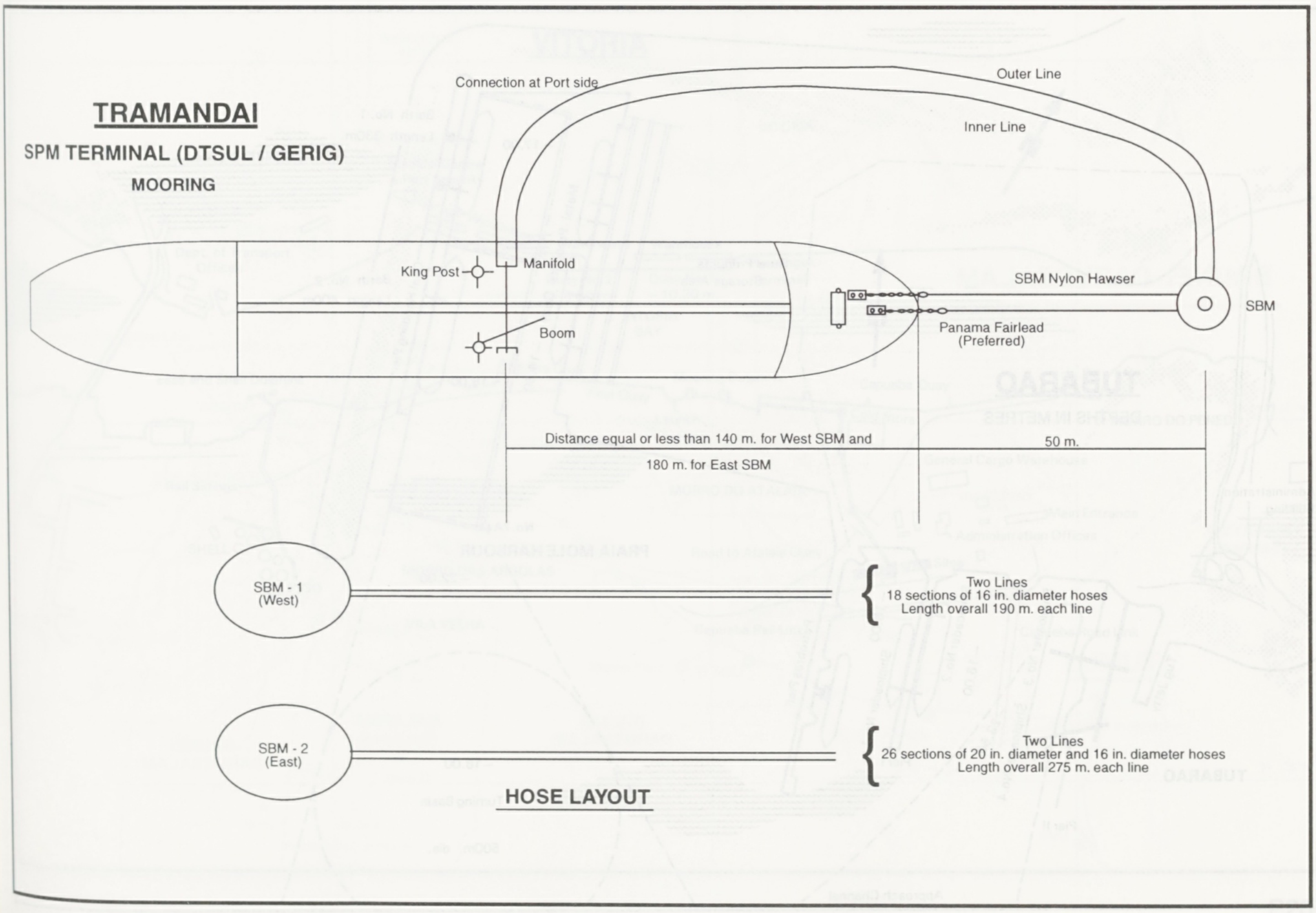

204°(T)
Vessel Length 210m
N

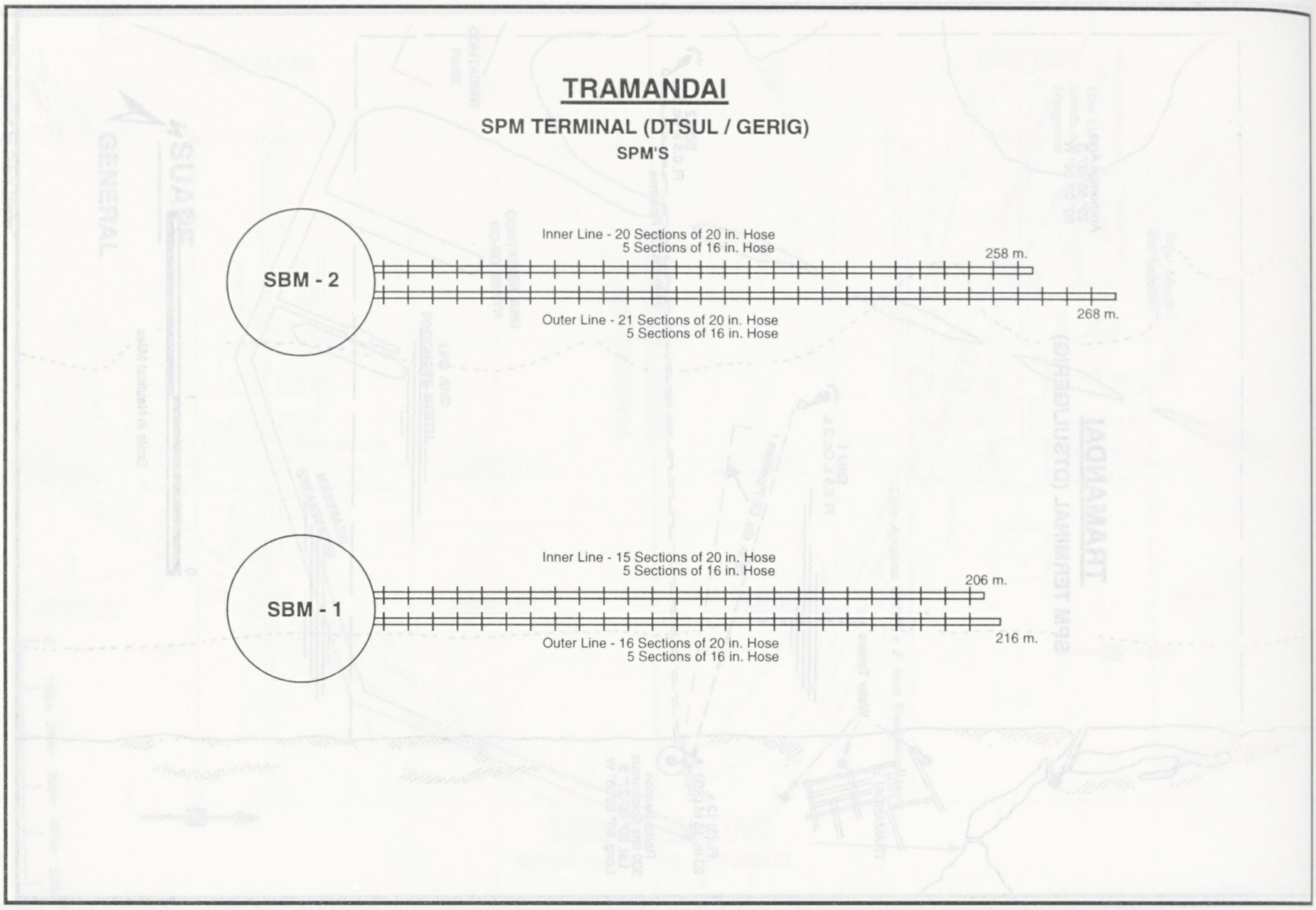
SUAPE

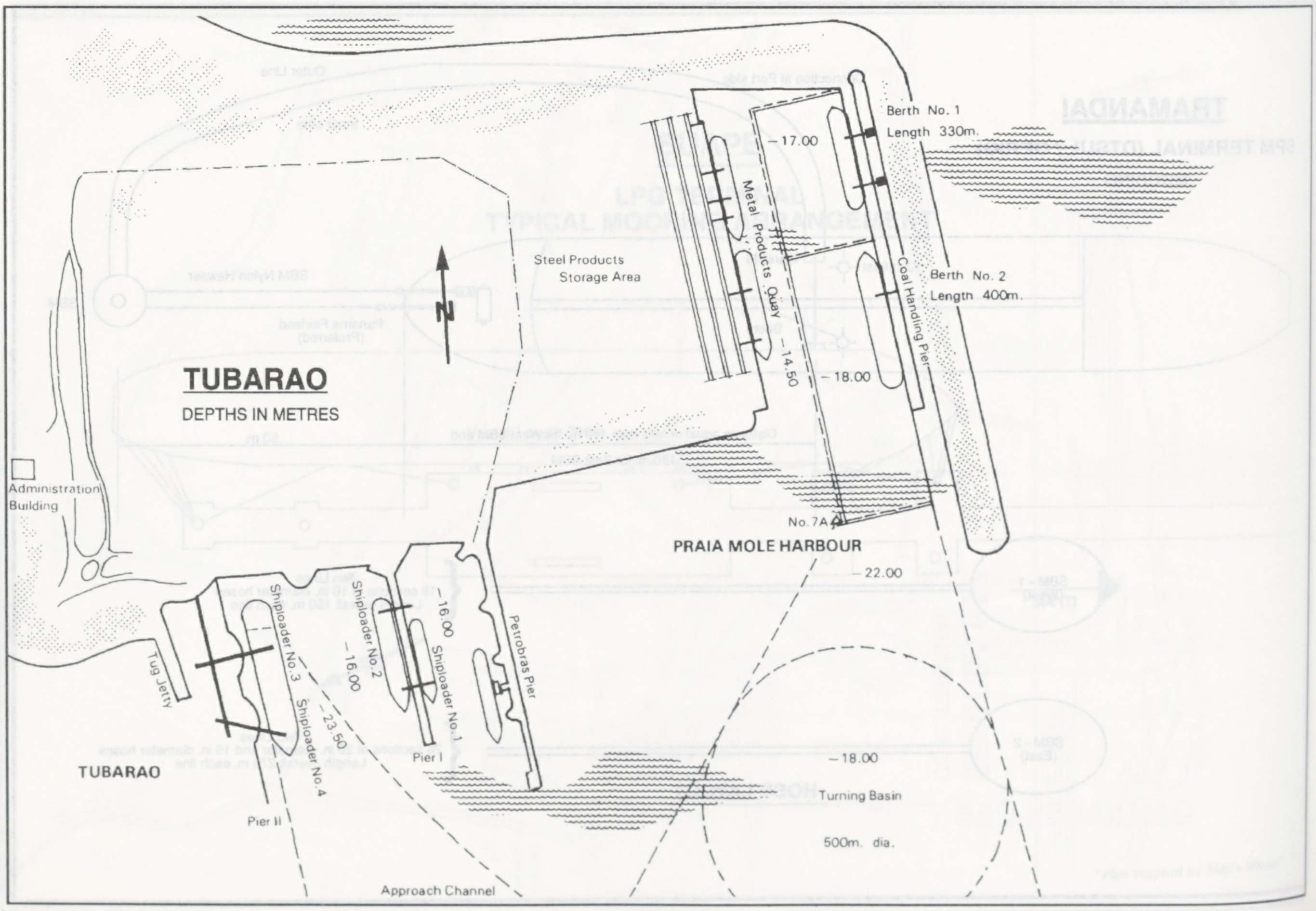
LPG TERMINAL
TYPICAL MOORING ARRANGEMENT

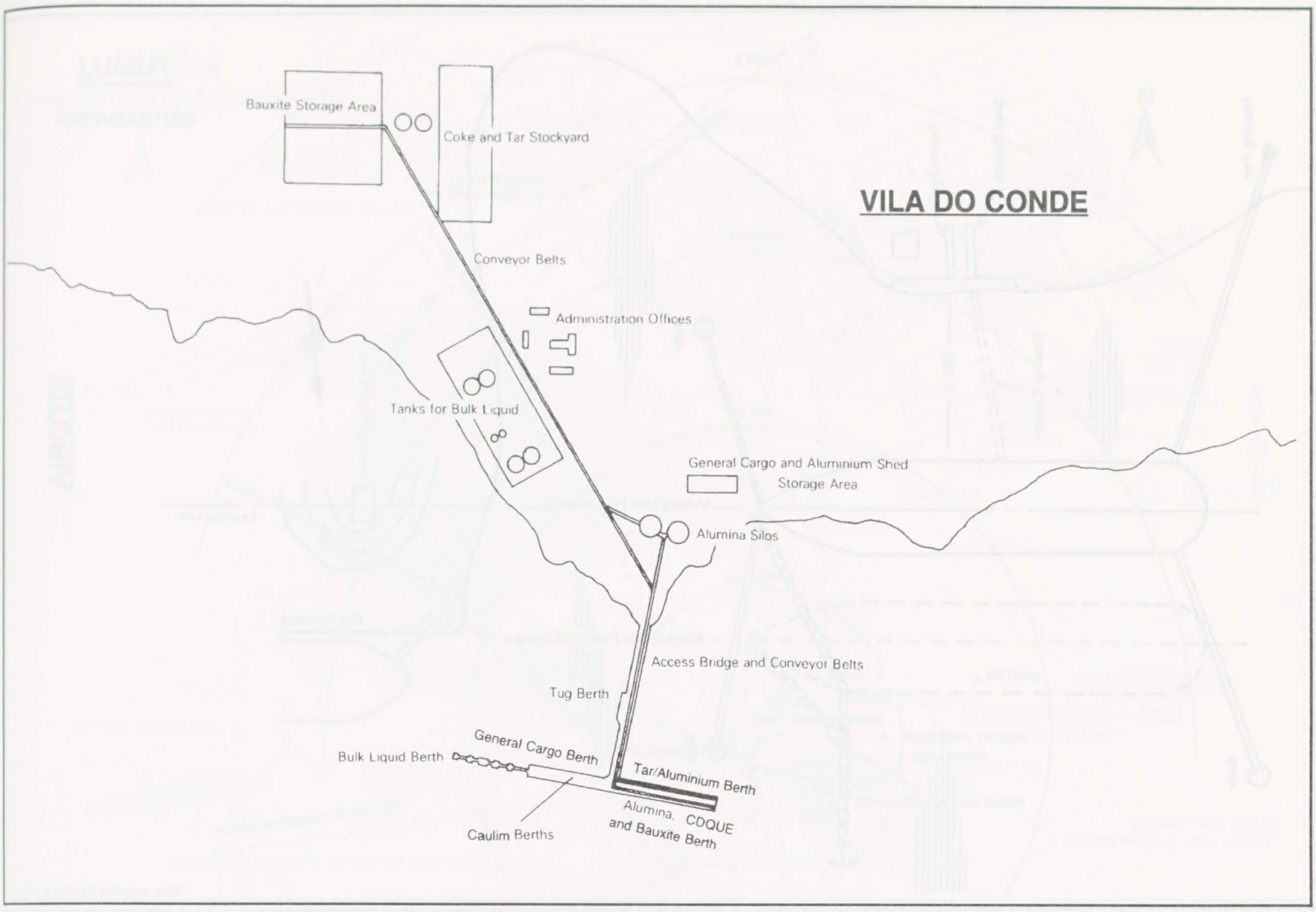
"Plan supplied by Ship's Master"

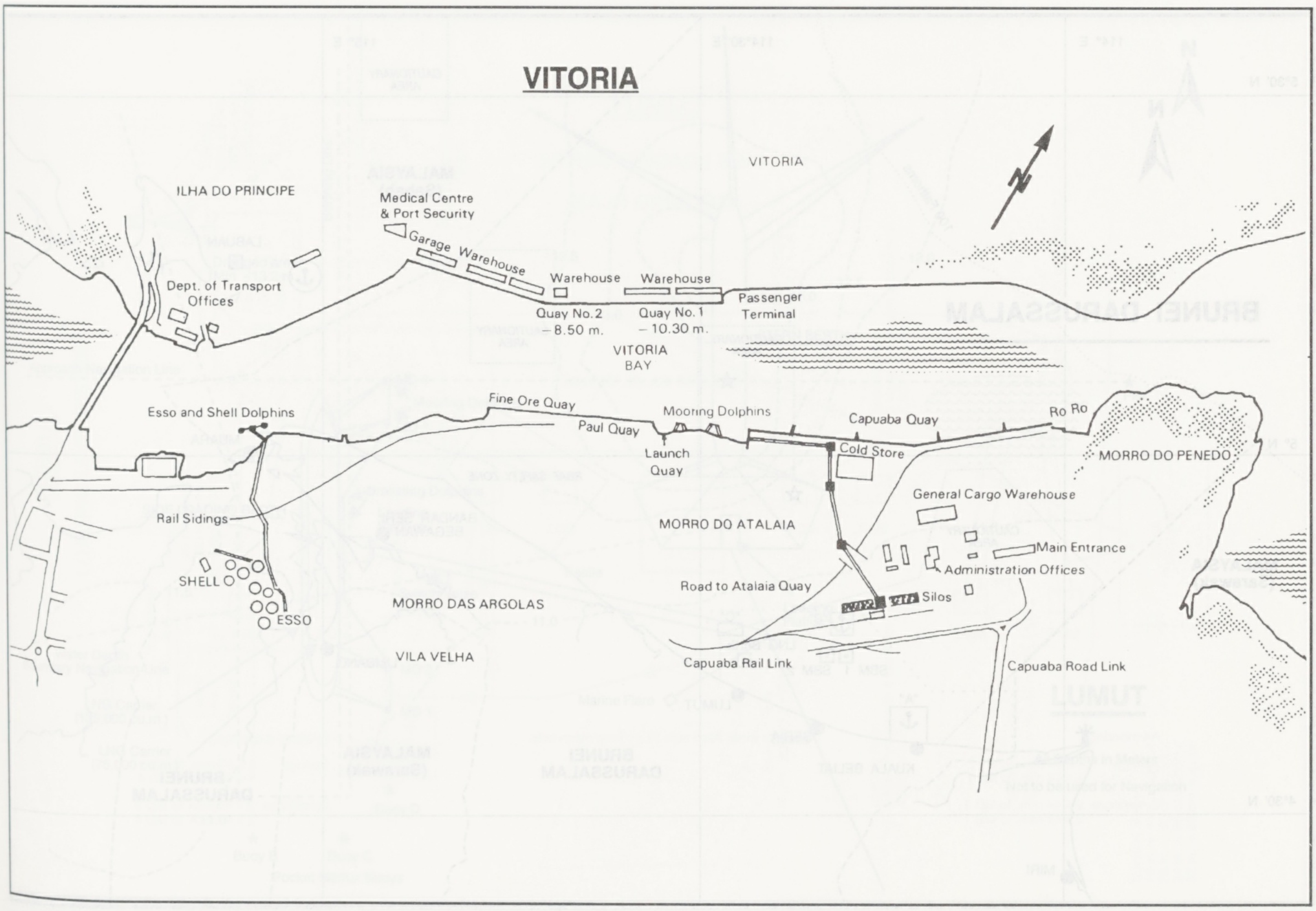

TRAMANDAI
SPM TERMINAL (DTSUL/GERIG)
Anchorage Area
29° 59' 30" S
50° 03' 36" W
SBM 2
Fl. 0.5 s. Oc. 3 s.
34 in. dia. Oil Pipelines
SBM 1
Fl. 0.5 s. Oc. 3 s.
28 in. dia. Oil Pipelines
Water Towers
TRAMANDAI
Fl. (3) 12 s.
25 m. 15 M (SG)
Radio Beacon
300 khz Continuous
Lat. 30° 00' 27" S
Long. 50° 08'05" W
N
Scale in Nautical Miles
0
1
2

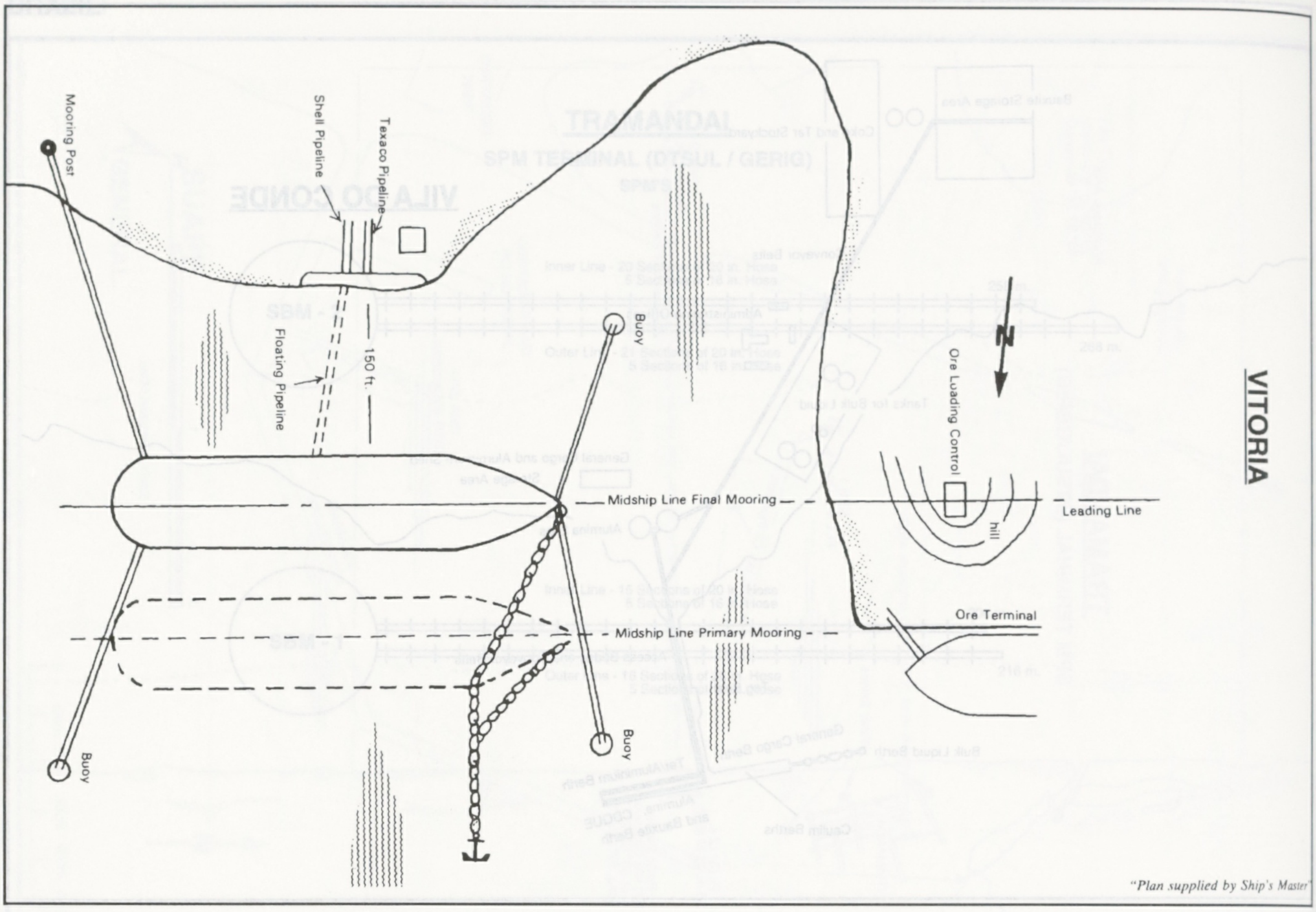

TRAMANDAI
SPM TERMINAL (DTSUL / GERIG)
MOORING
Connection at Port side
Outer Line
Inner Line
King Post
Manifold
Boom
SBM Nylon Hawser
Panama Fairlead
(Preferred)
SBM
Distance equal or less than 140 m. for West SBM and
180 m. for East SBM
50 m.
SBM - 1
(West)
Two Lines
18 sections of 16 in. diameter hoses
Length overall 190 m. each line
SBM - 2
(East)
Two Lines
26 sections of 20 in. diameter and 16 in. diameter hoses
Length overall 275 m. each line
HOSE LAYOUT


TRAMANDAI
SPM TERMINAL (DTSUL / GERIG)
SPM'S
SBM - 2
Inner Line - 20 Sections of 20 in. Hose
5 Sections of 16 in. Hose
258 m.
268 m.
Outer Line - 21 Sections of 20 in. Hose
5 Sections of 16 in. Hose
SBM - 1
Inner Line - 15 Sections of 20 in. Hose
5 Sections of 16 in. Hose
206 m.
216 m.
Outer Line - 16 Sections of 20 in. Hose
5 Sections of 16 in. Hose

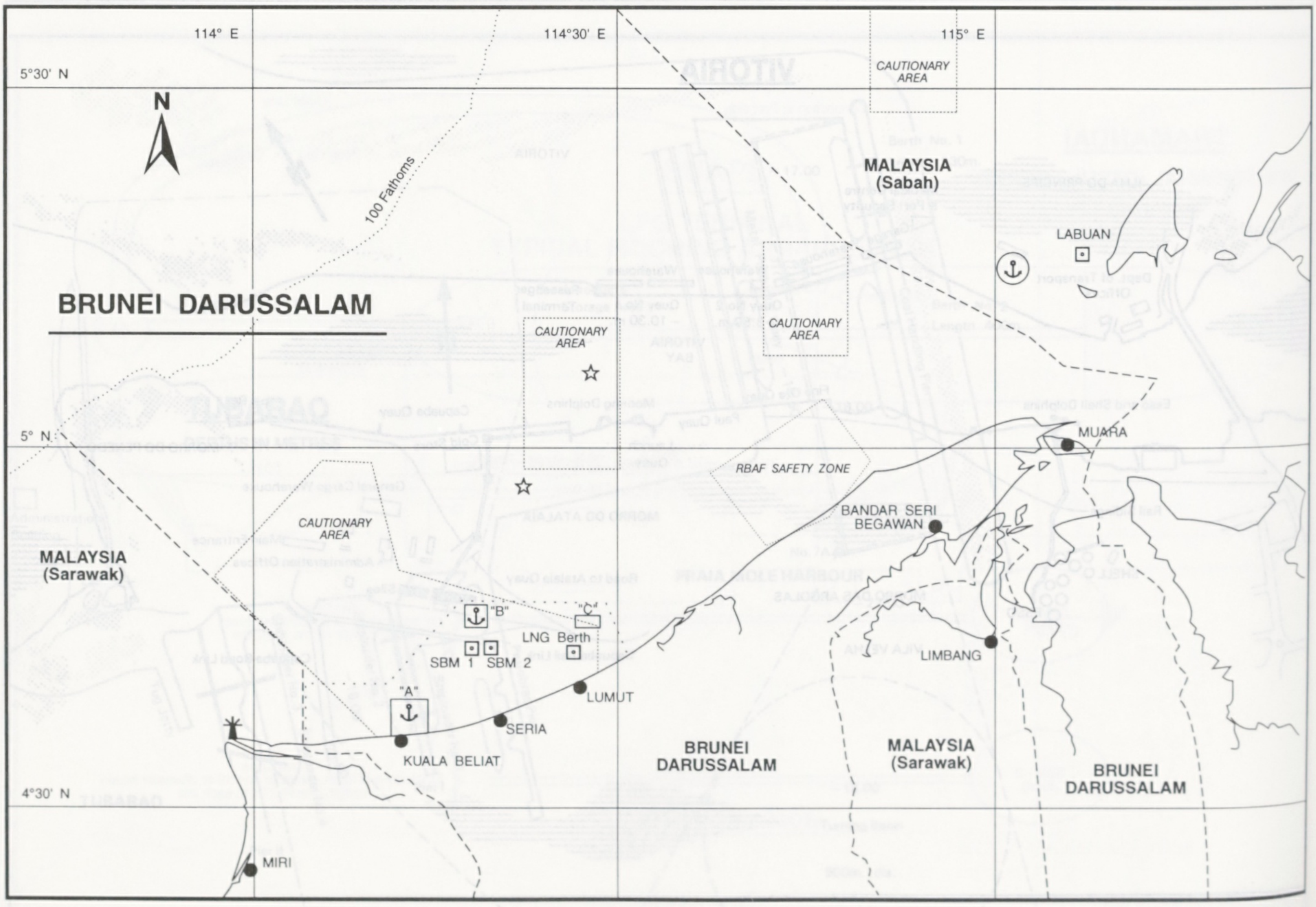

TUBARAO
DEPTHS IN METRES
N
Administration Building
Steel Products Storage Area
Berth No. 1
Length 330m.
– 17.00
Metal Products Quay
Coal Handling Pier
Berth No. 2
Length 400m.
– 14.50
– 18.00
No.7A
PRAIA MOLE HARBOUR
– 22.00
Shiploader No. 3
Shiploader No. 2
Shiploader No. 1
Shiploader No. 4
Tug Jetty
– 16.00
16.00
– 23.50
Petrobras Pier
Pier I
Pier II
TUBARAO
– 18.00
Turning Basin
500m. dia.
Approach Channel

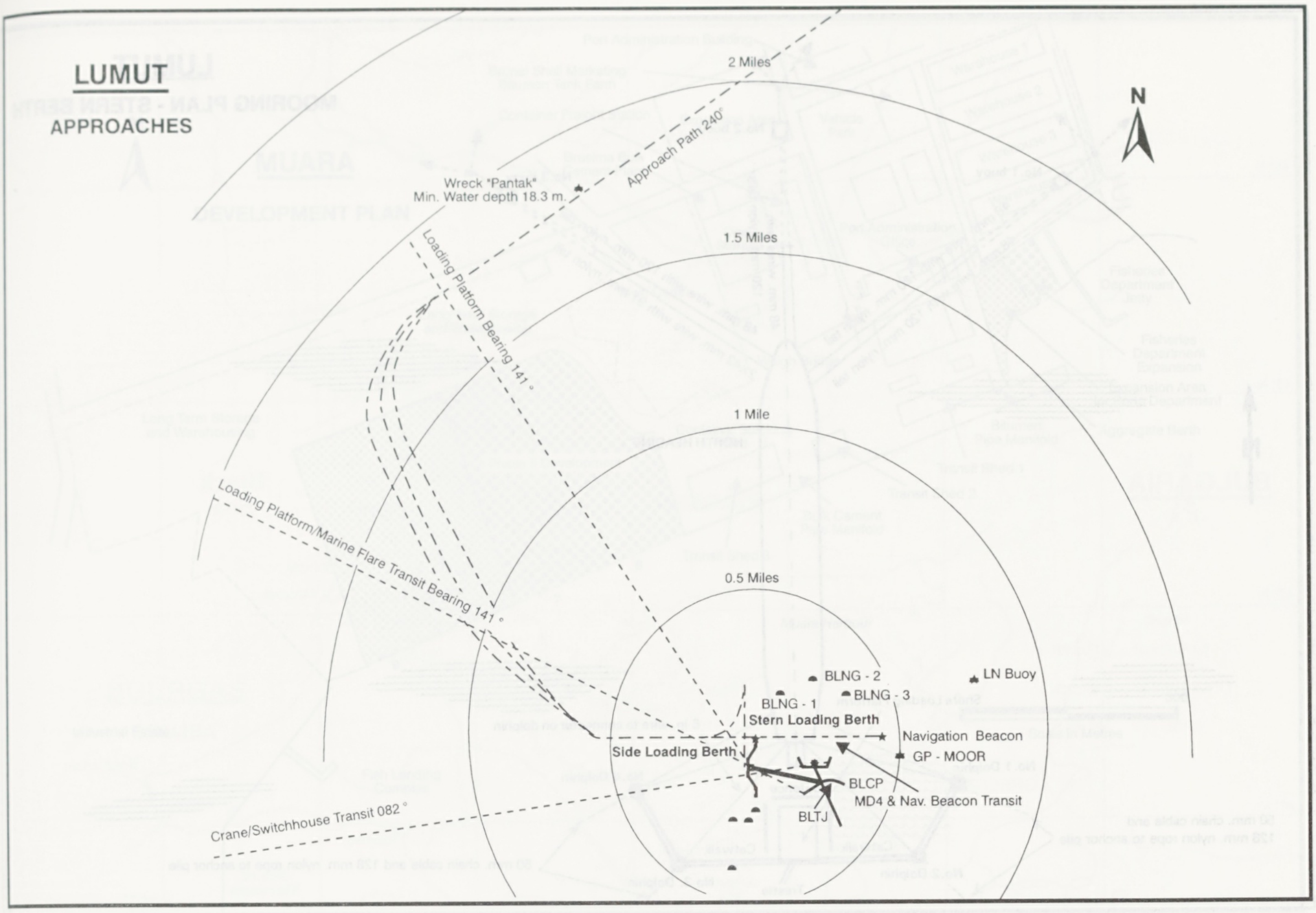

VILA DO CONDE
Bauxite Storage Area
Coke and Tar Stockyard
Conveyor Belts
Administration Offices
Tanks for Bulk Liquid
General Cargo and Aluminium Shed
Storage Area
Alumina Silos
Access Bridge and Conveyor Belts
Tug Berth
General Cargo Berth
Bulk Liquid Berth
Tar/Aluminium Berth
Alumina, CDQUE
and Bauxite Berth
Caulim Berths

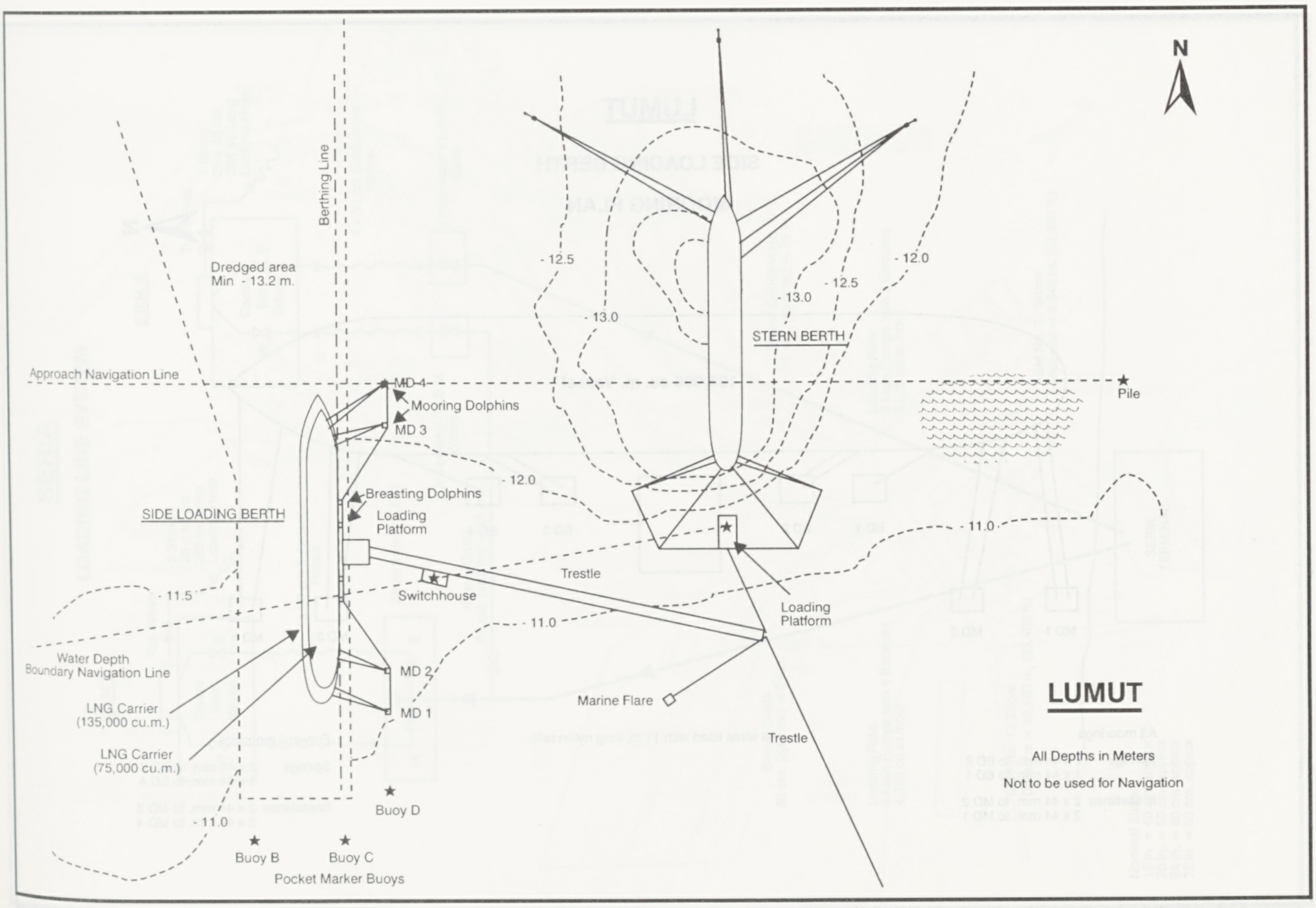

VITORIA
VITORIA
ILHA DO PRINCIPE
Medical Centre
& Port Security
Garage
Warehouse
Warehouse
Warehouse
Dept. of Transport
Offices
Quay No.2
– 8.50 m.
Quay No.1
– 10.30 m.
Passenger
Terminal
VITORIA
BAY
Fine Ore Quay
Mooring Dolphins
Capuaba Quay
Ro Ro
Esso and Shell Dolphins
Paul Quay
Launch
Quay
Cold Store
MORRO DO PENEDO
General Cargo Warehouse
Rail Sidings
MORRO DO ATALAIA
Main Entrance
Administration Offices
SHELL
Road to Atalaia Quay
Silos
MORRO DAS ARGOLAS
ESSO
VILA VELHA
Capuaba Rail Link
Capuaba Road Link

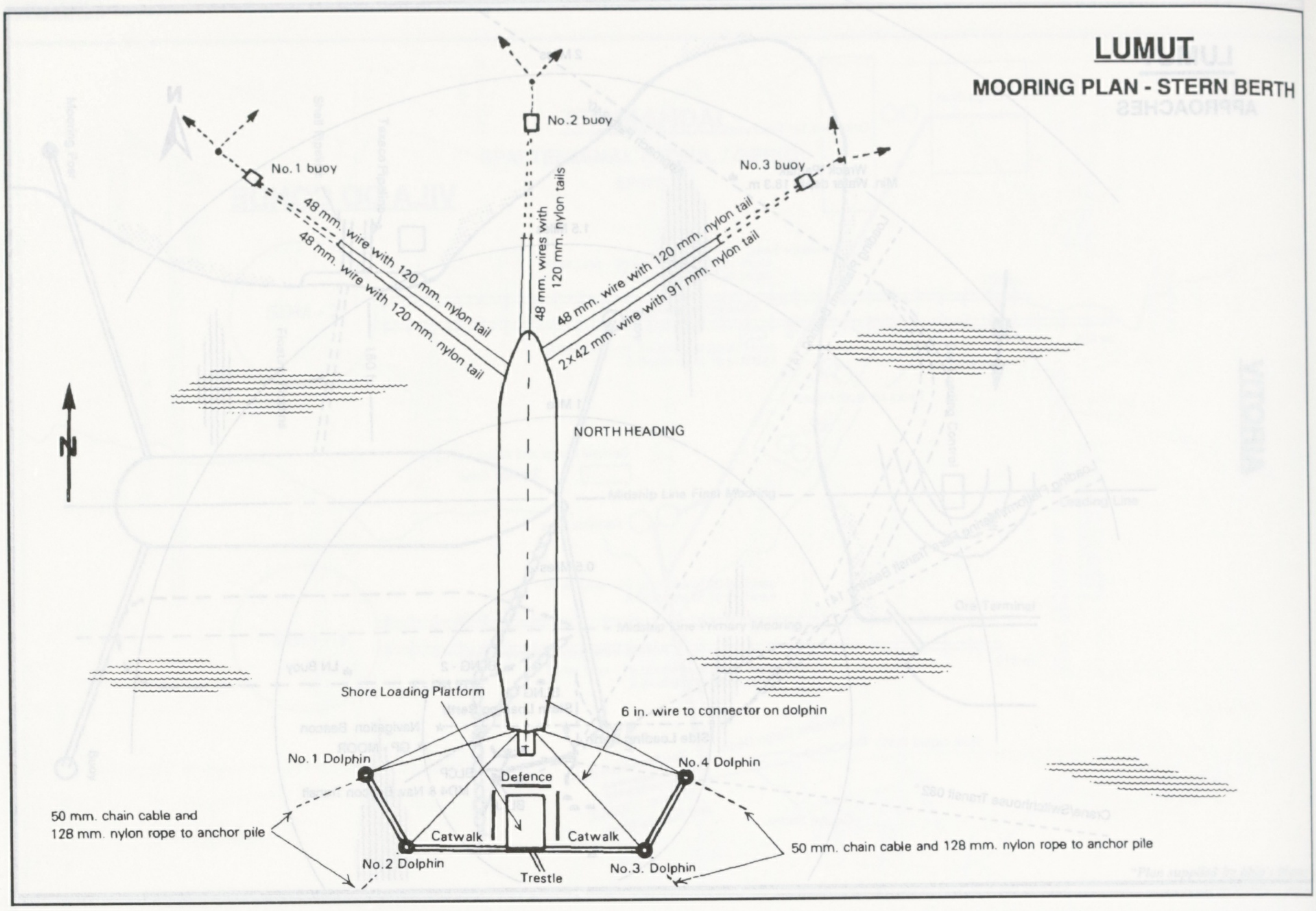

VITORIA
Mooring Post
Shell Pipeline
Texaco Pipeline
Floating Pipeline
150 ft.
Buoy
N
Ore Loading Control
hill
Midship Line Final Mooring
Leading Line
Ore Terminal
Midship Line Primary Mooring
Buoy
Buoy

"Plan supplied by Ship's Master"


114° E
114°30' E
115° E
5°30' N
5° N
4°30' N
N
100 Fathoms
BRUNEI DARUSSALAM
CAUTIONARY AREA
MALAYSIA (Sabah)
LABUAN
CAUTIONARY AREA
CAUTIONARY AREA
MUARA
RBAF SAFETY ZONE
BANDAR SERI BEGAWAN
CAUTIONARY AREA
MALAYSIA (Sarawak)
"B"
"C"
LNG Berth
SBM 1
SBM 2
LIMBANG
"A"
LUMUT
SERIA
KUALA BELIAT
BRUNEI DARUSSALAM
MALAYSIA (Sarawak)
BRUNEI DARUSSALAM
MIRI


LUMUT
APPROACHES
N
2 Miles
Approach Path 240°
Wreck "Pantak"
Min. Water depth 18.3 m.
Loading Platform Bearing 141°
1.5 Miles
1 Mile
Loading Platform/Marine Flare Transit Bearing 141°
0.5 Miles
BLNG - 2
BLNG - 3
LN Buoy
BLNG - 1
Stern Loading Berth
Navigation Beacon
Side Loading Berth
GP - MOOR
BLCP
MD4 & Nav. Beacon Transit
BLTJ
Crane/Switchhouse Transit 082°

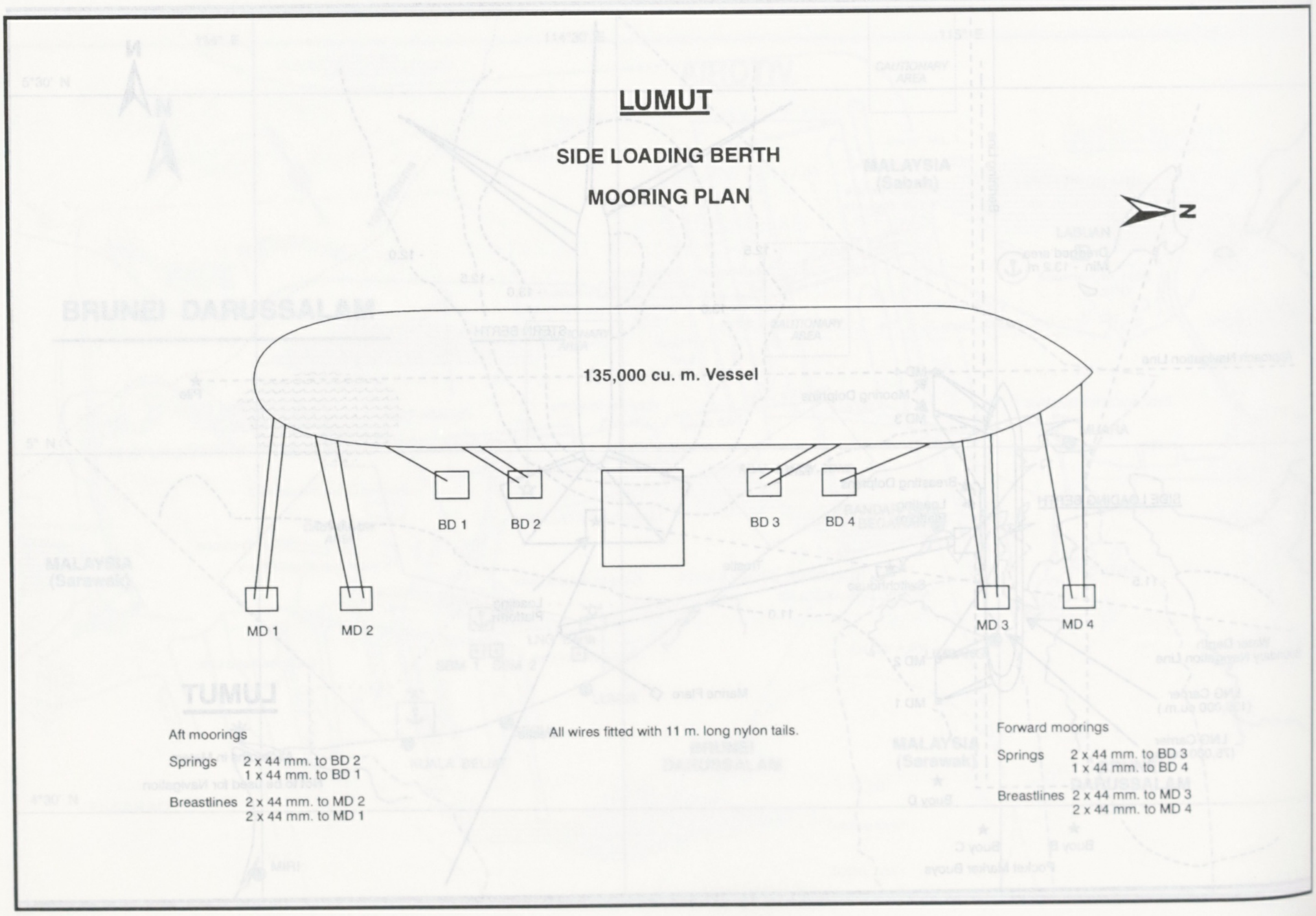

N
Berthing Line
Dredged area
Min - 13.2 m.
- 12.5
- 13.0
- 13.0
- 12.5
- 12.0
STERN BERTH
Approach Navigation Line
MD 4
Mooring Dolphins
MD 3
Pile
- 12.0
Breasting Dolphins
Loading Platform
SIDE LOADING BERTH
- 11.0
Trestle
- 11.5
Switchhouse
Loading Platform
- 11.0
Water Depth
Boundary Navigation Line
MD 2
MD 1
LNG Carrier
(135,000 cu.m.)
LNG Carrier
(75,000 cu.m.)
Marine Flare
Trestle
LUMUT
All Depths in Meters
Not to be used for Navigation
Buoy D
- 11.0
Buoy B
Buoy C
Pocket Marker Buoys



LUMUT

MOORING PLAN - STERN BERTH

N
No.2 buoy
No.1 buoy
No.3 buoy
48 mm. wire with 120 mm. nylon tail
48 mm. wire with 120 mm. nylon tail
48 mm. wires with 120 mm. nylon tails
48 mm. wire with 120 mm. nylon tail
2 x 42 mm. wire with 91 mm. nylon tail
N
NORTH HEADING
Shore Loading Platform
6 in. wire to connector on dolphin
No.1 Dolphin
No.4 Dolphin
Defence
50 mm. chain cable and
128 mm. nylon rope to anchor pile
Catwalk
Catwalk
50 mm. chain cable and 128 mm. nylon rope to anchor pile
No.2 Dolphin
Trestle
No.3. Dolphin



LUMUT

SIDE LOADING BERTH

MOORING PLAN

N
135,000 cu. m. Vessel
BD 1
BD 2
BD 3
BD 4
MD 1
MD 2
MD 3
MD 4

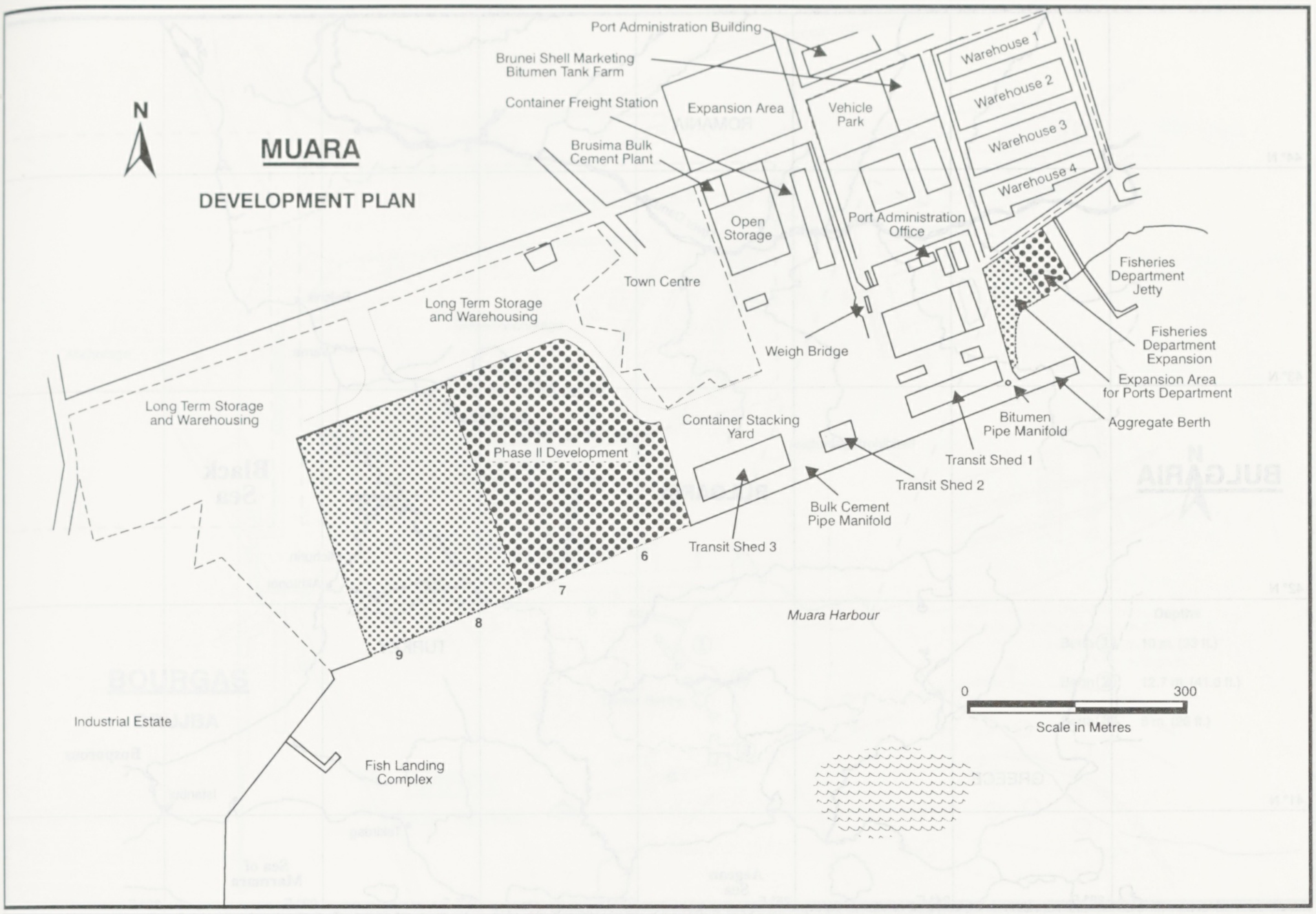
Aft moorings

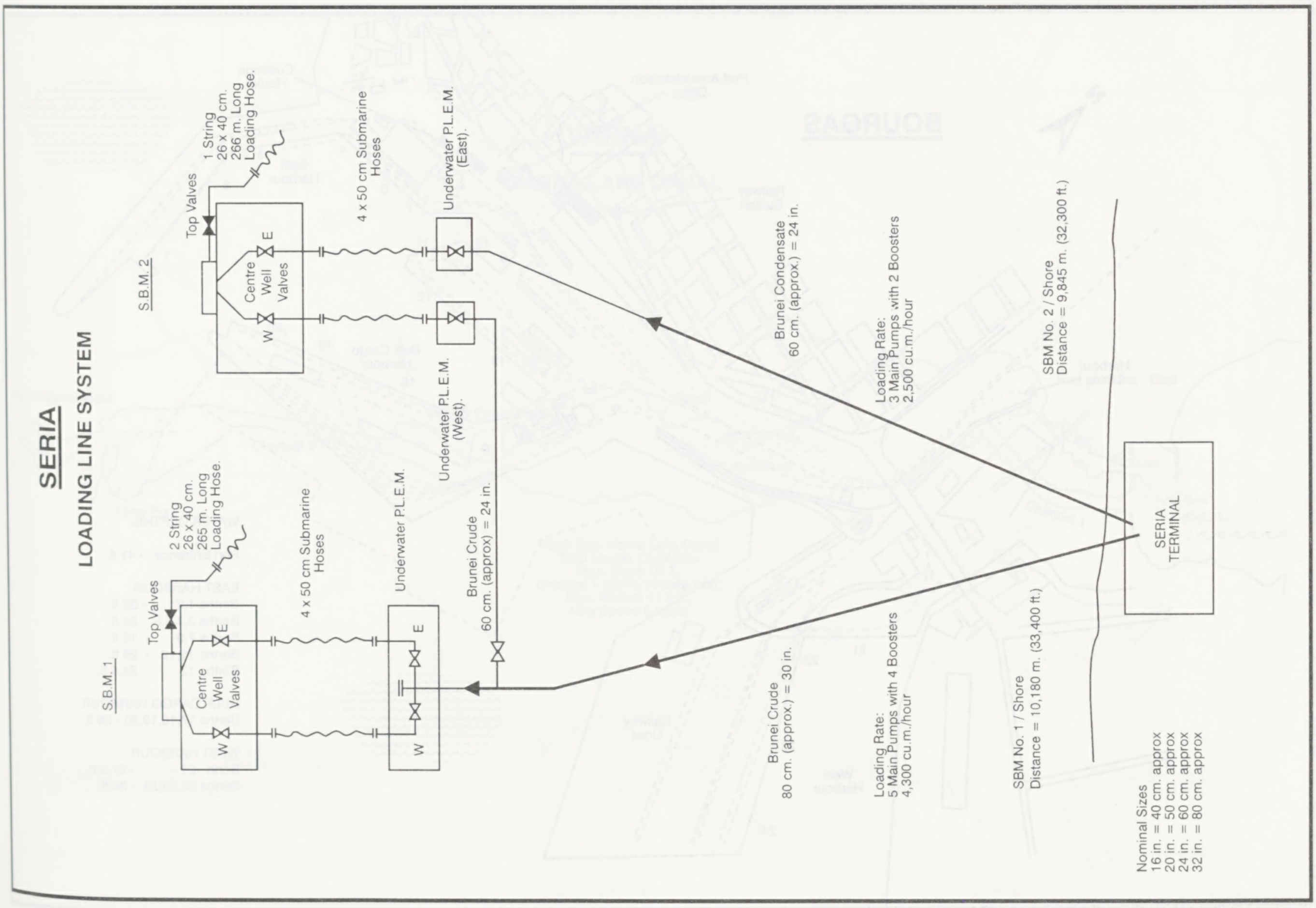
Springs	2 x 44 mm. to BD 2 1 x 44 mm. to BD 1
Breastlines	2 x 44 mm. to MD 2 2 x 44 mm. to MD 1

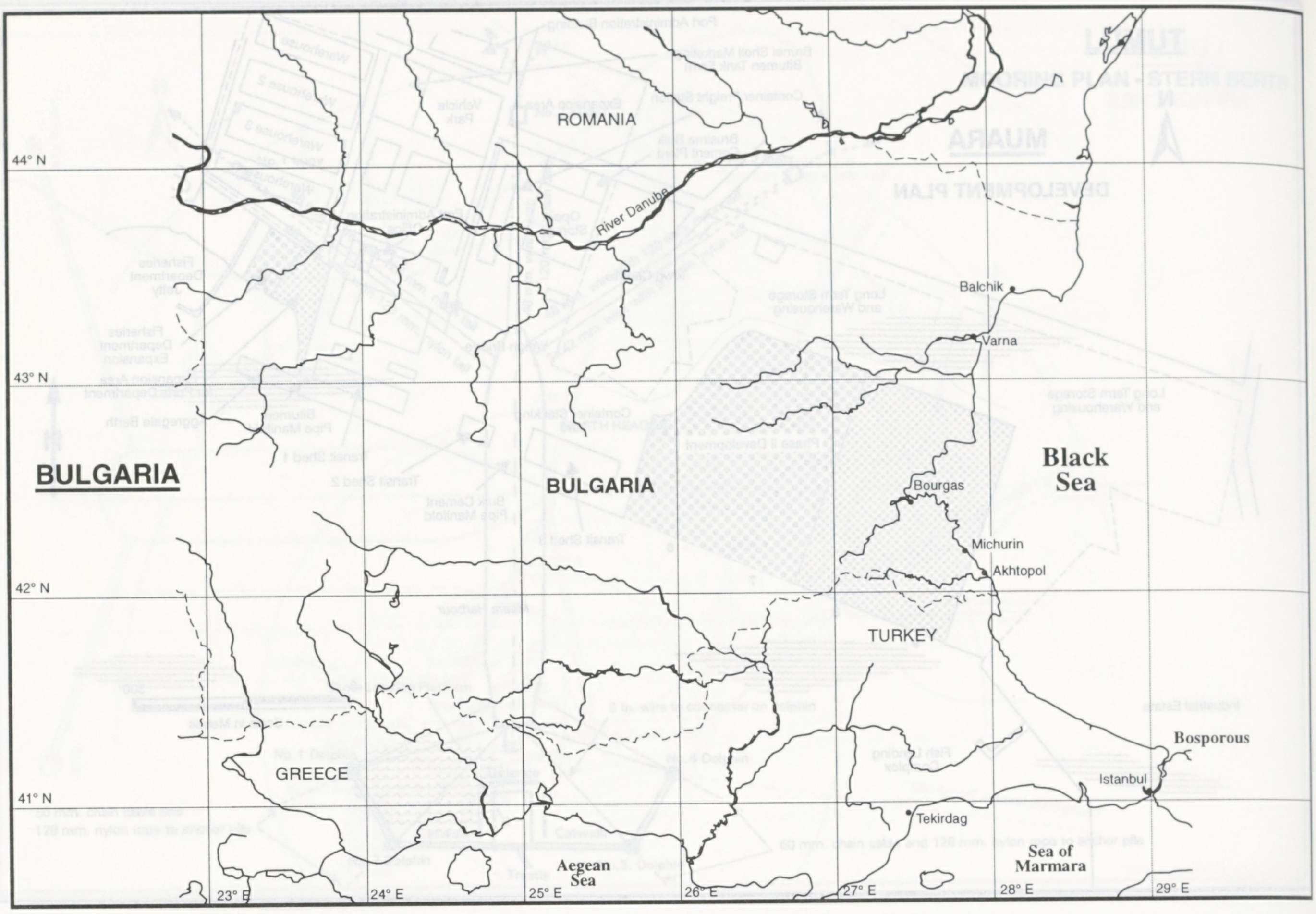
All wires fitted with 11 m. long nylon tails.

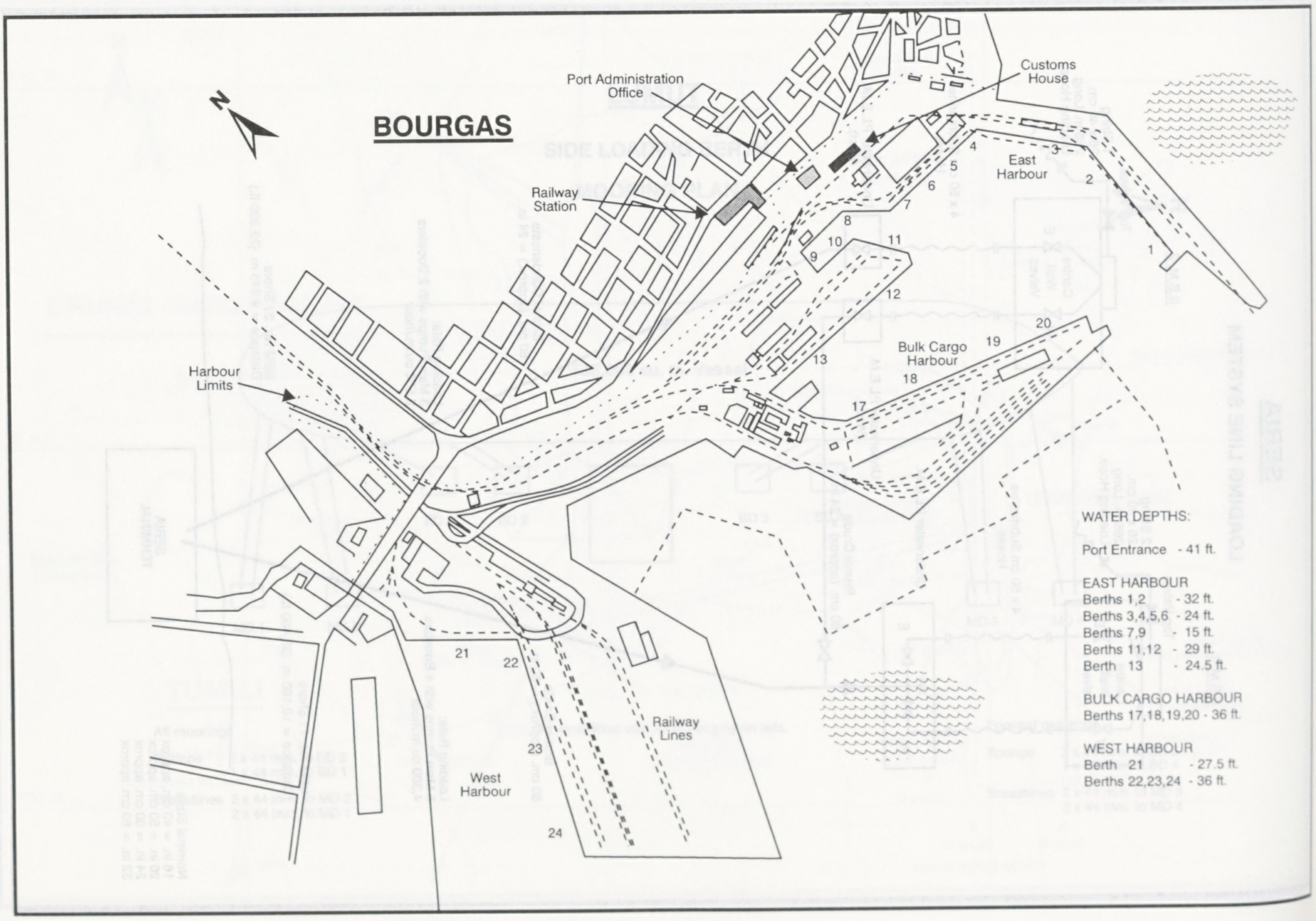
Forward moorings

Springs	2 x 44 mm. to BD 3 1 x 44 mm. to BD 4
Breastlines	2 x 44 mm. to MD 3 2 x 44 mm. to MD 4


N
MUARA
DEVELOPMENT PLAN
Port Administration Building
Brunei Shell Marketing Bitumen Tank Farm
Container Freight Station
Brusima Bulk Cement Plant
Expansion Area
Vehicle Park
Warehouse 1
Warehouse 2
Warehouse 3
Warehouse 4
Open Storage
Port Administration Office
Fisheries Department Jetty
Fisheries Department Expansion
Expansion Area for Ports Department
Aggregate Berth
Bitumen Pipe Manifold
Transit Shed 1
Transit Shed 2
Transit Shed 3
Bulk Cement Pipe Manifold
Container Stacking Yard
Weigh Bridge
Town Centre
Long Term Storage and Warehousing
Long Term Storage and Warehousing
Phase II Development
6
7
8
9
Muara Harbour
0
300
Scale in Metres
Industrial Estate
Fish Landing Complex


SERIA
LOADING LINE SYSTEM
S.B.M. 2
Top Valves
1 String 26 x 40 cm. 266 m. Long Loading Hose.
Centre Well Valves
W
E
4 x 50 cm Submarine Hoses
Underwater P.L.E.M. (East).
Underwater P.L.E.M. (West).
Brunei Condensate 60 cm. (approx.) = 24 in.
Loading Rate: 3 Main Pumps with 2 Boosters 2,500 cu.m./hour
SBM No. 2 / Shore Distance = 9,845 m. (32,300 ft.)
SERIA TERMINAL
S.B.M. 1
Top Valves
2 String 26 x 40 cm. 265 m. Long Loading Hose.
Centre Well Valves
W
E
4 x 50 cm Submarine Hoses
Underwater P.L.E.M.
E
W
Brunei Crude 60 cm. (approx) = 24 in.
Brunei Crude 80 cm. (approx.) = 30 in.
Loading Rate: 5 Main Pumps with 4 Boosters 4,300 cu.m./hour
SBM No. 1 / Shore Distance = 10,180 m. (33,400 ft.)
Nominal Sizes
16 in. = 40 cm. approx
20 in. = 50 cm. approx
24 in. = 60 cm. approx
32 in. = 80 cm. approx


ROMANIA
River Danube
44° N
43° N
42° N
41° N
BULGARIA
BULGARIA
Balchik
Varna
Black Sea
Bourgas
Michurin
Akhtopol
TURKEY
GREECE
Bosporous
Istanbul
Tekirdag
Sea of Marmara
Aegean Sea
23° E
24° E
25° E
26° E
27° E
28° E
29° E


N
BOURGAS
Port Administration Office
Customs House
Railway Station
East Harbour
1
2
3
4
5
6
7
8
9
10
11
12
13
Bulk Cargo Harbour
17
18
19
20
Harbour Limits
21
22
23
24
West Harbour
Railway Lines

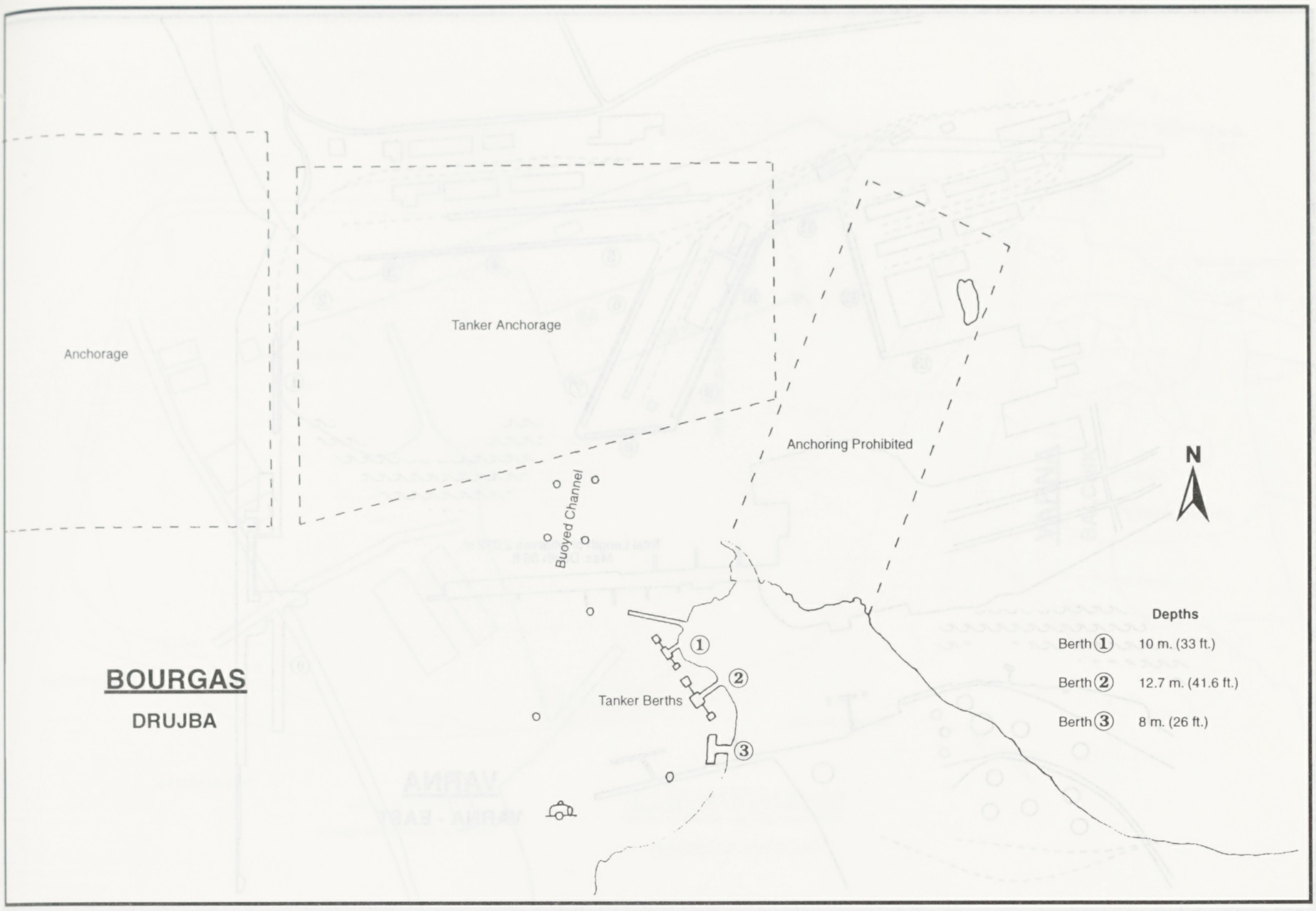
WATER DEPTHS:

Port Entrance - 41 ft.

EAST HARBOUR
Berths 1,2 - 32 ft.
Berths 3,4,5,6 - 24 ft.
Berths 7,9 - 15 ft.
Berths 11,12 - 29 ft.
Berth 13 - 24.5 ft.

BULK CARGO HARBOUR
Berths 17,18,19,20 - 36 ft.

WEST HARBOUR
Berth 21 - 27.5 ft.
Berths 22,23,24 - 36 ft.

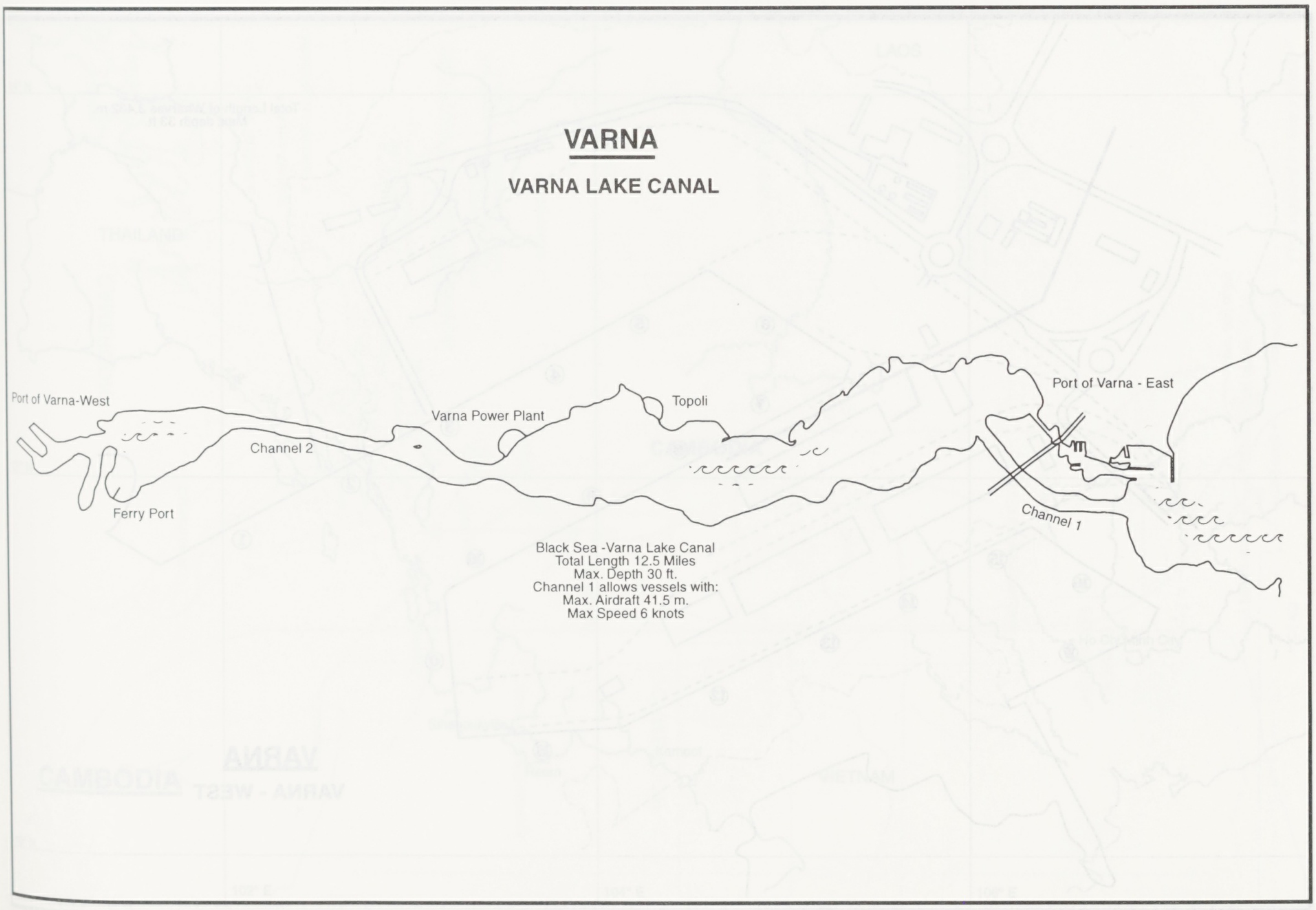

Anchorage
Tanker Anchorage
Anchoring Prohibited
N
Buoyed Channel
①
②
③
Tanker Berths
BOURGAS
DRUJBA

Depths

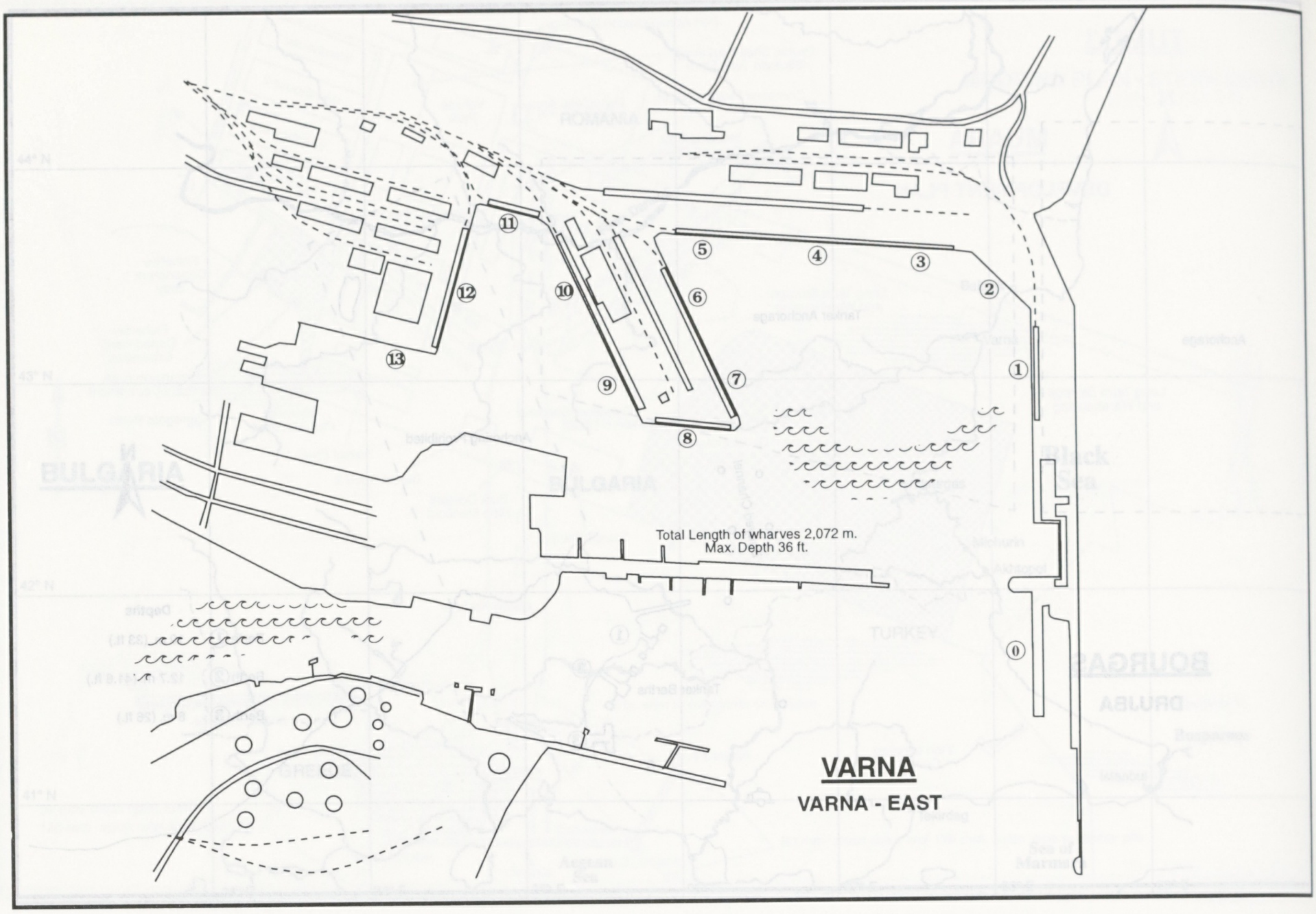
Berth ① 10 m. (33 ft.)

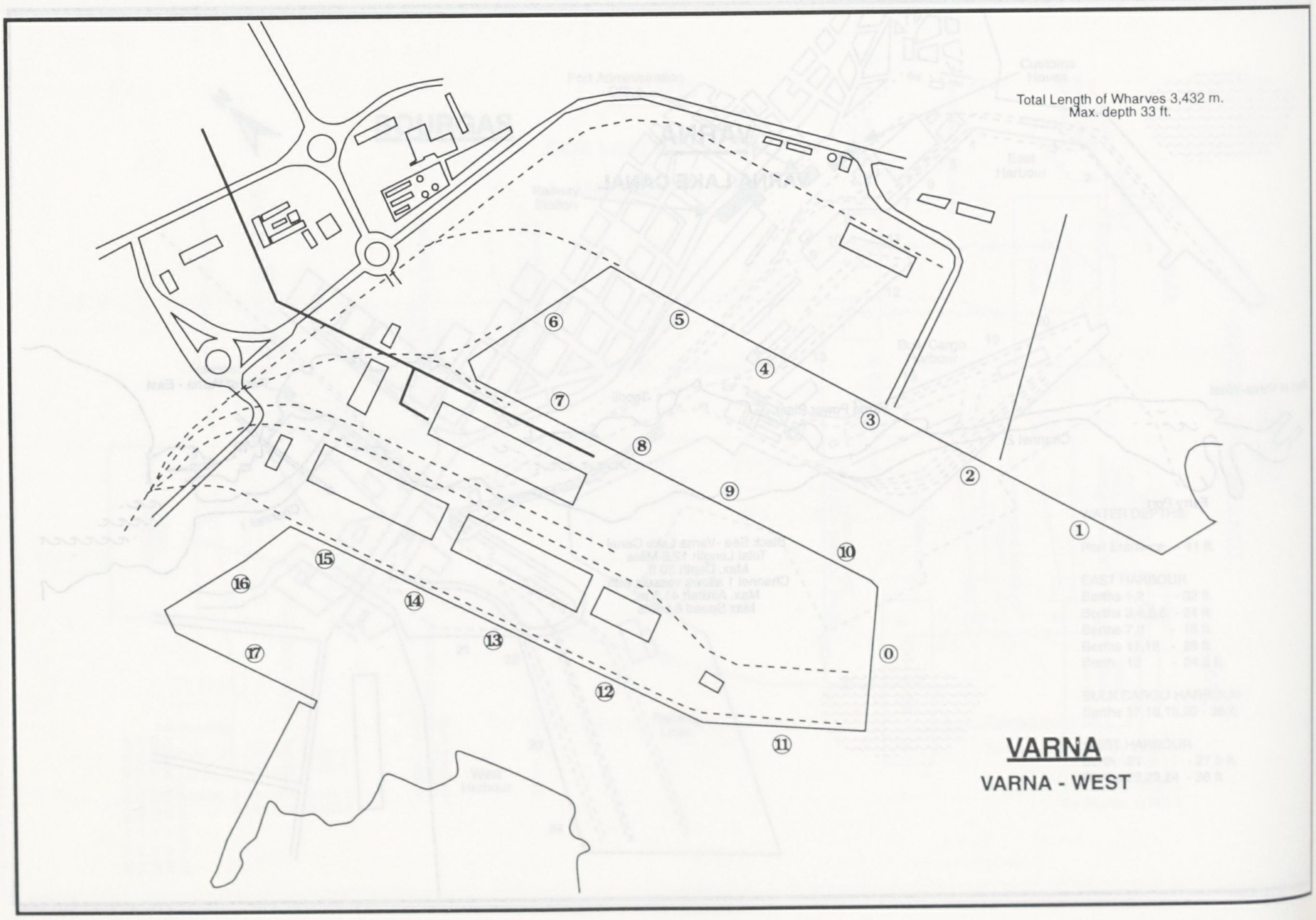
Berth ② 12.7 m. (41.6 ft.)

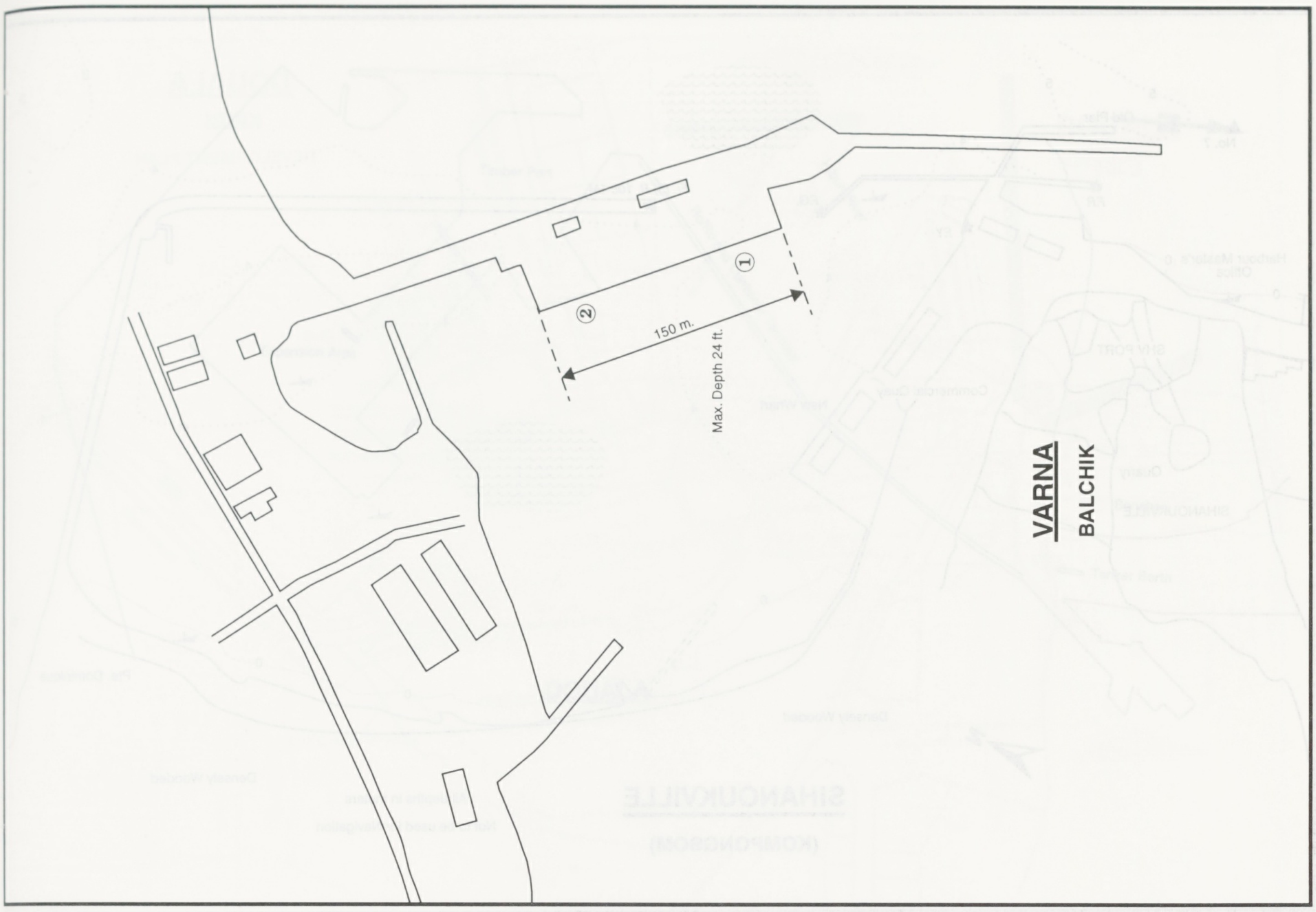
Berth ③ 8 m. (26 ft.)


VARNA
VARNA LAKE CANAL
Port of Varna-West
Ferry Port
Channel 2
Varna Power Plant
Topoli
Port of Varna - East
Channel 1

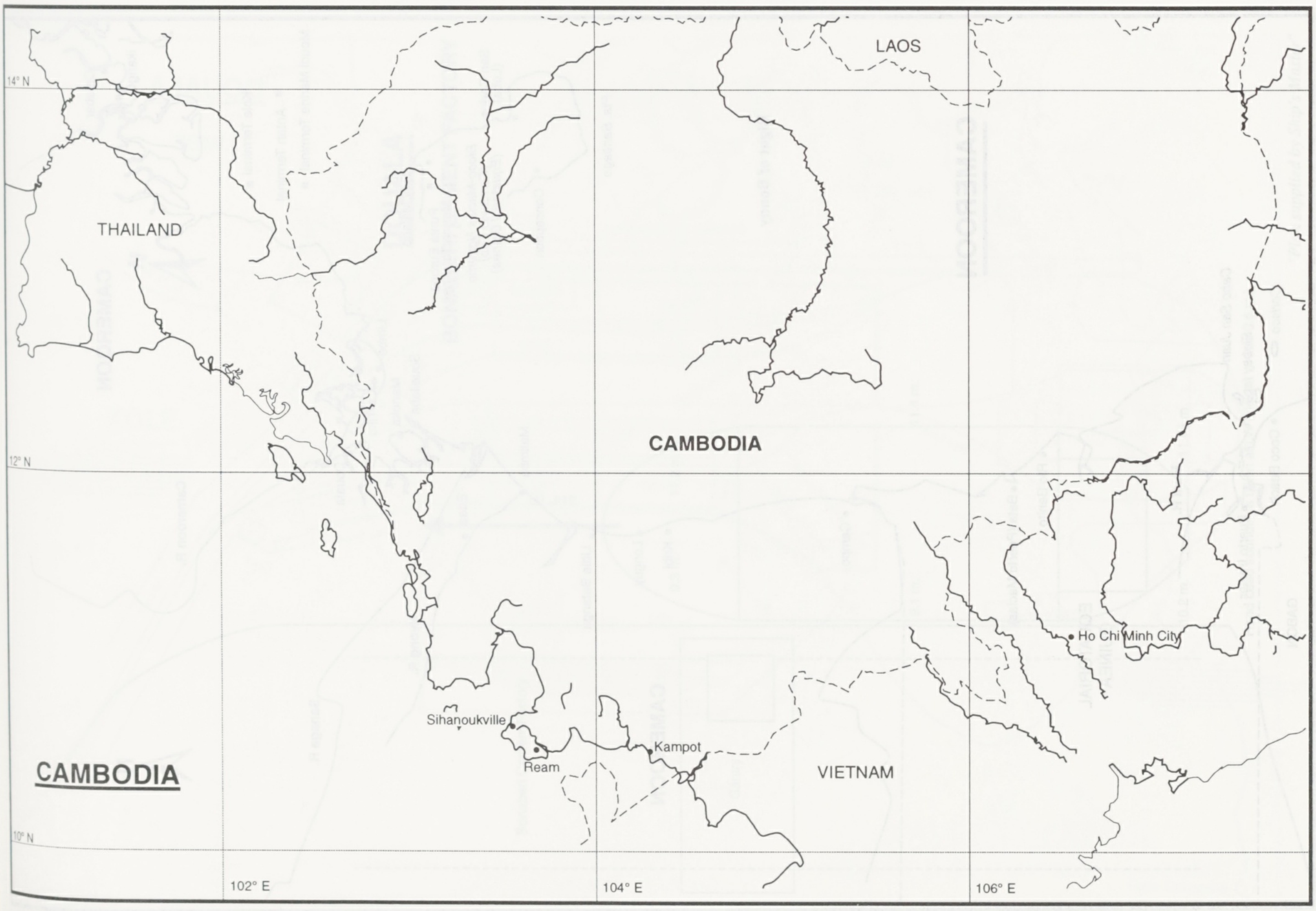
Black Sea -Varna Lake Canal
Total Length 12.5 Miles
Max. Depth 30 ft.
Channel 1 allows vessels with:
Max. Airdraft 41.5 m.
Max Speed 6 knots


⑪
⑤
④
③
②
⑩
⑥
⑫
①
⑬
⑦
⑨
⑧
Total Length of wharves 2,072 m.
Max. Depth 36 ft.
⓪
VARNA
VARNA - EAST

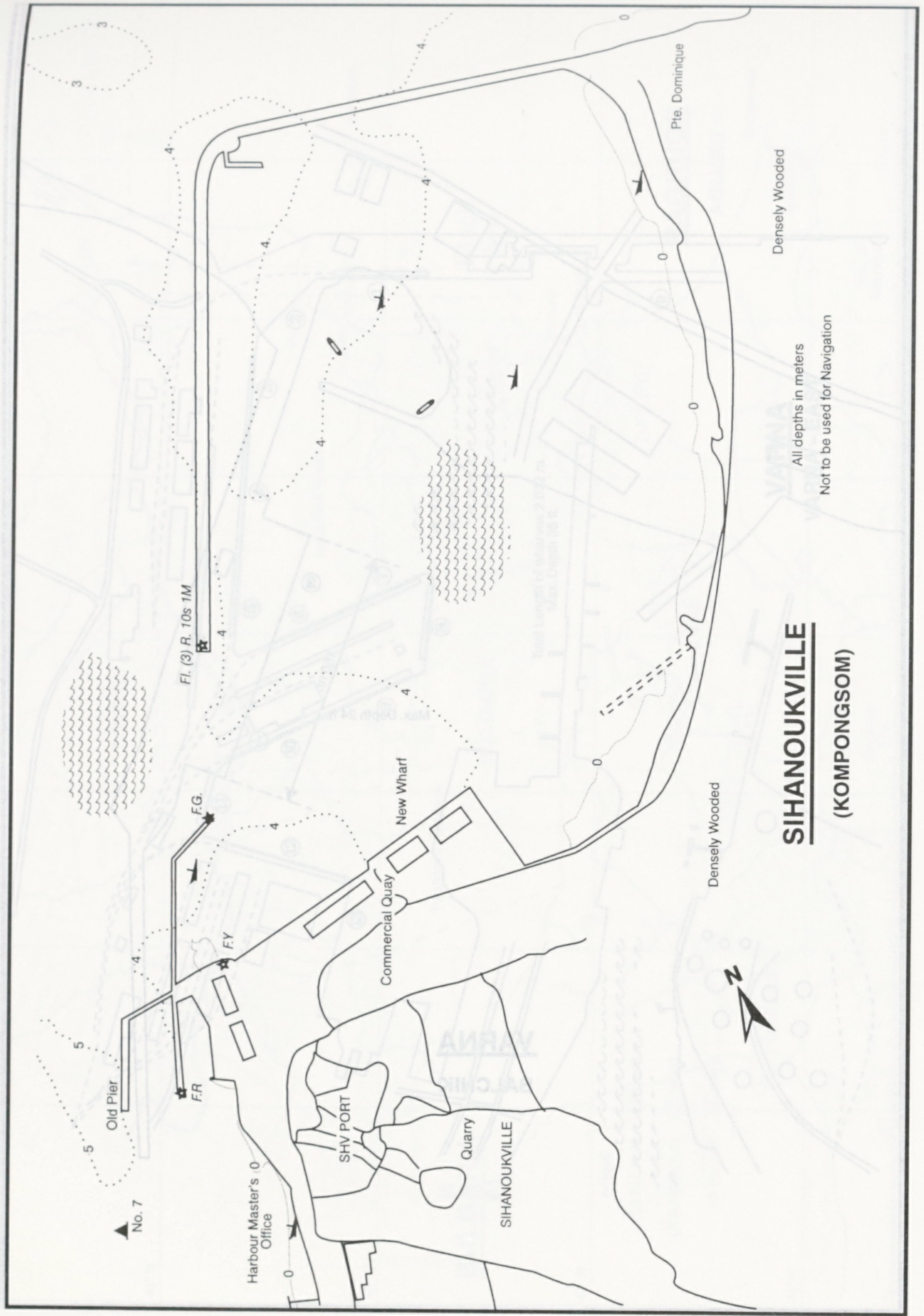

Total Length of Wharves 3,432 m.
Max. depth 33 ft.
⑥
⑤
④
⑦
③
⑧
②
⑨
①
⑩
⑮
⑯
⑭
⑬
⓪
⑰
⑫
⑪
VARNA
VARNA - WEST



VARNA
BALCHIK
①
②
150 m.
Max. Depth 24 ft.

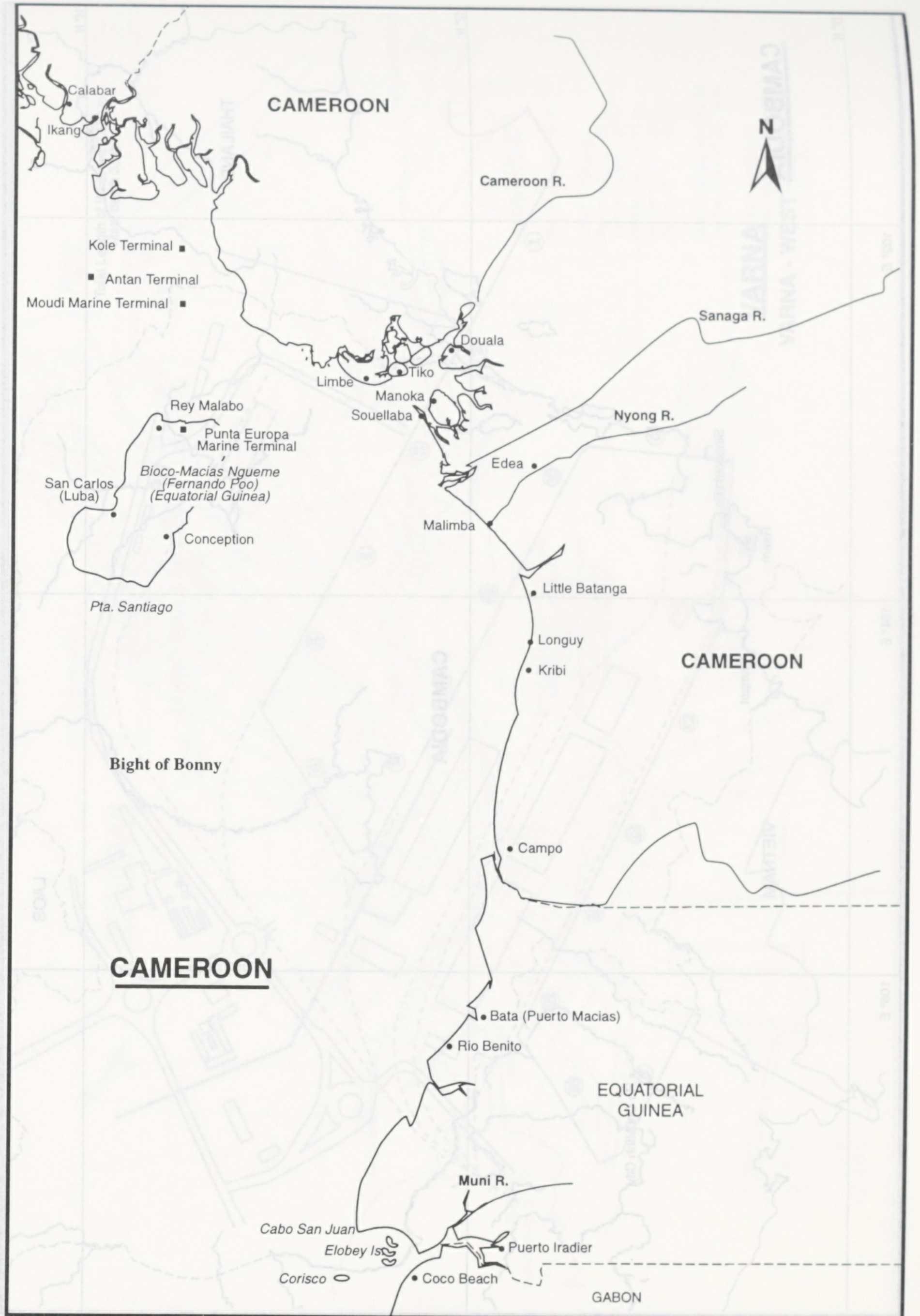


CAMBODIA
LAOS
THAILAND
CAMBODIA
VIETNAM
Ho Chi Minh City
Sihanoukville
Ream
Kampot
14° N
12° N
10° N
102° E
104° E
106° E

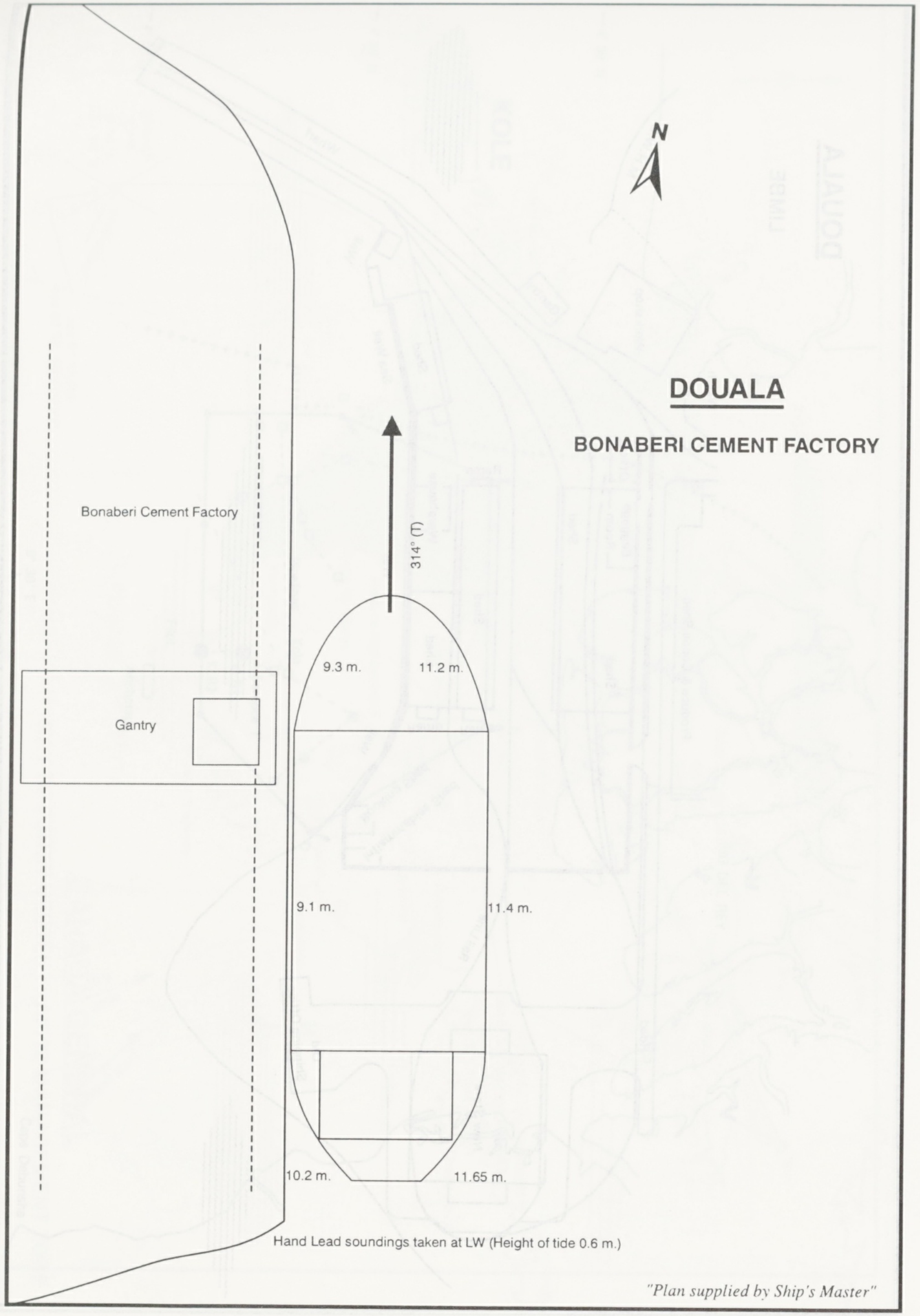

Pte. Dominique
Densely Wooded
Fl. (3) R. 10s 1M
F.G.
F.Y
F.R
Old Pier
No. 7
Harbour Master's Office
New Wharf
Commercial Quay
SHV PORT
Quarry
SIHANOUKVILLE
Densely Wooded
N
0
3
4
5

SIHANOUKVILLE
(KOMPONGSOM)

All depths in meters
Not to be used for Navigation

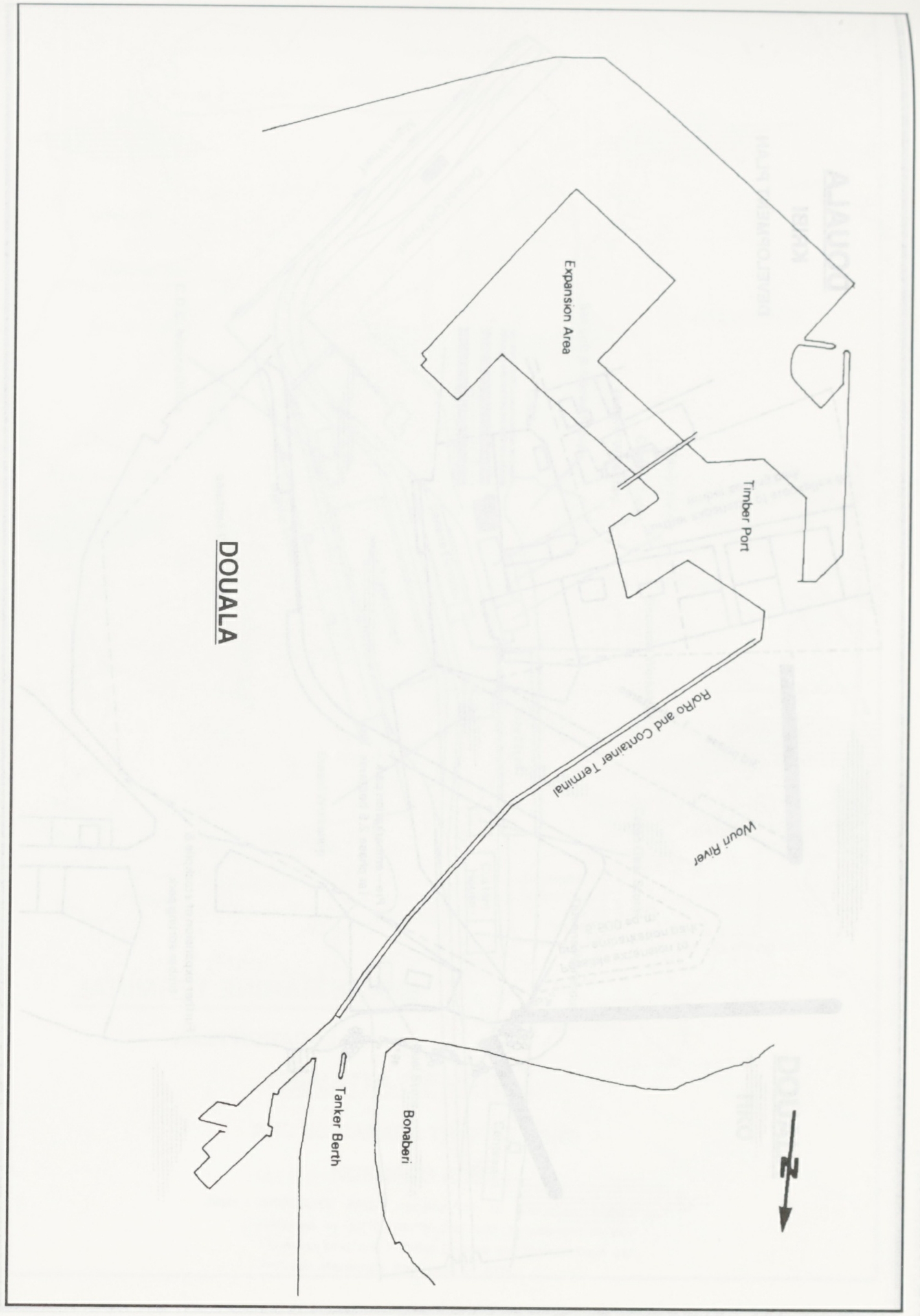

CAMEROON
Calabar
Ikang
N
Cameroon R.
Kole Terminal
Antan Terminal
Moudi Marine Terminal
Sanaga R.
Douala
Limbe
Tiko
Manoka
Souellaba
Nyong R.
Edea
Rey Malabo
Punta Europa Marine Terminal
Bioco-Macias Ngueme (Fernando Poo) (Equatorial Guinea)
San Carlos (Luba)
Conception
Pta. Santiago
Malimba
Little Batanga
Longuy
Kribi
CAMEROON
Bight of Bonny
Campo
Bata (Puerto Macias)
Rio Benito
EQUATORIAL GUINEA
Muni R.
Cabo San Juan
Elobey Is.
Puerto Iradier
Corisco
Coco Beach
GABON

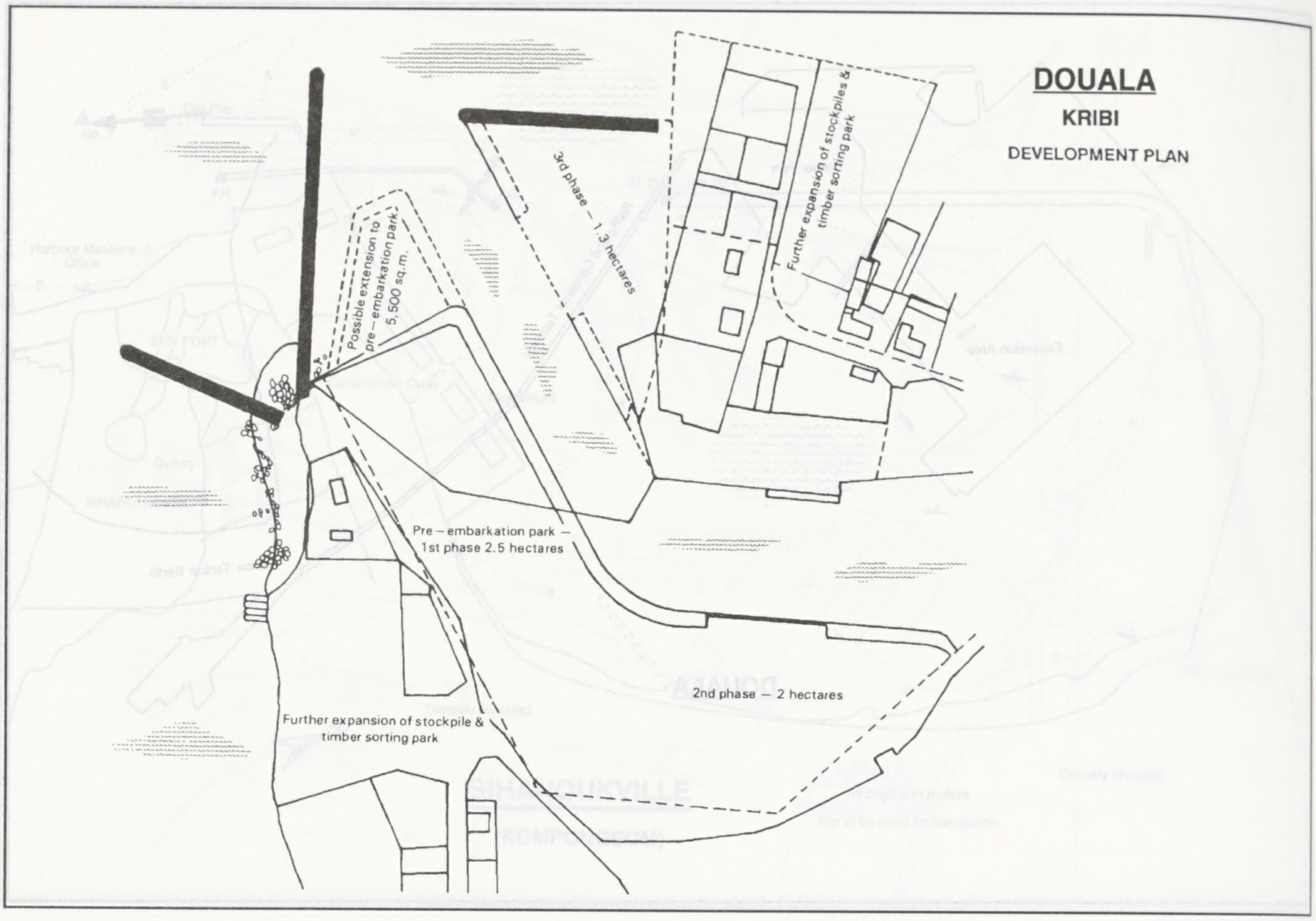
CAMEROON


DOUALA
BONABERI CEMENT FACTORY
N
Bonaberi Cement Factory
Gantry
314° (T)
9.3 m.
11.2 m.
9.1 m.
11.4 m.
10.2 m.
11.65 m.

Hand Lead soundings taken at LW (Height of tide 0.6 m.)

"Plan supplied by Ship's Master"


DOUALA
Expansion Area
Timber Port
Ro/Ro and Container Terminal
Woun River
Tanker Berth
Bonaberi
N

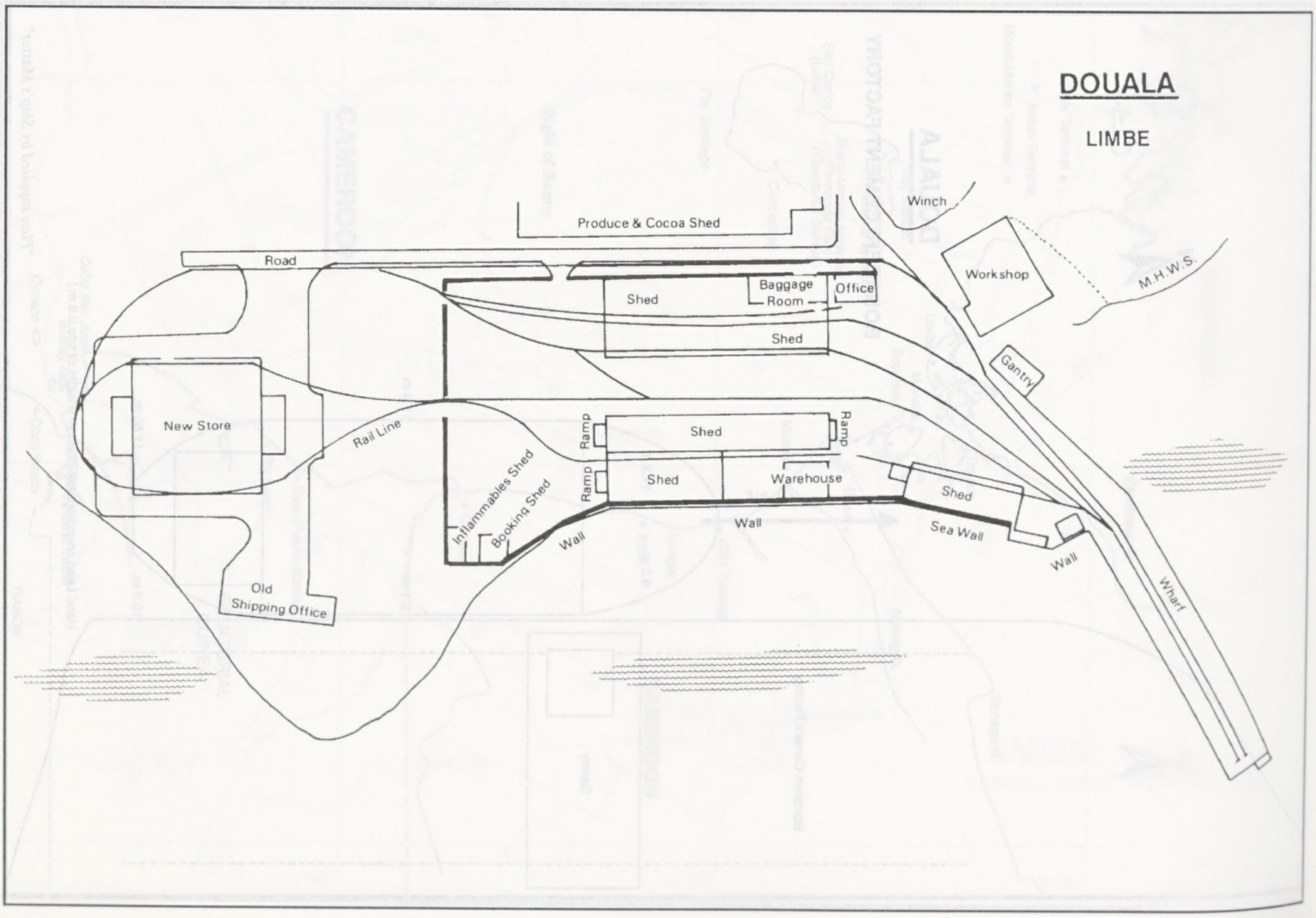


DOUALA

KRIBI

DEVELOPMENT PLAN

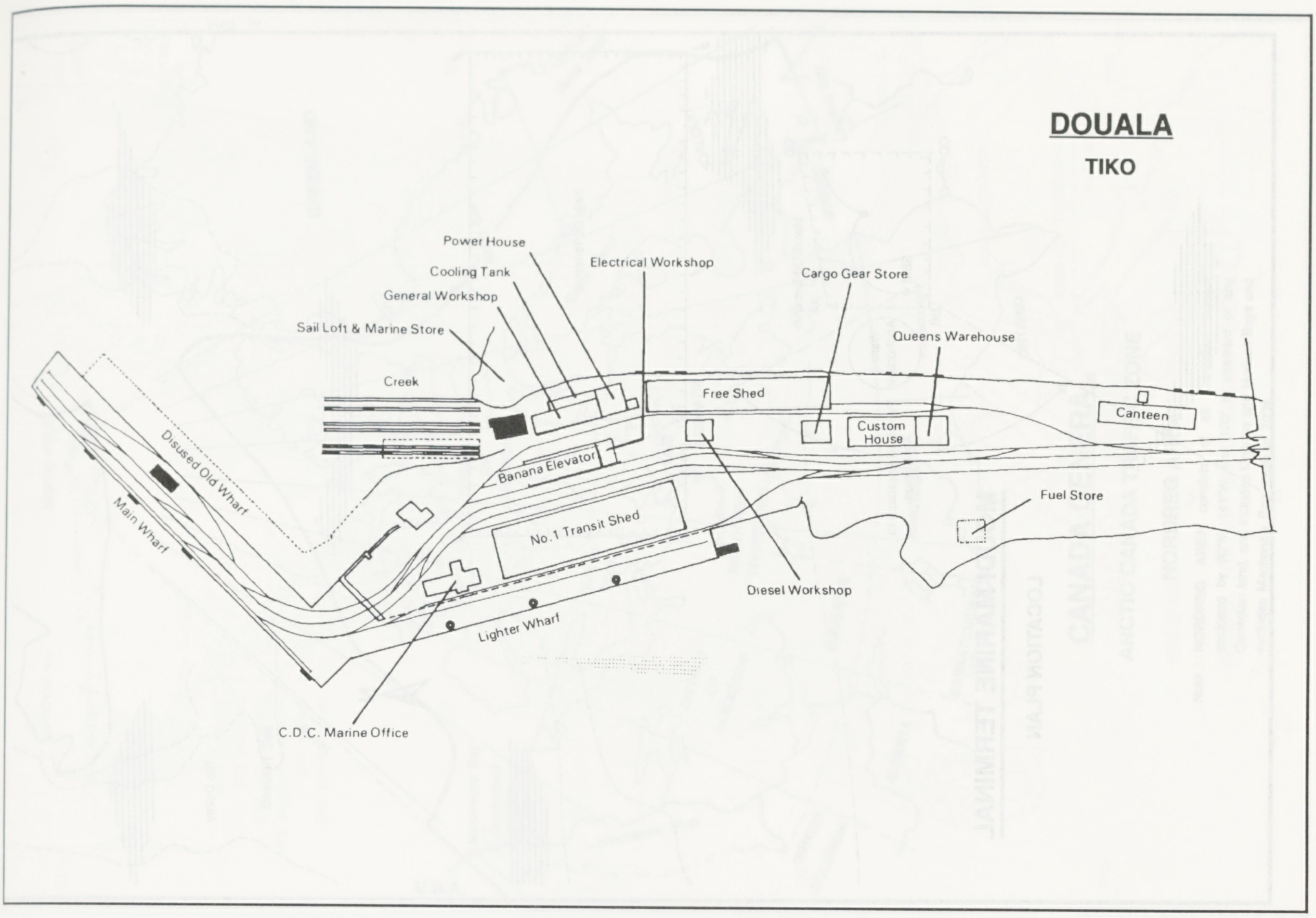
Possible extension to pre – embarkation park 5,500 sq.m.
3rd phase – 1.3 hectares
Further expansion of stockpiles & timber sorting park
Pre – embarkation park – 1st phase 2.5 hectares
2nd phase – 2 hectares
Further expansion of stockpile & timber sorting park

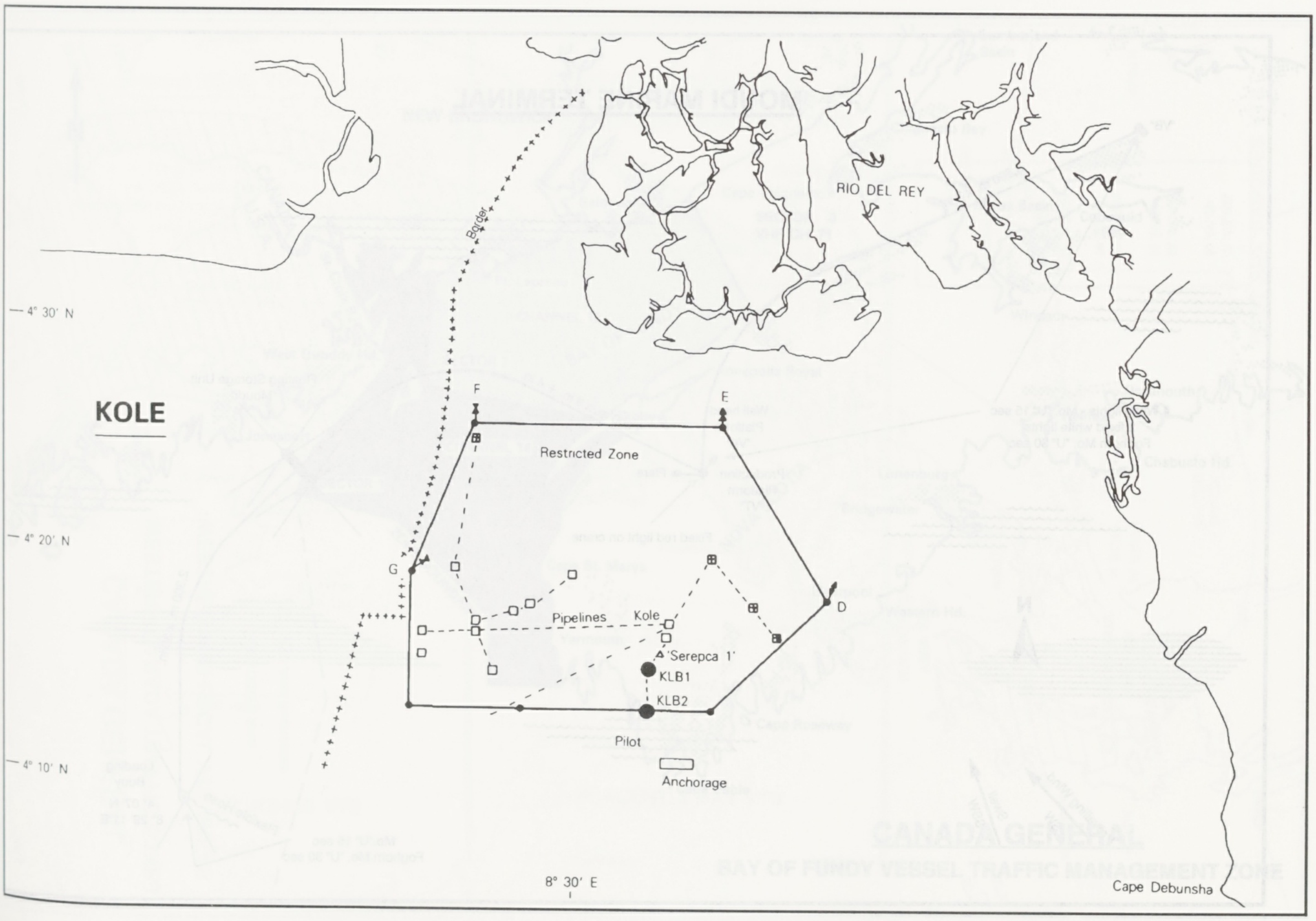


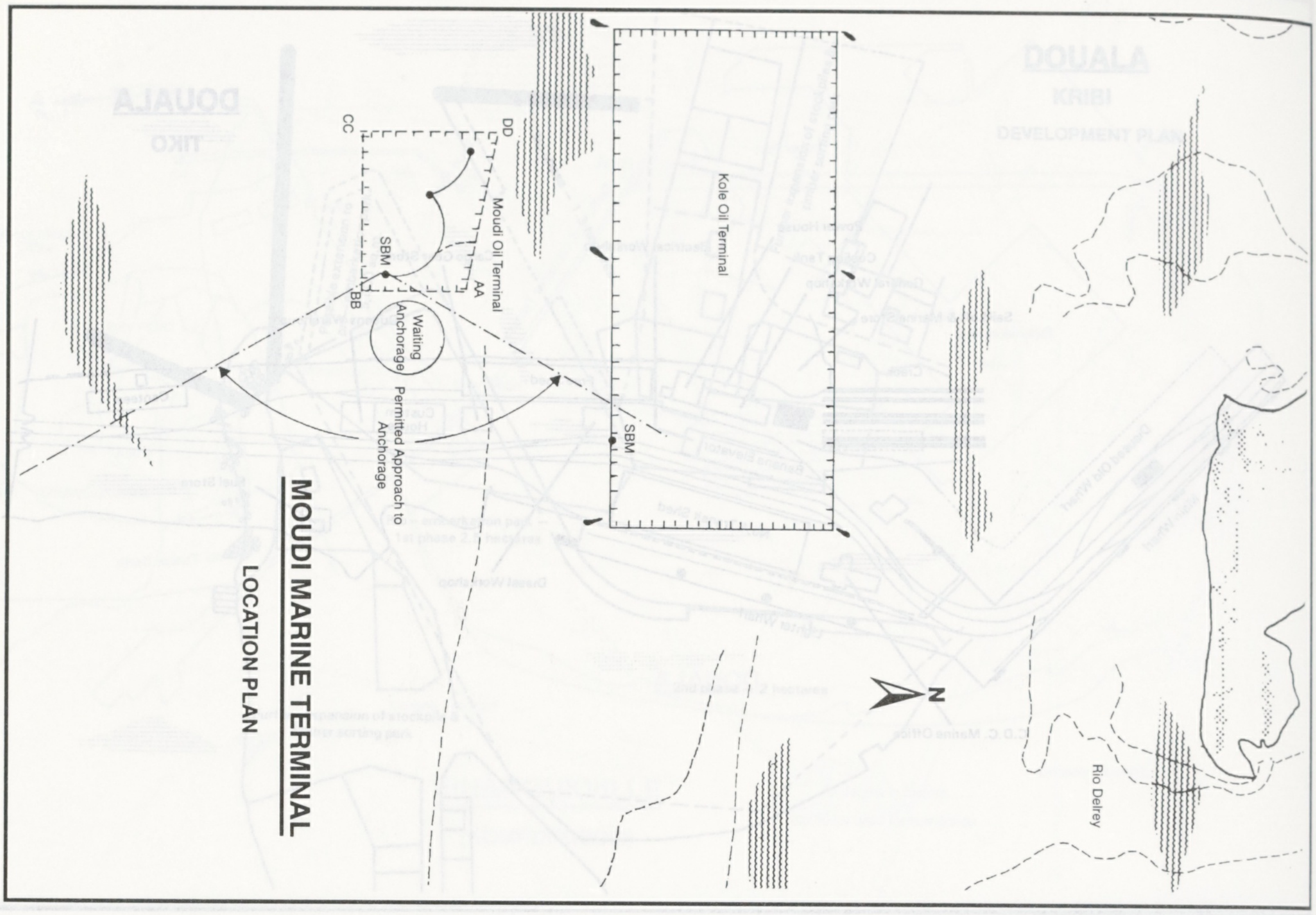
DOUALA

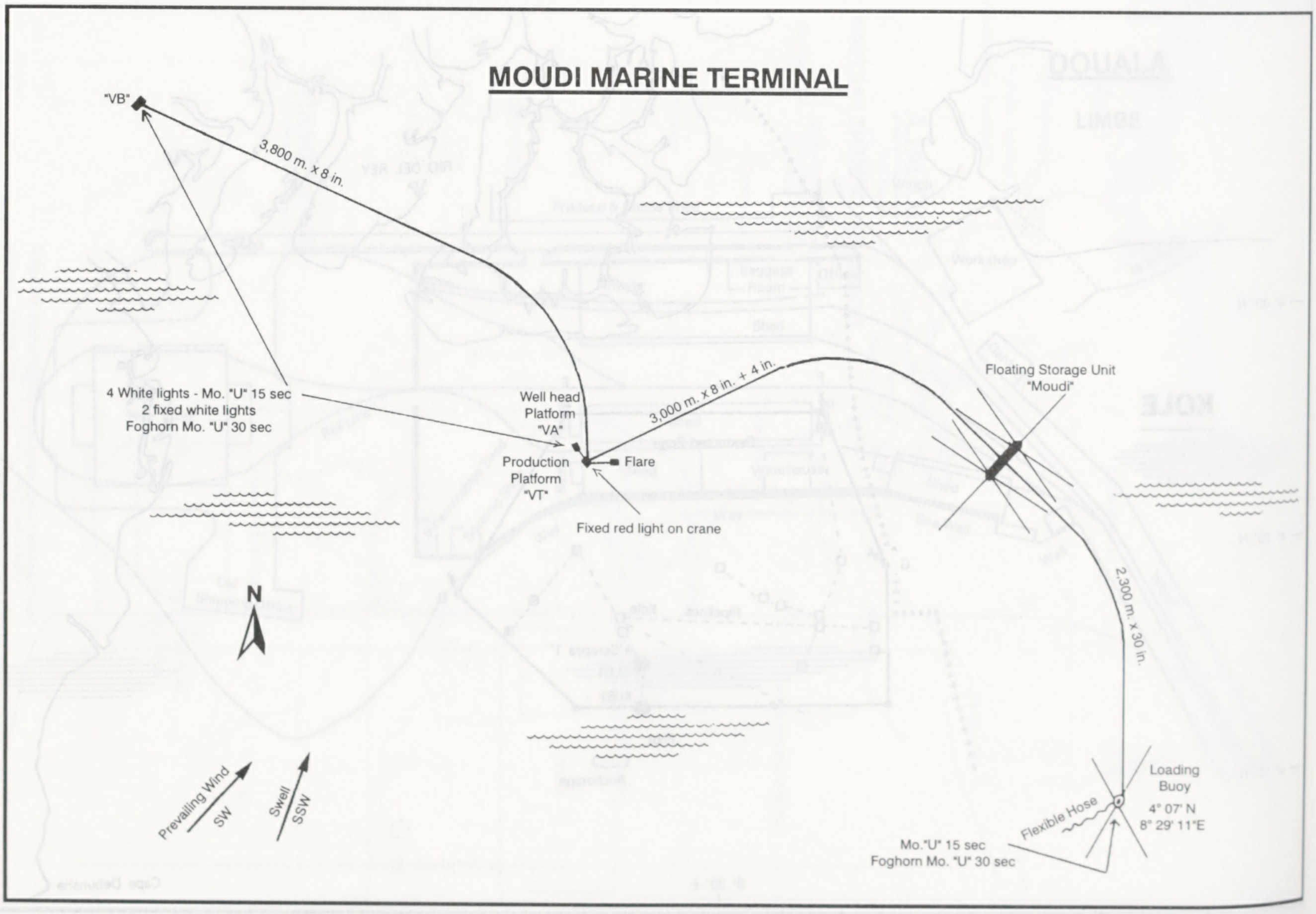
LIMBE

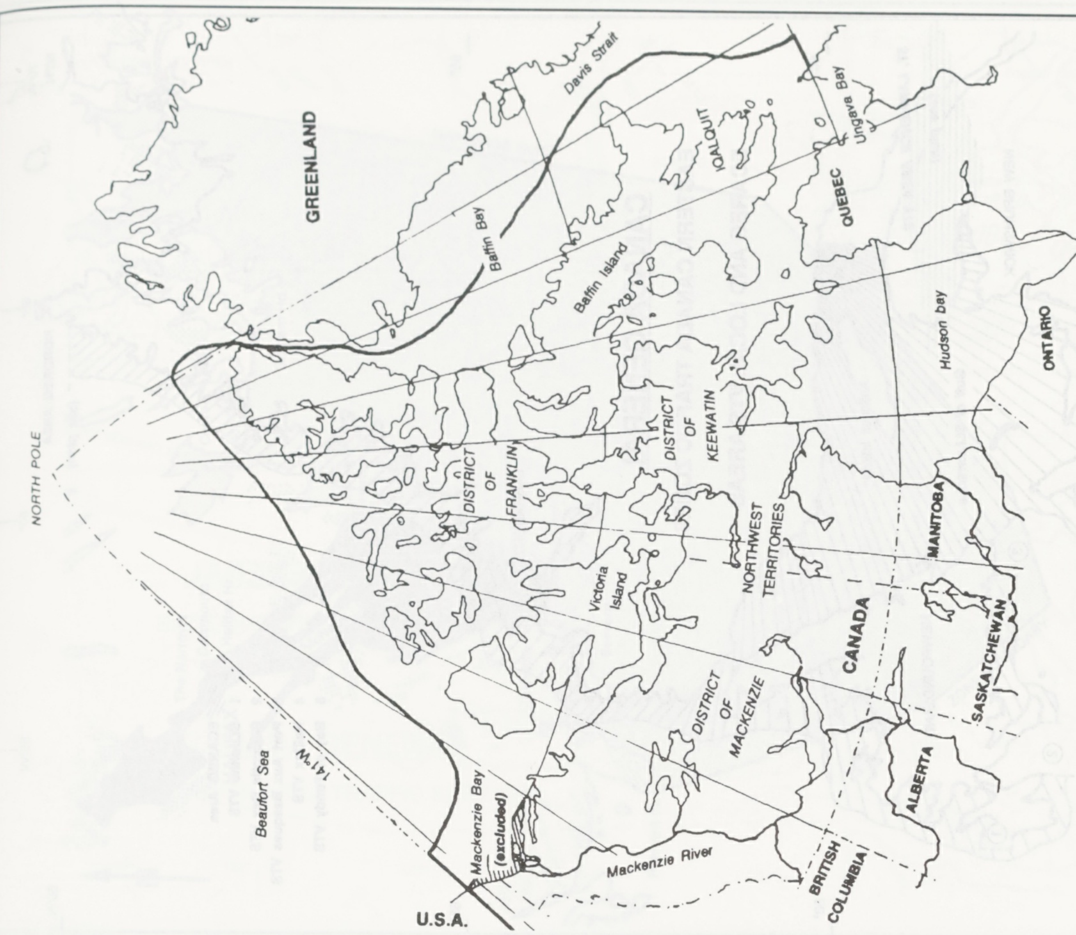
Produce & Cocoa Shed
Winch
Workshop
M.H.W.S.
Road
Shed
Baggage Room
Office
Shed
Gantry
New Store
Rail Line
Ramp
Shed
Ramp
Ramp
Shed
Warehouse
Inflammables Shed
Booking Shed
Wall
Wall
Shed
Sea Wall
Wall
Wharf
Old Shipping Office


DOUALA
TIKO
Power House
Cooling Tank
General Workshop
Sail Loft & Marine Store
Electrical Workshop
Cargo Gear Store
Queens Warehouse
Creek
Free Shed
Canteen
Custom House
Banana Elevator
Disused Old Wharf
Main Wharf
No.1 Transit Shed
Fuel Store
Diesel Workshop
Lighter Wharf
C.D.C. Marine Office


RIO DEL REY
Border
4° 30' N
4° 20' N
4° 10' N
KOLE
F
E
Restricted Zone
G
D
Pipelines
Kole
'Serepca 1'
KLB1
KLB2
Pilot
Anchorage
8° 30' E
Cape Debunsha


MOUDI MARINE TERMINAL
LOCATION PLAN
Moudi Oil Terminal
Kole Oil Terminal
SBM
SBM
AA
BB
CC
DD
Waiting Anchorage
Permitted Approach to Anchorage
N
Rio Delrey


MOUDI MARINE TERMINAL
"VB"
3,800 m. x 8 in.
4 White lights - Mo. "U" 15 sec
2 fixed white lights
Foghorn Mo. "U" 30 sec
Well head Platform "VA"
Production Platform "VT"
Flare
Fixed red light on crane
3,000 m. x 8 in. + 4 in.
Floating Storage Unit "Moudi"
2,300 m. x 30 in.
Loading Buoy
4° 07' N
8° 29' 11"E
Flexible Hose
Mo."U" 15 sec
Foghorn Mo. "U" 30 sec
N
Prevailing Wind
SW
Swell
SSW

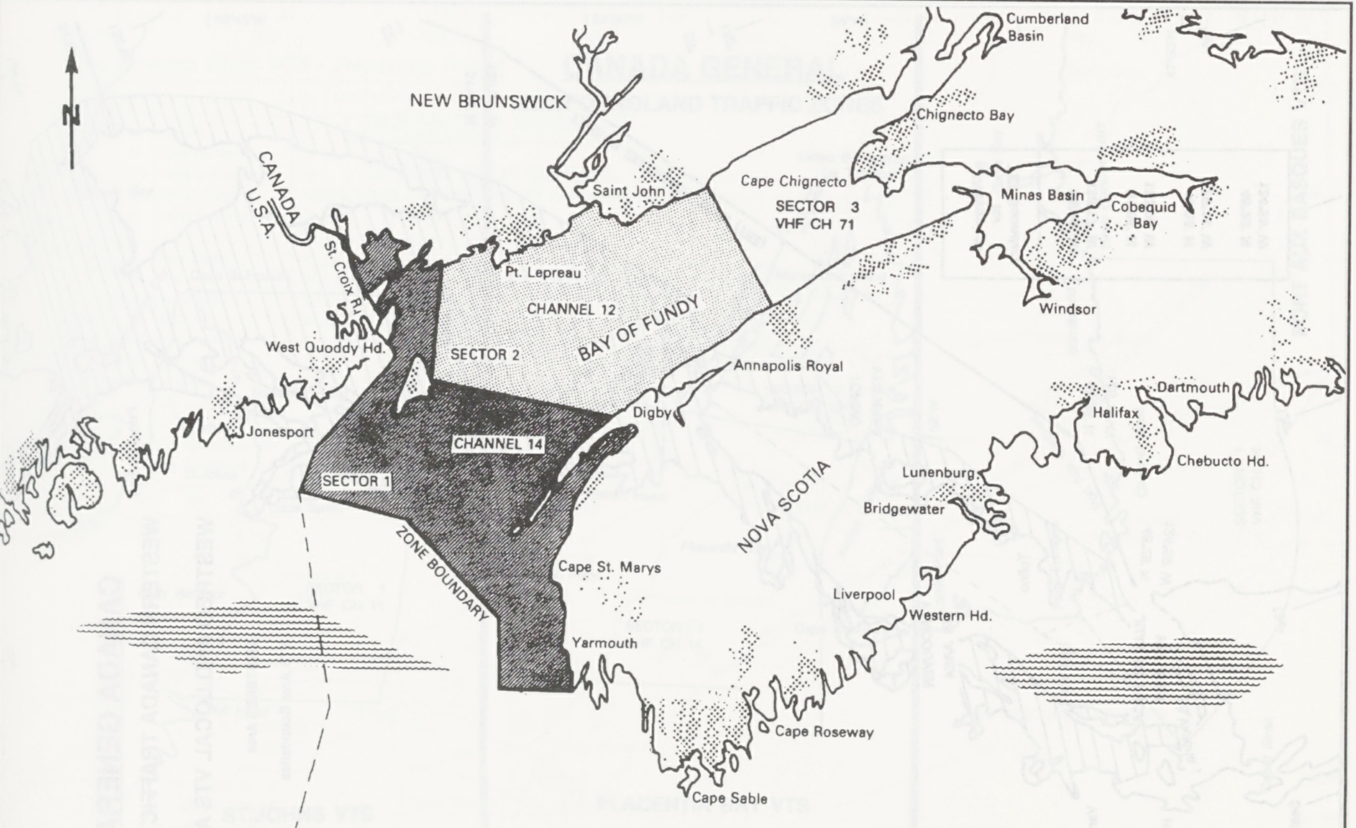

GREENLAND
NORTH POLE
Davis Strait
Ungava Bay
IQALUIT
QUEBEC
Baffin Bay
Baffin Island
Hudson bay
ONTARIO
DISTRICT OF FRANKLIN
DISTRICT OF KEEWATIN
Victoria Island
NORTHWEST TERRITORIES
MANITOBA
CANADA
DISTRICT OF MACKENZIE
SASKATCHEWAN
ALBERTA
BRITISH COLUMBIA
Beaufort Sea
141°W
Mackenzie Bay (excluded)
Mackenzie River
U.S.A.

CANADA GENERAL

ARCTIC CANADA TRAFFIC ZONE

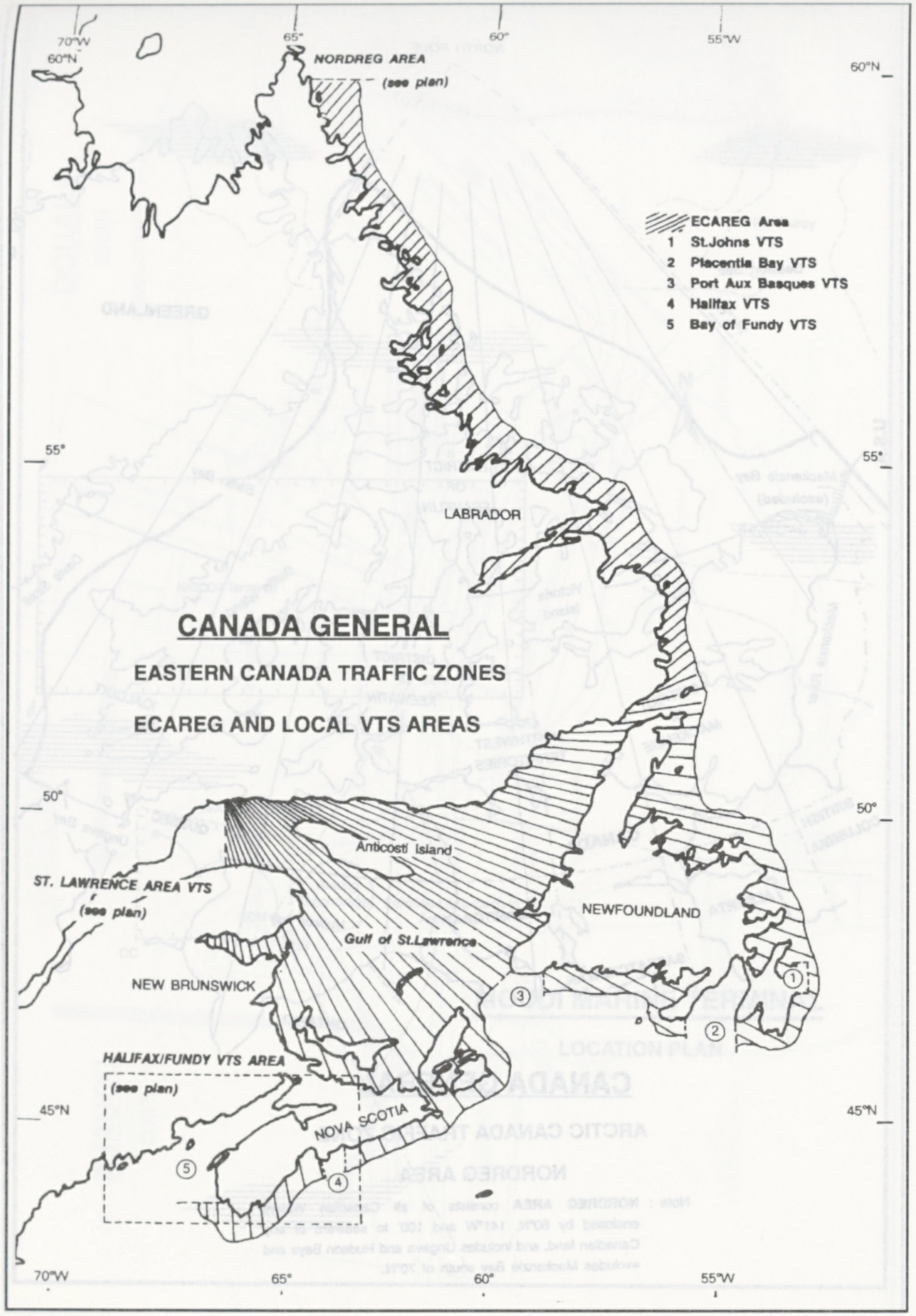
NORDREG AREA

Note : **NORDREG AREA** consists of all Canadian Waters enclosed by 60°N, 141°W and 100' to seaward of any Canadian land, and includes Ungava and Hudson Bays and excludes Mackenzie Bay south of 70°N.


N
NEW BRUNSWICK
CANADA
U.S.A.
St. Croix R.
West Quoddy Hd.
Jonesport
Saint John
Pt. Lepreau
CHANNEL 12
SECTOR 2
BAY OF FUNDY
CHANNEL 14
SECTOR 1
ZONE BOUNDARY
Cape Chignecto
SECTOR 3
VHF CH 71
Cumberland Basin
Chignecto Bay
Minas Basin
Cobequid Bay
Windsor
Annapolis Royal
Digby
Dartmouth
Halifax
Chebucto Hd.
Lunenburg
Bridgewater
NOVA SCOTIA
Cape St. Marys
Liverpool
Western Hd.
Yarmouth
Cape Roseway
Cape Sable

CANADA GENERAL

BAY OF FUNDY VESSEL TRAFFIC MANAGEMENT ZONE

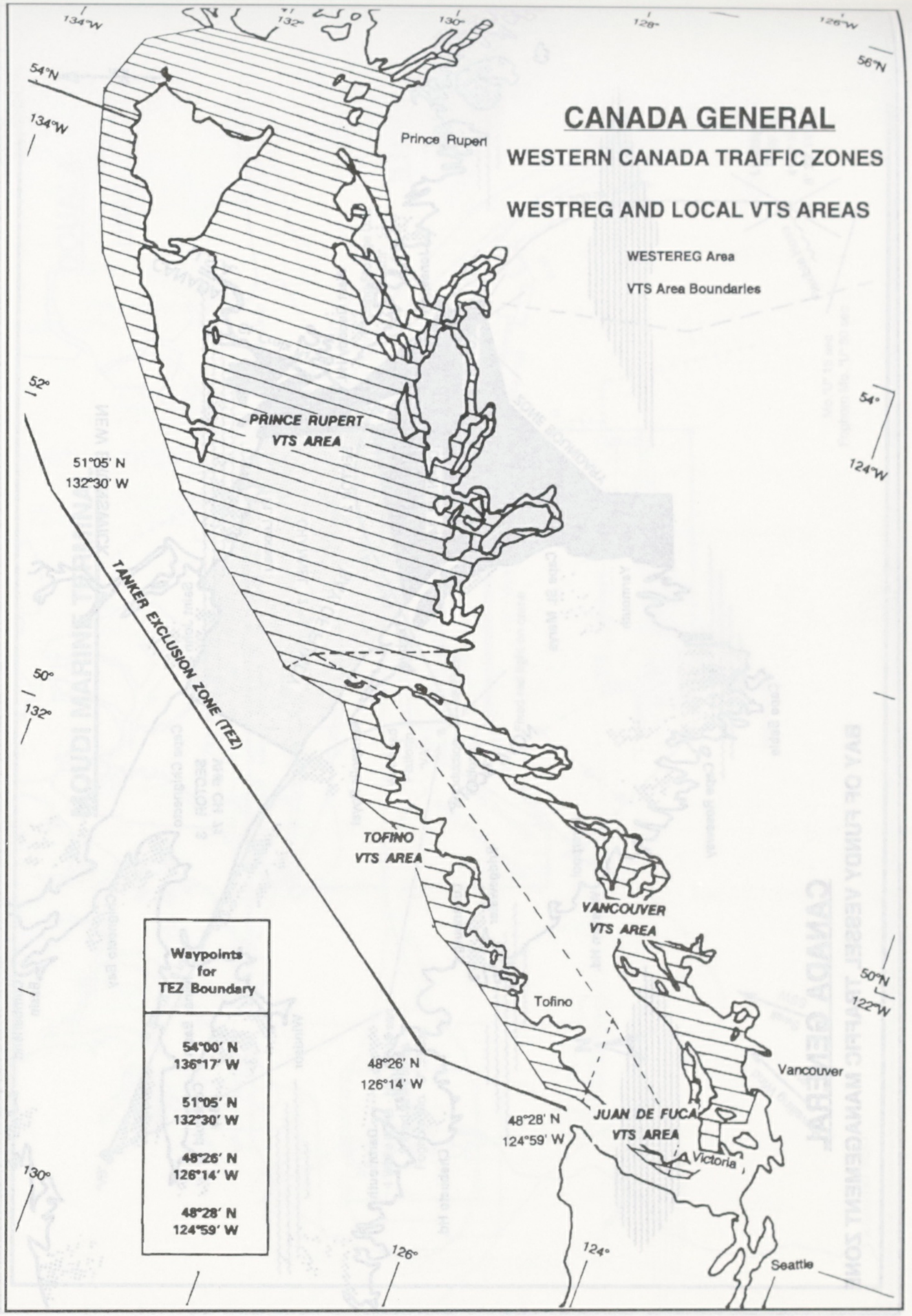


CANADA GENERAL

EASTERN CANADA TRAFFIC ZONES

ECAREG AND LOCAL VTS AREAS

▨ ECAREG Area
1 St.Johns VTS
2 Placentia Bay VTS
3 Port Aux Basques VTS
4 Halifax VTS
5 Bay of Fundy VTS
NORDREG AREA
(see plan)
LABRADOR
Anticosti Island
NEWFOUNDLAND
ST. LAWRENCE AREA VTS
(see plan)
Gulf of St.Lawrence
NEW BRUNSWICK
HALIFAX/FUNDY VTS AREA
(see plan)
NOVA SCOTIA
①
②
③
④
⑤
70°W
65°
60°
55°W
60°N
55°
50°
45°N
60°N
55°
50°
45°N
70°W
65°
60°
55°W



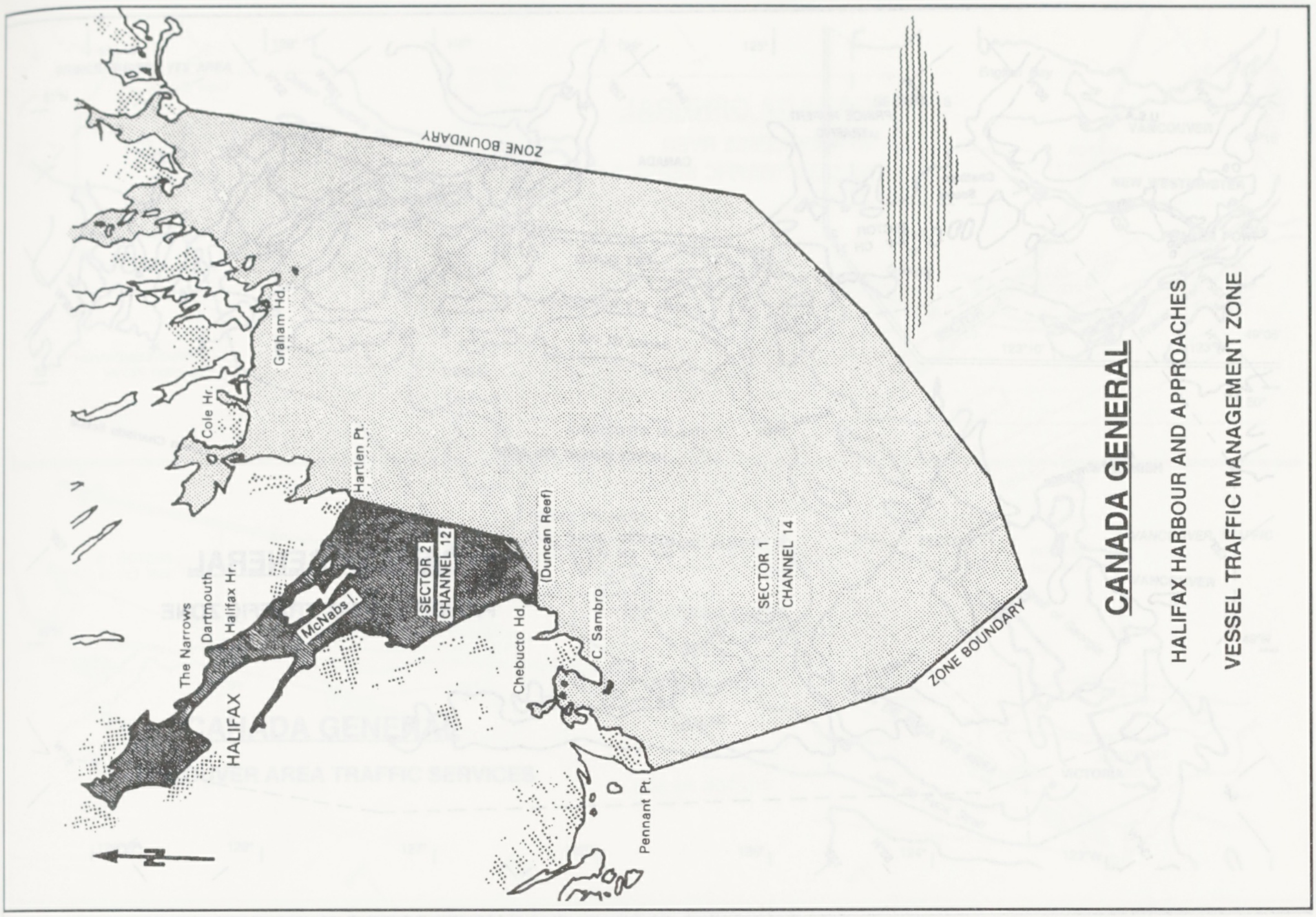
CANADA GENERAL

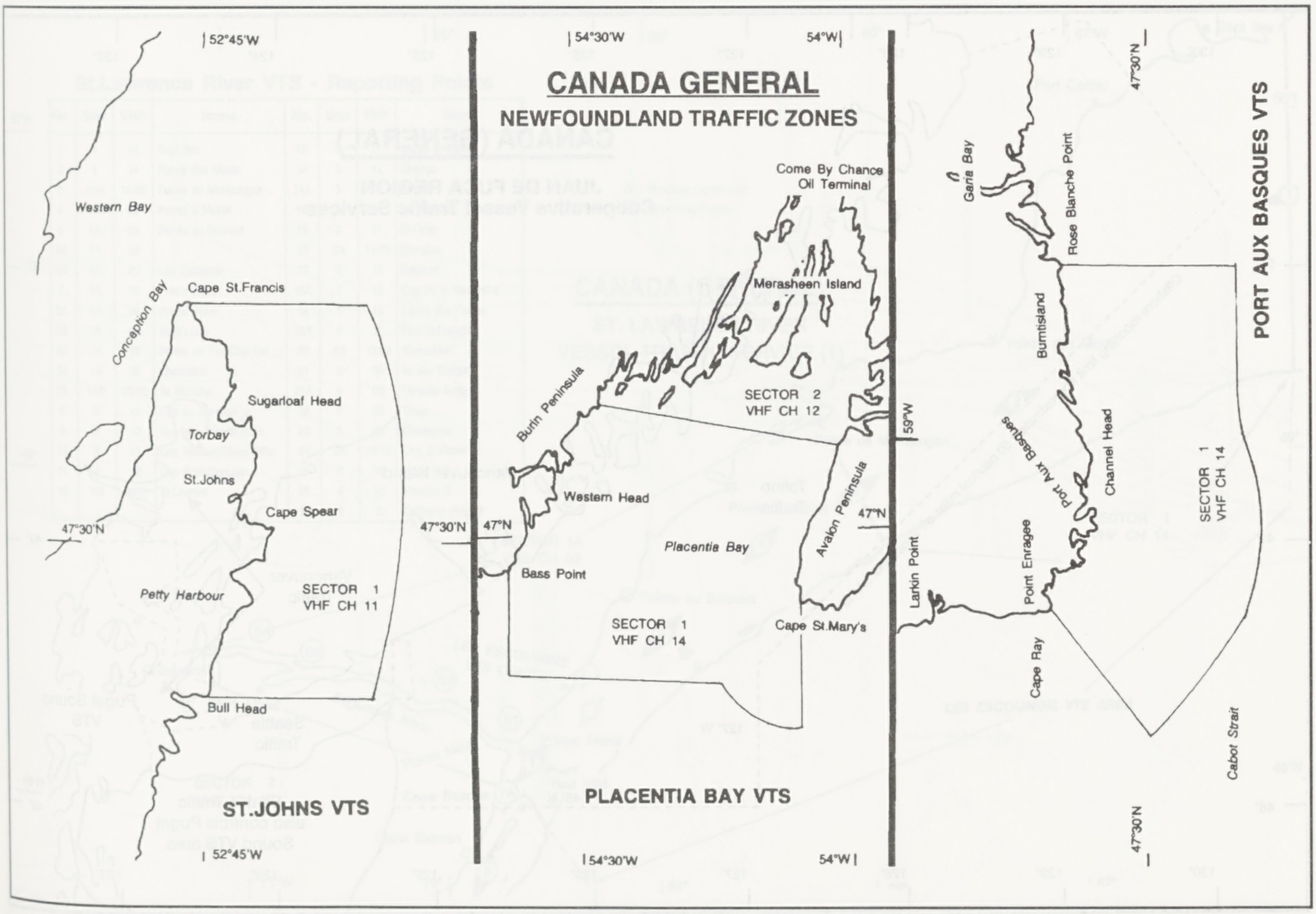
WESTERN CANADA TRAFFIC ZONES

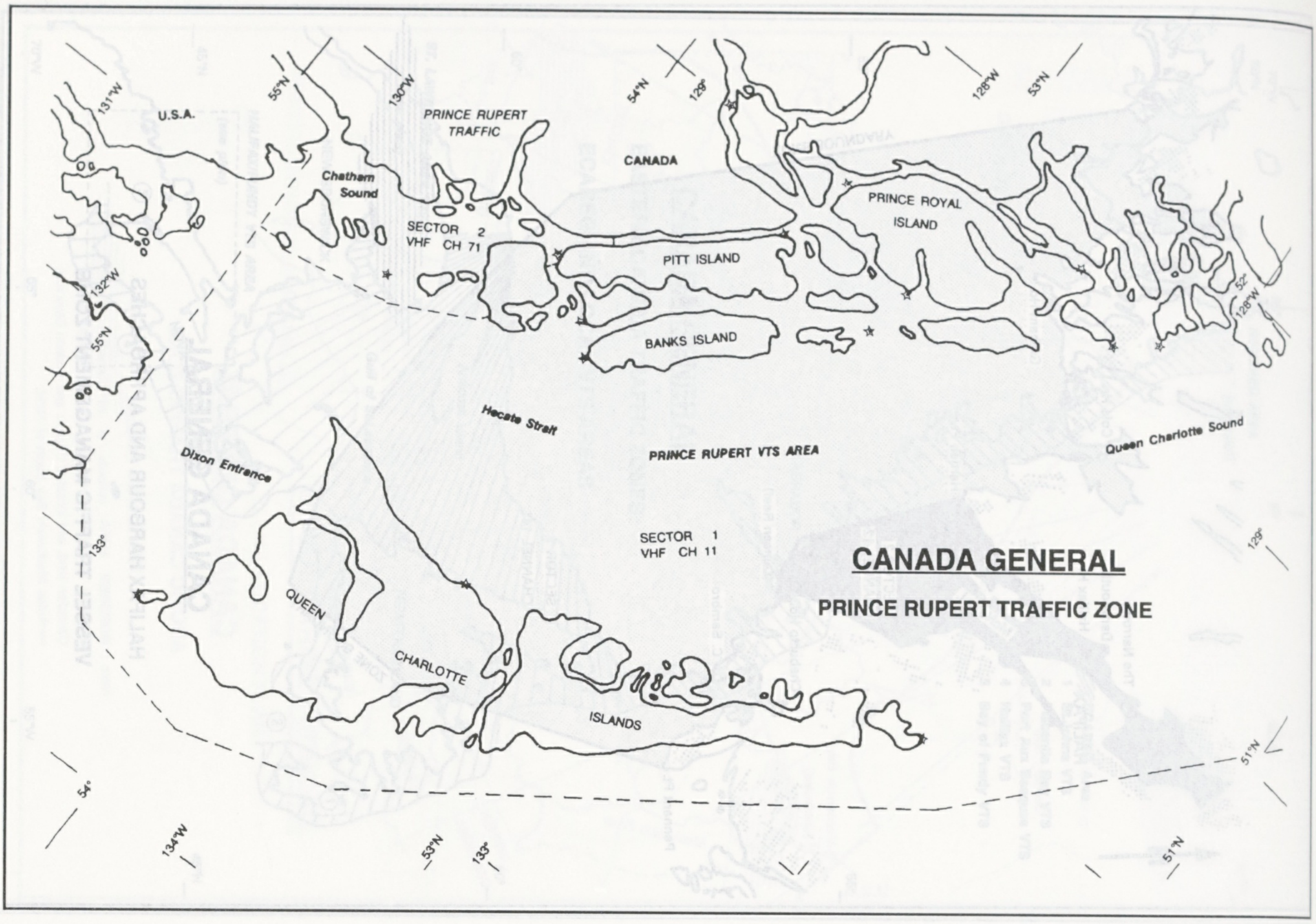
WESTREG AND LOCAL VTS AREAS

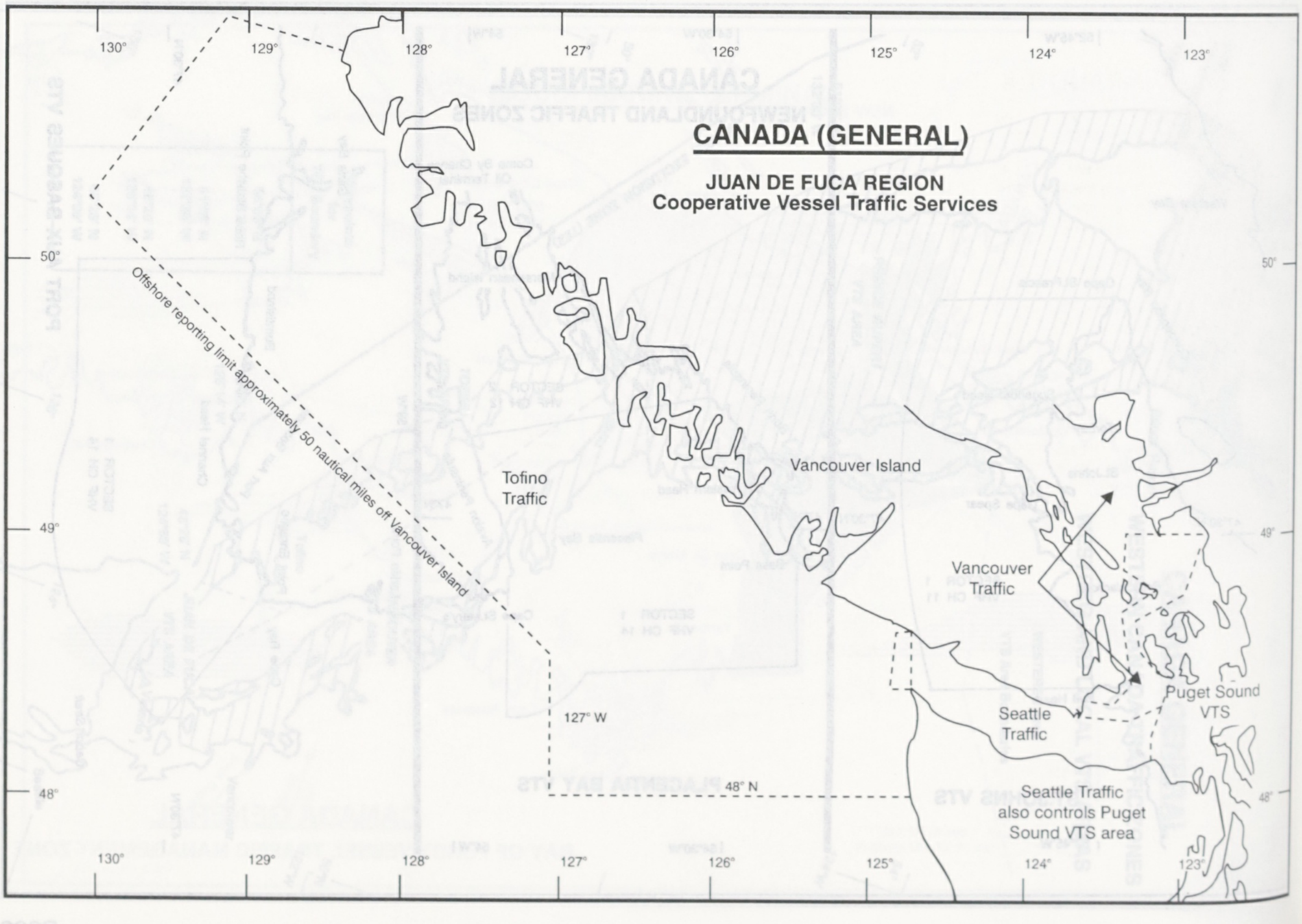
WESTEREG Area
VTS Area Boundaries
Prince Rupert
PRINCE RUPERT
VTS AREA
TANKER EXCLUSION ZONE (TEZ)
TOFINO
VTS AREA
Tofino
VANCOUVER
VTS AREA
Vancouver
JUAN DE FUCA
VTS AREA
Victoria
Seattle
51°05' N
132°30' W
48°26' N
126°14' W
48°28' N
124°59' W
134°W
132°
130°
128°
126°W
54°N
56°N
134°W
52°
54°
124°W
50°
132°
50°N
122°W
130°
126°
124°

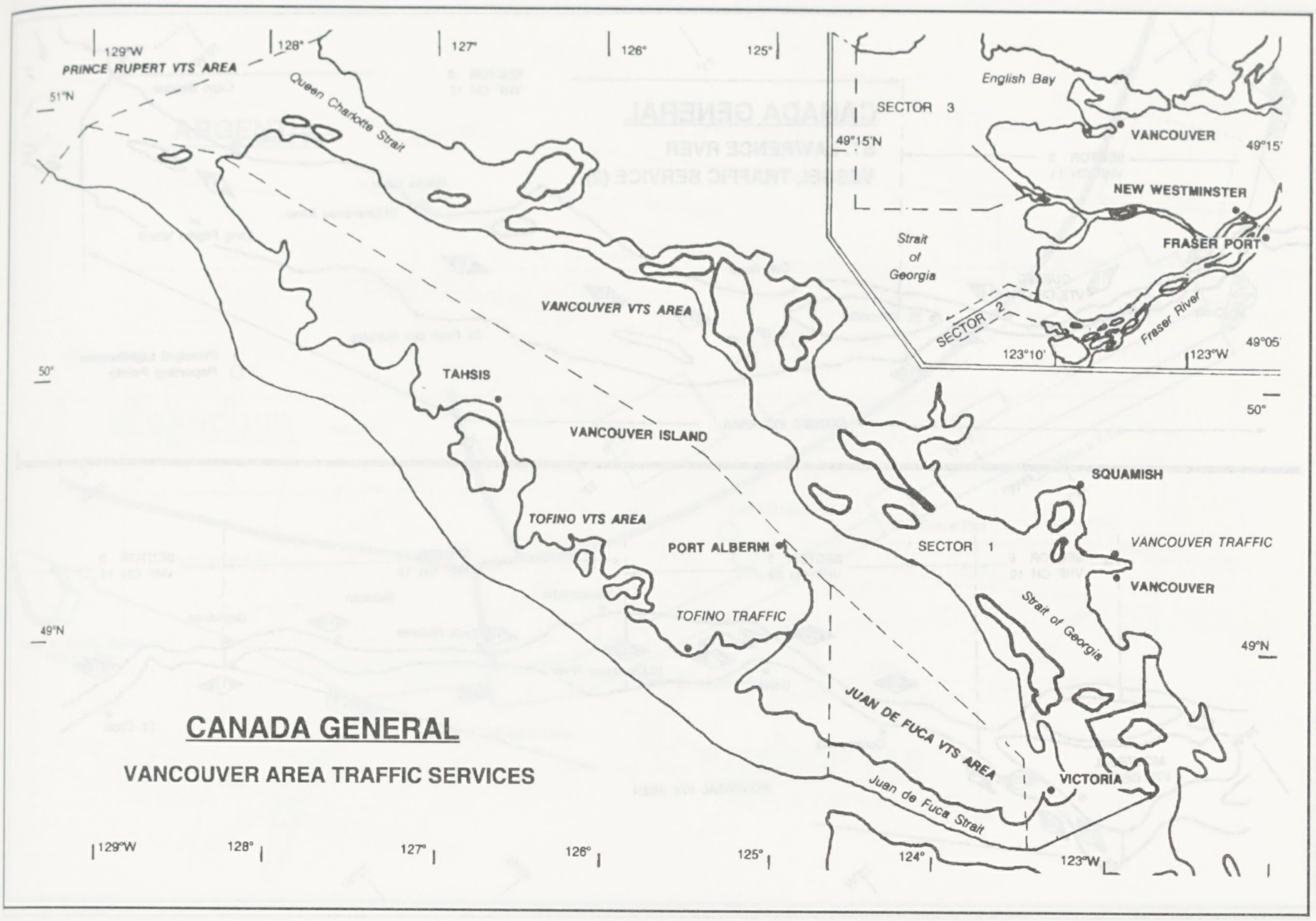
Waypoints for TEZ Boundary
54°00' N 136°17' W
51°05' N 132°30' W
48°26' N 126°14' W
48°28' N 124°59' W


CANADA GENERAL
HALIFAX HARBOUR AND APPROACHES
VESSEL TRAFFIC MANAGEMENT ZONE
ZONE BOUNDARY
ZONE BOUNDARY
SECTOR 1
CHANNEL 14
SECTOR 2
CHANNEL 12
N
HALIFAX
The Narrows
Dartmouth
Halifax Hr.
McNabs I.
Cole Hr.
Graham Hd.
Hartlen Pt.
(Duncan Reef)
Chebucto Hd.
C. Sambro
Pennant Pt.


CANADA GENERAL
NEWFOUNDLAND TRAFFIC ZONES
ST.JOHNS VTS
52°45'W
52°45'W
47°30'N
Western Bay
Conception Bay
Cape St.Francis
Sugarloaf Head
Torbay
St.Johns
Cape Spear
Petty Harbour
SECTOR 1
VHF CH 11
Bull Head
PLACENTIA BAY VTS
54°30'W
54°30'W
54°W
54°W
47°30'N
47°N
47°N
59°W
Come By Chance
Oil Terminal
Merasheen Island
SECTOR 2
VHF CH 12
Burin Peninsula
Western Head
Bass Point
Placentia Bay
Avalon Peninsula
SECTOR 1
VHF CH 14
Cape St.Mary's
PORT AUX BASQUES VTS
47°30'N
47°30'N
Garia Bay
Rose Blanche Point
Burntisland
Port Aux Basques
Channel Head
Larkin Point
Point Enragee
Cape Ray
SECTOR 1
VHF CH 14
Cabot Strait


CANADA GENERAL
PRINCE RUPERT TRAFFIC ZONE
U.S.A.
PRINCE RUPERT TRAFFIC
CANADA
Chatham Sound
SECTOR 2 VHF CH 71
PITT ISLAND
PRINCE ROYAL ISLAND
BANKS ISLAND
Hecate Strait
PRINCE RUPERT VTS AREA
Queen Charlotte Sound
Dixon Entrance
SECTOR 1 VHF CH 11
QUEEN
CHARLOTTE
ISLANDS
131°W
55°N
130°W
54°N
129°
128°W
53°N
132°W
55°N
52°
128°W
129°
133°
54°
134°W
53°N
133°
51°N
51°N

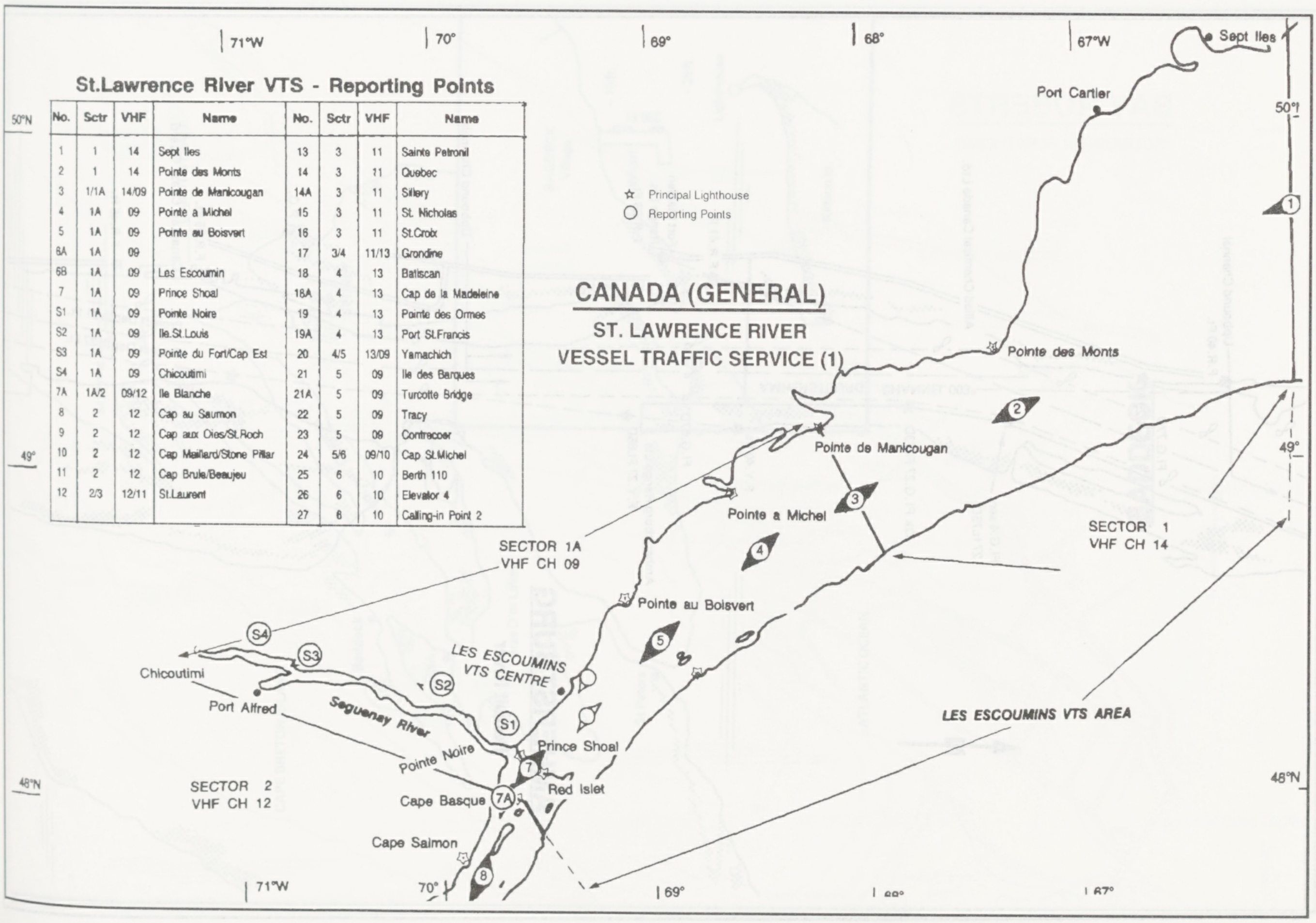

CANADA (GENERAL)
JUAN DE FUCA REGION
Cooperative Vessel Traffic Services
130°
129°
128°
127°
126°
125°
124°
123°
50°
49°
48°
Offshore reporting limit approximately 50 nautical miles off Vancouver Island
Tofino Traffic
Vancouver Island
Vancouver Traffic
Puget Sound VTS
Seattle Traffic
Seattle Traffic also controls Puget Sound VTS area
127° W
48° N



CANADA GENERAL

VANCOUVER AREA TRAFFIC SERVICES

129°W
128°
127°
126°
125°
PRINCE RUPERT VTS AREA
51°N
Queen Charlotte Strait
VANCOUVER VTS AREA
TAHSIS
50°
VANCOUVER ISLAND
TOFINO VTS AREA
PORT ALBERNI
TOFINO TRAFFIC
49°N
SECTOR 1
SQUAMISH
VANCOUVER TRAFFIC
VANCOUVER
Strait of Georgia
JUAN DE FUCA VTS AREA
Juan de Fuca Strait
VICTORIA
124°
123°W
SECTOR 3
English Bay
49°15'N
VANCOUVER
49°15'
NEW WESTMINSTER
FRASER PORT
Strait of Georgia
SECTOR 2
Fraser River
123°10'
123°W
49°05'
50°
49°N



St.Lawrence River VTS - Reporting Points

No.	Sctr	VHF	Name	No.	Sctr	VHF	Name
1	1	14	Sept Iles	13	3	11	Sainte Petronil
2	1	14	Pointe des Monts	14	3	11	Quebec
3	1/1A	14/09	Pointe de Manicougan	14A	3	11	Sillery
4	1A	09	Pointe a Michel	15	3	11	St. Nicholas
5	1A	09	Pointe au Boisvert	16	3	11	St.Croix
6A	1A	09		17	3/4	11/13	Grondine
6B	1A	09	Les Escoumin	18	4	13	Batiscan
7	1A	09	Prince Shoal	18A	4	13	Cap de la Madeleine
S1	1A	09	Pointe Noire	19	4	13	Pointe des Ormes
S2	1A	09	Ile.St.Louis	19A	4	13	Port St.Francis
S3	1A	09	Pointe du Fort/Cap Est	20	4/5	13/09	Yamachich
S4	1A	09	Chicoutimi	21	5	09	Ile des Barques
7A	1A/2	09/12	Ile Blanche	21A	5	09	Turcotte Bridge
8	2	12	Cap au Saumon	22	5	09	Tracy
9	2	12	Cap aux Oies/St.Roch	23	5	09	Contrecoer
10	2	12	Cap Maillard/Stone Pillar	24	5/6	09/10	Cap St.Michel
11	2	12	Cap Brule/Beaujeu	25	6	10	Berth 110
12	2/3	12/11	St.Laurent	26	6	10	Elevator 4
				27	6	10	Calling-in Point 2

☆ Principal Lighthouse

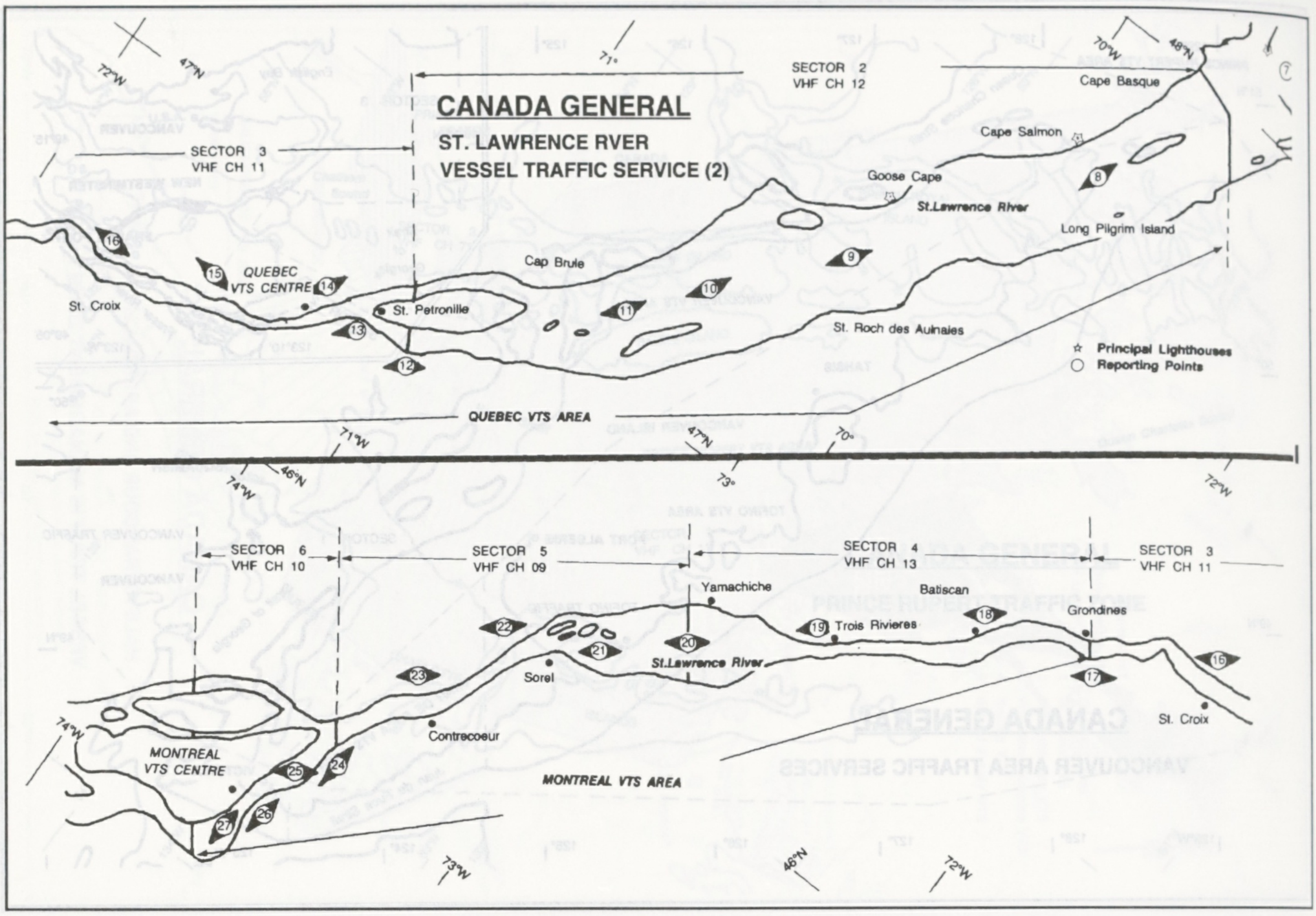
○ Reporting Points

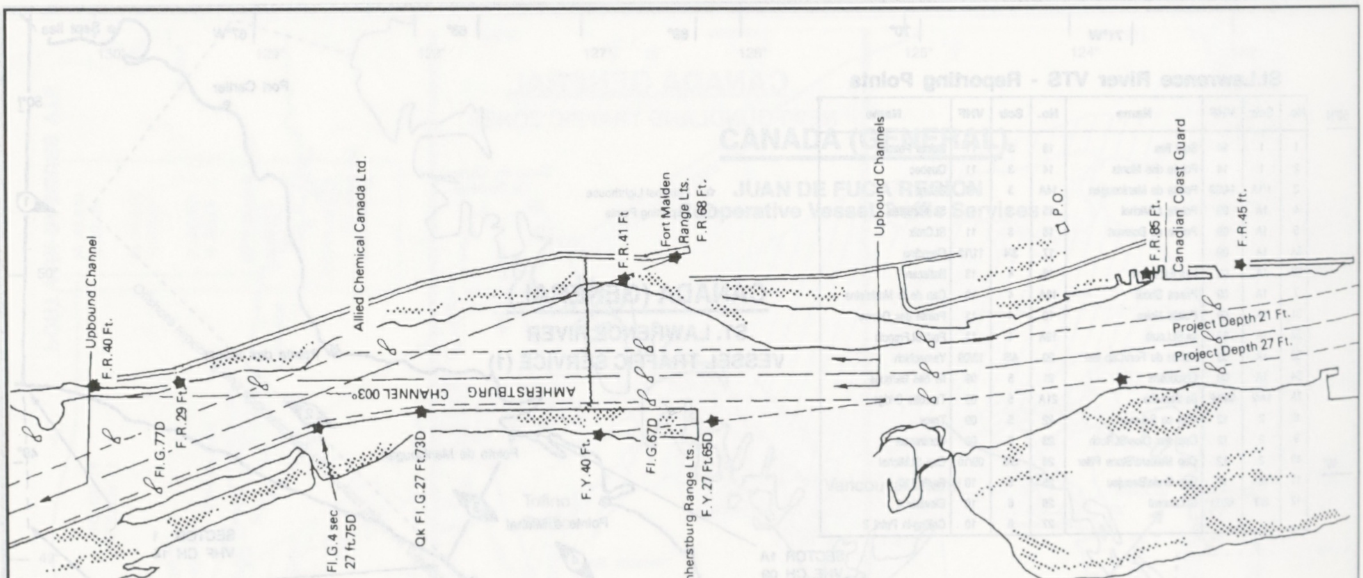
CANADA (GENERAL)

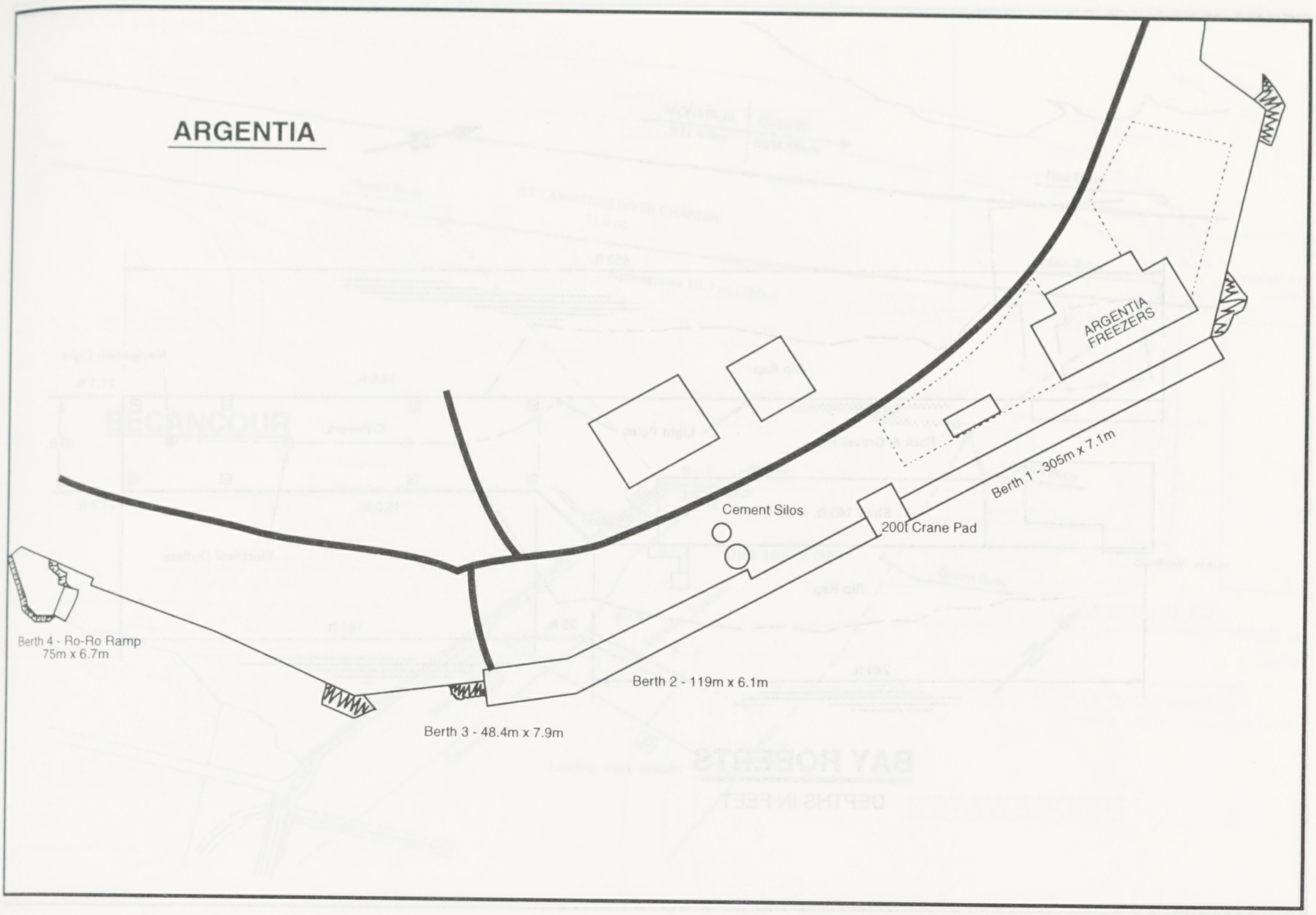
ST. LAWRENCE RIVER

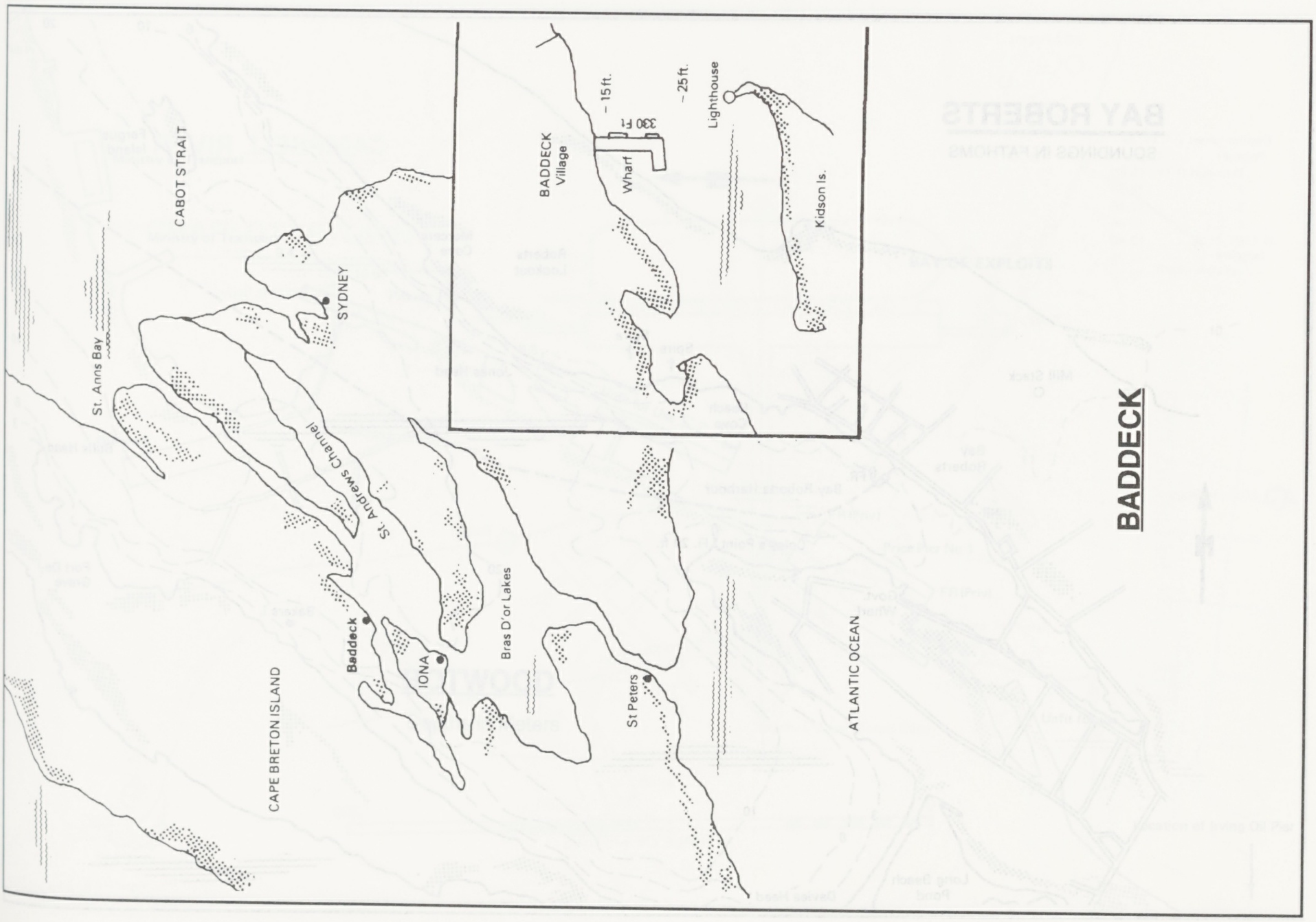
VESSEL TRAFFIC SERVICE (1)

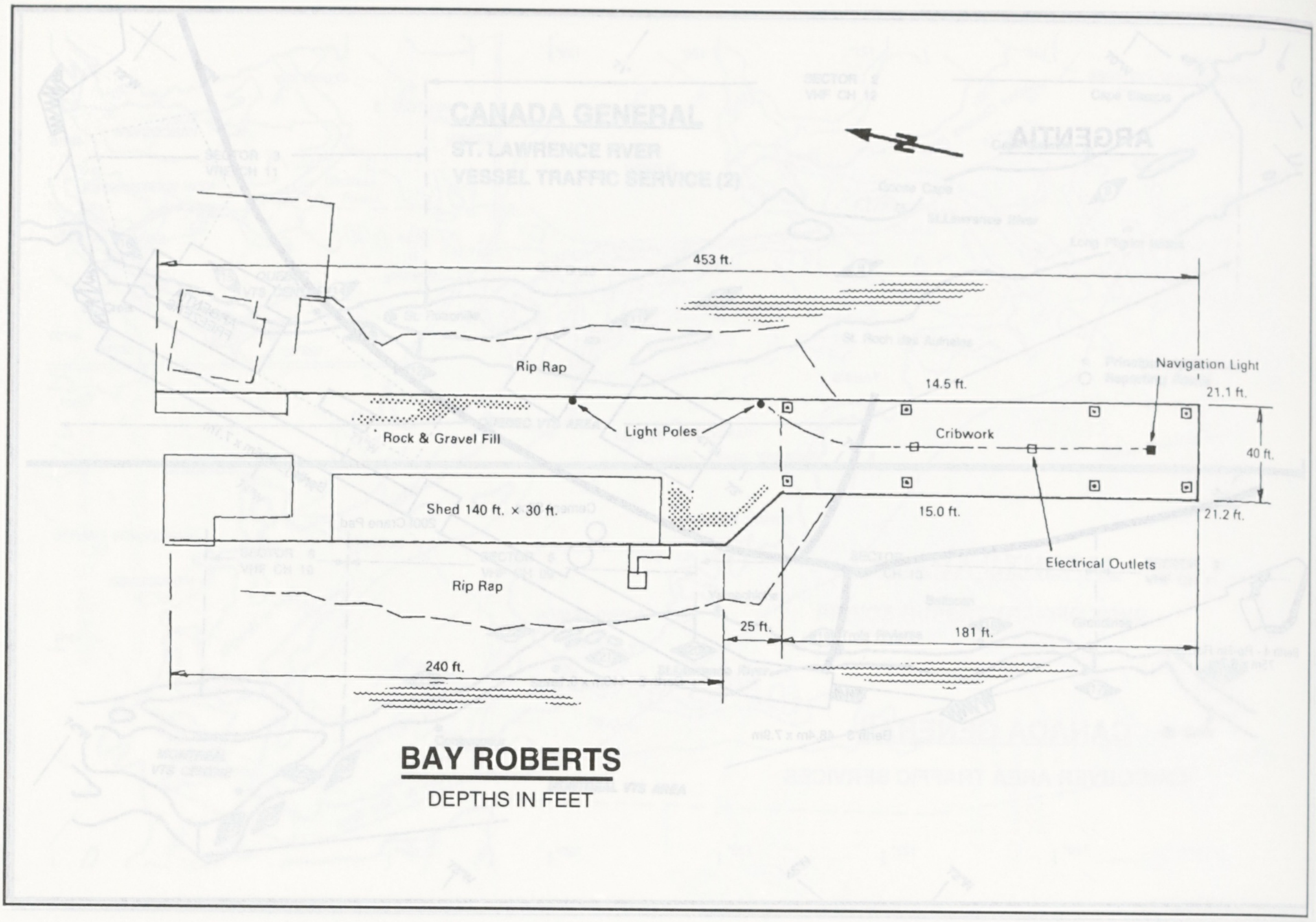
71°W
70°
69°
68°
67°W
50°N
49°
48°N
Sept Iles
Port Cartier
50°
1
Pointe des Monts
2
Pointe de Manicougan
3
Pointe a Michel
4
49°
SECTOR 1
VHF CH 14
SECTOR 1A
VHF CH 09
Pointe au Boisvert
5
S4
S3
Chicoutimi
LES ESCOUMINS VTS CENTRE
S2
Port Alfred
Saguenay River
S1
LES ESCOUMINS VTS AREA
Pointe Noire
Prince Shoal
7
7A
Red Islet
Cape Basque
SECTOR 2
VHF CH 12
Cape Saimon
8
48°N
71°W
70°
69°
68°
67°

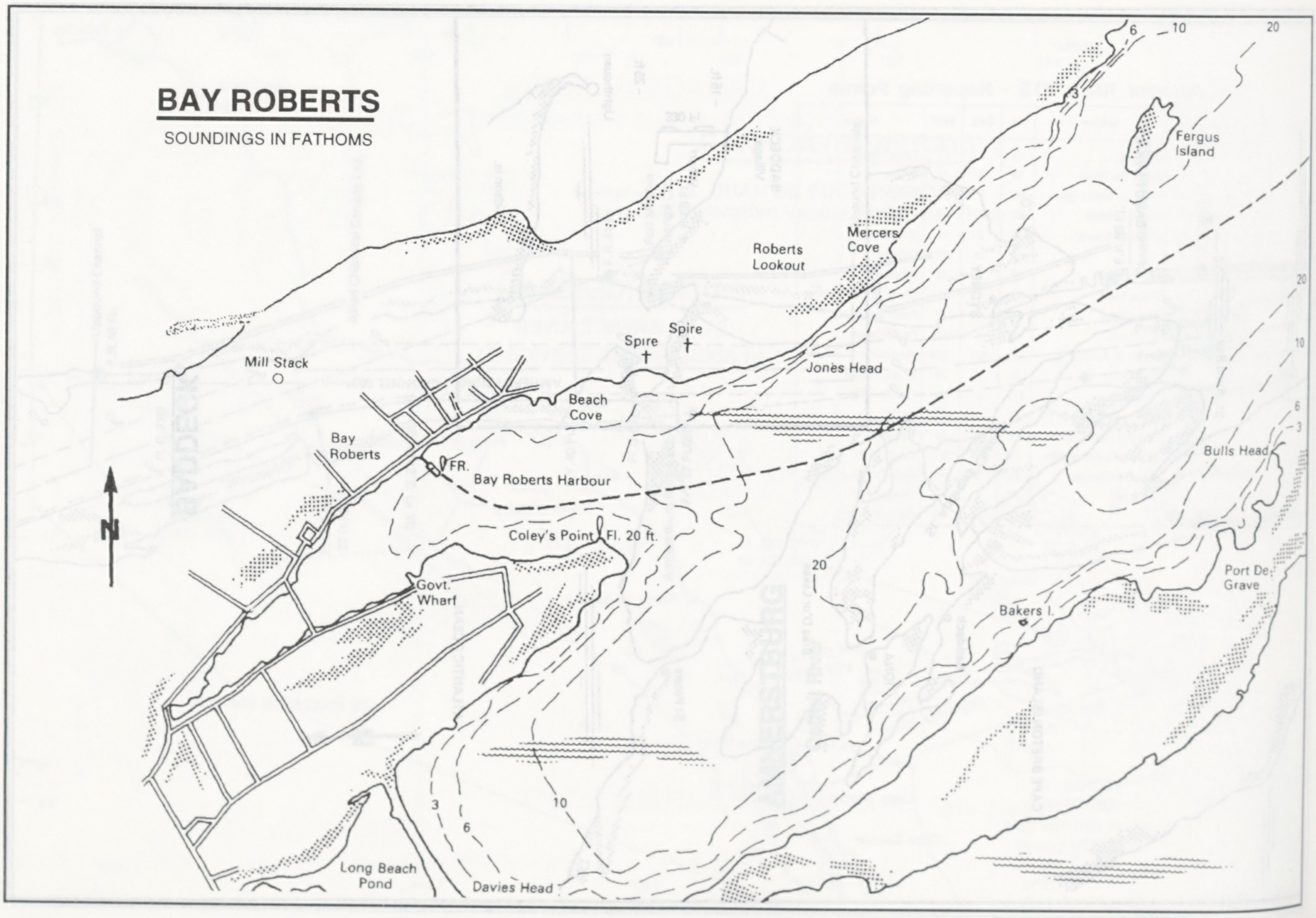

CANADA GENERAL
ST. LAWRENCE RVER
VESSEL TRAFFIC SERVICE (2)
SECTOR 2
VHF CH 12
SECTOR 3
VHF CH 11
72°W
47°N
71°
70°W
48°N
Cape Basque
Cape Salmon
Goose Cape
St.Lawrence River
Long Pilgrim Island
Cap Brule
QUEBEC
VTS CENTRE
St. Croix
St. Petronille
St. Roch des Aulnaies
Principal Lighthouses
Reporting Points
QUEBEC VTS AREA
71°W
47°N
70°
46°N
74°W
73°
72°W
SECTOR 6
VHF CH 10
SECTOR 5
VHF CH 09
SECTOR 4
VHF CH 13
SECTOR 3
VHF CH 11
Yamachiche
Batiscan
Grondines
Trois Rivieres
Sorel
St.Lawrence River
St. Croix
Contrecoeur
MONTREAL
VTS CENTRE
MONTREAL VTS AREA
74°W
73°W
46°N
72°W
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27

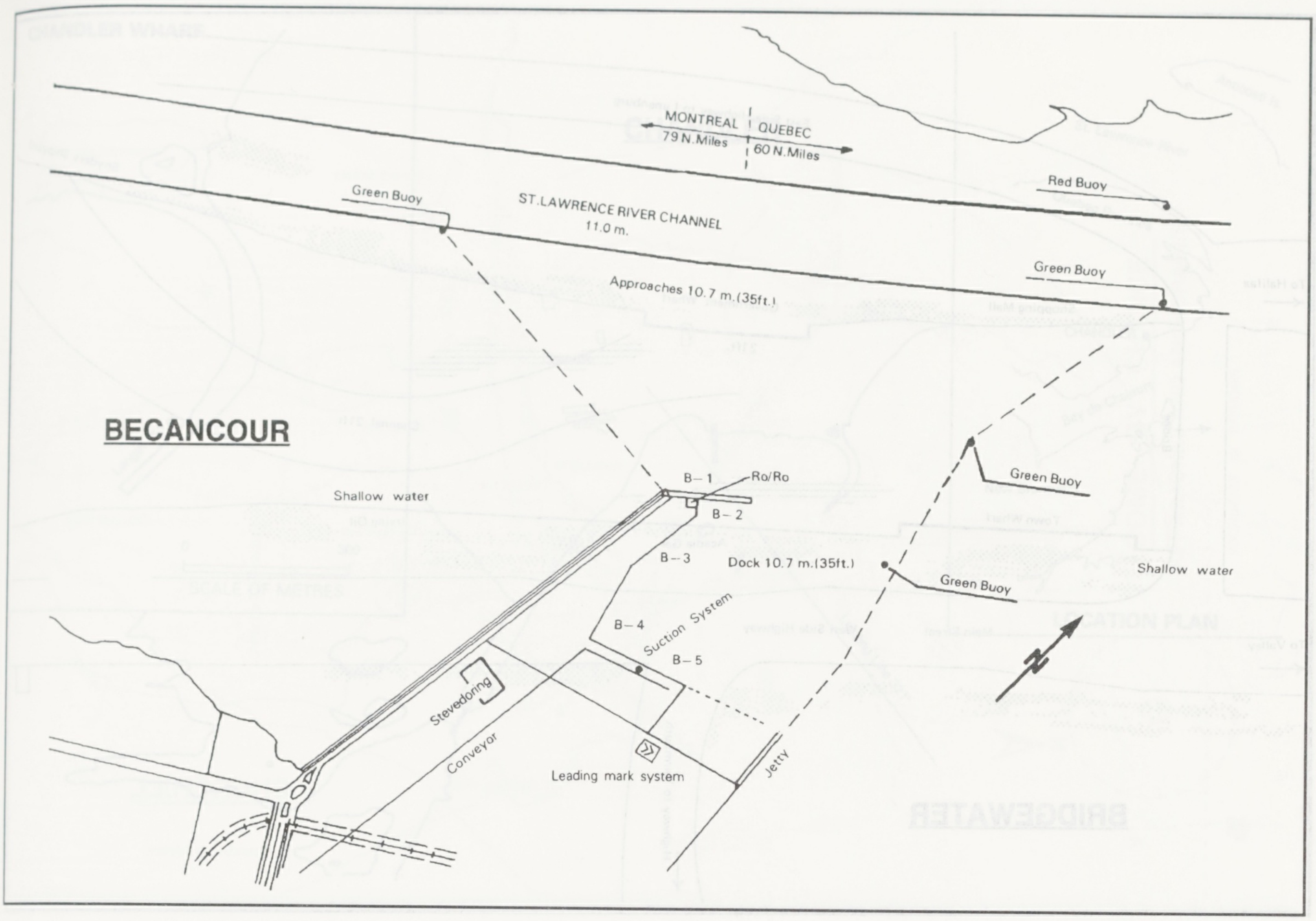

Upbound Channel
F.R. 40 Ft.
F.R. 29 Ft.
Fl.G.77D
Allied Chemical Canada Ltd.
AMHERSTBURG CHANNEL 003°
Fl.G.4 sec.
27 ft.75D
Qk Fl.G.27 Ft.73D
F.R.41 Ft.
Fort Malden
Range Lts.
F.R.68 Ft.
F.Y.40 Ft.
Fl.G.67D
Amherstburg Range Lts.
F.Y.27 Ft.65D
Upbound Channels
P.O.
F.R.85 Ft.
Canadian Coast Guard
F.R.45 ft.
Project Depth 21 Ft.
Project Depth 27 Ft.
N
AMHERSTBURG
Detroit River

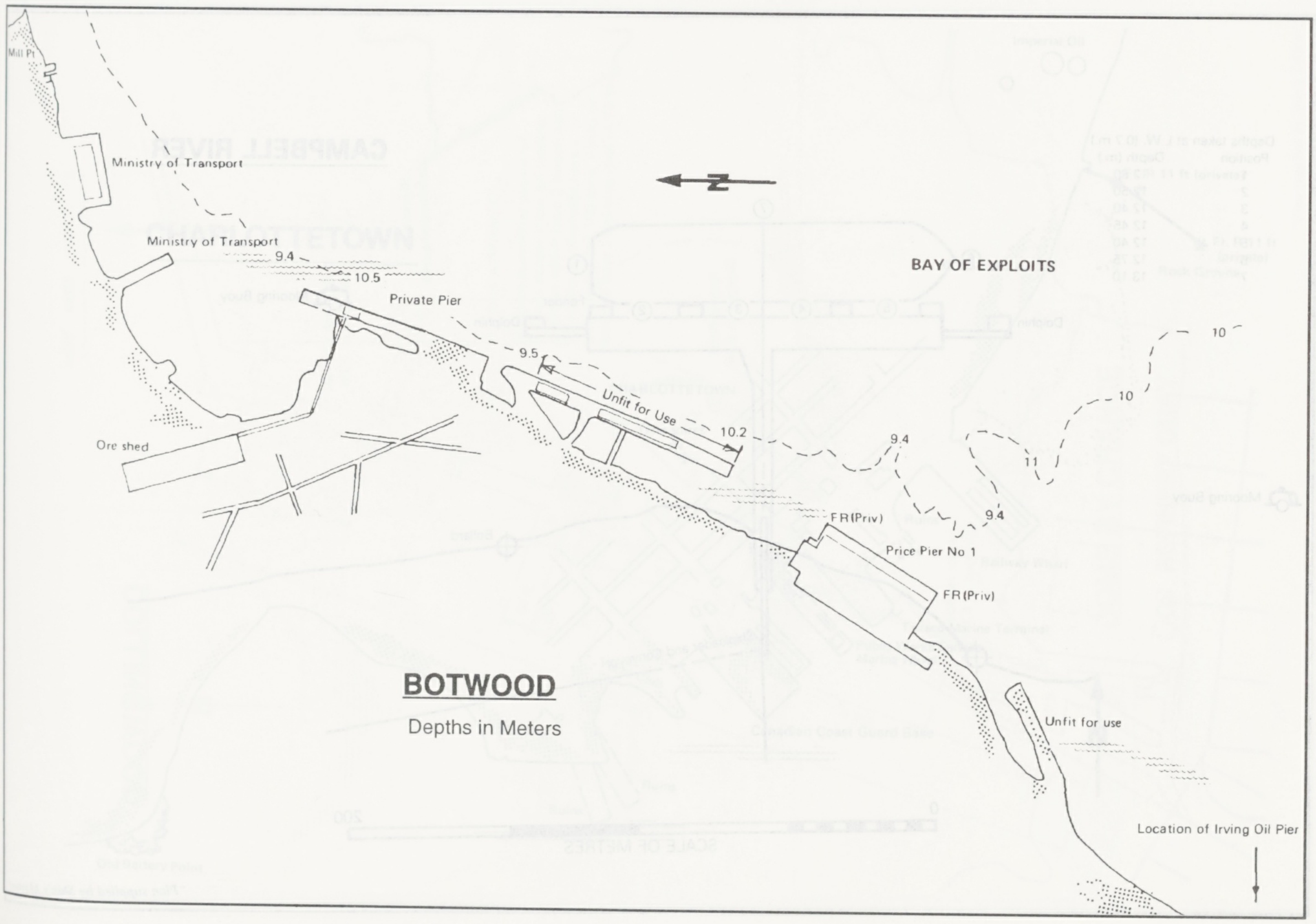

ARGENTIA
ARGENTIA FREEZERS
Berth 1 - 305m x 7.1m
Cement Silos
200t Crane Pad
Berth 2 - 119m x 6.1m
Berth 3 - 48.4m x 7.9m
Berth 4 - Ro-Ro Ramp
75m x 6.7m

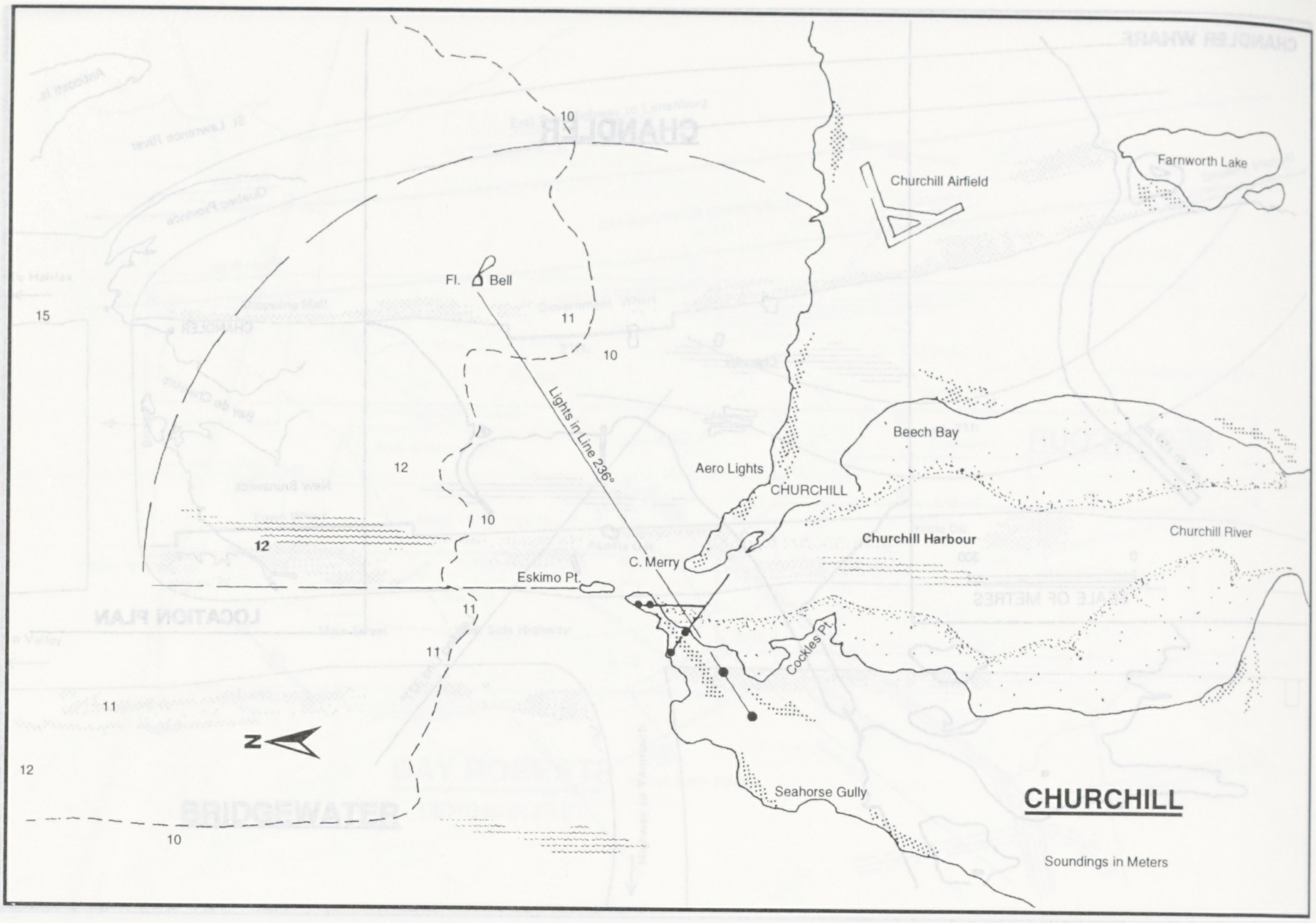

BADDECK
Village
Wharf
330 Ft
~ 15 ft.
~ 25 ft.
Lighthouse
Kidson Is.
CABOT STRAIT
St. Anns Bay
SYDNEY
St. Andrews Channel
Baddeck
IONA
Bras D'or Lakes
St Peters
CAPE BRETON ISLAND
ATLANTIC OCEAN

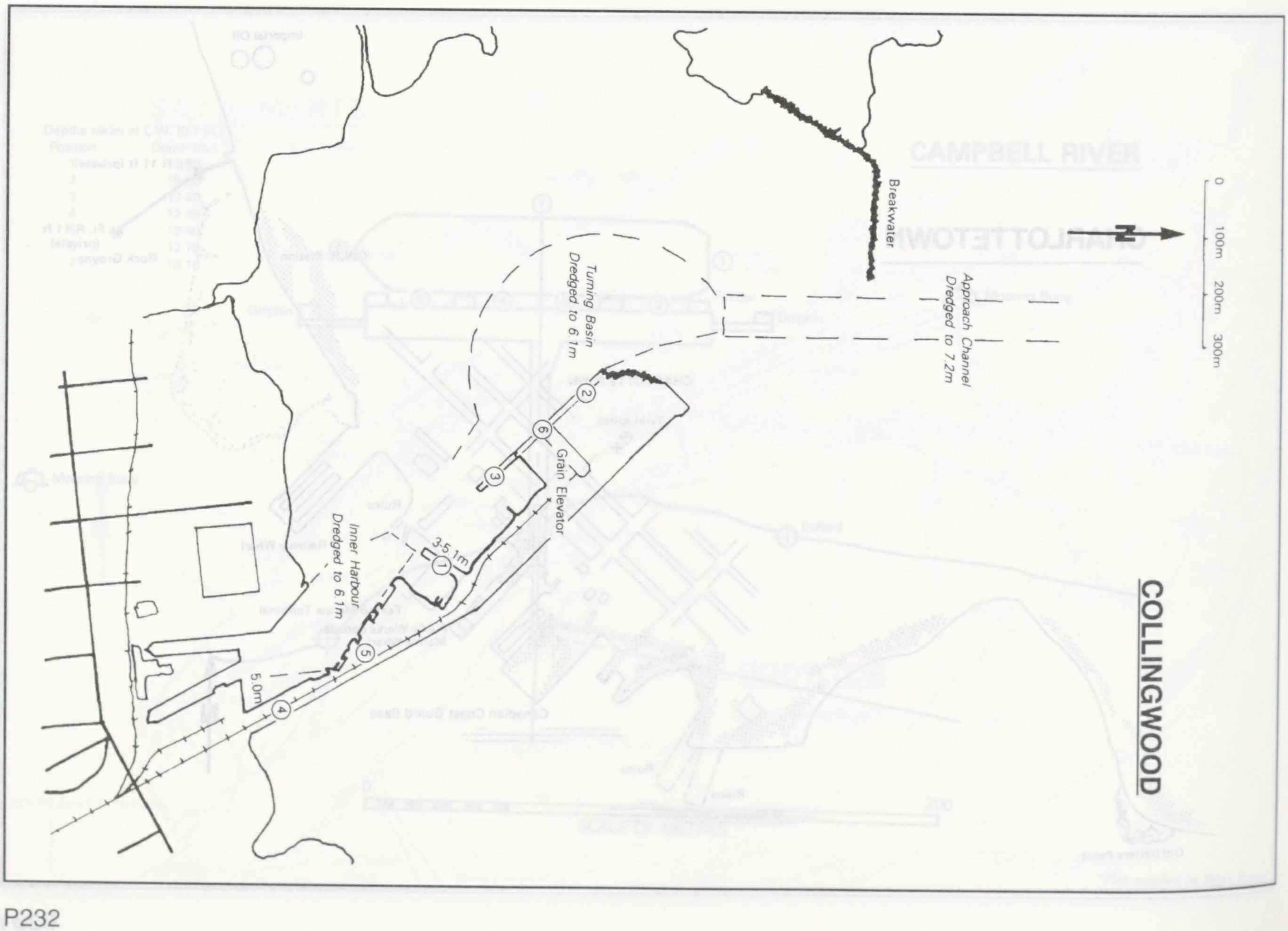

453 ft.
Rip Rap
14.5 ft.
Navigation Light
21.1 ft.
Rock & Gravel Fill
Light Poles
Cribwork
40 ft.
Shed 140 ft. × 30 ft.
15.0 ft.
21.2 ft.
Electrical Outlets
Rip Rap
25 ft.
181 ft.
240 ft.
BAY ROBERTS
DEPTHS IN FEET

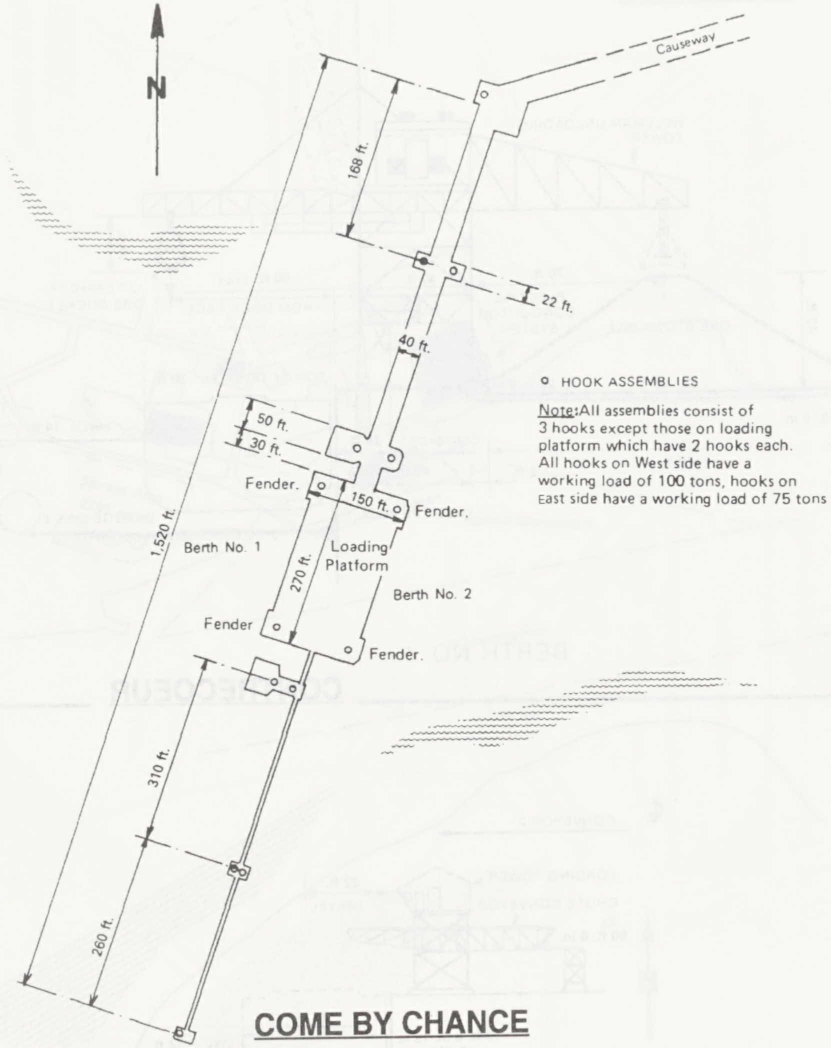

BAY ROBERTS
SOUNDINGS IN FATHOMS
6
10
20
3
Fergus Island
Roberts Lookout
Mercers Cove
20
10
Spire
Spire
Mill Stack
Jones Head
6
3
Beach Cove
Bay Roberts
FR.
Bay Roberts Harbour
Bulls Head
N
Coley's Point
Fl. 20 ft.
Govt. Wharf
20
Port De Grave
Bakers I.
3
10
6
Long Beach Pond
Davies Head


BECANCOUR
MONTREAL
79 N.Miles
QUEBEC
60 N.Miles
Red Buoy
Green Buoy
ST.LAWRENCE RIVER CHANNEL
11.0 m.
Green Buoy
Approaches 10.7 m.(35ft.)
Shallow water
B-1
Ro/Ro
B-2
B-3
Dock 10.7 m.(35ft.)
Green Buoy
Green Buoy
Shallow water
B-4
Suction System
B-5
Stevedoring
Conveyor
Leading mark system
Jetty
N


Mill Pt
Ministry of Transport
N
Ministry of Transport
9.4
10.5
BAY OF EXPLOITS
Private Pier
9.5
Unfit for Use
10.2
9.4
10
10
11
9.4
Ore shed
FR(Priv)
Price Pier No 1
FR(Priv)
BOTWOOD
Depths in Meters
Unfit for use
Location of Irving Oil Pier


10
Churchill Airfield
Farnworth Lake
Fl. Bell
15
11
10
Lights in Line 236°
Beech Bay
12
Aero Lights
CHURCHILL
10
Churchill Harbour
Churchill River
12
C. Merry
Eskimo Pt.
11
11
Cockles Pt.
11
N
12
Seahorse Gully
10
CHURCHILL
Soundings in Meters


COLLINGWOOD
Breakwater
N
0
100m
200m
300m
Approach Channel
Dredged to 7.2m
Turning Basin
Dredged to 6.1m
②
⑥
Grain Elevator
③
3.5 1m
①
Inner Harbour
Dredged to 6.1m
⑤
5.0m
④


N
Causeway
168 ft.
22 ft.
40 ft.
50 ft.
30 ft.
Fender.
150 ft.
Fender.
1,520 ft.
Berth No. 1
Loading Platform
270 ft.
Berth No. 2
Fender
Fender.
310 ft.
260 ft.

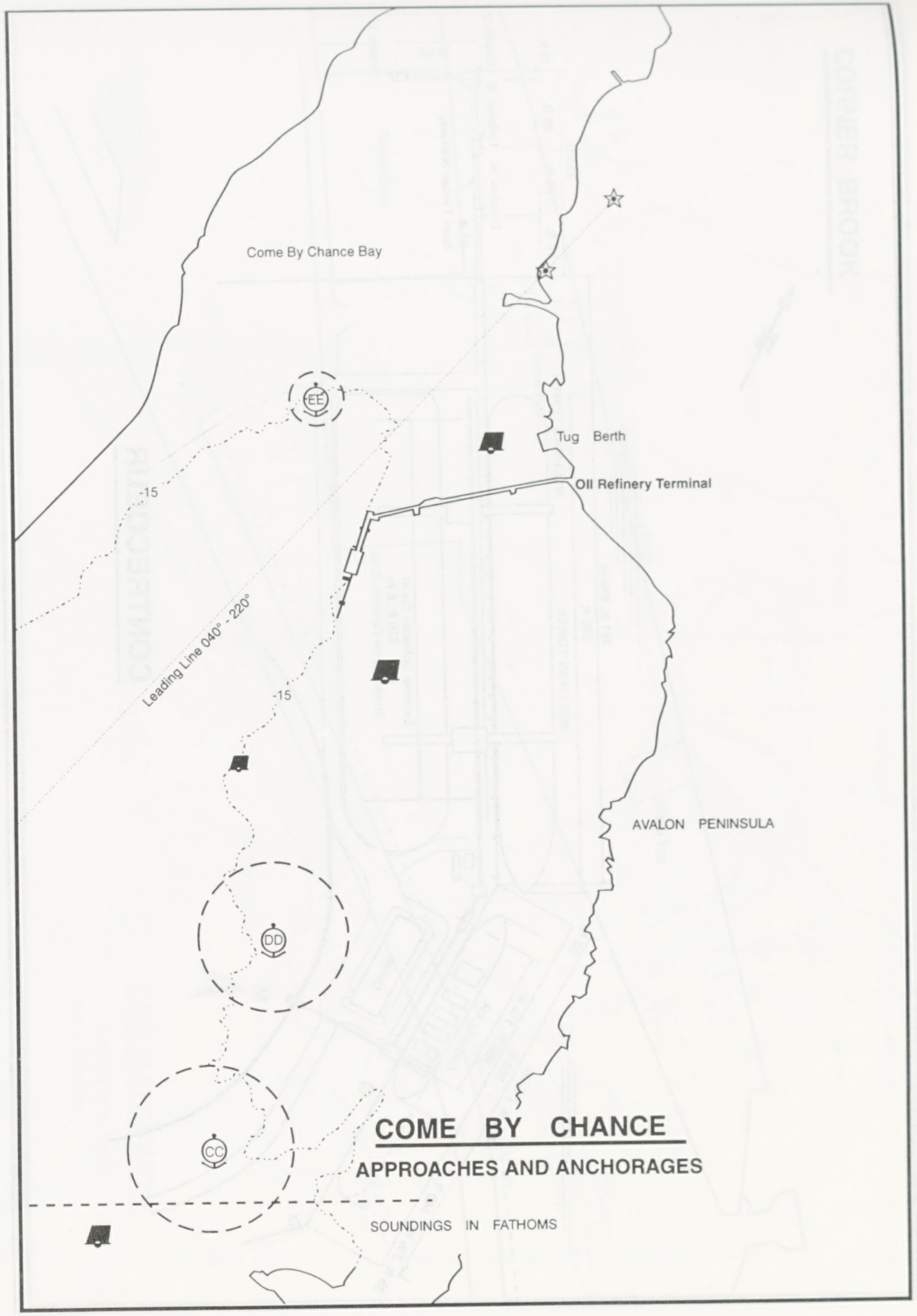
○ HOOK ASSEMBLIES

Note: All assemblies consist of 3 hooks except those on loading platform which have 2 hooks each. All hooks on West side have a working load of 100 tons, hooks on East side have a working load of 75 tons

COME BY CHANCE

OIL REFINERY QUAY

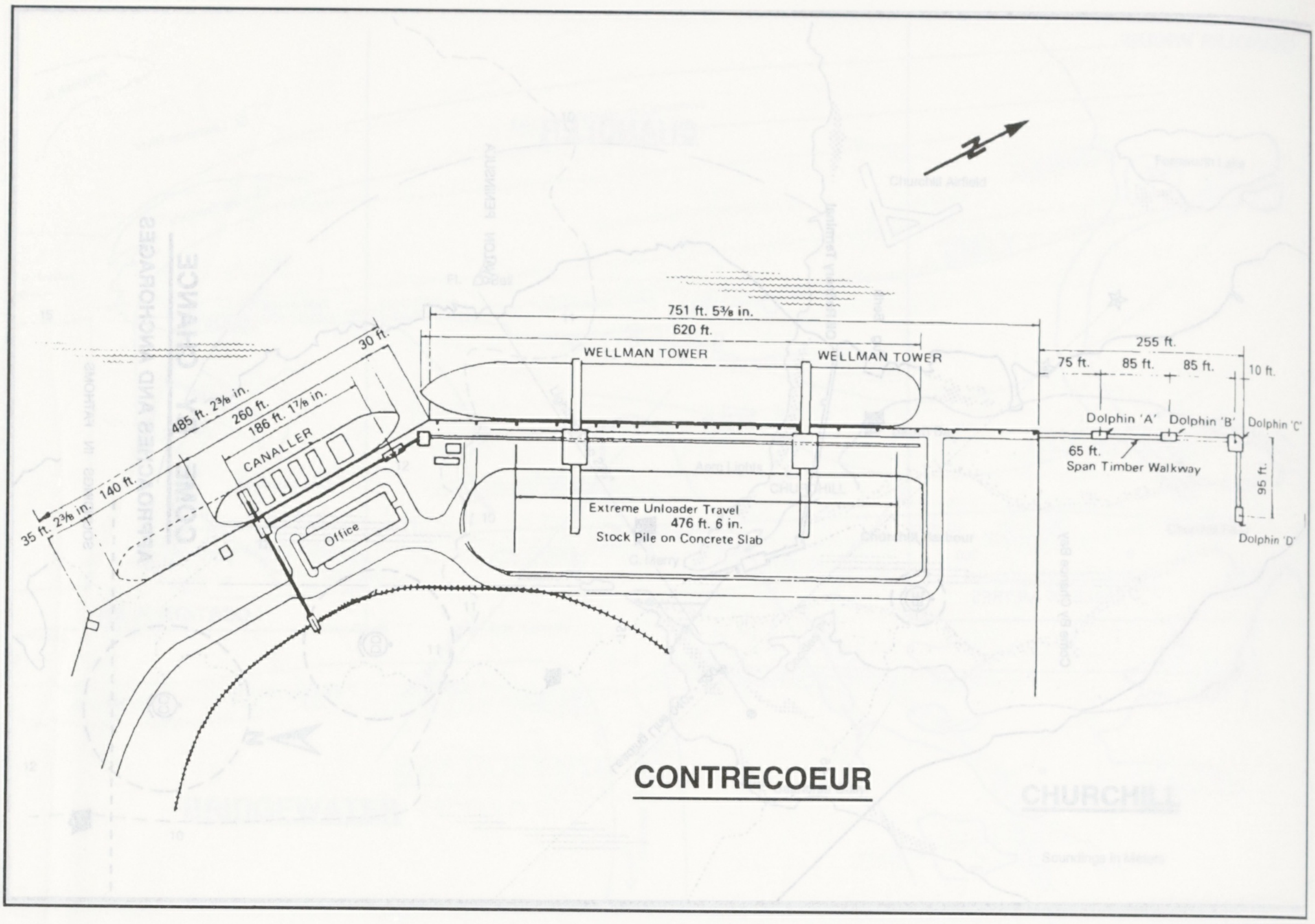
"Plan supplied by Ship's Officer"


Come By Chance Bay
EE
Tug Berth
Oil Refinery Terminal
-15
Leading Line 040° - 220°
-15
AVALON PENINSULA
DD
CC

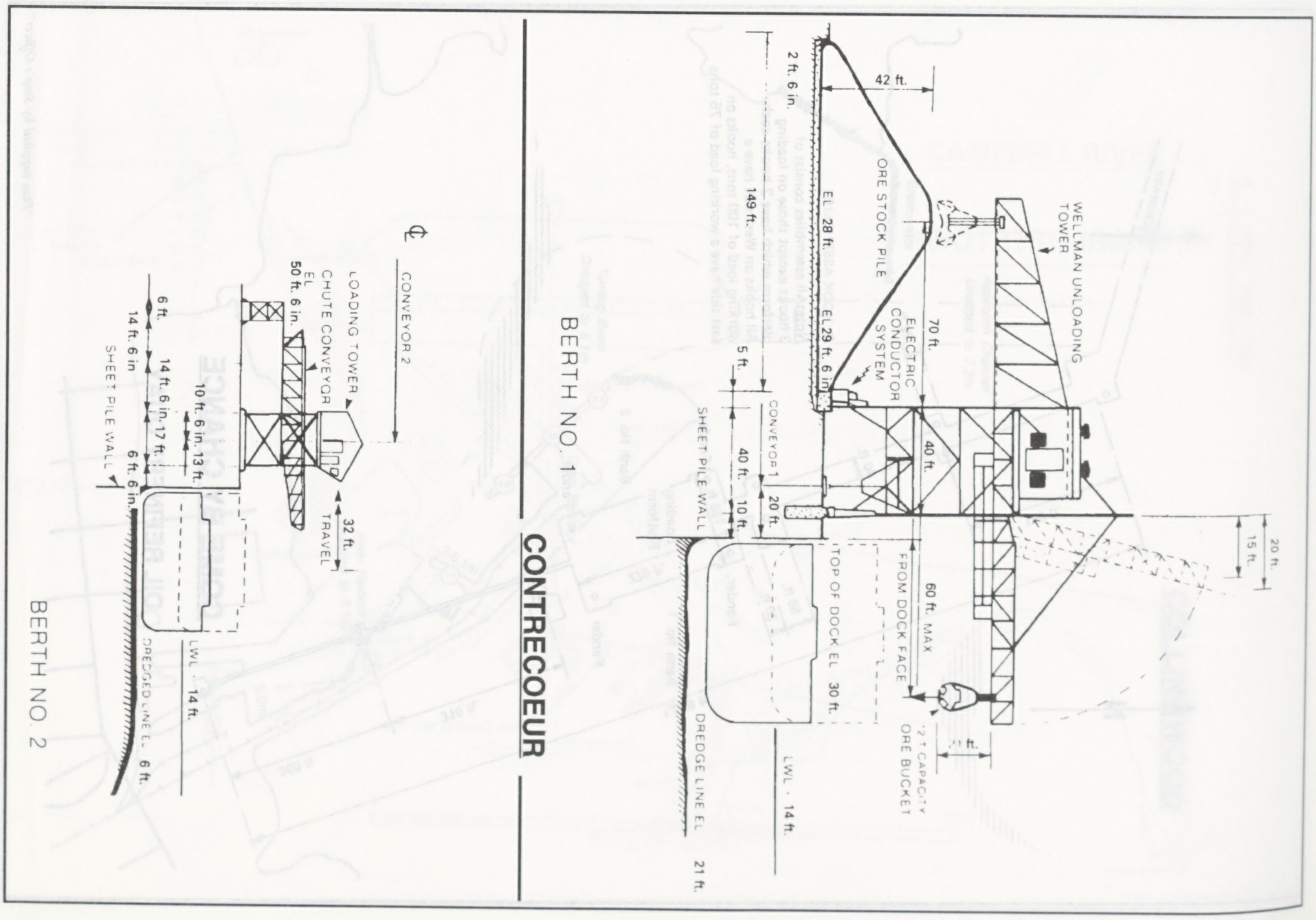
COME BY CHANCE

APPROACHES AND ANCHORAGES

SOUNDINGS IN FATHOMS

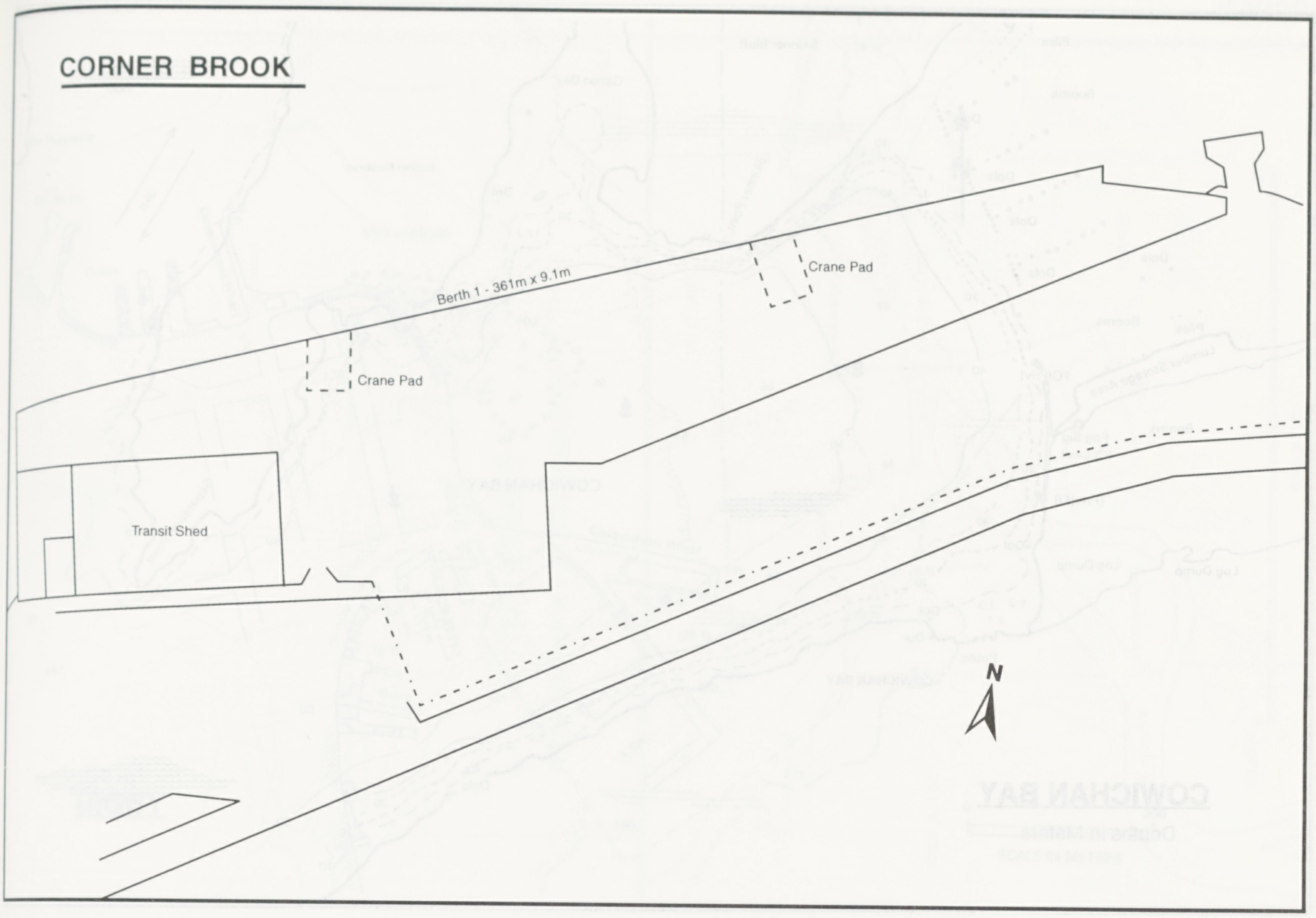

751 ft. 5⅜ in.
620 ft.
WELLMAN TOWER
WELLMAN TOWER
255 ft.
75 ft.
85 ft.
85 ft.
10 ft.
Dolphin 'A'
Dolphin 'B'
Dolphin 'C'
65 ft.
Span Timber Walkway
95 ft.
Dolphin 'D'
30 ft.
485 ft. 2⅜ in.
260 ft.
186 ft. 1⅞ in.
CANALLER
140 ft.
35 ft. 2⅜ in.
Office
Extreme Unloader Travel
476 ft. 6 in.
Stock Pile on Concrete Slab

CONTRECOEUR

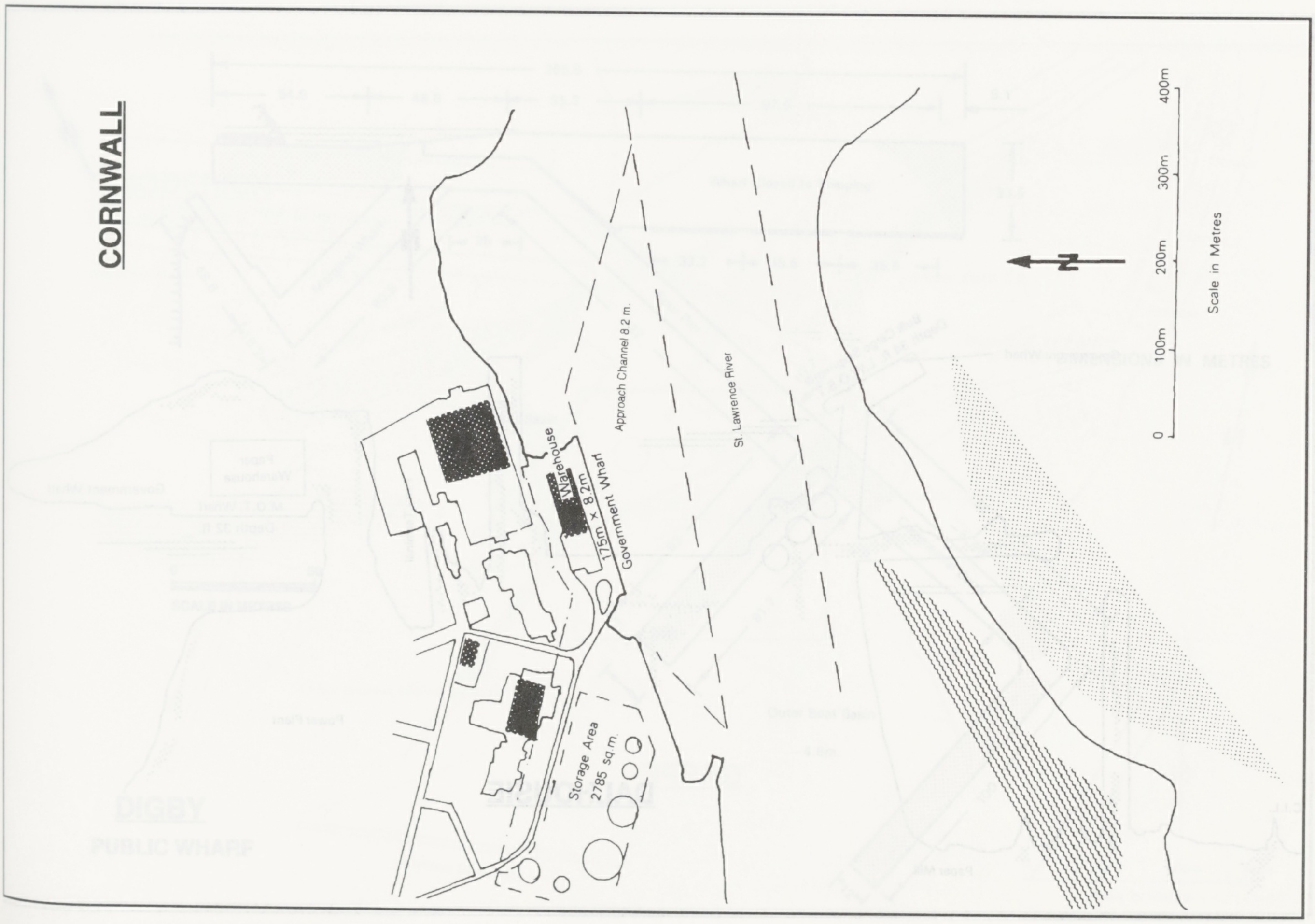

WELLMAN UNLOADING TOWER
42 ft.
2 ft. 6 in.
EL. 28 ft.
ORE STOCK PILE
EL 29 ft. 6 in.
70 ft.
ELECTRIC CONDUCTOR SYSTEM
149 ft.
5 ft.
CONVEYOR 1
40 ft.
40 ft.
10 ft.
20 ft.
SHEET PILE WALL
20 ft.
15 ft.
60 ft. MAX FROM DOCK FACE
TOP OF DOCK EL. 30 ft.
12 T CAPACITY ORE BUCKET
LWL 14 ft.
DREDGE LINE EL. 21 ft.
BERTH NO. 1
CONVEYOR 2
LOADING TOWER
CHUTE CONVEYOR
EL 50 ft. 6 in.
6 ft.
14 ft. 6 in.
14 ft. 6 in.
10 ft. 6 in.
17 ft.
13 ft.
6 ft. 6 in.
SHEET PILE WALL
32 ft. TRAVEL
LWL 14 ft.
DREDGED LINE EL. 6 ft.
BERTH NO. 2

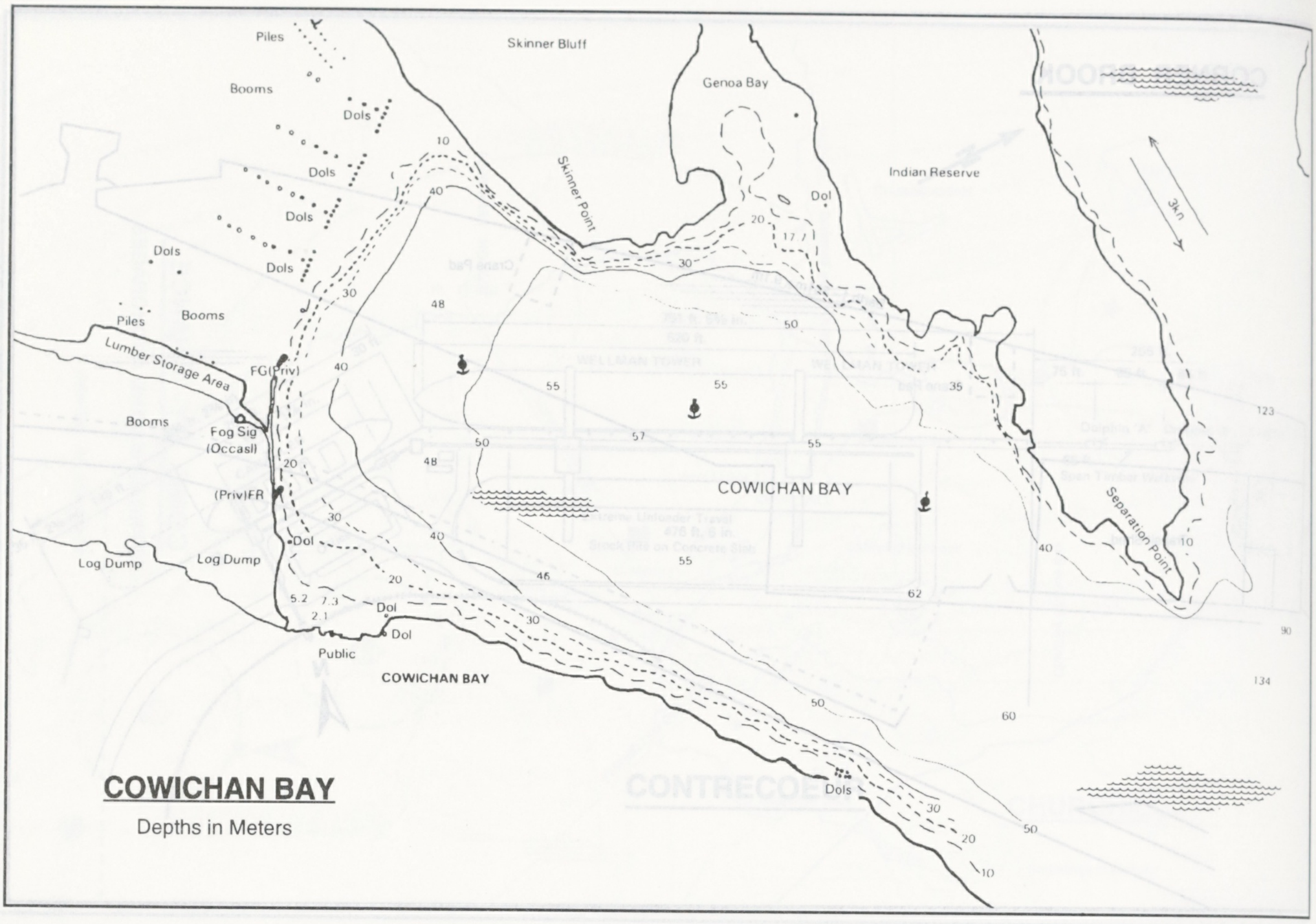
CONTRECOEUR

CORNER BROOK


Berth 1 - 361m x 9.1m
Crane Pad
Crane Pad
Transit Shed
N

CORNWALL

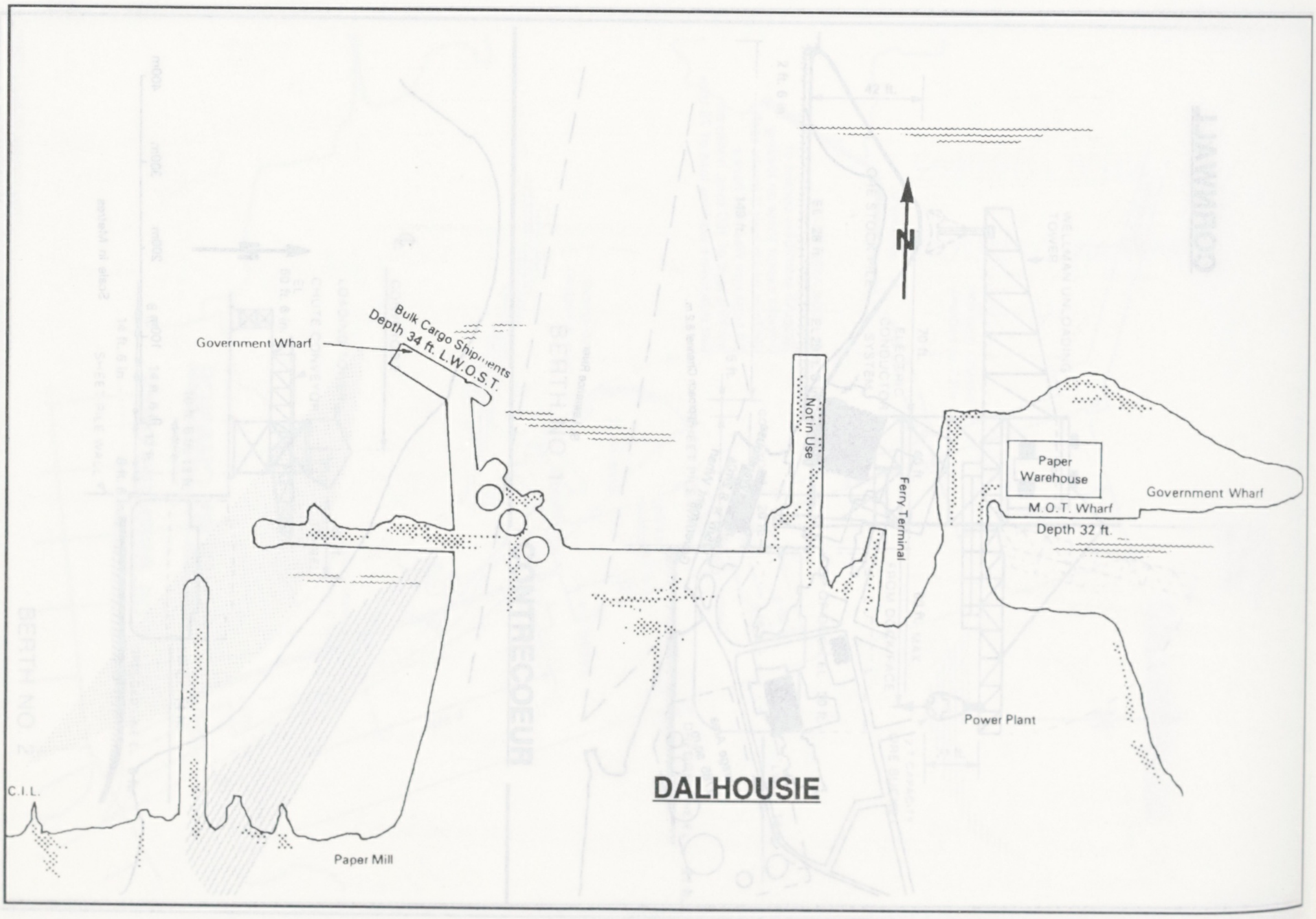

Approach Channel 8.2 m.
St. Lawrence River
Warehouse
175m x 8.2m
Government Wharf
Storage Area
2785 sq.m.
N
0
100m
200m
300m
400m
Scale in Metres



COWICHAN BAY

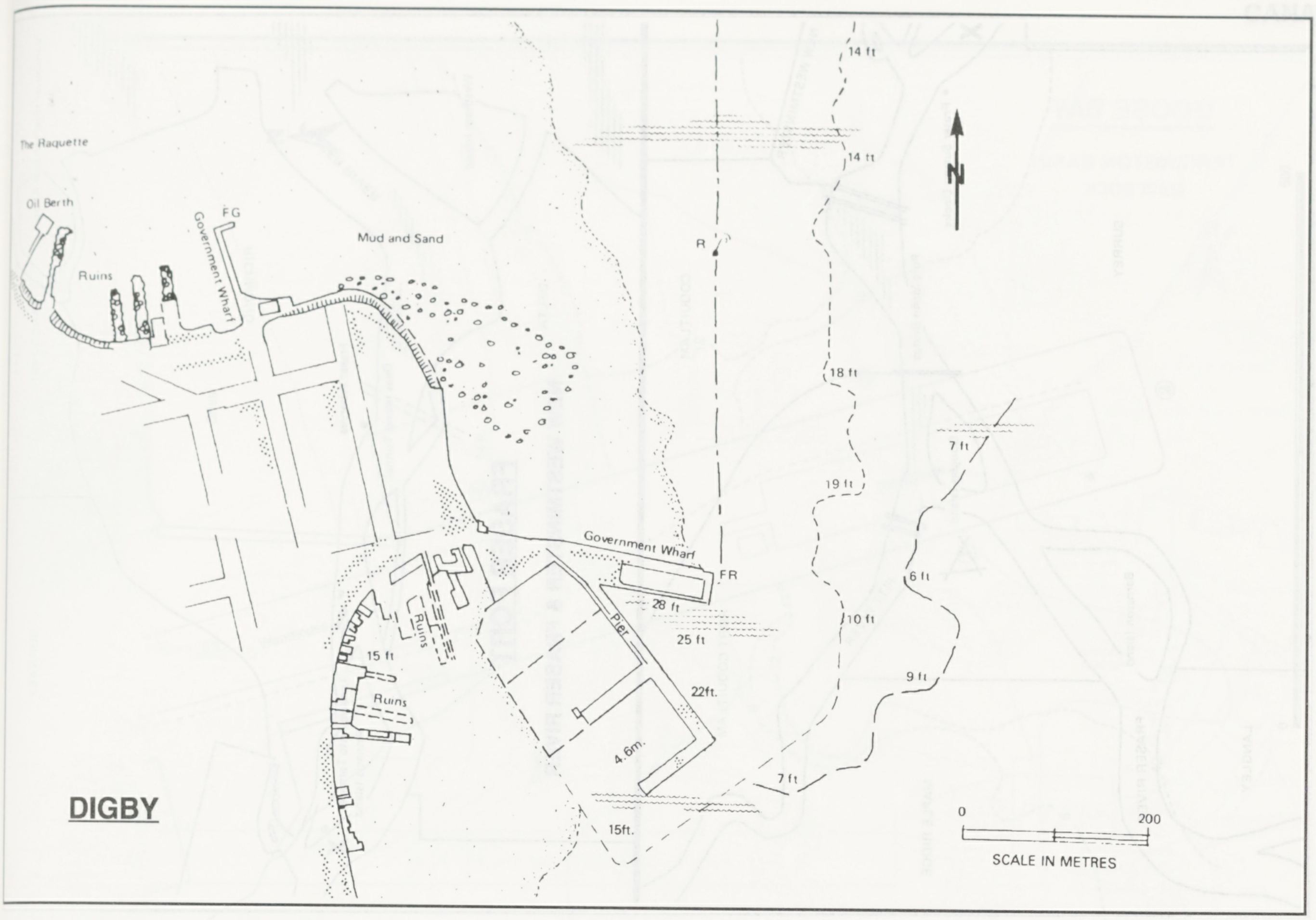
Depths in Meters

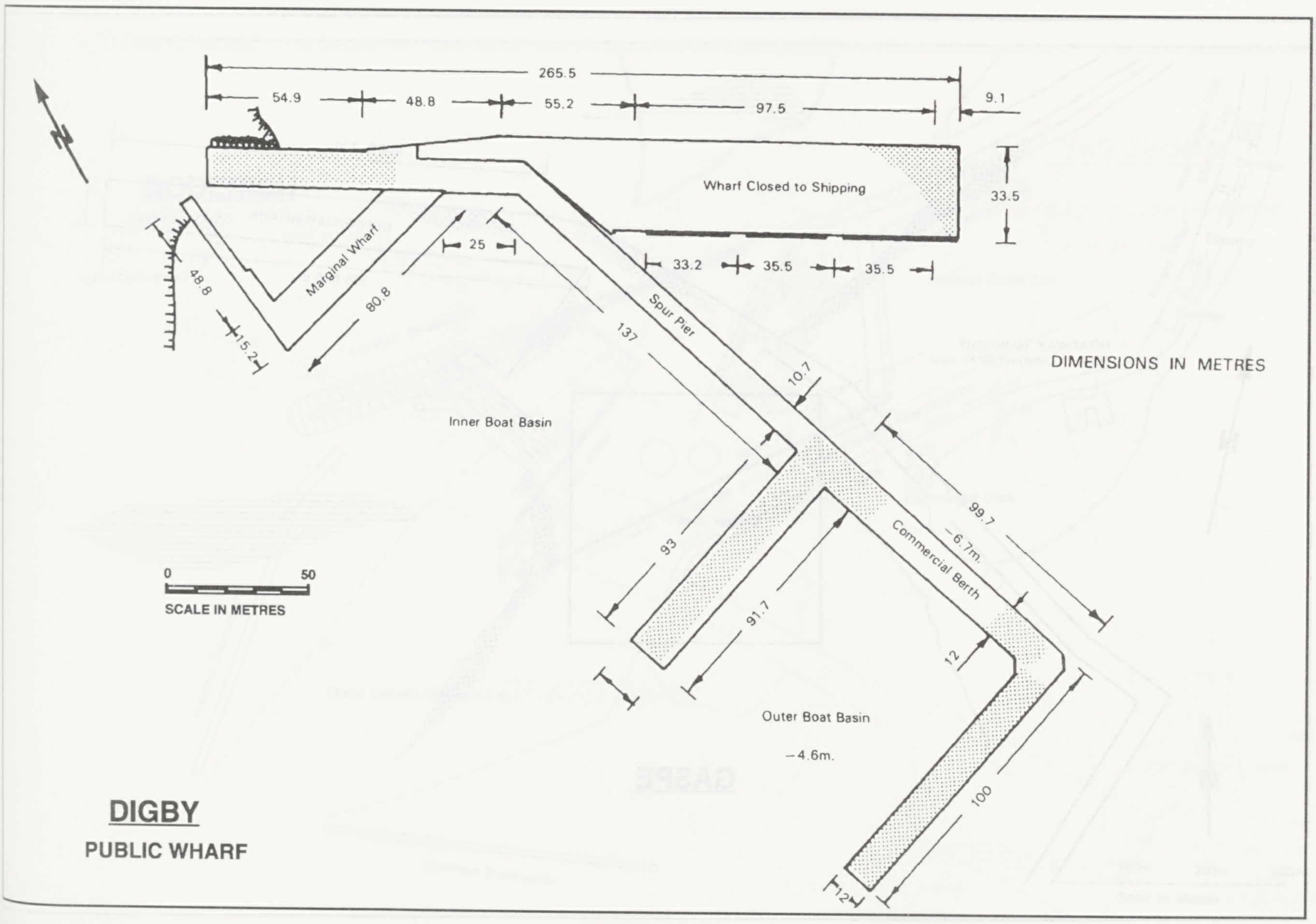
Piles
Skinner Bluff
Genoa Bay
Booms
Dols
Dols
Dols
Dols
Dols
Indian Reserve
Dol
Skinner Point
3kn
Piles
Booms
Lumber Storage Area
FG(Priv)
Booms
Fog Sig (Occasl)
(Priv)FR
Dol
Log Dump
Log Dump
Dol
Dol
Public
COWICHAN BAY
COWICHAN BAY
Separation Point
Dols
10
40
20
17
30
48
50
40
55
55
35
123
57
55
50
48
20
30
40
55
46
62
90
5.2
7.3
2.1
20
30
134
50
60
30
20
50
10
10
40

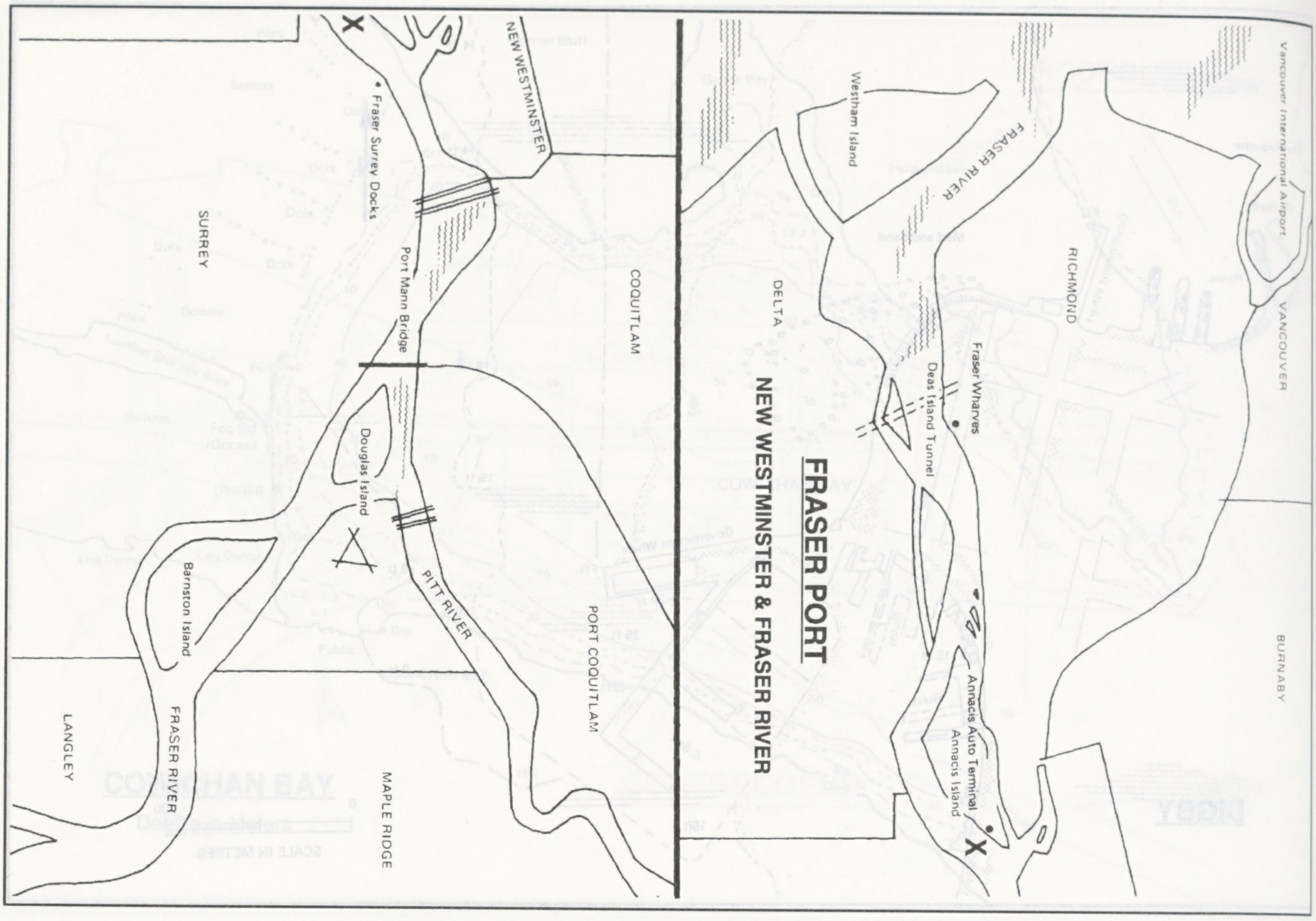


DALHOUSIE

N
Government Wharf
Bulk Cargo Shipments
Depth 34 ft. L.W.O.S.T.
Not in Use
Ferry Terminal
Paper Warehouse
Government Wharf
M.O.T. Wharf
Depth 32 ft.
Power Plant
C.I.L.
Paper Mill


The Raquette
Oil Berth
Ruins
FG
Government Wharf
Mud and Sand
R
14 ft
14 ft
18 ft
7 ft
19 ft
6 ft
10 ft
9 ft
Government Wharf
FR
28 ft
25 ft
Pier
22ft.
Ruins
15 ft
Ruins
4.6m.
7 ft
15ft.
DIGBY
0
200
SCALE IN METRES

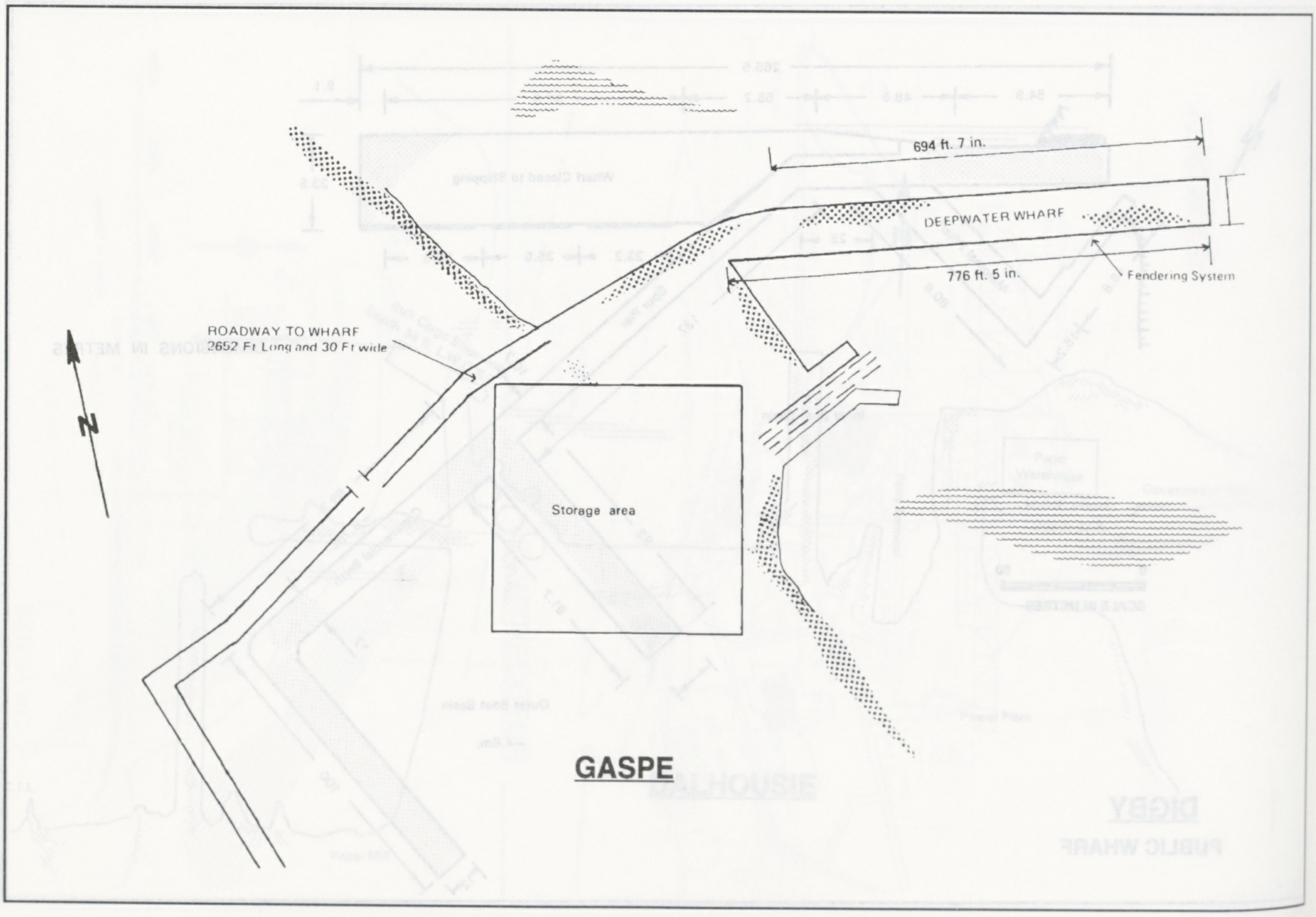

265.5
54.9
48.8
55.2
97.5
9.1
Wharf Closed to Shipping
33.5
33.2
35.5
35.5
25
Marginal Wharf
80.8
48.8
15.2
Spur Pier
137
10.7
DIMENSIONS IN METRES
Inner Boat Basin
99.7
–6.7m.
Commercial Berth
93
91.7
12
0
50
SCALE IN METRES
Outer Boat Basin
–4.6m.
100
12
DIGBY
PUBLIC WHARF



FRASER PORT

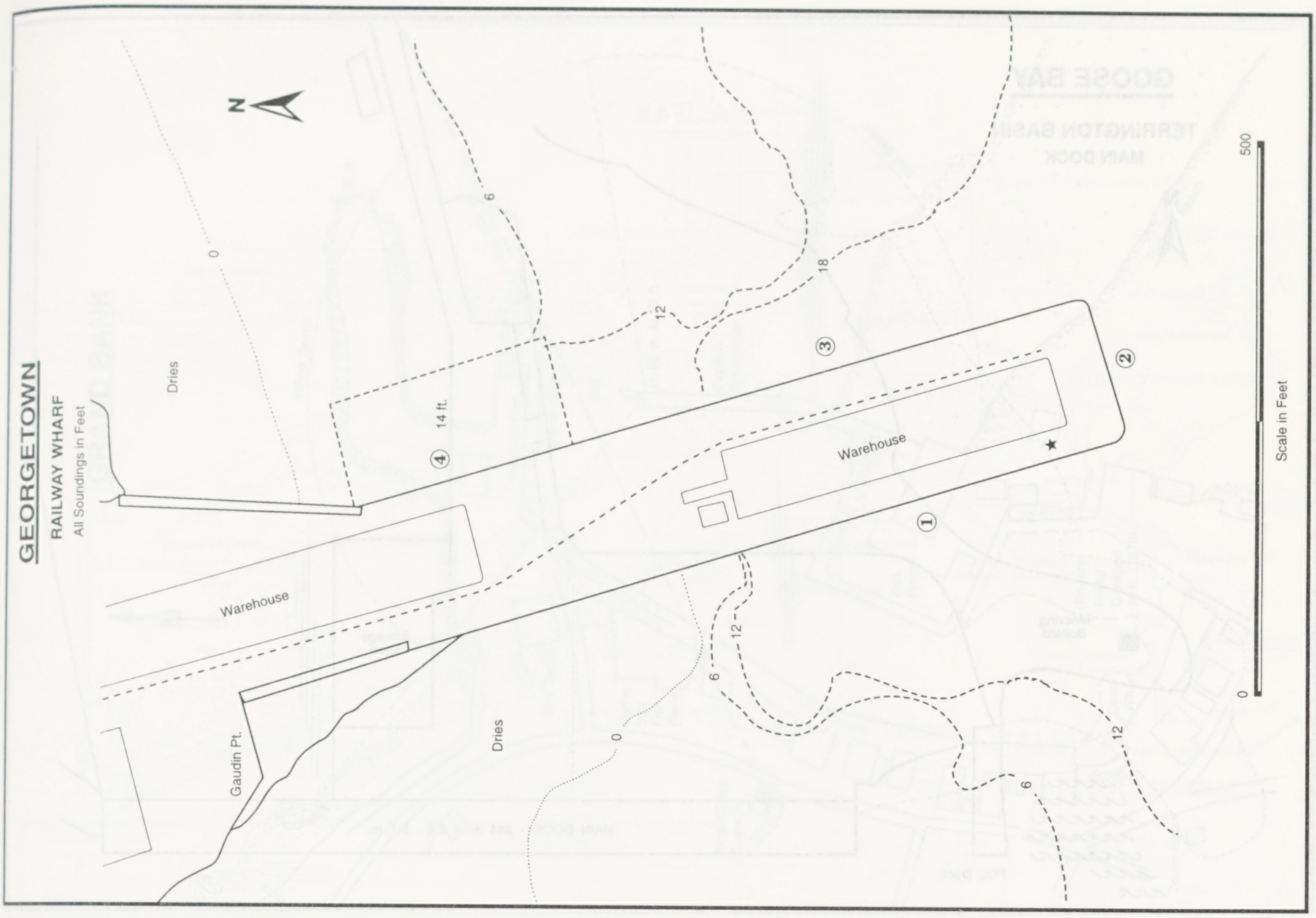
NEW WESTMINSTER & FRASER RIVER

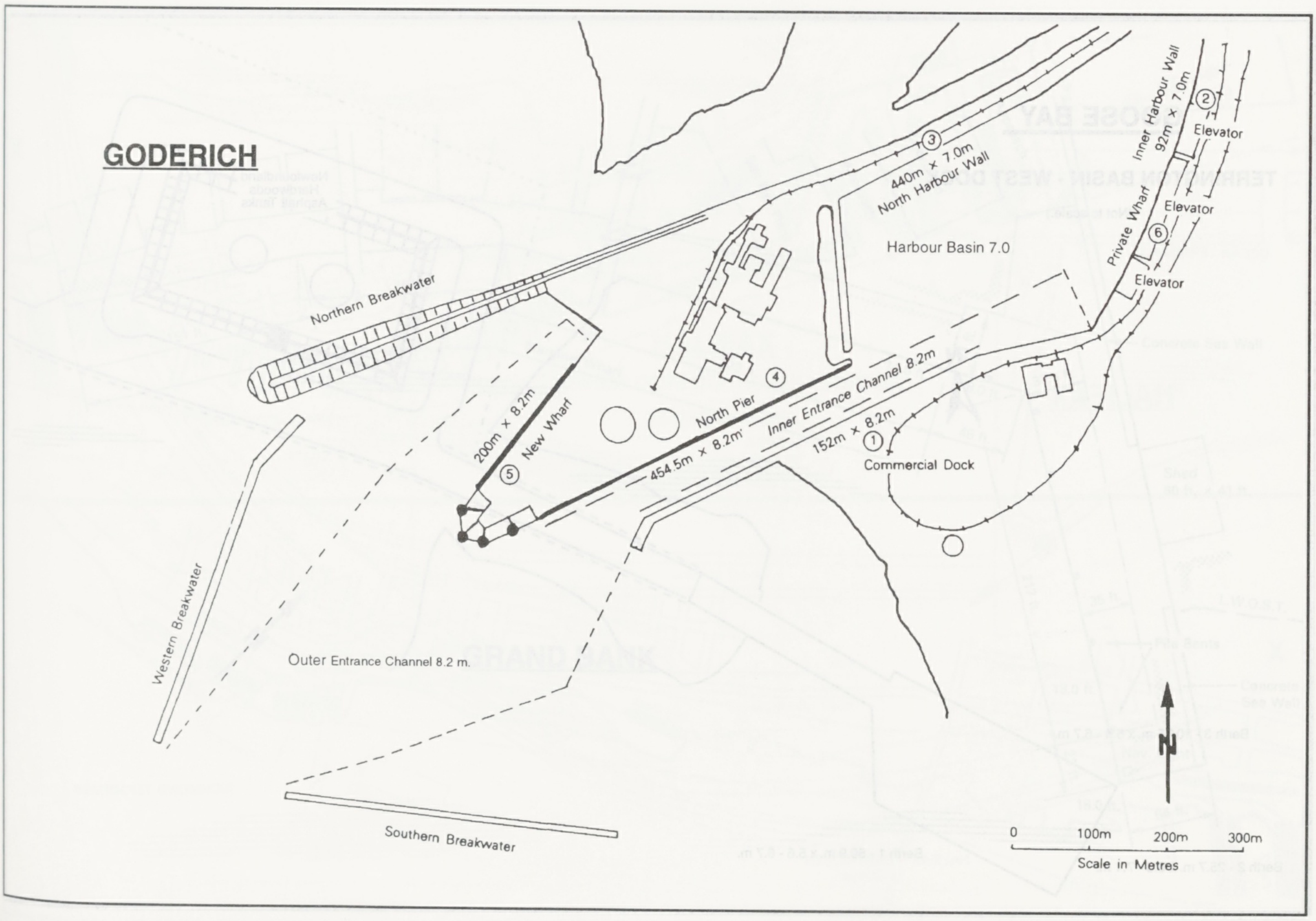
X
Fraser Surrey Docks
NEW WESTMINSTER
SURREY
Port Mann Bridge
COQUITLAM
Douglas Island
Barnston Island
PITT RIVER
PORT COQUITLAM
LANGLEY
FRASER RIVER
MAPLE RIDGE
DELTA
Westham Island
FRASER RIVER
RICHMOND
Vancouver International Airport
VANCOUVER
Fraser Wharves
Deas Island Tunnel
Annacis Auto Terminal
Annacis Island
X
X
BURNABY

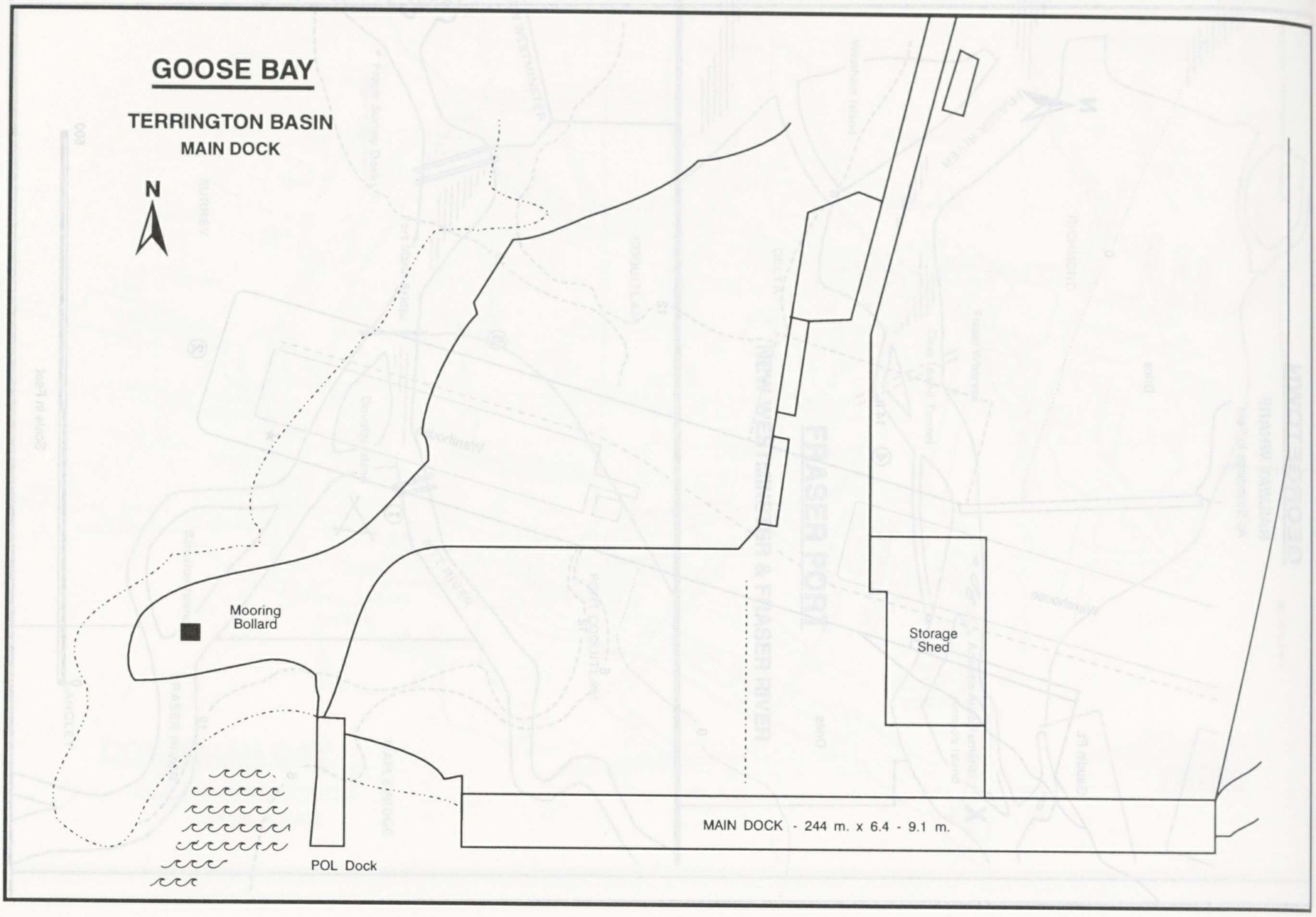


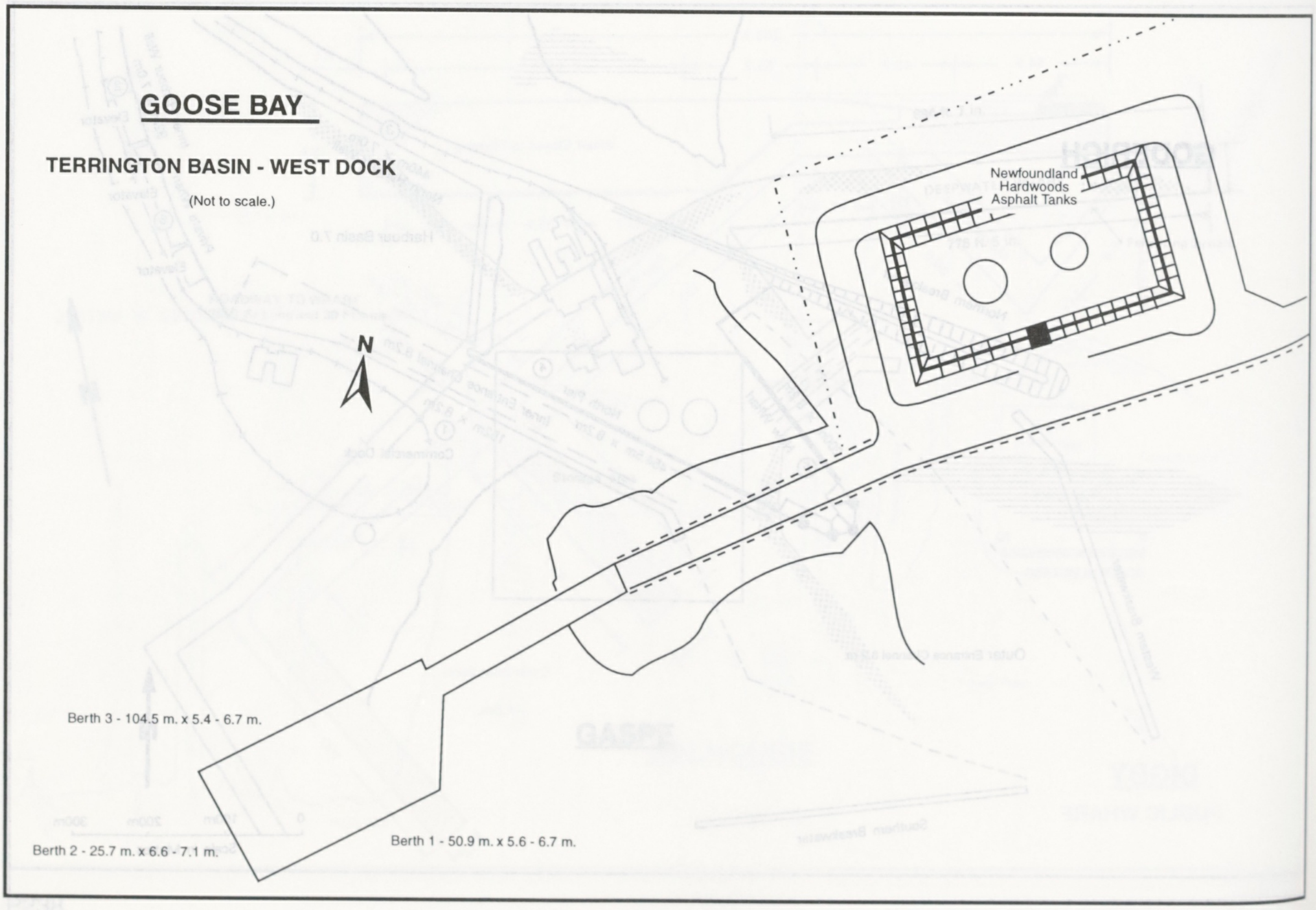
GASPE

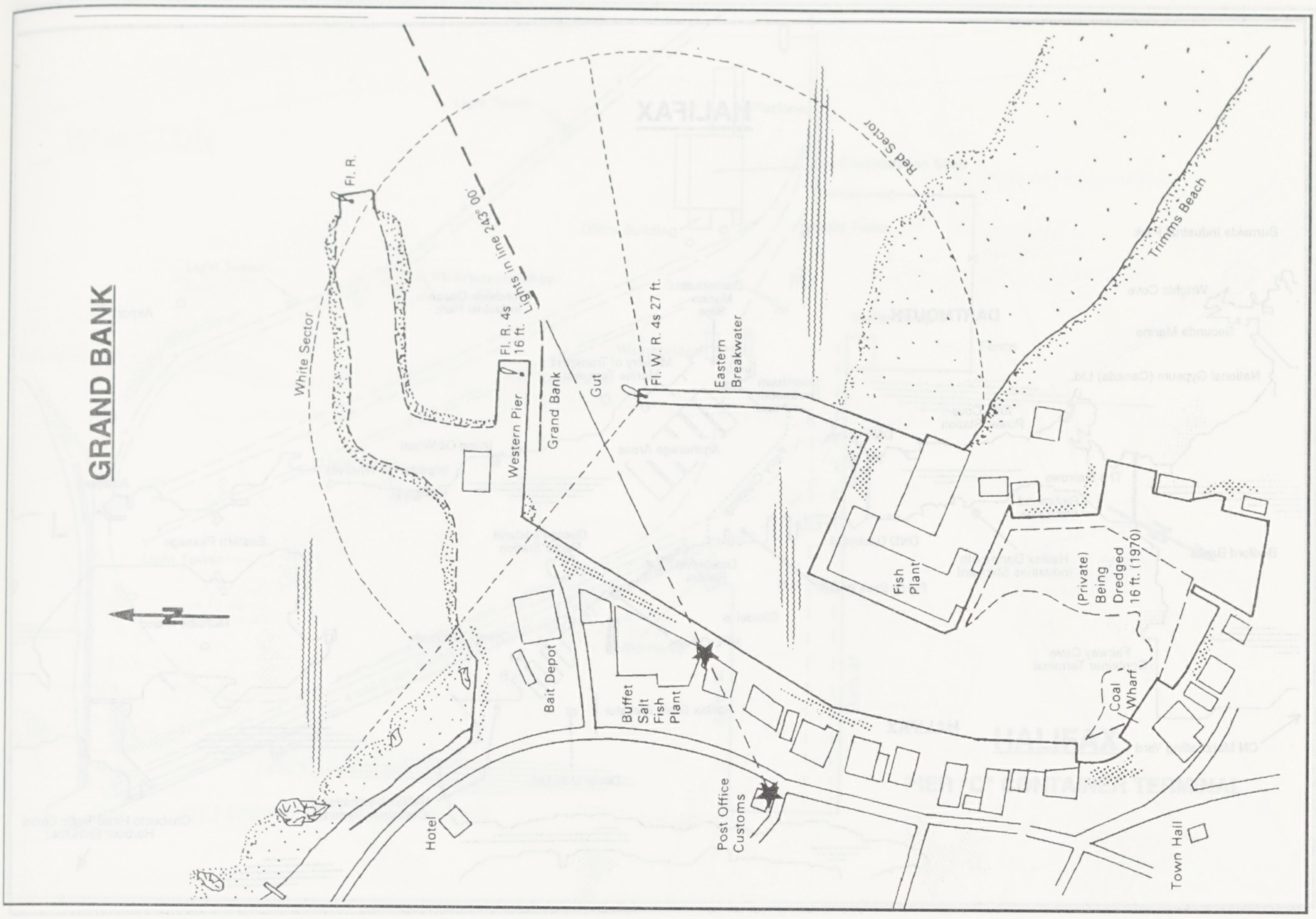
694 ft. 7 in.
DEEPWATER WHARF
776 ft. 5 in.
Fendering System
ROADWAY TO WHARF
2652 Ft Long and 30 Ft wide
Storage area
N

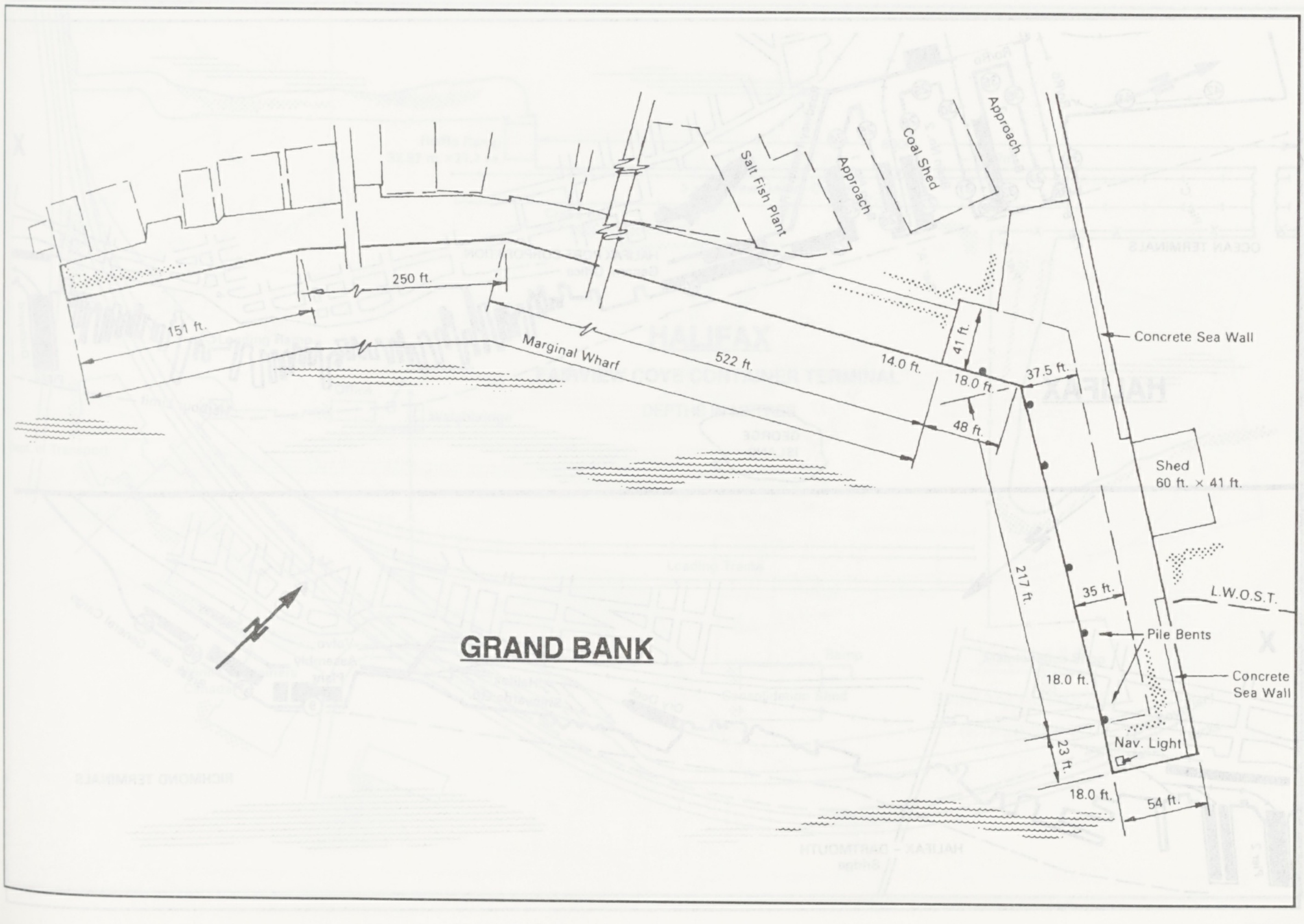

GEORGETOWN
RAILWAY WHARF
All Soundings in Feet
N
Dries
0
6
12
18
14 ft.
④
③
②
①
Warehouse
Warehouse
Gaudin Pt.
Dries
0
6
12
6
12
500
0
Scale in Feet

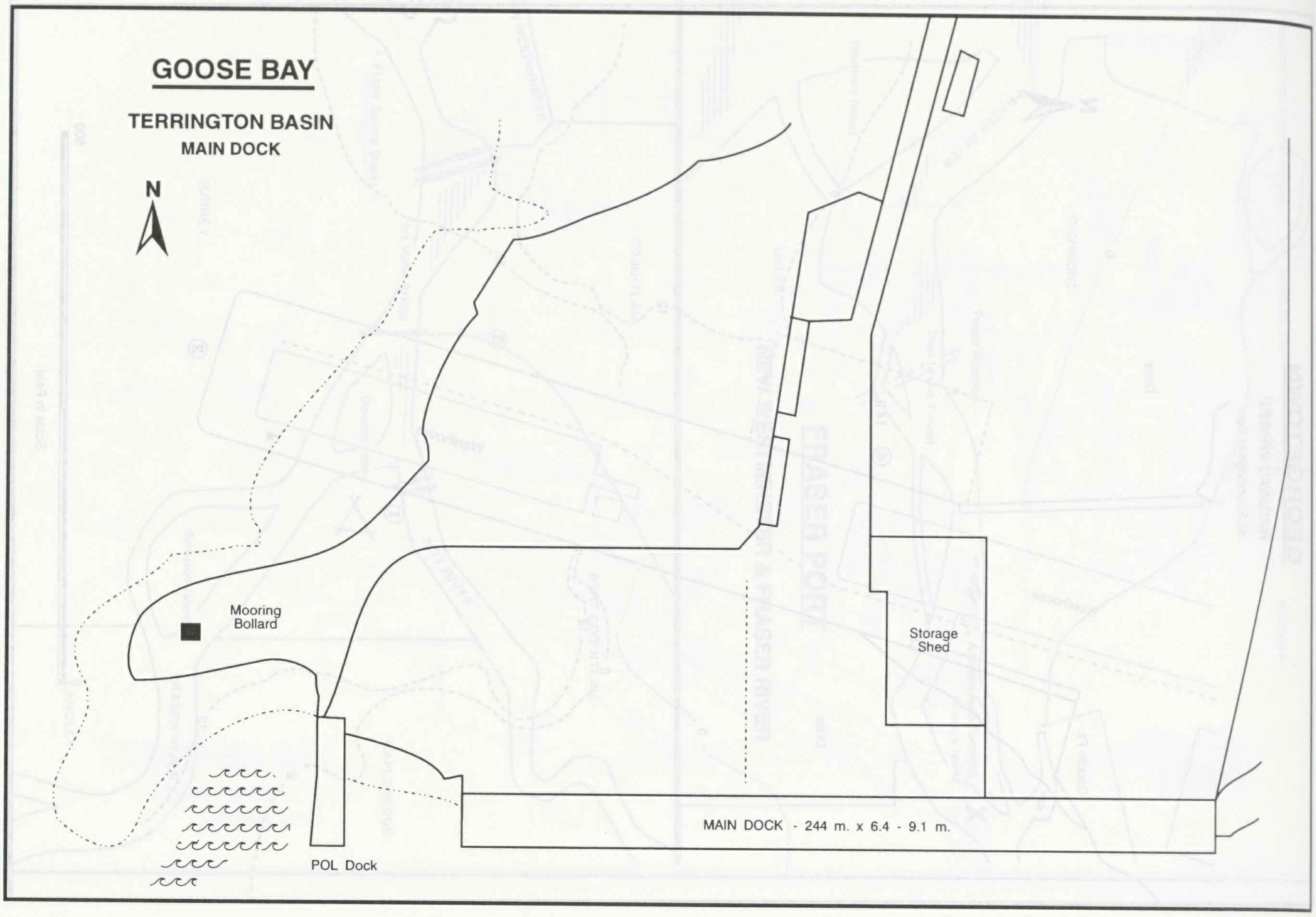

GODERICH
Northern Breakwater
Western Breakwater
Southern Breakwater
Outer Entrance Channel 8.2 m.
200m × 8.2m
⑤
New Wharf
North Pier
454.5m × 8.2m
④
Inner Entrance Channel 8.2m
152m × 8.2m
①
Commercial Dock
Harbour Basin 7.0
③
440m × 7.0m
North Harbour Wall
②
Inner Harbour Wall
92m × 7.0m
Elevator
Elevator
Elevator
Private Wharf
⑥
N
0
100m
200m
300m
Scale in Metres

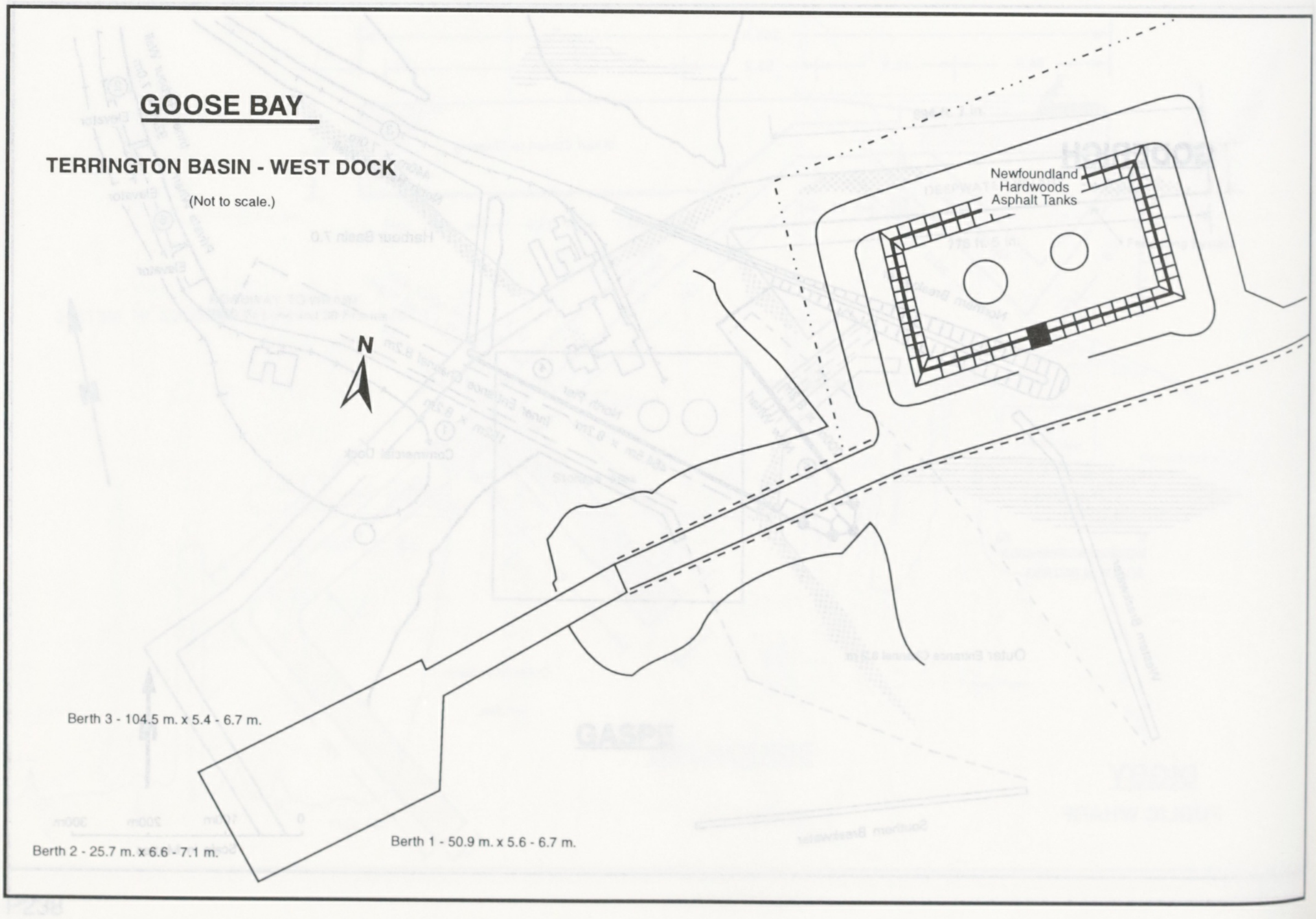

GOOSE BAY
TERRINGTON BASIN
MAIN DOCK
N
Mooring Bollard
Storage Shed
MAIN DOCK - 244 m. x 6.4 - 9.1 m.
POL Dock

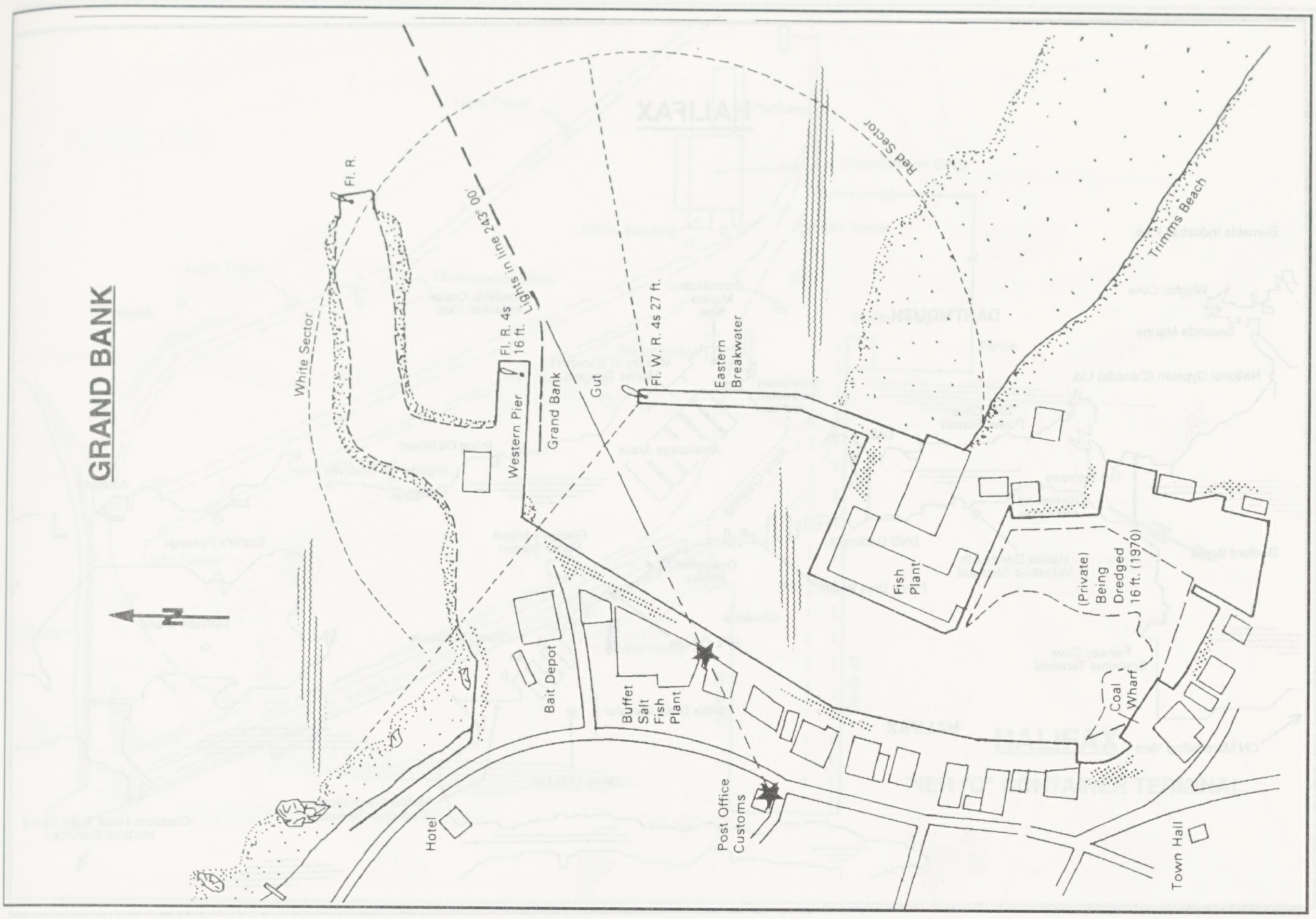

GOOSE BAY
TERRINGTON BASIN - WEST DOCK
(Not to scale.)
N
Newfoundland Hardwoods Asphalt Tanks
Berth 3 - 104.5 m. x 5.4 - 6.7 m.
Berth 2 - 25.7 m. x 6.6 - 7.1 m.
Berth 1 - 50.9 m. x 5.6 - 6.7 m.

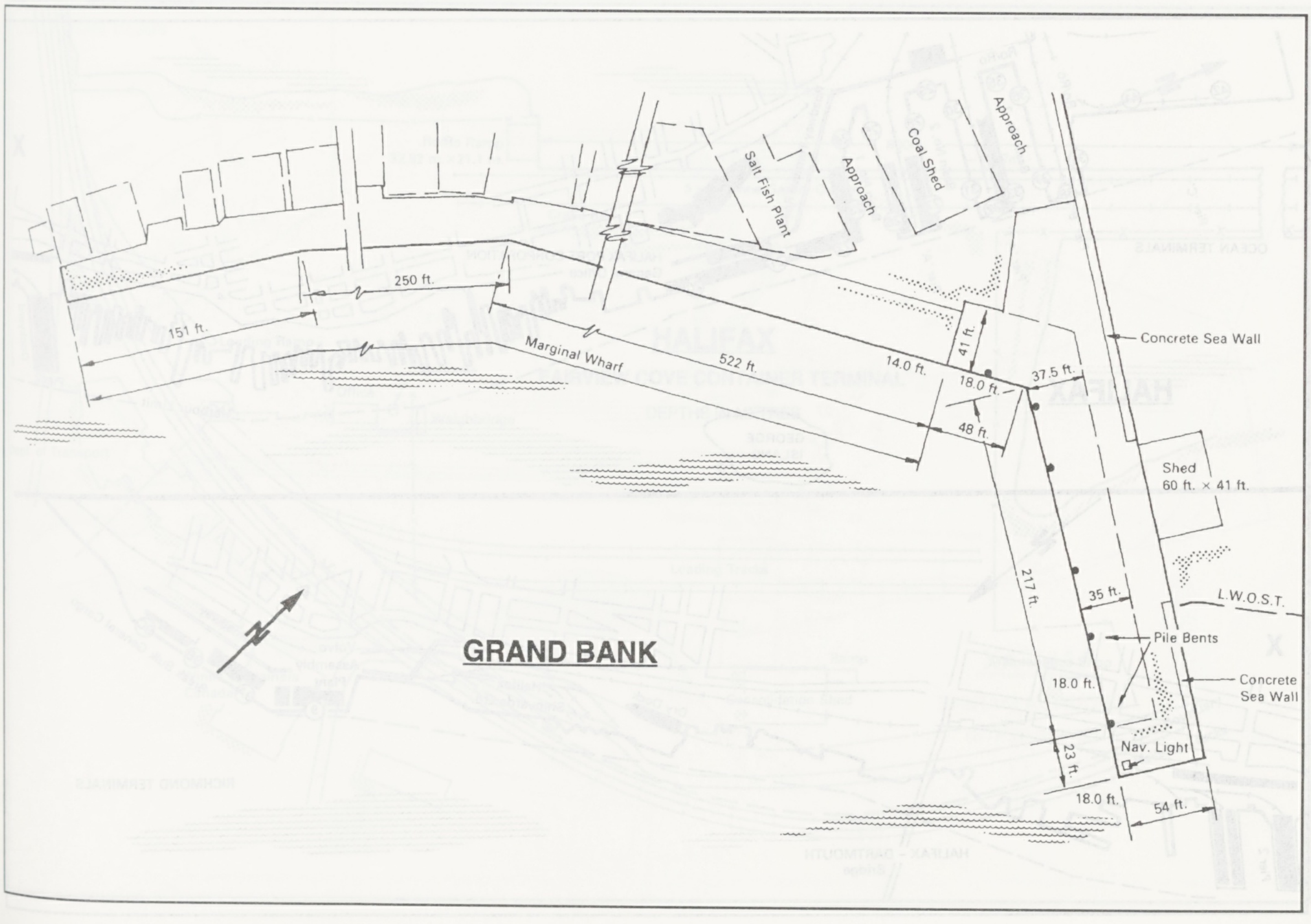

GRAND BANK
N
White Sector
Fl. R.
Lights in line 243° 00'
Fl. R. 4s 16 ft.
Western Pier
Grand Bank
Gut
Fl. W. R. 4s 27 ft.
Eastern Breakwater
Red Sector
Trimms Beach
Fish Plant
(Private) Being Dredged 16 ft. (1970)
Coal Wharf
Bait Depot
Buffet Salt Fish Plant
Hotel
Post Office Customs
Town Hall

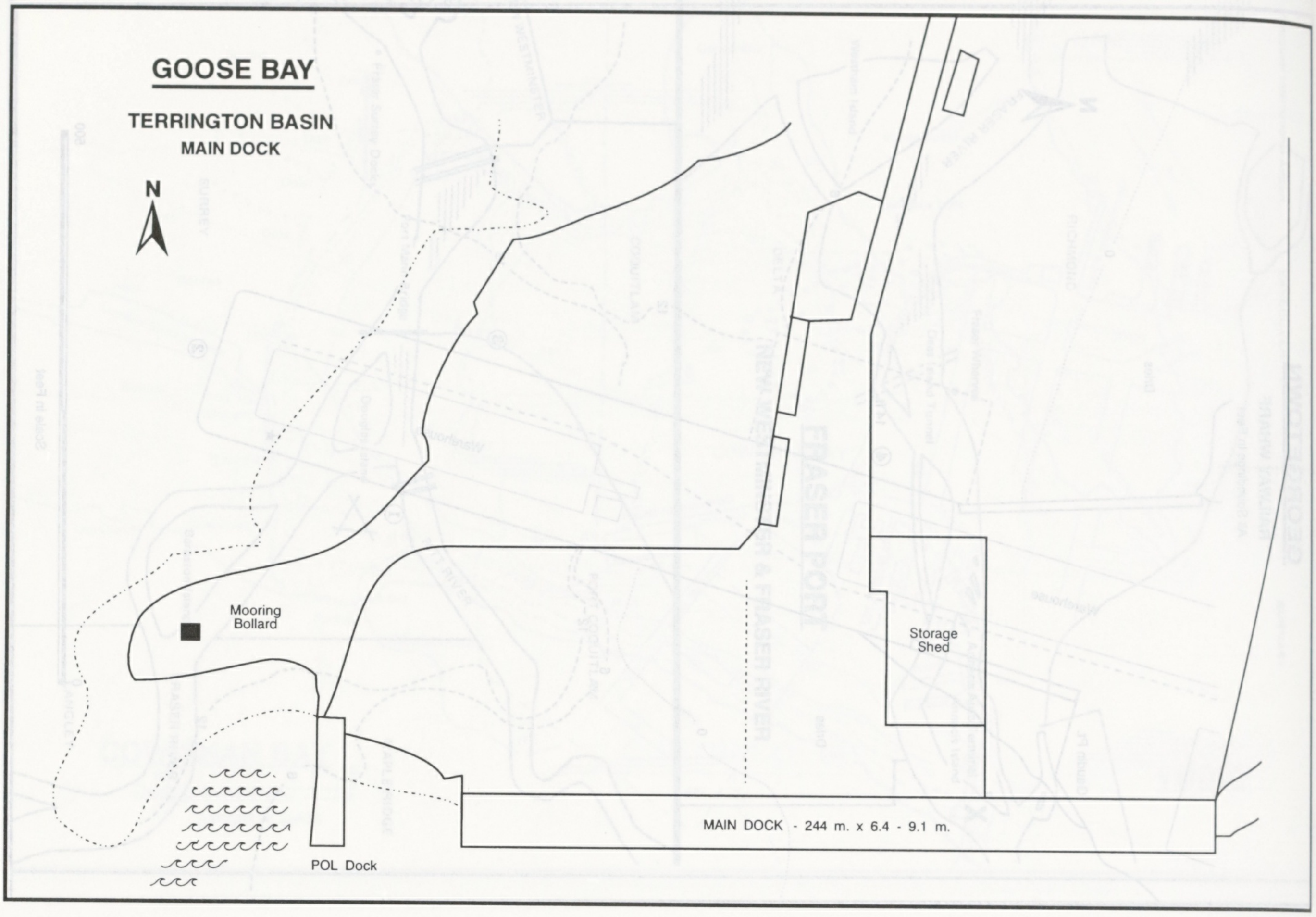

Salt Fish Plant
Approach
Coal Shed
Approach
250 ft.
151 ft.
Marginal Wharf
522 ft.
14.0 ft.
41 ft.
18.0 ft.
37.5 ft.
48 ft.
Concrete Sea Wall
Shed 60 ft. × 41 ft.
217 ft.
35 ft.
L.W.O.S.T.
Pile Bents
18.0 ft.
Concrete Sea Wall
23 ft.
Nav. Light
18.0 ft.
54 ft.
N
GRAND BANK


GOOSE BAY
TERRINGTON BASIN
MAIN DOCK
N
Mooring Bollard
Storage Shed
MAIN DOCK - 244 m. x 6.4 - 9.1 m.
POL Dock


GOOSE BAY
TERRINGTON BASIN - WEST DOCK
(Not to scale.)
N
Newfoundland Hardwoods Asphalt Tanks
Berth 3 - 104.5 m. x 5.4 - 6.7 m.
Berth 2 - 25.7 m. x 6.6 - 7.1 m.
Berth 1 - 50.9 m. x 5.6 - 6.7 m.


GRAND BANK
White Sector
Fl. R.
Lights in line 243° 00'
Fl. R. 4s 16 ft.
Western Pier
Grand Bank
Gut
Fl. W. R. 4s 27 ft.
Eastern Breakwater
Red Sector
Trimms Beach
Fish Plant
(Private) Being Dredged 16 ft. (1970)
Coal Wharf
Bait Depot
Buffet Salt Fish Plant
Hotel
Post Office Customs
Town Hall

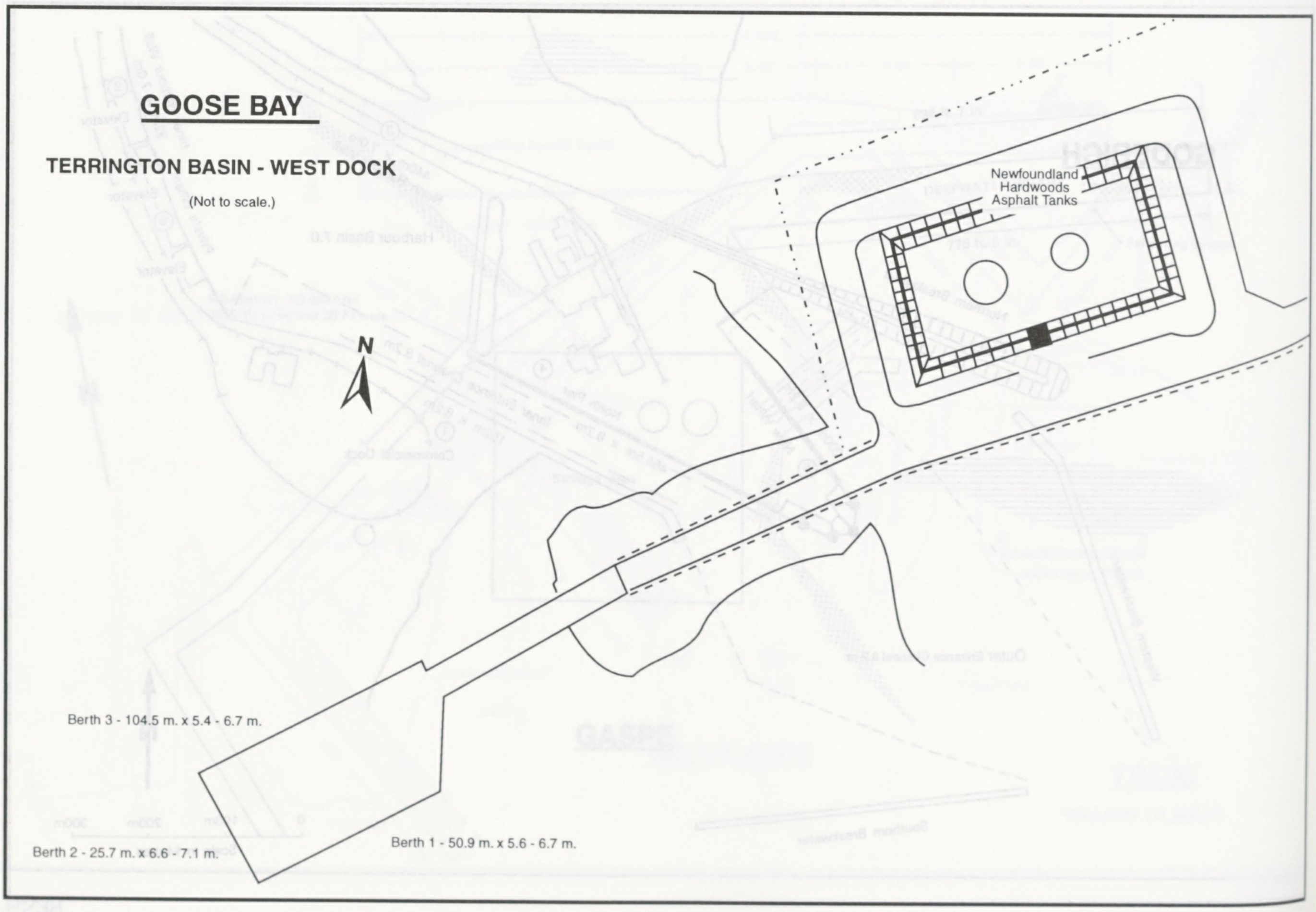

Salt Fish Plant
Approach
Coal Shed
Approach
250 ft.
151 ft.
Marginal Wharf
522 ft.
14.0 ft.
41 ft.
18.0 ft.
37.5 ft.
48 ft.
Concrete Sea Wall
Shed 60 ft. × 41 ft.
217 ft.
35 ft.
L.W.O.S.T.
Pile Bents
Concrete Sea Wall
18.0 ft.
23 ft.
Nav. Light
18.0 ft.
54 ft.
GRAND BANK



GOOSE BAY

TERRINGTON BASIN
MAIN DOCK

N
Mooring Bollard
Storage Shed
POL Dock
MAIN DOCK - 244 m. x 6.4 - 9.1 m.

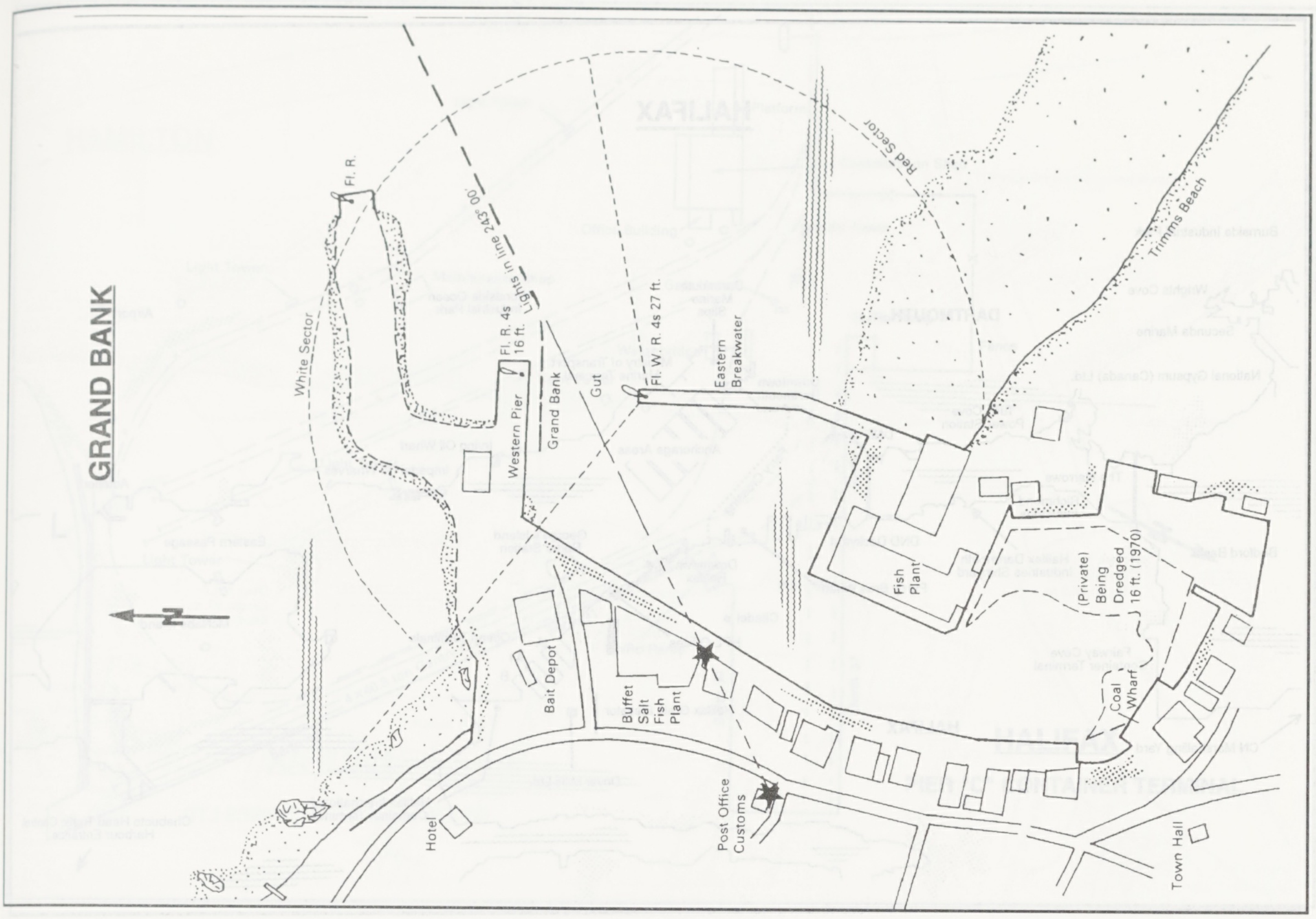


GOOSE BAY

TERRINGTON BASIN - WEST DOCK

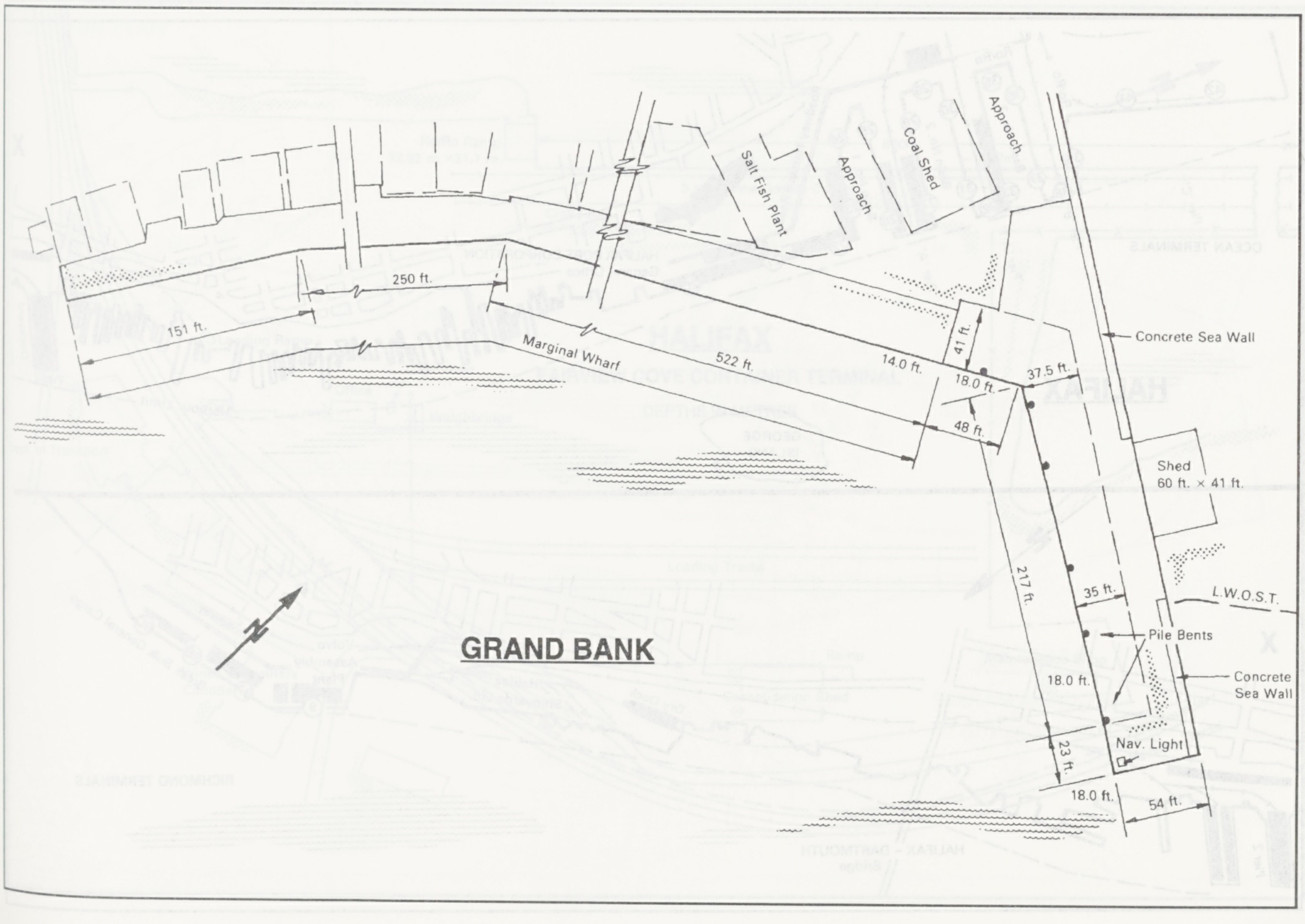
(Not to scale.)

N
Newfoundland Hardwoods Asphalt Tanks
Berth 3 - 104.5 m. x 5.4 - 6.7 m.
Berth 2 - 25.7 m. x 6.6 - 7.1 m.
Berth 1 - 50.9 m. x 5.6 - 6.7 m.



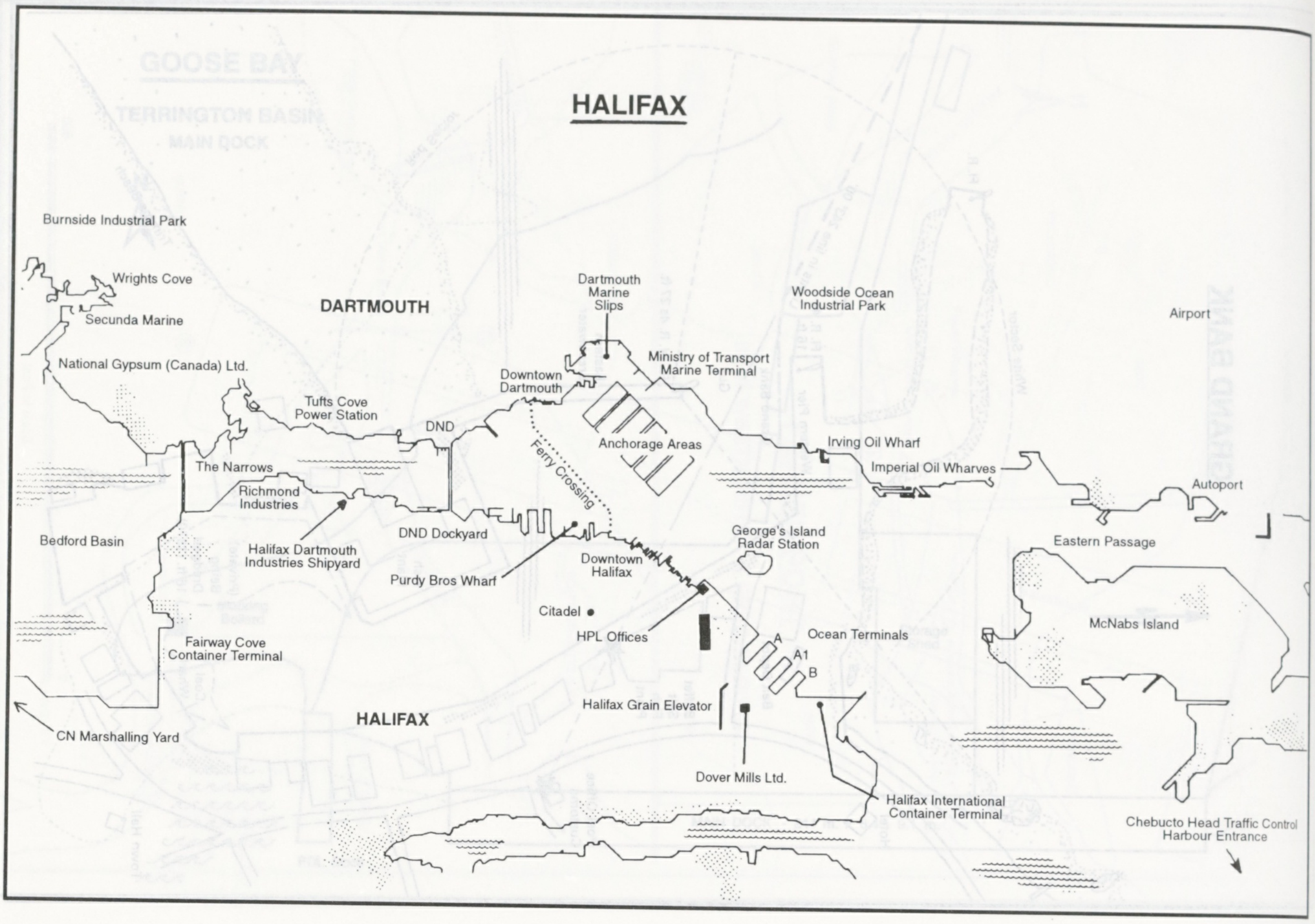
GRAND BANK

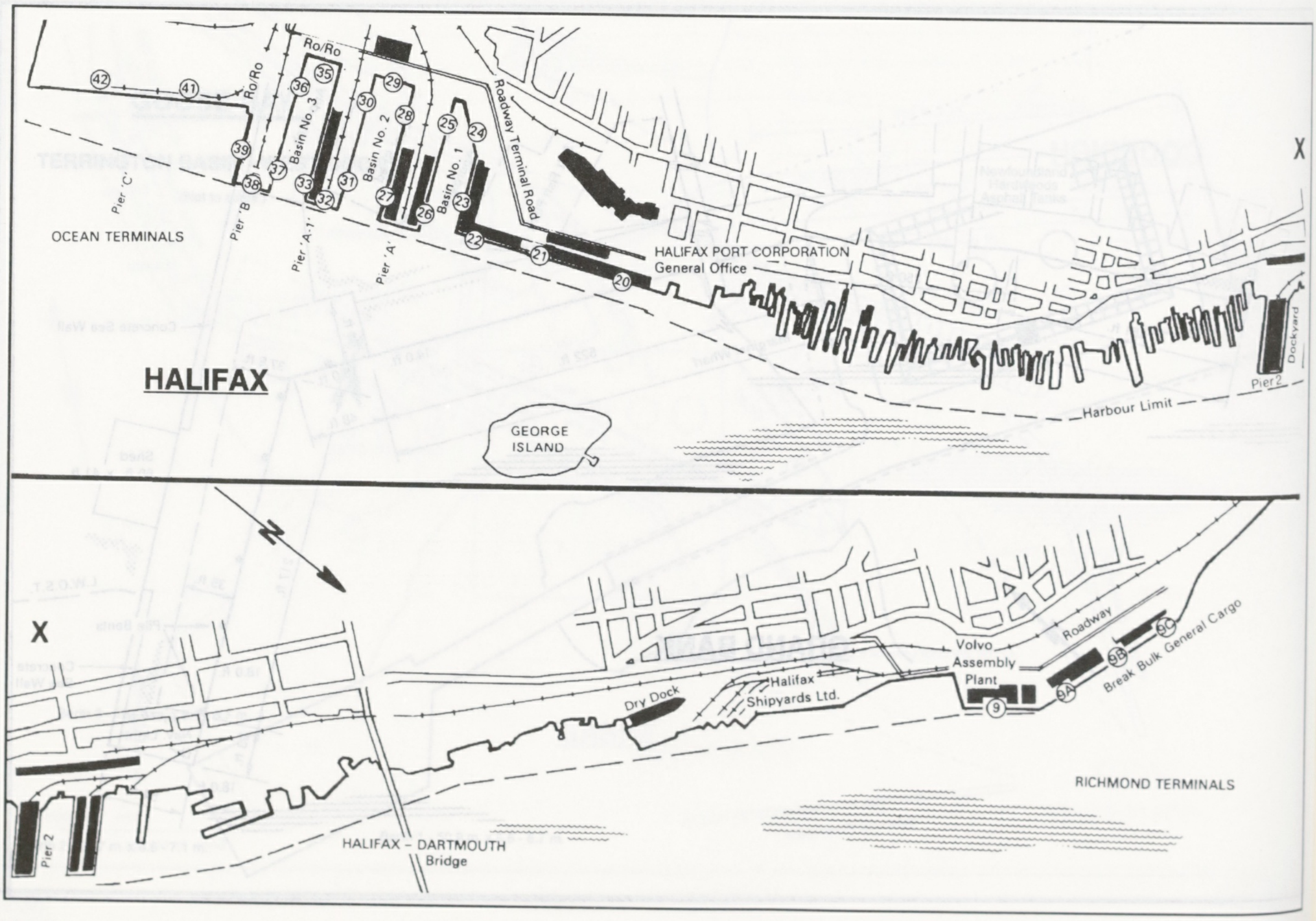
N
Fl. R.
White Sector
Lights in line 243° 00'
Fl. R. 4s 16 ft.
Western Pier
Grand Bank
Gut
Fl. W. R. 4s 27 ft.
Eastern Breakwater
Red Sector
Trimms Beach
Fish Plant
(Private) Being Dredged 16 ft. (1970)
Coal Wharf
Bait Depot
Buffet Salt Fish Plant
Hotel
Post Office Customs
Town Hall

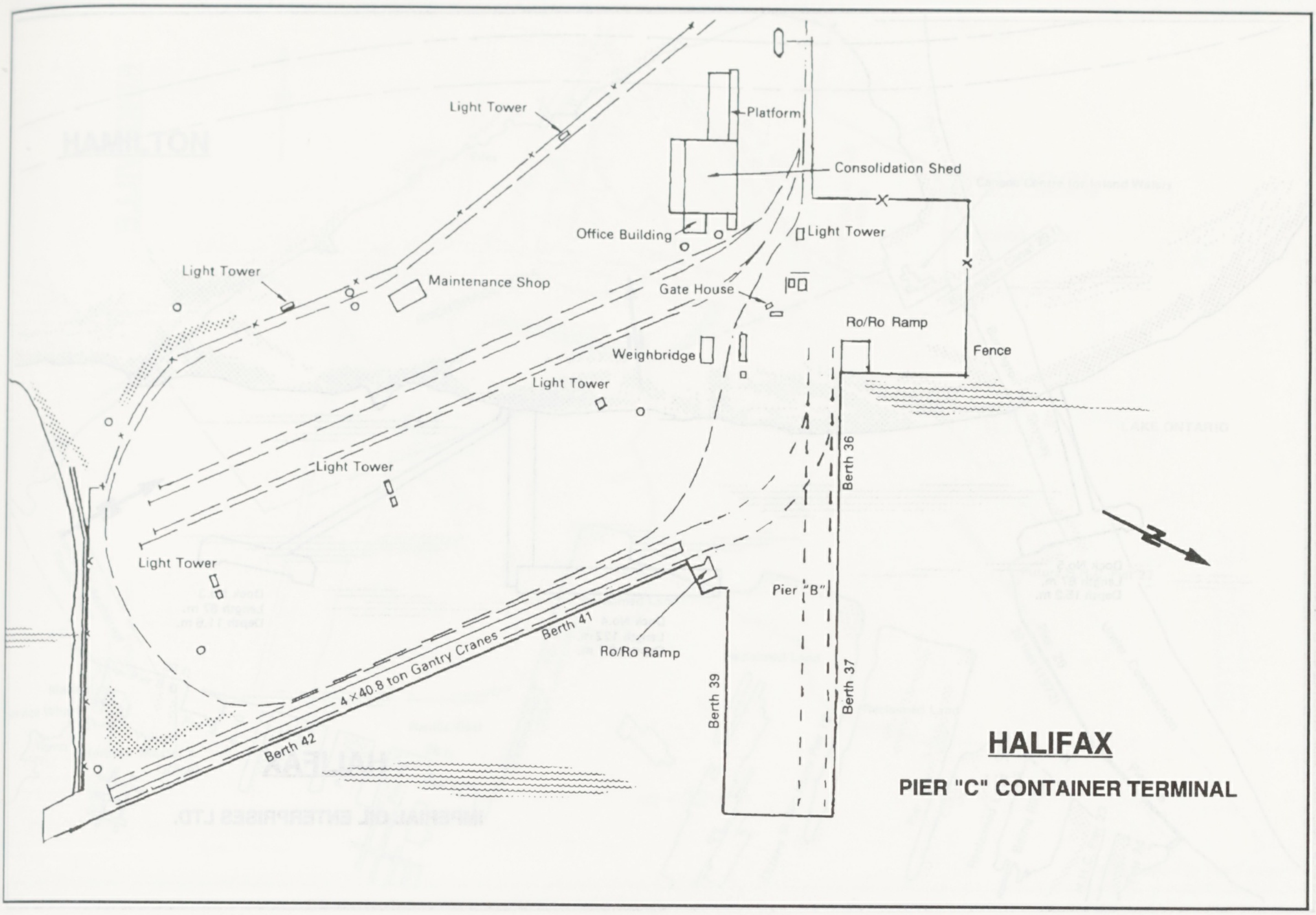


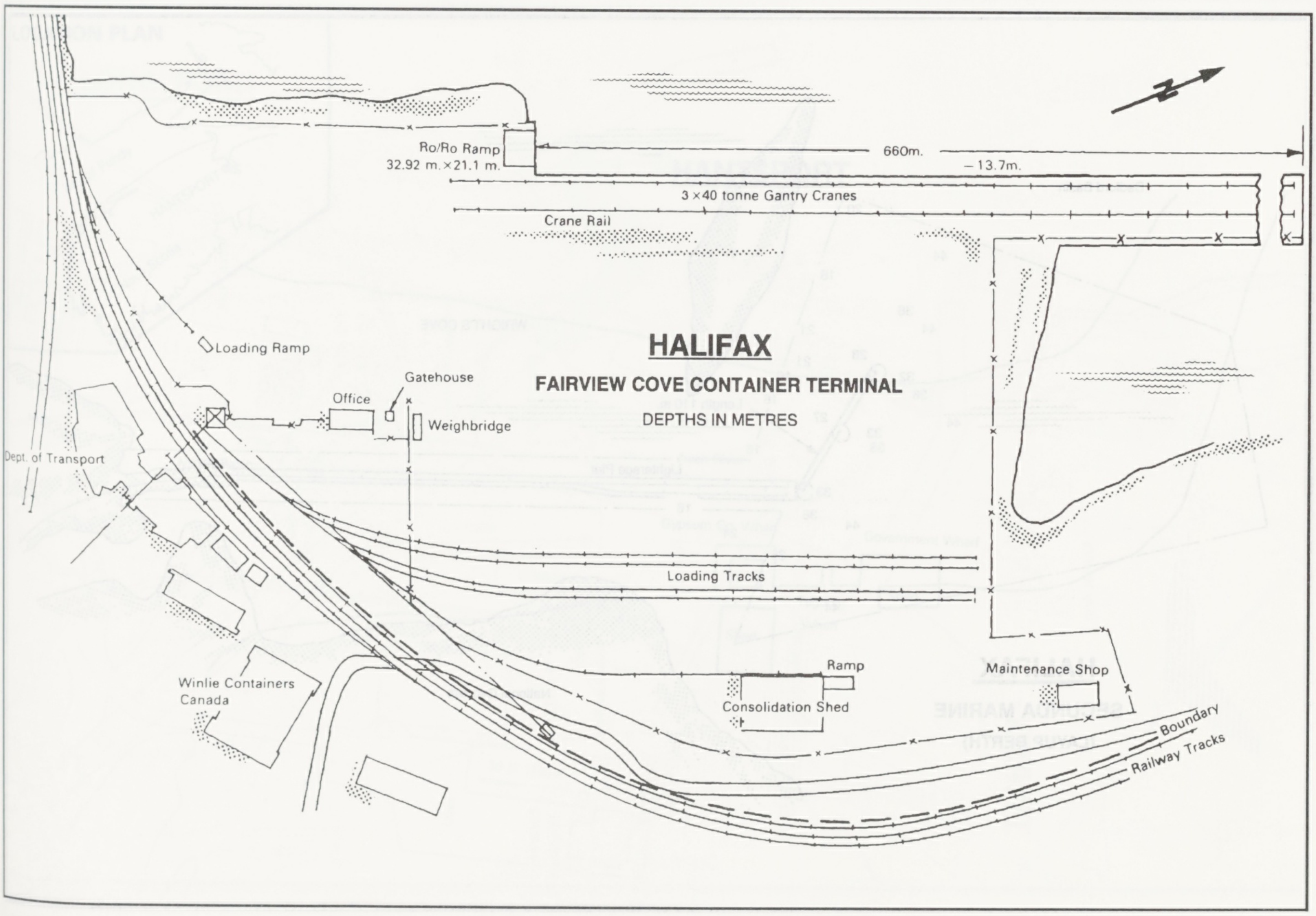
GRAND BANK

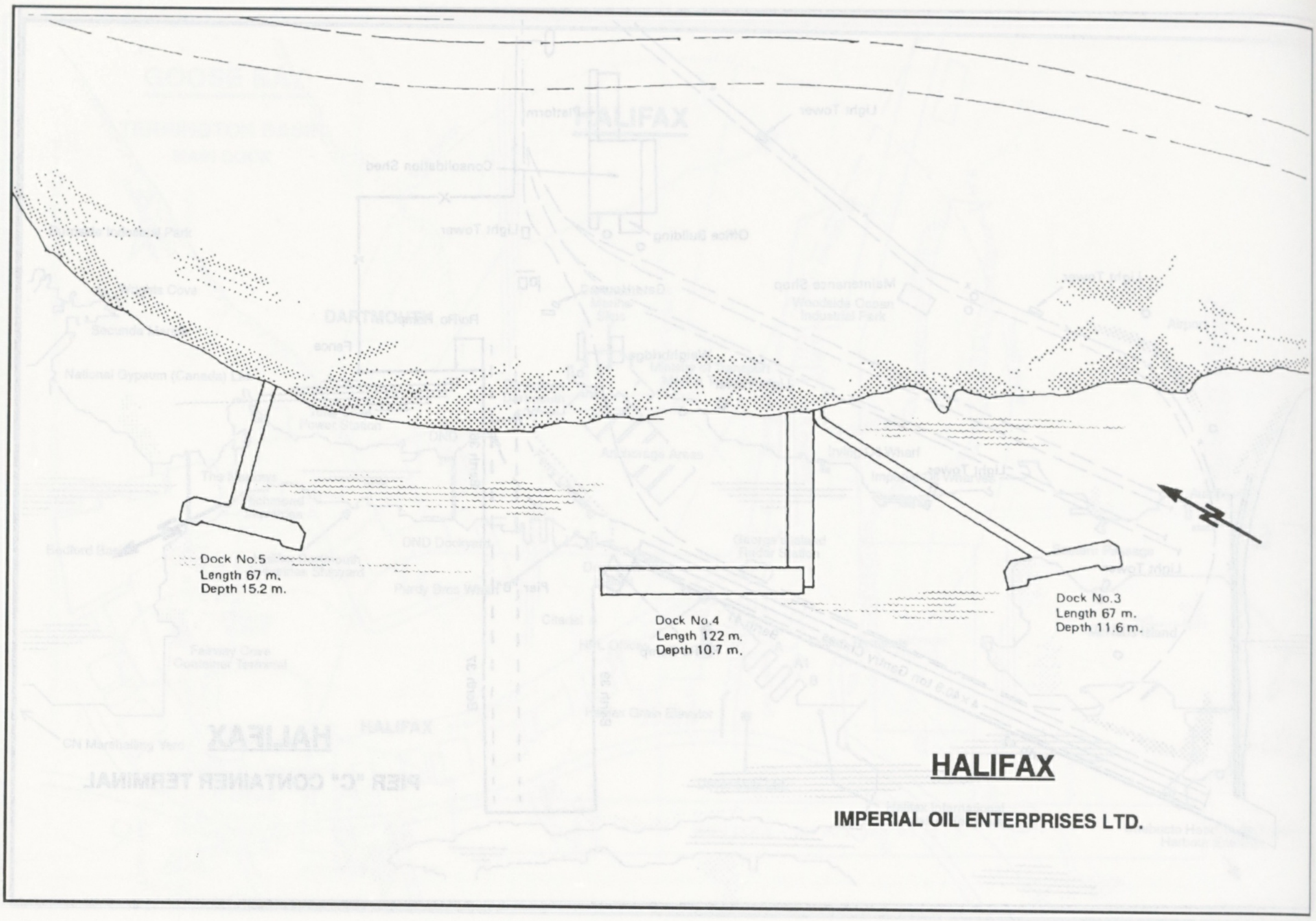
N
Salt Fish Plant
Approach
Coal Shed
Approach
250 ft.
151 ft.
Marginal Wharf
522 ft.
14.0 ft.
41 ft.
18.0 ft.
37.5 ft.
48 ft.
Concrete Sea Wall
Shed 60 ft. × 41 ft.
217 ft.
35 ft.
L.W.O.S.T.
Pile Bents
Concrete Sea Wall
18.0 ft.
Nav. Light
23 ft.
18.0 ft.
54 ft.


HALIFAX
Burnside Industrial Park
Wrights Cove
Secunda Marine
National Gypsum (Canada) Ltd.
DARTMOUTH
Tufts Cove
Power Station
DND
The Narrows
Richmond
Industries
Bedford Basin
Halifax Dartmouth
Industries Shipyard
DND Dockyard
Purdy Bros Wharf
Fairway Cove
Container Terminal
CN Marshalling Yard
HALIFAX
Dartmouth
Marine
Slips
Downtown
Dartmouth
Ferry Crossing
Ministry of Transport
Marine Terminal
Anchorage Areas
Downtown
Halifax
Citadel
HPL Offices
Halifax Grain Elevator
Dover Mills Ltd.
George's Island
Radar Station
A
A1
B
Ocean Terminals
Halifax International
Container Terminal
Woodside Ocean
Industrial Park
Irving Oil Wharf
Imperial Oil Wharves
Airport
Autoport
Eastern Passage
McNabs Island
Chebucto Head Traffic Control
Harbour Entrance


Ro/Ro
Ro/Ro
42
41
39
38
37
36
35
Basin No. 3
33
32
31
30
29
28
27
26
Basin No. 2
25
24
23
22
Basin No. 1
21
20
Roadway Terminal Road
Pier 'C'
Pier 'B'
Pier 'A-1'
Pier 'A'
OCEAN TERMINALS
HALIFAX PORT CORPORATION
General Office
X
Dockyard
Pier 2
Harbour Limit
HALIFAX
GEORGE
ISLAND
N
X
Pier 2
Dry Dock
Halifax
Shipyards Ltd.
Volvo
Assembly
Plant
9
9A
9B
9C
Roadway
Break Bulk General Cargo
RICHMOND TERMINALS
HALIFAX – DARTMOUTH
Bridge

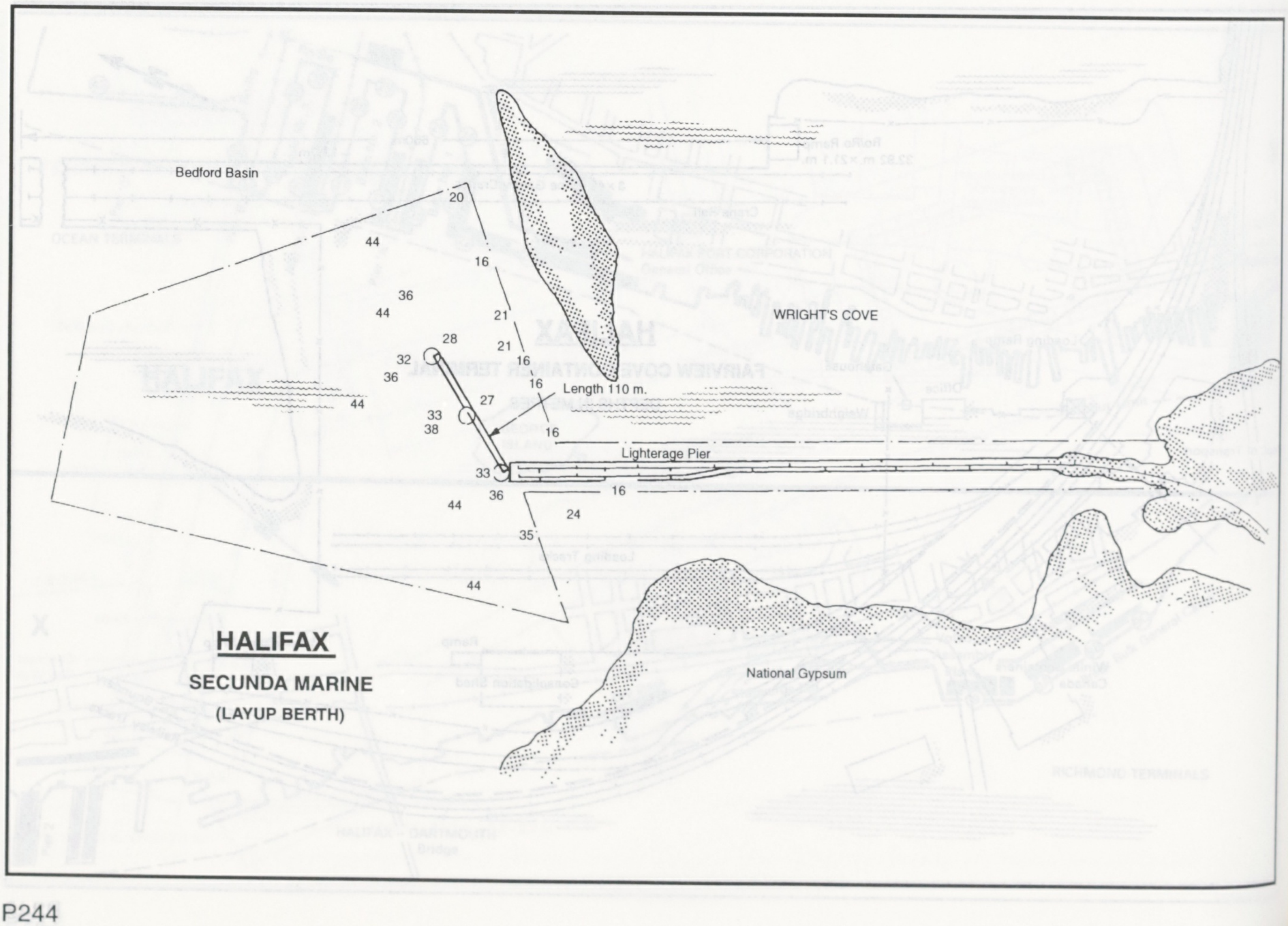

Light Tower
Platform
Consolidation Shed
Office Building
Light Tower
Light Tower
Maintenance Shop
Gate House
Ro/Ro Ramp
Fence
Weighbridge
Light Tower
Berth 36
Light Tower
Light Tower
Pier "B"
Ro/Ro Ramp
Berth 41
4×40.8 ton Gantry Cranes
Berth 39
Berth 37
Berth 42
HALIFAX
PIER "C" CONTAINER TERMINAL


Ro/Ro Ramp
32.92 m.×21.1 m.
660m.
−13.7m.
3×40 tonne Gantry Cranes
Crane Rail
Loading Ramp
HALIFAX
FAIRVIEW COVE CONTAINER TERMINAL
DEPTHS IN METRES
Gatehouse
Office
Weighbridge
Dept. of Transport
Loading Tracks
Ramp
Maintenance Shop
Winlie Containers
Canada
Consolidation Shed
Boundary
Railway Tracks


Dock No.5
Length 67 m.
Depth 15.2 m.
Dock No.4
Length 122 m.
Depth 10.7 m.
Dock No.3
Length 67 m.
Depth 11.6 m.

HALIFAX

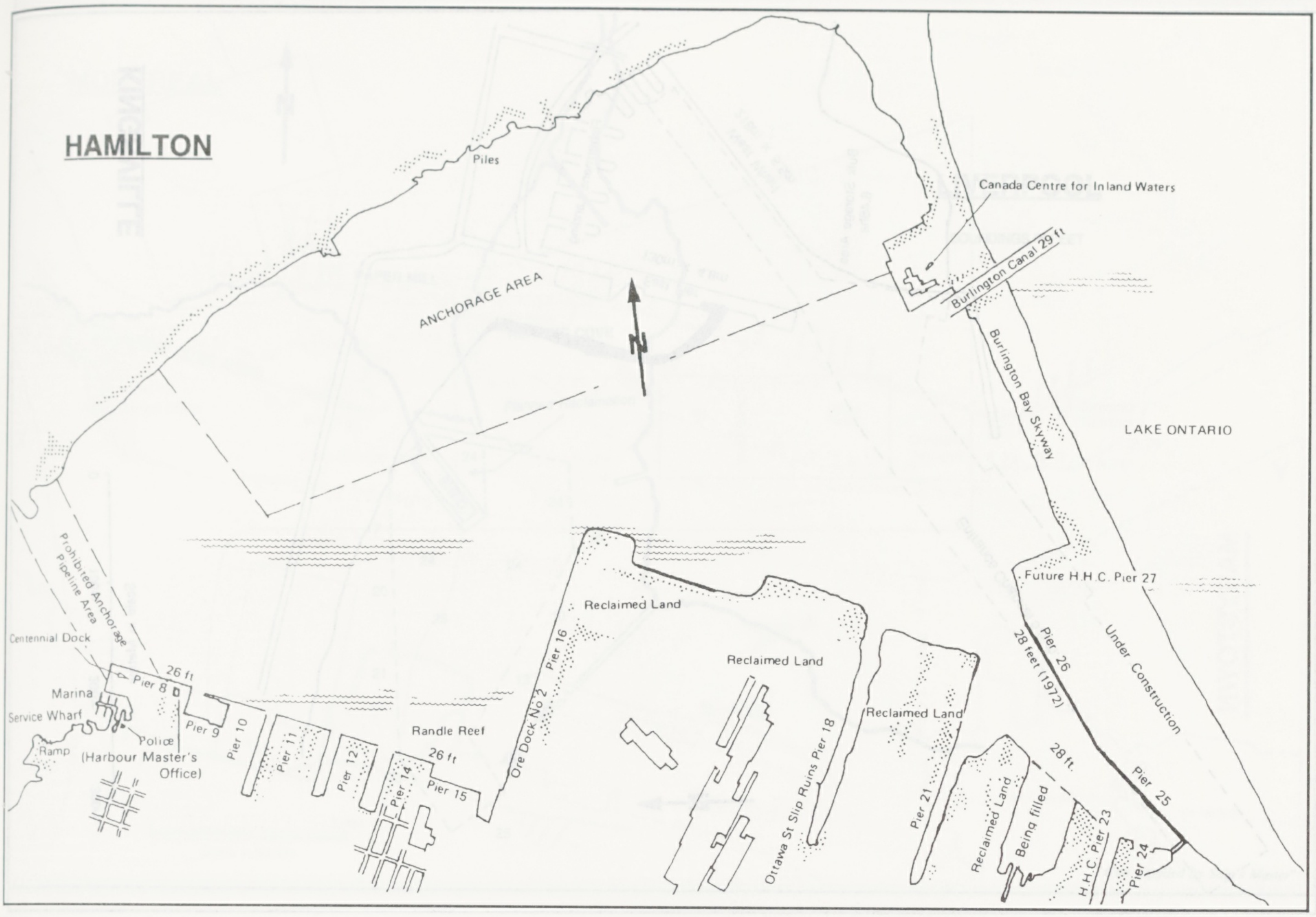
IMPERIAL OIL ENTERPRISES LTD.

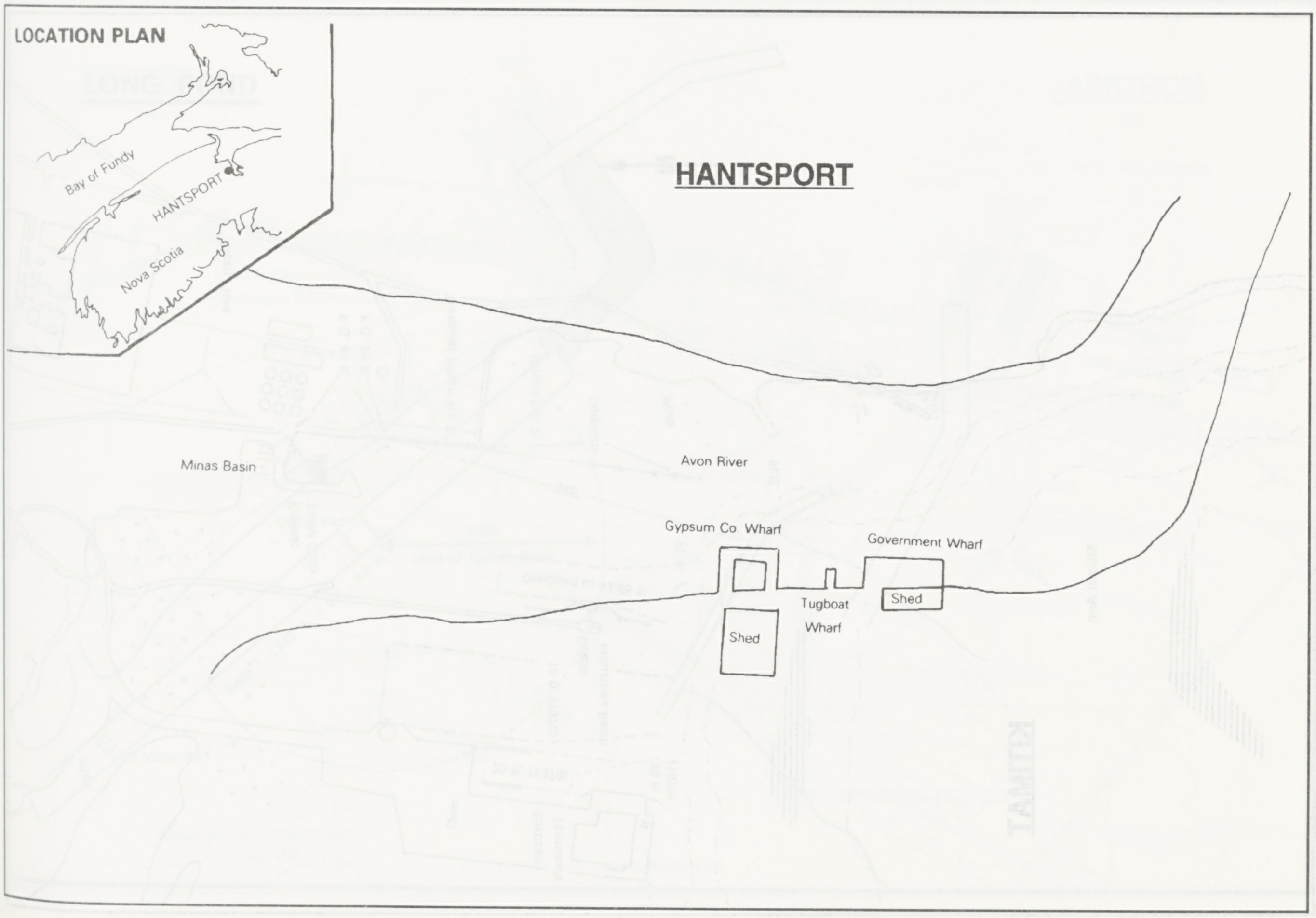

Bedford Basin
20
44
16
36
44
21
21
16
28
32
36
16
Length 110 m.
44
27
33
38
16
Lighterage Pier
33
36
16
44
24
35
44
WRIGHT'S COVE
National Gypsum

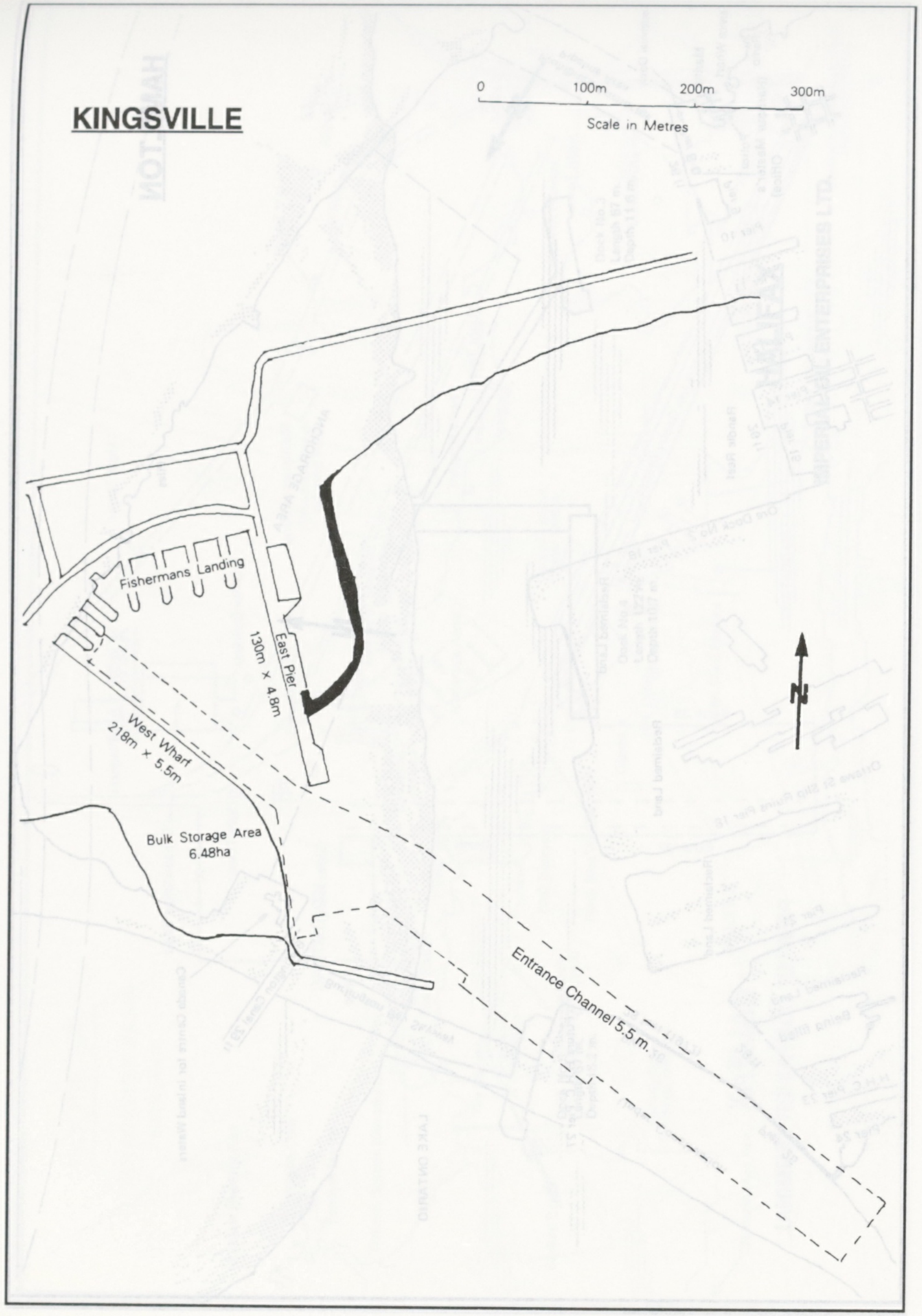
HALIFAX

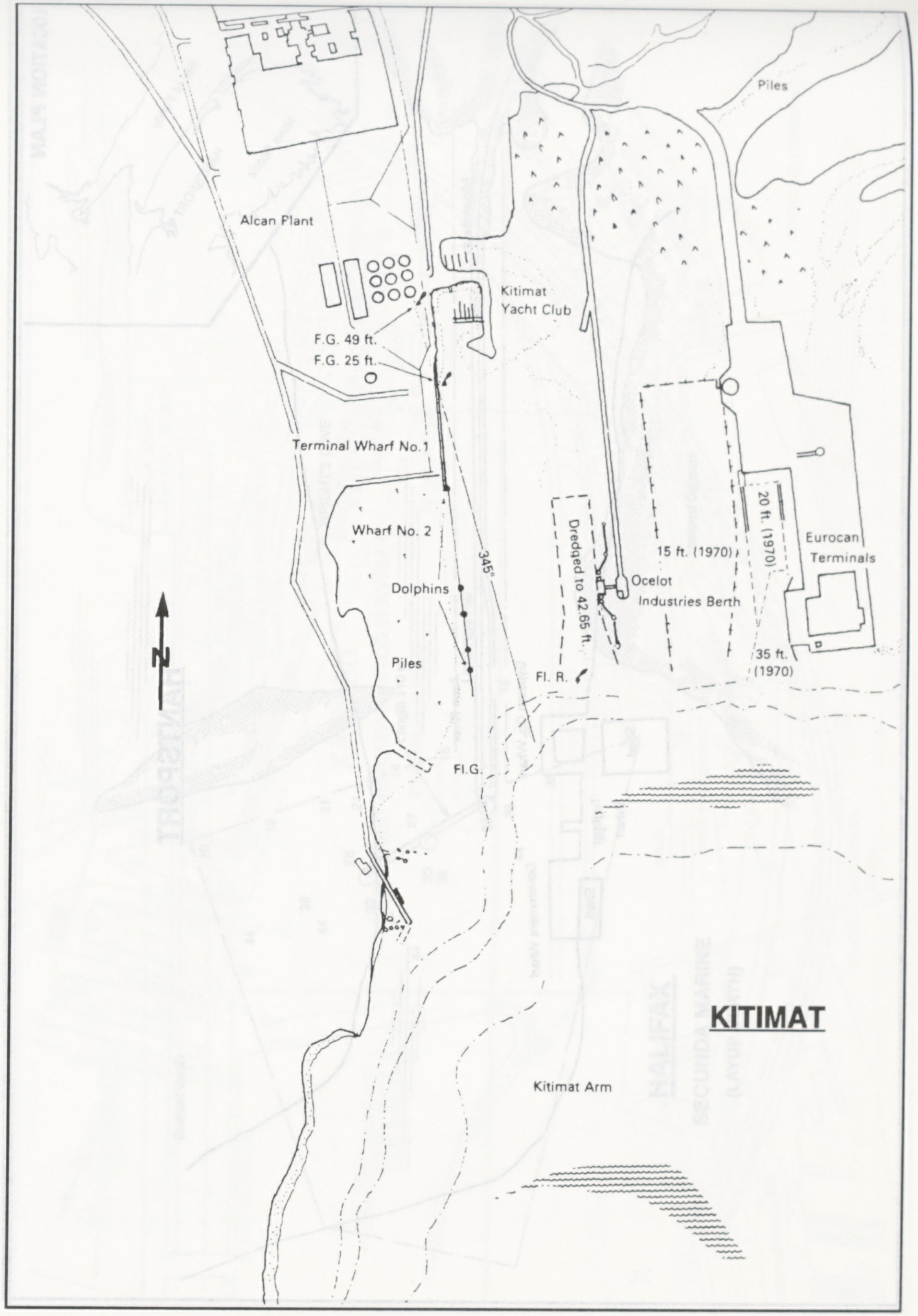
SECUNDA MARINE

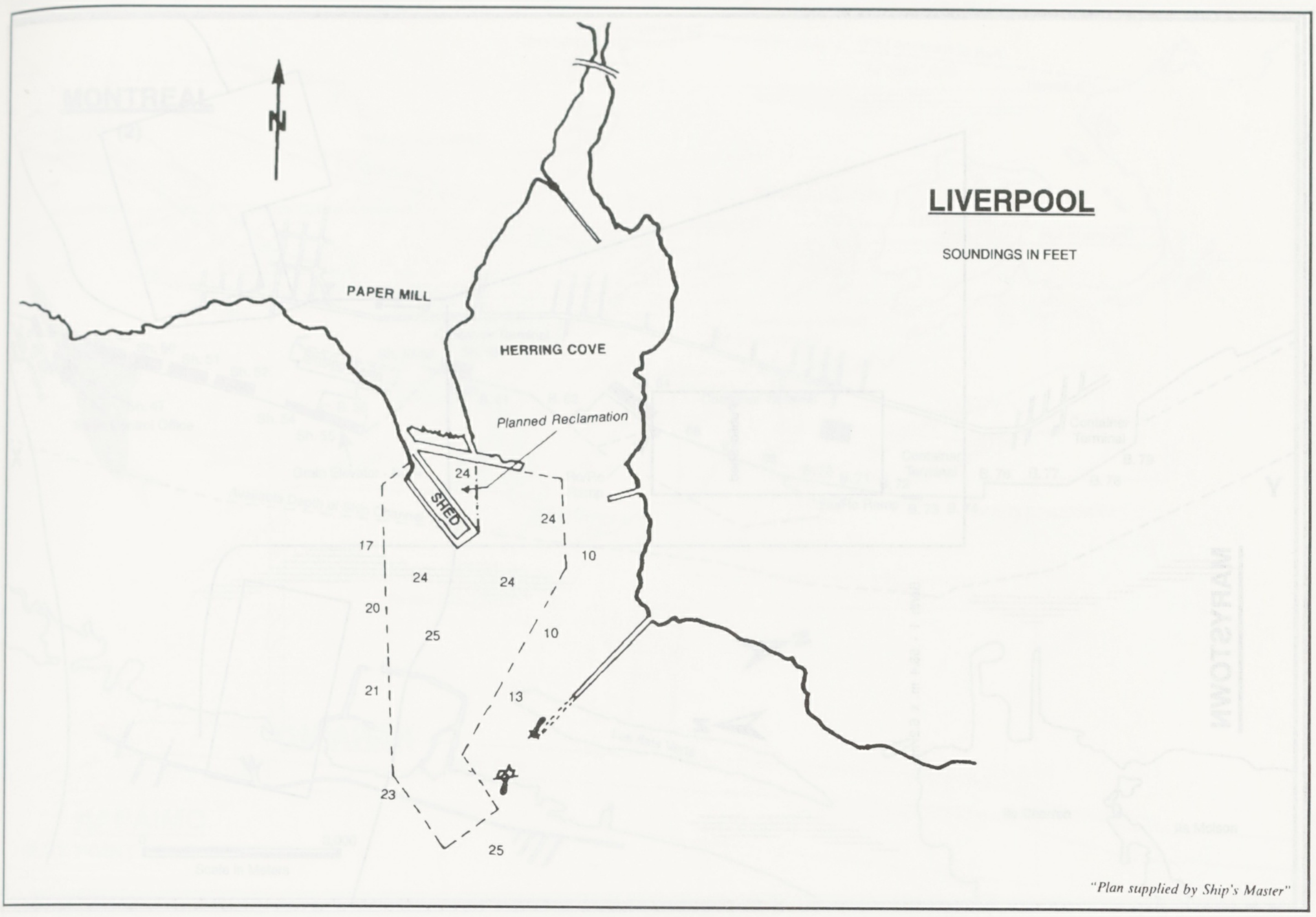
(LAYUP BERTH)

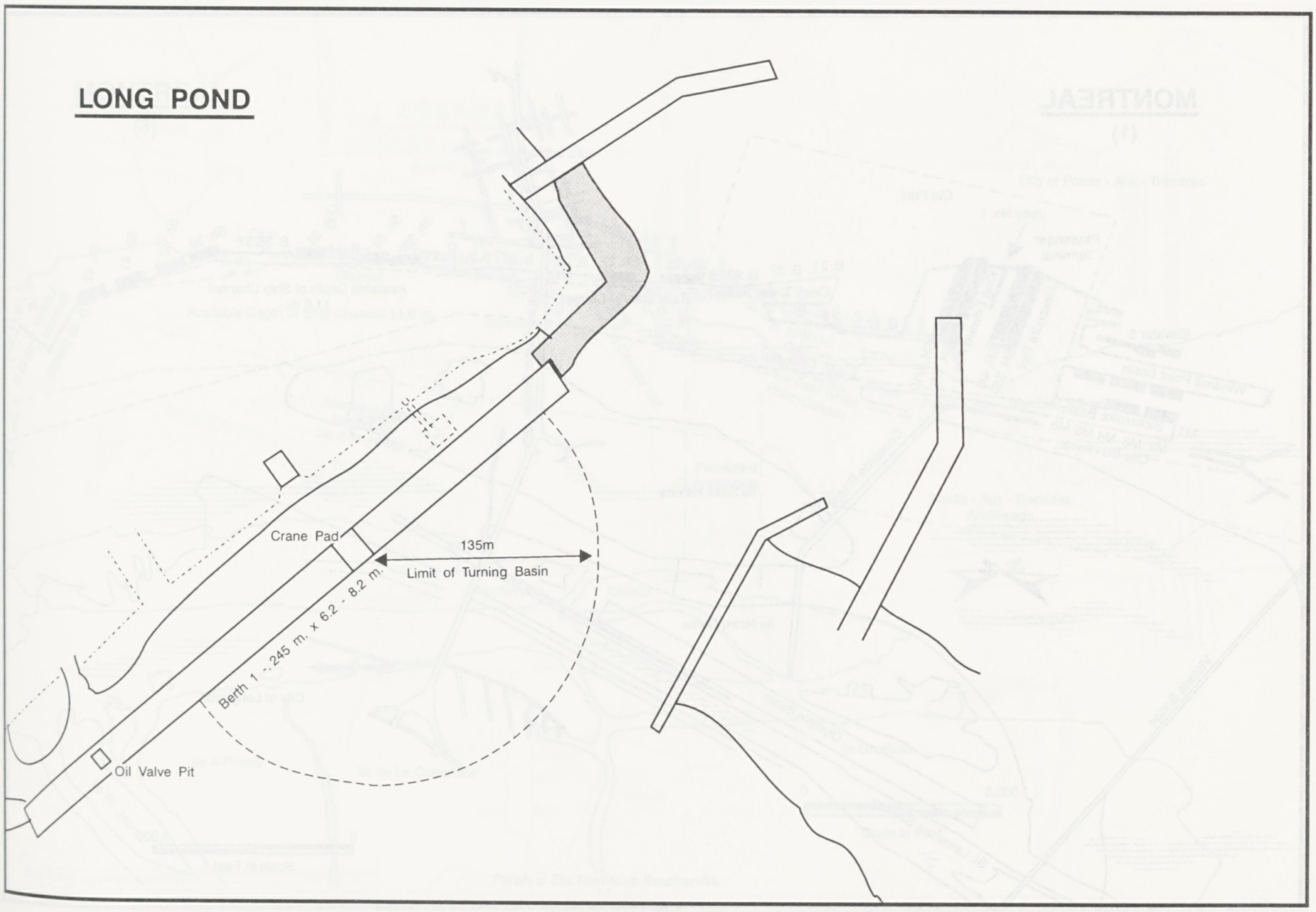

HAMILTON
Piles
Canada Centre for Inland Waters
Burlington Canal 29 ft
ANCHORAGE AREA
Burlington Bay Skyway
LAKE ONTARIO
Prohibited Anchorage Pipeline Area
Future H.H.C. Pier 27
Reclaimed Land
Centennial Dock
Pier 16
Pier 26
28 feet (1972)
Under Construction
26 ft
Pier 8
Marina
Service Wharf
Police
Pier 9
Ramp
(Harbour Master's Office)
Pier 10
Pier 11
Pier 12
Pier 14
Randle Reef
26 ft
Pier 15
Ore Dock No 2
Reclaimed Land
Ottawa St Slip Ruins Pier 18
Reclaimed Land
Pier 21
28 ft
Reclaimed Land
Being filled
H.H.C. Pier 23
Pier 24
Pier 25


LOCATION PLAN
Bay of Fundy
HANTSPORT
Nova Scotia
HANTSPORT
Minas Basin
Avon River
Gypsum Co. Wharf
Government Wharf
Shed
Tugboat Wharf
Shed

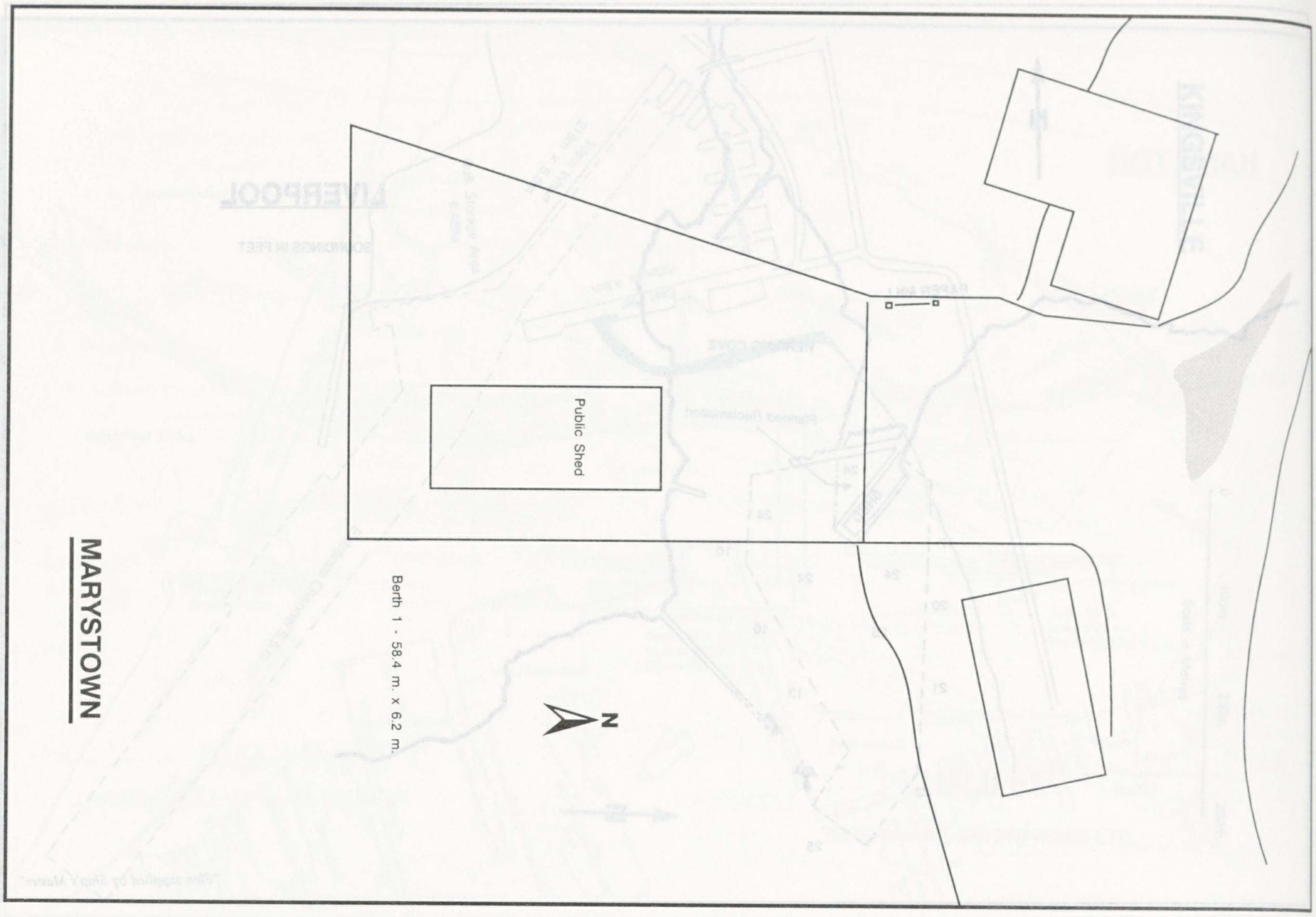

KINGSVILLE
0
100m
200m
300m
Scale in Metres
Fishermans Landing
East Pier
130m × 4.8m
West Wharf
218m × 5.5m
Bulk Storage Area
6.48ha
Entrance Channel 5.5 m.
N


Piles
Alcan Plant
Kitimat
Yacht Club
F.G. 49 ft.
F.G. 25 ft.
Terminal Wharf No.1
Wharf No. 2
345°
Dredged to 42.65 ft.
15 ft. (1970)
20 ft. (1970)
Eurocan
Terminals
Ocelot
Industries Berth
Dolphins
Piles
Fl. R.
35 ft.
(1970)
Fl.G.
N
KITIMAT
Kitimat Arm


LIVERPOOL
SOUNDINGS IN FEET
N
PAPER MILL
HERRING COVE
Planned Reclamation
SHED
24
24
17
24
24
10
20
25
10
21
13
23
25
"Plan supplied by Ship's Master"

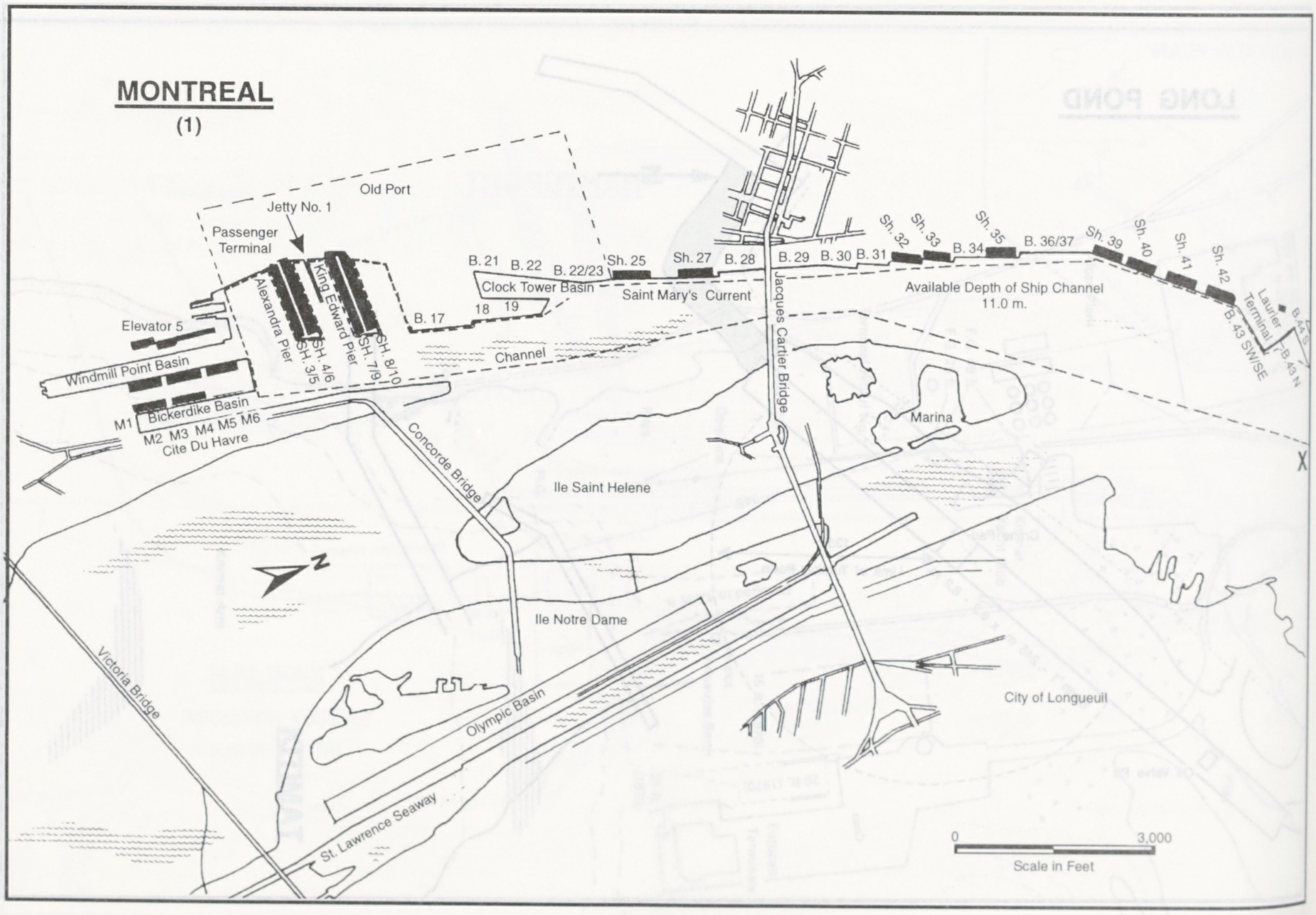

LONG POND
Crane Pad
135m
Limit of Turning Basin
Berth 1 - 245 m. x 6.2 - 8.2 m.
Oil Valve Pit

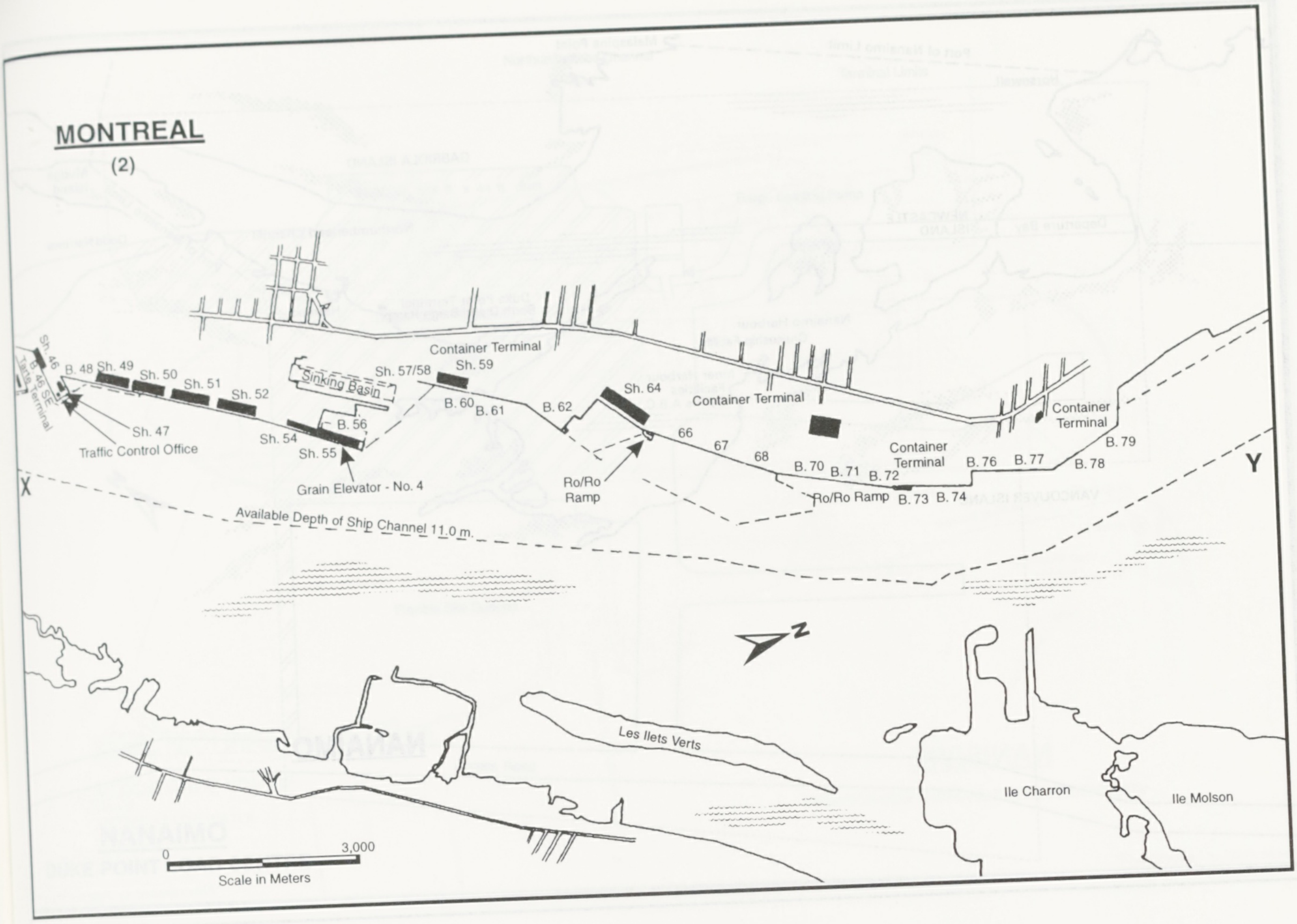
MARYSTOWN

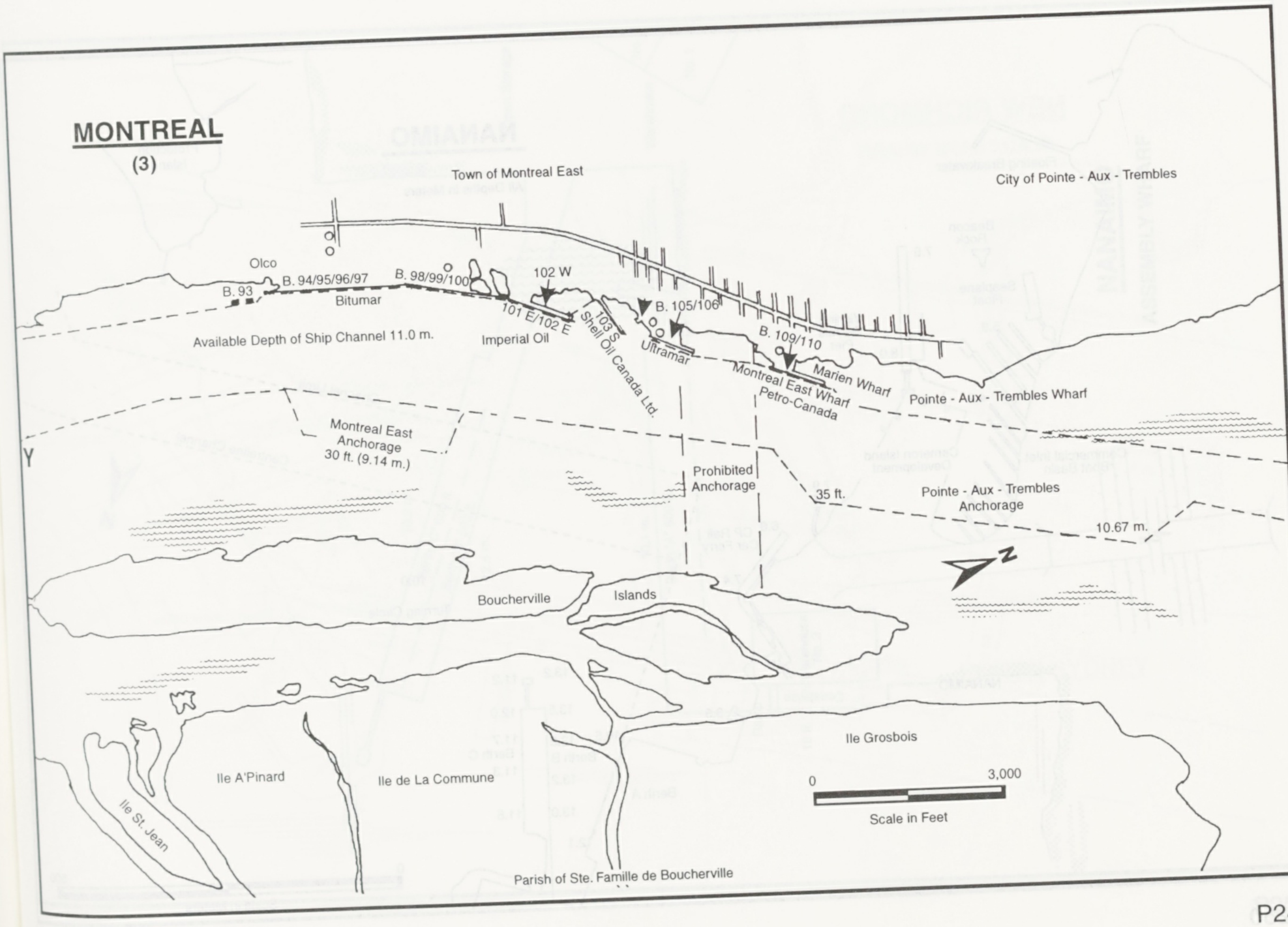

Public Shed
Berth 1 - 58.4 m. x 6.2 m.
N

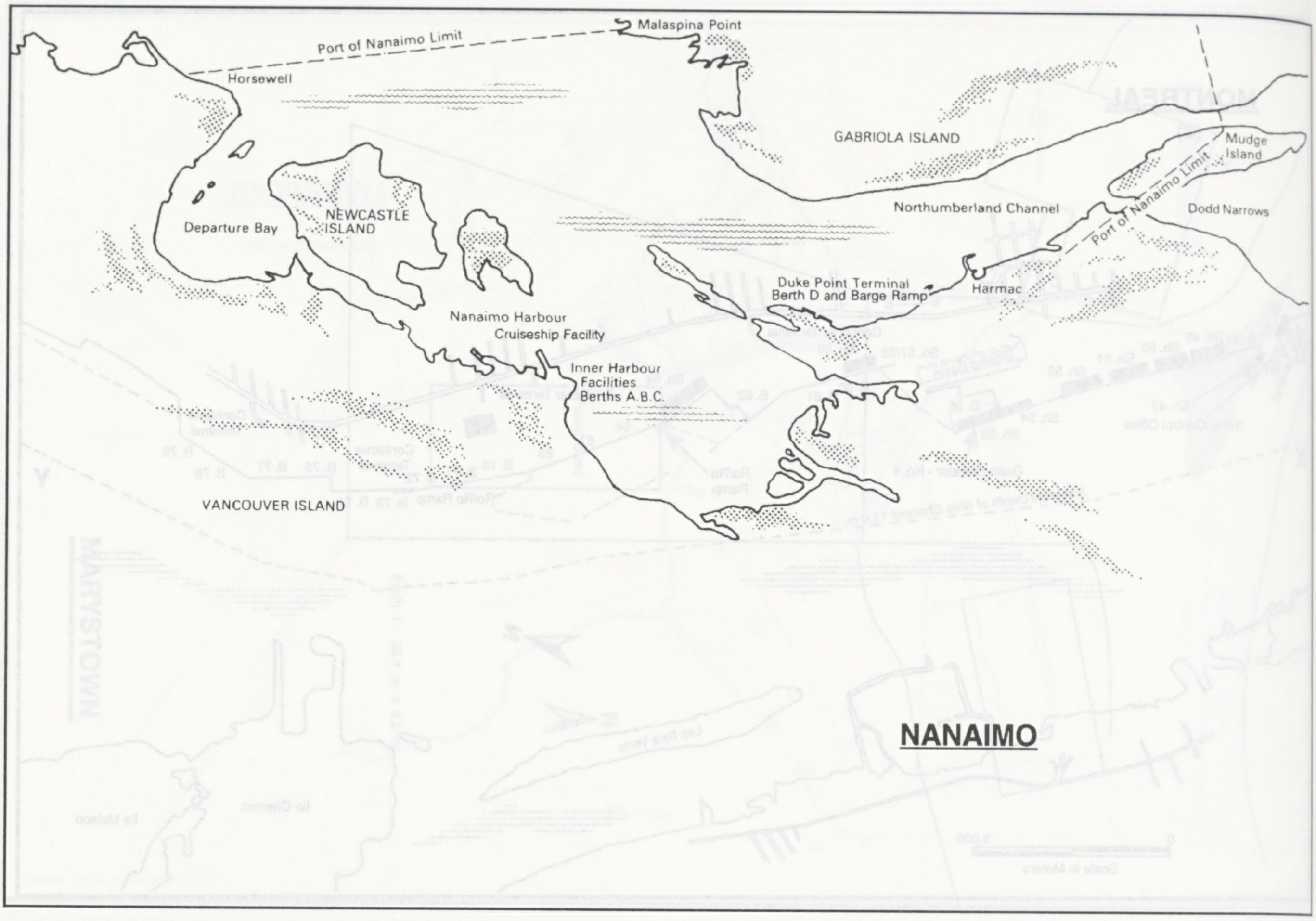
MONTREAL

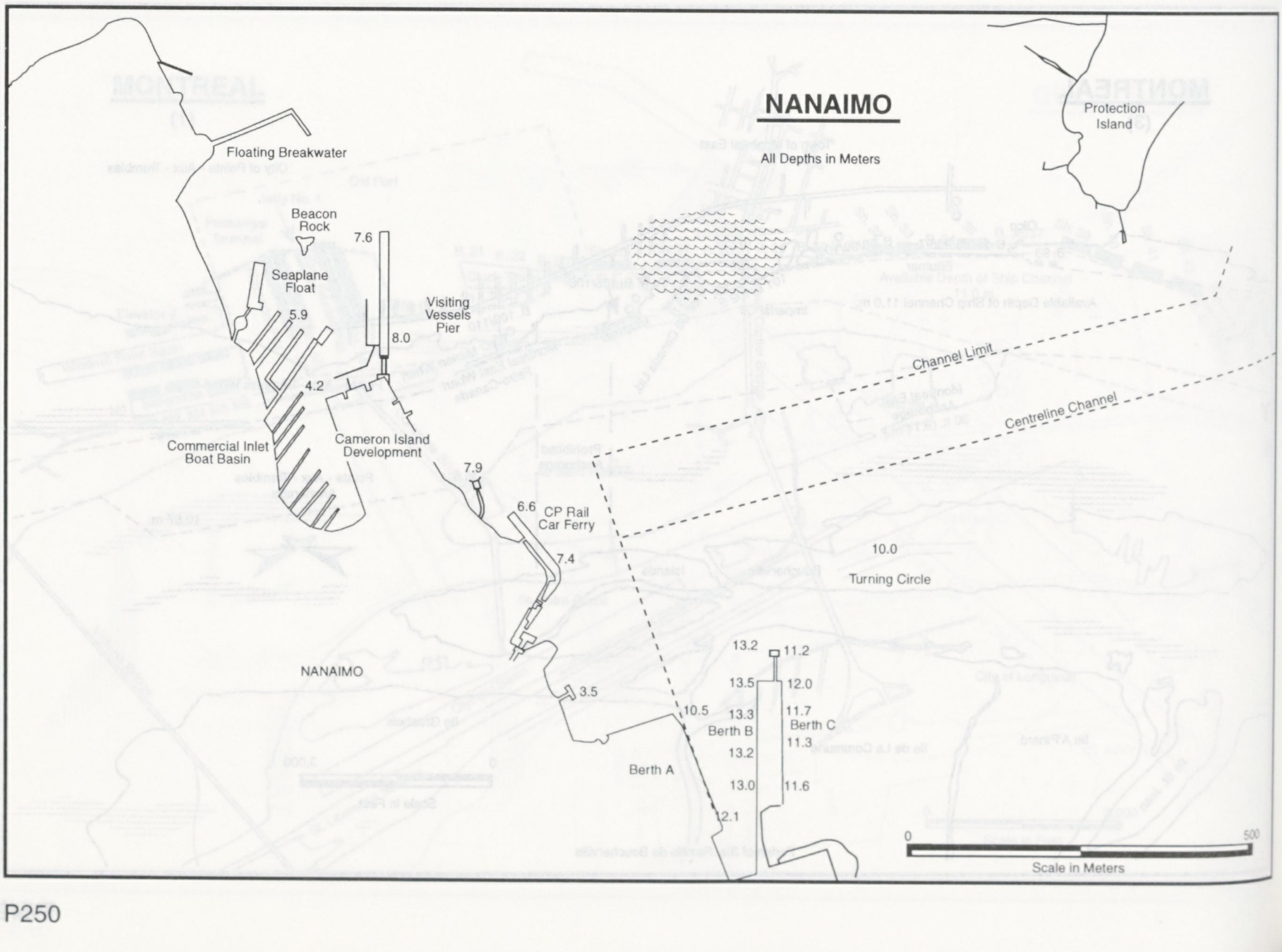
(1)

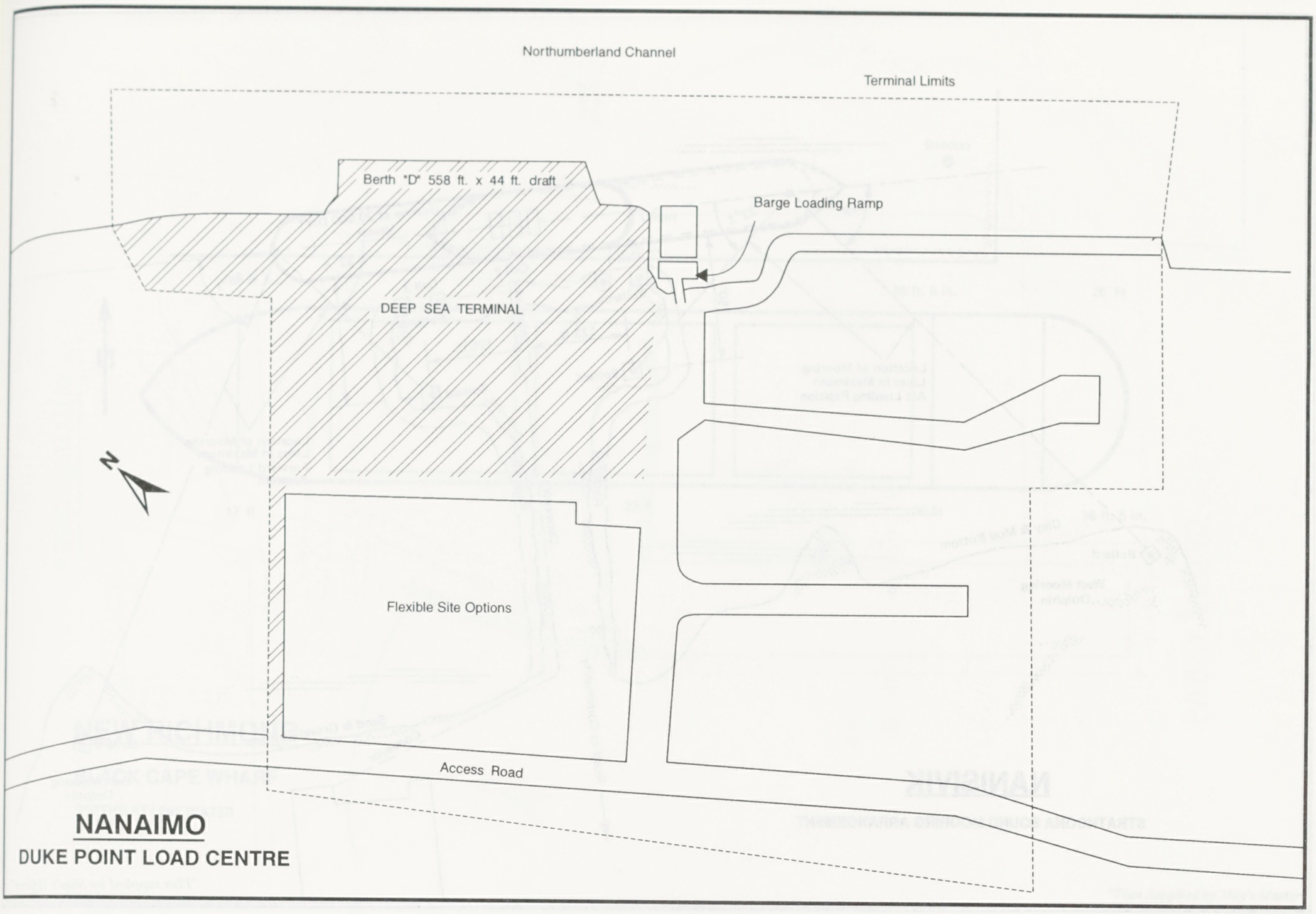

Old Port
Jetty No. 1
Passenger Terminal
Elevator 5
Windmill Point Basin
Bickerdike Basin
M1
M2 M3 M4 M5 M6
Cite Du Havre
Alexandra Pier
King Edward Pier
SH. 3/5
SH. 4/6
SH. 7/9
SH. 8/10
B. 17
18
19
B. 21
B. 22
B. 22/23
Clock Tower Basin
Sh. 25
Sh. 27
B. 28
B. 29
B. 30
B. 31
Sh. 32
Sh. 33
B. 34
Sh. 35
B. 36/37
Sh. 39
Sh. 40
Sh. 41
Sh. 42
Laurier Terminal
B. 43 SW/SE
B. 43 N
B. 44
Saint Mary's Current
Available Depth of Ship Channel
11.0 m.
Channel
Jacques Cartier Bridge
Concorde Bridge
Marina
X
Ile Saint Helene
Ile Notre Dame
Olympic Basin
St. Lawrence Seaway
Victoria Bridge
City of Longueuil
N
0
3,000
Scale in Feet


MONTREAL
(2)
Sh. 46
B. 48
B. 49 SE
Jetty Terminal
Sh. 49
Sh. 50
Sh. 51
Sh. 52
Sh. 47
Traffic Control Office
Sh. 54
Sh. 55
B. 56
Grain Elevator - No. 4
Sinking Basin
Sh. 57/58
Container Terminal
Sh. 59
B. 60
B. 61
B. 62
Sh. 64
Ro/Ro Ramp
Container Terminal
66
67
68
B. 70
B. 71
B. 72
B. 73
B. 74
Ro/Ro Ramp
Container Terminal
B. 76
B. 77
B. 78
B. 79
Container Terminal
X
Y
Available Depth of Ship Channel 11.0 m.
N
Les Ilets Verts
Ile Charron
Ile Molson
0
3,000
Scale in Meters

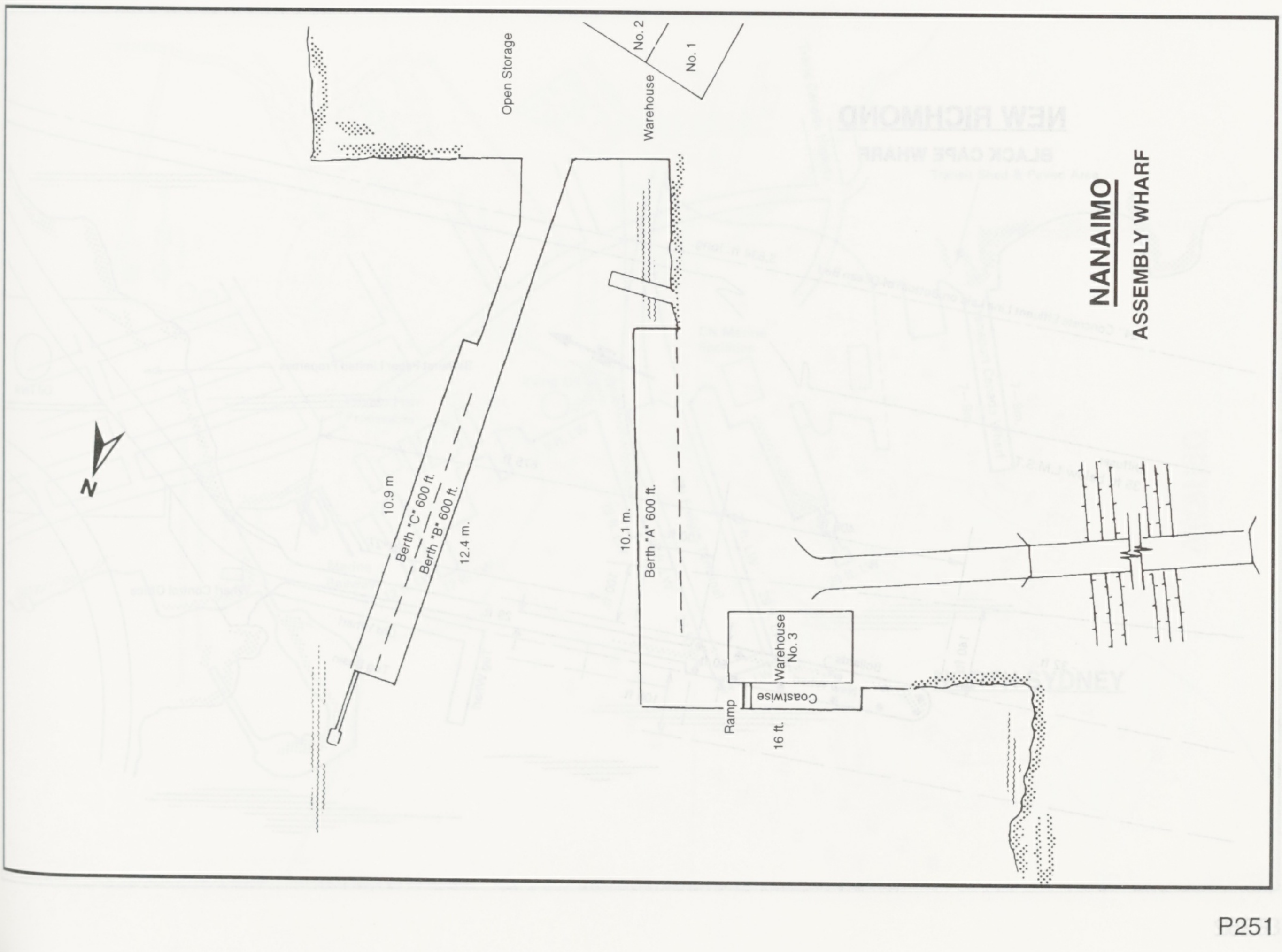

MONTREAL
(3)
Town of Montreal East
City of Pointe - Aux - Trembles
Olco
B. 93
B. 94/95/96/97
Bitumar
B. 98/99/100
102 W
101 E/102 E
Imperial Oil
103 S
Shell Oil Canada Ltd.
B. 105/106
Ultramar
B. 109/110
Marien Wharf
Montreal East Wharf
Petro-Canada
Pointe - Aux - Trembles Wharf
Available Depth of Ship Channel 11.0 m.
Y
X
Montreal East
Anchorage
30 ft. (9.14 m.)
Prohibited
Anchorage
35 ft.
Pointe - Aux - Trembles
Anchorage
10.67 m.
N
Boucherville
Islands
Ile Grosbois
Ile A'Pinard
Ile de La Commune
Ile St. Jean
0
3,000
Scale in Feet
Parish of Ste. Famille de Boucherville


Port of Nanaimo Limit
Malaspina Point
Horsewell
GABRIOLA ISLAND
Mudge Island
Departure Bay
NEWCASTLE ISLAND
Northumberland Channel
Dodd Narrows
Port of Nanaimo Limit
Duke Point Terminal Berth D and Barge Ramp
Harmac
Nanaimo Harbour Cruiseship Facility
Inner Harbour Facilities Berths A.B.C.
VANCOUVER ISLAND
NANAIMO

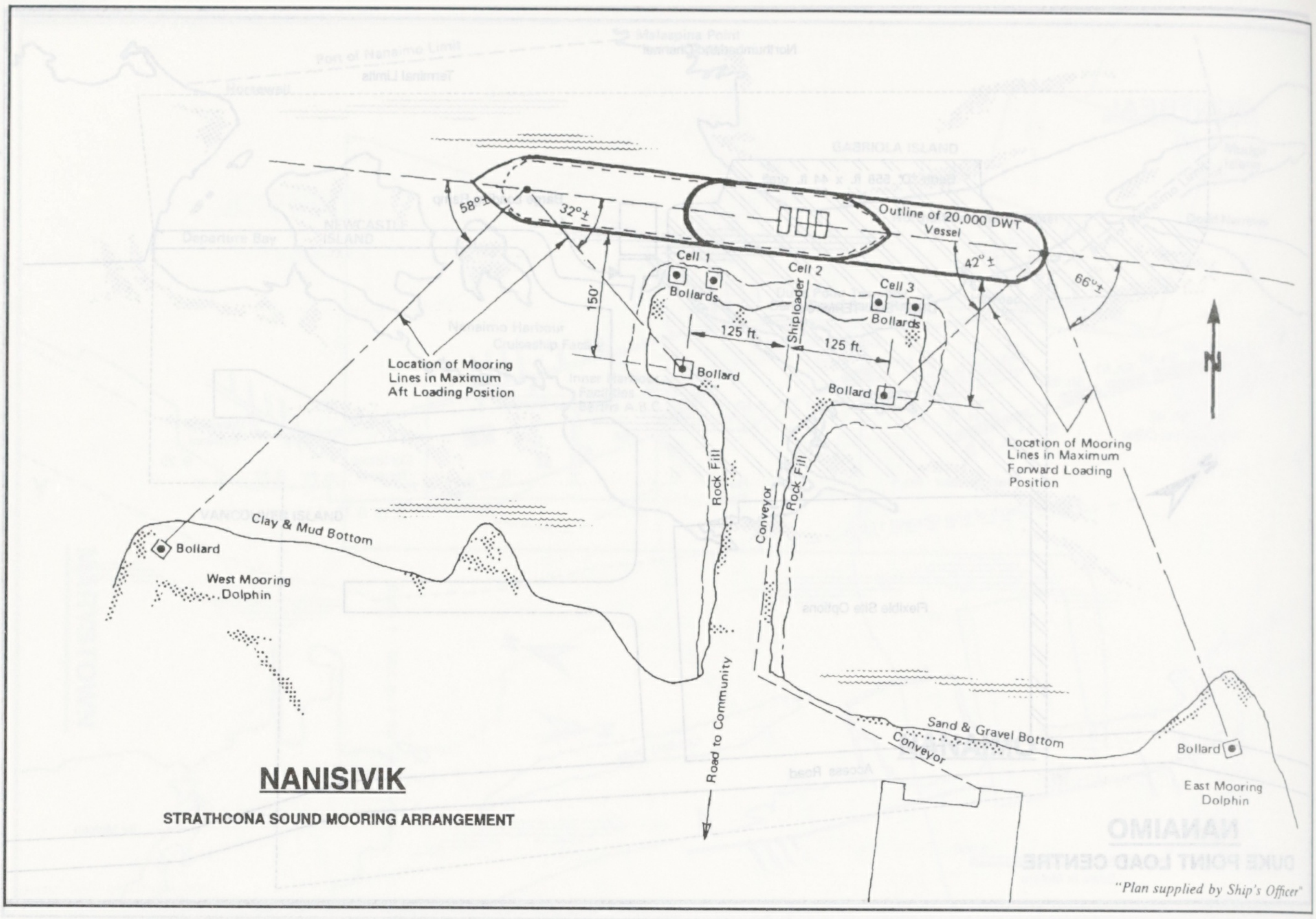

NANAIMO
All Depths in Meters
Protection Island
Floating Breakwater
Beacon Rock
7.6
Seaplane Float
5.9
Visiting Vessels Pier
8.0
4.2
Commercial Inlet Boat Basin
Cameron Island Development
7.9
6.6
CP Rail Car Ferry
7.4
Channel Limit
Centreline Channel
10.0
Turning Circle
NANAIMO
3.5
13.2
11.2
13.5
12.0
10.5
13.3
11.7
Berth B
Berth C
11.3
13.2
Berth A
13.0
11.6
12.1
0
500
Scale in Meters


Northumberland Channel
Terminal Limits
Berth "D" 558 ft. x 44 ft. draft
Barge Loading Ramp
DEEP SEA TERMINAL
N
Flexible Site Options
Access Road

NANAIMO
DUKE POINT LOAD CENTRE


Open Storage
Warehouse
No. 2
No. 1
N
10.9 m
Berth "C" 600 ft.
Berth "B" 600 ft.
12.4 m.
10.1 m.
Berth "A" 600 ft.
Warehouse
No. 3
Coastwise
Ramp
16 ft.

NANAIMO
ASSEMBLY WHARF

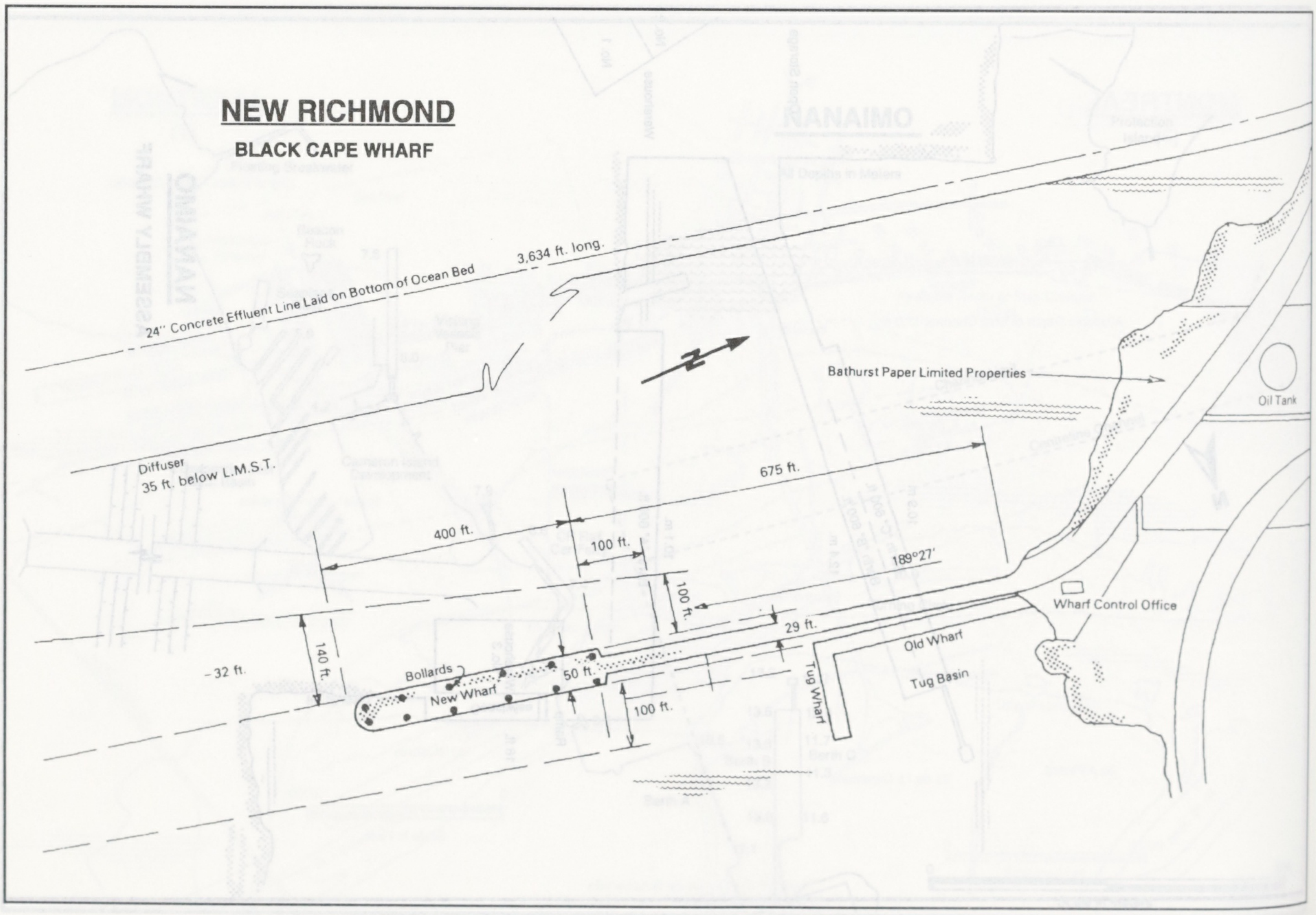


NANISIVIK

STRATHCONA SOUND MOORING ARRANGEMENT

58°±
32°±
Outline of 20,000 DWT Vessel
42°±
66°±
150'
Cell 1
Bollards
Cell 2
Cell 3
Bollards
125 ft.
Shiploader
125 ft.
Bollard
Bollard
Location of Mooring Lines in Maximum Aft Loading Position
Location of Mooring Lines in Maximum Forward Loading Position
N
Rock Fill
Conveyor
Rock Fill
Clay & Mud Bottom
Bollard
West Mooring Dolphin
Road to Community
Sand & Gravel Bottom
Conveyor
Bollard
East Mooring Dolphin

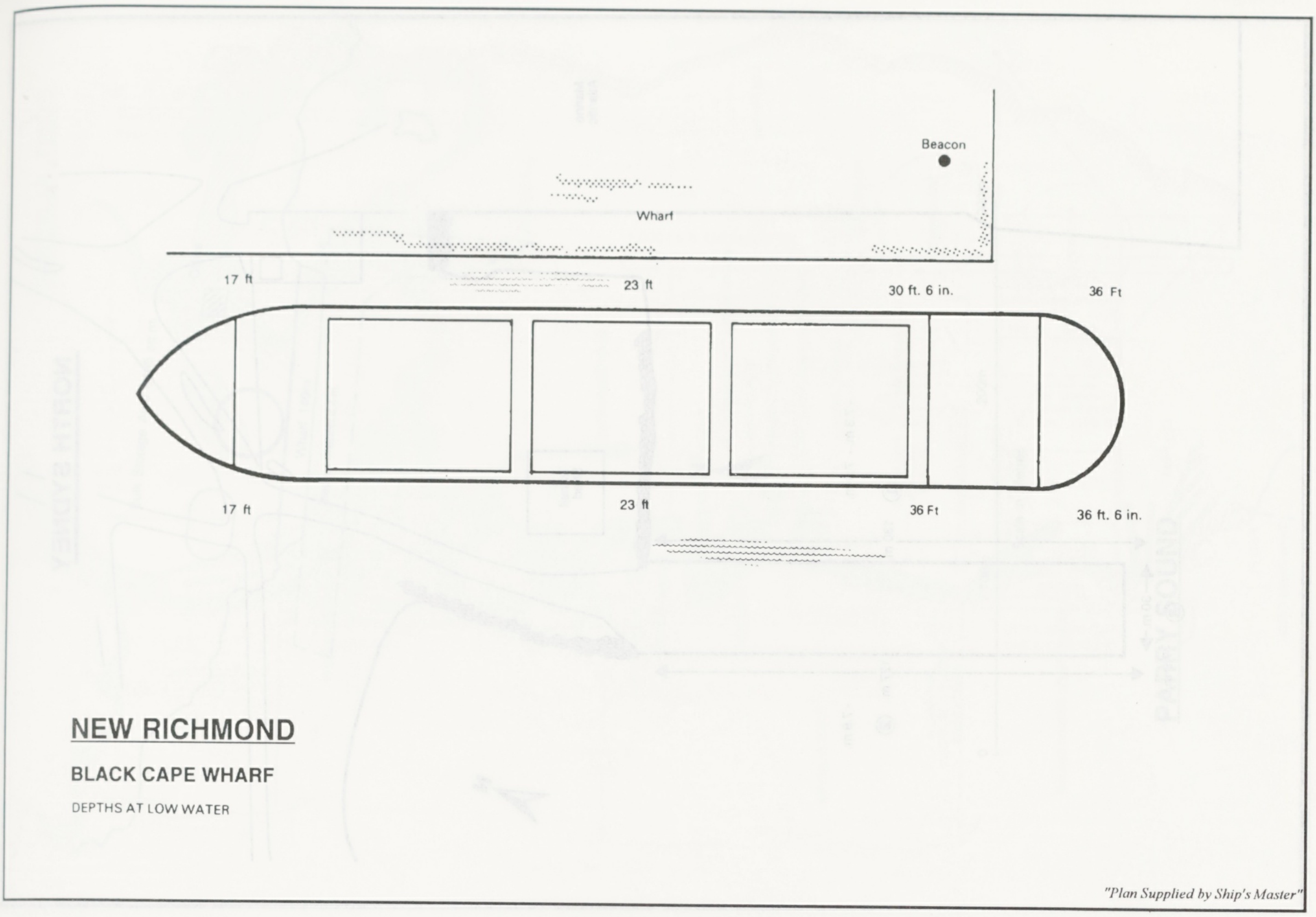
"Plan supplied by Ship's Officer"

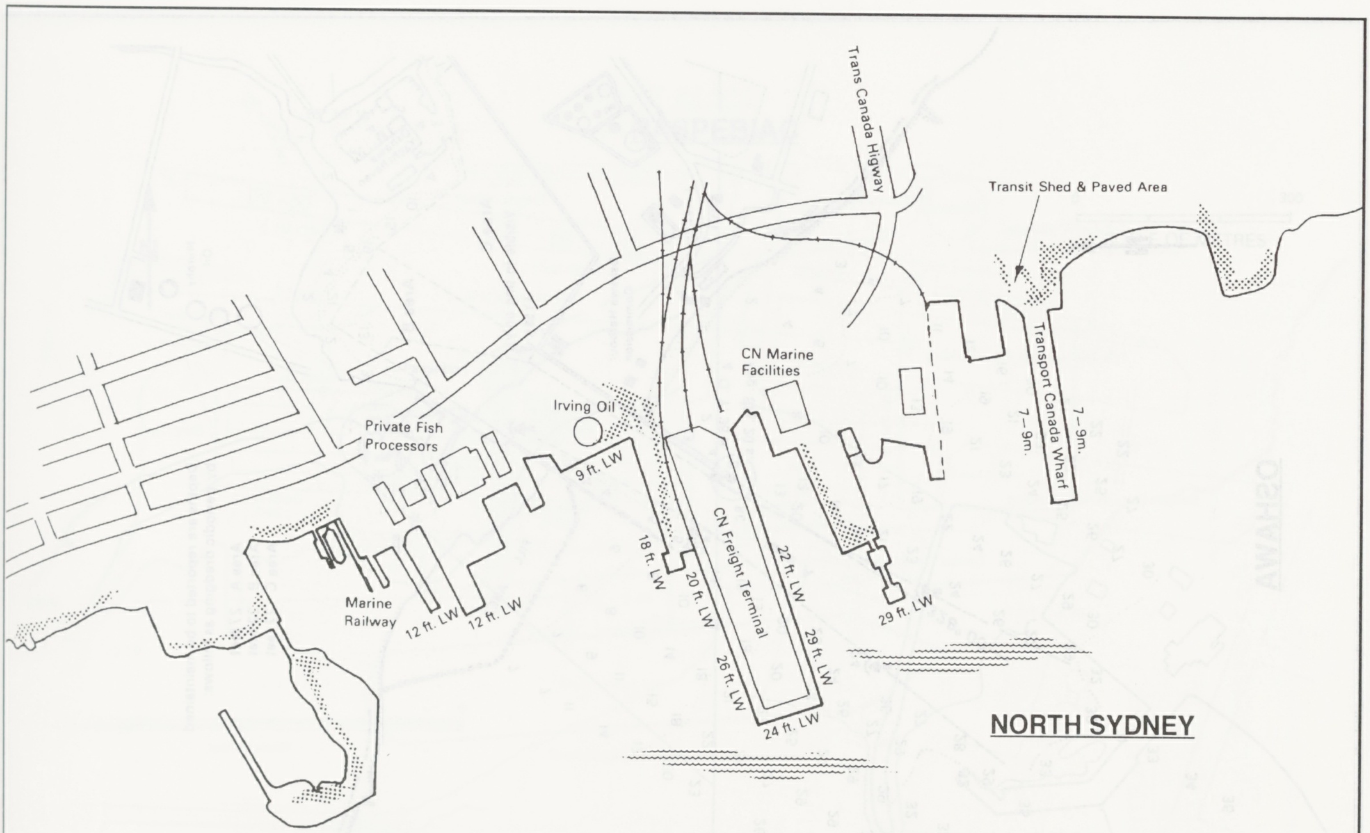


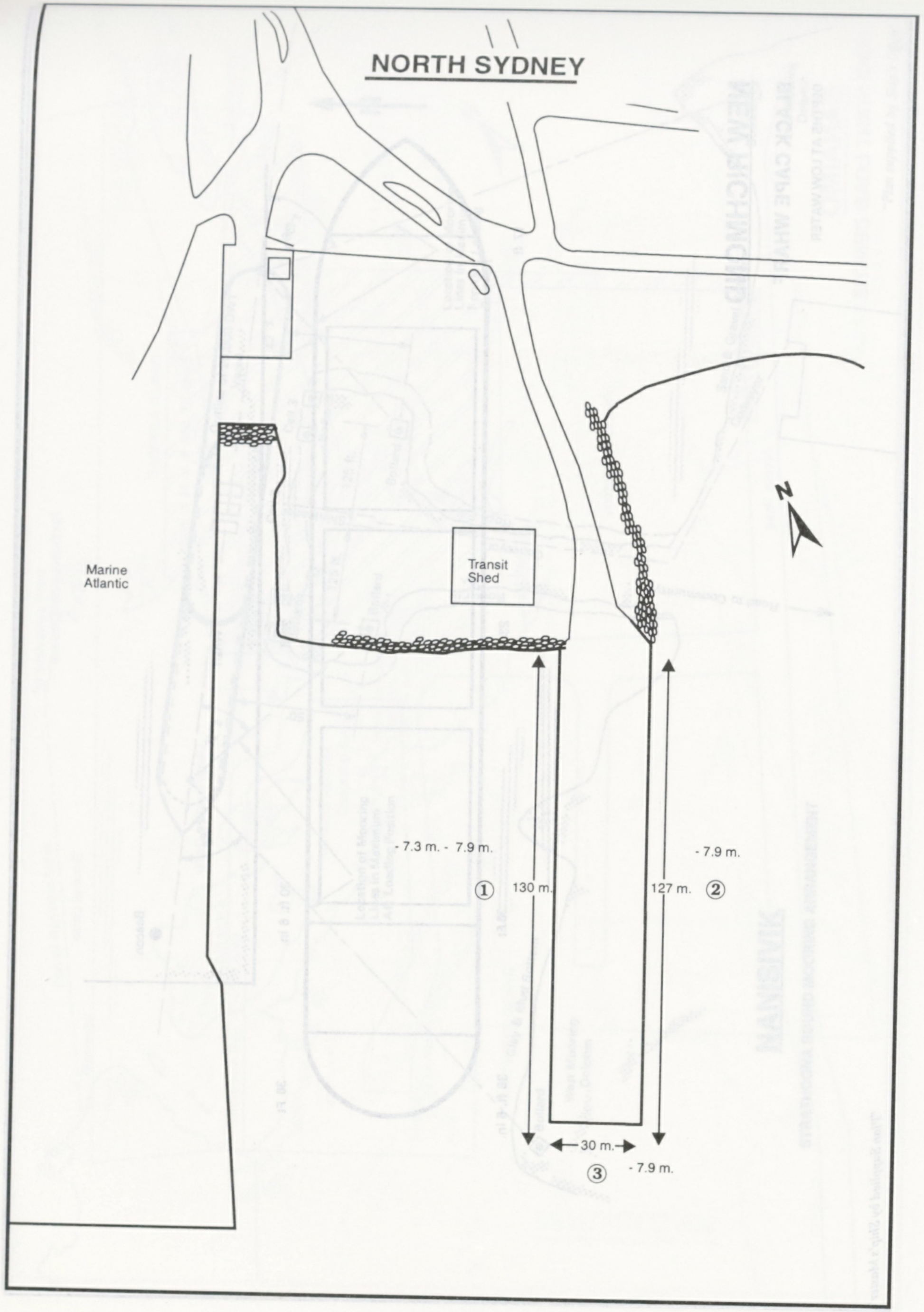
NEW RICHMOND

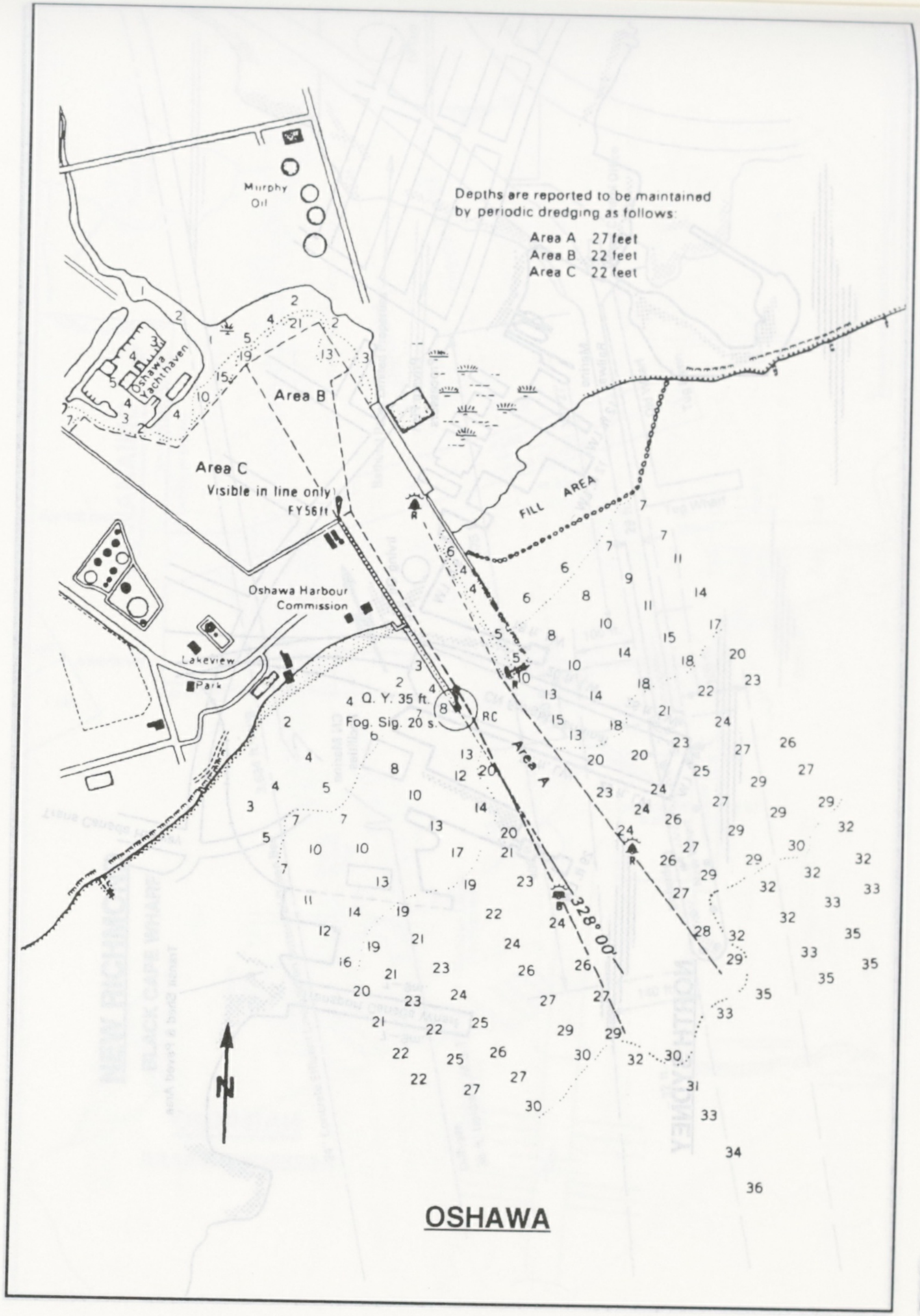
BLACK CAPE WHARF

24" Concrete Effluent Line Laid on Bottom of Ocean Bed
3,634 ft. long.
N
Bathurst Paper Limited Properties
Oil Tank
Diffuser
35 ft. below L.M.S.T.
675 ft.
400 ft.
100 ft.
100 ft.
189°27'
Wharf Control Office
140 ft.
29 ft.
Old Wharf
- 32 ft.
Bollards
50 ft.
Tug Wharf
Tug Basin
New Wharf
100 ft.


Beacon
Wharf
17 ft
23 ft
30 ft. 6 in.
36 Ft
17 ft
23 ft
36 Ft
36 ft. 6 in.
NEW RICHMOND
BLACK CAPE WHARF
DEPTHS AT LOW WATER
"Plan Supplied by Ship's Master"

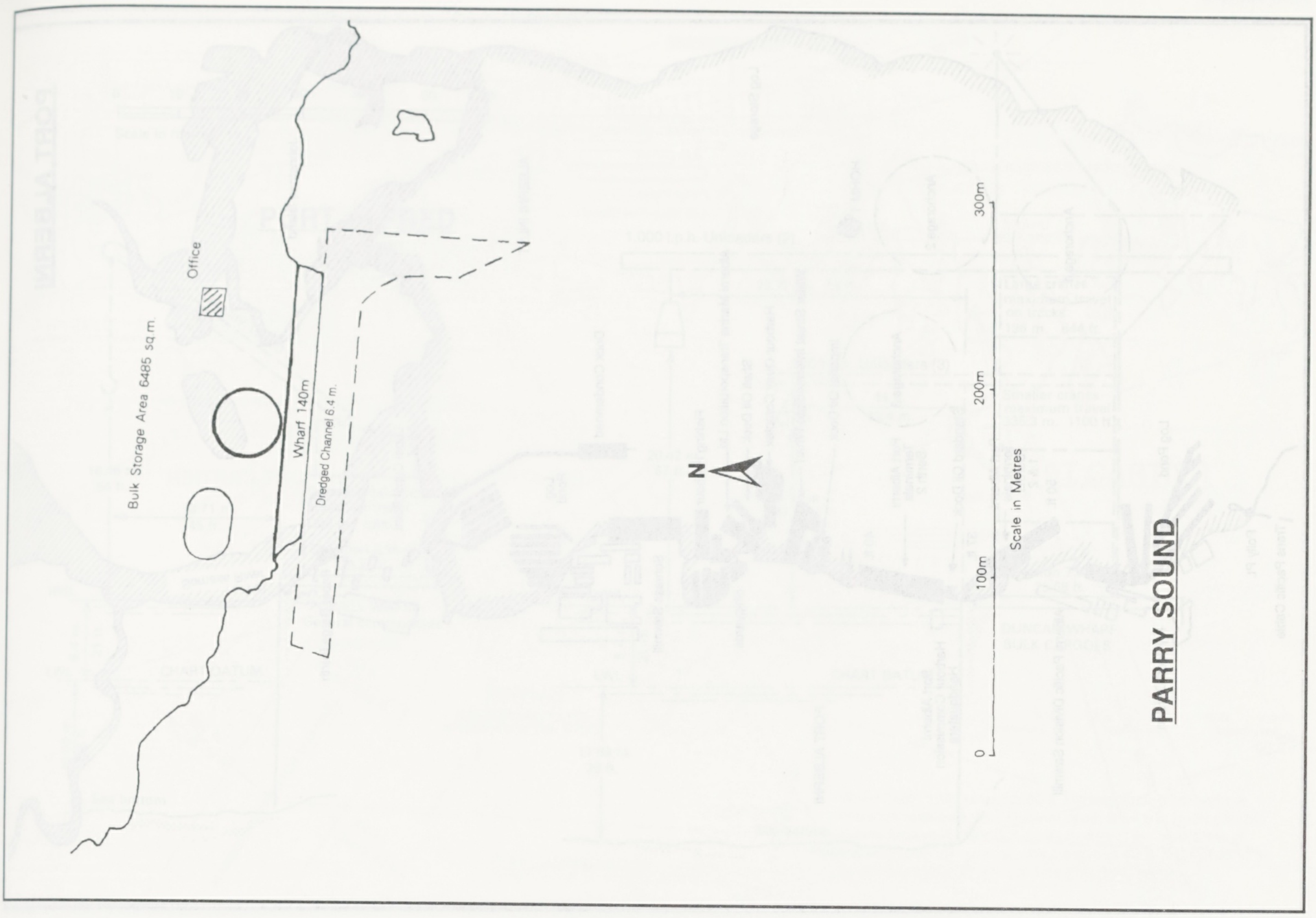

Trans Canada Higway
Transit Shed & Paved Area
CN Marine Facilities
Transport Canada Wharf
7–9m.
7–9m.
Irving Oil
Private Fish Processors
9 ft. LW
18 ft. LW
CN Freight Terminal
22 ft. LW
20 ft. LW
29 ft. LW
26 ft. LW
24 ft. LW
29 ft. LW
Marine Railway
12 ft. LW
12 ft. LW
NORTH SYDNEY

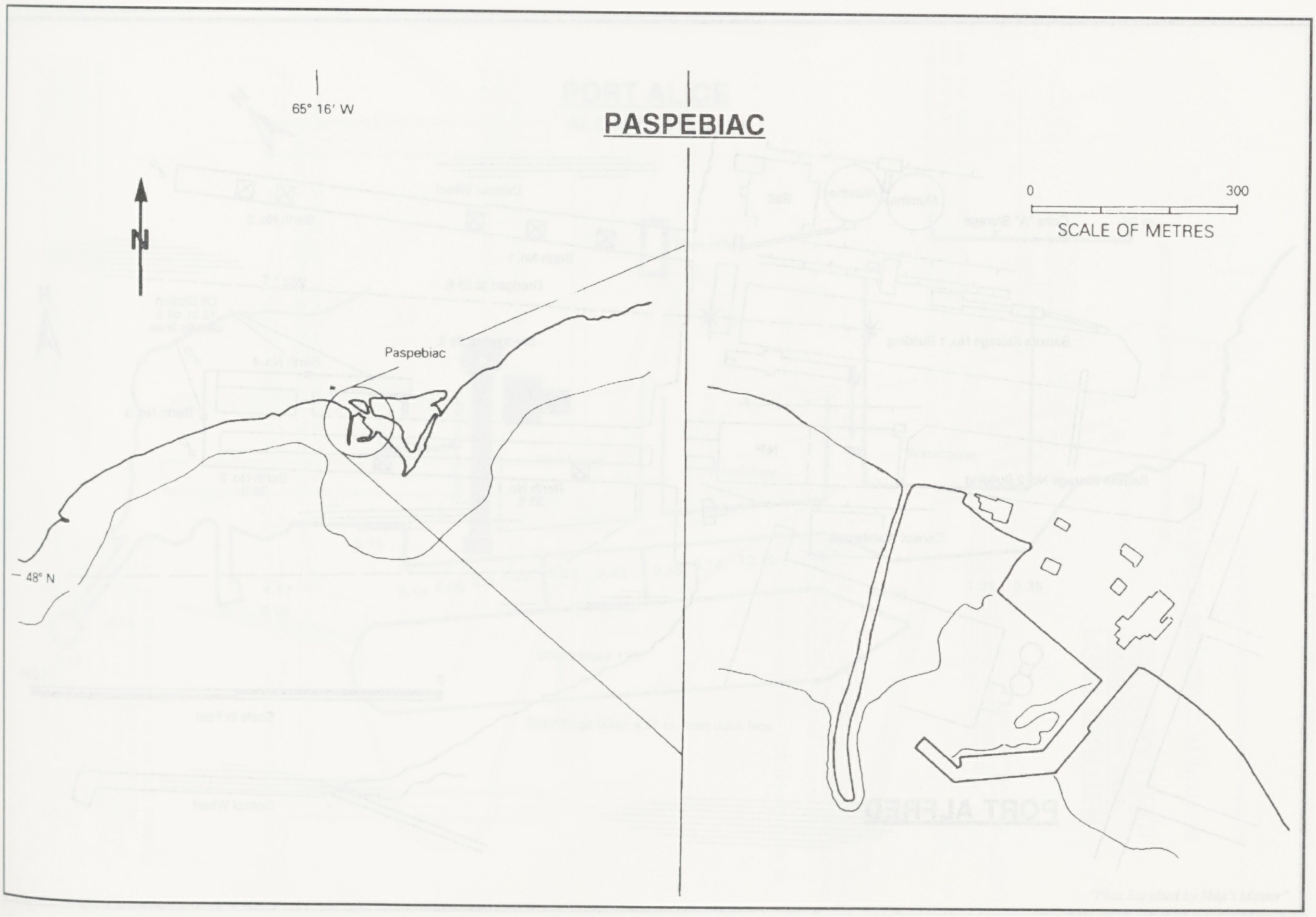

NORTH SYDNEY
Marine Atlantic
Transit Shed
N
- 7.3 m. - 7.9 m.
①
130 m.
127 m.
②
- 7.9 m.
30 m.
③
- 7.9 m.

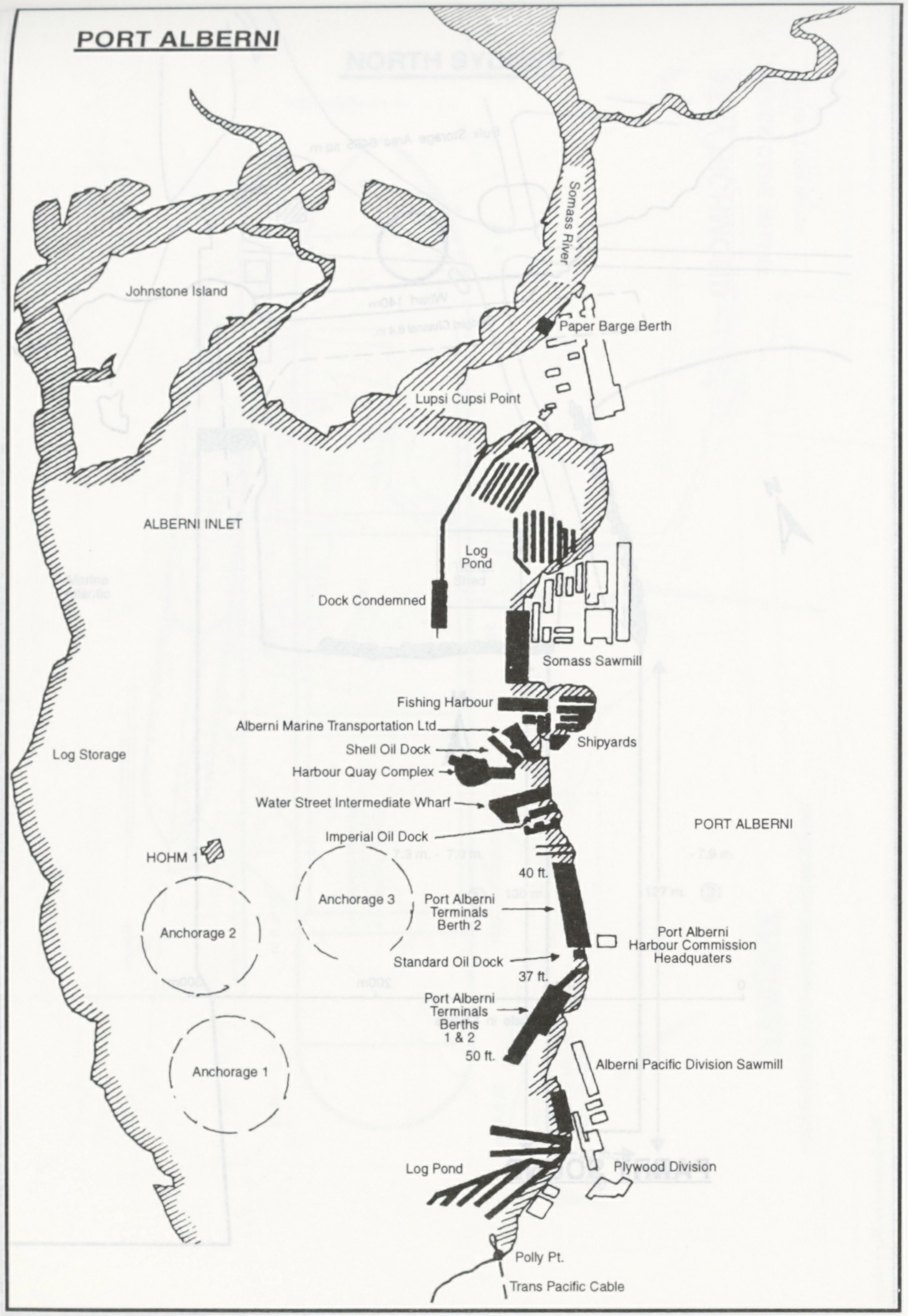

Depths are reported to be maintained by periodic dredging as follows:

Area A 27 feet
Area B 22 feet
Area C 22 feet

OSHAWA
Murphy Oil
Oshawa Yachthaven
Area B
Area C
Visible in line only
FY 56 ft
FILL AREA
Oshawa Harbour Commission
Lakeview Park
Q. Y. 35 ft.
Fog. Sig. 20 s.
RC
Area A
328° 00'
N

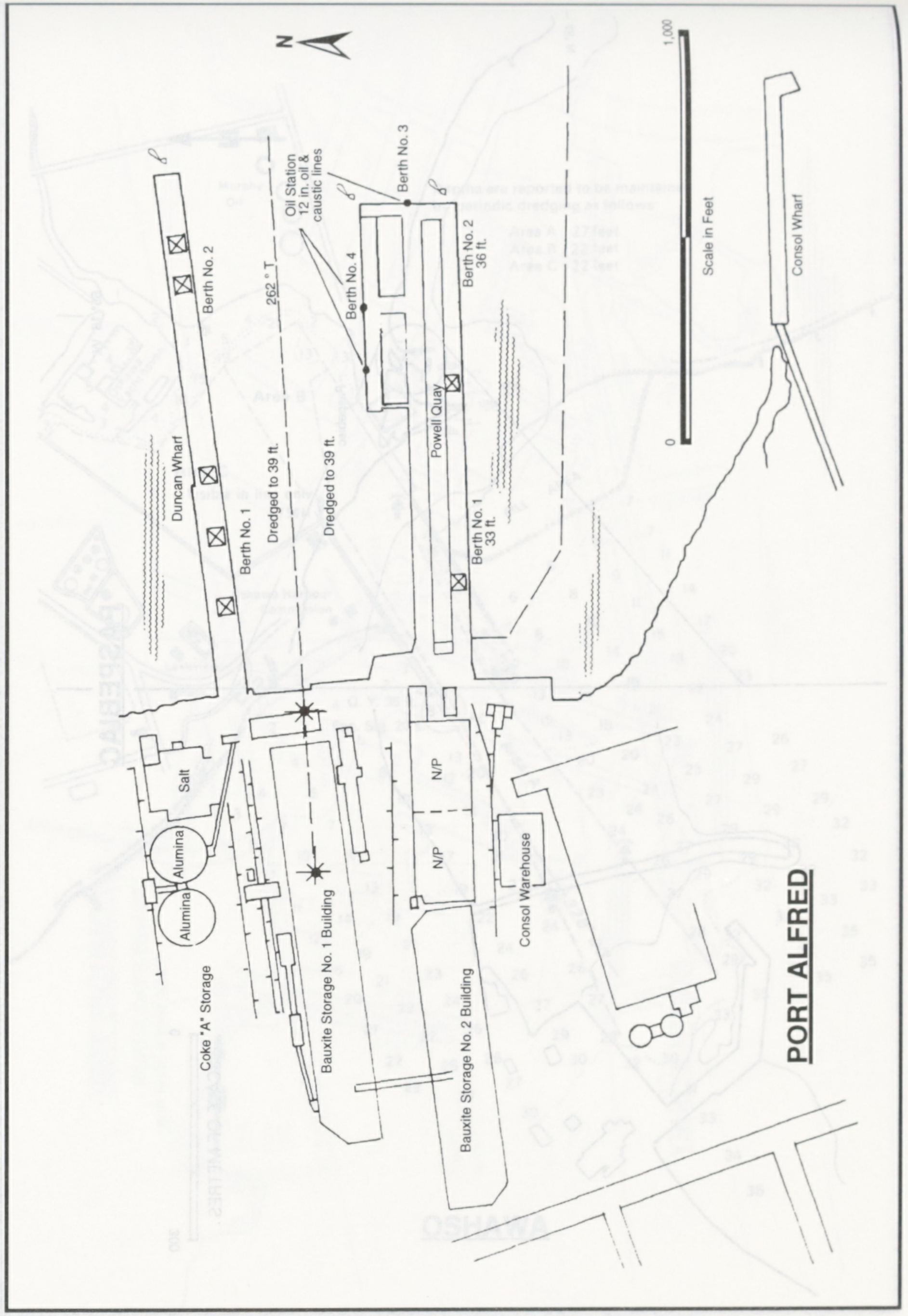

PARRY SOUND
Office
Bulk Storage Area 6485 sq m.
Wharf 140m
Dredged Channel 6.4 m.
N
Scale in Metres
0
100m
200m
300m


PASPEBIAC
65° 16′ W
N
Paspebiac
48° N
0
300
SCALE OF METRES



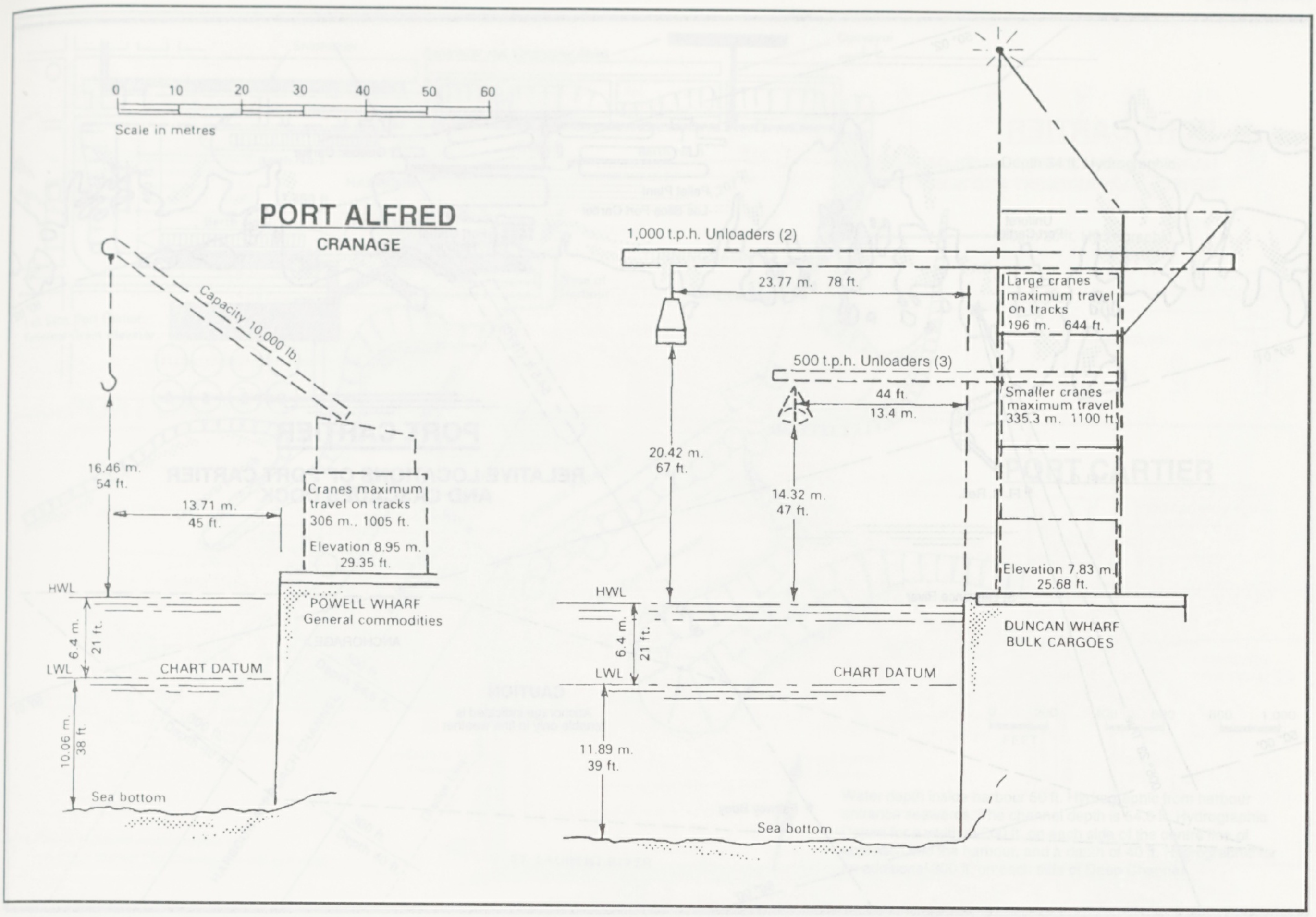
PORT ALBERNI

Somass River
Johnstone Island
Paper Barge Berth
Lupsi Cupsi Point
ALBERNI INLET
Log Pond
Dock Condemned
Somass Sawmill
Fishing Harbour
Alberni Marine Transportation Ltd
Shell Oil Dock
Shipyards
Harbour Quay Complex
Water Street Intermediate Wharf
Log Storage
Imperial Oil Dock
PORT ALBERNI
HOHM 1
40 ft.
Anchorage 3
Port Alberni Terminals Berth 2
Anchorage 2
Port Alberni Harbour Commission Headquaters
Standard Oil Dock
37 ft.
Port Alberni Terminals Berths 1 & 2
50 ft.
Anchorage 1
Alberni Pacific Division Sawmill
Log Pond
Plywood Division
Polly Pt.
Trans Pacific Cable



PORT ALFRED

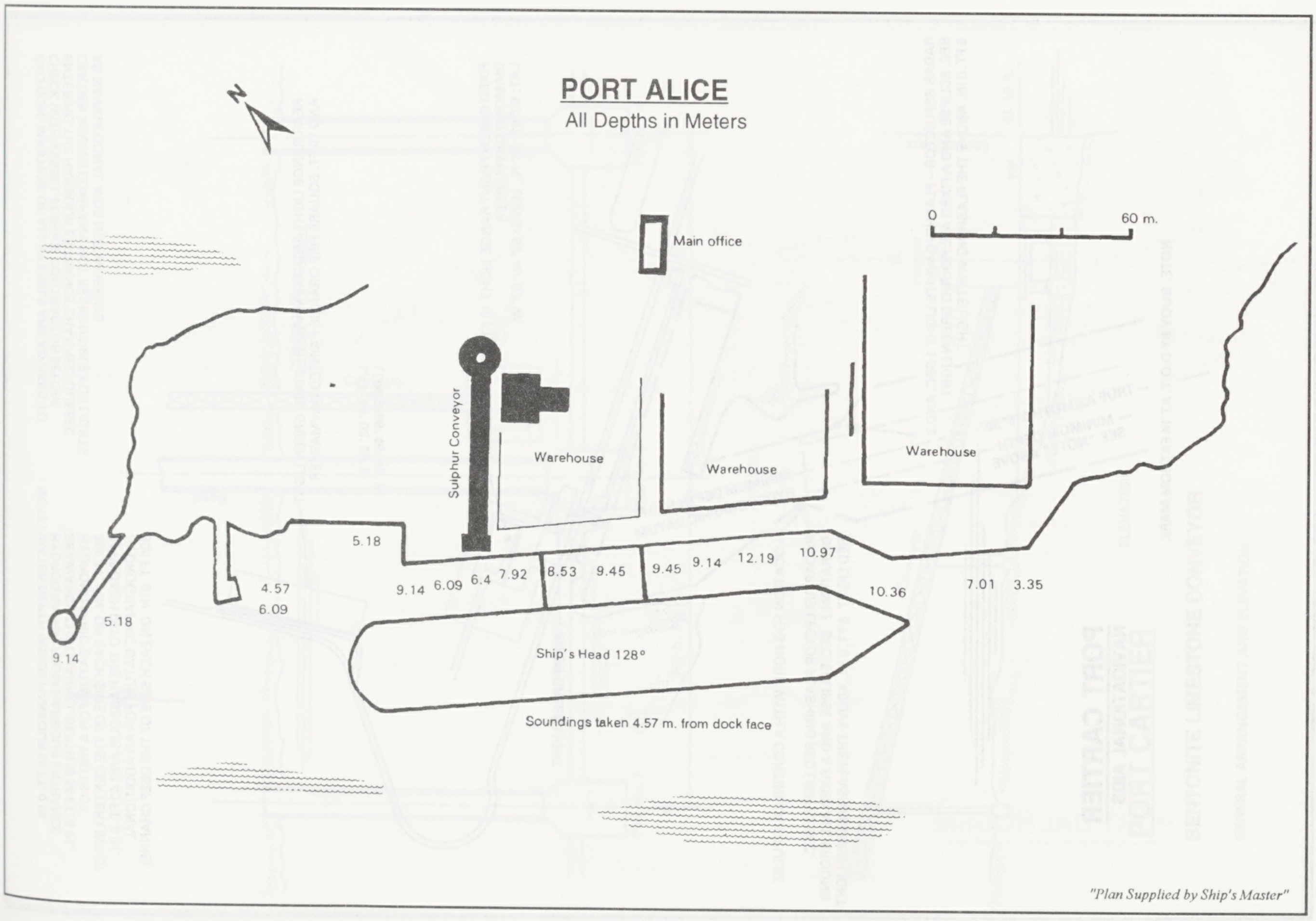
N
Scale in Feet
0
1,000
Consol Wharf
Berth No. 3
Oil Station 12 in. oil & caustic lines
Berth No. 4
Berth No. 2 36 ft.
Powell Quay
Berth No. 1 33 ft.
Duncan Wharf
Berth No. 2
Berth No. 1
262° T
Dredged to 39 ft.
Dredged to 39 ft.
Salt
Alumina
Alumina
Coke 'A' Storage
Bauxite Storage No. 1 Building
N/P
N/P
Bauxite Storage No. 2 Building
Consol Warehouse



PORT ALFRED

CRANAGE

0 10 20 30 40 50 60
Scale in metres
Capacity 10,000 lb.
16.46 m.
54 ft.
13.71 m.
45 ft.
Cranes maximum travel on tracks 306 m., 1005 ft.
Elevation 8.95 m.
29.35 ft.
HWL
POWELL WHARF
General commodities
6.4 m.
21 ft.
LWL
CHART DATUM
10.06 m.
38 ft.
Sea bottom
1,000 t.p.h. Unloaders (2)
23.77 m. 78 ft.
Large cranes maximum travel on tracks 196 m. 644 ft.
500 t.p.h. Unloaders (3)
44 ft.
13.4 m.
Smaller cranes maximum travel 335.3 m. 1100 ft.
20.42 m.
67 ft.
14.32 m.
47 ft.
Elevation 7.83 m.
25.68 ft.
HWL
DUNCAN WHARF
BULK CARGOES
6.4 m.
21 ft.
LWL
CHART DATUM
11.89 m.
39 ft.
Sea bottom

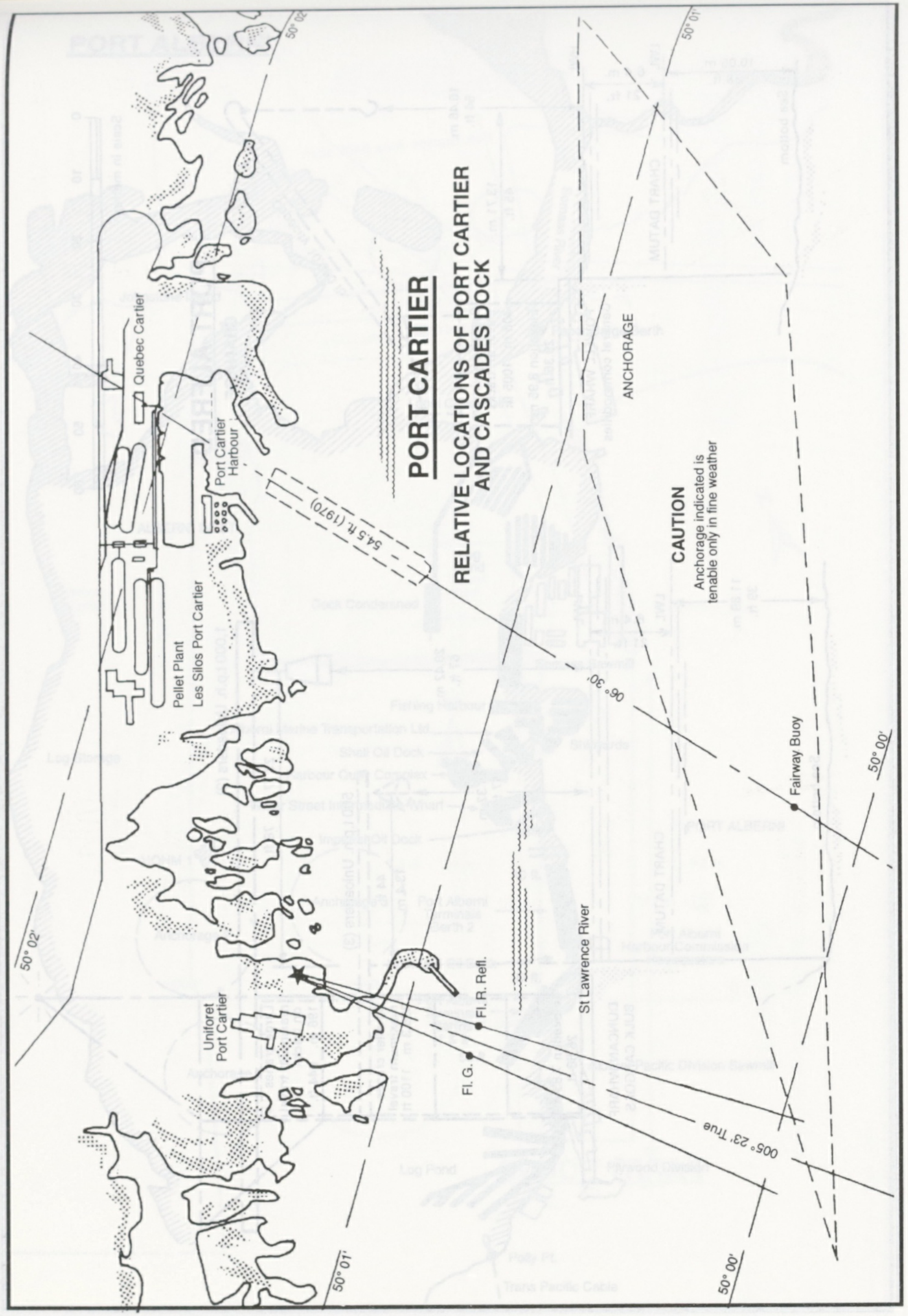


PORT ALICE

All Depths in Meters

N
0 60 m.
Main office
Sulphur Conveyor
Warehouse
Warehouse
Warehouse
5.18
4.57
6.09
5.18
9.14
9.14
6.09
6.4
7.92
8.53
9.45
9.45
9.14
12.19
10.97
10.36
7.01
3.35
Ship's Head 128°
Soundings taken 4.57 m. from dock face

"Plan Supplied by Ship's Master"



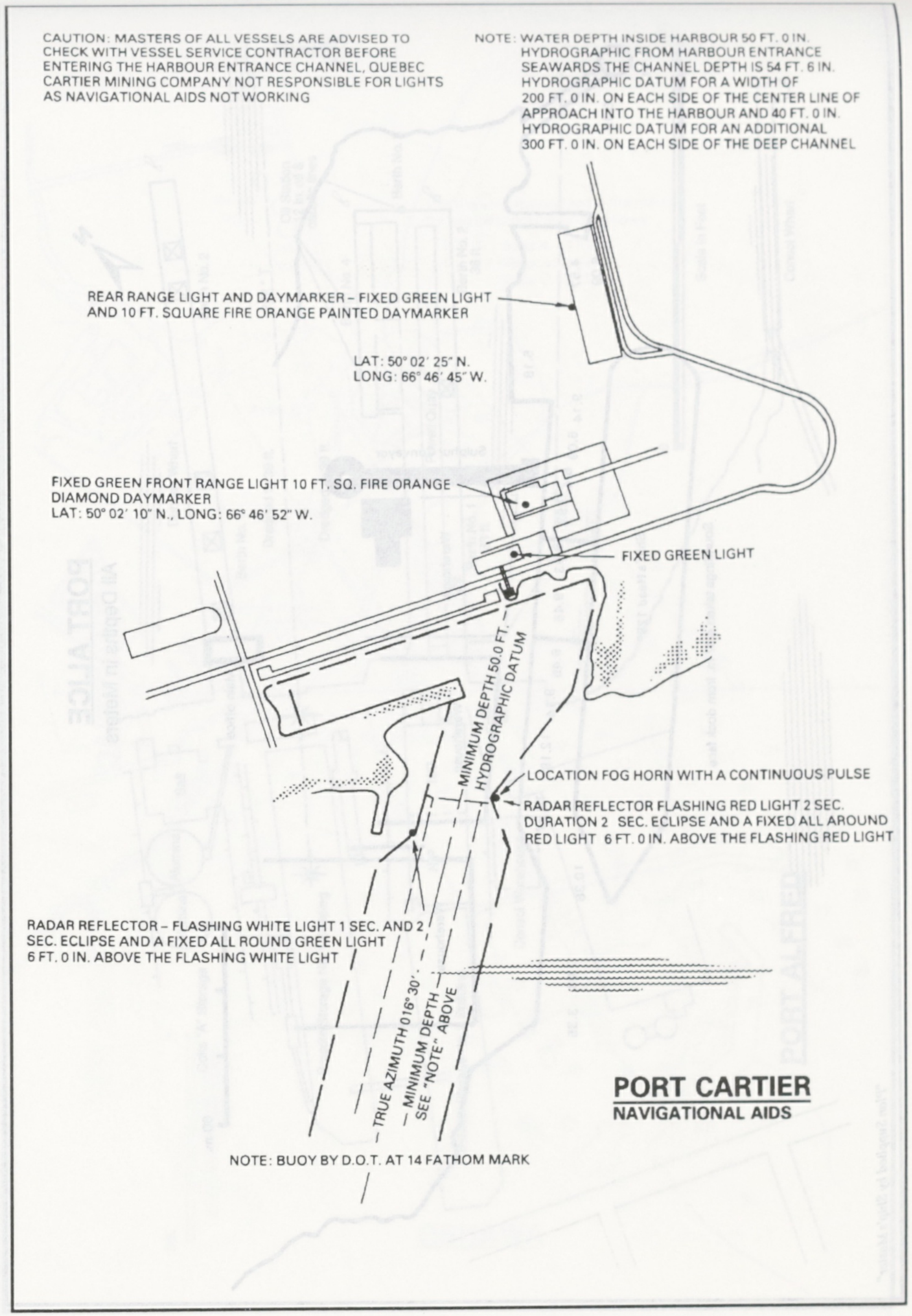
PORT CARTIER

RELATIVE LOCATIONS OF PORT CARTIER AND CASCADES DOCK

CAUTION

Anchorage indicated is tenable only in fine weather

Quebec Cartier
Port Cartier Harbour
Pellet Plant Les Silos Port Cartier
Uniforet Port Cartier
Fl. G.
Fl. R. Refl.
St Lawrence River
ANCHORAGE
Fairway Buoy
54.5 ft. (1970)
06° 30'
005° 23' True
50° 02'
50° 02'
50° 01'
50° 01'
50° 00'
50° 00'



CAUTION: MASTERS OF ALL VESSELS ARE ADVISED TO CHECK WITH VESSEL SERVICE CONTRACTOR BEFORE ENTERING THE HARBOUR ENTRANCE CHANNEL, QUEBEC CARTIER MINING COMPANY NOT RESPONSIBLE FOR LIGHTS AS NAVIGATIONAL AIDS NOT WORKING

NOTE: WATER DEPTH INSIDE HARBOUR 50 FT. 0 IN. HYDROGRAPHIC FROM HARBOUR ENTRANCE SEAWARDS THE CHANNEL DEPTH IS 54 FT. 6 IN. HYDROGRAPHIC DATUM FOR A WIDTH OF 200 FT. 0 IN. ON EACH SIDE OF THE CENTER LINE OF APPROACH INTO THE HARBOUR AND 40 FT. 0 IN. HYDROGRAPHIC DATUM FOR AN ADDITIONAL 300 FT. 0 IN. ON EACH SIDE OF THE DEEP CHANNEL

REAR RANGE LIGHT AND DAYMARKER – FIXED GREEN LIGHT AND 10 FT. SQUARE FIRE ORANGE PAINTED DAYMARKER

LAT: 50° 02' 25" N.
LONG: 66° 46' 45" W.

FIXED GREEN FRONT RANGE LIGHT 10 FT. SQ. FIRE ORANGE DIAMOND DAYMARKER
LAT: 50° 02' 10" N., LONG: 66° 46' 52" W.

FIXED GREEN LIGHT

MINIMUM DEPTH 50.0 FT. HYDROGRAPHIC DATUM

LOCATION FOG HORN WITH A CONTINUOUS PULSE

RADAR REFLECTOR FLASHING RED LIGHT 2 SEC. DURATION 2 SEC. ECLIPSE AND A FIXED ALL AROUND RED LIGHT 6 FT. 0 IN. ABOVE THE FLASHING RED LIGHT

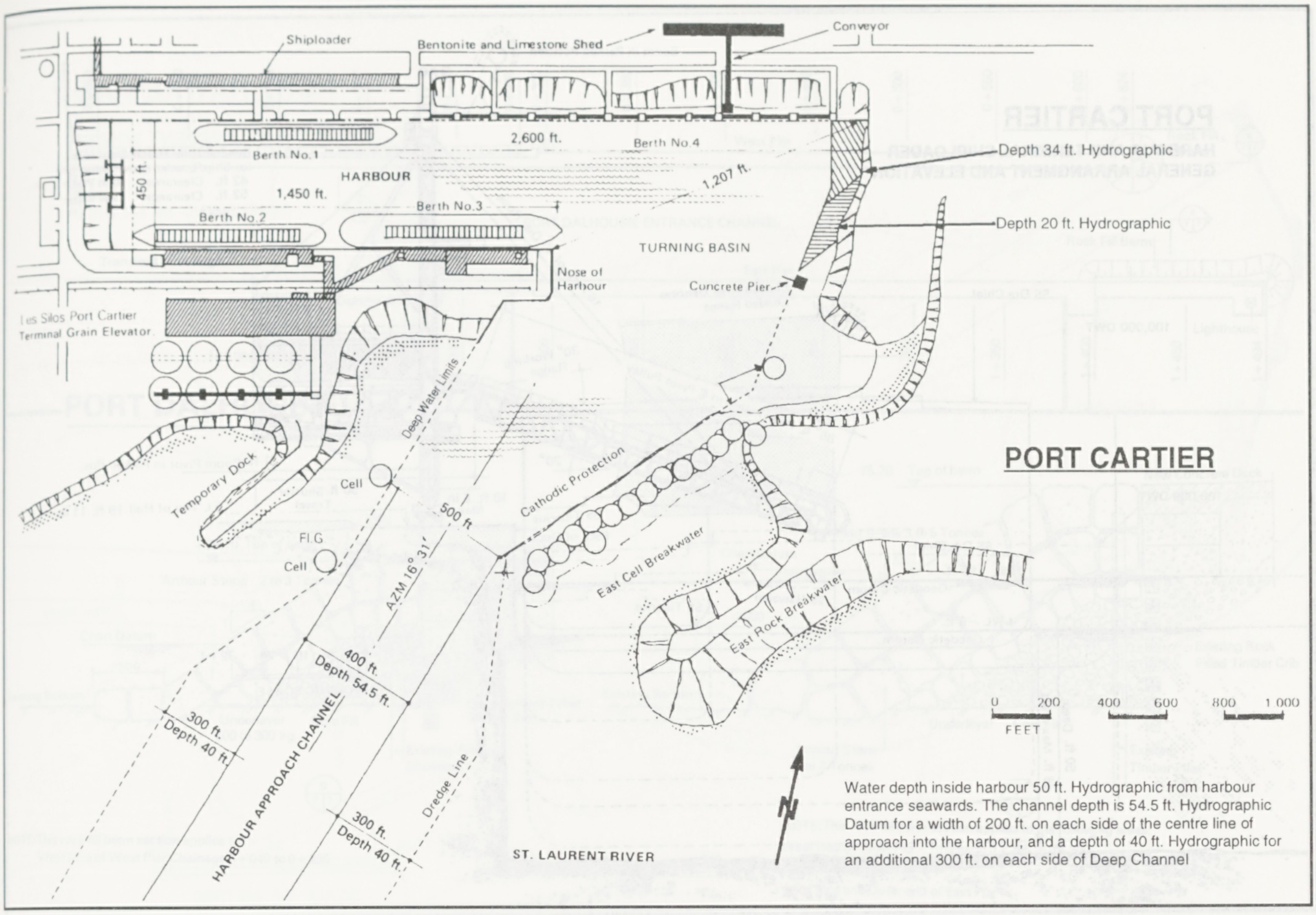
RADAR REFLECTOR – FLASHING WHITE LIGHT 1 SEC. AND 2 SEC. ECLIPSE AND A FIXED ALL ROUND GREEN LIGHT 6 FT. 0 IN. ABOVE THE FLASHING WHITE LIGHT

TRUE AZIMUTH 016° 30'
– MINIMUM DEPTH SEE "NOTE" ABOVE

NOTE: BUOY BY D.O.T. AT 14 FATHOM MARK

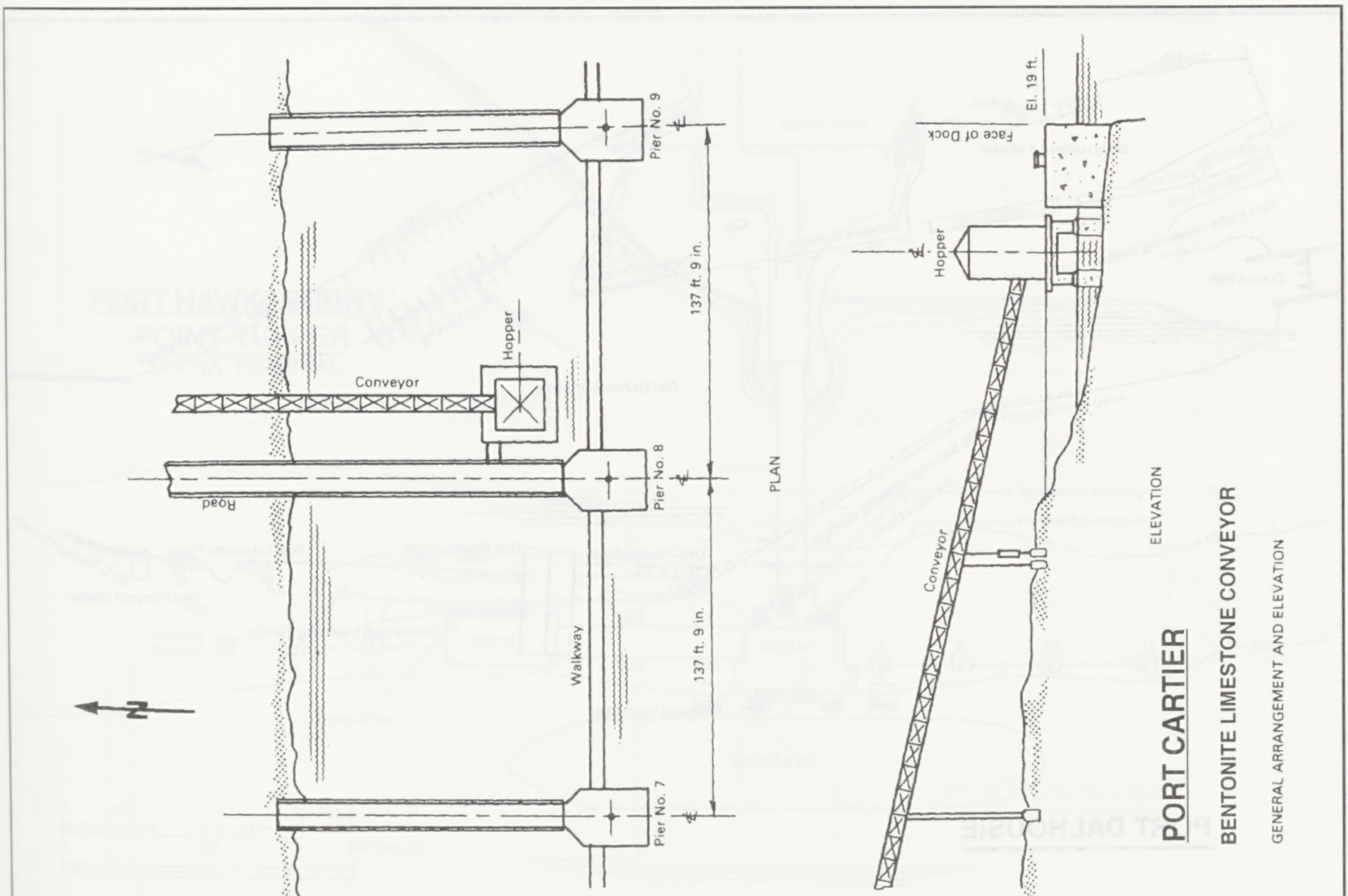
PORT CARTIER

NAVIGATIONAL AIDS


Shiploader
Bentonite and Limestone Shed
Conveyor
2,600 ft.
Berth No.1
Berth No.4
450 ft.
HARBOUR
1,450 ft.
1,207 ft.
Berth No.2
Berth No.3
TURNING BASIN
Nose of Harbour
Concrete Pier
Les Silos Port Cartier Terminal Grain Elevator
Depth 34 ft. Hydrographic
Depth 20 ft. Hydrographic
Temporary Dock
Deep Water Limits
Cell
Cathodic Protection
500 ft.
Fl.G
Cell
AZM 16°31'
East Cell Breakwater
East Rock Breakwater
400 ft.
Depth 54.5 ft.
300 ft.
Depth 40 ft.
HARBOUR APPROACH CHANNEL
Dredge Line
300 ft.
Depth 40 ft.
ST. LAURENT RIVER
0 200 400 600 800 1 000
FEET

PORT CARTIER

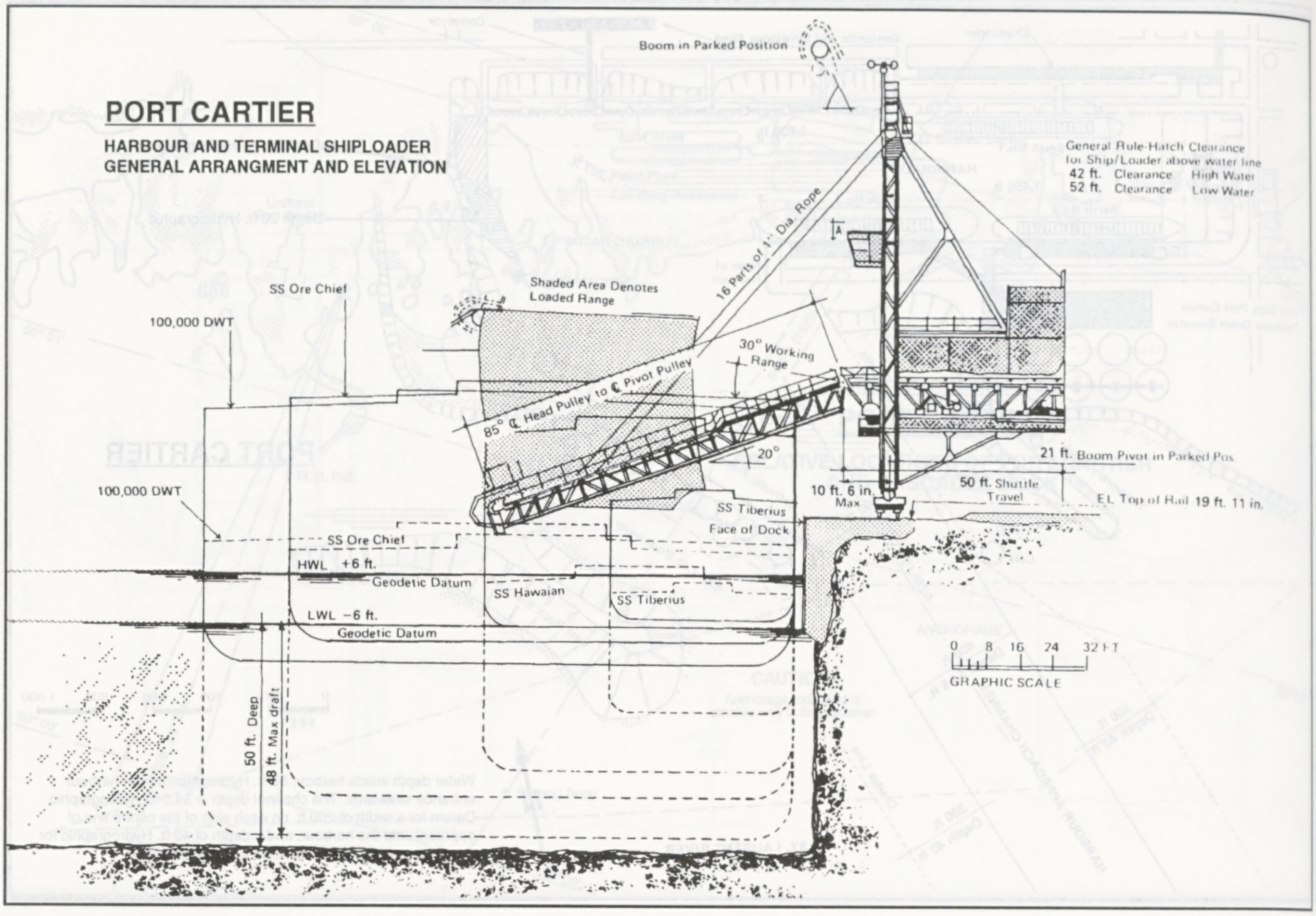
Water depth inside harbour 50 ft. Hydrographic from harbour entrance seawards. The channel depth is 54.5 ft. Hydrographic Datum for a width of 200 ft. on each side of the centre line of approach into the harbour, and a depth of 40 ft. Hydrographic for an additional 300 ft. on each side of Deep Channel


Pier No. 9
137 ft. 9 in.
Hopper
Conveyor
Pier No. 8
Road
PLAN
Walkway
137 ft. 9 in.
Pier No. 7
N
El. 19 ft.
Face of Dock
Hopper
Conveyor
ELEVATION

PORT CARTIER

BENTONITE LIMESTONE CONVEYOR

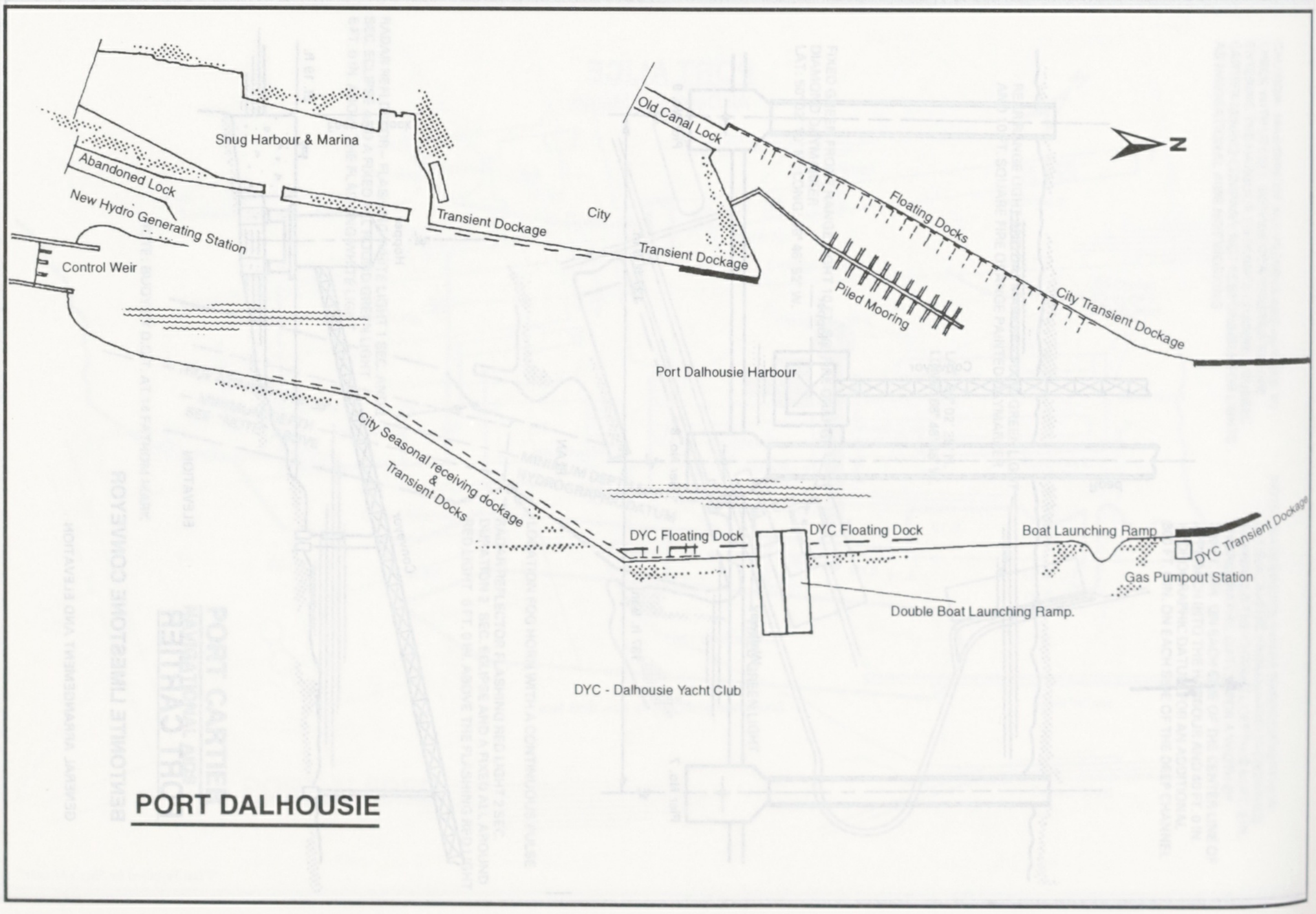
GENERAL ARRANGEMENT AND ELEVATION



PORT CARTIER

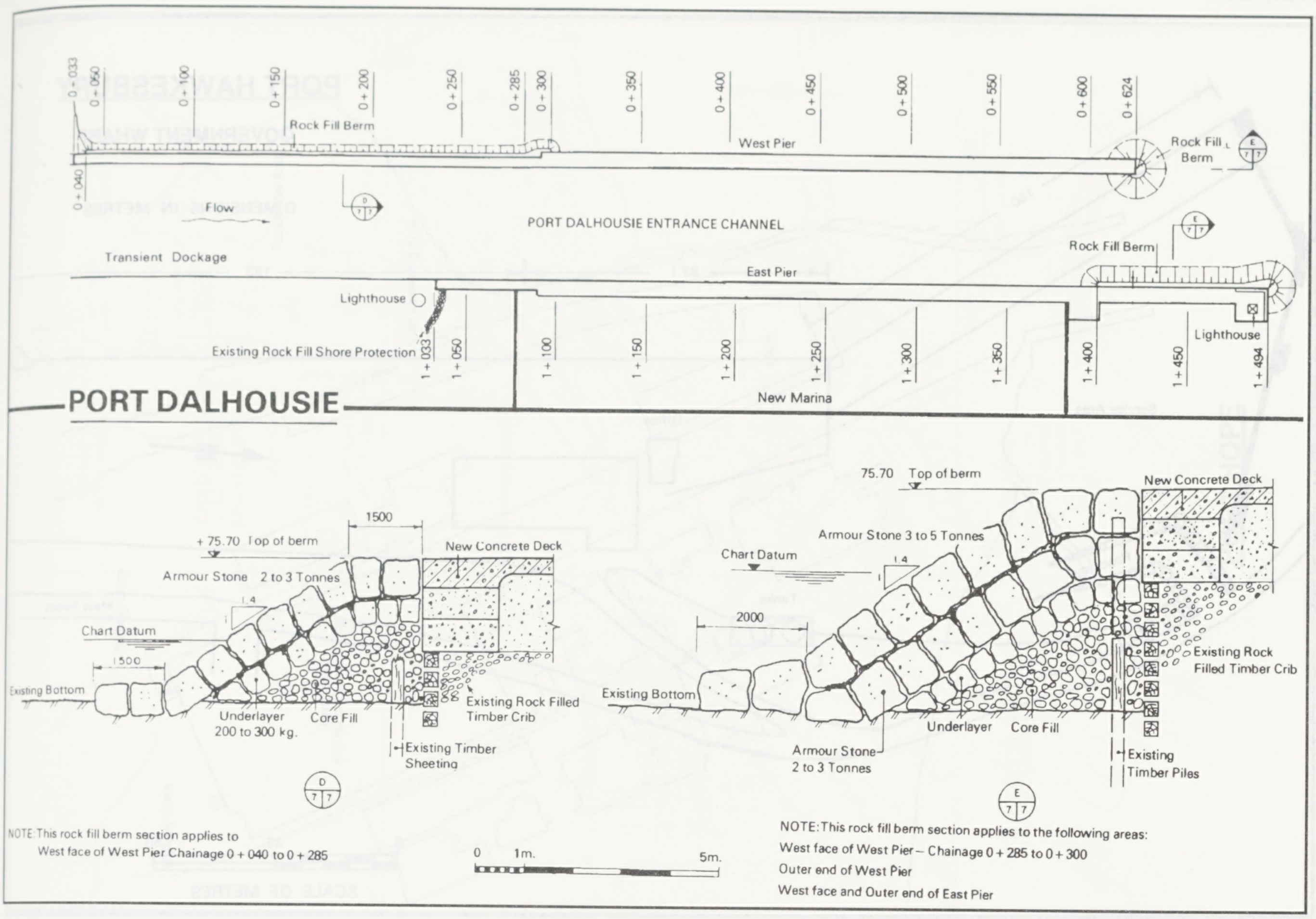
HARBOUR AND TERMINAL SHIPLOADER
GENERAL ARRANGMENT AND ELEVATION

Boom in Parked Position
General Rule-Hatch Clearance
for Ship/Loader above water line
42 ft. Clearance High Water
52 ft. Clearance Low Water
16 Parts of 1" Dia. Rope
Shaded Area Denotes
Loaded Range
SS Ore Chief
100,000 DWT
30° Working
Range
85° ℄ Head Pulley to ℄ Pivot Pulley
20°
21 ft. Boom Pivot in Parked Pos
50 ft. Shuttle
Travel
10 ft. 6 in.
Max
EL Top of Rail 19 ft. 11 in.
SS Tiberius
Face of Dock
100,000 DWT
SS Ore Chief
HWL +6 ft.
Geodetic Datum
SS Hawaian
SS Tiberius
LWL −6 ft.
Geodetic Datum
50 ft. Deep
48 ft. Max draft
0 8 16 24 32 FT
GRAPHIC SCALE



PORT DALHOUSIE

Snug Harbour & Marina
Abandoned Lock
New Hydro Generating Station
Control Weir
Transient Dockage
City
Transient Dockage
Old Canal Lock
Floating Docks
Piled Mooring
City Transient Dockage
N
Port Dalhousie Harbour
City Seasonal receiving dockage
&
Transient Docks
DYC Floating Dock
DYC Floating Dock
Boat Launching Ramp
DYC Transient Dockage
Gas Pumpout Station
Double Boat Launching Ramp.
DYC - Dalhousie Yacht Club

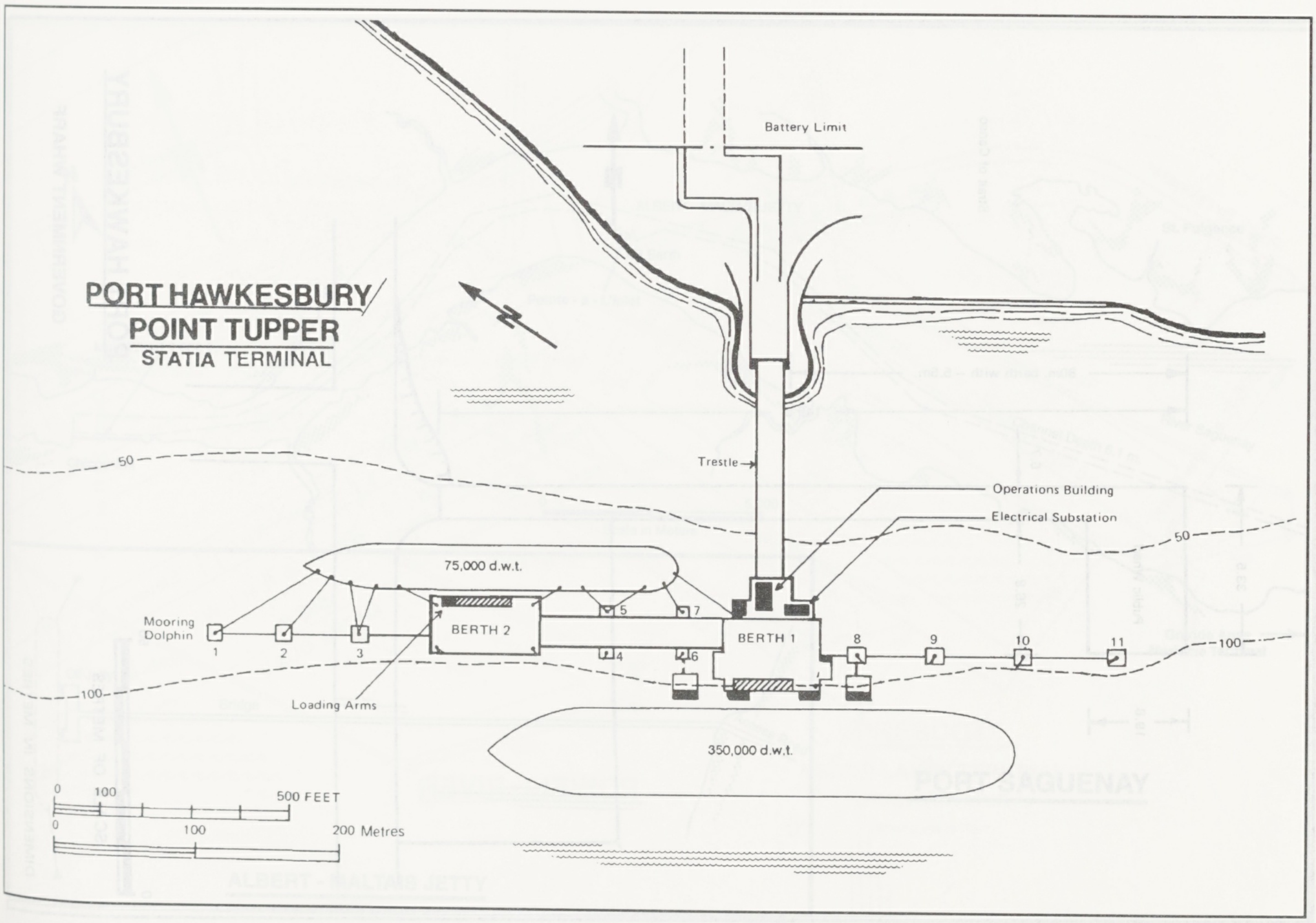


PORT DALHOUSIE

0 + 033
0 + 050
0 + 100
0 + 150
0 + 200
0 + 250
0 + 285
0 + 300
0 + 350
0 + 400
0 + 450
0 + 500
0 + 550
0 + 600
0 + 624
0 + 040
Rock Fill Berm
West Pier
Rock Fill Berm
E 7 7
D 7 7
Flow
PORT DALHOUSIE ENTRANCE CHANNEL
Transient Dockage
Rock Fill Berm
East Pier
Lighthouse
Existing Rock Fill Shore Protection
1 + 033
1 + 050
1 + 100
1 + 150
1 + 200
1 + 250
1 + 300
1 + 350
1 + 400
1 + 450
1 + 494
Lighthouse
New Marina
1500
+ 75.70 Top of berm
New Concrete Deck
Armour Stone 2 to 3 Tonnes
1.4
1
Chart Datum
1500
Existing Bottom
Underlayer 200 to 300 kg.
Core Fill
Existing Rock Filled Timber Crib
Existing Timber Sheeting
D 7 7
75.70 Top of berm
New Concrete Deck
Armour Stone 3 to 5 Tonnes
Chart Datum
1.4
1
2000
Existing Bottom
Existing Rock Filled Timber Crib
Underlayer
Core Fill
Armour Stone 2 to 3 Tonnes
Existing Timber Piles
E 7 7
0
1m.
5m.

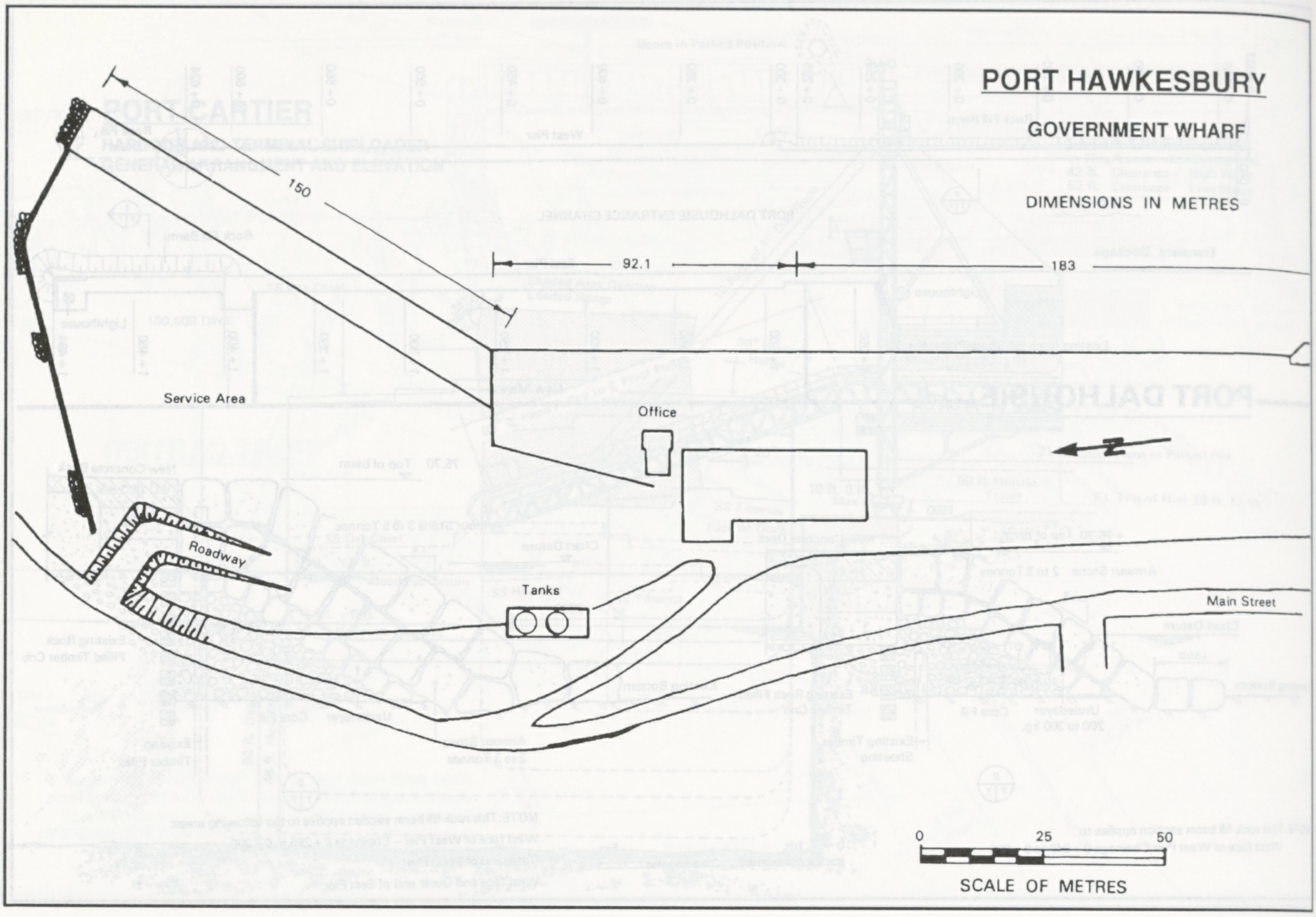
NOTE: This rock fill berm section applies to West face of West Pier Chainage 0 + 040 to 0 + 285

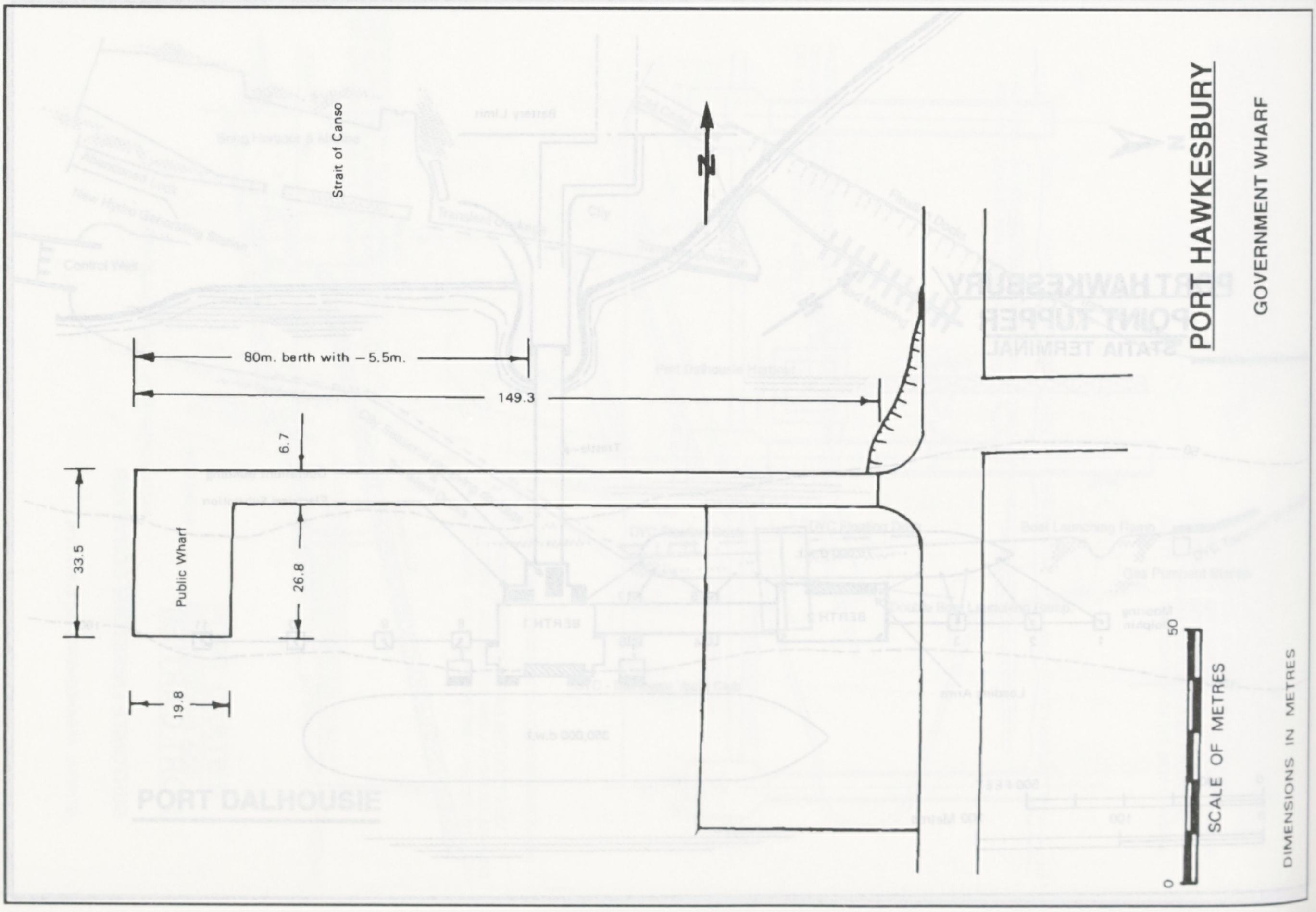
NOTE: This rock fill berm section applies to the following areas:
West face of West Pier – Chainage 0 + 285 to 0 + 300
Outer end of West Pier
West face and Outer end of East Pier

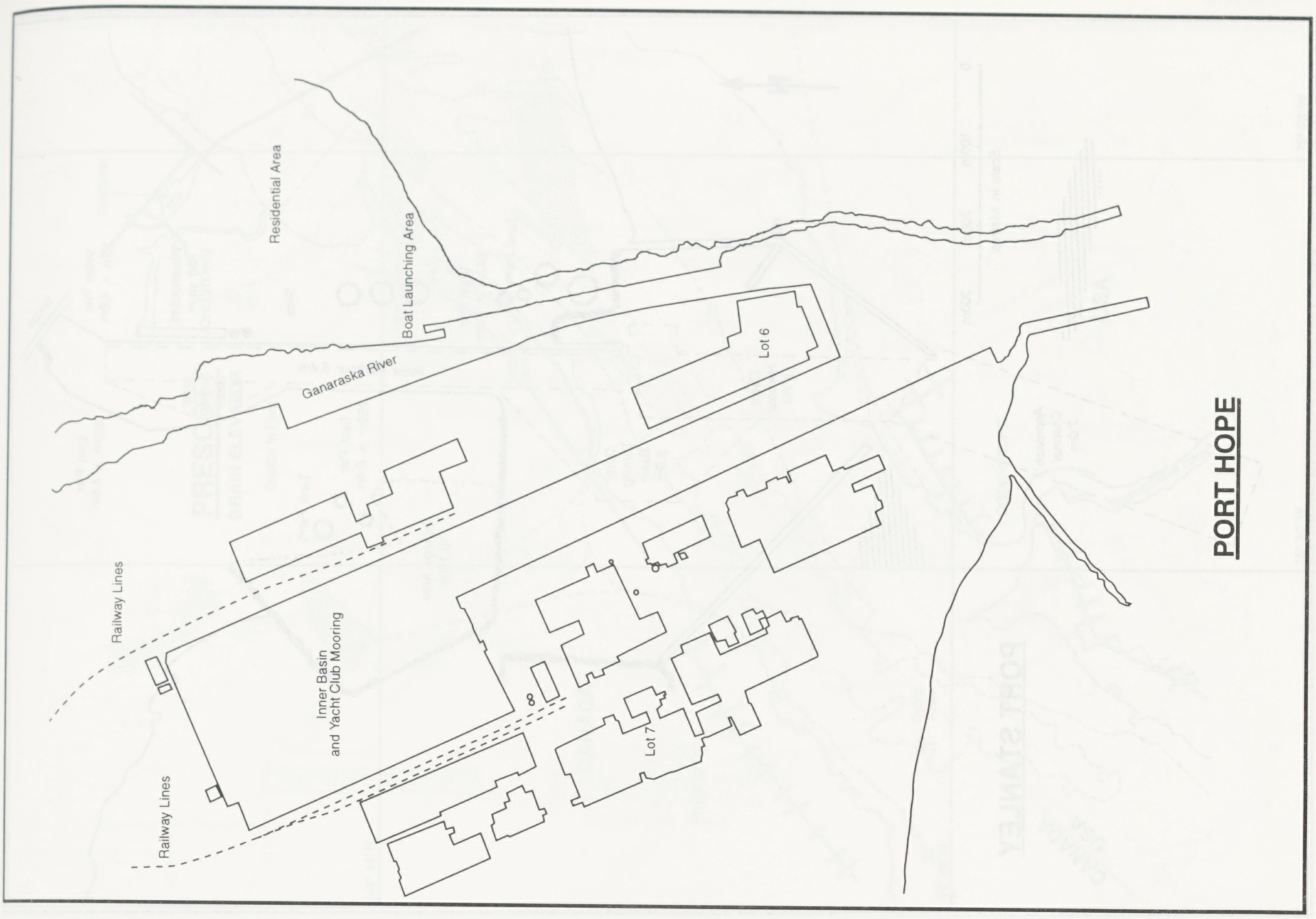


PORT HAWKESBURY/ POINT TUPPER
STATIA TERMINAL

Battery Limit
Trestle
Operations Building
Electrical Substation
50
50
75,000 d.w.t.
Mooring Dolphin
1
2
3
BERTH 2
5
7
4
6
BERTH 1
8
9
10
11
100
100
Loading Arms
350,000 d.w.t.
0
100
500 FEET
0
100
200 Metres

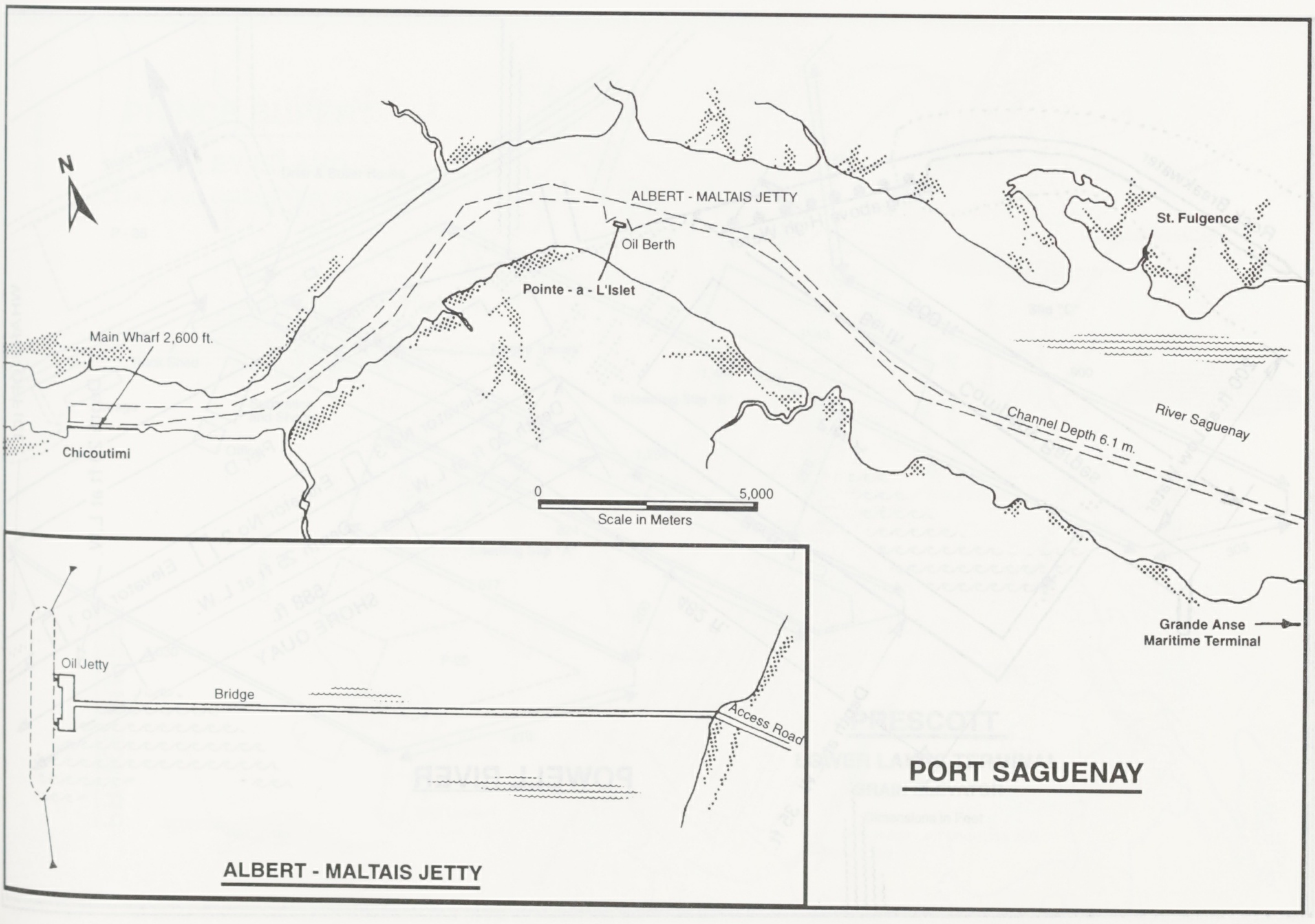

PORT HAWKESBURY
GOVERNMENT WHARF
DIMENSIONS IN METRES
150
92.1
183
Service Area
Office
Roadway
Tanks
Main Street
N
0
25
50
SCALE OF METRES


PORT HAWKESBURY
GOVERNMENT WHARF
Strait of Canso
N
80m. berth with −5.5m.
149.3
6.7
33.5
26.8
Public Wharf
19.8
50
SCALE OF METRES
0
DIMENSIONS IN METRES



PORT HOPE

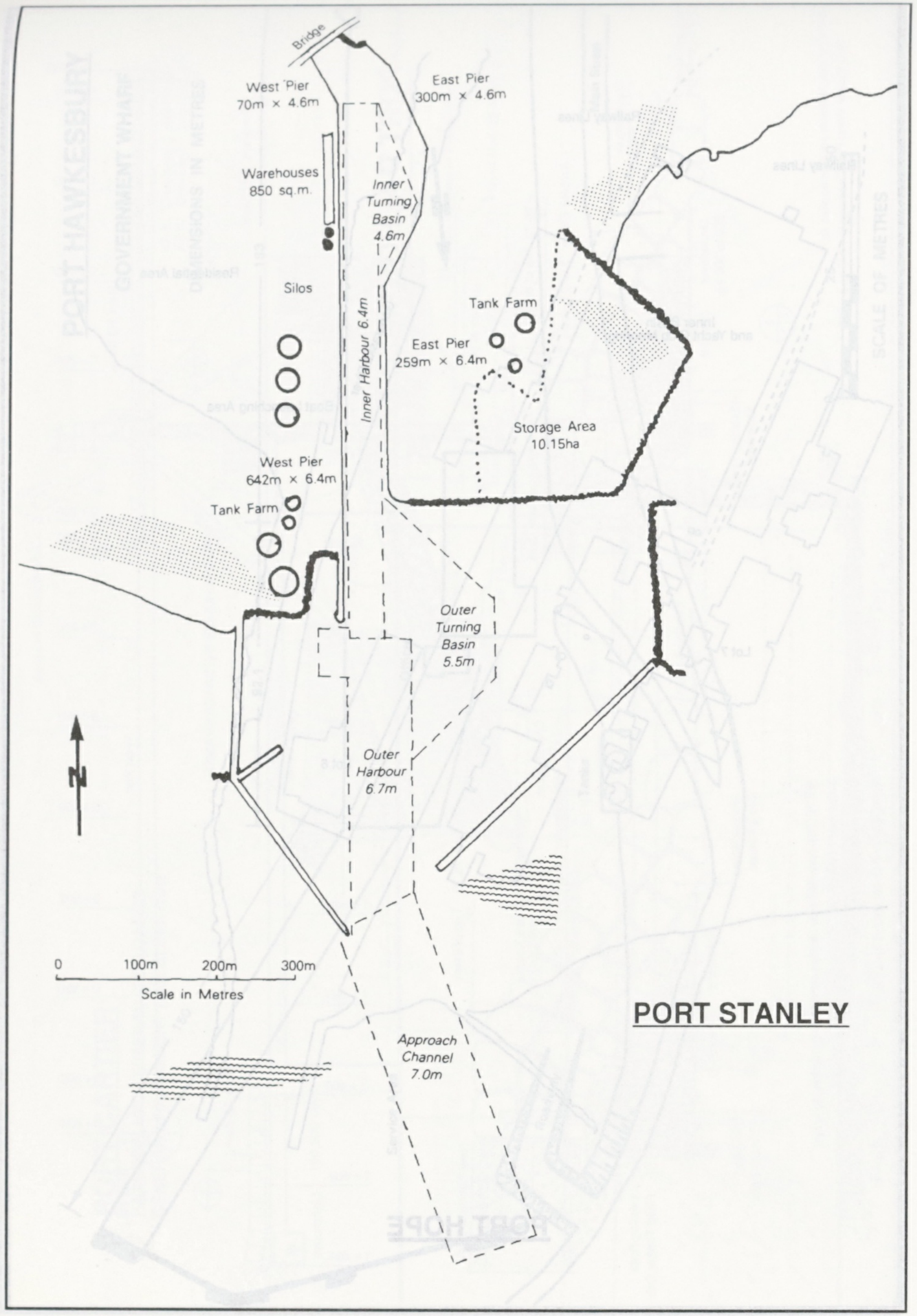
Residential Area
Boat Launching Area
Ganaraska River
Lot 6
Railway Lines
Inner Basin
and Yacht Club Mooring
Lot 7
Railway Lines



PORT SAGUENAY

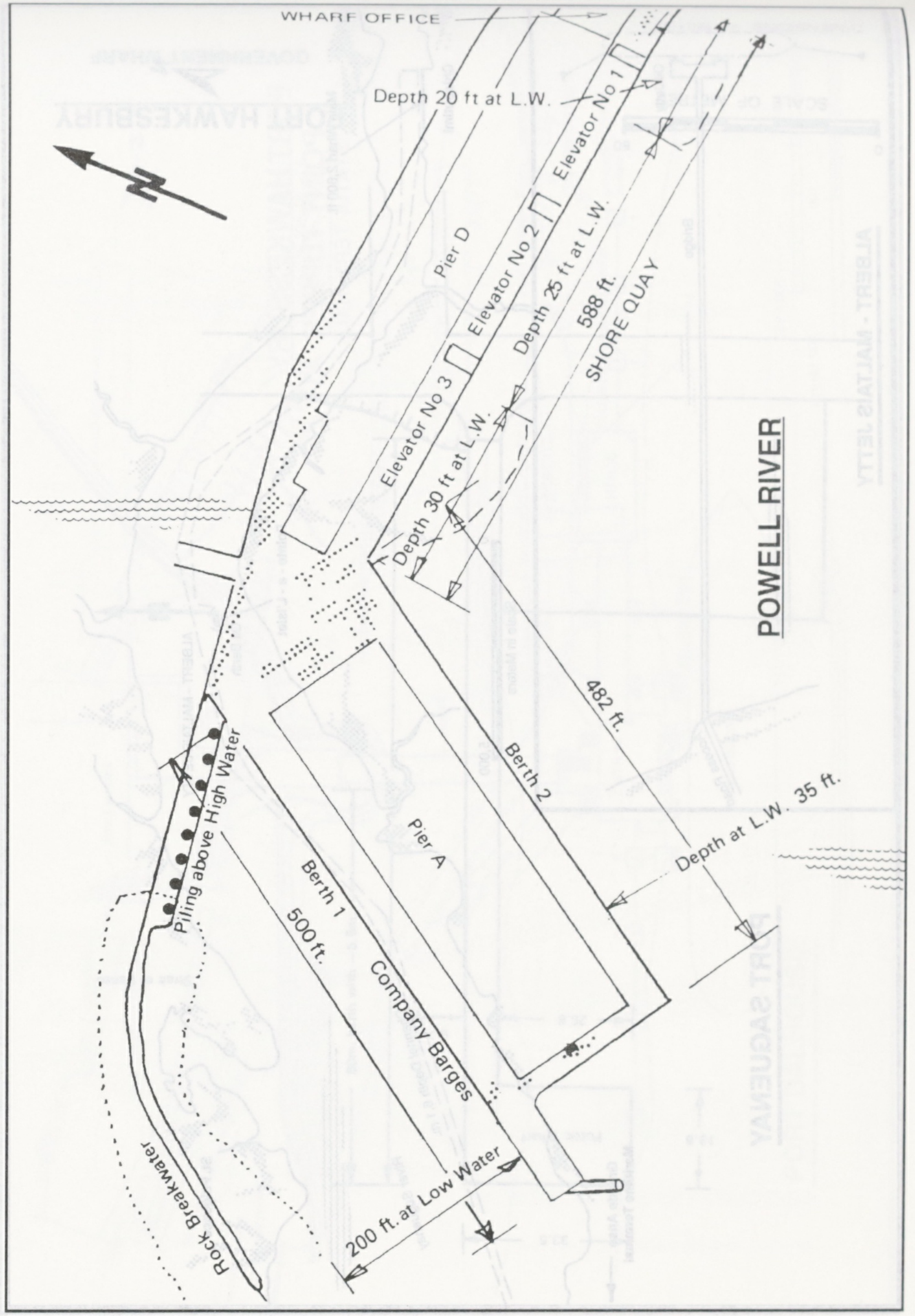
ALBERT - MALTAIS JETTY

N
ALBERT - MALTAIS JETTY
Oil Berth
Pointe - a - L'Islet
St. Fulgence
Main Wharf 2,600 ft.
Chicoutimi
Channel Depth 6.1 m.
River Saguenay
0
5,000
Scale in Meters
Grande Anse
Maritime Terminal
Oil Jetty
Bridge
Access Road



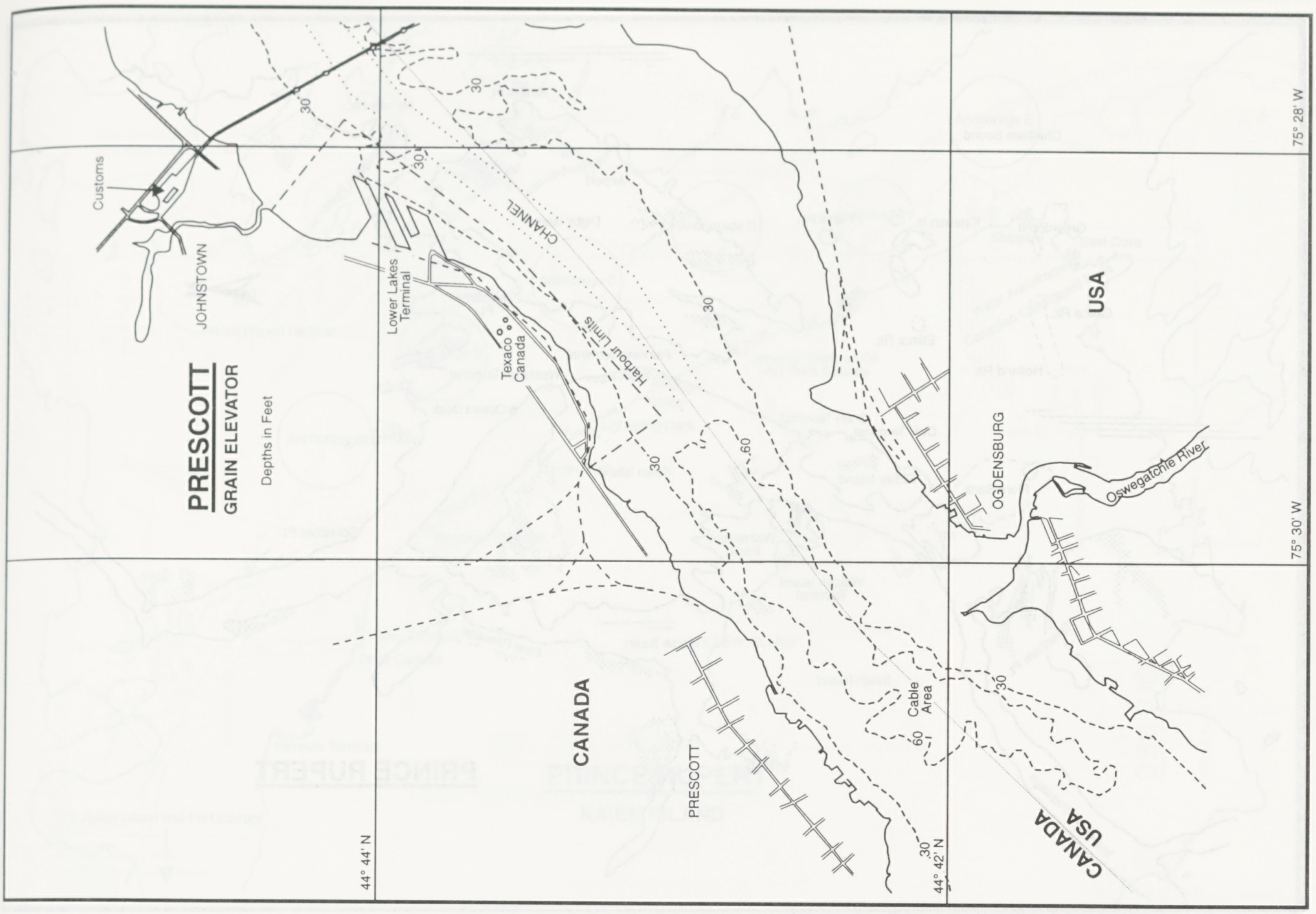
PORT STANLEY

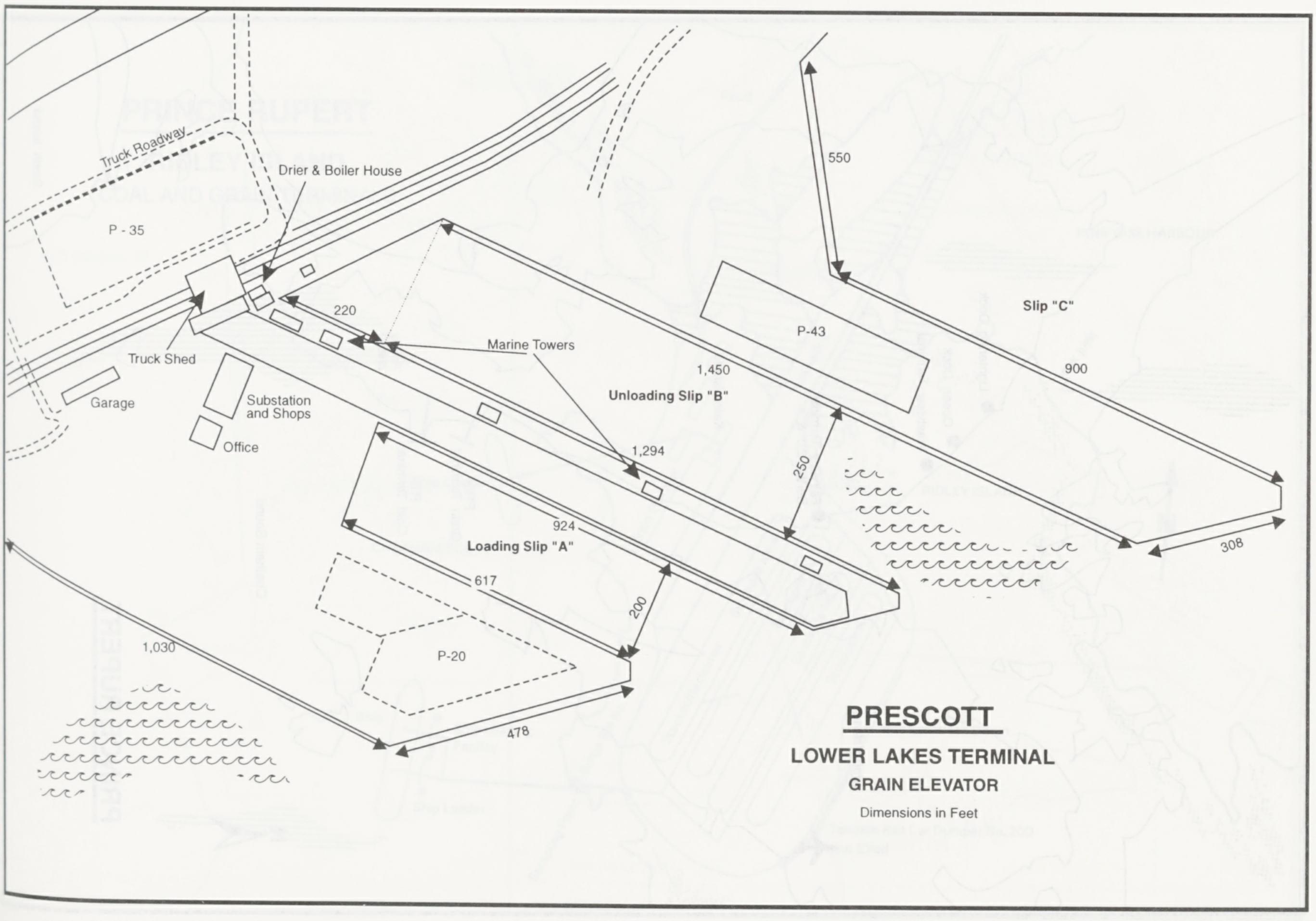
Bridge
West Pier
70m × 4.6m
East Pier
300m × 4.6m
Warehouses
850 sq.m.
Inner
Turning
Basin
4.6m
Silos
Tank Farm
East Pier
259m × 6.4m
Inner Harbour 6.4m
Storage Area
10.15ha
West Pier
642m × 6.4m
Tank Farm
Outer
Turning
Basin
5.5m
N
Outer
Harbour
6.7m
0
100m
200m
300m
Scale in Metres
Approach
Channel
7.0m

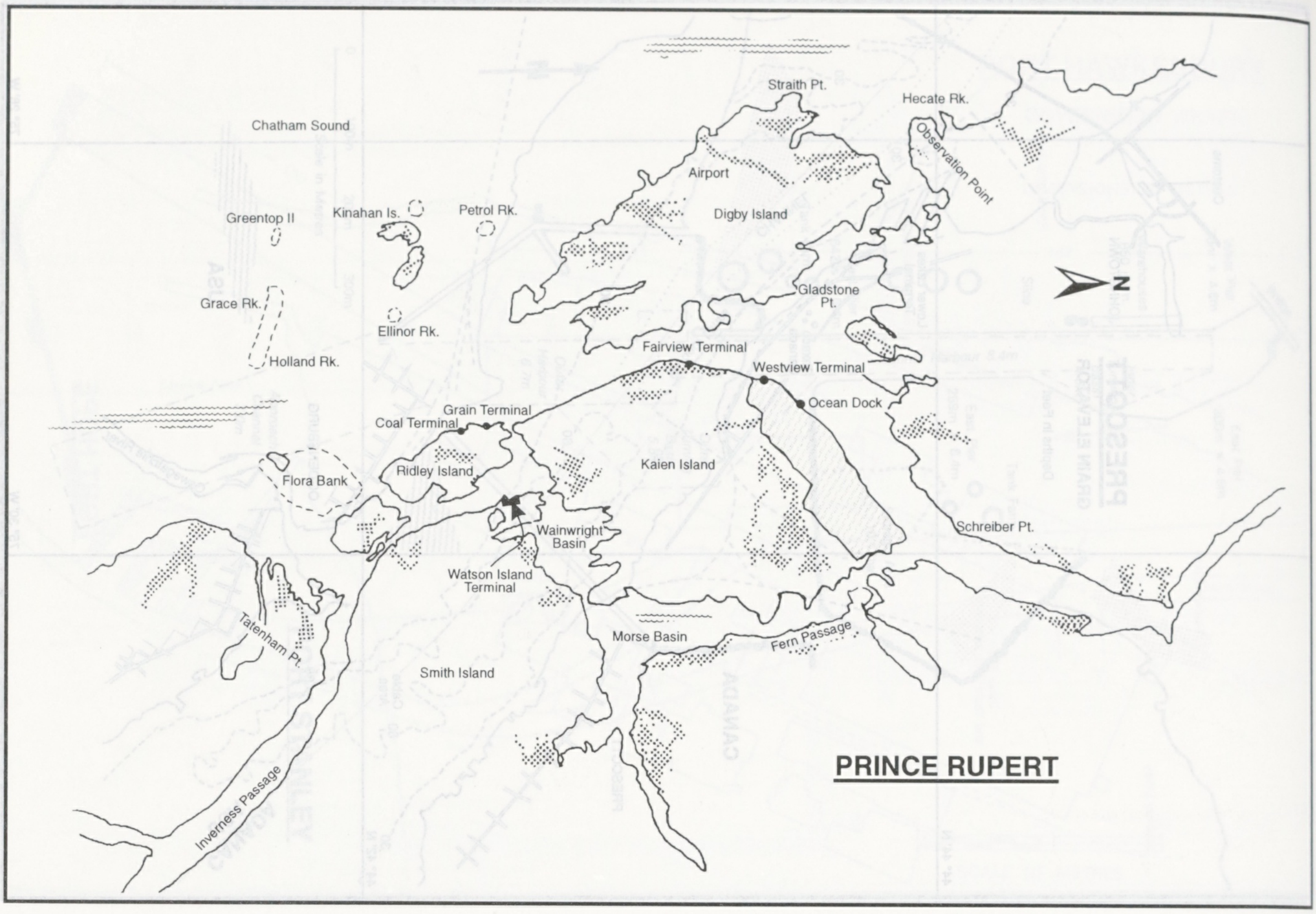


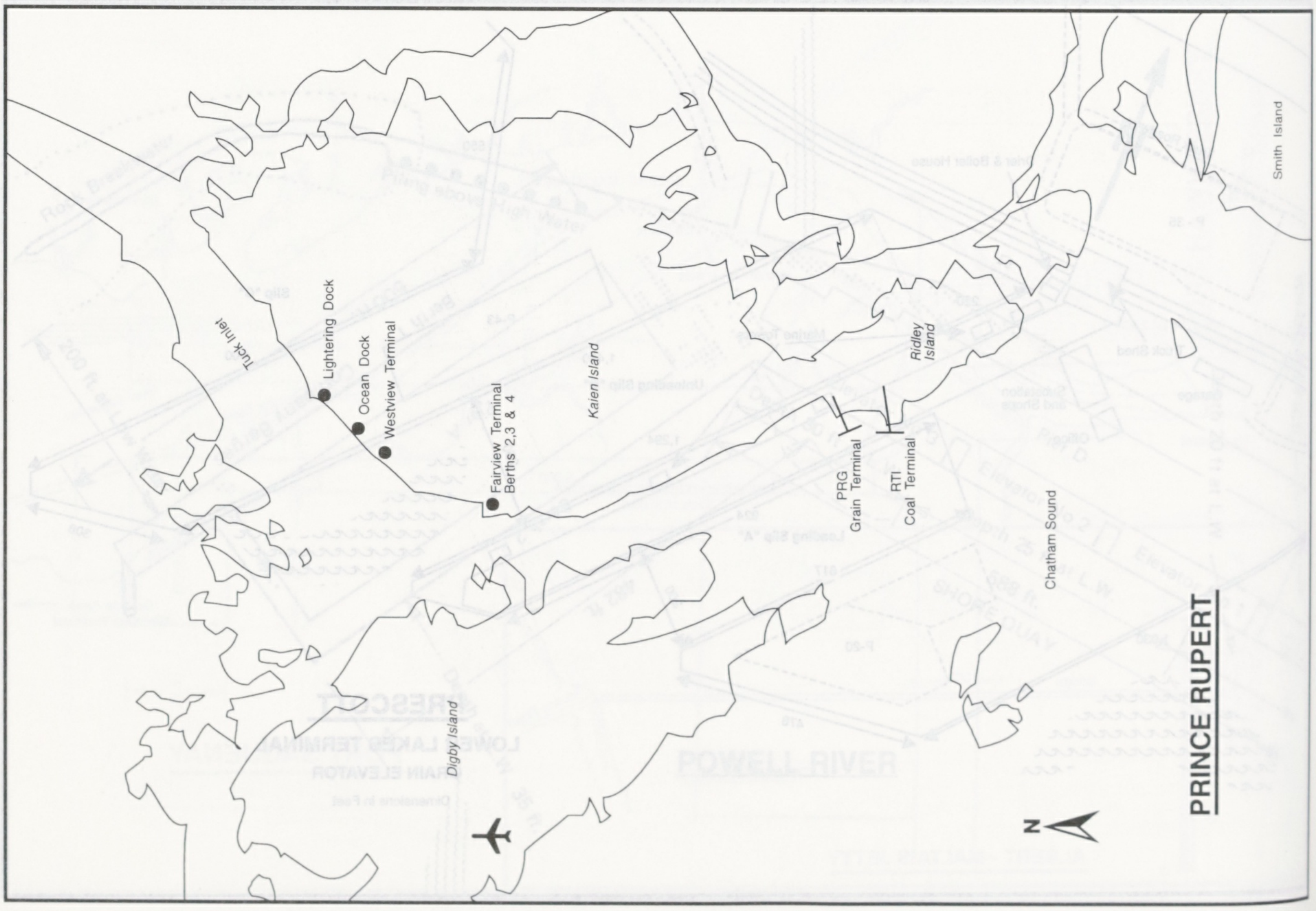
POWELL RIVER

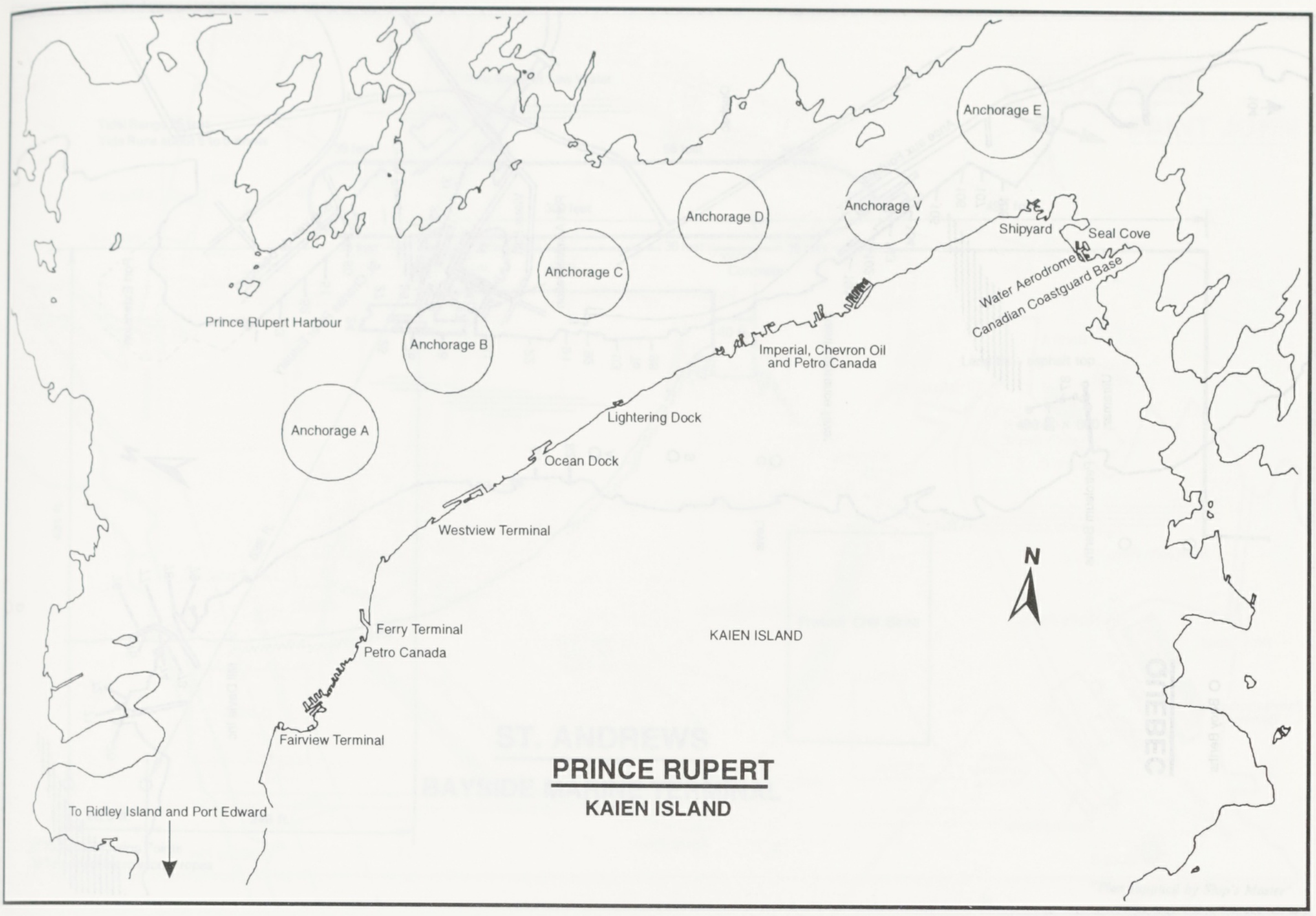
WHARF OFFICE
Depth 20 ft at L.W.
Elevator No 1
Elevator No 2
Pier D
Depth 25 ft at L.W.
588 ft.
SHORE QUAY
N
Elevator No 3
Depth 30 ft at L.W.
482 ft.
Berth 2
Pier A
Depth at L.W. 35 ft.
Piling above High Water
Berth 1
500 ft.
Company Barges
200 ft. at Low Water
Rock Breakwater


PRESCOTT
GRAIN ELEVATOR
Depths in Feet
Customs
JOHNSTOWN
Lower Lakes Terminal
Texaco Canada
Harbour Limits
CHANNEL
30
60
USA
OGDENSBURG
Oswegatchie River
CANADA
PRESCOTT
Cable Area
CANADA
USA
44° 44' N
44° 42' N
75° 28' W
75° 30' W


Truck Roadway
Drier & Boiler House
P - 35
220
Marine Towers
Truck Shed
Garage
Substation and Shops
Office
550
P-43
Slip "C"
1,450
Unloading Slip "B"
900
250
1,294
924
Loading Slip "A"
617
200
308
1,030
P-20
478
PRESCOTT
LOWER LAKES TERMINAL
GRAIN ELEVATOR
Dimensions in Feet


Straith Pt.
Hecate Rk.
Observation Point
Chatham Sound
Airport
Digby Island
Greentop II
Kinahan Is.
Petrol Rk.
N
Grace Rk.
Gladstone Pt.
Ellinor Rk.
Holland Rk.
Fairview Terminal
Westview Terminal
Ocean Dock
Grain Terminal
Coal Terminal
Kaien Island
Ridley Island
Flora Bank
Wainwright Basin
Schreiber Pt.
Watson Island Terminal
Tatenham Pt.
Morse Basin
Fern Passage
Smith Island
PRINCE RUPERT
Inverness Passage

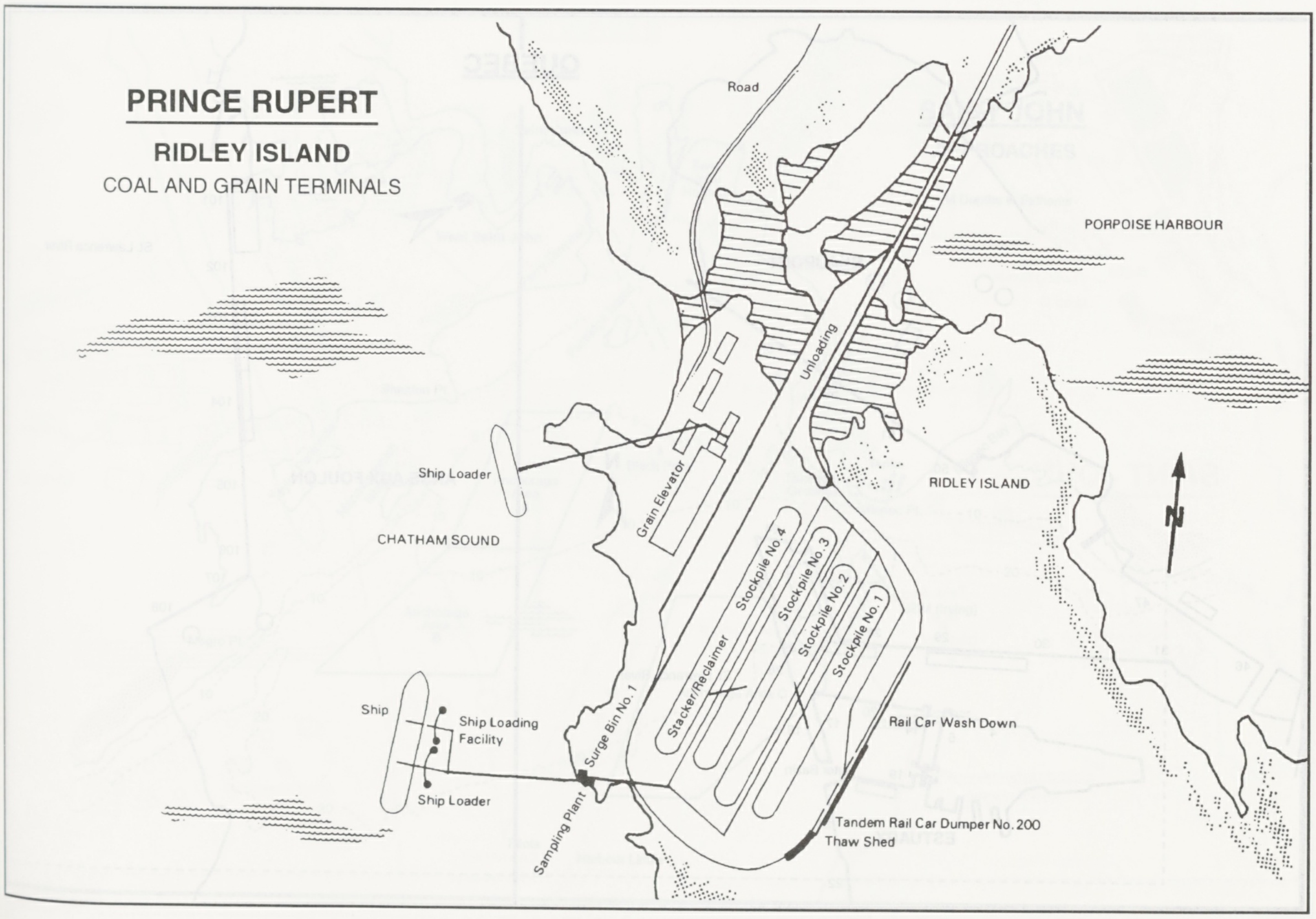

Smith Island
Tuck Inlet
Lightering Dock
Ocean Dock
Westview Terminal
Fairview Terminal Berths 2,3 & 4
Kaien Island
Ridley Island
PRG Grain Terminal
RTI Coal Terminal
Chatham Sound
PRINCE RUPERT
Digby Island
N



PRINCE RUPERT

KAIEN ISLAND

Anchorage E
Anchorage D
Anchorage V
Anchorage C
Anchorage B
Anchorage A
Shipyard
Seal Cove
Water Aerodrome
Canadian Coastguard Base
Prince Rupert Harbour
Imperial, Chevron Oil and Petro Canada
Lightering Dock
Ocean Dock
Westview Terminal
N
Ferry Terminal
Petro Canada
KAIEN ISLAND
Fairview Terminal
To Ridley Island and Port Edward

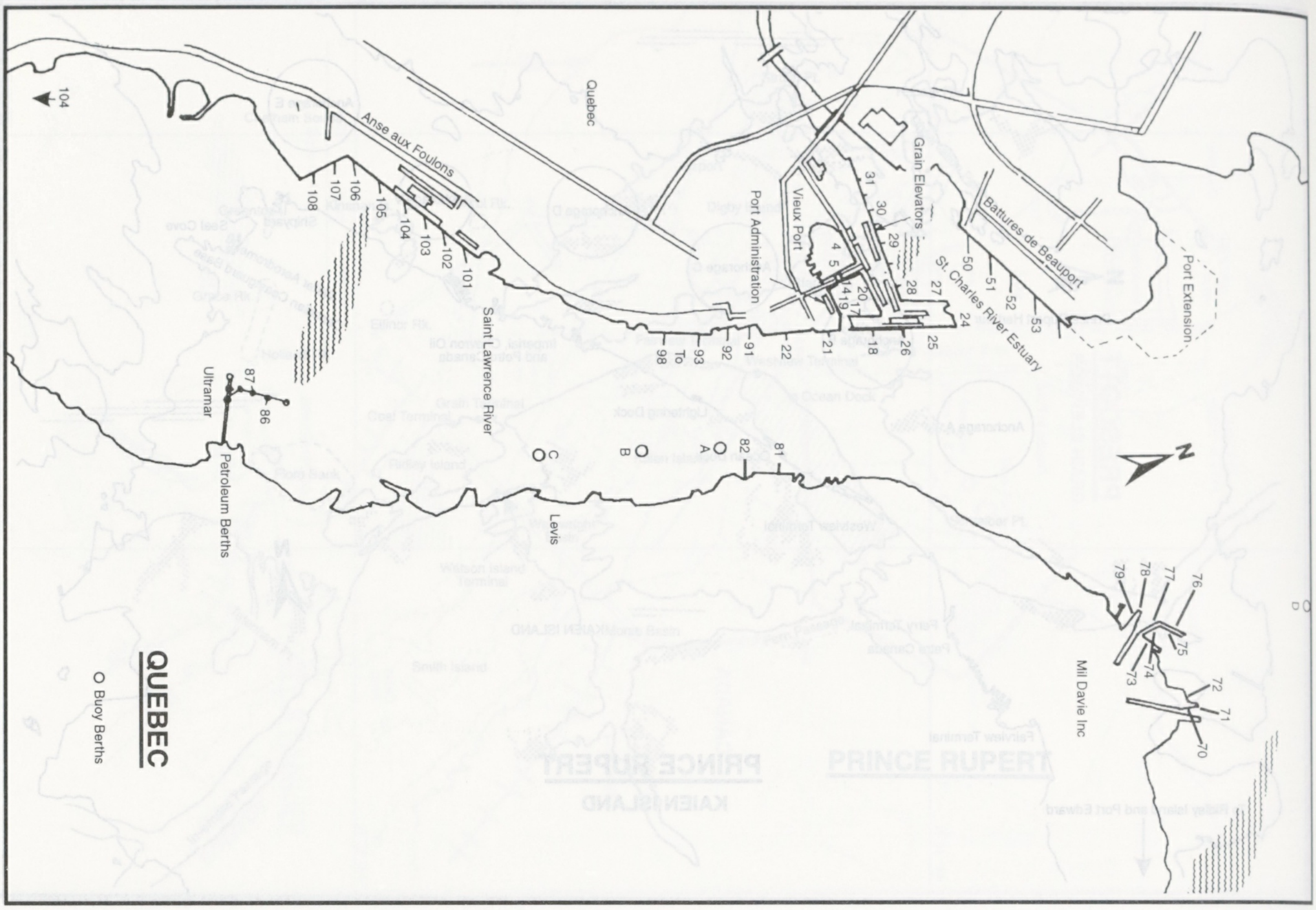


PRINCE RUPERT

RIDLEY ISLAND

COAL AND GRAIN TERMINALS

Road
PORPOISE HARBOUR
Unloading
Ship Loader
Grain Elevator
RIDLEY ISLAND
N
CHATHAM SOUND
Stockpile No. 4
Stockpile No. 3
Stockpile No. 2
Stockpile No. 1
Stacker/Reclaimer
Ship
Ship Loading Facility
Surge Bin No. 1
Rail Car Wash Down
Ship Loader
Sampling Plant
Tandem Rail Car Dumper No. 200
Thaw Shed


QUEBEC
○ Buoy Berths
Port Extension
Battures de Beauport
St. Charles River Estuary
Grain Elevators
Vieux Port
Port Administration
Quebec
Anse aux Foulons
Saint Lawrence River
Levis
Mil Davie Inc
Petroleum Berths
Ultramar
N
104
50
51
52
53
24
25
26
27
28
29
30
31
18
20
17
14
19
4
5
21
22
91
92
93
To
98
81
82
A
B
C
101
102
103
104
105
106
107
108
86
87
70
71
72
73
74
75
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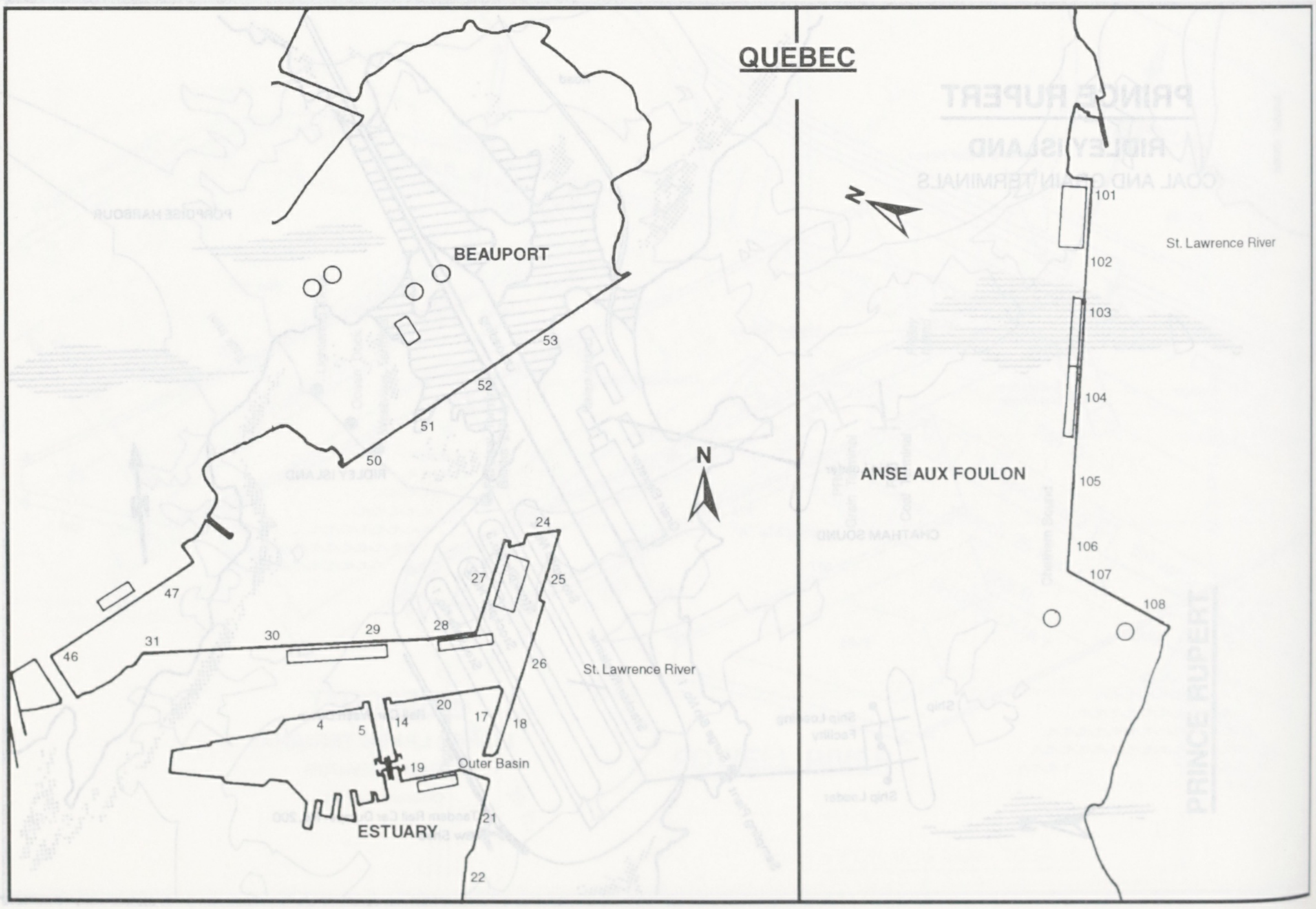
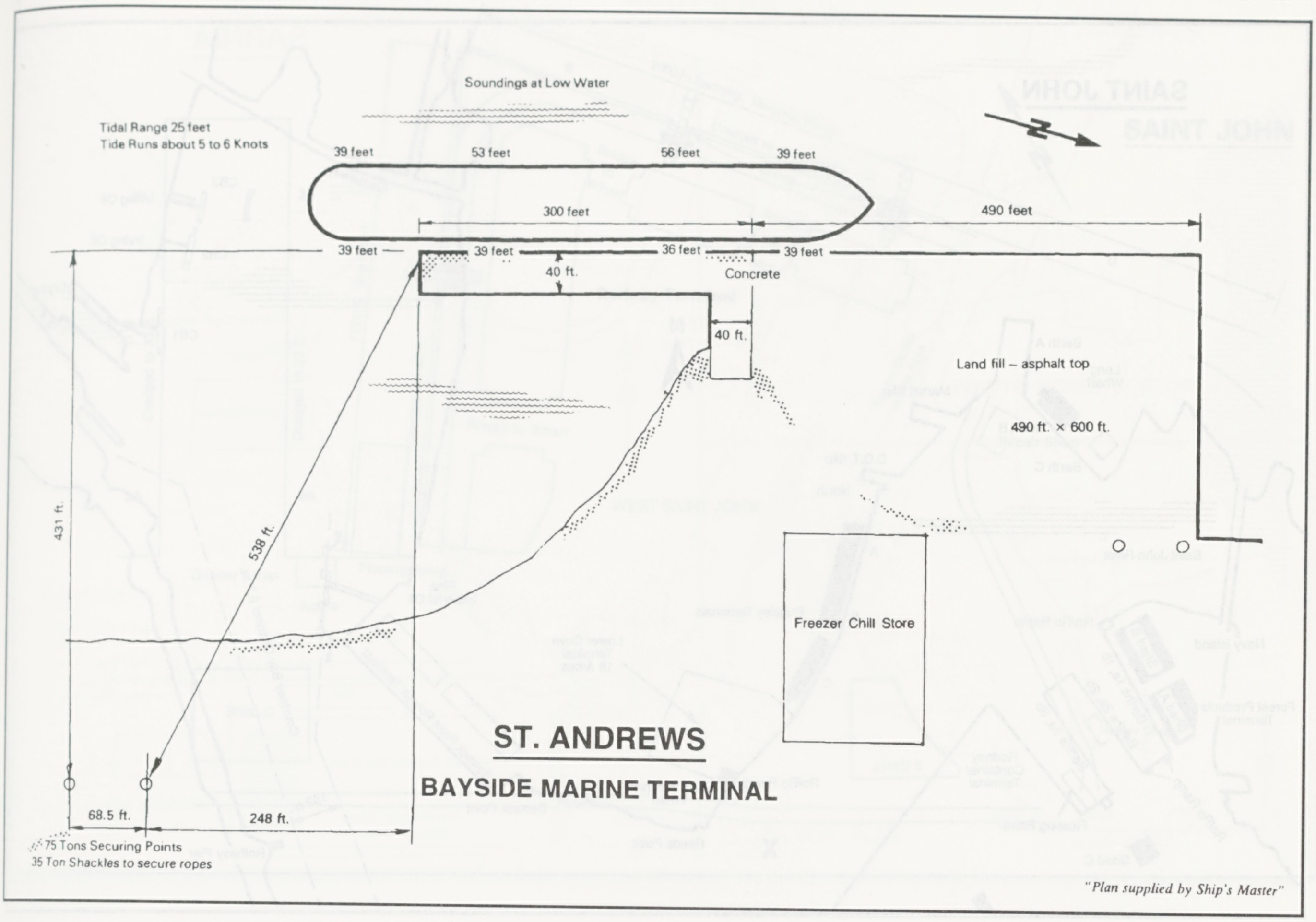
77
78
79


QUEBEC
BEAUPORT
ESTUARY
Outer Basin
St. Lawrence River
ANSE AUX FOULON
St. Lawrence River
N
N
46
47
31
30
29
28
27
24
25
26
18
17
20
14
19
5
4
21
22
50
51
52
53
101
102
103
104
105
106
107
108

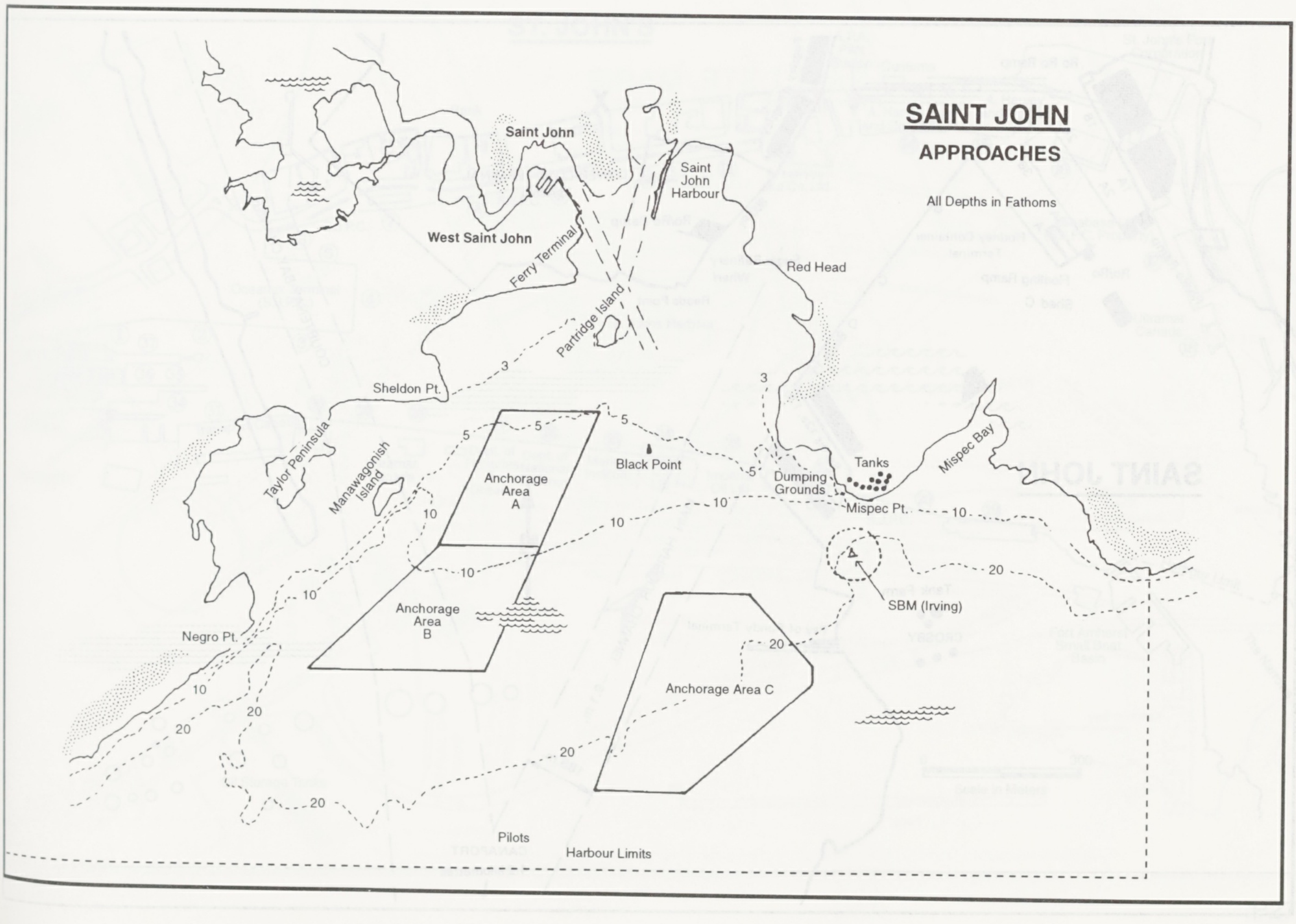


ST. ANDREWS

BAYSIDE MARINE TERMINAL

Soundings at Low Water
Tidal Range 25 feet
Tide Runs about 5 to 6 Knots
39 feet
53 feet
56 feet
39 feet
300 feet
490 feet
39 feet
39 feet
36 feet
39 feet
40 ft.
Concrete
40 ft.
Land fill – asphalt top
490 ft. × 600 ft.
431 ft.
538 ft.
Freezer Chill Store
68.5 ft.
248 ft.
75 Tons Securing Points
35 Ton Shackles to secure ropes

"Plan supplied by Ship's Master"

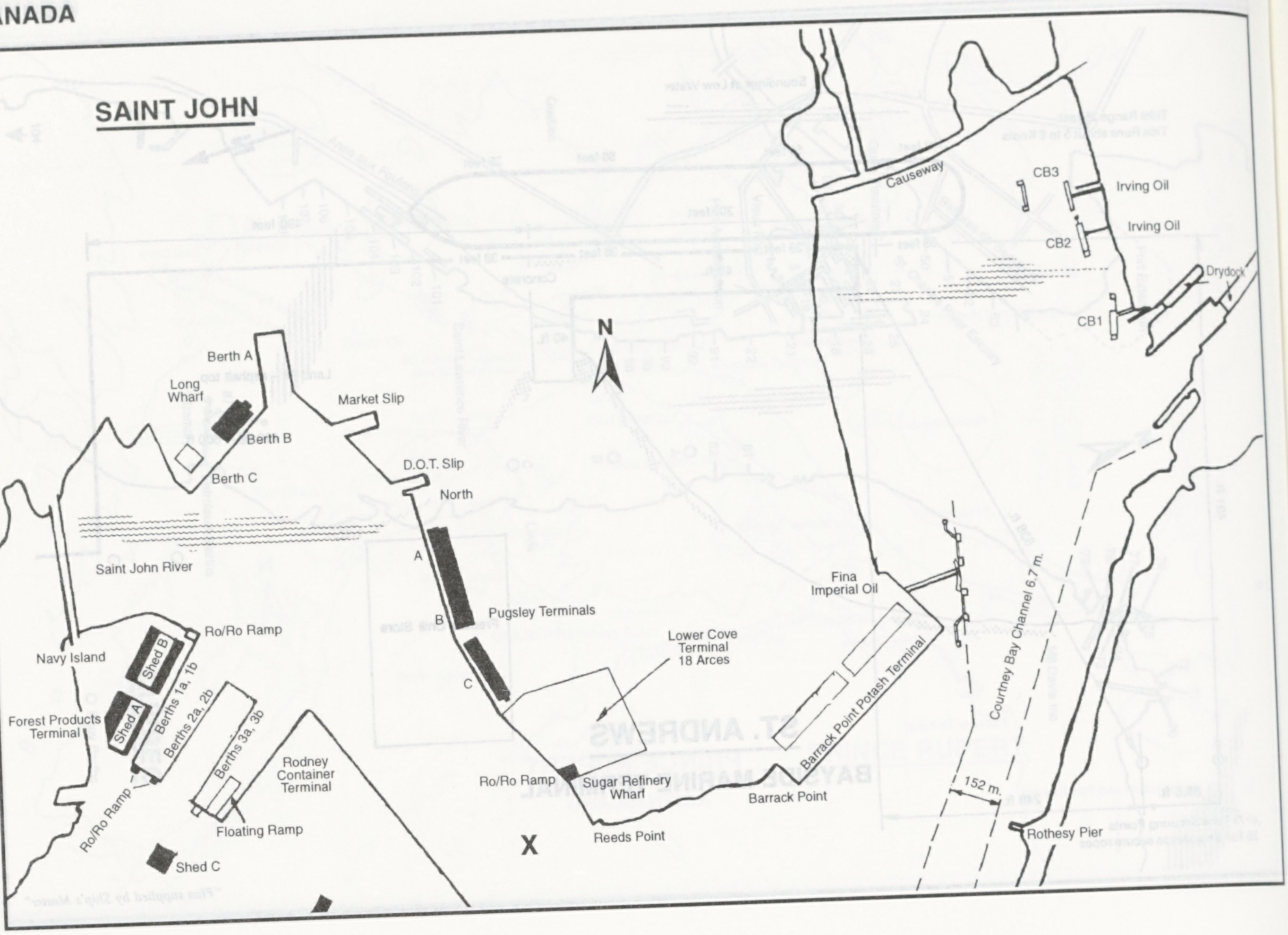


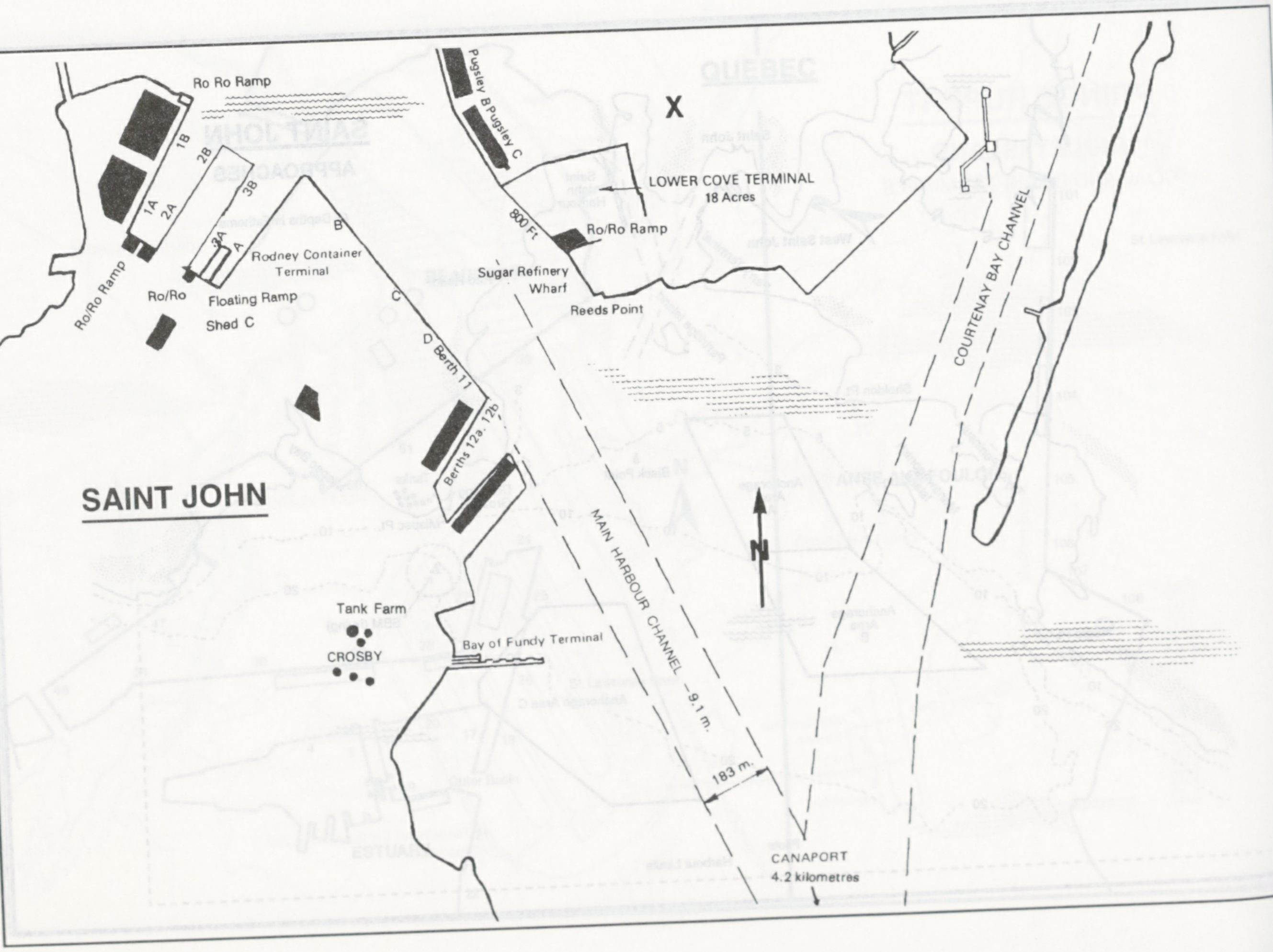
SAINT JOHN

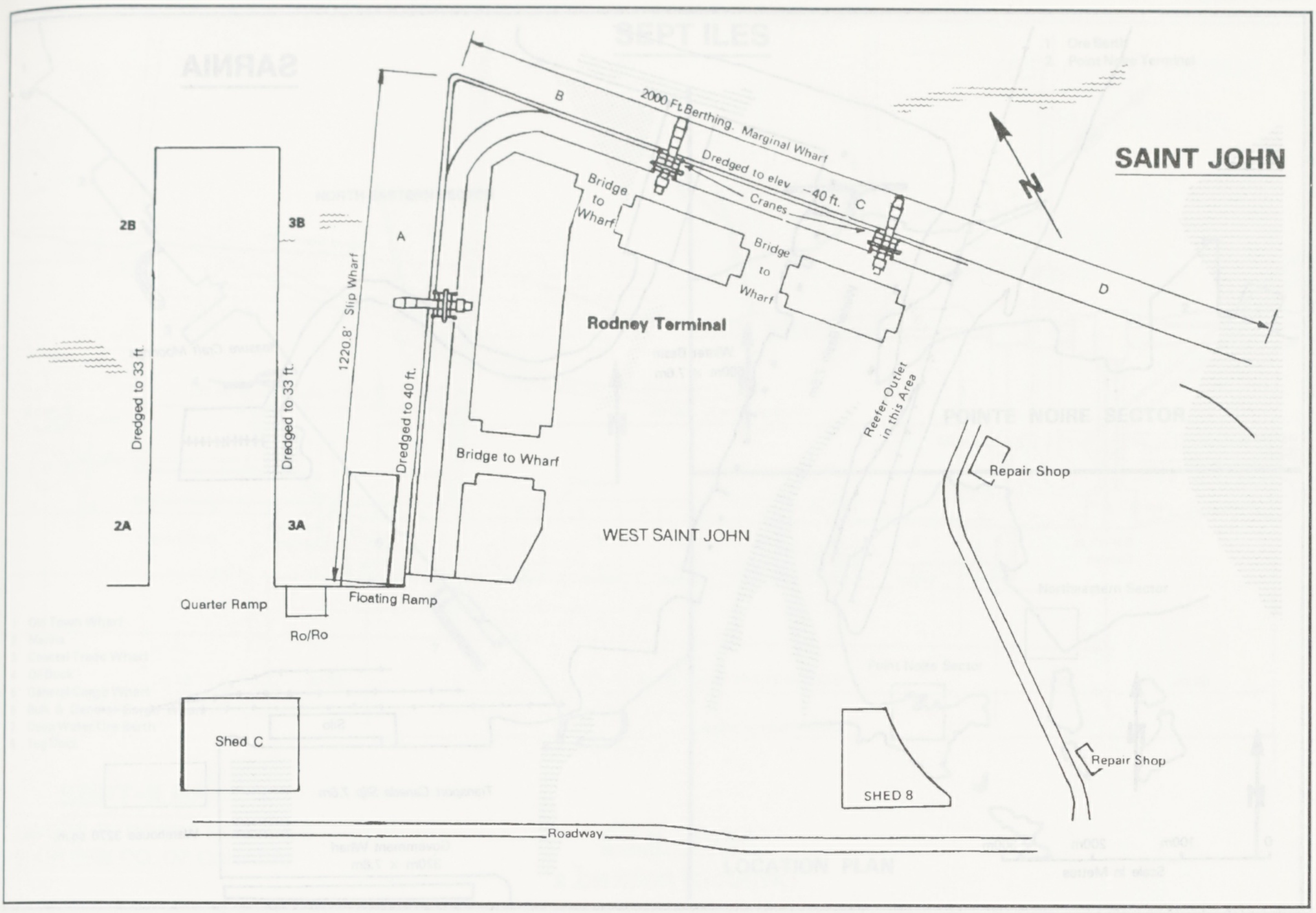
APPROACHES

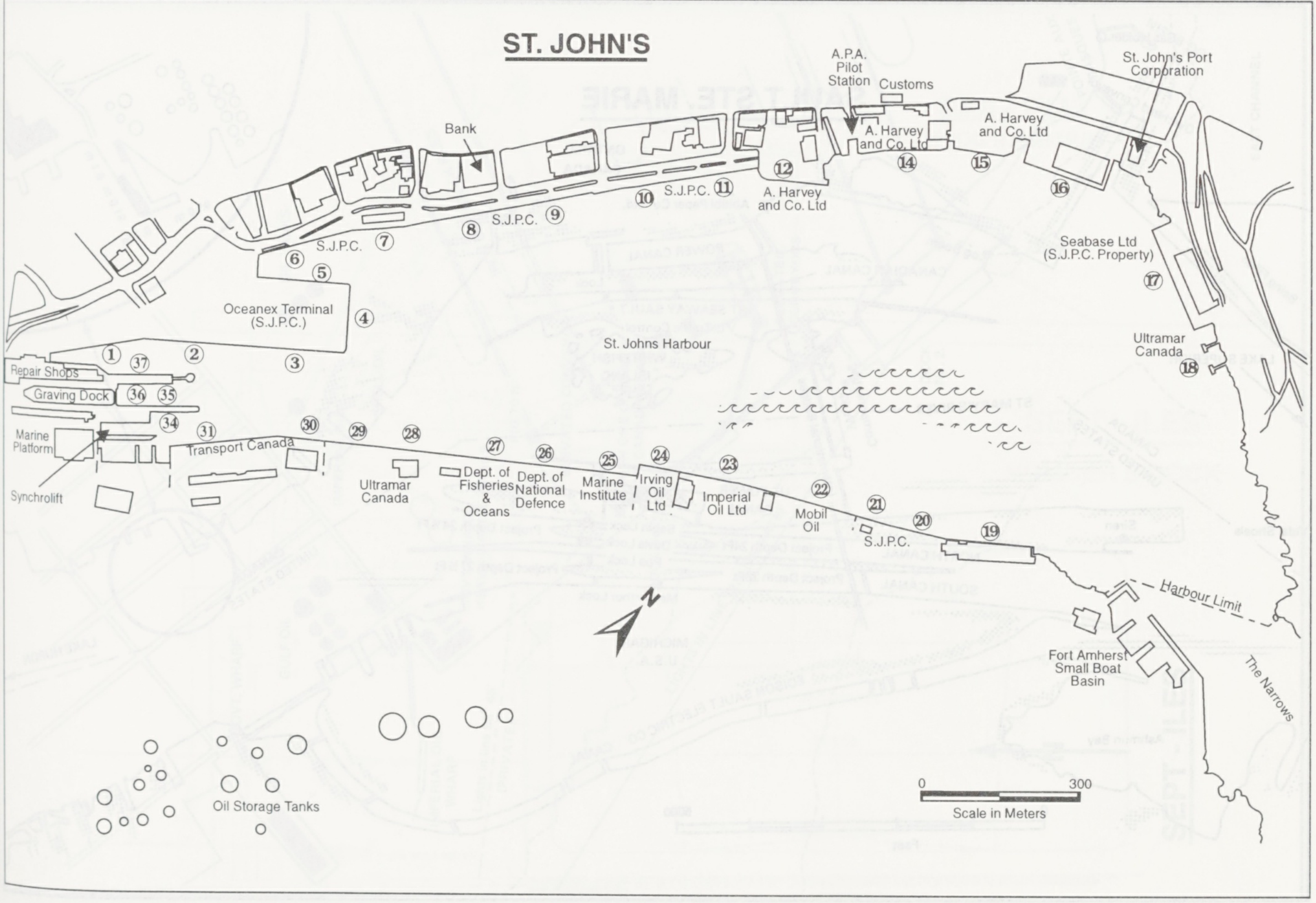
All Depths in Fathoms

Saint John
Saint John Harbour
West Saint John
Ferry Terminal
Partridge Island
Red Head
Sheldon Pt.
Taylor Peninsula
Manawagonish Island
Anchorage Area A
Anchorage Area B
Anchorage Area C
Black Point
Dumping Grounds
Tanks
Mispec Pt.
Mispec Bay
SBM (Irving)
Negro Pt.
Pilots
Harbour Limits
3
5
10
20


SAINT JOHN
Causeway
CB3
Irving Oil
Irving Oil
CB2
Drydock
CB1
N
Berth A
Long Wharf
Market Slip
Berth B
Berth C
D.O.T. Slip
North
Saint John River
A
Fina
Imperial Oil
B
Pugsley Terminals
Ro/Ro Ramp
Lower Cove Terminal 18 Arces
Navy Island
Shed B
Berths 1a, 1b
C
Barrack Point Potash Terminal
Courtney Bay Channel 6.7 m.
Forest Products Terminal
Shed A
Berths 2a, 2b
Berths 3a, 3b
Rodney Container Terminal
Ro/Ro Ramp
Sugar Refinery Wharf
Barrack Point
152 m.
Ro/Ro Ramp
Floating Ramp
Rothesy Pier
X
Reeds Point
Shed C


Pugsley B
Pugsley C
Ro Ro Ramp
X
1B
2B
3B
LOWER COVE TERMINAL 18 Acres
1A
2A
B
800 Ft
Ro/Ro Ramp
3A
A
Rodney Container Terminal
Sugar Refinery Wharf
COURTENAY BAY CHANNEL
Ro/Ro Ramp
Ro/Ro
Floating Ramp
Reeds Point
Shed C
C
D
Berth 11
Berths 12a, 12b
SAINT JOHN
MAIN HARBOUR CHANNEL – 9.1 m.
N
Tank Farm
CROSBY
Bay of Fundy Terminal
183 m.
CANAPORT
4.2 kilometres


SAINT JOHN
2B
2A
3B
3A
Dredged to 33 ft.
Dredged to 33 ft.
1220.8' Slip Wharf
A
Dredged to 40 ft.
B
2000 Ft.Berthing. Marginal Wharf
Dredged to elev -40 ft.
C
D
Cranes
Bridge to Wharf
Bridge to Wharf
Bridge to Wharf
Rodney Terminal
Reefer Outlet in this Area
WEST SAINT JOHN
Repair Shop
Repair Shop
Quarter Ramp
Floating Ramp
Ro/Ro
Shed C
SHED 8
Roadway
N


ST. JOHN'S
A.P.A. Pilot Station
Customs
St. John's Port Corporation
Bank
A. Harvey and Co. Ltd
A. Harvey and Co. Ltd
A. Harvey and Co. Ltd
S.J.P.C.
S.J.P.C.
S.J.P.C.
S.J.P.C.
Seabase Ltd (S.J.P.C. Property)
Ultramar Canada
Oceanex Terminal (S.J.P.C.)
St. Johns Harbour
Repair Shops
Graving Dock
Marine Platform
Synchrolift
Transport Canada
Ultramar Canada
Dept. of Fisheries & Oceans
Dept. of National Defence
Marine Institute
Irving Oil Ltd
Imperial Oil Ltd
Mobil Oil
Harbour Limit
Fort Amherst Small Boat Basin
The Narrows
Oil Storage Tanks
0
300
Scale in Meters
N
①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑫
⑭
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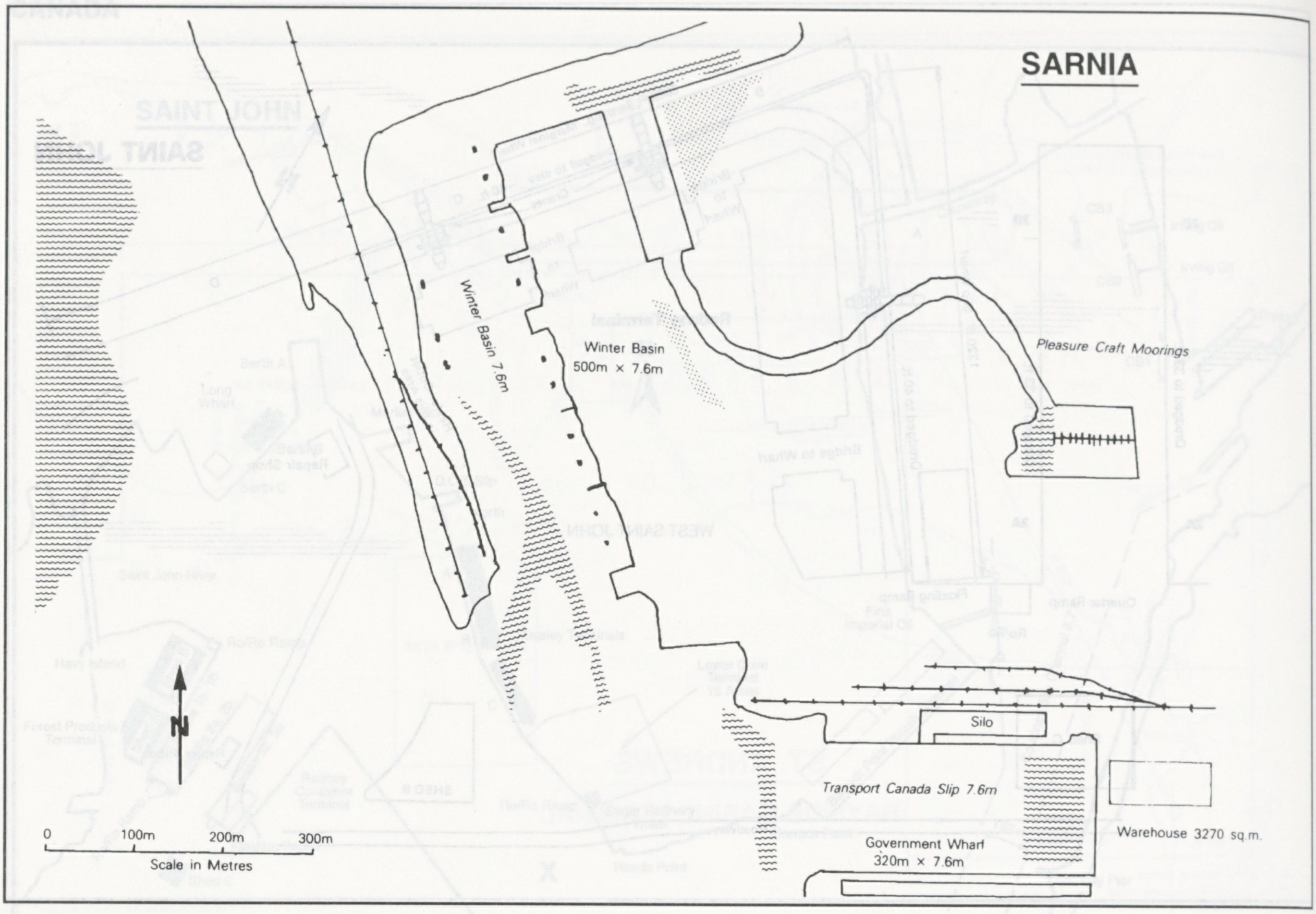
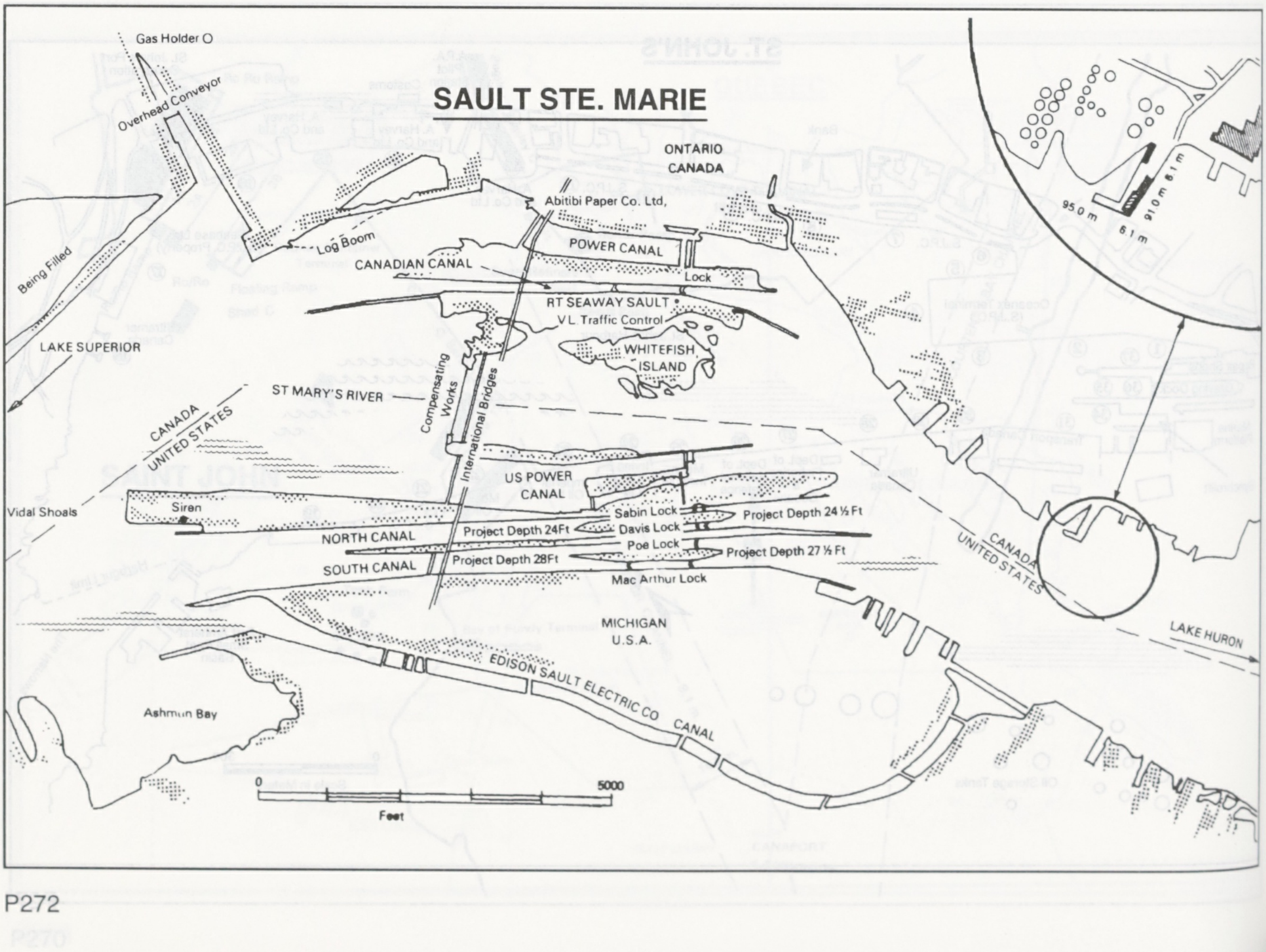
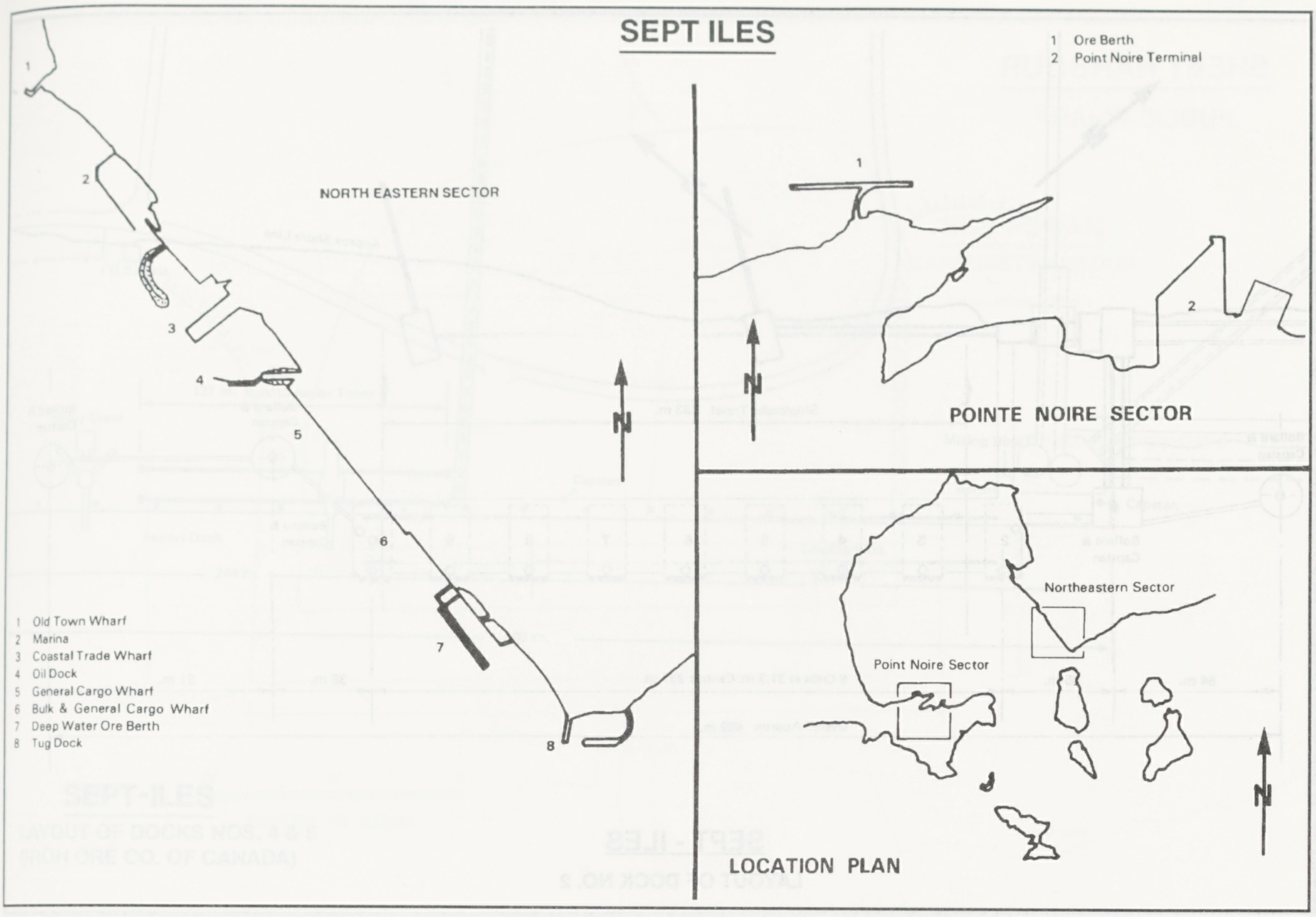
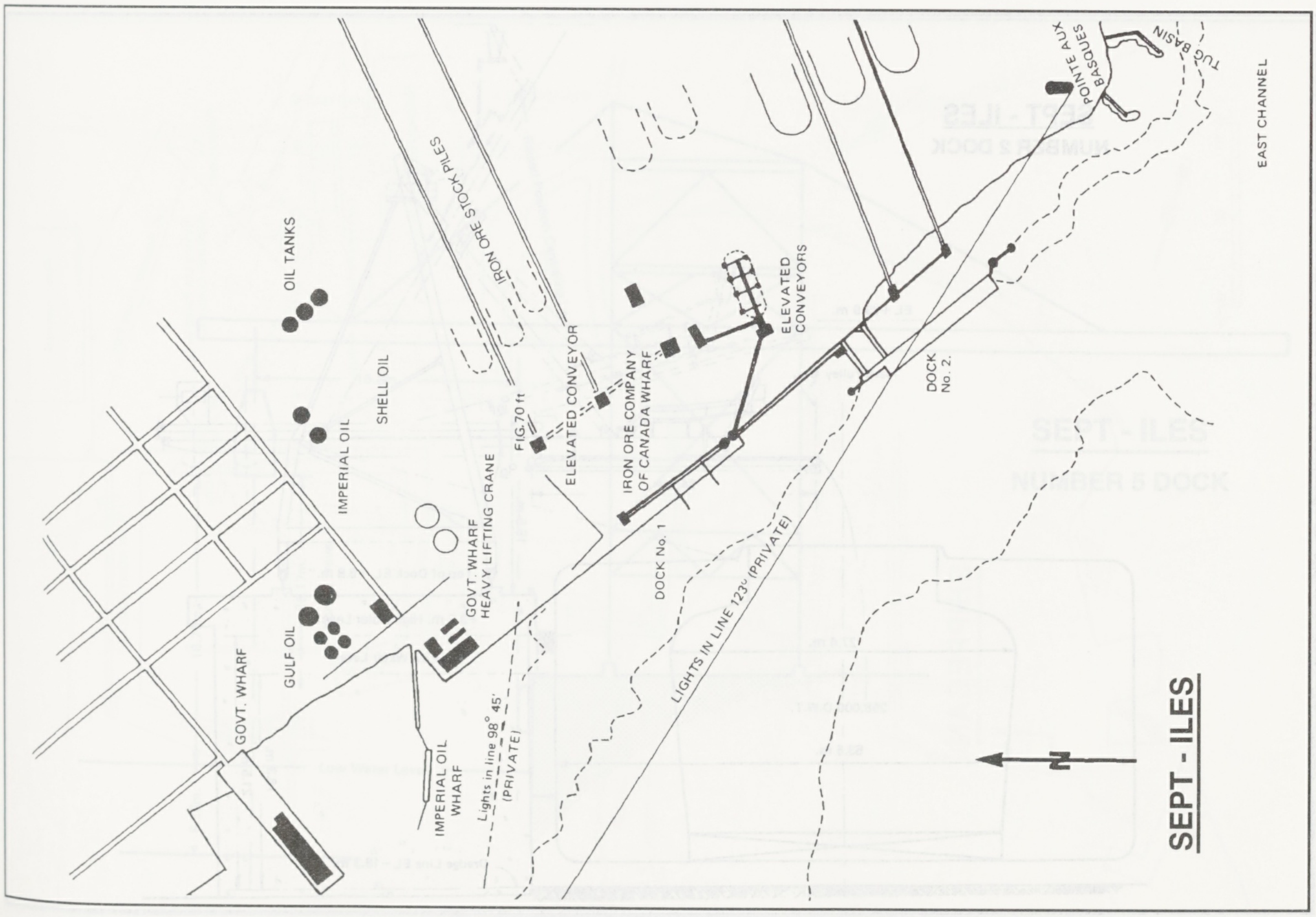
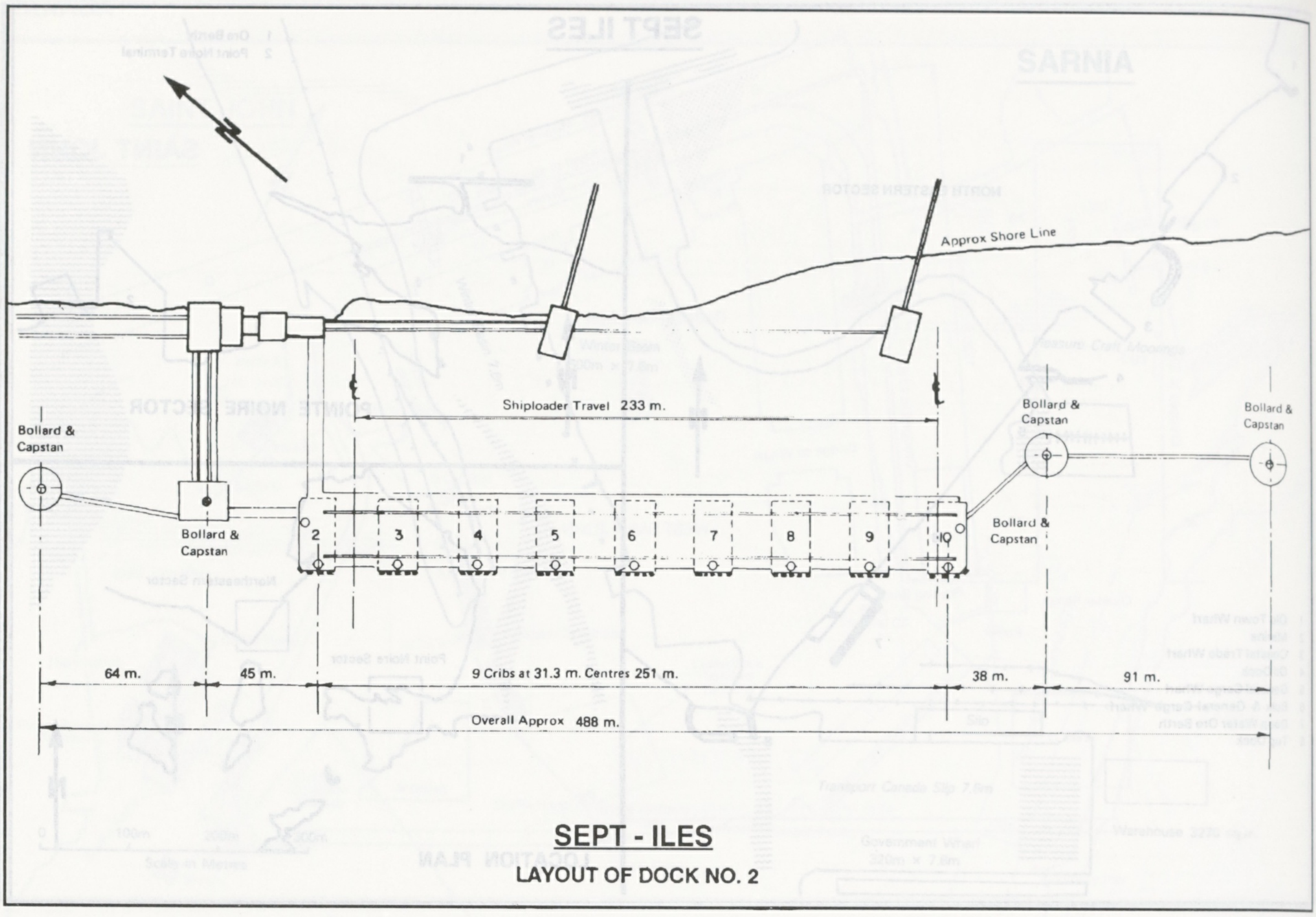

SARNIA
Winter Basin 7.6m
Winter Basin
500m × 7.6m
Pleasure Craft Moorings
N
0
100m
200m
300m
Scale in Metres
Silo
Transport Canada Slip 7.6m
Government Wharf
320m × 7.6m
Warehouse 3270 sq.m.


SAULT STE. MARIE
Gas Holder O
Overhead Conveyor
ONTARIO
CANADA
Abitibi Paper Co. Ltd,
Log Boom
POWER CANAL
CANADIAN CANAL
Lock
RT SEAWAY SAULT
V.L. Traffic Control
WHITEFISH
ISLAND
Being Filled
LAKE SUPERIOR
ST MARY'S RIVER
Compensating Works
International Bridges
CANADA
UNITED STATES
Vidal Shoals
Siren
US POWER
CANAL
Sabin Lock
Project Depth 24½ Ft
Davis Lock
Project Depth 24Ft
NORTH CANAL
Poe Lock
Project Depth 28Ft
Project Depth 27½ Ft
SOUTH CANAL
Mac Arthur Lock
MICHIGAN
U.S.A.
EDISON SAULT ELECTRIC CO CANAL
Ashmun Bay
0
5000
Feet
95.0 m
91.0 m
6.1 m
6.1 m
CANADA
UNITED STATES
LAKE HURON

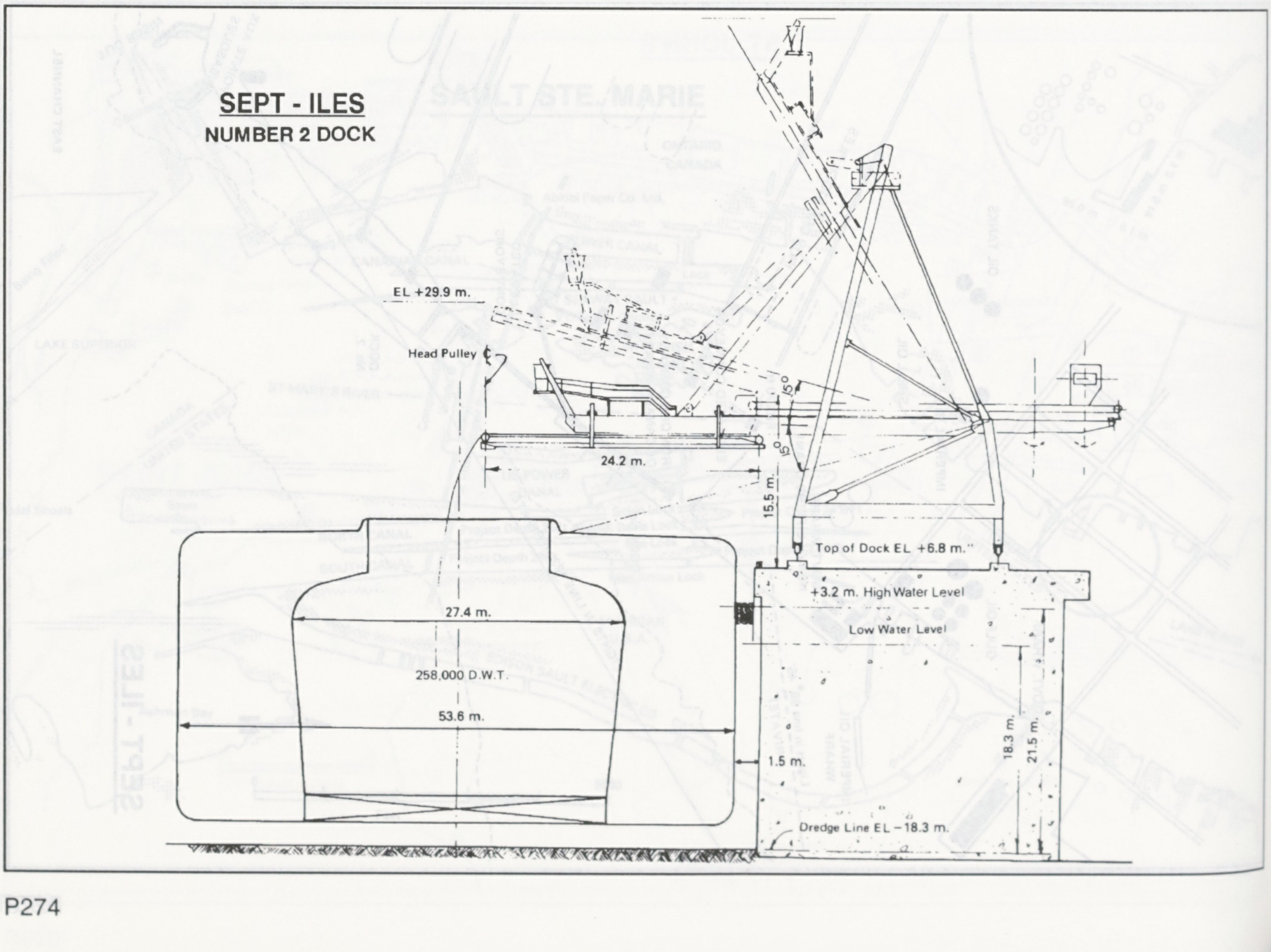

SEPT ILES
1 Ore Berth
2 Point Noire Terminal
NORTH EASTERN SECTOR
1
2
3
4
5
6
7
8
N
1 Old Town Wharf
2 Marina
3 Coastal Trade Wharf
4 Oil Dock
5 General Cargo Wharf
6 Bulk & General Cargo Wharf
7 Deep Water Ore Berth
8 Tug Dock
1
2
N
POINTE NOIRE SECTOR
Northeastern Sector
Point Noire Sector
N
LOCATION PLAN


TUG BASIN
POINTE AUX BASQUES
EAST CHANNEL
OIL TANKS
IRON ORE STOCK PILES
ELEVATED CONVEYORS
SHELL OIL
ELEVATED CONVEYOR
IRON ORE COMPANY OF CANADA WHARF
DOCK No. 2.
IMPERIAL OIL
FIG.70 ft
GOVT. WHARF HEAVY LIFTING CRANE
DOCK No. 1
LIGHTS IN LINE 123° (PRIVATE)
GULF OIL
GOVT. WHARF
IMPERIAL OIL WHARF
Lights in line 98° 45' (PRIVATE)
N
SEPT - ILES


Approx Shore Line
Shiploader Travel 233 m.
Bollard & Capstan
Bollard & Capstan
Bollard & Capstan
Bollard & Capstan
Bollard & Capstan
2
3
4
5
6
7
8
9
10
64 m.
45 m.
9 Cribs at 31.3 m. Centres 251 m.
38 m.
91 m.
Overall Approx 488 m.

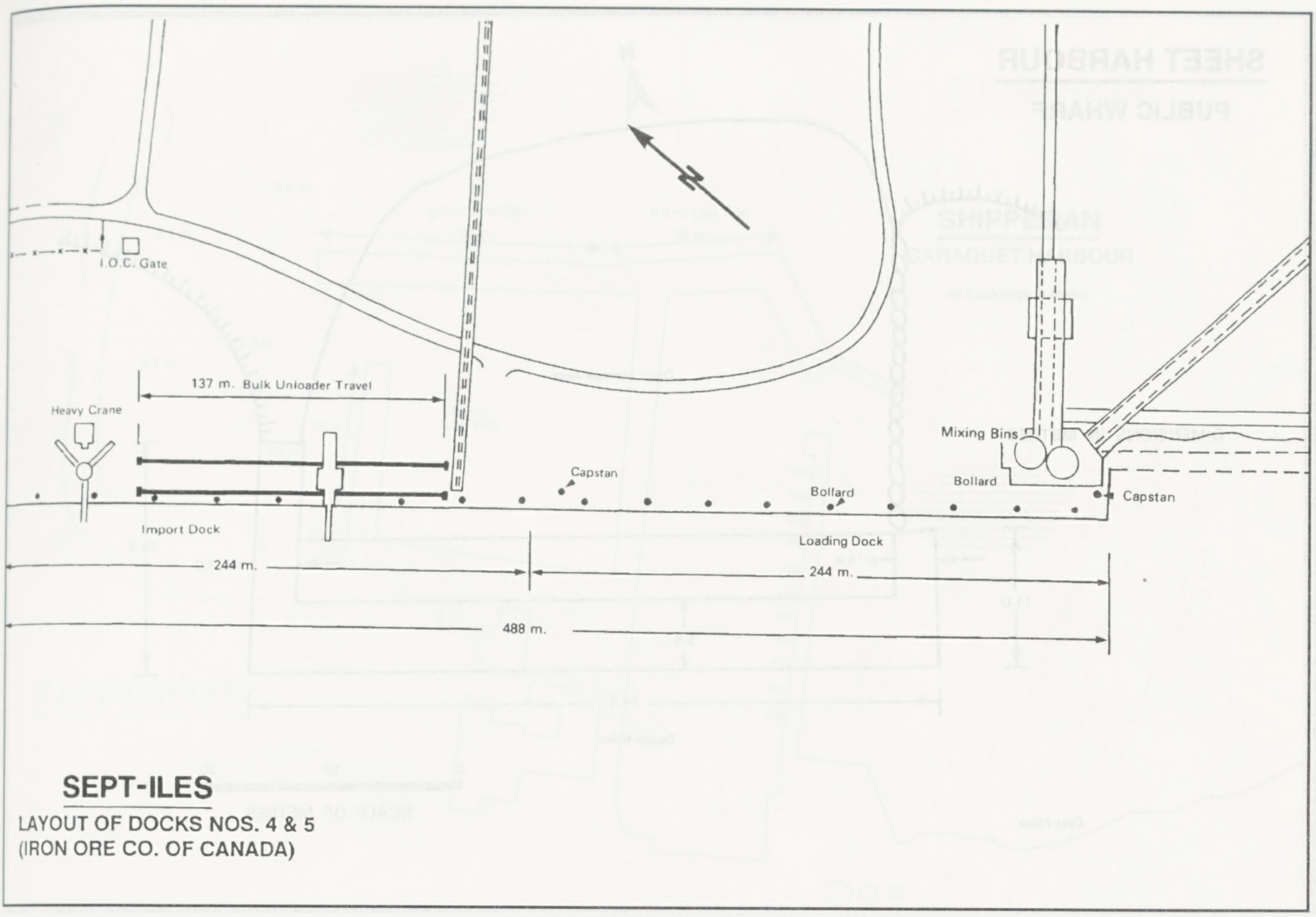
SEPT - ILES

LAYOUT OF DOCK NO. 2


SEPT - ILES

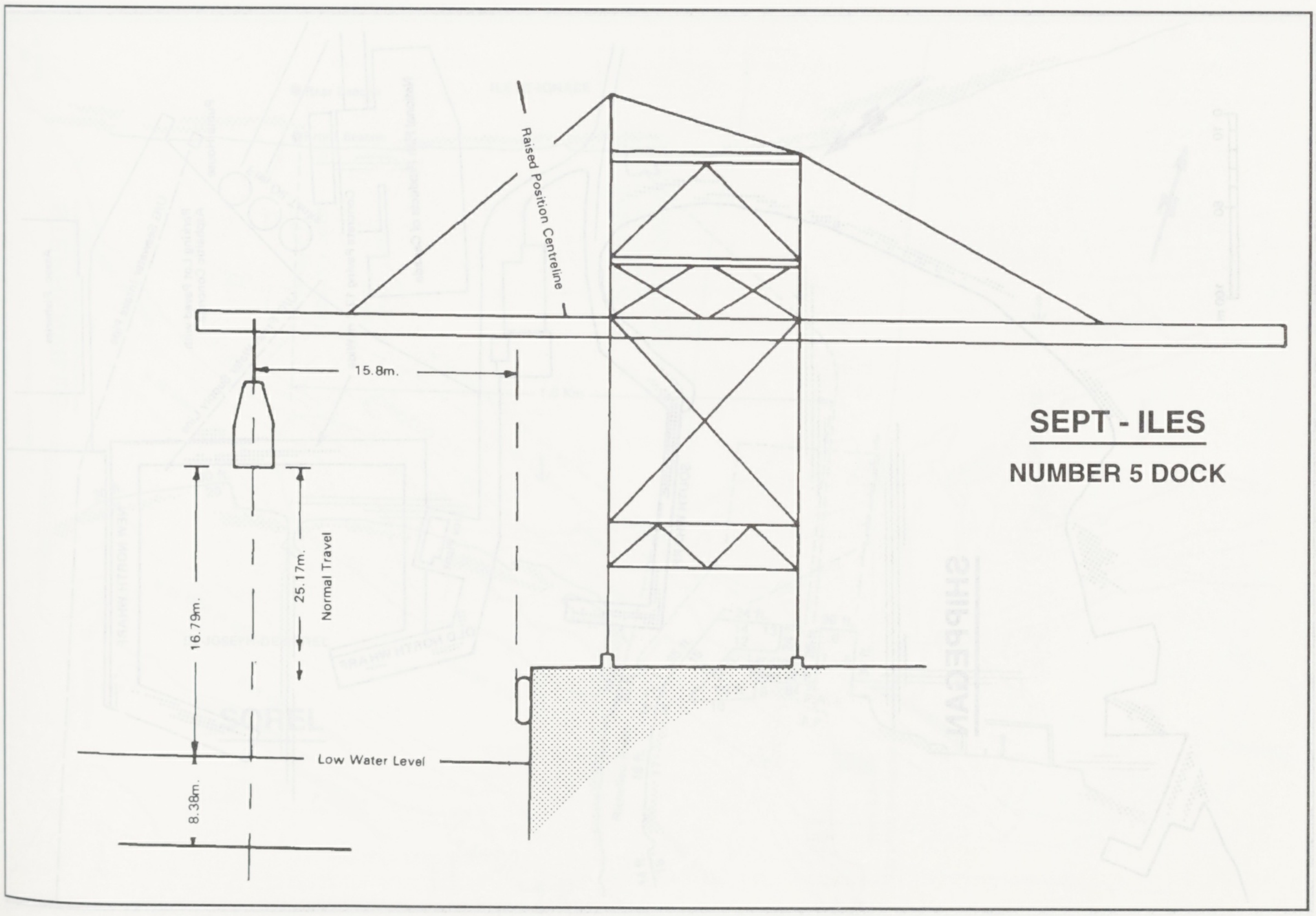
NUMBER 2 DOCK

EL +29.9 m.
Head Pulley
15°
15°
24.2 m.
15.5 m.
Top of Dock EL +6.8 m.
+3.2 m. High Water Level
Low Water Level
27.4 m.
258,000 D.W.T.
53.6 m.
1.5 m.
18.3 m.
21.5 m.
Dredge Line EL −18.3 m.


I.O.C. Gate
137 m. Bulk Unloader Travel
Heavy Crane
Capstan
Mixing Bins
Bollard
Bollard
Capstan
Import Dock
Loading Dock
244 m.
244 m.
488 m.

SEPT-ILES

LAYOUT OF DOCKS NOS. 4 & 5
(IRON ORE CO. OF CANADA)

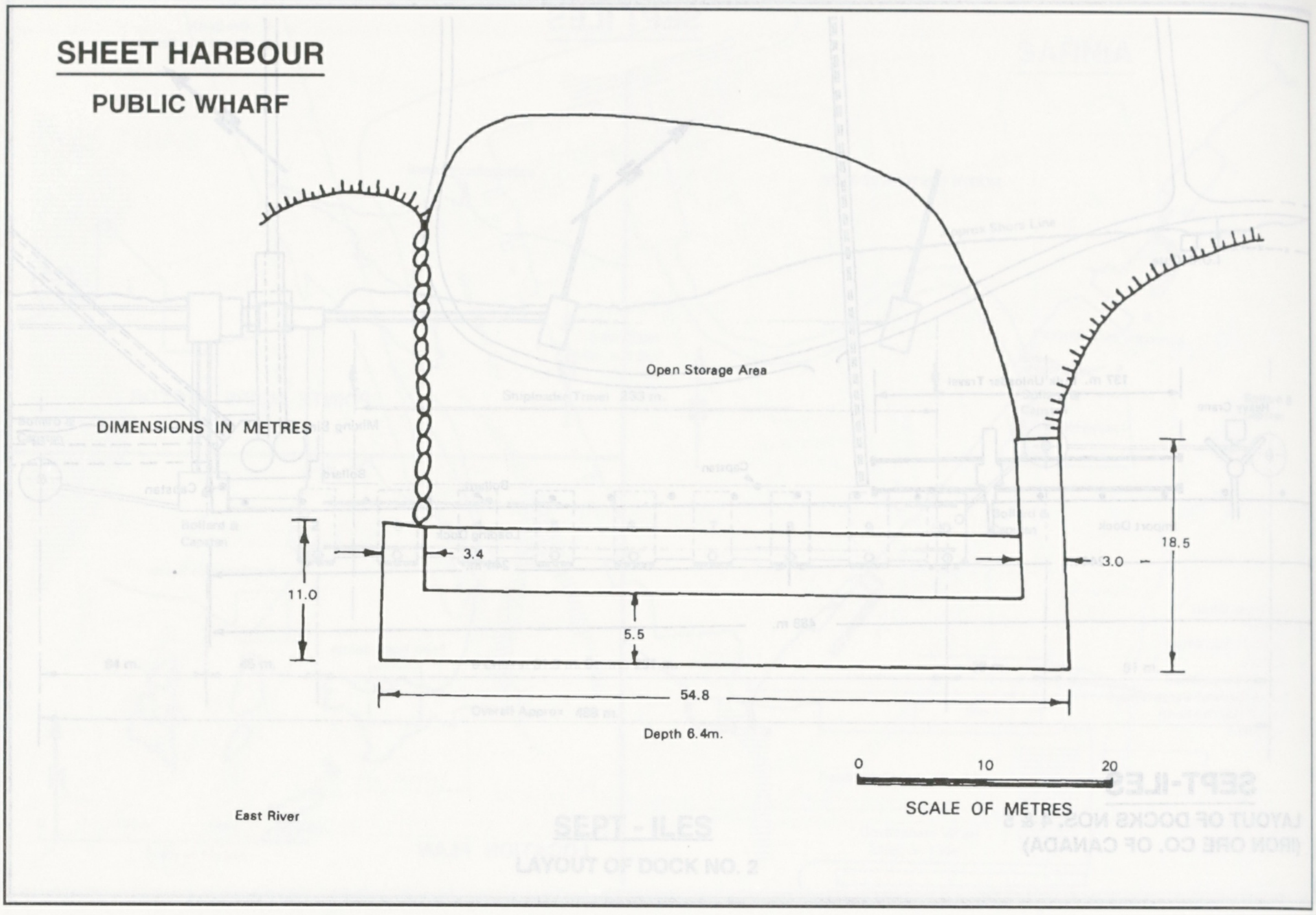

Raised Position Centreline
15.8m.
16.79m.
25.17m.
Normal Travel
Low Water Level
8.38m.

SEPT - ILES

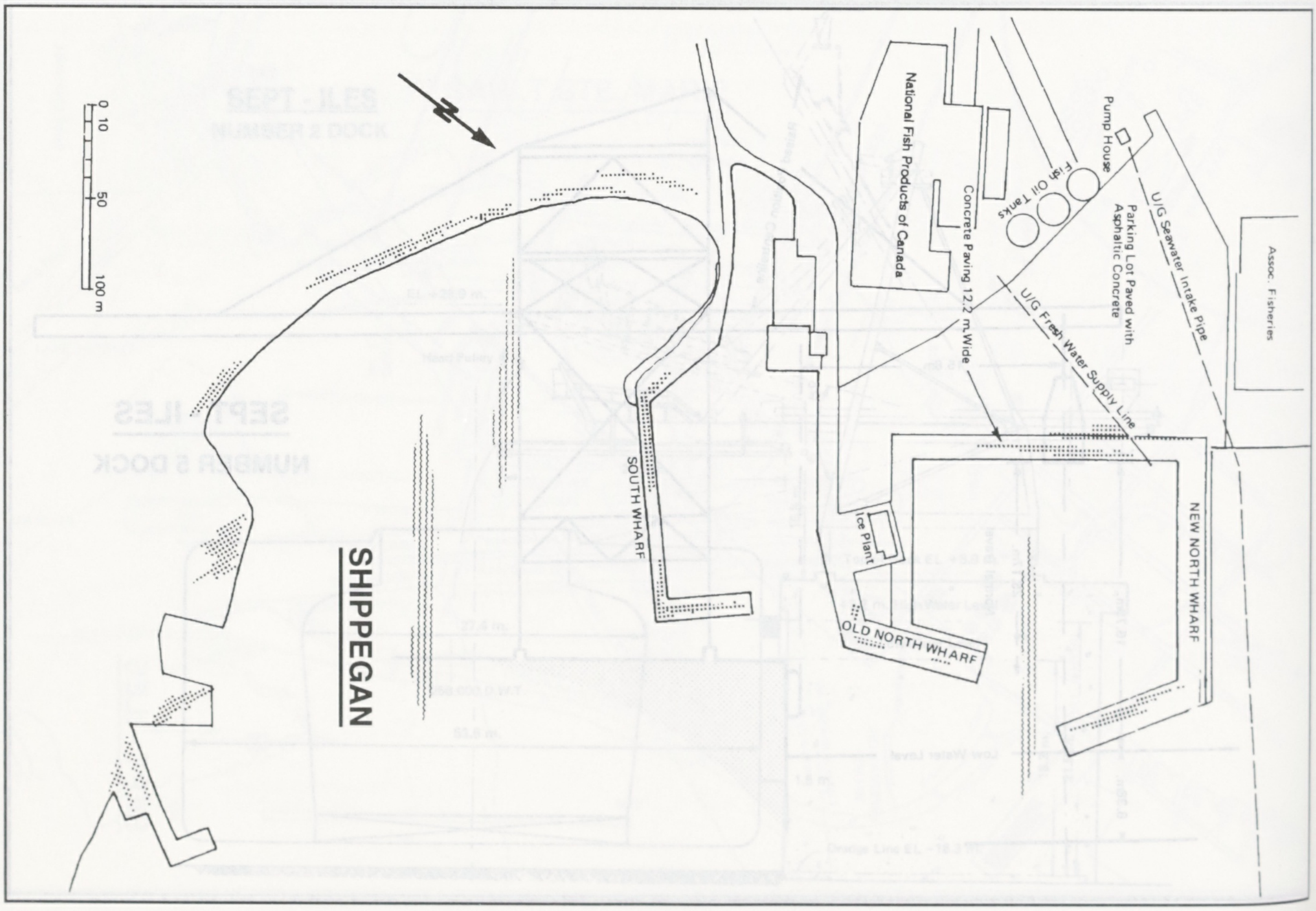
NUMBER 5 DOCK

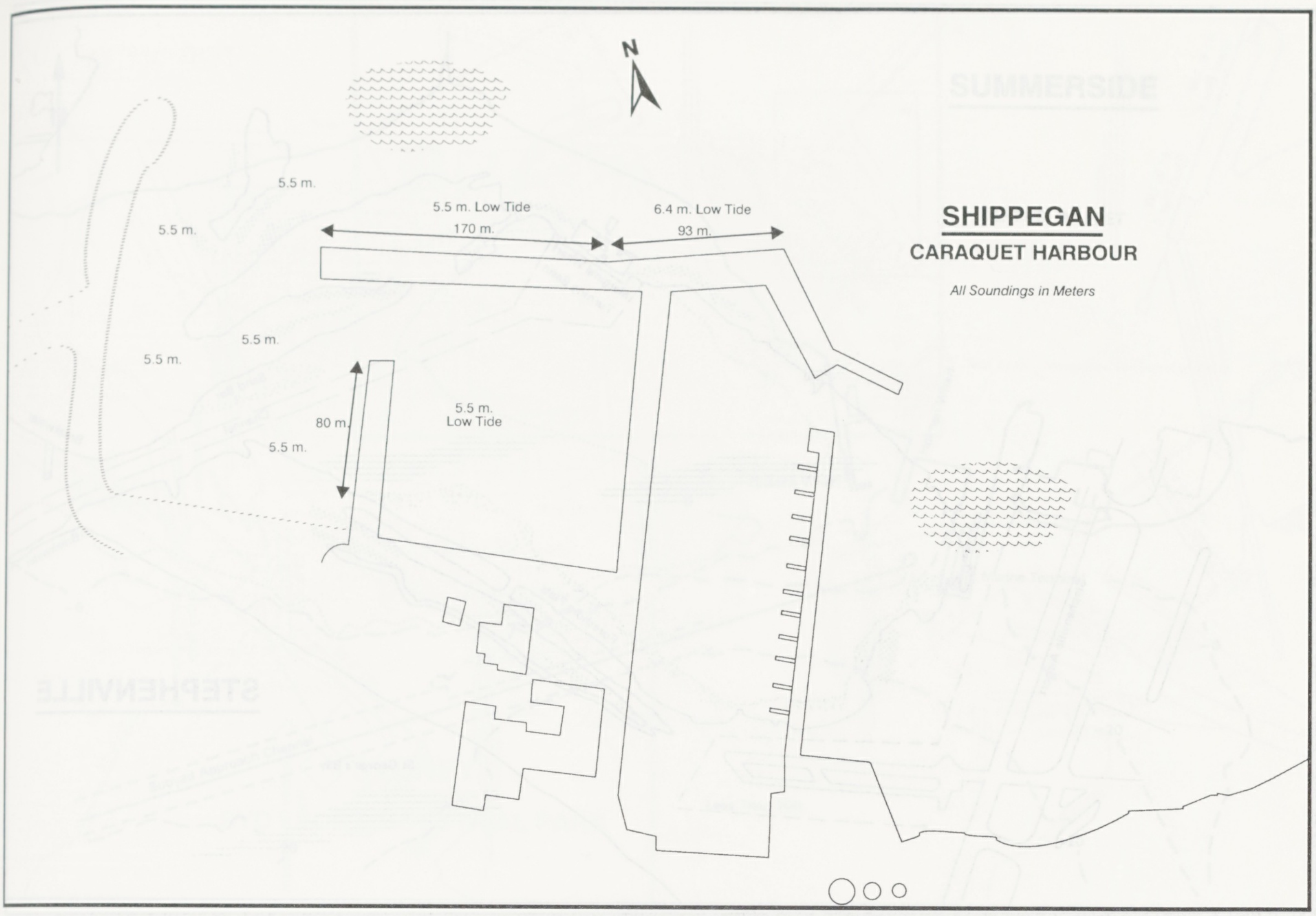
SHEET HARBOUR

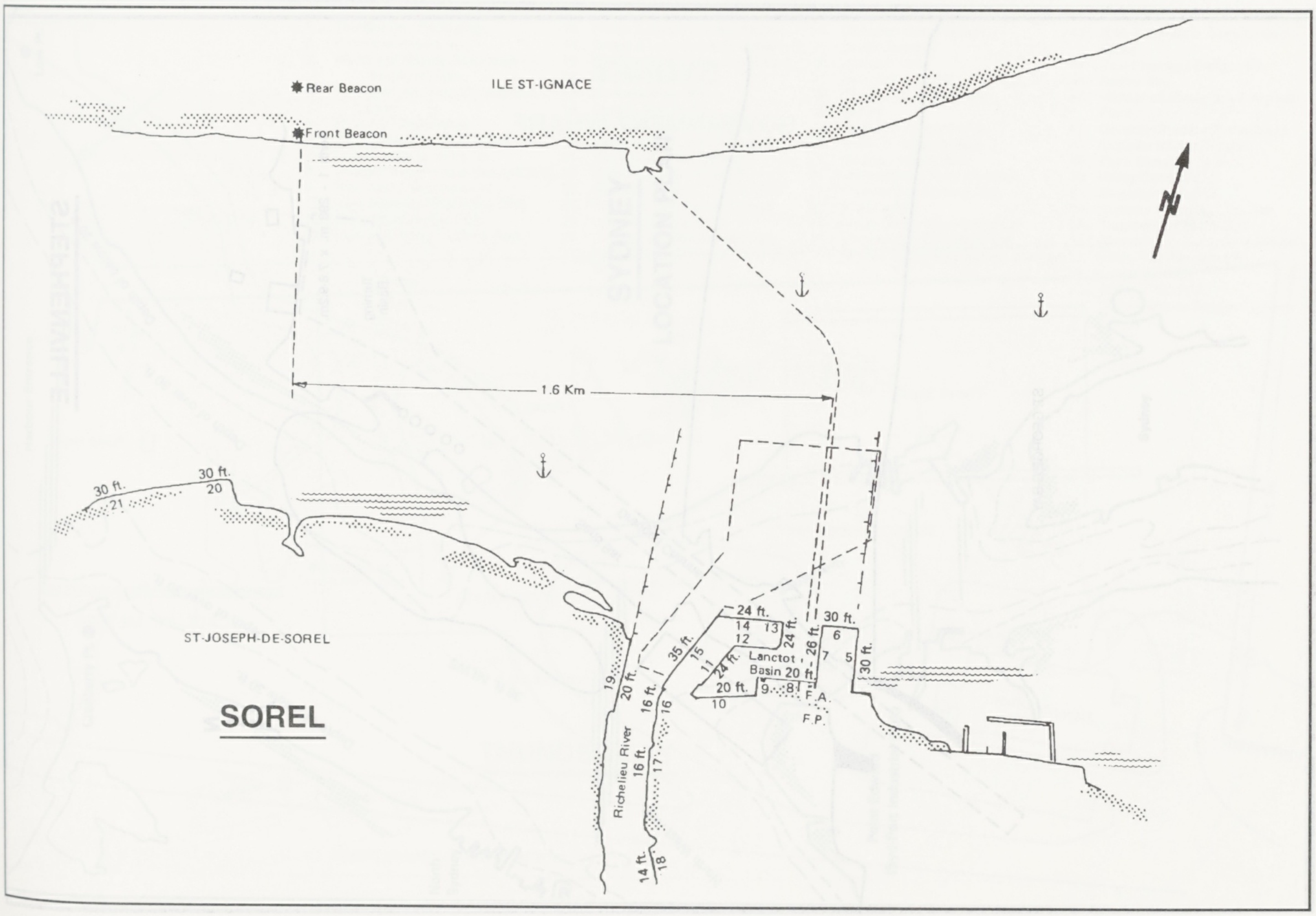
PUBLIC WHARF

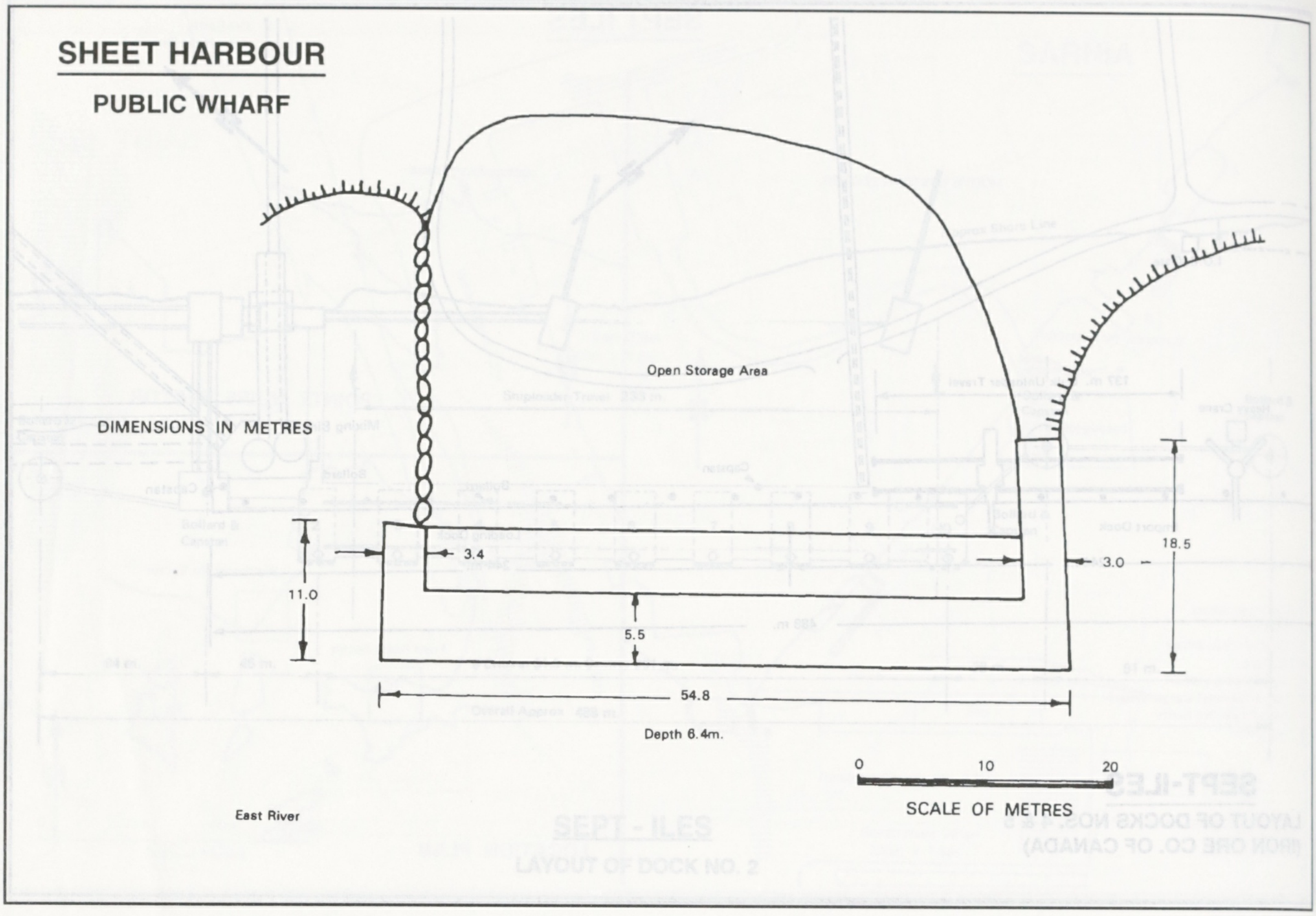

DIMENSIONS IN METRES
Open Storage Area
3.4
3.0
18.5
11.0
5.5
54.8
Depth 6.4m.
0
10
20
SCALE OF METRES
East River

SHIPPEGAN


0 10
50
100 m
National Fish Products of Canada
Concrete Paving 12.2 m.Wide
Fish Oil Tanks
Pump House
Parking Lot Paved with Asphaltic Concrete
U/G Seawater Intake Pipe
U/G Fresh Water Supply Line
Assoc. Fisheries
SOUTH WHARF
Ice Plant
OLD NORTH WHARF
NEW NORTH WHARF


N
SHIPPEGAN
CARAQUET HARBOUR
All Soundings in Meters
5.5 m.
5.5 m.
5.5 m. Low Tide
170 m.
6.4 m. Low Tide
93 m.
5.5 m.
5.5 m.
80 m.
5.5 m.
Low Tide
5.5 m.

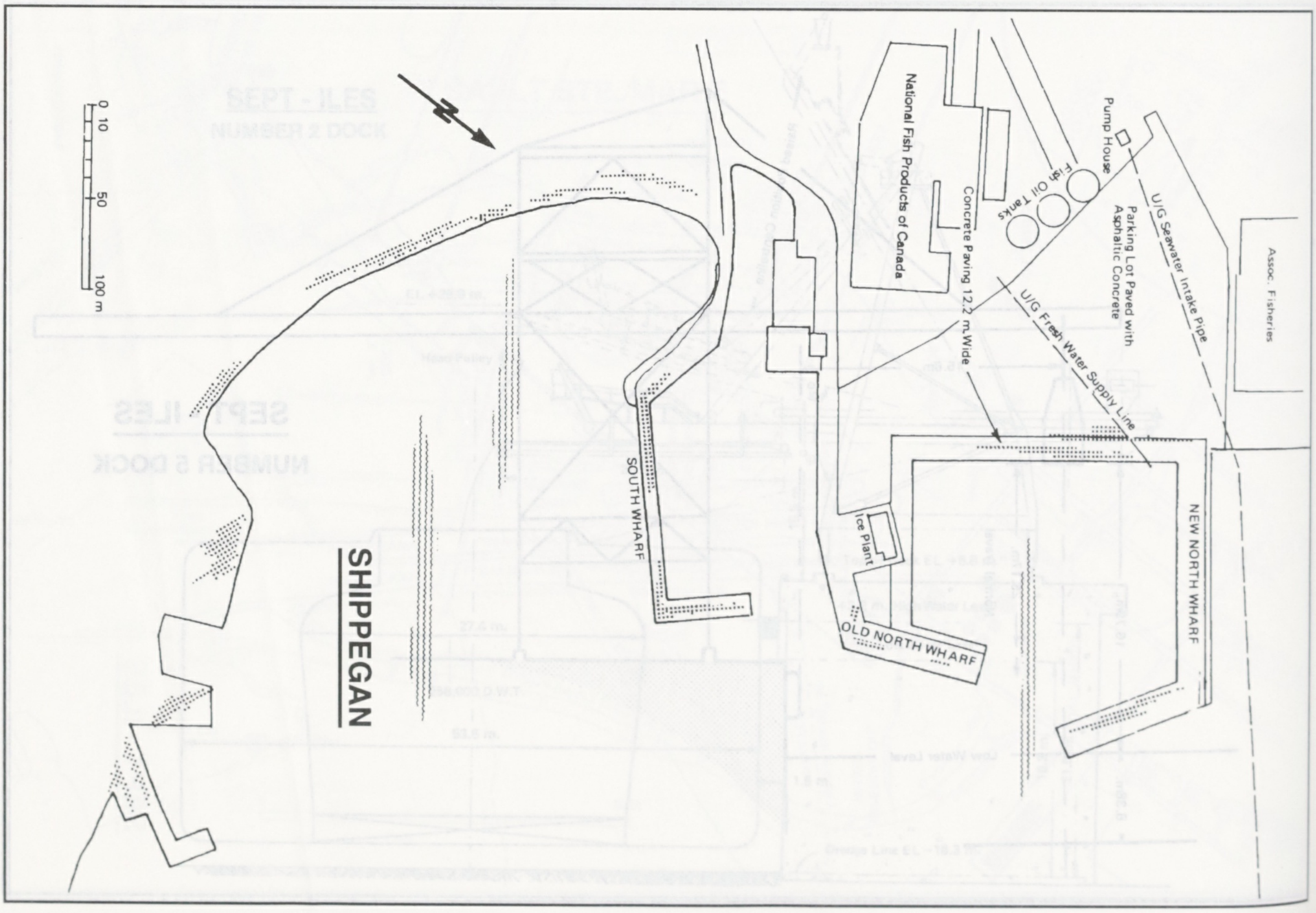

Rear Beacon
ILE ST-IGNACE
Front Beacon
1.6 Km
30 ft.
21
30 ft.
20
ST-JOSEPH-DE-SOREL
SOREL
24 ft.
14
13
12
30 ft.
6
24 ft.
26 ft.
35 ft.
15
11
24 ft.
Lanctot
Basin 20 ft.
7
5
30 ft.
20 ft.
9
8
10
F.A.
F.P.
19
20 ft.
16 ft.
16
Richelieu River
16 ft.
17
14 ft.
18



SHEET HARBOUR

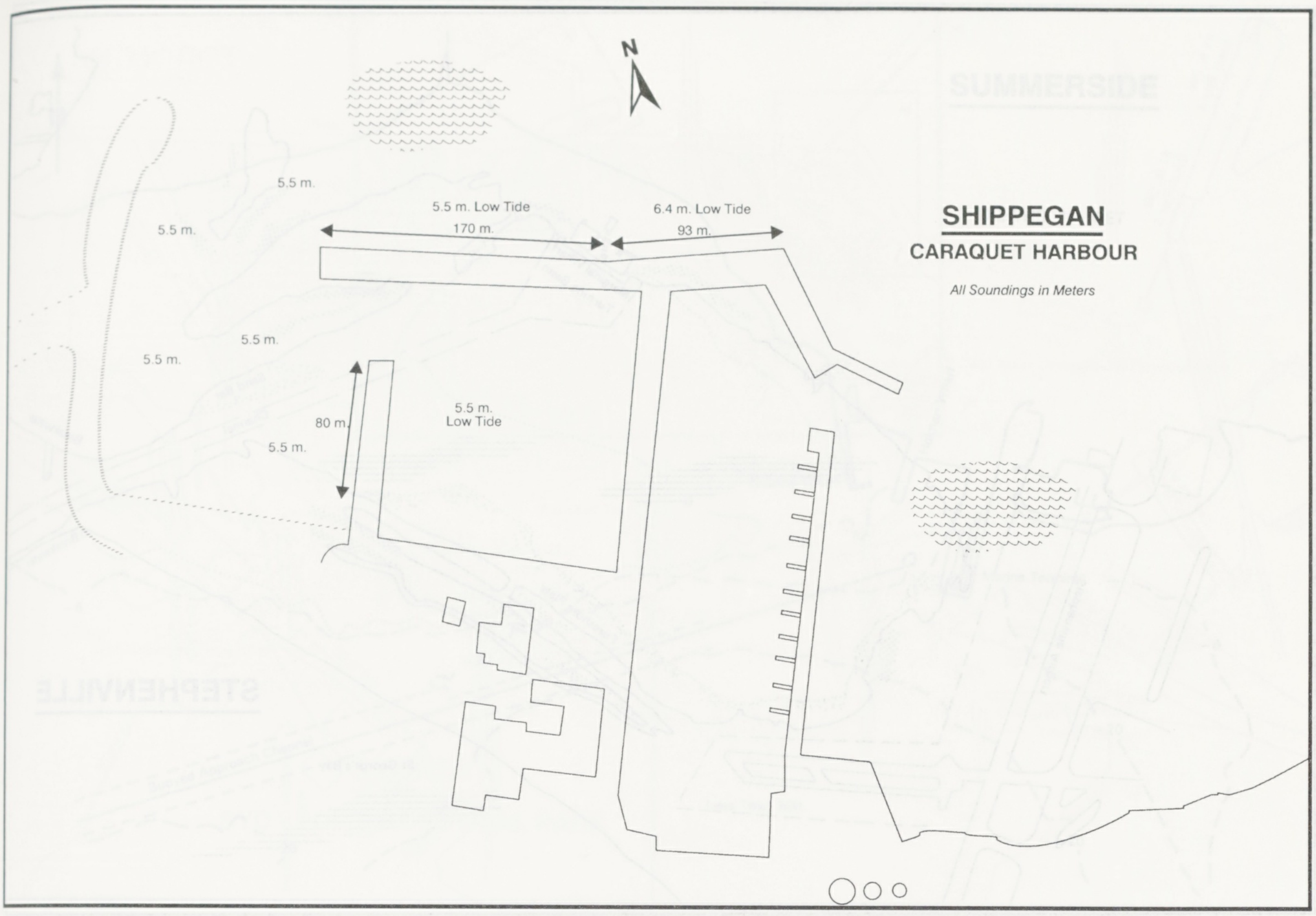
PUBLIC WHARF

Open Storage Area
DIMENSIONS IN METRES
3.4
11.0
5.5
3.0
18.5
54.8
Depth 6.4m.
0
10
20
SCALE OF METRES
East River



SHIPPEGAN

0
10
50
100 m
National Fish Products of Canada
Pump House
Fish Oil Tanks
Concrete Paving 12.2 m.Wide
Parking Lot Paved with Asphaltic Concrete
U/G Seawater Intake Pipe
U/G Fresh Water Supply Line
Assoc. Fisheries
SOUTH WHARF
Ice Plant
OLD NORTH WHARF
NEW NORTH WHARF

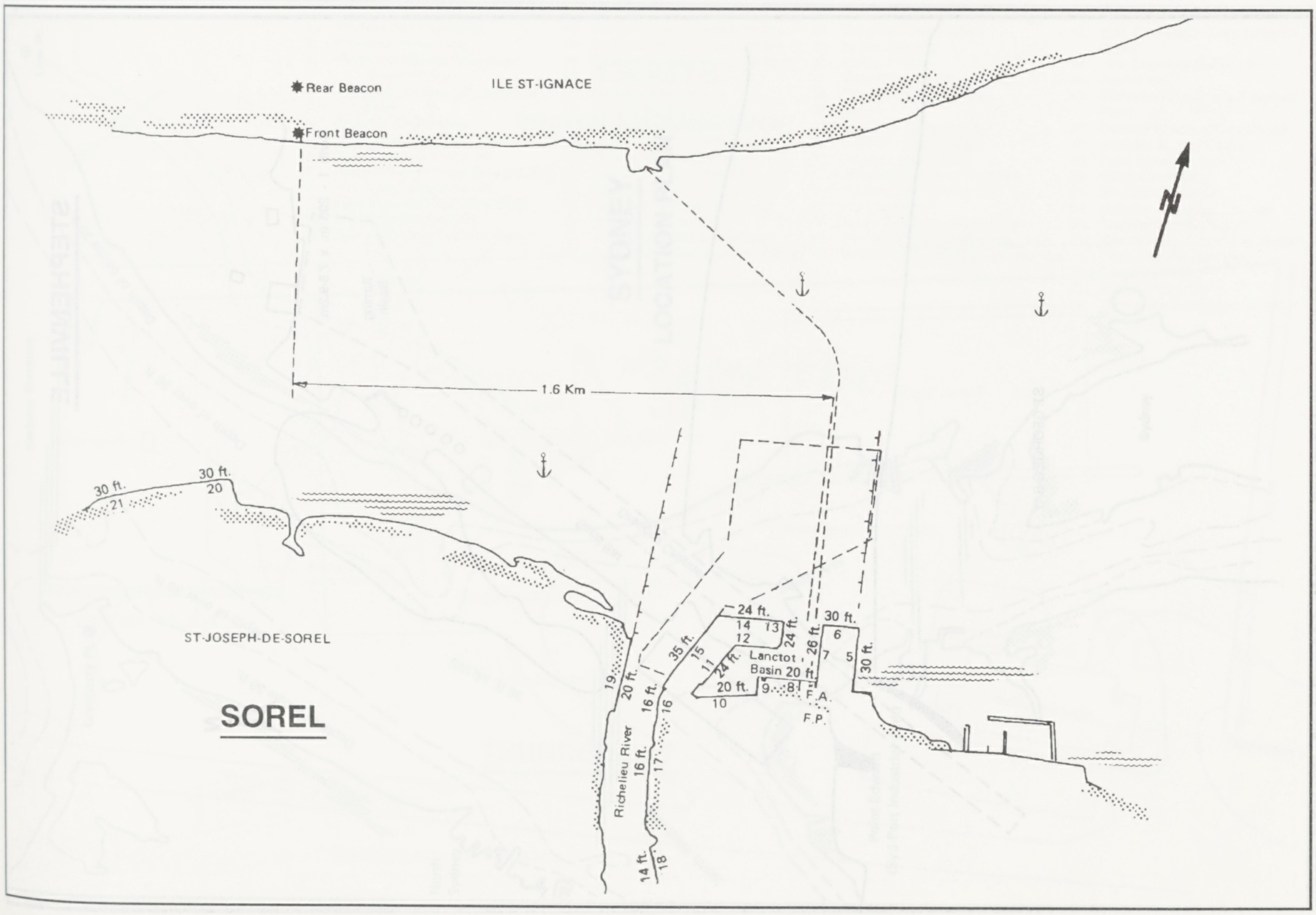


SHIPPEGAN

CARAQUET HARBOUR

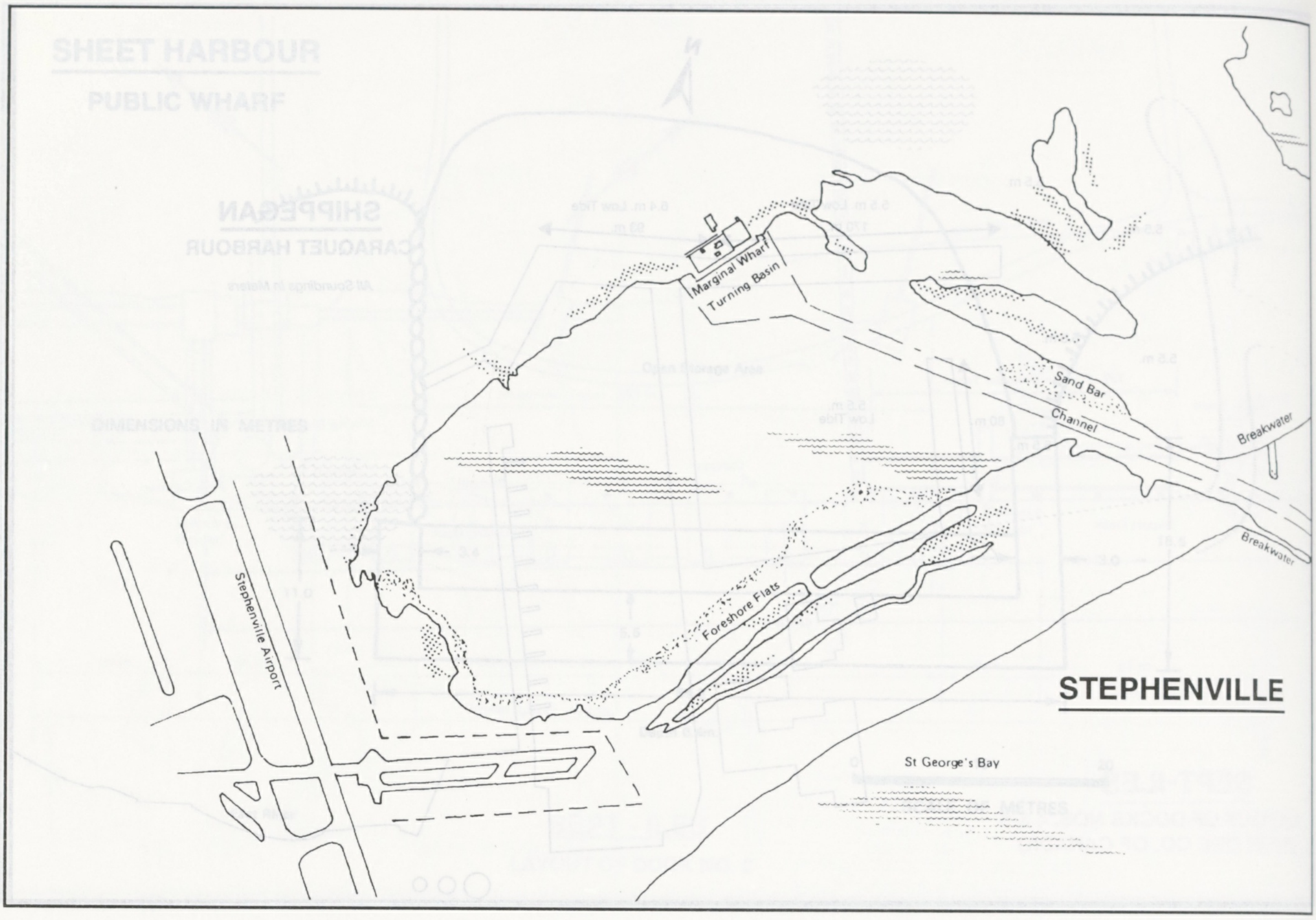
All Soundings in Meters

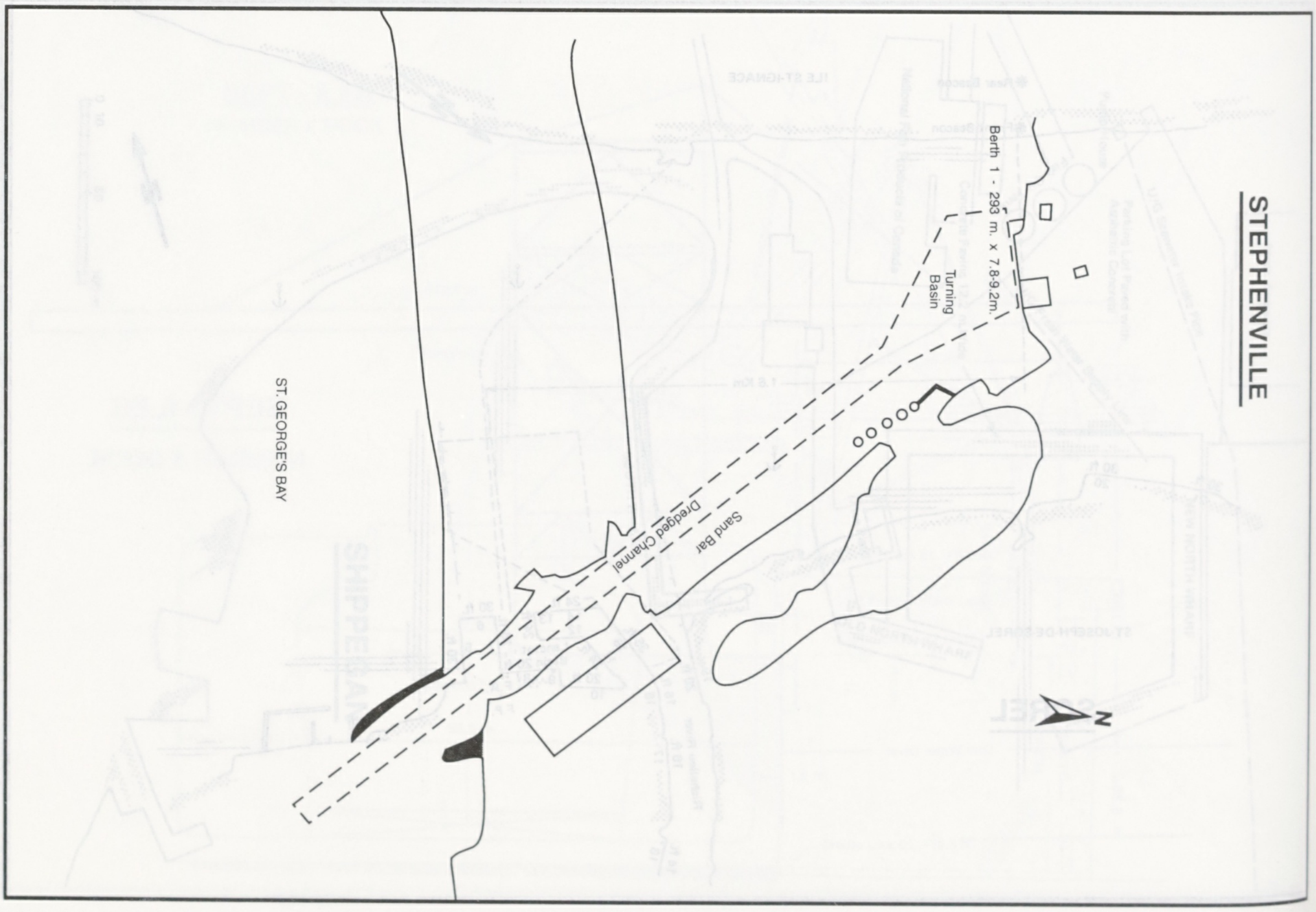
N
5.5 m.
5.5 m.
5.5 m. Low Tide
170 m.
6.4 m. Low Tide
93 m.
5.5 m.
5.5 m.
80 m.
5.5 m.
Low Tide
5.5 m.

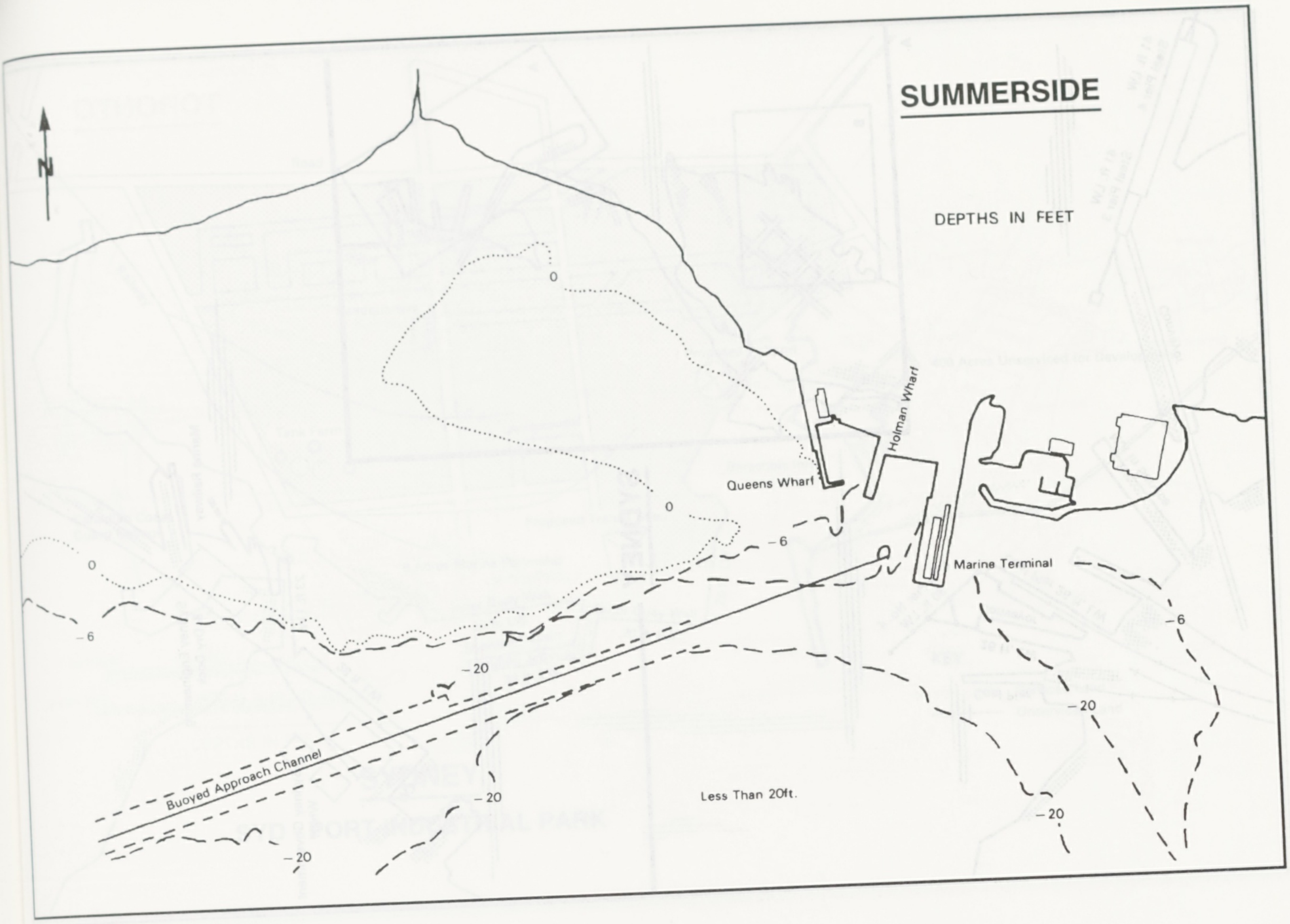


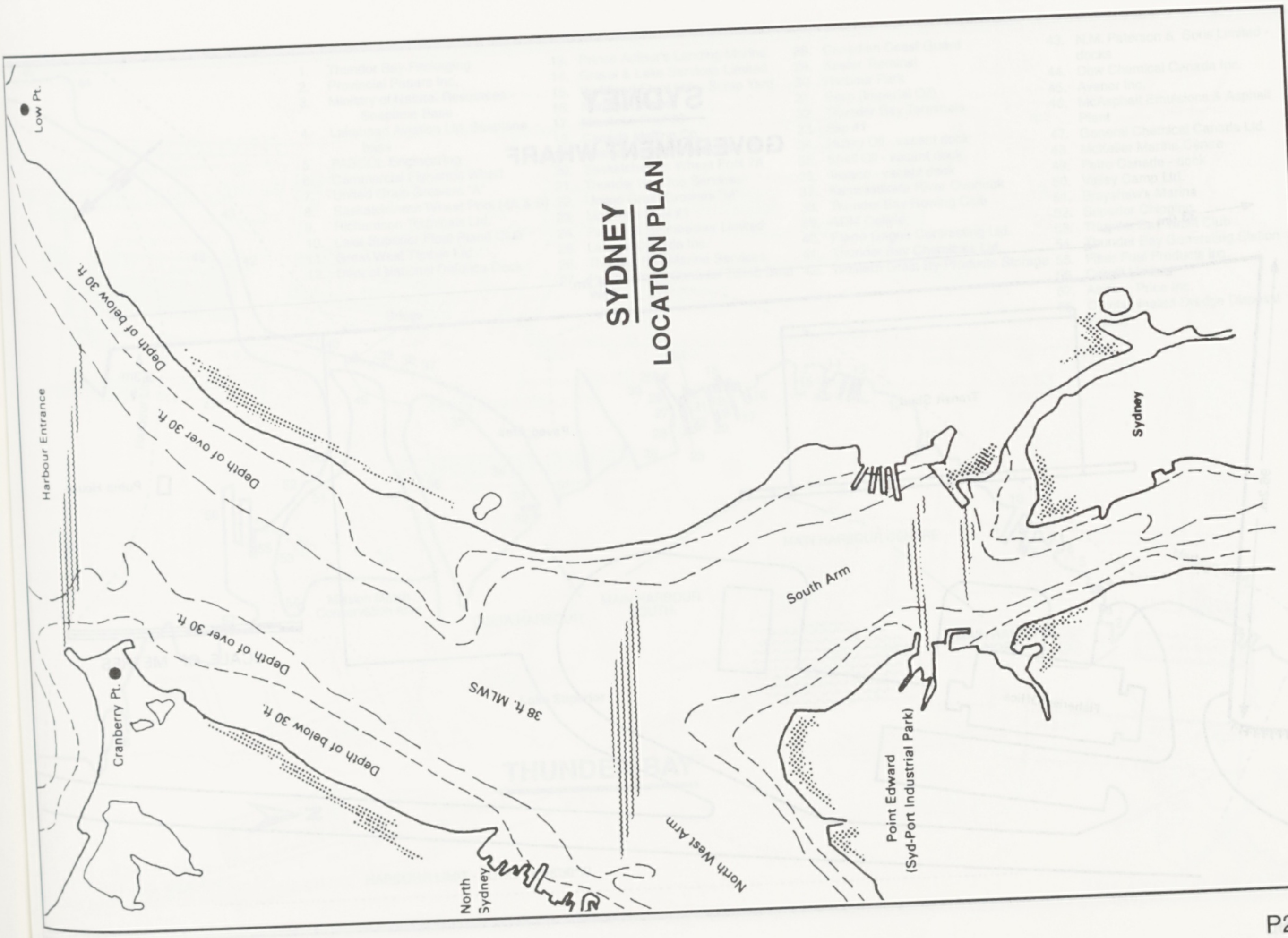
SOREL

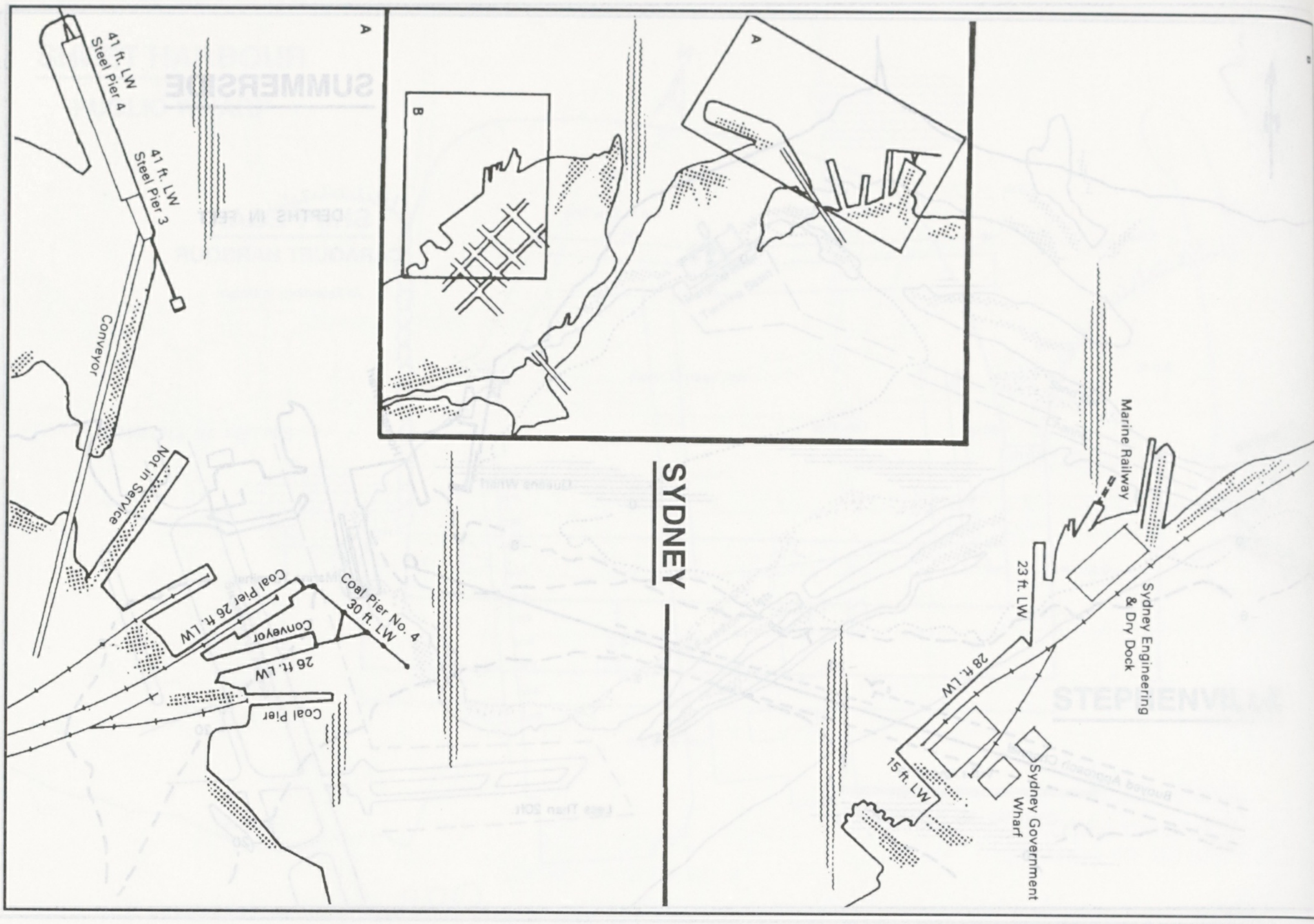
Rear Beacon
ILE ST-IGNACE
Front Beacon
N
1.6 Km
30 ft.
21
30 ft.
20
ST-JOSEPH-DE-SOREL
24 ft.
14
13
12
24 ft.
30 ft.
6
35 ft.
15
11
24 ft.
Lanctot
Basin 20 ft.
26 ft.
7
5
30 ft.
20 ft.
9
8
10
F.A.
F.P.
19
20 ft.
16 ft.
16
Richelieu River
16 ft.
17
14 ft.
18


STEPHENVILLE
Marginal Wharf
Turning Basin
Sand Bar
Channel
Breakwater
Breakwater
Foreshore Flats
Stephenville Airport
St George's Bay


STEPHENVILLE
Berth 1 - 293 m. x 7.8-9.2m.
Turning Basin
Dredged Channel
Sand Bar
ST. GEORGE'S BAY
N


SUMMERSIDE
N
DEPTHS IN FEET
0
0
0
Queens Wharf
Holman Wharf
Marine Terminal
−6
−6
−6
−20
−20
−20
−20
−20
Buoyed Approach Channel
Less Than 20ft.

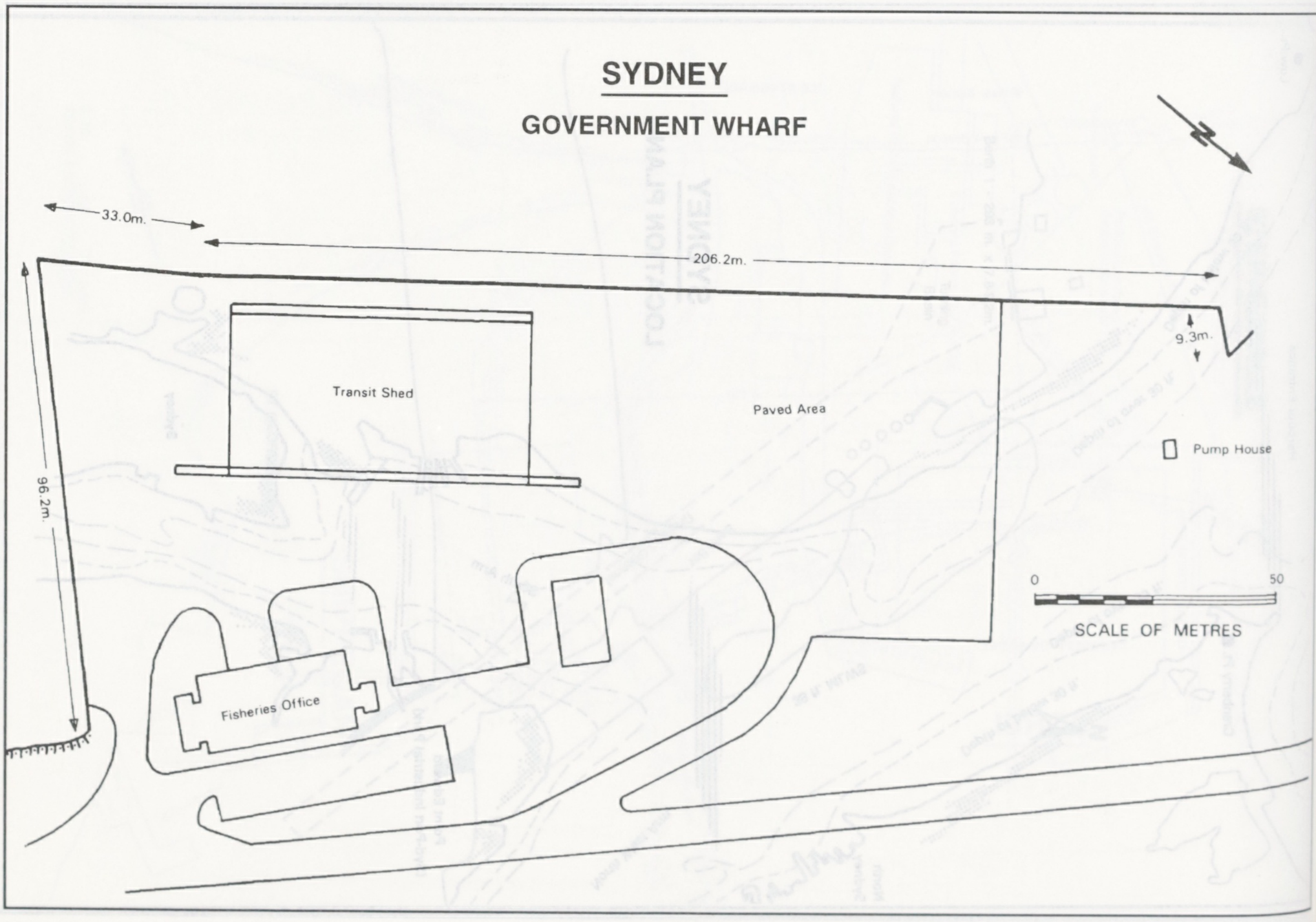

SYDNEY
LOCATION PLAN
Low Pt.
Harbour Entrance
Depth of below 30 ft.
Depth of over 30 ft.
Depth of over 30 ft.
Depth of below 30 ft.
Cranberry Pt.
38 ft. MLWS
North Sydney
North West Arm
South Arm
Point Edward
(Syd-Port Industrial Park)
Sydney
N



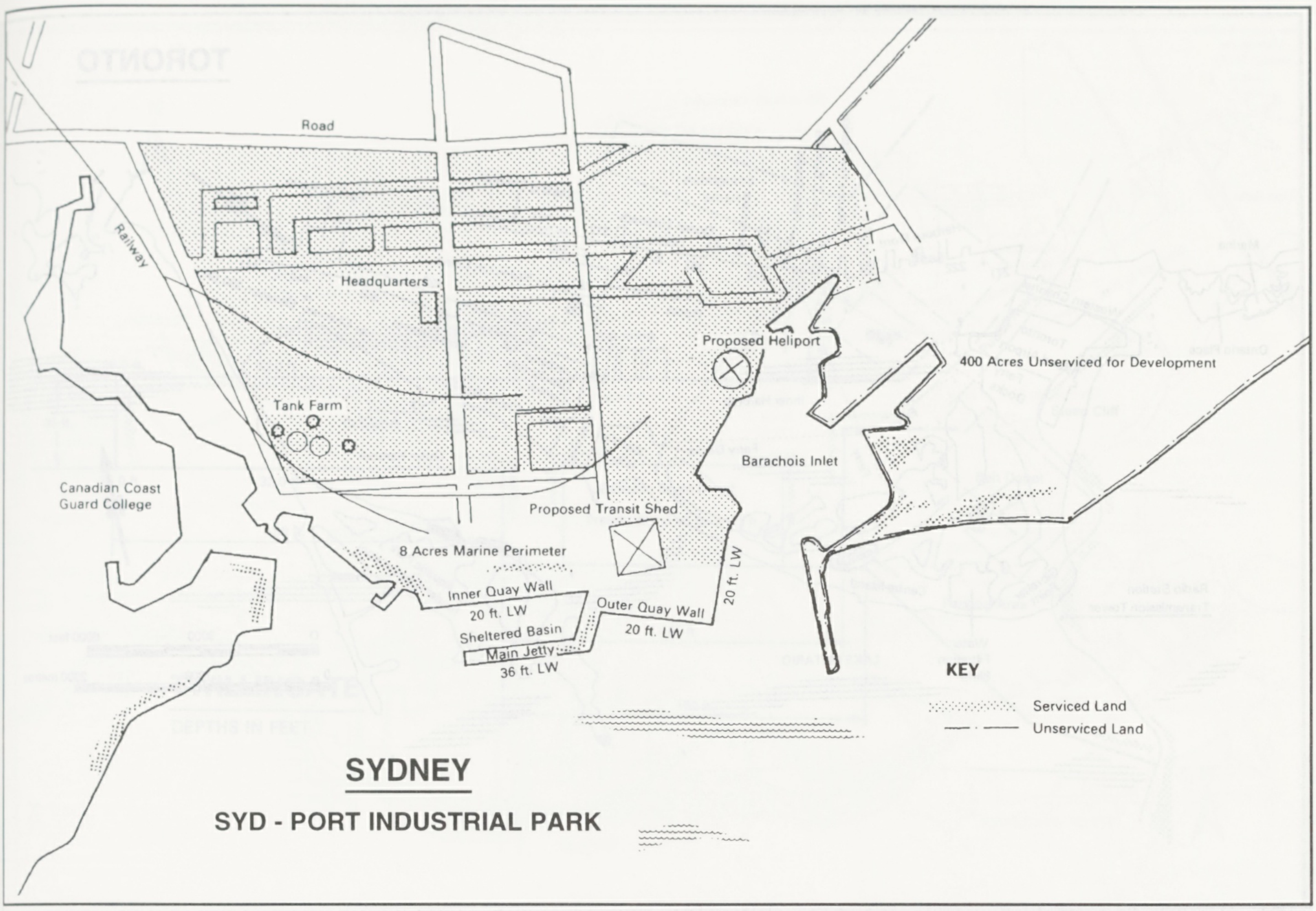
A
41 ft. LW Steel Pier 4
41 ft. LW Steel Pier 3
Conveyor
Not in Service
Coal Pier 26 ft. LW
Conveyor
Coal Pier No. 4 30 ft. LW
26 ft. LW
Coal Pier
A
B
SYDNEY
Marine Railway
Sydney Engineering & Dry Dock
23 ft. LW
28 ft. LW
15 ft. LW
Sydney Government Wharf

SYDNEY

GOVERNMENT WHARF



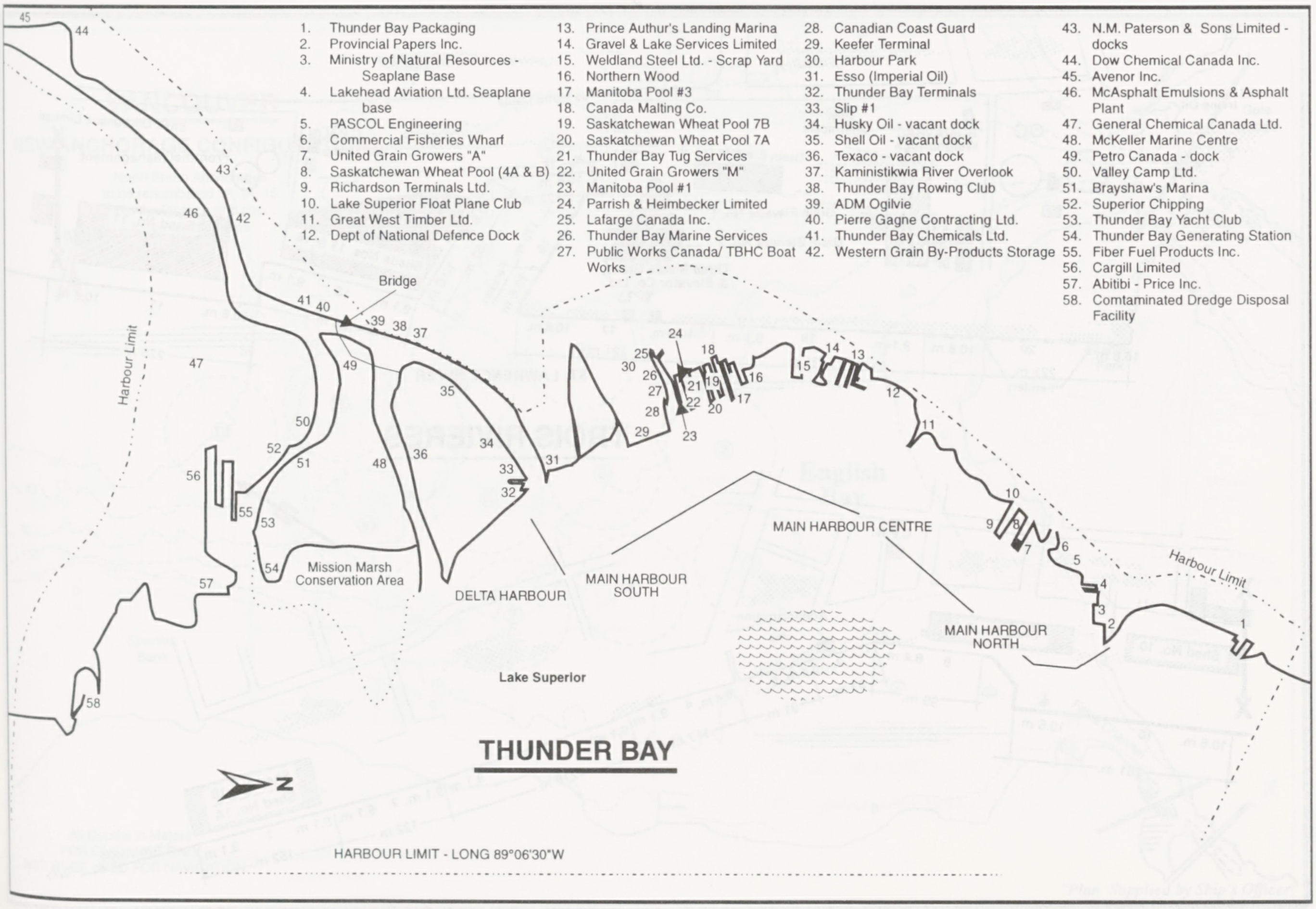
33.0m.
206.2m.
9.3m.
96.2m.
Transit Shed
Paved Area
Pump House
Fisheries Office
0
50
SCALE OF METRES



SYDNEY

SYD - PORT INDUSTRIAL PARK

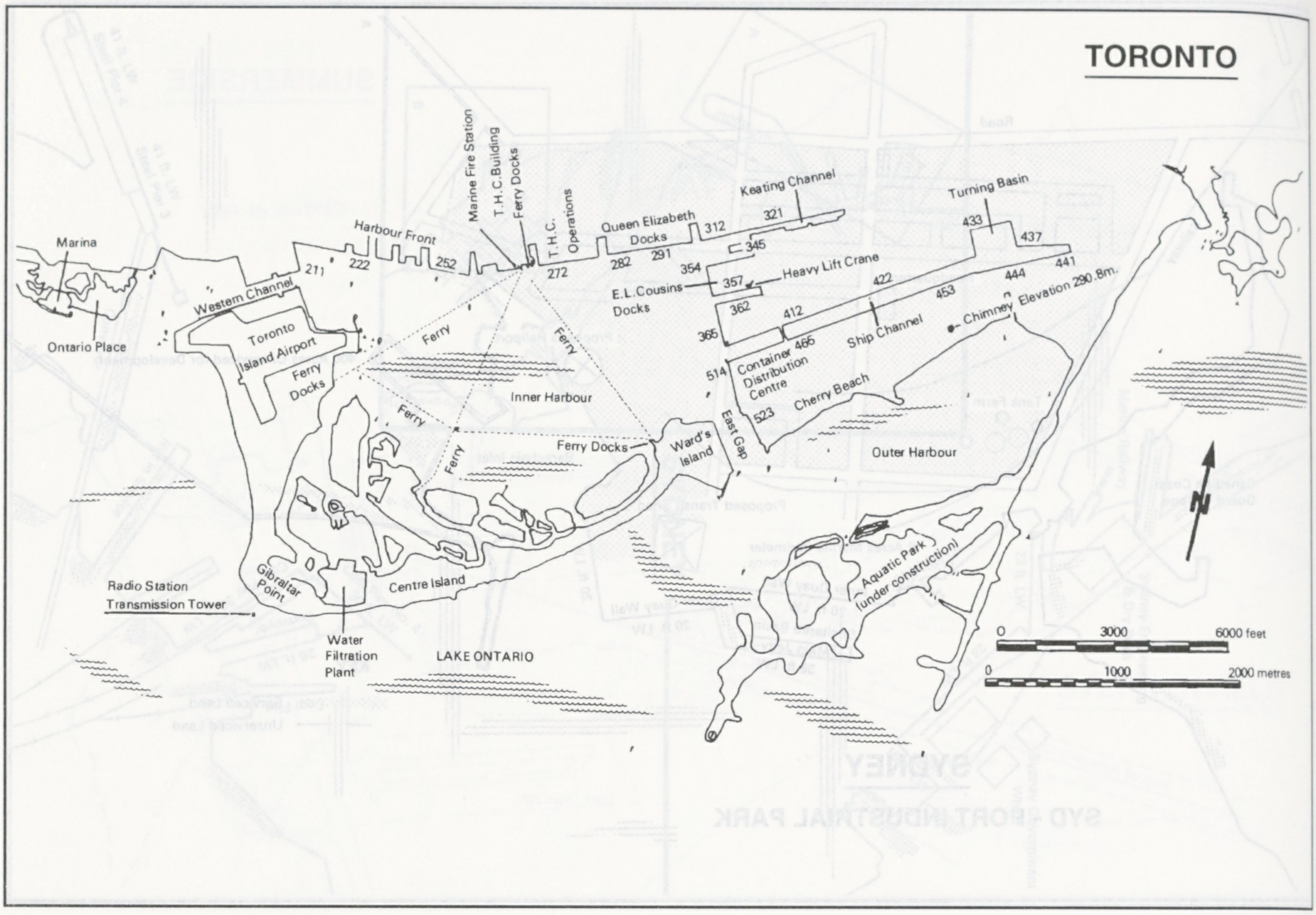
Road
Railway
Headquarters
Proposed Heliport
400 Acres Unserviced for Development
Tank Farm
Barachois Inlet
Canadian Coast Guard College
Proposed Transit Shed
8 Acres Marine Perimeter
Inner Quay Wall
20 ft. LW
Outer Quay Wall
20 ft. LW
20 ft. LW
Sheltered Basin
Main Jetty
36 ft. LW
KEY
Serviced Land
Unserviced Land

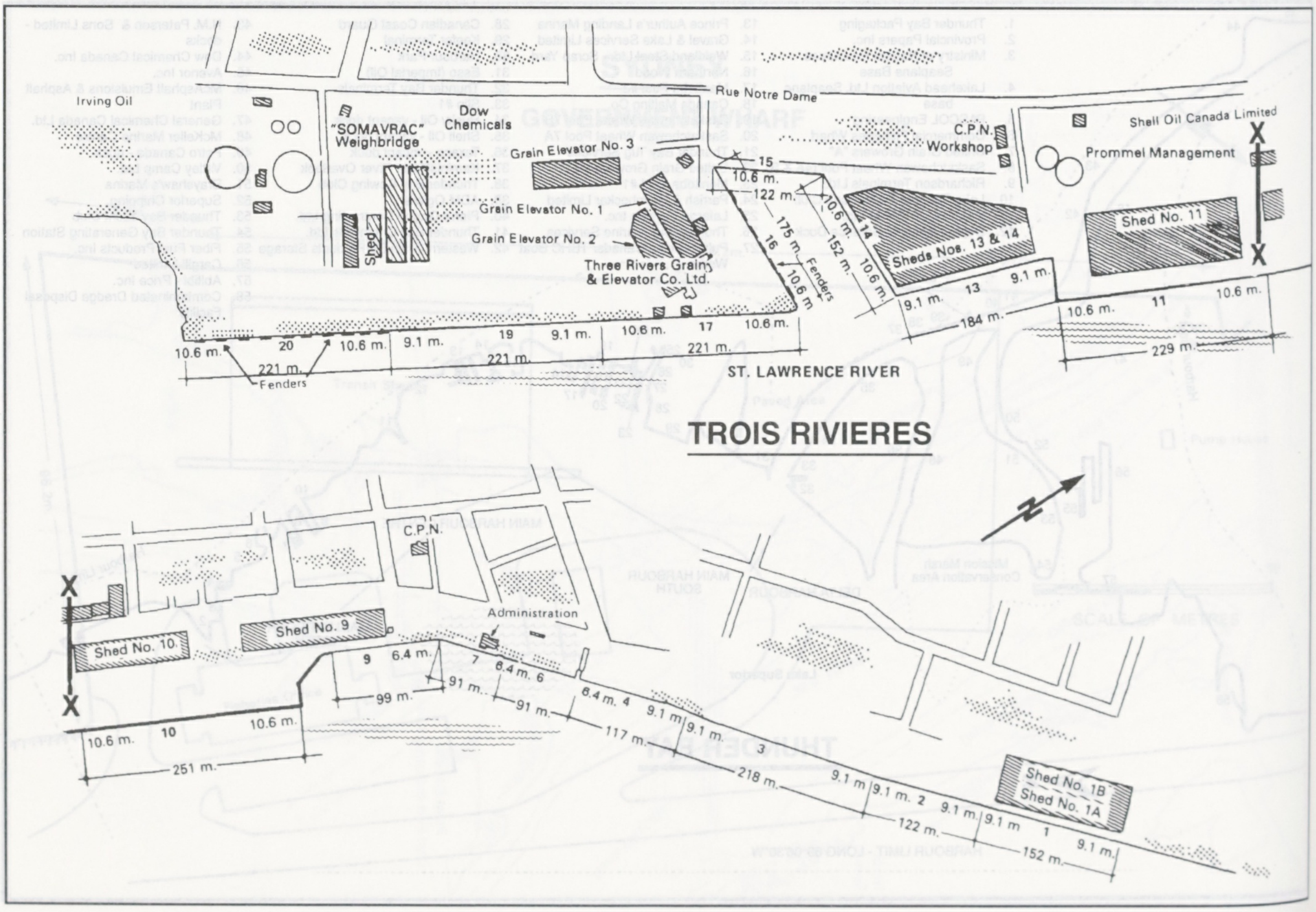


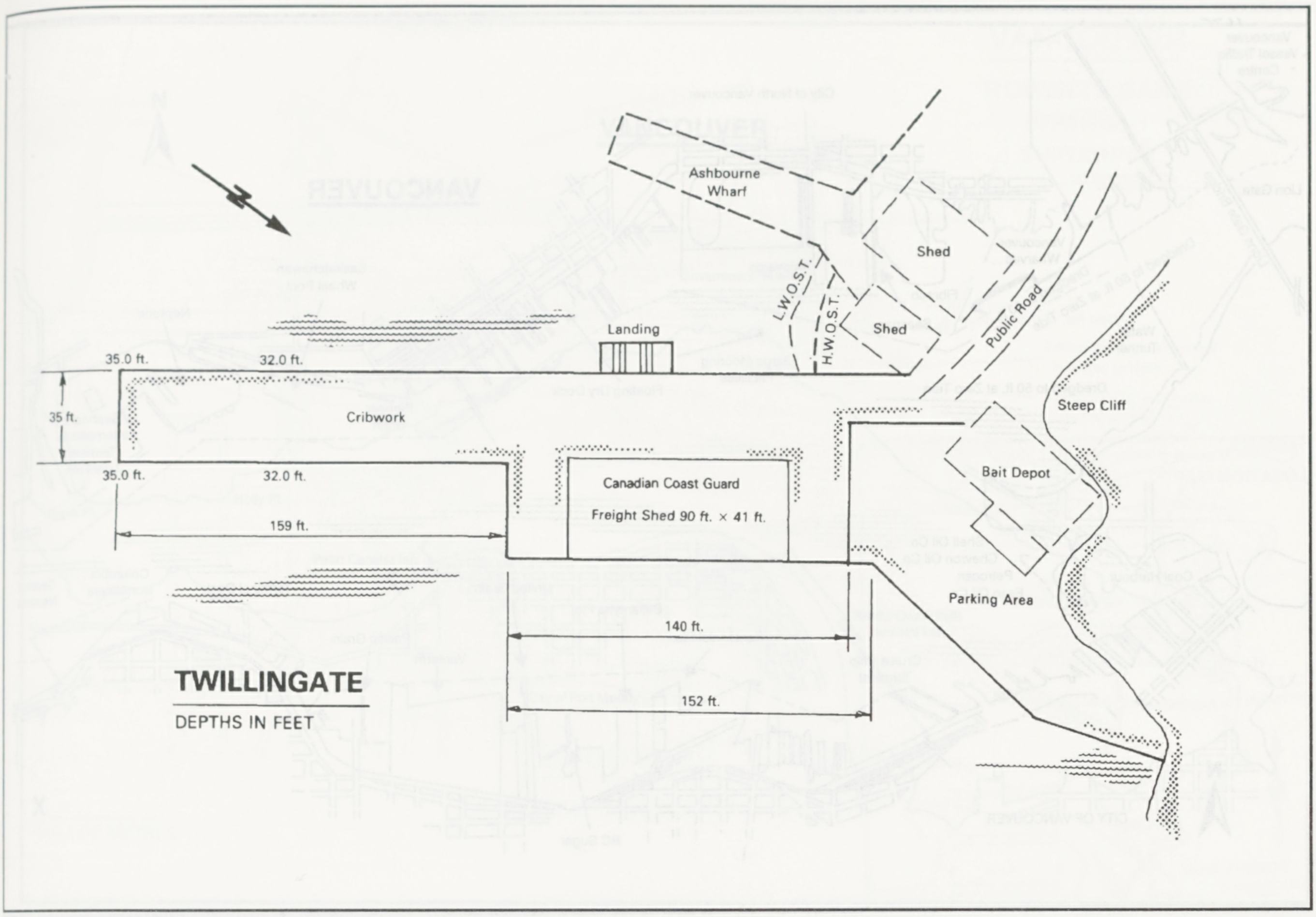
THUNDER BAY

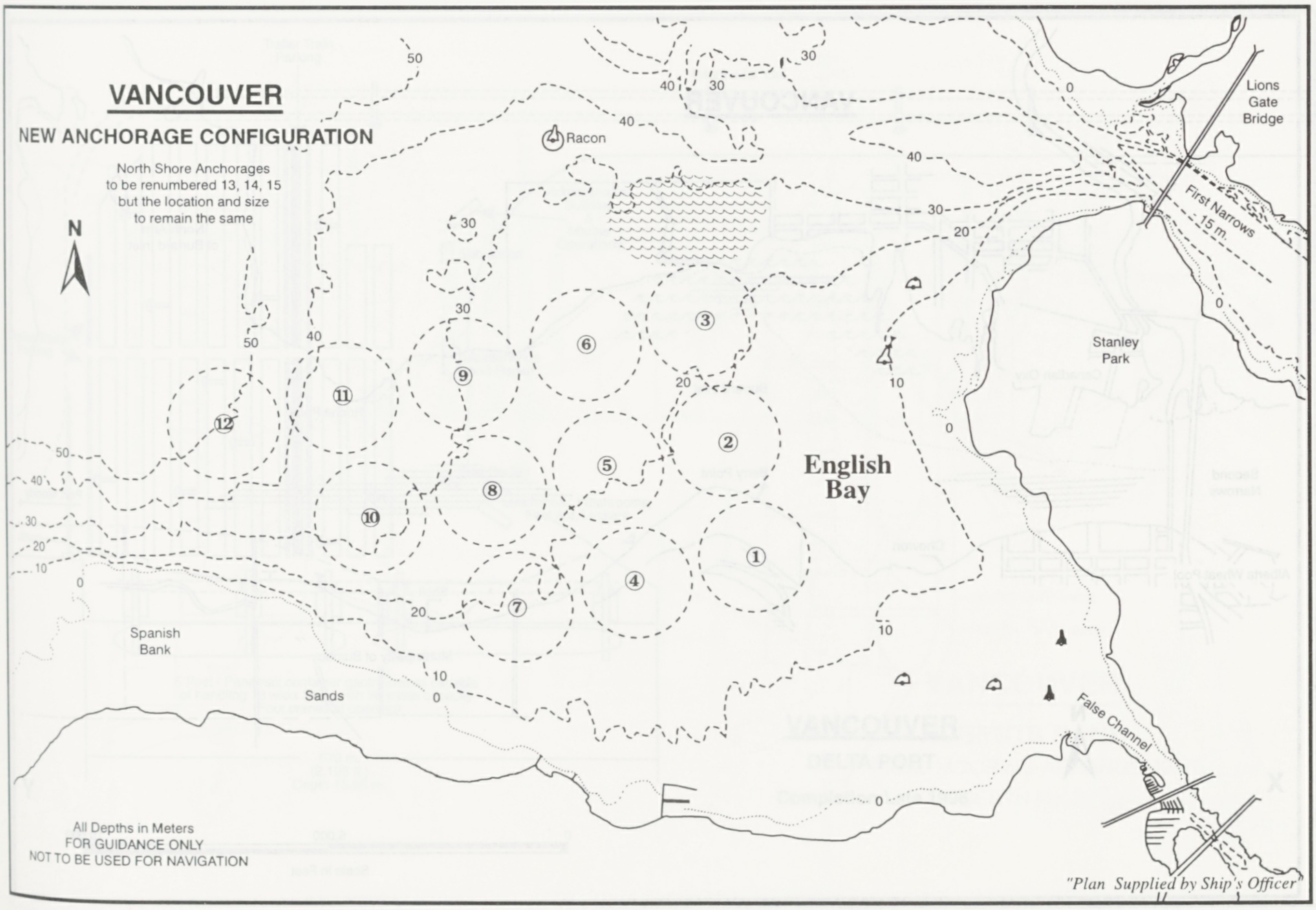
1. Thunder Bay Packaging
2. Provincial Papers Inc.
3. Ministry of Natural Resources - Seaplane Base
4. Lakehead Aviation Ltd. Seaplane base
5. PASCOL Engineering
6. Commercial Fisheries Wharf
7. United Grain Growers "A"
8. Saskatchewan Wheat Pool (4A & B)
9. Richardson Terminals Ltd.
10. Lake Superior Float Plane Club
11. Great West Timber Ltd.
12. Dept of National Defence Dock
13. Prince Authur's Landing Marina
14. Gravel & Lake Services Limited
15. Weldland Steel Ltd. - Scrap Yard
16. Northern Wood
17. Manitoba Pool #3
18. Canada Malting Co.
19. Saskatchewan Wheat Pool 7B
20. Saskatchewan Wheat Pool 7A
21. Thunder Bay Tug Services
22. United Grain Growers "M"
23. Manitoba Pool #1
24. Parrish & Heimbecker Limited
25. Lafarge Canada Inc.
26. Thunder Bay Marine Services
27. Public Works Canada/ TBHC Boat Works
28. Canadian Coast Guard
29. Keefer Terminal
30. Harbour Park
31. Esso (Imperial Oil)
32. Thunder Bay Terminals
33. Slip #1
34. Husky Oil - vacant dock
35. Shell Oil - vacant dock
36. Texaco - vacant dock
37. Kaministikwia River Overlook
38. Thunder Bay Rowing Club
39. ADM Ogilvie
40. Pierre Gagne Contracting Ltd.
41. Thunder Bay Chemicals Ltd.
42. Western Grain By-Products Storage
43. N.M. Paterson & Sons Limited - docks
44. Dow Chemical Canada Inc.
45. Avenor Inc.
46. McAsphalt Emulsions & Asphalt Plant
47. General Chemical Canada Ltd.
48. McKeller Marine Centre
49. Petro Canada - dock
50. Valley Camp Ltd.
51. Brayshaw's Marina
52. Superior Chipping
53. Thunder Bay Yacht Club
54. Thunder Bay Generating Station
55. Fiber Fuel Products Inc.
56. Cargill Limited
57. Abitibi - Price Inc.
58. Comtaminated Dredge Disposal Facility

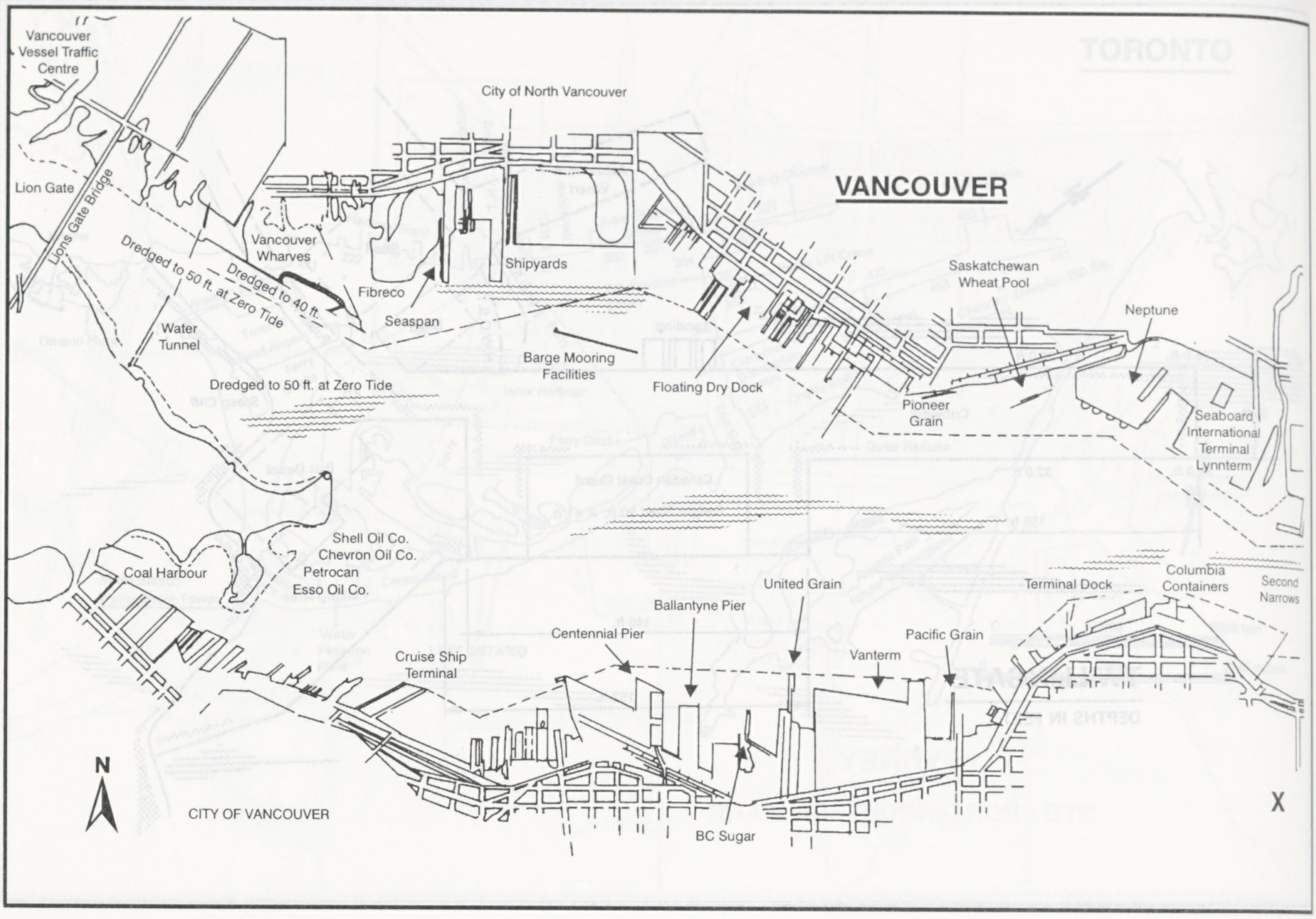
Bridge
Harbour Limit
Harbour Limit
Mission Marsh Conservation Area
DELTA HARBOUR
MAIN HARBOUR SOUTH
MAIN HARBOUR CENTRE
MAIN HARBOUR NORTH
Lake Superior
N
HARBOUR LIMIT - LONG 89°06'30"W

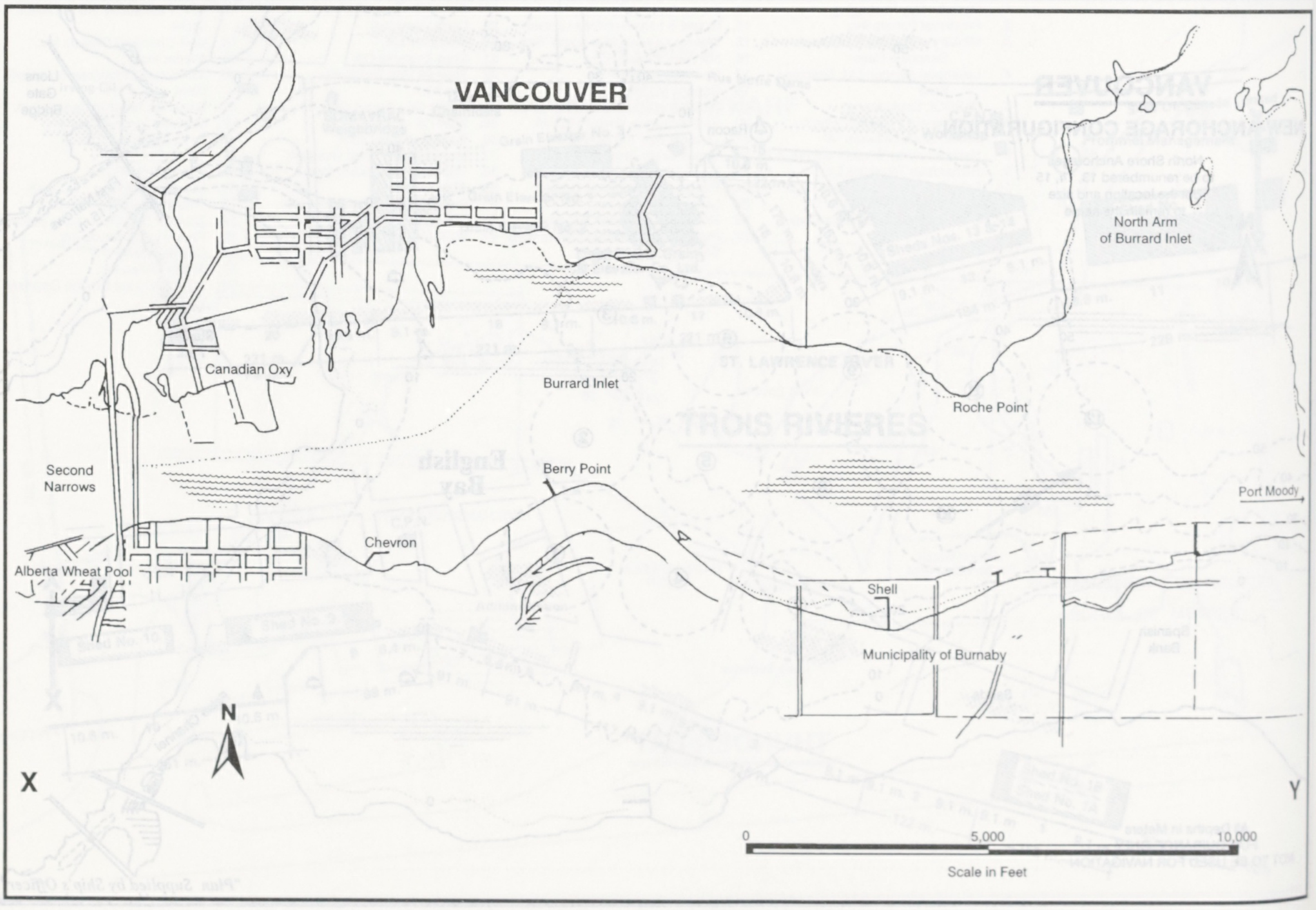

TORONTO
Marina
Ontario Place
Western Channel
211
222
Harbour Front
252
Marine Fire Station
T.H.C.Building
Ferry Docks
T.H.C. Operations
272
282
Queen Elizabeth Docks
291
312
Keating Channel
321
345
354
357
Heavy Lift Crane
E.L.Cousins Docks
362
412
422
453
444
441
437
433
Turning Basin
Ship Channel
Chimney Elevation 290.8m.
365
Container Distribution Centre
466
514
523
Cherry Beach
East Gap
Ward's Island
Ferry Docks
Outer Harbour
Toronto Island Airport
Ferry Docks
Ferry
Ferry
Ferry
Ferry
Inner Harbour
Radio Station Transmission Tower
Gibraltar Point
Centre Island
Water Filtration Plant
LAKE ONTARIO
Aquatic Park (under construction)
0 3000 6000 feet
0 1000 2000 metres

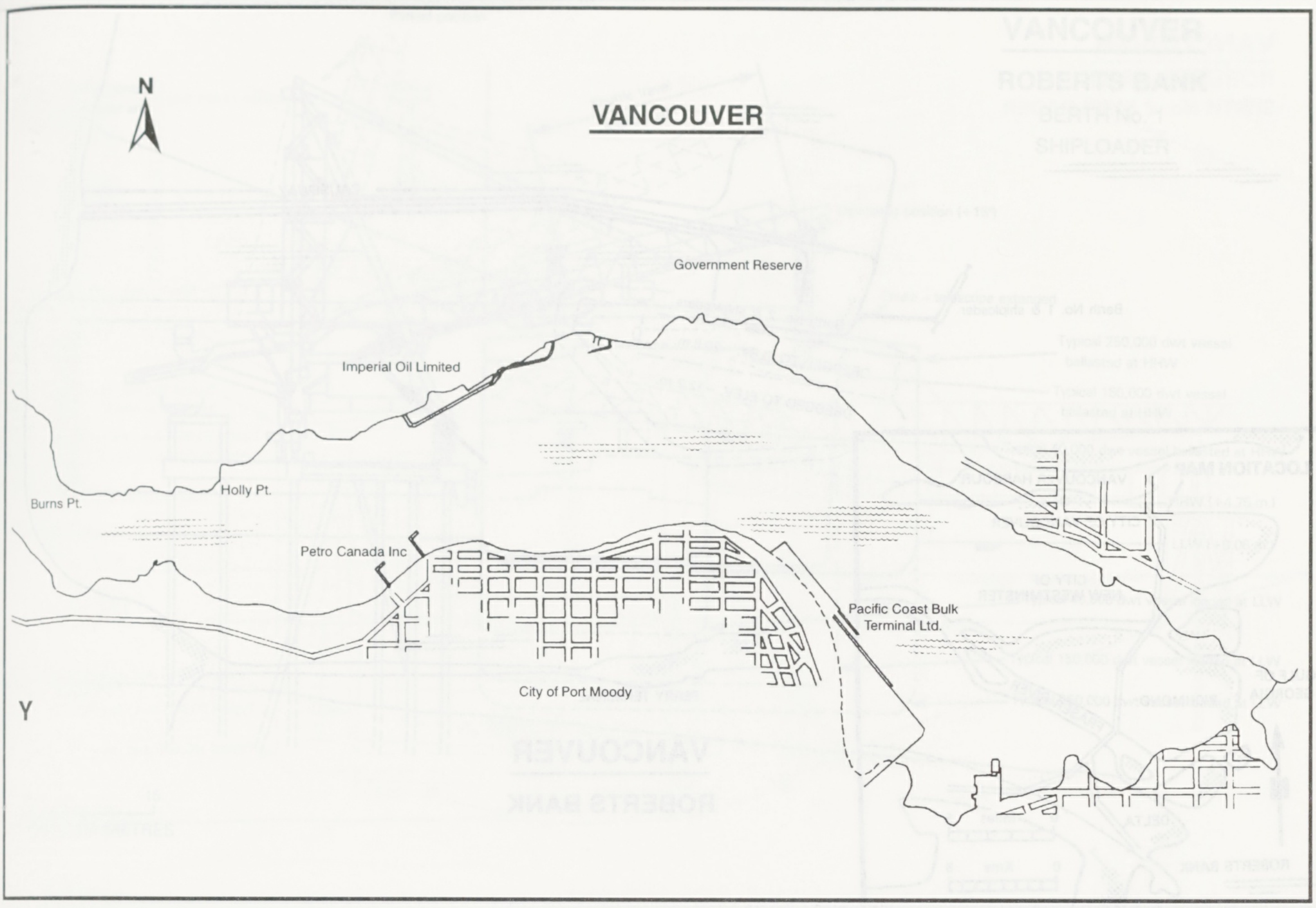

Irving Oil
"SOMAVRAC" Weighbridge
Dow Chemicals
Grain Elevator No. 3
Grain Elevator No. 1
Grain Elevator No. 2
Shed
Three Rivers Grain & Elevator Co. Ltd.
Rue Notre Dame
C.P.N. Workshop
Shell Oil Canada Limited
Prommel Management
X
X
Shed No. 11
Sheds Nos. 13 & 14
15
10.6 m.
122 m.
175 m.
16
10.6 m.
Fenders
14
10.6 m.
152 m.
10.6 m.
9.1 m.
13
9.1 m.
184 m.
10.6 m.
11
10.6 m.
229 m.
17
10.6 m.
221 m.
19
9.1 m.
9.1 m.
20
10.6 m.
10.6 m.
221 m.
Fenders
ST. LAWRENCE RIVER
TROIS RIVIERES
C.P.N.
X
X
Shed No. 10.
Shed No. 9
Administration
9
6.4 m.
7
6.4 m.
6
99 m.
91 m.
91 m.
6.4 m.
4
9.1 m
9.1 m.
117 m.
3
218 m.
10.6 m.
10
10.6 m.
251 m.
9.1 m
9.1 m.
2
9.1 m.
9.1 m
1
9.1 m.
122 m.
152 m.
Shed No. 1B
Shed No. 1A

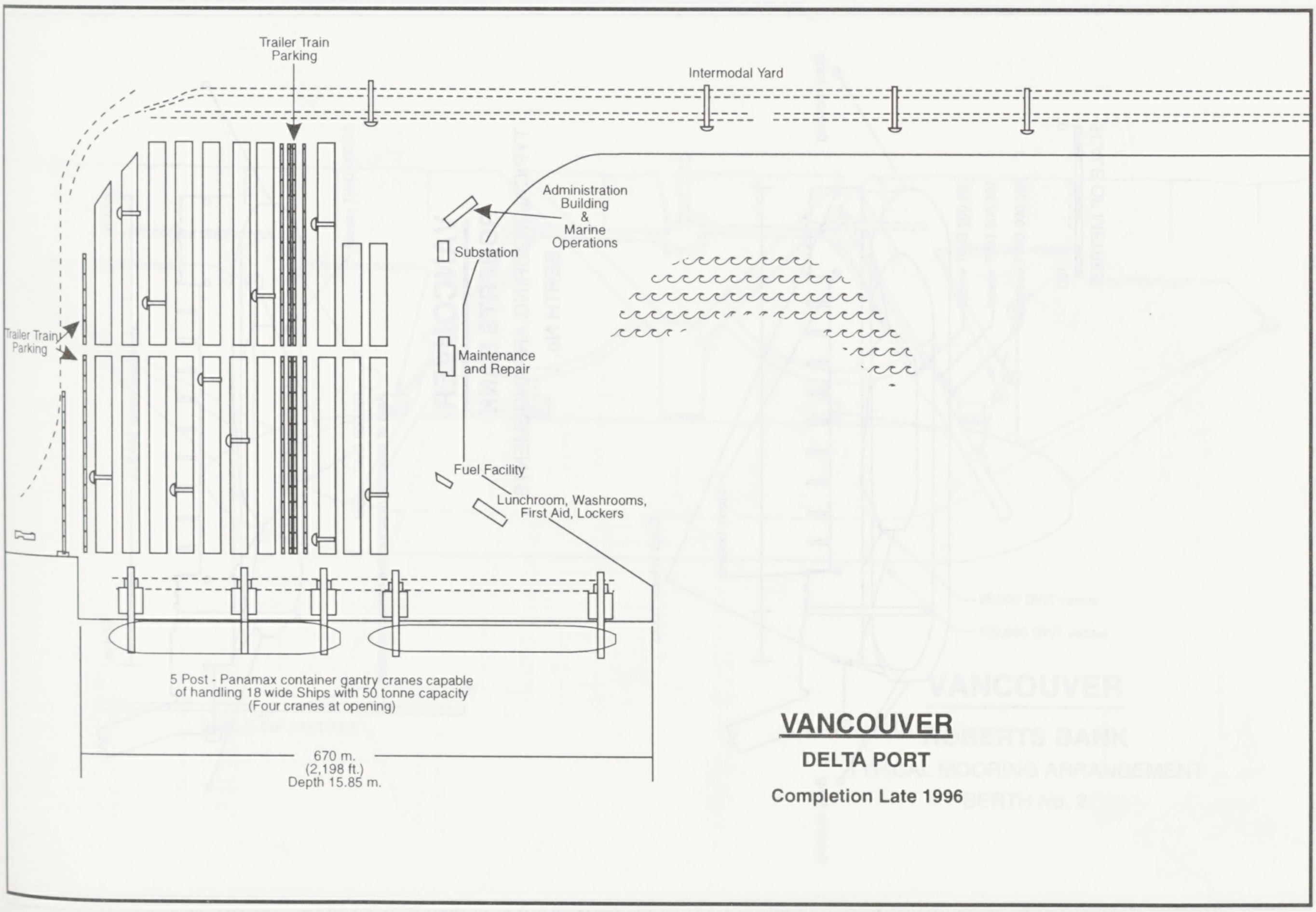

Ashbourne Wharf
Shed
Shed
L.W.O.S.T.
H.W.O.S.T.
Public Road
Landing
35.0 ft.
32.0 ft.
35 ft.
Cribwork
35.0 ft.
32.0 ft.
159 ft.
Canadian Coast Guard
Freight Shed 90 ft. × 41 ft.
Steep Cliff
Bait Depot
Parking Area
140 ft.
152 ft.
TWILLINGATE
DEPTHS IN FEET


VANCOUVER
NEW ANCHORAGE CONFIGURATION
North Shore Anchorages to be renumbered 13, 14, 15 but the location and size to remain the same
N
50
40
30
40
30
Racon
0
Lions Gate Bridge
40
30
20
First Narrows 15 m.
0
Stanley Park
30
30
50
40
③
⑥
⑨
⑪
⑫
20
10
0
②
⑤
⑧
⑩
①
④
⑦
English Bay
50
40
30
20
10
0
20
10
Spanish Bank
Sands
10
0
False Channel
0
All Depths in Meters
FOR GUIDANCE ONLY
NOT TO BE USED FOR NAVIGATION
"Plan Supplied by Ship's Officer"


VANCOUVER
Vancouver Vessel Traffic Centre
City of North Vancouver
Lion Gate
Lions Gate Bridge
Dredged to 50 ft. at Zero Tide
Dredged to 40 ft.
Vancouver Wharves
Fibreco
Seaspan
Shipyards
Water Tunnel
Dredged to 50 ft. at Zero Tide
Barge Mooring Facilities
Floating Dry Dock
Saskatchewan Wheat Pool
Neptune
Pioneer Grain
Seaboard International Terminal Lynnterm
Shell Oil Co.
Chevron Oil Co.
Petrocan
Esso Oil Co.
Coal Harbour
United Grain
Ballantyne Pier
Centennial Pier
Cruise Ship Terminal
Terminal Dock
Columbia Containers
Second Narrows
Pacific Grain
Vanterm
N
CITY OF VANCOUVER
BC Sugar
X


VANCOUVER
North Arm of Burrard Inlet
Canadian Oxy
Burrard Inlet
Roche Point
Second Narrows
Berry Point
Port Moody
Chevron
Alberta Wheat Pool
Shell
Municipality of Burnaby
N
X
Y
0
5,000
10,000
Scale in Feet

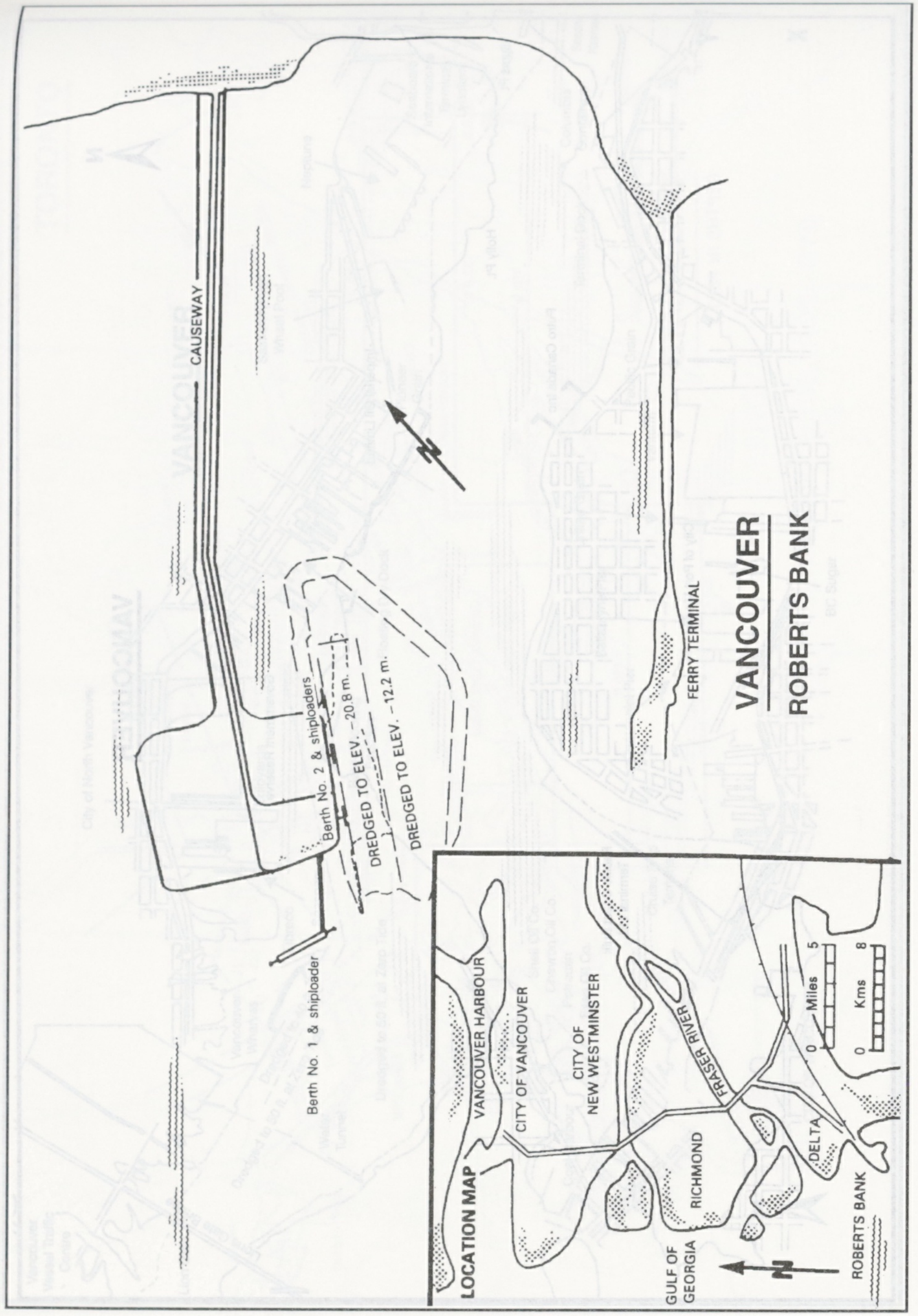

N
VANCOUVER
Government Reserve
Imperial Oil Limited
Burns Pt.
Holly Pt.
Petro Canada Inc
Pacific Coast Bulk Terminal Ltd.
City of Port Moody
Y

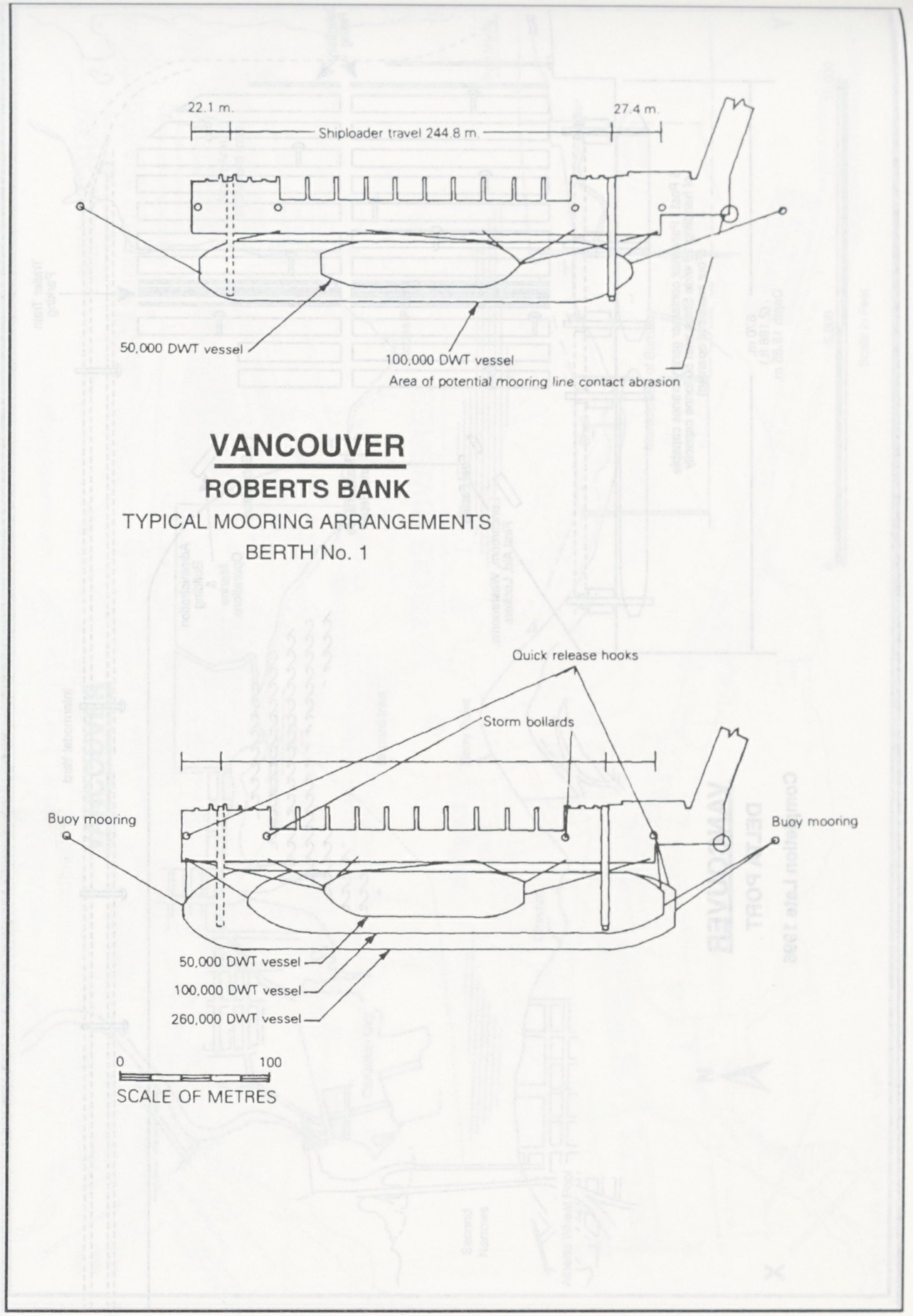

Trailer Train Parking
Intermodal Yard
Administration Building & Marine Operations
Substation
Trailer Train Parking
Maintenance and Repair
Fuel Facility
Lunchroom, Washrooms, First Aid, Lockers
5 Post - Panamax container gantry cranes capable of handling 18 wide Ships with 50 tonne capacity (Four cranes at opening)
670 m. (2,198 ft.) Depth 15.85 m.

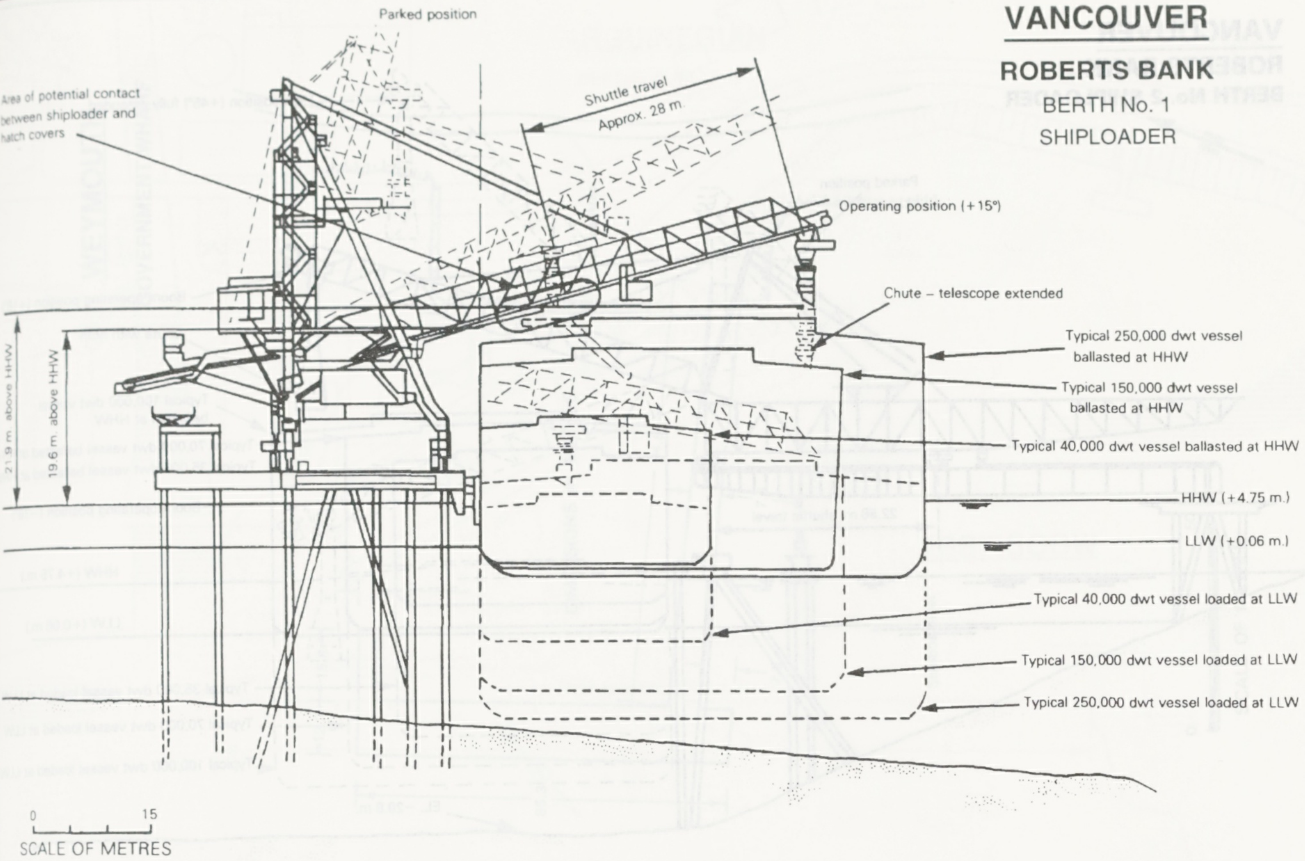
VANCOUVER

DELTA PORT

Completion Late 1996


CAUSEWAY
Berth No. 2 & shiploaders
DREDGED TO ELEV. - 20.8 m.
DREDGED TO ELEV. - 12.2 m.
Berth No. 1 & shiploader
N
FERRY TERMINAL
VANCOUVER
ROBERTS BANK
LOCATION MAP
VANCOUVER HARBOUR
CITY OF VANCOUVER
CITY OF NEW WESTMINSTER
FRASER RIVER
RICHMOND
DELTA
GULF OF GEORGIA
ROBERTS BANK
N
Miles
0
5
Kms
0
8

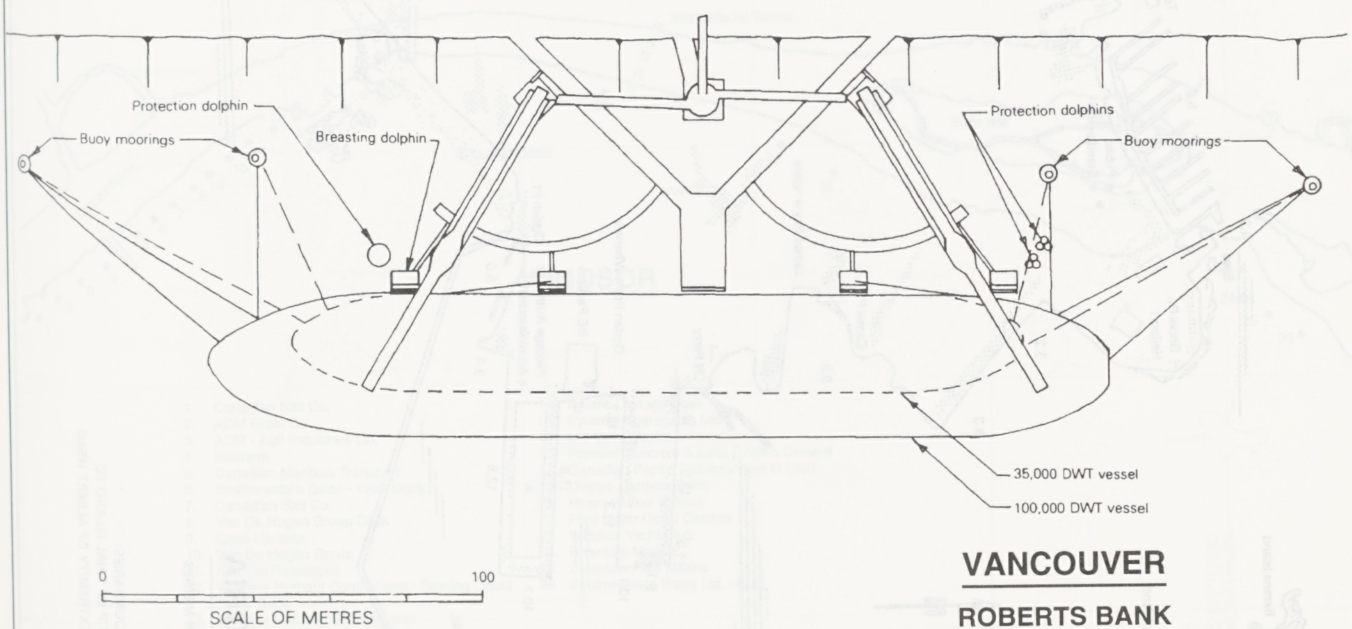

22.1 m.
27.4 m.
Shiploader travel 244.8 m
50,000 DWT vessel
100,000 DWT vessel
Area of potential mooring line contact abrasion
VANCOUVER
ROBERTS BANK
TYPICAL MOORING ARRANGEMENTS
BERTH No. 1
Quick release hooks
Storm bollards
Buoy mooring
Buoy mooring
50,000 DWT vessel
100,000 DWT vessel
260,000 DWT vessel
0
100
SCALE OF METRES


Parked position
Area of potential contact between shiploader and hatch covers
Shuttle travel
Approx. 28 m.
Operating position (+15°)
Chute – telescope extended
Typical 250,000 dwt vessel ballasted at HHW
Typical 150,000 dwt vessel ballasted at HHW
Typical 40,000 dwt vessel ballasted at HHW
HHW (+4.75 m.)
LLW (+0.06 m.)
Typical 40,000 dwt vessel loaded at LLW
Typical 150,000 dwt vessel loaded at LLW
Typical 250,000 dwt vessel loaded at LLW
21.9 m. above HHW
19.6 m. above HHW
0
15
SCALE OF METRES

VANCOUVER

ROBERTS BANK

BERTH No. 1
SHIPLOADER

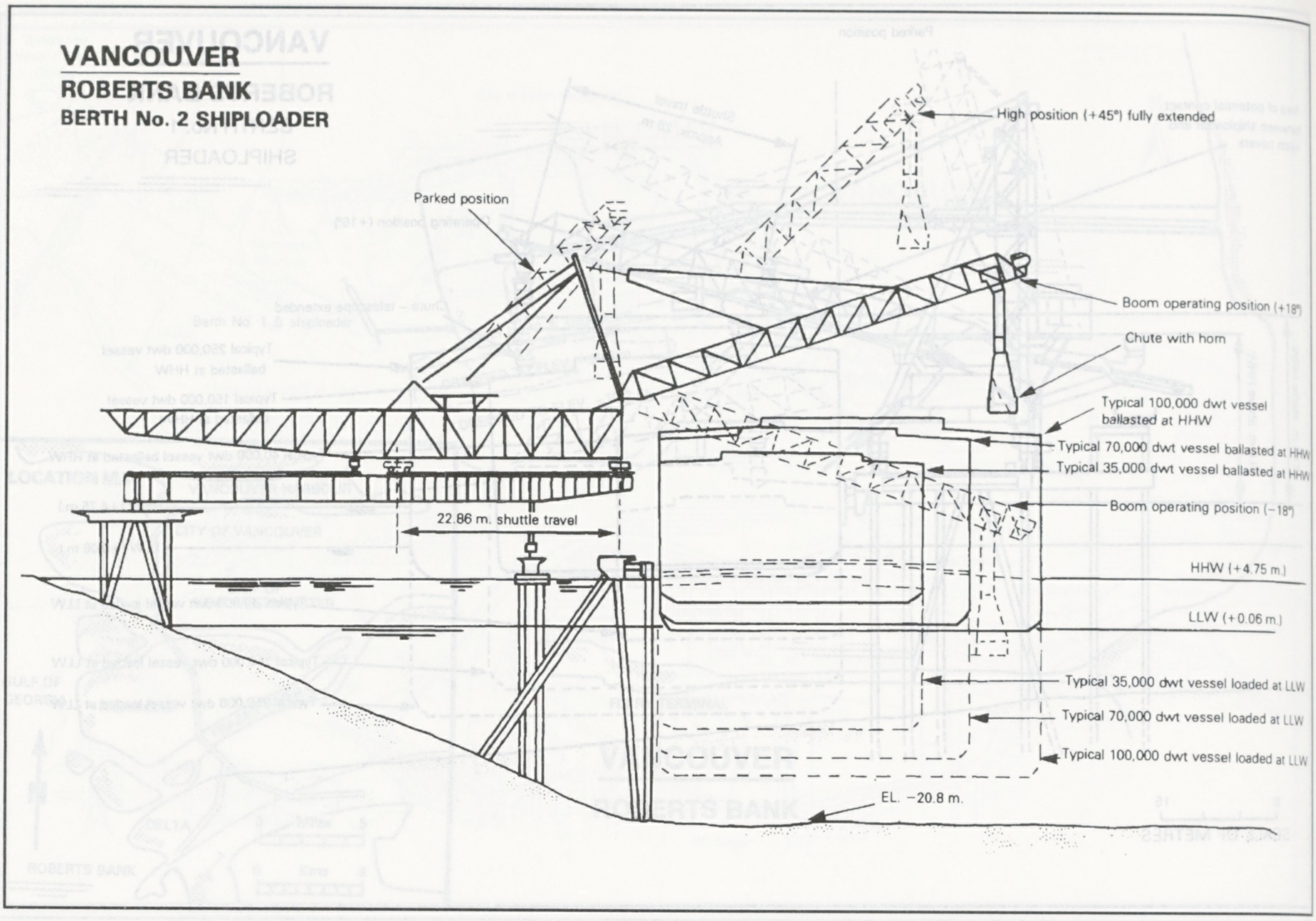

Protection dolphin
Buoy moorings
Breasting dolphin
Protection dolphins
Buoy moorings
35,000 DWT vessel
100,000 DWT vessel
0
100
SCALE OF METRES

VANCOUVER

ROBERTS BANK

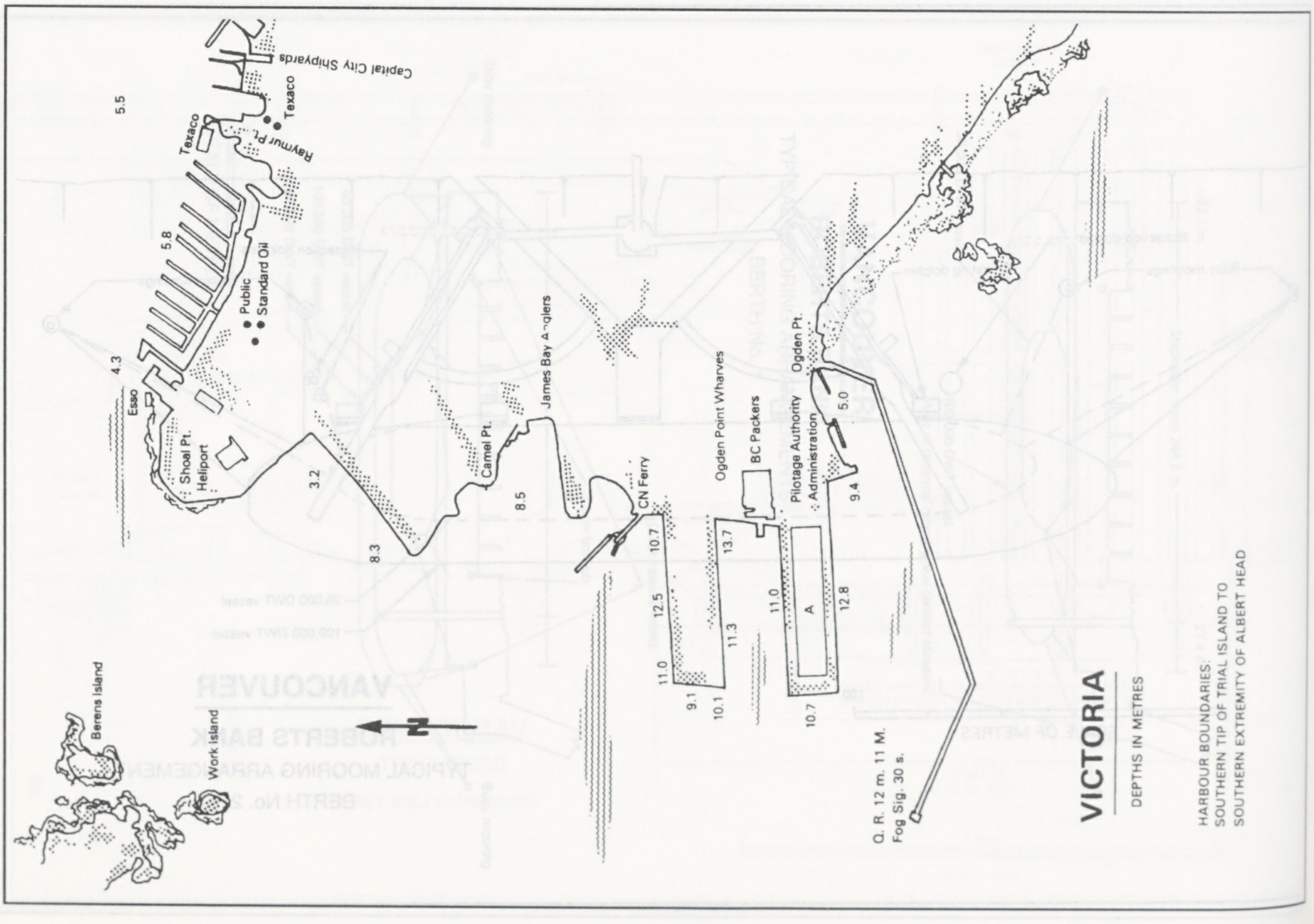
TYPICAL MOORING ARRANGEMENT
BERTH No. 2

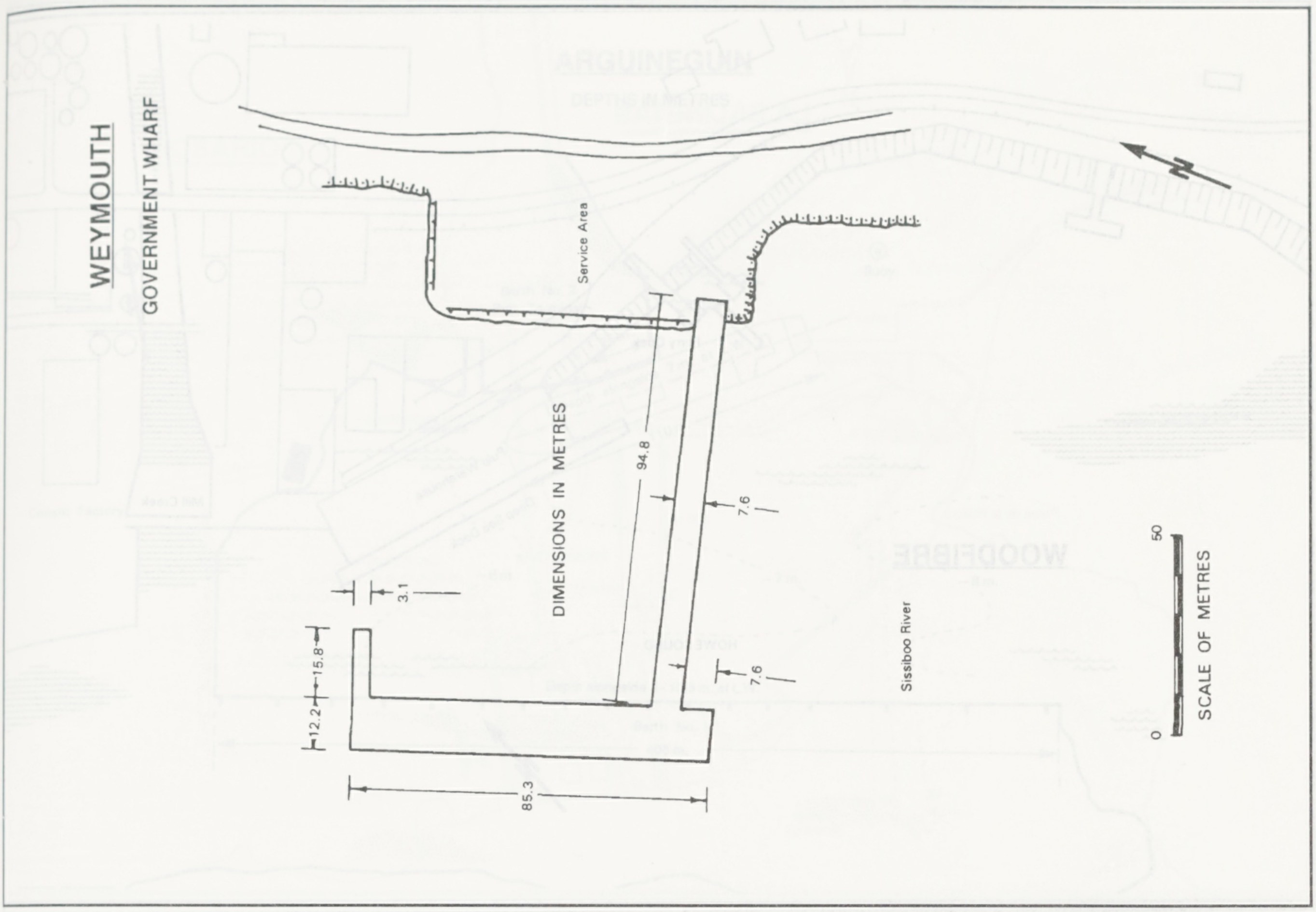
VANCOUVER
ROBERTS BANK
BERTH No. 2 SHIPLOADER

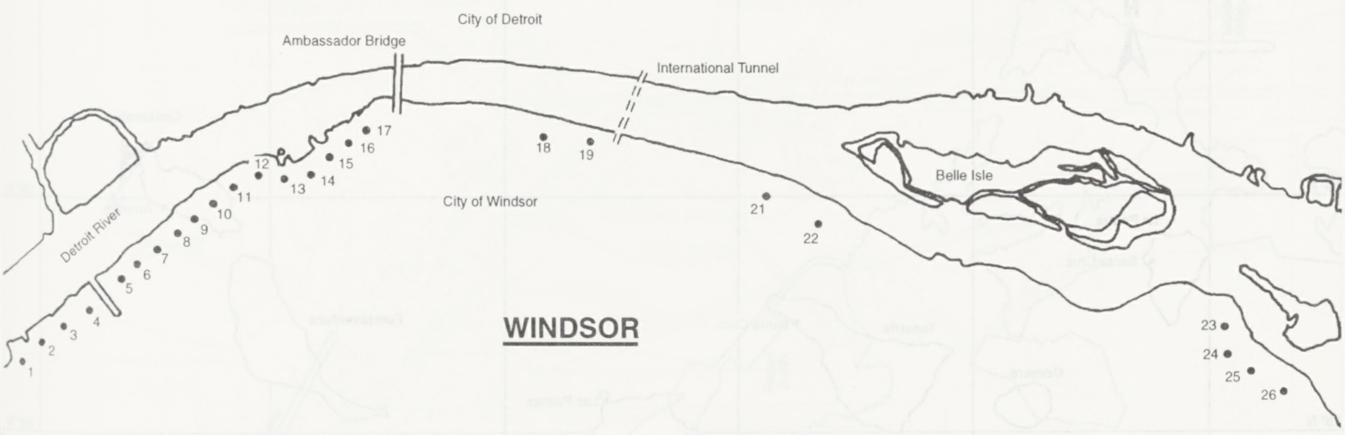

High position (+45°) fully extended
Parked position
Boom operating position (+18°)
Chute with horn
Typical 100,000 dwt vessel ballasted at HHW
Typical 70,000 dwt vessel ballasted at HHW
Typical 35,000 dwt vessel ballasted at HHW
Boom operating position (−18°)
22.86 m. shuttle travel
HHW (+4.75 m.)
LLW (+0.06 m.)
Typical 35,000 dwt vessel loaded at LLW
Typical 70,000 dwt vessel loaded at LLW
Typical 100,000 dwt vessel loaded at LLW
EL. −20.8 m.

VICTORIA
DEPTHS IN METRES

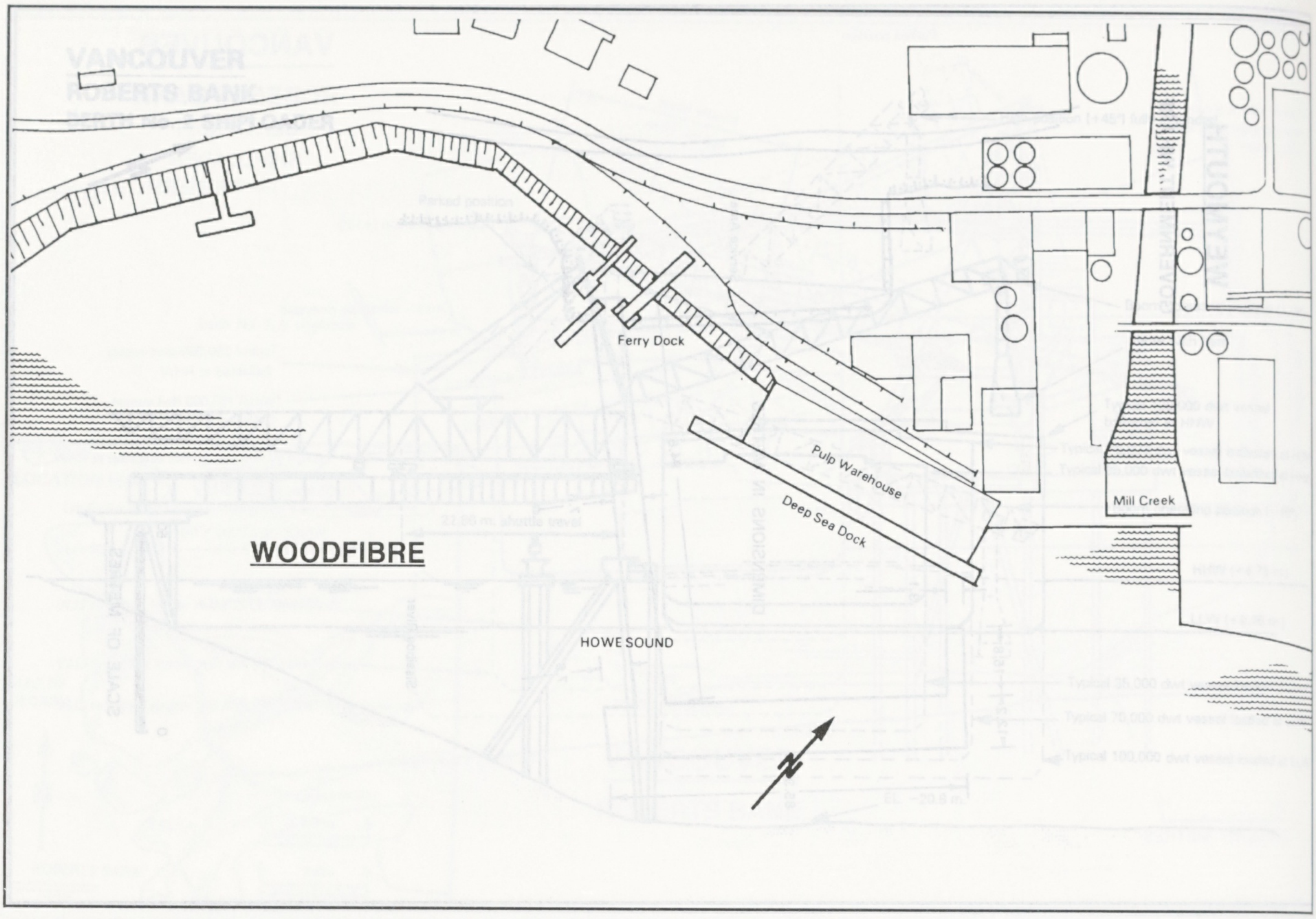
HARBOUR BOUNDARIES:
SOUTHERN TIP OF TRIAL ISLAND TO
SOUTHERN EXTREMITY OF ALBERT HEAD

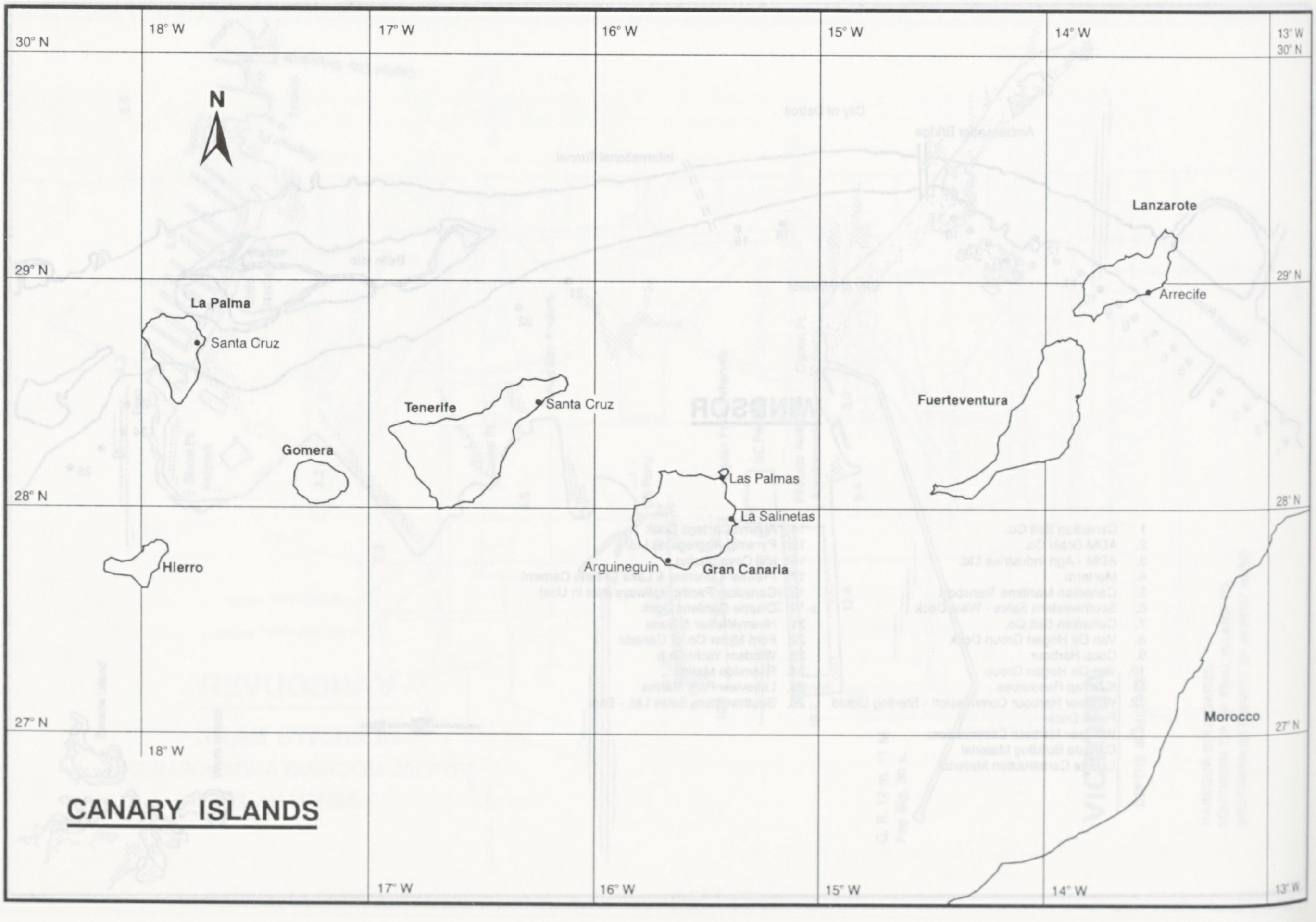

Capital City Shipyards
Texaco
Raymur Pt.
Texaco
5.5
5.8
Public
Standard Oil
4.3
Esso
Shoal Pt.
Heliport
3.2
8.3
Camel Pt.
James Bay Anglers
8.5
CN Ferry
10.7
12.5
11.0
9.1
Ogden Point Wharves
13.7
11.3
10.1
BC Packers
Pilotage Authority
Administration
11.0
A
12.8
10.7
Ogden Pt.
5.0
9.4
Q. R. 12 m. 11 M.
Fog Sig. 30 s.
Berens Island
Work Island
N

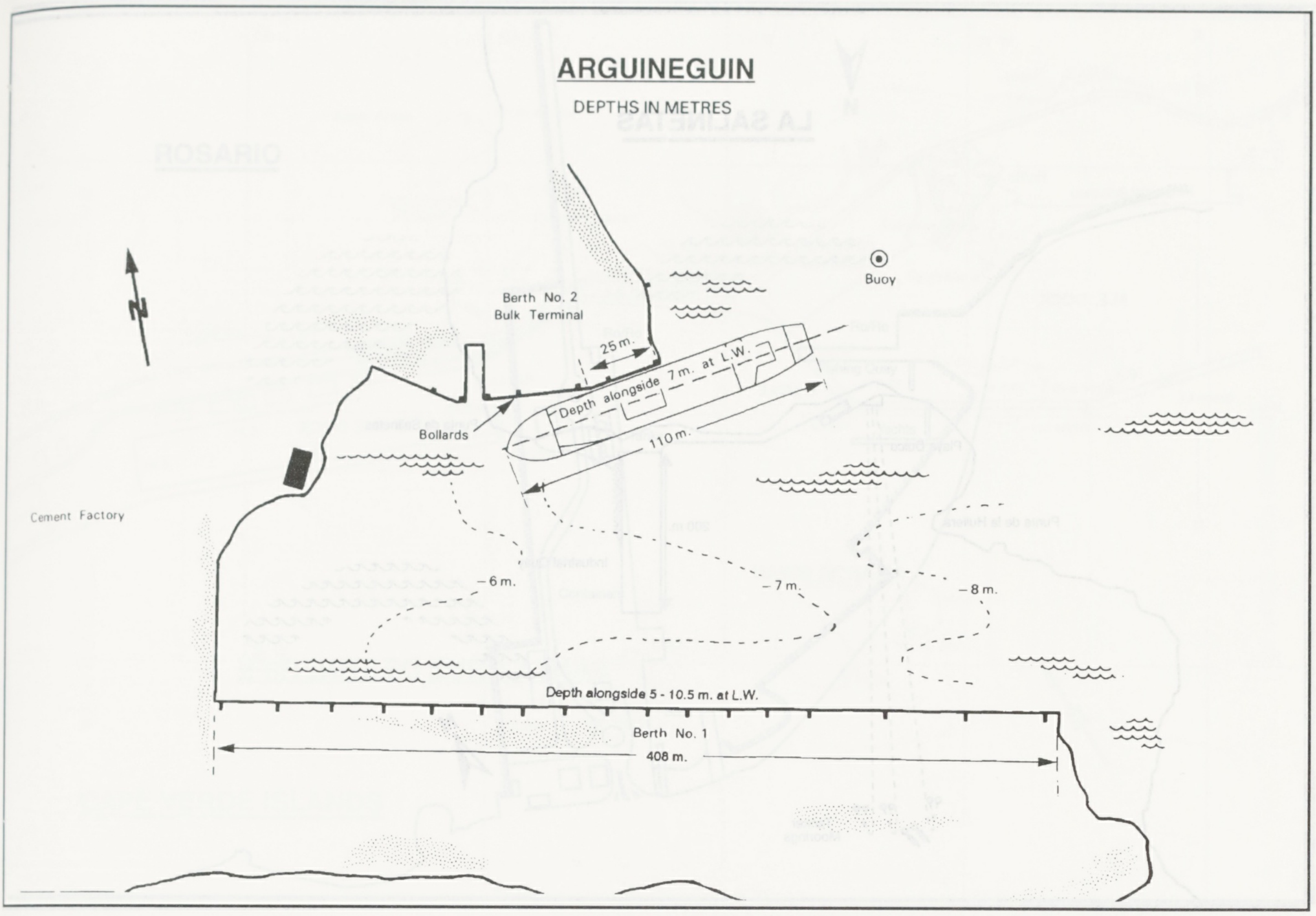

WEYMOUTH
GOVERNMENT WHARF
Service Area
DIMENSIONS IN METRES
94.8
7.6
3.1
15.8
12.2
7.6
85.3
Sissiboo River
0
50
SCALE OF METRES

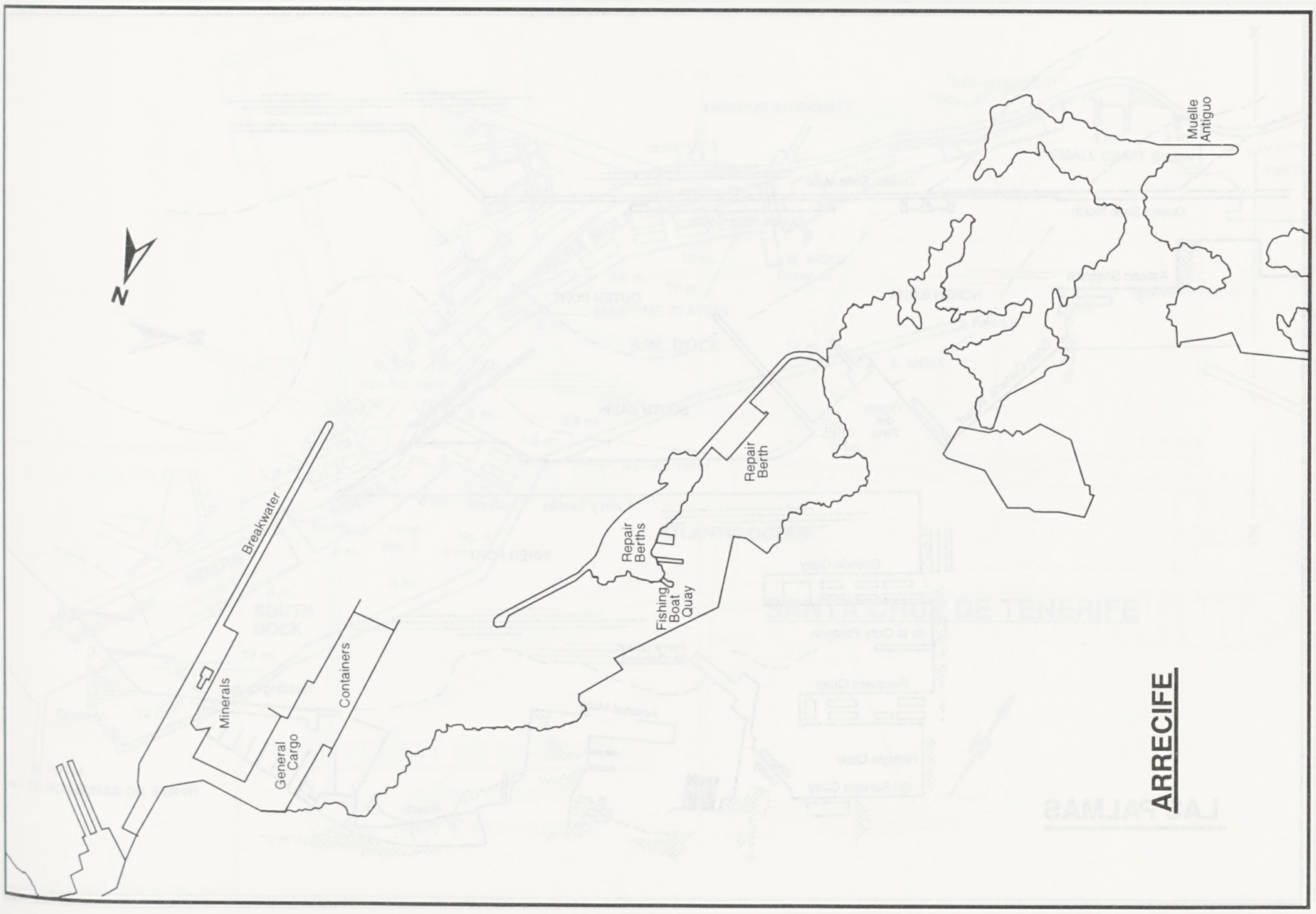

City of Detroit
Ambassador Bridge
International Tunnel
Belle Isle
City of Windsor
Detroit River
WINDSOR
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
21
22
23
24
25
26

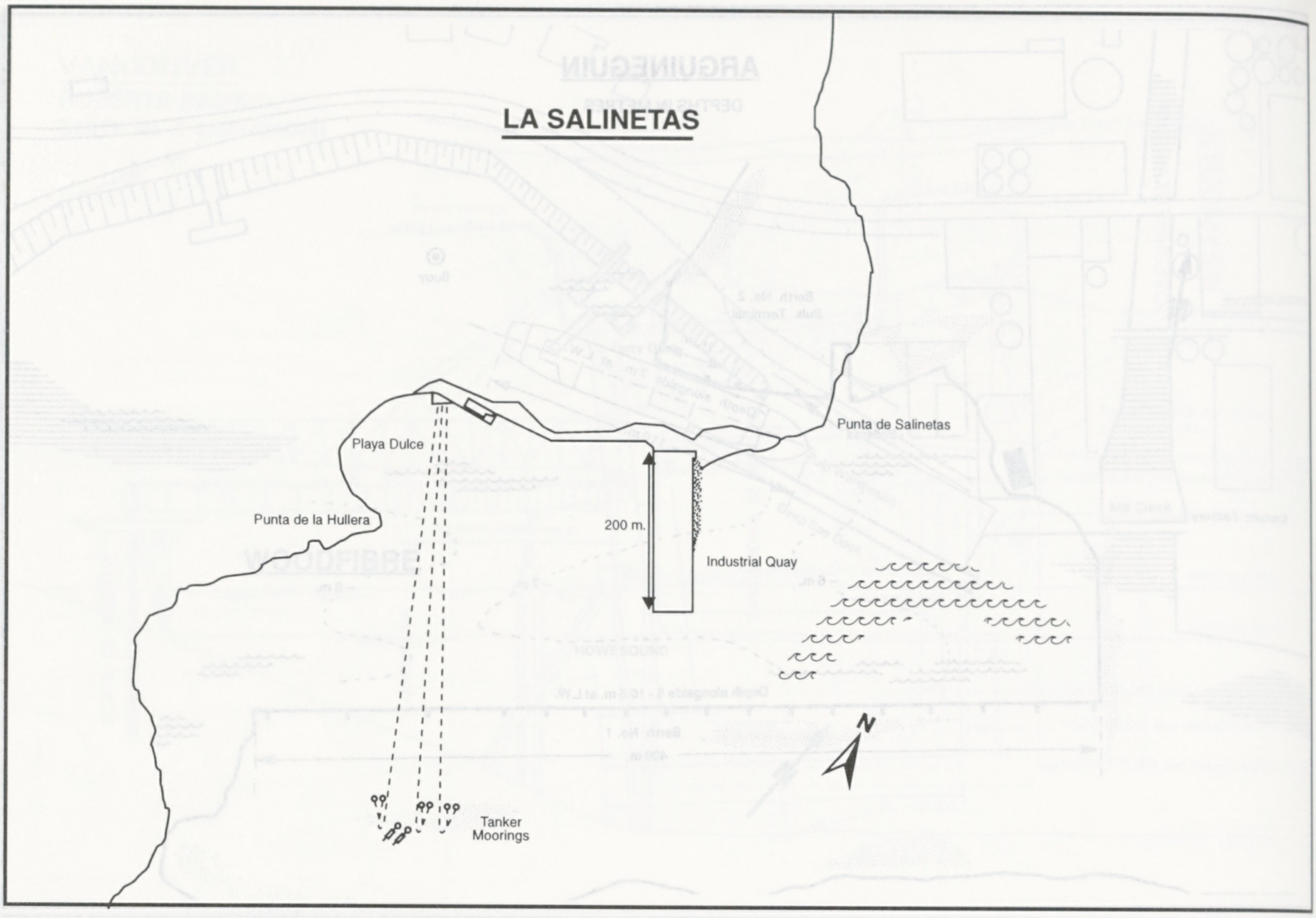
1 Canadian Salt Co.
2. ADM Grain Co.
3. ADM - Agri Industries Ltd.
4. Morterm
5. Canadian Maritime Transport
6. Southwestern Sales - West Dock
7. Canadian Salt Co.
8. Van De Hogan Group Dock
9. Coco Harbour
10. Van De Hogan Group
11. K Scrap Resources
12. Windsor Harbour Commission - Sterling Liquid Fuels Dock
13. Windsor Harbour Commission:-
Canada Building Material
Lafage Construction Material
14. Adams Cartage Dock
15. Pyramid Aggregates Ltd.
16. Mill Cove Marina
17. Premier Concrete & Lake Ontario Cement
18. Canadian Pacific Railways (Not in Use)
19. Dieppe Gardens Dock
21. Hiram Walker & Sons
22. Ford Motor Co. of Canada
23. Windsor Yacht Club
24. Riverside Marina
25. Lakeview Park Marina
26. Southwestern Sales Ltd. - East

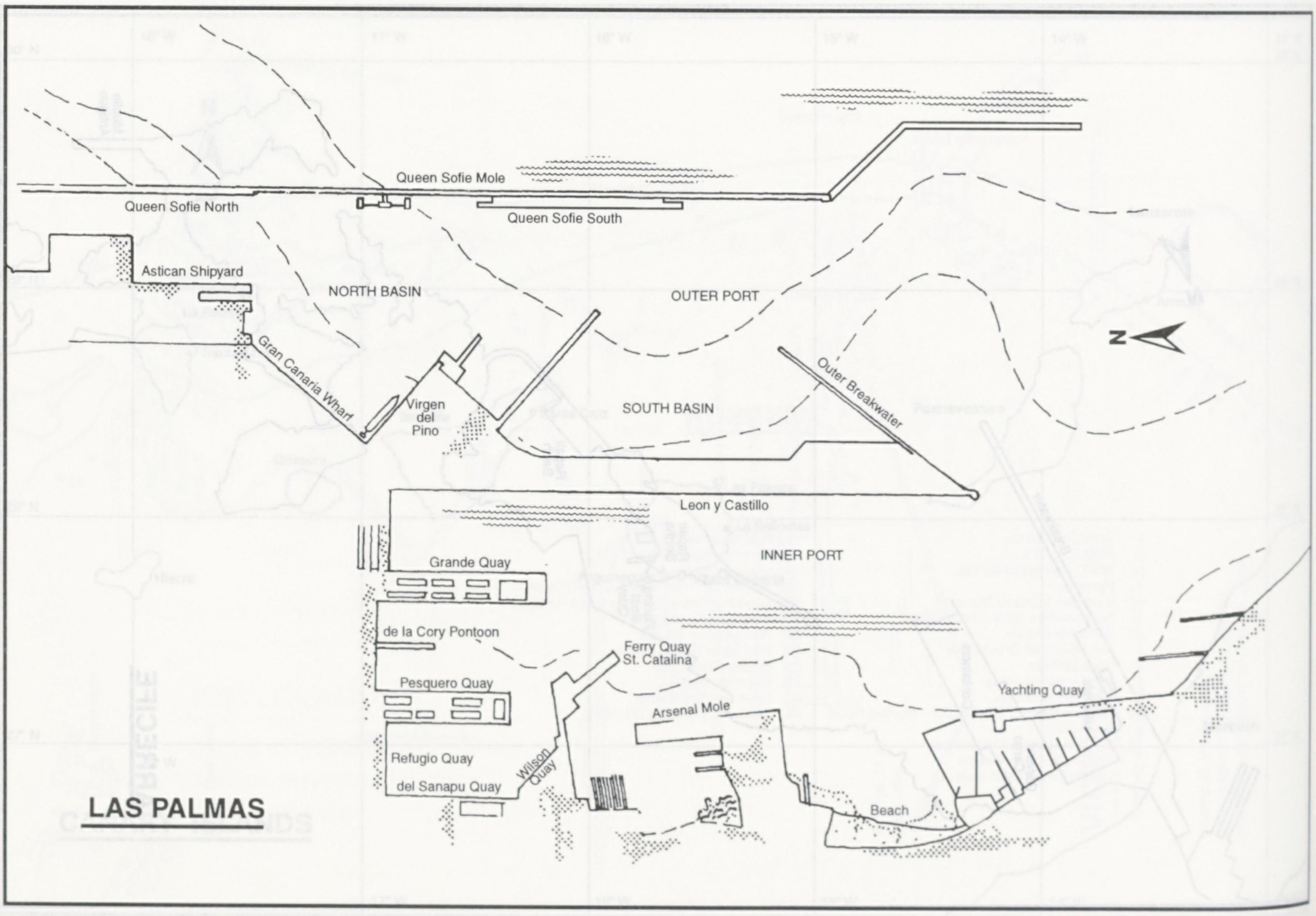

WOODFIBRE
Ferry Dock
Pulp Warehouse
Deep Sea Dock
Mill Creek
HOWE SOUND

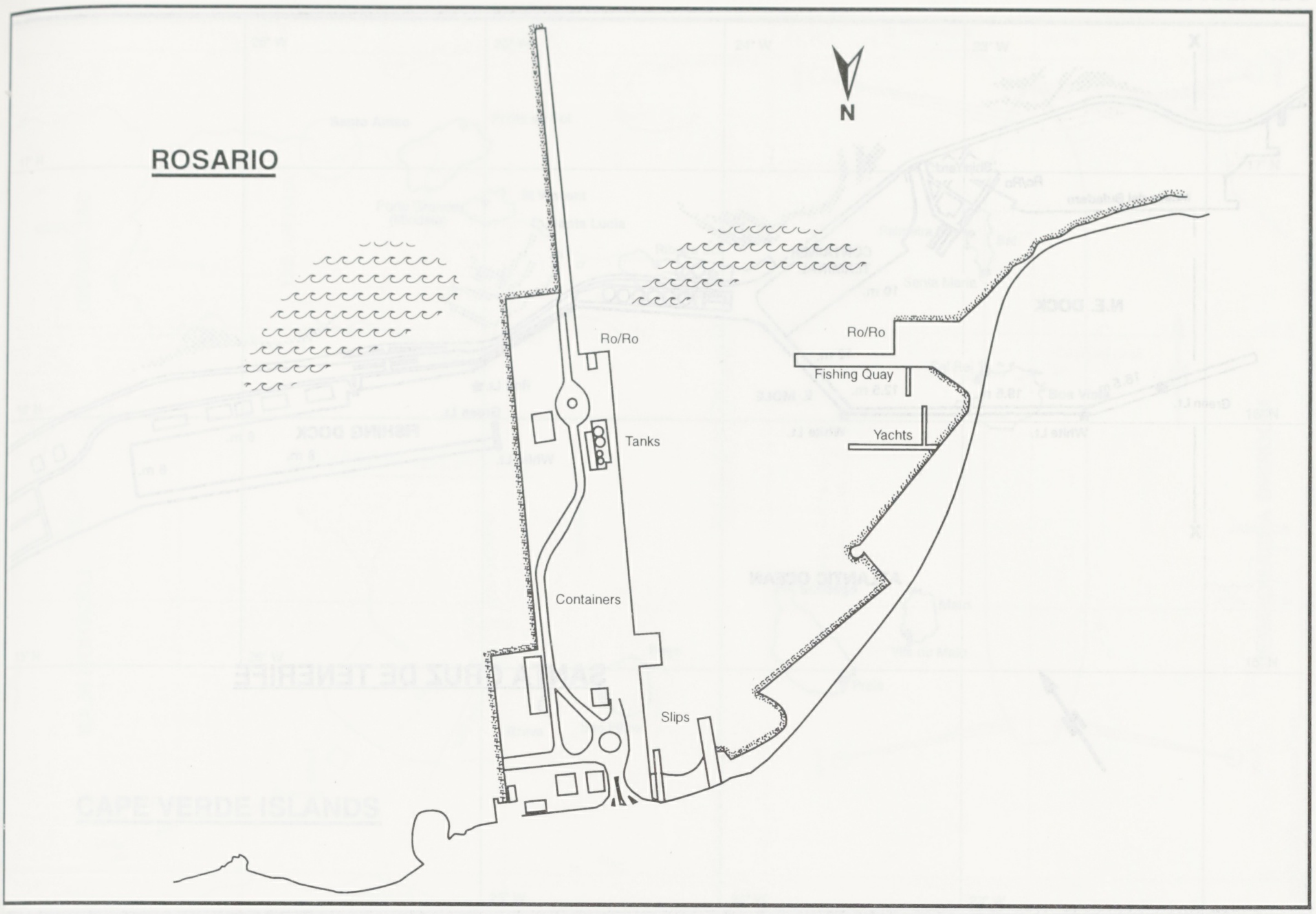

CANARY ISLANDS
N
18° W
17° W
16° W
15° W
14° W
13° W
30° N
29° N
28° N
27° N
La Palma
Santa Cruz
Tenerife
Santa Cruz
Gomera
Hierro
Las Palmas
La Salinetas
Arguineguin
Gran Canaria
Fuerteventura
Lanzarote
Arrecife
Morocco

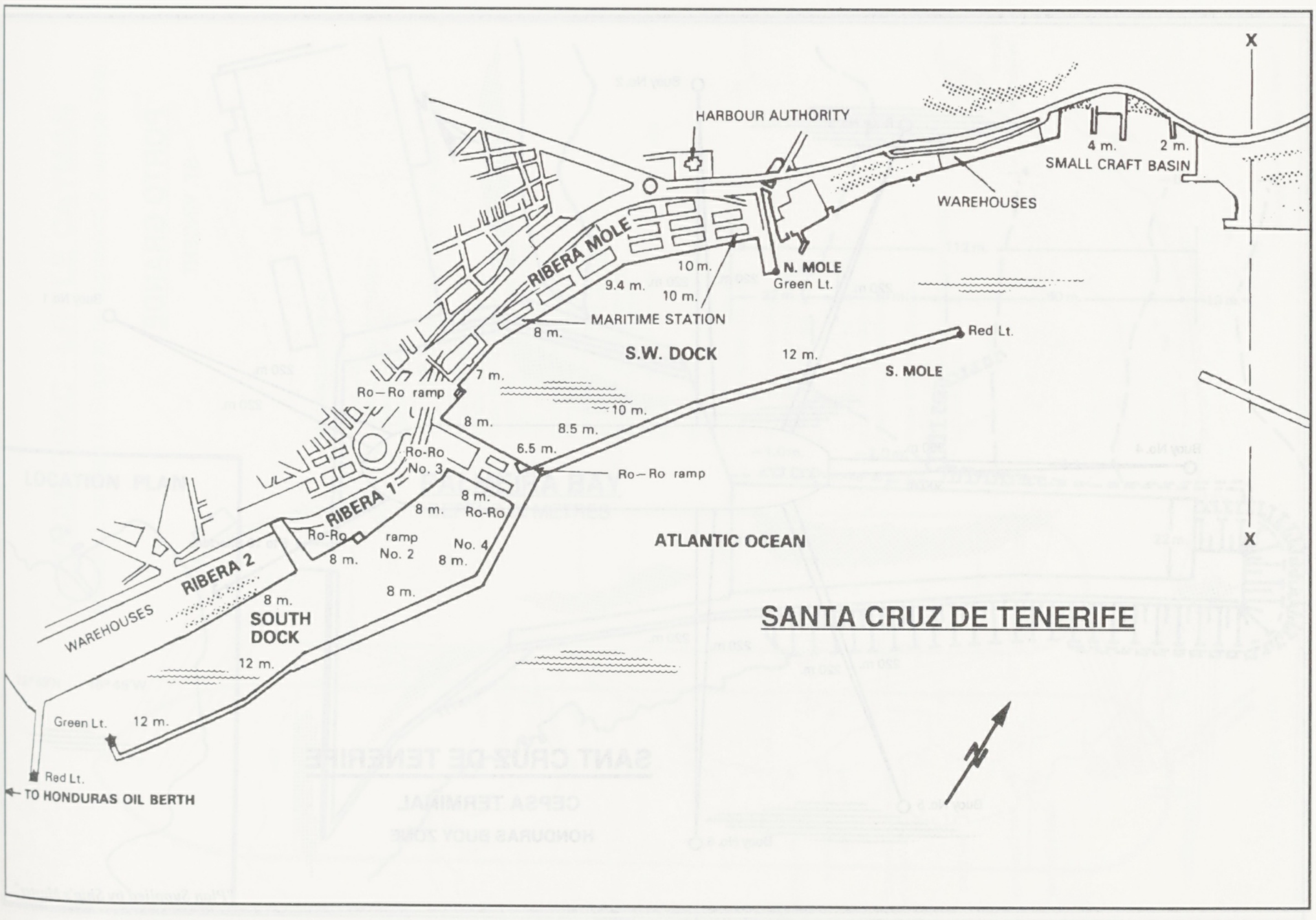

ARGUINEGUIN
DEPTHS IN METRES
N
Buoy
Berth No. 2
Bulk Terminal
25 m.
Depth alongside 7 m. at L.W.
Bollards
110 m.
Cement Factory
– 6 m.
– 7 m.
– 8 m.
Depth alongside 5 - 10.5 m. at L.W.
Berth No. 1
408 m.

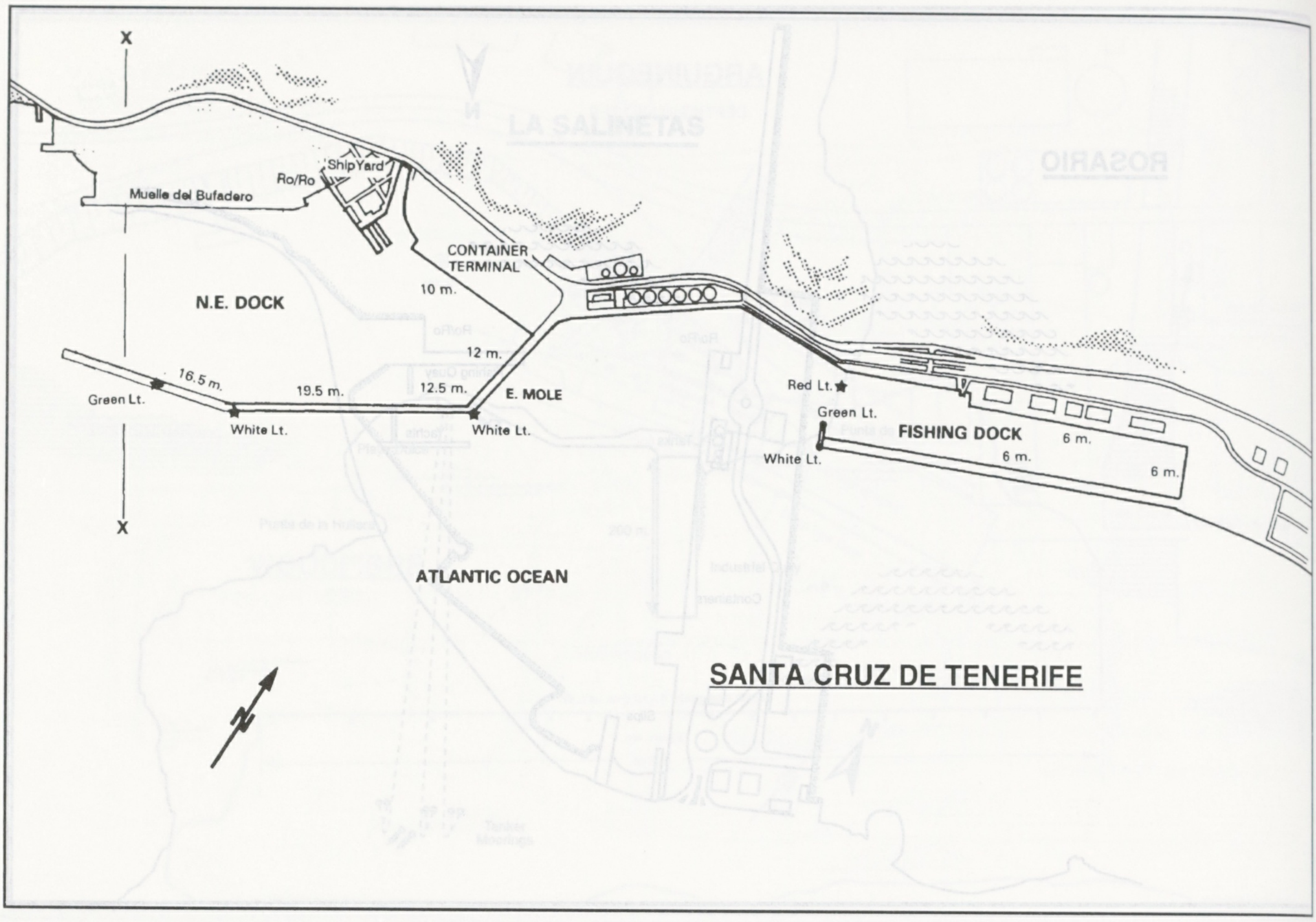

N
Muelle Antiguo
Repair Berth
Repair Berths
Fishing Boat Quay
Breakwater
Minerals
Containers
General Cargo
ARRECIFE


LA SALINETAS
Punta de Salinetas
Playa Dulce
Punta de la Hullera
200 m.
Industrial Quay
N
Tanker
Moorings


Queen Sofie Mole
Queen Sofie North
Queen Sofie South
Astican Shipyard
NORTH BASIN
OUTER PORT
N
Gran Canaria Wharf
Virgen
del
Pino
SOUTH BASIN
Outer Breakwater
Leon y Castillo
INNER PORT
Grande Quay
de la Cory Pontoon
Ferry Quay
St. Catalina
Pesquero Quay
Arsenal Mole
Yachting Quay
Refugio Quay
Wilson
Quay
del Sanapu Quay
Beach
LAS PALMAS

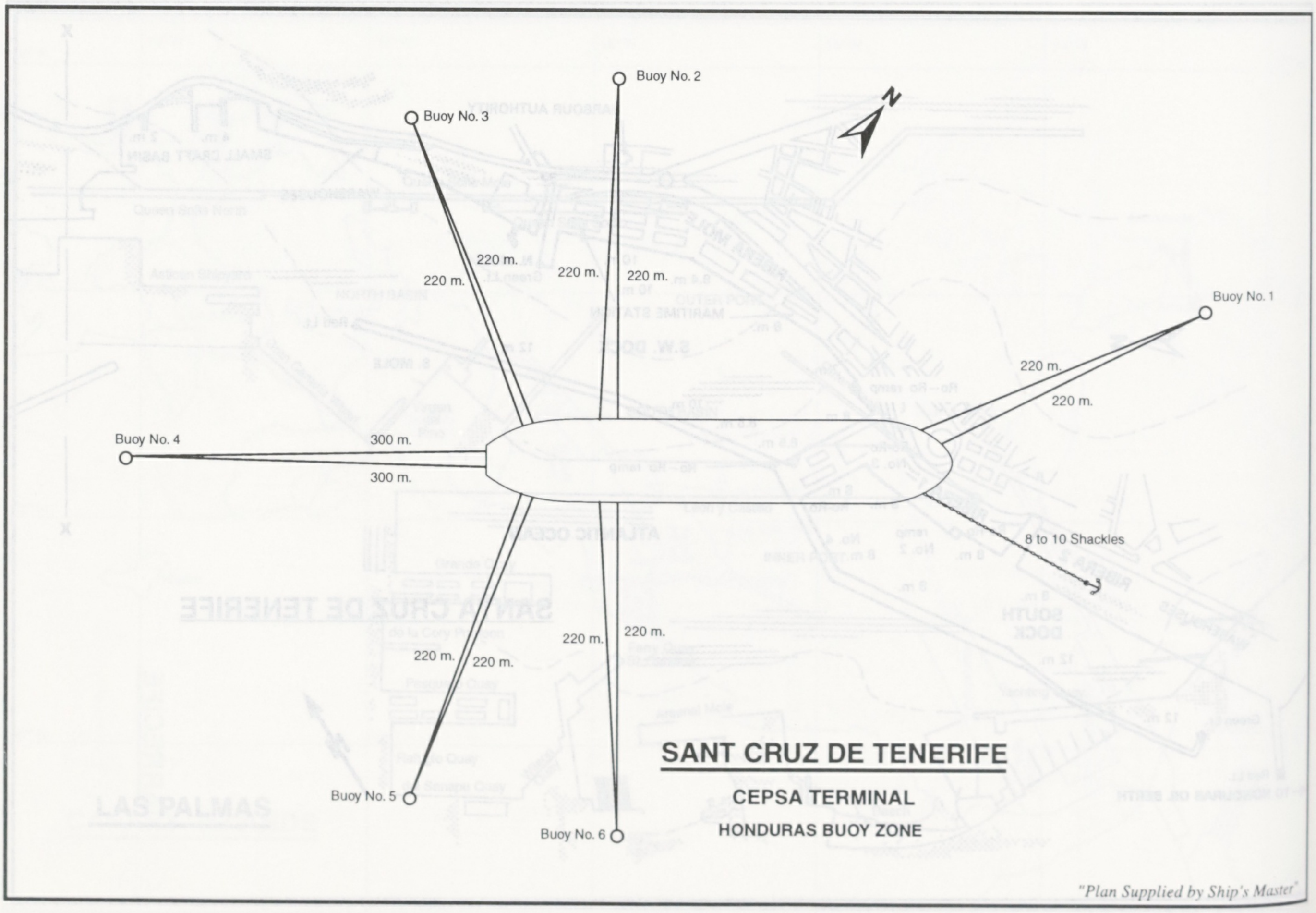

ROSARIO
N
Ro/Ro
Tanks
Containers
Slips
Ro/Ro
Fishing Quay
Yachts


X
HARBOUR AUTHORITY
4 m.
2 m.
SMALL CRAFT BASIN
WAREHOUSES
RIBERA MOLE
10 m.
N. MOLE
Green Lt.
9.4 m.
10 m.
MARITIME STATION
8 m.
S.W. DOCK
12 m.
Red Lt.
S. MOLE
7 m.
Ro—Ro ramp
10 m.
8 m.
8.5 m.
6.5 m.
Ro-Ro
No. 3
Ro—Ro ramp
RIBERA 1
8 m.
8 m.
Ro-Ro
Ro-Ro
ramp
No. 2
No. 4
8 m.
8 m.
ATLANTIC OCEAN
X
RIBERA 2
WAREHOUSES
8 m.
8 m.
SOUTH
DOCK
12 m.
SANTA CRUZ DE TENERIFE
Green Lt.
12 m.
Red Lt.
TO HONDURAS OIL BERTH



SANTA CRUZ DE TENERIFE

X
ShipYard
Ro/Ro
Muelle del Bufadero
CONTAINER TERMINAL
10 m.
N.E. DOCK
12 m.
16.5 m.
19.5 m.
12.5 m.
E. MOLE
Green Lt.
White Lt.
White Lt.
Red Lt.
Green Lt.
White Lt.
FISHING DOCK
6 m.
6 m.
6 m.
X
ATLANTIC OCEAN
N



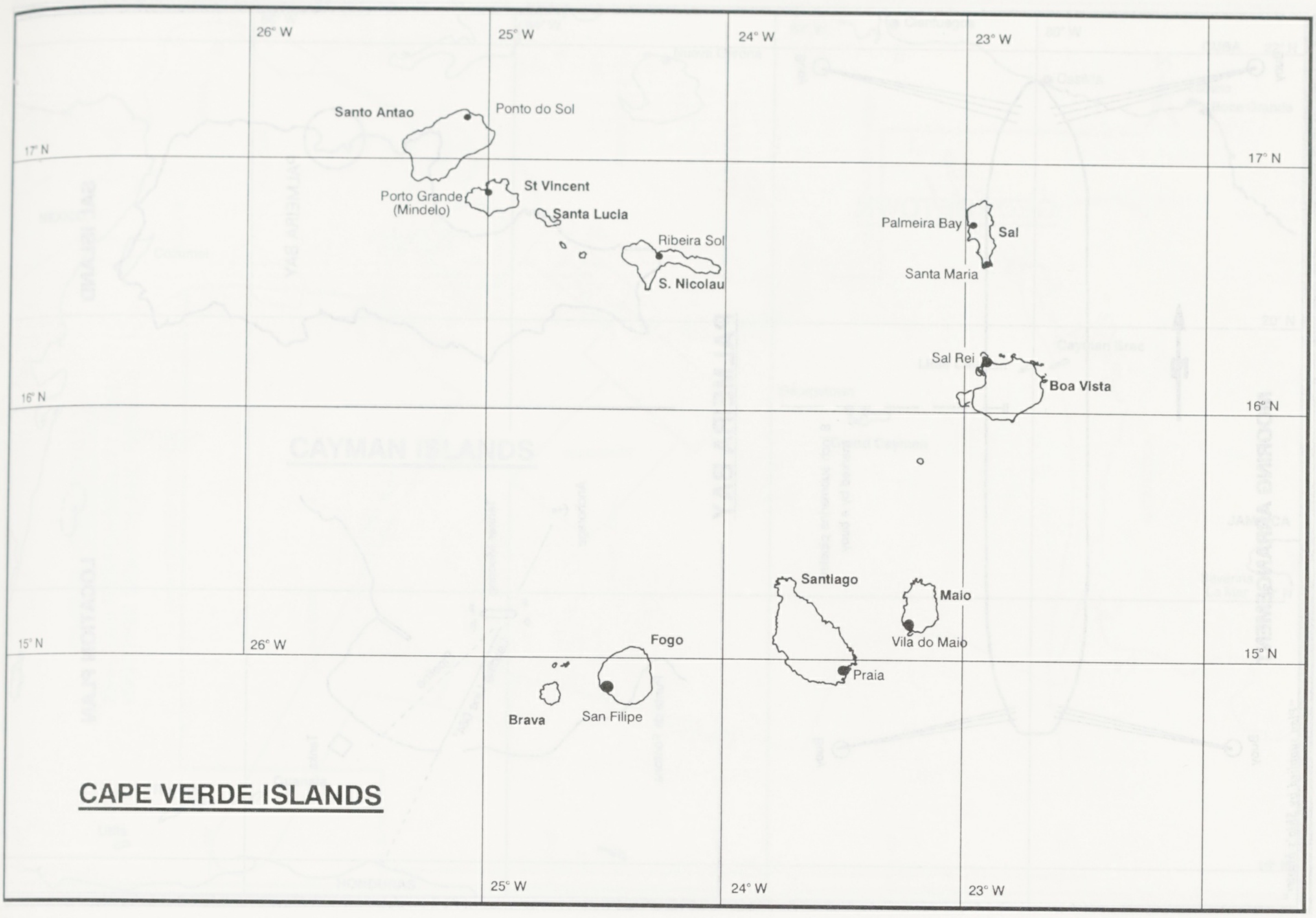
SANT CRUZ DE TENERIFE

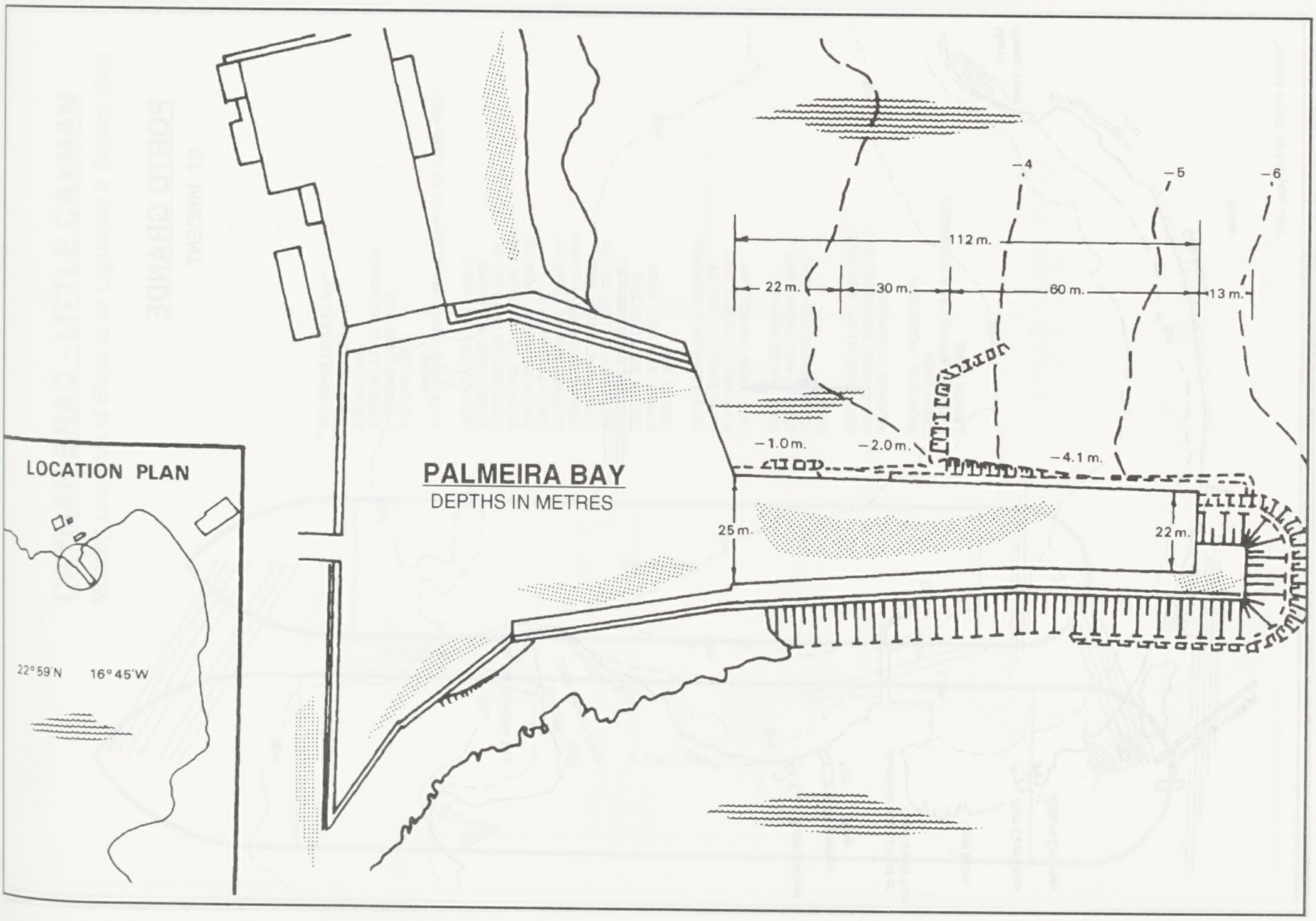
CEPSA TERMINAL

HONDURAS BUOY ZONE

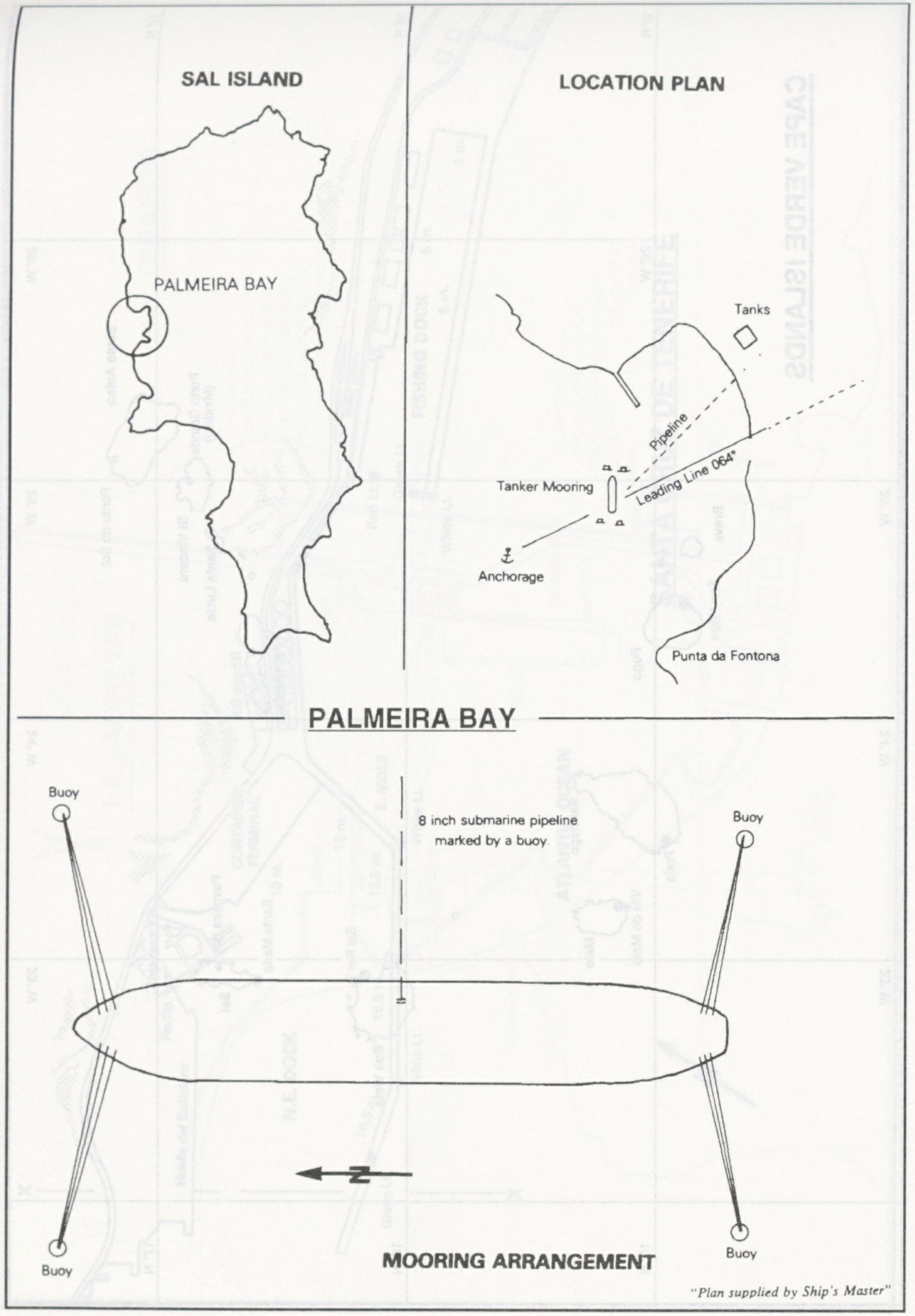
"Plan Supplied by Ship's Master"

Buoy No. 2
Buoy No. 3
N
220 m.
220 m.
220 m.
220 m.
Buoy No. 1
220 m.
220 m.
Buoy No. 4
300 m.
300 m.
8 to 10 Shackles
220 m.
220 m.
220 m.
220 m.
Buoy No. 5
Buoy No. 6


26° W
25° W
24° W
23° W
17° N
16° N
15° N
Santo Antao
Ponto do Sol
St Vincent
Porto Grande
(Mindelo)
Santa Lucia
Ribeira Sol
S. Nicolau
Palmeira Bay
Sal
Santa Maria
Sal Rei
Boa Vista
Santiago
Maio
Vila do Maio
Praia
Fogo
Brava
San Filipe
CAPE VERDE ISLANDS


PALMEIRA BAY
DEPTHS IN METRES
LOCATION PLAN
22° 59'N
16° 45'W
−4
−5
−6
112 m.
22 m.
30 m.
60 m.
13 m.
−1.0 m.
−2.0 m.
−4.1 m.
25 m.
22 m.

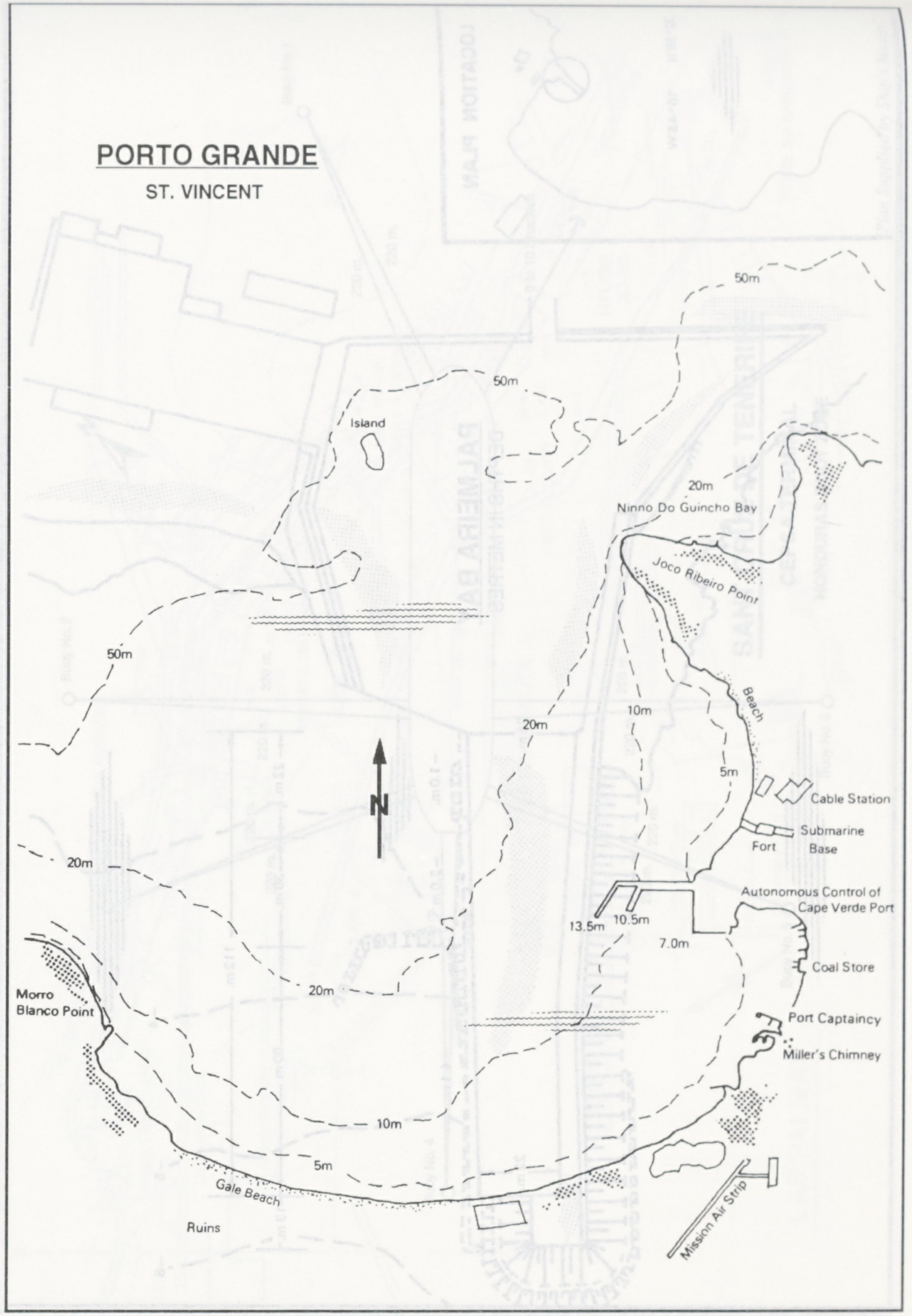
PALMEIRA BAY


SAL ISLAND
PALMEIRA BAY
LOCATION PLAN
Tanks
Pipeline
Leading Line 064°
Tanker Mooring
Anchorage
Punta da Fontona
Buoy
8 inch submarine pipeline marked by a buoy.
Buoy
N
Buoy
Buoy
MOORING ARRANGEMENT

"Plan supplied by Ship's Master"

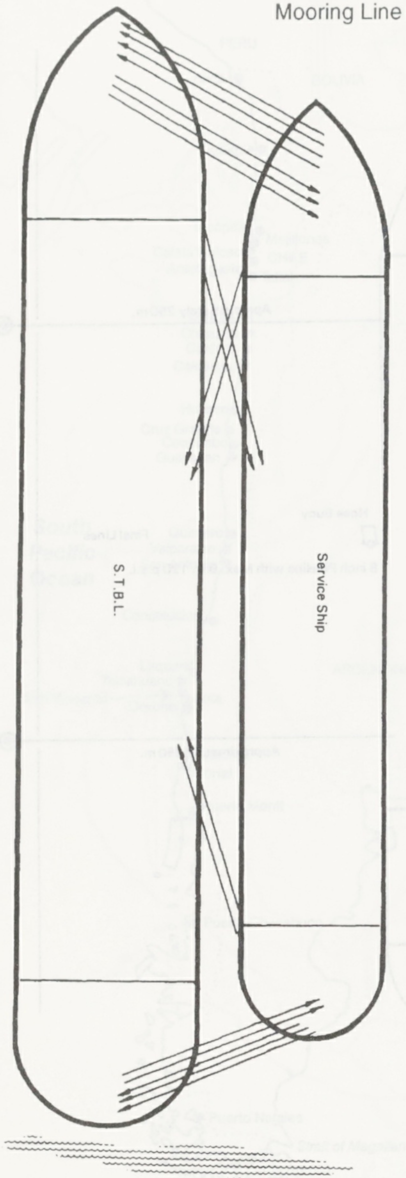
PORTO GRANDE

ST. VINCENT


50m
50m
Island
20m
Ninno Do Guincho Bay
Joco Ribeiro Point
50m
Beach
10m
20m
5m
Cable Station
N
Submarine Base
Fort
20m
Autonomous Control of Cape Verde Port
13.5m
10.5m
7.0m
Coal Store
Morro Blanco Point
20m
Port Captaincy
Miller's Chimney
10m
5m
Gale Beach
Ruins
Mission Air Strip

CAYMAN BRAC - LITTLE CAYMAN

Mooring Line Plan of Ships to be Lightened & Service Ship


S.T.B.L.
Service Ship

" MOORING LINES PLAN "

FROM SERVICE SHIP:
4 BOW LINES
2 SPRING LINES (FORWARD)
2 SPRING LINES (AFT)
3 STERN LINES

NOTE: LINES FROM SERVICE SHIP TO BE GIVEN FIRST

NOTE: 2 BOW LINES AND 2 SPRING LINES (FORWARD) FROM SERVICE SHIP WILL BE GIVEN ALL AT THE SAME TIME; THEREFORE PLEASE ARRANGE FOR AFTER GANG ON BERTHING SHIP TO STAND-BY FORWARD TO RECEIVE SPRING LINES FROM SERVICE SHIP. AFTER SPRING LINES ARE ON THE BITS, GANG SHOULD RETURN AFT TO RECEIVE SPRING LINES (AFT) FROM SERVICE SHIP.

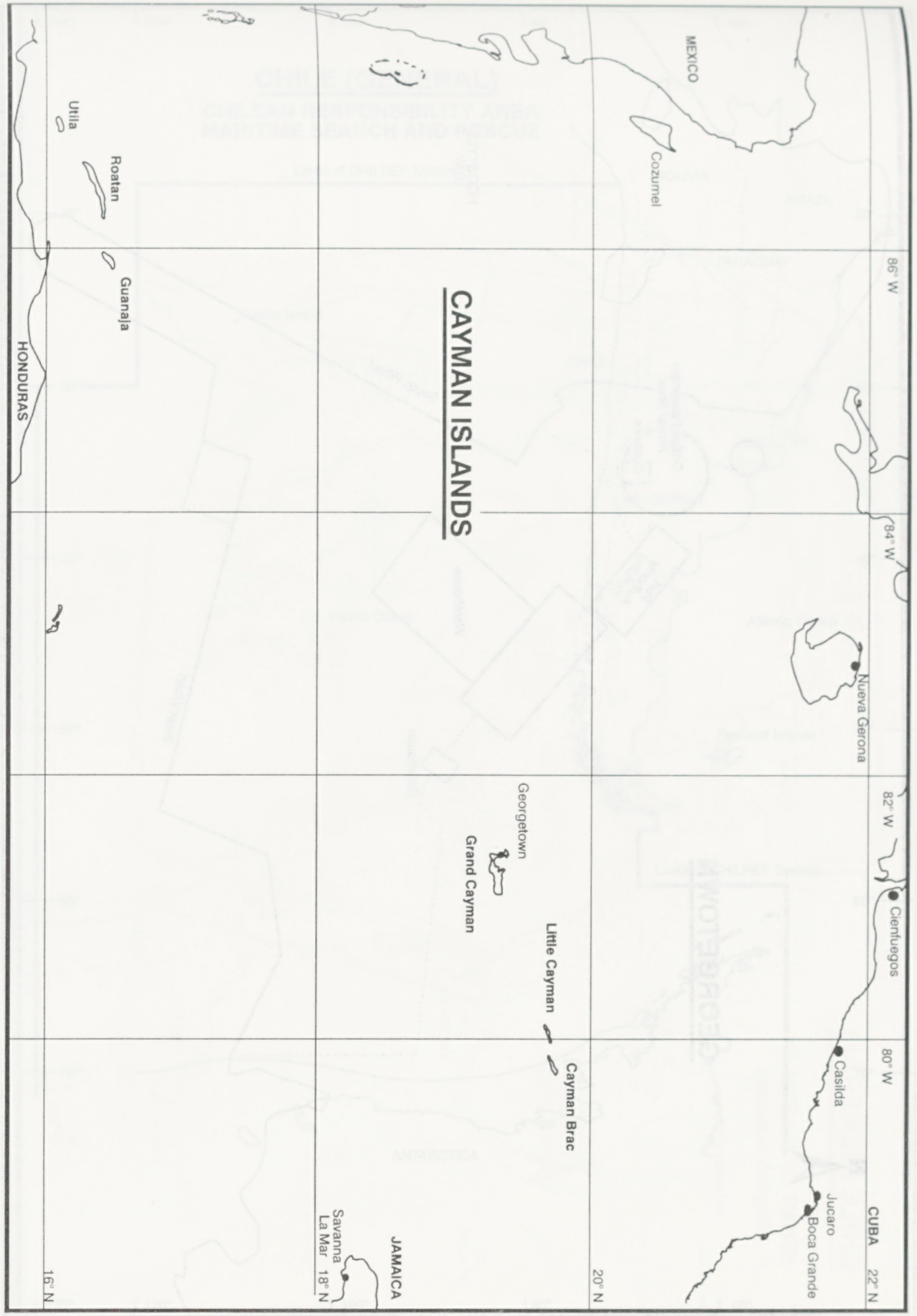
NOTE: MEANWHILE FORWARD GANG SHOULD STAND-BY FORWARD TO RECEIVE BOW LINES FROM SERVICE SHIP

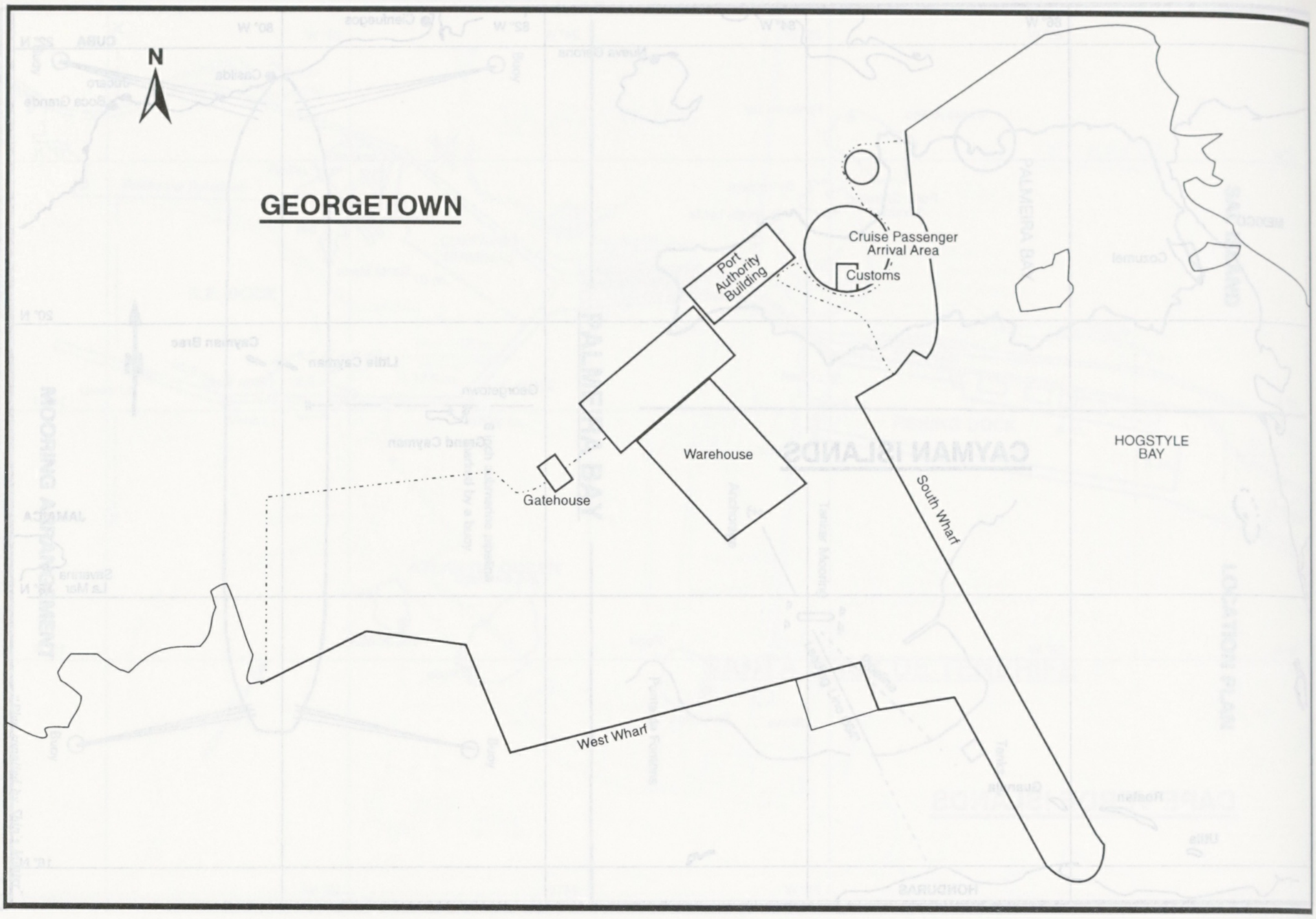
NOTE: PLEASE PREPARE STRONG MESSENGER LINES FOR RECEIVING AND GIVING LINES.

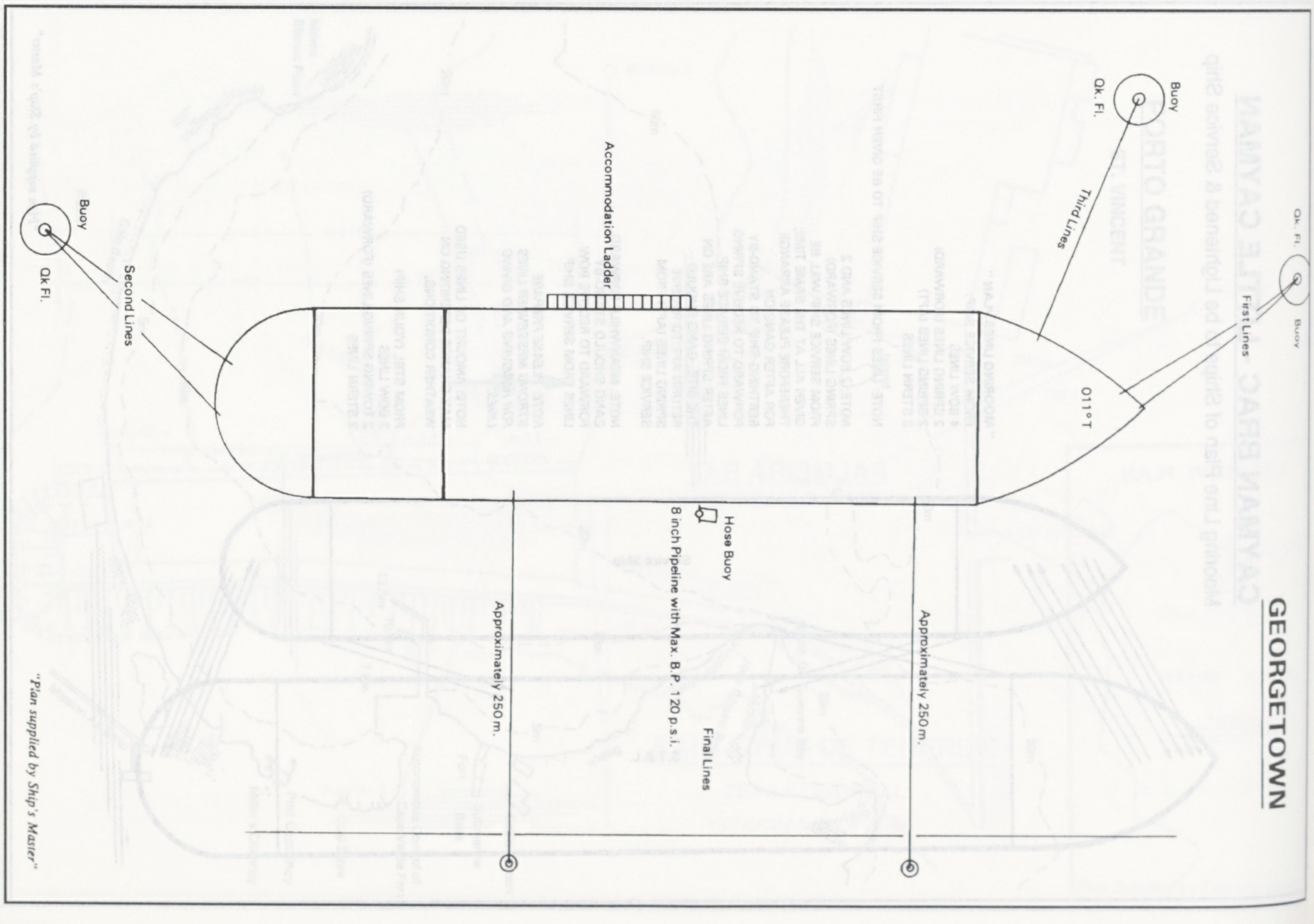
NOTE: AMOUNT OF LINES USED MAY CHANGE DEPENDING ON WEATHER CONDITIONS.

FROM STBL (YOUR SHIP)
3 BOW LINES
2 TOWING SPRING LINES (FORWARD)
2 STERN LINES

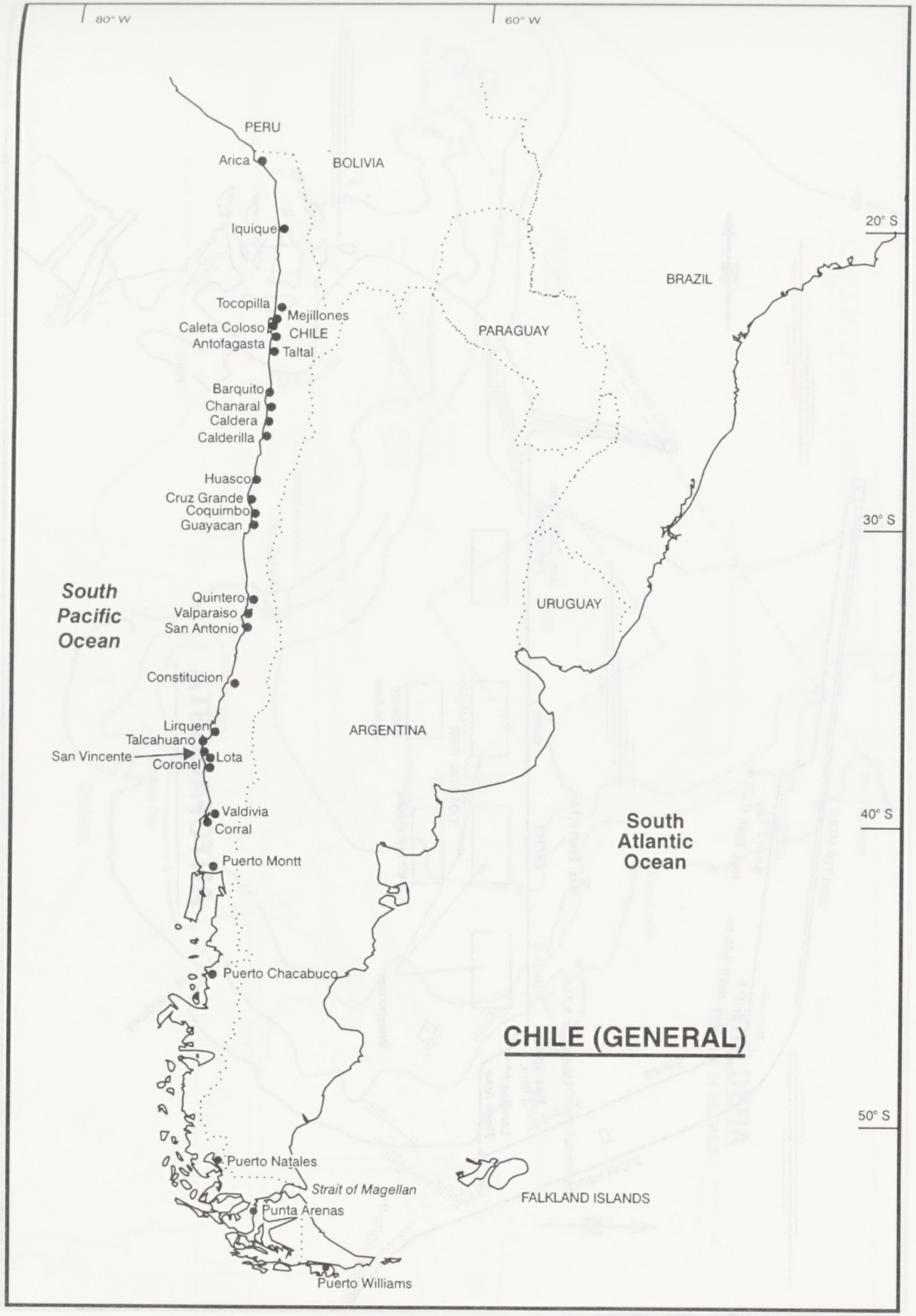
"Plan supplied by Ship's Master"

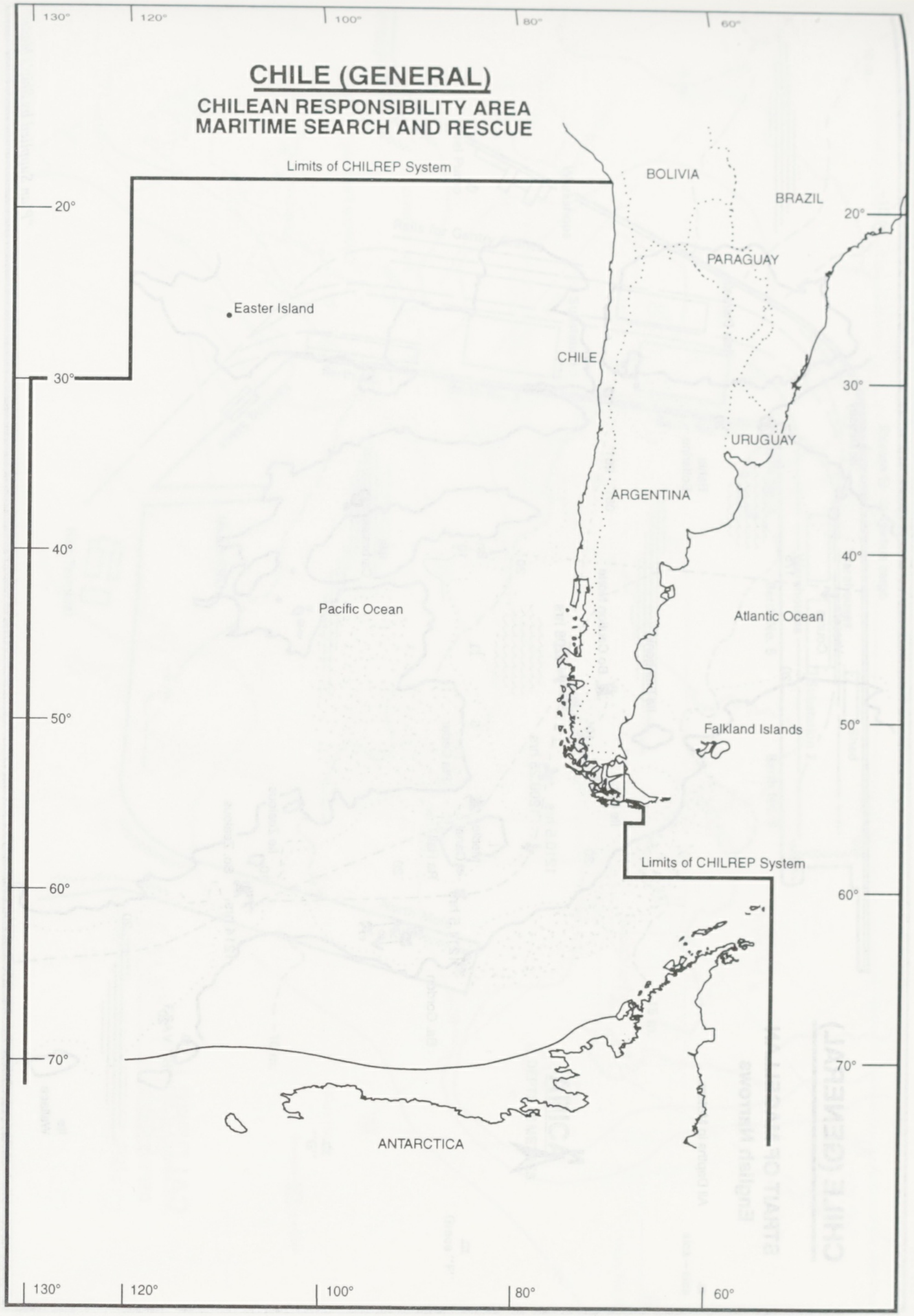

CAYMAN ISLANDS
MEXICO
Cozumel
Utila
Roatan
Guanaja
HONDURAS
86° W
84° W
82° W
80° W
22° N
20° N
18° N
16° N
Nueva Gerona
Georgetown
Grand Cayman
Little Cayman
Cayman Brac
Cienfuegos
Casilda
Jucaro
Boca Grande
CUBA
JAMAICA
Savanna La Mar

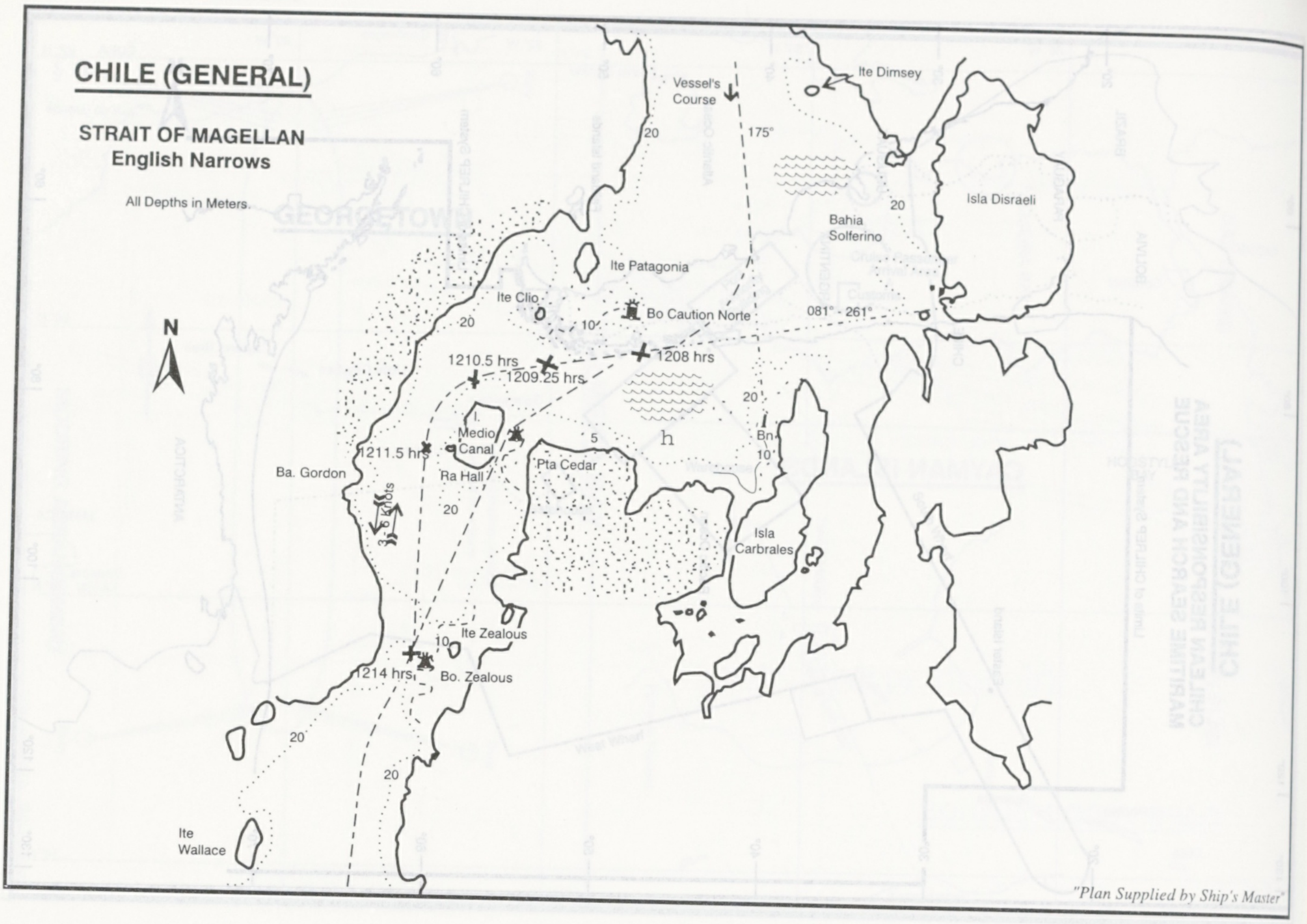

N
GEORGETOWN
Port Authority Building
Cruise Passenger Arrival Area
Customs
Warehouse
Gatehouse
South Wharf
West Wharf
HOGSTYLE BAY


GEORGETOWN
Buoy
Qk. Fl.
Qk. Fl.
Buoy
First Lines
Third Lines
011°T
Accommodation Ladder
Hose Buoy
8 inch Pipeline with Max. B.P. 120 p.s.i.
Final Lines
Approximately 250 m.
Approximately 250 m.
Buoy
Qk. Fl.
Second Lines

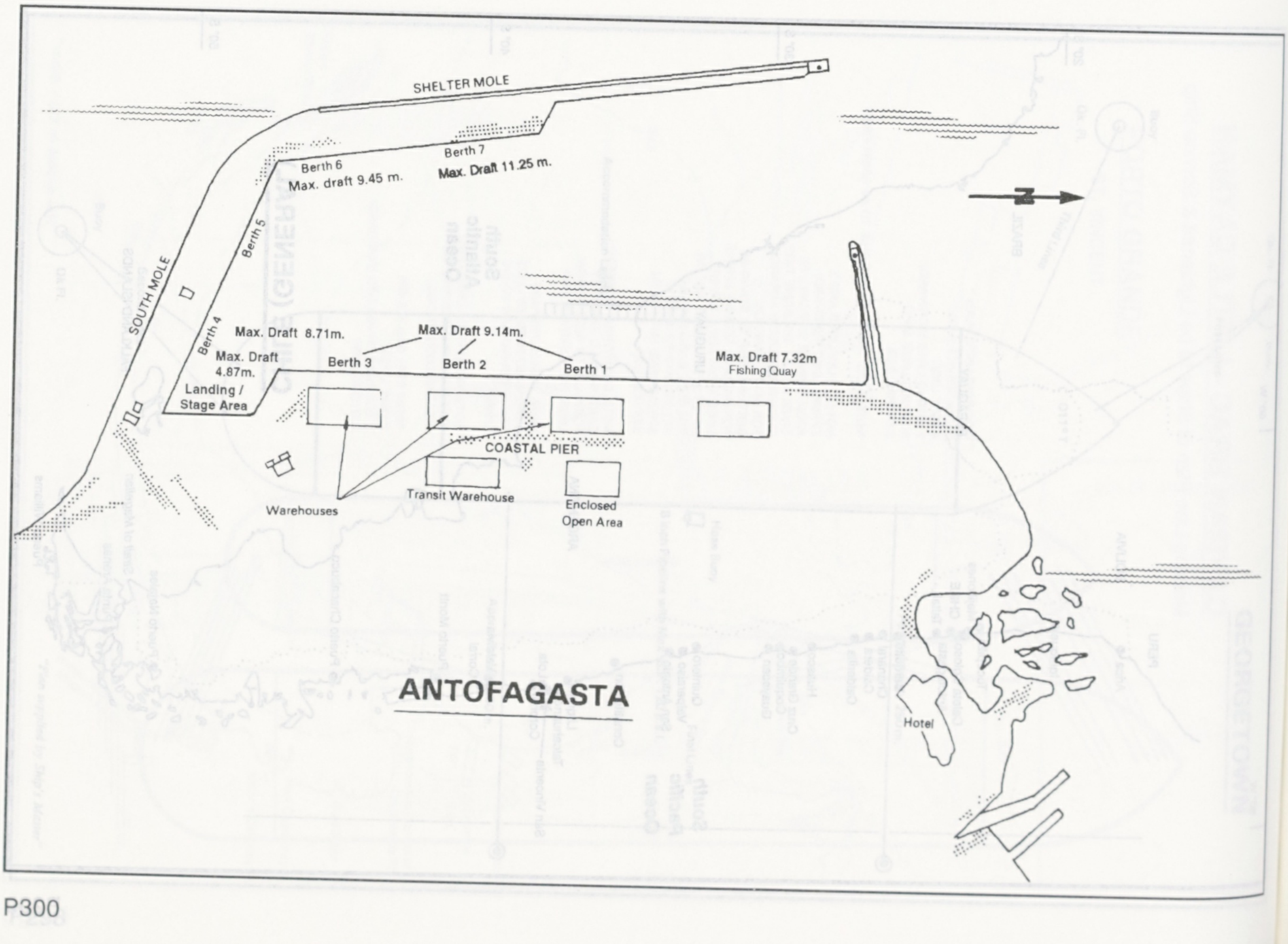
"Plan supplied by Ship's Master"

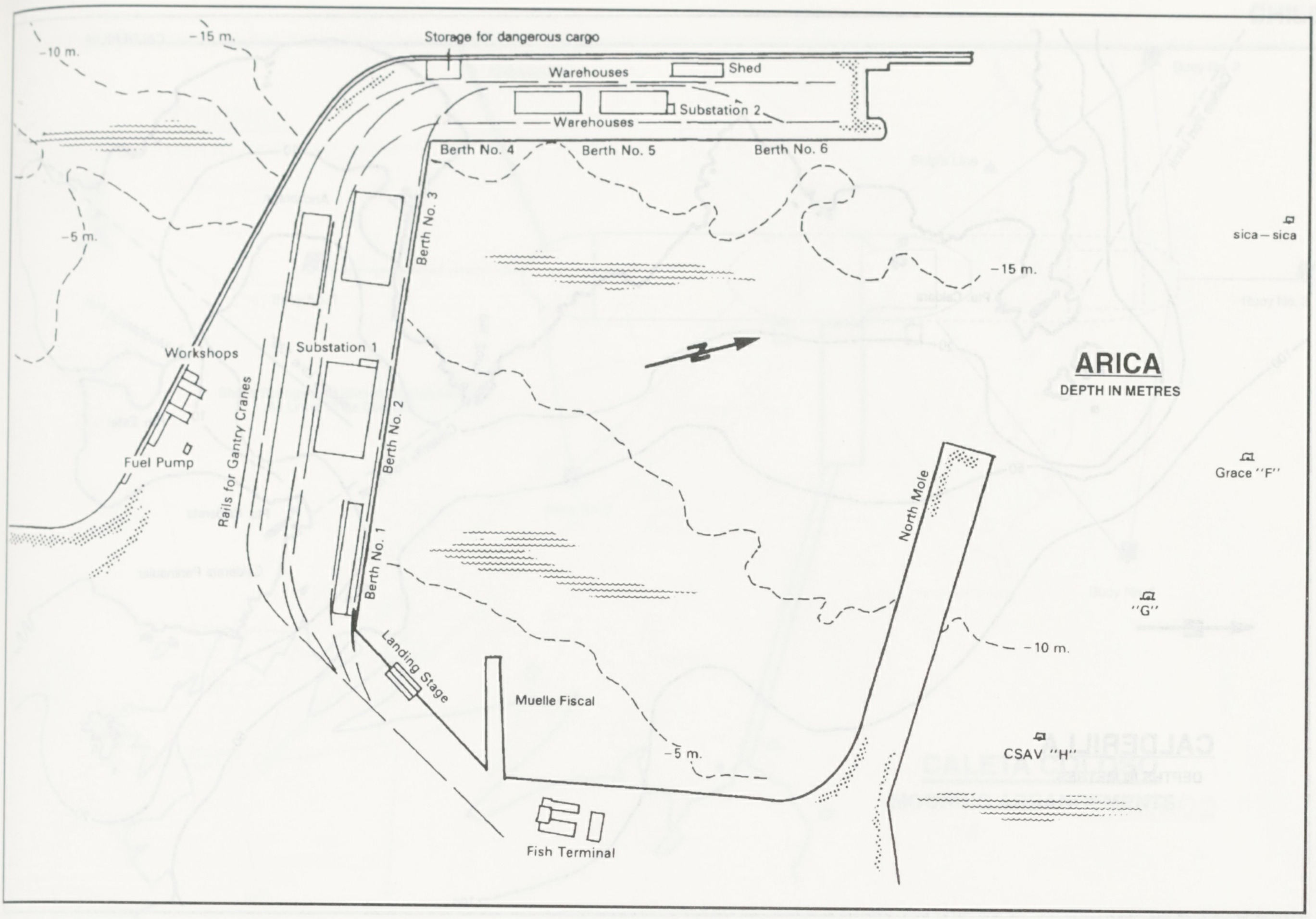

80° W
60° W
PERU
Arica
BOLIVIA
Iquique
20° S
BRAZIL
Tocopilla
Mejillones
Caleta Coloso
CHILE
Antofagasta
Taltal
PARAGUAY
Barquito
Chanaral
Caldera
Calderilla
Huasco
Cruz Grande
Coquimbo
Guayacan
30° S
South Pacific Ocean
Quintero
Valparaiso
San Antonio
URUGUAY
Constitucion
Lirquen
Talcahuano
San Vincente
Lota
Coronel
ARGENTINA
Valdivia
Corral
40° S
South Atlantic Ocean
Puerto Montt
Puerto Chacabuco
CHILE (GENERAL)
50° S
Puerto Natales
Strait of Magellan
FALKLAND ISLANDS
Punta Arenas
Puerto Williams

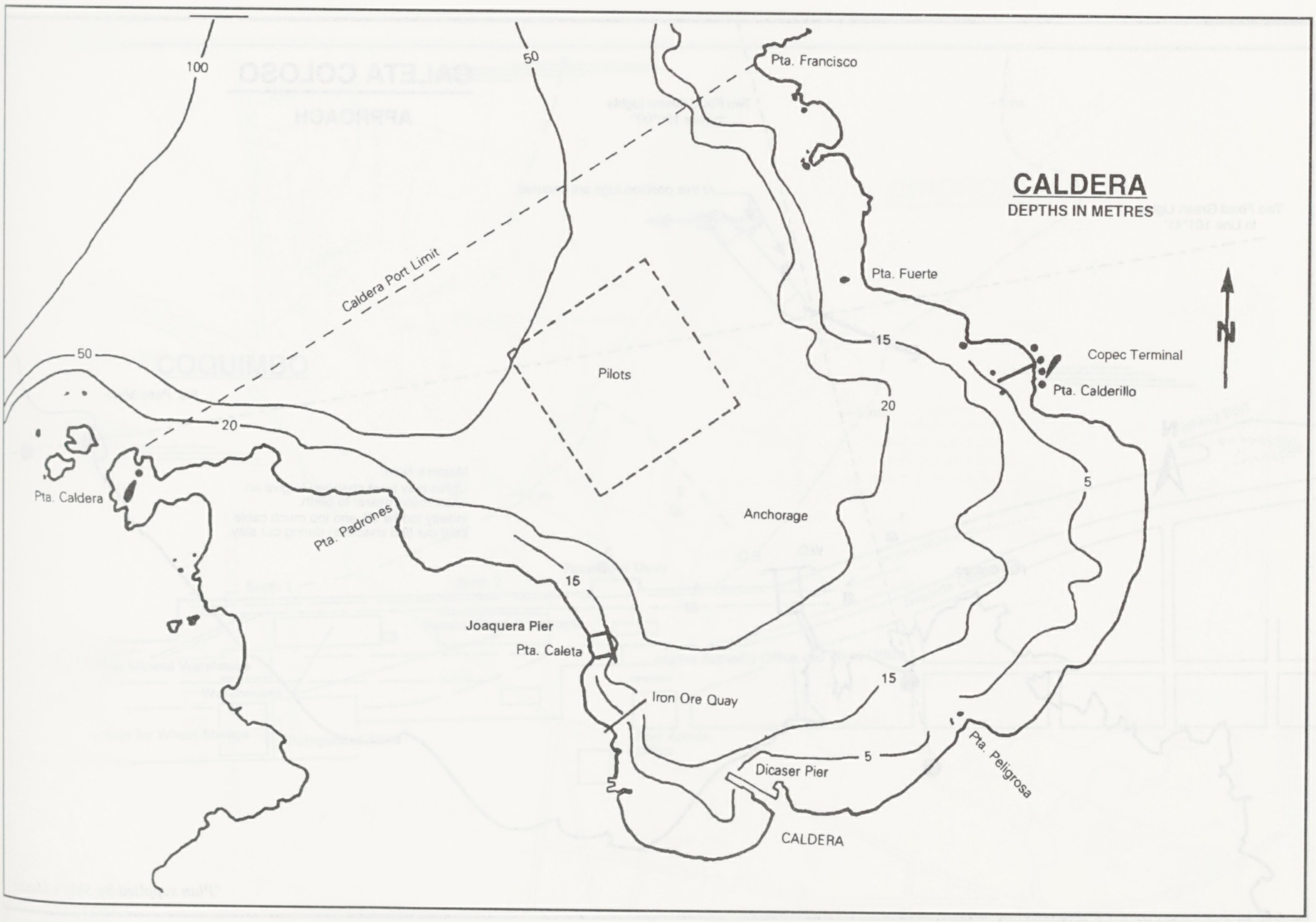

130°
120°
100°
80°
60°
CHILE (GENERAL)
CHILEAN RESPONSIBILITY AREA
MARITIME SEARCH AND RESCUE
Limits of CHILREP System
BOLIVIA
BRAZIL
20°
PARAGUAY
Easter Island
CHILE
30°
URUGUAY
ARGENTINA
40°
Pacific Ocean
Atlantic Ocean
50°
Falkland Islands
Limits of CHILREP System
60°
70°
ANTARCTICA
130°
120°
100°
80°
60°

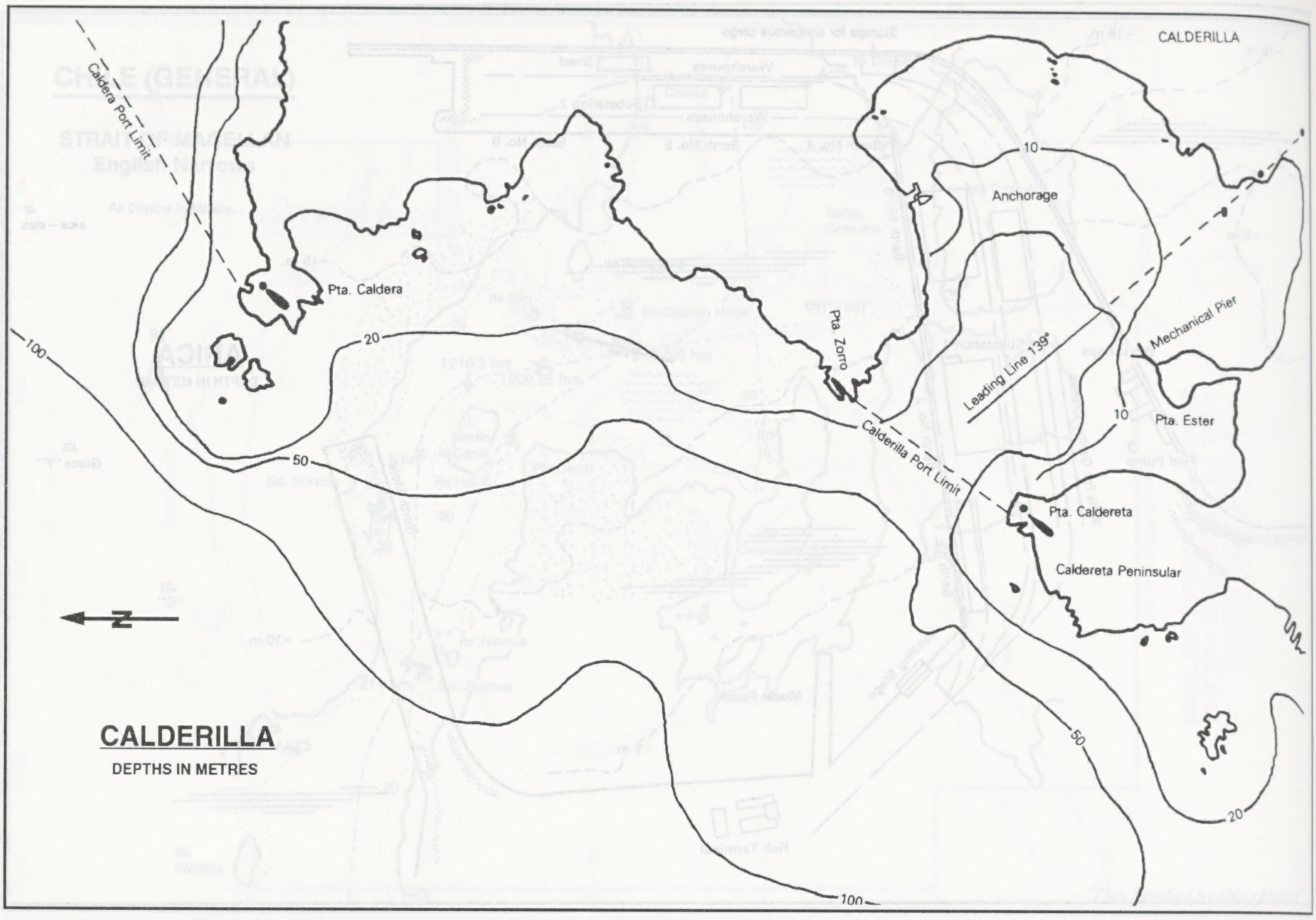

CHILE (GENERAL)
STRAIT OF MAGELLAN
English Narrows
All Depths in Meters.
N
Vessel's Course
175°
Ite Dimsey
Isla Disraeli
Bahia Solferino
Ite Patagonia
Ite Clio
Bo Caution Norte
081° - 261°
1210.5 hrs
1209.25 hrs
1208 hrs
I. Medio Canal
1211.5 hrs
Ra Hall
Pta Cedar
Bn
Ba. Gordon
3 - 5 knots
Isla Carbrales
Ite Zealous
1214 hrs
Bo. Zealous
Ite Wallace
20
10
5

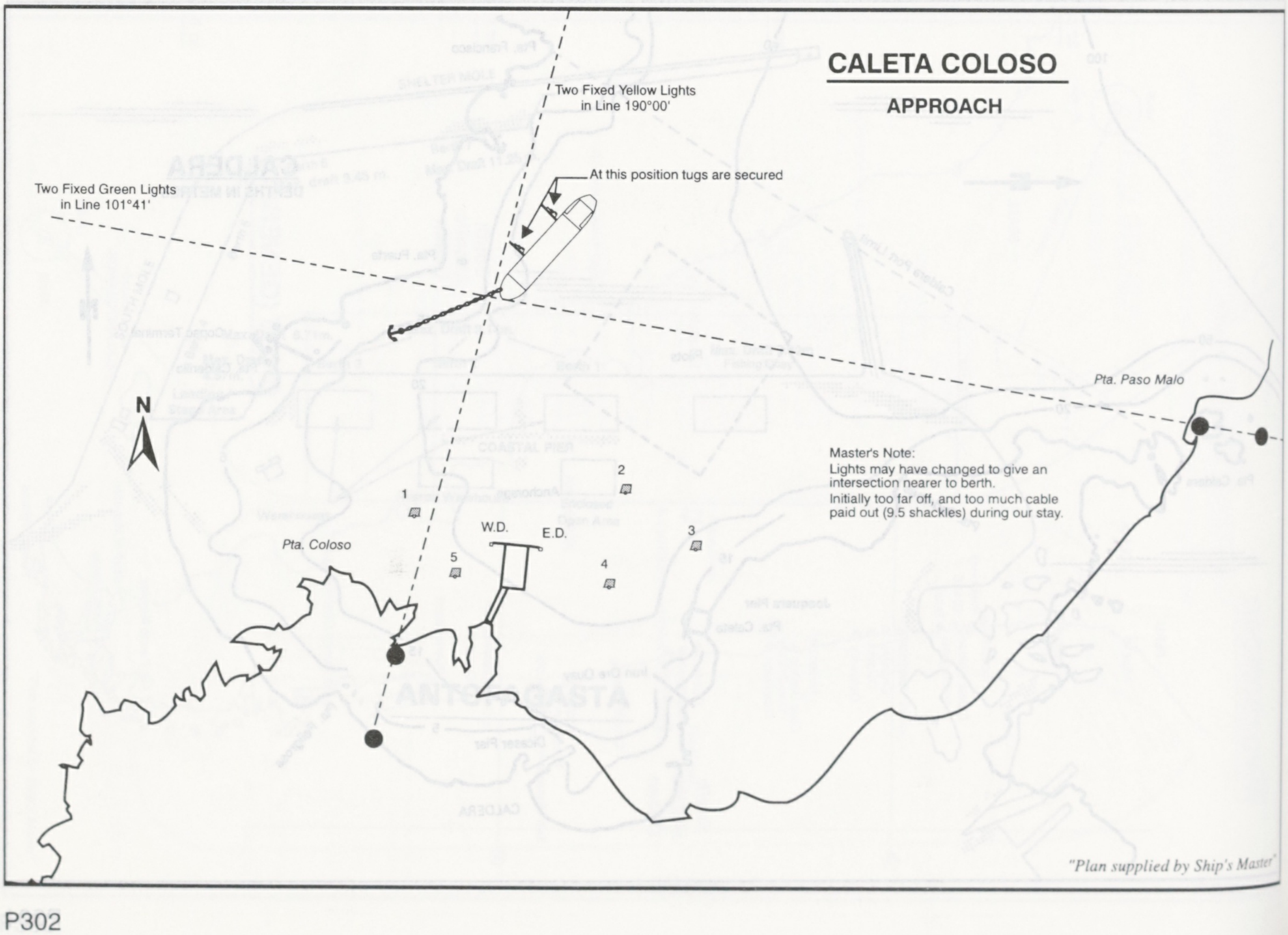
"Plan Supplied by Ship's Master"


SHELTER MOLE
Berth 7
Max. Draft 11.25 m.
Berth 6
Max. draft 9.45 m.
Berth 5
SOUTH MOLE
Berth 4
Max. Draft 4.87m.
Max. Draft 8.71m.
Max. Draft 9.14m.
Berth 3
Berth 2
Berth 1
Max. Draft 7.32m
Fishing Quay
Landing / Stage Area
COASTAL PIER
Warehouses
Transit Warehouse
Enclosed Open Area
Hotel
N
ANTOFAGASTA

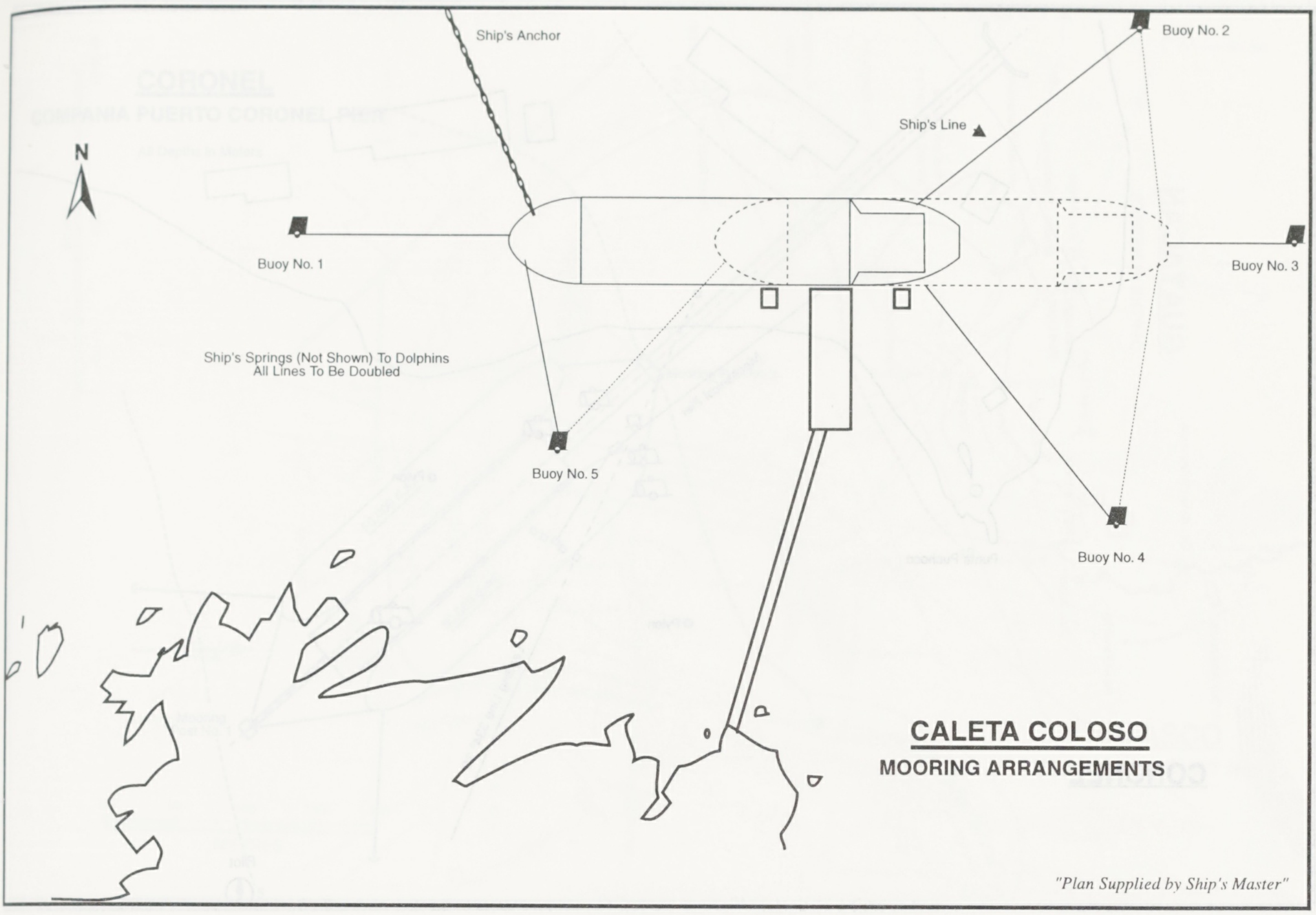

ARICA
DEPTH IN METRES
Storage for dangerous cargo
Warehouses
Shed
Substation 2
Warehouses
Berth No. 4
Berth No. 5
Berth No. 6
Berth No. 3
Berth No. 2
Berth No. 1
Substation 1
Workshops
Fuel Pump
Rails for Gantry Cranes
Landing Stage
Muelle Fiscal
Fish Terminal
North Mole
sica – sica
Grace "F"
"G"
CSAV "H"
–10 m.
–15 m.
–5 m.
–15 m.
–10 m.
–5 m.
N


CALDERA
DEPTHS IN METRES
N
Pta. Francisco
Pta. Fuerte
Copec Terminal
Pta. Calderillo
Caldera Port Limit
Pilots
Anchorage
Pta. Caldera
Pta. Padrones
Joaquera Pier
Pta. Caleta
Iron Ore Quay
Dicaser Pier
CALDERA
Pta. Peligrosa
100
50
50
20
20
15
15
15
5
5


CALDERILLA
Caldera Port Limit
Pta. Caldera
100
20
50
Anchorage
10
Pta. Zorro
Leading Line 139°
Mechanical Pier
Pta. Ester
Calderilla Port Limit
Pta. Caldereta
Caldereta Peninsular
N
CALDERILLA
DEPTHS IN METRES


CALETA COLOSO
APPROACH
Two Fixed Yellow Lights
in Line 190°00'
At this position tugs are secured
Two Fixed Green Lights
in Line 101°41'
N
Pta. Paso Malo
Master's Note:
Lights may have changed to give an
intersection nearer to berth.
Initially too far off, and too much cable
paid out (9.5 shackles) during our stay.
1
2
3
4
5
W.D.
E.D.
Pta. Coloso

"Plan supplied by Ship's Master"

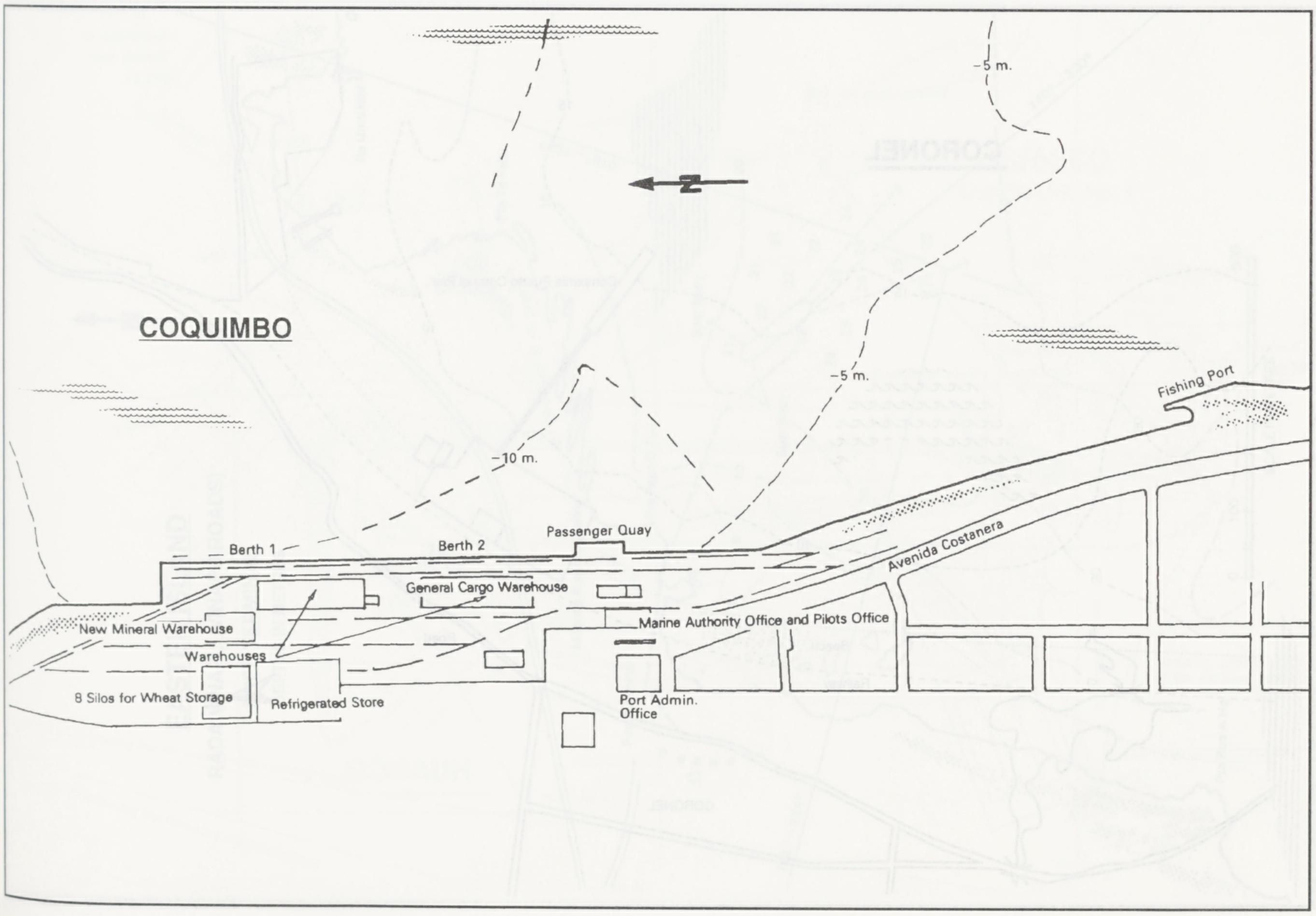


CALETA COLOSO

MOORING ARRANGEMENTS

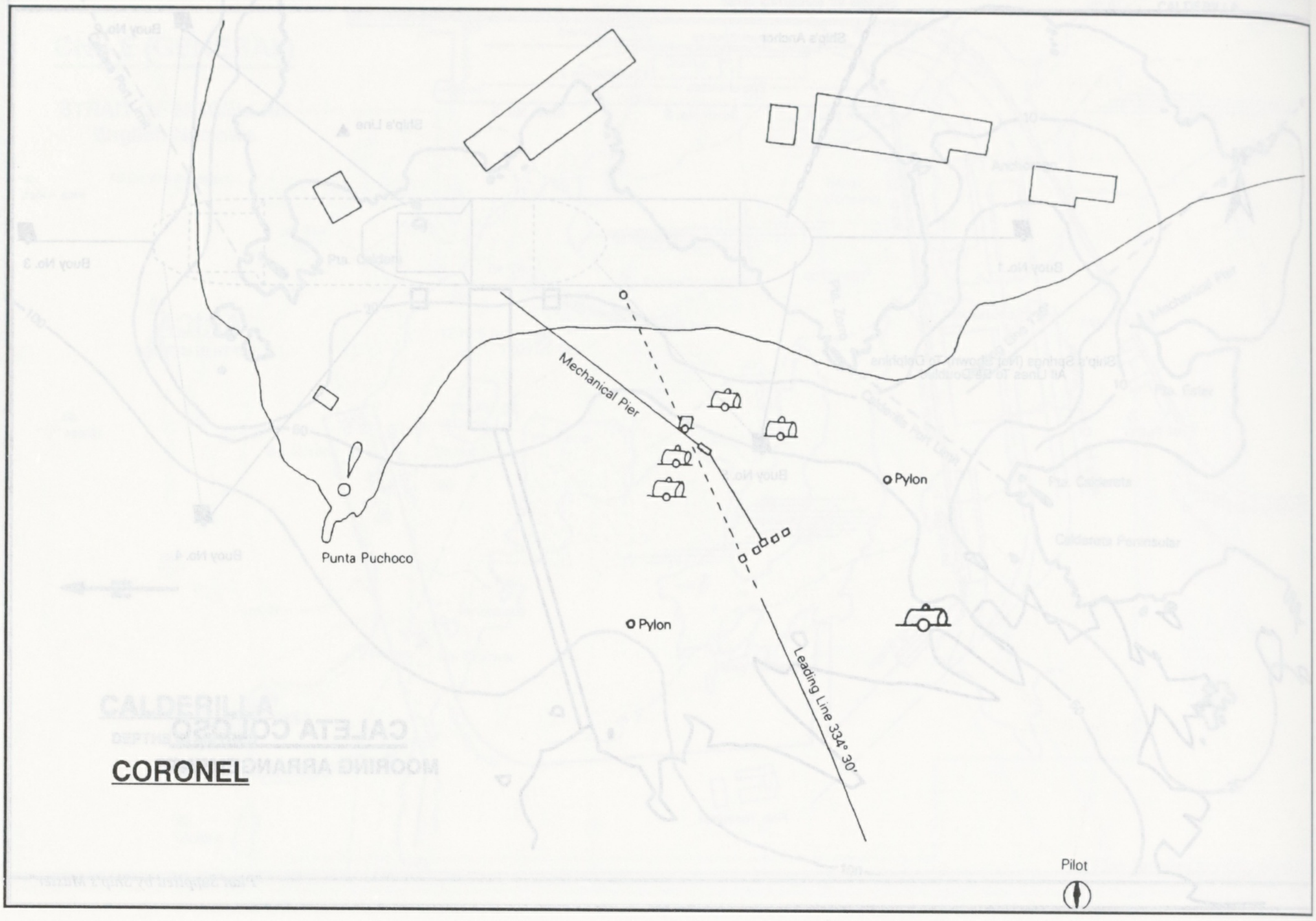
"Plan Supplied by Ship's Master"

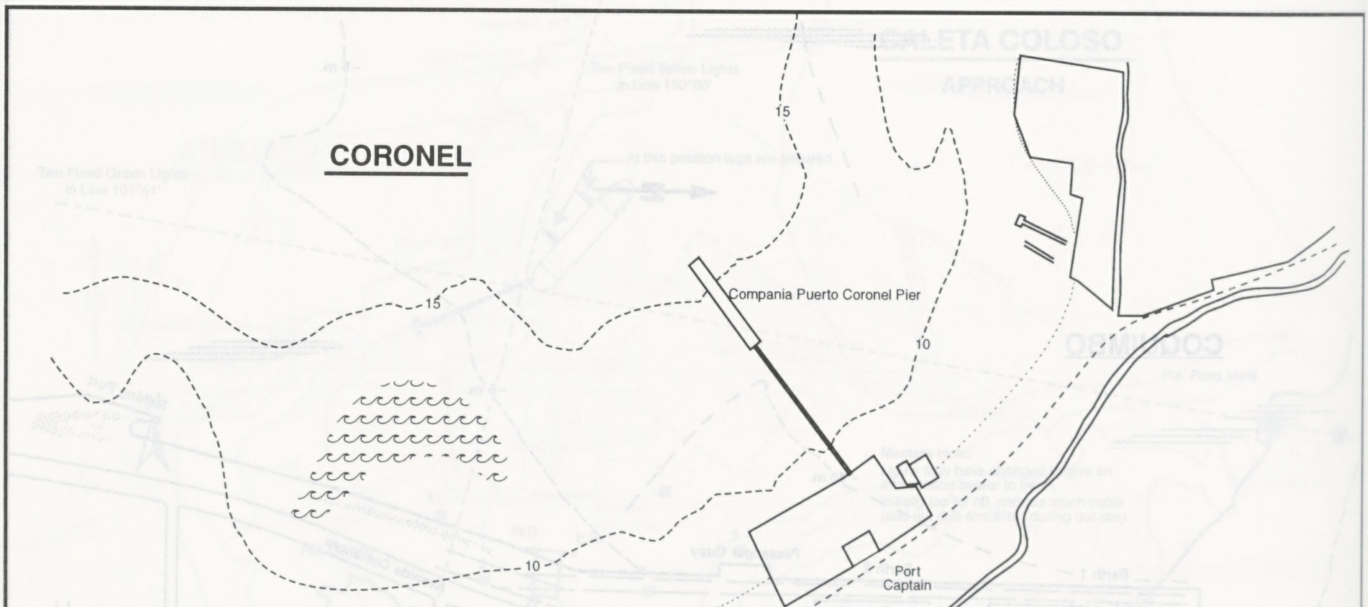
Ship's Anchor
Buoy No. 2
N
Ship's Line
Buoy No. 1
Buoy No. 3
Ship's Springs (Not Shown) To Dolphins
All Lines To Be Doubled
Buoy No. 5
Buoy No. 4

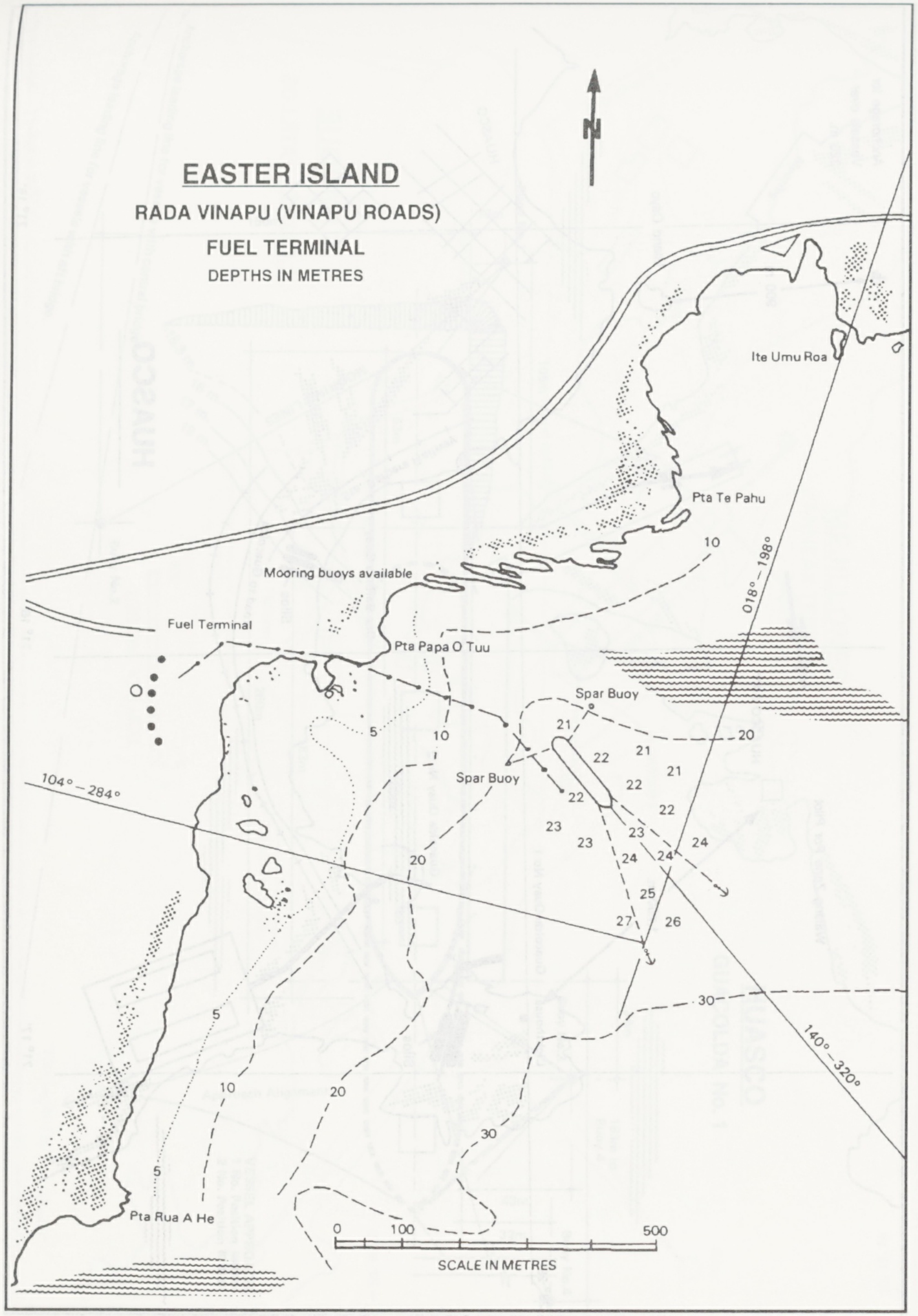


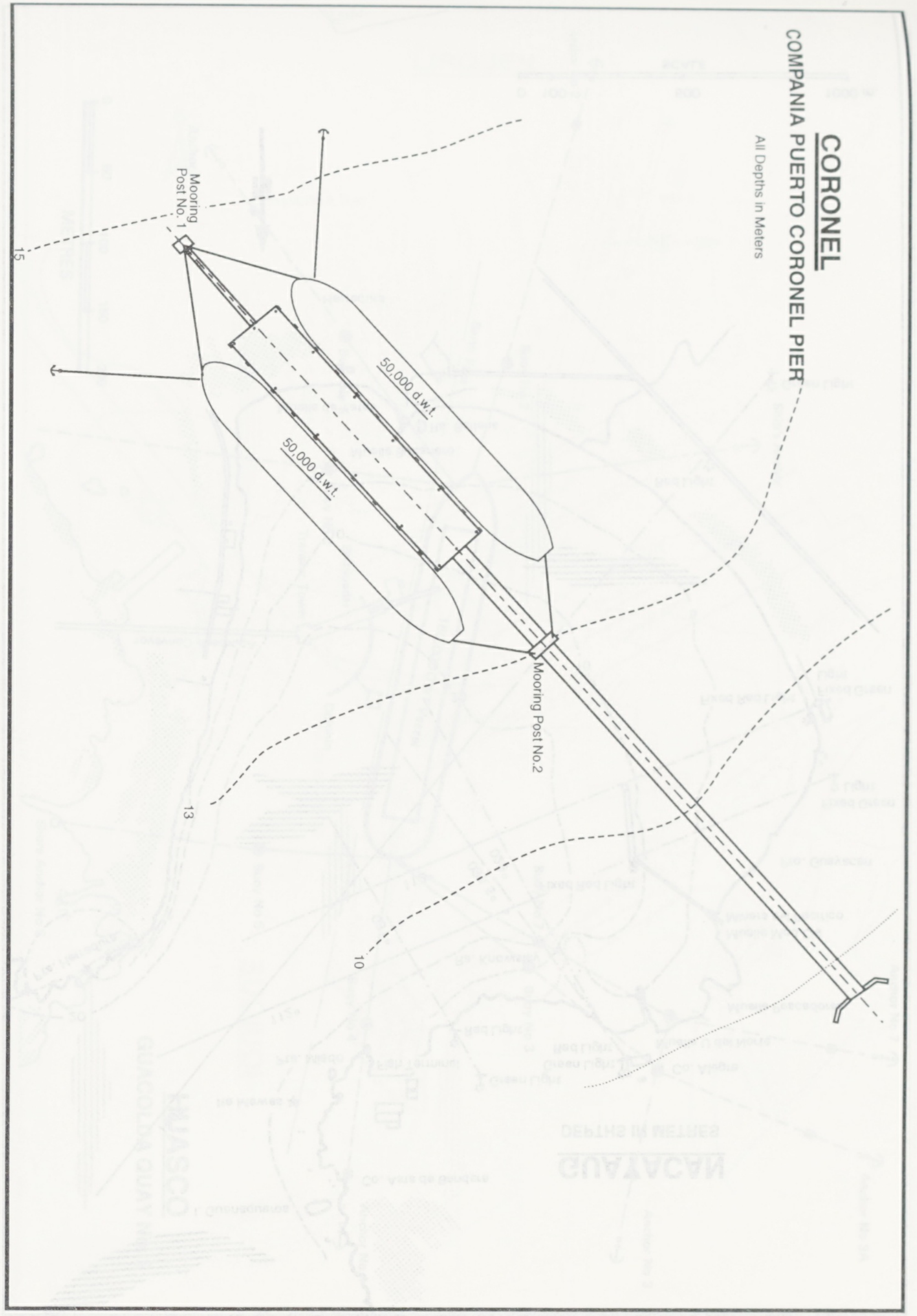
COQUIMBO

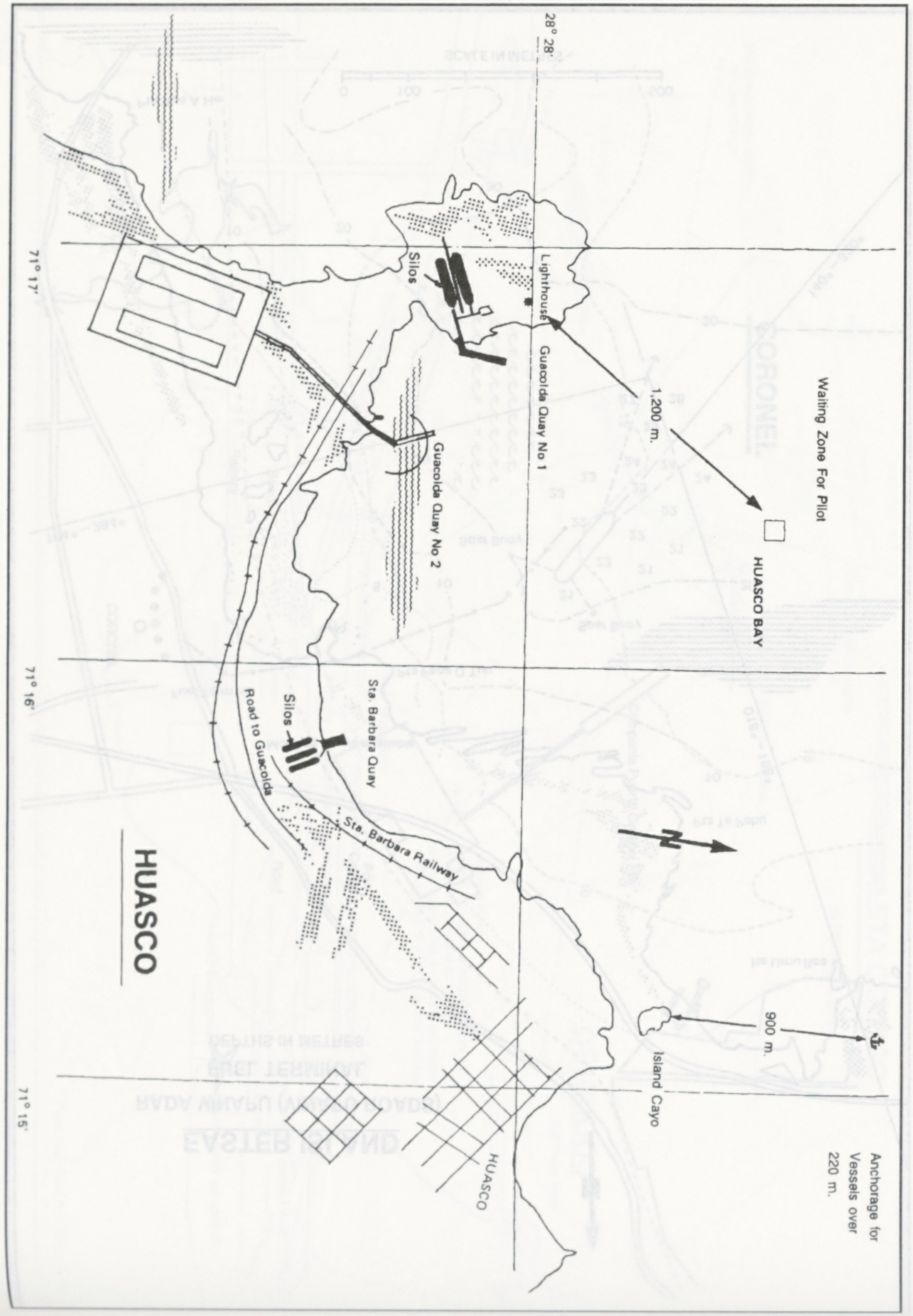
N
–5 m.
–5 m.
–10 m.
Fishing Port
Passenger Quay
Berth 1
Berth 2
Avenida Costanera
General Cargo Warehouse
New Mineral Warehouse
Marine Authority Office and Pilots Office
Warehouses
8 Silos for Wheat Storage
Refrigerated Store
Port Admin.
Office

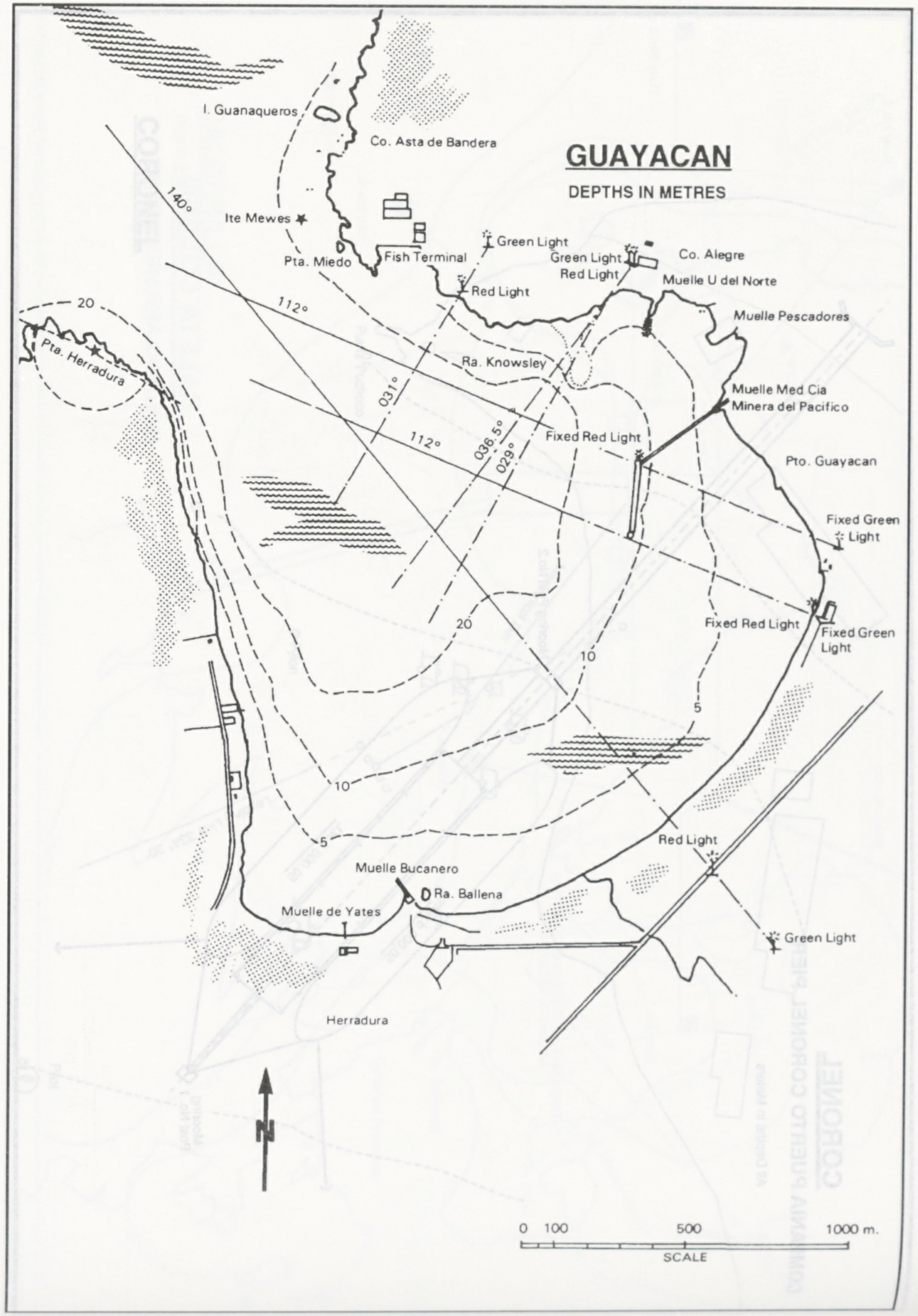

Mechanical Pier
Pylon
Punta Puchoco
Pylon
Leading Line 334° 30'
CORONEL
Pilot

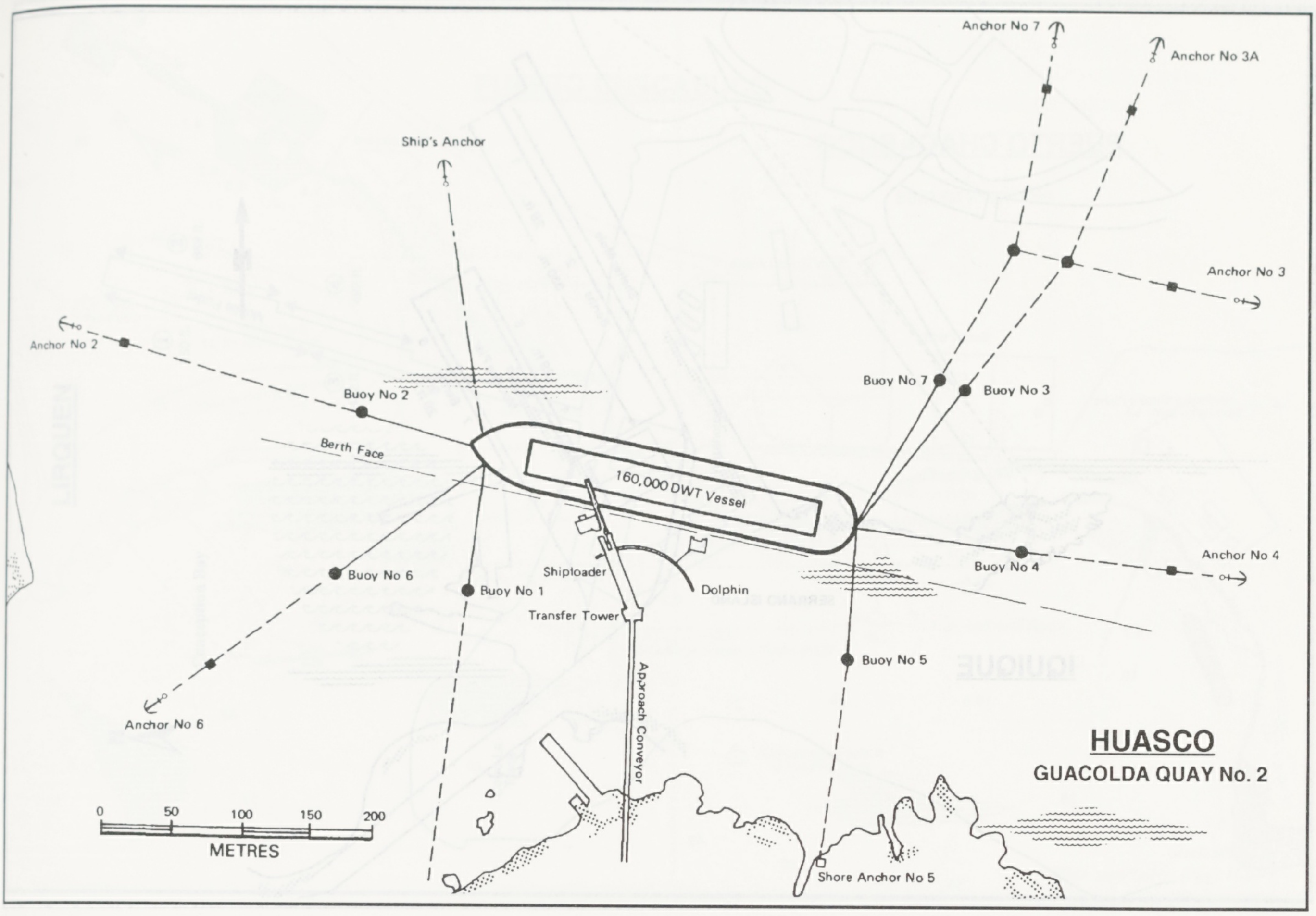

15
CORONEL
15
Compania Puerto Coronel Pier
10
10
Port
Captain
Beach
Road
Railway
N
CORONEL


EASTER ISLAND
RADA VINAPU (VINAPU ROADS)
FUEL TERMINAL
DEPTHS IN METRES
N
Ite Umu Roa
Pta Te Pahu
Mooring buoys available
Fuel Terminal
Pta Papa O Tuu
Spar Buoy
Spar Buoy
018° – 198°
104° – 284°
140° – 320°
Pta Rua A He
10
20
30
5
21
22
23
24
25
26
27
0
100
500
SCALE IN METRES


CORONEL
COMPANIA PUERTO CORONEL PIER
All Depths in Meters
Mooring Post No. 1
Mooring Post No.2
50,000 d.w.t.
50,000 d.w.t.
15
13
10

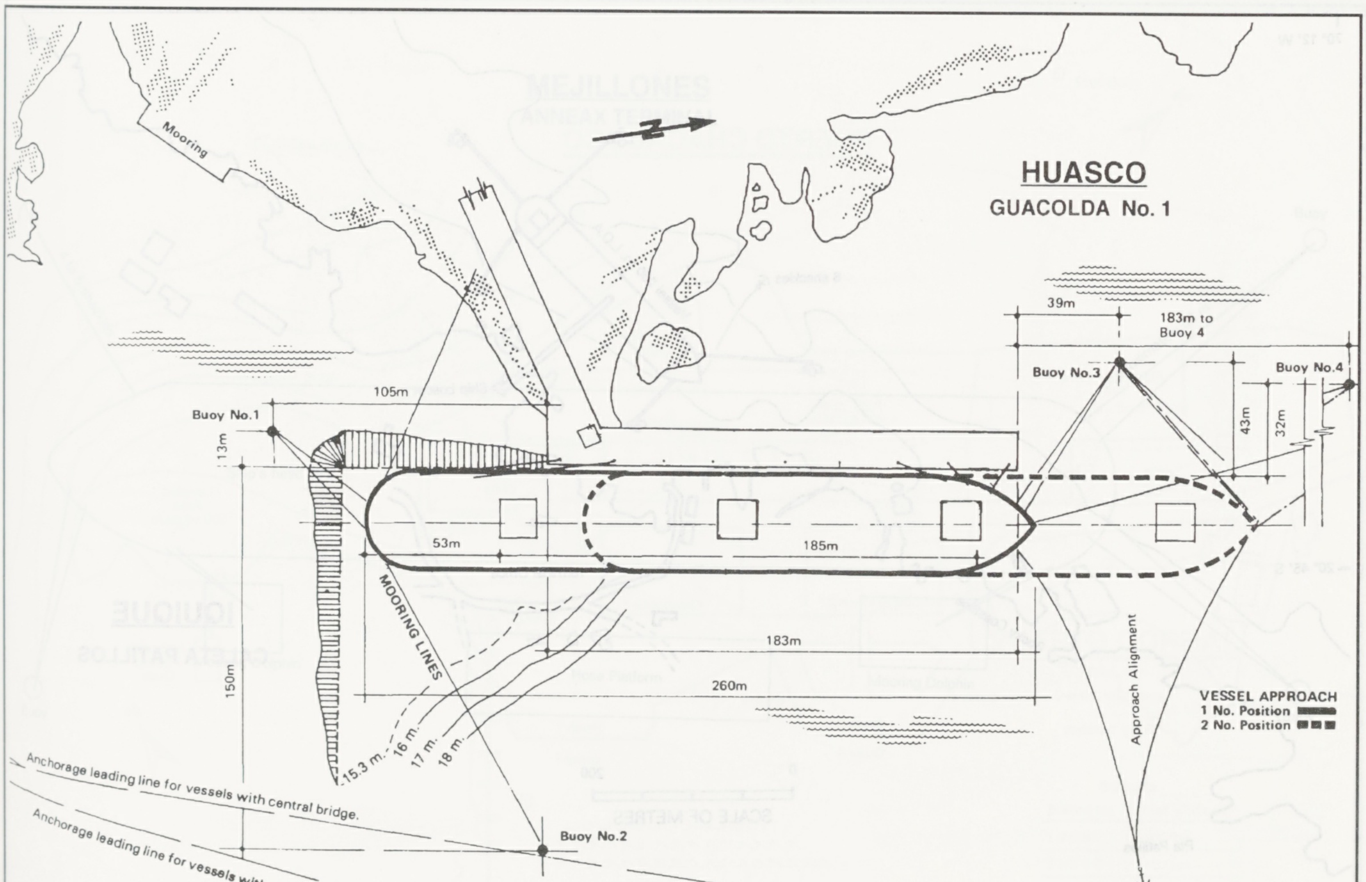

HUASCO
Waiting Zone For Pilot
HUASCO BAY
1,200 m.
Lighthouse
Guacolda Quay No 1
Silos
Guacolda Quay No 2
Sta. Barbara Quay
Silos
Road to Guacolda
Sta. Barbara Railway
N
900 m.
Island Cayo
Anchorage for Vessels over 220 m.
HUASCO
28° 28'
71° 17'
71° 16'
71° 15'


GUAYACAN
DEPTHS IN METRES
I. Guanaqueros
Co. Asta de Bandera
Ite Mewes
Pta. Miedo
Fish Terminal
Green Light
Green Light
Red Light
Co. Alegre
Muelle U del Norte
Red Light
Muelle Pescadores
140°
112°
Ra. Knowsley
031°
Muelle Med Cia Minera del Pacifico
Pta. Herradura
20
112°
036.5°
029°
Fixed Red Light
Pto. Guayacan
Fixed Green Light
20
10
Fixed Red Light
Fixed Green Light
5
10
5
Red Light
Muelle Bucanero
Ra. Ballena
Muelle de Yates
Green Light
Herradura
N
0 100 500 1000 m.
SCALE



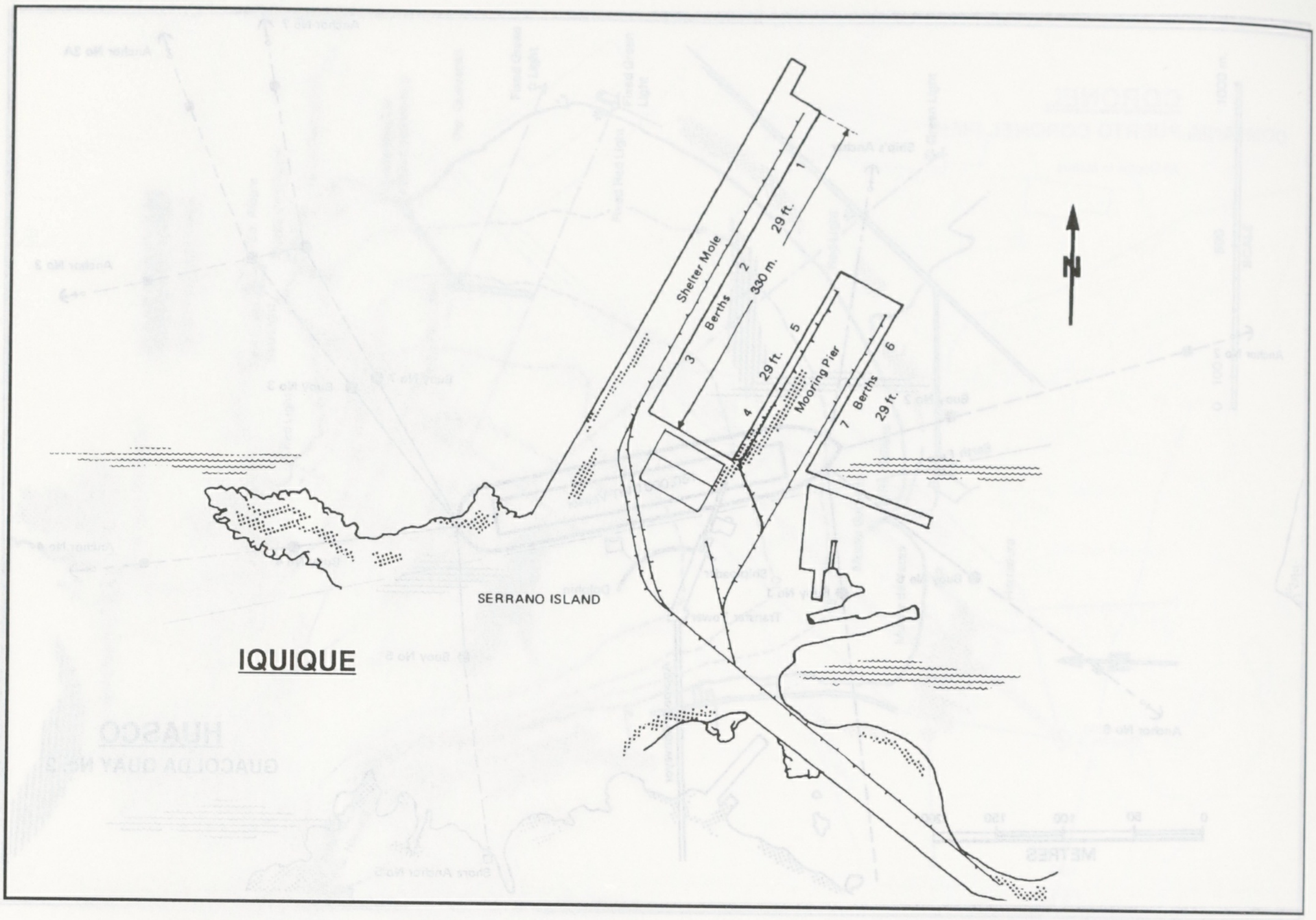
HUASCO
GUACOLDA QUAY No. 2

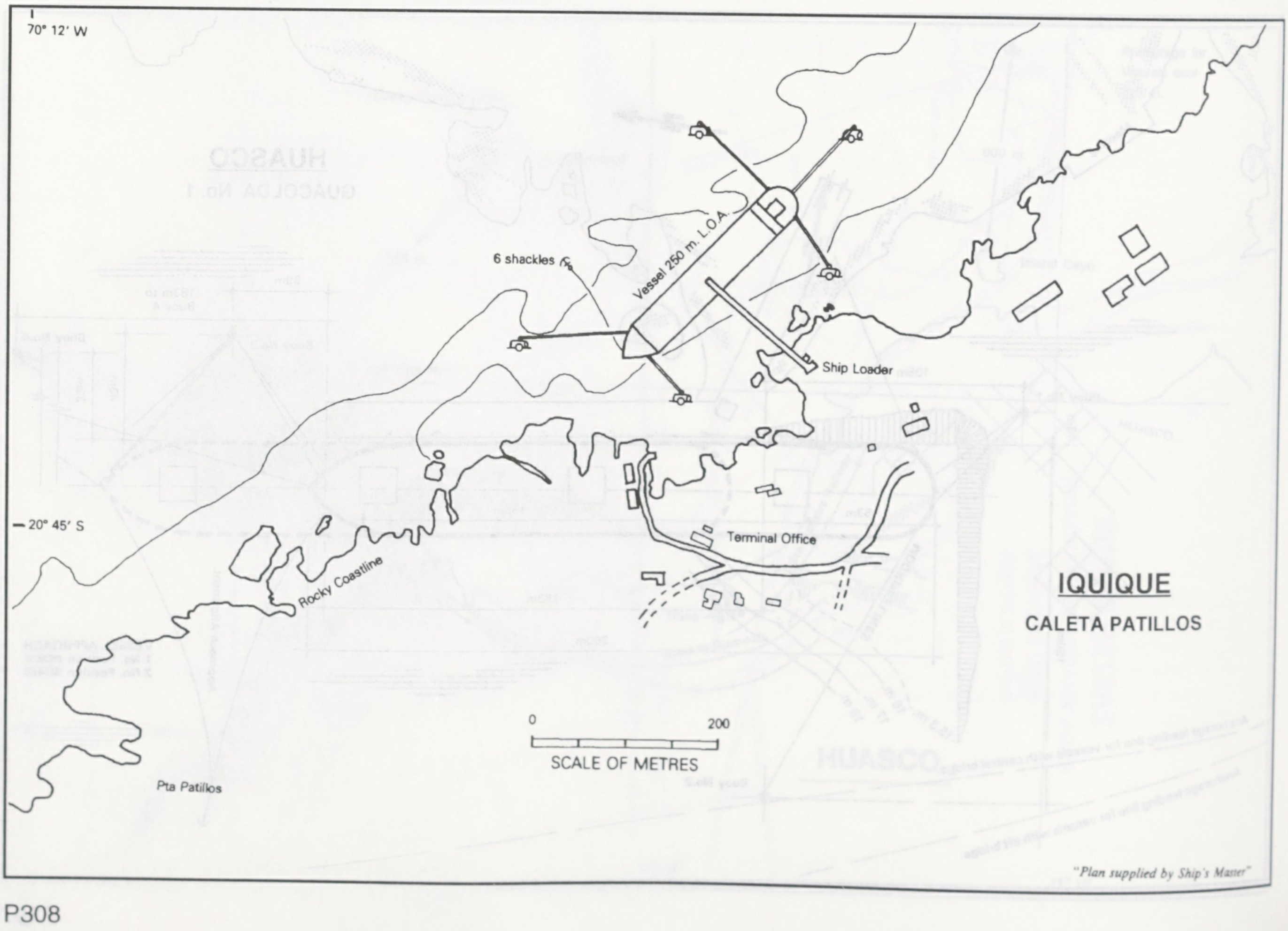
Anchor No 7
Anchor No 3A
Ship's Anchor
Anchor No 3
Anchor No 2
Buoy No 7
Buoy No 3
Buoy No 2
Berth Face
160,000 DWT Vessel
Anchor No 4
Buoy No 4
Shiploader
Dolphin
Buoy No 6
Buoy No 1
Transfer Tower
Buoy No 5
Approach Conveyor
Anchor No 6
0
50
100
150
200
METRES
Shore Anchor No 5



HUASCO
GUACOLDA No. 1

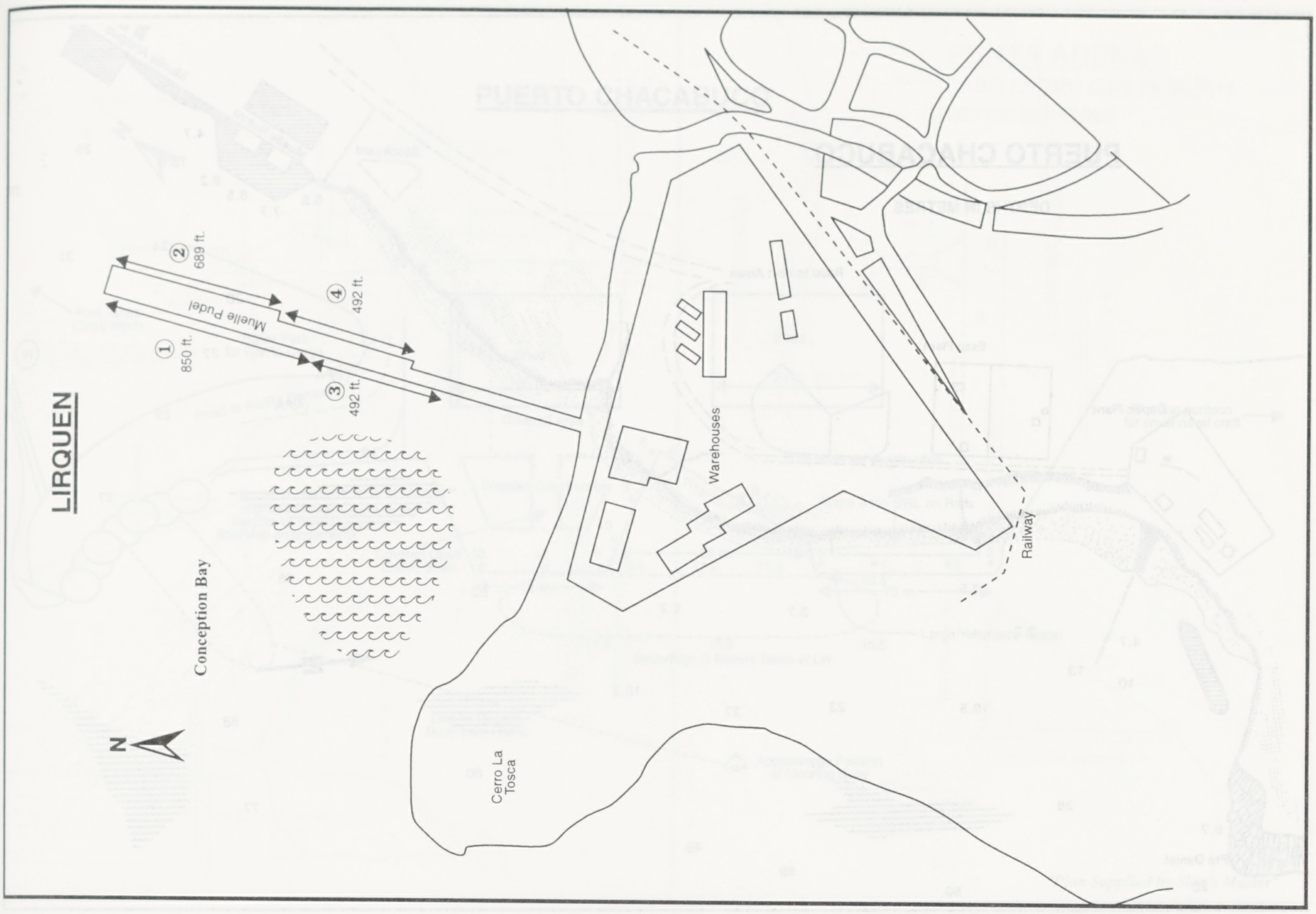
Mooring
N
39m
183m to Buoy 4
Buoy No.3
Buoy No.4
105m
Buoy No.1
13m
43m
32m
53m
185m
MOORING LINES
183m
260m
150m
Approach Alignment
VESSEL APPROACH
1 No. Position ▬
2 No. Position ▬ ▬
15.3 m.
16 m.
17 m.
18 m.
Anchorage leading line for vessels with central bridge.
Anchorage leading line for vessels with aft bridge.
Buoy No.2


Shelter Mole
1
2
3
Berths
330 m.
29 ft.
4
5
6
7
29 ft.
Mooring Pier
Berths
29 ft.
N
SERRANO ISLAND
IQUIQUE


70° 12′ W
20° 45′ S
6 shackles
Vessel 250 m. L.O.A.
Ship Loader
Terminal Office
Rocky Coastline
Pta Patillos
0
200
SCALE OF METRES
IQUIQUE
CALETA PATILLOS

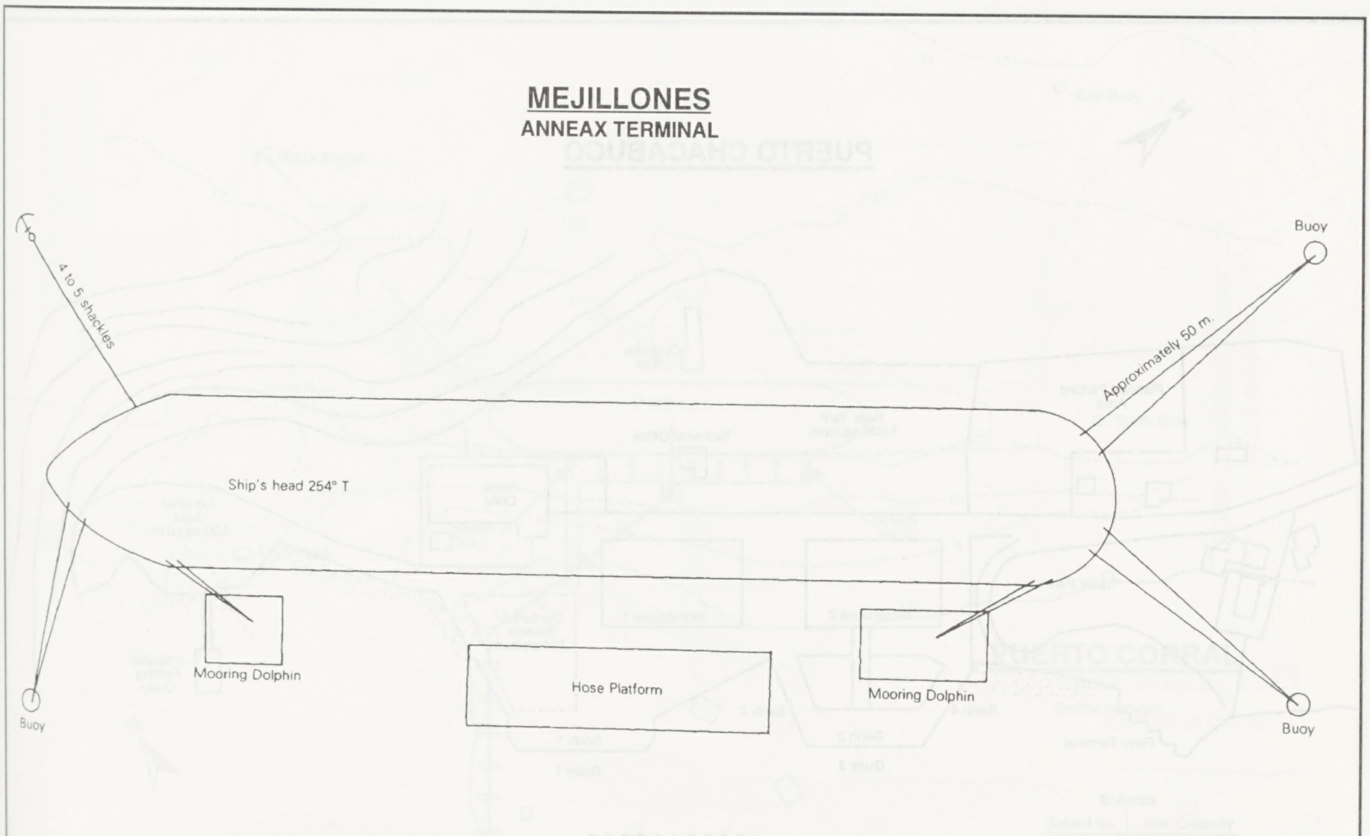
"Plan supplied by Ship's Master"

LIRQUEN

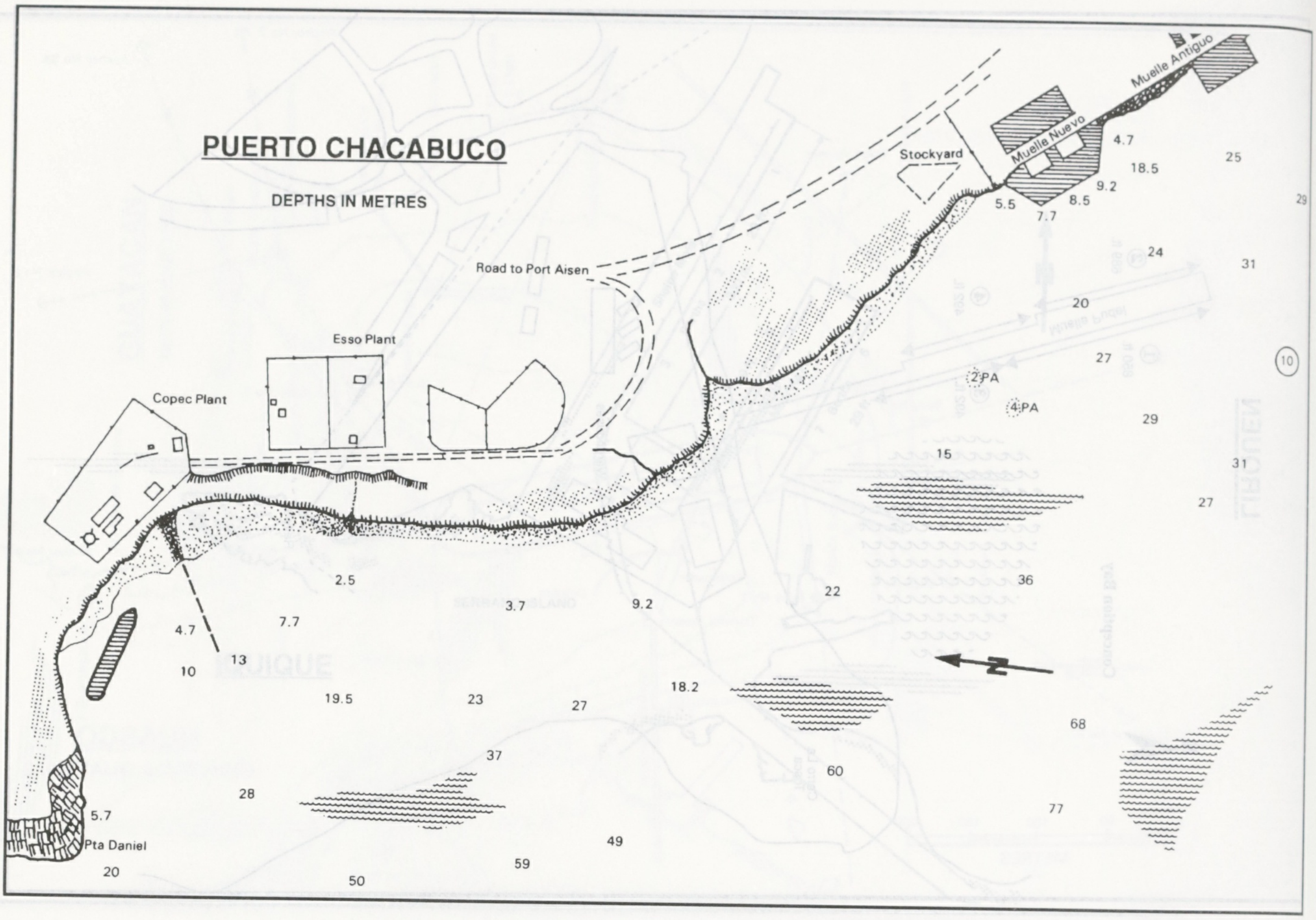

Muelle Pudel
① 850 ft.
② 689 ft.
③ 492 ft.
④ 492 ft.
Conception Bay
N
Warehouses
Railway
Cerro La Tosca

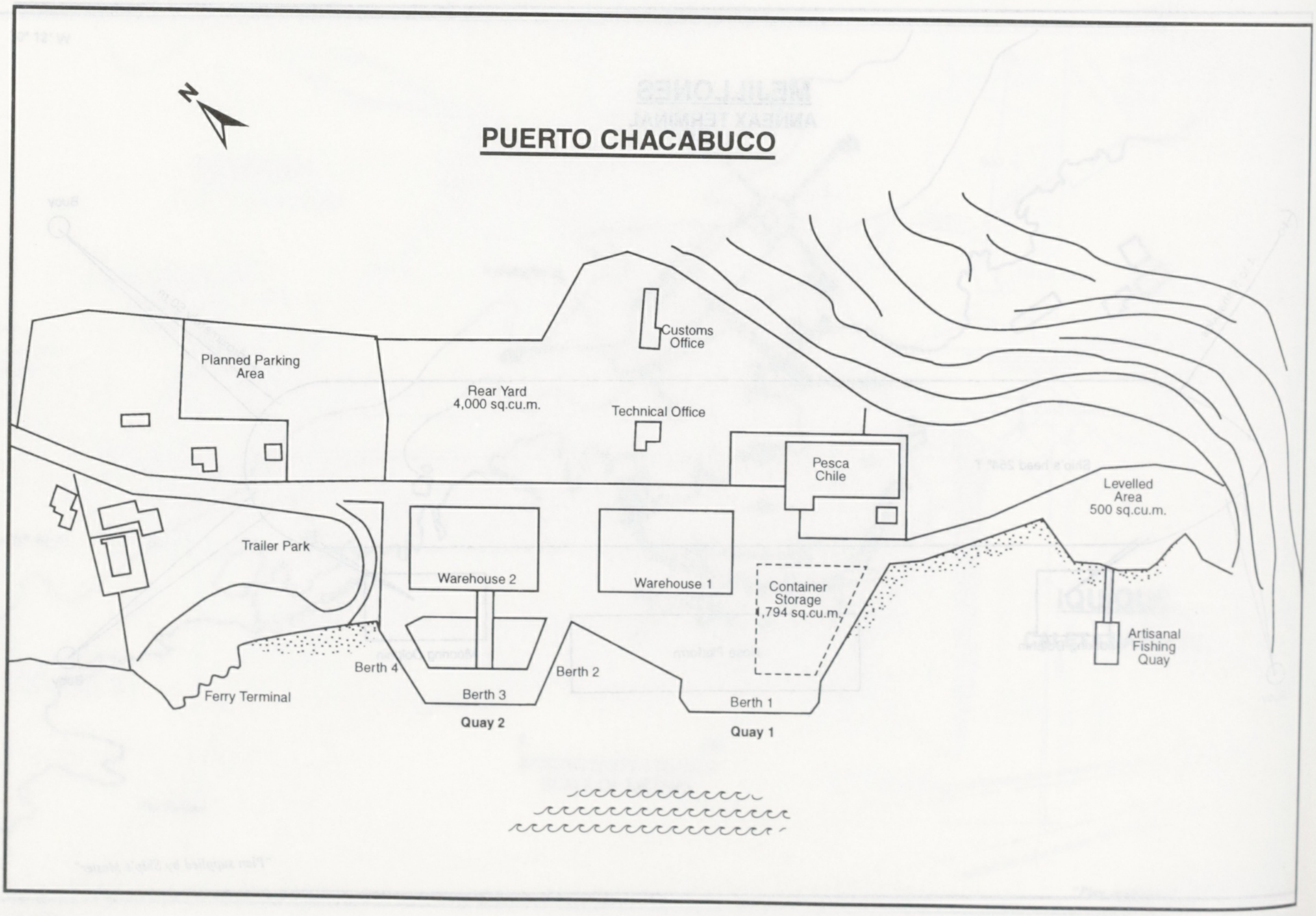
MEJILLONES

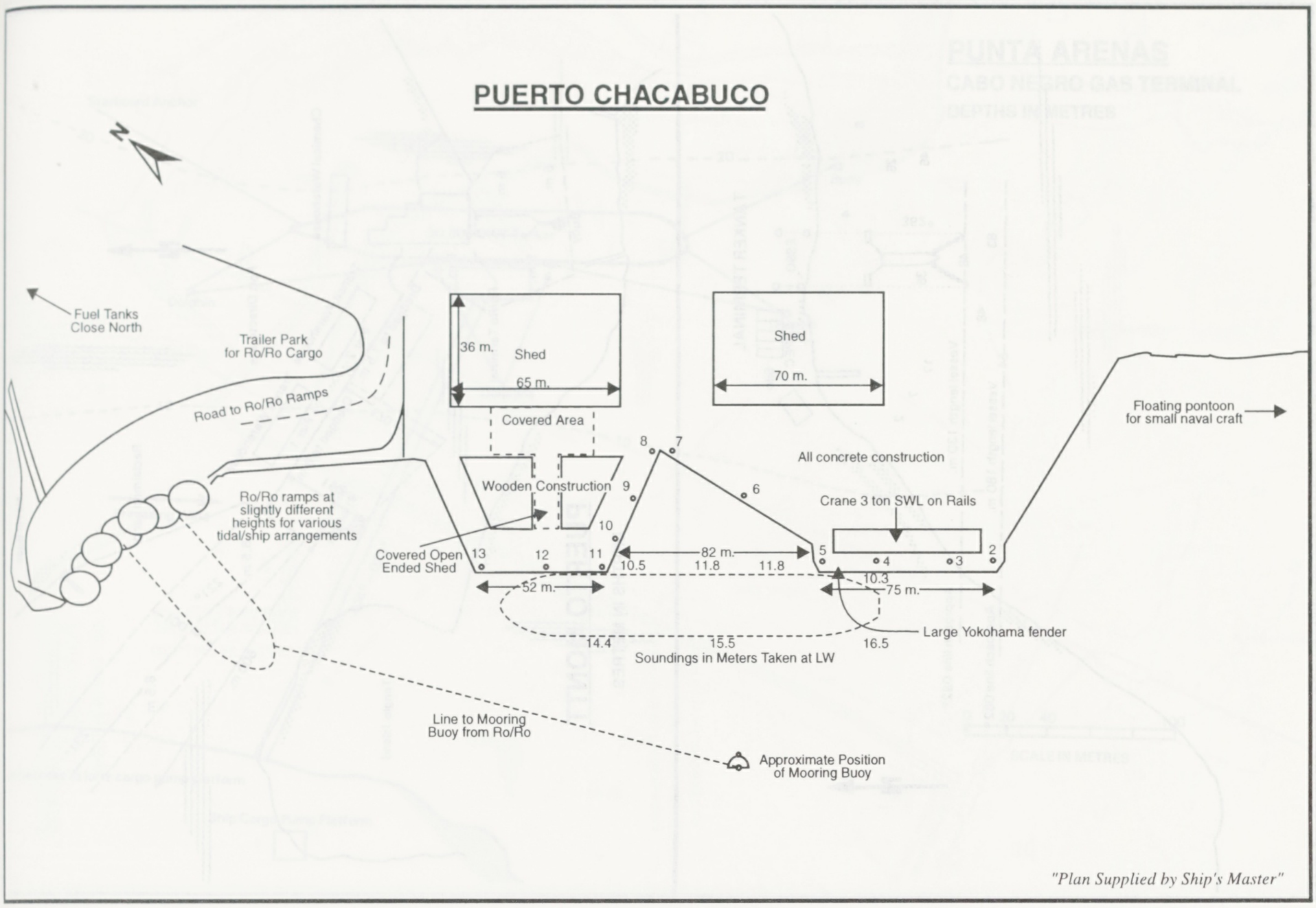
ANNEAX TERMINAL


4 to 5 shackles
Buoy
Approximately 50 m.
Ship's head 254° T
Mooring Dolphin
Hose Platform
Mooring Dolphin
Buoy
Buoy

"Plan supplied by Ship's Master"


PUERTO CHACABUCO
DEPTHS IN METRES
Road to Port Aisen
Stockyard
Muelle Antiguo
Muelle Nuevo
Esso Plant
Copec Plant
Pta Daniel
2 PA
4 PA
10
4.7
18.5
25
29
9.2
5.5
8.5
7.7
24
31
20
27
29
31
27
15
36
22
2.5
3.7
9.2
4.7
7.7
13
10
19.5
23
27
18.2
68
37
60
77
28
5.7
49
59
20
50

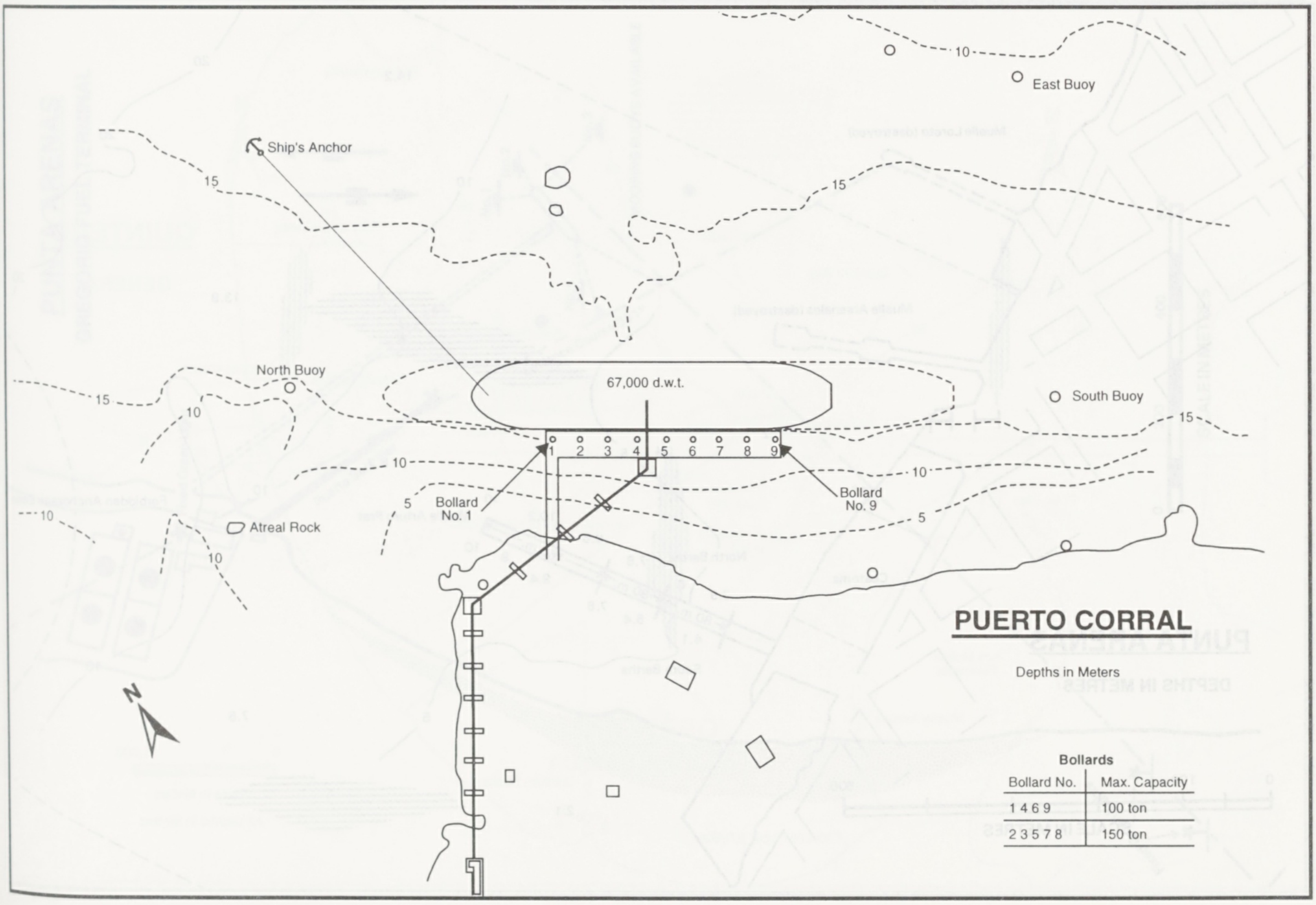

N
PUERTO CHACABUCO
Customs Office
Planned Parking Area
Rear Yard 4,000 sq.cu.m.
Technical Office
Pesca Chile
Levelled Area 500 sq.cu.m.
Trailer Park
Warehouse 2
Warehouse 1
Container Storage ,794 sq.cu.m.
Artisanal Fishing Quay
Berth 4
Berth 3
Berth 2
Berth 1
Quay 2
Quay 1
Ferry Terminal



PUERTO CHACABUCO

"Plan Supplied by Ship's Master"

N
Fuel Tanks
Close North
Trailer Park
for Ro/Ro Cargo
Road to Ro/Ro Ramps
Ro/Ro ramps at
slightly different
heights for various
tidal/ship arrangements
36 m.
Shed
65 m.
Covered Area
Wooden Construction
Covered Open
Ended Shed
Shed
70 m.
All concrete construction
Crane 3 ton SWL on Rails
Floating pontoon
for small naval craft
8
7
6
9
10
13
12
11
5
4
3
2
10.5
82 m.
11.8
11.8
10.3
52 m.
75 m.
14.4
15.5
16.5
Large Yokohama fender
Soundings in Meters Taken at LW
Line to Mooring
Buoy from Ro/Ro
Approximate Position
of Mooring Buoy



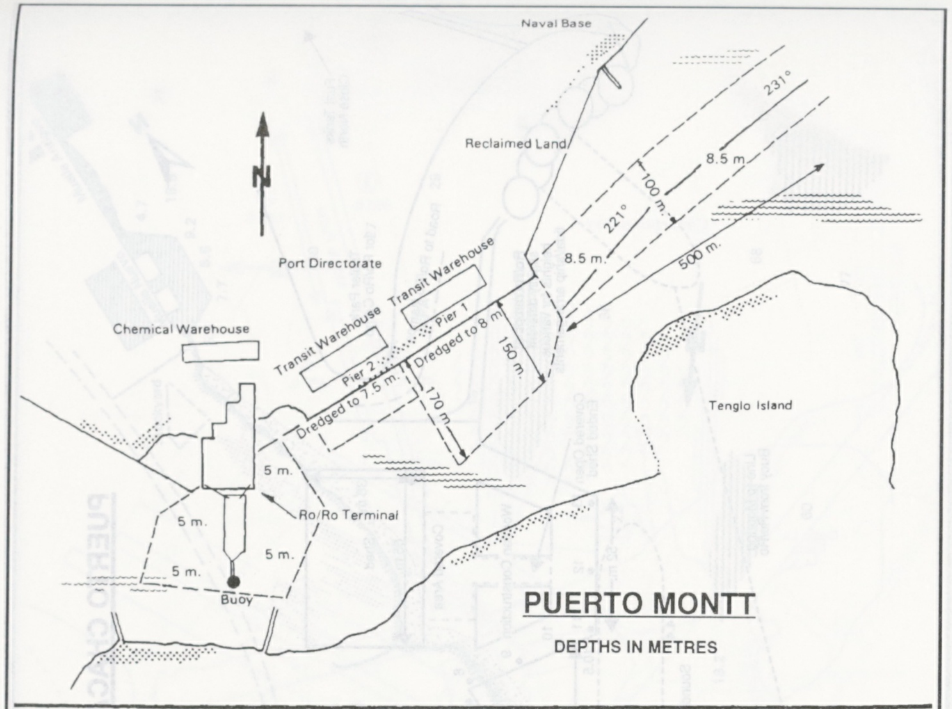
PUERTO CORRAL

Depths in Meters

10
East Buoy
Ship's Anchor
15
15
North Buoy
15
10
67,000 d.w.t.
South Buoy
15
1
2
3
4
5
6
7
8
9
10
10
5
Bollard
No. 1
Bollard
No. 9
5
10
Atreal Rock
10
N

Bollards

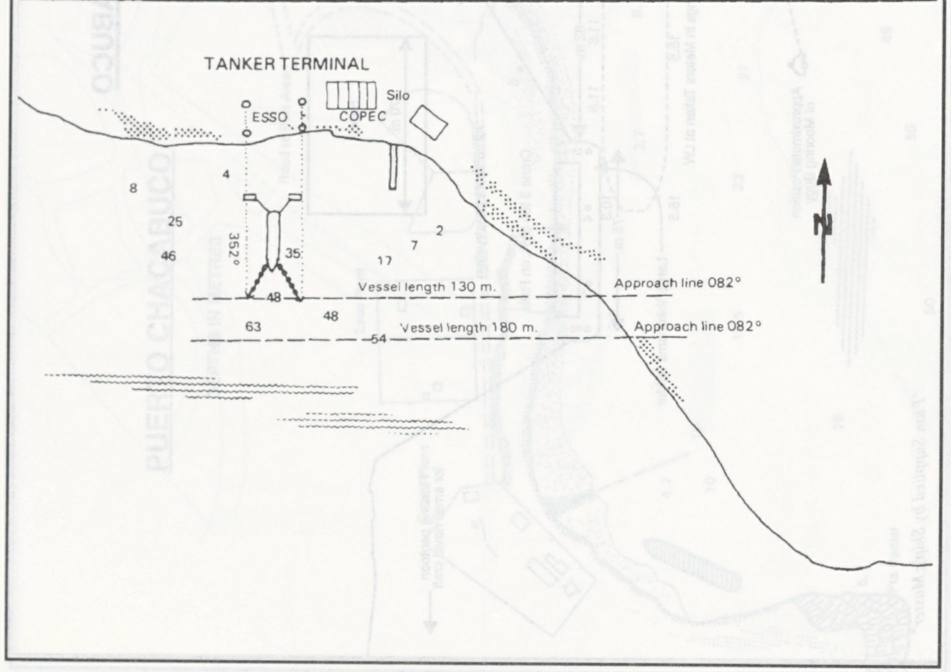
Bollard No.	Max. Capacity
1 4 6 9	100 ton
2 3 5 7 8	150 ton



PUERTO MONTT

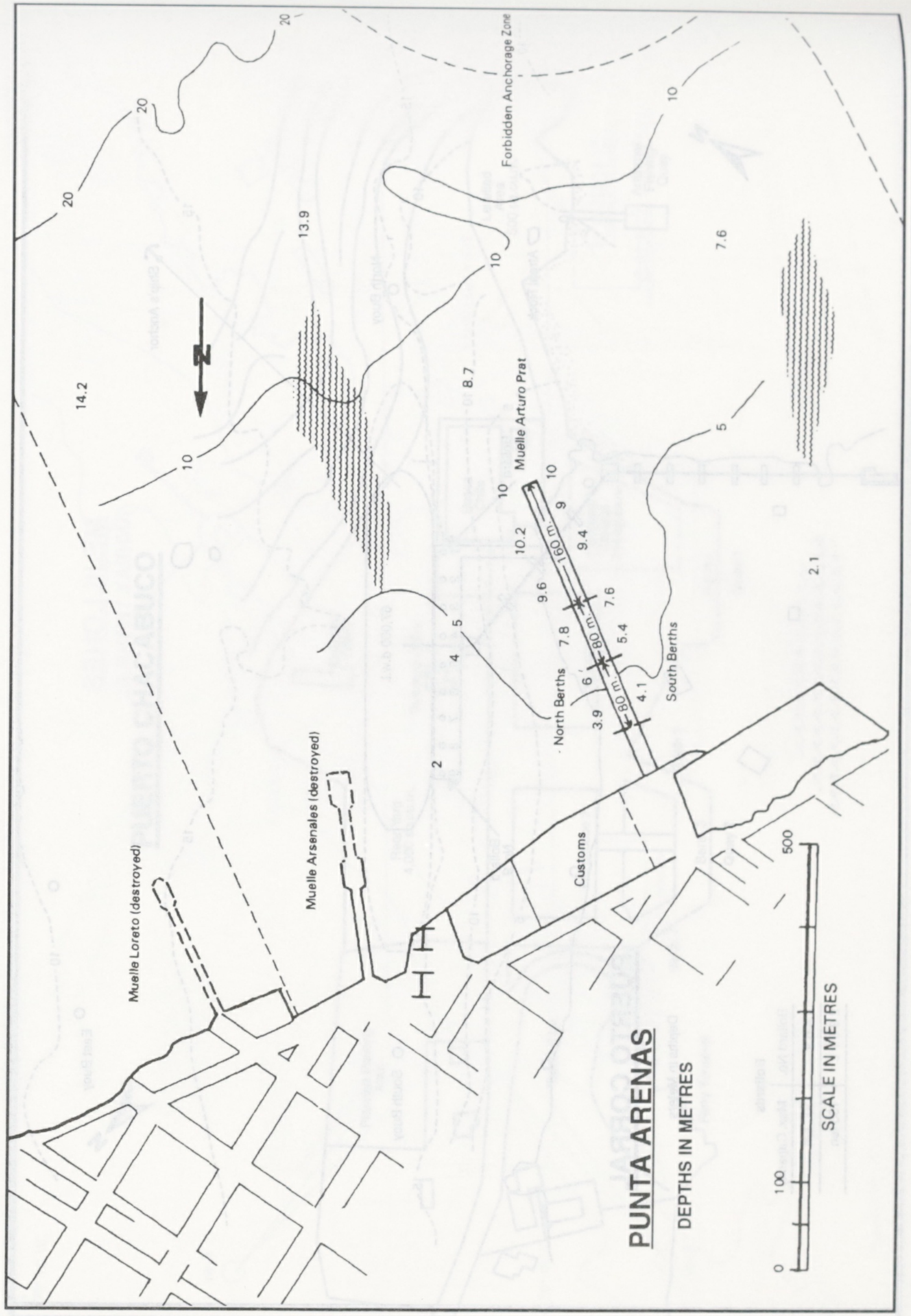
DEPTHS IN METRES

Naval Base
Reclaimed Land
231°
8.5 m.
100 m.
221°
8.5 m.
500 m.
Port Directorate
Transit Warehouse
Transit Warehouse
Pier 1
Pier 2
Dredged to 8 m.
Dredged to 7.5 m.
150 m.
170 m.
Chemical Warehouse
Tenglo Island
5 m.
5 m.
5 m.
5 m.
Ro/Ro Terminal
Buoy



TANKER TERMINAL

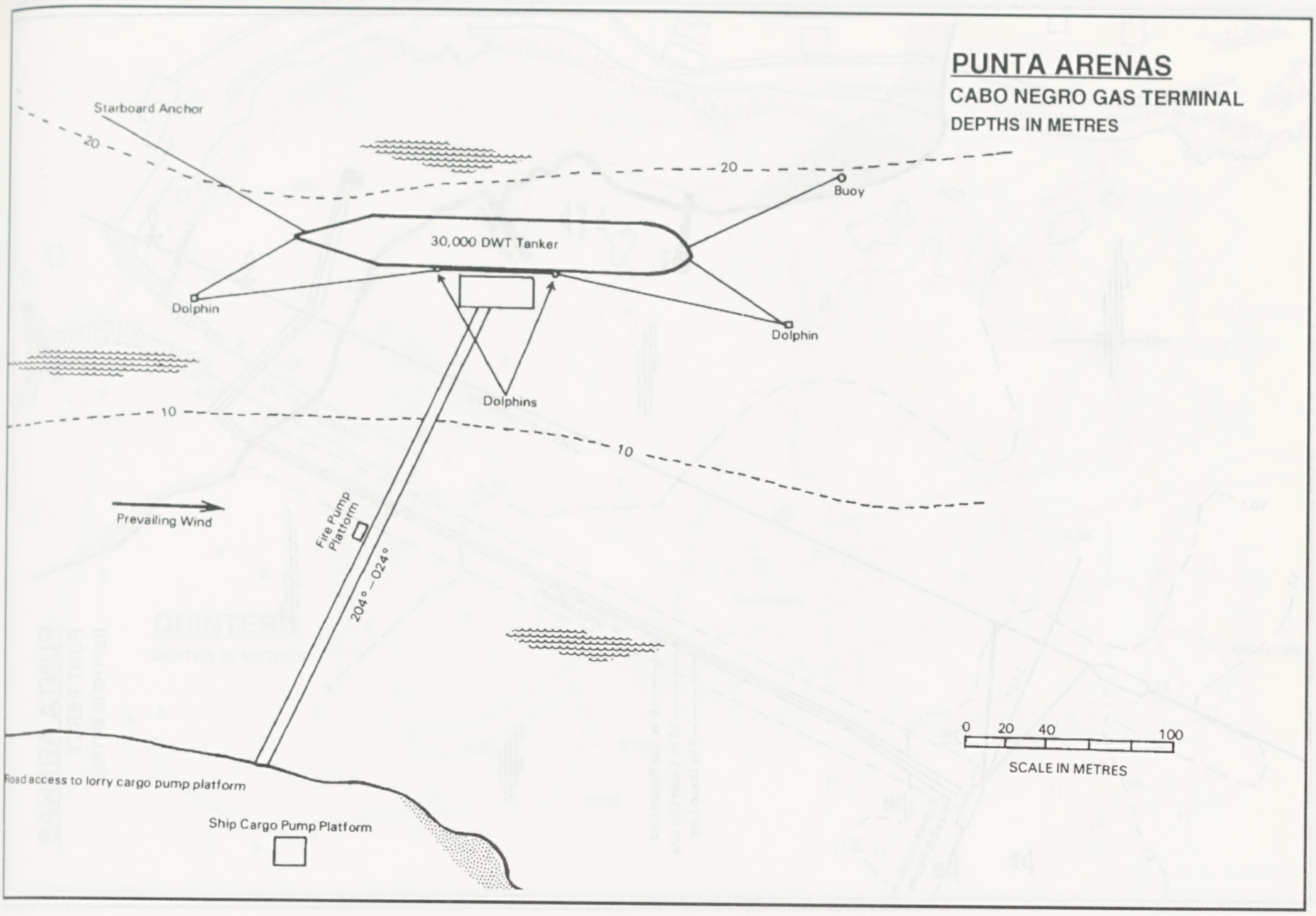
ESSO
COPEC
Silo
4
8
25
46
352°
35
17
7
2
48
48
63
54
Vessel length 130 m.
Approach line 082°
Vessel length 180 m.
Approach line 082°

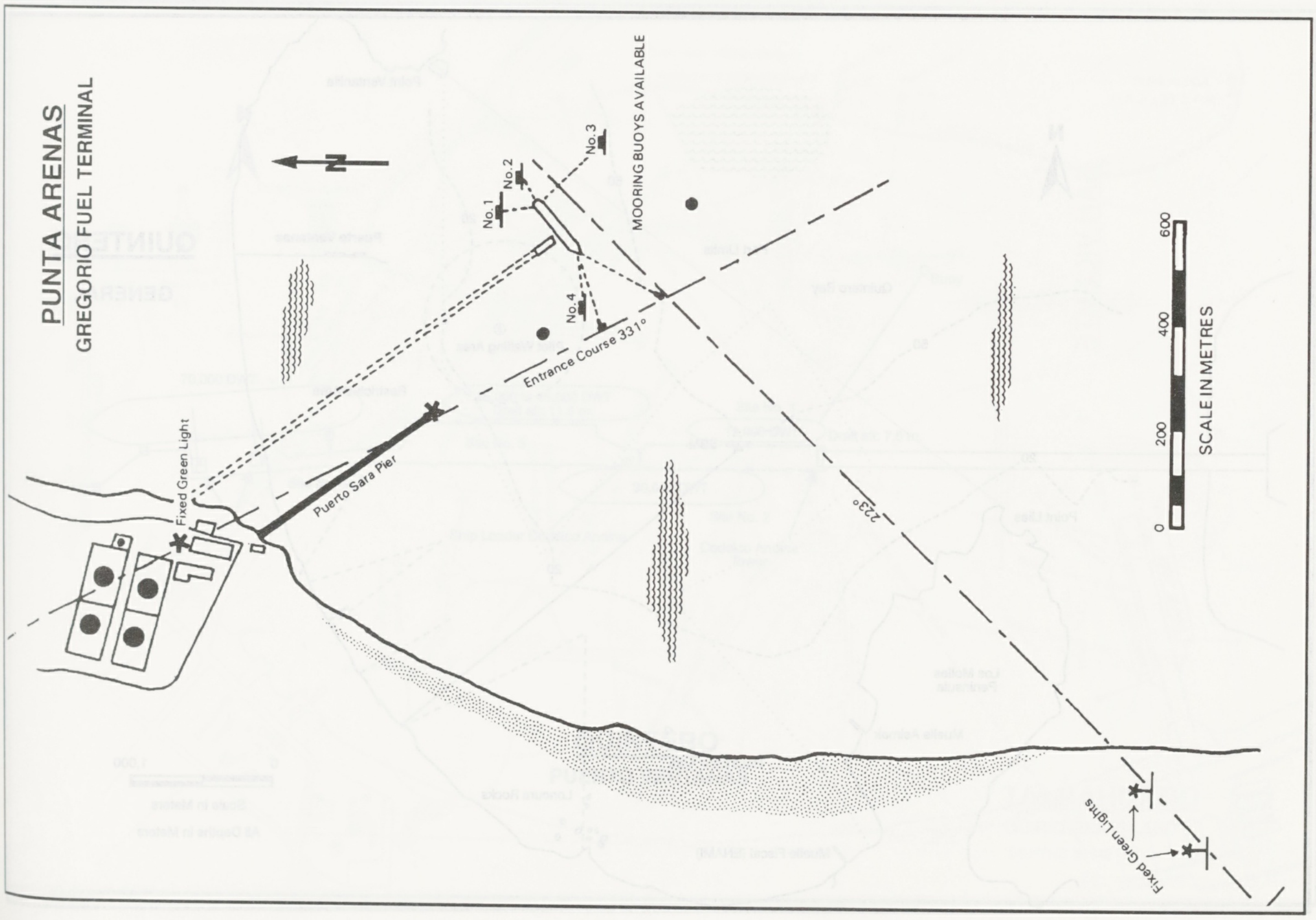


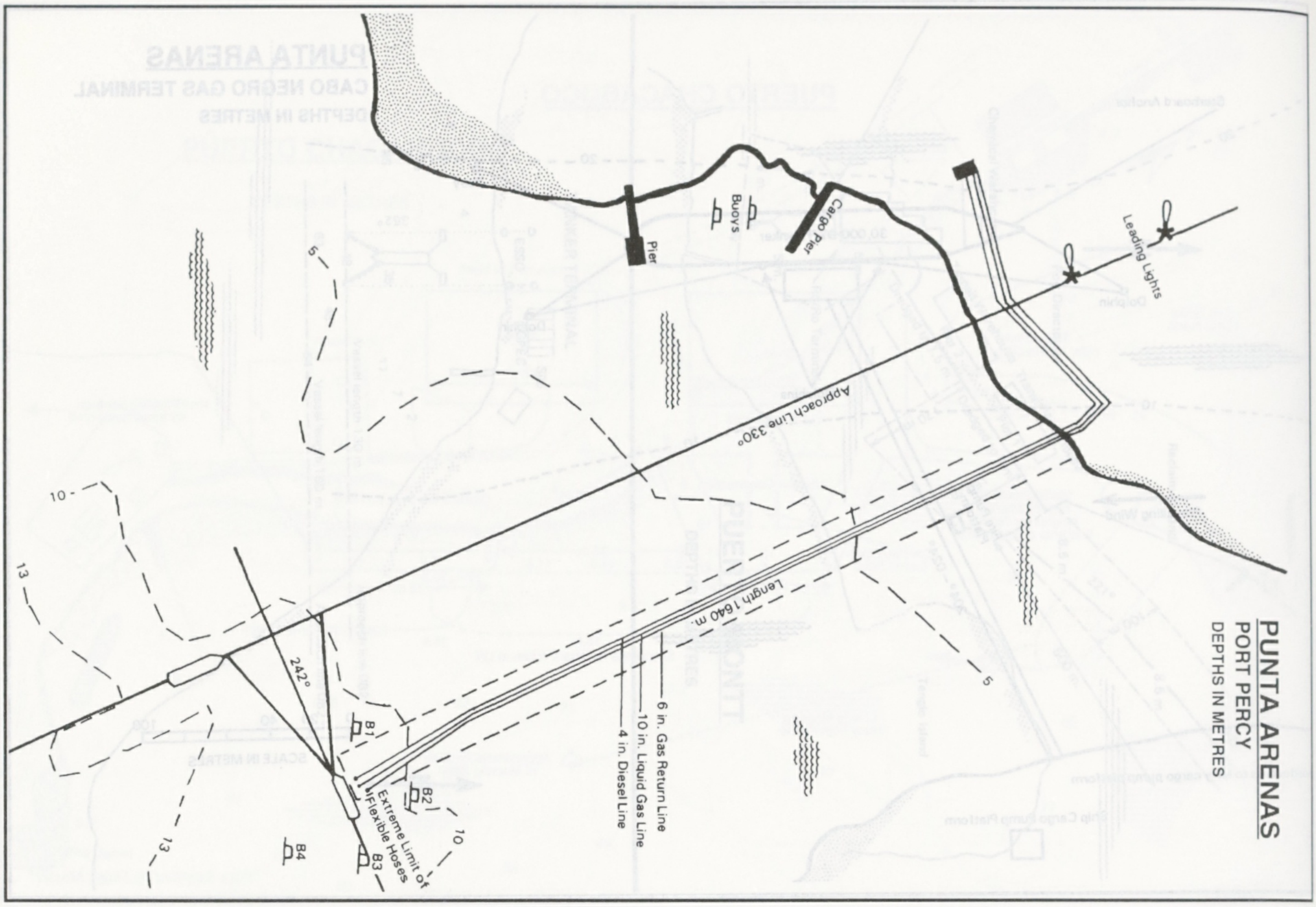
PUNTA ARENAS

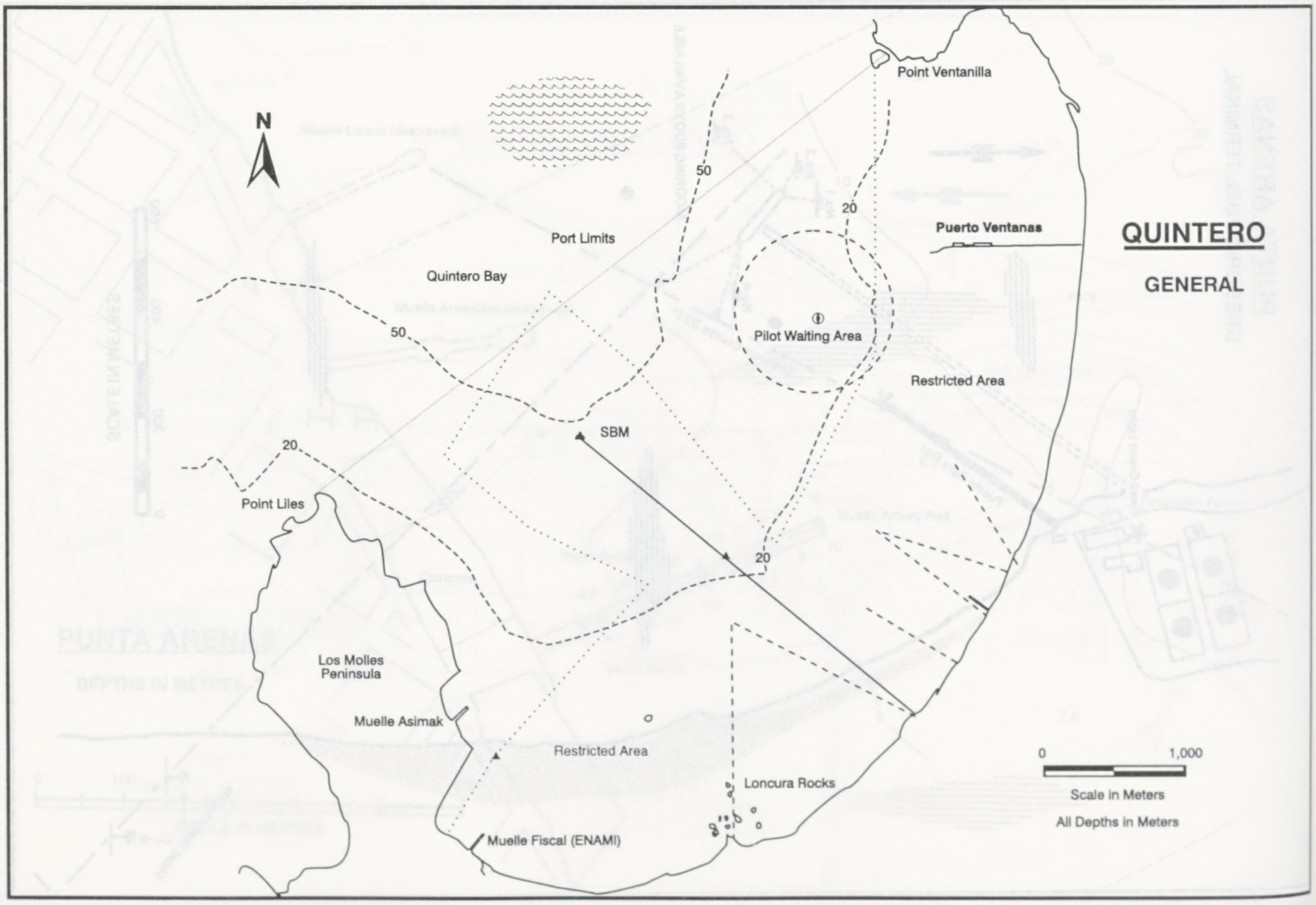
DEPTHS IN METRES

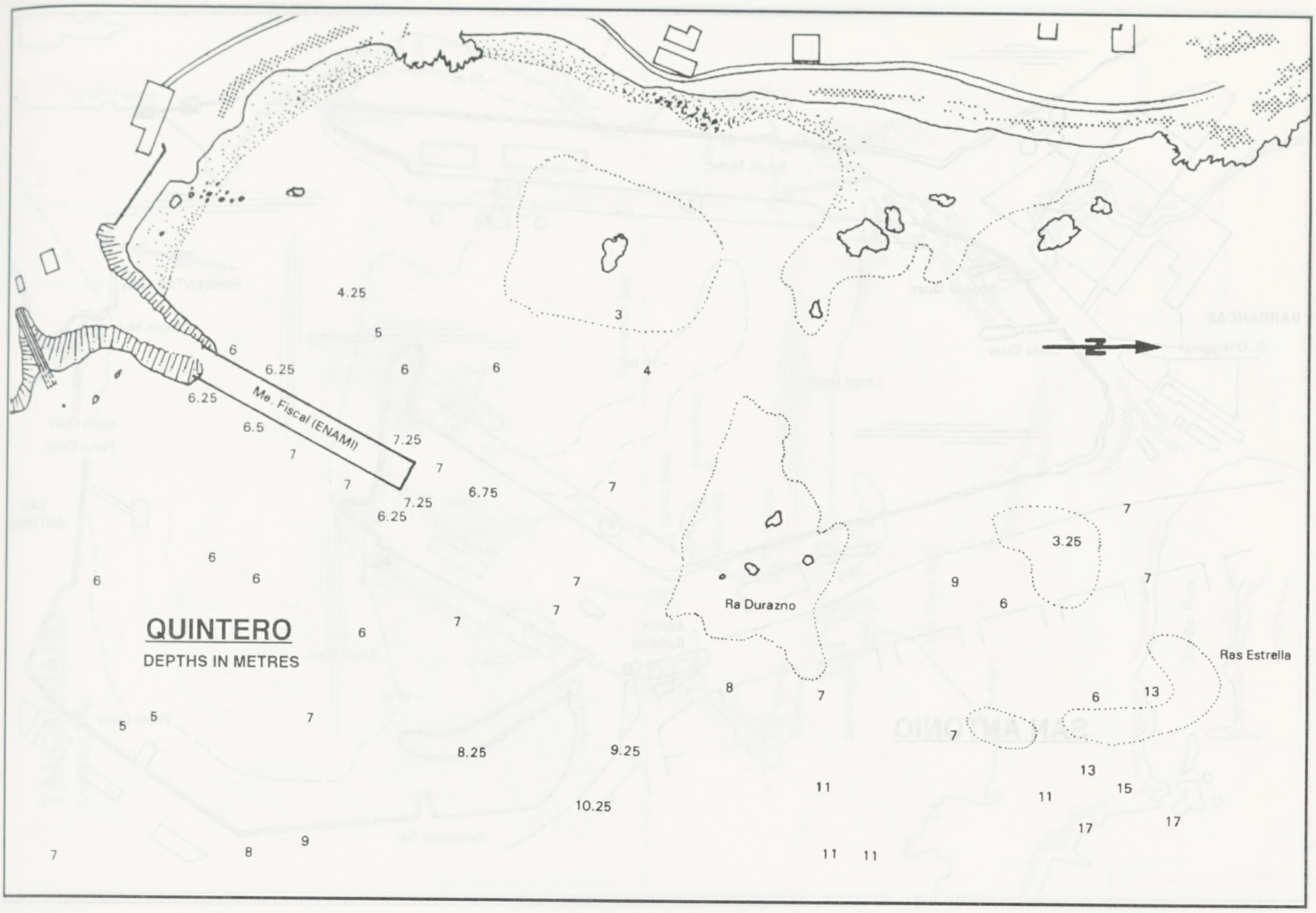
20
20
20
10
Forbidden Anchorage Zone
13.9
10
7.6
14.2
8.7
Muelle Arturo Prat
10
10
10
9
10.2
160 m.
9.4
9.6
7.6
7.8
80 m.
5.4
6
80 m.
4.1
3.9
North Berths
South Berths
5
5
4
2.1
2
Muelle Loreto (destroyed)
Muelle Arsenales (destroyed)
Customs
0
100
500
SCALE IN METRES

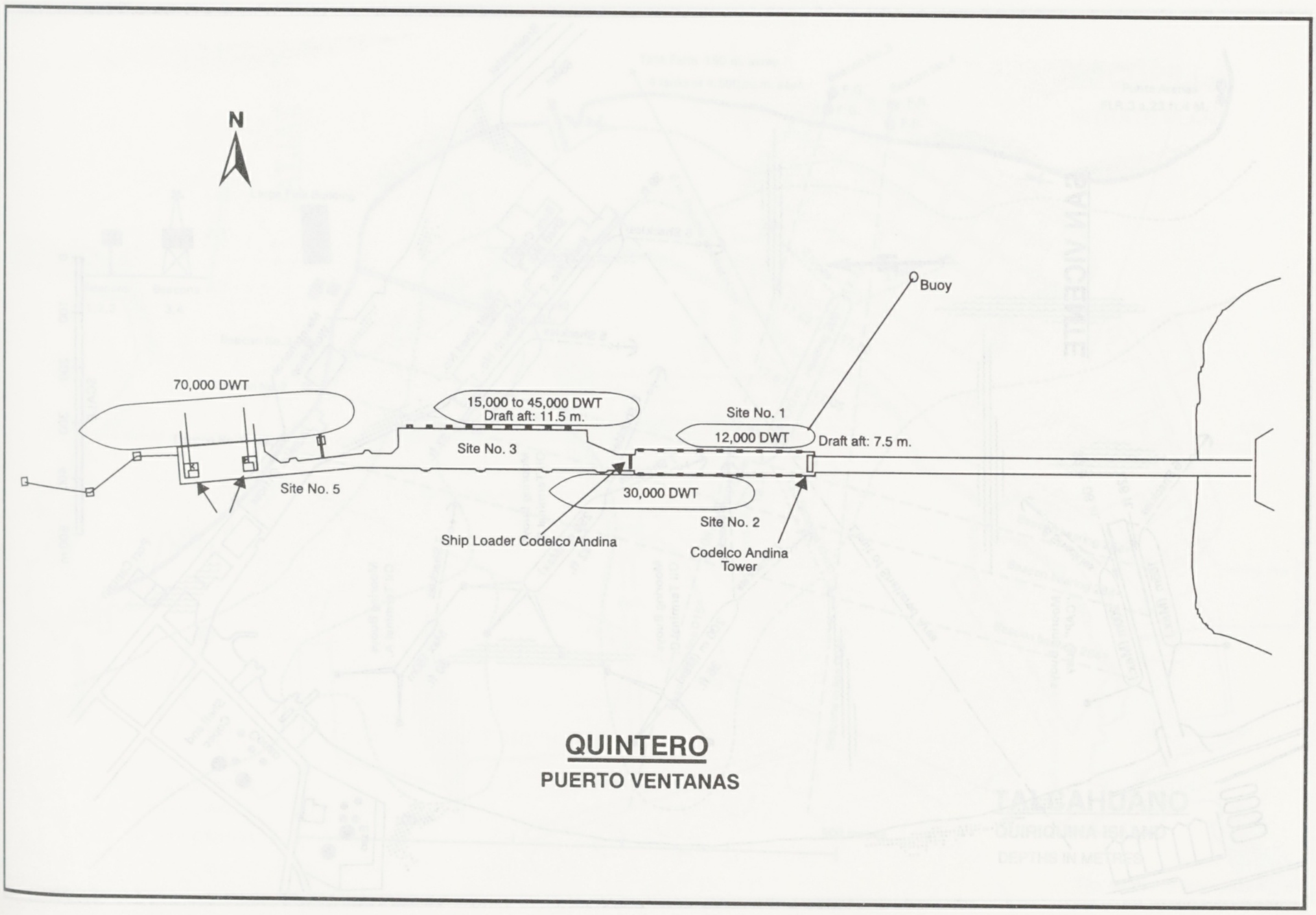

PUNTA ARENAS
CABO NEGRO GAS TERMINAL
DEPTHS IN METRES
Starboard Anchor
20
20
Buoy
30,000 DWT Tanker
Dolphin
Dolphin
Dolphins
10
10
Prevailing Wind
Fire Pump Platform
204° – 024°
0 20 40 100
SCALE IN METRES
Road access to lorry cargo pump platform
Ship Cargo Pump Platform

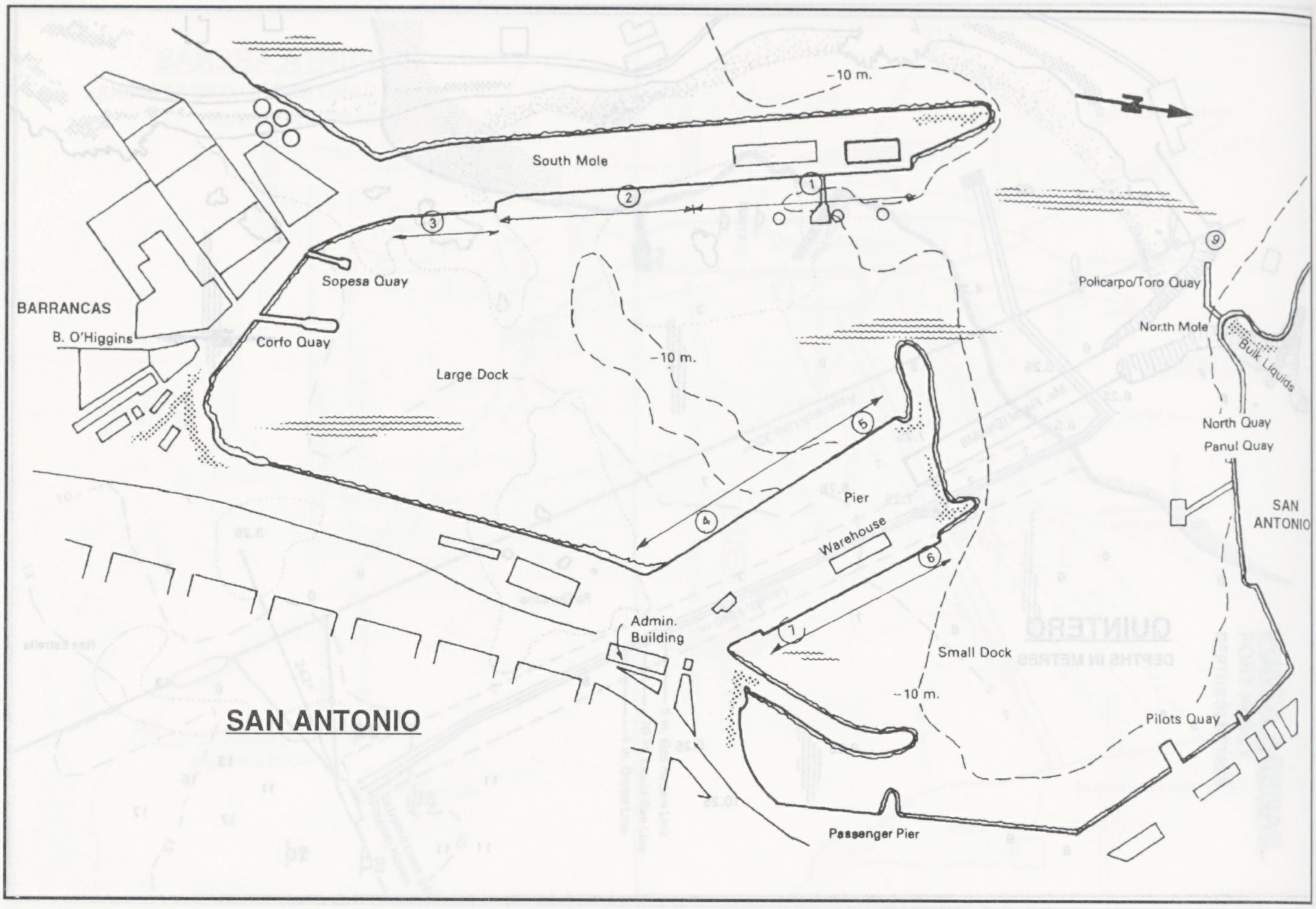

PUNTA ARENAS
GREGORIO FUEL TERMINAL
N
No.3
No.2
No.1
No.4
MOORING BUOYS AVAILABLE
Entrance Course 331°
Puerto Sara Pier
Fixed Green Light
223°
Fixed Green Lights
0
200
400
600
SCALE IN METRES

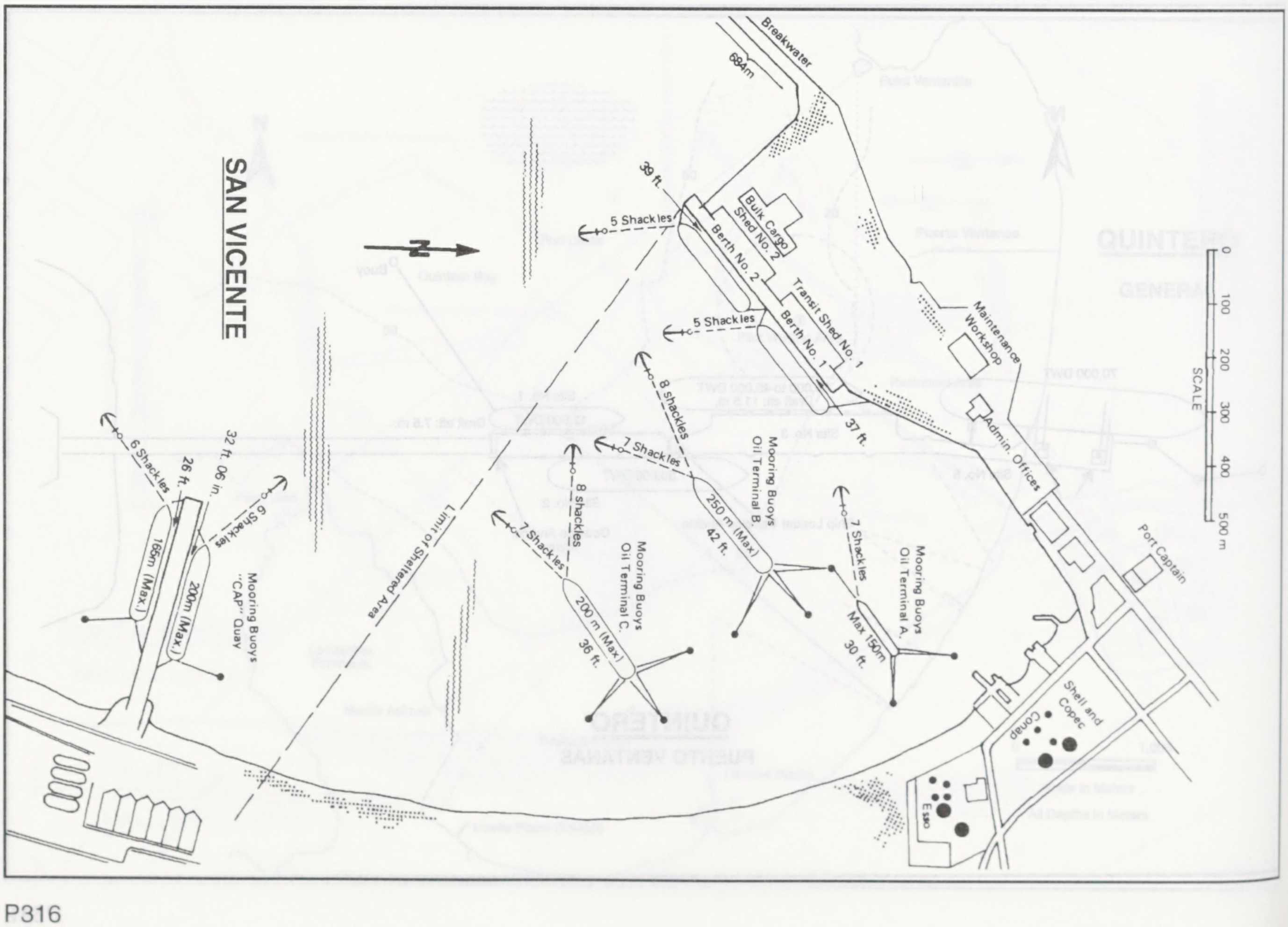

PUNTA ARENAS
PORT PERCY
DEPTHS IN METRES
Pier
Buoys
Cargo Pier
Leading Lights
Approach Line 330°
Length 1 640 m
6 in. Gas Return Line
10 in. Liquid Gas Line
4 in. Diesel Line
242°
B1
B2
B3
B4
Extreme Limit of Flexible Hoses
10
13
6
5
10
13
10
5

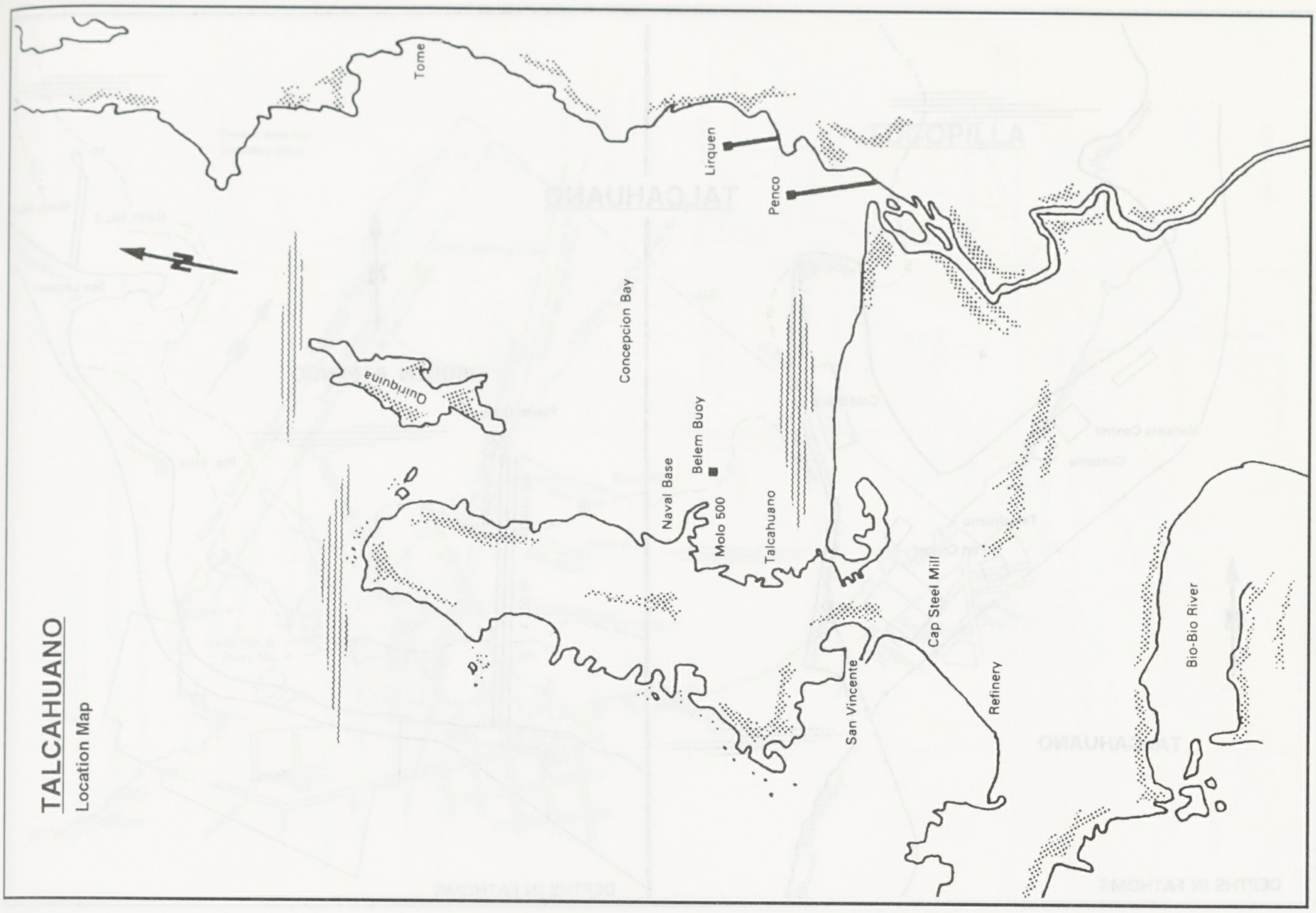

QUINTERO
GENERAL
N
Point Ventanilla
Puerto Ventanas
50
20
Port Limits
Quintero Bay
50
Pilot Waiting Area
Restricted Area
SBM
20
Point Liles
20
Los Molles Peninsula
Muelle Asimak
Restricted Area
Loncura Rocks
Muelle Fiscal (ENAMI)
0
1,000
Scale in Meters
All Depths in Meters


QUINTERO
DEPTHS IN METRES
Me. Fiscal (ENAMI)
Ra Durazno
Ras Estrella
N
4.25
5
6
6.25
6.25
6.5
7.25
7.25
6.25
6.75
3
4
7
9
3.25
8
8.25
9.25
10.25
11
13
15
17


N
Buoy
70,000 DWT
15,000 to 45,000 DWT
Draft aft: 11.5 m.
Site No. 1
12,000 DWT
Draft aft: 7.5 m.
Site No. 3
Site No. 5
30,000 DWT
Site No. 2
Ship Loader Codelco Andina
Codelco Andina
Tower
QUINTERO
PUERTO VENTANAS


-10 m.
South Mole
1
2
3
Sopesa Quay
BARRANCAS
B. O'Higgins
Corfo Quay
Large Dock
-10 m.
5
4
Pier
Warehouse
6
7
Admin. Building
SAN ANTONIO
Small Dock
-10 m.
Passenger Pier
9
Policarpo/Toro Quay
North Mole
Bulk Liquids
North Quay
Panul Quay
SAN ANTONIO
Pilots Quay

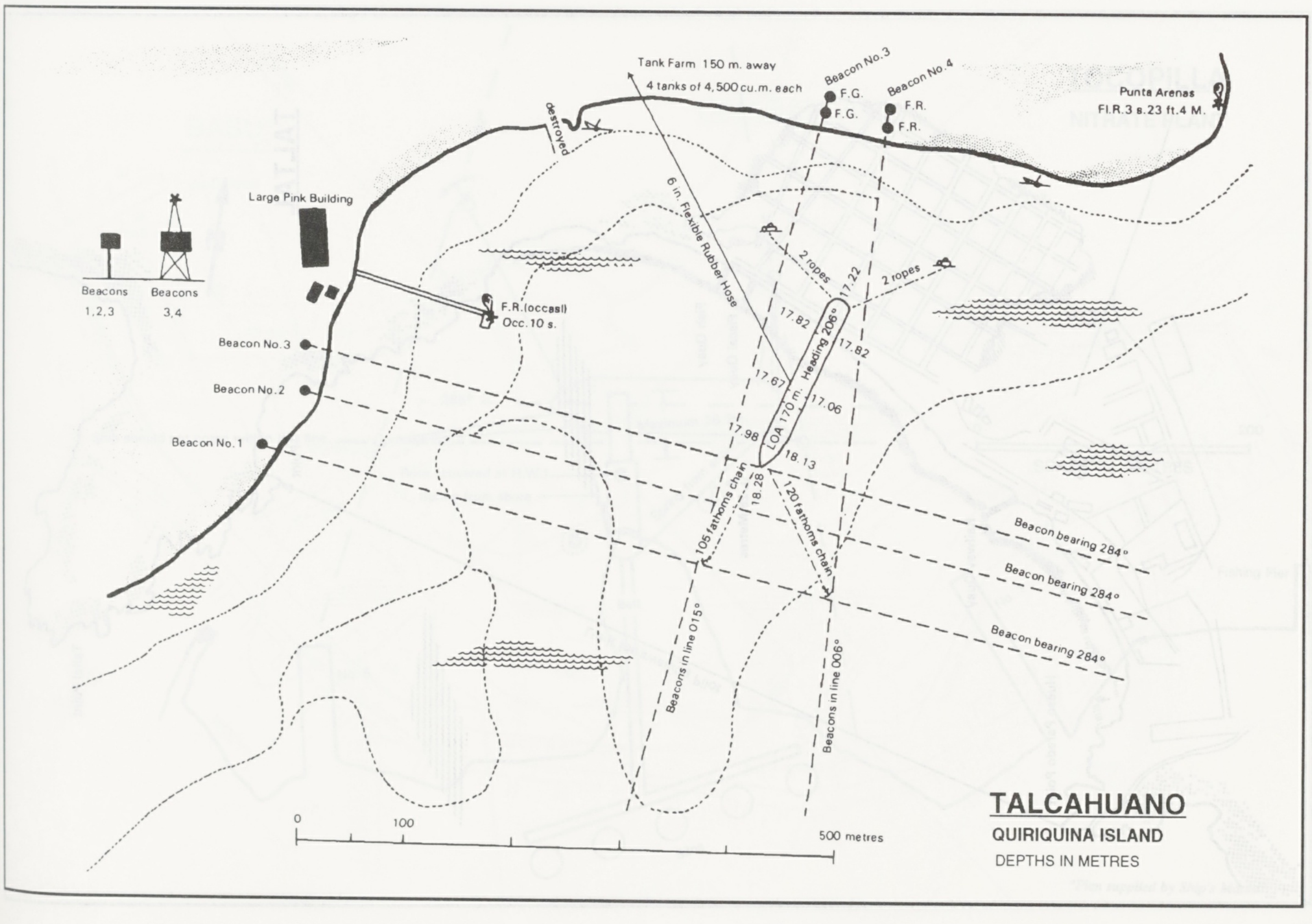

SAN VICENTE
Breakwater
684m
39 ft.
5 Shackles
Bulk Cargo Shed No. 2
Berth No. 2
Transit Shed No. 1
Berth No. 1
5 Shackles
Maintenance Workshop
8 shackles
37 ft.
Admin. Offices
7 Shackles
Mooring Buoys Oil Terminal B.
250 m (Max)
42 ft.
8 shackles
7 Shackles
Mooring Buoys Oil Terminal C.
200 m (Max)
36 ft.
7 Shackles
Mooring Buoys Oil Terminal A.
Max 150m
30 ft.
Limit of Sheltered Area
6 Shackles
26 ft.
32 ft. 06 in.
6 Shackles
166m (Max.)
200m (Max.)
Mooring Buoys "CAP" Quay
Port Captain
Shell and Copec
Conap
Esso
SCALE
0
100
200
300
400
500 m



TALCAHUANO

Location Map

Tome
Lirquen
Penco
Concepcion Bay
Quiriquina
Belem Buoy
Naval Base
Molo 500
Talcahuano
Cap Steel Mill
San Vincente
Refinery
Bio-Bio River

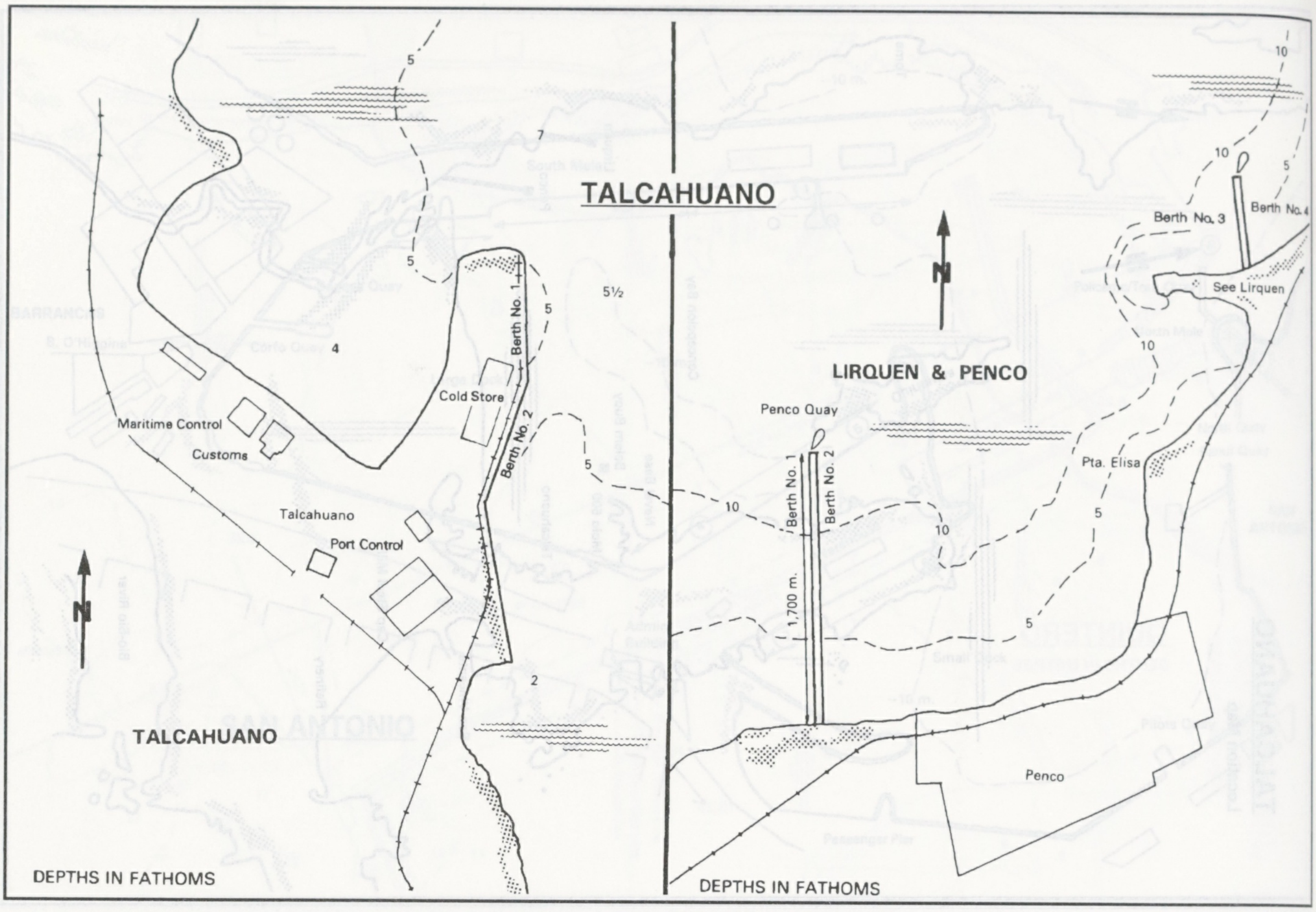


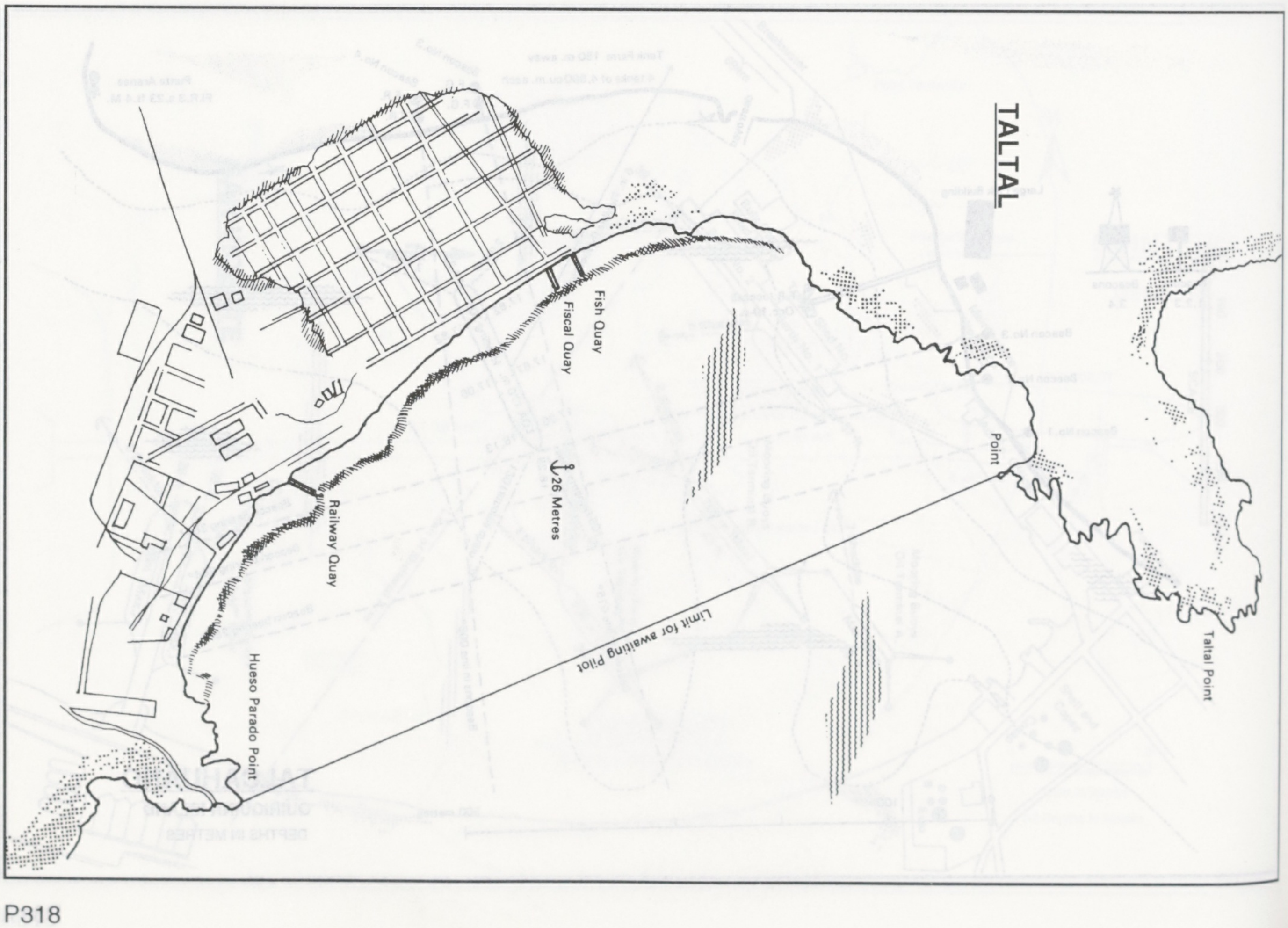
TALCAHUANO

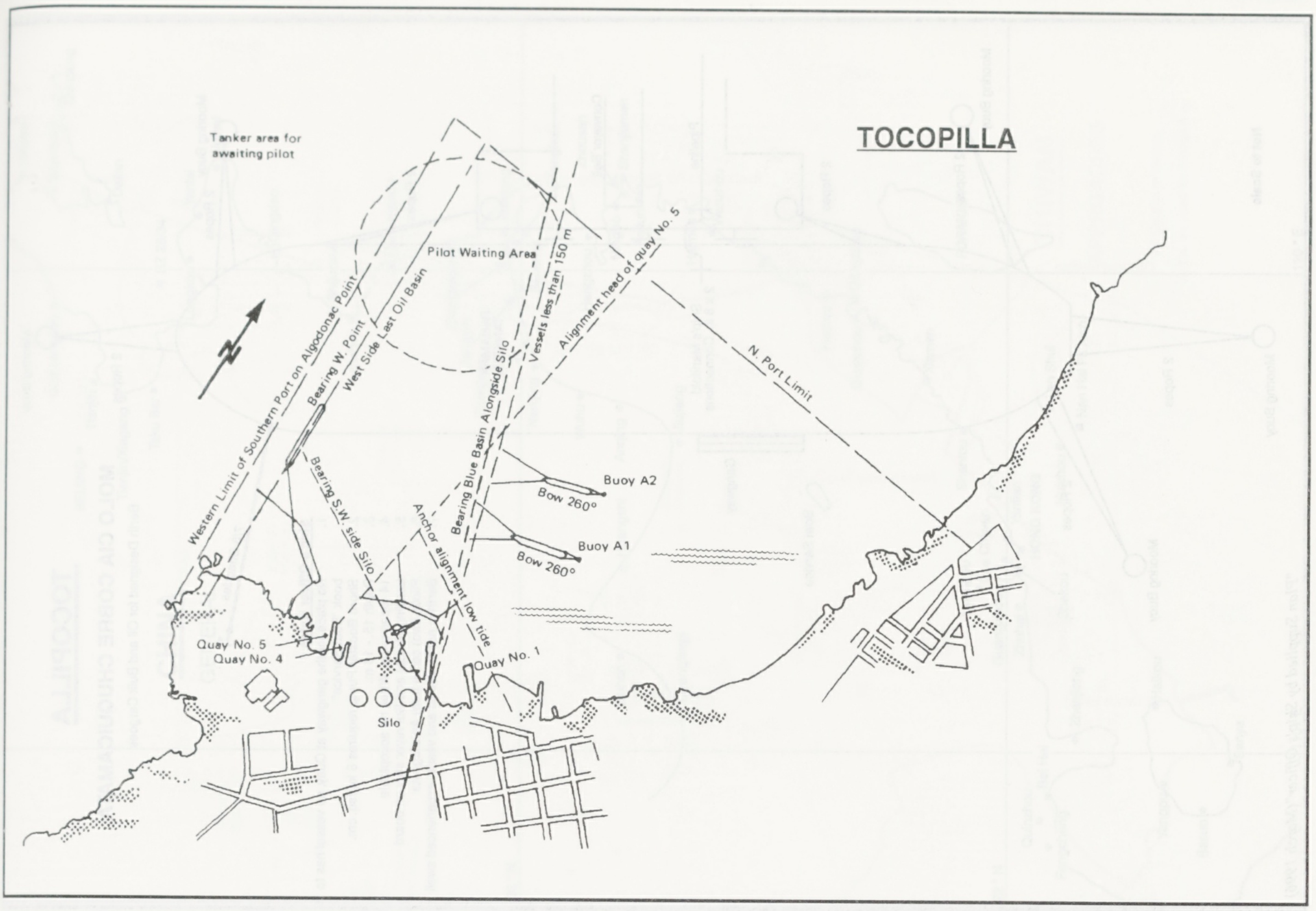
QUIRIQUINA ISLAND

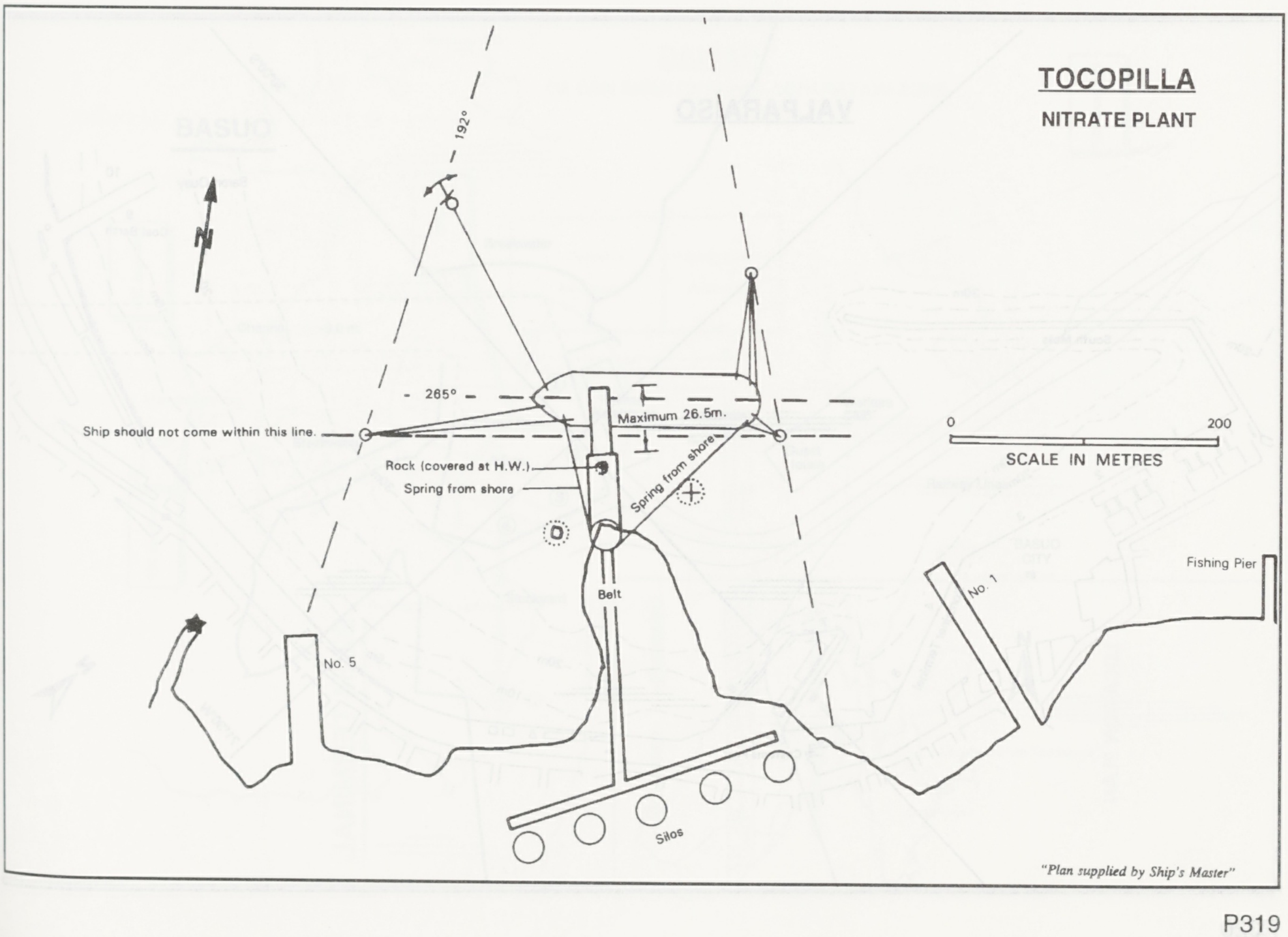
DEPTHS IN METRES

Tank Farm 150 m. away
4 tanks of 4,500 cu.m. each
Beacon No.3
F.G.
F.G.
Beacon No.4
F.R.
F.R.
Punta Arenas
Fl.R.3 s.23 ft.4 M.
destroyed
Large Pink Building
Beacons 1,2,3
Beacons 3,4
6 in. Flexible Rubber Hose
2 ropes
2 ropes
17.22
17.82
17.82
17.67
17.06
17.98
18.13
18.28
LOA 170 m. Heading 206°
F.R.(occasl)
Occ.10 s.
Beacon No.3
Beacon No.2
Beacon No.1
105 fathoms chain
120 fathoms chain
Beacon bearing 284°
Beacon bearing 284°
Beacon bearing 284°
Beacons in line 015°
Beacons in line 006°
0
100
500 metres


TALCAHUANO
5
7
5
5½
5
4
Berth No. 1
Berth No. 2
Cold Store
Maritime Control
Customs
Talcahuano
Port Control
5
2
N
TALCAHUANO
DEPTHS IN FATHOMS
10
10
5
Berth No. 3
Berth No. 4
See Lirquen
N
10
LIRQUEN & PENCO
Penco Quay
Berth No. 1
Berth No. 2
1,700 m.
10
10
Pta. Elisa
5
5
Penco
DEPTHS IN FATHOMS


TALTAL
Fish Quay
Fiscal Quay
26 Metres
Railway Quay
Hueso Parado Point
Limit for awaiting Pilot
Point
Taltal Point


TOCOPILLA
Tanker area for awaiting pilot
Pilot Waiting Area
Western Limit of Southern Port on Algodonac Point
Bearing W. Point
West Side Last Oil Basin
Bearing Blue Basin Alongside Silo
Vessels less than 150 m
Alignment head of quay No. 5
N. Port Limit
Bearing S.W. side Silo
Anchor alignment low tide
Buoy A2
Bow 260°
Buoy A1
Bow 260°
Quay No. 5
Quay No. 4
Quay No. 1
Silo

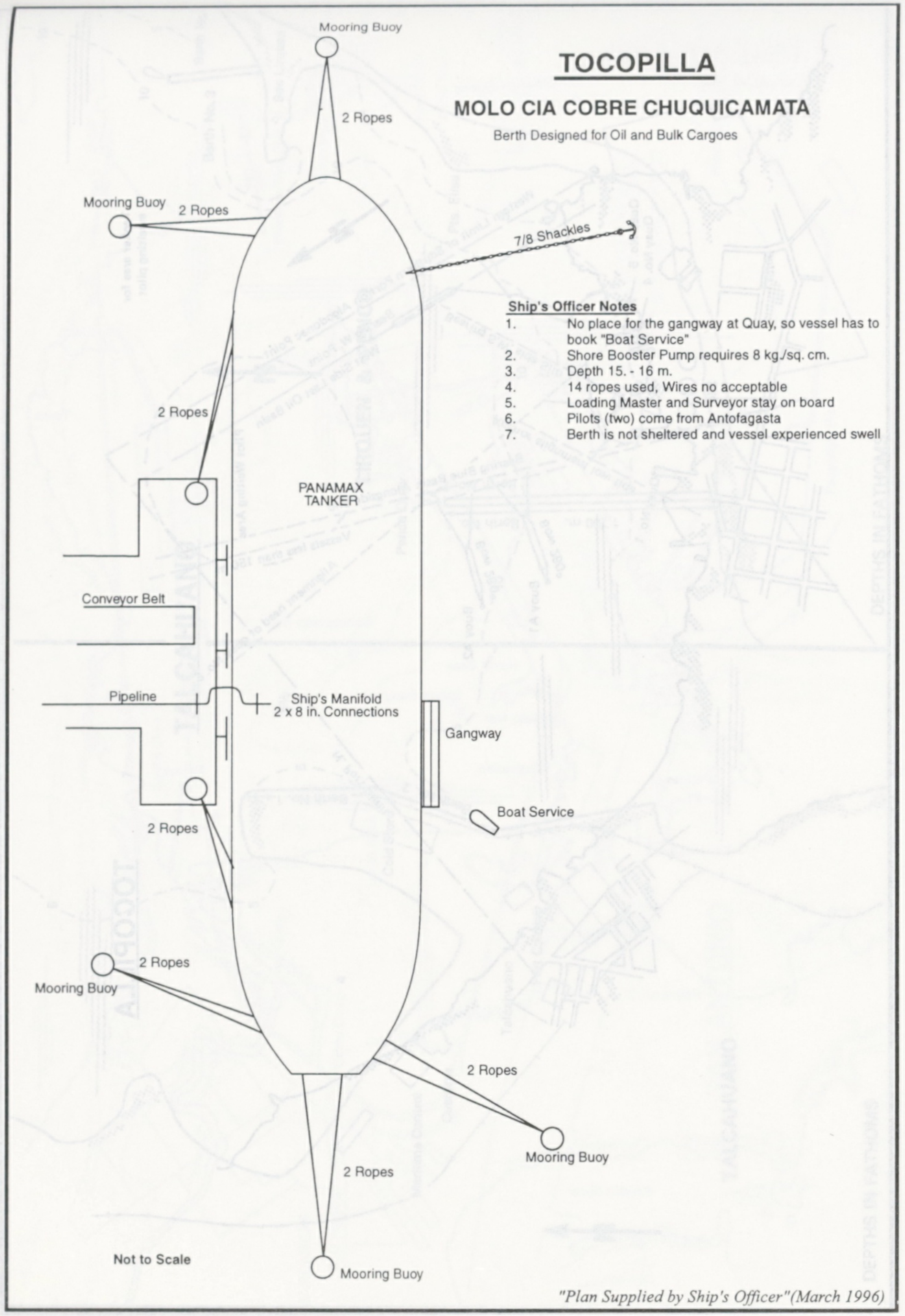

TOCOPILLA
NITRATE PLANT
192°
265°
Maximum 26.5m.
Ship should not come within this line.
Rock (covered at H.W.)
Spring from shore
Spring from shore
Belt
No. 5
No. 1
Fishing Pier
Silos
0
200
SCALE IN METRES

"Plan supplied by Ship's Master"

TOCOPILLA

MOLO CIA COBRE CHUQUICAMATA

Berth Designed for Oil and Bulk Cargoes

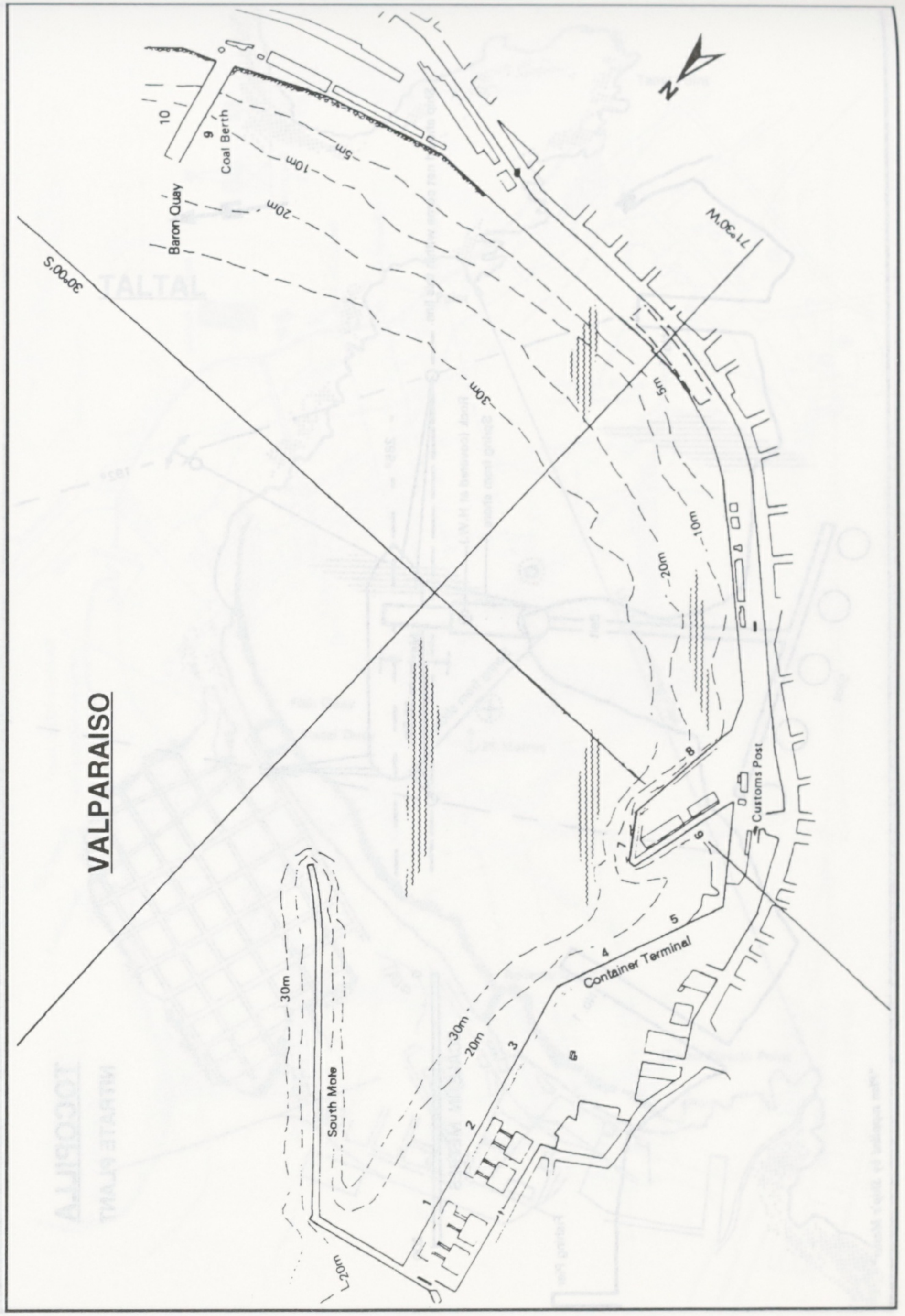

Mooring Buoy
2 Ropes
Mooring Buoy
2 Ropes
7/8 Shackles
2 Ropes
PANAMAX TANKER
Conveyor Belt
Pipeline
Ship's Manifold
2 x 8 in. Connections
Gangway
Boat Service
2 Ropes
2 Ropes
Mooring Buoy
2 Ropes
Mooring Buoy
2 Ropes
Mooring Buoy
Not to Scale

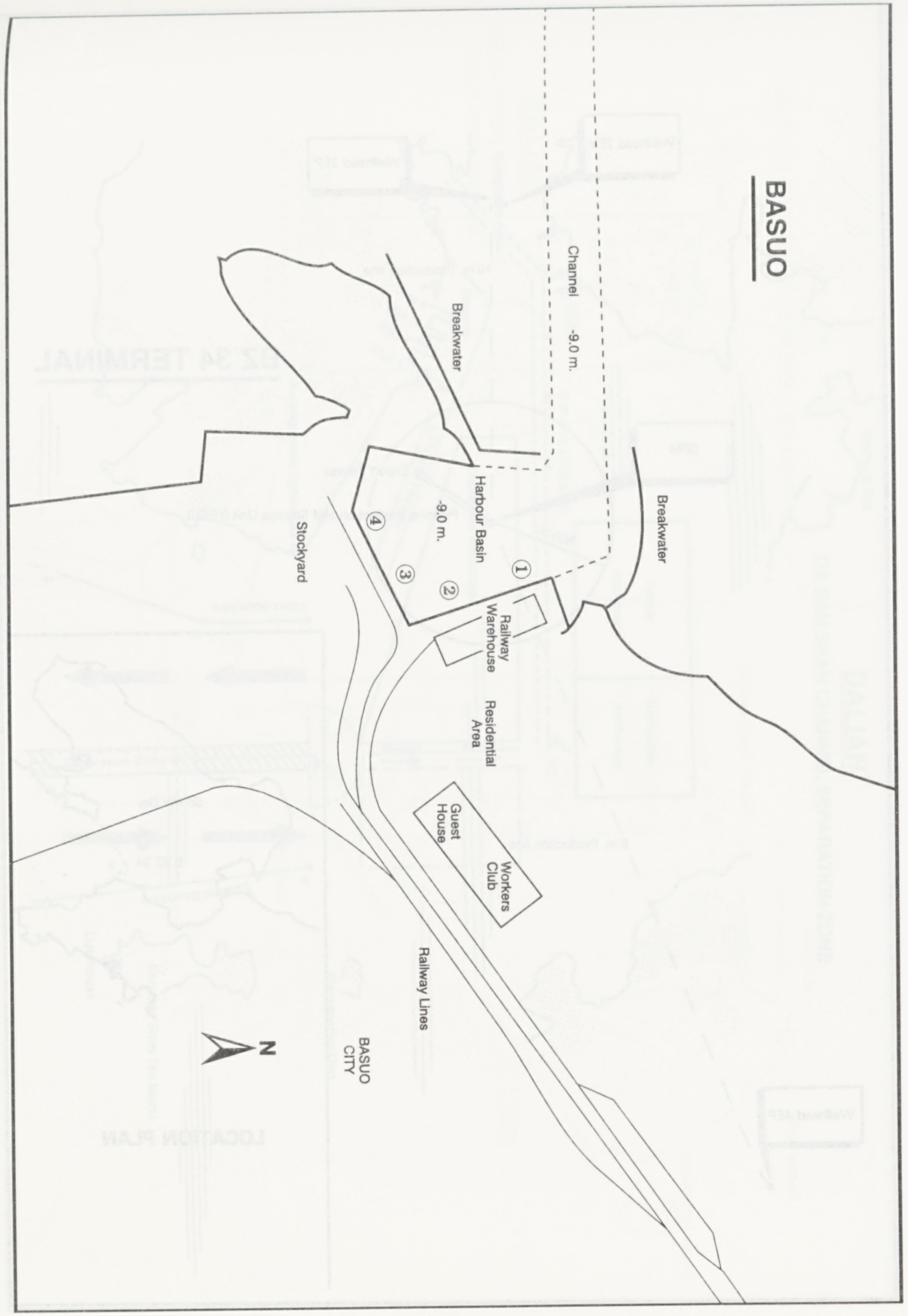
Ship's Officer Notes

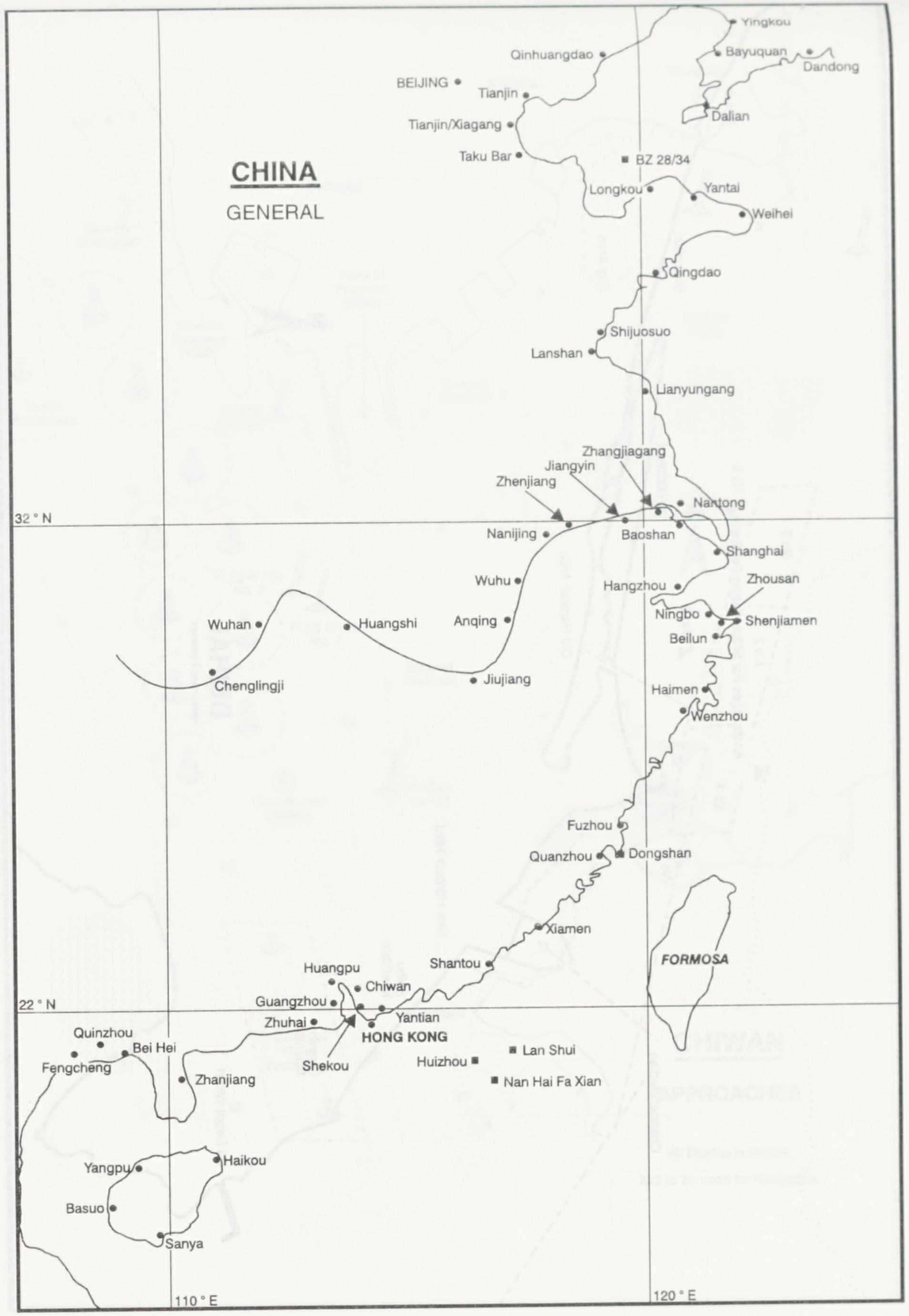
1. No place for the gangway at Quay, so vessel has to book "Boat Service"
2. Shore Booster Pump requires 8 kg./sq. cm.
3. Depth 15. - 16 m.
4. 14 ropes used, Wires no acceptable
5. Loading Master and Surveyor stay on board
6. Pilots (two) come from Antofagasta
7. Berth is not sheltered and vessel experienced swell

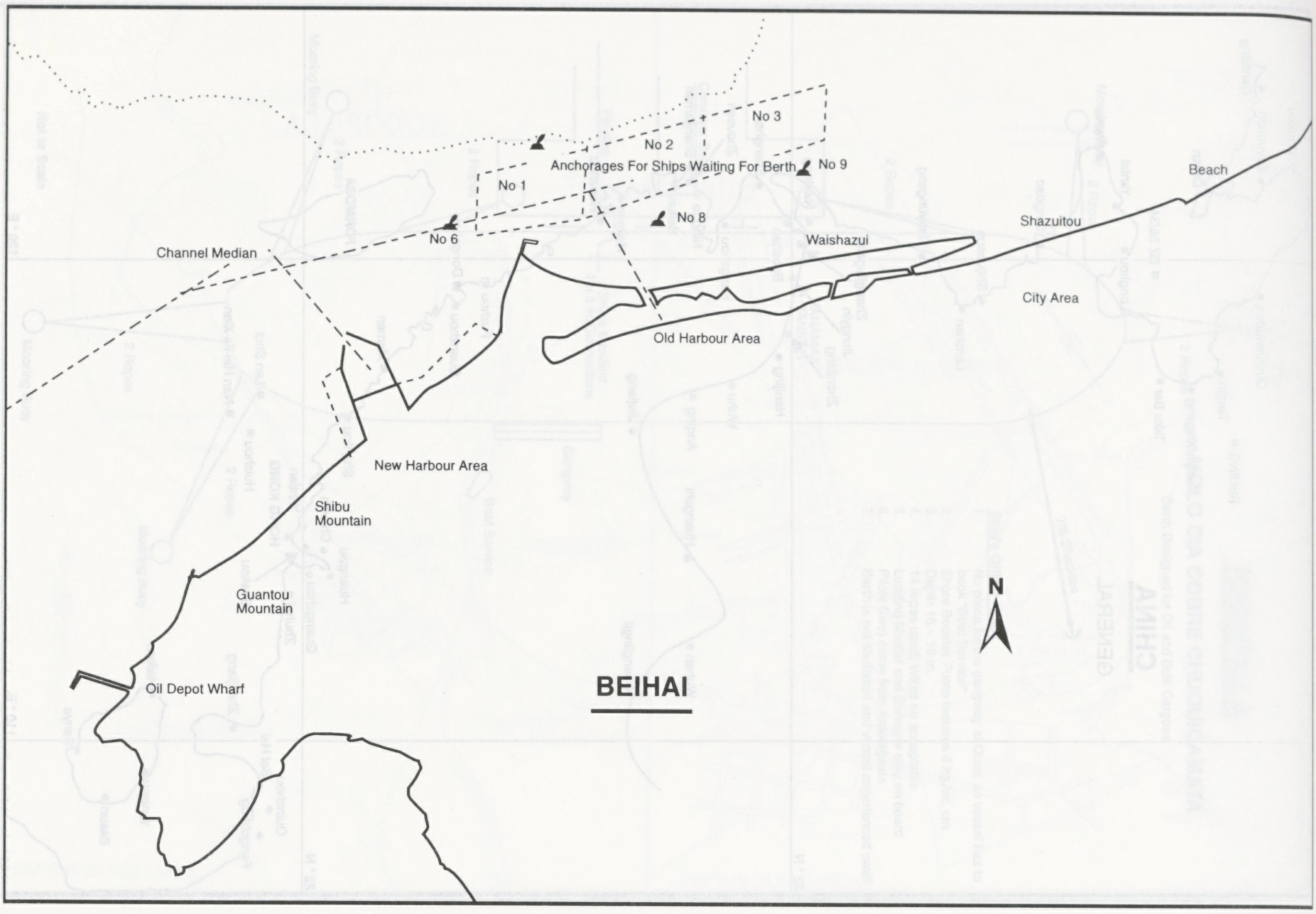
"Plan Supplied by Ship's Officer"(March 1996)

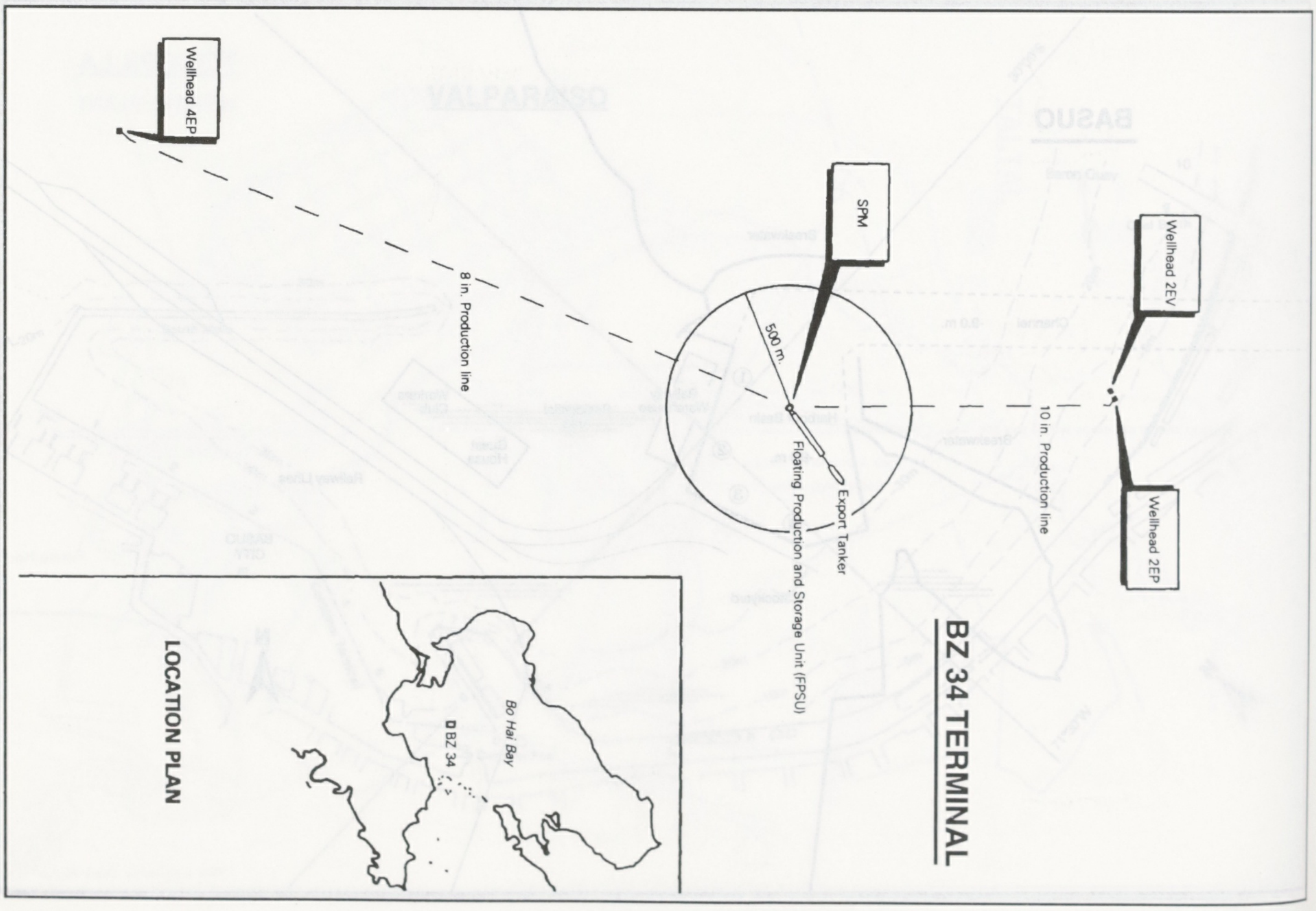
VALPARAISO

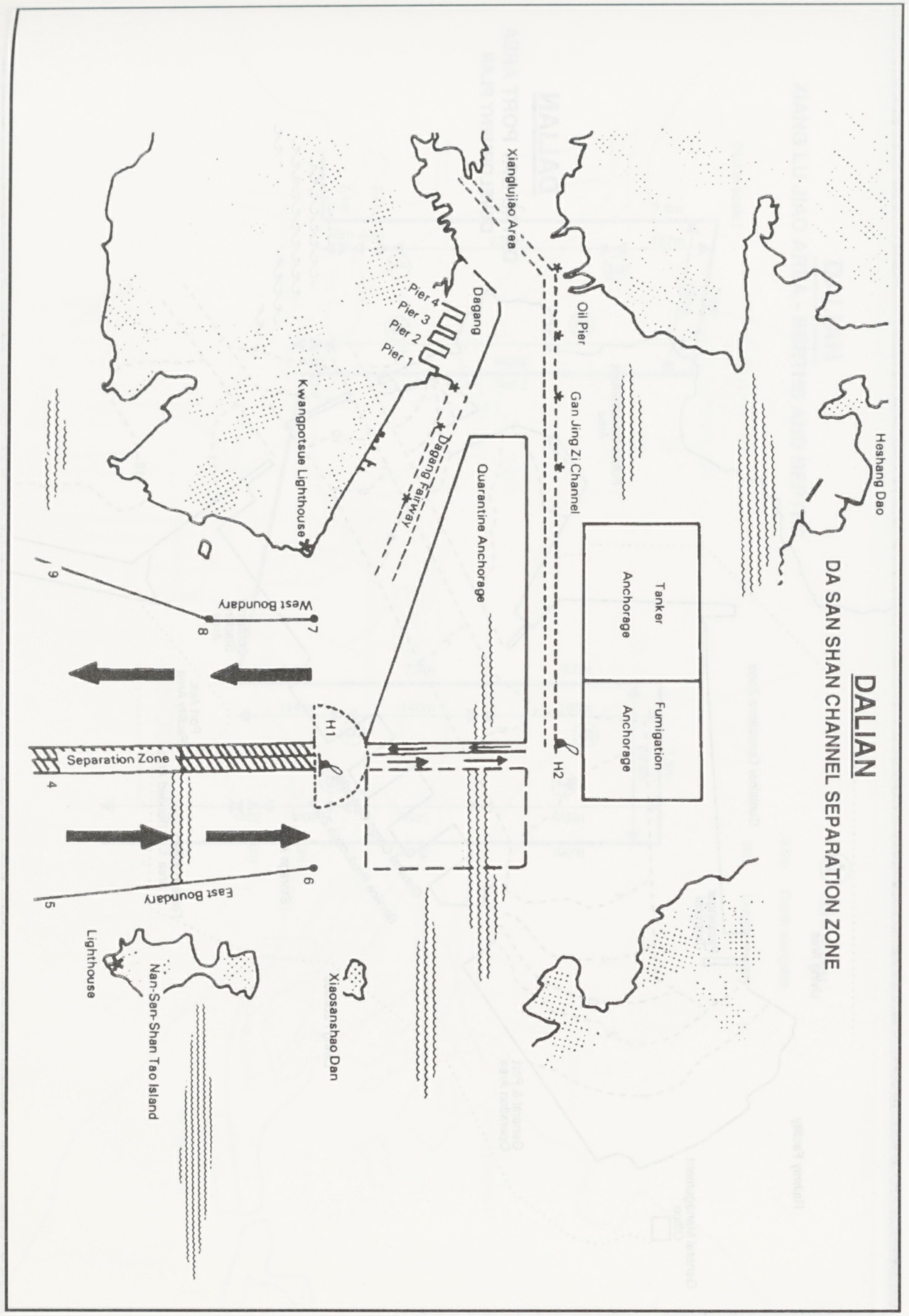

N
71°30'W
30°00'S
10
9
Coal Berth
Baron Quay
5m
10m
20m
30m
5m
10m
20m
8
7
6
Customs Post
5
4
Container Terminal
3
2
1
-30m
-20m
30m
South Mole
-20m


BASUO
Channel -9.0 m.
Breakwater
Breakwater
Harbour Basin
-9.0 m.
①
②
③
④
Stockyard
Railway Warehouse
Residential Area
Guest House
Workers Club
Railway Lines
BASUO CITY
N


CHINA
GENERAL
Yingkou
Bayuquan
Dandong
Qinhuangdao
BEIJING
Tianjin
Dalian
Tianjin/Xiagang
Taku Bar
BZ 28/34
Longkou
Yantai
Weihei
Qingdao
Shijuosuo
Lanshan
Lianyungang
Zhangjiagang
Jiangyin
Zhenjiang
Nantong
Nanijing
Baoshan
Shanghai
Zhousan
Wuhu
Hangzhou
Ningbo
Shenjiamen
Beilun
Wuhan
Huangshi
Anqing
Jiujiang
Chenglingji
Haimen
Wenzhou
Fuzhou
Quanzhou
Dongshan
Xiamen
FORMOSA
Shantou
Huangpu
Chiwan
Guangzhou
Zhuhai
Yantian
HONG KONG
Shekou
Lan Shui
Huizhou
Nan Hai Fa Xian
Quinzhou
Bei Hei
Fengcheng
Zhanjiang
Haikou
Yangpu
Basuo
Sanya
32 ° N
22 ° N
110 ° E
120 ° E


No 3
No 2
Anchorages For Ships Waiting For Berth
No 9
Beach
No 1
No 8
No 6
Shazuitou
Waishazui
Channel Median
City Area
Old Harbour Area
New Harbour Area
Shibu Mountain
N
Guantou Mountain
Oil Depot Wharf
BEIHAI

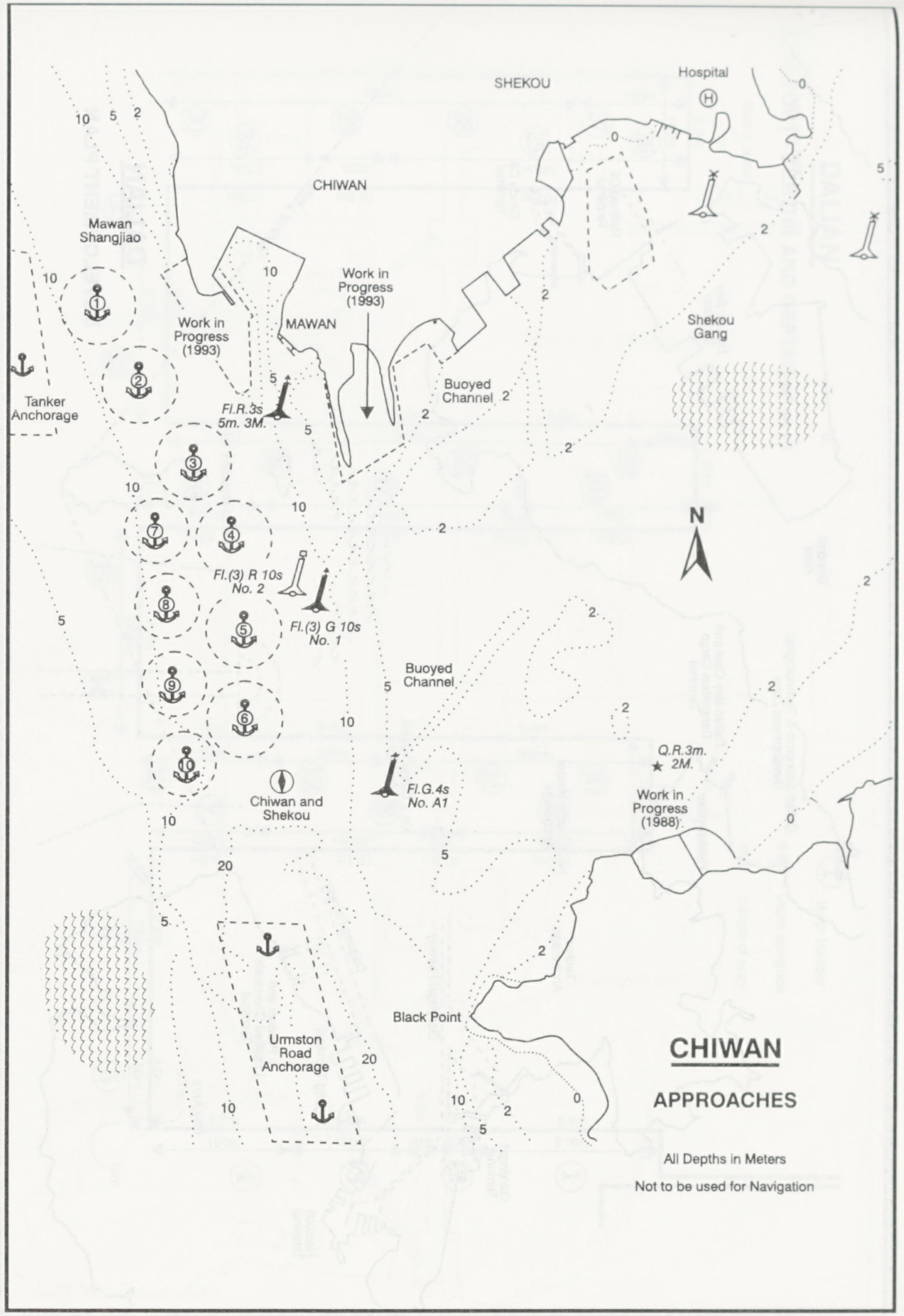

Wellhead 4EP
SPM
Wellhead 2EV
8 in. Production line
500 m.
10 in. Production line
Export Tanker
Floating Production and Storage Unit (FPSU)
Wellhead 2EP
BZ 34 TERMINAL
LOCATION PLAN
Bo Hai Bay
BZ 34



DALIAN

DA SAN SHAN CHANNEL SEPARATION ZONE

Heshang Dao
Oil Pier
Gan Jing Zi Channel
Xianglujiao Area
Dagang
Pier 4
Pier 3
Pier 2
Pier 1
Dagang Fairway
Kwangpotsue Lighthouse
Tanker Anchorage
Fumigation Anchorage
Quarantine Anchorage
H2
H1
West Boundary
East Boundary
Separation Zone
7
8
9
6
5
4
Xiaosanshao Dan
Nan-Sen-Shan Tao Island
Lighthouse



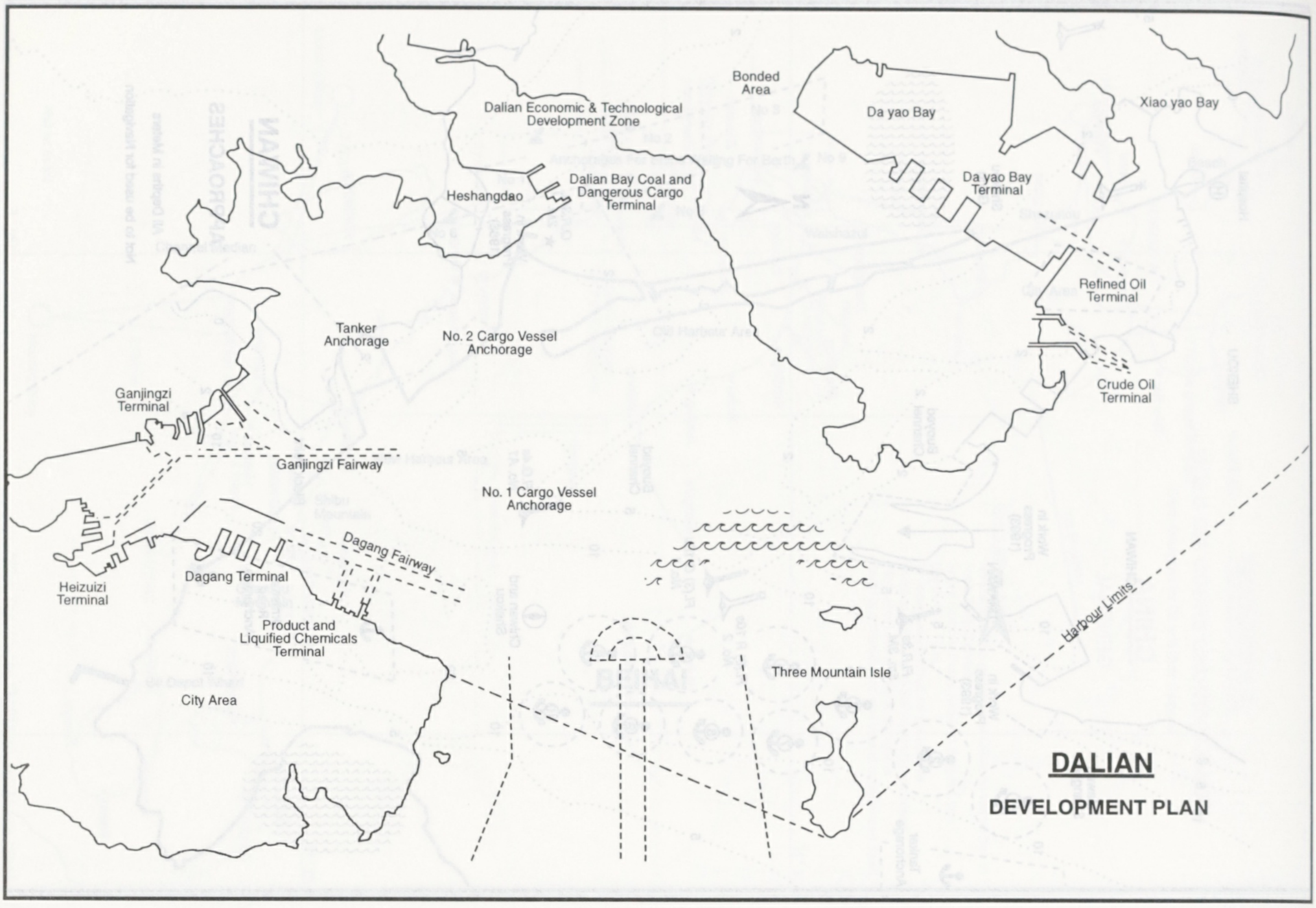
CHIWAN

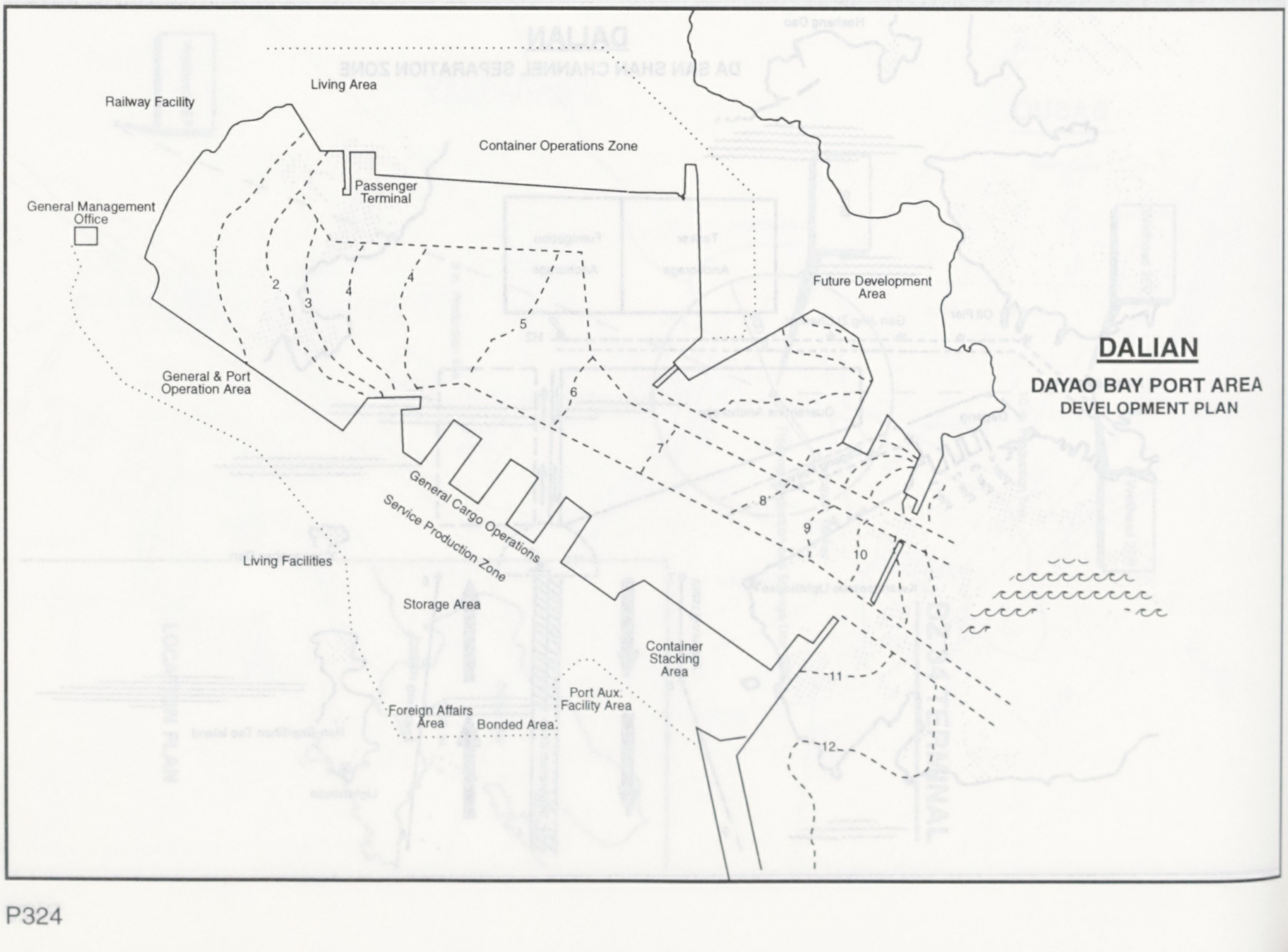
APPROACHES

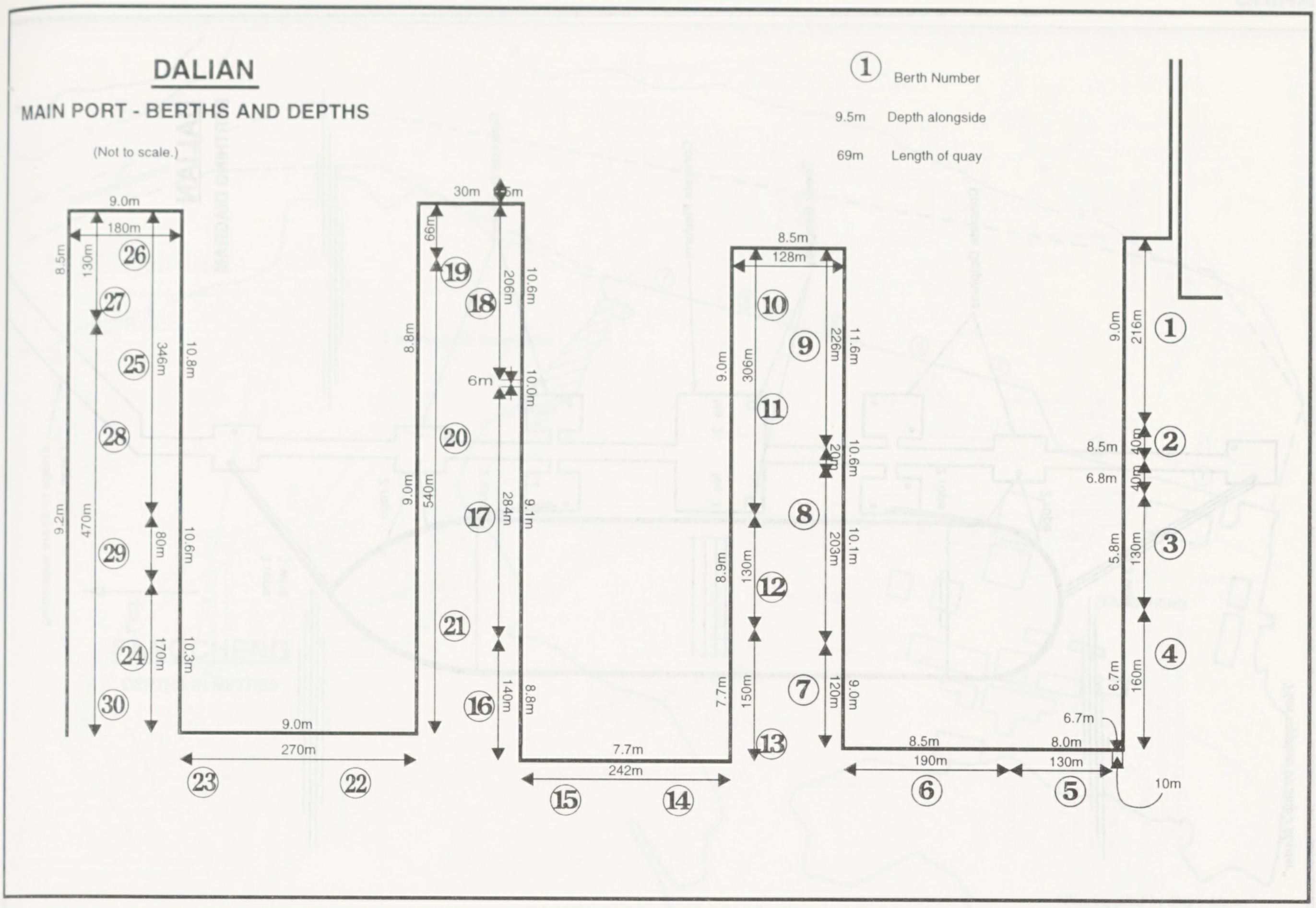
All Depths in Meters

Not to be used for Navigation

SHEKOU
Hospital
H
CHIWAN
Mawan Shangjiao
Work in Progress (1993)
Work in Progress (1993)
MAWAN
Tanker Anchorage
Fl.R.3s 5m. 3M.
Buoyed Channel
Shekou Gang
Fl.(3) R 10s No. 2
Fl.(3) G 10s No. 1
Buoyed Channel
Q.R.3m. 2M.
Work in Progress (1988)
Fl.G.4s No. A1
Chiwan and Shekou
Black Point
Urmston Road Anchorage
N
1
2
3
4
5
6
7
8
9
10
0
2
5
10
20


Dalian Economic & Technological Development Zone
Bonded Area
Da yao Bay
Xiao yao Bay
Heshangdao
Dalian Bay Coal and Dangerous Cargo Terminal
Da yao Bay Terminal
Refined Oil Terminal
Crude Oil Terminal
Tanker Anchorage
No. 2 Cargo Vessel Anchorage
Ganjingzi Terminal
Ganjingzi Fairway
No. 1 Cargo Vessel Anchorage
Dagang Fairway
Heizuizi Terminal
Dagang Terminal
Product and Liquified Chemicals Terminal
City Area
Three Mountain Isle
Harbour Limits
DALIAN
DEVELOPMENT PLAN


Living Area
Railway Facility
Container Operations Zone
Passenger Terminal
General Management Office
1
2
3
4
5
6
7
8
9
10
11
12
Future Development Area
DALIAN
DAYAO BAY PORT AREA DEVELOPMENT PLAN
General & Port Operation Area
General Cargo Operations
Service Production Zone
Living Facilities
Storage Area
Container Stacking Area
Port Aux. Facility Area
Foreign Affairs Area
Bonded Area

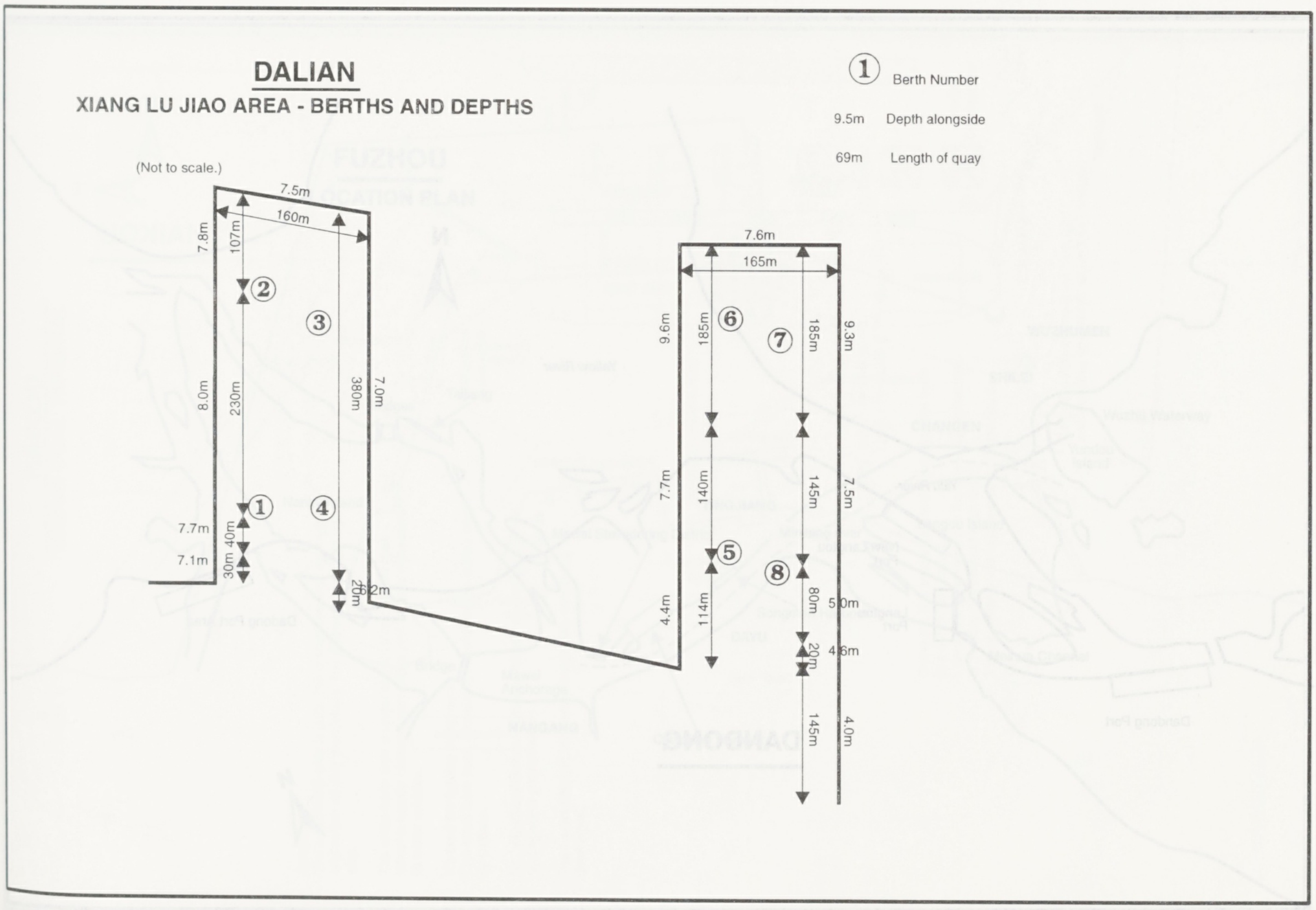


DALIAN

MAIN PORT - BERTHS AND DEPTHS

(Not to scale.)

① Berth Number
9.5m Depth alongside
69m Length of quay
9.0m
180m
8.5m
130m
26
27
25
28
29
24
30
346m
10.8m
9.2m
470m
80m
10.6m
170m
10.3m
9.0m
270m
23
22
30m
5m
66m
19
18
206m
10.6m
8.8m
6m
10.0m
20
9.0m
540m
17
284m
9.1m
21
16
140m
8.8m
7.7m
242m
15
14
8.5m
128m
10
9
11.6m
226m
9.0m
306m
11
20m
10.6m
8
203m
10.1m
8.9m
130m
12
7
120m
9.0m
7.7m
150m
13
8.5m
190m
6
130m
5
10m
9.0m
216m
1
8.5m
40m
2
6.8m
40m
5.8m
130m
3
4
6.7m
160m
6.7m
8.0m

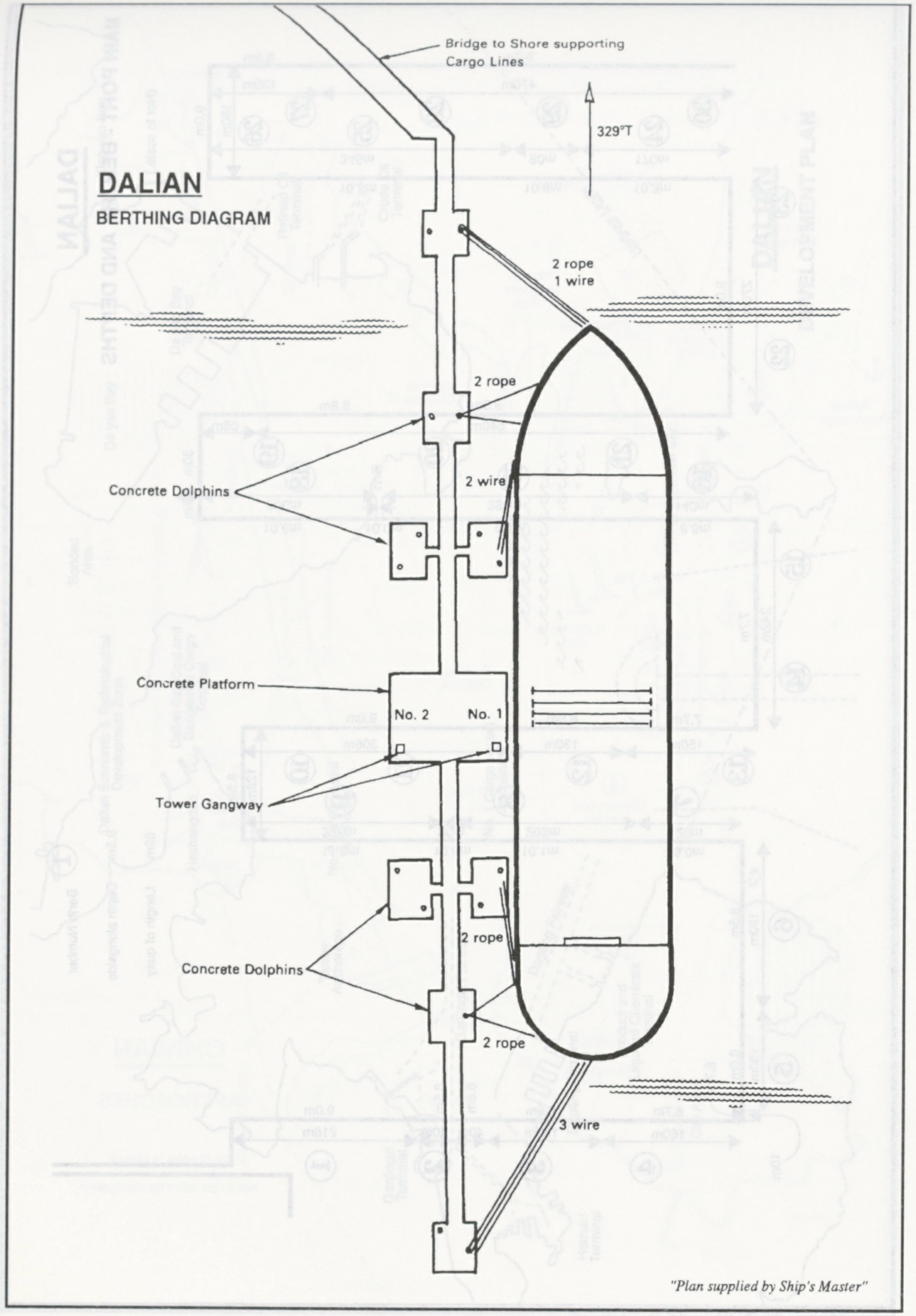


DALIAN

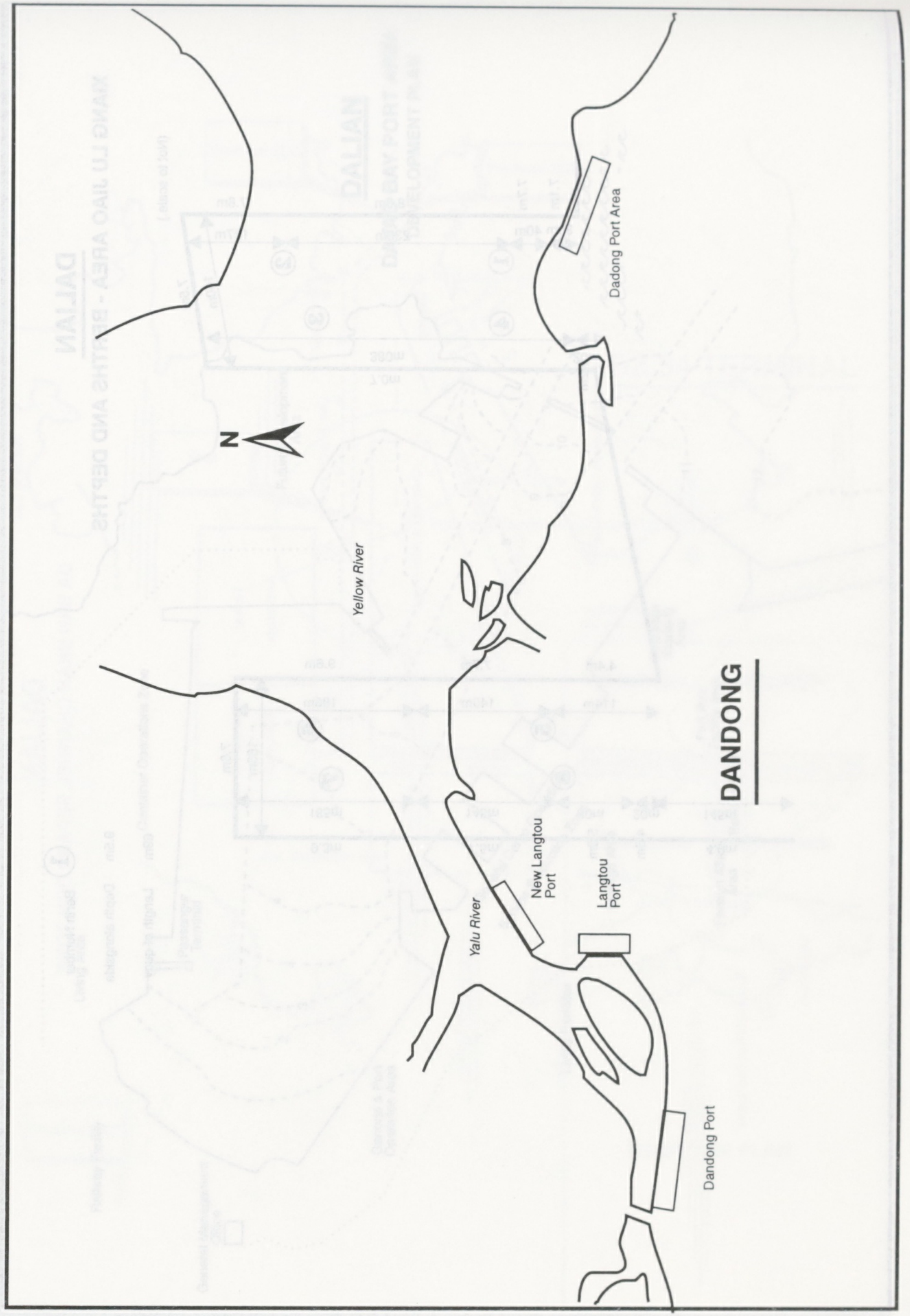
XIANG LU JIAO AREA - BERTHS AND DEPTHS

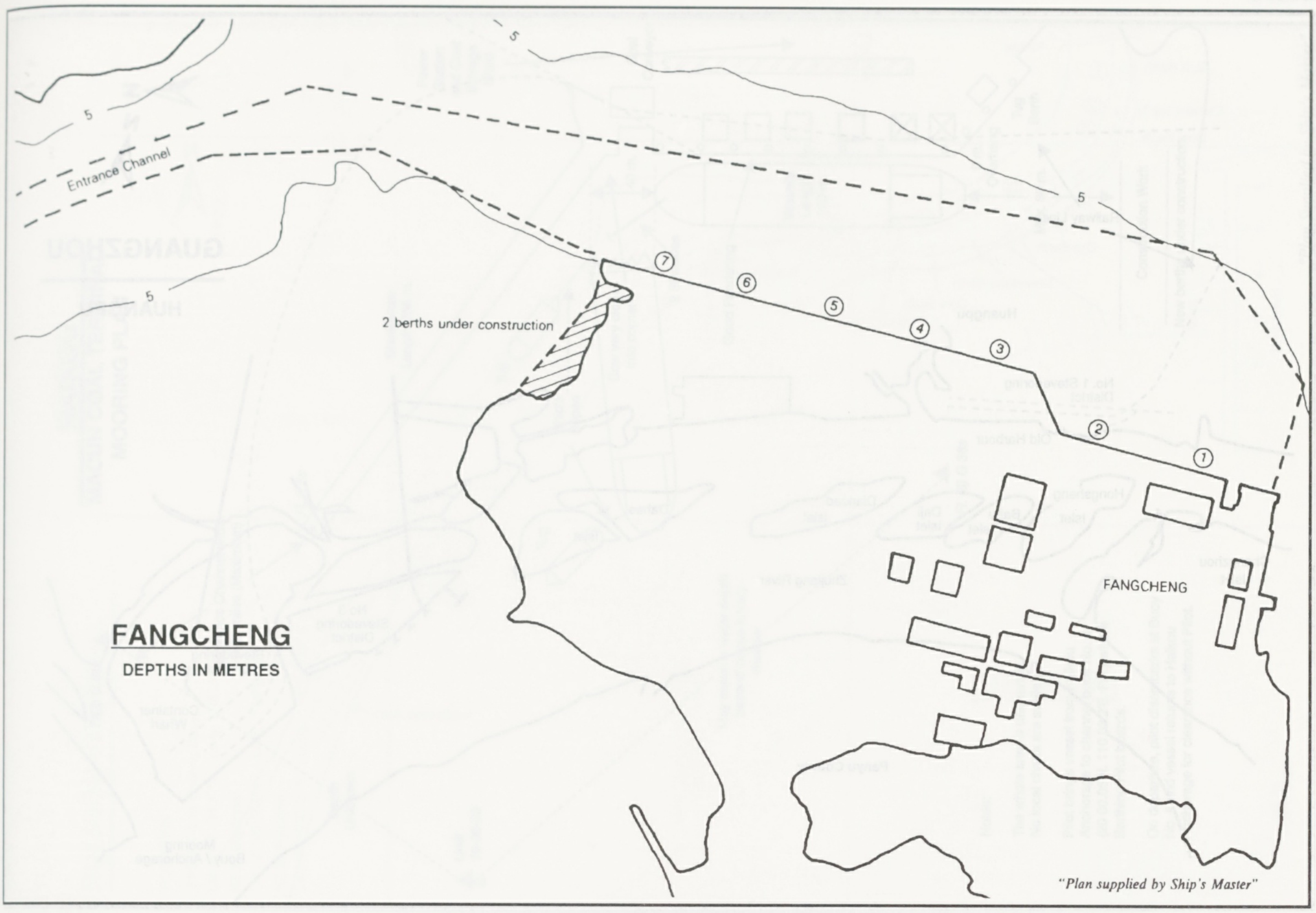
(Not to scale.)

① Berth Number
9.5m Depth alongside
69m Length of quay
7.5m
160m
7.8m
107m
2
3
8.0m
230m
380m
7.0m
1
4
7.7m
40m
7.1m
30m
20m
6.2m
7.6m
165m
9.6m
185m
6
7
185m
9.3m
7.7m
140m
145m
7.5m
5
8
4.4m
114m
80m
5.0m
20m
4.6m
145m
4.0m


DALIAN
BERTHING DIAGRAM
Bridge to Shore supporting Cargo Lines
329°T
2 rope
1 wire
2 rope
2 wire
Concrete Dolphins
Concrete Platform
No. 2
No. 1
Tower Gangway
Concrete Dolphins
2 rope
2 rope
3 wire

"Plan supplied by Ship's Master"


N
Dadong Port Area
Yellow River
DANDONG
New Langtou Port
Langtou Port
Yalu River
Dandong Port

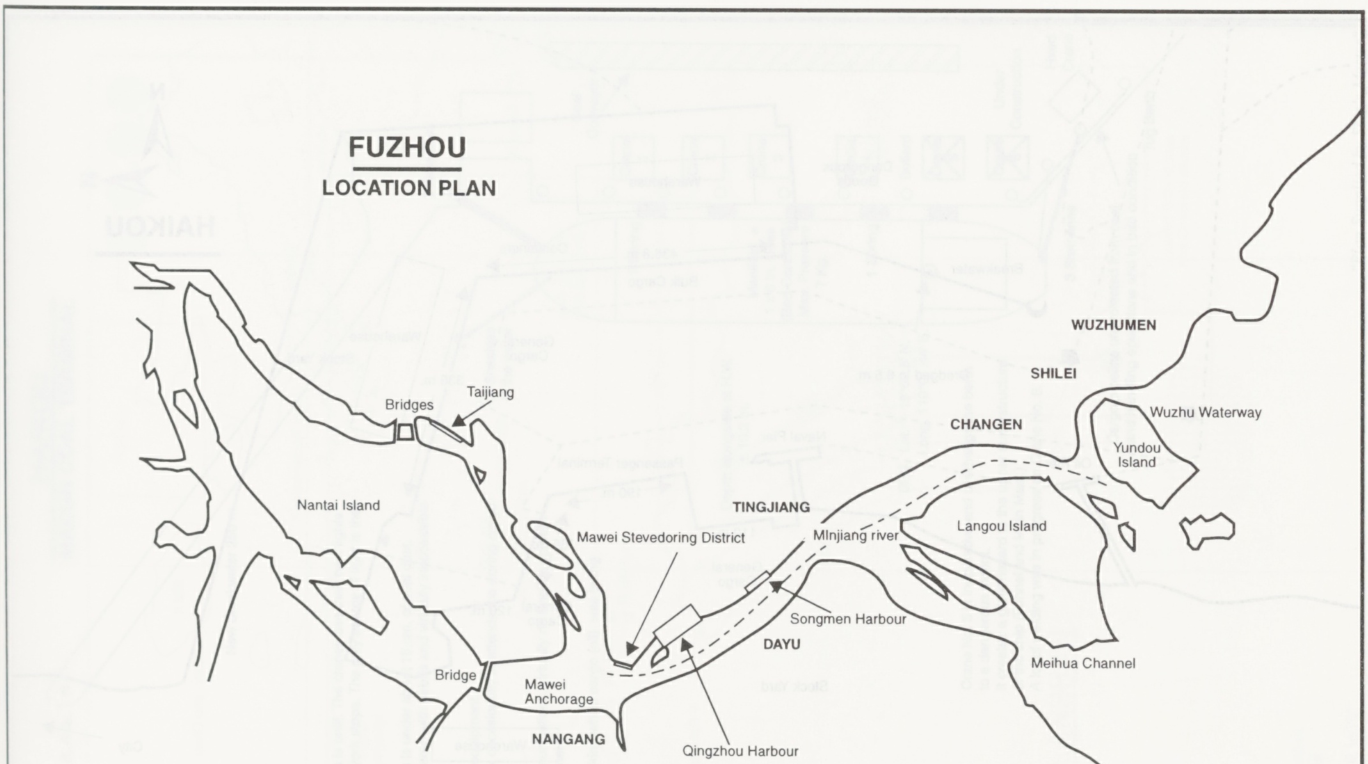


FANGCHENG

DEPTHS IN METRES

5
5
5
5
Entrance Channel
2 berths under construction
⑦
⑥
⑤
④
③
②
①
FANGCHENG

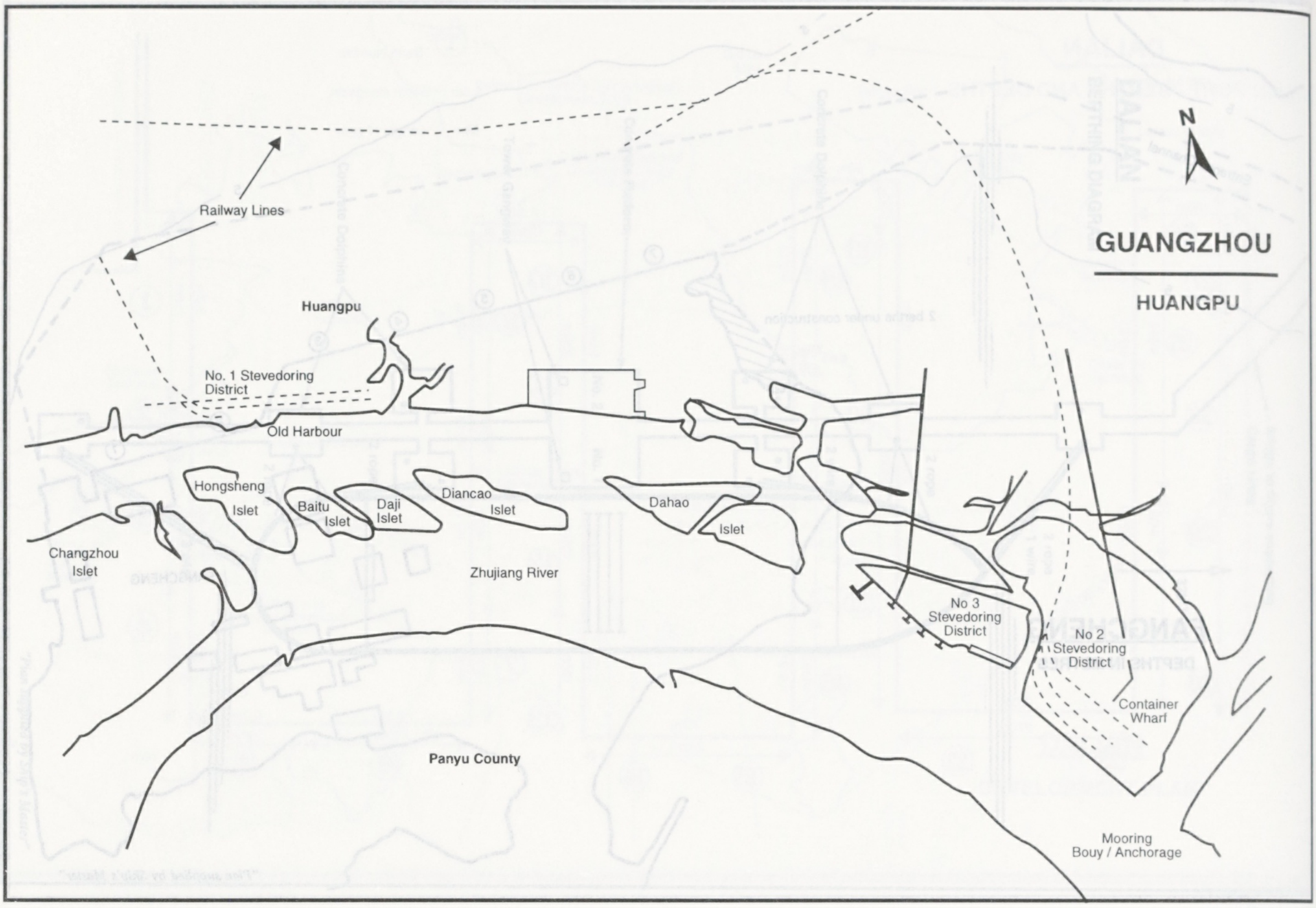
"Plan supplied by Ship's Master"

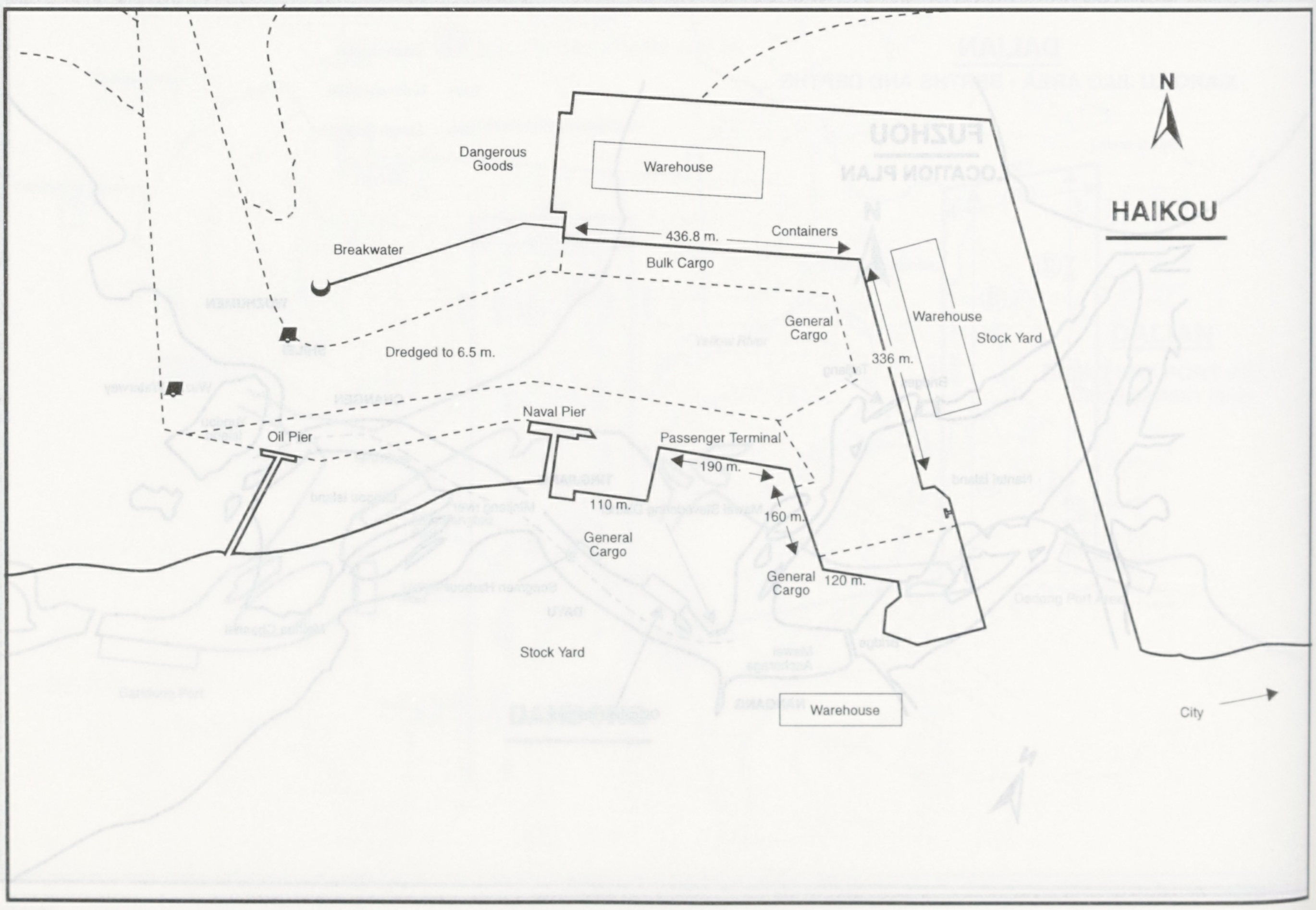


FUZHOU

LOCATION PLAN

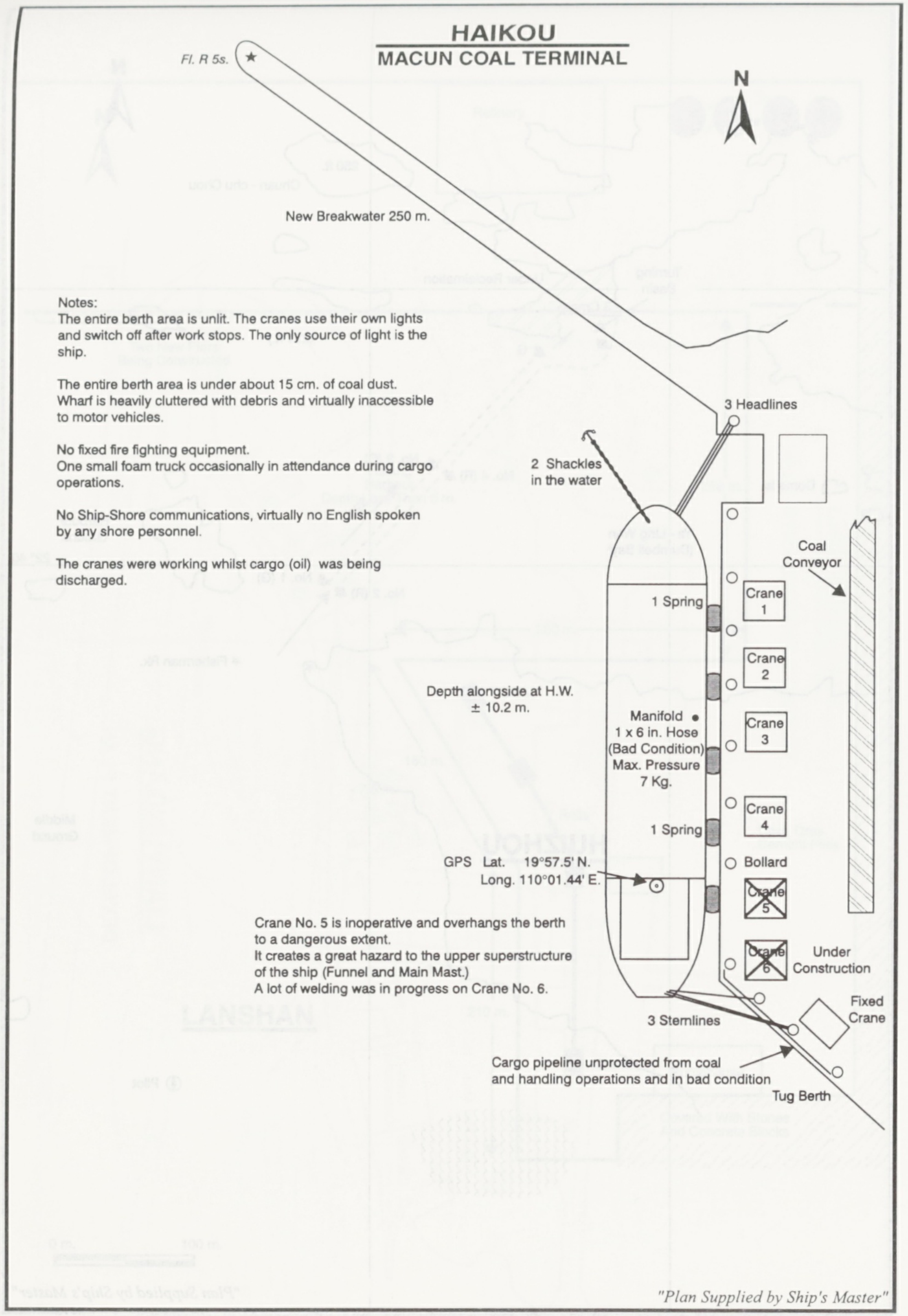
Bridges
Taijiang
Nantai Island
Bridge
Mawei Anchorage
NANGANG
Mawei Stevedoring District
Qingzhou Harbour
TINGJIANG
DAYU
Songmen Harbour
Minjiang river
CHANGEN
SHILEI
WUZHUMEN
Wuzhu Waterway
Yundou Island
Langou Island
Meihua Channel
N


N
GUANGZHOU
HUANGPU
Railway Lines
Huangpu
No. 1 Stevedoring District
Old Harbour
Hongsheng Islet
Baitu Islet
Daji Islet
Diancao Islet
Dahao Islet
Changzhou Islet
Zhujiang River
No 3 Stevedoring District
No 2 Stevedoring District
Container Wharf
Panyu County
Mooring Bouy / Anchorage


N
HAIKOU
Dangerous Goods
Warehouse
Breakwater
436.8 m.
Containers
Bulk Cargo
General Cargo
Warehouse
Stock Yard
336 m.
Dredged to 6.5 m.
Naval Pier
Oil Pier
Passenger Terminal
190 m.
110 m.
160 m.
General Cargo
General Cargo
120 m.
Stock Yard
Warehouse
City

HAIKOU

MACUN COAL TERMINAL



Notes:
The entire berth area is unlit. The cranes use their own lights and switch off after work stops. The only source of light is the ship.

The entire berth area is under about 15 cm. of coal dust. Wharf is heavily cluttered with debris and virtually inaccessible to motor vehicles.

No fixed fire fighting equipment. One small foam truck occasionally in attendance during cargo operations.

No Ship-Shore communications, virtually no English spoken by any shore personnel.

The cranes were working whilst cargo (oil) was being discharged.

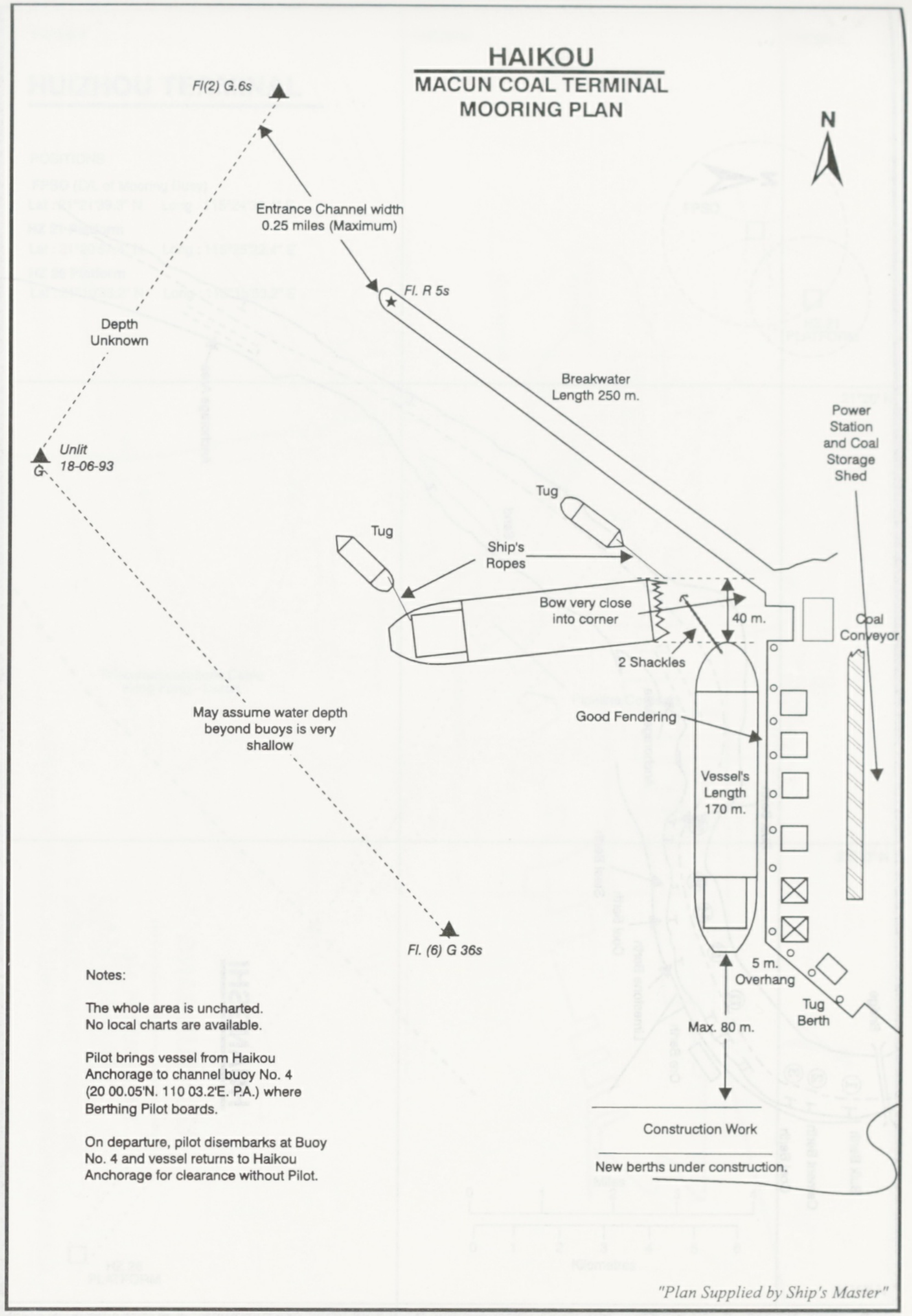
Crane No. 5 is inoperative and overhangs the berth to a dangerous extent. It creates a great hazard to the upper superstructure of the ship (Funnel and Main Mast.) A lot of welding was in progress on Crane No. 6.

"Plan Supplied by Ship's Master"

Fl. R 5s.
N
New Breakwater 250 m.
3 Headlines
2 Shackles in the water
Coal Conveyor
1 Spring
Crane 1
Crane 2
Crane 3
Crane 4
Crane 5
Crane 6
Depth alongside at H.W. ± 10.2 m.
Manifold
1 x 6 in. Hose (Bad Condition)
Max. Pressure 7 Kg.
1 Spring
Bollard
GPS Lat. 19°57.5' N.
Long. 110°01.44' E.
Under Construction
Fixed Crane
3 Sternlines
Cargo pipeline unprotected from coal and handling operations and in bad condition
Tug Berth

HAIKOU

MACUN COAL TERMINAL MOORING PLAN



Notes:

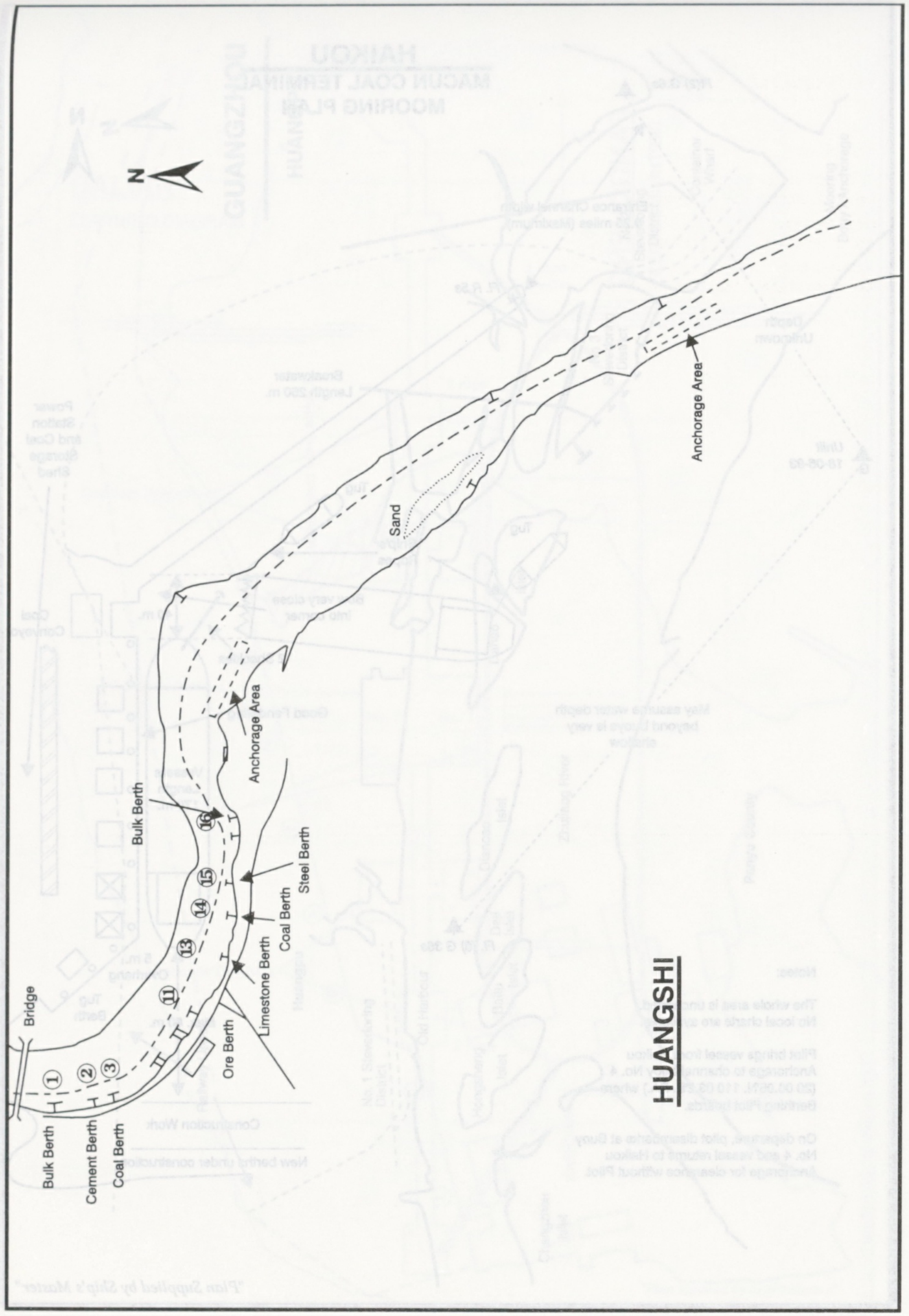
The whole area is uncharted.
No local charts are available.

Pilot brings vessel from Haikou Anchorage to channel buoy No. 4 (20 00.05'N. 110 03.2'E. P.A.) where Berthing Pilot boards.

On departure, pilot disembarks at Buoy No. 4 and vessel returns to Haikou Anchorage for clearance without Pilot.

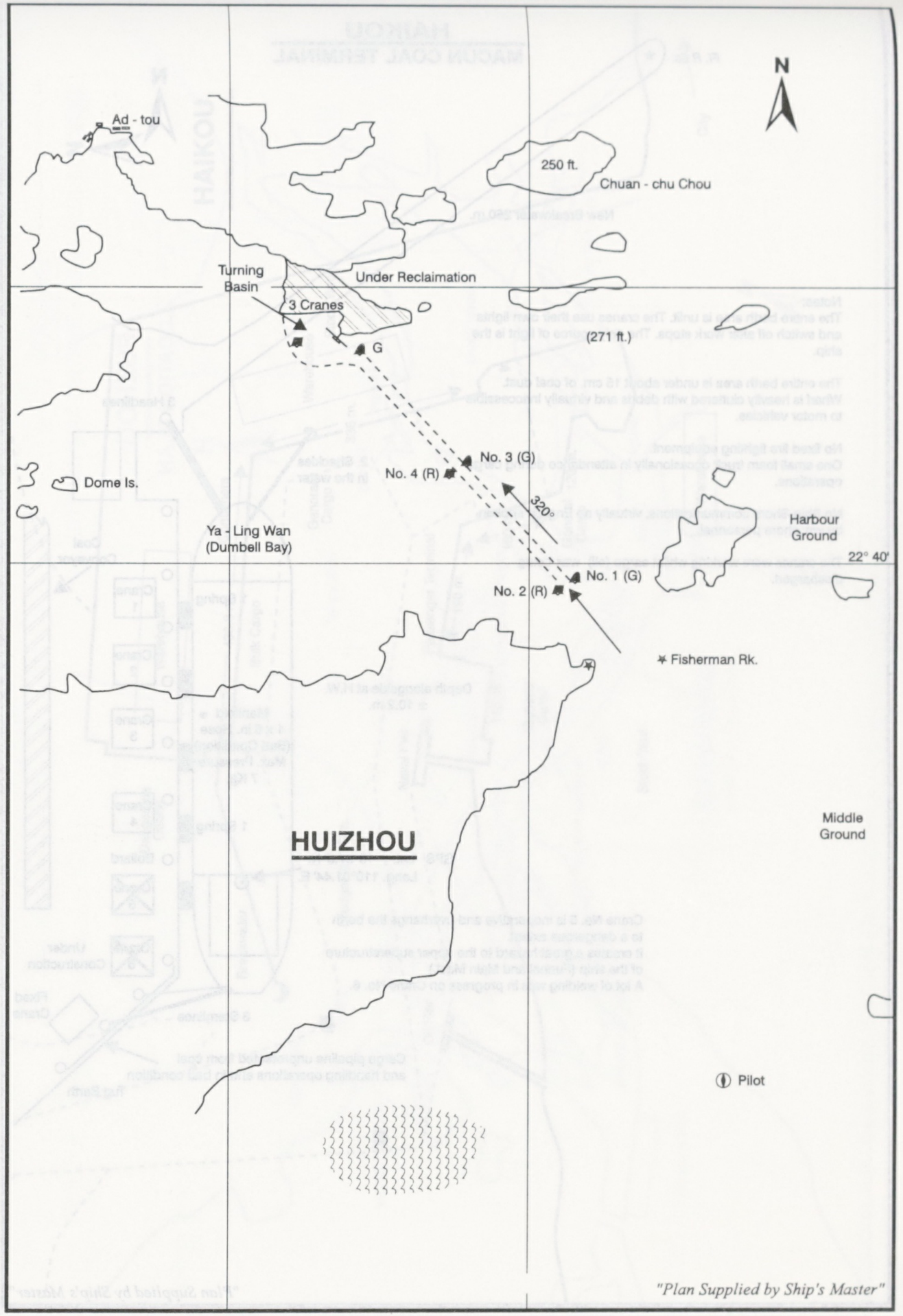
"Plan Supplied by Ship's Master"

Fl(2) G.6s
N
Entrance Channel width 0.25 miles (Maximum)
Fl. R 5s
Depth Unknown
Breakwater Length 250 m.
Unlit 18-06-93
G
Power Station and Coal Storage Shed
Tug
Tug
Ship's Ropes
Bow very close into corner
40 m.
Coal Conveyor
2 Shackles
Good Fendering
May assume water depth beyond buoys is very shallow
Vessel's Length 170 m.
Fl. (6) G 36s
5 m. Overhang
Tug Berth
Max. 80 m.
Construction Work
New berths under construction.



HUANGSHI

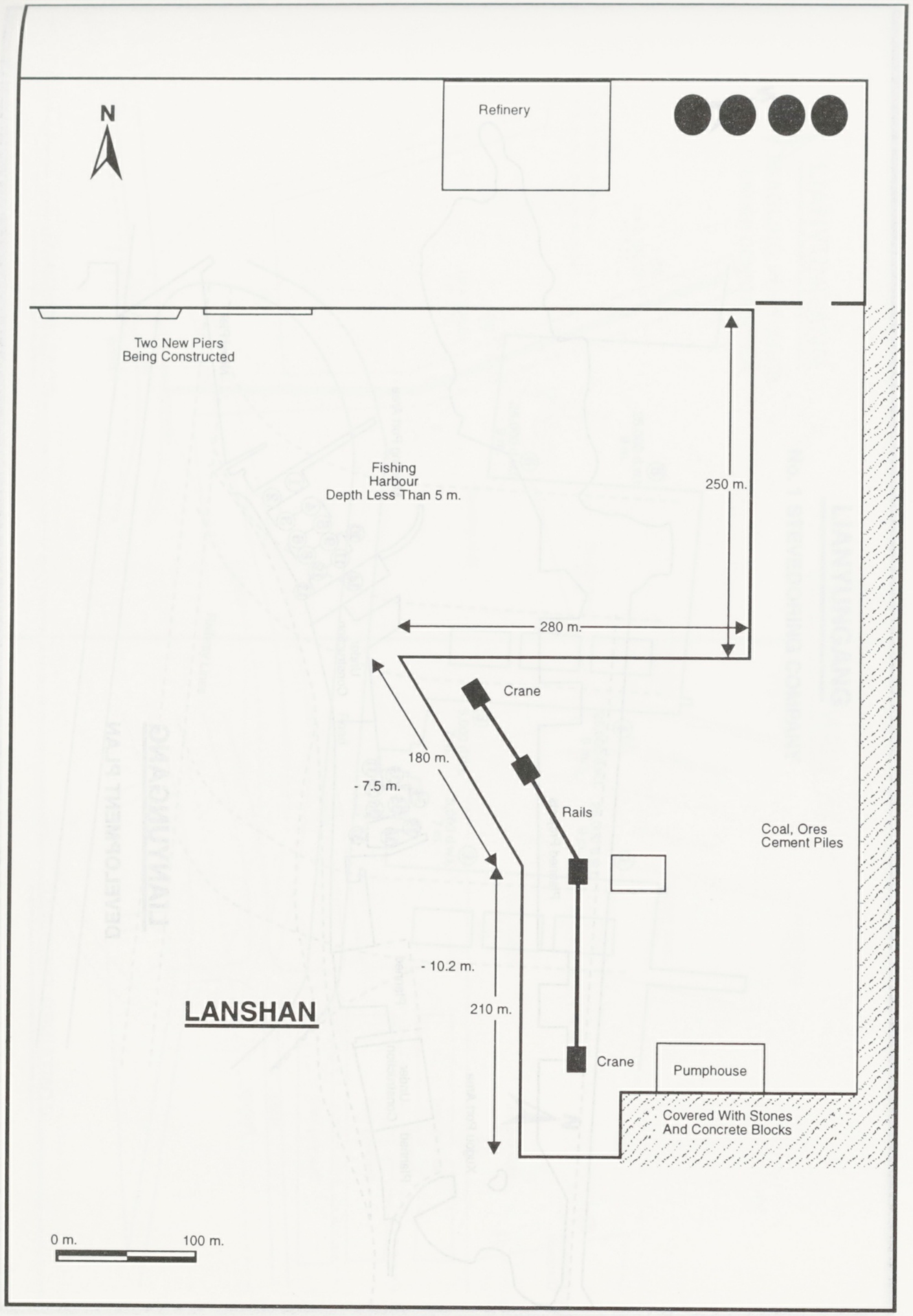
N
Anchorage Area
Sand
Anchorage Area
Bulk Berth
16
15
Steel Berth
14
Coal Berth
13
Limestone Berth
11
Ore Berth
Bridge
1
2
3
Bulk Berth
Cement Berth
Coal Berth

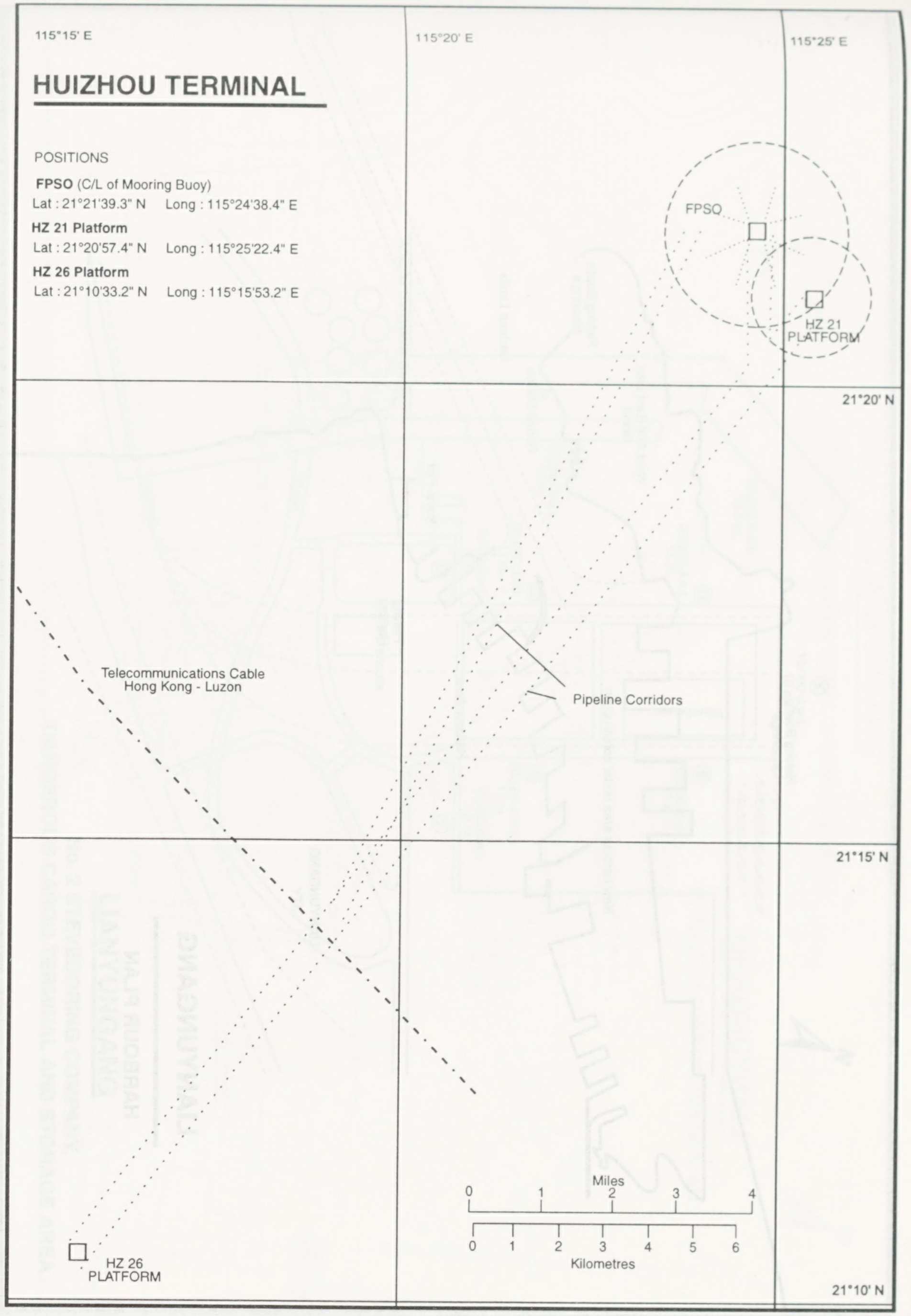


HUIZHOU

N
Ad - tou
250 ft.
Chuan - chu Chou
Turning Basin
Under Reclaimation
3 Cranes
(271 ft.)
G
No. 3 (G)
No. 4 (R)
320°
Dome Is.
Ya - Ling Wan (Dumbell Bay)
Harbour Ground
22° 40'
No. 1 (G)
No. 2 (R)
Fisherman Rk.
Middle Ground
Pilot

"Plan Supplied by Ship's Master"


Refinery
N
Two New Piers Being Constructed
Fishing Harbour Depth Less Than 5 m.
250 m.
280 m.
Crane
180 m.
- 7.5 m.
Rails
Coal, Ores Cement Piles
- 10.2 m.
210 m.
LANSHAN
Crane
Pumphouse
Covered With Stones And Concrete Blocks
0 m.
100 m.



HUIZHOU TERMINAL

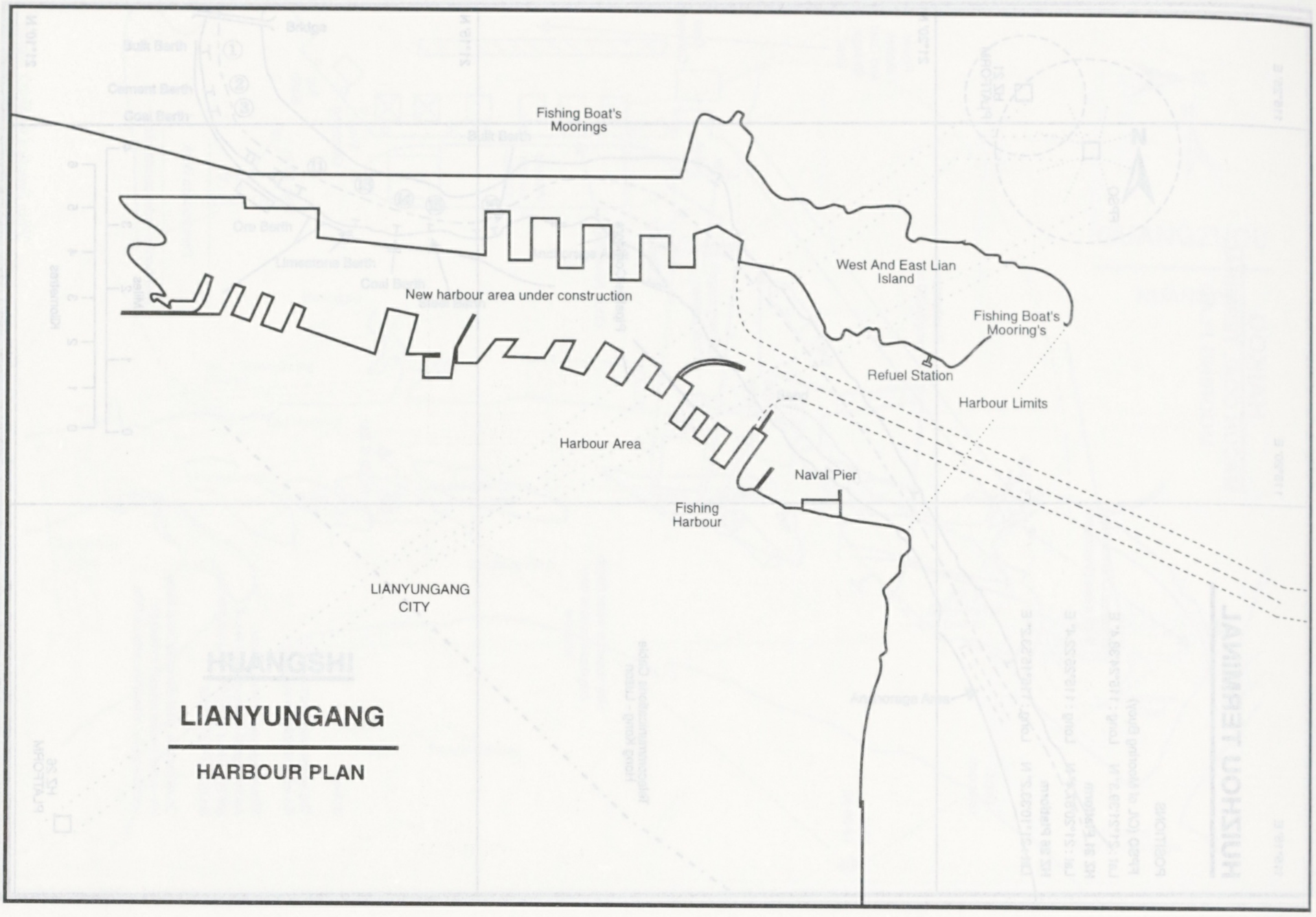
POSITIONS

FPSO (C/L of Mooring Buoy)
Lat : 21°21'39.3" N Long : 115°24'38.4" E

HZ 21 Platform
Lat : 21°20'57.4" N Long : 115°25'22.4" E

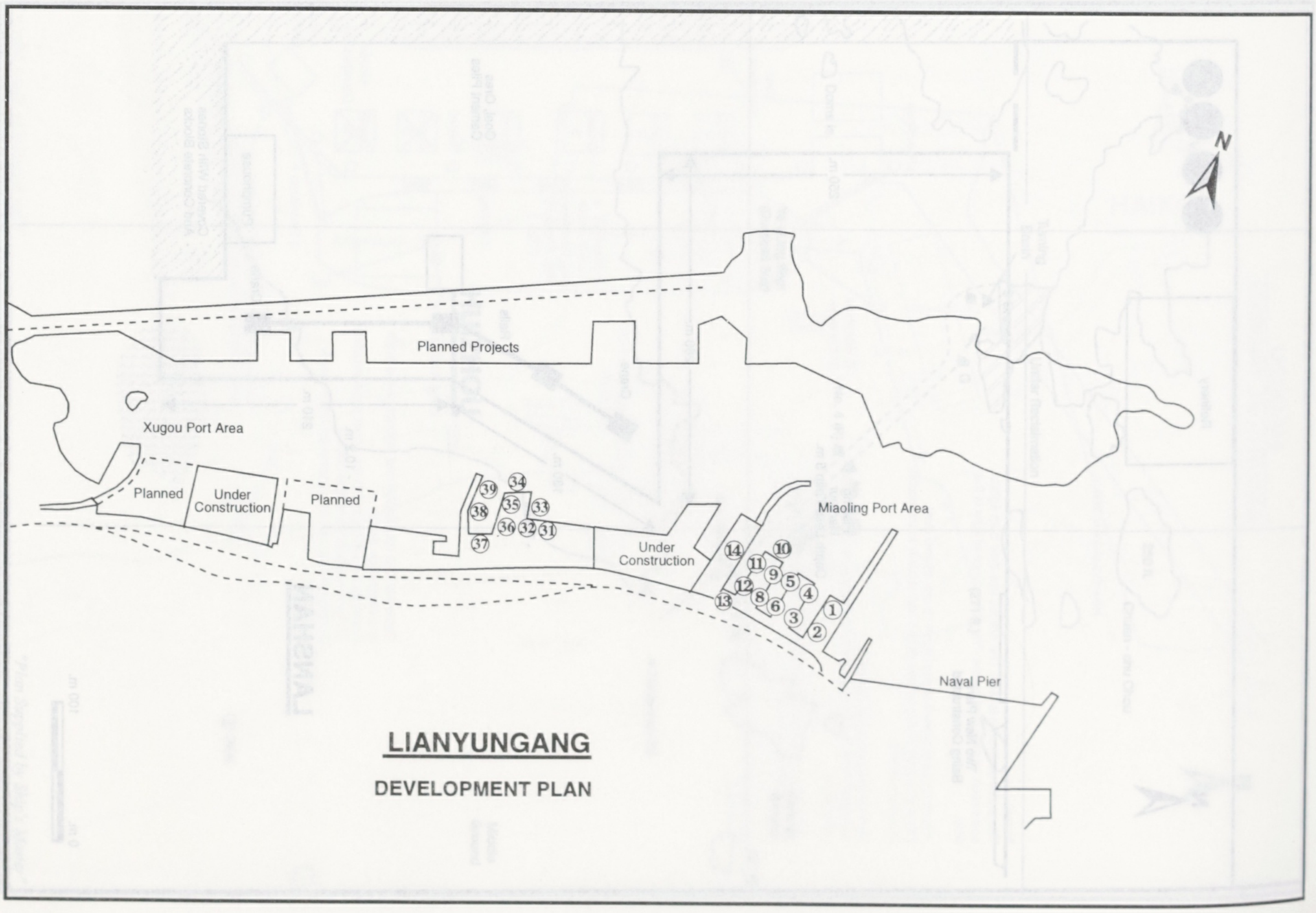
HZ 26 Platform
Lat : 21°10'33.2" N Long : 115°15'53.2" E

115°15' E
115°20' E
115°25' E
FPSO
HZ 21 PLATFORM
21°20' N
Telecommunications Cable Hong Kong - Luzon
Pipeline Corridors
21°15' N
Miles
0
1
2
3
4
0
1
2
3
4
5
6
Kilometres
HZ 26 PLATFORM
21°10' N


Fishing Boat's Moorings
West And East Lian Island
Fishing Boat's Mooring's
New harbour area under construction
Refuel Station
Harbour Limits
Harbour Area
Naval Pier
Fishing Harbour
LIANYUNGANG CITY

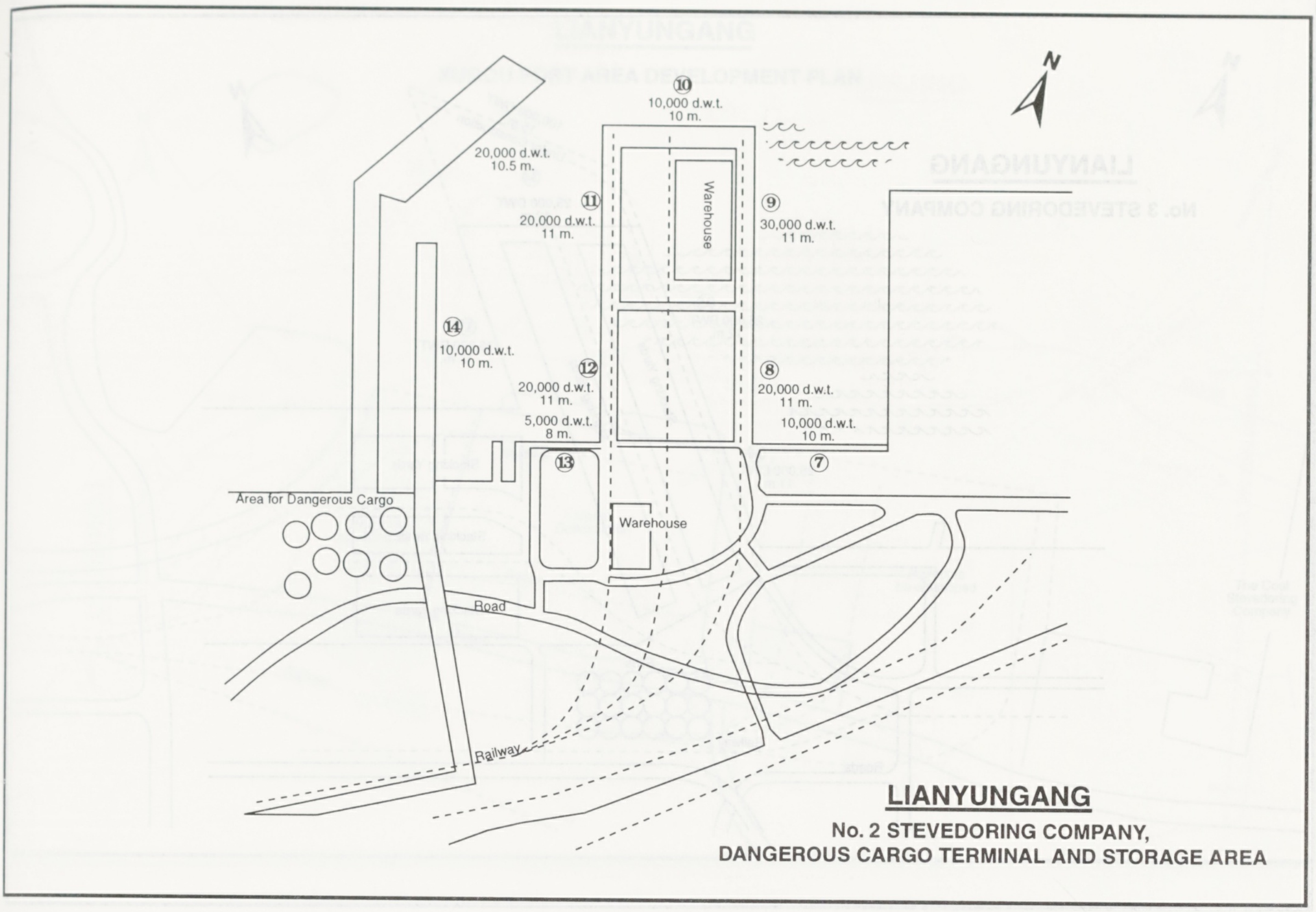
LIANYUNGANG

HARBOUR PLAN


N
Planned Projects
Xugou Port Area
Planned
Under Construction
Planned
39
34
35
33
38
36
32
31
37
Under Construction
Miaoling Port Area
14
10
11
9
5
12
8
4
6
13
3
1
2
Naval Pier

LIANYUNGANG

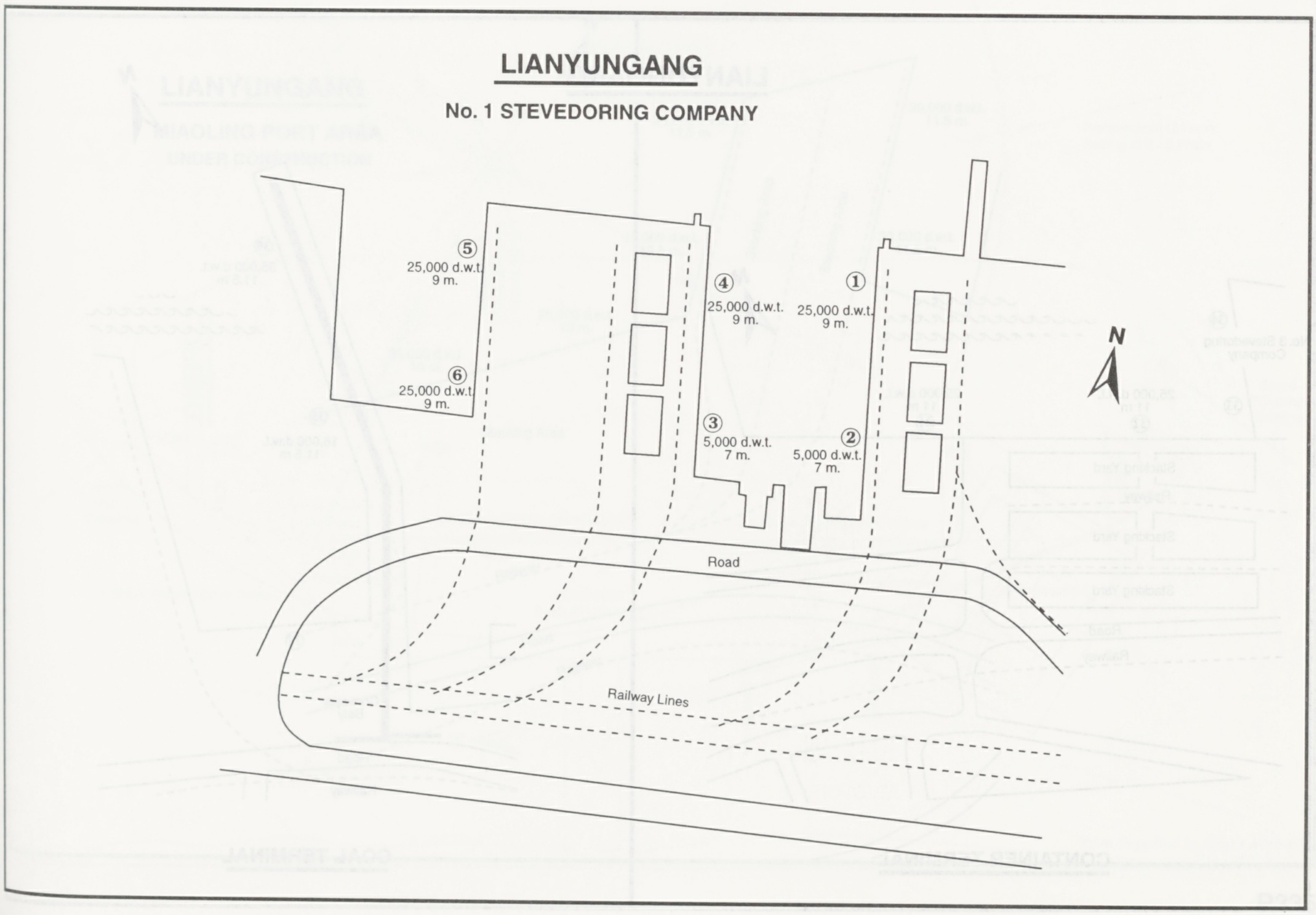
DEVELOPMENT PLAN



LIANYUNGANG

No. 2 STEVEDORING COMPANY, DANGEROUS CARGO TERMINAL AND STORAGE AREA

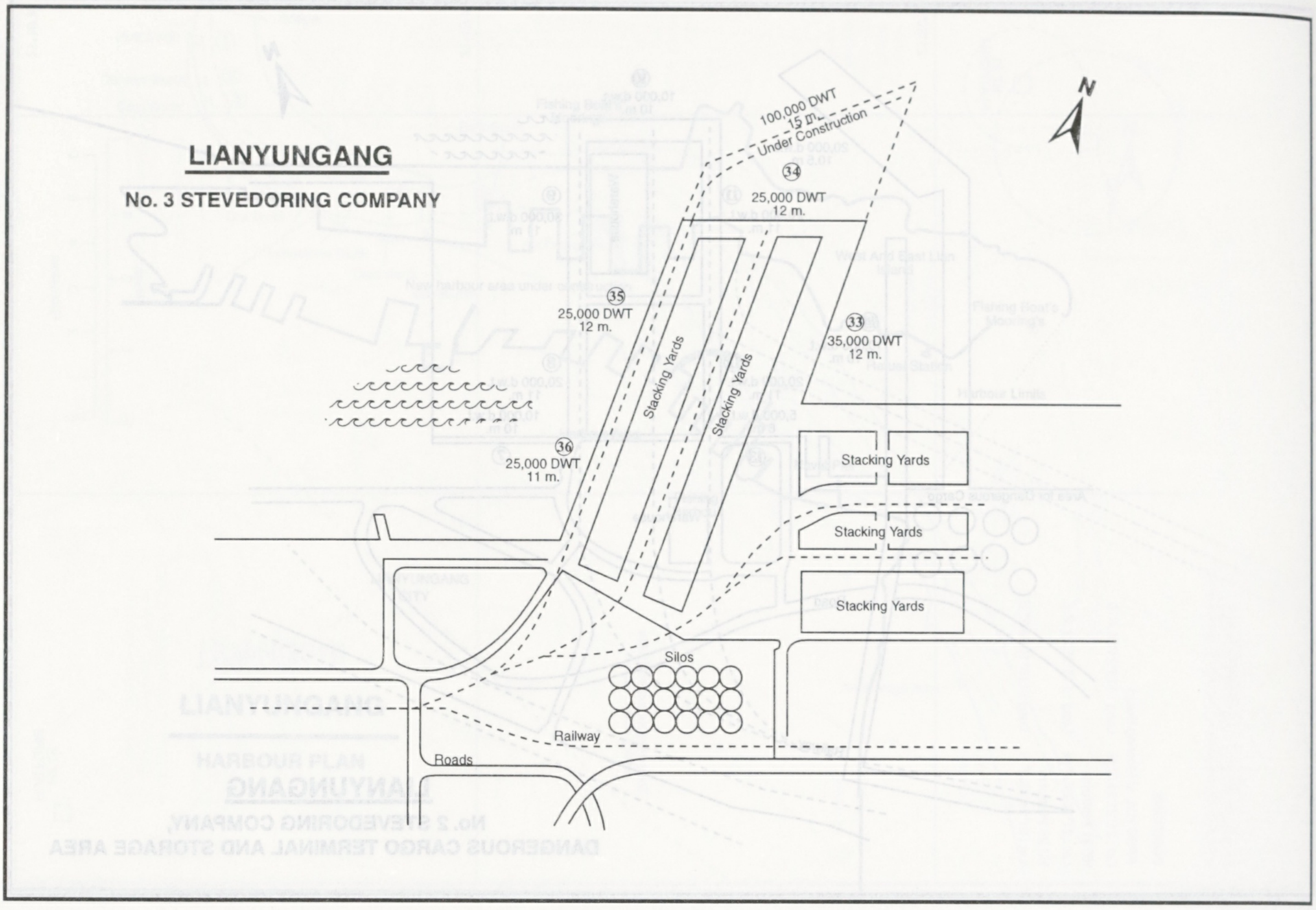
N
⑩
10,000 d.w.t.
10 m.
20,000 d.w.t.
10.5 m.
⑪
20,000 d.w.t.
11 m.
Warehouse
⑨
30,000 d.w.t.
11 m.
⑭
10,000 d.w.t.
10 m.
⑫
20,000 d.w.t.
11 m.
⑧
20,000 d.w.t.
11 m.
5,000 d.w.t.
8 m.
10,000 d.w.t.
10 m.
⑬
⑦
Area for Dangerous Cargo
Warehouse
Road
Railway



LIANYUNGANG

No. 1 STEVEDORING COMPANY

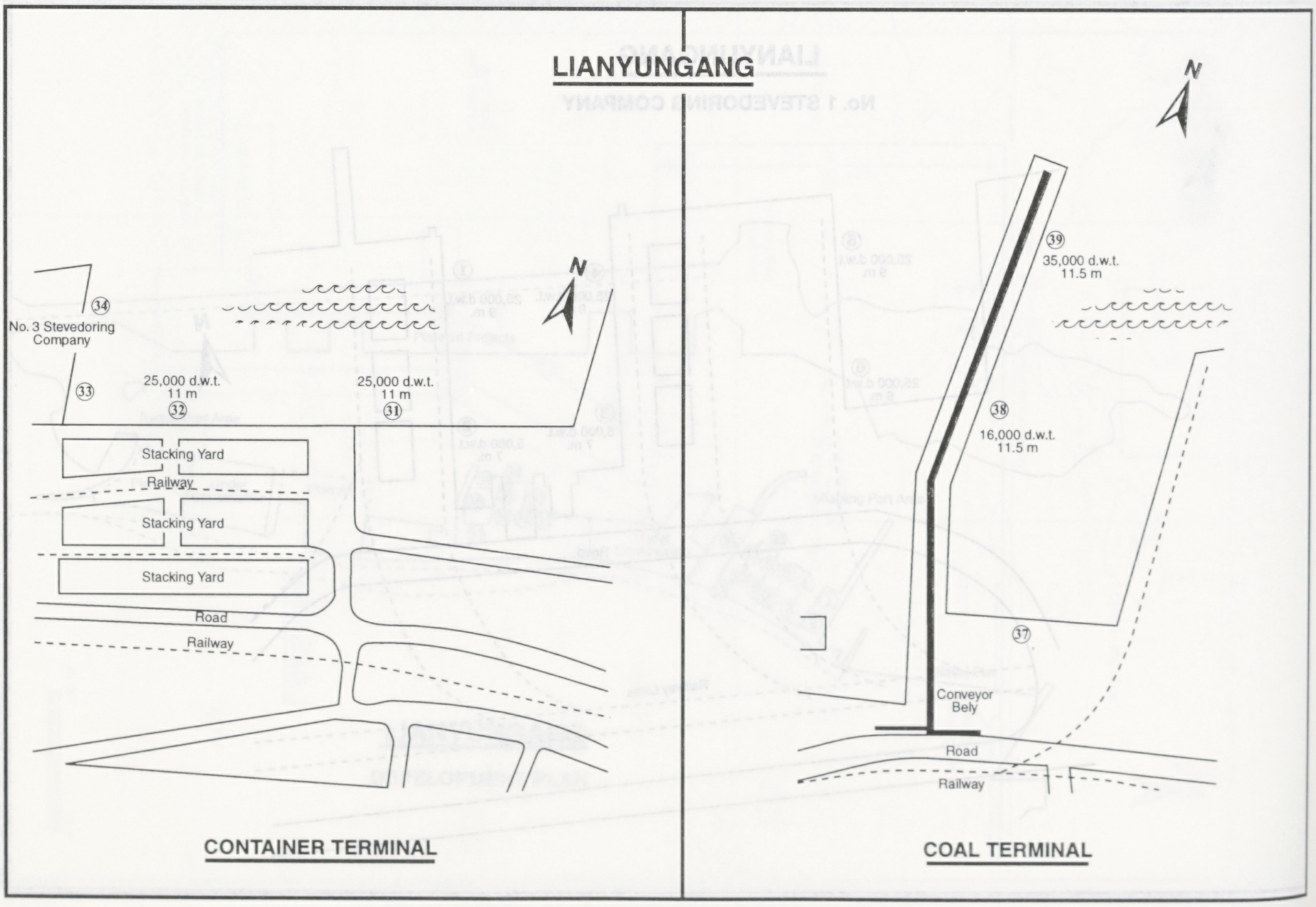
⑤
25,000 d.w.t.
9 m.
④
25,000 d.w.t.
9 m.
①
25,000 d.w.t.
9 m.
N
⑥
25,000 d.w.t.
9 m.
③
5,000 d.w.t.
7 m.
②
5,000 d.w.t.
7 m.
Road
Railway Lines



LIANYUNGANG

No. 3 STEVEDORING COMPANY

N
100,000 DWT
15 m.
Under Construction
㉞
25,000 DWT
12 m.
㉟
25,000 DWT
12 m.
㉝
35,000 DWT
12 m.
Stacking Yards
Stacking Yards
㊱
25,000 DWT
11 m.
Stacking Yards
Stacking Yards
Stacking Yards
Silos
Railway
Roads

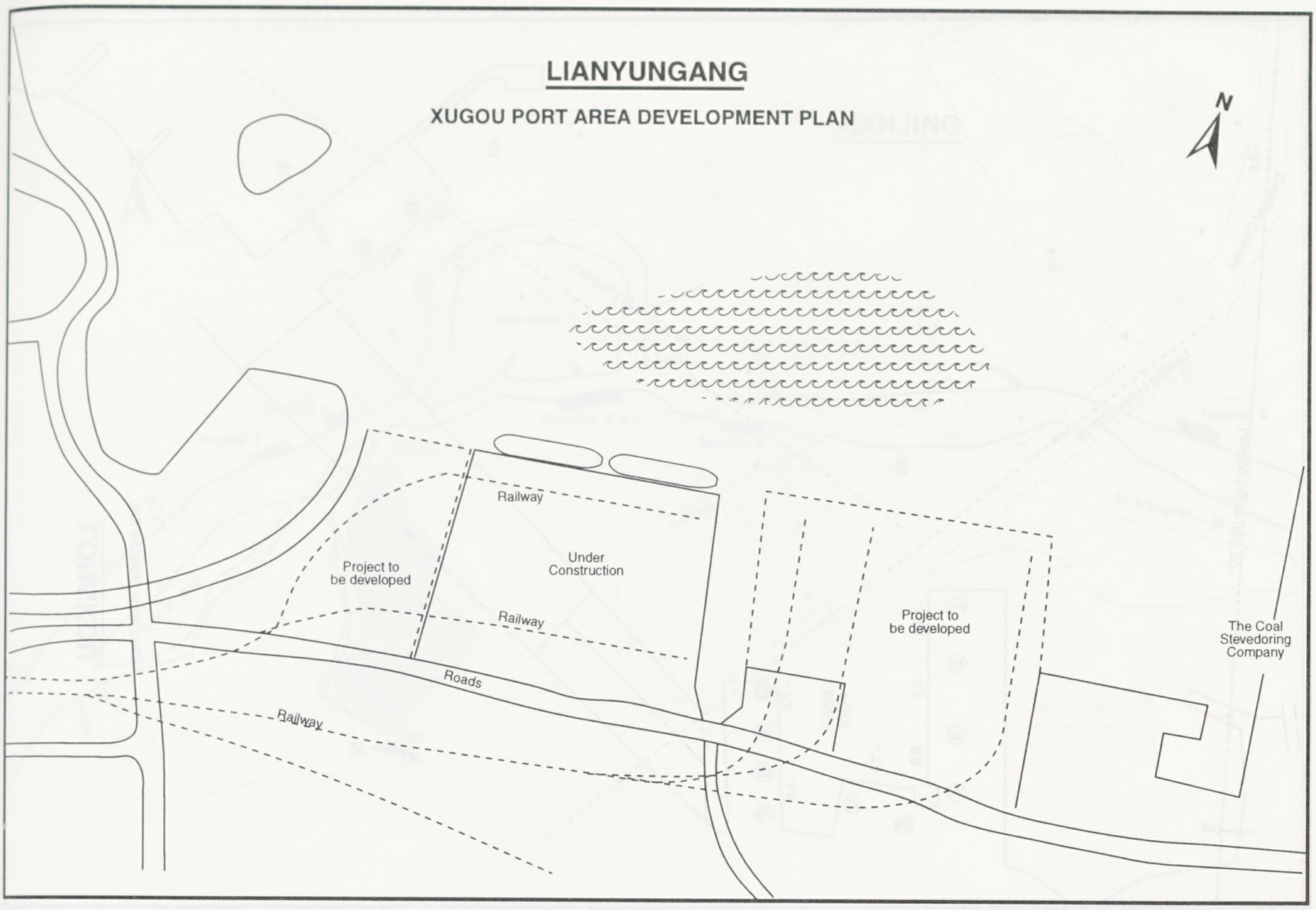


LIANYUNGANG

N
㉞
No. 3 Stevedoring Company
㉝
25,000 d.w.t.
11 m
㉜
25,000 d.w.t.
11 m
㉛
Stacking Yard
Railway
Stacking Yard
Stacking Yard
Road
Railway
N
㊴
35,000 d.w.t.
11.5 m
㊳
16,000 d.w.t.
11.5 m
㊲
Conveyor
Bely
Road
Railway

CONTAINER TERMINAL

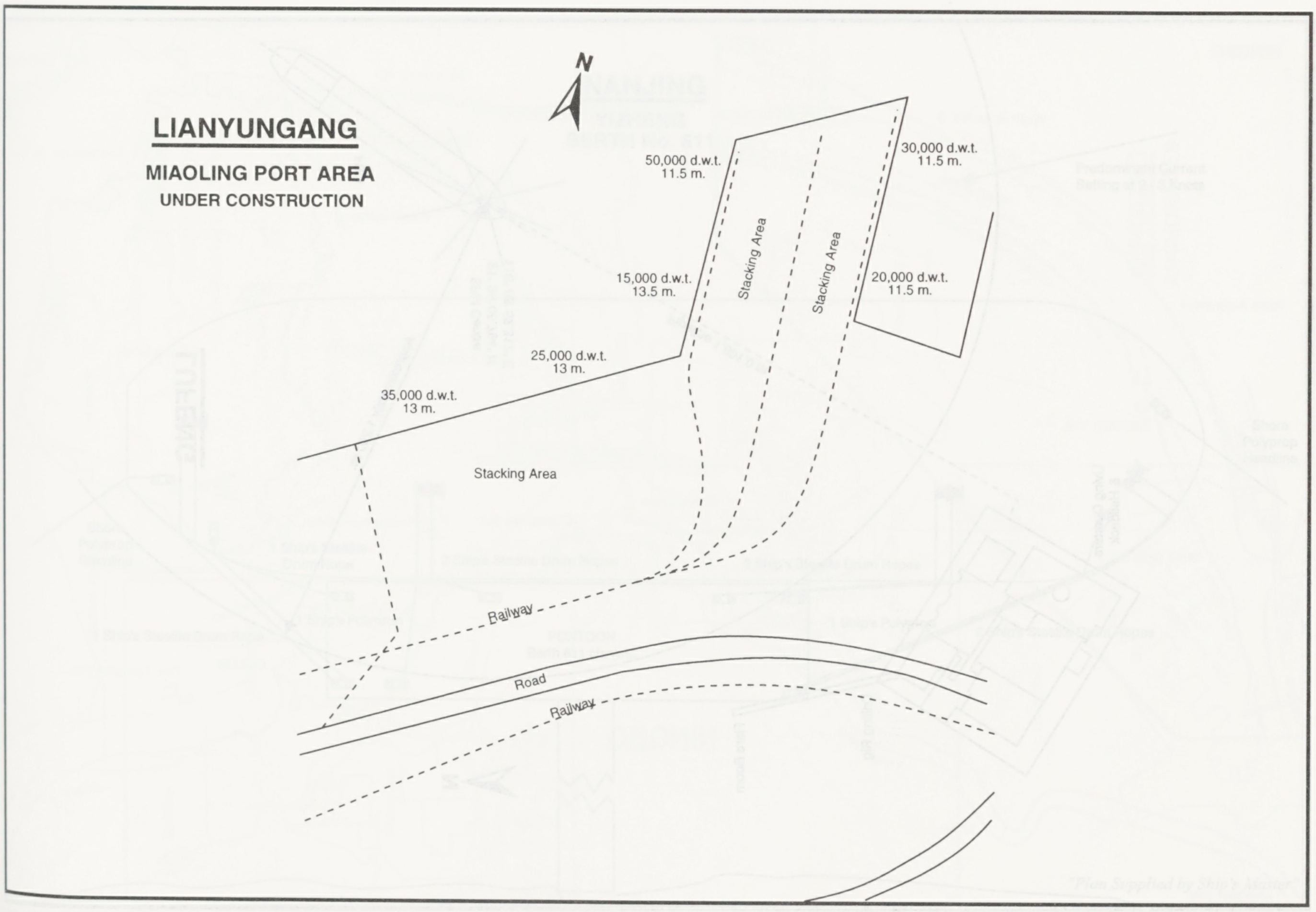
COAL TERMINAL



LIANYUNGANG

XUGOU PORT AREA DEVELOPMENT PLAN

N
Railway
Project to be developed
Under Construction
Railway
Roads
Railway
Project to be developed
The Coal Stevedoring Company



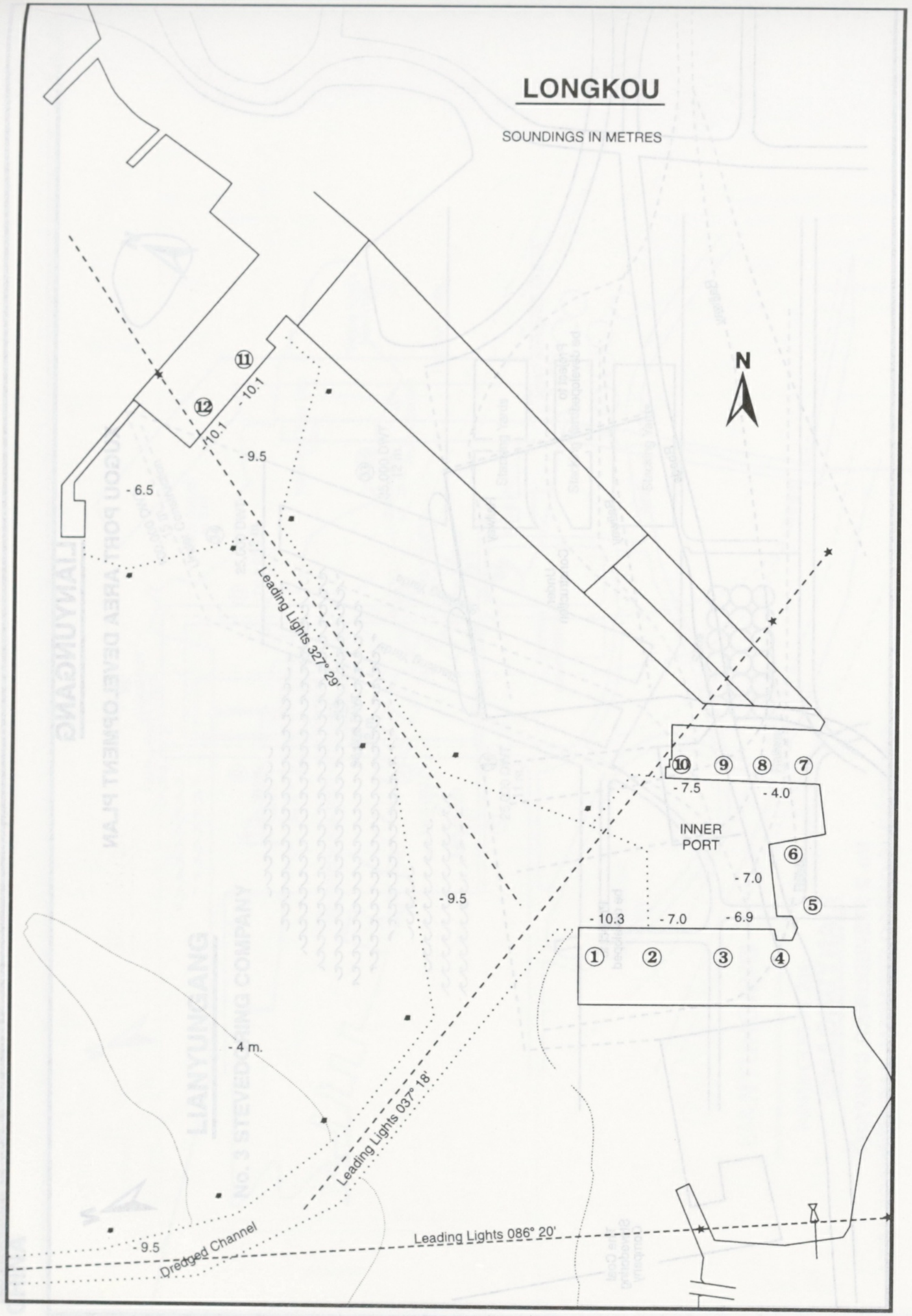
LIANYUNGANG

MIAOLING PORT AREA

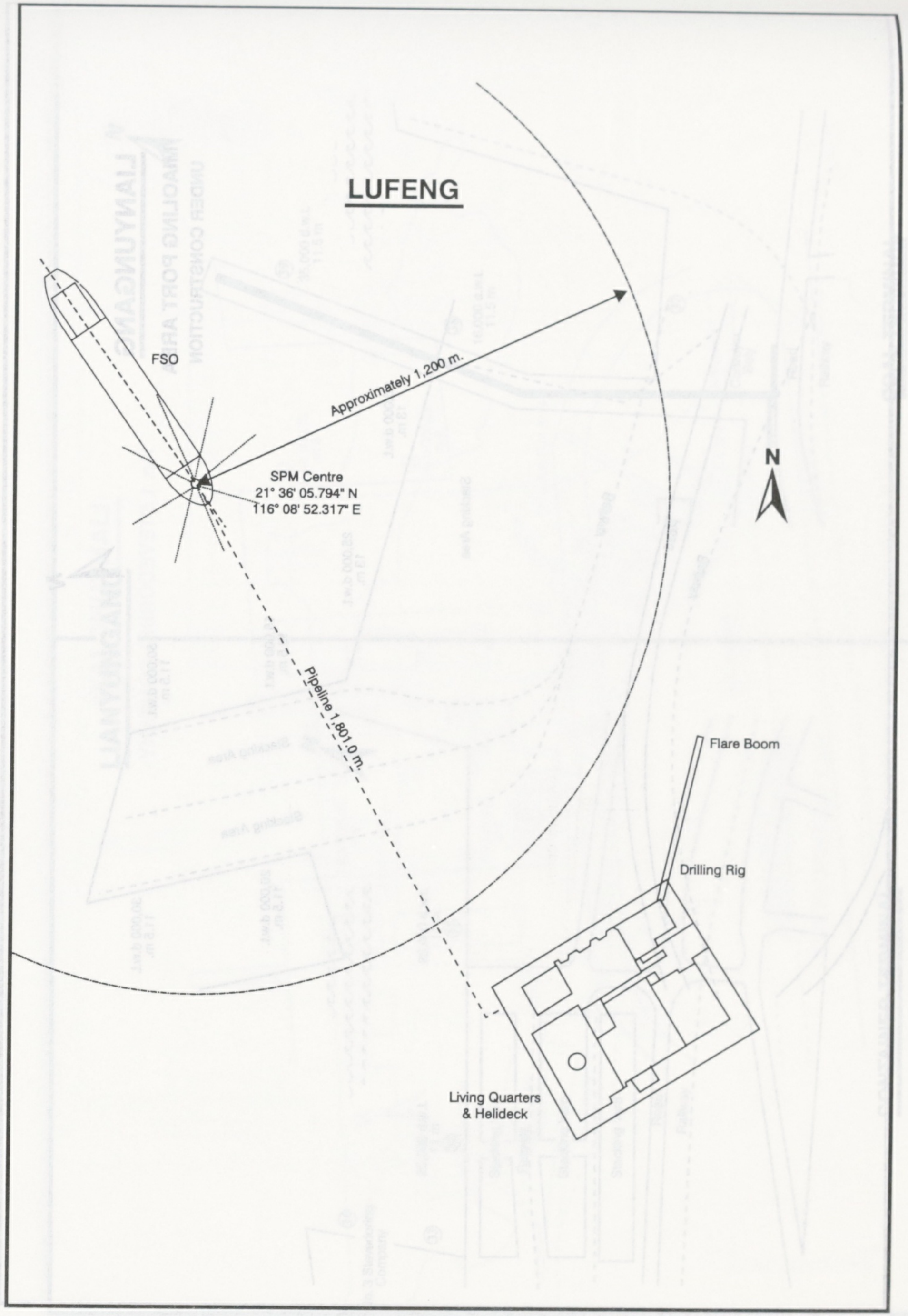
UNDER CONSTRUCTION

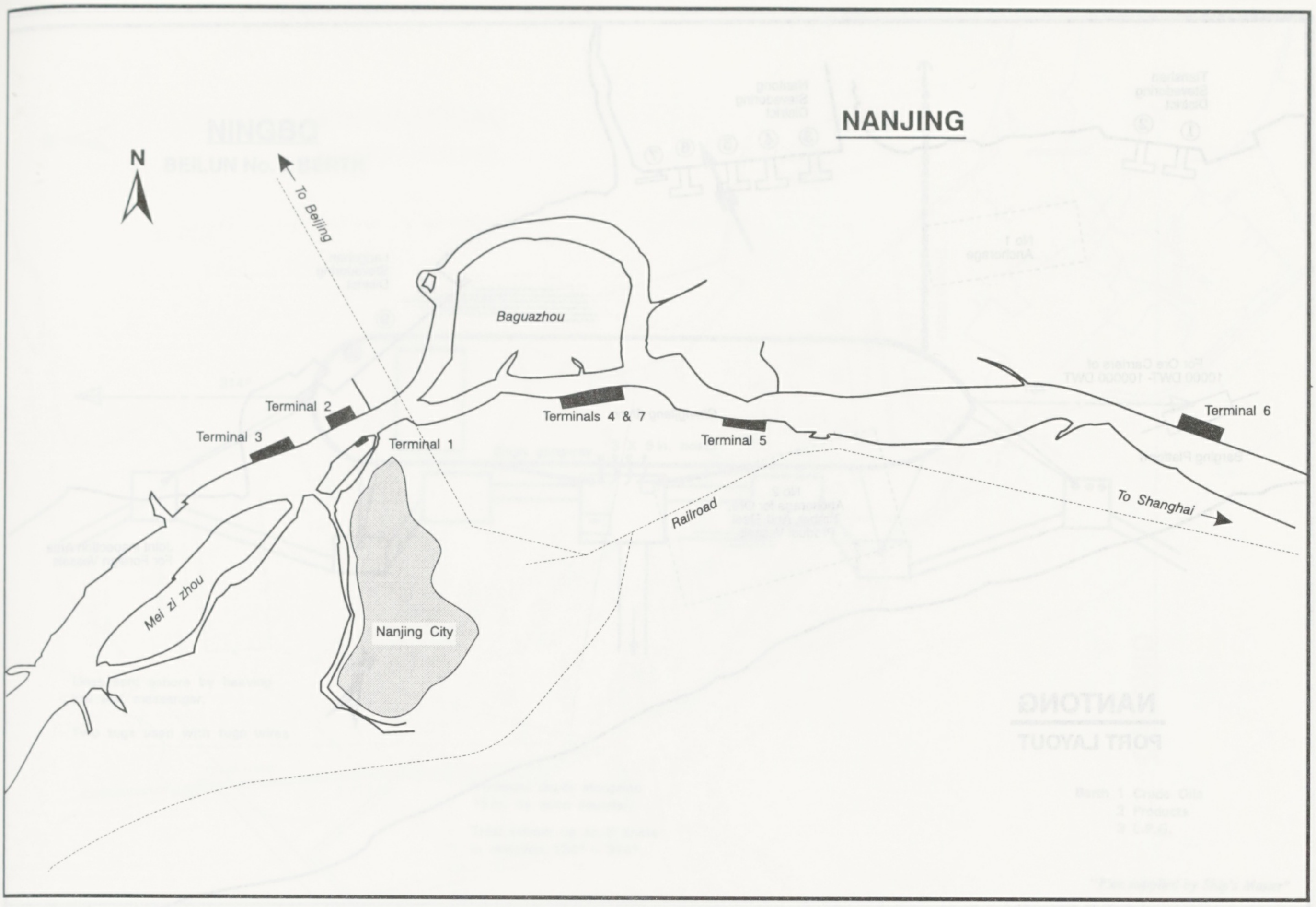
N
50,000 d.w.t. 11.5 m.
30,000 d.w.t. 11.5 m.
Stacking Area
Stacking Area
15,000 d.w.t. 13.5 m.
20,000 d.w.t. 11.5 m.
25,000 d.w.t. 13 m.
35,000 d.w.t. 13 m.
Stacking Area
Railway
Road
Railway

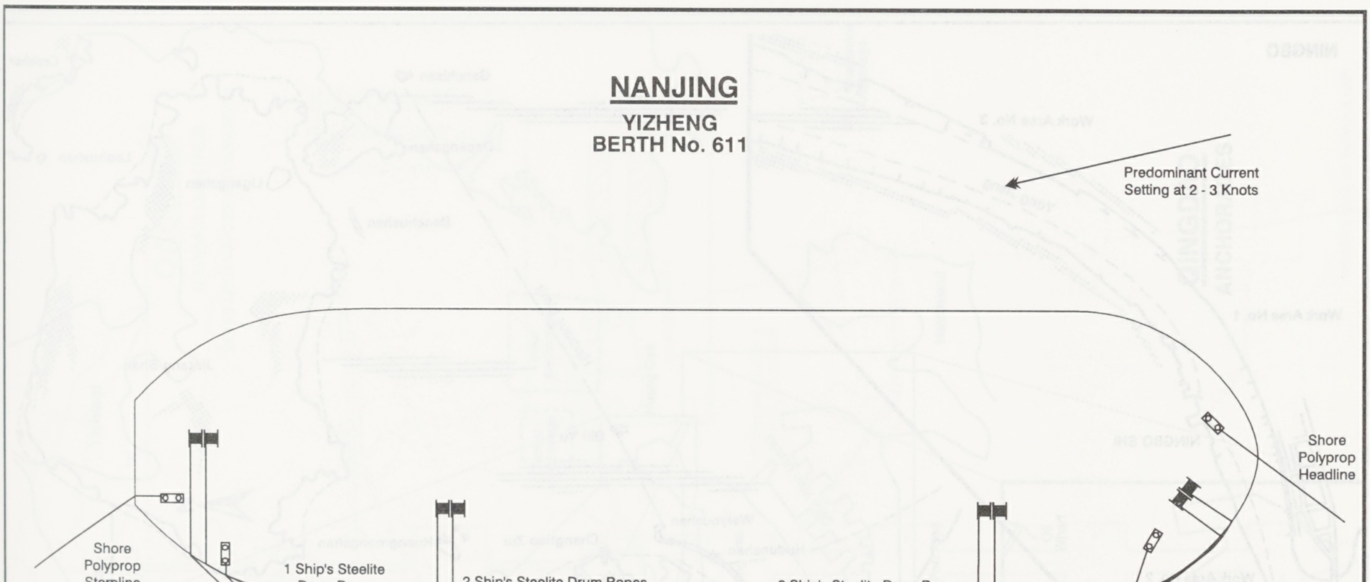
LONGKOU


SOUNDINGS IN METRES
N
⑪
⑫
10.1
- 10.1
- 9.5
- 6.5
Leading Lights 327° 29'
⑩
⑨
⑧
⑦
- 7.5
- 4.0
INNER PORT
⑥
- 7.0
⑤
- 9.5
- 10.3
- 7.0
- 6.9
①
②
③
④
- 4 m.
Leading Lights 037° 18'
- 9.5
Dredged Channel
Leading Lights 086° 20'

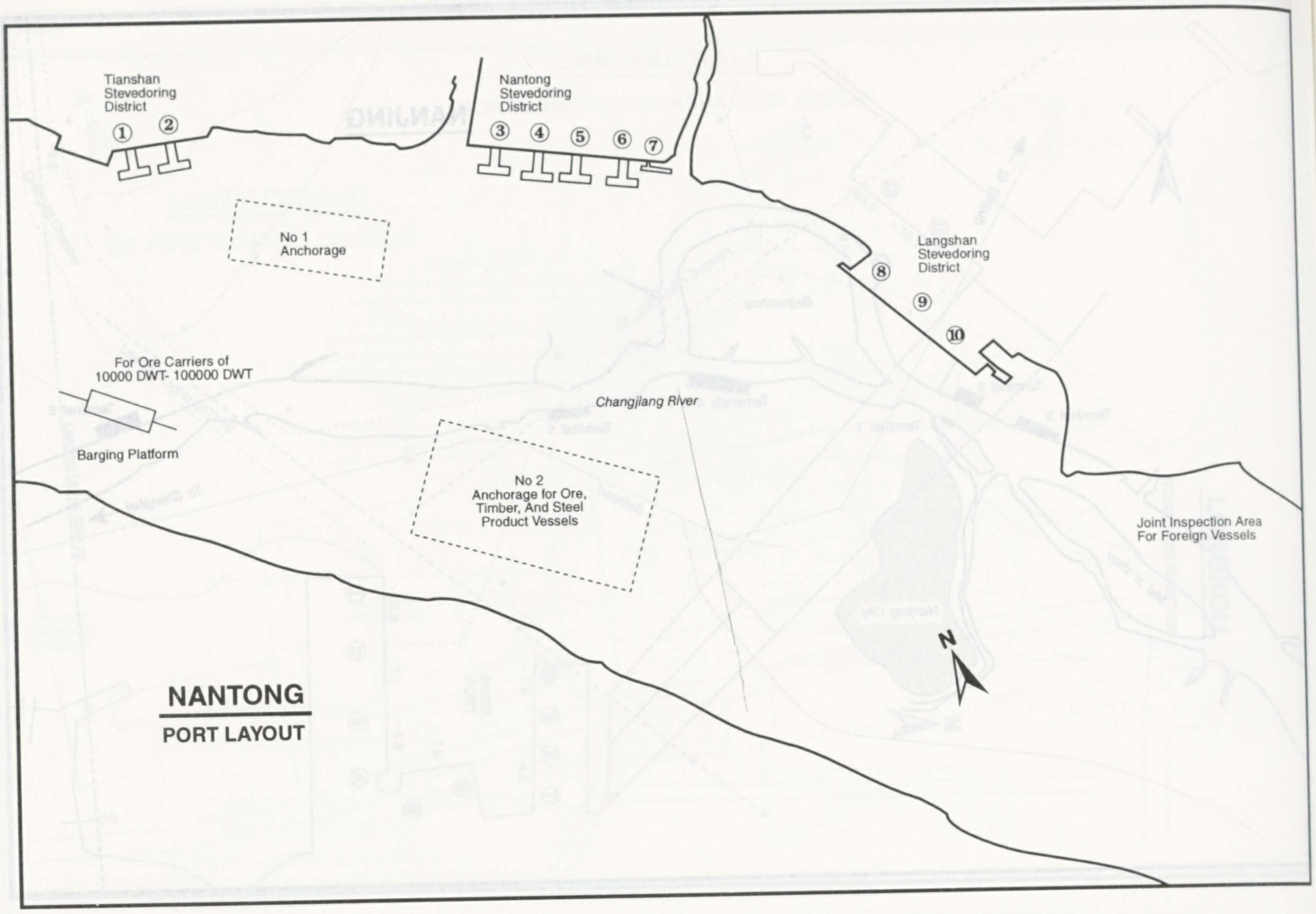
LUFENG


FSO
Approximately 1,200 m.
SPM Centre
21° 36' 05.794" N
116° 08' 52.317" E
N
Pipeline 1,801.0 m.
Flare Boom
Drilling Rig
Living Quarters & Helideck


NANJING
N
To Beijing
Baguazhou
Terminal 2
Terminal 3
Terminal 1
Terminals 4 & 7
Terminal 5
Terminal 6
To Shanghai
Railroad
Mei zi zhou
Nanjing City

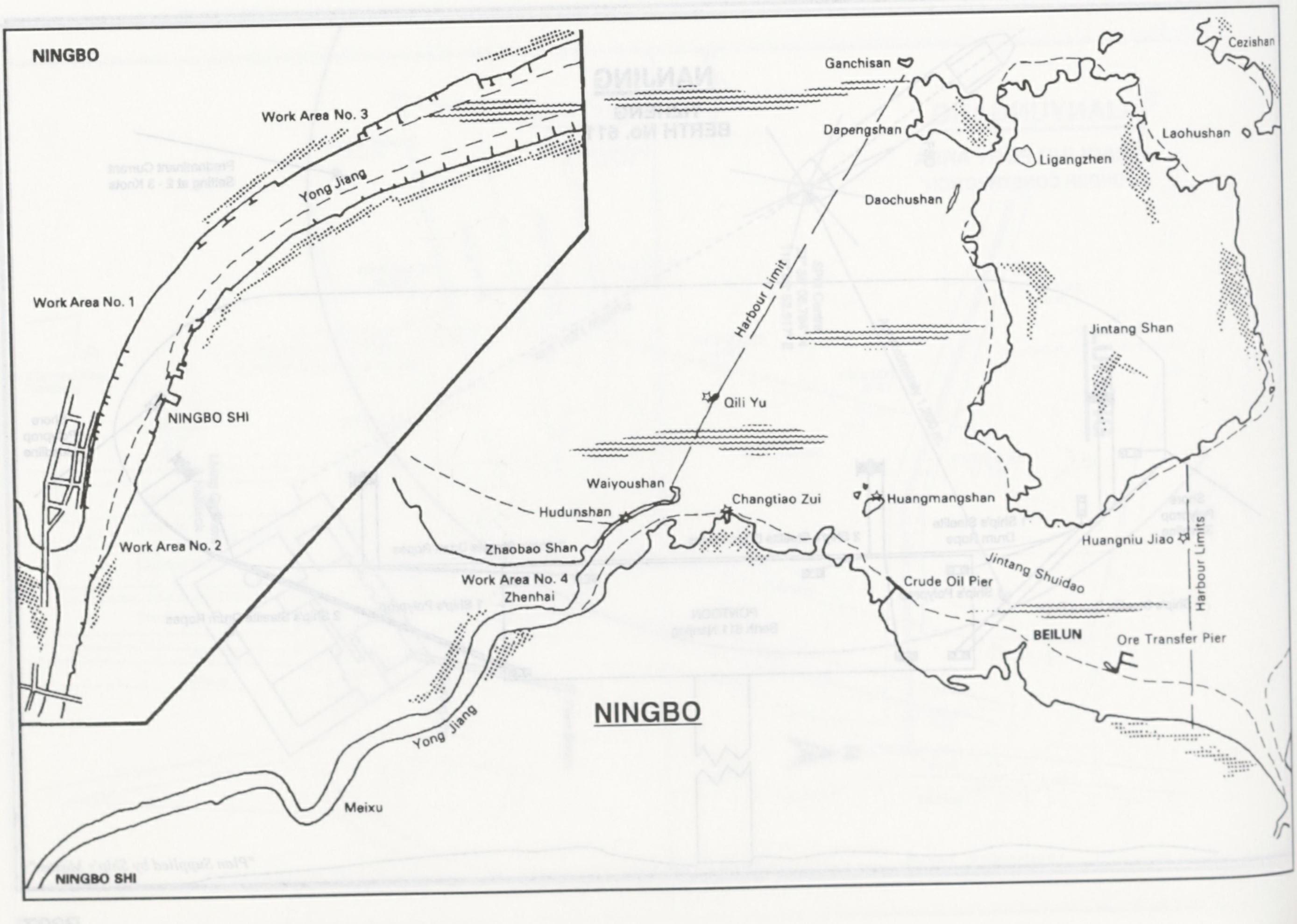

NANJING
YIZHENG
BERTH No. 611
Predominant Current
Setting at 2 - 3 Knots
Shore
Polyprop
Headline
Shore
Polyprop
Sternline
1 Ship's Steelite
Drum Rope
2 Ship's Steelite Drum Ropes
2 Ship's Steelite Drum Ropes
1 Ship's Polyprop
1 Ship's Steelite Drum Rope
PONTOON
Berth 611 Nanjing
1 Ship's Polyprop
2 Ship's Steelite Drum Ropes

"Plan Supplied by Ship's Master"

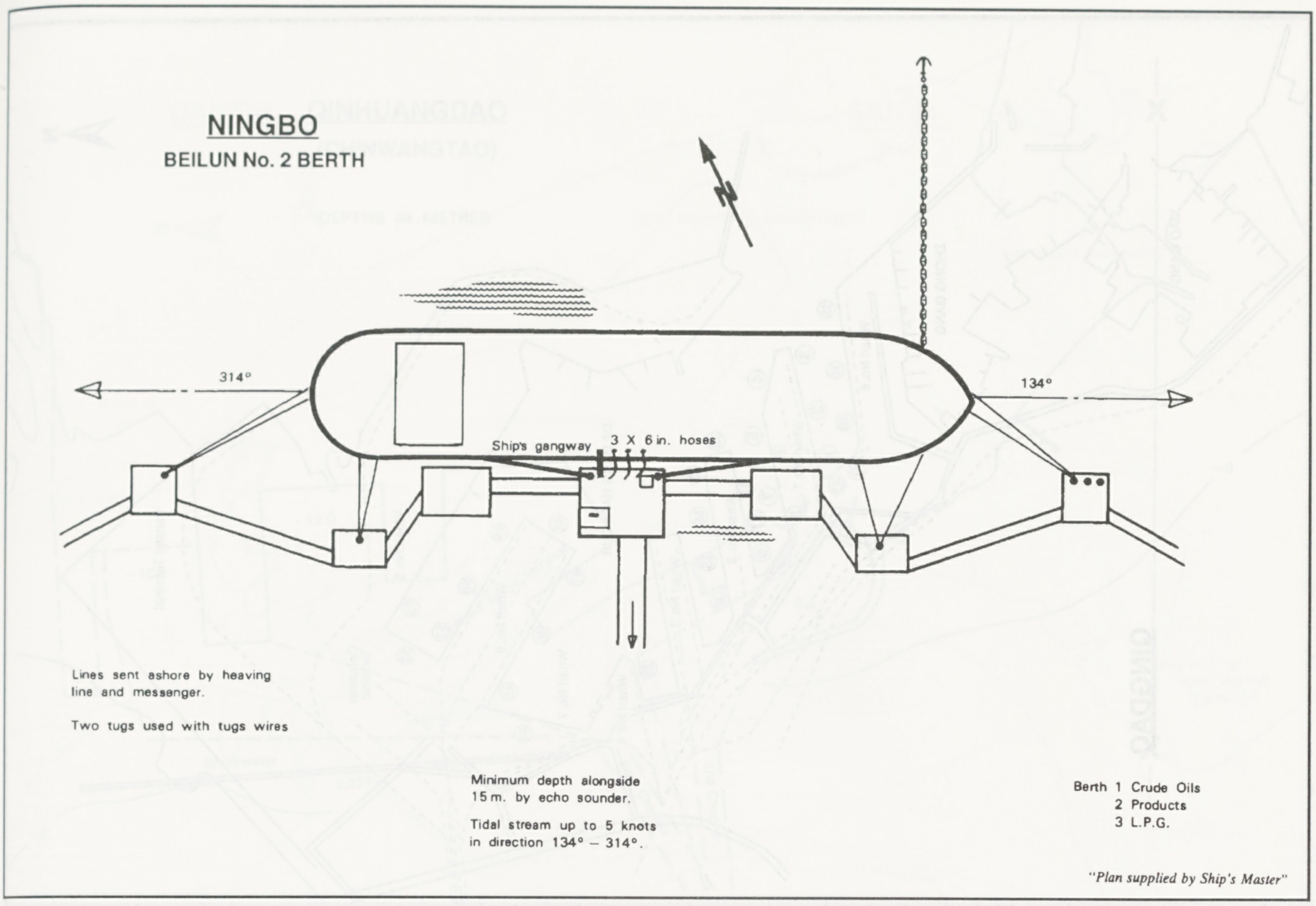

Tianshan Stevedoring District
①
②
Nantong Stevedoring District
③
④
⑤
⑥
⑦
No 1 Anchorage
For Ore Carriers of 10000 DWT- 100000 DWT
Barging Platform
Changjiang River
No 2 Anchorage for Ore, Timber, And Steel Product Vessels
Langshan Stevedoring District
⑧
⑨
⑩
Joint Inspection Area For Foreign Vessels
N

NANTONG

PORT LAYOUT


NINGBO
Work Area No. 3
Yong Jiang
Work Area No. 1
NINGBO SHI
Work Area No. 2
Ganchisan
Cezishan
Dapengshan
Laohushan
Ligangzhen
Daochushan
Harbour Limit
Jintang Shan
Qili Yu
Waiyoushan
Hudunshan
Changtiao Zui
Huangmangshan
Zhaobao Shan
Work Area No. 4
Zhenhai
Crude Oil Pier
Jintang Shuidao
Huangniu Jiao
Harbour Limits
BEILUN
Ore Transfer Pier
Yong Jiang
Meixu
NINGBO SHI

NINGBO



NINGBO

BEILUN No. 2 BERTH

314°
134°
Ship's gangway
3 X 6 in. hoses

Lines sent ashore by heaving line and messenger.

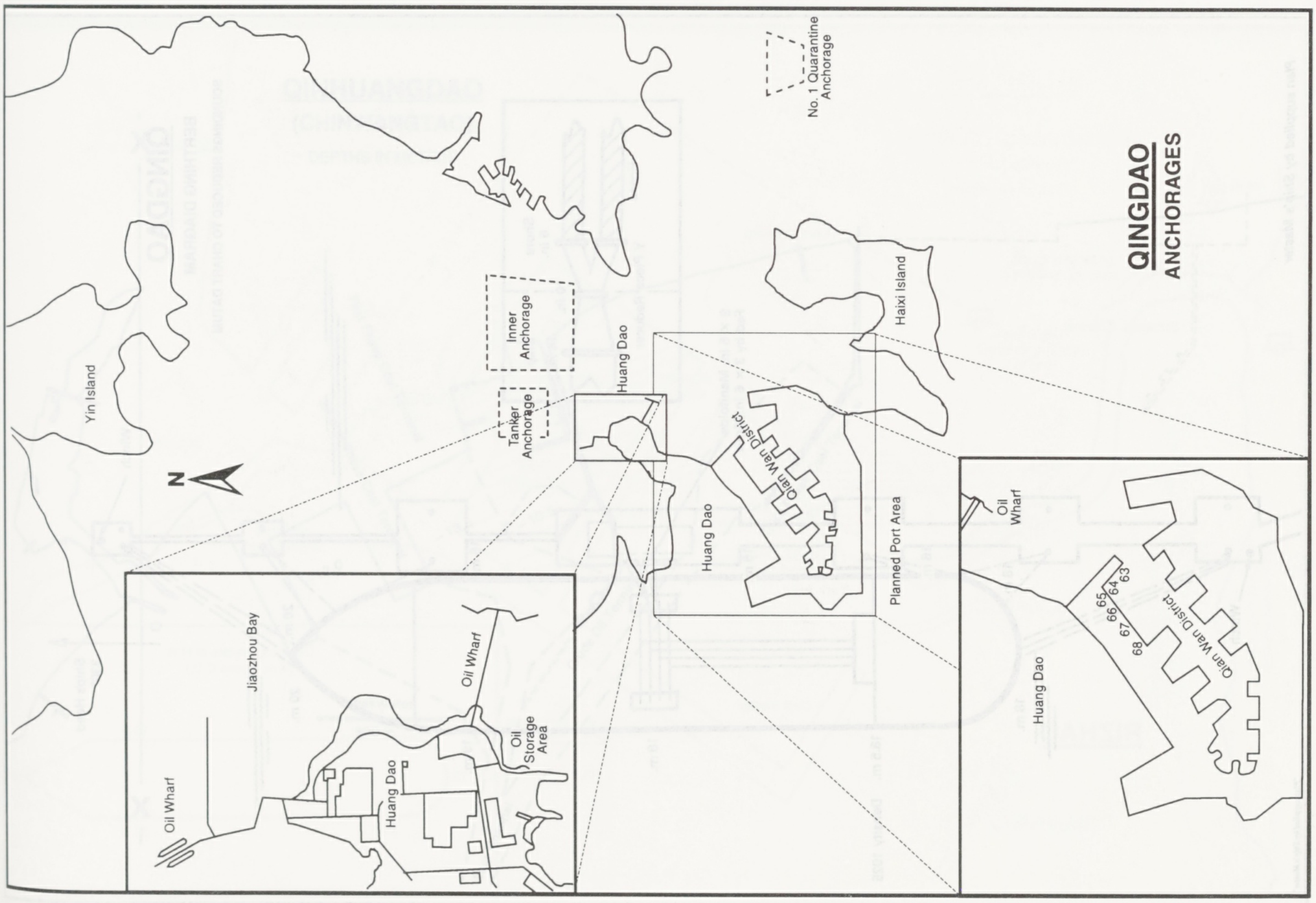
Two tugs used with tugs wires

Minimum depth alongside 15 m. by echo sounder.

Tidal stream up to 5 knots in direction 134° – 314°.

Berth 1 Crude Oils
2 Products
3 L.P.G.

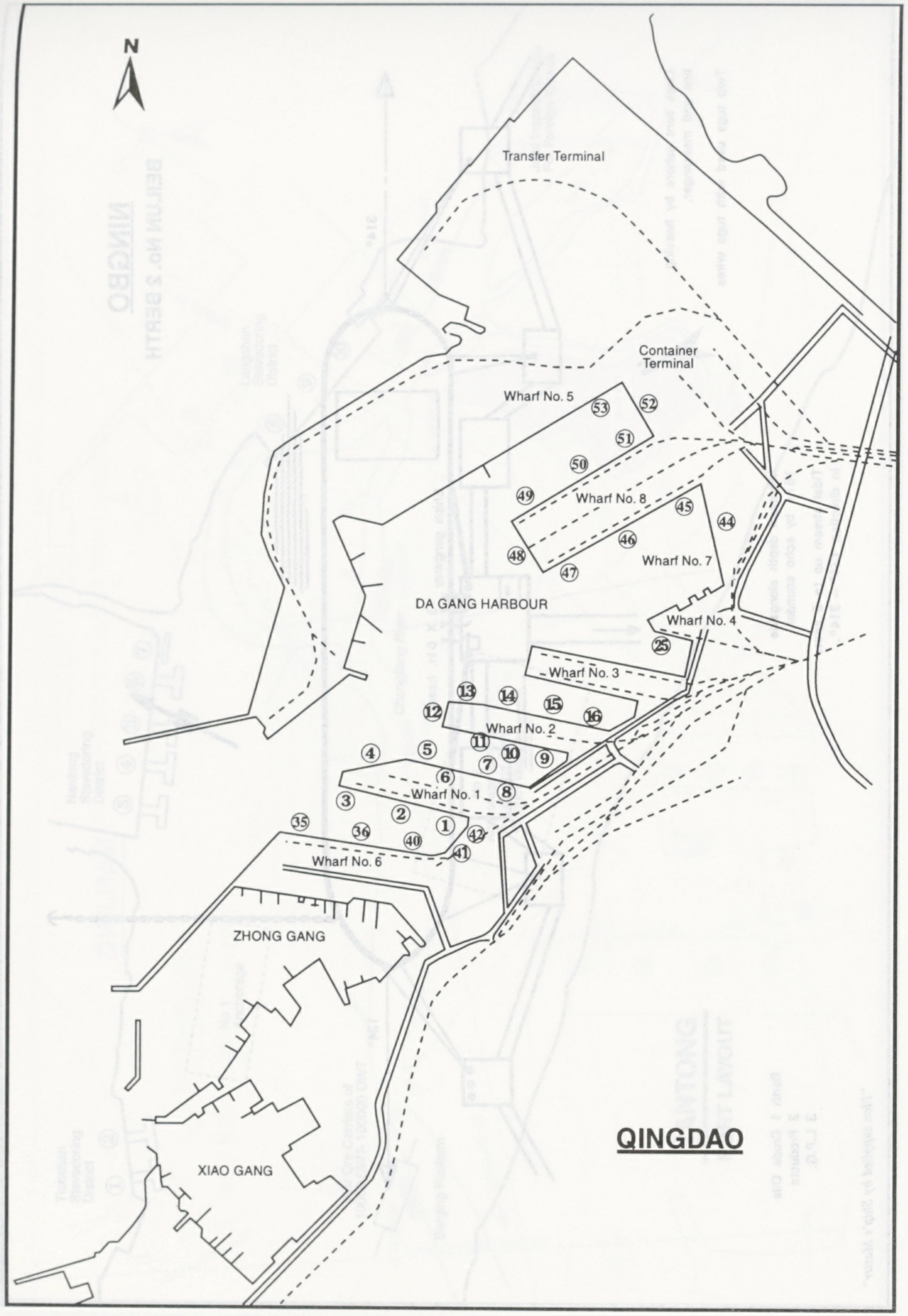
"Plan supplied by Ship's Master"

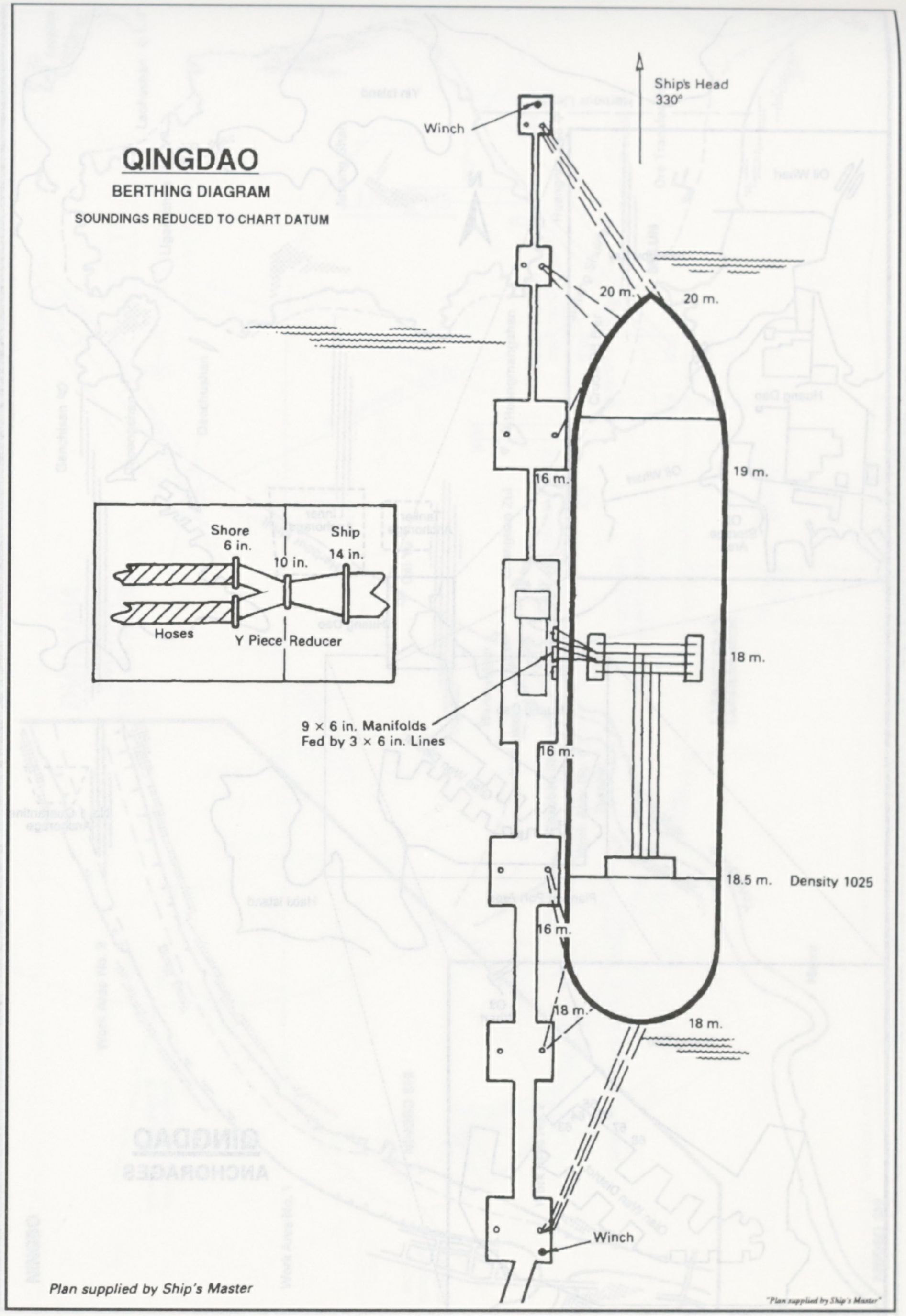


QINGDAO

ANCHORAGES

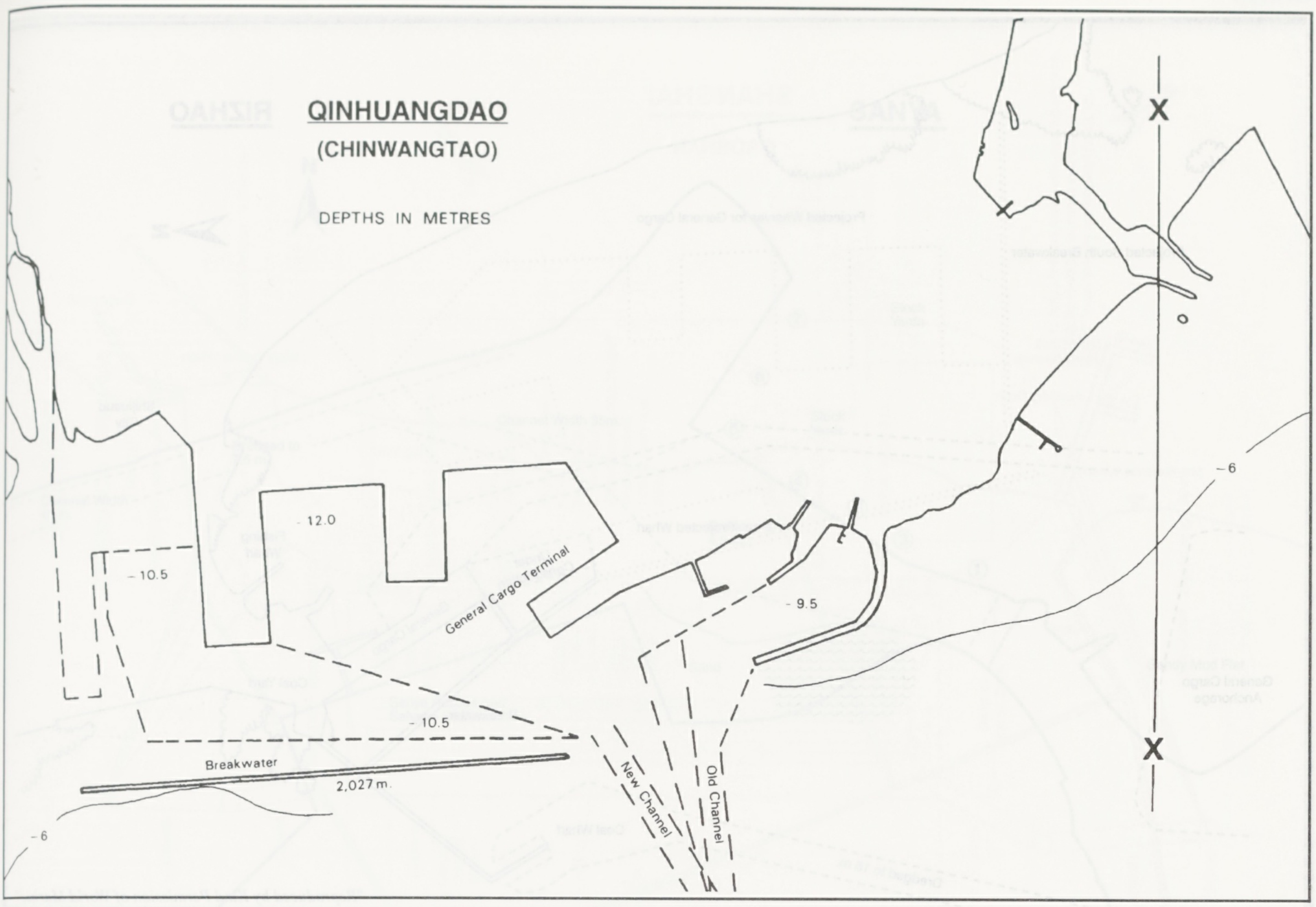
No. 1 Quarantine Anchorage
Inner Anchorage
Tanker Anchorage
Huang Dao
Haixi Island
Yin Island
N
Qian Wan District
Huang Dao
Planned Port Area
Jiaozhou Bay
Oil Wharf
Oil Storage Area
Huang Dao
Oil Wharf
Oil Wharf
Huang Dao
Qian Wan District
63
64
65
66
67
68

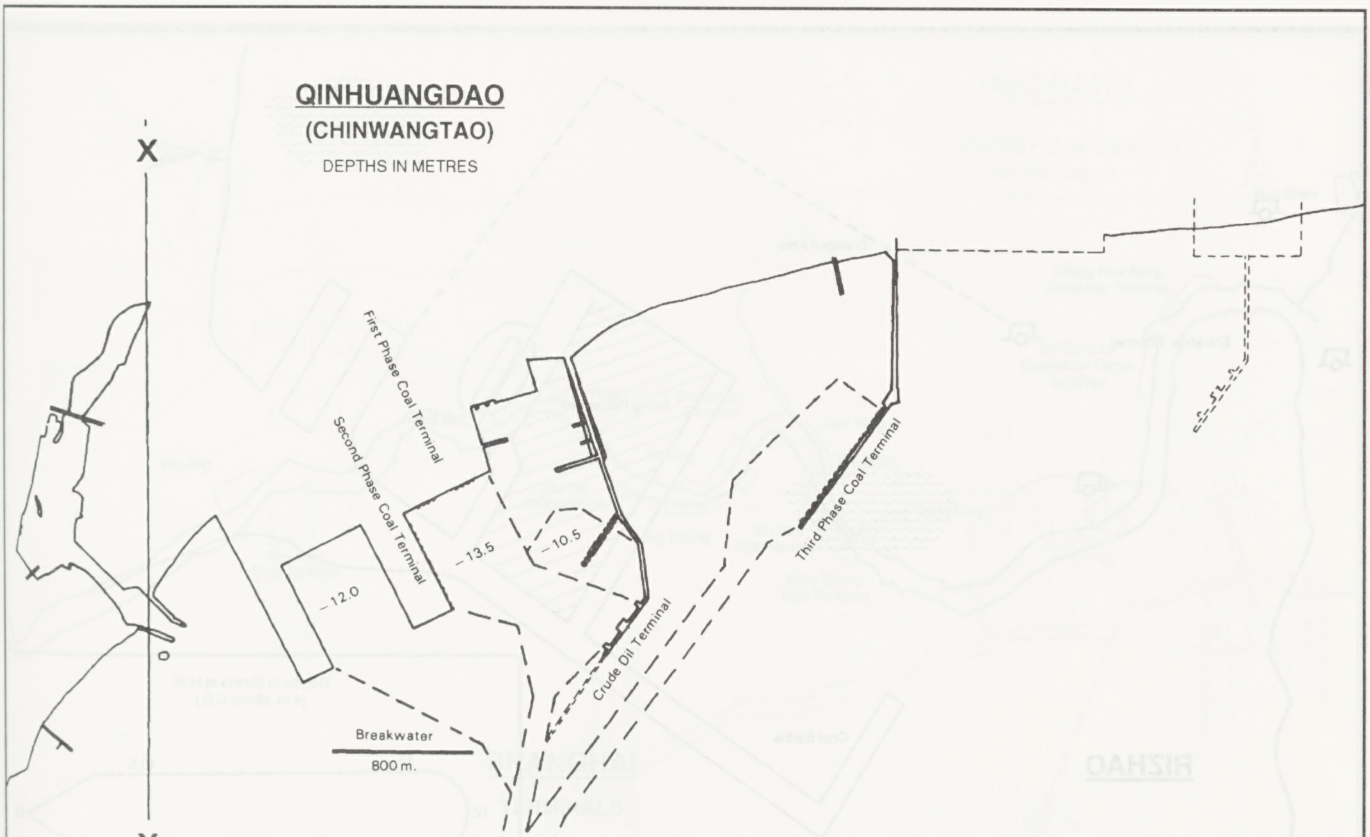

N
Transfer Terminal
Container Terminal
Wharf No. 5
52
53
51
50
49
Wharf No. 8
45
44
46
48
47
Wharf No. 7
DA GANG HARBOUR
Wharf No. 4
25
Wharf No. 3
13
14
15
12
16
Wharf No. 2
11
10
9
4
5
6
7
8
Wharf No. 1
3
2
1
35
36
40
42
41
Wharf No. 6
ZHONG GANG
XIAO GANG
QINGDAO

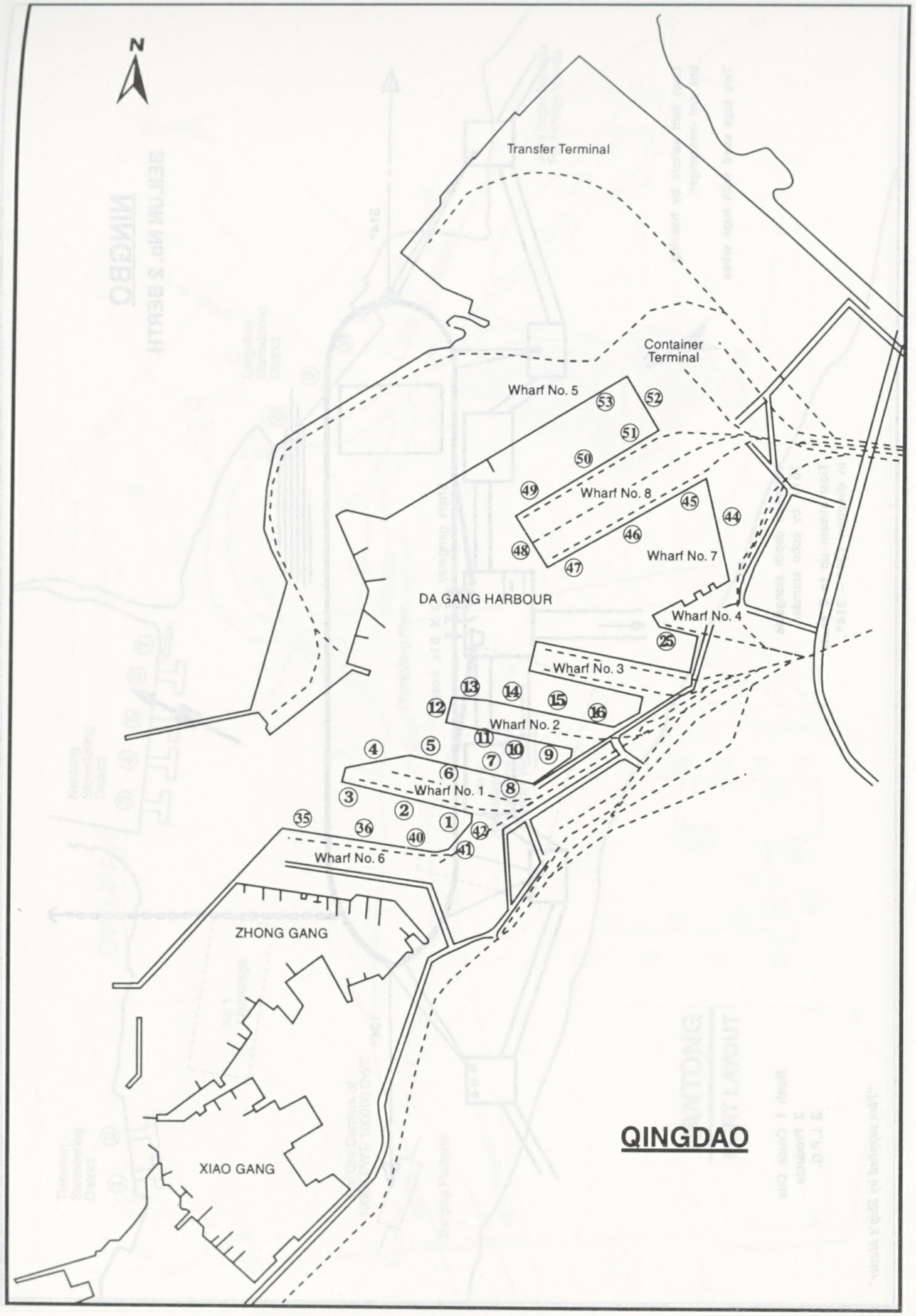

QINGDAO
BERTHING DIAGRAM
SOUNDINGS REDUCED TO CHART DATUM
Ship's Head
330°
Winch
20 m.
20 m.
16 m.
19 m.
Shore
6 in.
10 in.
Ship
14 in.
Hoses
Y Piece Reducer
18 m.
9 × 6 in. Manifolds
Fed by 3 × 6 in. Lines
16 m.
18.5 m.
Density 1025
16 m.
18 m.
18 m.
Winch

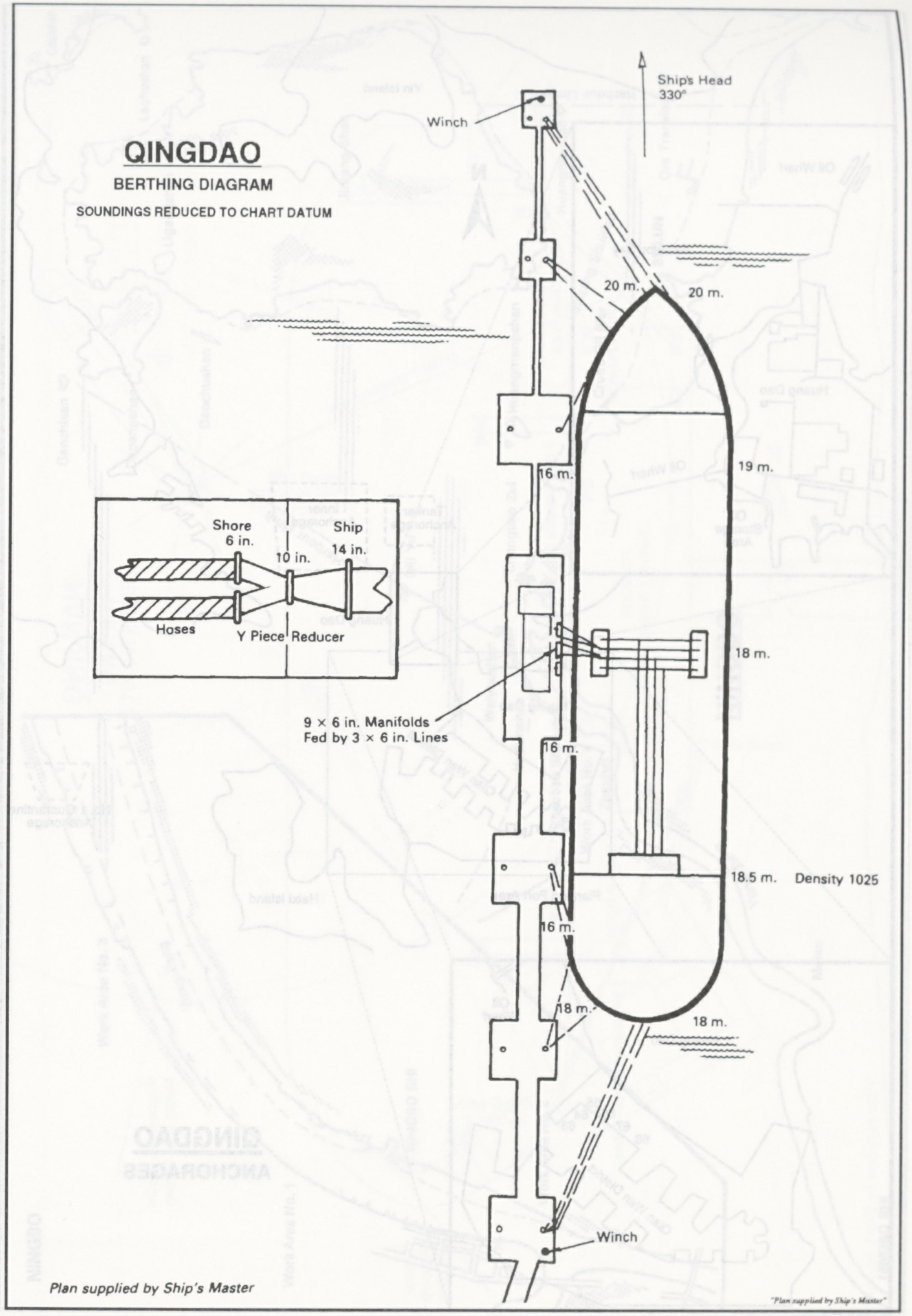
Plan supplied by Ship's Master

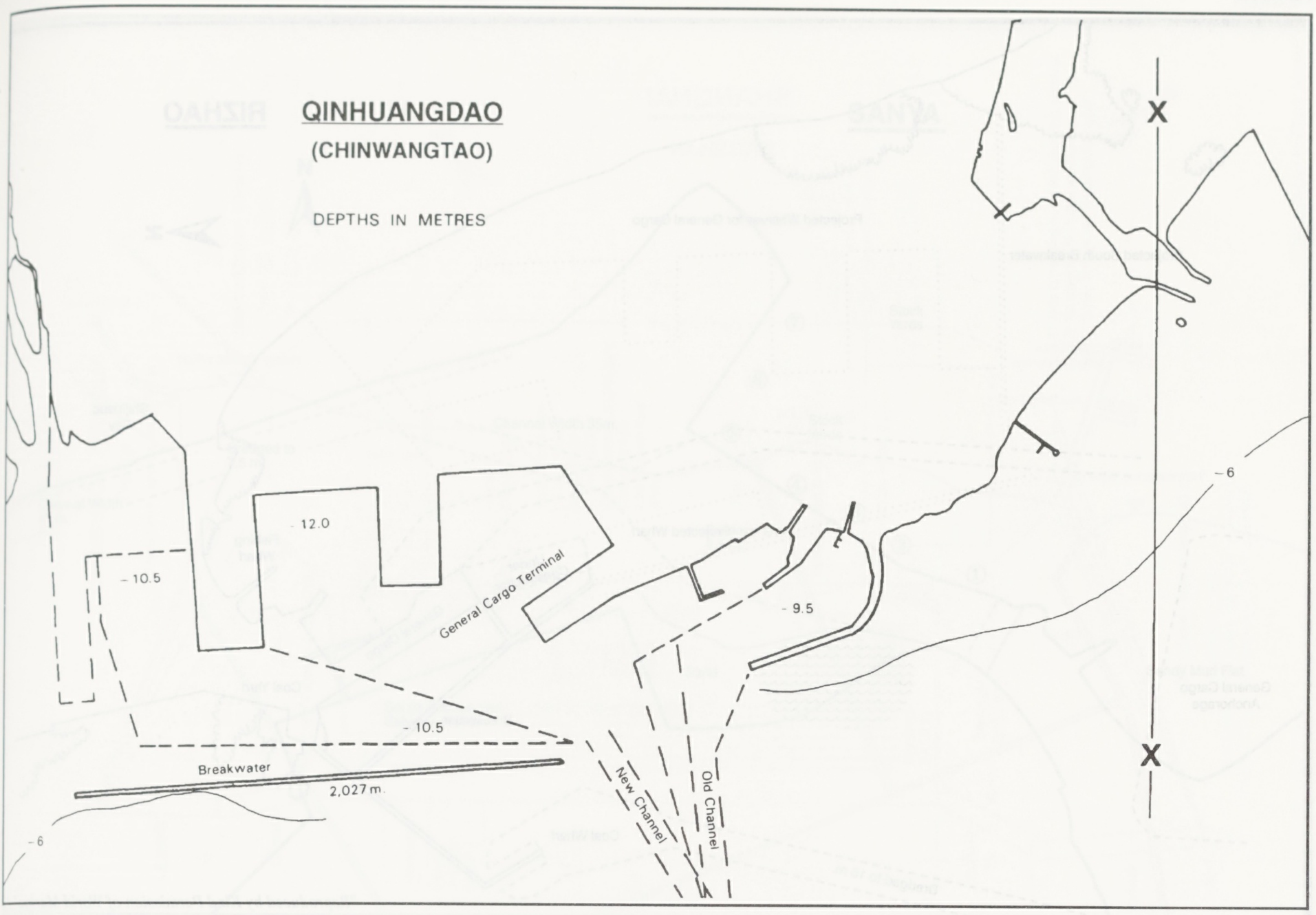
"Plan supplied by Ship's Master"

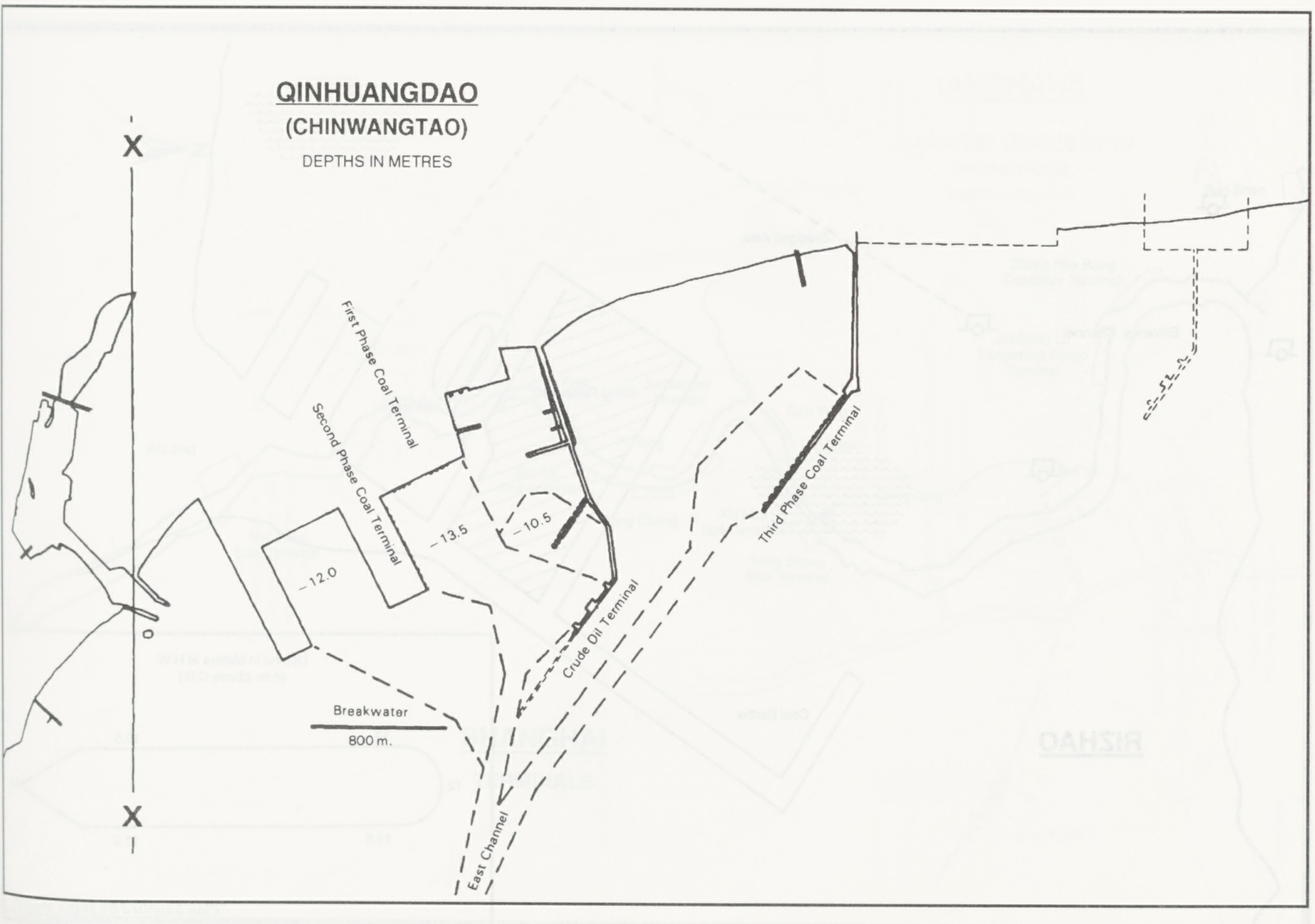

QINHUANGDAO
(CHINWANGTAO)
DEPTHS IN METRES
X
– 12.0
– 10.5
General Cargo Terminal
– 9.5
– 6
– 10.5
Breakwater
2,027 m.
New Channel
Old Channel
X
– 6

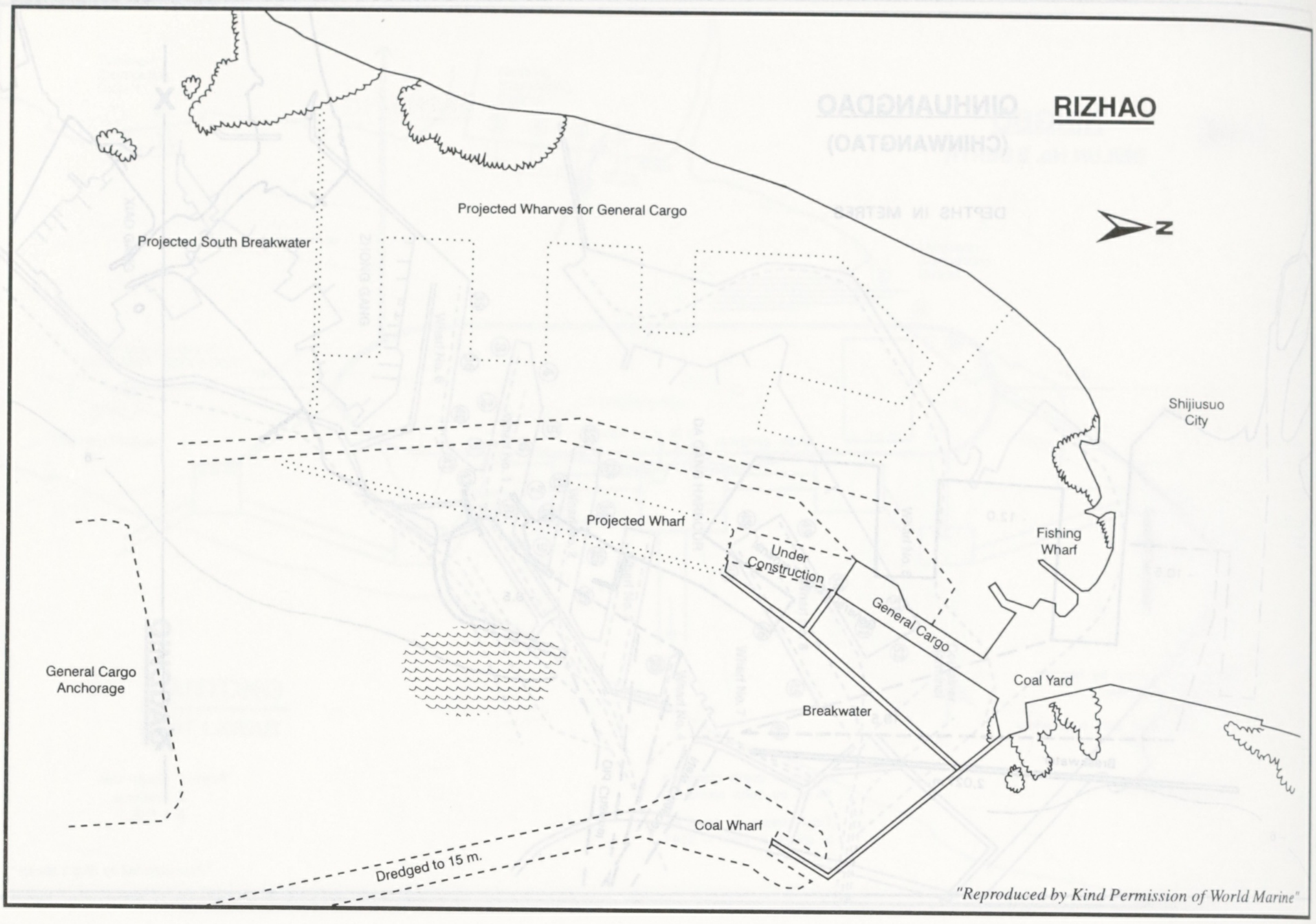

QINHUANGDAO
(CHINWANGTAO)
DEPTHS IN METRES
X
First Phase Coal Terminal
Second Phase Coal Terminal
Third Phase Coal Terminal
– 13.5
– 10.5
– 12.0
Crude Oil Terminal
Breakwater
800 m.
East Channel
X


N
Transfer Terminal
Container Terminal
Wharf No. 5
53
52
51
50
49
Wharf No. 8
45
44
46
48
47
Wharf No. 7
DA GANG HARBOUR
Wharf No. 4
25
Wharf No. 3
13
14
15
16
12
Wharf No. 2
11
10
9
4
5
7
6
8
Wharf No. 1
3
2
1
35
36
40
42
41
Wharf No. 6
ZHONG GANG
XIAO GANG
QINGDAO

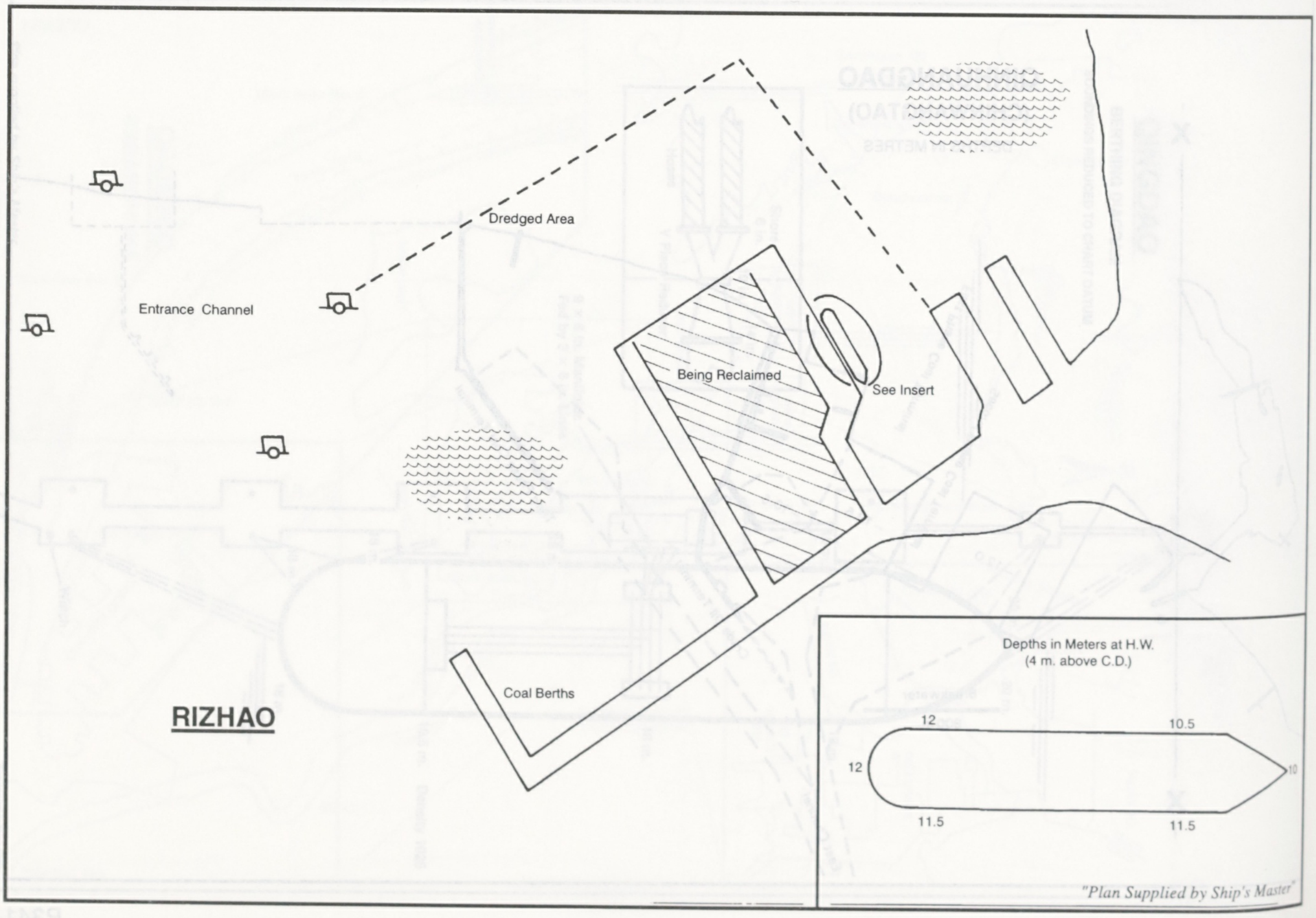

QINGDAO
BERTHING DIAGRAM
SOUNDINGS REDUCED TO CHART DATUM
Ship's Head 330°
Winch
20 m.
20 m.
16 m.
19 m.
Shore 6 in.
Ship 14 in.
10 in.
Hoses
Y Piece
Reducer
18 m.
9 × 6 in. Manifolds
Fed by 3 × 6 in. Lines
16 m.
18.5 m.
Density 1025
16 m.
18 m.
18 m.
Winch
Plan supplied by Ship's Master


QINHUANGDAO
(CHINWANGTAO)
DEPTHS IN METRES
X
X
- 12.0
- 10.5
General Cargo Terminal
- 9.5
- 6
- 10.5
Breakwater
2,027 m.
New Channel
Old Channel
- 6

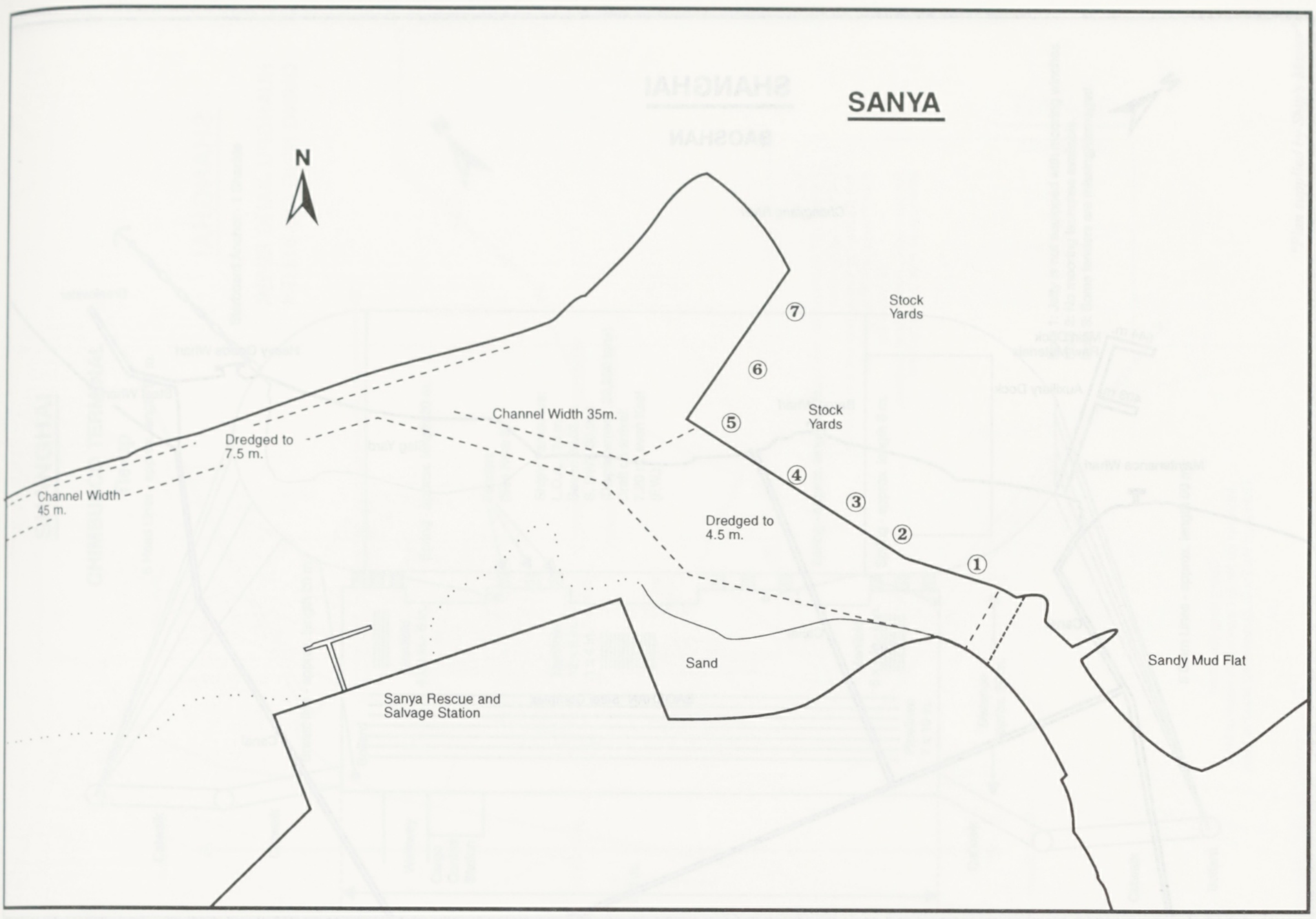

QINHUANGDAO
(CHINWANGTAO)
DEPTHS IN METRES
X
First Phase Coal Terminal
Second Phase Coal Terminal
- 13.5
- 10.5
- 12.0
Third Phase Coal Terminal
Crude Oil Terminal
Breakwater
800 m.
East Channel
X


RIZHAO
N
Projected Wharves for General Cargo
Projected South Breakwater
Shijiusuo City
Fishing Wharf
Projected Wharf
Under Construction
General Cargo
General Cargo Anchorage
Coal Yard
Breakwater
Coal Wharf
Dredged to 15 m.

"Reproduced by Kind Permission of World Marine"

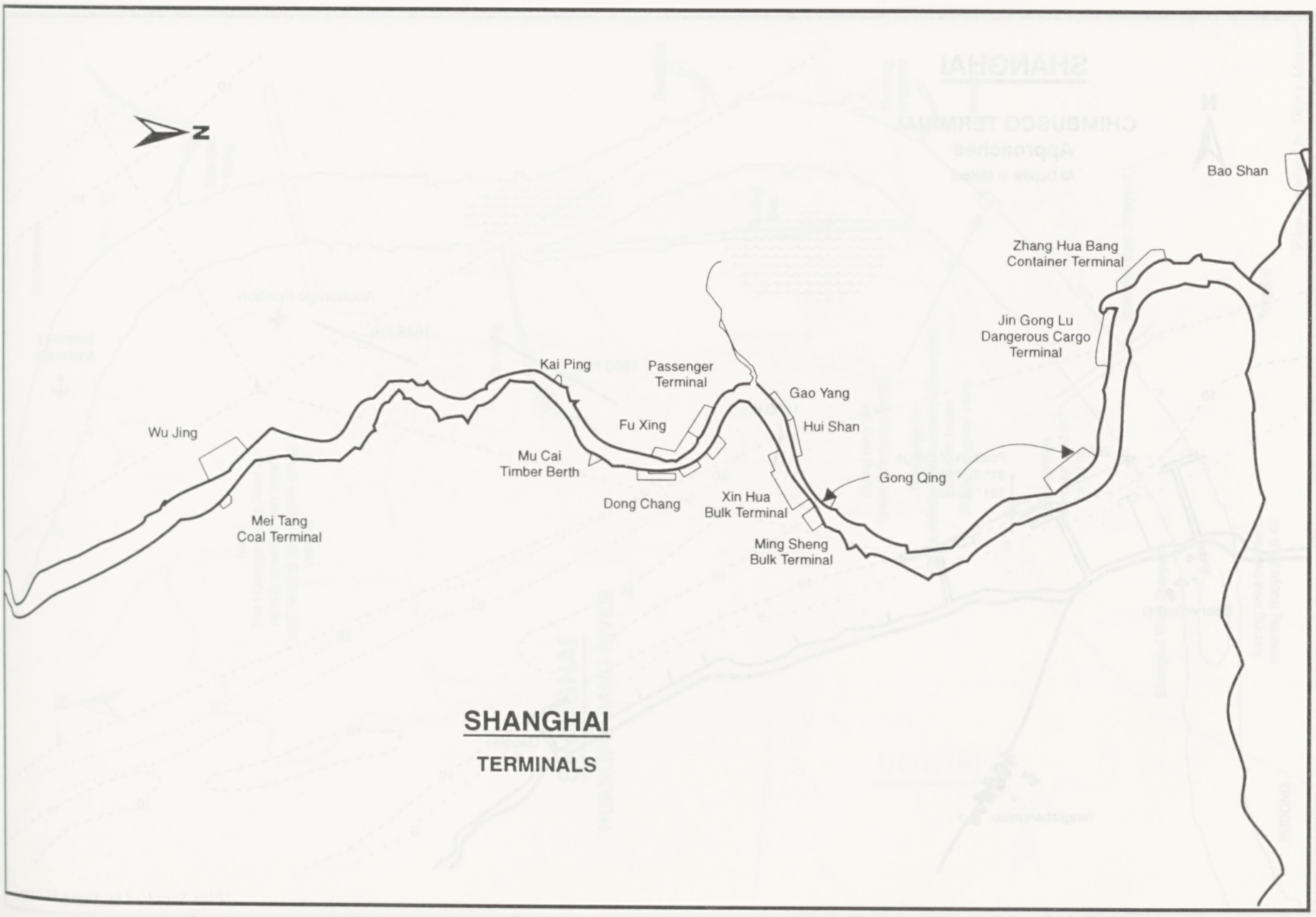

Dredged Area
Entrance Channel
Being Reclaimed
See Insert
Coal Berths
RIZHAO
Depths in Meters at H.W.
(4 m. above C.D.)
12
10.5
12
10
11.5
11.5

"Plan Supplied by Ship's Master"



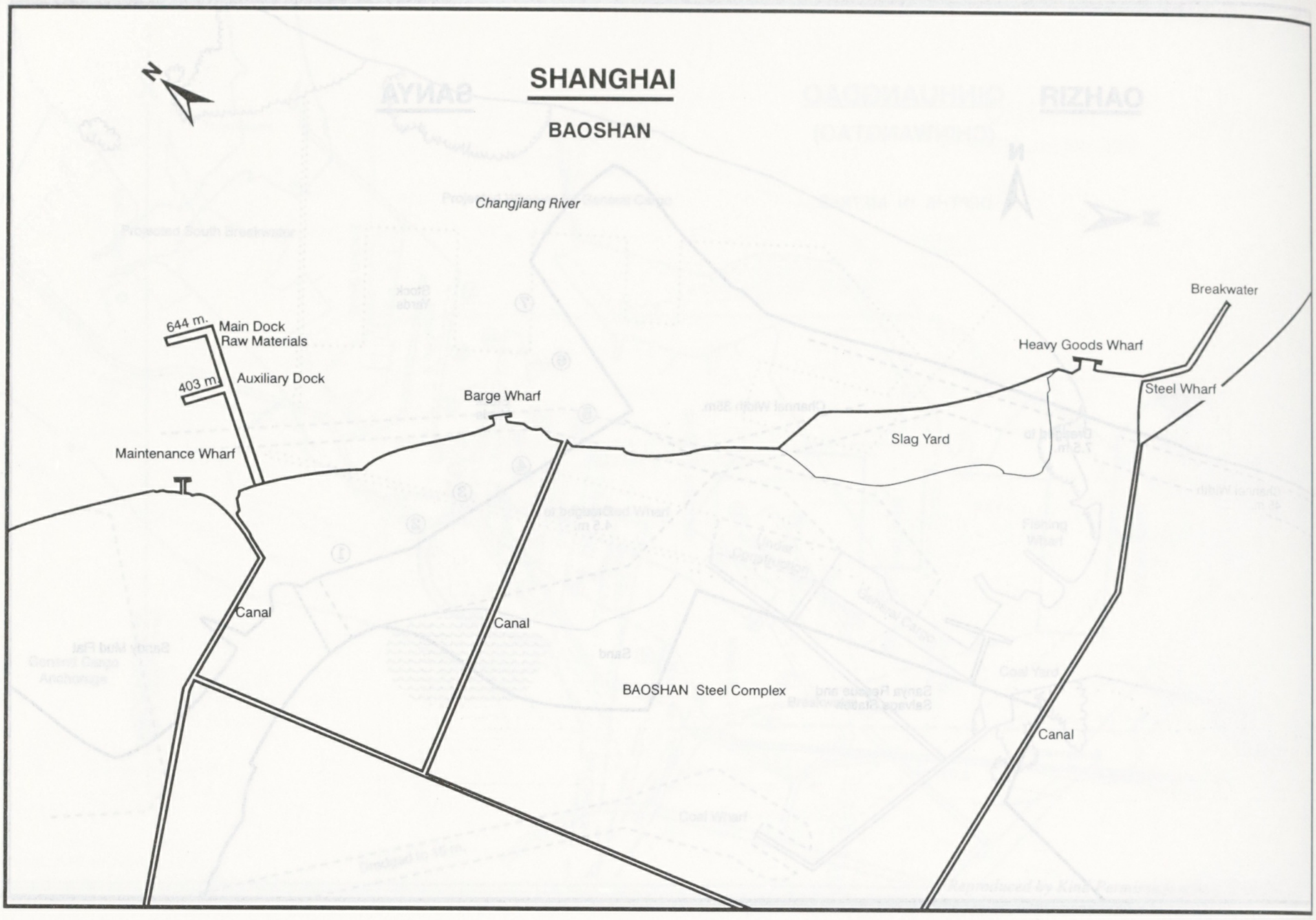
SANYA

N
Stock Yards
⑦
⑥
Channel Width 35m.
⑤
Stock Yards
Dredged to 7.5 m.
④
③
Channel Width 45 m.
②
Dredged to 4.5 m.
①
Sand
Sandy Mud Flat
Sanya Rescue and Salvage Station



SHANGHAI
TERMINALS

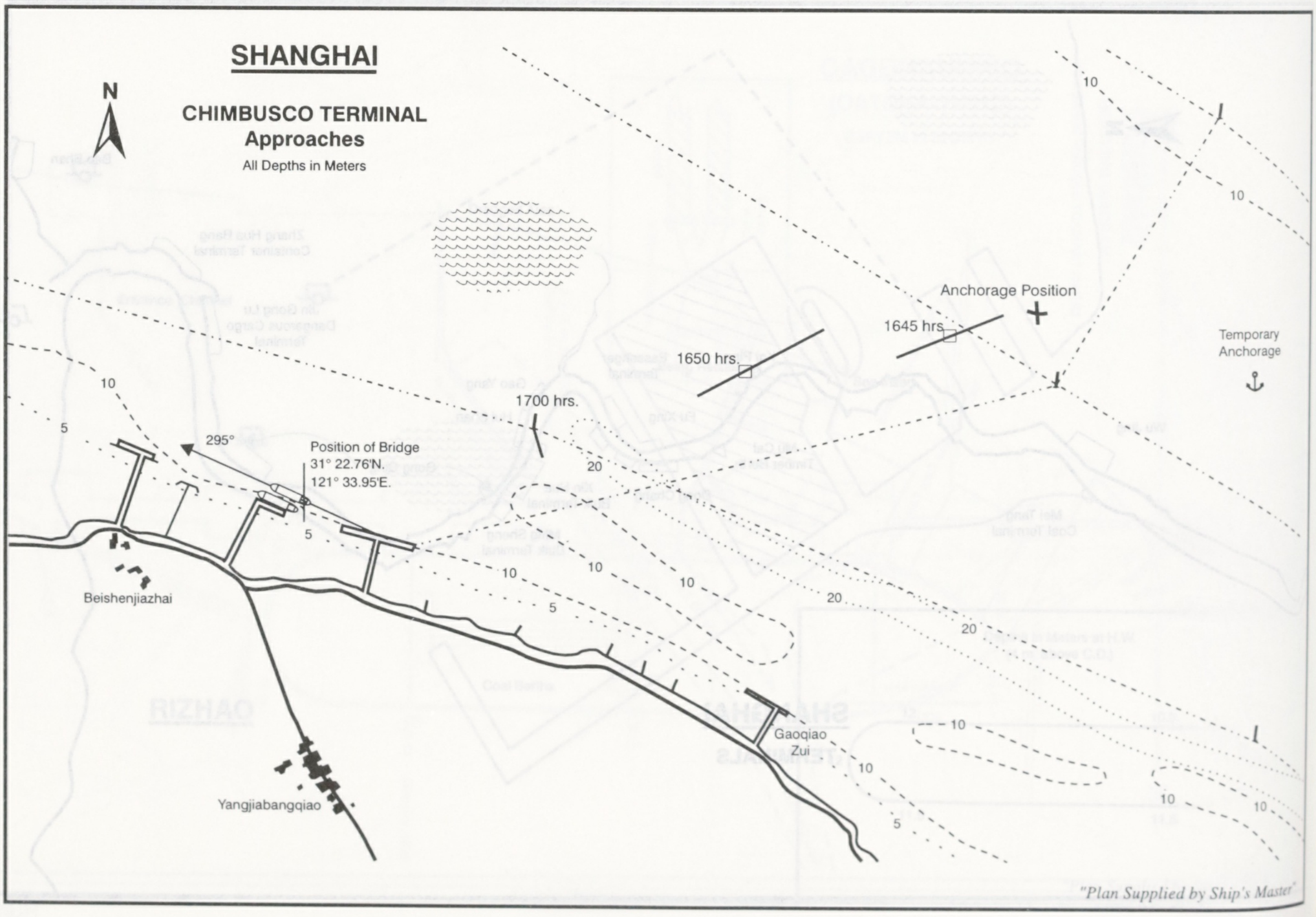
N
N
Bao Shan
Zhang Hua Bang Container Terminal
Jin Gong Lu Dangerous Cargo Terminal
Kai Ping
Passenger Terminal
Gao Yang
Fu Xing
Hui Shan
Wu Jing
Mu Cai Timber Berth
Gong Qing
Dong Chang
Xin Hua Bulk Terminal
Ming Sheng Bulk Terminal
Mei Tang Coal Terminal



SHANGHAI

BAOSHAN

N
Changjiang River
644 m.
Main Dock
Raw Materials
403 m.
Auxiliary Dock
Maintenance Wharf
Barge Wharf
Heavy Goods Wharf
Breakwater
Steel Wharf
Slag Yard
Canal
Canal
Canal
BAOSHAN Steel Complex

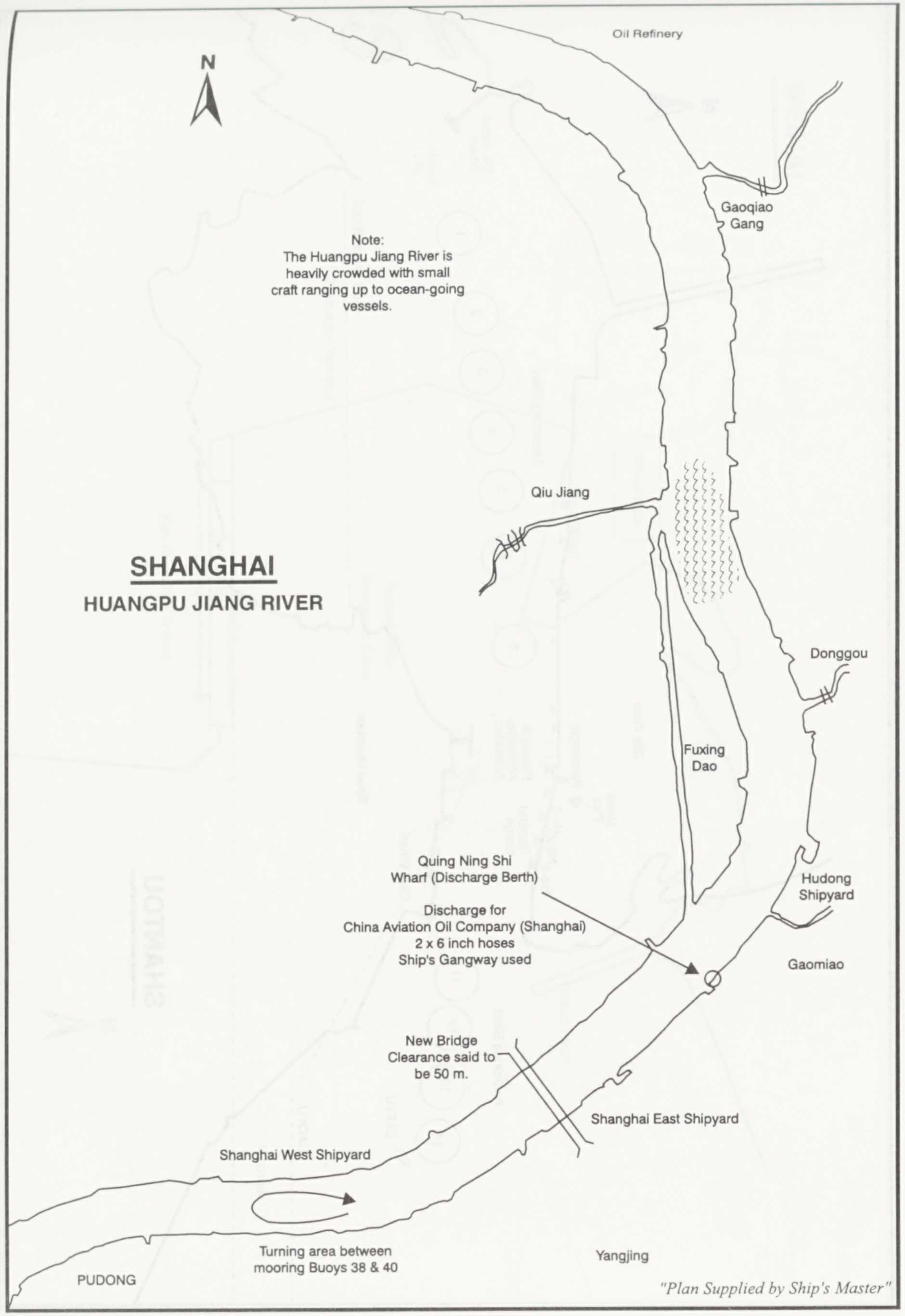


SHANGHAI

CHIMBUSCO TERMINAL
Approaches
All Depths in Meters

N
Anchorage Position
1645 hrs.
1650 hrs.
1700 hrs.
Temporary
Anchorage
295°
Position of Bridge
31° 22.76'N.
121° 33.95'E.
Beishenjiazhai
Yangjiabangqiao
Gaoqiao
Zui
10
10
10
10
10
10
10
10
10
10
10
5
5
5
5
20
20
20

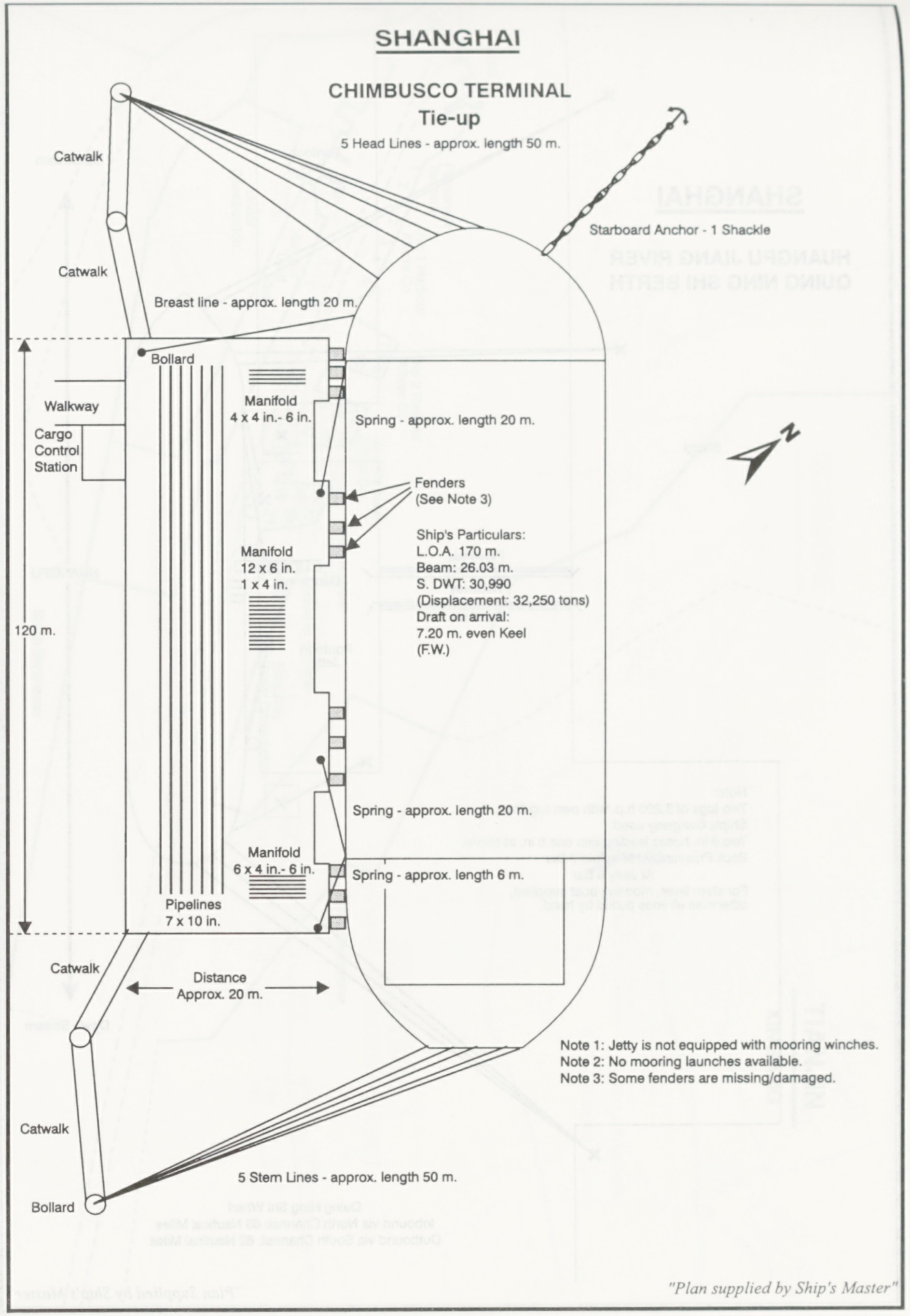
"Plan Supplied by Ship's Master"


SHANGHAI
HUANGPU JIANG RIVER
N
Oil Refinery
Gaoqiao Gang
Qiu Jiang
Donggou
Fuxing Dao
Hudong Shipyard
Gaomiao
Quing Ning Shi Wharf (Discharge Berth)
New Bridge Clearance said to be 50 m.
Shanghai East Shipyard
Shanghai West Shipyard
Turning area between mooring Buoys 38 & 40
Yangjing
PUDONG

Note:
The Huangpu Jiang River is heavily crowded with small craft ranging up to ocean-going vessels.

Discharge for
China Aviation Oil Company (Shanghai)
2 x 6 inch hoses
Ship's Gangway used

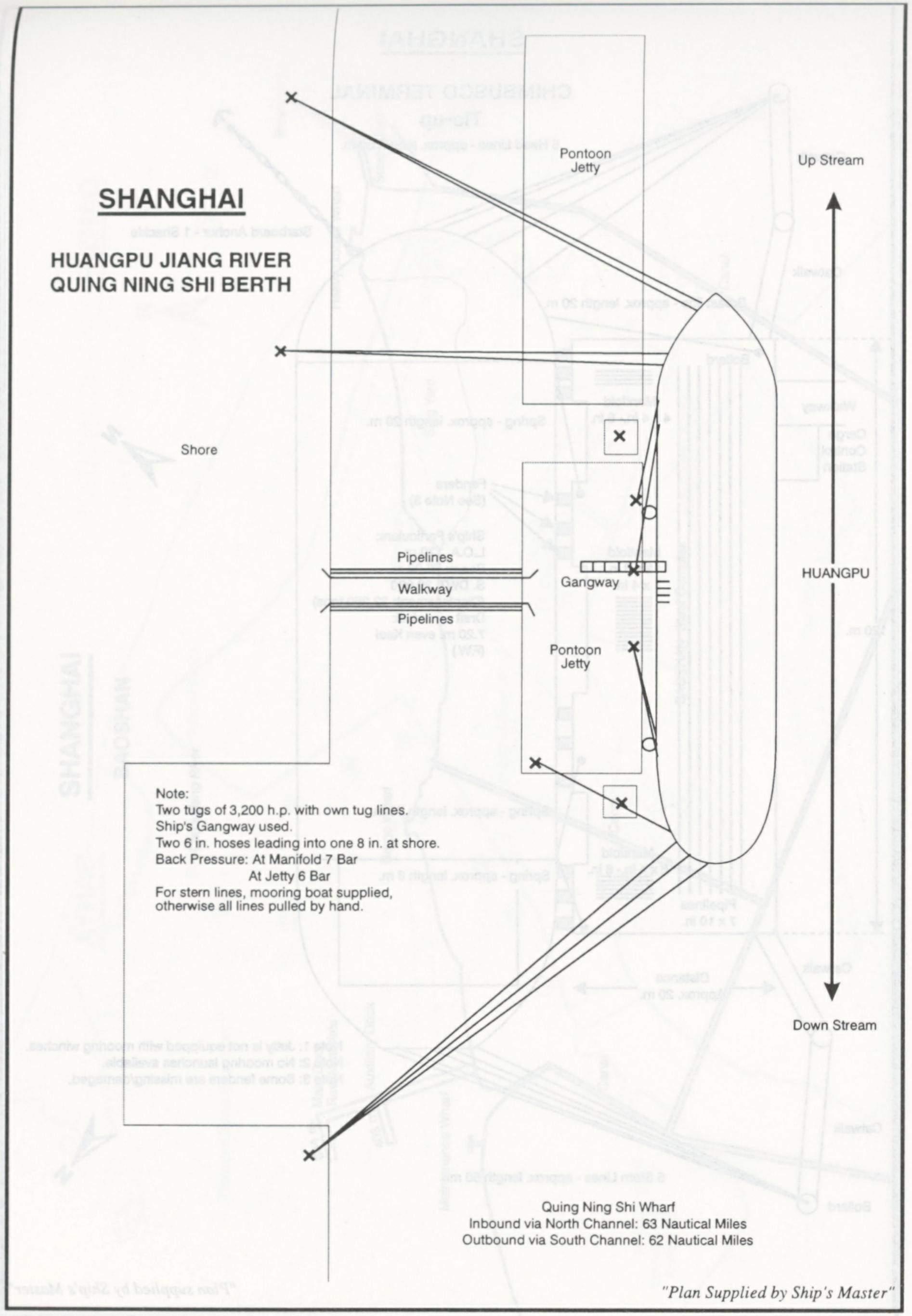
"Plan Supplied by Ship's Master"


SHANGHAI
CHIMBUSCO TERMINAL
Tie-up
5 Head Lines - approx. length 50 m.
Catwalk
Catwalk
Starboard Anchor - 1 Shackle
Breast line - approx. length 20 m.
Bollard
Walkway
Cargo Control Station
Manifold 4 x 4 in.- 6 in.
Spring - approx. length 20 m.
Fenders (See Note 3)
Manifold 12 x 6 in. 1 x 4 in.
120 m.
Spring - approx. length 20 m.
Manifold 6 x 4 in.- 6 in.
Spring - approx. length 6 m.
Pipelines 7 x 10 in.
Catwalk
Distance Approx. 20 m.
Catwalk
Bollard
5 Stern Lines - approx. length 50 m.
N

Ship's Particulars:
L.O.A. 170 m.
Beam: 26.03 m.
S. DWT: 30,990
(Displacement: 32,250 tons)
Draft on arrival:
7.20 m. even Keel
(F.W.)

Note 1: Jetty is not equipped with mooring winches.
Note 2: No mooring launches available.
Note 3: Some fenders are missing/damaged.

"Plan supplied by Ship's Master"



SHANGHAI

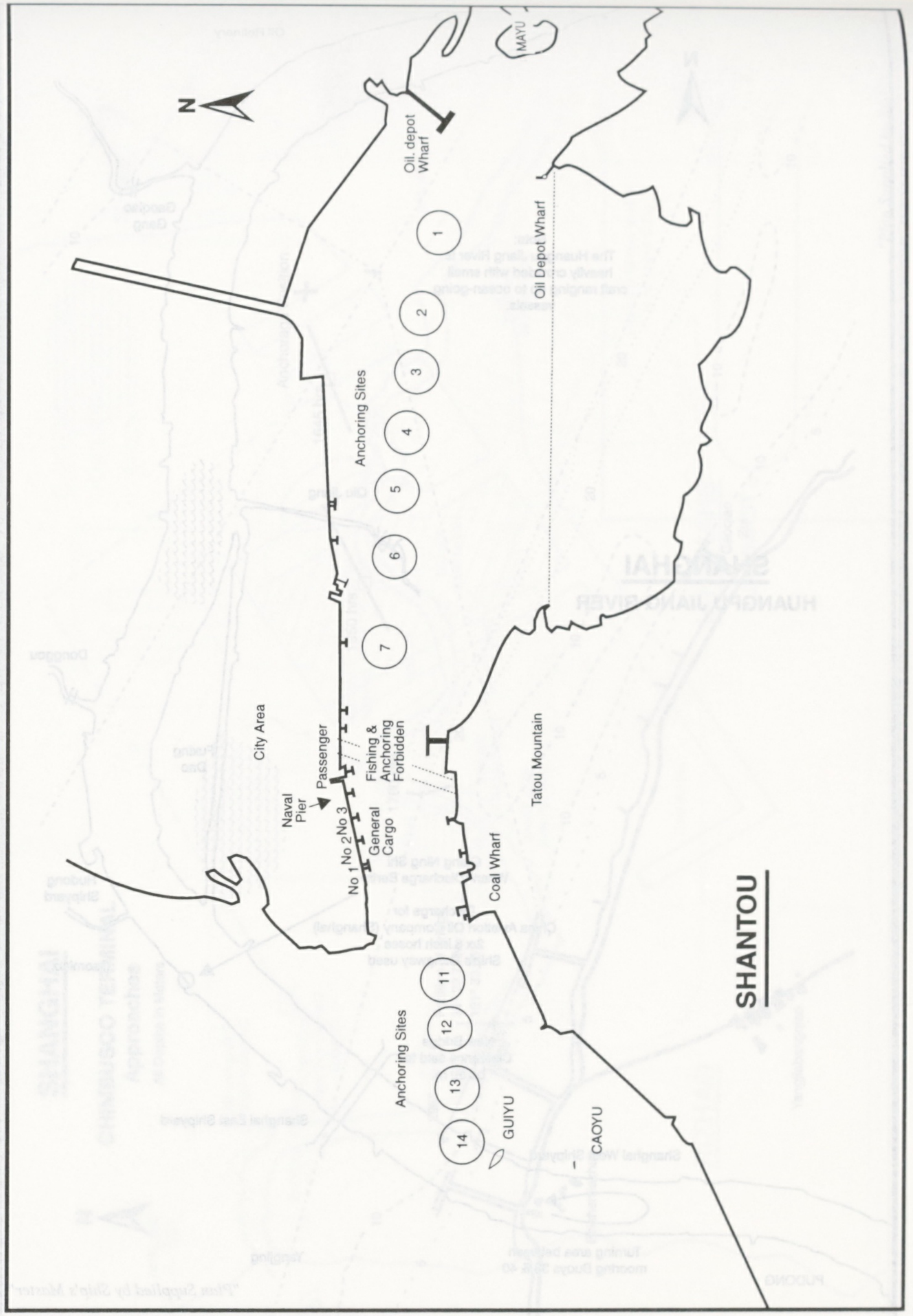
HUANGPU JIANG RIVER
QUING NING SHI BERTH

Shore
Pontoon Jetty
Up Stream
Pipelines
Walkway
Pipelines
Gangway
HUANGPU
Pontoon Jetty
Down Stream

Note:
Two tugs of 3,200 h.p. with own tug lines.
Ship's Gangway used.
Two 6 in. hoses leading into one 8 in. at shore.
Back Pressure: At Manifold 7 Bar
At Jetty 6 Bar
For stern lines, mooring boat supplied, otherwise all lines pulled by hand.

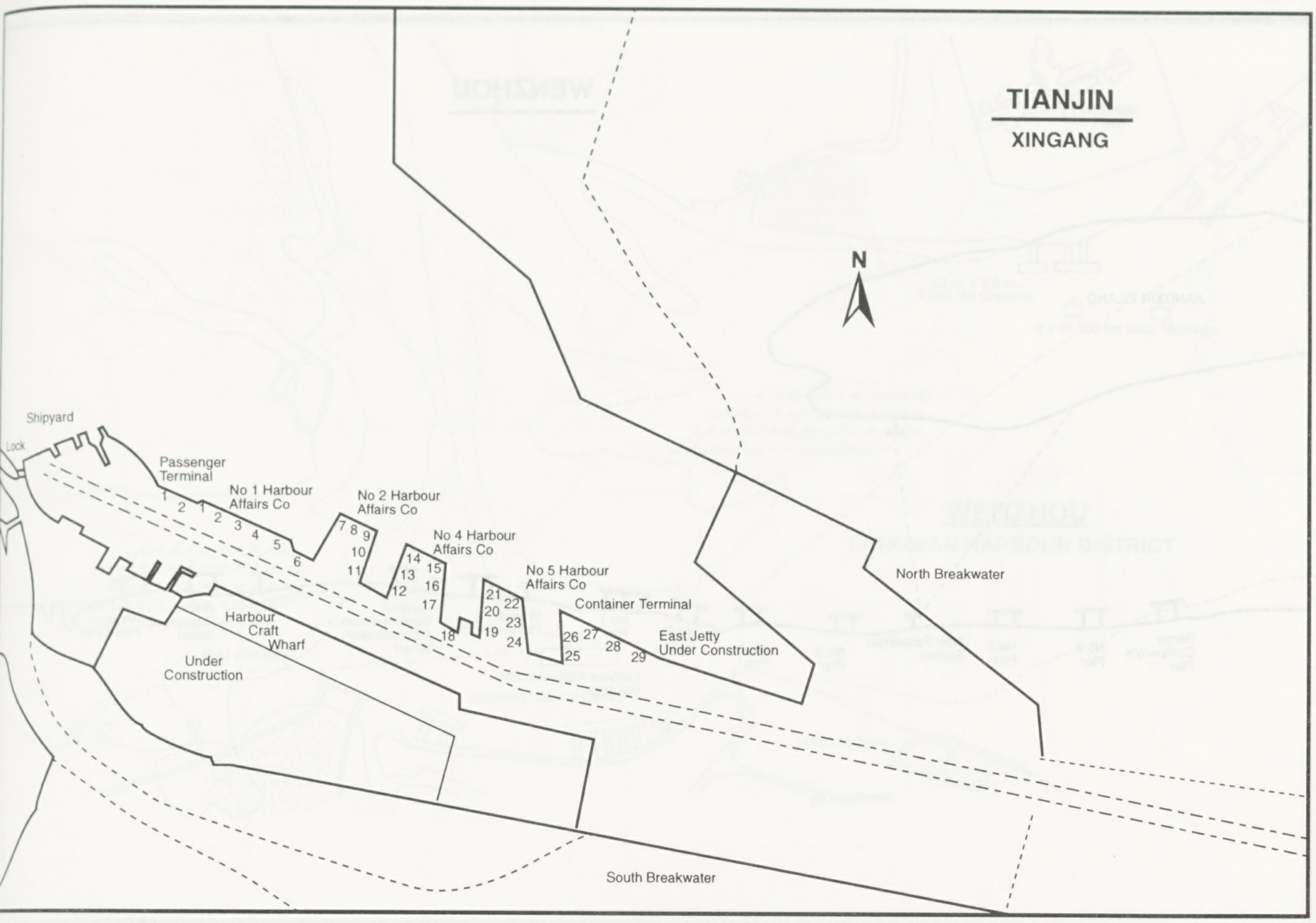
Quing Ning Shi Wharf
Inbound via North Channel: 63 Nautical Miles
Outbound via South Channel: 62 Nautical Miles

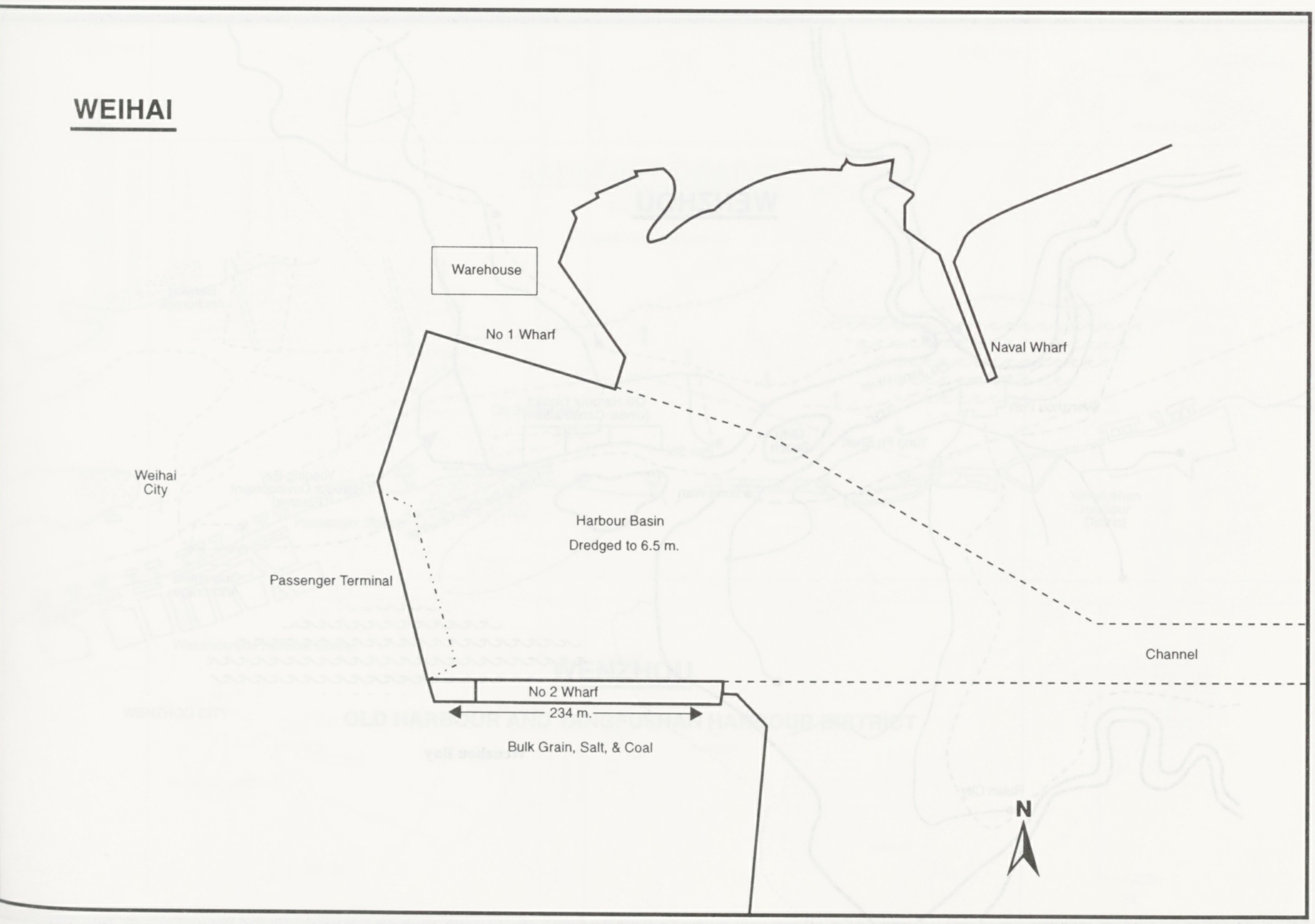
"Plan Supplied by Ship's Master"

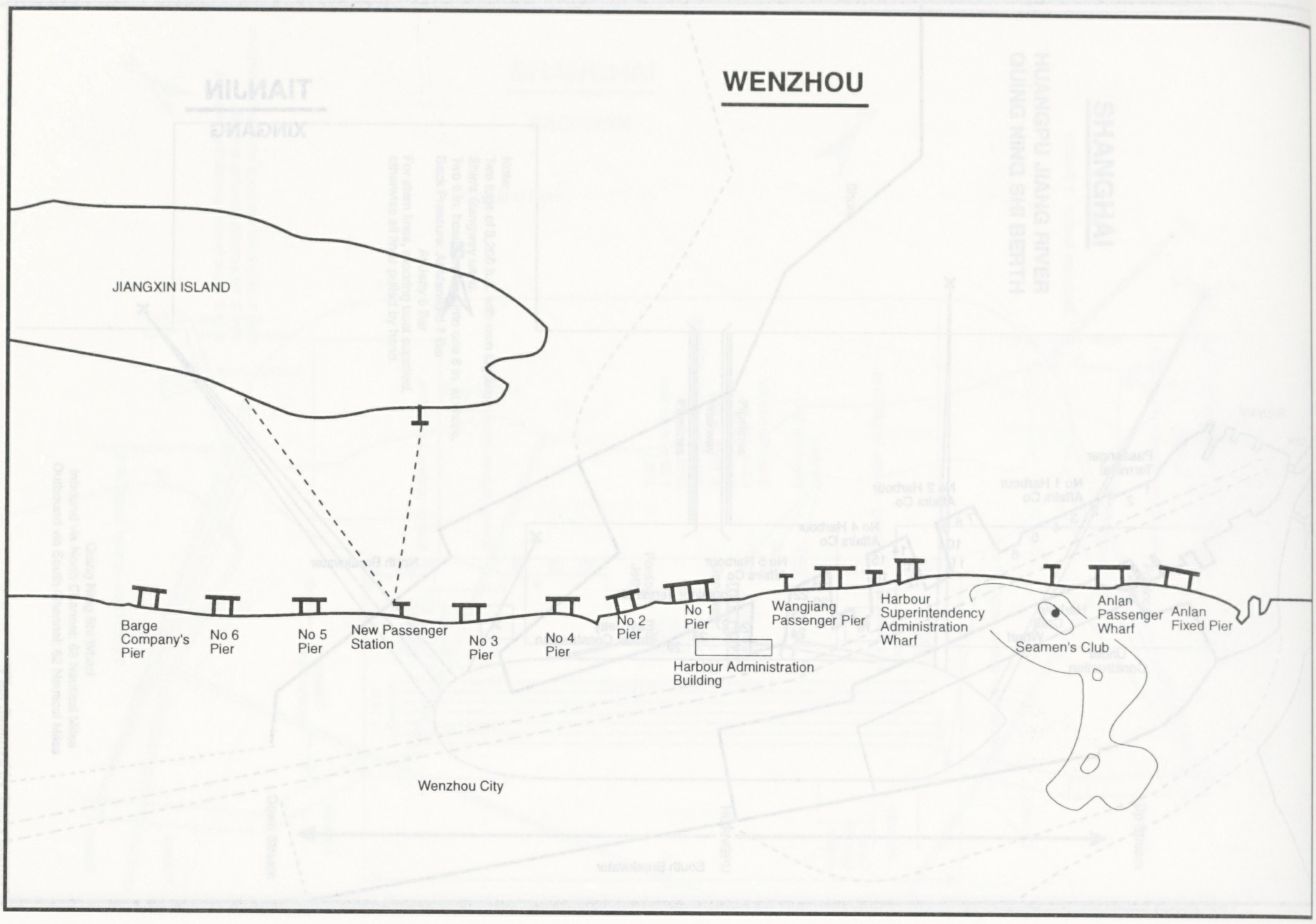


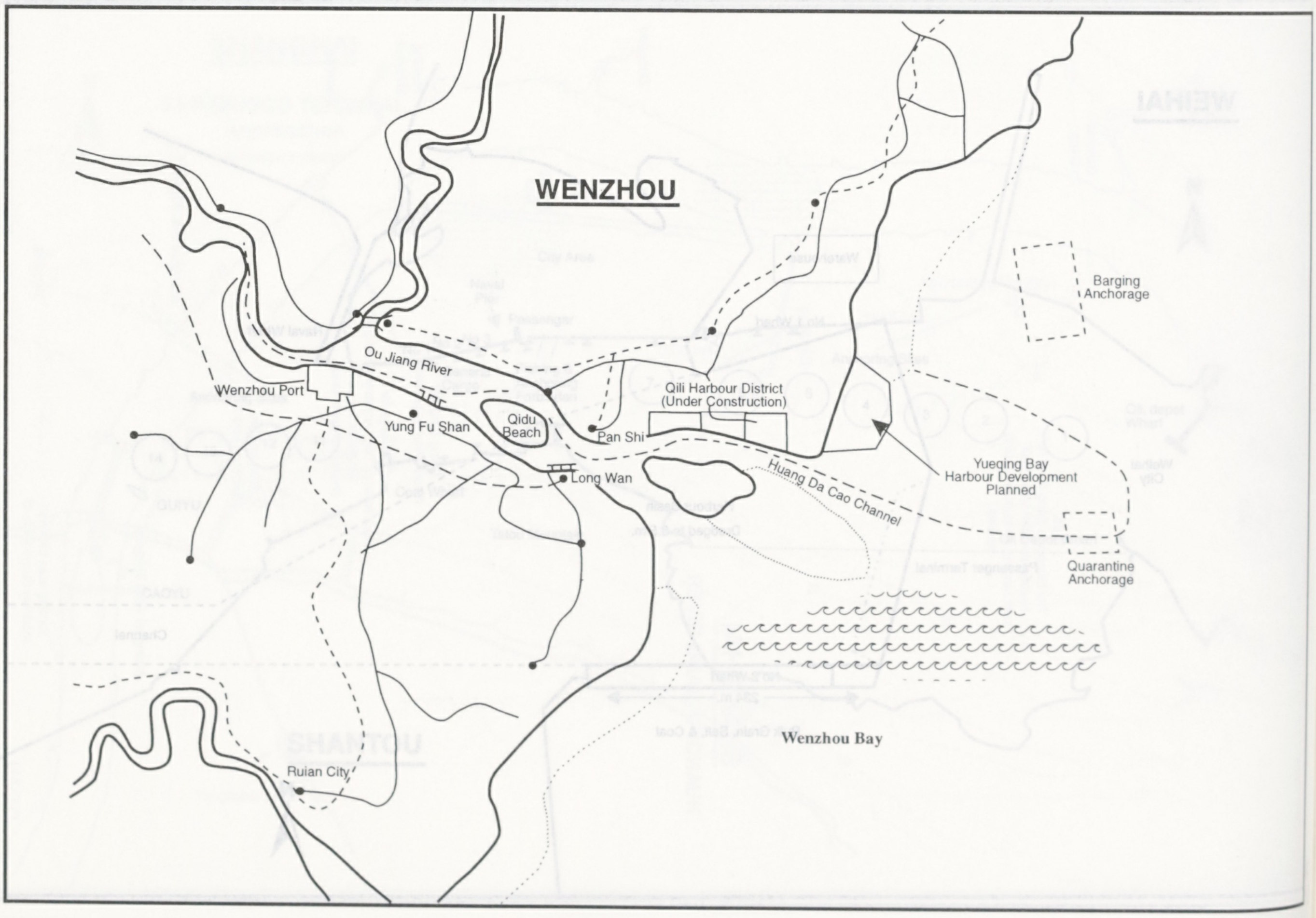
SHANTOU

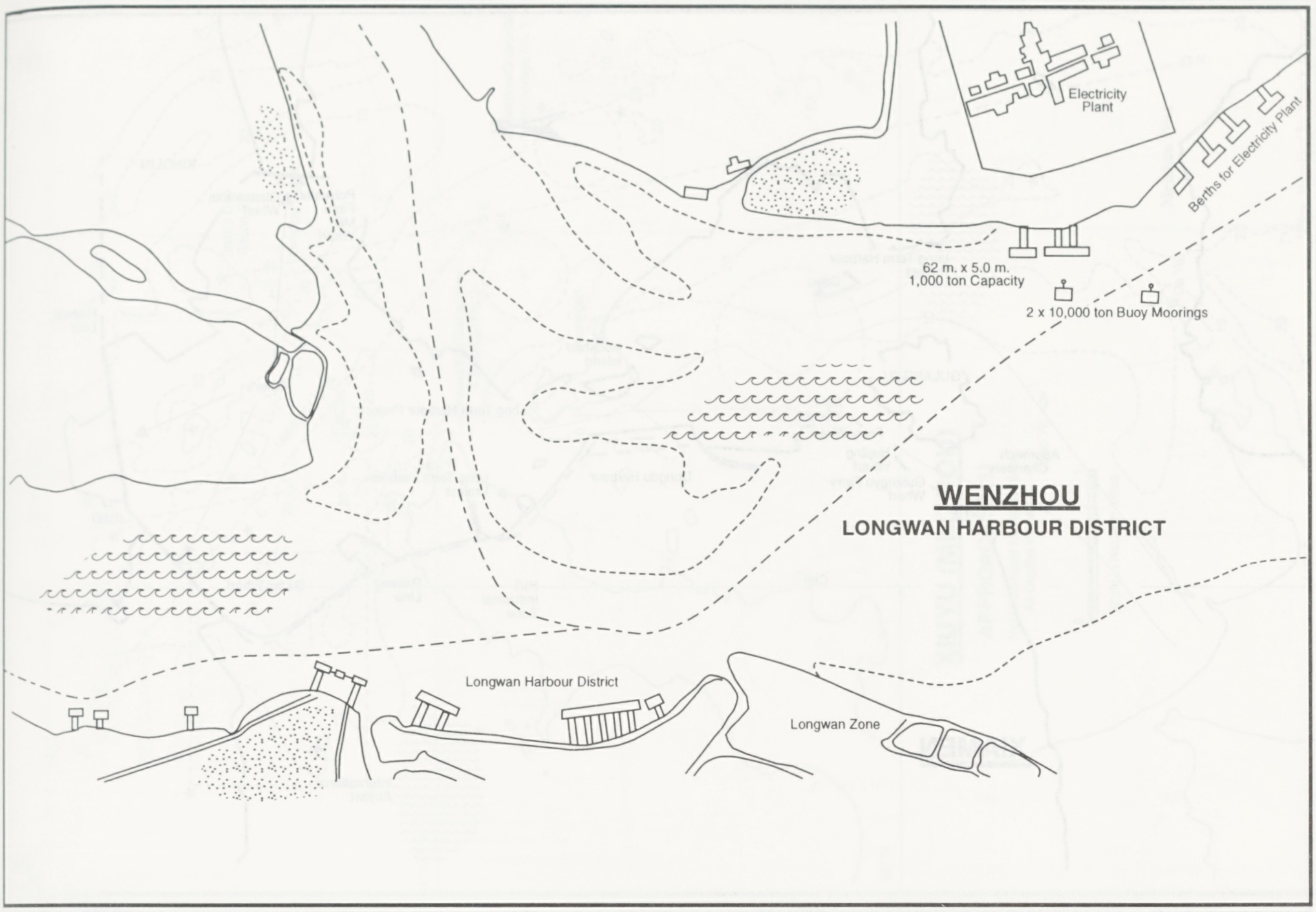
N
MAYU
Oil. depot Wharf
Oil Depot Wharf
1
2
3
4
5
6
7
Anchoring Sites
City Area
Naval Pier
Passenger
Fishing & Anchoring Forbidden
No 1
No 2
No 3
General Cargo
Coal Wharf
Tatou Mountain
11
12
13
14
Anchoring Sites
GUIYU
CAOYU


TIANJIN
XINGANG
N
Shipyard
Lock
Passenger Terminal
No 1 Harbour Affairs Co
No 2 Harbour Affairs Co
No 4 Harbour Affairs Co
No 5 Harbour Affairs Co
1
2
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
Container Terminal
East Jetty Under Construction
North Breakwater
Harbour Craft Wharf
Under Construction
South Breakwater


WEIHAI
Warehouse
No 1 Wharf
Naval Wharf
Weihai City
Harbour Basin
Dredged to 6.5 m.
Passenger Terminal
Channel
No 2 Wharf
234 m.
Bulk Grain, Salt, & Coal
N


WENZHOU
JIANGXIN ISLAND
Barge Company's Pier
No 6 Pier
No 5 Pier
New Passenger Station
No 3 Pier
No 4 Pier
No 2 Pier
No 1 Pier
Harbour Administration Building
Wangjiang Passenger Pier
Harbour Superintendency Administration Wharf
Seamen's Club
Anlan Passenger Wharf
Anlan Fixed Pier
Wenzhou City

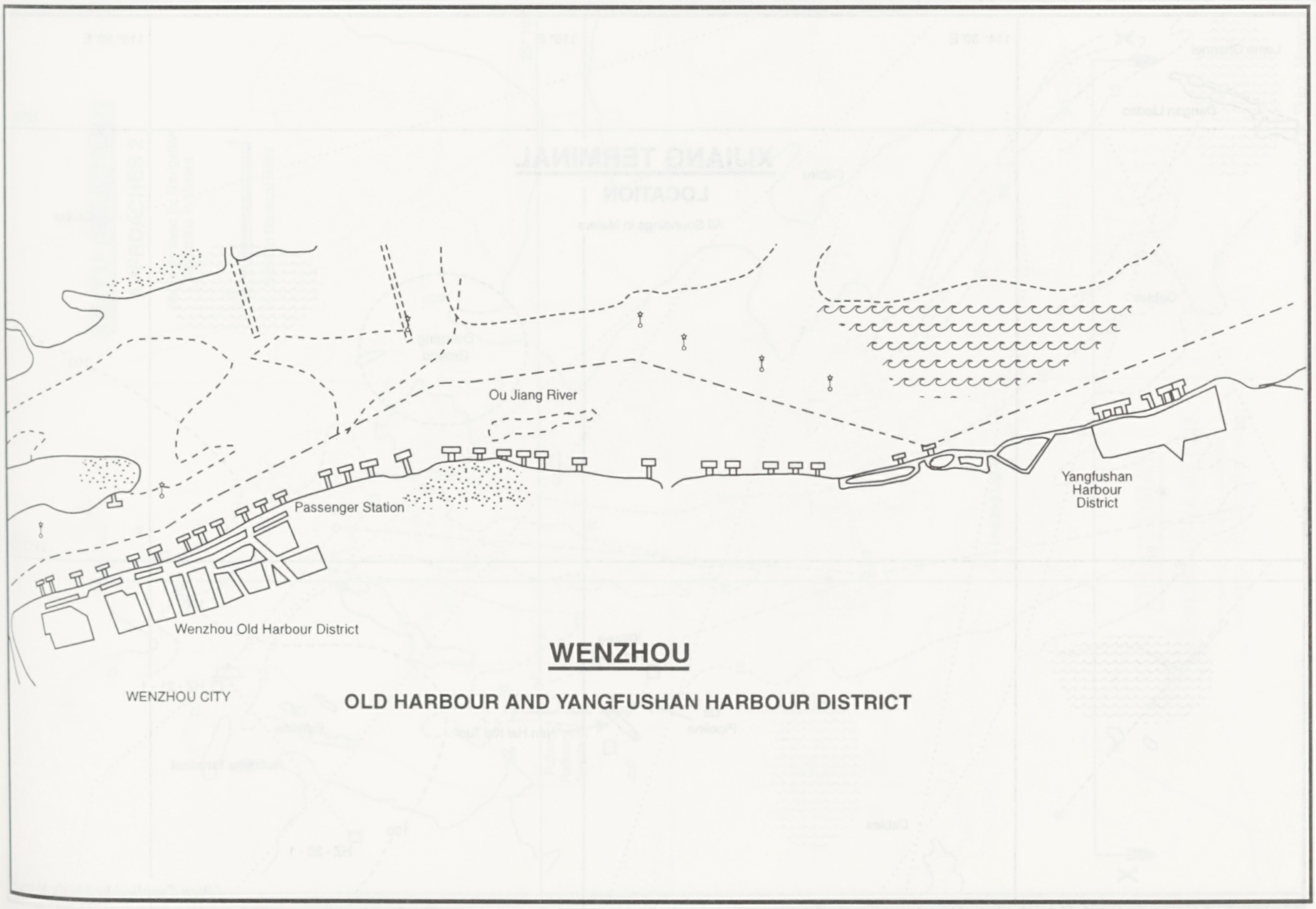

WENZHOU
Barging Anchorage
Ou Jiang River
Wenzhou Port
Yung Fu Shan
Qidu Beach
Pan Shi
Qili Harbour District (Under Construction)
Long Wan
Huang Da Cao Channel
Yueqing Bay Harbour Development Planned
Quarantine Anchorage
Wenzhou Bay
Ruian City



WENZHOU

LONGWAN HARBOUR DISTRICT

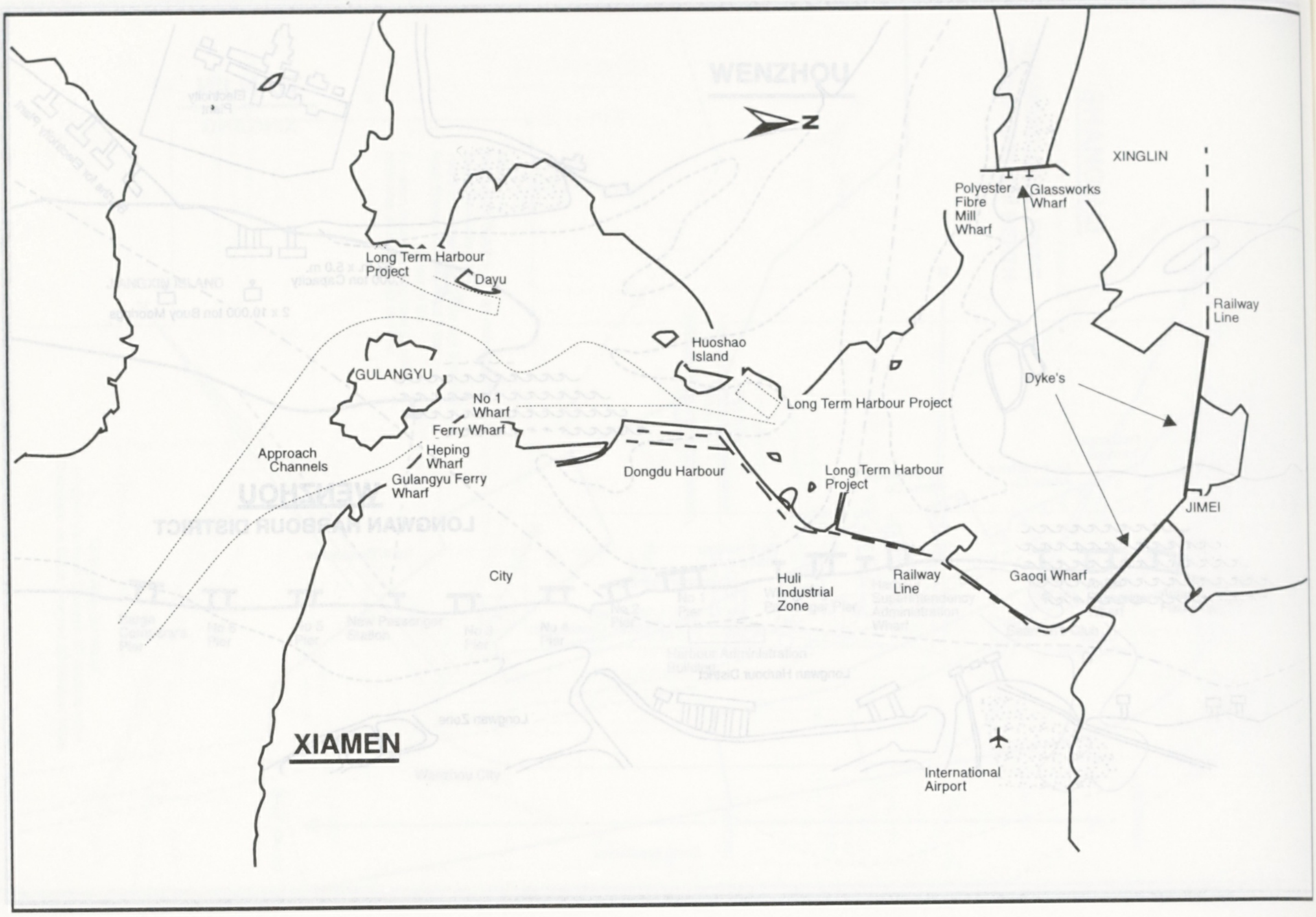
Electricity Plant
Berths for Electricity Plant
62 m. x 5.0 m.
1,000 ton Capacity
2 x 10,000 ton Buoy Moorings
Longwan Harbour District
Longwan Zone

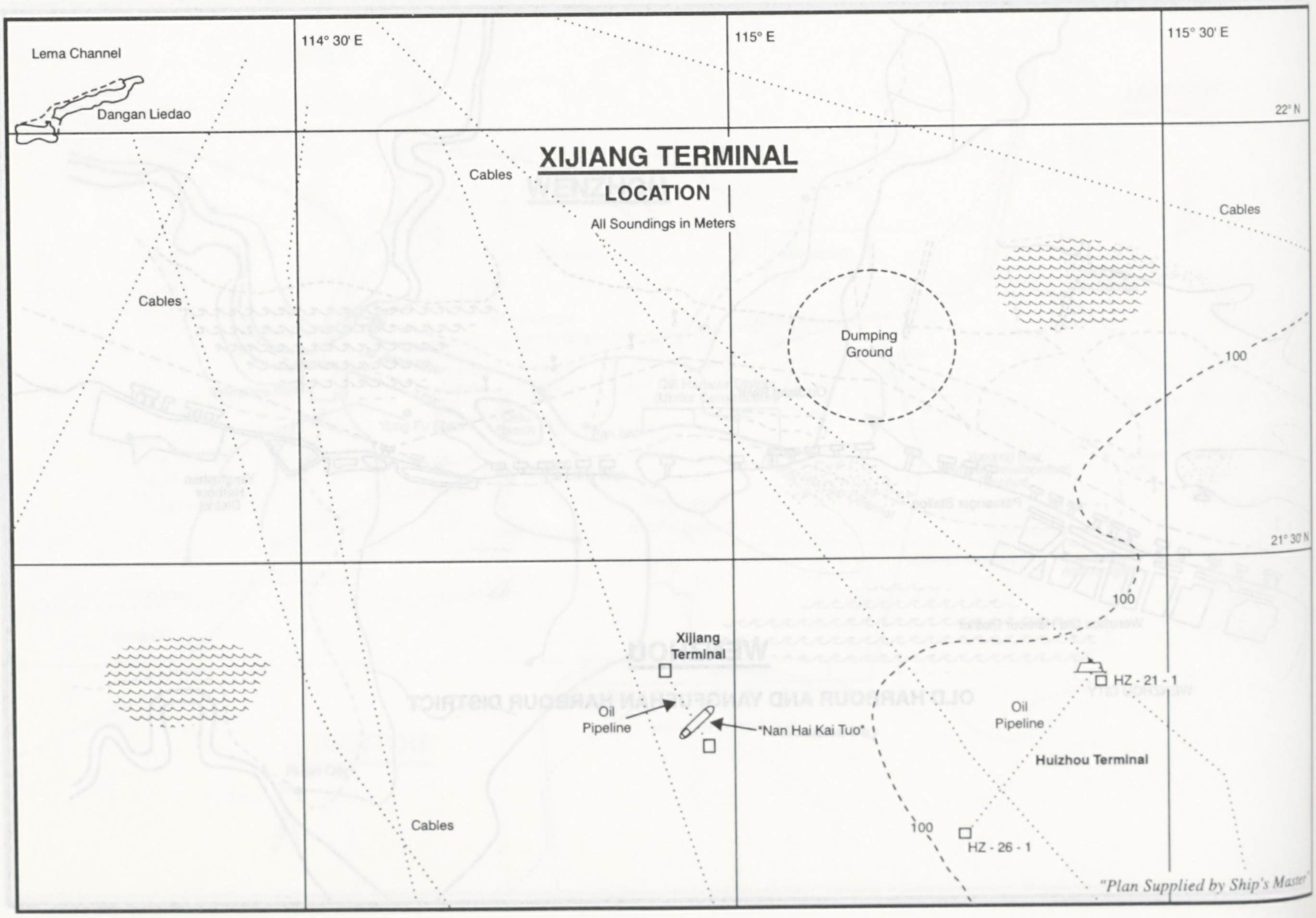


WENZHOU

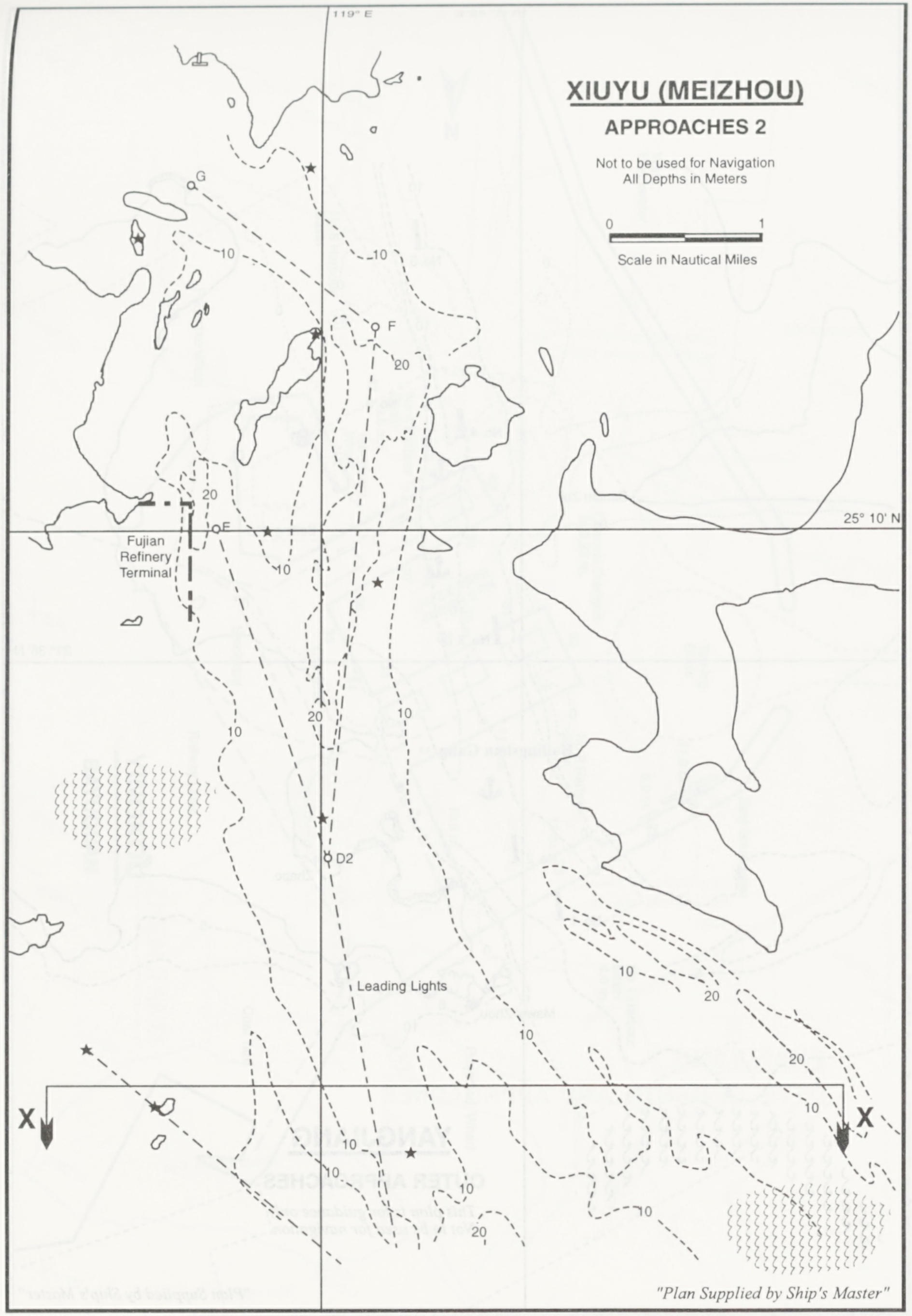
OLD HARBOUR AND YANGFUSHAN HARBOUR DISTRICT

Ou Jiang River
Passenger Station
Yangfushan Harbour District
Wenzhou Old Harbour District
WENZHOU CITY


XIAMEN
N
XINGLIN
Polyester Fibre Mill Wharf
Glassworks Wharf
Railway Line
Long Term Harbour Project
Dayu
Huoshao Island
GULANGYU
No 1 Wharf
Ferry Wharf
Long Term Harbour Project
Dyke's
Approach Channels
Heping Wharf
Gulangyu Ferry Wharf
Dongdu Harbour
Long Term Harbour Project
JIMEI
City
Huli Industrial Zone
Railway Line
Gaoqi Wharf
International Airport


XIJIANG TERMINAL
LOCATION
All Soundings in Meters
114° 30' E
115° E
115° 30' E
22° N
21° 30' N
Lema Channel
Dangan Liedao
Cables
Cables
Cables
Cables
Dumping Ground
100
100
100
Xijiang Terminal
Oil Pipeline
"Nan Hai Kai Tuo"
Oil Pipeline
HZ - 21 - 1
Huizhou Terminal
HZ - 26 - 1

"Plan Supplied by Ship's Master"

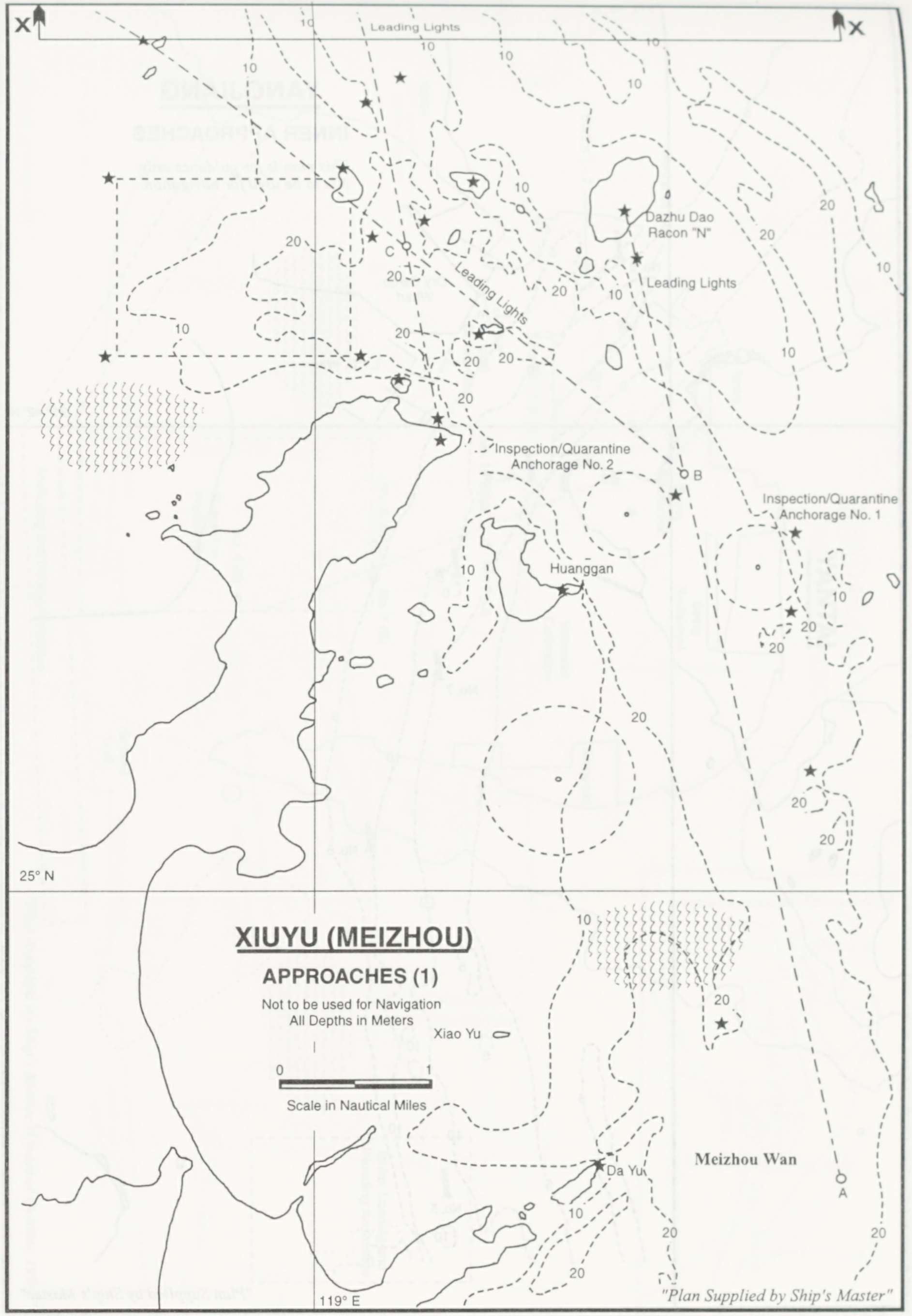


XIUYU (MEIZHOU)

APPROACHES 2

Not to be used for Navigation
All Depths in Meters

119° E
0
1
Scale in Nautical Miles
G
10
10
F
20
20
E
25° 10' N
Fujian
Refinery
Terminal
10
20
10
10
D2
Leading Lights
10
20
10
20
10
X
X
10
10
10
20
10
"Plan Supplied by Ship's Master"

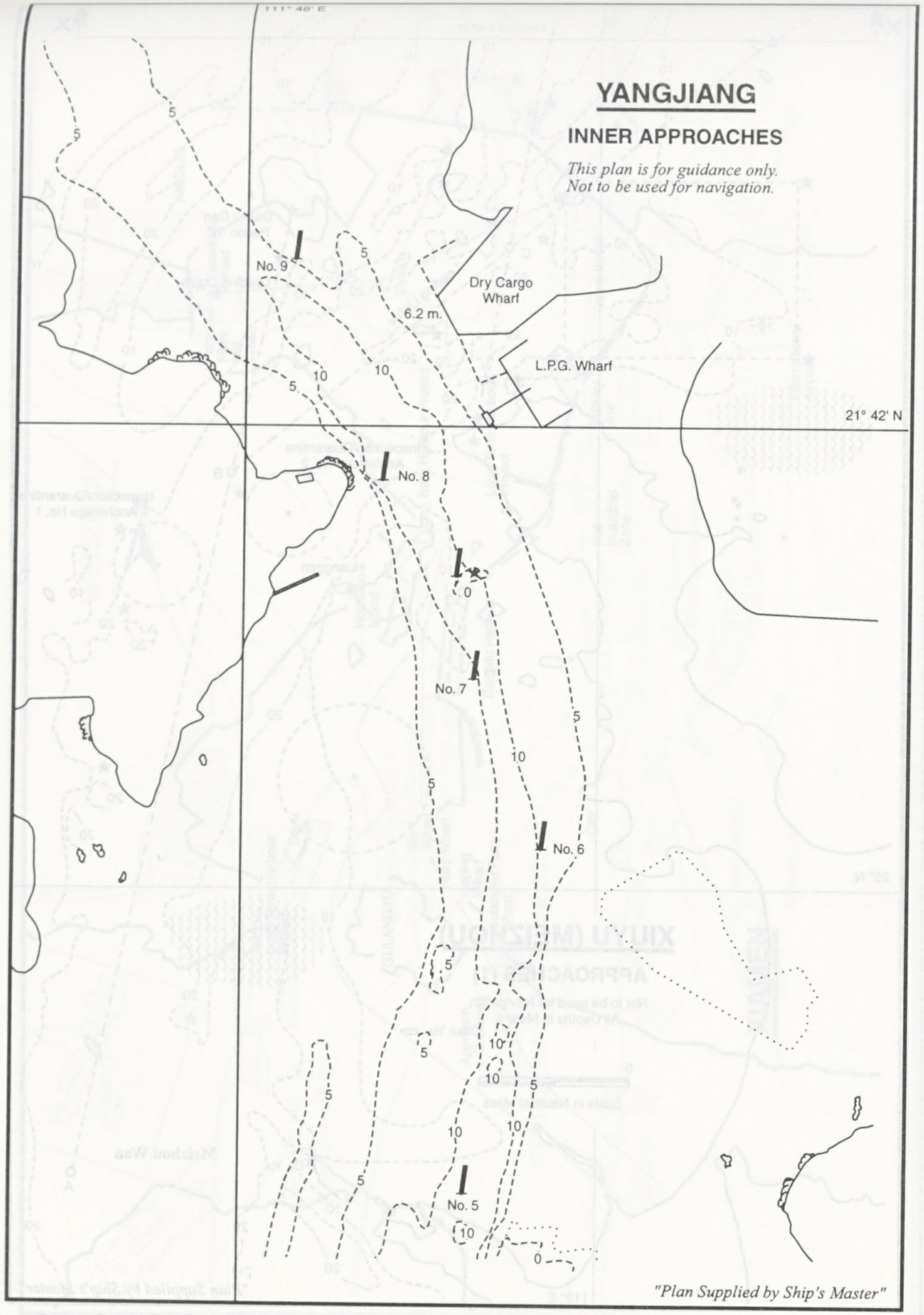


XIUYU (MEIZHOU)

APPROACHES (1)

Not to be used for Navigation
All Depths in Meters

X
X
Leading Lights
10
10
10
10
10
10
10
20
Dazhu Dao
Racon "N"
20
20
10
C
20
Leading Lights
20
10
Leading Lights
10
20
20
20
10
20
Inspection/Quarantine
Anchorage No. 2
B
Inspection/Quarantine
Anchorage No. 1
10
Huanggan
10
20
20
20
20
20
25° N
10
20
Xiao Yu
0
1
Scale in Nautical Miles
Da Yu
Meizhou Wan
A
10
20
20
20
119° E
"Plan Supplied by Ship's Master"



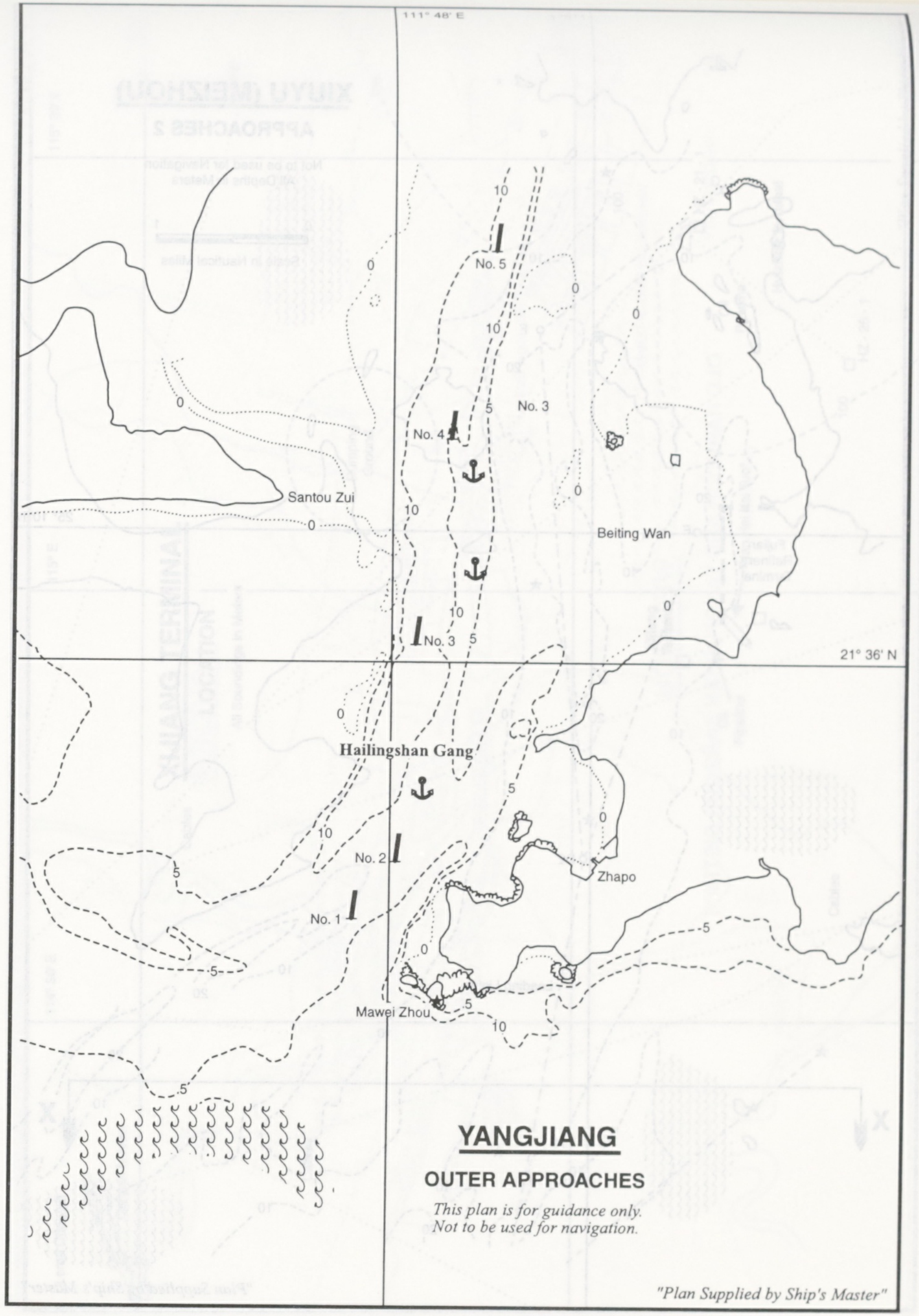
YANGJIANG

INNER APPROACHES

This plan is for guidance only. Not to be used for navigation.

"Plan Supplied by Ship's Master"

111° 48' E
No. 9
Dry Cargo Wharf
6.2 m.
L.P.G. Wharf
21° 42' N
No. 8
No. 7
No. 6
No. 5
5
10
0



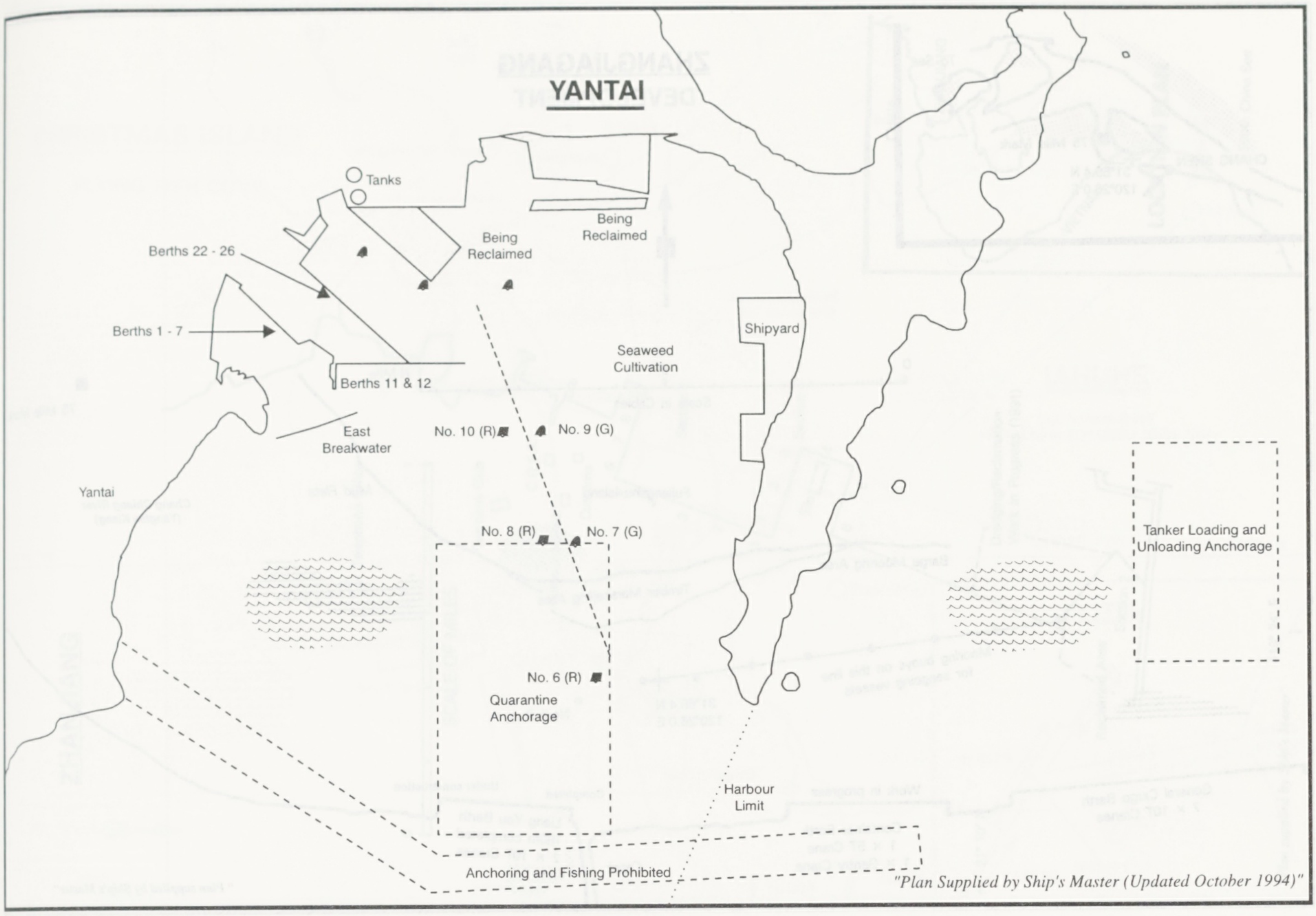
YANGJIANG

OUTER APPROACHES

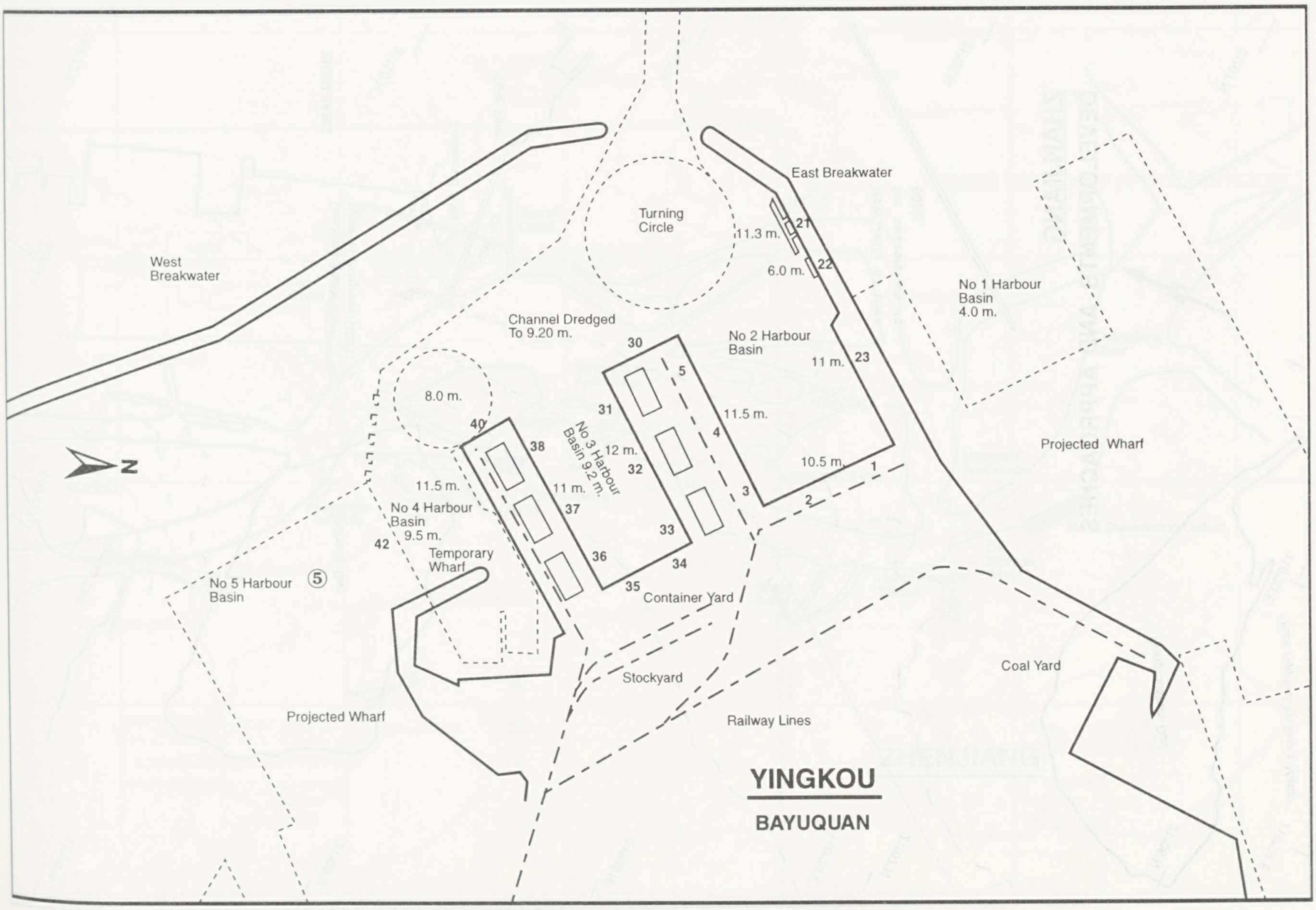
This plan is for guidance only. Not to be used for navigation.

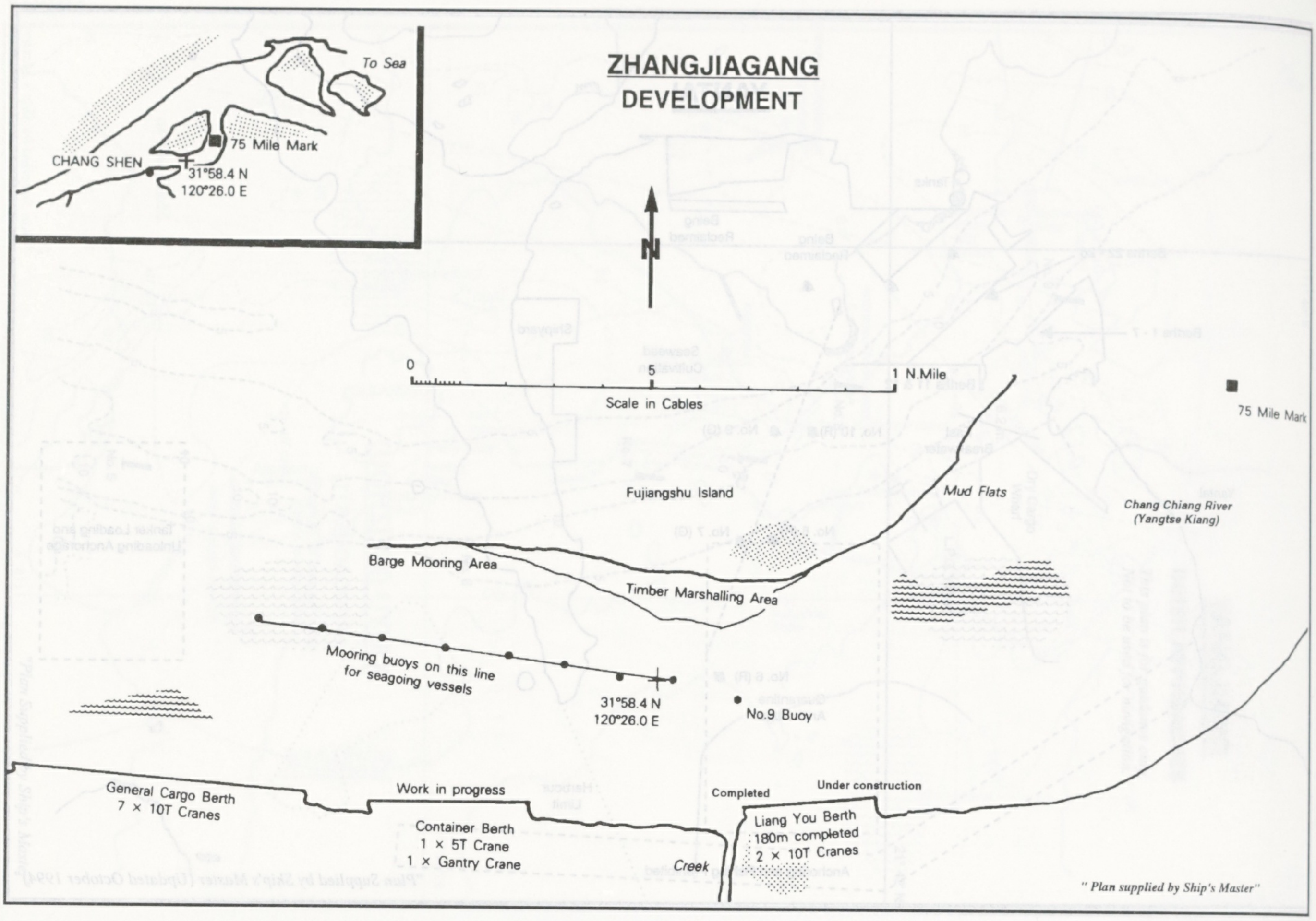
"Plan Supplied by Ship's Master"

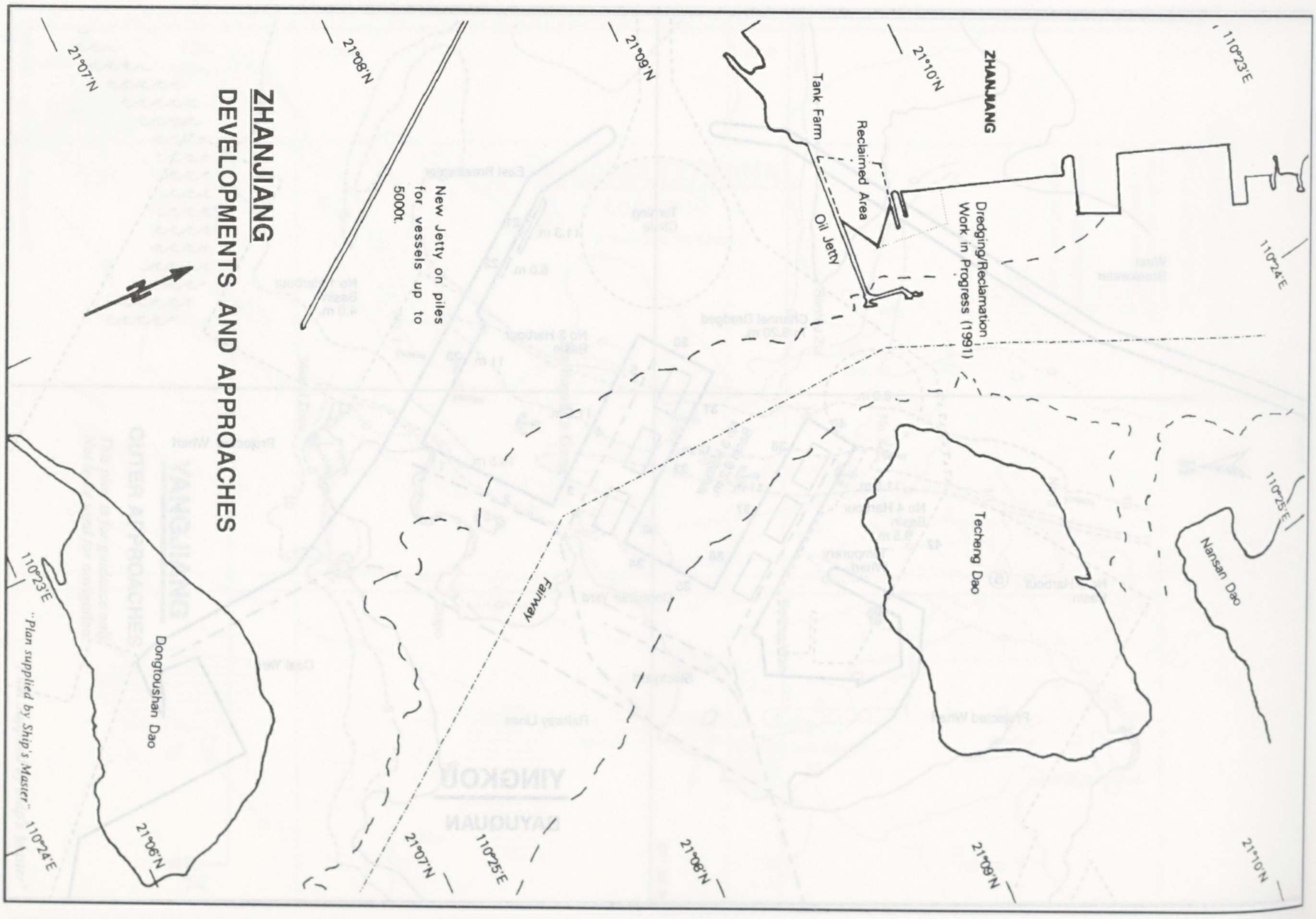
111° 48' E
No. 5
No. 4
No. 3
Santou Zui
Beiting Wan
No. 3
21° 36' N
Hailingshan Gang
No. 2
No. 1
Zhapo
Mawei Zhou
0
5
10

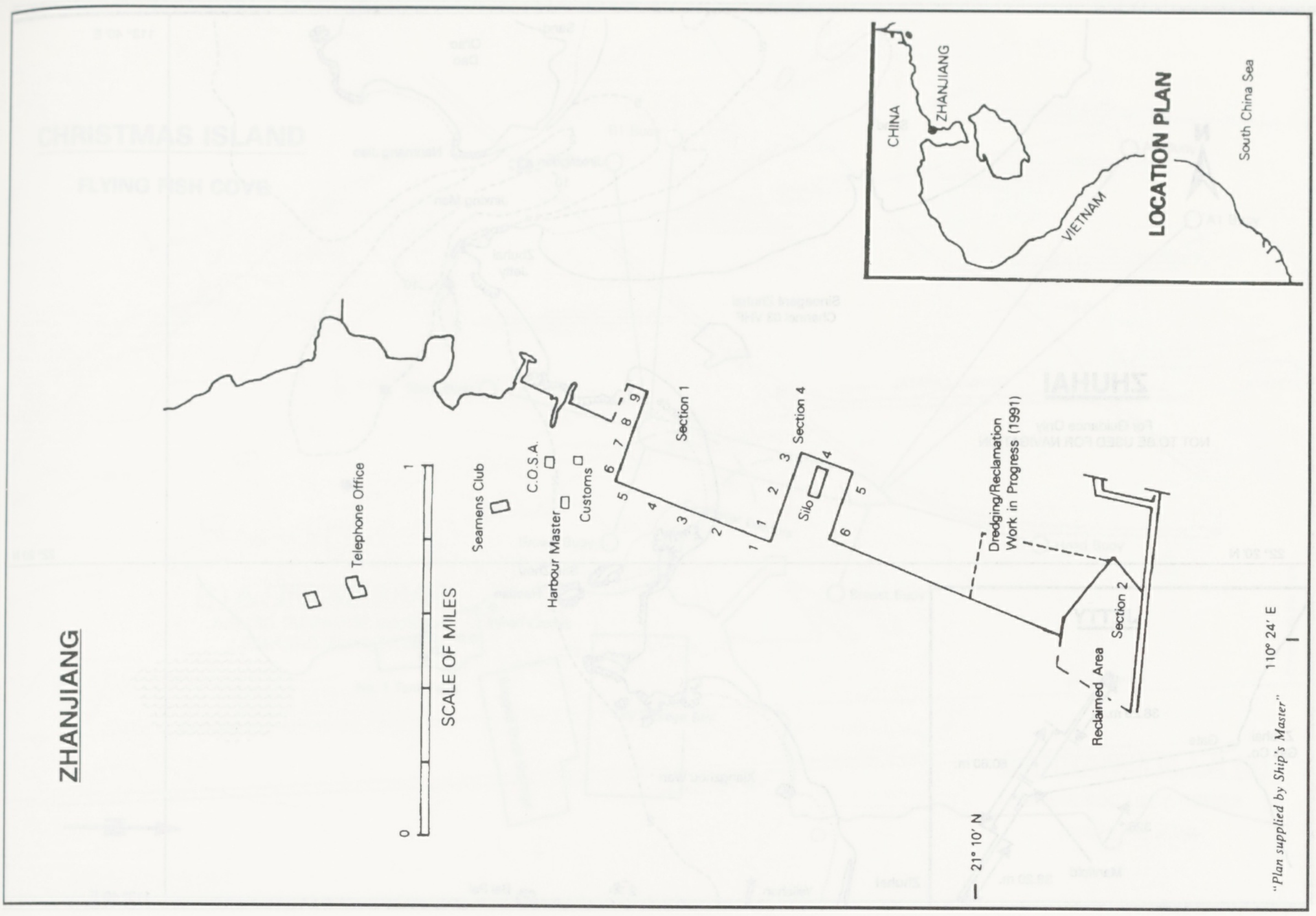

YANTAI
Tanks
Being Reclaimed
Being Reclaimed
Berths 22 - 26
Berths 1 - 7
Berths 11 & 12
Shipyard
Seaweed Cultivation
East Breakwater
No. 10 (R)
No. 9 (G)
Yantai
No. 8 (R)
No. 7 (G)
Tanker Loading and Unloading Anchorage
No. 6 (R)
Quarantine Anchorage
Harbour Limit
Anchoring and Fishing Prohibited

"Plan Supplied by Ship's Master (Updated October 1994)"


East Breakwater
Turning Circle
11.3 m.
21
6.0 m.
22
West Breakwater
No 1 Harbour Basin 4.0 m.
Channel Dredged To 9.20 m.
30
No 2 Harbour Basin
11 m.
23
5
8.0 m.
31
11.5 m.
4
40
No 3 Harbour Basin 9.2 m.
38
12 m.
32
10.5 m.
1
N
11.5 m.
11 m.
3
2
Projected Wharf
No 4 Harbour Basin 9.5 m.
37
33
42
Temporary Wharf
36
34
No 5 Harbour Basin
⑤
35
Container Yard
Coal Yard
Stockyard
Projected Wharf
Railway Lines
YINGKOU
BAYUQUAN


ZHANGJIAGANG
DEVELOPMENT
To Sea
CHANG SHEN
75 Mile Mark
31°58.4 N
120°26.0 E
N
0
5
1 N.Mile
Scale in Cables
75 Mile Mark
Fujiangshu Island
Mud Flats
Chang Chiang River (Yangtse Kiang)
Barge Mooring Area
Timber Marshalling Area
Mooring buoys on this line for seagoing vessels
31°58.4 N
120°26.0 E
No.9 Buoy
General Cargo Berth
7 × 10T Cranes
Work in progress
Container Berth
1 × 5T Crane
1 × Gantry Crane
Creek
Completed
Under construction
Liang You Berth
180m completed
2 × 10T Cranes
" Plan supplied by Ship's Master"

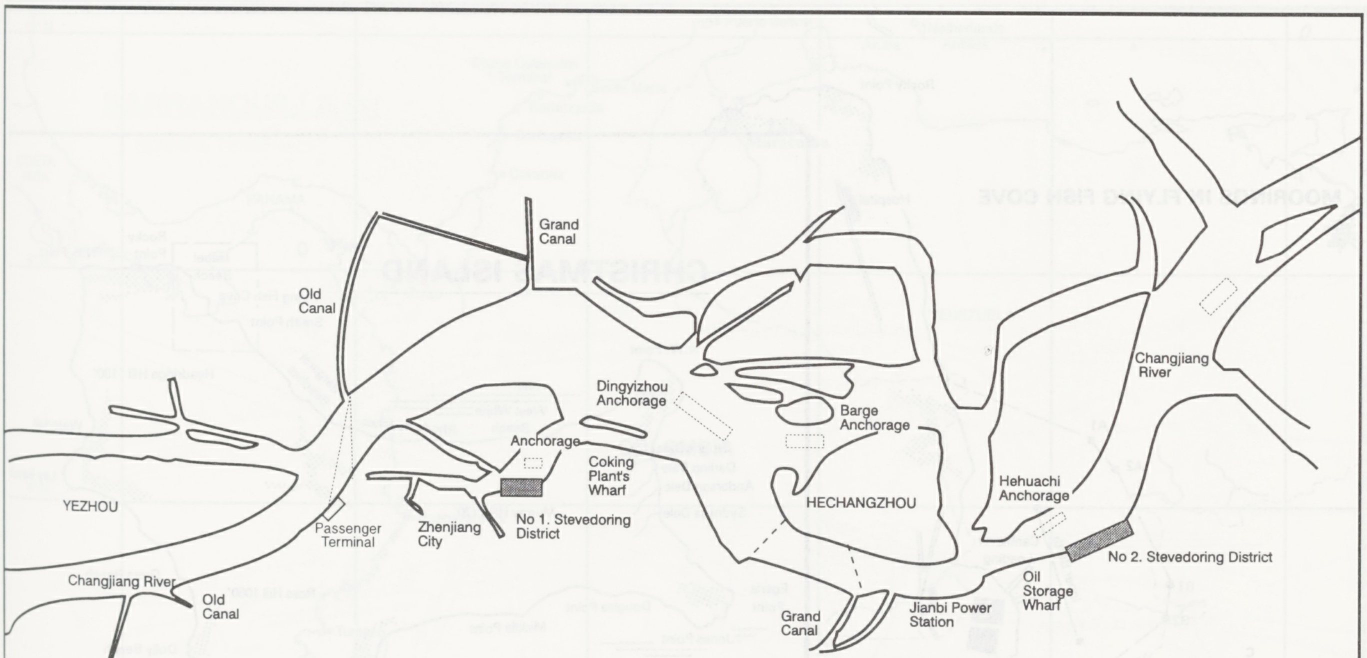

ZHANJIANG
DEVELOPMENTS AND APPROACHES
N
21°07'N
21°08'N
21°09'N
21°10'N
110°23'E
110°24'E
110°25'E
New Jetty on piles for vessels up to 5000t.
ZHANJIANG
Tank Farm
Reclaimed Area
Oil Jetty
Dredging/Reclamation Work in Progress (1991)
Fairway
Techeng Dao
Nansan Dao
Dongtoushan Dao
110°23'E
"Plan supplied by Ship's Master"
110°24'E
21°06'N
21°07'N
110°25'E
21°08'N
21°09'N
21°10'N



ZHANJIANG

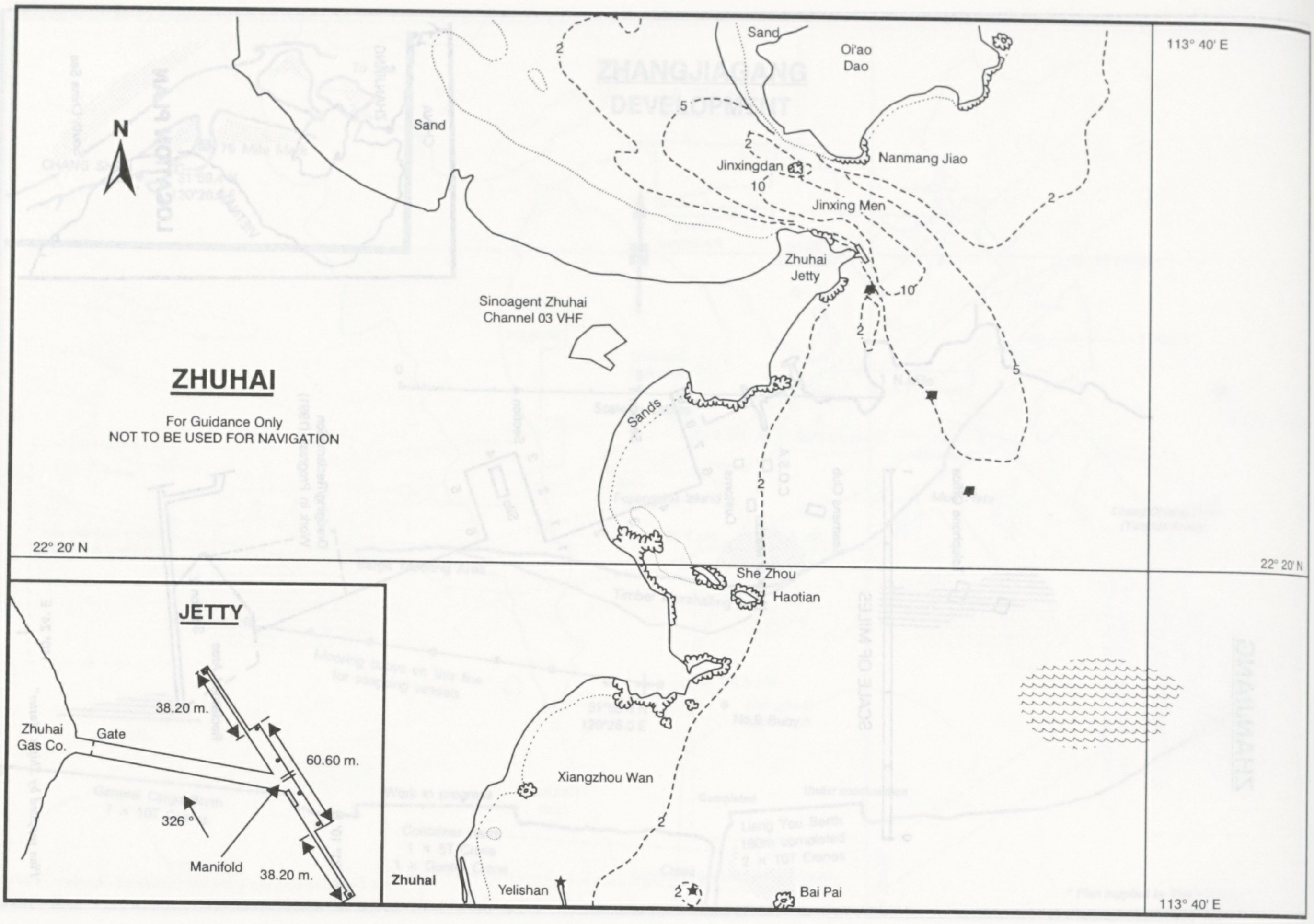
LOCATION PLAN
CHINA
ZHANJIANG
VIETNAM
South China Sea
Telephone Office
Seamens Club
C.O.S.A
Customs
Harbour Master
SCALE OF MILES
0
1
Section 1
Section 4
Section 2
1
2
3
4
5
6
7
8
9
Silo
Dredging/Reclamation Work in Progress (1991)
Reclaimed Area
21° 10' N
110° 24' E

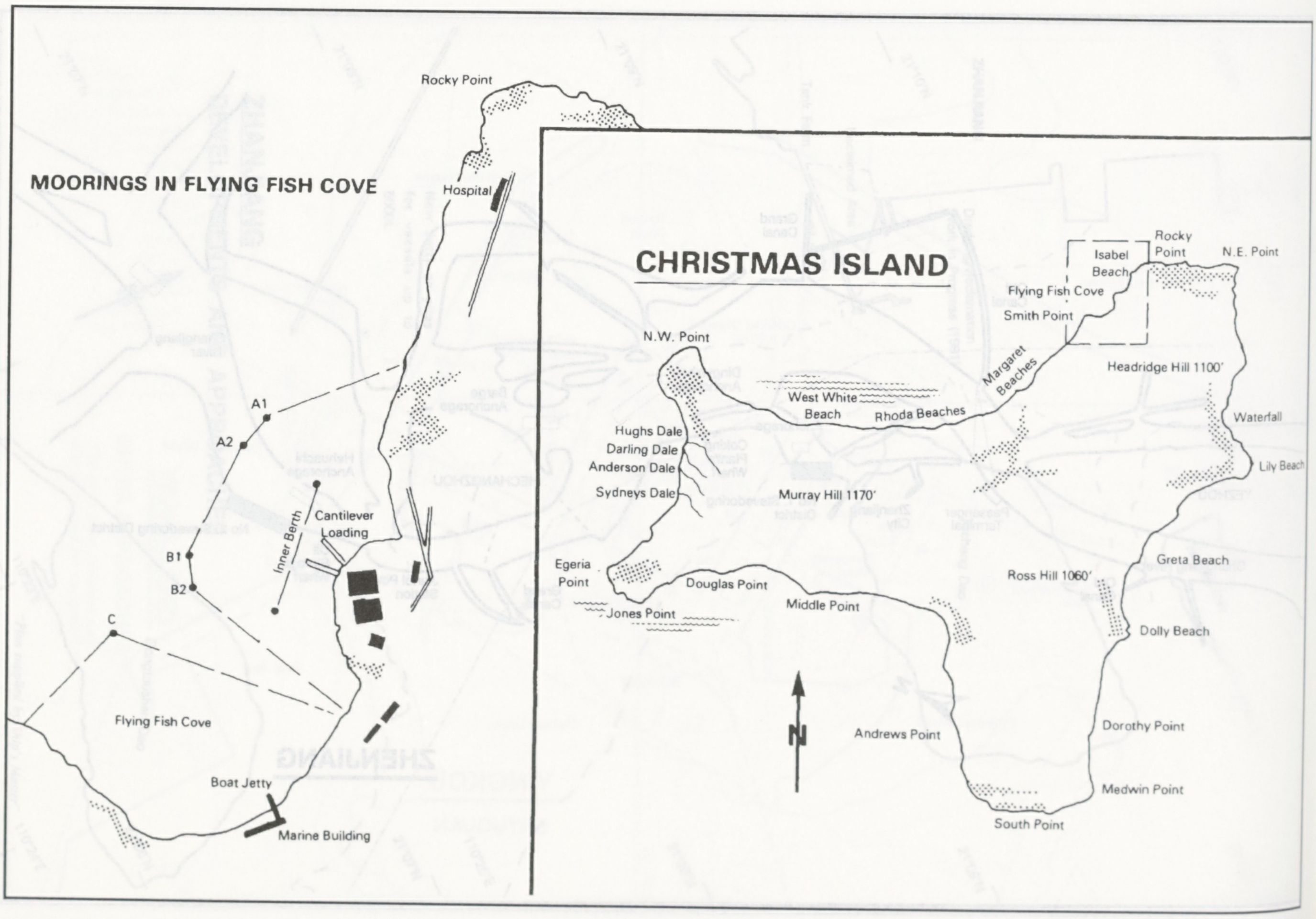
"Plan supplied by Ship's Master"

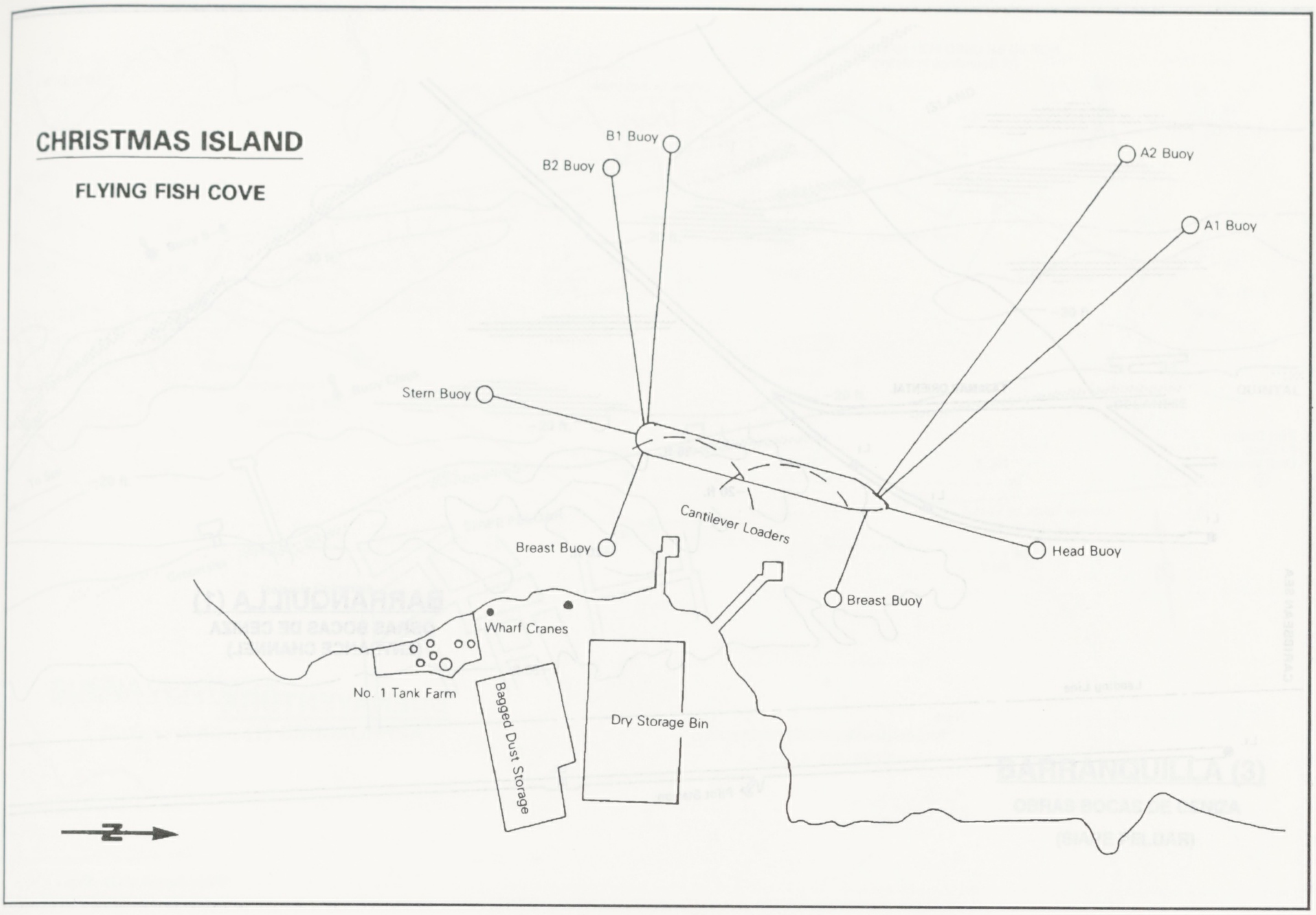


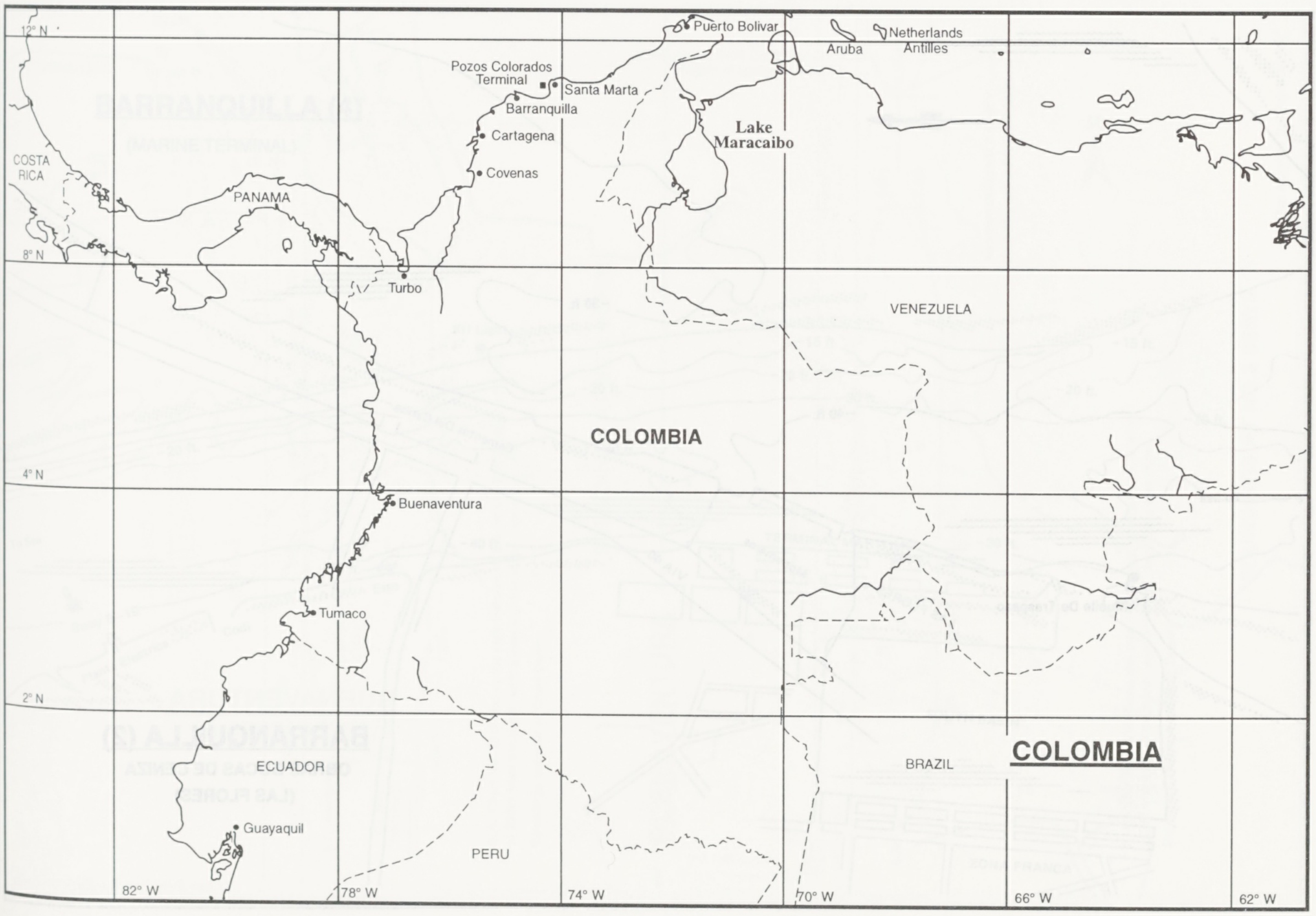
ZHENJIANG

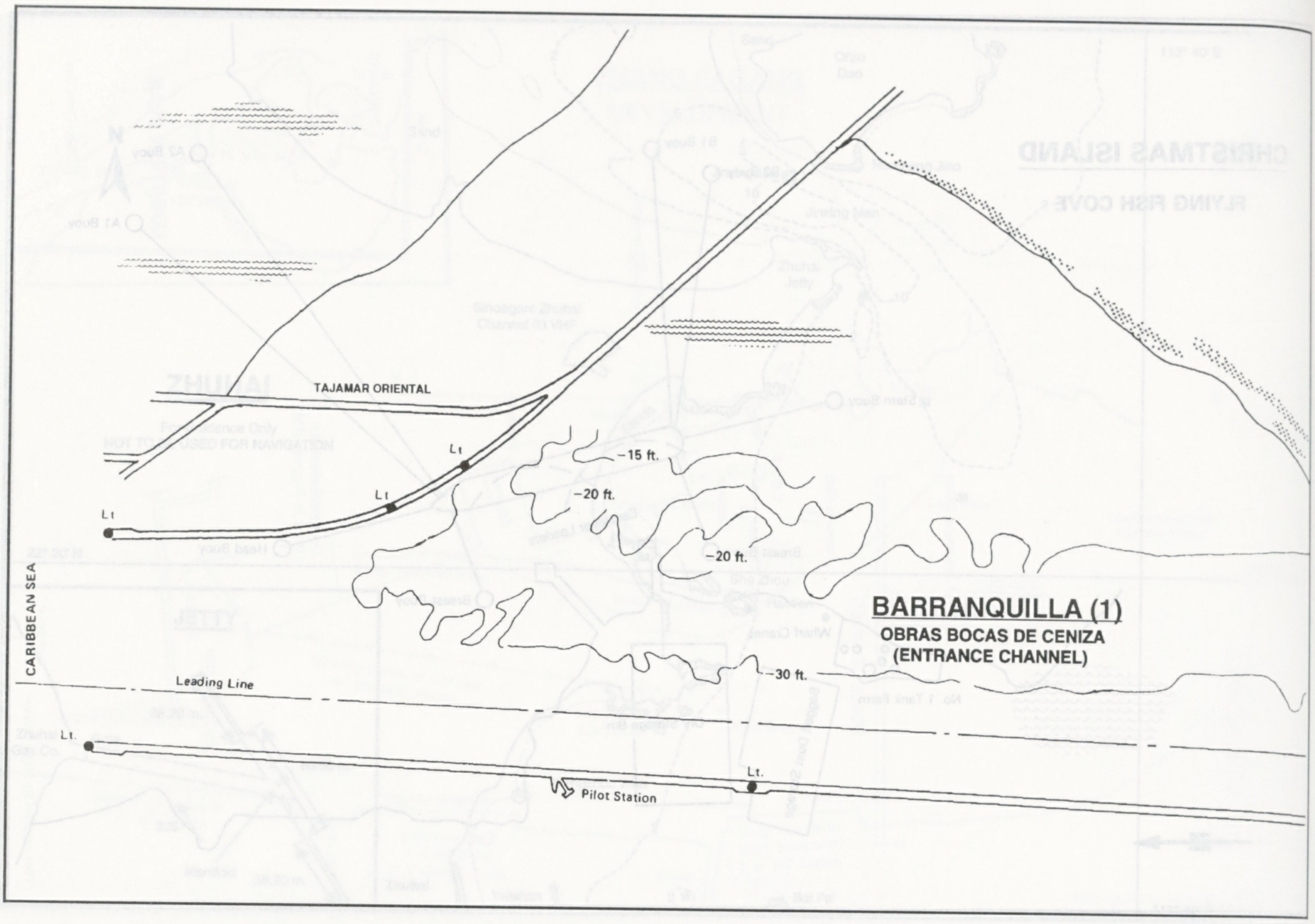
Grand Canal
Old Canal
YEZHOU
Changjiang River
Old Canal
Passenger Terminal
Zhenjiang City
Anchorage
No 1. Stevedoring District
Coking Plant's Wharf
Dingyizhou Anchorage
Barge Anchorage
HECHANGZHOU
Grand Canal
Jianbi Power Station
Oil Storage Wharf
Hehuachi Anchorage
No 2. Stevedoring District
Changjiang River
N


ZHUHAI
For Guidance Only
NOT TO BE USED FOR NAVIGATION
N
Sand
Sand
Oi'ao
Dao
Nanmang Jiao
Jinxingdan
Jinxing Men
Zhuhai
Jetty
Sinoagent Zhuhai
Channel 03 VHF
Sands
She Zhou
Haotian
Xiangzhou Wan
Zhuhai
Yelishan
Bai Pai
113° 40' E
113° 40' E
22° 20' N
22° 20' N
2
5
10
JETTY
38.20 m.
60.60 m.
38.20 m.
Zhuhai
Gas Co.
Gate
326 °
Manifold


MOORINGS IN FLYING FISH COVE
Rocky Point
Hospital
A1
A2
B1
B2
C
Inner Berth
Cantilever
Loading
Flying Fish Cove
Boat Jetty
Marine Building
CHRISTMAS ISLAND
Rocky
Point
N.E. Point
Isabel
Beach
Flying Fish Cove
Smith Point
N.W. Point
Margaret
Beaches
Headridge Hill 1100'
West White
Beach
Rhoda Beaches
Waterfall
Lily Beach
Hughs Dale
Darling Dale
Anderson Dale
Sydneys Dale
Murray Hill 1170'
Egeria
Point
Douglas Point
Jones Point
Middle Point
Ross Hill 1060'
Greta Beach
Dolly Beach
N
Andrews Point
Dorothy Point
Medwin Point
South Point

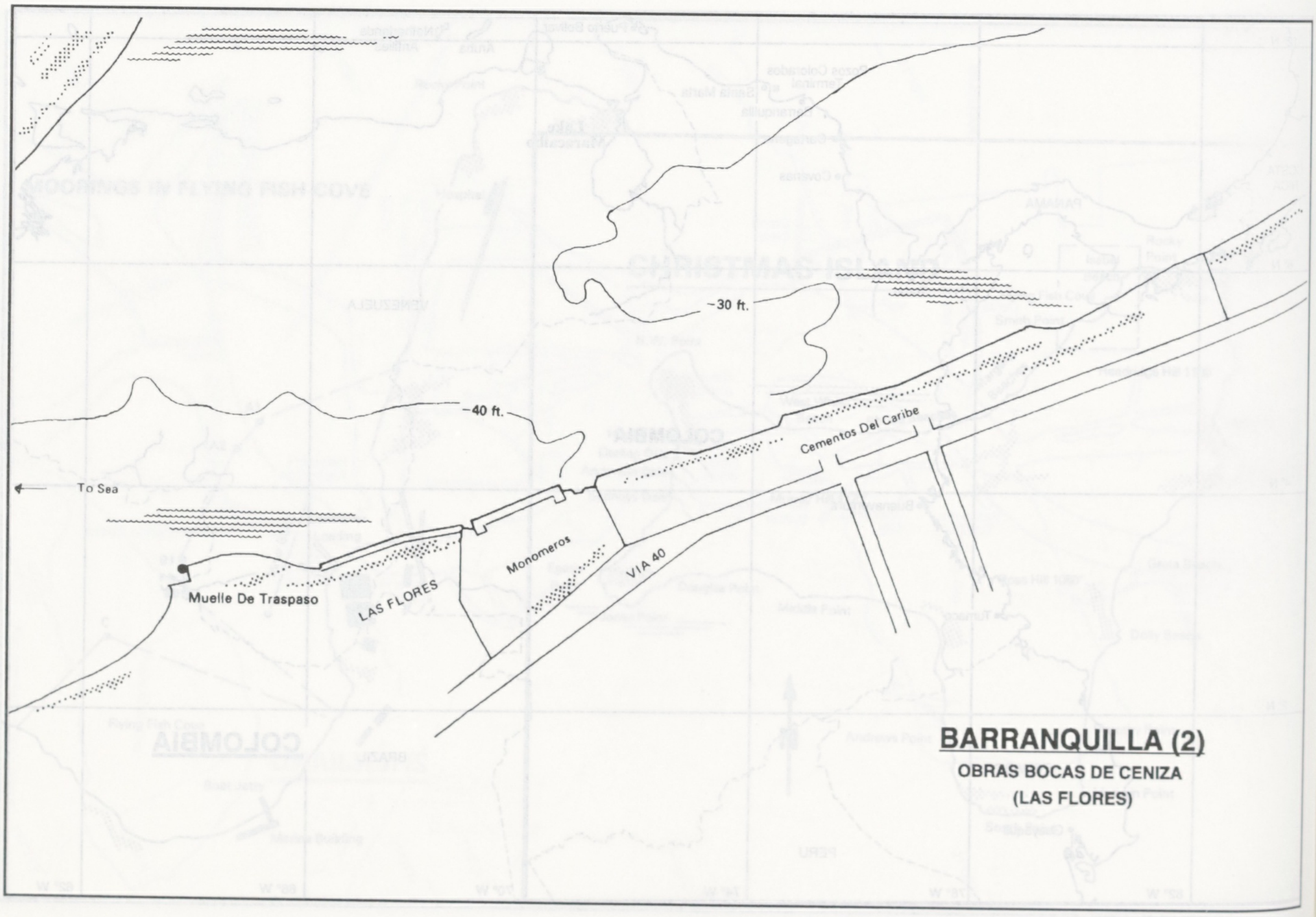

CHRISTMAS ISLAND
FLYING FISH COVE
B1 Buoy
B2 Buoy
A2 Buoy
A1 Buoy
Stern Buoy
Cantilever Loaders
Breast Buoy
Head Buoy
Breast Buoy
Wharf Cranes
No. 1 Tank Farm
Bagged Dust Storage
Dry Storage Bin
N


12° N
8° N
4° N
2° N
82° W
78° W
74° W
70° W
66° W
62° W
Puerto Bolivar
Aruba
Netherlands Antilles
Pozos Colorados Terminal
Santa Marta
Barranquilla
Cartagena
Covenas
Lake Maracaibo
COSTA RICA
PANAMA
Turbo
VENEZUELA
COLOMBIA
Buenaventura
Tumaco
ECUADOR
Guayaquil
PERU
BRAZIL
COLOMBIA


TAJAMAR ORIENTAL
Lt
Lt
Lt
−15 ft.
−20 ft.
−20 ft.
CARIBBEAN SEA
Leading Line
−30 ft.
Lt.
Lt.
Pilot Station

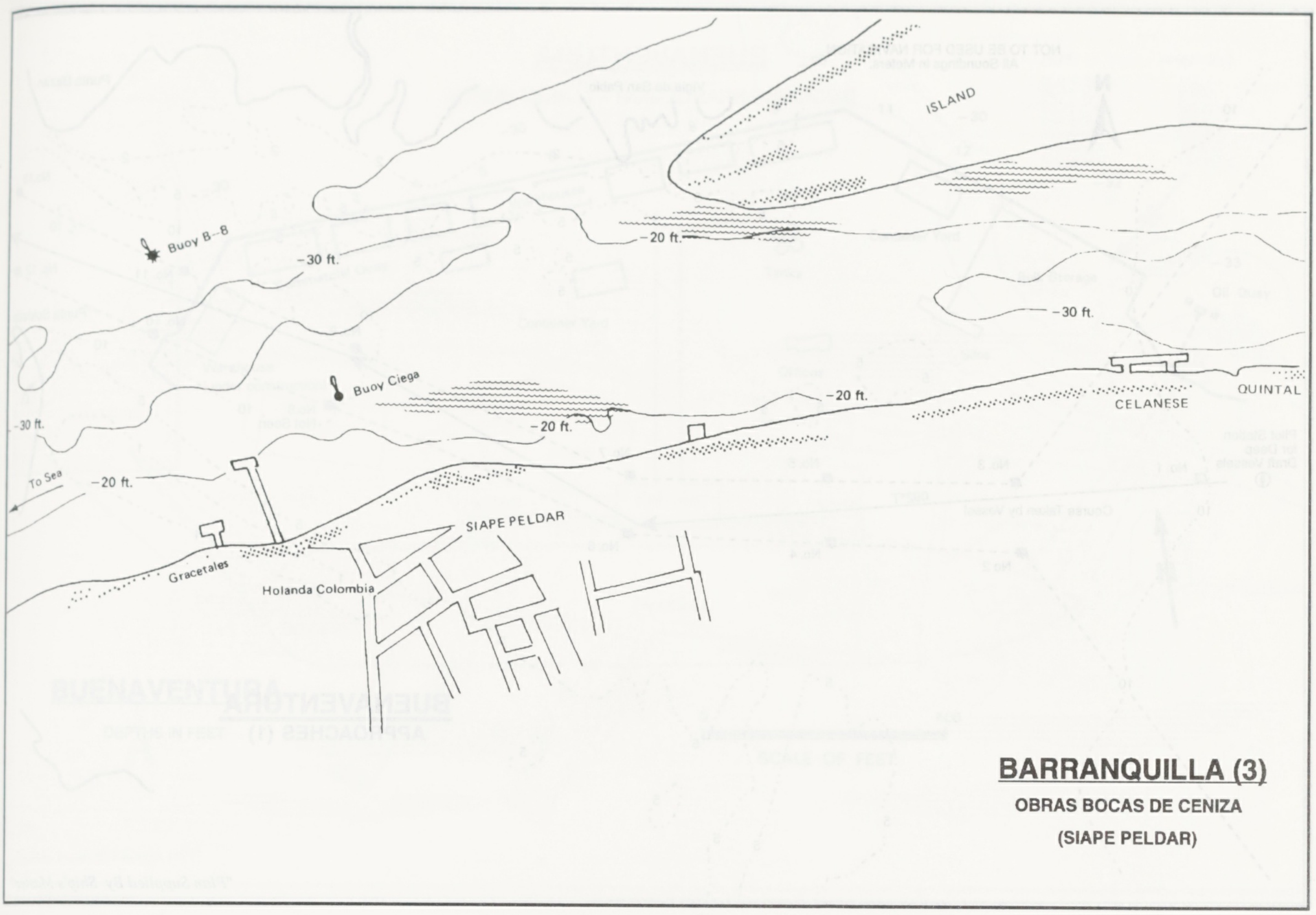
BARRANQUILLA (1)

OBRAS BOCAS DE CENIZA
(ENTRANCE CHANNEL)


−30 ft.
−40 ft.
To Sea
Cementos Del Caribe
Monomeros
VIA 40
LAS FLORES
Muelle De Traspaso

BARRANQUILLA (2)

OBRAS BOCAS DE CENIZA
(LAS FLORES)

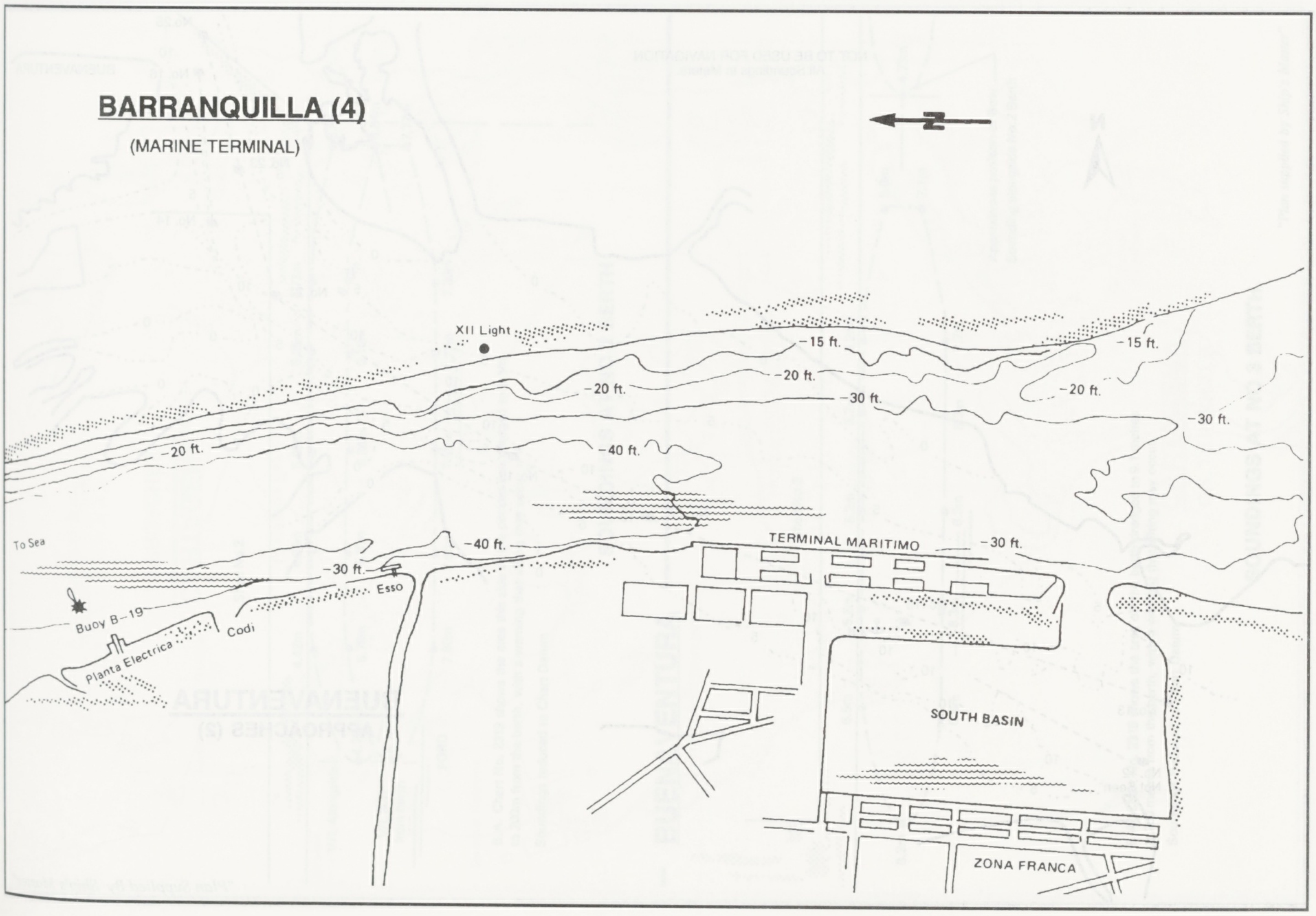


BARRANQUILLA (3)

OBRAS BOCAS DE CENIZA

(SIAPE PELDAR)

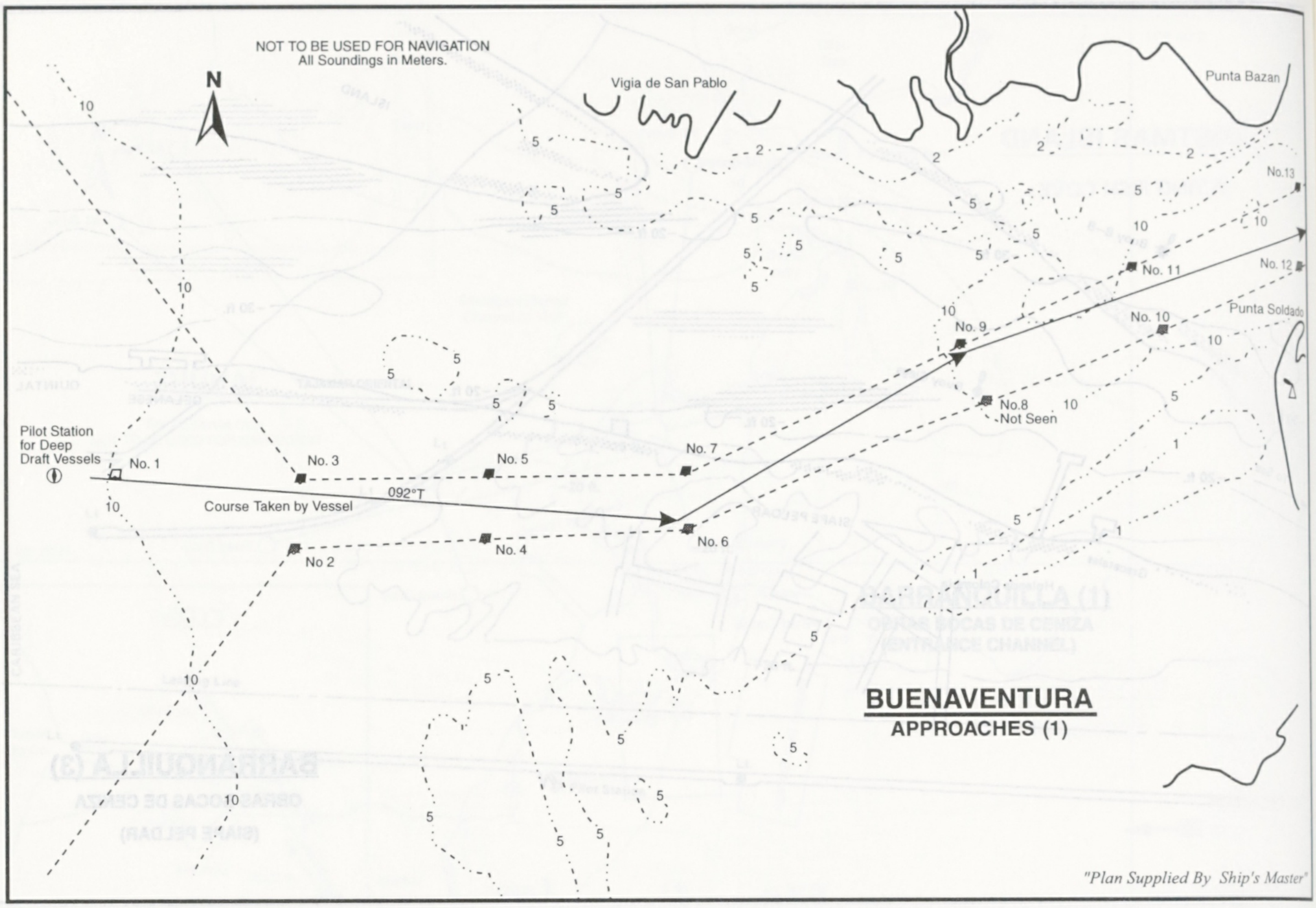
ISLAND
Buoy B–8
−30 ft.
−20 ft.
−30 ft.
Buoy Ciega
−20 ft.
−20 ft.
−30 ft.
To Sea
−20 ft.
CELANESE
QUINTAL
SIAPE PELDAR
Gracetales
Holanda Colombia



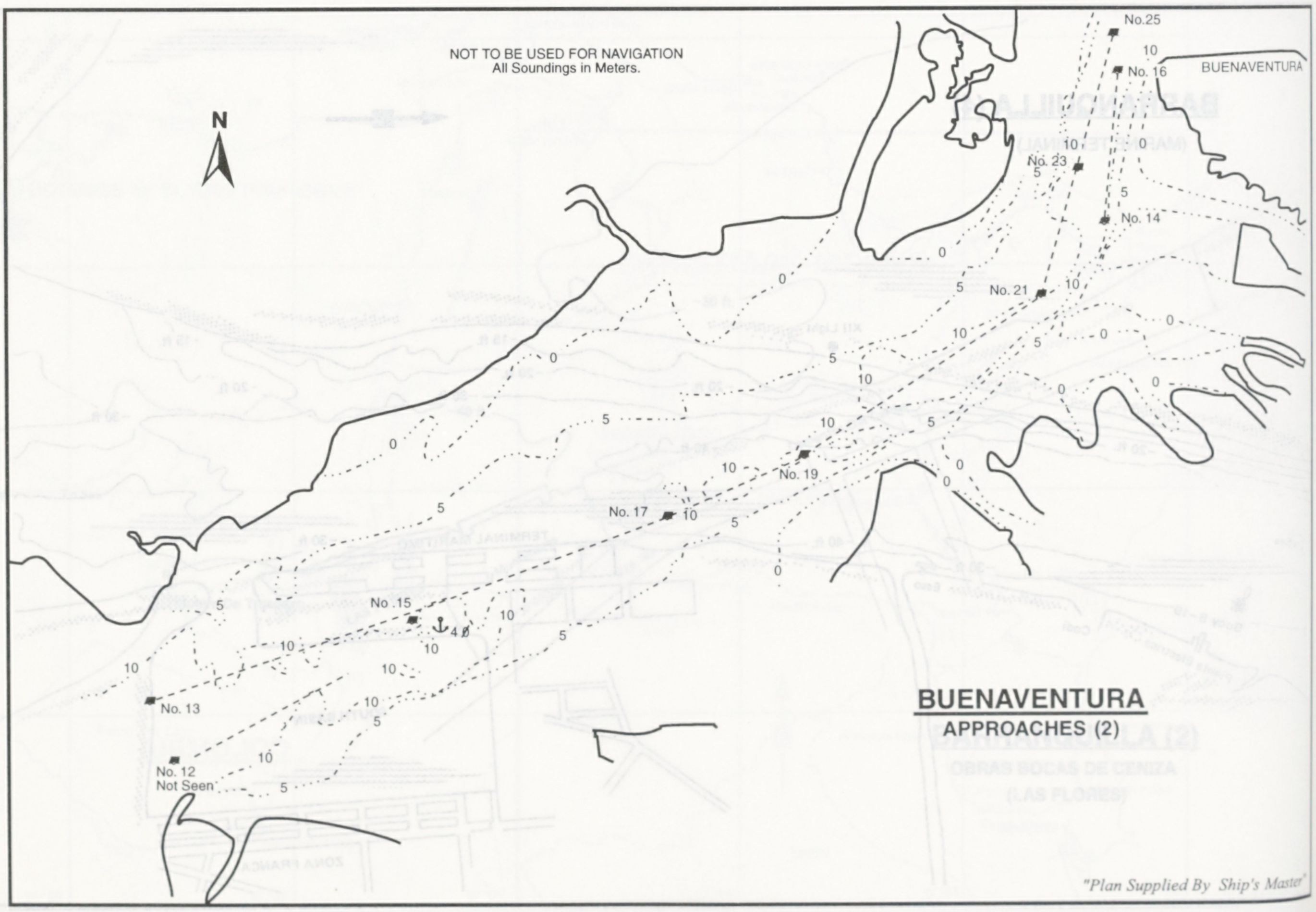
BARRANQUILLA (4)

(MARINE TERMINAL)

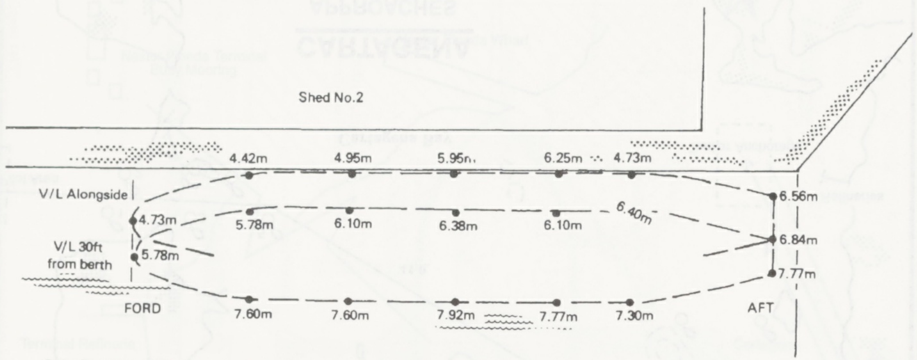
N
XII Light
−15 ft.
−15 ft.
−20 ft.
−20 ft.
−20 ft.
−30 ft.
−30 ft.
−20 ft.
−40 ft.
To Sea
−40 ft.
TERMINAL MARITIMO
−30 ft.
−30 ft.
Esso
Buoy B–19
Codi
Planta Electrica
SOUTH BASIN
ZONA FRANCA


NOT TO BE USED FOR NAVIGATION
All Soundings in Meters.
N
Vigia de San Pablo
Punta Bazan
No.13
No. 12
No. 11
No. 10
Punta Soldado
No. 9
No.8
Not Seen
Pilot Station
for Deep
Draft Vessels
No. 1
No. 3
No. 5
No. 7
092°T
Course Taken by Vessel
No. 6
No 2
No. 4
BUENAVENTURA
APPROACHES (1)

"Plan Supplied By Ship's Master"


NOT TO BE USED FOR NAVIGATION
All Soundings in Meters.
N
No.25
No. 16
BUENAVENTURA
No. 23
No. 14
No. 21
No. 19
No. 17
No. 15
No. 13
No. 12
Not Seen
BUENAVENTURA
APPROACHES (2)

"Plan Supplied By Ship's Master"

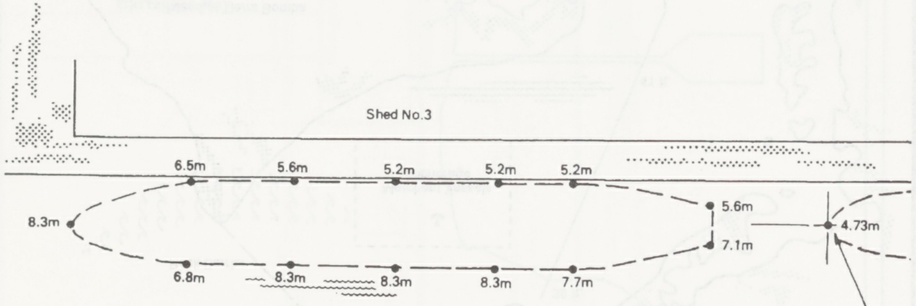

Shed No.2
4.42m
4.95m
5.95m
6.25m
4.73m
V/L Alongside
6.56m
4.73m
5.78m
6.10m
6.38m
6.10m
6.40m
6.84m
V/L 30ft from berth
5.78m
7.77m
FORD
7.60m
7.60m
7.92m
7.77m
7.30m
AFT

B.A. Chart No. 2319 shows the area this side of the pecked line dredged to 9.1m to 200m from the berth, with a warning that silting may occur.

Soundings reduced to Chart Datum

SOUNDINGS AT NO 2 BERTH

– BUENAVENTURA


Shed No.3
6.5m
5.6m
5.2m
5.2m
5.2m
8.3m
5.6m
4.73m
7.1m
6.8m
8.3m
8.3m
8.3m
7.7m

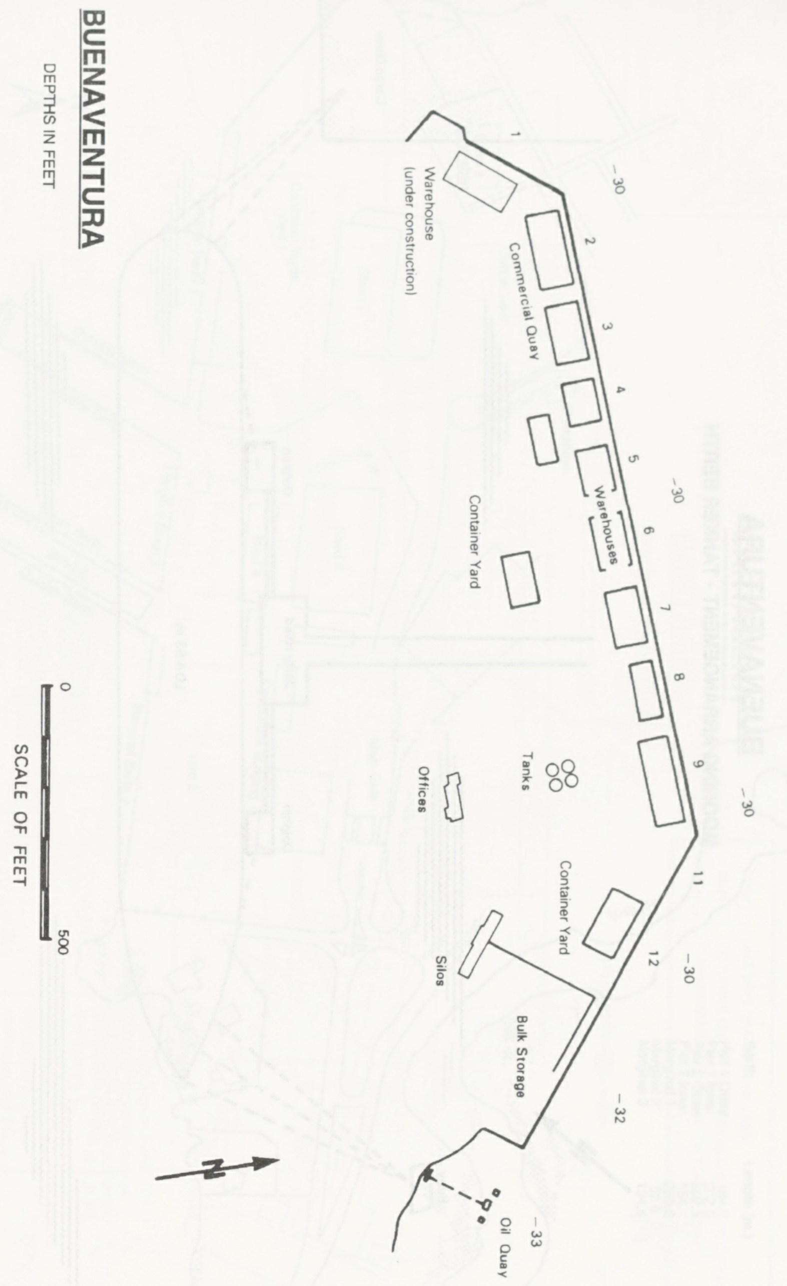
Approximate position of Bow Sounding alongside No.2 Berth

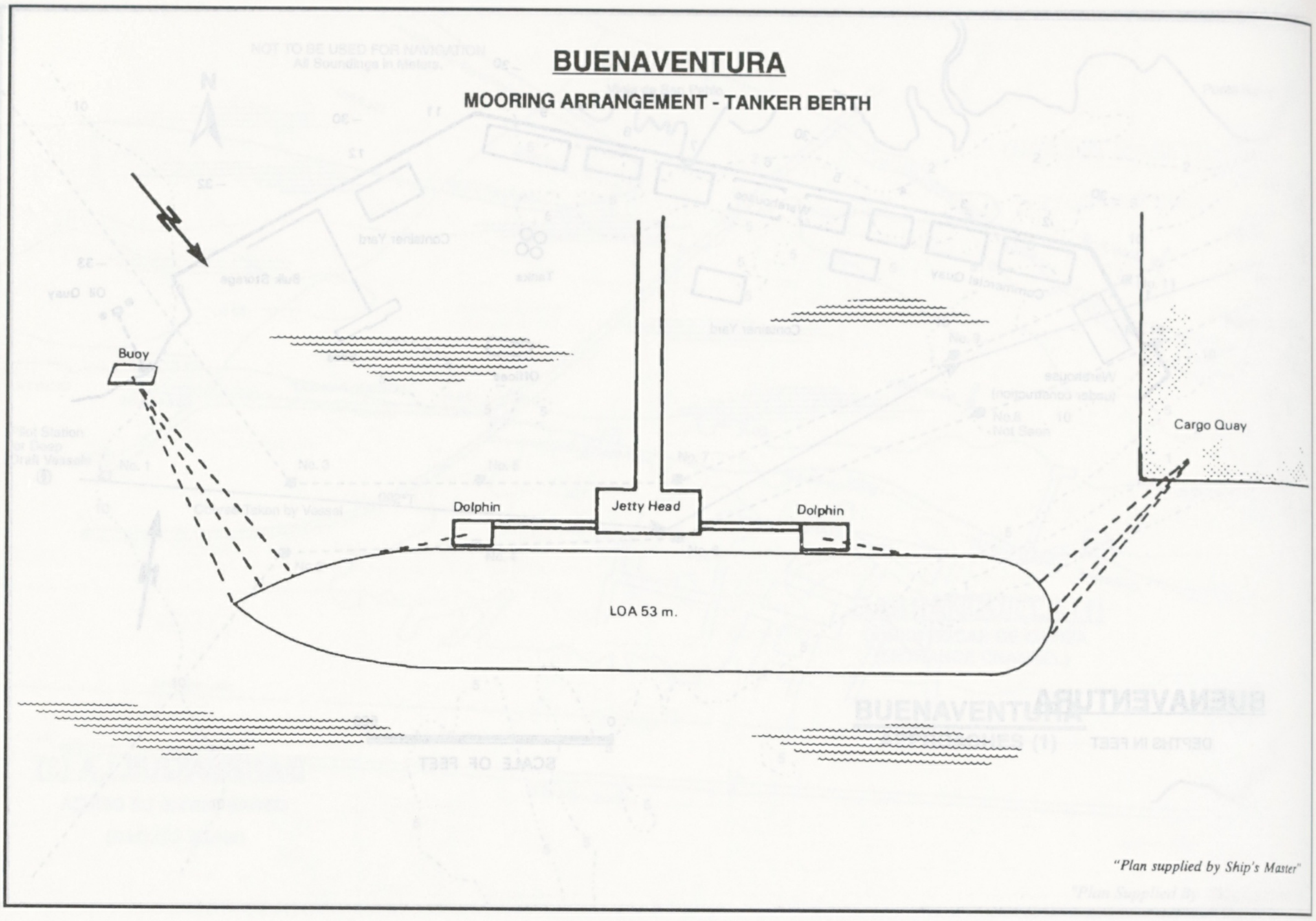
B.A. Chart No. 2319 shows the area off the berth dredged to 9.1 metres to 200 metres from the berth, with a warning that silting may occur.

Soundings Reduced to Chart Datum

SOUNDINGS AT NO 3 BERTH

"Plan supplied by Ship's Master"


BUENAVENTURA
DEPTHS IN FEET
SCALE OF FEET
0
500
N
1
2
3
4
5
6
7
8
9
11
12
–30
–30
–30
–30
–32
–33
Warehouse (under construction)
Commercial Quay
Warehouses
Container Yard
Tanks
Offices
Container Yard
Silos
Bulk Storage
Oil Quay

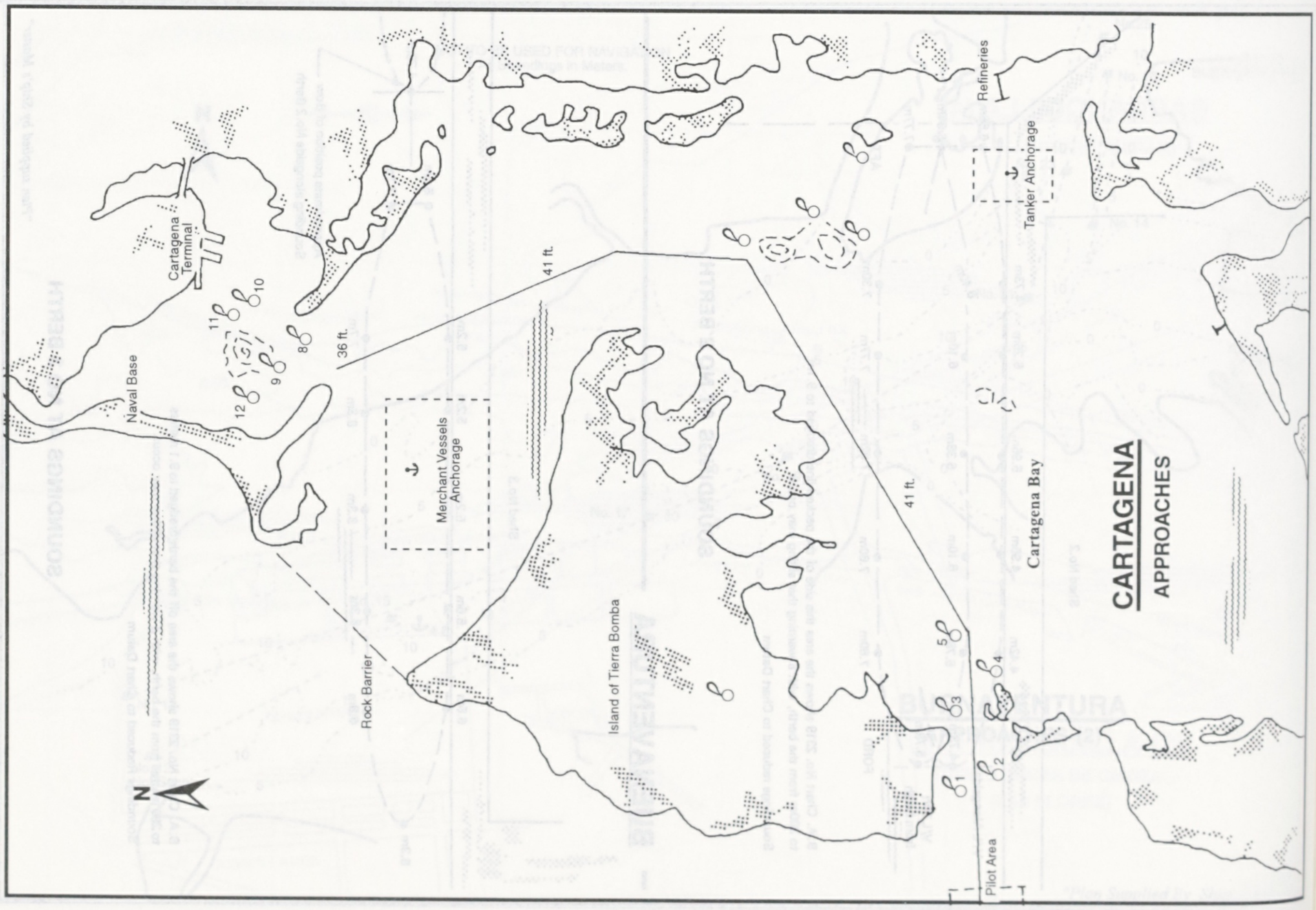


BUENAVENTURA

MOORING ARRANGEMENT - TANKER BERTH

Buoy
Jetty Head
Dolphin
Dolphin
Cargo Quay
LOA 53 m.

"Plan supplied by Ship's Master"

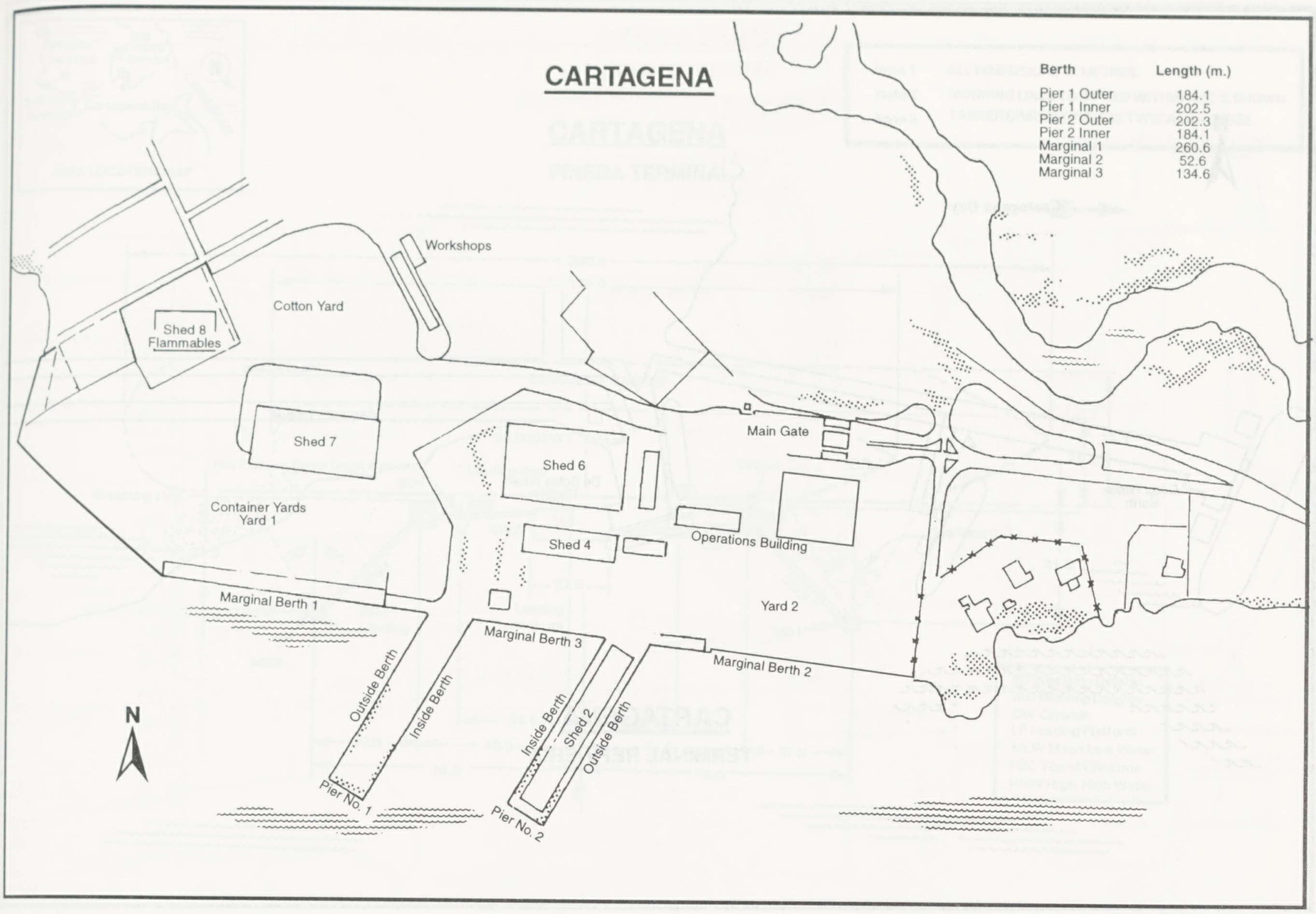


CARTAGENA

APPROACHES

Refineries
Tanker Anchorage
Cartagena Terminal
Naval Base
41 ft.
36 ft.
Merchant Vessels Anchorage
Rock Barrier
Island of Tierra Bomba
41 ft.
Cartagena Bay
Pilot Area
N
1
2
3
4
5
8
9
10
11
12

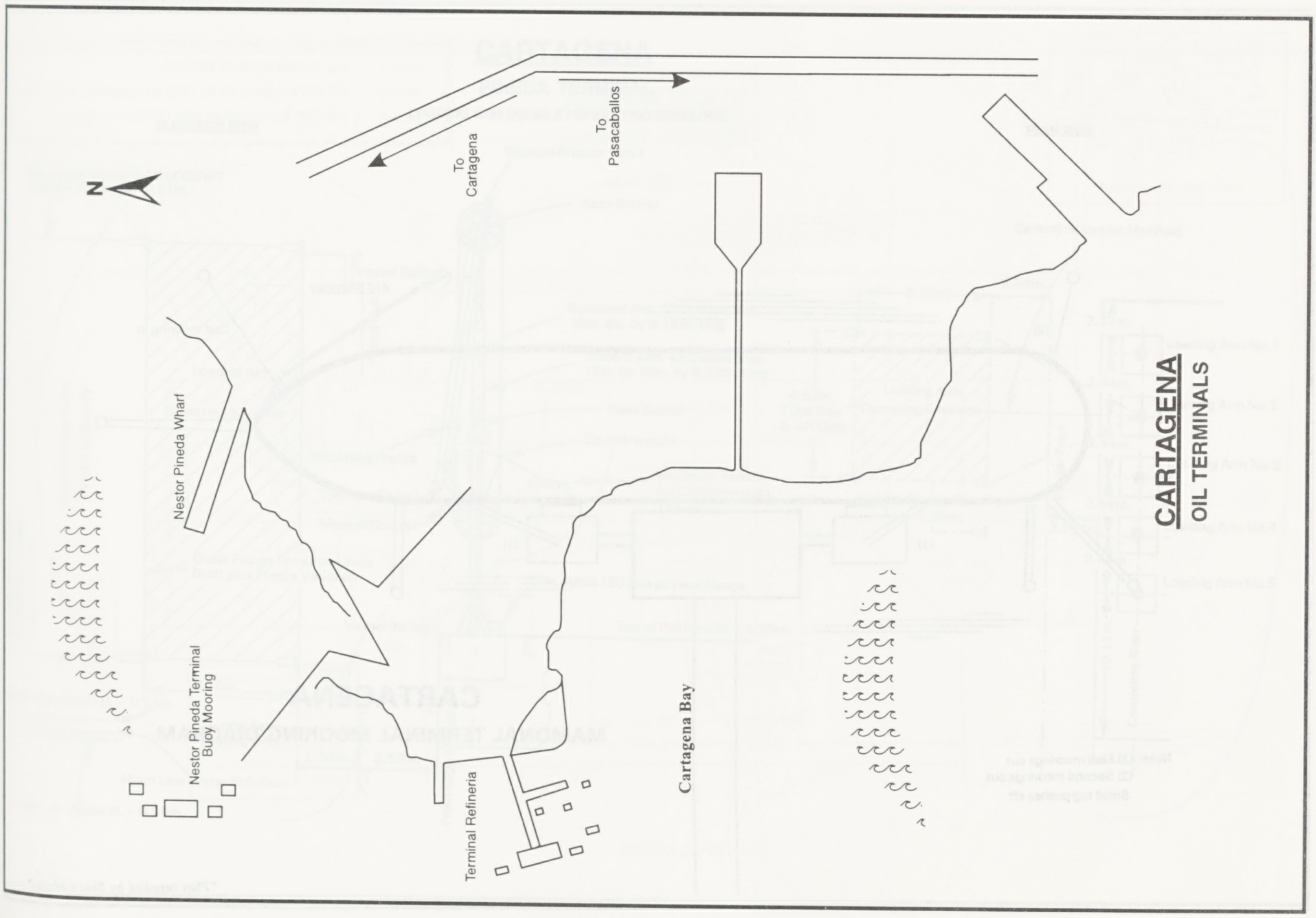
CARTAGENA



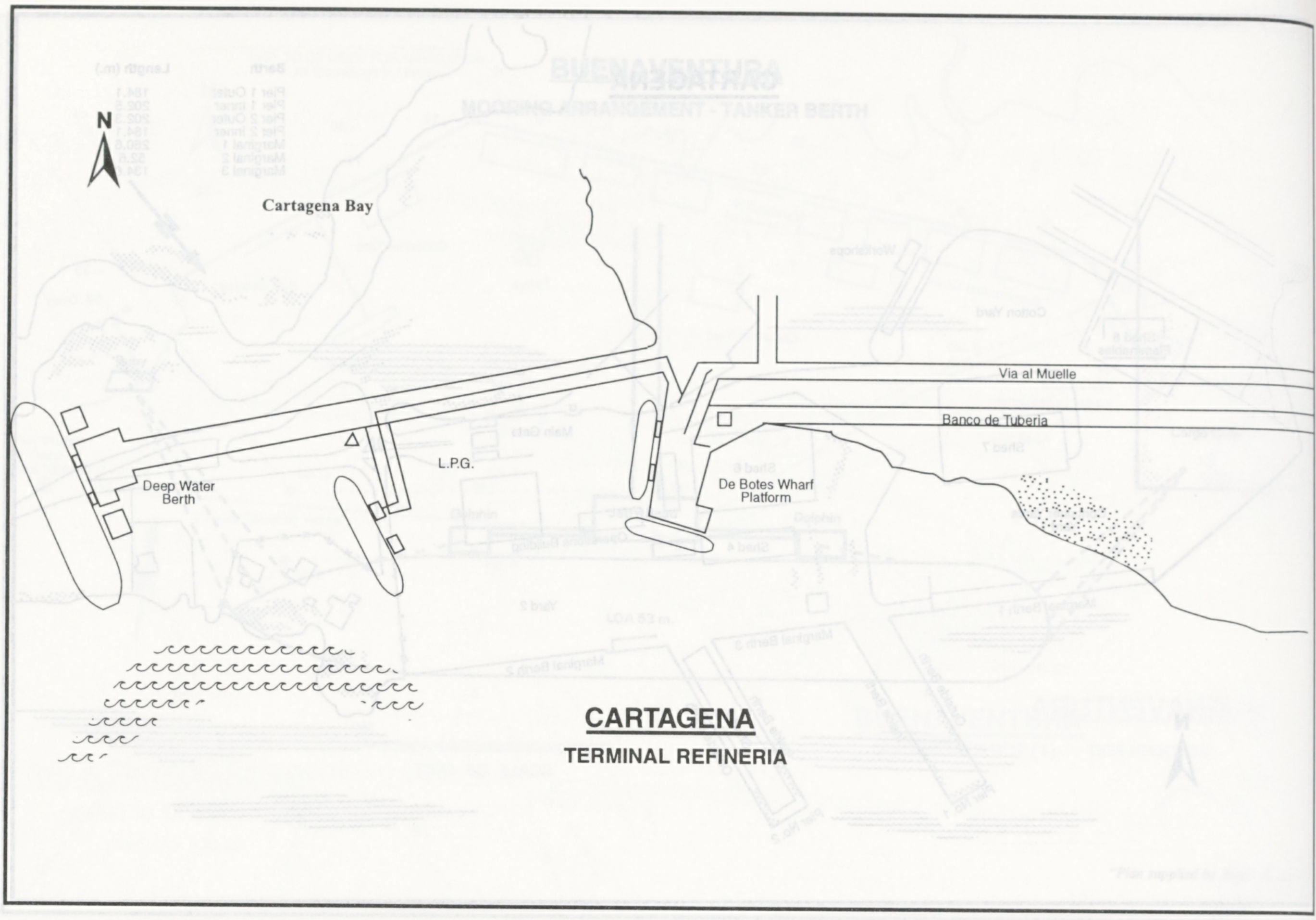
Berth	Length (m.)
Pier 1 Outer	184.1
Pier 1 Inner	202.5
Pier 2 Outer	202.3
Pier 2 Inner	184.1
Marginal 1	260.6
Marginal 2	52.6
Marginal 3	134.6

Workshops
Cotton Yard
Shed 8 Flammables
Shed 7
Container Yards Yard 1
Shed 6
Shed 4
Main Gate
Operations Building
Yard 2
Marginal Berth 1
Marginal Berth 3
Marginal Berth 2
Outside Berth
Inside Berth
Pier No. 1
Inside Berth
Shed 2
Outside Berth
Pier No. 2
N

CARTAGENA
OIL TERMINALS

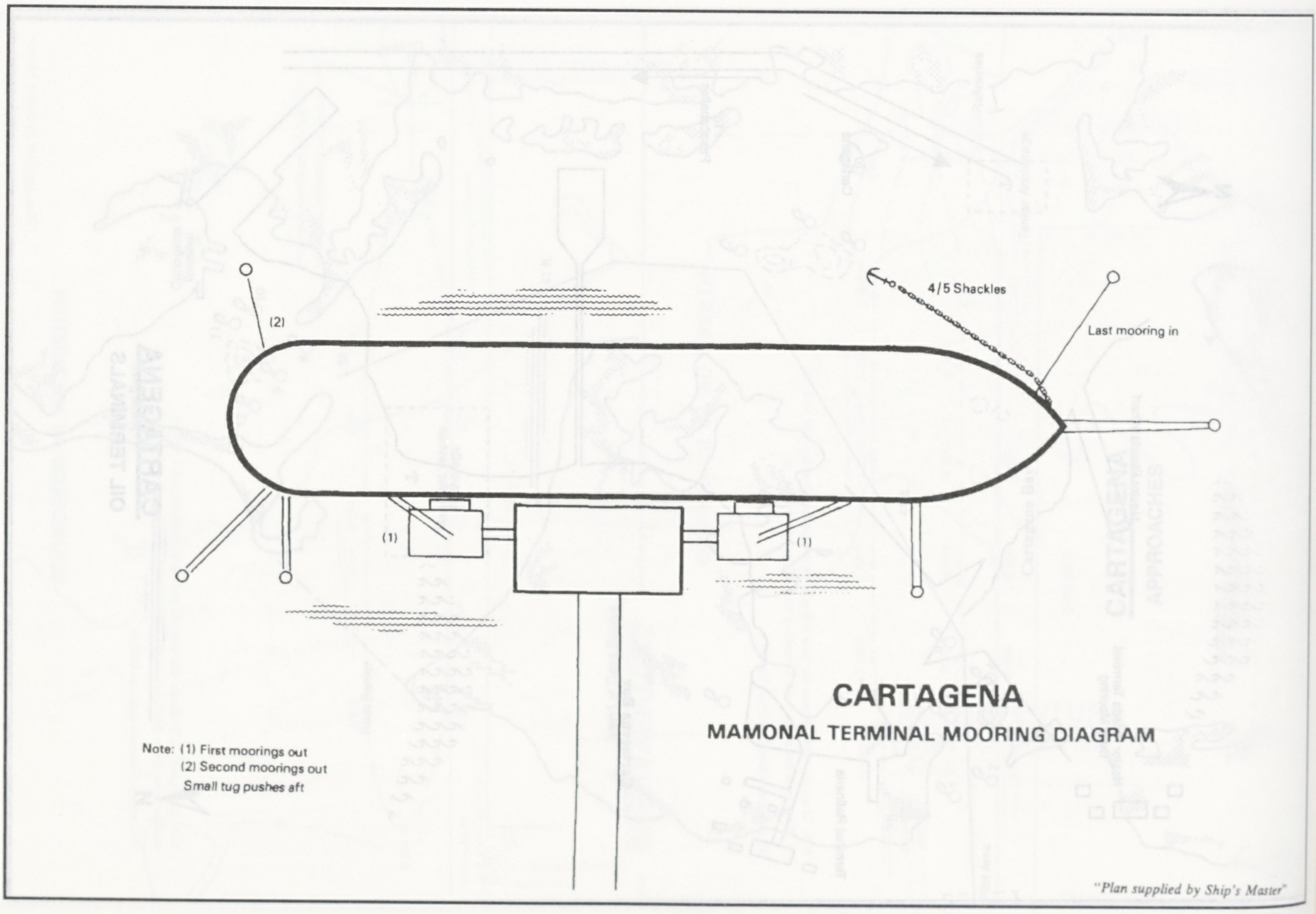


N
To Cartagena
To Pasacaballos
Nestor Pineda Wharf
Nestor Pineda Terminal Buoy Mooring
Terminal Refinería
Cartagena Bay


N
Cartagena Bay
Via al Muelle
Banco de Tuberia
Deep Water Berth
L.P.G.
De Botes Wharf Platform

CARTAGENA

TERMINAL REFINERIA


(2)
4/5 Shackles
Last mooring in
(1)
(1)

CARTAGENA

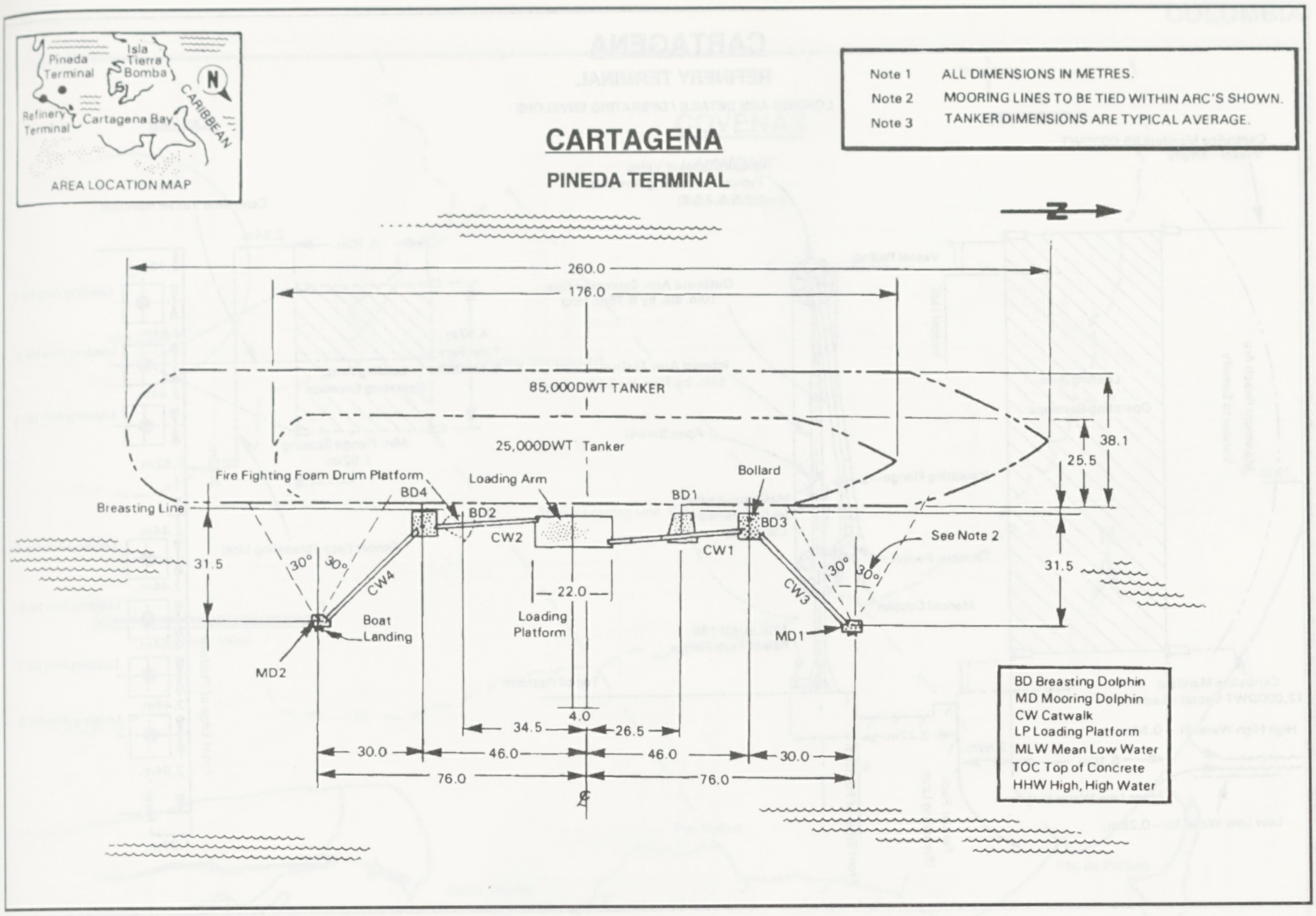
MAMONAL TERMINAL MOORING DIAGRAM

Note: (1) First moorings out
(2) Second moorings out
Small tug pushes aft

"Plan supplied by Ship's Master"

CARTAGENA

PINEDA TERMINAL



Note 1 ALL DIMENSIONS IN METRES.
Note 2 MOORING LINES TO BE TIED WITHIN ARC'S SHOWN.
Note 3 TANKER DIMENSIONS ARE TYPICAL AVERAGE.

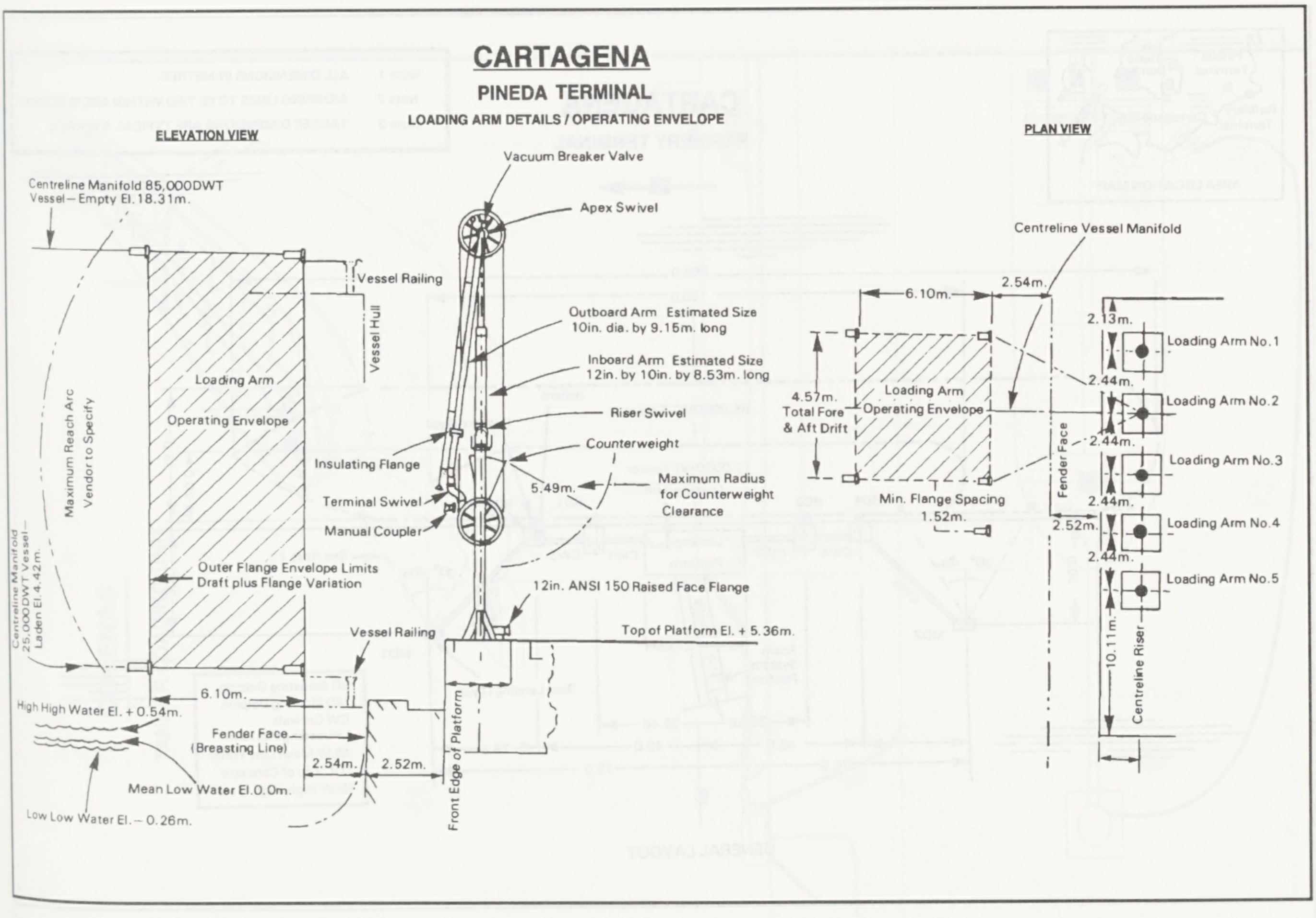
BD Breasting Dolphin
MD Mooring Dolphin
CW Catwalk
LP Loading Platform
MLW Mean Low Water
TOC Top of Concrete
HHW High, High Water

Pineda Terminal
Isla Tierra Bomba
Refinery Terminal
Cartagena Bay
CARIBBEAN
N
AREA LOCATION MAP
260.0
176.0
85,000DWT TANKER
25,000DWT Tanker
38.1
25.5
Fire Fighting Foam Drum Platform
Loading Arm
Bollard
Breasting Line
BD4
BD2
BD1
BD3
CW2
CW1
CW4
CW3
See Note 2
31.5
30°
30°
22.0
Boat Landing
Loading Platform
MD2
MD1
34.5
4.0
26.5
30.0
46.0
46.0
30.0
76.0
76.0
℄

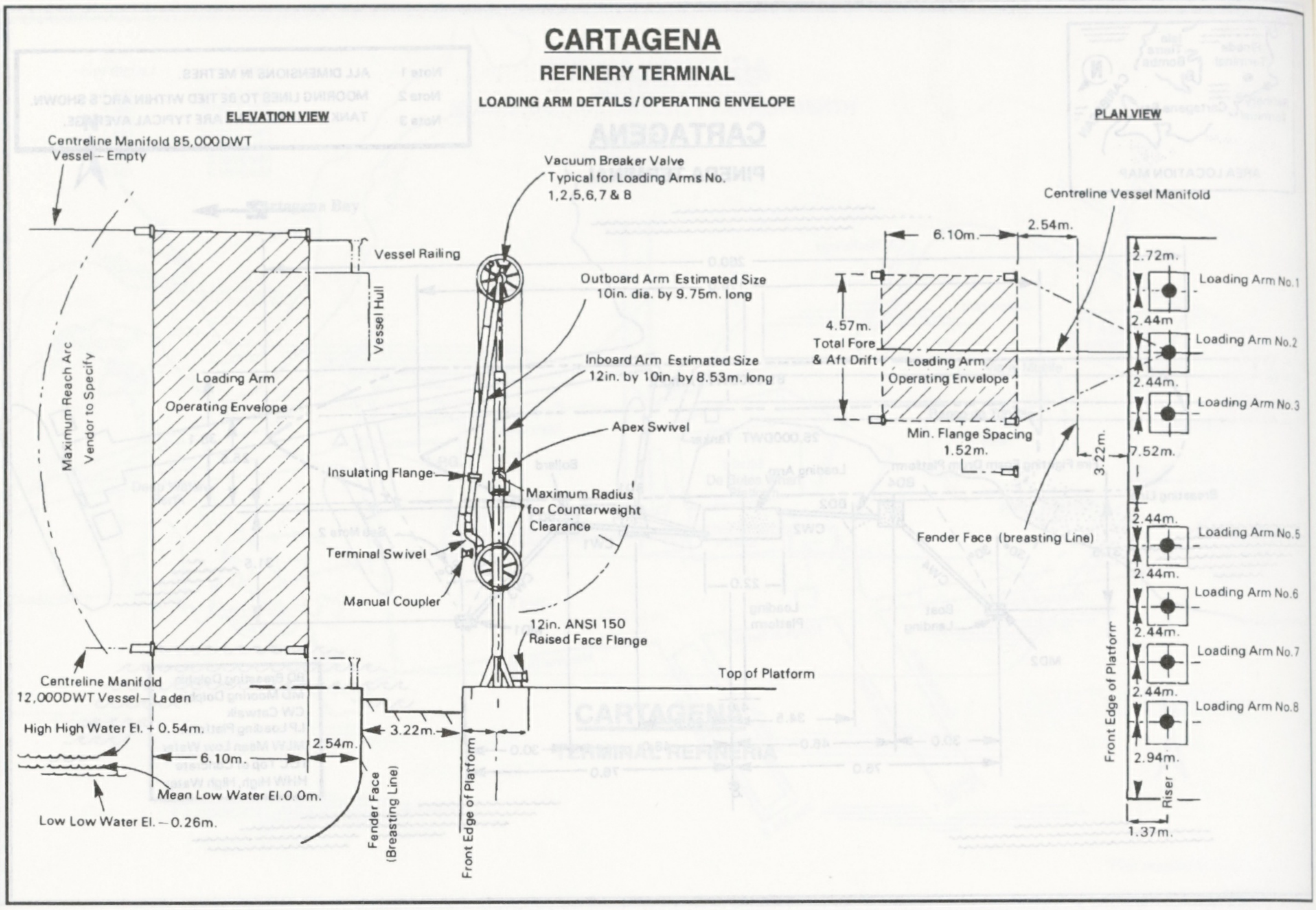
CARTAGENA

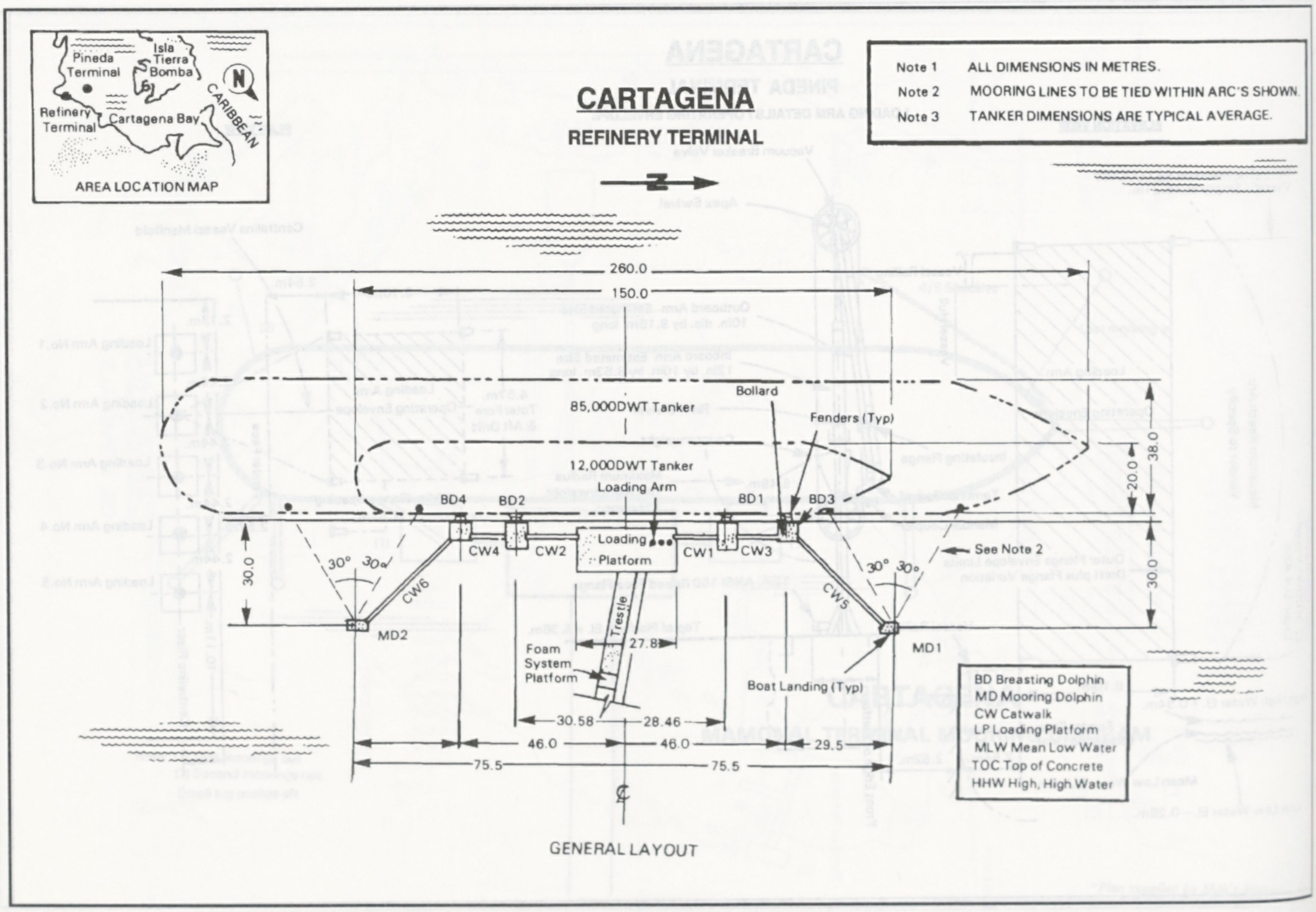
PINEDA TERMINAL

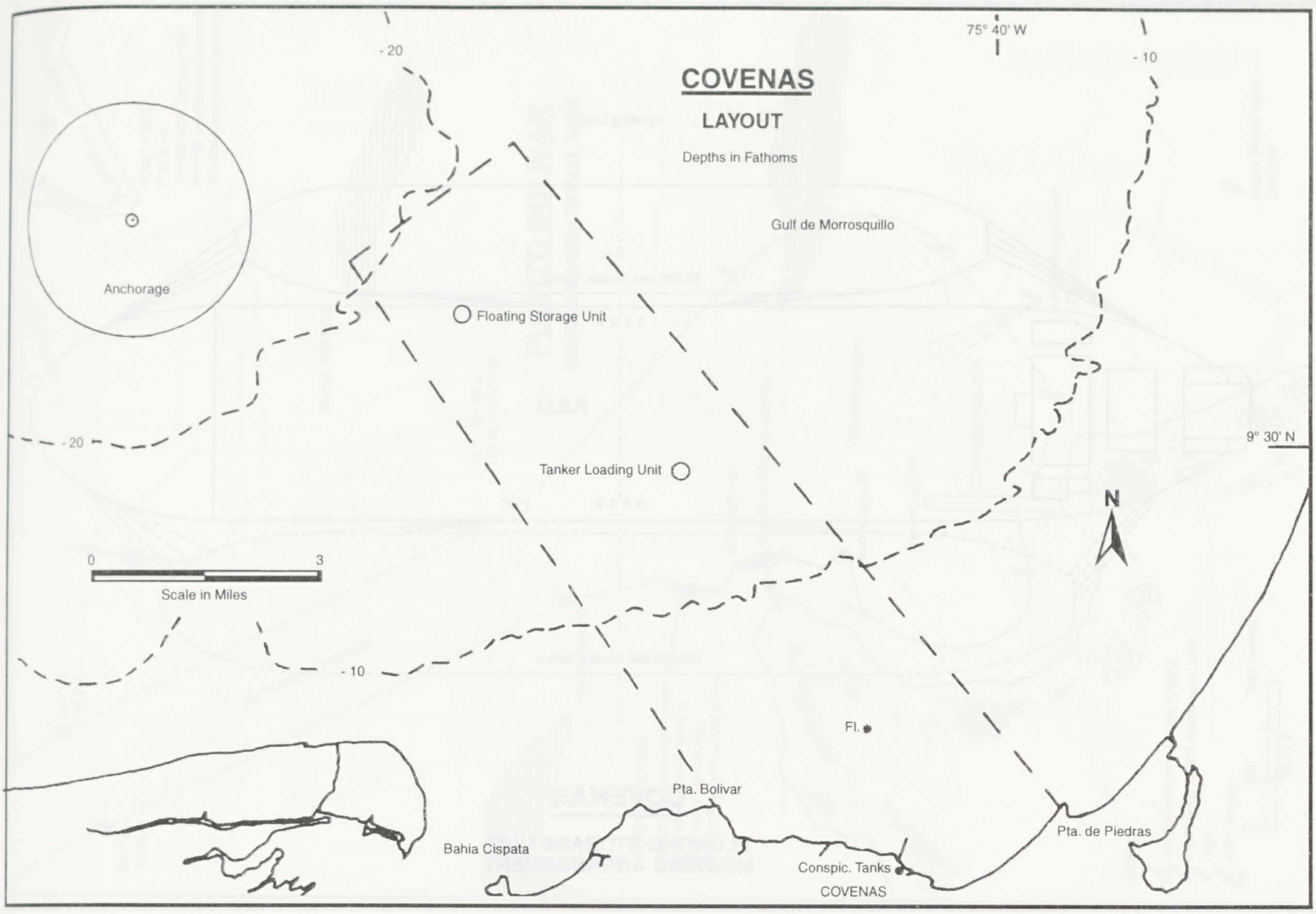
LOADING ARM DETAILS / OPERATING ENVELOPE

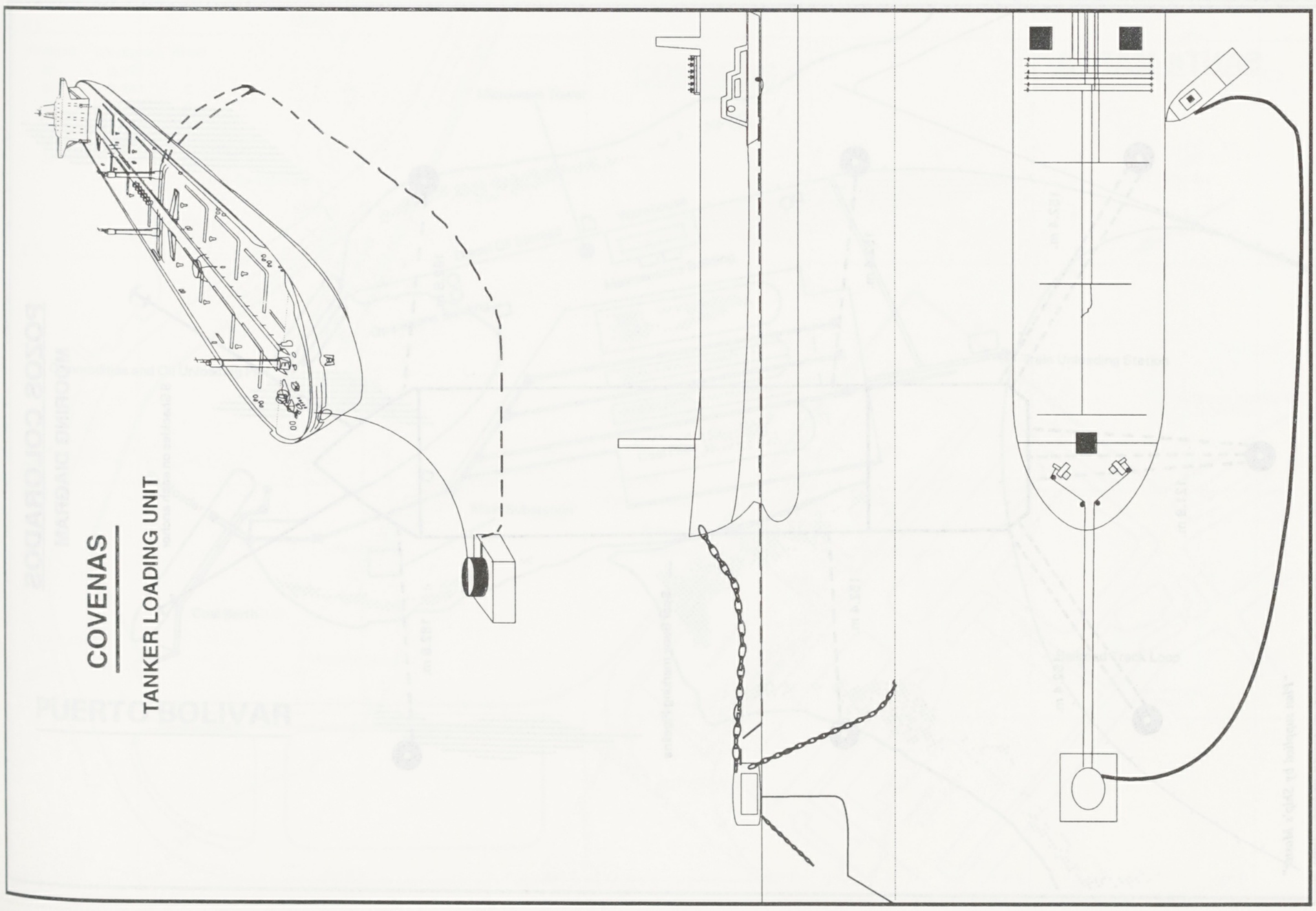


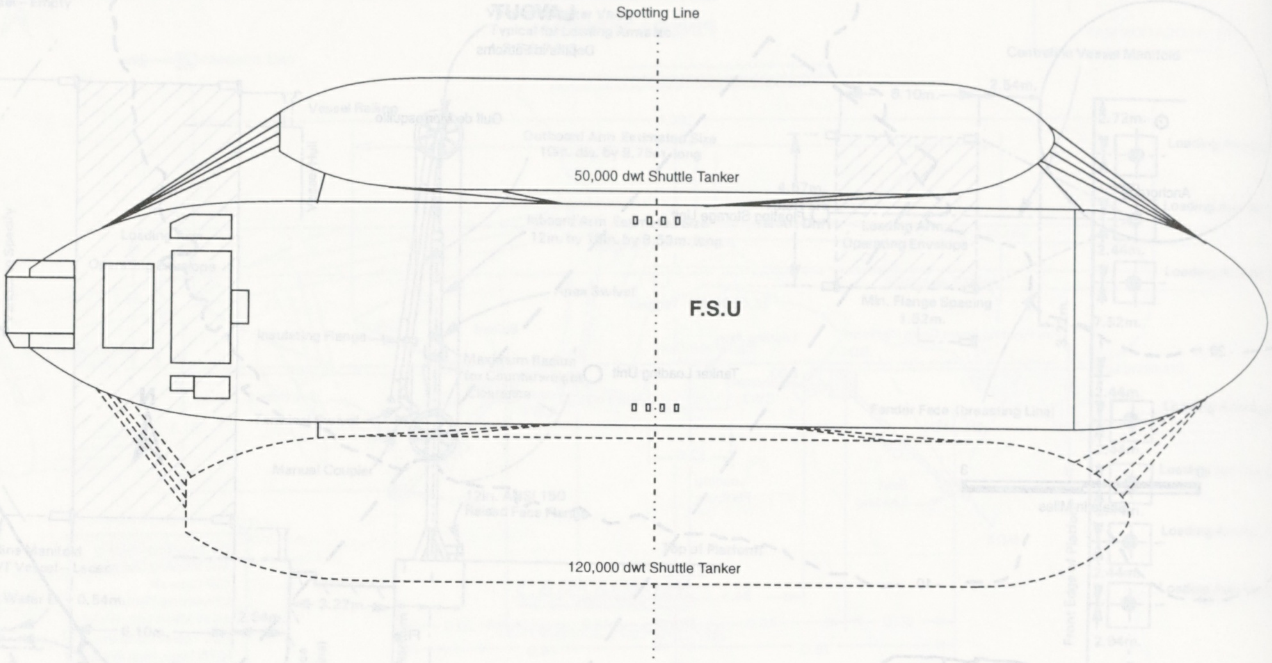
ELEVATION VIEW
Centreline Manifold 85,000DWT Vessel – Empty El. 18.31m.
Vessel Railing
Vessel Hull
Loading Arm Operating Envelope
Maximum Reach Arc Vendor to Specify
Centreline Manifold 25,000DWT Vessel – Laden El 4.42m.
Outer Flange Envelope Limits Draft plus Flange Variation
Vessel Railing
6.10m.
High High Water El. + 0.54m.
Fender Face (Breasting Line)
Mean Low Water El.0.0m.
Low Low Water El. – 0.26m.
2.54m.
2.52m.
Front Edge of Platform
Vacuum Breaker Valve
Apex Swivel
Outboard Arm Estimated Size 10in. dia. by 9.15m. long
Inboard Arm Estimated Size 12in. by 10in. by 8.53m. long
Riser Swivel
Counterweight
Insulating Flange
5.49m.
Maximum Radius for Counterweight Clearance
Terminal Swivel
Manual Coupler
12in. ANSI 150 Raised Face Flange
Top of Platform El. + 5.36m.
PLAN VIEW
Centreline Vessel Manifold
6.10m.
2.54m.
2.13m.
4.57m. Total Fore & Aft Drift
Loading Arm Operating Envelope
Min. Flange Spacing 1.52m.
Fender Face
2.44m.
2.44m.
2.44m.
2.44m.
2.52m.
10.11m.
Centreline Riser
Loading Arm No.1
Loading Arm No.2
Loading Arm No.3
Loading Arm No.4
Loading Arm No.5


CARTAGENA
REFINERY TERMINAL
LOADING ARM DETAILS / OPERATING ENVELOPE
ELEVATION VIEW
Centreline Manifold 85,000DWT Vessel – Empty
Vessel Railing
Vessel Hull
Maximum Reach Arc Vendor to Specify
Loading Arm Operating Envelope
Vacuum Breaker Valve Typical for Loading Arms No. 1,2,5,6,7 & 8
Outboard Arm Estimated Size 10in. dia. by 9.75m. long
Inboard Arm Estimated Size 12in. by 10in. by 8.53m. long
Apex Swivel
Insulating Flange
Maximum Radius for Counterweight Clearance
Terminal Swivel
Manual Coupler
12in. ANSI 150 Raised Face Flange
Top of Platform
Centreline Manifold 12,000DWT Vessel – Laden
High High Water El. + 0.54m.
3.22m.
2.54m.
6.10m.
Mean Low Water El.0.0m.
Low Low Water El. – 0.26m.
Fender Face (Breasting Line)
Front Edge of Platform
PLAN VIEW
Centreline Vessel Manifold
6.10m.
2.54m.
4.57m. Total Fore & Aft Drift
Loading Arm Operating Envelope
Min. Flange Spacing 1.52m.
Fender Face (breasting Line)
2.72m.
Loading Arm No.1
2.44m.
Loading Arm No.2
2.44m.
Loading Arm No.3
3.22m.
7.52m.
2.44m.
Loading Arm No.5
2.44m.
Loading Arm No.6
2.44m.
Loading Arm No.7
2.44m.
Loading Arm No.8
2.94m.
Front Edge of Platform
Riser
1.37m.


Pineda Terminal
Isla Tierra Bomba
Refinery Terminal
Cartagena Bay
CARIBBEAN
N
AREA LOCATION MAP
CARTAGENA
REFINERY TERMINAL
Note 1 ALL DIMENSIONS IN METRES.
Note 2 MOORING LINES TO BE TIED WITHIN ARC'S SHOWN.
Note 3 TANKER DIMENSIONS ARE TYPICAL AVERAGE.
N
260.0
150.0
Bollard
85,000DWT Tanker
Fenders (Typ)
12,000DWT Tanker
Loading Arm
38.0
20.0
30.0
BD4
BD2
BD1
BD3
CW4
CW2
Loading Platform
CW1
CW3
See Note 2
30°
30°
CW6
CW5
30°
30°
30.0
MD2
MD1
Trestle
27.8
Foam System Platform
Boat Landing (Typ)
30.58
28.46
46.0
46.0
29.5
75.5
75.5
℄
BD Breasting Dolphin
MD Mooring Dolphin
CW Catwalk
LP Loading Platform
MLW Mean Low Water
TOC Top of Concrete
HHW High, High Water
GENERAL LAYOUT


COVENAS
LAYOUT
Depths in Fathoms
75° 40' W
- 20
- 10
Gulf de Morrosquillo
Anchorage
Floating Storage Unit
Tanker Loading Unit
- 20
9° 30' N
N
0
3
Scale in Miles
- 10
Fl.
Pta. Bolivar
Bahia Cispata
Conspic. Tanks
COVENAS
Pta. de Piedras


COVENAS
TANKER LOADING UNIT

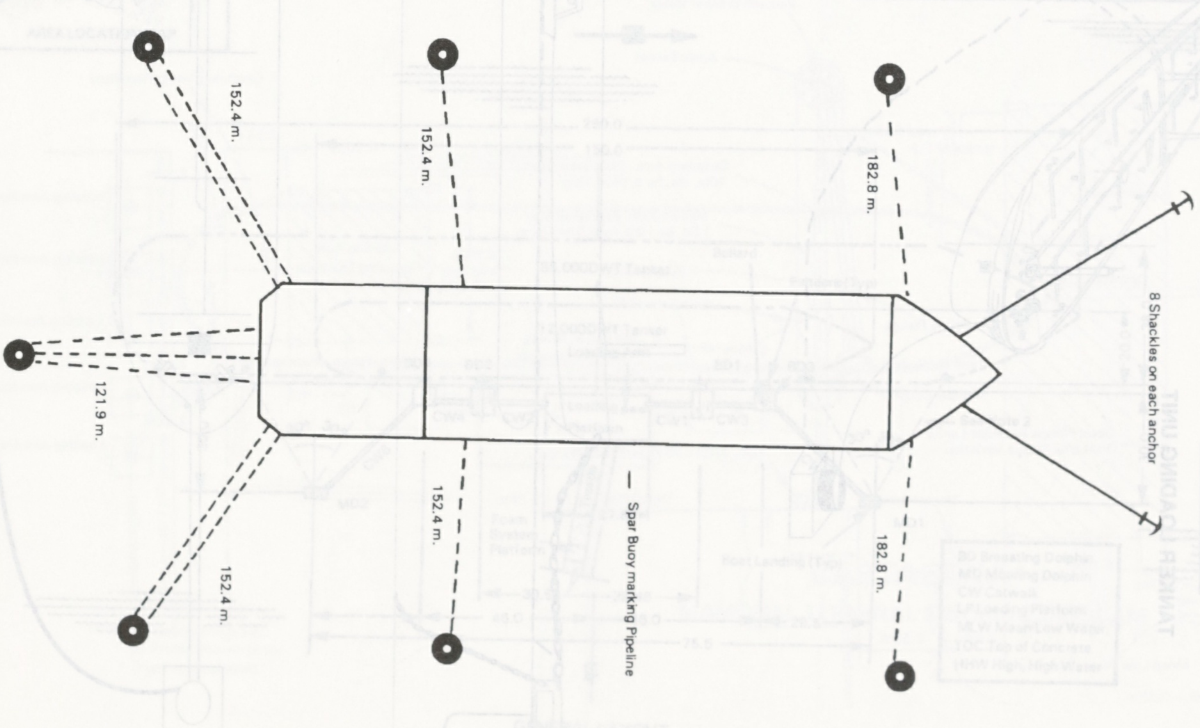

Spotting Line
50,000 dwt Shuttle Tanker
F.S.U
120,000 dwt Shuttle Tanker

COVENAS

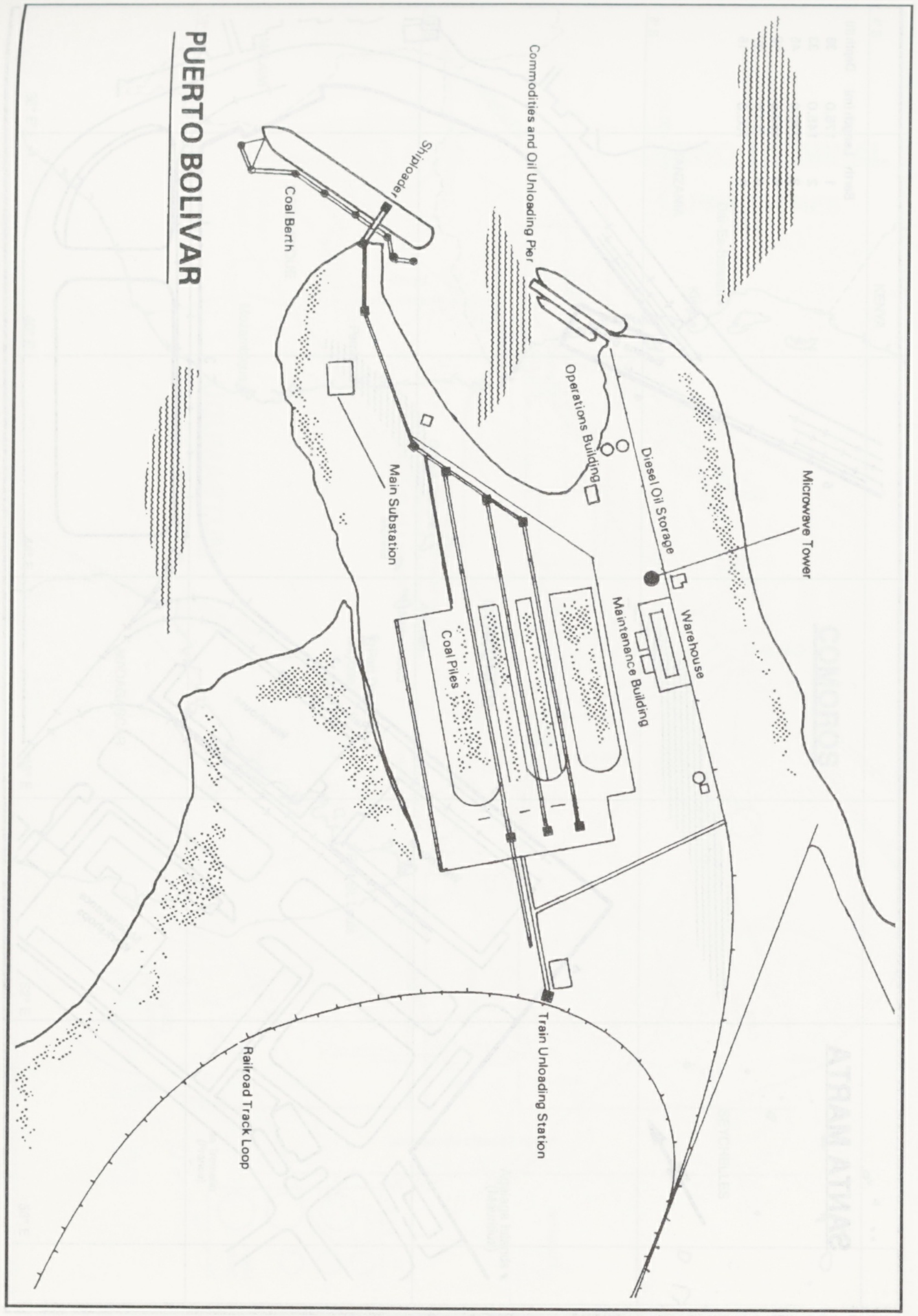
FLOATING STORAGE UNIT MOORING ARRANGEMENT

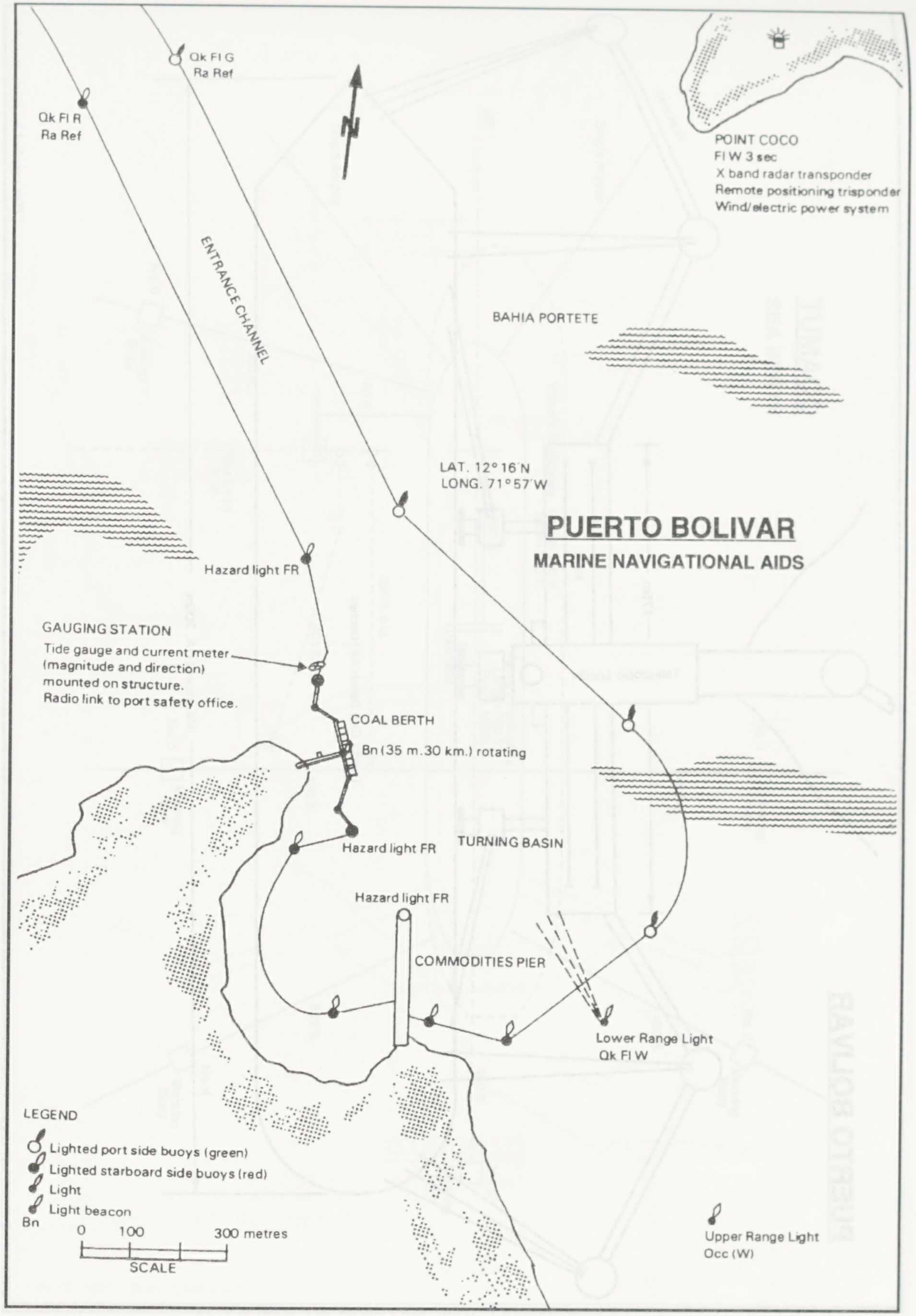
POZOS COLORADOS

MOORING DIAGRAM

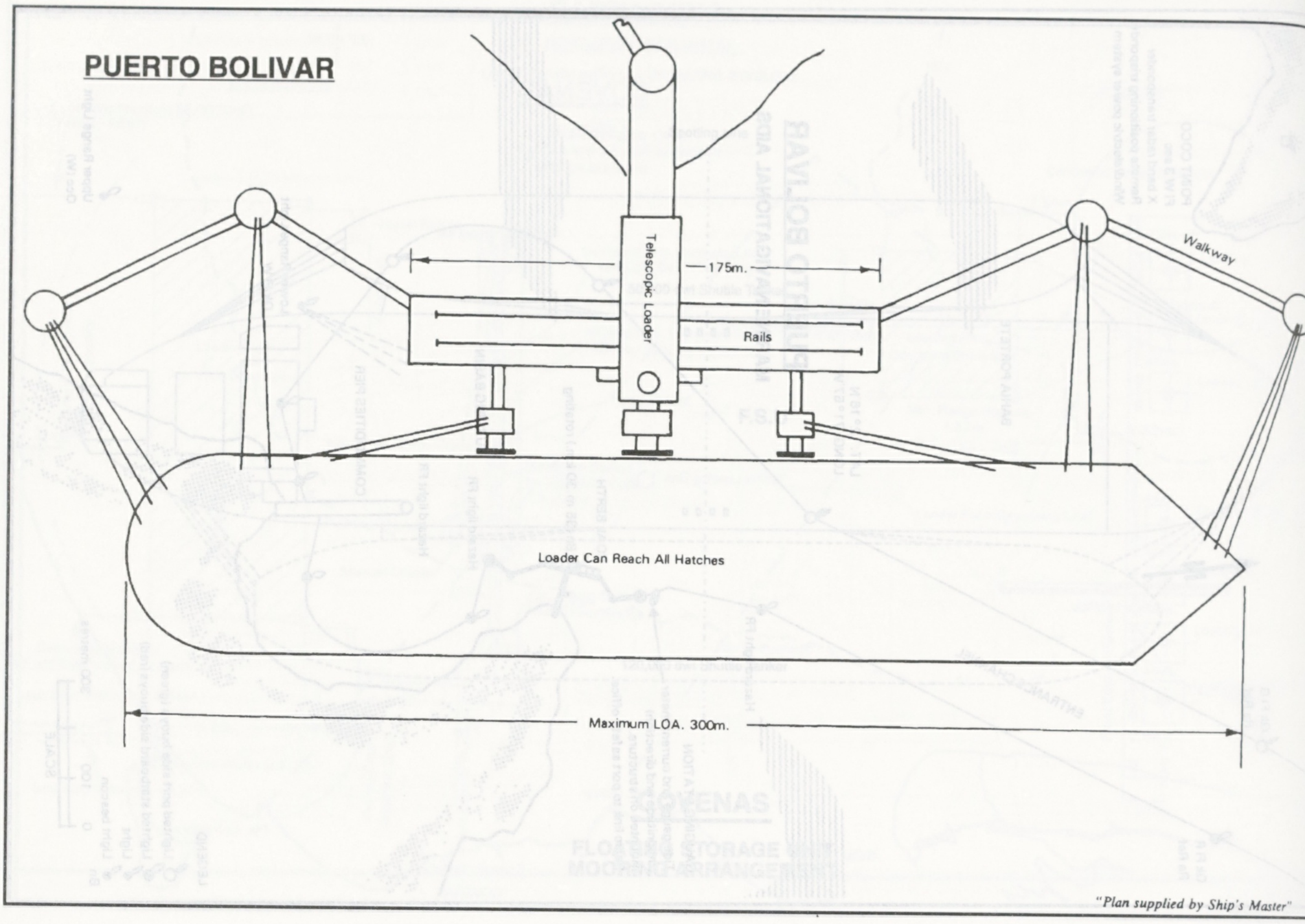

152.4 m.
152.4 m.
182.8 m.
121.9 m.
8 Shackles on each anchor
Spar Buoy marking Pipeline
152.4 m.
152.4 m.
182.8 m.

"Plan supplied by Ship's Master"


PUERTO BOLIVAR
Shiploader
Coal Berth
Commodities and Oil Unloading Pier
Operations Building
Diesel Oil Storage
Microwave Tower
Main Substation
Warehouse
Maintenance Building
Coal Piles
Train Unloading Station
Railroad Track Loop

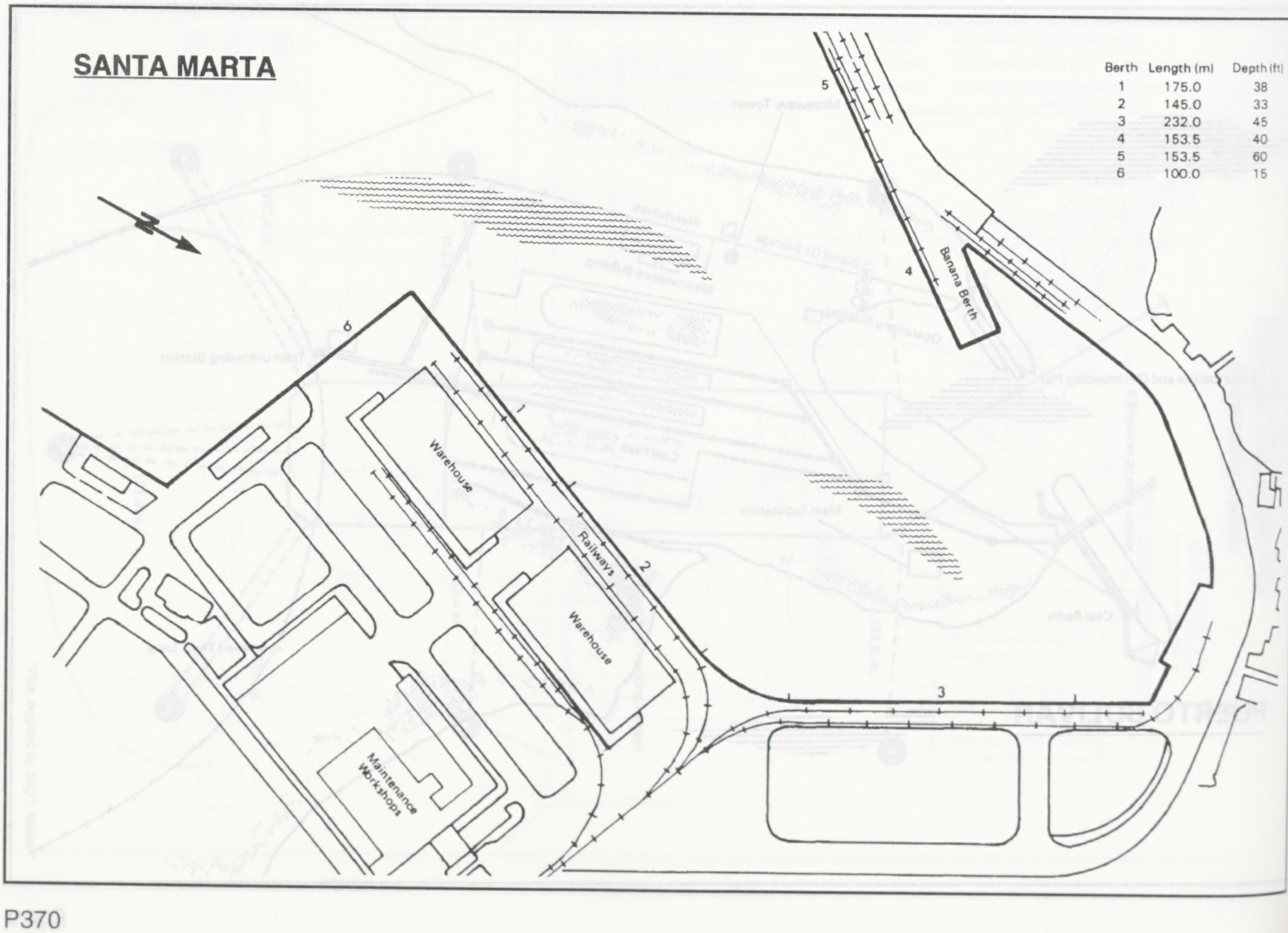

PUERTO BOLIVAR
MARINE NAVIGATIONAL AIDS
Qk Fl G
Ra Ref
Qk Fl R
Ra Ref
POINT COCO
Fl W 3 sec
X band radar transponder
Remote positioning trisponder
Wind/electric power system
ENTRANCE CHANNEL
BAHIA PORTETE
LAT. 12° 16'N
LONG. 71° 57'W
Hazard light FR
GAUGING STATION
Tide gauge and current meter
(magnitude and direction)
mounted on structure.
Radio link to port safety office.
COAL BERTH
Bn (35 m. 30 km.) rotating
Hazard light FR
TURNING BASIN
Hazard light FR
COMMODITIES PIER
Lower Range Light
Qk Fl W
Upper Range Light
Occ (W)
LEGEND
Lighted port side buoys (green)
Lighted starboard side buoys (red)
Light
Light beacon
Bn
0
100
300 metres
SCALE

PUERTO BOLIVAR

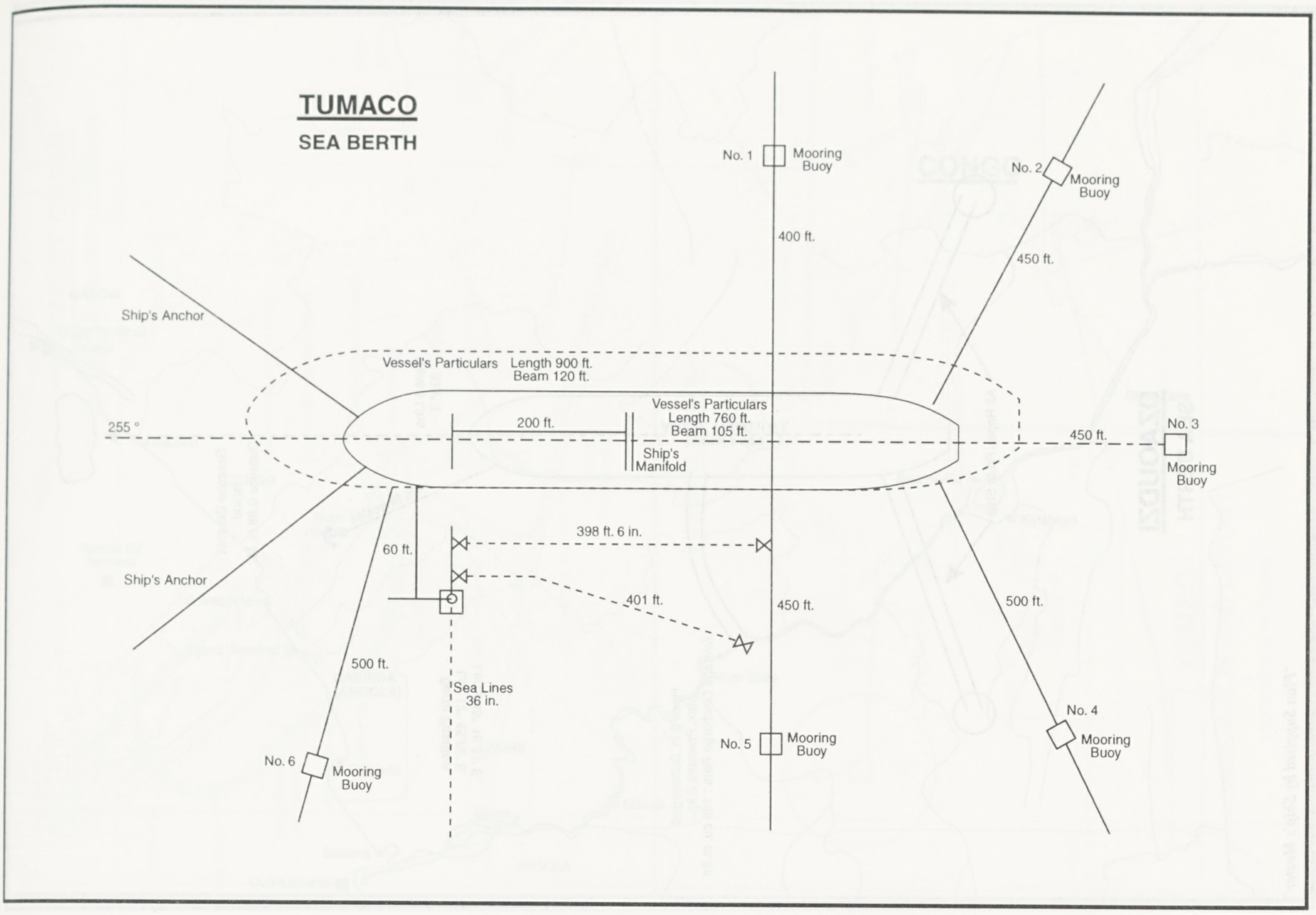

175m.
Telescopic Loader
Rails
Walkway
Loader Can Reach All Hatches
Maximum LOA. 300m.

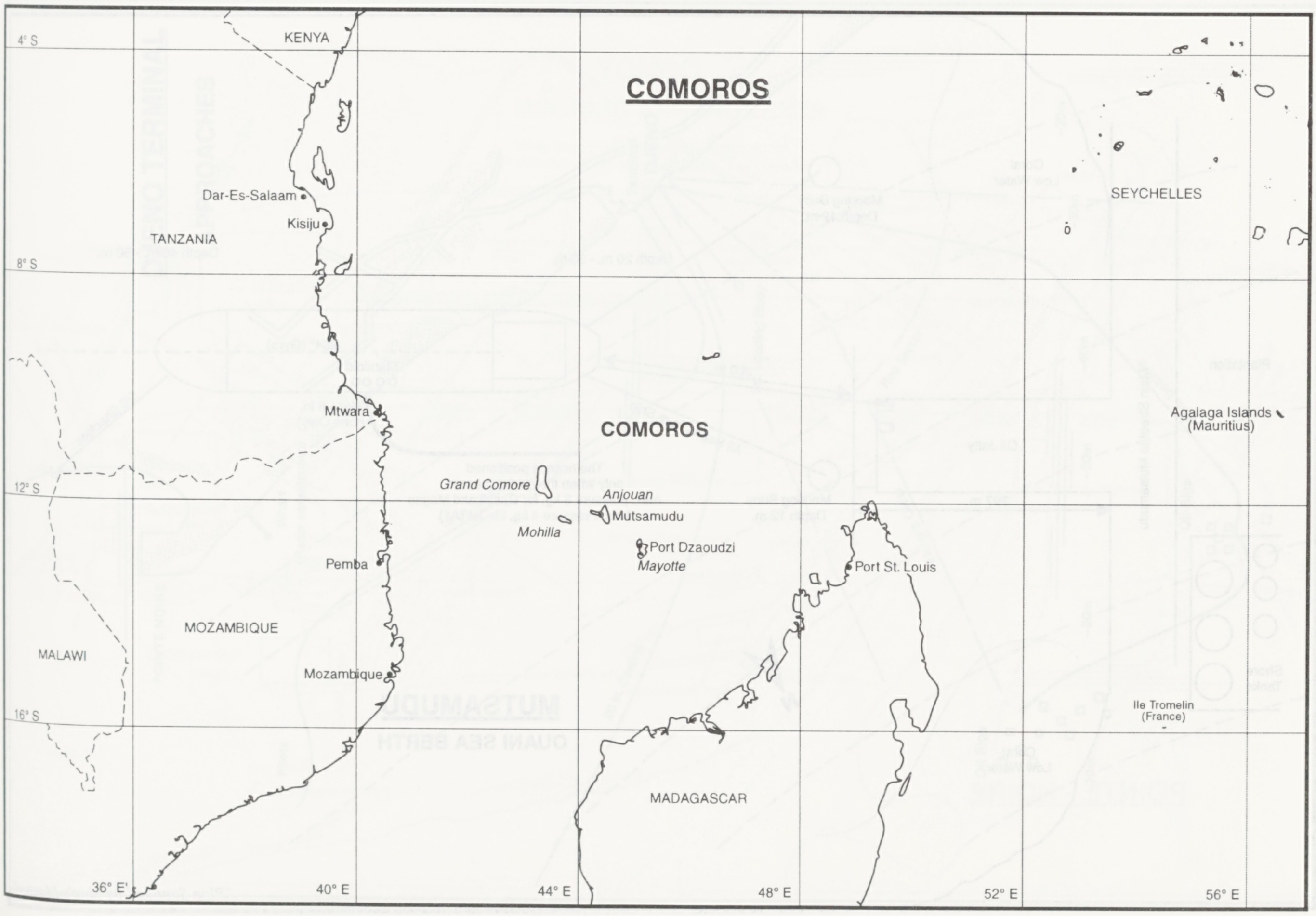
"Plan supplied by Ship's Master"

SANTA MARTA

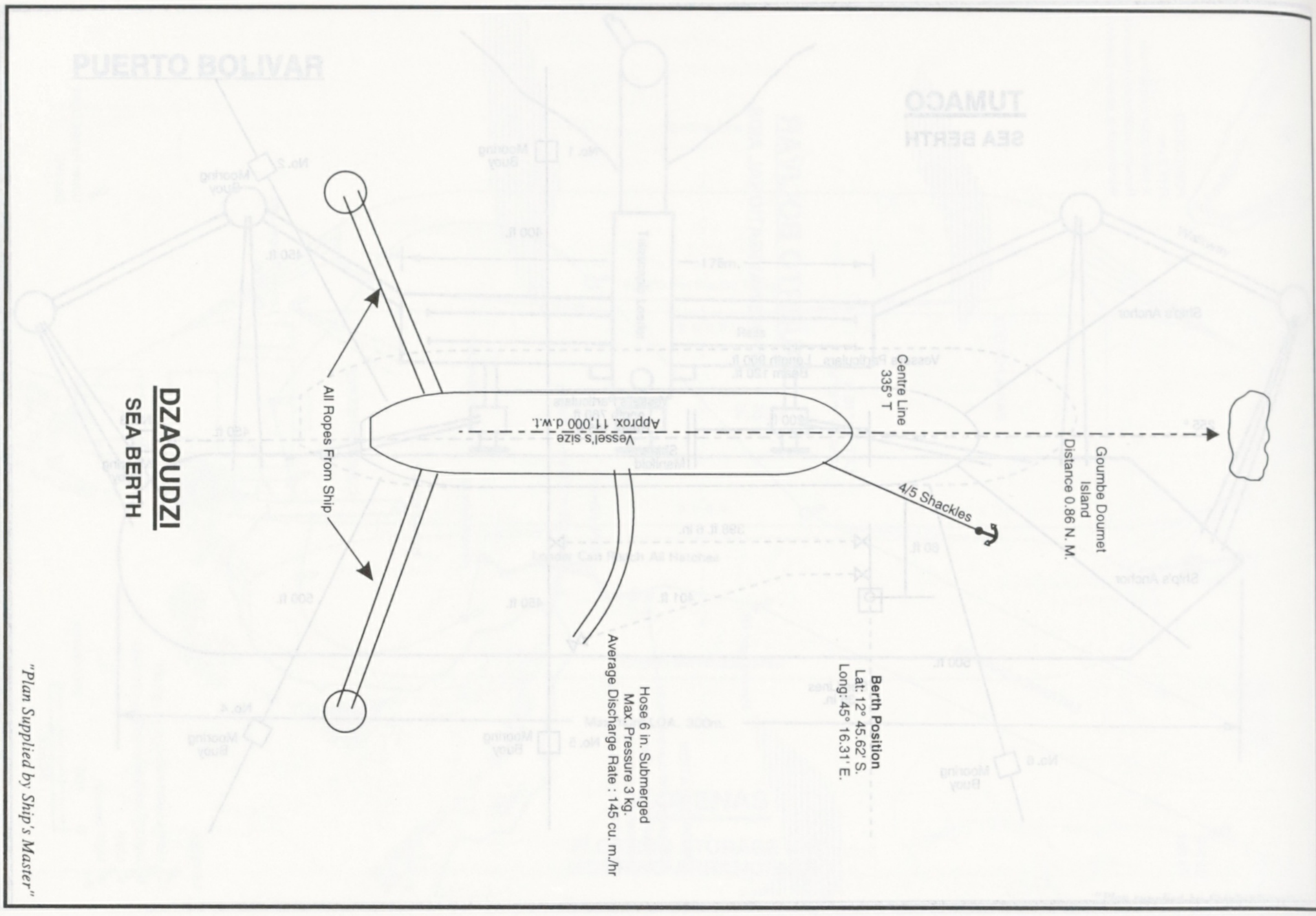

1
2
3
4
5
6
Warehouse
Railways
Warehouse
Maintenance Workshops
Banana Berth

Berth	Length (m)	Depth (ft)
1	175.0	38
2	145.0	33
3	232.0	45
4	153.5	40
5	153.5	60
6	100.0	15


TUMACO
SEA BERTH
No. 1
Mooring Buoy
400 ft.
No. 2
Mooring Buoy
450 ft.
Ship's Anchor
Vessel's Particulars Length 900 ft.
Beam 120 ft.
Vessel's Particulars
Length 760 ft.
Beam 105 ft.
255 °
200 ft.
Ship's Manifold
450 ft.
No. 3
Mooring Buoy
60 ft.
398 ft. 6 in.
401 ft.
Ship's Anchor
450 ft.
500 ft.
500 ft.
Sea Lines
36 in.
No. 6
Mooring Buoy
No. 5
Mooring Buoy
No. 4
Mooring Buoy

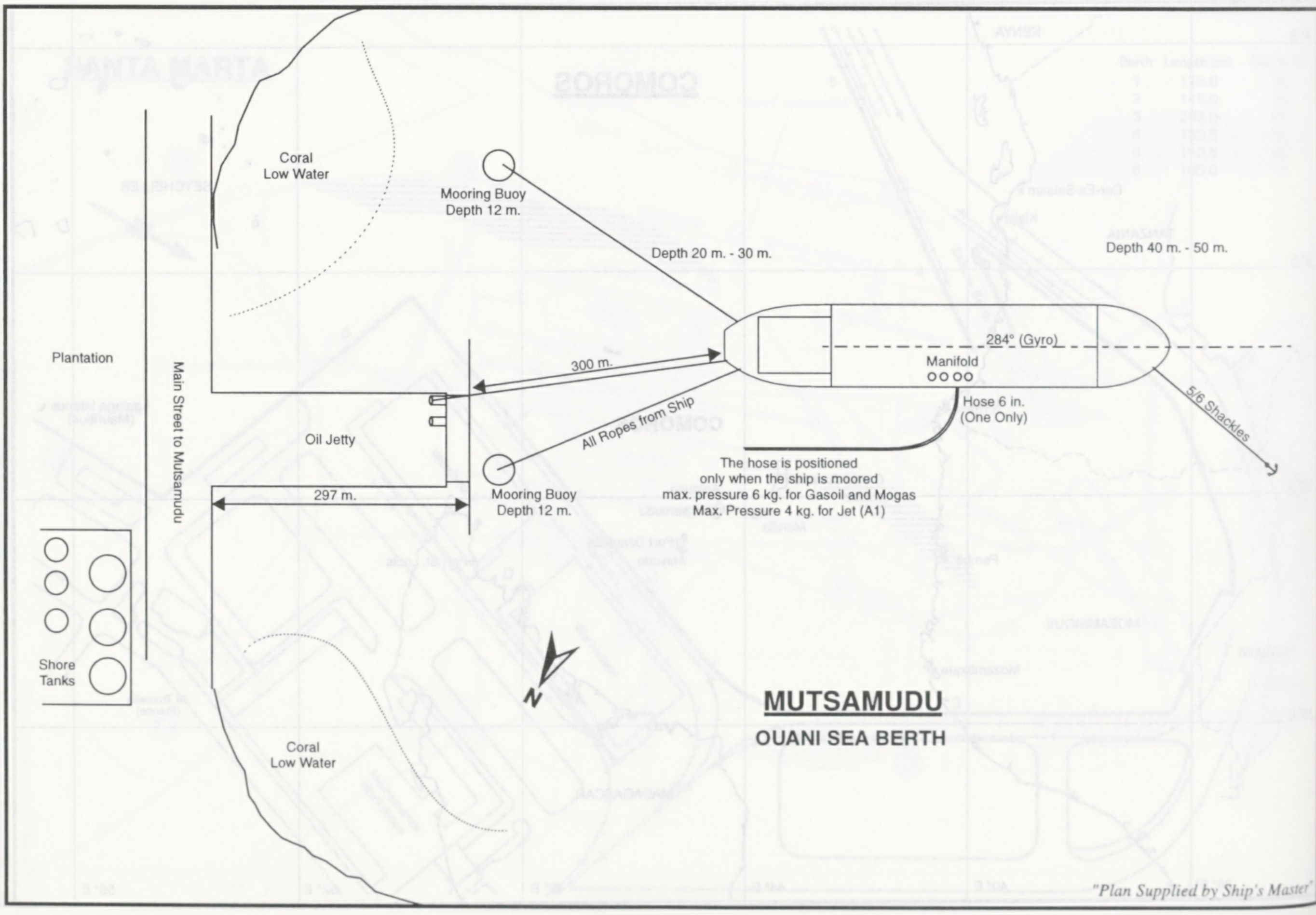

4° S
KENYA
COMOROS
Dar-Es-Salaam
Kisiju
TANZANIA
SEYCHELLES
8° S
Mtwara
COMOROS
Agalaga Islands
(Mauritius)
12° S
Grand Comore
Anjouan
Mutsamudu
Mohilla
Port Dzaoudzi
Mayotte
Port St. Louis
Pemba
MOZAMBIQUE
MALAWI
Mozambique
Ile Tromelin
(France)
16° S
MADAGASCAR
36° E
40° E
44° E
48° E
52° E
56° E

DZAOUDZI
SEA BERTH

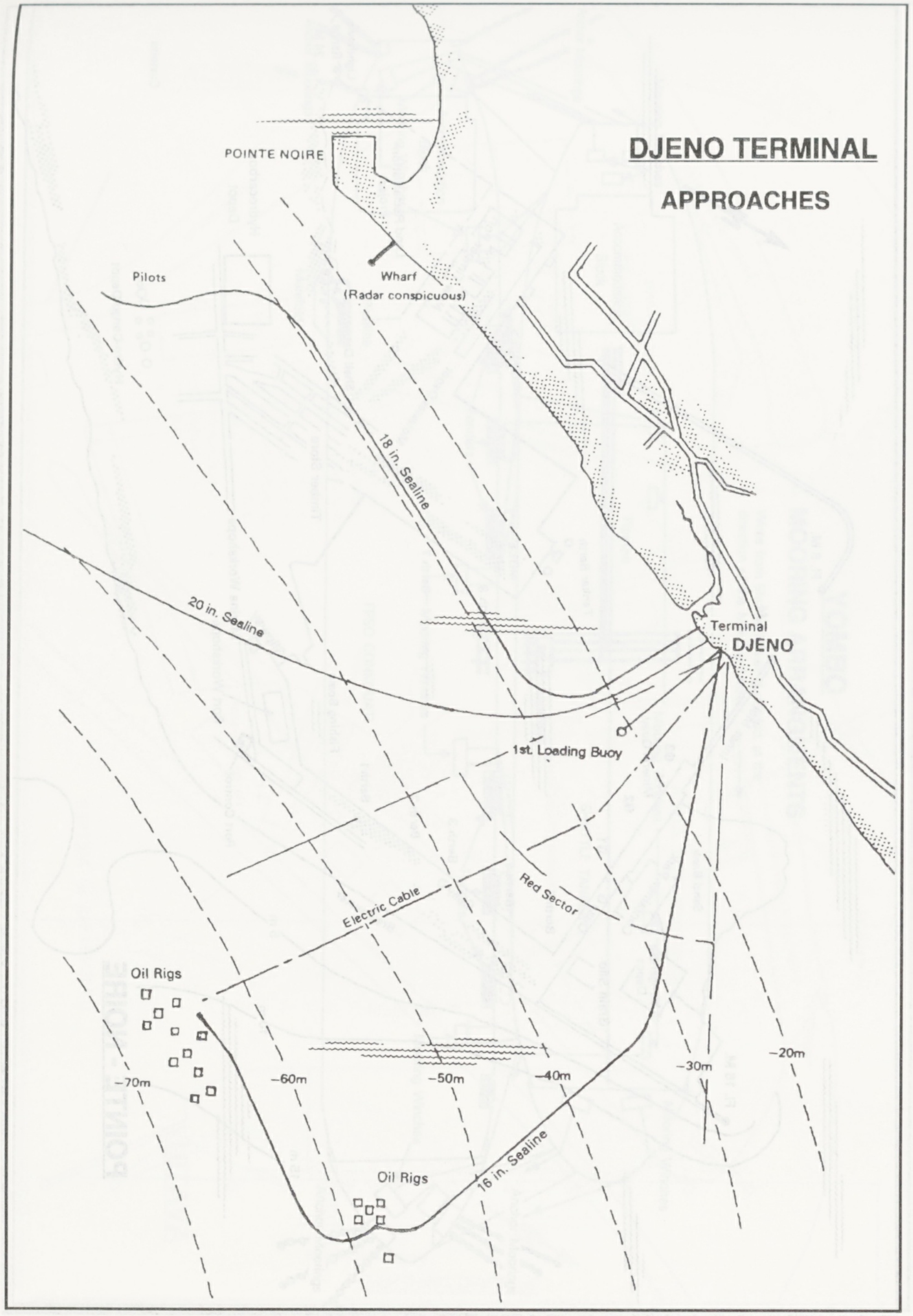

All Ropes From Ship
Approx. 11,000 d.w.t.
Vessel's size
Centre Line
335° T
Goumbe Doumet
Island
Distance 0.86 N. M.
4/5 Shackles
Berth Position
Lat: 12° 45.62' S.
Long: 45° 16.31' E.
Hose 6 in. Submerged
Max. Pressure 3 kg.
Average Discharge Rate : 145 cu. m./hr

"Plan Supplied by Ship's Master"

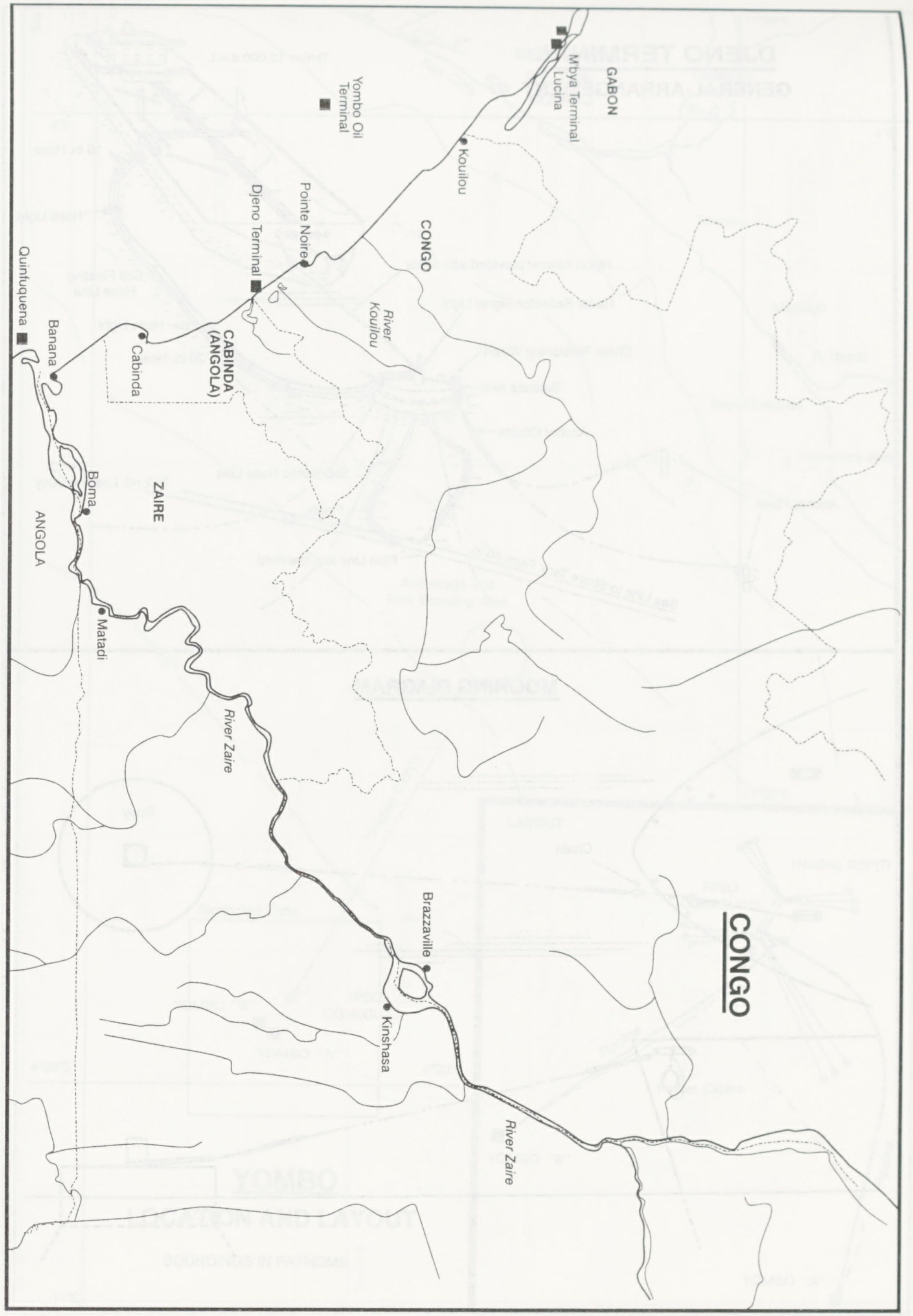
MUTSAMUDU
OUANI SEA BERTH


Coral
Low Water
Mooring Buoy
Depth 12 m.
Depth 20 m. - 30 m.
Depth 40 m. - 50 m.
Plantation
Main Street to Mutsamudu
300 m.
284° (Gyro)
Manifold
Hose 6 in.
(One Only)
5/6 Shackles
All Ropes from Ship
Oil Jetty
297 m.
Mooring Buoy
Depth 12 m.
The hose is positioned
only when the ship is moored
max. pressure 6 kg. for Gasoil and Mogas
Max. Pressure 4 kg. for Jet (A1)
Shore
Tanks
N
Coral
Low Water

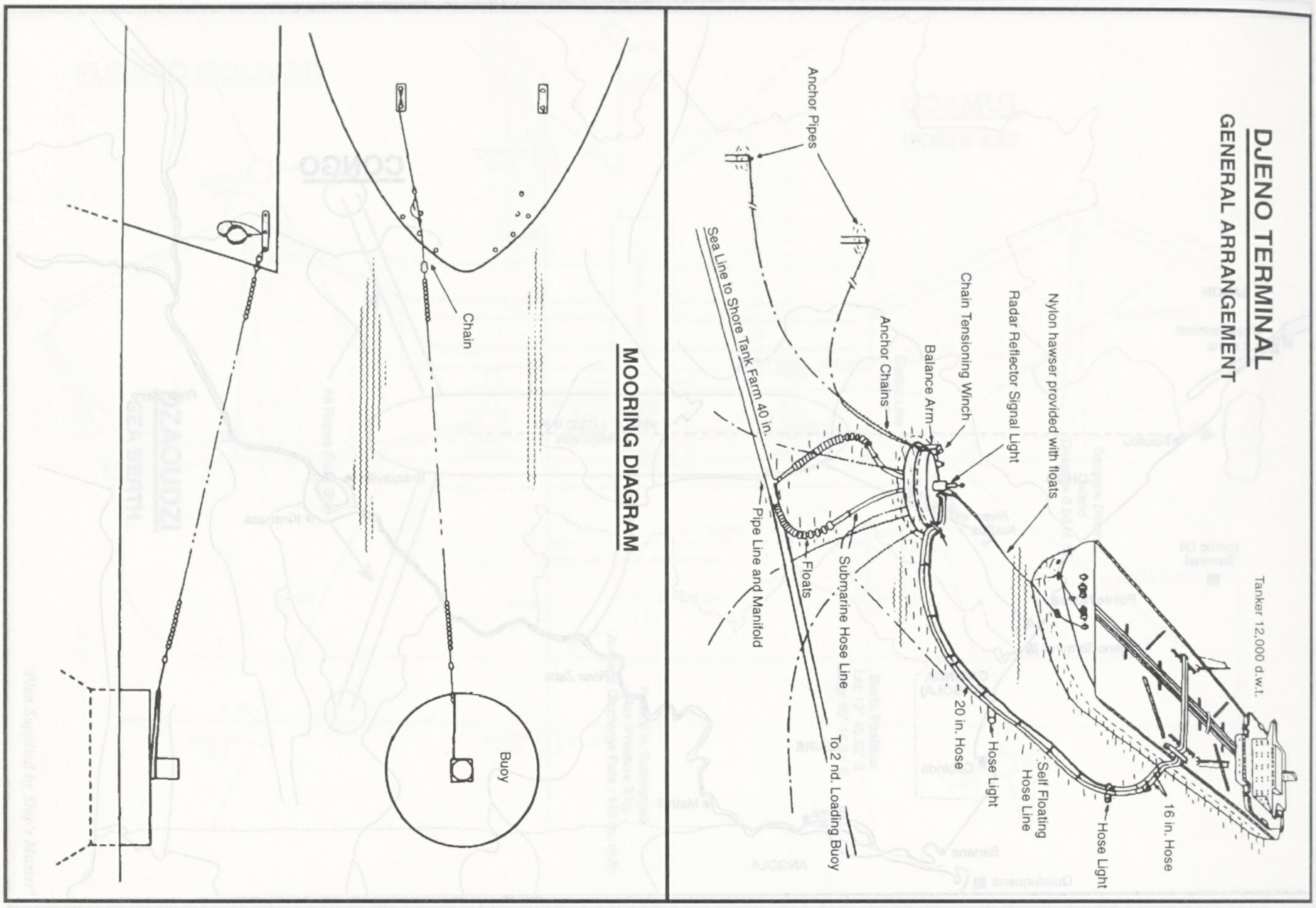
"Plan Supplied by Ship's Master"


DJENO TERMINAL APPROACHES

POINTE NOIRE
Wharf
(Radar conspicuous)
Pilots
18 in. Sealine
20 in. Sealine
Terminal
DJENO
1st. Loading Buoy
Electric Cable
Red Sector
Oil Rigs
−70m
−60m
−50m
−40m
−30m
−20m
16 in. Sealine
Oil Rigs


CONGO

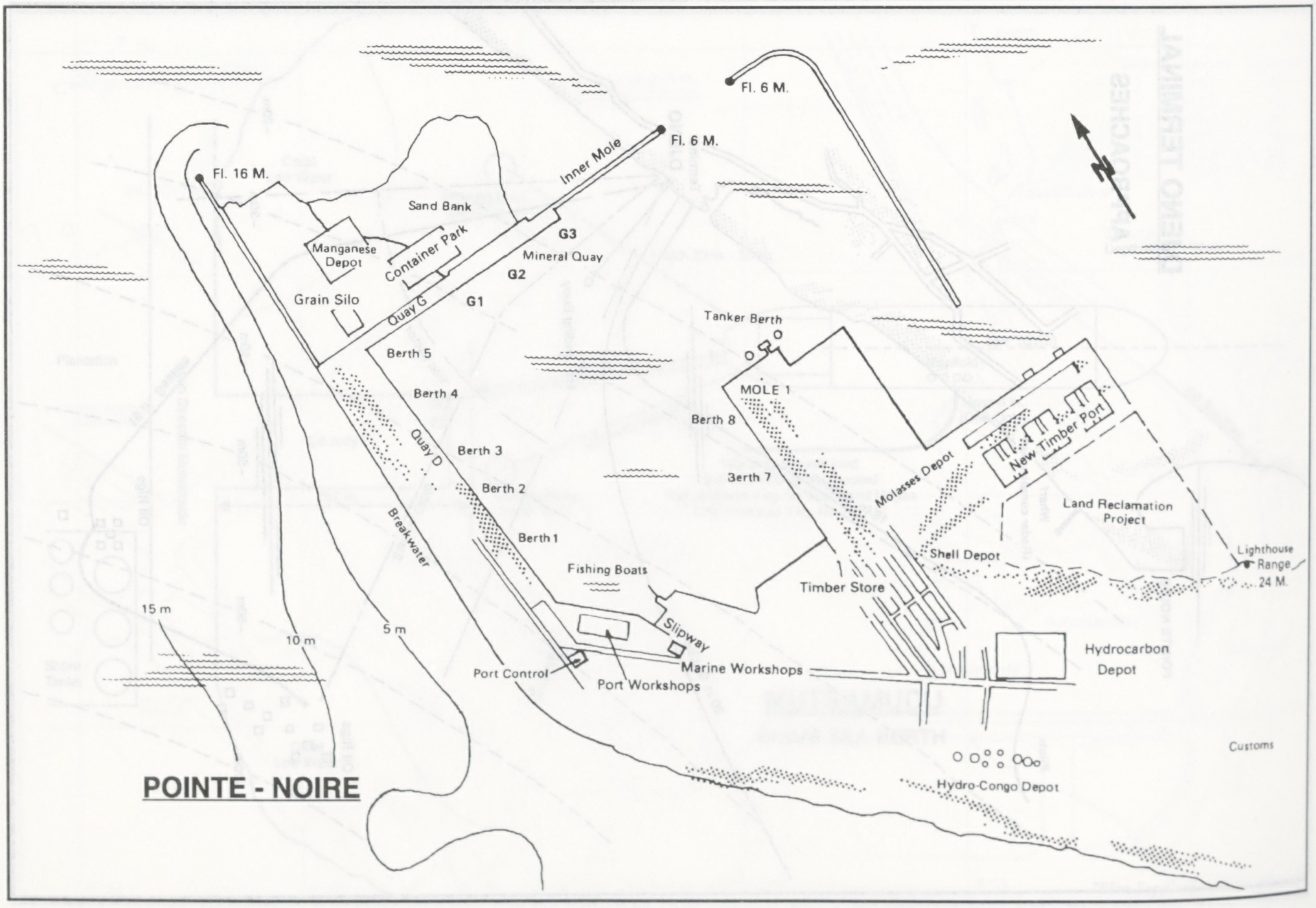
GABON
Mbya Terminal
Lucina
Yombo Oil Terminal
Kouilou
CONGO
Pointe Noire
Djeno Terminal
River Kouilou
CABINDA (ANGOLA)
Cabinda
Quinfuquena
Banana
Boma
ZAIRE
ANGOLA
Matadi
River Zaire
Brazzaville
Kinshasa
River Zaire



DJENO TERMINAL
GENERAL ARRANGEMENT

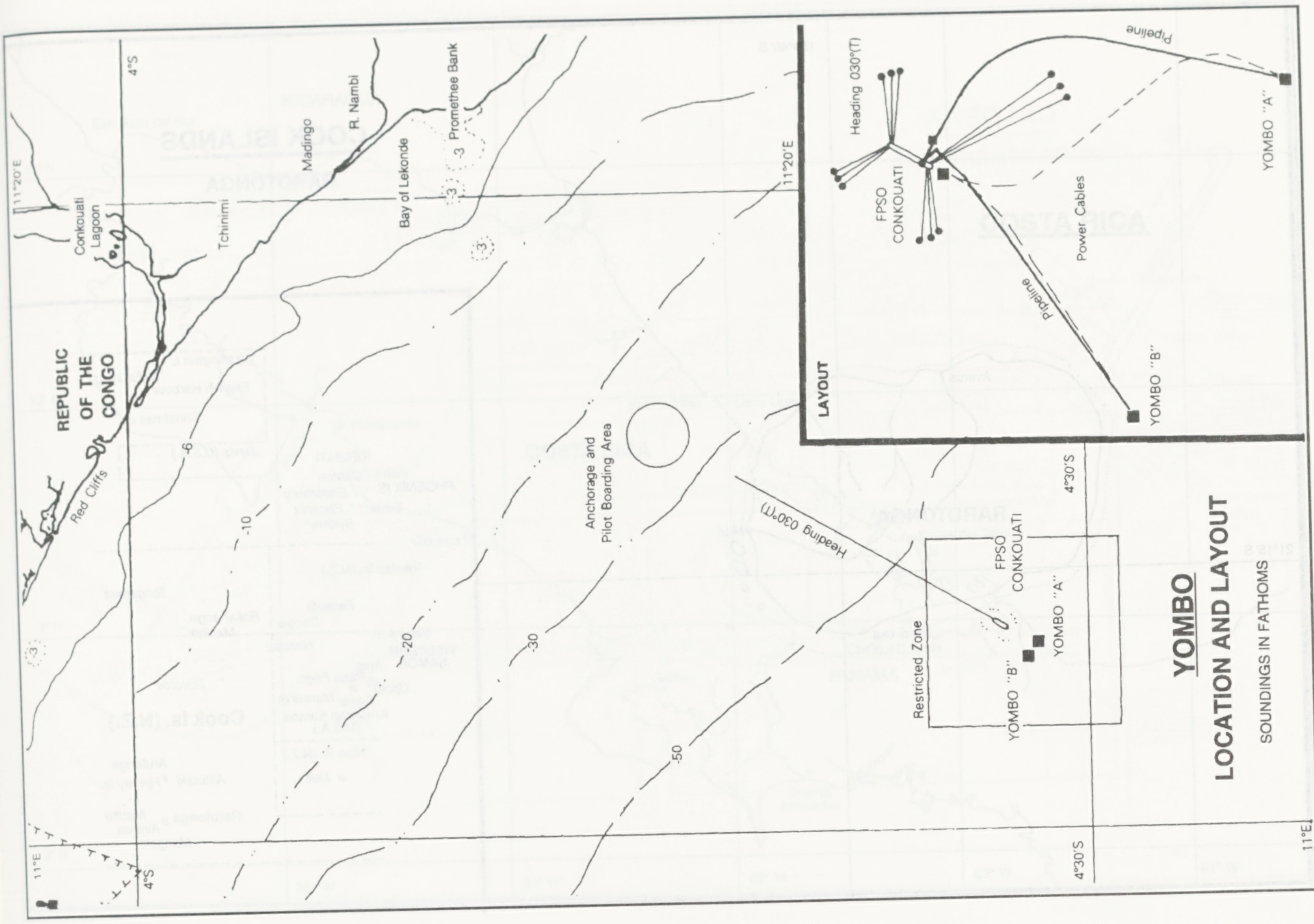
MOORING DIAGRAM

Tanker 12,000 d.w.t.
16 in. Hose
Hose Light
Self Floating Hose Line
Hose Light
20 in. Hose
Nylon hawser provided with floats
Radar Reflector Signal Light
Chain Tensioning Winch
Balance Arm
Anchor Chains
Anchor Pipes
Sea Line to Shore Tank Farm 40 in.
Pipe Line and Manifold
Floats
Submarine Hose Line
To 2 nd. Loading Buoy
Chain
Buoy



POINTE - NOIRE

Fl. 6 M.
Fl. 6 M.
Fl. 16 M.
Inner Mole
Sand Bank
Manganese Depot
Container Park
G3
Mineral Quay
G2
G1
Grain Silo
Quay G
Berth 5
Berth 4
Quay D
Berth 3
Berth 2
Berth 1
Breakwater
Fishing Boats
Slipway
Port Control
Port Workshops
Marine Workshops
Tanker Berth
MOLE 1
Berth 8
Berth 7
Molasses Depot
New Timber Port
Land Reclamation Project
Shell Depot
Timber Store
Lighthouse Range 24 M.
Hydrocarbon Depot
Customs
Hydro-Congo Depot
15 m
10 m
5 m

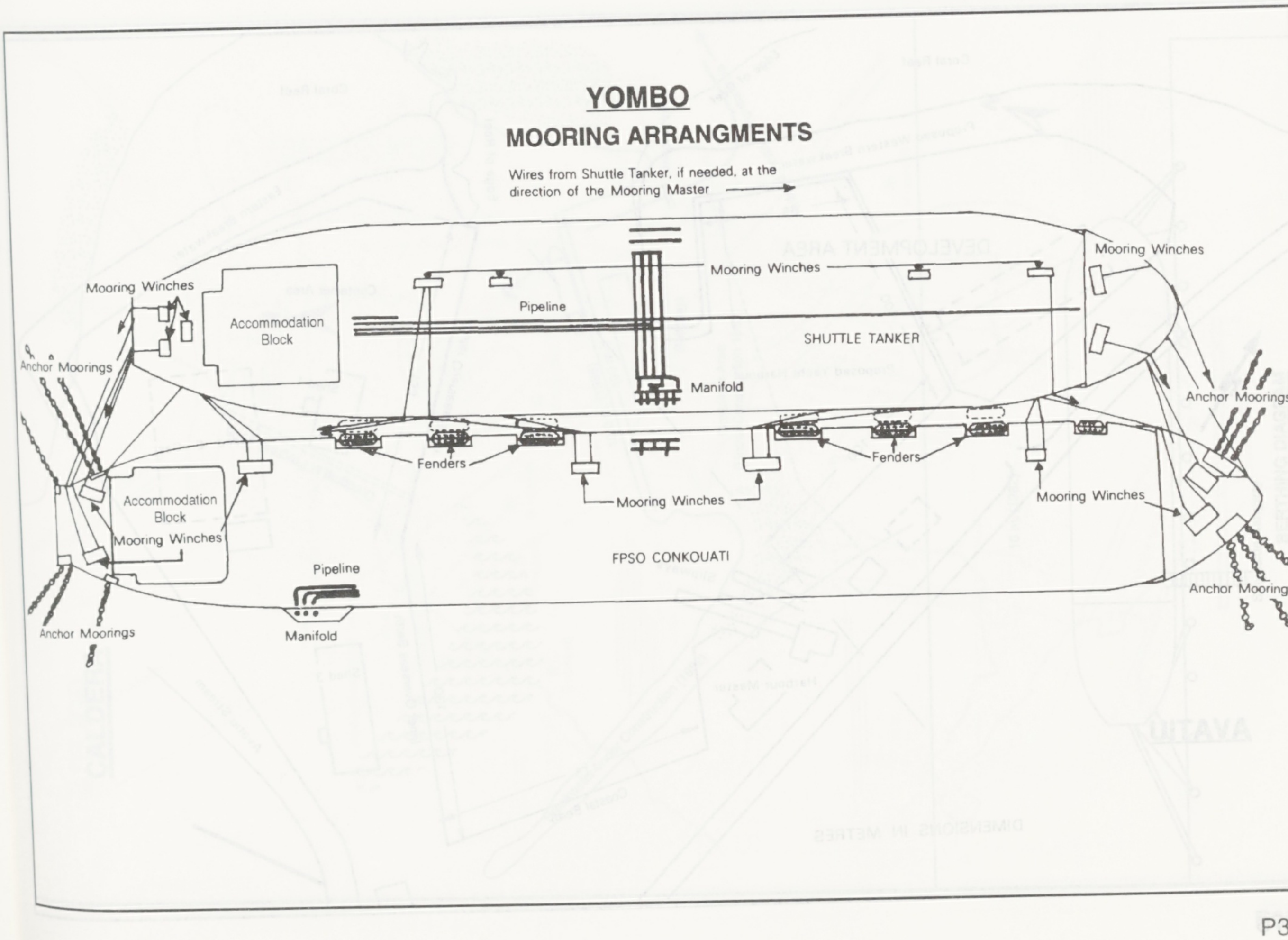


YOMBO

LOCATION AND LAYOUT

SOUNDINGS IN FATHOMS

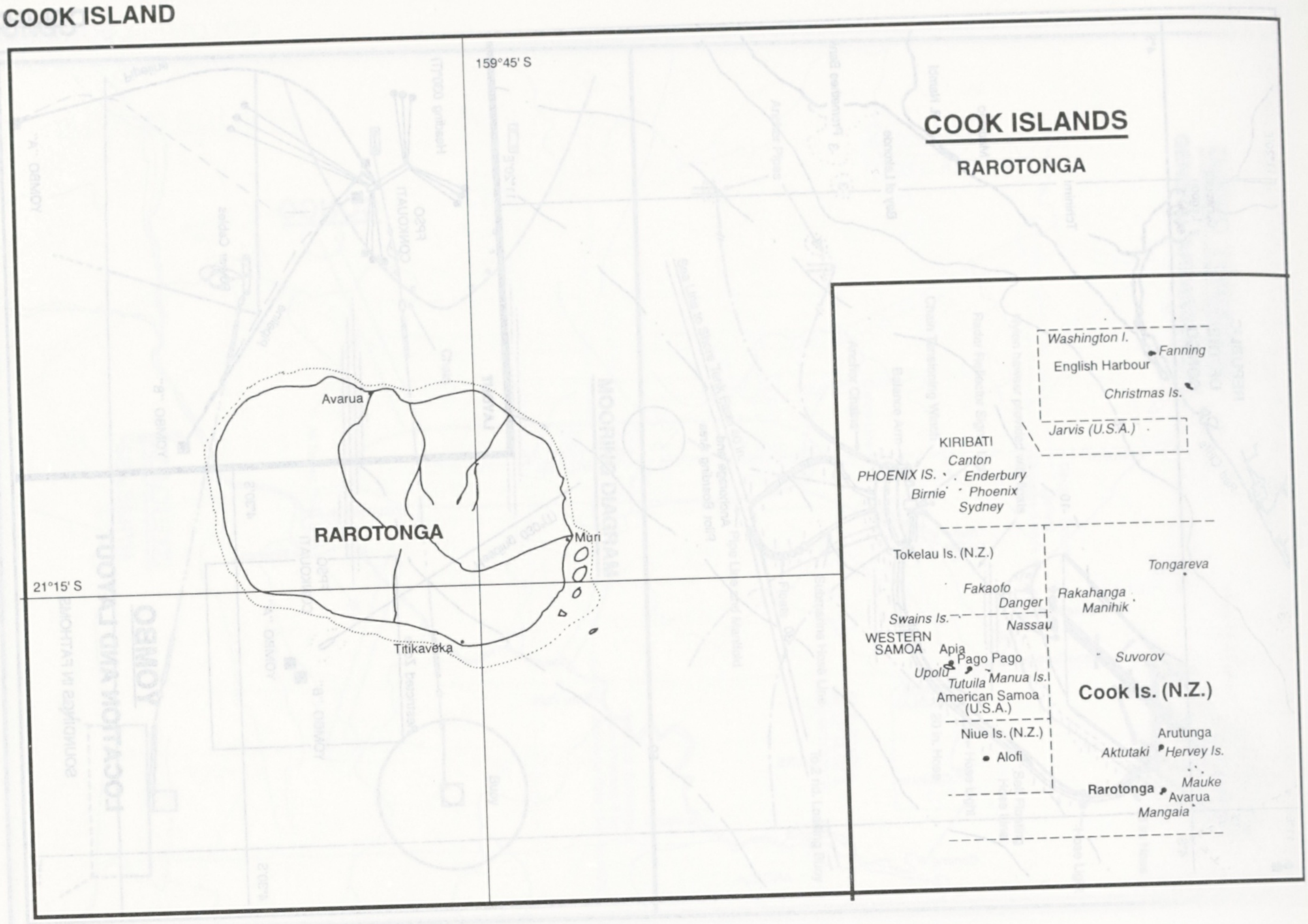
REPUBLIC OF THE CONGO
Conkouati Lagoon
Tchinimi
Madingo
R. Nambi
Bay of Lekonde
Promethee Bank
Red Cliffs
Anchorage and Pilot Boarding Area
Heading 030°(T)
Restricted Zone
FPSO CONKOUATI
YOMBO "A"
YOMBO "B"
LAYOUT
Pipeline
Power Cables
Heading 030°(T)
11°20'E
11°E
4°S
4°30'S
3
6
10
20
30
50

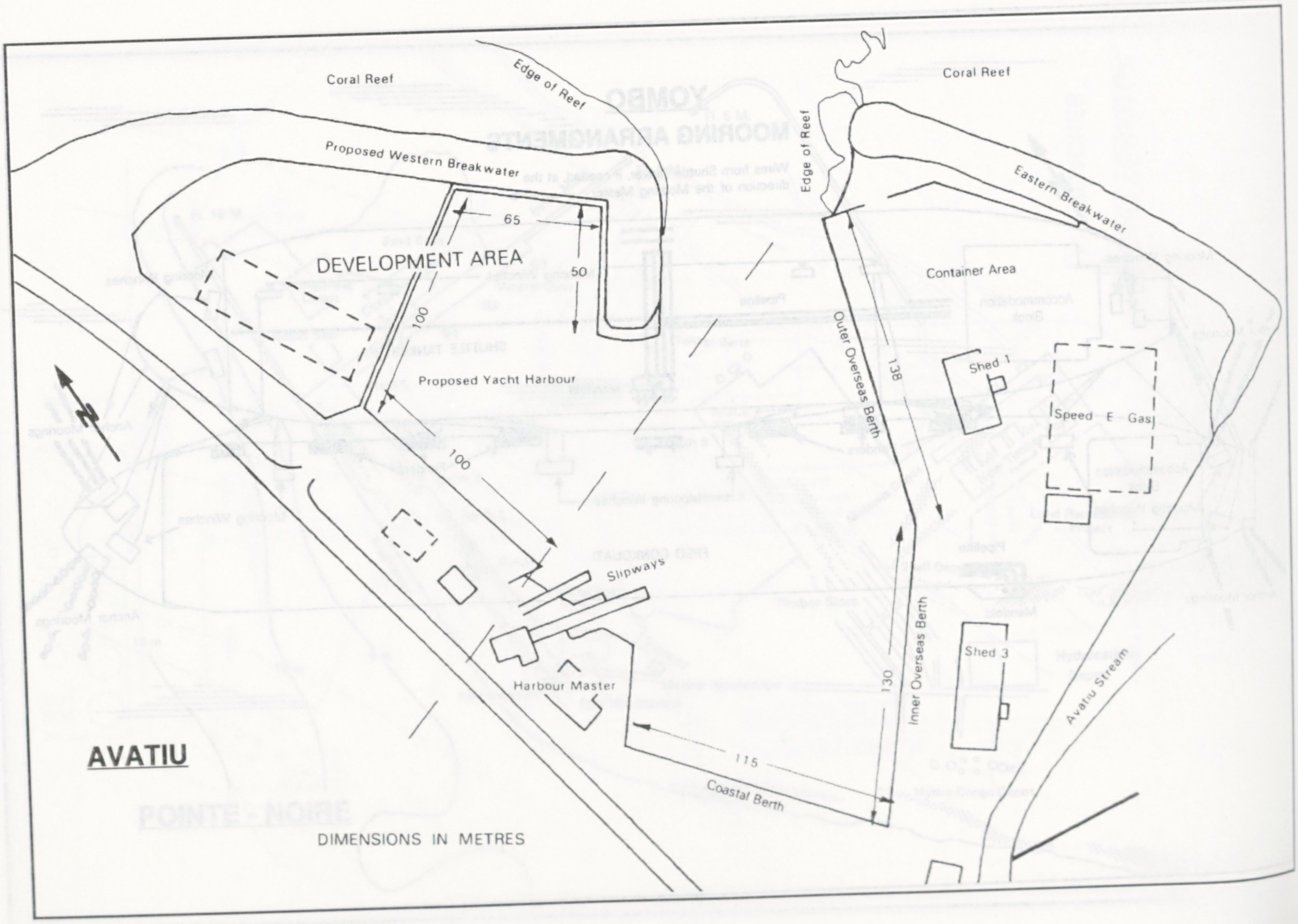


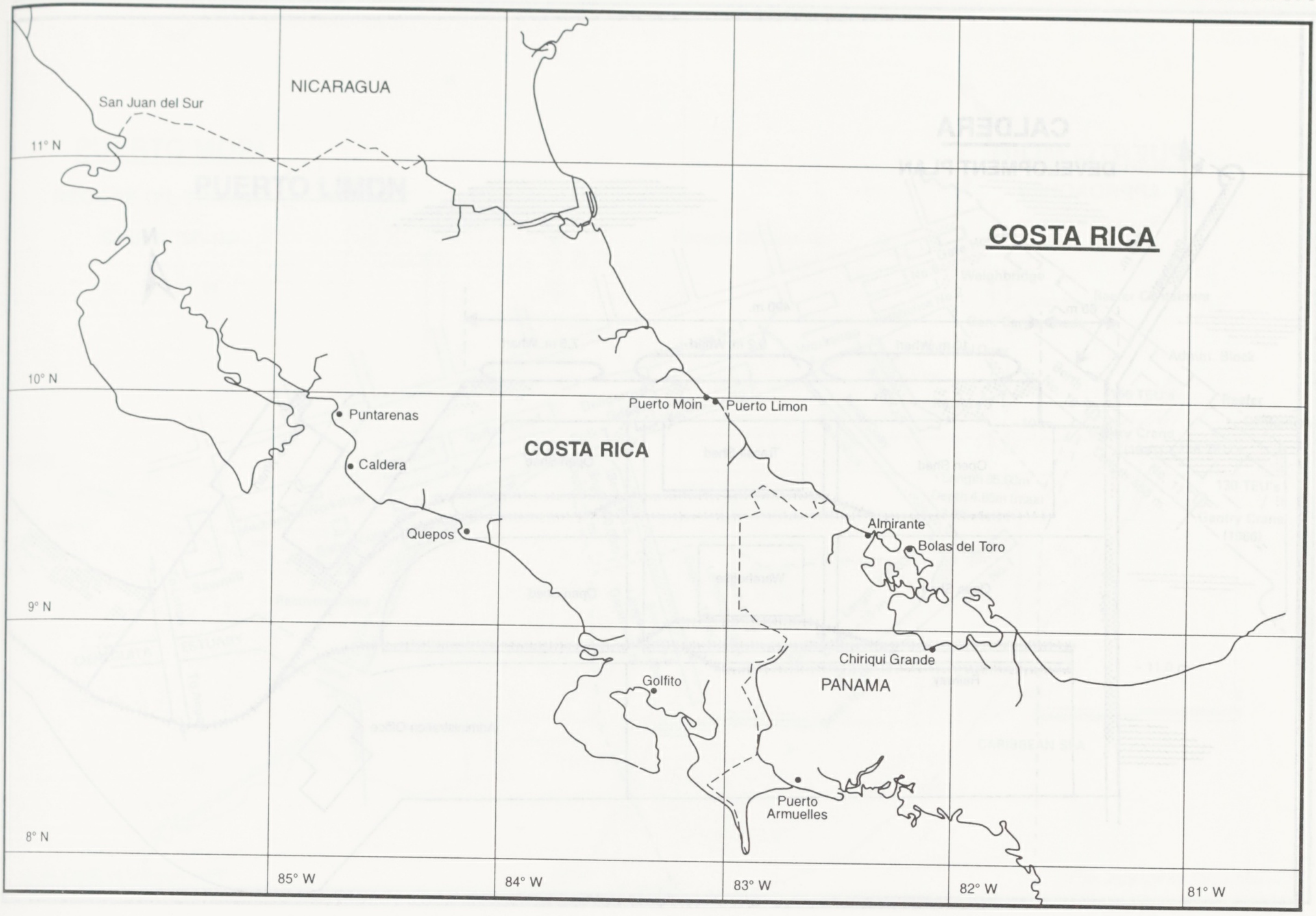
YOMBO

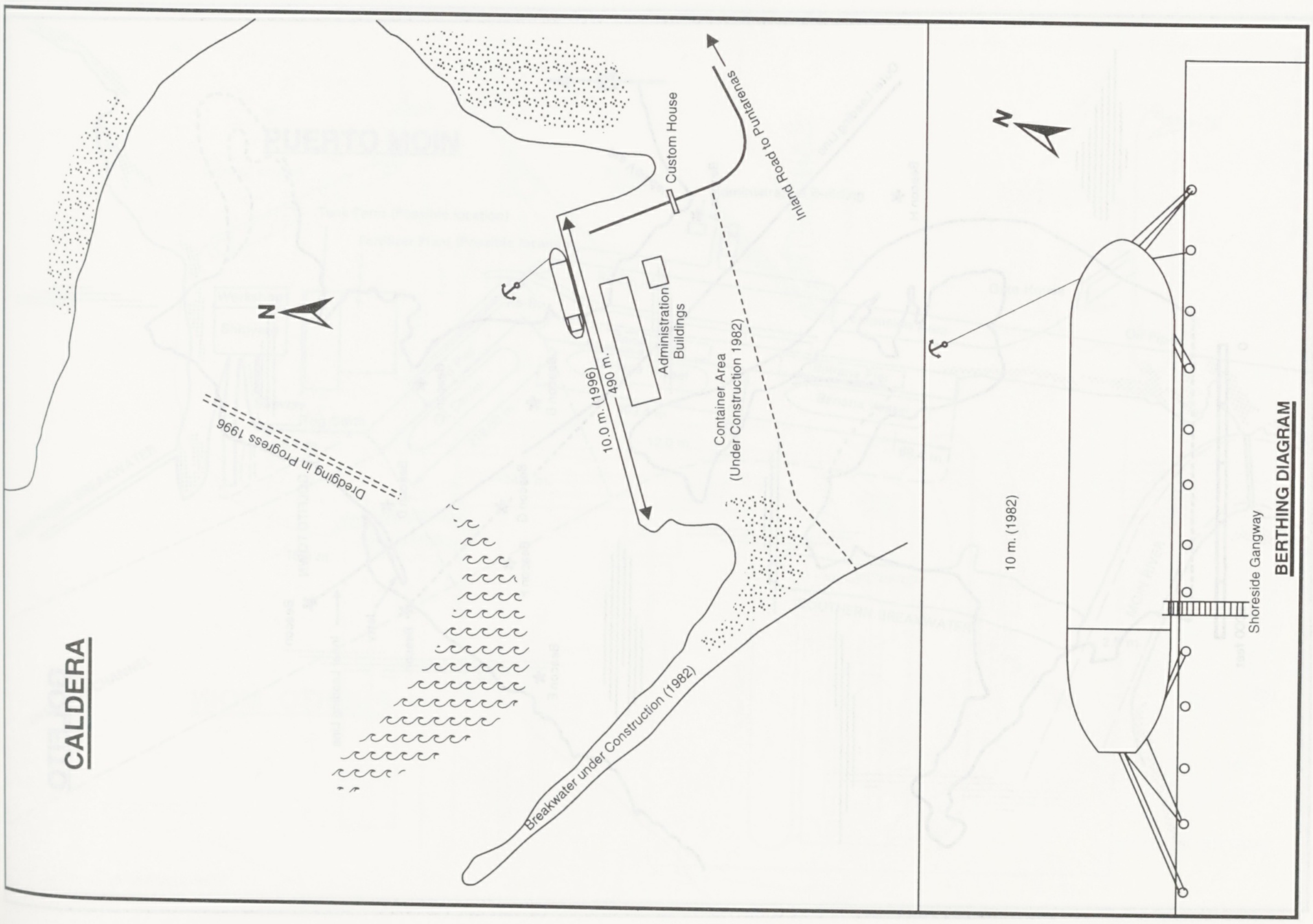
MOORING ARRANGMENTS

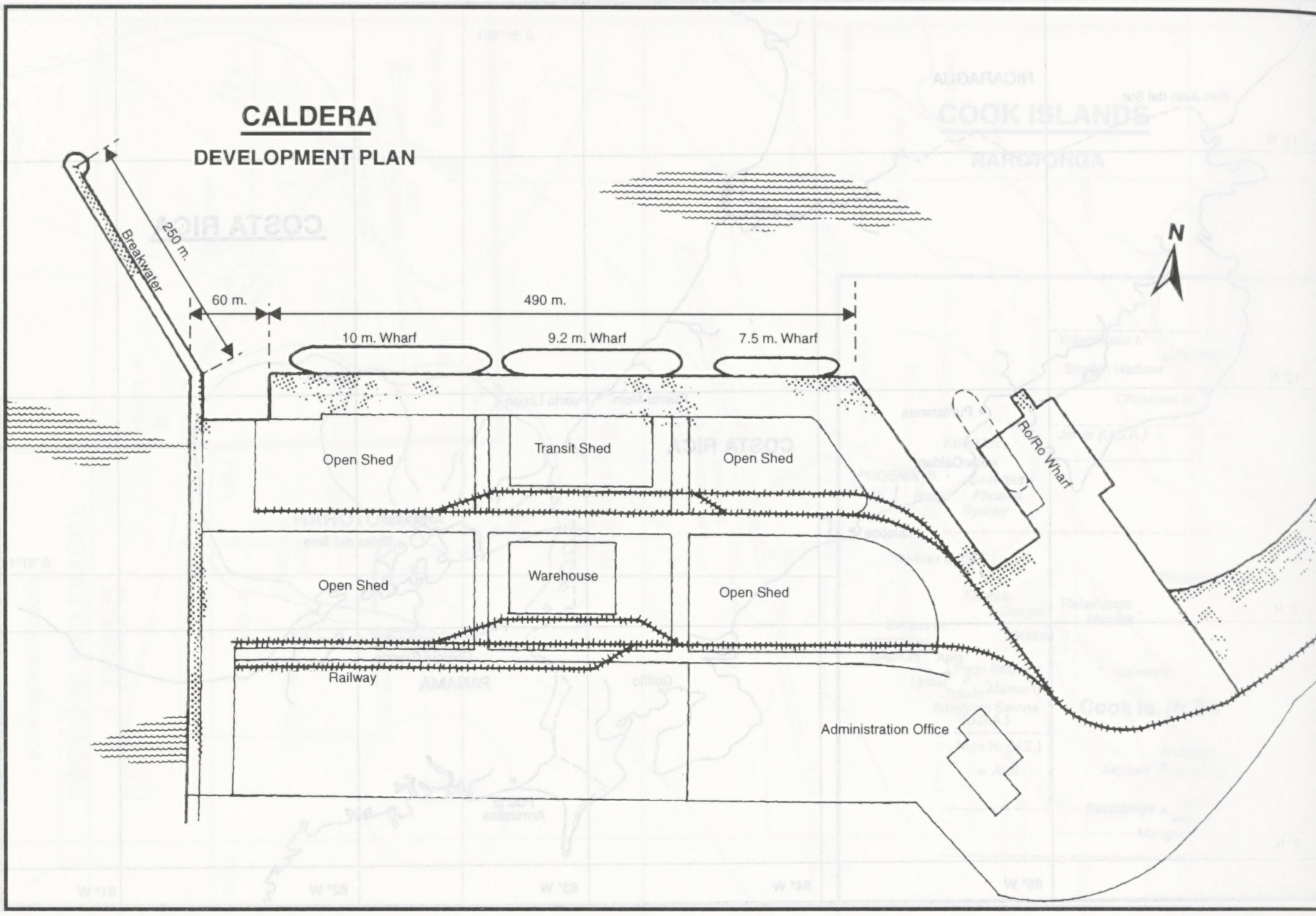
Wires from Shuttle Tanker, if needed, at the direction of the Mooring Master
Mooring Winches
Accommodation Block
Pipeline
Mooring Winches
SHUTTLE TANKER
Mooring Winches
Anchor Moorings
Manifold
Fenders
Fenders
Anchor Moorings
Mooring Winches
Mooring Winches
Accommodation Block
Mooring Winches
FPSO CONKOUATI
Pipeline
Manifold
Anchor Moorings
Anchor Moorings

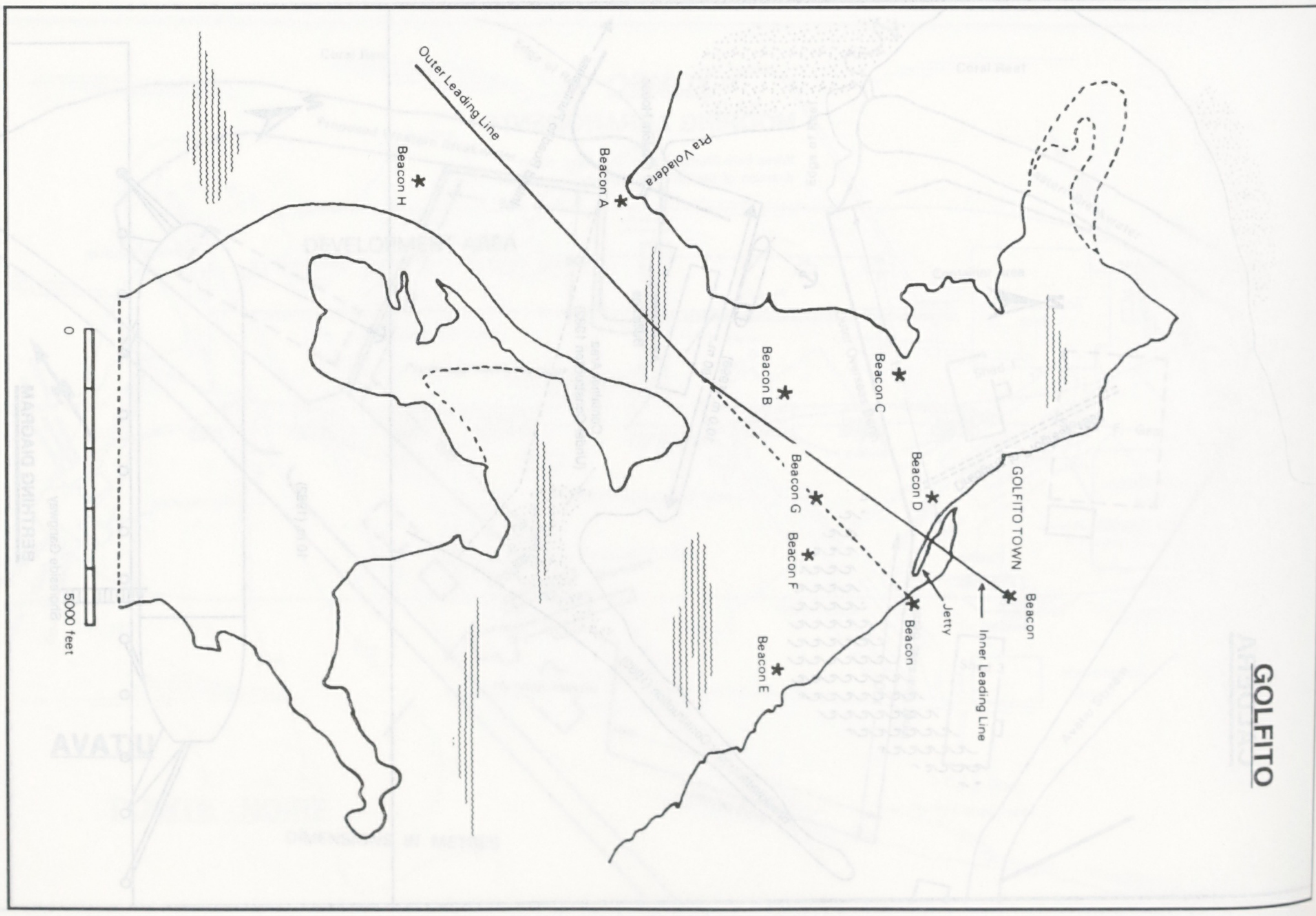

159°45' S
COOK ISLANDS
RAROTONGA
Avarua
RAROTONGA
Muri
21°15' S
Titikaveka
Washington I.
Fanning
English Harbour
Christmas Is.
Jarvis (U.S.A.)
KIRIBATI
Canton
PHOENIX IS.
Enderbury
Birnie
Phoenix
Sydney
Tokelau Is. (N.Z.)
Tongareva
Fakaofo
Danger
Rakahanga
Manihik
Swains Is.
Nassau
WESTERN
SAMOA
Apia
Pago Pago
Suvorov
Upolu
Tutuila
Manua Is.
American Samoa
(U.S.A.)
Cook Is. (N.Z.)
Niue Is. (N.Z.)
Arutunga
Alofi
Aktutaki
Hervey Is.
Mauke
Rarotonga
Avarua
Mangaia

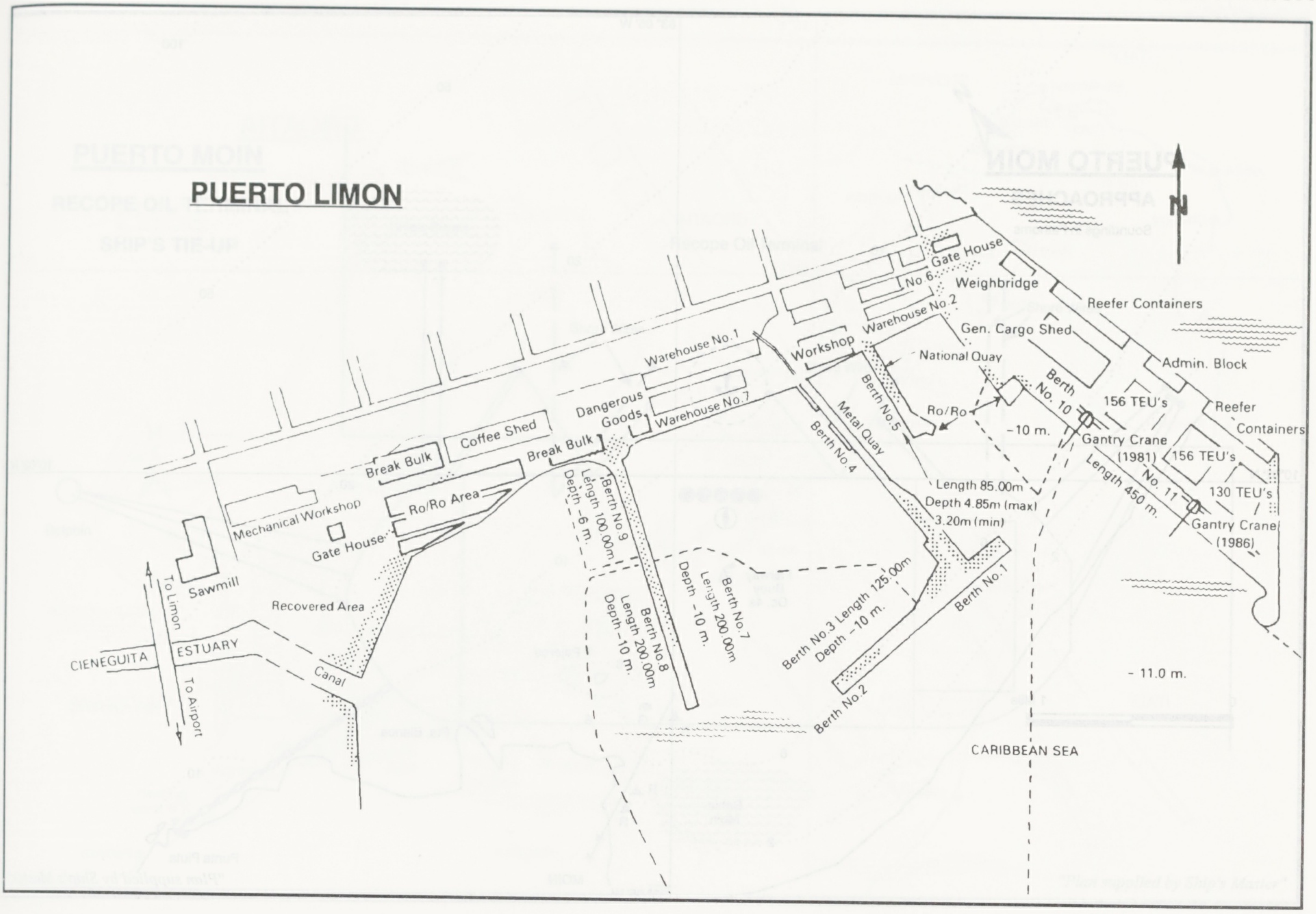

Coral Reef
Edge of Reef
Coral Reef
Edge of Reef
Proposed Western Breakwater
Eastern Breakwater
65
50
DEVELOPMENT AREA
100
Container Area
Outer Overseas Berth
138
Shed 1
Proposed Yacht Harbour
Speed E Gas
N
100
Slipways
Inner Overseas Berth
Shed 3
Avatiu Stream
Harbour Master
130
AVATIU
115
Coastal Berth
DIMENSIONS IN METRES

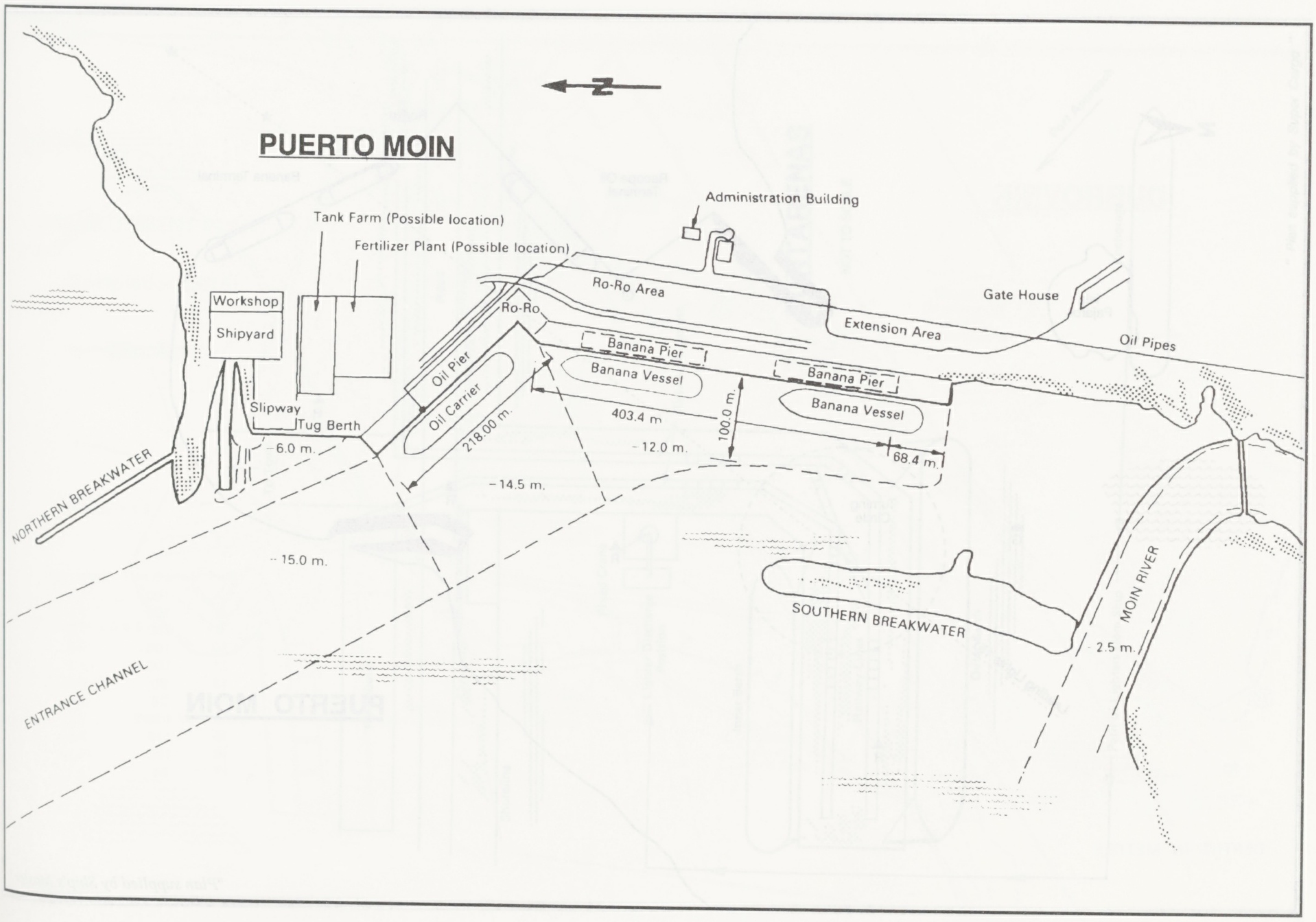

COSTA RICA
NICARAGUA
San Juan del Sur
11° N
10° N
9° N
8° N
Puntarenas
Caldera
Quepos
COSTA RICA
Puerto Moin
Puerto Limon
Almirante
Bolas del Toro
Chiriqui Grande
PANAMA
Golfito
Puerto Armuelles
85° W
84° W
83° W
82° W
81° W

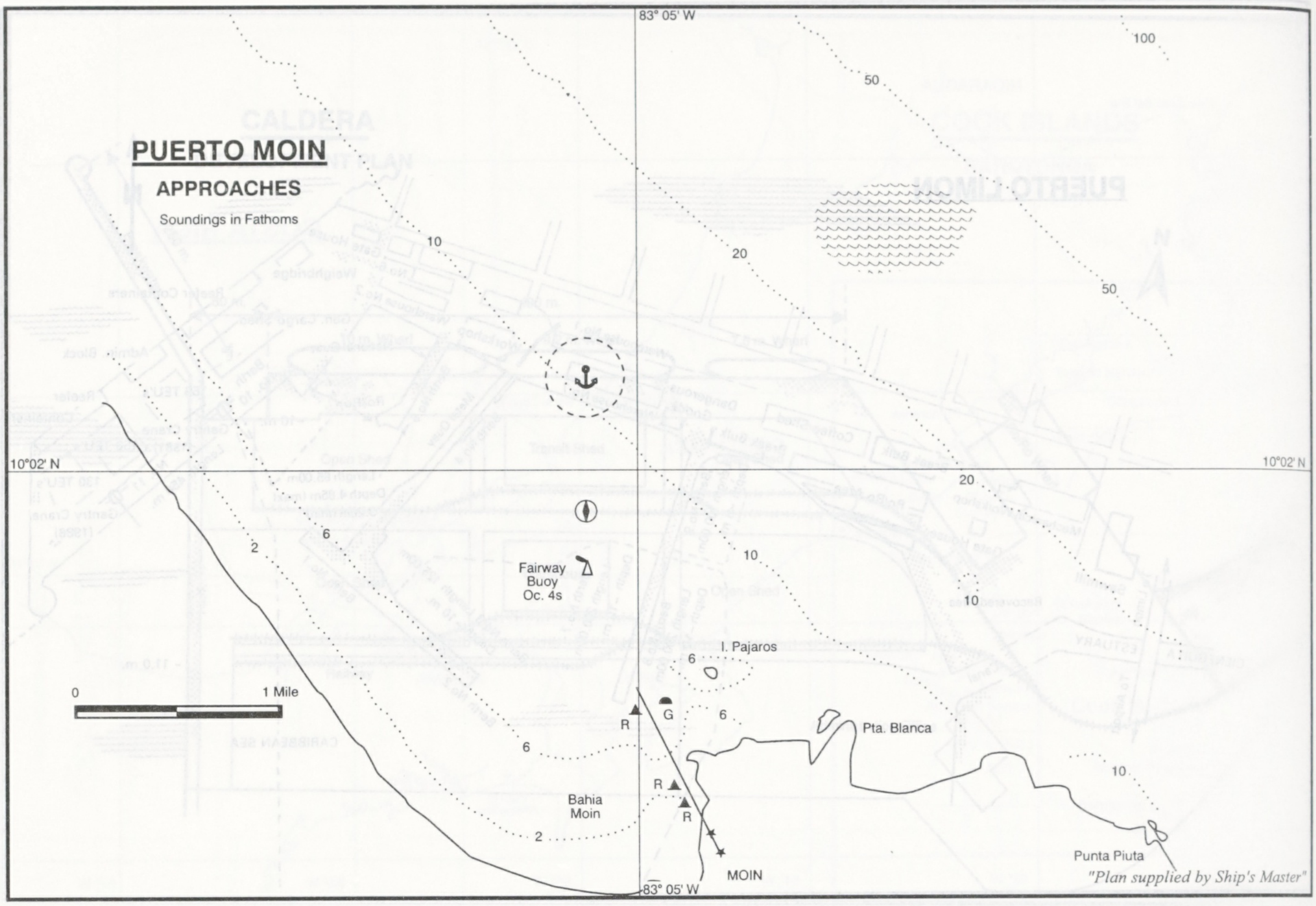

CALDERA
N
Custom House
Inland Road to Puntarenas
Administration Buildings
10.0 m. (1996)
490 m.
Container Area (Under Construction 1982)
Dredging in Progress 1996
Breakwater under Construction (1982)
BERTHING DIAGRAM
N
10 m. (1982)
Shoreside Gangway


CALDERA
DEVELOPMENT PLAN
N
Breakwater
250 m.
60 m.
490 m.
10 m. Wharf
9.2 m. Wharf
7.5 m. Wharf
Ro/Ro Wharf
Open Shed
Transit Shed
Open Shed
Open Shed
Warehouse
Open Shed
Railway
Administration Office

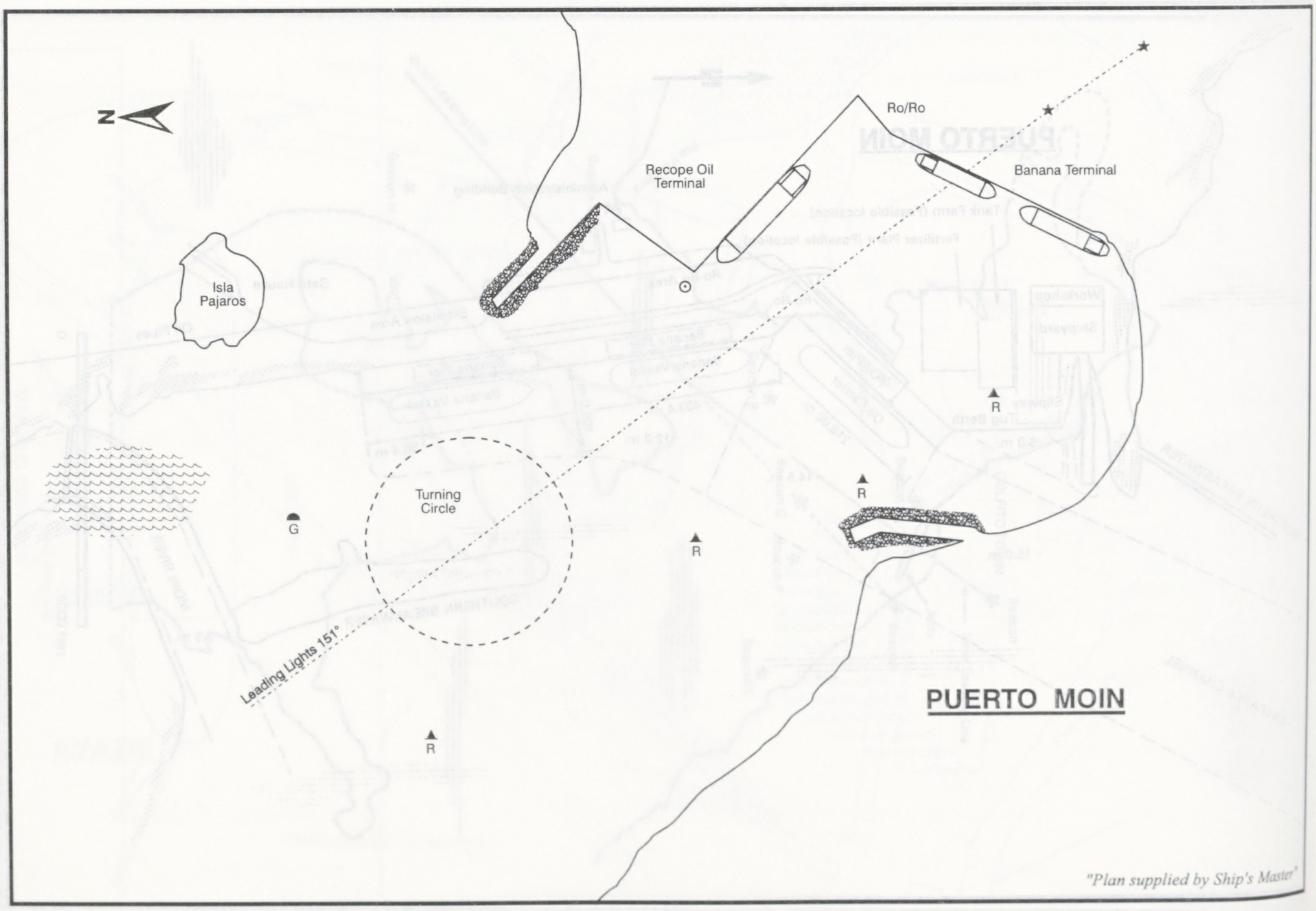

GOLFITO
Outer Leading Line
Beacon H
Beacon A
Pta Voladera
Beacon B
Beacon C
Beacon D
GOLFITO TOWN
Beacon
Inner Leading Line
Jetty
Beacon
Beacon G
Beacon F
Beacon E
0
5000 feet


PUERTO LIMON
N
Gate House
No 6
Weighbridge
Reefer Containers
Warehouse No.2
Gen. Cargo Shed
Admin. Block
Workshop
National Quay
Warehouse No.1
Berth No. 10
156 TEU's
Reefer Containers
Ro/Ro
-10 m.
Gantry Crane (1981)
156 TEU's
Berth No.5
Length 450 m.
No. 11
Metal Quay
130 TEU's
Berth No.4
Gantry Crane (1986)
Dangerous Goods
Warehouse No.7
Coffee Shed
Break Bulk
Break Bulk
Length 85.00m
Depth 4.85m (max)
3.20m (min)
Ro/Ro Area
Mechanical Workshop
Berth No 9
Length 100.00m
Depth -6 m.
Gate House
Berth No.7
Length 200.00m
Depth -10 m.
Berth No.3 Length 125.00m
Depth -10 m.
Berth No.1
Sawmill
To Limon
Recovered Area
Berth No.8
Length 200.00m
Depth -10 m.
CIENEGUITA
ESTUARY
Canal
To Airport
Berth No.2
- 11.0 m.
CARIBBEAN SEA


N
PUERTO MOIN
Administration Building
Tank Farm (Possible location)
Fertilizer Plant (Possible location)
Ro-Ro Area
Gate House
Workshop
Shipyard
Ro-Ro
Extension Area
Oil Pipes
Banana Pier
Banana Pier
Oil Pier
Banana Vessel
Banana Vessel
Oil Carrier
Slipway
Tug Berth
403.4 m.
100.0 m.
-6.0 m.
218.00 m.
-12.0 m.
68.4 m.
NORTHERN BREAKWATER
-14.5 m.
-15.0 m.
SOUTHERN BREAKWATER
MOIN RIVER
2.5 m.
ENTRANCE CHANNEL

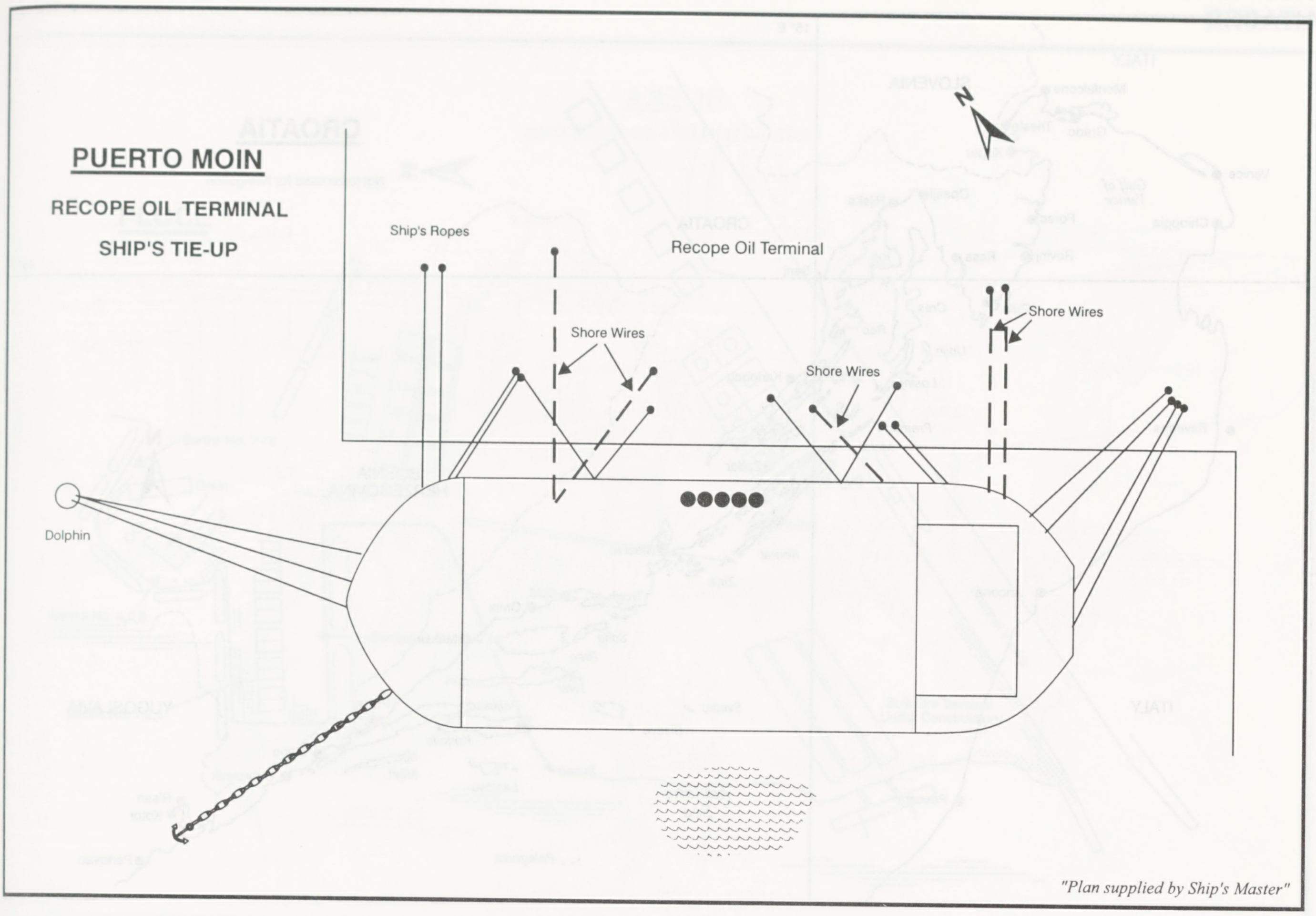

PUERTO MOIN
APPROACHES
Soundings in Fathoms
83° 05' W
10°02' N
10°02' N
100
50
50
20
20
10
10
10
10
6
6
6
2
2
Fairway
Buoy
Oc. 4s
I. Pajaros
Pta. Blanca
R
G
R
R
Bahia
Moin
MOIN
Punta Piuta
0
1 Mile
83° 05' W

"Plan supplied by Ship's Master"

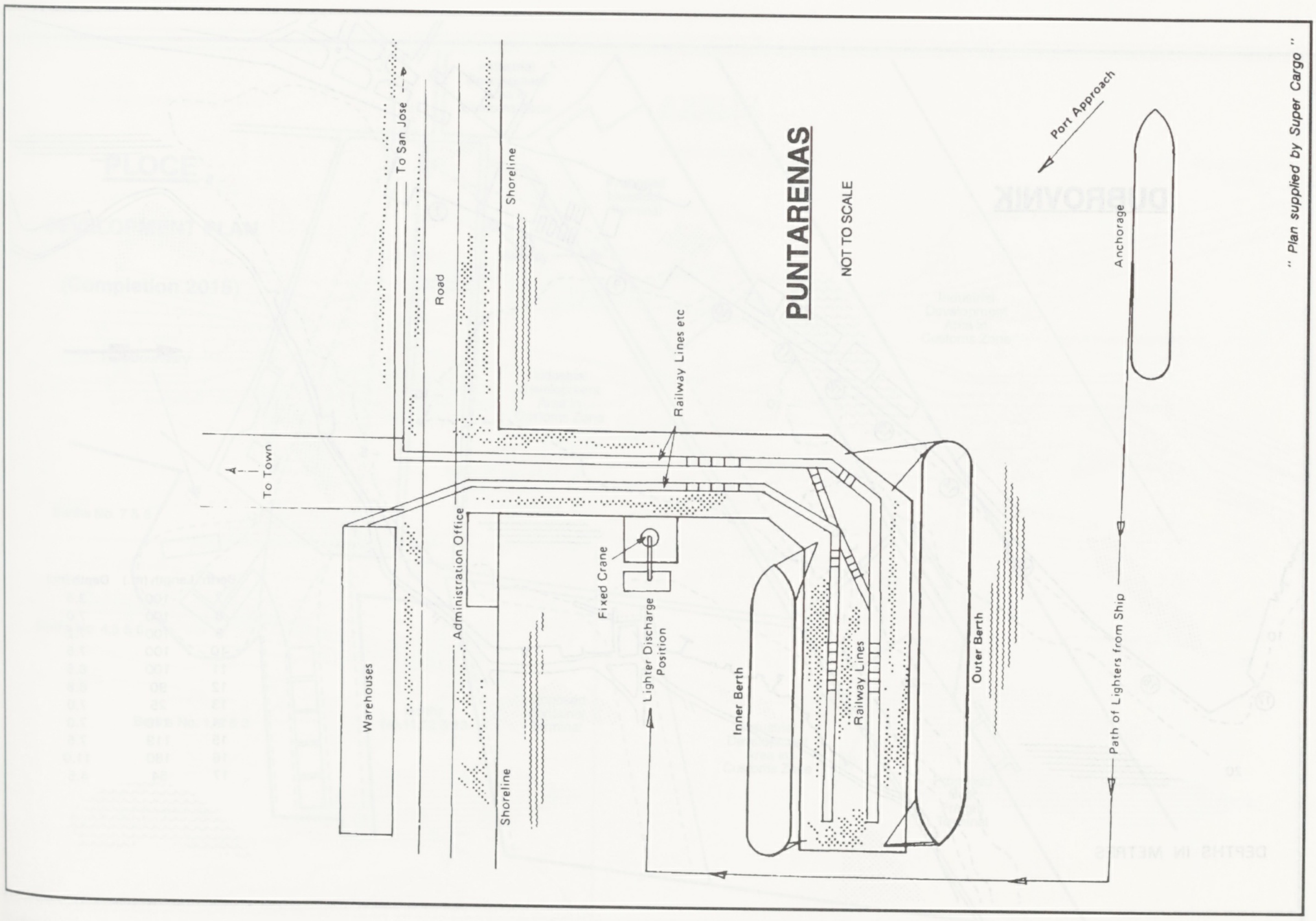

N
Ro/Ro
Recope Oil
Terminal
Banana Terminal
Isla
Pajaros
Turning
Circle
G
R
R
R
R
Leading Lights 151°

PUERTO MOIN

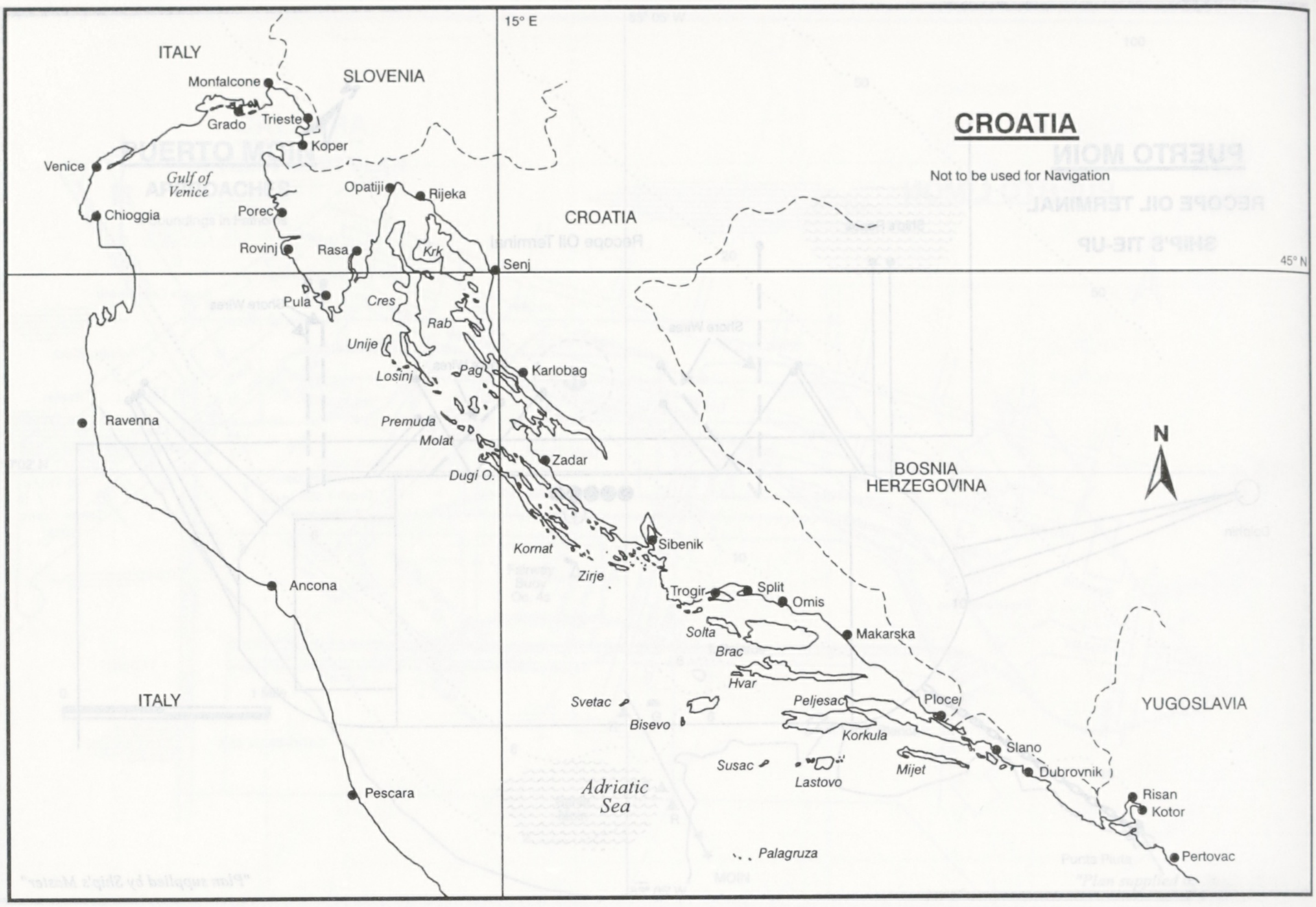
"Plan supplied by Ship's Master"

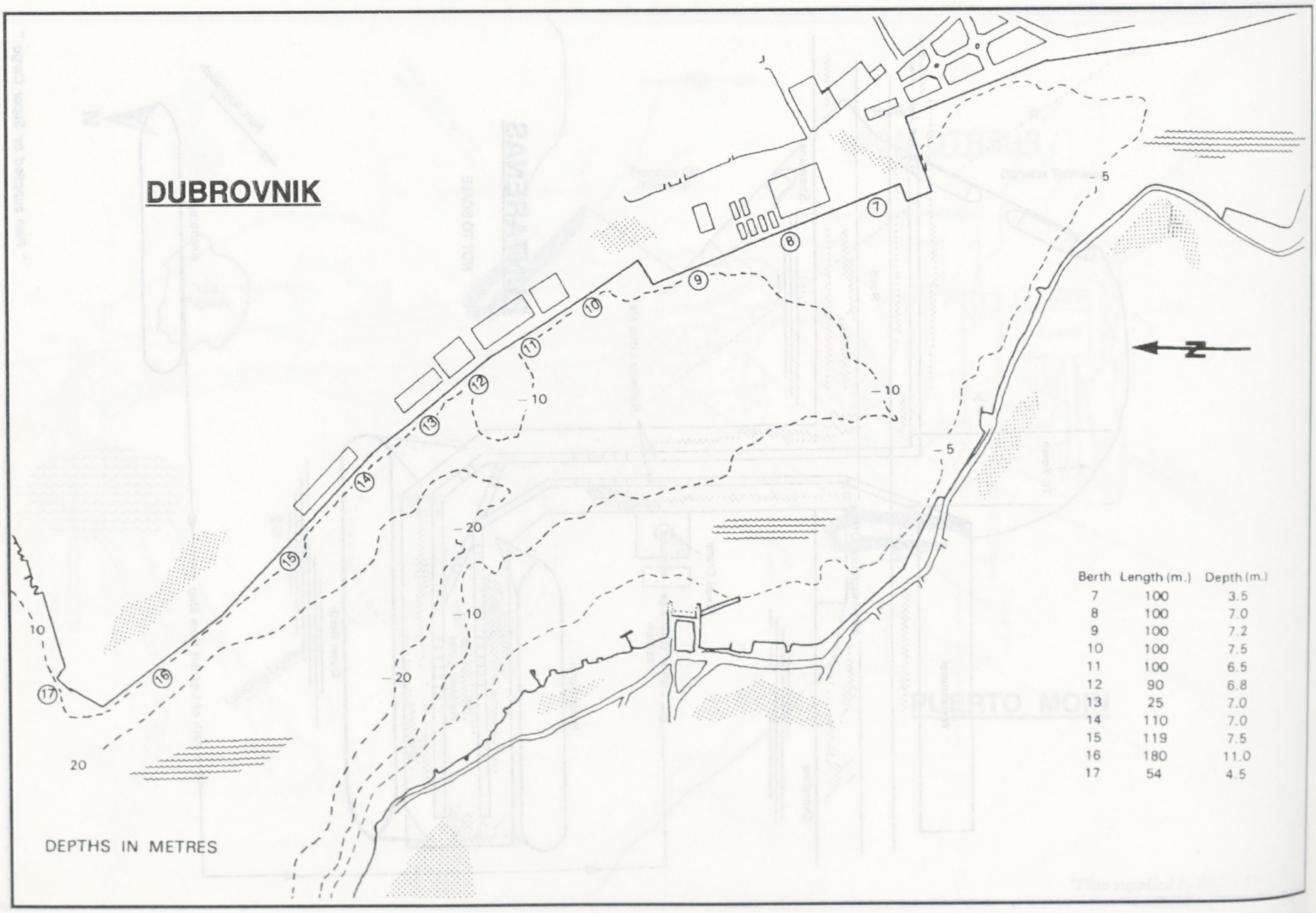

PUERTO MOIN
RECOPE OIL TERMINAL
SHIP'S TIE-UP
N
Ship's Ropes
Recope Oil Terminal
Shore Wires
Shore Wires
Shore Wires
Dolphin

"Plan supplied by Ship's Master"

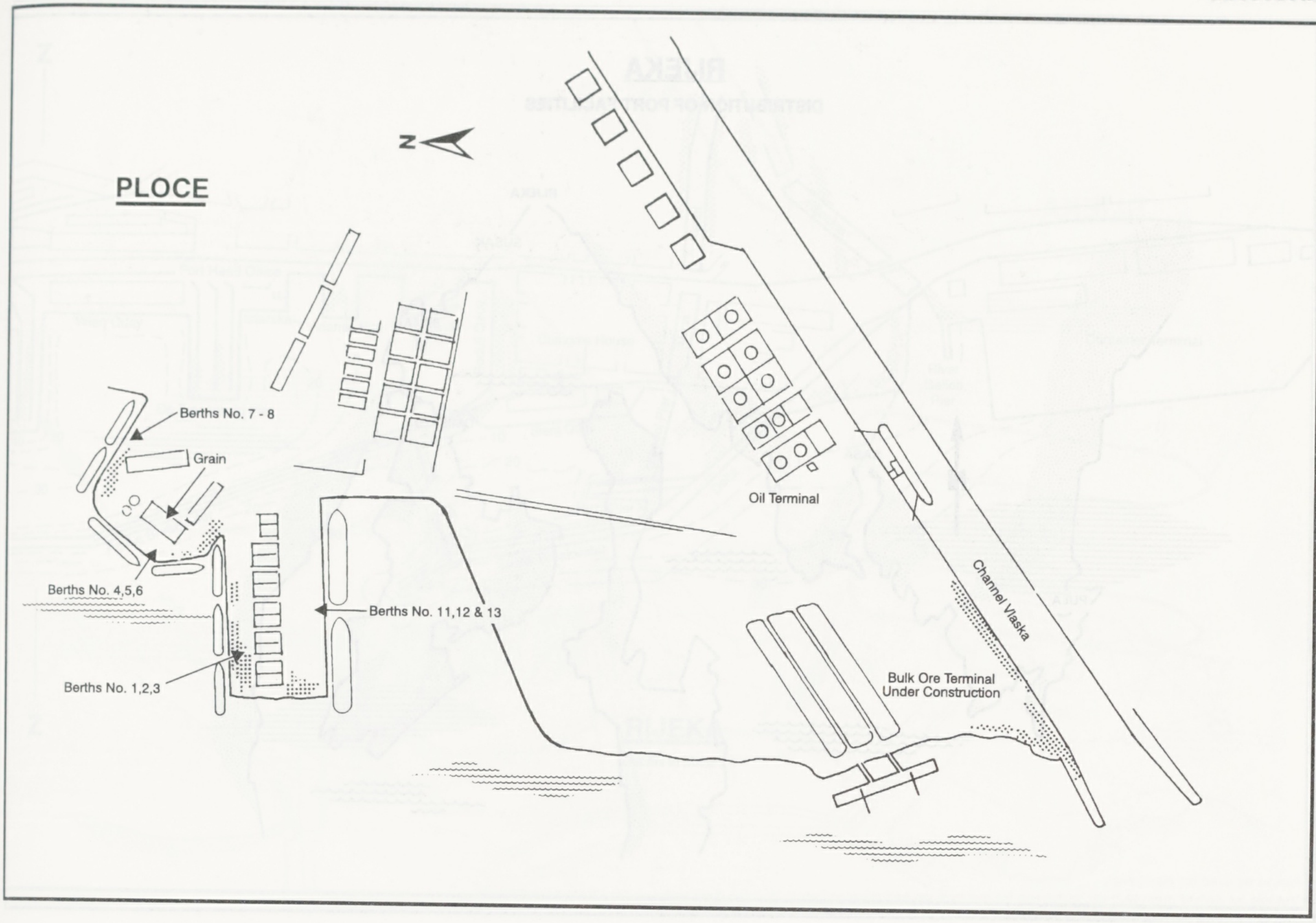

PUNTARENAS
NOT TO SCALE
Port Approach
Anchorage
Path of Lighters from Ship
Outer Berth
Inner Berth
Railway Lines
Railway Lines etc
Fixed Crane
Lighter Discharge Position
Administration Office
Warehouses
Shoreline
Shoreline
Shoreline
Road
To San Jose
To Town

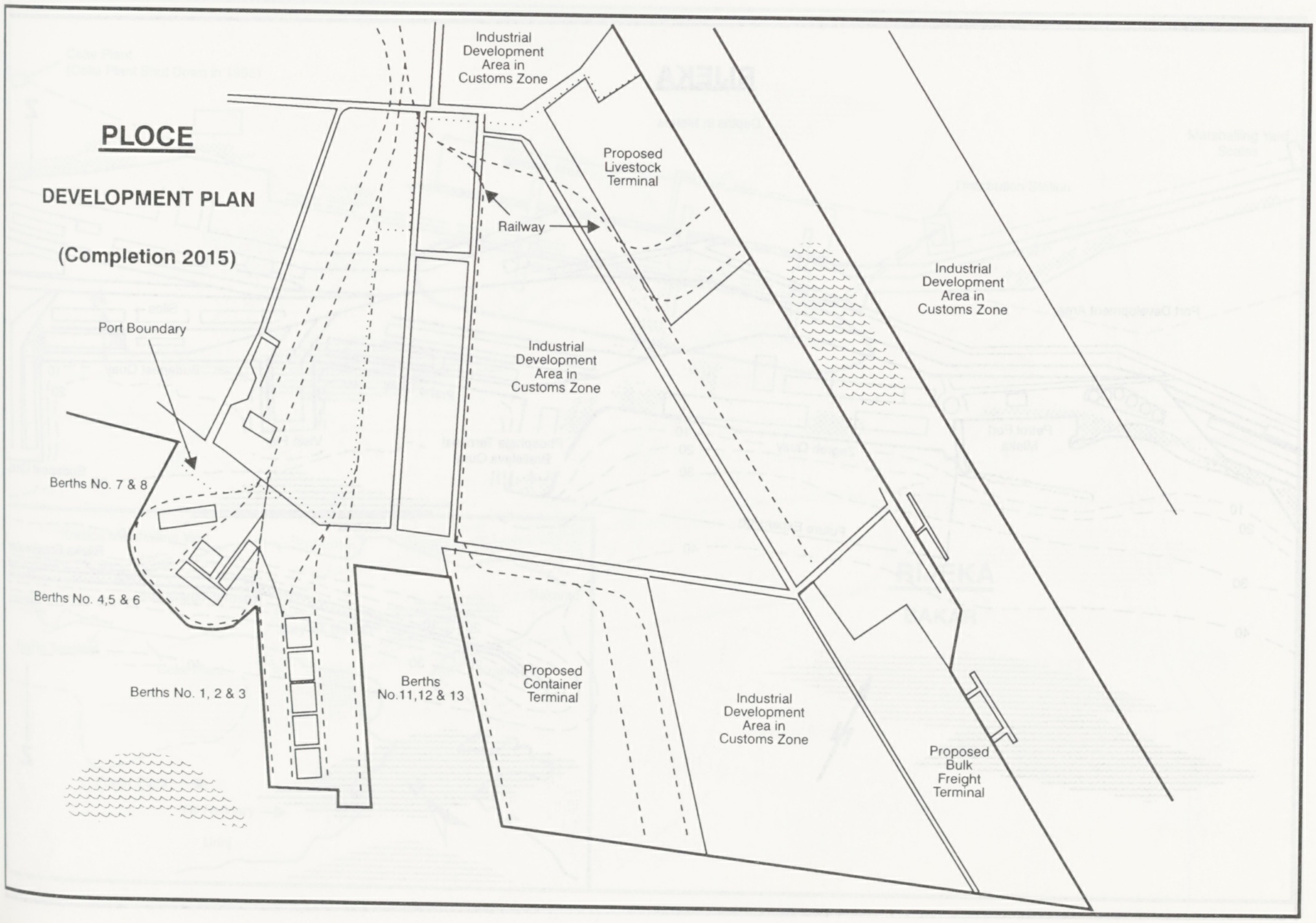
" Plan supplied by Super Cargo "

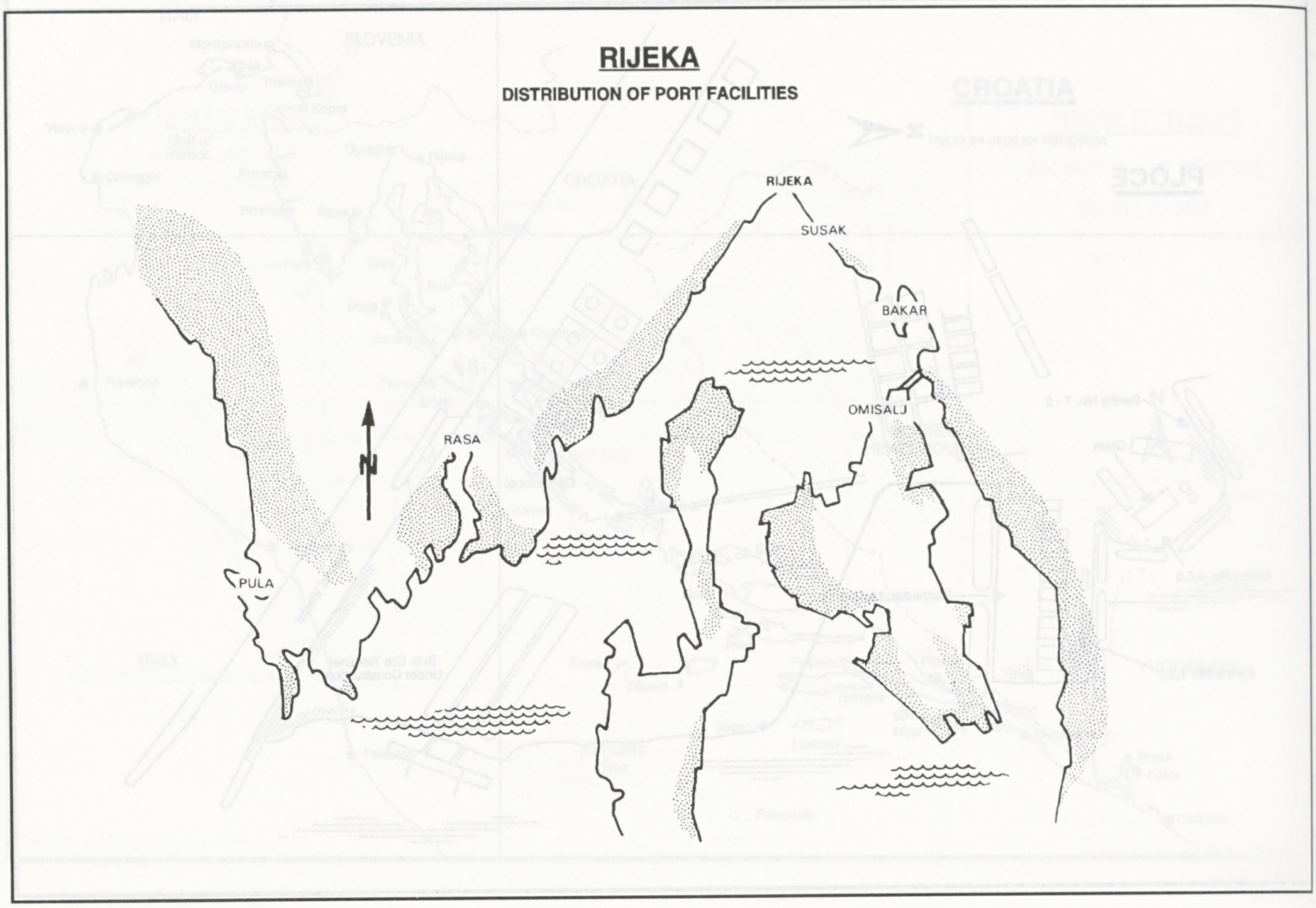

CROATIA
Not to be used for Navigation
15° E
45° N
ITALY
SLOVENIA
CROATIA
BOSNIA
HERZEGOVINA
YUGOSLAVIA
N
Monfalcone
Grado
Trieste
Koper
Venice
Gulf of Venice
Chioggia
Porec
Rovinj
Opatiji
Rijeka
Rasa
Krk
Senj
Pula
Cres
Rab
Unije
Losinj
Pag
Karlobag
Ravenna
Premuda
Molat
Zadar
Dugi O.
Kornat
Zirje
Sibenik
Trogir
Split
Omis
Solta
Brac
Makarska
Hvar
Ancona
Svetac
Bisevo
Peljesac
Korkula
Ploce
Slano
Dubrovnik
Mijet
Susac
Lastovo
Adriatic Sea
Risan
Kotor
Pertovac
Palagruza
Pescara


DUBROVNIK
N
7
8
9
10
11
12
13
14
15
16
17
5
– 10
– 10
– 5
– 20
– 10
– 20
10
20
DEPTHS IN METRES

Berth	Length (m.)	Depth (m.)
7	100	3.5
8	100	7.0
9	100	7.2
10	100	7.5
11	100	6.5
12	90	6.8
13	25	7.0
14	110	7.0
15	119	7.5
16	180	11.0
17	54	4.5


PLOCE
N
Berths No. 7 - 8
Grain
Berths No. 4,5,6
Berths No. 11,12 & 13
Berths No. 1,2,3
Oil Terminal
Channel Vlaska
Bulk Ore Terminal
Under Construction

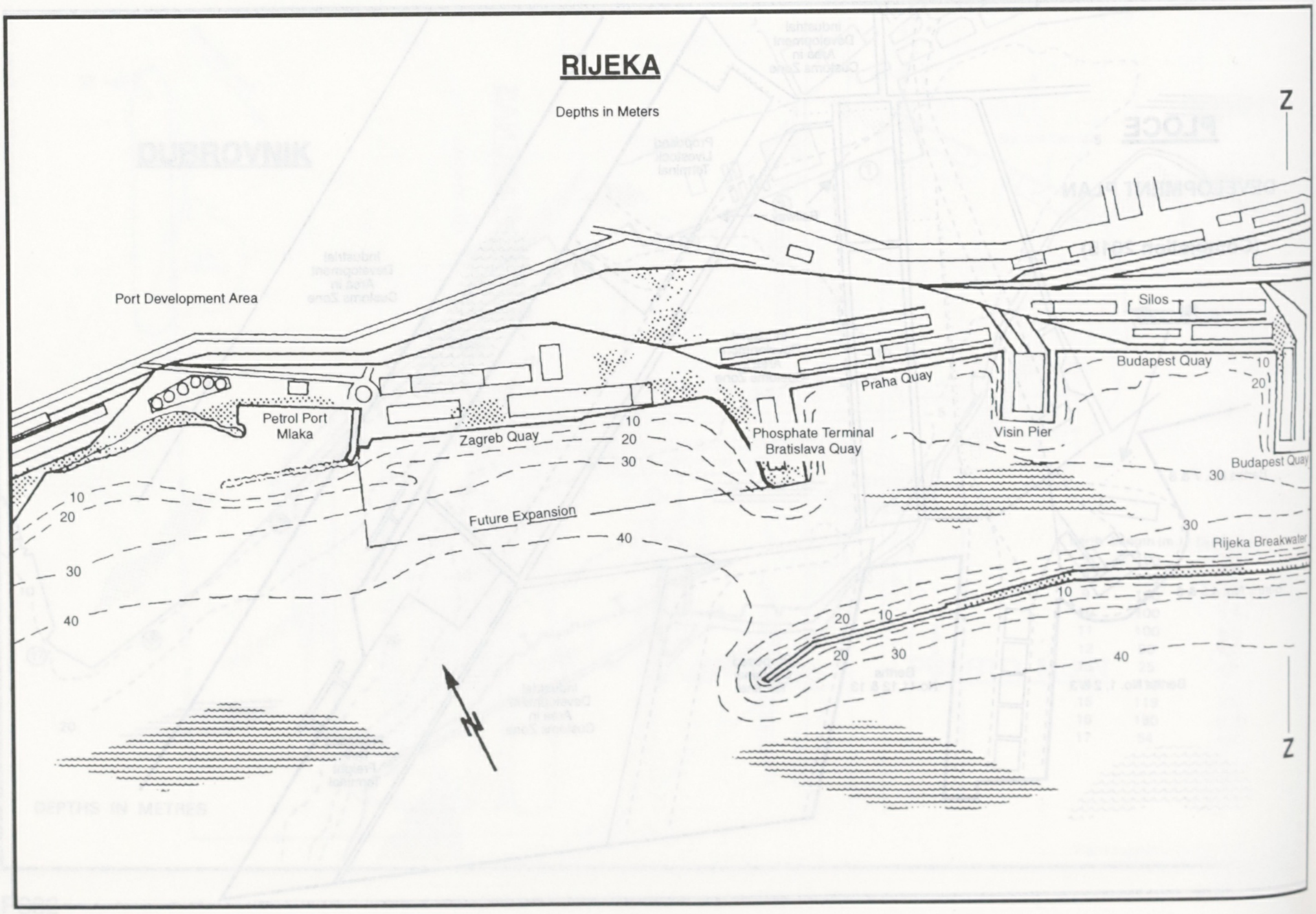

PLOCE
DEVELOPMENT PLAN
(Completion 2015)
Industrial Development Area in Customs Zone
Proposed Livestock Terminal
Railway
Industrial Development Area in Customs Zone
Port Boundary
Industrial Development Area in Customs Zone
Berths No. 7 & 8
Berths No. 4,5 & 6
Berths No. 1, 2 & 3
Berths No.11,12 & 13
Proposed Container Terminal
Industrial Development Area in Customs Zone
Proposed Bulk Freight Terminal



RIJEKA

DISTRIBUTION OF PORT FACILITIES

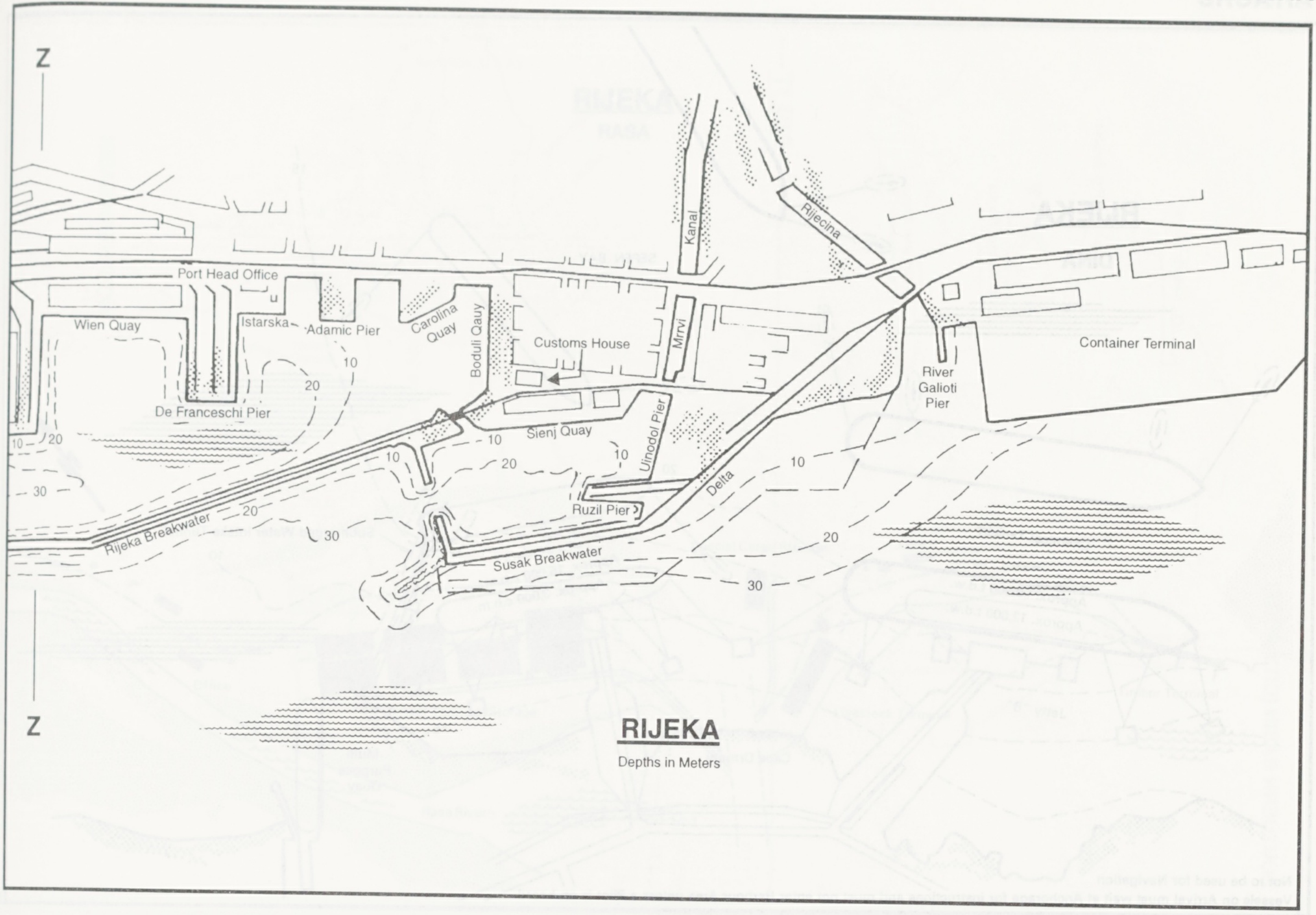
RIJEKA
SUSAK
BAKAR
OMISALJ
RASA
N
PULA

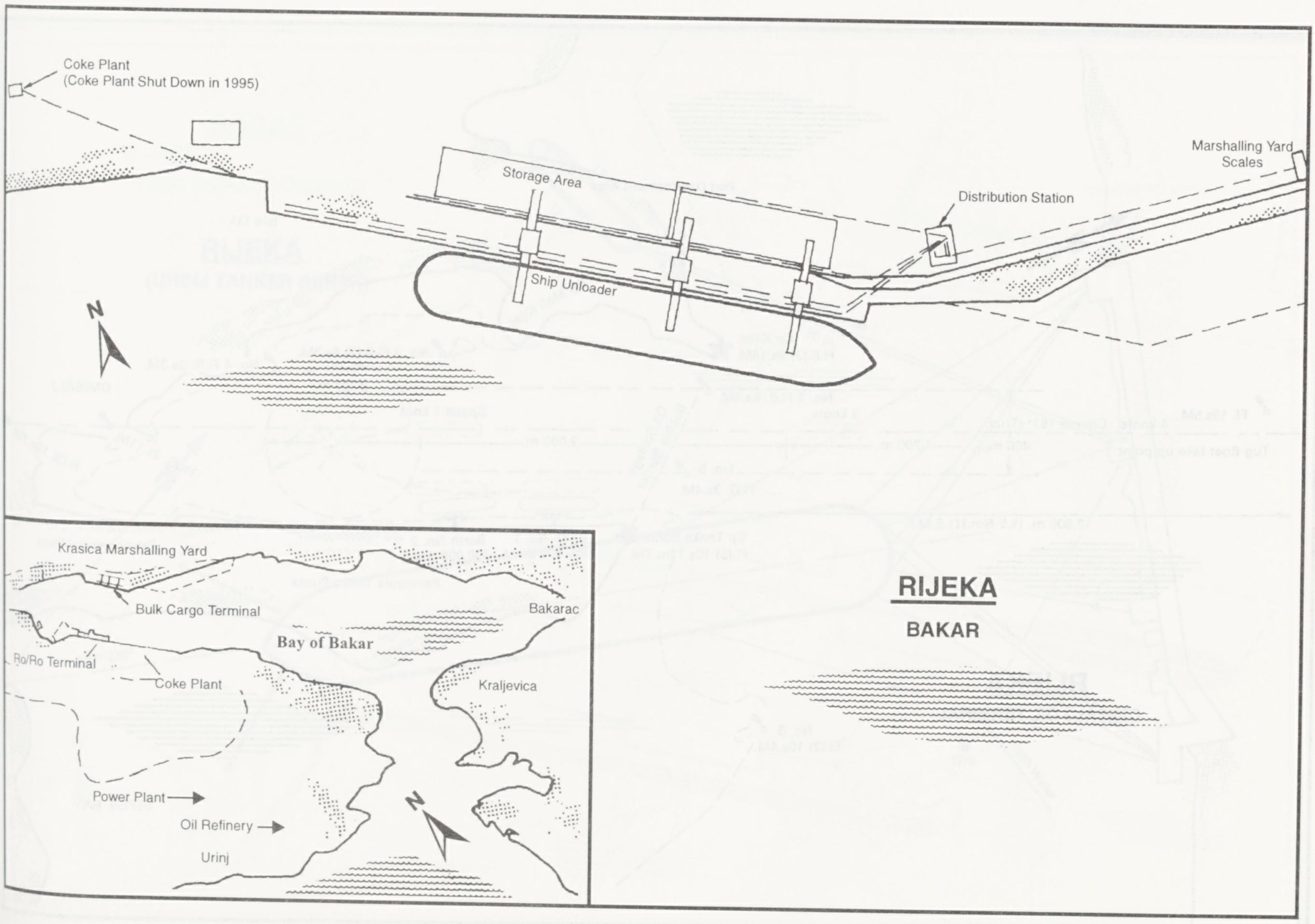


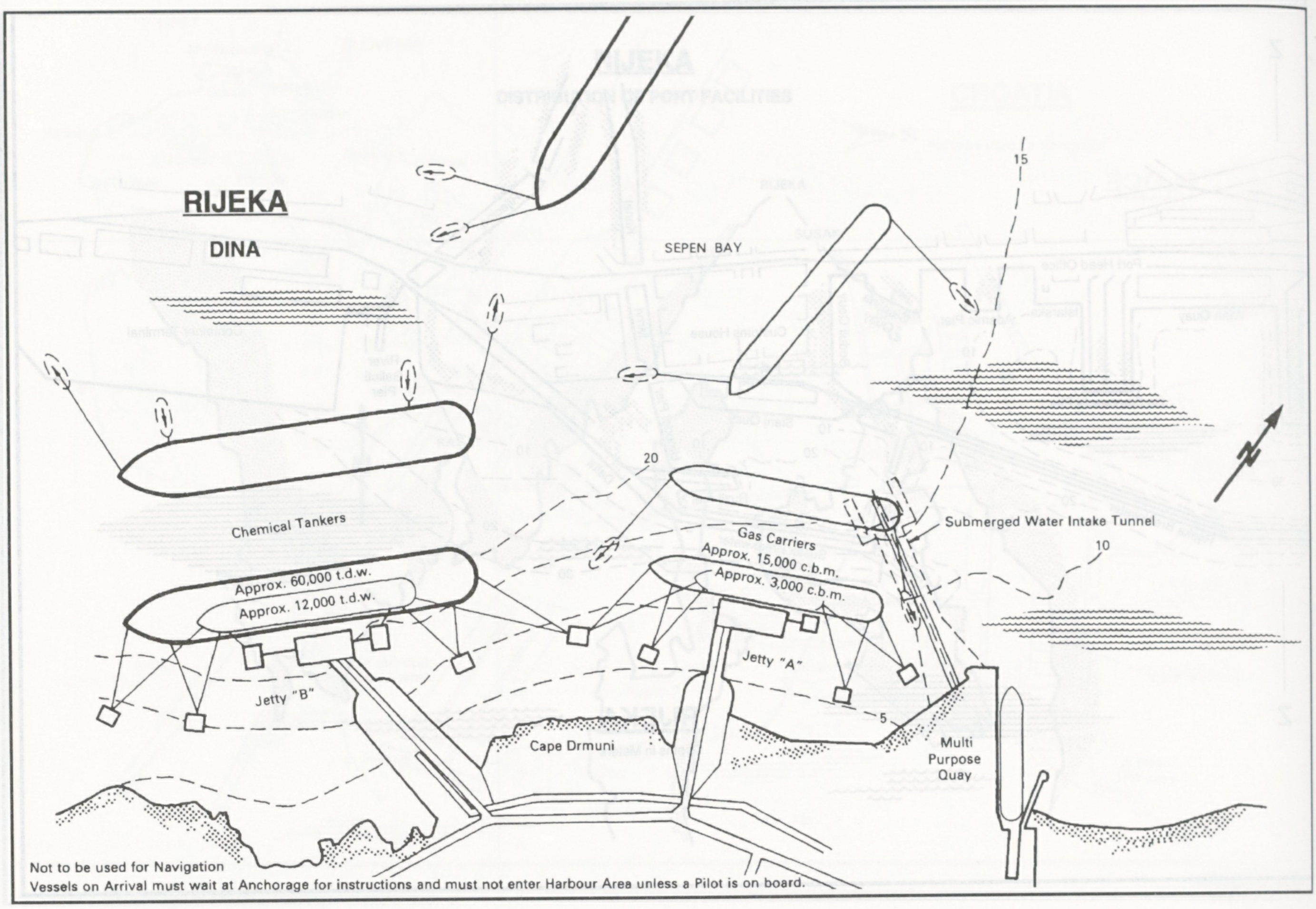
RIJEKA

Depths in Meters

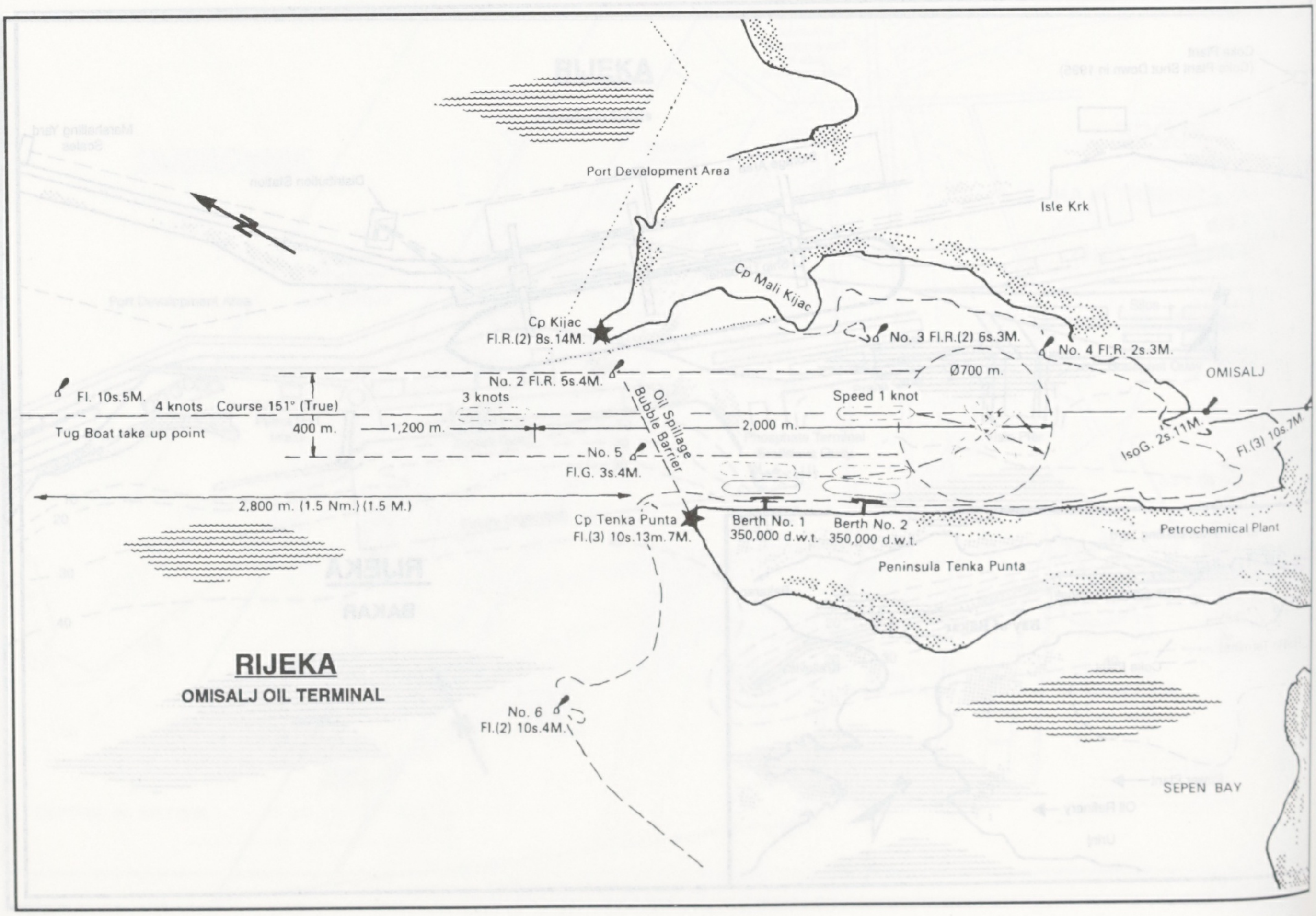
Z
Port Development Area
Silos
Budapest Quay
10
20
Praha Quay
Petrol Port
Mlaka
Zagreb Quay
10
20
30
Phosphate Terminal
Bratislava Quay
Visin Pier
Budapest Quay
30
10
20
Future Expansion
30
40
30
Rijeka Breakwater
10
30
40
20
10
20
30
40
N
Z

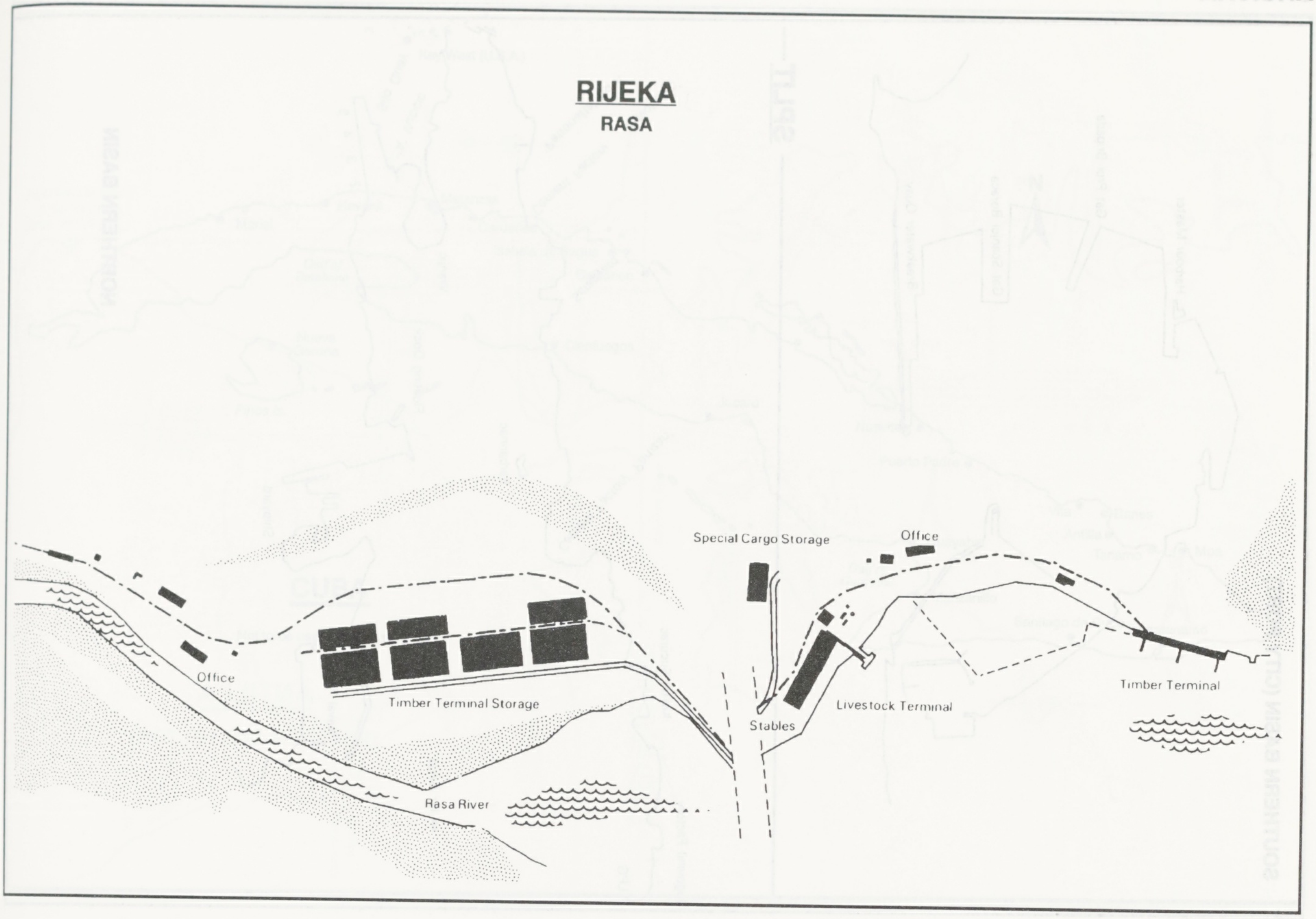

Z
Z
Kanal
Rječina
Port Head Office
Wien Quay
Istarska
Adamic Pier
Carolina Quay
Boduli Qauy
Customs House
Mrrvi
Container Terminal
River Galioti Pier
De Franceschi Pier
Sienj Quay
Uinodol Pier
Ruzil Pier
Delta
Rijeka Breakwater
Susak Breakwater
10
20
30
RIJEKA
Depths in Meters

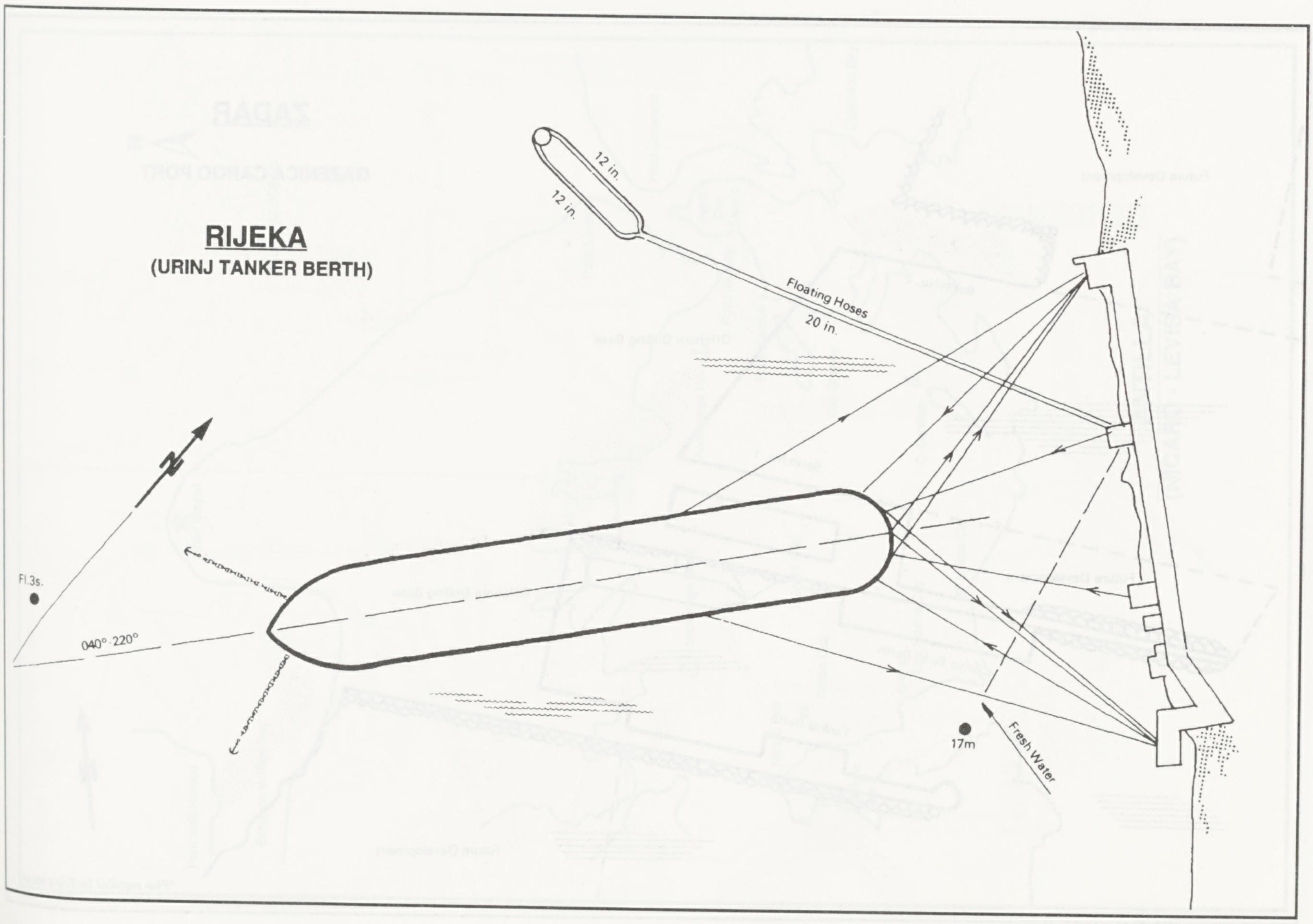

Coke Plant
(Coke Plant Shut Down in 1995)
Storage Area
Ship Unloader
Distribution Station
Marshalling Yard Scales
N
RIJEKA
BAKAR
Krasica Marshalling Yard
Bulk Cargo Terminal
Bay of Bakar
Bakarac
Ro/Ro Terminal
Coke Plant
Kraljevica
Power Plant
Oil Refinery
Urinj
N

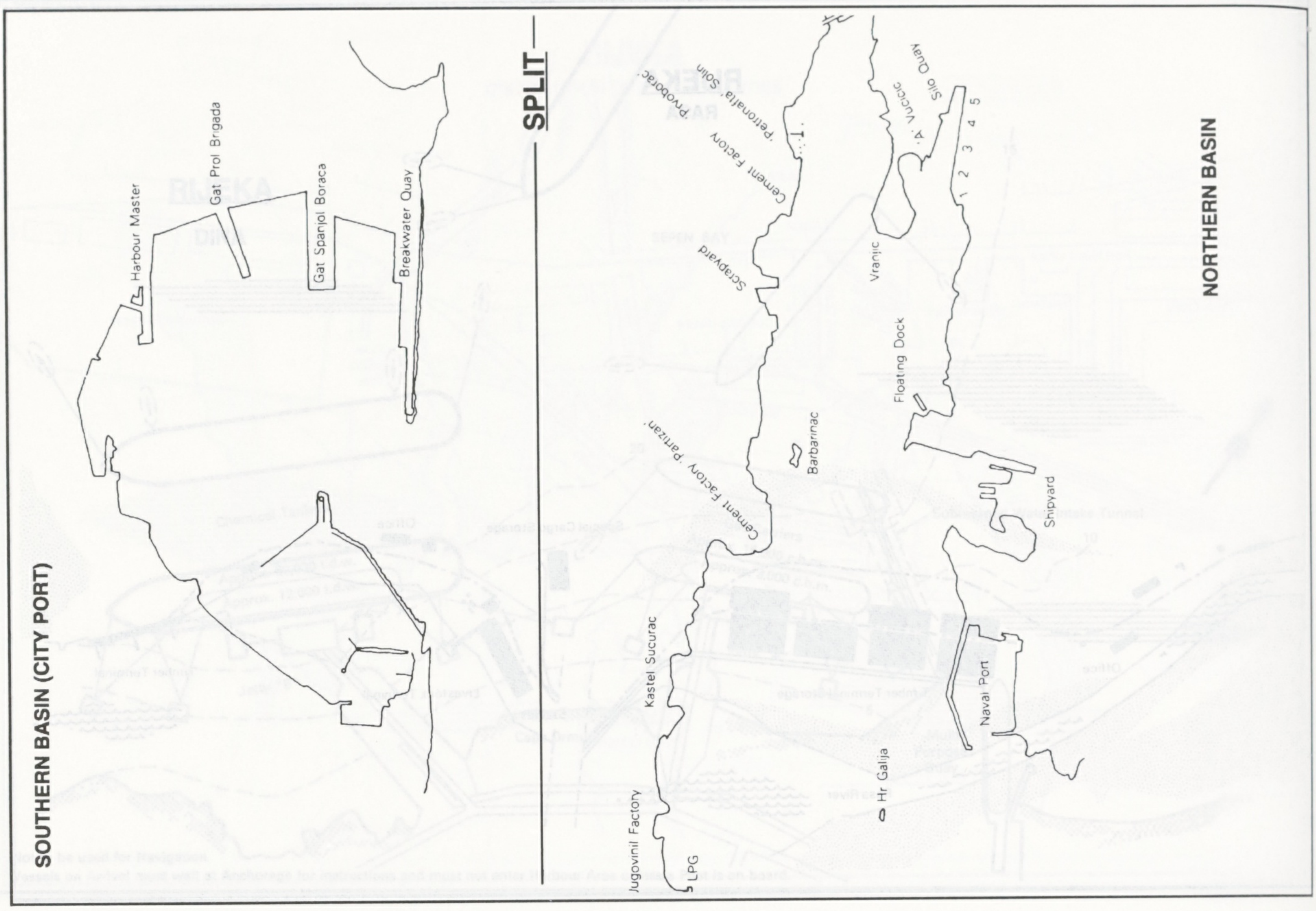

RIJEKA
DINA
SEPEN BAY
15
Chemical Tankers
Approx. 60,000 t.d.w.
Approx. 12,000 t.d.w.
Jetty "B"
20
Gas Carriers
Approx. 15,000 c.b.m.
Approx. 3,000 c.b.m.
Jetty "A"
Submerged Water Intake Tunnel
10
5
Cape Drmuni
Multi Purpose Quay

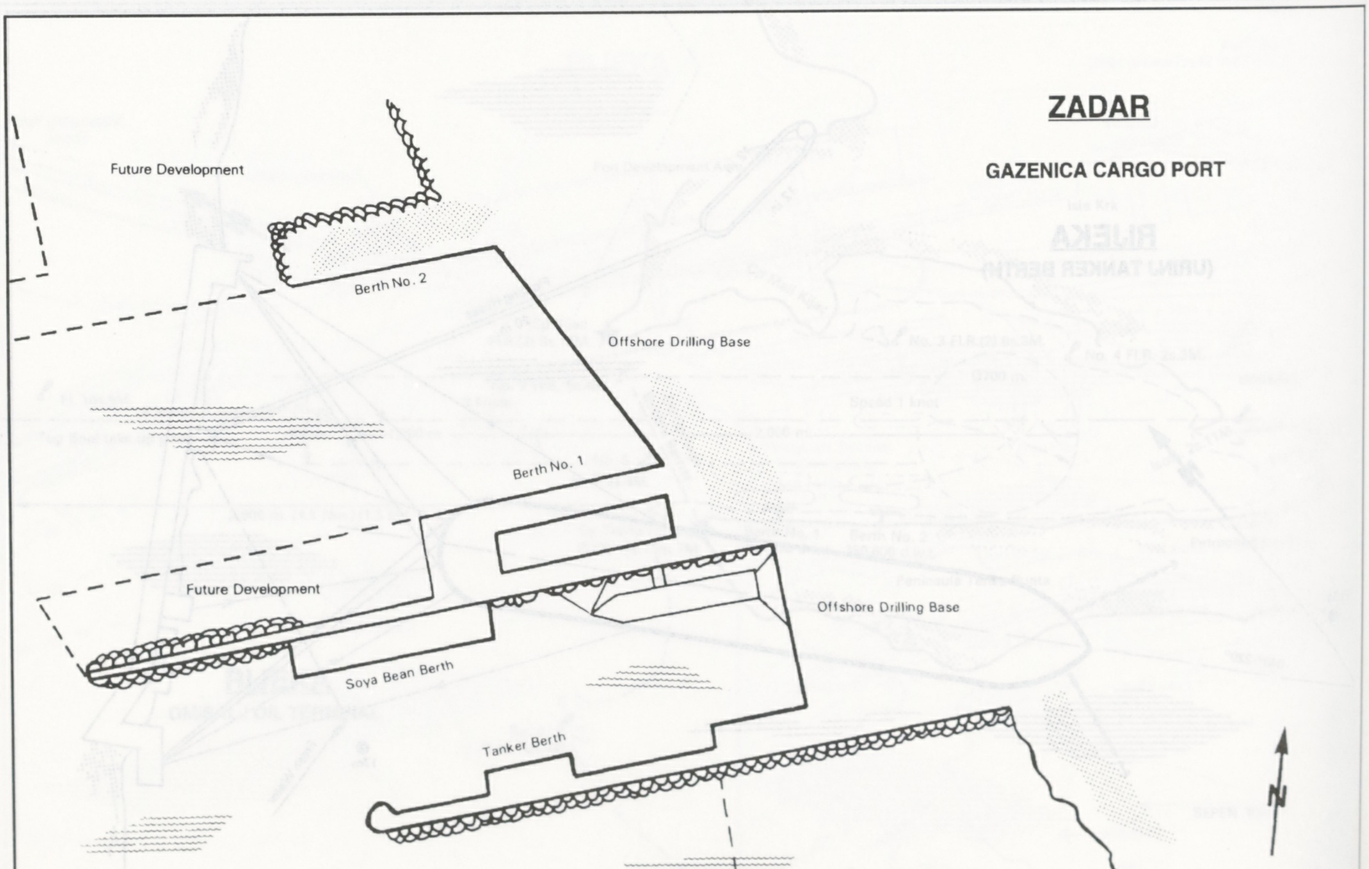
Not to be used for Navigation
Vessels on Arrival must wait at Anchorage for instructions and must not enter Harbour Area unless a Pilot is on board.

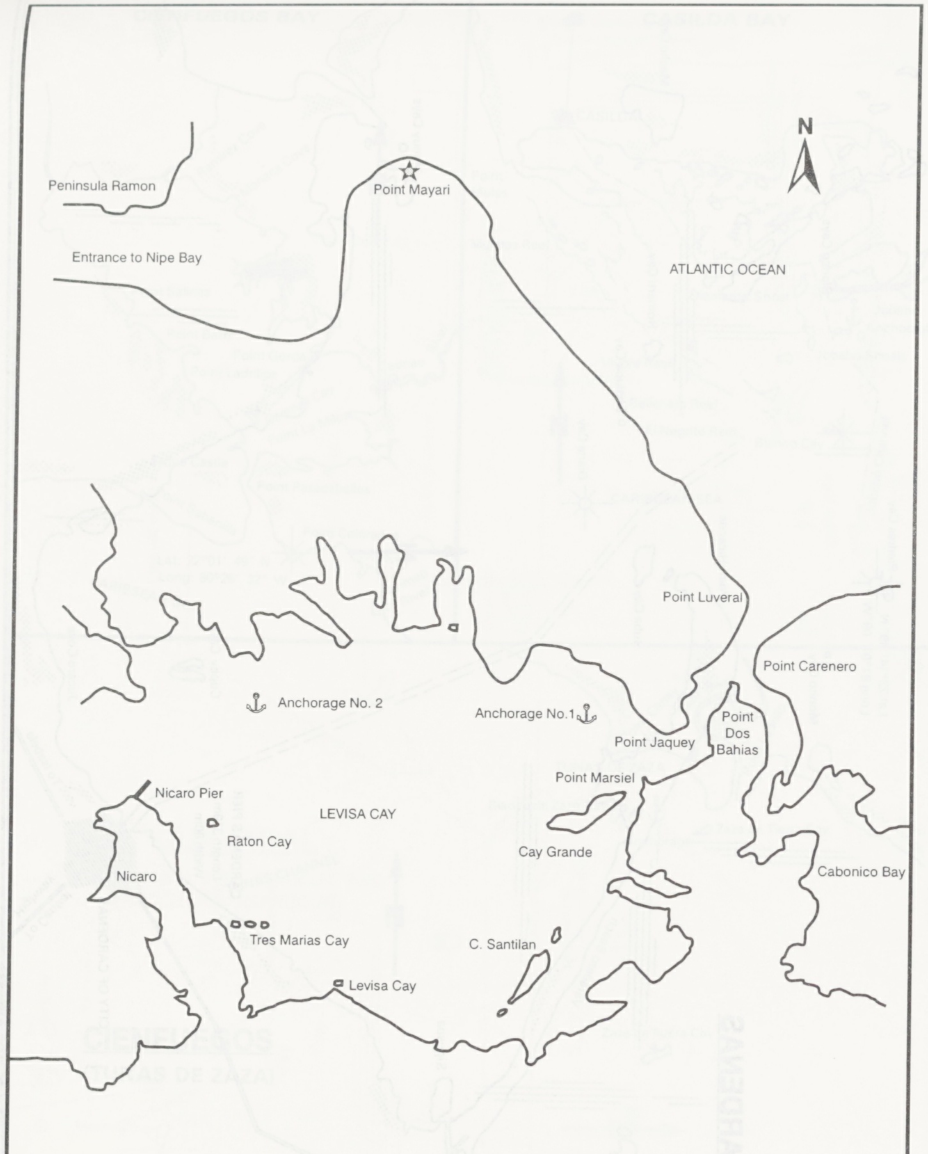

Port Development Area
Isle Krk
Cp Mali Kijac
Cp Kijac
Fl.R.(2) 8s.14M.
No. 3 Fl.R.(2) 6s.3M.
No. 4 Fl.R. 2s.3M.
OMISALJ
No. 2 Fl.R. 5s.4M.
Ø700 m.
Fl. 10s.5M.
4 knots
Course 151° (True)
3 knots
Speed 1 knot
Tug Boat take up point
400 m.
1,200 m.
2,000 m.
IsoG. 2s.11M.
Fl.(3) 10s.7M.
No. 5
Fl.G. 3s.4M.
Oil Spillage Bubble Barrier
2,800 m. (1.5 Nm.) (1.5 M.)
Cp Tenka Punta
Fl.(3) 10s.13m.7M.
Berth No. 1
350,000 d.w.t.
Berth No. 2
350,000 d.w.t.
Petrochemical Plant
Peninsula Tenka Punta
RIJEKA
OMISALJ OIL TERMINAL
No. 6
Fl.(2) 10s.4M.
SEPEN BAY


RIJEKA
RASA
Special Cargo Storage
Office
Office
Timber Terminal Storage
Stables
Livestock Terminal
Timber Terminal
Rasa River

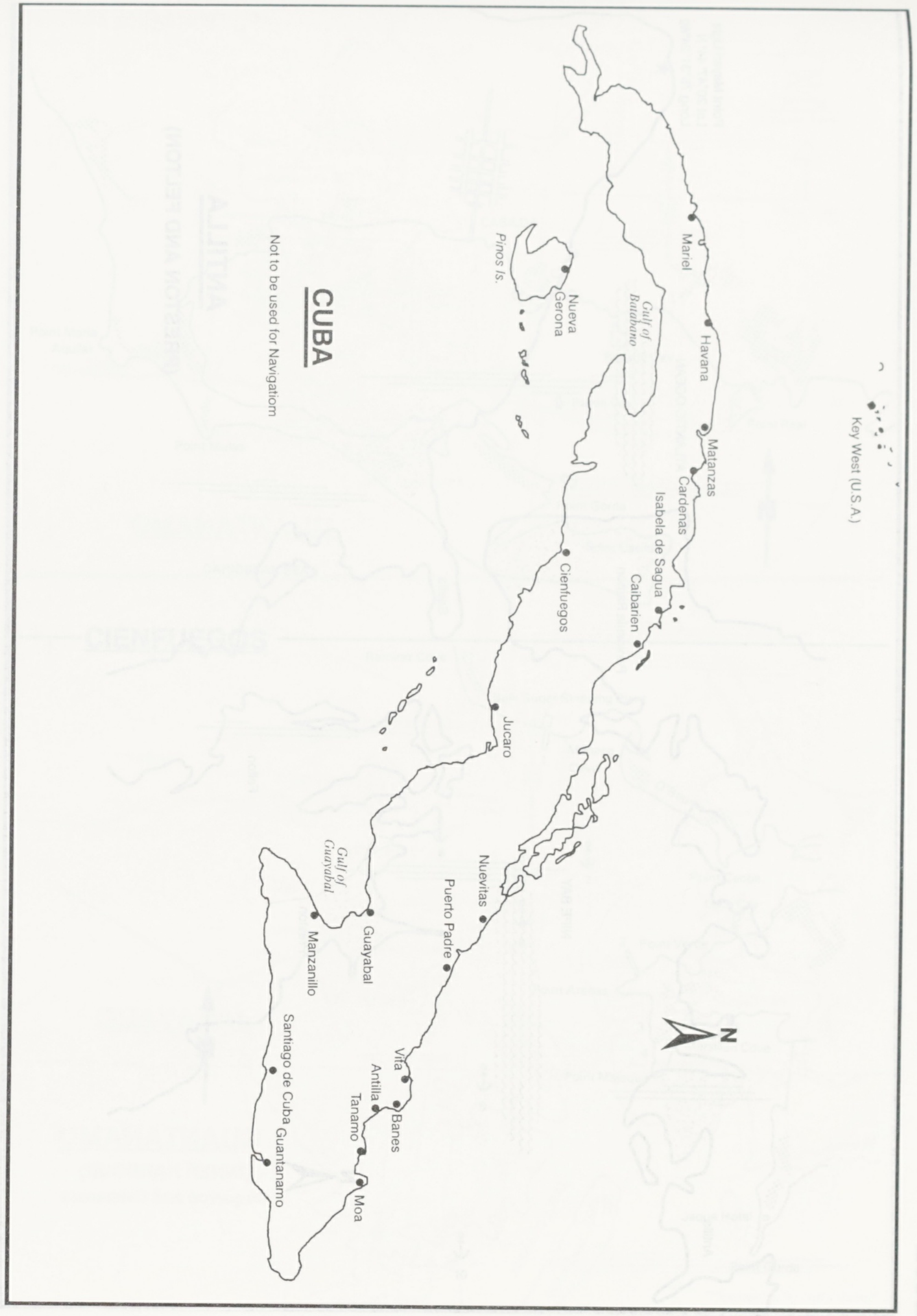

RIJEKA
(URINJ TANKER BERTH)
12 in.
12 in.
Floating Hoses
20 in.
Fl.3s.
040°-220°
17m
Fresh Water

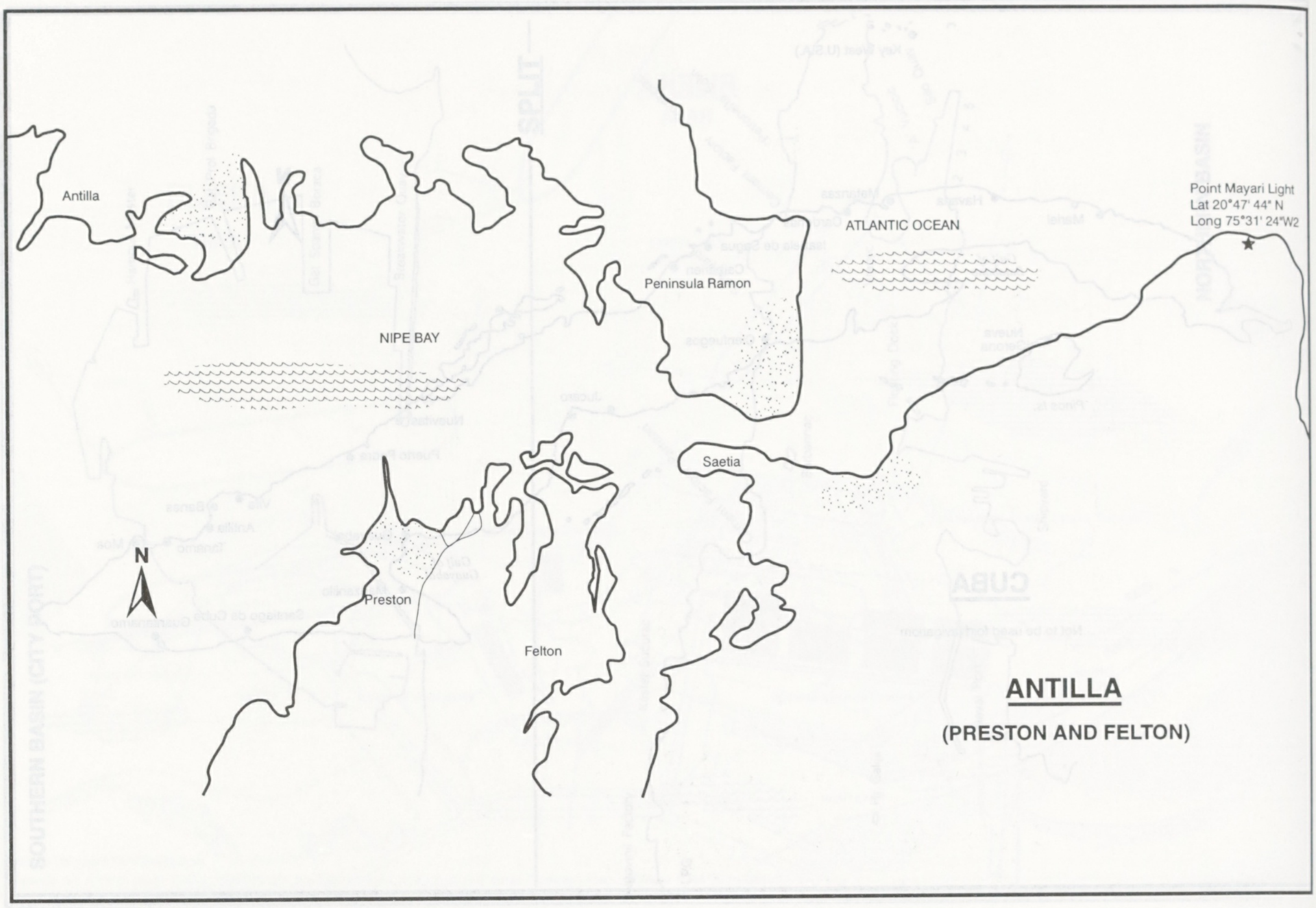

SPLIT
SOUTHERN BASIN (CITY PORT)
Harbour Master
Gat Prol Brigada
Gat Spanjol Boraca
Breakwater Quay
NORTHERN BASIN
Cement Factory
'Petronafta', Solin
'Prvoborac'
Scrapyard
'A' Vucicic
Silo Quay
1
2
3
4
5
Vranjic
Floating Dock
Barbarinac
Cement Factory 'Partizan'
Shipyard
Naval Port
Kastel Sucurac
Hr Galija
Jugovinil Factory
LPG


ZADAR
GAZENICA CARGO PORT
Future Development
Berth No. 2
Offshore Drilling Base
Berth No. 1
Future Development
Offshore Drilling Base
Soya Bean Berth
Tanker Berth
Future Development
"Plan supplied by Ship's Master"


N
Peninsula Ramon
Point Mayari
Entrance to Nipe Bay
ATLANTIC OCEAN
Point Luveral
Point Carenero
Anchorage No. 2
Anchorage No.1
Point Jaquey
Point Dos Bahias
Point Marsiel
Nicaro Pier
LEVISA CAY
Raton Cay
Cay Grande
Cabonico Bay
Nicaro
Tres Marias Cay
C. Santilan
Levisa Cay

ANTILLA
(NICARO - LEVISA BAY)

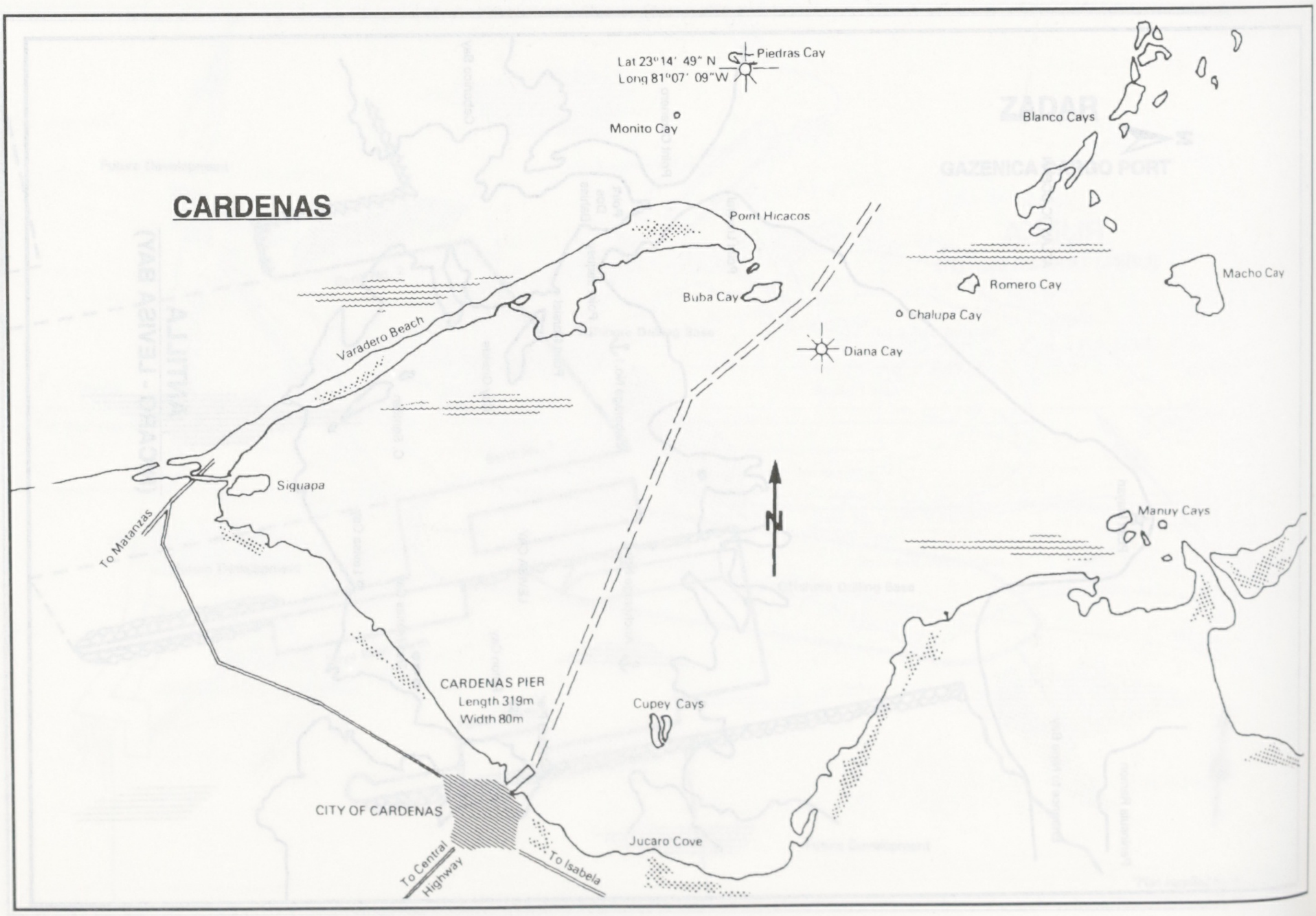

CUBA
Not to be used for Navigatiom
Key West (U.S.A.)
Mariel
Havana
Matanzas
Cardenas
Isabela de Sagua
Caibarien
Gulf of Batabano
Nueva Gerona
Pinos Is.
Cienfuegos
Jucaro
Nuevitas
Puerto Padre
Gulf of Guayabal
Guayabal
Manzanillo
Vita
Antilla
Banes
Tanamo
Moa
Santiago de Cuba
Guantanamo
N



ANTILLA

(PRESTON AND FELTON)

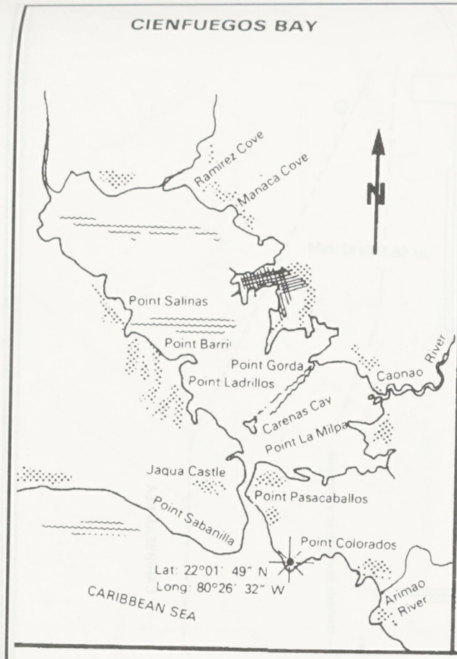
Antilla
NIPE BAY
Peninsula Ramon
ATLANTIC OCEAN
Point Mayari Light
Lat 20°47' 44" N
Long 75°31' 24"W2
Saetia
N
Preston
Felton



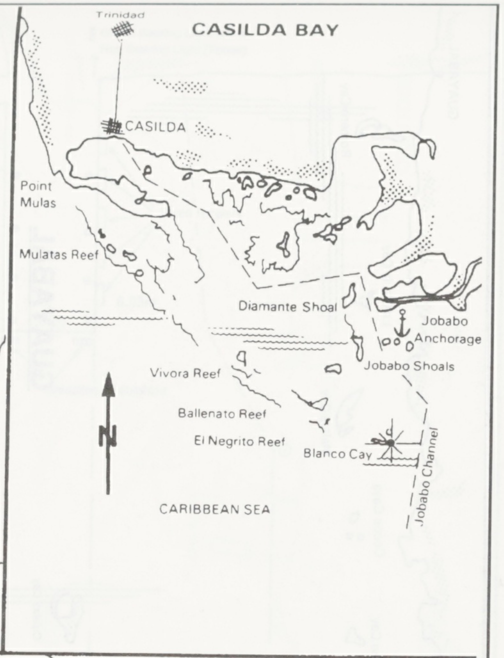
CARDENAS

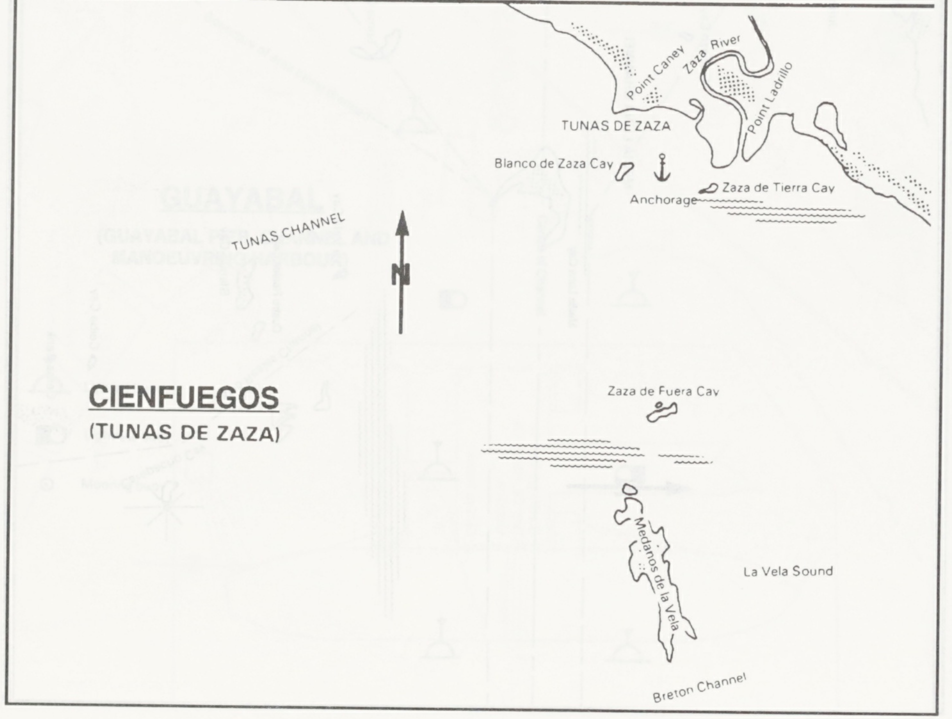
Lat 23°14' 49" N
Long 81°07' 09"W
Piedras Cay
Monito Cay
Blanco Cays
Point Hicacos
Macho Cay
Buba Cay
Romero Cay
Chalupa Cay
Diana Cay
Varadero Beach
Siquapa
To Matanzas
N
Manuy Cays
CARDENAS PIER
Length 319m
Width 80m
Cupey Cays
CITY OF CARDENAS
Jucaro Cove
To Central Highway
To Isabela

CIENFUEGOS BAY

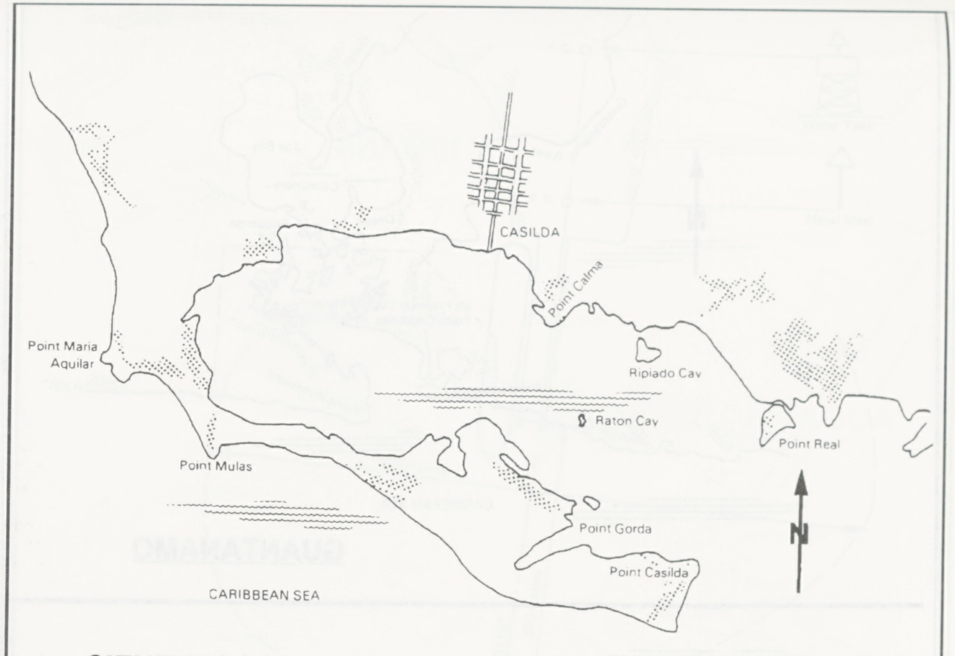

Ramirez Cove
Manaca Cove
N
Point Salinas
Point Barrii
Point Gorda
Point Ladrillos
Caonao River
Carenas Cay
Point La Milpa
Jaqua Castle
Point Pasacaballos
Point Sabanilla
Point Colorados
Lat: 22°01' 49" N
Long: 80°26' 32" W
CARIBBEAN SEA
Arimao River

CASILDA BAY

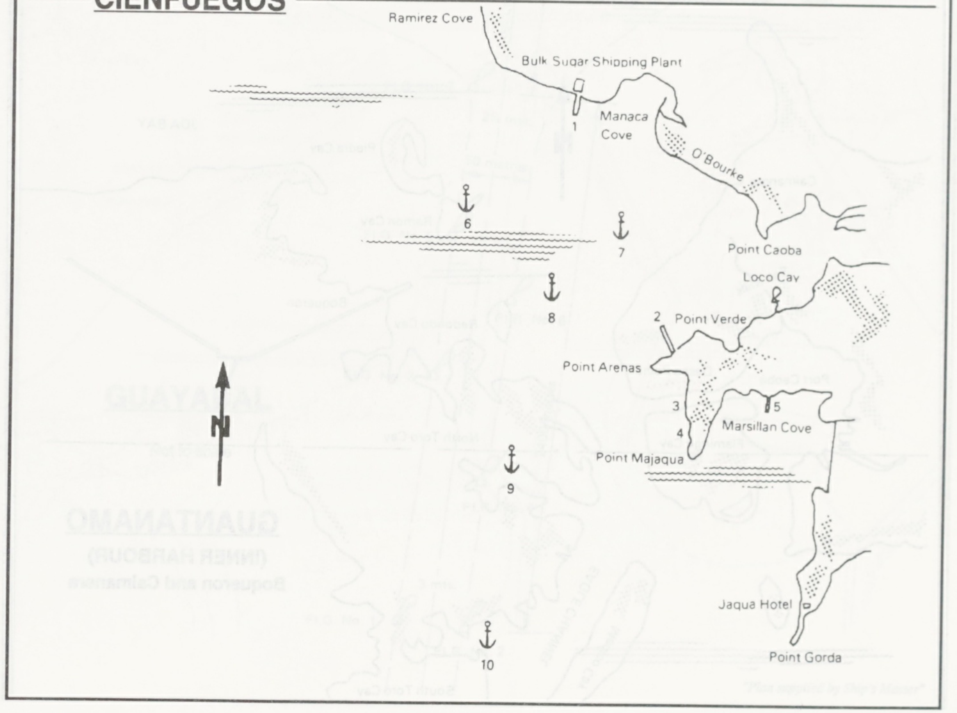

Trinidad
CASILDA
Point Mulas
Mulatas Reef
Diamante Shoal
Jobabo Anchorage
Jobabo Shoals
Vivora Reef
N
Ballenato Reef
El Negrito Reef
Blanco Cay
Jobabo Channel
CARIBBEAN SEA

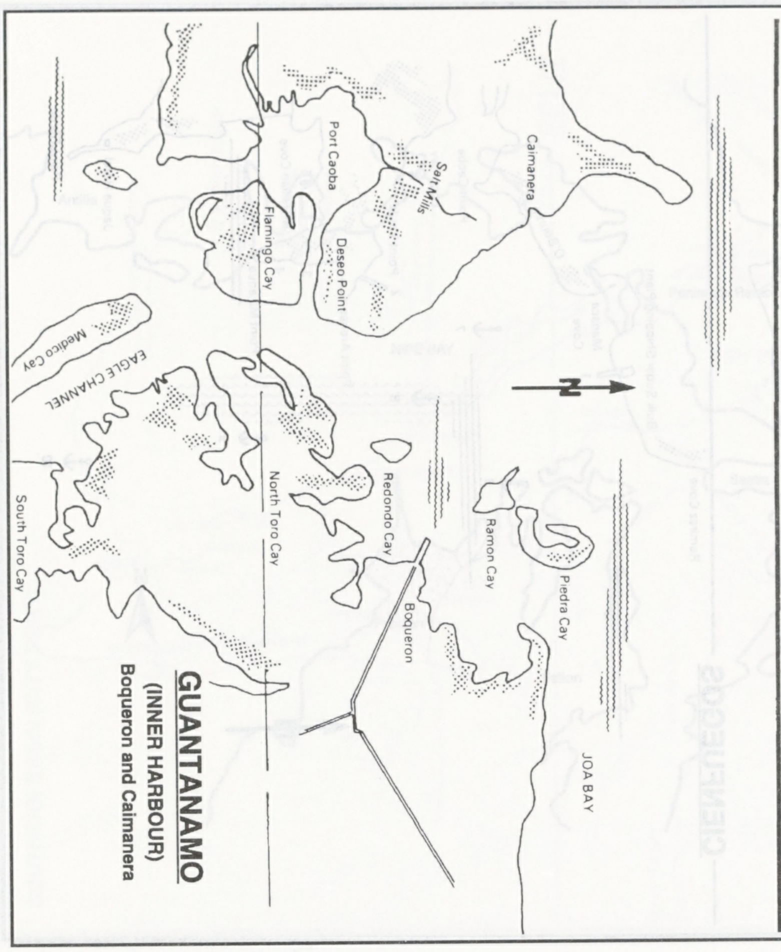

Point Caney
Zaza River
Point Ladrillo
TUNAS DE ZAZA
Blanco de Zaza Cay
Anchorage
Zaza de Tierra Cay
TUNAS CHANNEL
N
Zaza de Fuera Cay
Medanos de la Vela
La Vela Sound
Breton Channel

CIENFUEGOS
(TUNAS DE ZAZA)


CASILDA
Point Carna
Point Maria Aquilar
Ripiado Cay
Raton Cay
Point Real
Point Mulas
Point Gorda
N
Point Casilda
CARIBBEAN SEA

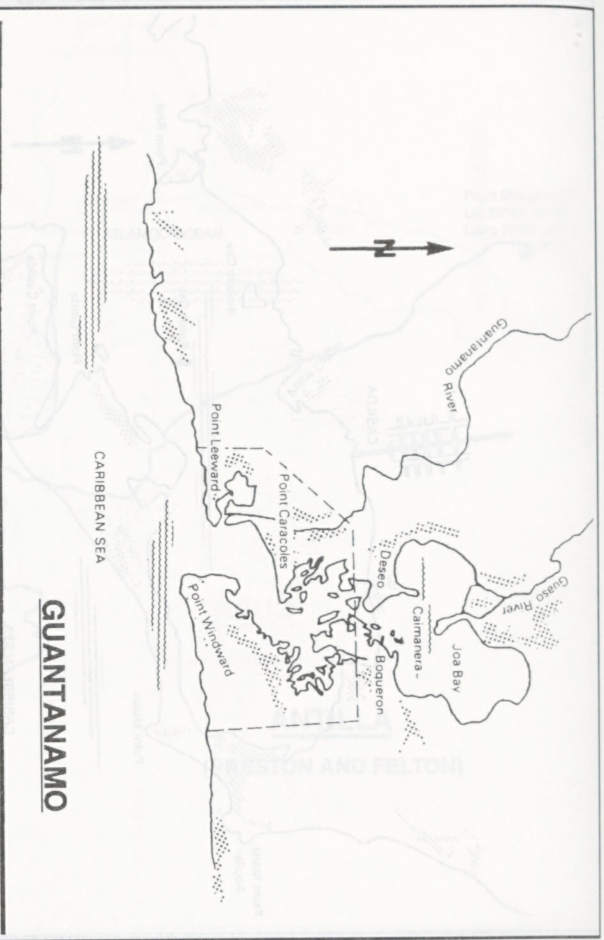
CIENFUEGOS


Ramirez Cove
Bulk Sugar Shipping Plant
1
Manaca Cove
O'Bourke
6
7
8
Point Caoba
Loco Cay
2
Point Verde
Point Arenas
3
4
5
Marsillan Cove
Point Majaqua
N
9
Jaqua Hotel
10
Point Gorda



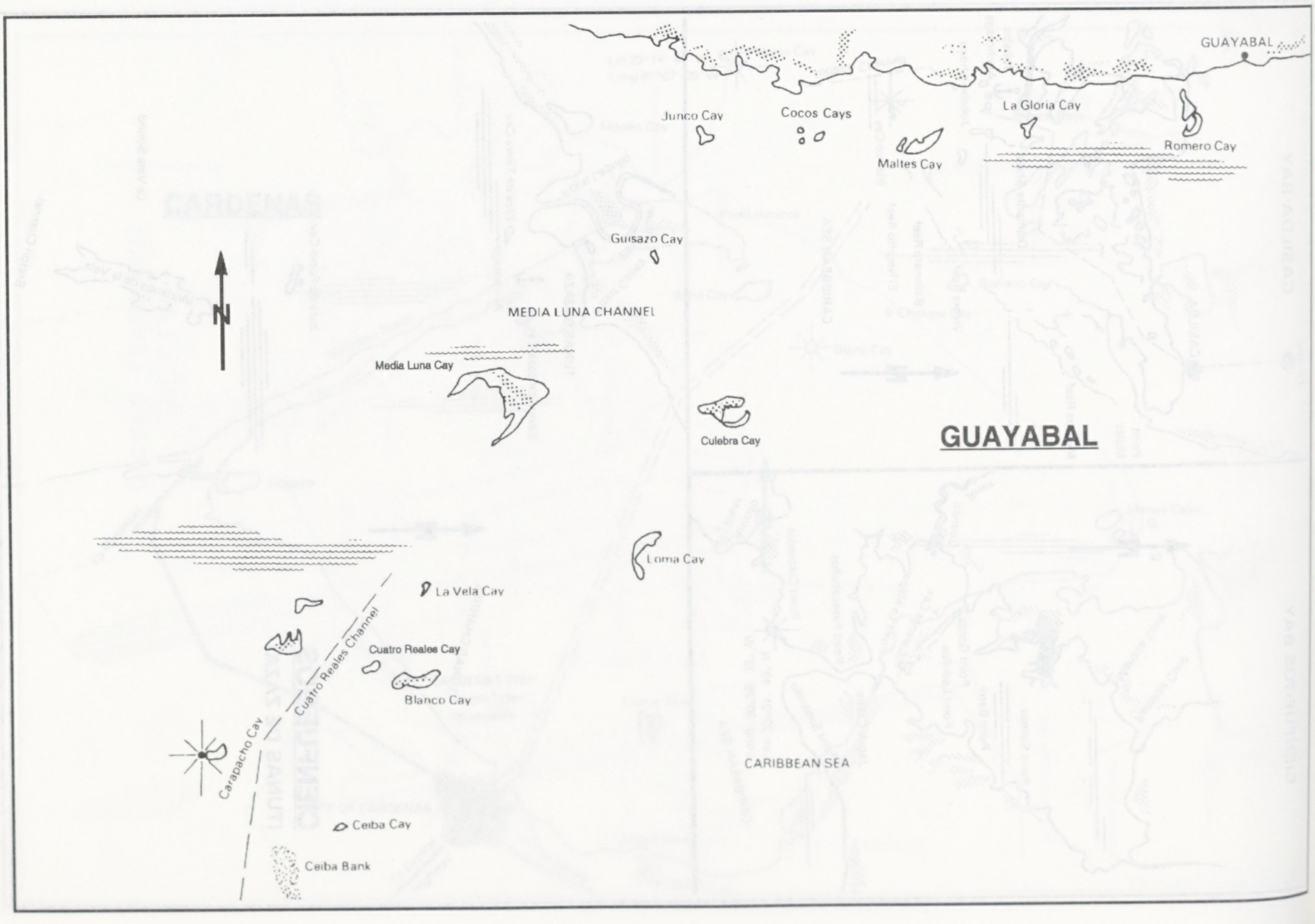
GUANTANAMO
(INNER HARBOUR)
Boqueron and Caimanera

Caimanera
Salt Mills
Port Caoba
Flamingo Cay
Deseo Point
Medico Cay
EAGLE CHANNEL
North Toro Cay
Redondo Cay
Ramon Cay
Piedra Cay
Boqueron
South Toro Cay
JOA BAY
N



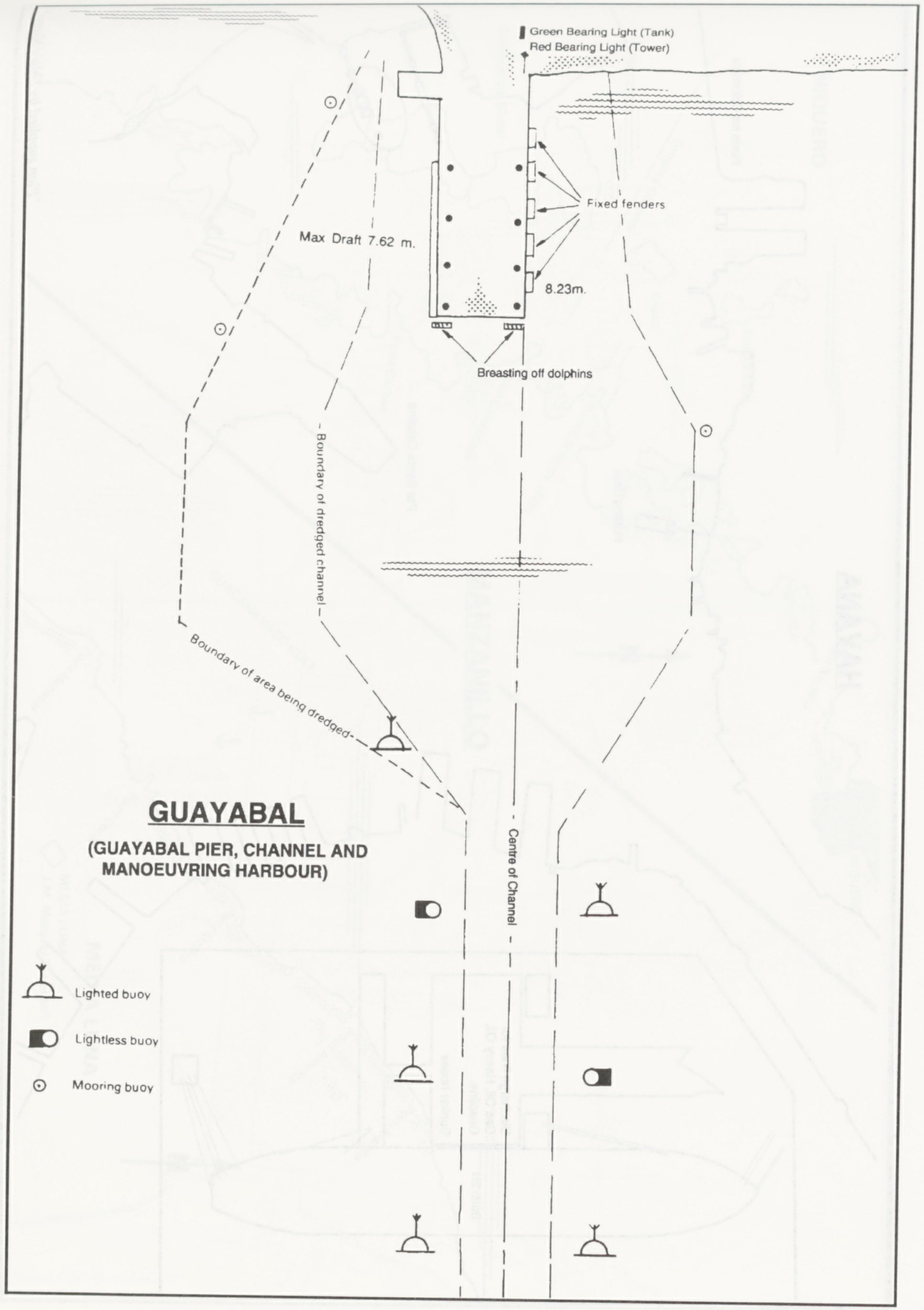
GUANTANAMO

N
Guantanamo River
Guaso River
Joa Bay
Caimanera
Deseo
Boqueron
Point Caracoles
Point Leeward
Point Windward
CARIBBEAN SEA



GUAYABAL

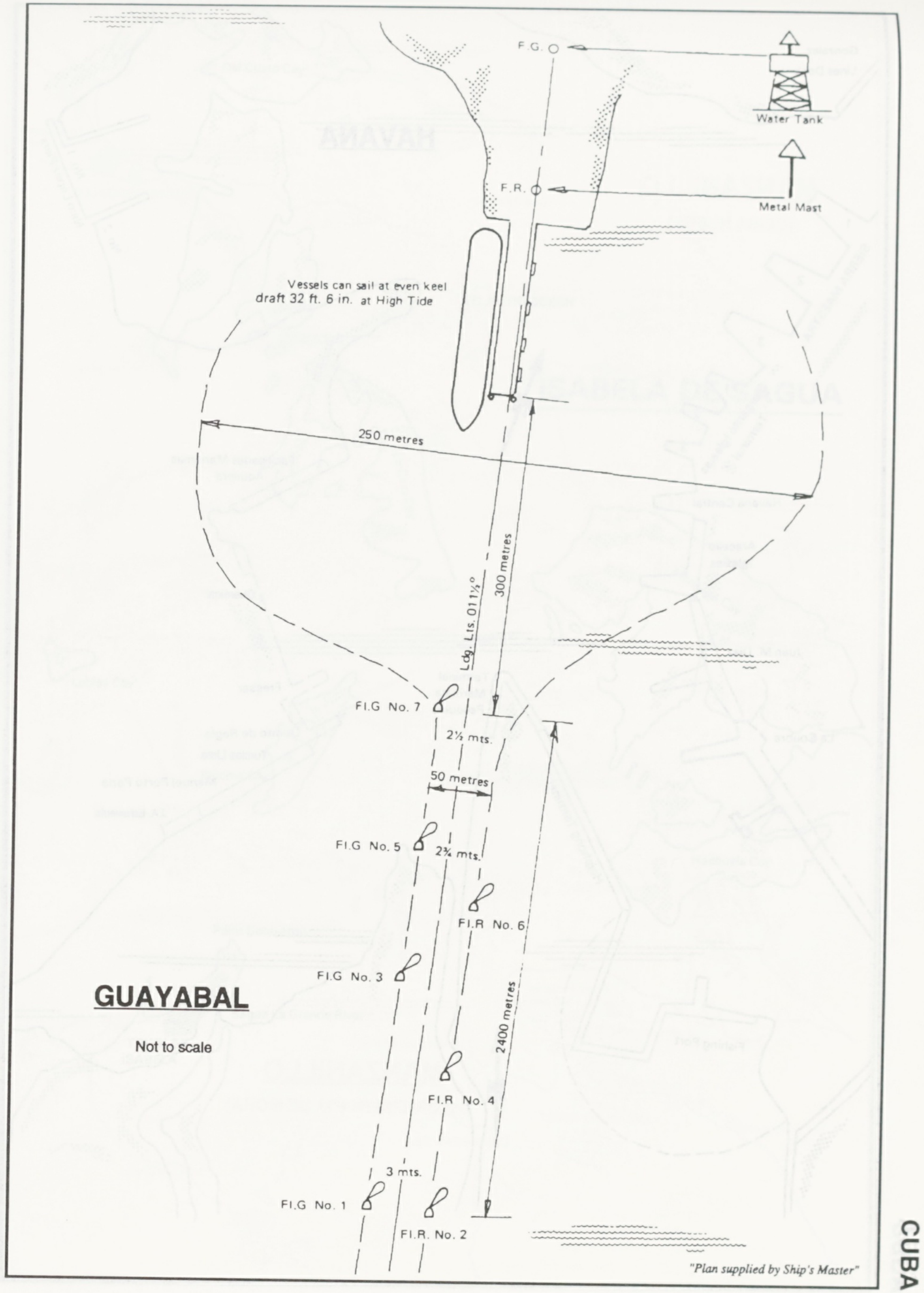
GUAYABAL
La Gloria Cay
Romero Cay
Maltes Cay
Cocos Cays
Junco Cay
Guisazo Cay
MEDIA LUNA CHANNEL
Media Luna Cay
Culebra Cay
N
Loma Cay
La Vela Cay
Cuatro Reales Cay
Cuatro Reales Channel
Blanco Cay
Carapacho Cay
Ceiba Cay
Ceiba Bank
CARIBBEAN SEA



GUAYABAL

(GUAYABAL PIER, CHANNEL AND MANOEUVRING HARBOUR)

Green Bearing Light (Tank)
Red Bearing Light (Tower)
Fixed fenders
Max Draft 7.62 m.
8.23m.
Breasting off dolphins
Boundary of dredged channel
Boundary of area being dredged
Centre of Channel
Lighted buoy
Lightless buoy
Mooring buoy

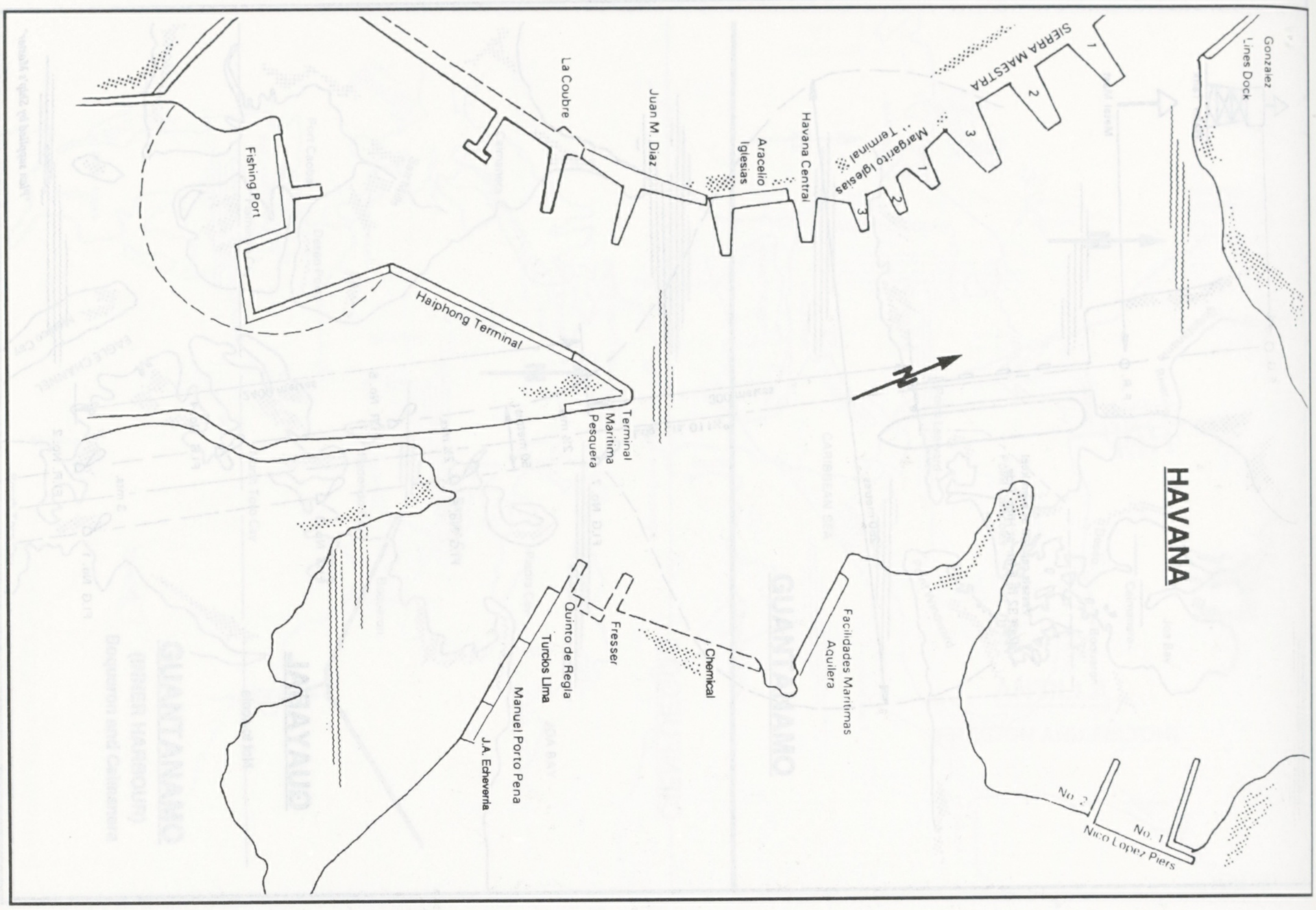


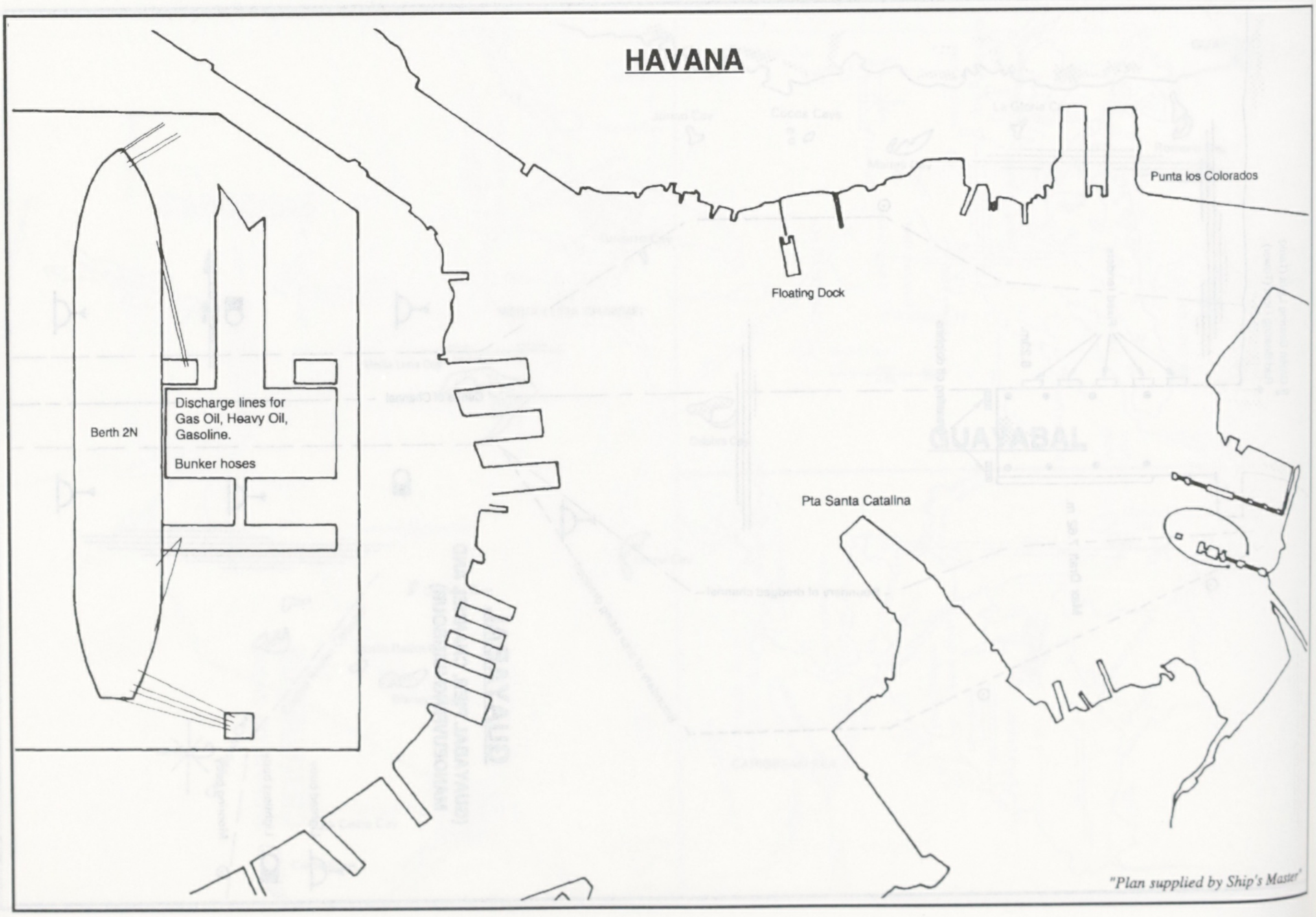
GUAYABAL

Not to scale

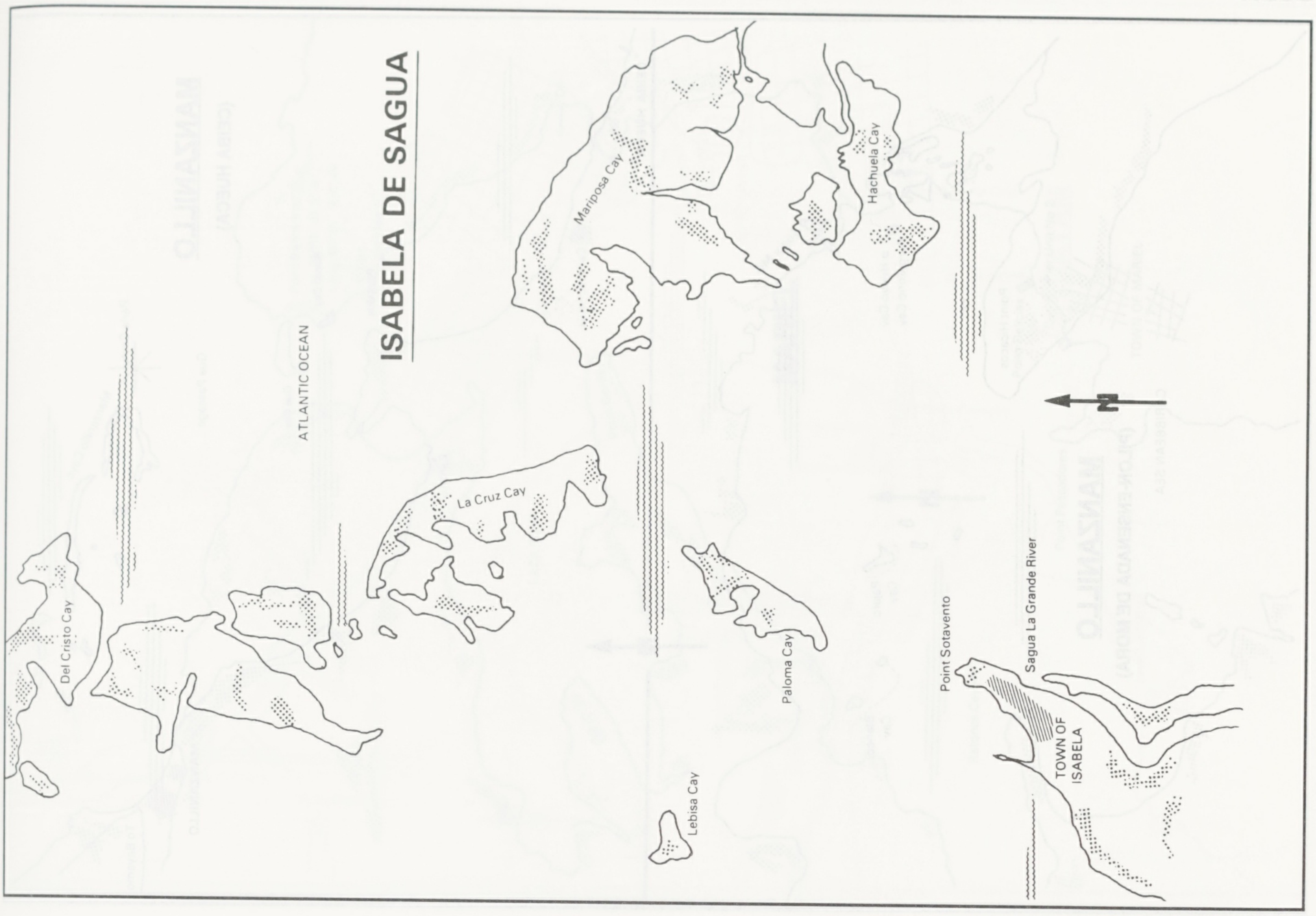
F.G.
Water Tank
F.R.
Metal Mast
Vessels can sail at even keel draft 32 ft. 6 in. at High Tide
250 metres
300 metres
Ldg. Lts. 011½°
Fl.G No. 7
2½ mts.
50 metres
Fl.G No. 5
2¾ mts.
Fl.R No. 6
Fl.G No. 3
2400 metres
Fl.R No. 4
3 mts.
Fl.G No. 1
Fl.R. No. 2

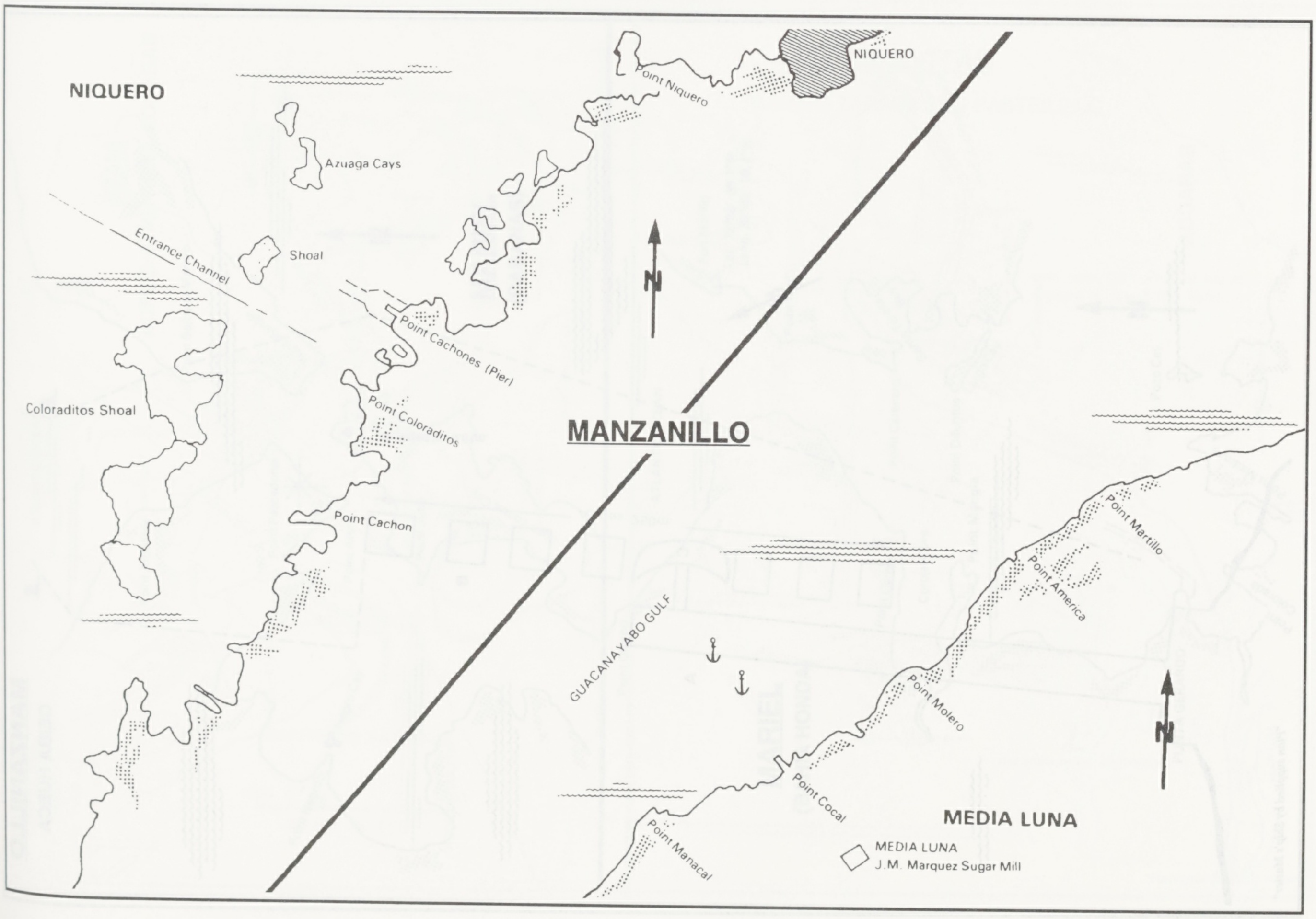
"Plan supplied by Ship's Master"

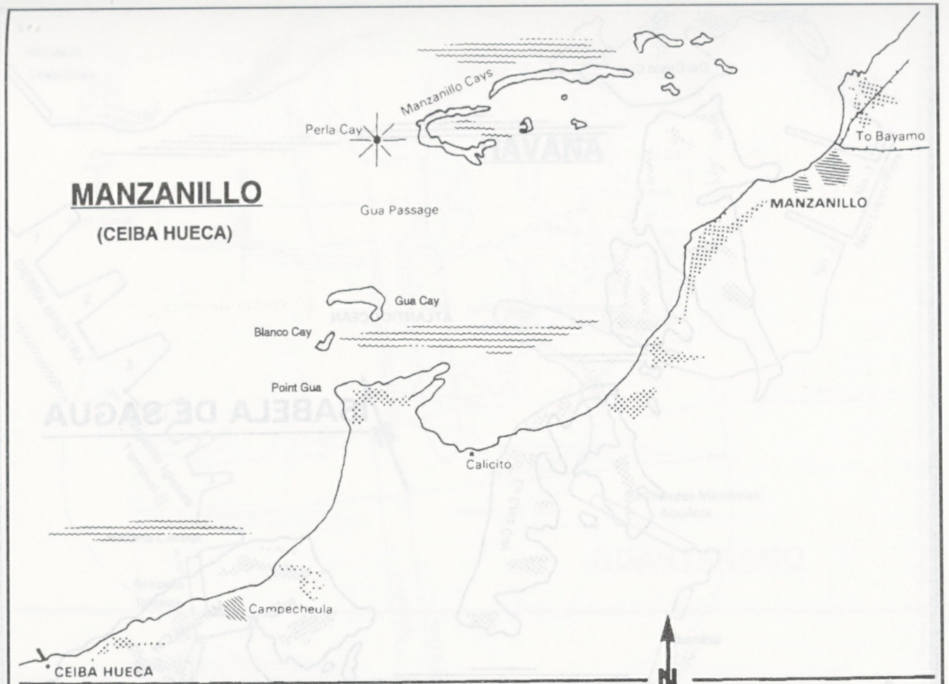

HAVANA
Fishing Port
Haiphong Terminal
Terminal Maritima Pesquera
La Coubre
Juan M. Diaz
Aracelio Iglesias
Havana Central
Margarito Iglesias Terminal
1
2
3
SIERRA MAESTRA
1
2
3
Gonzalez Lines Dock
Facilidades Maritimas Aquilera
Chemical
Fresser
Quinto de Regla
Turcios Lima
Manuel Porto Pena
J.A. Echeverria
No. 2
No. 1
Nico Lopez Piers


HAVANA
Punta los Colorados
Floating Dock
Pta Santa Catalina
Berth 2N
Discharge lines for Gas Oil, Heavy Oil, Gasoline.
Bunker hoses

"Plan supplied by Ship's Master"


ISABELA DE SAGUA
ATLANTIC OCEAN
Mariposa Cay
Hachuela Cay
La Cruz Cay
Del Cristo Cay
Paloma Cay
Lebisa Cay
Point Sotavento
Sagua La Grande River
TOWN OF ISABELA
N

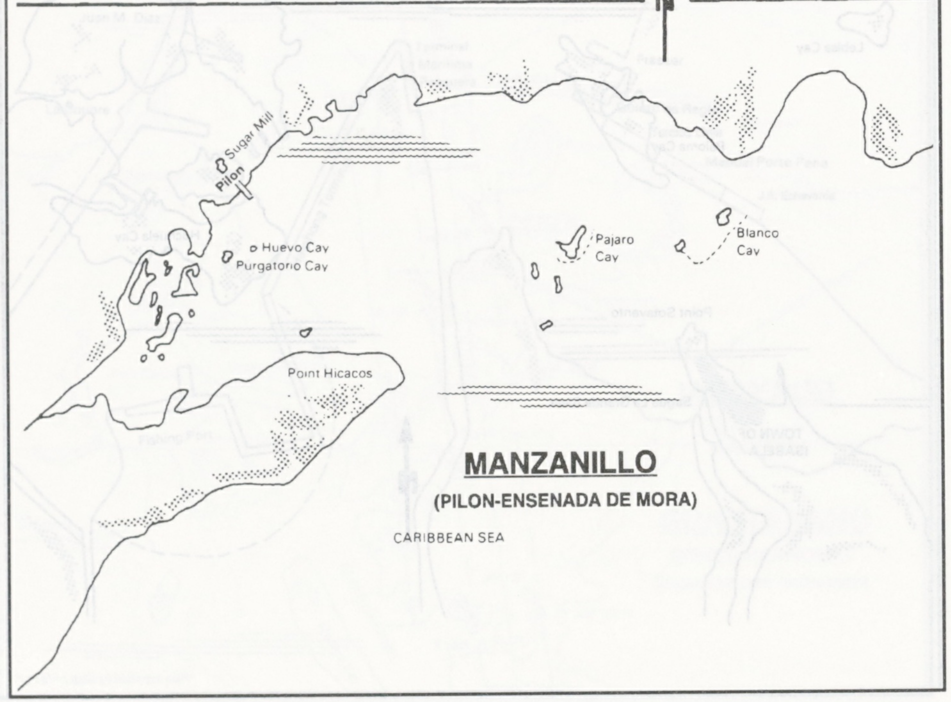

NIQUERO
NIQUERO
Point Niquero
Azuaga Cays
Shoal
Entrance Channel
Point Cachones (Pier)
Coloraditos Shoal
Point Coloraditos
Point Cachon
MANZANILLO
GUACANAYABO GULF
N
Point Martillo
Point America
Point Molero
Point Cocal
Point Manacal
MEDIA LUNA
MEDIA LUNA
J.M. Marquez Sugar Mill
N



MANZANILLO

(CEIBA HUECA)

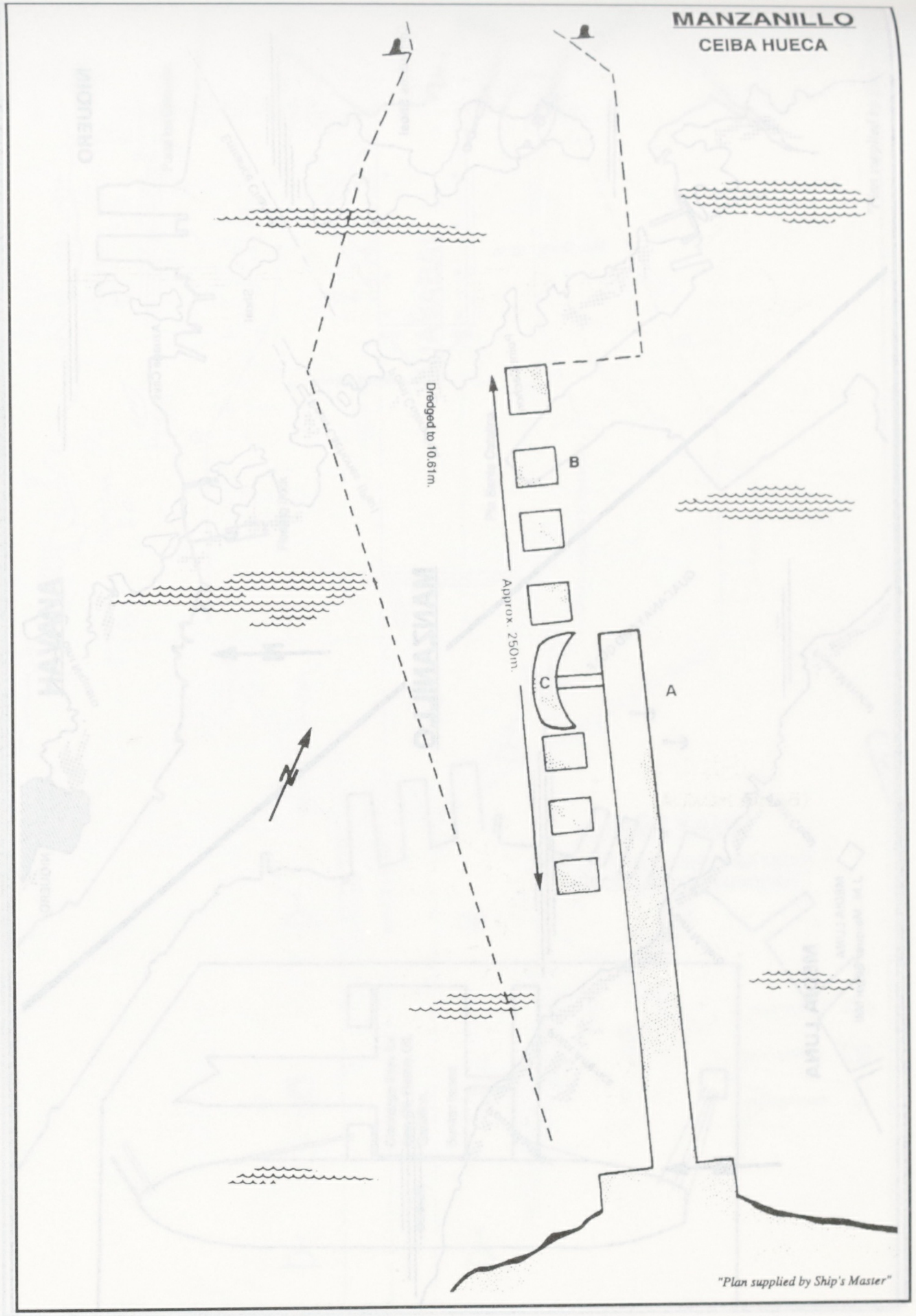
Manzanillo Cays
Perla Cay
To Bayamo
MANZANILLO
Gua Passage
Gua Cay
Blanco Cay
Point Gua
Calicito
Campecheula
CEIBA HUECA



MANZANILLO

(PILON-ENSENADA DE MORA)

Sugar Mill
Pilon
Huevo Cay
Purgatorio Cay
Pajaro Cay
Blanco Cay
Point Hicacos
CARIBBEAN SEA

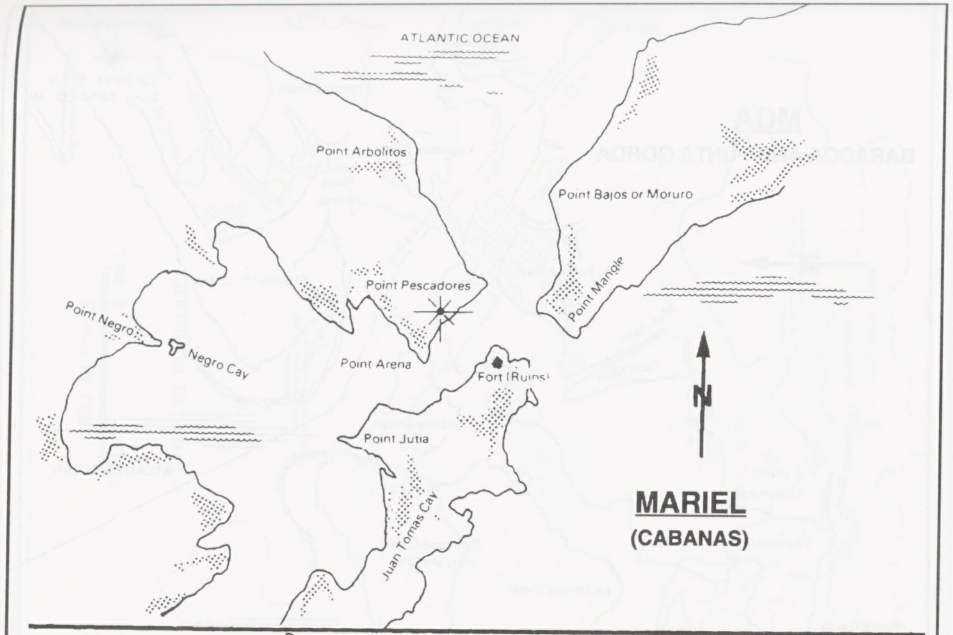


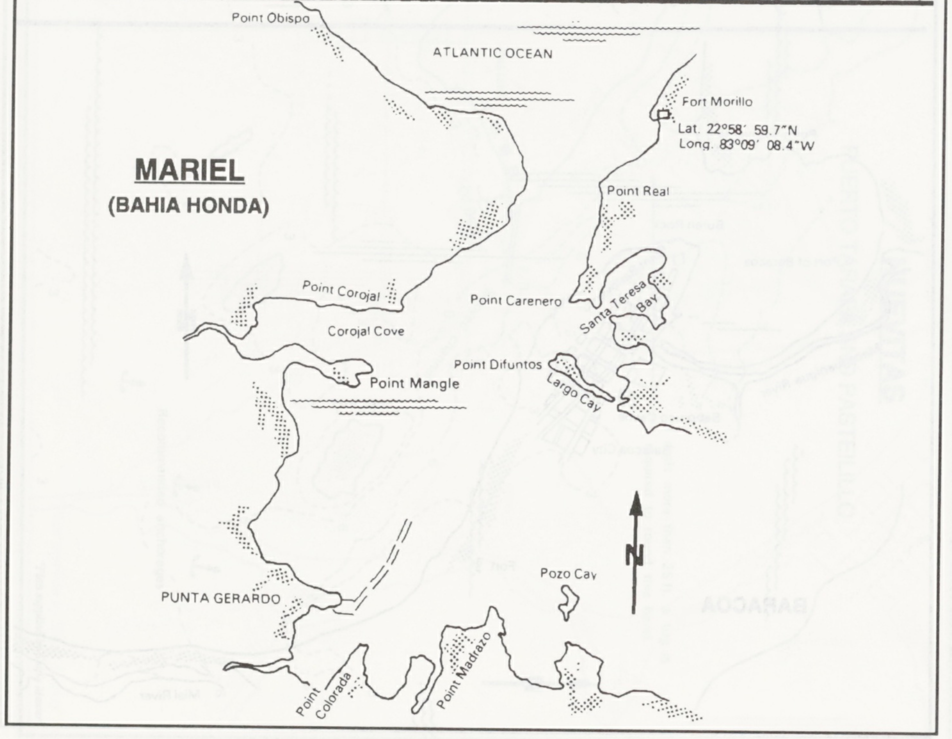
MANZANILLO

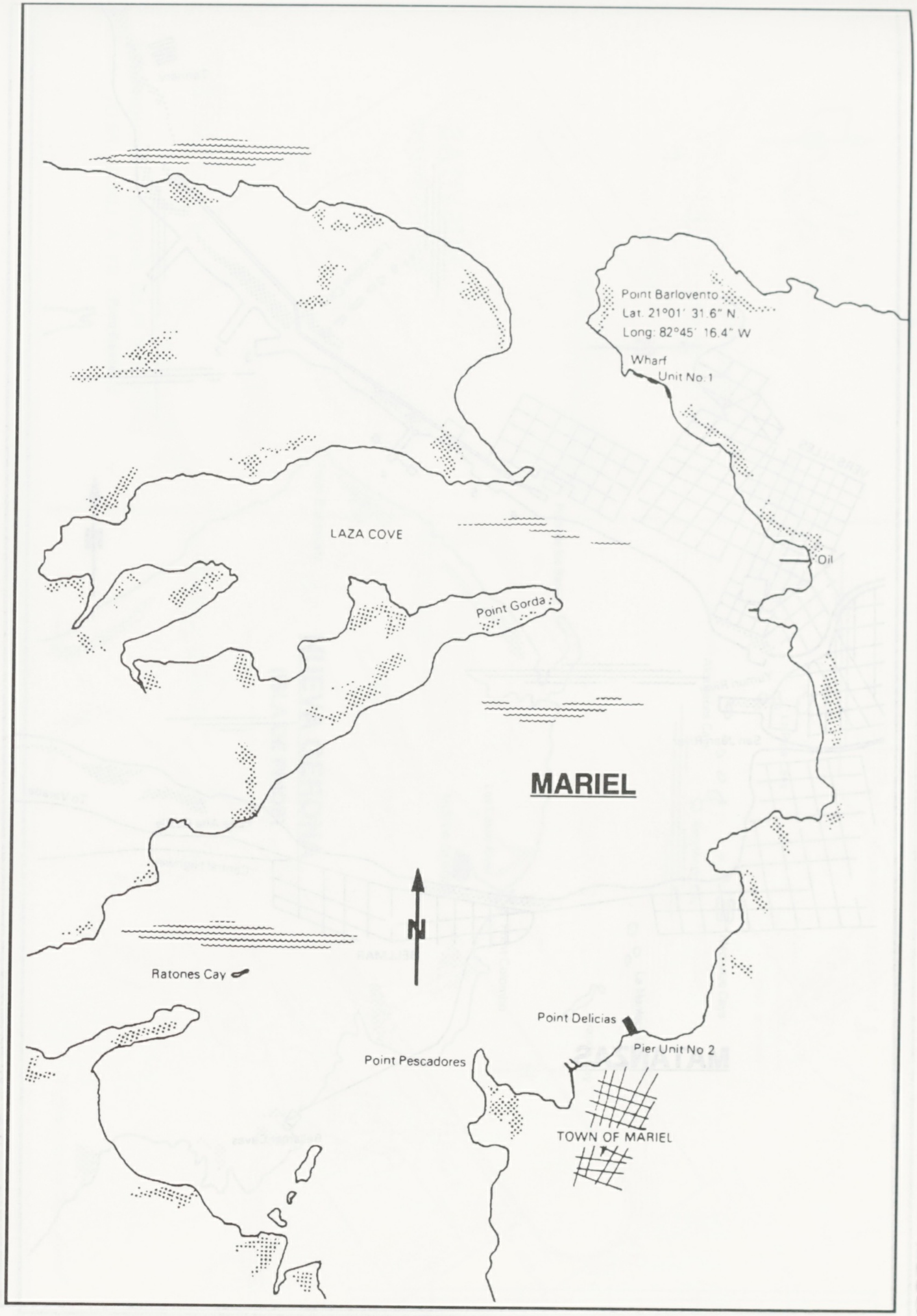
CEIBA HUECA

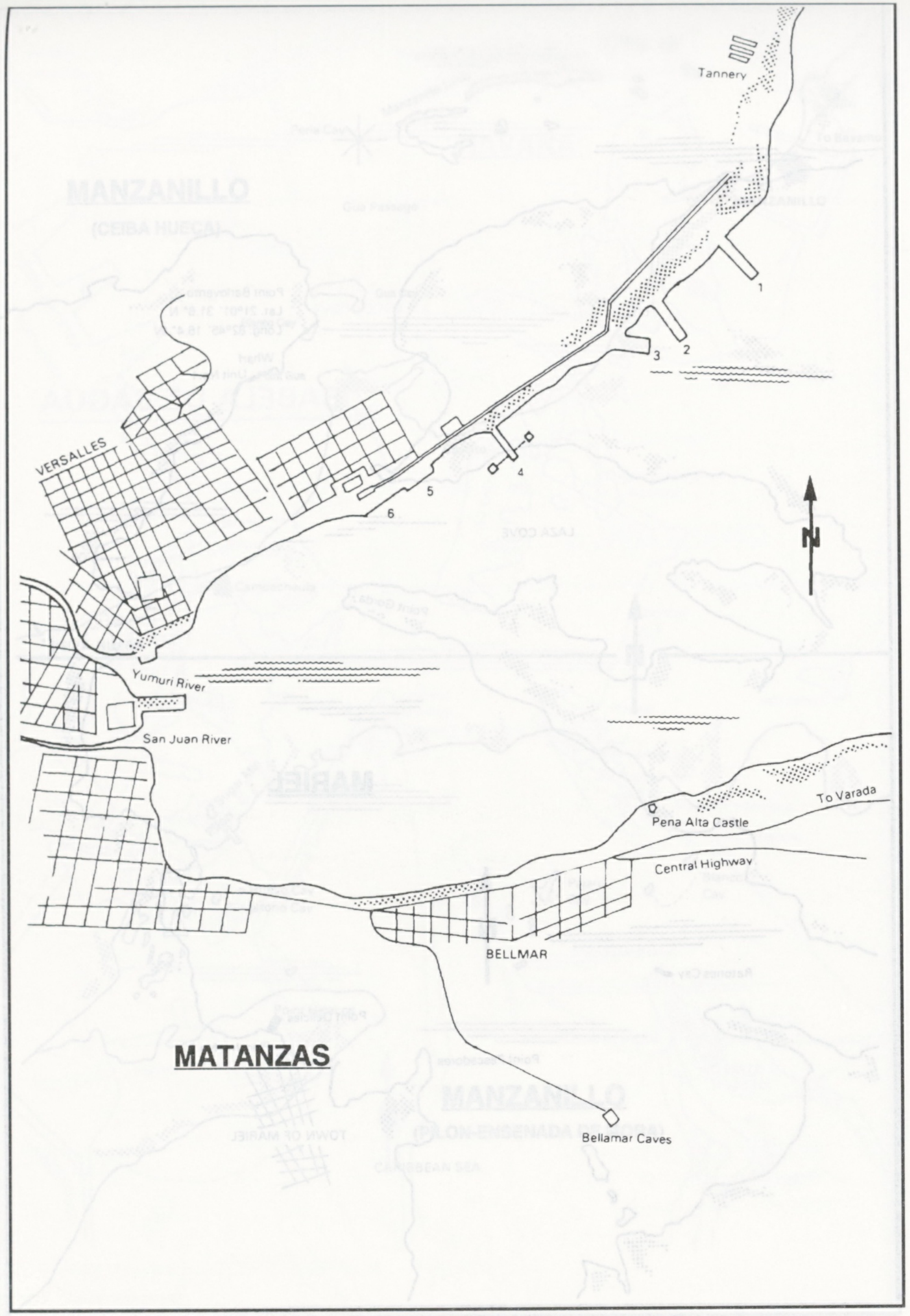
Dredged to 10.61m.
B
Approx. 250m.
C
A

"Plan supplied by Ship's Master"


ATLANTIC OCEAN
Point Arbolitos
Point Bajos or Moruro
Point Pescadores
Point Mangle
Point Negro
Negro Cay
Point Arena
Fort (Ruins)
Point Jutia
Juan Tomas Cay
N
MARIEL
(CABANAS)

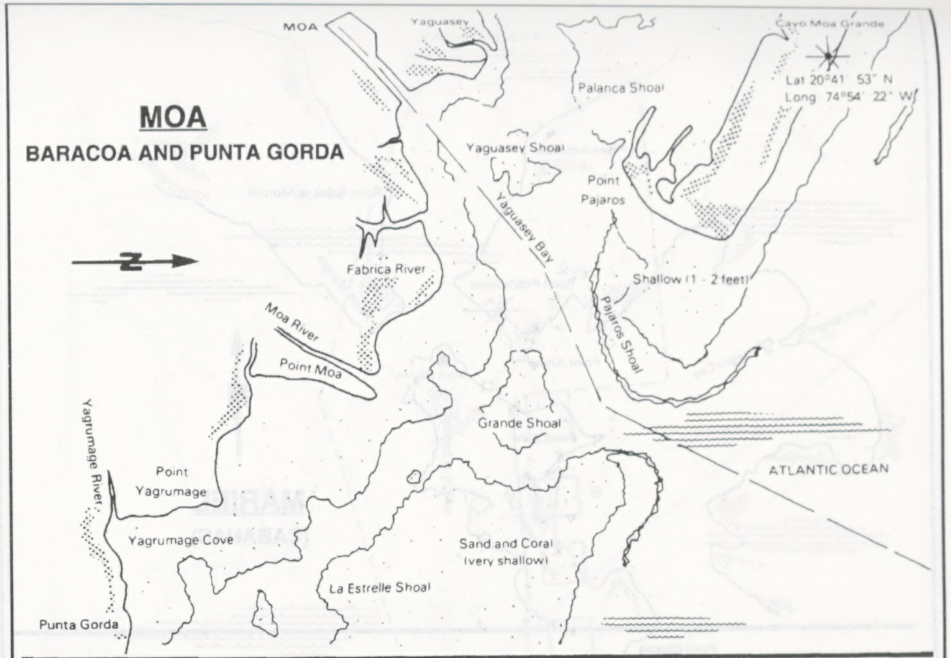

Point Obispo
ATLANTIC OCEAN
Fort Morillo
Lat. 22°58′ 59.7″N
Long. 83°09′ 08.4″W
MARIEL
(BAHIA HONDA)
Point Real
Point Corojal
Point Carenero
Santa Teresa Bay
Corojal Cove
Point Difuntos
Point Mangle
Largo Cay
N
Pozo Cay
PUNTA GERARDO
Point Colorada
Point Madrazo


Point Barlovento
Lat. 21°01′ 31.6″ N
Long. 82°45′ 16.4″ W
Wharf
Unit No.1
LAZA COVE
Oil
Point Gorda
MARIEL
N
Ratones Cay
Point Delicias
Pier Unit No 2
Point Pescadores
TOWN OF MARIEL



MATANZAS

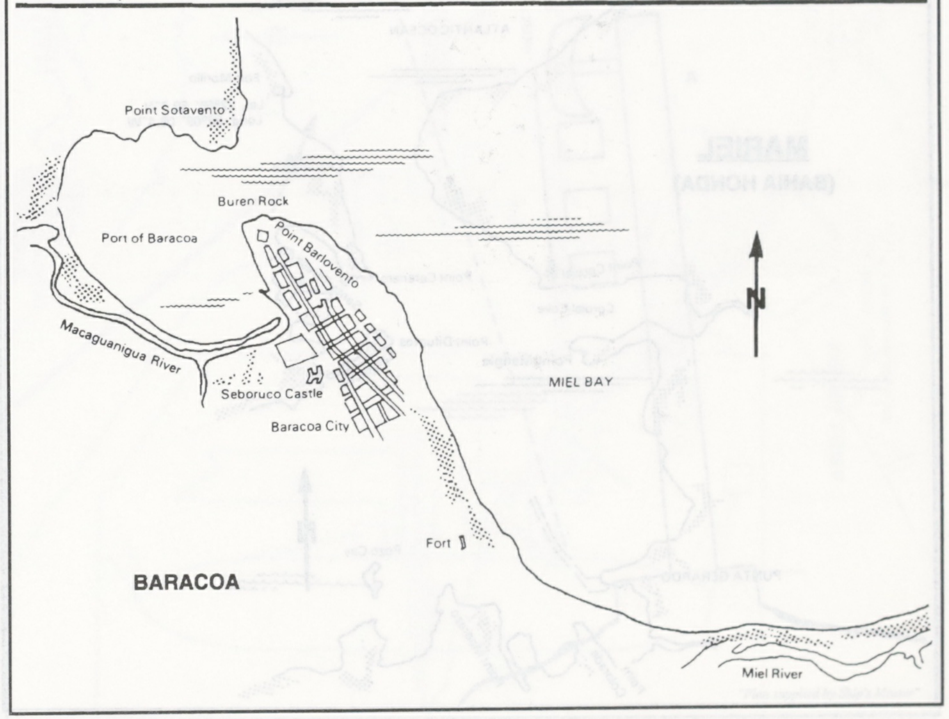
Tannery
1
2
3
4
5
6
VERSALLES
Yumuri River
San Juan River
N
Pena Alta Castle
To Varada
Central Highway
BELLMAR
Bellmar Caves



MOA

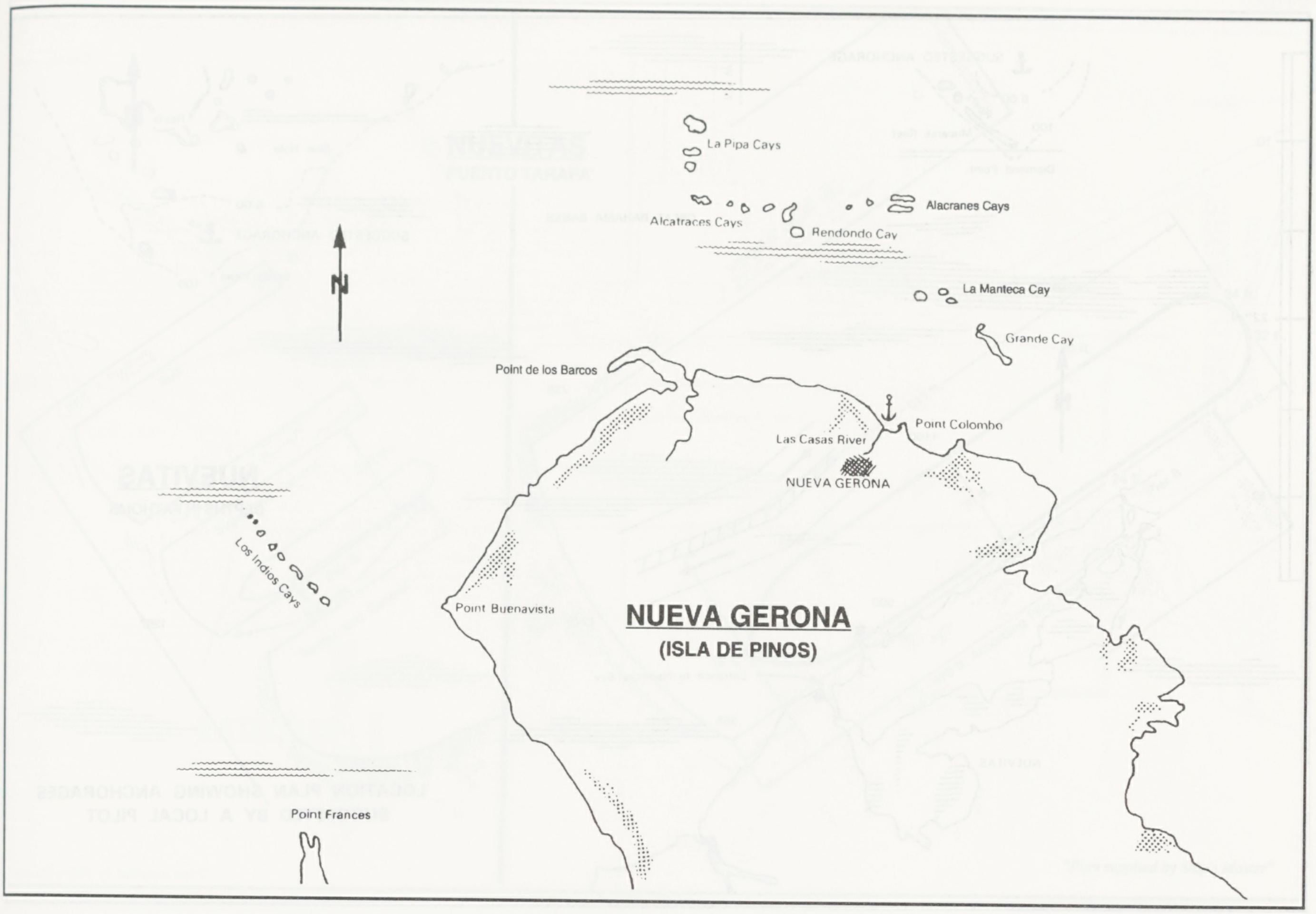
BARACOA AND PUNTA GORDA

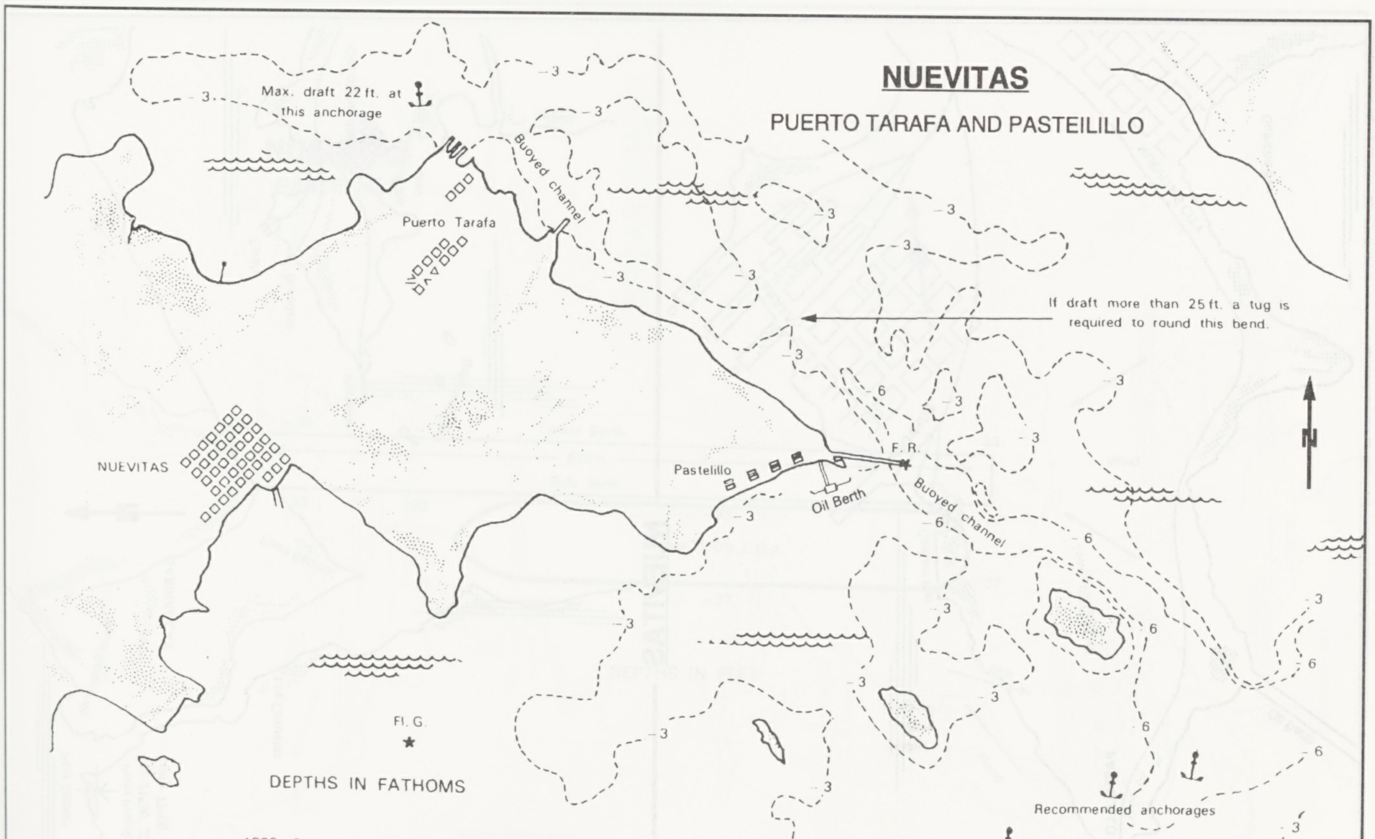
MOA
Yaguasey
Cayo Moa Grande
Lat 20°41' 53" N
Long 74°54' 22" W
Palanca Shoal
Yaguasey Shoal
Point Pajaros
Yaguasey Bay
N
Fabrica River
Shallow (1 - 2 feet)
Moa River
Point Moa
Pajaros Shoal
Grande Shoal
ATLANTIC OCEAN
Point Yagrumage
Yagrumage River
Yagrumage Cove
Sand and Coral (very shallow)
La Estrelle Shoal
Punta Gorda



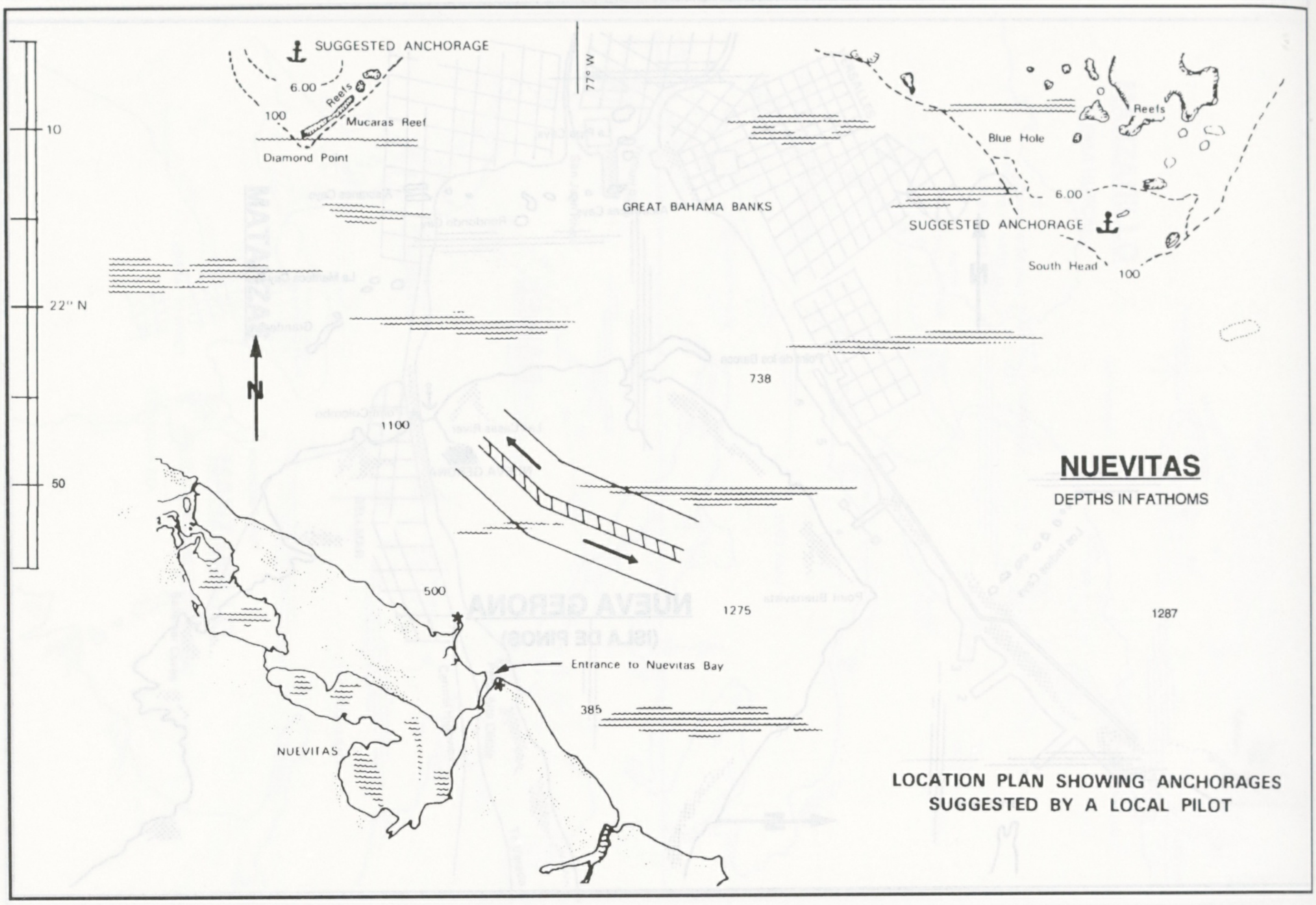
BARACOA

Point Sotavento
Buren Rock
Port of Baracoa
Point Barlovento
N
Macaguanigua River
Seboruco Castle
Baracoa City
MIEL BAY
Fort
Miel River


La Pipa Cays
Alacranes Cays
Alcatraces Cays
Rendondo Cay
La Manteca Cay
Grande Cay
N
Point de los Barcos
Point Colombo
Las Casas River
NUEVA GERONA
Los Indios Cays
Point Buenavista
NUEVA GERONA
(ISLA DE PINOS)
Point Frances


NUEVITAS
PUERTO TARAFA AND PASTEILILLO
Max. draft 22 ft. at this anchorage
Buoyed channel
Puerto Tarafa
If draft more than 25 ft. a tug is required to round this bend.
N
NUEVITAS
Pastelillo
F. R.
Oil Berth
Buoyed channel
Fl. G.
DEPTHS IN FATHOMS
1000 0 5000
SCALE IN FEET
Recommended anchorages
3
6

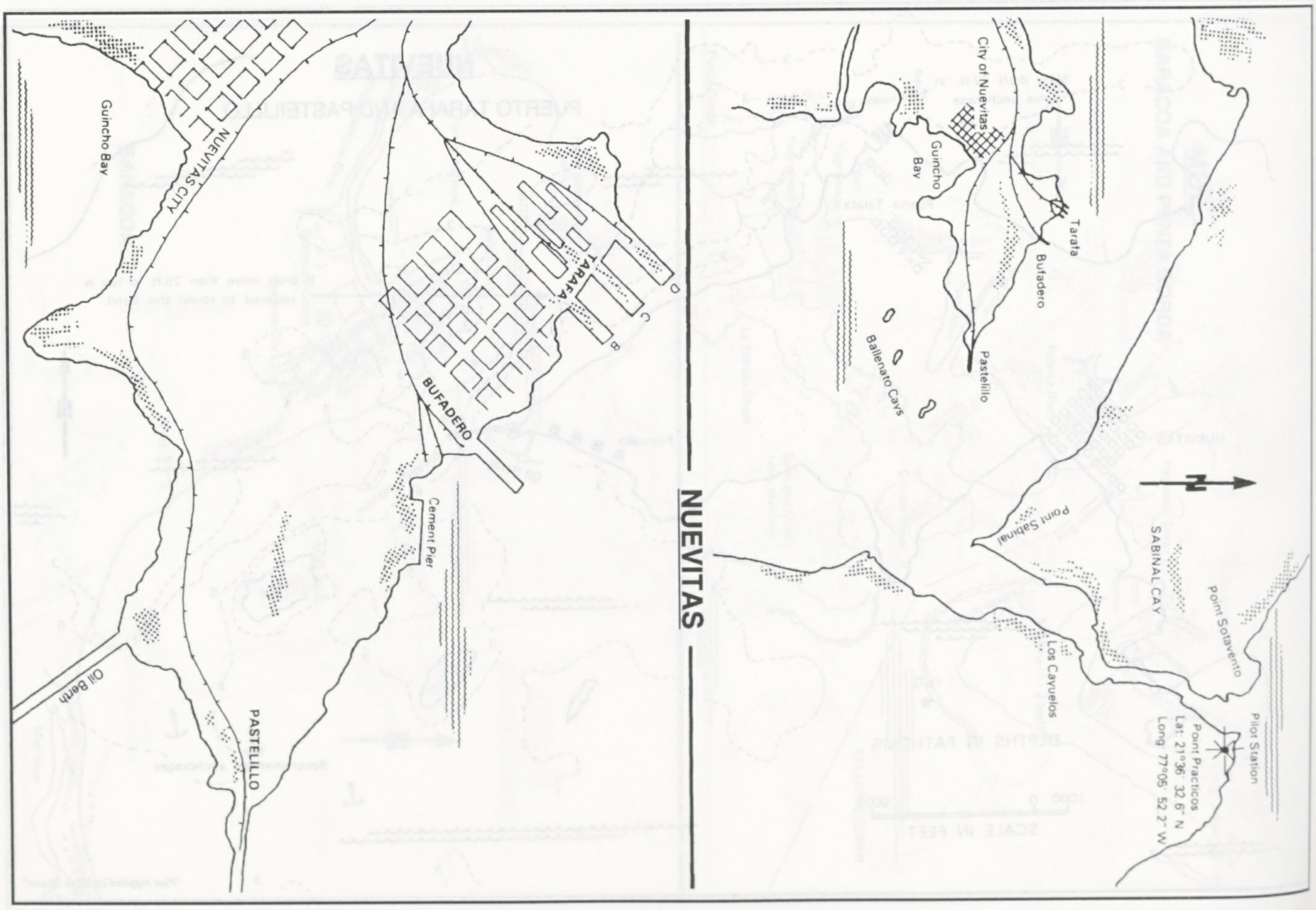
"Plan supplied by Ship's Master"

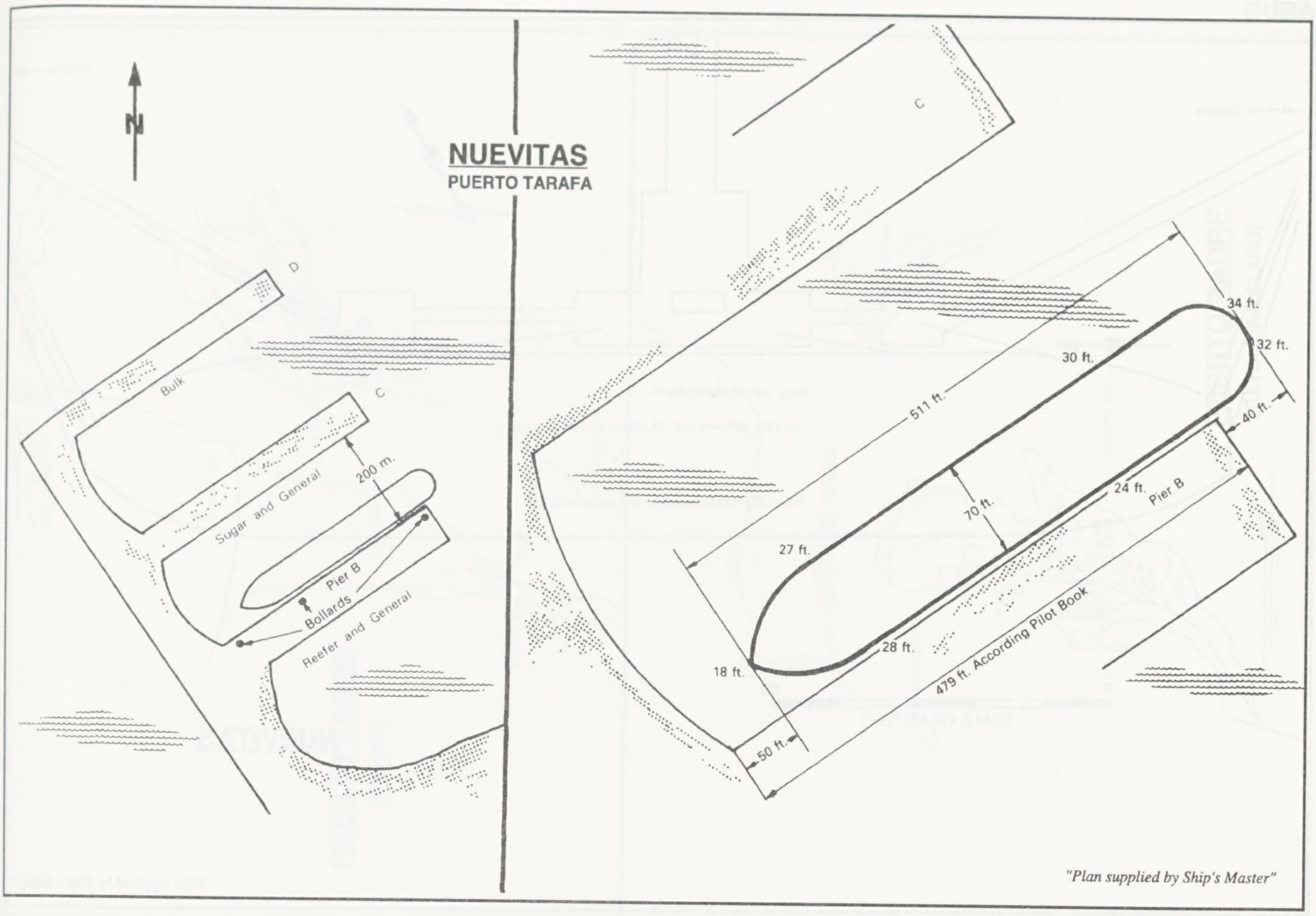

SUGGESTED ANCHORAGE
6.00
Reefs
100
Mucaras Reef
Diamond Point
77° W
GREAT BAHAMA BANKS
Reefs
Blue Hole
6.00
SUGGESTED ANCHORAGE
South Head
100
10
22° N
50
N
738
1100
500
1275
1287
Entrance to Nuevitas Bay
385
NUEVITAS

NUEVITAS

DEPTHS IN FATHOMS

LOCATION PLAN SHOWING ANCHORAGES SUGGESTED BY A LOCAL PILOT


Guincho Bay
NUEVITAS CITY
TARAFA
BUFADERO
D
C
B
Cement Pier
Oil Berth
PASTELILLO
NUEVITAS
City of Nuevitas
Guincho Bay
Tarafa
Bufadero
Pastelillo
Ballenato Cays
N
Point Sabinal
SABINAL CAY
Point Sotavento
Los Cayuelos
Pilot Station
Point Practicos
Lat: 21°36' 32.6" N
Long: 77°05' 52.2" W

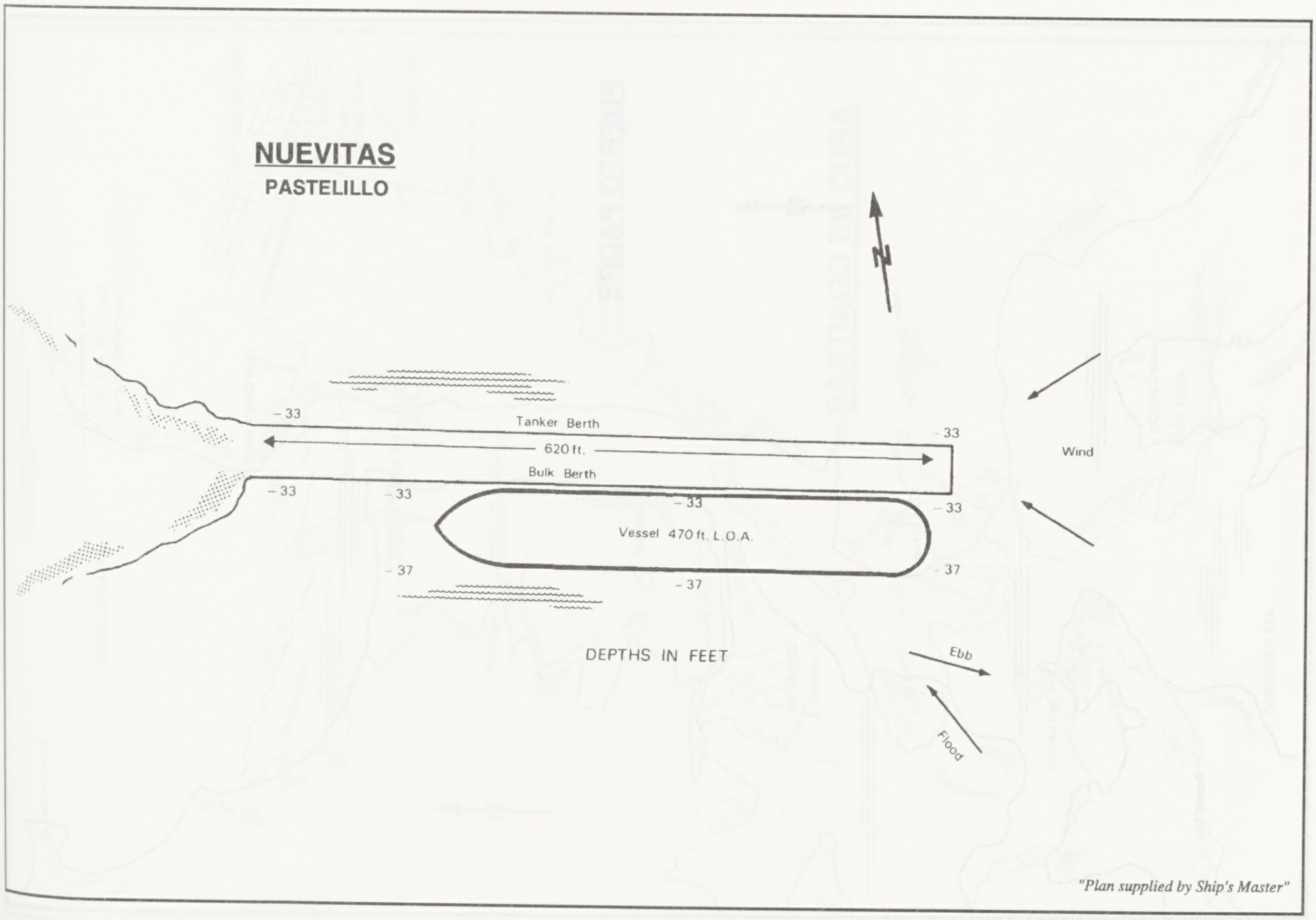


NUEVITAS

PUERTO TARAFA

N
D
Bulk
C
Sugar and General
200 m.
Pier B
Bollards
Reefer and General
C
34 ft.
32 ft.
30 ft.
511 ft.
40 ft.
70 ft.
24 ft.
Pier B
27 ft.
28 ft.
18 ft.
479 ft. According Pilot Book
50 ft.

"Plan supplied by Ship's Master"

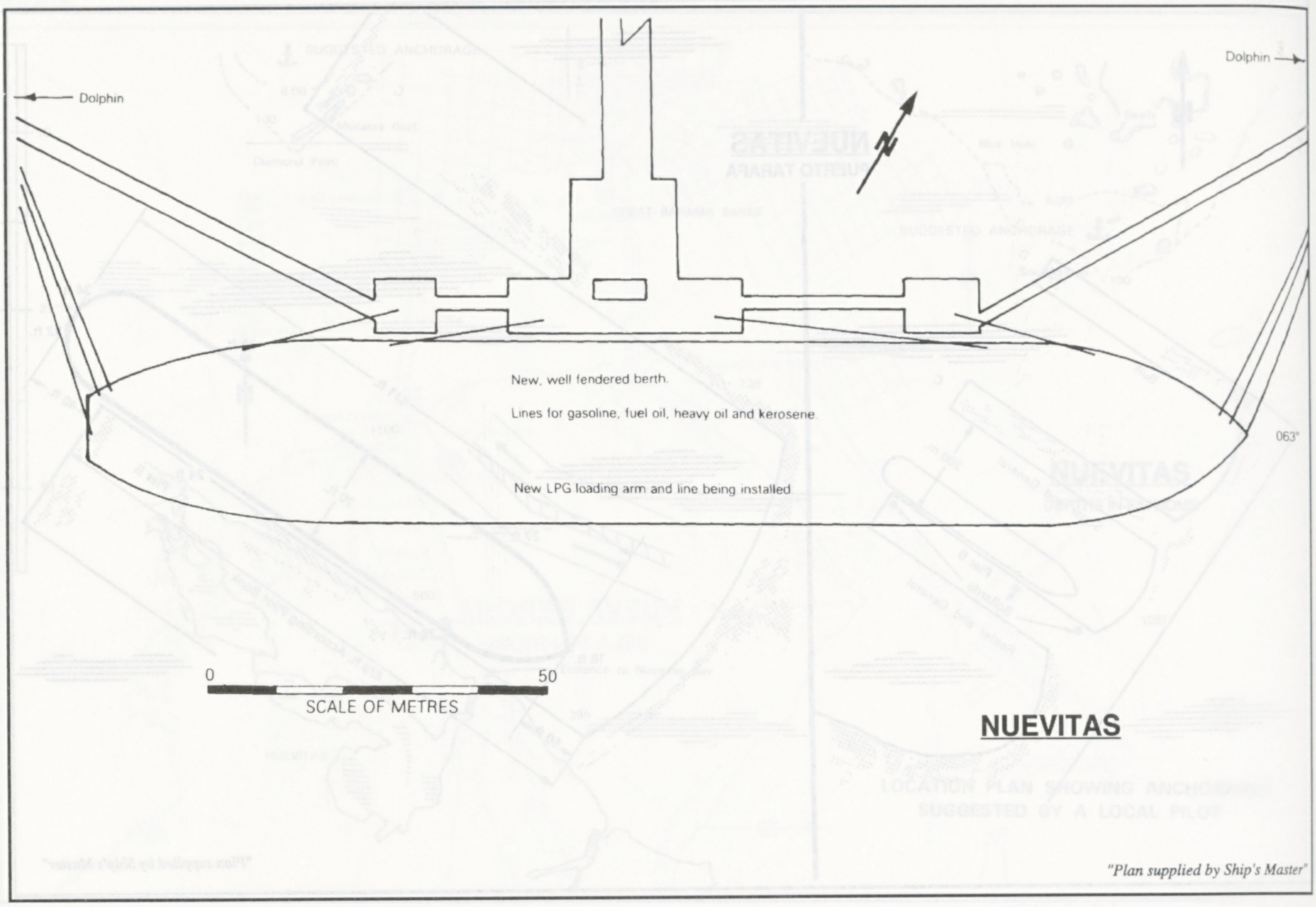


NUEVITAS

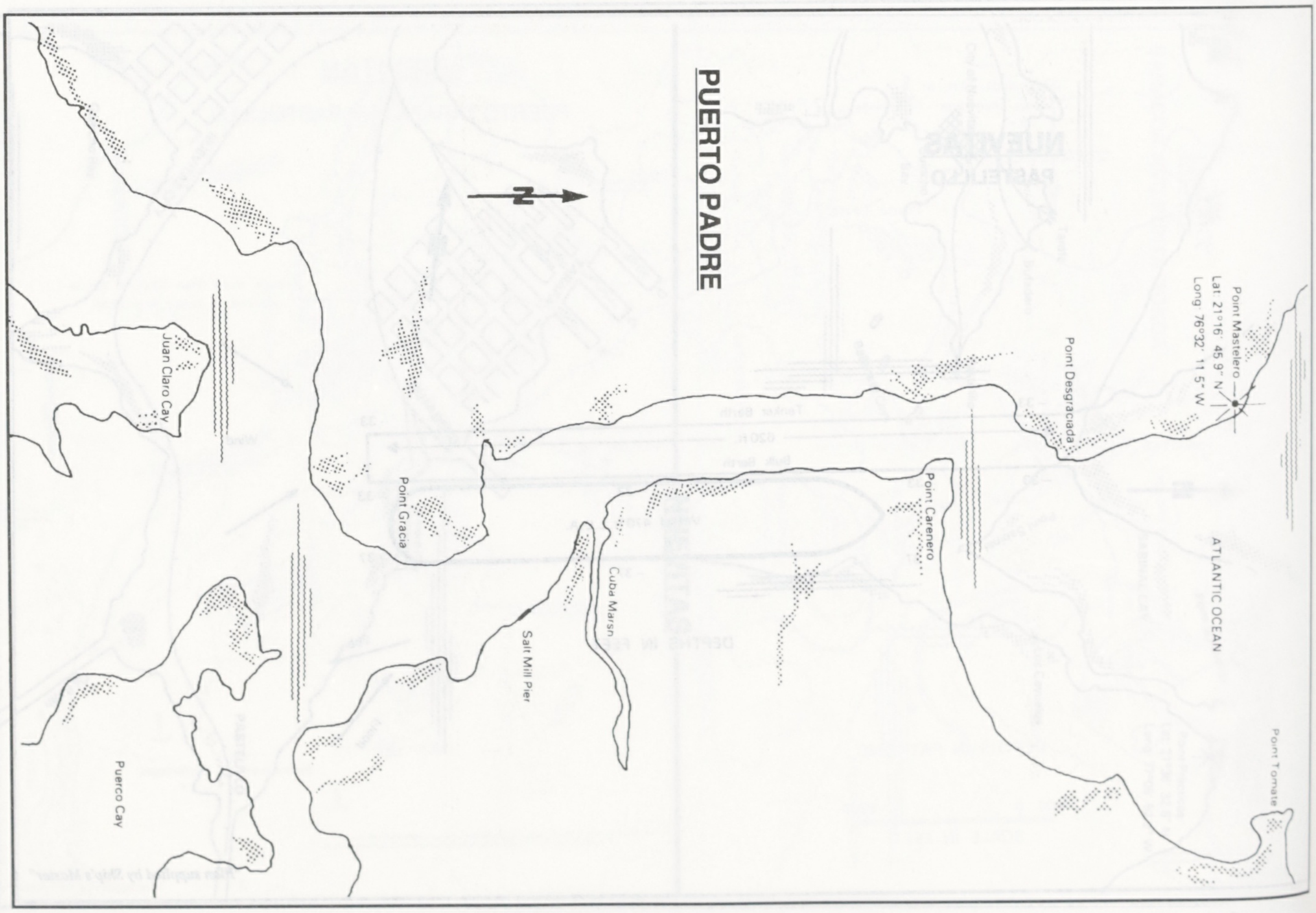
PASTELILLO

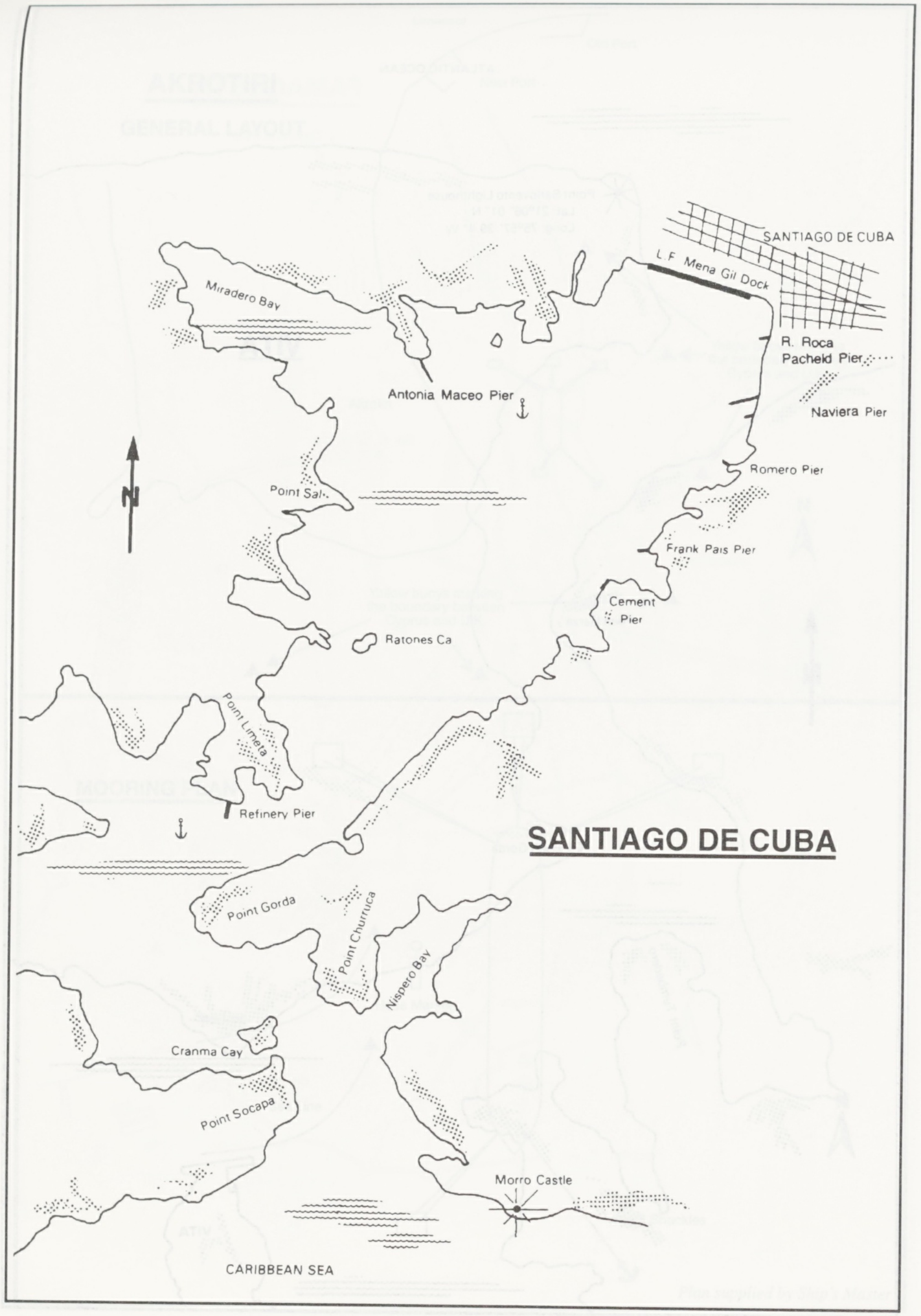
N
– 33
Tanker Berth
620 ft.
Bulk Berth
– 33
– 33
– 33
– 33
– 33
Vessel 470 ft. L.O.A.
– 37
– 37
– 37
Wind
DEPTHS IN FEET
Ebb
Flood

"Plan supplied by Ship's Master"


Dolphin
Dolphin
New, well fendered berth.
Lines for gasoline, fuel oil, heavy oil and kerosene
New LPG loading arm and line being installed
063°
0
50
SCALE OF METRES
NUEVITAS

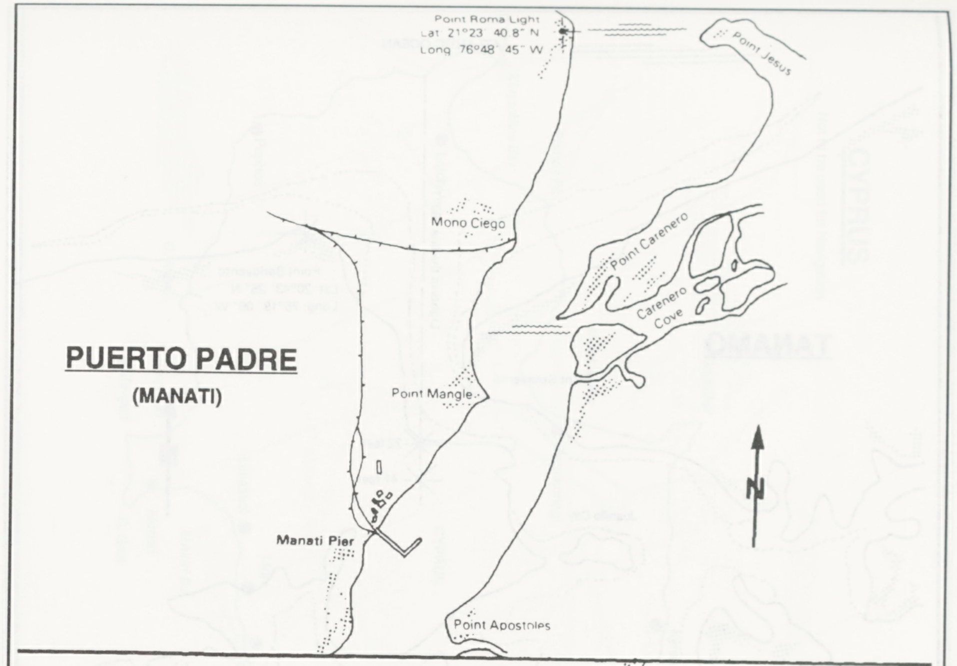
"Plan supplied by Ship's Master"


PUERTO PADRE
Juan Claro Cay
Point Gracia
Salt Mill Pier
Cuba Marsh
Point Carenero
Point Desgracada
Point Mastelero
Lat 21°16' 45.9" N
Long 76°32' 11.5" W
ATLANTIC OCEAN
Point Tomate
Puerco Cay



SANTIAGO DE CUBA

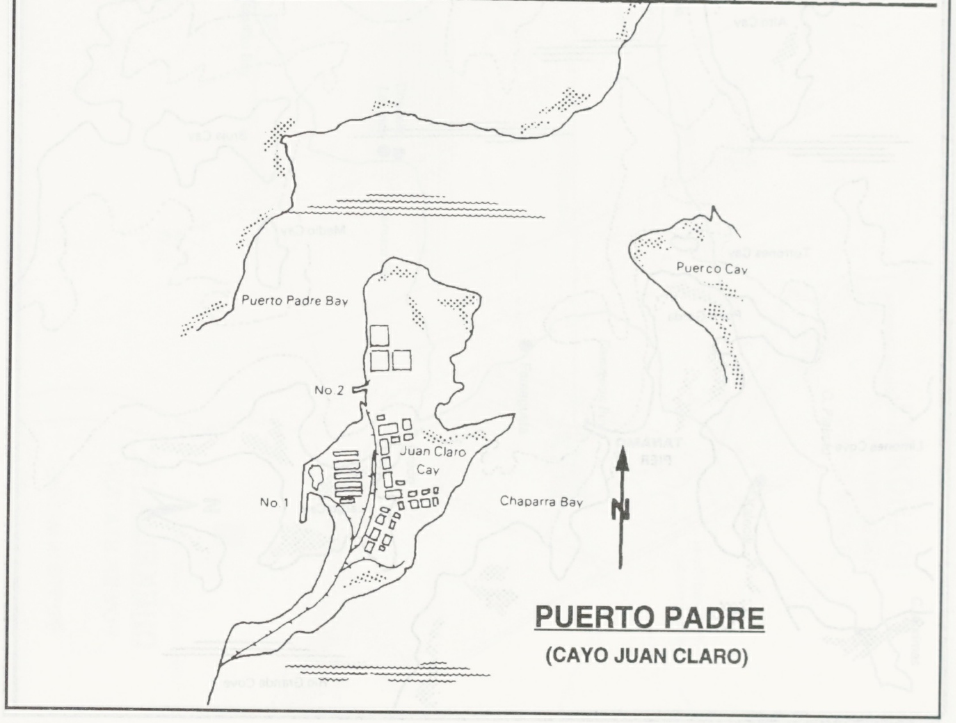
SANTIAGO DE CUBA
L.F. Mena Gil Dock
R. Roca
Pacheld Pier
Naviera Pier
Romero Pier
Frank Pais Pier
Cement
Pier
Miradero Bay
Antonia Maceo Pier
Point Sal
Ratones Ca
Point Limeta
Refinery Pier
Point Gorda
Point Churruca
Nispero Bay
Cranma Cay
Point Socapa
Morro Castle
CARIBBEAN SEA
N



PUERTO PADRE

(MANATI)

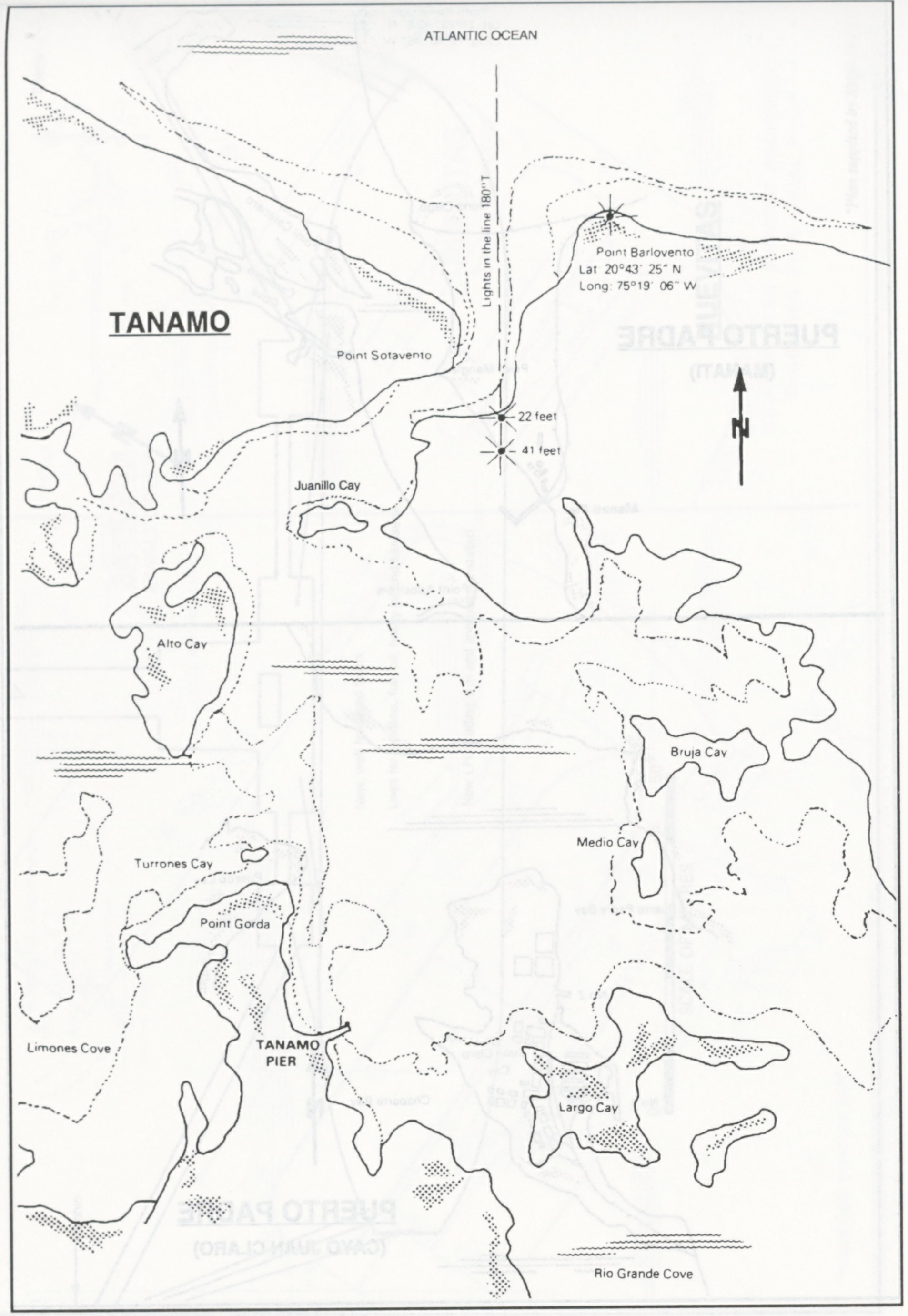
Point Roma Light
Lat 21°23' 40.8" N
Long 76°48' 45" W
Point Jesus
Mono Ciego
Point Carenero
Carenero
Cove
Point Mangle
Manati Pier
Point Apostoles
N

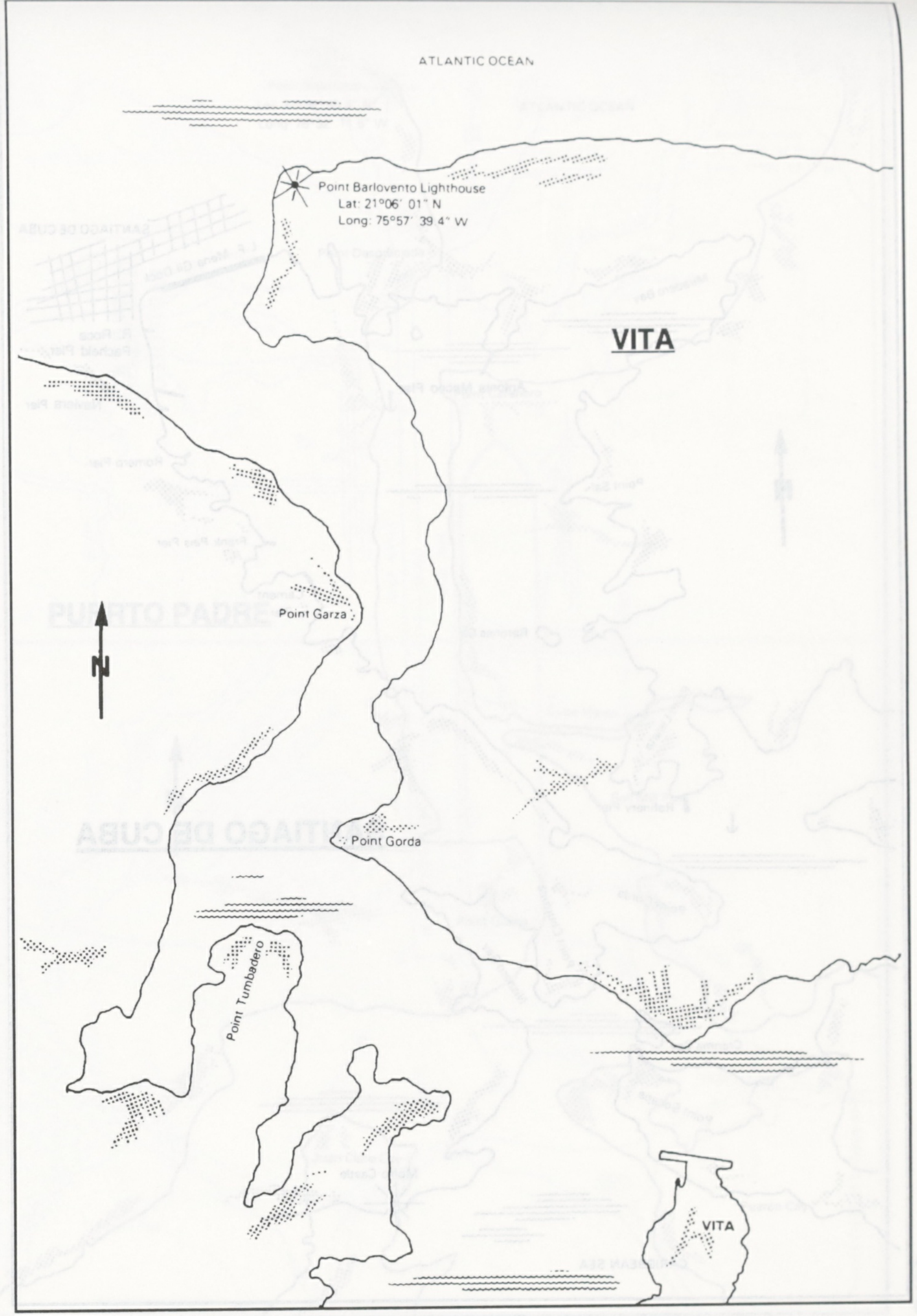


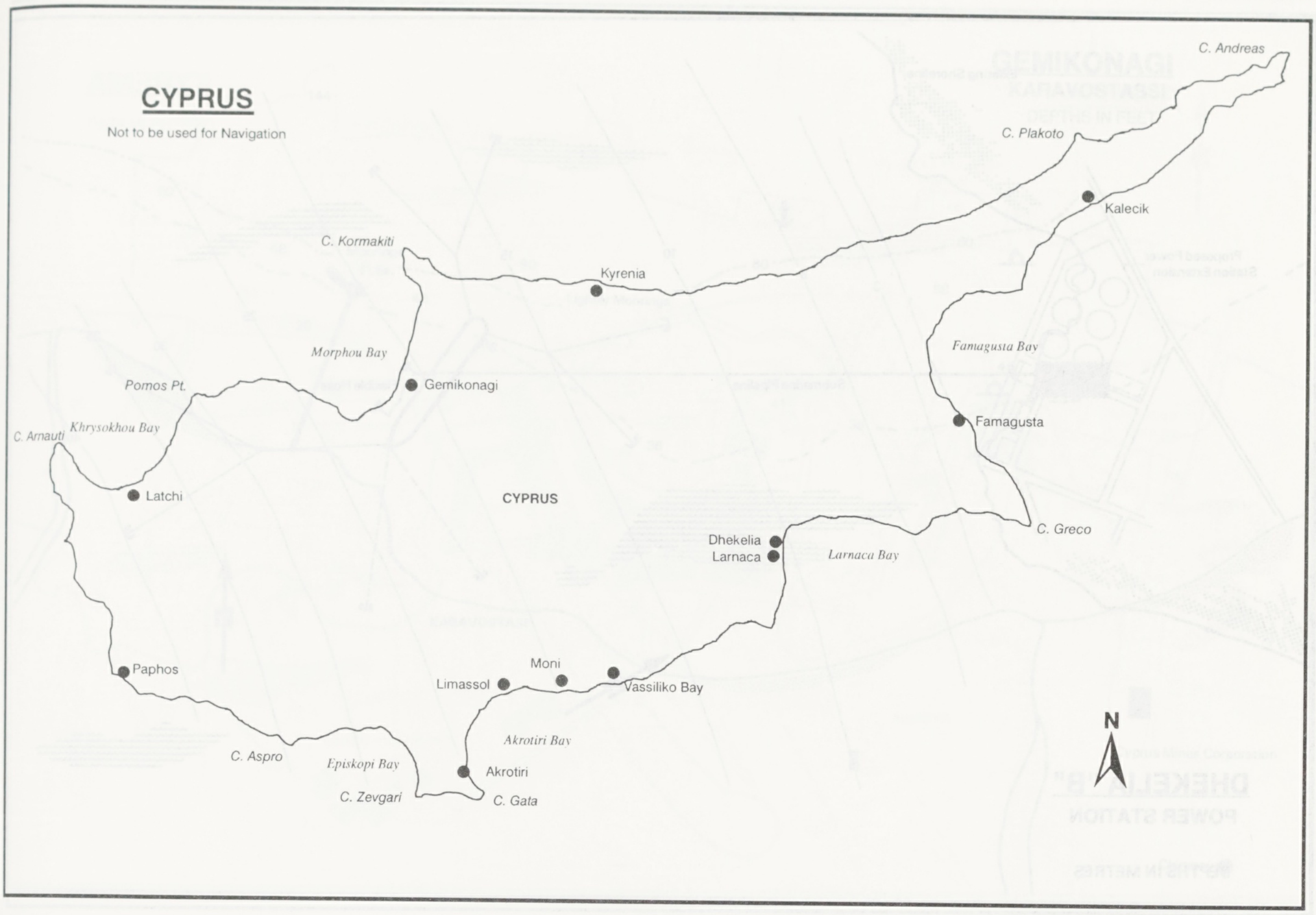
PUERTO PADRE

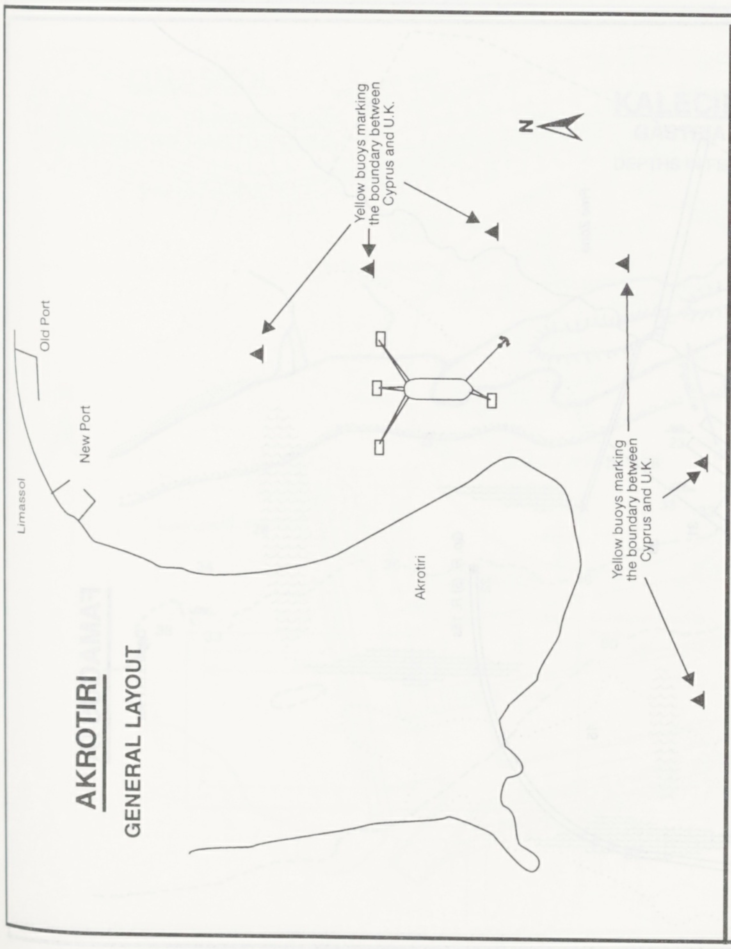
(CAYO JUAN CLARO)

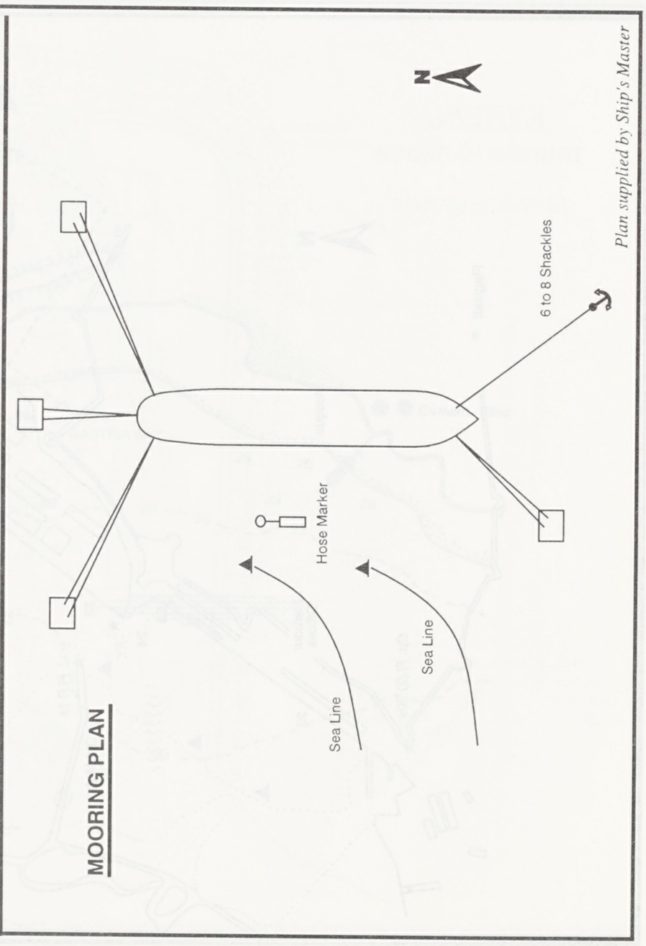
Puerco Cay
Puerto Padre Bay
No 2
Juan Claro
Cay
No 1
Chaparra Bay
N

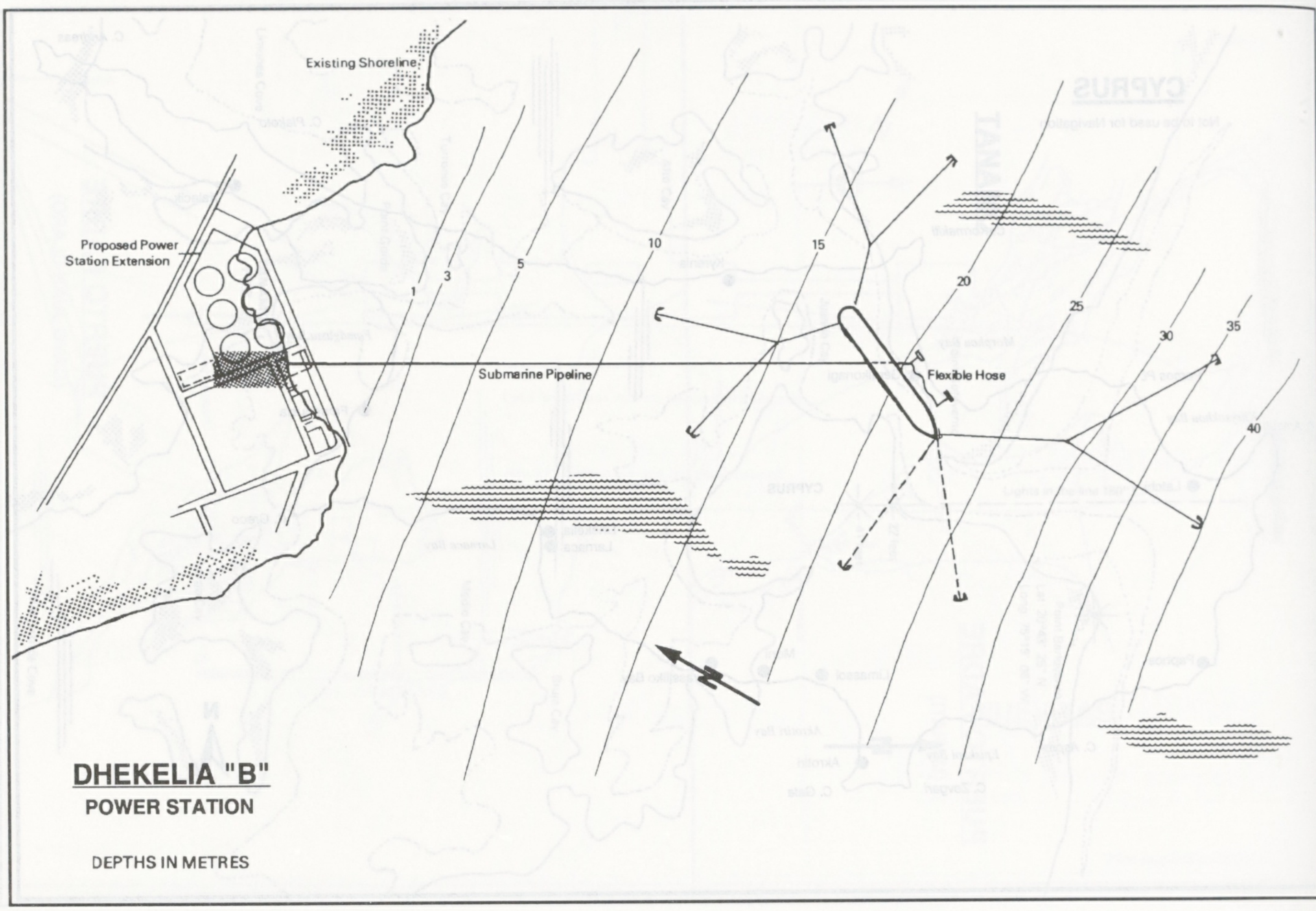

ATLANTIC OCEAN
TANAMO
Lights in the line 180°T
Point Barlovento
Lat 20°43' 25" N
Long: 75°19' 06" W
Point Sotavento
22 feet
41 feet
N
Juanillo Cay
Alto Cay
Bruja Cay
Medio Cay
Turrones Cay
Point Gorda
TANAMO
PIER
Limones Cove
Largo Cay
Rio Grande Cove


ATLANTIC OCEAN
Point Barlovento Lighthouse
Lat: 21°06' 01" N
Long: 75°57' 39.4" W
VITA
N
Point Garza
Point Gorda
Point Tumbadero
VITA


CYPRUS
Not to be used for Navigation
C. Andreas
C. Plakoto
Kalecik
C. Kormakiti
Kyrenia
Morphou Bay
Gemikonagi
Pomos Pt.
Famagusta Bay
Famagusta
C. Arnauti
Khrysokhou Bay
Latchi
CYPRUS
C. Greco
Dhekelia
Larnaca
Larnaca Bay
Paphos
Moni
Limassol
Vassiliko Bay
Akrotiri Bay
N
C. Aspro
Episkopi Bay
Akrotiri
C. Zevgari
C. Gata


AKROTIRI
GENERAL LAYOUT
N
Yellow buoys marking the boundary between Cyprus and U.K.
Old Port
New Port
Limassol
Akrotiri
Yellow buoys marking the boundary between Cyprus and U.K.

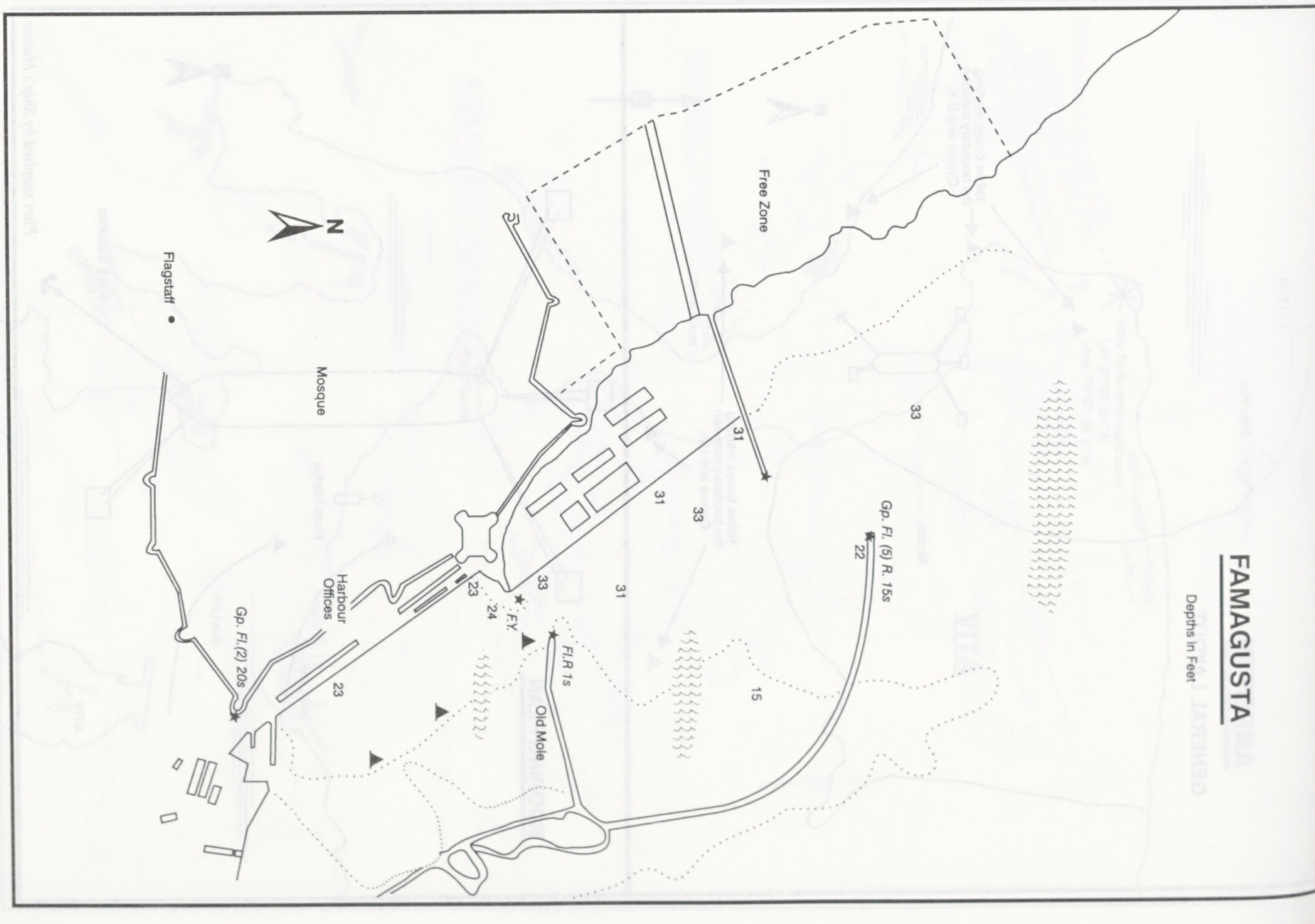

MOORING PLAN
N
Plan supplied by Ship's Master
6 to 8 Shackles
Hose Marker
Sea Line
Sea Line



DHEKELIA "B"
POWER STATION

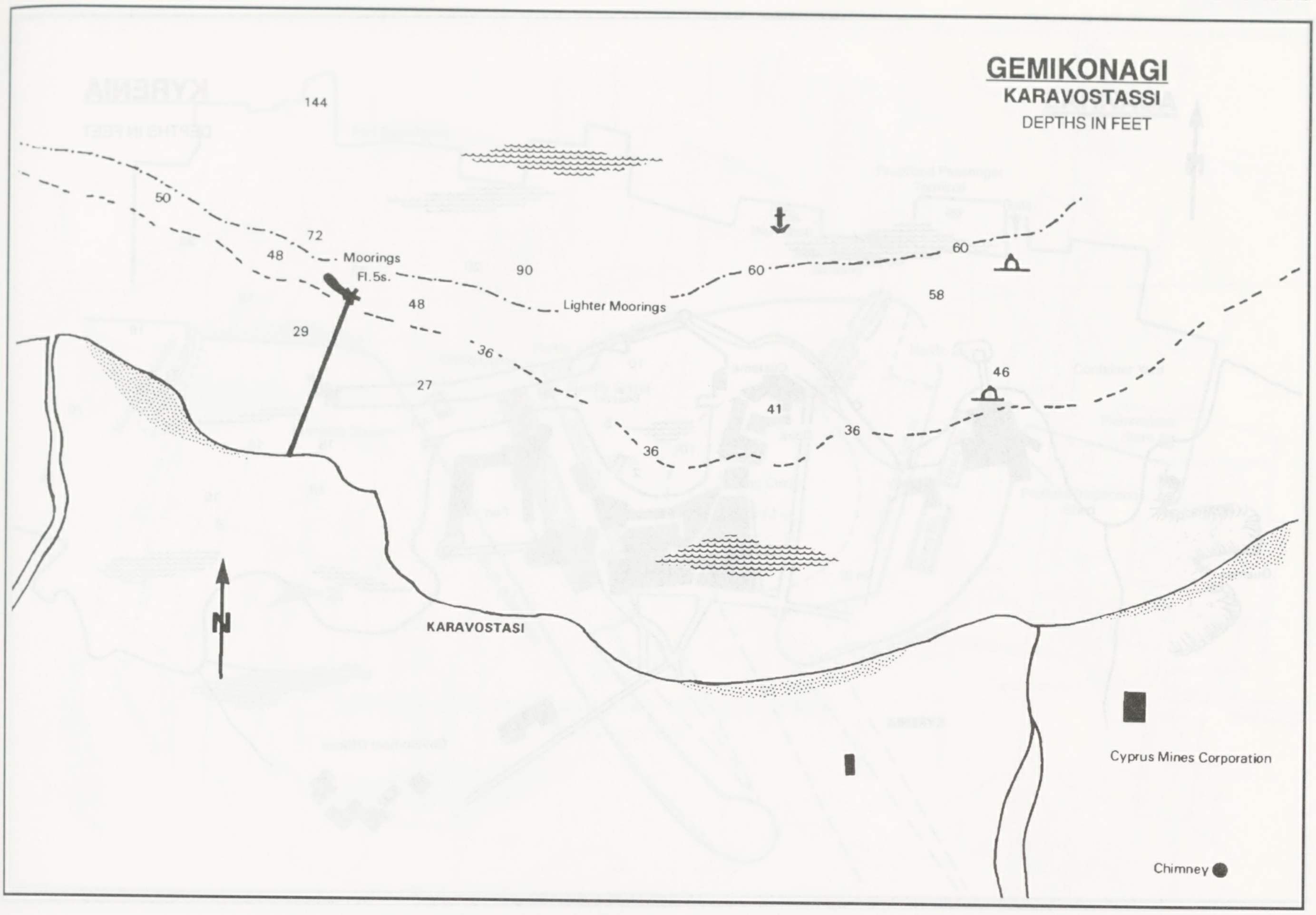
DEPTHS IN METRES

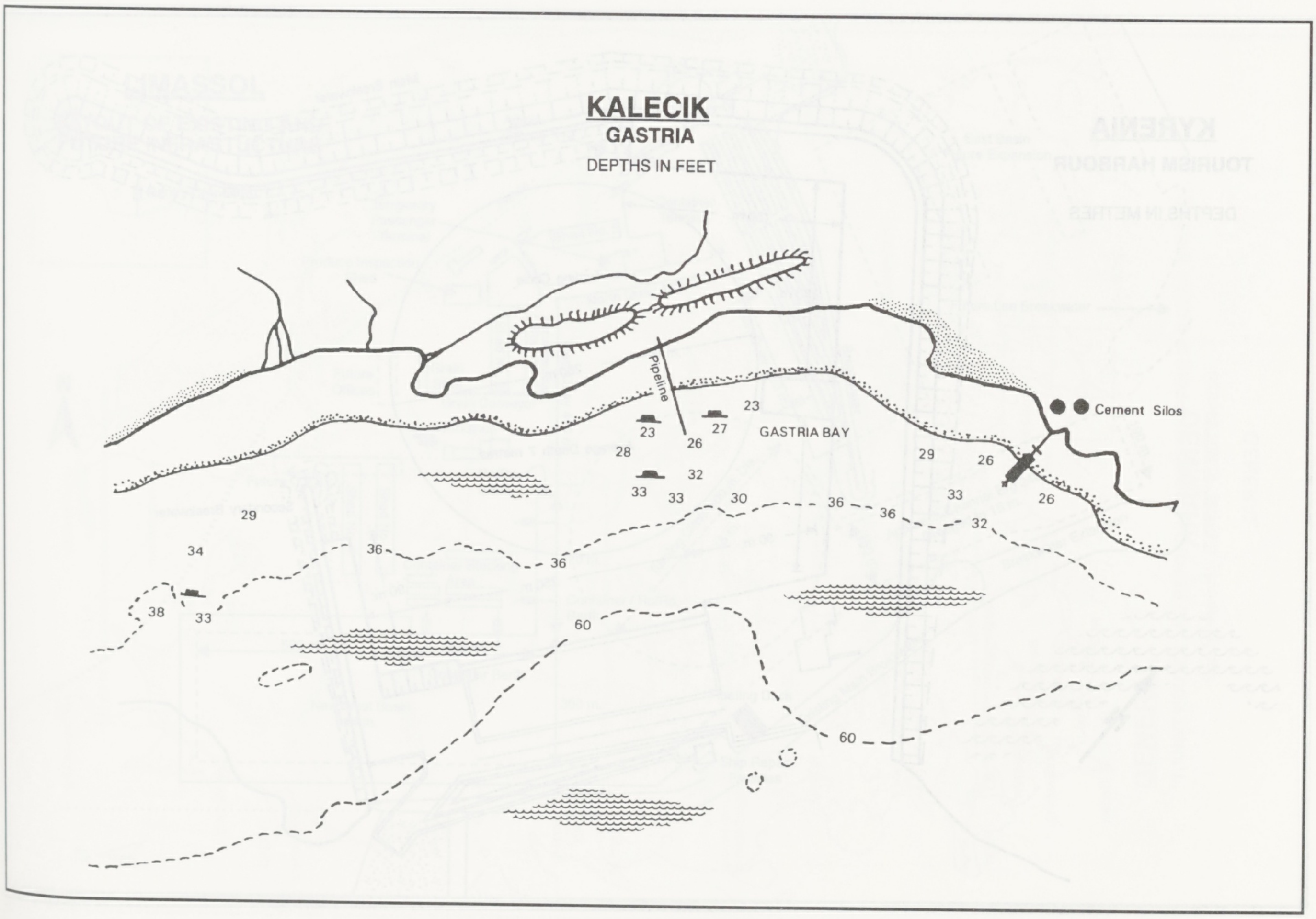
Existing Shoreline
Proposed Power Station Extension
Submarine Pipeline
Flexible Hose
1
3
5
10
15
20
25
30
35
40

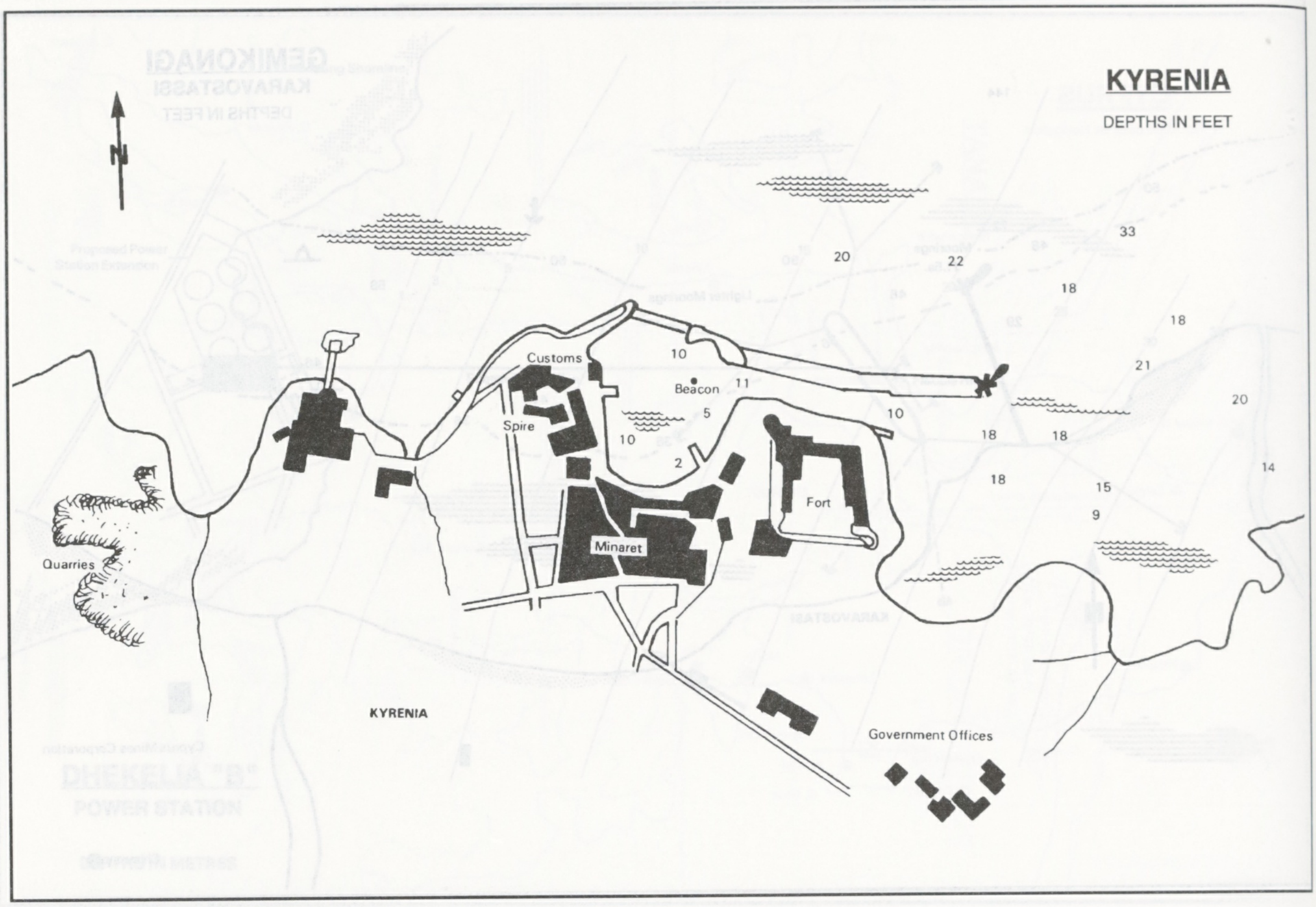


FAMAGUSTA
Depths in Feet

N
Flagstaff
Mosque
Harbour Offices
Free Zone
Gp. Fl.(2) 20s
F.Y.
Fl.R 1s
Old Mole
Gp. Fl. (5) R. 15s
33
31
31
33
31
33
23
24
23
22
15


GEMIKONAGI
KARAVOSTASSI
DEPTHS IN FEET
144
50
72
48
Moorings
Fl.5s.
90
48
29
36
27
Lighter Moorings
60
60
58
46
41
36
36
N
KARAVOSTASI
Cyprus Mines Corporation
Chimney

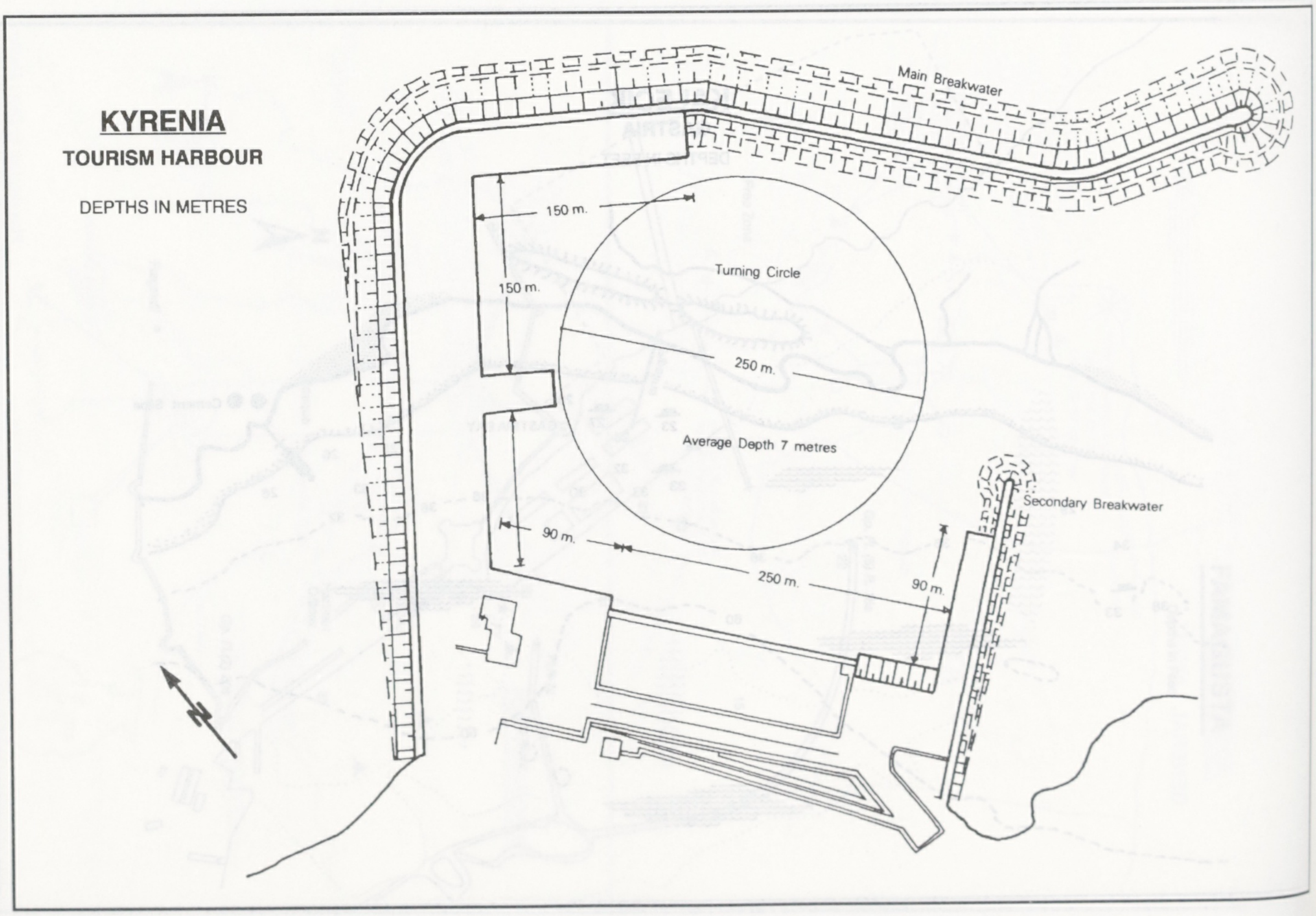

KALECIK
GASTRIA
DEPTHS IN FEET
Pipeline
Cement Silos
23
23
27
26
GASTRIA BAY
28
32
33
33
30
29
26
33
26
36
36
32
29
34
36
36
38
33
60
60



KYRENIA

DEPTHS IN FEET

N
20
22
33
18
18
21
20
14
10
11
Beacon
5
10
2
10
18
18
18
15
9
Customs
Spire
Minaret
Fort
Quarries
KYRENIA
Government Offices

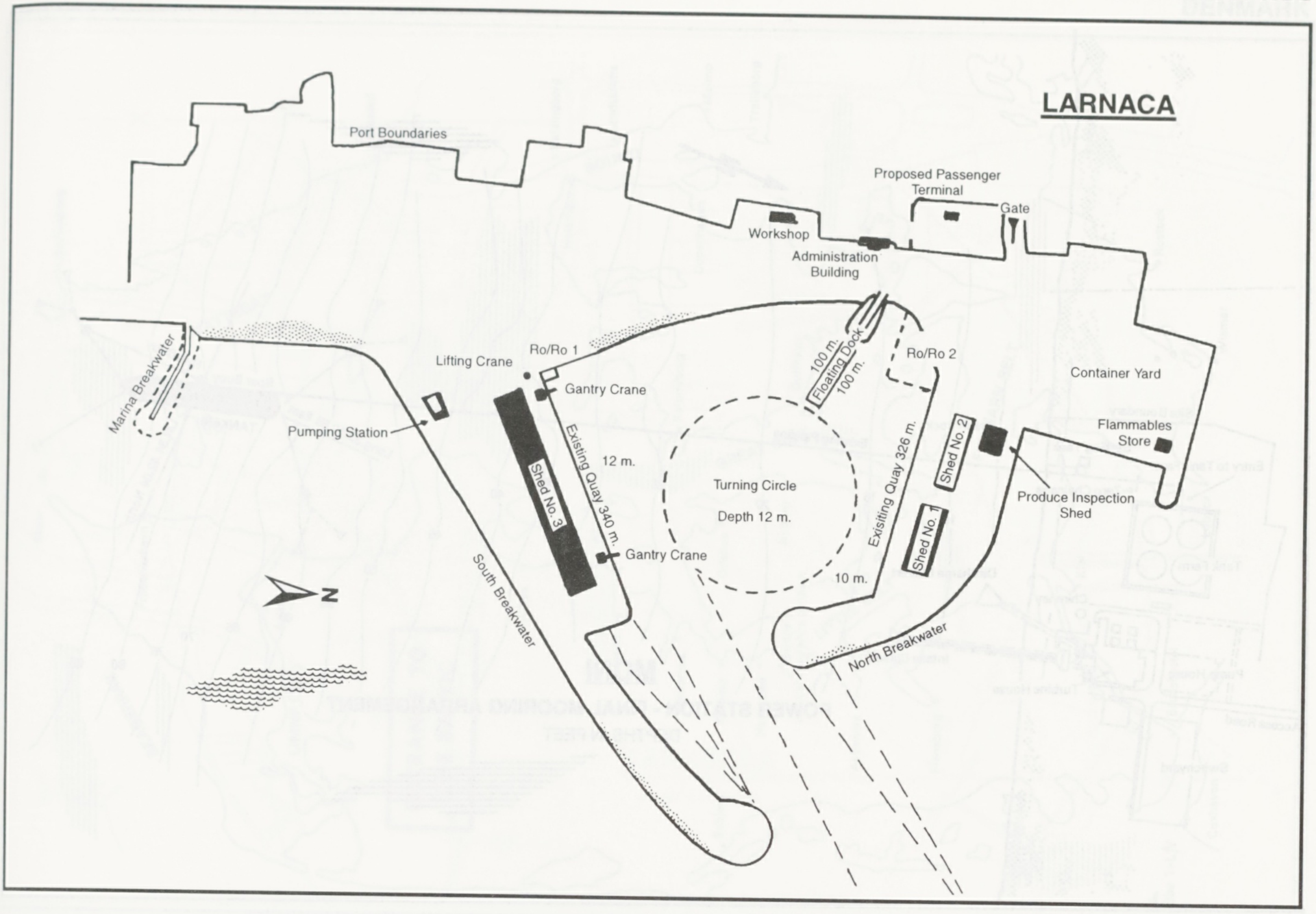


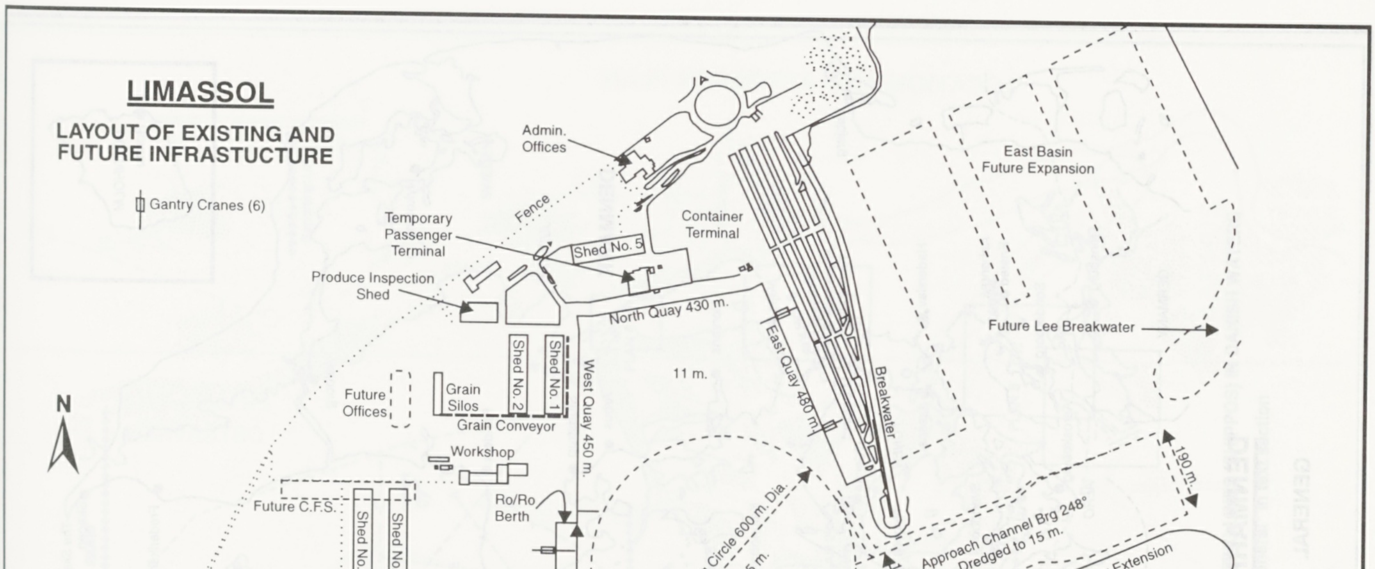
KYRENIA

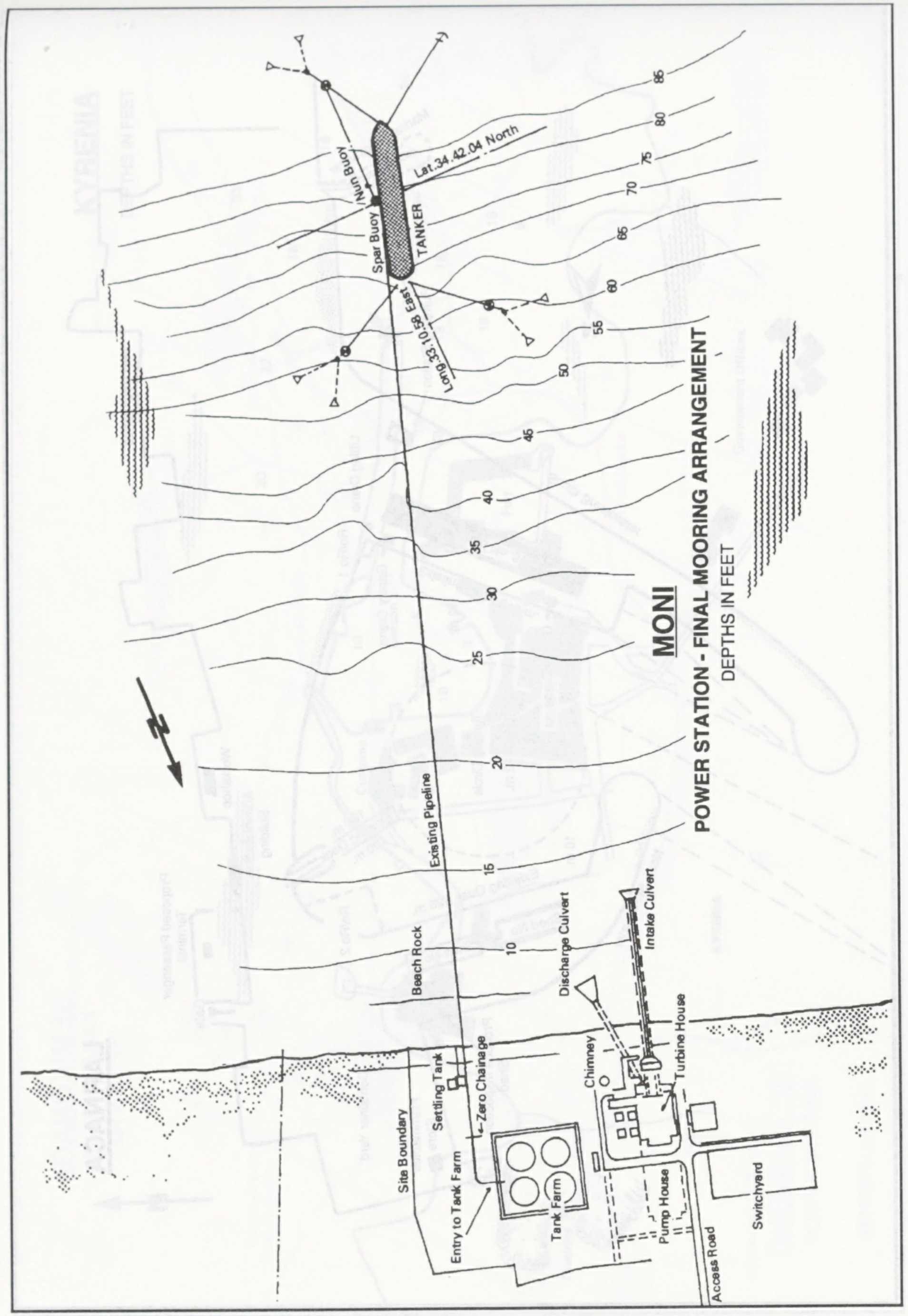
TOURISM HARBOUR

DEPTHS IN METRES

Main Breakwater
150 m.
150 m.
Turning Circle
250 m.
Average Depth 7 metres
90 m.
250 m.
90 m.
Secondary Breakwater
N


LARNACA
Port Boundaries
Proposed Passenger Terminal
Gate
Workshop
Administration Building
Marina Breakwater
Lifting Crane
Ro/Ro 1
Gantry Crane
Pumping Station
Floating Dock
100 m.
100 m.
Ro/Ro 2
Container Yard
Flammables Store
Produce Inspection Shed
Existing Quay 340 m.
Shed No. 3
12 m.
Turning Circle
Depth 12 m.
Exisiting Quay 326 m.
Shed No. 2
Shed No. 1
Gantry Crane
10 m.
South Breakwater
North Breakwater
N


LIMASSOL
LAYOUT OF EXISTING AND FUTURE INFRASTUCTURE
Gantry Cranes (6)
Admin. Offices
Fence
Temporary Passenger Terminal
Container Terminal
Shed No. 5
Produce Inspection Shed
North Quay 430 m.
East Basin Future Expansion
Future Lee Breakwater
Shed No. 2
Shed No. 1
Future Offices
Grain Silos
Grain Conveyor
West Quay 450 m.
11 m.
East Quay 480 m.
Breakwater
N
Workshop
Future C.F.S.
Shed No. 4
Shed No. 3
Ro/Ro Berth
Turning Circle 600 m. Dia.
15 m.
Approach Channel Brg 248° Dredged to 15 m.
190 m.
150 m.
Breakwater Extension
320 m.
Container Stacking Area
Container / Ro/Ro Berth
500 m.
300 m.
Container Berth
New West Basin
14 m.
300 m.
Floating Dock
Existing Main Breakwater
Ship Repair Facilities

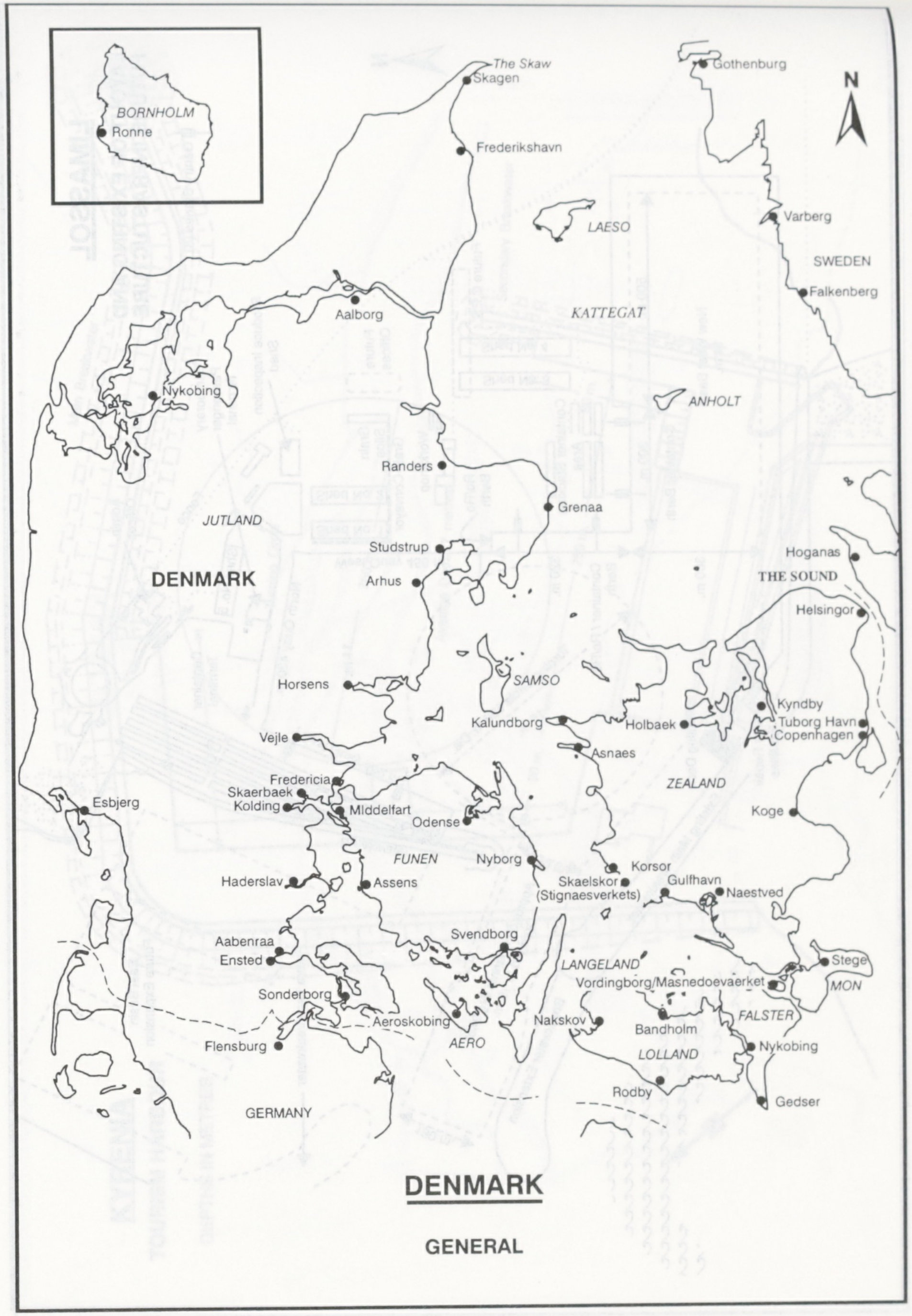


N
TANKER
Lat.34.42.04 North
Long.33.10.58 East
Nun Buoy
Spar Buoy
85
80
75
70
65
60
55
50
45
40
35
30
25
20
15
10
Existing Pipeline
Beach Rock
Discharge Culvert
Intake Culvert
Turbine House
Chimney
Settling Tank
Zero Chainage
Site Boundary
Entry to Tank Farm
Tank Farm
Pump House
Access Road
Switchyard

MONI

POWER STATION - FINAL MOORING ARRANGEMENT

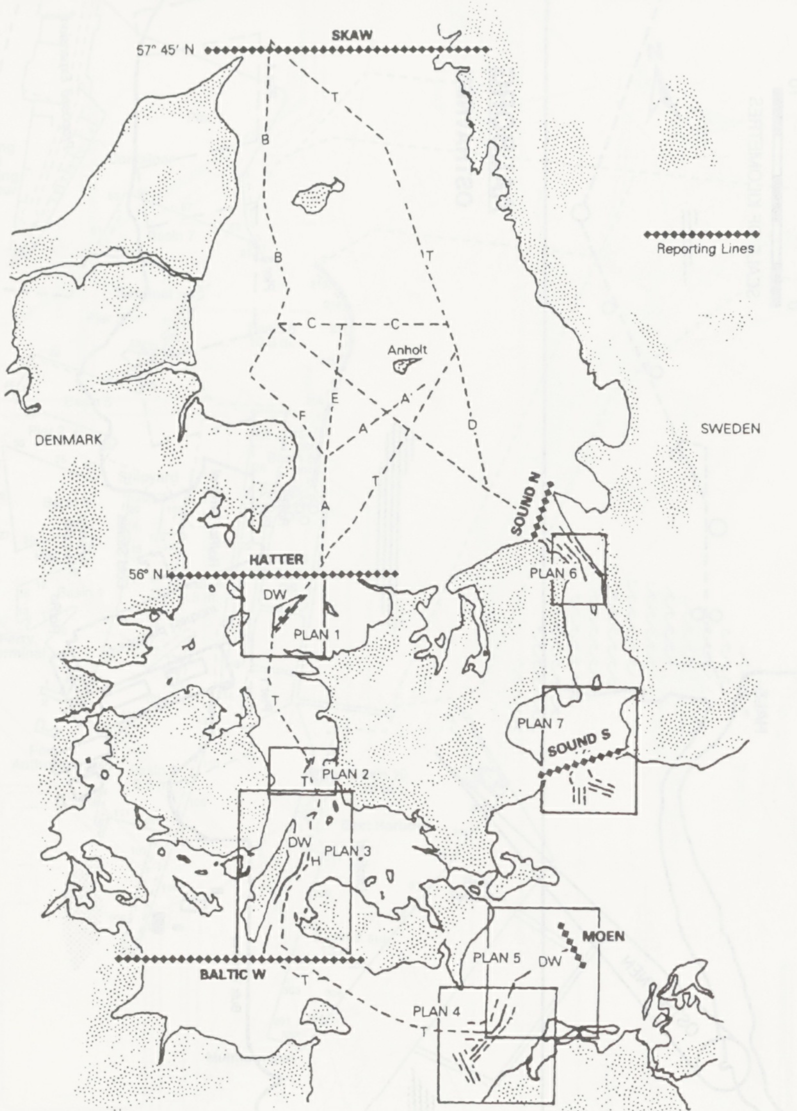
DEPTHS IN FEET



BORNHOLM
Ronne
N
The Skaw
Skagen
Gothenburg
Frederikshavn
LAESO
Varberg
SWEDEN
Falkenberg
Aalborg
KATTEGAT
Nykobing
ANHOLT
Randers
Grenaa
JUTLAND
Studstrup
Arhus
Hoganas
THE SOUND
DENMARK
Helsingor
SAMSO
Horsens
Kyndby
Tuborg Havn
Copenhagen
Kalundborg
Holbaek
Asnaes
Vejle
ZEALAND
Fredericia
Skaerbaek
Kolding
Middelfart
Odense
Esbjerg
Koge
FUNEN
Nyborg
Korsor
Haderslav
Assens
Skaelskor
(Stignaesverkets)
Gulfhavn
Naestved
Aabenraa
Ensted
Svendborg
LANGELAND
Stege
Vordingborg/Masnedoevaerket
MON
Sonderborg
Aeroskobing
Nakskov
Bandholm
FALSTER
Flensburg
AERO
LOLLAND
Nykobing
Rodby
Gedser
GERMANY

DENMARK

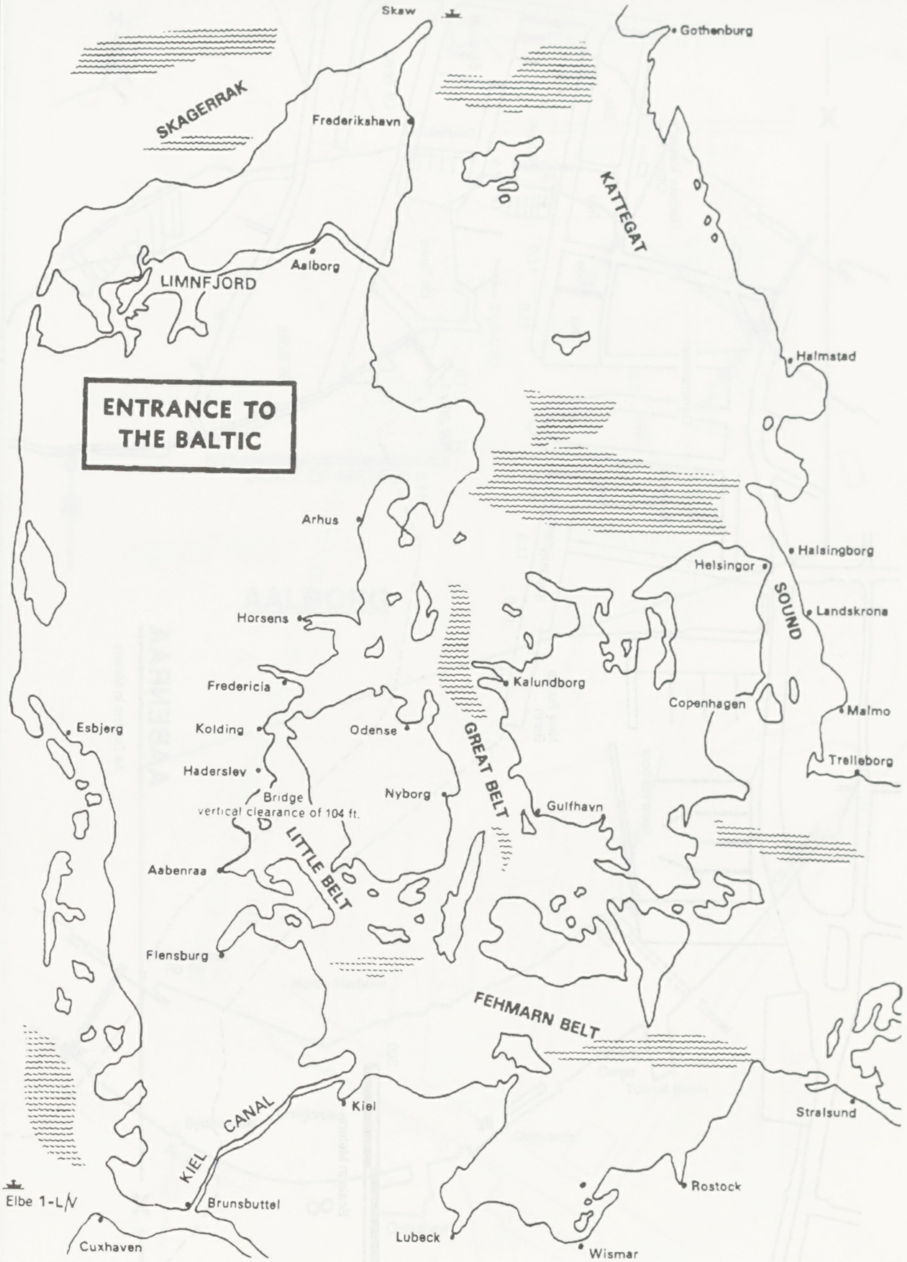
GENERAL

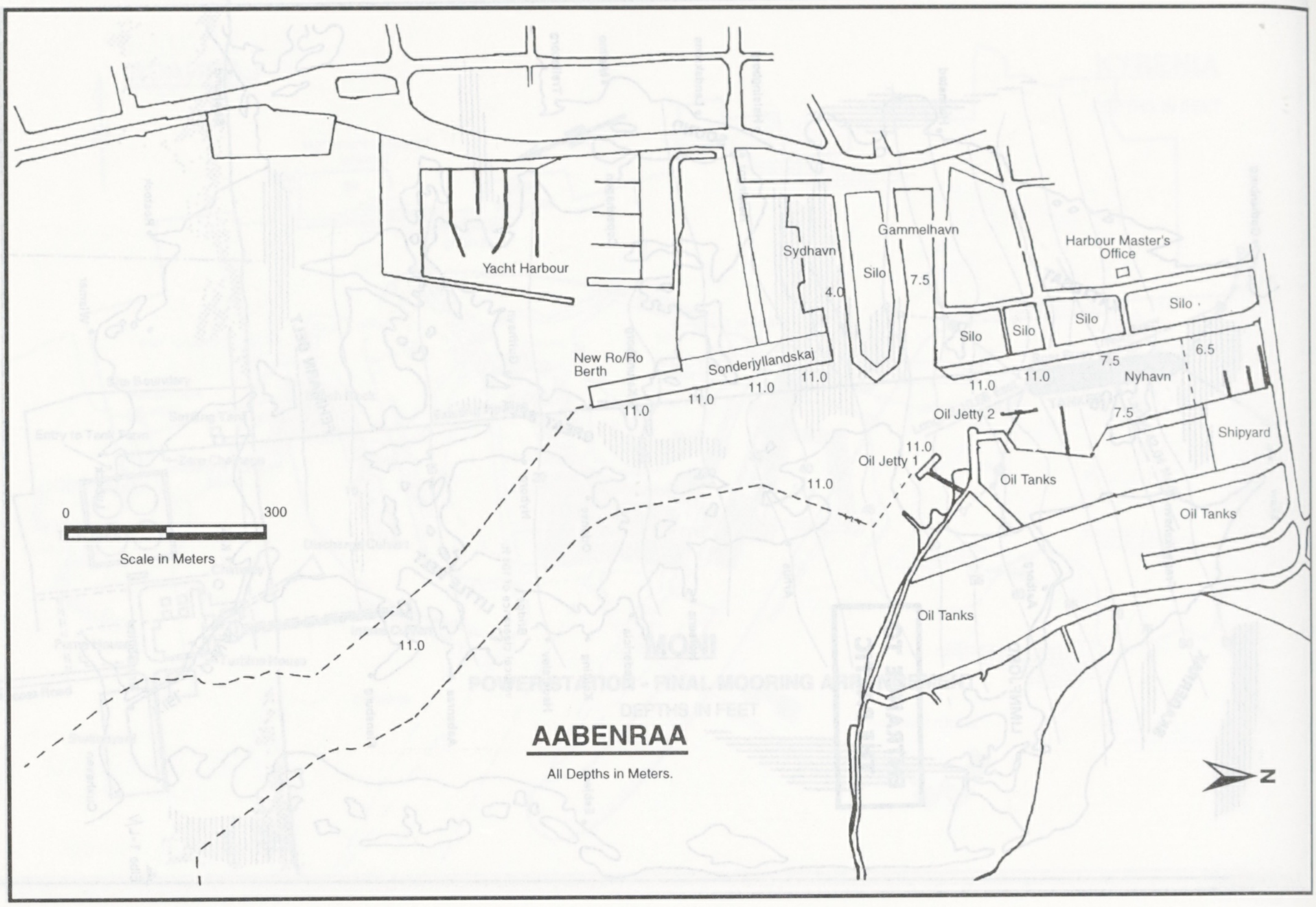

SKAW
57° 45' N
T
B
B
T
Reporting Lines
C
C
Anholt
E
A
F
A
D
T
A
DENMARK
SWEDEN
SOUND N
HATTER
56° N
PLAN 6
DW
PLAN 1
T
PLAN 7
SOUND S
PLAN 2
T
DW
PLAN 3
H
MOEN
PLAN 5
DW
BALTIC W
T
PLAN 4
T

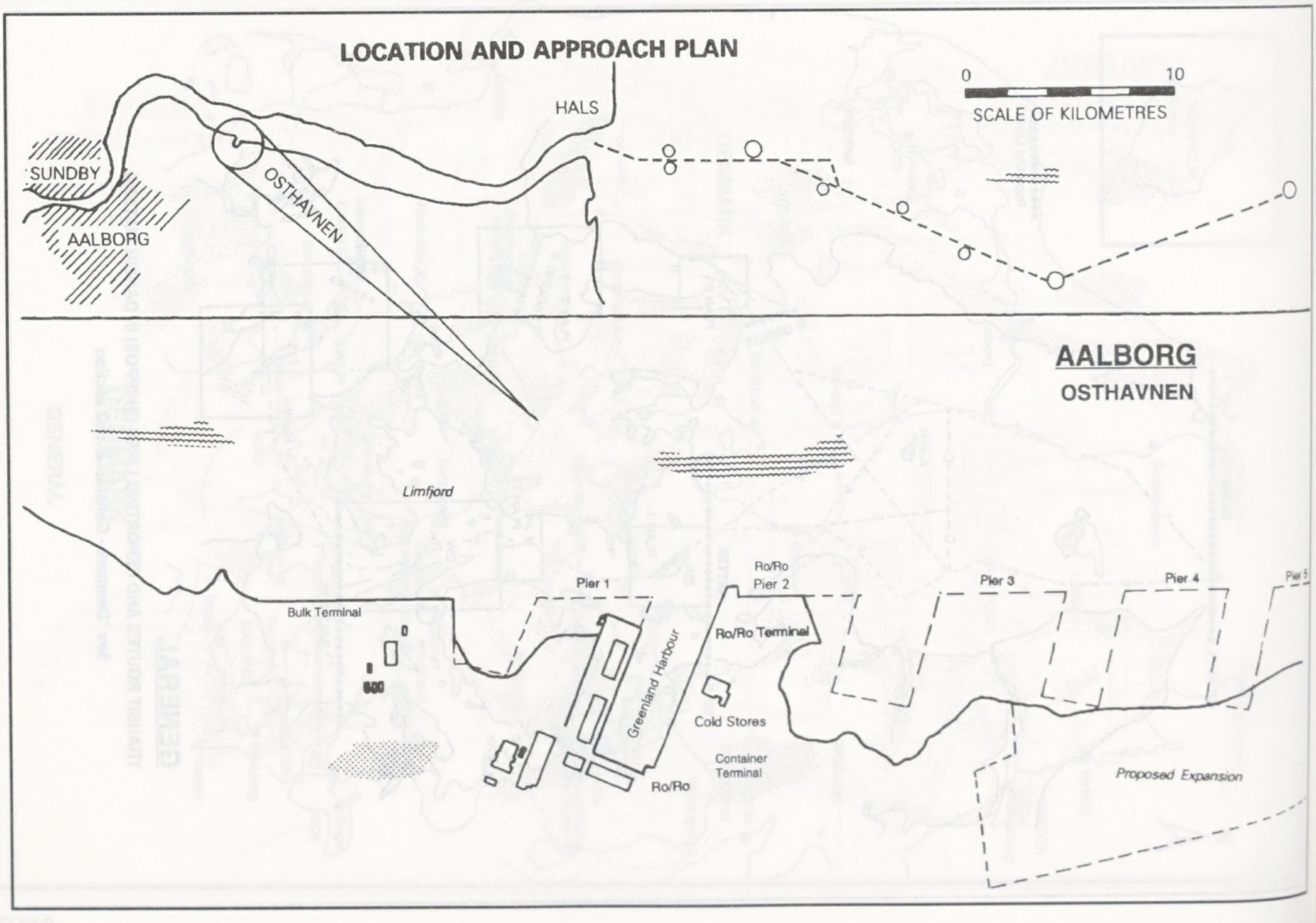
GENERAL

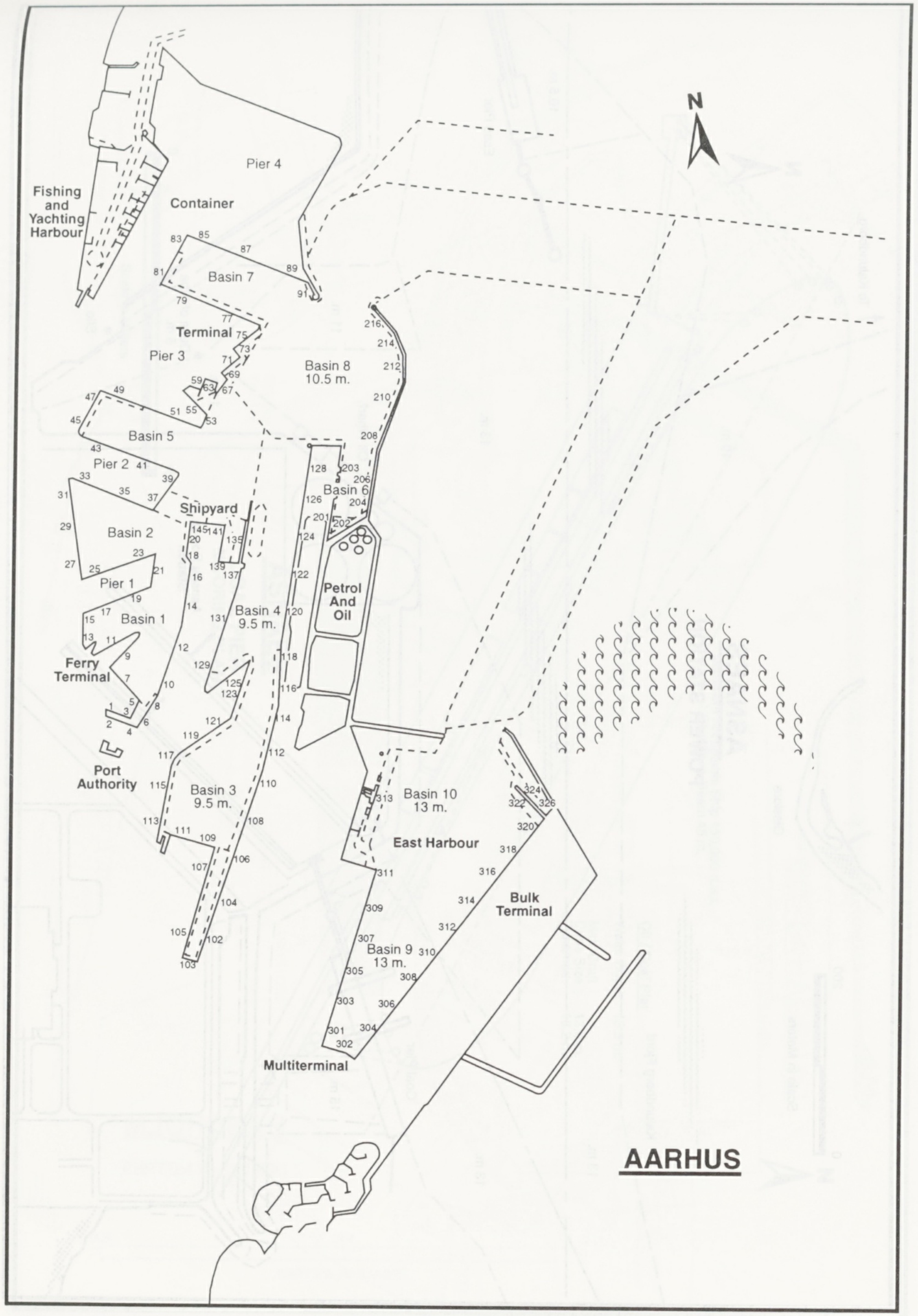
TRANSIT ROUTES AND REPORTING LINES (SHIPPOS) IN DANISH WATERS

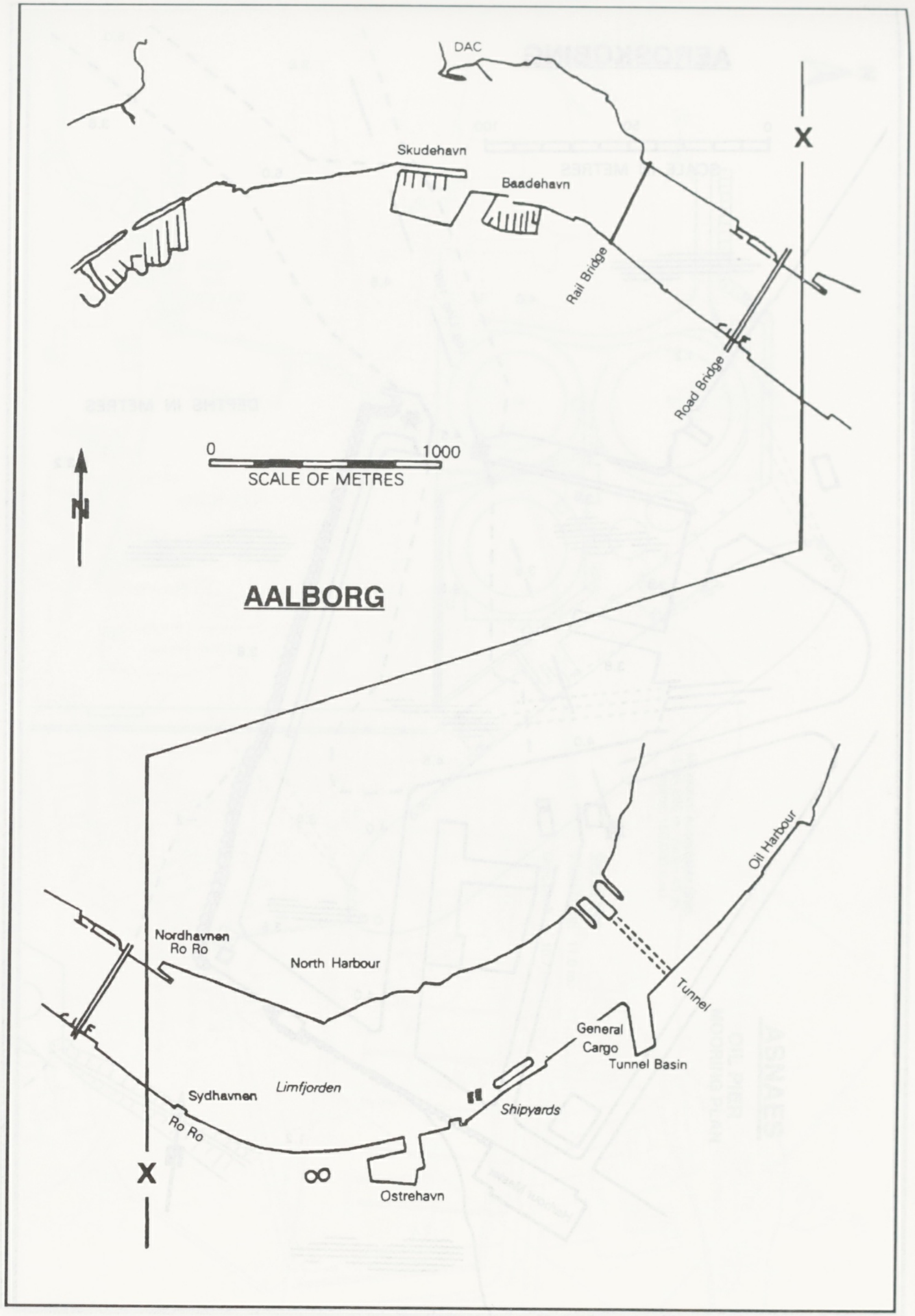
See "Denmark - General" in text section

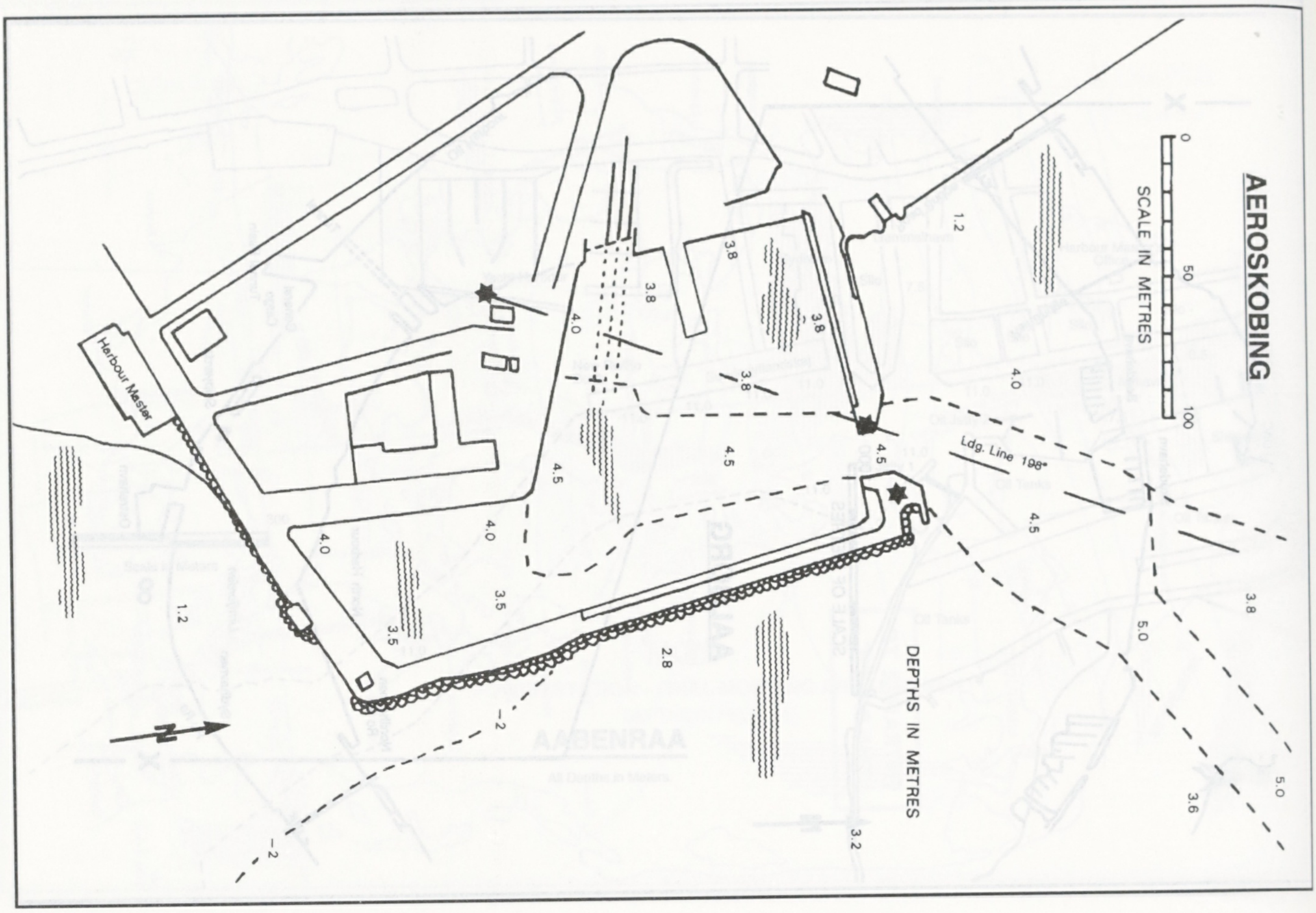

Skaw
Gothenburg
SKAGERRAK
Frederikshavn
KATTEGAT
LIMNFJORD
Aalborg
ENTRANCE TO THE BALTIC
Halmstad
Arhus
Halsingborg
Helsingor
Horsens
SOUND
Landskrona
Kalundborg
Fredericia
Copenhagen
Malmo
Esbjerg
Kolding
Odense
GREAT BELT
Trelleborg
Haderslev
Nyborg
Bridge
vertical clearance of 104 ft.
Gulfhavn
LITTLE BELT
Aabenraa
Flensburg
FEHMARN BELT
Kiel
Stralsund
CANAL
KIEL
Rostock
Elbe 1-L/V
Brunsbuttel
Lubeck
Wismar
Cuxhaven

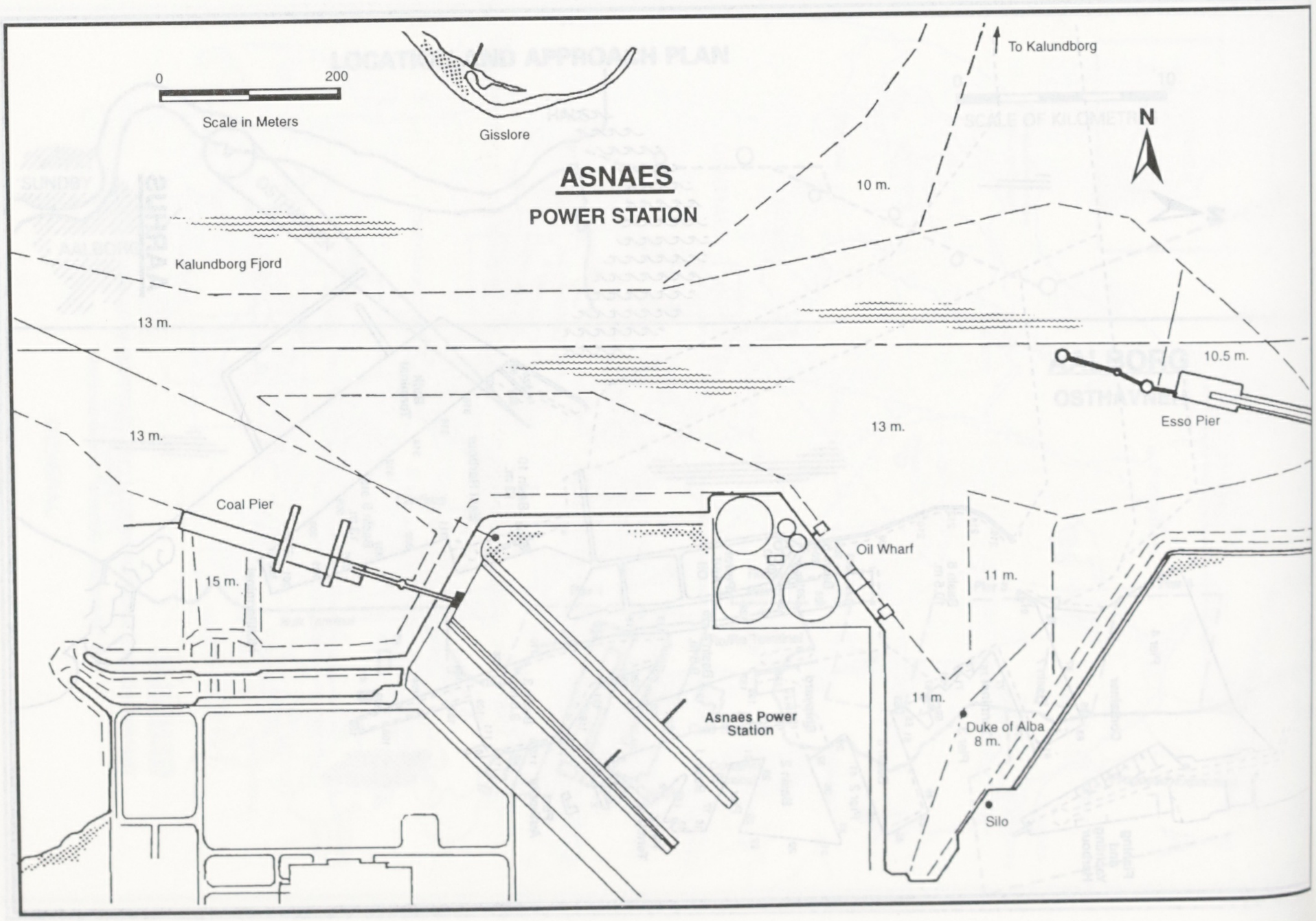

Yacht Harbour
Sydhavn
4.0
Gammelhavn
Silo
7.5
Harbour Master's Office
Silo
Silo
Silo
Silo
New Ro/Ro Berth
Sonderjyllandskaj
11.0
11.0
11.0
11.0
11.0
11.0
7.5
6.5
Nyhavn
Oil Jetty 2
7.5
Shipyard
Oil Jetty 1
11.0
11.0
Oil Tanks
Oil Tanks
0
300
Scale in Meters
Oil Tanks
11.0
AABENRAA
All Depths in Meters.
N

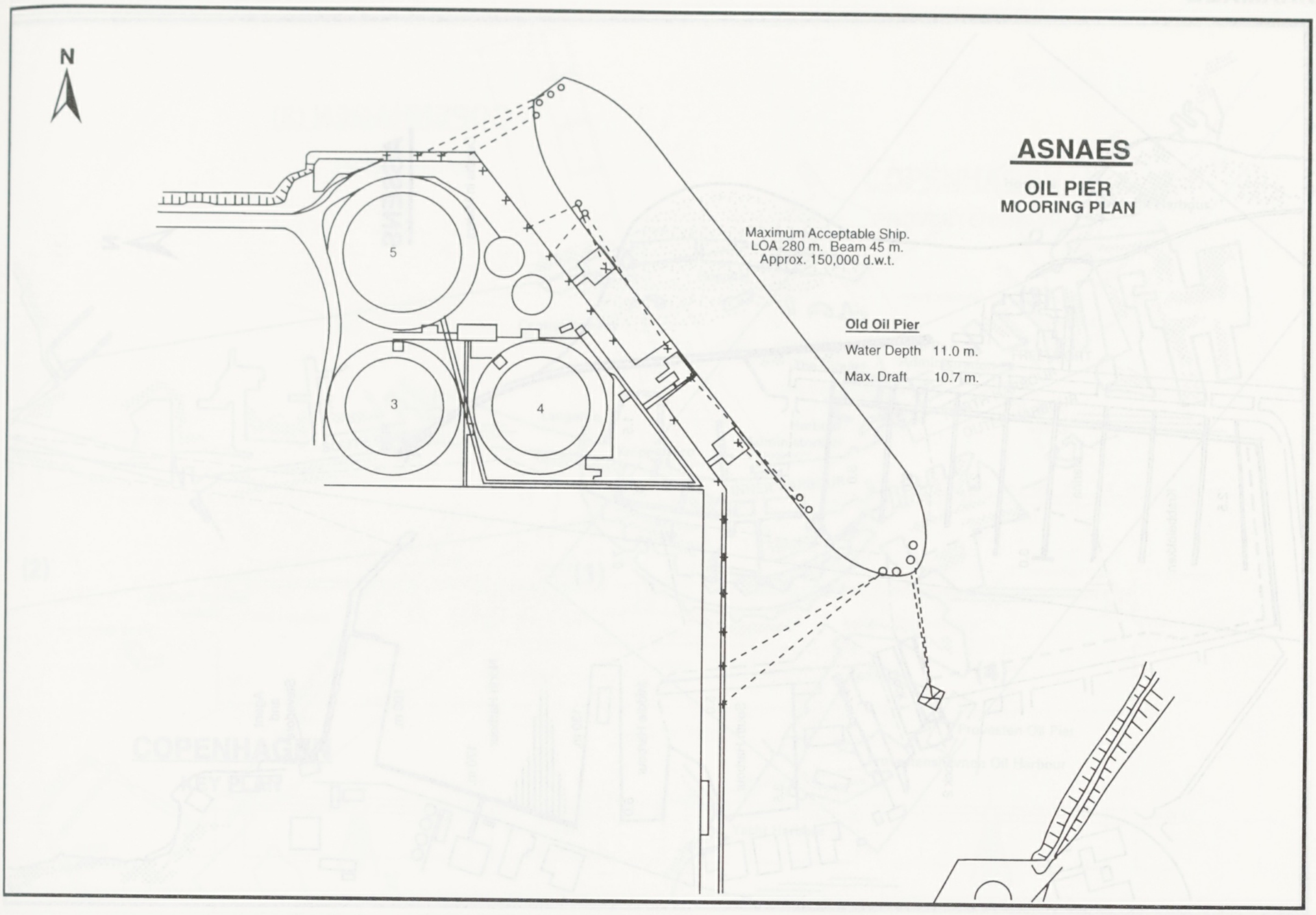

LOCATION AND APPROACH PLAN
HALS
0
10
SCALE OF KILOMETRES
SUNDBY
AALBORG
OSTHAVNEN
AALBORG
OSTHAVNEN
Limfjord
Ro/Ro
Pier 2
Pier 1
Pier 3
Pier 4
Pier 5
Bulk Terminal
Ro/Ro Terminal
Greenland Harbour
Cold Stores
Container Terminal
Ro/Ro
Proposed Expansion

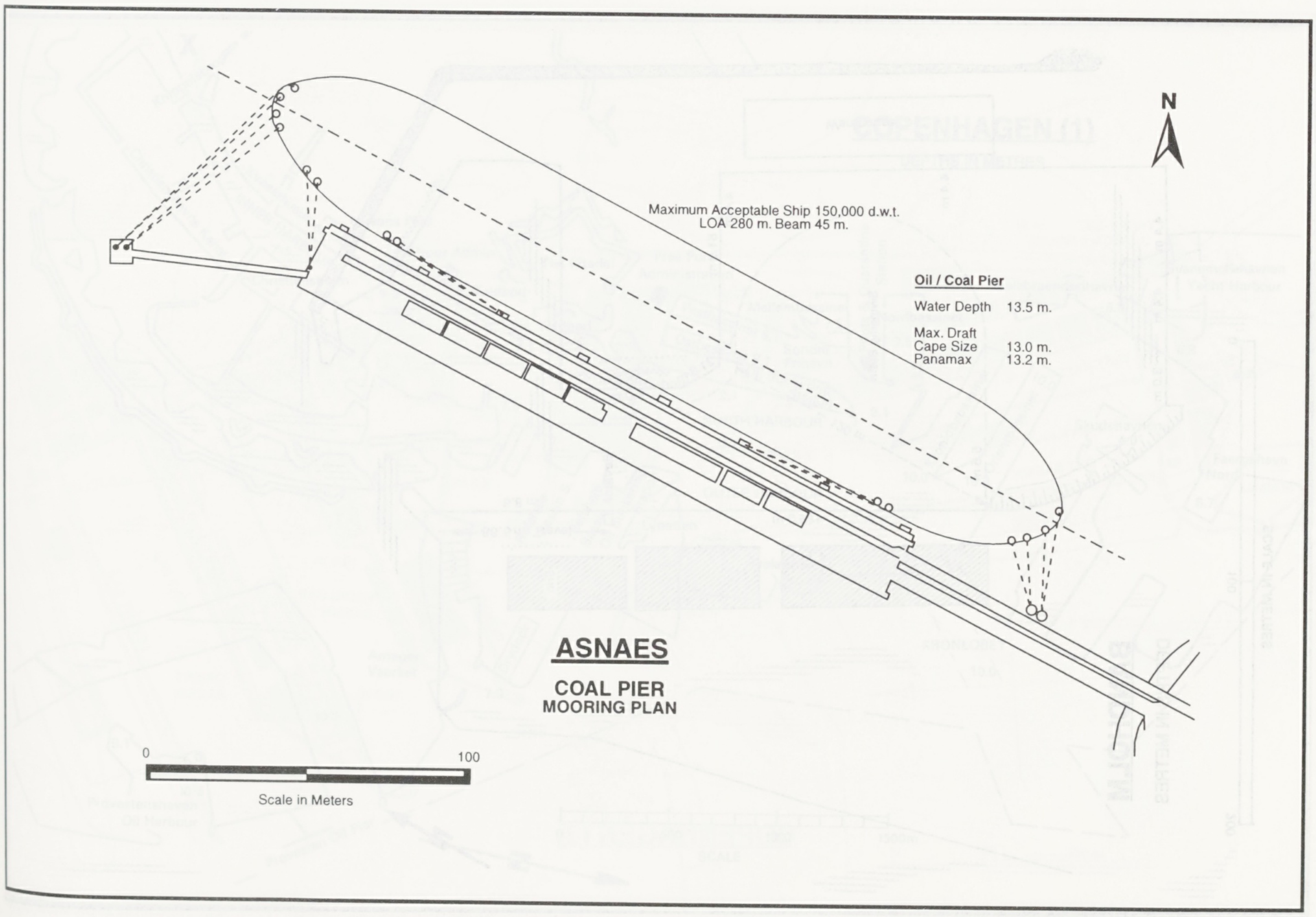

N
Fishing and Yachting Harbour
Container
Pier 4
Basin 7
Terminal
Pier 3
Basin 8 10.5 m.
Basin 5
Pier 2
Shipyard
Basin 6
Basin 2
Pier 1
Basin 1
Petrol And Oil
Basin 4 9.5 m.
Ferry Terminal
Port Authority
Basin 3 9.5 m.
Basin 10 13 m.
East Harbour
Bulk Terminal
Basin 9 13 m.
Multiterminal
AARHUS

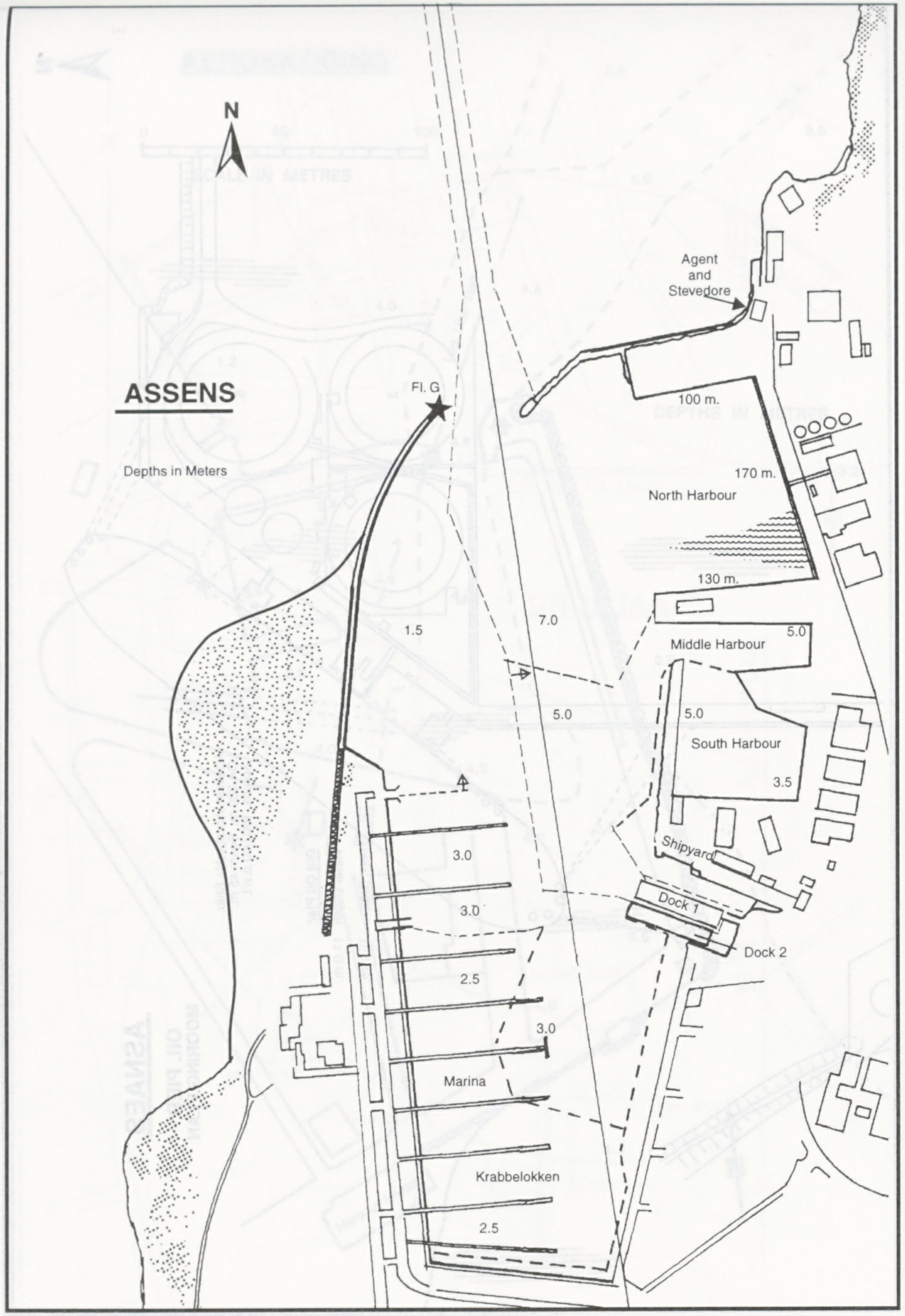

DAC
X
Skudehavn
Baadehavn
Rail Bridge
Road Bridge
0
1000
SCALE OF METRES
N
AALBORG
Oil Harbour
Nordhavnen Ro Ro
North Harbour
Tunnel
General Cargo
Tunnel Basin
Sydhavnen
Limfjorden
Shipyards
Ro Ro
X
Ostrehavn

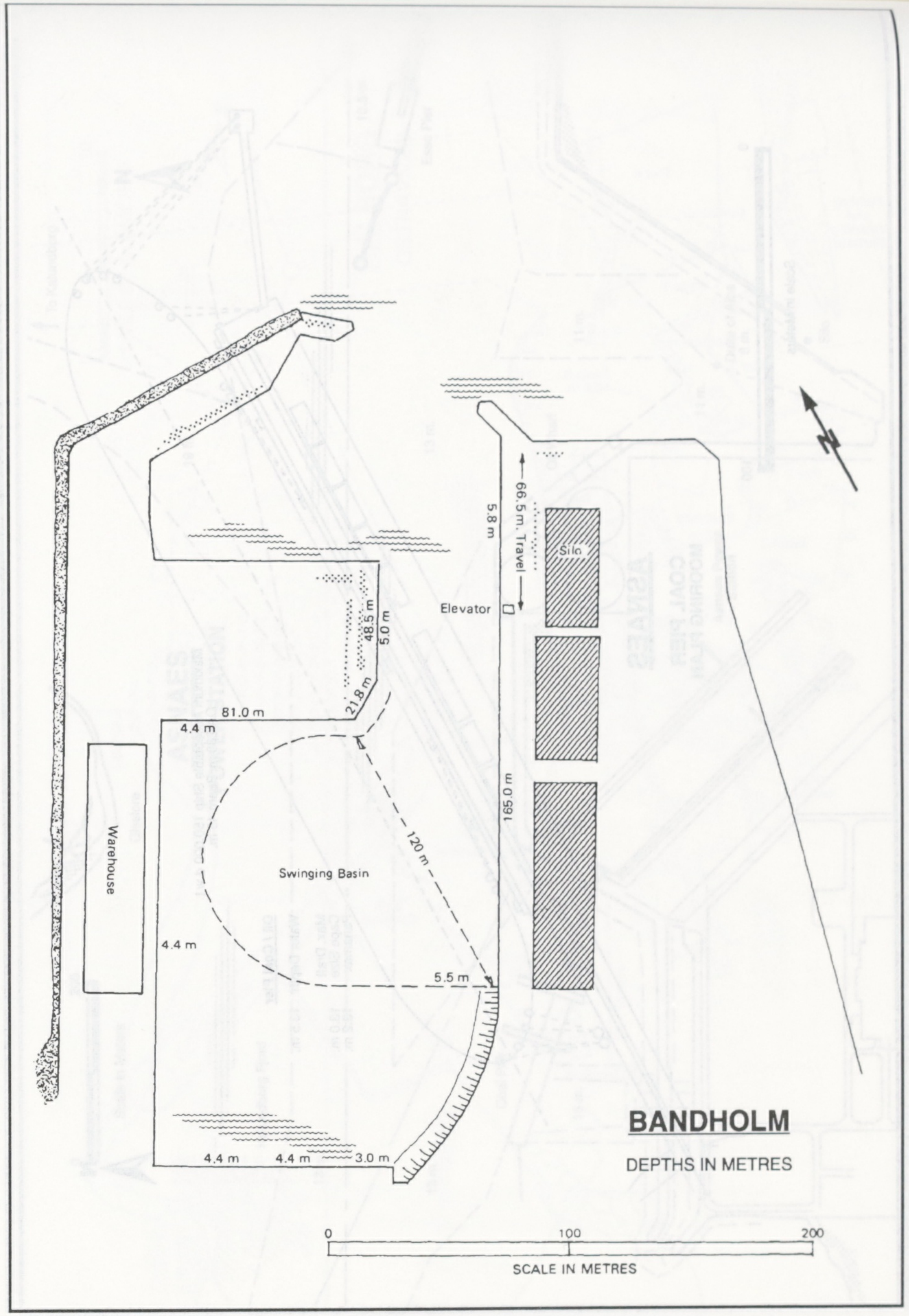

AEROSKOBING
SCALE IN METRES
0
50
100
DEPTHS IN METRES
Harbour Master
Ldg. Line 198°
N
1.2
3.8
3.8
3.8
3.8
4.0
4.0
4.0
4.0
4.5
4.5
4.5
4.5
3.5
3.5
2.8
1.2
–2
–2
5.0
5.0
3.8
3.6
3.2

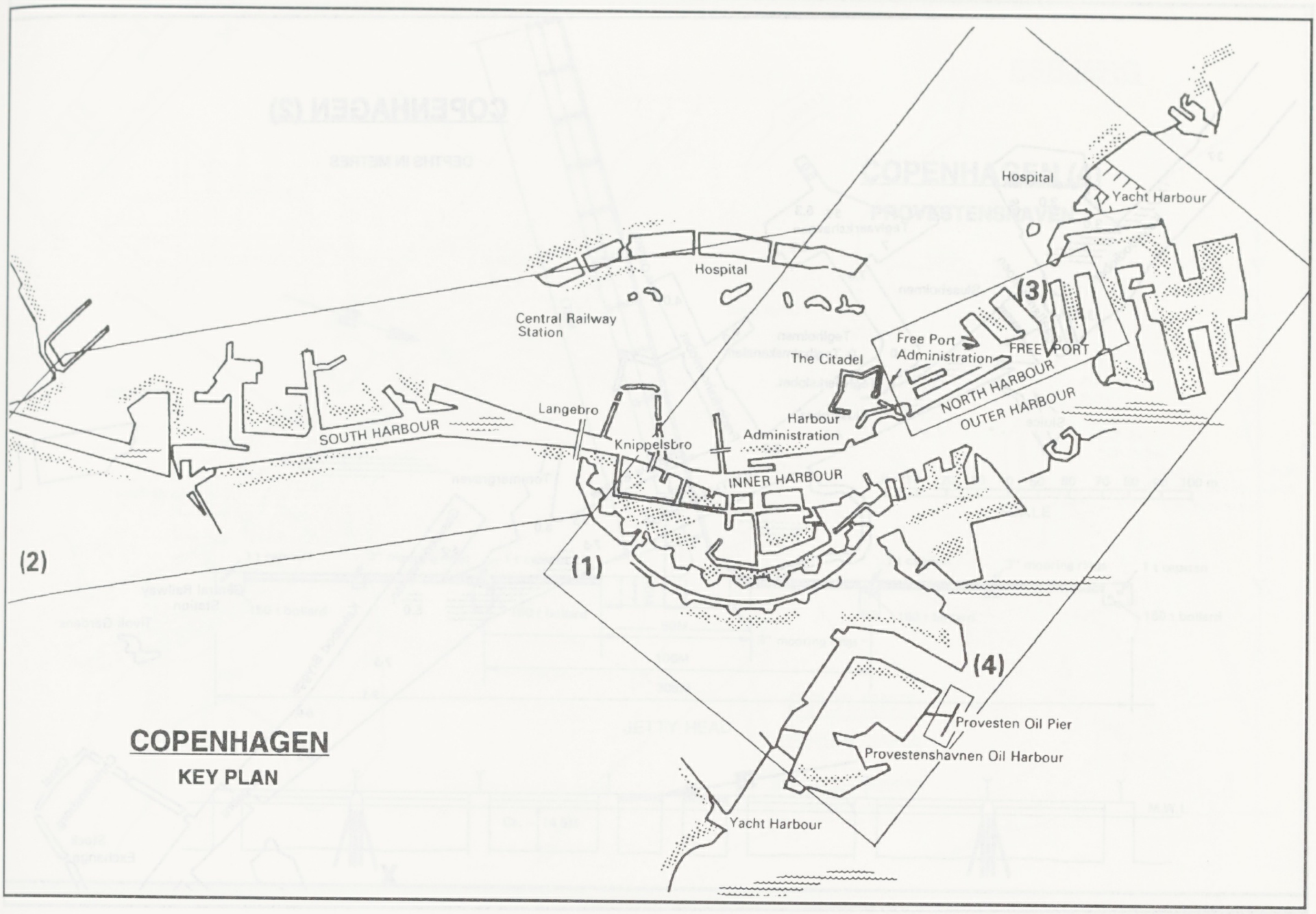

0
200
Scale in Meters
Gisslore
ASNAES
POWER STATION
To Kalundborg
N
10 m.
Kalundborg Fjord
13 m.
13 m.
13 m.
10.5 m.
Esso Pier
Coal Pier
15 m.
Oil Wharf
11 m.
11 m.
Asnaes Power Station
Duke of Alba
8 m.
Silo


N
ASNAES
OIL PIER
MOORING PLAN
Maximum Acceptable Ship.
LOA 280 m. Beam 45 m.
Approx. 150,000 d.w.t.
Old Oil Pier
Water Depth 11.0 m.
Max. Draft 10.7 m.
5
3
4


N
Maximum Acceptable Ship 150,000 d.w.t.
LOA 280 m. Beam 45 m.
Oil / Coal Pier
Water Depth 13.5 m.
Max. Draft
Cape Size 13.0 m.
Panamax 13.2 m.
ASNAES
COAL PIER
MOORING PLAN
0
100
Scale in Meters


N
Agent
and
Stevedore
ASSENS
Fl. G
Depths in Meters
100 m.
170 m.
North Harbour
130 m.
1.5
7.0
Middle Harbour
5.0
5.0
5.0
South Harbour
3.5
Shipyard
Dock 1
Dock 2
3.0
3.0
2.5
3.0
Marina
Krabbelokken
2.5

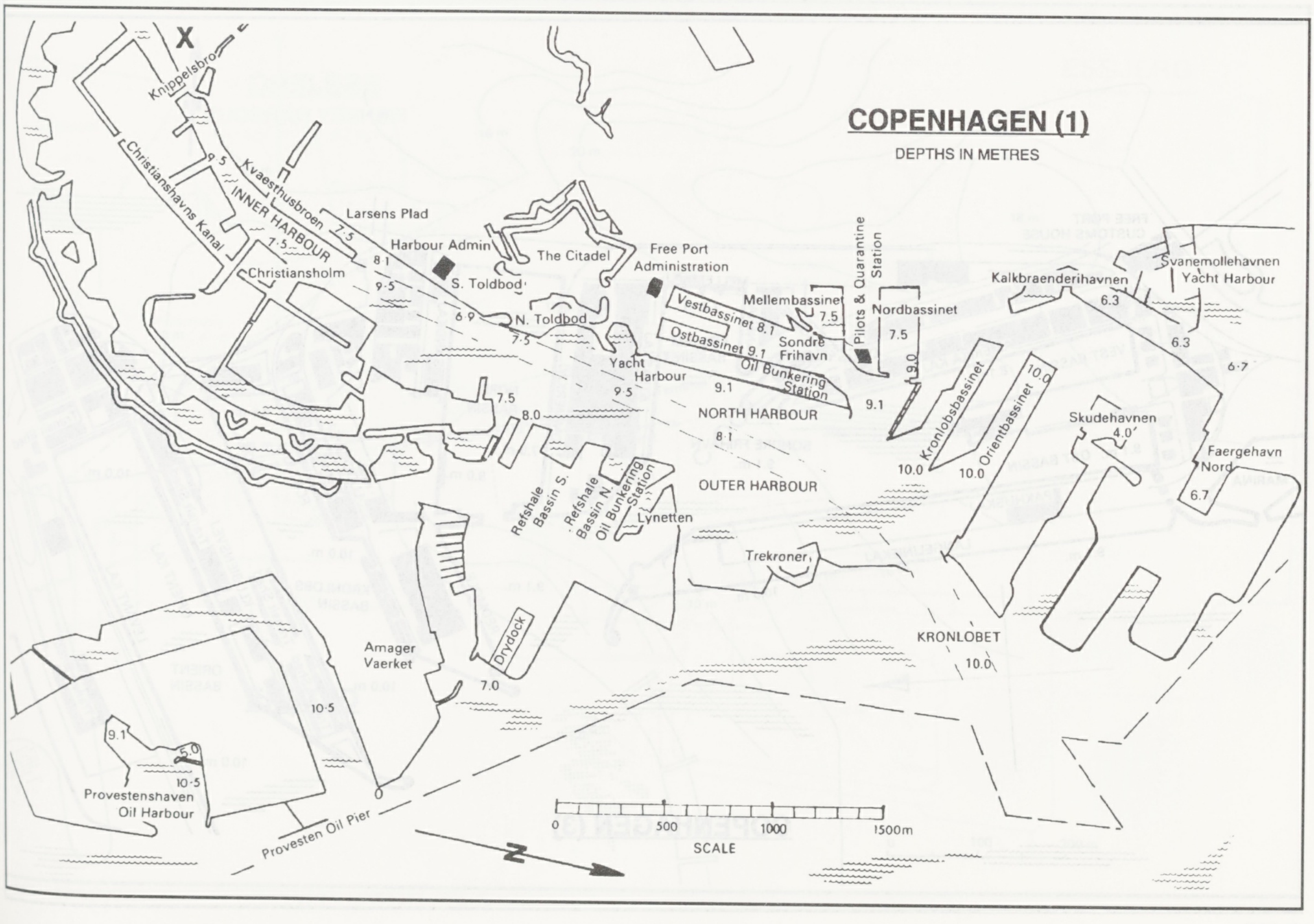

66.5 m. Travel
5.8 m
Silo
Elevator
48.5 m
5.0 m
21.8 m
81.0 m
4.4 m
Warehouse
Swinging Basin
120 m
165.0 m
4.4 m
5.5 m
4.4 m
4.4 m
3.0 m
BANDHOLM
DEPTHS IN METRES
0
100
200
SCALE IN METRES



COPENHAGEN

KEY PLAN

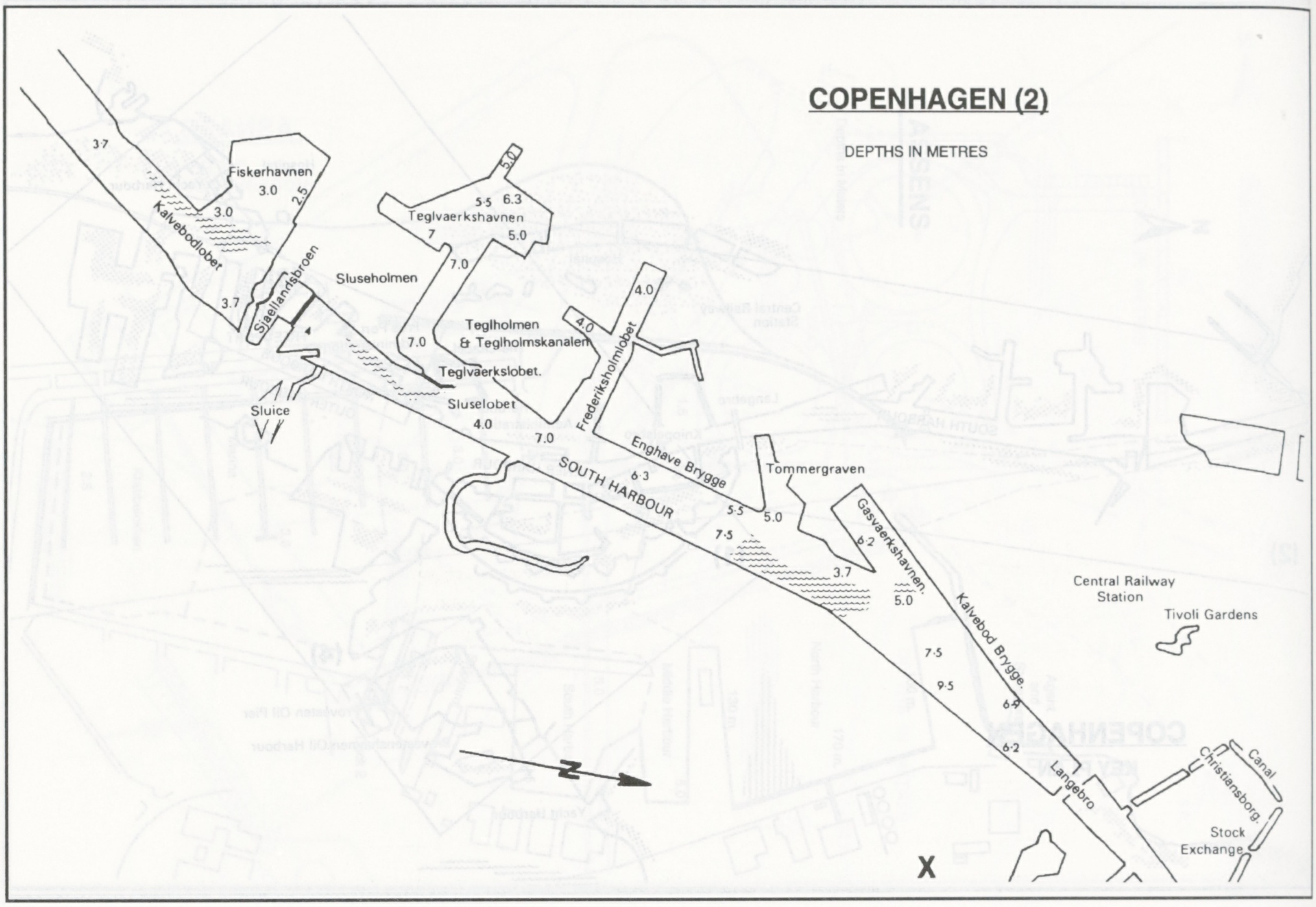
Hospital
Yacht Harbour
Hospital
(3)
Central Railway Station
Free Port Administration
FREE PORT
The Citadel
NORTH HARBOUR
OUTER HARBOUR
Langebro
Harbour Administration
SOUTH HARBOUR
Knippelsbro
INNER HARBOUR
(2)
(1)
(4)
Provesten Oil Pier
Provestenshavnen Oil Harbour
Yacht Harbour



COPENHAGEN (1)

DEPTHS IN METRES

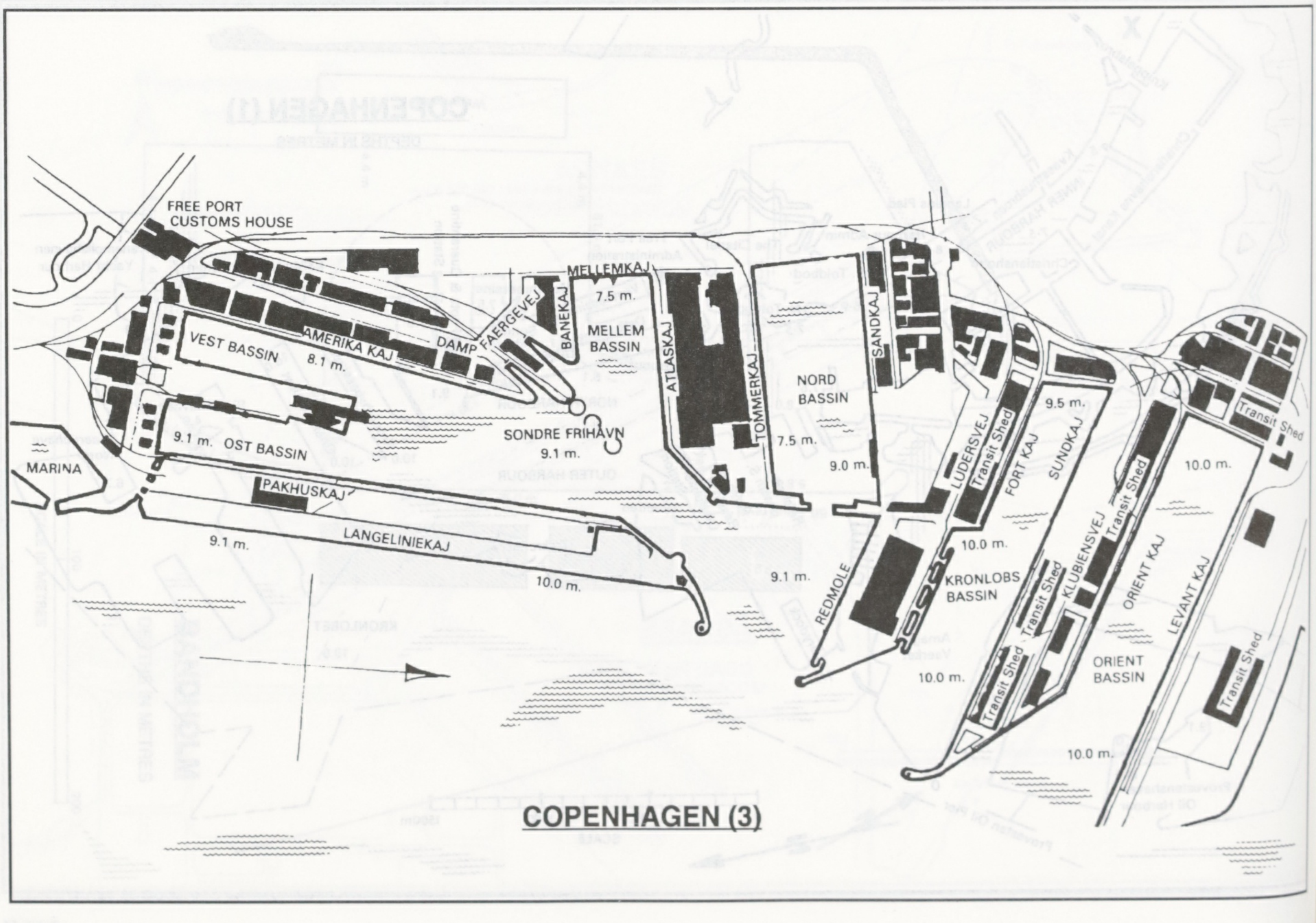
X
Knippelsbro
9.5
Kvaesthusbroen
Christianshavns Kanal
INNER HARBOUR
7.5
7.5
Larsens Plad
Harbour Admin
8.1
S. Toldbod
9.5
Christiansholm
The Citadel
Free Port Administration
6.9
N. Toldbod
7.5
Vestbassinet 8.1
Ostbassinet 9.1
Mellembassinet
7.5
Sondre Frihavn
Pilots & Quarantine Station
Nordbassinet
7.5
9.0
Oil Bunkering Station
9.1
9.1
Yacht Harbour
9.5
NORTH HARBOUR
8.1
7.5
8.0
OUTER HARBOUR
Refshale Bassin S.
Refshale Bassin N.
Oil Bunkering Station
Lynetten
Trekroner
Kronlobsbassinet
Orientbassinet
10.0
10.0
10.0
Kalkbraenderihavnen
6.3
Svanemollehavnen Yacht Harbour
6.3
6.7
Skudehavnen
4.0
Faergehavn Nord
6.7
KRONLOBET
10.0
Drydock
Amager Vaerket
7.0
10.5
9.1
5.0
10.5
Provestenshaven Oil Harbour
Provesten Oil Pier
0
500
1000
1500m
SCALE
N



COPENHAGEN (2)

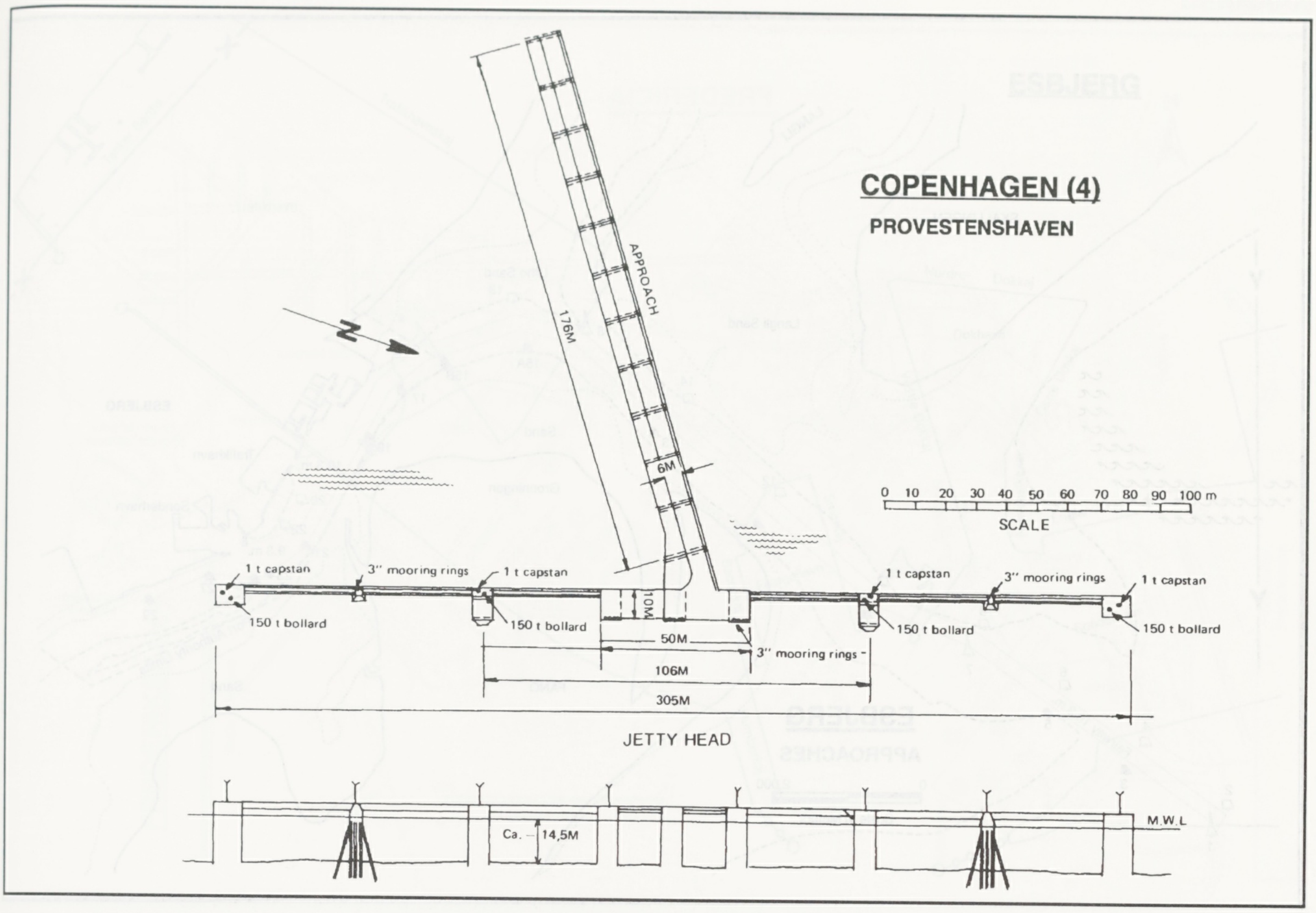
DEPTHS IN METRES

3·7
Fiskerhavnen
3.0
2.5
3.0
Kalvebodlobet
Sjaellandsbroen
3.7
Sluseholmen
5.0
5·5
6.3
Teglvaerkshavnen
7
5.0
7.0
4.0
Teglholmen
& Teglholmskanalen
4.0
7.0
Teglvaerkslobet.
Frederiksholmlobet
Sluselobet
4.0
7.0
Sluice
SOUTH HARBOUR
Enghave Brygge
6·3
Tommergraven
5·5
5.0
7·5
Gasvaerkshavnen.
6·2
3.7
5.0
Kalvebod Brygge.
7·5
9·5
6·9
6·2
Central Railway
Station
Tivoli Gardens
Langebro
Canal
Christiansborg.
Stock
Exchange
N
X



FREE PORT
CUSTOMS HOUSE
MELLEMKAJ
7.5 m.
MELLEM
BASSIN
BANEKAJ
FAERGEVEJ
DAMP
AMERIKA KAJ
VEST BASSIN
8.1 m.
9.1 m.
OST BASSIN
MARINA
PAKHUSKAJ
9.1 m.
LANGELINIEKAJ
10.0 m.
SONDRE FRIHAVN
9.1 m.
ATLASKAJ
TOMMERKAJ
NORD
BASSIN
7.5 m.
9.0 m.
SANDKAJ
LUDERSVEJ
Transit Shed
FORT KAJ
9.5 m.
SUNDKAJ
10.0 m.
KRONLOBS
BASSIN
REDMOLE
9.1 m.
KLUBIENSVEJ
Transit Shed
Transit Shed
Transit Shed
Transit Shed
ORIENT KAJ
LEVANT KAJ
Transit Shed
10.0 m.
ORIENT
BASSIN
10.0 m.
10.0 m.
Transit Shed

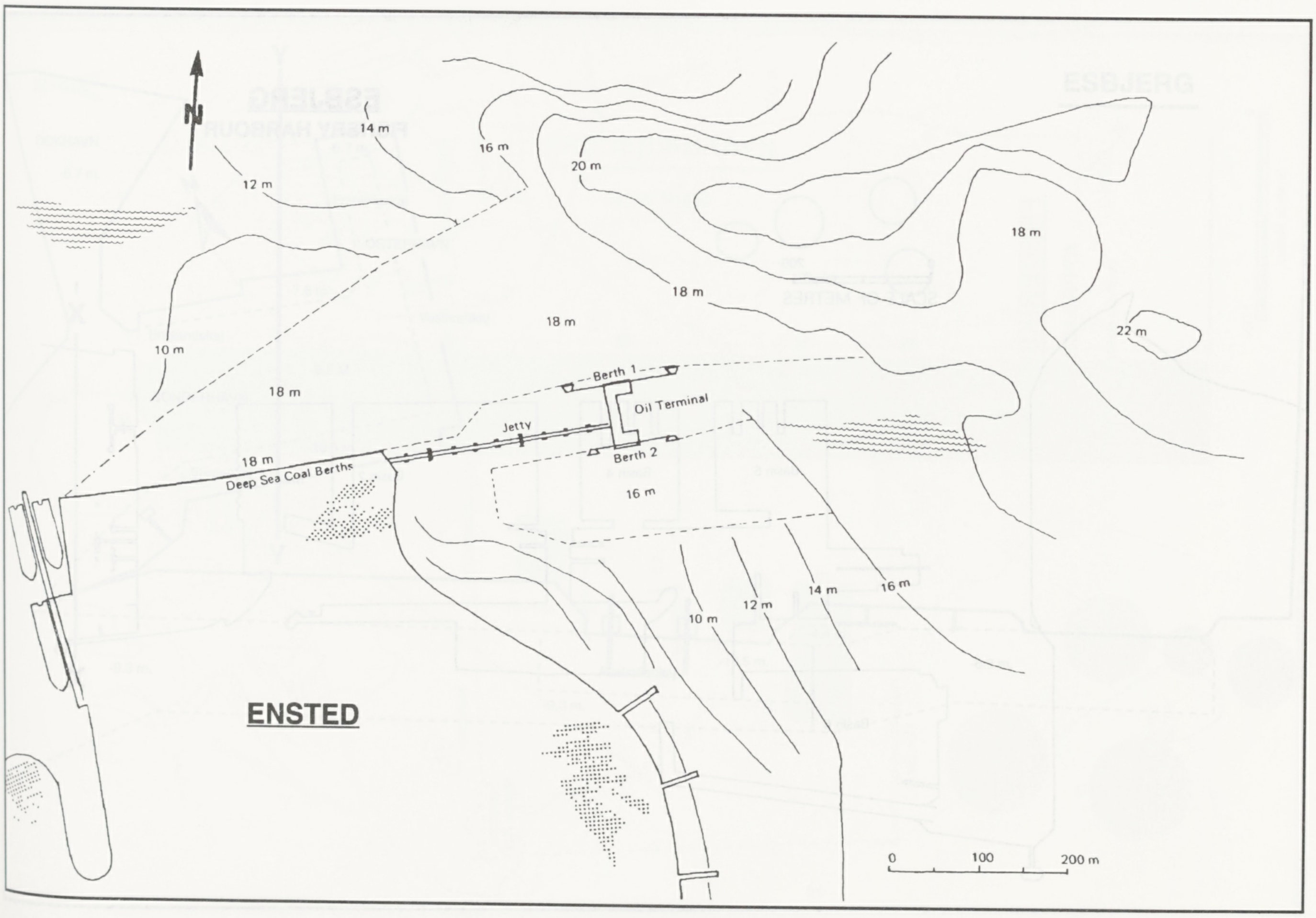
COPENHAGEN (3)



COPENHAGEN (4)

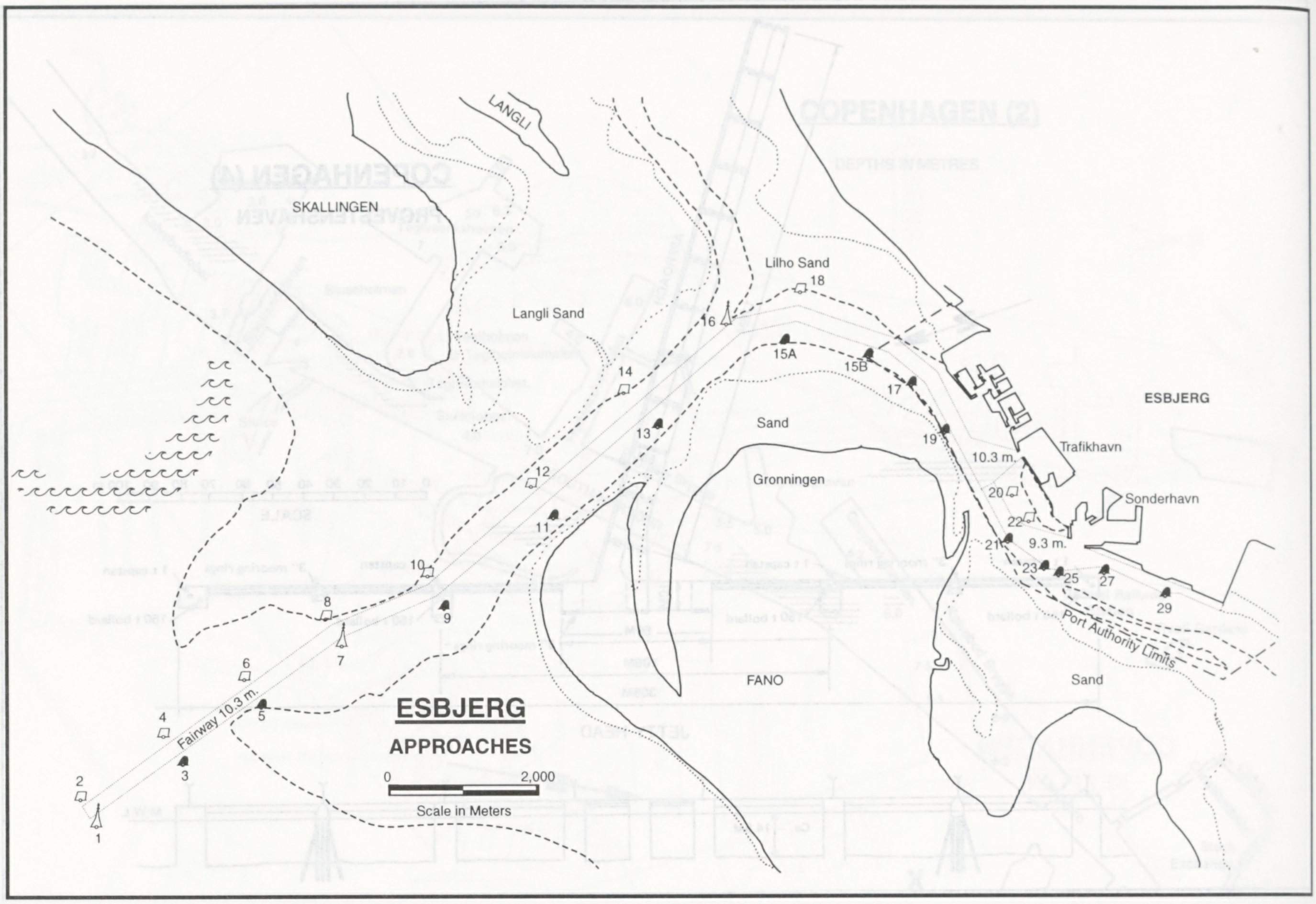
PROVESTENSHAVEN

APPROACH
176M
6M
N
0 10 20 30 40 50 60 70 80 90 100 m
SCALE
1 t capstan
3" mooring rings
1 t capstan
150 t bollard
150 t bollard
10M
50M
106M
305M
3" mooring rings
1 t capstan
3" mooring rings
1 t capstan
150 t bollard
150 t bollard
JETTY HEAD
Ca. 14,5M
M.W.L



ENSTED

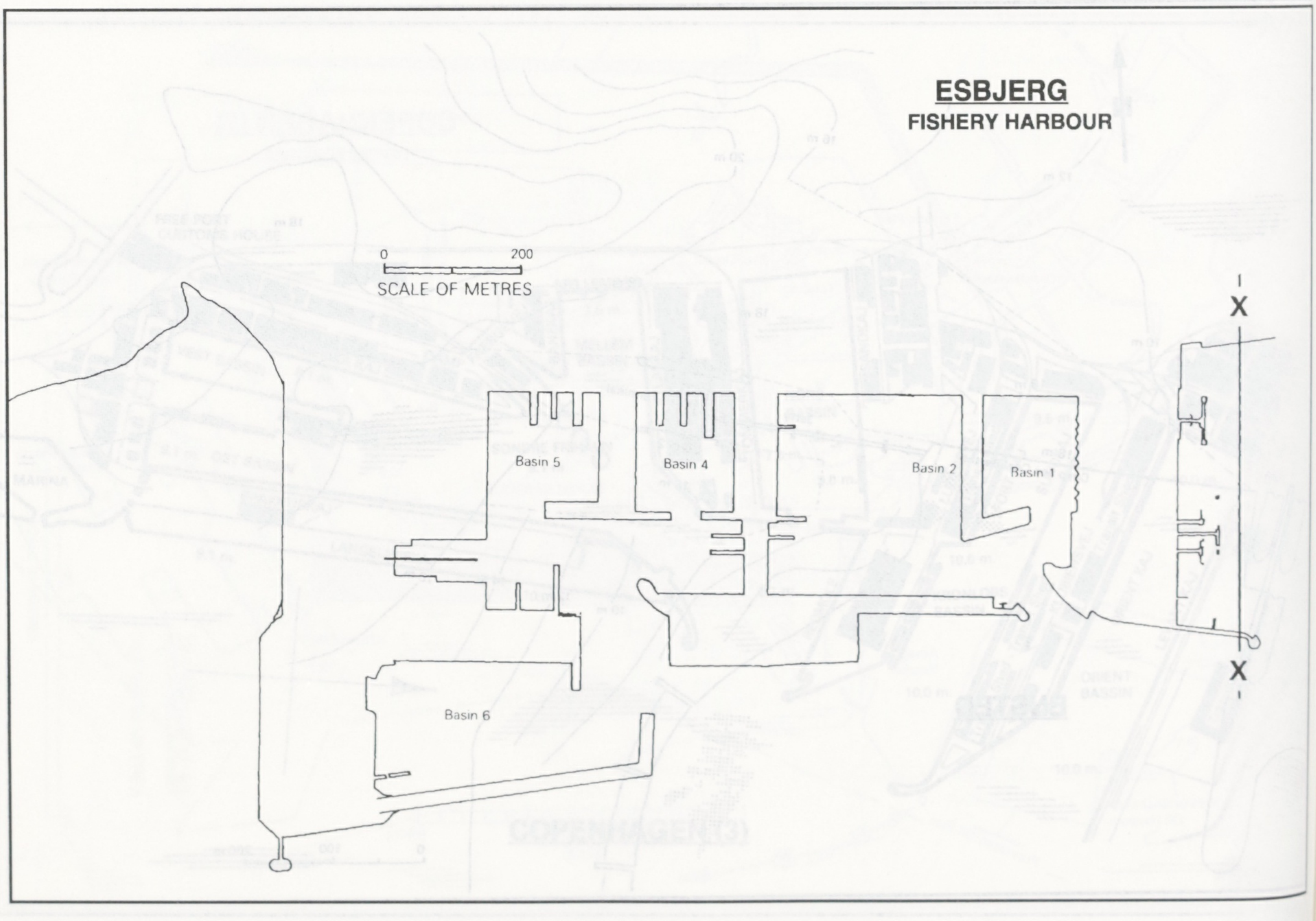
N
14 m
16 m
20 m
12 m
18 m
18 m
18 m
22 m
10 m
18 m
Berth 1
Oil Terminal
Jetty
Berth 2
18 m
Deep Sea Coal Berths
16 m
14 m
16 m
10 m
12 m
0
100
200 m



ESBJERG

APPROACHES

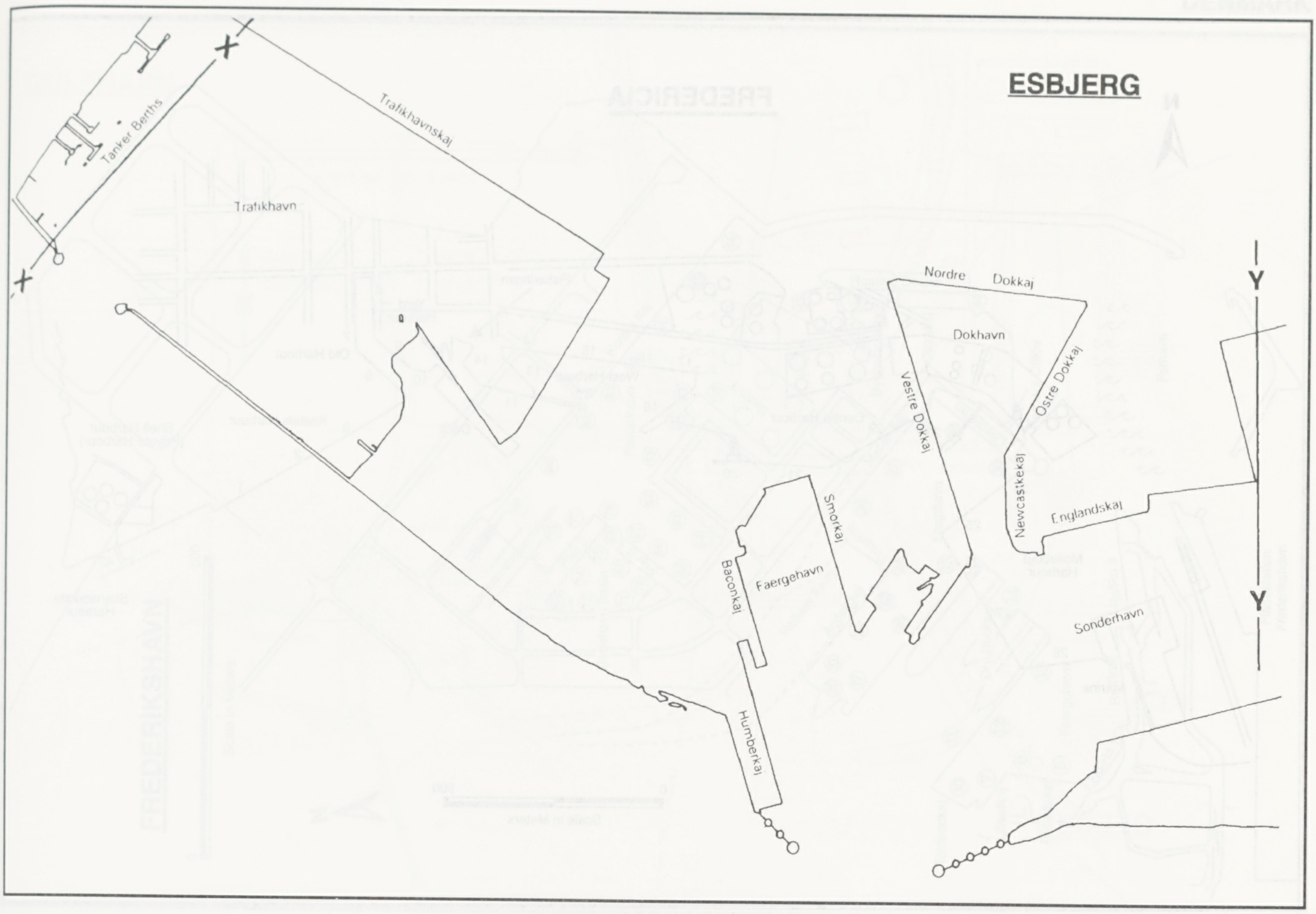
LANGLI
SKALLINGEN
Langli Sand
Lilho Sand
18
16
15A
15B
17
14
13
Sand
19
ESBJERG
10.3 m.
Trafikhavn
Gronningen
12
20
Sonderhavn
22
11
21
9.3 m.
10
23
25
27
29
8
9
Port Authority Limits
7
6
FANO
Sand
4
Fairway 10.3 m.
5
3
2
1
0
2,000
Scale in Meters

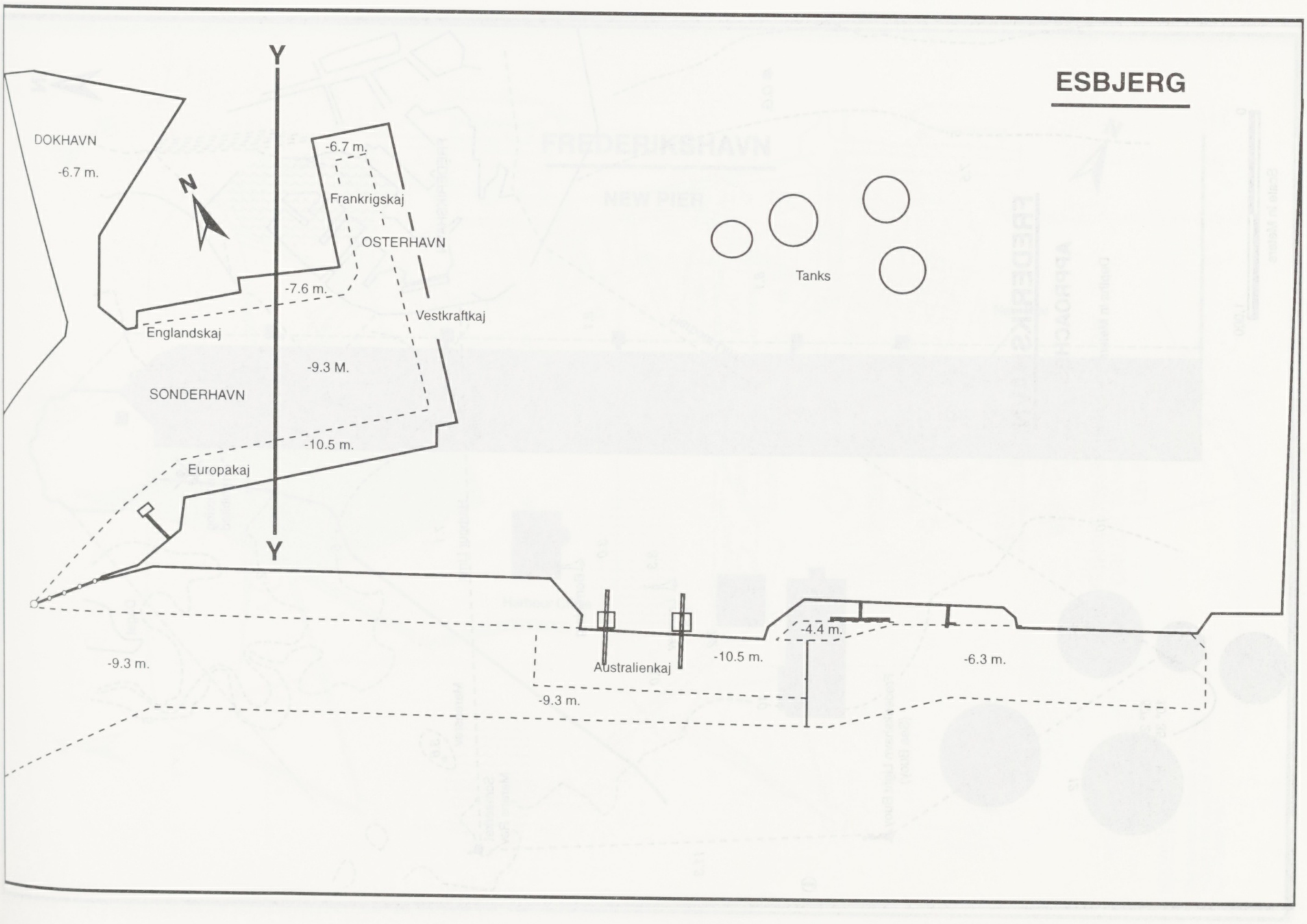


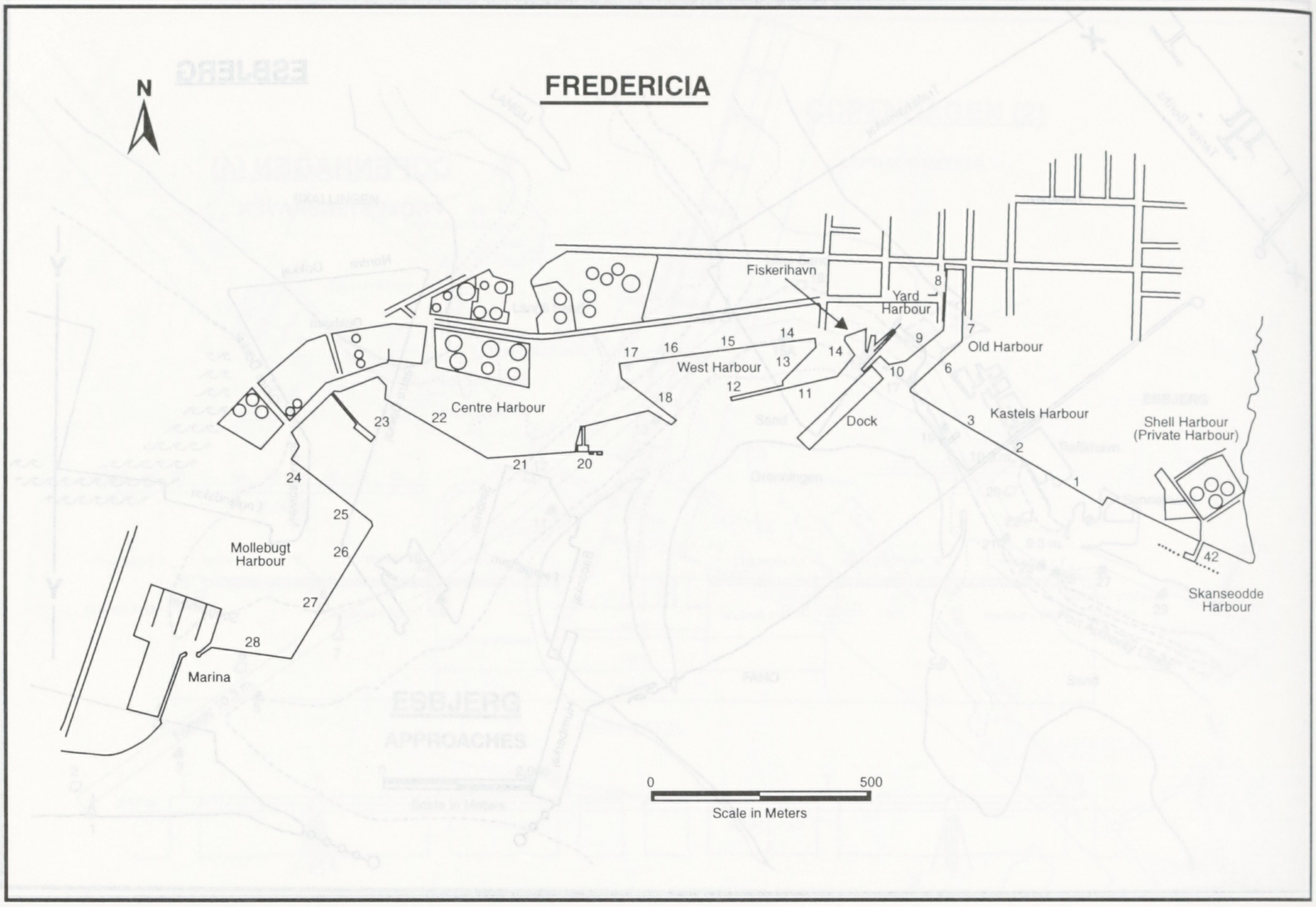
ESBJERG

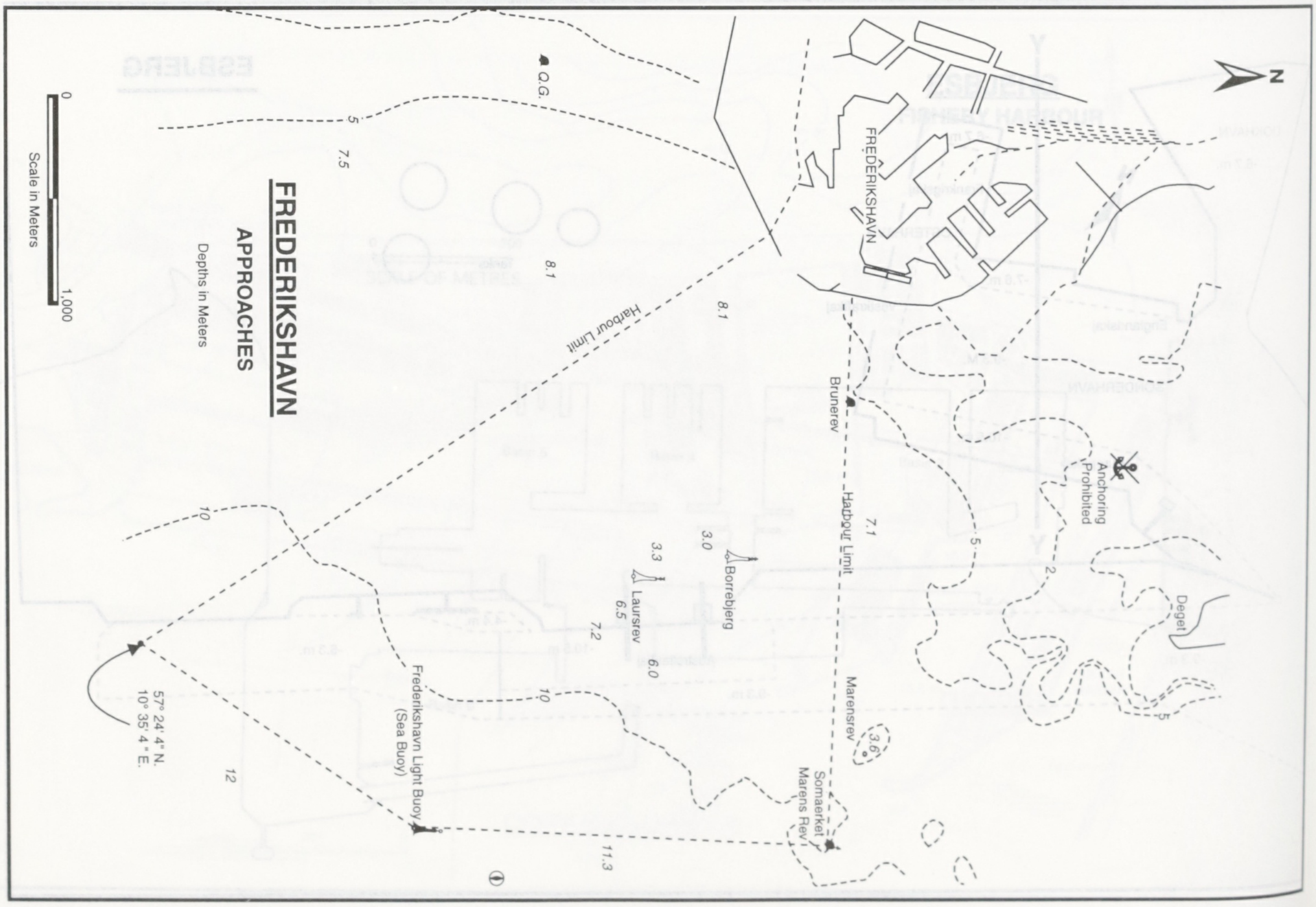
FISHERY HARBOUR

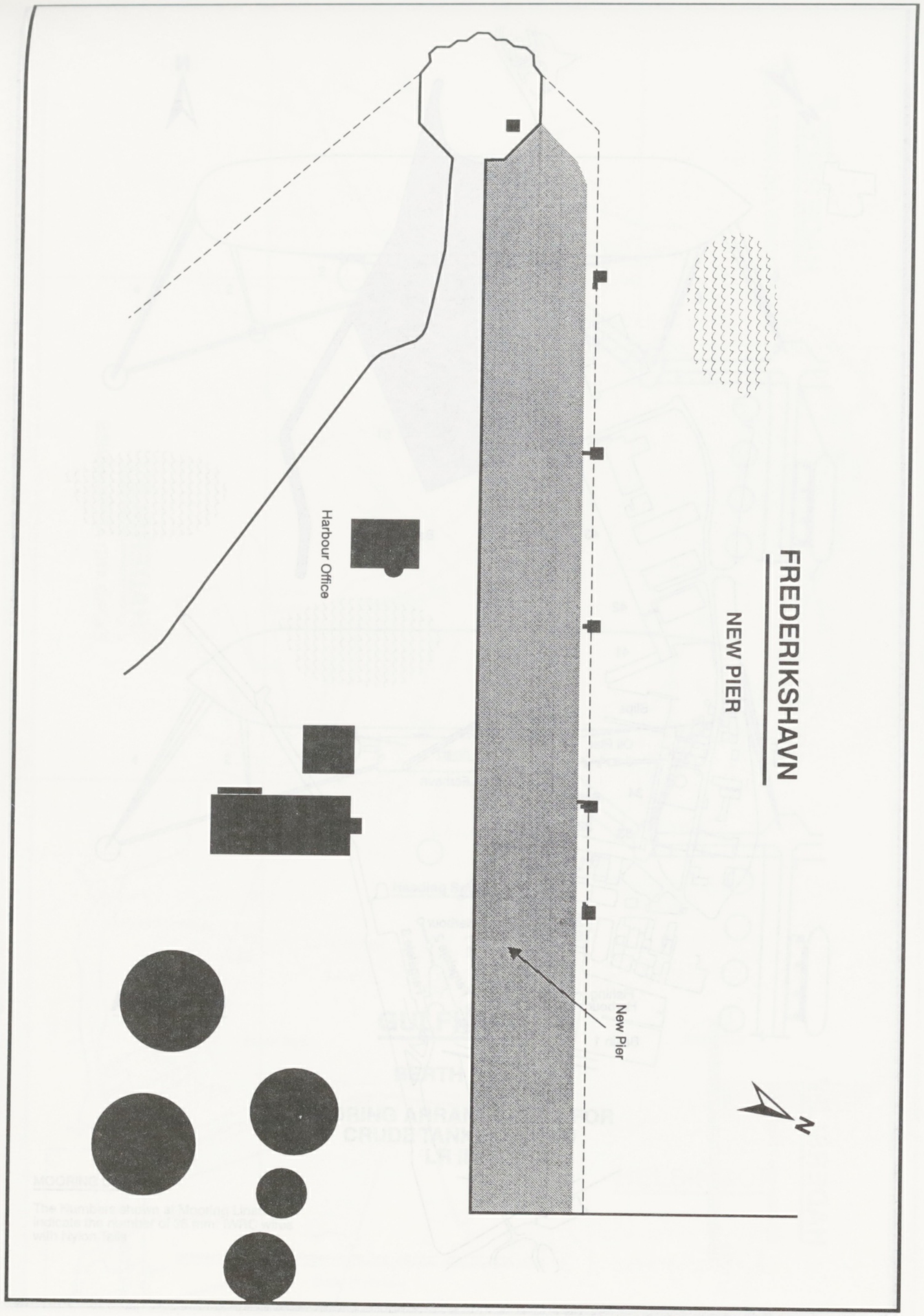
0
200
SCALE OF METRES
X
Basin 5
Basin 4
Basin 2
Basin 1
X
Basin 6

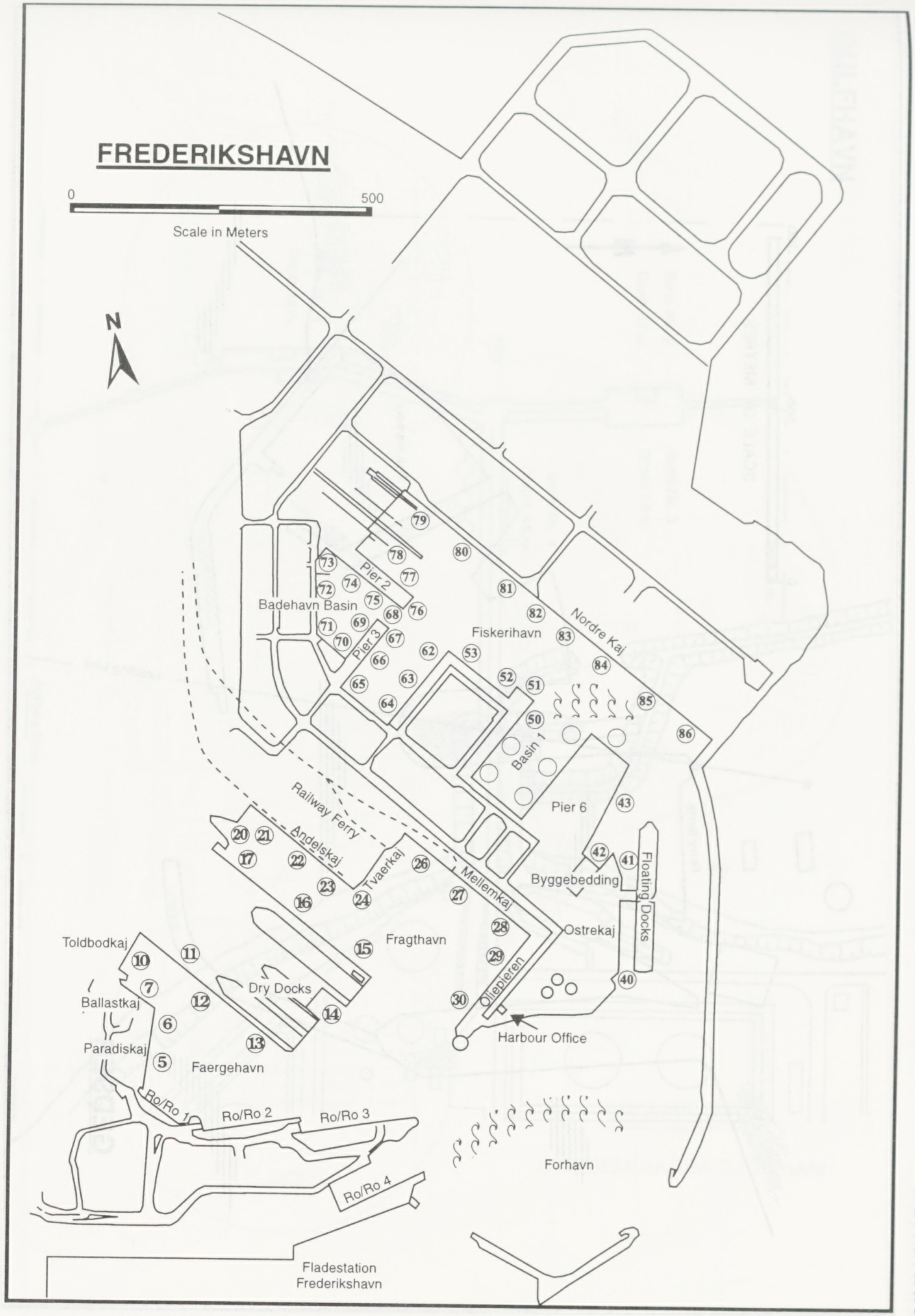

ESBJERG
X
X
Tanker Berths
Trafikhavnskaj
Trafikhavn
Nordre Dokkaj
Dokhavn
Vestre Dokkaj
Ostre Dokkaj
Y
Newcastlekaj
Englandskaj
Smorkaj
Faergehavn
Baconkaj
Y
Sonderhavn
Humberkaj

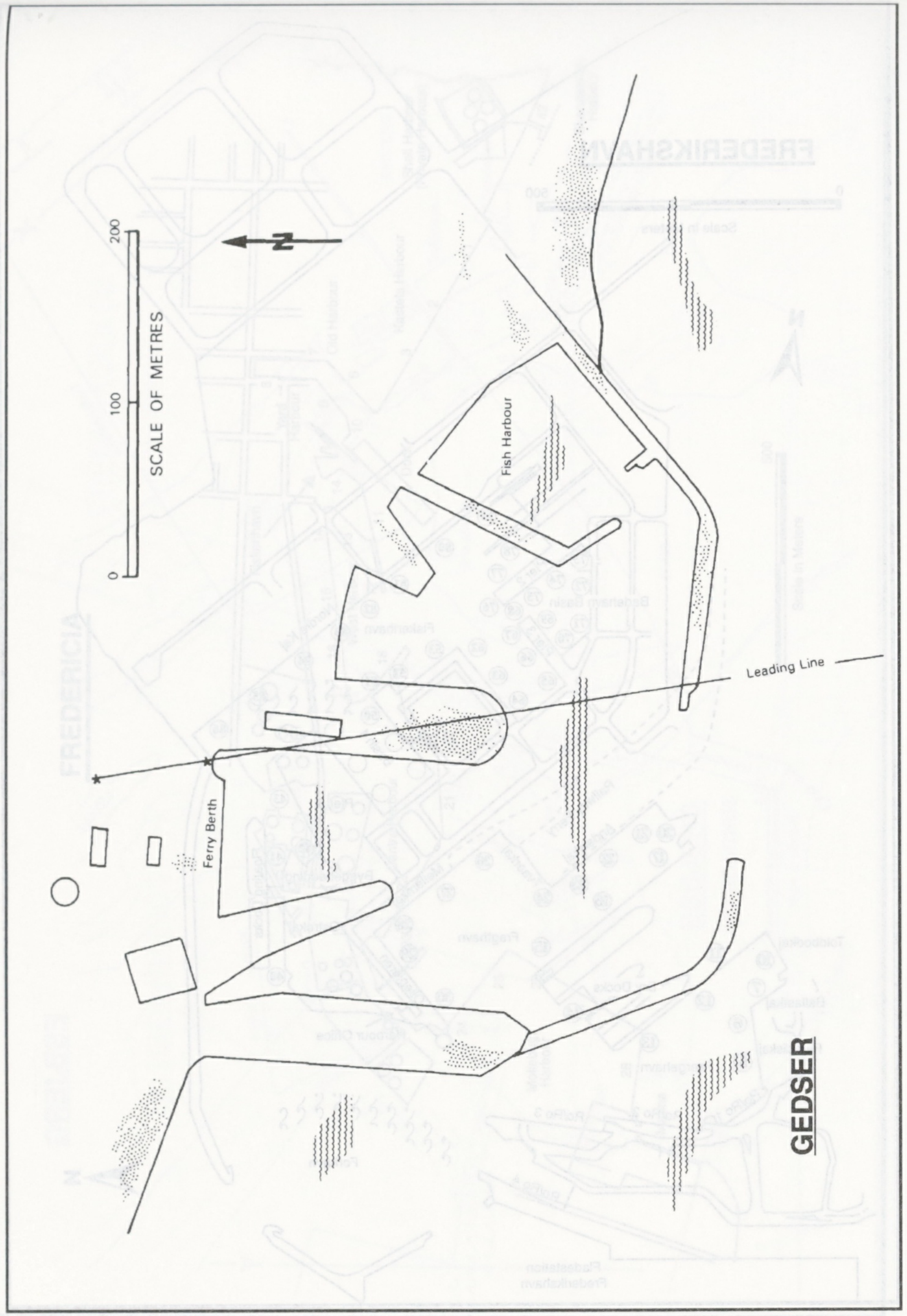

ESBJERG
Y
DOKHAVN
-6.7 m.
N
-6.7 m.
Frankrigskaj
OSTERHAVN
-7.6 m.
Vestkraftkaj
Englandskaj
-9.3 M.
SONDERHAVN
-10.5 m.
Europakaj
Y
Tanks
-4.4 m.
-9.3 m.
Australienkaj
-10.5 m.
-6.3 m.
-9.3 m.

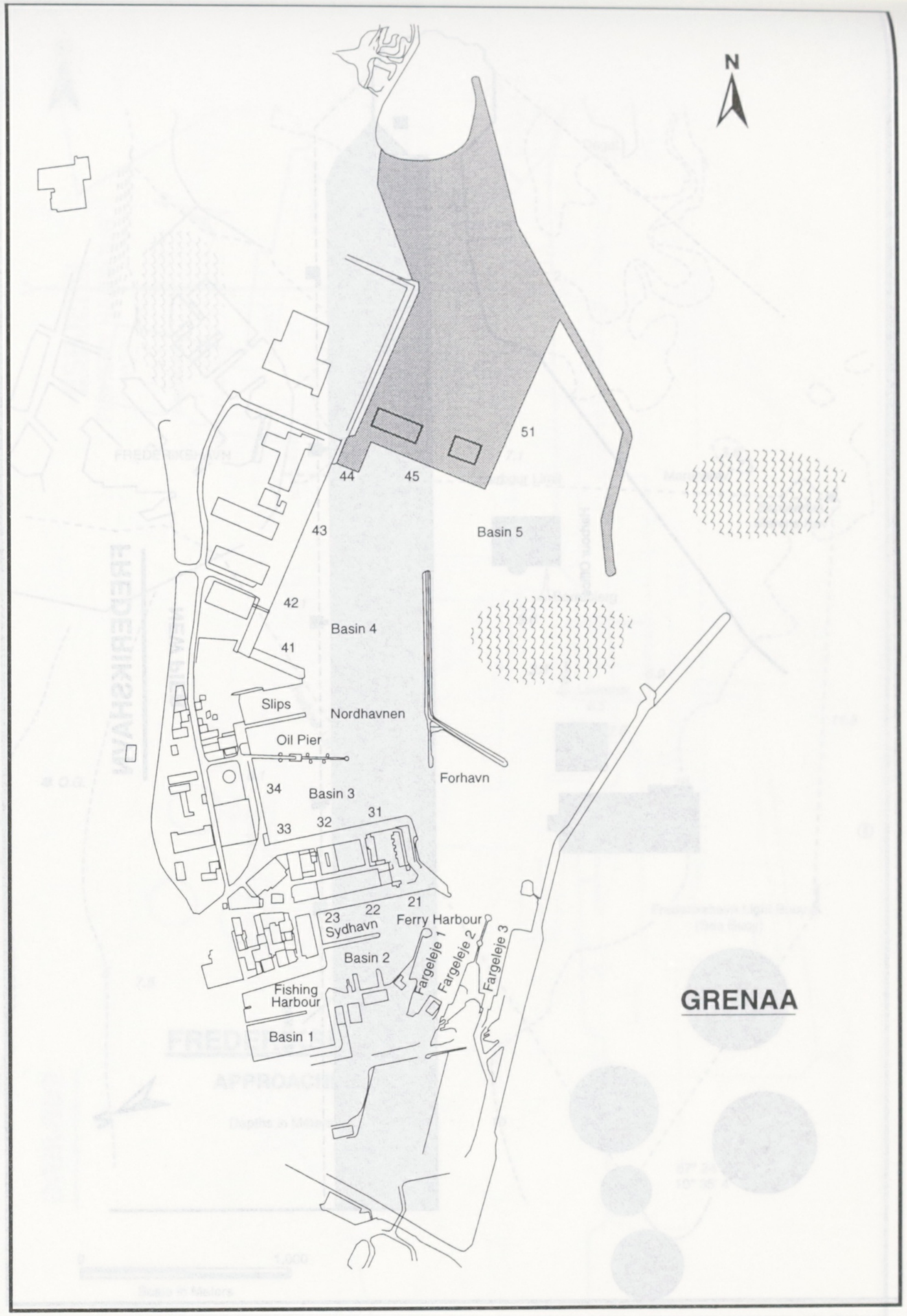

FREDERICIA
N
Fiskerihavn
Yard Harbour
Old Harbour
West Harbour
Centre Harbour
Dock
Kastels Harbour
Shell Harbour (Private Harbour)
Skanseodde Harbour
Mollebugt Harbour
Marina
1
2
3
6
7
8
9
10
11
12
13
14
14
15
16
17
18
20
21
22
23
24
25
26
27
28
42
0
500
Scale in Meters

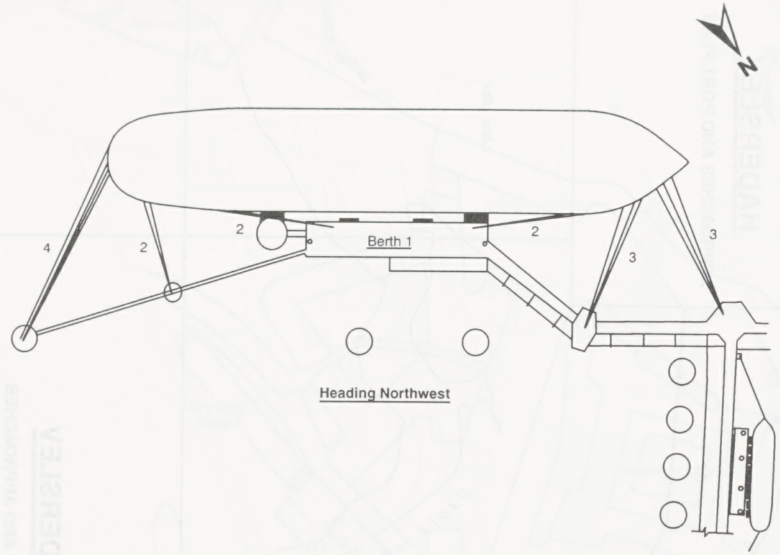

FREDERIKSHAVN
APPROACHES
Depths in Meters
0
1,000
Scale in Meters
N
Q.G.
5
7.5
8.1
8.1
Harbour Limit
FREDERIKSHAVN
Brunerev
Harbour Limit
7.1
Anchoring Prohibited
5
2
Deget
5
10
3.0
3.3
Borrebjerg
Laursrev
6.5
7.2
6.0
10
Frederikshavn Light Buoy (Sea Buoy)
57° 24' 4" N.
10° 35' 4" E.
12
11.3
Marensrev
3.6
Somaerket Marens Rev


FREDERIKSHAVN
NEW PIER
Harbour Office
New Pier
N

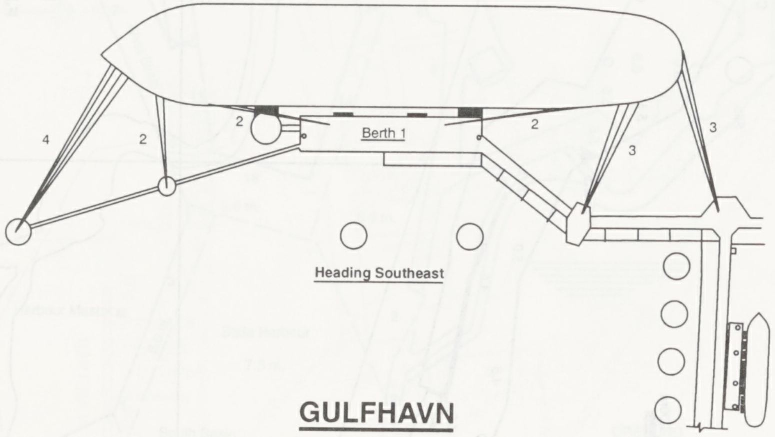

FREDERIKSHAVN
0
500
Scale in Meters
N
Badehavn Basin
Pier 2
Pier 3
Fiskerihavn
Nordre Kaj
Basin 1
Pier 6
Railway Ferry
Andelskaj
Tvaerkaj
Mellemkaj
Byggebedding
Floating Docks
Ostrekaj
Oliepieren
Fragthavn
Dry Docks
Toldbodkaj
Ballastkaj
Paradiskaj
Faergehavn
Harbour Office
Ro/Ro 1
Ro/Ro 2
Ro/Ro 3
Ro/Ro 4
Forhavn
Fladestation
Frederikshavn
⑤ ⑥ ⑦ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑳ ㉑ ㉒ ㉓ ㉔ ㉖ ㉗ ㉘ ㉙ ㉚
㊵ ㊶ ㊷ ㊸ ㊿ (51) (52) (53) (62) (63) (64) (65) (66) (67) (68) (69) (70)
(71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86)


SCALE OF METRES
0
100
200
N
Fish Harbour
Leading Line
Ferry Berth
GEDSER


N
51
44
45
43
Basin 5
42
Basin 4
41
Slips
Nordhavnen
Oil Pier
Forhavn
34
Basin 3
33
32
31
21
23
22
Sydhavn
Ferry Harbour
Fargeleje 1
Fargeleje 2
Fargeleje 3
Basin 2
Fishing Harbour
Basin 1
GRENAA


N
4
2
2
Berth 1
2
3
3

Heading Northwest


4
2
2
Berth 1
2
3
3

Heading Southeast

GULFHAVN

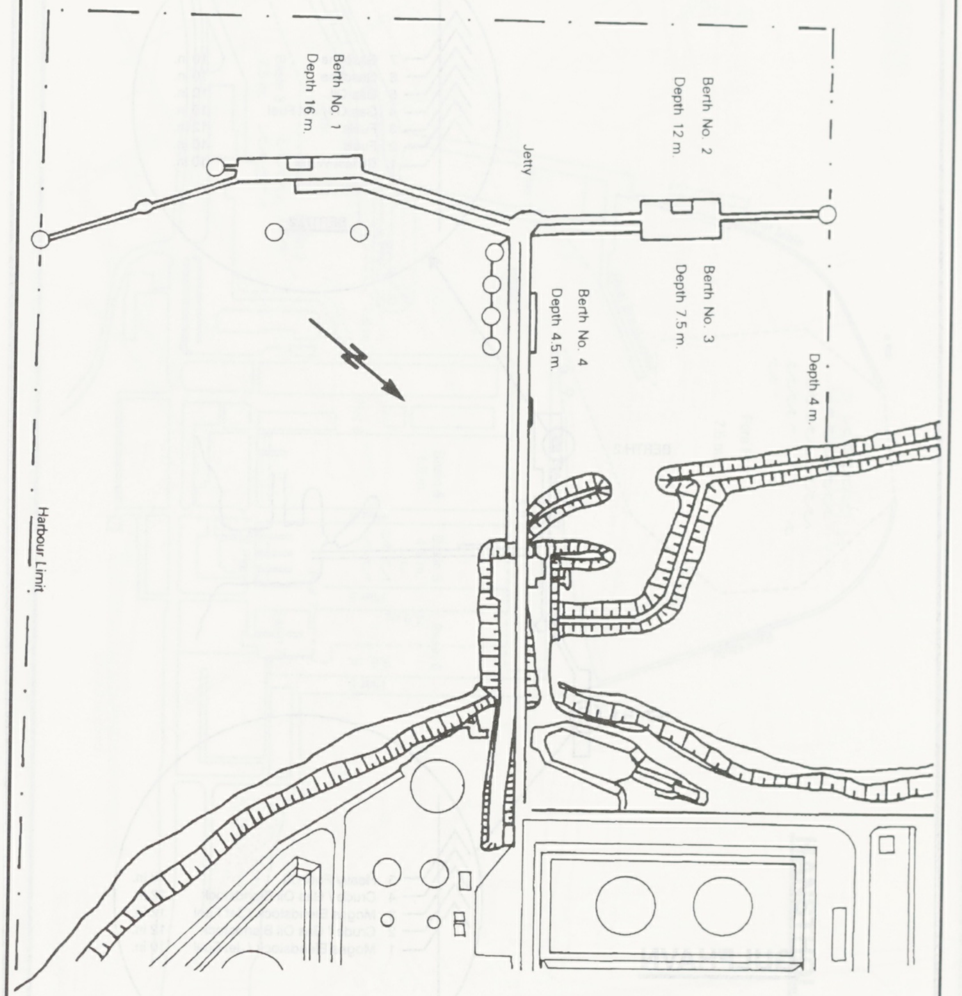
BERTH No. 1

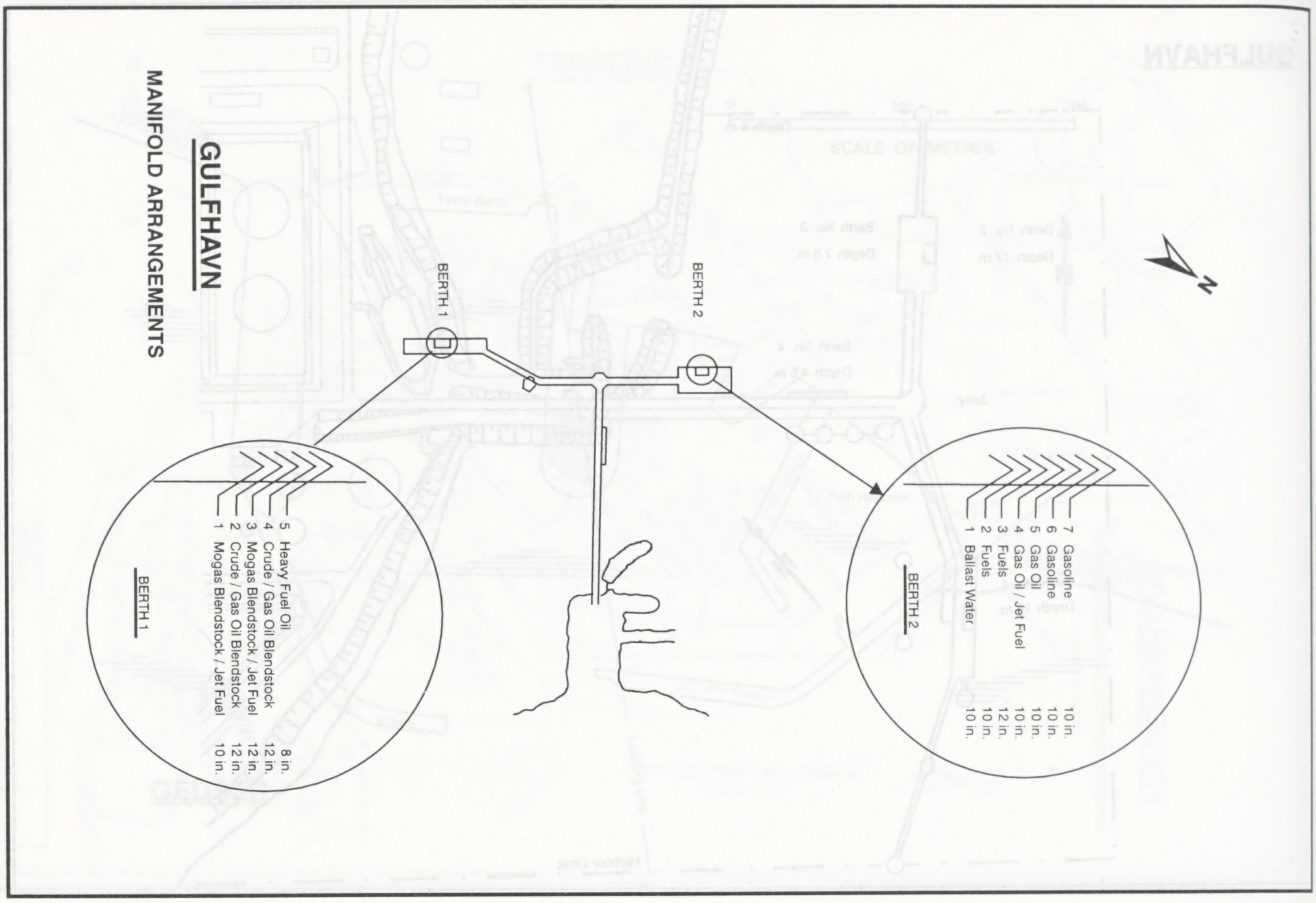
MOORING ARRANGEMENT FOR CRUDE TANKERS AND LR II's

MOORING LINES

The Numbers shown at Mooring Lines indicate the number of 38 mm. IWRC wires with Nylon Tails

GULFHAVN

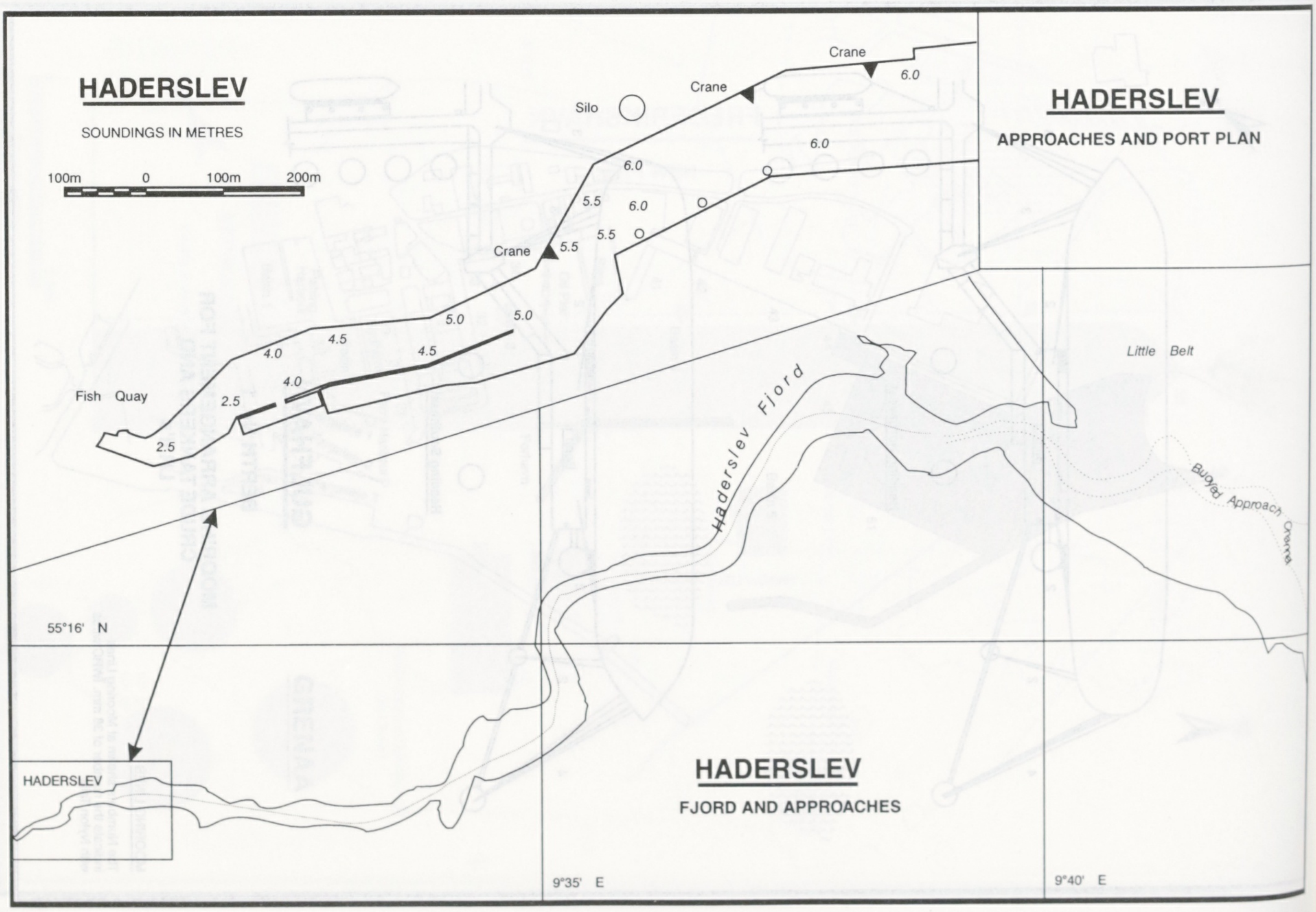

Berth No. 1
Depth 16 m.
Jetty
Berth No. 2
Depth 12 m.
Berth No. 3
Depth 7.5 m.
Berth No. 4
Depth 4.5 m.
Depth 4 m.
N
Harbour Limit



GULFHAVN

MANIFOLD ARRANGEMENTS

BERTH 1
BERTH 2
5 Heavy Fuel Oil 8 in.
4 Crude / Gas Oil Blendstock 12 in.
3 Mogas Blendstock / Jet Fuel 12 in.
2 Crude / Gas Oil Blendstock 12 in.
1 Mogas Blendstock / Jet Fuel 10 in.
BERTH 1
7 Gasoline 10 in.
6 Gasoline 10 in.
5 Gas Oil 10 in.
4 Gas Oil / Jet Fuel 10 in.
3 Fuels 12 in.
2 Fuels 10 in.
1 Ballast Water 10 in.
BERTH 2
N



HADERSLEV

SOUNDINGS IN METRES

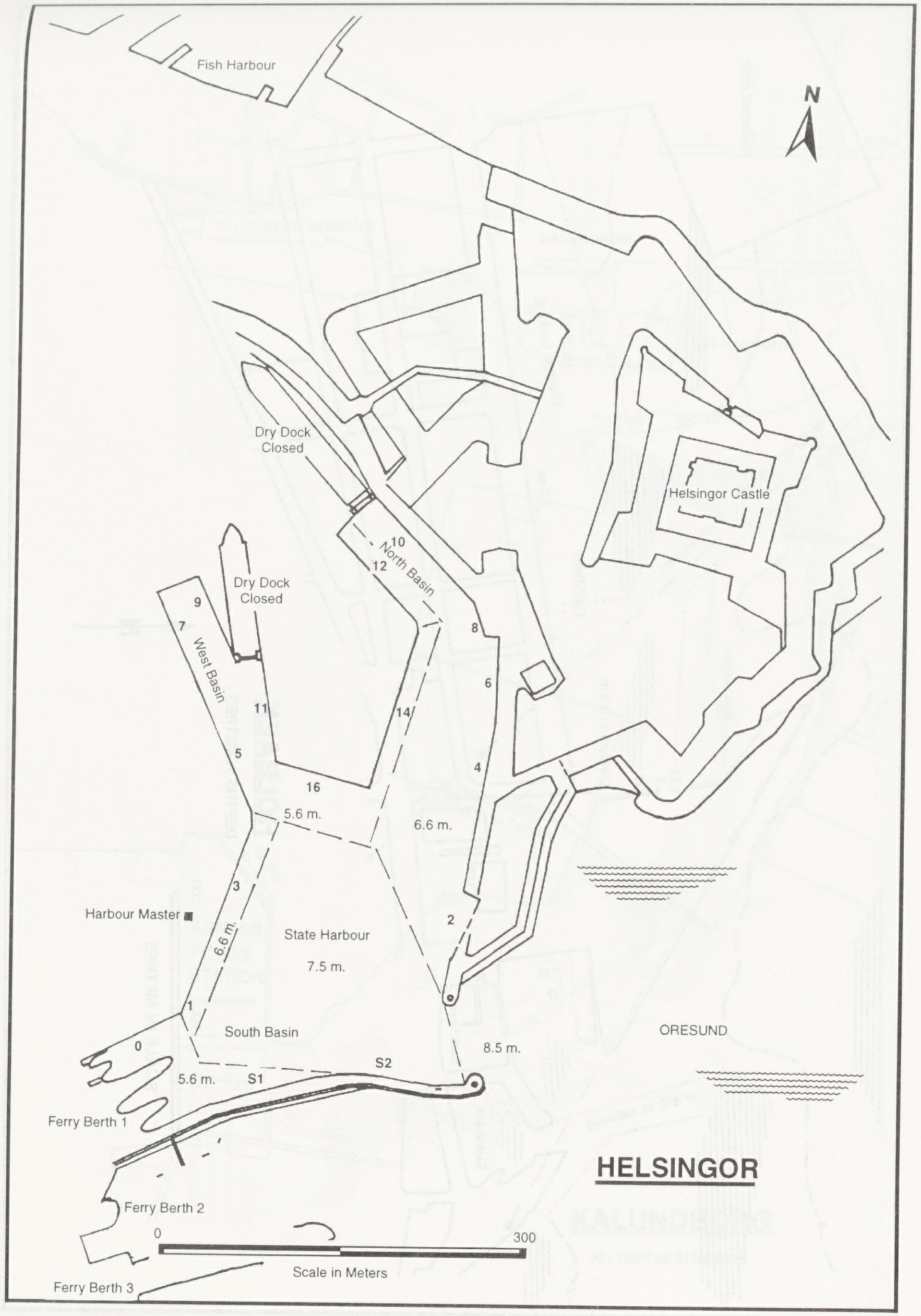
HADERSLEV

APPROACHES AND PORT PLAN

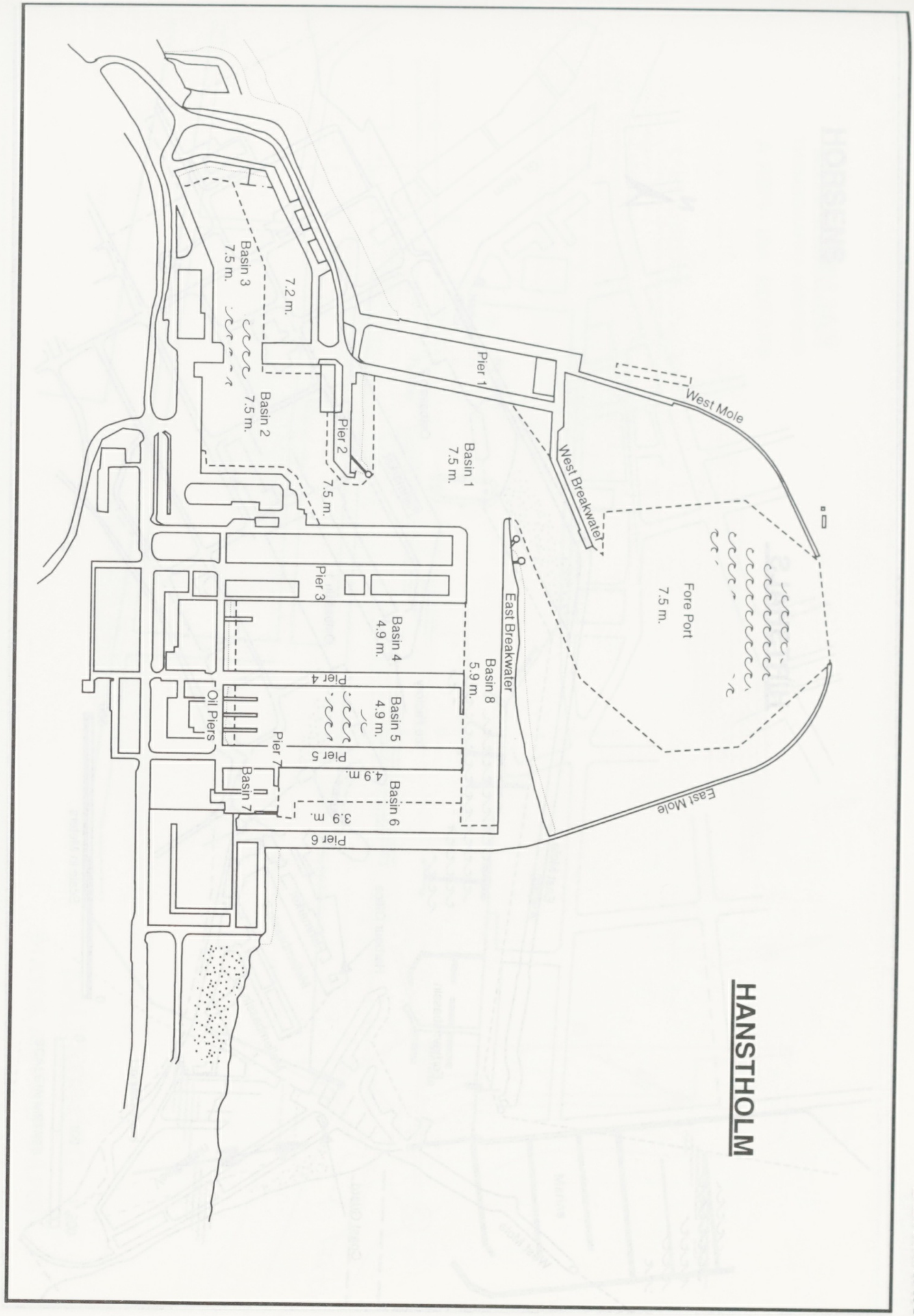
HADERSLEV

FJORD AND APPROACHES

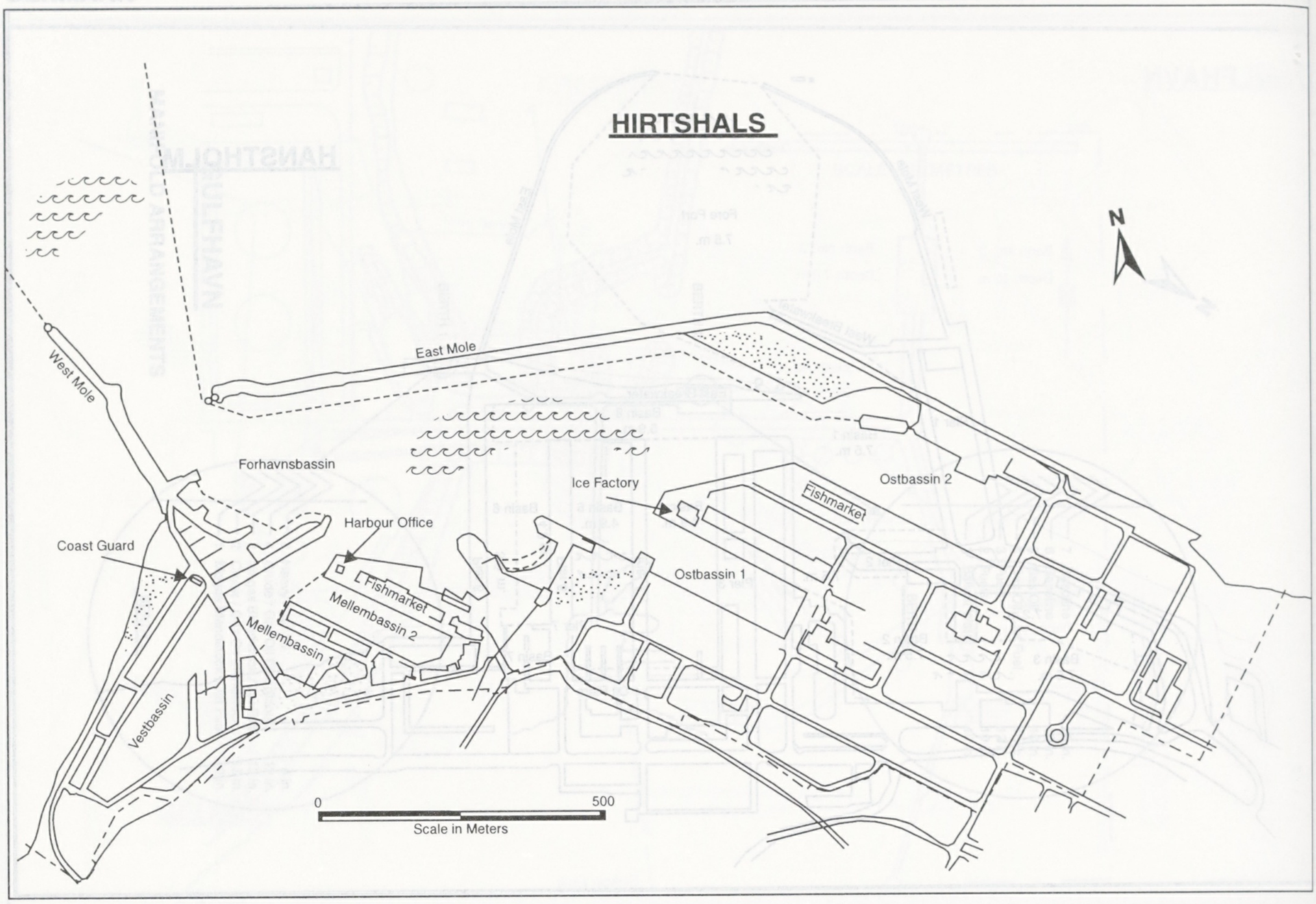
100m
0
100m
200m
Silo
Crane
Crane
Crane
6.0
6.0
6.0
6.0
5.5
5.5
5.5
5.0
5.0
4.5
4.5
4.0
4.0
2.5
2.5
Fish Quay
Little Belt
Buoyed Approach Channel
Haderslev Fjord
55°16' N
HADERSLEV
9°35' E
9°40' E

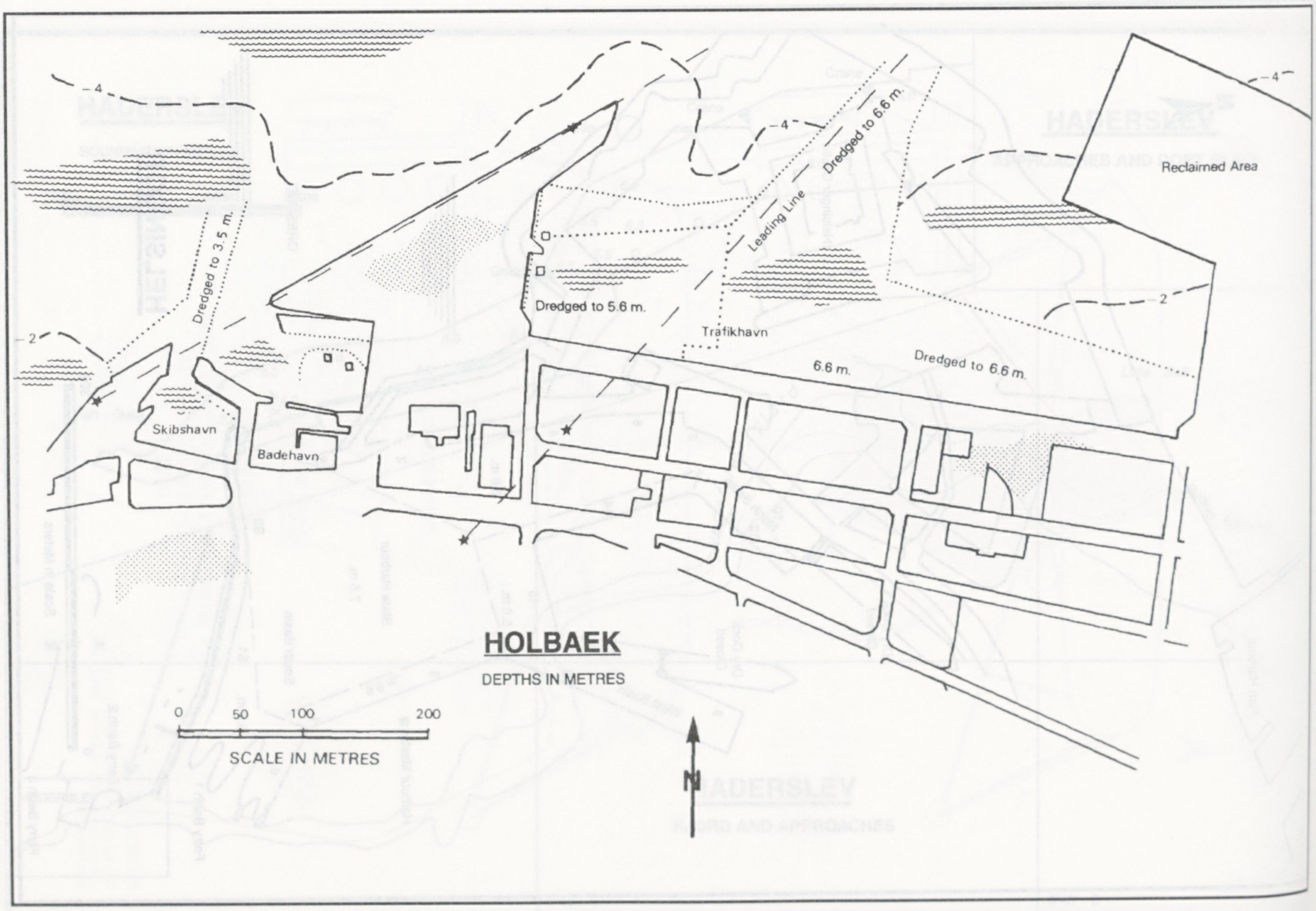

Fish Harbour
N
Dry Dock
Closed
Helsingor Castle
10
12
North Basin
Dry Dock
Closed
9
7
West Basin
8
6
11
14
5
4
16
5.6 m.
6.6 m.
3
Harbour Master
6.6 m.
State Harbour
7.5 m.
2
1
0
South Basin
ORESUND
S2
8.5 m.
5.6 m.
S1
Ferry Berth 1
Ferry Berth 2
0
300
Scale in Meters
Ferry Berth 3

HELSINGOR

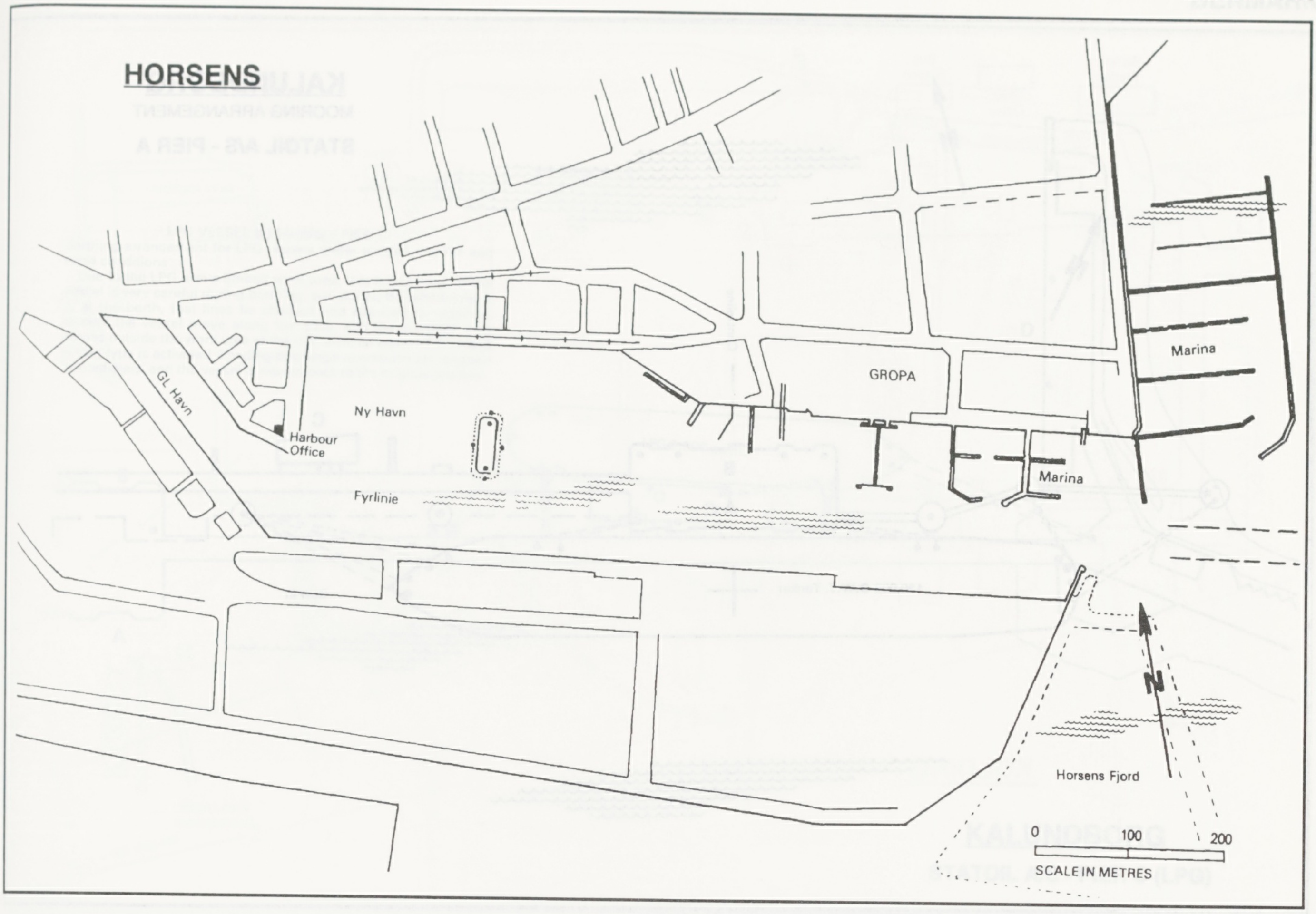

Basin 3
7.5 m.
7.2 m.
Basin 2
7.5 m.
Pier 2
7.5 m.
Pier 1
Basin 1
7.5 m.
West Mole
West Breakwater
Fore Port
7.5 m.
Pier 3
East Breakwater
Basin 4
4.9 m.
Basin 8
5.9 m.
Pier 4
Oil Piers
Basin 5
4.9 m.
Pier 7
Pier 5
Basin 7
4.9 m.
Basin 6
3.9 m.
Pier 6
East Mole

HANSTHOLM


HIRTSHALS
N
East Mole
West Mole
Forhavnsbassin
Ice Factory
Ostbassin 2
Fishmarket
Harbour Office
Coast Guard
Fishmarket
Mellembassin 2
Mellembassin 1
Ostbassin 1
Vestbassin
0
500
Scale in Meters

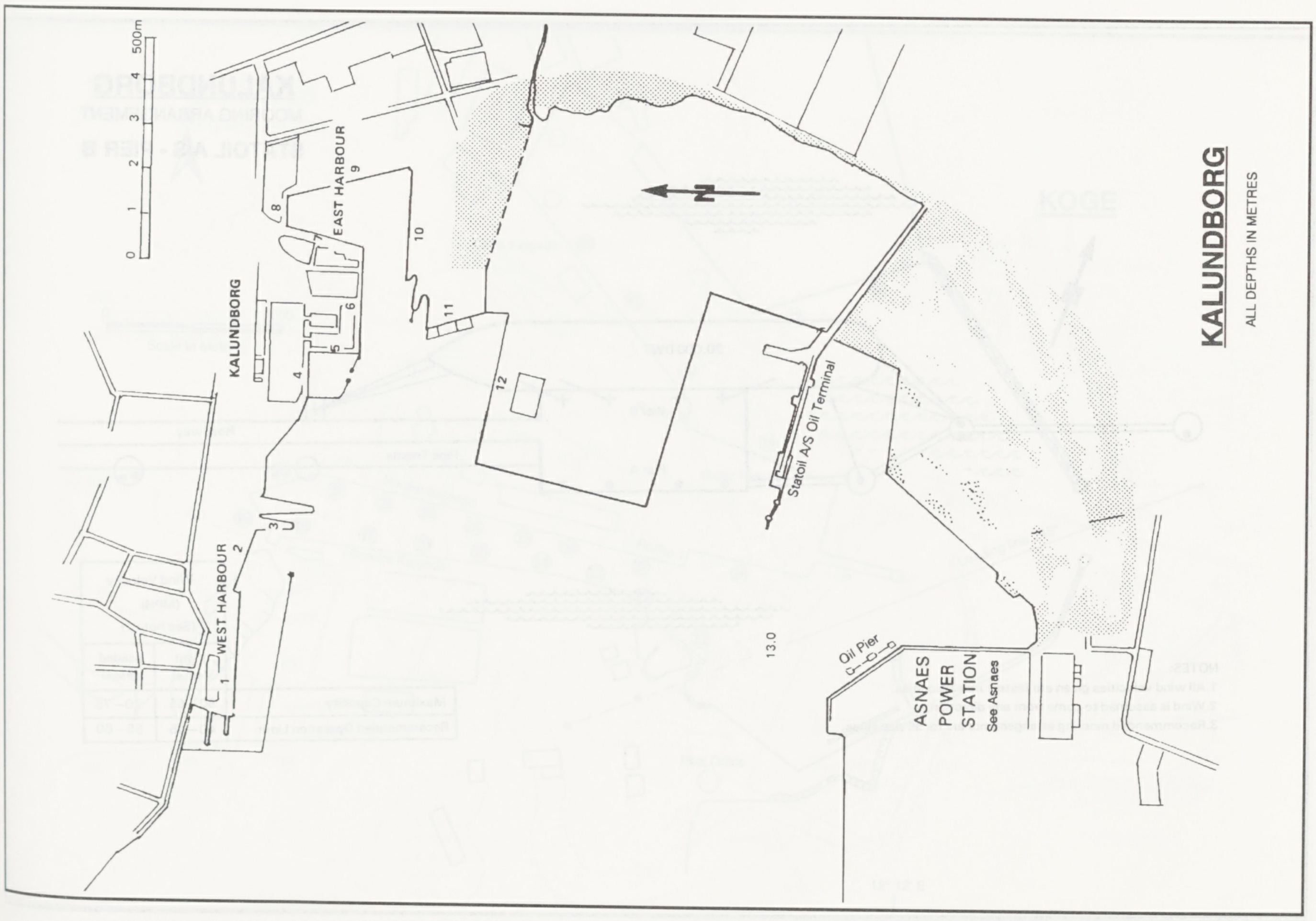

-4
-4
-4
Dredged to 6.6 m.
Leading Line
Reclaimed Area
Dredged to 3.5 m.
Dredged to 5.6 m.
-2
-2
Trafikhavn
6.6 m.
Dredged to 6.6 m.
Skibshavn
Badehavn
HOLBAEK
DEPTHS IN METRES
0
50
100
200
SCALE IN METRES
N

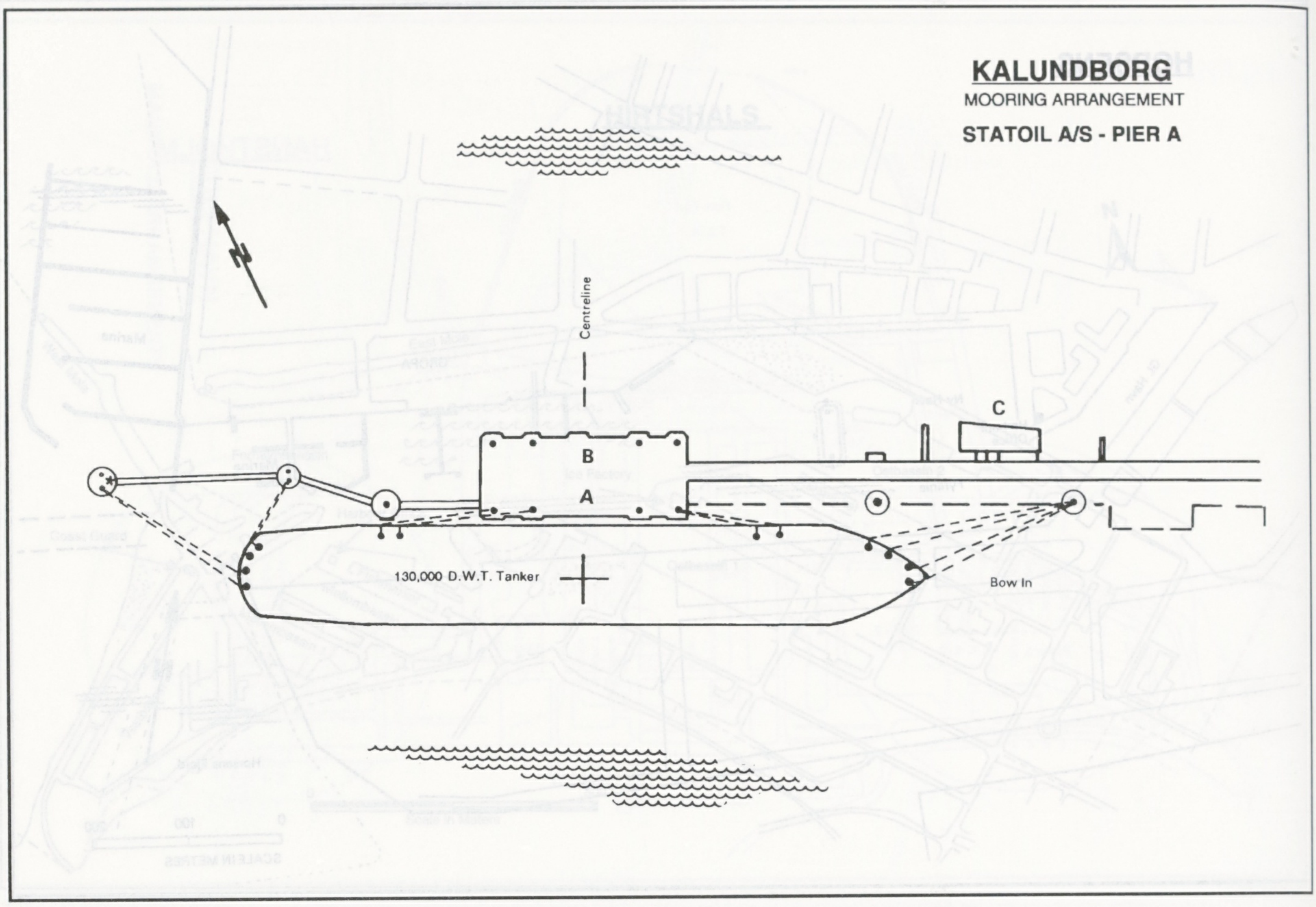
HORSENS

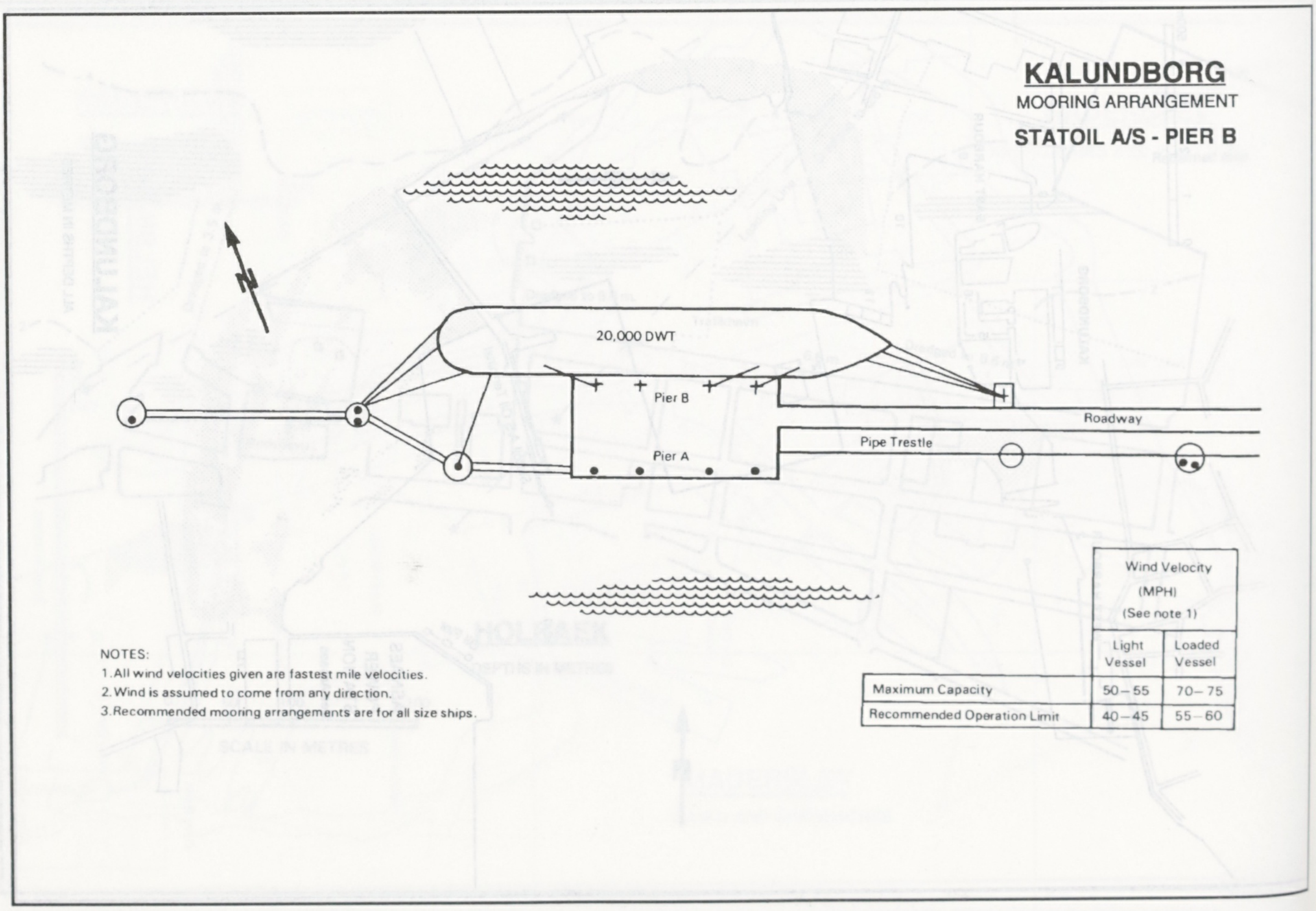

GL Havn
Harbour Office
Ny Havn
Fyrlinie
GROPA
Marina
Marina
Horsens Fjord
N
0
100
200
SCALE IN METRES

KALUNDBORG

ALL DEPTHS IN METRES

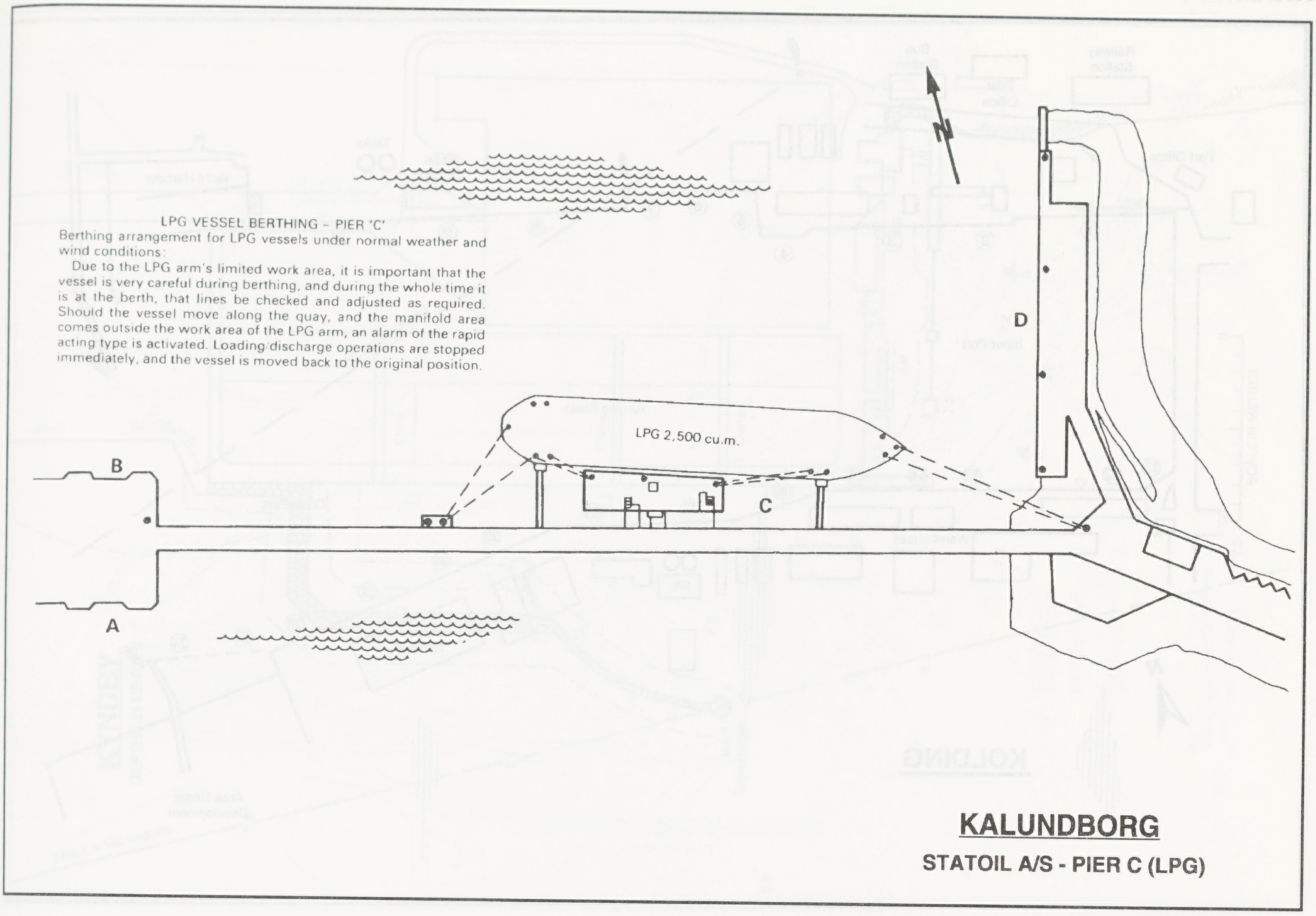

0
1
2
3
4
500m
KALUNDBORG
WEST HARBOUR
EAST HARBOUR
1
2
3
4
5
6
7
8
9
10
11
12
N
Statoil A/S Oil Terminal
13.0
Oil Pier
ASNAES POWER STATION
See Asnaes


KALUNDBORG
MOORING ARRANGEMENT
STATOIL A/S - PIER A
N
Centreline
B
A
C
130,000 D.W.T. Tanker
Bow In


KALUNDBORG
MOORING ARRANGEMENT
STATOIL A/S - PIER B
N
20,000 DWT
Pier B
Pier A
Roadway
Pipe Trestle

NOTES:
1. All wind velocities given are fastest mile velocities.
2. Wind is assumed to come from any direction.
3. Recommended mooring arrangements are for all size ships.

	Wind Velocity (MPH) (See note 1)	
	Light Vessel	Loaded Vessel
Maximum Capacity	50 – 55	70 – 75
Recommended Operation Limit	40 – 45	55 – 60



LPG VESSEL BERTHING – PIER 'C'

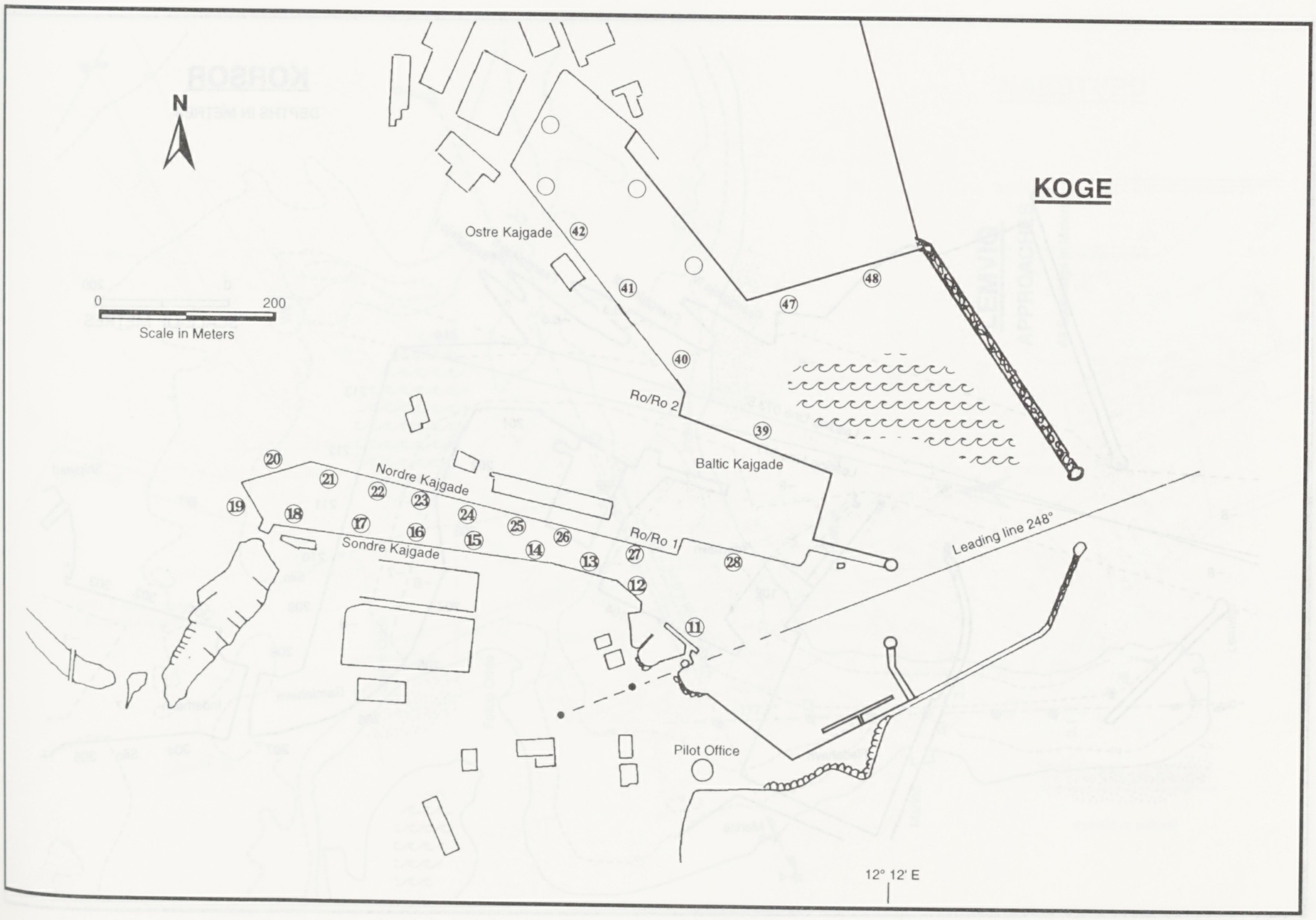
Berthing arrangement for LPG vessels under normal weather and wind conditions:

Due to the LPG arm's limited work area, it is important that the vessel is very careful during berthing, and during the whole time it is at the berth, that lines be checked and adjusted as required. Should the vessel move along the quay, and the manifold area comes outside the work area of the LPG arm, an alarm of the rapid acting type is activated. Loading/discharge operations are stopped immediately, and the vessel is moved back to the original position.

N
LPG 2,500 cu.m.
A
B
C
D

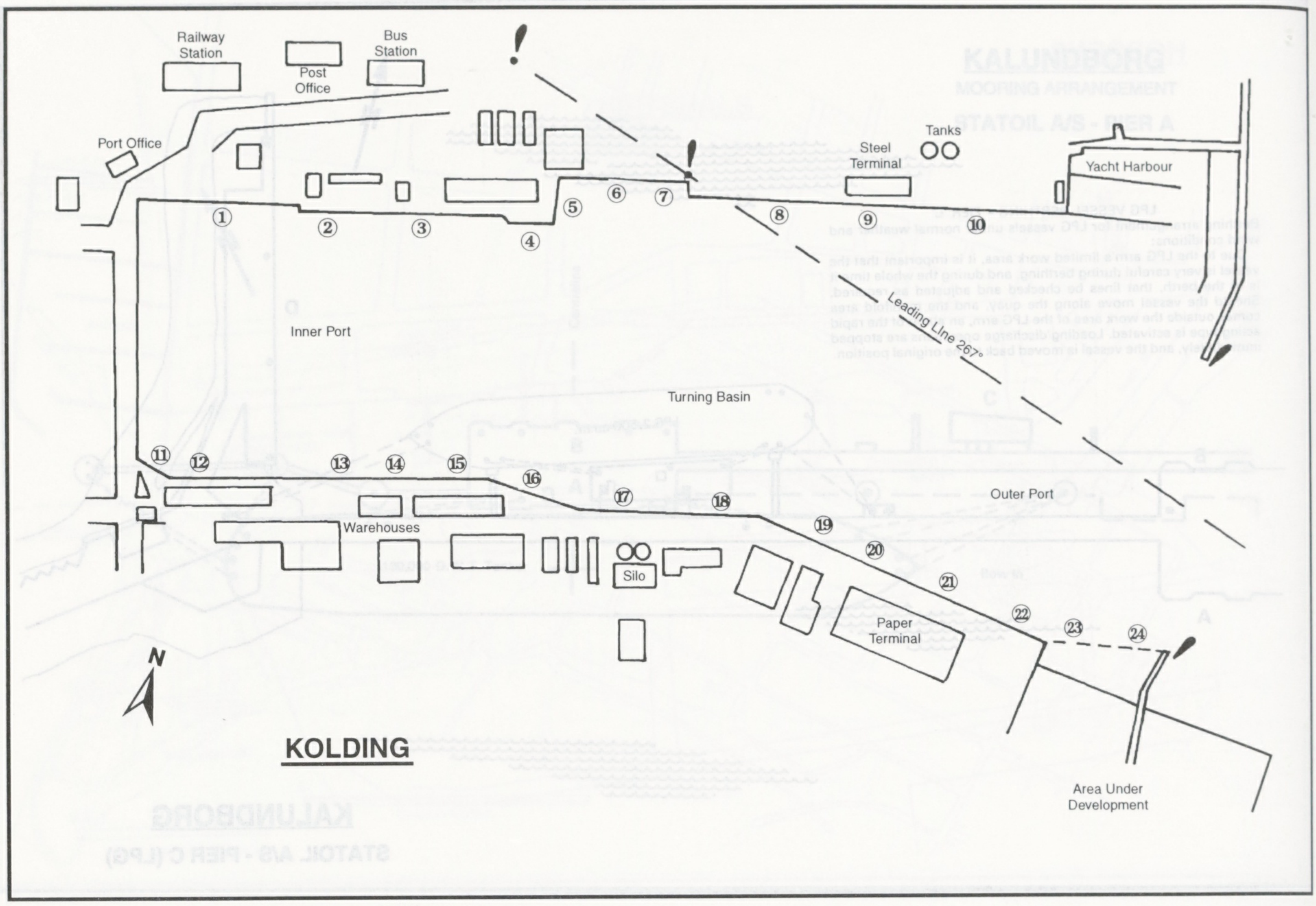
KALUNDBORG

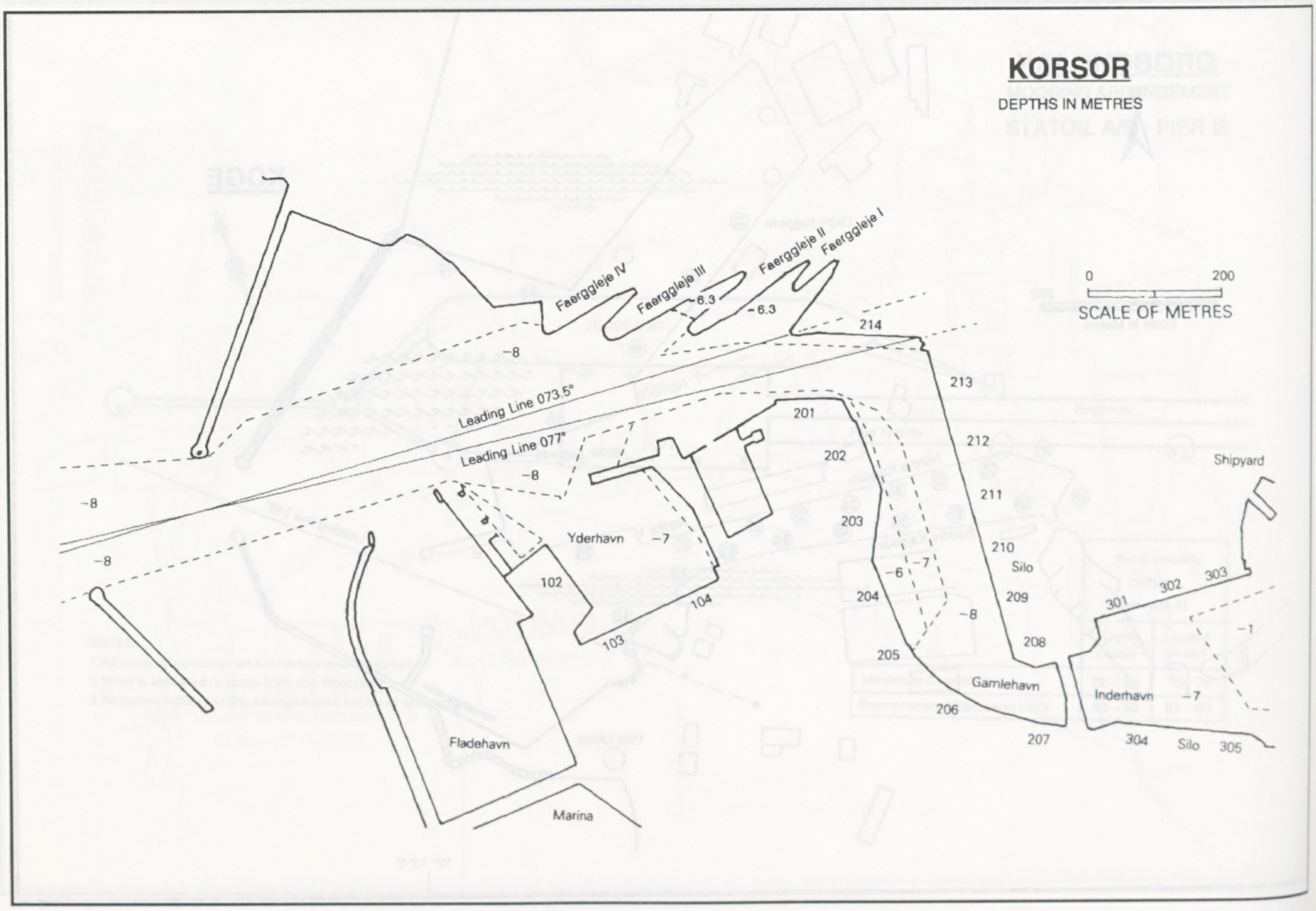
STATOIL A/S - PIER C (LPG)

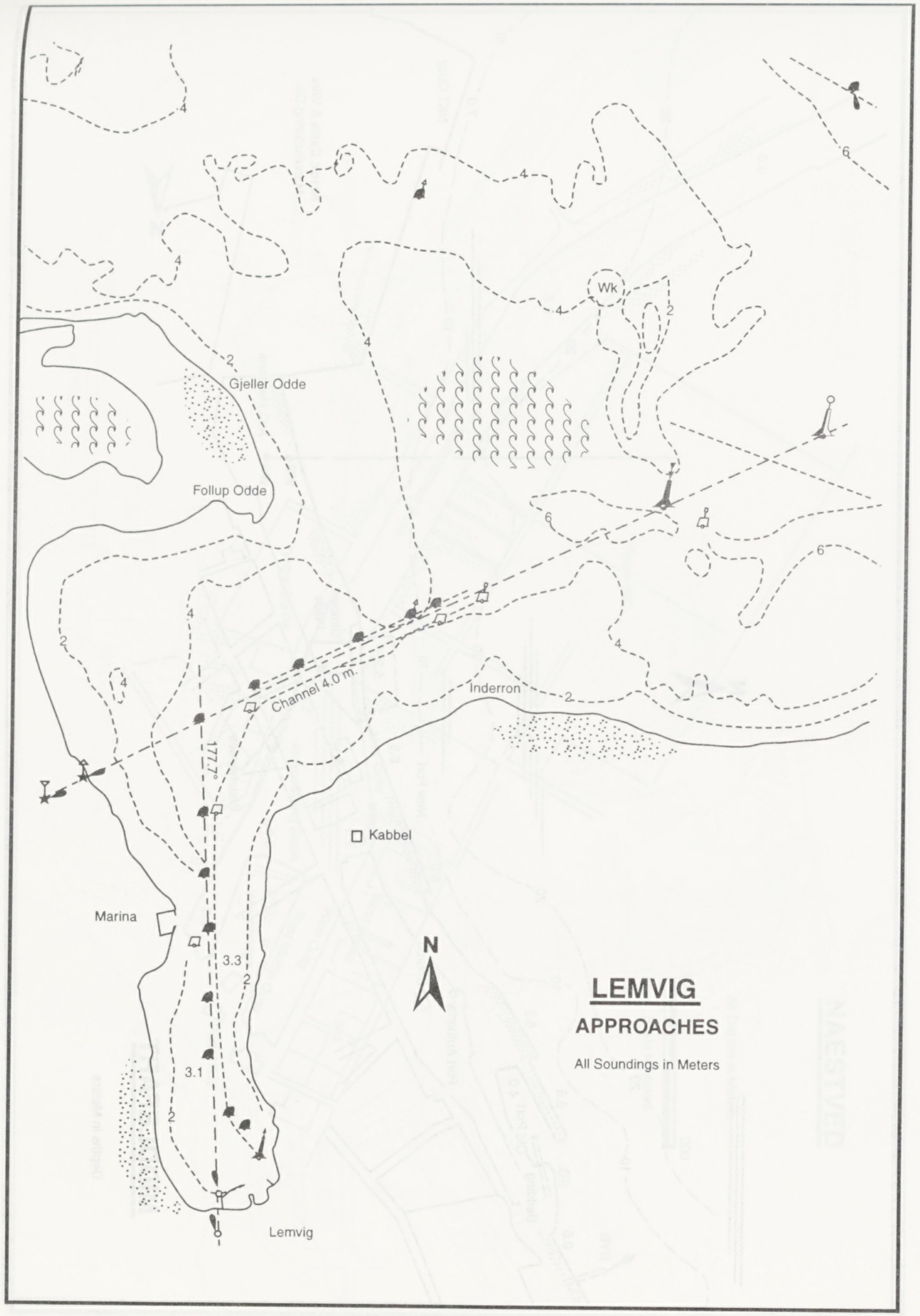


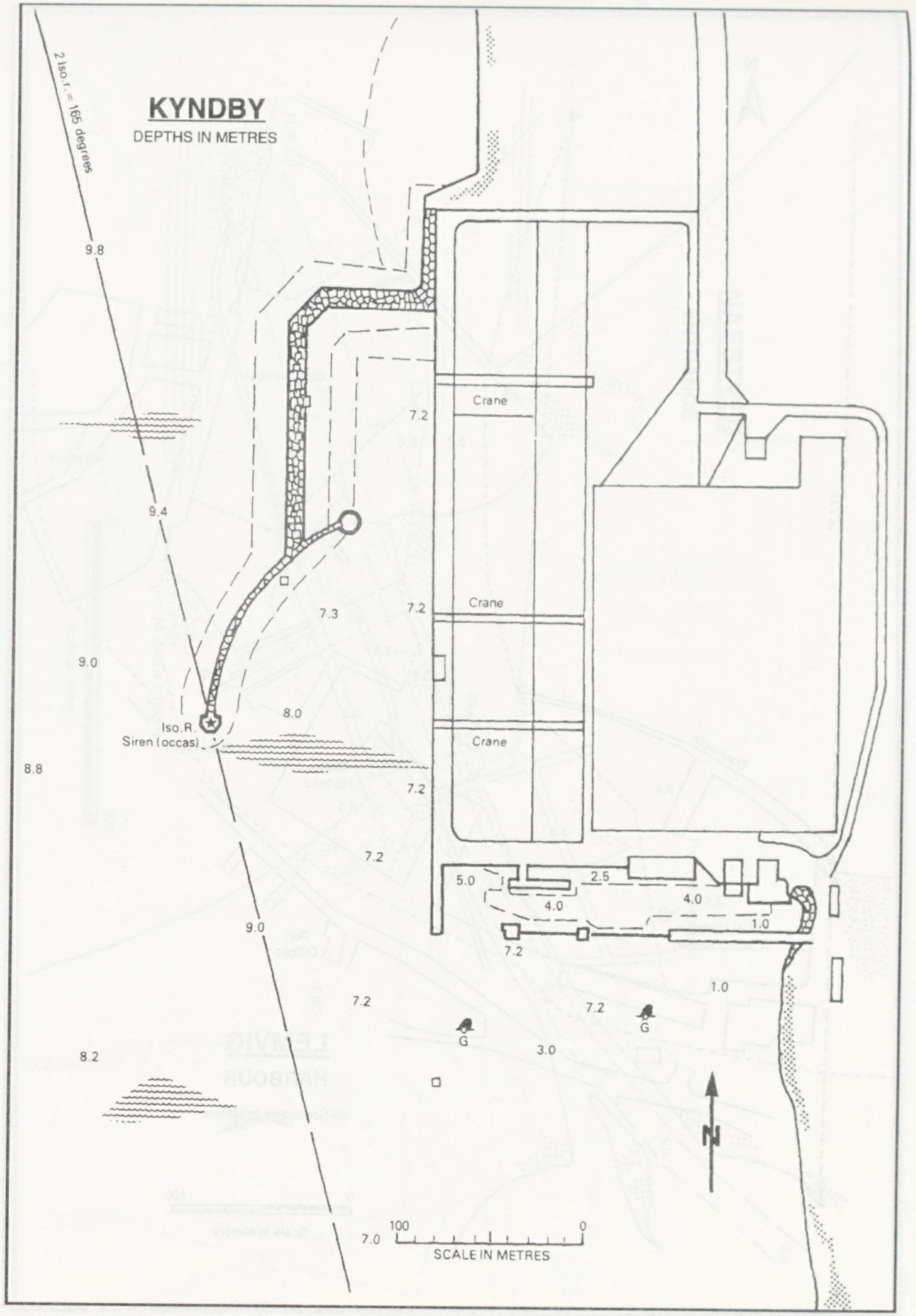
KOGE

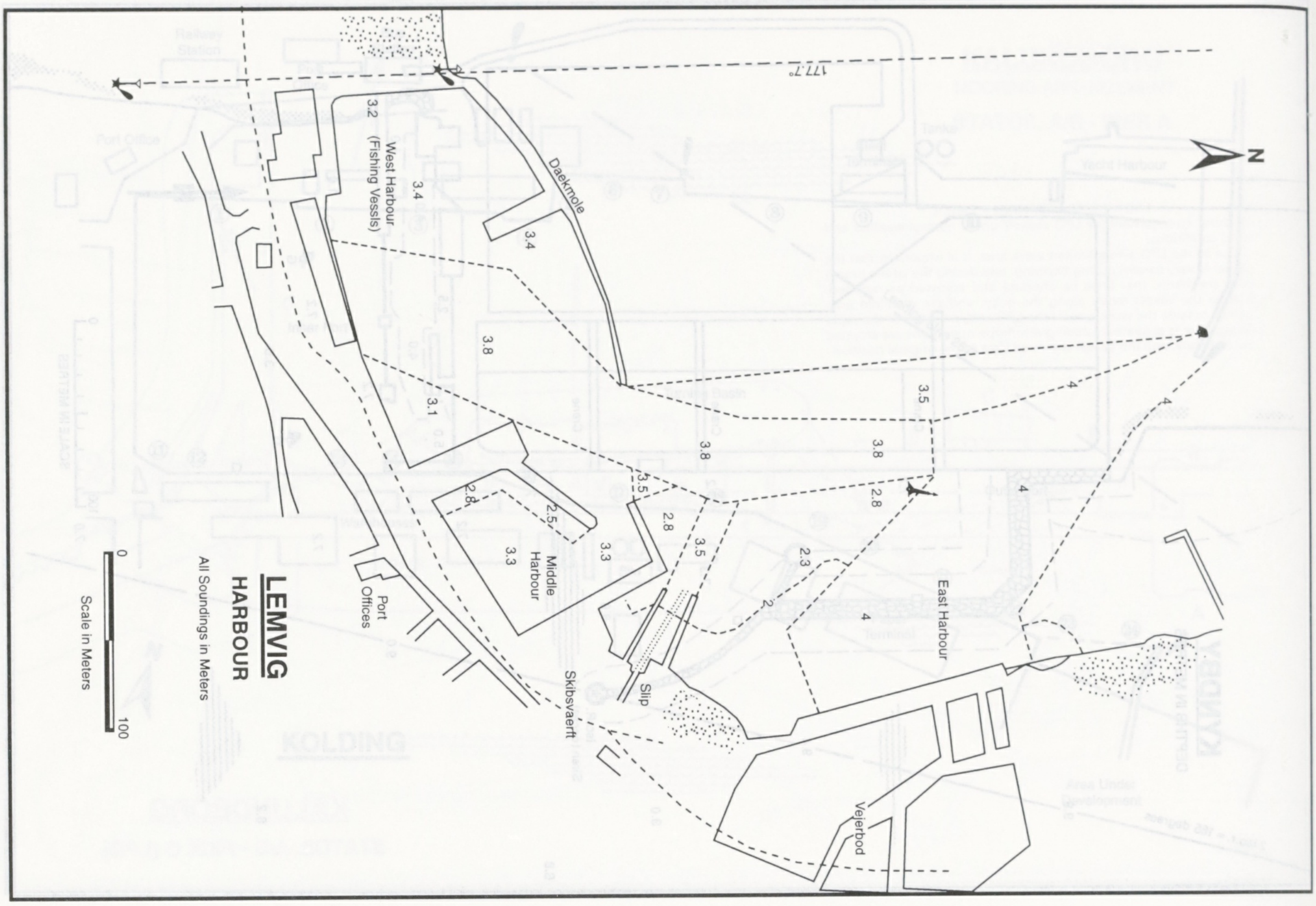
N
0
200
Scale in Meters
Ostre Kajgade
Ro/Ro 2
Baltic Kajgade
Nordre Kajgade
Sondre Kajgade
Ro/Ro 1
Leading line 248°
Pilot Office
12° 12' E
㊷
㊶
㊵
㊴
㊽
㊼
⑳
㉑
㉒
㉓
㉔
㉕
㉖
⑲
⑱
⑰
⑯
⑮
⑭
⑬
㉗
㉘
⑫
⑪

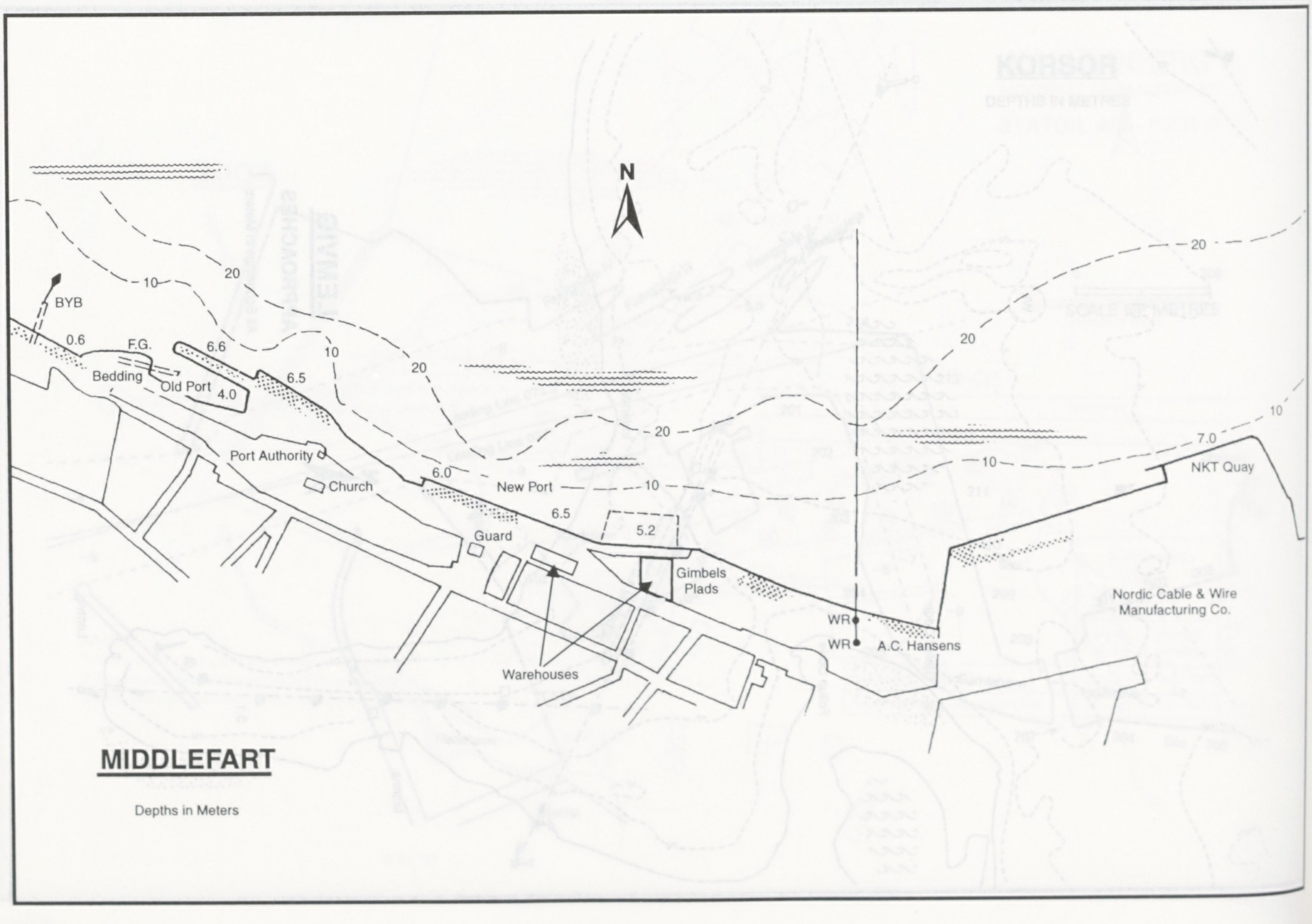

Railway Station
Post Office
Bus Station
Port Office
Steel Terminal
Tanks
Yacht Harbour
①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
Inner Port
Leading Line 267°
Turning Basin
⑪
⑫
⑬
⑭
⑮
⑯
⑰
⑱
Outer Port
⑲
⑳
㉑
㉒
㉓
㉔
Warehouses
Silo
Paper Terminal
N
KOLDING
Area Under Development

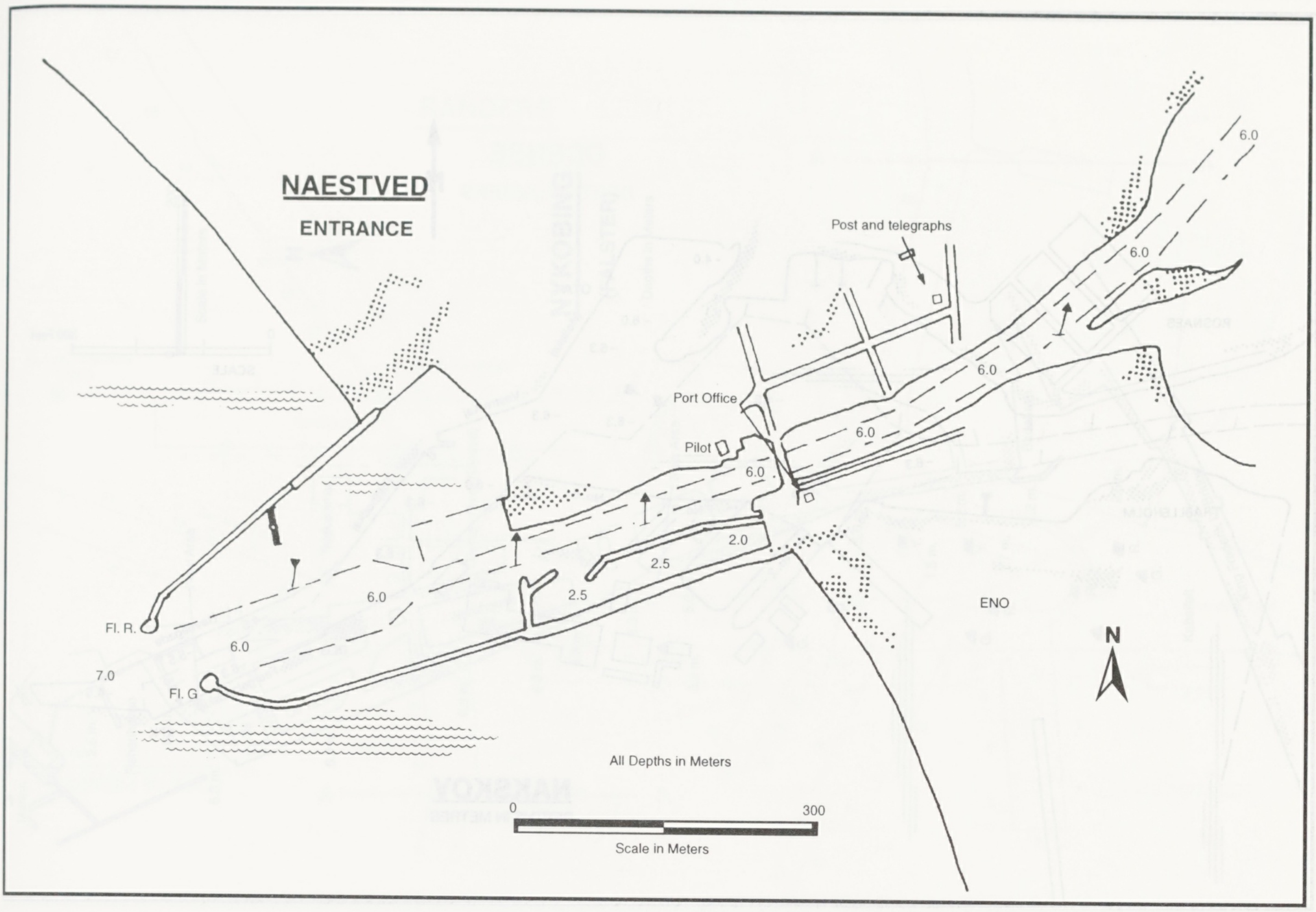

KORSOR
DEPTHS IN METRES
0
200
SCALE OF METRES
Faergleje IV
Faergleje III
Faergleje II
Faergleje I
6.3
−6.3
214
−8
213
Leading Line 073.5°
201
212
Leading Line 077°
202
−8
211
−8
Shipyard
Yderhavn
−7
203
−8
102
−6
−7
210
Silo
303
302
301
104
204
209
−8
103
208
−1
205
Gamlehavn
Inderhavn
−7
206
207
304
Silo
305
Fladehavn
Marina

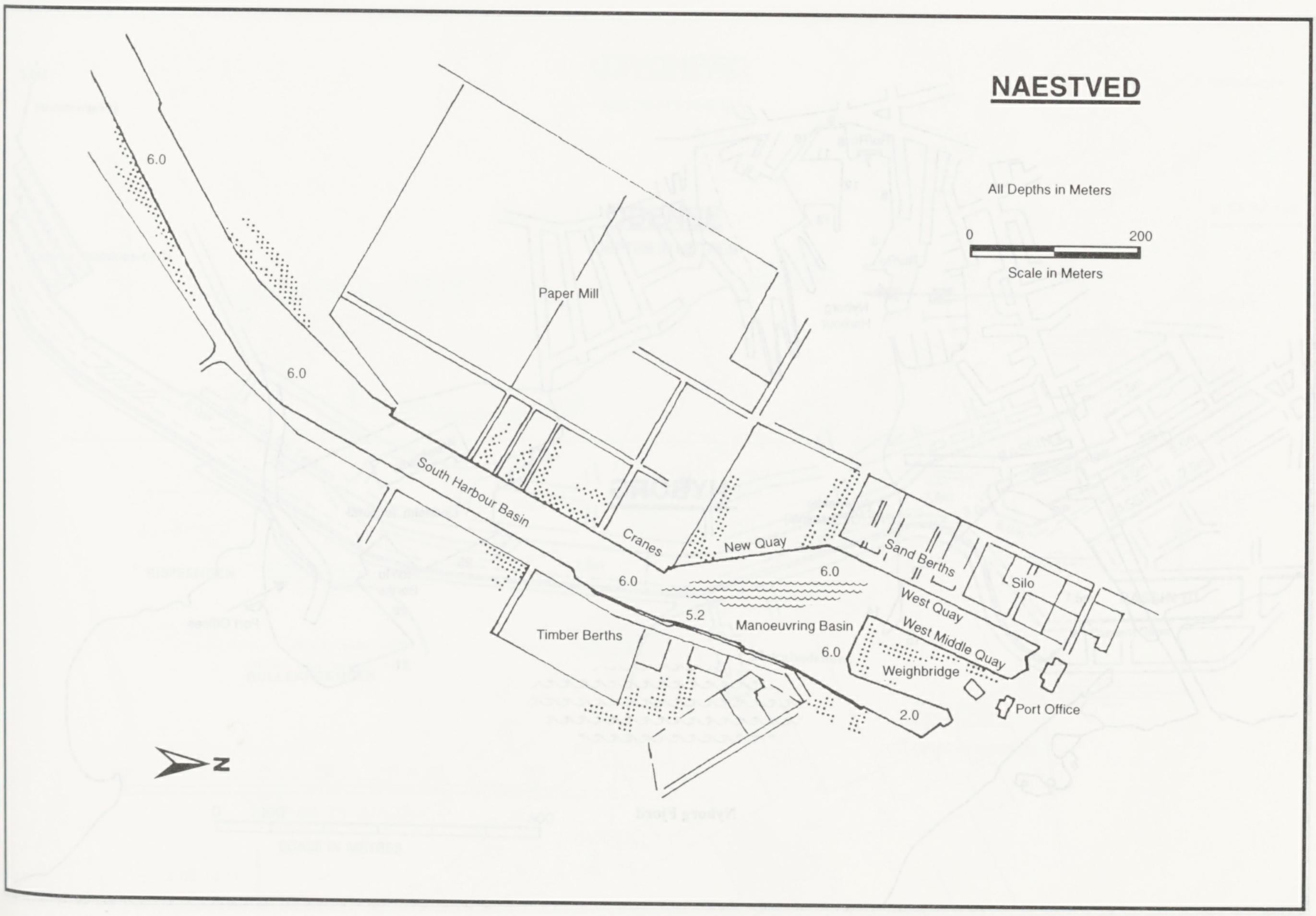

4
6
Wk
2
Gjeller Odde
Follup Odde
Channel 4.0 m.
Inderron
177.7°
Kabbel
Marina
3.3
3.1
2
Lemvig
N
LEMVIG
APPROACHES
All Soundings in Meters

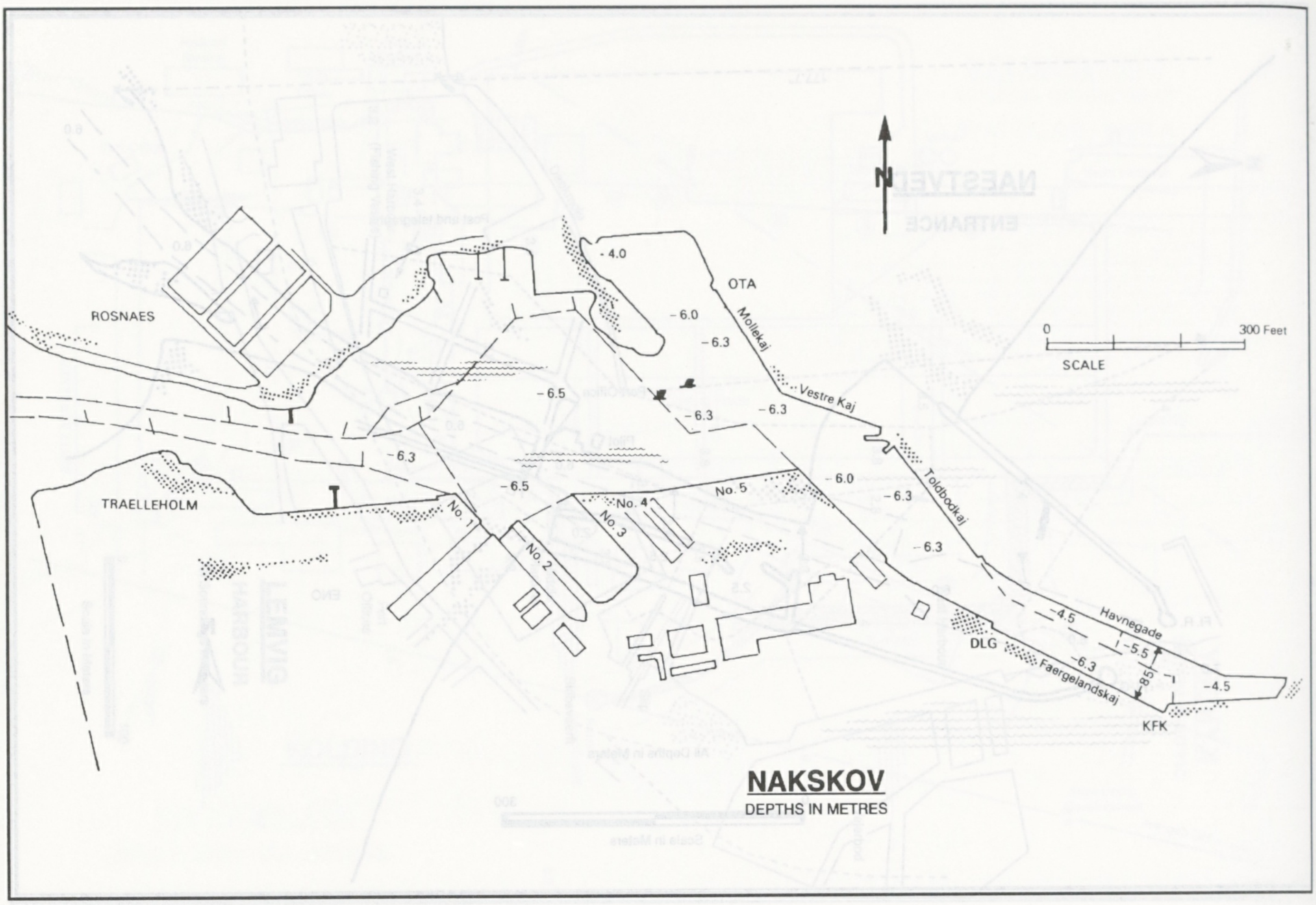

KYNDBY
DEPTHS IN METRES
2 Iso.r. = 165 degrees
9.8
9.4
9.0
8.8
8.2
8.0
7.3
7.2
Crane
Crane
Crane
Iso.R.
Siren (occas)
5.0
2.5
4.0
4.0
1.0
1.0
7.2
3.0
G
G
7.0
100
0
SCALE IN METRES


LEMVIG
HARBOUR
All Soundings in Meters
Scale in Meters
0
100
N
177.7°
West Harbour
(Fishing Vessls)
Daekmole
Middle Harbour
Port Offices
Skibsvaerft
Slip
East Harbour
Vejerbod
3.2
3.4
3.4
3.8
3.1
2.8
2.5
3.3
3.3
3.5
2.8
3.8
3.5
3.5
3.8
2.8
2.3
2
4
4
4
4


MIDDLEFART
Depths in Meters
N
BYB
0.6
F.G.
Bedding
Old Port
4.0
6.6
6.5
Port Authority
Church
6.0
New Port
6.5
Guard
5.2
Warehouses
Gimbels Plads
WR
WR
A.C. Hansens
7.0
NKT Quay
Nordic Cable & Wire Manufacturing Co.
10
20
10
20
20
10
20
10
20
10
10

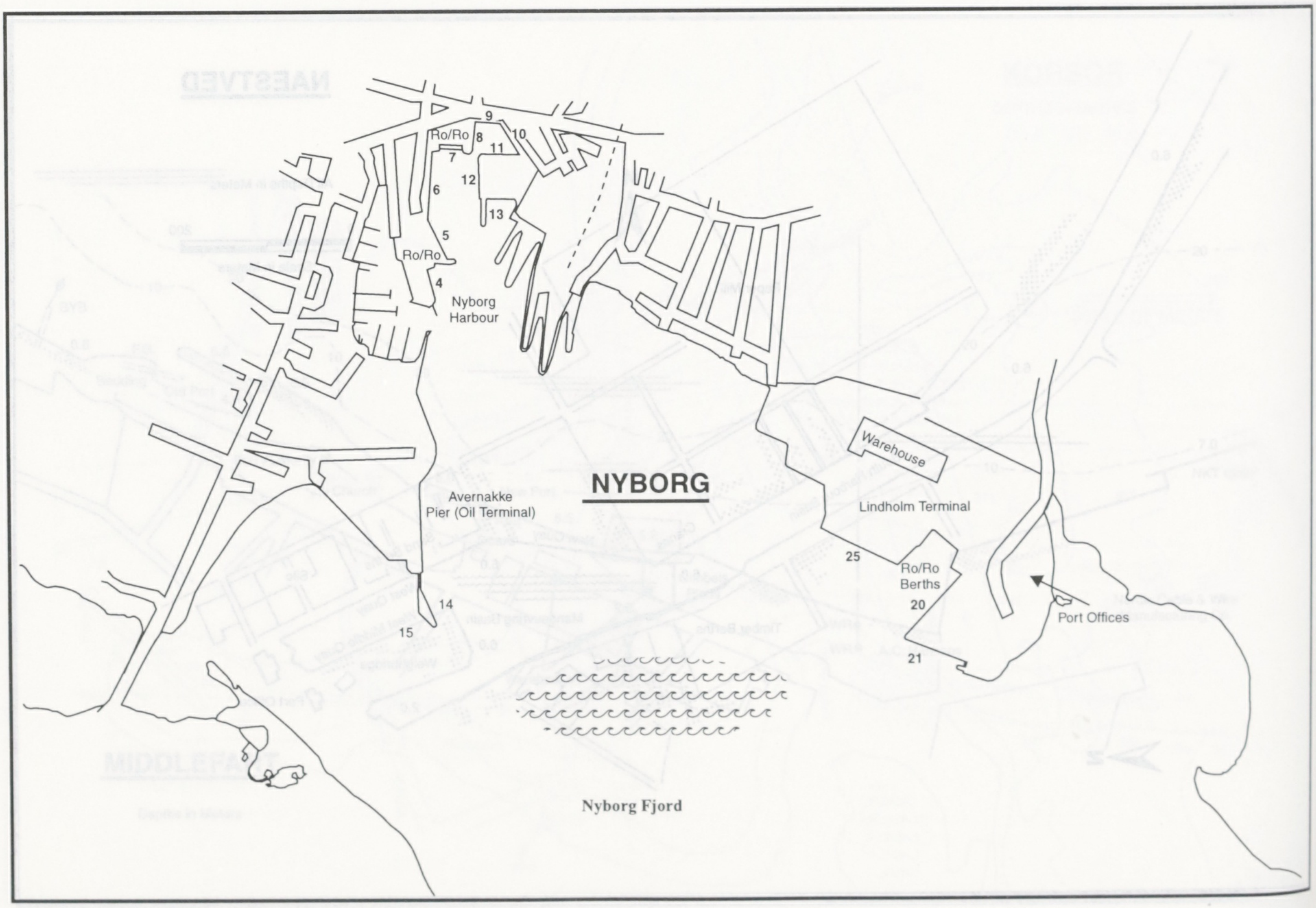

NAESTVED
ENTRANCE
Post and telegraphs
6.0
6.0
6.0
Port Office
Pilot
6.0
6.0
2.0
2.5
2.5
6.0
Fl. R.
6.0
7.0
Fl. G
ENO
N
All Depths in Meters
0
300
Scale in Meters


NAESTVED
All Depths in Meters
0
200
Scale in Meters
6.0
Paper Mill
6.0
South Harbour Basin
Cranes
New Quay
Sand Berths
Silo
6.0
6.0
West Quay
West Middle Quay
5.2
Manoeuvring Basin
Timber Berths
6.0
Weighbridge
Port Office
2.0
N

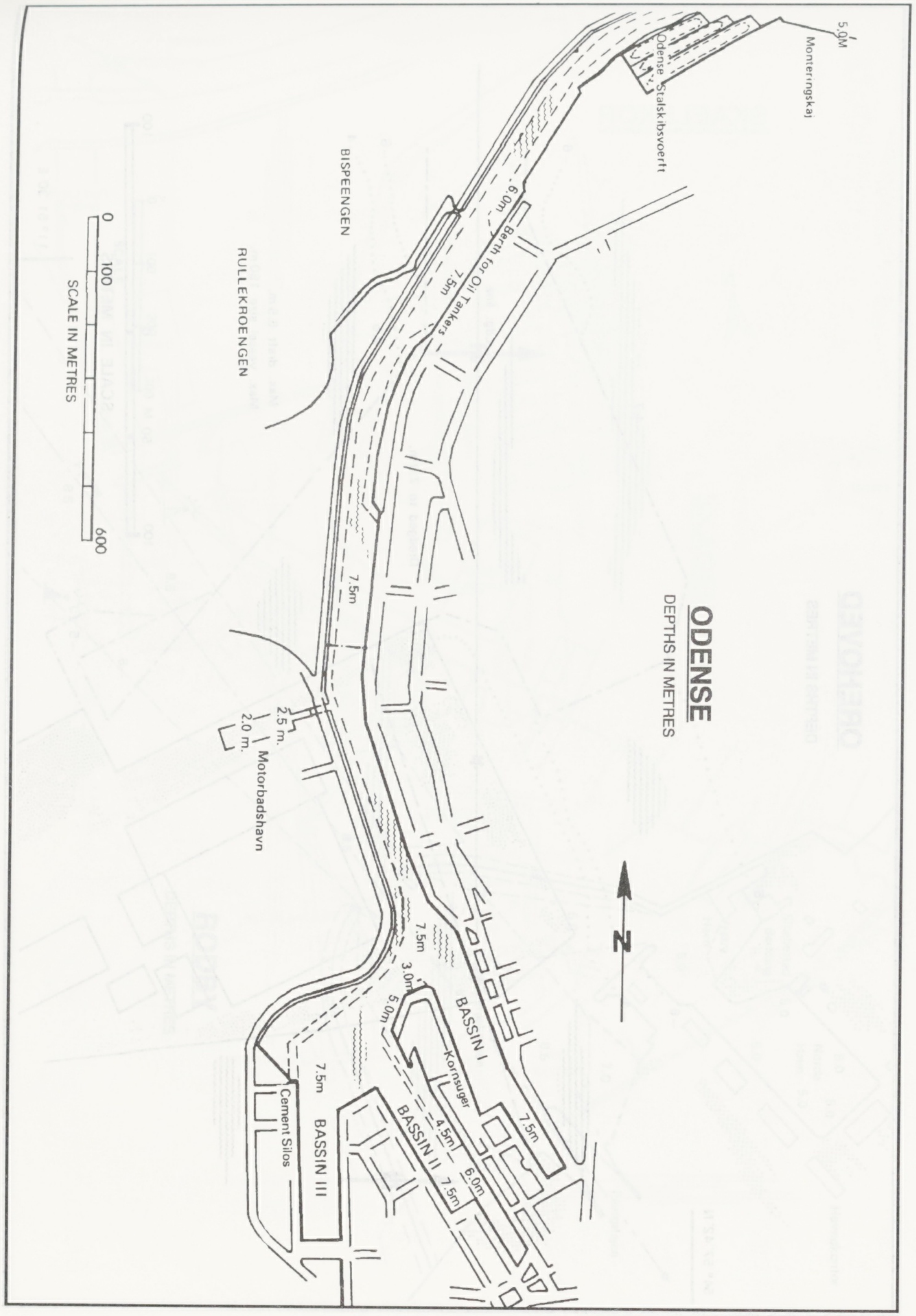

N
ROSNAES
TRAELLEHOLM
- 4.0
OTA
Mollekaj
- 6.0
- 6.3
Vestre Kaj
- 6.5
- 6.3
- 6.3
- 6.3
- 6.5
No. 1
No. 2
No. 3
No. 4
No. 5
- 6.0
- 6.3
Toldbodkaj
- 6.3
-4.5
Havnegade
-5.5
8.5
-6.3
-4.5
DLG
Faergelandskaj
KFK
0
300 Feet
SCALE

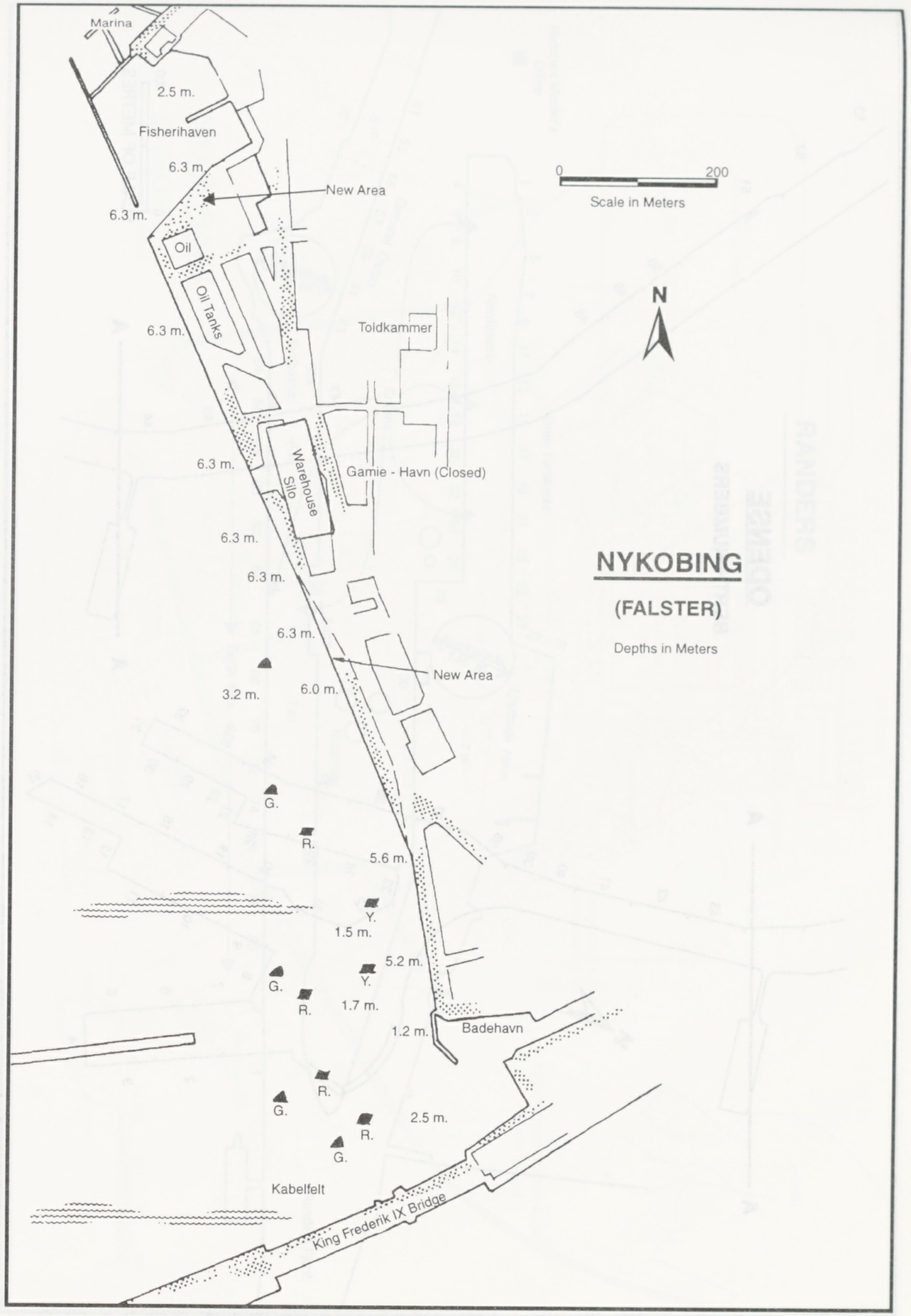
NAKSKOV

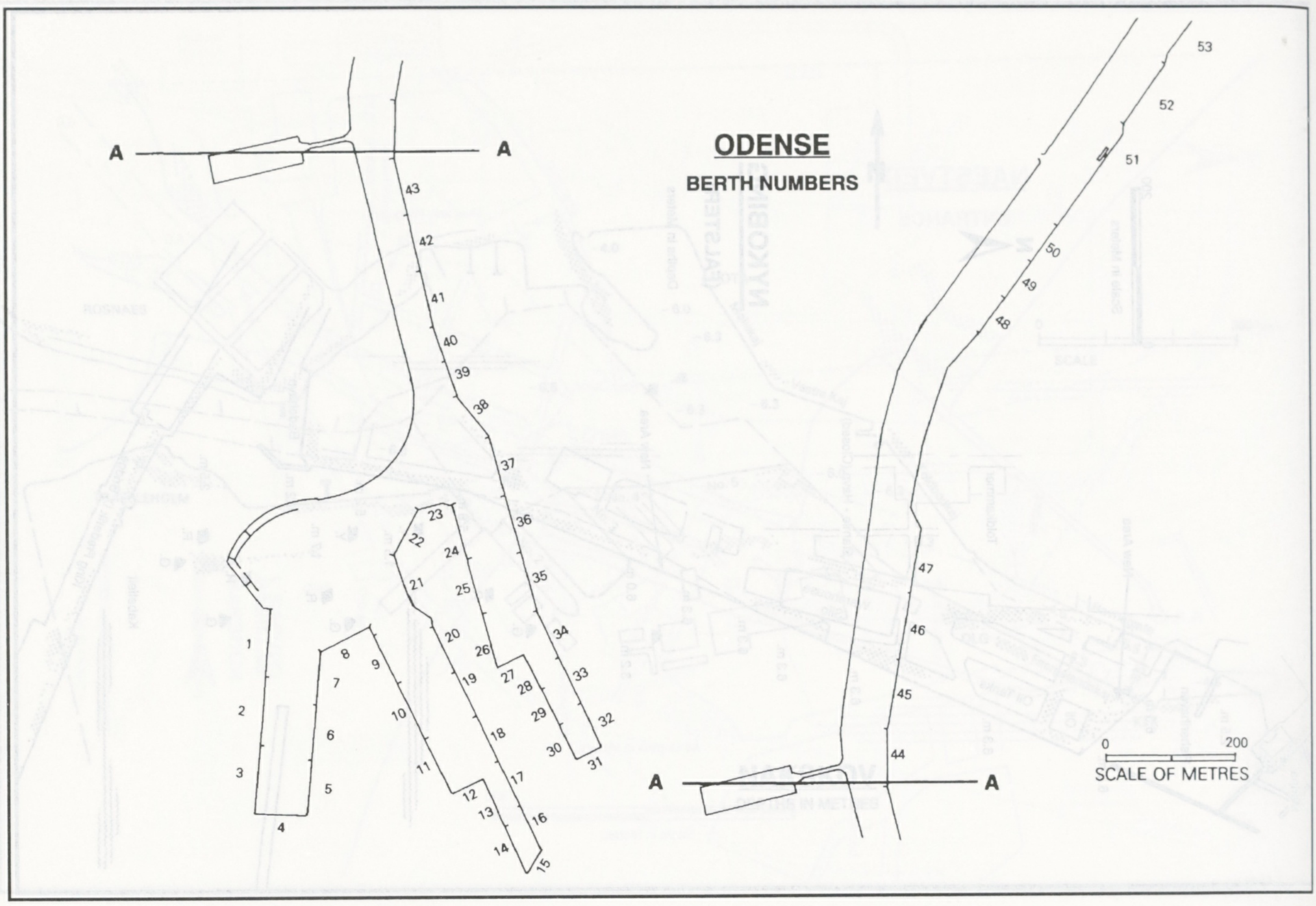
DEPTHS IN METRES


Ro/Ro
9
8
10
11
7
12
6
13
5
Ro/Ro
4
Nyborg Harbour
Avernakke Pier (Oil Terminal)
14
15
Warehouse
Lindholm Terminal
25
Ro/Ro Berths
20
21
Port Offices
Nyborg Fjord

NYBORG


ODENSE
DEPTHS IN METRES
Monteringskaj
5.0M
Odense Stalskibsvoerft
6.0m
Berth for Oil Tankers
7.5m
BISPEENGEN
RULLEKROENGEN
0
100
600
SCALE IN METRES
7.5m
2.5 m.
2.0 m.
Motorbadshavn
N
7.5m
3.0m
5.0m
BASSIN I
Kornsuger
7.5m
4.5m
BASSIN II
6.0m
7.5m
7.5m
BASSIN III
Cement Silos

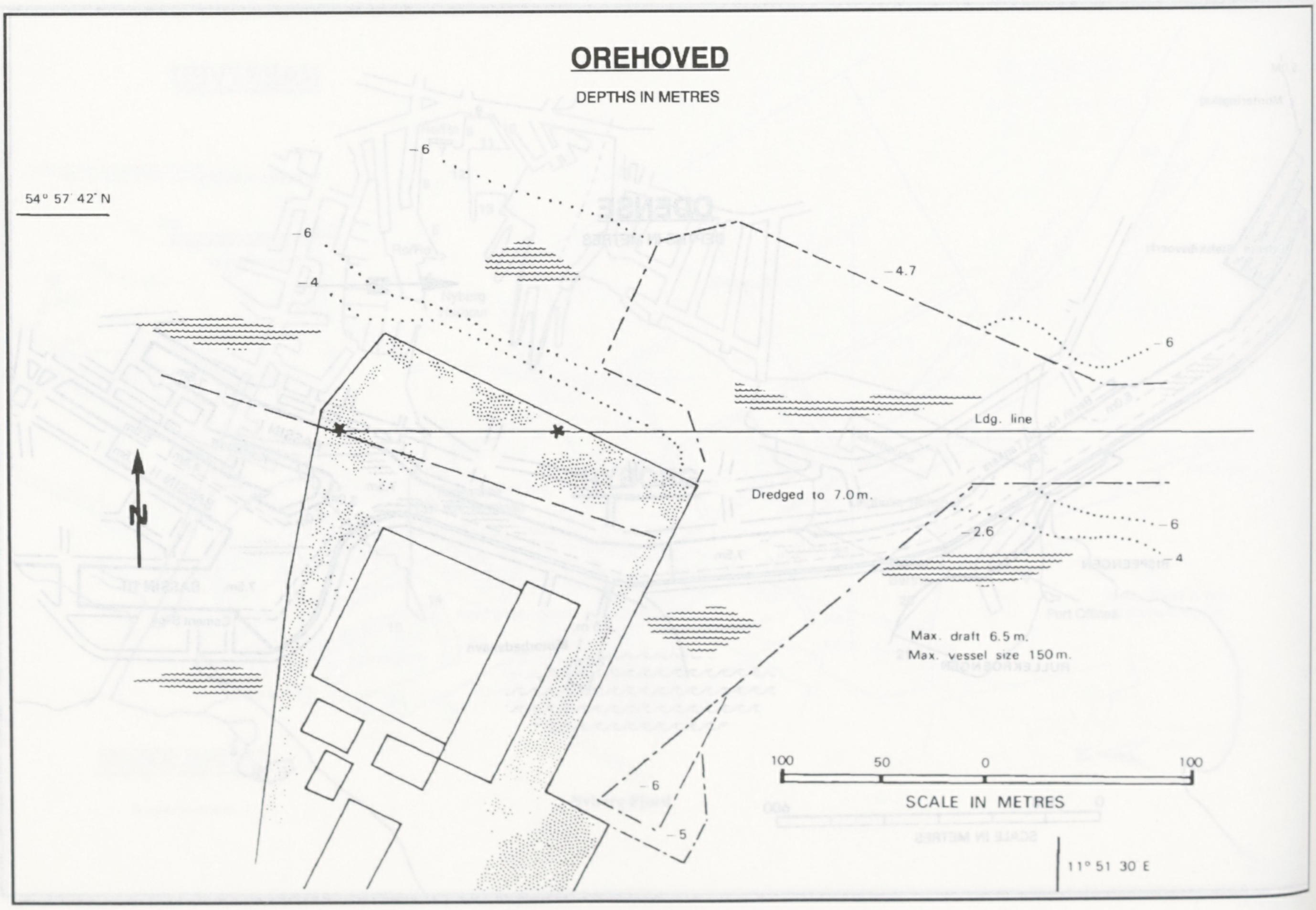

Marina
2.5 m.
Fisherihaven
6.3 m.
6.3 m.
New Area
0
200
Scale in Meters
Oil
Oil Tanks
6.3 m.
N
Toldkammer
6.3 m.
Warehouse Silo
Gamie - Havn (Closed)
6.3 m.
6.3 m.
NYKOBING
(FALSTER)
Depths in Meters
6.3 m.
New Area
3.2 m.
6.0 m.
G.
R.
5.6 m.
Y.
1.5 m.
5.2 m.
G.
Y.
R.
1.7 m.
1.2 m.
Badehavn
R.
G.
R.
2.5 m.
G.
Kabelfelt
King Frederik IX Bridge



ODENSE

BERTH NUMBERS

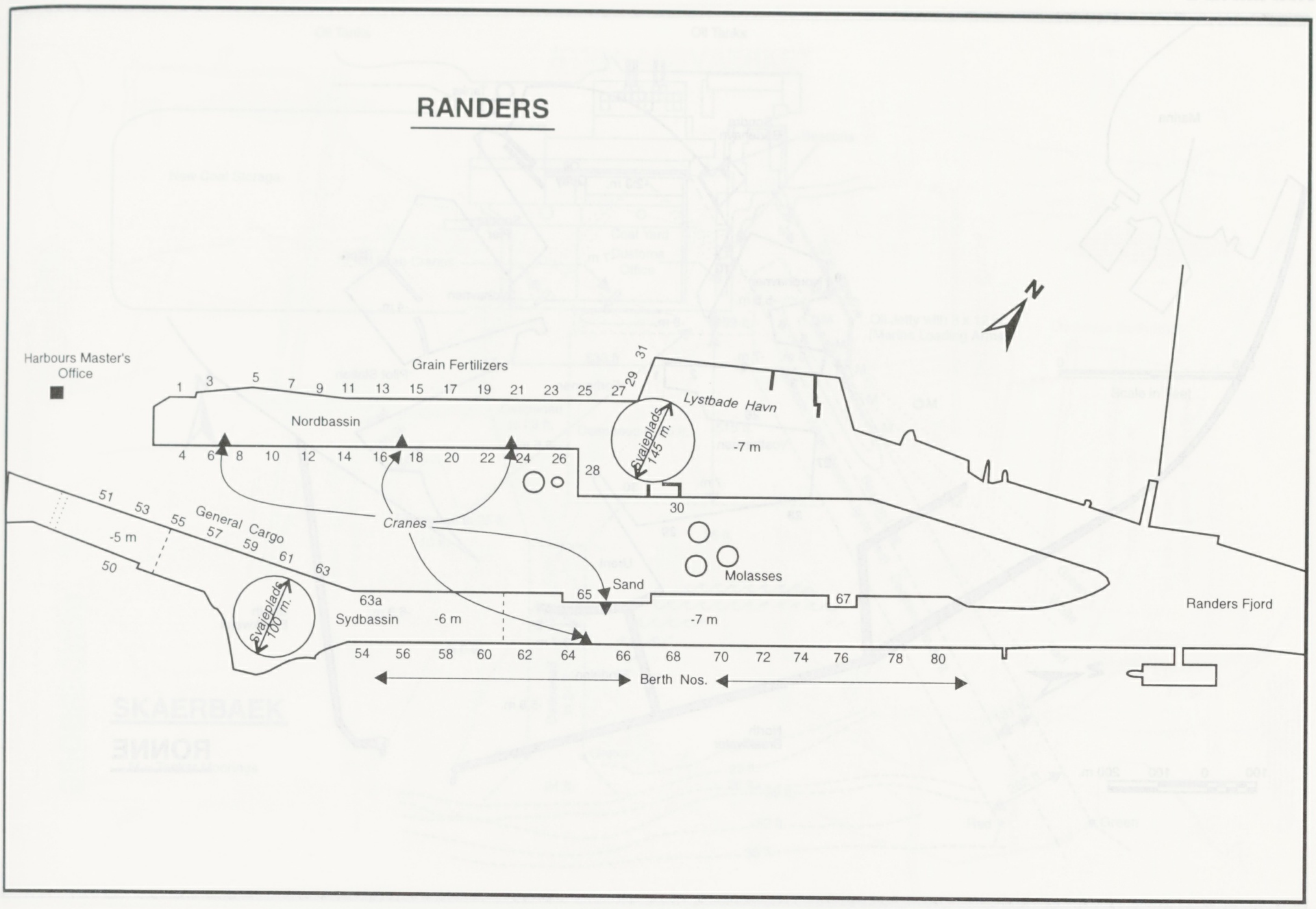
A
A
A
A
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
0
200
SCALE OF METRES

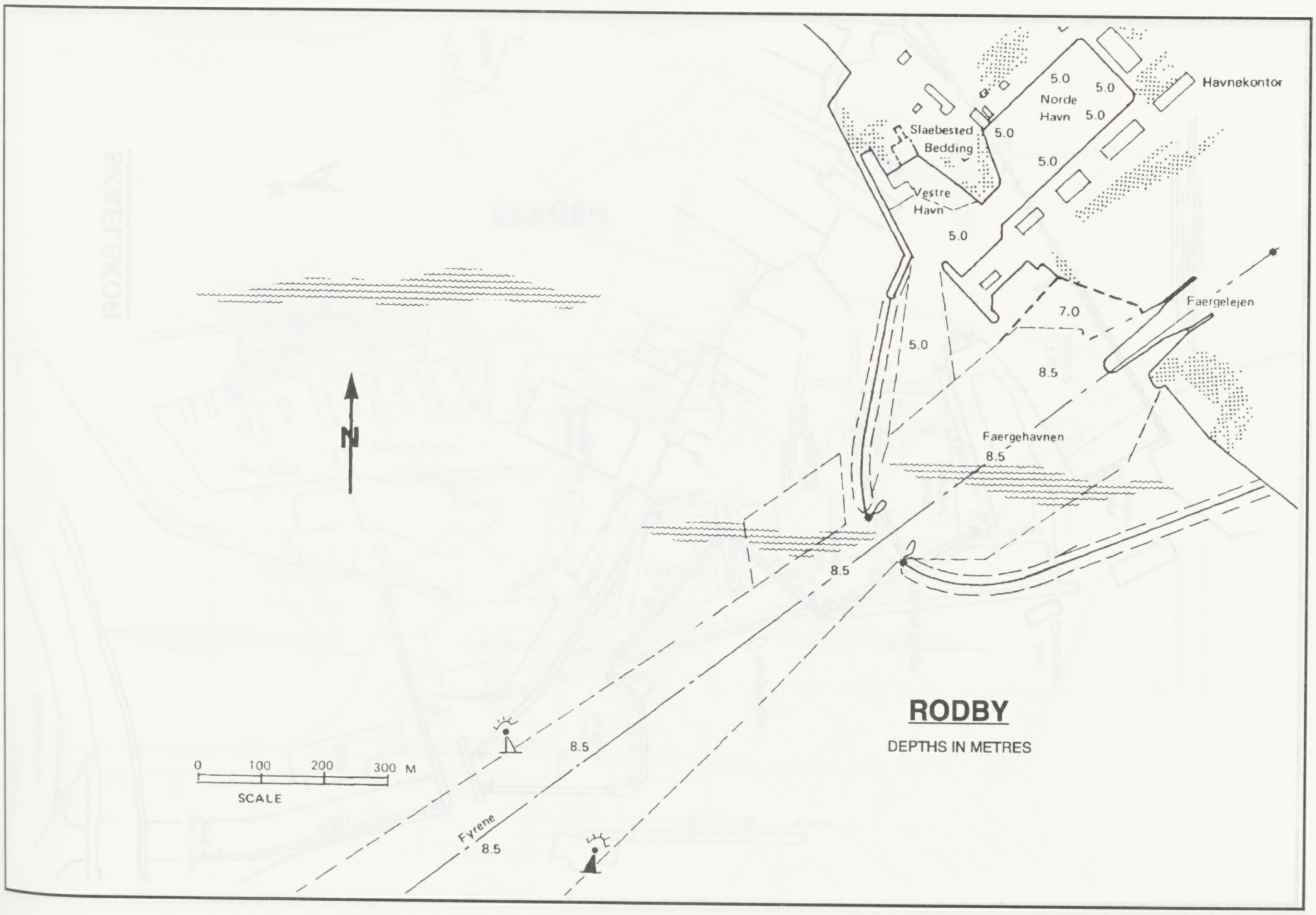


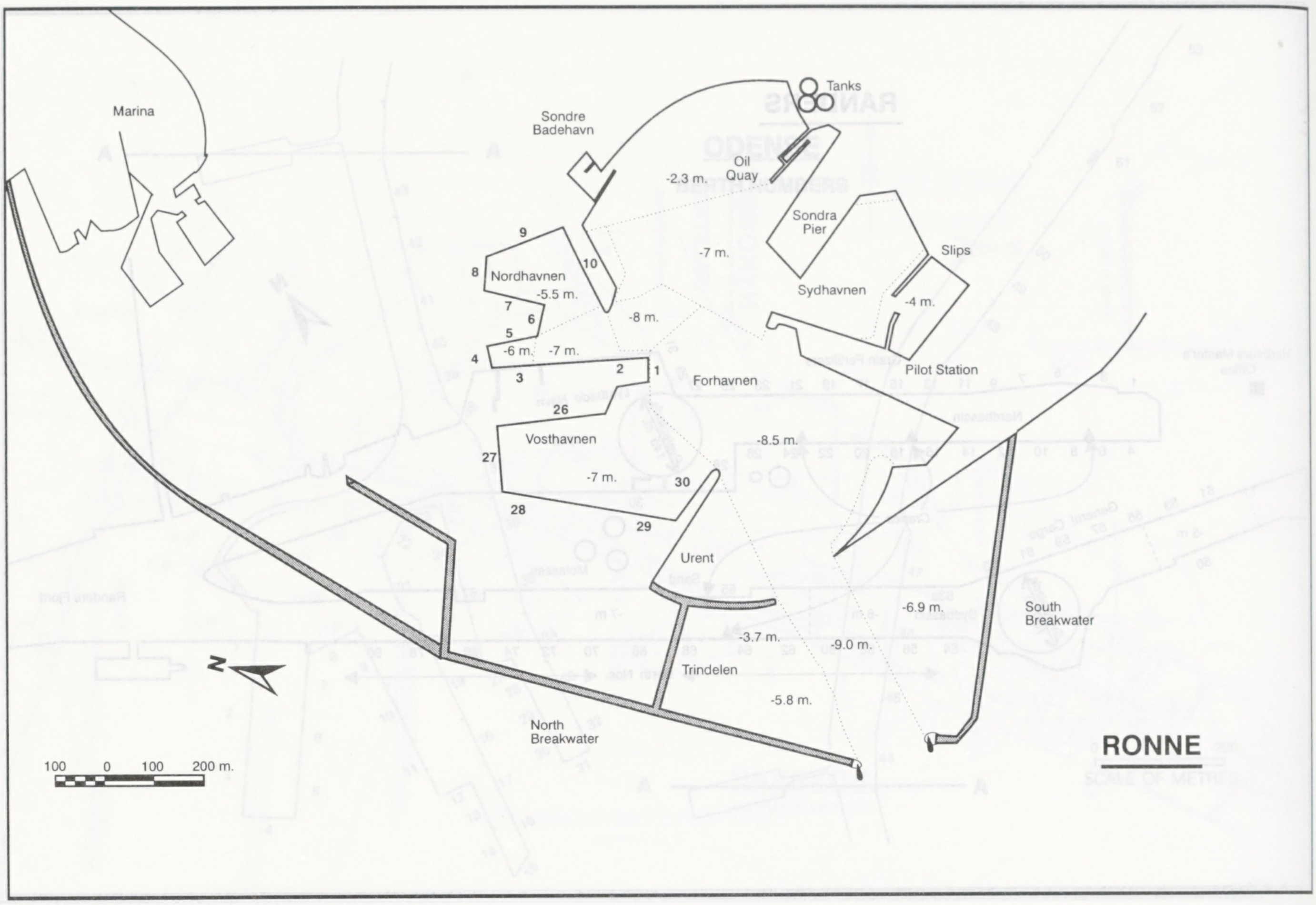
OREHOVED

DEPTHS IN METRES

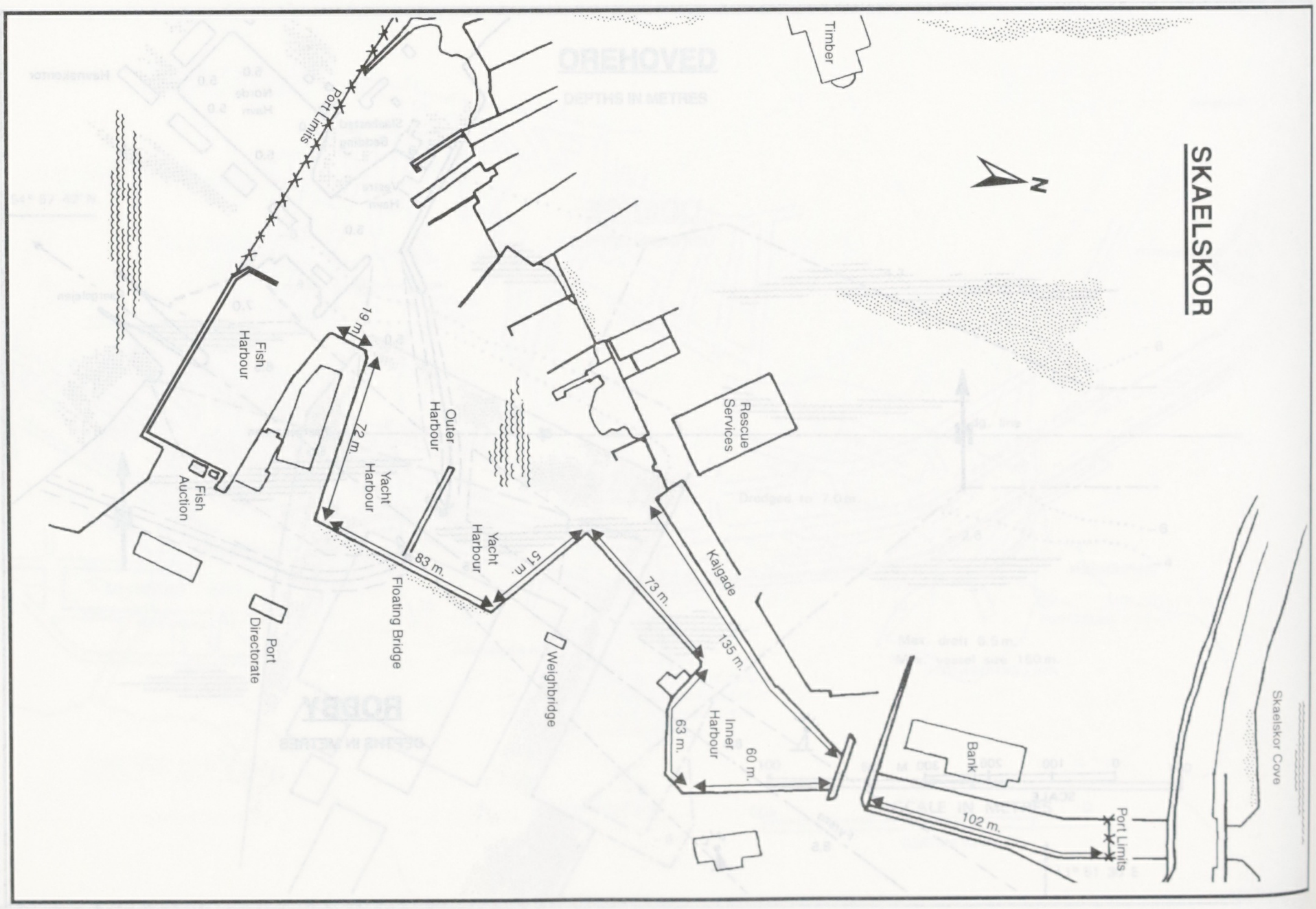
54° 57' 42" N
−6
−6
−4
−4.7
−6
Ldg. line
Dredged to 7.0 m.
−2.6
−6
−4
Max. draft 6.5 m.
Max. vessel size 150 m.
−6
−5
N
100
50
0
100
SCALE IN METRES
11° 51' 30" E


RANDERS
N
Harbours Master's Office
Grain Fertilizers
1
3
5
7
9
11
13
15
17
19
21
23
25
27
29
31
Lystbade Havn
Nordbassin
Svajeplads 145 m.
-7 m
4
6
8
10
12
14
16
18
20
22
24
26
28
30
51
53
55
57
59
61
63
General Cargo
Cranes
-5 m
50
Svajeplads 100 m.
63a
Sydbassin
-6 m
65
Sand
Molasses
67
-7 m
Randers Fjord
54
56
58
60
62
64
66
68
70
72
74
76
78
80
Berth Nos.

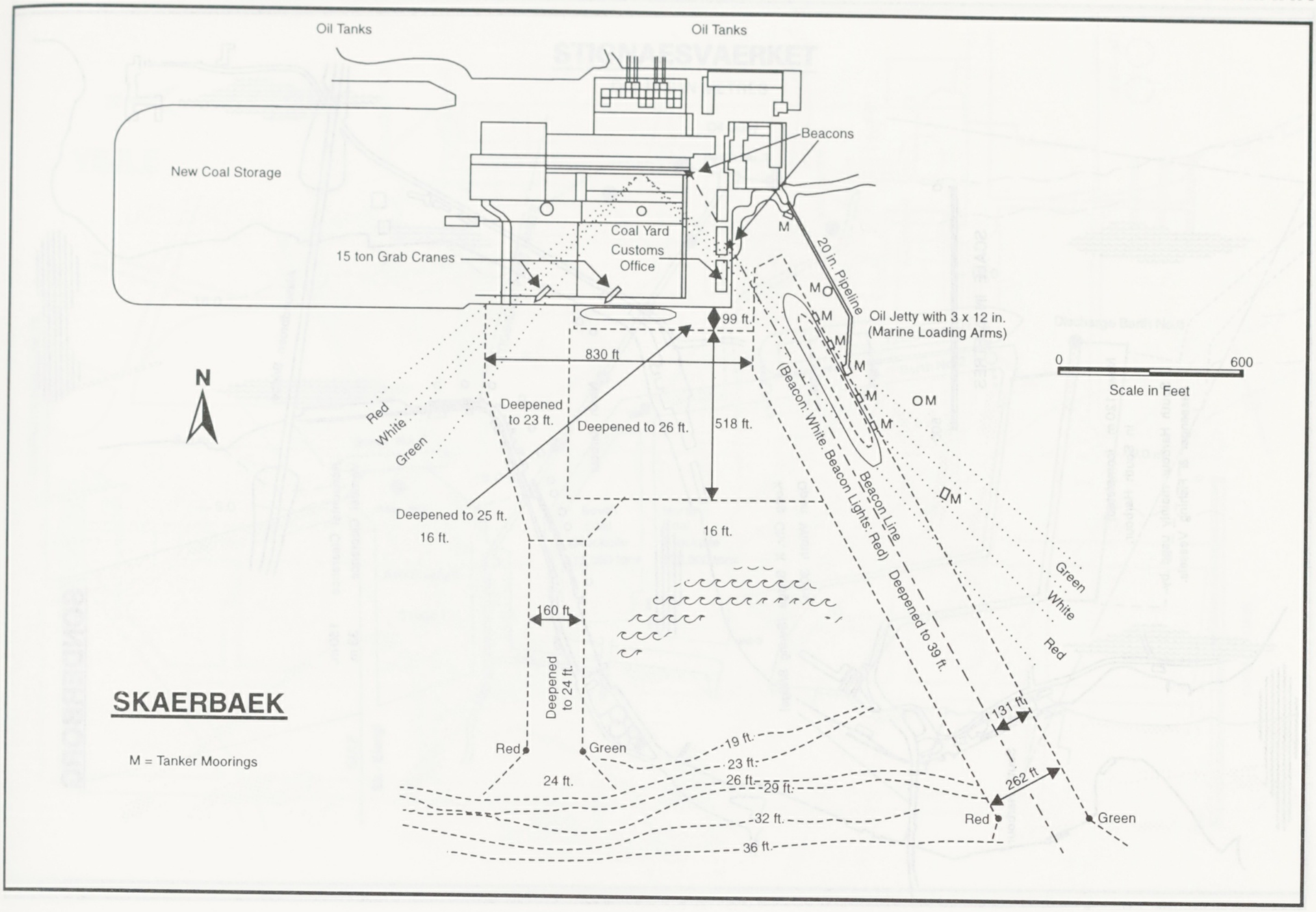

5.0
5.0
Havnekontor
Norde Havn
5.0
Slaebested Bedding
5.0
5.0
Vestre Havn
5.0
Faergelejen
7.0
5.0
8.5
N
Faergehavnen
8.5
8.5
RODBY
DEPTHS IN METRES
8.5
0
100
200
300 M
SCALE
Fyrene
8.5

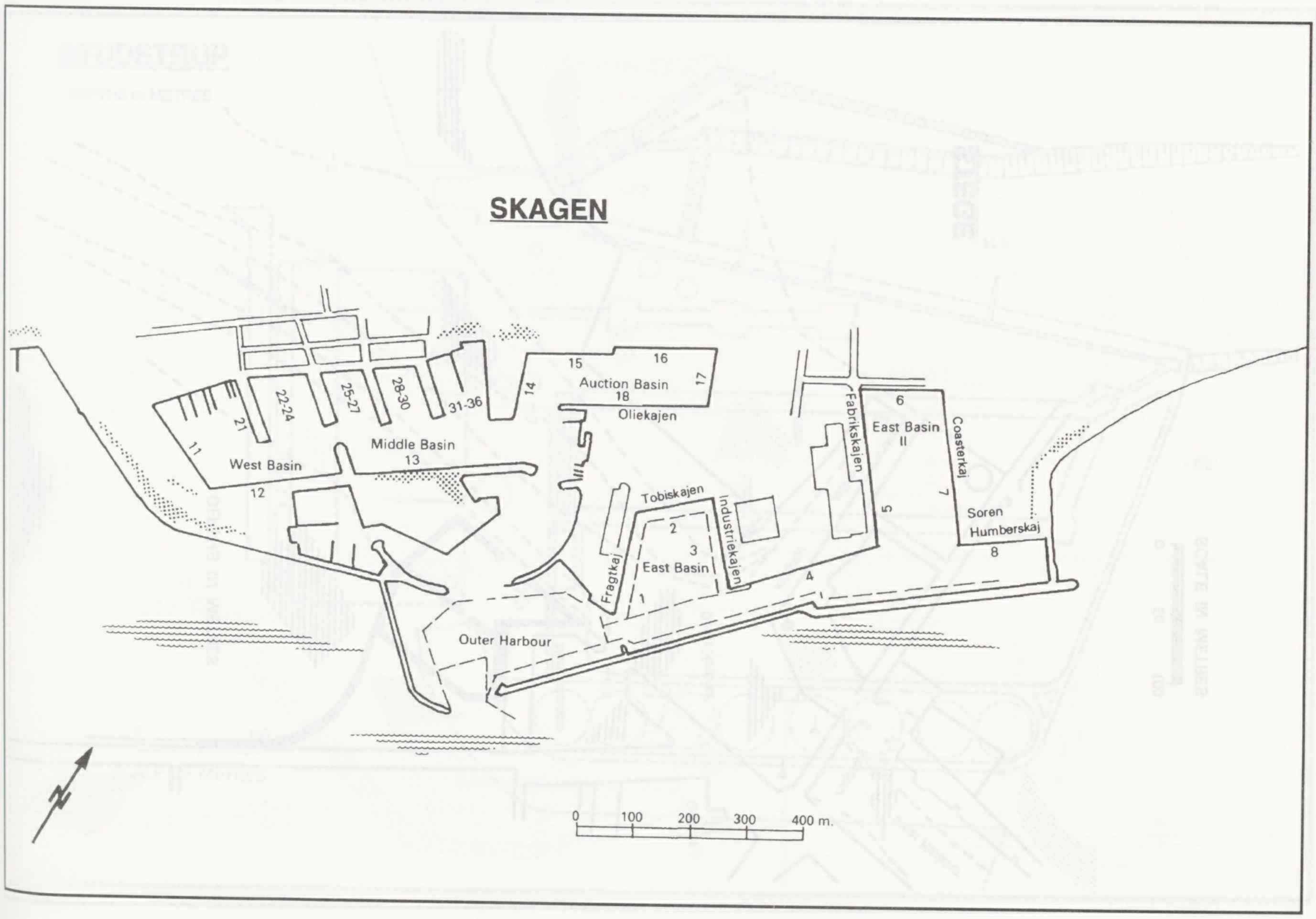

Marina
Tanks
Sondre Badehavn
Oil Quay
-2.3 m.
Sondra Pier
9
10
8
Nordhavnen
-5.5 m.
-7 m.
Slips
Sydhavnen
-4 m.
7
6
5
-8 m.
4
-6 m.
-7 m.
3
2
1
Forhavnen
Pilot Station
26
Vosthavnen
-8.5 m.
27
-7 m.
30
28
29
Urent
-6.9 m.
South Breakwater
-3.7 m.
-9.0 m.
Trindelen
-5.8 m.
North Breakwater
N
100 0 100 200 m.

RONNE

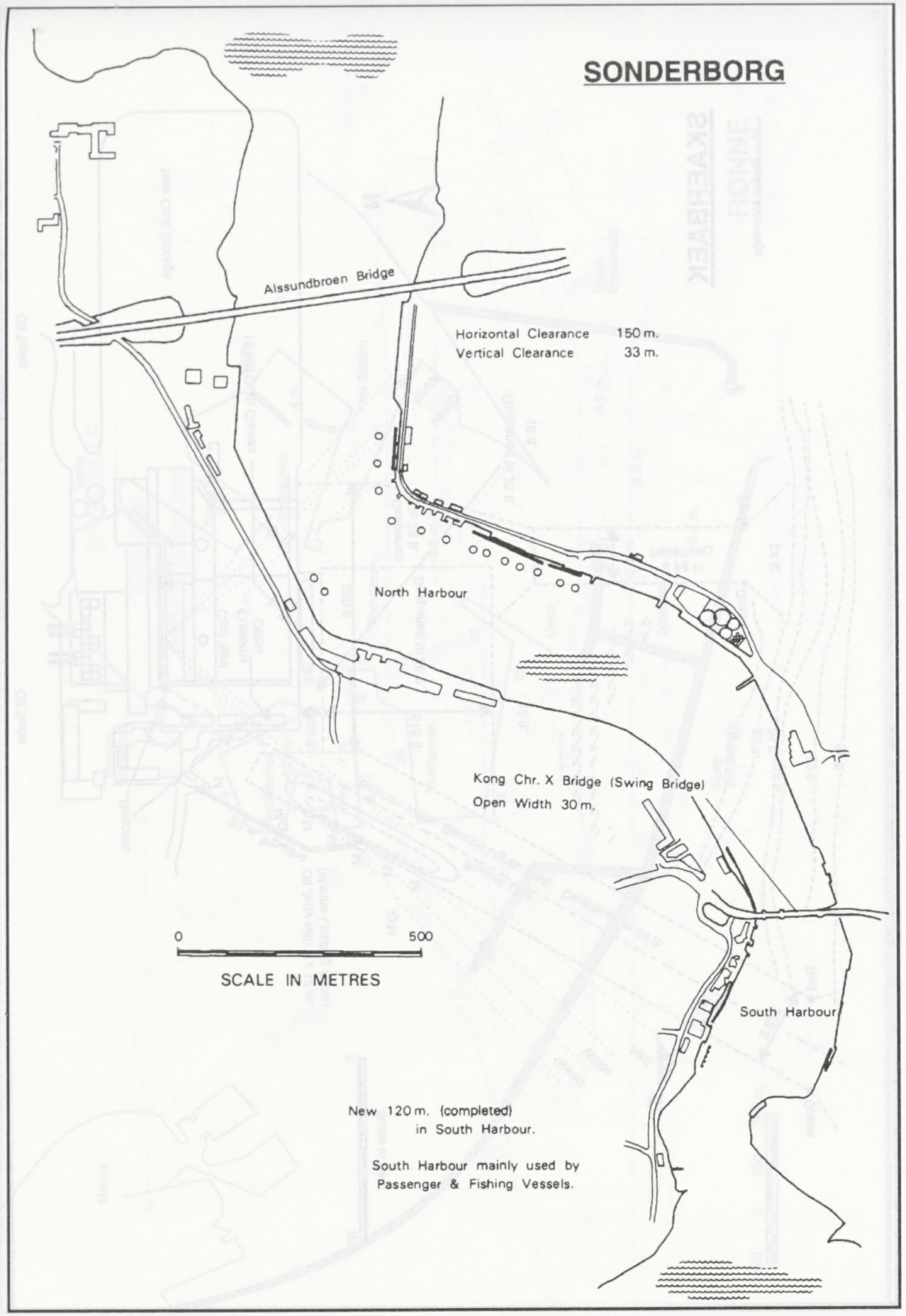

Timber
N
Port Limits
Fish Harbour
19 m.
72 m.
Yacht Harbour
Outer Harbour
Rescue Services
Fish Auction
83 m.
Floating Bridge
Yacht Harbour
51 m.
Port Directorate
Weighbridge
73 m.
Kajgade
135 m.
Inner Harbour
63 m.
60 m.
Bank
102 m.
Port Limits
Skaelskor Cove

SKAELSKOR


SKAERBAEK
M = Tanker Moorings
Oil Tanks
Oil Tanks
New Coal Storage
Beacons
Coal Yard
Customs Office
15 ton Grab Cranes
20 in. Pipeline
Oil Jetty with 3 x 12 in. (Marine Loading Arms)
0
600
Scale in Feet
99 ft.
830 ft
518 ft.
Red
White
Green
Deepened to 23 ft.
Deepened to 26 ft.
Deepened to 25 ft.
16 ft.
16 ft.
Beacon Line
(Beacon: White. Beacon Lights: Red)
Deepened to 39 ft.
Green
White
Red
160 ft
Deepened to 24 ft.
131 ft
262 ft
Red
Green
24 ft.
19 ft.
23 ft.
26 ft.
29 ft.
32 ft.
36 ft.
Red
Green
M
M
M
M
M
M
M
M
M
N


SKAGEN
11
21
22-24
25-27
28-30
31-36
14
15
16
17
Auction Basin
18
Oliekajen
Middle Basin
13
West Basin
12
Tobiskajen
2
3
East Basin
Fragtkaj
1
Industrikajen
4
Fabrikskajen
5
6
East Basin II
Coasterkaj
7
Soren Humberskaj
8
Outer Harbour
0
100
200
300
400 m.

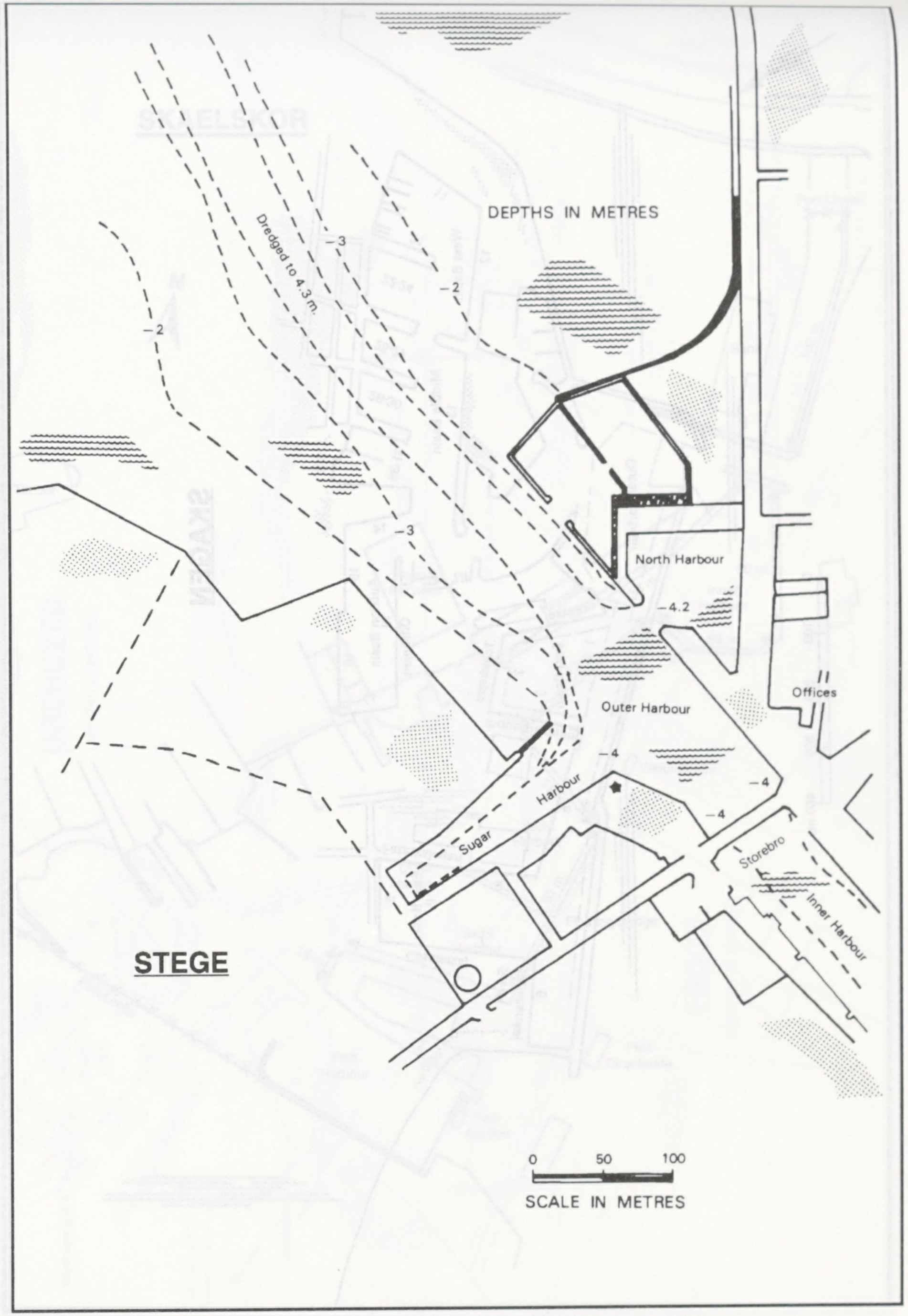
SONDERBORG

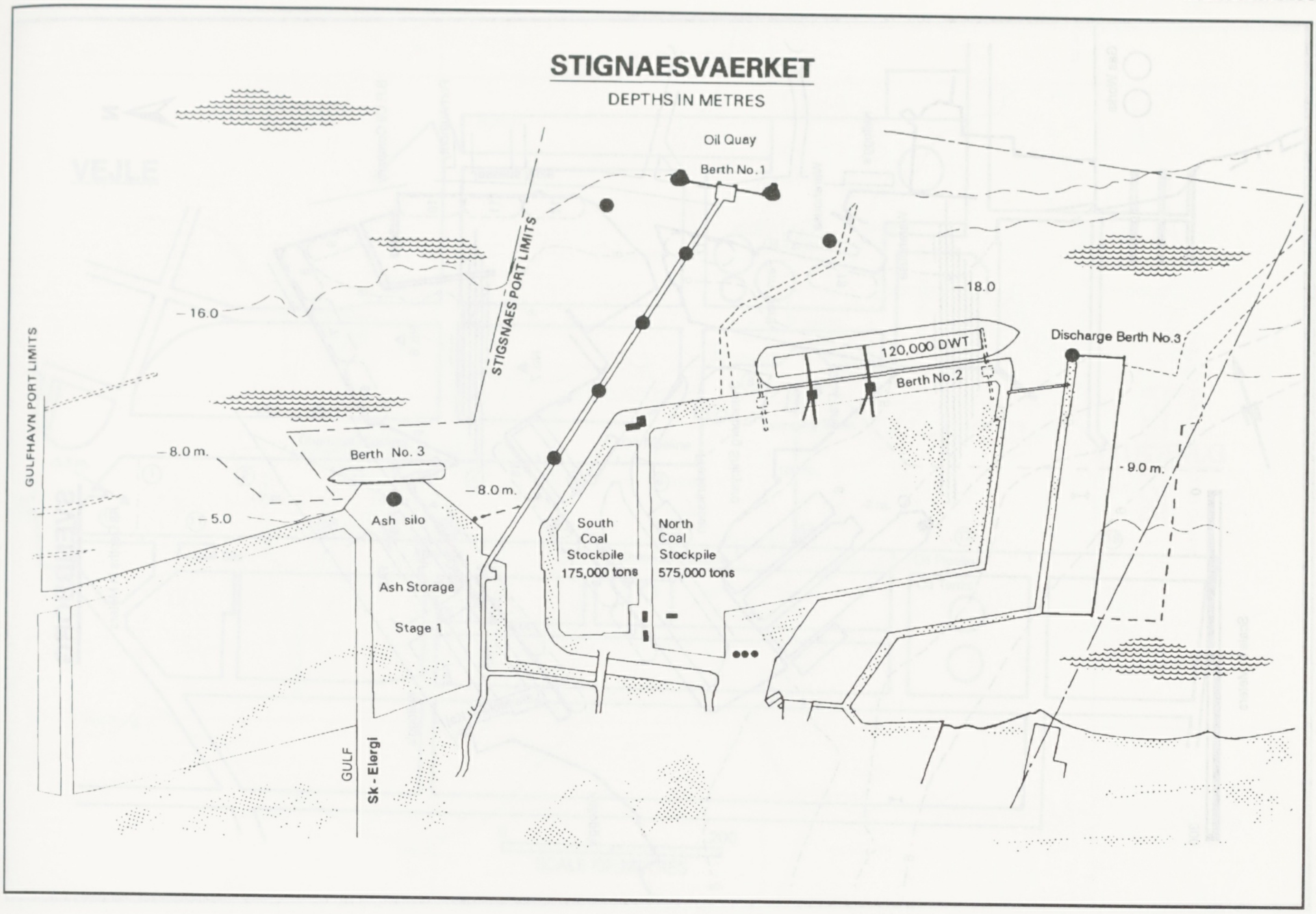

Alssundbroen Bridge
Horizontal Clearance 150 m.
Vertical Clearance 33 m.
North Harbour
Kong Chr. X Bridge (Swing Bridge)
Open Width 30 m.
0
500
SCALE IN METRES
South Harbour

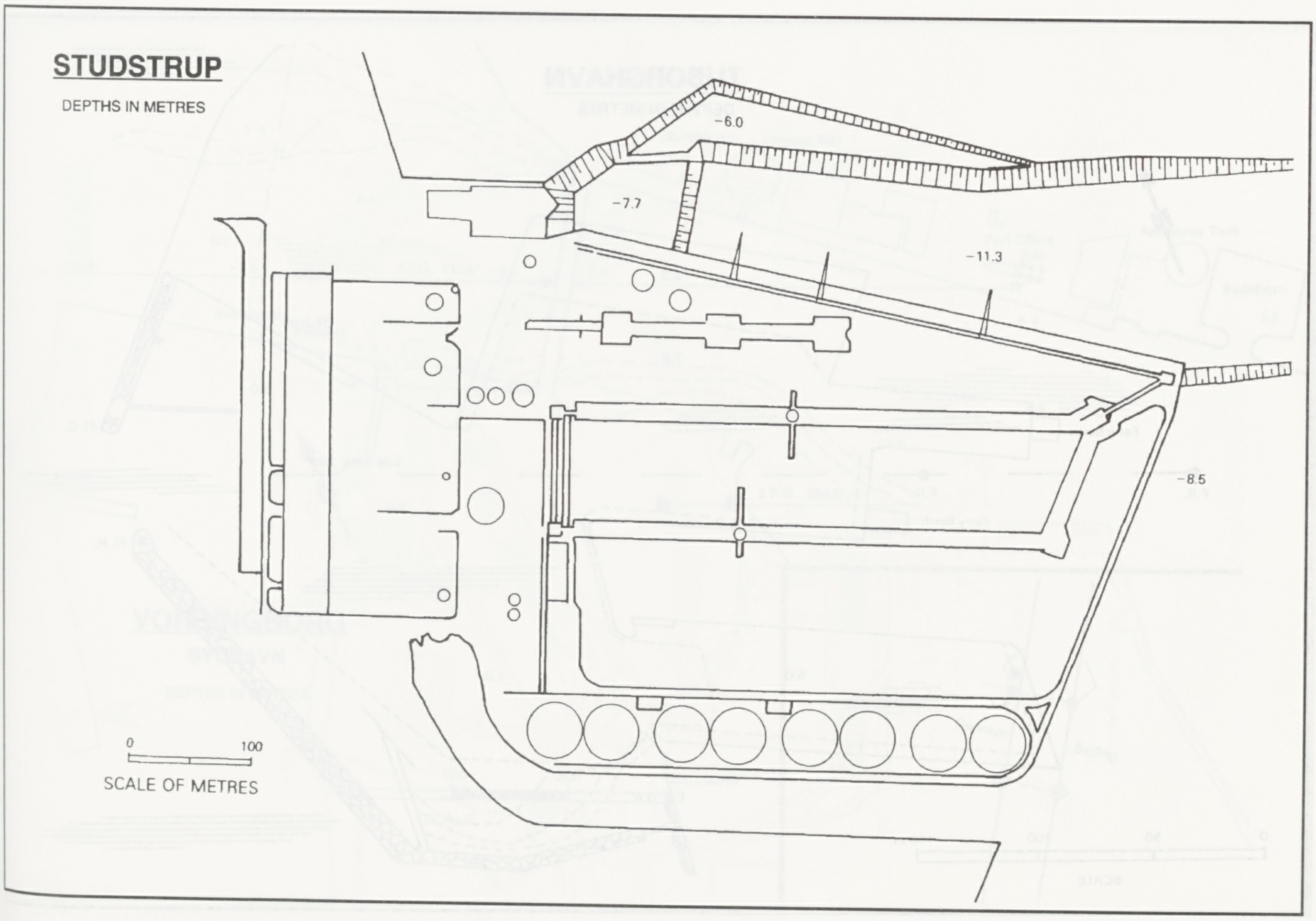
New 120 m. (completed)
in South Harbour.

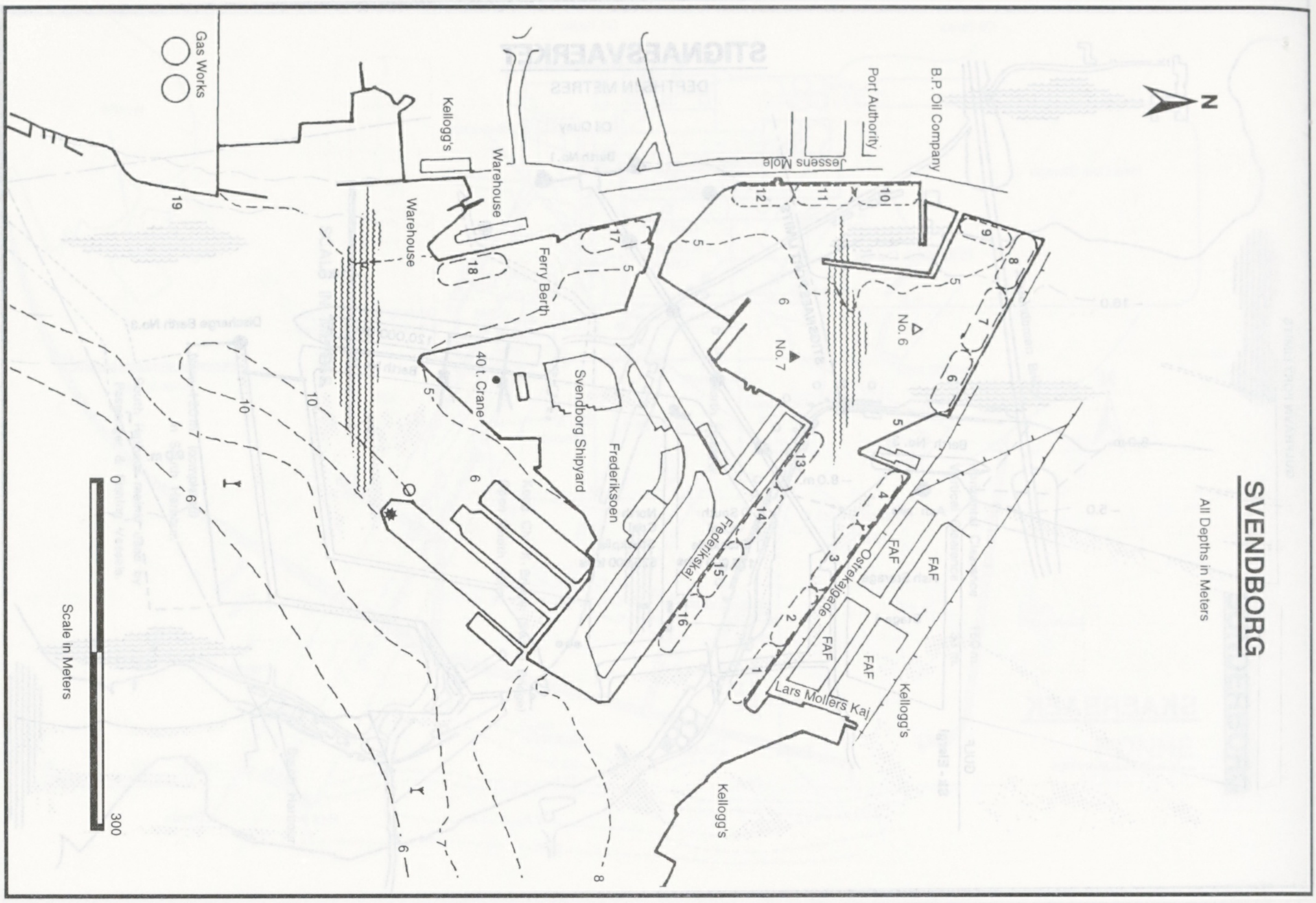
South Harbour mainly used by
Passenger & Fishing Vessels.

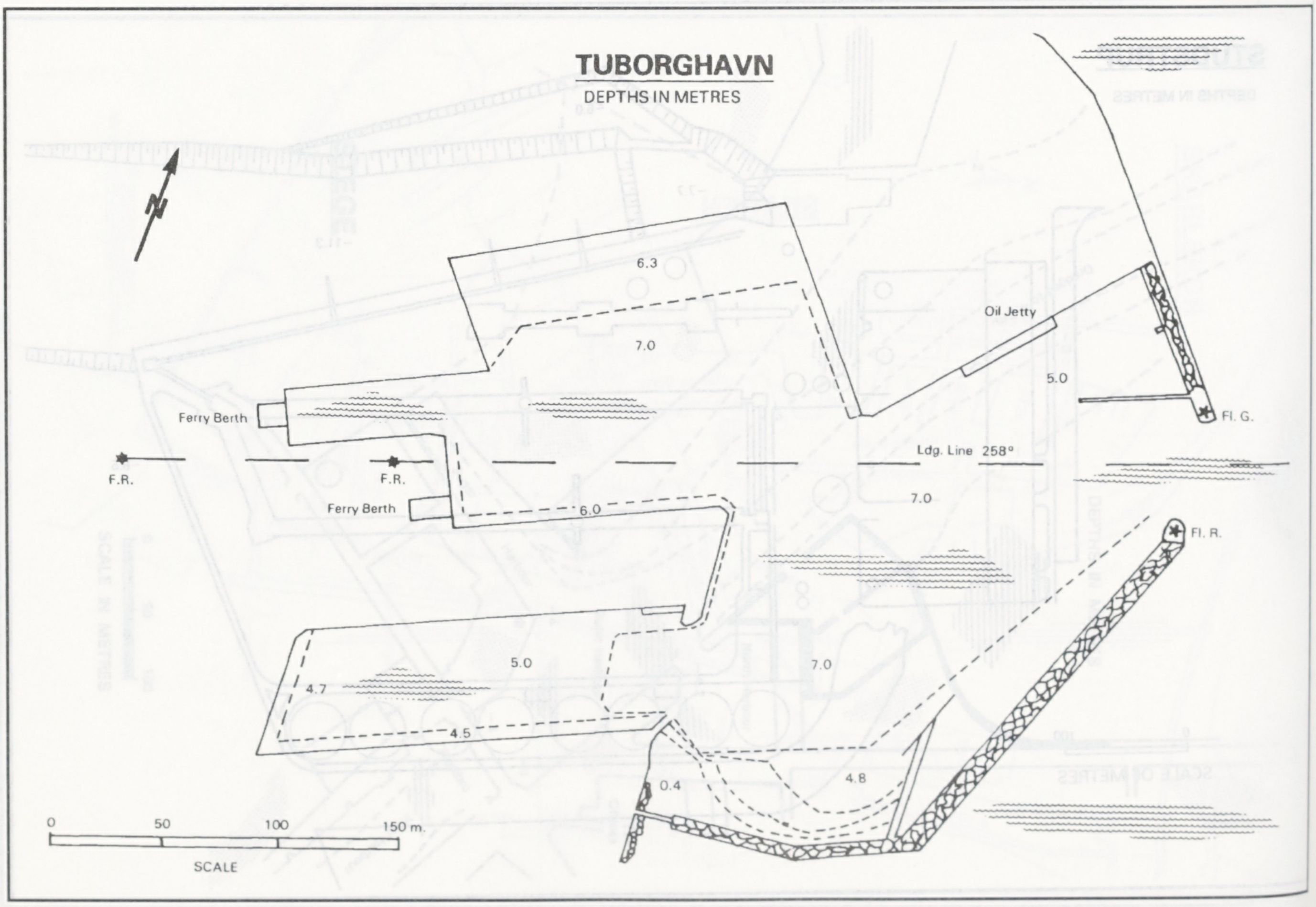
STEGE

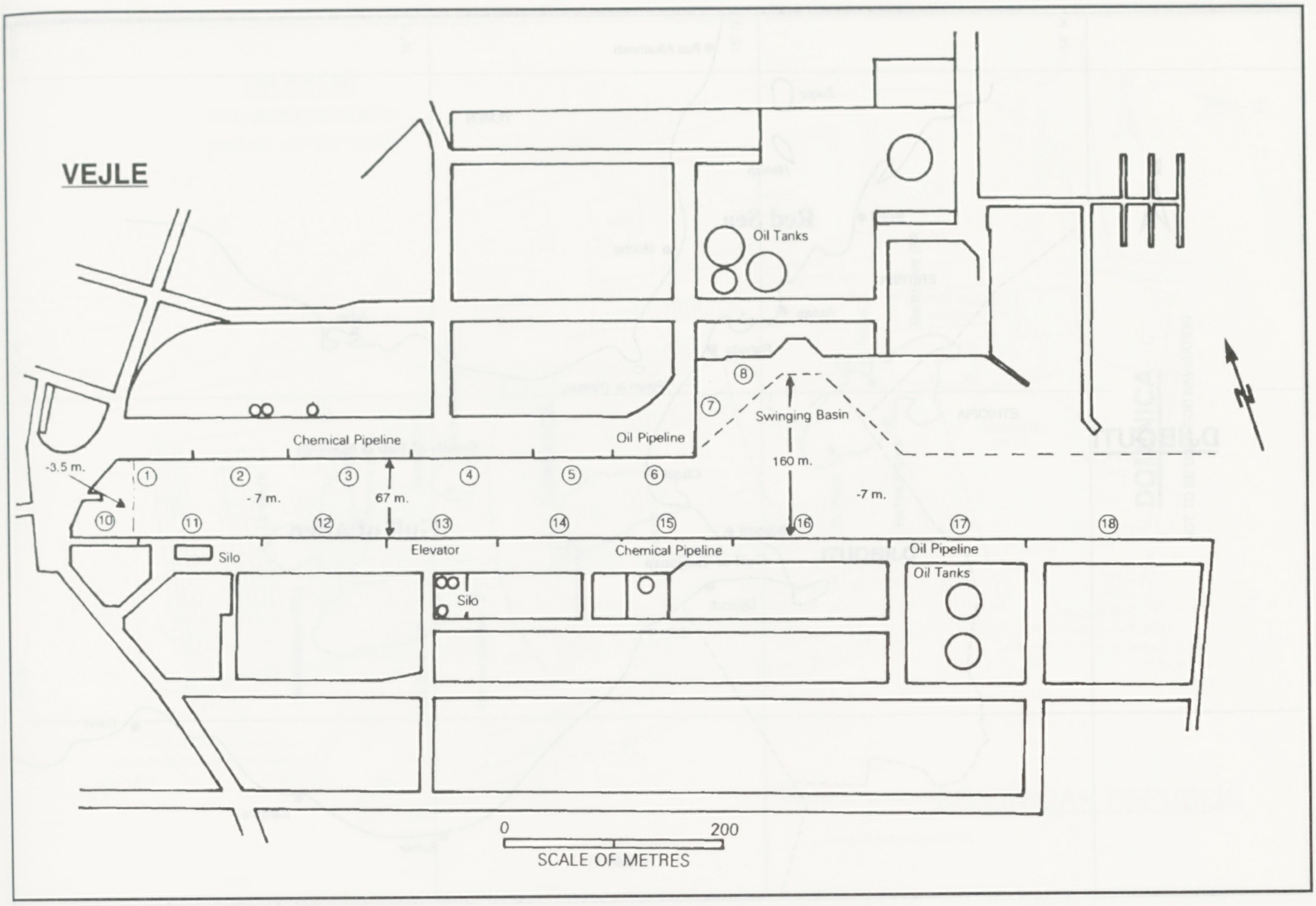

DEPTHS IN METRES
Dredged to 4.3 m.
–3
–2
–2
–3
North Harbour
–4.2
Offices
Outer Harbour
–4
–4
–4
Sugar Harbour
Storebro
Inner Harbour
0
50
100
SCALE IN METRES

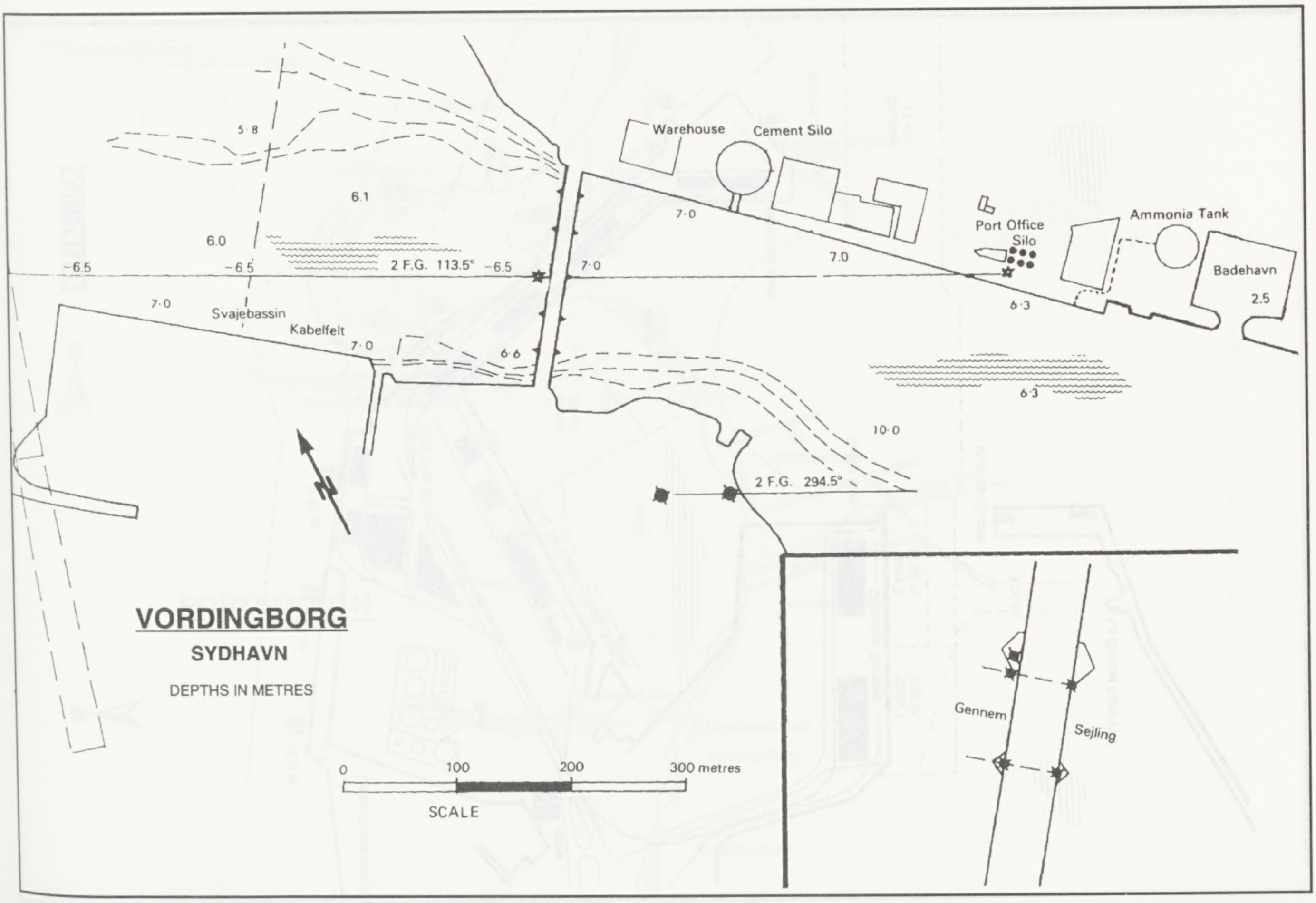

STIGNAESVAERKET
DEPTHS IN METRES
Oil Quay
Berth No.1
STIGSNAES PORT LIMITS
−16.0
−18.0
120,000 DWT
Berth No.2
Discharge Berth No.3
GULFHAVN PORT LIMITS
−8.0 m.
Berth No. 3
−8.0 m.
−5.0
Ash silo
South Coal Stockpile 175,000 tons
North Coal Stockpile 575,000 tons
−9.0 m.
Ash Storage
Stage 1
GULF
Sk - Elergi

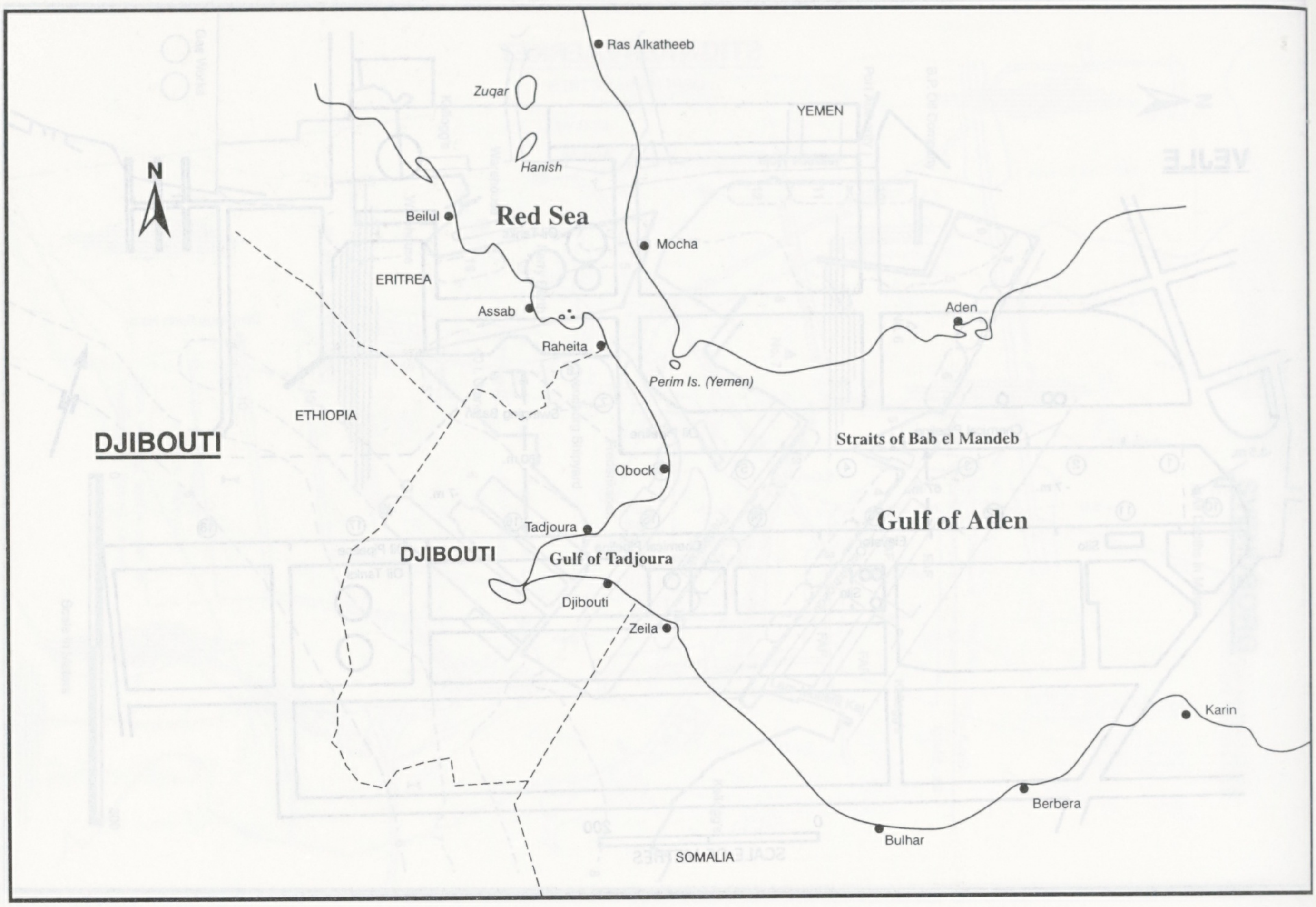

STUDSTRUP
DEPTHS IN METRES
−6.0
−7.7
−11.3
−8.5
0
100
SCALE OF METRES

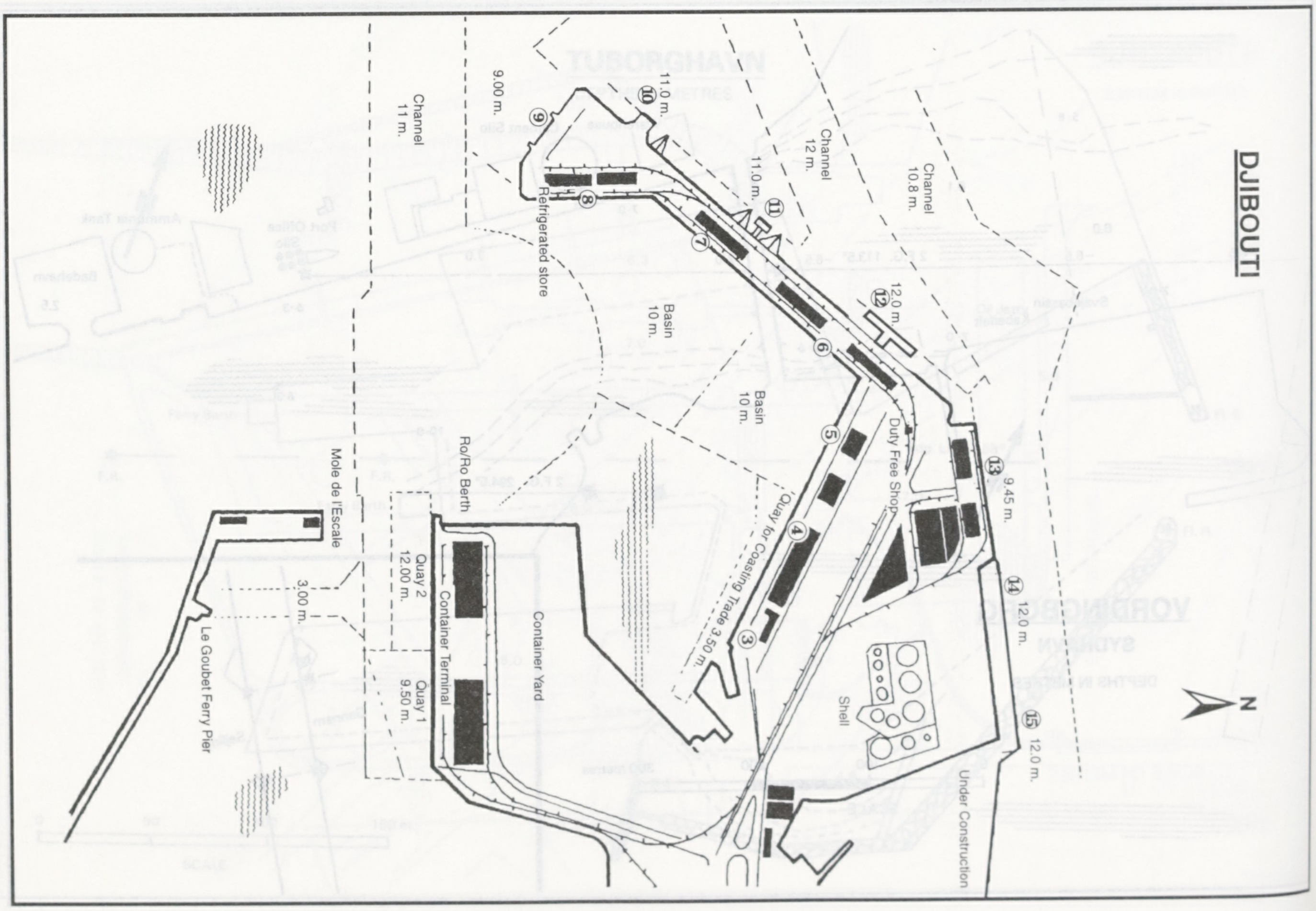

SVENDBORG
All Depths in Meters
N
Gas Works
Kellogg's
Warehouse
Warehouse
Port Authority
B.P. Oil Company
Jessens Mole
Ferry Berth
40 t. Crane
Svendborg Shipyard
Frederiksoen
Frederikskaj
Ostrekajgade
FAF
FAF
FAF
FAF
Lars Mollers Kaj
Kellogg's
Kellogg's
No. 6
No. 7
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
Scale in Meters
0
300

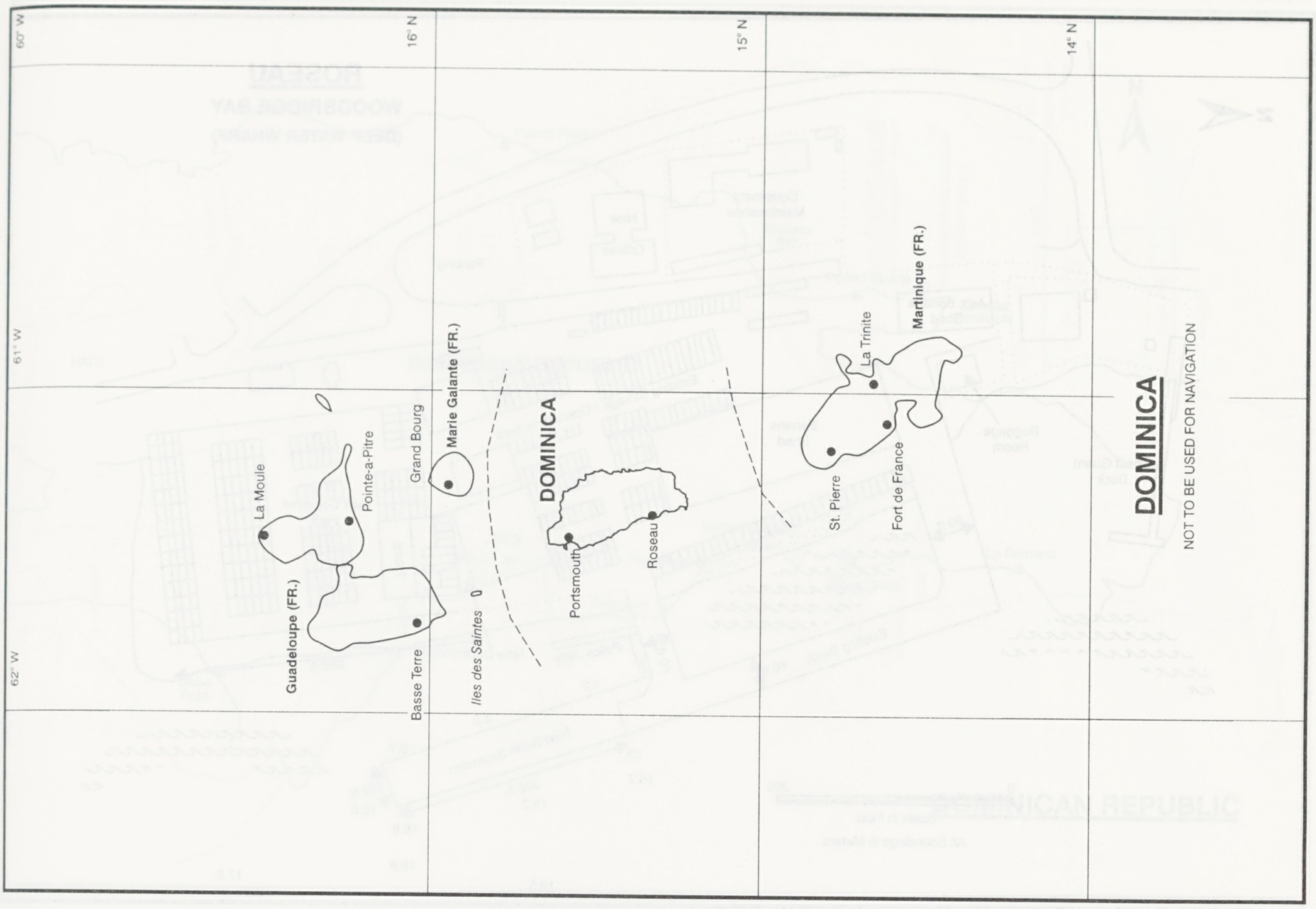

TUBORGHAVN
DEPTHS IN METRES
N
Ferry Berth
Ferry Berth
F.R.
F.R.
Ldg. Line 258°
Oil Jetty
Fl. G.
Fl. R.
6.3
7.0
6.0
7.0
5.0
5.0
4.7
4.5
7.0
4.8
0.4
0
50
100
150 m.
SCALE

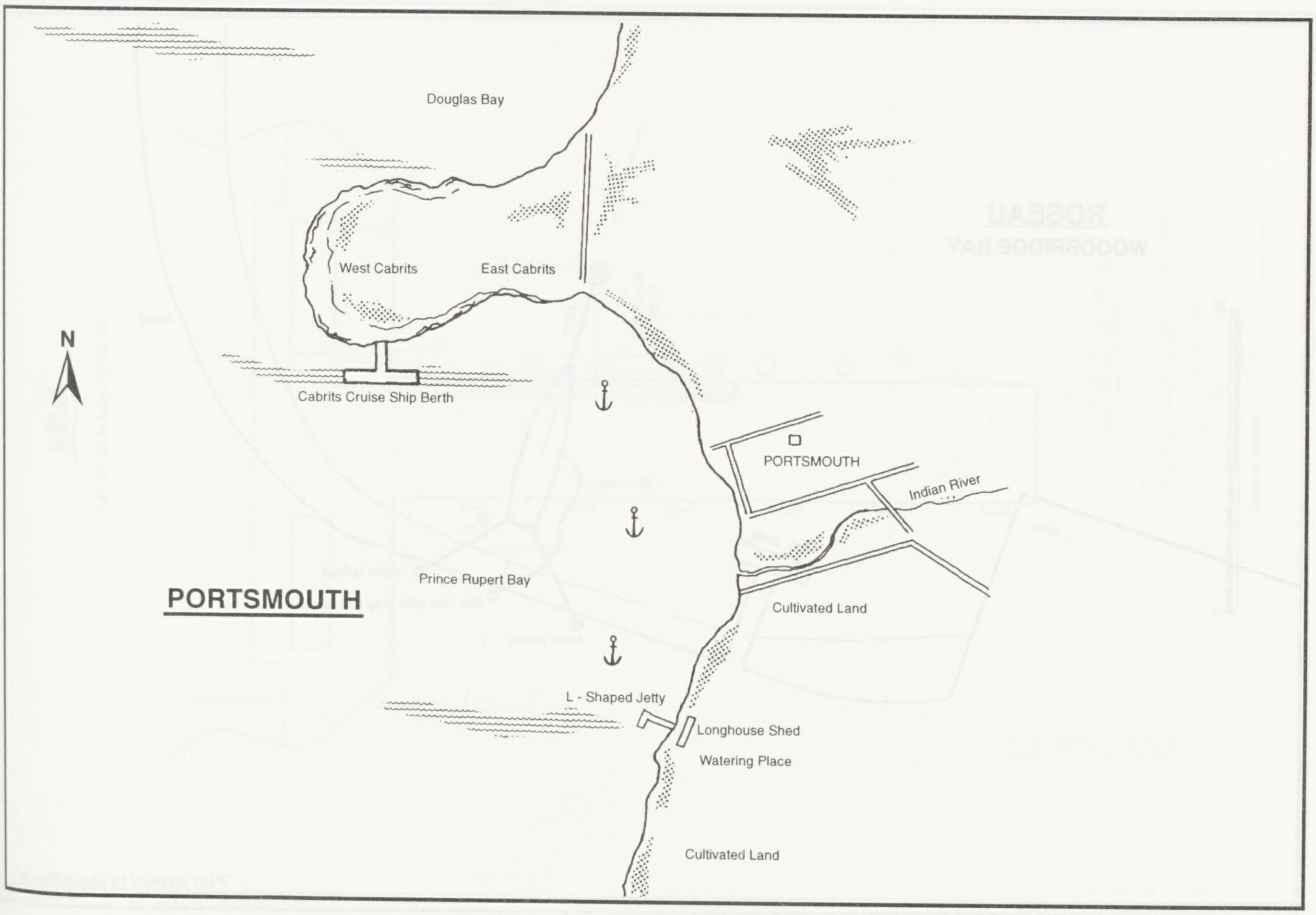

VEJLE
Oil Tanks
Chemical Pipeline
Oil Pipeline
Swinging Basin
160 m.
-3.5 m.
- 7 m.
67 m.
-7 m.
①
②
③
④
⑤
⑥
⑦
⑧
⑩
⑪
⑫
⑬
⑭
⑮
⑯
⑰
⑱
Silo
Elevator
Chemical Pipeline
Oil Pipeline
Oil Tanks
Silo
0
200
SCALE OF METRES

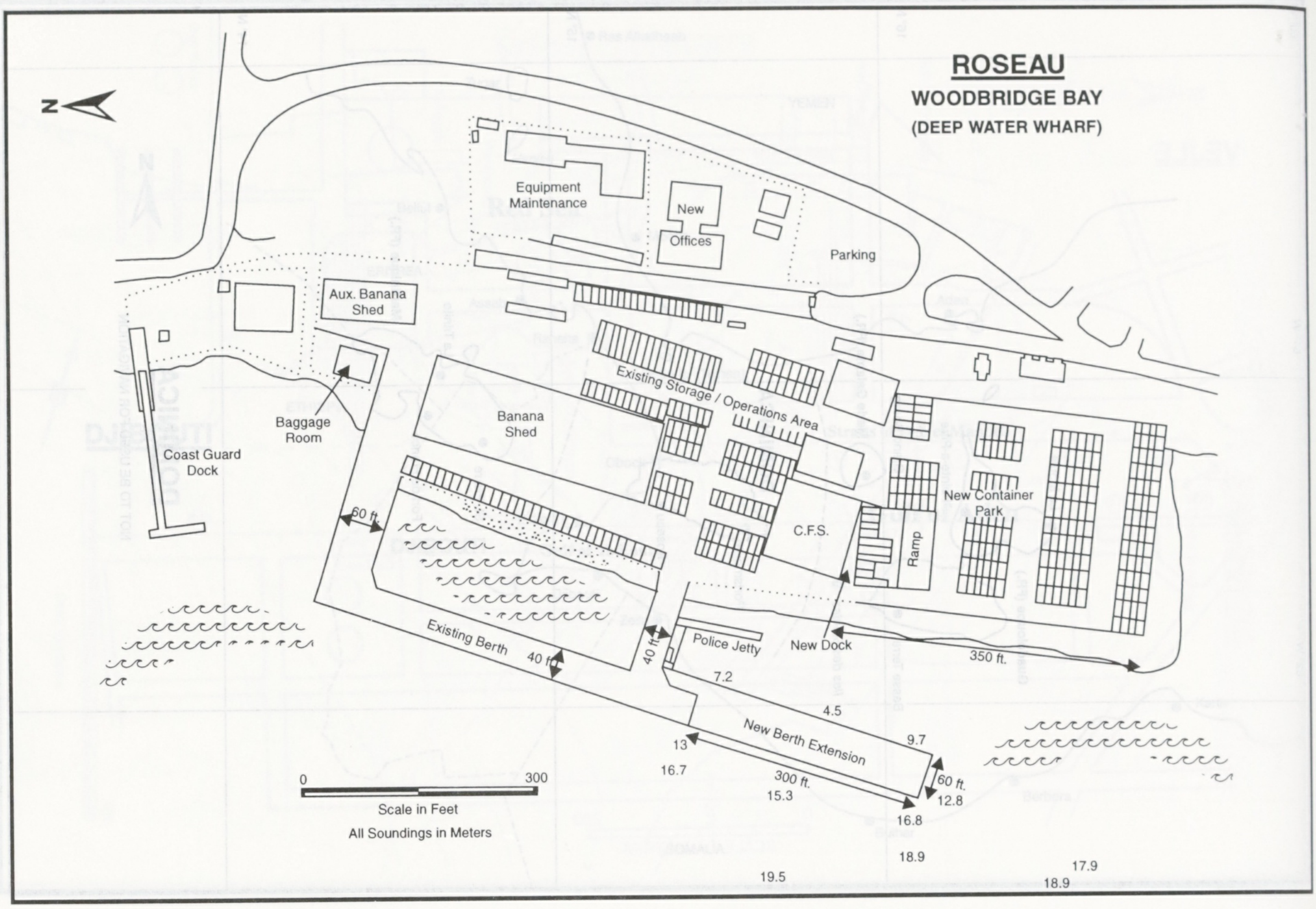

Warehouse
Cement Silo
5·8
6·1
6.0
7·0
7.0
Port Office
Silo
Ammonia Tank
Badehavn
2.5
-6.5
-6.5
2 F.G. 113.5°
-6.5
7·0
7·0
Svajebassin
Kabelfelt
7·0
6·6
6·3
6·3
10·0
2 F.G. 294.5°
VORDINGBORG
SYDHAVN
DEPTHS IN METRES
0
100
200
300 metres
SCALE
Gennem
Sejling

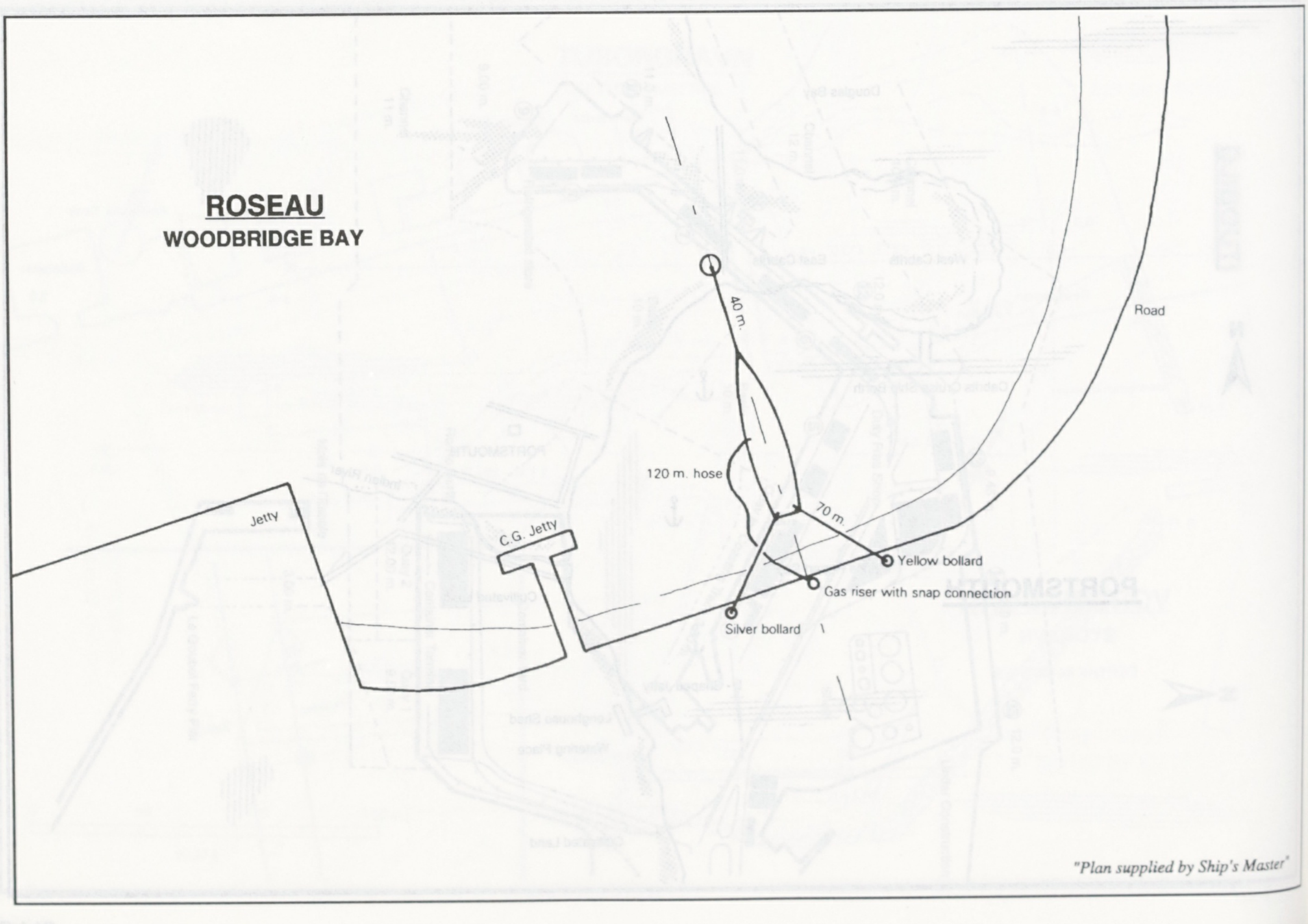

N
DJIBOUTI
Ras Alkatheeb
Zuqar
Hanish
YEMEN
Red Sea
Beilul
Mocha
ERITREA
Assab
Aden
Raheita
Perim Is. (Yemen)
ETHIOPIA
Straits of Bab el Mandeb
Obock
Gulf of Aden
Tadjoura
DJIBOUTI
Gulf of Tadjoura
Djibouti
Zeila
Karin
Berbera
Bulhar
SOMALIA


DJIBOUTI
Channel 11 m.
9.00 m.
⑨
⑩
11.0 m.
Channel 12 m.
Channel 10.8 m.
11.0 m.
⑪
⑧
Refrigerated store
⑦
Basin 10 m.
⑫
12.0 m.
⑥
Basin 10 m.
Duty Free Shop
⑤
⑬
9.45 m.
Mole de l'Escale
Ro/Ro Berth
Quay for Coasting Trade 3.50 m.
④
Quay 2 12.00 m.
Container Terminal
Quay 1 9.50 m.
Container Yard
3.00 m.
⑭
12.0 m.
③
Shell
Le Goubet Ferry Pier
N
⑮
12.0 m.
Under Construction

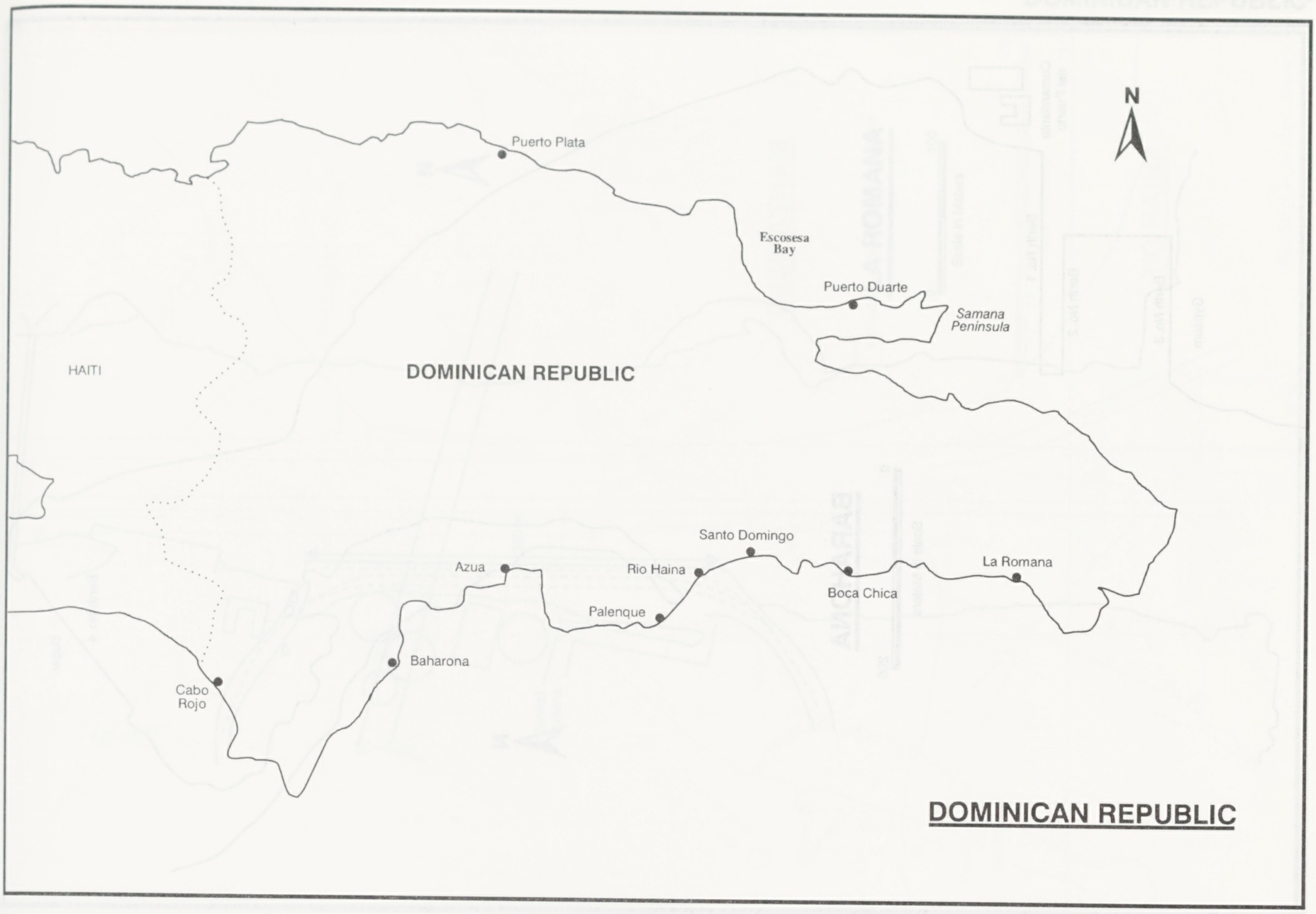

60° W
61° W
62° W
16° N
15° N
14° N
La Moule
Pointe-a-Pitre
Guadeloupe (FR.)
Grand Bourg
Marie Galante (FR.)
Basse Terre
Iles des Saintes
DOMINICA
Portsmouth
Roseau
St. Pierre
Fort de France
La Trinite
Martinique (FR.)
DOMINICA
NOT TO BE USED FOR NAVIGATION

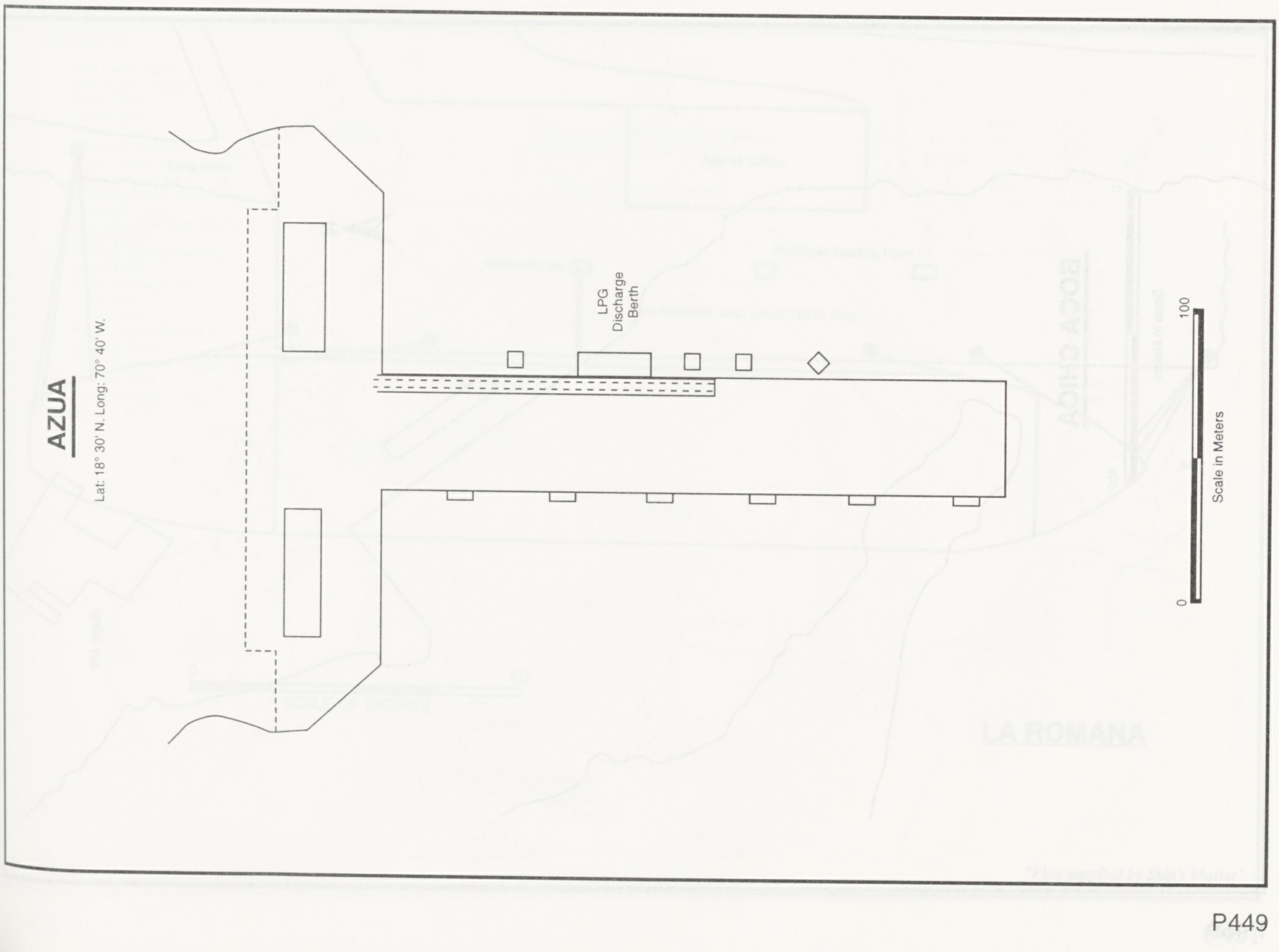

Douglas Bay
West Cabrits
East Cabrits
N
Cabrits Cruise Ship Berth
PORTSMOUTH
Indian River
Prince Rupert Bay
PORTSMOUTH
Cultivated Land
L - Shaped Jetty
Longhouse Shed
Watering Place
Cultivated Land

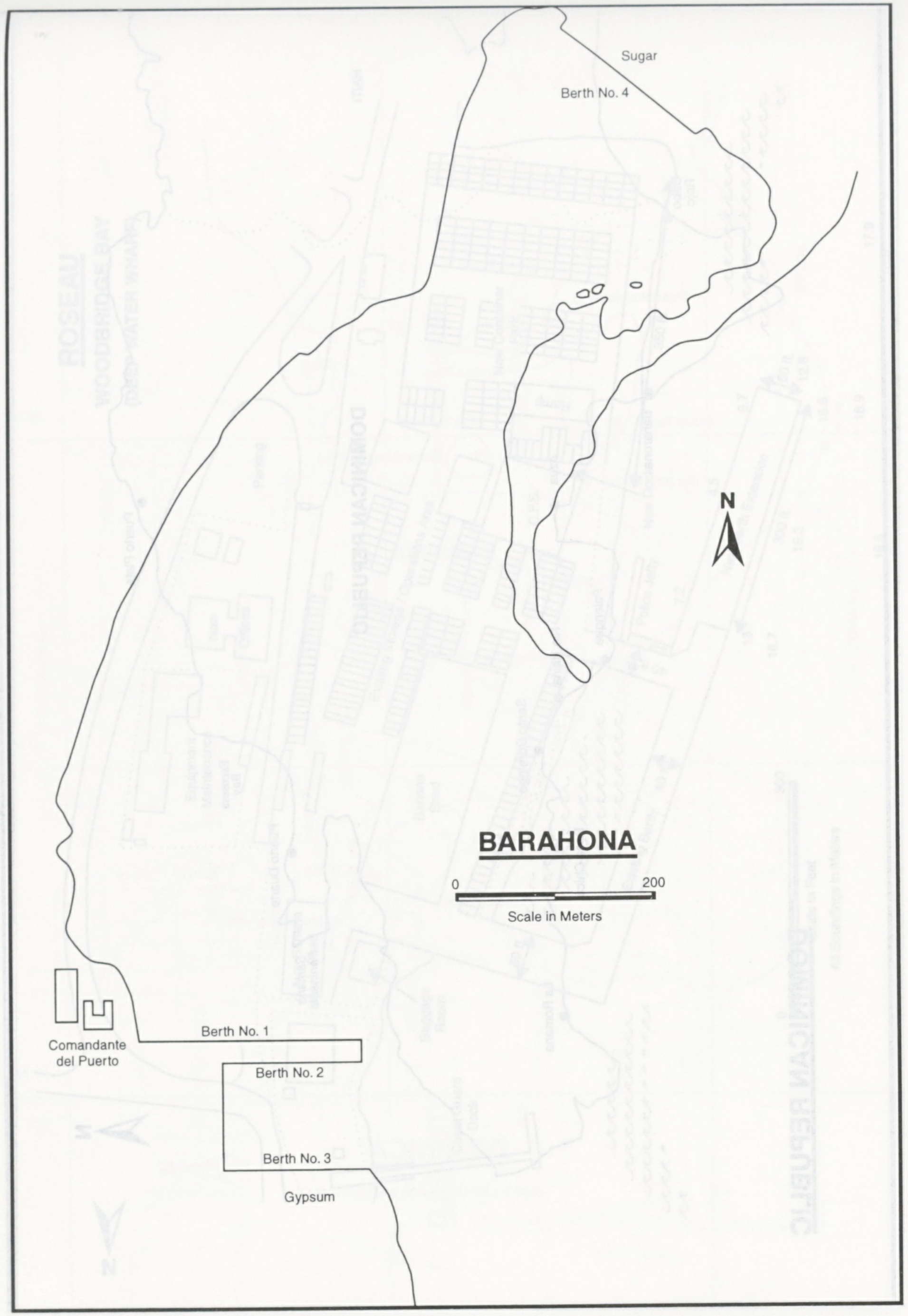

ROSEAU
WOODBRIDGE BAY
(DEEP WATER WHARF)
N
Equipment Maintenance
New Offices
Parking
Aux. Banana Shed
Baggage Room
Coast Guard Dock
Banana Shed
Existing Storage / Operations Area
C.F.S.
Ramp
New Container Park
60 ft.
Existing Berth
40 ft.
40 ft.
Police Jetty
New Dock
350 ft.
7.2
4.5
13
New Berth Extension
9.7
16.7
300 ft.
60 ft.
15.3
12.8
16.8
18.9
17.9
19.5
18.9
0
300
Scale in Feet
All Soundings in Meters


ROSEAU
WOODBRIDGE BAY
40 m.
120 m. hose
70 m.
Road
Jetty
C.G. Jetty
Yellow bollard
Gas riser with snap connection
Silver bollard

"Plan supplied by Ship's Master"

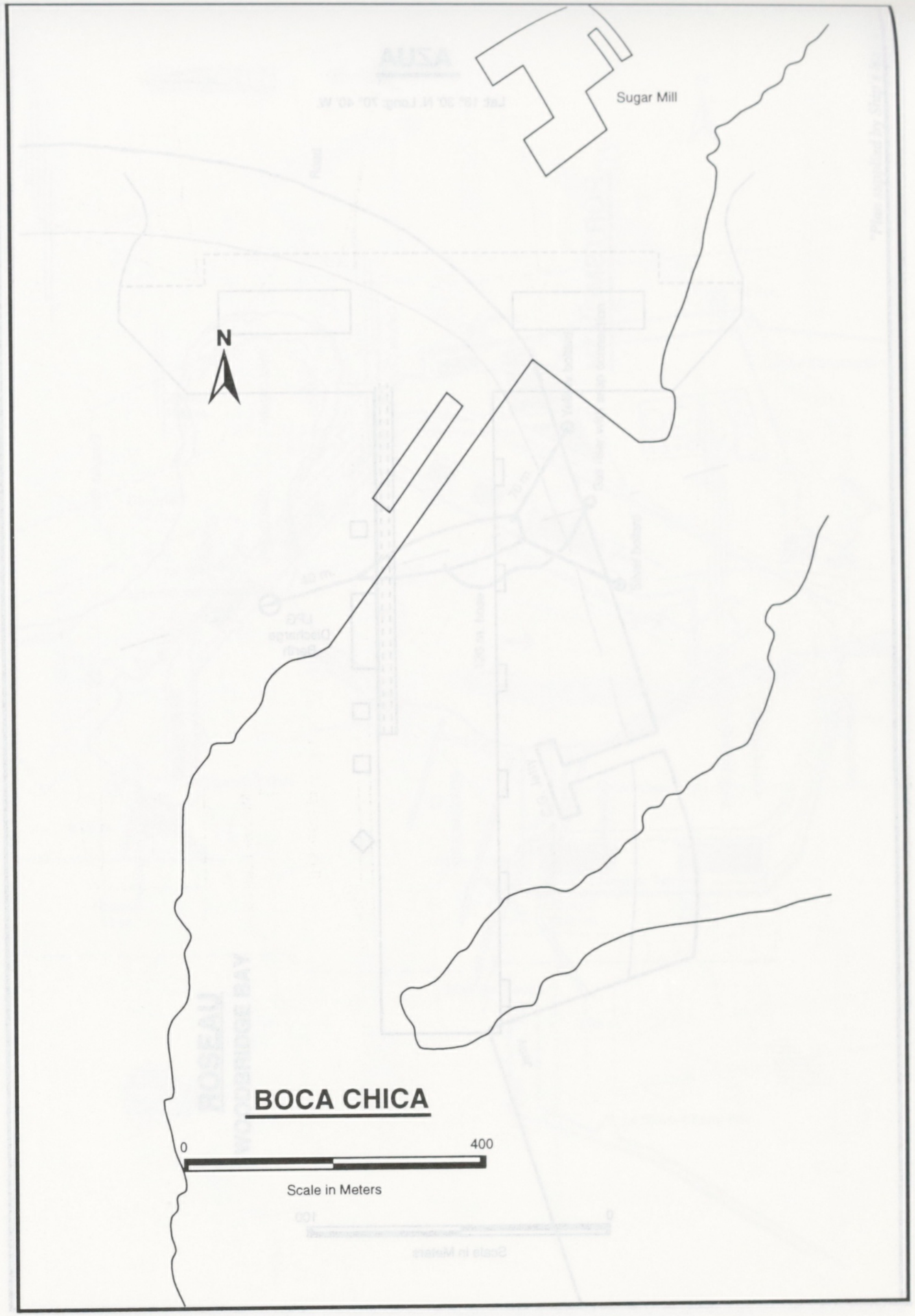

N
Puerto Plata
Escosesa Bay
Puerto Duarte
Samana Peninsula
HAITI
DOMINICAN REPUBLIC
Santo Domingo
Azua
Rio Haina
La Romana
Boca Chica
Palenque
Baharona
Cabo Rojo
DOMINICAN REPUBLIC


AZUA
Lat: 18° 30' N. Long: 70° 40' W.
LPG Discharge Berth
100
0
Scale in Meters



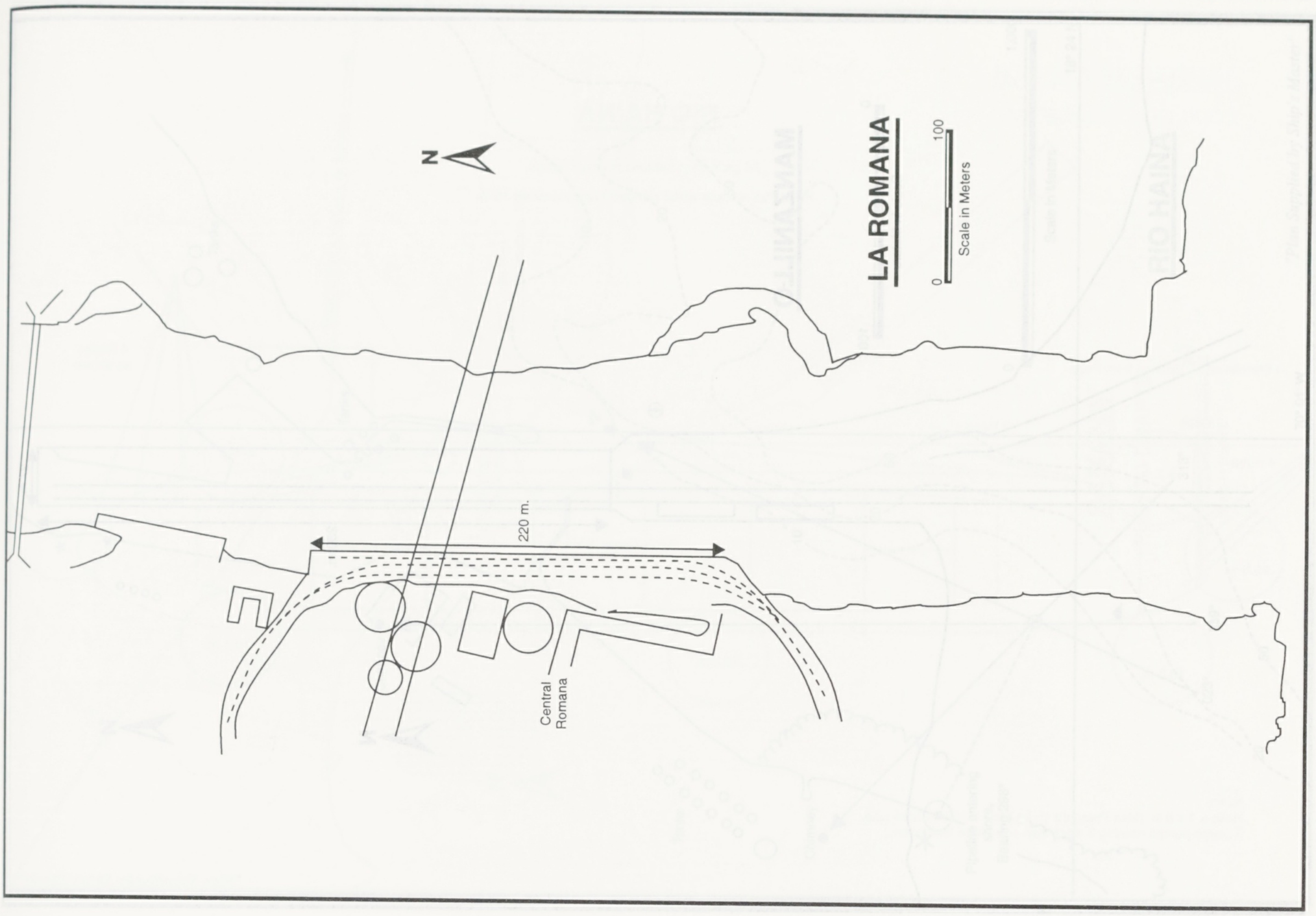
BARAHONA

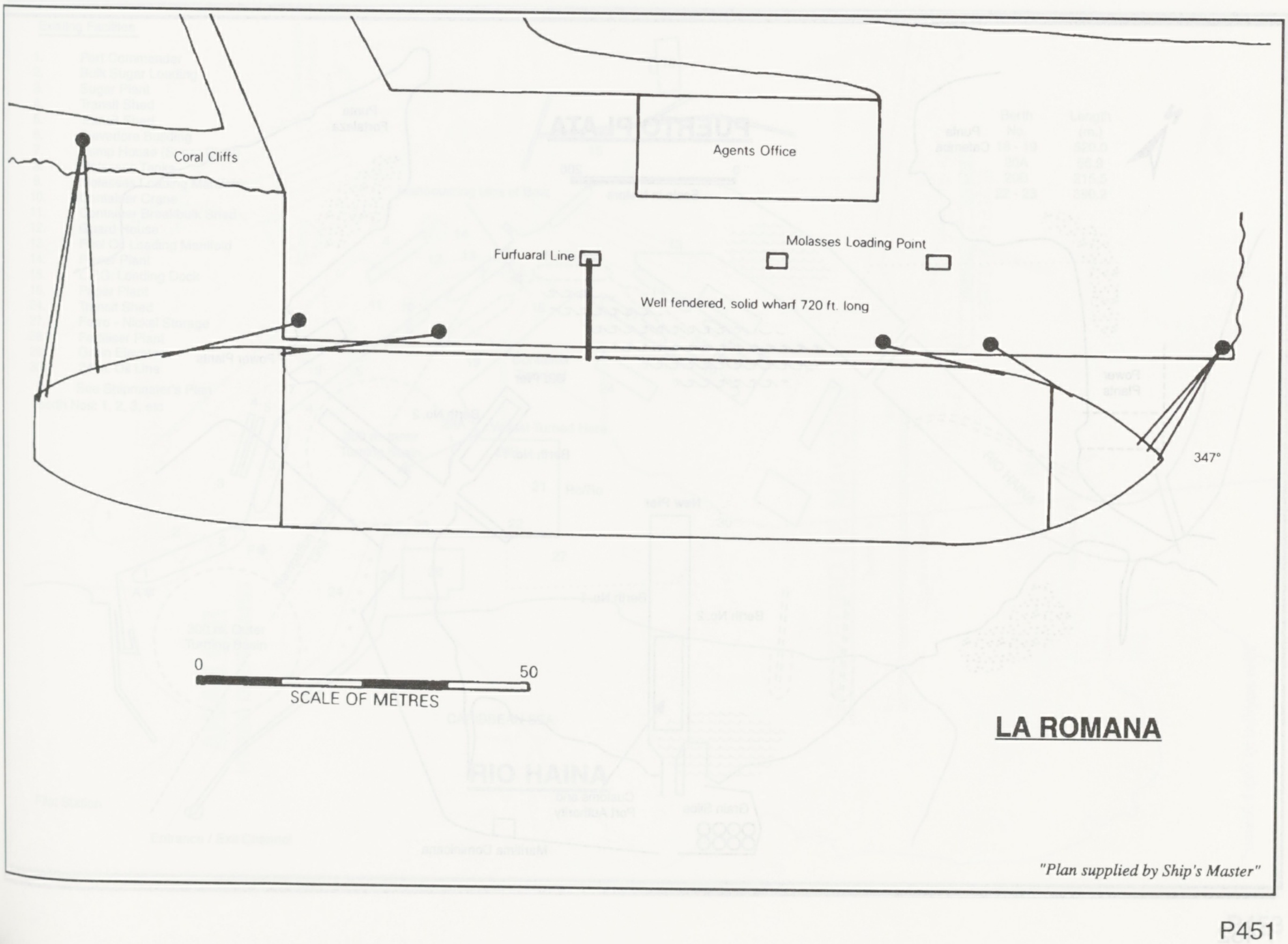
Sugar
Berth No. 4
N
0
200
Scale in Meters
Comandante del Puerto
Berth No. 1
Berth No. 2
Berth No. 3
Gypsum



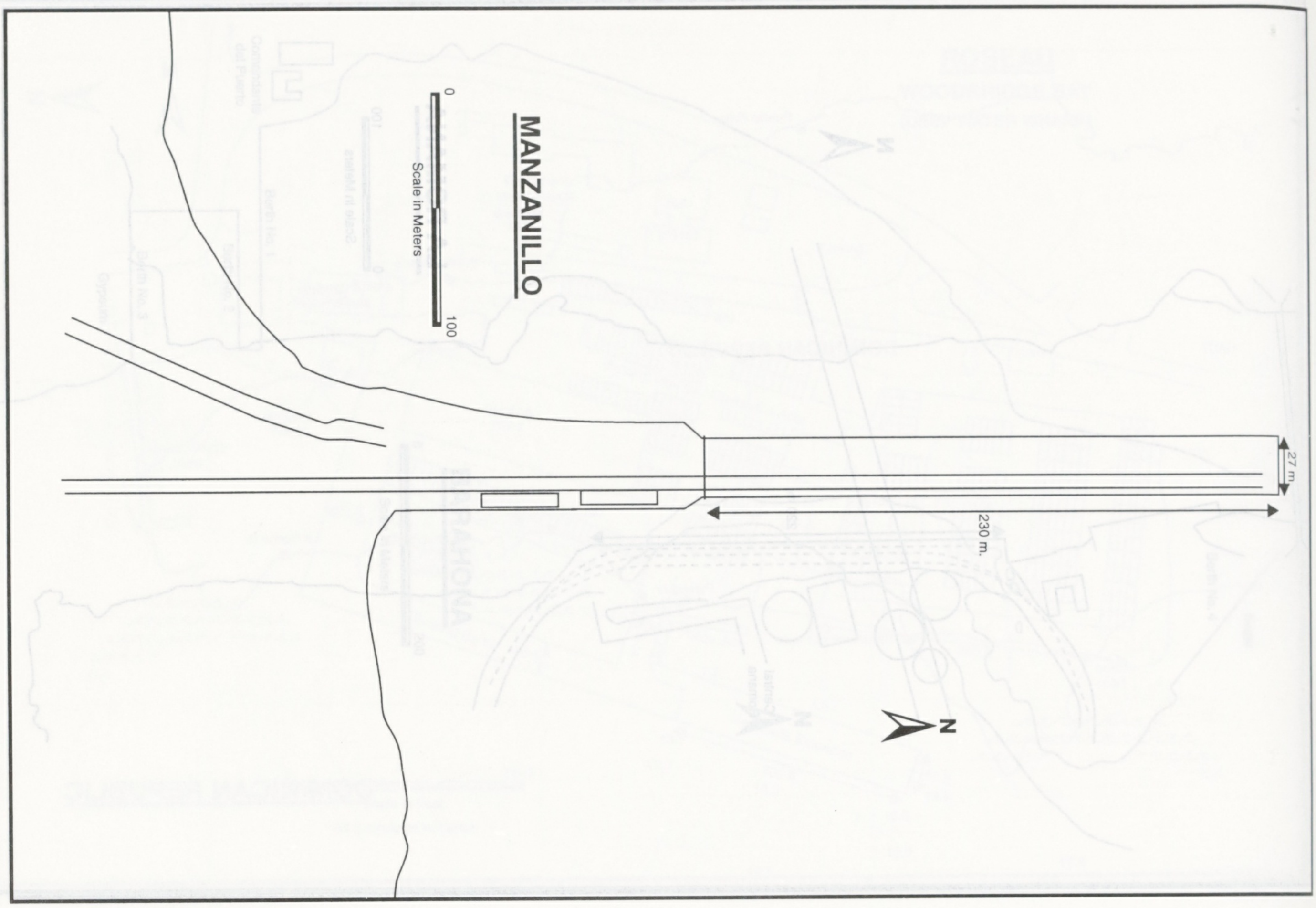
BOCA CHICA

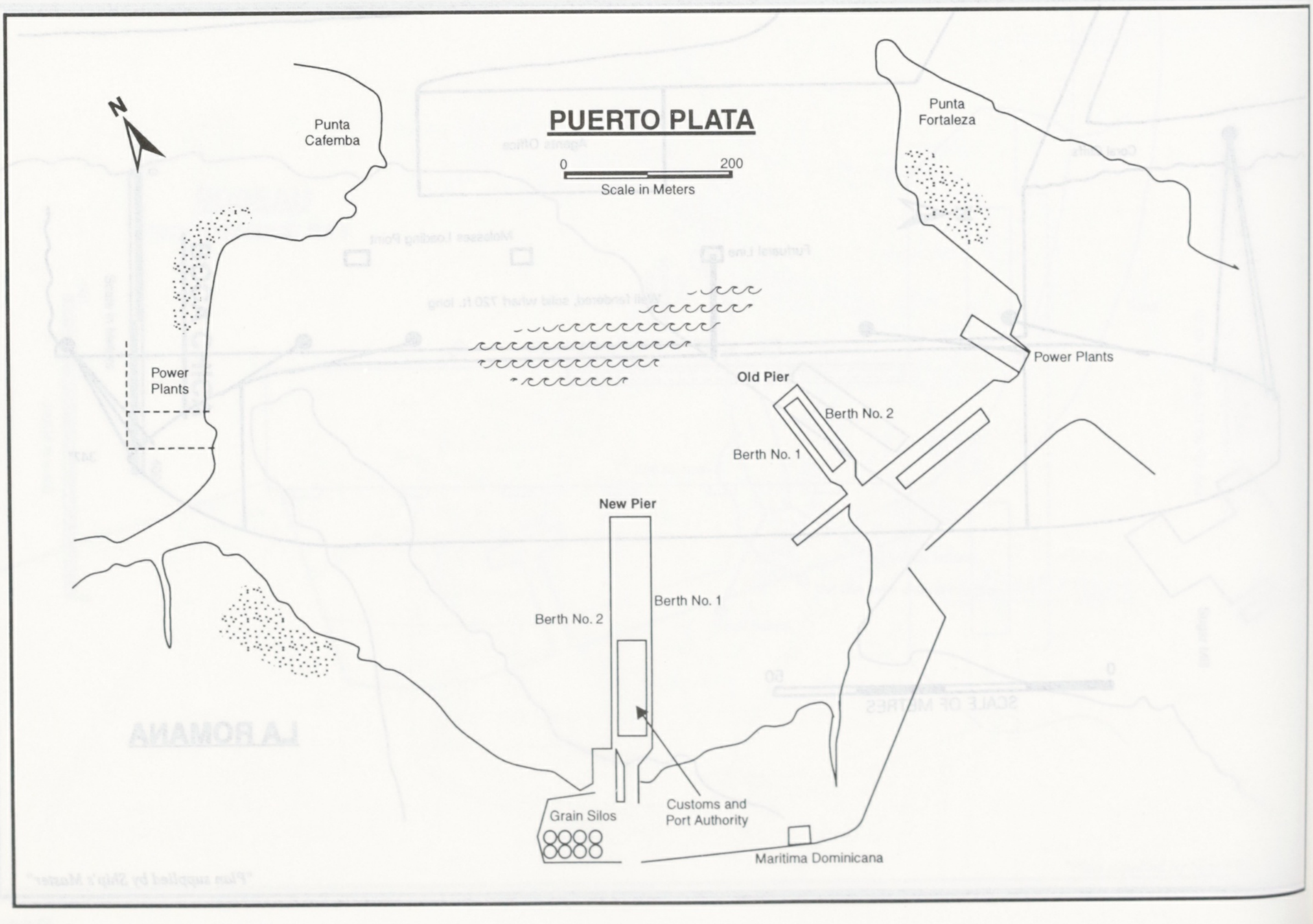
Sugar Mill
N
0
400
Scale in Meters

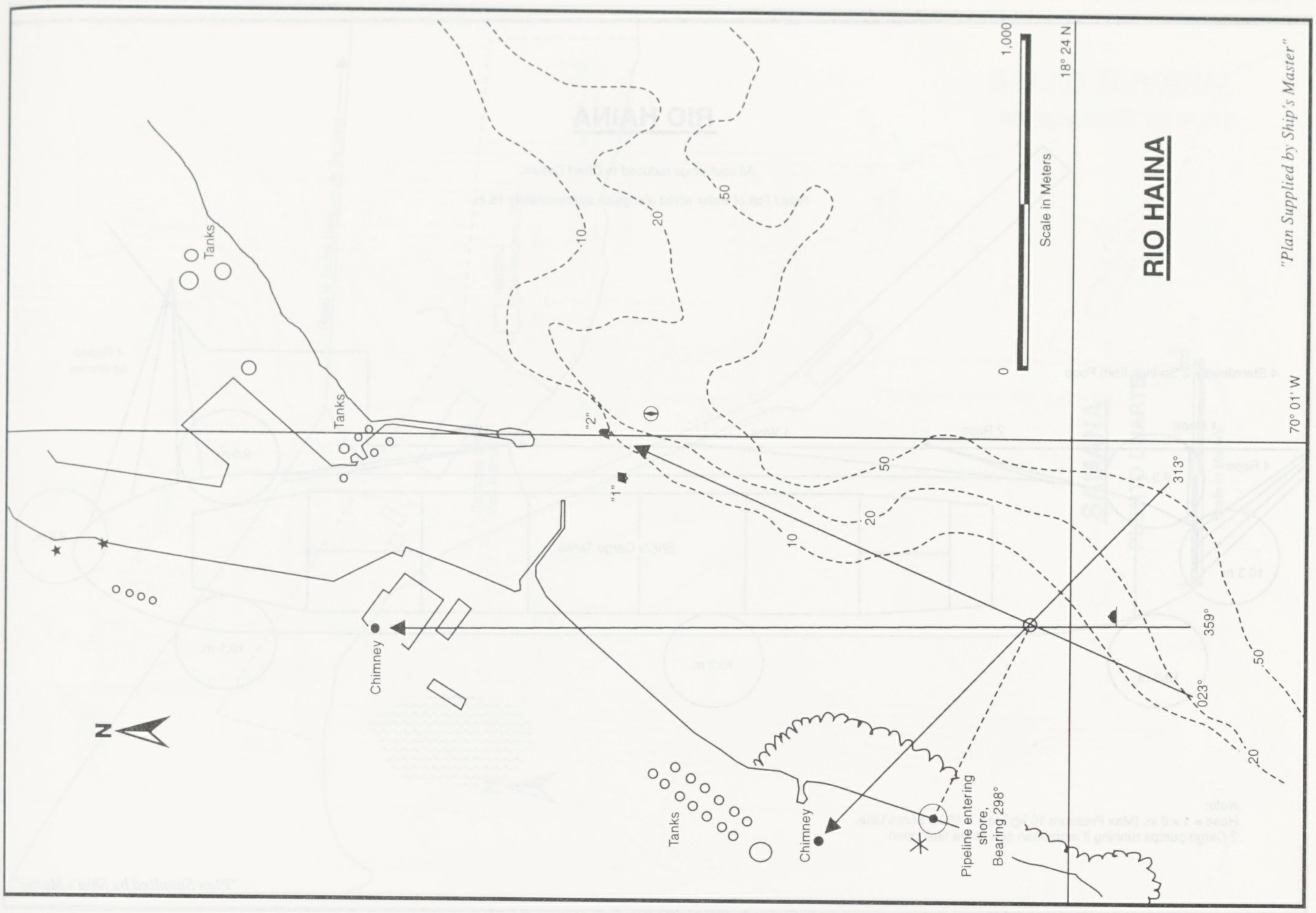

LA ROMANA
0
100
Scale in Meters
N
220 m.
Central Romana

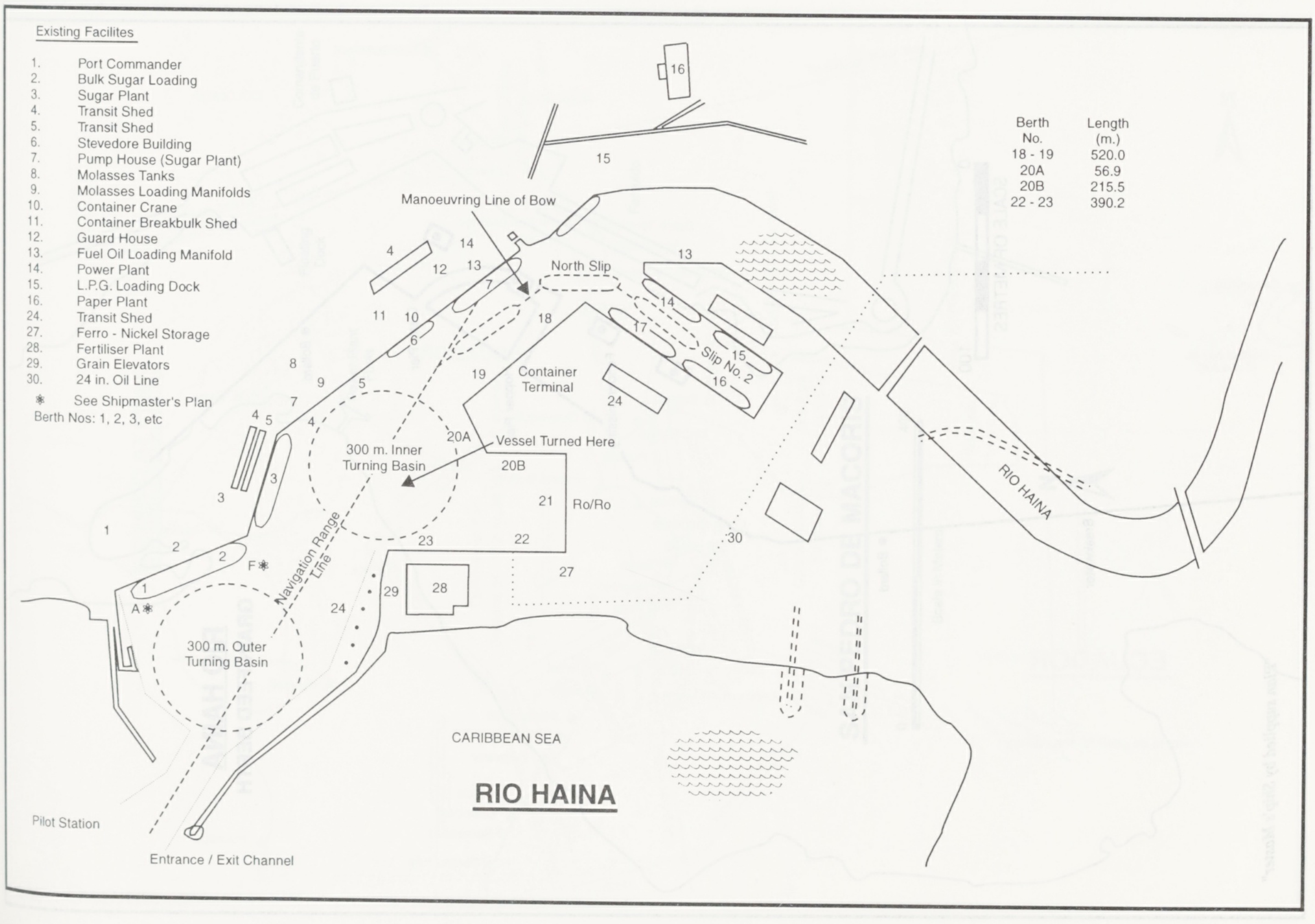

Coral Cliffs
Agents Office
Furfuaral Line
Molasses Loading Point
Well fendered, solid wharf 720 ft. long
347°
0
50
SCALE OF METRES
LA ROMANA

"Plan supplied by Ship's Master"


MANZANILLO
0
100
Scale in Meters
27 m.
230 m.
N


PUERTO PLATA
0
200
Scale in Meters
N
Punta Cafemba
Punta Fortaleza
Power Plants
Power Plants
Old Pier
Berth No. 2
Berth No. 1
New Pier
Berth No. 1
Berth No. 2
Grain Silos
Customs and Port Authority
Maritima Dominicana


RIO HAINA
"Plan Supplied by Ship's Master"
Scale in Meters
0
1,000
18° 24 N
70° 01' W
N
Tanks
Tanks
Tanks
Chimney
Chimney
"2"
"1"
Pipeline entering shore, Bearing 298°
313°
359°
023°
10
20
50
10
20
50
50
20

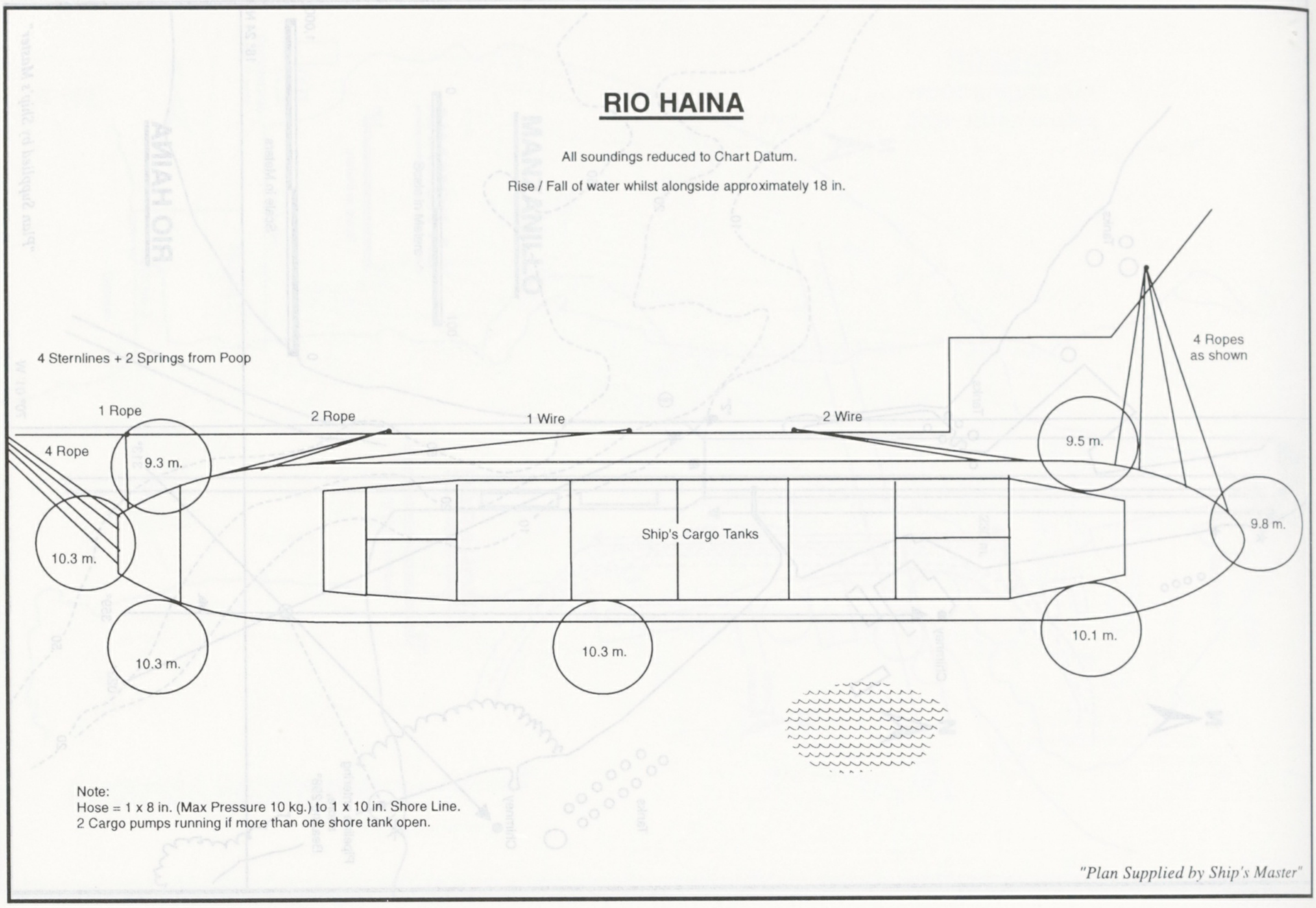

RIO HAINA
CARIBBEAN SEA
Pilot Station
Entrance / Exit Channel
300 m. Outer Turning Basin
300 m. Inner Turning Basin
Navigation Range Line
Manoeuvring Line of Bow
North Slip
Slip No. 2
Container Terminal
Vessel Turned Here
Ro/Ro
A ❋
F ❋
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20A
20B
21
22
23
24
27
28
29
30

Existing Facilites

1.	Port Commander
2.	Bulk Sugar Loading
3.	Sugar Plant
4.	Transit Shed
5.	Transit Shed
6.	Stevedore Building
7.	Pump House (Sugar Plant)
8.	Molasses Tanks
9.	Molasses Loading Manifolds
10.	Container Crane
11.	Container Breakbulk Shed
12.	Guard House
13.	Fuel Oil Loading Manifold
14.	Power Plant
15.	L.P.G. Loading Dock
16.	Paper Plant
24.	Transit Shed
27.	Ferro - Nickel Storage
28.	Fertiliser Plant
29.	Grain Elevators
30.	24 in. Oil Line
❋	See Shipmaster's Plan

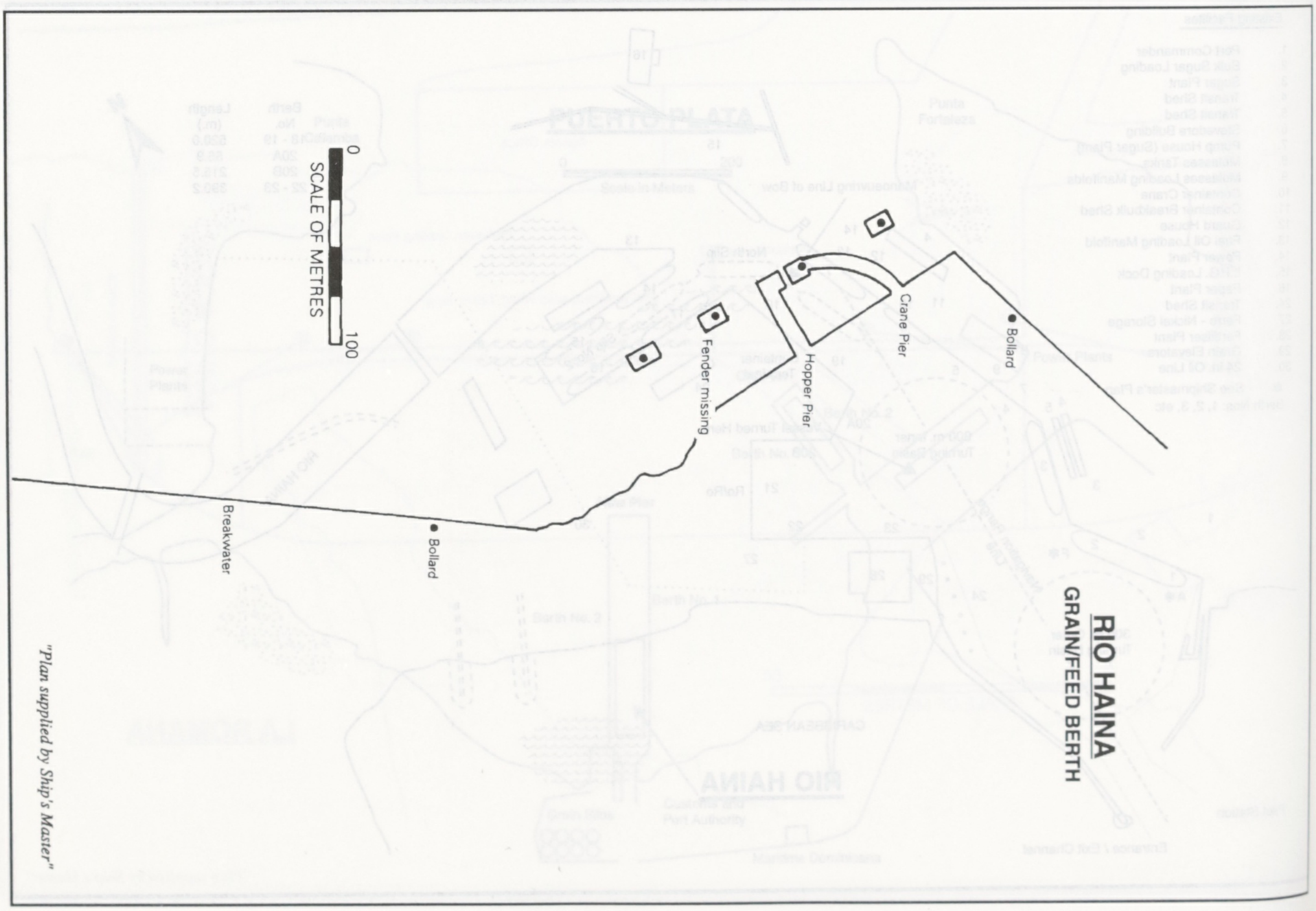
Berth Nos: 1, 2, 3, etc

Berth No.	Length (m.)
18 - 19	520.0
20A	56.9
20B	215.5
22 - 23	390.2

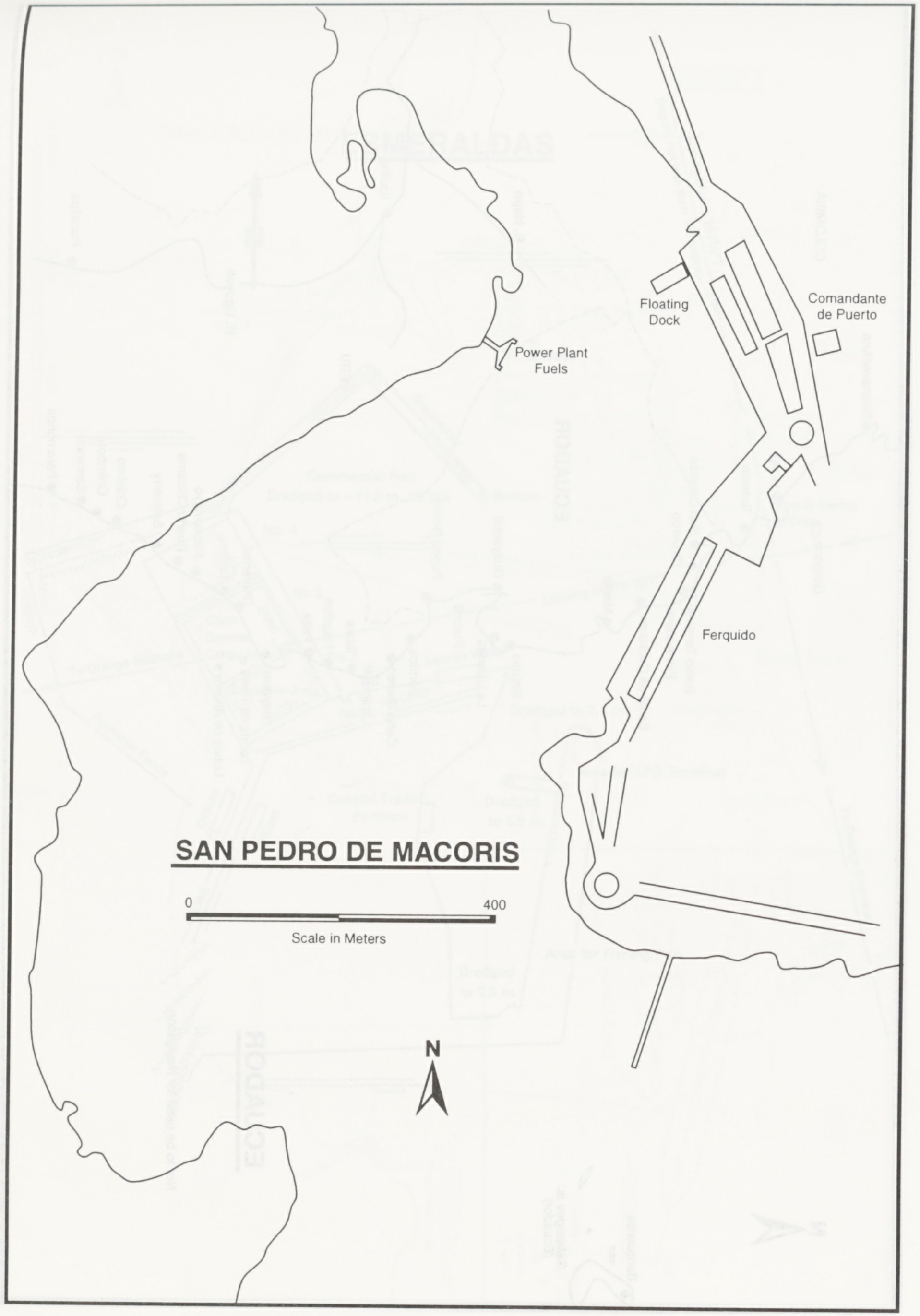

RIO HAINA
All soundings reduced to Chart Datum.
Rise / Fall of water whilst alongside approximately 18 in.
4 Sternlines + 2 Springs from Poop
1 Rope
4 Rope
9.3 m.
10.3 m.
2 Rope
1 Wire
2 Wire
4 Ropes as shown
9.5 m.
9.8 m.
Ship's Cargo Tanks
10.3 m.
10.3 m.
10.1 m.

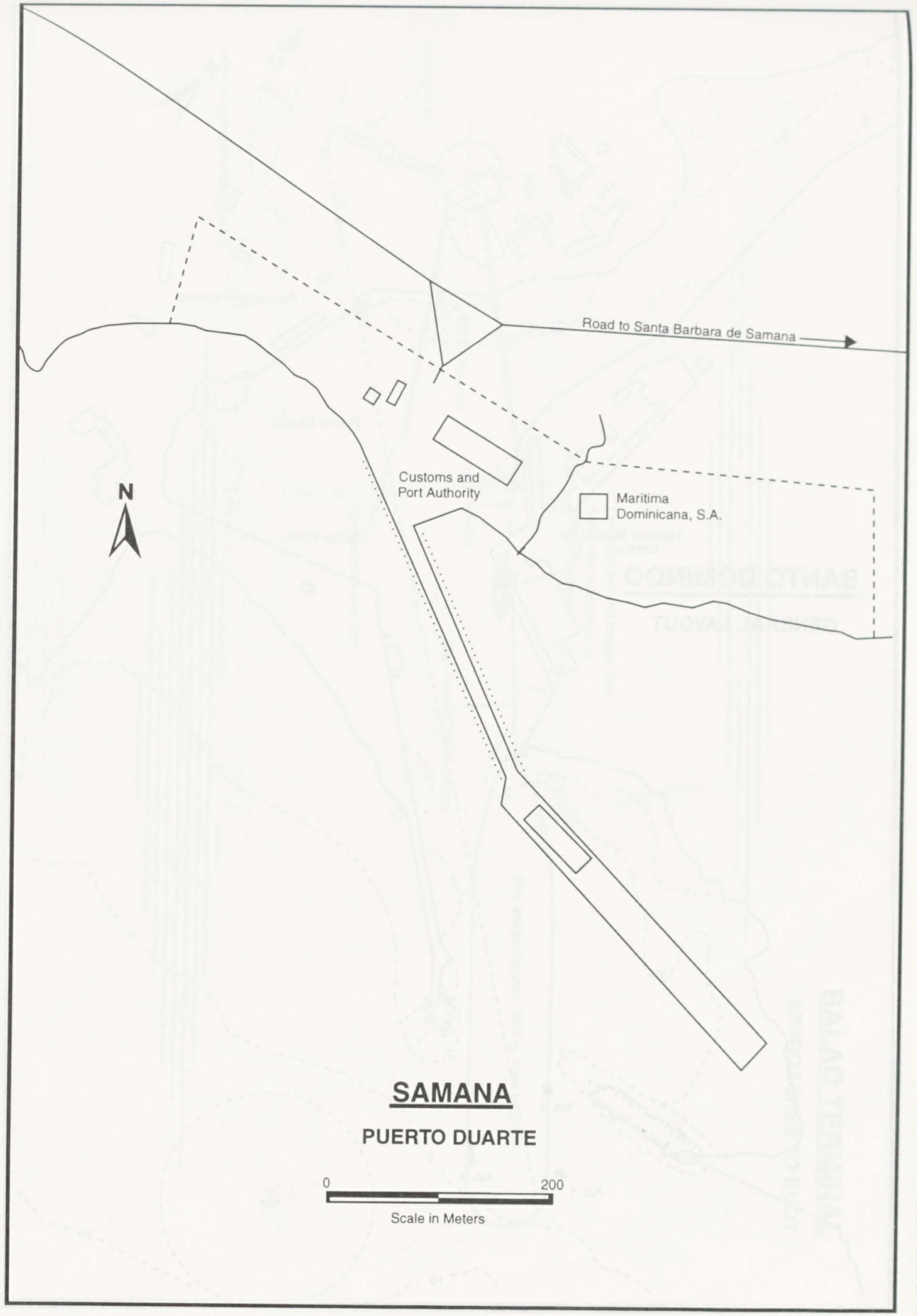
Note:
Hose = 1 x 8 in. (Max Pressure 10 kg.) to 1 x 10 in. Shore Line.
2 Cargo pumps running if more than one shore tank open.

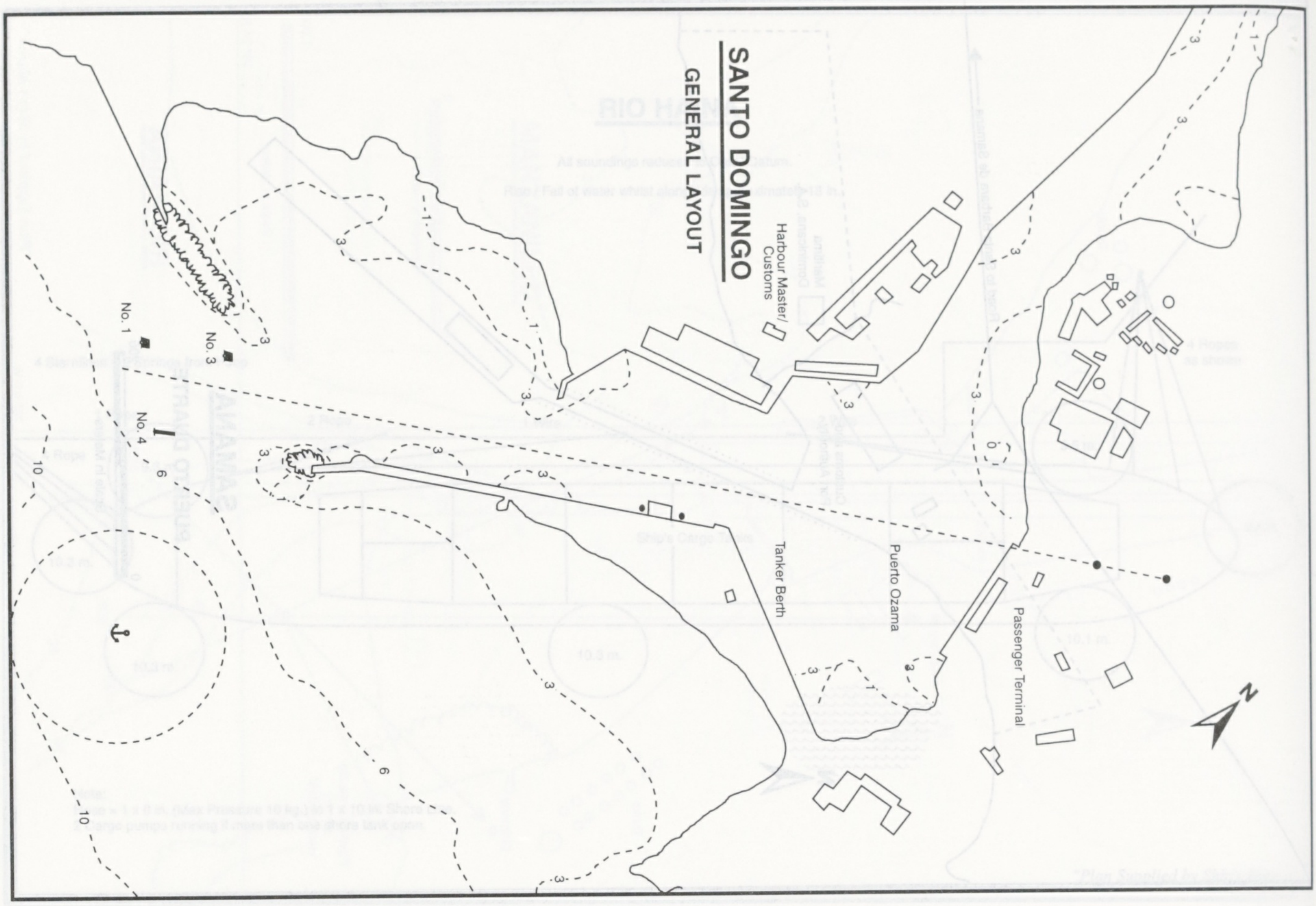
"Plan Supplied by Ship's Master"

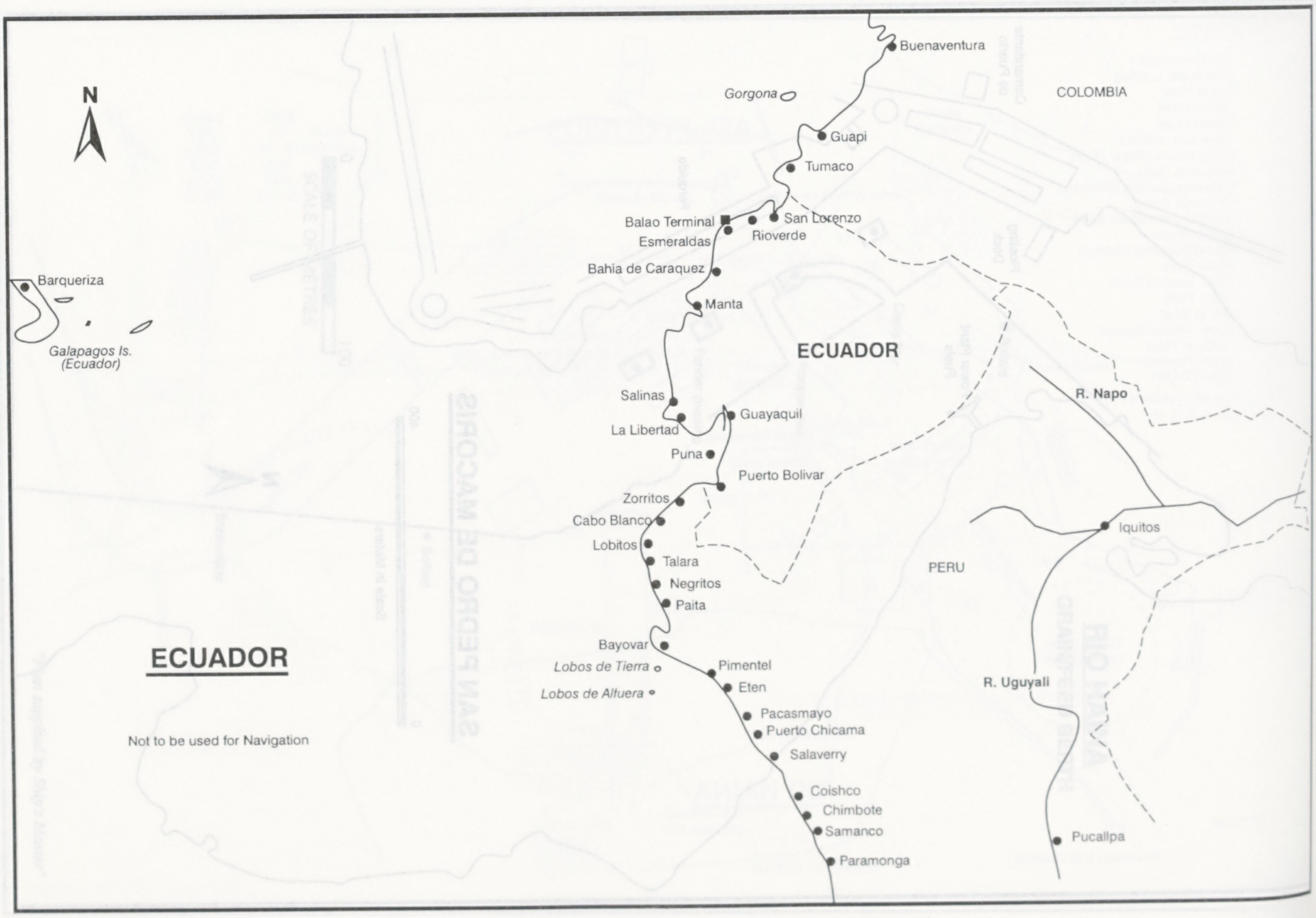

RIO HAINA
GRAIN/FEED BERTH
SCALE OF METRES
0
100
Fender missing
Hopper Pier
Crane Pier
Bollard
Breakwater
Bollard

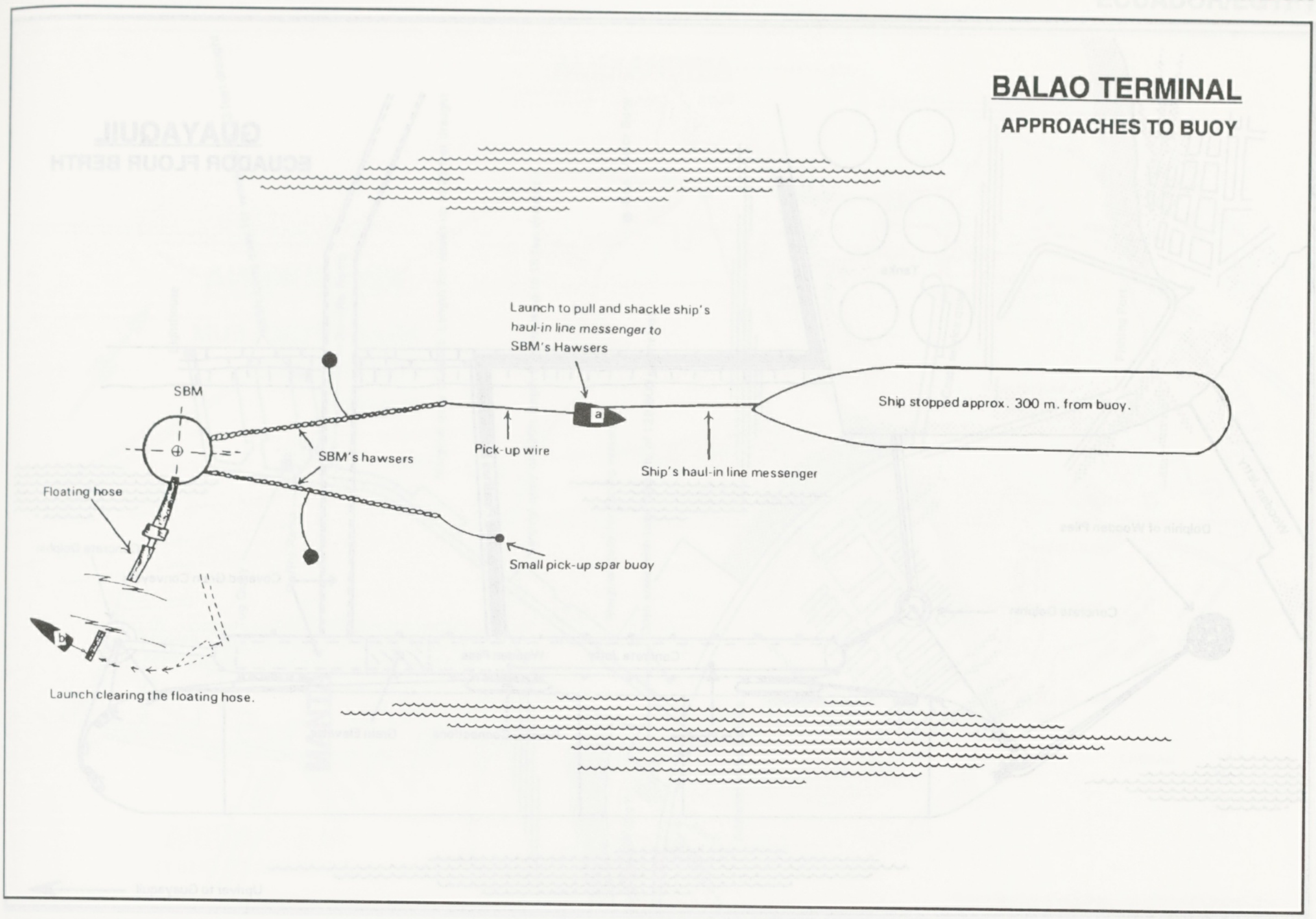
"Plan supplied by Ship's Master"


Floating Dock
Comandante de Puerto
Power Plant Fuels
Ferquido
SAN PEDRO DE MACORIS
0
400
Scale in Meters
N


Road to Santa Barbara de Samana
Customs and Port Authority
Maritima Dominicana, S.A.
N
SAMANA
PUERTO DUARTE
0
200
Scale in Meters


SANTO DOMINGO
GENERAL LAYOUT
Harbour Master/
Customs
Tanker Berth
Puerto Ozama
Passenger Terminal
No. 1
No. 3
No. 4
N
3
1
6
10

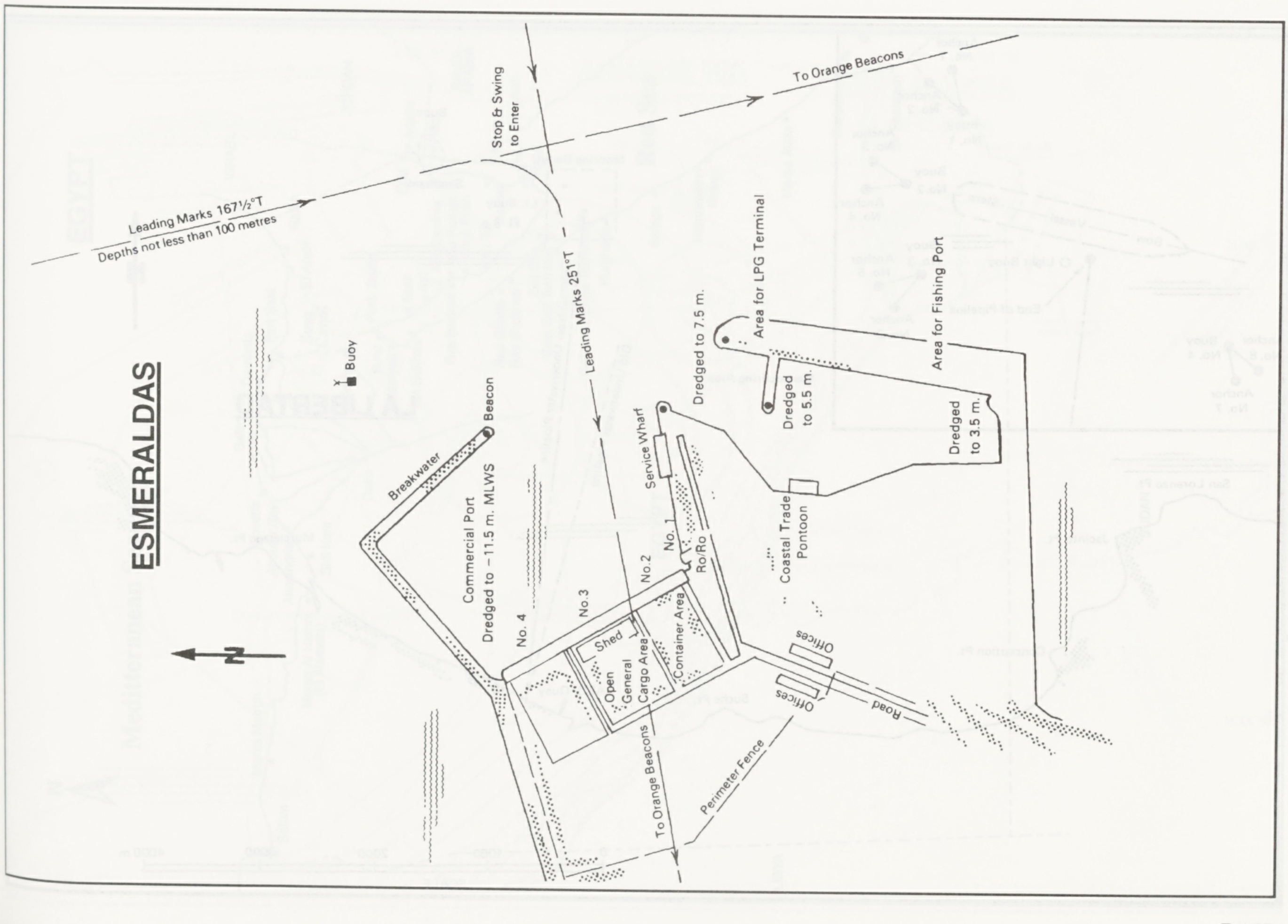

N
Buenaventura
Gorgona
COLOMBIA
Guapi
Tumaco
Balao Terminal
San Lorenzo
Esmeraldas
Rioverde
Bahia de Caraquez
Barqueriza
Manta
Galapagos Is.
(Ecuador)
ECUADOR
R. Napo
Salinas
Guayaquil
La Libertad
Puna
Puerto Bolivar
Zorritos
Cabo Blanco
Iquitos
Lobitos
Talara
PERU
Negritos
Paita
Bayovar
ECUADOR
Lobos de Tierra
Pimentel
Lobos de Alfuera
Eten
R. Uguyali
Pacasmayo
Not to be used for Navigation
Puerto Chicama
Salaverry
Coishco
Chimbote
Samanco
Pucallpa
Paramonga



BALAO TERMINAL

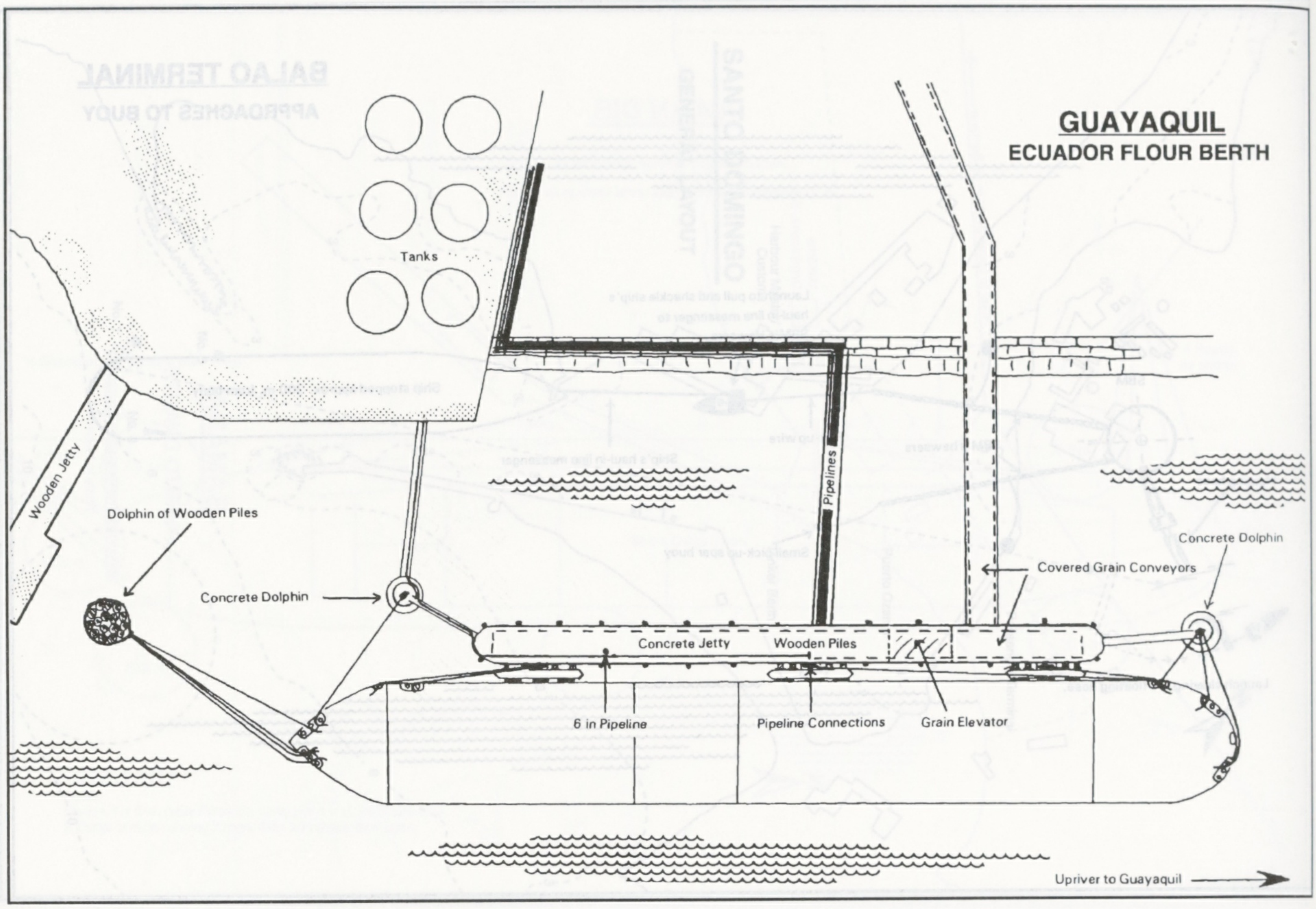
APPROACHES TO BUOY

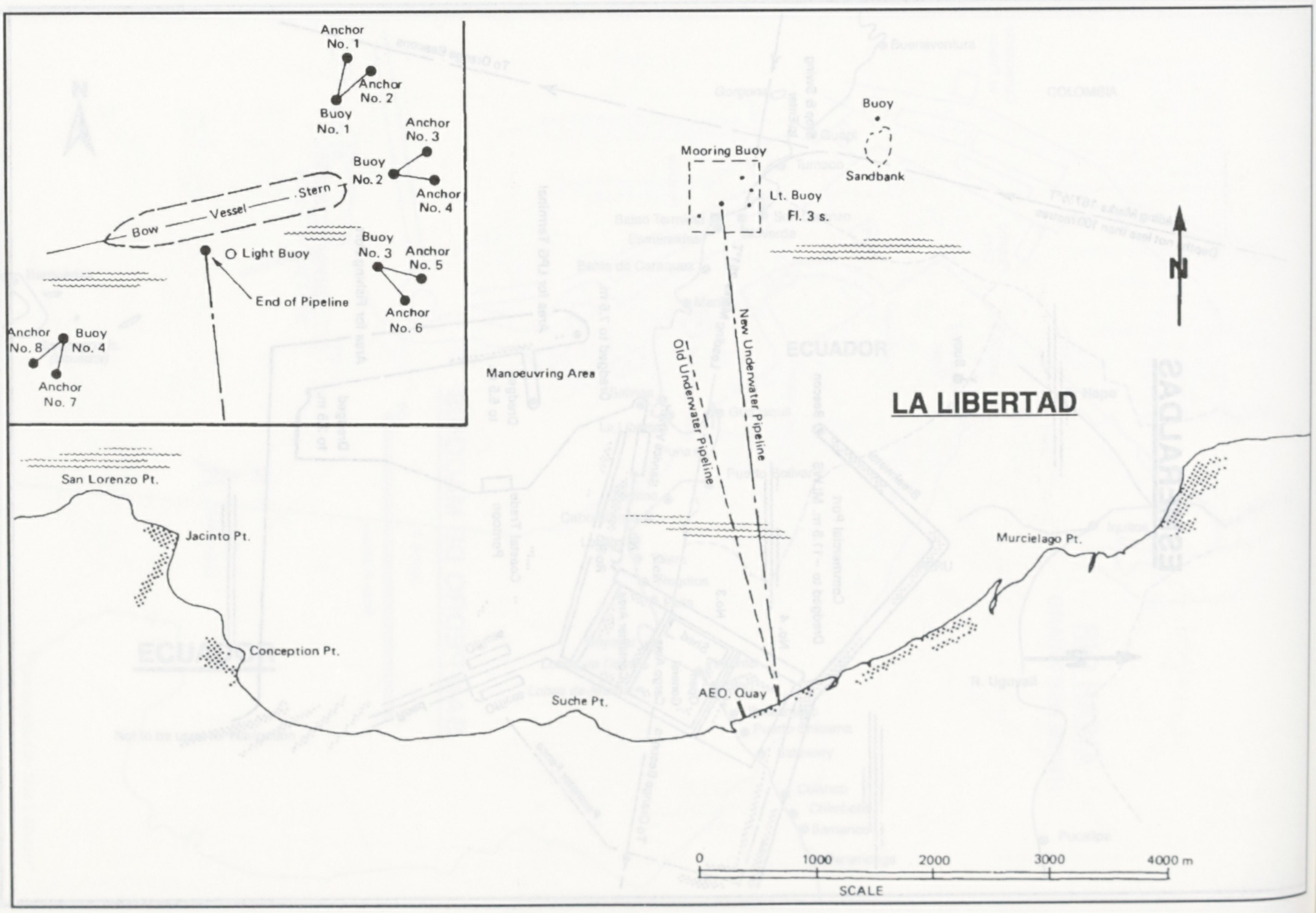
Launch to pull and shackle ship's haul-in line messenger to SBM's Hawsers
SBM
a
Ship stopped approx. 300 m. from buoy.
SBM's hawsers
Pick-up wire
Ship's haul-in line messenger
Floating hose
Small pick-up spar buoy
b
Launch clearing the floating hose.

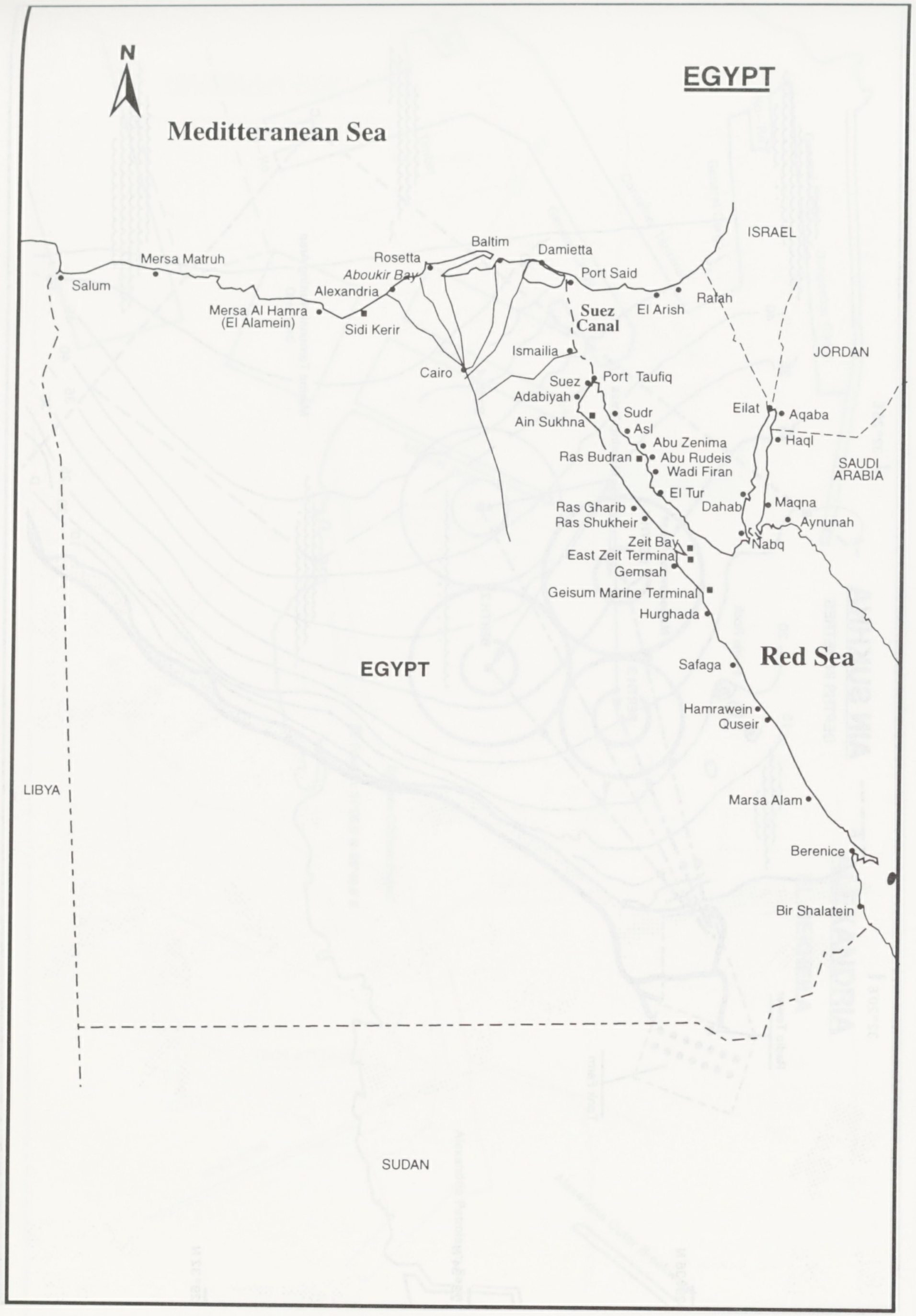


ESMERALDAS

N
Leading Marks 167½°T
Depths not less than 100 metres
Stop & Swing to Enter
To Orange Beacons
Leading Marks 251°T
Buoy
Beacon
Breakwater
Commercial Port Dredged to −11.5 m. MLWS
No. 4
No. 3
No. 2
No. 1
Shed
Open General Cargo Area
Container Area
Ro/Ro
Service Wharf
Dredged to 7.5 m.
Area for LPG Terminal
Dredged to 5.5 m.
Area for Fishing Port
Dredged to 3.5 m.
Coastal Trade Pontoon
Offices
Offices
Road
Perimeter Fence
To Orange Beacons

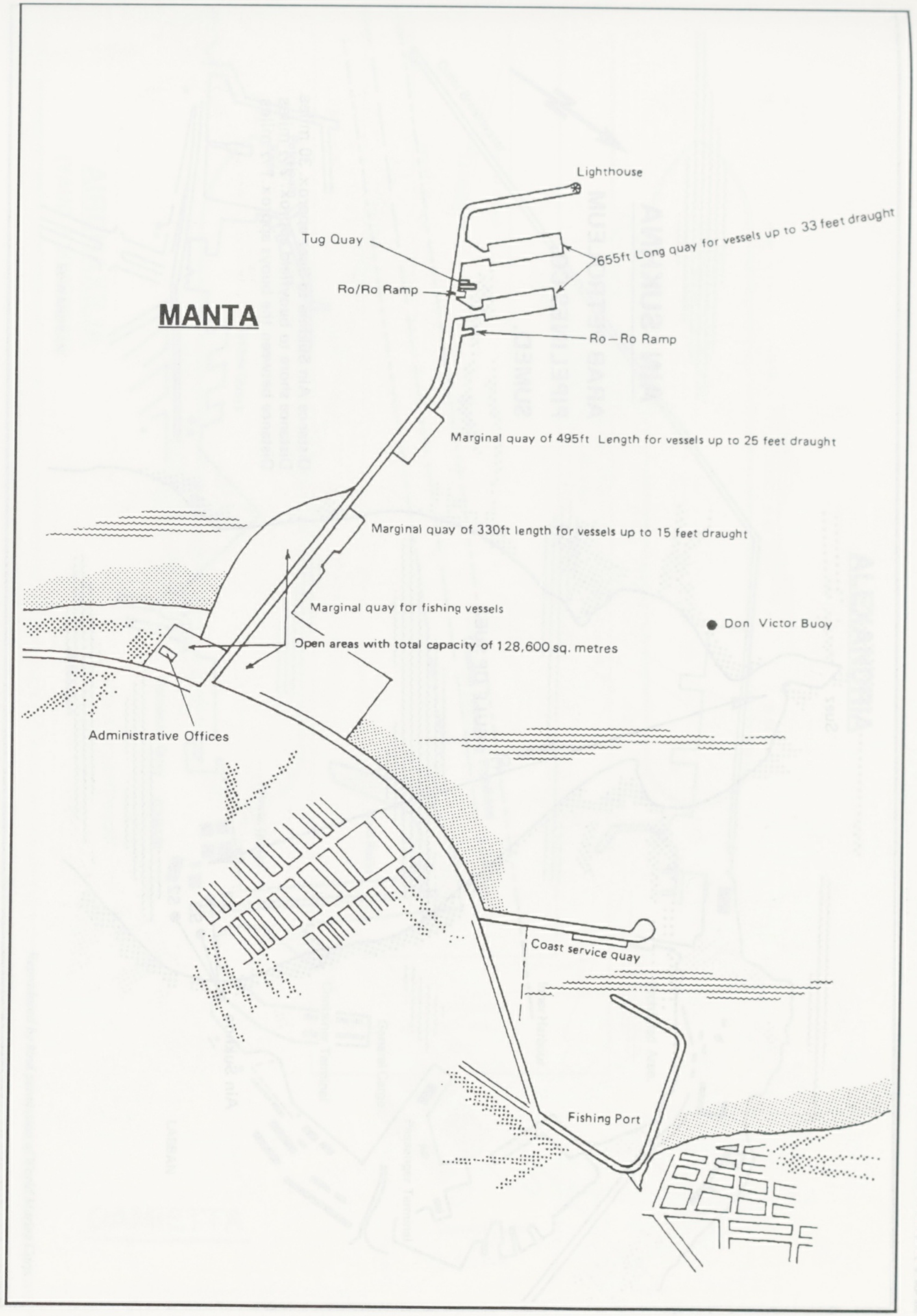

GUAYAQUIL
ECUADOR FLOUR BERTH
Tanks
Wooden Jetty
Dolphin of Wooden Piles
Concrete Dolphin
Pipelines
Covered Grain Conveyors
Concrete Dolphin
Concrete Jetty
Wooden Piles
6 in Pipeline
Pipeline Connections
Grain Elevator
Upriver to Guayaquil


Anchor No. 1
Anchor No. 2
Buoy No. 1
Anchor No. 3
Buoy No. 2
Anchor No. 4
Bow
Vessel
Stern
Light Buoy
End of Pipeline
Buoy No. 3
Anchor No. 5
Anchor No. 6
Anchor No. 8
Buoy No. 4
Anchor No. 7
Manoeuvring Area
Mooring Buoy
Lt. Buoy
Fl. 3 s.
Buoy
Sandbank
N
New Underwater Pipeline
Old Underwater Pipeline
LA LIBERTAD
San Lorenzo Pt.
Jacinto Pt.
Conception Pt.
Suche Pt.
AEO. Quay
Murcielago Pt.
0
1000
2000
3000
4000 m
SCALE



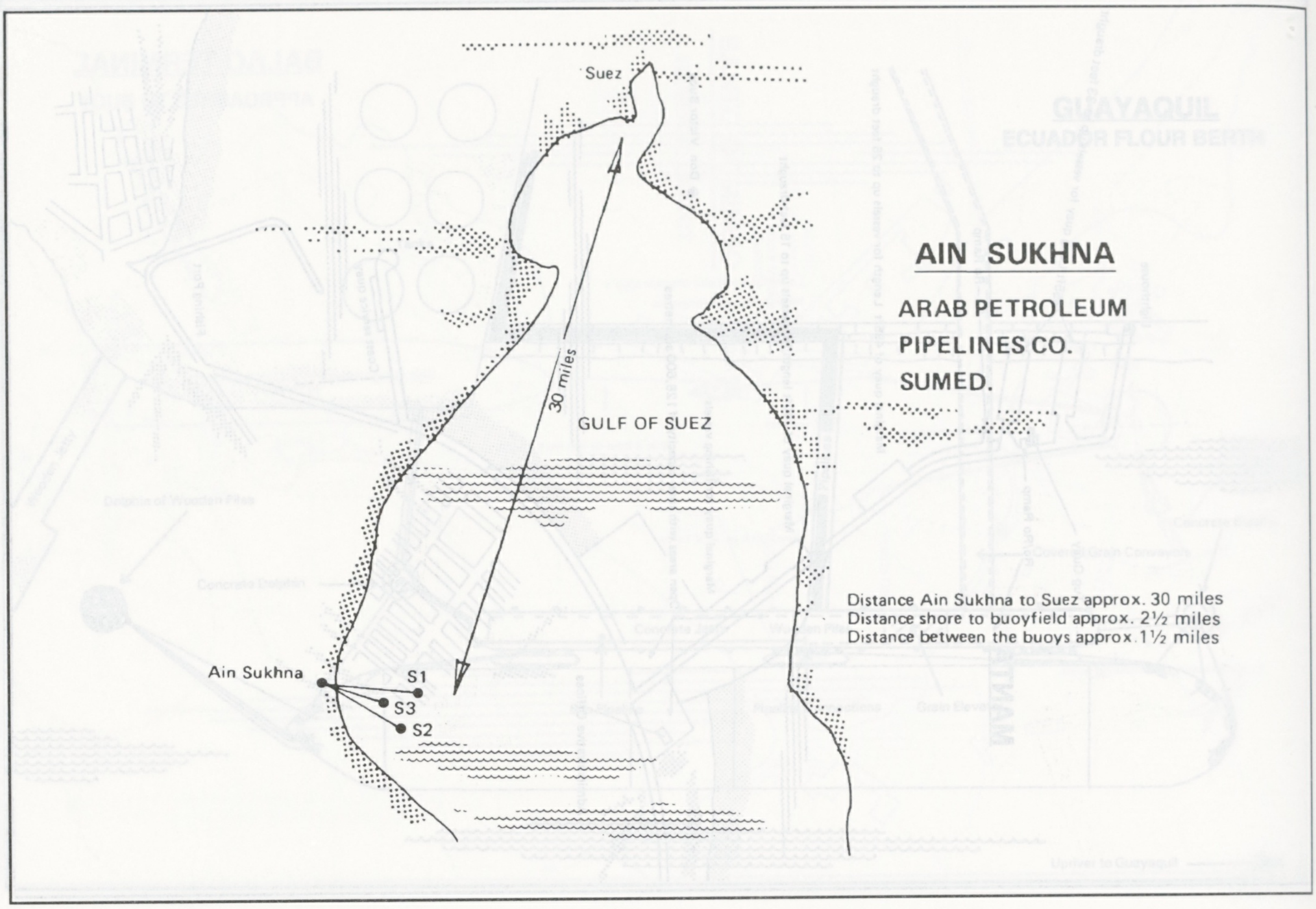
EGYPT

N
Meditteranean Sea
Salum
Mersa Matruh
Rosetta
Aboukir Bay
Baltim
Damietta
Port Said
Alexandria
Mersa Al Hamra
(El Alamein)
Sidi Kerir
Suez
Canal
El Arish
Rafah
ISRAEL
JORDAN
Cairo
Ismailia
Suez
Port Taufiq
Adabiyah
Ain Sukhna
Sudr
Asl
Abu Zenima
Ras Budran
Abu Rudeis
Wadi Firan
El Tur
Eilat
Aqaba
Haql
SAUDI
ARABIA
Dahab
Maqna
Aynunah
Nabq
Ras Gharib
Ras Shukheir
Zeit Bay
East Zeit Terminal
Gemsah
Geisum Marine Terminal
Hurghada
Safaga
Red Sea
EGYPT
Hamrawein
Quseir
LIBYA
Marsa Alam
Berenice
Bir Shalatein
SUDAN



MANTA

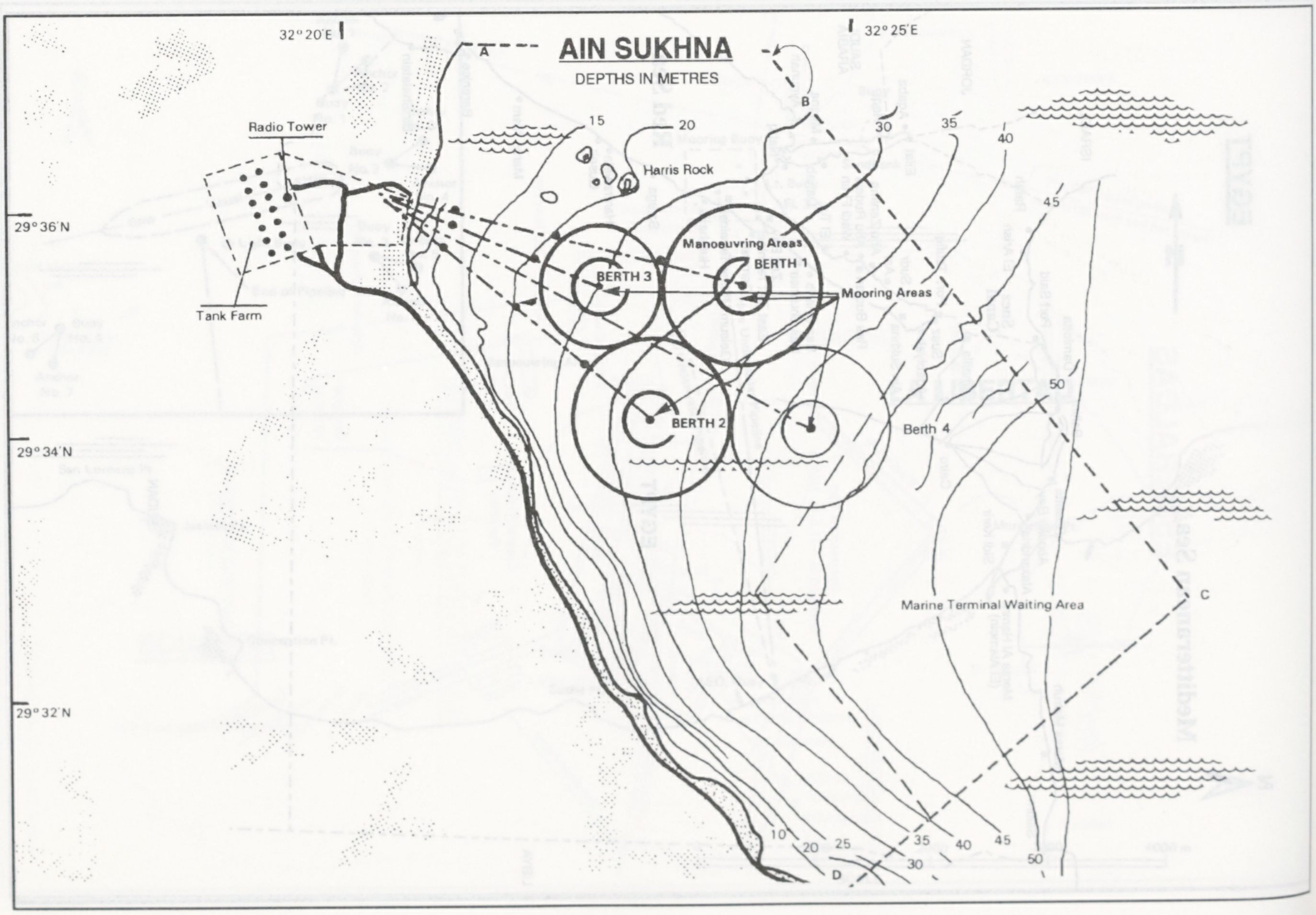
Lighthouse
Tug Quay
655ft Long quay for vessels up to 33 feet draught
Ro/Ro Ramp
Ro—Ro Ramp
Marginal quay of 495ft Length for vessels up to 25 feet draught
Marginal quay of 330ft length for vessels up to 15 feet draught
Marginal quay for fishing vessels
Open areas with total capacity of 128,600 sq. metres
Don Victor Buoy
Administrative Offices
Coast service quay
Fishing Port

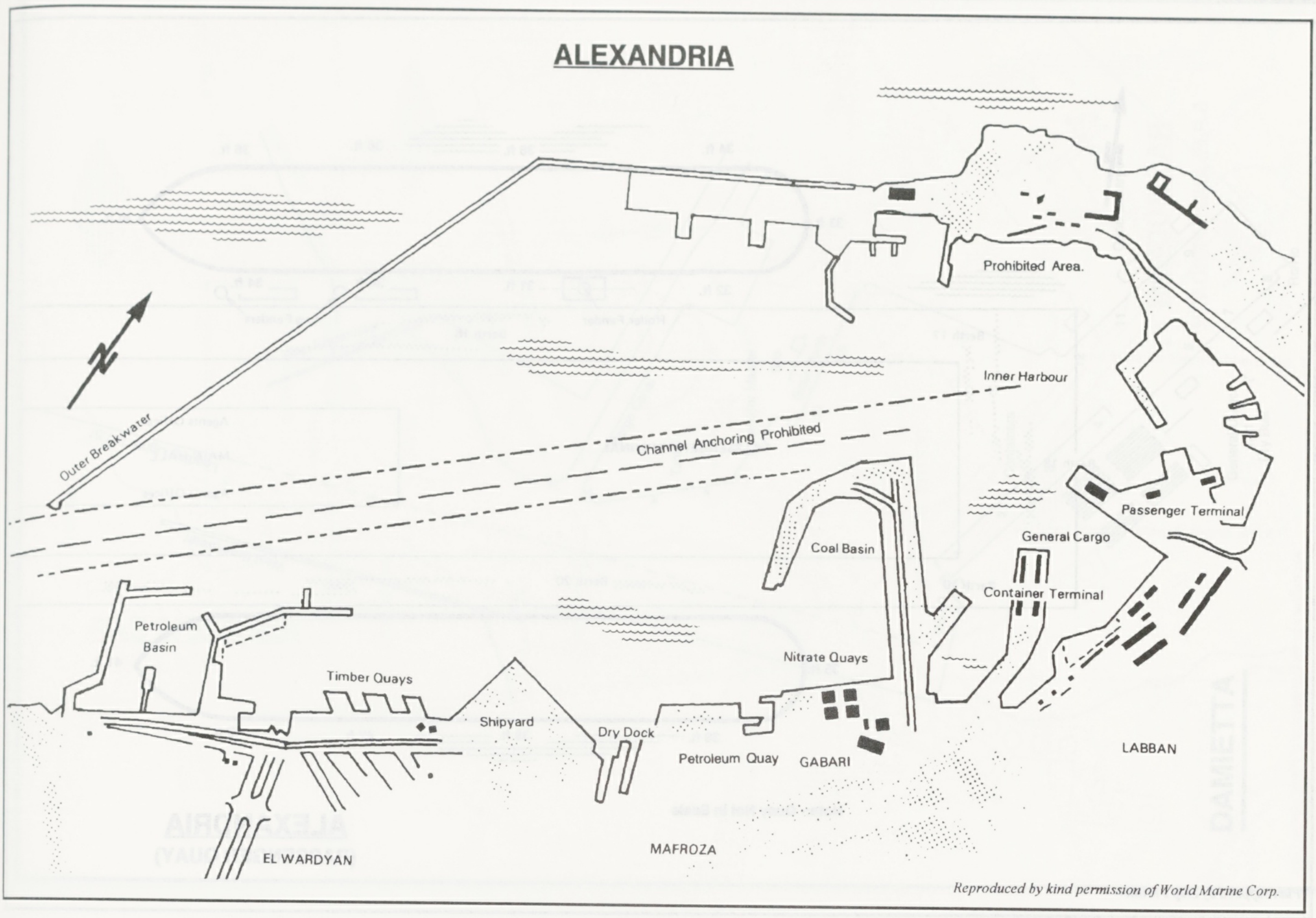

Suez
30 miles
GULF OF SUEZ
Ain Sukhna
S1
S3
S2

AIN SUKHNA

ARAB PETROLEUM
PIPELINES CO.
SUMED.

Distance Ain Sukhna to Suez approx. 30 miles
Distance shore to buoyfield approx. 2½ miles
Distance between the buoys approx. 1½ miles


AIN SUKHNA
DEPTHS IN METRES
32° 20'E
32° 25'E
A
B
C
D
29° 36'N
29° 34'N
29° 32'N
Radio Tower
Tank Farm
Harris Rock
Manoeuvring Areas
BERTH 3
BERTH 1
BERTH 2
Berth 4
Mooring Areas
Marine Terminal Waiting Area
15
20
30
35
40
45
50
10
20
25
35
40
45
30
50


ALEXANDRIA
Prohibited Area.
Inner Harbour
Outer Breakwater
Channel Anchoring Prohibited
Passenger Terminal
General Cargo
Coal Basin
Container Terminal
Petroleum Basin
Timber Quays
Nitrate Quays
Shipyard
Dry Dock
Petroleum Quay
GABARI
LABBAN
MAFROZA
EL WARDYAN

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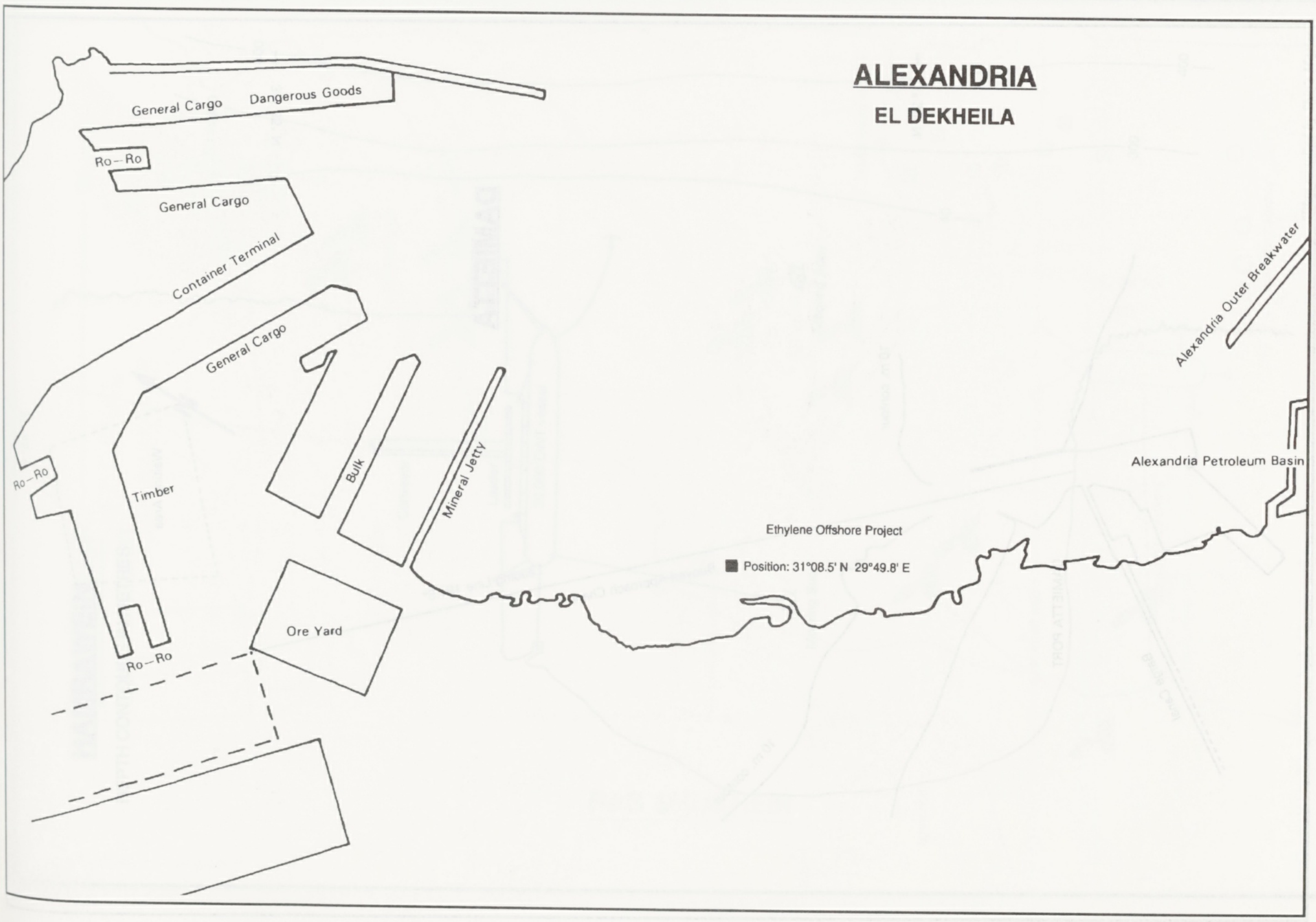
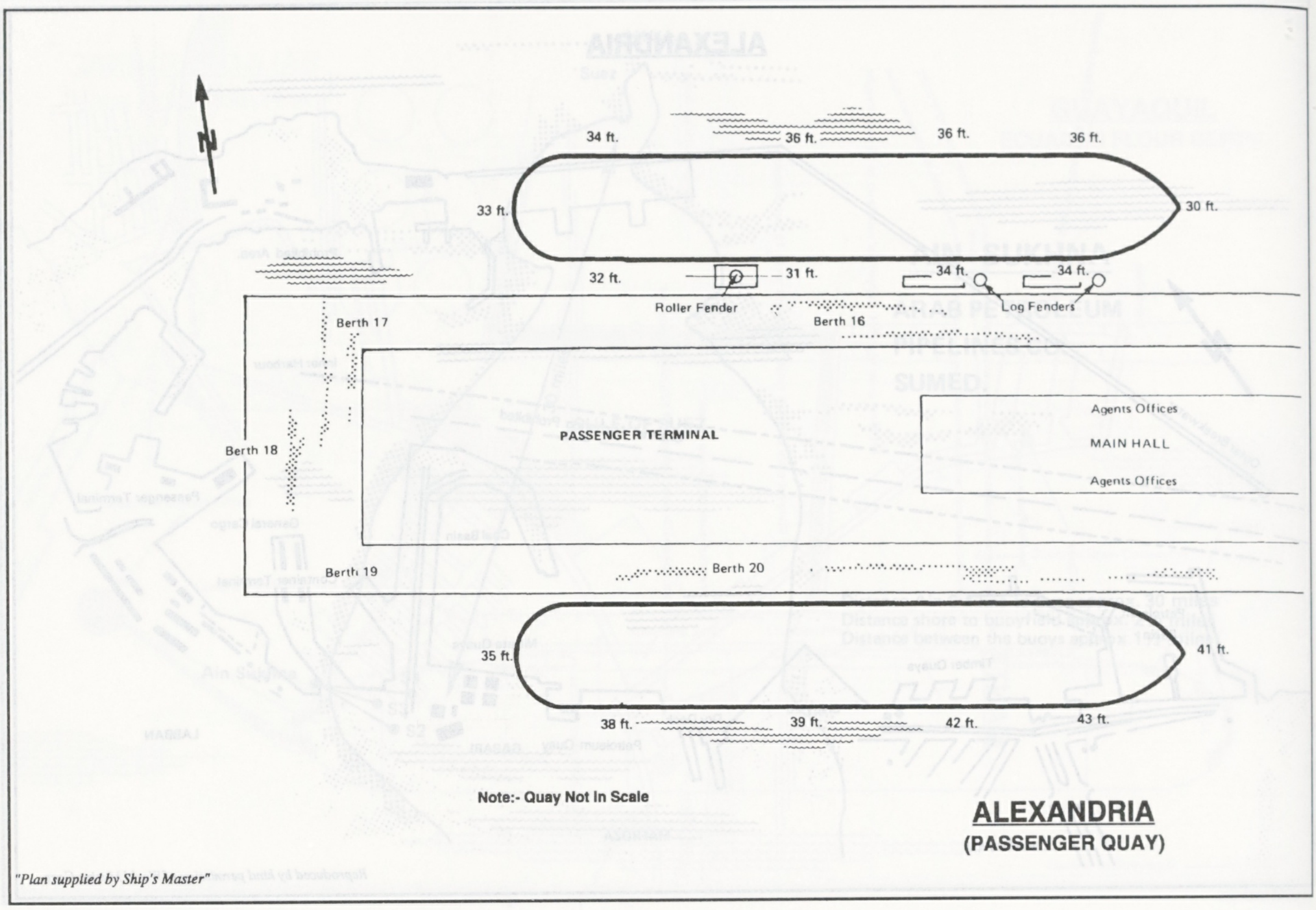
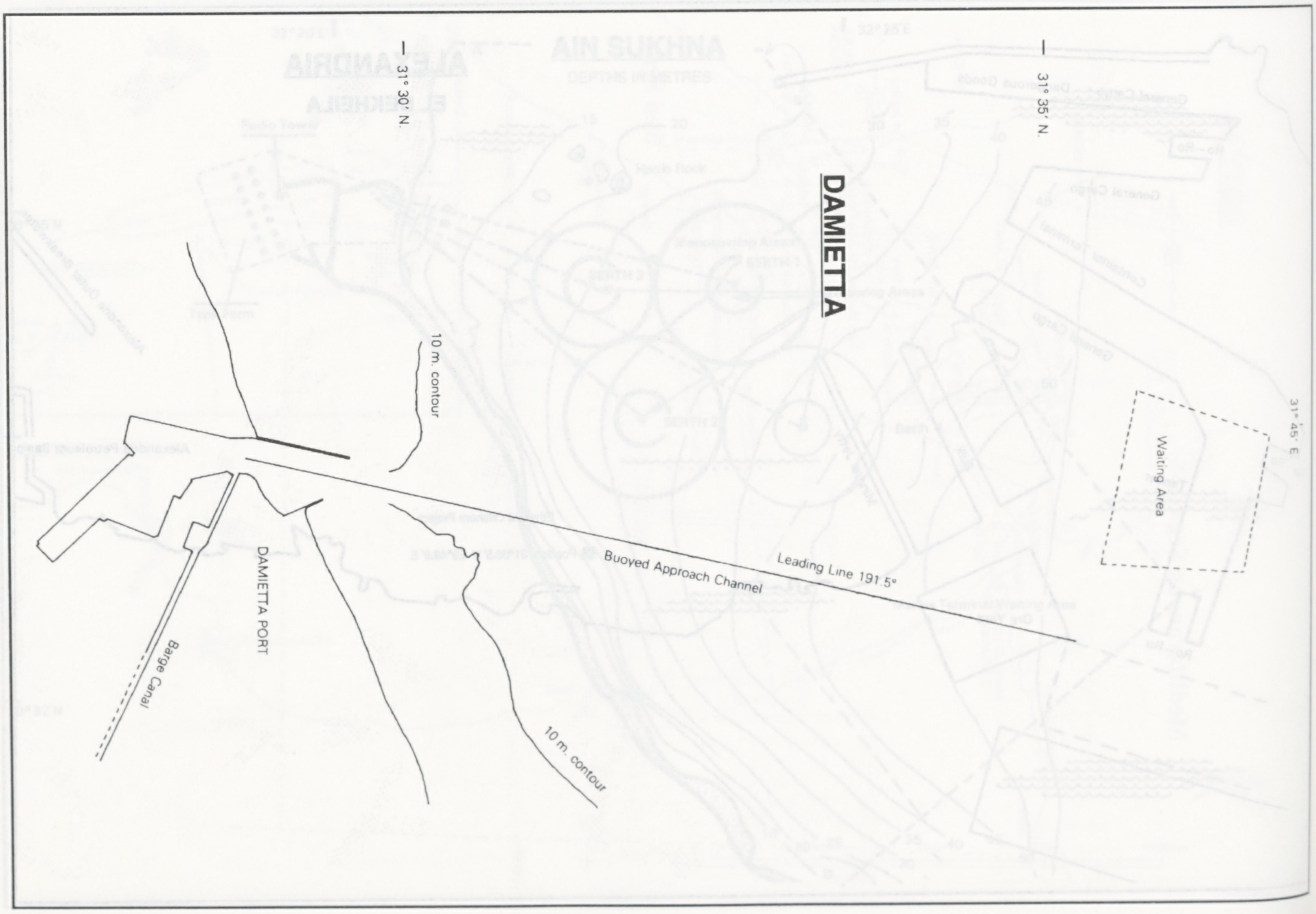
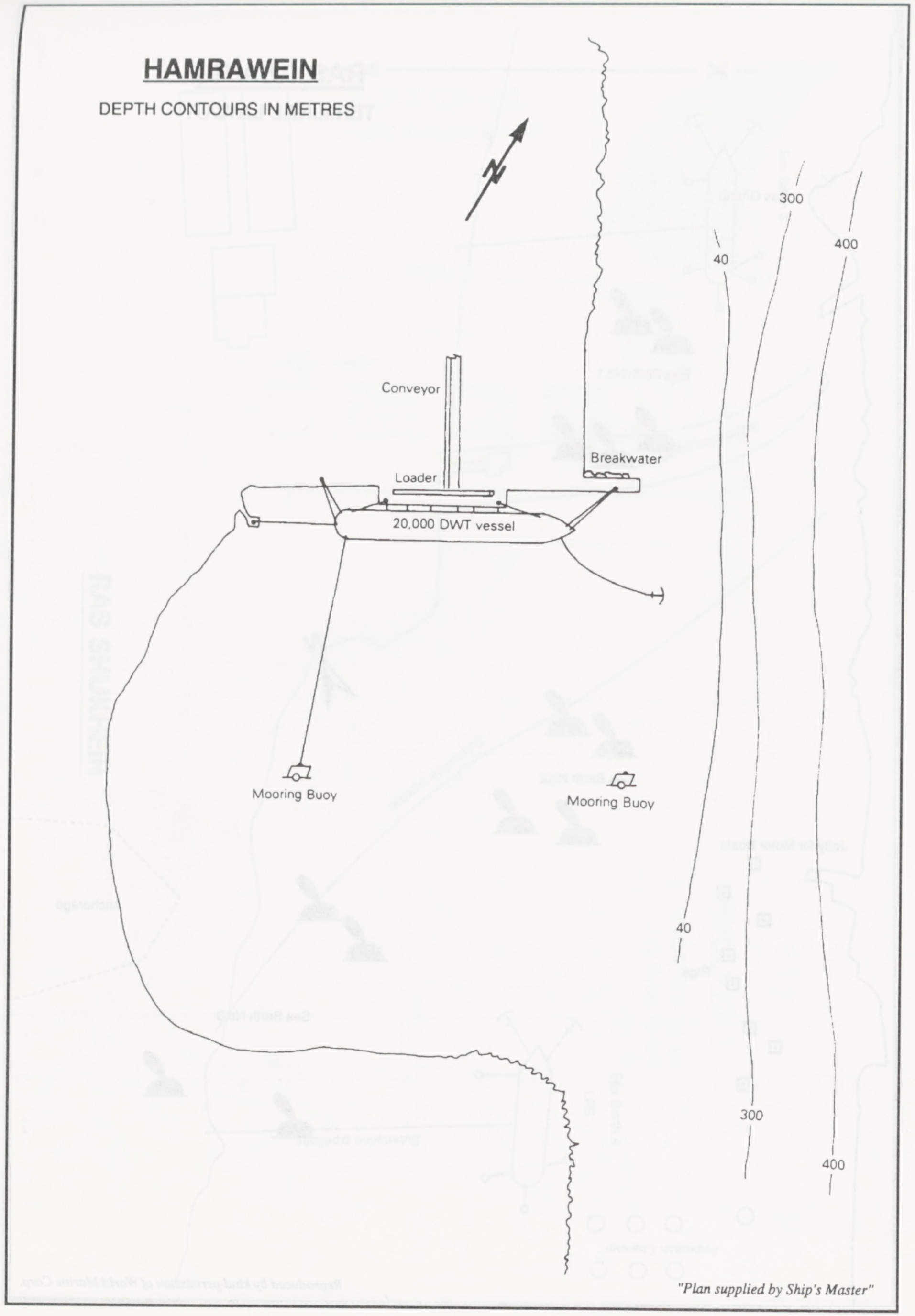

ALEXANDRIA
EL DEKHEILA
General Cargo
Dangerous Goods
Ro – Ro
General Cargo
Container Terminal
General Cargo
Alexandria Outer Breakwater
Ro – Ro
Timber
Bulk
Mineral Jetty
Alexandria Petroleum Basin
Ethylene Offshore Project
■ Position: 31°08.5' N 29°49.8' E
Ore Yard
Ro – Ro


34 ft.
36 ft.
36 ft.
36 ft.
33 ft.
30 ft.
32 ft.
31 ft.
34 ft.
34 ft.
Roller Fender
Log Fenders
Berth 17
Berth 16
Berth 18
PASSENGER TERMINAL
Agents Offices
MAIN HALL
Agents Offices
Berth 19
Berth 20
35 ft.
41 ft.
38 ft.
39 ft.
42 ft.
43 ft.
Note:- Quay Not In Scale
ALEXANDRIA
(PASSENGER QUAY)
"Plan supplied by Ship's Master"


31° 30' N.
31° 35' N.
DAMIETTA
10 m. contour
31° 45' E
Waiting Area
DAMIETTA PORT
Buoyed Approach Channel
Leading Line 191.5°
Barge Canal
10 m. contour

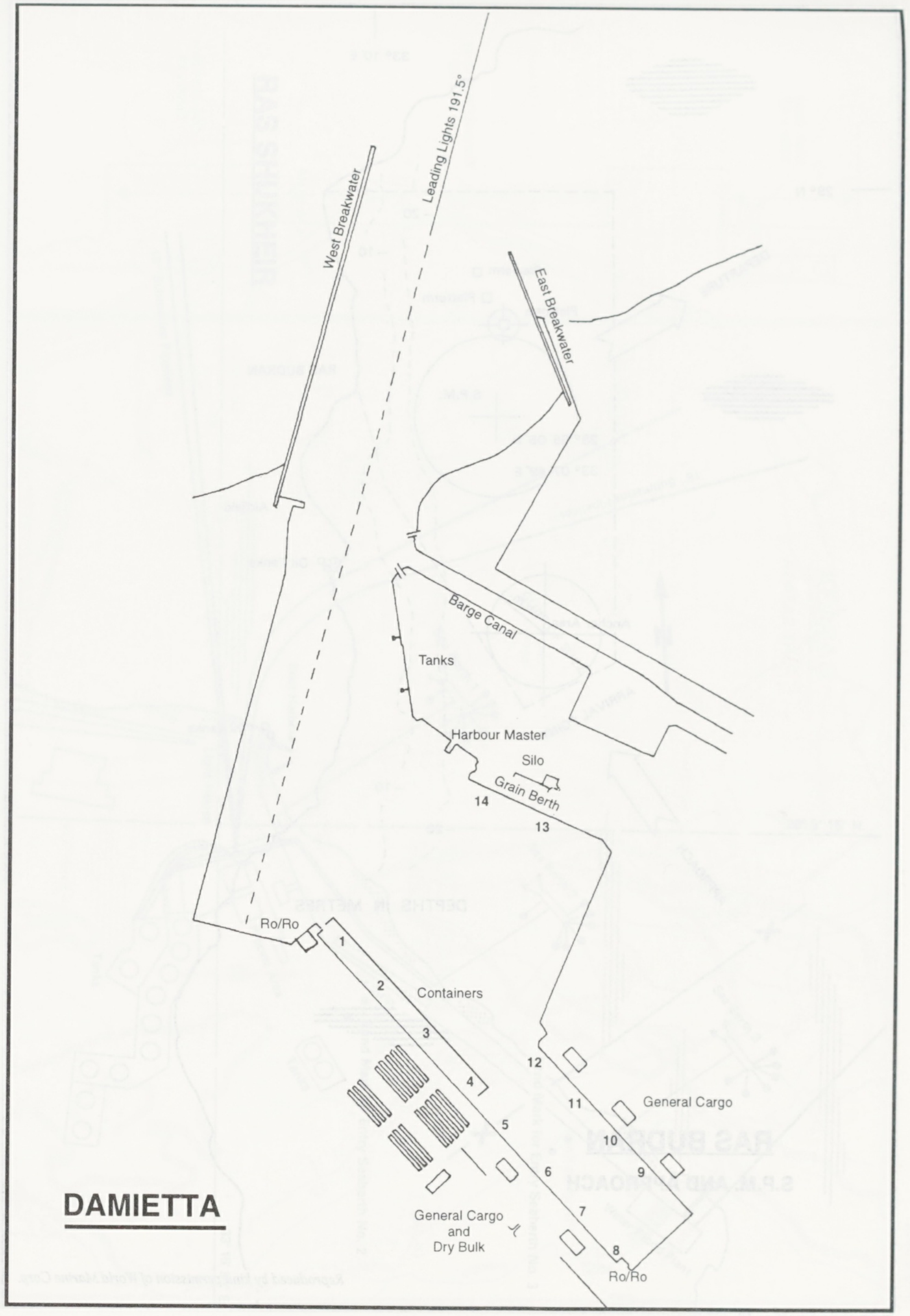
HAMRAWEIN

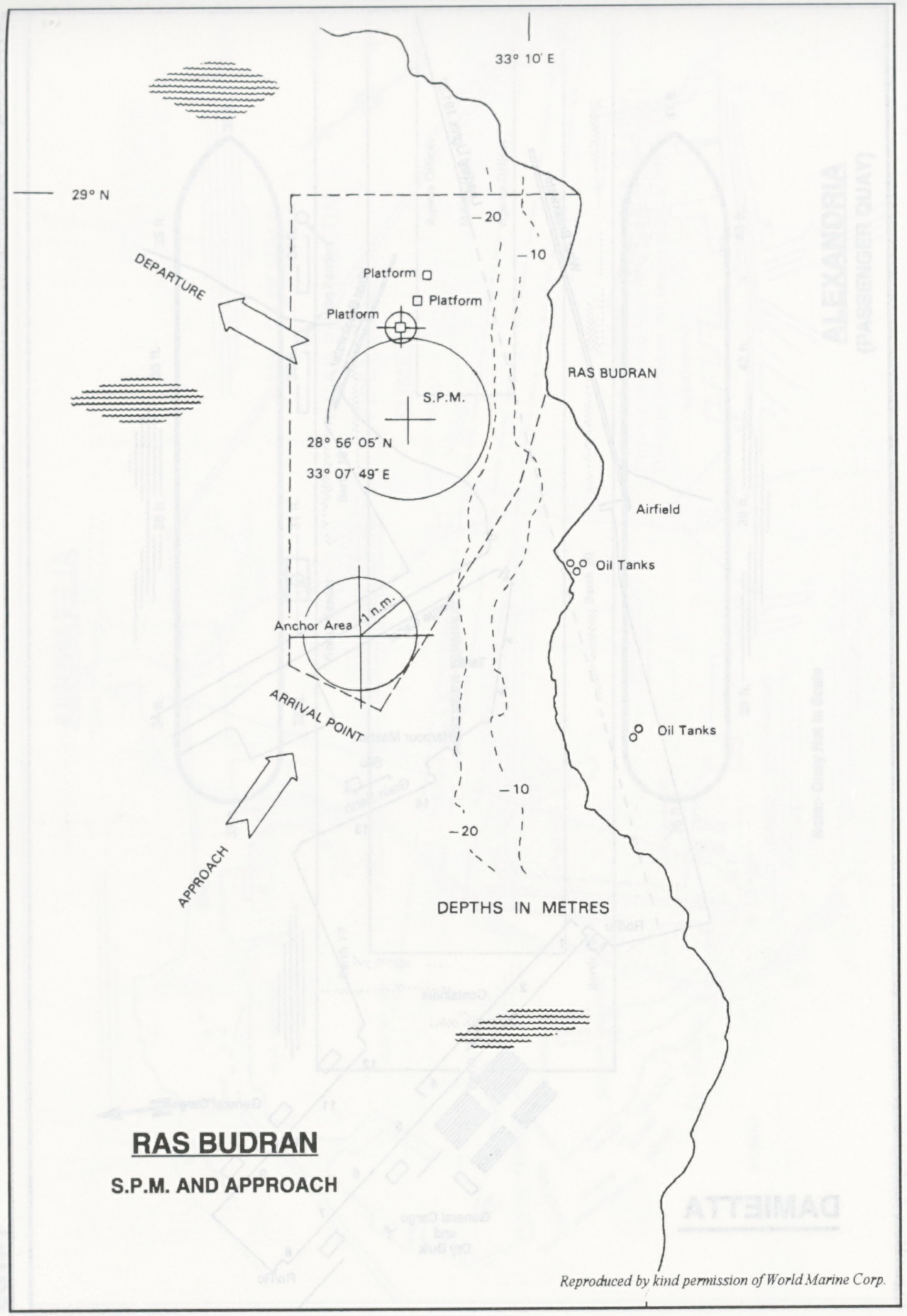
DEPTH CONTOURS IN METRES


N
Conveyor
Breakwater
Loader
20,000 DWT vessel
Mooring Buoy
Mooring Buoy
40
300
400
40
300
400

"Plan supplied by Ship's Master"

DAMIETTA


Leading Lights 191.5°
West Breakwater
East Breakwater
Barge Canal
Tanks
Harbour Master
Silo
Grain Berth
14
13
Ro/Ro
1
2
Containers
3
4
5
6
7
8
Ro/Ro
12
11
General Cargo
10
9
General Cargo
and
Dry Bulk


33° 10′ E
29° N
– 20
– 10
Platform
Platform
Platform
DEPARTURE
RAS BUDRAN
S.P.M.
28° 56′ 05″ N
33° 07′ 49″ E
Airfield
Oil Tanks
Anchor Area
1 n.m.
ARRIVAL POINT
Oil Tanks
– 10
– 20
APPROACH
DEPTHS IN METRES

RAS BUDRAN

S.P.M. AND APPROACH

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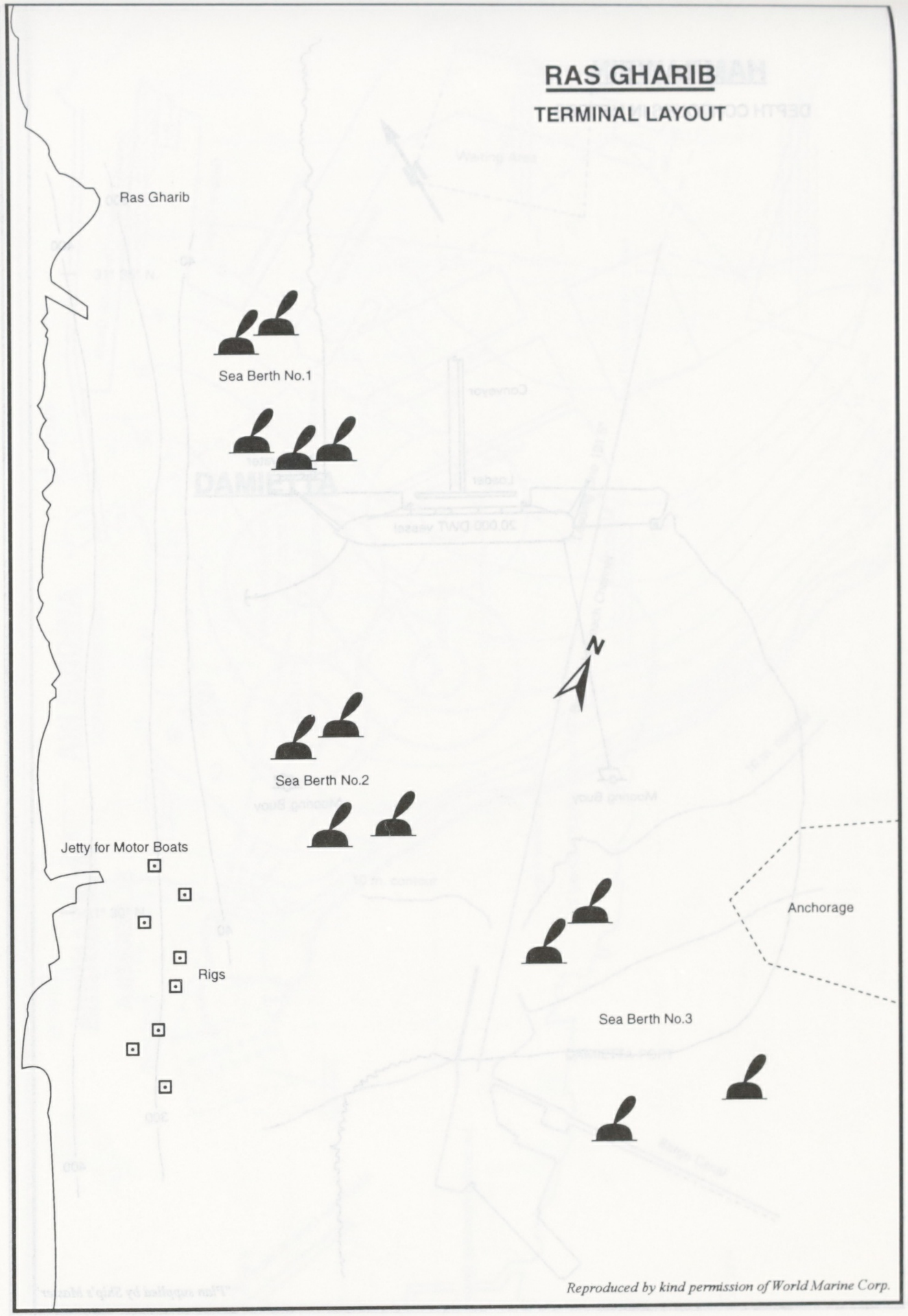
Ras Gharib
Sea Berth No.1
Sea Berth No.2
N
Jetty for Motor Boats
Rigs
Anchorage
Sea Berth No.3

RAS GHARIB

TERMINAL LAYOUT

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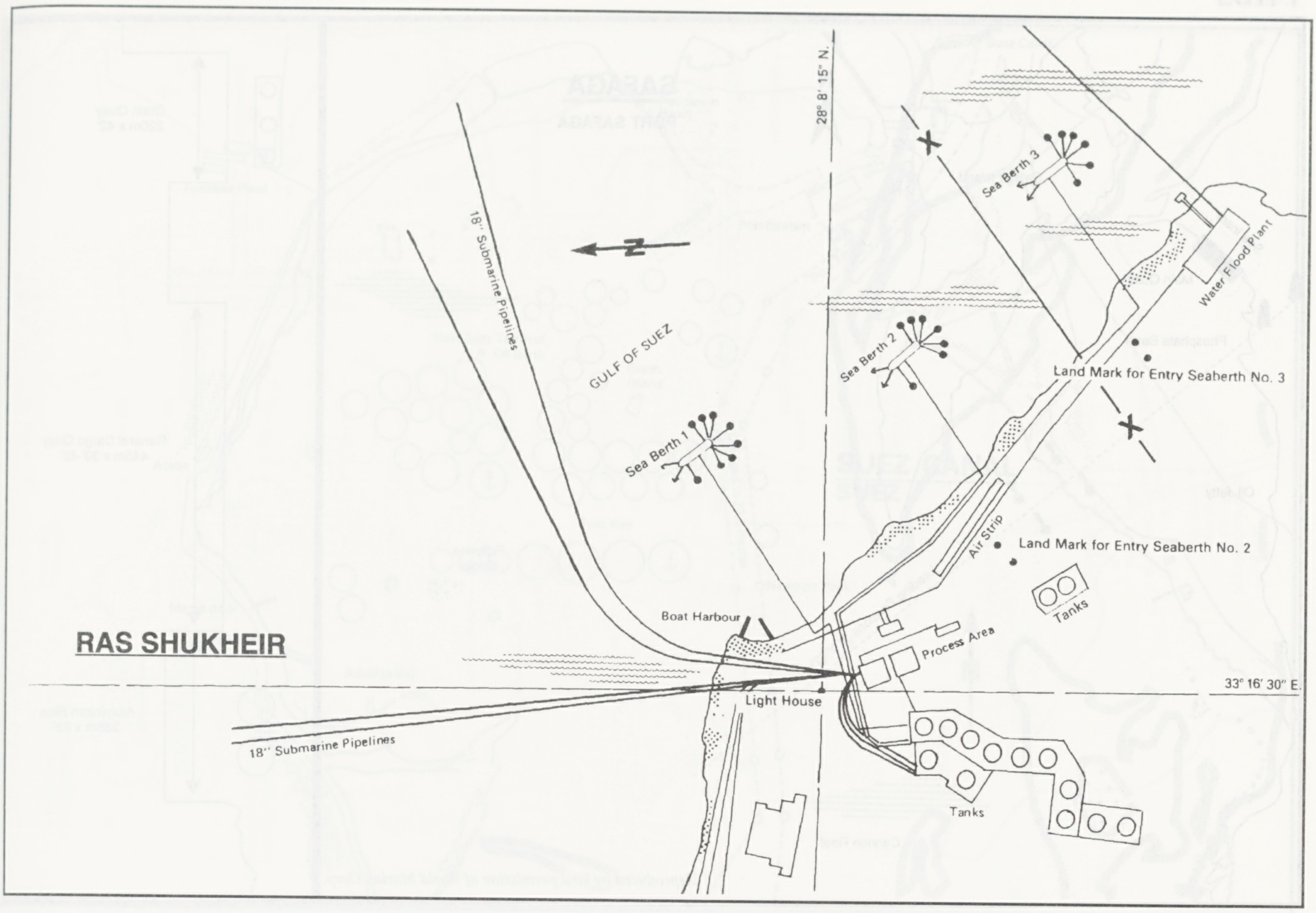
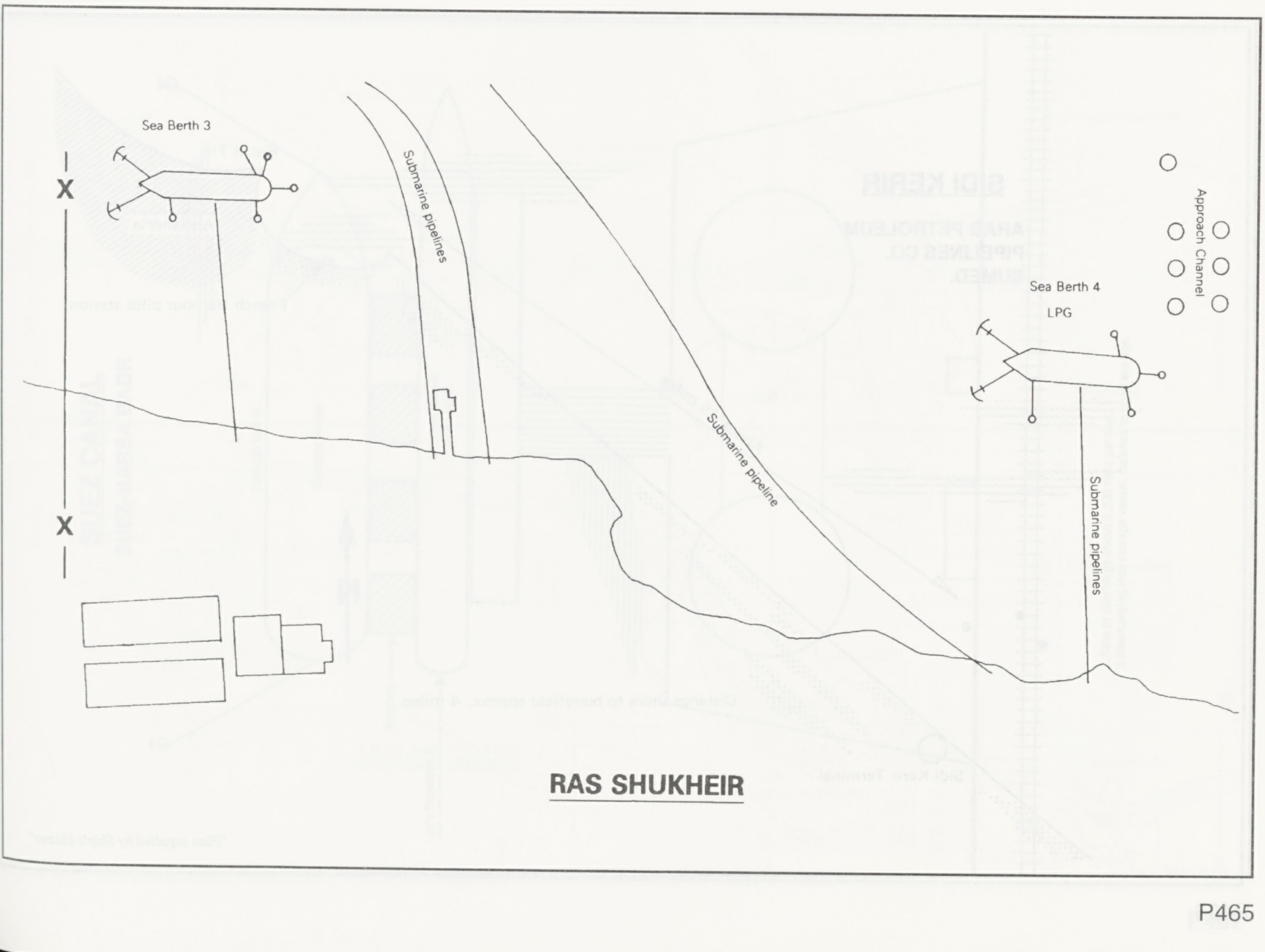
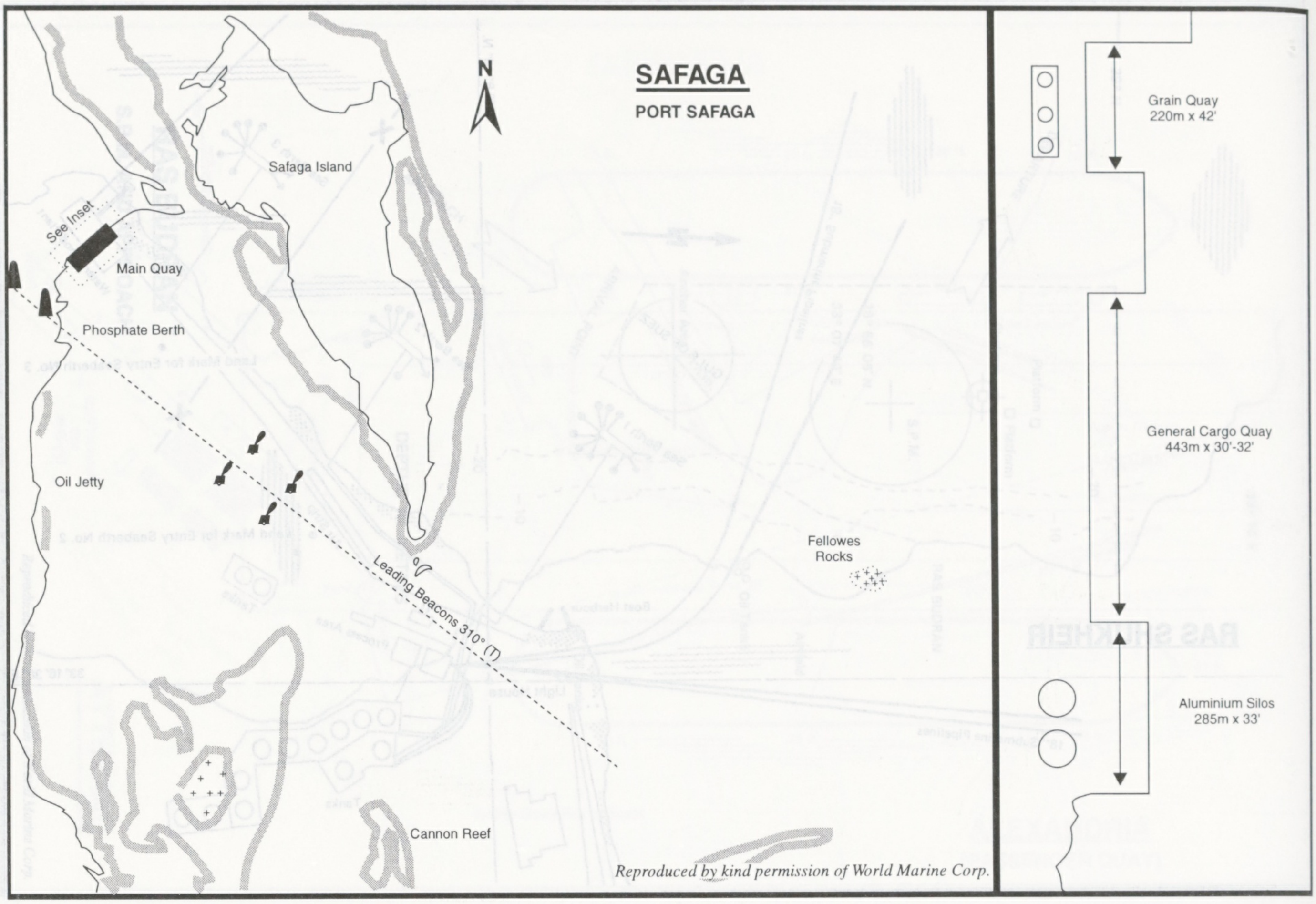

28° 8' 15" N.
N
18" Submarine Pipelines
GULF OF SUEZ
X
Sea Berth 3
Water Flood Plant
Sea Berth 2
Land Mark for Entry Seaberth No. 3
X
Sea Berth 1
Air Strip
Land Mark for Entry Seaberth No. 2
Tanks
RAS SHUKHEIR
Boat Harbour
Process Area
Light House
33° 16' 30" E.
18" Submarine Pipelines
Tanks


Sea Berth 3
X
Submarine pipelines
Approach Channel
Sea Berth 4
LPG
X
Submarine pipeline
Submarine pipelines
RAS SHUKHEIR


SAFAGA
PORT SAFAGA
N
Safaga Island
See Inset
Main Quay
Phosphate Berth
Oil Jetty
Leading Beacons 310° (T)
Fellowes Rocks
Cannon Reef
Grain Quay 220m x 42'
General Cargo Quay 443m x 30'-32'
Aluminium Silos 285m x 33'

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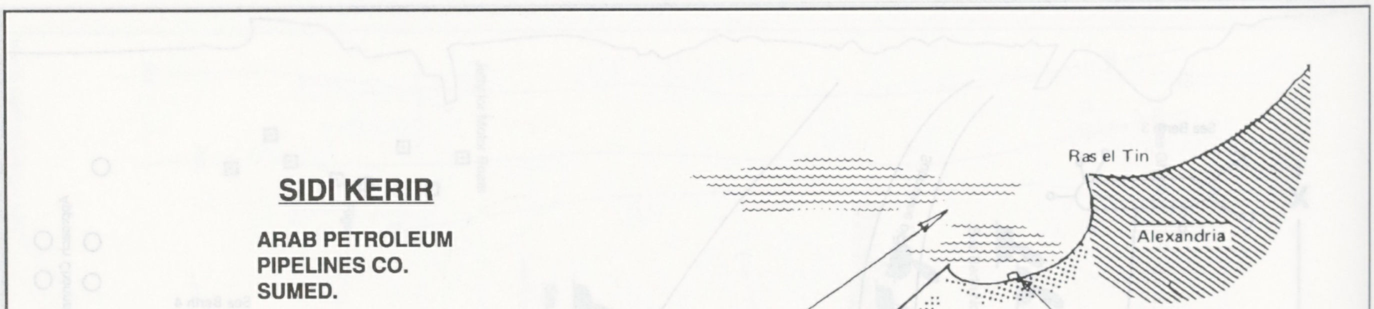
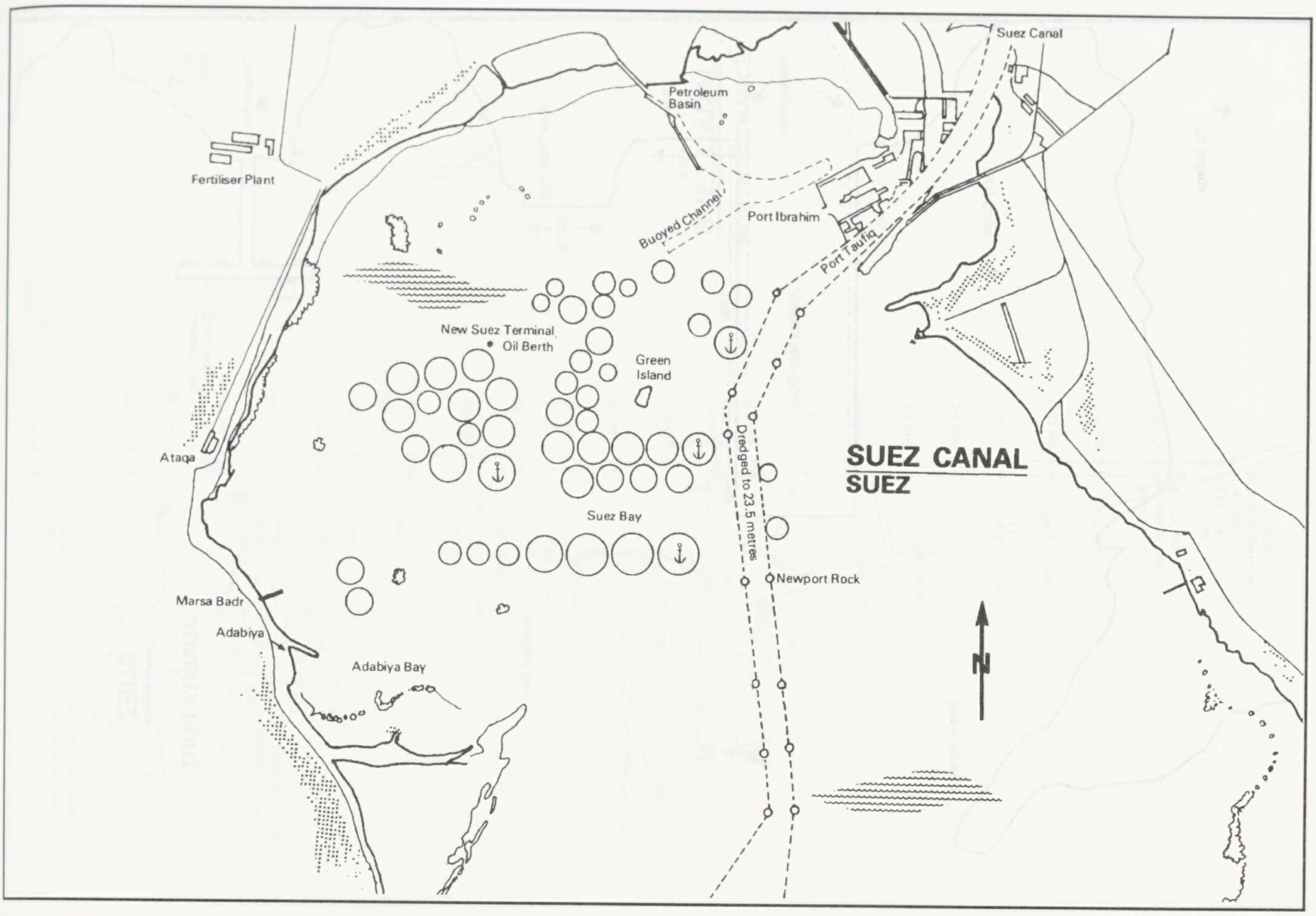

SIDI KERIR
ARAB PETROLEUM
PIPELINES CO.
SUMED.
Ras el Tin
Alexandria
French Harbour pilot station
About 15 miles
N
Distance shore to buoyfield approx. 4 miles
Sidi Kerir Terminal

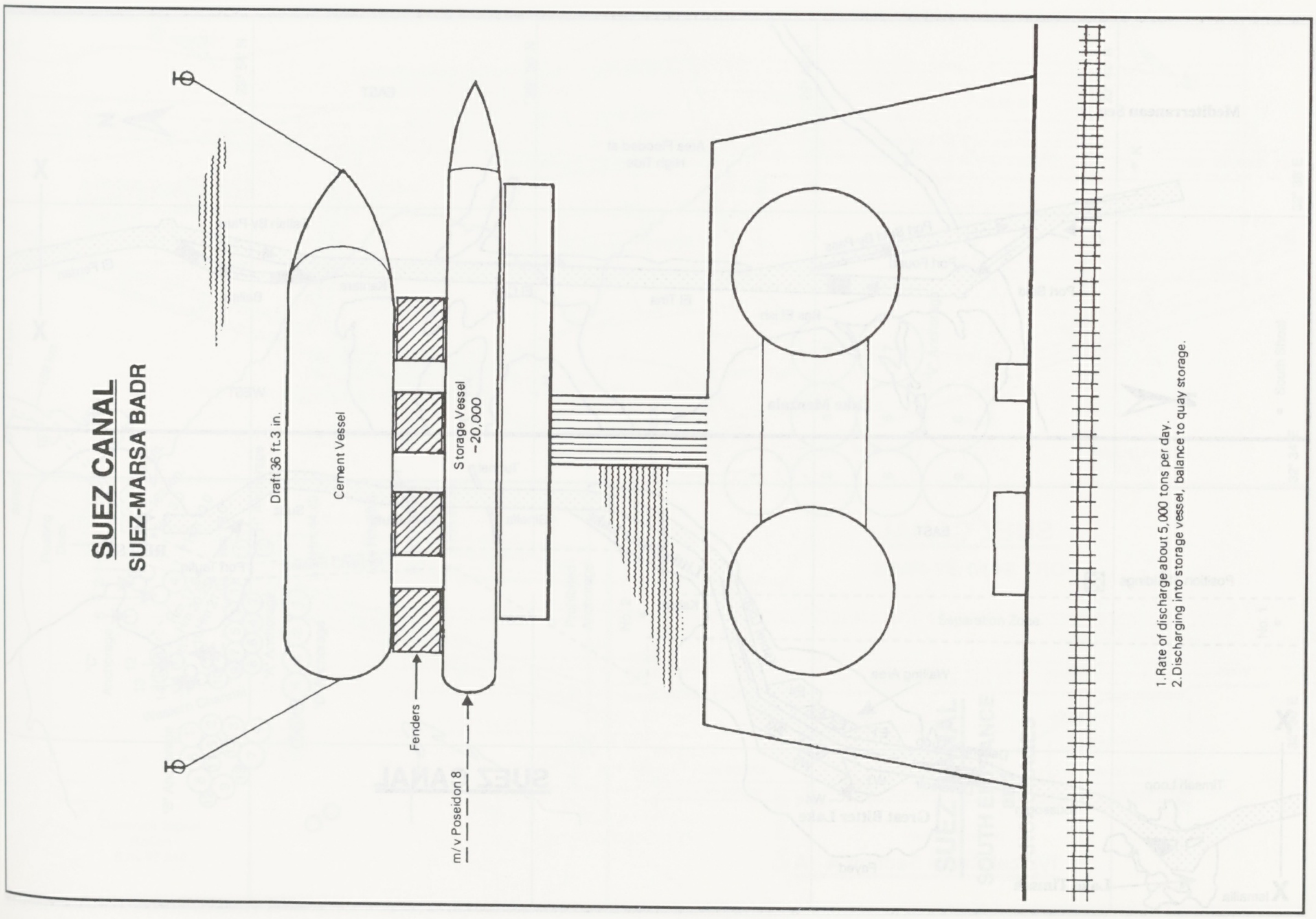
"Plan supplied by Ship's Master"



SUEZ CANAL

SUEZ

Suez Canal
Petroleum Basin
Fertiliser Plant
Buoyed Channel
Port Ibrahim
Port Taufiq
New Suez Terminal
Oil Berth
Green Island
Ataqa
Dredged to 23.5 metres
Suez Bay
Newport Rock
Marsa Badr
Adabiya
Adabiya Bay
N

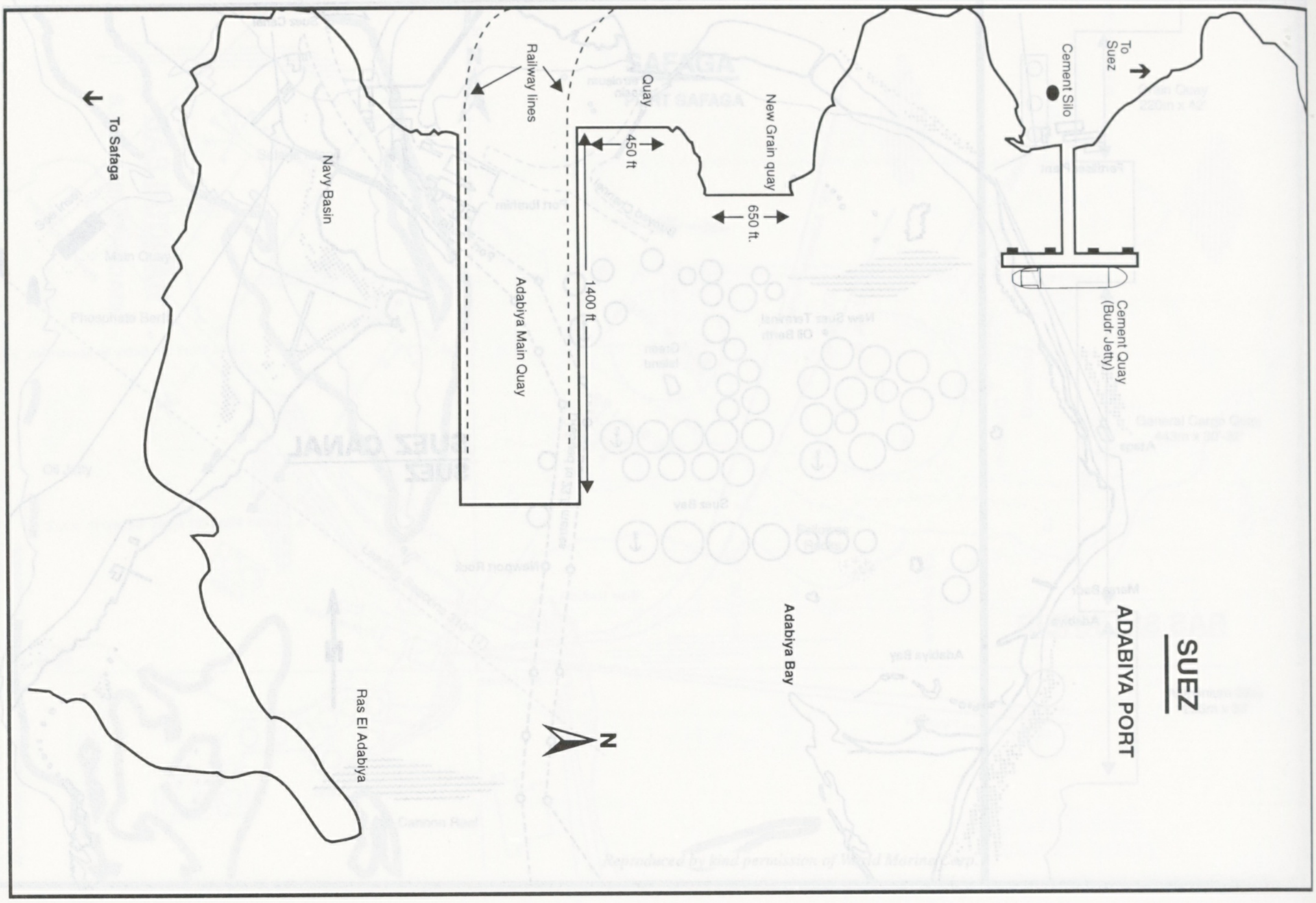


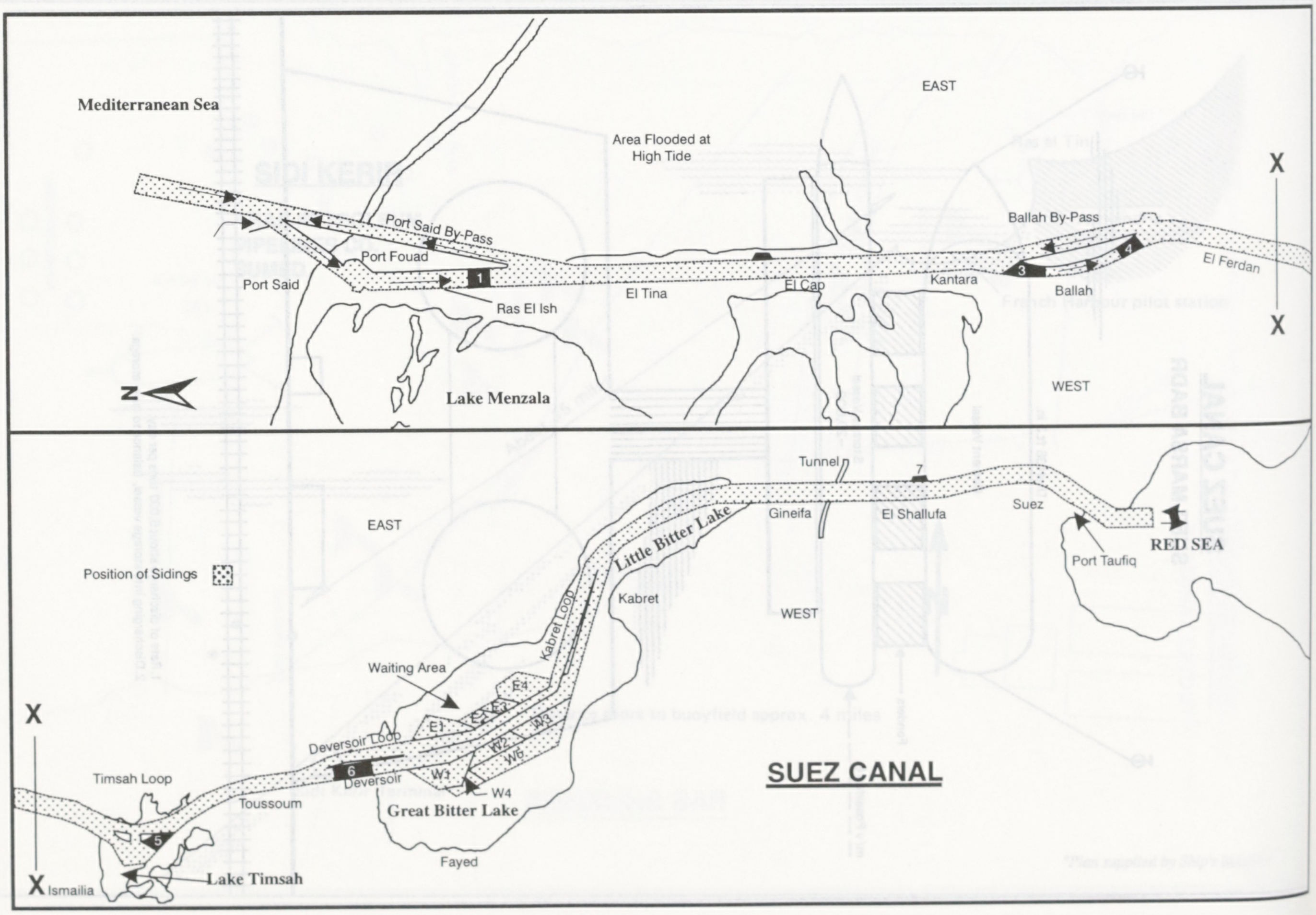
SUEZ CANAL

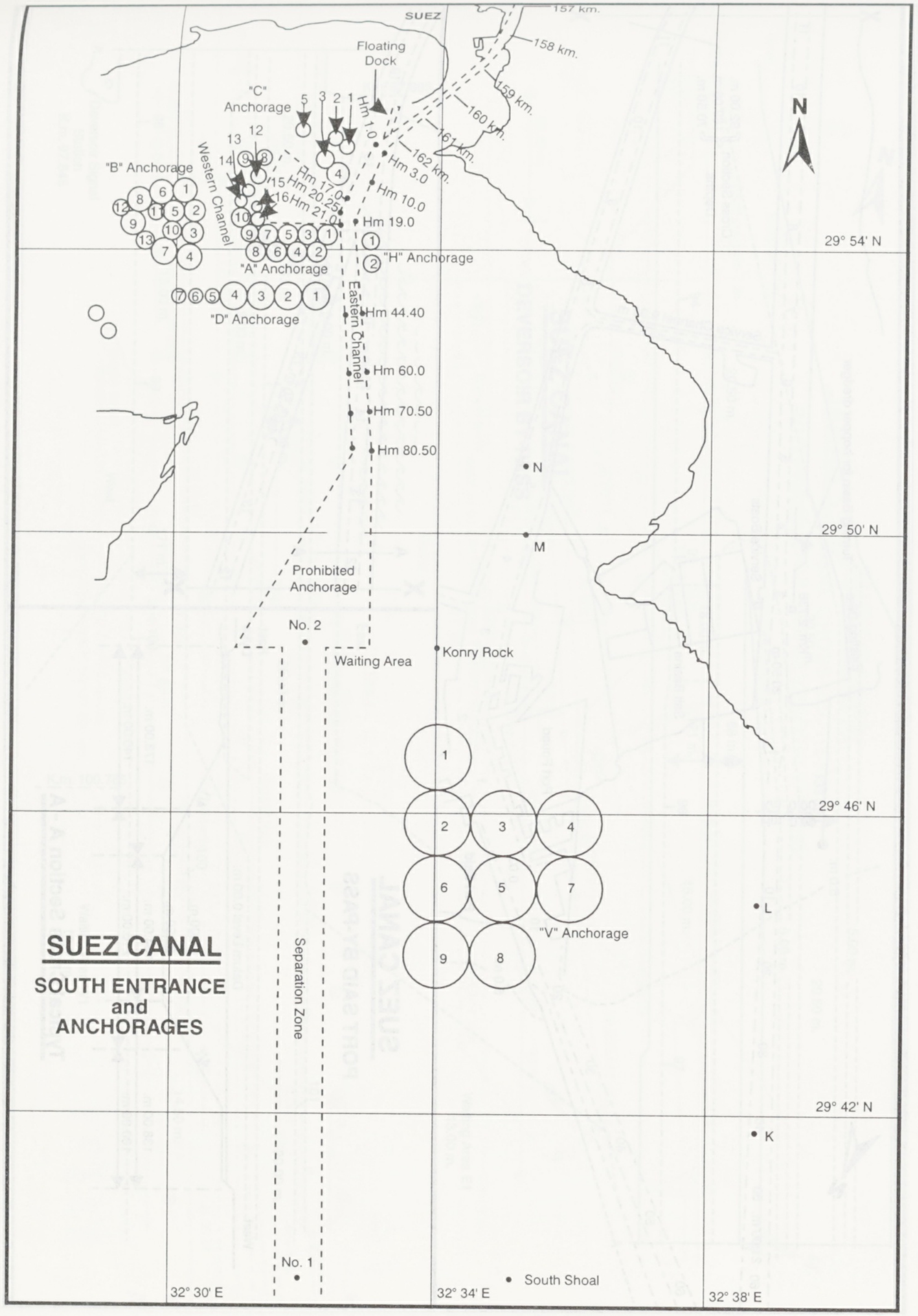
SUEZ-MARSA BADR

Draft 36 ft. 3 in.
Cement Vessel
Storage Vessel
–20,000
Fenders
m/v Poseidon 8

1. Rate of discharge about 5,000 tons per day.
2. Discharging into storage vessel, balance to quay storage.


SUEZ
ADABIYA PORT
To Suez
Cement Silo
Cement Quay (Budr Jetty)
New Grain quay
650 ft.
Quay
450 ft
Railway lines
1400 ft
Adabiya Main Quay
Navy Basin
To Safaga
Adabiya Bay
Ras El Adabiya
N

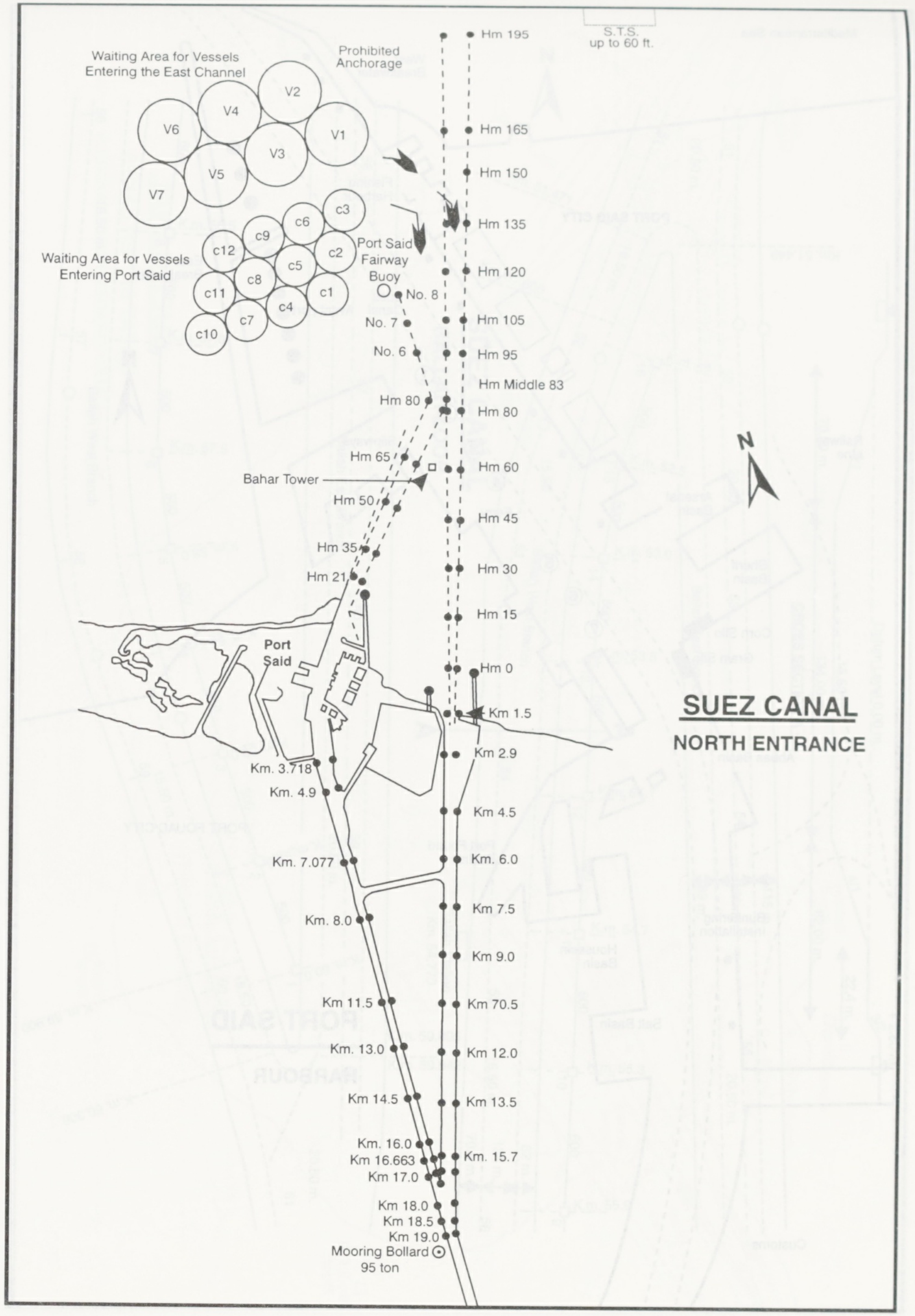

Mediterranean Sea
EAST
Area Flooded at High Tide
X
X
Port Said By-Pass
Ballah By-Pass
El Ferdan
Port Fouad
Port Said
1
Ras El Ish
El Tina
El Cap
Kantara
3
4
Ballah
N
Lake Menzala
WEST
Tunnel
7
Gineifa
El Shallufa
Suez
Port Taufiq
RED SEA
EAST
Position of Sidings
Little Bitter Lake
Kabret
Kabret Loop
WEST
Waiting Area
E4
E3
E2
E1
W3
W2
W6
W1
W4
Deversoir Loop
6
Deversoir
Great Bitter Lake
SUEZ CANAL
X
X
Timsah Loop
Toussoum
5
Fayed
Ismailia
Lake Timsah



SUEZ CANAL

SOUTH ENTRANCE and ANCHORAGES

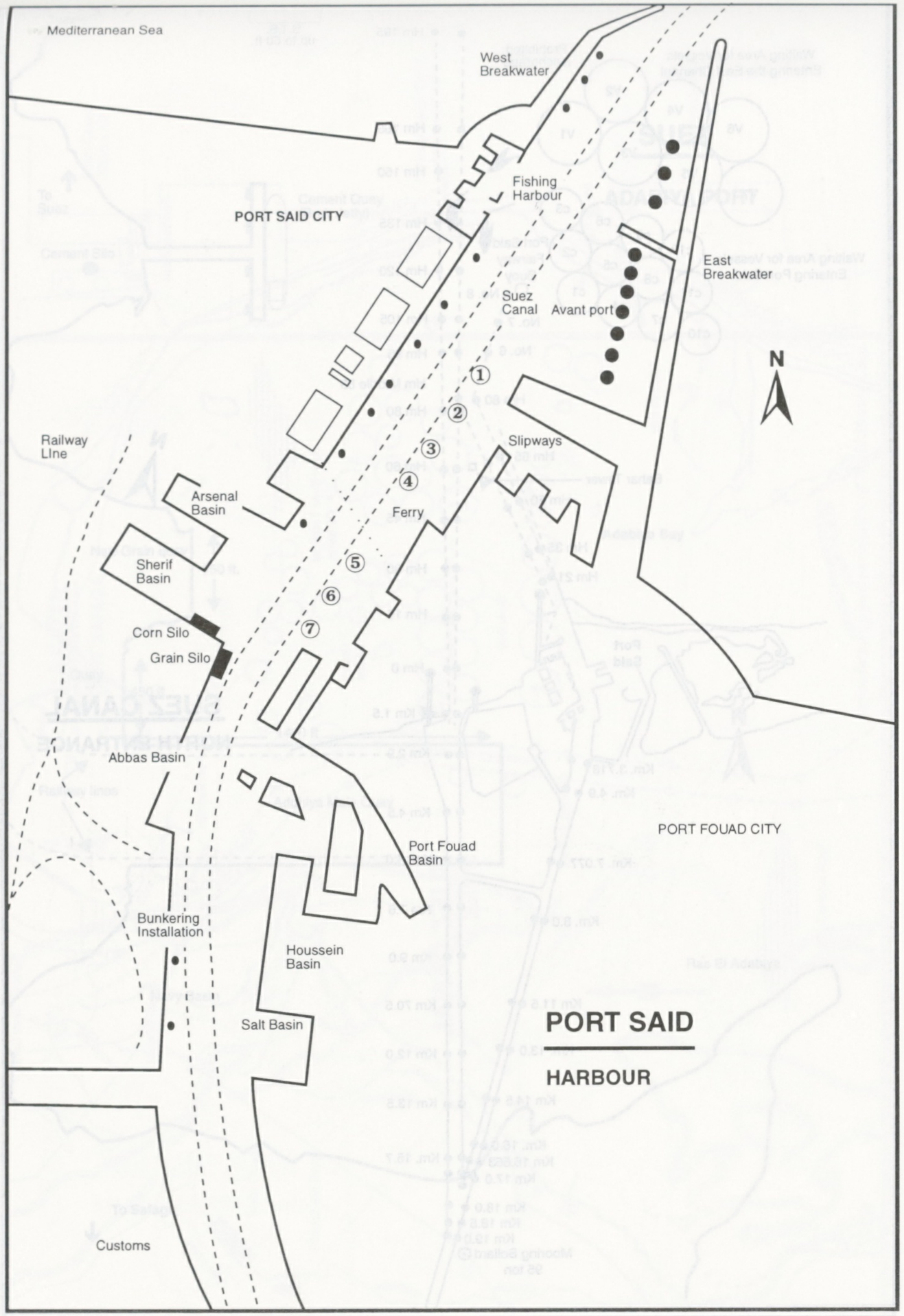
SUEZ
157 km.
158 km.
159 km.
160 km.
161 km.
162 km.
Floating Dock
"C" Anchorage
"B" Anchorage
"A" Anchorage
"D" Anchorage
"H" Anchorage
"V" Anchorage
Western Channel
Eastern Channel
Hm 1.0
Hm 3.0
Hm 10.0
Hm 17.0
Hm 20.25
Hm 21.0
Hm 19.0
Hm 44.40
Hm 60.0
Hm 70.50
Hm 80.50
N
29° 54' N
29° 50' N
29° 46' N
29° 42' N
Prohibited Anchorage
No. 2
Waiting Area
Konry Rock
Separation Zone
No. 1
South Shoal
N
M
L
K
32° 30' E
32° 34' E
32° 38' E



SUEZ CANAL

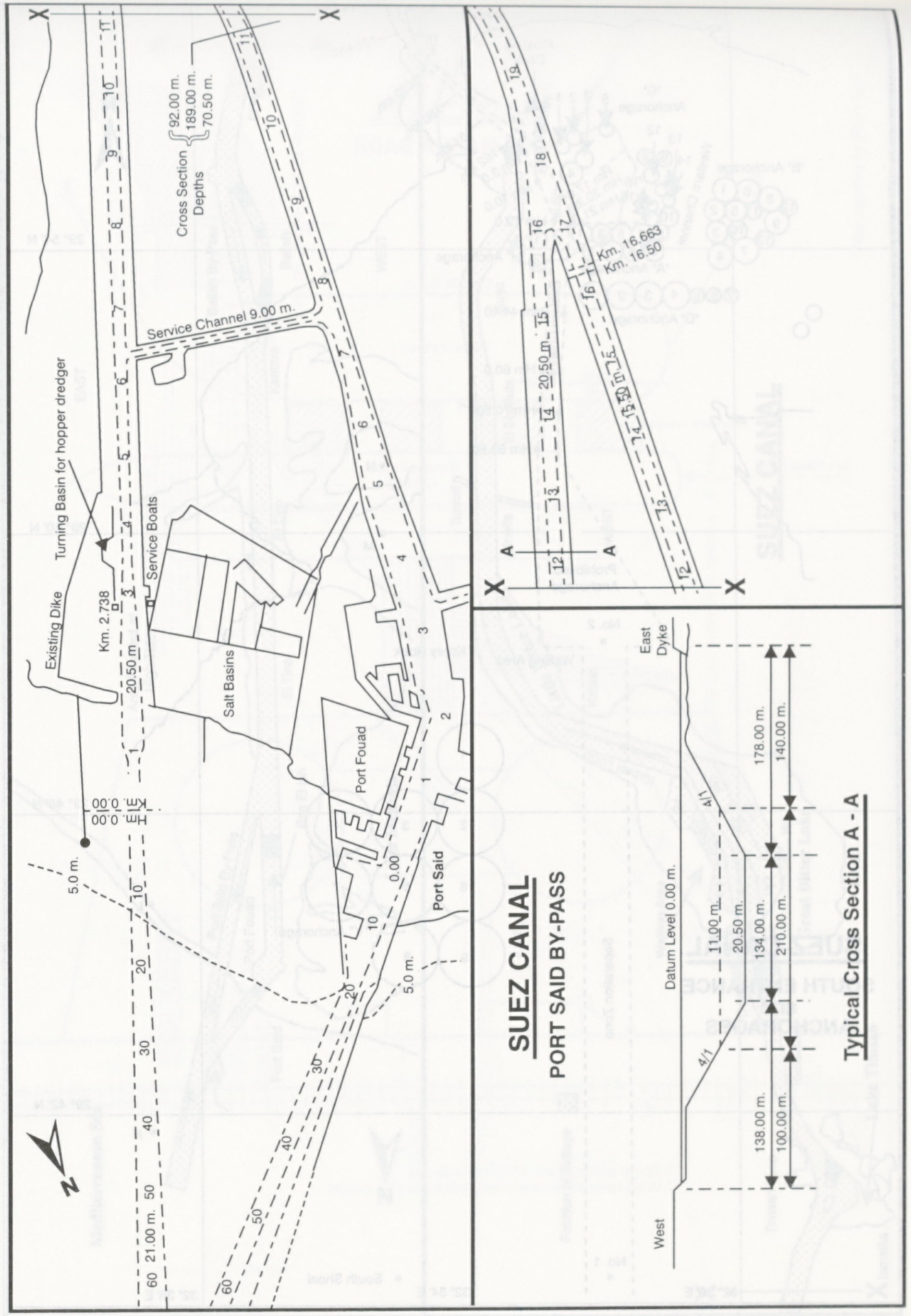
NORTH ENTRANCE

S.T.S. up to 60 ft.
Prohibited Anchorage
Waiting Area for Vessels Entering the East Channel
V1
V2
V3
V4
V5
V6
V7
Waiting Area for Vessels Entering Port Said
c1
c2
c3
c4
c5
c6
c7
c8
c9
c10
c11
c12
Port Said Fairway Buoy
No. 8
No. 7
No. 6
Hm 195
Hm 165
Hm 150
Hm 135
Hm 120
Hm 105
Hm 95
Hm Middle 83
Hm 80
Hm 80
Hm 65
Hm 60
Bahar Tower
Hm 50
Hm 45
Hm 35
Hm 30
Hm 21
Hm 15
Hm 0
Port Said
Km 1.5
Km 2.9
Km. 3.718
Km. 4.9
Km 4.5
Km. 7.077
Km. 6.0
Km. 8.0
Km 7.5
Km 9.0
Km 11.5
Km 70.5
Km. 13.0
Km 12.0
Km 14.5
Km 13.5
Km. 16.0
Km 16.663
Km 17.0
Km. 15.7
Km 18.0
Km 18.5
Km 19.0
Mooring Bollard 95 ton
N


Mediterranean Sea
West Breakwater
Fishing Harbour
PORT SAID CITY
East Breakwater
Suez Canal
Avant port
①
②
③
④
⑤
⑥
⑦
N
Slipways
Railway Line
Arsenal Basin
Ferry
Sherif Basin
Corn Silo
Grain Silo
Abbas Basin
PORT FOUAD CITY
Port Fouad Basin
Bunkering Installation
Houssein Basin
Salt Basin
Customs

PORT SAID

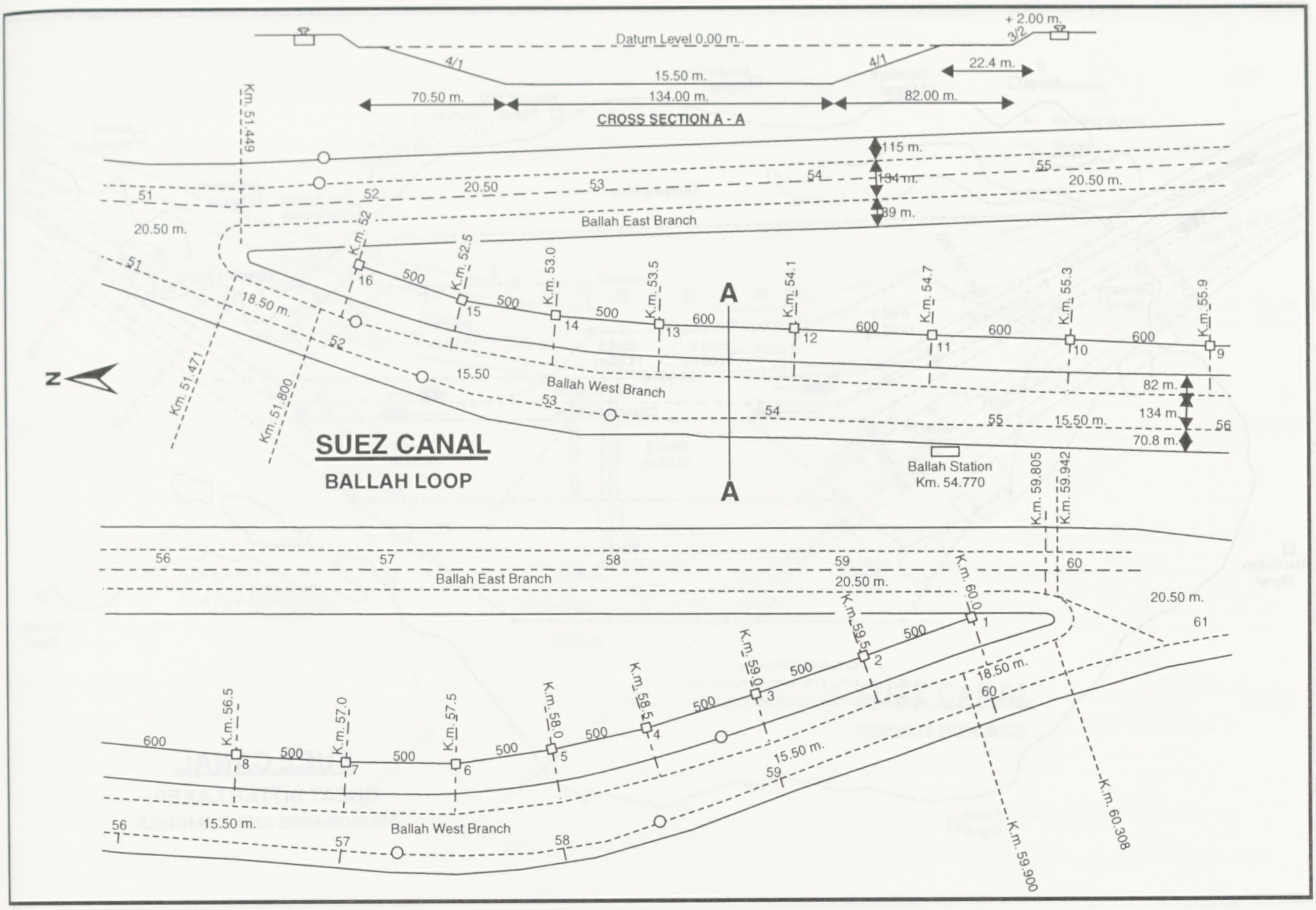
HARBOUR

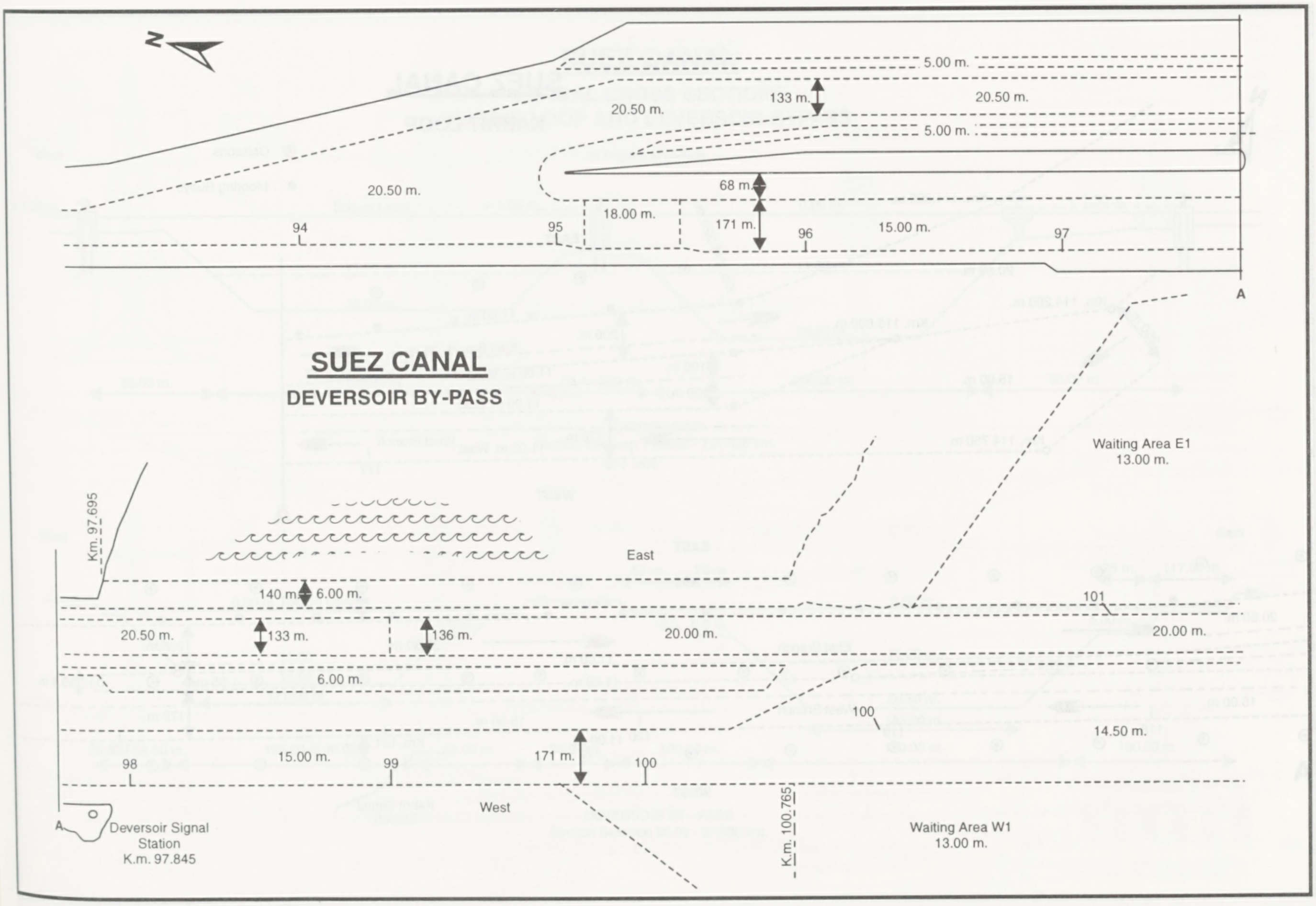

X
Cross Section Depths
92.00 m.
189.00 m.
70.50 m.
Service Channel 9.00 m.
Turning Basin for hopper dredger
Service Boats
Existing Dike
Km. 2.738
20.50 m
Salt Basins
Port Fouad
Port Said
0.00
5.0 m.
21.00 m.
N
Km. 16.663
Km. 16.50
20.50 m.
A
East Dyke
West
Datum Level 0.00 m.
11.00 m.
20.50 m.
134.00 m.
210.00 m.
178.00 m.
140.00 m.
138.00 m.
100.00 m.
4/1

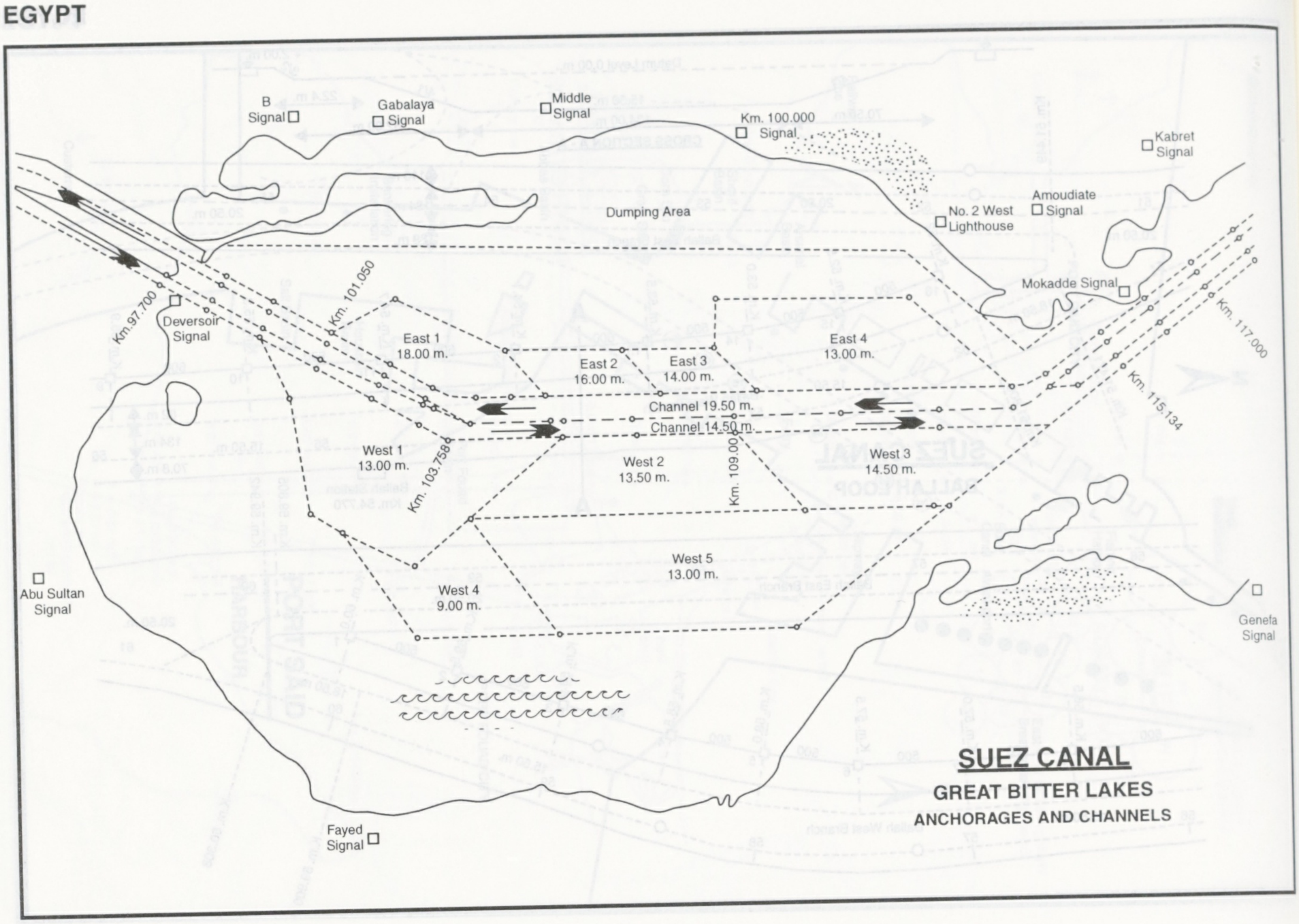
SUEZ CANAL

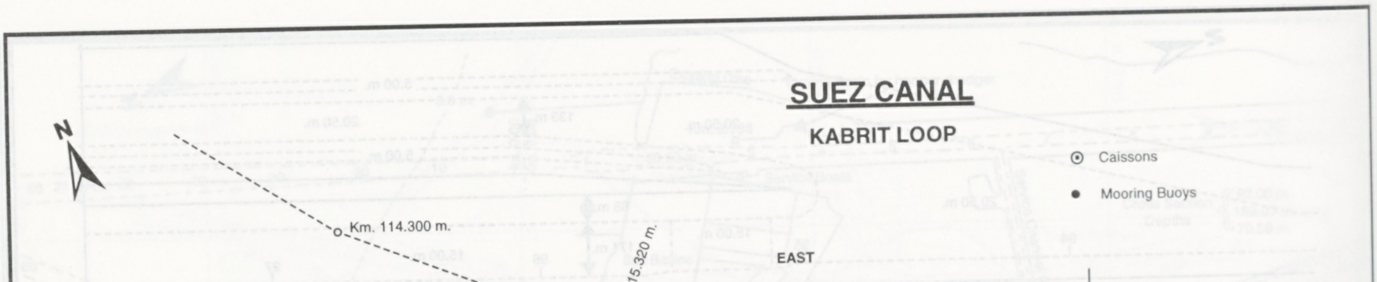
PORT SAID BY-PASS

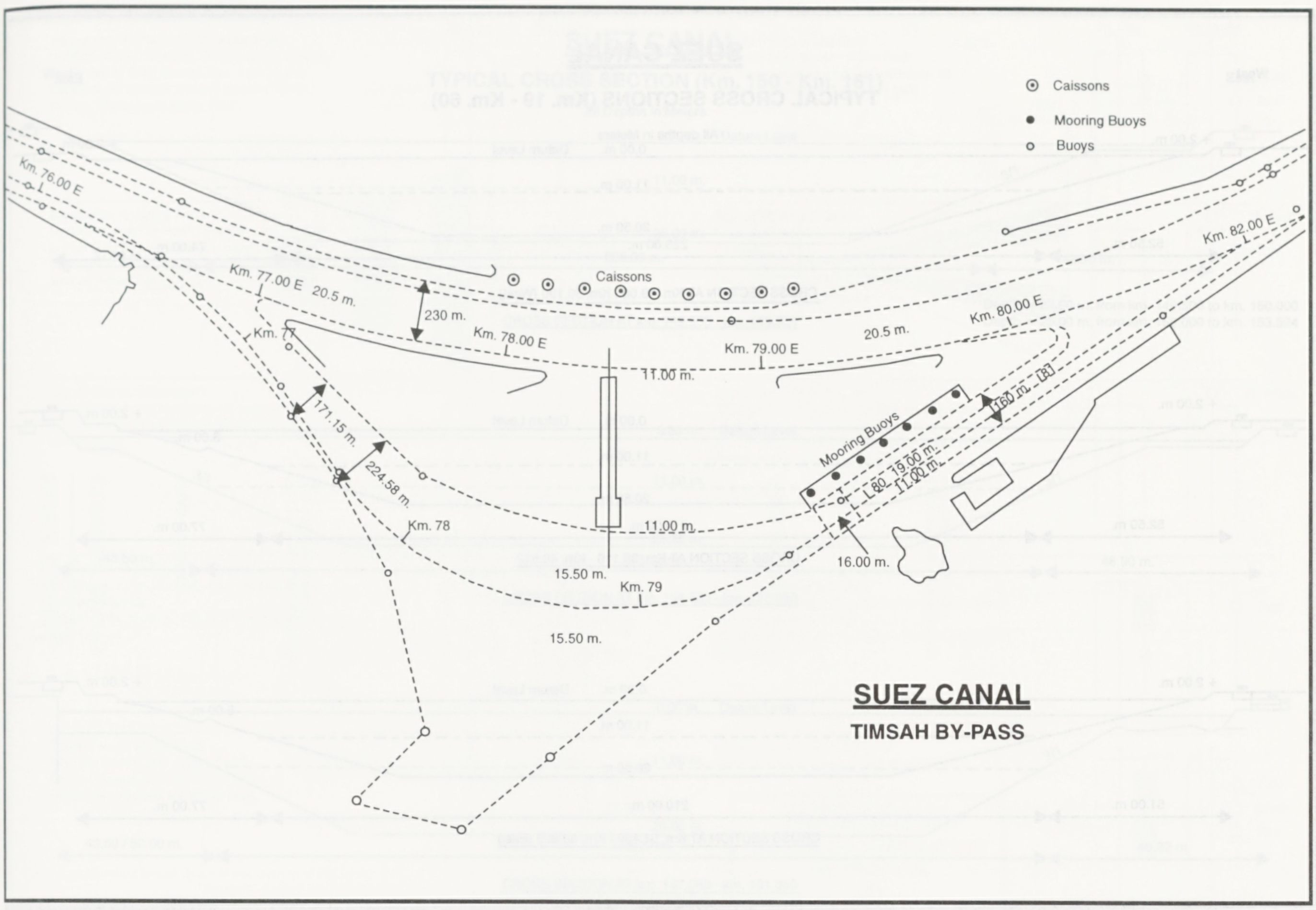
Typical Cross Section A - A


Datum Level 0.00 m.
+ 2.00 m.
3/2
4/1
4/1
15.50 m.
22.4 m.
70.50 m.
134.00 m.
82.00 m.
CROSS SECTION A - A
Km. 51.449
115 m.
134 m.
39 m.
20.50
20.50 m.
20.50 m.
51
52
53
54
55
Ballah East Branch
N
K.m. 52
K.m. 52.5
K.m. 53.0
K.m. 53.5
K.m. 54.1
K.m. 54.7
K.m. 55.3
K.m. 55.9
16
15
14
13
12
11
10
9
500
500
500
600
600
600
600
A
A
18.50 m.
15.50
Ballah West Branch
82 m.
134 m.
70.8 m.
15.50 m.
56
Km. 51.471
Km. 51.800
SUEZ CANAL
BALLAH LOOP
Ballah Station
Km. 54.770
K.m. 59.805
K.m. 59.942
56
57
58
59
60
61
20.50 m.
K.m. 60.0
K.m. 59.5
K.m. 59.0
K.m. 58.5
K.m. 58.0
K.m. 57.5
K.m. 57.0
K.m. 56.5
1
2
3
4
5
6
7
8
600
500
500
500
500
500
500
500
18.50 m.
15.50 m.
15.50 m.
Ballah West Branch
K.m. 59.900
K.m. 60.308


N
5.00 m.
133 m.
20.50 m.
20.50 m.
5.00 m.
20.50 m.
68 m.
18.00 m.
171 m.
15.00 m.
94
95
96
97
A
SUEZ CANAL
DEVERSOIR BY-PASS
Waiting Area E1
13.00 m.
Km. 97.695
East
140 m.
6.00 m.
101
20.50 m.
133 m.
136 m.
20.00 m.
20.00 m.
6.00 m.
100
14.50 m.
15.00 m.
171 m.
98
99
100
West
A
Deversoir Signal
Station
K.m. 97.845
K.m. 100.765
Waiting Area W1
13.00 m.


SUEZ CANAL
GREAT BITTER LAKES
ANCHORAGES AND CHANNELS
B Signal
Gabalaya Signal
Middle Signal
Km. 100.000 Signal
Kabret Signal
Amoudiate Signal
No. 2 West Lighthouse
Dumping Area
Mokadde Signal
Km. 117.000
Km. 115.134
Km.97.700
Deversoir Signal
Km. 101.050
East 1 18.00 m.
East 2 16.00 m.
East 3 14.00 m.
East 4 13.00 m.
Channel 19.50 m.
Channel 14.50 m.
West 1 13.00 m.
Km. 103.758
West 2 13.50 m.
Km. 109.000
West 3 14.50 m.
West 5 13.00 m.
West 4 9.00 m.
Abu Sultan Signal
Genefa Signal
Fayed Signal


SUEZ CANAL
KABRIT LOOP
N
Caissons
Mooring Buoys
Km. 114.300 m.
Km. 115.320 m.
EAST
20.50 m.
Km. 114.200 m.
250 m.
Km. 115.000 m.
11.00 m.
200 m.
East Branch 20.50 m.
100 m.
11.00 m. West
15.00 m.
100 m.
11.00 m. East
170 m.
11.00 m. West
West Branch
Km. 114.750 m.
Km. 116
117
WEST
A
EAST
11.00 m.
90 m.
20.50 m.
East Branch
20.50 m.
200 m.
11.00 m.
65 m.
55.4 m.
11.00 m.
170 m.
15.00 m.
West Branch
15.50 m.
118
119
120
11.00 m.
Km. 121
85 m.
122
A
WEST
Kabrit Signal Station


Caissons
Mooring Buoys
Buoys
Km. 76.00 E
Km. 77.00 E
20.5 m.
230 m.
Caissons
Km. 77
Km. 78.00 E
Km. 79.00 E
11.00 m.
20.5 m.
Km. 80.00 E
Km. 82.00 E
171.15 m.
224.58 m.
Km. 78
11.00 m.
15.50 m.
Km. 79
15.50 m.
Mooring Buoys
160 m.
L80
19.00 m.
11.00 m.
L81
16.00 m.

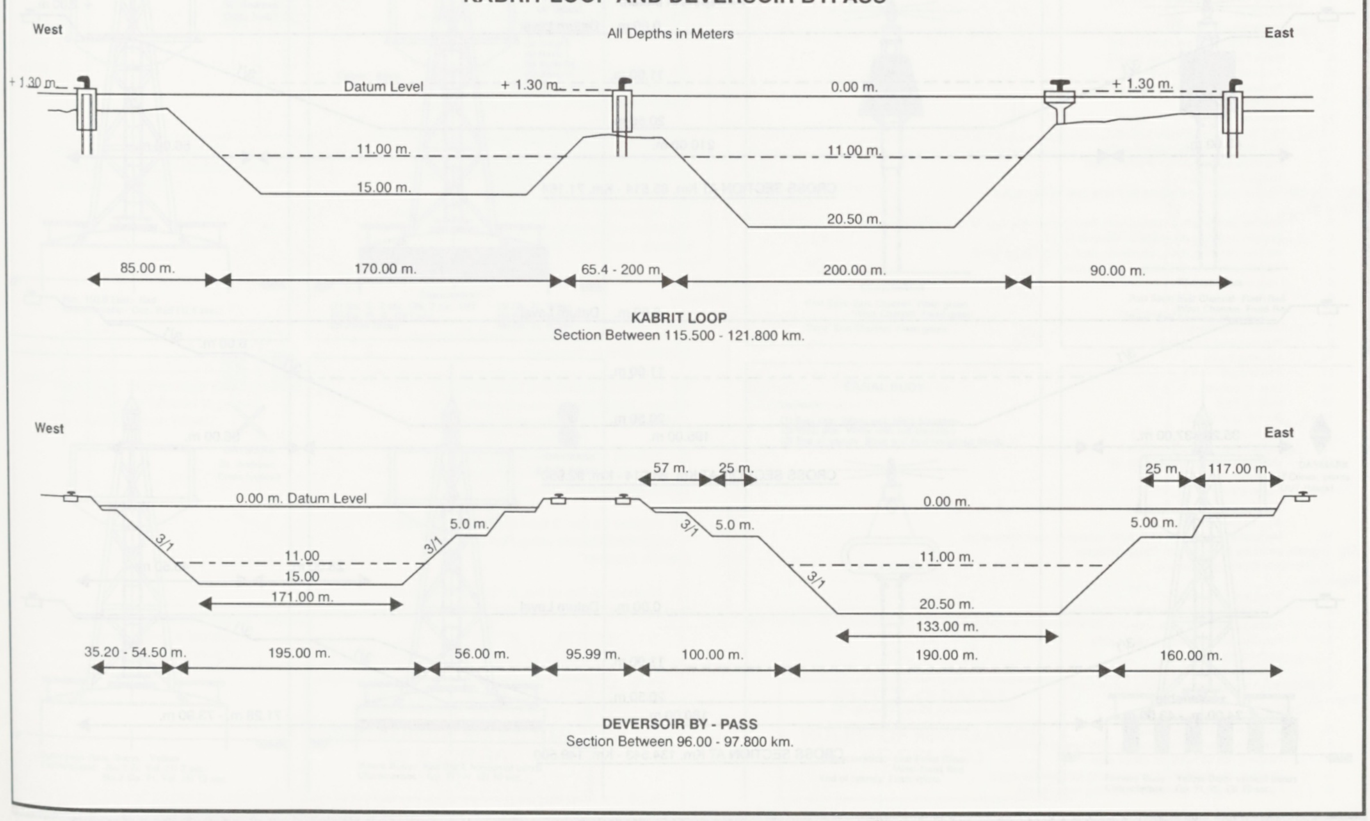
SUEZ CANAL

TIMSAH BY-PASS

SUEZ CANAL

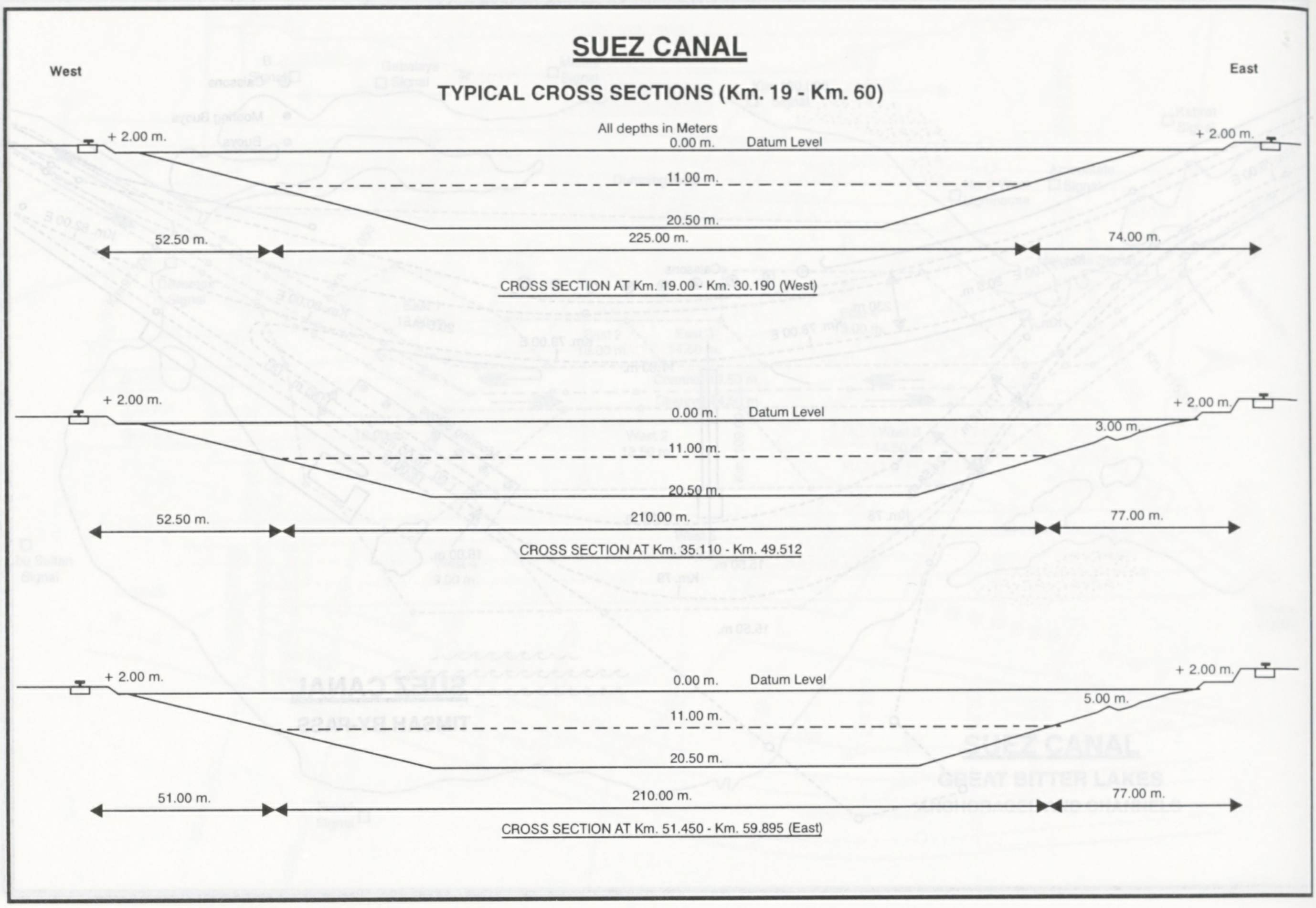
TYPICAL CROSS SECTIONS KABRIT LOOP AND DEVERSOIR BYPASS

All Depths in Meters


West
East
+ 1.30 m.
Datum Level
+ 1.30 m.
0.00 m.
+ 1.30 m.
11.00 m.
15.00 m.
11.00 m.
20.50 m.
85.00 m.
170.00 m.
65.4 - 200 m.
200.00 m.
90.00 m.
West
East
57 m.
25 m.
25 m.
117.00 m.
0.00 m. Datum Level
0.00 m.
5.0 m.
5.0 m.
5.00 m.
3/1
3/1
3/1
3/1
11.00
15.00
171.00 m.
11.00 m.
20.50 m.
133.00 m.
35.20 - 54.50 m.
195.00 m.
56.00 m.
95.99 m.
100.00 m.
190.00 m.
160.00 m.

KABRIT LOOP
Section Between 115.500 - 121.800 km.

DEVERSOIR BY - PASS
Section Between 96.00 - 97.800 km.



SUEZ CANAL

TYPICAL CROSS SECTIONS (Km. 19 - Km. 60)

All depths in Meters

West
East
+ 2.00 m.
+ 2.00 m.
0.00 m. Datum Level
11.00 m.
20.50 m.
52.50 m.
225.00 m.
74.00 m.

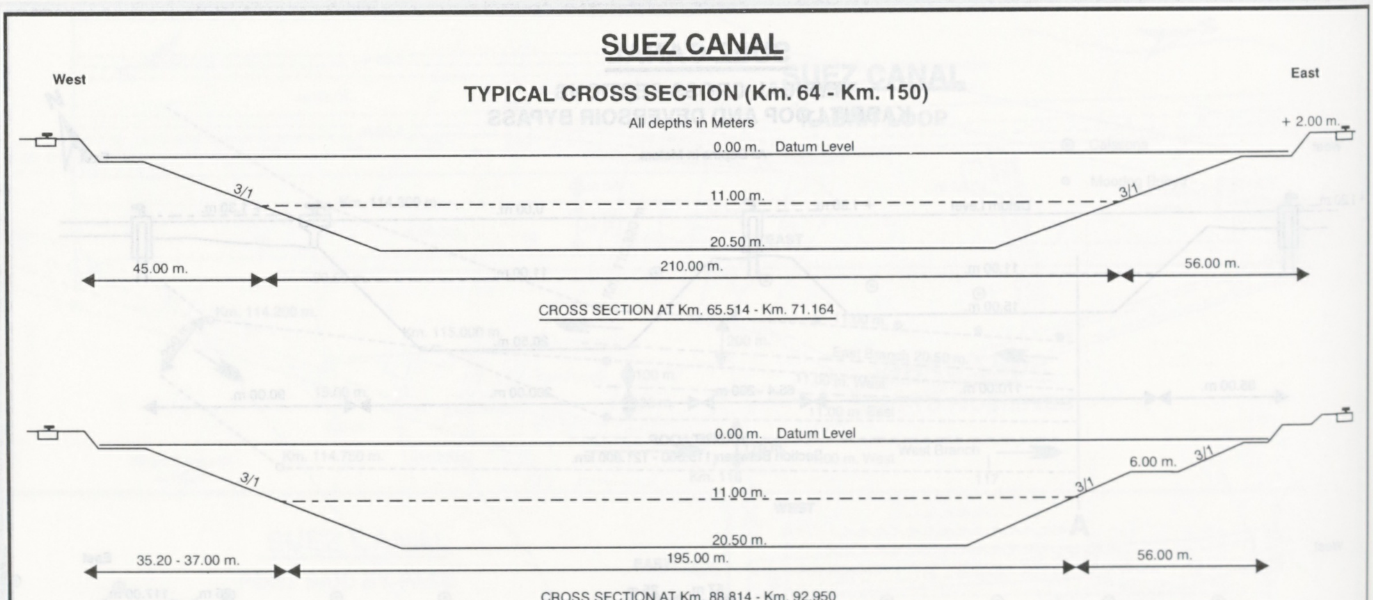
CROSS SECTION AT Km. 19.00 - Km. 30.190 (West)

+ 2.00 m.
+ 2.00 m.
0.00 m. Datum Level
3.00 m.
11.00 m.
20.50 m.
52.50 m.
210.00 m.
77.00 m.

CROSS SECTION AT Km. 35.110 - Km. 49.512

+ 2.00 m.
+ 2.00 m.
0.00 m. Datum Level
5.00 m.
11.00 m.
20.50 m.
51.00 m.
210.00 m.
77.00 m.

CROSS SECTION AT Km. 51.450 - Km. 59.895 (East)



SUEZ CANAL

TYPICAL CROSS SECTION (Km. 64 - Km. 150)

All depths in Meters

West
East
+ 2.00 m.
0.00 m. Datum Level
3/1
11.00 m.
3/1
20.50 m.
45.00 m.
210.00 m.
56.00 m.

CROSS SECTION AT Km. 65.514 - Km. 71.164

0.00 m. Datum Level
3/1
6.00 m.
3/1
11.00 m.
3/1
20.50 m.
35.20 - 37.00 m.
195.00 m.
56.00 m.

CROSS SECTION AT Km. 88.814 - Km. 92.950

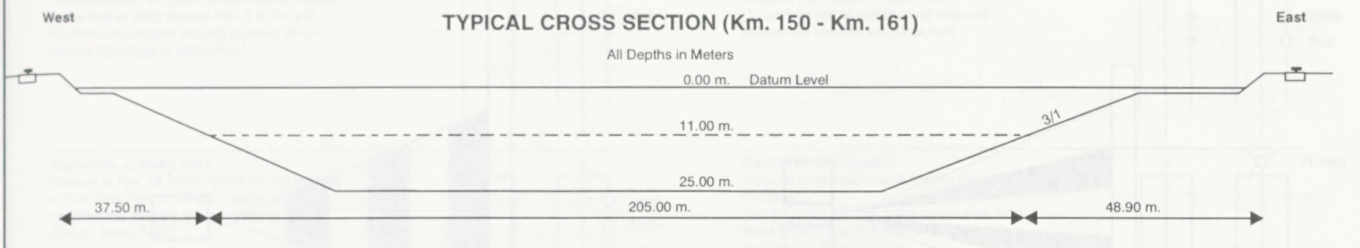
28.00 m.
46.50 m.
0.00 m. Datum Level
3/1
3/1
11.00 m.
3/1
20.50 m.
Variable
34.00 m. - 43.00 m.
180.00 m.
71.28 m. - 73.90 m.

CROSS SECTION AT Km. 134.543 - Km. 149.500

SUEZ CANAL

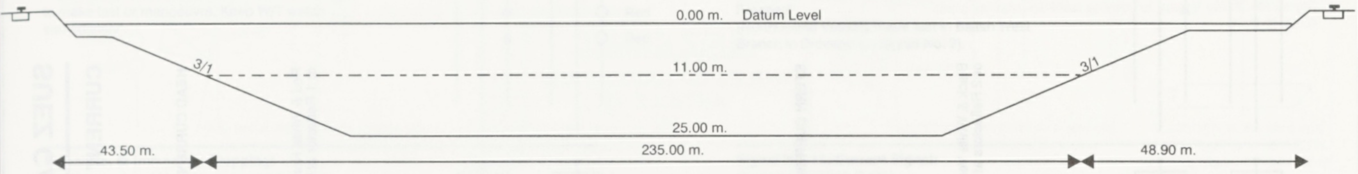
TYPICAL CROSS SECTION (Km. 150 - Km. 161)

All Depths in Meters

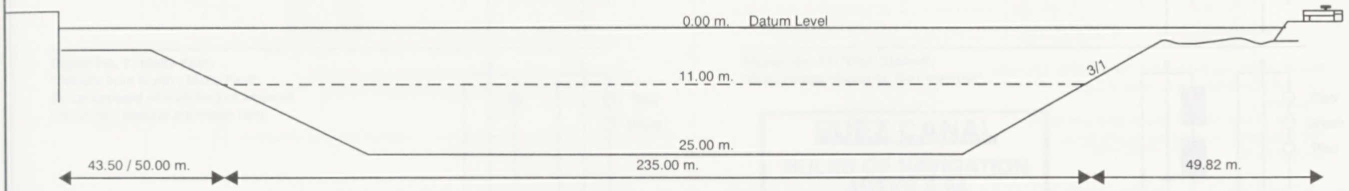

West
East
0.00 m. Datum Level
11.00 m.
3/1
25.00 m.
37.50 m.
205.00 m.
48.90 m.

Depth = 23.00 m. from km. 149.500 to km. 150.000
Depth = 25.00 m. from km. 150.000 to km. 153.524

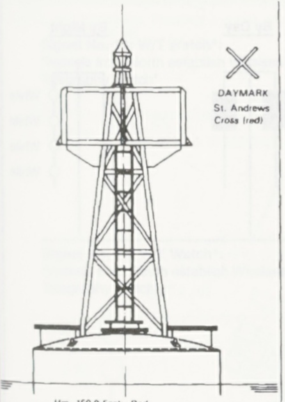
CROSS SECTION AT km. 149.500 - km. 153.524


0.00 m. Datum Level
3/1
11.00 m.
3/1
25.00 m.
43.50 m.
235.00 m.
48.90 m.

CROSS SECTION AT km. 154.724 - km. 157.550

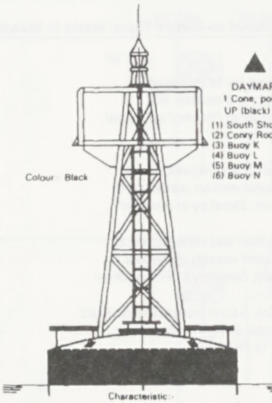

0.00 m. Datum Level
11.00 m.
3/1
25.00 m.
43.50 / 50.00 m.
235.00 m.
49.82 m.

CROSS SECTION AT km. 157.550 - km. 161.050



DAYMARK
St. Andrews
Cross (red)

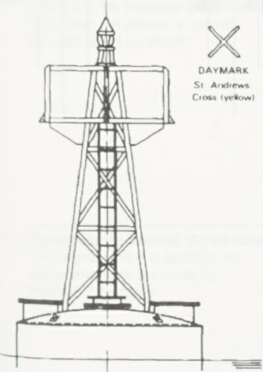
Hm. 150.0 East:- Red
Characteristic:- Occ. Red (1) 4 sec.



DAYMARK
1 Cone, point
UP (black)
(1) South Shoal
(2) Conry Rock
(3) Buoy K
(4) Buoy L
(5) Buoy M
(6) Buoy N

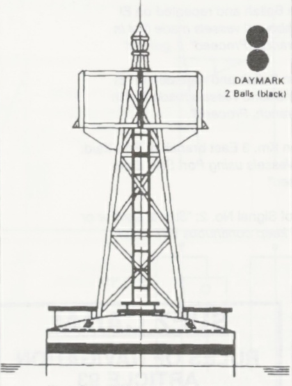
Colour:- Black

Characteristic:-
(1) Iso. G. 2 sec. ON, 2 sec. OFF
(2) Gp. Fl. G. (2) 7 sec.
(3) Fixed Green
(4) Qk. Fl. Green
(5) Fixed Green
(6) Qk. Fl. Green



DAYMARK
St. Andrews
Cross (yellow)

Separation Zone Buoys: Yellow
Characteristic: No.1-Fl. Yel. (1) 2 sec.
No.2 Gp. Fl. Yel. (4) 15 sec.

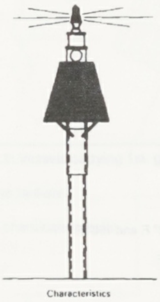


DAYMARK
2 Balls (black)

Wreck Buoy:- Red-Black horizontal bands
Characteristic:- Gp. Fl. W. (2) 10 sec.

SEA CHANNEL BUOY

East Side:
Colour: Black
Daymark: Black Cone shape

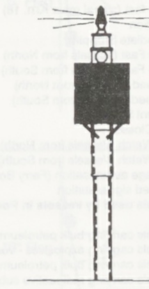


Characteristics

Port Said: East Channel- Flash green
West Channel- Fixed green
Suez: Sea Channel- Flash green

SEA CHANNEL BUOY

West Side:
Colour; Red
Daymark: Red Can shape

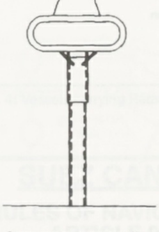


Characteristics

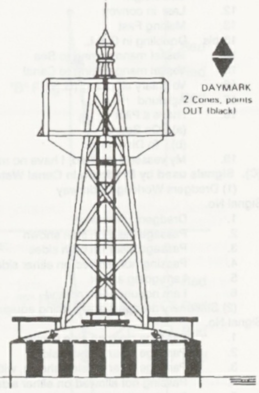
Port Said: East Channel- Flash Red
West Channel- Fixed Red
Suez: Sea Channel- Flash Red

CANAL BUOY

Daymark:-
(1) East side- White with black boundary
(2) West side- White with red boundary
(3) End of islands- Black and Red horizontal bands

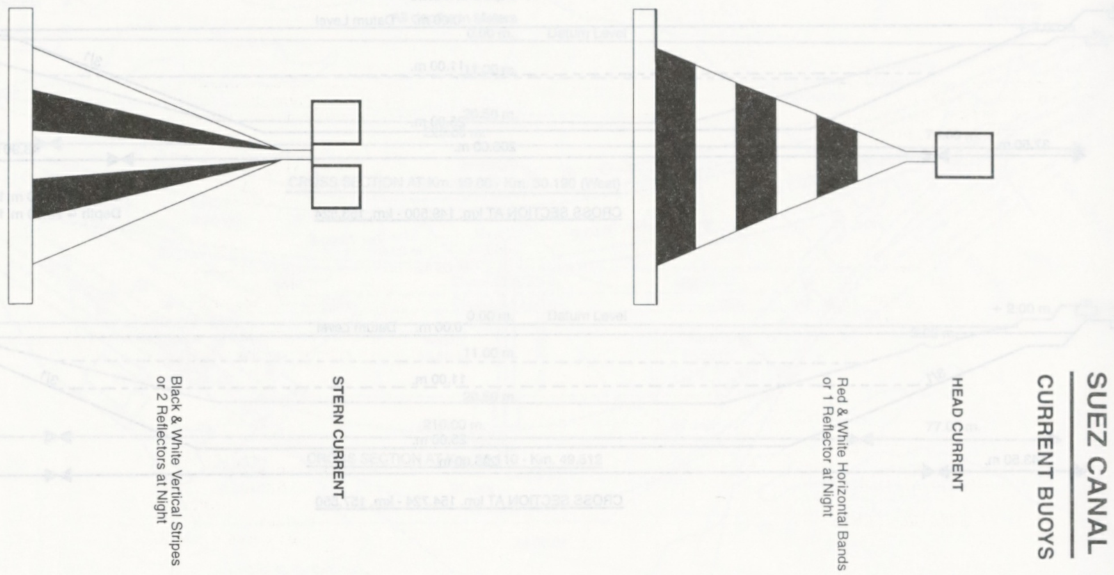


Characteristics: East Fixed Green
West-Fixed Red
End of Islands: Flash White



DAYMARK
2 Cones, points
OUT (black)

Fairway Buoy:- Yellow-Black vertical bands
Characteristic:- Gp. Fl. W. (3) 10 sec.


SUEZ CANAL
CURRENT BUOYS
HEAD CURRENT
Red & White Horizontal Bands or 1 Reflector at Night
STERN CURRENT
Black & White Vertical Stripes or 2 Reflectors at Night

Article 93: Visual Signals

(A). Signals displayed on station signal masts to vessels:

Signal No.

1. Stand by to proceed (general)
2. Proceed (general)
3. Stand by to make fast (signal mast Km. 18)
4. Make fast (signal mast Km. 18)
5. Attention
6. Immediate Stopping
7. Make Fast (Vessels from North)
8. Make Fast (Vessels from South)
9. Proceed (Vessels from North)
10. Proceed (Vessels from South)
11. Current Signal
12. Port Closed
13. W/T Watch (Vessels from North)
14. W/T Watch (Vessels from South)
15. Passage authorisation (Ferry Boats)
16. Isolated signal station

(B). Special signals used by vessels in Ports and in the Canal

Signal No.

1. Vessels carrying bulk petroleum, flash point between 73° F. and 150° F.
2. Vessels carrying explosives - vessels N.G.F.
3. Vessels carrying bulk petroleum, flash point under 73° F.
4. Vessels carrying radioactive substances.
5. I require a pilot
6. I require Free Pratique
7. Coming from an Infected Port
8. Under Quarantine
9. Tug required (in ports)
10. Mooring boats
11. Searchlight
12. Last in convoy
13. Making Fast

13-bis Doubling in G.B.L.

14. Vessel manoeuvring to Sea
15. Vessel manoeuvring to Canal
16. Voluntary stopping (G. V.)
17. Aground
18. I have a Pilot
    (a). On Board
    (b). To Disembark
19. My vessel is isolated, I have no means of communication

(C). Signals used by Dredgers in Canal Waters:

(1) Dredgers Working Underway

Signal No.

1. Dredgers underway
2. Passage clear on side shown
3. Passage clear on both sides
4. Passing not allowed on either side
5. I am going about
6. I am not under command

(2) Stationary dredgers and floating equipment

Signal No.

1. Passage clear on side shown
2. Passage clear on both sides
3. Passage clear on side shown, with speed reductions
4. Passing not allowed on either side
5. Passing not allowed : Manoeuvring to clear passage
6. I am not under command - passing not allowed

(A) Signals displayed on Station Signal Masts to Vessels — By Day — By Night

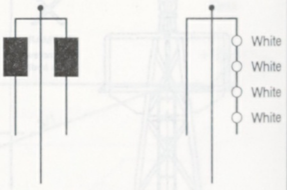
Signal No. 1: Stand by to Proceed.

(a) Hoisted on Kabrit, Deversoir and Ras El Ech: *"Stand by to Proceed on Signal No. 2"*

(b) Hoised on Ballah and repeated on El Ferdan: *"Southbound vessels made fast in Ballah West Branch, Stand by to Proceed"*

(C) Hoisted on Ballah and repeated on El Kantara: *"Northbound vessels made fast in Ballah West Branch, Stand by to Proceed"*.

(D) Hoisted on Km. 3 East branch of Port Said: *"Southbound Vessels using Port Said East Branch, Stand by to Proceed"*



Signal No. 2: Proceed.

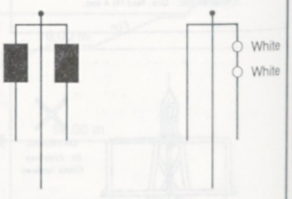
(a) Hoisted on Port Tewfik, Kabrit, Deversoir and Ras El Ech: *"Proceed"*

(b) Hoised on Ballah and repeated on El Ferdan: *"Southbound vessels made fast in Ballah West Branch, Proceed"*

(C) Hoisted on Ballah and repeated on El Kantara: *"Northbound vessels made fast in Ballah West Branch, Proceed"*.

(D) Hoisted on Km. 3 East branch of Port Said: *"Southbound Vessels using Port Said East Branch, Proceed"*

(E) Absence of Signal No. 2: *"Stay at anchor or make fast and keep continuous W/T watch"*

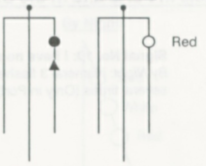


SUEZ CANAL

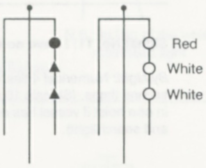
RULES OF NAVIGATION
ARTICLE 93
(1)

By Day By Night

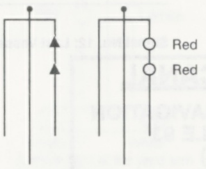
Signal No. 3: Stand by to Make Fast:
Hoisted at Km. 18 mast: "Southbound vessels made fast in West Branch Km. 4 to 14 and Northbound vessels already passed Tineh station, Stand by to Make Fast".



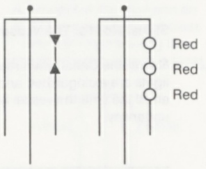
Signal No. 4: Make Fast:
Hoisted at Km. 18 mast: "Southbound vessels in Port Said East or West By-pass, and Northbound Vessels already passed Tineh Station, Make Fast".



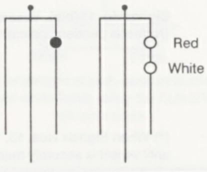
Signal No. 5: "Attention":
"Southbound and Northbound vessels stand by to make fast or manoeuvre. Keep W/T watch immediately".



Signal No. 6: Immediate Stopping:
"Southbound and Northbound vessels make fast immediately".
Vessels may proceed when signal is lowered or switched off.

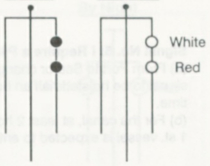


Signal No. 7: Make Fast:
"Vessels from North : Make Fast".
(To be lowered or switched of when all concerned vessels are made fast).

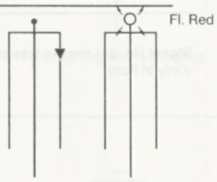


By Day By Night

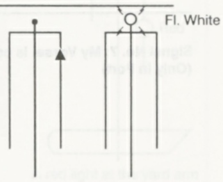
Signal No. 8: Make Fast:
"Vessels from South : Make Fast".
(To be lowered or switched off when all concerned vessels are made fast).



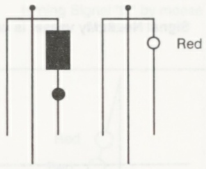
Signal No. 9: Proceed:
"Vessels from North made fast on Signal No. 7 : Proceed".
(Southbound Vessels made fast in Port Said West Branch and in Ballah West Branch to Proceed on Signal No. 2).



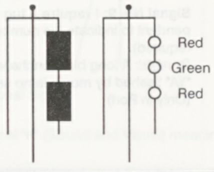
Signal No. 10: Proceed:
"Vessels from South made fast on Signal No. 8 : Proceed".
(Northbound Vessels made fast in Ballah West Branch to Proceed on Signal No. 2).



Signal No. 11: Current Signal:
Current indication Signal
Hoisted on Challoufa and Genefa signal masts :
"Current Running North"
Absence of Signal : "Current is Running South or Slack Water".



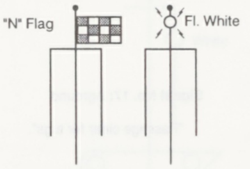
Signal No. 12: "Port Closed":
"Suez Roads closed for Bad Weather".



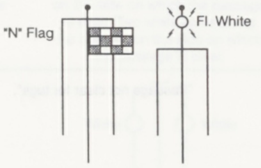
SUEZ CANAL
RULES OF NAVIGATION ARTICLE 93
(2)

By Day By Night

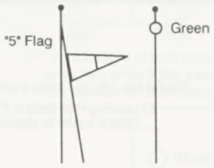
Signal No. 13: W/T Watch*:
"Vessels from North establish Wireless Telegraphy Watch"



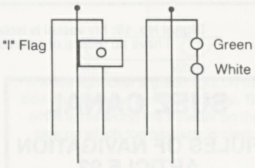
Signal No. 14: W/T Watch*:
"Vessels from South establish Wireless Telegraphy Watch"



Signal No. 15: Passage Authorisation:
"Ferry Boat not allowed to move"
(By night: Light on Wharf."



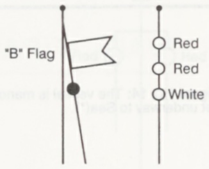
Signal No. 16: Isolated Signal Station:
"This signal station is isolated. All communications are made by Wireless Telegraphy".



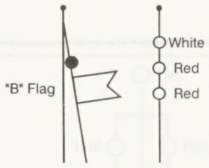
(B) Special Signals Used by Vessels in Ports and in the Canal

By Day By Night

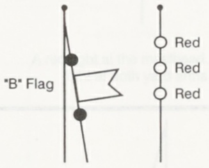
1. Oil tankers carrying bulk petroleum (flash point between 73° and 150° F).



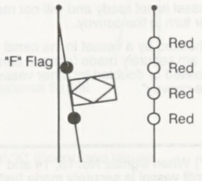
Signal No. 2: Vessels carrying 1st. group dangerous goods.
Not Gas Free tankers.
LPG - LNG.
Dangerous chemicals in bulk.



Signal No. 3: Petroleum in Bulk:
(Flash Point below 73° F):



Signal No. 4: Vessels carrying Radio Active Substances:



SUEZ CANAL
RULES OF NAVIGATION ARTICLE 93
(3)

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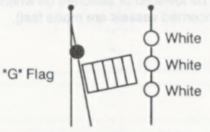
* Signals No. 13 and 14 can be used at the same time addressing both convoys from North and South

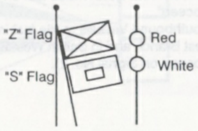
(B) Special Signals - Used by Vessels in Ports and in the Canal

By Day By Night

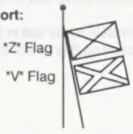
Signal No. 5: I Require a Pilot:
(a) From Port to Sea or changing berth, signal to be hoisted half an hour before sailing time.
(b) For the canal, at least 2 hours before the 1 st. vessel is expected to enter the Canal


"G" Flag
White
White
White

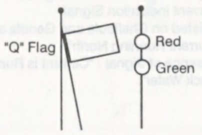
Signal No. 6: I require free pratique.
(Only in Port)


"Z" Flag
"S" Flag
Red
White

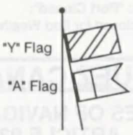
Signal No. 7: My Vessel is coming from an infected port: (Only in Port)


"Z" Flag
"V" Flag

Signal No. 8: My vessel is under Quarantine.

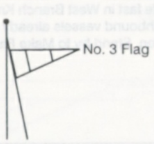

"Q" Flag
Red
Green

Signal No. 9: I require a tug (followed by a numeral pendant to indicate the number of tugs required).
By night: A long blast on the whistle and letters "YA" flashed by morse lamp several times.
(Only in Port)


"Y" Flag
"A" Flag

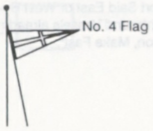
By Day By Night

Signal No. 10: I have no mooring boats.
By Night: Numeral 3 flashed by morse lamp several times (Only in Port).

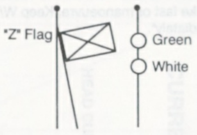


Signal No. 11: I have no shore searchlight.

By night: Numerical 4 flashed by morse lamp several times. (Signals 10 and 11 can be used in one hoist if vessel has no mooring boats and searchlight).

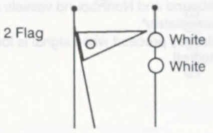


Signal No. 12: Last Vessel in Convoy.

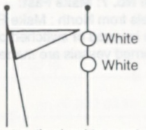

"Z" Flag
Green
White

Signal No. 13: The Vessel is making fast*:

N.B. In the Canal when made fast the 2 white lights are extinguished and a red light put on aft all the time the vessel is moored until actually underway.


No. 2 Flag
White
White

Signal No. 13(bis). Vessel Doubling in the G.B.L.
(Numeral pendent indicating new turn of vessel).


White
White

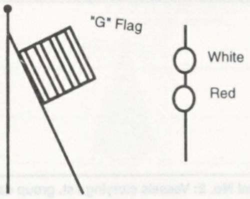
(*) When Signals Nos. 13, 14 and 15 are hoisted, vessels are not authorised to overtake or cross until vessel is securely made fast and Signal No. 16 (G.V.) hoisted.

SUEZ CANAL
RULES OF NAVIGATION
ARTICLE 93
(4)

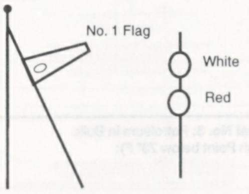
(B) Special Signals - Used by Vessels in Ports and in the Canal

By Day By Night

Signal No. 14: The vessel is manoeuvring to get underway to Sea(*).


"G" Flag
White
Red

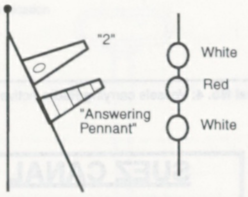
Signal No. 15: The vessel is manoeuvring to get underway to the canal (*)


No. 1 Flag
White
Red

Signal No. 16: Voluntary Stopping (G.V.)
"Garage Volontaire":

Vessel is not ready and will not maintain her turn in the convoy.

If hoisted by a vessel in the canal :
" I am securely made fast and can be crossed or doubled by other vessels in the convoy".

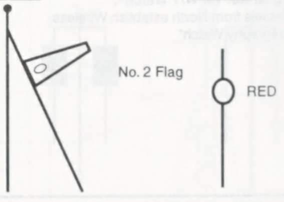

"2"
"Answering Pennant"
White
Red
White

(*) When signals No. 13, 14 and 15 are hoisted, vessels are not authorised to overtake or cross until vessel is securely made fast and Signal No. 16(G.V.) hoisted.

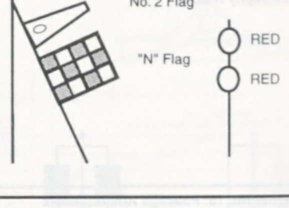
By Day By Night

Signal No. 17: Aground

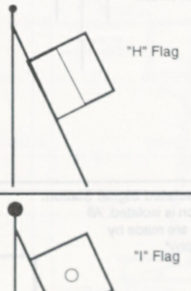
"Passage clear for tugs".


No. 2 Flag
RED

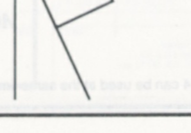
"Passage not clear for tugs".


No. 2 Flag
"N" Flag
RED
RED

Signal No. 18: a) I have a pilot on board
b) Leaving Port Said & Port of Suez
I Have a pilot to disembark.



Signal No. 19: My vessel is isolated:
I have no means of communication.



SUEZ CANAL
RULES OF NAVIGATION
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(5)

C Signals used by dredgers in Canal Waters

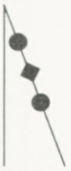
SUEZ CANAL

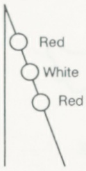
RULES OF NAVIGATION
ARTICLE 93
(6)

(1) Dredgers working underway

By Day — By Night

Signal No. 1: I am dredging underway and cannot get out of the way.

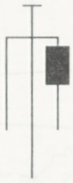




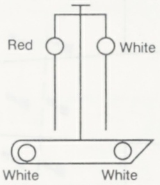
N.B.: In lieu of the white masthead light

International Signal

Signal No. 2: Passage is clear on the side shown

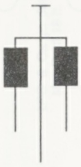


A drum at the yard arm on the side on which the passage is clear.

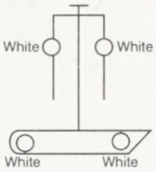


A white light at the yard arm on which the passage is clear. A red light at the yard arm on which the passage is not clear. Two white lights along the bulwark where passage is clear.

Signal No. 3: Passage is clear on both sides



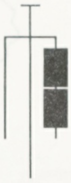
A drum at both yard arms



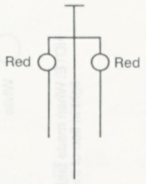
A white light at both yard arms and two white lights along the bulwark on both sides

By Day — By Night

Signal No. 4: Passing not allowed on either side

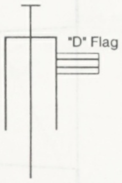


Two drums one over the other at the yard arm.

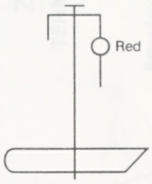


A red light at both yard arms.

Signal No. 5: I am going about.

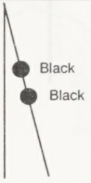


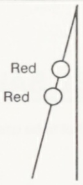
Flag "D" hoisted at the yard arm on the side to which she is turning



A red light at the yard arm on the side to which she is turning Signal "IP" by moese code

Signal No. 6: I am not under command(*)





International Signal

(*) This Signal may be hoisted together with the international signal "K" (Sound and Visual) meaning "STOP IMMEDIATELY".

C - Signals Used by dredgers in Canal Waters

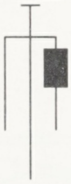
SUEZ CANAL

RULES OF NAVIGATION
ARTICLE 93
(7)

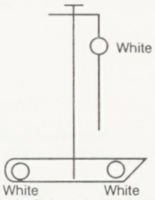
(2) Stationary Dredgers, Floating cranes, etc

By Day — By Night

Signal No. 1: Passage is clear on the side shown. (I am at work or Moored):

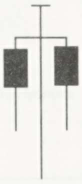


A drum at the yard arm on the side on which the passage is clear.

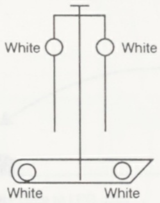


A white light at the yard arm on the side on which the passage is clear. Two white lights along the bulwark on the side on which the passage is clear.

Signal No. 2 Passage is clear on Both Sides (I am at work):

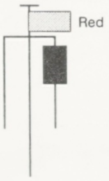


A drum at both yard arms.

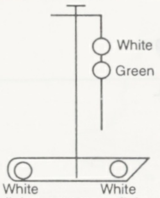


A white light at both yard arms. Two white lights along the bulwark on both sides.

Signal No. 3: Passage is clear on the side shown but only proceed at the lowest possible speed (*¤)



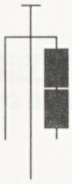
A red flag at the masthead. A drum at the yard arm at the yard arm on the side on which the passage is clear.



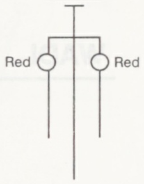
A white light over a green light on the side on which the passage is clear. Two white lights along the bulwark on the side on which the passage is clear.

By Day — By Night

Signal No. 4: Passing not allowed on either side.

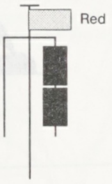


Two drums one over the other at the yard arm.

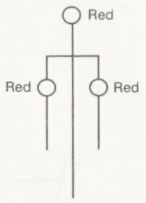


A red light at both yard arms.

Signal No. 5: Passing not allowed. (I am manoeurving to make fast to clear the passage)

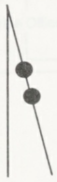


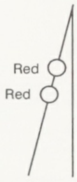
A red flag the masthead and two drums one over the other at the yard arm.



A red light at the masthead. A red light at both yard arms..

Signal No. 6: Passing not allowed. (I have a breakdown and cannot get out of the way) (**)



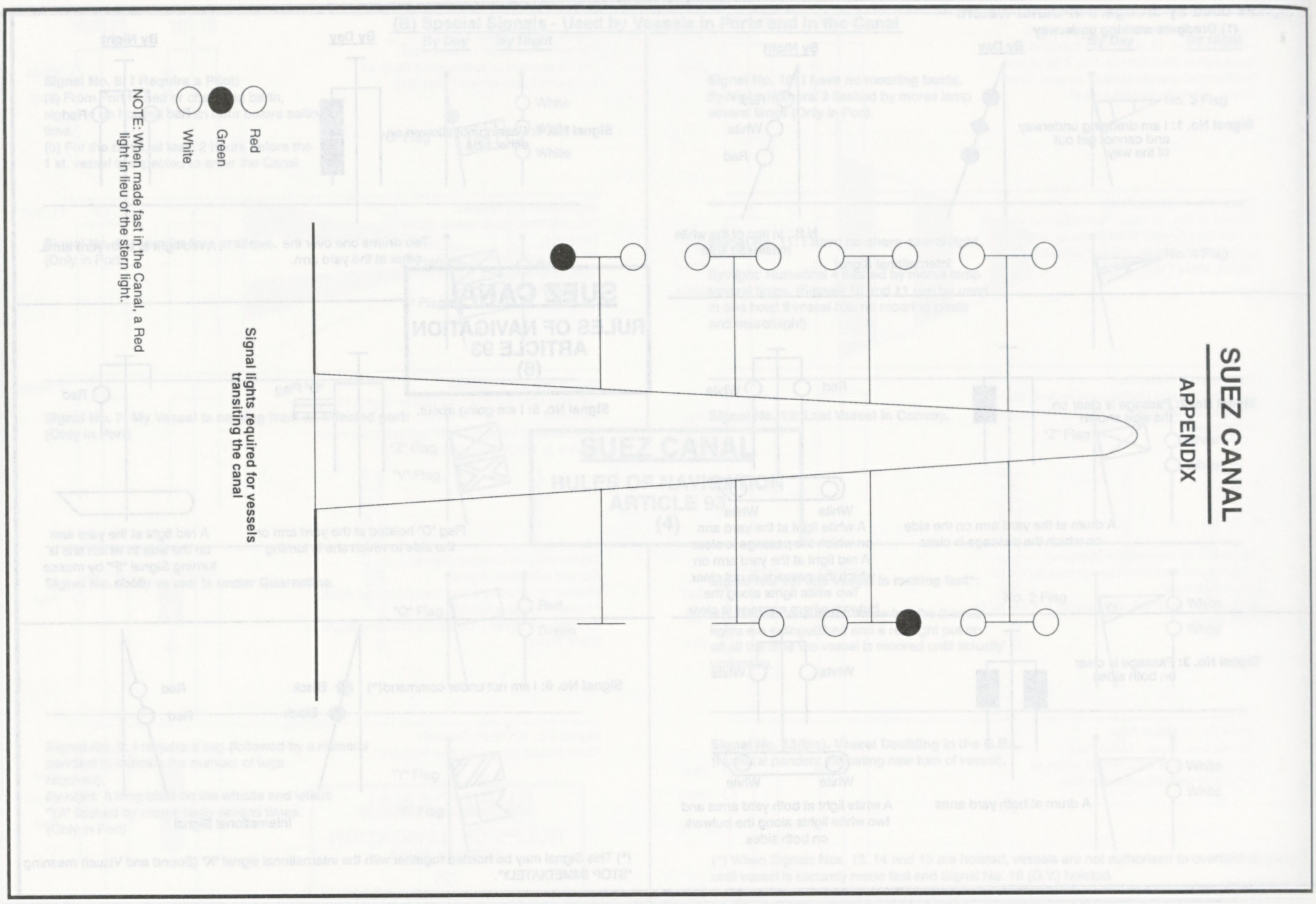


International Signal

(*) This Signal is also used by "Warehouse" string of barges.

(¤) The International Signal TE may also be hoisted. In this case the decrease of speed is imperative. By night the imperative decrease of speed is shown on the Pilot's boarding order.

(**) This Signal may be hoisted with the international signal "K" (Sound and Visual: ("STOP IMMEDIATELY).



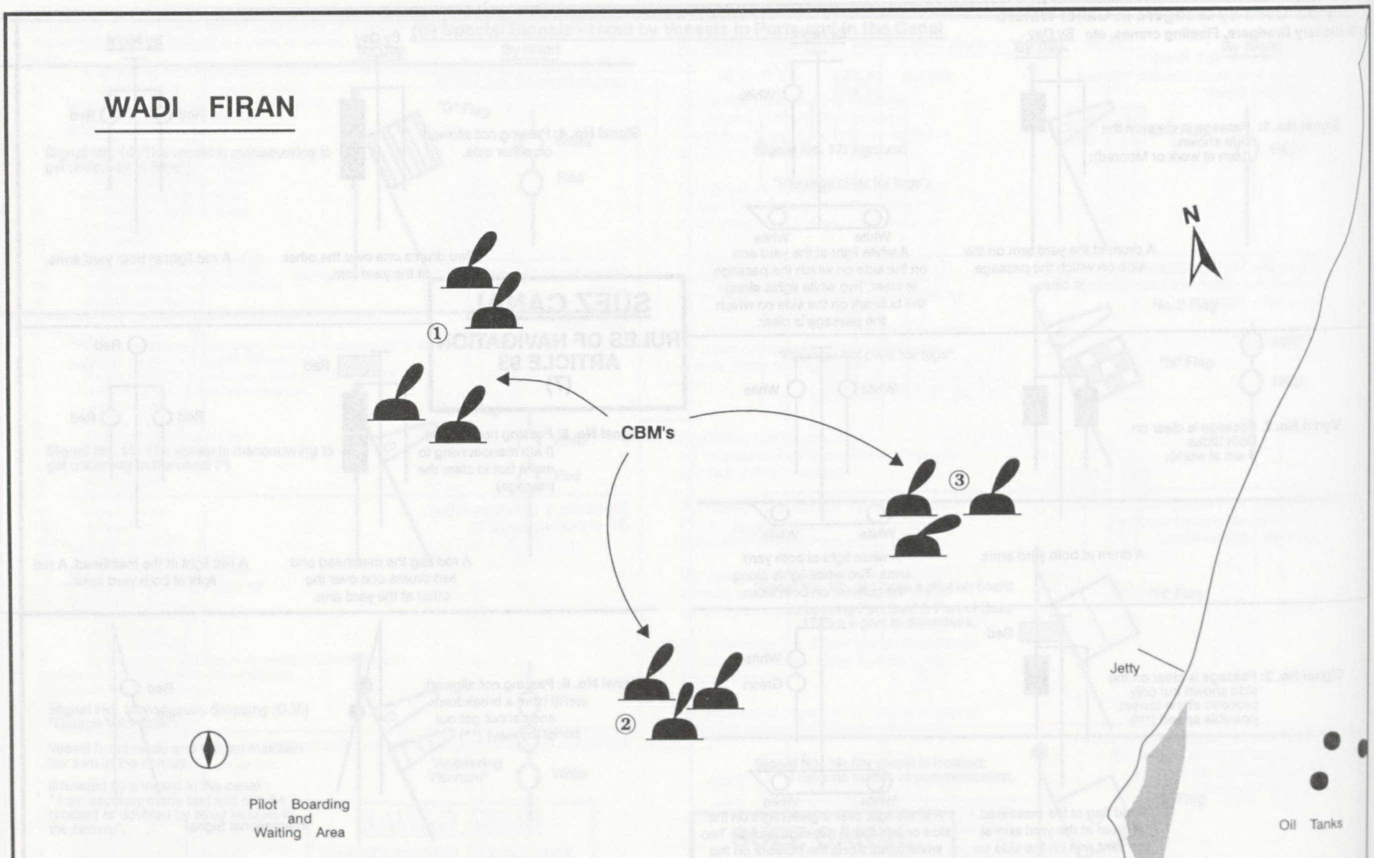
SUEZ CANAL

APPENDIX

Signal lights required for vessels transiting the canal

NOTE: When made fast in the Canal, a Red light in lieu of the stern light.

Red
Green
White



WADI FIRAN

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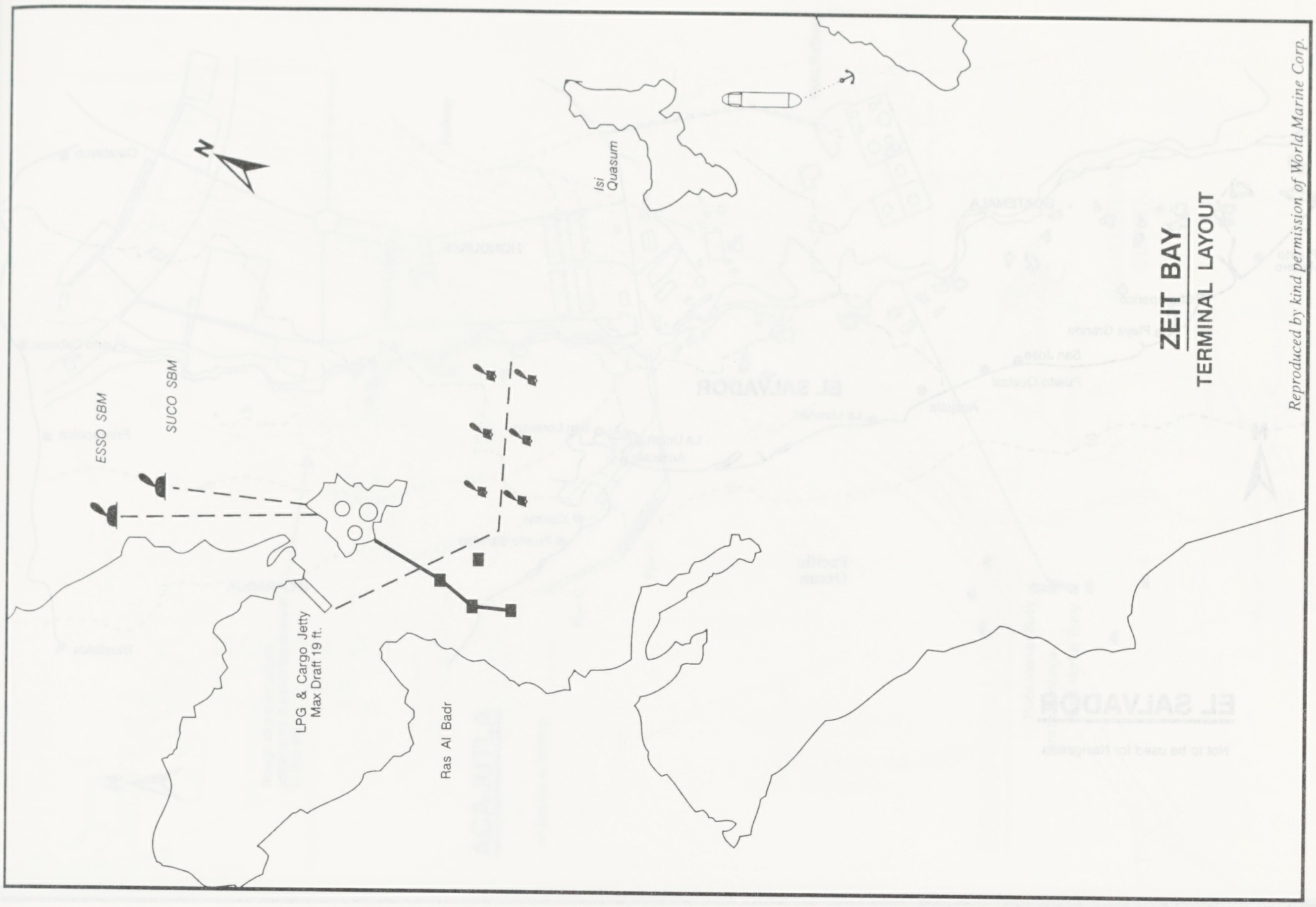
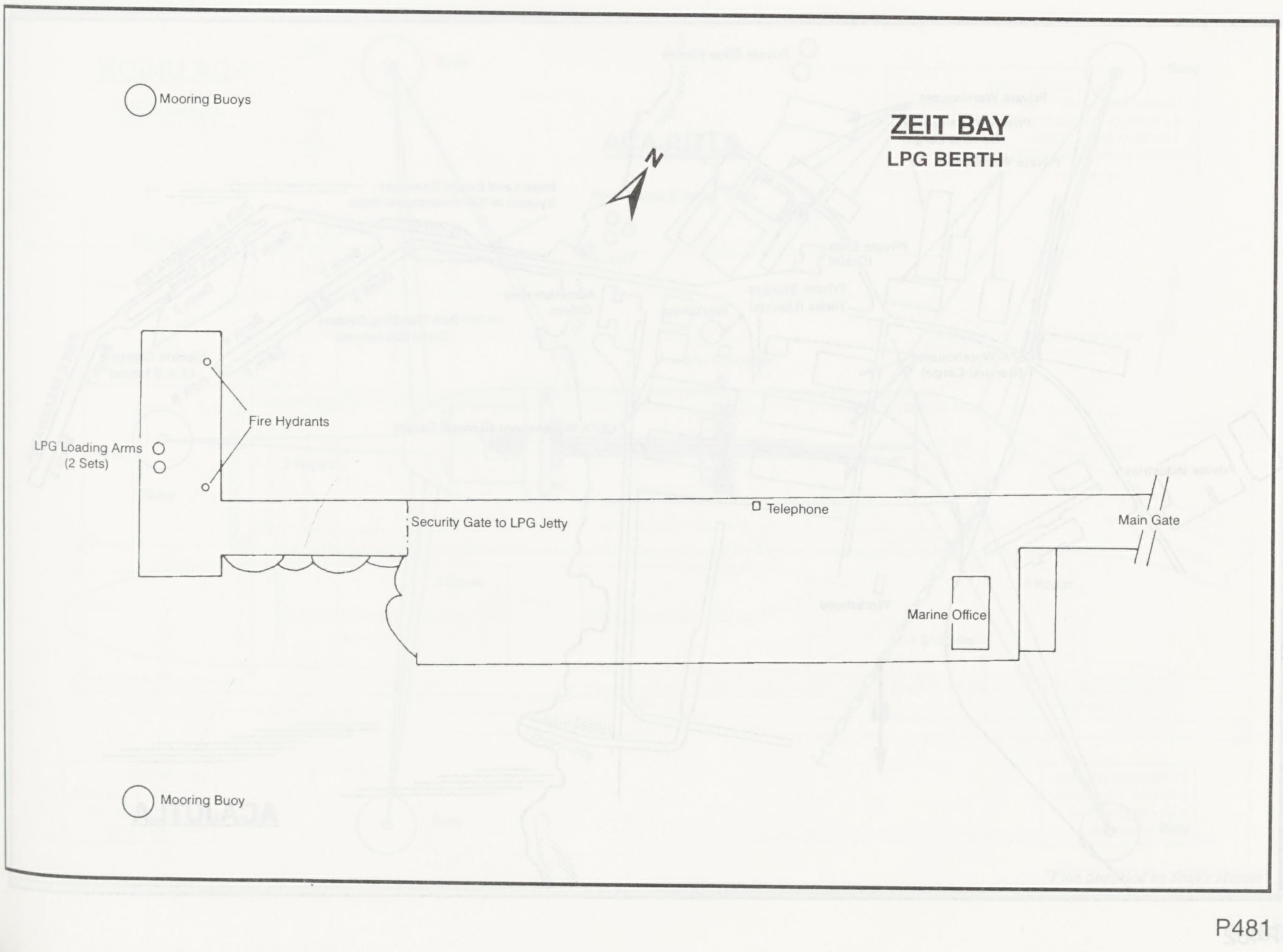
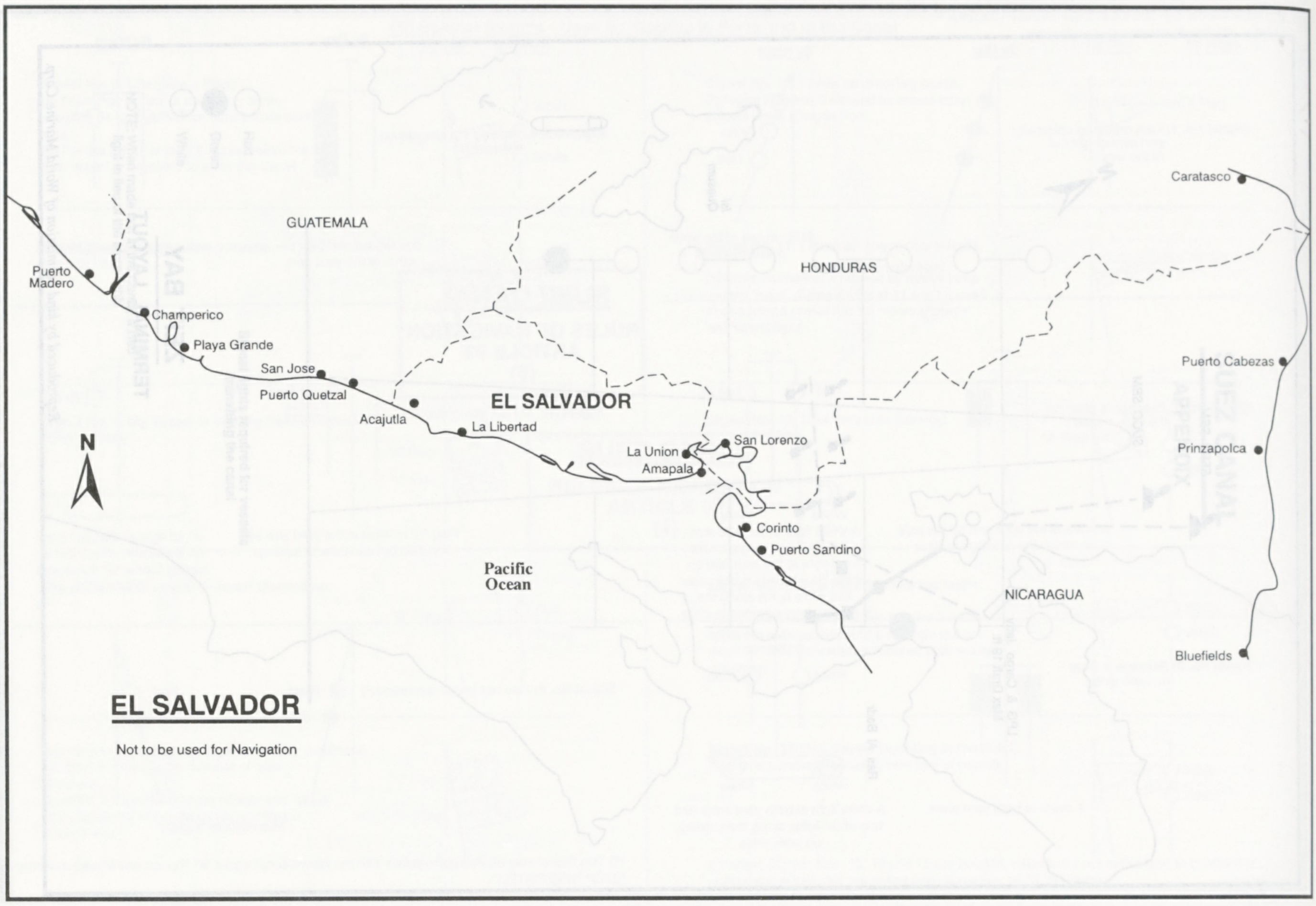
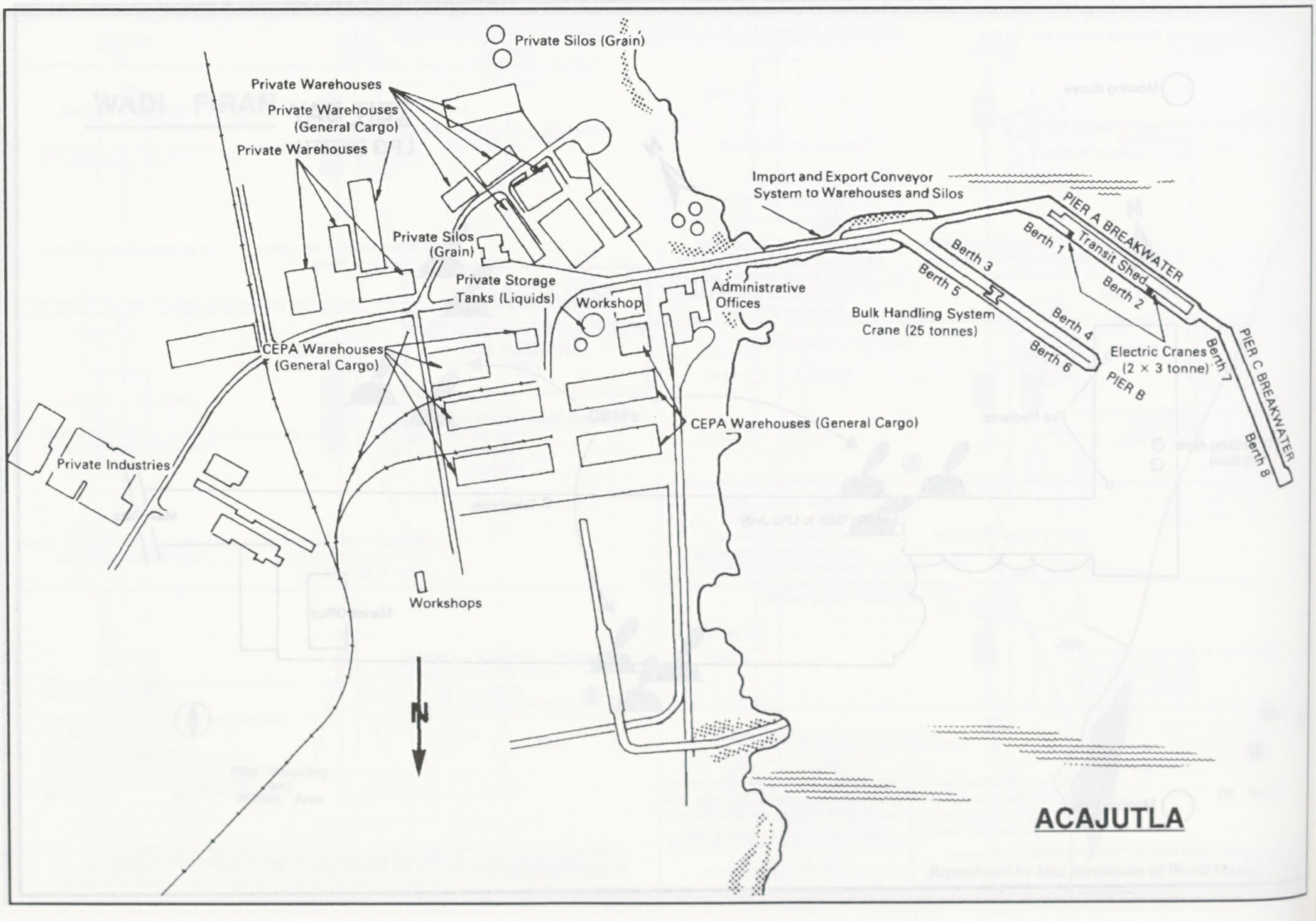
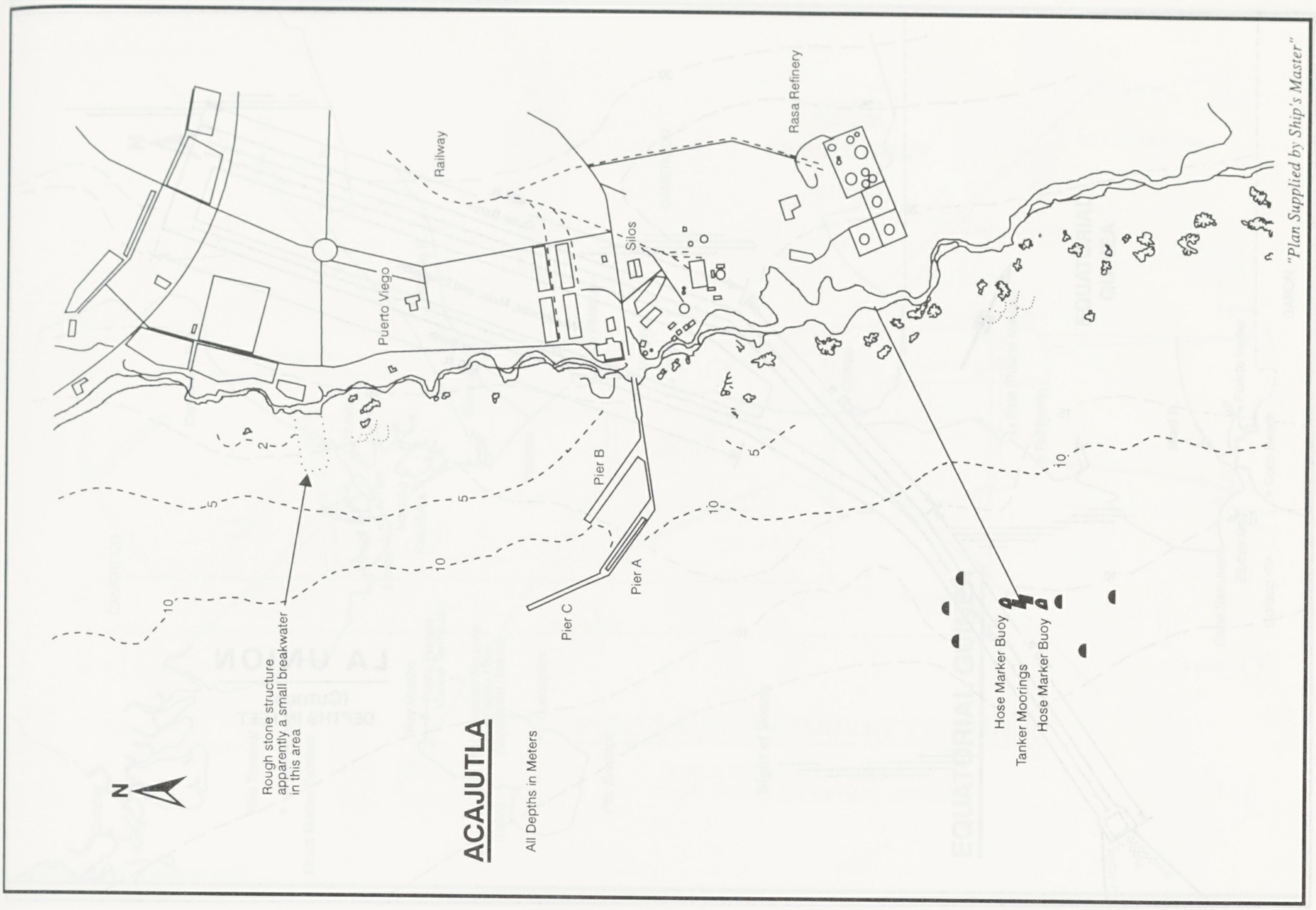
①
②
③
CBM's
N
Jetty
Oil Tanks
Pilot Boarding and Waiting Area


ZEIT BAY
TERMINAL LAYOUT
Reproduced by kind permission of World Marine Corp.
N
Isi Quasum
ESSO SBM
SUCO SBM
LPG & Cargo Jetty Max Draft 19 ft.
Ras Al Badr

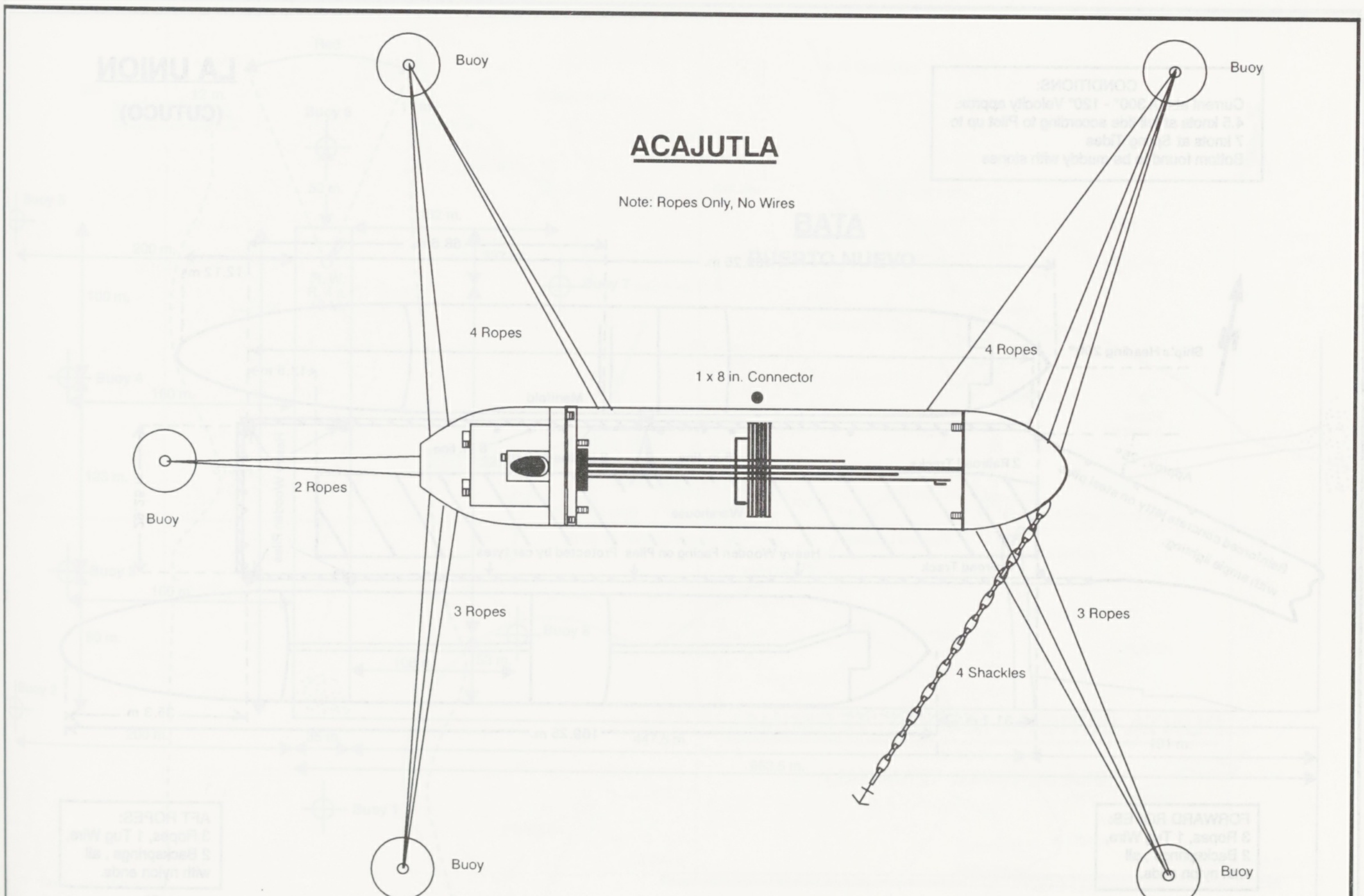

ZEIT BAY
LPG BERTH
N
Mooring Buoys
Fire Hydrants
LPG Loading Arms (2 Sets)
Security Gate to LPG Jetty
Telephone
Main Gate
Marine Office
Mooring Buoy


GUATEMALA
Puerto Madero
Champerico
Playa Grande
San Jose
Puerto Quetzal
Acajutla
EL SALVADOR
La Libertad
La Union
San Lorenzo
Amapala
HONDURAS
Caratasco
Puerto Cabezas
Prinzapolca
Corinto
Puerto Sandino
NICARAGUA
Bluefields
Pacific Ocean
N
EL SALVADOR
Not to be used for Navigation

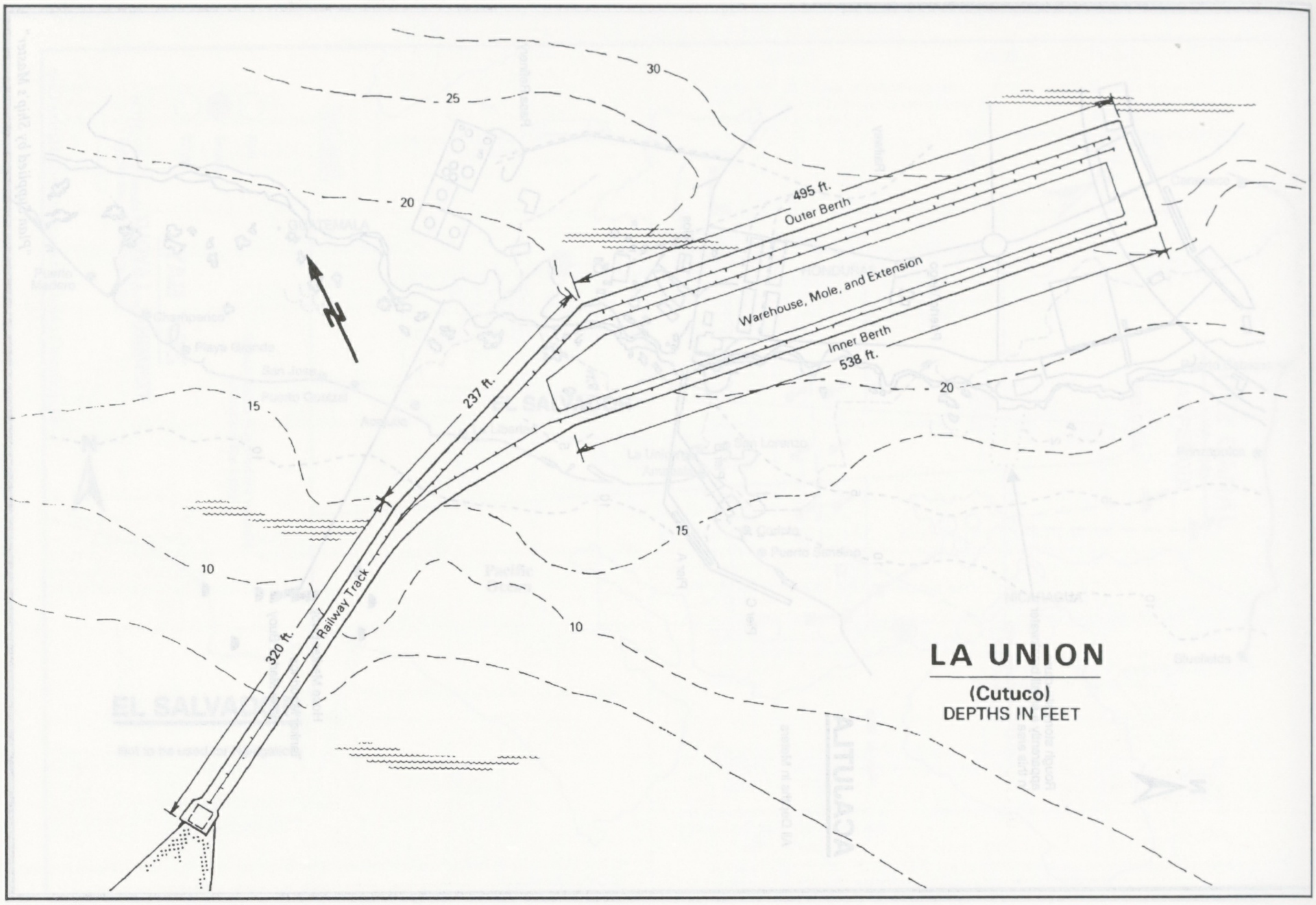

Private Silos (Grain)
Private Warehouses
Private Warehouses (General Cargo)
Private Warehouses
Private Silos (Grain)
Private Storage Tanks (Liquids)
Workshop
Administrative Offices
Import and Export Conveyor System to Warehouses and Silos
PIER A BREAKWATER
Berth 1
Transit Shed
Berth 2
Berth 3
Berth 5
Berth 4
Berth 6
PIER B
Bulk Handling System Crane (25 tonnes)
Electric Cranes (2 × 3 tonne)
Berth 7
PIER C BREAKWATER
Berth 8
CEPA Warehouses (General Cargo)
CEPA Warehouses (General Cargo)
Private Industries
Workshops
N
ACAJUTLA


ACAJUTLA
All Depths in Meters
N
Rough stone structure apparently a small breakwater in this area
Puerto Viego
Railway
Silos
Rasa Refinery
Pier A
Pier B
Pier C
Hose Marker Buoy
Tanker Mocrings
Hose Marker Buoy
2
5
5
5
10
10
10
10

"Plan Supplied by Ship's Master"

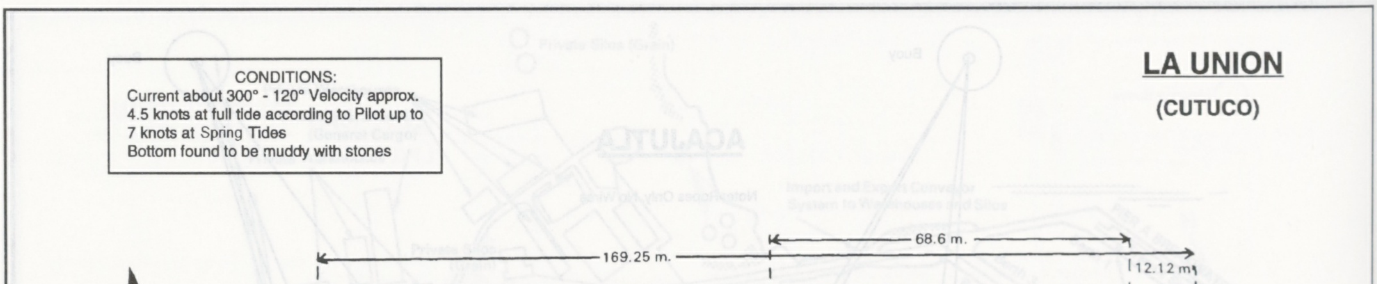

ACAJUTLA
Note: Ropes Only, No Wires
Buoy
Buoy
Buoy
Buoy
Buoy
4 Ropes
4 Ropes
1 x 8 in. Connector
2 Ropes
3 Ropes
3 Ropes
4 Shackles

"Plan Supplied by Ship's Master"


30
25
20
15
10
15
10
20
495 ft.
Outer Berth
Warehouse, Mole, and Extension
Inner Berth
538 ft.
237 ft.
320 ft.
Railway Track
N

LA UNION

(Cutuco)
DEPTHS IN FEET


Ship's Heading 280°
Approx. 25°
Reinforced concrete jetty on steel piles with ample lighting.
169.25 m.
68.6 m.
12.12 m
12.5 m
Manifold
8 in. line
2 Railroad Tracks
6 in. line
8 in. line on jetty
Warehouse
Heavy Wooden Facing on Piles Protected by car tyres
Railroad Track
Heavy Wooden Piles
29.25 m
31.7 m.
169.25 m.
35.3 m.
N

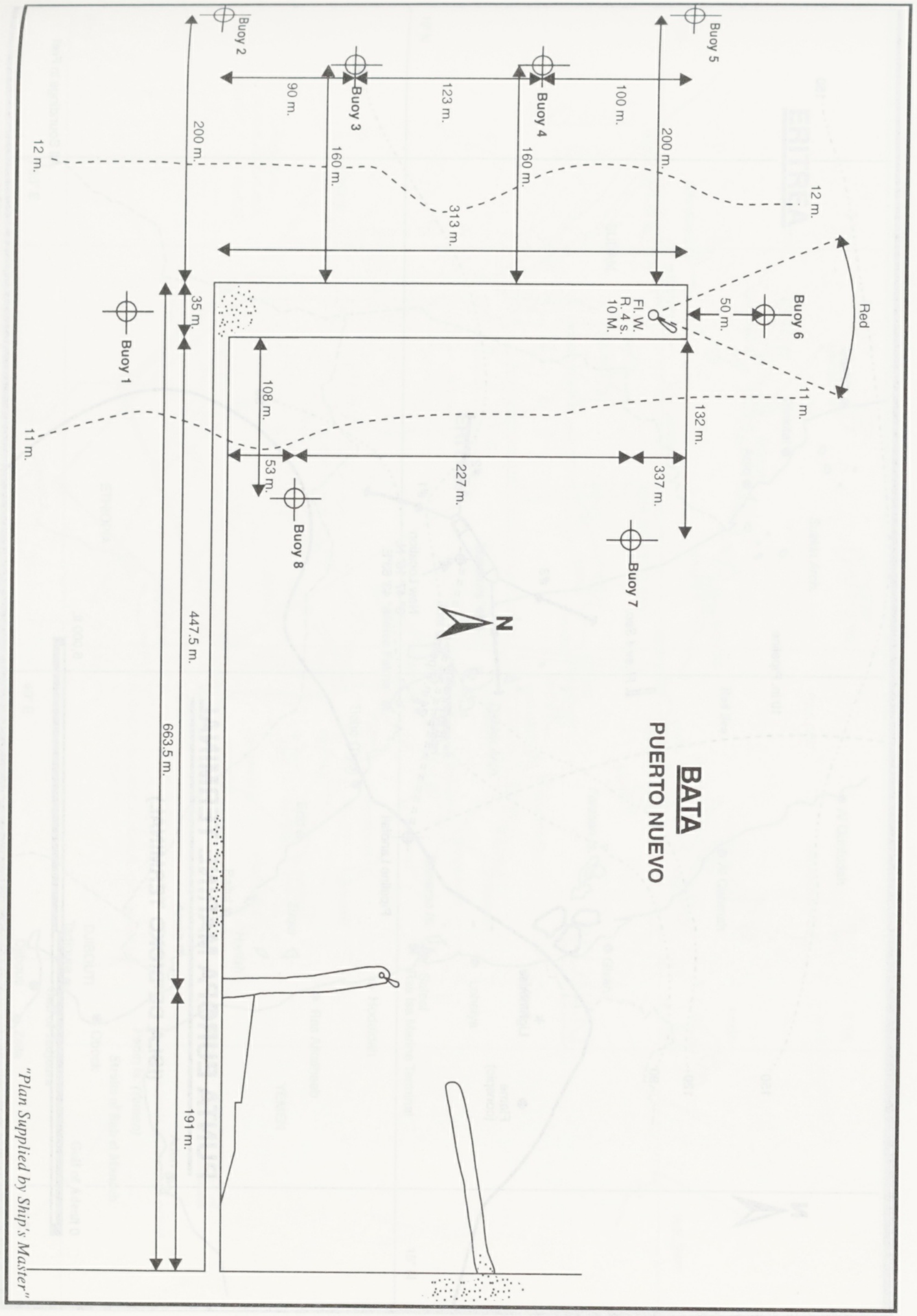
LA UNION

(CUTUCO)

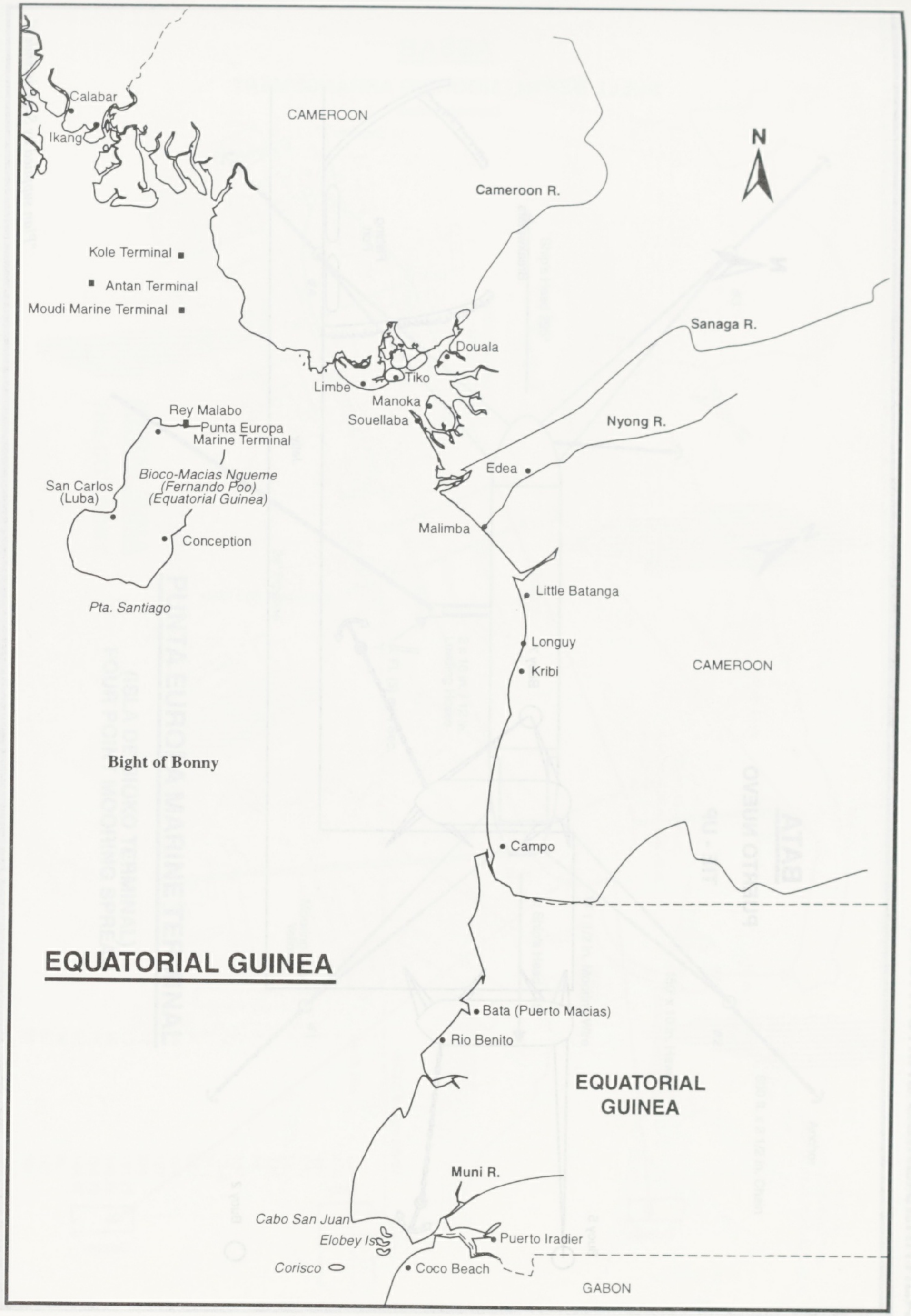
CONDITIONS:
Current about 300° - 120° Velocity approx.
4.5 knots at full tide according to Pilot up to
7 knots at Spring Tides
Bottom found to be muddy with stones

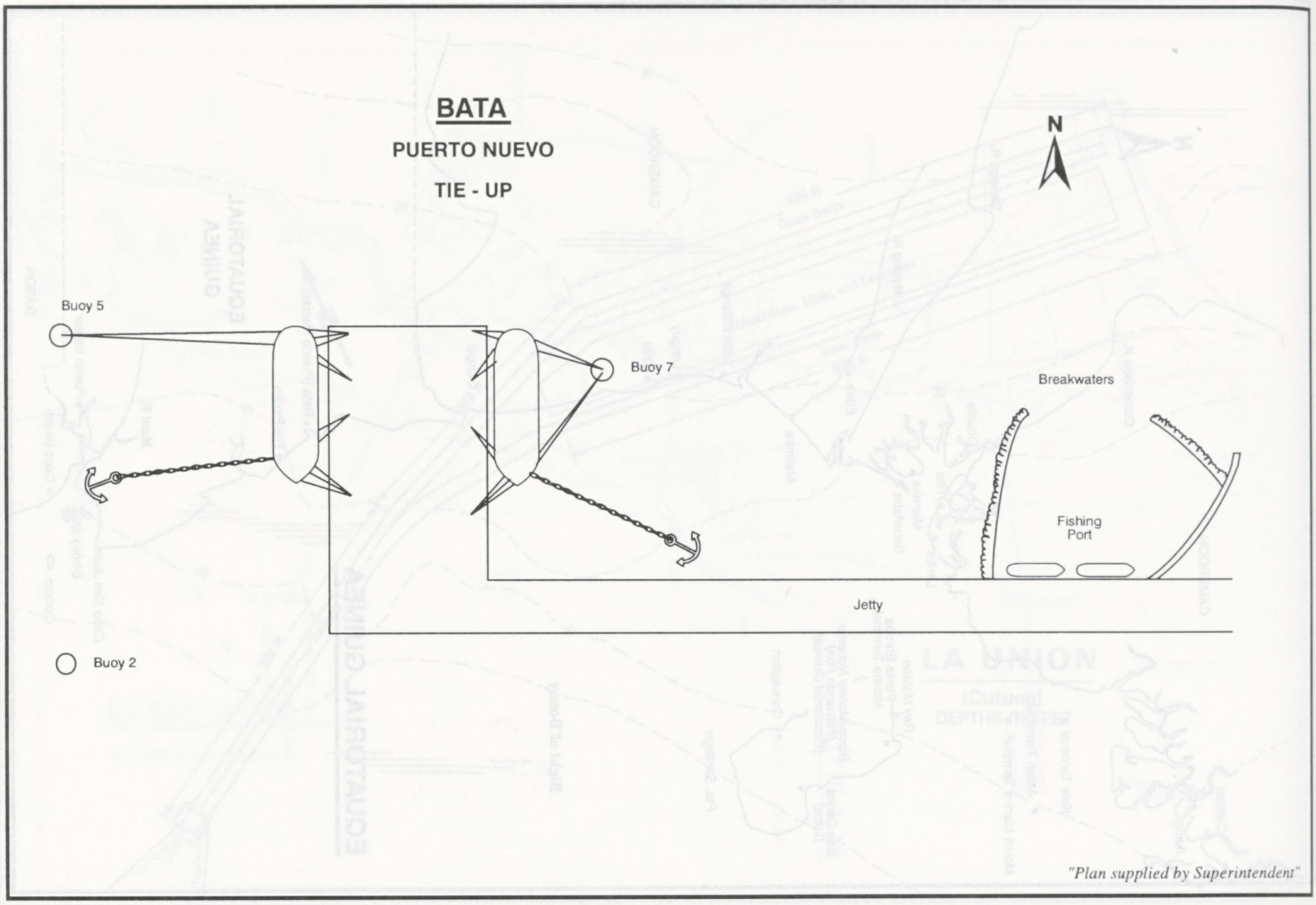
FORWARD ROPES:
3 Ropes, 1 Tug Wire,
2 Backsprings , all
with nylon ends.

AFT ROPES:
3 Ropes, 1 Tug Wire,
2 Backsprings , all
with nylon ends.


BATA
PUERTO NUEVO
N
Buoy 1
Buoy 2
Buoy 3
Buoy 4
Buoy 5
Buoy 6
Buoy 7
Buoy 8
Fl. W. R. 4 s. 10 M.
Red
12 m.
11 m.
200 m.
90 m.
123 m.
100 m.
160 m.
313 m.
35 m.
50 m.
108 m.
132 m.
53 m.
227 m.
337 m.
447.5 m.
663.5 m.
191 m.

"Plan Supplied by Ship's Master"


EQUATORIAL GUINEA
N
CAMEROON
Calabar
Ikang
Cameroon R.
Kole Terminal
Antan Terminal
Moudi Marine Terminal
Douala
Tiko
Limbe
Manoka
Souellaba
Sanaga R.
Nyong R.
Edea
Malimba
Rey Malabo
Punta Europa Marine Terminal
Bioco-Macias Ngueme (Fernando Poo) (Equatorial Guinea)
San Carlos (Luba)
Conception
Pta. Santiago
Little Batanga
Longuy
Kribi
CAMEROON
Bight of Bonny
Campo
Bata (Puerto Macias)
Rio Benito
EQUATORIAL GUINEA
Muni R.
Cabo San Juan
Elobey Is
Puerto Iradier
Corisco
Coco Beach
GABON



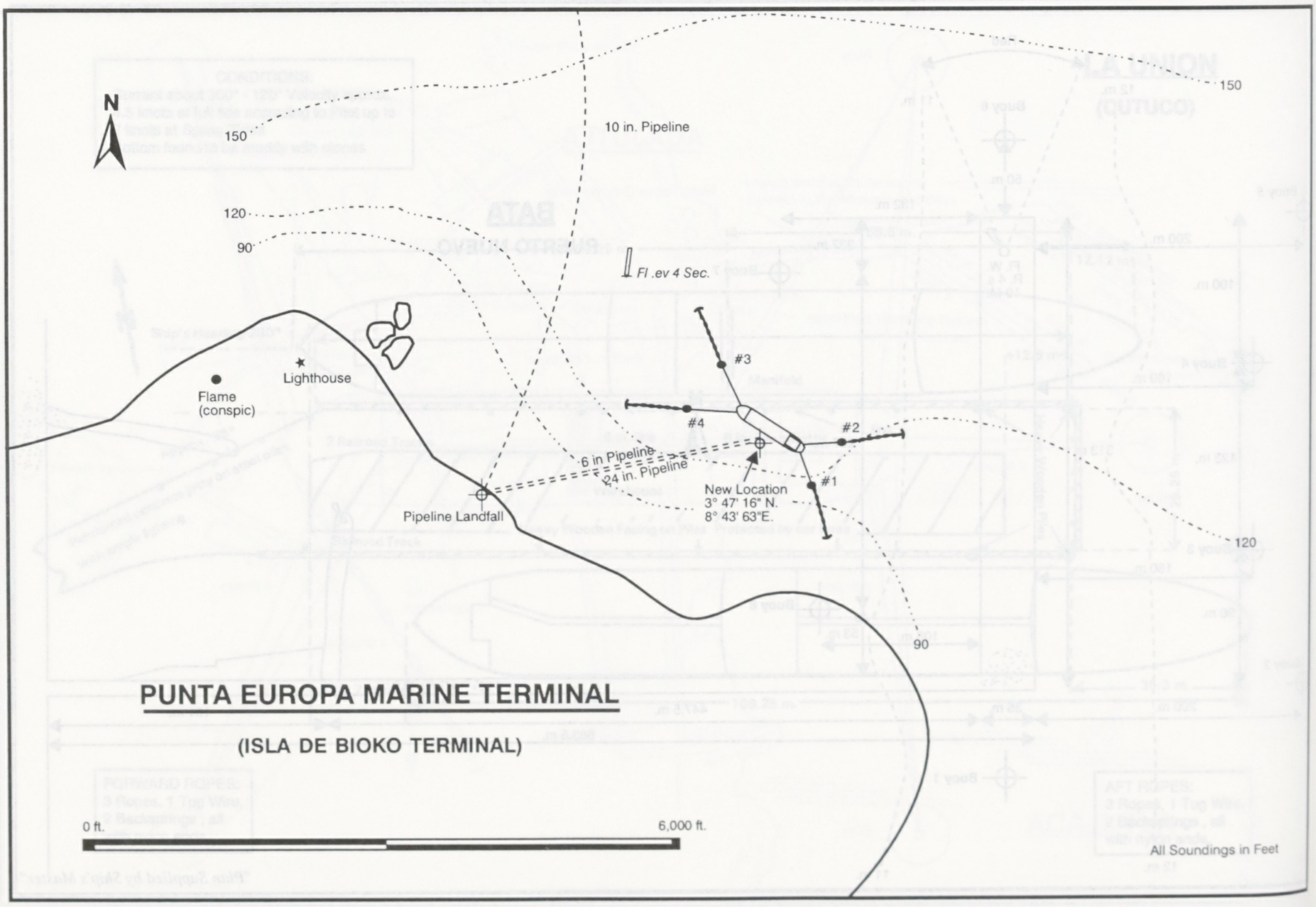
BATA

PUERTO NUEVO

TIE - UP

N
Buoy 5
Buoy 7
Breakwaters
Fishing Port
Jetty
Buoy 2

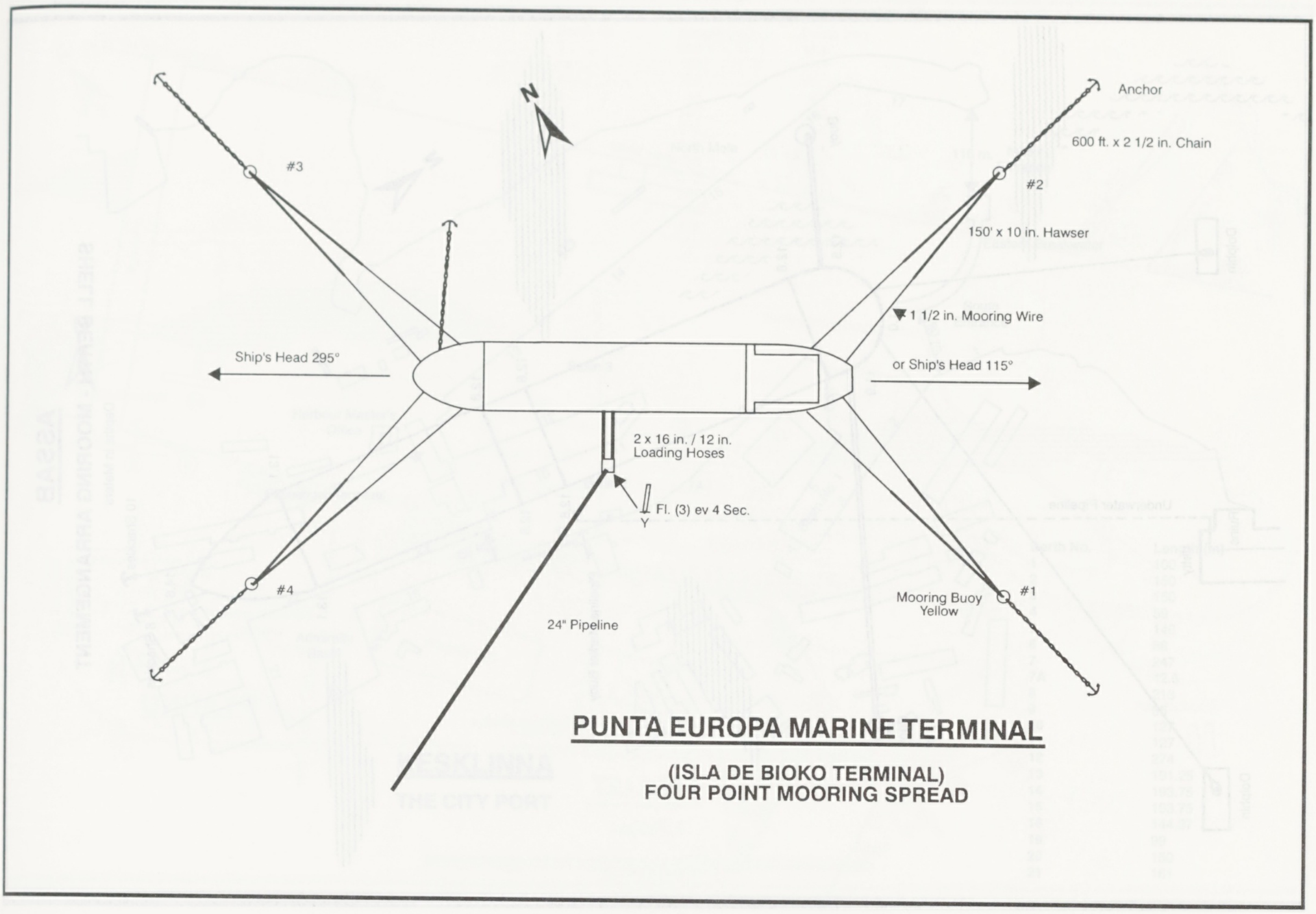
"Plan supplied by Superintendent"



PUNTA EUROPA MARINE TERMINAL

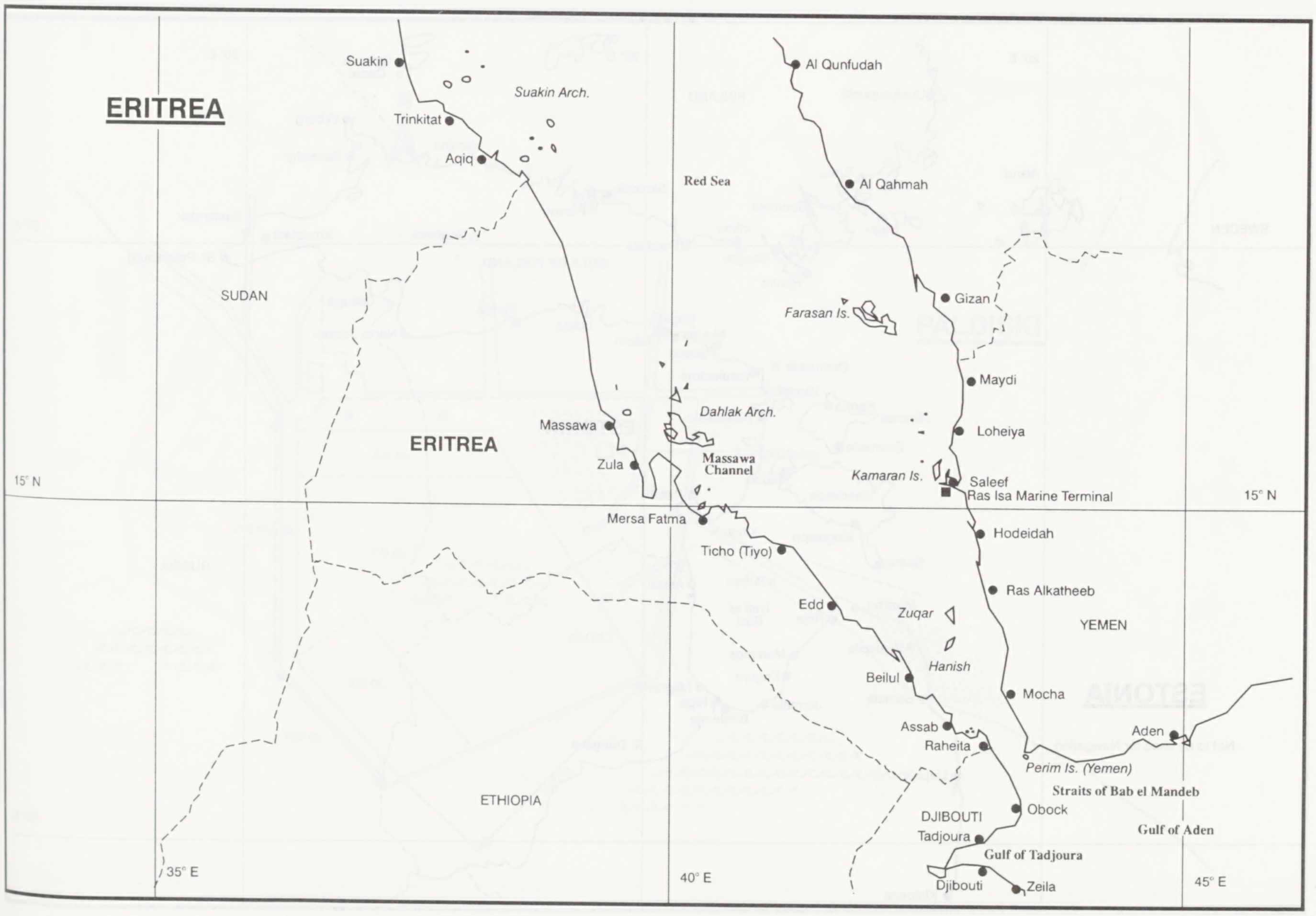
(ISLA DE BIOKO TERMINAL)

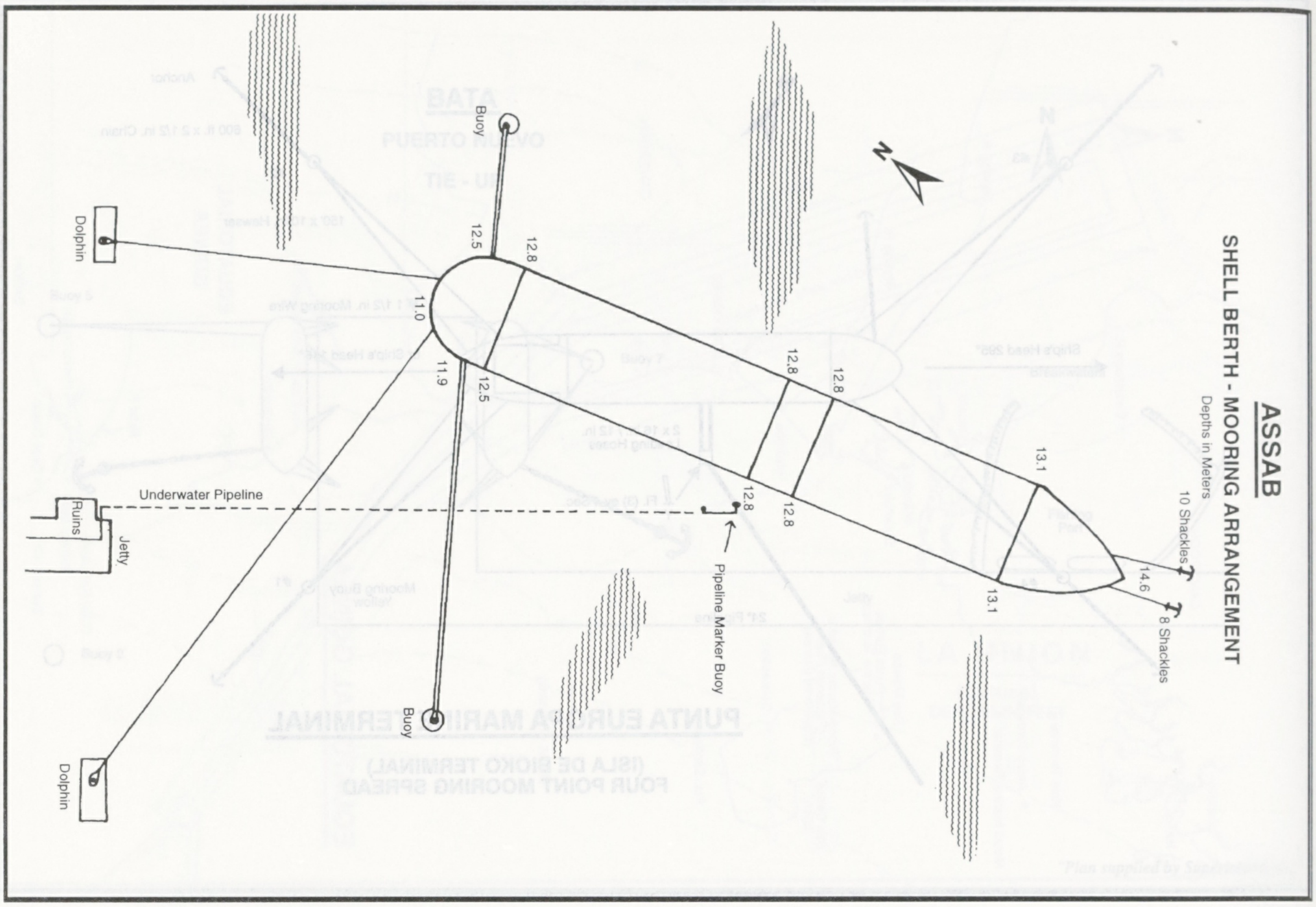
N
150
10 in. Pipeline
150
120
90
Fl .ev 4 Sec.
#3
Flame (conspic)
Lighthouse
#4
#2
6 in Pipeline
24 in. Pipeline
#1
New Location
3° 47' 16" N.
8° 43' 63°E.
Pipeline Landfall
120
90
0 ft.
6,000 ft.
All Soundings in Feet

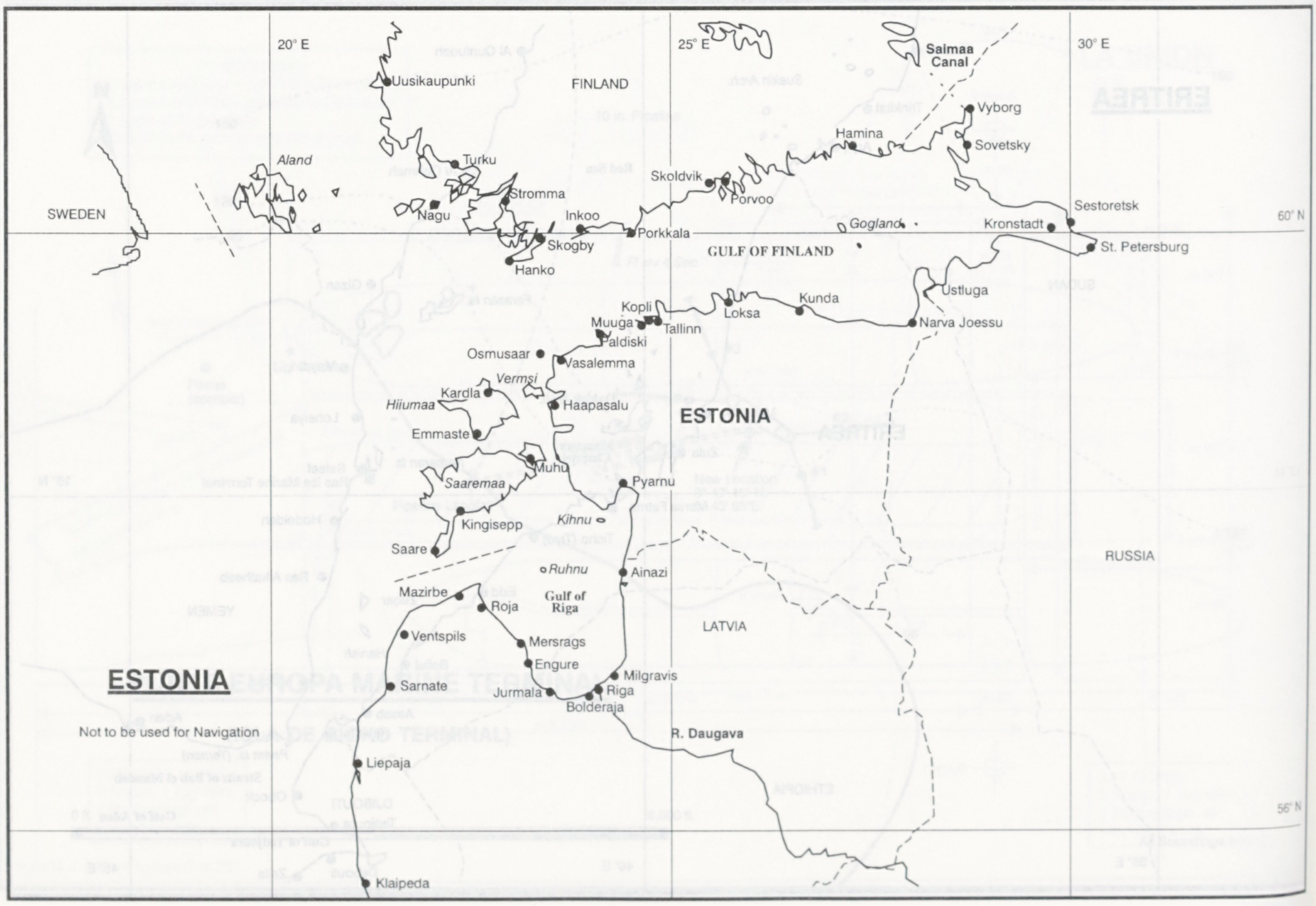

Anchor
600 ft. x 2 1/2 in. Chain
#3
#2
150' x 10 in. Hawser
1 1/2 in. Mooring Wire
Ship's Head 295°
or Ship's Head 115°
2 x 16 in. / 12 in.
Loading Hoses
Fl. (3) ev 4 Sec.
Y
#4
#1
Mooring Buoy
Yellow
24" Pipeline

PUNTA EUROPA MARINE TERMINAL

(ISLA DE BIOKO TERMINAL)
FOUR POINT MOORING SPREAD

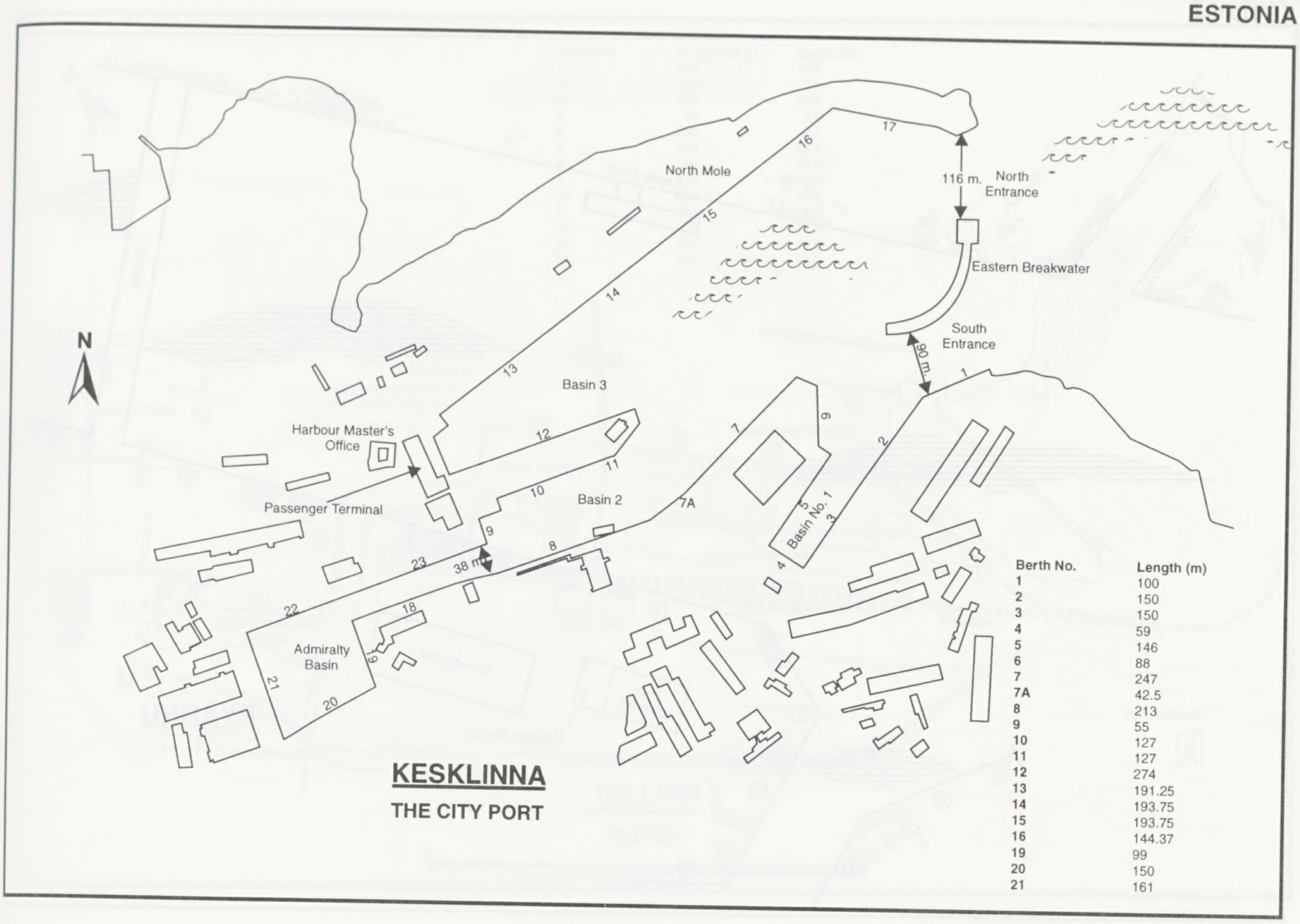

ERITREA
Suakin
Suakin Arch.
Trinkitat
Aqiq
Red Sea
Al Qunfudah
Al Qahmah
SUDAN
Gizan
Farasan Is.
Maydi
Dahlak Arch.
Massawa
Loheiya
ERITREA
Massawa
Channel
Zula
Kamaran Is.
Saleef
Ras Isa Marine Terminal
15° N
15° N
Mersa Fatma
Hodeidah
Ticho (Tiyo)
Ras Alkatheeb
Edd
Zuqar
YEMEN
Hanish
Beilul
Mocha
Assab
Aden
Raheita
Perim Is. (Yemen)
Straits of Bab el Mandeb
Obock
ETHIOPIA
DJIBOUTI
Gulf of Aden
Tadjoura
Gulf of Tadjoura
35° E
40° E
45° E
Djibouti
Zeila


ASSAB
SHELL BERTH - MOORING ARRANGEMENT
Depths in Meters
N
10 Shackles
8 Shackles
14.6
13.1
13.1
12.8
12.8
12.8
12.8
12.8
12.8
12.5
12.5
11.0
11.9
Buoy
Buoy
Dolphin
Dolphin
Underwater Pipeline
Ruins
Jetty
Pipeline Marker Buoy


20° E
25° E
30° E
60° N
56° N
SWEDEN
FINLAND
ESTONIA
LATVIA
RUSSIA
Uusikaupunki
Aland
Turku
Nagu
Stromma
Inkoo
Skogby
Hanko
Porkkala
Skoldvik
Porvoo
Hamina
Salmaa Canal
Vyborg
Sovetsky
Gogland
GULF OF FINLAND
Kronstadt
Sestoretsk
St. Petersburg
Ustluga
Narva Joessu
Kunda
Loksa
Kopli
Muuga
Tallinn
Paldiski
Osmusaar
Vasalemma
Vermsi
Kardla
Hiiumaa
Haapasalu
Emmaste
Muhu
Saaremaa
Kingisepp
Saare
Pyarnu
Kihnu
Ruhnu
Ainazi
Gulf of Riga
Mazirbe
Roja
Ventspils
Mersrags
Engure
Jurmala
Bolderaja
Riga
Milgravis
Sarnate
R. Daugava
Liepaja
Klaipeda

ESTONIA

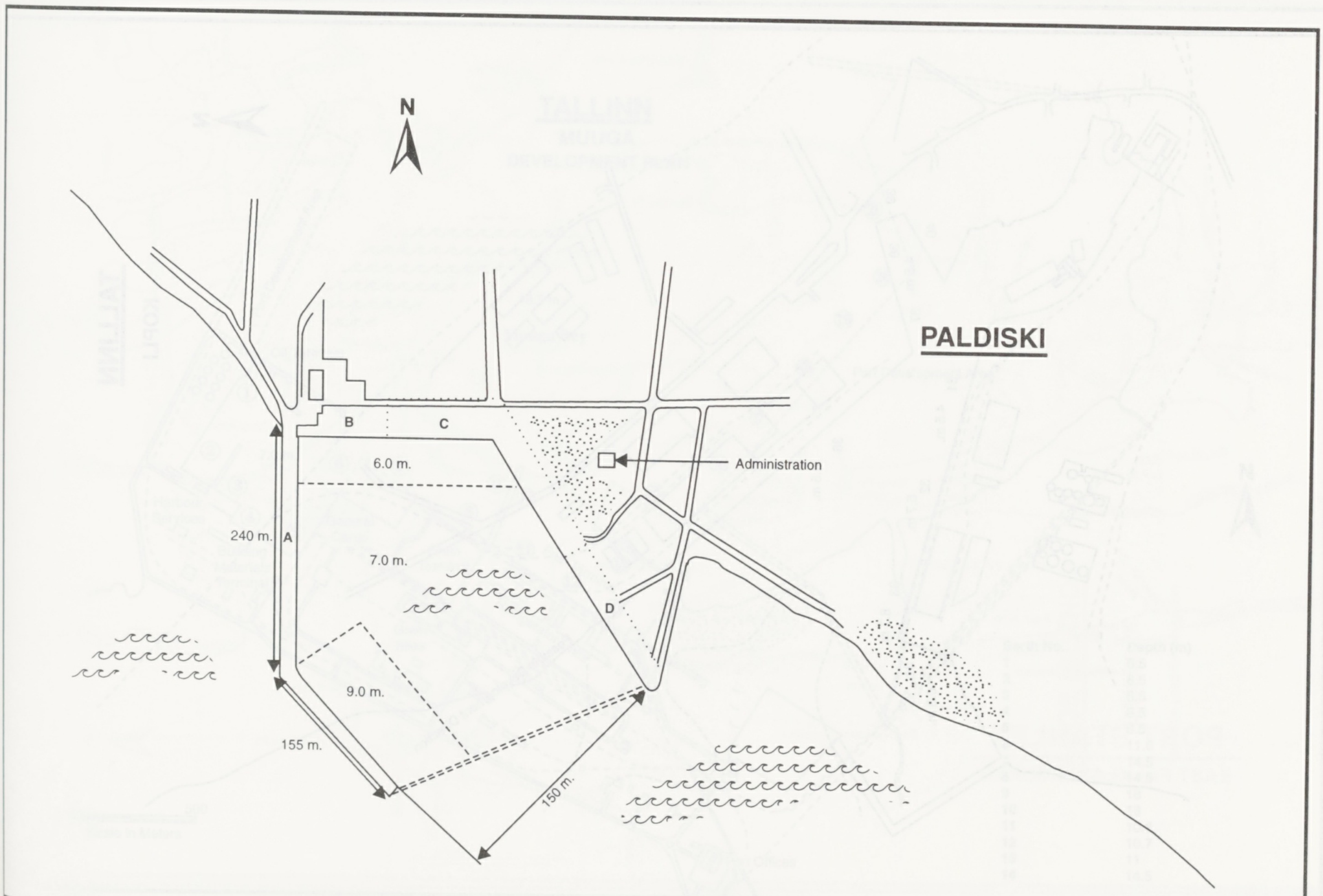
Not to be used for Navigation


North Mole
17
16
15
14
13
116 m.
North Entrance
Eastern Breakwater
South Entrance
90 m.
1
2
3
Basin No. 1
4
5
6
7
7A
Basin 3
Basin 2
Harbour Master's Office
Passenger Terminal
12
11
10
9
8
38 m.
23
22
18
19
20
21
Admiralty Basin
N

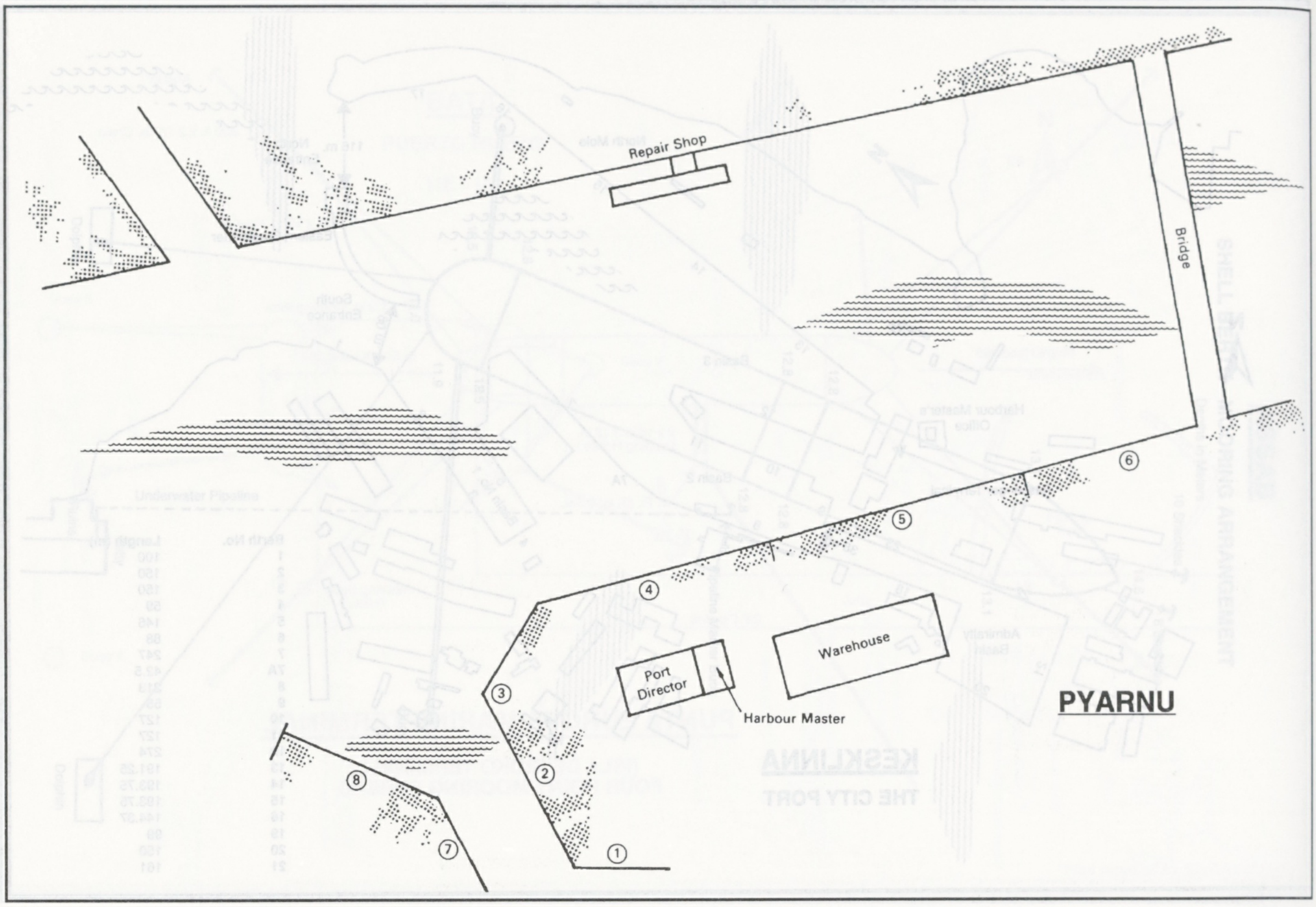
KESKLINNA

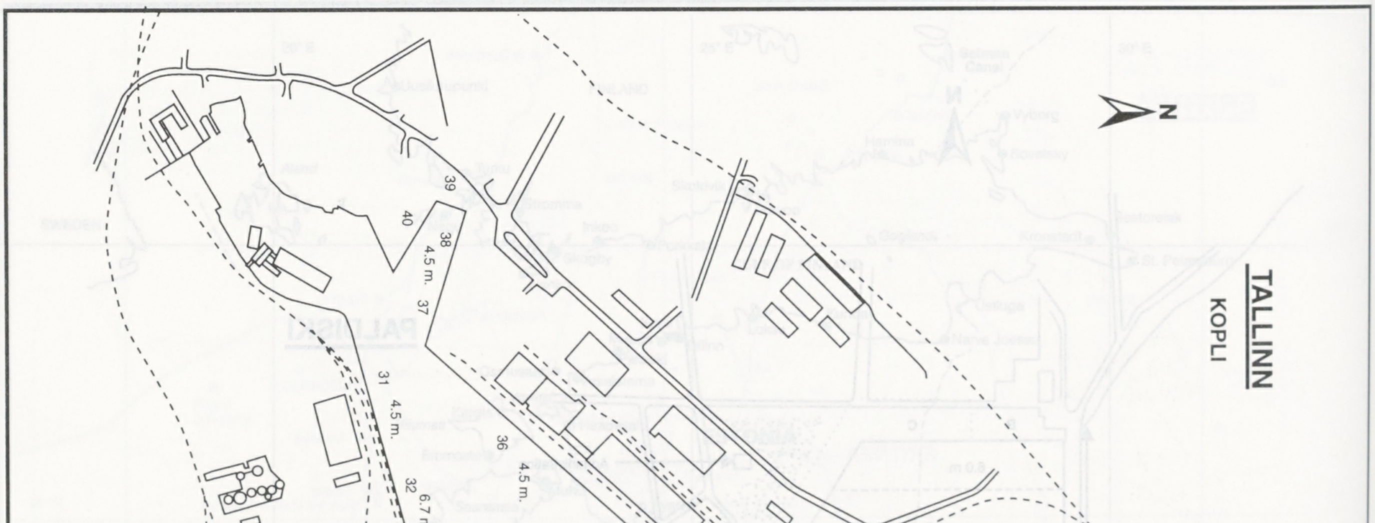
THE CITY PORT

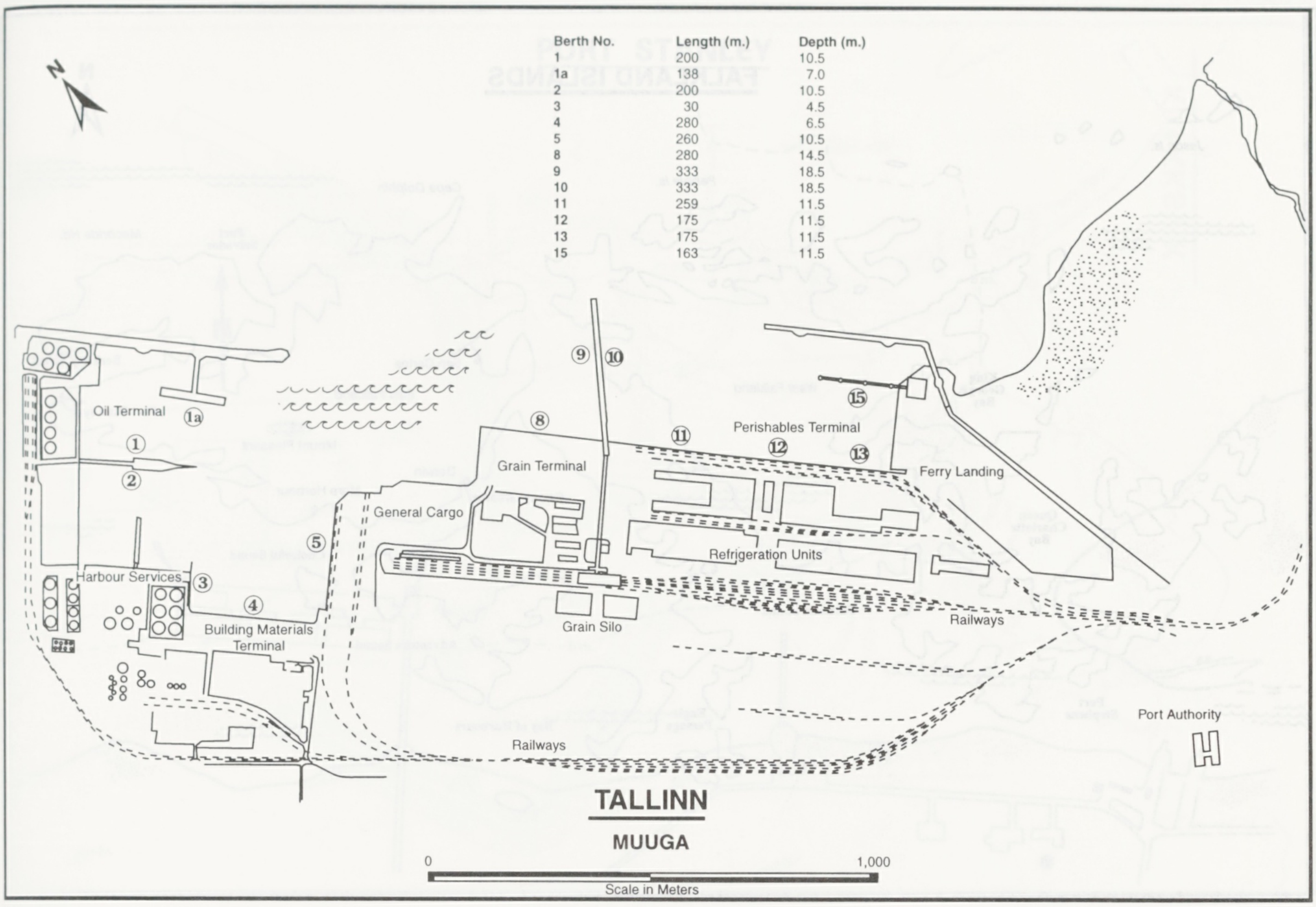
Berth No.	Length (m)
1	100
2	150
3	150
4	59
5	146
6	88
7	247
7A	42.5
8	213
9	55
10	127
11	127
12	274
13	191.25
14	193.75
15	193.75
16	144.37
19	99
20	150
21	161


N
B
C
6.0 m.
Administration
240 m.
A
7.0 m.
D
9.0 m.
155 m.
150 m.

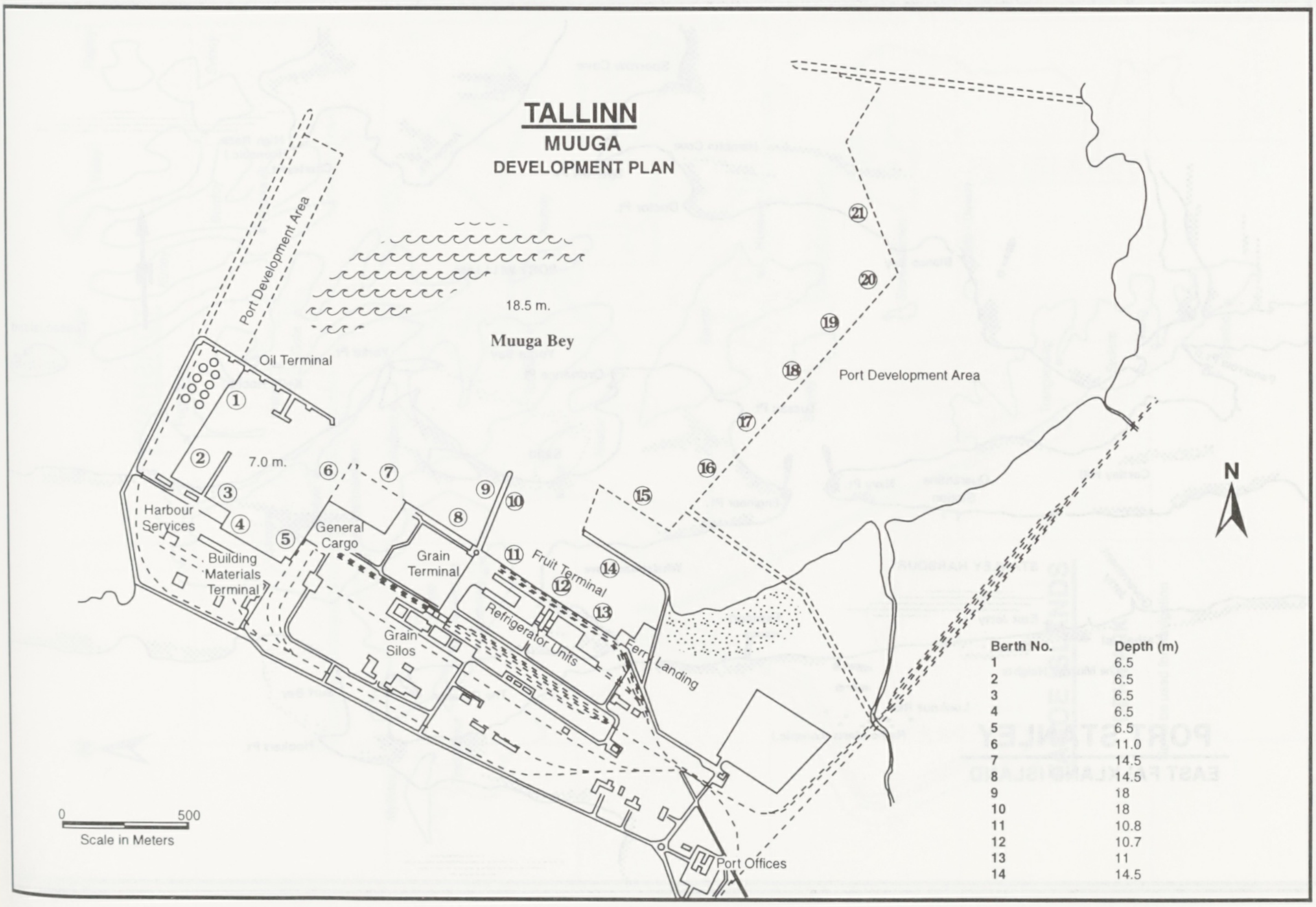
PALDISKI


Repair Shop
Bridge
⑥
⑤
④
Port Director
Warehouse
Harbour Master
PYARNU
③
②
⑧
⑦
①

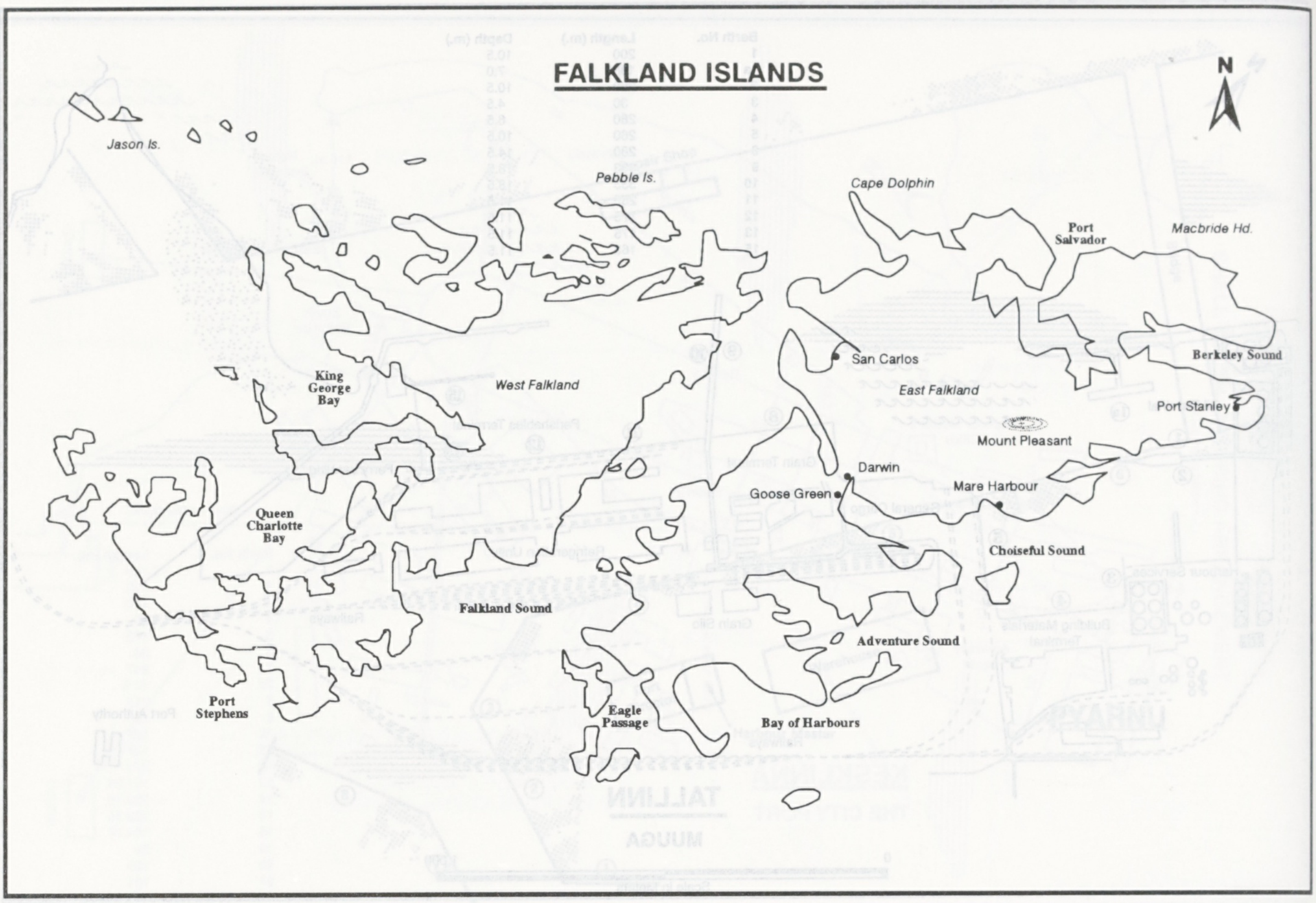

N
TALLINN
KOPLI
39
40
38
4.5 m.
37
31
4.5 m.
36
4.5 m.
32
6.7 m.
33
8.7 m.
34
6.8 m.
35
9.6 m.
Possible Development Direction

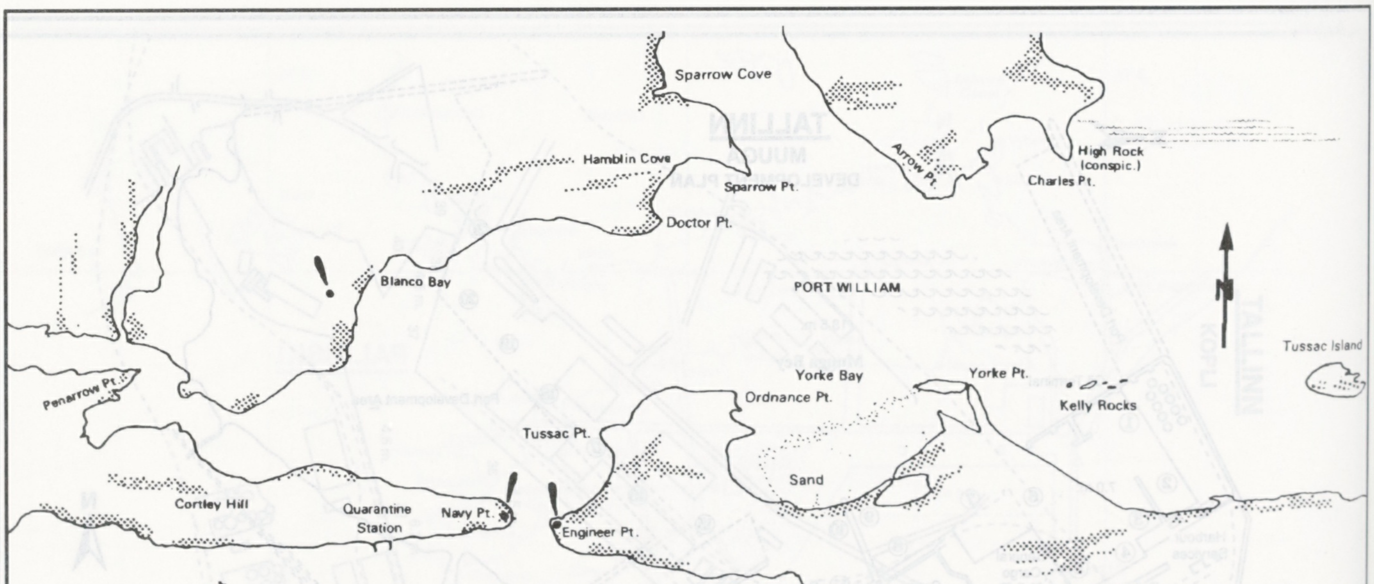

N
TALLINN
MUUGA
Oil Terminal
①
1a
②
③
④
⑤
⑧
⑨
⑩
⑪
⑫
⑬
⑮
Harbour Services
Building Materials Terminal
General Cargo
Grain Terminal
Grain Silo
Perishables Terminal
Ferry Landing
Refrigeration Units
Railways
Railways
Port Authority
0
1,000
Scale in Meters

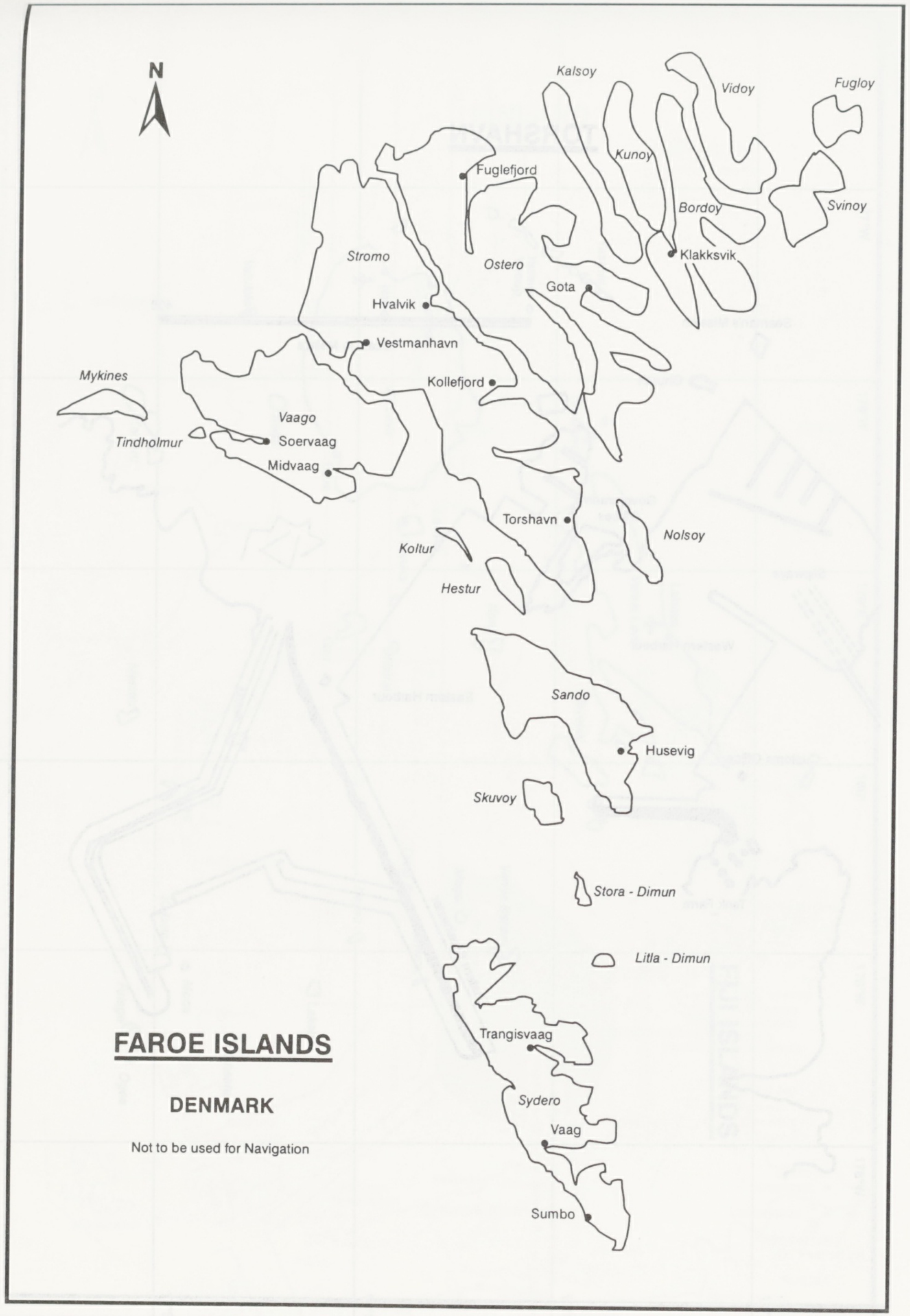
Berth No.	Length (m.)	Depth (m.)
1	200	10.5
1a	138	7.0
2	200	10.5
3	30	4.5
4	280	6.5
5	260	10.5
8	280	14.5
9	333	18.5
10	333	18.5
11	259	11.5
12	175	11.5
13	175	11.5
15	163	11.5

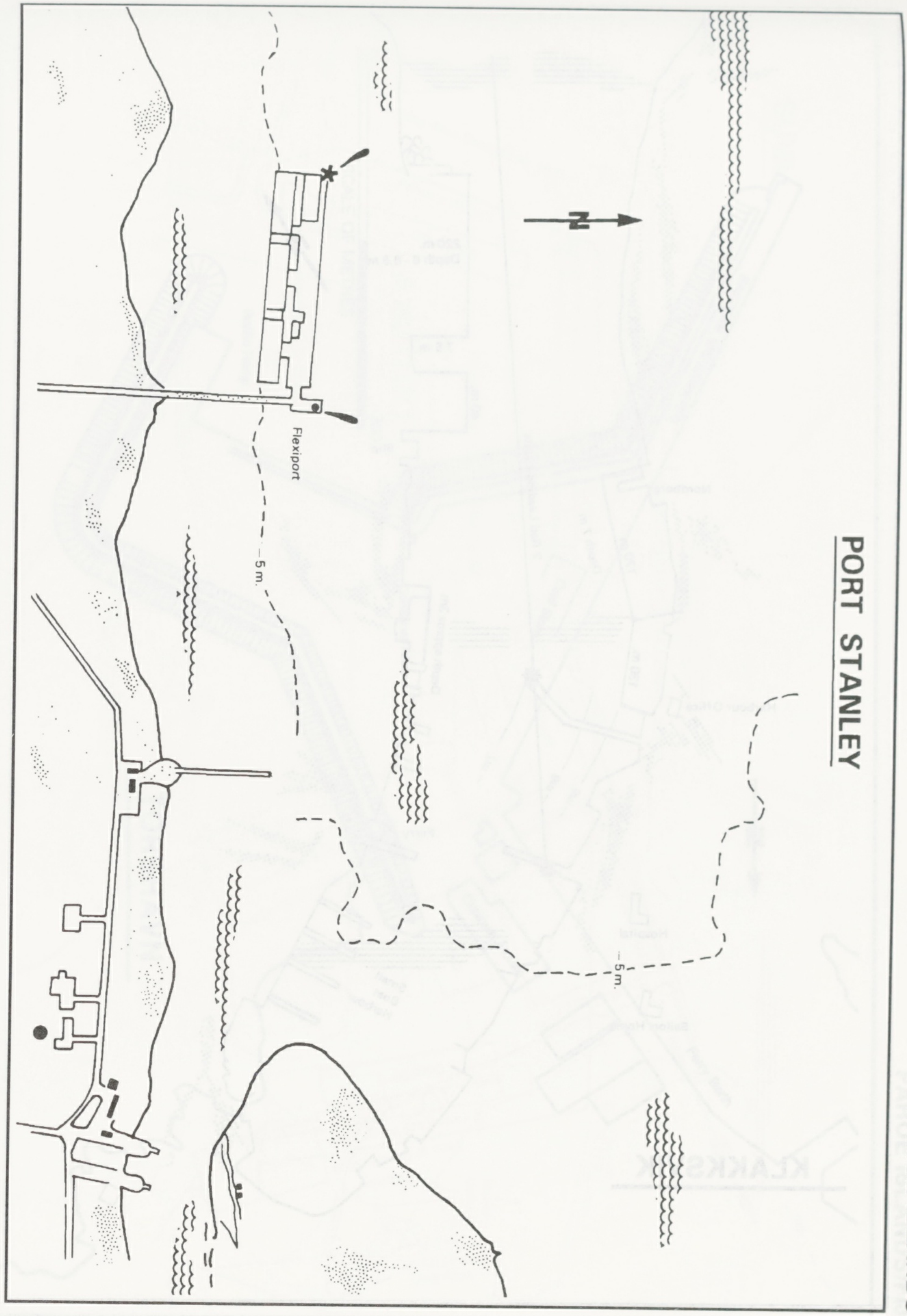

TALLINN
MUUGA
DEVELOPMENT PLAN
Port Development Area
18.5 m.
Muuga Bey
Oil Terminal
①
②
7.0 m.
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑫
⑬
⑭
⑮
⑯
⑰
⑱
⑲
⑳
㉑
Harbour Services
Building Materials Terminal
General Cargo
Grain Terminal
Grain Silos
Refrigerator Units
Fruit Terminal
Ferry Landing
Port Development Area
Port Offices
N
0
500
Scale in Meters

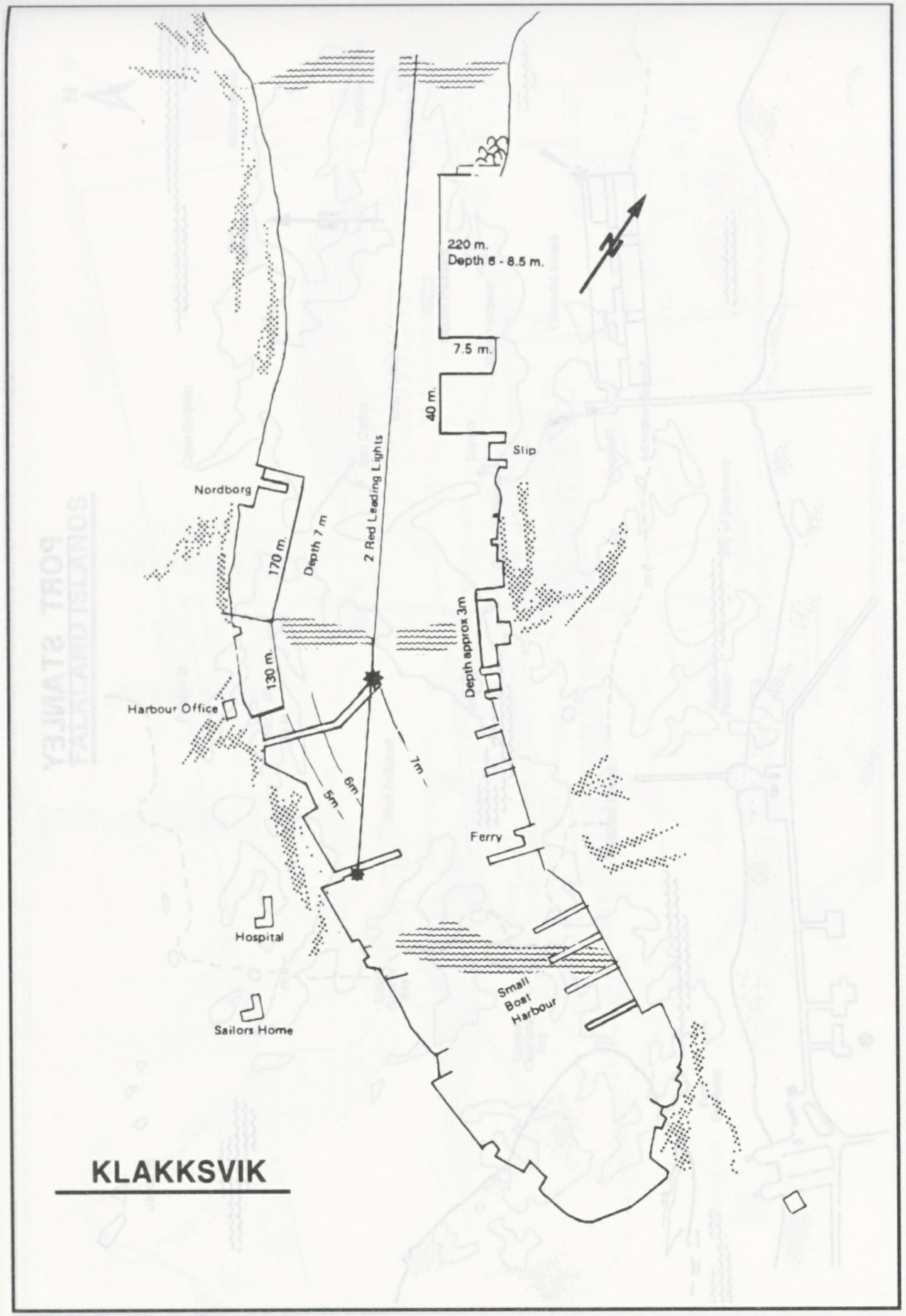
Berth No.	Depth (m)
1	6.5
2	6.5
3	6.5
4	6.5
5	6.5
6	11.0
7	14.5
8	14.5
9	18
10	18
11	10.8
12	10.7
13	11
14	14.5

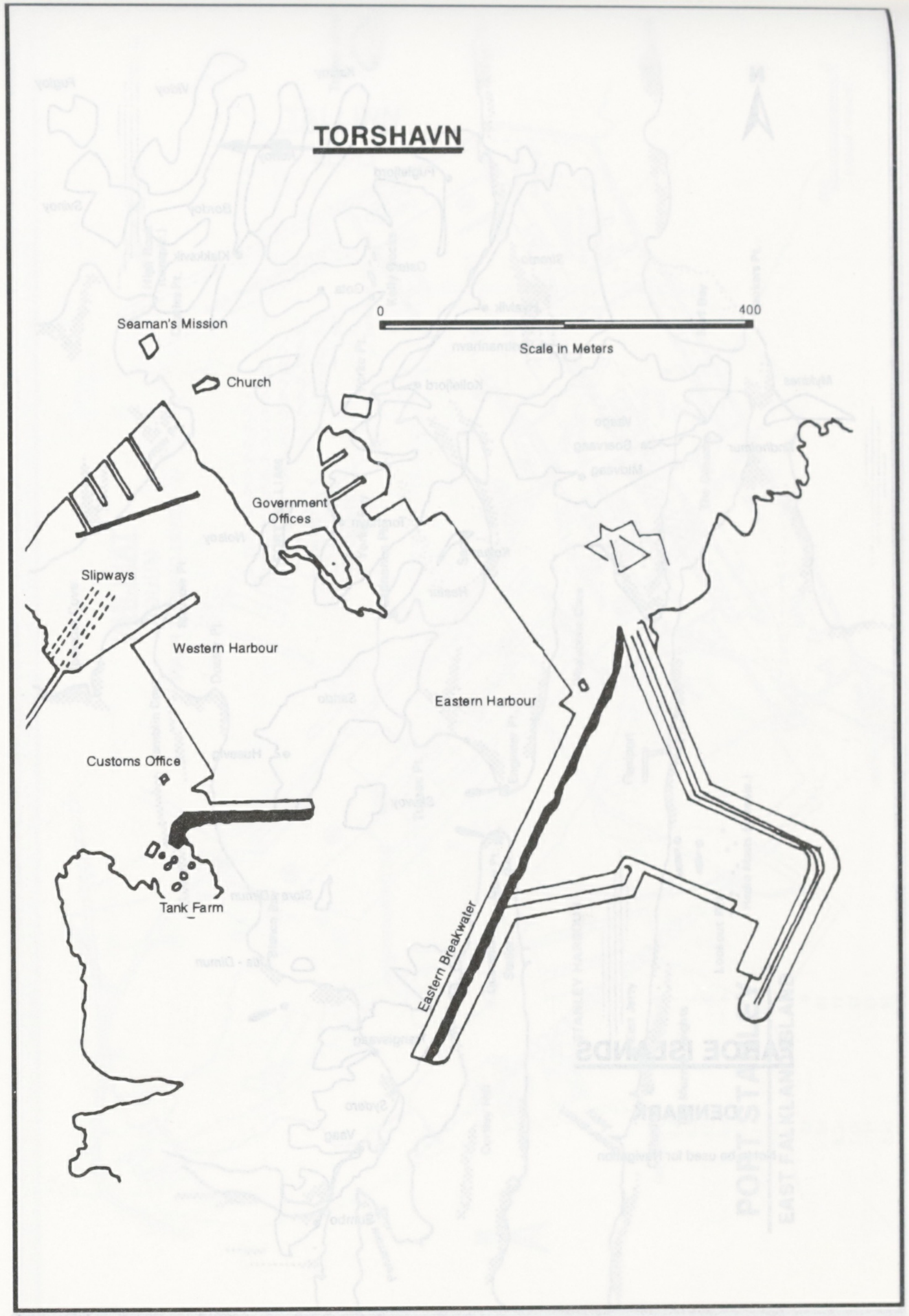

FALKLAND ISLANDS
N
Jason Is.
Pebble Is.
Cape Dolphin
Port Salvador
Macbride Hd.
San Carlos
Berkeley Sound
King George Bay
West Falkland
East Falkland
Port Stanley
Mount Pleasant
Darwin
Goose Green
Mare Harbour
Queen Charlotte Bay
Choiseful Sound
Falkland Sound
Adventure Sound
Port Stephens
Eagle Passage
Bay of Harbours

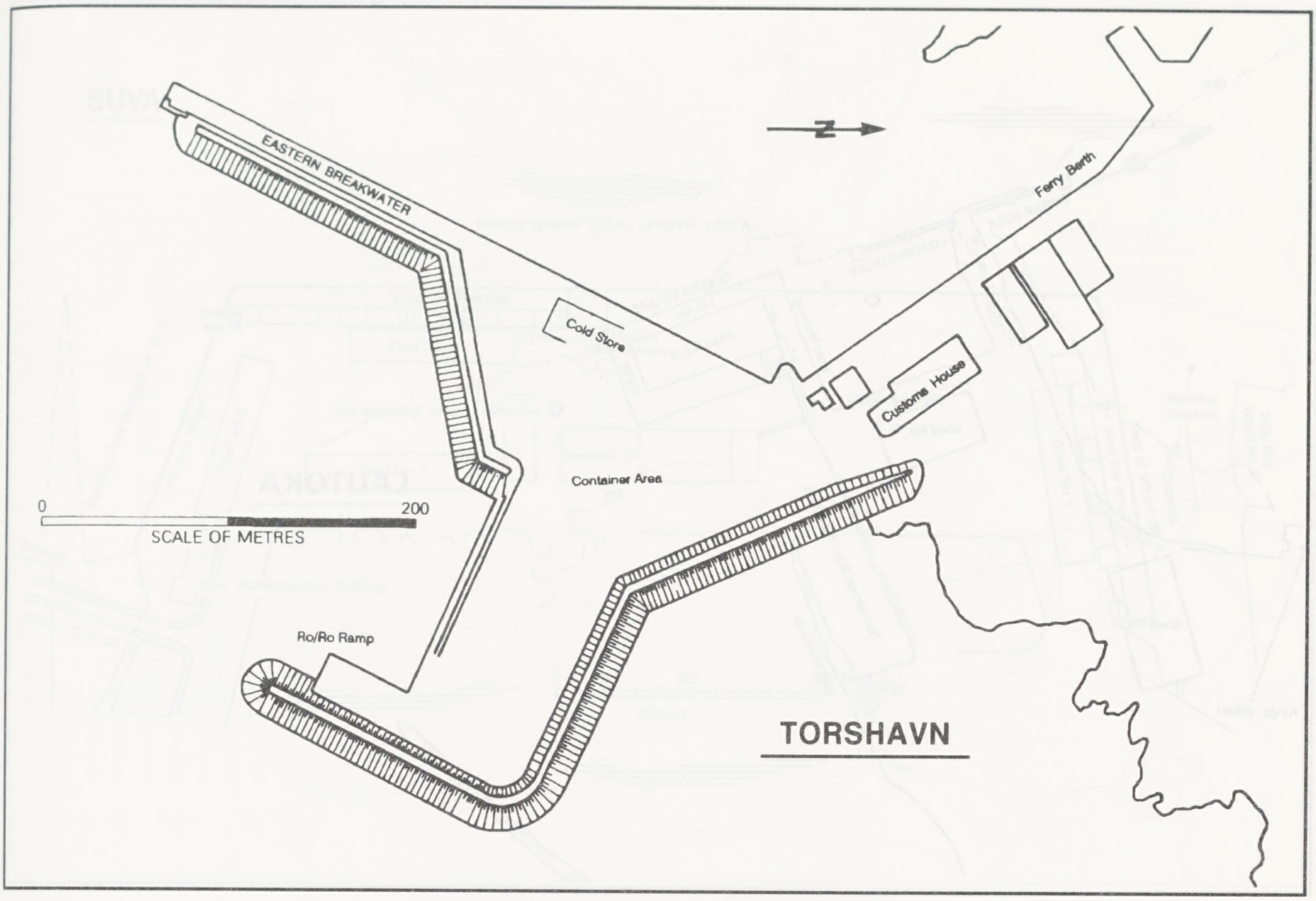

Sparrow Cove
Hamblin Cove
Sparrow Pt.
Arrow Pt.
High Rock (conspic.)
Charles Pt.
Doctor Pt.
Blanco Bay
PORT WILLIAM
Tussac Island
Yorke Bay
Yorke Pt.
Penarrow Pt.
Ordnance Pt.
Kelly Rocks
Tussac Pt.
Sand
Cortley Hill
Quarantine Station
Navy Pt.
Engineer Pt.
Government Jetty
STANLEY HARBOUR
Whalebone Cove
East Jetty
Flexiport
Cathedral
The Murray Heights
The Canache
Surf Bay
Lookout Rks
Radio Masts (conspic.)
Hookers Pt.
PORT STANLEY
EAST FALKLAND ISLAND

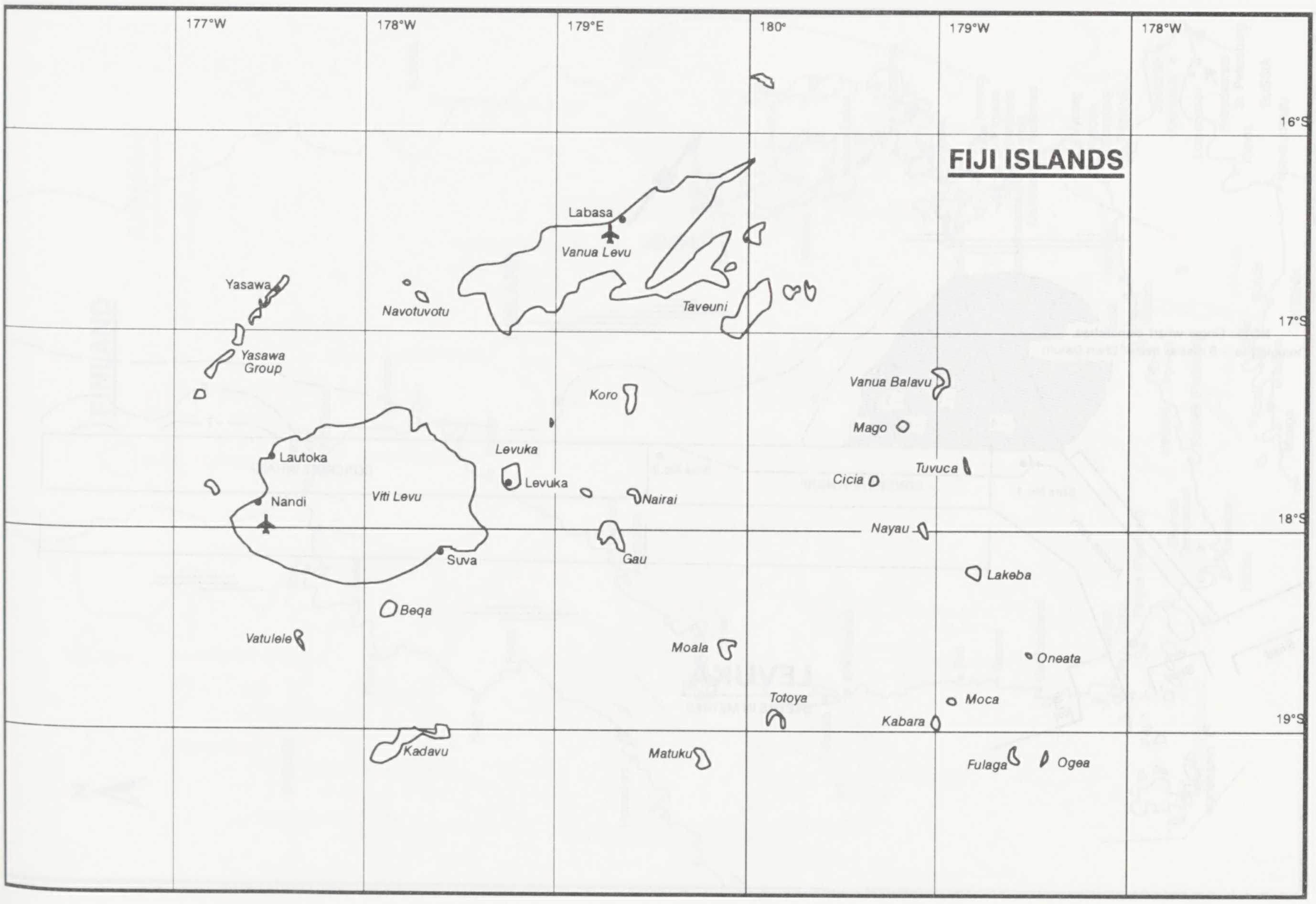

N
Kalsoy
Vidoy
Fugloy
Kunoy
Fuglefjord
Bordoy
Svinoy
Klakksvik
Stromo
Ostero
Gota
Hvalvik
Vestmanhavn
Mykines
Kollefjord
Vaago
Tindholmur
Soervaag
Midvaag
Torshavn
Nolsoy
Koltur
Hestur
Sando
Husevig
Skuvoy
Stora - Dimun
Litla - Dimun
Trangisvaag
Sydero
Vaag
Sumbo
FAROE ISLANDS
DENMARK
Not to be used for Navigation

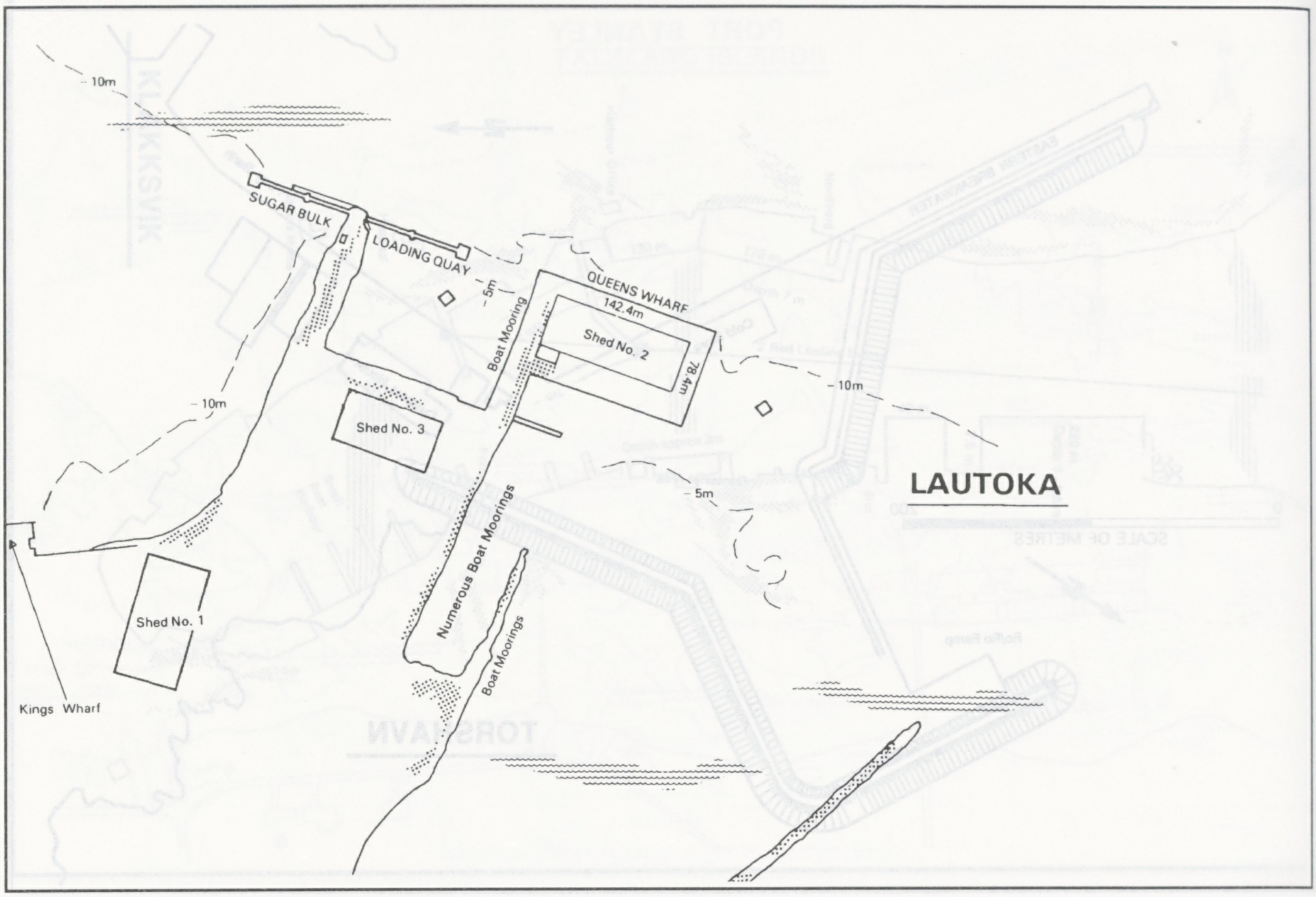

PORT STANLEY
N
Flexiport
5 m.
5 m.

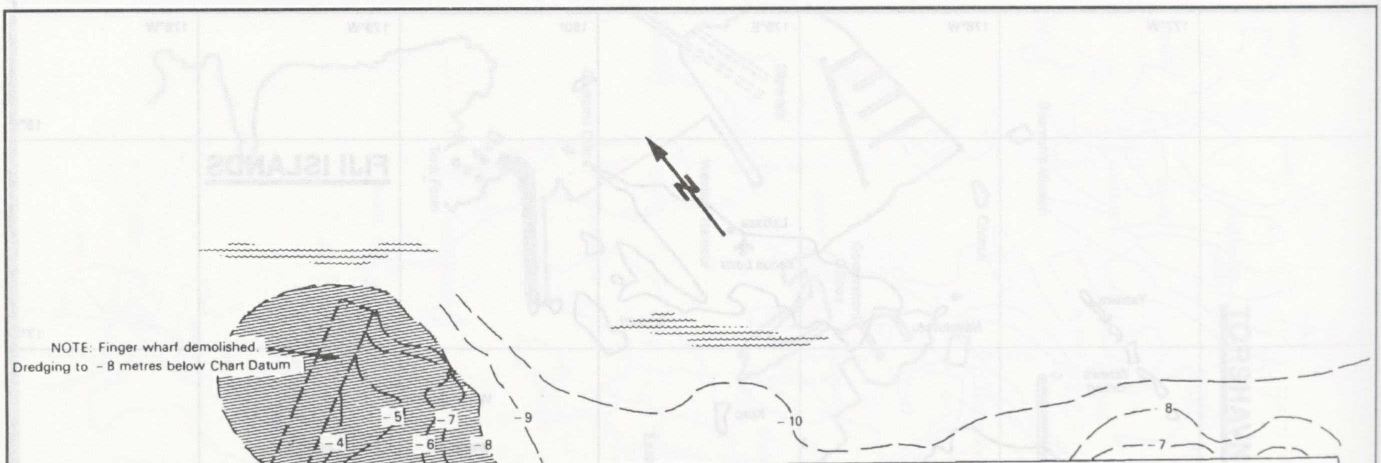

220 m.
Depth 6 - 8.5 m.
7.5 m.
40 m.
Slip
Nordborg
170 m.
Depth 7 m
2 Red Leading Lights
Depth approx 3m
130 m.
Harbour Office
7m
6m
5m
Ferry
Hospital
Small Boat Harbour
Sailors Home
KLAKKSVIK

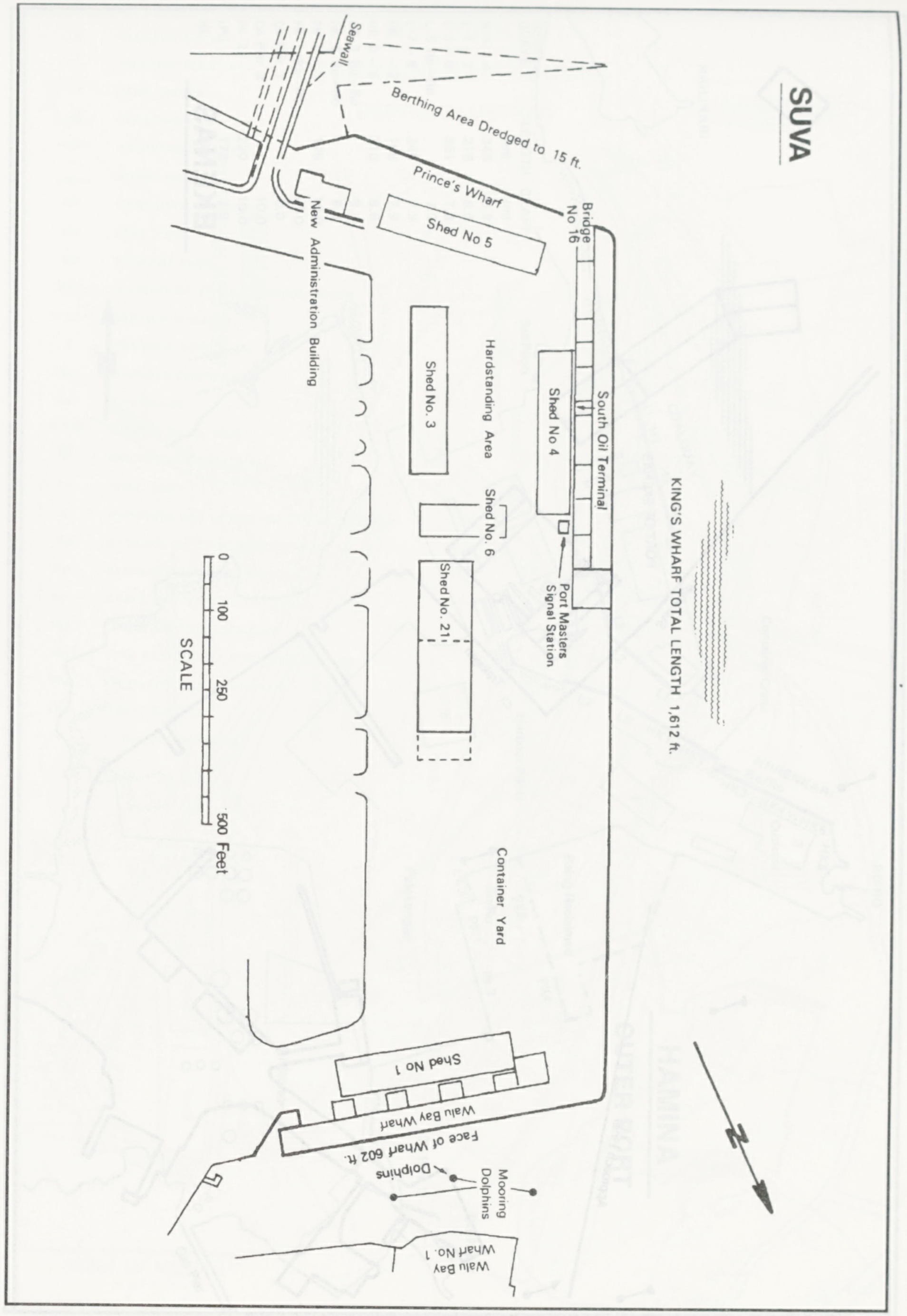

TORSHAVN
0
400
Scale in Meters
Seaman's Mission
Church
Government Offices
Slipways
Western Harbour
Eastern Harbour
Customs Office
Tank Farm
Eastern Breakwater

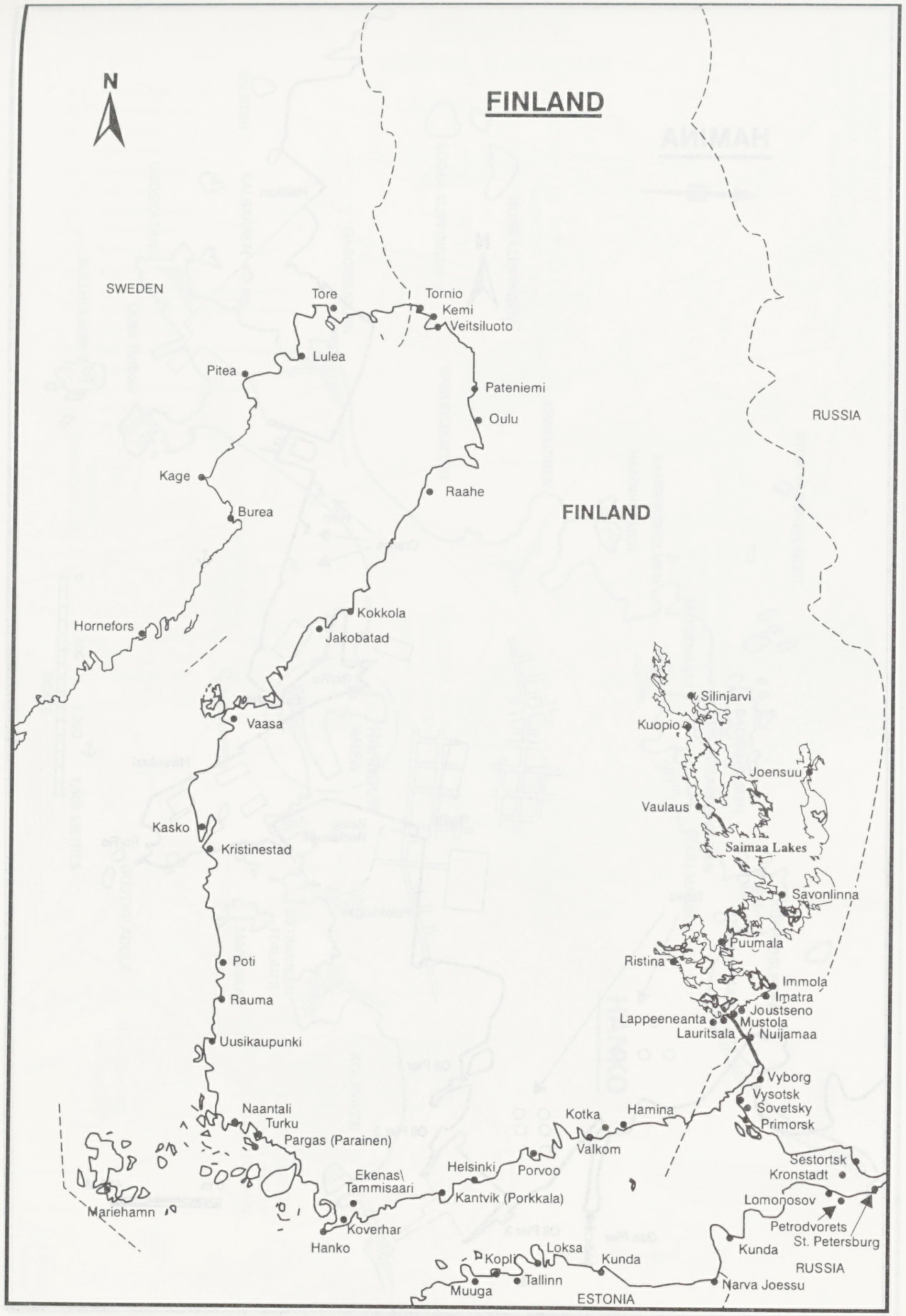

N
EASTERN BREAKWATER
Ferry Berth
Cold Store
Customs House
Container Area
0
200
SCALE OF METRES
Ro/Ro Ramp
TORSHAVN

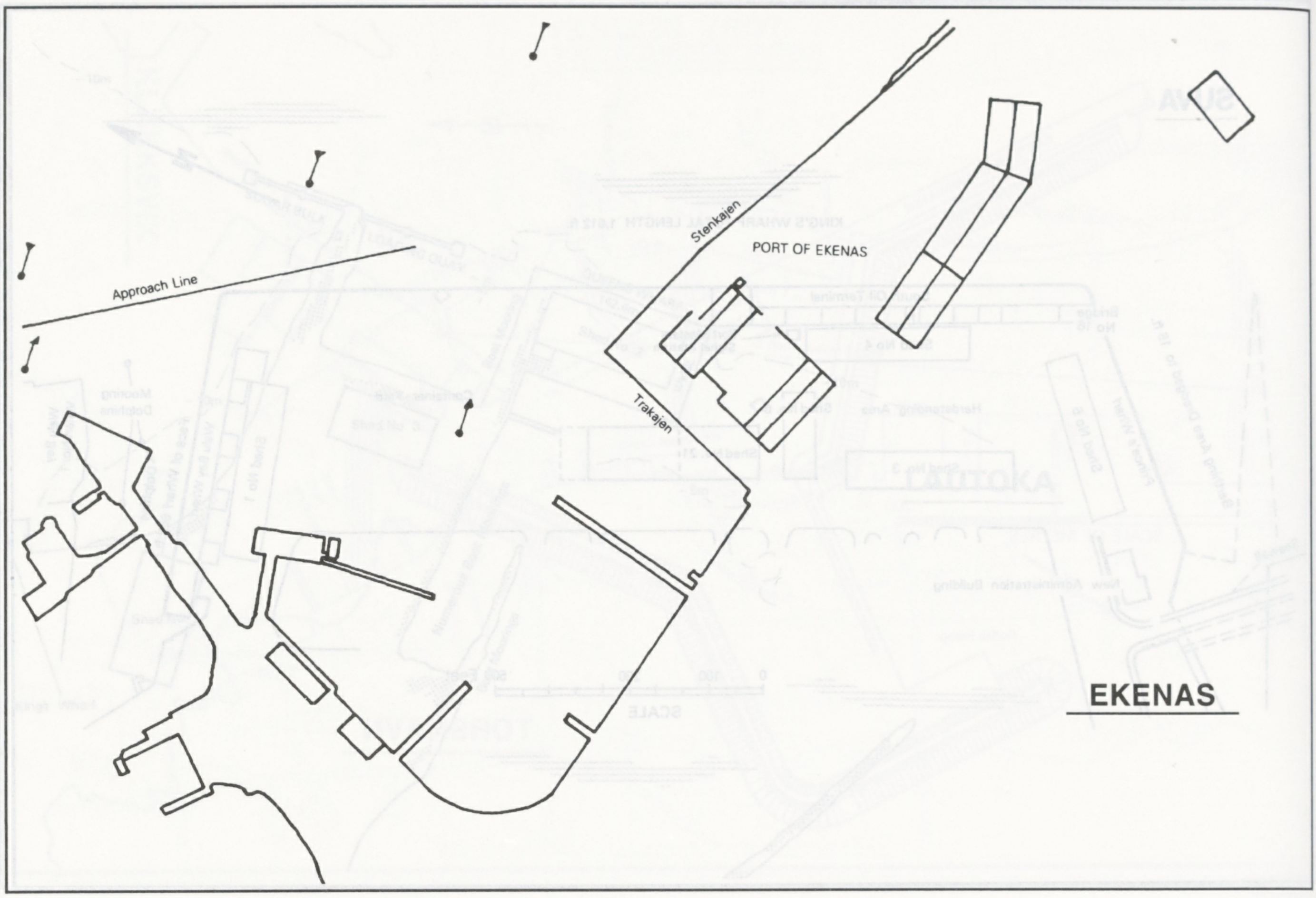

177°W
178°W
179°E
180°
179°W
178°W
16°S
17°S
18°S
19°S
FIJI ISLANDS
Labasa
Vanua Levu
Taveuni
Yasawa
Navotuvotu
Yasawa Group
Koro
Vanua Balavu
Mago
Levuka
Levuka
Lautoka
Nandi
Viti Levu
Nairai
Tuvuca
Cicia
Nayau
Suva
Gau
Lakeba
Beqa
Vatulele
Moala
Oneata
Totoya
Moca
Kabara
Kadavu
Matuku
Fulaga
Ogea

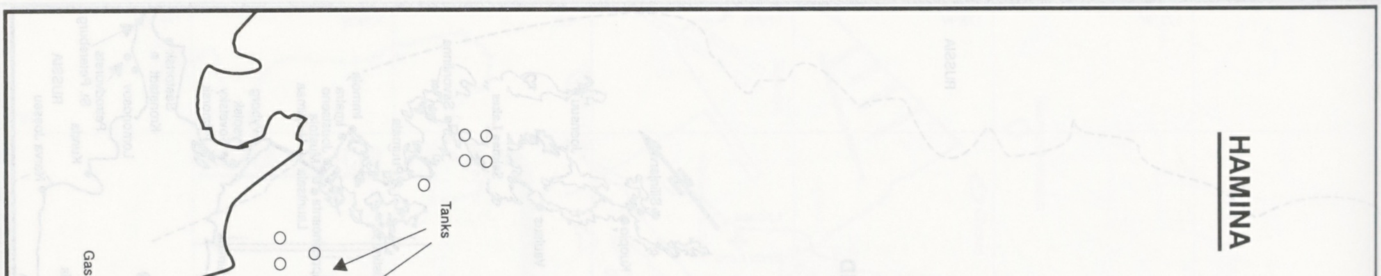

- 10m
SUGAR BULK
LOADING QUAY
- 5m
QUEENS WHARF
142.4m
Shed No. 2
78.4m
Boat Mooring
- 10m
Shed No. 3
- 10m
- 5m
LAUTOKA
Numerous Boat Moorings
Boat Moorings
Shed No. 1
Kings Wharf

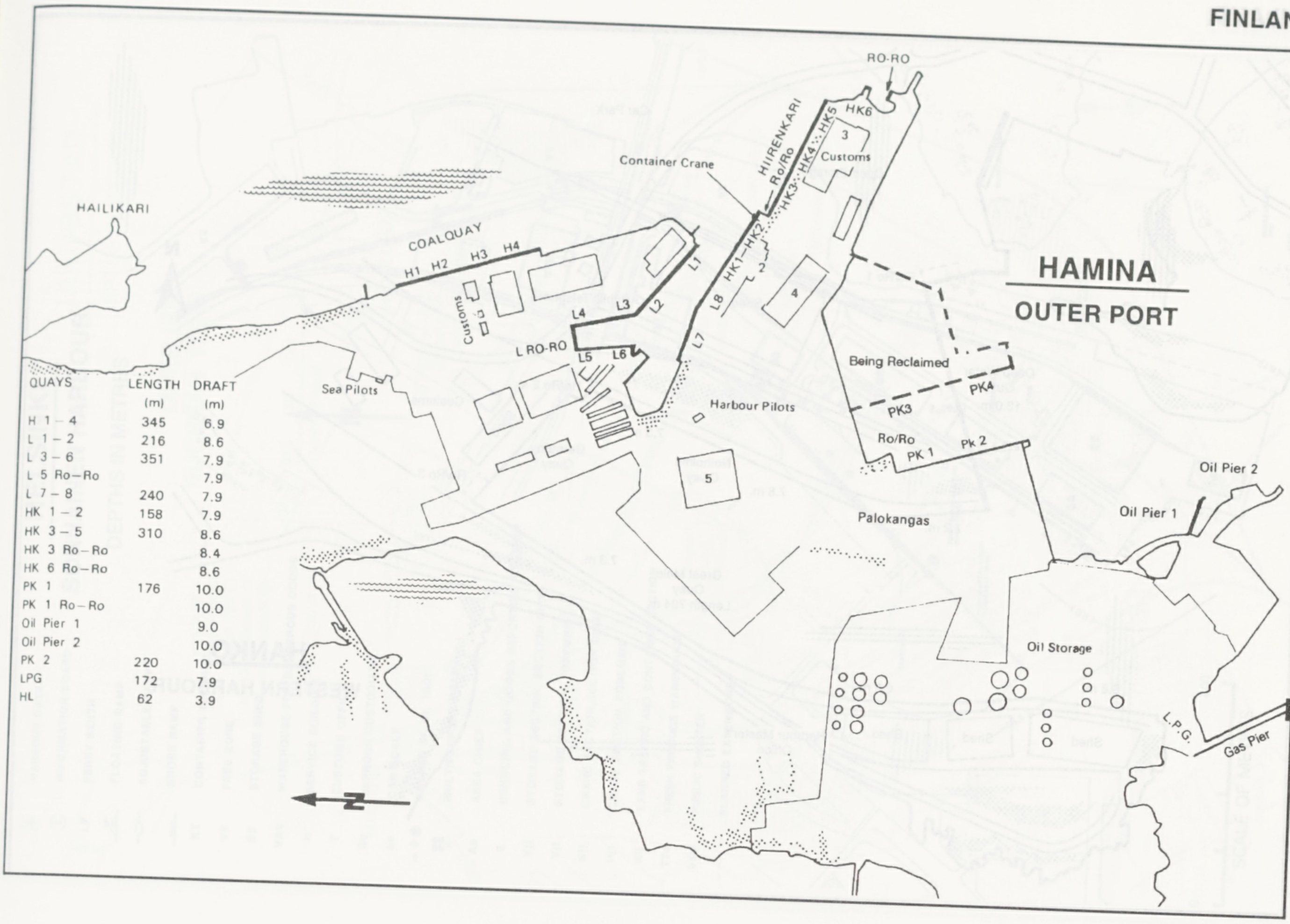

NOTE: Finger wharf demolished.
Dredging to - 8 metres below Chart Datum
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 8
- 7
Bore No.1.
CONCRETE WHARF
Bore No.2
CONCRETE WHARF
Access Jetty
Shed
Shed
SLIP
LEVUKA
DEPTHS IN METRES


SUVA
Seawall
Berthing Area Dredged to 15 ft.
Prince's Wharf
Shed No 5
Bridge No 16
New Administration Building
Hardstanding Area
Shed No. 3
Shed No 4
South Oil Terminal
Shed No. 6
Port Masters Signal Station
Shed No. 21
KING'S WHARF TOTAL LENGTH 1,612 ft.
0
100
250
500 Feet
SCALE
Container Yard
Shed No 1
Walu Bay Wharf
Face of Wharf 602 ft.
Dolphins
Mooring Dolphins
Walu Bay Wharf No. 1
N

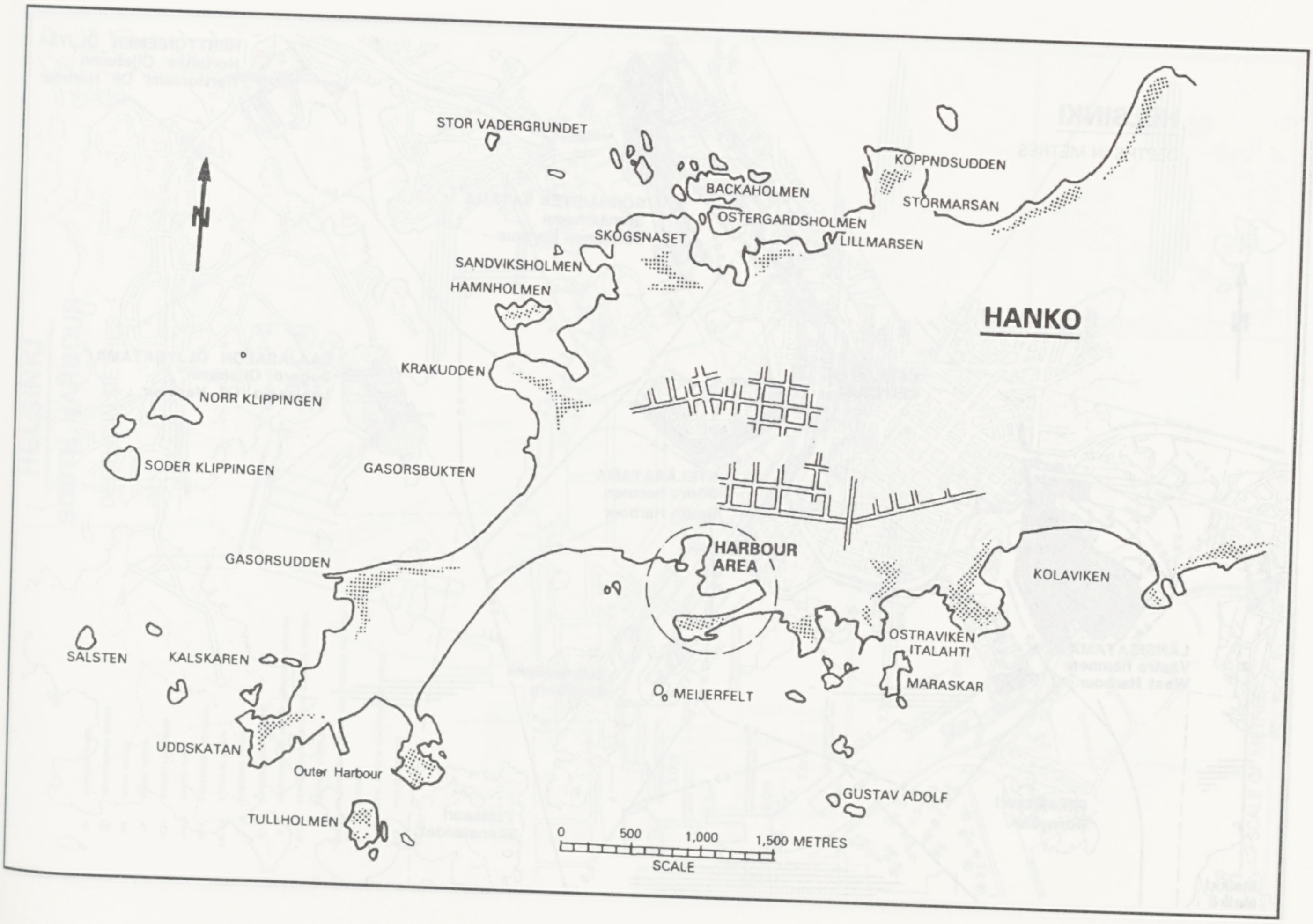

N
FINLAND
SWEDEN
Tore
Tornio
Kemi
Veitsiluoto
Lulea
Pitea
Pateniemi
Oulu
RUSSIA
Kage
Raahe
Burea
FINLAND
Hornefors
Kokkola
Jakobatad
Silinjarvi
Vaasa
Kuopio
Joensuu
Vaulaus
Kasko
Kristinestad
Saimaa Lakes
Savonlinna
Poti
Ristina
Puumala
Immola
Imatra
Rauma
Joustseno
Lappeenranta
Mustola
Lauritsala
Nuijamaa
Uusikaupunki
Vyborg
Vysotsk
Sovetsky
Naantali
Kotka
Hamina
Primorsk
Turku
Pargas (Parainen)
Valkom
Sestortsk
Helsinki
Porvoo
Kronstadt
Ekenas\ Tammisaari
Kantvik (Porkkala)
Lomonosov
Mariehamn
Petrodvorets
Koverhar
St. Petersburg
Hanko
Loksa
Kunda
Kopli
Kunda
RUSSIA
Tallinn
Muuga
Narva Joessu
ESTONIA

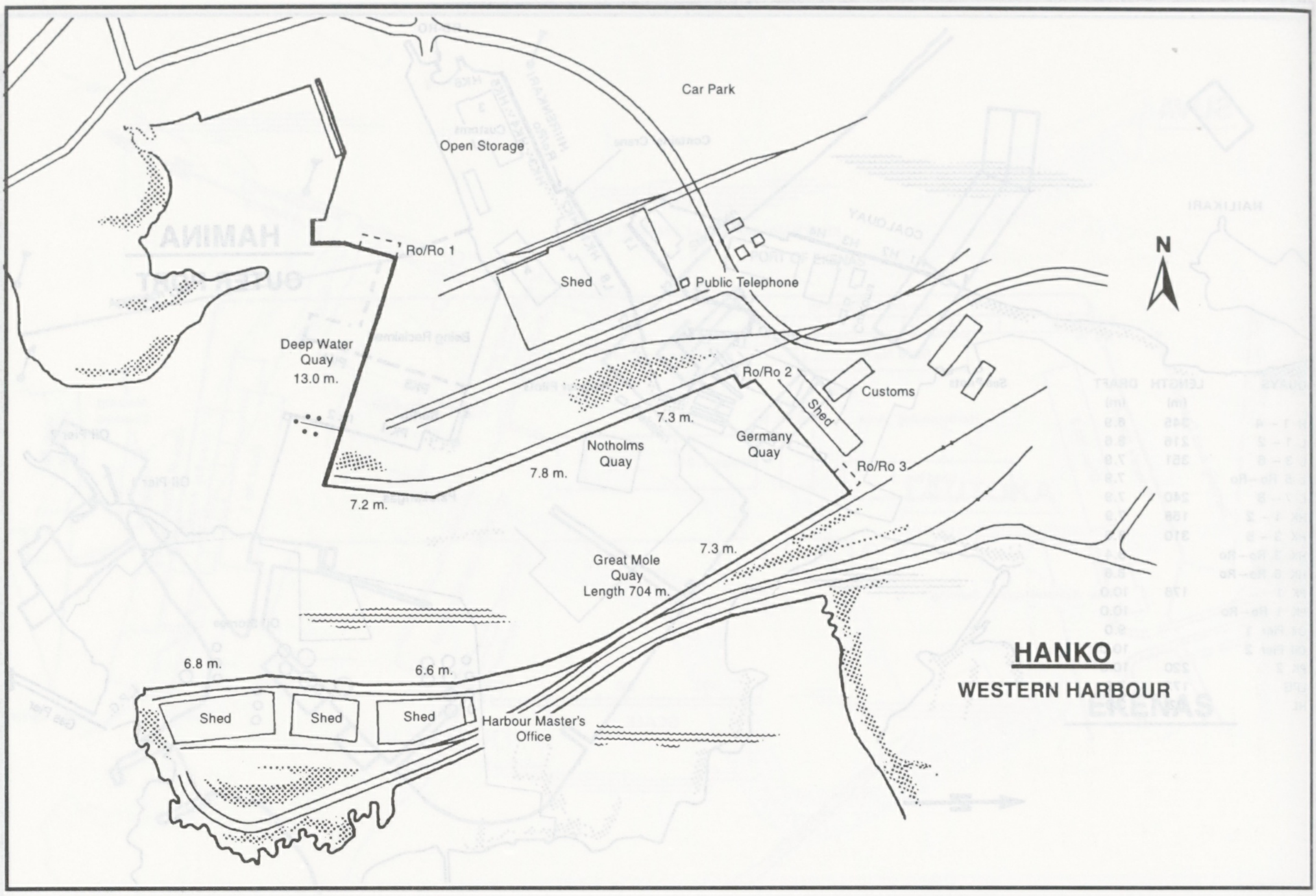

Approach Line
Stenkajen
PORT OF EKENAS
Trakajen
EKENAS

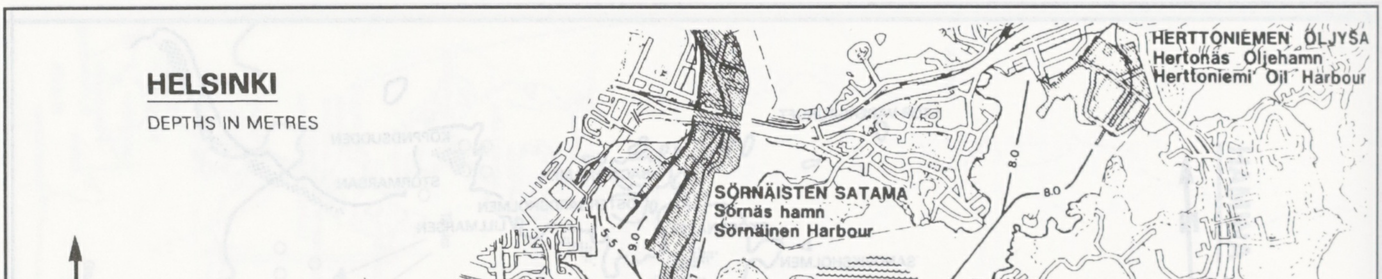

HAMINA
N
Tanks
Gas Pier
Oil Pier 3
Oil Pier 2
Oil Pier 1
Ro/Ro
Palokangas
Being Reclaimed
Ro/Ro
Lakulahti
Cranes
Hillo
Hiirenkari
Ro/Ro
Halikari
0 m.
400 M.

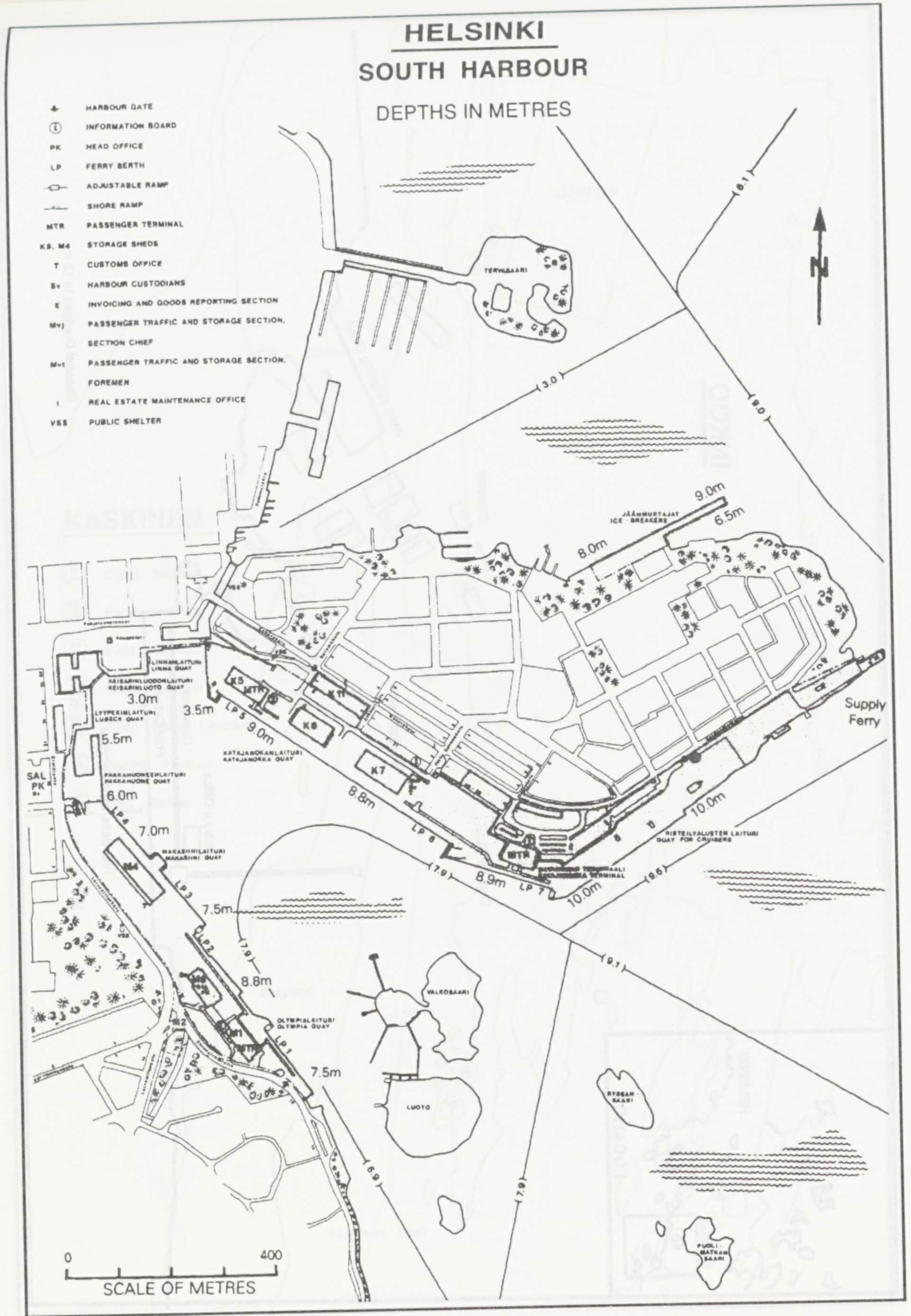

HAMINA
OUTER PORT
RO-RO
HK6
3
Customs
HIIRENKARI
Ro/Ro
HK3–HK4–HK5
Container Crane
HAILIKARI
COALQUAY
H1 H2 H3 H4
Customs
L1
L2
L3
L4
L RO-RO
L5 L6
L7
L8
HK1–HK2
2
4
Being Reclaimed
PK4
PK3
Ro/Ro
PK 1
Pk 2
Sea Pilots
Harbour Pilots
5
Palokangas
Oil Pier 2
Oil Pier 1
Oil Storage
L.P.G.
Gas Pier
N

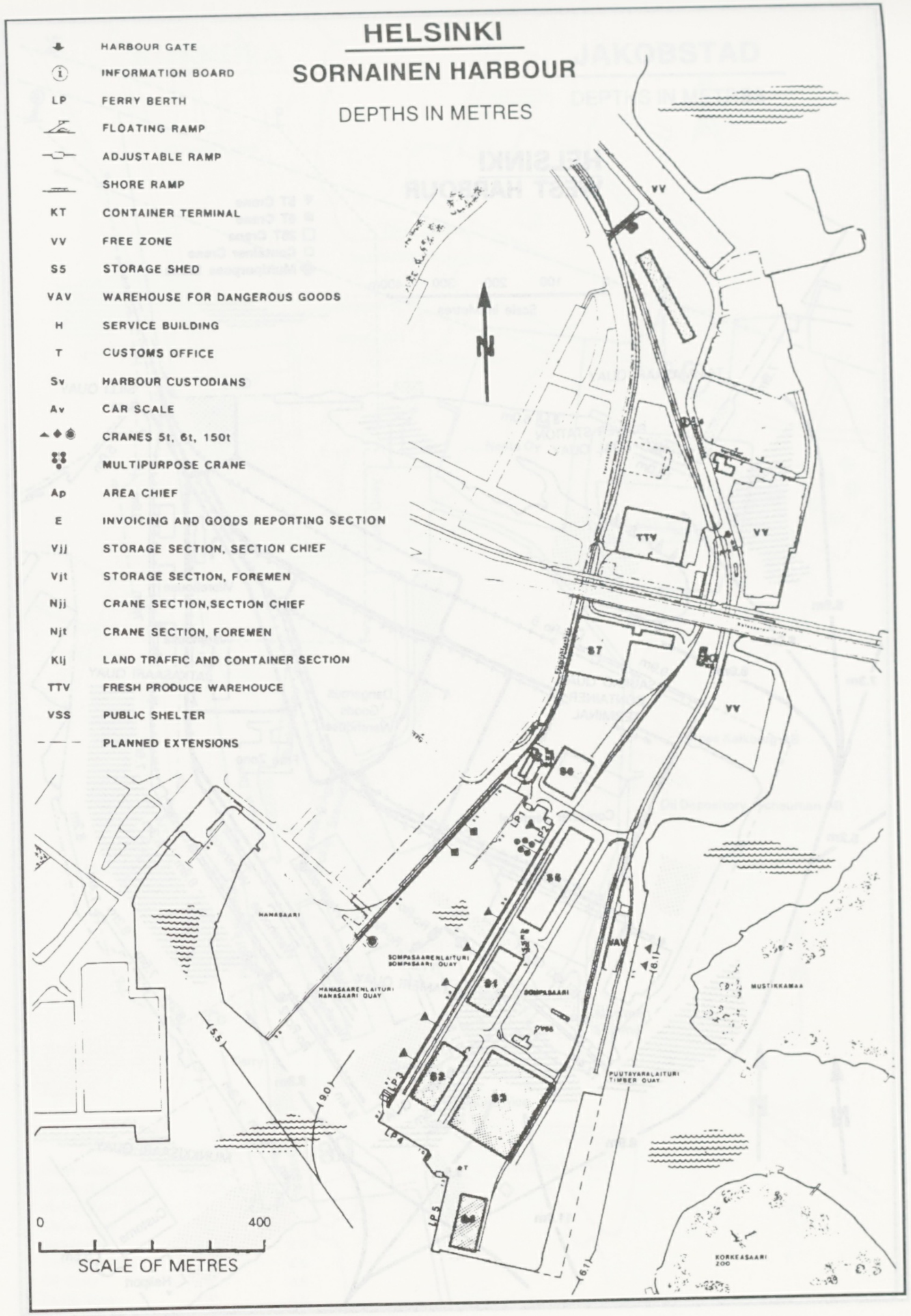
QUAYS	LENGTH (m)	DRAFT (m)
H 1 – 4	345	6.9
L 1 – 2	216	8.6
L 3 – 6	351	7.9
L 5 Ro–Ro		7.9
L 7 – 8	240	7.9
HK 1 – 2	158	7.9
HK 3 – 5	310	8.6
HK 3 Ro–Ro		8.4
HK 6 Ro–Ro		8.6
PK 1	176	10.0
PK 1 Ro–Ro		10.0
Oil Pier 1		9.0
Oil Pier 2		10.0
PK 2	220	10.0
LPG	172	7.9
HL	62	3.9

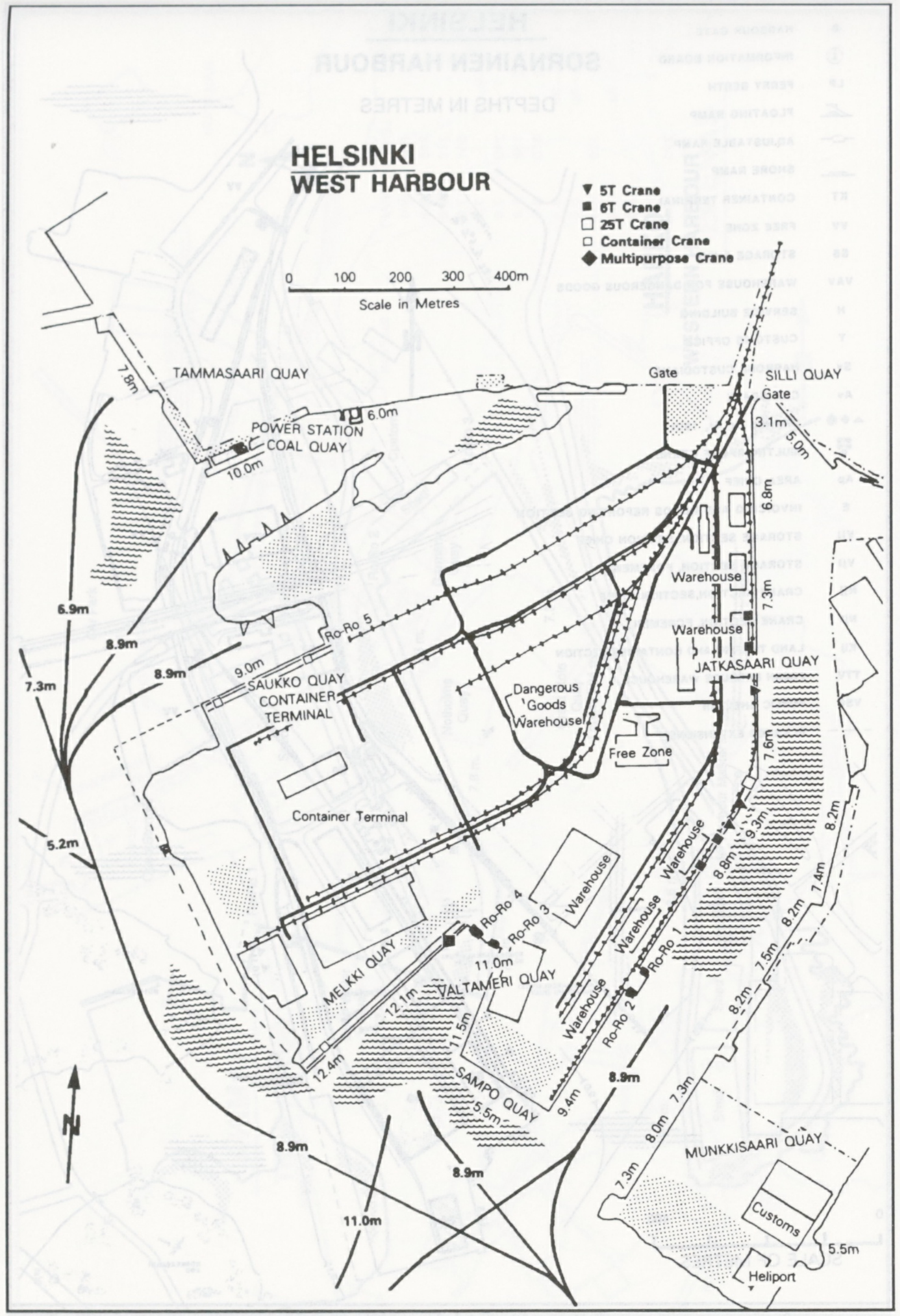

HANKO
N
STOR VADERGRUNDET
BACKAHOLMEN
KOPPNDSUDDEN
STORMARSAN
OSTERGARDSHOLMEN
LILLMARSEN
SKOGSNASET
SANDVIKSHOLMEN
HAMNHOLMEN
KRAKUDDEN
NORR KLIPPINGEN
SODER KLIPPINGEN
GASORSBUKTEN
GASORSUDDEN
HARBOUR AREA
KOLAVIKEN
OSTRAVIKEN
ITALAHTI
MARASKAR
SALSTEN
KALSKAREN
MEIJERFELT
UDDSKATAN
Outer Harbour
TULLHOLMEN
GUSTAV ADOLF
0 500 1,000 1,500 METRES
SCALE

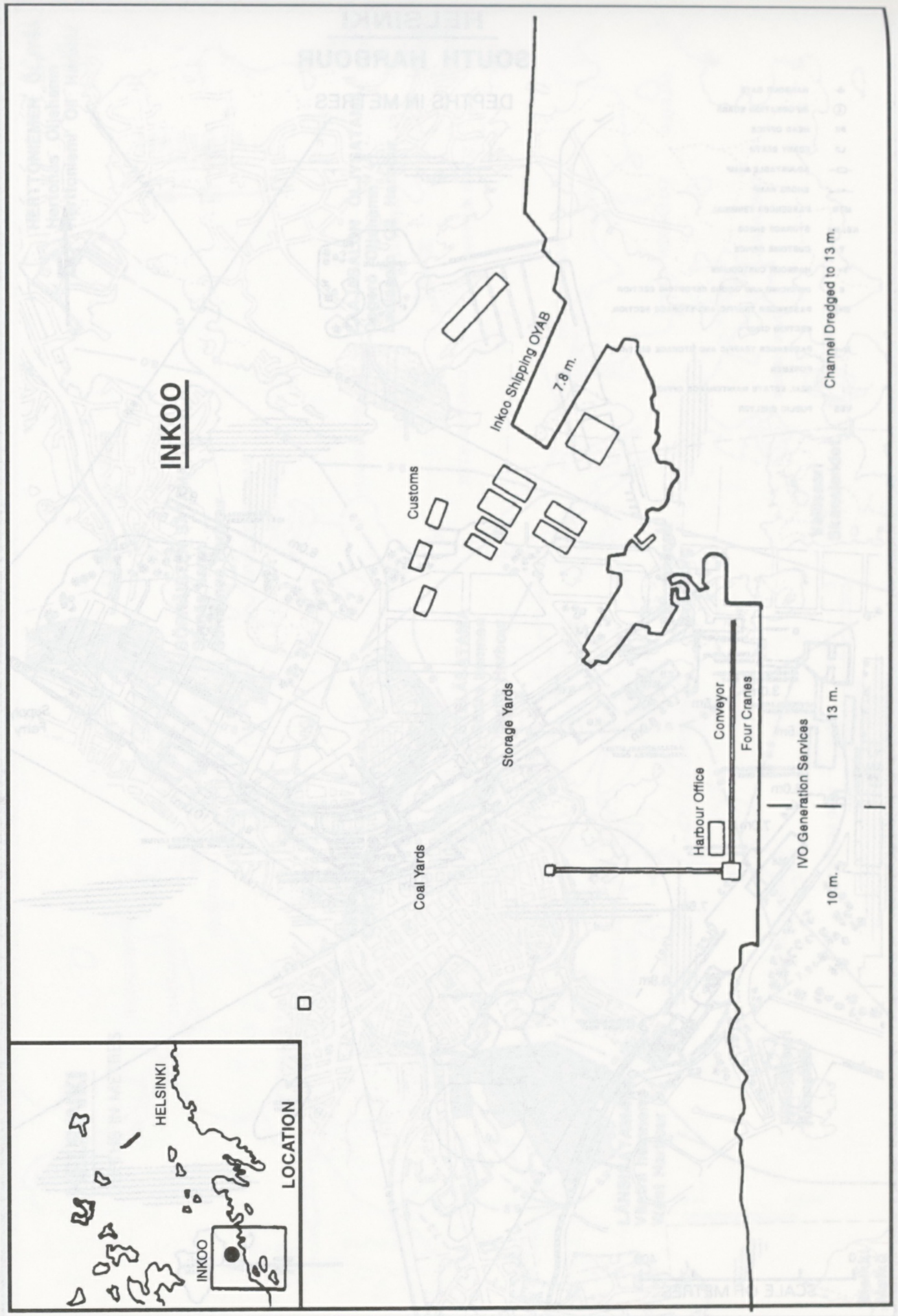

HANKO
WESTERN HARBOUR
N
Car Park
Open Storage
Ro/Ro 1
Shed
Public Telephone
Deep Water Quay 13.0 m.
Ro/Ro 2
Customs
Shed
7.3 m.
Notholms Quay
Germany Quay
7.8 m.
7.2 m.
Ro/Ro 3
7.3 m.
Great Mole Quay Length 704 m.
6.8 m.
6.6 m.
Shed
Shed
Shed
Harbour Master's Office

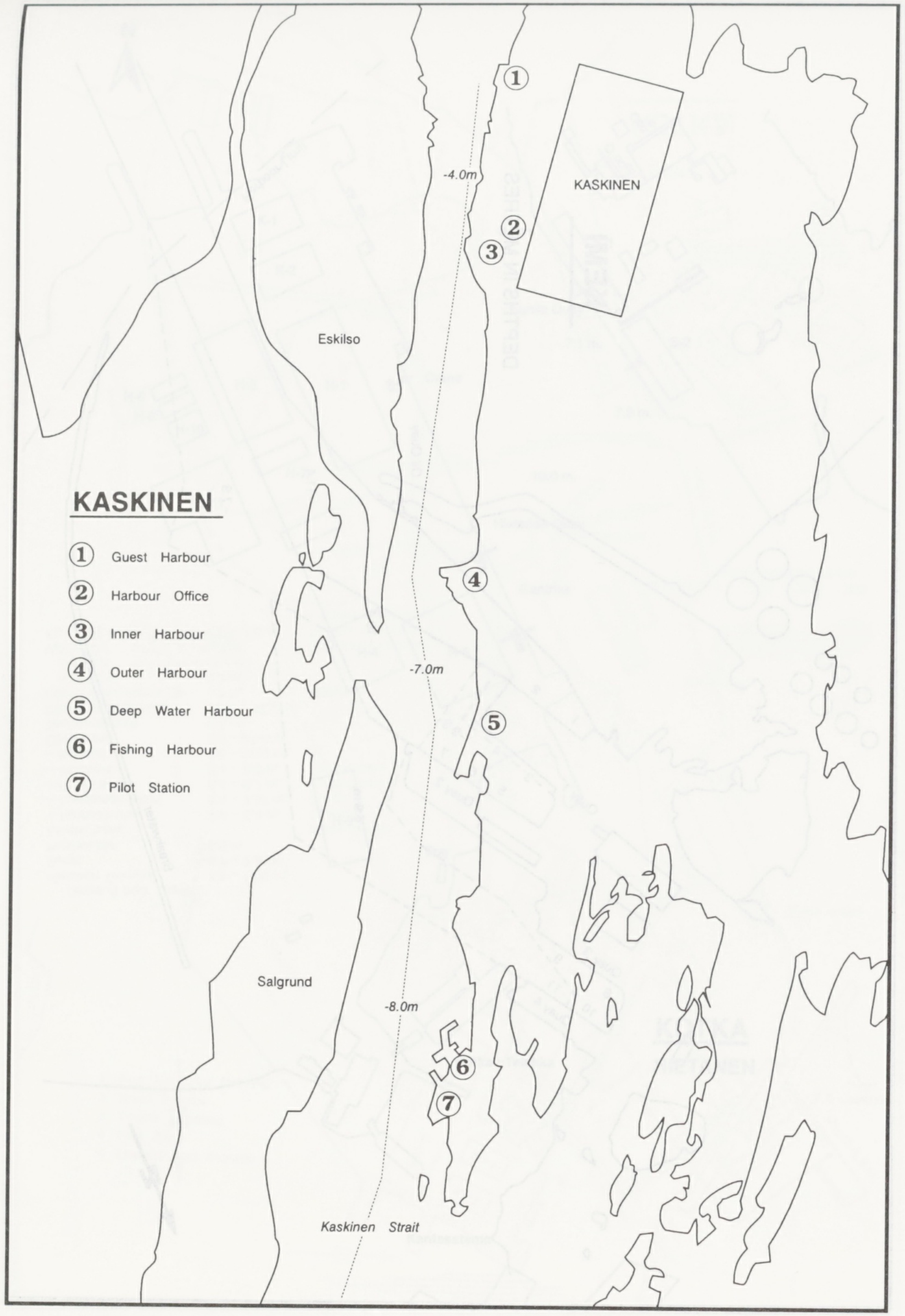

HELSINKI
DEPTHS IN METRES
N
HERTTONIEMEN ÖLJYSA
Hertonäs Oljehamn
Herttoniemi Oil Harbour
SÖRNÄISTEN SATAMA
Sörnäs hamn
Sörnäinen Harbour
KESKUSTA
CENTRUM
LAAJASALON ÖLJYSATAMA
Degerö Oljehamn
Laajasalo Oil Harbour
ETELÄSATAMA
Södra hamnen
South Harbour
LÄNSISATAMA
Västra hamnen
West Harbour
Suomenlinna
Sveaborg
Pihlajasaari
Rönnskär
Vallisaari
Skanslandet
Melkki
Melkö
8.0
8.0
8.0
6.9
9.0
9.6
9.6
9.6
9.1
9.6
7.9
6.9
6.2
5.5
9.6
7.3
7.3
8.9
8.9
8.9
7.9
9.6
8.9
8.9
7.9
9.6

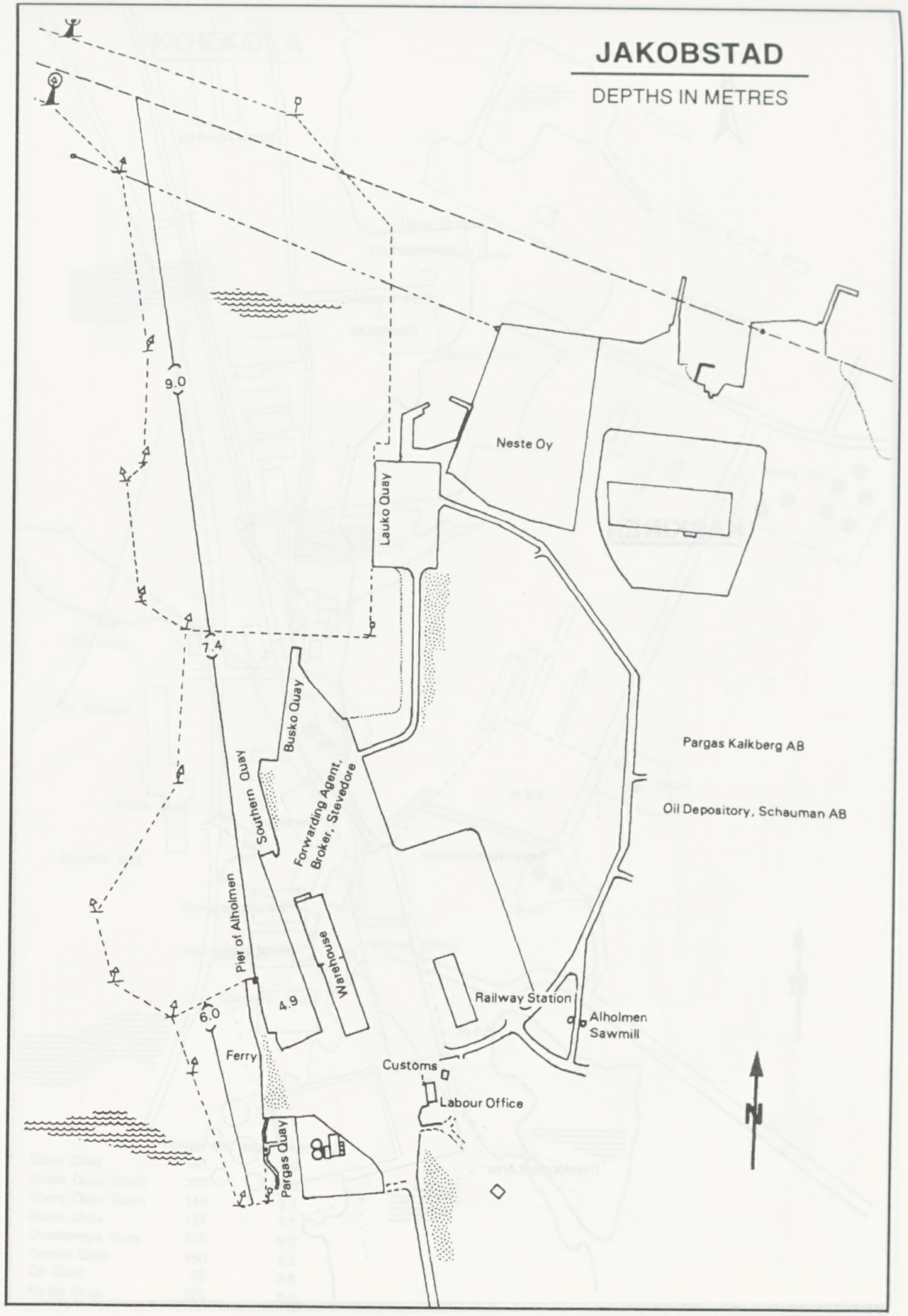

HELSINKI
SOUTH HARBOUR
DEPTHS IN METRES
HARBOUR GATE
INFORMATION BOARD
PK HEAD OFFICE
LP FERRY BERTH
ADJUSTABLE RAMP
SHORE RAMP
MTR PASSENGER TERMINAL
K5, M4 STORAGE SHEDS
T CUSTOMS OFFICE
Sv HARBOUR CUSTODIANS
E INVOICING AND GOODS REPORTING SECTION
Mvj PASSENGER TRAFFIC AND STORAGE SECTION, SECTION CHIEF
Mvt PASSENGER TRAFFIC AND STORAGE SECTION, FOREMEN
I REAL ESTATE MAINTENANCE OFFICE
VSS PUBLIC SHELTER
N
TERVASAARI
(3.0)
(8.0)
(6.1)
9.0m
6.5m
JÄÄMURTAJAT
ICE BREAKERS
8.0m
LINNANLAITURI
LINNA QUAY
KEISARINLUODONLAITURI
KEISARINLUOTO QUAY
3.0m
3.5m
LYYPEKINLAITURI
LUBECK QUAY
5.5m
SAL
PK
6.0m
PAKKAHUONEENLAITURI
PAKKAHUONE QUAY
7.0m
MAKASIINILAITURI
MAKASIINI QUAY
M4
LP 5
LP 4
LP 3
LP 2
LP 1
LP 6
LP 7
K5
MTR
K6
K7
9.0m
KATAJANOKANLAITURI
KATAJANOKKA QUAY
8.8m
MTR
KATAJANOKAN TERMINAALI
KATAJANOKKA TERMINAL
RISTEILYALUSTEN LAITURI
QUAY FOR CRUISERS
10.0m
(7.9)
8.9m
10.0m
(9.6)
Supply
Ferry
7.5m
(7.9)
8.8m
OLYMPIALAITURI
OLYMPIA QUAY
M2
M1
MTR
7.5m
(9.1)
VALKOSAARI
LUOTO
RYSSÄN-SAARI
(6.9)
(7.9)
PUOLIMATKAN-SAARI
0
400
SCALE OF METRES

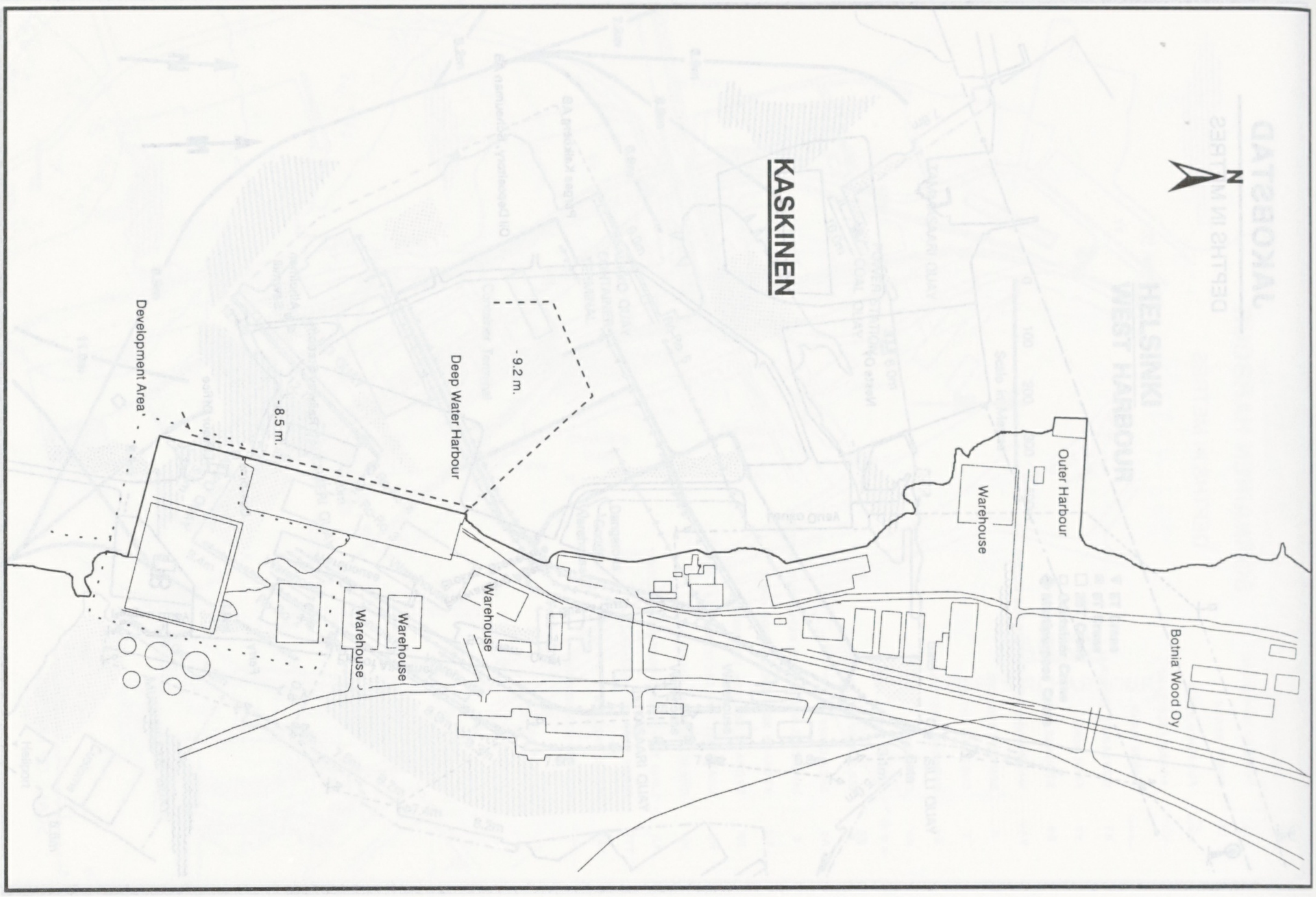

HELSINKI
SORNAINEN HARBOUR
DEPTHS IN METRES
HARBOUR GATE
INFORMATION BOARD
LP FERRY BERTH
FLOATING RAMP
ADJUSTABLE RAMP
SHORE RAMP
KT CONTAINER TERMINAL
VV FREE ZONE
S5 STORAGE SHED
VAV WAREHOUSE FOR DANGEROUS GOODS
H SERVICE BUILDING
T CUSTOMS OFFICE
Sv HARBOUR CUSTODIANS
Av CAR SCALE
CRANES 5t, 6t, 150t
MULTIPURPOSE CRANE
Ap AREA CHIEF
E INVOICING AND GOODS REPORTING SECTION
Vjj STORAGE SECTION, SECTION CHIEF
Vjt STORAGE SECTION, FOREMEN
Njj CRANE SECTION,SECTION CHIEF
Njt CRANE SECTION, FOREMEN
Klj LAND TRAFFIC AND CONTAINER SECTION
TTV FRESH PRODUCE WAREHOUCE
VSS PUBLIC SHELTER
PLANNED EXTENSIONS
N
VV
VV
TTV
VV
S7
VV
S6
LP1
LP2
S5
HANASAARI
SÖRNÄISTENRANTA
SOMPASAARENLAITURI
SOMPASAARI QUAY
HANASAARENLAITURI
HANASAARI QUAY
S4
SOMPASAARI
VAV
(6.1)
S2
S3
LP3
LP4
LP5
S8
PUUTAVARALAITURI
TIMBER QUAY
MUSTIKKAMAA
(5.5)
(9.0)
(6.1)
KORKEASAARI
ZOO
0
400
SCALE OF METRES

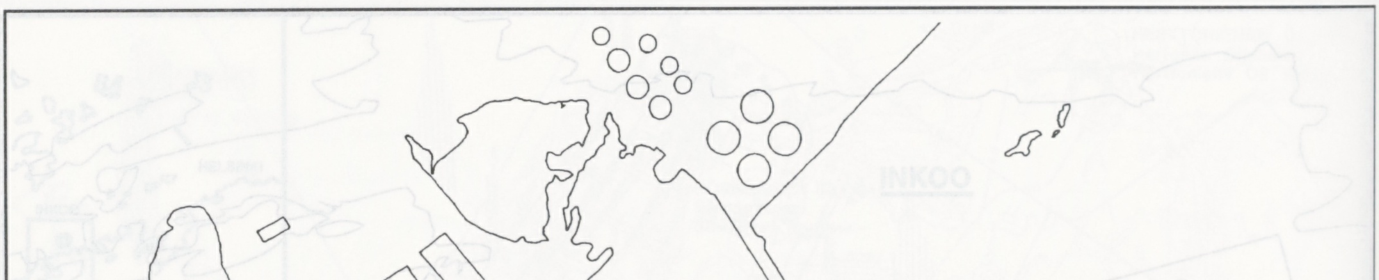

HELSINKI
WEST HARBOUR
▼ 5T Crane
■ 6T Crane
□ 25T Crane
□ Container Crane
◆ Multipurpose Crane
0
100
200
300
400m
Scale in Metres
TAMMASAARI QUAY
7.8m
POWER STATION
COAL QUAY
6.0m
10.0m
Gate
SILLI QUAY
Gate
3.1m
5.0m
6.8m
Warehouse
Warehouse
7.3m
JATKASAARI QUAY
Ro-Ro 5
9.0m
SAUKKO QUAY
CONTAINER
TERMINAL
6.9m
8.9m
8.9m
7.3m
Dangerous
Goods
Warehouse
Free Zone
7.6m
Container Terminal
5.2m
9.3m
8.2m
8.8m
Warehouse
Warehouse
Warehouse
Warehouse
Ro-Ro 4
Ro-Ro 3
11.0m
Ro-Ro 1
Ro-Ro 2
7.4m
8.2m
7.5m
MELKKI QUAY
12.1m
VALTAMERI QUAY
Warehouse
11.5m
12.4m
SAMPO QUAY
5.5m
9.4m
8.9m
8.2m
7.3m
8.0m
8.9m
8.9m
MUNKKISAARI QUAY
7.3m
11.0m
Customs
5.5m
Heliport
N


INKOO
Channel Dredged to 13 m.
Inkoo Shipping OYAB
7.8 m.
Customs
Storage Yards
Coal Yards
Conveyor
Four Cranes
Harbour Office
IVO Generation Services
13 m.
10 m.
LOCATION
HELSINKI
INKOO


KASKINEN
① Guest Harbour
② Harbour Office
③ Inner Harbour
④ Outer Harbour
⑤ Deep Water Harbour
⑥ Fishing Harbour
⑦ Pilot Station
KASKINEN
Eskilso
Salgrund
Kaskinen Strait
-4.0m
-7.0m
-8.0m
①
②
③
④
⑤
⑥
⑦

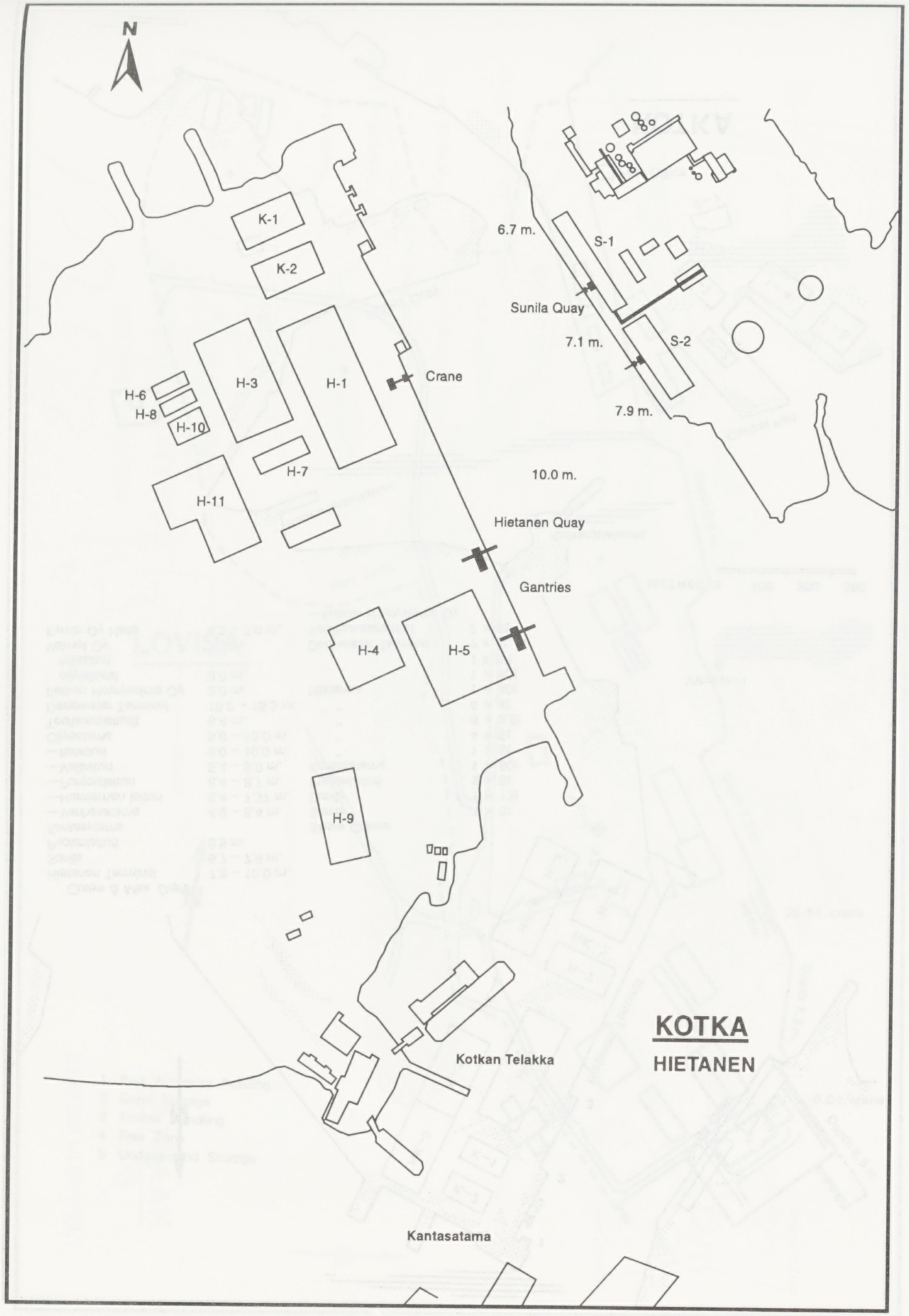

JAKOBSTAD
DEPTHS IN METRES
Neste Oy
Lauko Quay
9.0
7.4
Busko Quay
Southern Quay
Forwarding Agent, Broker, Stevedore
Pargas Kalkberg AB
Oil Depository, Schauman AB
Pier of Alholmen
Warehouse
4.9
6.0
Railway Station
Alholmen Sawmill
Ferry
Customs
Labour Office
Pargas Quay
N


KASKINEN
N
Development Area
- 8.5 m.
Deep Water Harbour
- 9.2 m.
Warehouse
Warehouse
Warehouse
Warehouse
Outer Harbour
Botnia Wood Oy

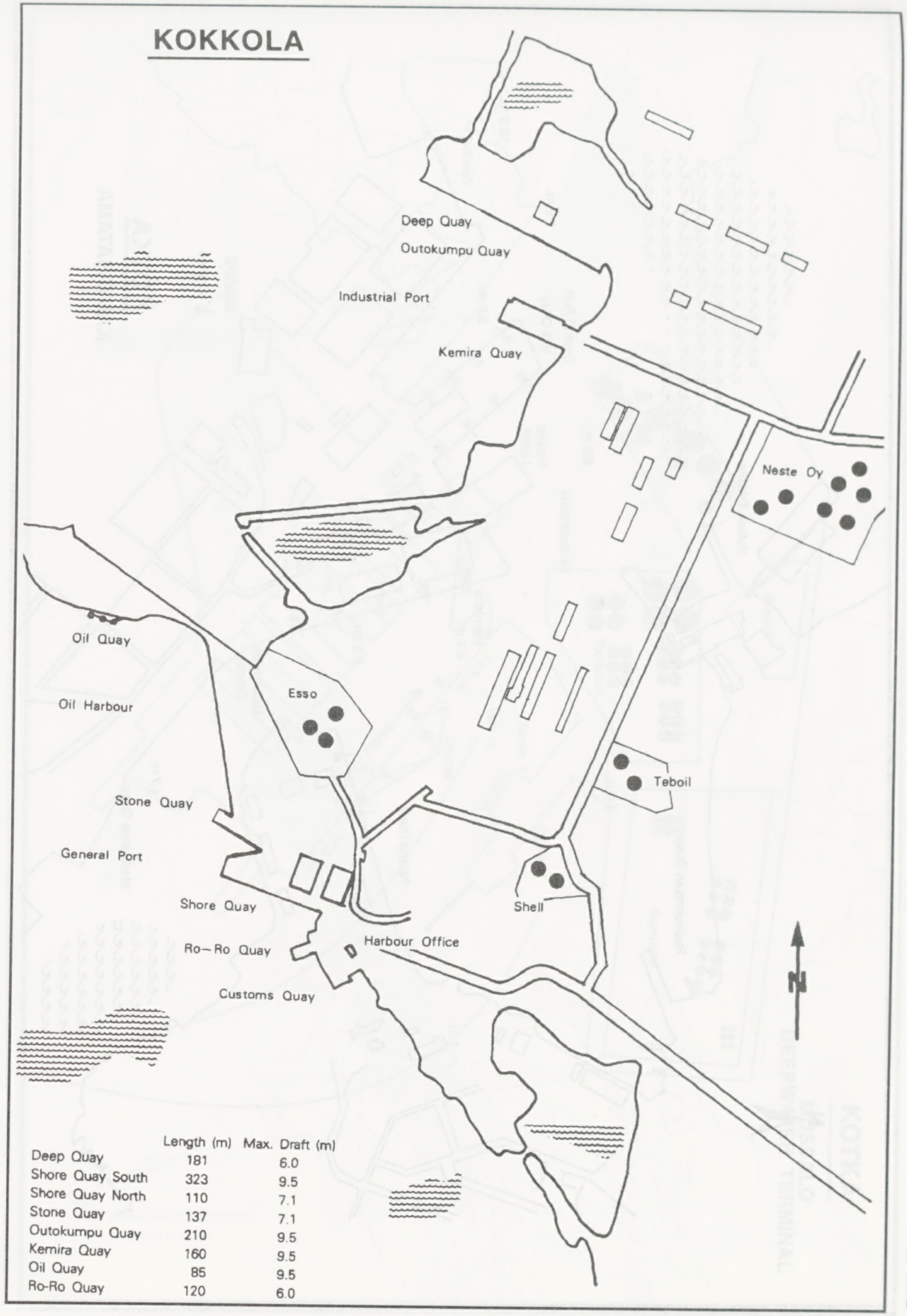

KEMI
DEPTHS IN METRES
Quay 3
Quay 1
Quay 4
Quay 2
8
10
11
9
1
2
3
4
5
6
7
9.3
- 6.9 m.
- 10.4
- 11.4
- 7.9
Oil Quay
Harbour Limit
Breakwater
N

KOTKA

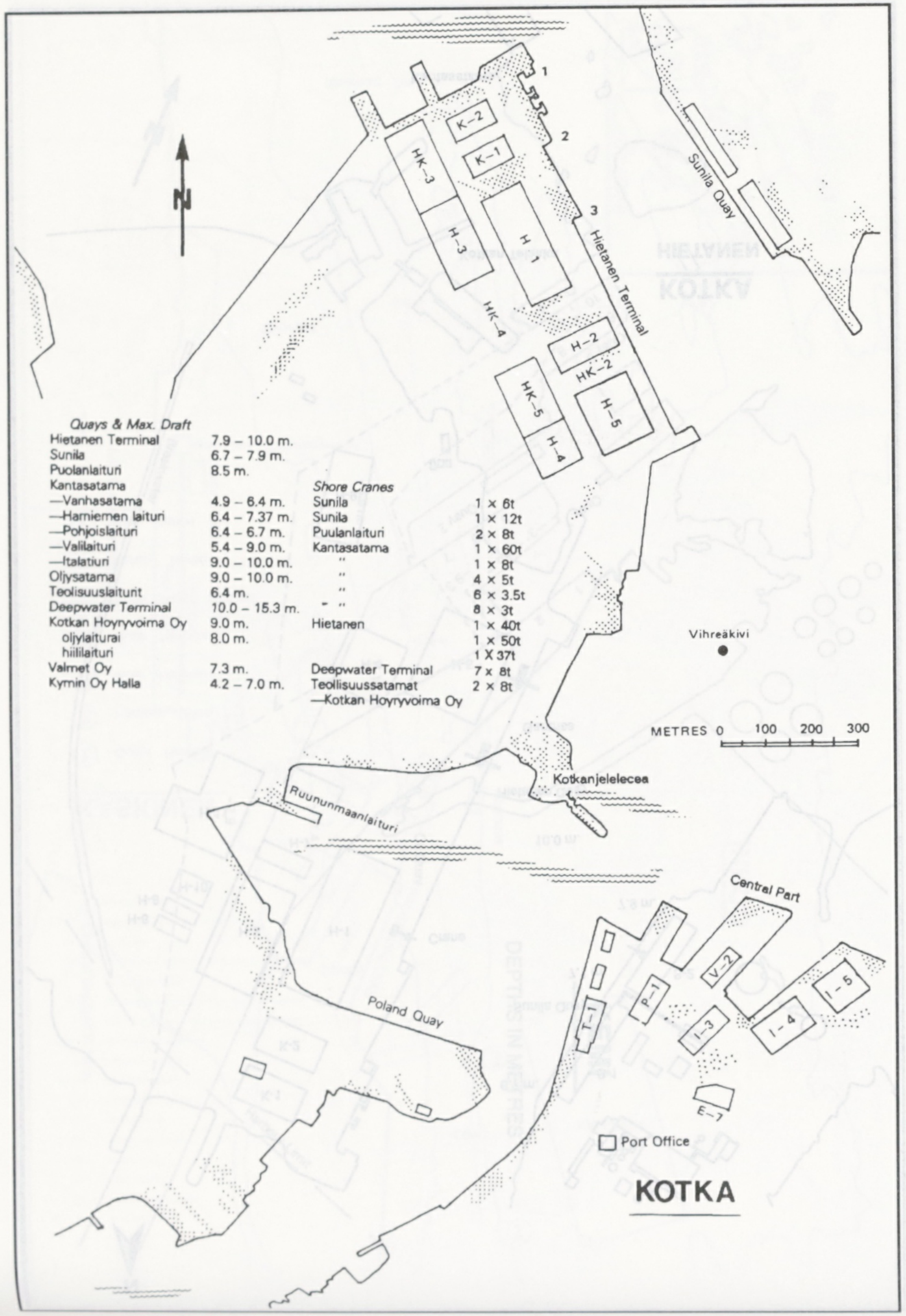
HIETANEN


N
K-1
K-2
6.7 m.
S-1
Sunila Quay
7.1 m.
S-2
Crane
H-6
H-8
H-10
H-3
H-1
7.9 m.
H-7
10.0 m.
H-11
Hietanen Quay
Gantries
H-4
H-5
H-9
Kotkan Telakka
Kantasatama

KOKKOLA


Deep Quay
Outokumpu Quay
Industrial Port
Kemira Quay
Neste Oy
Oil Quay
Esso
Oil Harbour
Teboil
Stone Quay
General Port
Shore Quay
Shell
Ro—Ro Quay
Harbour Office
Customs Quay
N

	Length (m)	Max. Draft (m)
Deep Quay	181	6.0
Shore Quay South	323	9.5
Shore Quay North	110	7.1
Stone Quay	137	7.1
Outokumpu Quay	210	9.5
Kemira Quay	160	9.5
Oil Quay	85	9.5
Ro-Ro Quay	120	6.0

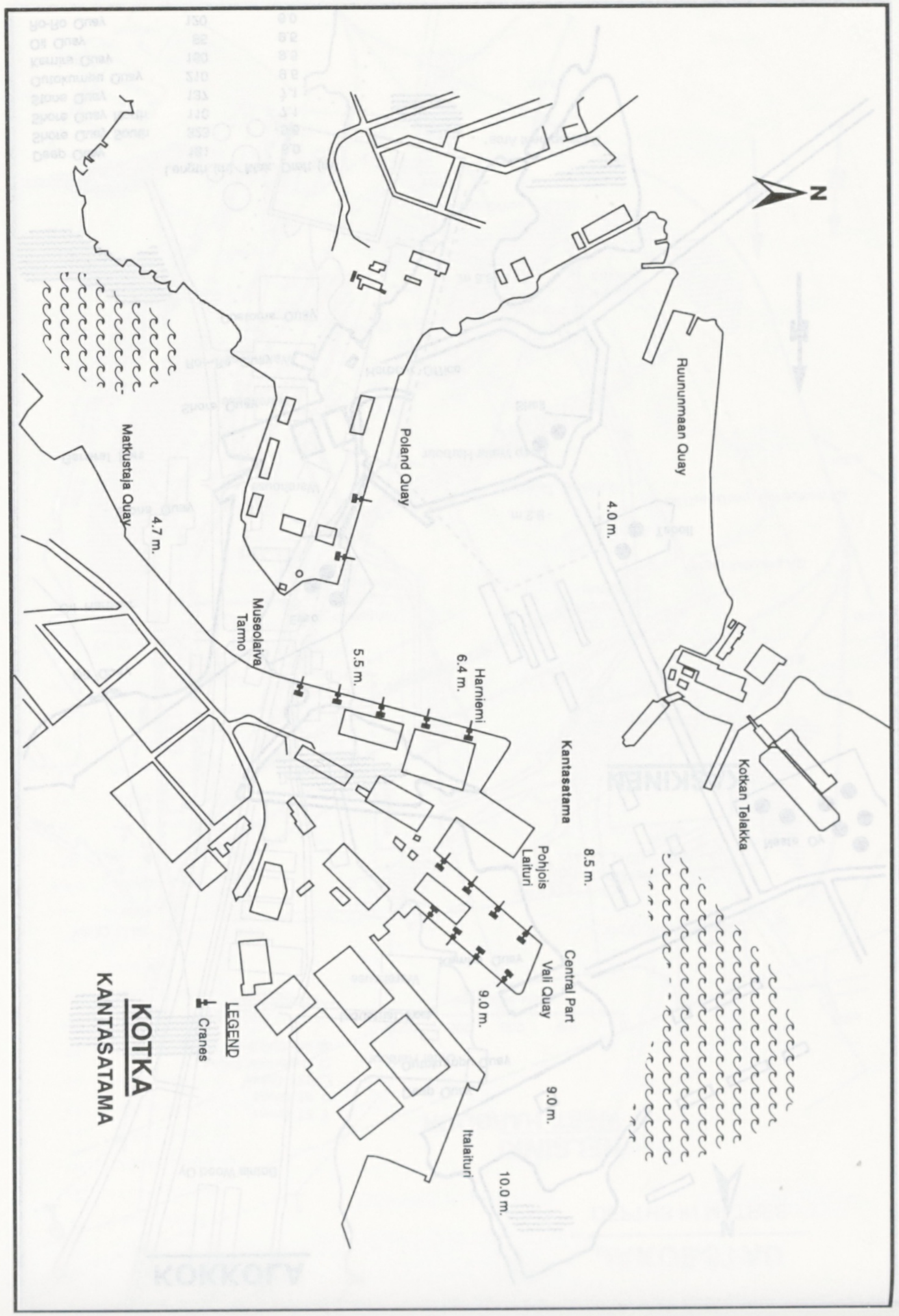

1
2
3
K–2
K–1
HK–3
H–3
H 1
HK–4
H–2
HK–2
HK–5
H–5
H–4
Hietanen Terminal
Sunila Quay
N
Vihreäkivi
METRES 0 100 200 300
Kotkanjelelecea
Ruununmaanlaituri
Central Part
Poland Quay
V–2
P–1
T–1
I–3
I–4
I–5
E–7
Port Office
KOTKA

Quays & Max. Draft

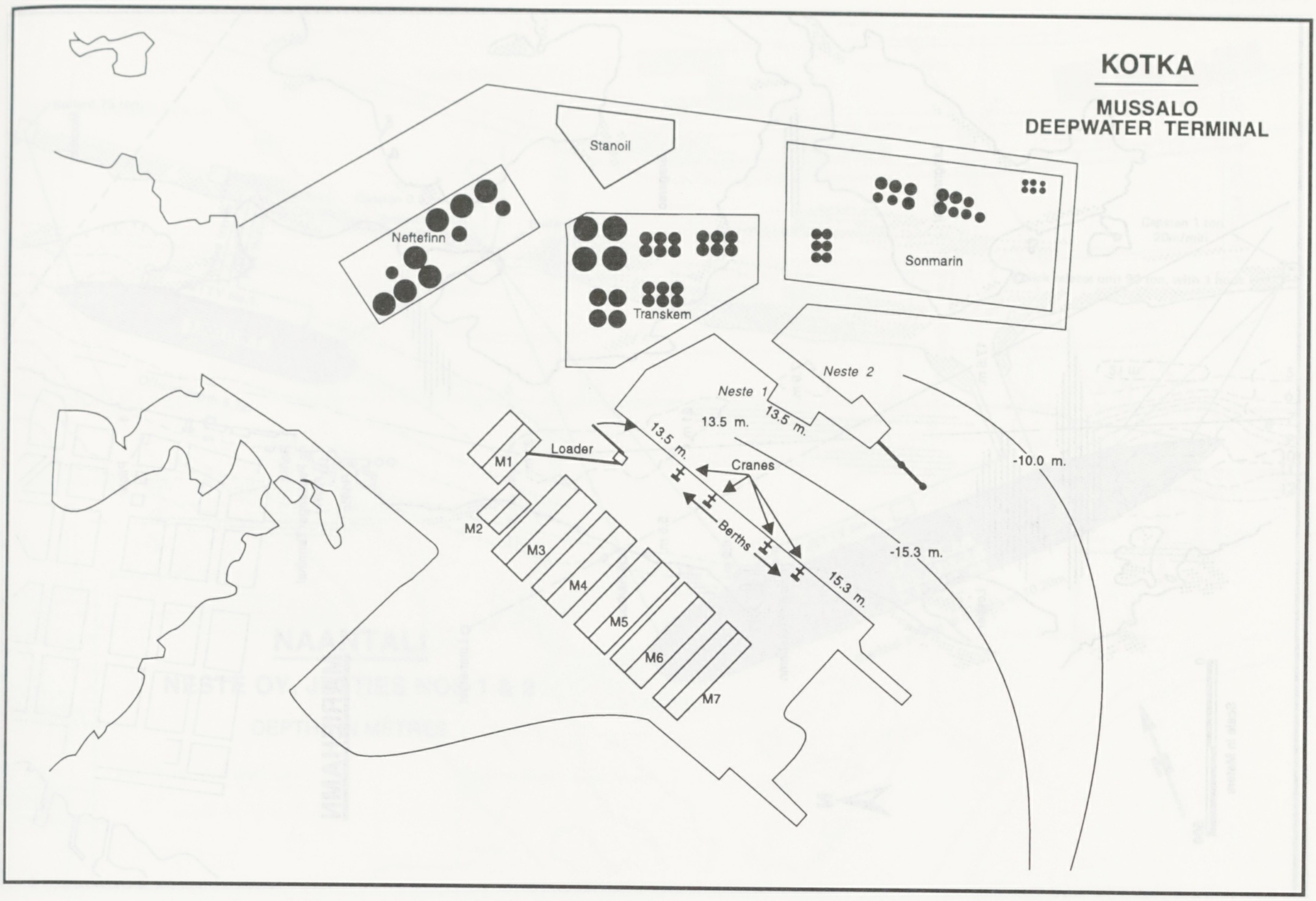
Hietanen Terminal	7.9 – 10.0 m.
Sunila	6.7 – 7.9 m.
Puolanlaituri	8.5 m.
Kantasatama	
—Vanhasatama	4.9 – 6.4 m.
—Harniemen laituri	6.4 – 7.37 m.
—Pohjoislaituri	6.4 – 6.7 m.
—Valilaituri	5.4 – 9.0 m.
—Italatiuri	9.0 – 10.0 m.
Oljysatama	9.0 – 10.0 m.
Teolisuuslaiturit	6.4 m.
Deepwater Terminal	10.0 – 15.3 m.
Kotkan Hoyryvoima Oy	9.0 m.
oljylaiturai	8.0 m.
hiililaituri	
Valmet Oy	7.3 m.
Kymin Oy Halla	4.2 – 7.0 m.

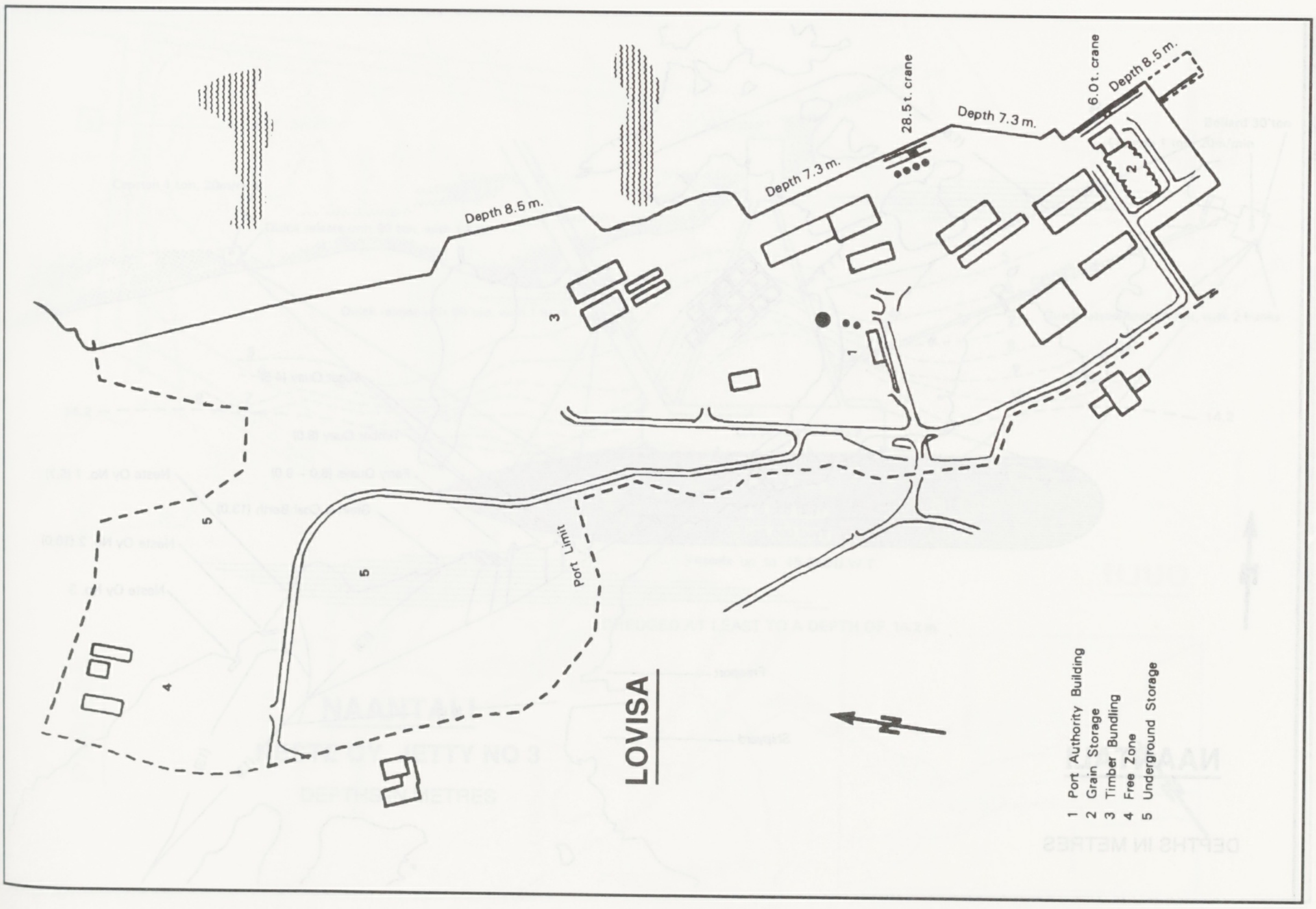
Shore Cranes

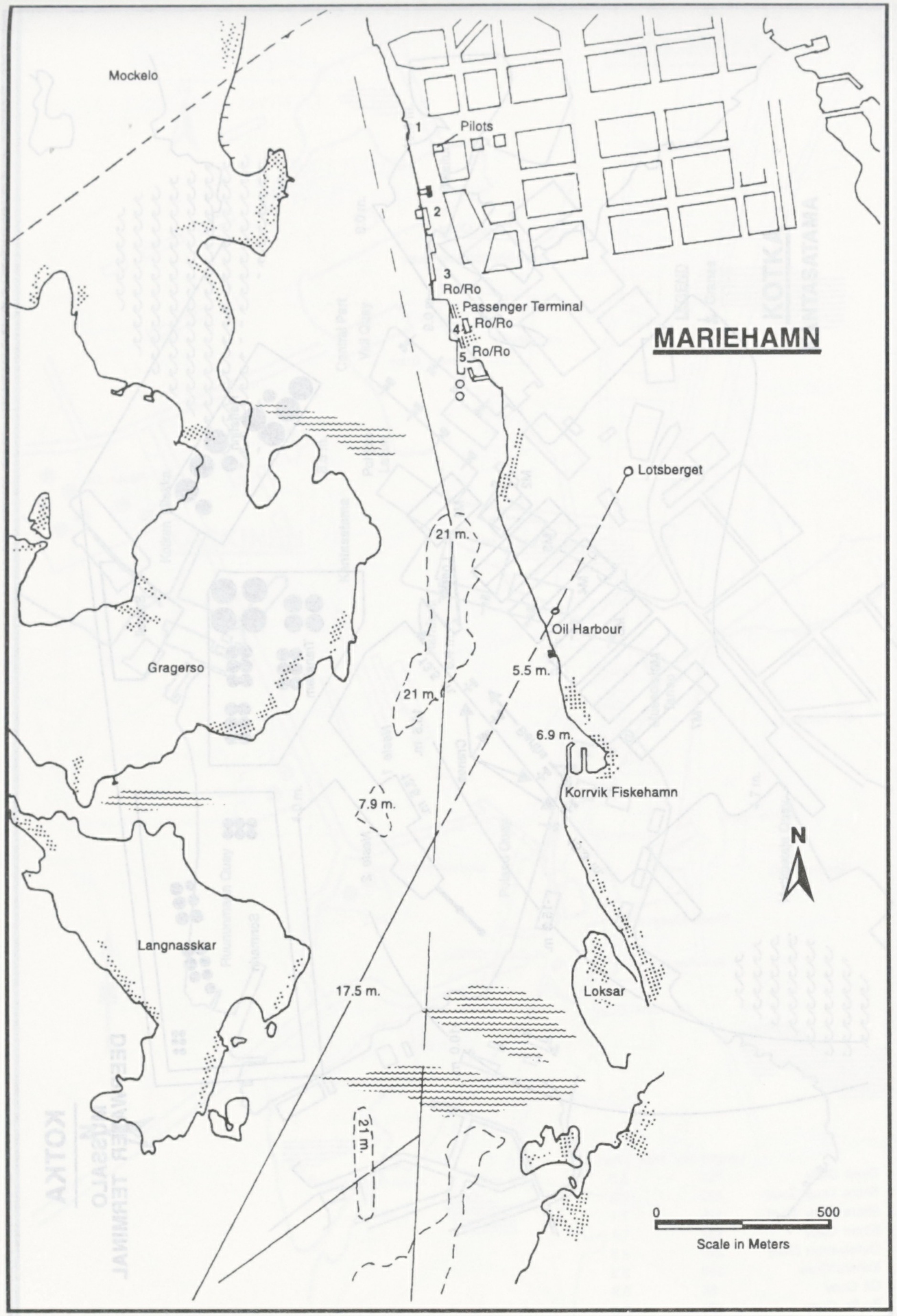
Sunila	1 × 6t
Sunila	1 × 12t
Puulanlaituri	2 × 8t
Kantasatama	1 × 60t
"	1 × 8t
"	4 × 5t
"	6 × 3.5t
"	8 × 3t
Hietanen	1 × 40t
	1 × 50t
	1 X 37t
Deepwater Terminal	7 x 8t
Teollisuussatamat	2 × 8t
—Kotkan Hoyryvoima Oy	

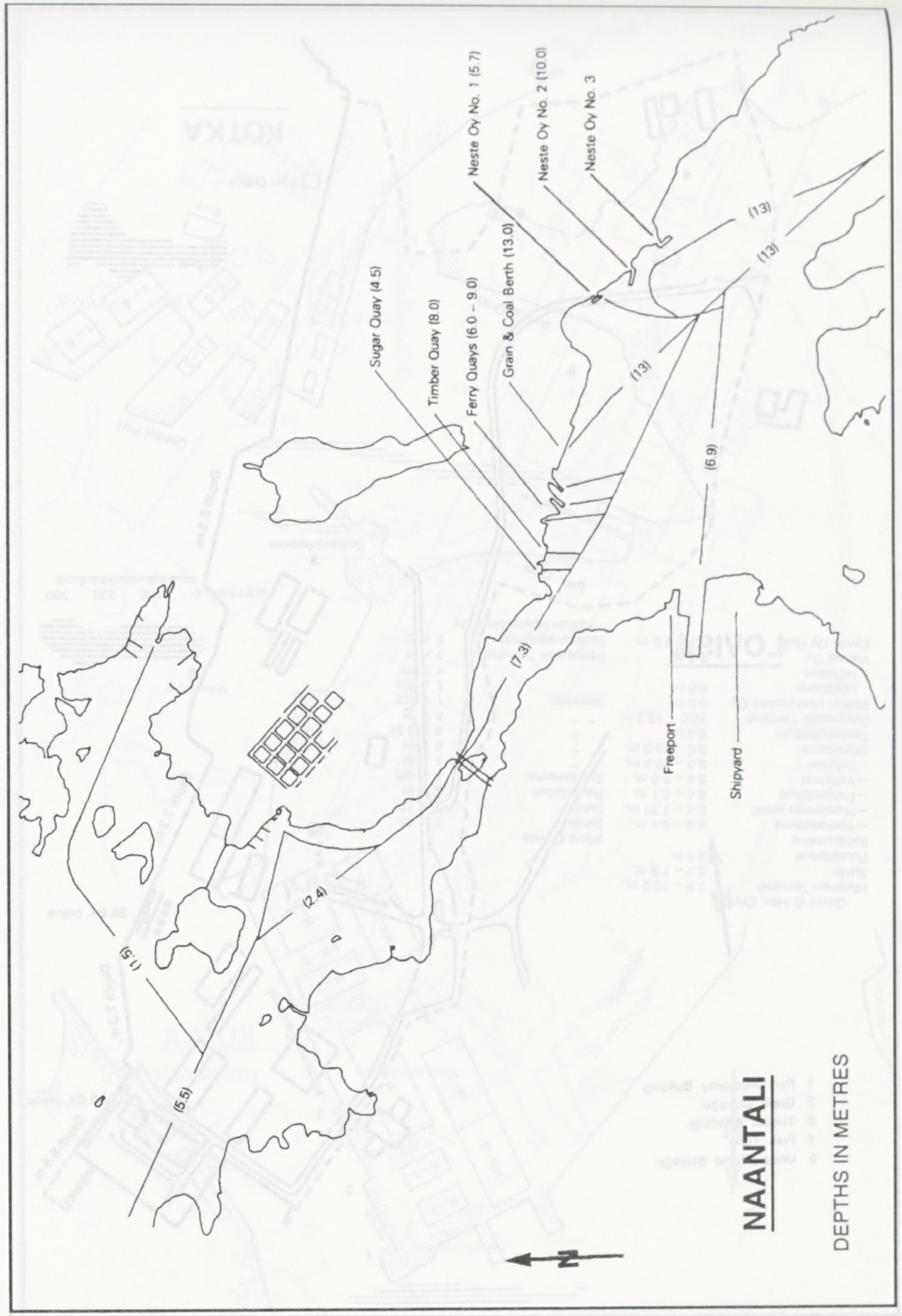

N
Ruununmaan Quay
4.0 m.
Poland Quay
Matkustaja Quay
4.7 m.
Museolaiva Tarmo
5.5 m.
Harniemi
6.4 m.
Kantasatama
8.5 m.
Pohjois Laituri
Kotkan Telakka
Central Part
Vali Quay
9.0 m.
9.0 m.
Italaituri
10.0 m.
LEGEND
Cranes

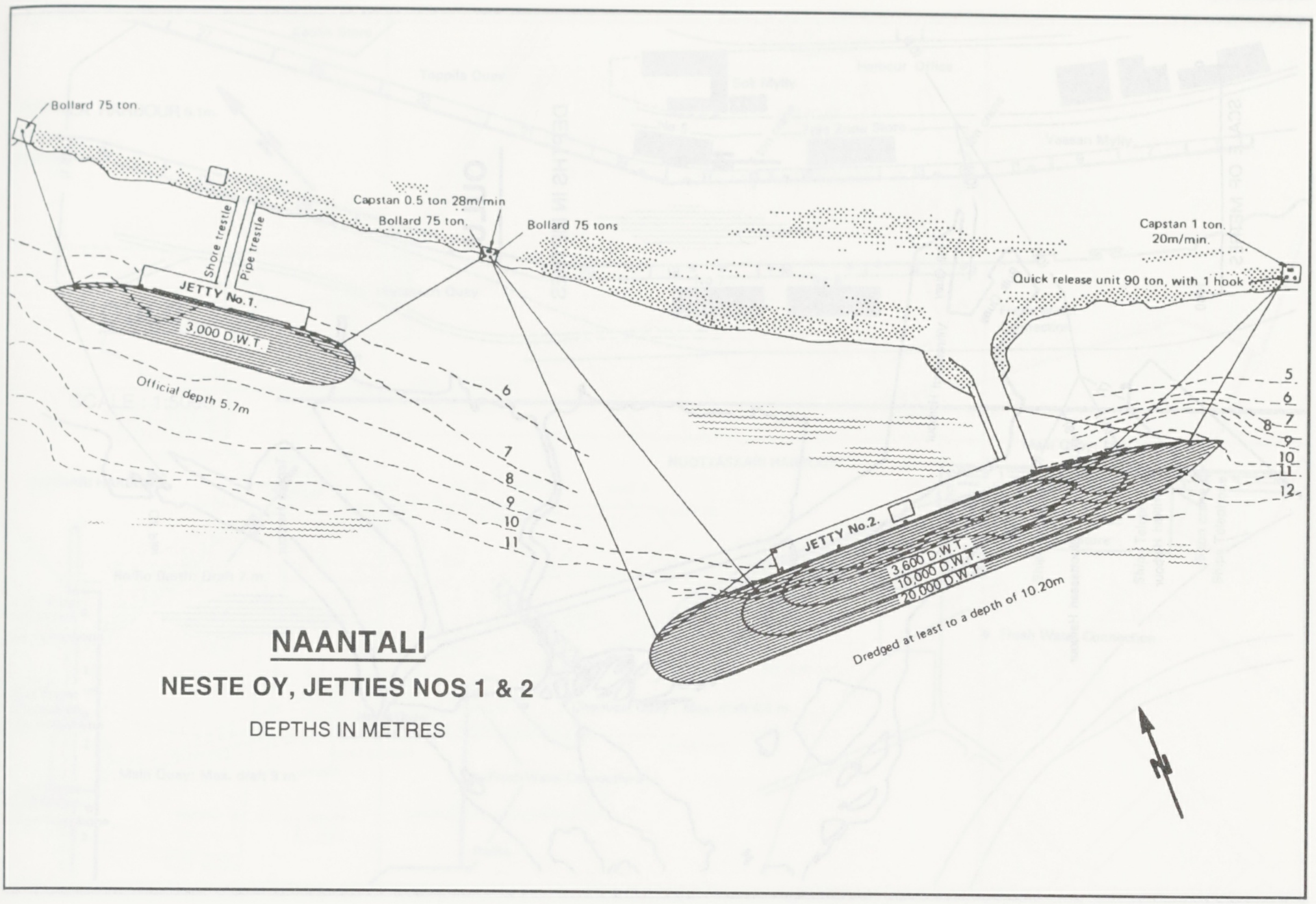
KOTKA
KANTASATAMA


KOTKA
MUSSALO
DEEPWATER TERMINAL
Stanoil
Neftefinn
Transkem
Sonmarin
Neste 1
Neste 2
13.5 m.
13.5 m.
13.5 m.
Loader
Cranes
Berths
-10.0 m.
-15.3 m.
15.3 m.
M1
M2
M3
M4
M5
M6
M7


LOVISA
Depth 8.5 m.
Depth 7.3 m.
Depth 7.3 m.
28.5 t. crane
6.0 t. crane
Depth 8.5 m.
Port Limit
N
1
2
3
4
5
5
1 Port Authority Building
2 Grain Storage
3 Timber Bundling
4 Free Zone
5 Underground Storage


MARIEHAMN
Mockelo
1 Pilots
2
3 Ro/Ro
Passenger Terminal
4 Ro/Ro
5 Ro/Ro
Lotsberget
21 m.
Oil Harbour
5.5 m.
21 m.
6.9 m.
Korrvik Fiskehamn
7.9 m.
Gragerso
Langnasskar
17.5 m.
Loksar
21 m.
N
0
500
Scale in Meters

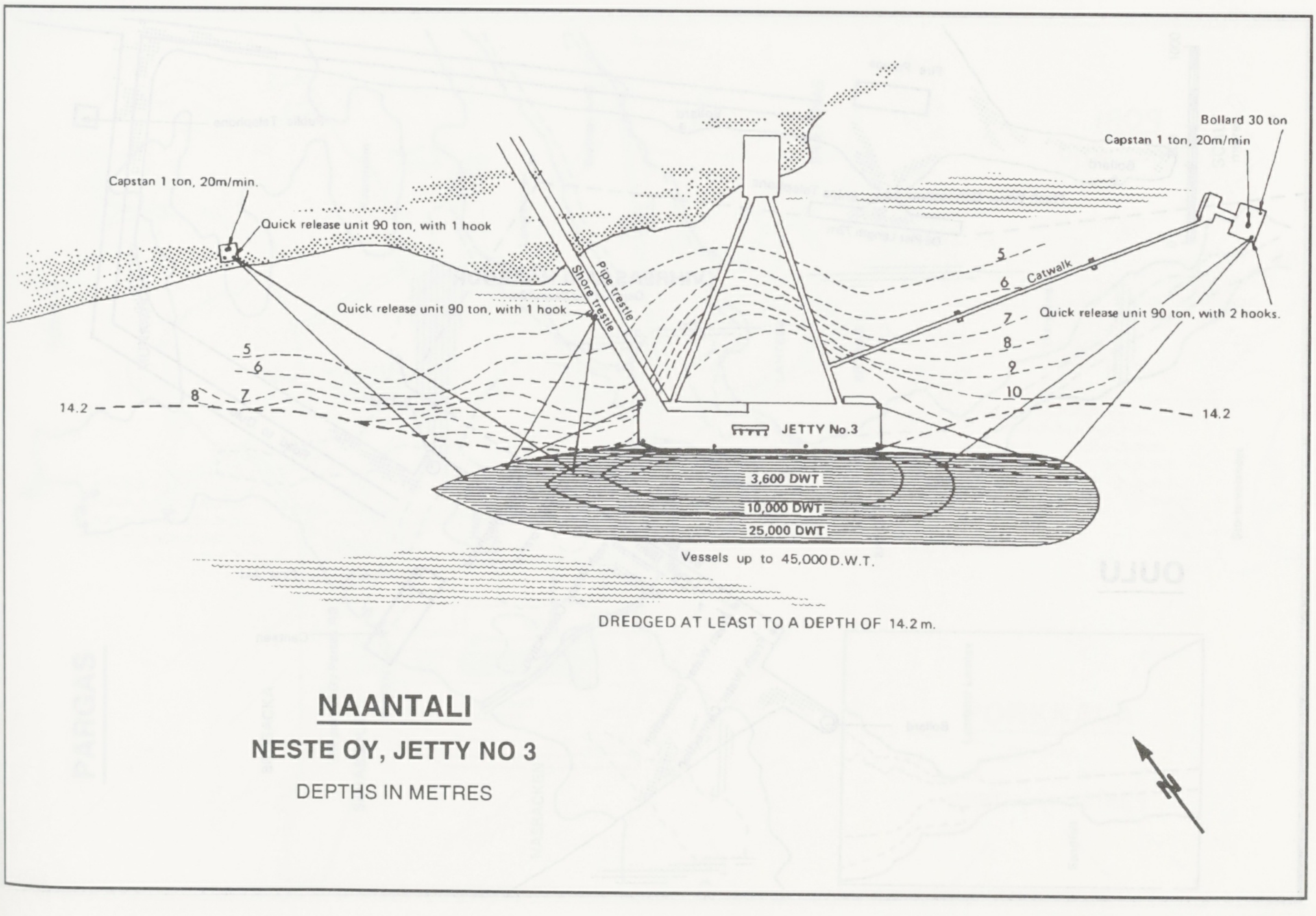

Sugar Quay (4.5)
Timber Quay (8.0)
Ferry Quays (6.0 – 9.0)
Grain & Coal Berth (13.0)
Neste Oy No. 1 (5.7)
Neste Oy No. 2 (10.0)
Neste Oy No. 3
(13)
(13)
(13)
(6.9)
(7.3)
Freeport
Shipyard
(2.4)
(1.5)
(5.5)
N
NAANTALI
DEPTHS IN METRES


Bollard 75 ton
Shore trestle
Pipe trestle
JETTY No.1.
3,000 D.W.T.
Official depth 5.7m
Capstan 0.5 ton 28m/min
Bollard 75 ton.
Bollard 75 tons
6
7
8
9
10
11
Capstan 1 ton.
20m/min.
Quick release unit 90 ton, with 1 hook
5
6
7
8
9
10
11
12
JETTY No.2.
3,600 D.W.T.
10,000 D.W.T.
20,000 D.W.T.
Dredged at least to a depth of 10.20m
N

NAANTALI

NESTE OY, JETTIES NOS 1 & 2

DEPTHS IN METRES

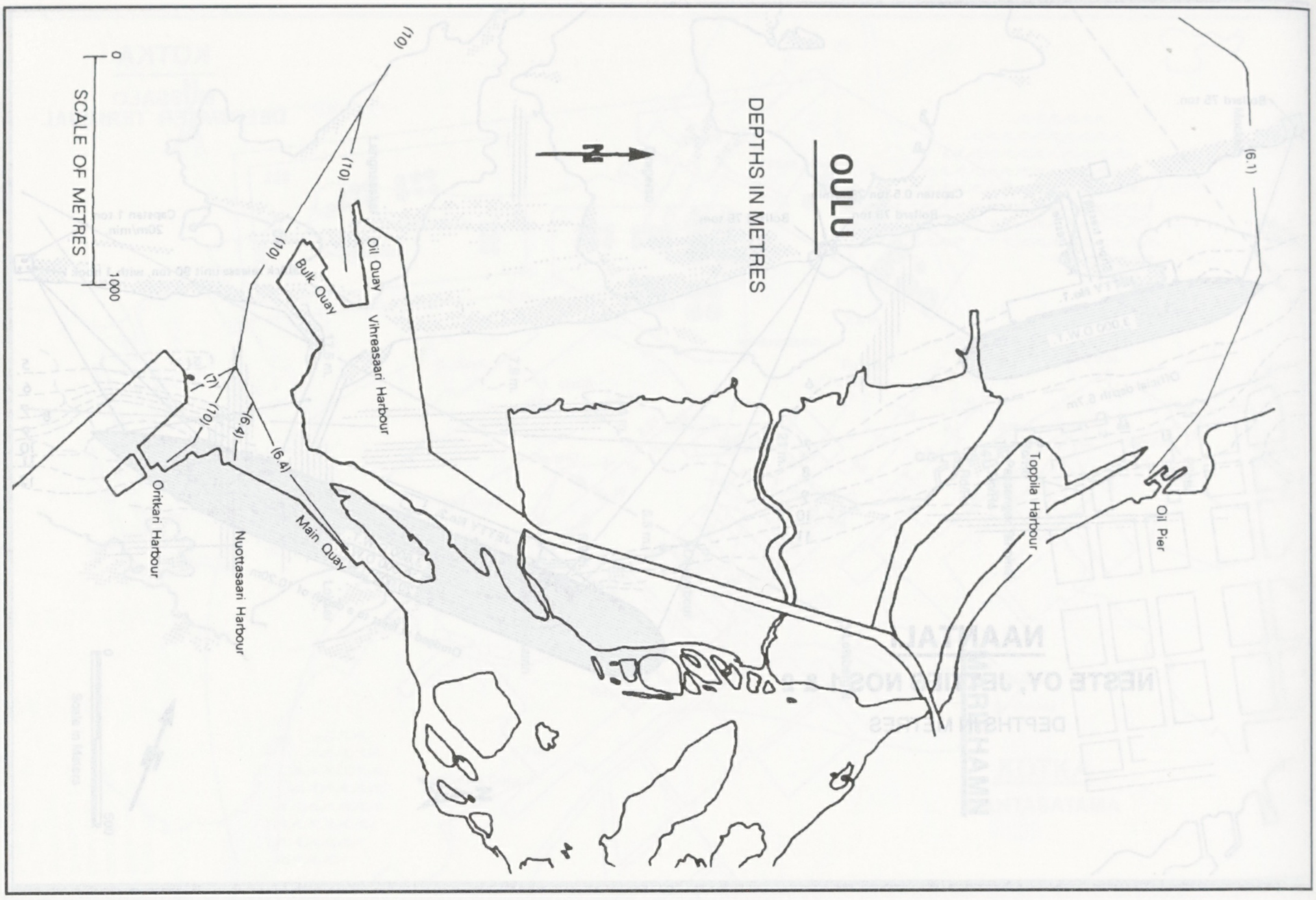

Capstan 1 ton, 20m/min.
Quick release unit 90 ton, with 1 hook
Quick release unit 90 ton, with 1 hook
Pipe trestle
Shore trestle
5
6
8
7
14.2
Bollard 30 ton
Capstan 1 ton, 20m/min
Quick release unit 90 ton, with 2 hooks.
Catwalk
5
6
7
8
9
10
14.2
JETTY No.3
3,600 DWT
10,000 DWT
25,000 DWT
Vessels up to 45,000 D.W.T.
N

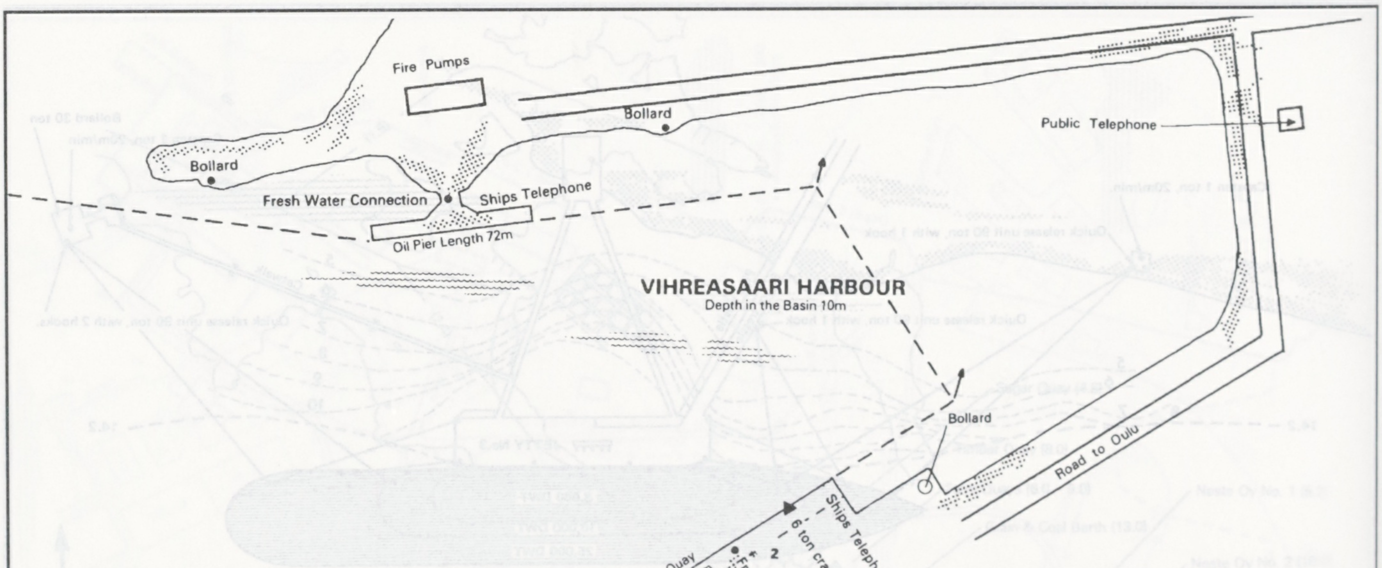
DREDGED AT LEAST TO A DEPTH OF 14.2 m.

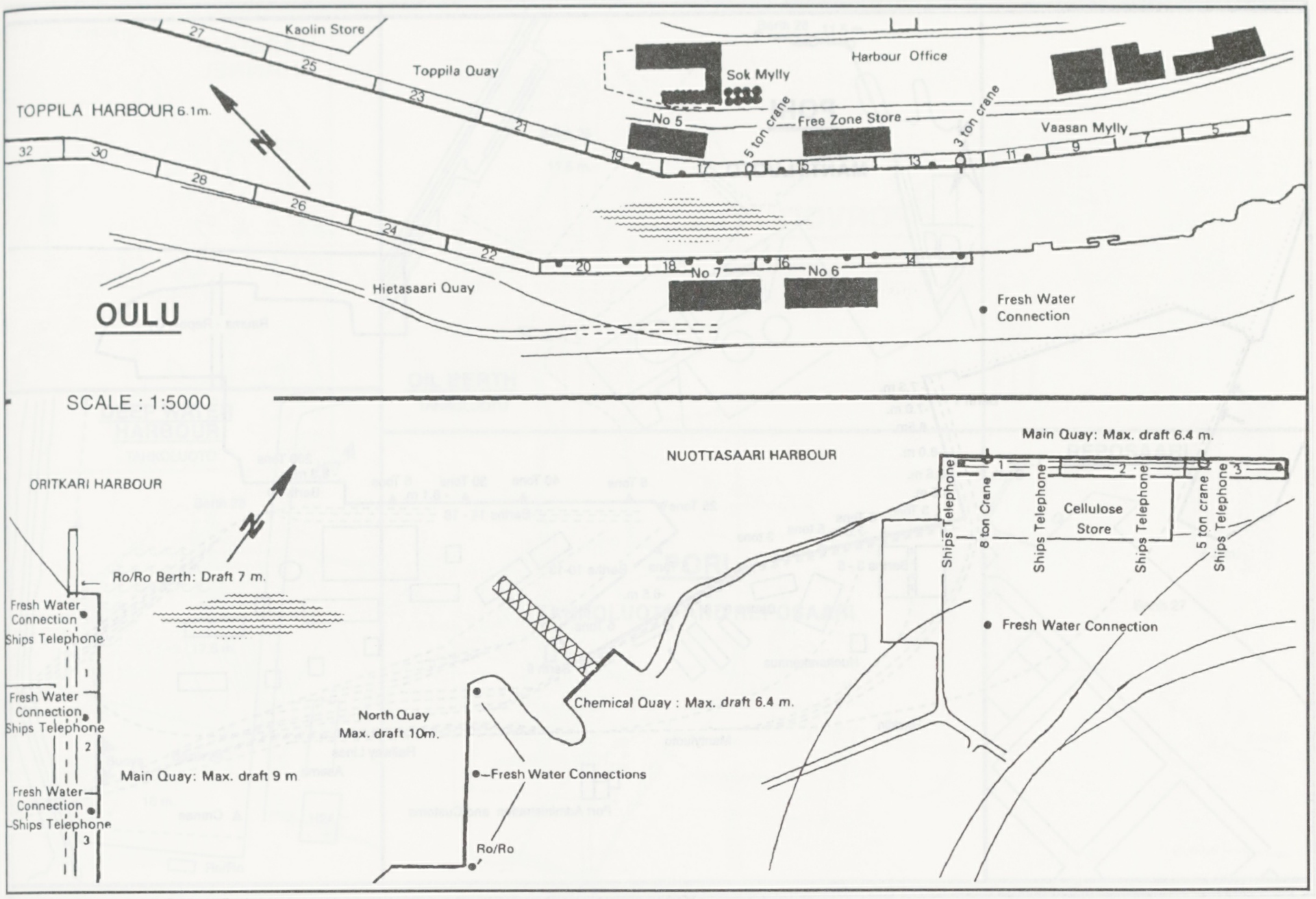
NAANTALI

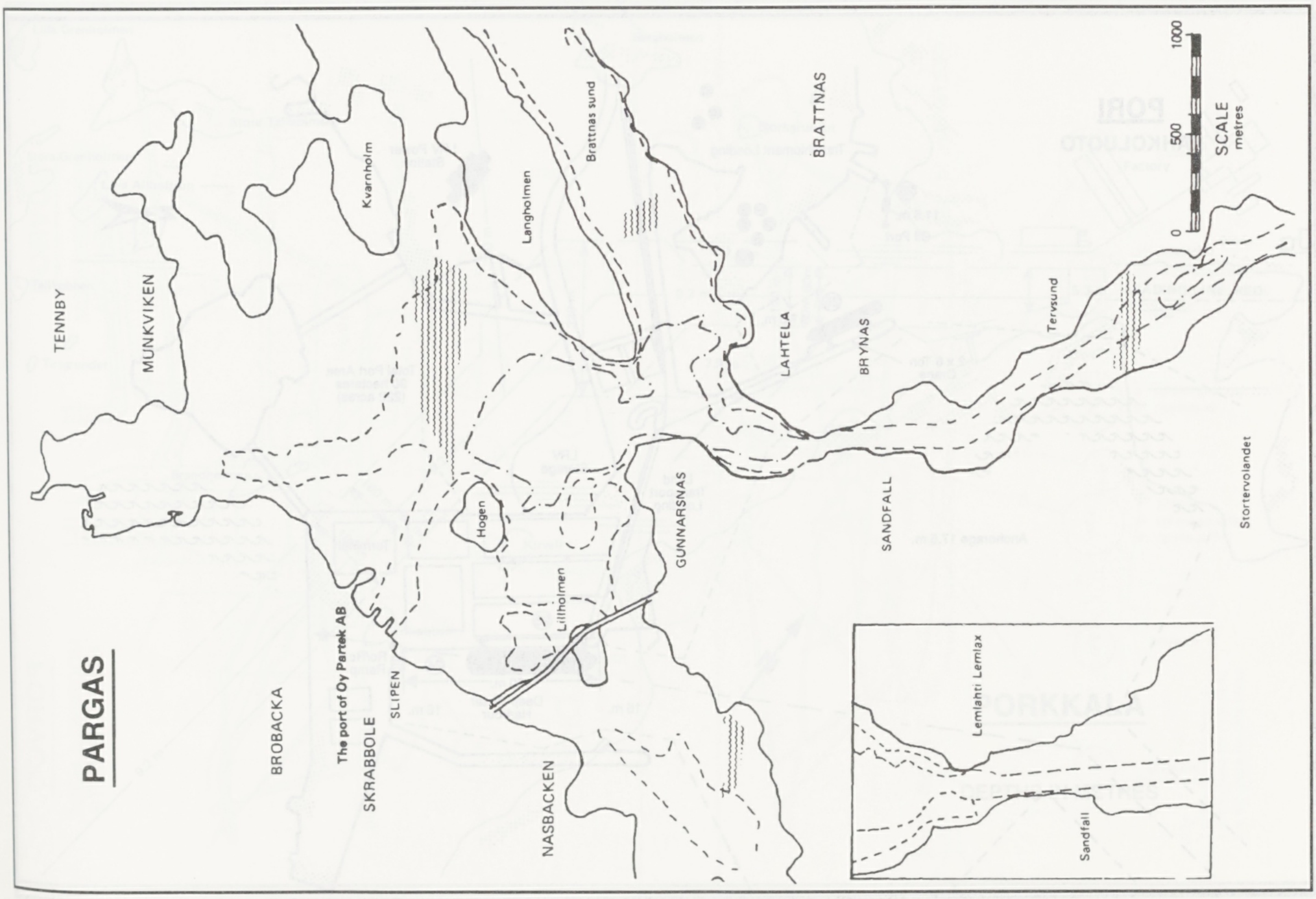
NESTE OY, JETTY NO 3

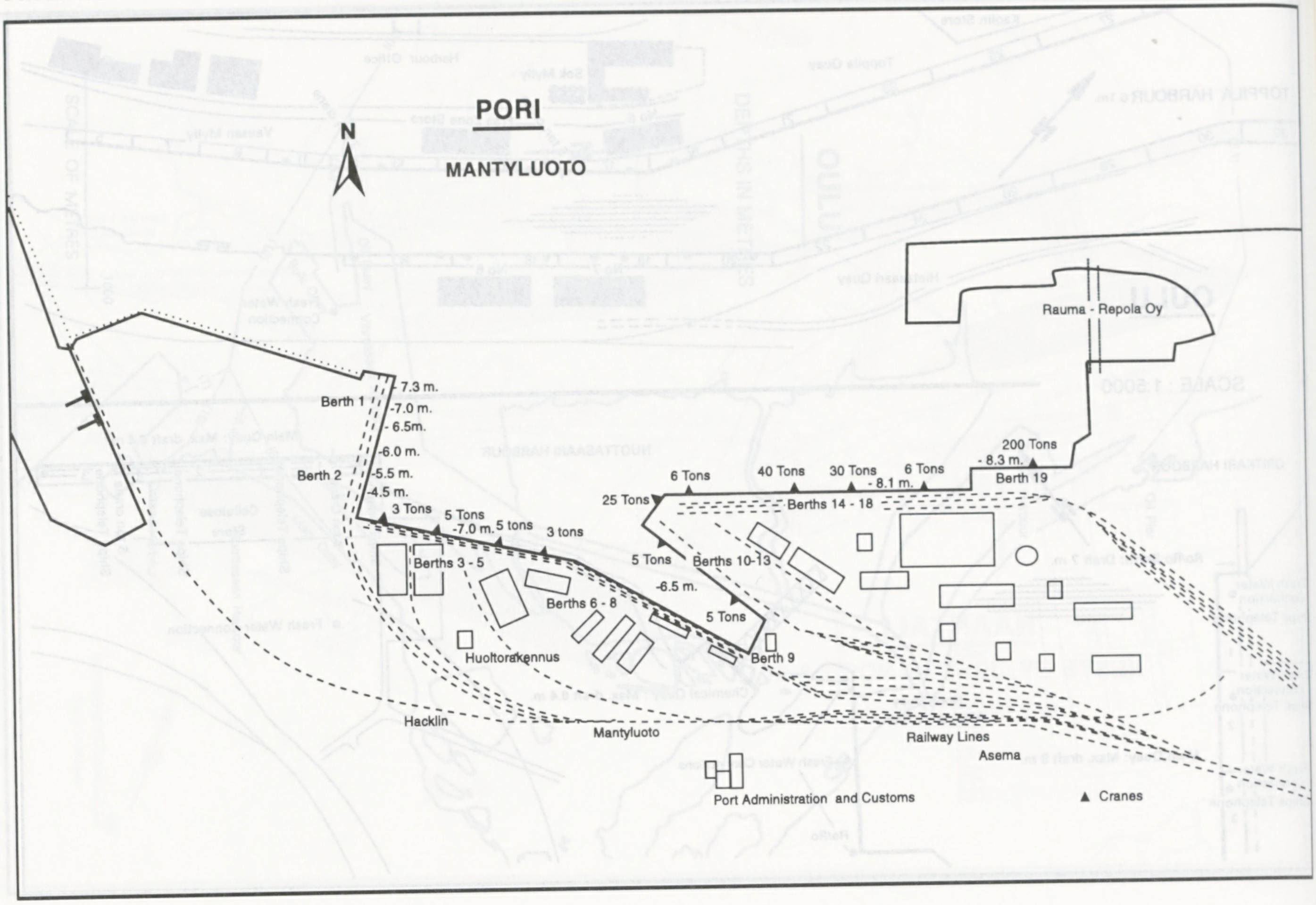
DEPTHS IN METRES

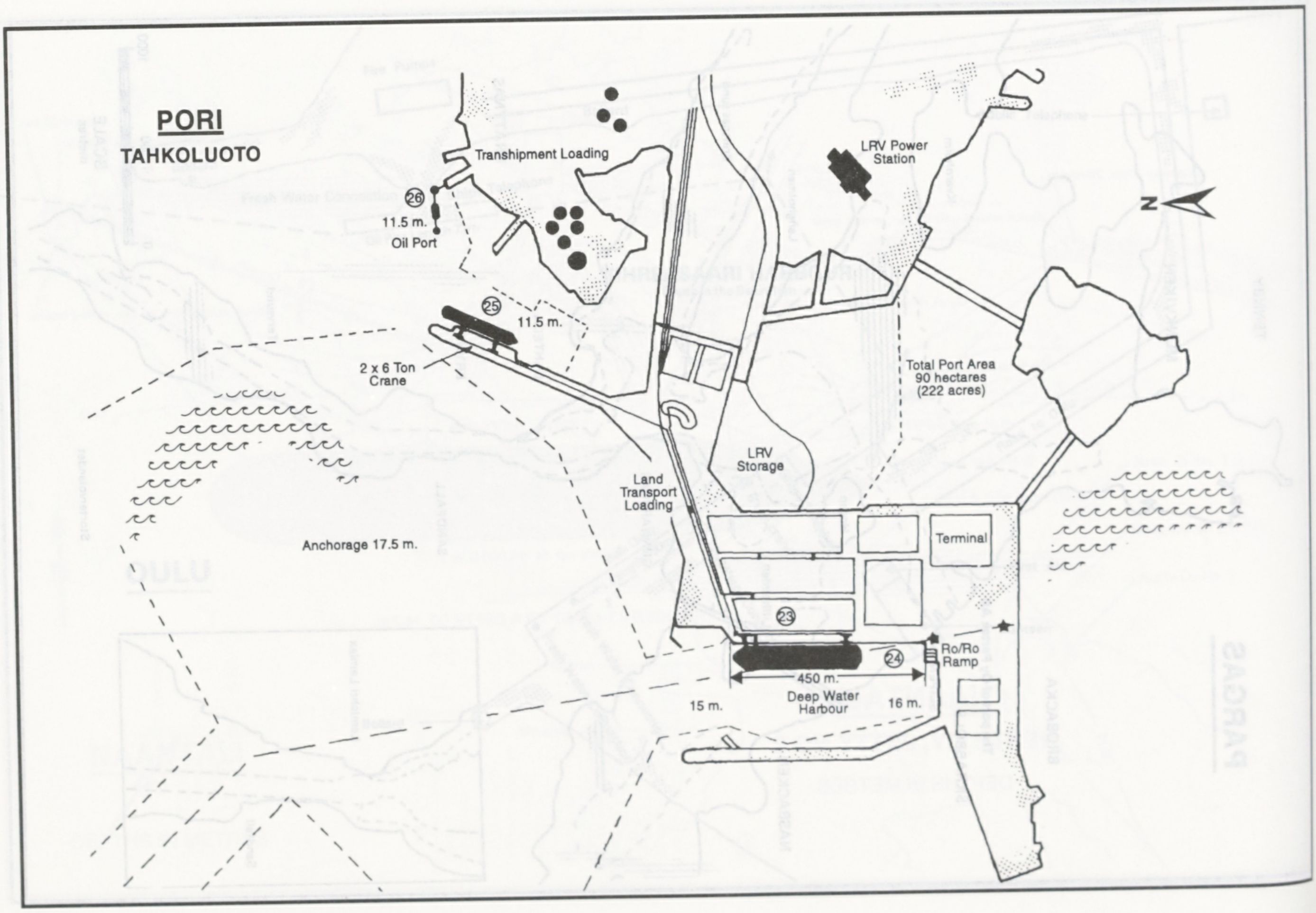

OULU
DEPTHS IN METRES
N
SCALE OF METRES
0
1000
(10)
(10)
(10)
(7)
(10)
(6.4)
(6.4)
(6.1)
Oil Quay
Bulk Quay
Vihreasaari Harbour
Oritkari Harbour
Nuottasaari Harbour
Main Quay
Toppila Harbour
Oil Pier

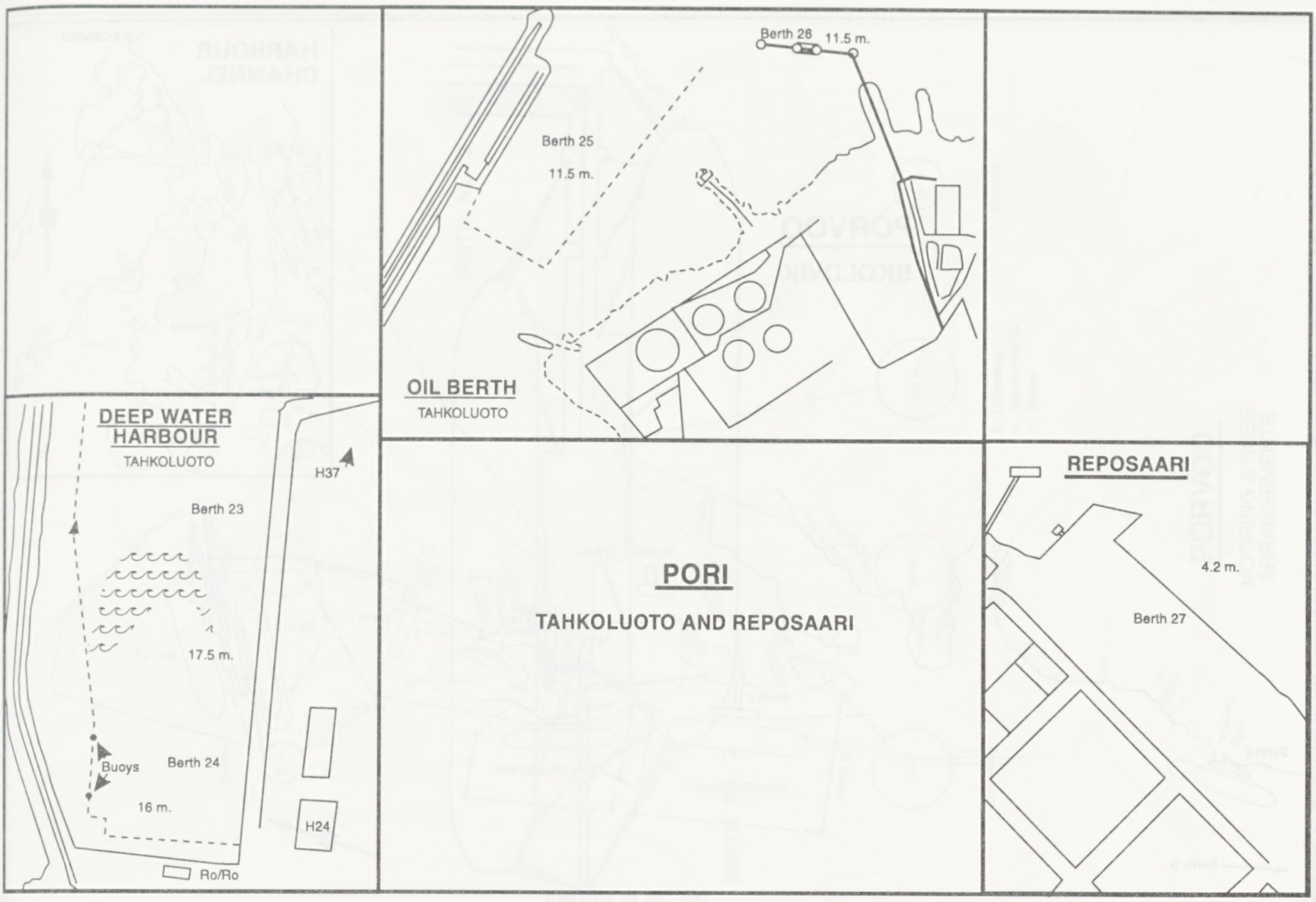

Fire Pumps
Bollard
Bollard
Fresh Water Connection
Ships Telephone
Oil Pier Length 72m
Public Telephone
VIHREASAARI HARBOUR
Depth in the Basin 10m
Bollard
Road to Oulu
Ships Telephone
6 ton crane
Bulk Quay
Length 150m
2
1
Fresh Water Connection
Fresh Water Connection
Fresh Water Connection
First Aid
Canteen
Bollard
OULU

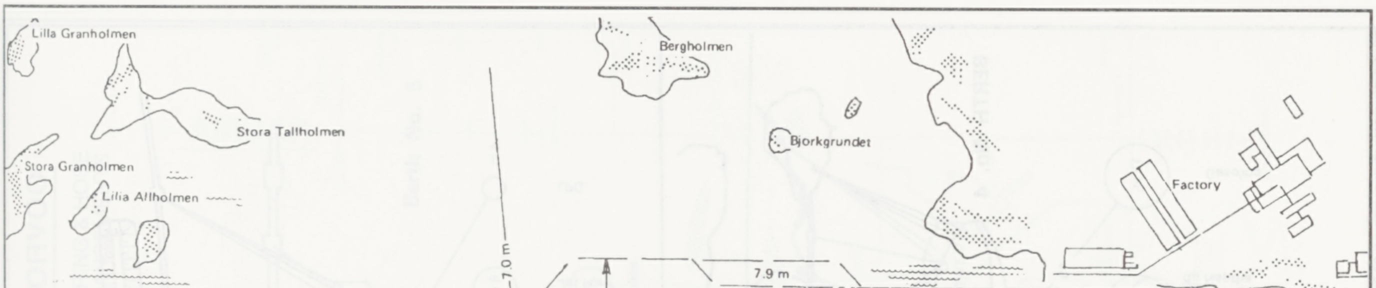

Kaolin Store
Toppila Quay
TOPPILA HARBOUR 6.1m.
Harbour Office
Sok Mylly
No 5
5 ton crane
Free Zone Store
3 ton crane
Vaasan Mylly
27
25
23
21
19
17
15
13
11
9
7
5
32
30
28
26
24
22
20
18
16
14
No 7
No 6
Hietasaari Quay
Fresh Water Connection
OULU
SCALE : 1:5000
ORITKARI HARBOUR
NUOTTASAARI HARBOUR
Main Quay: Max. draft 6.4 m.
1
2
3
Ships Telephone
8 ton Crane
Ships Telephone
Cellulose Store
Ships Telephone
5 ton crane
Ships Telephone
Ro/Ro Berth: Draft 7 m.
Fresh Water Connection
Ships Telephone
Fresh Water Connection
Ships Telephone
Fresh Water Connection
Ships Telephone
Main Quay: Max. draft 9 m
Fresh Water Connection
Chemical Quay : Max. draft 6.4 m.
North Quay
Max. draft 10m.
Fresh Water Connections
Ro/Ro

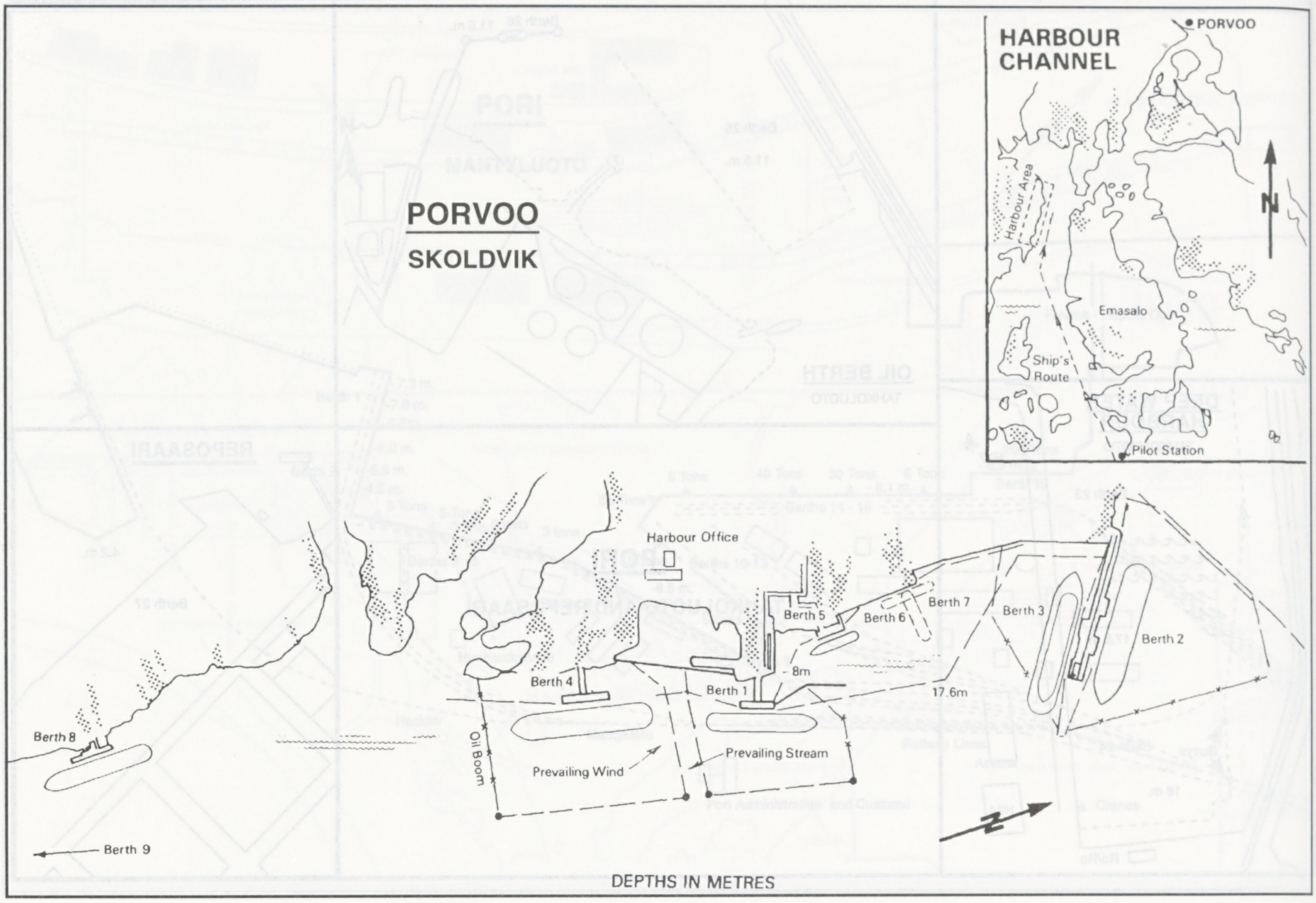

PARGAS
TENNBY
MUNKVIKEN
Kvarnholm
Langholmen
Brattnas sund
BRATTNAS
LAHTELA
BRYNAS
Tervsund
SANDFALL
Stortervolandet
GUNNARSNAS
Hogen
Lillholmen
NASBACKEN
SLIPEN
SKRABBOLE
The port of Oy Partek AB
BROBACKA
SCALE metres
0
500
1000
Lemlahti Lemlax
Sandfall

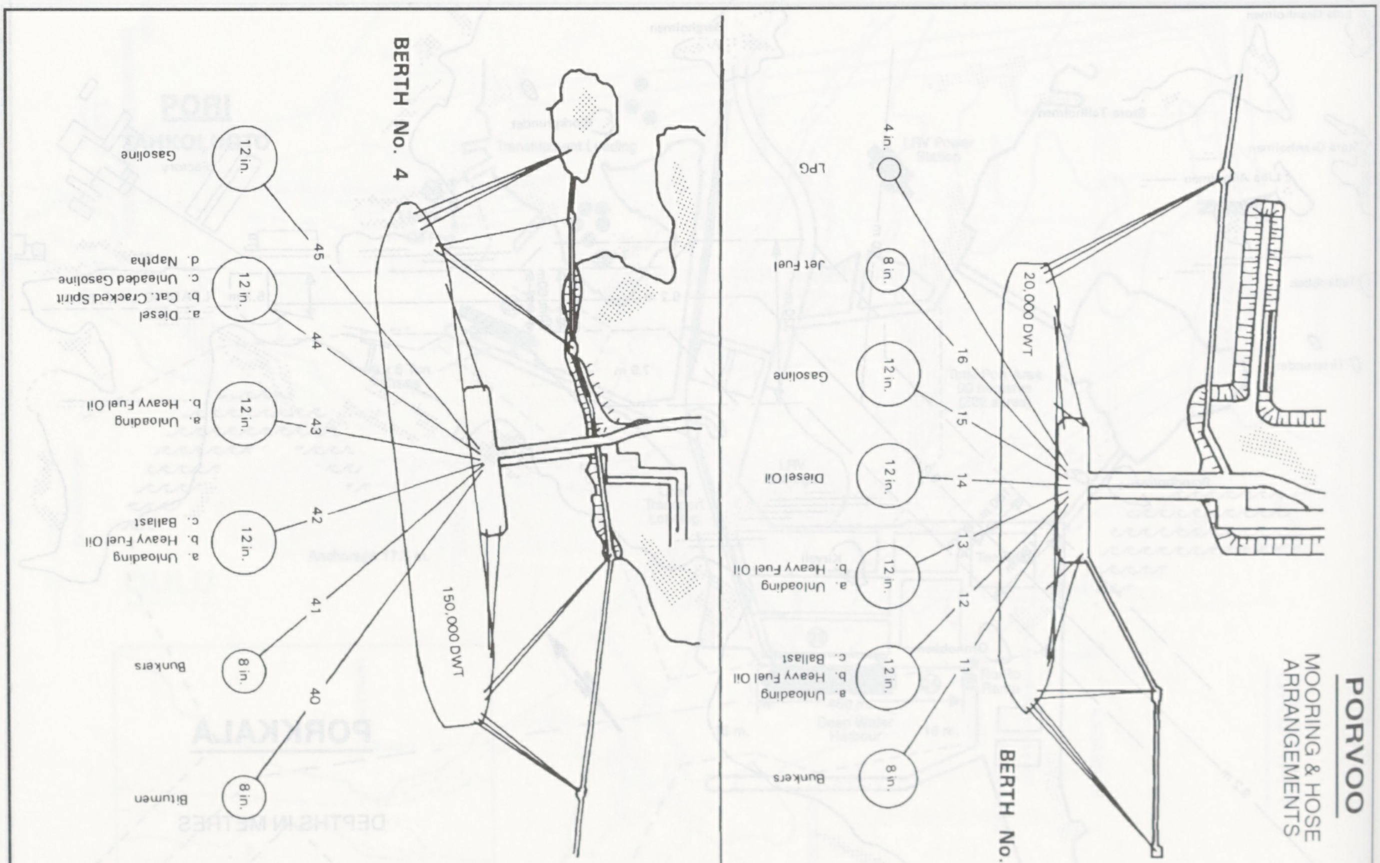

PORI
MANTYLUOTO
N
Rauma - Repola Oy
Berth 1
- 7.3 m.
-7.0 m.
- 6.5m.
-6.0 m.
Berth 2
-5.5 m.
-4.5 m.
3 Tons
5 Tons
-7.0 m.
5 tons
3 tons
Berths 3 - 5
Berths 6 - 8
Huoltorakennus
5 Tons
Berths 10-13
-6.5 m.
5 Tons
Berth 9
25 Tons
6 Tons
40 Tons
30 Tons
- 8.1 m.
6 Tons
Berths 14 - 18
200 Tons
- 8.3 m.
Berth 19
Hacklin
Mantyluoto
Railway Lines
Asema
Port Administration and Customs
▲ Cranes


PORI
TAHKOLUOTO
Transhipment Loading
26
11.5 m.
Oil Port
25
11.5 m.
2 x 6 Ton Crane
LRV Power Station
N
Total Port Area 90 hectares (222 acres)
LRV Storage
Land Transport Loading
Anchorage 17.5 m.
Terminal
23
24
Ro/Ro Ramp
450 m.
15 m.
Deep Water Harbour
16 m.


OIL BERTH
TAHKOLUOTO
Berth 25
11.5 m.
Berth 26
11.5 m.
DEEP WATER HARBOUR
TAHKOLUOTO
H37
Berth 23
17.5 m.
Buoys
Berth 24
16 m.
H24
Ro/Ro
PORI
TAHKOLUOTO AND REPOSAARI
REPOSAARI
4.2 m.
Berth 27

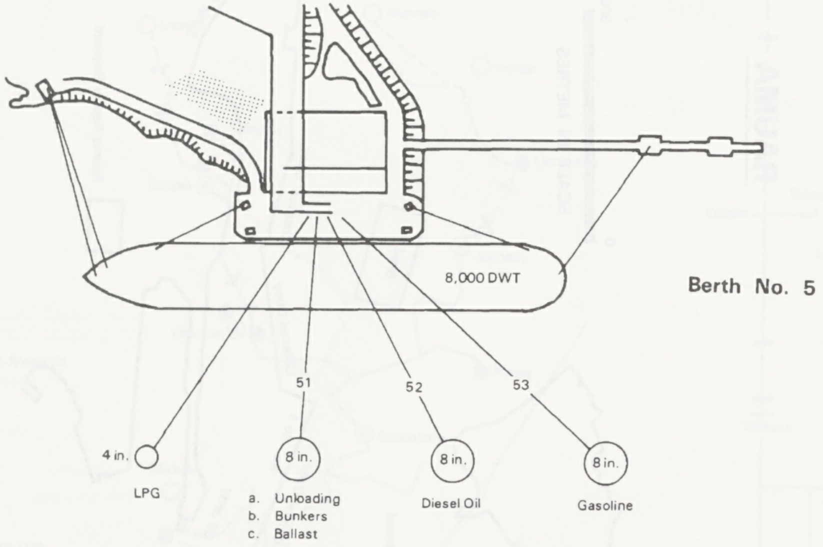

Lilla Granholmen
Stora Tallholmen
Stora Granholmen
Lilla Alholmen
Tallkobben
Tirsgrundet
Bergholmen
Bjorkgrundet
Factory
7.0 m
320 m
7.9 m
9.2 m
120 m
60 m
60 m
5.3 m
LEADING LINE, RED
7.9 m
9.2 m
100 m
80 m
180 m
Brandholmen
Kirvell
Ornkobben
9.2 m
PORKKALA
DEPTHS IN METRES

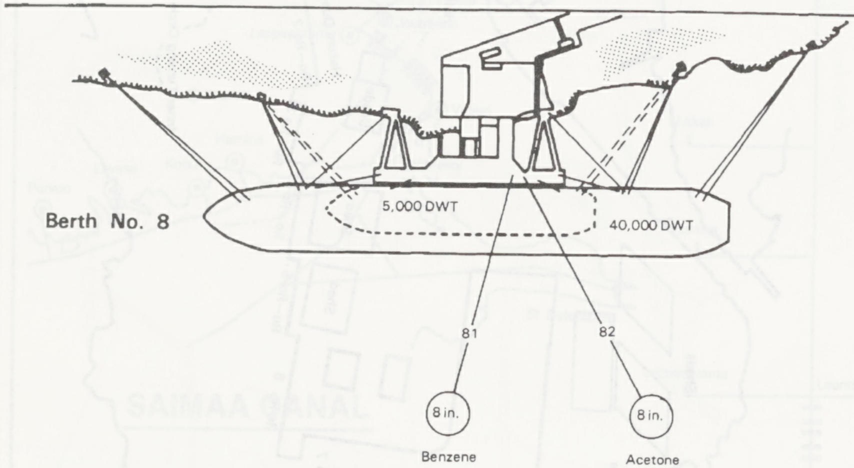

PORVOO
SKOLDVIK
HARBOUR CHANNEL
PORVOO
Harbour Area
Emasalo
Ship's Route
Pilot Station
N
Harbour Office
Berth 1
Berth 2
Berth 3
Berth 4
Berth 5
Berth 6
Berth 7
Berth 8
Berth 9
8m
17.6m
Oil Boom
Prevailing Wind
Prevailing Stream
N
DEPTHS IN METRES


PORVOO
MOORING & HOSE ARRANGEMENTS
BERTH No. 1
20,000 DWT
4 in. LPG
8 in. Jet Fuel
12 in. Gasoline
12 in. Diesel Oil
12 in. a. Unloading b. Heavy Fuel Oil
12 in. a. Unloading b. Heavy Fuel Oil c. Ballast
8 in. Bunkers
16
15
14
13
12
11
BERTH No. 4
150,000 DWT
12 in. Gasoline
12 in. a. Diesel b. Cat. Cracked Spirit c. Unleaded Gasoline d. Naptha
12 in. a. Unloading b. Heavy Fuel Oil
12 in. a. Unloading b. Heavy Fuel Oil c. Ballast
8 in. Bunkers
8 in. Bitumen
45
44
43
42
41
40

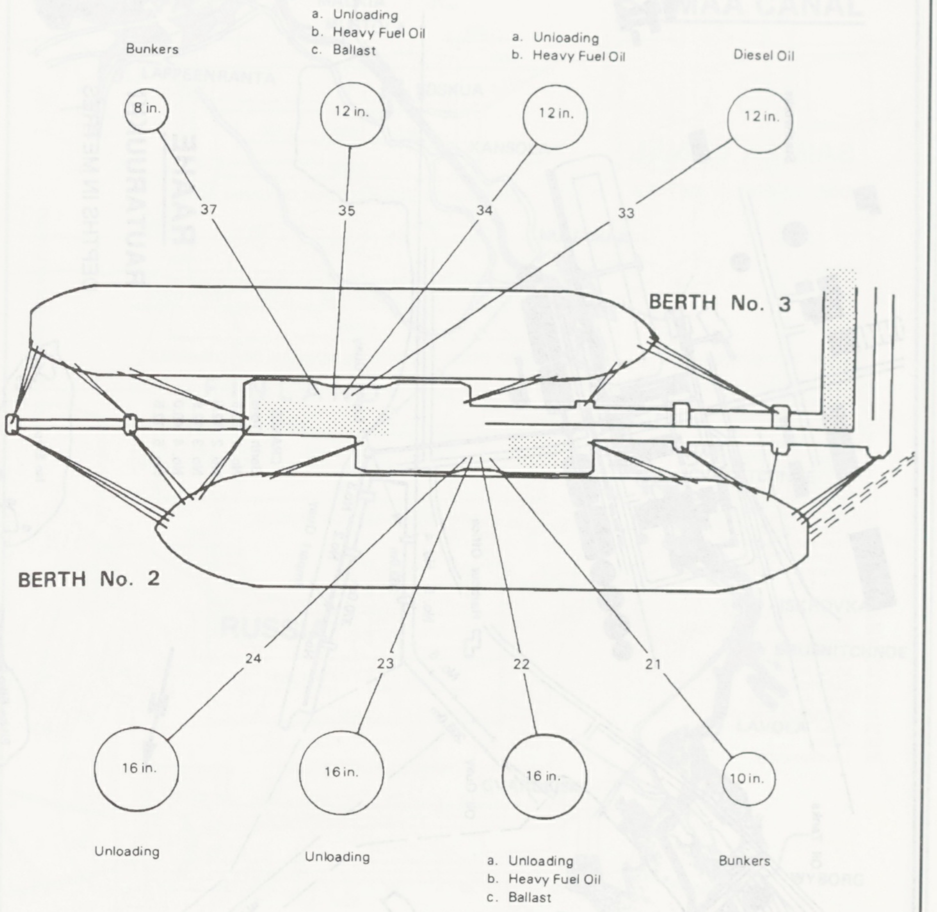
PORVOO

MOORING & HOSE ARRANGEMENTS


8,000 DWT
Berth No. 5
51
52
53
4 in.
LPG
8 in.
a. Unloading
b. Bunkers
c. Ballast
8 in.
Diesel Oil
8 in.
Gasoline

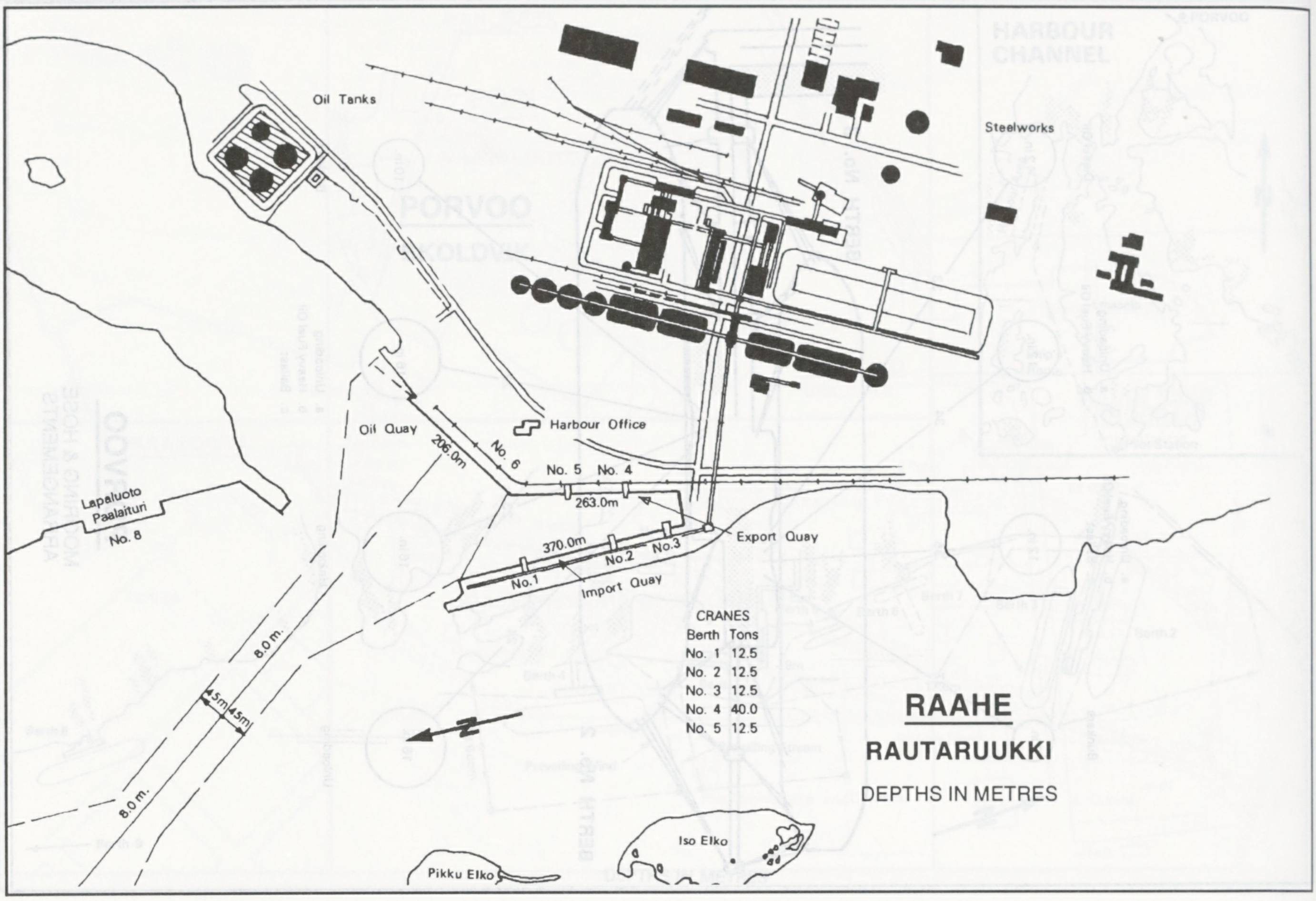

Berth No. 8
5,000 DWT
40,000 DWT
81
82
8 in.
Benzene
8 in.
Acetone

Also
1 x 6 in. hose for Phenol
1 x 8 in. hose for Propylene
1 x 4 in. hose for Oily Water


Bunkers
a. Unloading
b. Heavy Fuel Oil
c. Ballast
a. Unloading
b. Heavy Fuel Oil
Diesel Oil
8 in.
12 in.
12 in.
12 in.
37
35
34
33
BERTH No. 3
BERTH No. 2
24
23
22
21
16 in.
16 in.
16 in.
10 in.
Unloading
Unloading
a. Unloading
b. Heavy Fuel Oil
c. Ballast
Bunkers

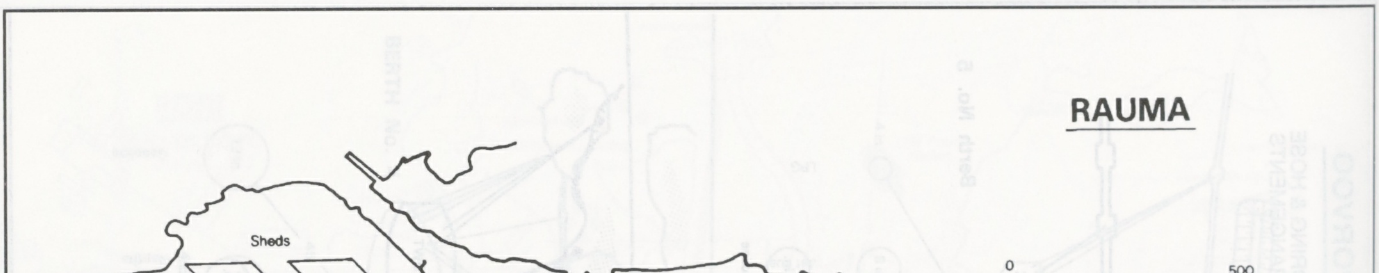
PORVOO

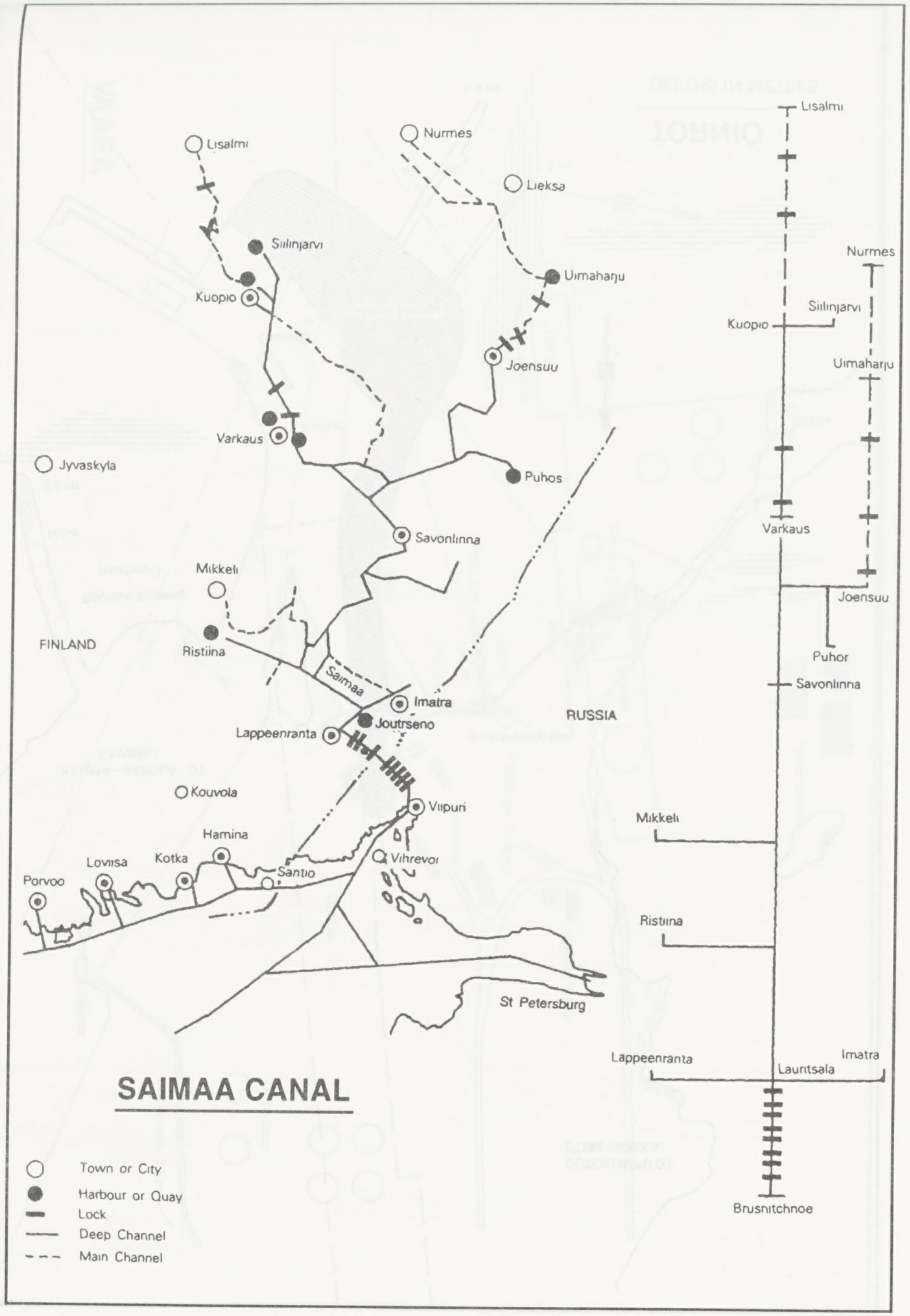
MOORING & HOSE ARRANGEMENTS


Oil Tanks
Steelworks
Harbour Office
Oil Quay
No. 6
206.0m
No. 5
No. 4
263.0m
Export Quay
370.0m
No.3
No.2
No.1
Import Quay
Lapaluoto Paalaituri
No. 8
8.0 m.
45m
45m
8.0 m.
Iso Elko
Pikku Elko
RAAHE
RAUTARUUKKI
DEPTHS IN METRES

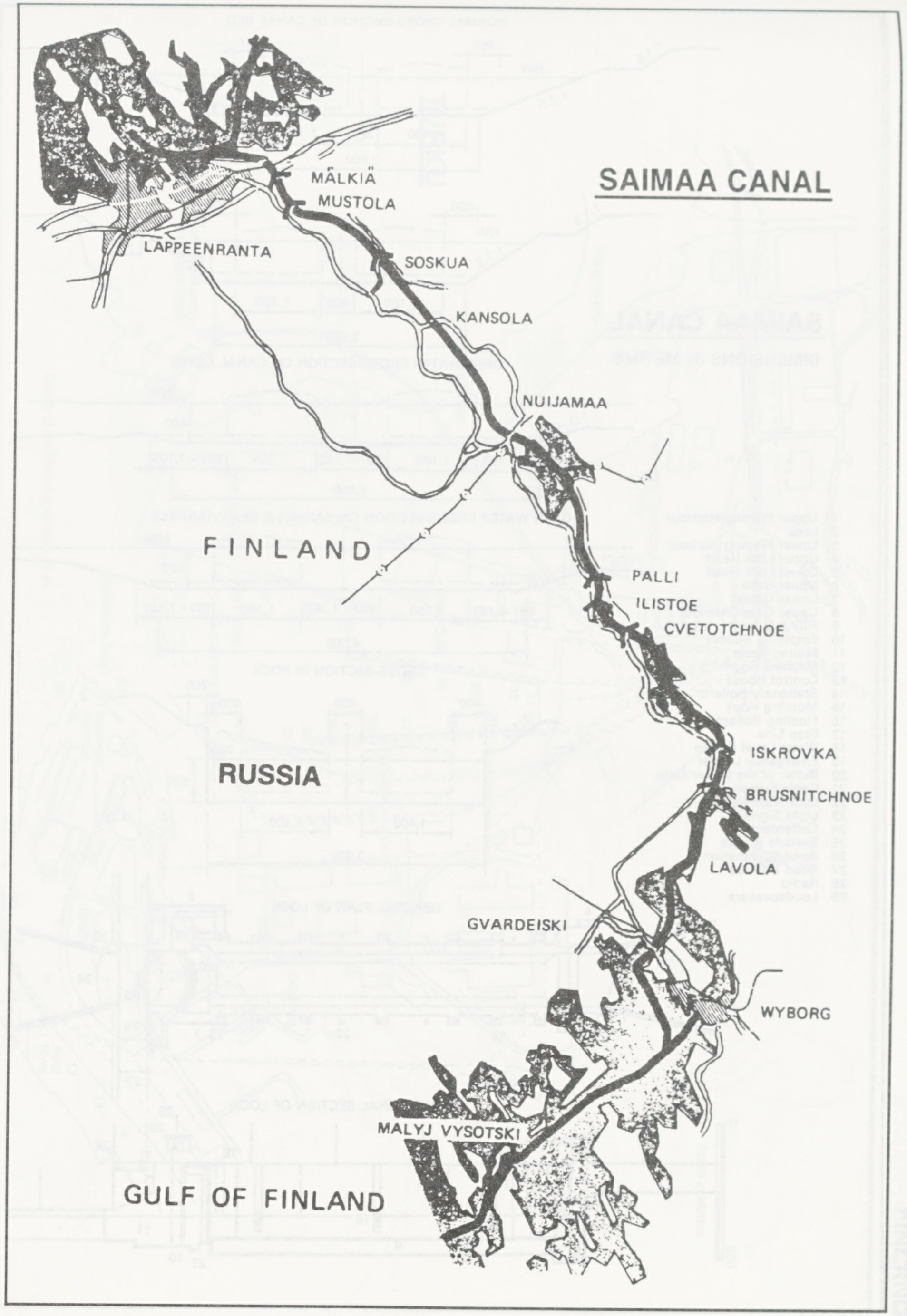
CRANES

Berth	Tons
No. 1	12.5
No. 2	12.5
No. 3	12.5
No. 4	40.0
No. 5	12.5


RAUMA
0
500
SCALE IN METRES
Sheds
Grain Storage
Hollming Shipyard
Shed
Sheds
Shed
Shed
Ro/Ro 7
Ro-Ro 6
Ro—Ro 5
Ro—Ro 4
Ro—Ro 3
Ro—Ro 2
Hakuni Quay
Central Quay
Ro—Ro 1
Laitsaari Quay
Chemical Quay
Kallistus Quay
Suoja Quay
Oil Jetty
Inner Turning Circle
Rauma Repola Shipyard
N


SAIMAA CANAL

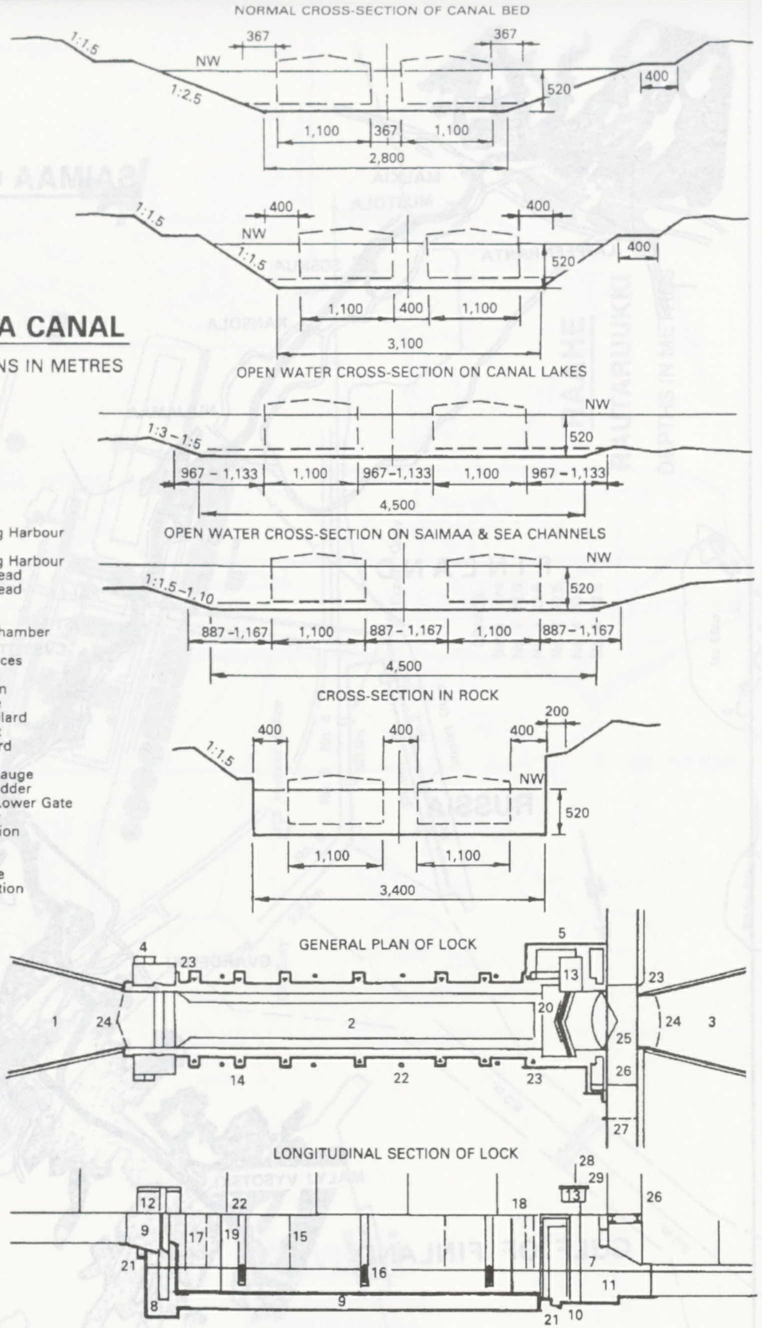
Iisalmi
Nurmes
Lieksa
Siilinjarvi
Uimaharju
Kuopio
Joensuu
Varkaus
Jyvaskyla
Puhos
Savonlinna
Mikkeli
FINLAND
Ristiina
Saimaa
Imatra
Joutseno
Lappeenranta
RUSSIA
Kouvola
Viipuri
Hamina
Loviisa
Kotka
Porvoo
Santio
Vihrevoi
St Petersburg
Iisalmi
Nurmes
Siilinjarvi
Kuopio
Uimaharju
Varkaus
Joensuu
Puhor
Savonlinna
Mikkeli
Ristiina
Lappeenranta
Lauritsala
Imatra
Brusnitchnoe
Town or City
Harbour or Quay
Lock
Deep Channel
Main Channel


SAIMAA CANAL

MÄLKIÄ
MUSTOLA
LAPPEENRANTA
SOSKUA
KANSOLA
NUIJAMAA
FINLAND
PALLI
ILISTOE
CVETOTCHNOE
RUSSIA
ISKROVKA
BRUSNITCHNOE
LAVOLA
GVARDEISKI
WYBORG
MALYJ VYSOTSKI
GULF OF FINLAND

SAIMAA CANAL

DIMENSIONS IN METRES


NORMAL CROSS-SECTION OF CANAL BED

OPEN WATER CROSS-SECTION ON CANAL LAKES

OPEN WATER CROSS-SECTION ON SAIMAA & SEA CHANNELS

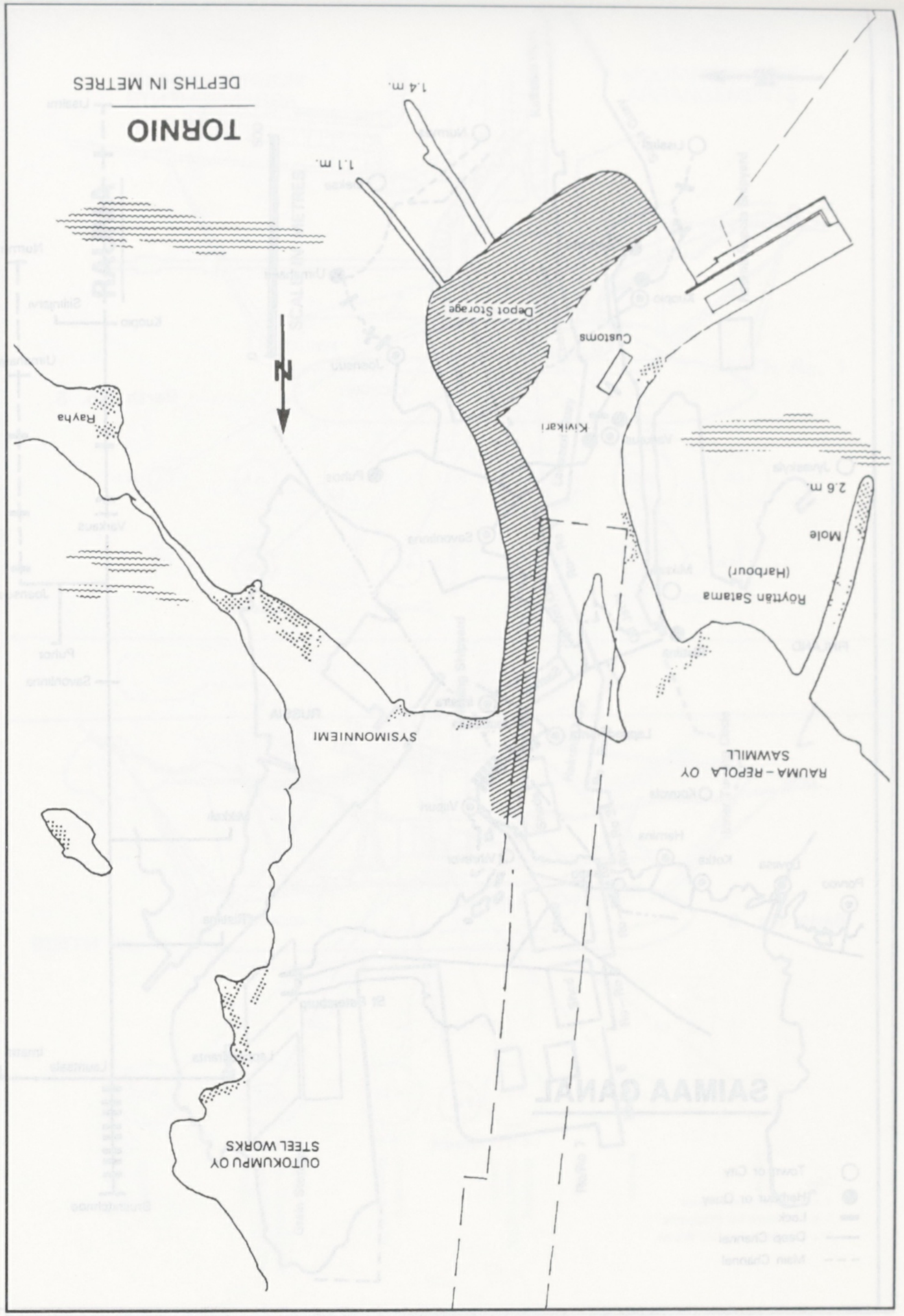
CROSS-SECTION IN ROCK

GENERAL PLAN OF LOCK

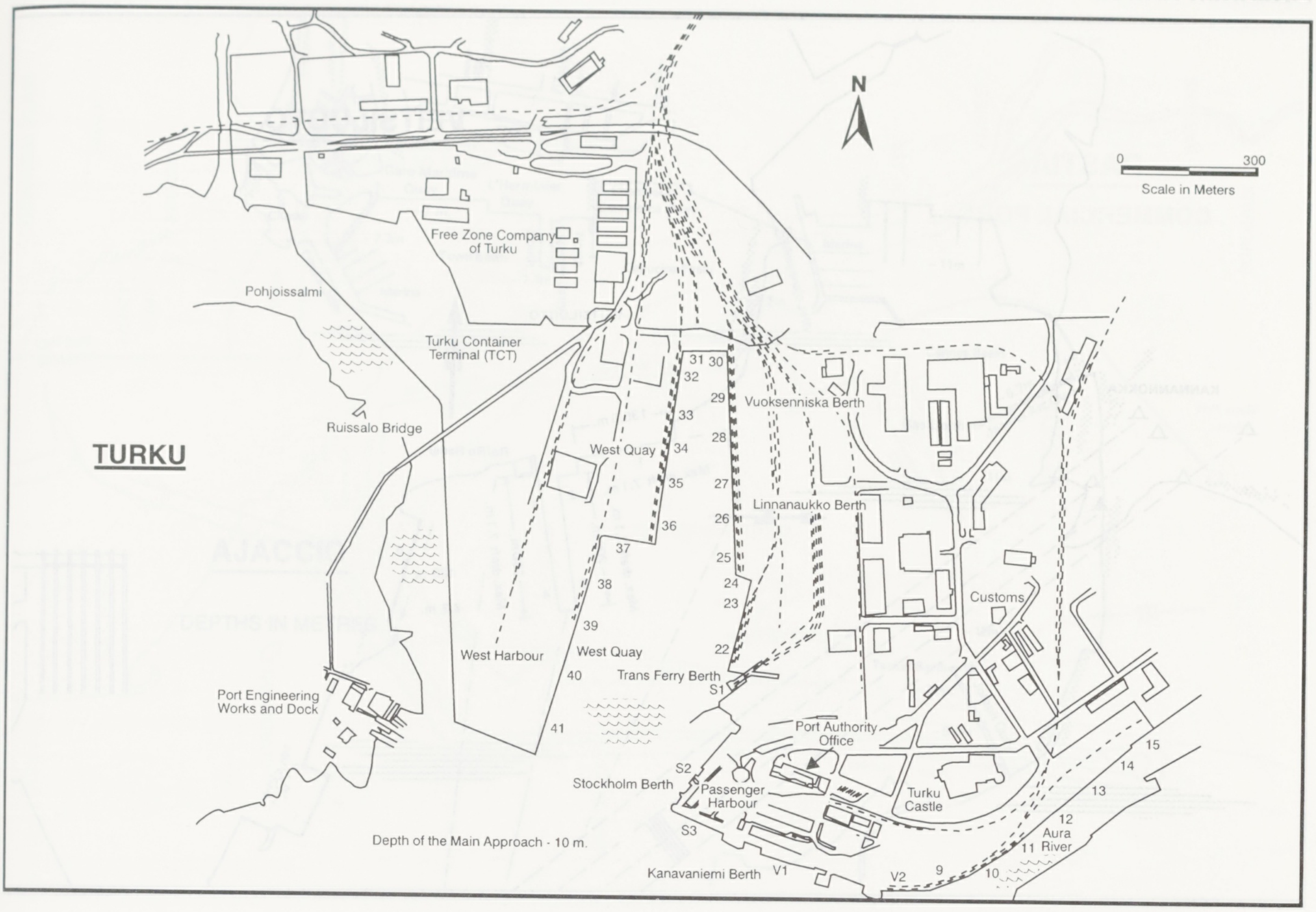
LONGITUDINAL SECTION OF LOCK

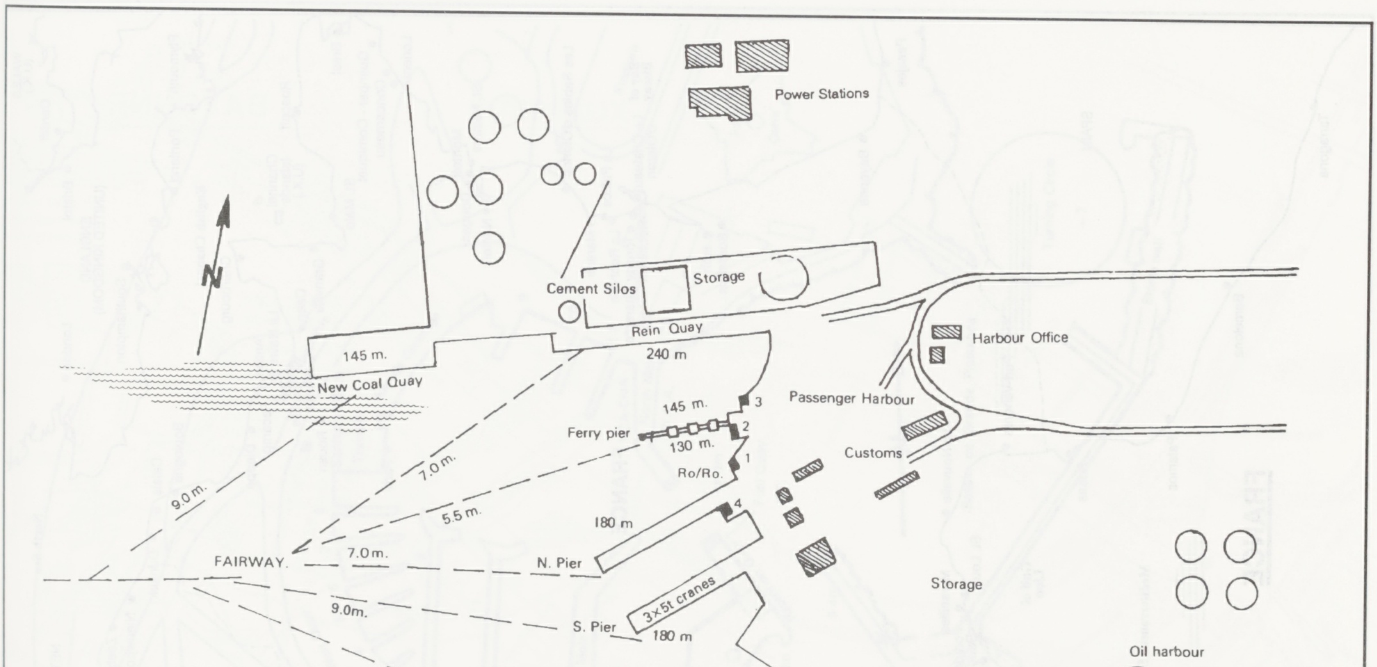
1:1.5
367
NW
1:2.5
520
400
1,100
2,800
1:1.5
3,100
1:3 – 1:5
967 – 1,133
4,500
1:1.5 – 1:10
887 – 1,167
200
3,400

1 Upper Waiting Harbour
2 Lock
3 Lower Waiting Harbour
4 Upper Lock Head
5 Lower Lock Head
6 Upper Gate
7 Lower Gates
8 Upper Gate Chamber
9 Filling Culvert
10 Emptying Sluices
11 Stilling Basin
12 Machine Room
13 Control House
14 Stationary Bollard
15 Mooring Hook
16 Floating Bollard
17 Stop Line
18 Water Level Gauge
19 Emergency Ladder
20 Buffer of the Lower Gate
21 Cable Subway
22 Lock Illumination
23 Light Signals
24 Cofferdam
25 Bascule Bridge
26 Road Illumination
27 Road Barriers
28 Radio
29 Loudspeakers

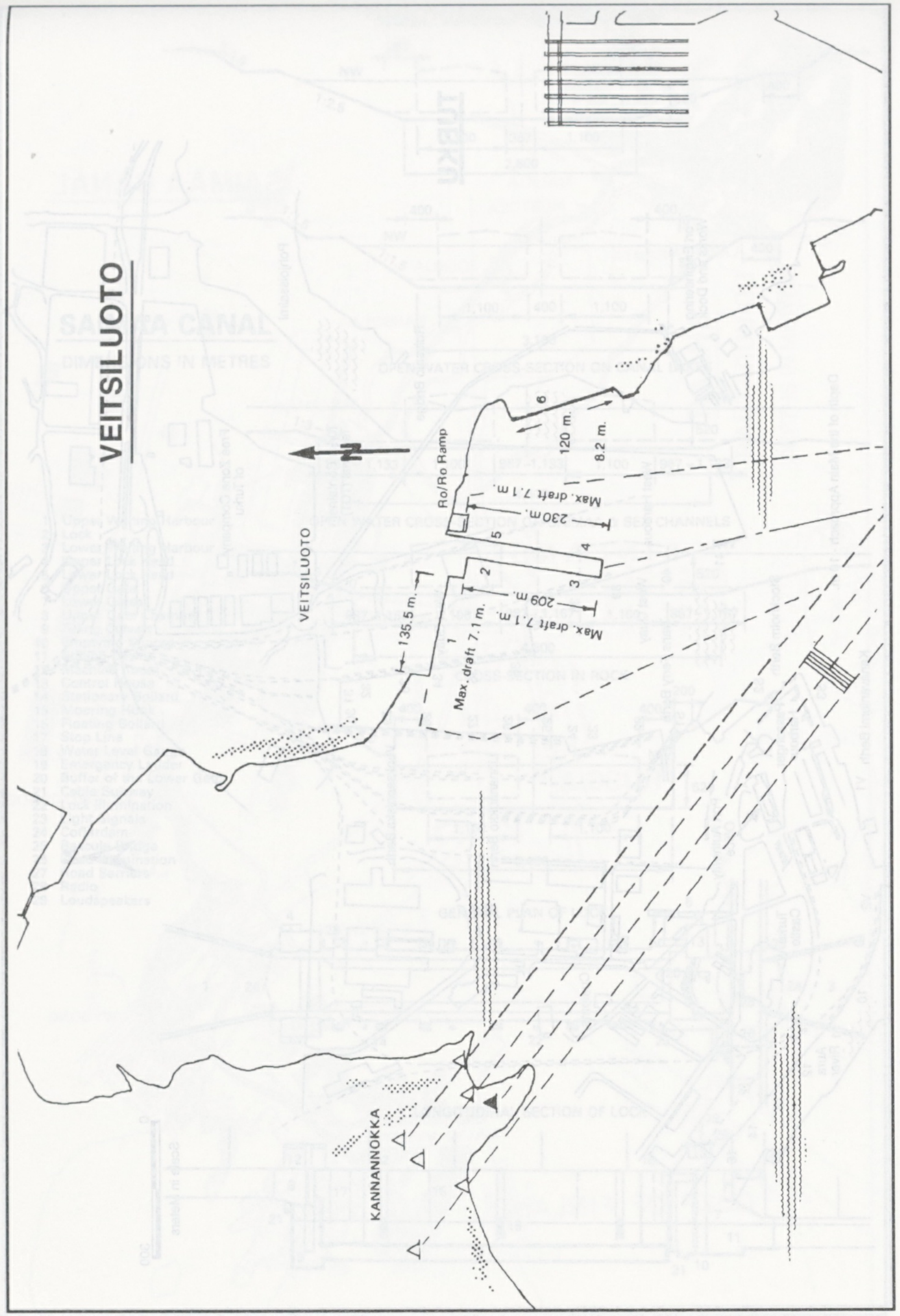


TORNIO
DEPTHS IN METRES
N
1.4 m.
1.1 m.
2.6 m.
Depot Storage
Customs
Kivikari
Räyhä
Mole
Röyttän Satama
(Harbour)
SYSMONNIEMI
RAUMA-REPOLA OY
SAWMILL
OUTOKUMPU OY
STEEL WORKS

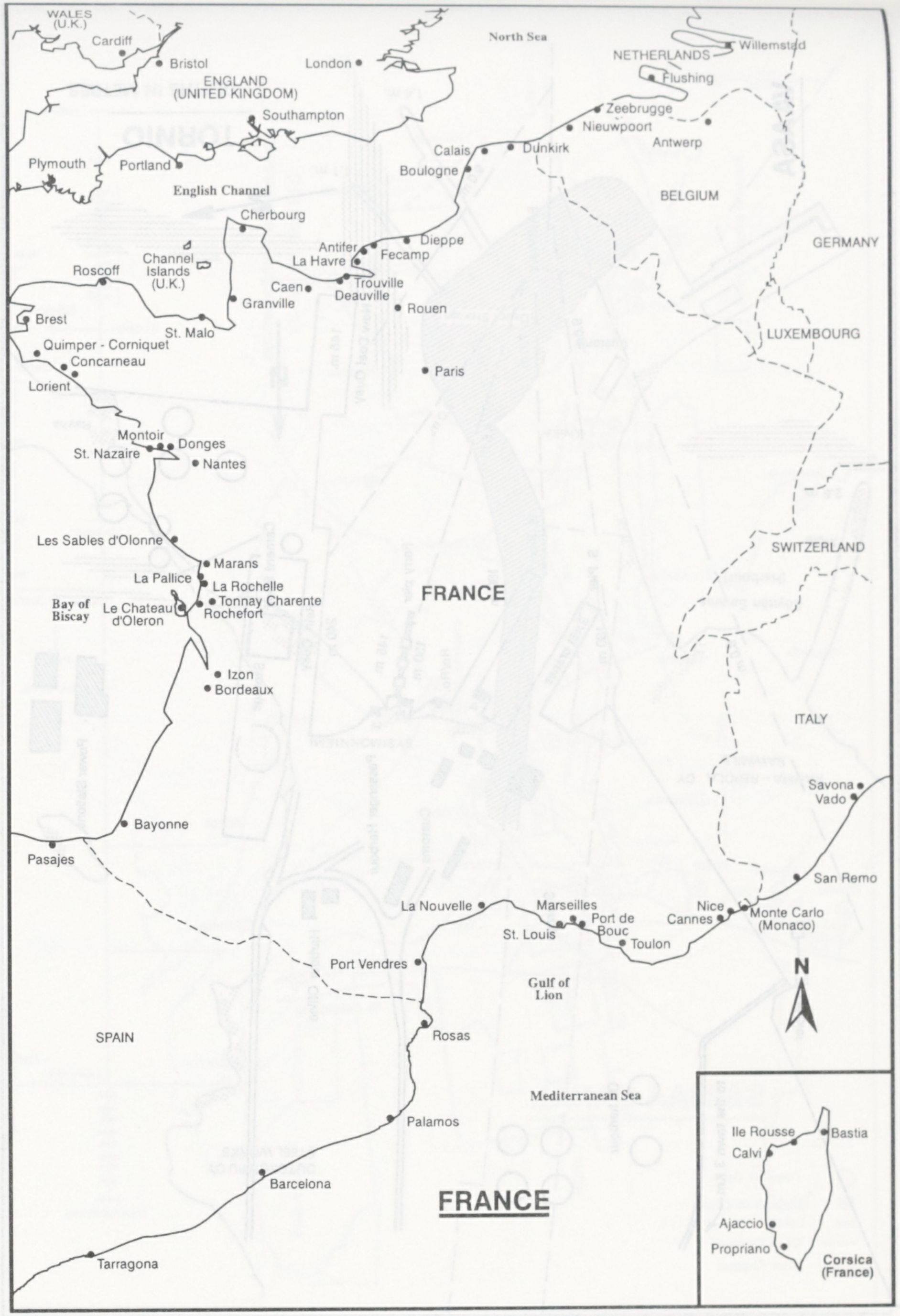

TURKU
N
0 300
Scale in Meters
Free Zone Company of Turku
Pohjoissalmi
Turku Container Terminal (TCT)
Ruissalo Bridge
West Quay
West Quay
West Harbour
Port Engineering Works and Dock
31 30
32
29
33
28
34
35
27
36
26
37
25
38
24
23
39
22
40
41
S1
S2
S3
Vuoksenniska Berth
Linnanaukko Berth
Customs
Trans Ferry Berth
Port Authority Office
Stockholm Berth
Passenger Harbour
Turku Castle
15
14
13
12
11
Aura River
10
9
V1
V2
Kanavaniemi Berth
Depth of the Main Approach - 10 m.

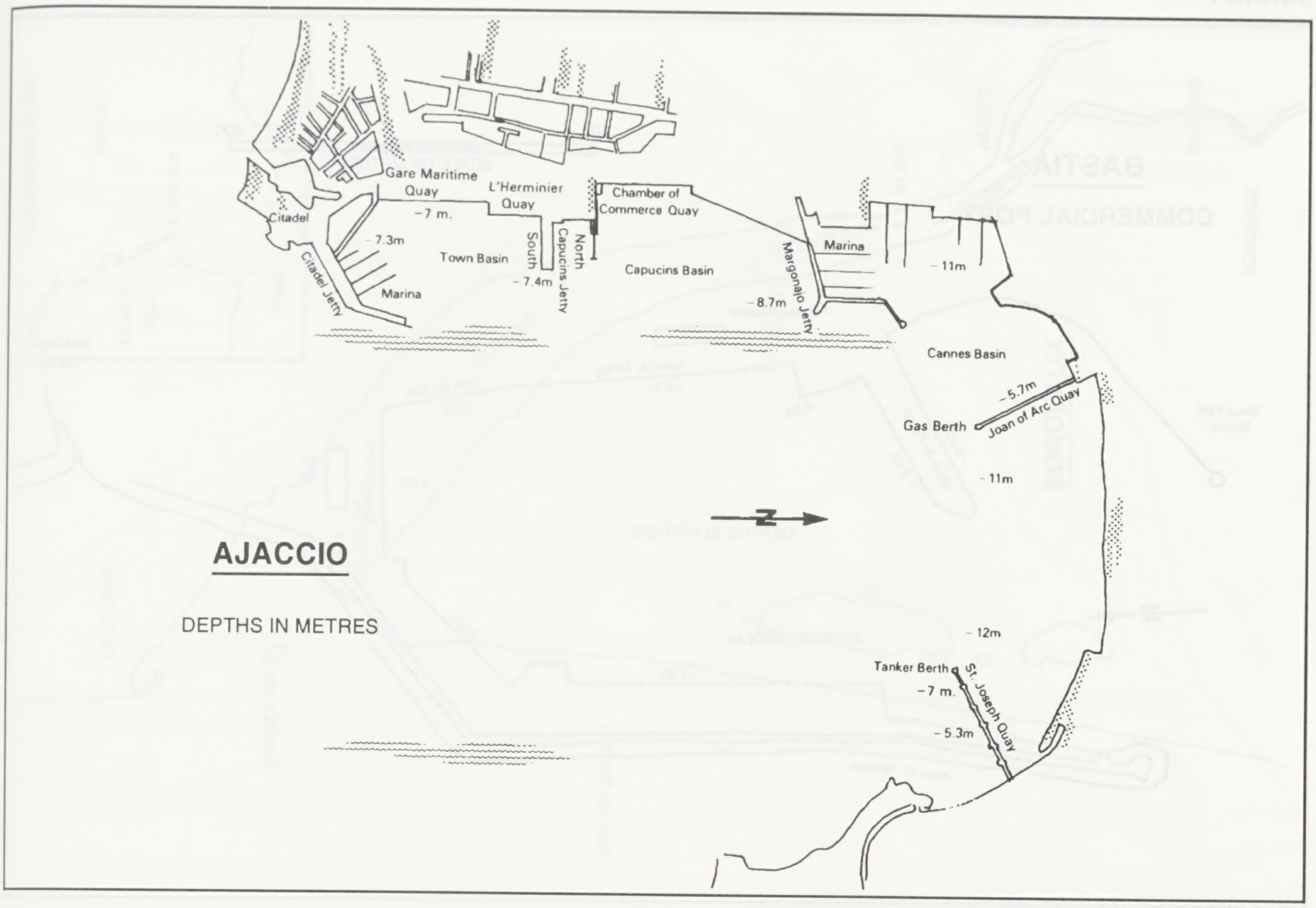

Power Stations
N
Cement Silos
Storage
Rein Quay
240 m
145 m.
New Coal Quay
Harbour Office
Passenger Harbour
145 m.
3
Ferry pier
2
130 m.
1
Ro/Ro.
Customs
7.0 m.
9.0 m.
5.5 m.
180 m
4
FAIRWAY.
7.0 m.
N. Pier
9.0 m.
S. Pier
3×5t cranes
180 m
Storage
Oil harbour
9.0 m.
to the town 3 Km
Oil-pier
VAASA

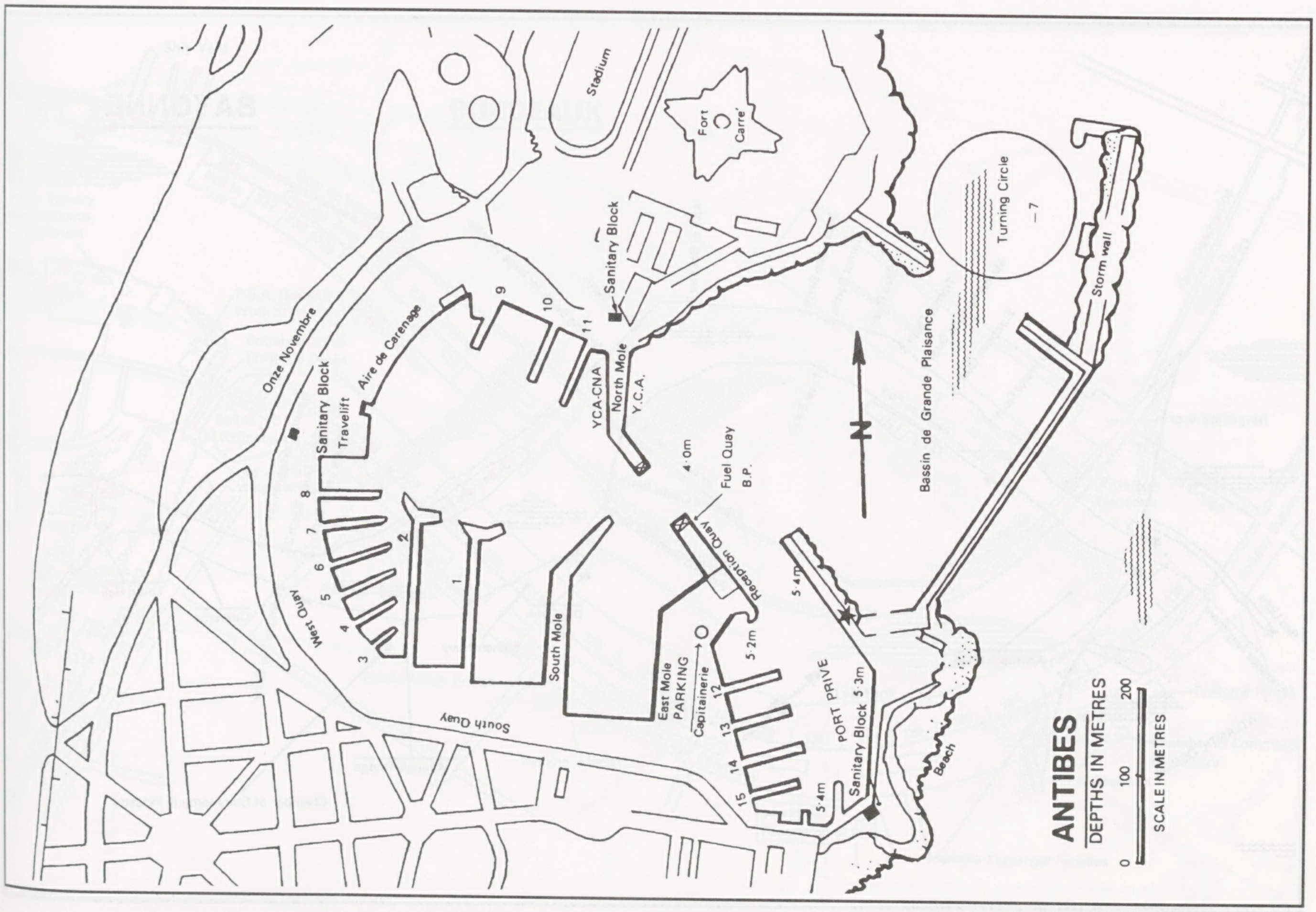
VEITSILUOTO

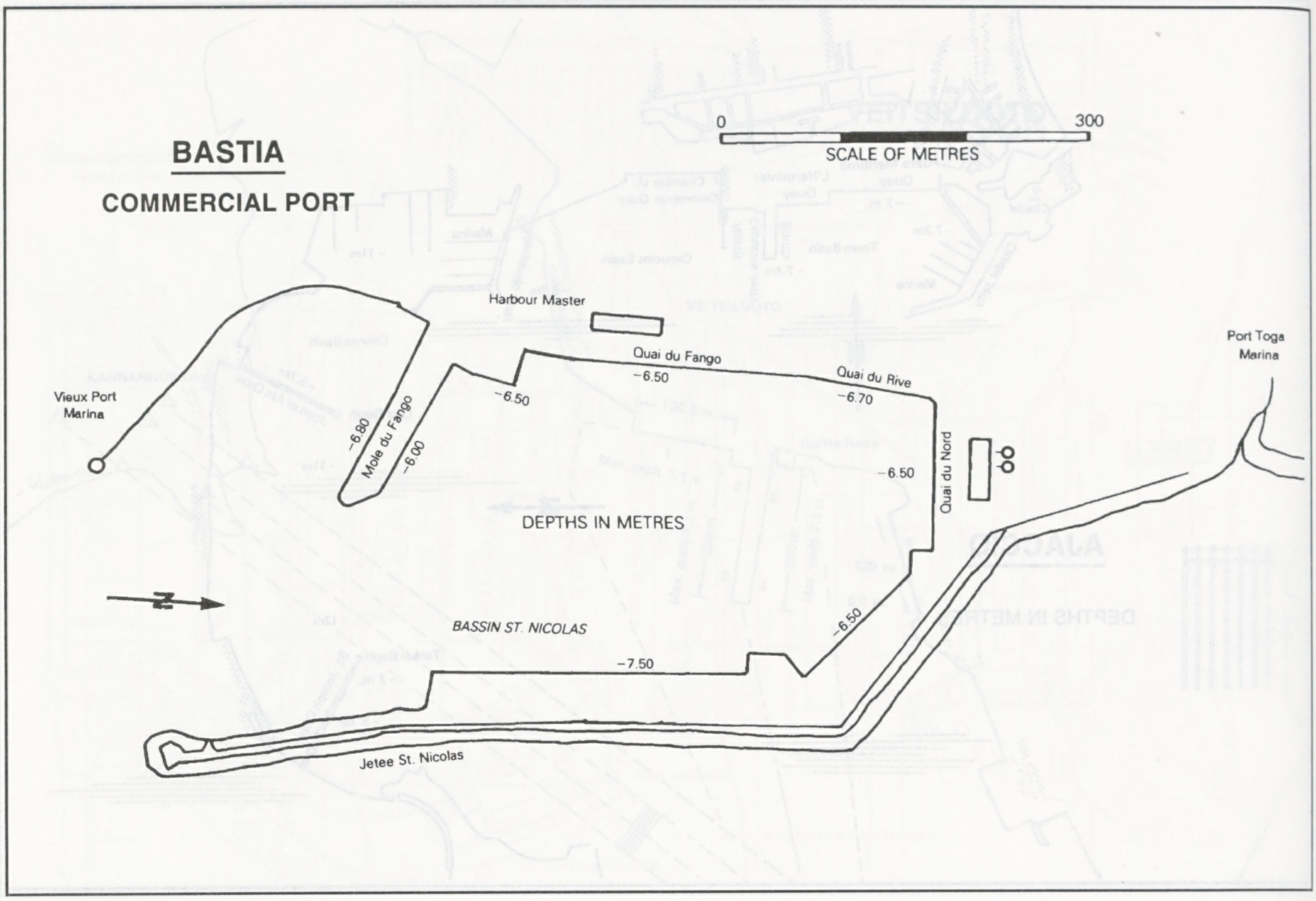

N
VEITSILUOTO
KANNANNOKKA
Ro/Ro Ramp
6
120 m.
8.2 m.
Max. draft 7.1 m.
230 m.
5
4
2
3
209 m.
Max. draft 7.1 m.
135.5 m.
1
Max. draft 7.1 m.

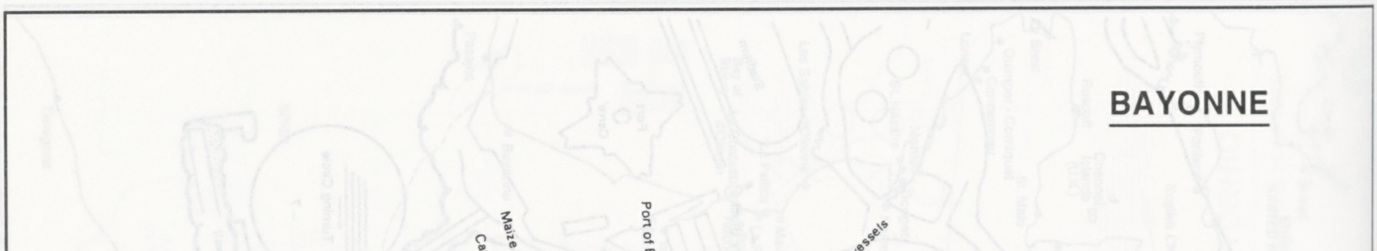
FRANCE

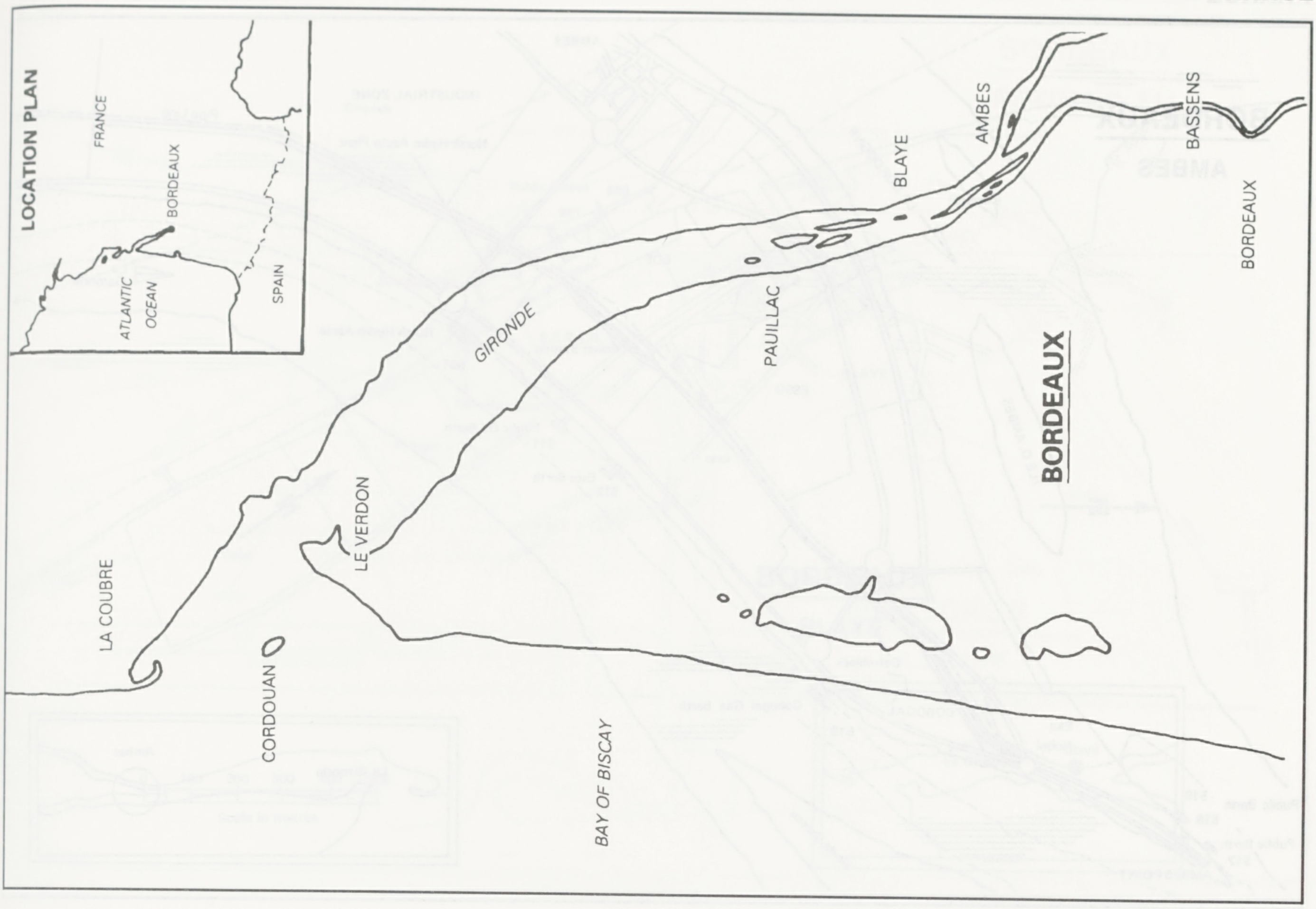

WALES (U.K.)
Cardiff
Bristol
ENGLAND (UNITED KINGDOM)
Southampton
London
North Sea
NETHERLANDS
Willemstad
Flushing
Zeebrugge
Nieuwpoort
Antwerp
Plymouth
Portland
English Channel
Calais
Dunkirk
Boulogne
BELGIUM
GERMANY
Cherbourg
Antifer
Dieppe
La Havre
Fecamp
Channel Islands (U.K.)
Roscoff
Caen
Trouville
Deauville
Granville
Rouen
Brest
St. Malo
LUXEMBOURG
Quimper - Corniquet
Concarneau
Paris
Lorient
Montoir
Donges
St. Nazaire
Nantes
SWITZERLAND
Les Sables d'Olonne
Marans
La Pallice
La Rochelle
Bay of Biscay
Le Chateau d'Oleron
Tonnay Charente
Rochefort
FRANCE
Izon
Bordeaux
ITALY
Savona
Vado
Bayonne
Pasajes
San Remo
La Nouvelle
Marseilles
Port de Bouc
St. Louis
Toulon
Nice
Cannes
Monte Carlo (Monaco)
Port Vendres
Gulf of Lion
N
Rosas
SPAIN
Mediterranean Sea
Palamos
Barcelona
Tarragona
Ile Rousse
Bastia
Calvi
Ajaccio
Propriano
Corsica (France)

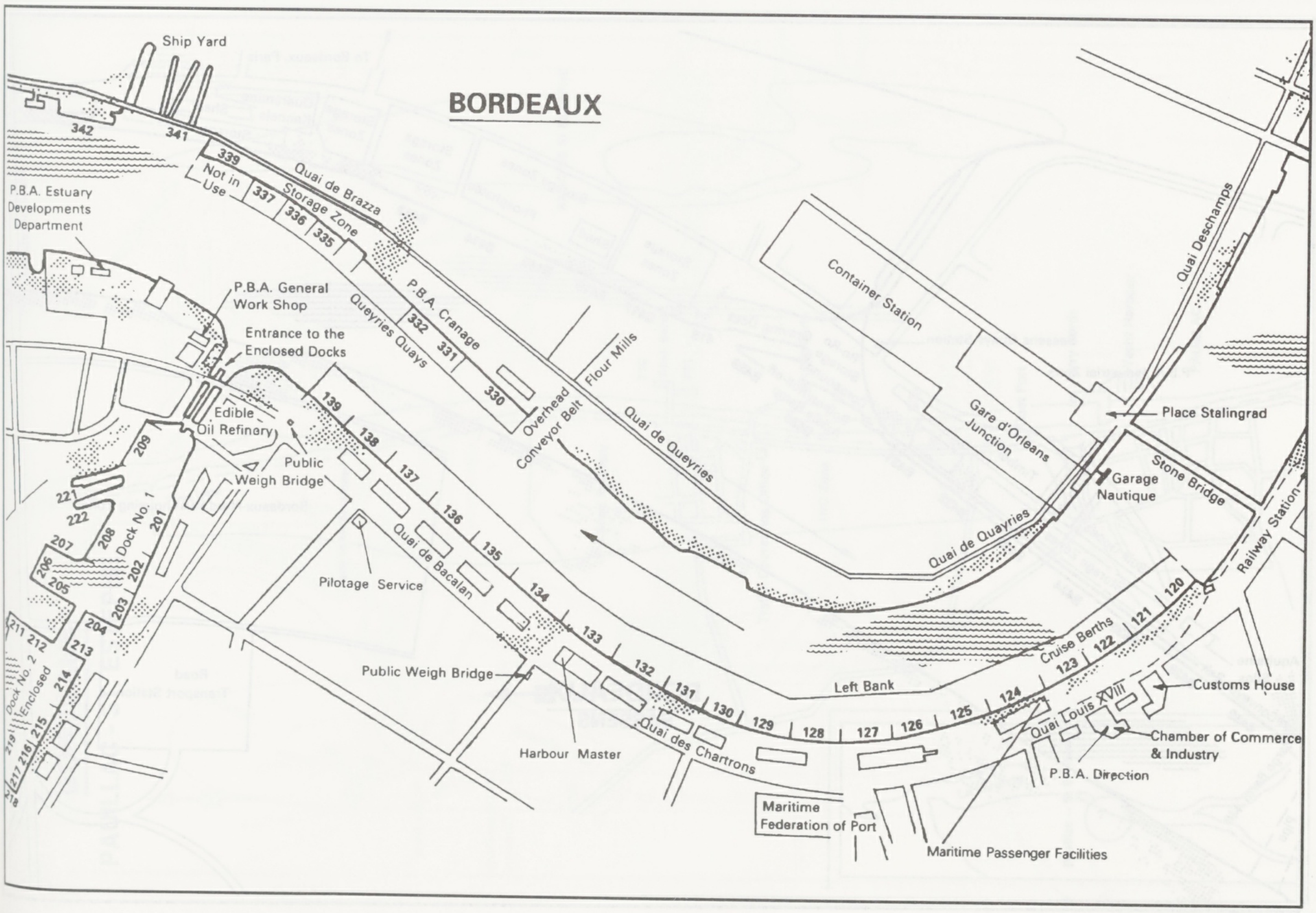

AJACCIO
DEPTHS IN METRES
Gare Maritime Quay
L'Herminier Quay
Chamber of Commerce Quay
Citadel
-7 m.
-7.3m
Town Basin
South
North Capucins Jetty
-7.4m
Capucins Basin
Citadel Jetty
Marina
Margonajo Jetty
-8.7m
Marina
-11m
Cannes Basin
-5.7m
Gas Berth
Joan of Arc Quay
-11m
N
-12m
Tanker Berth
-7 m.
St. Joseph Quay
-5.3m

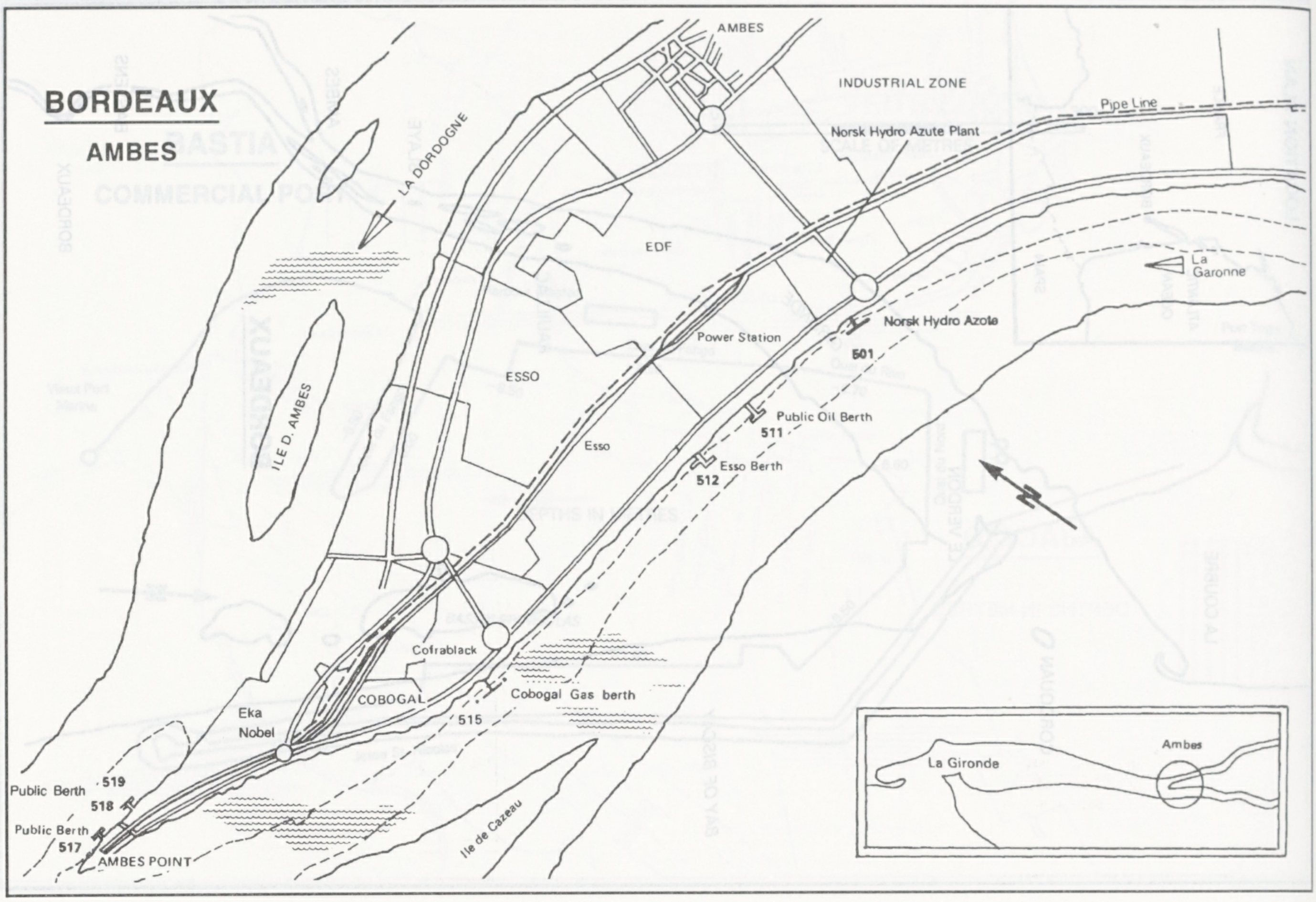

ANTIBES
DEPTHS IN METRES
SCALE IN METRES
0
100
200
Stadium
Fort Carré
Turning Circle
-7
Storm wall
Sanitary Block
9
10
11
Onze Novembre
Aire de Carenage
Sanitary Block
Travelift
YCA-CNA
North Mole
Y.C.A.
Bassin de Grande Plaisance
N
4·0m
Fuel Quay
B.P.
8
7
6
5
4
3
2
1
West Quay
South Mole
Reception Quay
5·4m
East Mole
PARKING
Capitainerie
5·2m
12
13
14
15
PORT PRIVE
5·3m
Sanitary Block
5·4m
South Quay
Beach

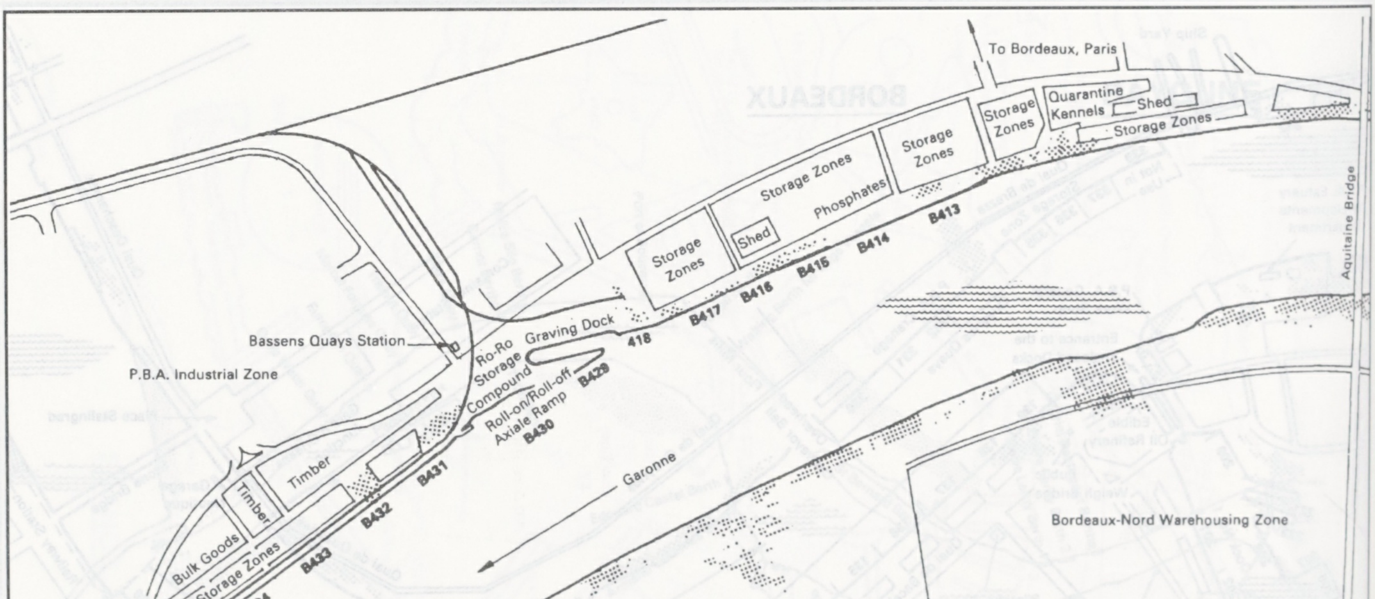

BASTIA
COMMERCIAL PORT
0
300
SCALE OF METRES
Harbour Master
Vieux Port Marina
–6.80
Mole du Fango
–6.00
–6.50
Quai du Fango
–6.50
Quai du Rive
–6.70
Quai du Nord
–6.50
Port Toga Marina
DEPTHS IN METRES
N
BASSIN ST. NICOLAS
–6.50
–7.50
Jetee St. Nicolas

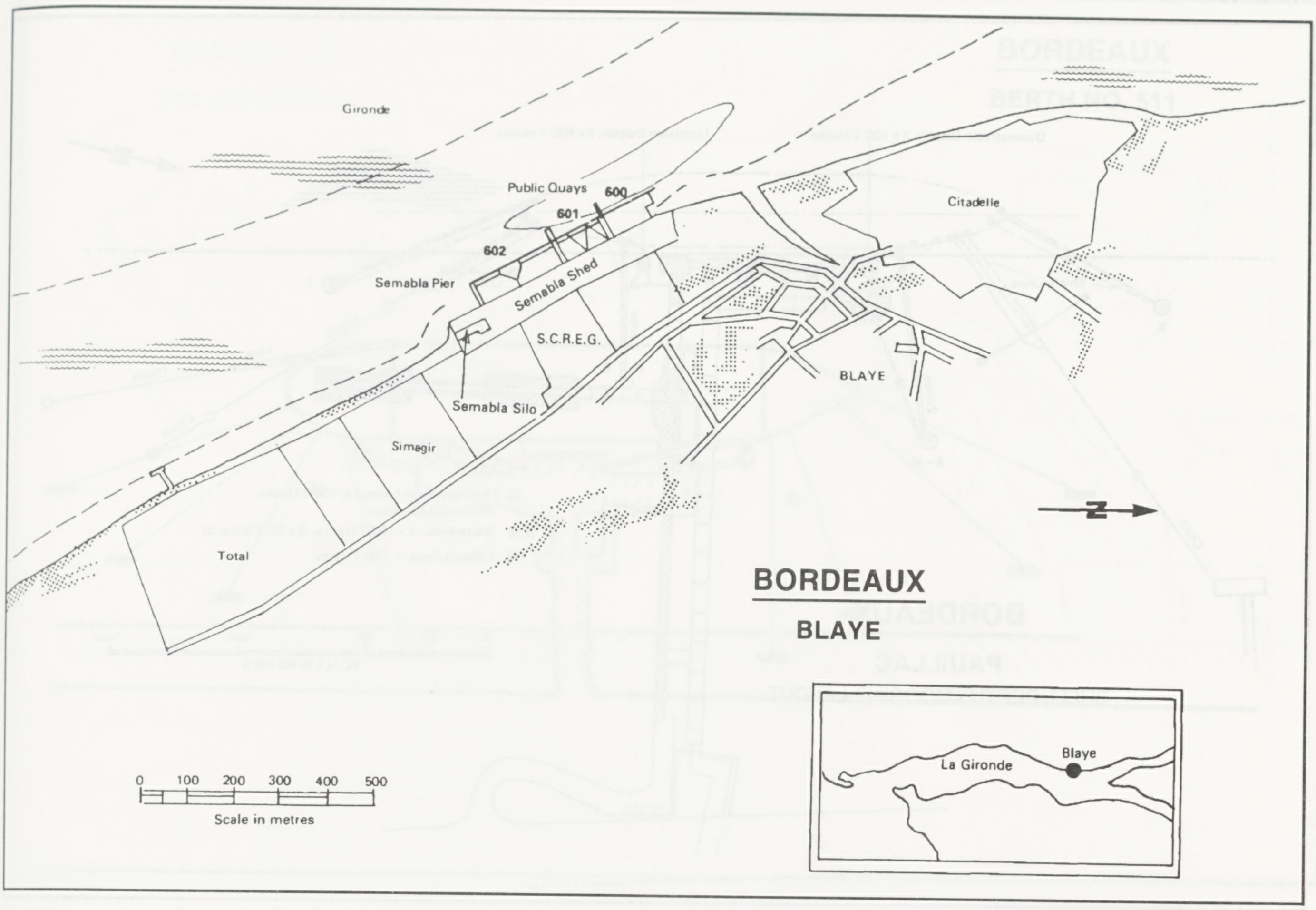

BAYONNE
Port of Boucau
Maize Silo Berth
Carnot Berths
Baze Quay
Tramut Quay
Marcel Forgues Quay
European Quay
Deep Water Quay
Shell Berth
Waiting Berth for large vessels
Pleasure Port
Total Berth
Edouard Castel Berth
Armand Gommes Berth
St Bernard Bank
Gabriel Castagnet Berths
Pierre Leroy Berth 2
Pierre Leroy Berth 1
Edmund Foy Quay
Dry Dock
French Navy
Customs
Town Hall
L'Aveugle Bridge
Chamber of Commerce & Industry
Red Light
Entrance Alignment
Approach Mast
ATLANTIC OCEAN
N


LOCATION PLAN
FRANCE
BORDEAUX
ATLANTIC OCEAN
SPAIN
LA COUBRE
CORDOUAN
LE VERDON
GIRONDE
BAY OF BISCAY
PAUILLAC
BLAYE
AMBES
BASSENS
BORDEAUX
BORDEAUX


BORDEAUX
Ship Yard
342
341
339
Not in Use
337
336
335
Quai de Brazza
Storage Zone
P.B.A. Estuary Developments Department
P.B.A. General Work Shop
Entrance to the Enclosed Docks
Queyries Quays
P.B.A. Cranage
332
331
330
Edible Oil Refinary
Public Weigh Bridge
139
138
137
136
135
134
133
132
131
130
129
128
127
126
125
124
123
122
121
120
Overhead Conveyor Belt
Flour Mills
Quai de Queyries
Container Station
Gare d'Orleans Junction
Quai Deschamps
Place Stalingrad
Garage Nautique
Stone Bridge
Railway Station
Quai de Quayries
209
221
222
208
Dock No. 1
201
207
206
205
202
203
204
211
212
213
214
215
216
217
218
Dock No. 2 Enclosed
Pilotage Service
Quai de Bacalan
Public Weigh Bridge
Harbour Master
Quai des Chartrons
Left Bank
Cruise Berths
Quai Louis XVIII
Customs House
Chamber of Commerce & Industry
P.B.A. Direction
Maritime Federation of Port
Maritime Passenger Facilities


BORDEAUX
AMBES
AMBES
INDUSTRIAL ZONE
Pipe Line
Norsk Hydro Azute Plant
LA DORDOGNE
EDF
La Garonne
Norsk Hydro Azote
501
Power Station
ILE D. AMBES
ESSO
Public Oil Berth
511
Esso
Esso Berth
512
Cofrablack
Cobogal Gas berth
COBOGAL
515
Eka Nobel
Public Berth
519
518
Public Berth
517
AMBES POINT
Ile de Cazeau
La Gironde
Ambes

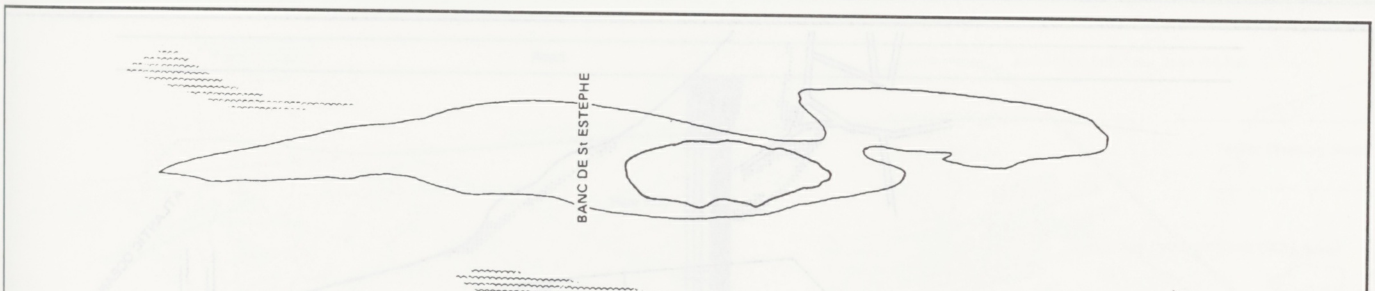

To Bordeaux, Paris
Quarantine Kennels
Shed
Storage Zones
Storage Zones
Storage Zones
Storage Zones
Phosphates
Shed
Storage Zones
Aquitaine Bridge
B413
B414
B415
B416
B417
418
Bassens Quays Station
Ro-Ro Storage Compound
Graving Dock
P.B.A. Industrial Zone
B429
Roll-on/Roll-off Axiale Ramp
B430
B431
Timber
Timber
B432
Bulk Goods
Storage Zones
B433
B434
B435
B436
Conveyor Belt
Aquitaine Silos
B439
Barge Berth 440
Pipe
Garonne
Bordeaux-Nord Warehousing Zone
Road Transport Station
BORDEAUX
BASSENS



BORDEAUX

BLAYE

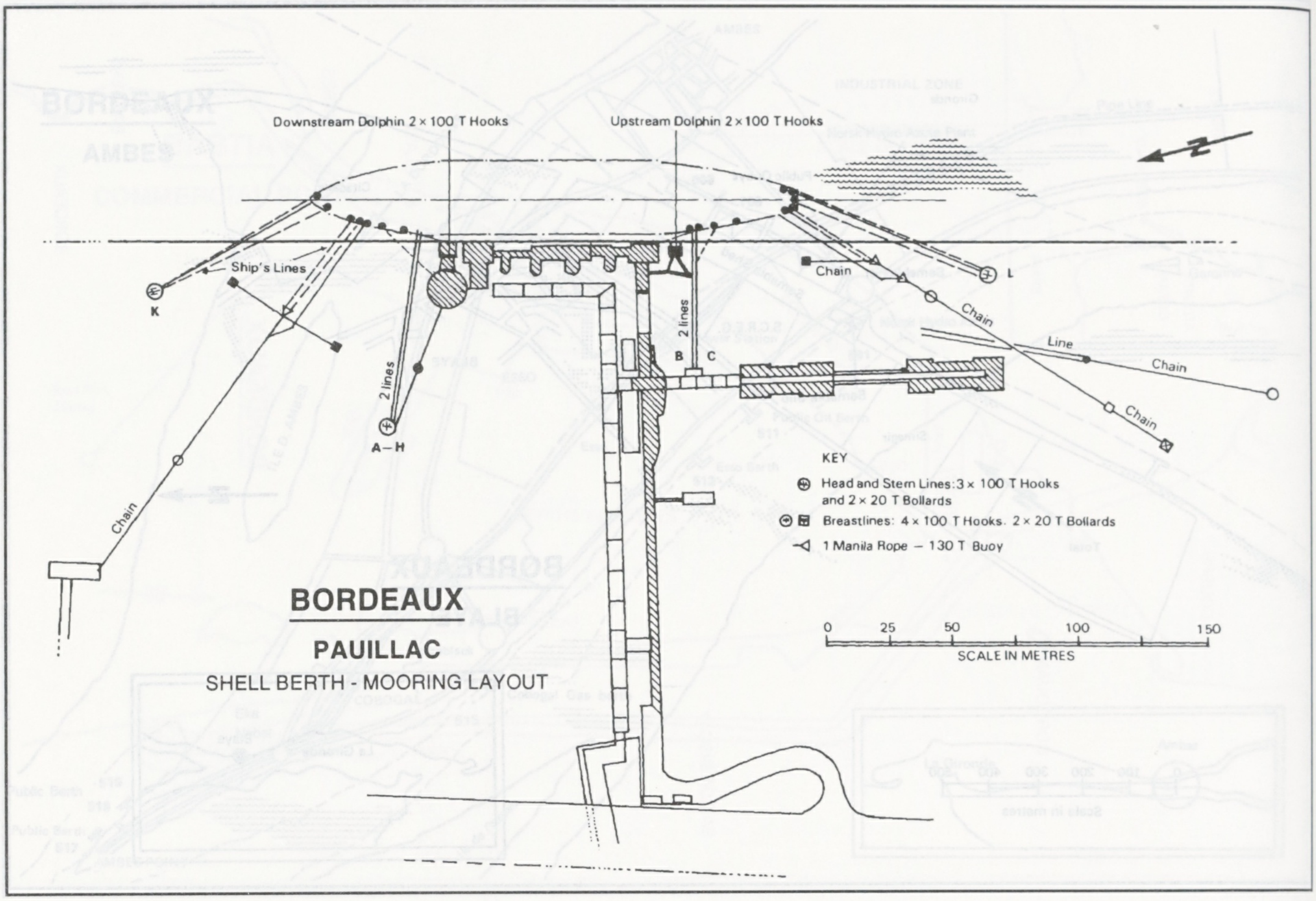
Gironde
Public Quays
600
601
602
Semabla Pier
Semabla Shed
S.C.R.E.G.
Semabla Silo
Simagir
Total
Citadelle
BLAYE
N
0
100
200
300
400
500
Scale in metres
La Gironde
Blaye



BORDEAUX

PAUILLAC - ST. ESTEPHE

BANC DE St ESTEPHE
710
Shell Berth
711
Public Berth
700
Slip
Gaet Port
Ferry Berth
Yacht Harbour
PAUILLAC
Pipe Line
Zone to be developed
Shell Refinery
Traffic Operations Office
IND Zone
N
La Gironde
Pauillac – St Estephe

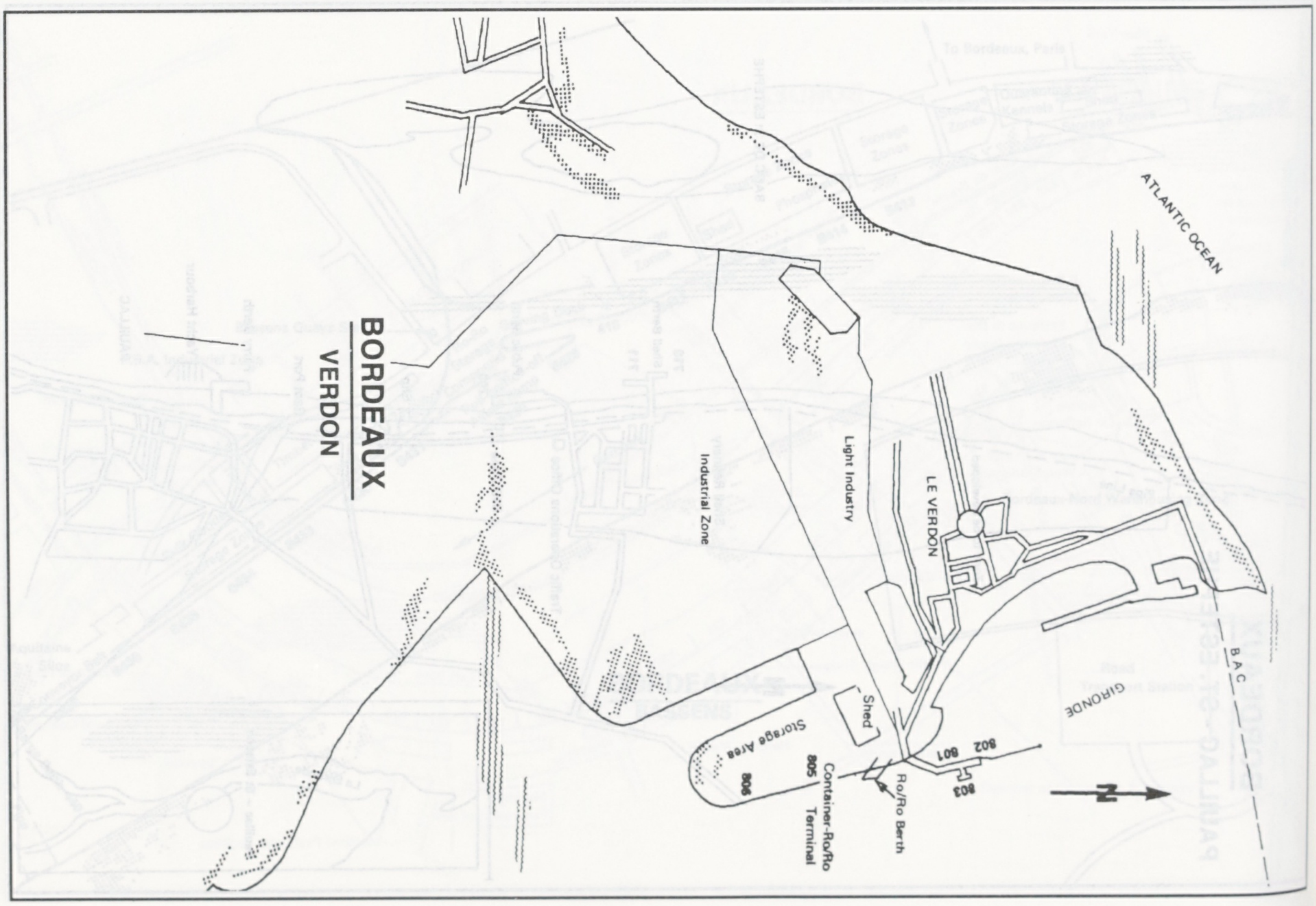


BORDEAUX

PAUILLAC

SHELL BERTH - MOORING LAYOUT

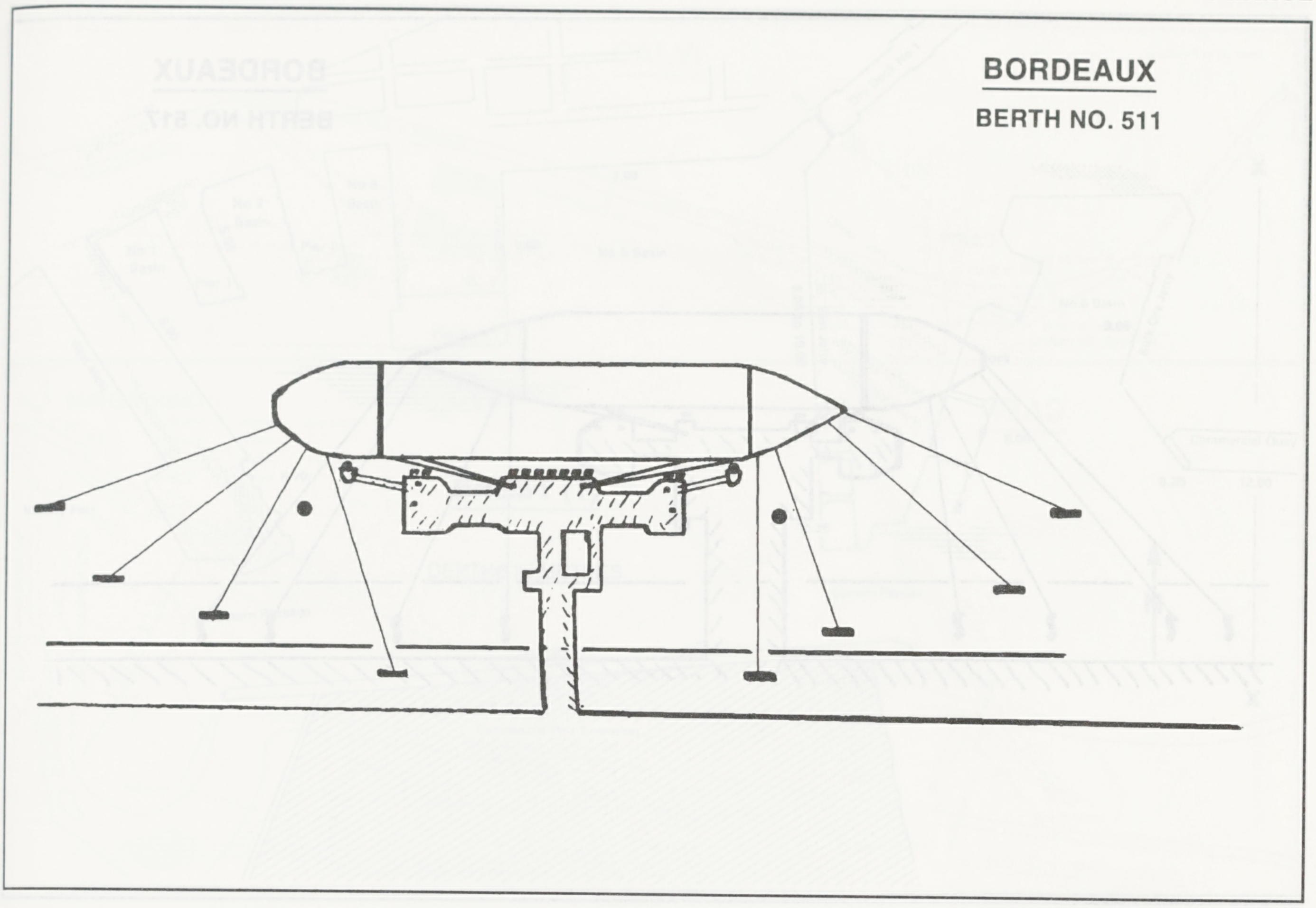
Downstream Dolphin 2 × 100 T Hooks
Upstream Dolphin 2 × 100 T Hooks
Ship's Lines
K
2 lines
A–H
2 lines
B
C
Chain
L
Chain
Line
Chain
Chain
Chain
KEY
Head and Stern Lines: 3 × 100 T Hooks and 2 × 20 T Bollards
Breastlines: 4 × 100 T Hooks. 2 × 20 T Bollards
1 Manila Rope – 130 T Buoy
0
25
50
100
150
SCALE IN METRES



BORDEAUX

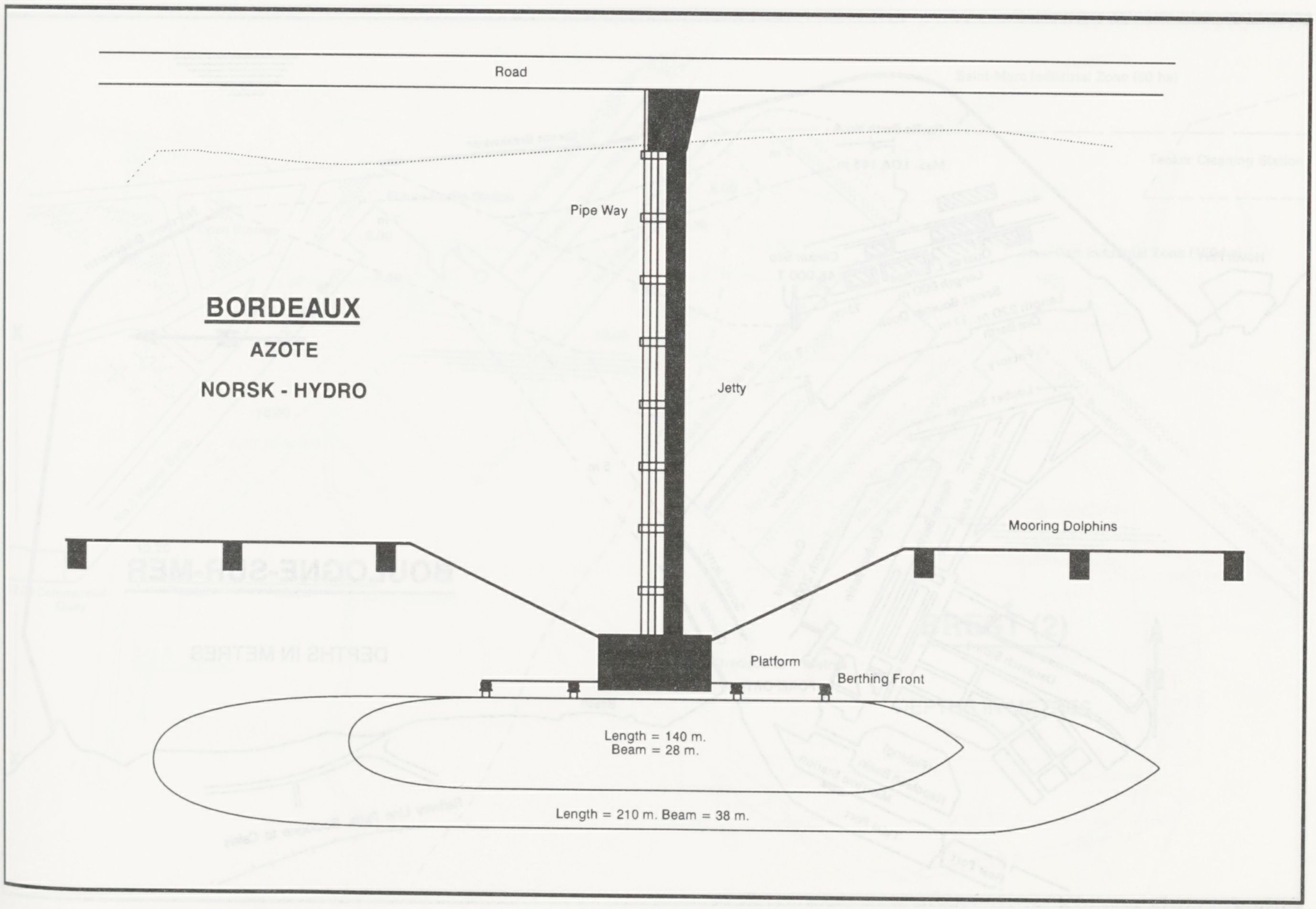
VERDON

ATLANTIC OCEAN
LE VERDON
Light Industry
Industrial Zone
Storage Area
Shed
801
802
803
805
806
Container-Ro/Ro Terminal
Ro/Ro Berth
BAC
GIRONDE
N



BORDEAUX

BERTH NO. 511

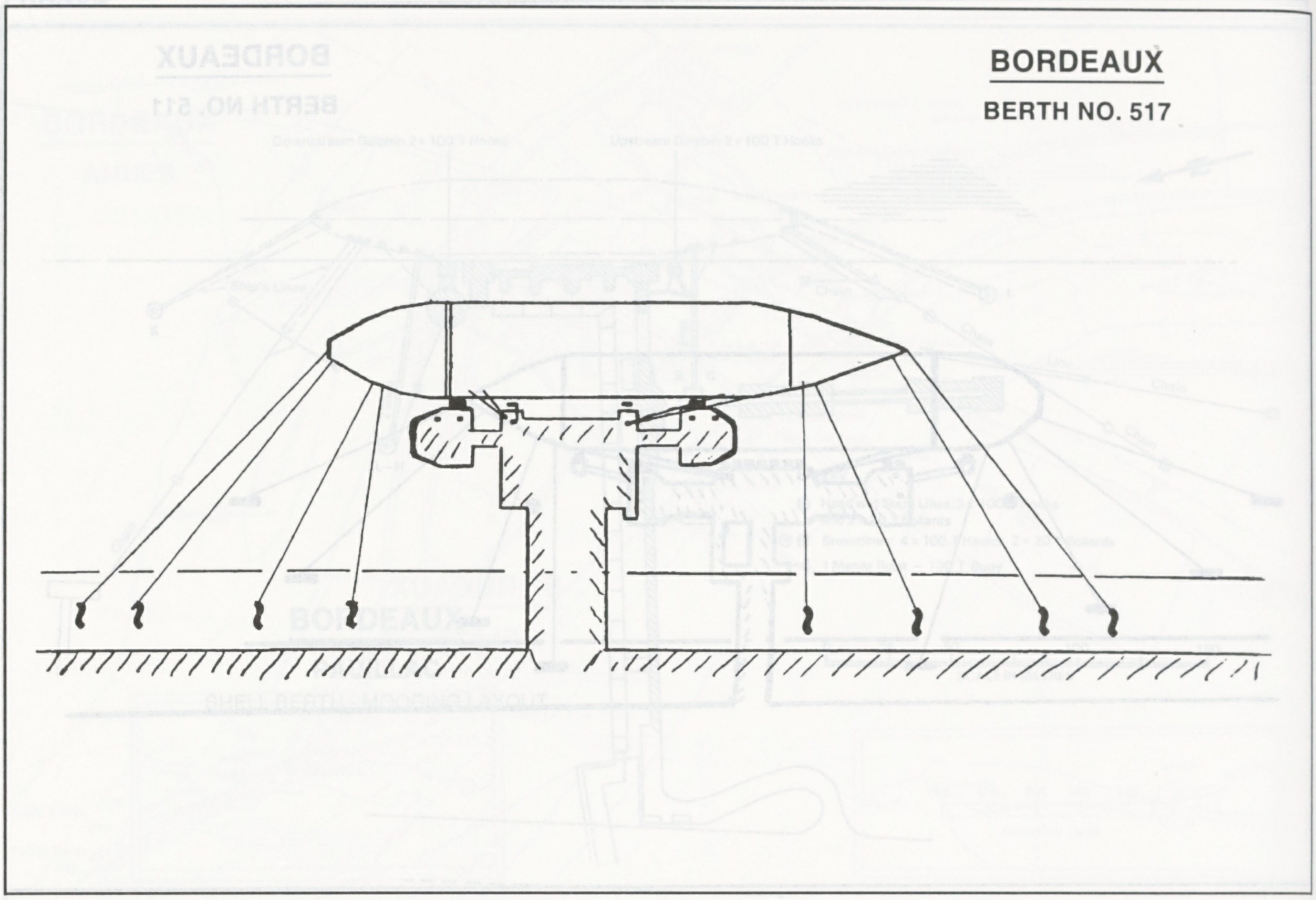


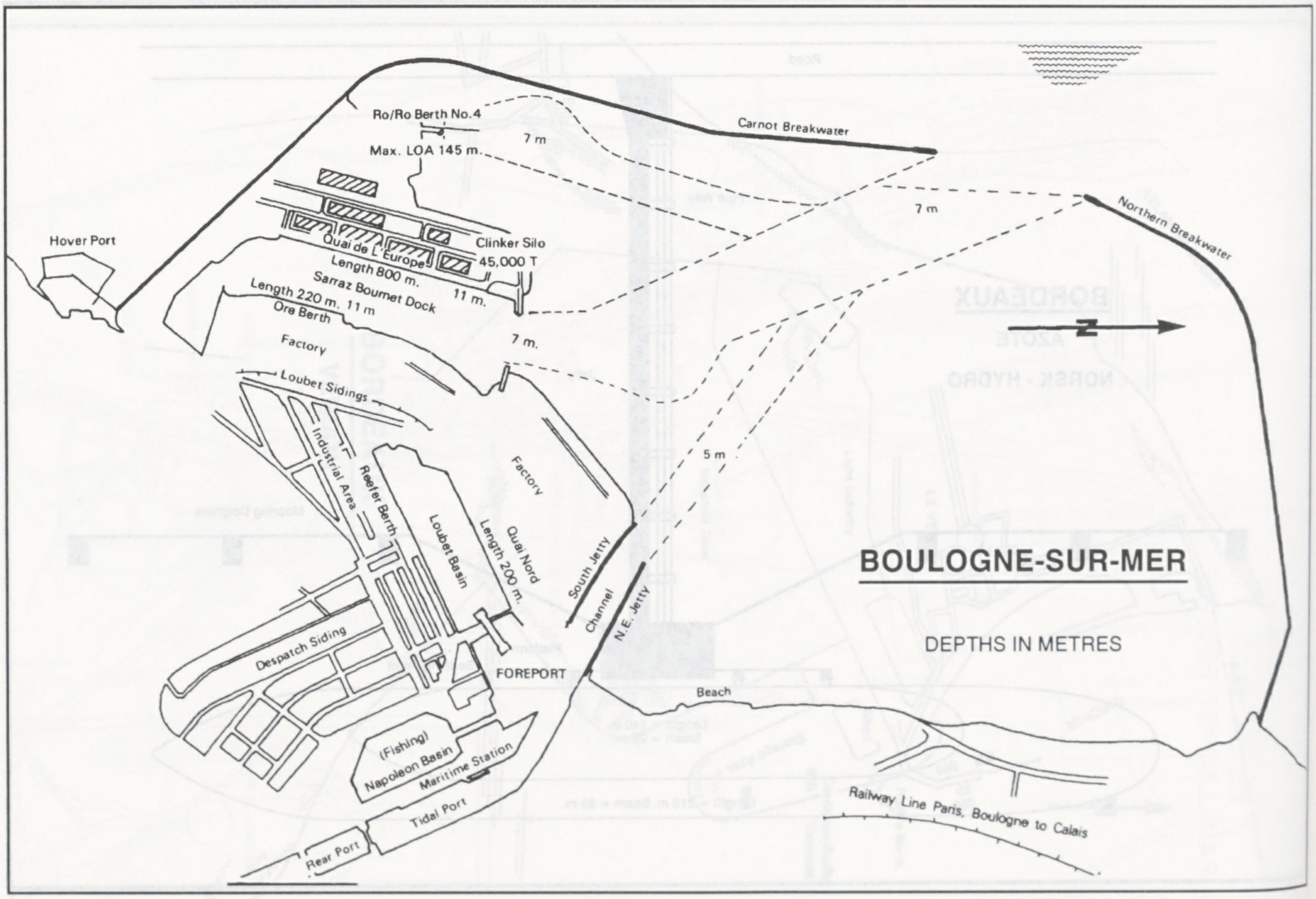
BORDEAUX

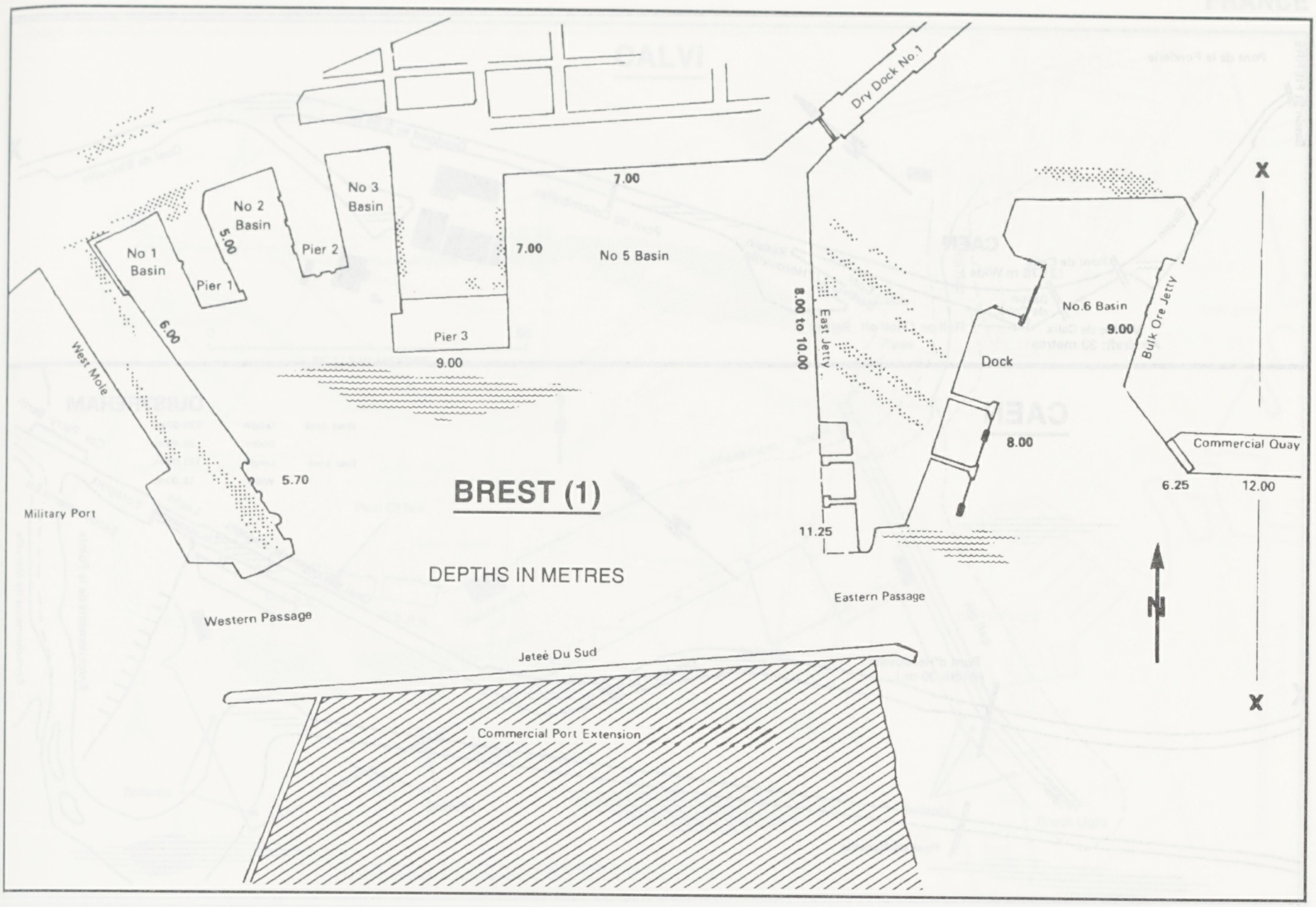
AZOTE

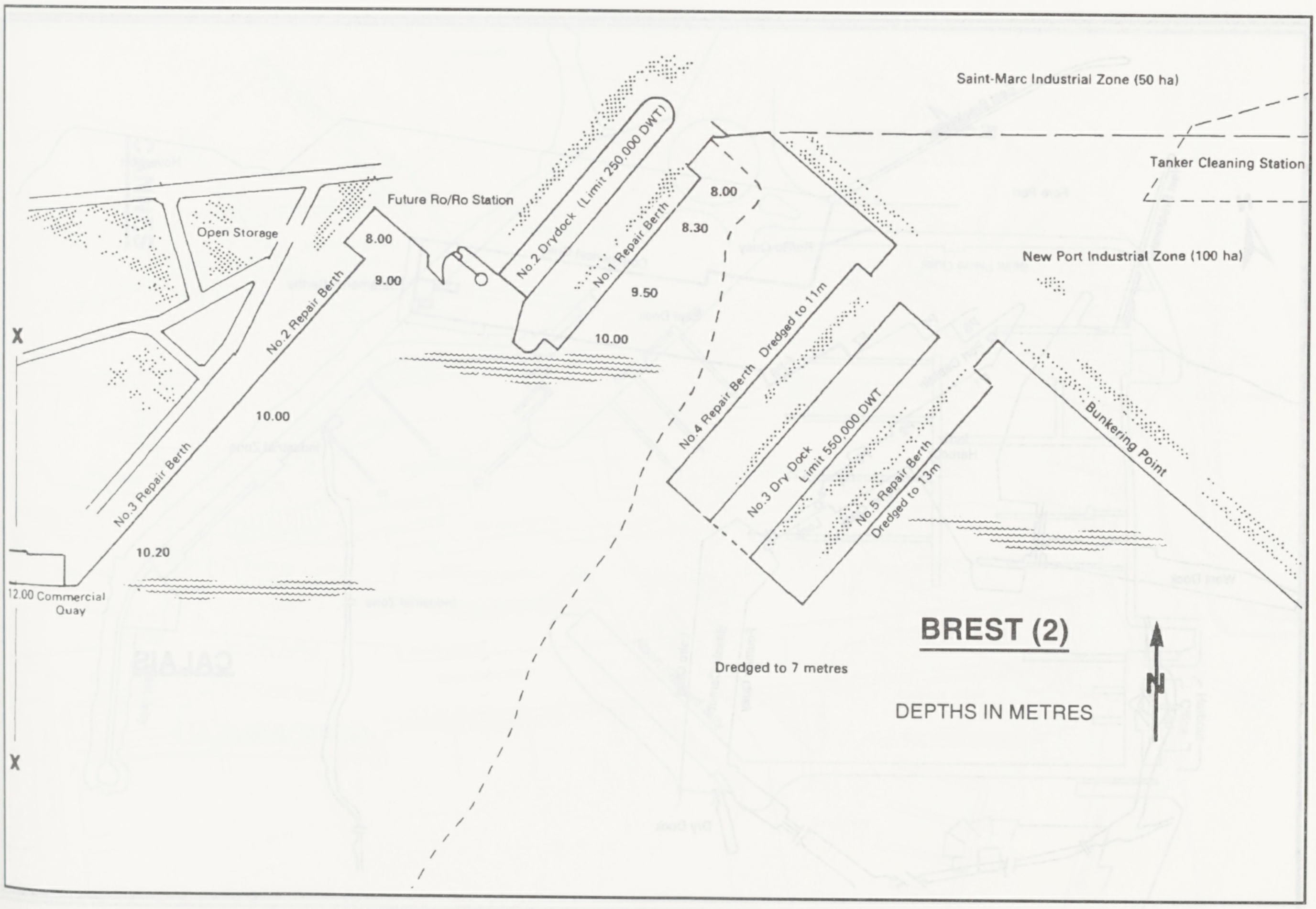
NORSK - HYDRO

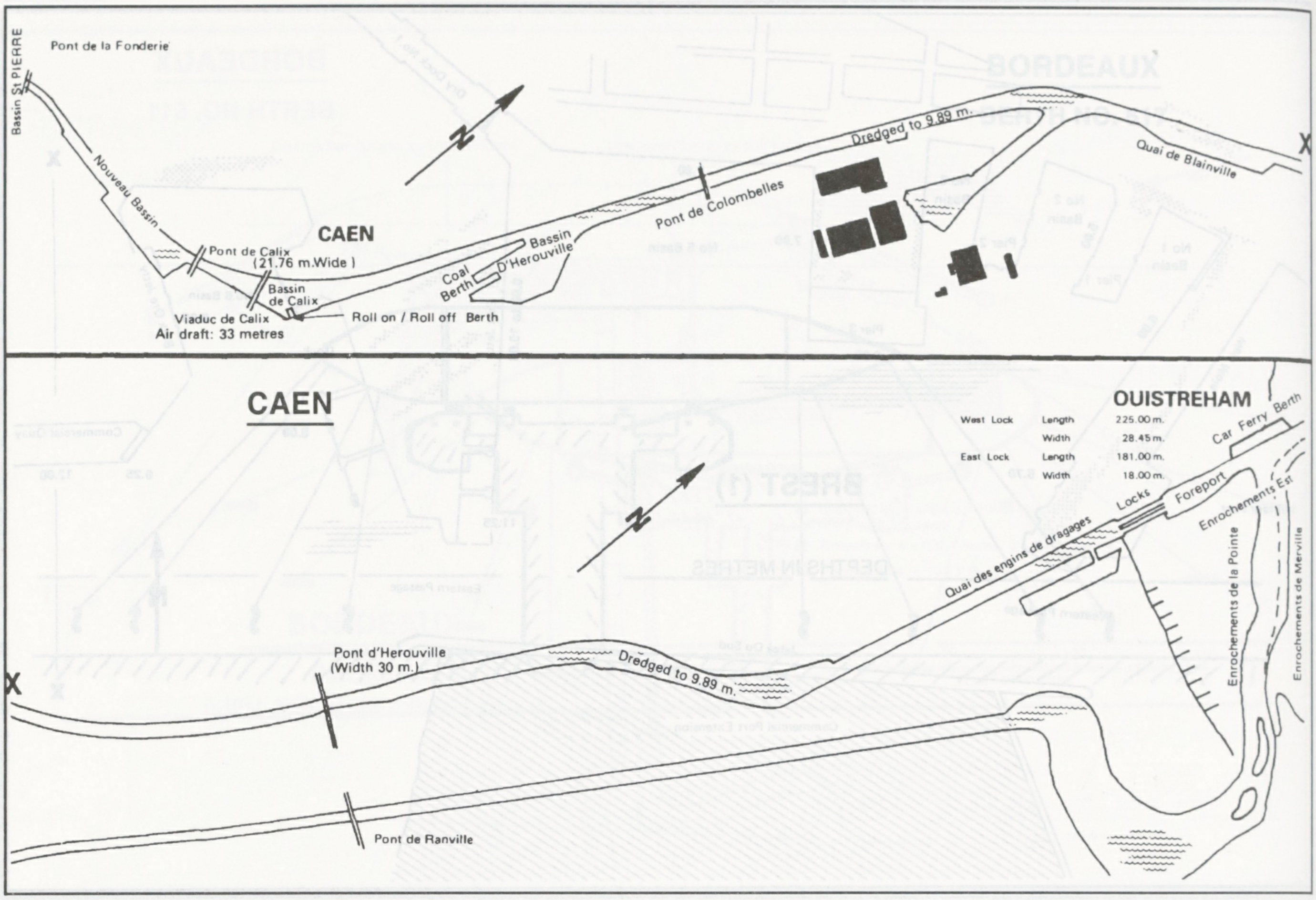
Road
Pipe Way
Jetty
Mooring Dolphins
Platform
Berthing Front
Length = 140 m.
Beam = 28 m.
Length = 210 m. Beam = 38 m.

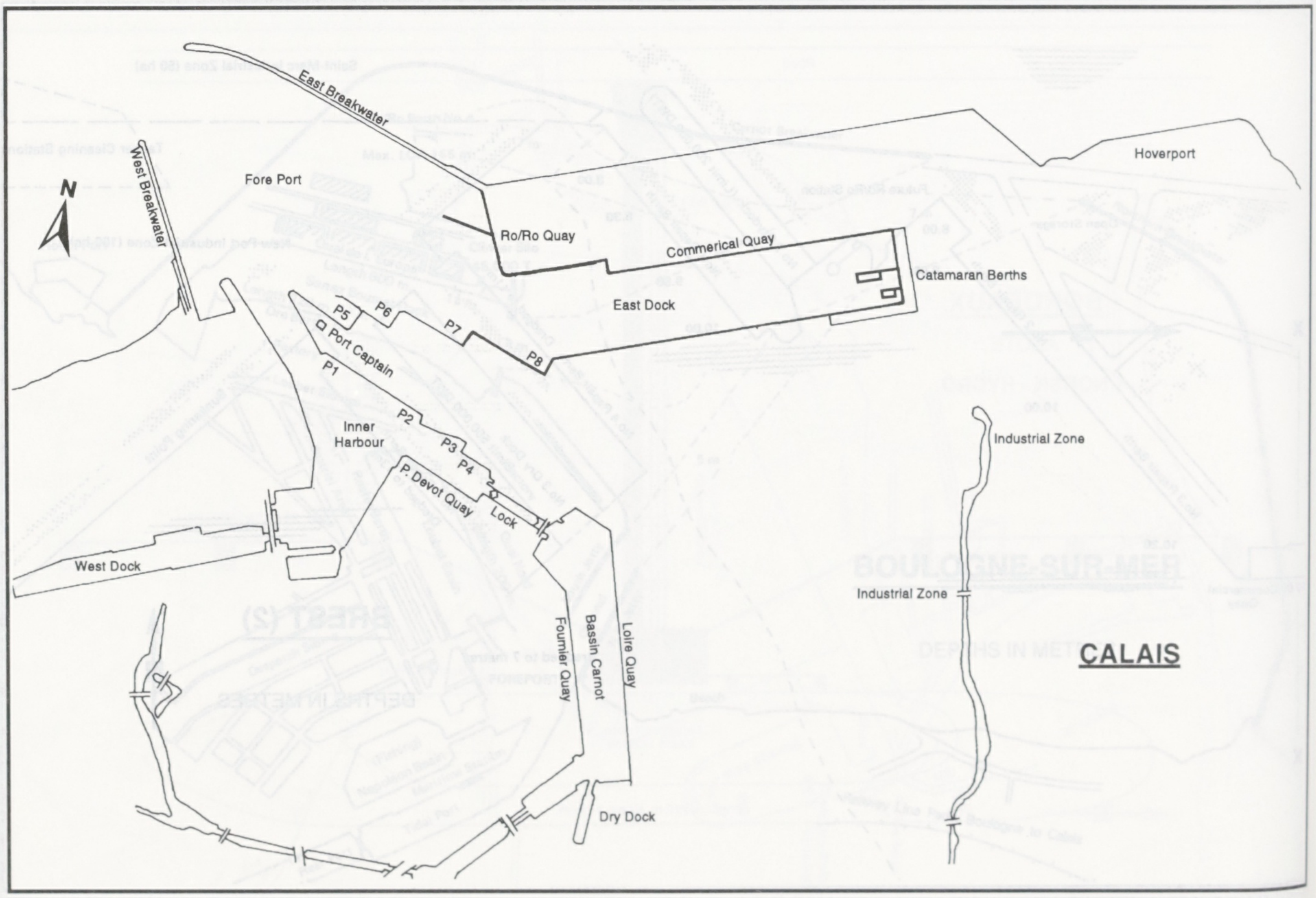

BORDEAUX
BERTH NO. 517

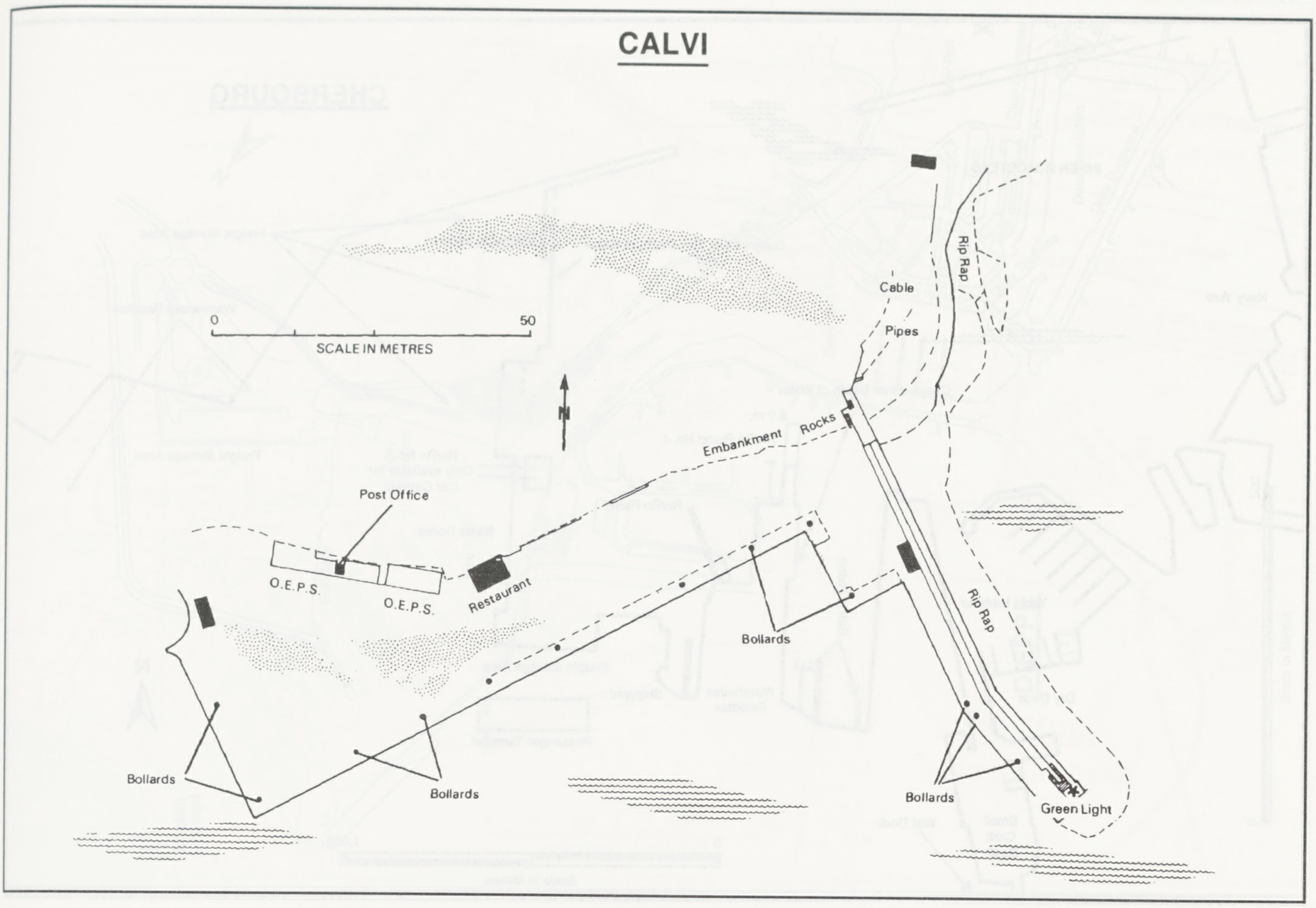

Ro/Ro Berth No.4
Max. LOA 145 m.
7 m
Carnot Breakwater
7 m
Northern Breakwater
Hover Port
Clinker Silo
45,000 T
Quai de L'Europe
Length 800 m.
Sarraz Bournet Dock
11 m.
Length 220 m. 11 m
Ore Berth
7 m.
Factory
Loubet Sidings
Factory
Industrial Area
Reefer Berth
Loubet Basin
Quai Nord
Length 200 m.
5 m
South Jetty
Channel
N.E. Jetty
Despatch Siding
FOREPORT
Beach
(Fishing)
Napoleon Basin
Maritime Station
Tidal Port
Rear Port
Railway Line Paris, Boulogne to Calais
N
BOULOGNE-SUR-MER
DEPTHS IN METRES

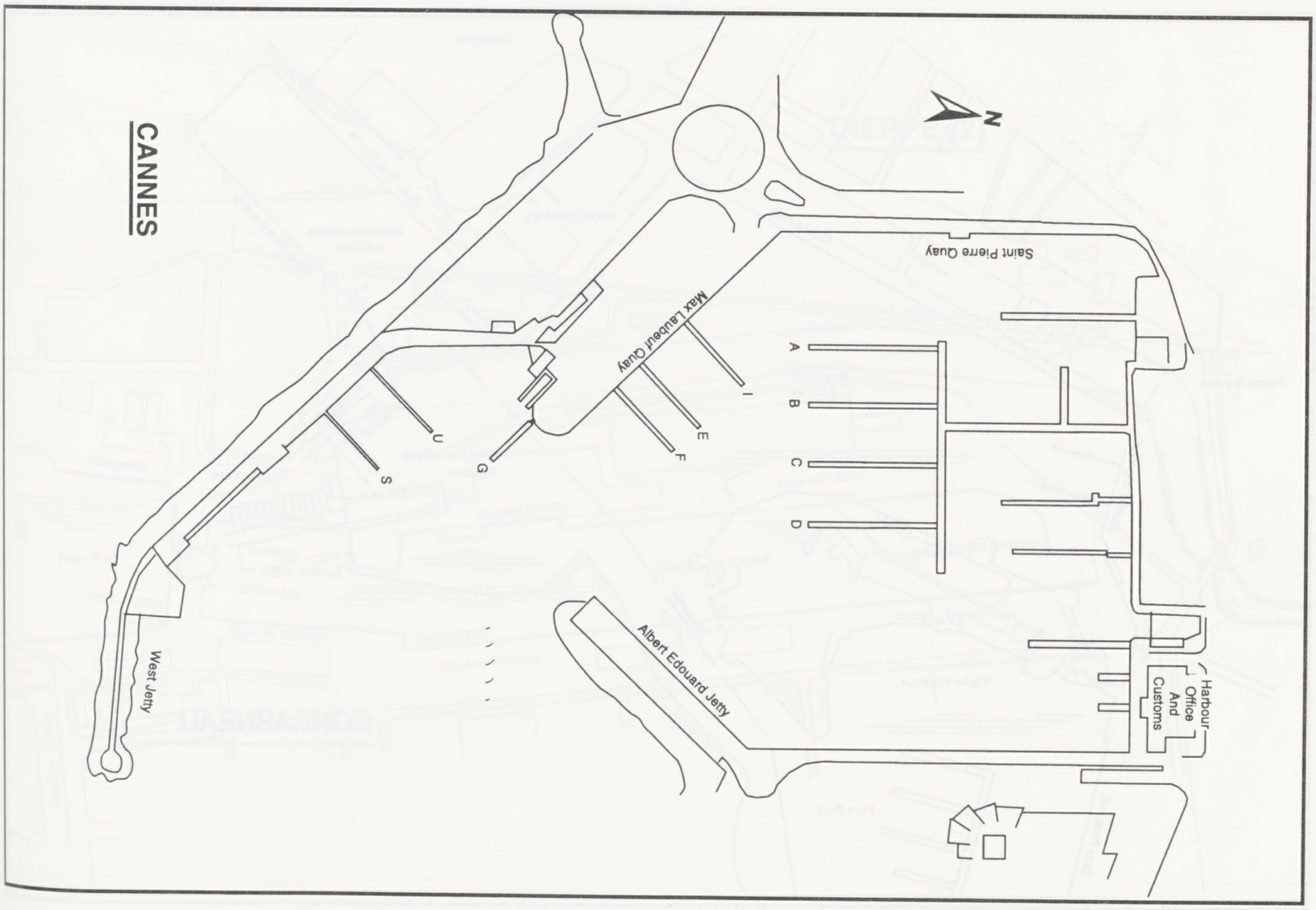

BREST (1)
DEPTHS IN METRES
Dry Dock No.1
7.00
No 1 Basin
No 2 Basin
No 3 Basin
5.00
Pier 1
Pier 2
7.00
No 5 Basin
Pier 3
9.00
6.00
West Mole
5.70
Military Port
Western Passage
8.00 to 10.00
East Jetty
No.6 Basin
9.00
Bulk Ore Jetty
Dock
8.00
Commercial Quay
6.25
12.00
11.25
Eastern Passage
N
X
X
Jeteé Du Sud
Commercial Port Extension

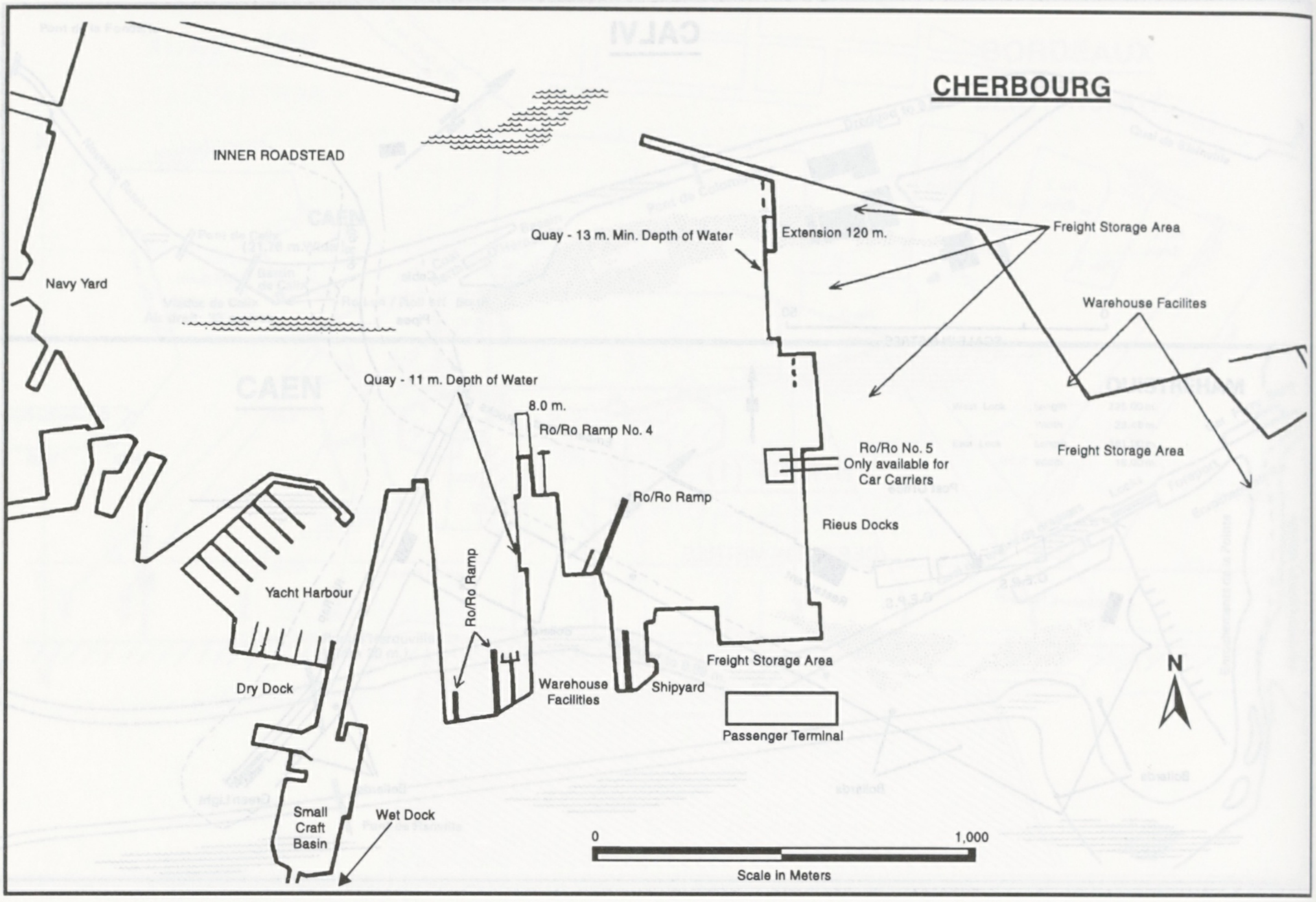

Saint-Marc Industrial Zone (50 ha)
Tanker Cleaning Station
New Port Industrial Zone (100 ha)
Future Ro/Ro Station
Open Storage
8.00
9.00
No.2 Drydock (Limit 250,000 DWT)
No.1 Repair Berth
8.00
8.30
9.50
10.00
No.2 Repair Berth
10.00
No.3 Repair Berth
10.20
12.00 Commercial Quay
X
X
No.4 Repair Berth Dredged to 11m
No.3 Dry Dock Limit 550,000 DWT
No.5 Repair Berth Dredged to 13m
Bunkering Point
BREST (2)
Dredged to 7 metres
DEPTHS IN METRES
N

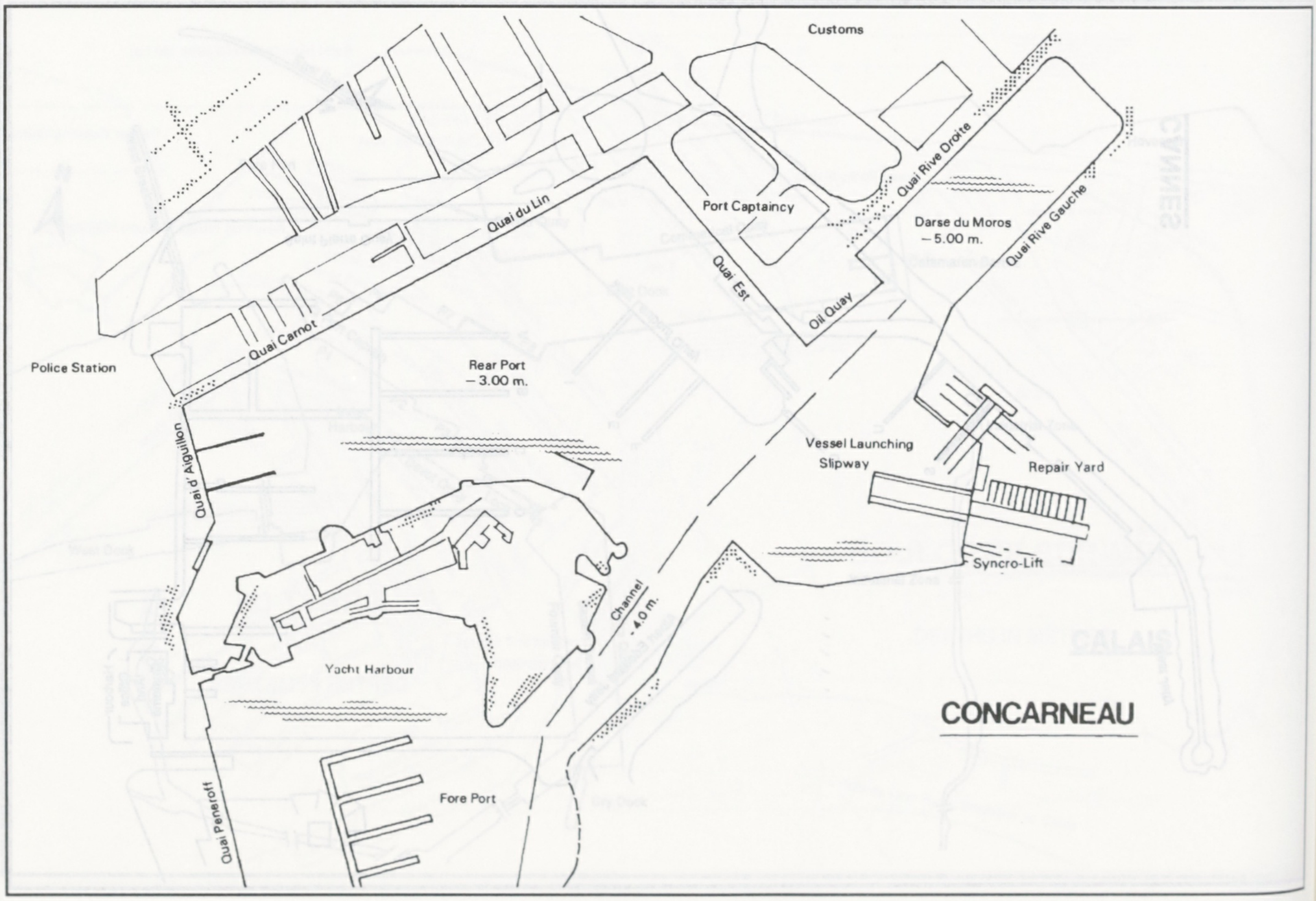

Pont de la Fonderie
Bassin St PIERRE
Nouveau Bassin
CAEN
Pont de Calix
(21.76 m.Wide)
Bassin de Calix
Viaduc de Calix
Air draft: 33 metres
Roll on / Roll off Berth
Coal Berth
Bassin D'Herouville
Pont de Colombelles
Dredged to 9.89 m.
Quai de Blainville
X
N
CAEN
OUISTREHAM
West Lock Length 225.00 m.
Width 28.45 m.
East Lock Length 181.00 m.
Width 18.00 m.
Car Ferry Berth
Foreport
Locks
Quai des engins de dragages
Enrochements Est
Enrochements de la Pointe
Enrochements de Merville
Pont d'Herouville
(Width 30 m.)
Dredged to 9.89 m.
Pont de Ranville
X
N

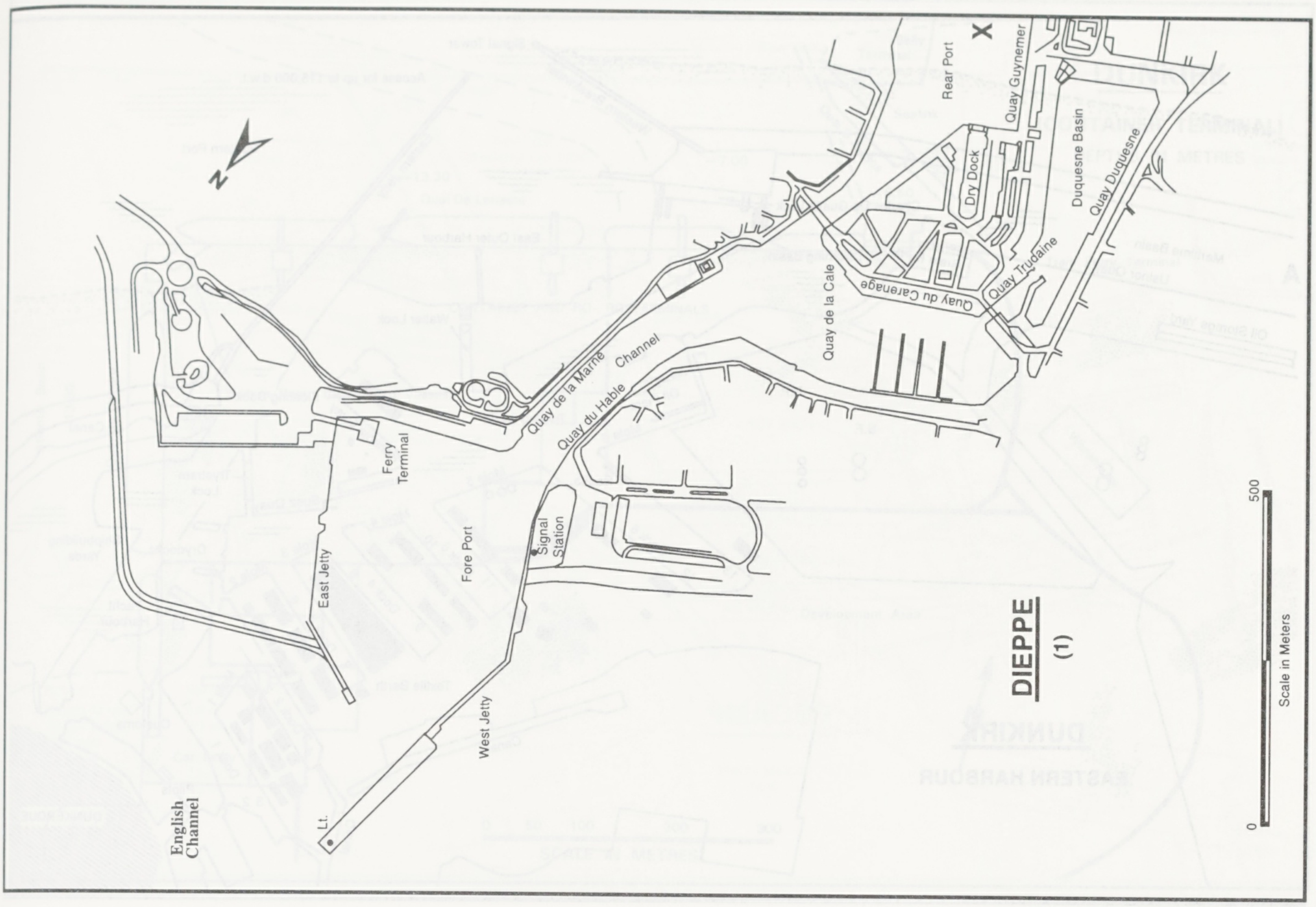

East Breakwater
West Breakwater
Fore Port
N
Ro/Ro Quay
Commerical Quay
Hoverport
Catamaran Berths
East Dock
P5
P6
P7
P8
Port Captain
P1
Inner Harbour
P2
P3
P4
P. Devot Quay
Lock
West Dock
Fournier Quay
Bassin Carnot
Loire Quay
Dry Dock
Industrial Zone
Industrial Zone
CALAIS

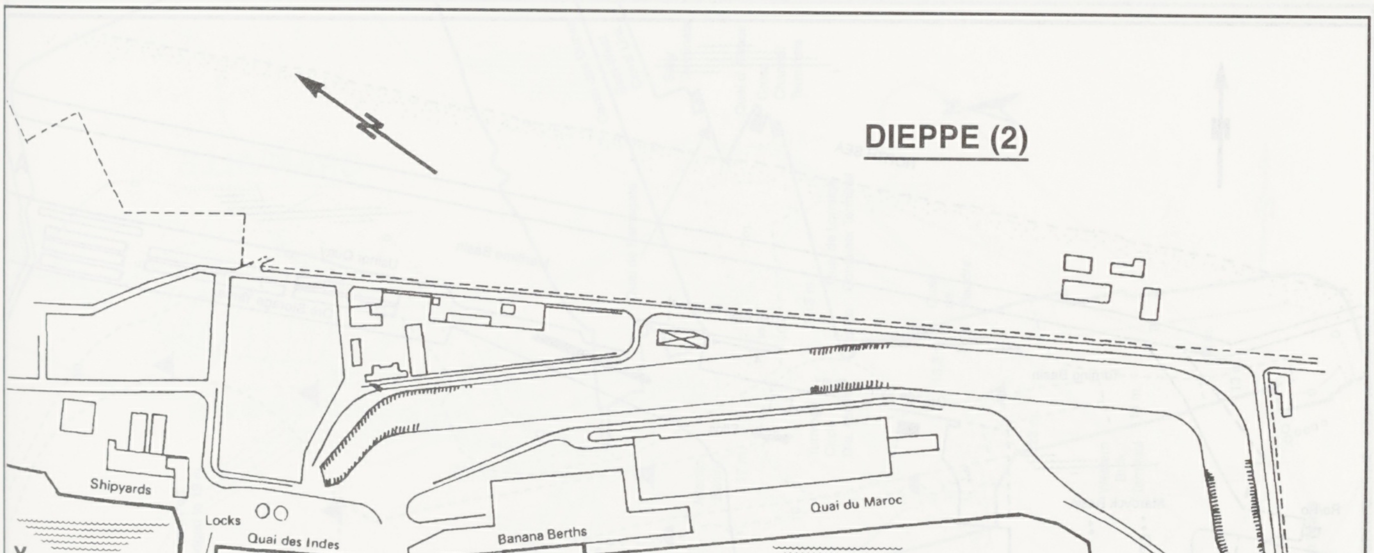

CALVI
0
50
SCALE IN METRES
N
Cable
Pipes
Rip Rap
Embankment
Rocks
Post Office
O.E.P.S.
O.E.P.S.
Restaurant
Bollards
Bollards
Bollards
Bollards
Rip Rap
Green Light

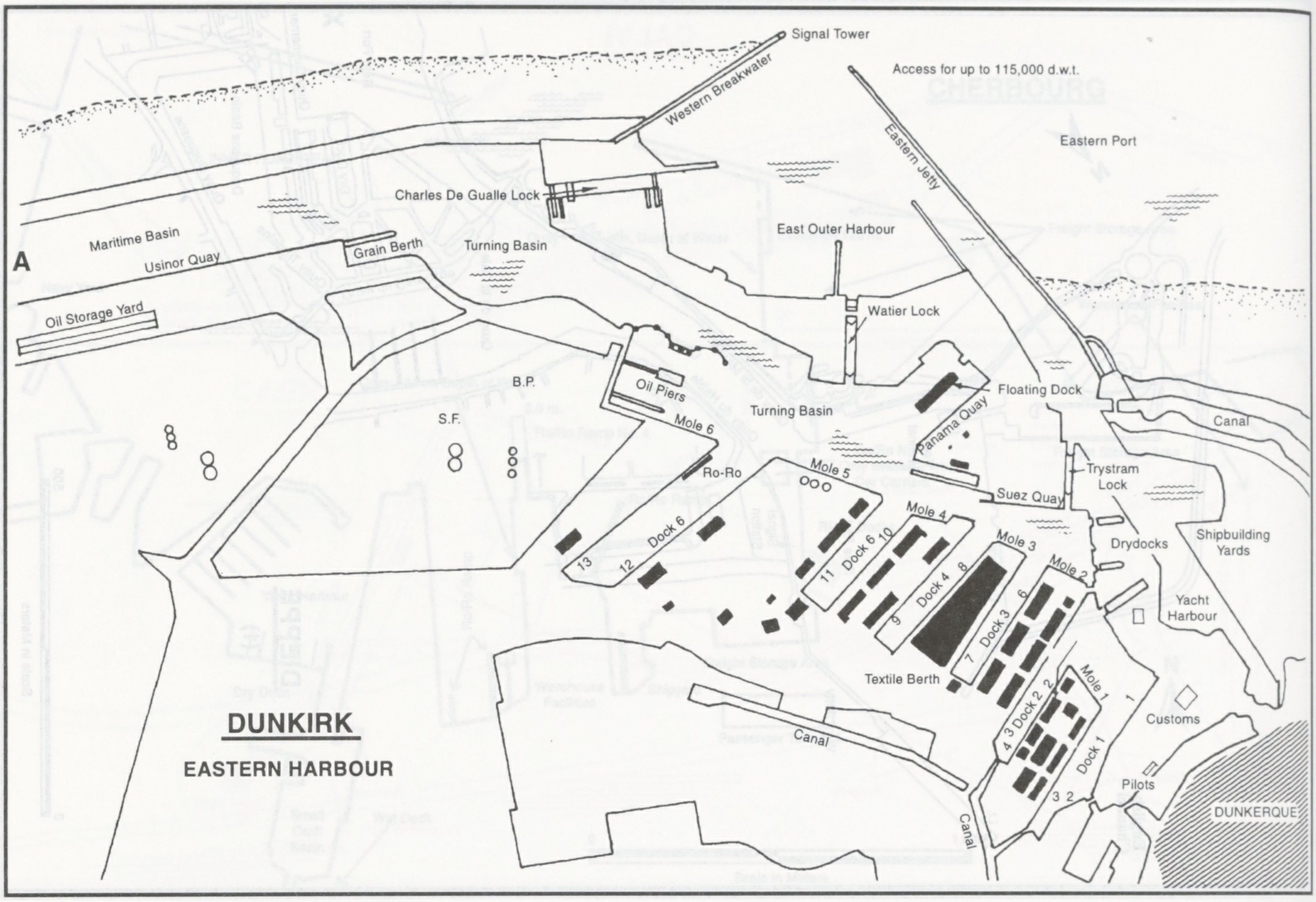

CANNES
N
Saint Pierre Quay
Max Laubeuf Quay
A
B
C
D
I
E
F
G
U
S
West Jetty
Albert Edouard Jetty
Harbour Office And Customs

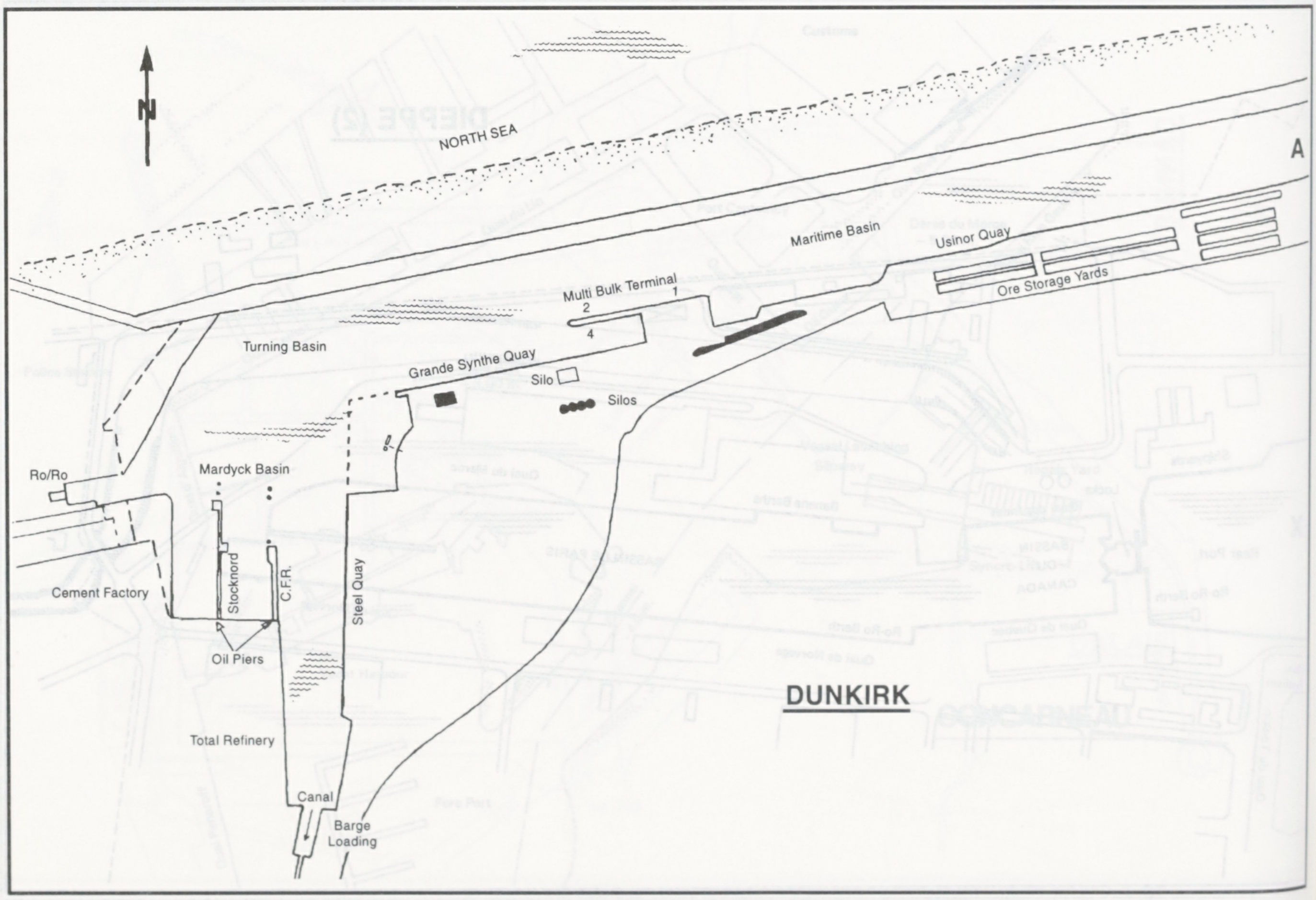

CHERBOURG
INNER ROADSTEAD
Navy Yard
Quay - 13 m. Min. Depth of Water
Extension 120 m.
Freight Storage Area
Warehouse Facilites
Freight Storage Area
Quay - 11 m. Depth of Water
8.0 m.
Ro/Ro Ramp No. 4
Ro/Ro No. 5
Only available for
Car Carriers
Ro/Ro Ramp
Rieus Docks
Yacht Harbour
Ro/Ro Ramp
Warehouse
Facilities
Shipyard
Freight Storage Area
Dry Dock
Passenger Terminal
Small
Craft
Basin
Wet Dock
0
1,000
Scale in Meters
N

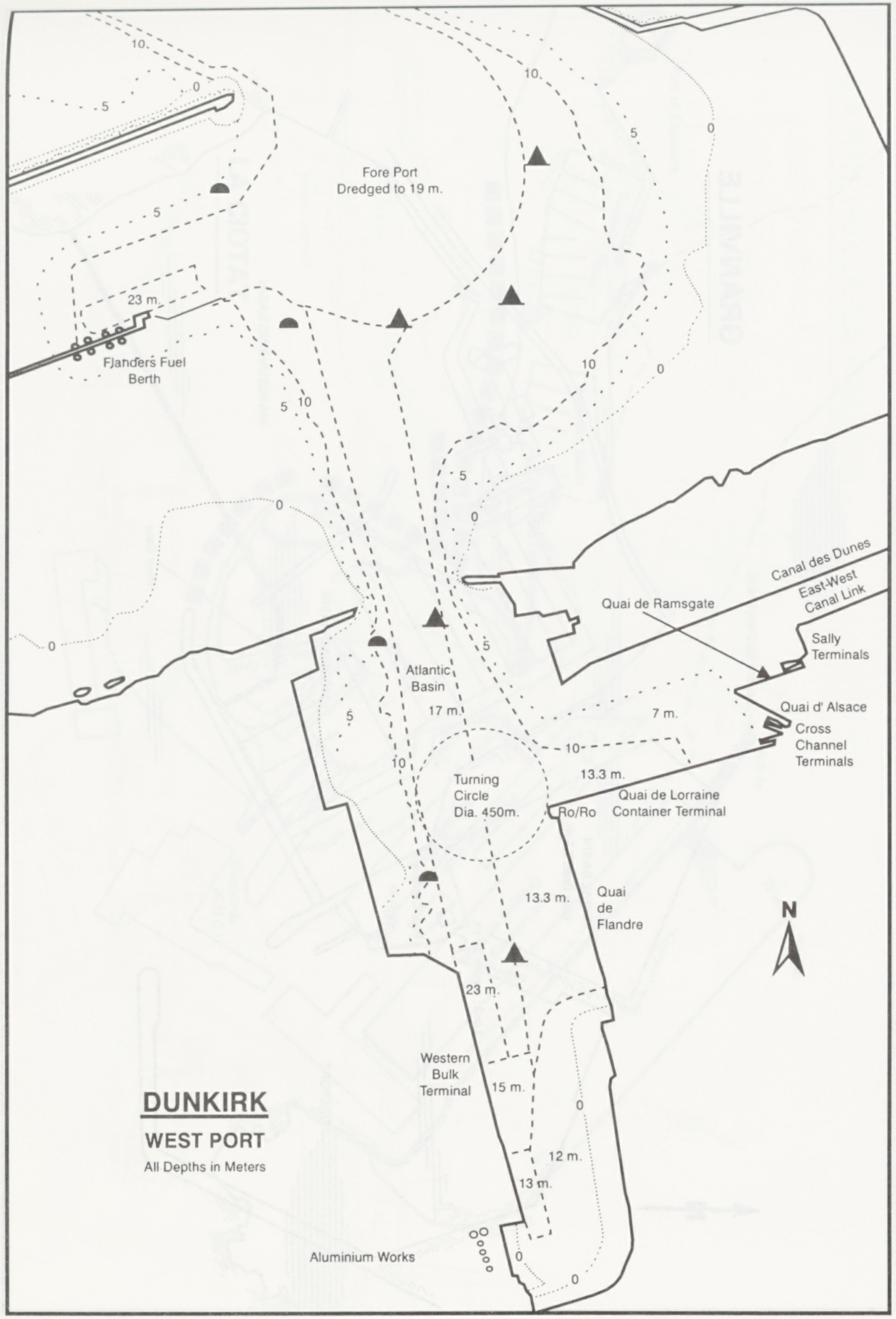

Customs
Quai Rive Droite
Port Captaincy
Quai du Lin
Darse du Moros
– 5.00 m.
Quai Rive Gauche
Quai Est
Oil Quay
Quai Carnot
Police Station
Rear Port
– 3.00 m.
Quai d' Aiguillon
Vessel Launching
Slipway
Repair Yard
Syncro-Lift
Channel
- 4.0 m.
Yacht Harbour
CONCARNEAU
Fore Port
Quai Peneroff


DIEPPE
(1)
N
X
Rear Port
Quay Guynemer
Dry Dock
Duquesne Basin
Quay Duquesne
Quay Trudaine
Quay du Carenage
Quay de la Cale
Quay de la Marne
Quay du Hable
Channel
Ferry Terminal
Signal Station
Fore Port
East Jetty
West Jetty
Lt.
English Channel
500
Scale in Meters
0


DIEPPE (2)
N
Shipyards
Locks
Quai des Indes
X
Rear Port
BASSIN DU CANADA
Ro-Ro Berth
Quai de Quebec
Banana Berths
Quai du Maroc
BASSIN DE PARIS
Ro-Ro Berth
Quai de Norvege
Quai de Norvege
Quai Gallieni
Quai du Tonkin


Signal Tower
Access for up to 115,000 d.w.t.
Western Breakwater
Eastern Jetty
Eastern Port
Charles De Gualle Lock
East Outer Harbour
Maritime Basin
A
Usinor Quay
Grain Berth
Turning Basin
Oil Storage Yard
Watier Lock
B.P.
Oil Piers
Floating Dock
S.F.
Turning Basin
Panama Quay
Canal
Mole 6
Ro-Ro
Mole 5
Trystram Lock
Suez Quay
Shipbuilding Yards
Mole 4
Mole 3
Drydocks
Dock 6
13
12
11
Dock 6 10
Dock 4
9
8
Dock 3
7
6
Mole 2
Yacht Harbour
Textile Berth
Mole 1
1
Dock 2
2
4
3
Dock 1
3
2
Customs
Pilots
DUNKIRK
EASTERN HARBOUR
Canal
Canal
DUNKERQUE


N
NORTH SEA
A
Maritime Basin
Usinor Quay
Ore Storage Yards
Multi Bulk Terminal
2
1
4
Turning Basin
Grande Synthe Quay
Silo
Silos
Ro/Ro
Mardyck Basin
Cement Factory
Stocknord
C.F.R.
Steel Quay
Oil Piers
Total Refinery
Canal
Barge Loading
DUNKIRK

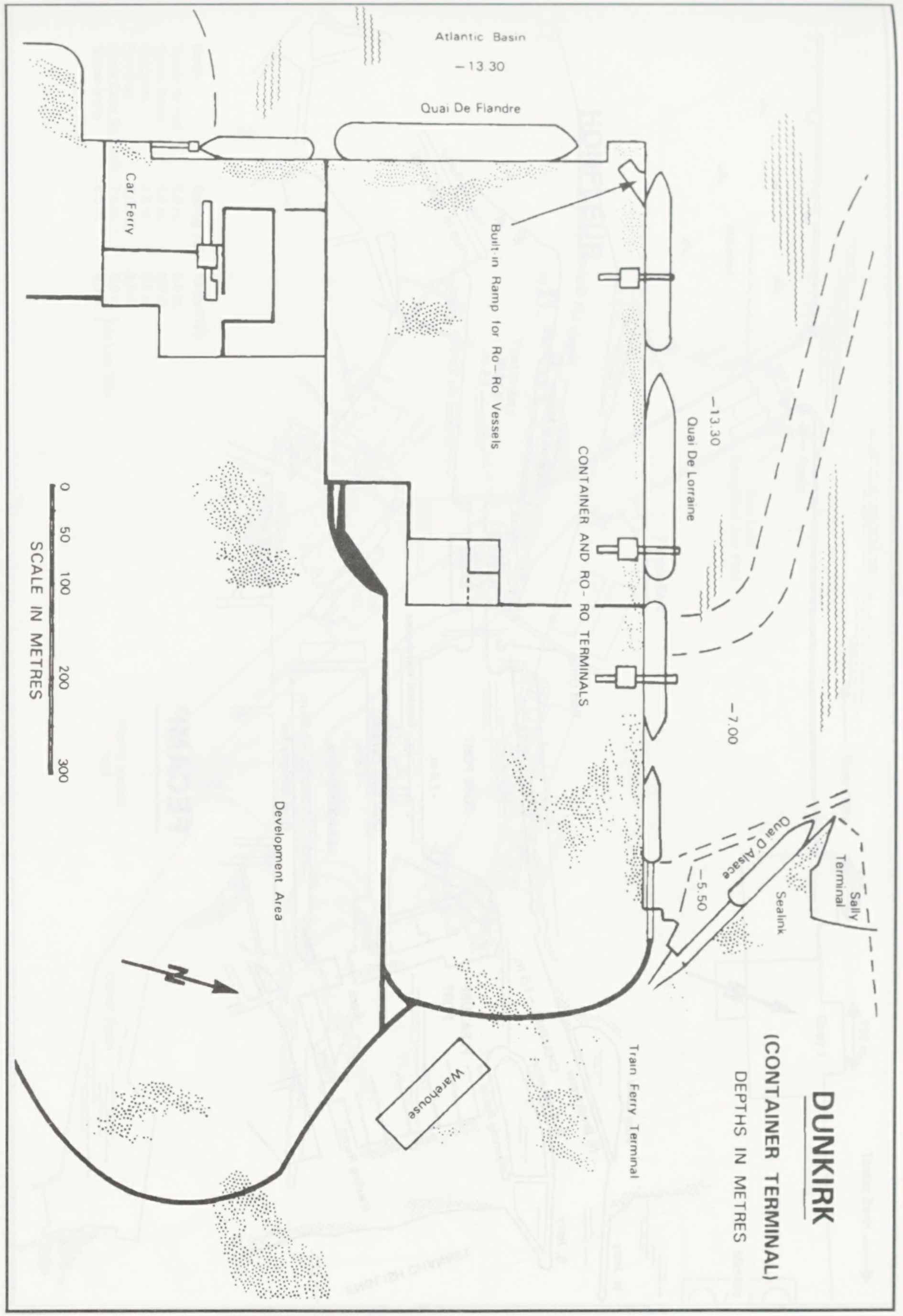


DUNKIRK

WEST PORT

All Depths in Meters

10
0
5
Fore Port
Dredged to 19 m.
10
5
0
23 m.
Flanders Fuel Berth
5
10
10
0
5
0
0
0
Canal des Dunes
East-West Canal Link
Quai de Ramsgate
Sally Terminals
Atlantic Basin
5
17 m.
7 m.
Quai d' Alsace
Cross Channel Terminals
5
10
10
Turning Circle Dia. 450m.
13.3 m.
Quai de Lorraine Container Terminal
Ro/Ro
13.3 m.
Quai de Flandre
N
23 m.
Western Bulk Terminal
15 m.
0
12 m.
13 m.
Aluminium Works
0
0

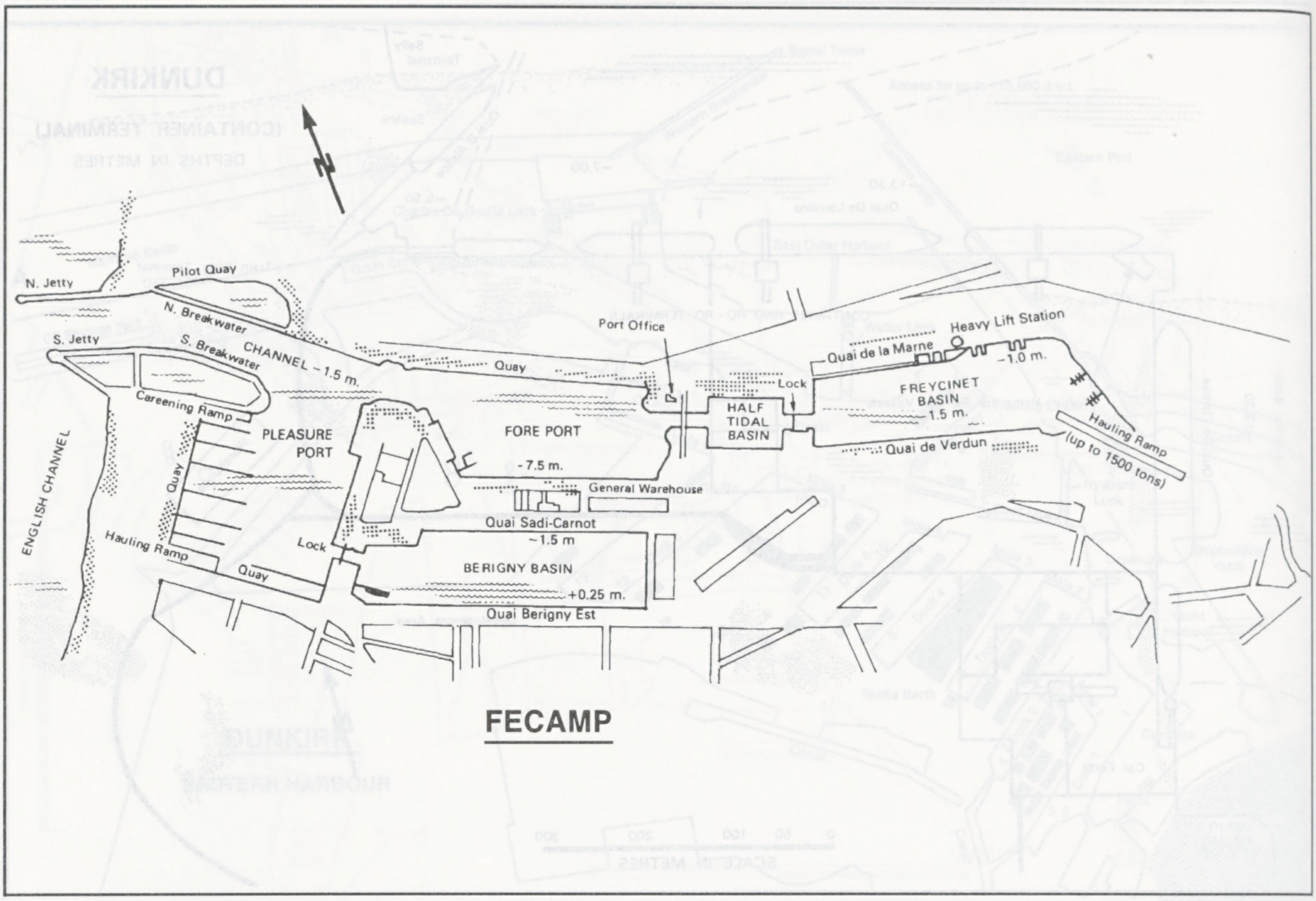


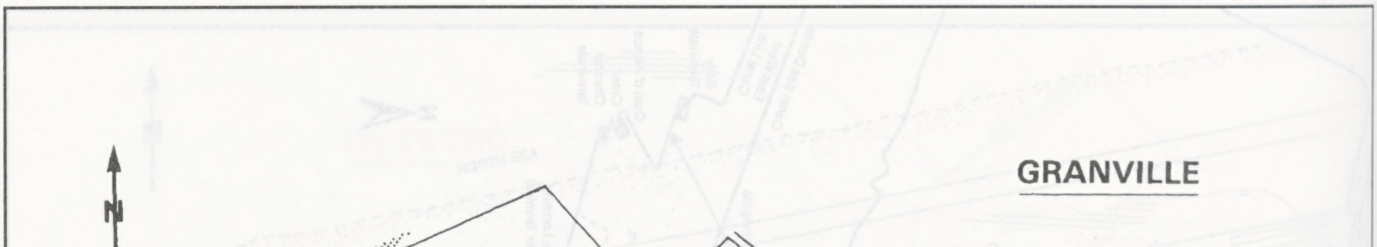
DUNKIRK

(CONTAINER TERMINAL)

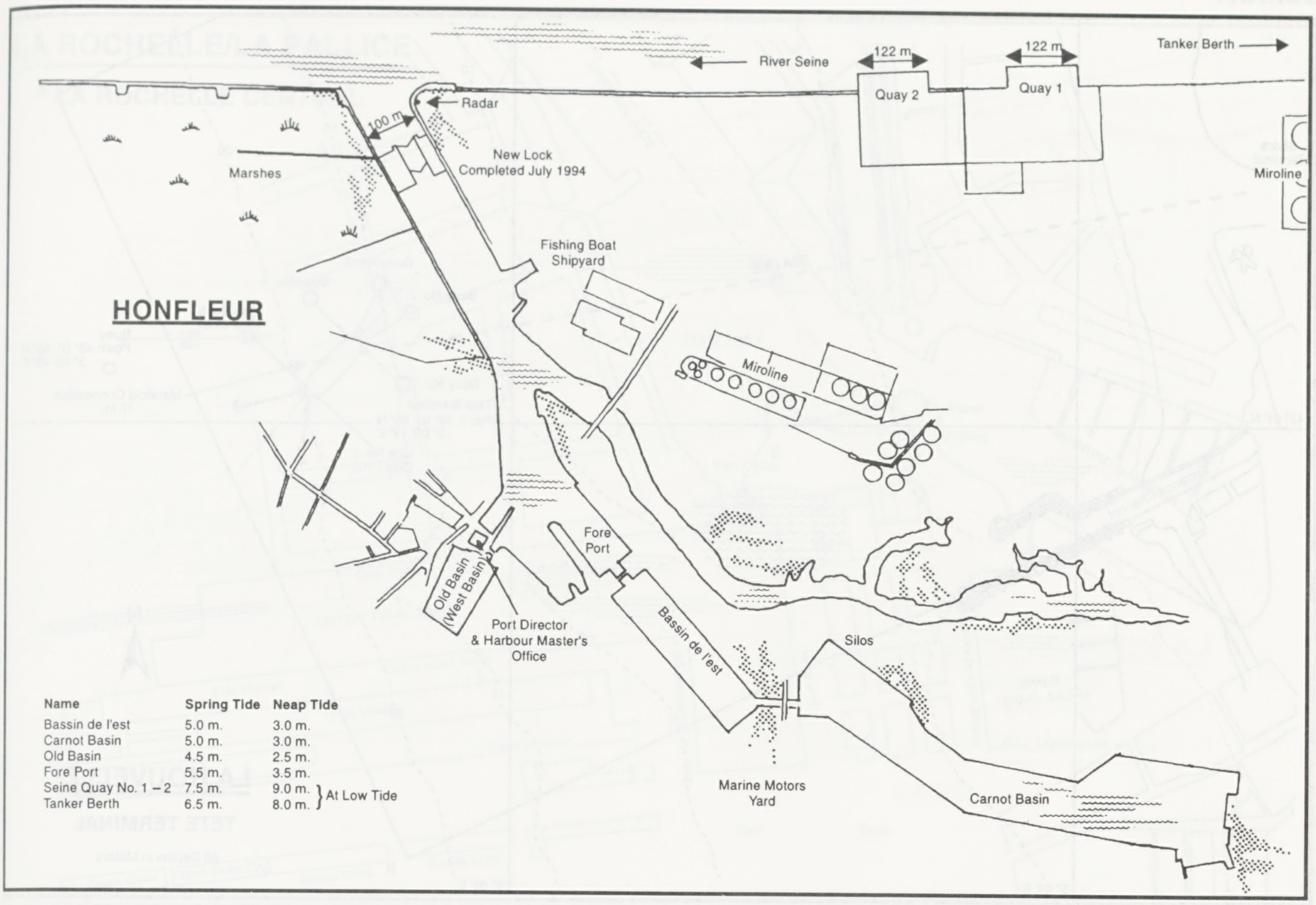
DEPTHS IN METRES

Atlantic Basin
−13.30
Quai De Flandre
Car Ferry
Built in Ramp for Ro-Ro Vessels
CONTAINER AND RO-RO TERMINALS
−13.30
Quai De Lorraine
−7.00
Quai D'Alsace
−5.50
Sealink
Sally Terminal
SCALE IN METRES
0
50
100
200
300
Development Area
N
Warehouse
Train Ferry Terminal


FECAMP
N
N. Jetty
Pilot Quay
N. Breakwater
S. Jetty
S. Breakwater
CHANNEL ~1.5 m.
Careening Ramp
PLEASURE PORT
Quay
ENGLISH CHANNEL
Hauling Ramp
Quay
Lock
Quay
Port Office
FORE PORT
-7.5 m.
General Warehouse
Quai Sadi-Carnot
~1.5 m
BERIGNY BASIN
+0.25 m.
Quai Berigny Est
HALF TIDAL BASIN
Lock
Quai de la Marne
Heavy Lift Station
-1.0 m.
FREYCINET BASIN
~1.5 m.
Quai de Verdun
Hauling Ramp
(up to 1500 tons)

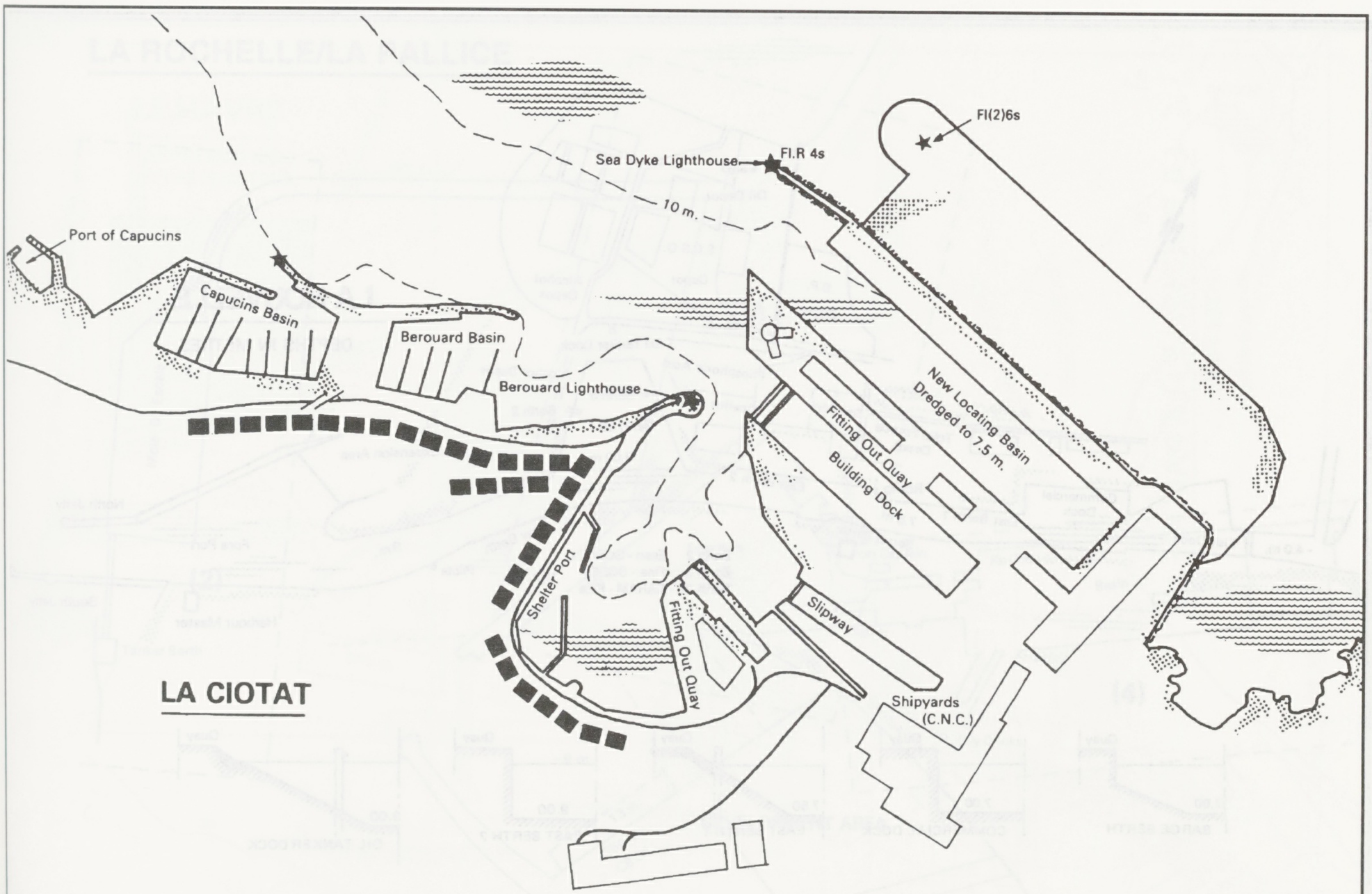

GRANVILLE
N
TIDAL BASIN
Max Draft 7.5 m.
Lock: width 20 m.
Port Captain
FOREPORT
Dry Dock
Visitors
MOORING BASIN
MANOEUVRING BASIN
Pivot Gate

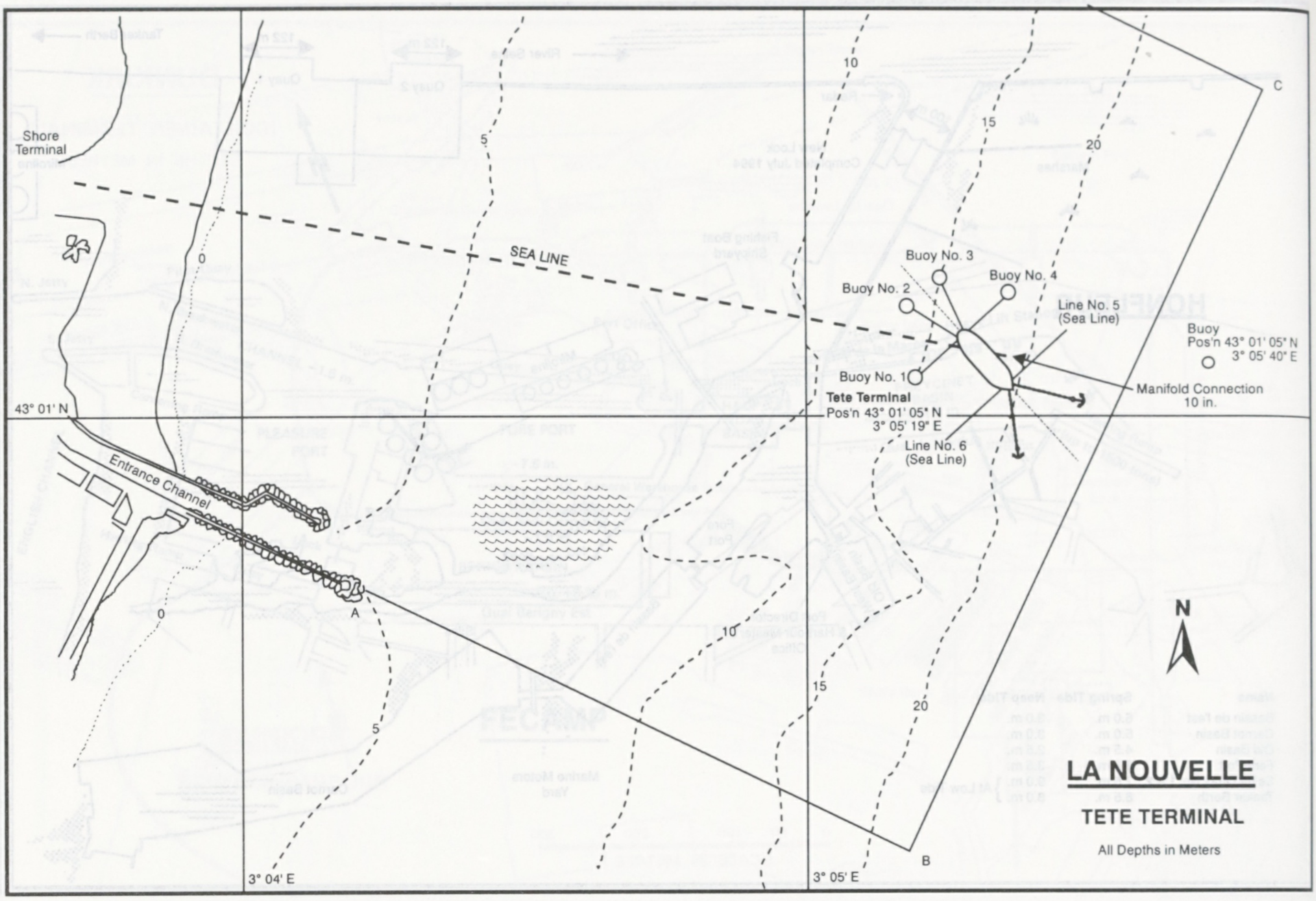
HONFLEUR

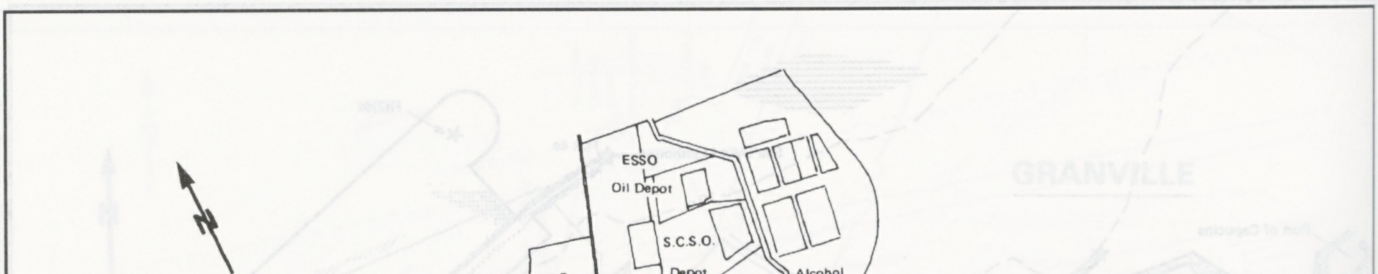

River Seine
122 m
122 m
Tanker Berth
Quay 2
Quay 1
Miroline
Radar
100 m
New Lock
Completed July 1994
Marshes
Fishing Boat
Shipyard
Miroline
Fore
Port
Old Basin
(West Basin)
Port Director
& Harbour Master's
Office
Bassin de l'est
Silos
Marine Motors
Yard
Carnot Basin

Name	Spring Tide	Neap Tide	
Bassin de l'est	5.0 m.	3.0 m.	
Carnot Basin	5.0 m.	3.0 m.	
Old Basin	4.5 m.	2.5 m.	
Fore Port	5.5 m.	3.5 m.	
Seine Quay No. 1 – 2	7.5 m.	9.0 m.	At Low Tide
Tanker Berth	6.5 m.	8.0 m.	

LA CIOTAT

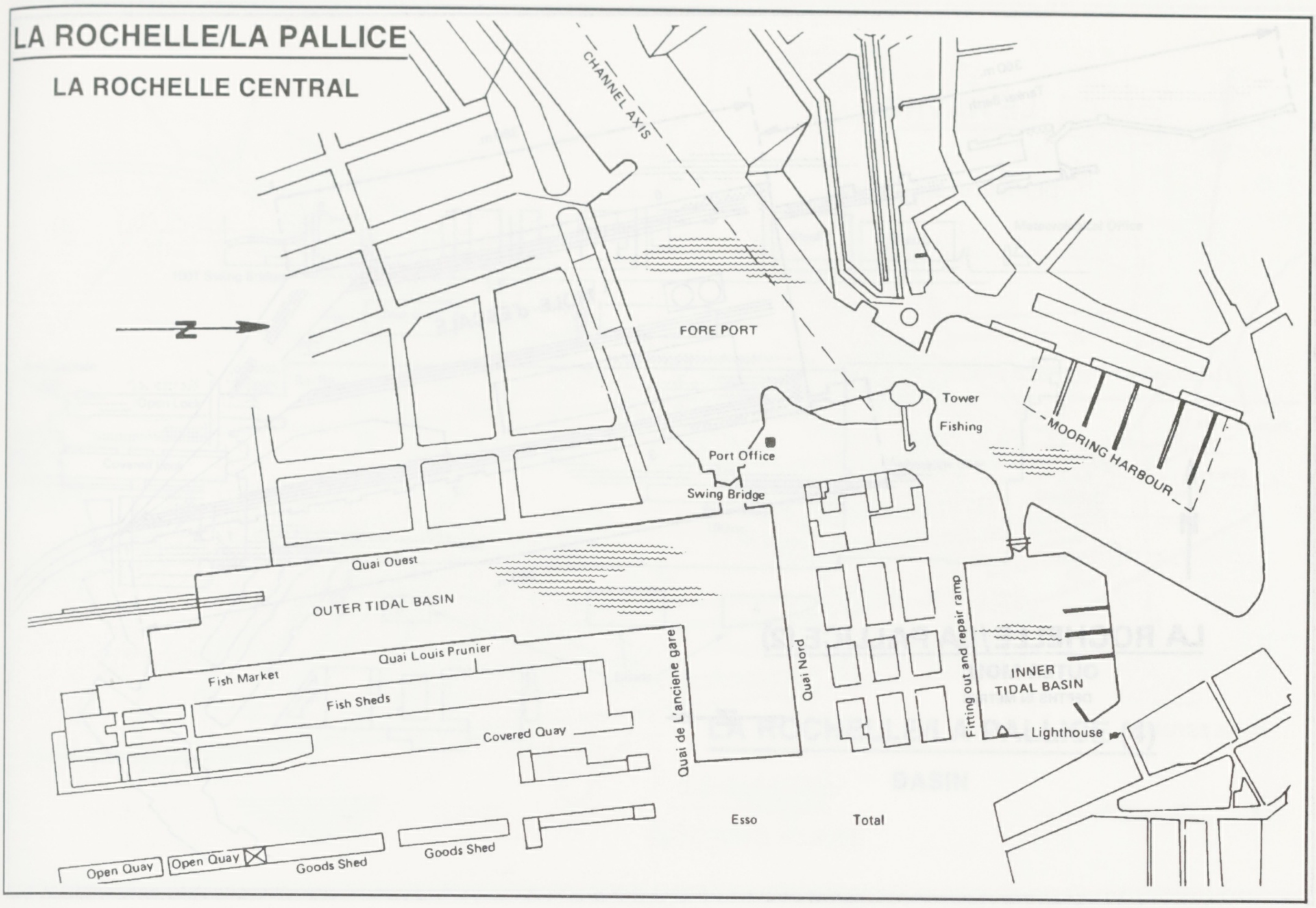

Port of Capucins
Capucins Basin
Berouard Basin
Berouard Lighthouse
Sea Dyke Lighthouse
Fl.R 4s
10 m.
Fl(2)6s
New Locating Basin
Dredged to 7.5 m.
Fitting Out Quay
Building Dock
Shelter Port
Fitting Out Quay
Slipway
Shipyards
(C.N.C.)


Shore Terminal
SEA LINE
0
5
10
15
20
Buoy No. 1
Buoy No. 2
Buoy No. 3
Buoy No. 4
Line No. 5 (Sea Line)
Line No. 6 (Sea Line)
Buoy Pos'n 43° 01' 05" N 3° 05' 40" E
Manifold Connection 10 in.
Tete Terminal
Pos'n 43° 01' 05" N 3° 05' 19" E
43° 01' N
3° 04' E
3° 05' E
Entrance Channel
A
B
C
N
LA NOUVELLE
TETE TERMINAL
All Depths in Meters

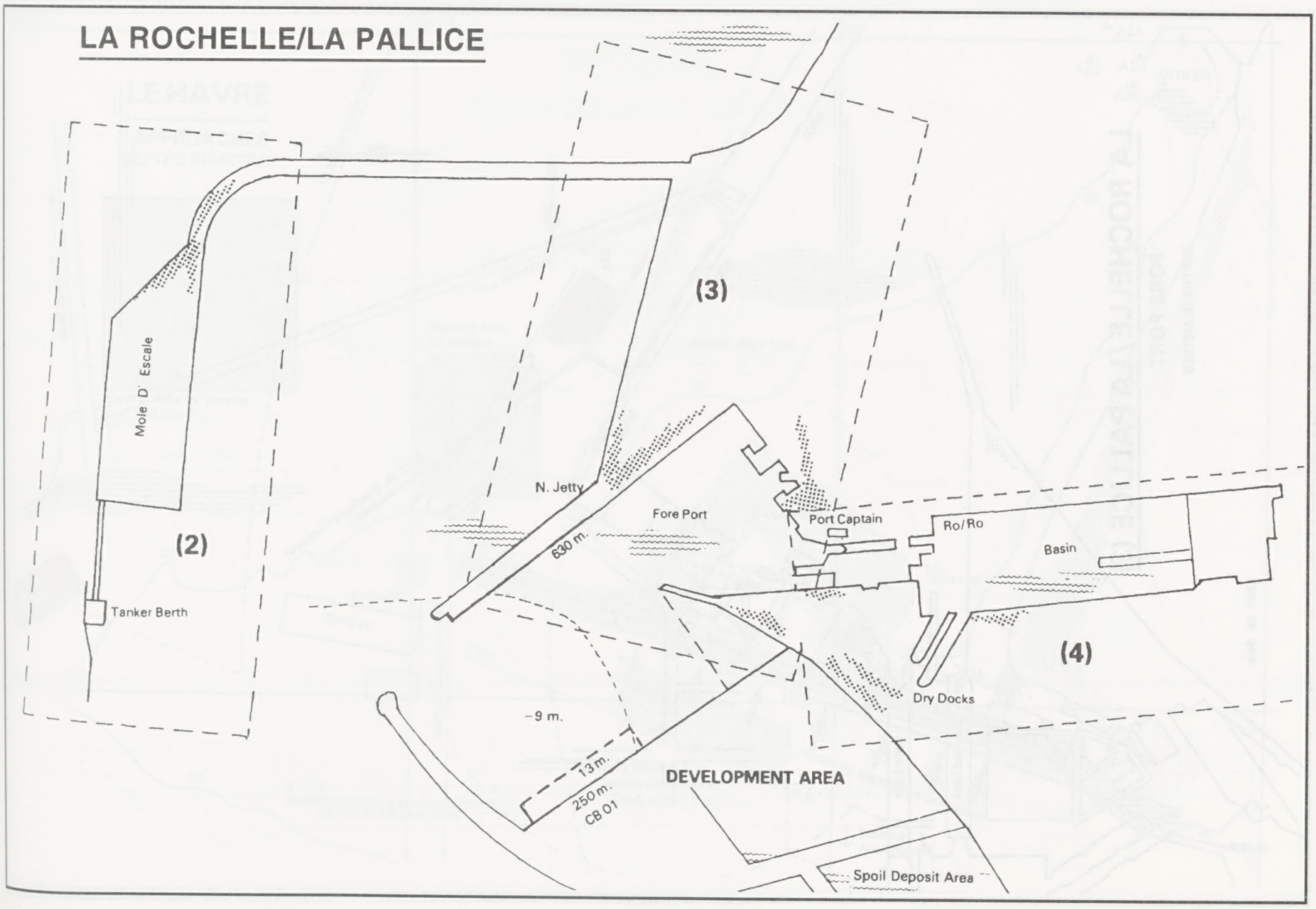

N
ESSO
Oil Depot
S.C.S.O.
Depot
B.P.
Depot
Alcohol Depot
Oil Tanker Dock
Phosphoric Acid
Pipeline
Saw Mill
Total France Depot
Alcohol Depot
Berth 3
Berth 3b
Berth 2
9.00 m.
Expansion Area
Commercial Dock
Ro/Ro
East Berth 2
East Berth 1
7.5 m.
-4.0 m.
Fish Dock
South Berth
New Berth
9 m.
Pilots
North Jetty
Fore Port
South Jetty
Harbour Master
Berth 2 Esso - SCSO
Berth 3 Fina - SCSO
Berth 3b SARAM - Fina
LA NOUVELLE
DEPTHS IN METRES
Quay
7.00
BARGE BERTH
Quay
7.00
COMMERCIAL DOCK
Quay
7.50
EAST BERTH 1
Quay
9.00
EAST BERTH 2
Quay
9.00
OIL TANKER DOCK

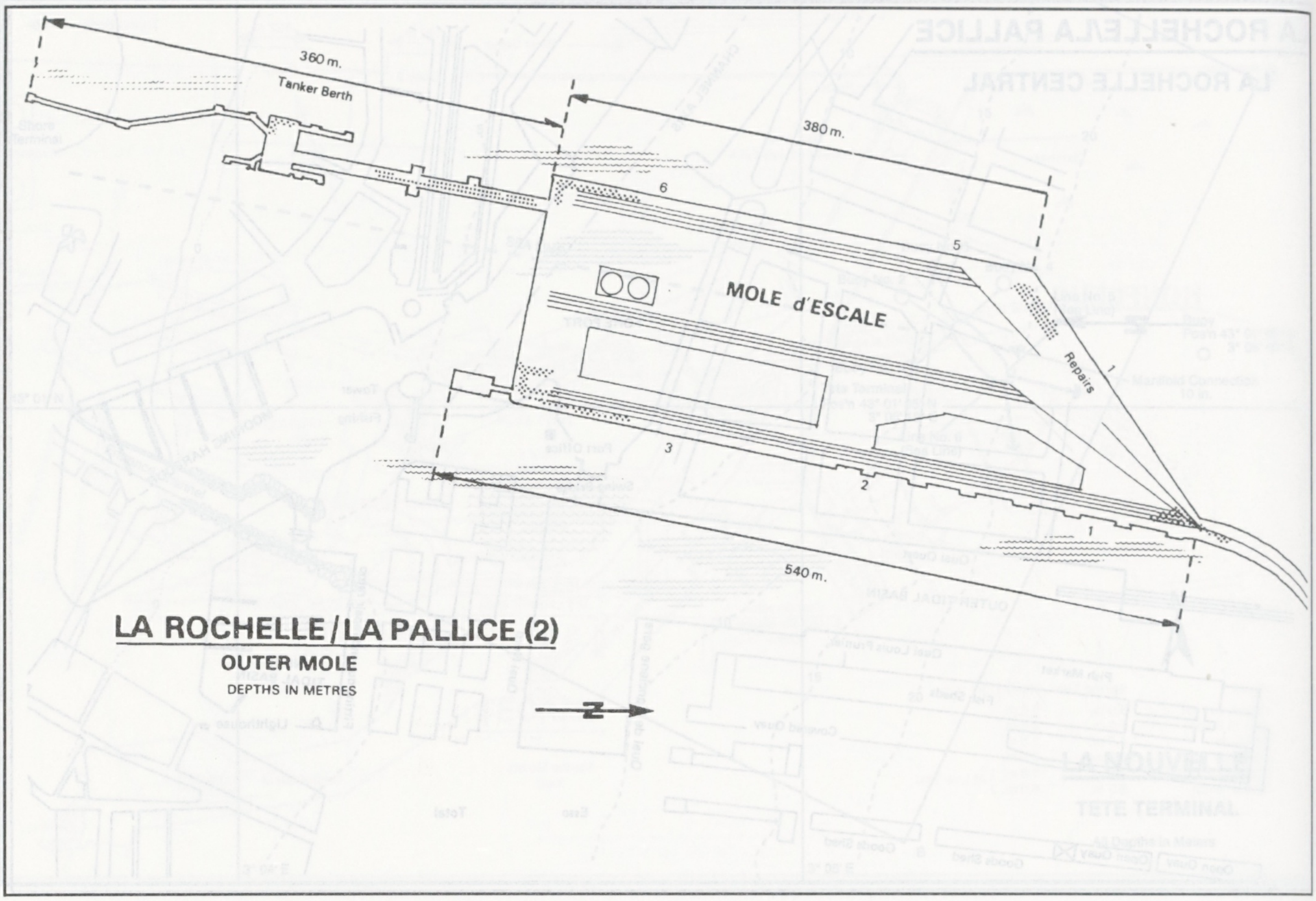
LA ROCHELLE/LA PALLICE

LA ROCHELLE CENTRAL


N
CHANNEL AXIS
FORE PORT
Tower
Fishing
MOORING HARBOUR
Port Office
Swing Bridge
Quai Ouest
OUTER TIDAL BASIN
Quai Louis Prunier
Fish Market
Fish Sheds
Covered Quay
Quai de L'anciene gare
Quai Nord
Fitting out and repair ramp
INNER TIDAL BASIN
Lighthouse
Esso
Total
Open Quay
Open Quay
Goods Shed
Goods Shed

LA ROCHELLE/LA PALLICE


Mole D' Escale
(2)
Tanker Berth
(3)
N. Jetty
630 m.
Fore Port
Port Captain
Ro/Ro
Basin
(4)
Dry Docks
-9 m.
13 m.
250 m.
CB 01
DEVELOPMENT AREA
Spoil Deposit Area

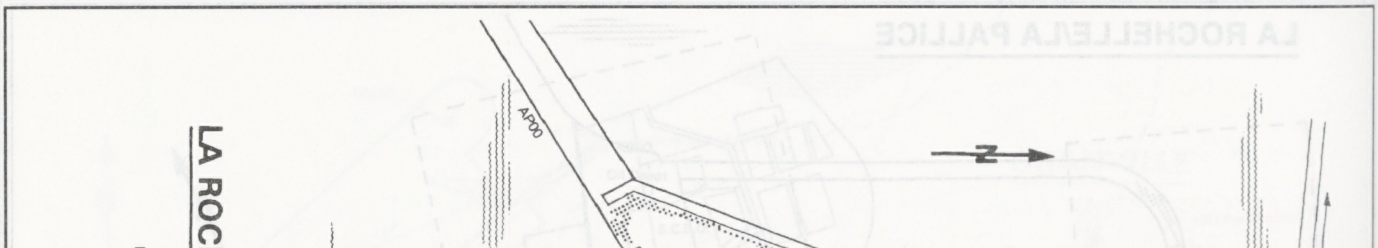


LA ROCHELLE/LA PALLICE (2)

OUTER MOLE

DEPTHS IN METRES

360 m.
Tanker Berth
380 m.
6
5
MOLE d'ESCALE
Repairs
1
3
2
1
540 m.
N

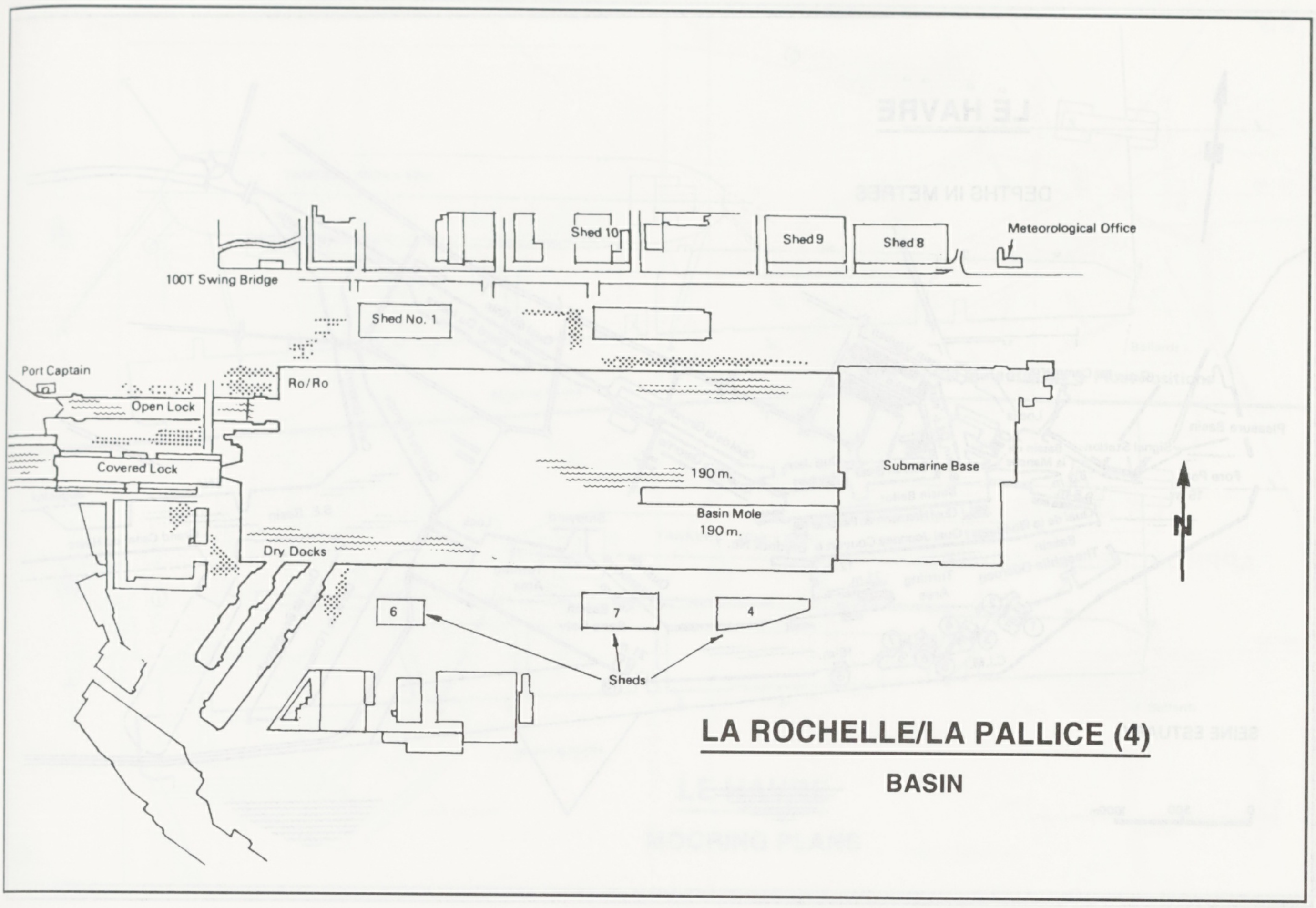


LA ROCHELLE/LA PALLICE (3)

FORE PORT

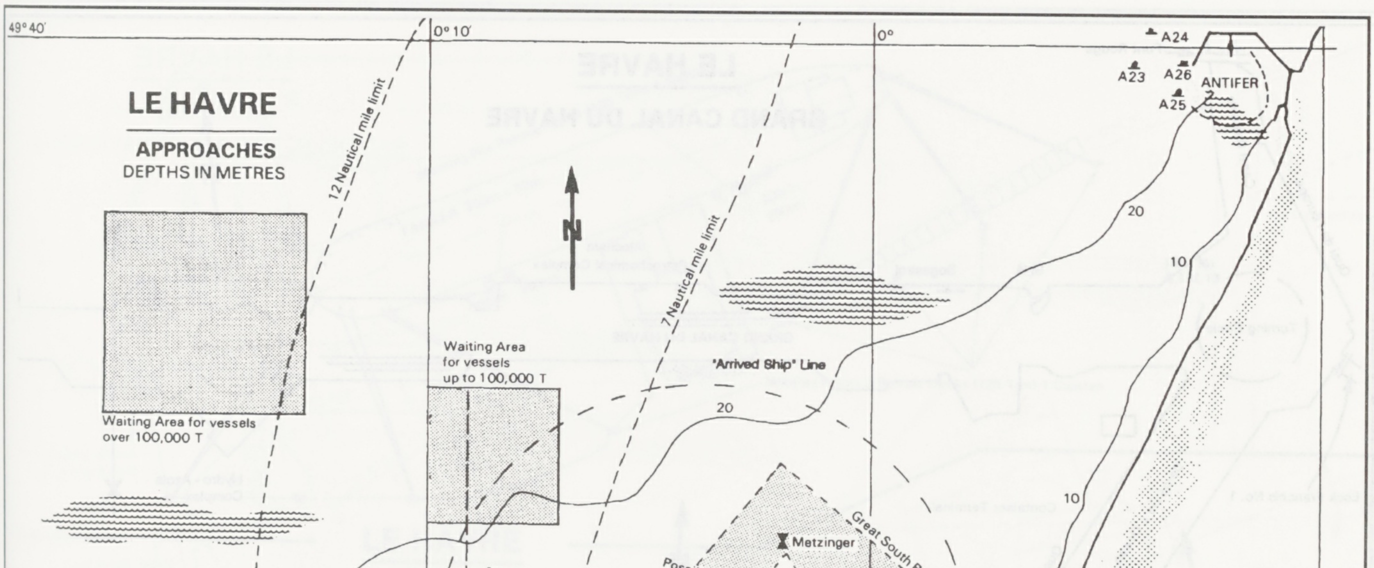
DEPTHS IN METRES

AP00
AP01
AP02
Silo
N
To Outer Mole
S.I.C.A. Overhead Conveyor
Shed 14
Silo
Chef de Baie
Port Captain
Covered Lock
Open Lock


Shed 10
Shed 9
Shed 8
Meteorological Office
100T Swing Bridge
Shed No. 1
Port Captain
Ro/Ro
Open Lock
Covered Lock
190 m.
Submarine Base
Basin Mole
190 m.
N
Dry Docks
6
7
4
Sheds

LA ROCHELLE/LA PALLICE (4)

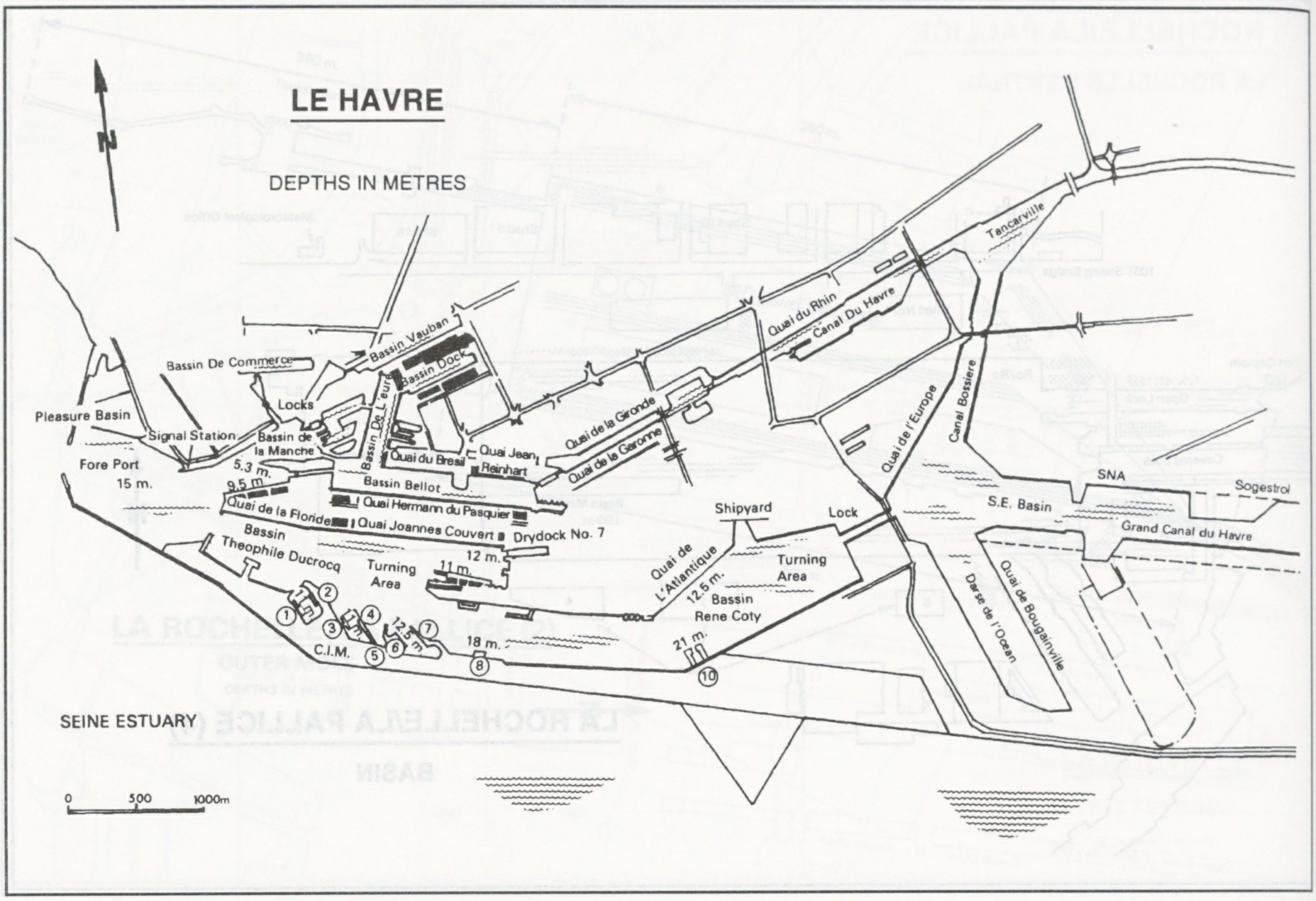
BASIN

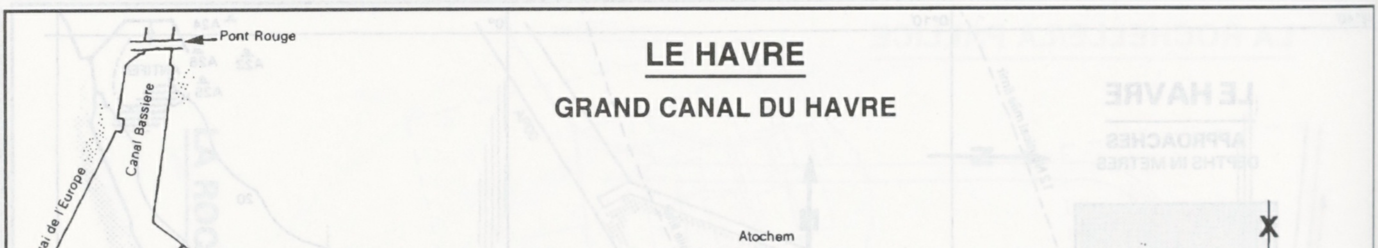

LE HAVRE

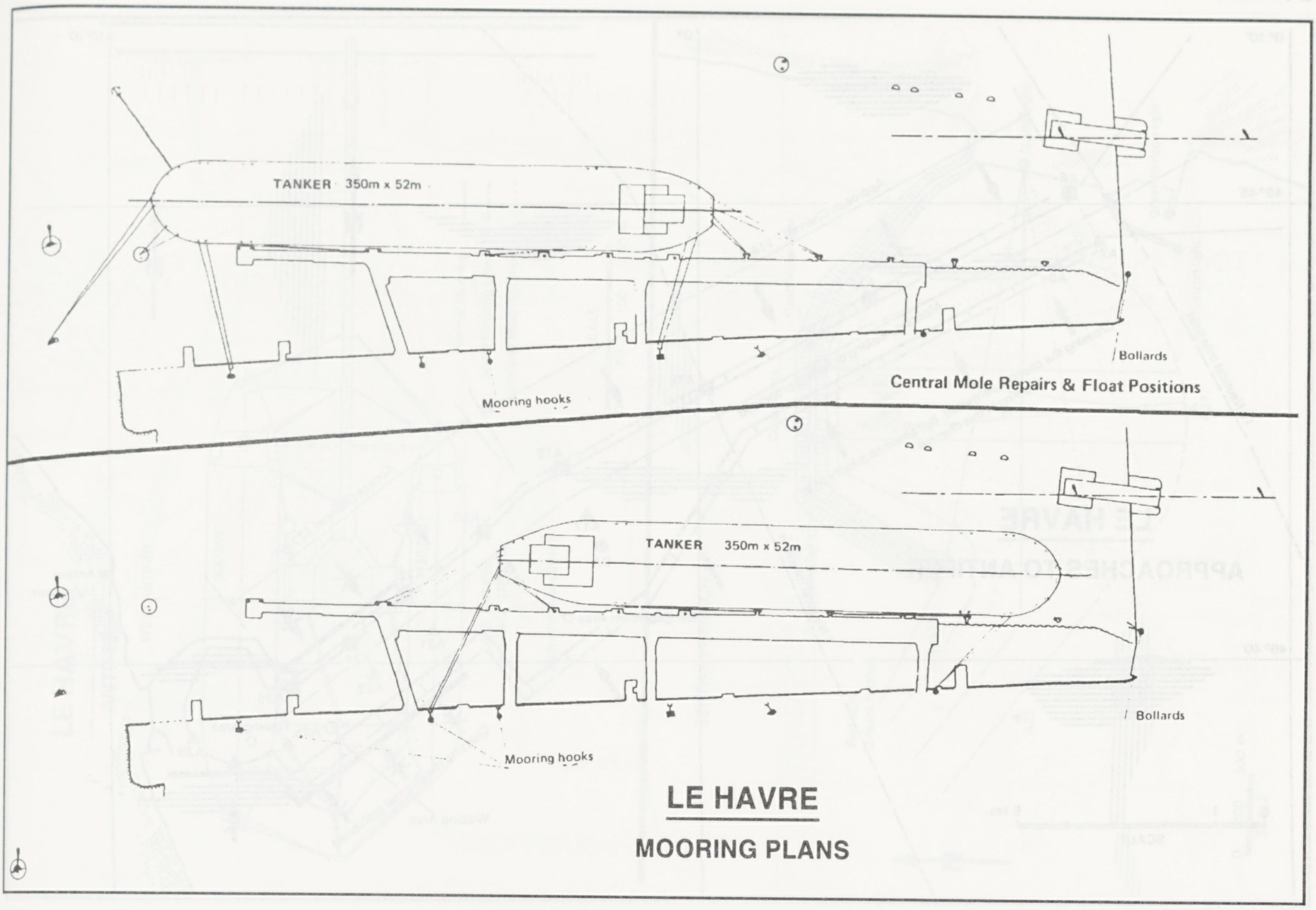
APPROACHES

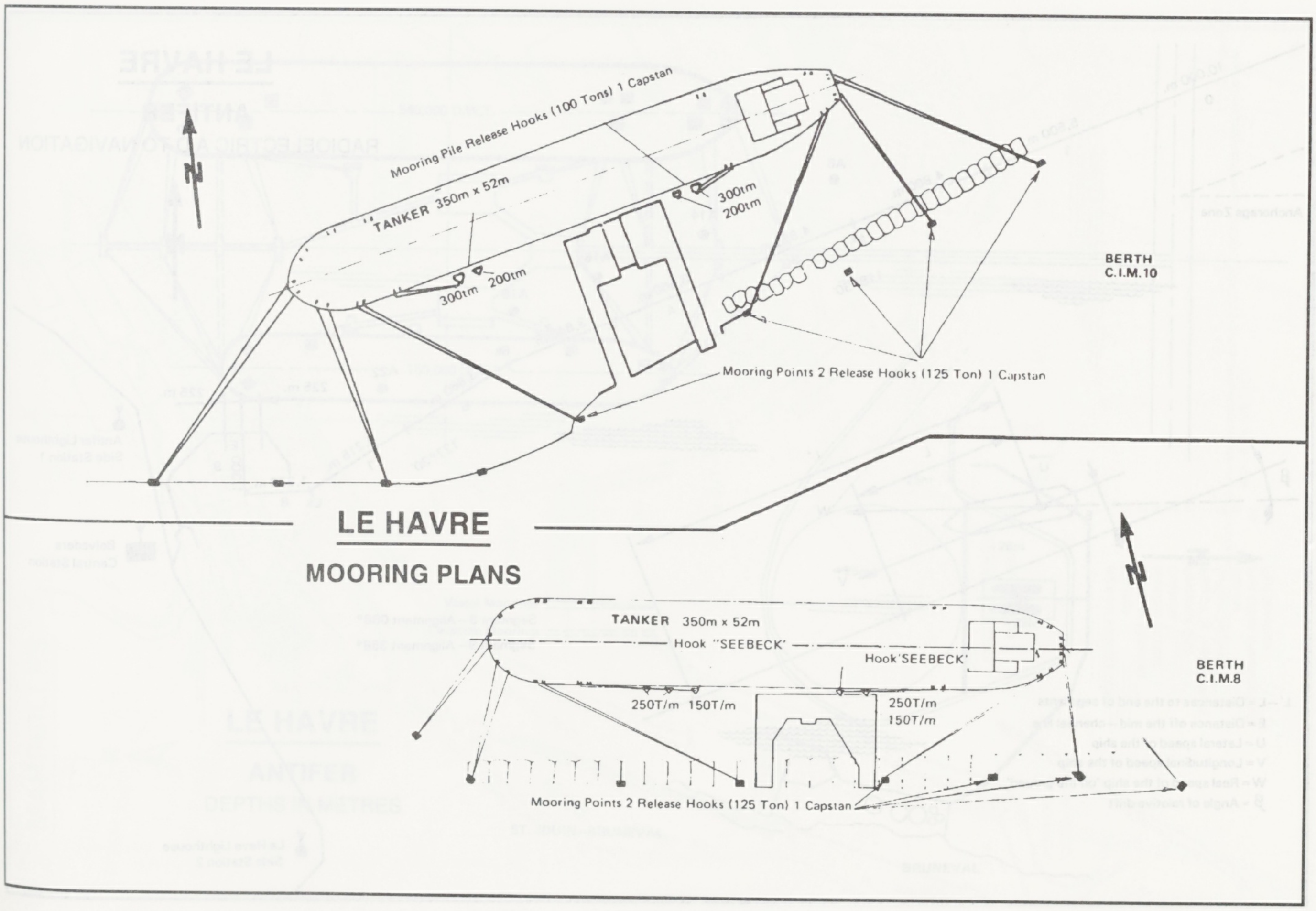
DEPTHS IN METRES

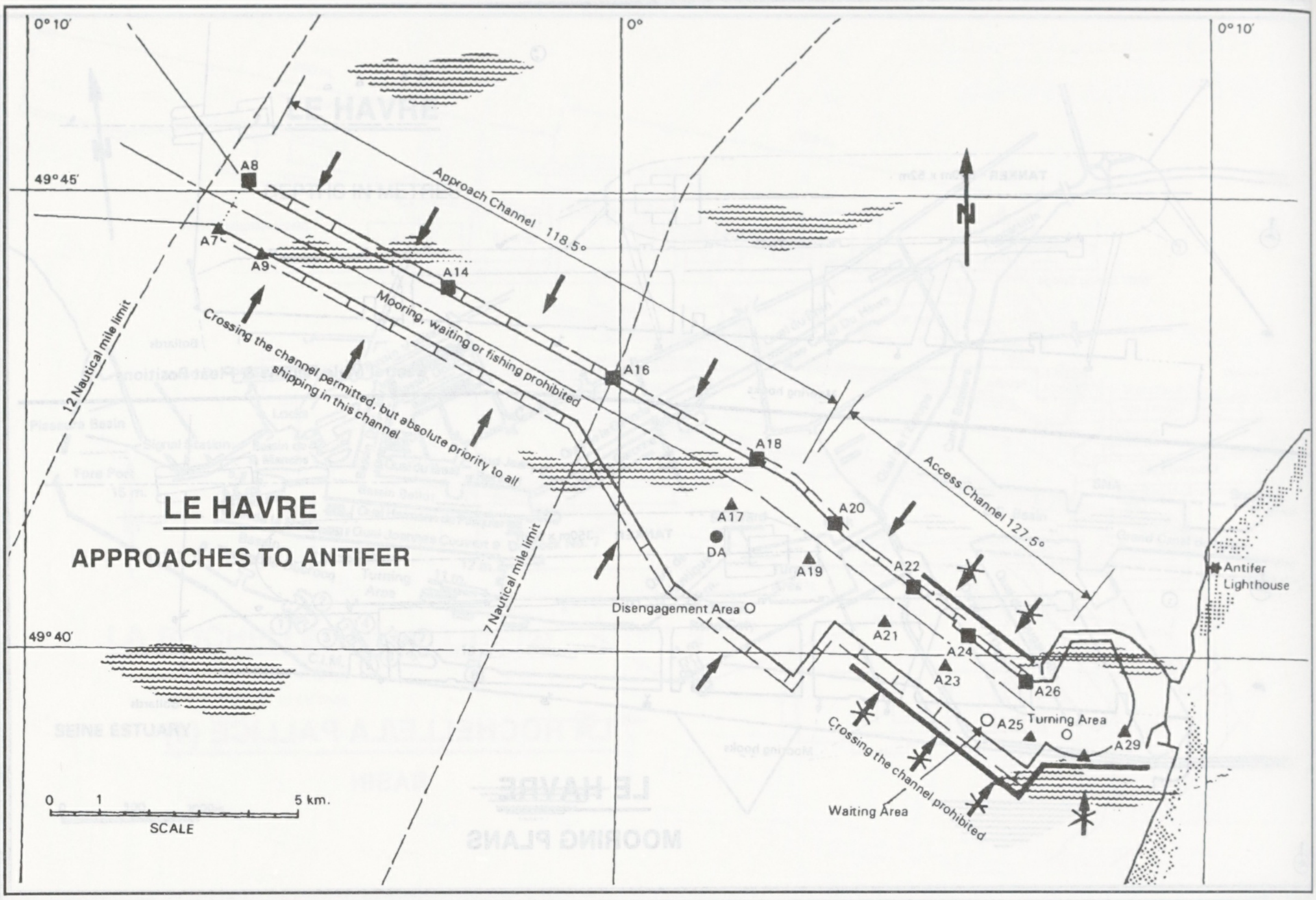
49° 40'
0° 10'
0°
49° 30'
12 Nautical mile limit
7 Nautical mile limit
N
Waiting Area for vessels over 100,000 T
Waiting Area for vessels up to 100,000 T
"Arrived Ship" Line
20
10
A24
A23
A26
A25
ANTIFER
Metzinger
Great South Roads
Octeville
106° 47'
110°
Possible to cross channel, but absolute priority to all shipping in channel
LH4
LH6
LH3
LH5
LH7
LH10
L.H.
R.N.
LE HAVRE
Le Havre Pilotage Limit
Crossing the channel prohibited
Le Havre Waiting Area Length up to 250 m. Draft up to 12 m.
Waiting Area Rouen
La Carosse Roads
0
1
6
SCALE IN KILOMETRES

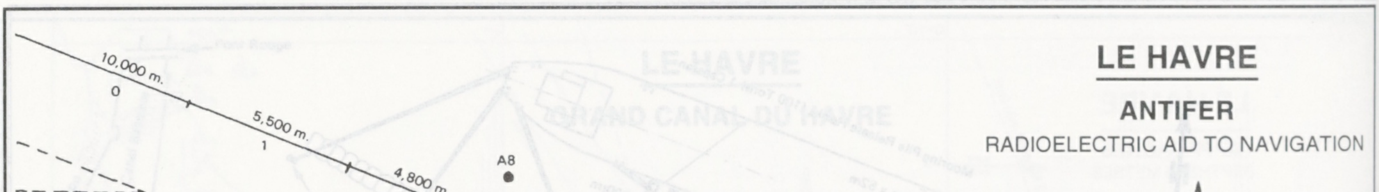

LE HAVRE
DEPTHS IN METRES
N
Pleasure Basin
Signal Station
Fore Port
15 m.
Bassin De Commerce
Locks
Bassin de la Manche
5.3 m.
9.5 m.
Bassin Vauban
Bassin Dock
Bassin De L'eure
Quai du Bresil
Quai Jean Reinhart
Bassin Bellot
Quai de la Floride
Quai Hermann du Pasquier
Quai Joannes Couvert
Drydock No. 7
Bassin Theophile Ducrocq
Turning Area
12 m.
11 m.
12.5 m.
18 m.
C.I.M.
1
2
3
4
5
6
7
8
10
Quai de la Gironde
Quai de la Garonne
Quai du Rhin
Canal Du Havre
Tancarville
Quai de l'Europe
Canal Bossiere
Quai de L'Atlantique
12.5 m.
Bassin Rene Coty
21 m.
Shipyard
Lock
Turning Area
SNA
S.E. Basin
Sogestrol
Grand Canal du Havre
Darse de l'Ocean
Quai de Bougainville
SEINE ESTUARY
0
500
1000m

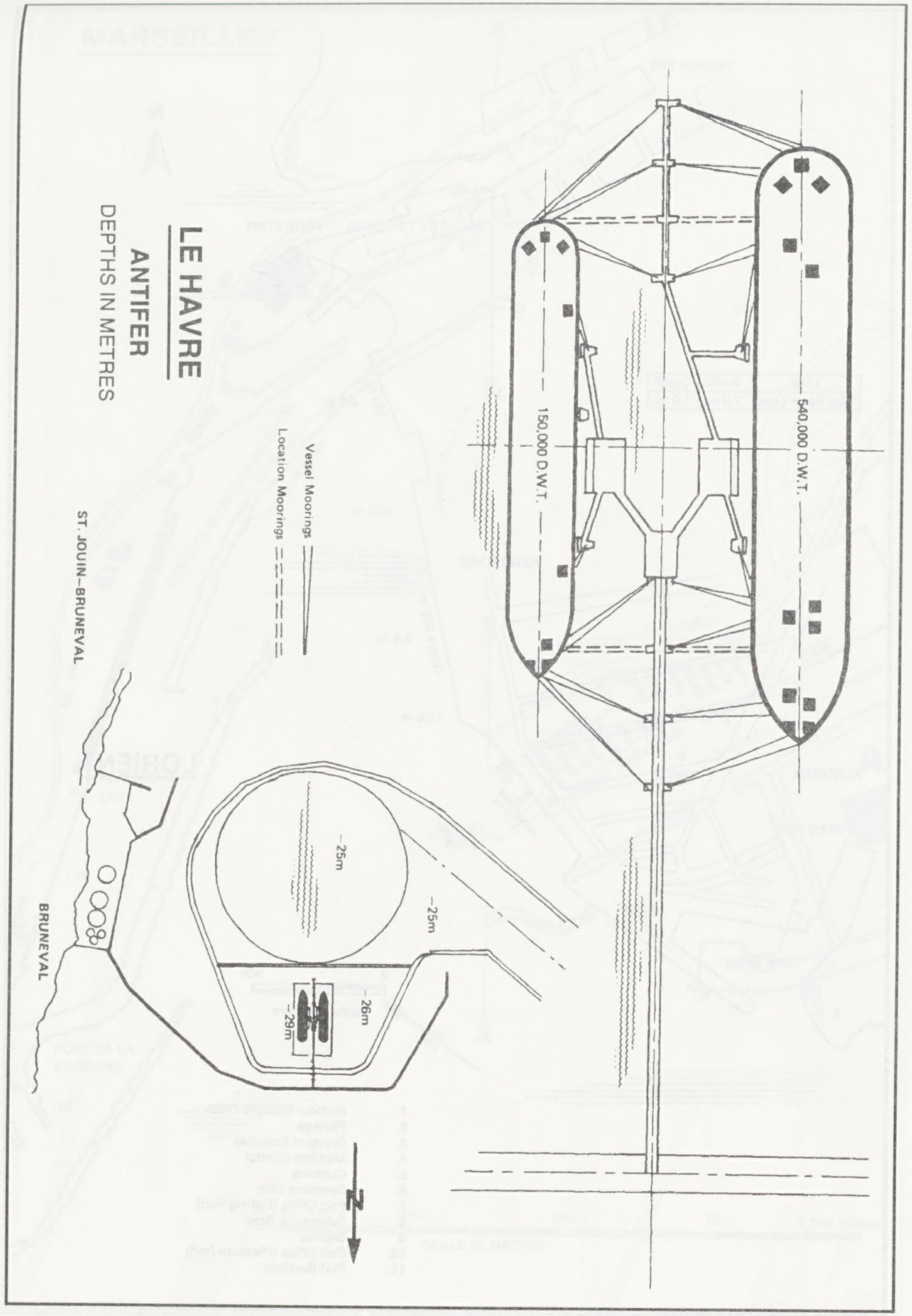

LE HAVRE
GRAND CANAL DU HAVRE
Pont Rouge
Canal Bassiere
Quai de l'Europe
Turning Circle
Lock Francois No. 1
SNA
Sogestrol
Atochem Petrochemical Complex
GRAND CANAL DU HAVRE
Sogestrol
Turning Circle
Hydro - Azote Complex
Container Terminal
Darse De L'Ocean
Quai Bougainville
N
GRAND CANAL DU HAVRE
Turning Circle
Multivrac


TANKER 350m x 52m
Bollards
Mooring hooks
Central Mole Repairs & Float Positions
TANKER 350m x 52m
Bollards
Mooring hooks
LE HAVRE
MOORING PLANS


Mooring Pile Release Hooks (100 Tons) 1 Capstan
TANKER 350m x 52m
300tm
200tm
300tm 200tm
BERTH
C.I.M.10
Mooring Points 2 Release Hooks (125 Ton) 1 Capstan
LE HAVRE
MOORING PLANS
TANKER 350m x 52m
Hook "SEEBECK"
Hook 'SEEBECK'
250T/m 150T/m
250T/m
150T/m
BERTH
C.I.M.8
Mooring Points 2 Release Hooks (125 Ton) 1 Capstan

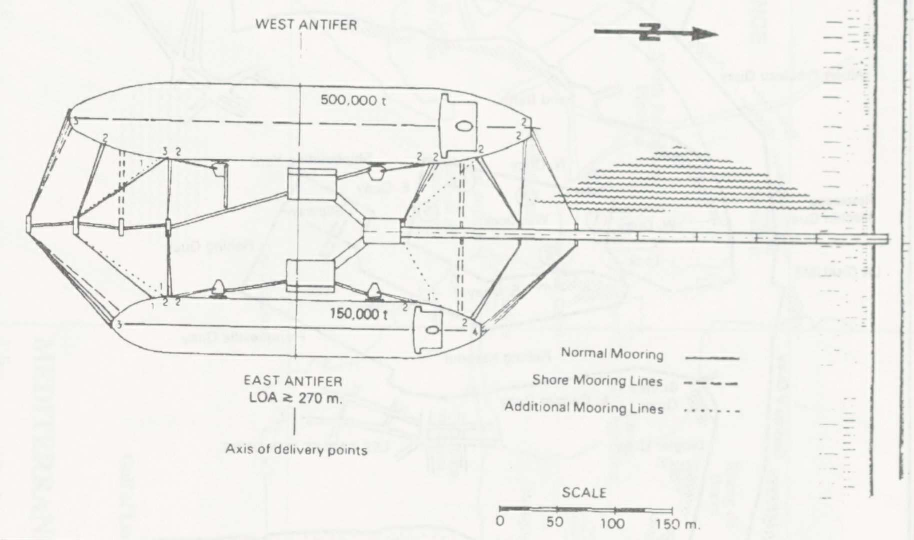

LE HAVRE
APPROACHES TO ANTIFER
0° 10'
0°
0° 10'
49° 45'
49° 40'
A7
A8
A9
A14
A16
A17
DA
A18
A19
A20
A21
A22
A23
A24
A25
A26
A29
Approach Channel 118.5°
Access Channel 127.5°
Mooring, waiting or fishing prohibited
Crossing the channel permitted, but absolute priority to all shipping in this channel
12 Nautical mile limit
7 Nautical mile limit
Disengagement Area
Turning Area
Crossing the channel prohibited
Waiting Area
Antifer Lighthouse
0
1
5 km.
SCALE


LE HAVRE
ANTIFER
RADIOELECTRIC AID TO NAVIGATION
10,000 m.
0
5,500 m.
1
4,800 m.
2
Ak
4,855 m.
3
118°30'
3,360 m.
4
3,840 m.
5
Bk
3,860 m.
6
3,215 m.
7
127°30'
Ck
1,370 m.
8
1,300 m.
9
225 m.
225 m.
A8
A14
A16
A18
A22
Anchorage Zone
Antifer Lighthouse Side Station 1
Belvedere Central Station
La Heve Lighthouse Side Station 2
Segment 8 – Alignment 088°
Segment 9 – Alignment 358°
β
E
U
L
L'
W
V
L'–L = Distances to the end of segments
E = Distance off the mid – channel line
U = Lateral speed of the ship
V = Longitudinal speed of the ship
W = Real speed of the ship 'on the ground'
β = Angle of relative drift

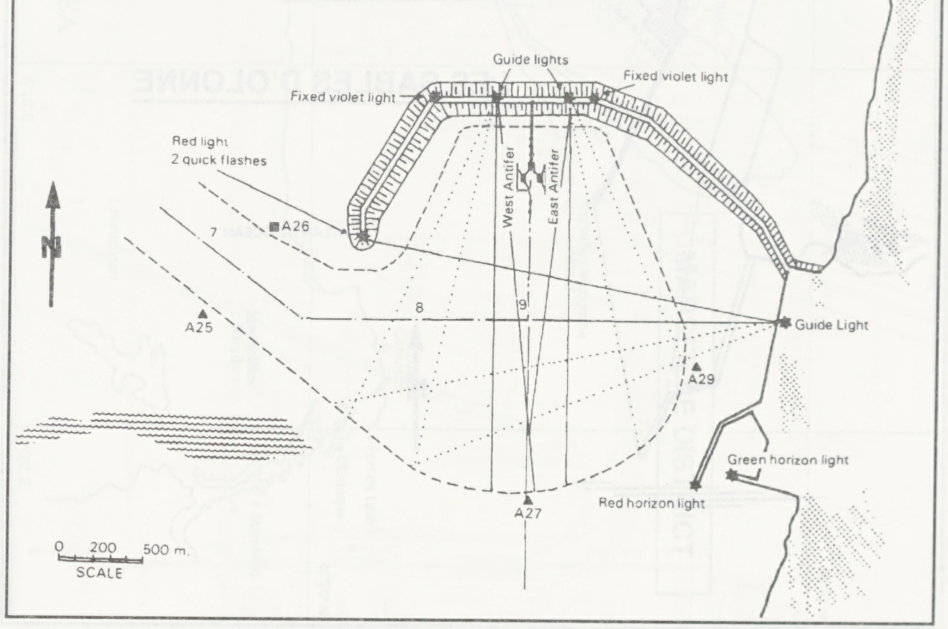

LE HAVRE
ANTIFER
DEPTHS IN METRES
Vessel Moorings
Location Moorings
ST. JOUIN–BRUNEVAL
BRUNEVAL
150,000 D.W.T.
540,000 D.W.T.
–25m
–25m
26m
–29m

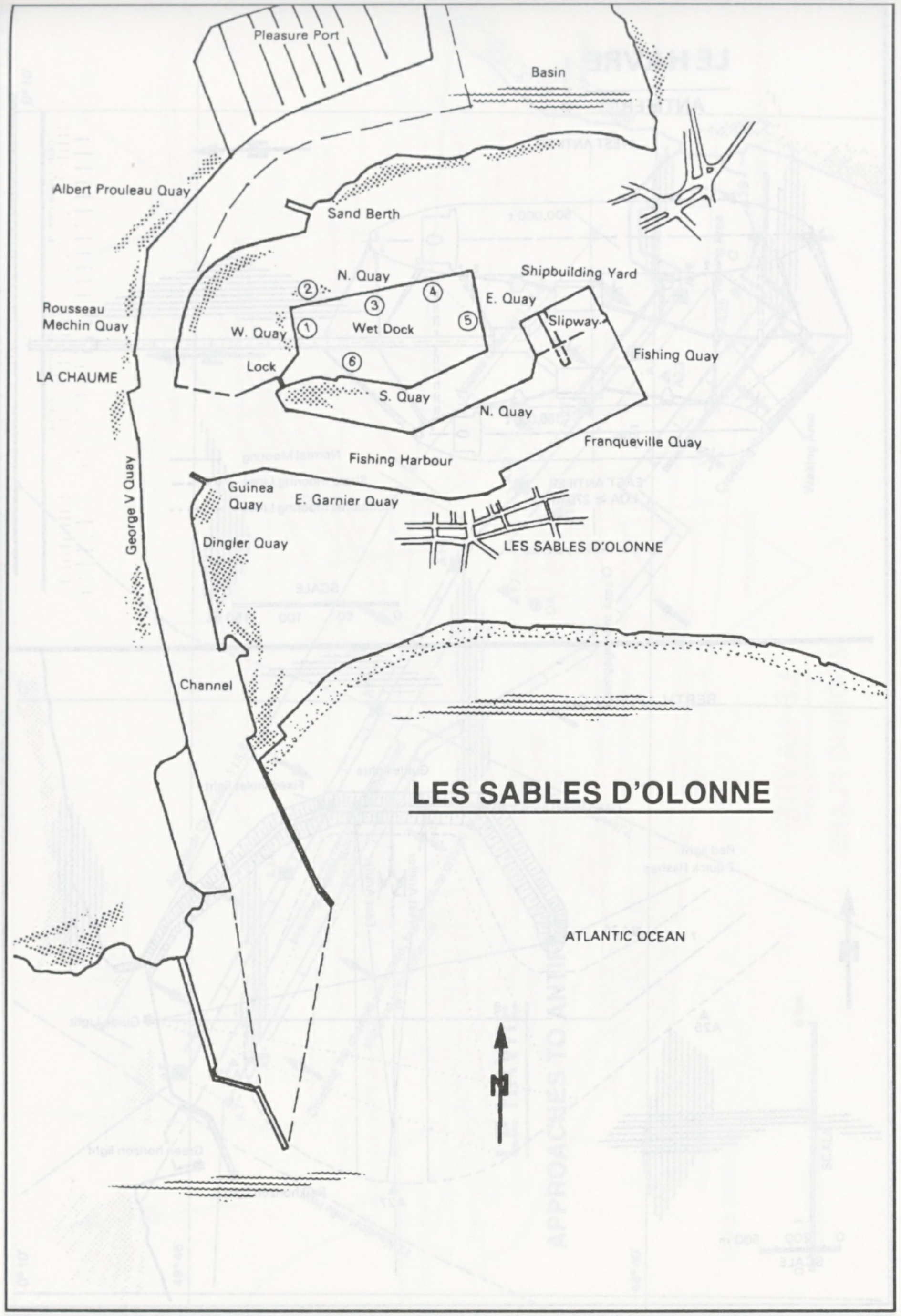
LE HAVRE

ANTIFER


WEST ANTIFER
500,000 t
150,000 t
EAST ANTIFER
LOA ≥ 270 m.
Axis of delivery points
Normal Mooring
Shore Mooring Lines
Additional Mooring Lines
SCALE
0
50
100
150 m.

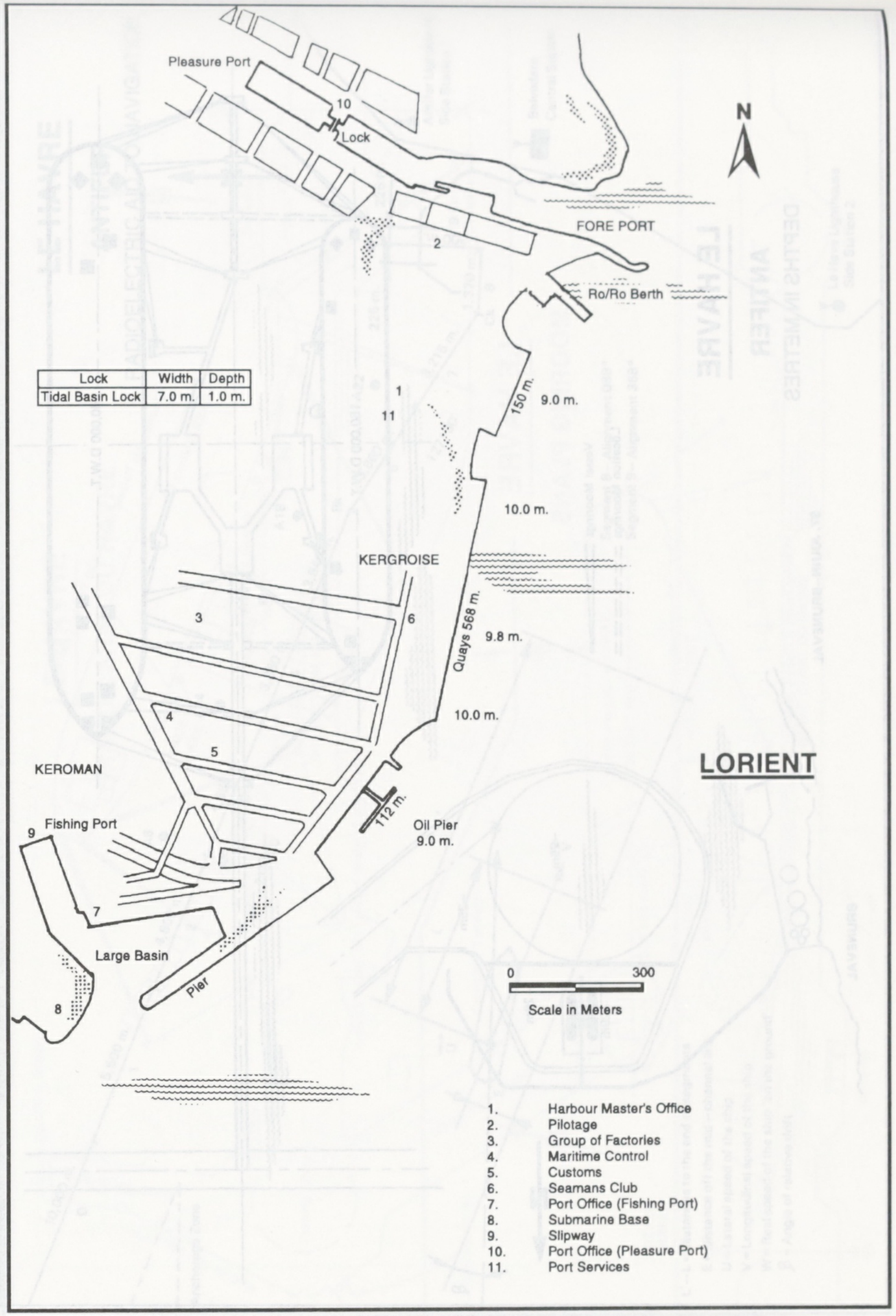
BERTH APPROACH


Guide lights
Fixed violet light
Fixed violet light
Red light
2 quick flashes
A26
7
A25
8
9
West Antifer
East Antifer
Guide Light
A29
A27
Green horizon light
Red horizon light
0
200
500 m.
SCALE



LES SABLES D'OLONNE

Pleasure Port
Basin
Albert Prouleau Quay
Sand Berth
Rousseau Mechin Quay
N. Quay
Shipbuilding Yard
E. Quay
Slipway
W. Quay
Wet Dock
Fishing Quay
LA CHAUME
Lock
S. Quay
N. Quay
Franqueville Quay
Fishing Harbour
Guinea Quay
E. Garnier Quay
George V Quay
Dingler Quay
LES SABLES D'OLONNE
Channel
ATLANTIC OCEAN
N
①
②
③
④
⑤
⑥

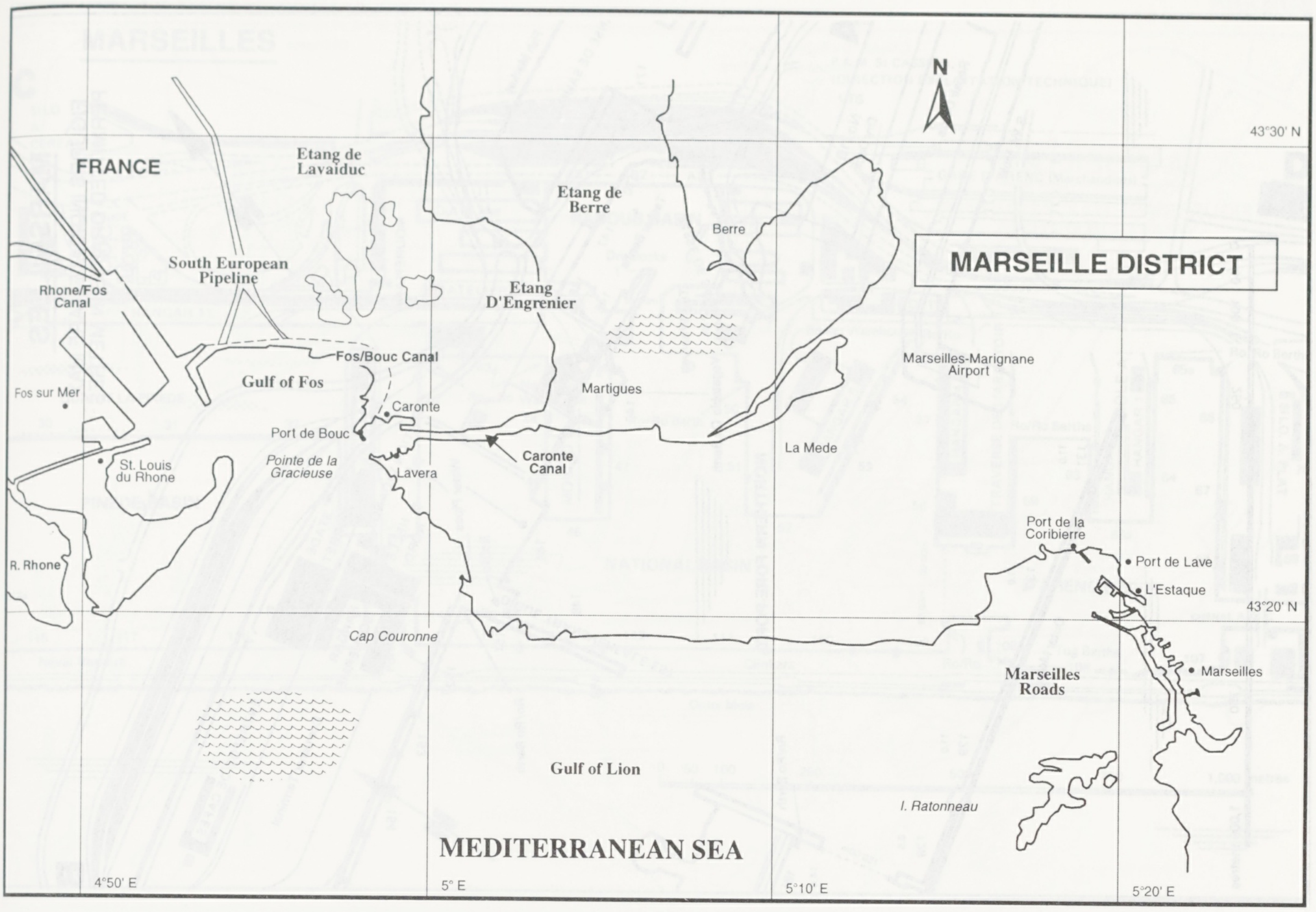


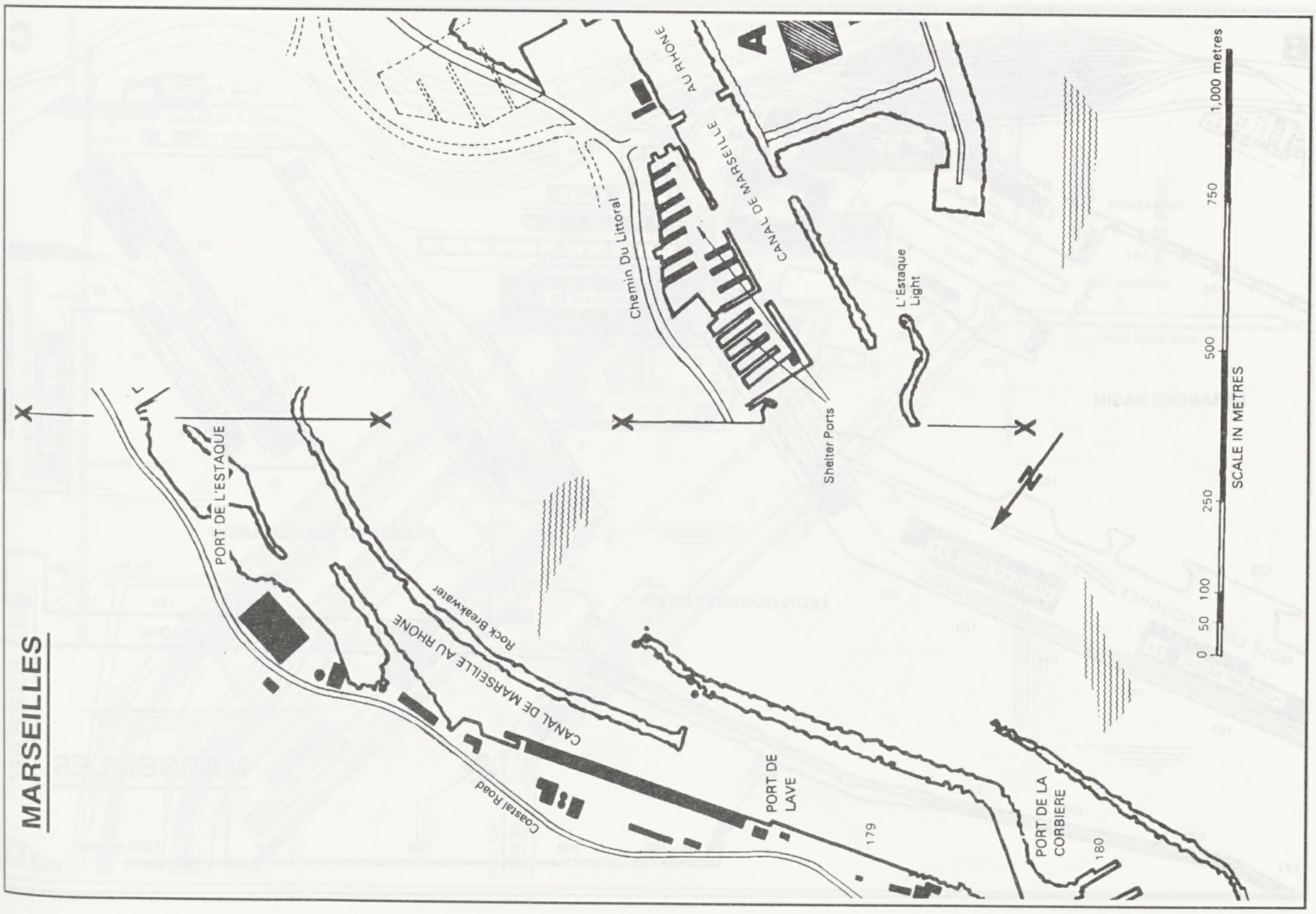
LORIENT

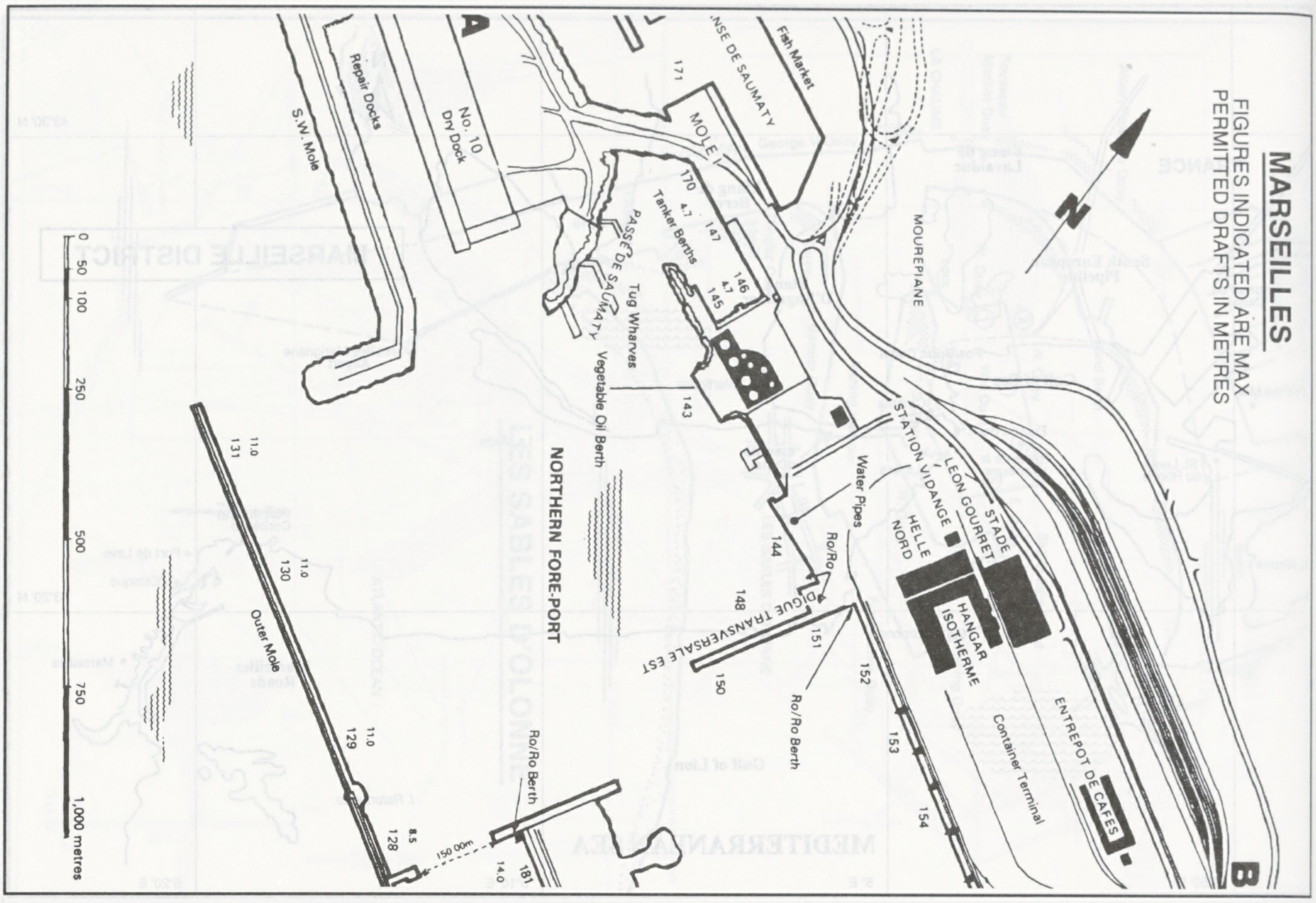
Pleasure Port
10
Lock
N
FORE PORT
2
Ro/Ro Berth
1
11
150 m.
9.0 m.
10.0 m.
KERGROISE
3
6
Quays 568 m.
9.8 m.
10.0 m.
4
5
KEROMAN
112 m.
Oil Pier
9.0 m.
Fishing Port
9
7
Large Basin
Pier
8
0
300
Scale in Meters

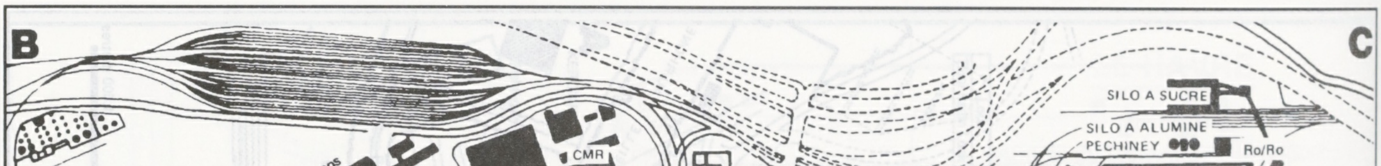
Lock	Width	Depth
Tidal Basin Lock	7.0 m.	1.0 m.

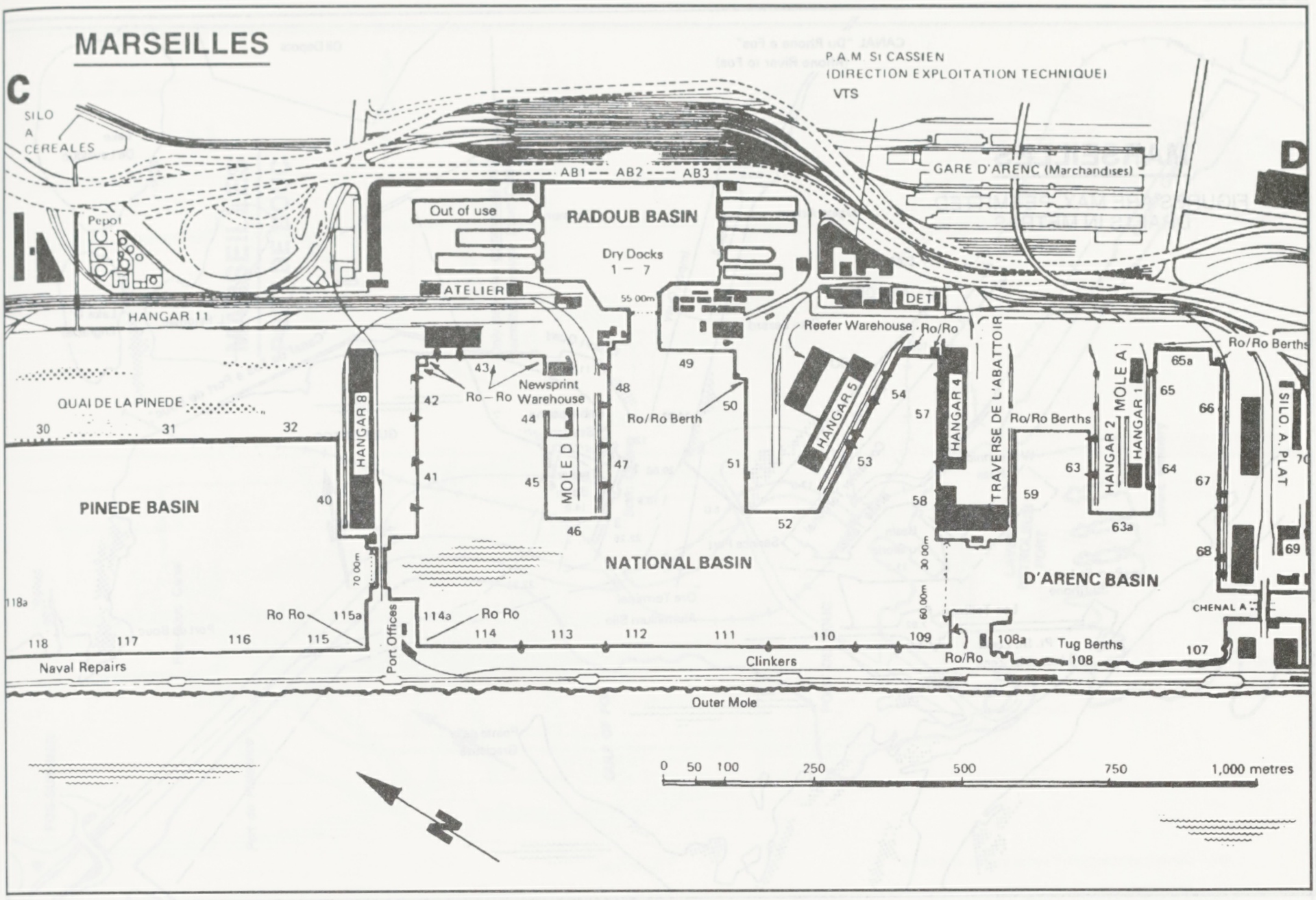
1. Harbour Master's Office
2. Pilotage
3. Group of Factories
4. Maritime Control
5. Customs
6. Seamans Club
7. Port Office (Fishing Port)
8. Submarine Base
9. Slipway
10. Port Office (Pleasure Port)
11. Port Services

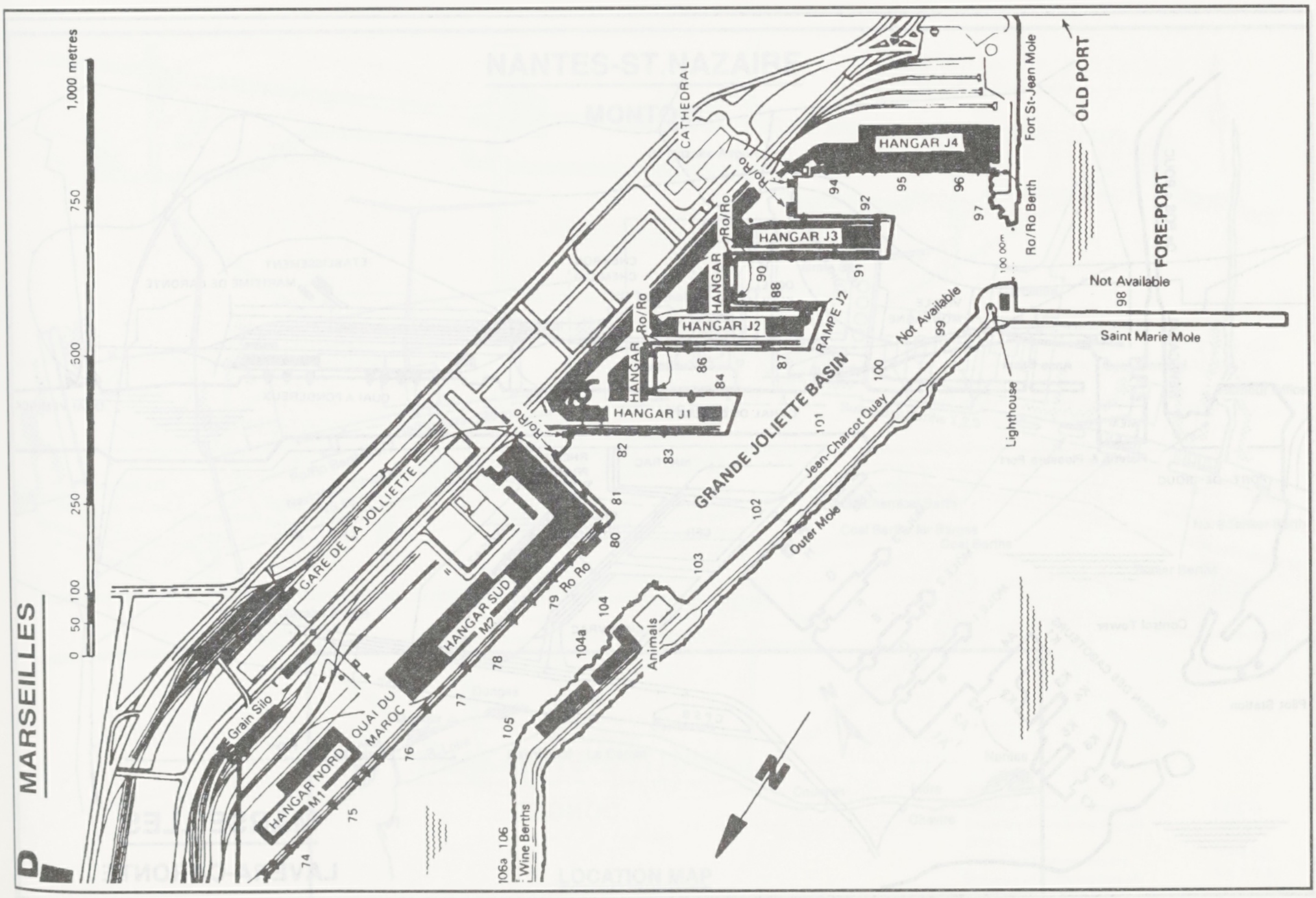

MARSEILLE DISTRICT
N
FRANCE
Etang de Lavaiduc
Etang de Berre
Berre
South European Pipeline
Rhone/Fos Canal
Etang D'Engrenier
Fos/Bouc Canal
Gulf of Fos
Fos sur Mer
Caronte
Martigues
Marseilles-Marignane Airport
Port de Bouc
Pointe de la Gracieuse
St. Louis du Rhone
Lavera
Caronte Canal
La Mede
Port de la Coribierre
Port de Lave
L'Estaque
R. Rhone
Cap Couronne
Marseilles Roads
Marseilles
Gulf of Lion
I. Ratonneau
MEDITERRANEAN SEA
43°30' N
43°20' N
4°50' E
5° E
5°10' E
5°20' E

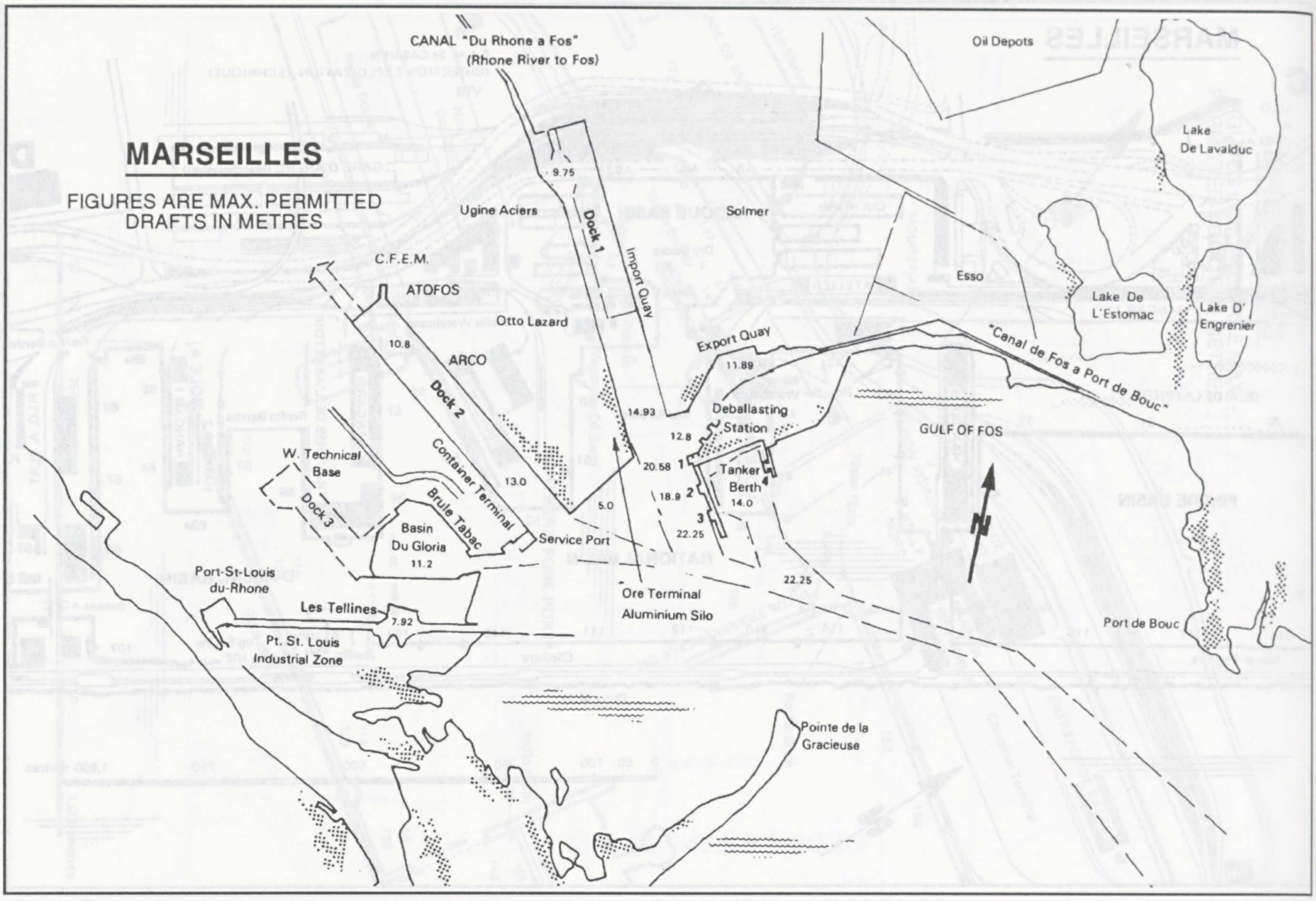

MARSEILLES
AU RHONE
CANAL DE MARSEILLE
Chemin Du Littoral
L'Estaque Light
Shelter Ports
PORT DE L'ESTAQUE
Rock Breakwater
CANAL DE MARSEILLE AU RHONE
Coastal Road
PORT DE LAVE
179
PORT DE LA CORBIERE
180
SCALE IN METRES
0
50
100
250
500
750
1,000 metres

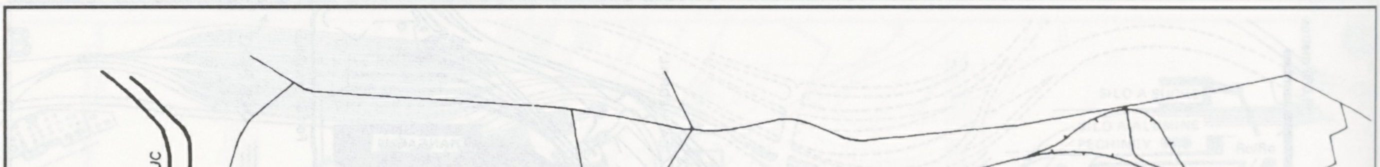

MARSEILLES
FIGURES INDICATED ARE MAX PERMITTED DRAFTS IN METRES
N
B
A
MOUREPIANE
STADE
LEON GOURRET
STATION VIDANGE
HELLE NORD
HANGAR ISOTHERME
ENTREPOT DE CAFES
Container Terminal
Ro/Ro Berth
Water Pipes
Ro/Ro
DIGUE TRANSVERSALE EST
144
148
151
150
152
153
154
NORTHERN FORE-PORT
Vegetable Oil Berth
143
Tug Wharves
PASSE DE SAUMATY
Tanker Berths
170
4.7
147
146
4.7
145
MOLE J
171
ANSE DE SAUMATY
Fish Market
No. 10 Dry Dock
Repair Docks
S.W. Mole
131
11.0
130
11.0
Outer Mole
129
11.0
128
8.5
150.00m
Ro/Ro Berth
181
14.0
0
50
100
250
500
750
1,000 metres


B
C
Ro/Ro Berth
Workshops
No. 9
No. 8
Dry Dock
157
156
155
160
CMR
SPAT
HANGAR 18
5
6
SILO A SUCRE
SILO A ALUMINE
PECHINEY
Ro/Ro
14
19
13
HANGAR 17
20
12
MOLE G
21
HANGAR 15
HANGAR 14
Ro/Ro
25
26
22
HANGAR 13
TRAVERSE DE LA MADRAGUE
27
24
Paper Products
23
27a
11
HANGAR 16
TRAVERSE DU CAP JANET
7
8
10
9
MIRABEAU BASIN
MOLE H
HANGAR 19
4
3
2
162
163
MOLE LEON-GOURRET
HANGAR SUD
23
186
185
184
183
182
HANGAR NORD
24
LEON-GOURRET BASIN
PRESIDENT WILSON BASIN
Ro Ro
119a
119
120
121
122
123
Coal Quay
Outer Mole
N
124
125
126
127
MARSEILLES
0
50
100
250
500
750
1,000 metres


MARSEILLES
C
D
SILO A CEREALES
Pepot
HANGAR 11
P.A.M. St CASSIEN (DIRECTION EXPLOITATION TECHNIQUE)
VTS
GARE D'ARENC (Marchandises)
AB1
AB2
AB3
Out of use
RADOUB BASIN
Dry Docks 1 — 7
ATELIER
55.00m
DET
Reefer Warehouse
Ro/Ro
Ro/Ro Berths
TRAVERSE DE L'ABATTOIR
MOLE A
HANGAR 1
HANGAR 2
HANGAR 4
HANGAR 5
HANGAR 8
SILO. A. PLAT
43
Ro – Ro
Newsprint Warehouse
42
44
48
49
50
Ro/Ro Berth
MOLE D
QUAI DE LA PINEDE
30
31
32
40
41
45
46
47
51
52
53
54
57
58
59
63
63a
64
65
65a
66
67
68
69
70
PINEDE BASIN
NATIONAL BASIN
D'ARENC BASIN
CHENAL A
70.00m
30.00m
60.00m
118a
118
117
116
115
115a
Ro Ro
Port Offices
114a
Ro Ro
114
113
112
111
110
109
108a
108
107
Tug Berths
Ro/Ro
Naval Repairs
Clinkers
Outer Mole
0
50
100
250
500
750
1,000 metres
N

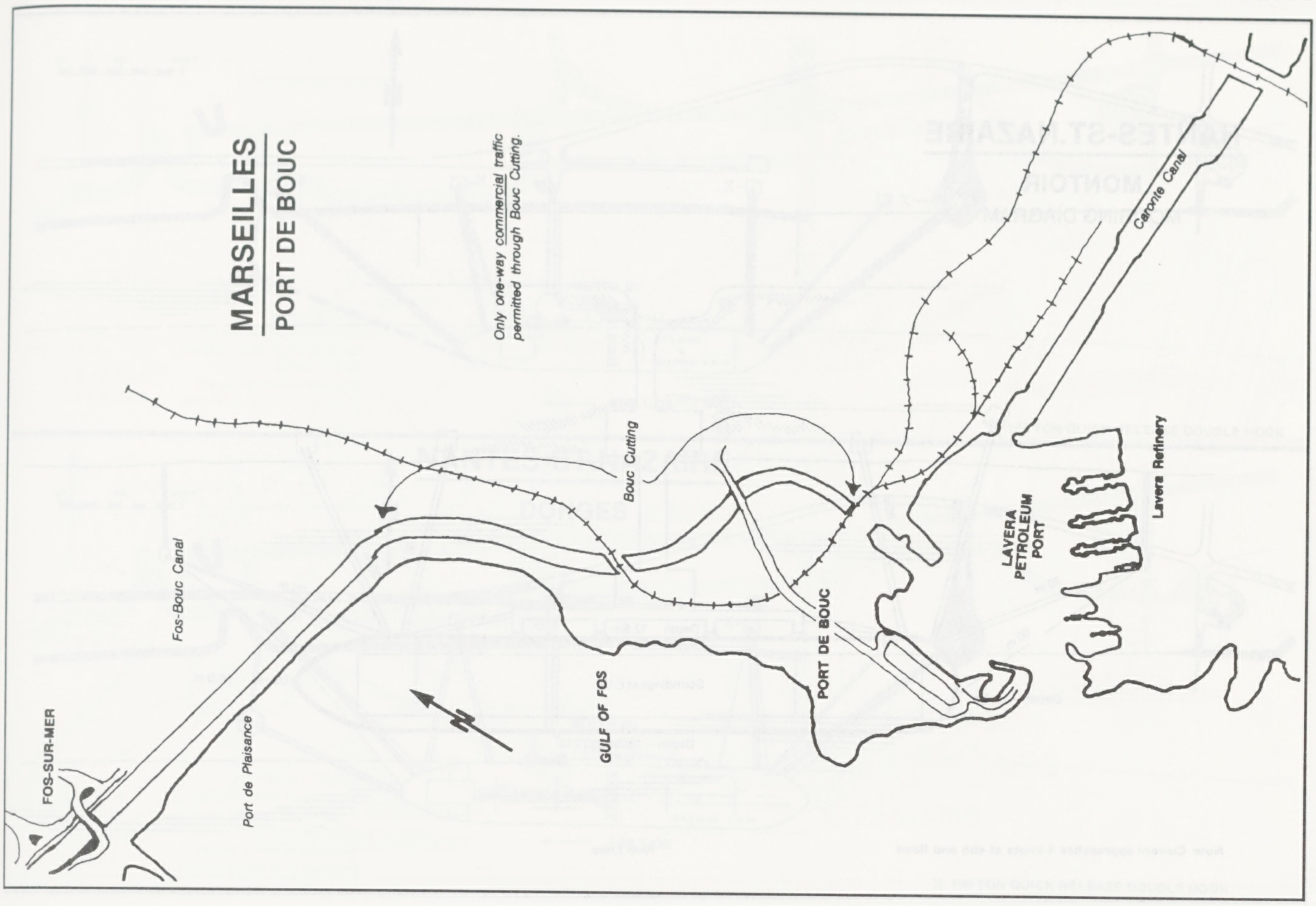

MARSEILLES
D
0
50
100
250
500
750
1,000 metres
CATHEDRAL
Ro/Ro
HANGAR J4
94
95
96
92
97
Fort St-Jean Mole
OLD PORT
Ro/Ro Berth
100.00m
FORE-PORT
Not Available
98
Saint Marie Mole
Lighthouse
HANGAR J3
HANGAR
91
90
88
89
RAMPE J2
HANGAR J2
Ro/Ro
HANGAR
86
87
84
HANGAR J1
Not Available
99
100
101
GRANDE JOLIETTE BASIN
Jean-Charcot Quay
82
83
81
80
102
Outer Mole
103
GARE DE LA JOLLIETTE
HANGAR SUD M2
79
Ro Ro
104
104a
Animals
78
77
76
105
QUAI DU MAROC
Grain Silo
HANGAR NORD M1
75
74
106a
106
Wine Berths
N


MARSEILLES
FIGURES ARE MAX. PERMITTED DRAFTS IN METRES
CANAL "Du Rhone a Fos" (Rhone River to Fos)
Oil Depots
Lake De Lavalduc
9.75
Ugine Aciers
Dock 1
Import Quay
Solmer
C.F.E.M.
ATOFOS
Esso
Lake De L'Estomac
Lake D' Engrenier
Otto Lazard
10.8
ARCO
Export Quay
11.89
"Canal de Fos a Port de Bouc"
Dock 2
14.93
Deballasting Station
12.8
GULF OF FOS
W. Technical Base
Container Terminal
13.0
20.58
1
2
Tanker Berth
4
Dock 3
Brule Tabac
5.0
18.9
14.0
3
22.25
Basin Du Gloria
11.2
Service Port
Port-St-Louis du-Rhone
22.25
Ore Terminal
Aluminium Silo
Port de Bouc
Les Tellines
7.92
Pt. St. Louis Industrial Zone
Pointe de la Gracieuse


De FOS a BOUC
NEW CANAL
UGINE KUHLMANN
OCTEL KUHLMANN
CHEVRON CHEMICAL
ETABLISSEMENT MARITIME DE CARONTE
VIELLE MONTAGNE
Anse Basin
OK
Q. Kuhlmann
QUAI A PONDEREUX
QUAI VEMINCK
MEM
CANAL DE CARONTE
Fishing & Pleasure Port
MAVRAC
RHONE PROGIL
PORT - DE - BOUC
H bis
MOLE 3
H
CFR
RHONE PROGIL
GEOGAZ
S F P
BP
MOLE 2
G
F
E
NAPHTACHIMIE
MOLE 1
D
C
B
CHIMIVRAC
Control Tower
BASSIN DES CABOTEURS
K1
A4
K3
K2
A3
K4
K5
A2
A1
K6
K8
K7
Pilot Station
CPSB
500m
MARSEILLES
LAVERA-CARONTE

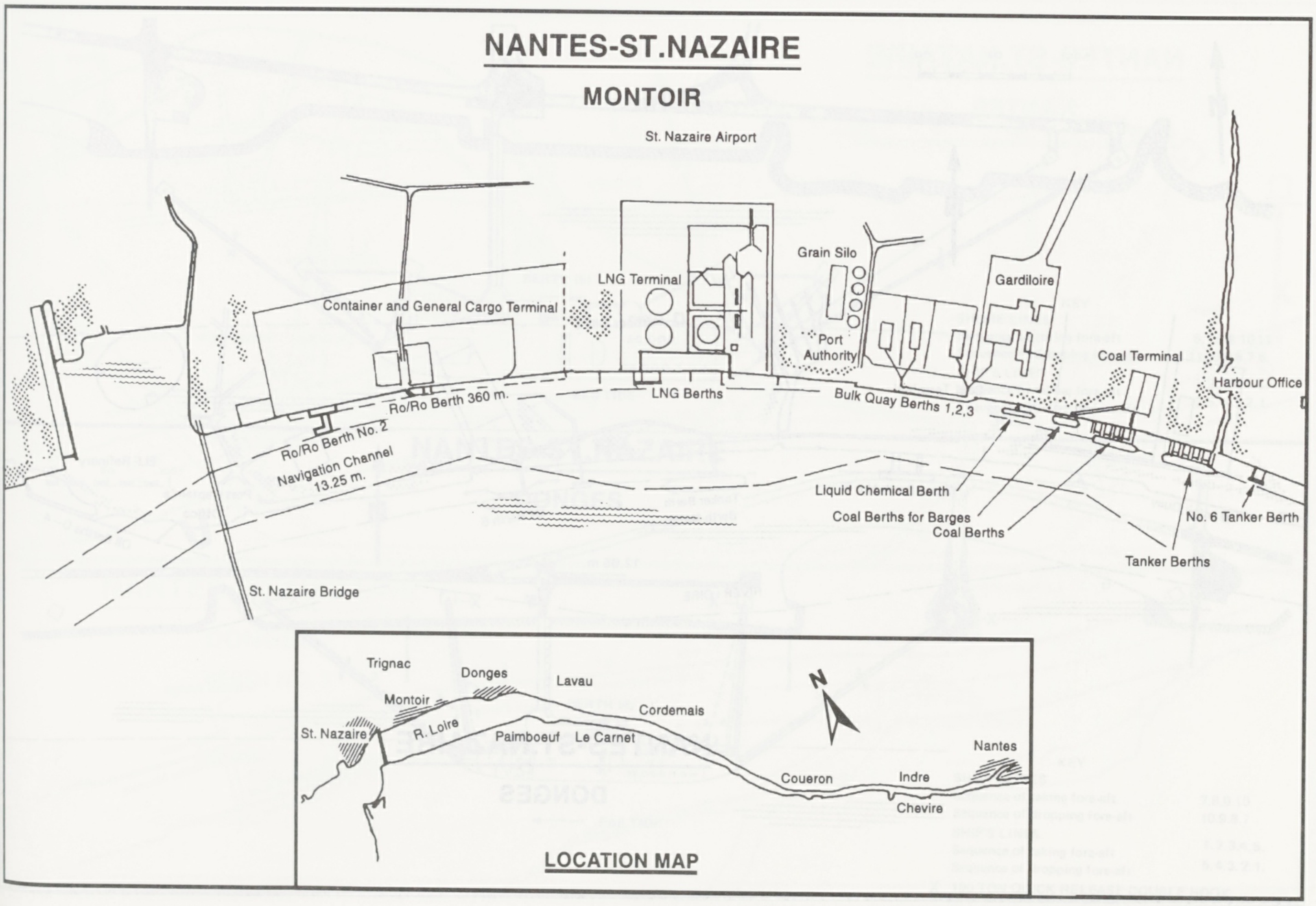
MARSEILLES

PORT DE BOUC


Only one-way commercial traffic permitted through Bouc Cutting.
Caronte Canal
Bouc Cutting
LAVERA PETROLEUM PORT
Lavera Refinery
Fos-Bouc Canal
PORT DE BOUC
GULF OF FOS
N
FOS-SUR-MER
Port de Plaisance

NANTES-ST.NAZAIRE

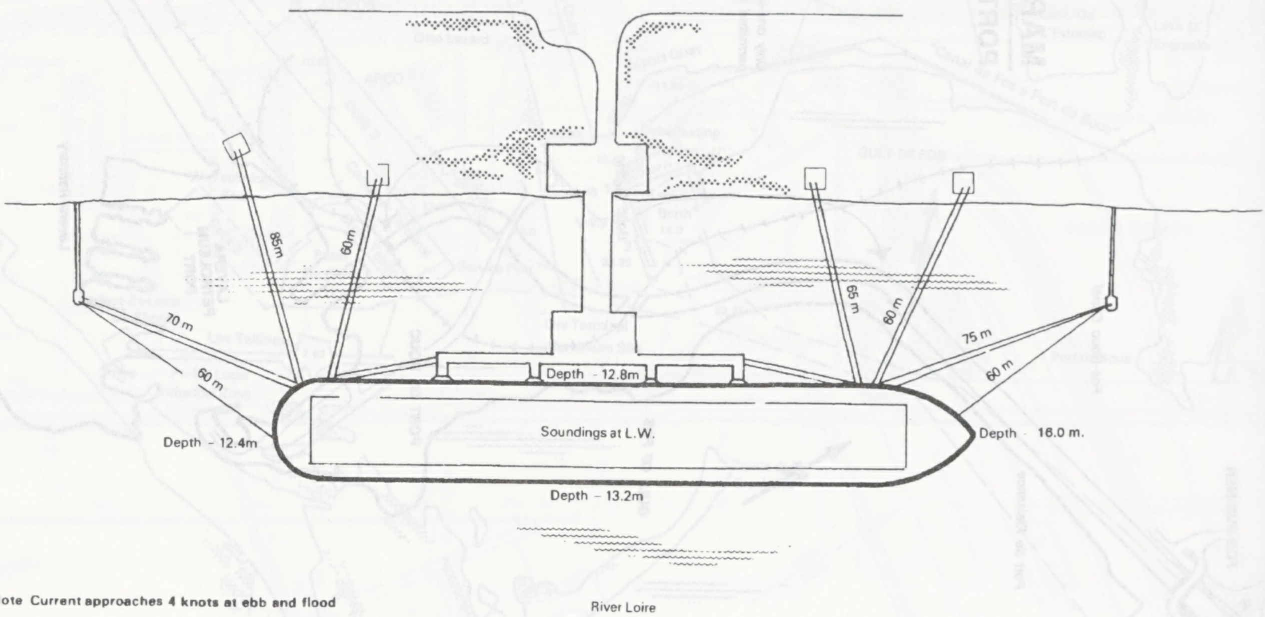
MONTOIR


St. Nazaire Airport
Grain Silo
LNG Terminal
Gardiloire
Container and General Cargo Terminal
Port Authority
Coal Terminal
Harbour Office
Ro/Ro Berth 360 m.
LNG Berths
Bulk Quay Berths 1,2,3
Ro/Ro Berth No. 2
Navigation Channel 13.25 m.
Liquid Chemical Berth
Coal Berths for Barges
Coal Berths
No. 6 Tanker Berth
Tanker Berths
St. Nazaire Bridge
Trignac
Donges
Lavau
Montoir
Cordemais
St. Nazaire
R. Loire
Paimboeuf
Le Carnet
N
Nantes
Coueron
Indre
Chevire
LOCATION MAP

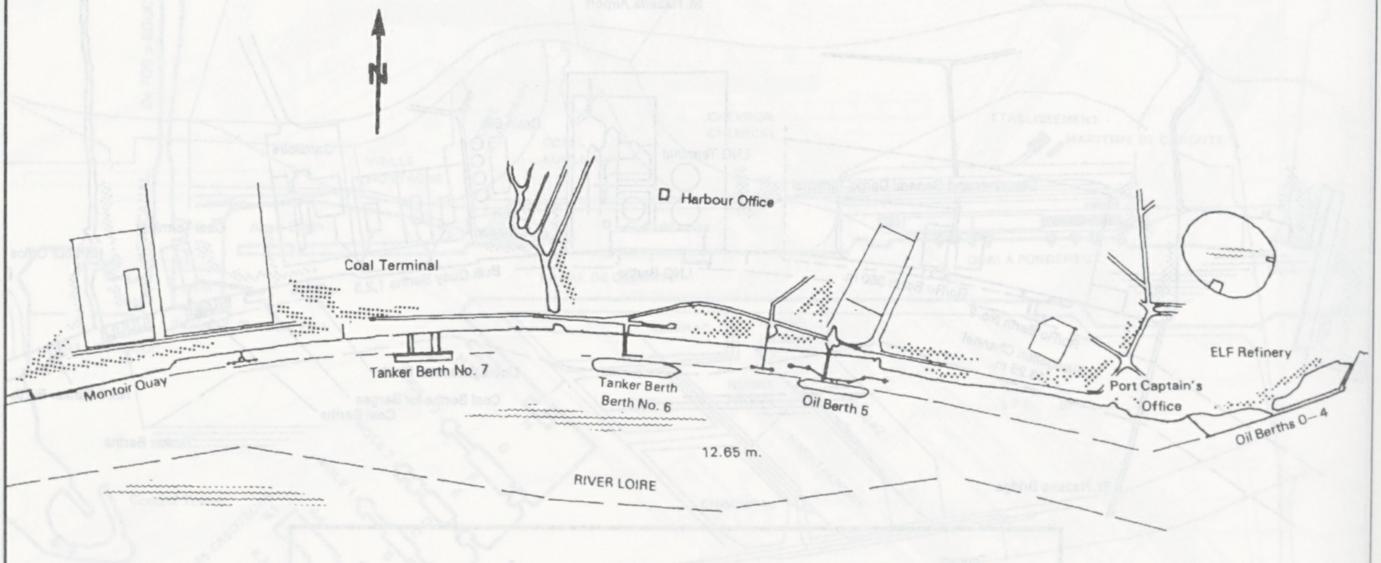
NANTES-ST.NAZAIRE

MONTOIR

MOORING DIAGRAM

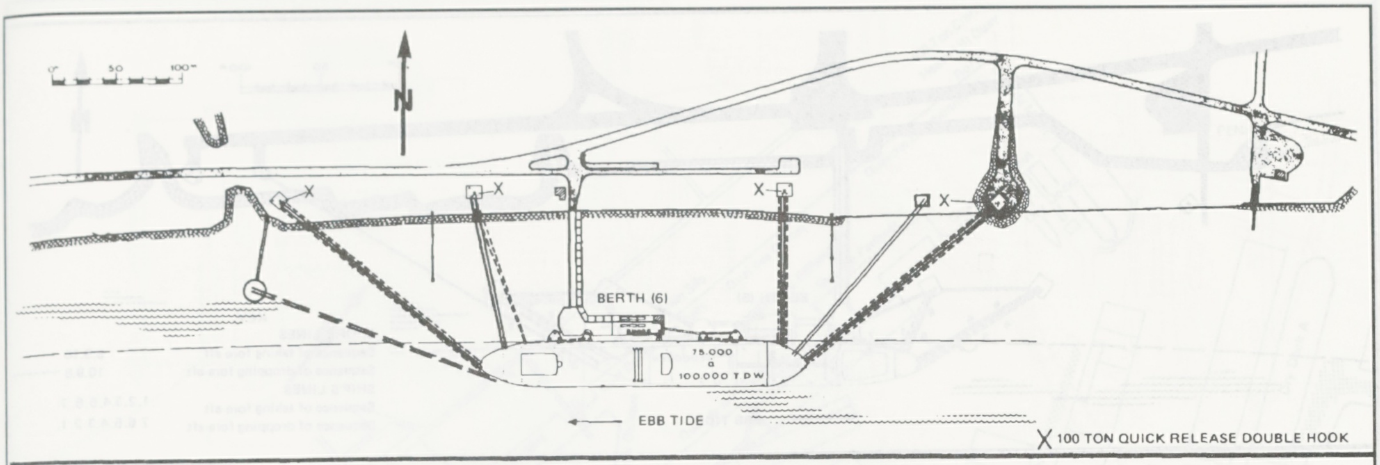

85m
60m
70 m
60 m
Depth - 12.4m
Depth - 12.8m
Soundings at L.W.
Depth - 16.0 m.
65 m
60 m
75 m
60 m
Depth - 13.2m
River Loire

Note Current approaches 4 knots at ebb and flood


N
D Harbour Office
Coal Terminal
Tanker Berth No. 7
Montoir Quay
Tanker Berth
Berth No. 6
Oil Berth 5
Port Captain's Office
ELF Refinery
Oil Berths 0–4
12.65 m.
RIVER LOIRE

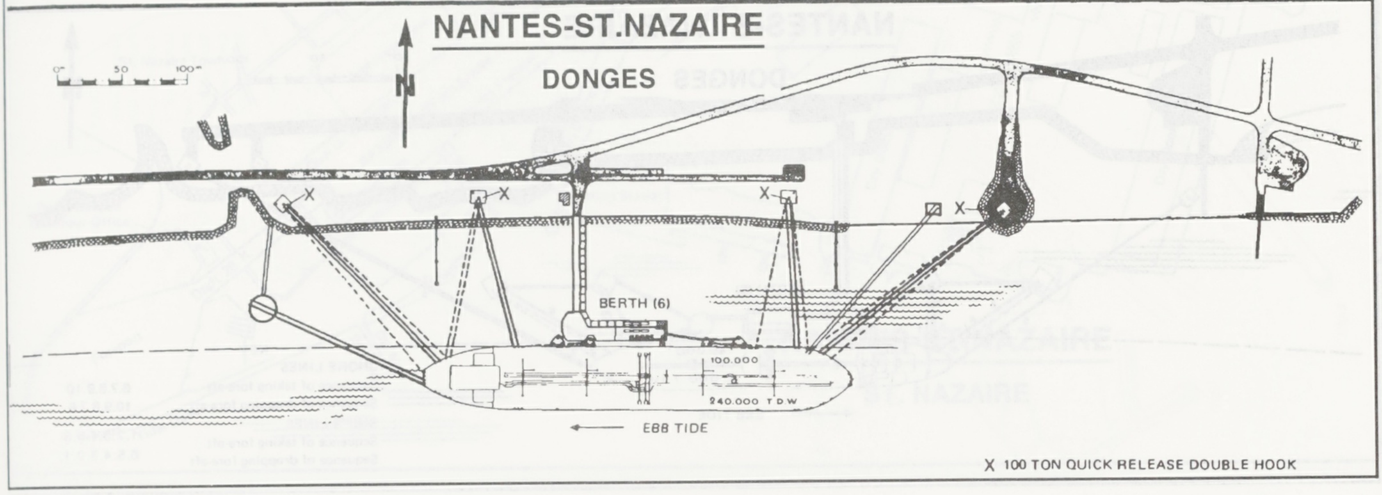
NANTES-ST.NAZAIRE

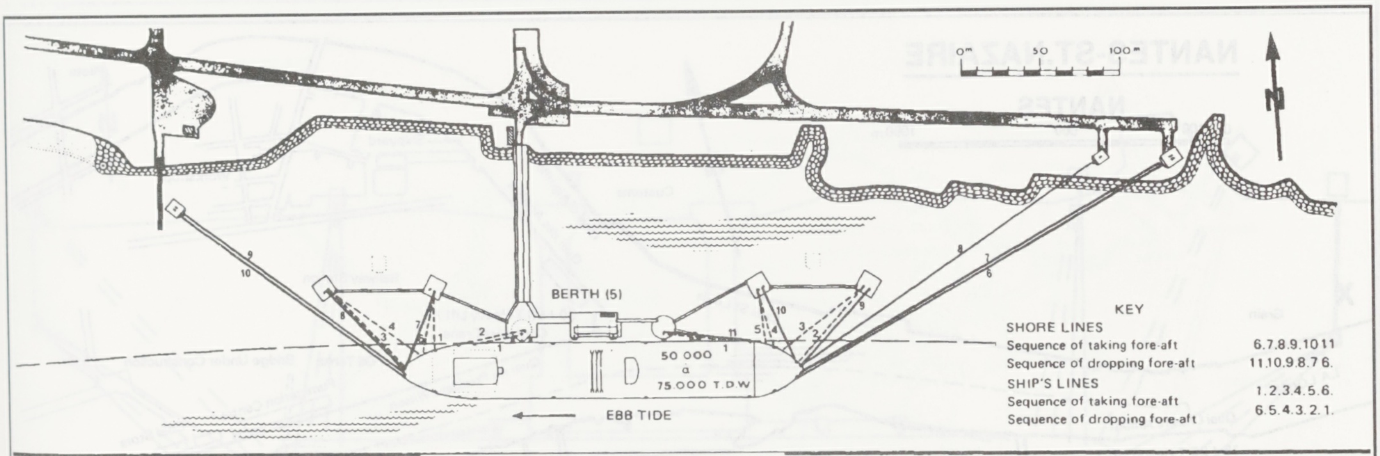
DONGES


0m 50 100m
N
X
BERTH (6)
75.000
a
100.000 T.D.W
EBB TIDE
X 100 TON QUICK RELEASE DOUBLE HOOK

NANTES-ST.NAZAIRE

DONGES


0m 50 100m
N
X
BERTH (6)
100.000
a
240.000 T.D.W
EBB TIDE
X 100 TON QUICK RELEASE DOUBLE HOOK


0m 50 100m
N
BERTH (5)
50 000
a
75.000 T.D.W
EBB TIDE
1
2
3
4
5
6
7
8
9
10
11

KEY

SHORE LINES

Sequence of taking fore-aft 6.7.8.9.10.11

Sequence of dropping fore-aft 11.10.9.8.7.6.

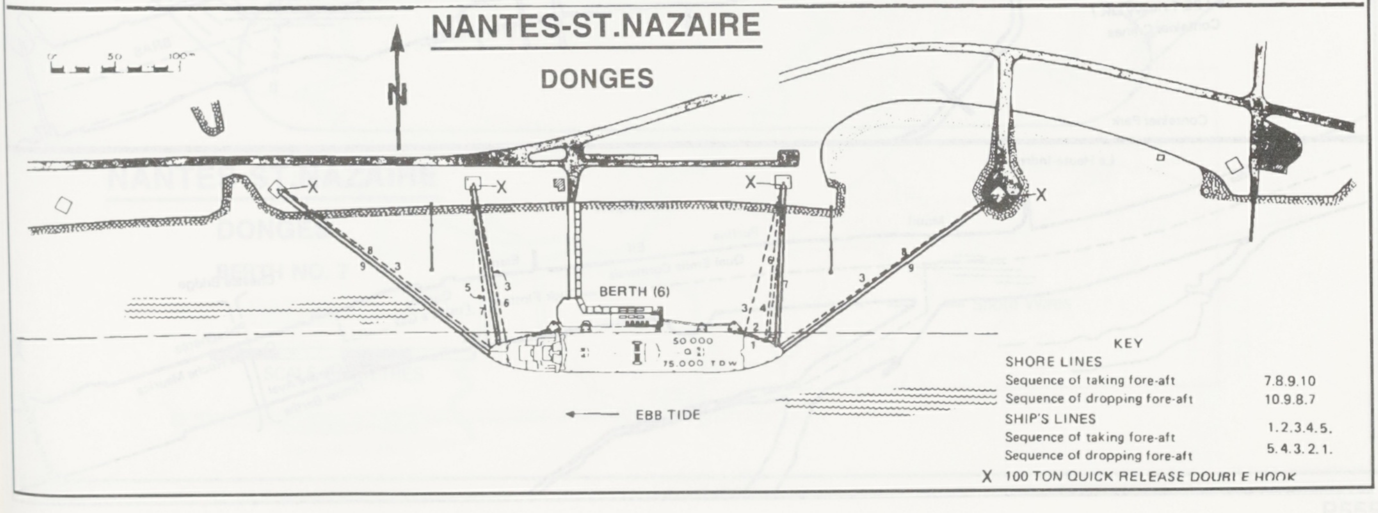
SHIP'S LINES

Sequence of taking fore-aft 1.2.3.4.5.6.

Sequence of dropping fore-aft 6.5.4.3.2.1.

NANTES-ST.NAZAIRE

DONGES


0m 50 100m
N
X
BERTH (6)
50 000
a
75.000 T.D.W
EBB TIDE
1
2
3
4
5
6
7
8
9

KEY

SHORE LINES

Sequence of taking fore-aft 7.8.9.10

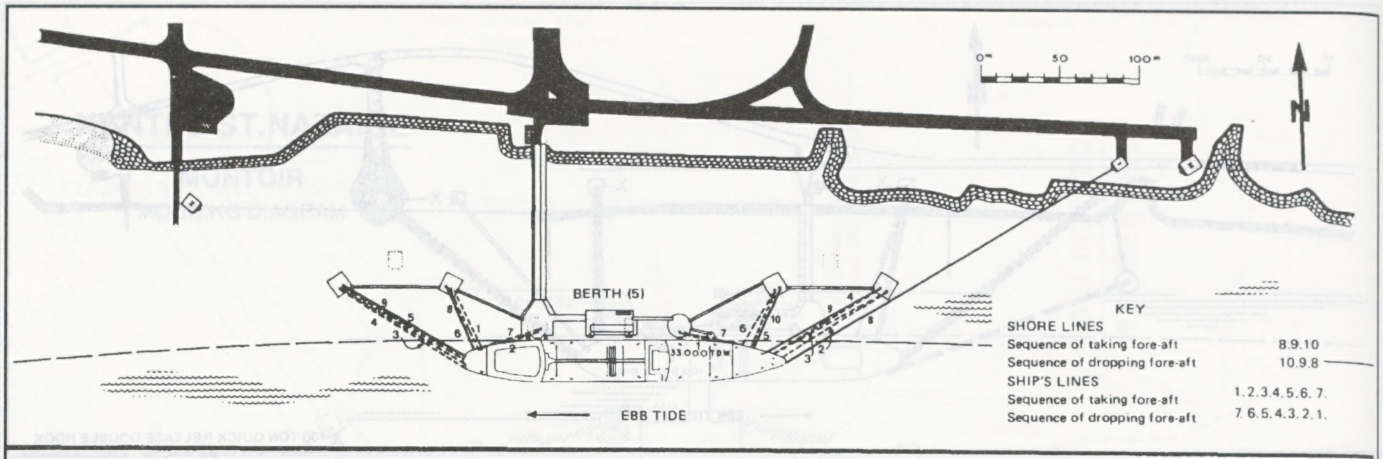
Sequence of dropping fore-aft 10.9.8.7

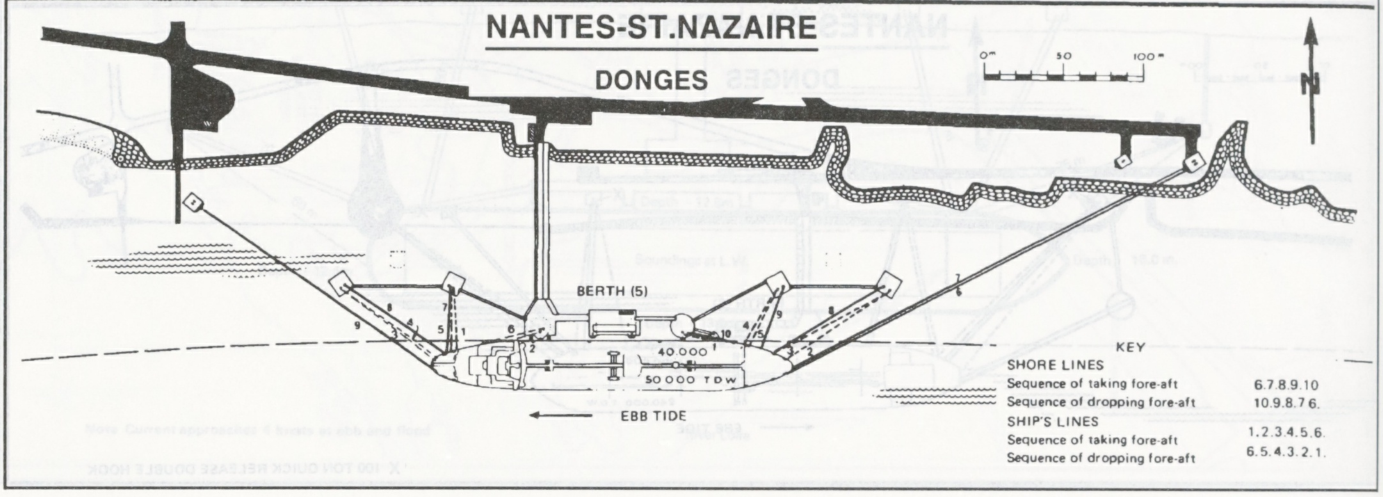
SHIP'S LINES

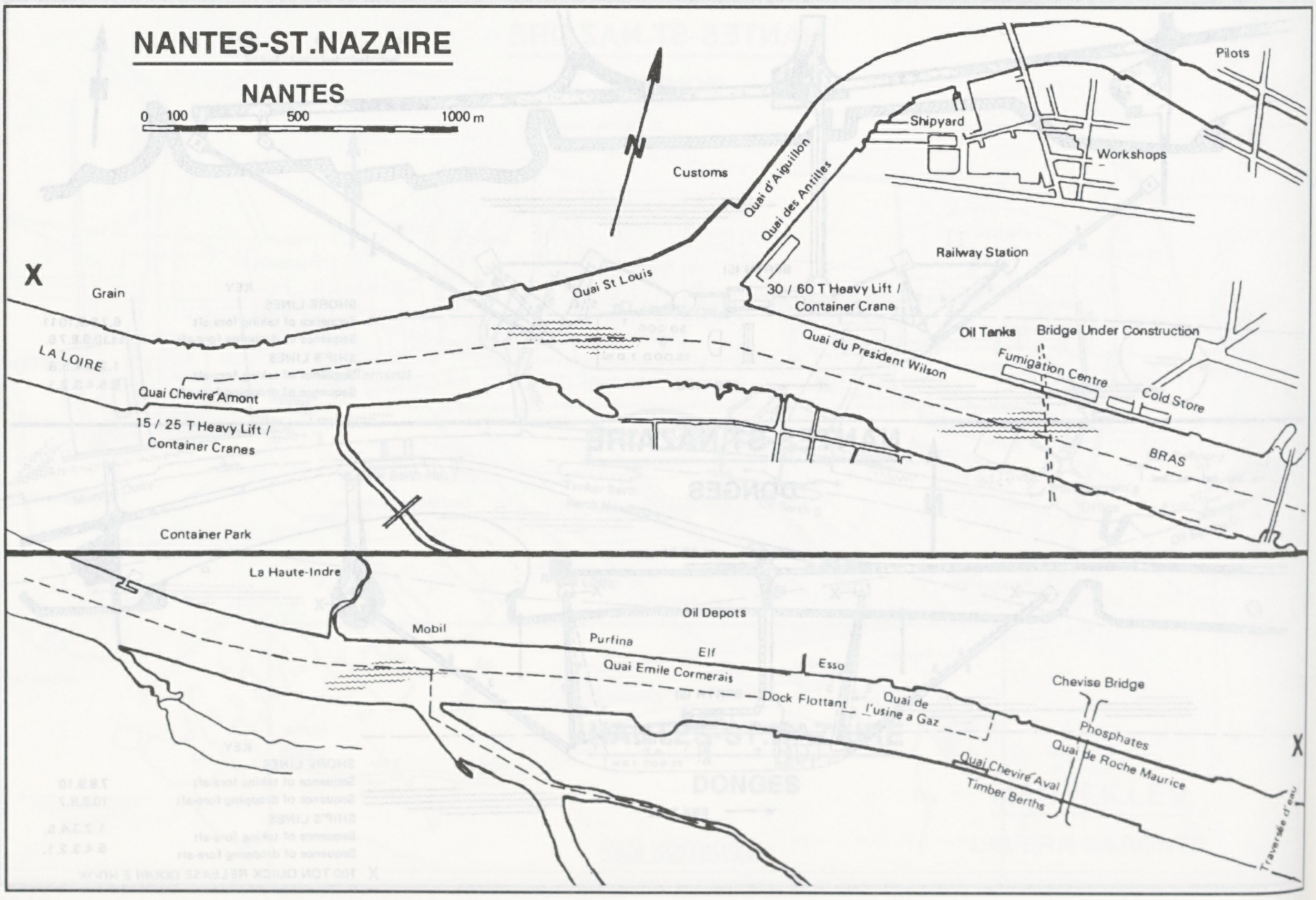
Sequence of taking fore-aft 1.2.3.4.5.

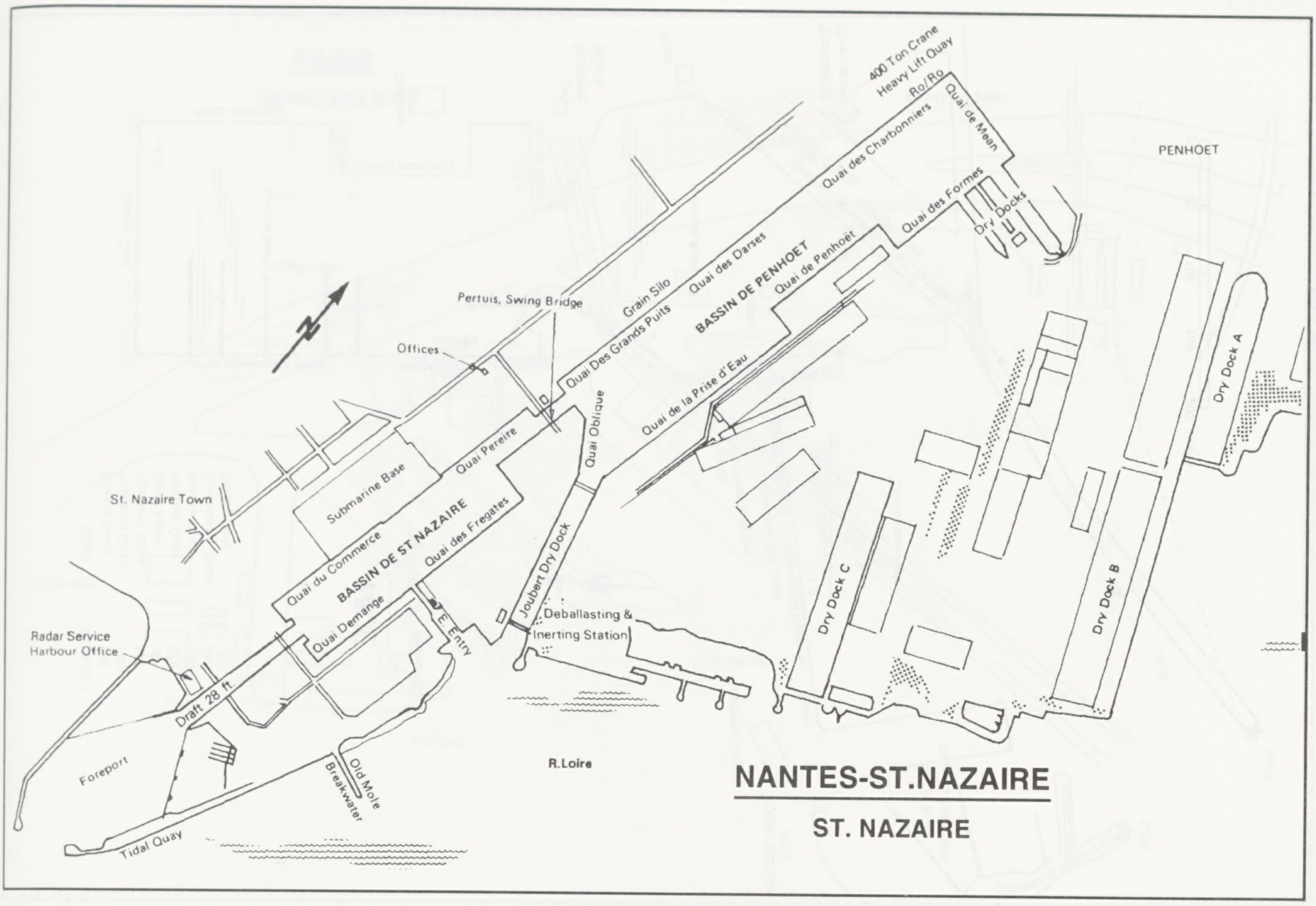
Sequence of dropping fore-aft 5.4.3.2.1.

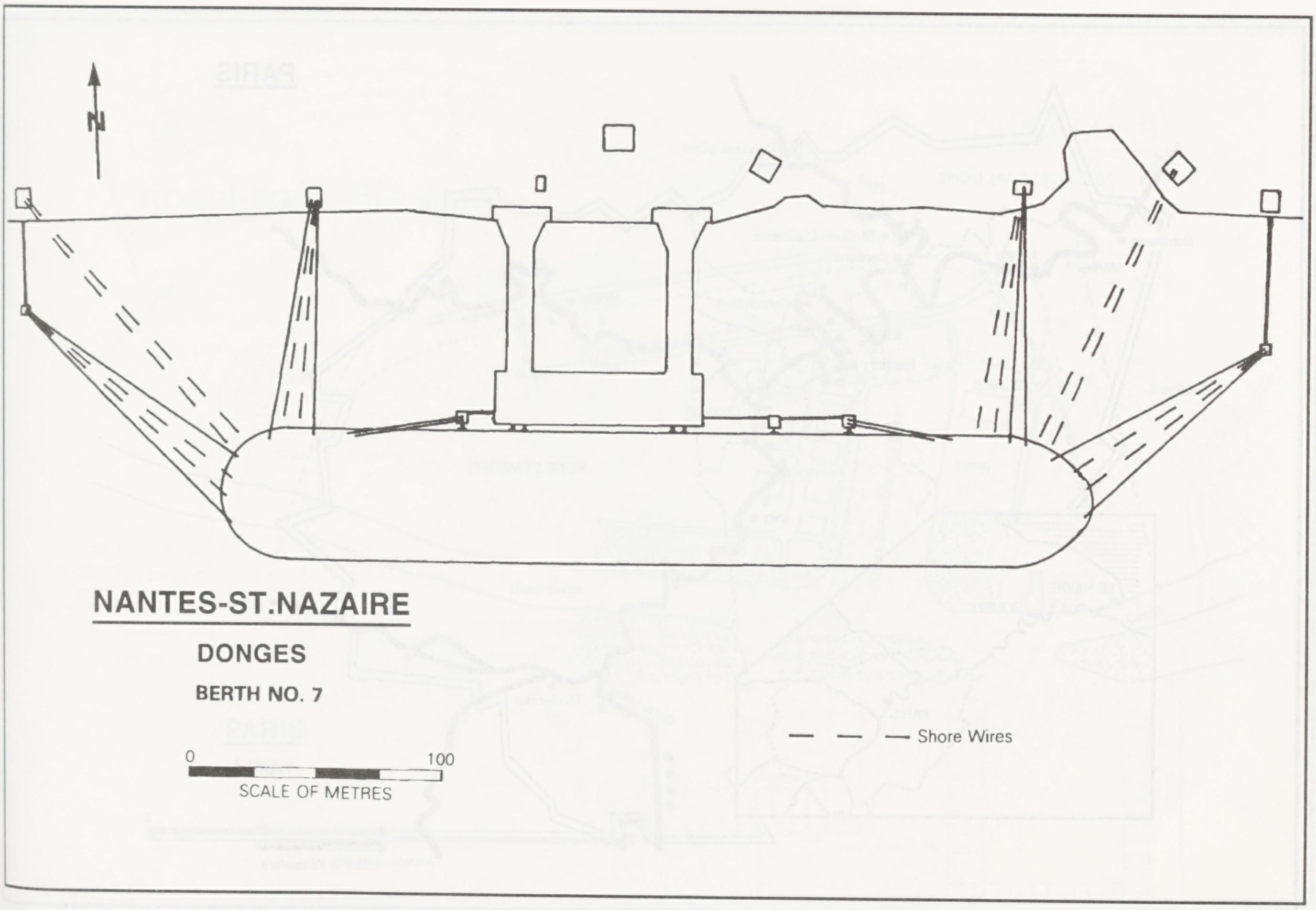
X 100 TON QUICK RELEASE DOUBLE HOOK


0m 50 100m
N
BERTH (5)
33 000 TDW
EBB TIDE
KEY
SHORE LINES
Sequence of taking fore-aft 8.9.10
Sequence of dropping fore-aft 10.9.8
SHIP'S LINES
Sequence of taking fore-aft 1.2.3.4.5.6.7.
Sequence of dropping fore-aft 7.6.5.4.3.2.1.


NANTES-ST.NAZAIRE
DONGES
0m 50 100m
N
BERTH (5)
40 000
50 000 TDW
EBB TIDE
KEY
SHORE LINES
Sequence of taking fore-aft 6.7.8.9.10
Sequence of dropping fore-aft 10.9.8.7.6.
SHIP'S LINES
Sequence of taking fore-aft 1.2.3.4.5.6.
Sequence of dropping fore-aft 6.5.4.3.2.1.

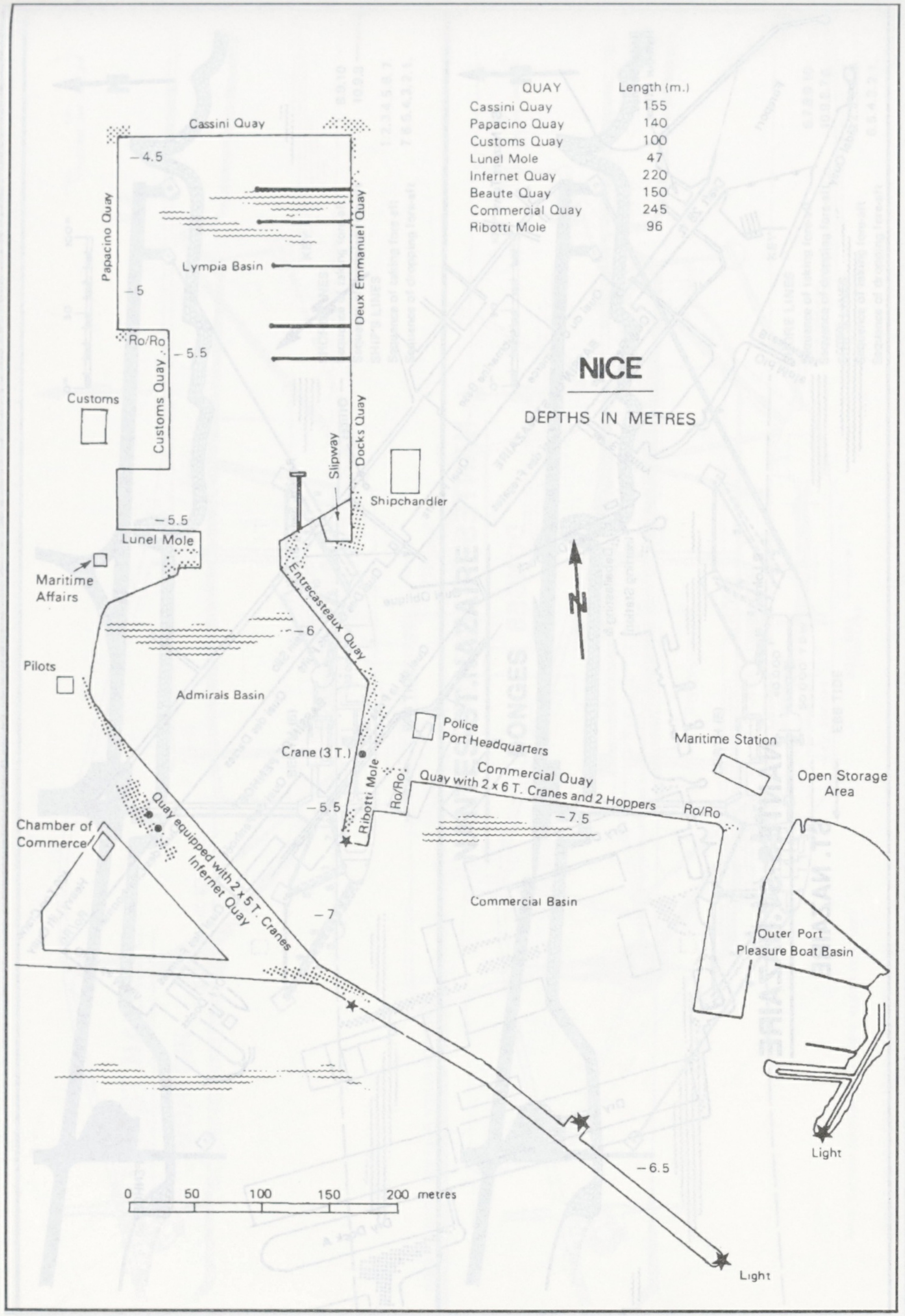

NANTES-ST.NAZAIRE
NANTES
0 100 500 1000 m
N
Pilots
Shipyard
Workshops
Customs
Quai d'Aiguillon
Quai des Antilles
Railway Station
X
Grain
Quai St Louis
30 / 60 T Heavy Lift / Container Crane
Quai du President Wilson
Oil Tanks
Bridge Under Construction
Fumigation Centre
Cold Store
LA LOIRE
Quai Chevire Amont
15 / 25 T Heavy Lift / Container Cranes
BRAS
Container Park
La Haute-Indre
Oil Depots
Mobil
Purfina
Elf
Esso
Quai Emile Cormerais
Dock Flottant
Quai de l'usine a Gaz
Chevise Bridge
Phosphates
Quai de Roche Maurice
Quai Chevire Aval
Timber Berths
X
Traversée d'eau


400 Ton Crane
Heavy Lift Quay
Ro/Ro
Quai des Charbonniers
Quai de Mean
PENHOET
Quai des Formes
Dry Docks
Pertuis, Swing Bridge
Grain Silo
Quai des Darses
BASSIN DE PENHOET
Quai de Penhoet
Offices
Quai Des Grands Puits
Quai de la Prise d'Eau
Dry Dock A
Quai Oblique
Quai Pereire
Submarine Base
St. Nazaire Town
BASSIN DE ST NAZAIRE
Quai des Fregates
Quai du Commerce
Quai Demange
Joubert Dry Dock
Dry Dock C
Dry Dock B
Radar Service
Harbour Office
E. Entry
Deballasting &
Inerting Station
Draft 28 ft.
Foreport
R.Loire
Old Mole
Breakwater
Tidal Quay
N
NANTES-ST.NAZAIRE
ST. NAZAIRE


N
NANTES-ST.NAZAIRE
DONGES
BERTH NO. 7
0
100
SCALE OF METRES
Shore Wires

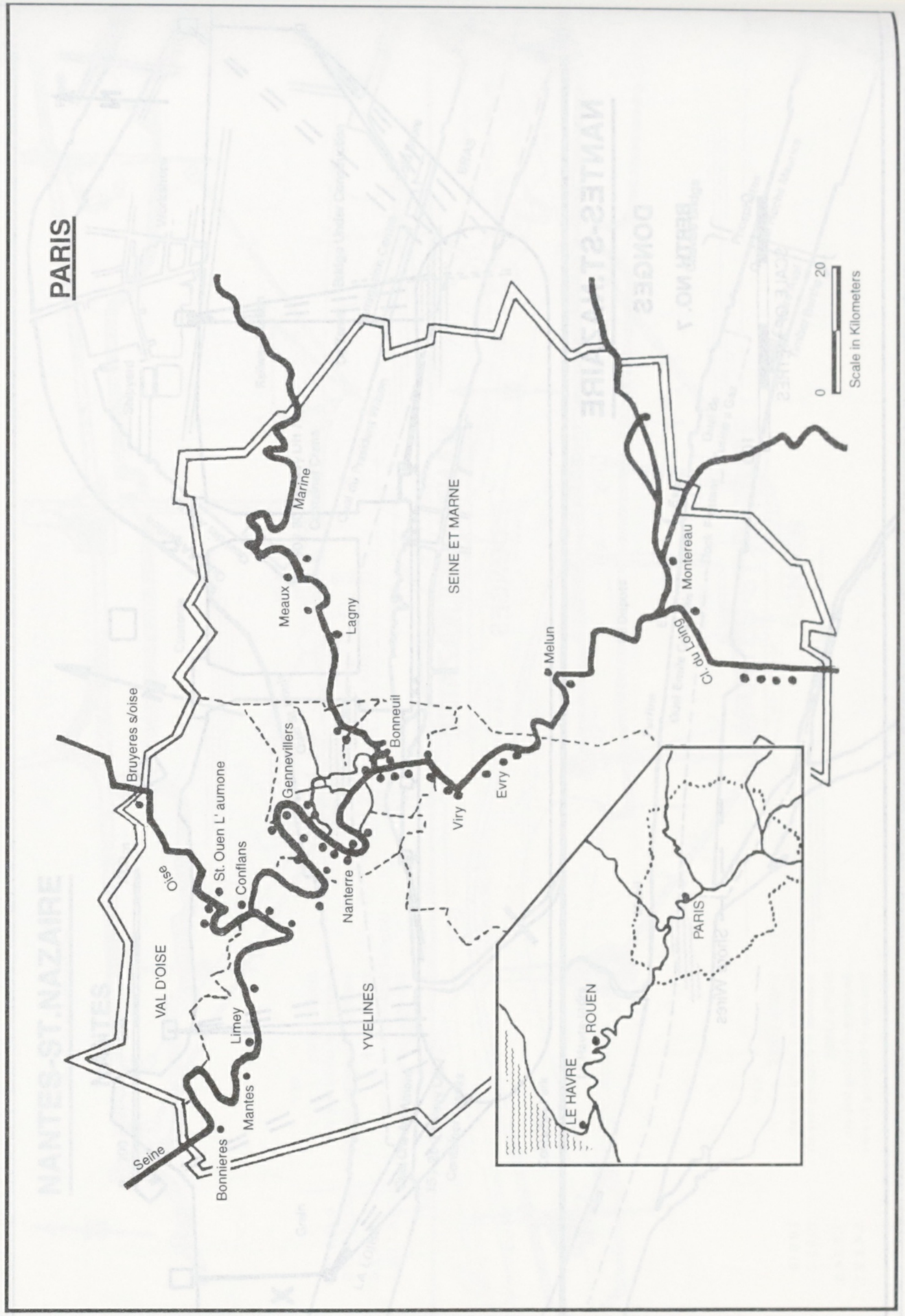
NICE

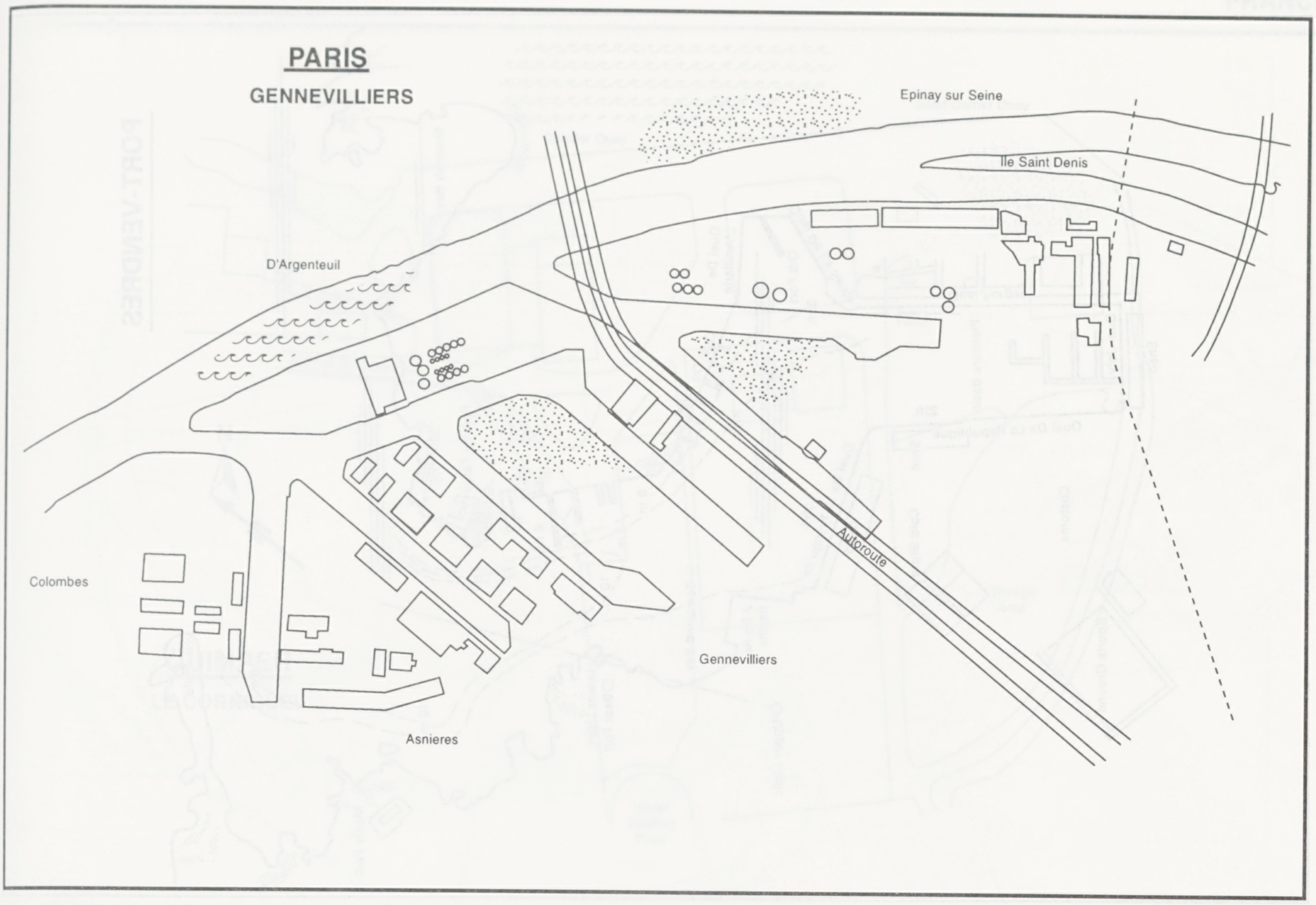
DEPTHS IN METRES

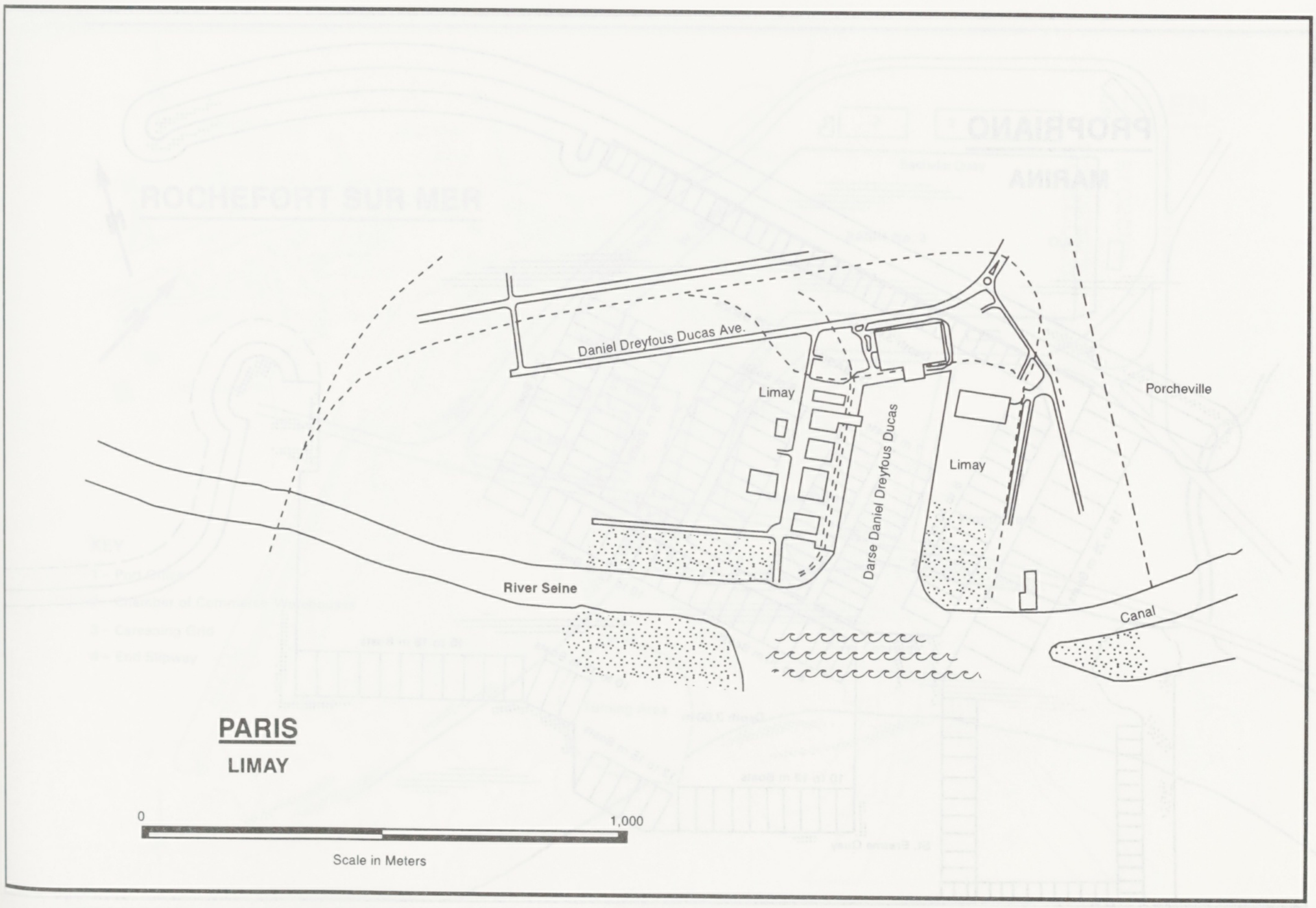

Cassini Quay
−4.5
Papacino Quay
−5
Ro/Ro
−5.5
Customs Quay
Customs
Lympia Basin
Deux Emmanuel Quay
Docks Quay
Slipway
Shipchandler
−5.5
Lunel Mole
Maritime Affairs
Entrecasteaux Quay
−6
Pilots
Admirals Basin
Police
Port Headquarters
Crane (3 T.)
Ribotti Mole
Ro/Ro
Commercial Quay
Quay with 2 x 6 T. Cranes and 2 Hoppers
Ro/Ro
Maritime Station
Open Storage Area
−5.5
−7.5
Chamber of Commerce
Quay equipped with 2 x 5 T. Cranes
Infernet Quay
−7
Commercial Basin
Outer Port
Pleasure Boat Basin
Light
−6.5
0
50
100
150
200 metres
Light
N

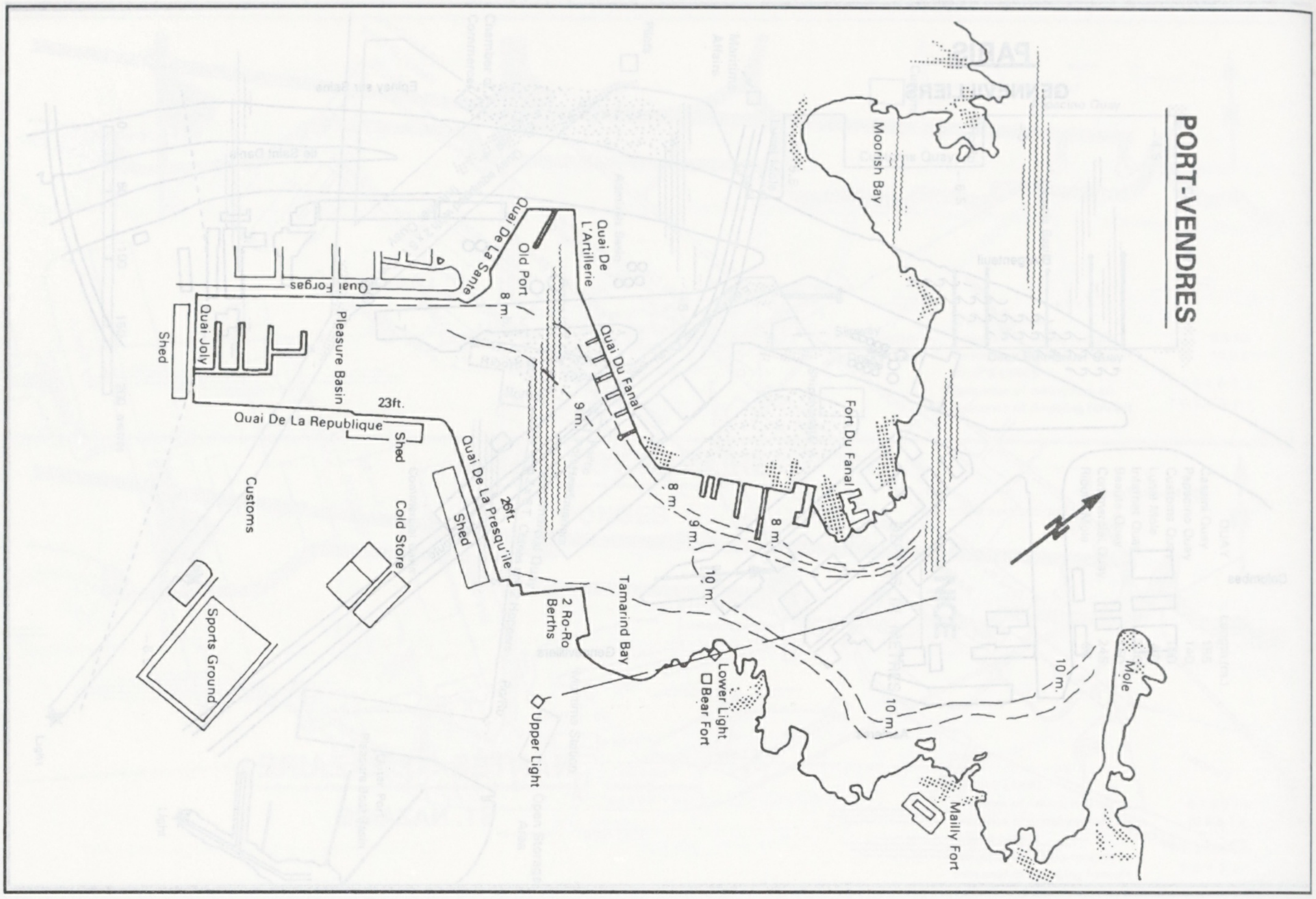
QUAY	Length (m.)
Cassini Quay	155
Papacino Quay	140
Customs Quay	100
Lunel Mole	47
Infernet Quay	220
Beaute Quay	150
Commercial Quay	245
Ribotti Mole	96

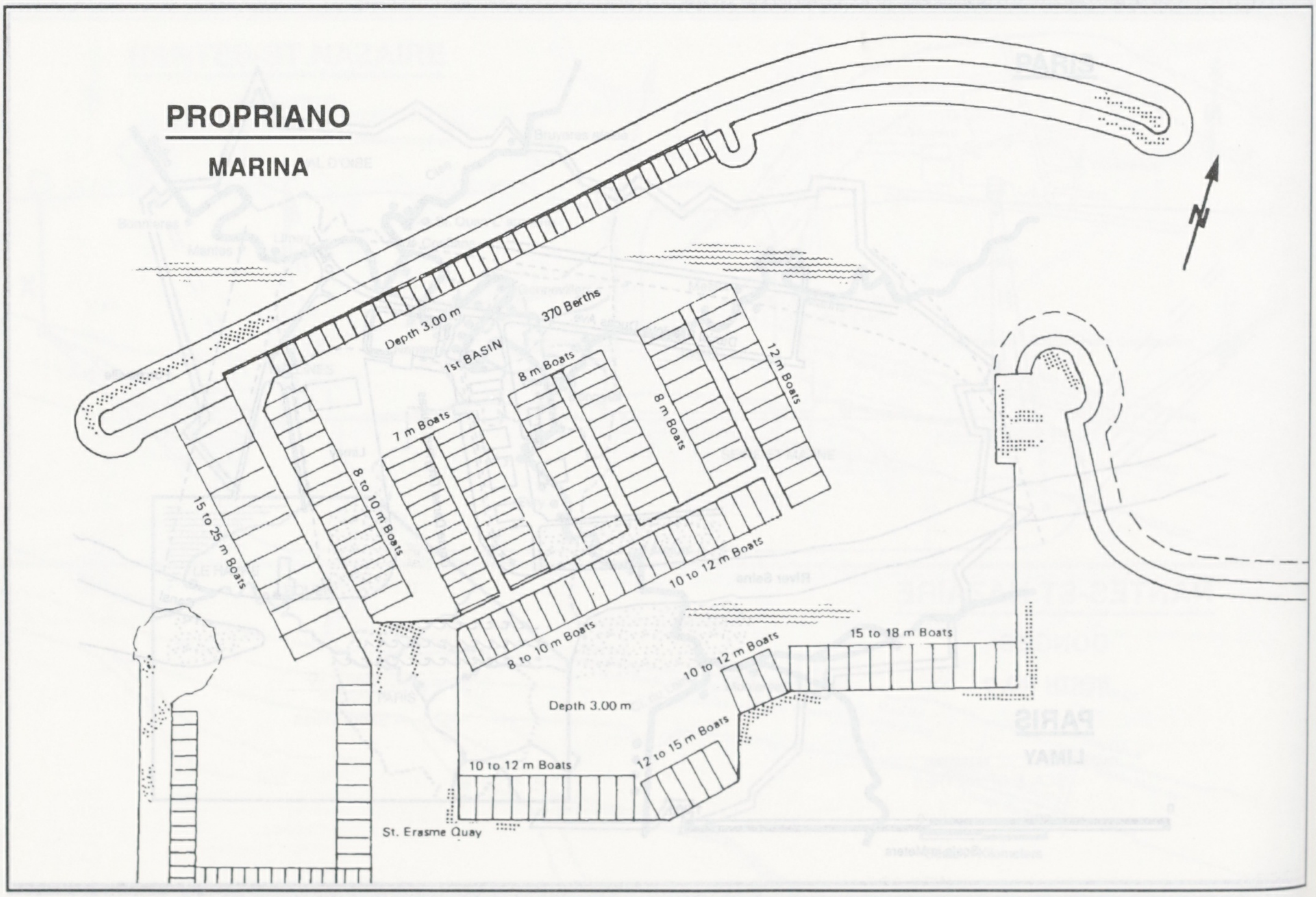
PARIS

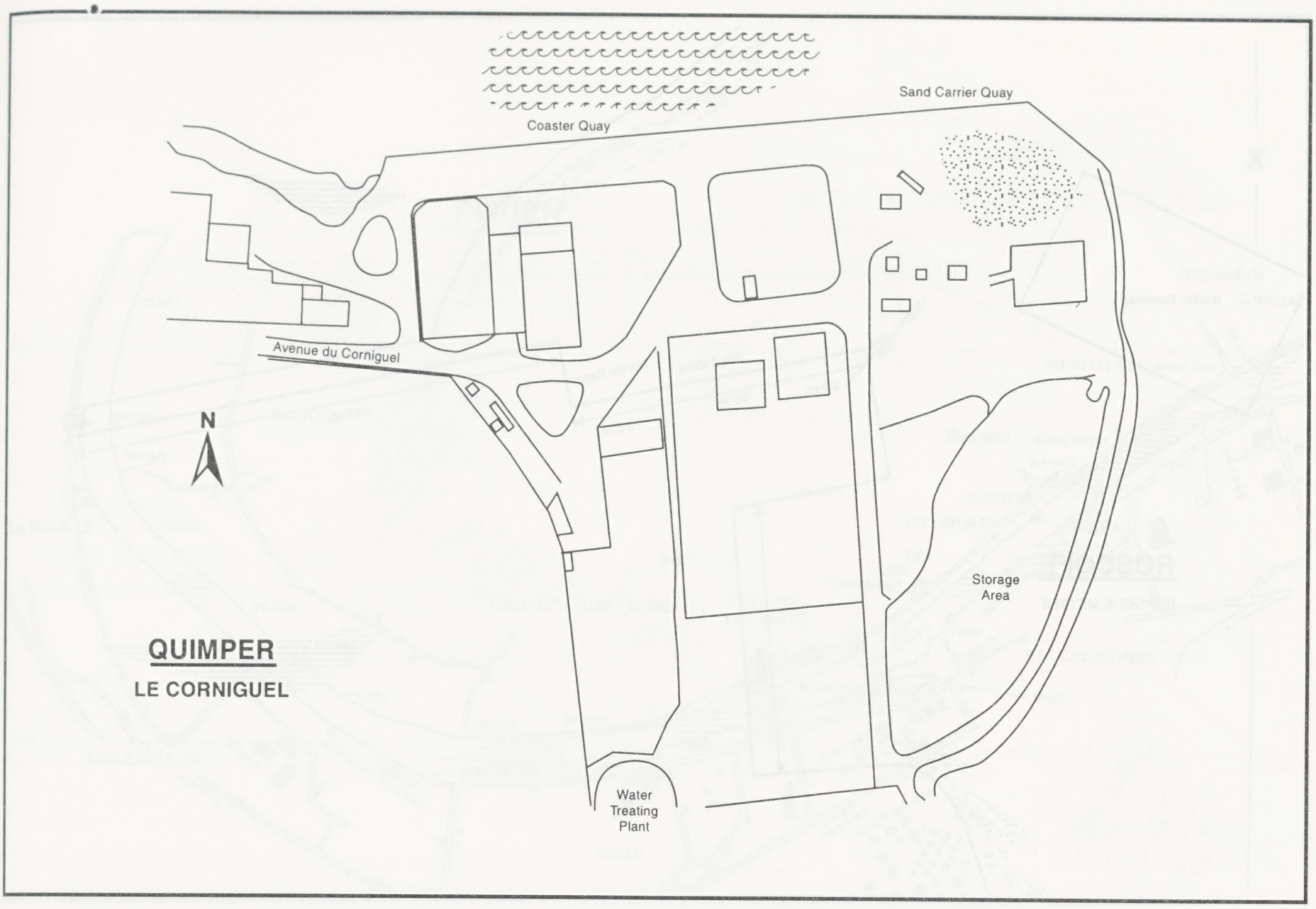

Seine
Bonnieres
Mantes
Limey
VAL D'OISE
Oise
Conflans
St. Ouen L' aumone
Bruyeres s/oise
Gennevilliers
Nanterre
YVELINES
Bonneuil
Viry
Evry
Meaux
Marne
Lagny
SEINE ET MARNE
Melun
Cl. du Loing
Montereau
0
20
Scale in Kilometers
LE HAVRE
ROUEN
PARIS

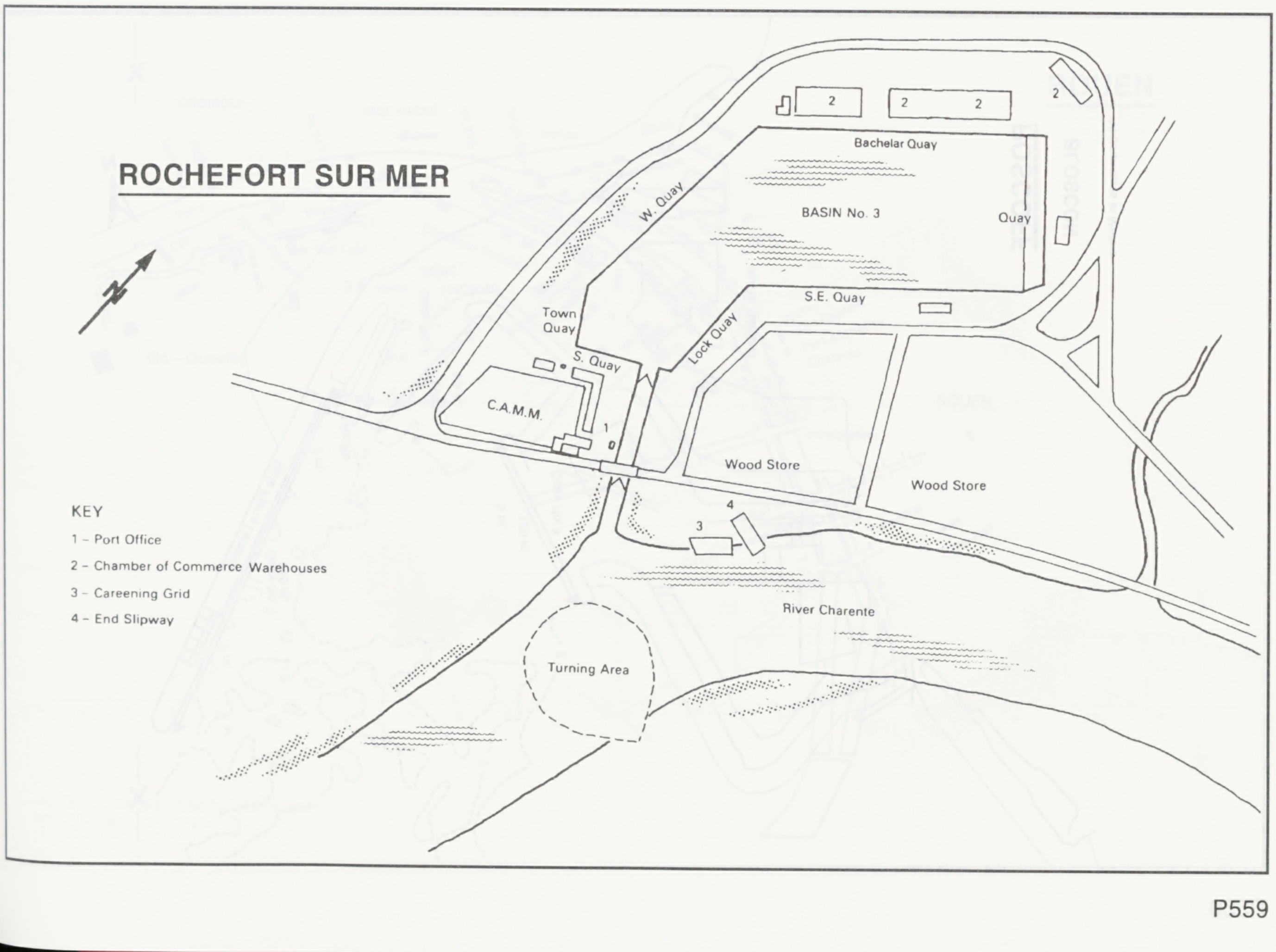

PARIS
GENNEVILLIERS
Epinay sur Seine
Ile Saint Denis
D'Argenteuil
Colombes
Autoroute
Gennevilliers
Asnieres

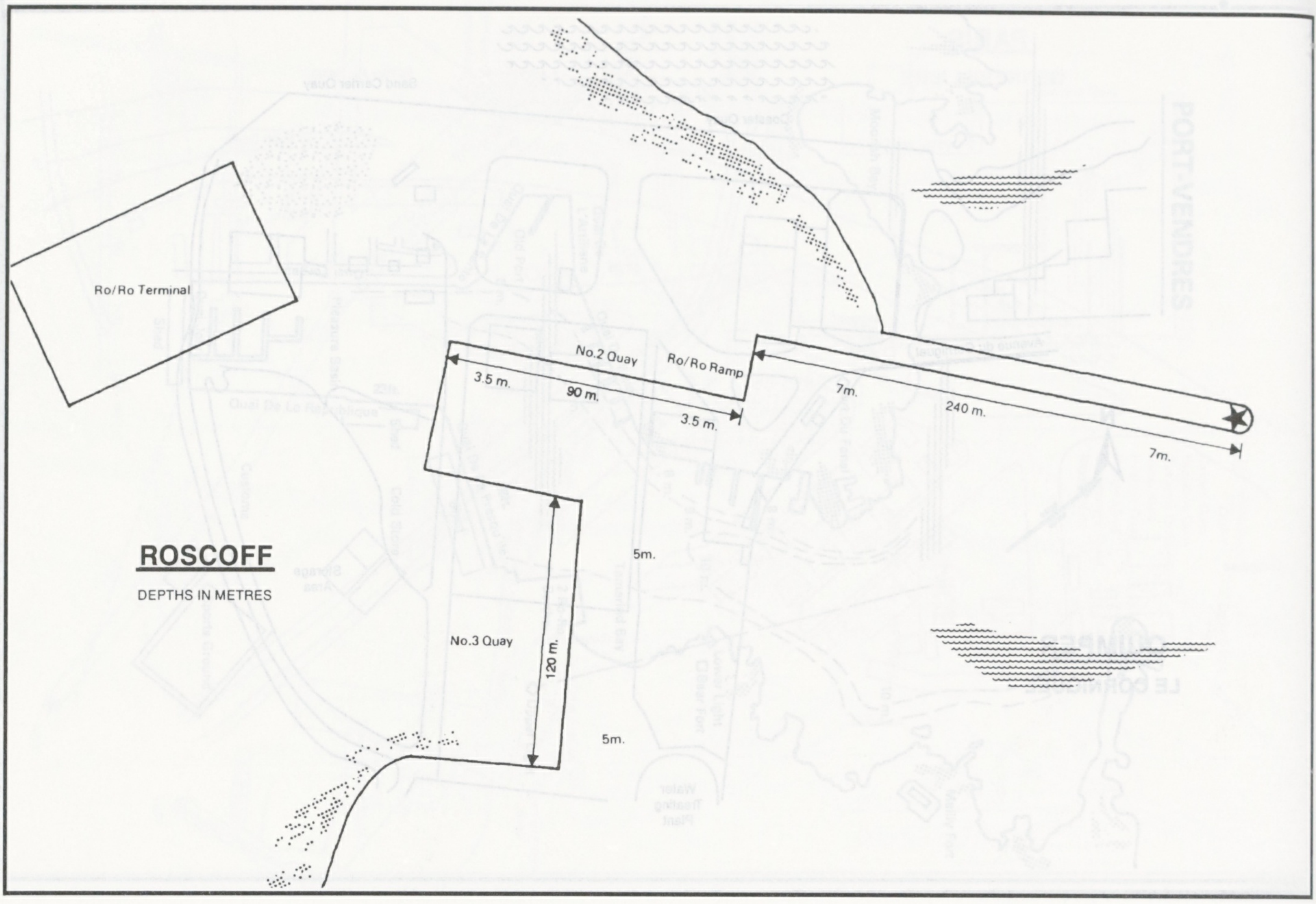

Daniel Dreyfous Ducas Ave.
Limay
Porcheville
Darse Daniel Dreyfous Ducas
Limay
River Seine
Canal
PARIS
LIMAY
0
1,000
Scale in Meters

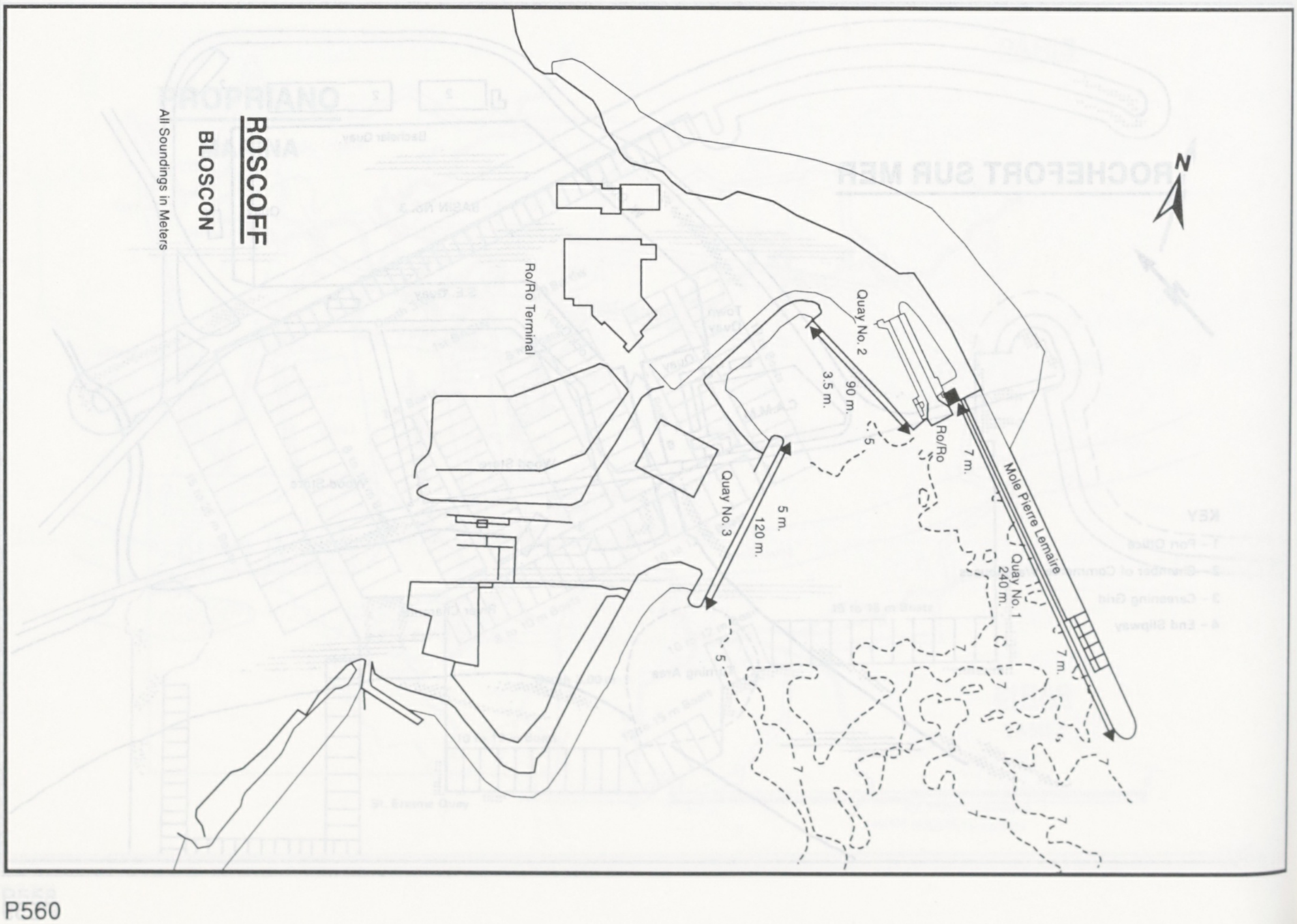

PORT-VENDRES
Moorish Bay
Fort Du Fanal
Quai De L'Artillerie
Old Port
Quai De La Sante
Quai Forgas
Quai Joly
Shed
Pleasure Basin
8 m.
23ft.
Quai De La Republique
Shed
Customs
Cold Store
Shed
Quai De La Presqu'ile
26ft.
Quai Du Fanal
9 m.
8 m.
9 m.
8 m.
10 m.
Sports Ground
2 Ro-Ro Berths
Tamarind Bay
Lower Light
Bear Fort
Upper Light
10 m.
10 m.
Mole
Mailly Fort

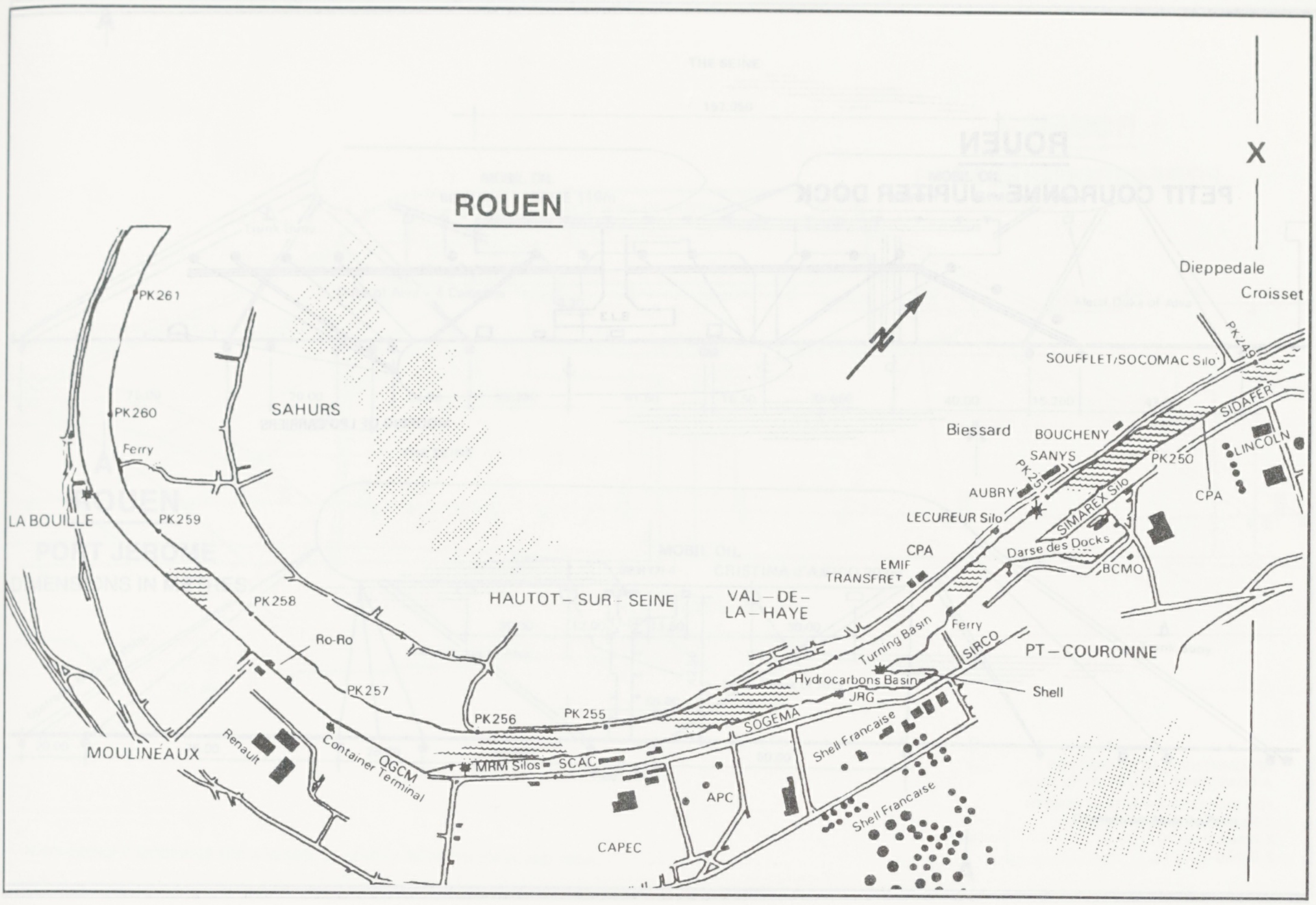

PROPRIANO
MARINA
Depth 3.00 m
370 Berths
1st BASIN
7 m Boats
8 m Boats
8 m Boats
12 m Boats
15 to 25 m Boats
8 to 10 m Boats
10 to 12 m Boats
8 to 10 m Boats
10 to 12 m Boats
15 to 18 m Boats
Depth 3.00 m
12 to 15 m Boats
10 to 12 m Boats
St. Erasme Quay

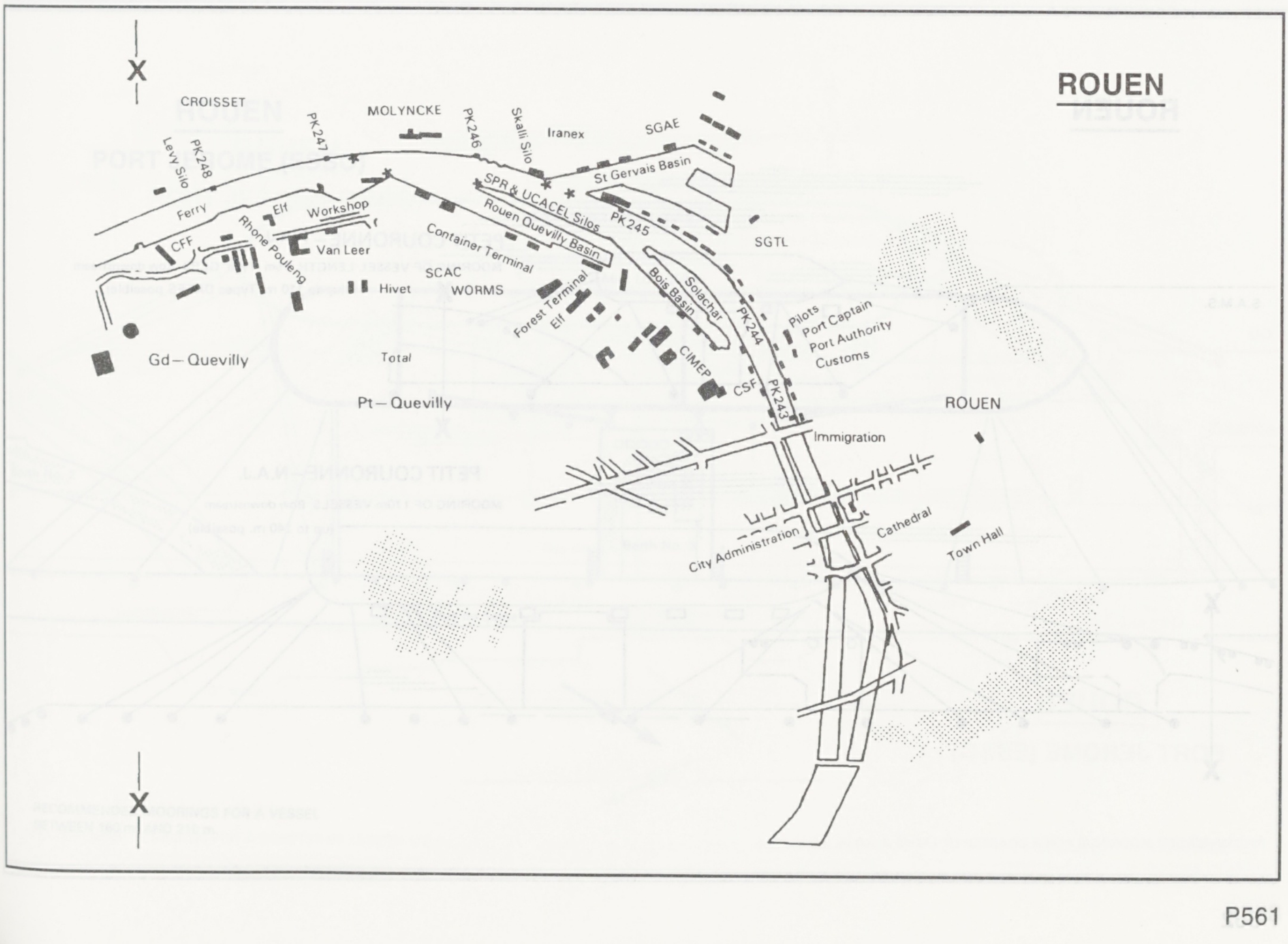

Sand Carrier Quay
Coaster Quay
Avenue du Corniguel
N
QUIMPER
LE CORNIGUEL
Storage Area
Water Treating Plant


ROCHEFORT SUR MER
N
2
2
2
2
Bachelar Quay
W. Quay
BASIN No. 3
Quay
S.E. Quay
Town Quay
S. Quay
Lock Quay
C.A.M.M.
1
Wood Store
Wood Store
4
3
River Charente
Turning Area
KEY
1 – Port Office
2 – Chamber of Commerce Warehouses
3 – Careening Grid
4 – End Slipway


Ro/Ro Terminal
No.2 Quay
Ro/Ro Ramp
3.5 m.
90 m.
3.5 m.
7m.
240 m.
7m.
ROSCOFF
DEPTHS IN METRES
5m.
No.3 Quay
120 m.
5m.

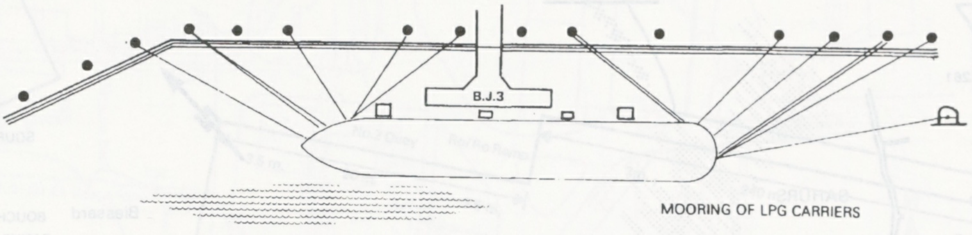

ROSCOFF
BLOSCON
All Soundings in Meters
Ro/Ro Terminal
N
Quay No. 2
90 m.
3.5 m.
5
Ro/Ro
7 m.
Mole Pierre Lemaire
Quay No. 3
5 m.
120 m.
Quay No. 1
240 m.
7 m.
5


ROUEN
X
Dieppedale
Croisset
PK249
SOUFFLET/SOCOMAC Silo
SIDAFER
Biessard
BOUCHENY
SANYS
PK251
PK250
LINCOLN
CPA
AUBRY
LECUREUR Silo
SIMAREX Silo
Darse des Docks
CPA
EMIF
TRANSFRET
BCMO
PK261
PK260
SAHURS
Ferry
LA BOUILLE
PK259
PK258
Ro-Ro
HAUTOT-SUR-SEINE
VAL-DE-LA-HAYE
Turning Basin
Ferry
SIRCO
PT-COURONNE
Hydrocarbons Basin
Shell
JRG
PK257
PK256
PK255
SOGEMA
Shell Francaise
MOULINEAUX
Renault
Container Terminal
QGCM
MRM Silos
SCAC
APC
CAPEC
Shell Francaise

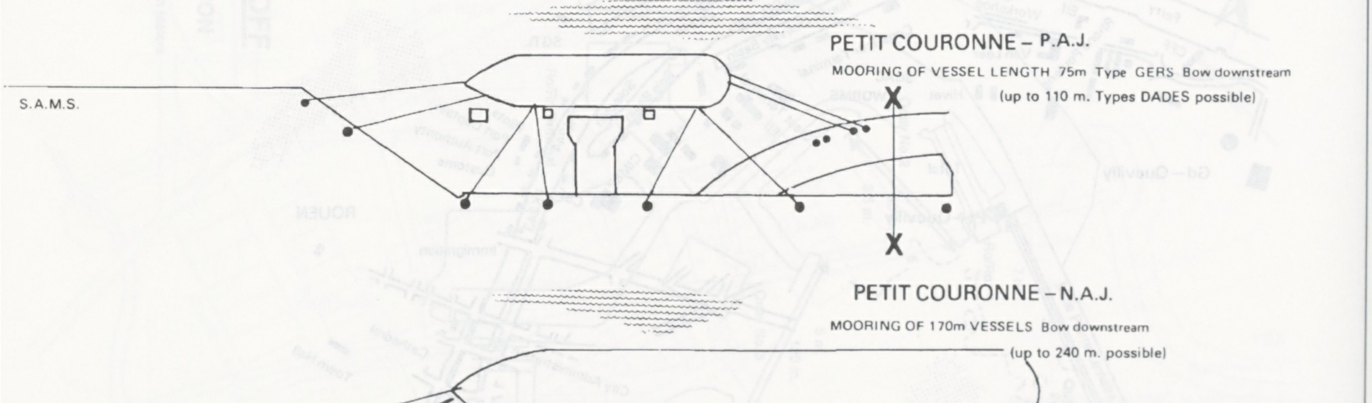

X
ROUEN
CROISSET
MOLYNCKE
PK248
Levy Silo
PK247
PK246
Skalli Silo
Iranex
SGAE
St Gervais Basin
Ferry
Elf
Workshop
SPR & UCACEL Silos
PK245
Rouen Quevilly Basin
CFF
Rhone Pouleng
Van Leer
Container Terminal
SGTL
SCAC
WORMS
Hivet
Forest Terminal
Elf
Bois Basin
Solachar
PK244
Pilots
Port Captain
Port Authority
Customs
Gd-Quevilly
Total
CIMEP
CSF
PK243
Pt-Quevilly
ROUEN
Immigration
Cathedral
City Administration
Town Hall
X

ROUEN

PETIT COURONNE - JUPITER DOCK


B.J.3
MOORING OF LPG CARRIERS

ROUEN

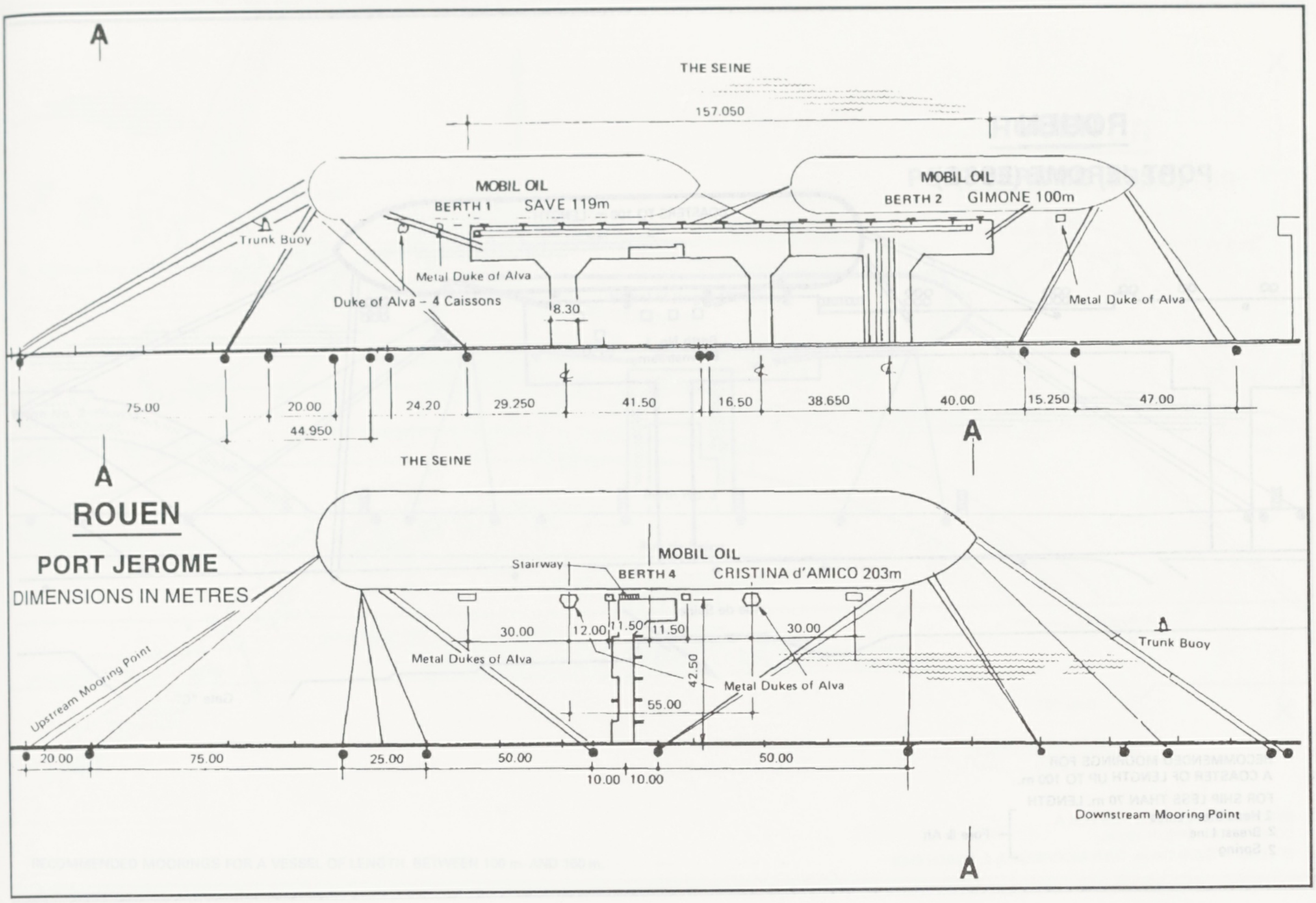


PETIT COURONNE – P.A.J.

MOORING OF VESSEL LENGTH 75m Type GERS Bow downstream (up to 110 m. Types DADES possible)

PETIT COURONNE – N.A.J.

MOORING OF 170m VESSELS Bow downstream (up to 240 m. possible)

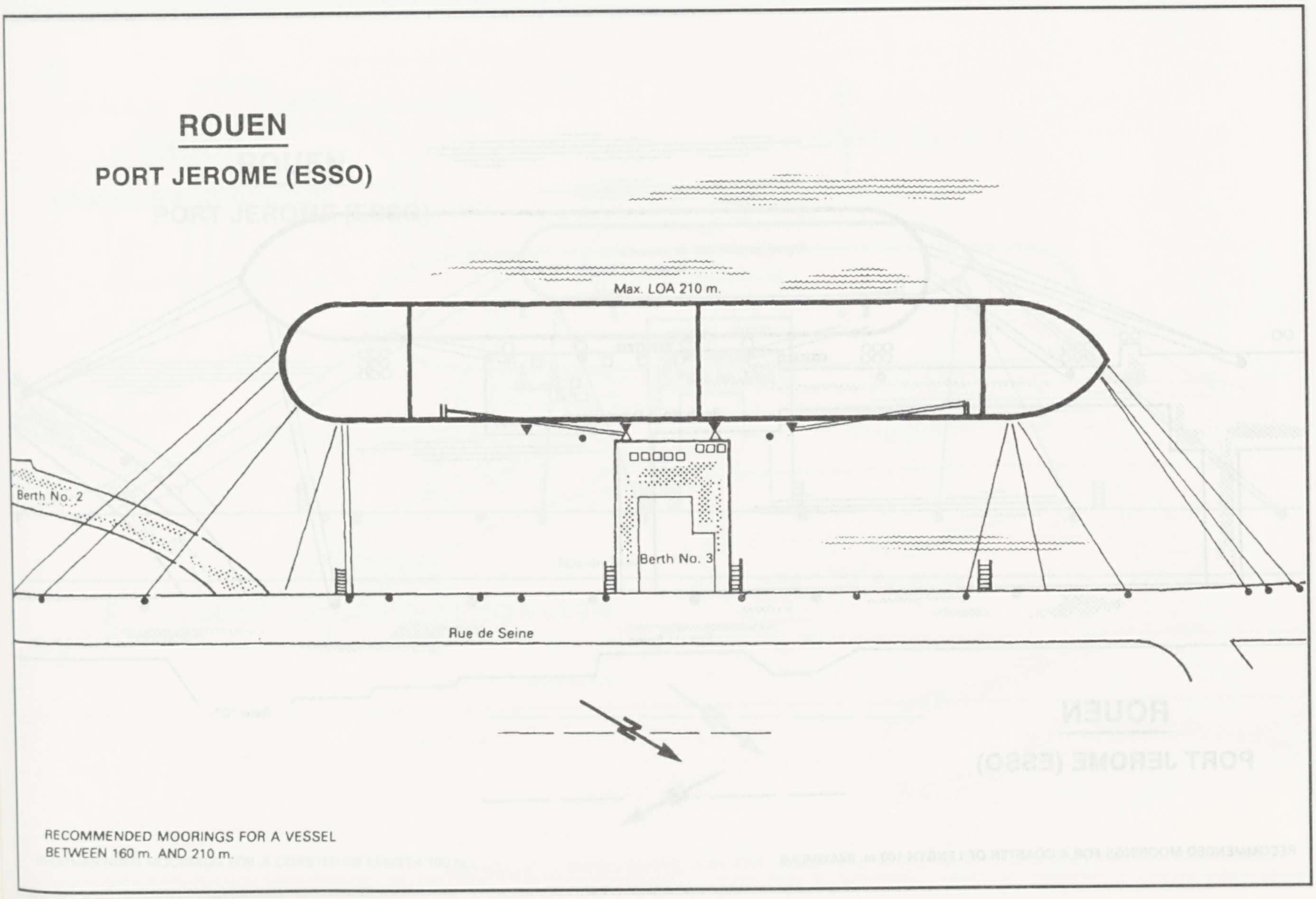


ROUEN

PORT JEROME

DIMENSIONS IN METRES

A
THE SEINE
157.050
MOBIL OIL
BERTH 1
SAVE 119m
MOBIL OIL
BERTH 2
GIMONE 100m
Trunk Buoy
Metal Duke of Alva
Duke of Alva – 4 Caissons
8.30
Metal Duke of Alva
75.00
20.00
44.950
24.20
29.250
41.50
16.50
38.650
40.00
15.250
47.00
A
THE SEINE
A
MOBIL OIL
Stairway
BERTH 4
CRISTINA d'AMICO 203m
30.00
12.00
11.50
11.50
30.00
Metal Dukes of Alva
42.50
Metal Dukes of Alva
55.00
Trunk Buoy
Upstream Mooring Point
20.00
75.00
25.00
50.00
10.00
10.00
50.00
Downstream Mooring Point
A

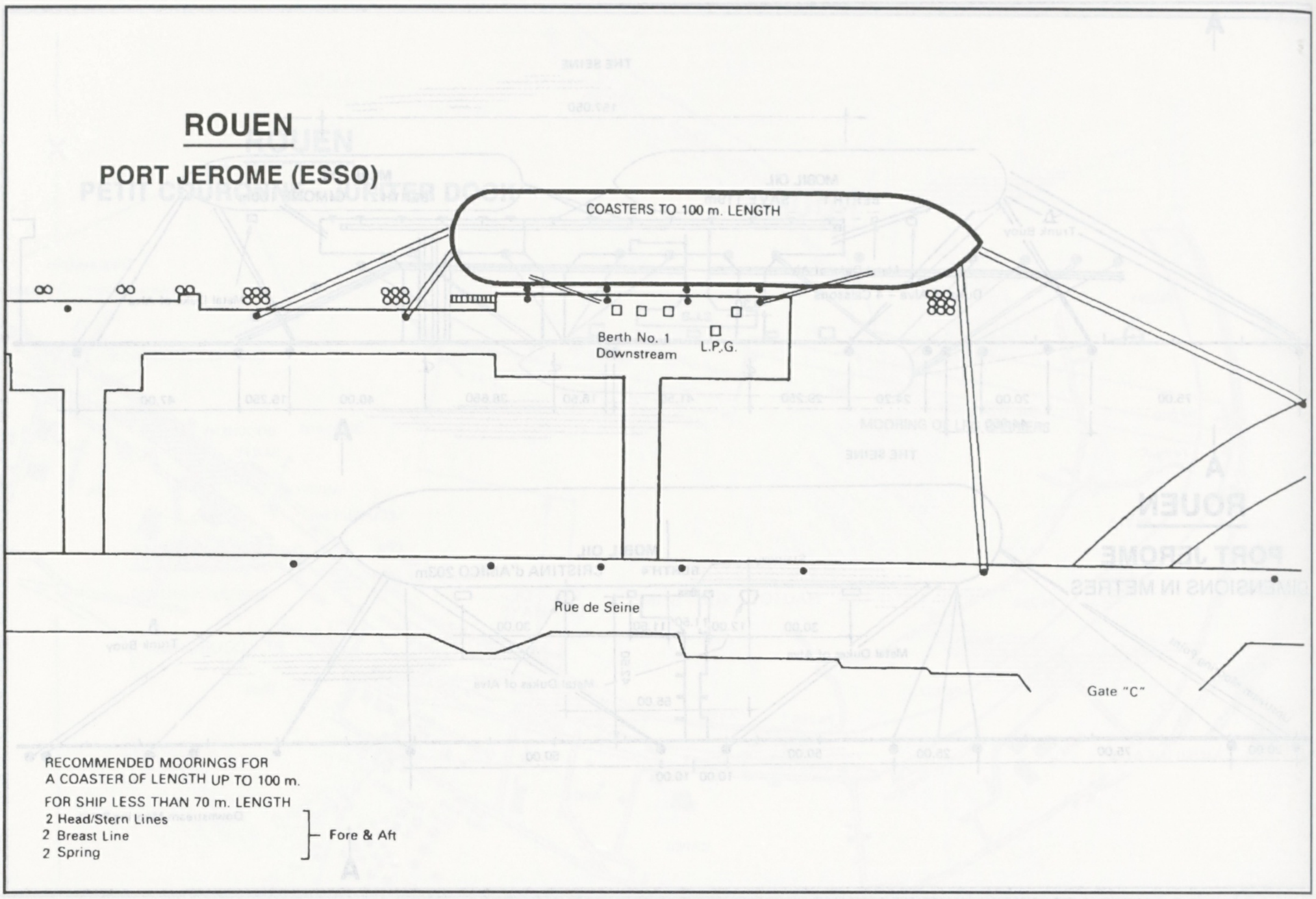


ROUEN

PORT JEROME (ESSO)

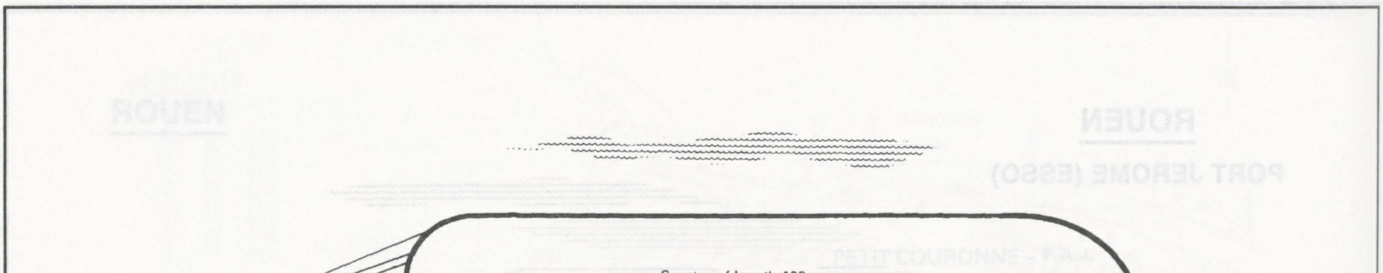
Max. LOA 210 m.
Berth No. 2
Berth No. 3
Rue de Seine

RECOMMENDED MOORINGS FOR A VESSEL
BETWEEN 160 m. AND 210 m.

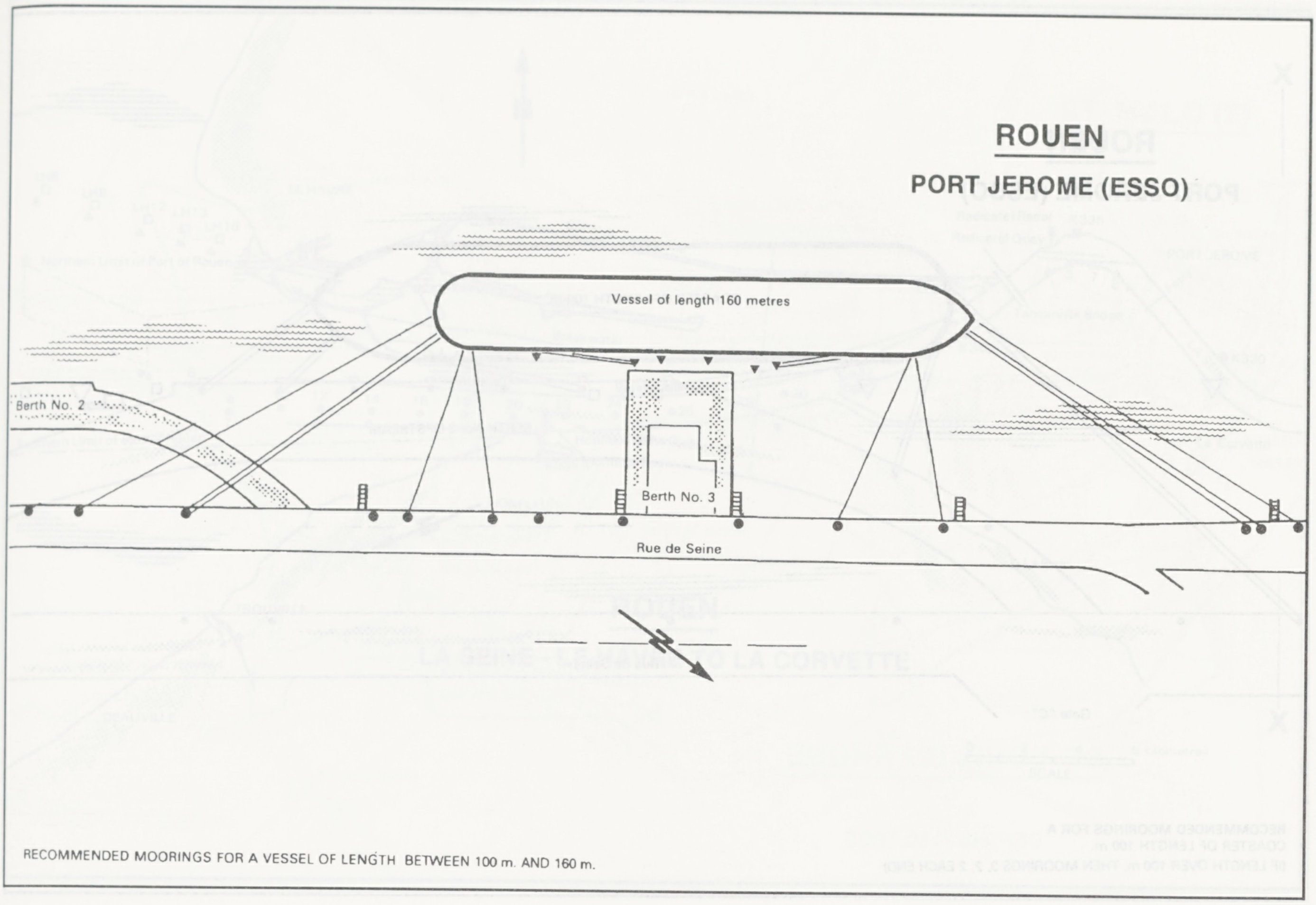

ROUEN
PORT JEROME (ESSO)
COASTERS TO 100 m. LENGTH
Berth No. 1
Downstream
L.P.G.
Rue de Seine
Gate "C"

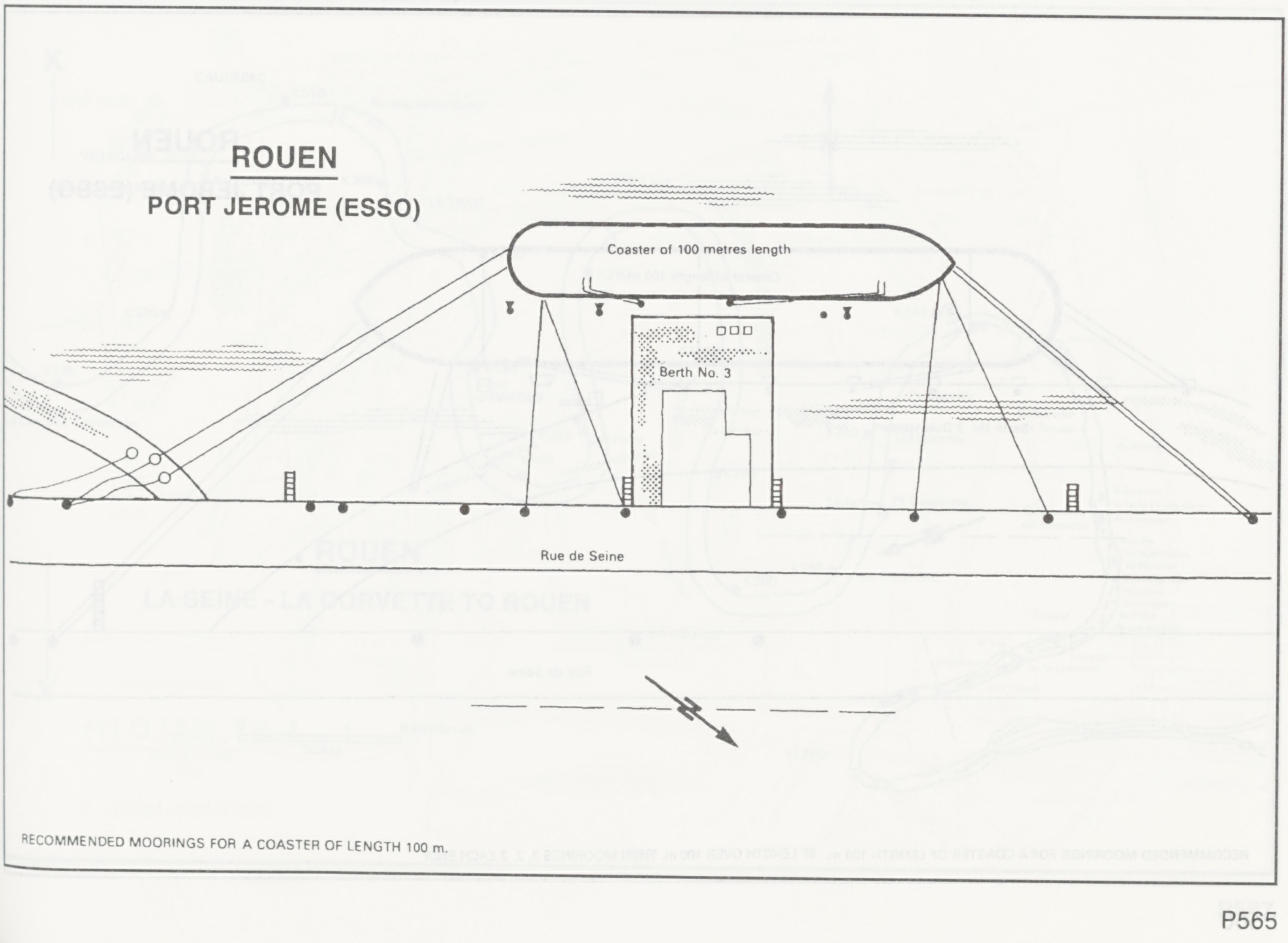
RECOMMENDED MOORINGS FOR
A COASTER OF LENGTH UP TO 100 m.

FOR SHIP LESS THAN 70 m. LENGTH
2 Head/Stern Lines
2 Breast Line
2 Spring
Fore & Aft


Coaster of length 100 m.
L.P.G.
Berth No. 1 Downstream
Rue de Seine
Gate "C"
ROUEN
PORT JEROME (ESSO)

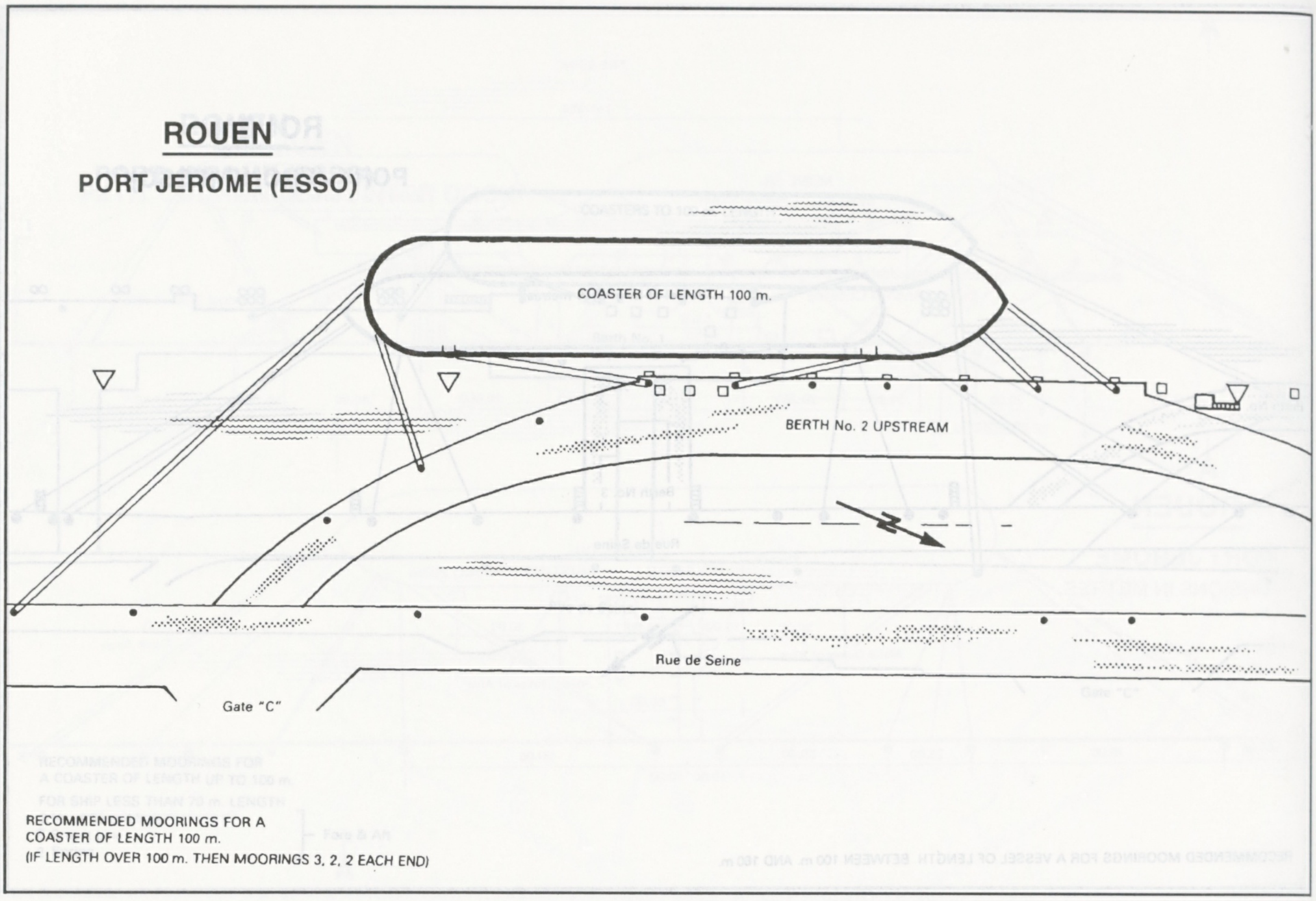
RECOMMENDED MOORINGS FOR A COASTER OF LENGTH 100 m. (MAXIMUM)


ROUEN
PORT JEROME (ESSO)
Vessel of length 160 metres
Berth No. 2
Berth No. 3
Rue de Seine
RECOMMENDED MOORINGS FOR A VESSEL OF LENGTH BETWEEN 100 m. AND 160 m.


ROUEN
PORT JEROME (ESSO)
Coaster of 100 metres length
Berth No. 3
Rue de Seine
RECOMMENDED MOORINGS FOR A COASTER OF LENGTH 100 m.

ROUEN

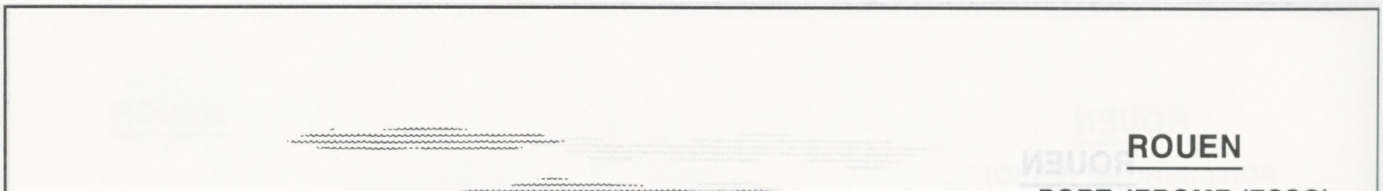
PORT JEROME (ESSO)


COASTER OF LENGTH 100 m.
BERTH No. 2 UPSTREAM
Rue de Seine
Gate "C"

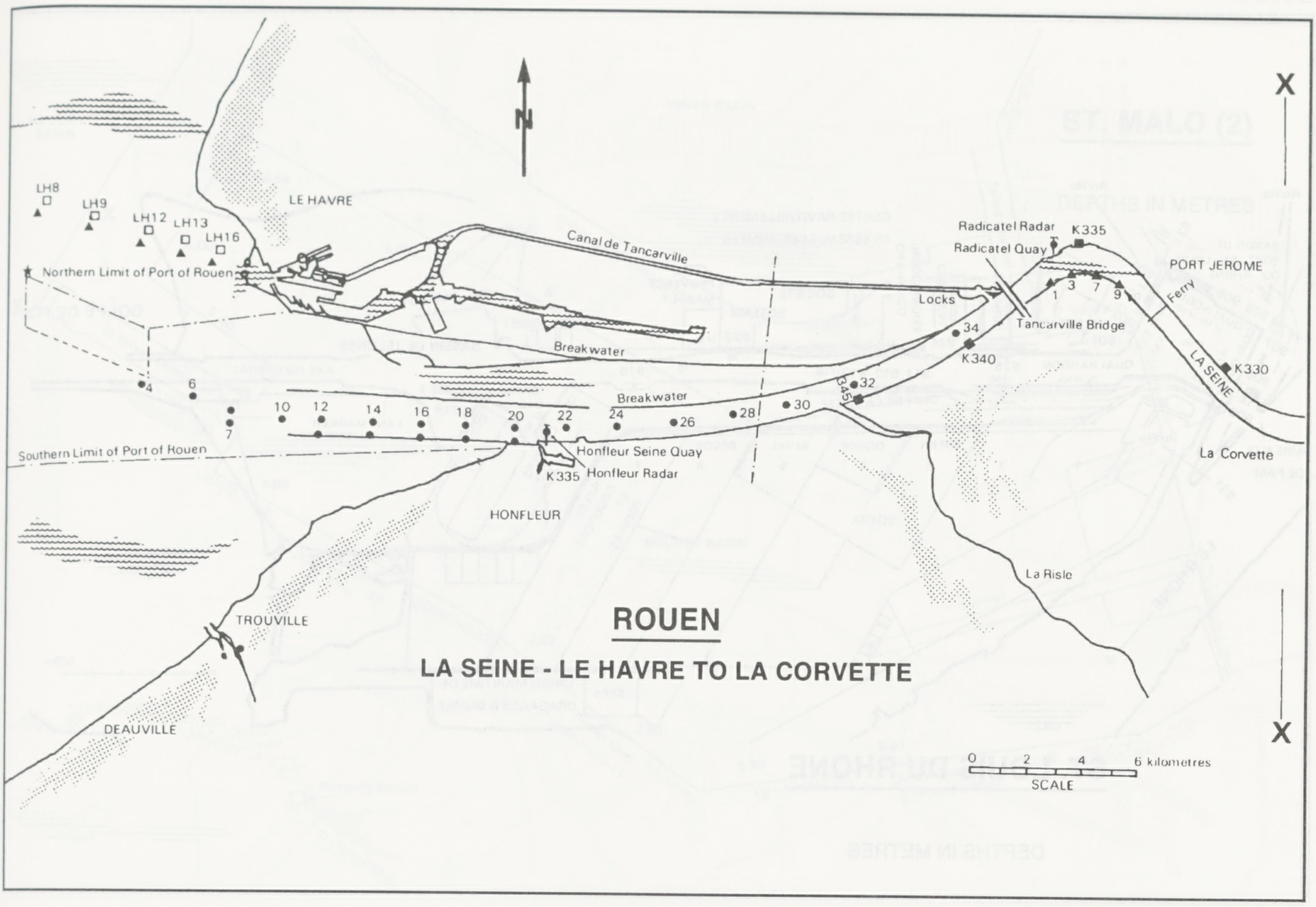
RECOMMENDED MOORINGS FOR A COASTER OF LENGTH 100 m.
(IF LENGTH OVER 100 m. THEN MOORINGS 3, 2, 2 EACH END)

ROUEN

PORT JEROME (ESSO)


Coaster of length 100 m.
Berth No. 2 Downstream
Rue de Seine

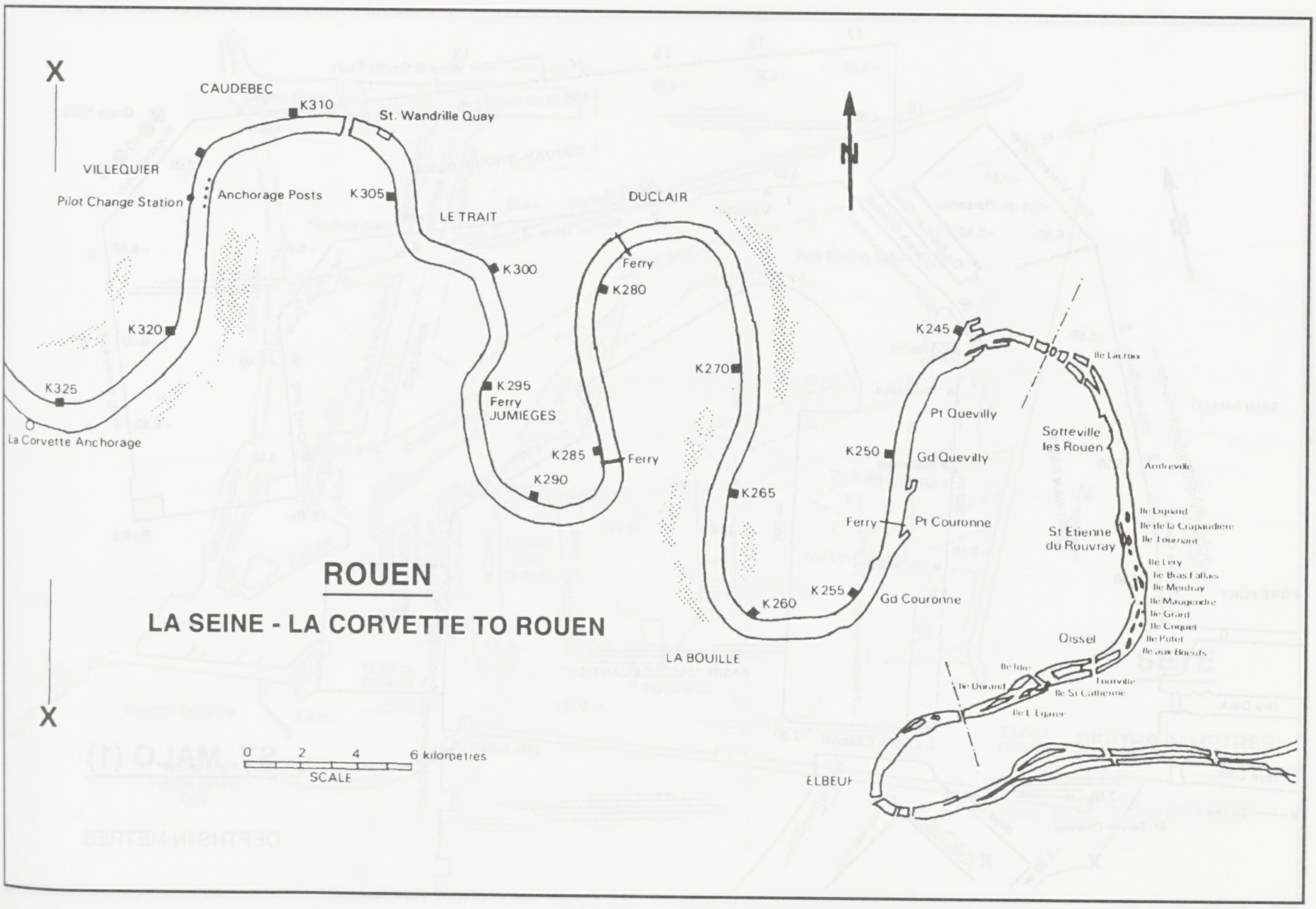
RECOMMENDED MOORINGS FOR A COASTER OF LENGTH 100 m. (IF LENGTH OVER 100 m. THEN MOORINGS 3, 2, 2 EACH END)



ROUEN

LA SEINE - LE HAVRE TO LA CORVETTE

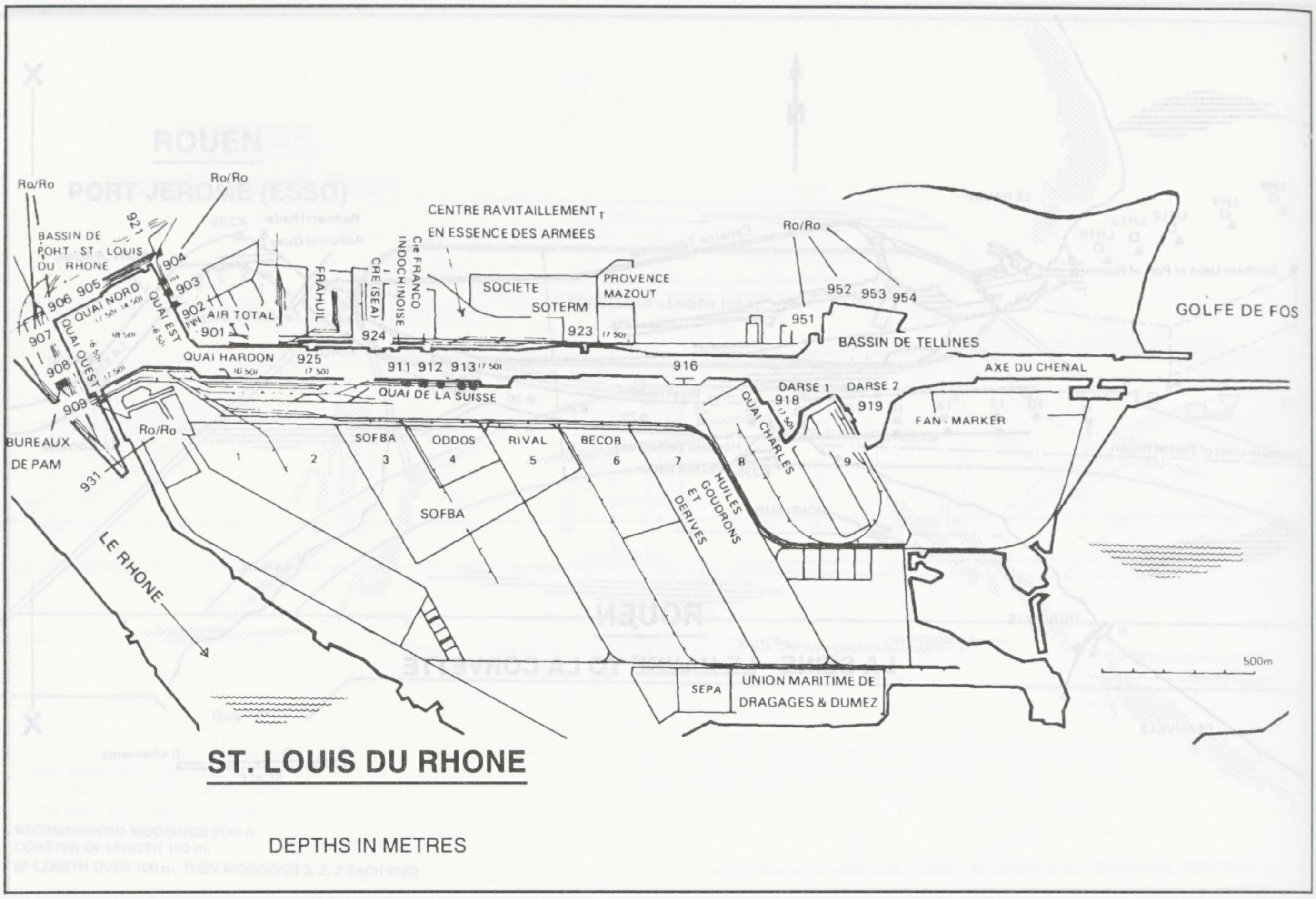
X
X
N
LE HAVRE
LH8
LH9
LH12
LH13
LH16
Northern Limit of Port of Rouen
Canal de Tancarville
Breakwater
Breakwater
4
6
7
10
12
14
16
18
20
22
24
26
28
30
32
34
K345
K340
Southern Limit of Port of Rouen
Honfleur Seine Quay
Honfleur Radar
K335
HONFLEUR
TROUVILLE
DEAUVILLE
Radicatel Radar
Radicatel Quay
K335
PORT JEROME
Locks
Tancarville Bridge
1
3
7
9
Ferry
LA SEINE
K330
La Corvette
La Risle
0
2
4
6 kilometres
SCALE



ROUEN

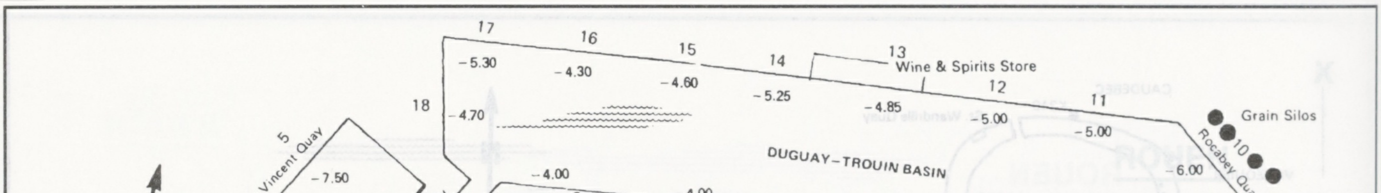
LA SEINE - LA CORVETTE TO ROUEN

X
X
N
CAUDEBEC
K310
St. Wandrille Quay
VILLEQUIER
Pilot Change Station
Anchorage Posts
K305
LE TRAIT
K300
K320
K325
La Corvette Anchorage
DUCLAIR
Ferry
K280
K295
Ferry
JUMIEGES
K285
Ferry
K290
K270
K265
K260
LA BOUILLE
K245
Ile Lacroix
Pt Quevilly
Sotteville
les Rouen
K250
Gd Quevilly
Amfreville
Ferry
Pt Couronne
Ile Liquard
Ile de la Crapaudiere
Ile Tournant
St Etienne
du Rouvray
Ile Lery
Ile Bras Fallais
Ile Merdray
Ile Maugendre
Ile Girard
Ile Coquet
Ile Potel
Ile aux Boeufs
K255
Gd Couronne
Oissel
Ile Idie
Tourville
Ile Durand
Ile St Catherine
Ile L'Egaree
ELBEUF
0
2
4
6 kilometres
SCALE


Ro/Ro
Ro/Ro
BASSIN DE PORT - ST - LOUIS DU RHONE
921
906
905
904
903
902
901
907
908
909
QUAI NORD
QUAI EST
QUAI OUEST
AIR TOTAL
QUAI HARDON
925
FRAHUIL
Cie FRANCO INDOCHINOISE
CRE (SEA)
924
CENTRE RAVITAILLEMENT EN ESSENCE DES ARMEES
SOCIETE
SOTERM
PROVENCE MAZOUT
923
911 912 913
QUAI DE LA SUISSE
916
Ro/Ro
952 953 954
951
BASSIN DE TELLINES
GOLFE DE FOS
AXE DU CHENAL
DARSE 1
DARSE 2
918
919
QUAI CHARLES
FAN-MARKER
BUREAUX DE PAM
Ro/Ro
931
SOFBA
ODDOS
RIVAL
BECOB
1
2
3
4
5
6
7
8
9
SOFBA
HUILES GOUDRONS ET DERIVES
LE RHONE
N
SEPA
UNION MARITIME DE DRAGAGES & DUMEZ
500m

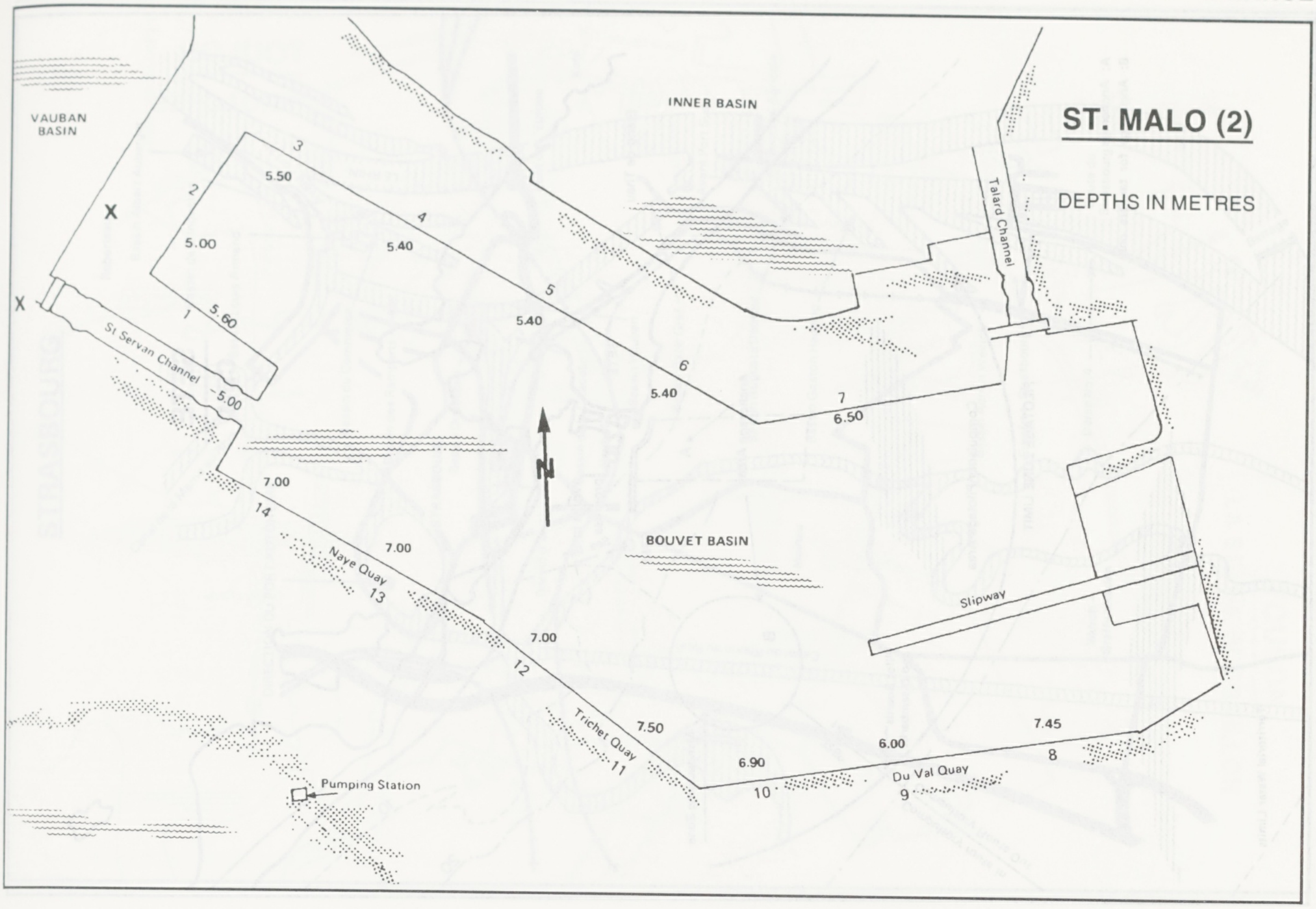
ST. LOUIS DU RHONE

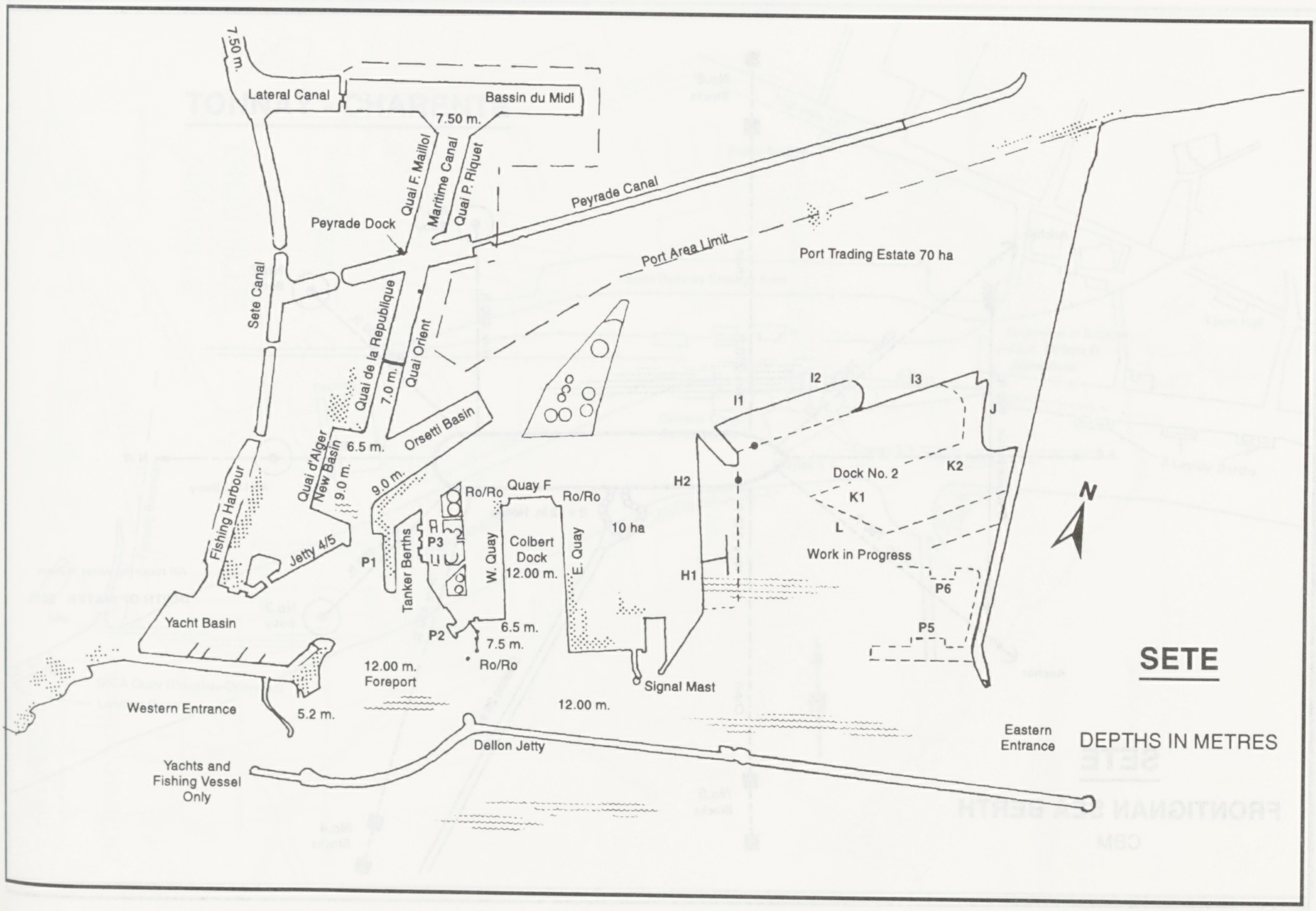
DEPTHS IN METRES

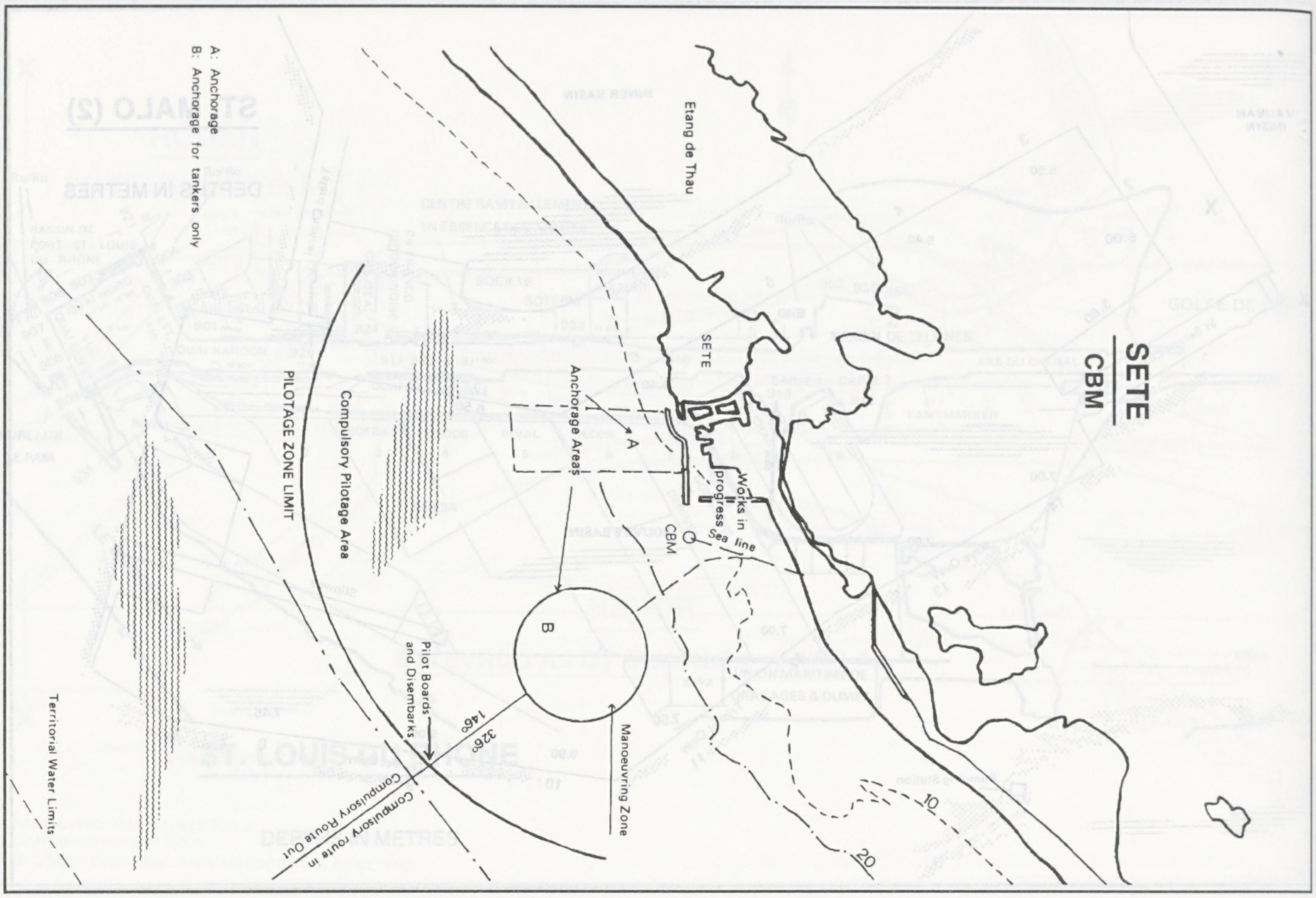

17
16
15
14
13
Wine & Spirits Store
12
11
–5.30
–4.30
–4.60
–5.25
–4.85
–5.00
–5.00
18
–4.70
Grain Silos
10
Rocabey Quay
–6.00
DUGUAY–TROUIN BASIN
–4.00
1
Molasses
–4.00
2
Surcouf Quay
3
–4.00
–4.60
4
5
Saint Vincent Quay
–7.50
Port de Plaisance
–6.50
–5.50
6
Du Bajoyer Quay
St Malo Channel
–5.00
Ro/Ro
Molasses
8
Molasses
Mineral Oil
360 m.
300 m.
9
–2.50
–2.50
Petroleum
3
–5.50
St Louis Quay
SAINT-MALO
2
–5.50
VAUBAN BASIN
1
La Bourse Quay
–4.50
FORE PORT
Dry Dock
Naye Lock
To Sea
–7.00
St. Servan Channel
–5.00
West Quay
J. Cartier Channel
–2.00
BASIN "JACQUES CARTIER"
ACM
–5.60
5
Pan Coupe Quay
6
–5.40
Sud-Est Quay
–6.50
Ro/Ro
–5.60
9
–6.00
8
Terre-Neuve Quay
–6.50
7
Ro/Ro
N

ST. MALO (1)

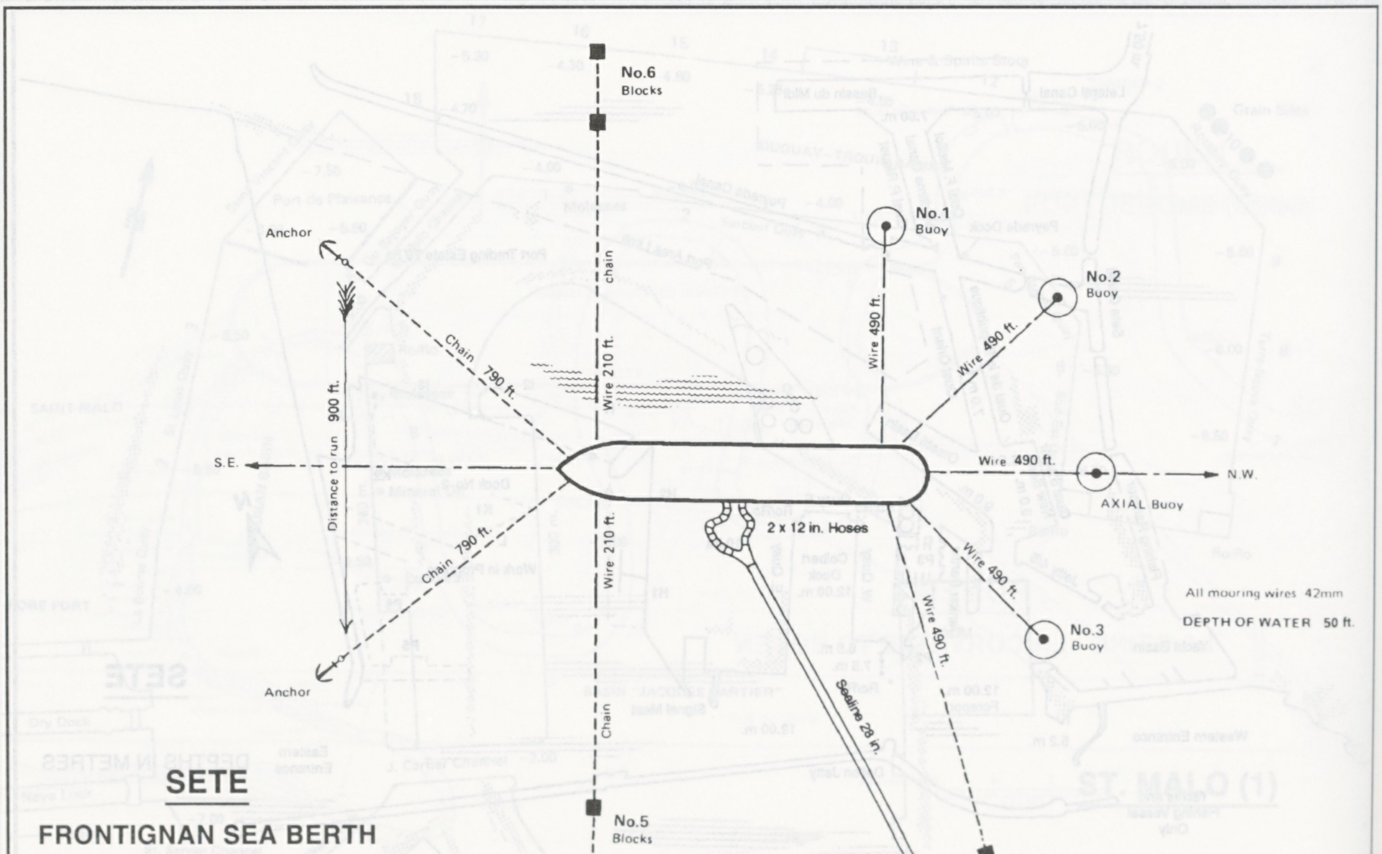
DEPTHS IN METRES


ST. MALO (2)
DEPTHS IN METRES
VAUBAN BASIN
INNER BASIN
BOUVET BASIN
X
X
St Servan Channel
Talard Channel
Slipway
Naye Quay
Trichet Quay
Du Val Quay
Pumping Station
N
1
2
3
4
5
6
7
8
9
10
11
12
13
14
5.50
5.00
5.60
5.40
5.40
5.40
6.50
5.00
7.00
7.00
7.00
7.50
6.90
6.00
7.45


SETE
DEPTHS IN METRES
7.50 m.
Lateral Canal
Bassin du Midi
7.50 m.
Quai F. Maillol
Maritime Canal
Quai P. Riquet
Peyrade Canal
Peyrade Dock
Port Area Limit
Port Trading Estate 70 ha
Sete Canal
Quai de la Republique
Quai Orient
7.0 m.
Orsetti Basin
6.5 m.
Quai d'Alger
New Basin
9.0 m.
9.0 m.
Fishing Harbour
Jetty 4/5
Yacht Basin
Ro/Ro
Quay F
Ro/Ro
P1
P2
P3
Tanker Berths
W. Quay
Colbert Dock
12.00 m.
E. Quay
10 ha
6.5 m.
7.5 m.
Ro/Ro
12.00 m.
Foreport
12.00 m.
Signal Mast
Western Entrance
5.2 m.
Yachts and Fishing Vessel Only
Dellon Jetty
Eastern Entrance
I1
I2
I3
J
H2
H1
Dock No. 2
K1
K2
L
Work in Progress
P6
P5
N

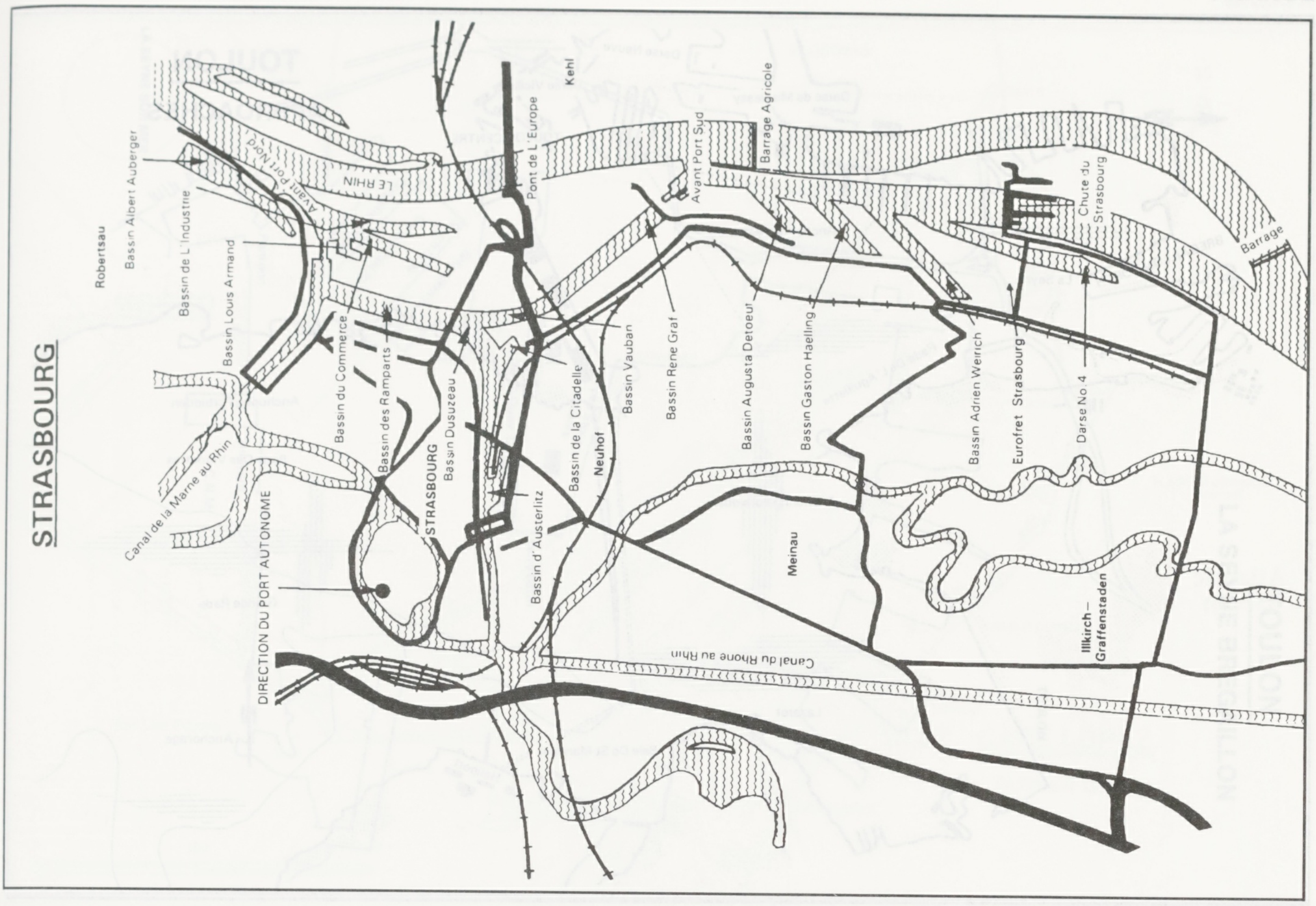

A: Anchorage
B: Anchorage for tankers only
Etang de Thau
SETE
Works in progress
CBM
Sea line
Anchorage Areas
A
B
Compulsory Pilotage Area
PILOTAGE ZONE LIMIT
Pilot Boards and Disembarks
146°
326°
Manoeuvring Zone
Compulsory Route Out
Compulsory route in
Territorial Water Limits
10
20

SETE
CBM

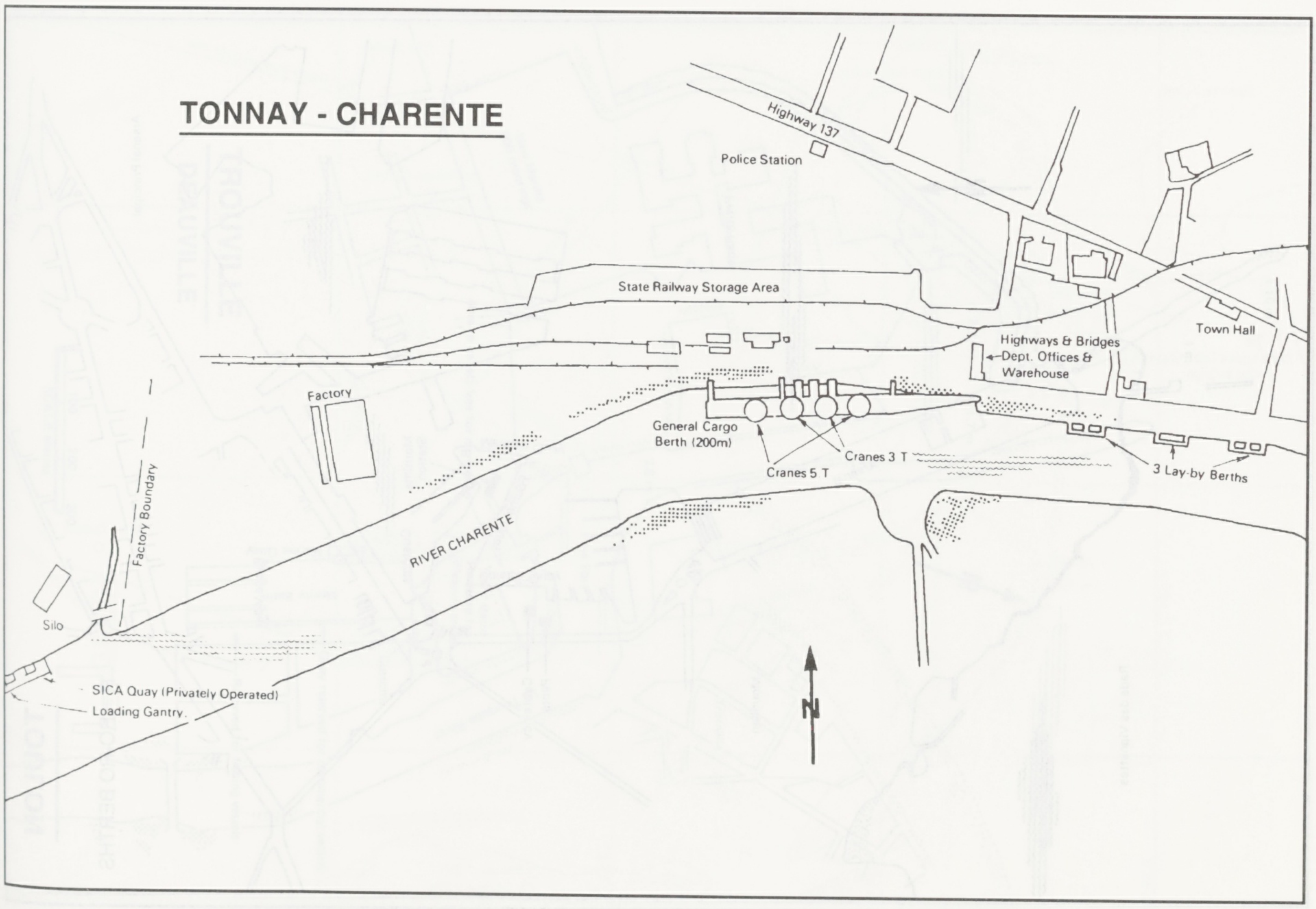

No.6
Blocks
No.1
Buoy
No.2
Buoy
Anchor
Chain 790 ft.
chain
Wire 210 ft.
Wire 490 ft.
Wire 490 ft.
Distance to run 900 ft.
S.E.
N.W.
Wire 490 ft.
AXIAL Buoy
2 x 12 in. Hoses
Wire 210 ft.
Chain 790 ft.
Wire 490 ft.
Wire 490 ft.
No.3
Buoy
Anchor
Chain
Sealine 28 in.
No.5
Blocks
No.4
Blocks
All mooring wires 42mm
DEPTH OF WATER 50 ft.

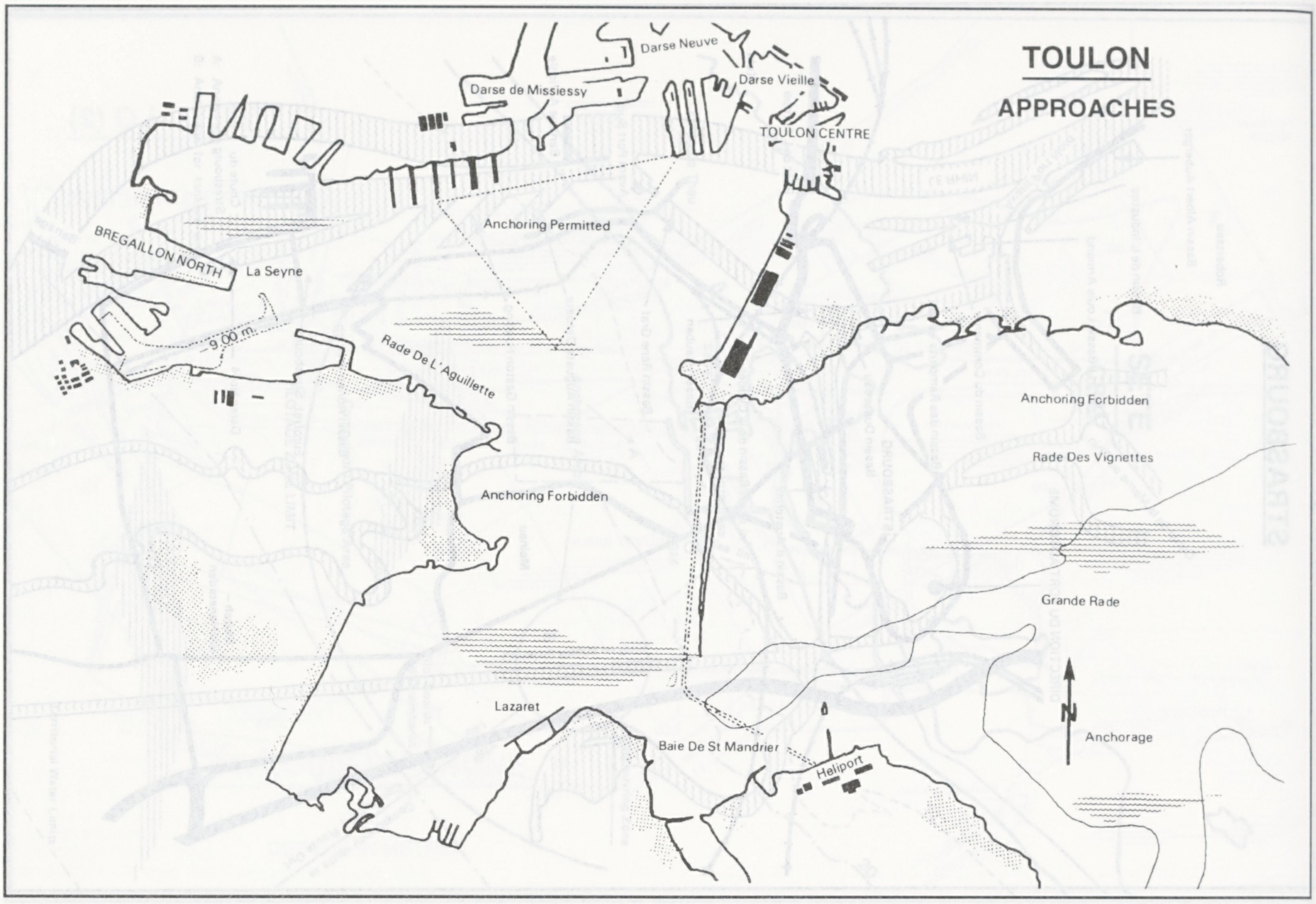
SETE
FRONTIGNAN SEA BERTH
CBM

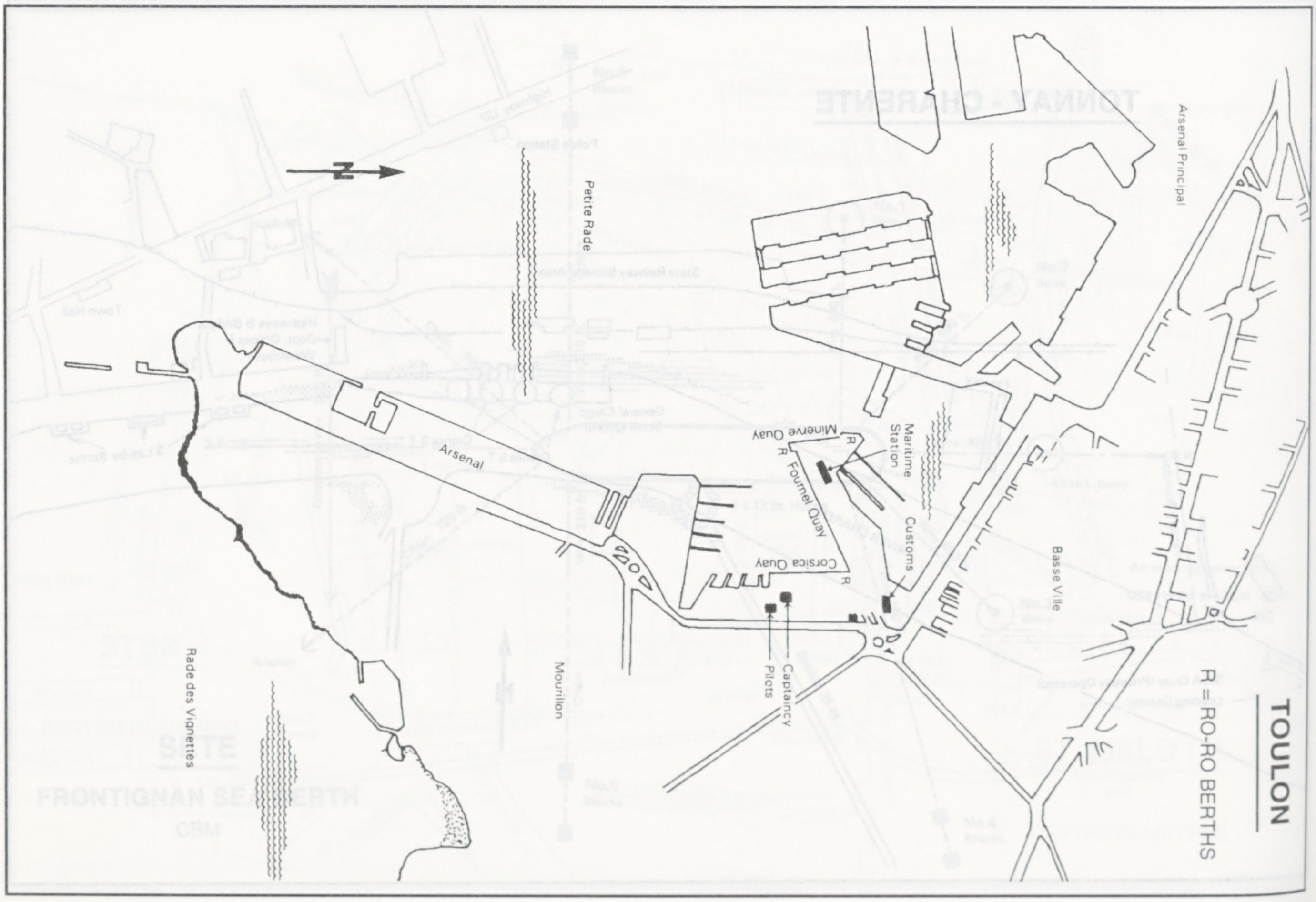
STRASBOURG

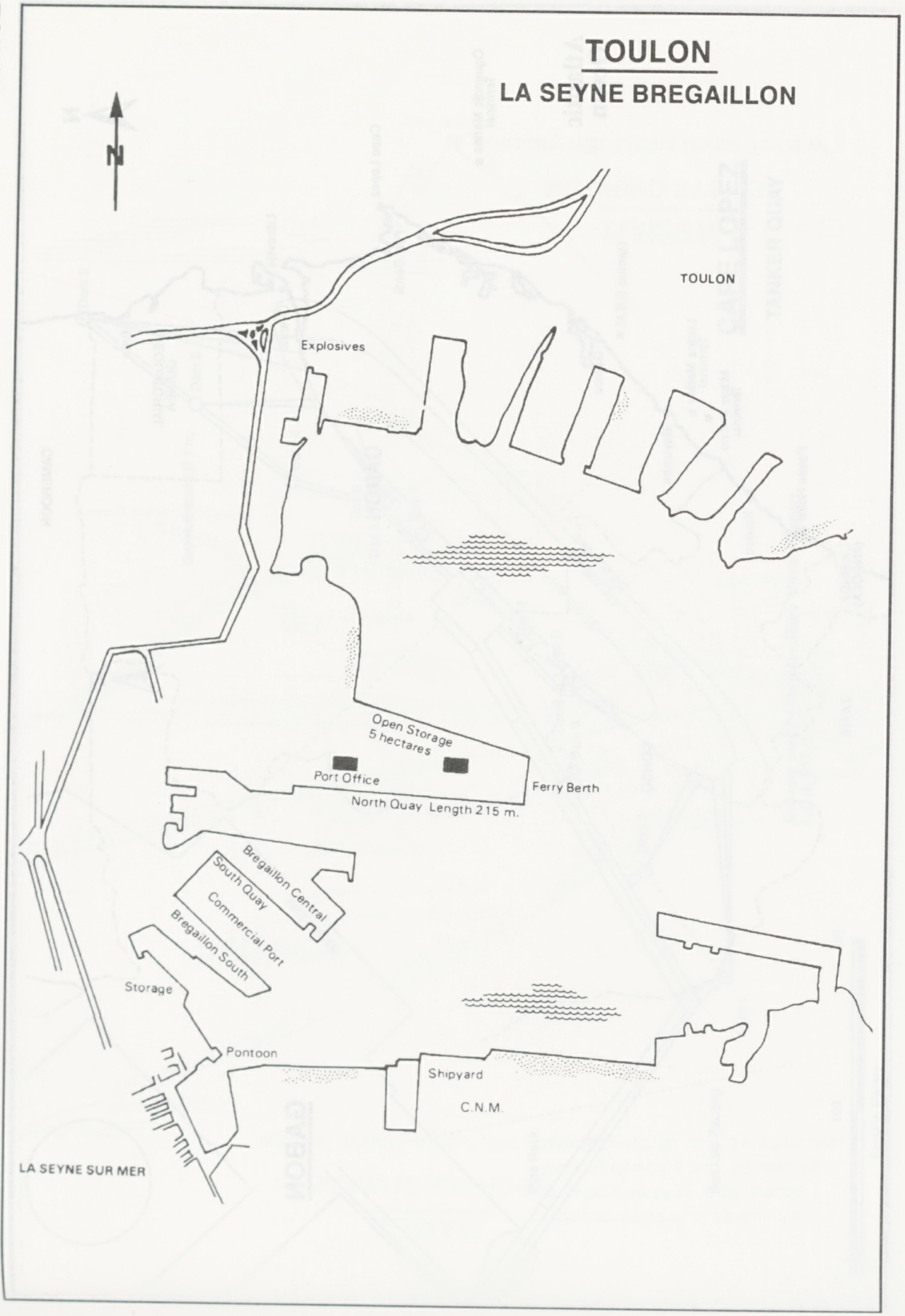

Robertsau
Bassin Albert Auberger
Bassin de L'Industrie
Bassin Louis Armand
Avant Port Nord
LE RHIN
Kehl
Pont de L'Europe
Canal de la Marne au Rhin
Bassin du Commerce
Bassin des Remparts
STRASBOURG
Bassin Dusuzeau
Bassin de la Citadelle
Bassin d'Austerlitz
Neuhof
Bassin Vauban
Bassin Rene Graf
Avant Port Sud
Barrage Agricole
Bassin Augusta Detoeuf
Bassin Gaston Haelling
Bassin Adrien Weirich
Eurofret Strasbourg
Darse No 4
Chute du Strasbourg
Barrage
Meinau
Illkirch – Graffenstaden
Canal du Rhone au Rhin
DIRECTION DU PORT AUTONOME

TONNAY - CHARENTE


Highway 137
Police Station
State Railway Storage Area
Town Hall
Highways & Bridges Dept. Offices & Warehouse
Factory
General Cargo Berth (200m)
Cranes 3 T
Cranes 5 T
3 Lay-by Berths
RIVER CHARENTE
Factory Boundary
Silo
SICA Quay (Privately Operated)
Loading Gantry
N


TOULON
APPROACHES
Darse Neuve
Darse de Missiessy
Darse Vieille
TOULON CENTRE
Anchoring Permitted
BREGAILLON NORTH
La Seyne
9.00 m.
Rade De L'Aguillette
Anchoring Forbidden
Anchoring Forbidden
Rade Des Vignettes
Grande Rade
Lazaret
Baie De St Mandrier
Heliport
N
Anchorage

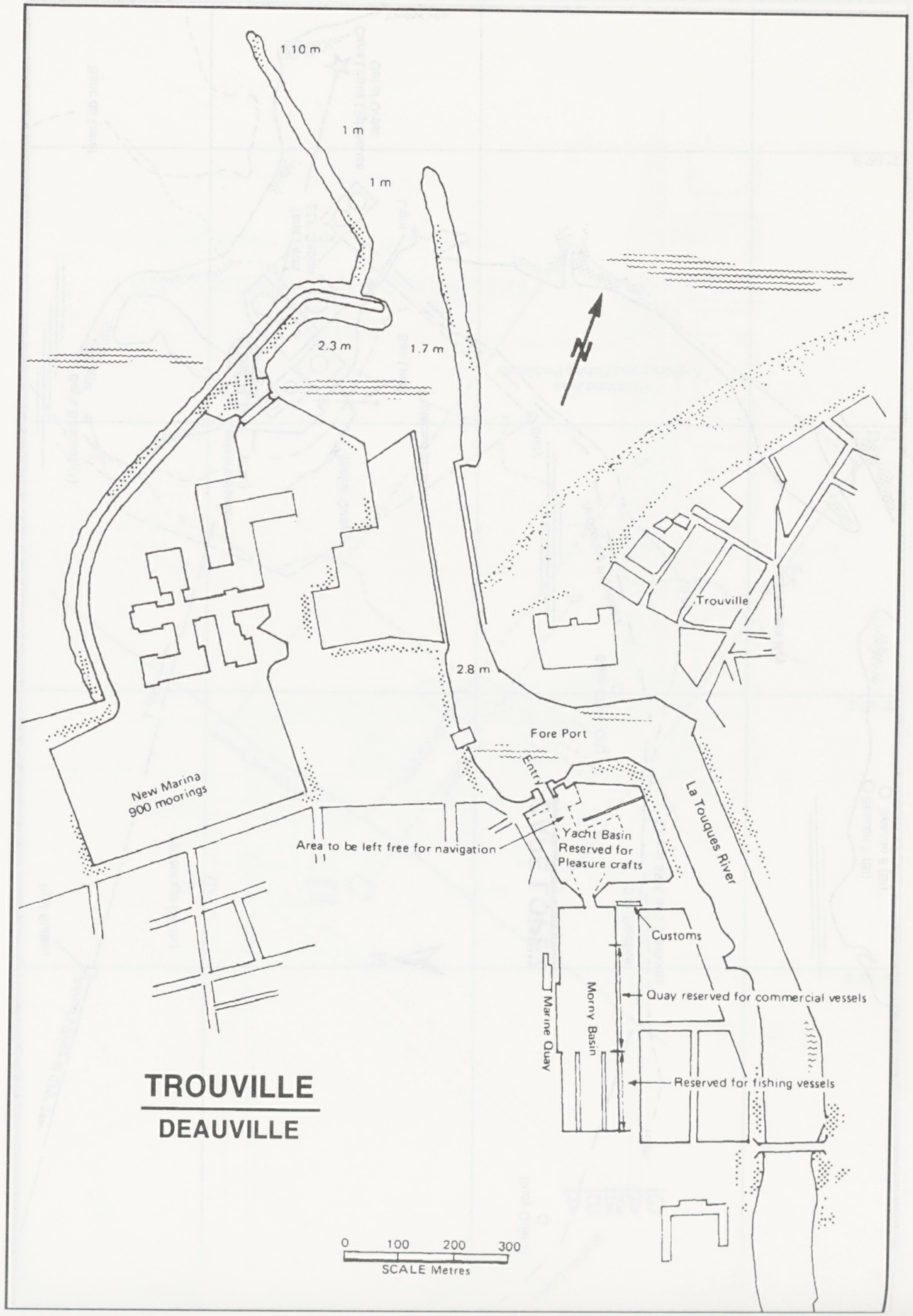

TOULON
R = RO-RO BERTHS
N
Arsenal Principal
Petite Rade
Arsenal
Minerve Quay
R
Maritime Station
R
Fournel Quay
Customs
Corsica Quay
R
Captaincy
Pilots
Mourillon
Basse Ville
Rade des Vignettes



TOULON

LA SEYNE BREGAILLON

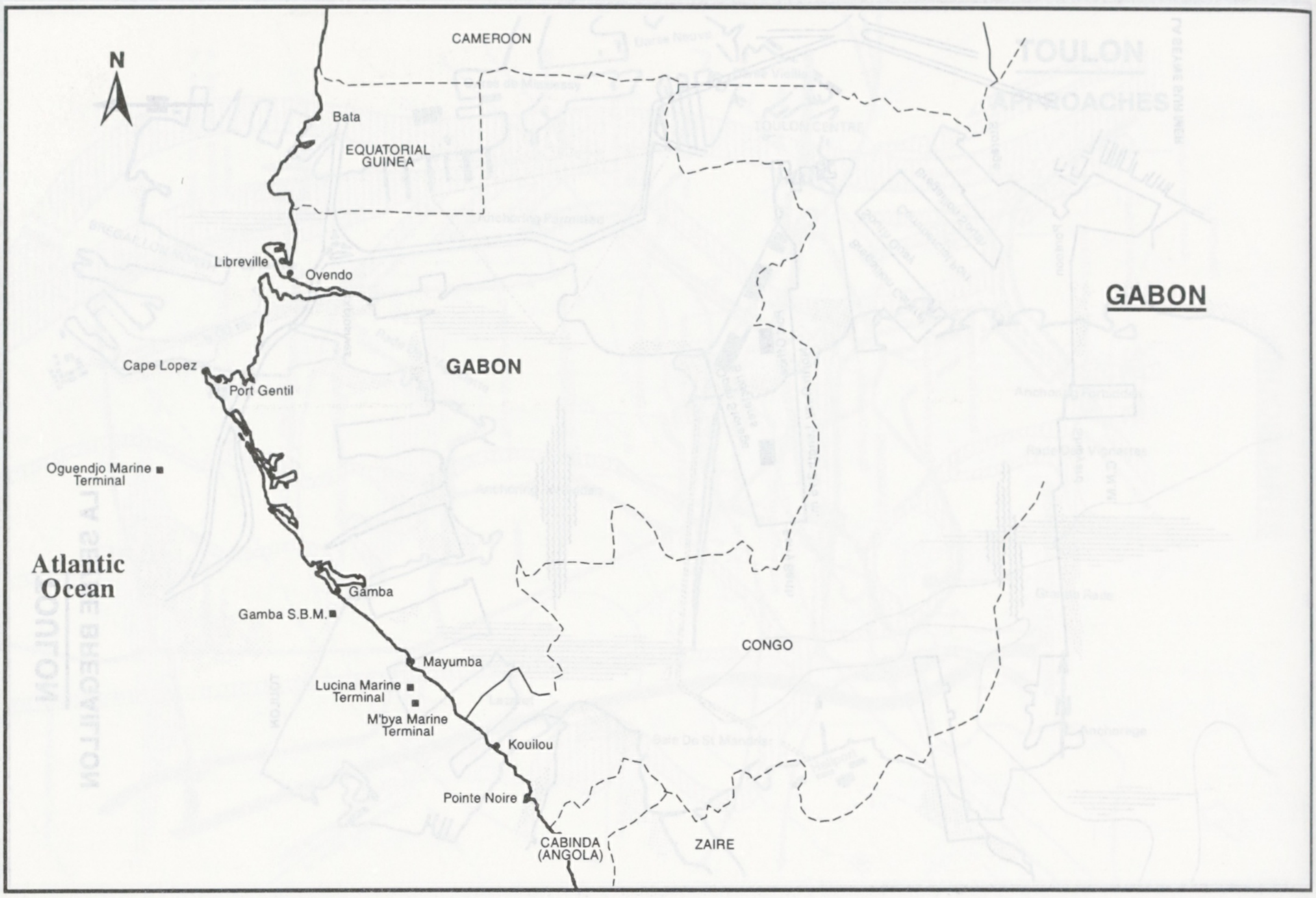
N
TOULON
Explosives
Open Storage
5 hectares
Port Office
Ferry Berth
North Quay Length 215 m.
Bregaillon Central
South Quay
Commercial Port
Bregaillon South
Storage
Pontoon
Shipyard
C.N.M.
LA SEYNE SUR MER

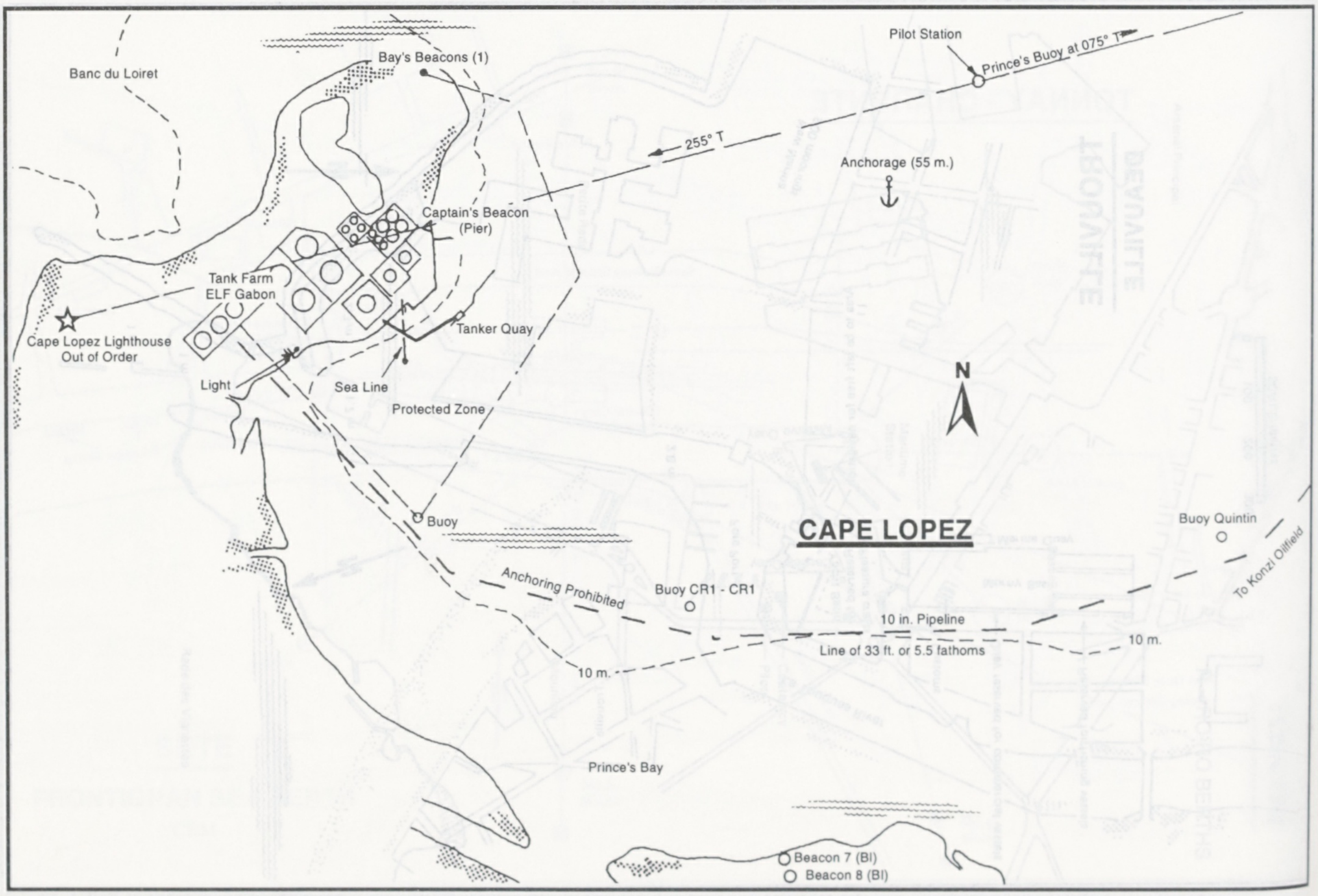


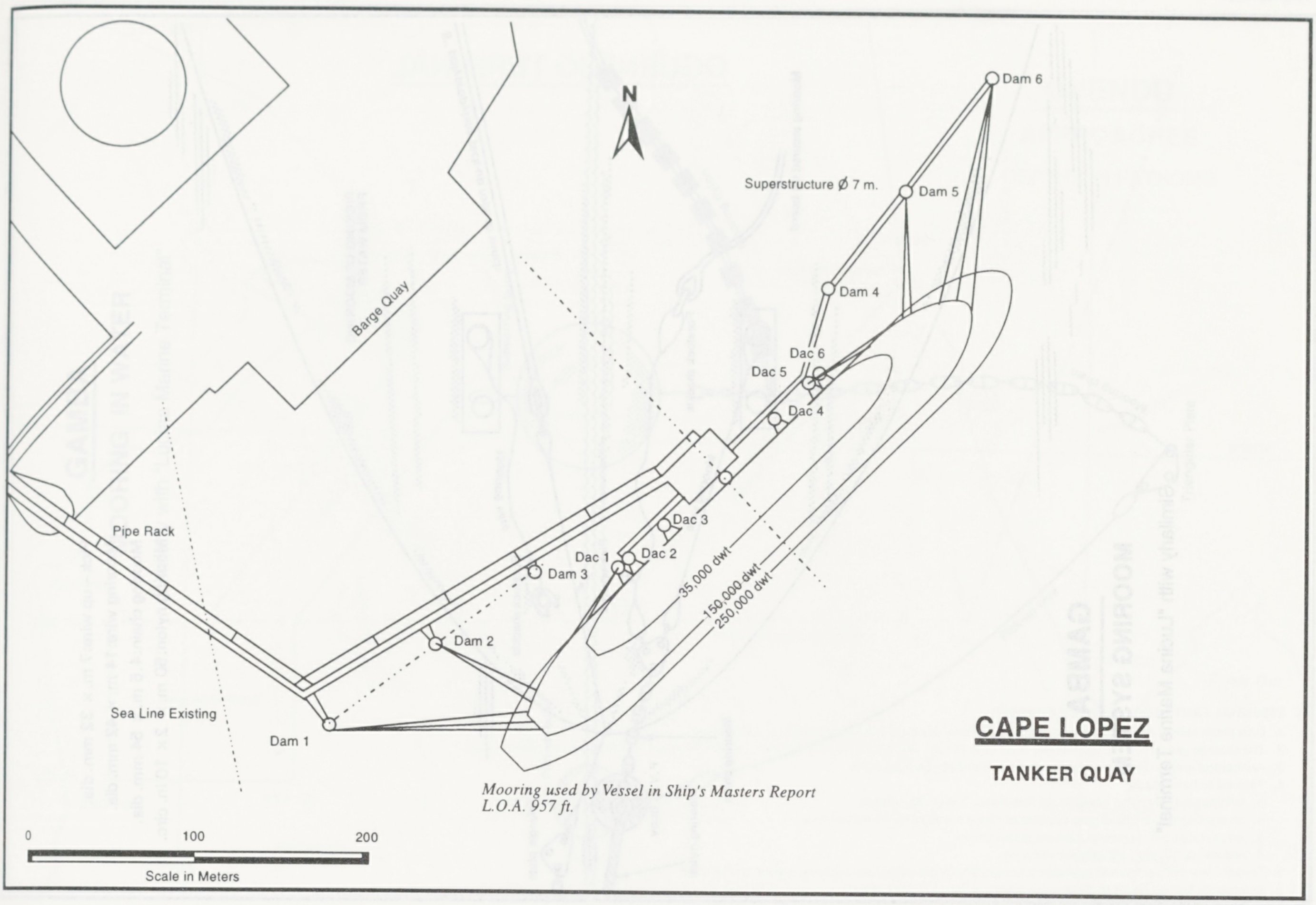
TROUVILLE

DEAUVILLE

1.10 m
1 m
1 m
2.3 m
1.7 m
N
2.8 m
Trouville
Fore Port
Entry
New Marina
900 moorings
Area to be left free for navigation
Yacht Basin
Reserved for
Pleasure crafts
La Touques River
Customs
Quay reserved for commercial vessels
Morny Basin
Marine Quay
Reserved for fishing vessels
0 100 200 300
SCALE Metres


CAMEROON
N
Bata
EQUATORIAL GUINEA
Libreville
Ovendo
GABON
GABON
Cape Lopez
Port Gentil
Oguendjo Marine Terminal
Atlantic Ocean
Gamba
Gamba S.B.M.
Mayumba
Lucina Marine Terminal
M'bya Marine Terminal
CONGO
Kouilou
Pointe Noire
CABINDA (ANGOLA)
ZAIRE


Banc du Loiret
Bay's Beacons (1)
Pilot Station
Prince's Buoy at 075° T
255° T
Anchorage (55 m.)
Captain's Beacon (Pier)
Tank Farm ELF Gabon
Cape Lopez Lighthouse Out of Order
Tanker Quay
Light
Sea Line
Protected Zone
N
Buoy
CAPE LOPEZ
Buoy Quintin
To Konzi Oilfield
Anchoring Prohibited
Buoy CR1 - CR1
10 in. Pipeline
Line of 33 ft. or 5.5 fathoms
10 m.
10 m.
Prince's Bay
Beacon 7 (Bl)
Beacon 8 (Bl)

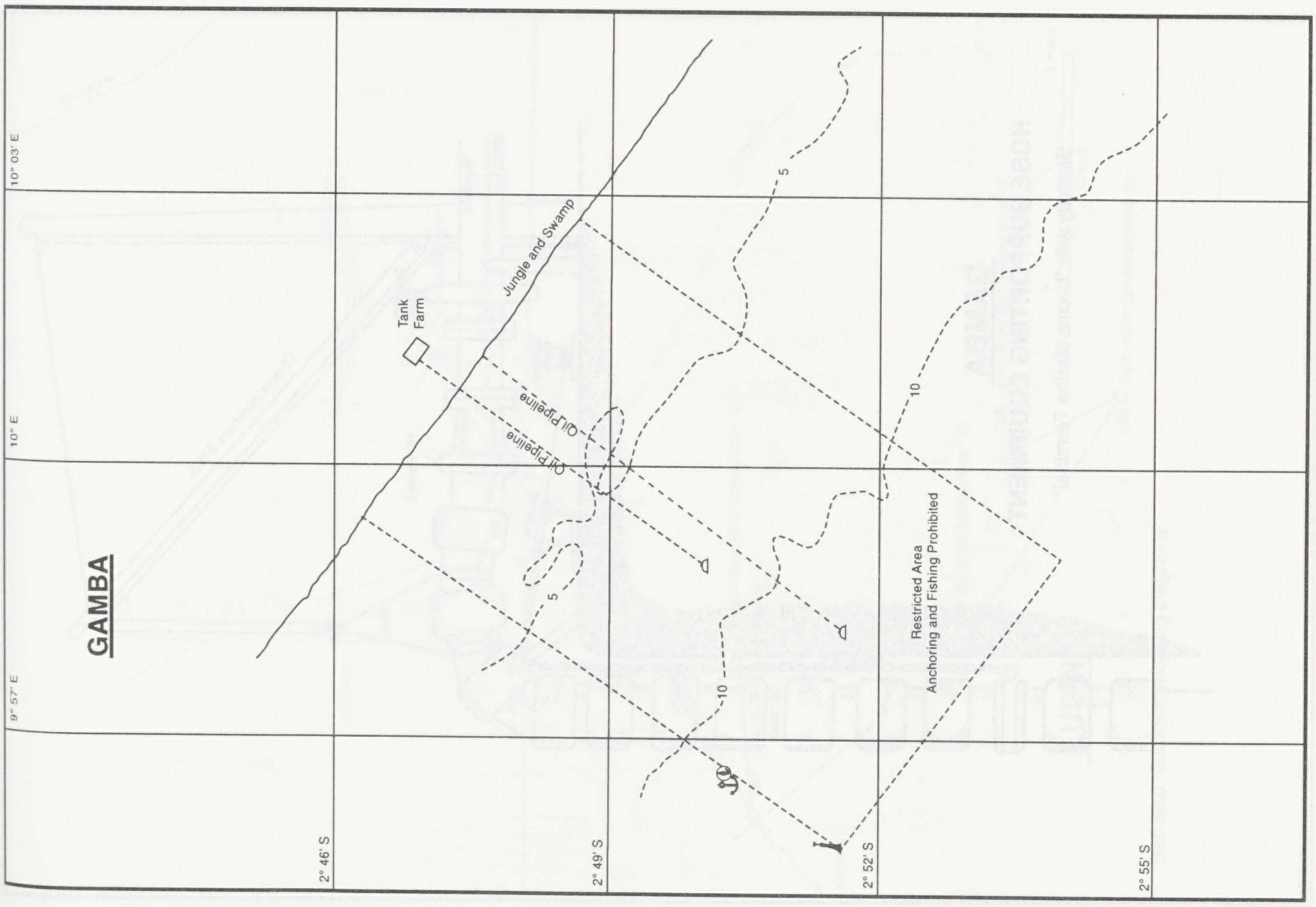


N
Dam 6
Superstructure Ø 7 m.
Dam 5
Dam 4
Dac 6
Dac 5
Dac 4
Barge Quay
Dac 3
Dac 1
Dac 2
Dam 3
Dam 2
Pipe Rack
35,000 dwt
150,000 dwt
250,000 dwt
Sea Line Existing
Dam 1
0
100
200
Scale in Meters

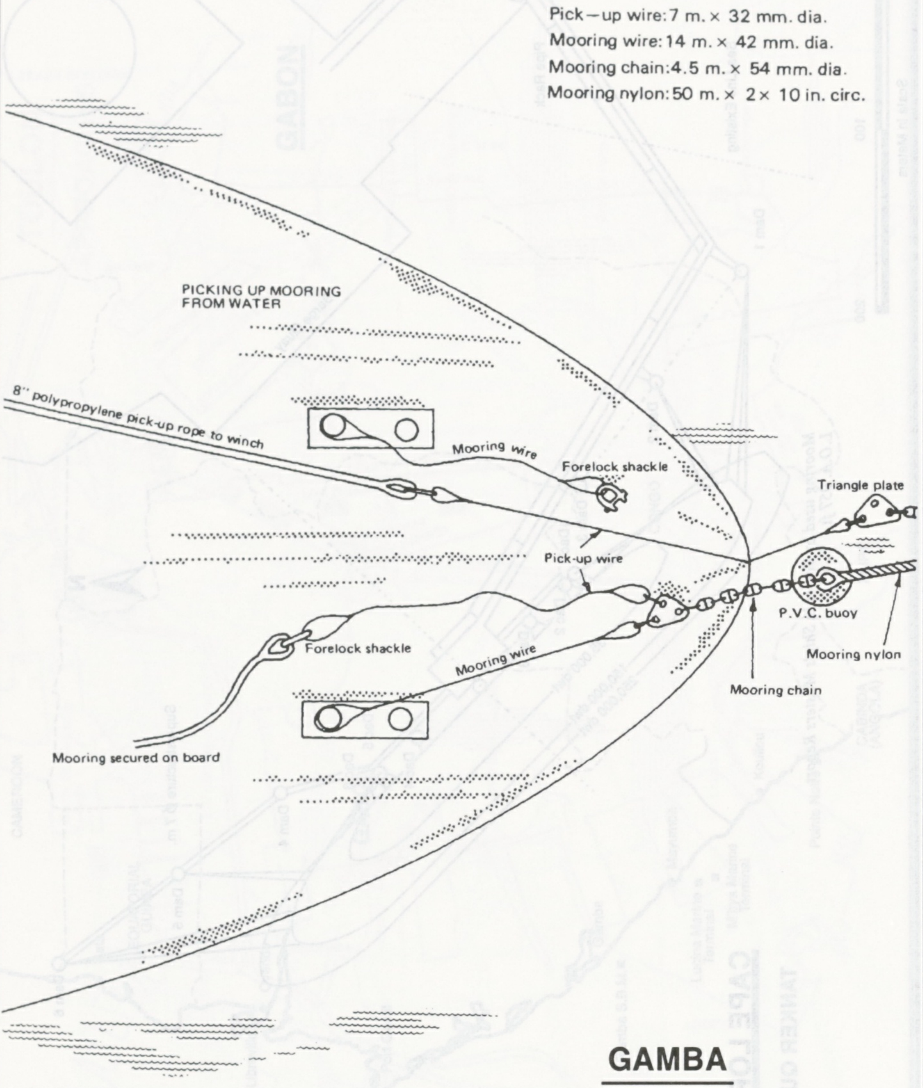
Mooring used by Vessel in Ship's Masters Report L.O.A. 957 ft.

CAPE LOPEZ

TANKER QUAY



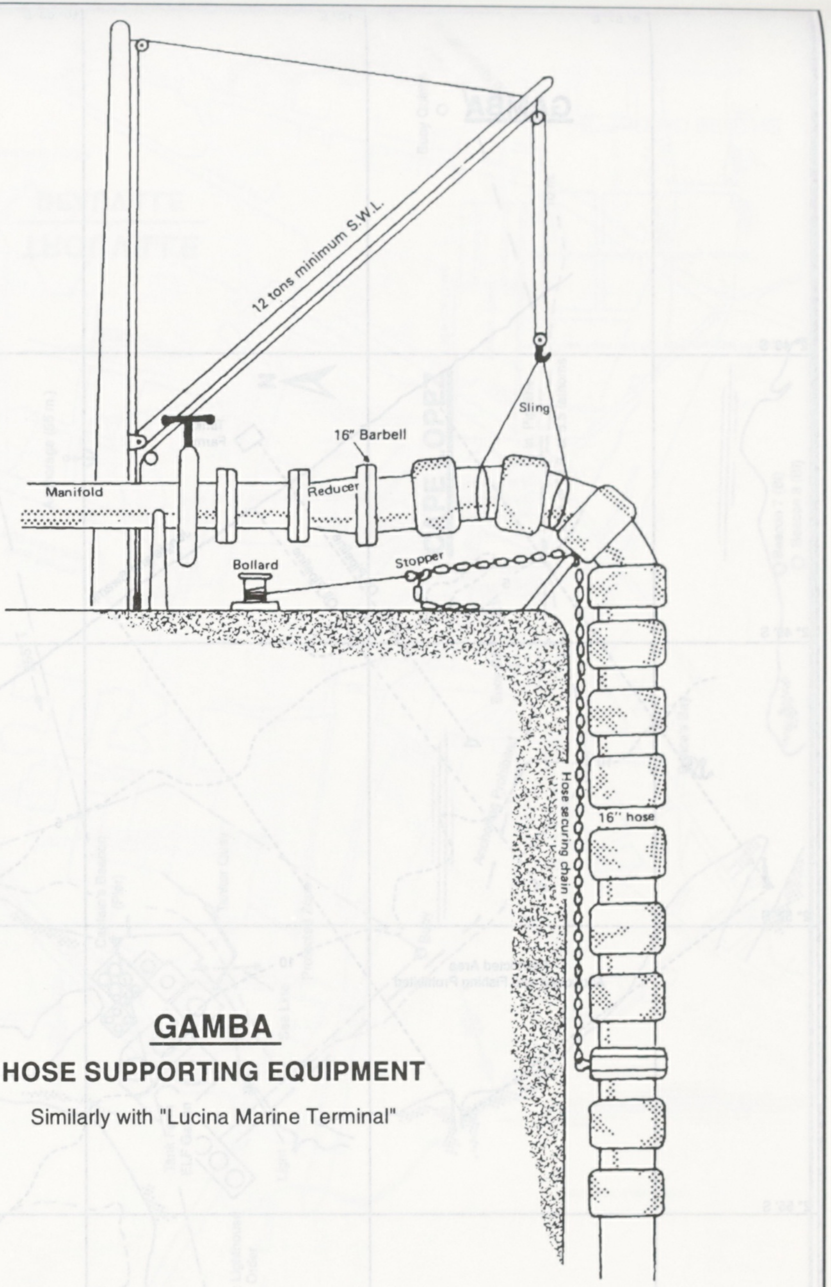
GAMBA
10° 03' E
10° E
9° 57' E
2° 46' S
2° 49' S
2° 52' S
2° 55' S
Jungle and Swamp
Tank Farm
Oil Pipeline
Oil Pipeline
5
5
10
10
Restricted Area
Anchoring and Fishing Prohibited


Pick—up wire: 7 m. × 32 mm. dia.
Mooring wire: 14 m. × 42 mm. dia.
Mooring chain: 4.5 m. × 54 mm. dia.
Mooring nylon: 50 m. × 2× 10 in. circ.
PICKING UP MOORING FROM WATER
8" polypropylene pick-up rope to winch
Mooring wire
Forelock shackle
Triangle plate
Pick-up wire
P.V.C. buoy
Forelock shackle
Mooring wire
Mooring nylon
Mooring chain
Mooring secured on board

GAMBA

MOORING SYSTEM

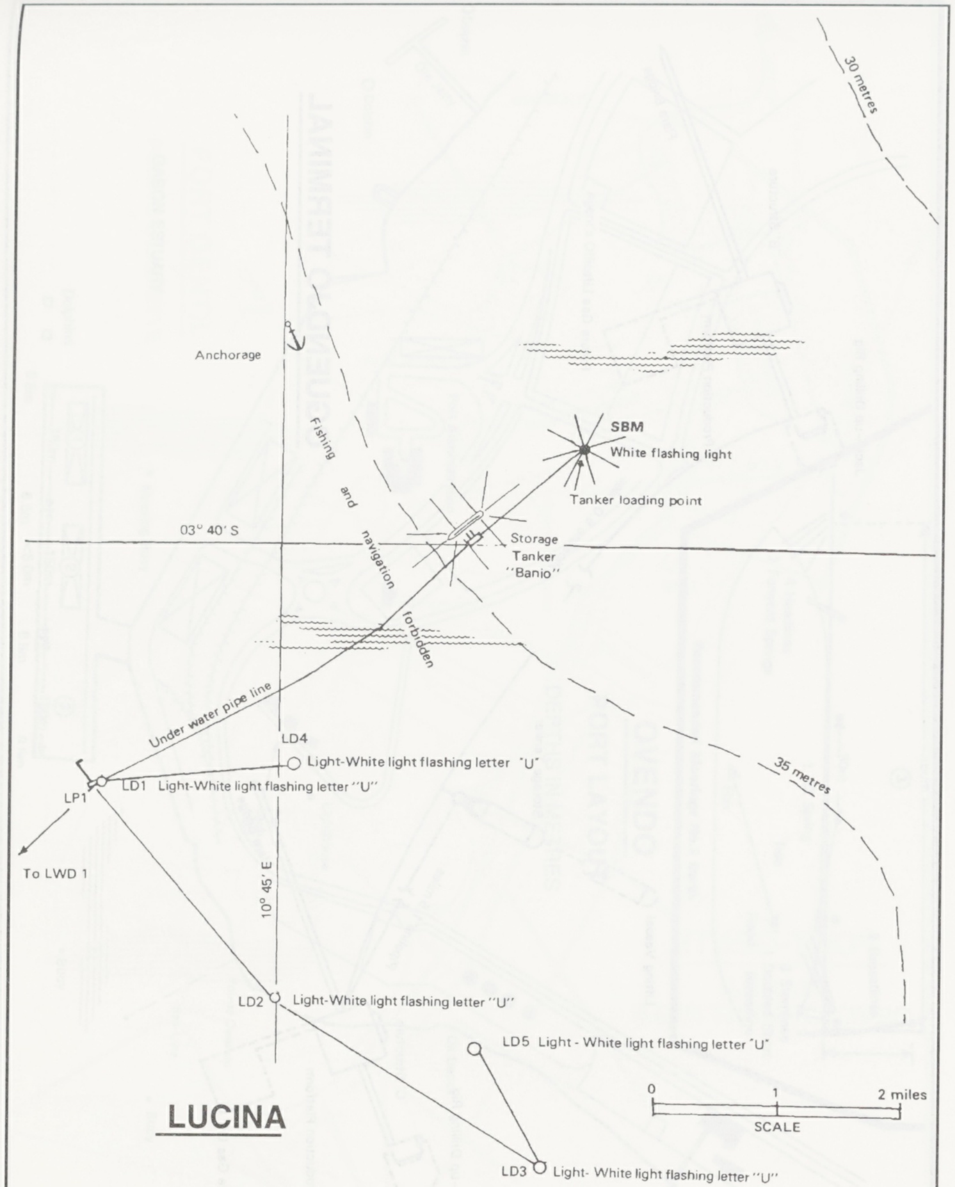
Similarly with "Lucina Marine Terminal"


12 tons minimum S.W.L.
Sling
16" Barbell
Manifold
Reducer
Bollard
Stopper
Hose securing chain
16" hose

GAMBA

HOSE SUPPORTING EQUIPMENT

Similarly with "Lucina Marine Terminal"


30 metres
Anchorage
Fishing and navigation forbidden
SBM
White flashing light
Tanker loading point
03° 40' S
Storage Tanker "Banio"
Under water pipe line
LD4
Light-White light flashing letter "U"
LP1
LD1 Light-White light flashing letter "U"
To LWD 1
10° 45' E
35 metres
LD2
Light-White light flashing letter "U"
LD5 Light - White light flashing letter "U"
LD3
Light- White light flashing letter "U"
0
1
2 miles
SCALE

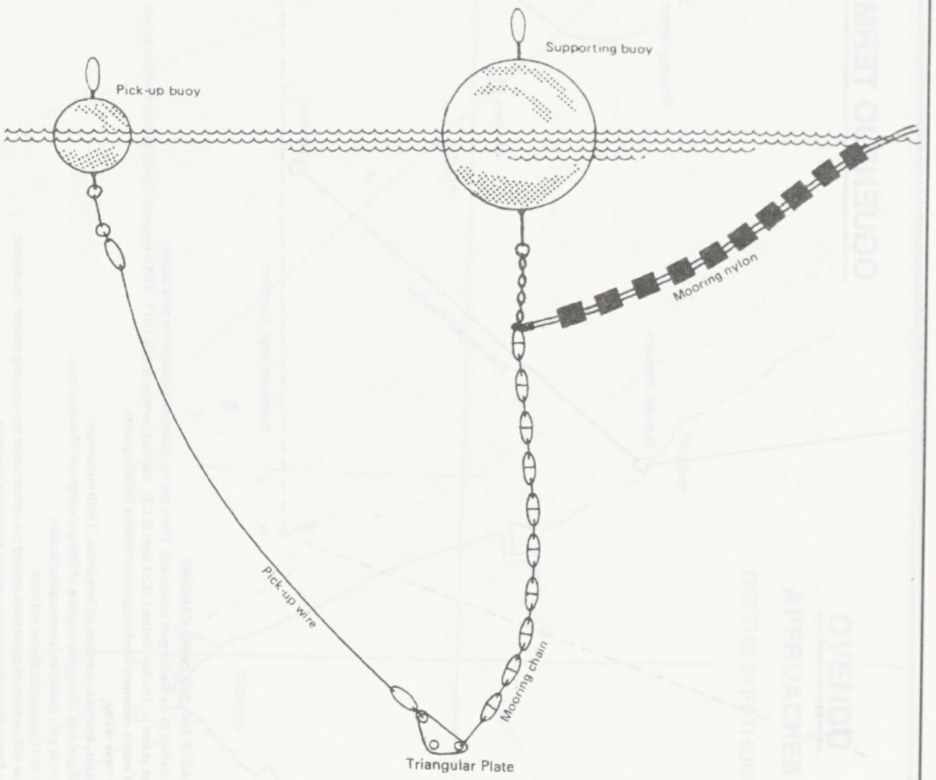
LUCINA

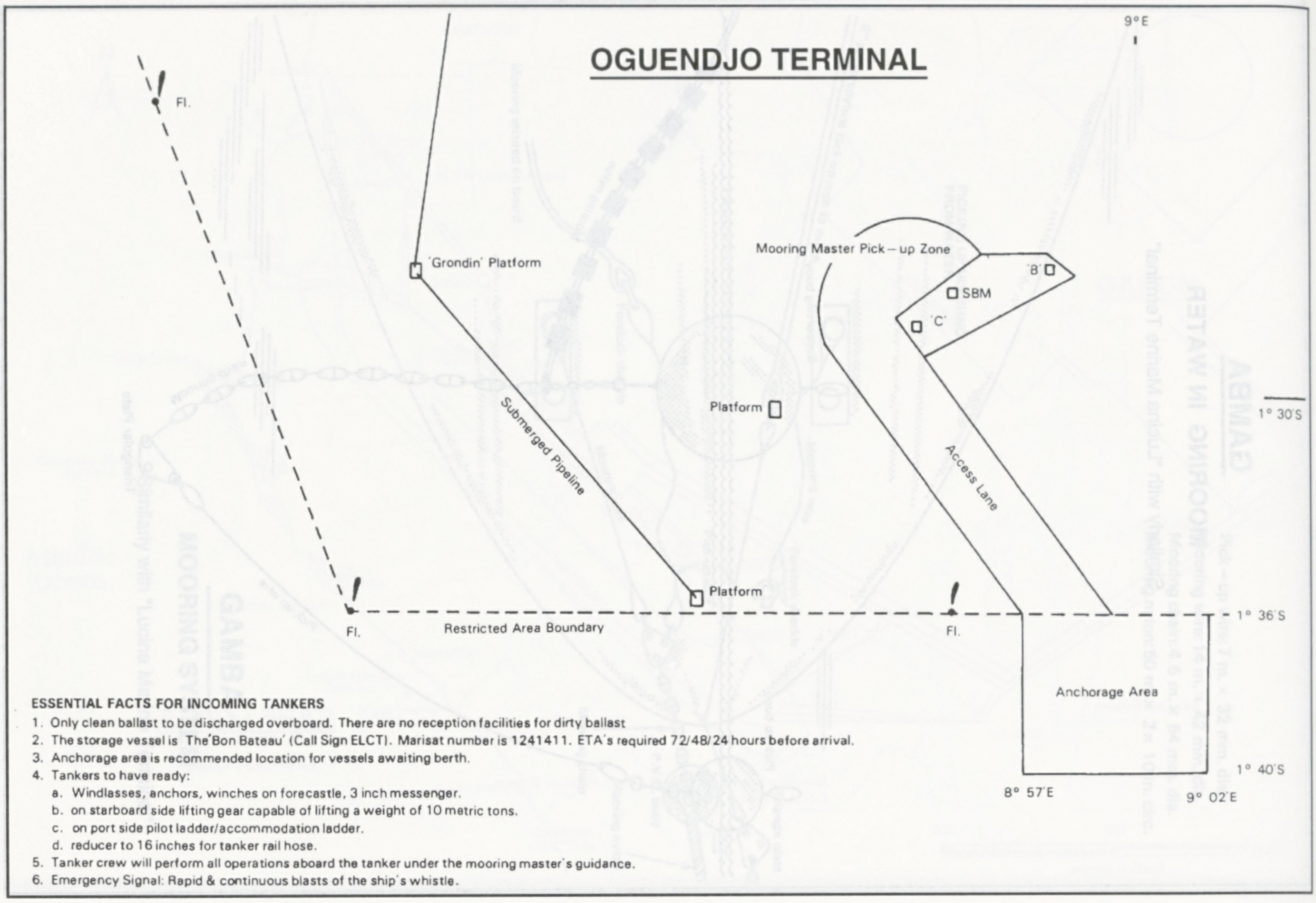
See also "GAMBA" mooring diagrams

GAMBA

MOORING IN WATER

Similarly with "Lucina Marine Terminal"


Supporting buoy
Pick-up buoy
Mooring nylon
Pick-up wire
Mooring chain
Triangular Plate

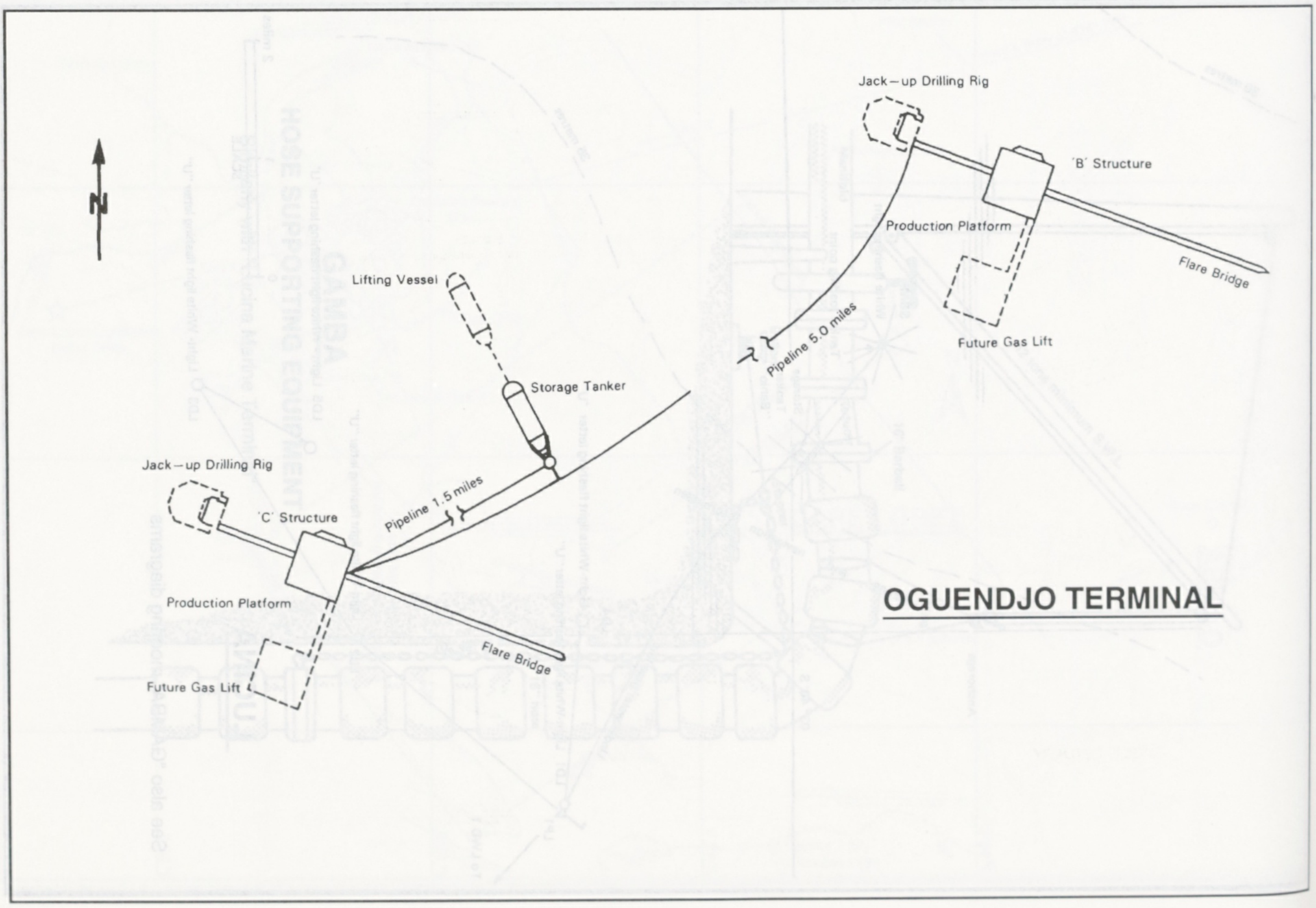


OGUENDJO TERMINAL

9°E
Fl.
'Grondin' Platform
Submerged Pipeline
Platform
Platform
Mooring Master Pick-up Zone
'B'
SBM
'C'
Access Lane
1° 30'S
1° 36'S
Fl.
Restricted Area Boundary
Fl.
Anchorage Area
1° 40'S
8° 57'E
9° 02'E

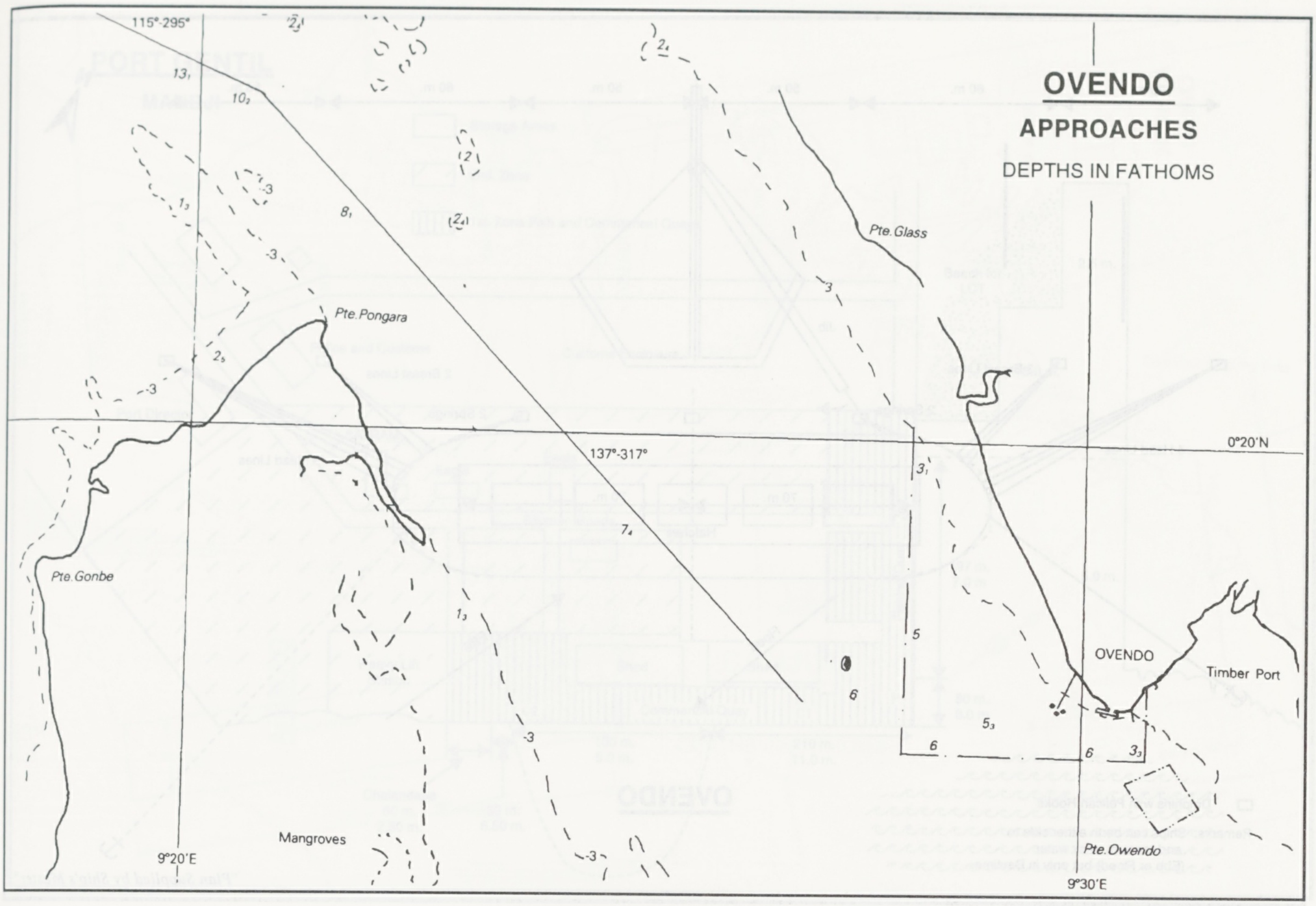
ESSENTIAL FACTS FOR INCOMING TANKERS

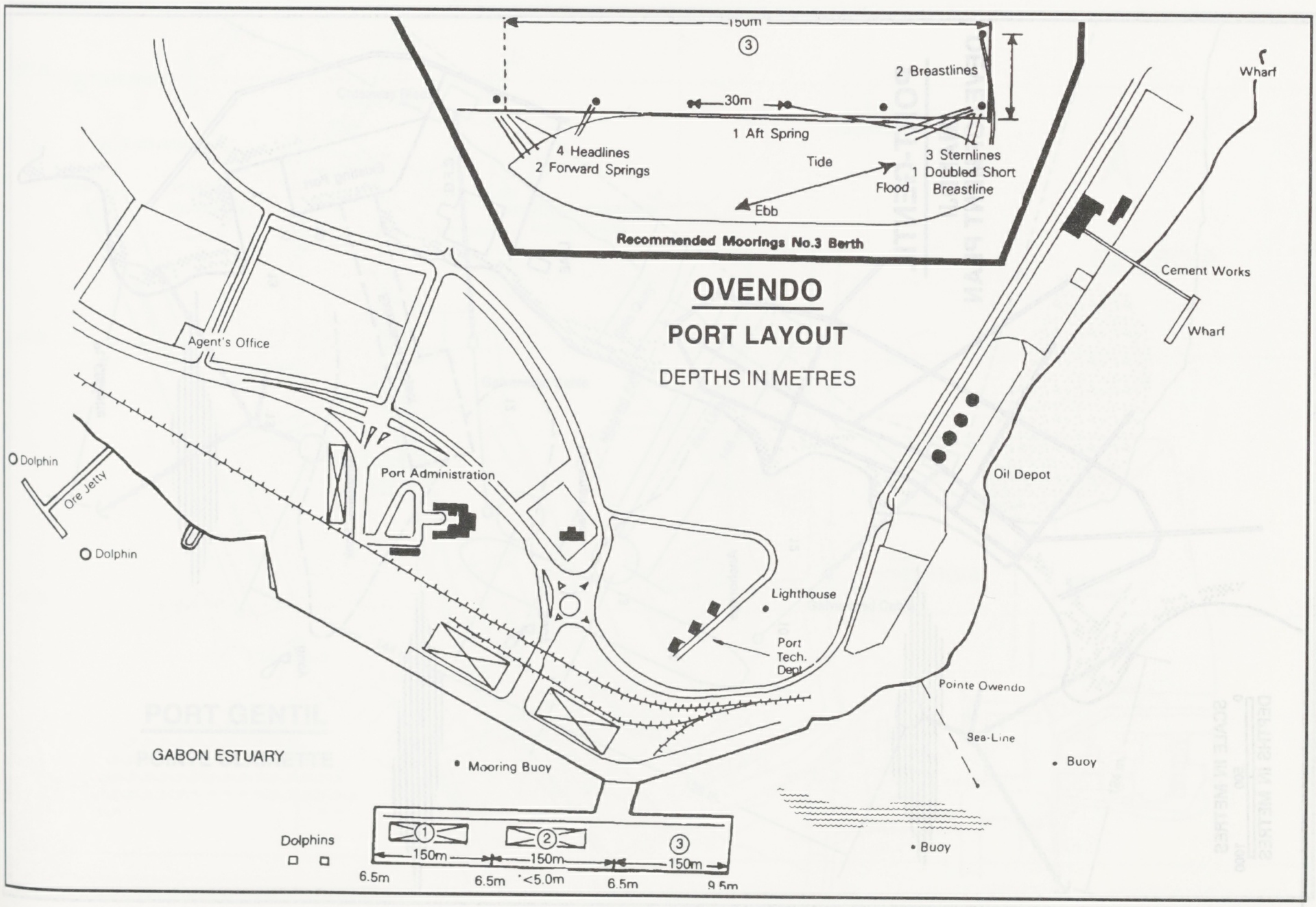
1. Only clean ballast to be discharged overboard. There are no reception facilities for dirty ballast
2. The storage vessel is The'Bon Bateau' (Call Sign ELCT). Marisat number is 1241411. ETA's required 72/48/24 hours before arrival.
3. Anchorage area is recommended location for vessels awaiting berth.
4. Tankers to have ready:
   a. Windlasses, anchors, winches on forecastle, 3 inch messenger.
   b. on starboard side lifting gear capable of lifting a weight of 10 metric tons.
   c. on port side pilot ladder/accommodation ladder.
   d. reducer to 16 inches for tanker rail hose.
5. Tanker crew will perform all operations aboard the tanker under the mooring master's guidance.
6. Emergency Signal: Rapid & continuous blasts of the ship's whistle.

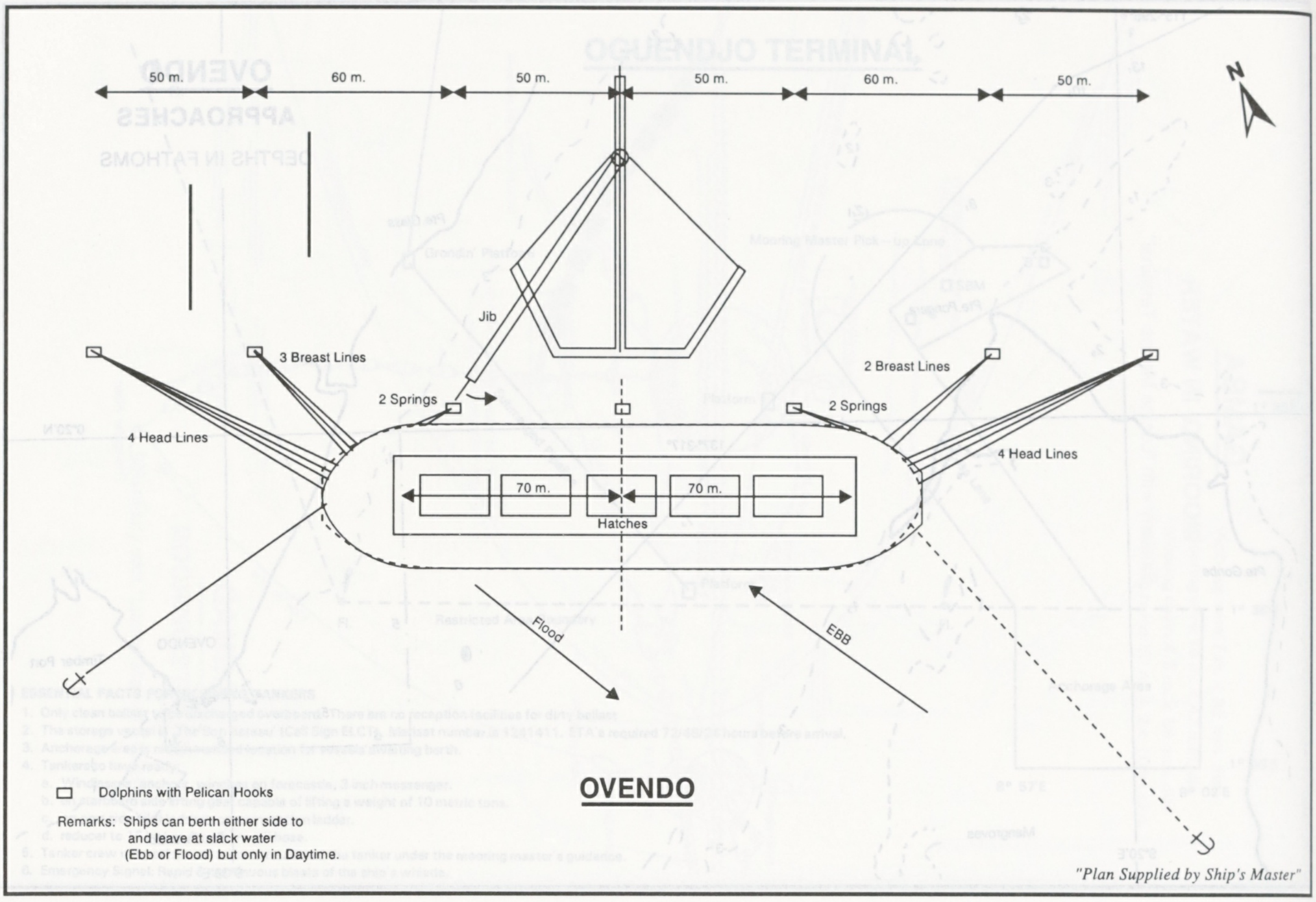


OGUENDJO TERMINAL

N
Jack-up Drilling Rig
'B' Structure
Production Platform
Flare Bridge
Future Gas Lift
Pipeline 5.0 miles
Lifting Vessel
Storage Tanker
Jack-up Drilling Rig
'C' Structure
Pipeline 1.5 miles
Production Platform
Flare Bridge
Future Gas Lift


OVENDO
APPROACHES
DEPTHS IN FATHOMS
115°-295°
137°-317°
0°20'N
9°20'E
9°30'E
Pte.Glass
Pte.Pongara
Pte.Gonbe
Pte.Owendo
OVENDO
Timber Port
Mangroves


OVENDO
PORT LAYOUT
DEPTHS IN METRES
150m
③
2 Breastlines
30m
1 Aft Spring
4 Headlines
2 Forward Springs
Tide
3 Sternlines
1 Doubled Short Breastline
Flood
Ebb
Recommended Moorings No.3 Berth
Wharf
Cement Works
Wharf
Agent's Office
Port Administration
Dolphin
Ore Jetty
Dolphin
Oil Depot
Lighthouse
Port Tech. Dept
Pointe Owendo
Sea-Line
Buoy
Buoy
GABON ESTUARY
Mooring Buoy
Dolphins
①
②
③
150m
150m
150m
6.5m
6.5m
<5.0m
6.5m
9.5m


50 m.
60 m.
50 m.
50 m.
60 m.
50 m.
N
Jib
3 Breast Lines
2 Breast Lines
2 Springs
2 Springs
4 Head Lines
4 Head Lines
70 m.
70 m.
Hatches
Flood
EBB

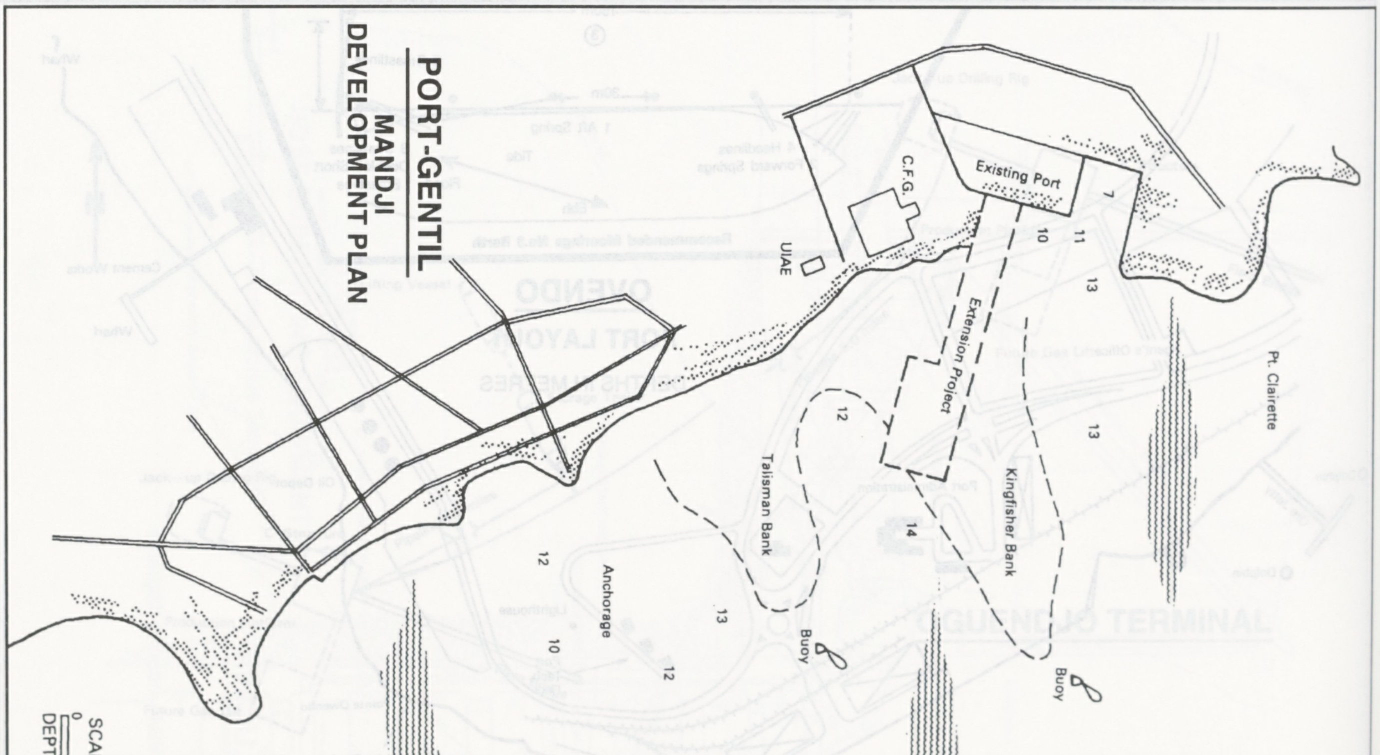
OVENDO

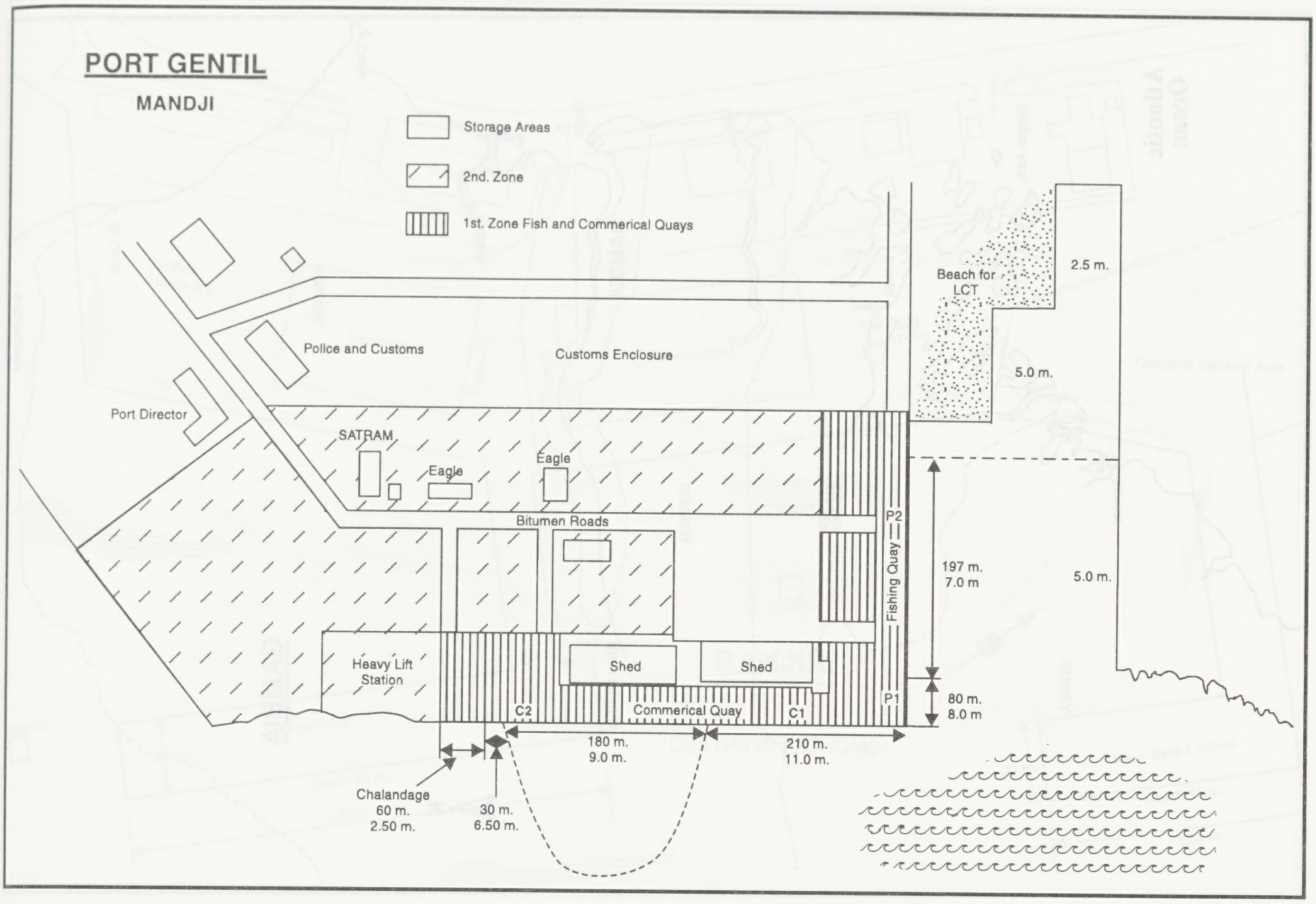
☐ Dolphins with Pelican Hooks

Remarks: Ships can berth either side to and leave at slack water (Ebb or Flood) but only in Daytime.

"Plan Supplied by Ship's Master"

PORT-GENTIL
MANDJI
DEVELOPMENT PLAN

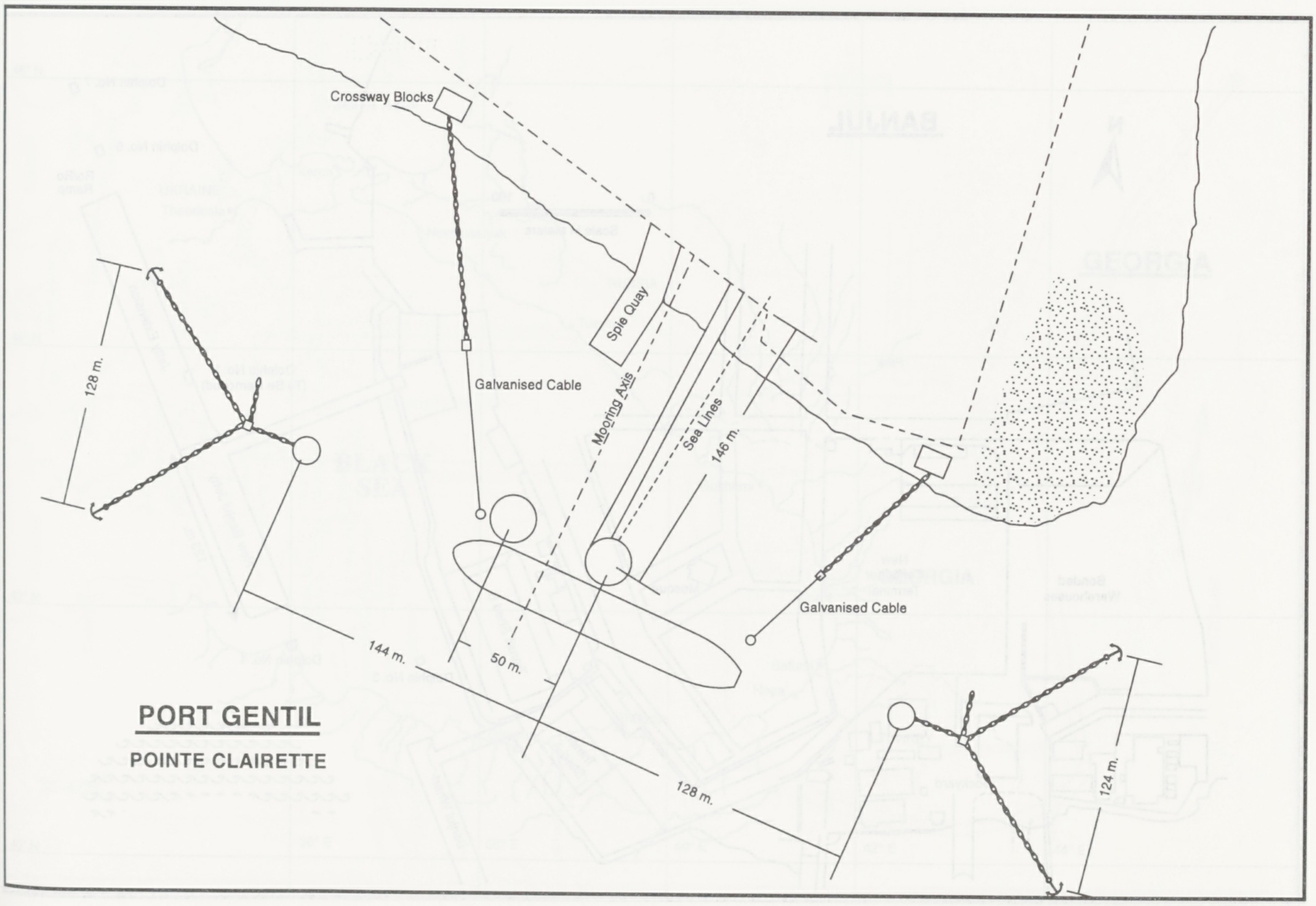

C.F.G.
Existing Port
UIAE
7
10
11
13
Extension Project
Pt. Clairette
12
13
Talisman Bank
Kingfisher Bank
14
Anchorage
12
10
13
12
Buoy
Buoy
SCALE IN METRES
0
500
1000
DEPTHS IN METRES



PORT GENTIL

MANDJI

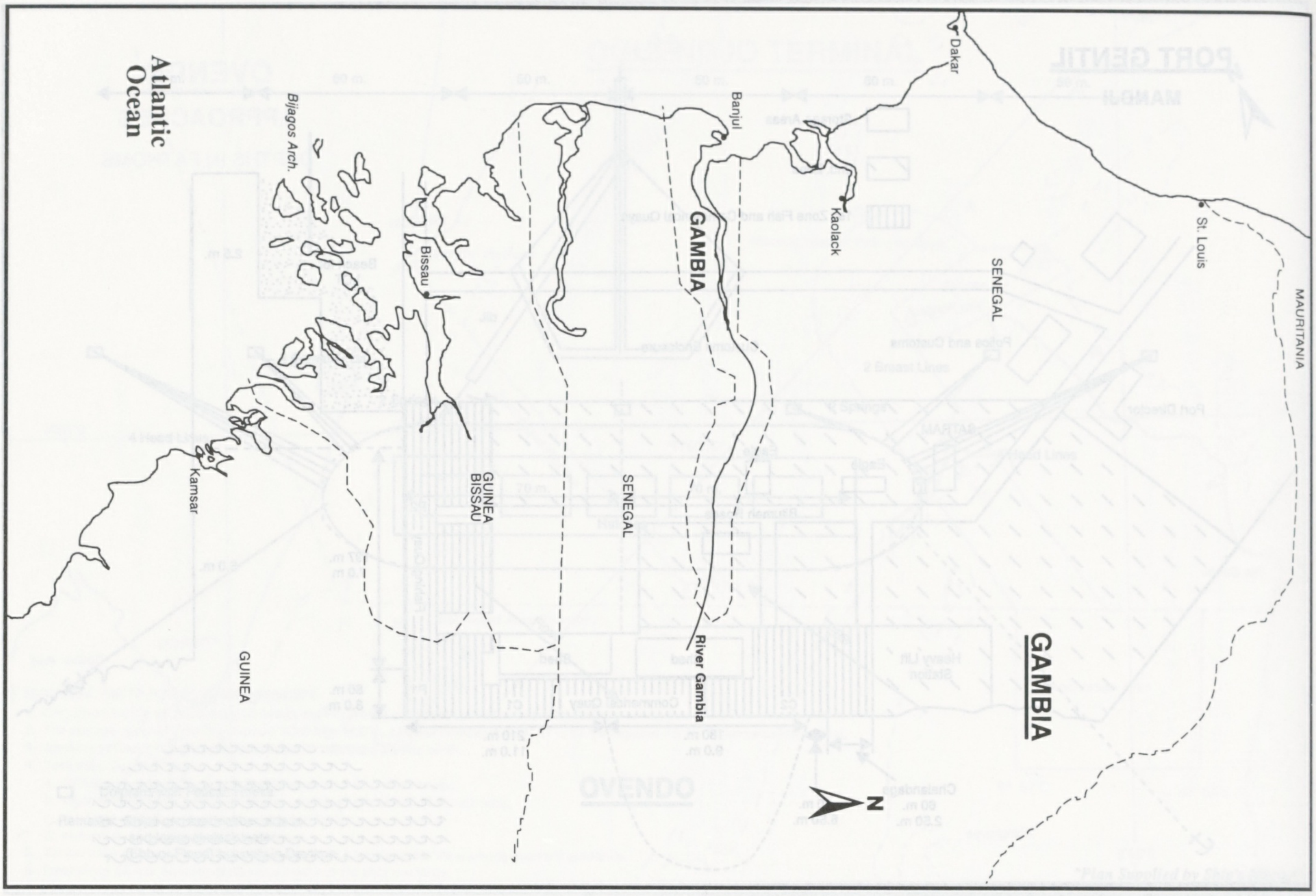
Storage Areas
2nd. Zone
1st. Zone Fish and Commerical Quays
Police and Customs
Customs Enclosure
Beach for LCT
2.5 m.
5.0 m.
5.0 m.
Port Director
SATRAM
Eagle
Eagle
Bitumen Roads
P2
Fishing Quay
197 m.
7.0 m
Heavy Lift Station
Shed
Shed
C2
Commerical Quay
C1
P1
80 m.
8.0 m
180 m.
9.0 m.
210 m.
11.0 m.
Chalandage
60 m.
2.50 m.
30 m.
6.50 m.

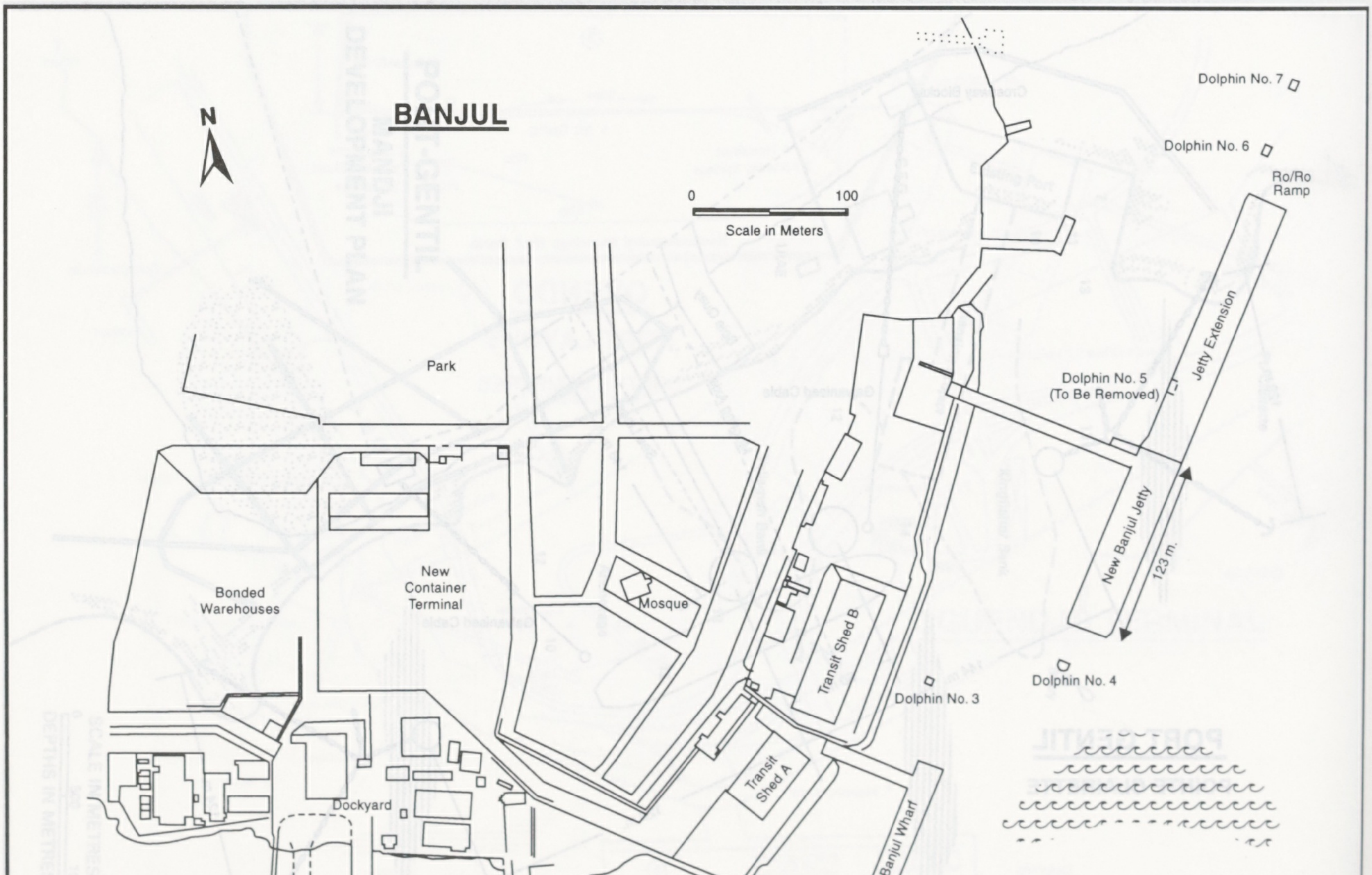


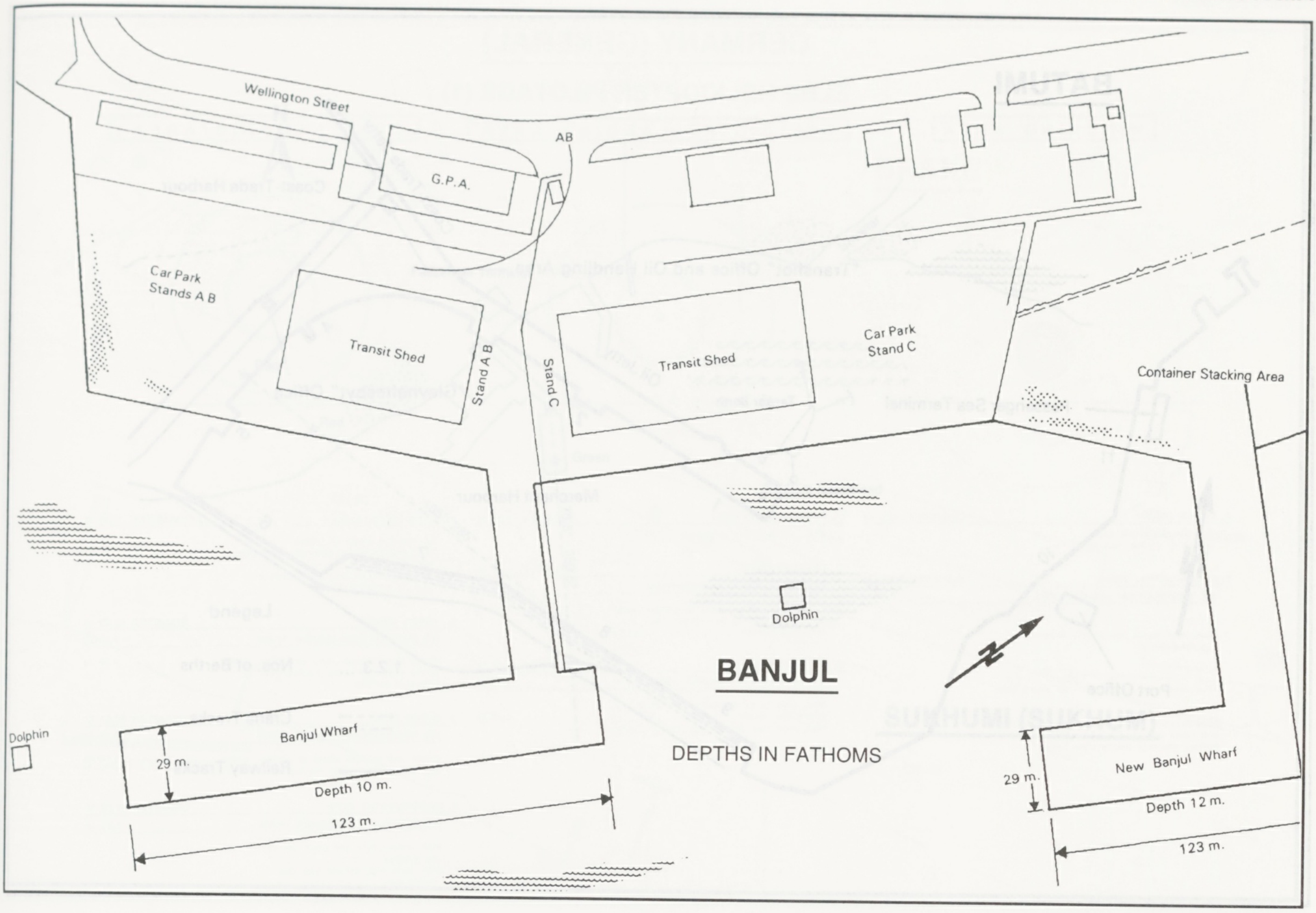
PORT GENTIL

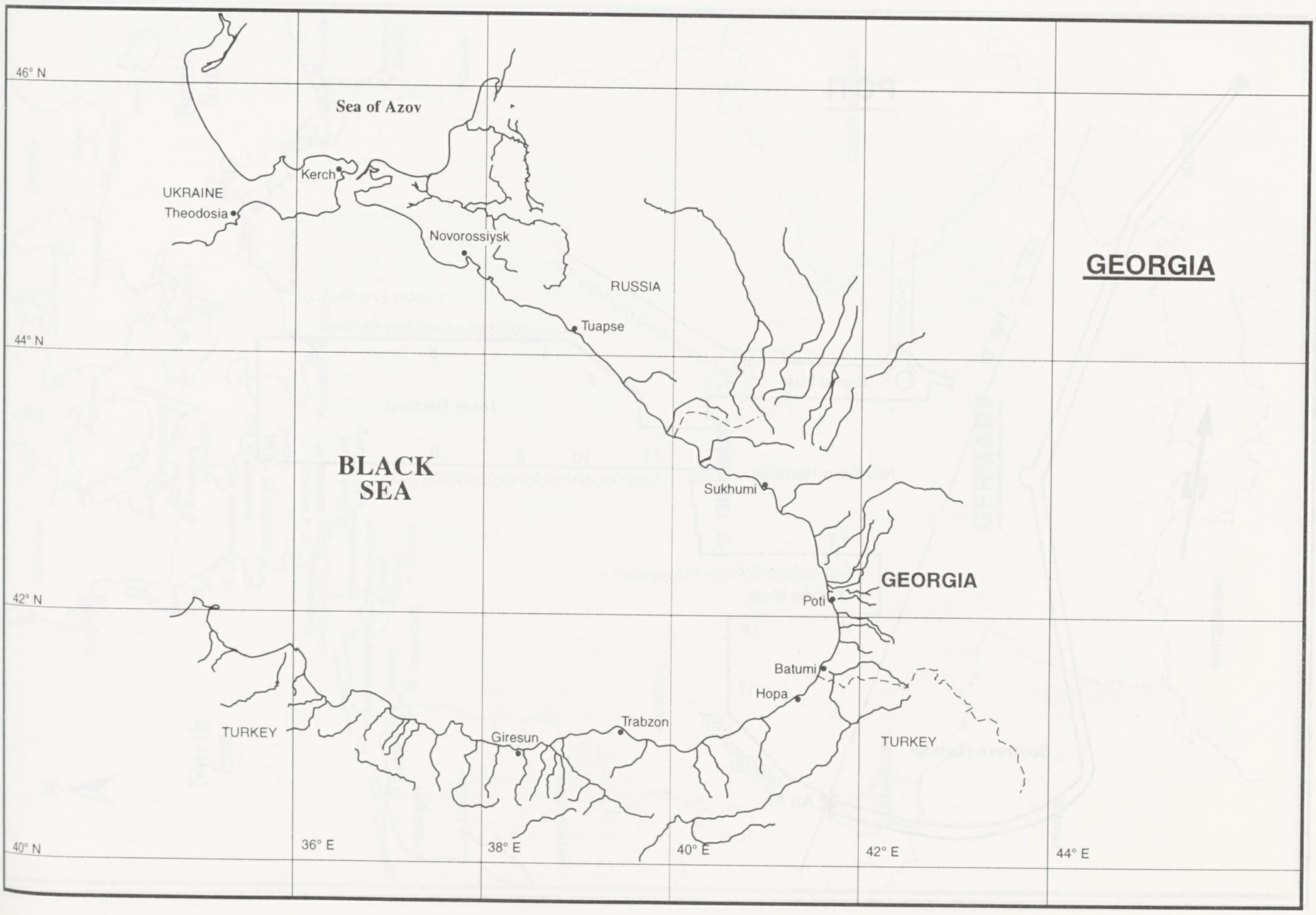
POINTE CLAIRETTE

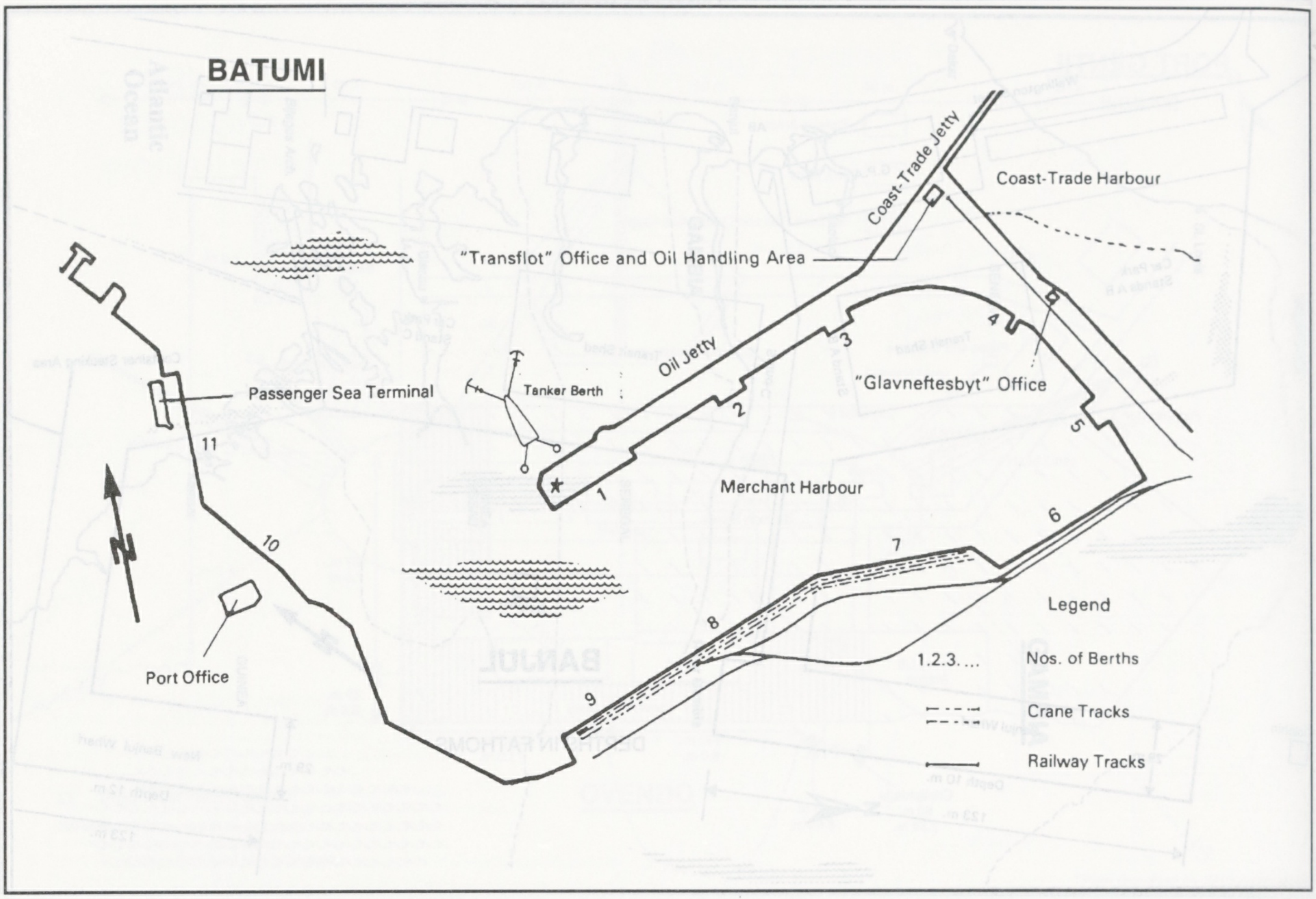
Crossway Blocks
Spie Quay
Galvanised Cable
Mooring Axis
Sea Lines
146 m.
128 m.
144 m.
50 m.
128 m.
Galvanised Cable
124 m.

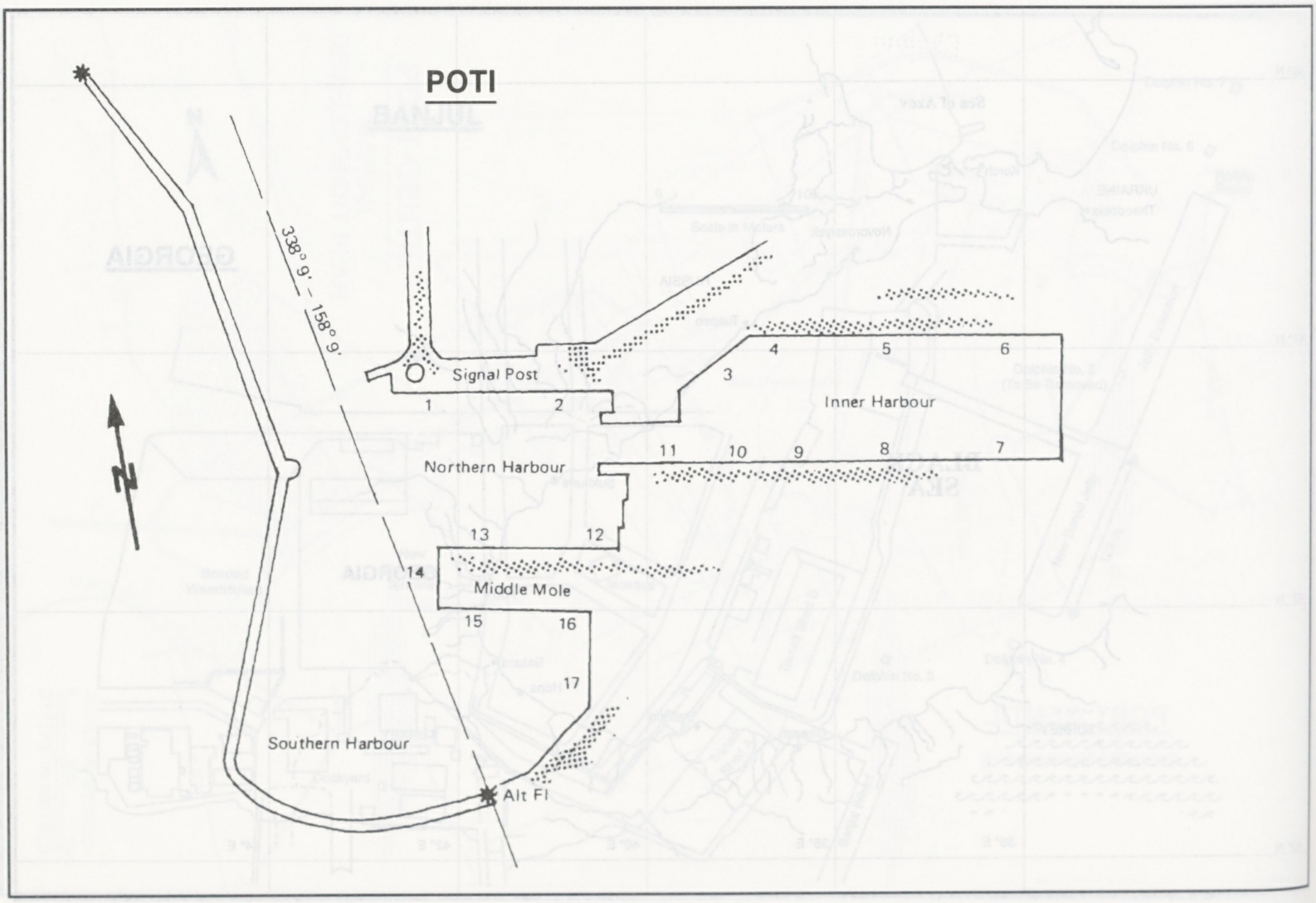

Atlantic Ocean
Bijagos Arch.
Bissau
Kamsar
GUINEA
GUINEA BISSAU
SENEGAL
GAMBIA
Banjul
River Gambia
Kaolack
Dakar
SENEGAL
St. Louis
MAURITANIA
GAMBIA
N

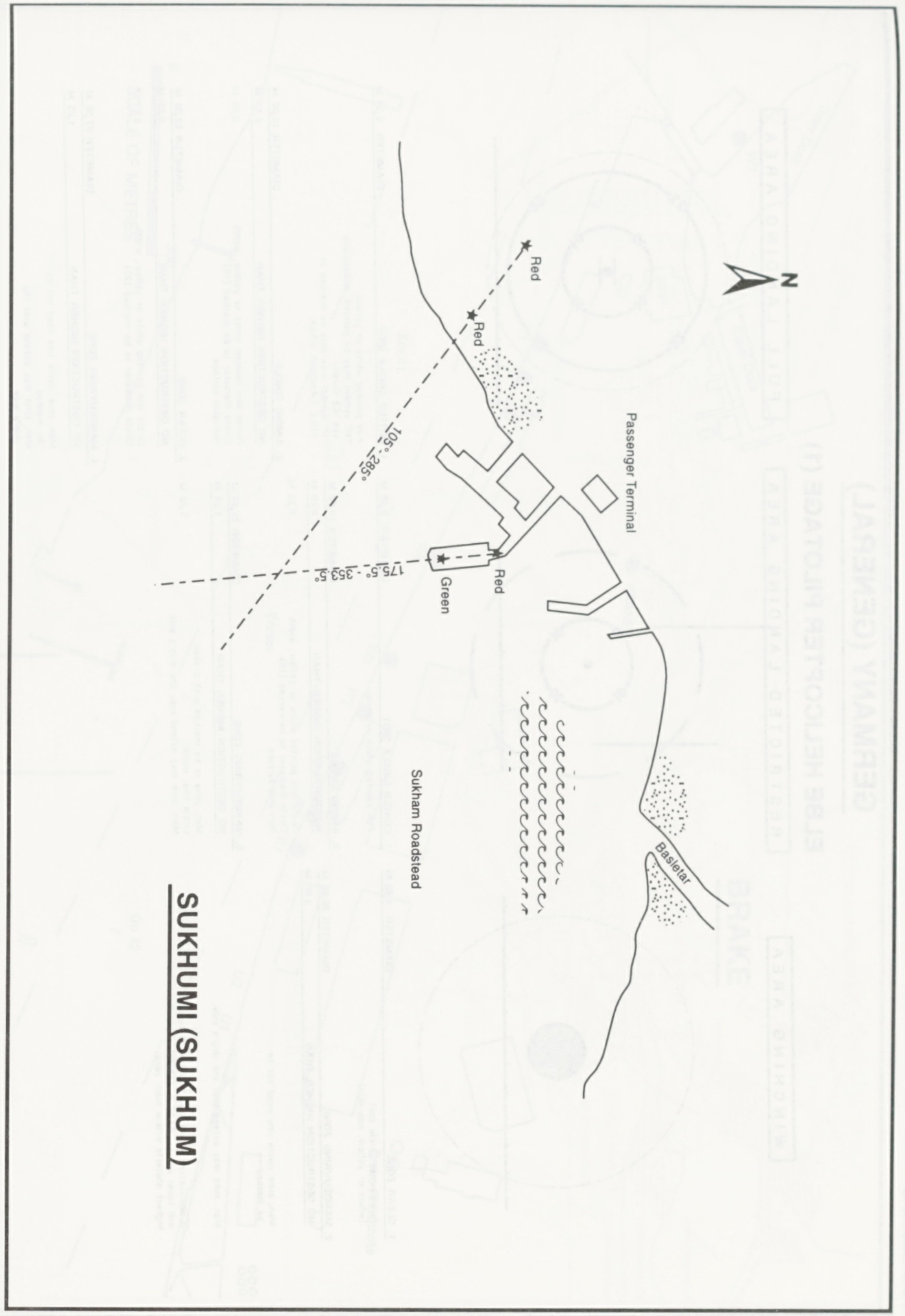

BANJUL
N
0
100
Scale in Meters
Park
Bonded Warehouses
New Container Terminal
Mosque
Dockyard
Transit Shed A
Transit Shed B
Banjul Wharf
Dolphin No. 3
Dolphin No. 4
New Banjul Jetty
123 m.
Dolphin No. 5 (To Be Removed)
Jetty Extension
Ro/Ro Ramp
Dolphin No. 6
Dolphin No. 7


Wellington Street
AB
G.P.A.
Car Park
Stands A B
Transit Shed
Stand A B
Stand C
Transit Shed
Car Park
Stand C
Container Stacking Area
Dolphin
BANJUL
DEPTHS IN FATHOMS
Dolphin
Banjul Wharf
29 m.
Depth 10 m.
123 m.
29 m.
New Banjul Wharf
Depth 12 m.
123 m.


46° N
Sea of Azov
Kerch
UKRAINE
Theodosia
Novorossiysk
RUSSIA
Tuapse
GEORGIA
44° N
BLACK SEA
Sukhumi
GEORGIA
Poti
42° N
Batumi
Hopa
TURKEY
Giresun
Trabzon
TURKEY
40° N
36° E
38° E
40° E
42° E
44° E

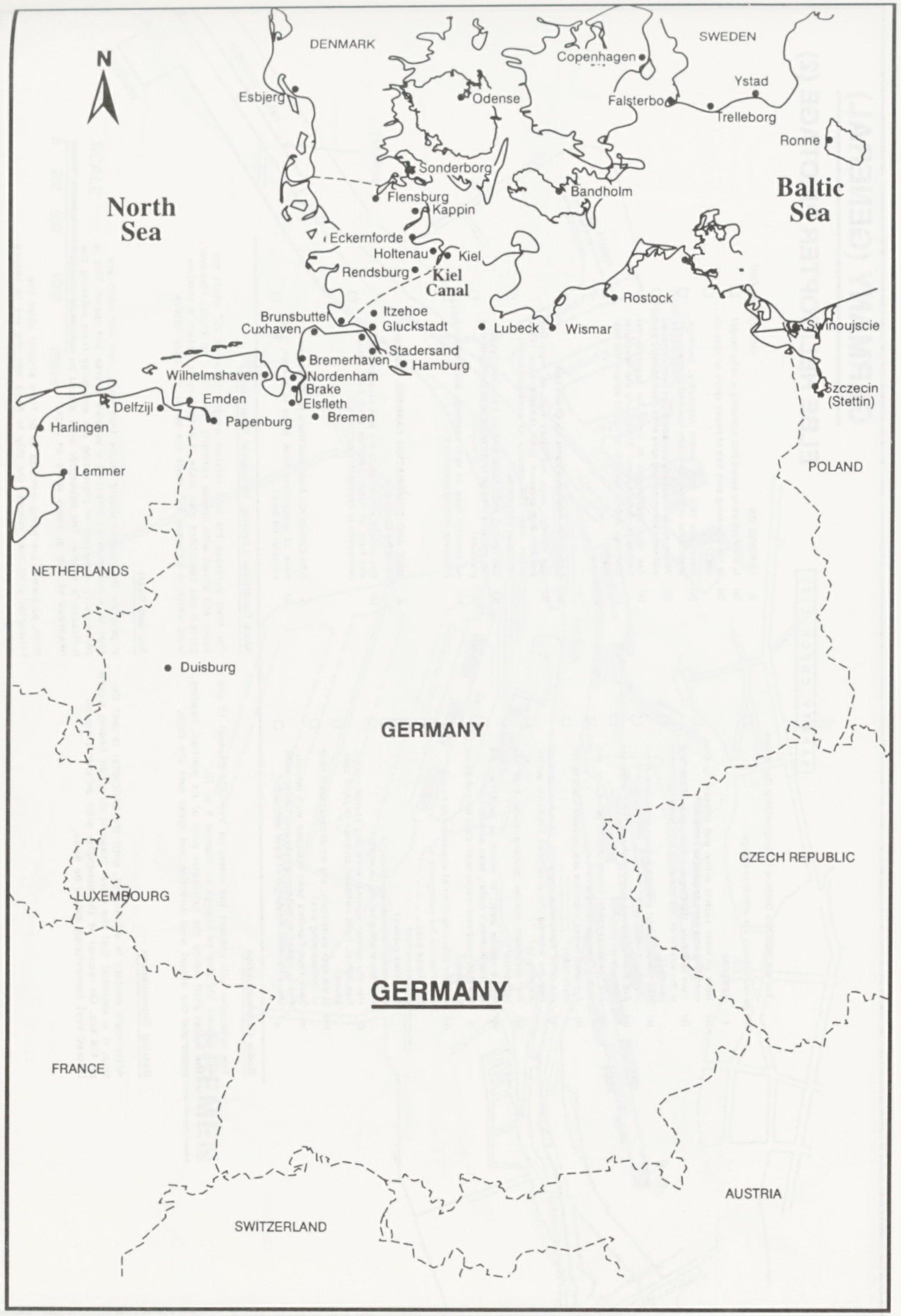

BATUMI
Coast-Trade Jetty
Coast-Trade Harbour
"Transflot" Office and Oil Handling Area
Oil Jetty
3
4
"Glavneftesbyt" Office
Tanker Berth
Passenger Sea Terminal
2
5
11
1
Merchant Harbour
6
N
7
10
Legend
8
Port Office
1.2.3. ...
Nos. of Berths
9
Crane Tracks
Railway Tracks


POTI
338° 9' – 158° 9'
4
5
6
Signal Post
3
1
2
Inner Harbour
N
11
10
9
8
7
Northern Harbour
13
12
14
Middle Mole
15
16
17
Southern Harbour
Alt Fl



SUKHUMI (SUKHUM)

N
Red
Red
105°-285°
Passenger Terminal
Red
Green
175.5°-353.5°
Sukham Roadstead
Basletar



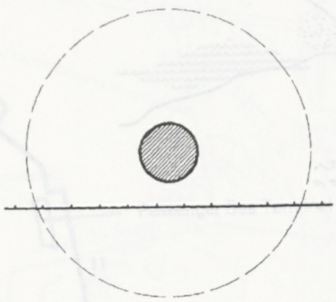
GERMANY

N
North Sea
Baltic Sea
DENMARK
SWEDEN
Copenhagen
Esbjerg
Odense
Falsterbo
Ystad
Trelleborg
Ronne
Sonderborg
Flensburg
Bandholm
Kappin
Eckernforde
Holtenau
Kiel
Rendsburg
Kiel Canal
Rostock
Itzehoe
Brunsbuttel
Gluckstadt
Cuxhaven
Lubeck
Wismar
Swinoujscie
Stadersand
Bremerhaven
Hamburg
Wilhelmshaven
Nordenham
Brake
Emden
Elsfleth
Delfzijl
Papenburg
Bremen
Szczecin (Stettin)
Harlingen
Lemmer
POLAND
NETHERLANDS
Duisburg
GERMANY
CZECH REPUBLIC
LUXEMBOURG
FRANCE
AUSTRIA
SWITZERLAND

GERMANY (GENERAL)

ELBE HELICOPTER PILOTAGE (1)

WINCHING AREA



1. CLEAR ZONE DIAMETER 4,60 M

Full painted circle spot
(white or yellow, non-skid)

2. MANOEUVRING ZONE DIAMETER 30,50 M

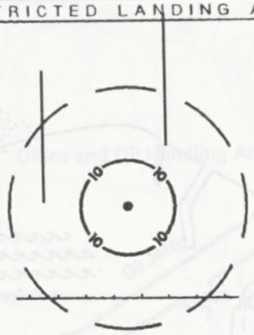
NO OBSTRUCTION HIGHER THAN 3,00 M

Man. zone circle line need not to be marked

Man. zone may extend over the ship's side.

If obstruction higher than 03,00 m, helicopter will hover approx. 03,05 m (10 ft) above the highest obstacle within man. zone.

RESTRICTED LANDING AREA



1. CENTER CIRCLE SPOT DIAMETER 0,50 M

Full painted white or yellow

2. AIMING CIRCLE DIAMETER 10,00 M

NO OBSTRUCTION HIGHER THAN 0,10 M

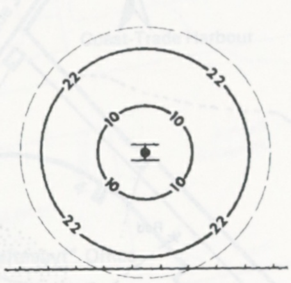
Circle line painted white or yellow, width 0,20 M
Circle diameter to be marked (10)
Non-skid surface

3. MANOEUVRING ZONE DIAMETER 25,50 M

NO OBSTRUCTION HIGHER THAN 1,25 M

Man. zone to be marked with broken circle line, width 0,20 M
Man. zone may extend over the ship's side

FULL LANDING AREA



1. CENTER CIRCLE SPOT DIAMETER 0,50 M

Full painted white or yellow.
"H" symbol may be painted, dimensions see ICS Guide.
"H" symbol may only be marked in FULL LANDING AREA

2. AIMING CIRCLE DIAMETER 10,00 M

NO OBSTRUCTION HIGHER THAN 0,10 M

Circle line painted white or yellow, width 0,20 M
Circle diameter to be marked (10)
Non-skid surface

3. CLEAR ZONE DIAMETER 22,00 M

NO OBSTRUCTION HIGHER THAN 0,25 M

Circle line painted white or yellow, width 0,20 M
Circle diameter to be marked (22)

4. MANOEUVRING ZONE DIAMETER 27,50 M

NO OBSTRUCTION HIGHER THAN 1,25 M

Man. zone circle line need not to be marked
Man. zone may extend over the ship's side

GERMANY (GENERAL)

ELBE HELICOPTER PILOTAGE (2)

SAFETY CHECK LIST

For use with ICS Guide to Helicopter/Ship Operations

To be checked by the officer in charge. ☐

1. GENERAL

(a) Have all loose objects within and adjacent to the operating area been secured or removed? ☐
(b) Have all aerials, standing or running gear above, and in the vicinity of, the operating area been lowered or secured? ☐
(c) Has the officer of the watch been consulted about the ship's readiness? ☐
(d) Are the fire pumps running and is there adequate pressure on deck? ☐
(e) Are fire hoses ready, (hoses should be near to, but clear of the operating area)? ☐
(f) Are foam hoses, monitors and portable foam equipment ready? ☐
(g) Are foam equipment operators, of whom at least two are wearing the prescribed firemen's outfits, standing by? ☐
(h) Are the foam nozzles pointing away from the helicopter? ☐
(i) Has a rescue party, of whom at least two are wearing firemen's outfits, been detailed? ☐
(j) Is a man overboard rescue boat ready for immediate lowering? ☐
(k) Are the following items of equipment to hand?
  (i) Portable fire extinguishers? ☐
  (ii) Large axe? ☐
  (iii) Crow bar? ☐
  (iv) Wire cutters? ☐
  (v) Red emergency signal/torch? ☐
  (vi) Marshalling batons (at night)? ☐
(l) Has the correct lighting, (including special navigation lights), been switched on prior to night operations? ☐
(m) Is the deck party ready, and are all passengers clear of the operating area? ☐
(n) Have hook handlers been equipped with helmets, strong rubber or suitable gloves and rubber soled shoes to avoid the danger of static discharge? ☐

2. LANDING ON

(a) Is the deck party aware that a landing is to be made? ☐
(b) Is the operating area free of heavy spray or seas on deck? ☐
(c) Have side rails and, where necessary, awnings, stanchions and derricks been lowered or removed? ☐
(d) Where applicable, have portable pipes been removed and have the remaining apex ends been blanked off? ☐
(e) Are rope messengers to hand for securing the helicopter, if necessary? (Note: only the helicopter pilot may decide whether or not to secure the helicopter). ☐

3. TANKERS: Additional Items for Check List

(a) Gas control, ships not fitted with an Inert Gas System: has pressure been released from tanks within thirty (30) minutes of commencement of helicopter operations? ☐
(b) Gas control, ships fitted with an Inert Gas System: has pressure in cargo tanks reduced to slight positive pressure? ☐
(c) All tankers: have all tank openings been secured following venting operations? ☐

4. BULK AND COMBINATION CARRIERS: Additional Items for Check List

(a) Has surface ventilation to dry bulk cargoes ceased, and have all hatch openings been fully battened down prior to helicopter operations? ☐

5. GAS CARRIERS: Additional Items for Check List

(a) Have all precautions been taken to prevent gas emission on deck? ☐

Radio Communication

The helicopter will contact the vessel on VHF-FM channel 16 and will request the ship to change to channel 9 or 70.
The vessel shall advise the helicopter pilot of its position, heading, speed and the actual wind direction and speed over the deck.

Bearing Transmissions

After radio contact is established, until the helicopter is over the ship, it is essential that the vessel transmit direction finding signals on 410 kcs. On request of the helicopter pilot an uninterrupted (locked key) transmission should be given.

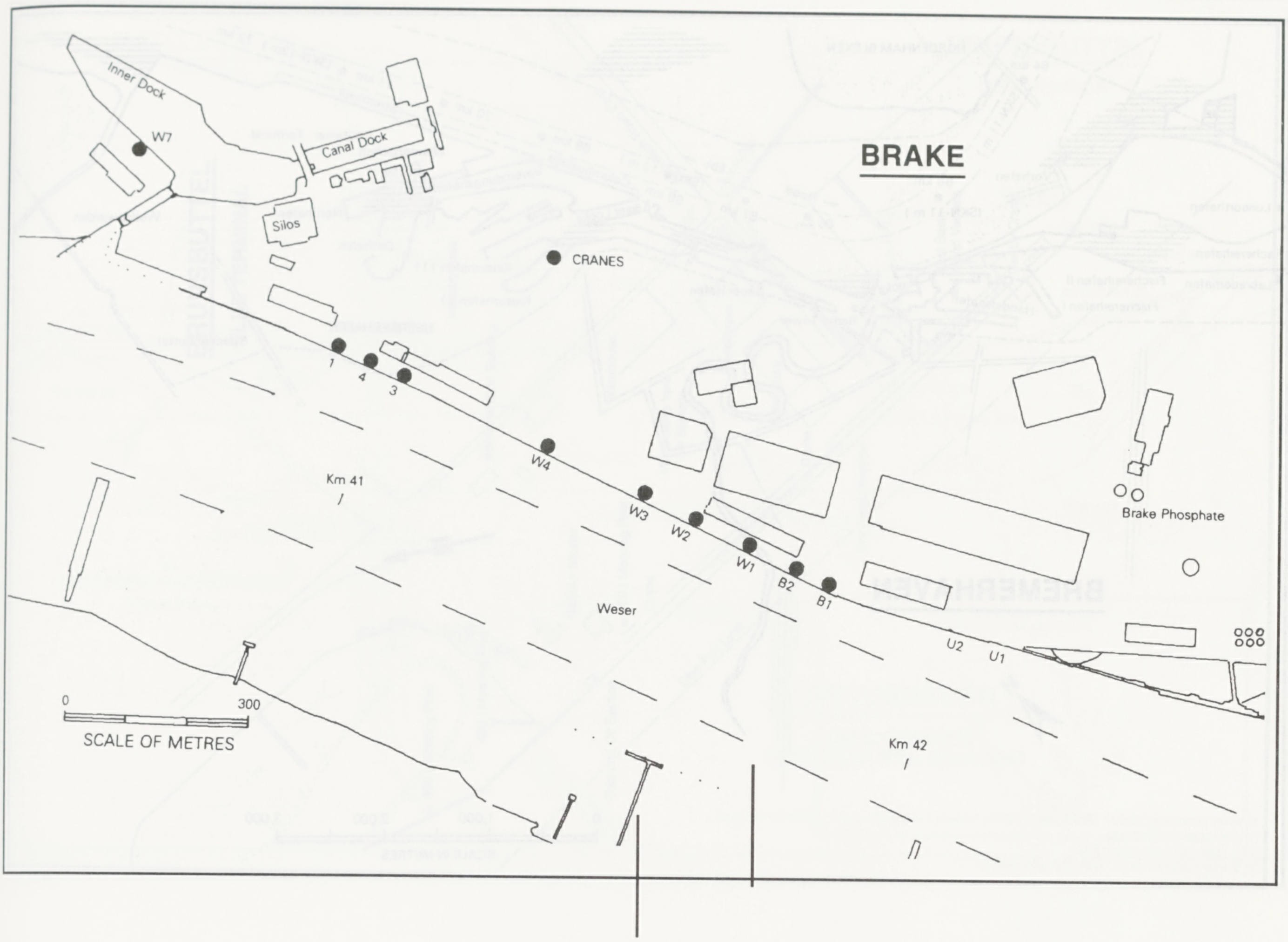
Wind Conditions Limiting Helicopter Operations

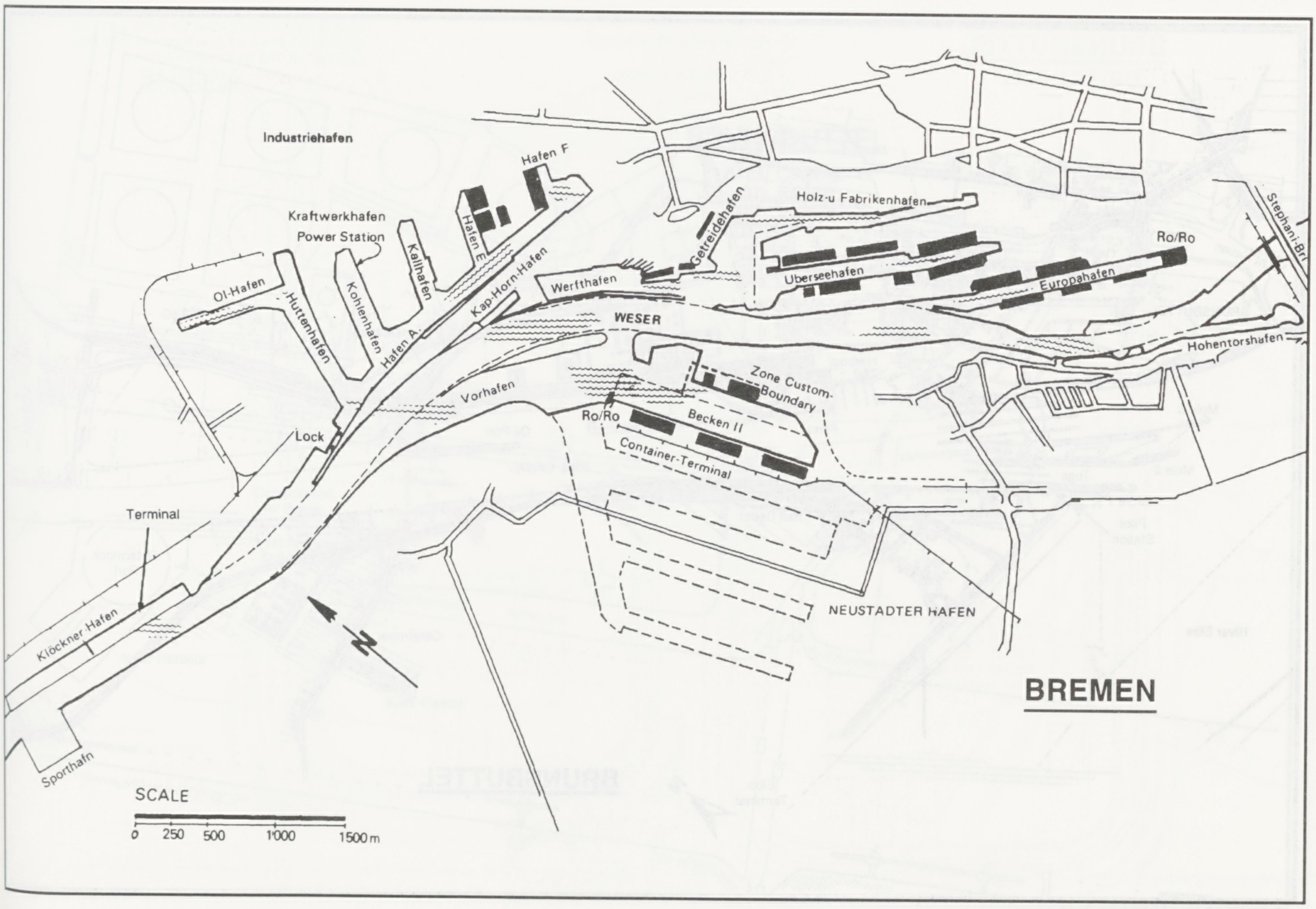
For most purposes the best relative wind is between 35° abaft the beam and ahead with speeds normally from 10 - 50 knots. However, certain sea conditions may make it necessary to obtain a relative wind which is between 35° abaft the beam and dead astern.

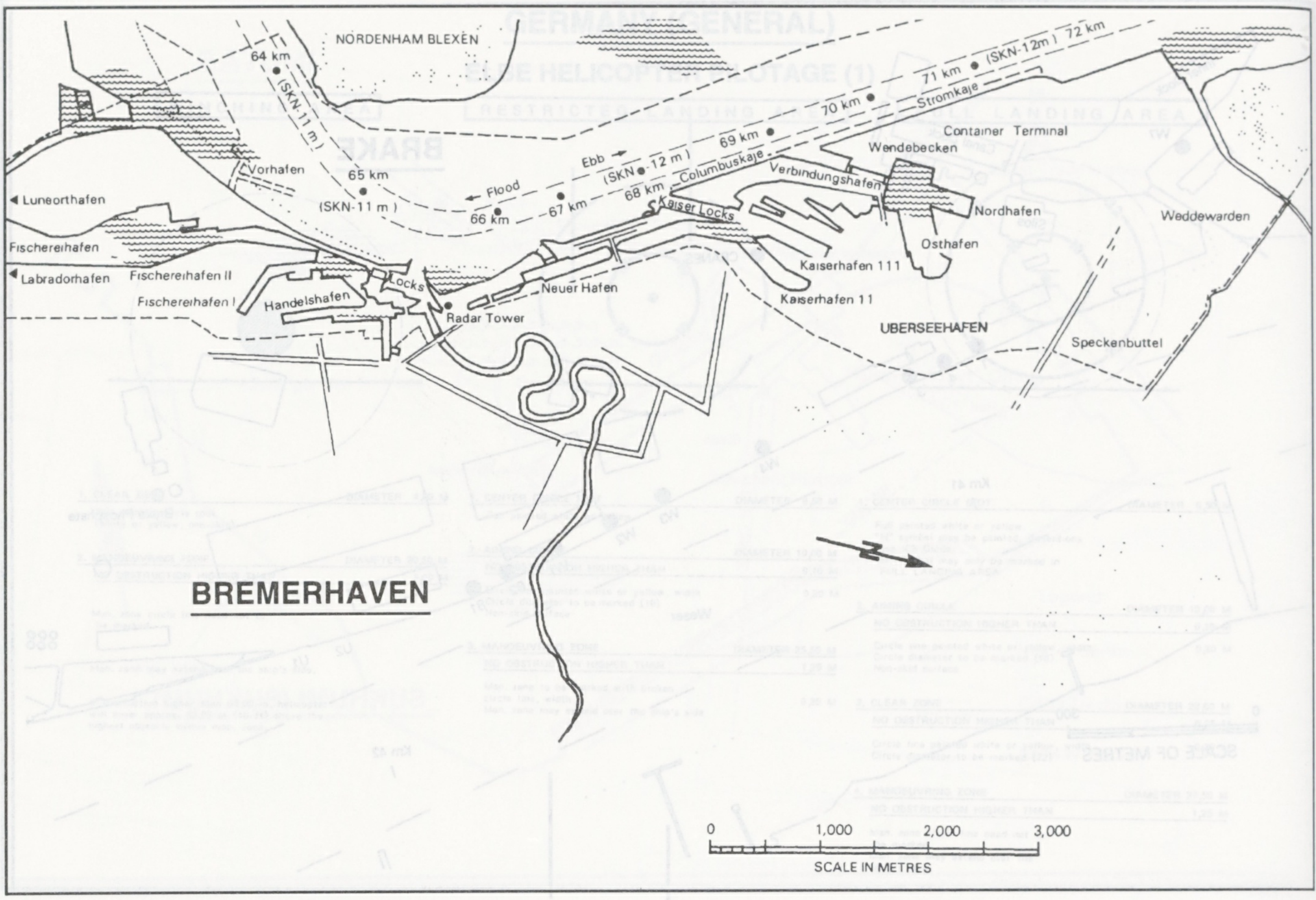
Sea and Swell

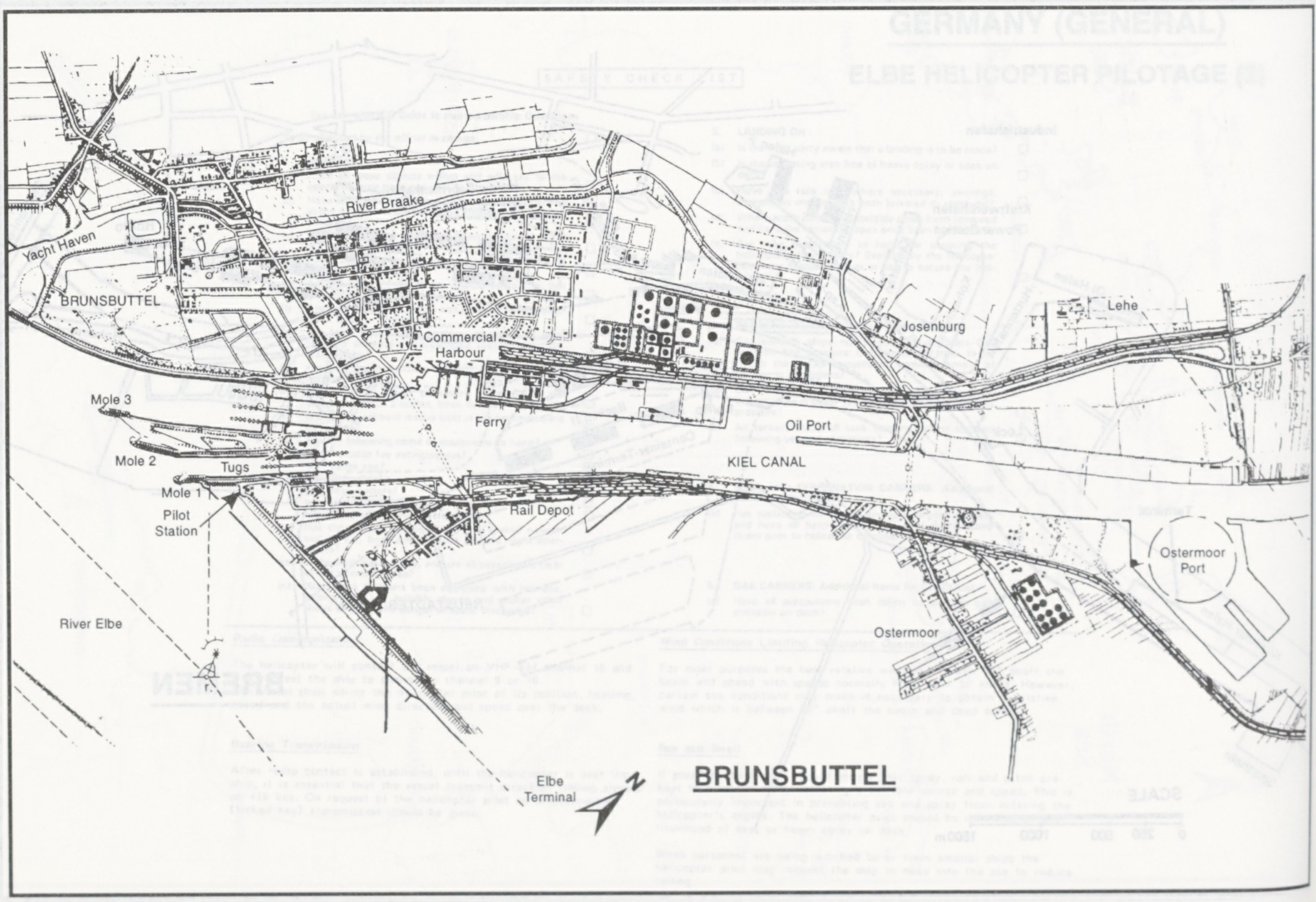
If possible the master should ensure that spray, roll and pitch are kept to a minimum by selecting a suitable course and speed. This is particularly important in preventing sea and spray from entering the helicopter's engine. The helicopter pilot should be informed of any likelihood of seas or heavy spray on deck.

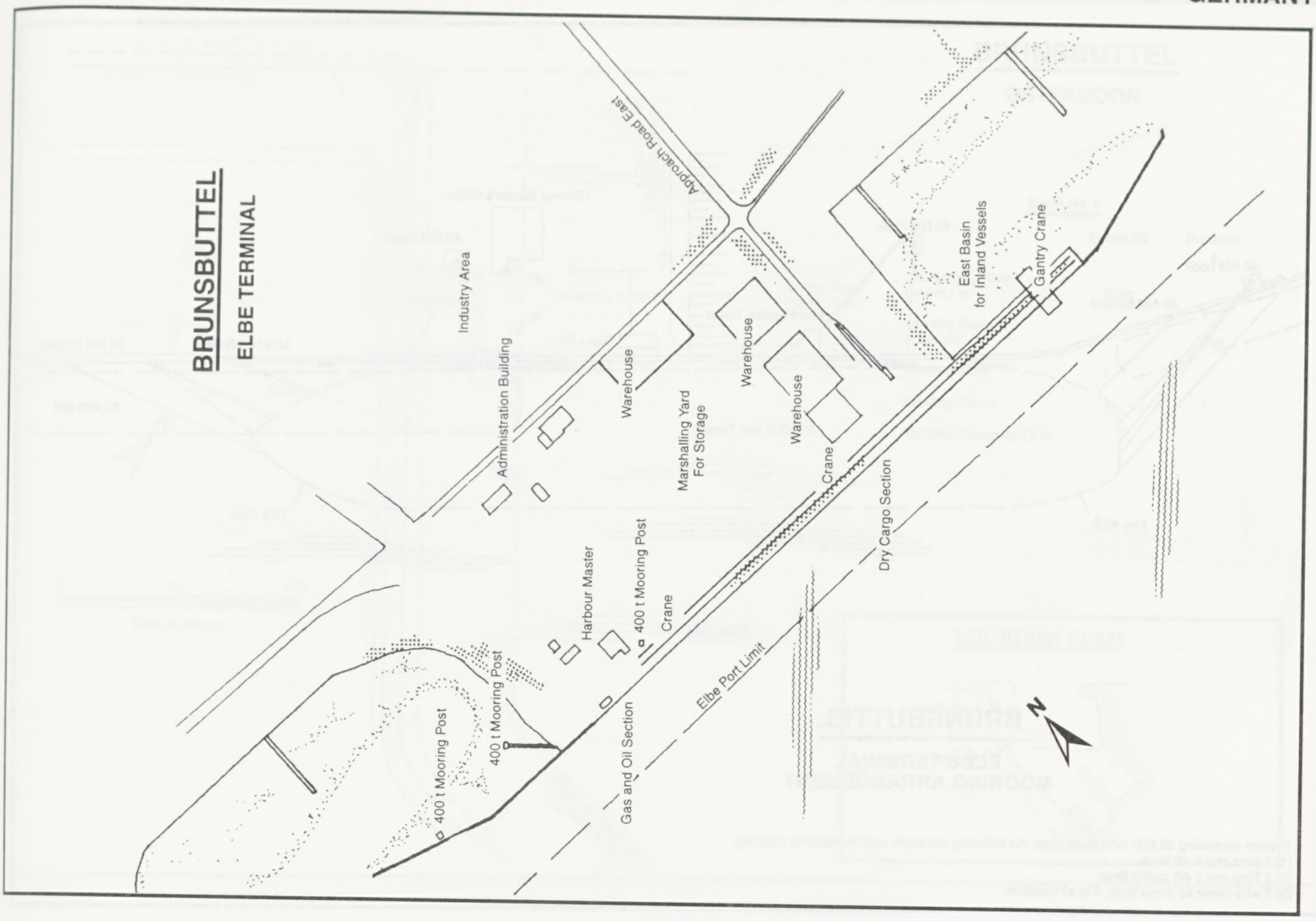
When personnel are being winched to or from smaller ships the helicopter pilot may request the ship to head into the sea to reduce rolling.

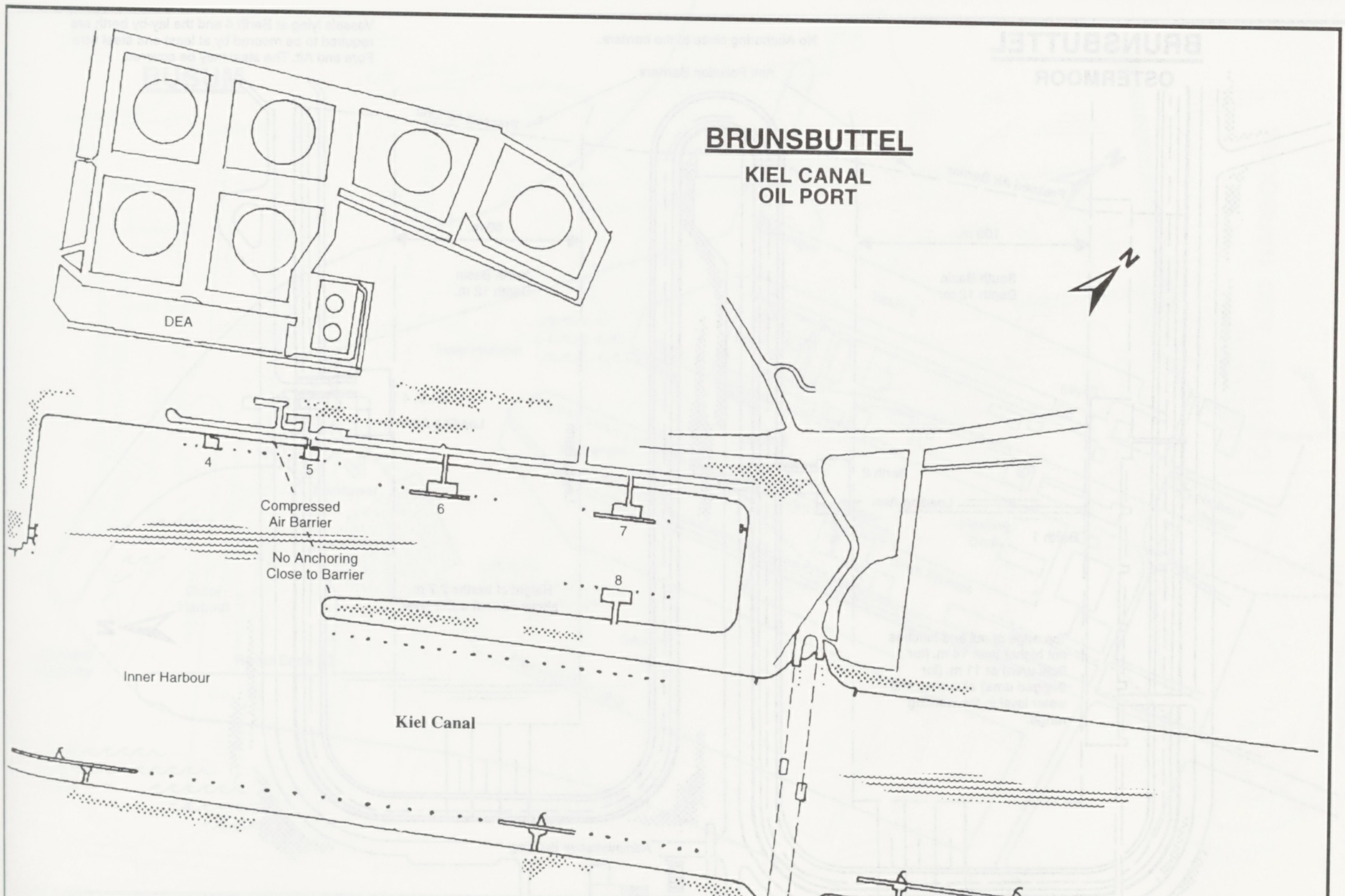

BRAKE
Inner Dock
W7
Canal Dock
Silos
CRANES
1
4
3
W4
Km 41
W3
W2
W1
B2
B1
Brake Phosphate
Weser
U2
U1
0
300
SCALE OF METRES
Km 42

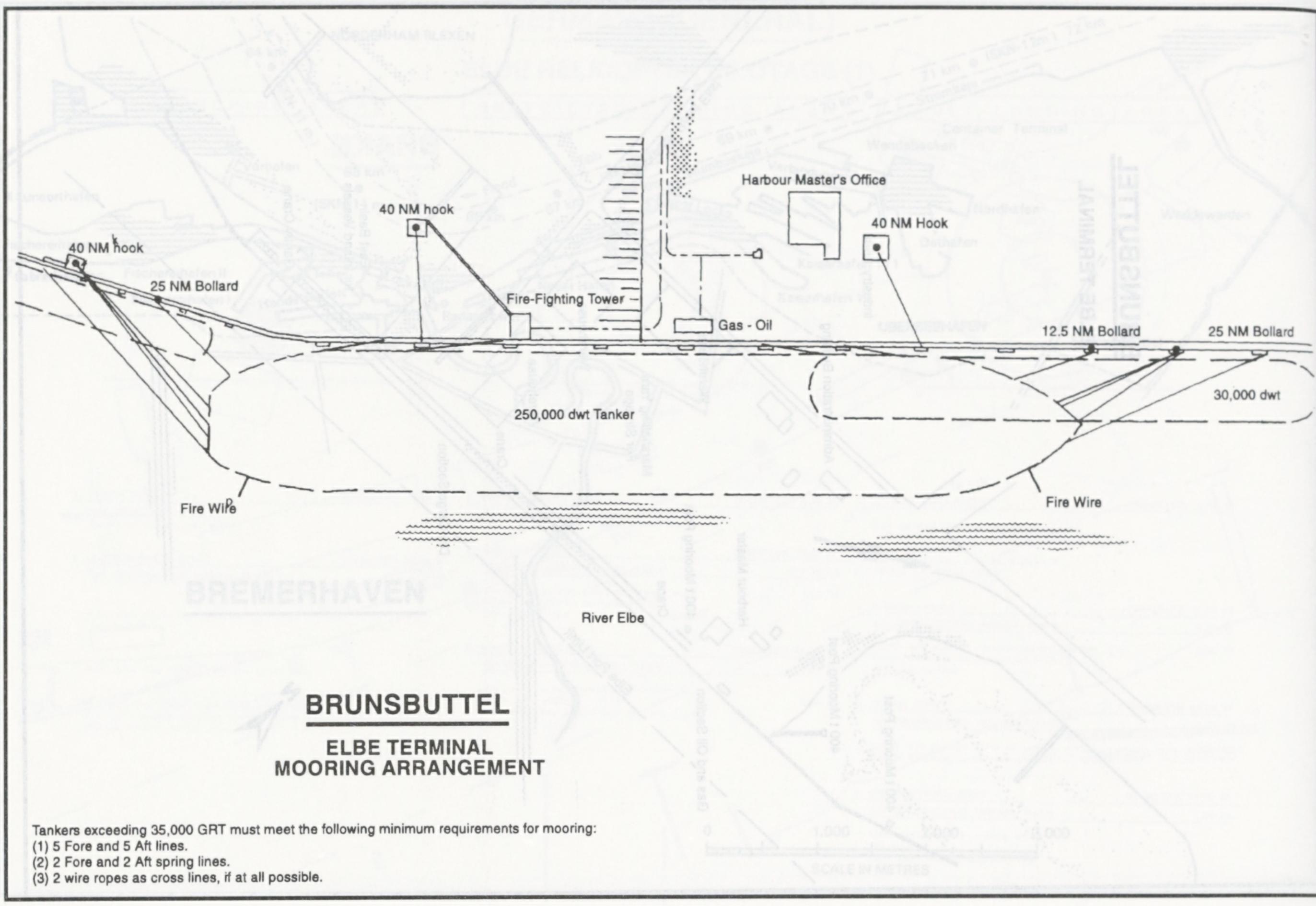

Industriehafen
Hafen F
Kraftwerkhafen
Power Station
Hafen E
Kalihafen
Öl-Hafen
Huttenhafen
Kohlenhafen
Hafen A
Kap-Horn-Hafen
Werfthafen
Getreidehafen
Holz-u Fabrikenhafen
Uberseehafen
Europahafen
Ro/Ro
Stephani-Br
WESER
Hohentorshafen
Zone Custom-Boundary
Vorhafen
Ro/Ro
Becken II
Container-Terminal
Lock
Terminal
NEUSTADTER HAFEN
Klöckner-Hafen
N
BREMEN
Sporthafn
SCALE
0
250
500
1000
1500 m


NORDENHAM BLEXEN
64 km
(SKN-11 m)
Vorhafen
65 km
(SKN-11 m)
Flood
Ebb
66 km
67 km
(SKN-12 m)
68 km
Columbuskaje
69 km
70 km
71 km
(SKN-12m)
72 km
Stromkaje
Container Terminal
Wendebecken
Verbindungshafen
Kaiser Locks
Nordhafen
Weddewarden
Osthafen
Kaiserhafen 111
Kaiserhafen 11
UBERSEEHAFEN
Speckenbuttel
Luneorthafen
Fischereihafen
Labradorhafen
Fischereihafen II
Fischereihafen I
Handelshafen
Locks
Radar Tower
Neuer Hafen
N
BREMERHAVEN
0
1,000
2,000
3,000
SCALE IN METRES


River Braake
Yacht Haven
BRUNSBUTTEL
Commercial Harbour
Josenburg
Lehe
Mole 3
Ferry
Oil Port
Mole 2
Tugs
KIEL CANAL
Mole 1
Pilot Station
Rail Depot
Ostermoor Port
River Elbe
Ostermoor
Elbe Terminal
N
BRUNSBUTTEL


BRUNSBUTTEL
ELBE TERMINAL
Approach Road East
Industry Area
Administration Building
Warehouse
Marshalling Yard For Storage
Warehouse
Warehouse
East Basin for Inland Vessels
Gantry Crane
Crane
Dry Cargo Section
Harbour Master
400 t Mooring Post
Crane
400 t Mooring Post
400 t Mooring Post
Gas and Oil Section
Elbe Port Limit
N

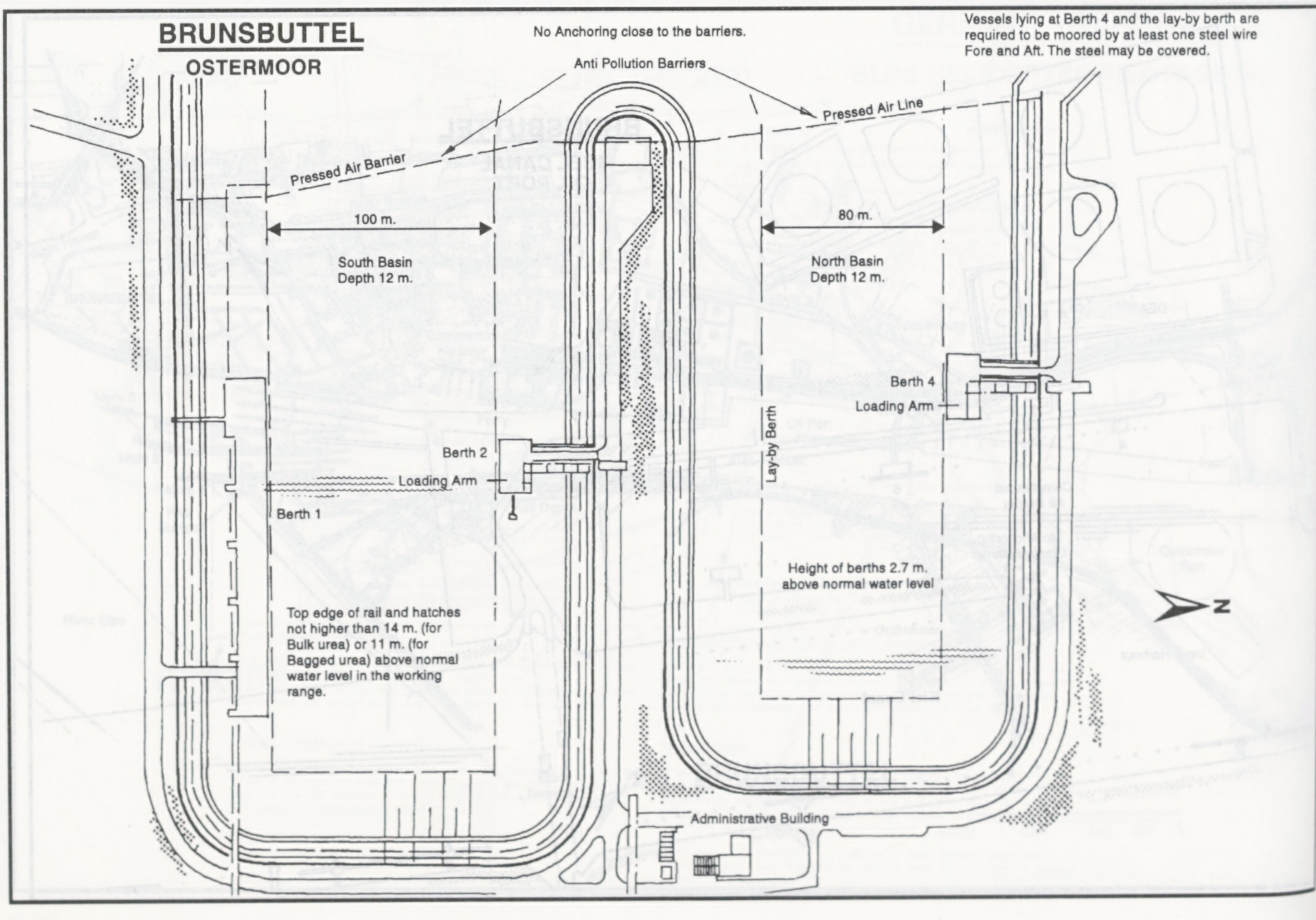

BRUNSBUTTEL
KIEL CANAL
OIL PORT
N
DEA
4
5
6
7
8
Compressed Air Barrier
No Anchoring Close to Barrier
Inner Harbour
Kiel Canal


40 NM hook
25 NM Bollard
40 NM hook
Fire-Fighting Tower
Harbour Master's Office
40 NM Hook
Gas - Oil
12.5 NM Bollard
25 NM Bollard
30,000 dwt
250,000 dwt Tanker
Fire Wire
Fire Wire
River Elbe

BRUNSBUTTEL

ELBE TERMINAL MOORING ARRANGEMENT

Tankers exceeding 35,000 GRT must meet the following minimum requirements for mooring:
(1) 5 Fore and 5 Aft lines.
(2) 2 Fore and 2 Aft spring lines.
(3) 2 wire ropes as cross lines, if at all possible.



BRUNSBUTTEL

OSTERMOOR

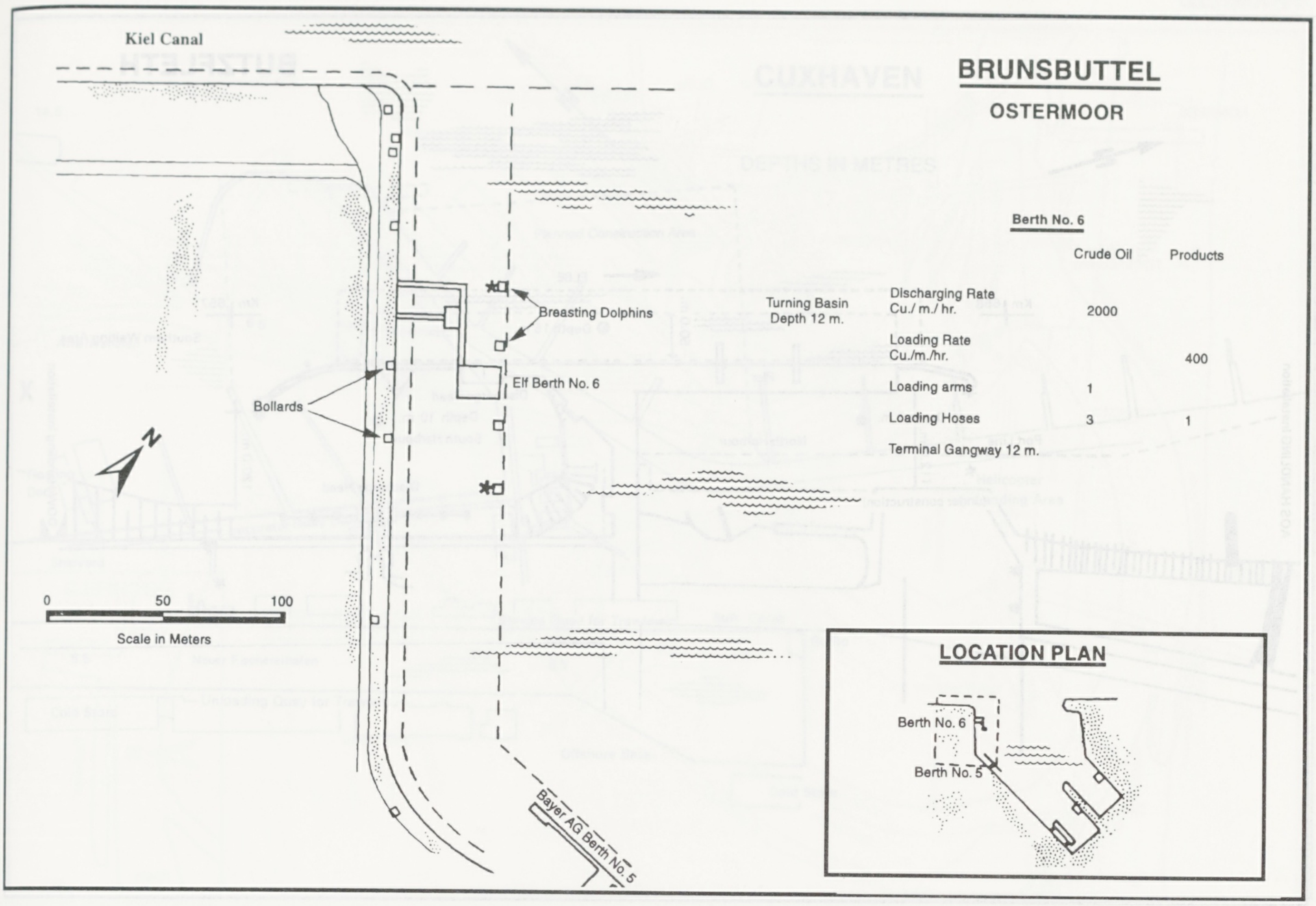
No Anchoring close to the barriers.

Vessels lying at Berth 4 and the lay-by berth are required to be moored by at least one steel wire Fore and Aft. The steel may be covered.

Anti Pollution Barriers
Pressed Air Line
Pressed Air Barrier
100 m.
South Basin
Depth 12 m.
80 m.
North Basin
Depth 12 m.
Berth 4
Loading Arm
Berth 2
Loading Arm
Berth 1
Lay-by Berth
N
Administrative Building

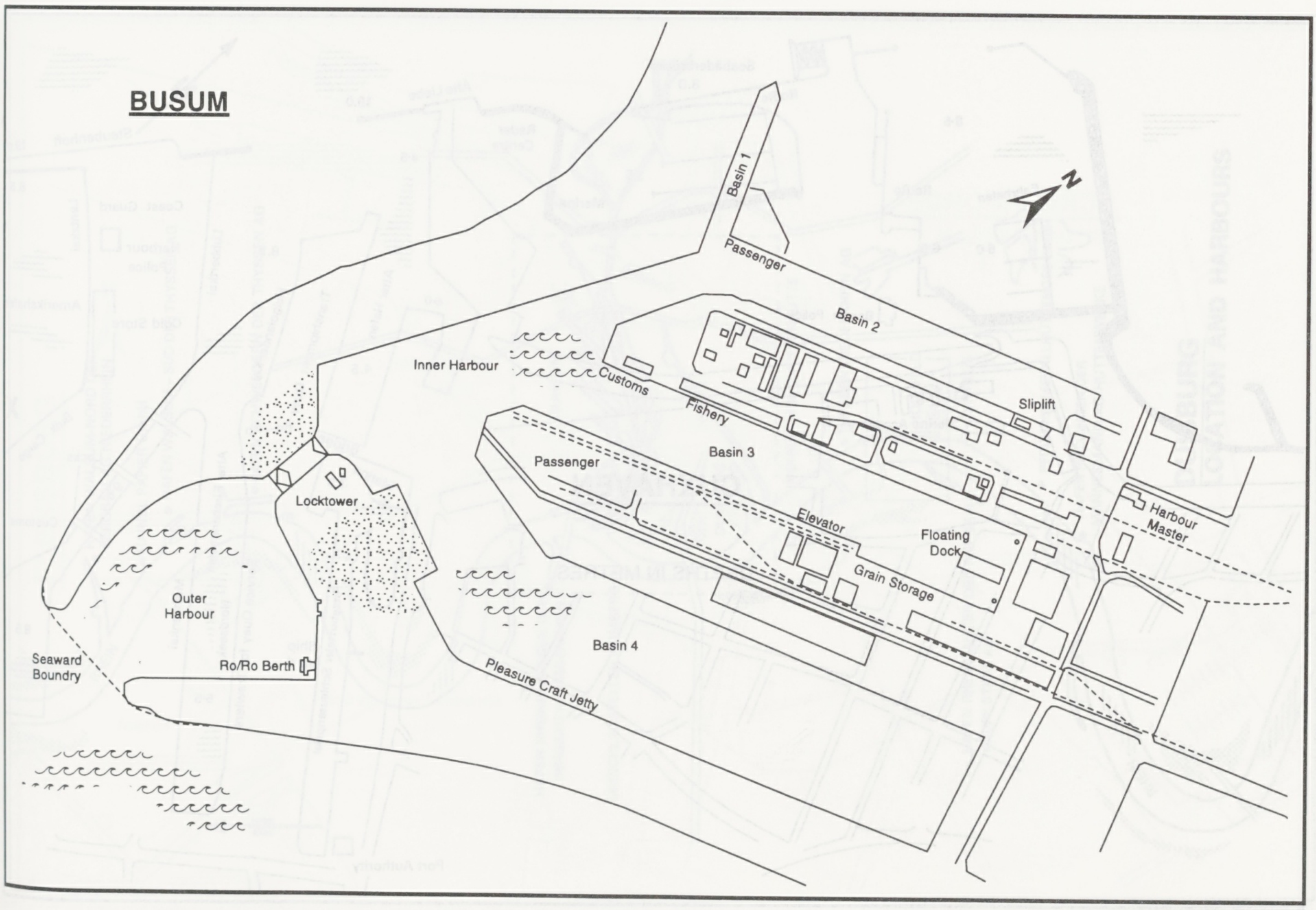
Height of berths 2.7 m. above normal water level

Top edge of rail and hatches not higher than 14 m. (for Bulk urea) or 11 m. (for Bagged urea) above normal water level in the working range.

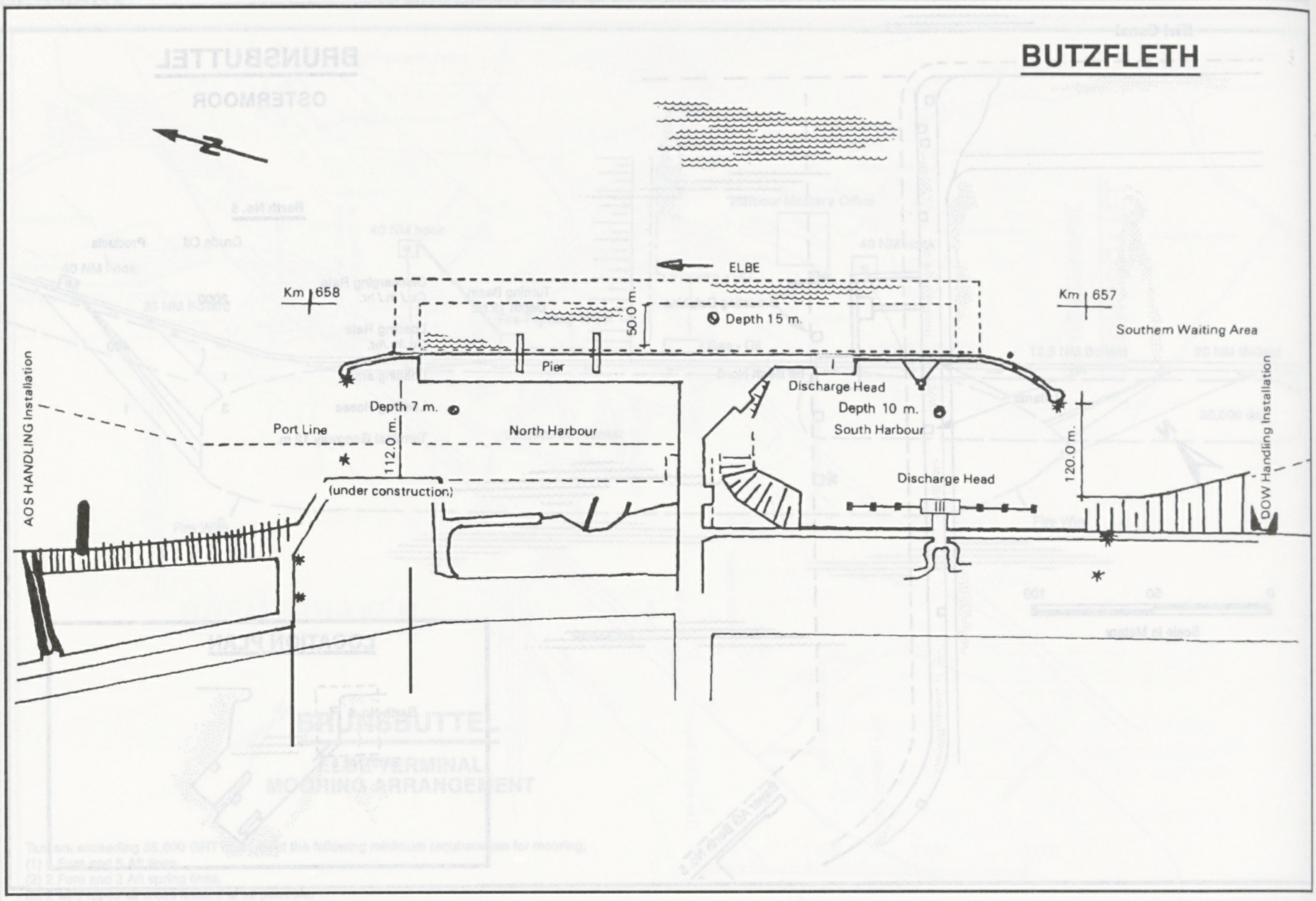

Kiel Canal
BRUNSBUTTEL
OSTERMOOR
Breasting Dolphins
Turning Basin
Depth 12 m.
Elf Berth No. 6
Bollards
N
0
50
100
Scale in Meters
Bayer AG Berth No. 5
LOCATION PLAN
Berth No. 6
Berth No. 5

Berth No. 6

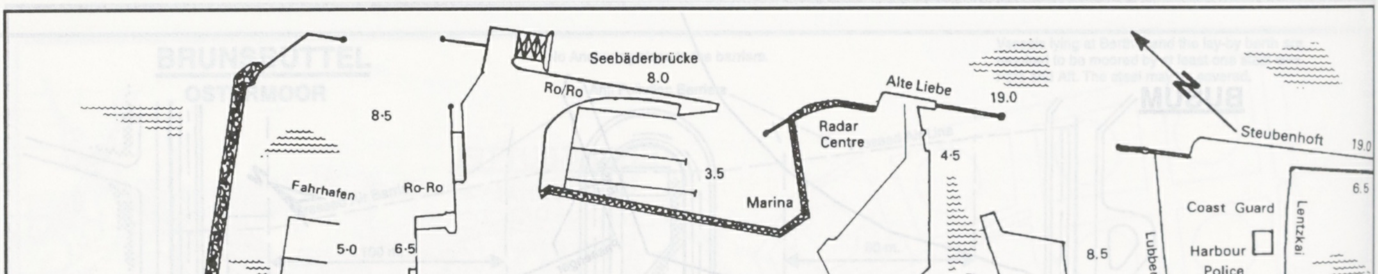
	Crude Oil	Products
Discharging Rate Cu./ m./ hr.	2000	
Loading Rate Cu./m./hr.		400
Loading arms	1	
Loading Hoses	3	1
Terminal Gangway 12 m.		

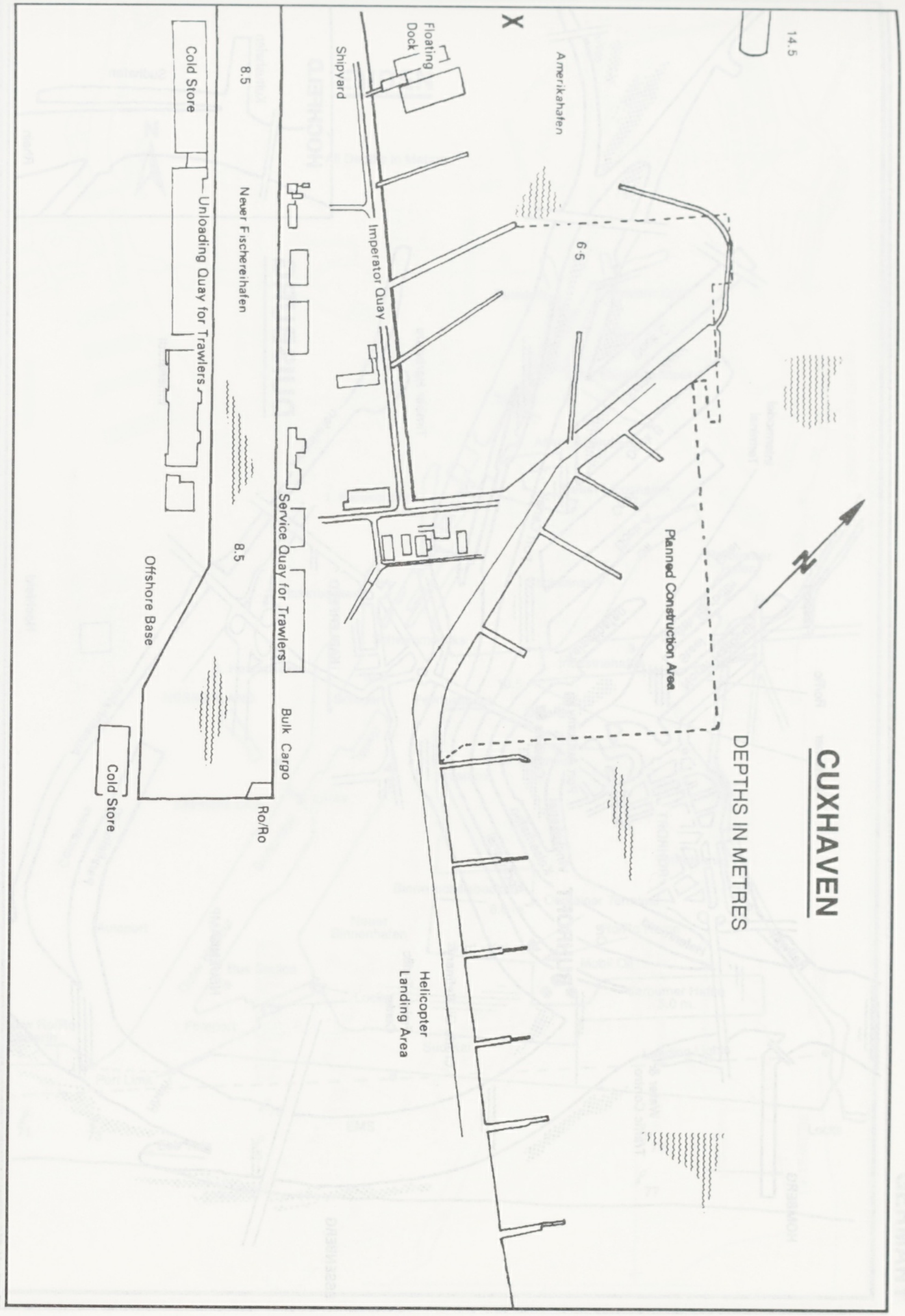

BUSUM
N
Basin 1
Passenger
Basin 2
Inner Harbour
Customs
Fishery
Sliplift
Basin 3
Passenger
Locktower
Elevator
Floating Dock
Harbour Master
Grain Storage
Outer Harbour
Basin 4
Seaward Boundry
Ro/Ro Berth
Pleasure Craft Jetty

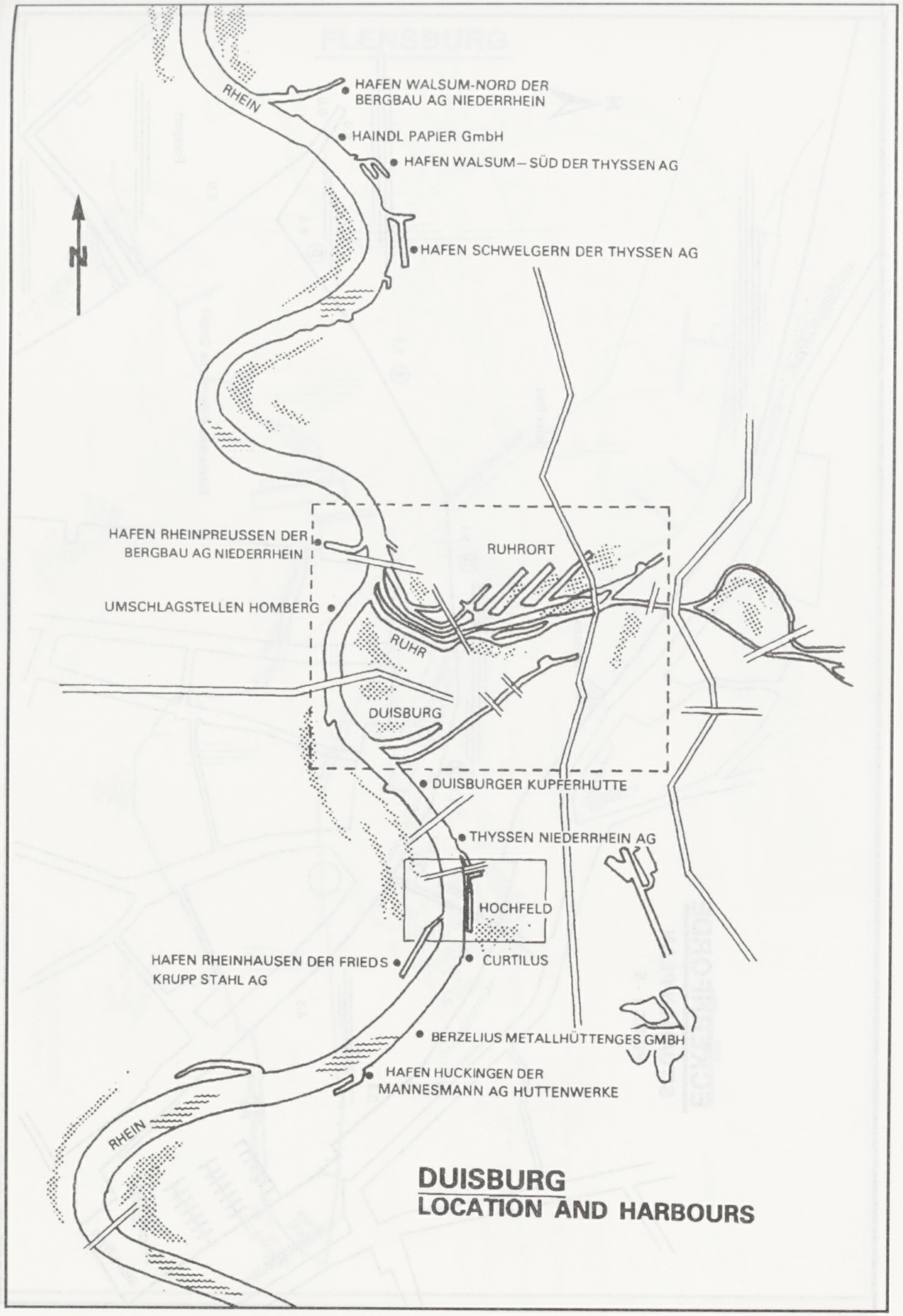
BUTZFLETH

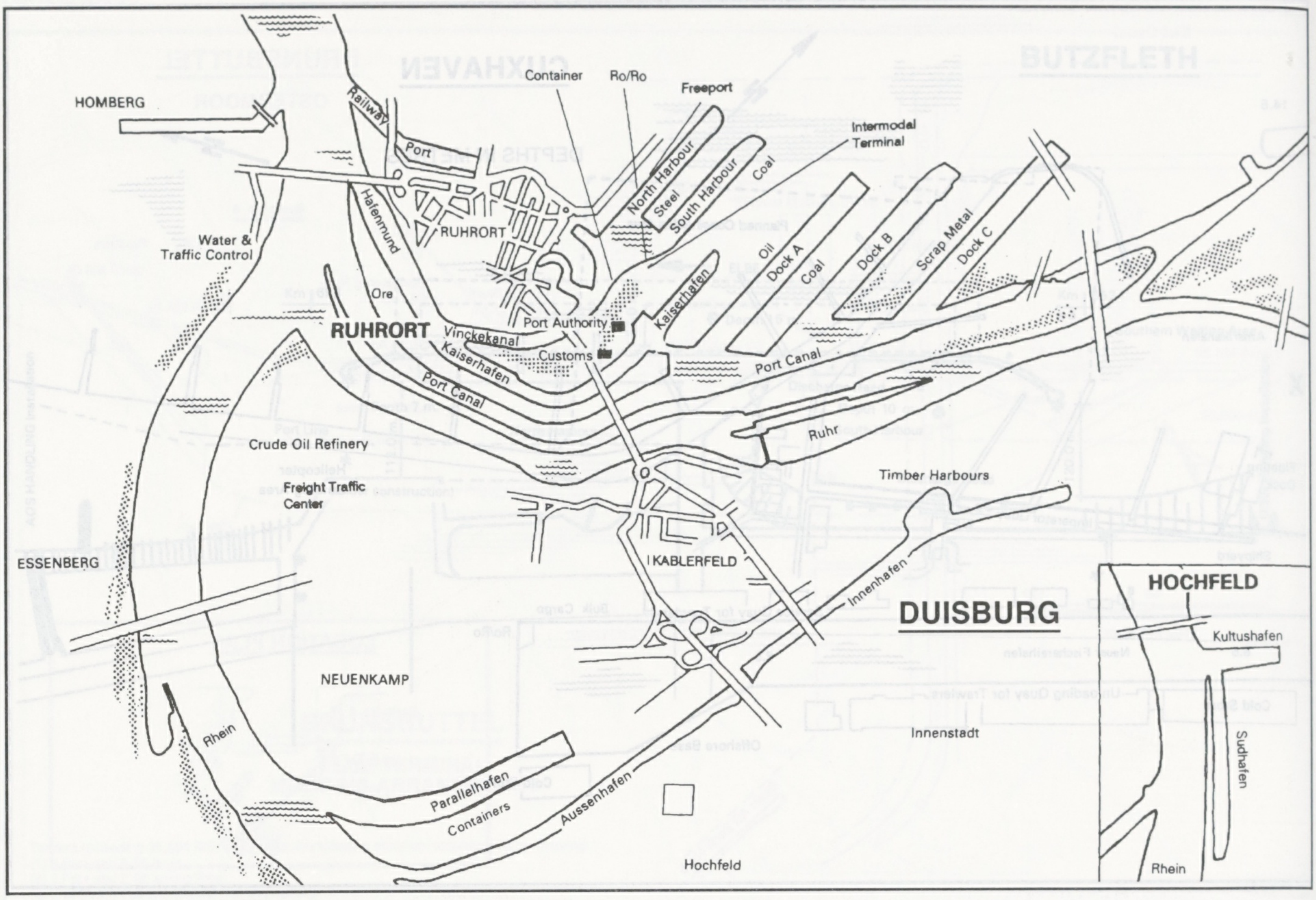

ELBE
Km 658
Km 657
50.0 m.
Depth 15 m.
Southern Waiting Area
Pier
Discharge Head
Depth 7 m.
Depth 10 m.
Port Line
North Harbour
South Harbour
112.0 m.
120.0 m.
(under construction)
Discharge Head
AOS HANDLING Installation
DOW Handling Installation

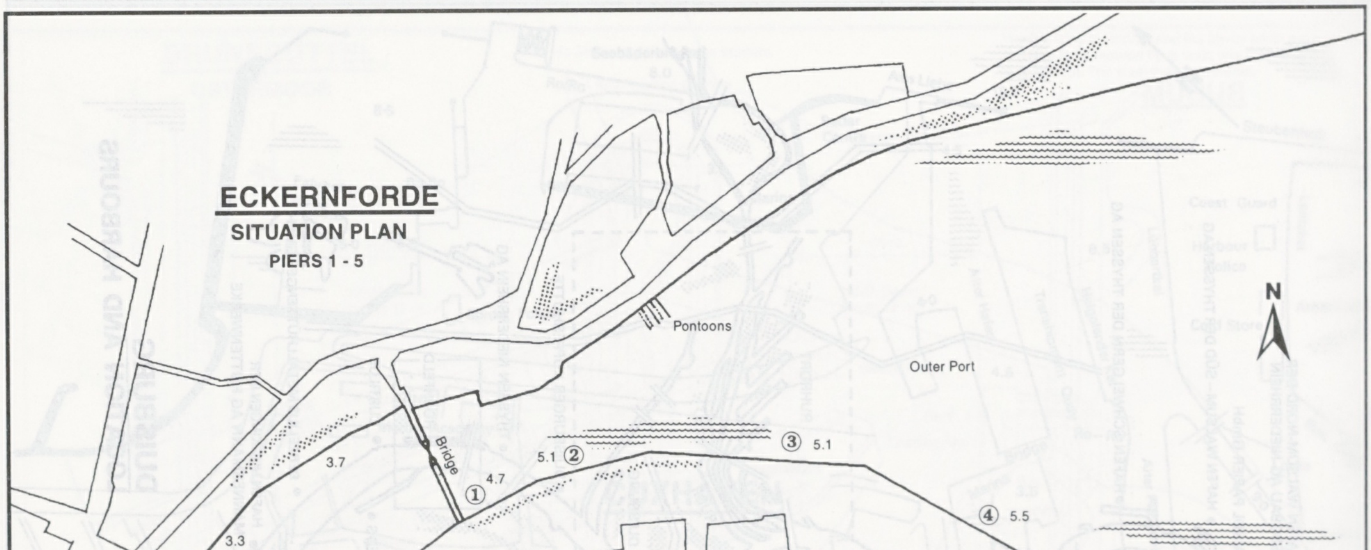
CUXHAVEN

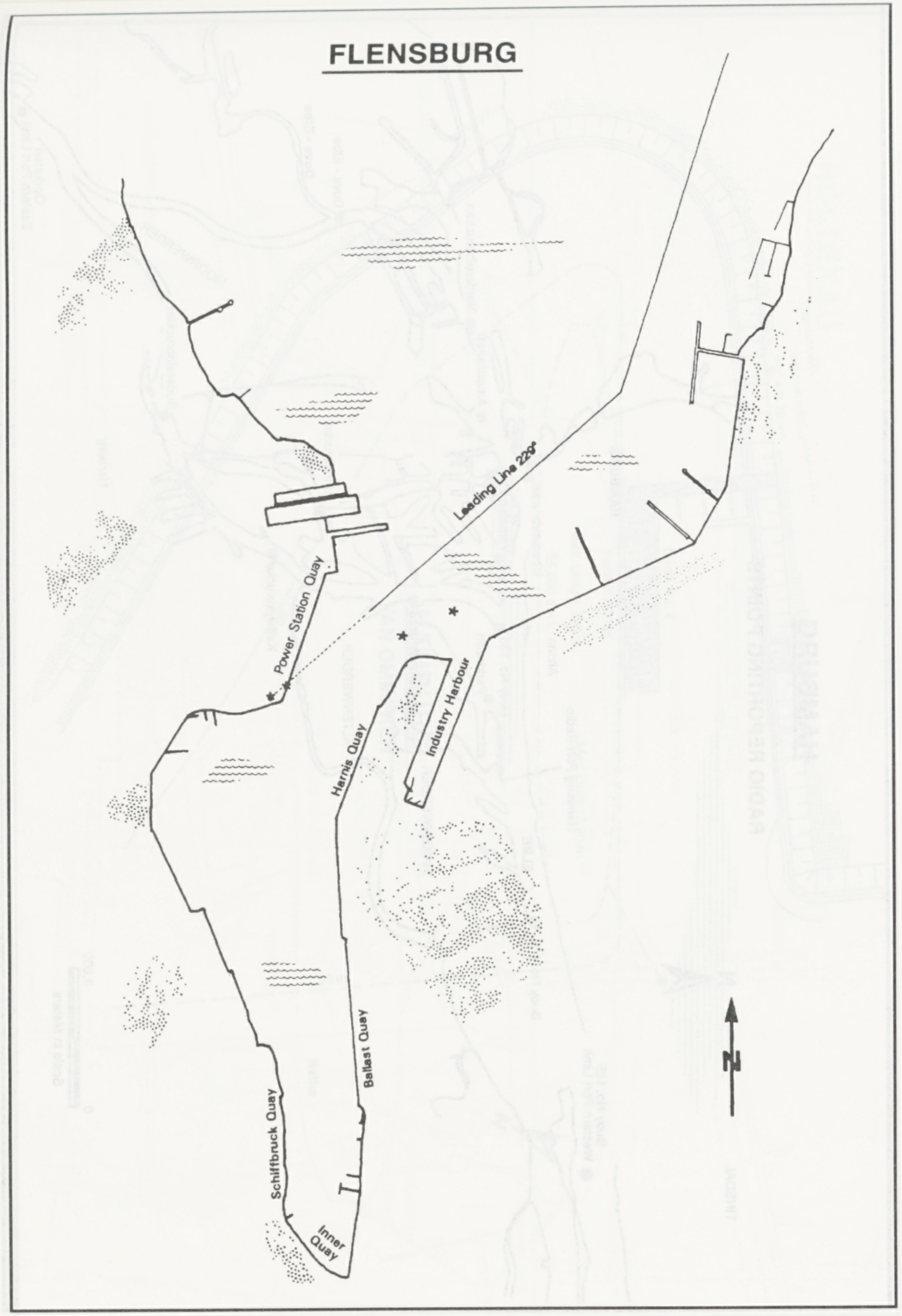

DEPTHS IN METRES
Seebäderbrücke
8.0
Ro/Ro
Alte Liebe
19.0
Radar Centre
Steubenhoft
19.0
8·5
Fahrhafen
Ro-Ro
3.5
Marina
4·5
6.5
Coast Guard
Lentzkai
5·0
6·5
8.5
Harbour Police
Lubbertkai
Amerikahafen
Border Police
4·0
Alter Hafen
Transhipment Quay
Helgolander Kai
Cold Store
4.5
Marine Academy
Ro—Ro
Bridge
Bulk Cargo
Locks
Marina
3.5
9·0
Customs
4·0
Alter Fischereihafen
Nordseekai
Meinkenkai
Ritzebutteler Schleusenpriel
Ship yard
Service Quay for Trawlers
5·5
8.5
Port Authority
X

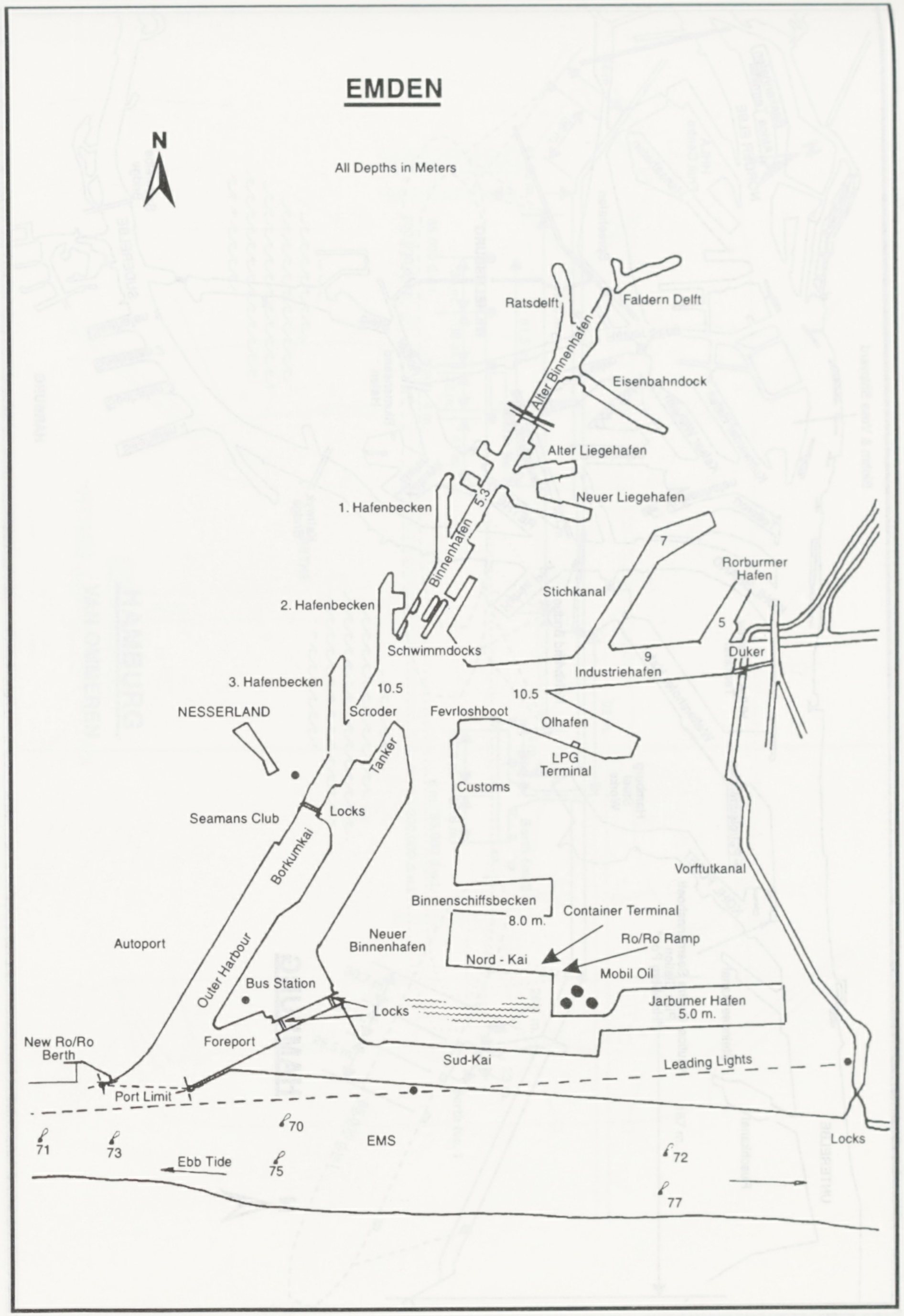

CUXHAVEN
DEPTHS IN METRES
N
X
14.5
Amerikahafen
Floating Dock
Shipyard
6.5
Imperator Quay
8.5
Neuer Fischereihafen
Cold Store
Unloading Quay for Trawlers
Service Quay for Trawlers
Planned Construction Area
8.5
Offshore Base
Bulk Cargo
Ro/Ro
Cold Store
Helicopter Landing Area

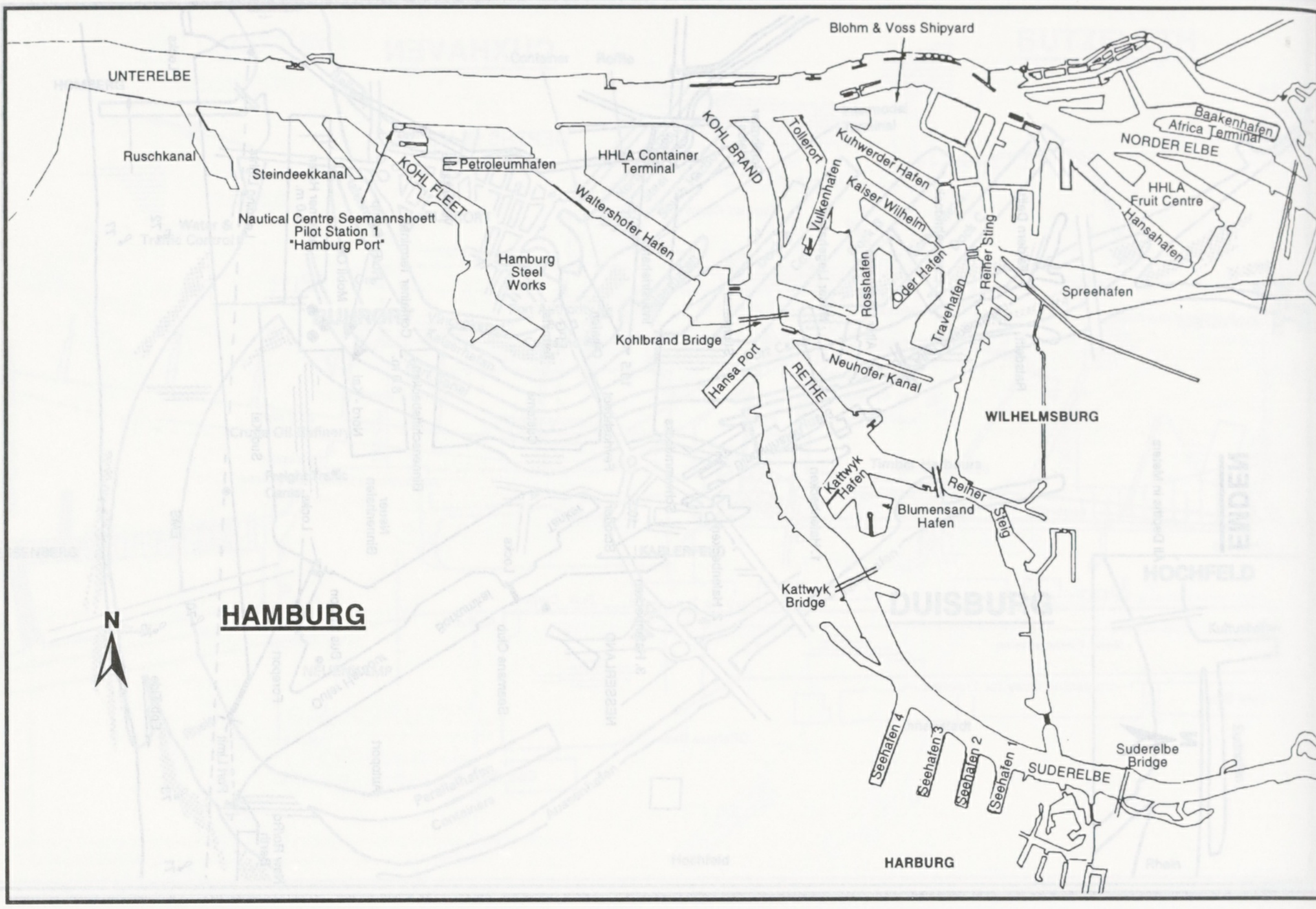

DUISBURG
LOCATION AND HARBOURS
N
RHEIN
HAFEN WALSUM-NORD DER BERGBAU AG NIEDERRHEIN
HAINDL PAPIER GmbH
HAFEN WALSUM–SÜD DER THYSSEN AG
HAFEN SCHWELGERN DER THYSSEN AG
HAFEN RHEINPREUSSEN DER BERGBAU AG NIEDERRHEIN
RUHRORT
UMSCHLAGSTELLEN HOMBERG
RUHR
DUISBURG
DUISBURGER KUPFERHUTTE
THYSSEN NIEDERRHEIN AG
HOCHFELD
HAFEN RHEINHAUSEN DER FRIEDS KRUPP STAHL AG
CURTILUS
BERZELIUS METALLHÜTTENGES GMBH
HAFEN HUCKINGEN DER MANNESMANN AG HUTTENWERKE
RHEIN

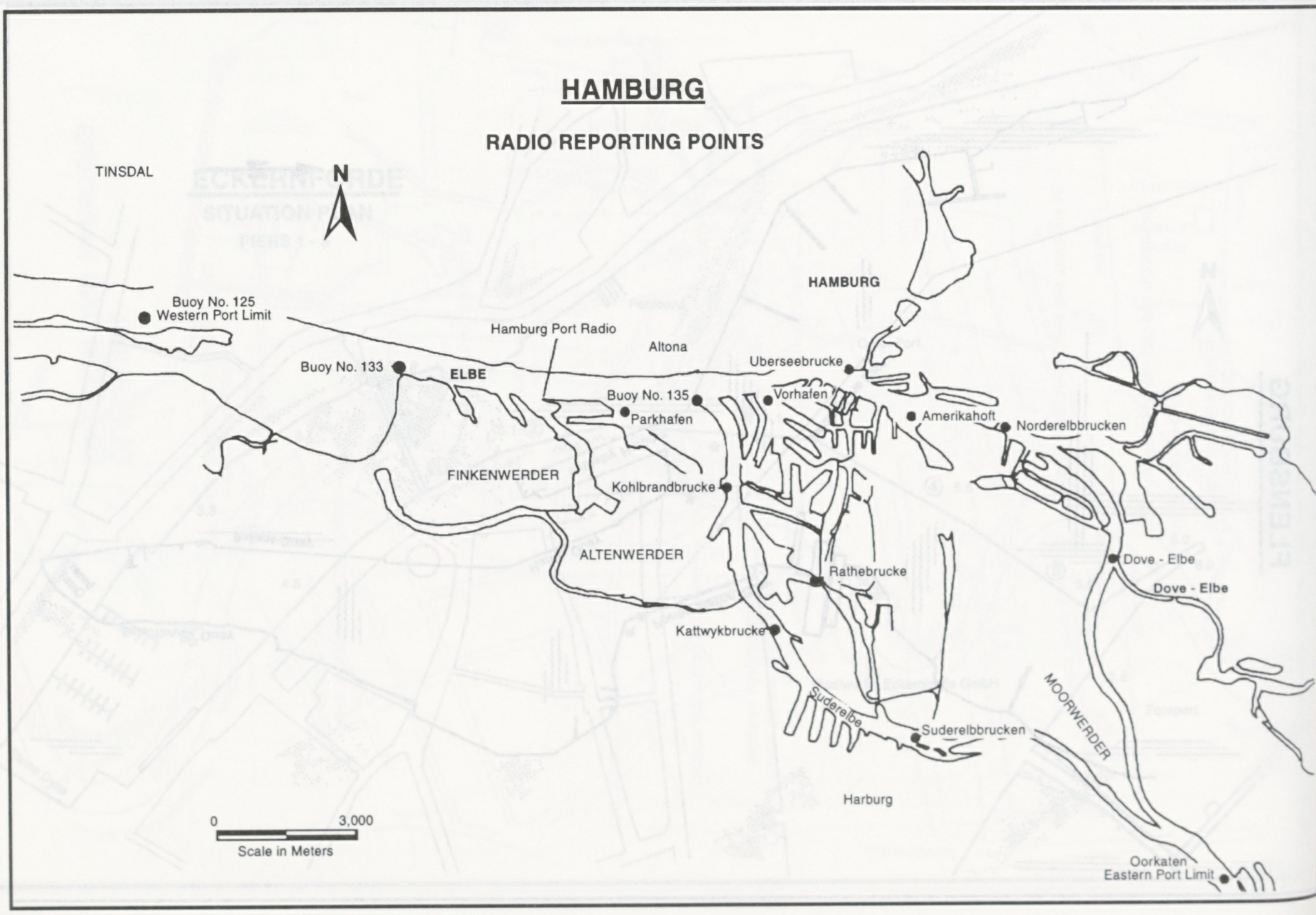

HOMBERG
Railway
Port
Container
Ro/Ro
Freeport
Intermodal
Terminal
Hafenmund
RUHRORT
North Harbour
Steel
South Harbour
Coal
Water &
Traffic Control
Ore
Oil
Dock A
Coal
Dock B
Scrap Metal
Dock C
Kaiserhafen
RUHRORT
Vinckekanal
Port Authority
Kaiserhafen
Customs
Port Canal
Port Canal
Ruhr
Crude Oil Refinery
Freight Traffic
Center
Timber Harbours
ESSENBERG
KABLERFELD
Innenhafen
DUISBURG
HOCHFELD
Kultushafen
NEUENKAMP
Rhein
Innenstadt
Parallelhafen
Containers
Aussenhafen
Sudhafen
Hochfeld
Rhein

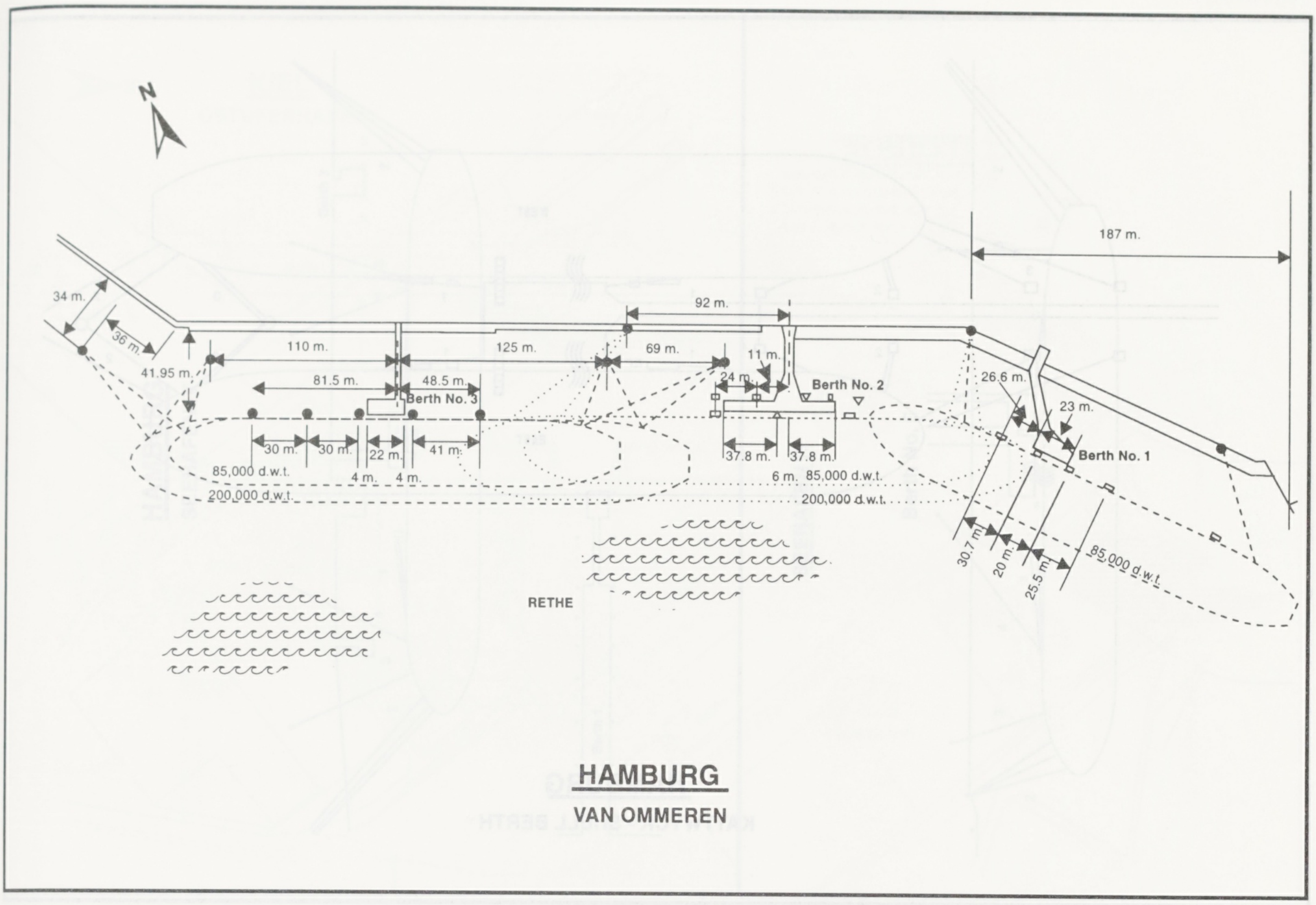

ECKERNFORDE
SITUATION PLAN
PIERS 1 - 5
Pontoons
Outer Port
N
Bridge
3.7
5.1 ②
③ 5.1
① 4.7
④ 5.5
3.3
6.0
6.0
⑤ 5.6
4.5
Inner
Por
Stadtwerke Eckernforde GmbH
5.8
Foreport
Stone Dyke

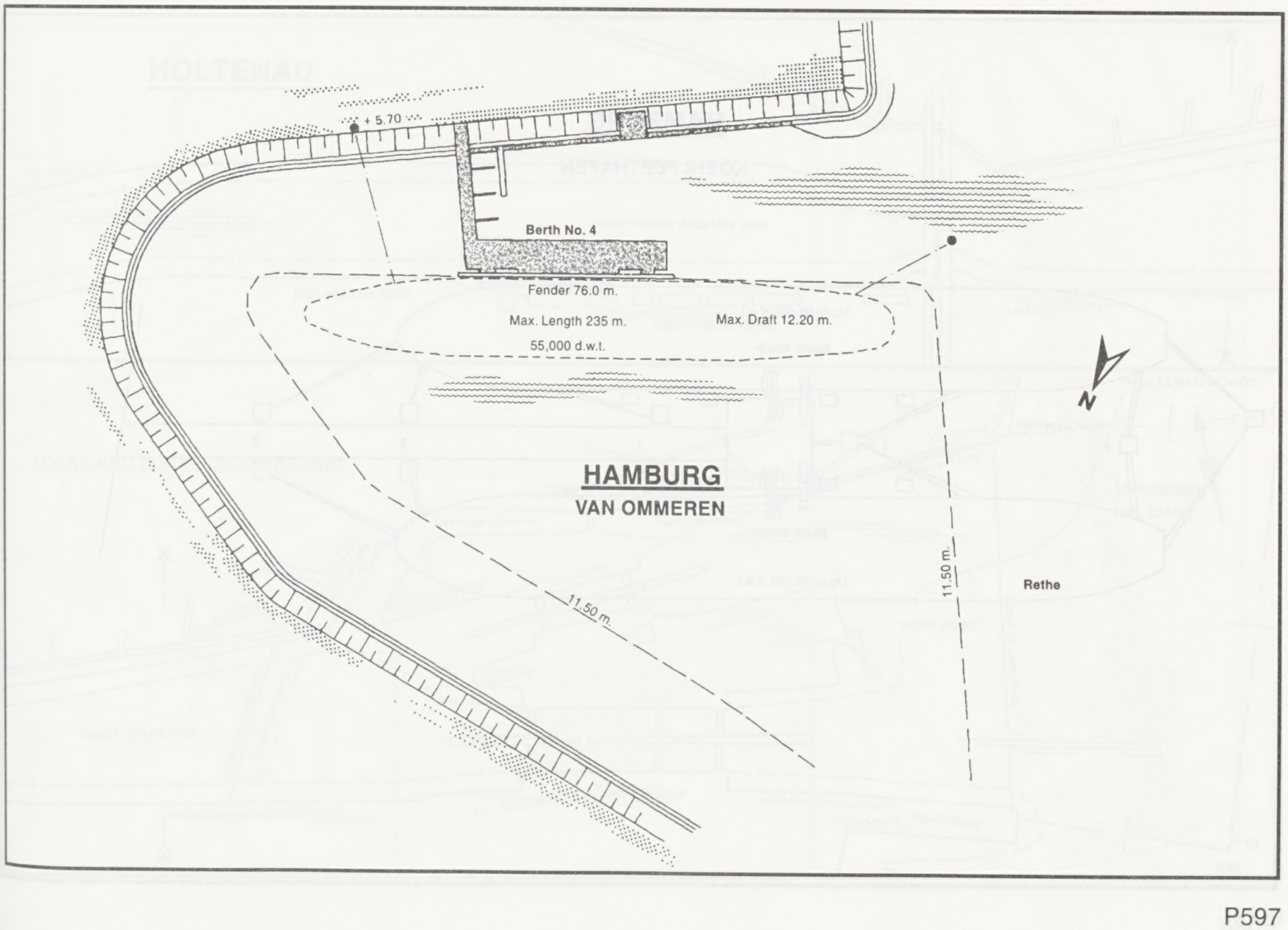

FLENSBURG
Leading Line 229°
Power Station Quay
Industry Harbour
Harnis Quay
Ballast Quay
Schiffbruck Quay
Inner Quay
N

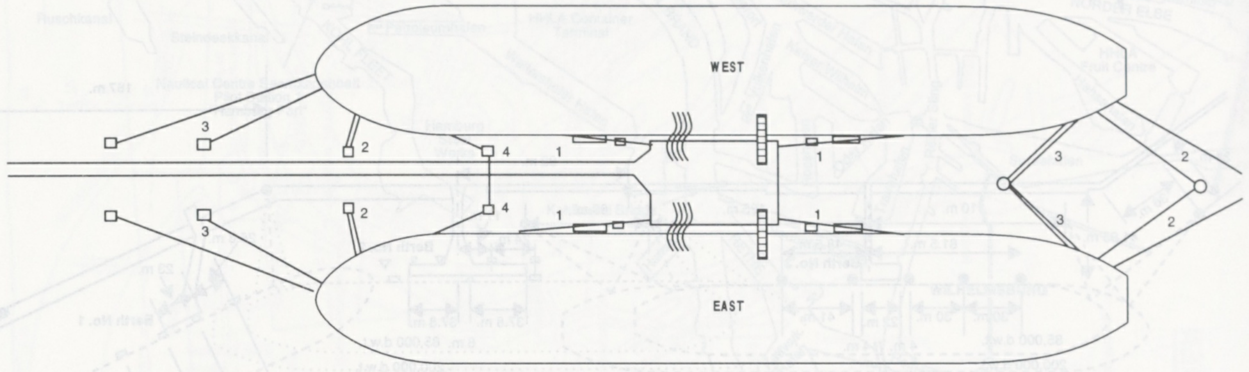

EMDEN
N
All Depths in Meters
Ratsdelft
Faldern Delft
Alter Binnenhafen
Eisenbahndock
Alter Liegehafen
Neuer Liegehafen
1. Hafenbecken
5.3
Binnenhafen
7
Rorburmer Hafen
Stichkanal
2. Hafenbecken
5
Schwimmdocks
9
Duker
Industriehafen
3. Hafenbecken
10.5
10.5
NESSERLAND
Scroder
Fevrloshboot
Olhafen
LPG Terminal
Tanker
Customs
Locks
Seamans Club
Borkumkai
Vorftutkanal
Binnenschiffsbecken
8.0 m.
Container Terminal
Autoport
Neuer Binnenhafen
Ro/Ro Ramp
Nord - Kai
Mobil Oil
Outer Harbour
Bus Station
Jarbumer Hafen
5.0 m.
Locks
New Ro/Ro Berth
Foreport
Sud-Kai
Leading Lights
Port Limit
70
EMS
71
73
Ebb Tide
75
72
77
Locks


HAMBURG
N
UNTERELBE
Ruschkanal
Steindeekkanal
Nautical Centre Seemannshoett
Pilot Station 1
"Hamburg Port"
KOHL FLEET
Petroleumhafen
HHLA Container Terminal
Waltershofer Hafen
Hamburg Steel Works
Kohlbrand Bridge
KOHL BRAND
Blohm & Voss Shipyard
Tollerort
Vulkanhafen
Kuhwerder Hafen
Kaiser Wilhelm
Rosshafen
Oder Hafen
Travehafen
Reiher Sting
Baakenhafen
Africa Terminal
NORDER ELBE
HHLA Fruit Centre
Hansahafen
Spreehafen
Hansa Port
RETHE
Neuhofer Kanal
WILHELMSBURG
Kattwyk Hafen
Blumensand Hafen
Reiher Steig
Kattwyk Bridge
Seehafen 4
Seehafen 3
Seehafen 2
Seehafen 1
SUDERELBE
Suderelbe Bridge
HARBURG


HAMBURG
RADIO REPORTING POINTS
TINSDAL
N
HAMBURG
Buoy No. 125
Western Port Limit
Hamburg Port Radio
Altona
Buoy No. 133
ELBE
Uberseebrucke
Vorhafen
Buoy No. 135
Parkhafen
Amerikahoft
Norderelbbrucken
FINKENWERDER
Kohlbrandbrucke
ALTENWERDER
Rathebrucke
Dove - Elbe
Dove - Elbe
Kattwykbrucke
Suderelbe
Suderelbbrucken
MOORWERDER
Harburg
0
3,000
Scale in Meters
Oorkaten
Eastern Port Limit


N
34 m.
36 m.
41.95 m.
110 m.
81.5 m.
125 m.
48.5 m.
Berth No. 3
92 m.
69 m.
11 m.
24 m.
Berth No. 2
187 m.
26.6 m.
23 m.
Berth No. 1
30 m.
30 m.
22 m.
41 m.
4 m.
4 m.
37.8 m.
37.8 m.
6 m.
85,000 d.w.t.
200,000 d.w.t.
85,000 d.w.t.
200,000 d.w.t.
30.7 m.
20 m.
25.5 m.
85,000 d.w.t.
RETHE
HAMBURG
VAN OMMEREN


+ 5.70
Berth No. 4
Fender 76.0 m.
Max. Length 235 m.
Max. Draft 12.20 m.
55,000 d.w.t.
N
HAMBURG
VAN OMMEREN
11.50 m.
11.50 m.
Rethe

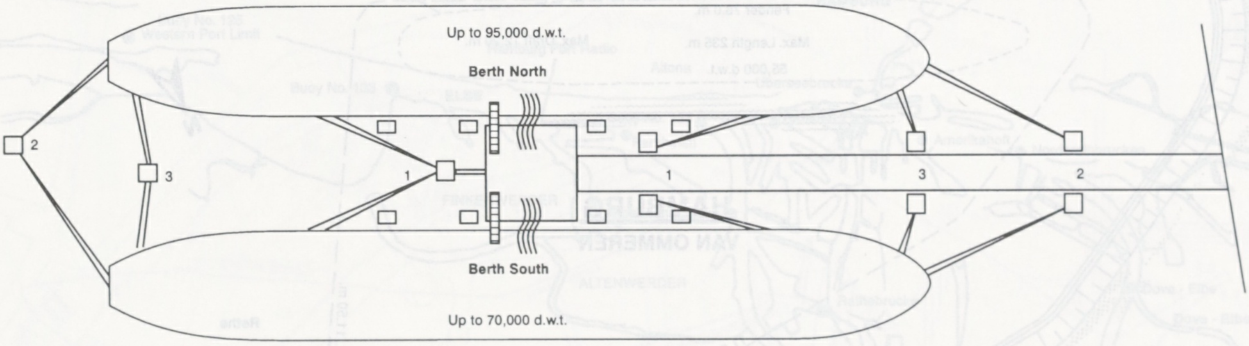

WEST
EAST
3
2
4
1
1
3
2
4
1
1
3
2
3
2

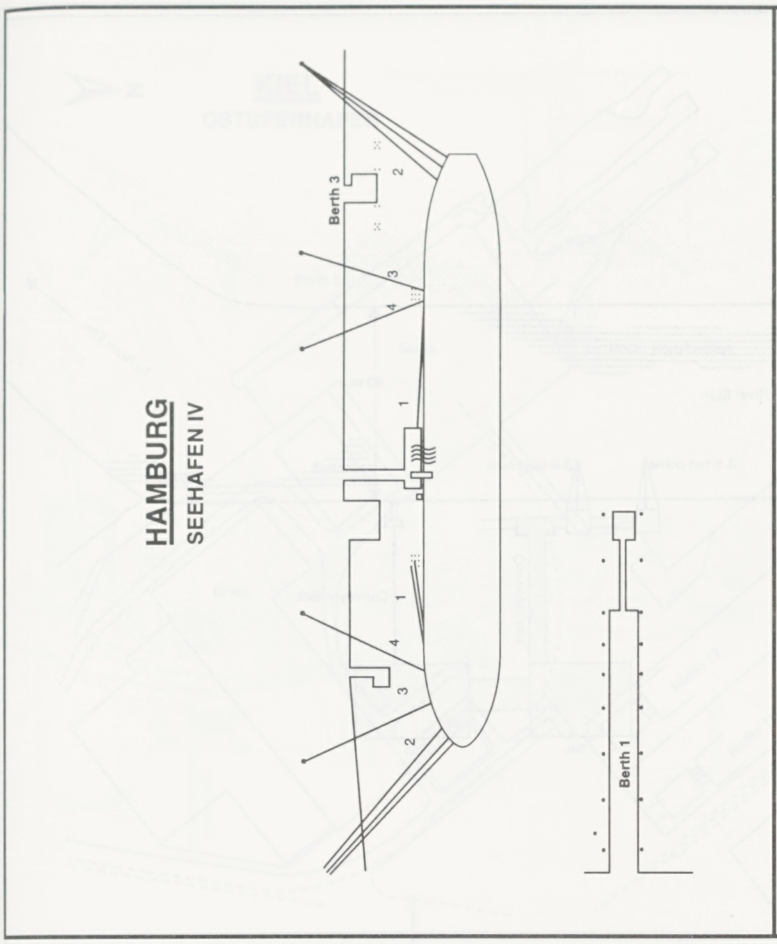
HAMBURG

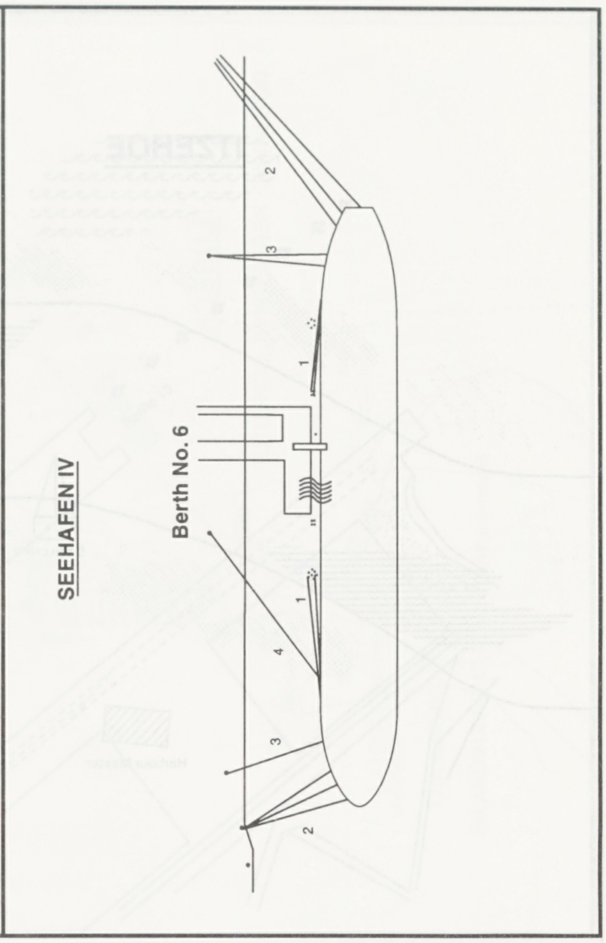
KATTWYCK - SHELL BERTH

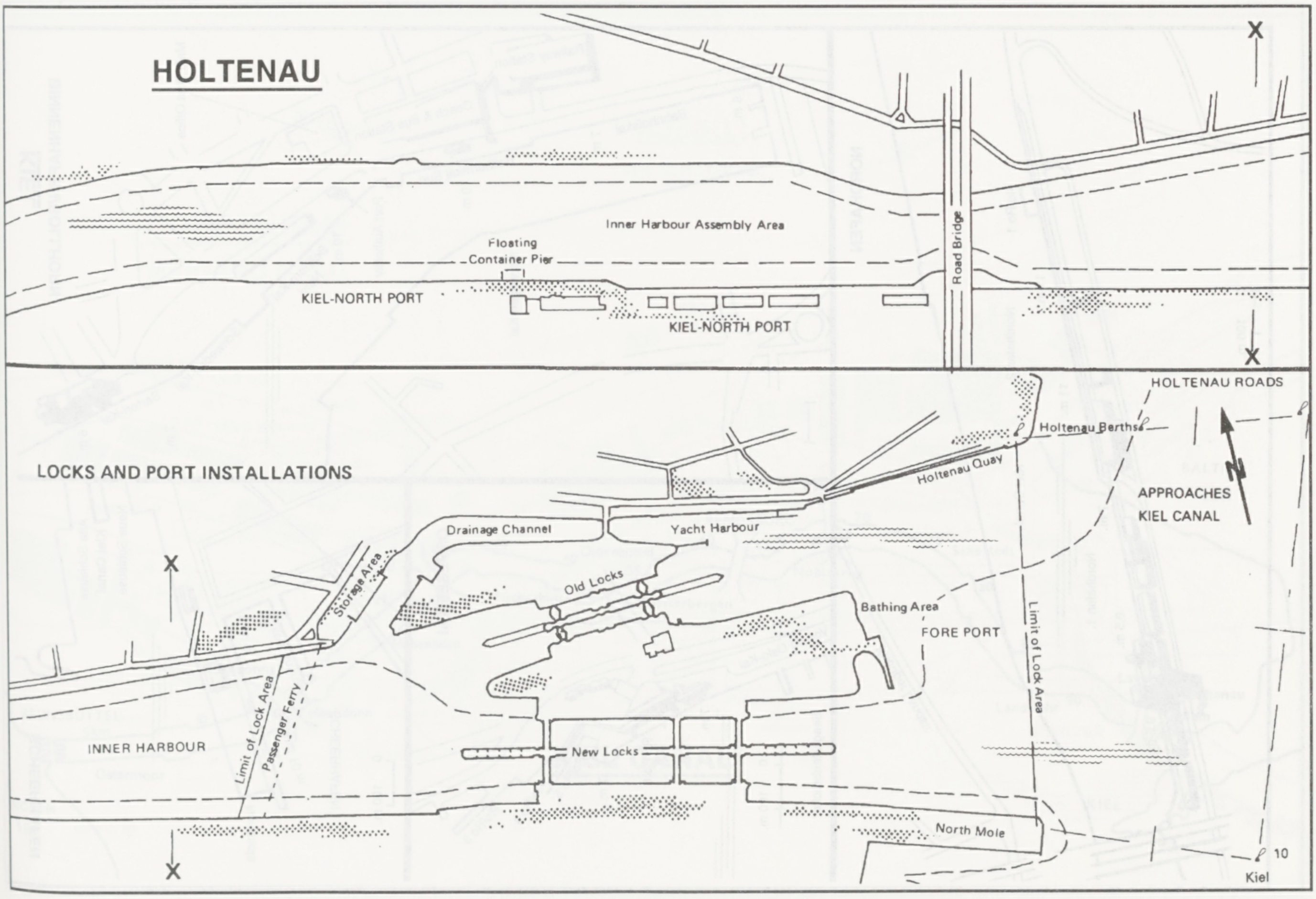
HAMBURG

KOEHLFEETHAFEN

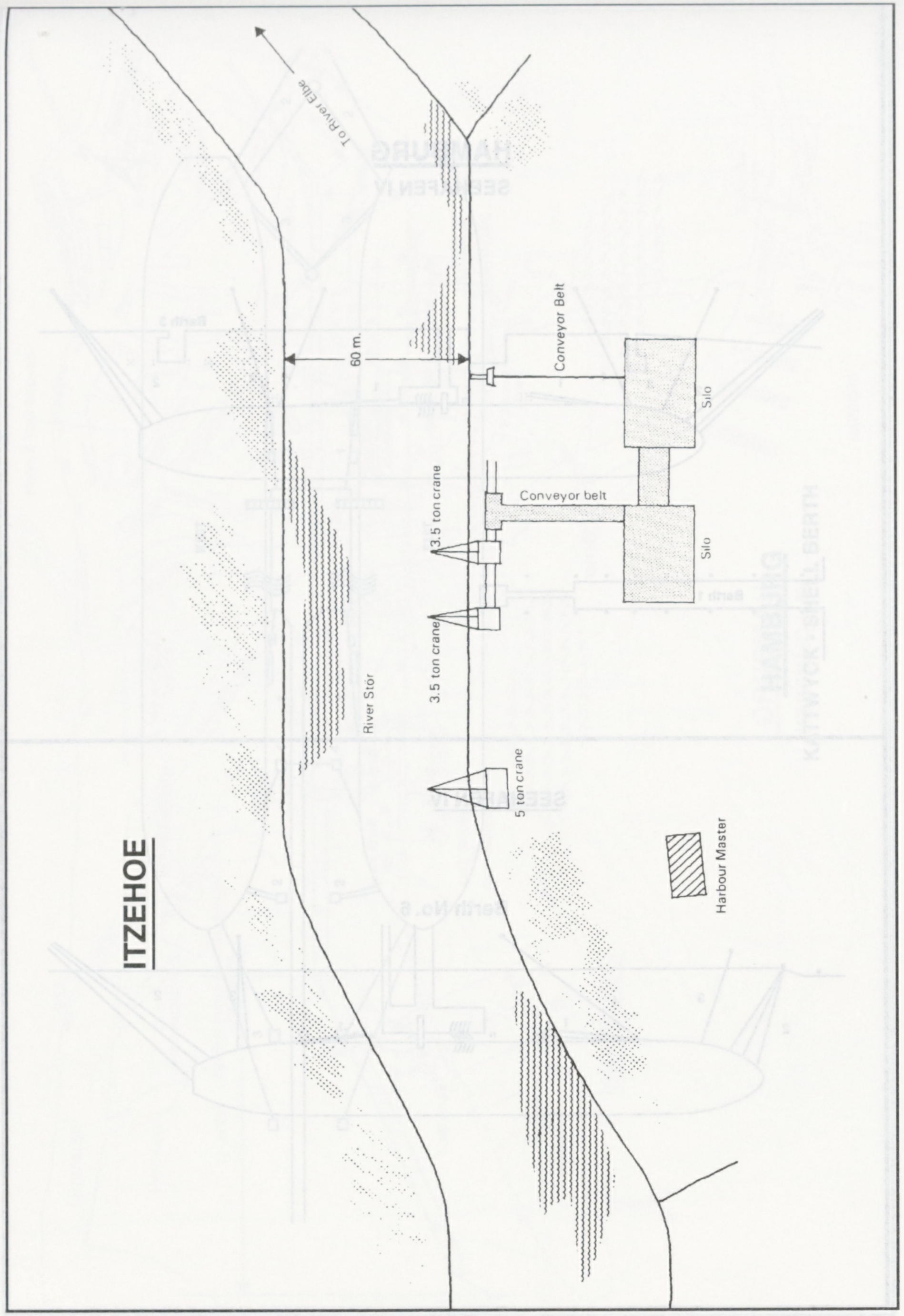

Up to 95,000 d.w.t.
Berth North
2
3
1
1
3
2
Berth South
Up to 70,000 d.w.t.


HAMBURG
SEEHAFEN IV
Berth 3
Berth 1
1
2
3
4

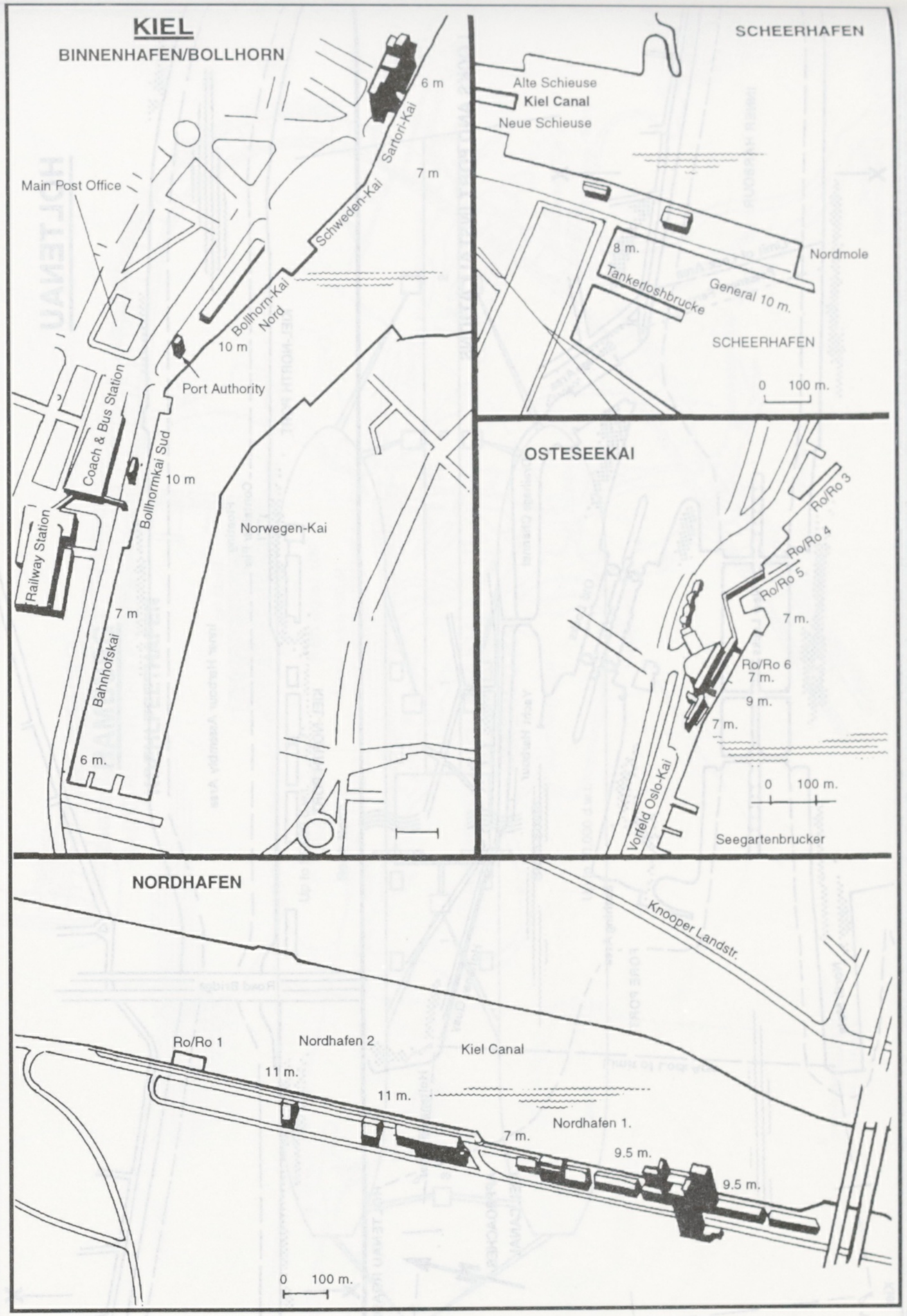

SEEHAFEN IV
Berth No. 6
1
2
3
4

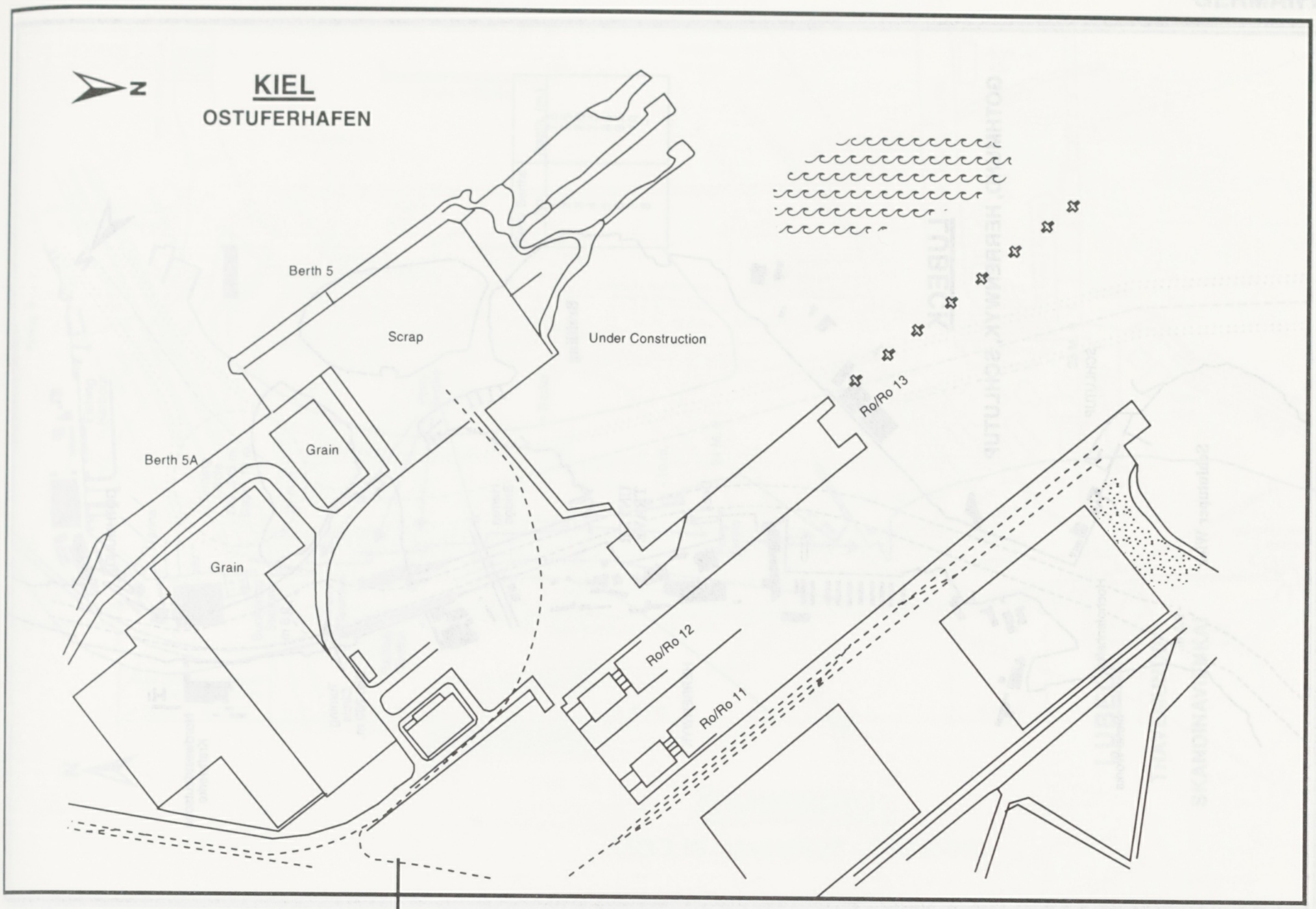

HOLTENAU
X
Inner Harbour Assembly Area
Floating
Container Pier
KIEL-NORTH PORT
KIEL-NORTH PORT
Road Bridge
X
LOCKS AND PORT INSTALLATIONS
HOLTENAU ROADS
Holtenau Berths
Holtenau Quay
APPROACHES
KIEL CANAL
Drainage Channel
Yacht Harbour
Storage Area
Old Locks
Bathing Area
FORE PORT
Limit of Lock Area
X
Limit of Lock Area
Passenger Ferry
INNER HARBOUR
New Locks
North Mole
X
10
Kiel

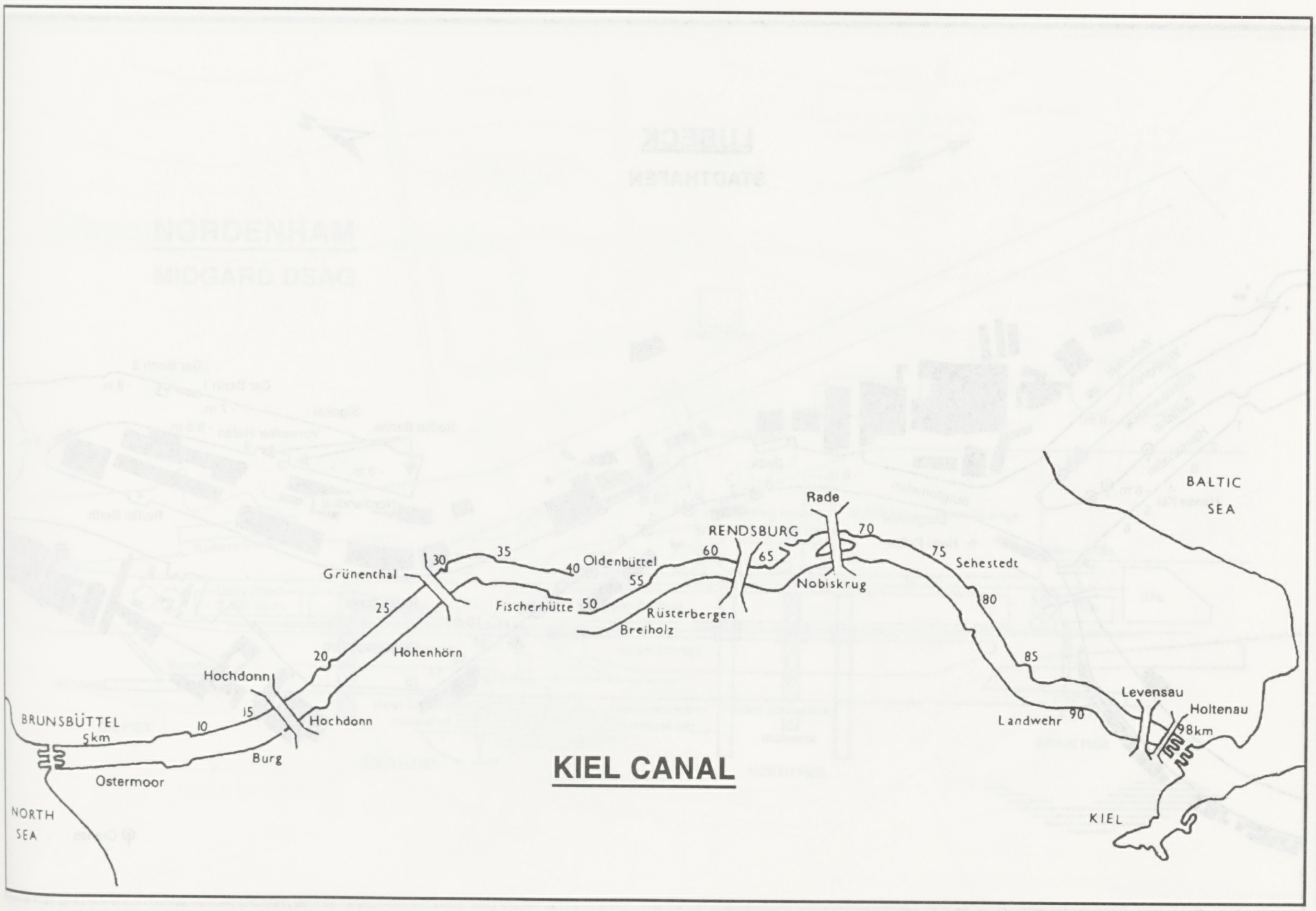
ITZEHOE

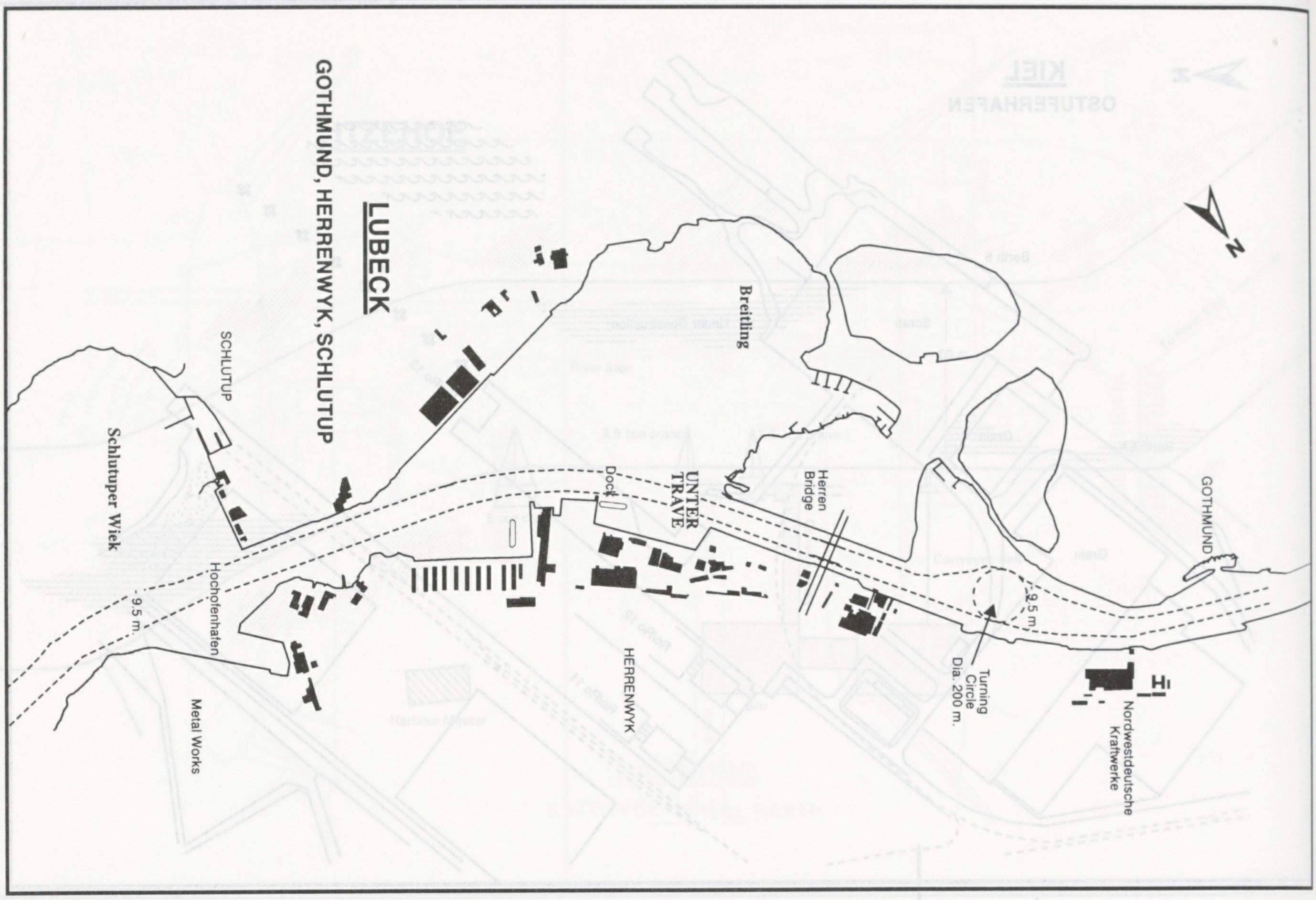

To River Elbe
60 m.
Conveyor Belt
Silo
Conveyor belt
3.5 ton crane
Silo
3.5 ton crane
River Stor
5 ton crane
Harbour Master

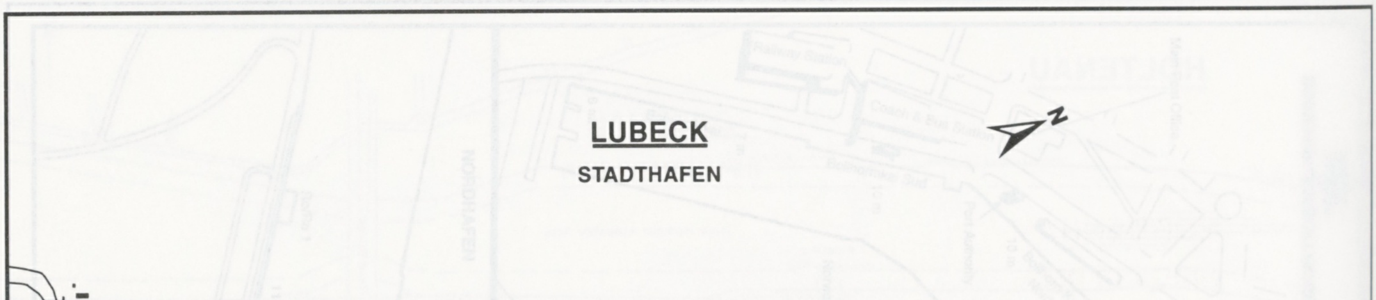
KIEL

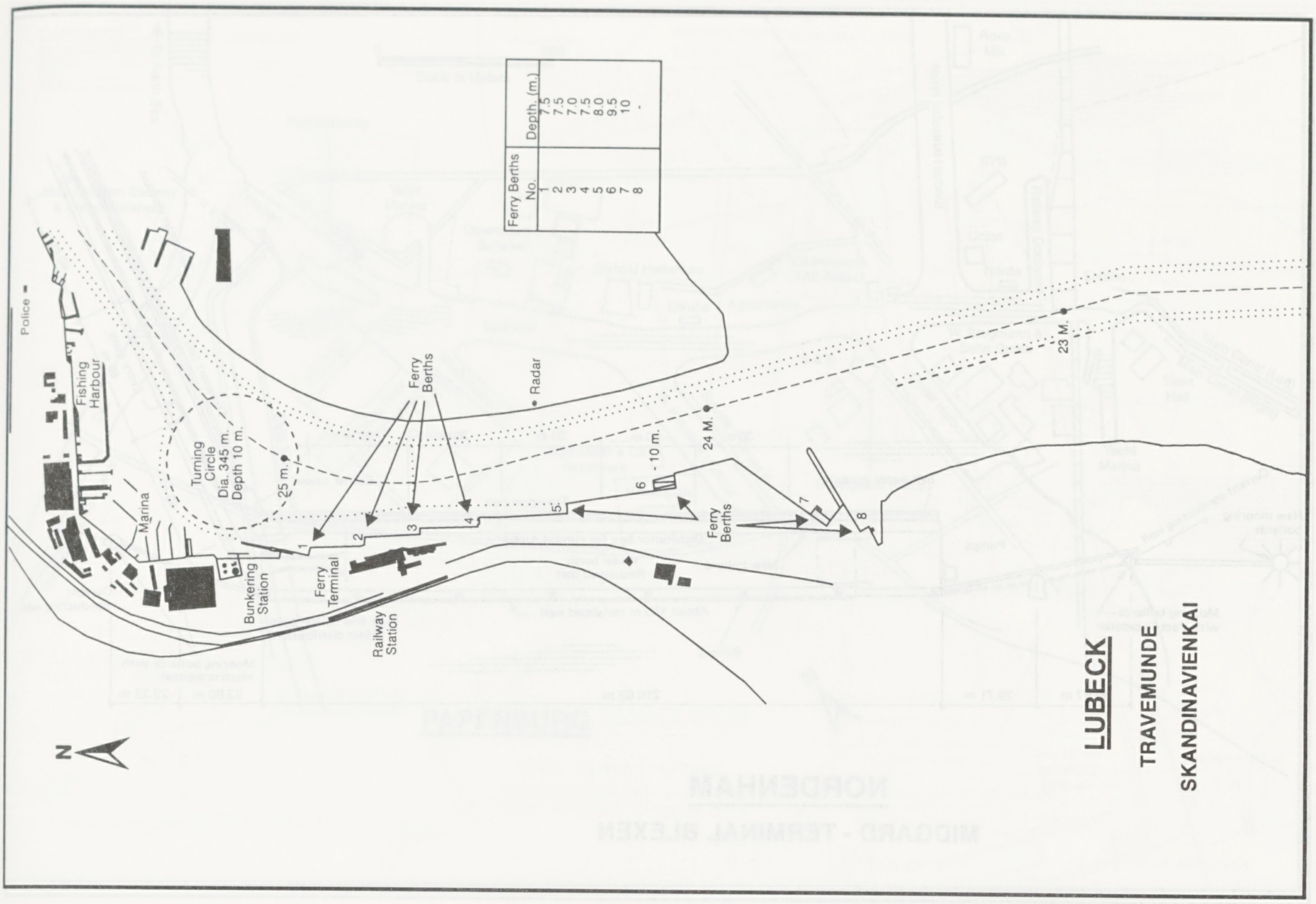

BINNENHAFEN/BOLLHORN
6 m
Sartori-Kai
7 m
Main Post Office
Schweden-Kai
Bollhorn-Kai Nord
10 m
Port Authority
Coach & Bus Station
Bollhornkai Sud
10 m
Norwegen-Kai
Railway Station
7 m
Bahnhofskai
6 m.
SCHEERHAFEN
Alte Schieuse
Kiel Canal
Neue Schieuse
8 m.
Nordmole
Tankerloshbrucke
General 10 m.
SCHEERHAFEN
0 100 m.
OSTESEEKAI
Ro/Ro 3
Ro/Ro 4
Ro/Ro 5
7 m.
Ro/Ro 6
7 m.
9 m.
7 m.
0 100 m.
Vorfeld Oslo-Kai
Seegartenbrucker
NORDHAFEN
Knooper Landstr.
Ro/Ro 1
Nordhafen 2
Kiel Canal
11 m.
11 m.
Nordhafen 1.
7 m.
9.5 m.
9.5 m.
0 100 m.


N
KIEL
OSTUFERHAFEN
Berth 5
Scrap
Under Construction
Ro/Ro 13
Berth 5A
Grain
Grain
Ro/Ro 12
Ro/Ro 11

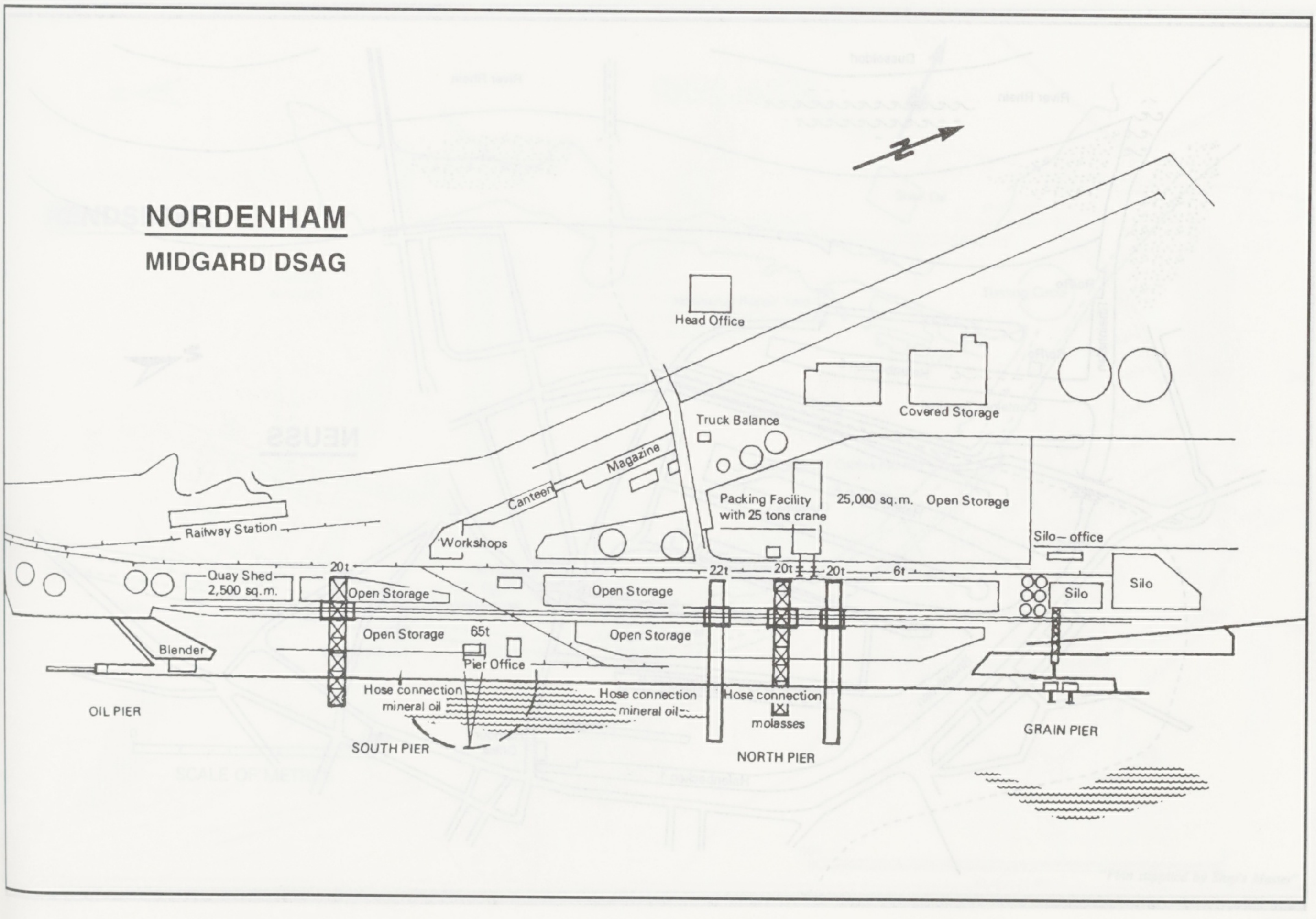

BALTIC SEA
Rade
RENDSBURG
70
60
65
75
Sehestedt
35
30
40
Oldenbüttel
Grünenthal
55
Nobiskrug
25
Fischerhütte
50
Rüsterbergen
Breiholz
80
Hohenhörn
20
85
Hochdonn
Levensau
15
Holtenau
BRUNSBÜTTEL
10
Hochdonn
Landwehr
90
98km
5km
Burg
Ostermoor
KIEL CANAL
NORTH SEA
KIEL

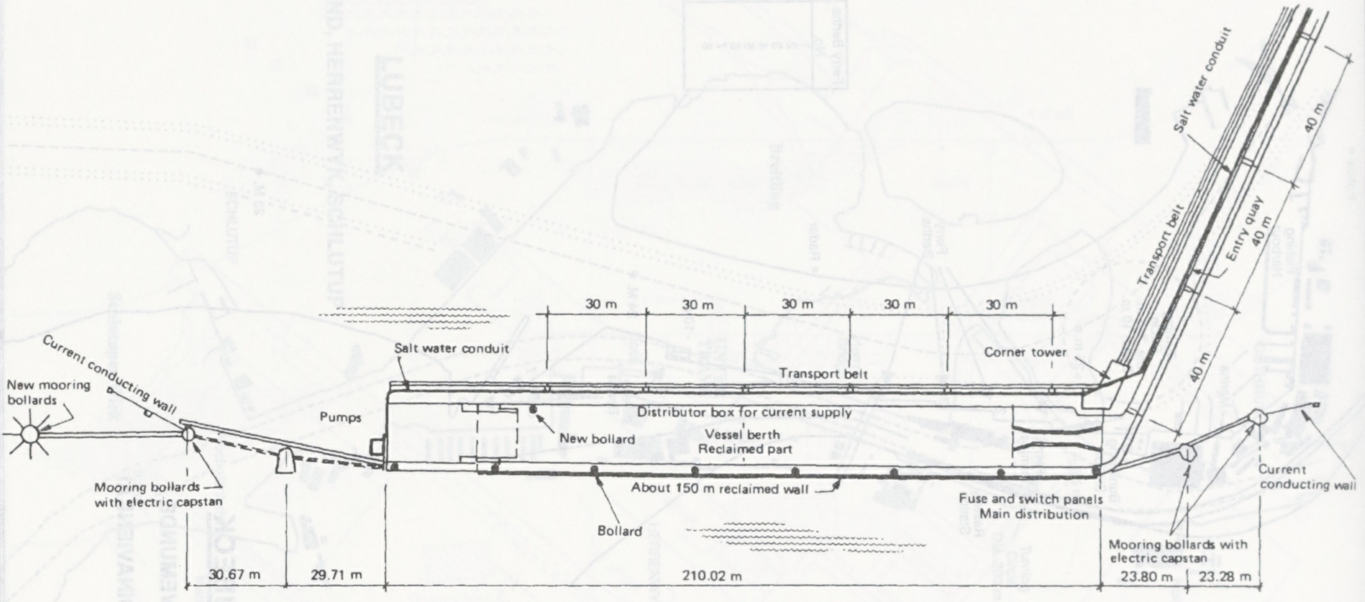

LUBECK
GOTHMUND, HERRENWYK, SCHLUTUP
SCHLUTUP
Schlutuper Wiek
Hochofenhafen
Metal Works
- 9.5 m.
Breitling
Dock
UNTER TRAVE
Herren Bridge
HERRENWYK
Turning Circle Dia. 200 m.
- 9.5 m.
GOTHMUND
Nordwestdeutsche Kraftwerke
N


LUBECK
STADTHAFEN
N
Viehofkai
Wallhafen
Kulenkampkai
Behnkai
Hansahafen
Hanse Kai
1
2
3
4
5
6
7
8
- 8 m.
- 8 m.
Burgtorhafen
Burgtorkai
River Police
- 8 m.
Dock
1
2
3
4
5
6
7
8
- 8 m.
9
10
11
- 10 m.
12
13
14
15
Konstinkai
River Trave
Umschlaghafen
Ro/Ro Berths
1
- 8 m.
Nordlandkai
Sigokai
Vorwerker Hafen
2
3
Car Berth 1
Car Berth 2
- 7 m.
- 9.5 m.
- 8 m.
- 8 m.
4
Ro/Ro Berth
- 3.5 m.
Cranes


LUBECK
TRAVEMUNDE
SKANDINAVIENKAI
Police
Fishing Harbour
Marina
Turning Circle Dia. 345 m. Depth 10 m.
25 m.
Bunkering Station
Ferry Terminal
Railway Station
Ferry Berths
Radar
1
2
3
4
5
6
7
8
- 10 m.
24 M.
23 M.
N

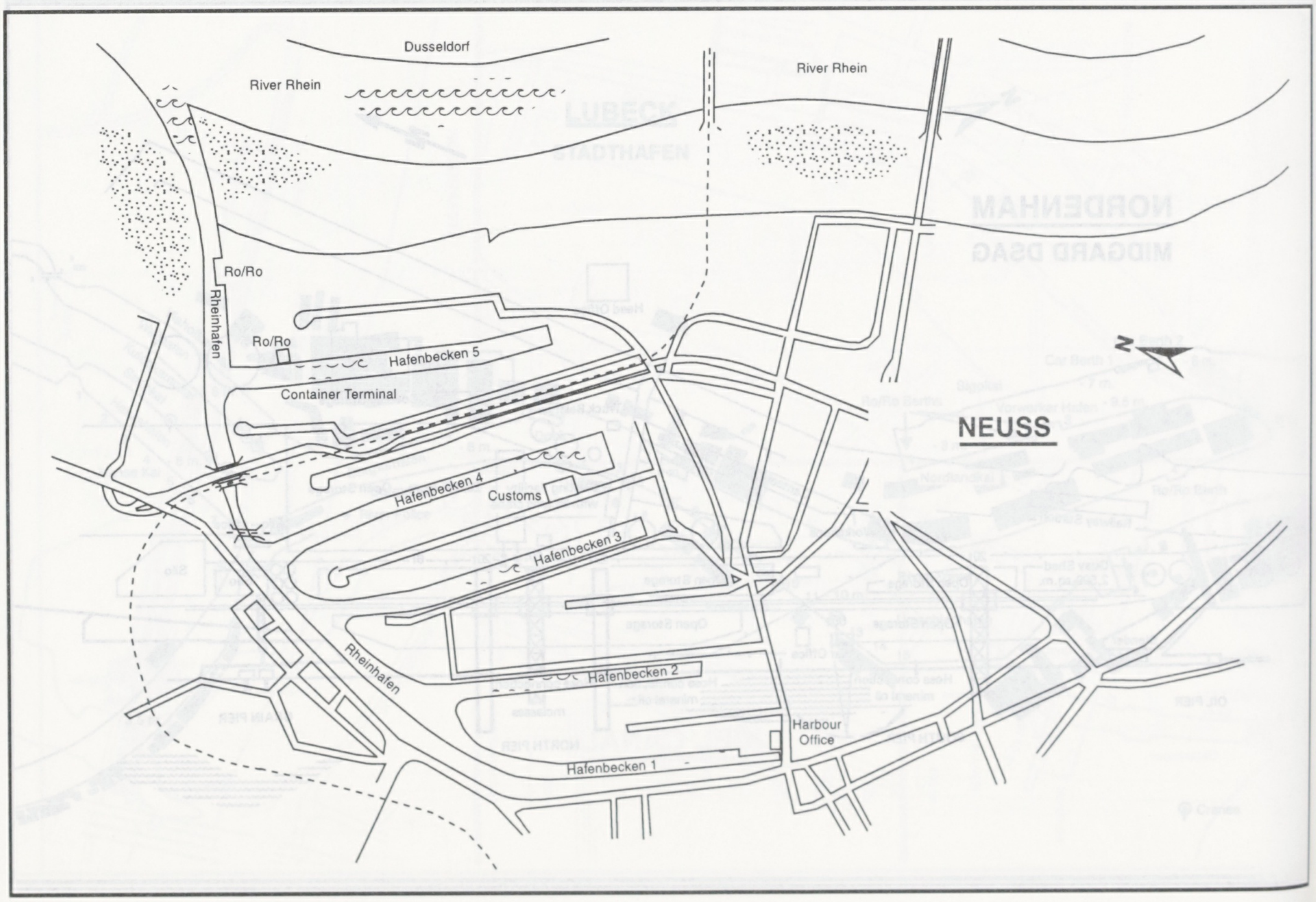
Ferry Berths No.	Depth (m.)
1	7.5
2	7.5
3	7.0
4	7.5
5	8.0
6	9.5
7	10
8	-


NORDENHAM
MIDGARD DSAG
N
Head Office
Covered Storage
Truck Balance
Magazine
Canteen
Packing Facility with 25 tons crane
25,000 sq.m. Open Storage
Railway Station
Workshops
Silo– office
Silo
Silo
Quay Shed 2,500 sq.m.
20t
Open Storage
22t
20t
20t
6t
Open Storage
Open Storage
65t
Open Storage
Blender
Pier Office
Hose connection mineral oil
Hose connection mineral oil
Hose connection molasses
OIL PIER
SOUTH PIER
NORTH PIER
GRAIN PIER

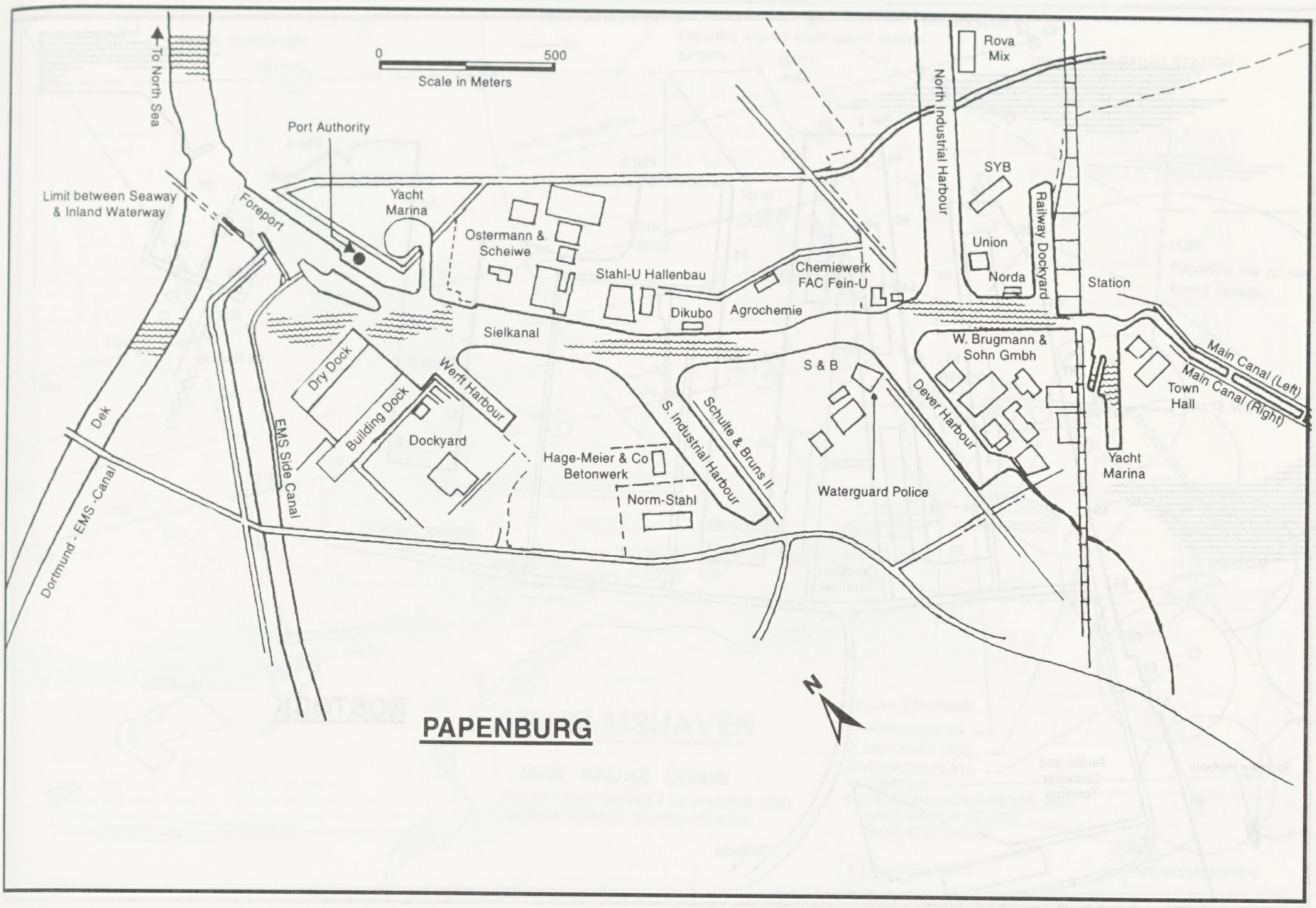

Salt water conduit
40 m
Transport belt
Entry quay
40 m
40 m
30 m
30 m
30 m
30 m
30 m
Salt water conduit
Corner tower
Transport belt
Current conducting wall
New mooring bollards
Pumps
Distributor box for current supply
New bollard
Vessel berth
Reclaimed part
Mooring bollards with electric capstan
About 150 m reclaimed wall
Fuse and switch panels
Main distribution
Current conducting wall
Bollard
Mooring bollards with electric capstan
30.67 m
29.71 m
210.02 m
23.80 m
23.28 m

NORDENHAM

MIDGARD - TERMINAL BLEXEN

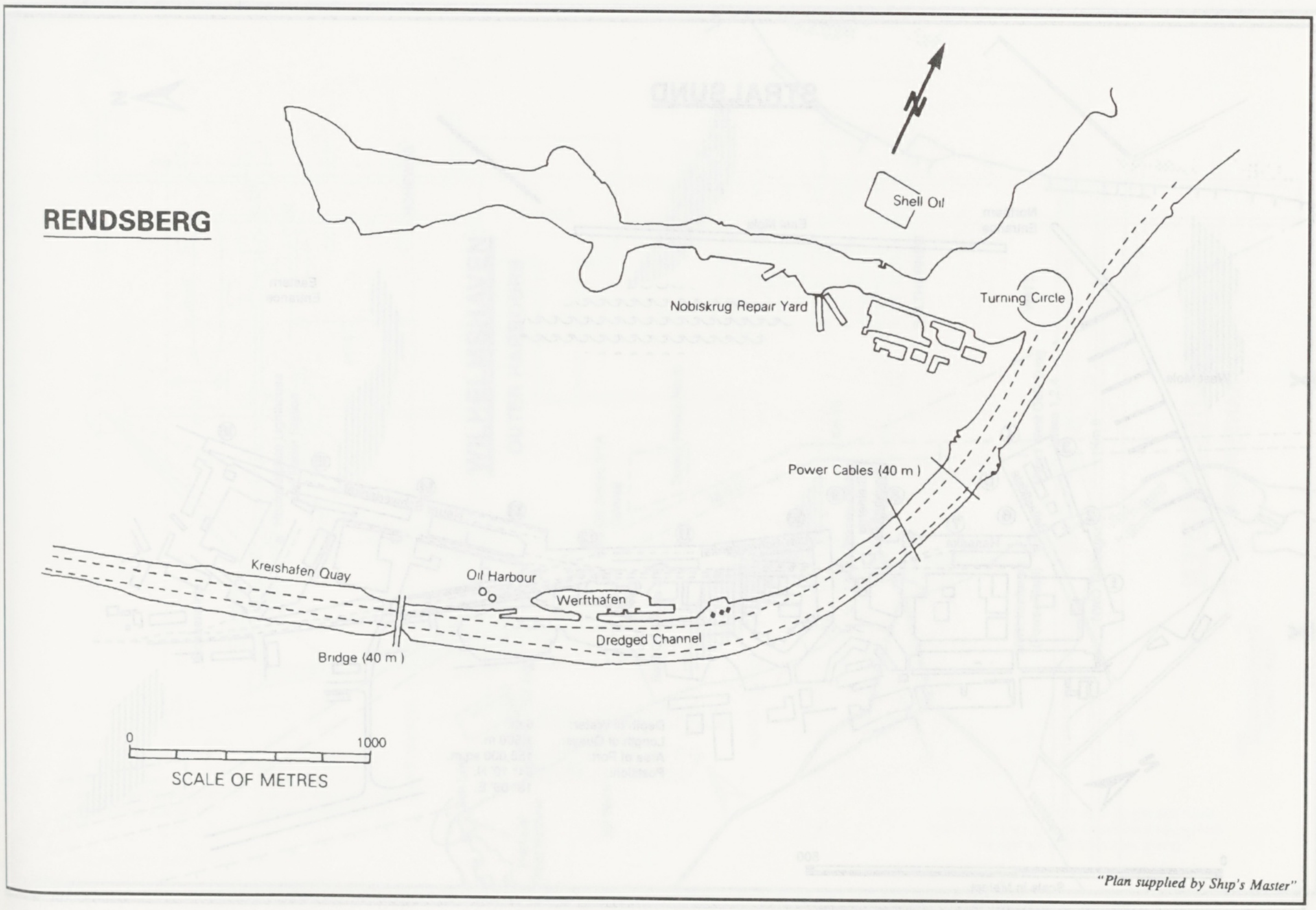

Dusseldorf
River Rhein
River Rhein
Ro/Ro
Rheinhafen
Ro/Ro
Hafenbecken 5
Container Terminal
Hafenbecken 4
Customs
Hafenbecken 3
Rheinhafen
Hafenbecken 2
Harbour Office
Hafenbecken 1
N

NEUSS



PAPENBURG

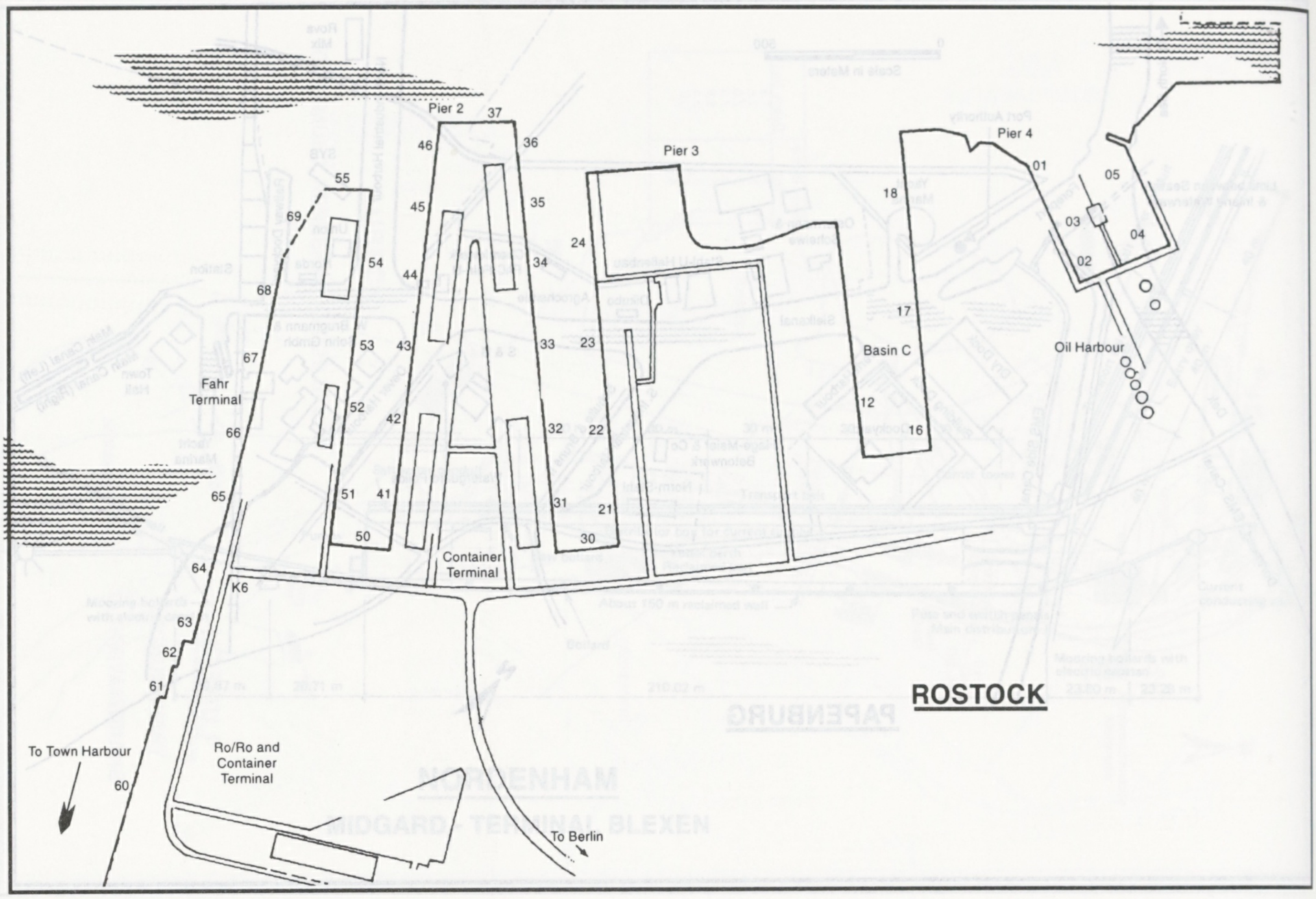
To North Sea
0
500
Scale in Meters
Port Authority
Limit between Seaway & Inland Waterway
Foreport
Yacht Marina
Ostermann & Scheiwe
Stahl-U Hallenbau
Chemiewerk FAC Fein-U
Dikubo
Agrochemie
Sielkanal
Rova Mix
North Industrial Harbour
SYB
Union
Norda
Railway Dockyard
Station
W. Brugmann & Sohn Gmbh
Main Canal (Left)
Main Canal (Right)
Town Hall
Yacht Marina
S & B
Dever Harbour
Waterguard Police
Schulte & Bruns II
S. Industrial Harbour
Hage-Meier & Co Betonwerk
Norm-Stahl
Werft Harbour
Dry Dock
Building Dock
Dockyard
Dek
EMS Side Canal
Dortmund - EMS -Canal
N

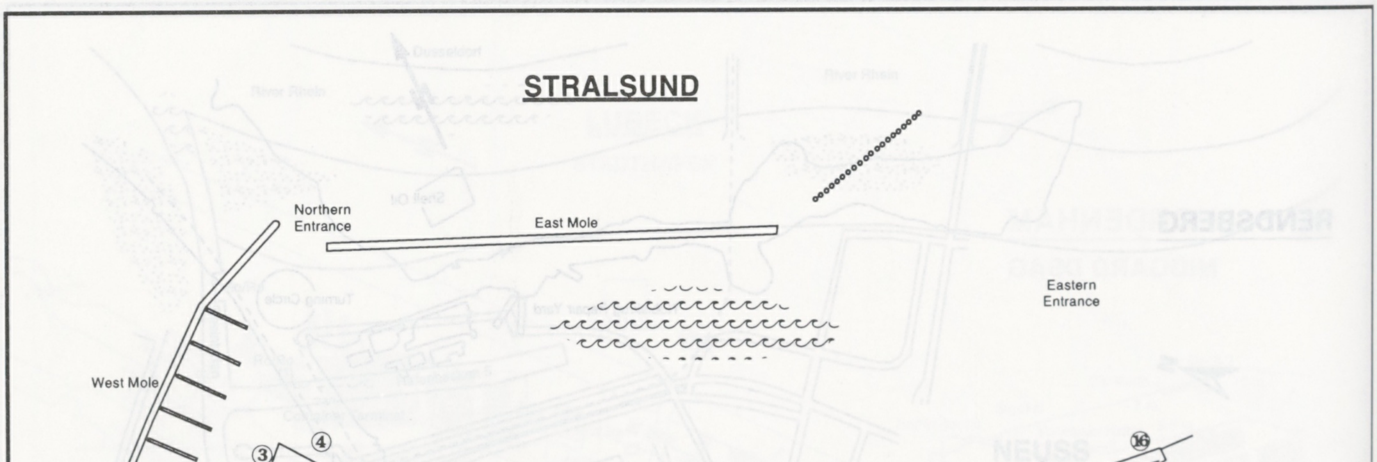


RENDSBERG

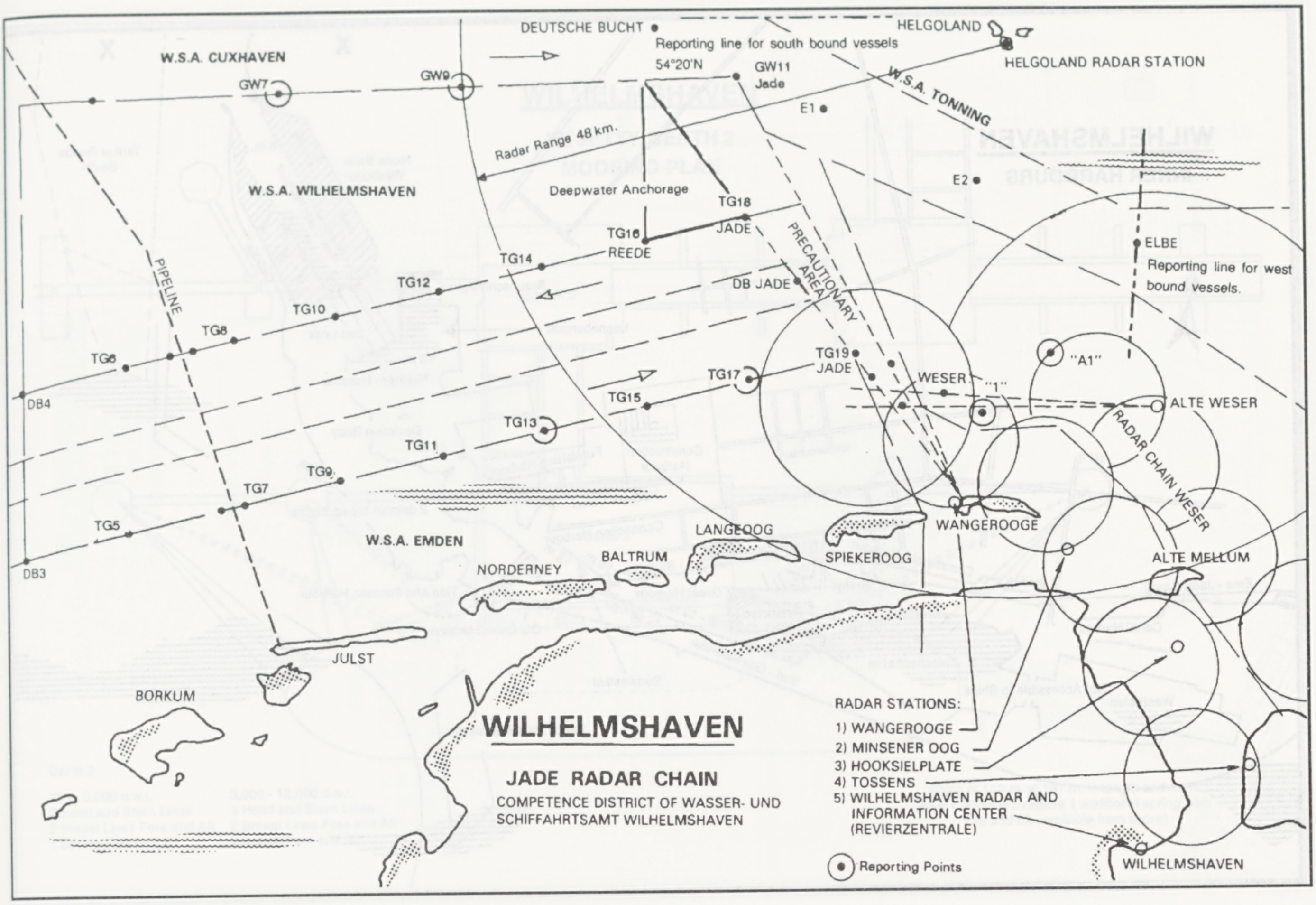
Shell Oil
Nobiskrug Repair Yard
Turning Circle
Power Cables (40 m)
Kreishafen Quay
Oil Harbour
Werfthafen
Dredged Channel
Bridge (40 m)
0
1000
SCALE OF METRES

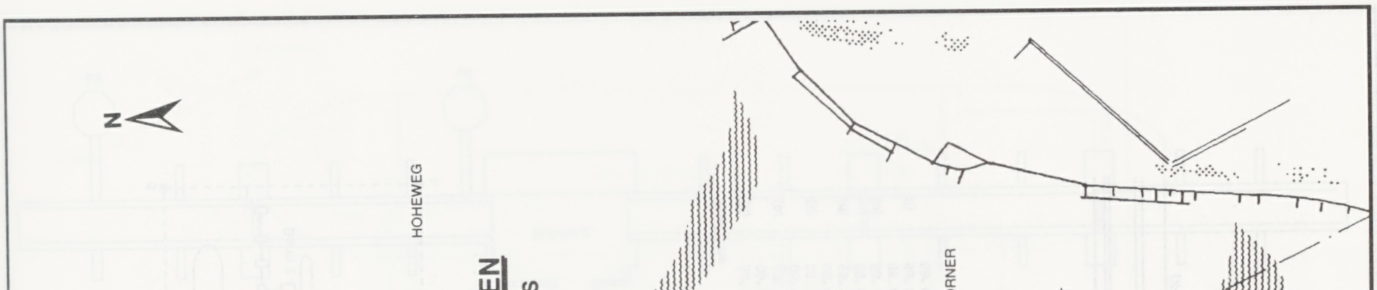
"Plan supplied by Ship's Master"

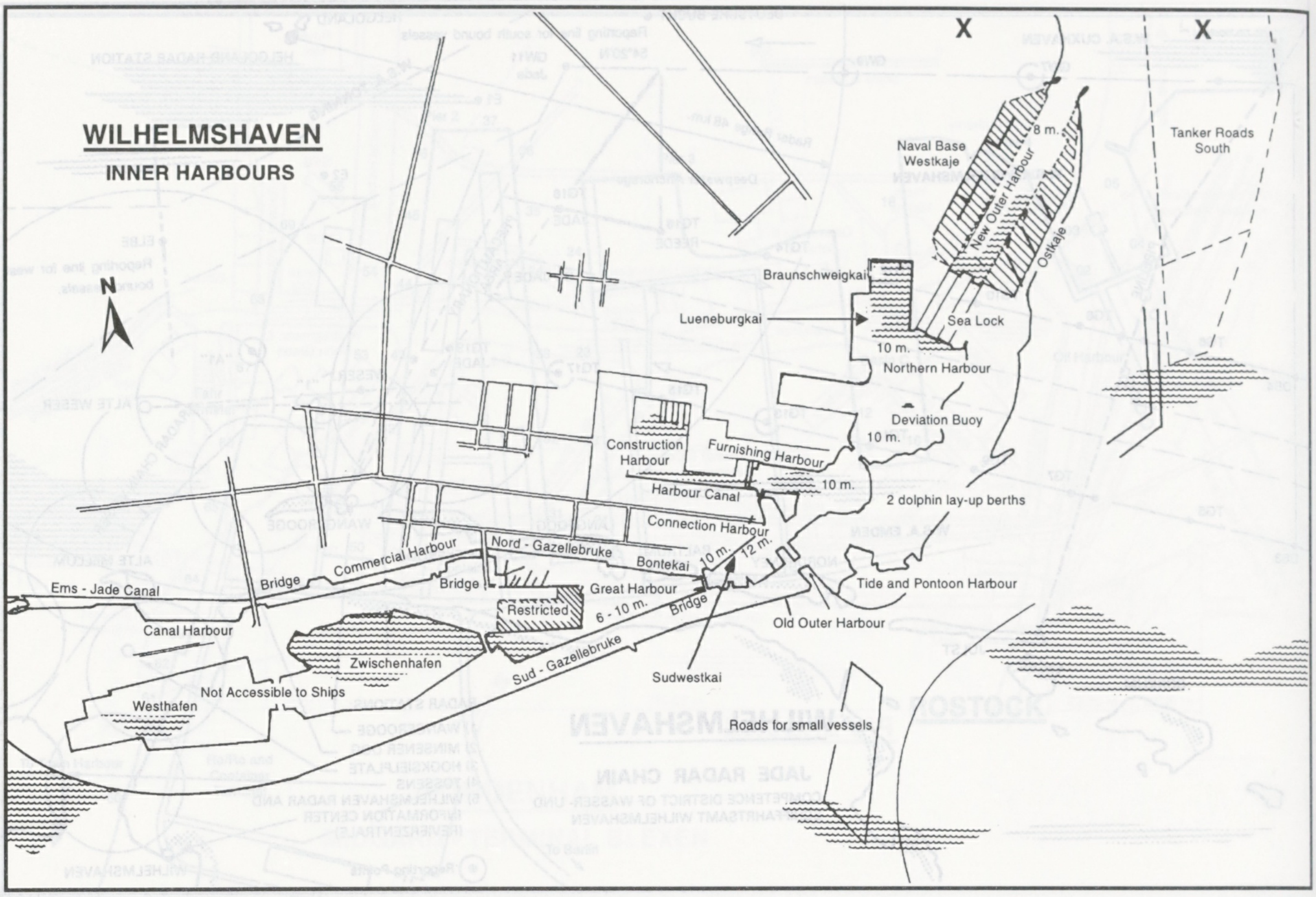

ROSTOCK
Pier 2
37
46
36
55
69
45
35
Pier 3
Pier 4
01
05
18
24
03
04
02
54
44
34
68
17
Oil Harbour
53
43
33
23
Basin C
67
Fahr Terminal
52
12
42
32
22
16
66
65
51
41
31
21
50
30
Container Terminal
64
K6
63
62
61
To Town Harbour
Ro/Ro and Container Terminal
60
To Berlin

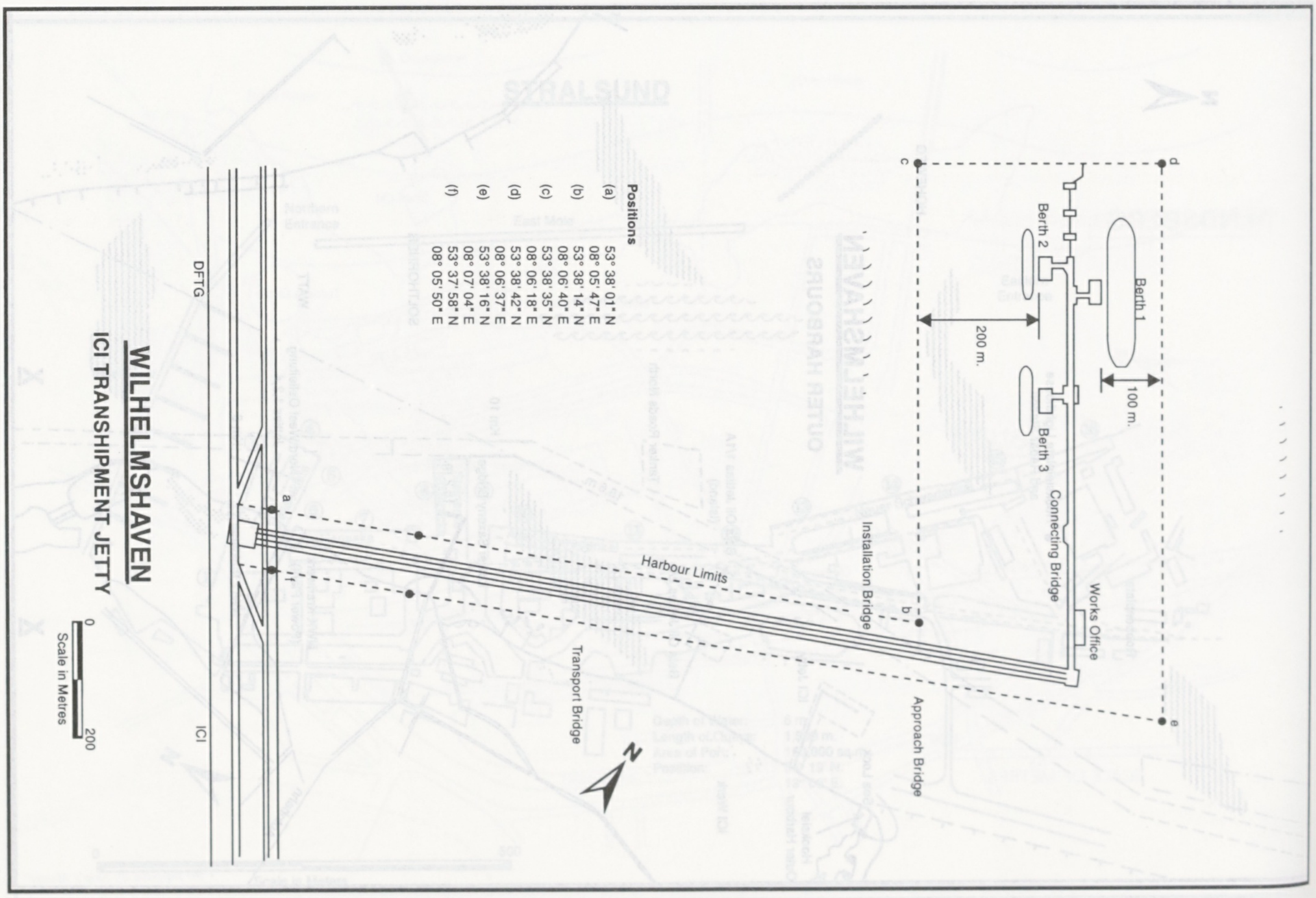

STRALSUND
Northern Entrance
East Mole
Eastern Entrance
West Mole
③
④
Ballastkiste
⑤
②
⑥
⑦
Hansaka
⑧
Steinerne Fischbrucke
⑨
⑩
Alter Schwedenkai
⑪
⑫
⑬
Neuer Schwedenkai
⑭
⑮
⑯
①
0
500
Scale in Meters

Depth of Water:	6 m.
Length of Quays:	1,500 m.
Area of Port:	150,000 sq.m.
Postition:	54° 19' N. 13° 06' E.


DEUTSCHE BUCHT
Reporting line for south bound vessels
54°20'N
HELGOLAND
HELGOLAND RADAR STATION
W.S.A. CUXHAVEN
GW7
GW9
GW11
Jade
E1
W.S.A. TONNING
E2
Radar Range 48 km.
Deepwater Anchorage
W.S.A. WILHELMSHAVEN
TG18
JADE
TG16
REEDE
PRECAUTIONARY AREA
ELBE
Reporting line for west bound vessels.
TG14
TG12
DB JADE
TG10
PIPELINE
TG8
TG6
TG19
JADE
"A1"
TG17
WESER
"1"
ALTE WESER
DB4
TG15
TG13
RADAR CHAIN WESER
TG11
TG9
TG7
TG5
WANGEROOGE
LANGEOOG
W.S.A. EMDEN
SPIEKEROOG
ALTE MELLUM
DB3
BALTRUM
NORDERNEY
JULST
BORKUM
WILHELMSHAVEN
JADE RADAR CHAIN
COMPETENCE DISTRICT OF WASSER- UND SCHIFFAHRTSAMT WILHELMSHAVEN
RADAR STATIONS:
1) WANGEROOGE
2) MINSENER OOG
3) HOOKSIELPLATE
4) TOSSENS
5) WILHELMSHAVEN RADAR AND INFORMATION CENTER (REVIERZENTRALE)
Reporting Points
WILHELMSHAVEN


N
WILHELMSHAVEN
OUTER HARBOURS
HOHEWEG
Hooksielplate Lighthouse and Radar Station
Robbenplate
Beta Oil Jetties 1/1A (Island)
Tanker Roads North
18.6 m.
Km 10
Lower Saxony Bridge
16.2 m.
SOLTHORNER
WATT
Nord West Oelleitung Jetties 1,2,4
Km 6
NWK Kraftwerk (Power Plant)
NWO Tanklager
Autobahn
Beta Oil Jetties 2/3
ICI Jetty
ICI Werk
Sea Lock
Hooksiel Outer Harbour
X
X


WILHELMSHAVEN
INNER HARBOURS
N
X
X
Naval Base Westkaje
8 m.
New Outer Harbour
Ostkaje
Tanker Roads South
Braunschweigkai
Lueneburgkai
Sea Lock
10 m.
Northern Harbour
Deviation Buoy
10 m.
Construction Harbour
Furnishing Harbour
10 m.
Harbour Canal
2 dolphin lay-up berths
Connection Harbour
Nord - Gazellebruke
Commercial Harbour
Bontekai
10 m.
12 m.
Bridge
Bridge
Ems - Jade Canal
Great Harbour
Restricted
Tide and Pontoon Harbour
Bridge
6 - 10 m.
Old Outer Harbour
Canal Harbour
Zwischenhafen
Sud - Gazellebruke
Sudwestkai
Not Accessible to Ships
Westhafen
Roads for small vessels

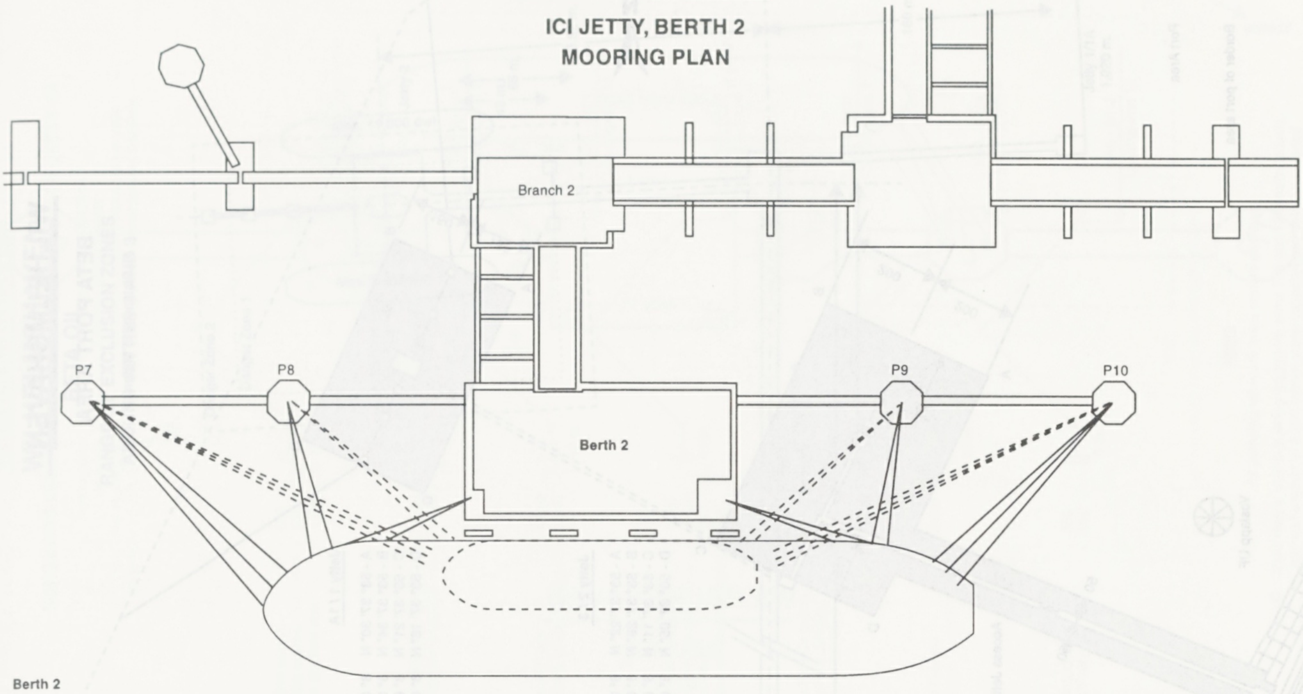

WILHELMSHAVEN
ICI TRANSHIPMENT JETTY
N
N
Berth 1
Berth 2
Berth 3
100 m.
200 m.
Connecting Bridge
Works Office
Installation Bridge
Approach Bridge
Harbour Limits
Transport Bridge
DFTG
ICI
a
b
c
d
e
f
0
200
Scale in Metres

Positions

(a)	53° 38' 01" N 08° 05' 47" E
(b)	53° 38' 14" N 08° 06' 40" E
(c)	53° 38' 35" N 08° 06' 18" E
(d)	53° 38' 42" N 08° 06' 37" E
(e)	53° 38' 16" N 08° 07' 04" E
(f)	53° 37' 58" N 08° 05' 50" E

WILHELMSHAVEN

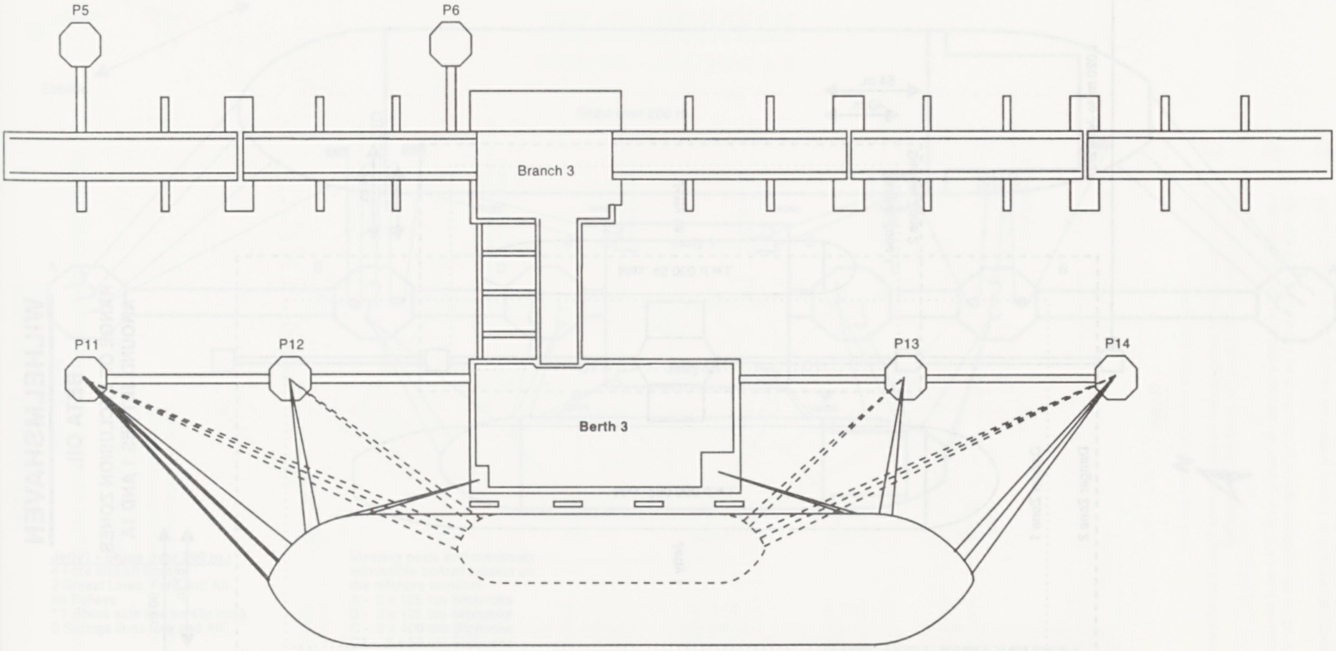
ICI JETTY, BERTH 2
MOORING PLAN



Berth 2

400 - 3,000 d.w.t.	3,000 - 12,000 d.w.t.
3 Head and Stern Lines	3 Head and Stern Lines
2 Breast Lines Fore and Aft	2 Breast Lines Fore and Aft
1 Spring Fore and Aft	2 Spring Fore and Aft

Ships of 120 m. to 137 m. in length and more than 7,000 d.w.t. require 1 additional spring both fore and aft (available from shore)



WILHELMSHAVEN

ICI JETTY, BERTH 3
MOORING PLAN

Berth 3

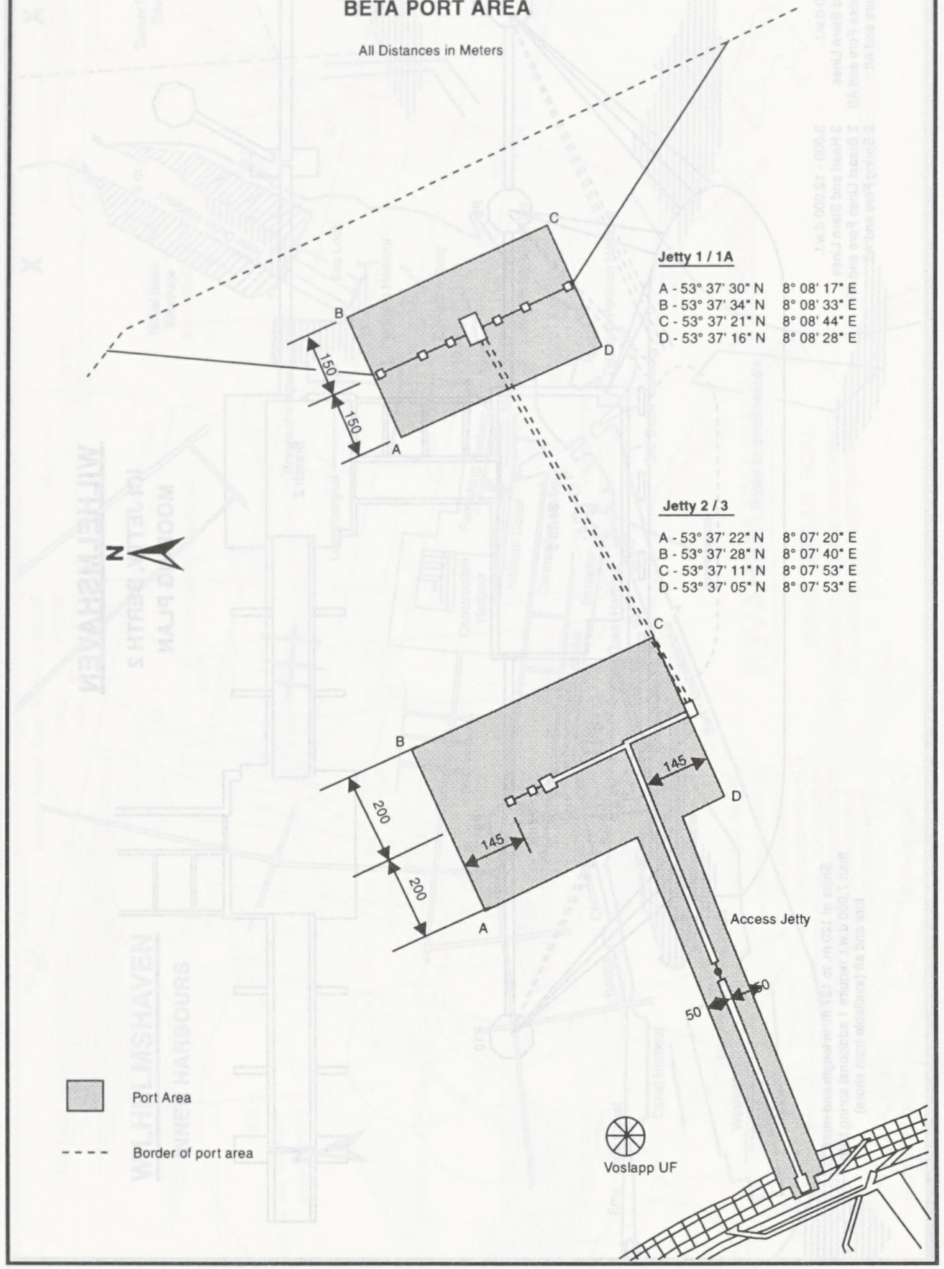
400 - 3,000 d.w.t.	3,000 - 12,000 d.w.t.
3 Head and Stern lines	3 Head and Stern lines
2 Breast lines Fore and Aft	2 Breast lines Fore and Aft
1 Spring Fore and Aft	2 Springs Fore and Aft

Ships of 120 m. to 137 m. in length and more than 7,000 d.w.t. require 1 additional spring both fore and aft. (available from shore)

WILHELMSHAVEN

BETA PORT AREA

All Distances in Meters


C
B
D
A
150
150
N
C
B
D
145
200
145
200
A
Access Jetty
50
50
▨ Port Area
- - - - Border of port area
Voslapp UF

Jetty 1 / 1A

A - 53° 37' 30" N	8° 08' 17" E
B - 53° 37' 34" N	8° 08' 33" E
C - 53° 37' 21" N	8° 08' 44" E
D - 53° 37' 16" N	8° 08' 28" E

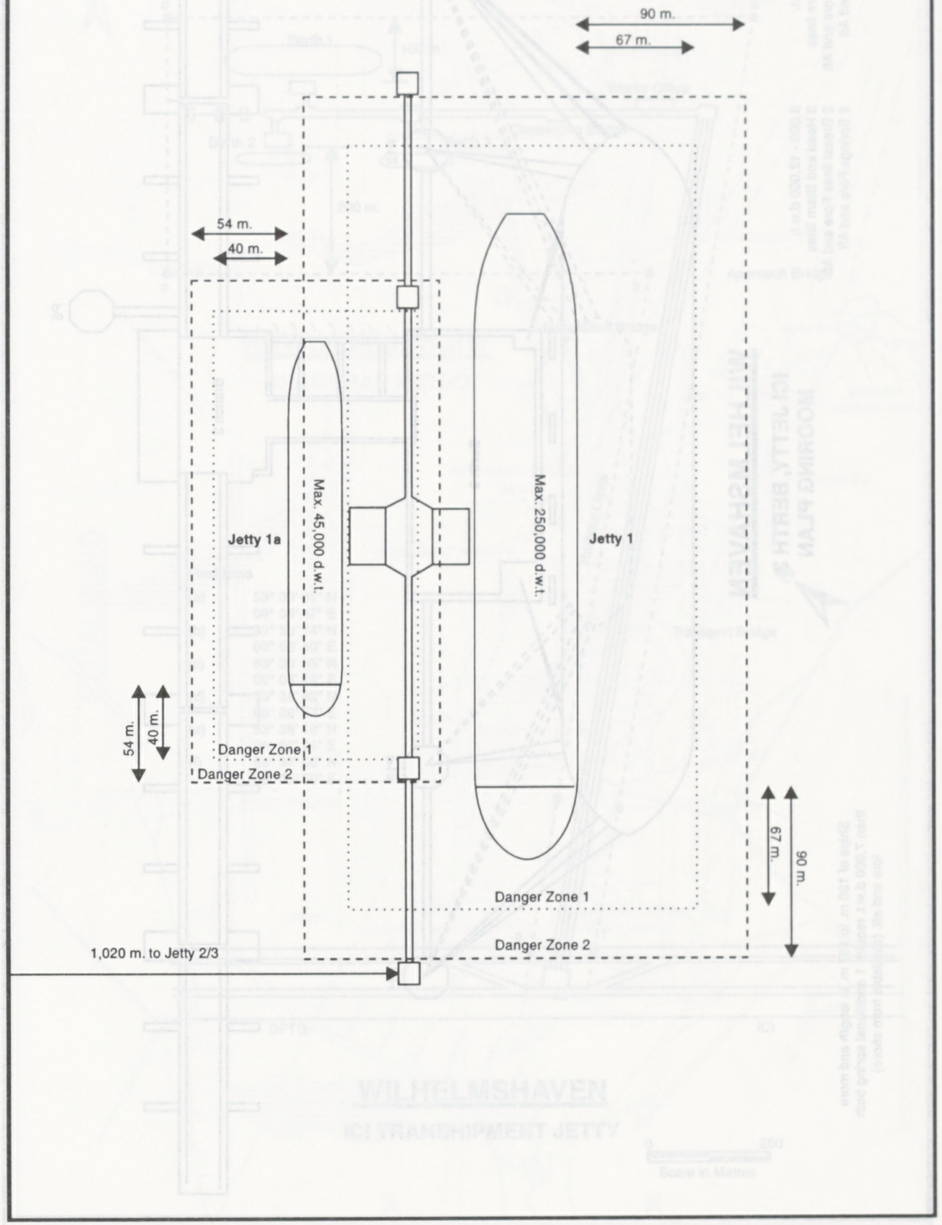
Jetty 2 / 3

A - 53° 37' 22" N	8° 07' 20" E
B - 53° 37' 28" N	8° 07' 40" E
C - 53° 37' 11" N	8° 07' 53" E
D - 53° 37' 05" N	8° 07' 53" E

WILHELMSHAVEN

BETA OIL

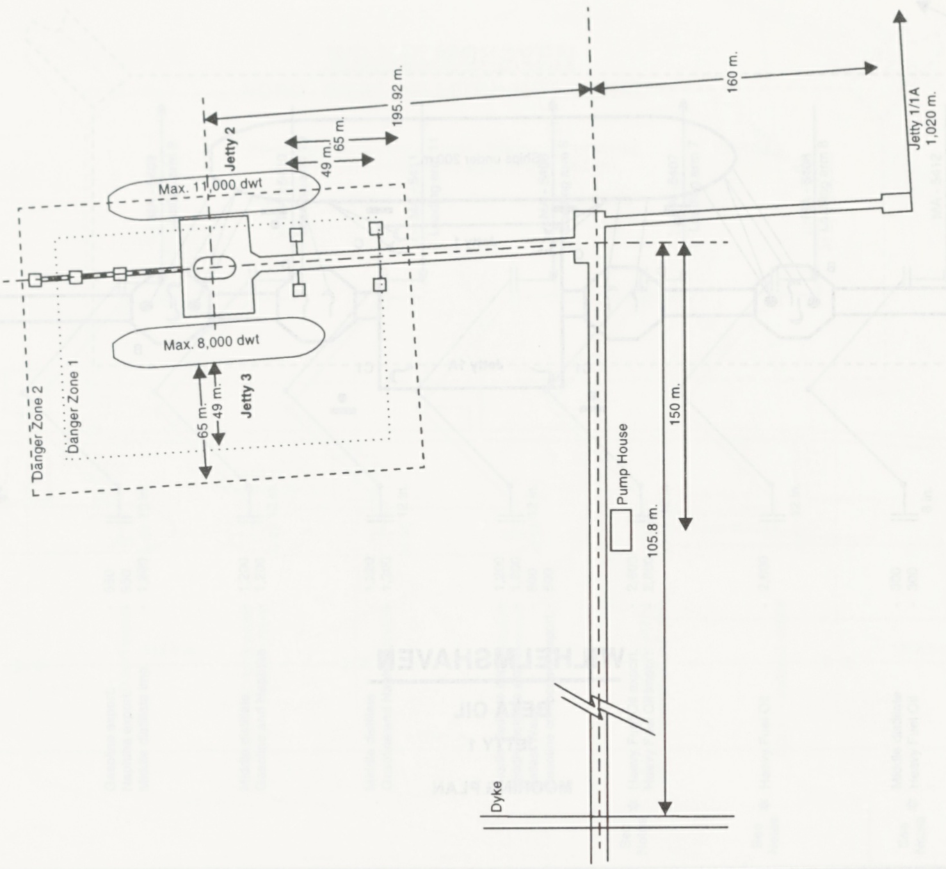
RANGE OF EXCLUSION ZONES AROUND JETTIES 1 AND 1A

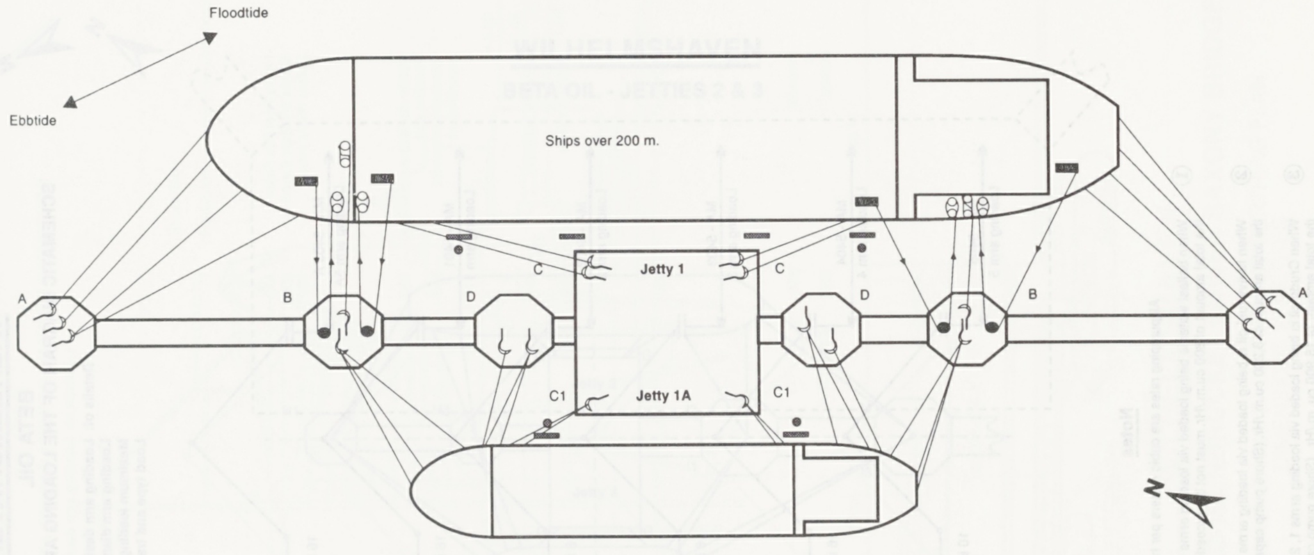

90 m.
67 m.
54 m.
40 m.
Jetty 1a
Max. 45,000 d.w.t.
Max. 250,000 d.w.t.
Jetty 1
54 m.
40 m.
Danger Zone 1
Danger Zone 2
67 m.
90 m.
Danger Zone 1
Danger Zone 2
1,020 m. to Jetty 2/3

WILHELMSHAVEN

BETA OIL

RANGE OF EXCLUSION ZONES AROUND JETTIES 2 AND 3


Max. 11,000 dwt
Jetty 2
195.92 m.
65 m.
49 m.
160 m.
Jetty 1/1A
1,020 m.
Max. 8,000 dwt
Danger Zone 2
Danger Zone 1
65 m.
49 m.
Jetty 3
150 m.
Pump House
105.8 m.
Dyke


Floodtide
Ebbtide
Ships over 200 m.
A
B
D
C
Jetty 1
C
D
B
A
C1
Jetty 1A
C1
N

Jetty1 - Ships over 200 m.:
4 Fore and aft lines
2 Breast Lines, Fore and Aft on Pulleys
* 1 Shore side line on slip hook
2 Springs lines fore and Aft

Jetty 1A - All Ships:
3 Fore and aft lines
2 Breast lines, fore And Aft
2 Spring lines, fore And Aft

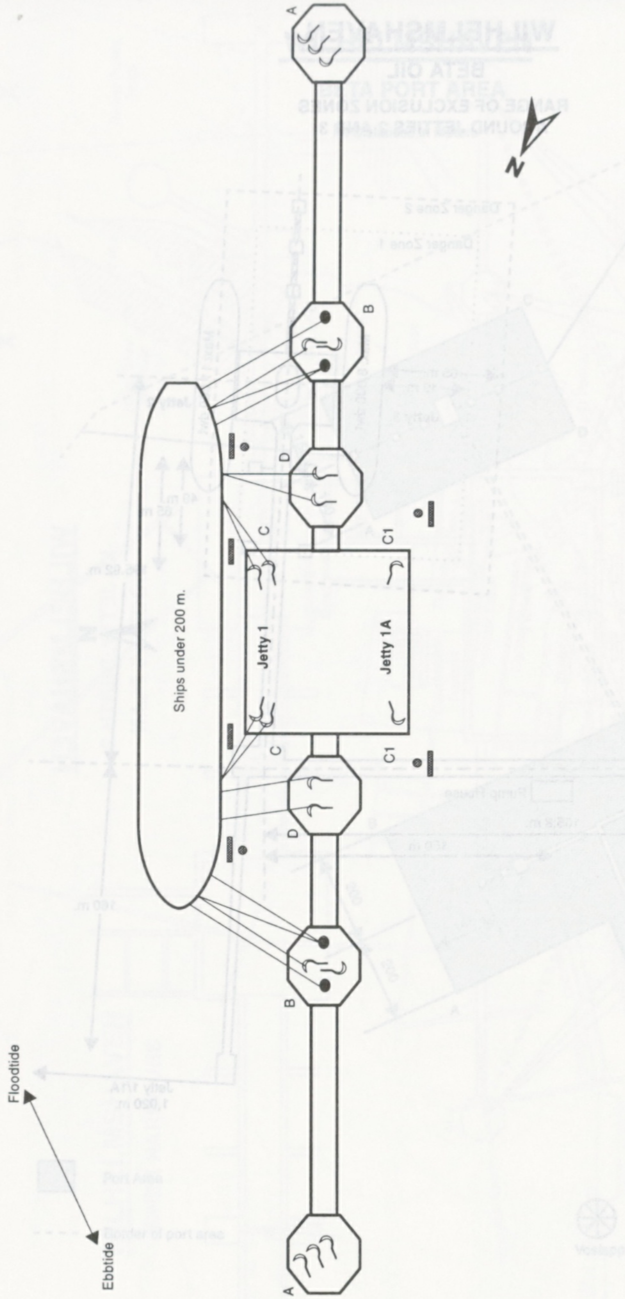
Each mooring post provides an additional shore cable wire:-
B For Jetty 1
D For Jetty 1A
The use of the cable wire is compulsory

Mooring posts and maximum admissible bollard tension on the offshore terminal
A - 3 x 125 ton Sliphooks
B - 3 x 125 ton Sliphooks
C - 2 x 100 ton Sliphooks
C1 - 2 x 50 ton Sliphooks
D - 2 x 75 ton Sliphooks

WILHELMSHAVEN

BETA OIL - JETTIES 1 & 1A

MOORING PLAN


A
B
D
C
C1
Jetty 1
Jetty 1A
Ships under 200 m.
C
C1
D
B
A
Floodtide
Ebbtide
N

WILHELMSHAVEN

BETA OIL

JETTY 1

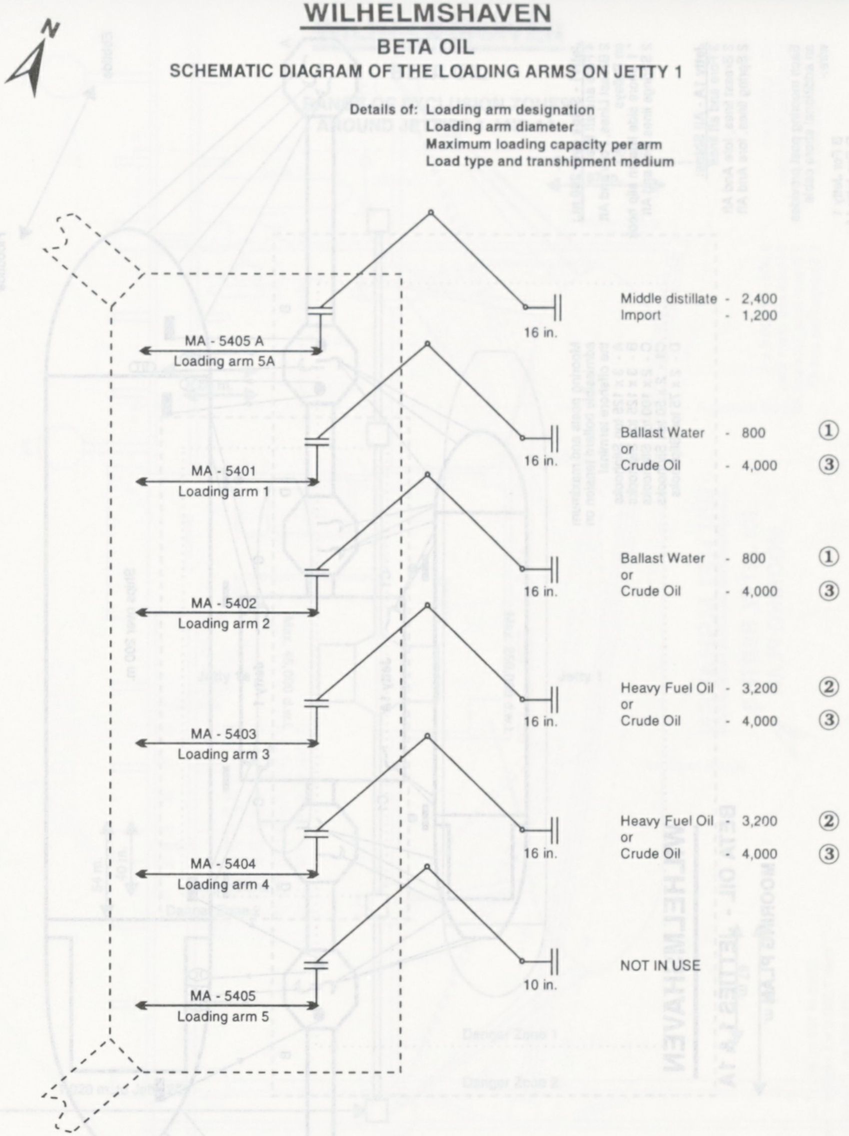
MOORING PLAN

WILHELMSHAVEN

BETA OIL

SCHEMATIC DIAGRAM OF THE LOADING ARMS ON JETTY 1

Details of: Loading arm designation
Loading arm diameter
Maximum loading capacity per arm
Load type and transhipment medium


N
MA - 5405 A
Loading arm 5A
16 in.
Middle distillate - 2,400
Import - 1,200
MA - 5401
Loading arm 1
16 in.
Ballast Water - 800 ①
or
Crude Oil - 4,000 ③
MA - 5402
Loading arm 2
16 in.
Ballast Water - 800 ①
or
Crude Oil - 4,000 ③
MA - 5403
Loading arm 3
16 in.
Heavy Fuel Oil - 3,200 ②
or
Crude Oil - 4,000 ③
MA - 5404
Loading arm 4
16 in.
Heavy Fuel Oil - 3,200 ②
or
Crude Oil - 4,000 ③
MA - 5405
Loading arm 5
10 in.
NOT IN USE

Notes

All pumping rates are cubic meters per hour

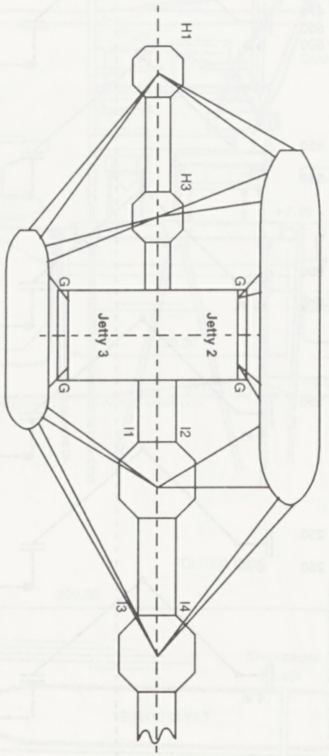
① When ballast water is being loaded via loading arms 1 and 2 simultaneously, the total amount of 800 cu.m./Hr. must not be exceeded.

② When heavy fuel oil is being loaded via loading arms 3, 4 and 5 simultaneously, the total amount of 3,200 cu.m./Hr. (Shore pump capacity)must not be exceeded.

③ When Crude oil is being loaded via loading arms 1, 2, 3 and 4 simultaneously, the total amount of 15,900 cu. m./Hr. (Shore pump capacity)must not be exceeded.

WILHELMSHAVEN

BETA OIL - JETTIES 2 & 3


H1
H3
G
G
G
G
Jetty 3
Jetty 2
I1
I2
I3
I4

Jetty 2 & 3
Bunker vessels and small tankers
2 fore and aft lines
1 spring line fore and aft

Ships between 1,000 - 3,000 d.w.t.
2 fore and aft lines
2 breast lines fore and aft
1 spring line fore and aft

Ships between 3,000 - 11,000 d.w.t.
2 fore and aft lines
2 breast lines fore and aft
1 spring fore and aft

Mooring posts and maximum admissible bollard tension on Jetties 2 & 3

G 50 tons.
H 75 tons.
I 50 tons.

Mooring posts H3 and I1/I2 each provide an additional shore - based cable
The use of the wire cable is compulsory

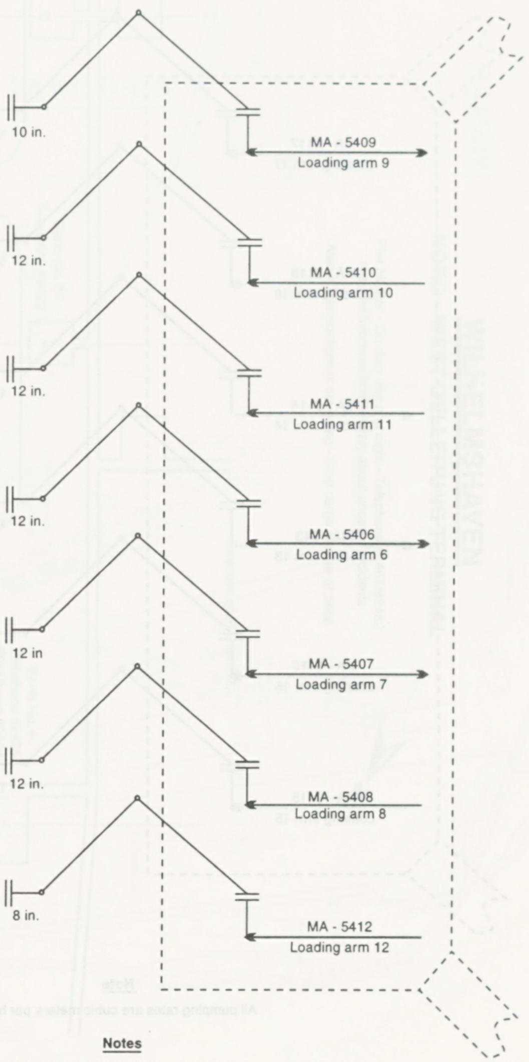
WILHELMSHAVEN

BETA OIL

SCHEMATIC DIAGRAM OF THE LOADING ARMS ON JETTY 1A

Details of: Loading arm designation
Loading arm diameter
Maximum loading capacity per arm
Load type and transhipment medium

	Gasoline export.	- 950
	Naphtha export.	- 950
	Middle distillate imp.	- 1,200
	Middle distillate	- 1,200
	Gasoline and Naphtha	- 1,200
	Middle distillate	- 1,200
	Gasoline and Naphtha,	- 1,200
	Middle distillate import.	- 1,200
	Middle distillate export.	- 1,800
	Ballast Water	- 800
	Gasoline component export.	- 500
See Notes ✡	Heavy Fuel Oil export.	- 2,600
	Heavy Fuel Oil import.	2,600
See Notes ✡	Heavy Fuel Oil	- 2,600
See Notes ✡	Middle distillate	- 300
	Heavy Fuel Oil	- 300


10 in.
MA - 5409
Loading arm 9
12 in.
MA - 5410
Loading arm 10
12 in.
MA - 5411
Loading arm 11
12 in.
MA - 5406
Loading arm 6
12 in
MA - 5407
Loading arm 7
12 in.
MA - 5408
Loading arm 8
8 in.
MA - 5412
Loading arm 12

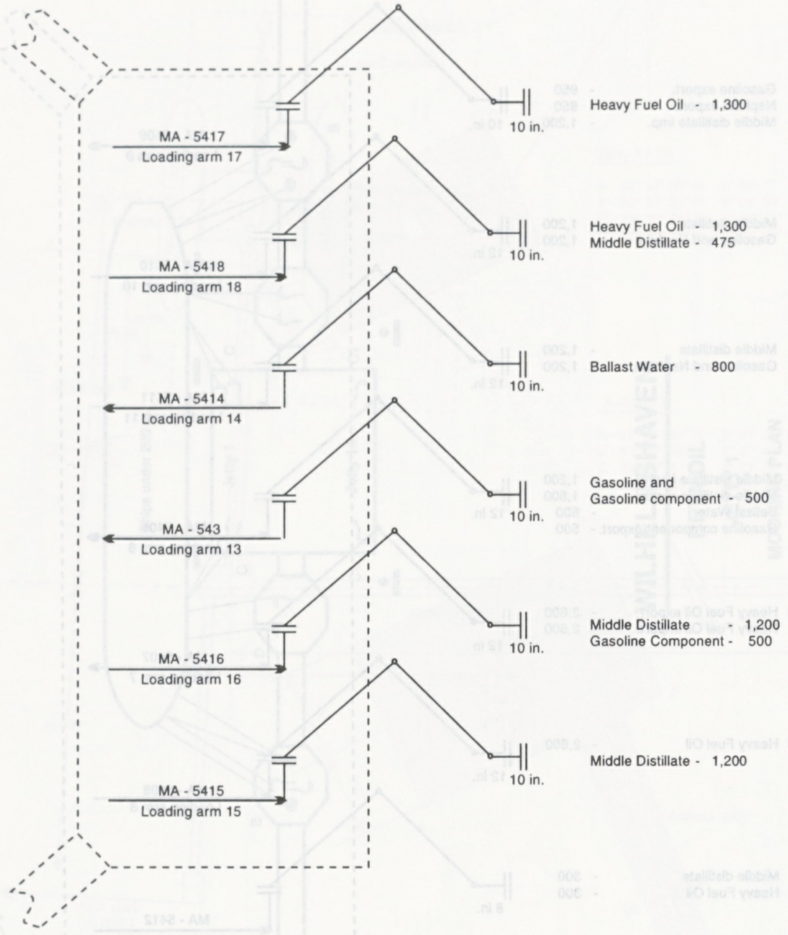
Notes

All pumping rates are cubic meters per hour

✡ When Heavy fuel oil is being loaded via arms 7, 8 and 12 simultaneously, the total amount of 3,200 (shore pump capacity) can not be exceeded

WILHELMSHAVEN
BETA OIL
SCHEMATIC DIAGRAM OF THE LOADING ARMS ON JETTY 2

Details of: Loading arm designation
Loading arm diameter
Maximum loading capacity per arm
Load type and transhipment medium

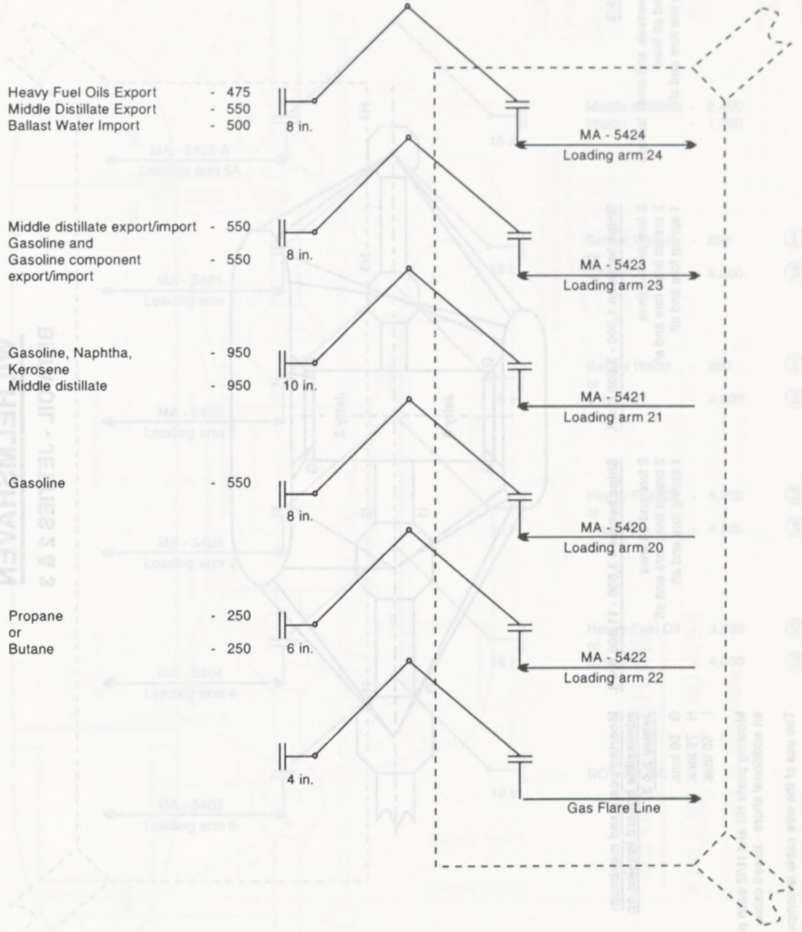

Heavy Fuel Oil - 1,300
10 in.
MA - 5417
Loading arm 17
Heavy Fuel Oil - 1,300
Middle Distillate - 475
10 in.
MA - 5418
Loading arm 18
Ballast Water - 800
10 in.
MA - 5414
Loading arm 14
Gasoline and
Gasoline component - 500
10 in.
MA - 543
Loading arm 13
Middle Distillate - 1,200
Gasoline Component - 500
10 in.
MA - 5416
Loading arm 16
Middle Distillate - 1,200
10 in.
MA - 5415
Loading arm 15

Note

All pumping rates are cubic meters per hour

WILHELMSHAVEN
BETA OIL
SCHEMATIC DIAGRAM OF THE LOADING ARMS ON BERTH 3

Details of: Loading arm designation
Loading arm diameter
Maximum loading capacity per arm
Load type and transhipment medium


Heavy Fuel Oils Export - 475
Middle Distillate Export - 550
Ballast Water Import - 500
8 in.
MA - 5424
Loading arm 24
Middle distillate export/import - 550
Gasoline and
Gasoline component - 550
export/import
8 in.
MA - 5423
Loading arm 23
Gasoline, Naphtha, - 950
Kerosene
Middle distillate - 950
10 in.
MA - 5421
Loading arm 21
Gasoline - 550
8 in.
MA - 5420
Loading arm 20
Propane - 250
or
Butane - 250
6 in.
MA - 5422
Loading arm 22
4 in.
Gas Flare Line

Note

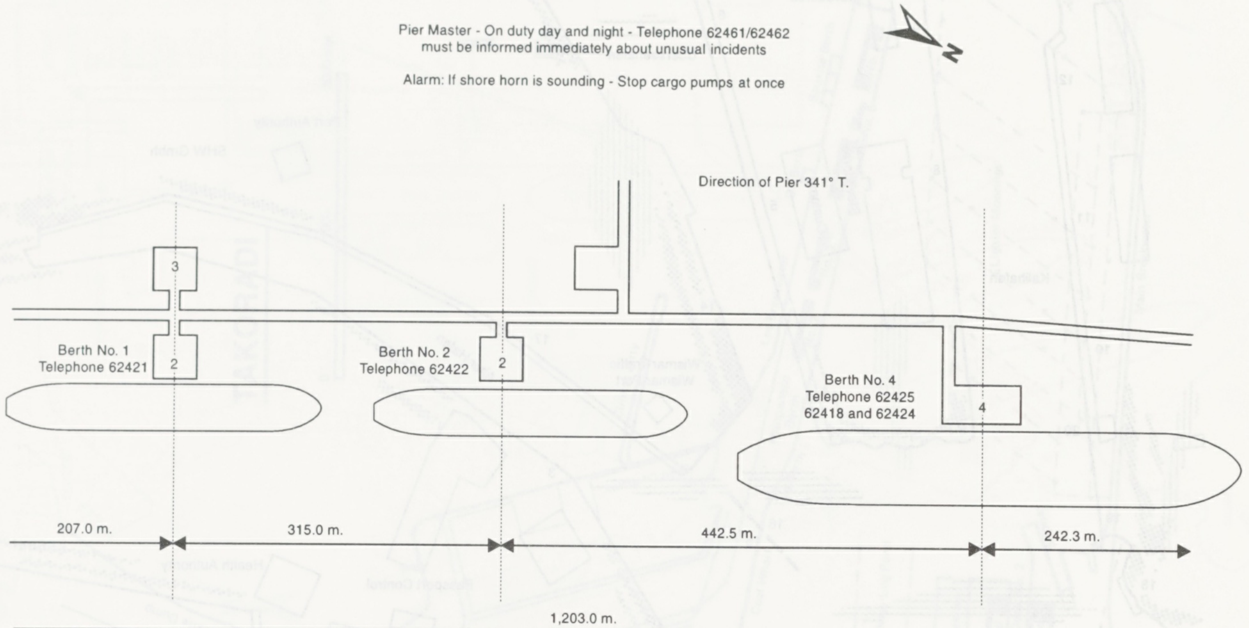
All pumping rates are Cubic Meters per hour

WILHELMSHAVEN

NORD - WEST OELLEITUNG TERMINAL

Pier Master - On duty day and night - Telephone 62461/62462
must be informed immediately about unusual incidents

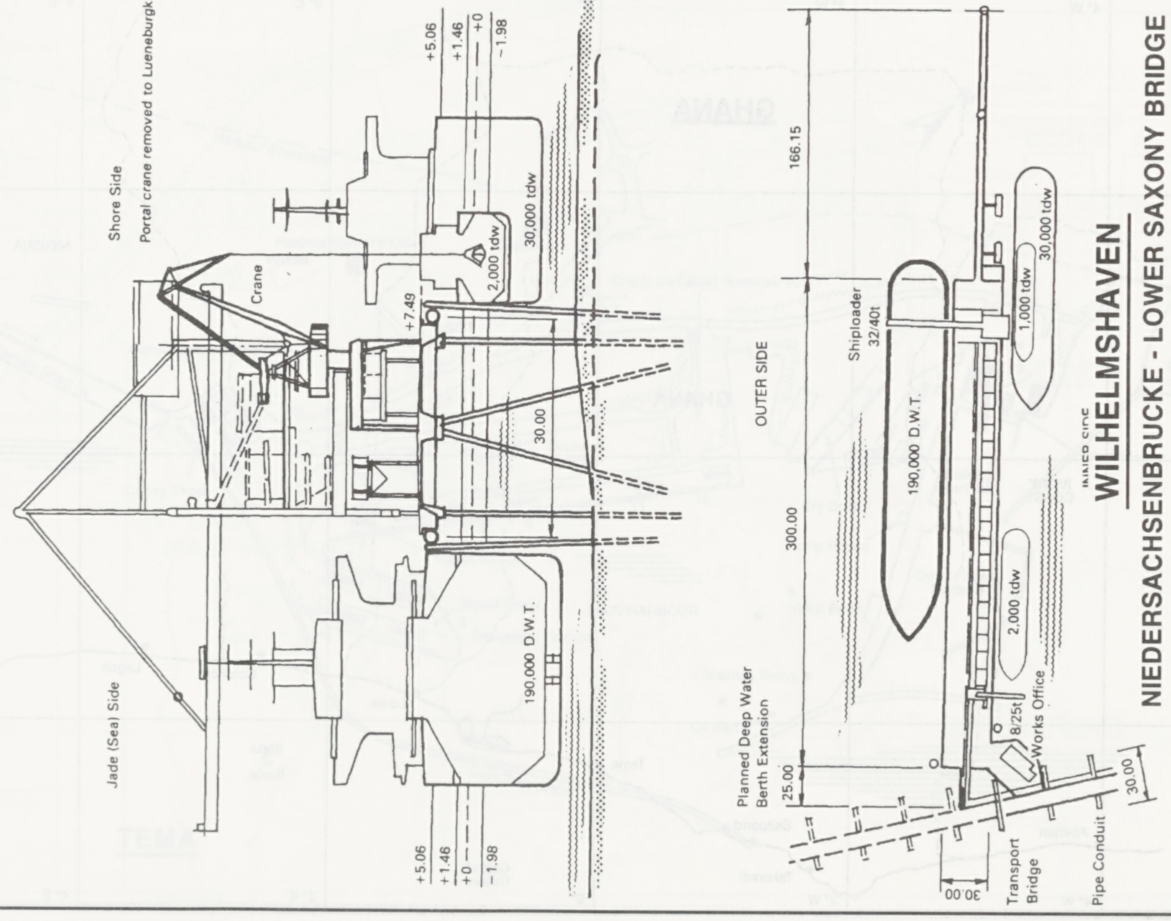
Alarm: If shore horn is sounding - Stop cargo pumps at once

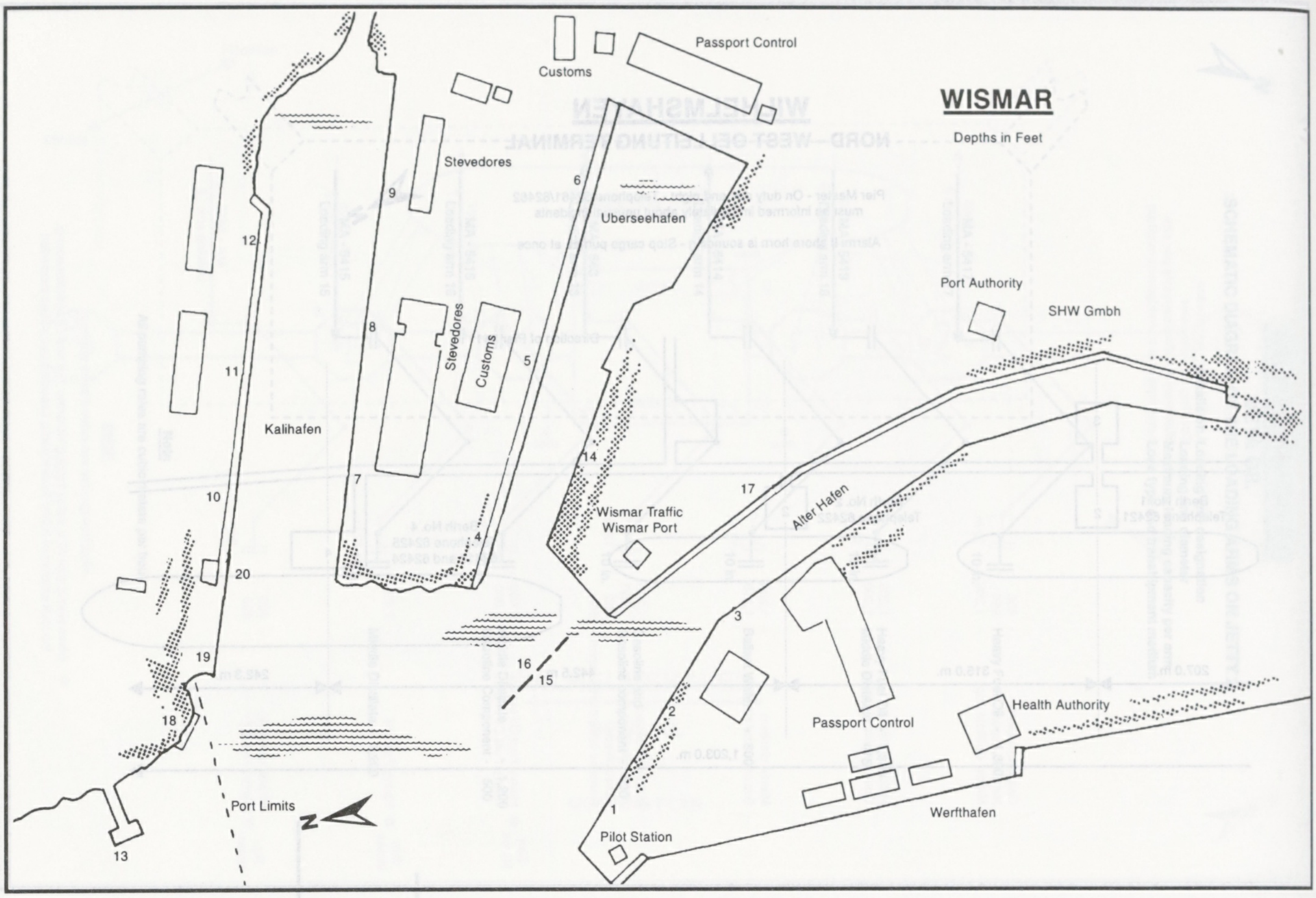

N
Direction of Pier 341° T.
3
2
Berth No. 1
Telephone 62421
Berth No. 2
Telephone 62422
2
Berth No. 4
Telephone 62425
62418 and 62424
4
207.0 m.
315.0 m.
442.5 m.
242.3 m.
1,203.0 m.

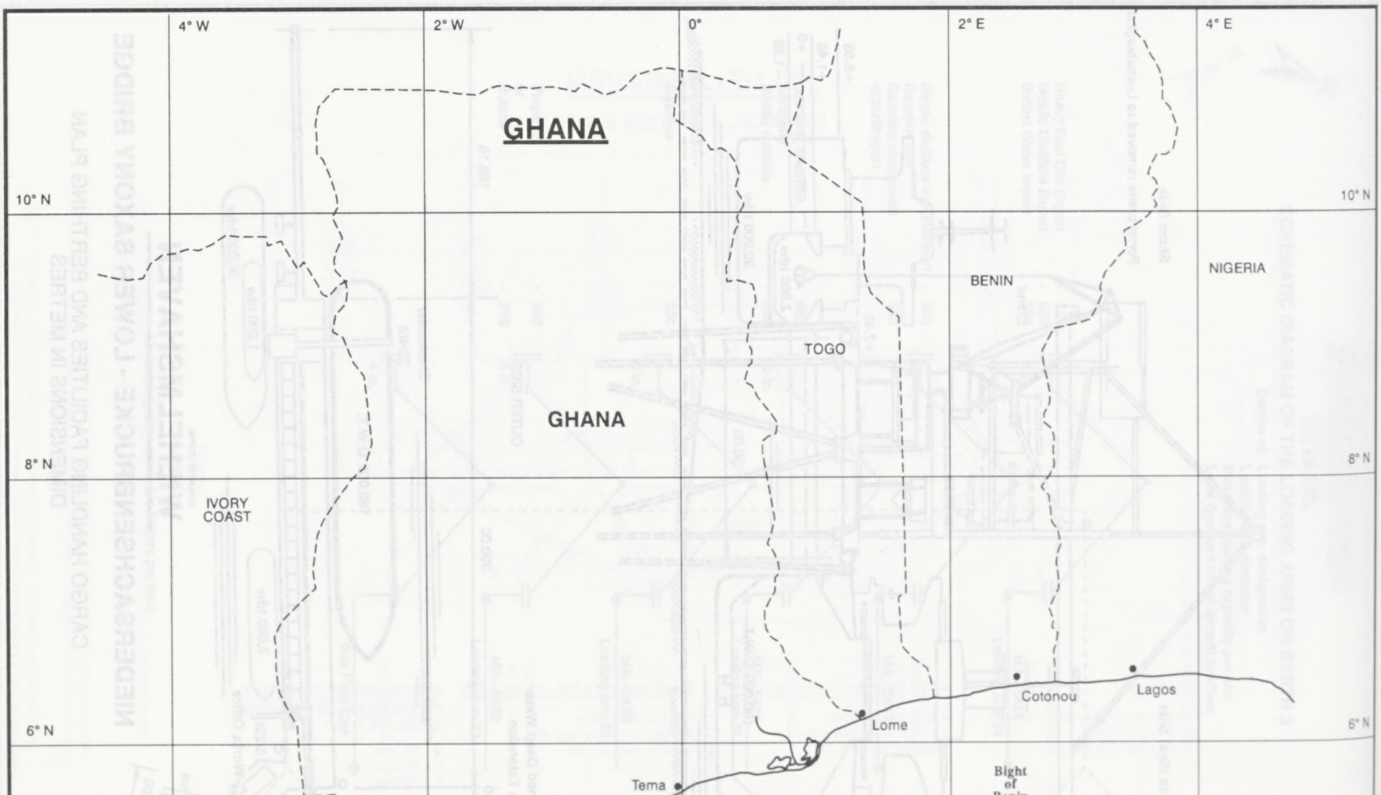
WILHELMSHAVEN

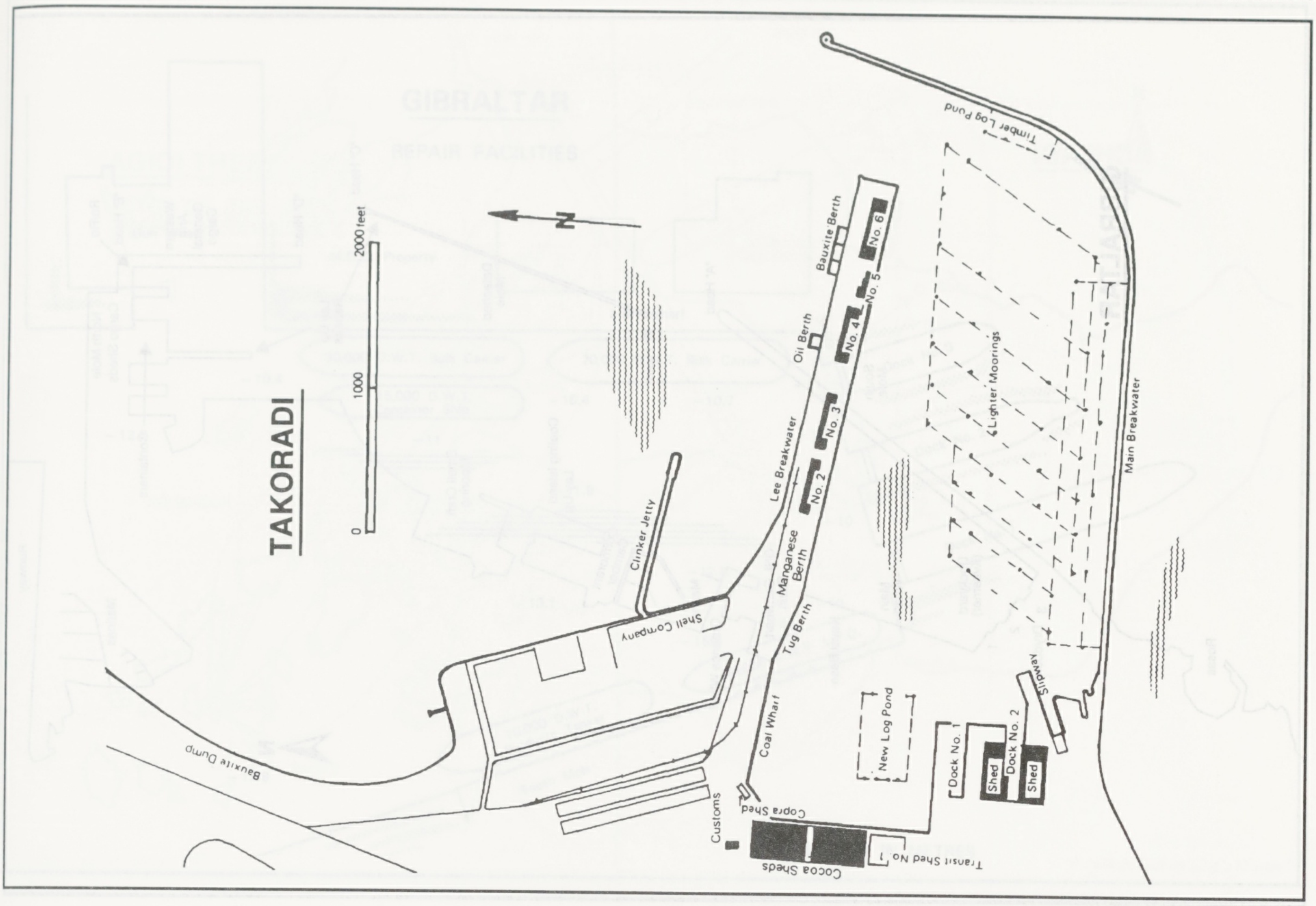
NIEDERSACHSENBRUCKE - LOWER SAXONY BRIDGE

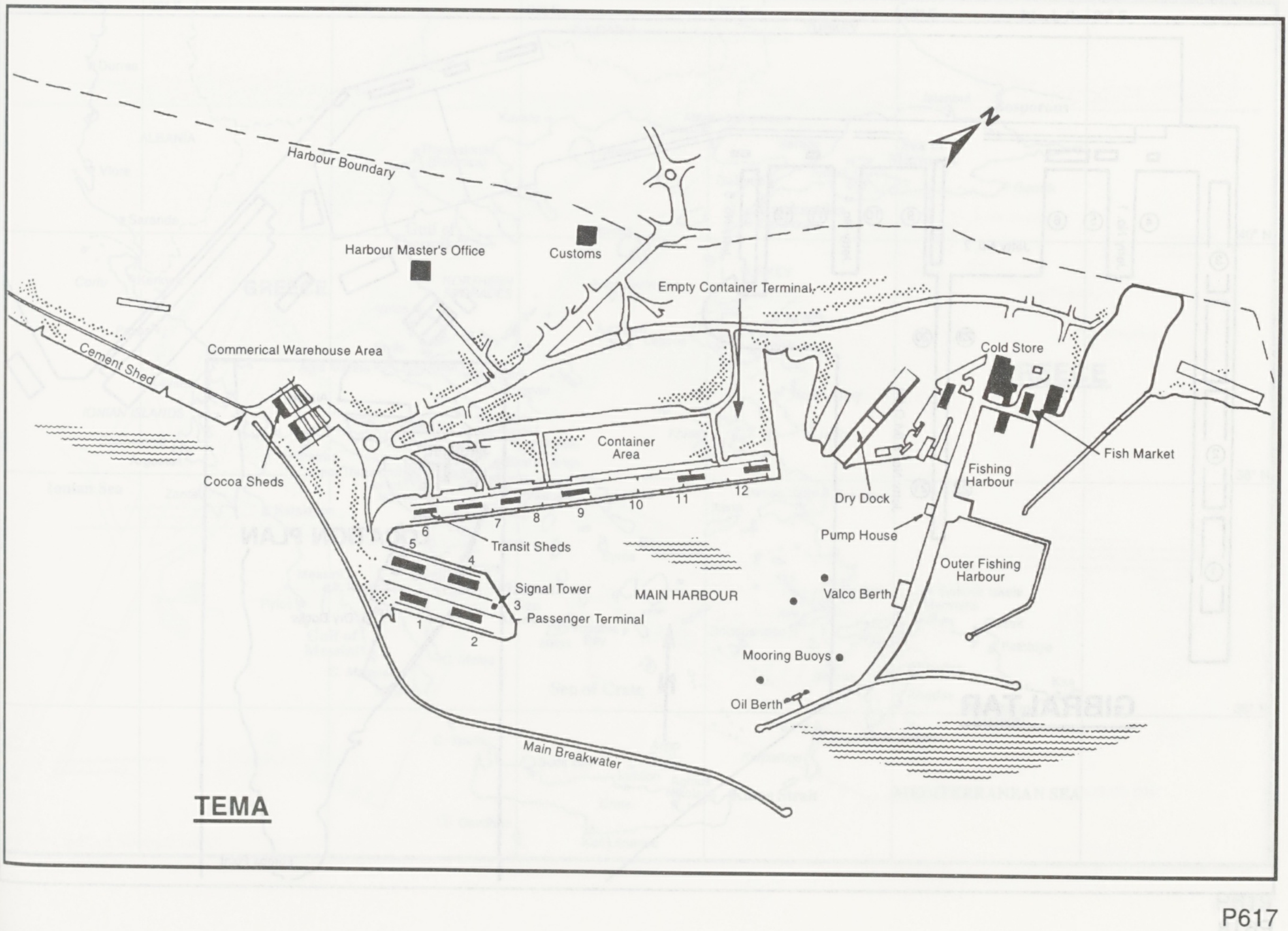
CARGO HANDLING FACILITIES AND BERTHING PLAN
DIMENSIONS IN METRES

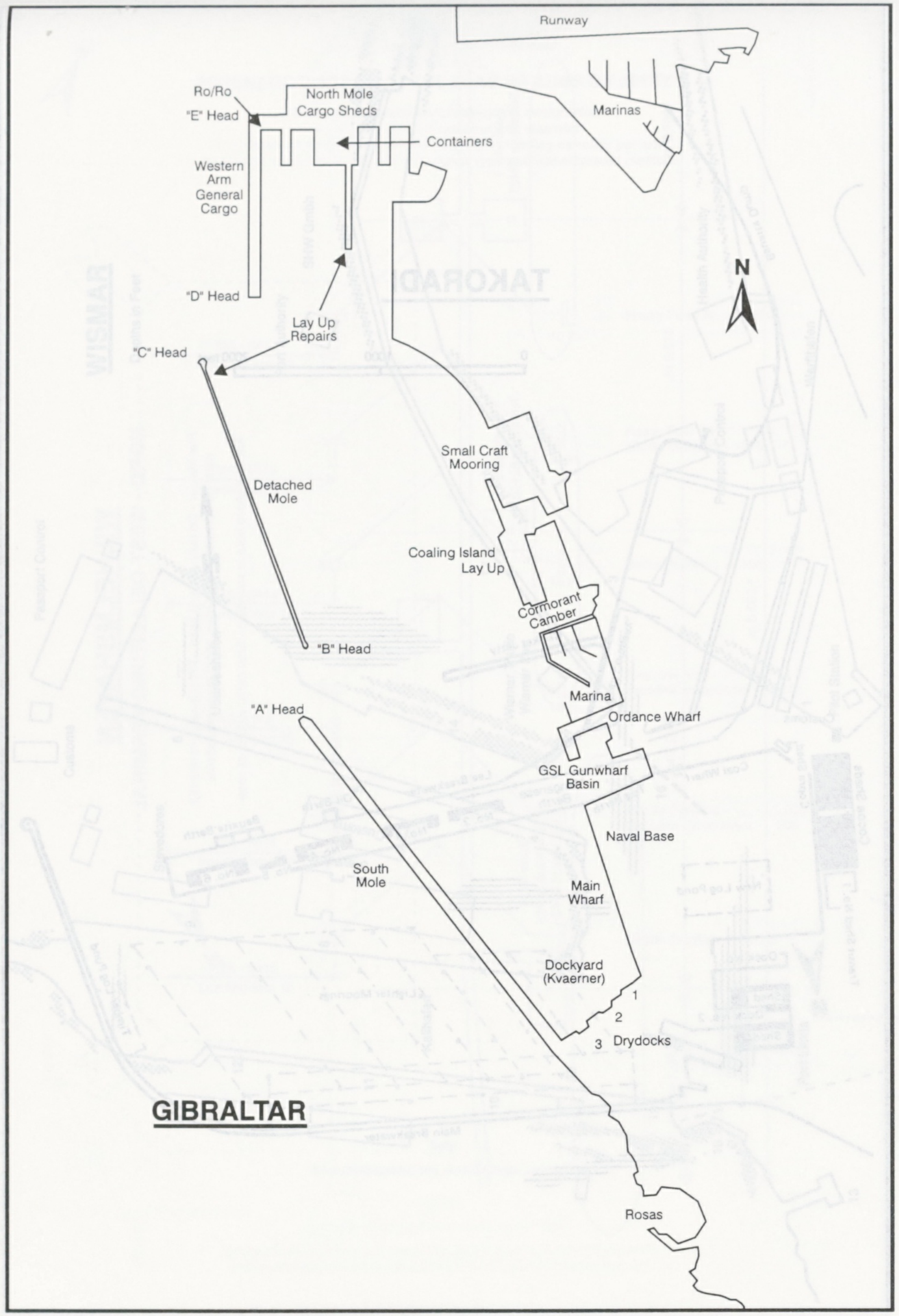

Shore Side
Portal crane removed to Lueneburgkai
Crane
Jade (Sea) Side
+5.06
+1.46
+0
-1.98
+7.49
2,000 tdw
30,000 tdw
30.00
190,000 D.W.T.
+5.06
+1.46
+0
-1.98
166.15
300.00
25.00
OUTER SIDE
INNER SIDE
Shiploader
32/40t
190,000 D.W.T.
1,000 tdw
30,000 tdw
2,000 tdw
Planned Deep Water
Berth Extension
8/25t
Works Office
Transport
Bridge
Pipe Conduit
30.00
30.00

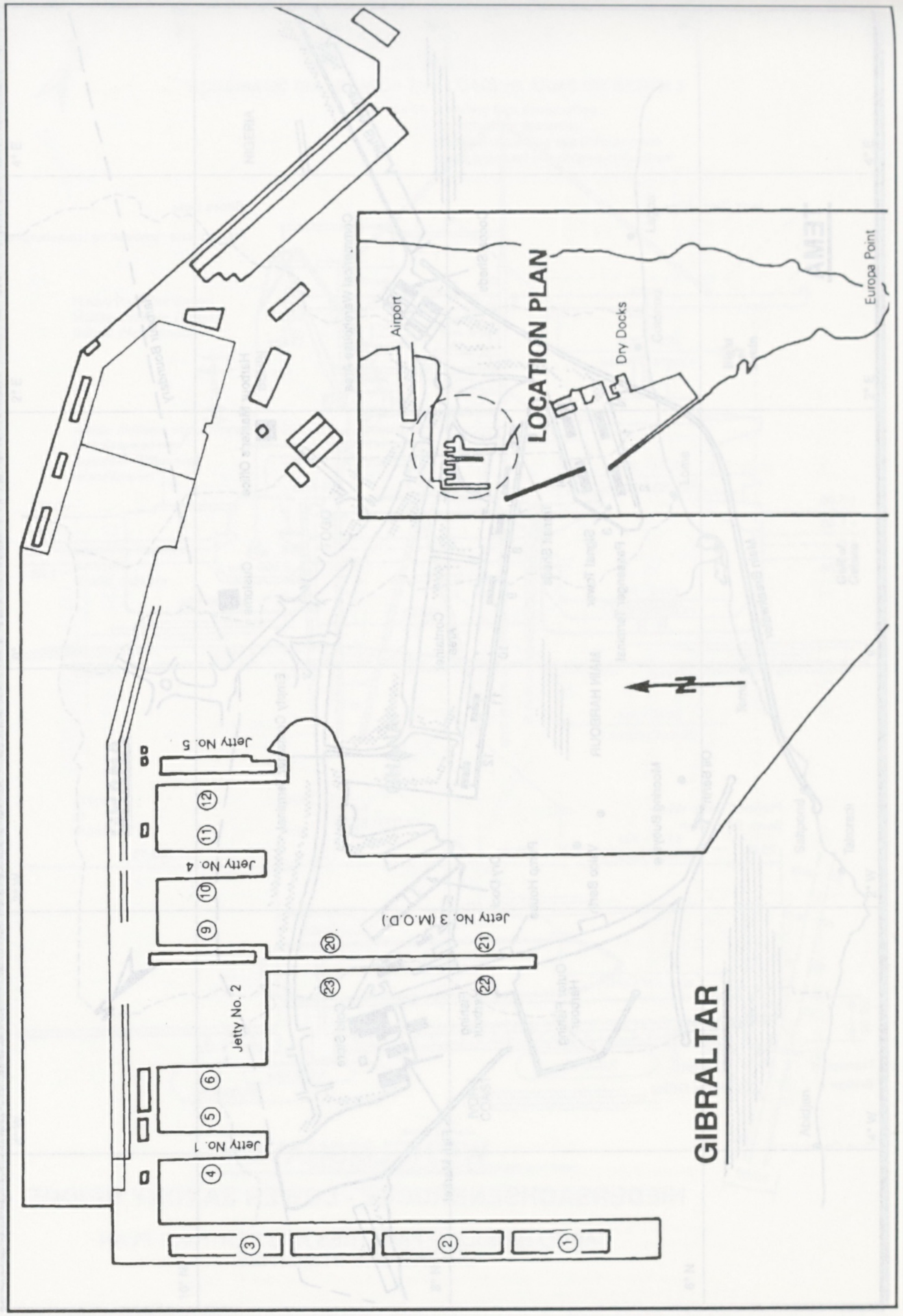

WISMAR
Depths in Feet
Passport Control
Customs
Stevedores
Uberseehafen
6
9
12
Port Authority
SHW Gmbh
8
Stevedores
Customs
5
11
Kalihafen
14
17
Alter Hafen
10
7
Wismar Traffic
Wismar Port
4
20
3
19
16
15
2
Health Authority
Passport Control
18
Werfthafen
Port Limits
N
1
Pilot Station
13

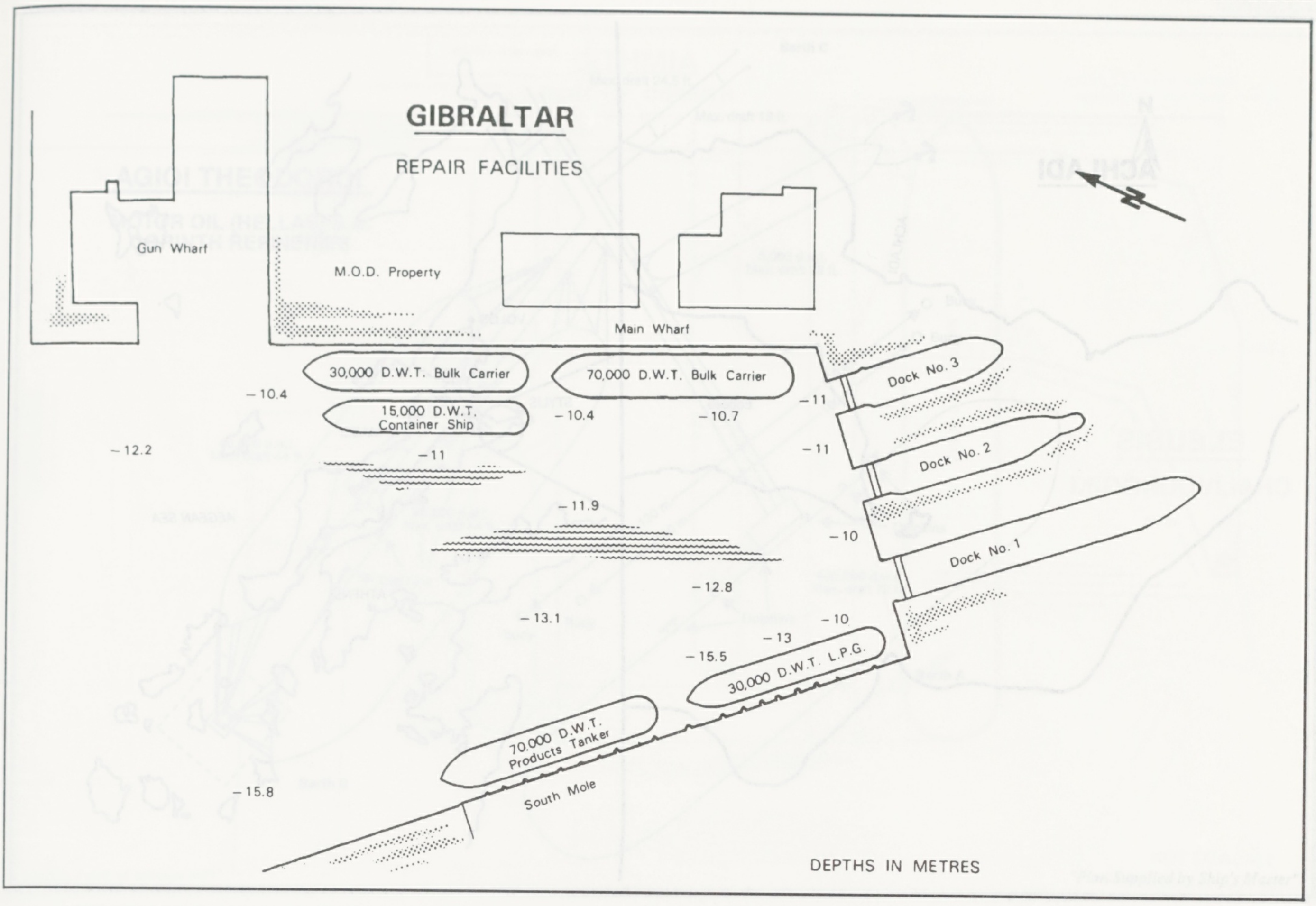

4° W
2° W
0°
2° E
4° E
GHANA
10° N
10° N
BENIN
NIGERIA
TOGO
GHANA
8° N
8° N
IVORY COAST
6° N
6° N
Lome
Cotonou
Lagos
Tema
Bight of Benin
Saltpond
Abidjan
Takoradi
Gulf of Guinea
4° W
2° W
0°
2° E
4° E

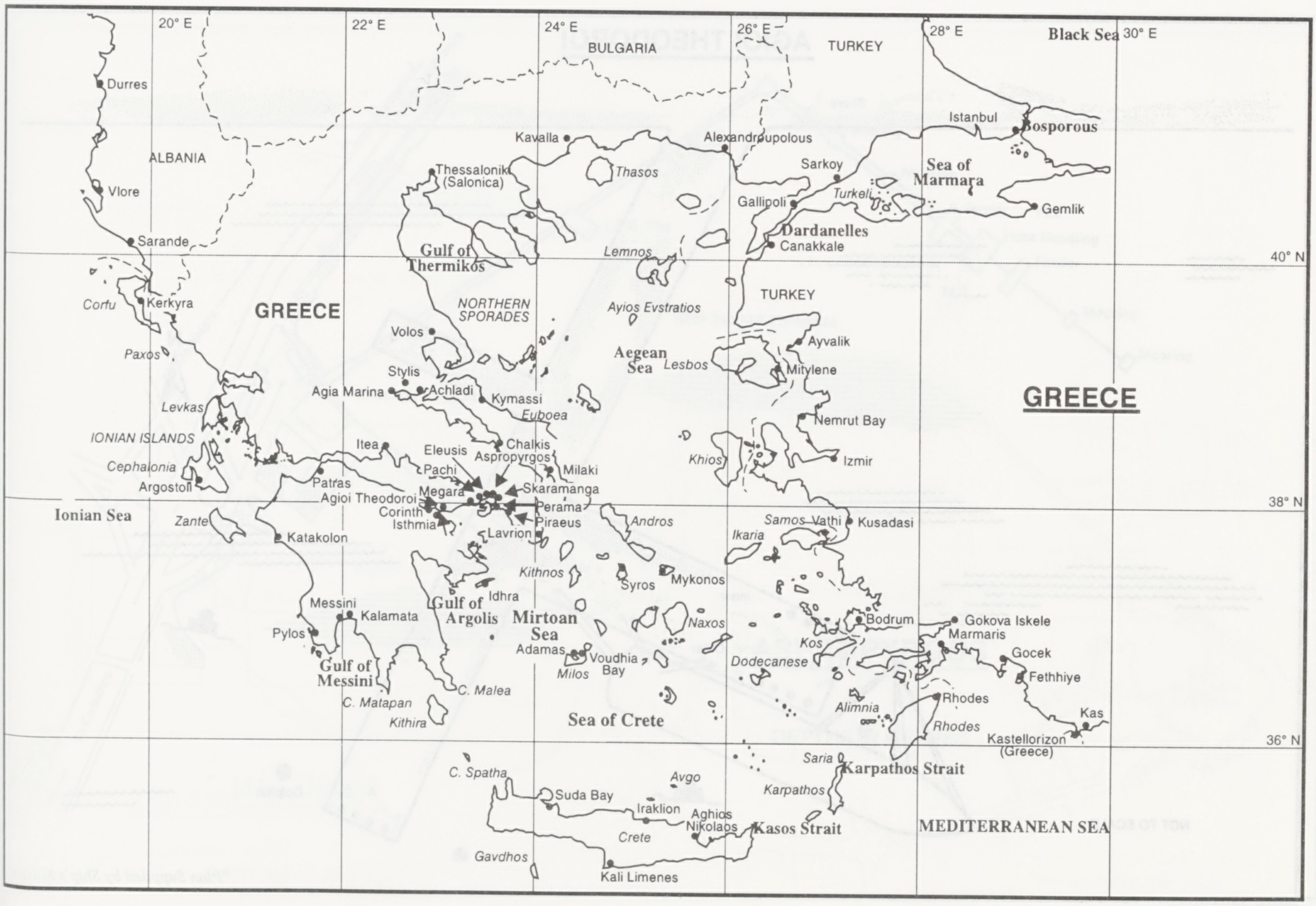

TAKORADI
0
1000
2000 feet
N
Timber Log Pond
Bauxite Berth
No. 6
No. 5
No. 4
Oil Berth
No. 3
No. 2
Lee Breakwater
Lighter Moorings
Main Breakwater
Clinker Jetty
Manganese Berth
Tug Berth
Shell Company
Coal Wharf
New Log Pond
Slipway
Dock No. 1
Dock No. 2
Shed
Shed
Bauxite Dump
Customs
Copra Shed
Cocoa Sheds
Transit Shed No 1


N
Harbour Boundary
Harbour Master's Office
Customs
Empty Container Terminal
Cement Shed
Commerical Warehouse Area
Cold Store
Cocoa Sheds
Container Area
Fish Market
Fishing Harbour
Dry Dock
Transit Sheds
1
2
3
4
5
6
7
8
9
10
11
12
Pump House
Signal Tower
Passenger Terminal
MAIN HARBOUR
Valco Berth
Outer Fishing Harbour
Mooring Buoys
Oil Berth
Main Breakwater
TEMA

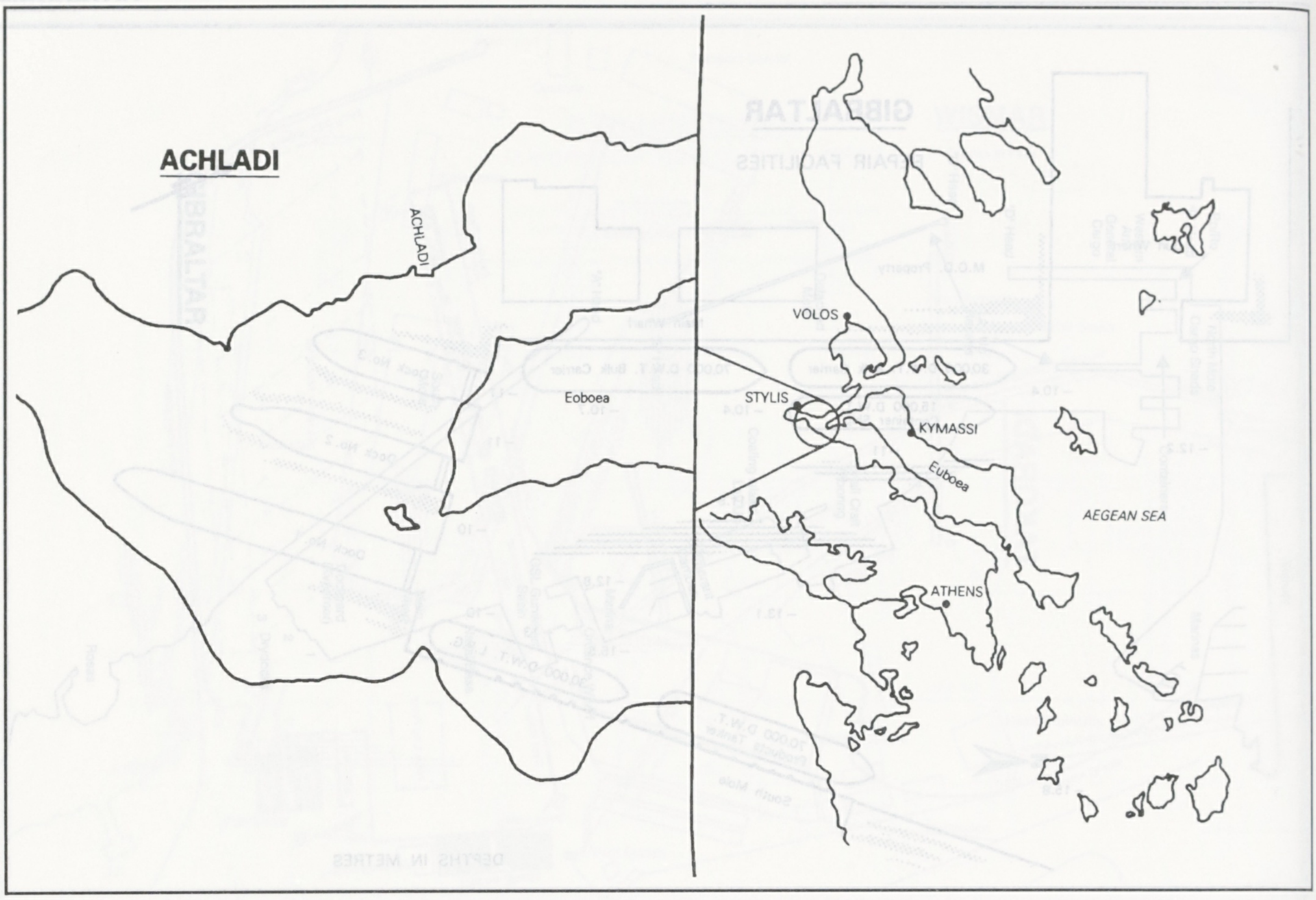

Runway
Ro/Ro
"E" Head
North Mole
Cargo Sheds
Marinas
Containers
Western
Arm
General
Cargo
N
"D" Head
Lay Up
Repairs
"C" Head
Small Craft
Mooring
Detached
Mole
Coaling Island
Lay Up
Cormorant
Camber
"B" Head
Marina
"A" Head
Ordance Wharf
GSL Gunwharf
Basin
Naval Base
South
Mole
Main
Wharf
Dockyard
(Kvaerner)
1
2
3
Drydocks
GIBRALTAR
Rosas


LOCATION PLAN
Airport
Dry Docks
Europa Point
N
Jetty No. 5
12
11
Jetty No. 4
10
9
Jetty No. 3 (M.O.D.)
20
21
23
22
Jetty No. 2
6
5
Jetty No. 1
4
3
2
1
GIBRALTAR

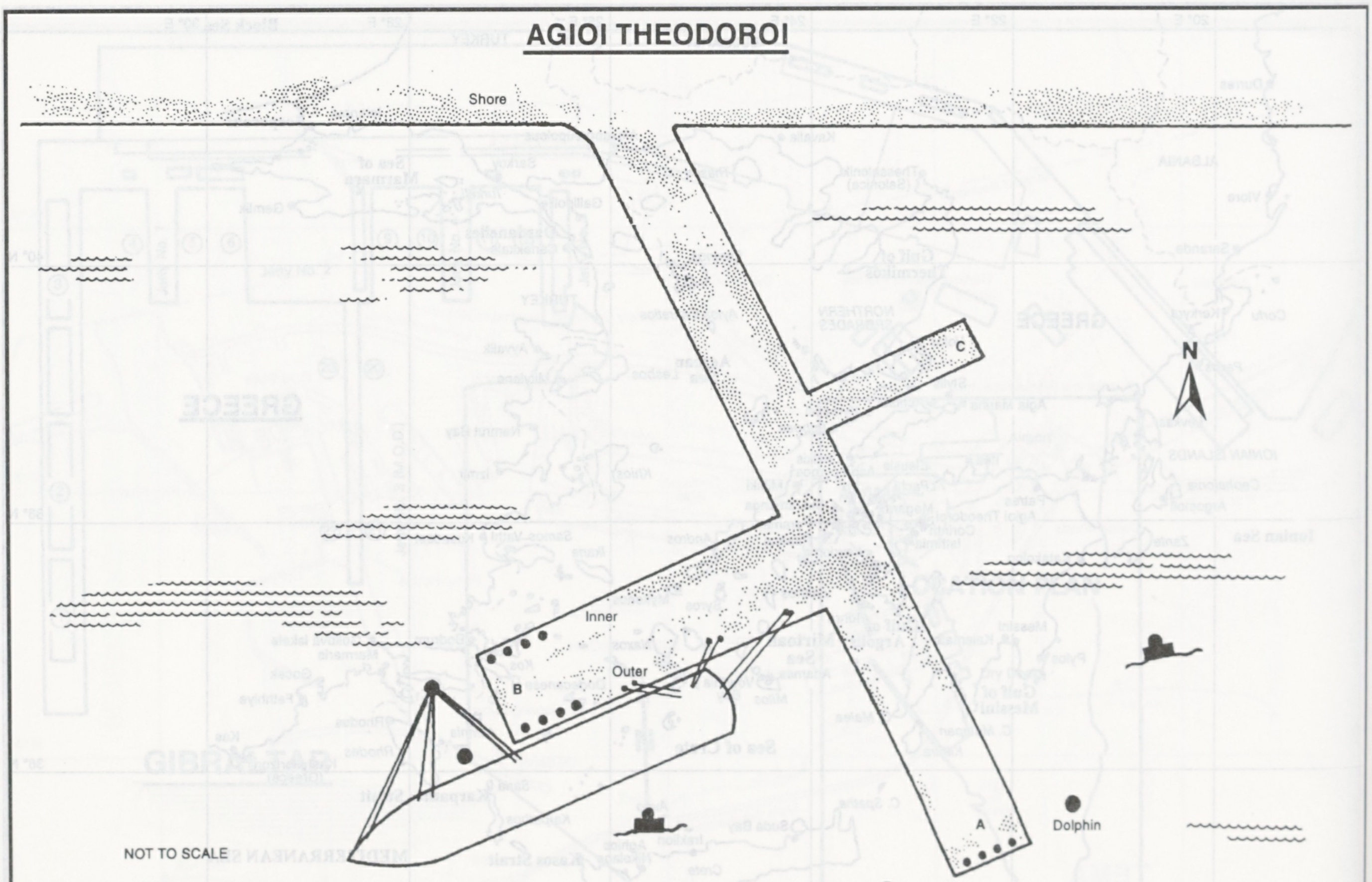

GIBRALTAR
REPAIR FACILITIES
Gun Wharf
M.O.D. Property
Main Wharf
30,000 D.W.T. Bulk Carrier
70,000 D.W.T. Bulk Carrier
15,000 D.W.T. Container Ship
Dock No. 3
Dock No. 2
Dock No. 1
30,000 D.W.T. L.P.G.
70,000 D.W.T. Products Tanker
South Mole
– 10.4
– 12.2
– 10.4
– 10.7
– 11
– 11
– 11
– 11.9
– 10
– 12.8
– 13.1
– 10
– 13
– 15.5
– 15.8
DEPTHS IN METRES


20° E
22° E
24° E
26° E
28° E
30° E
40° N
38° N
36° N
BULGARIA
TURKEY
Black Sea
ALBANIA
Durres
Vlore
Sarande
Corfu
Kerkyra
Paxos
Levkas
IONIAN ISLANDS
Cephalonia
Argostoli
Zante
Ionian Sea
GREECE
Kavalla
Thasos
Thessaloniki (Salonica)
Gulf of Thermikos
NORTHERN SPORADES
Volos
Stylis
Agia Marina
Achladi
Kymassi
Euboea
Itea
Eleusis
Chalkis
Aspropyrgos
Pachi
Milaki
Megara
Skaramanga
Agioi Theodoroi
Perama
Corinth
Piraeus
Isthmia
Lavrion
Patras
Katakolon
Kithnos
Idhra
Gulf of Argolis
Mirtoan Sea
Messini
Kalamata
Pylos
Gulf of Messini
C. Matapan
C. Malea
Kithira
Adamas
Milos
Voudhia Bay
Sea of Crete
C. Spatha
Suda Bay
Iraklion
Aghios Nikolaos
Crete
Gavdhos
Kali Limenes
Alexandroupolous
Istanbul
Bosporous
Sea of Marmara
Sarkoy
Turkeli
Gemlik
Gallipoli
Dardanelles
Canakkale
Lemnos
Ayios Evstratios
TURKEY
Aegean Sea
Lesbos
Ayvalik
Mitylene
Nemrut Bay
Khios
Izmir
Andros
Samos
Vathi
Kusadasi
Ikaria
Syros
Mykonos
Naxos
Bodrum
Kos
Gokova Iskele
Marmaris
Dodecanese
Gocek
Fethhiye
Alimnia
Rhodes
Rhodes
Kas
Kastellorizon (Greece)
Saria
Karpathos Strait
Karpathos
Kasos Strait
MEDITERRANEAN SEA
GREECE

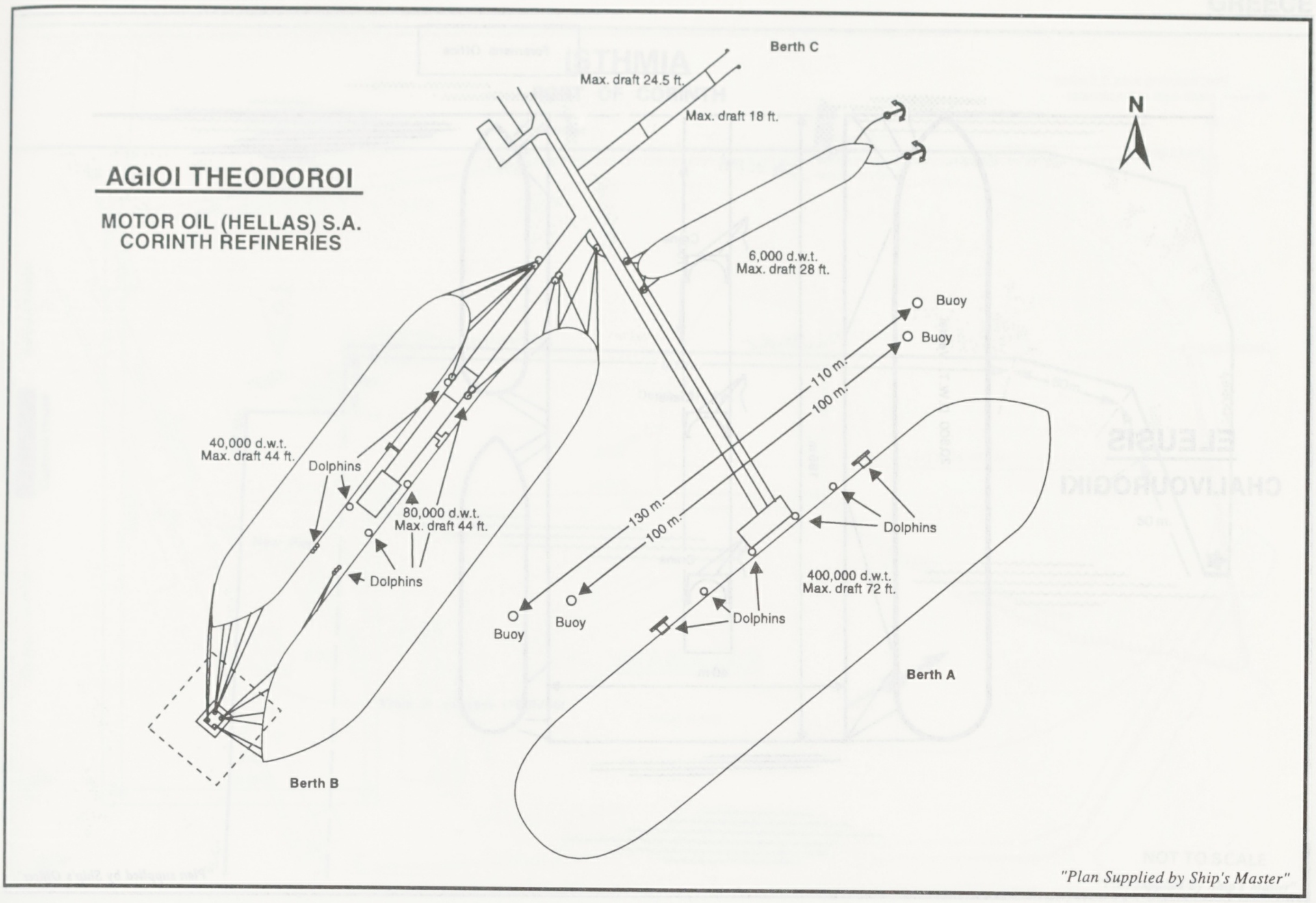
ACHLADI

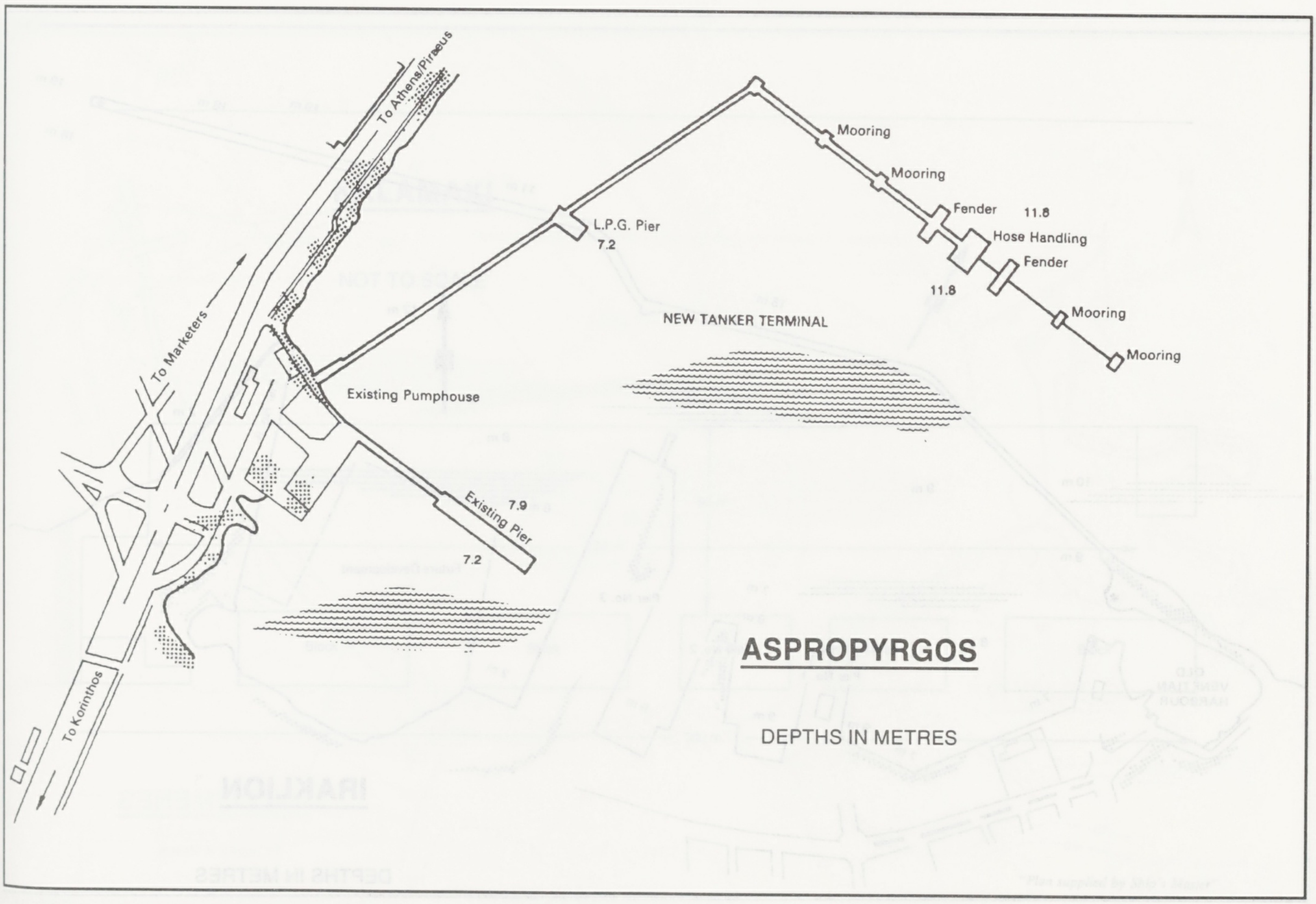

ACHLADI
Eoboea
VOLOS
STYLIS
KYMASSI
Euboea
AEGEAN SEA
ATHENS

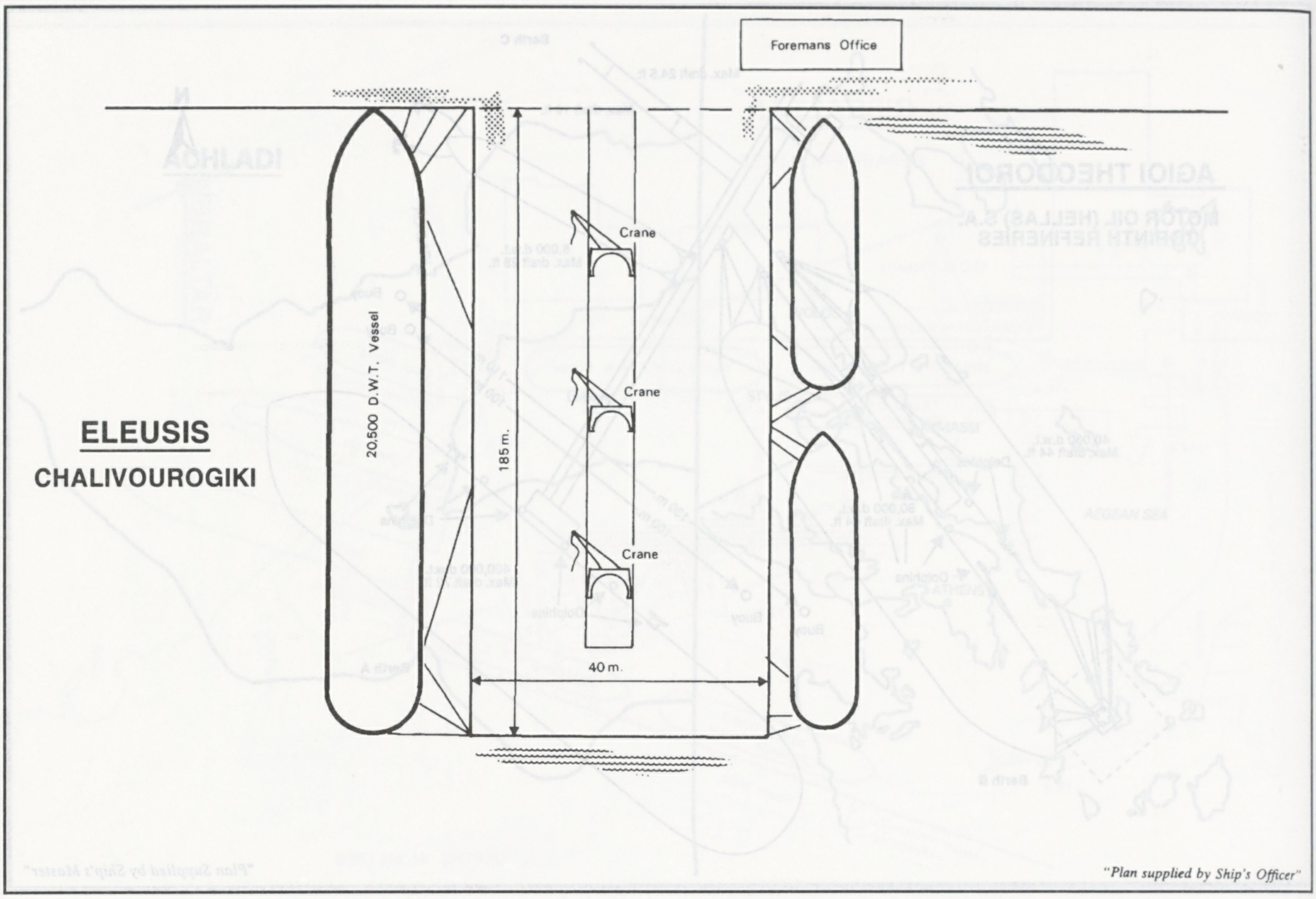
AGIOI THEODOROI


Shore
C
N
Inner
Outer
B
A
Dolphin
NOT TO SCALE

"Plan Supplied by Ship's Master"


AGIOI THEODOROI
MOTOR OIL (HELLAS) S.A.
CORINTH REFINERIES
Berth C
Max. draft 24.5 ft.
Max. draft 18 ft.
N
6,000 d.w.t.
Max. draft 28 ft.
Buoy
Buoy
110 m.
100 m.
40,000 d.w.t.
Max. draft 44 ft.
Dolphins
80,000 d.w.t.
Max. draft 44 ft.
Dolphins
130 m.
100 m.
Dolphins
400,000 d.w.t.
Max. draft 72 ft.
Dolphins
Buoy
Buoy
Berth A
Berth B
"Plan Supplied by Ship's Master"


To Athens/Piraeus
To Marketers
To Korinthos
Mooring
Mooring
Fender
11.8
Hose Handling
Fender
11.8
Mooring
Mooring
L.P.G. Pier
7.2
NEW TANKER TERMINAL
Existing Pumphouse
Existing Pier
7.9
7.2
ASPROPYRGOS
DEPTHS IN METRES

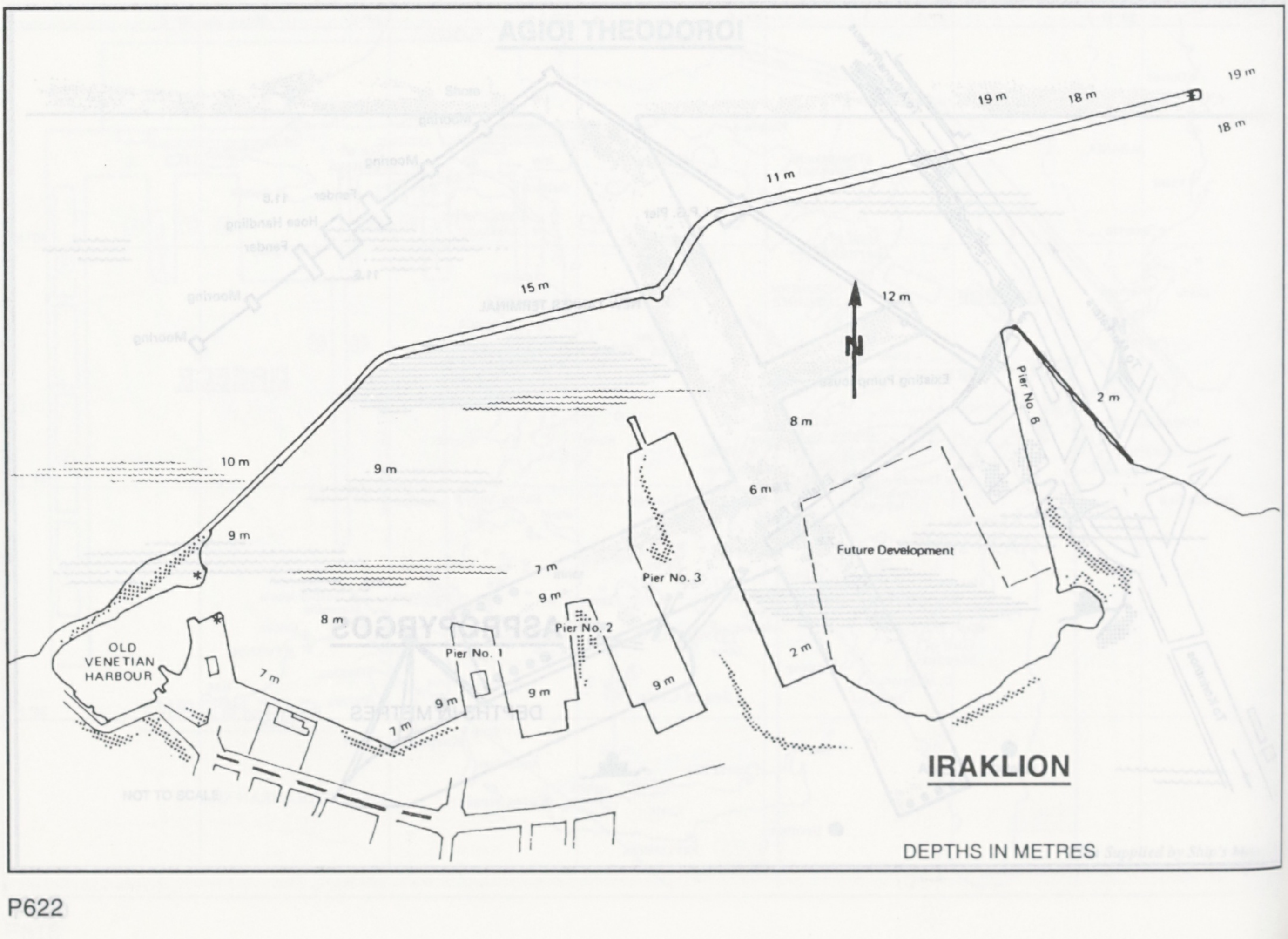


ELEUSIS

CHALIVOUROGIKI

Foremans Office
N
Crane
Crane
Crane
20,500 D.W.T. Vessel
185 m.
40 m.

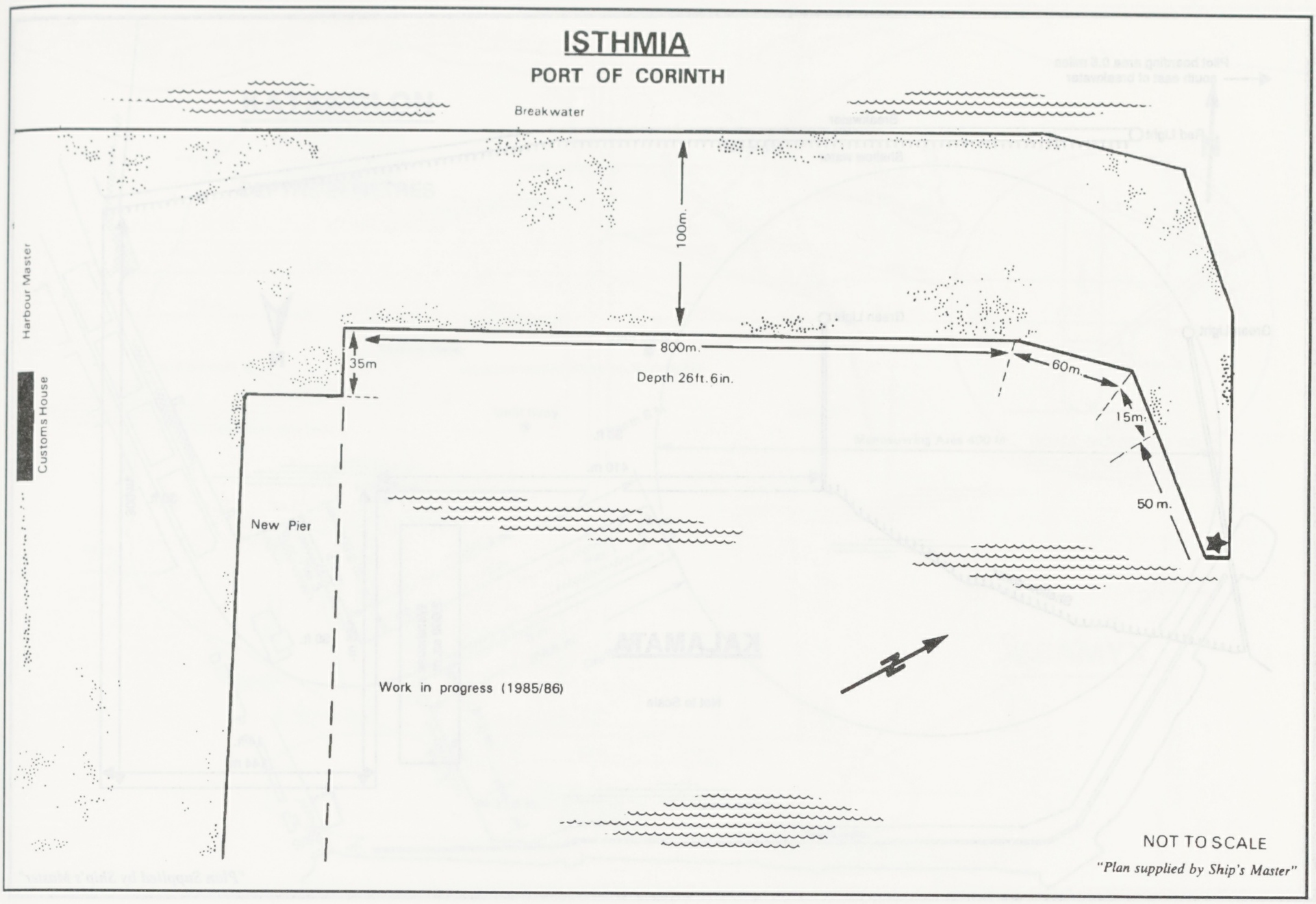
"Plan supplied by Ship's Officer"

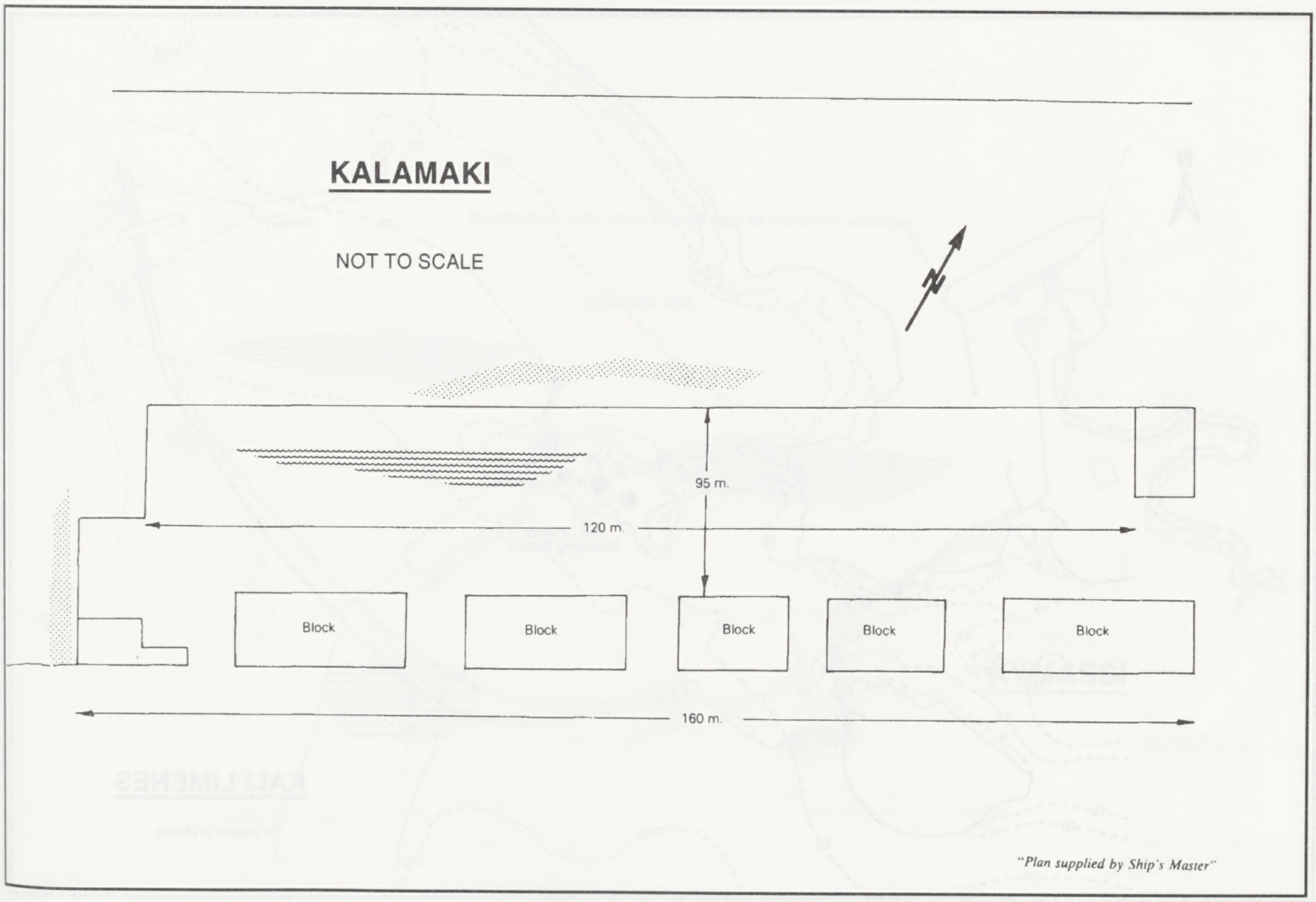


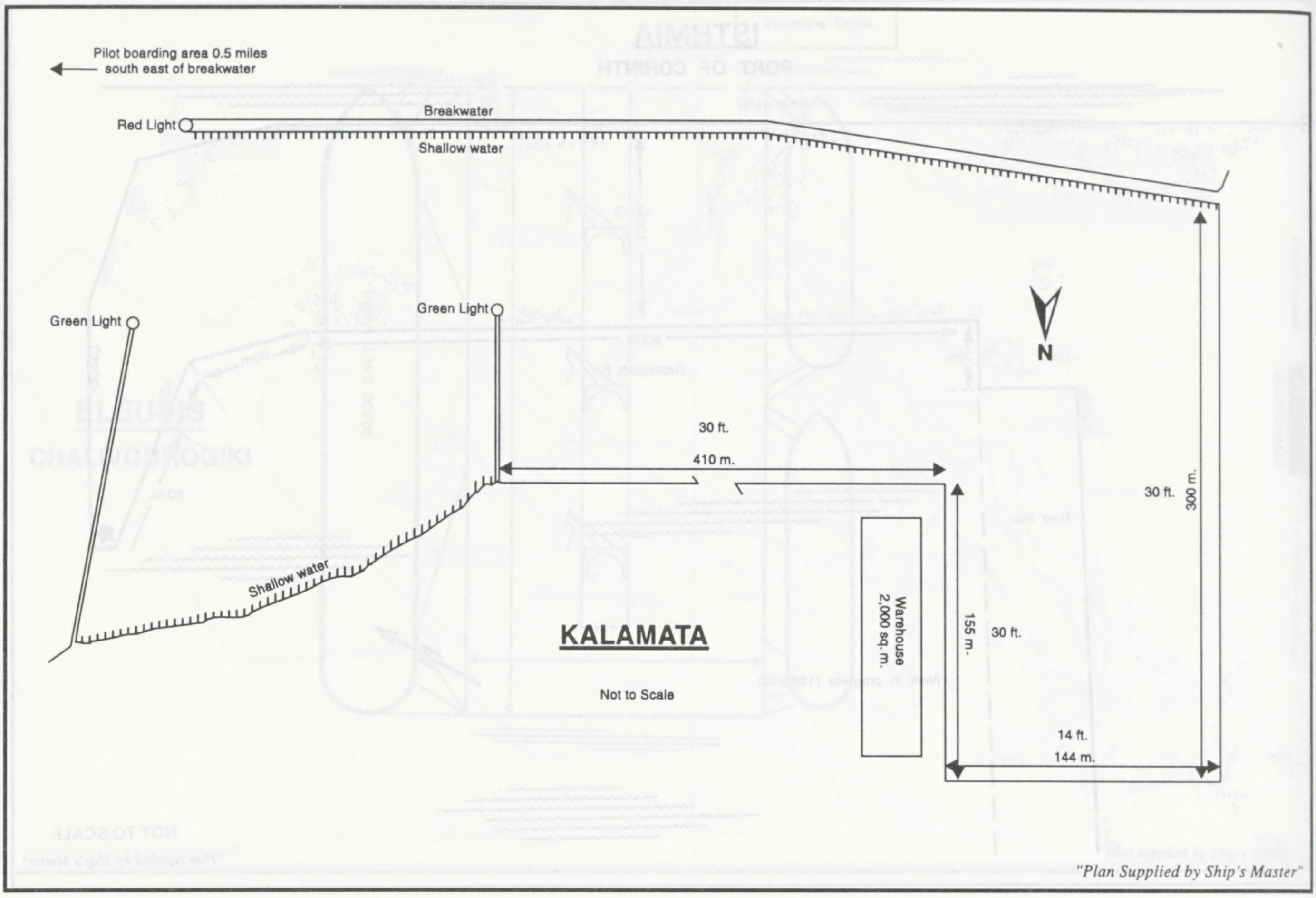
IRAKLION

DEPTHS IN METRES

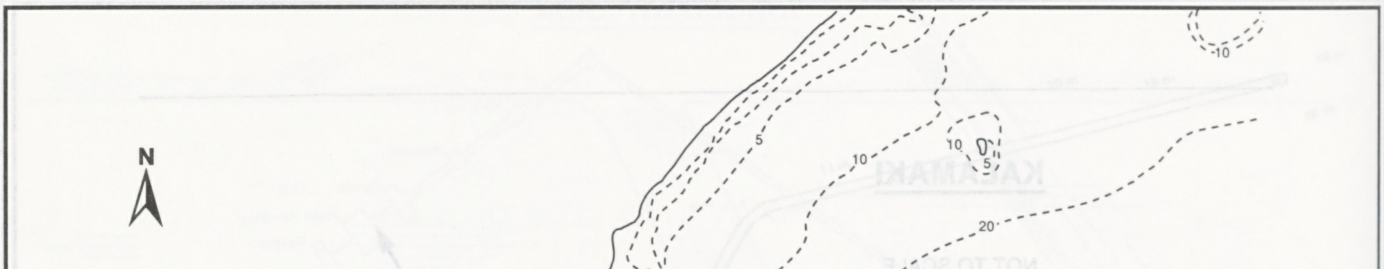
19 m
18 m
19 m
18 m
11 m
15 m
12 m
N
Pier No 6
2 m
8 m
10 m
9 m
6 m
Future Development
9 m
7 m
9 m
Pier No. 3
8 m
Pier No. 2
OLD VENETIAN HARBOUR
Pier No. 1
2 m
7 m
9 m
9 m
9 m
7 m

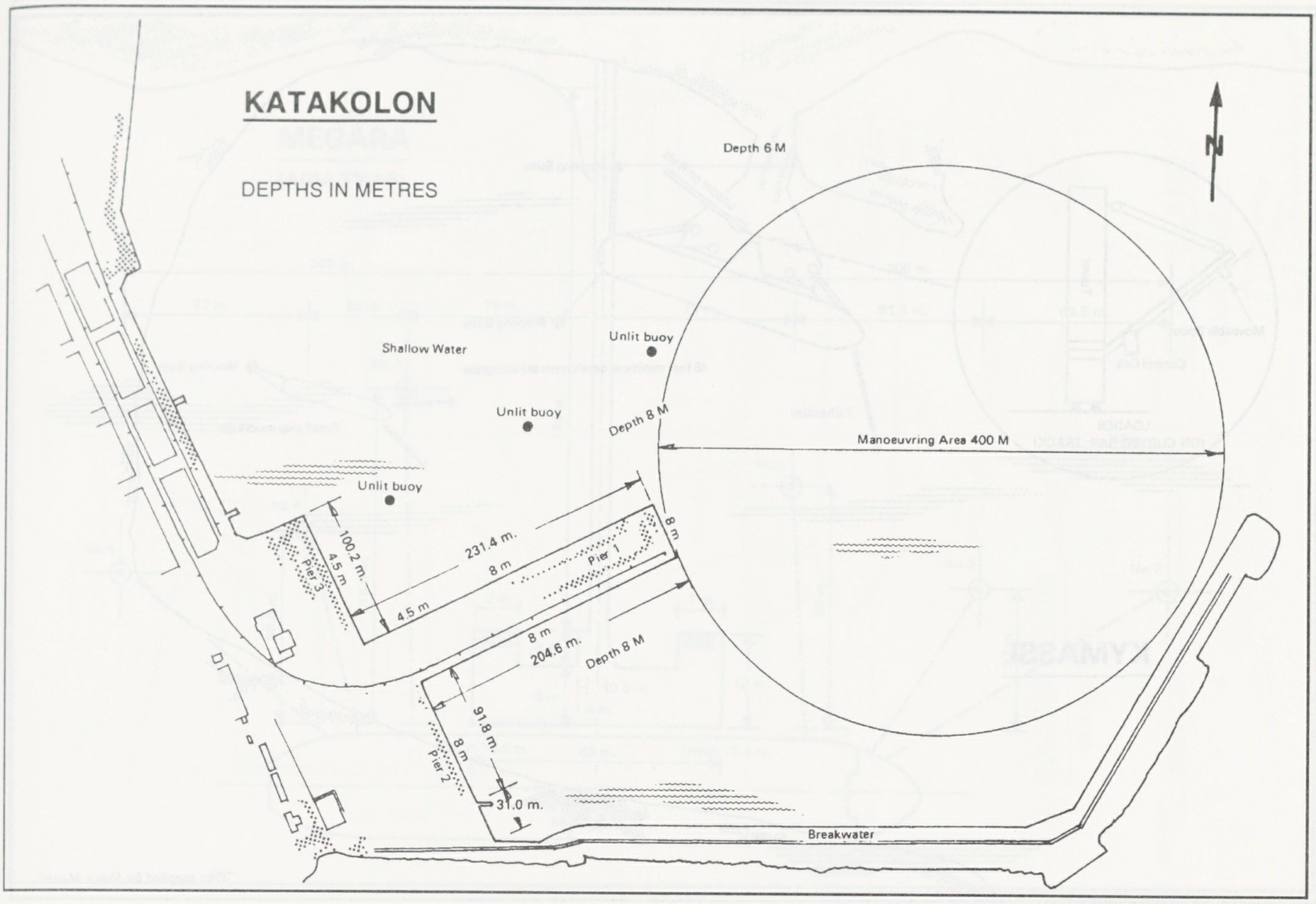

ISTHMIA
PORT OF CORINTH
Breakwater
100m.
Harbour Master
Customs House
35m
800m.
Depth 26ft.6in.
60m.
15m.
50 m.
New Pier
Work in progress (1985/86)
NOT TO SCALE
"Plan supplied by Ship's Master"

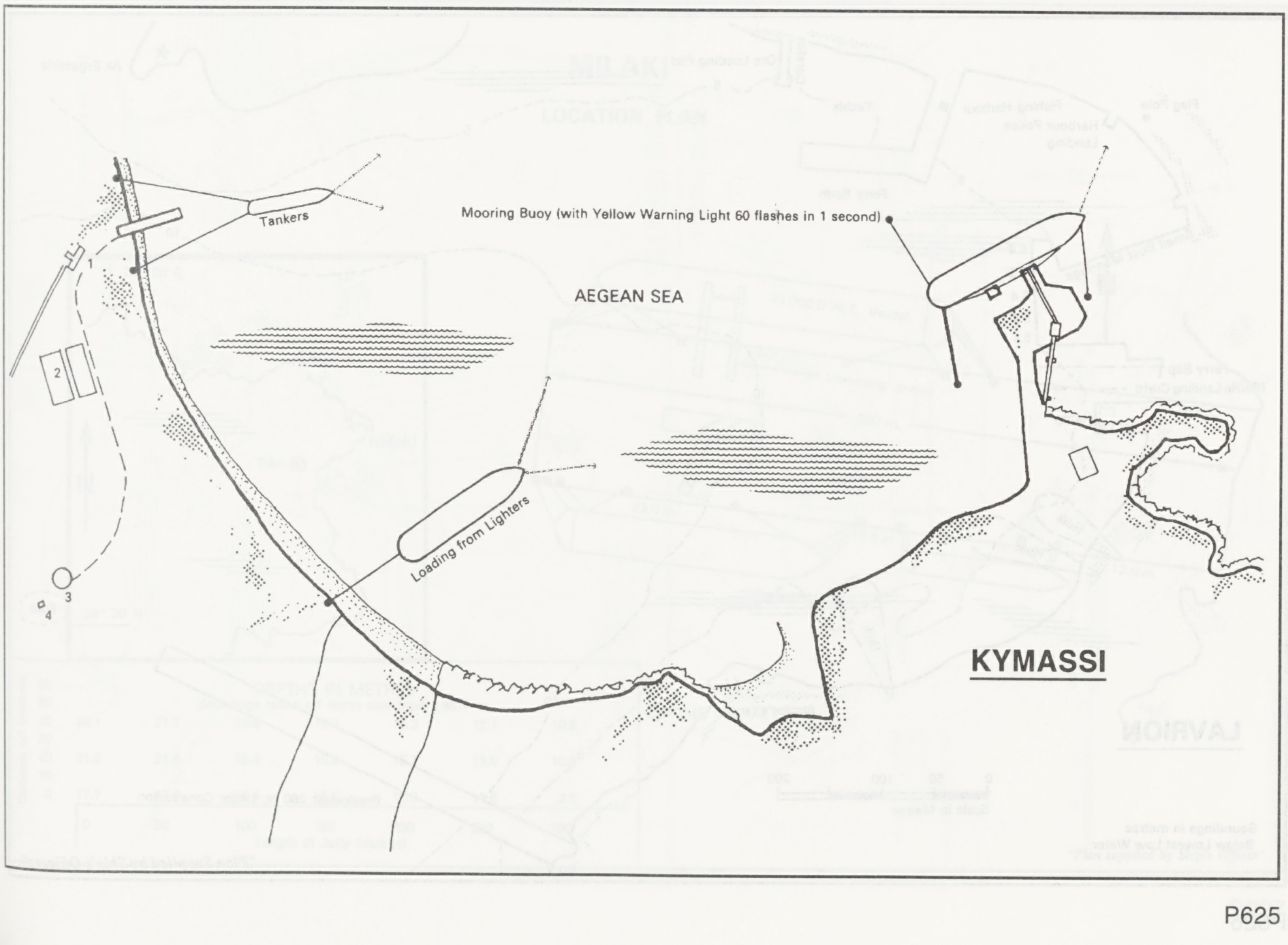

KALAMAKI
NOT TO SCALE
95 m.
120 m.
Block
Block
Block
Block
Block
160 m.
"Plan supplied by Ship's Master"


Pilot boarding area 0.5 miles south east of breakwater
Red Light
Breakwater
Shallow water
Green Light
Green Light
N
30 ft.
410 m.
30 ft.
300 m.
Shallow water
Warehouse 2,000 sq. m.
155 m.
30 ft.
KALAMATA
Not to Scale
14 ft.
144 m.

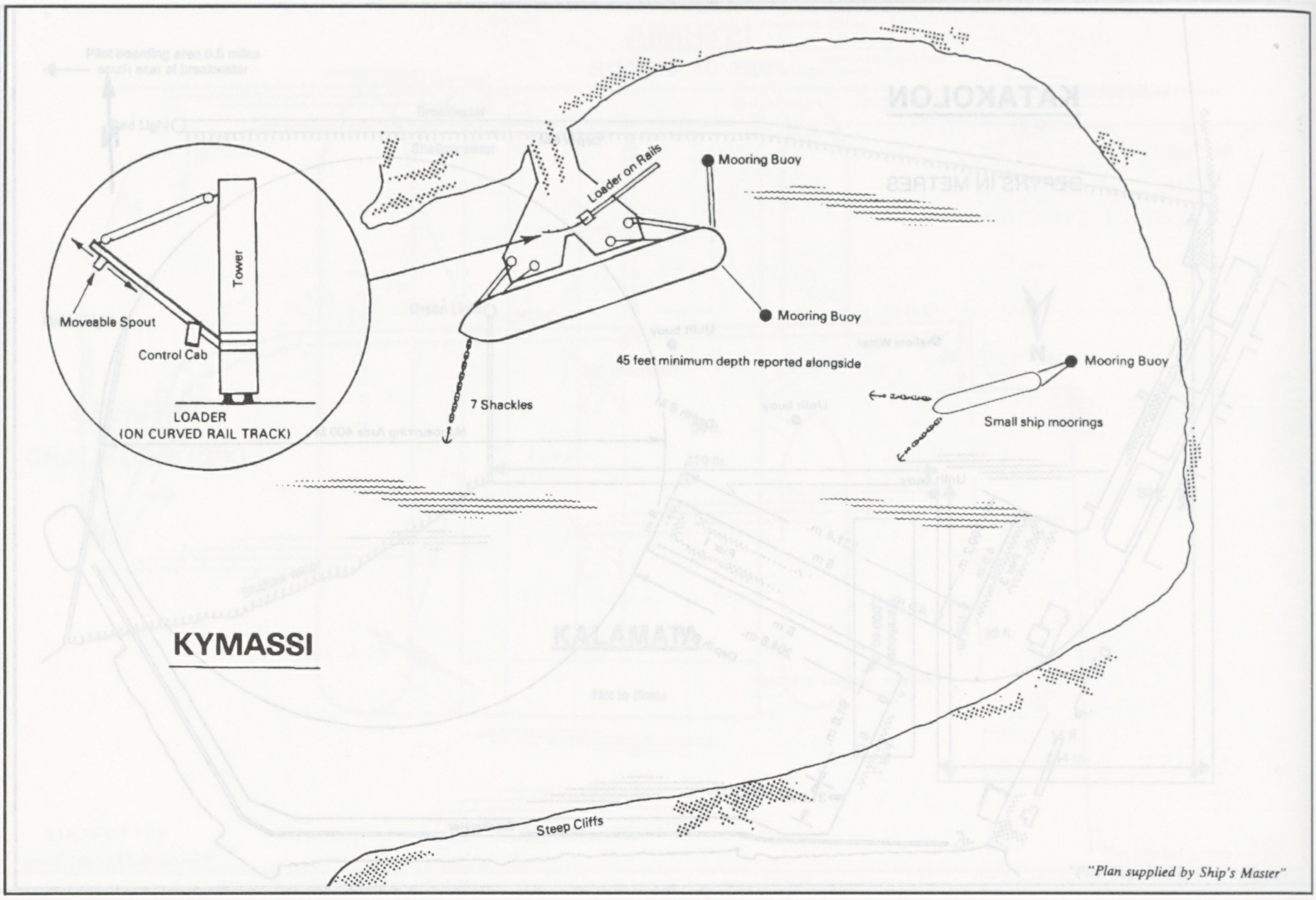
"Plan Supplied by Ship's Master"


N
5
10
20
50
100
Kali Limenes Bunkering Station
KALI LIMENES
All Depths in Meters


KATAKOLON
DEPTHS IN METRES
N
Depth 6 M
Shallow Water
Unlit buoy
Unlit buoy
Unlit buoy
Depth 8 M
Manoeuvring Area 400 M
8 m
231.4 m.
8 m
Pier 1
100.2 m.
4.5 m
Pier 3
4.5 m
8 m
204.6 m.
Depth 8 M
91.8 m.
8 m
Pier 2
31.0 m.
Breakwater

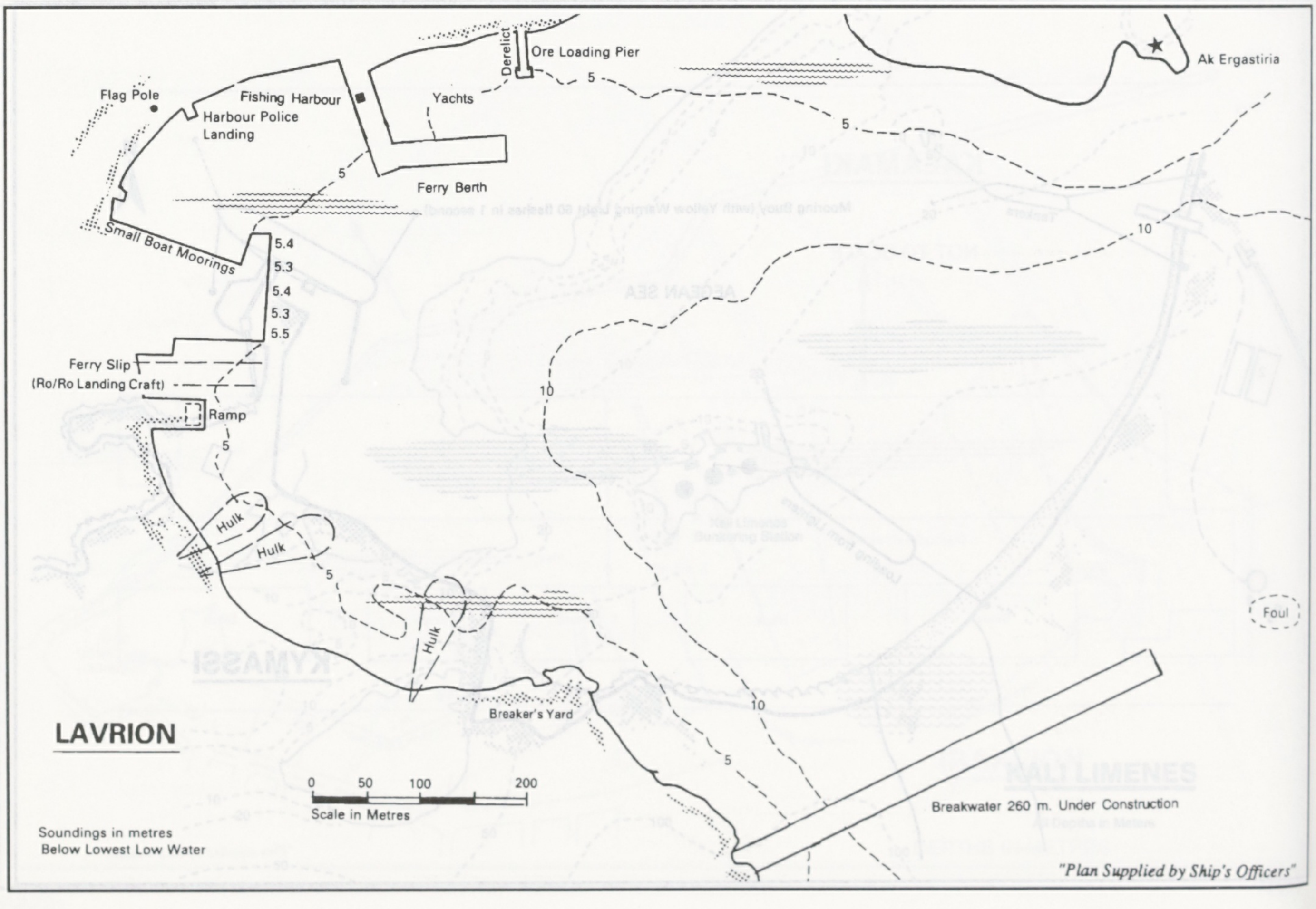

Tankers
Mooring Buoy (with Yellow Warning Light 60 flashes in 1 second)
AEGEAN SEA
1
2
3
4
Loading from Lighters
KYMASSI

KYMASSI


Mooring Buoy
Loader on Rails
Tower
Moveable Spout
Control Cab
LOADER
(ON CURVED RAIL TRACK)
Mooring Buoy
45 feet minimum depth reported alongside
Mooring Buoy
7 Shackles
Small ship moorings
Steep Cliffs

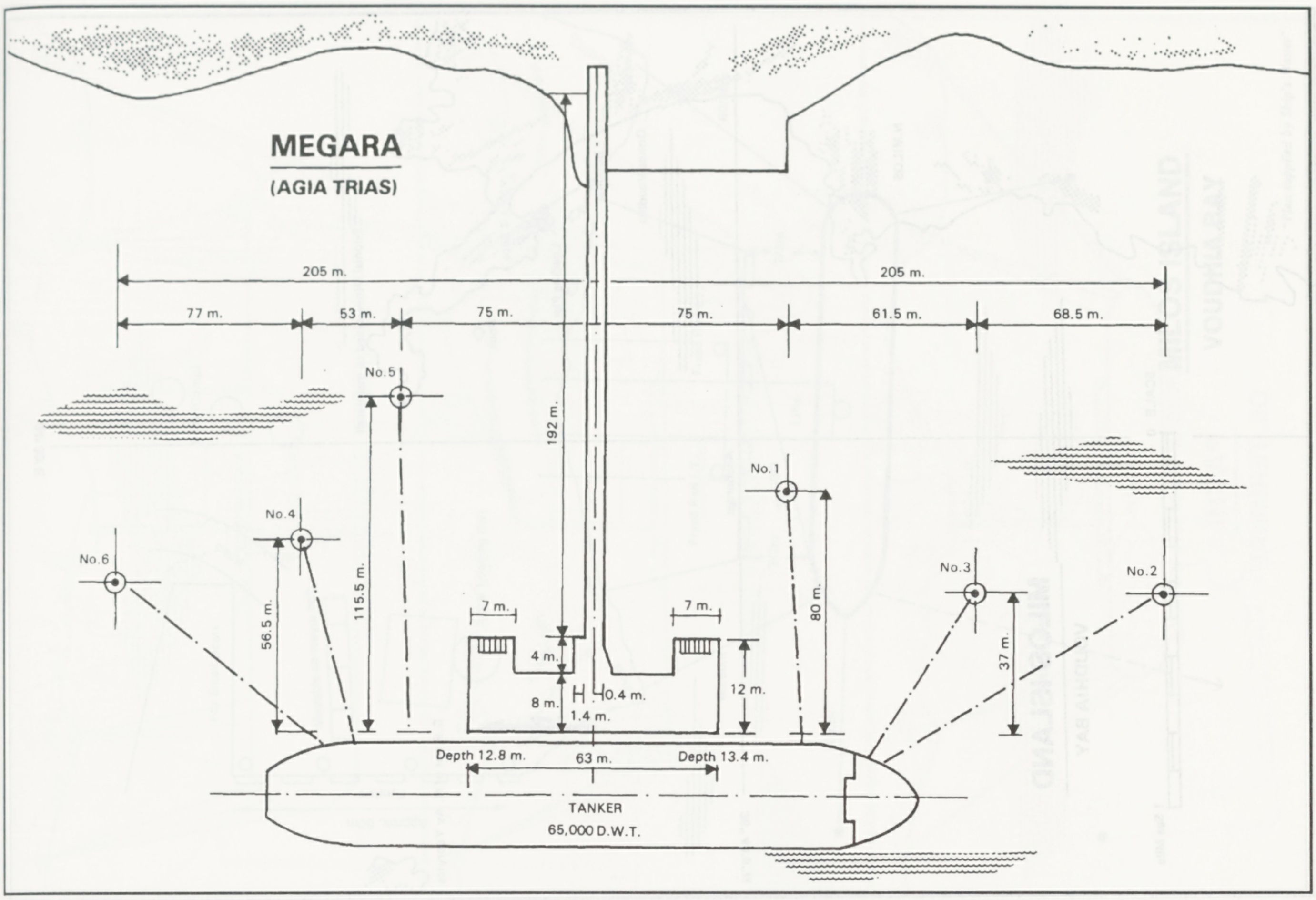
"Plan supplied by Ship's Master"

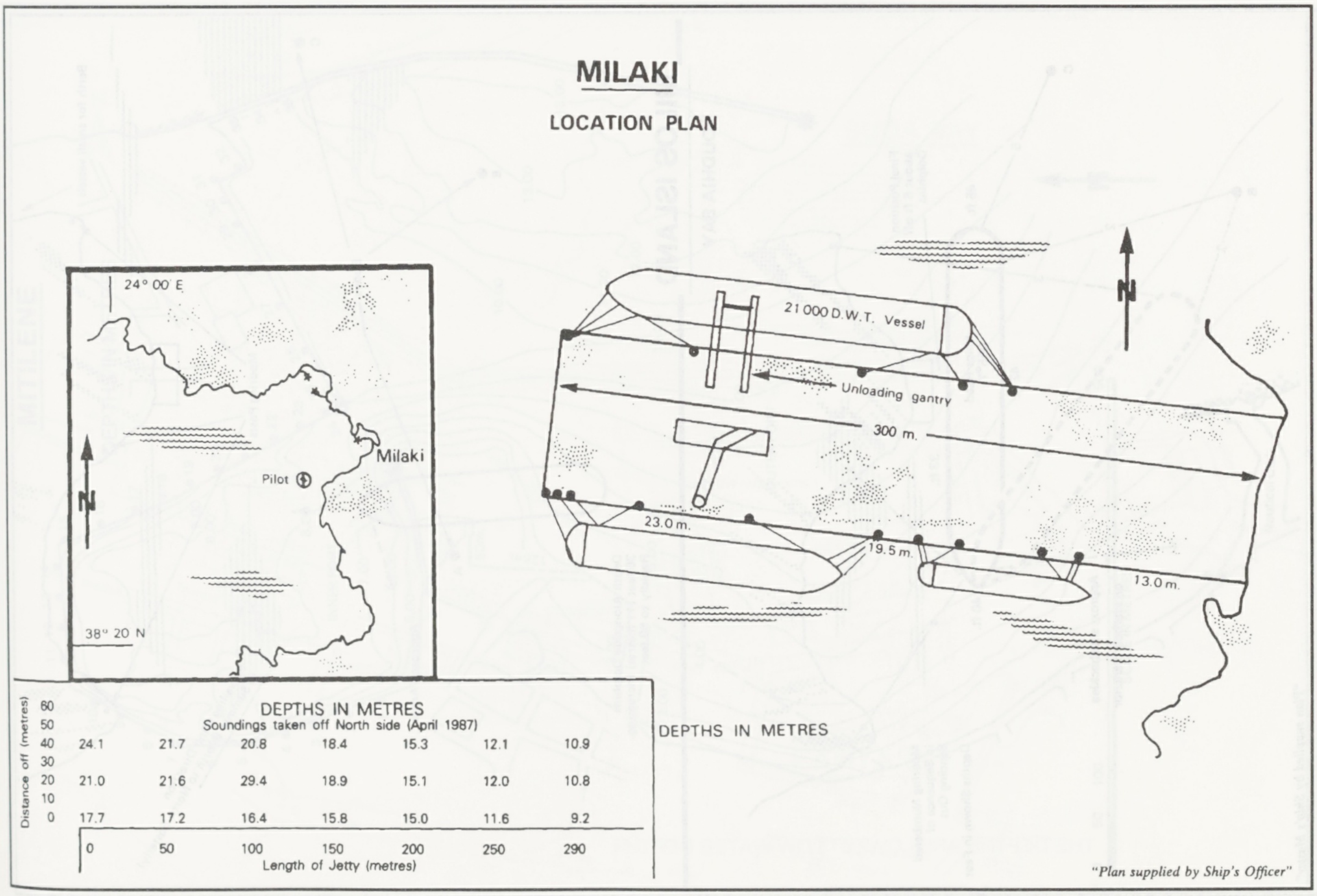
LAVRION


Derelict
Ore Loading Pier
Ak Ergastiria
Flag Pole
Fishing Harbour
Yachts
Harbour Police
Landing
5
5
5
Ferry Berth
Small Boat Moorings
5.4
5.3
5.4
5.3
5.5
10
Ferry Slip
(Ro/Ro Landing Craft)
Ramp
10
5
Hulk
Hulk
5
Hulk
Foul
Breaker's Yard
10
5
0
50
100
200
Scale in Metres
Breakwater 260 m. Under Construction

Soundings in metres
Below Lowest Low Water

"Plan Supplied by Ship's Officers"


MEGARA
(AGIA TRIAS)
205 m.
205 m.
77 m.
53 m.
75 m.
75 m.
61.5 m.
68.5 m.
192 m.
No.5
No.4
No.6
No.1
No.3
No.2
115.5 m.
56.5 m.
80 m.
37 m.
7 m.
7 m.
4 m.
8 m.
0.4 m.
1.4 m.
12 m.
Depth 12.8 m.
63 m.
Depth 13.4 m.
TANKER
65,000 D.W.T.

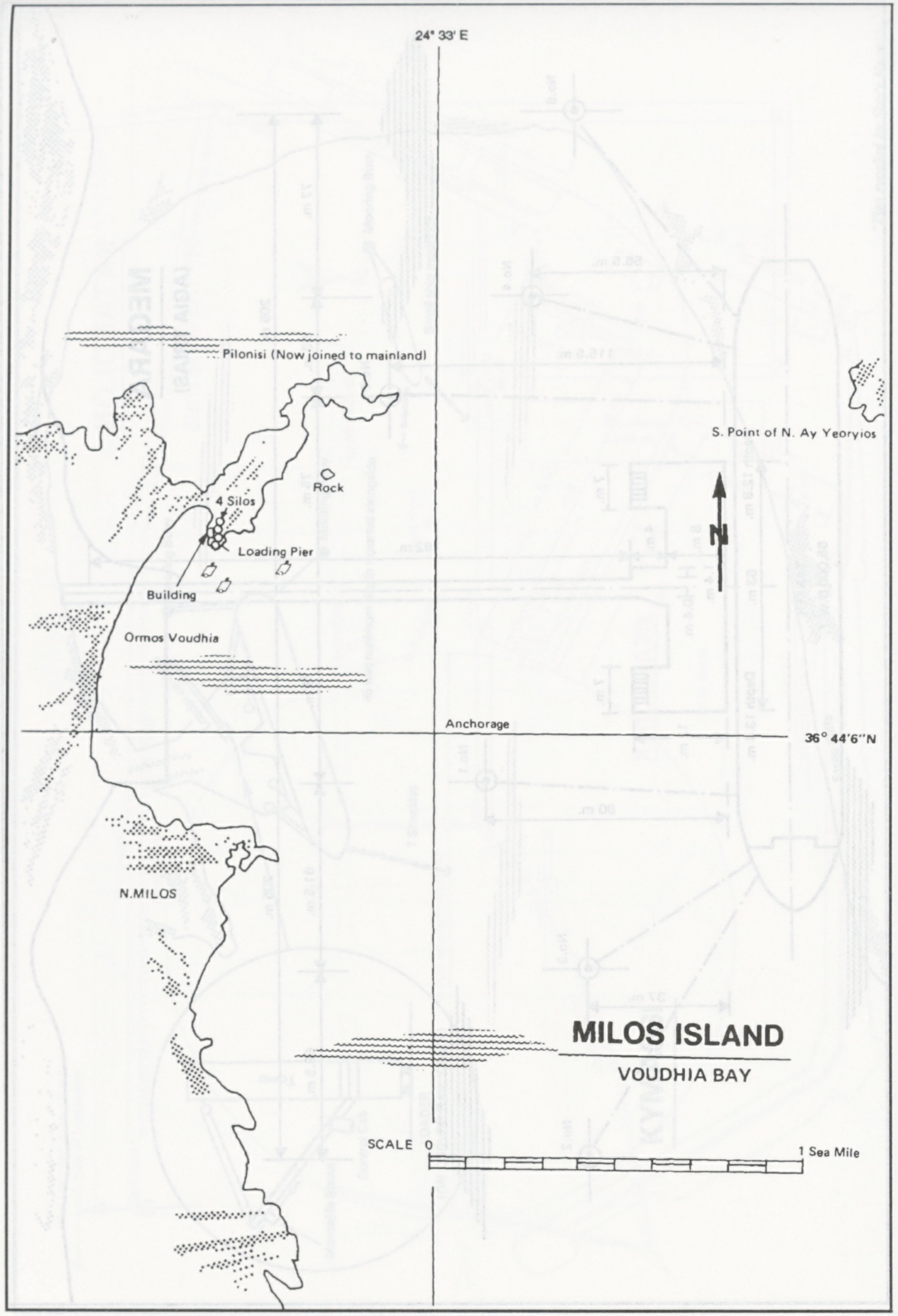

MILAKI
LOCATION PLAN
24° 00' E
Milaki
Pilot
N
38° 20' N
21 000 D.W.T. Vessel
Unloading gantry
300 m.
23.0 m.
19.5 m.
13.0 m.
N
DEPTHS IN METRES

DEPTHS IN METRES
Soundings taken off North side (April 1987)

Distance off (metres)	0	50	100	150	200	250	290
60							
50							
40	24.1	21.7	20.8	18.4	15.3	12.1	10.9
30							
20	21.0	21.6	29.4	18.9	15.1	12.0	10.8
10							
0	17.7	17.2	16.4	15.8	15.0	11.6	9.2

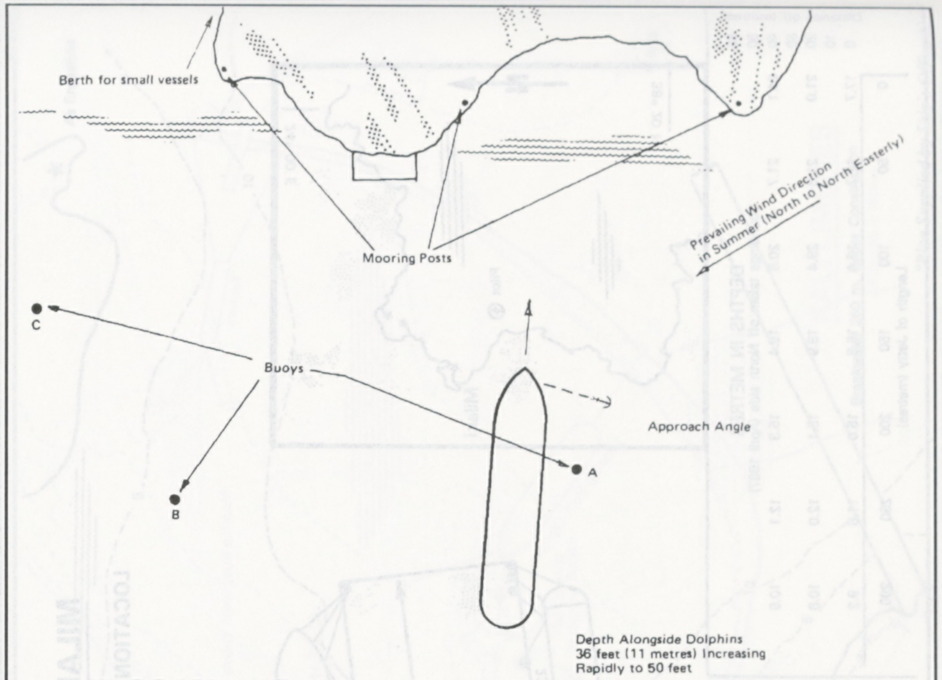
Length of Jetty (metres)

"Plan supplied by Ship's Officer"


24° 33' E
Pilonisi (Now joined to mainland)
S. Point of N. Ay Yeoryios
Rock
4 Silos
Loading Pier
Building
N
Ormos Voudhia
Anchorage
36° 44'6"N
N.MILOS
SCALE 0
1 Sea Mile

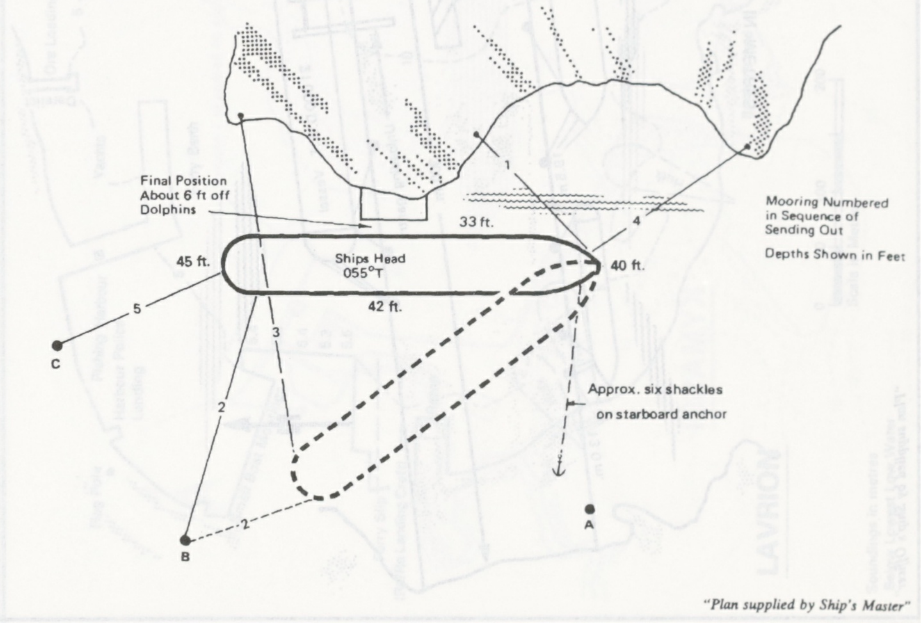
MILOS ISLAND

VOUDHIA BAY

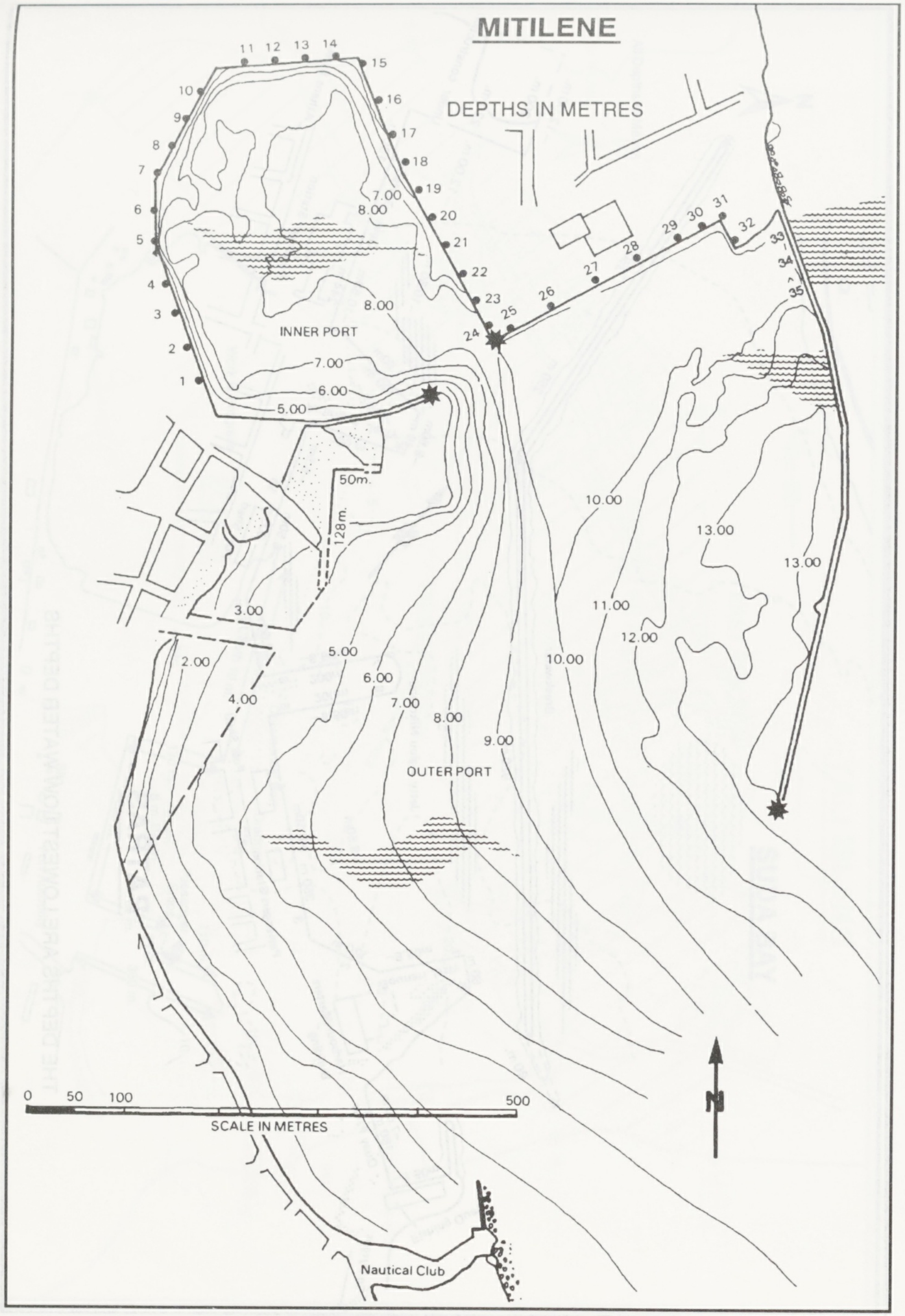

Berth for small vessels
Mooring Posts
Prevailing Wind Direction in Summer (North to North Easterly)
C
Buoys
A
B
Approach Angle
Depth Alongside Dolphins
36 feet (11 metres) Increasing
Rapidly to 50 feet

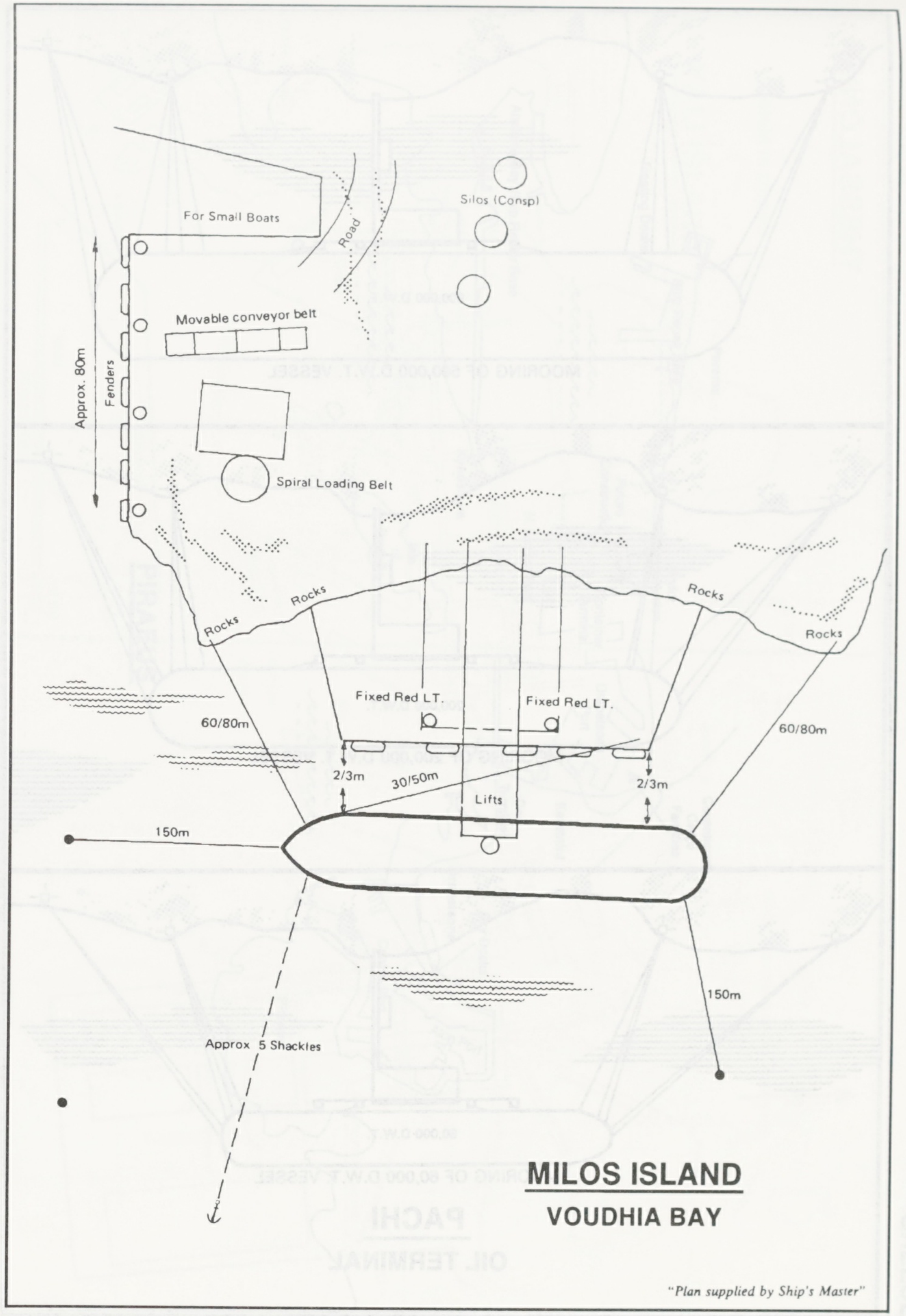
MILOS ISLAND

VOUDHIA BAY


Final Position
About 6 ft off
Dolphins
1
33 ft.
4
Mooring Numbered
in Sequence of
Sending Out
Depths Shown in Feet
45 ft.
Ships Head
055°T
40 ft.
42 ft.
5
C
3
Approx. six shackles
on starboard anchor
2
A
B
2

"Plan supplied by Ship's Master"

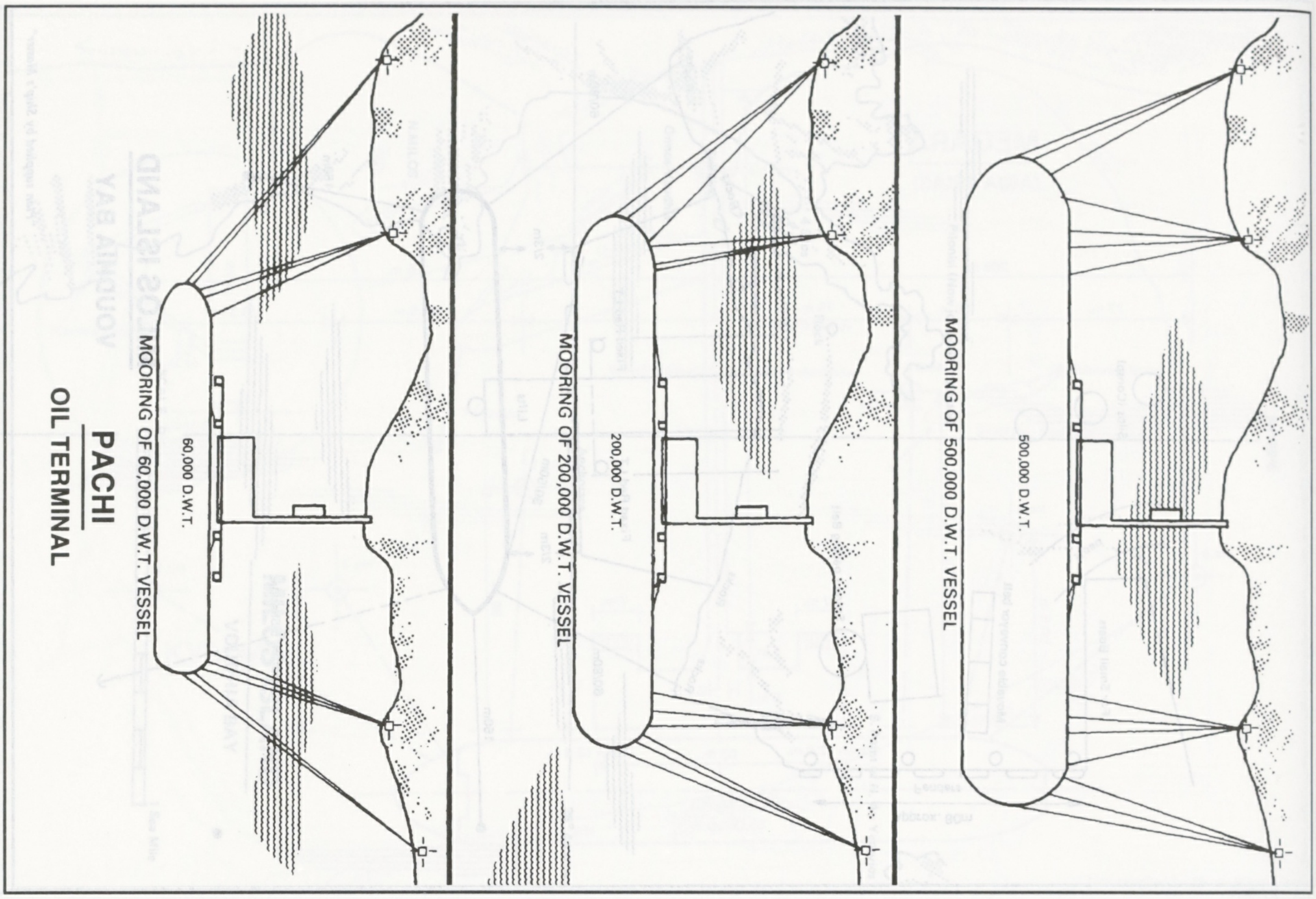

MITILENE
DEPTHS IN METRES
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
7.00
8.00
8.00
INNER PORT
7.00
6.00
5.00
50m.
128m.
3.00
2.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
10.00
11.00
12.00
13.00
13.00
OUTER PORT
0
50
100
500
SCALE IN METRES
N
Nautical Club

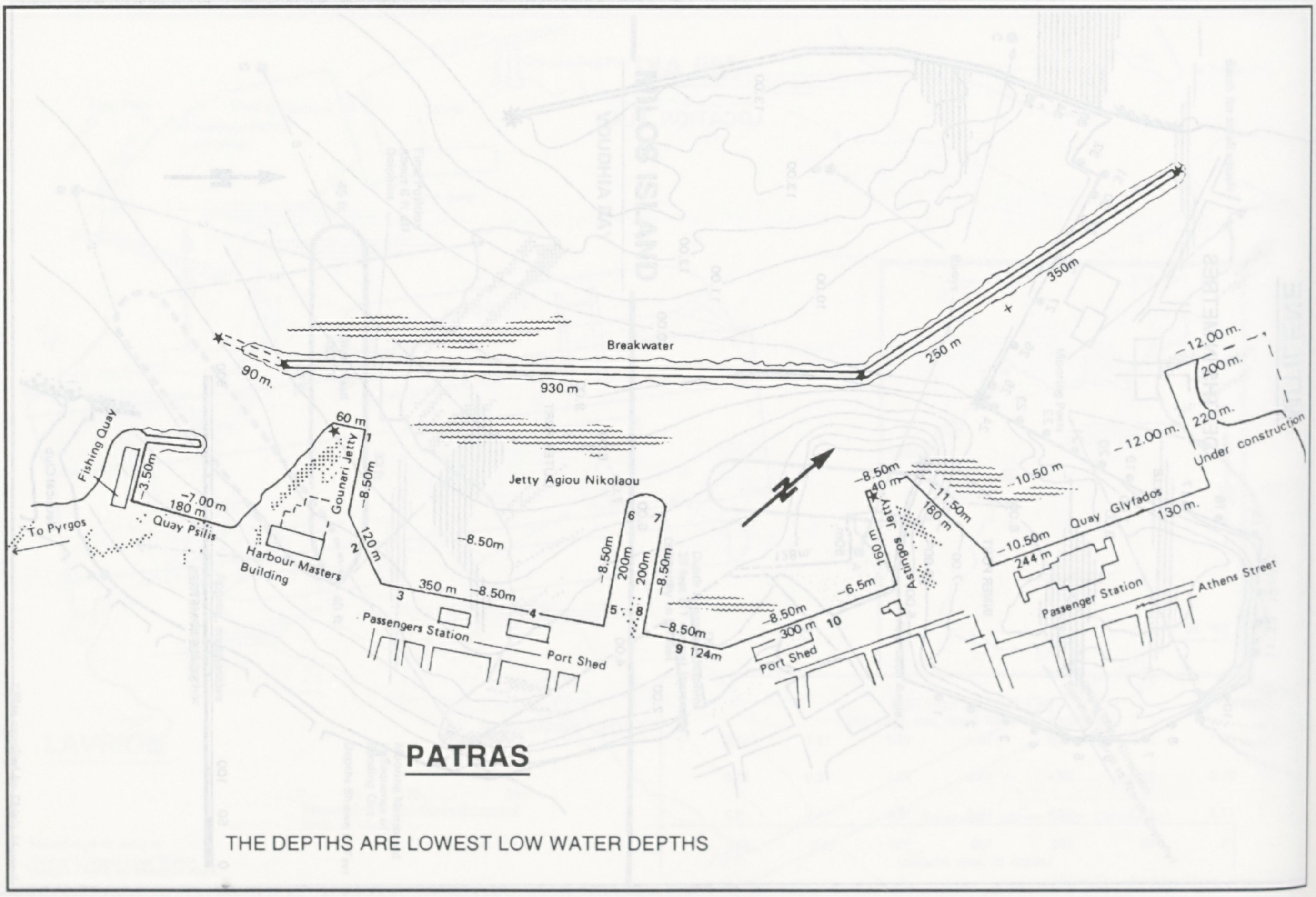

For Small Boats
Road
Silos (Consp)
Movable conveyor belt
Approx. 80m
Fenders
Spiral Loading Belt
Rocks
Rocks
Rocks
Rocks
Fixed Red LT.
Fixed Red LT.
60/80m
60/80m
2/3m
30/50m
2/3m
Lifts
150m
150m
Approx 5 Shackles

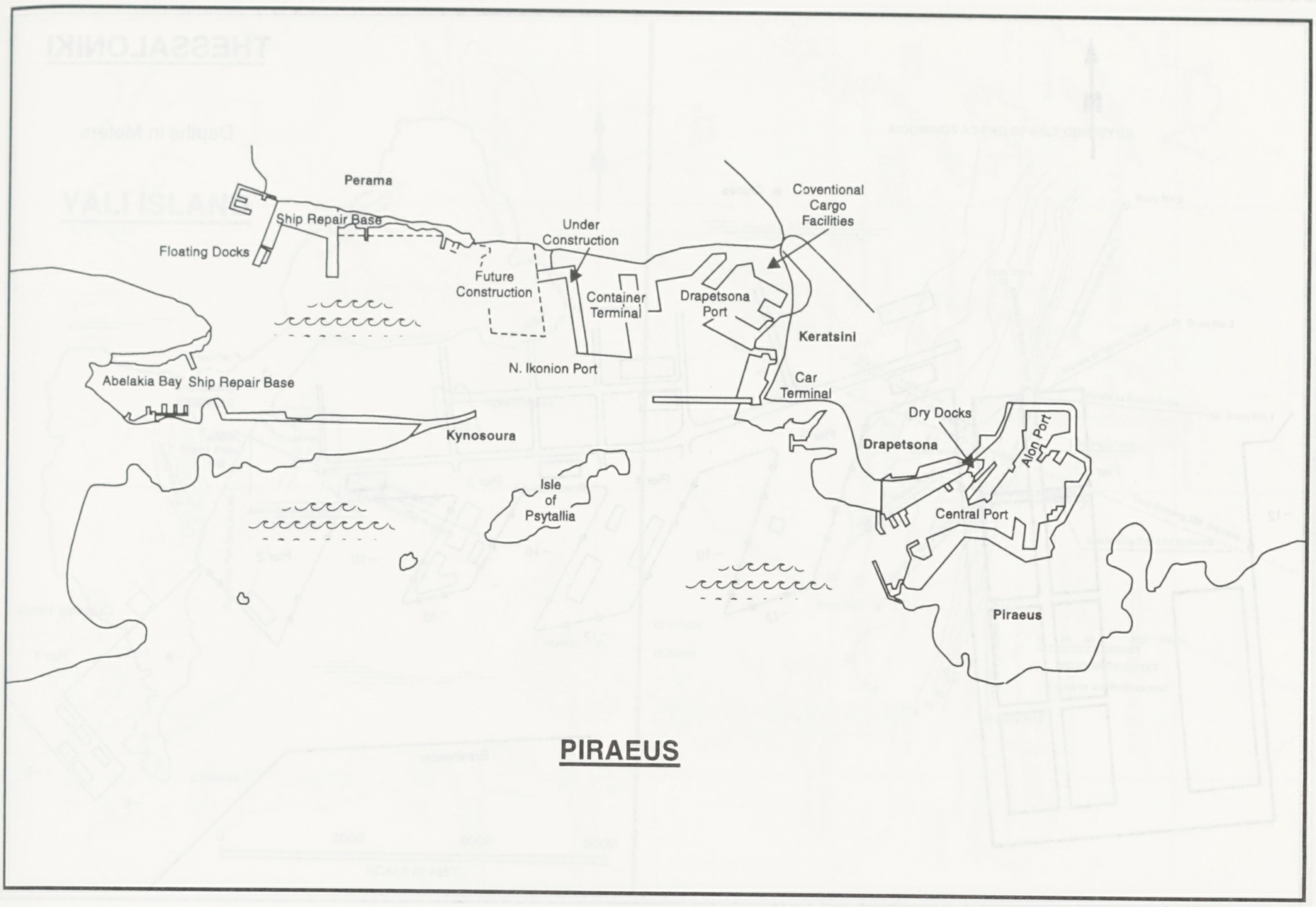
MILOS ISLAND

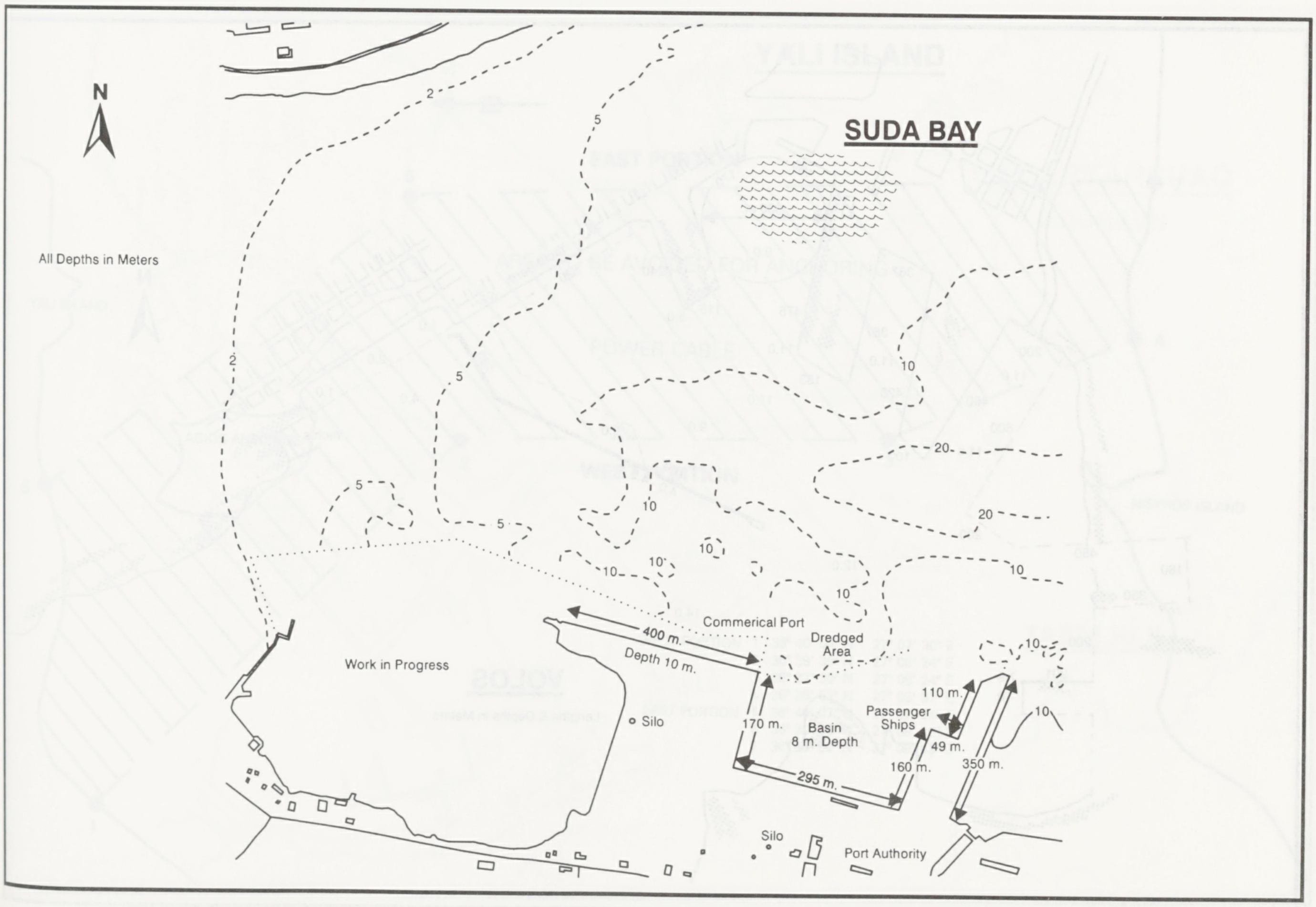
VOUDHIA BAY

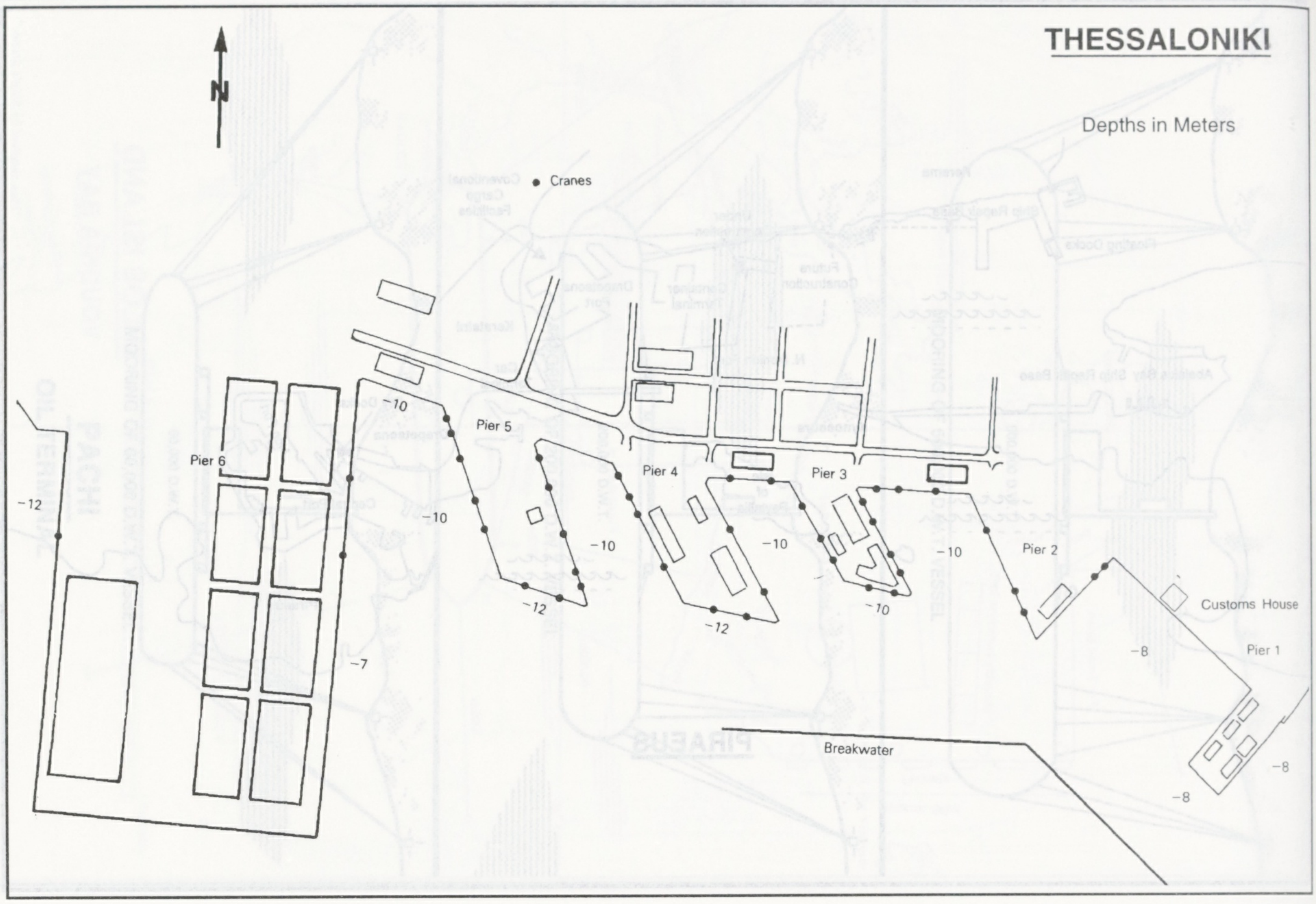
"Plan supplied by Ship's Master"

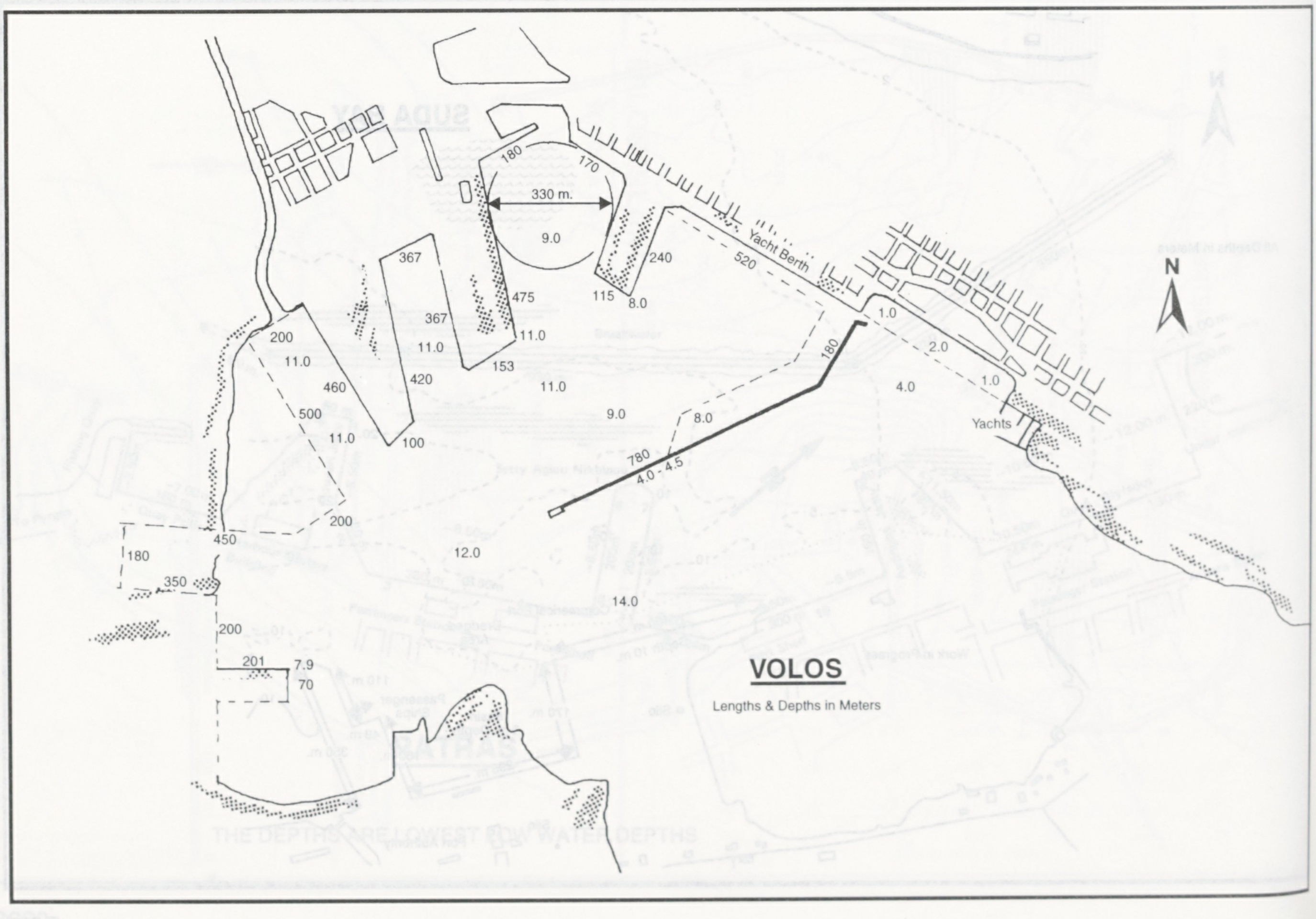

PACHI
OIL TERMINAL
MOORING OF 60,000 D.W.T. VESSEL
60,000 D.W.T.
MOORING OF 200,000 D.W.T. VESSEL
200,000 D.W.T.
MOORING OF 500,000 D.W.T. VESSEL
500,000 D.W.T.

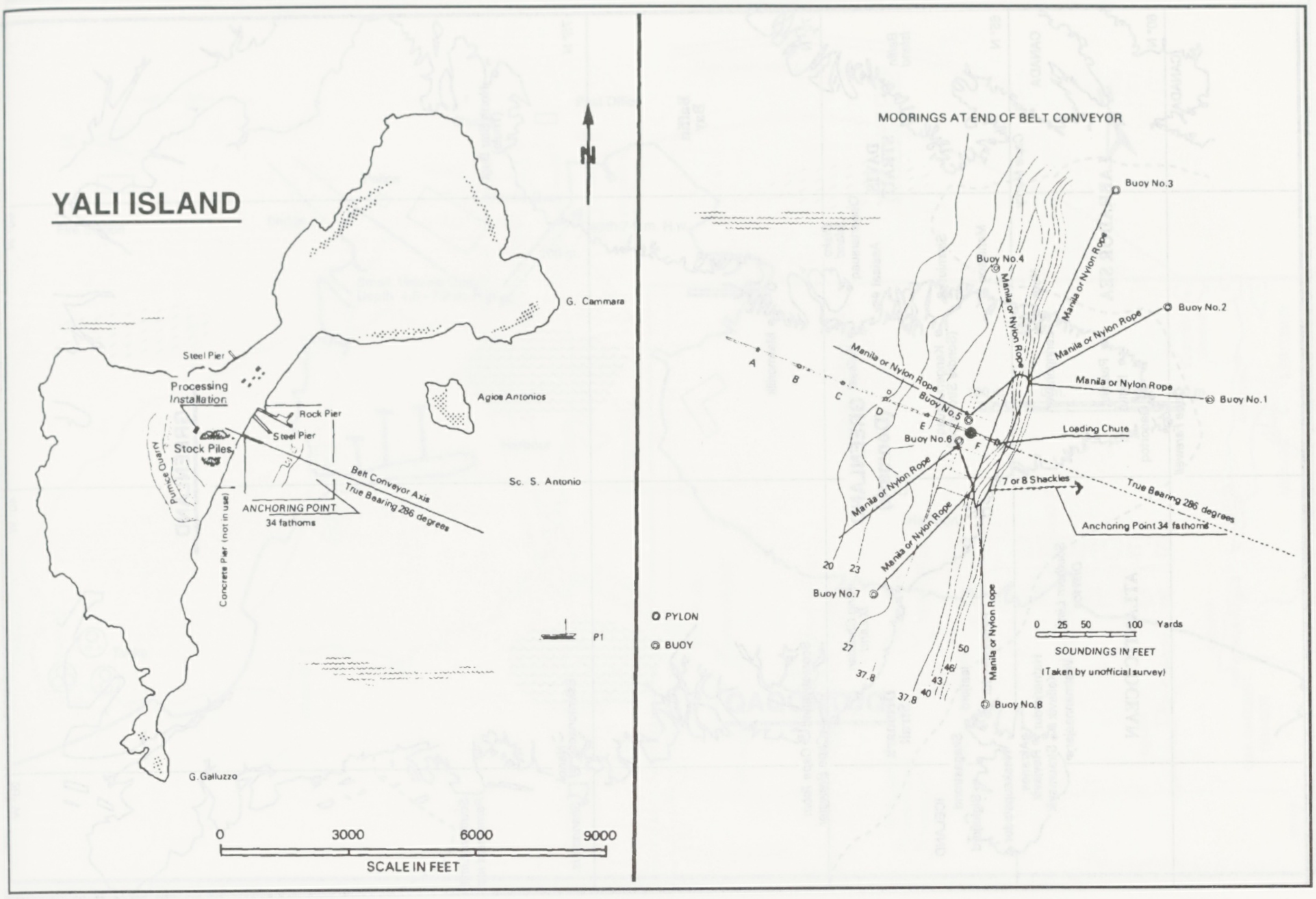

Breakwater
930 m
90 m.
250 m
350m
60 m
Gounari Jetty
–8.50m
120 m
2
3
350 m
–8.50m
4
Passengers Station
Port Shed
Jetty Agiou Nikolaou
–8.50m
6
7
–8.50m
200m
200m
–8.50m
5
8
–8.50m
9 124m
–8.50m
300 m
10
Port Shed
–6.5m
160 m
Astingos Jetty
–8.50m
40 m
11.50m
180 m
–10.50 m
–10.50m
244 m
Quay Glyfados
130 m.
–12.00 m.
220 m.
200 m.
–12.00 m.
Under construction
Passenger Station
Athens Street
Fishing Quay
–3.50m
–7.00 m
180 m
Quay Psilis
To Pyrgos
Harbour Masters Building
PATRAS
THE DEPTHS ARE LOWEST LOW WATER DEPTHS

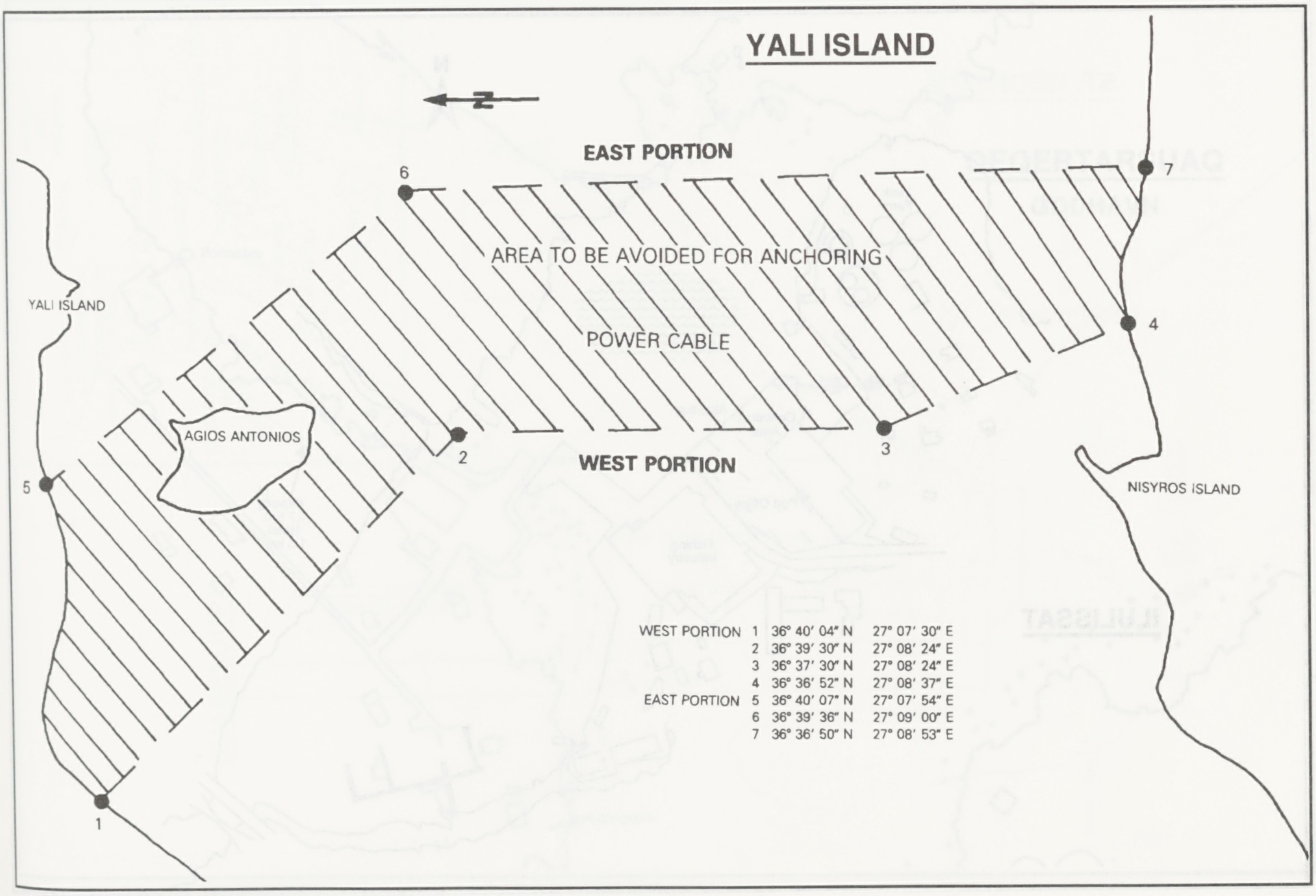

Perama
Ship Repair Base
Floating Docks
Under Construction
Future Construction
Container Terminal
Coventional Cargo Facilities
Drapetsona Port
Keratsini
N. Ikonion Port
Car Terminal
Abelakia Bay Ship Repair Base
Kynosoura
Dry Docks
Drapetsona
Alon Port
Isle of Psytallia
Central Port
Piraeus
PIRAEUS


N
SUDA BAY
All Depths in Meters
2
5
2
5
10
20
5
5
10
20
10
10
10
10
10
10
10
Commerical Port
400 m.
Depth 10 m.
Dredged Area
Work in Progress
Silo
170 m.
Basin
8 m. Depth
295 m.
110 m.
Passenger Ships
49 m.
160 m.
350 m.
Silo
Port Authority

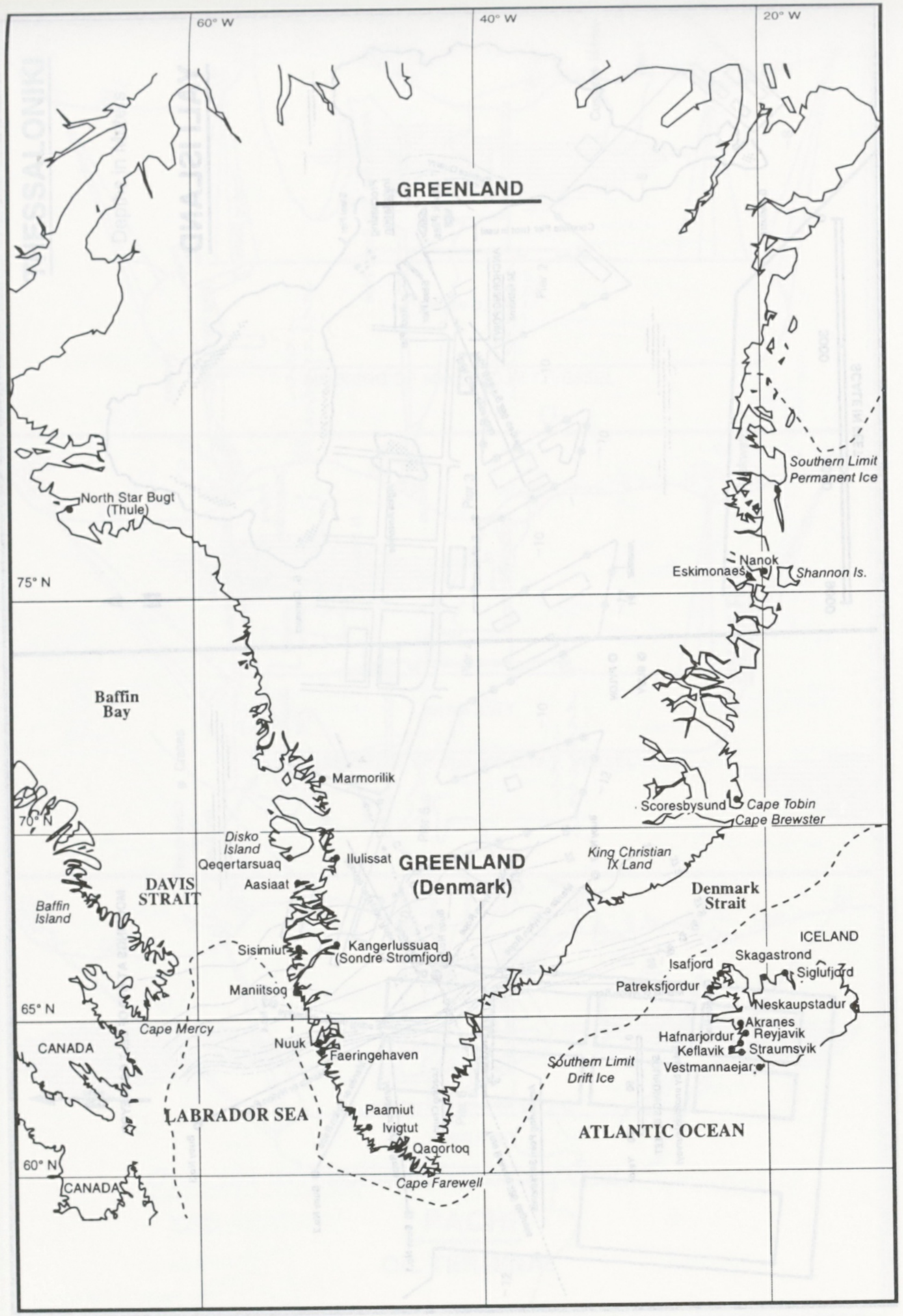

THESSALONIKI
Depths in Meters
N
Cranes
Pier 6
Pier 5
Pier 4
Pier 3
Pier 2
Pier 1
Customs House
Breakwater
−12
−10
−10
−10
−10
−10
−10
−12
−12
−10
−7
−8
−8
−8

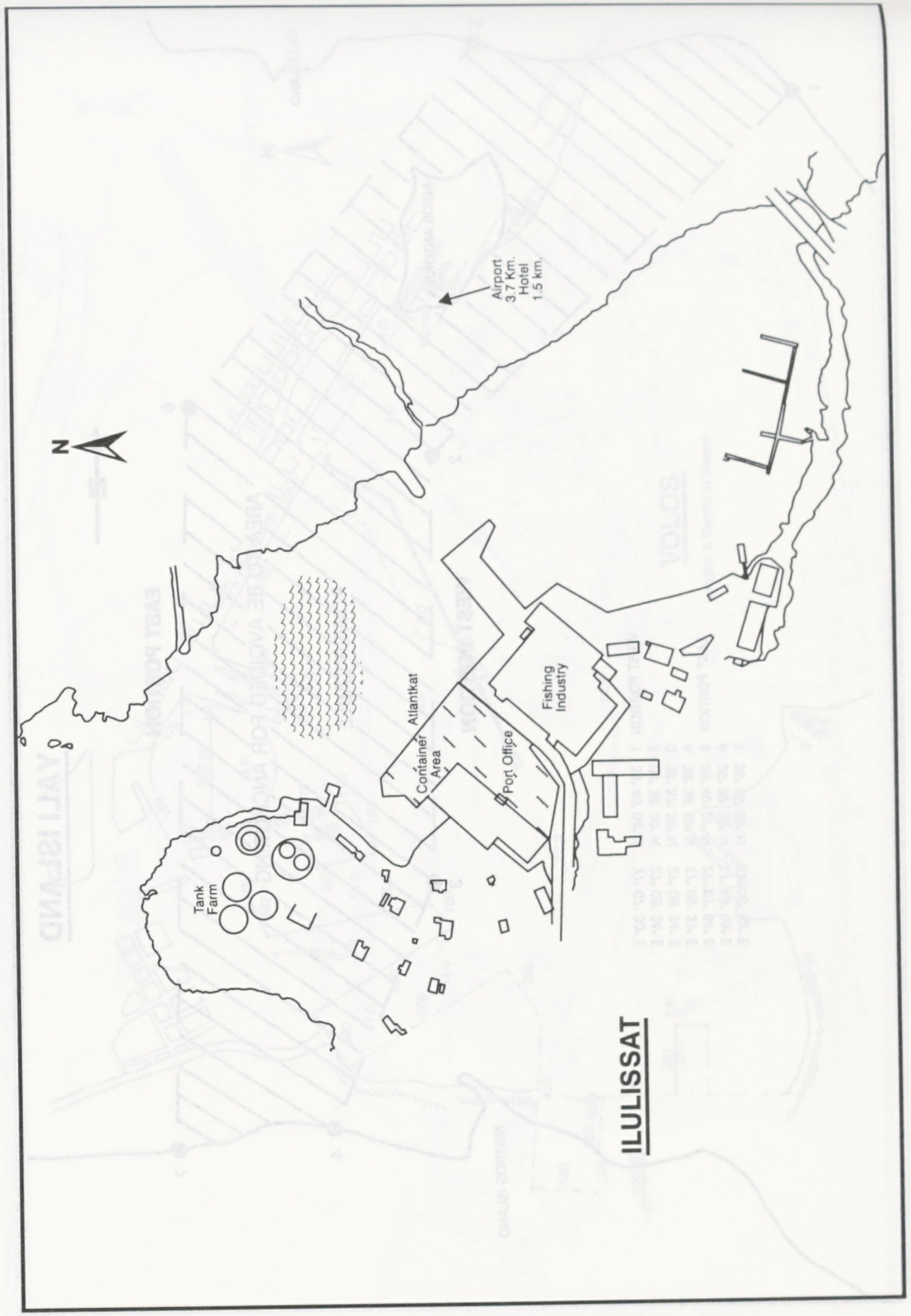

VOLOS
Lengths & Depths in Meters
N
330 m.
180
170
9.0
367
367
475
11.0
115
8.0
240
520
Yacht Berth
1.0
2.0
1.0
4.0
Yachts
180
200
11.0
460
500
11.0
11.0
420
153
11.0
100
9.0
8.0
780
4.0 - 4.5
200
450
180
350
12.0
14.0
200
201
7.9
70

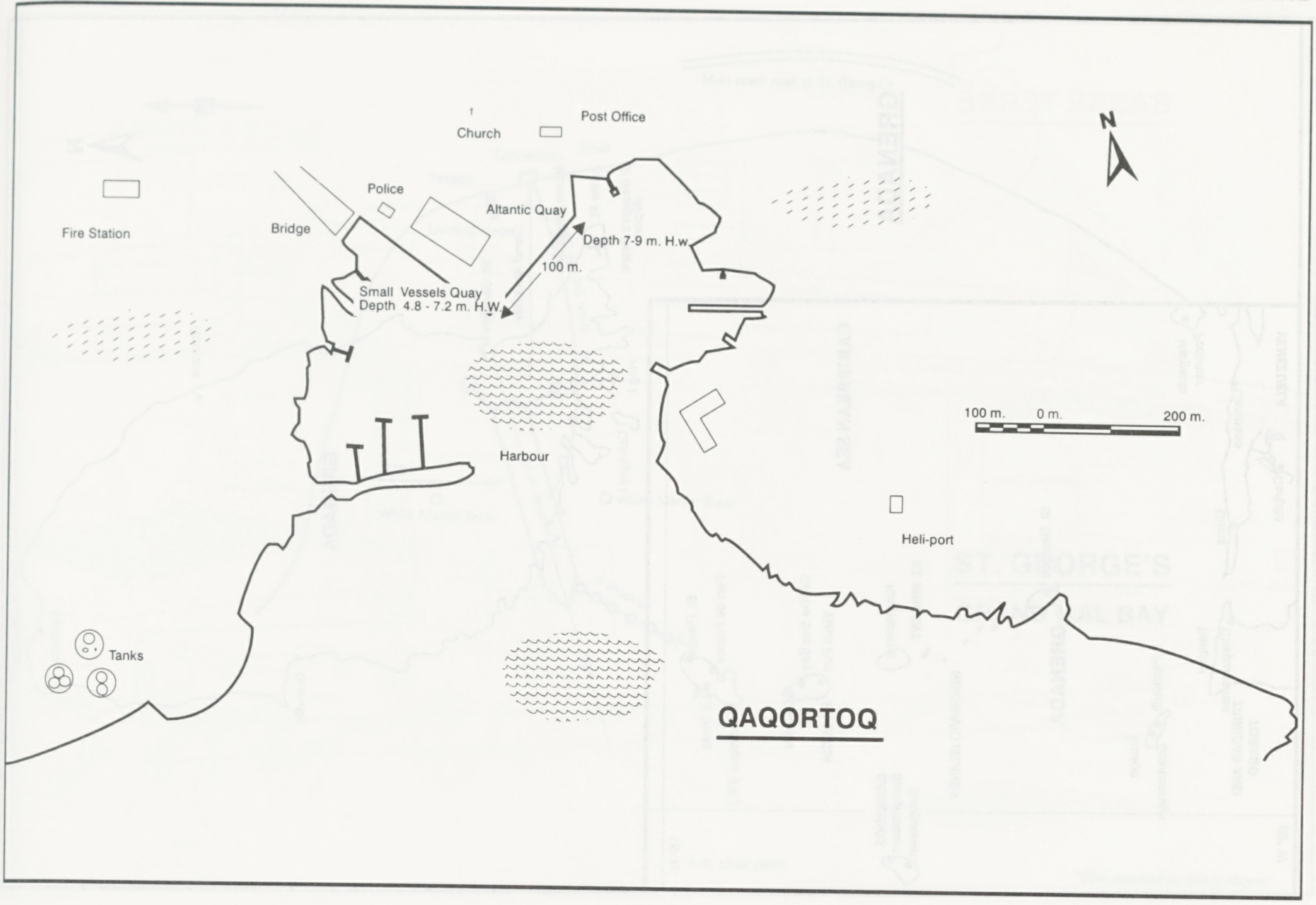

YALI ISLAND
N
G. Cammara
Steel Pier
Processing Installation
Rock Pier
Steel Pier
Stock Piles
Pumice Quarry
Agios Antonios
Belt Conveyor Axis
True Bearing 286 degrees
Sc. S. Antonio
ANCHORING POINT
34 fathoms
Concrete Pier (not in use)
P1
G.Galluzzo
0
3000
6000
9000
SCALE IN FEET
MOORINGS AT END OF BELT CONVEYOR
Buoy No.3
Buoy No.4
Buoy No.2
Buoy No.1
Buoy No.5
Buoy No.6
Buoy No.7
Buoy No.8
Manila or Nylon Rope
A
B
C
D
E
F
Loading Chute
7 or 8 Shackles
True Bearing 286 degrees
Anchoring Point 34 fathoms
20
23
27
37.8
50
46
43
40
37.8
PYLON
BUOY
0
25
50
100
Yards
SOUNDINGS IN FEET
(Taken by unofficial survey)

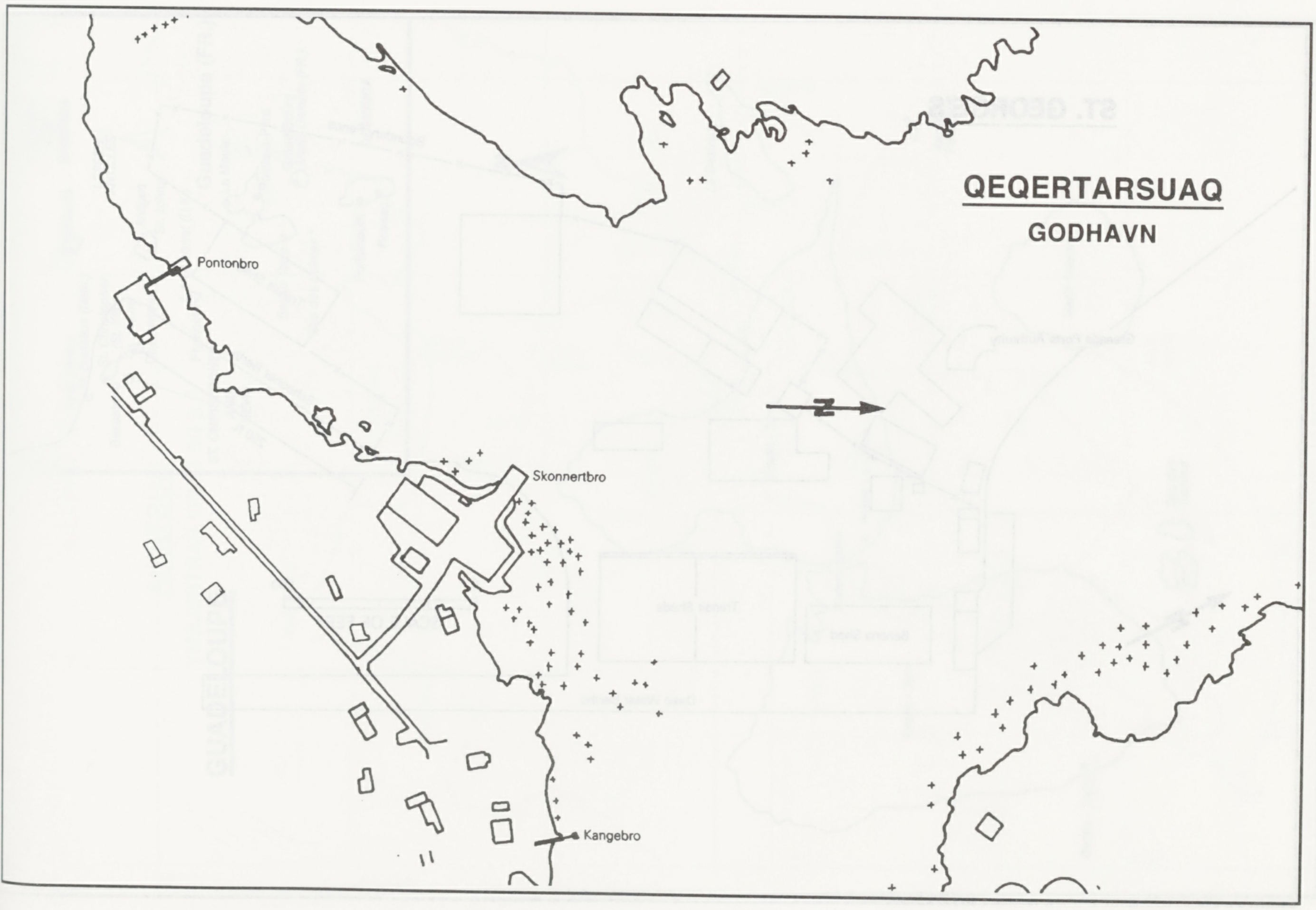

YALI ISLAND
N
EAST PORTION
AREA TO BE AVOIDED FOR ANCHORING
POWER CABLE
WEST PORTION
YALI ISLAND
AGIOS ANTONIOS
NISYROS ISLAND
1
2
3
4
5
6
7

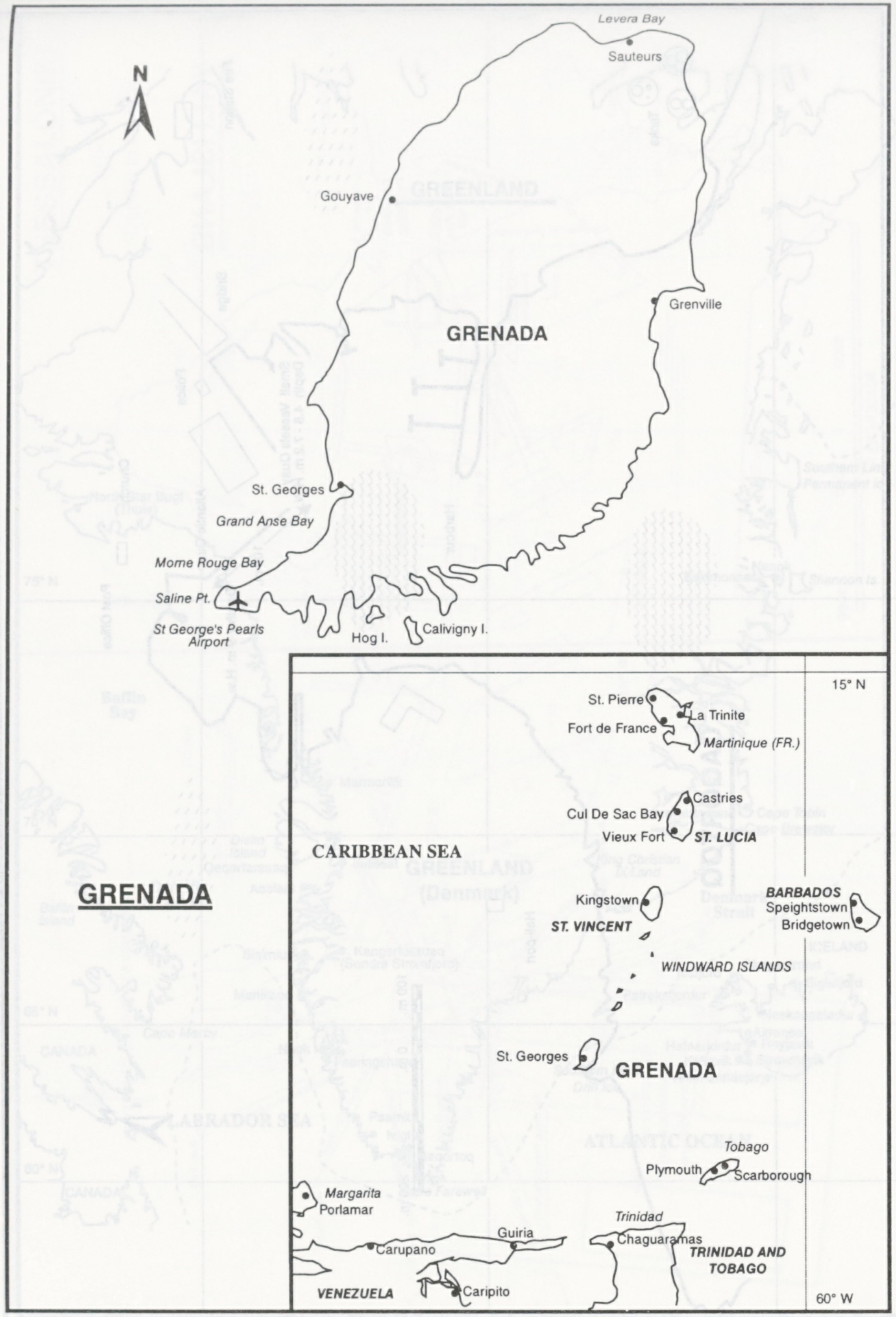
WEST PORTION	1	36° 40′ 04″ N	27° 07′ 30″ E
	2	36° 39′ 30″ N	27° 08′ 24″ E
	3	36° 37′ 30″ N	27° 08′ 24″ E
	4	36° 36′ 52″ N	27° 08′ 37″ E
EAST PORTION	5	36° 40′ 07″ N	27° 07′ 54″ E
	6	36° 39′ 36″ N	27° 09′ 00″ E
	7	36° 36′ 50″ N	27° 08′ 53″ E

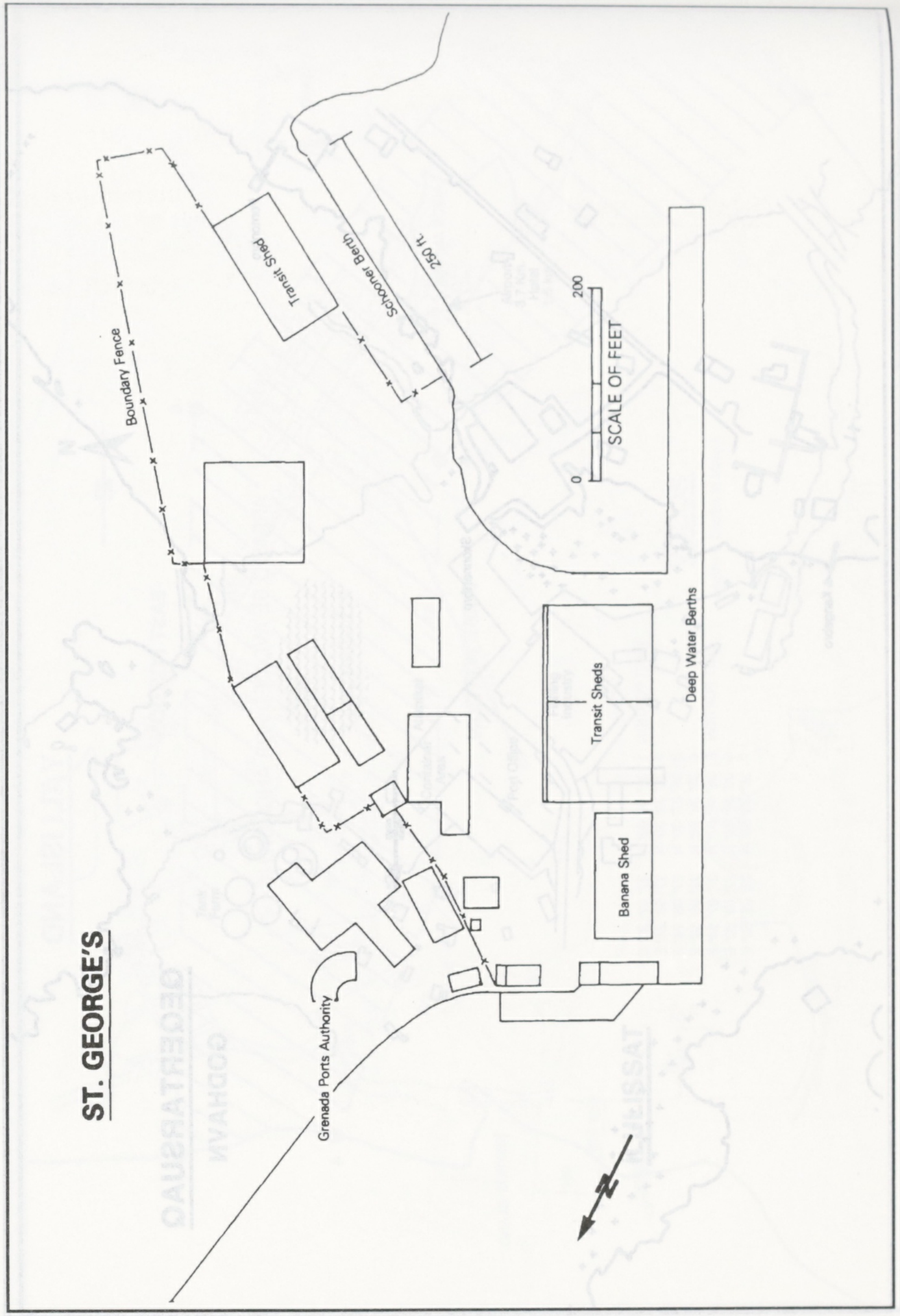

60° W
40° W
20° W
GREENLAND
Southern Limit Permanent Ice
North Star Bugt (Thule)
Nanok
Eskimonaes
Shannon Is.
75° N
Baffin Bay
Marmorilik
Scoresbysund
Cape Tobin
Cape Brewster
70° N
Disko Island
Qeqertarsuaq
Ilulissat
GREENLAND (Denmark)
King Christian IX Land
Denmark Strait
DAVIS STRAIT
Aasiaat
Baffin Island
ICELAND
Sisimiut
Kangerlussuaq (Sondre Stromfjord)
Skagastrond
Isafjord
Siglufjord
Patreksfjordur
Maniitsoq
Neskaupstadur
65° N
Cape Mercy
CANADA
Nuuk
Akranes
Hafnarjordur
Reyjavik
Keflavik
Straumsvik
Faeringehaven
Southern Limit Drift Ice
Vestmannaejar
LABRADOR SEA
Paamiut
Ivigtut
ATLANTIC OCEAN
Qaqortoq
60° N
CANADA
Cape Farewell


N
Airport 3.7 Km.
Hotel 1.5 km.
Fishing Industry
Atlantkat
Container Area
Port Office
Tank Farm
ILULISSAT

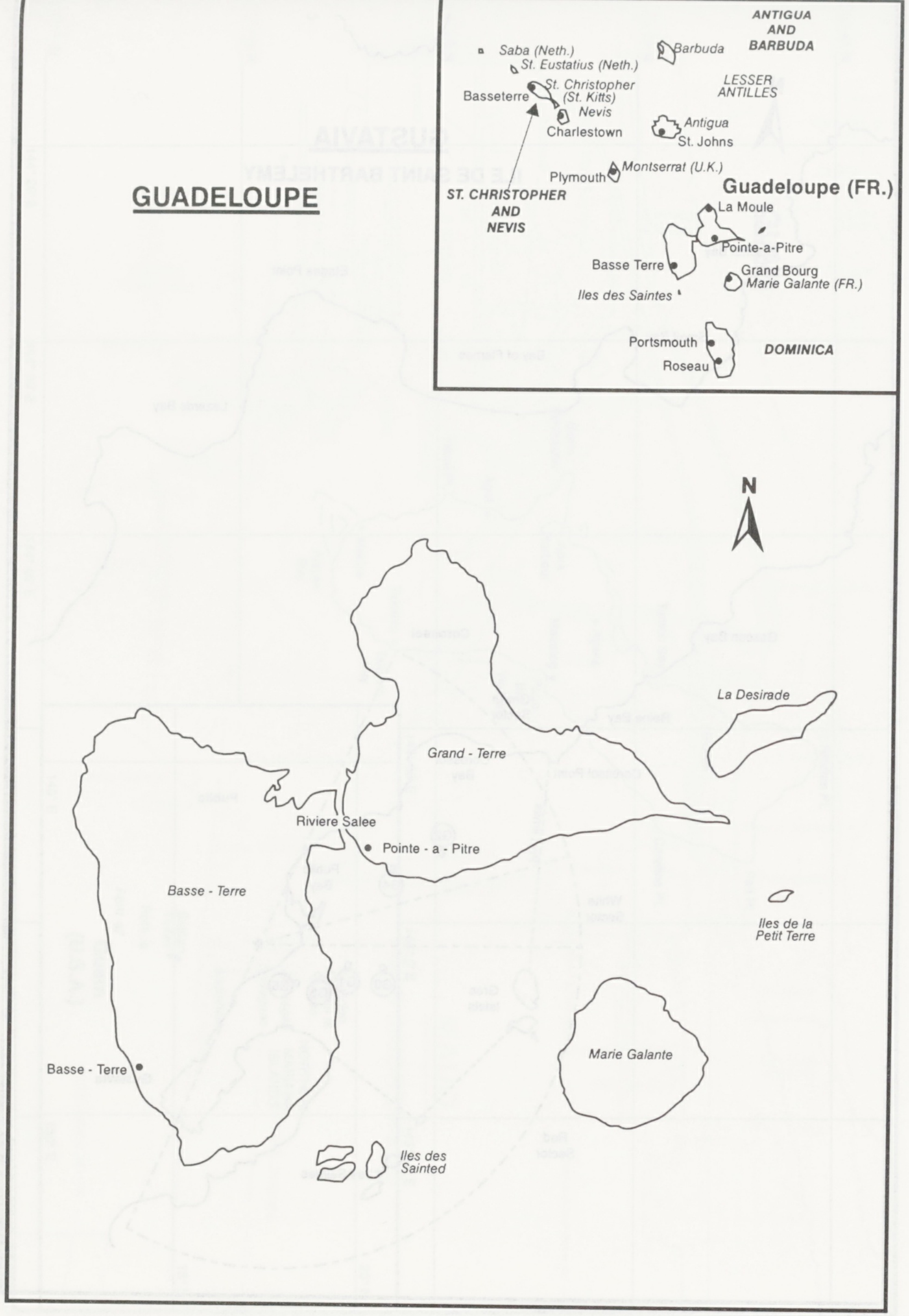

Church
Post Office
Police
Bridge
Fire Station
Altantic Quay
Depth 7-9 m. H.W.
100 m.
Small Vessels Quay
Depth 4.8 - 7.2 m. H.W.
Harbour
100 m.
0 m.
200 m.
Heli-port
Tanks
N
QAQORTOQ


QEQERTARSUAQ
GODHAVN
Pontonbro
Skonnertbro
Kangebro
N

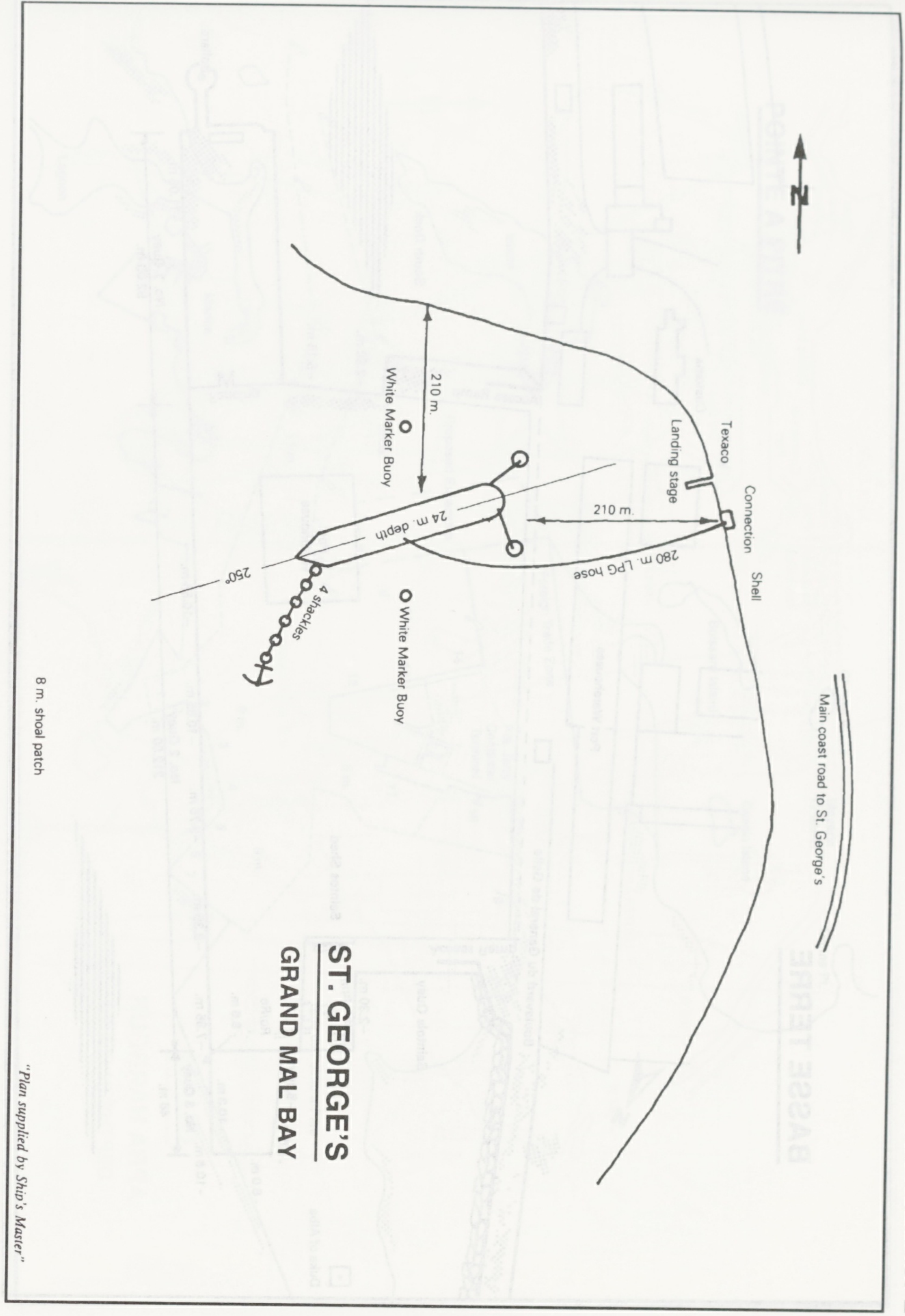

N
Levera Bay
Sauteurs
Gouyave
Grenville
GRENADA
St. Georges
Grand Anse Bay
Morne Rouge Bay
Saline Pt.
St George's Pearls Airport
Hog I.
Calivigny I.
GRENADA
15° N
St. Pierre
La Trinite
Fort de France
Martinique (FR.)
Castries
Cul De Sac Bay
Vieux Fort
ST. LUCIA
CARIBBEAN SEA
BARBADOS
Speightstown
Bridgetown
Kingstown
ST. VINCENT
WINDWARD ISLANDS
St. Georges
GRENADA
Tobago
Plymouth
Scarborough
Margarita
Porlamar
Guiria
Trinidad
Chaguaramas
Carupano
TRINIDAD AND TOBAGO
VENEZUELA
Caripito
60° W


ST. GEORGE'S
Boundary Fence
Transit Shed
Schooner Berth
250 ft.
SCALE OF FEET
0
200
Transit Sheds
Deep Water Berths
Banana Shed
Grenada Ports Authority
N

GUADELOUPE

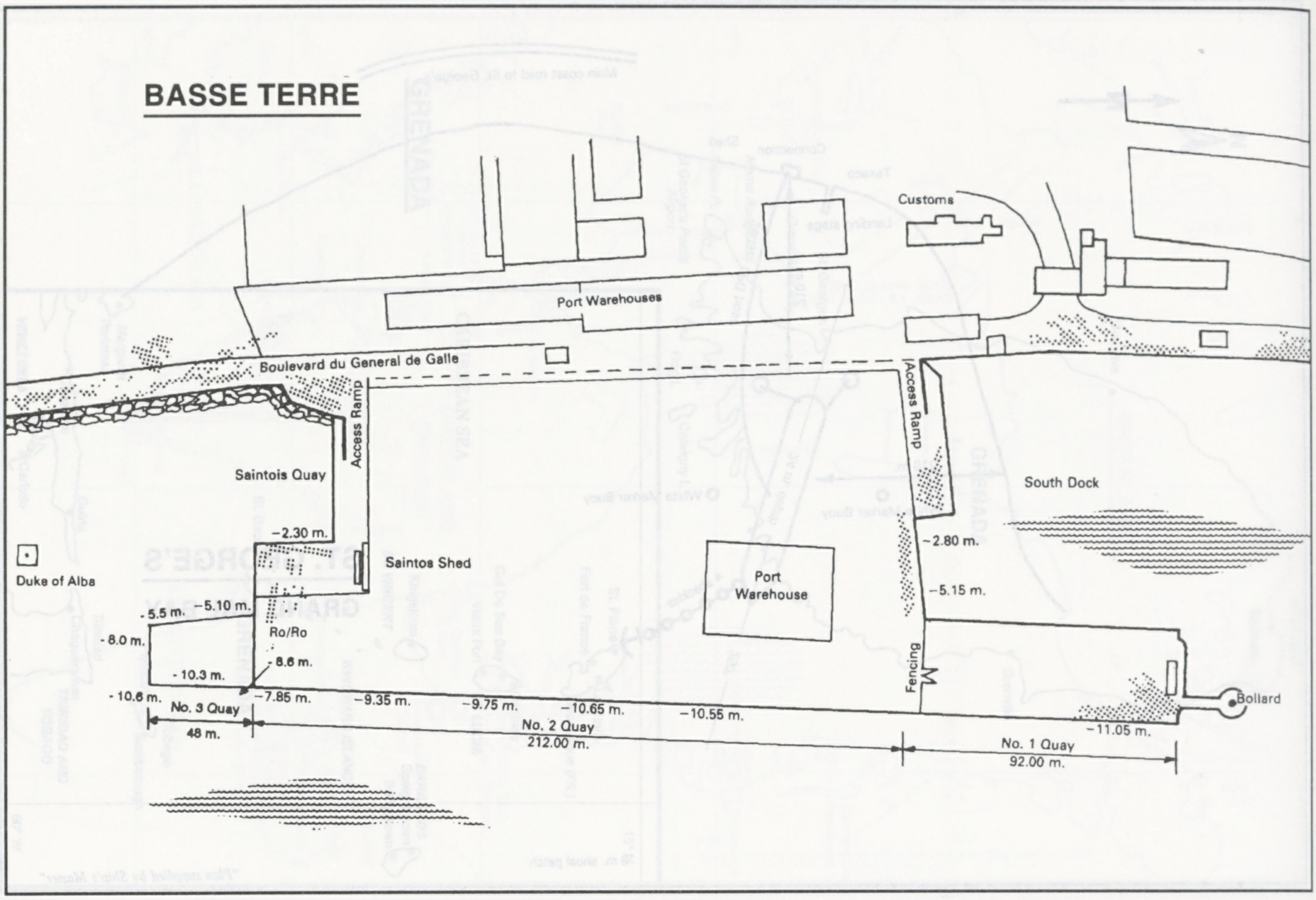

ANTIGUA AND BARBUDA
Saba (Neth.)
St. Eustatius (Neth.)
Barbuda
LESSER ANTILLES
Basseterre
St. Christopher (St. Kitts)
Nevis
Charlestown
Antigua
St. Johns
Plymouth
Montserrat (U.K.)
ST. CHRISTOPHER AND NEVIS
Guadeloupe (FR.)
La Moule
Pointe-a-Pitre
Basse Terre
Grand Bourg
Marie Galante (FR.)
Iles des Saintes
Portsmouth
Roseau
DOMINICA
N
La Desirade
Grand - Terre
Riviere Salee
Pointe - a - Pitre
Basse - Terre
Iles de la Petit Terre
Basse - Terre
Marie Galante
Iles des Sainted

ST. GEORGE'S
GRAND MAL BAY


N
Main coast road to St. George's
Texaco
Landing stage
Connection
Shell
210 m.
210 m.
280 m. LPG hose
24 m. depth
250°
4 shackles
White Marker Buoy
White Marker Buoy
8 m. shoal patch

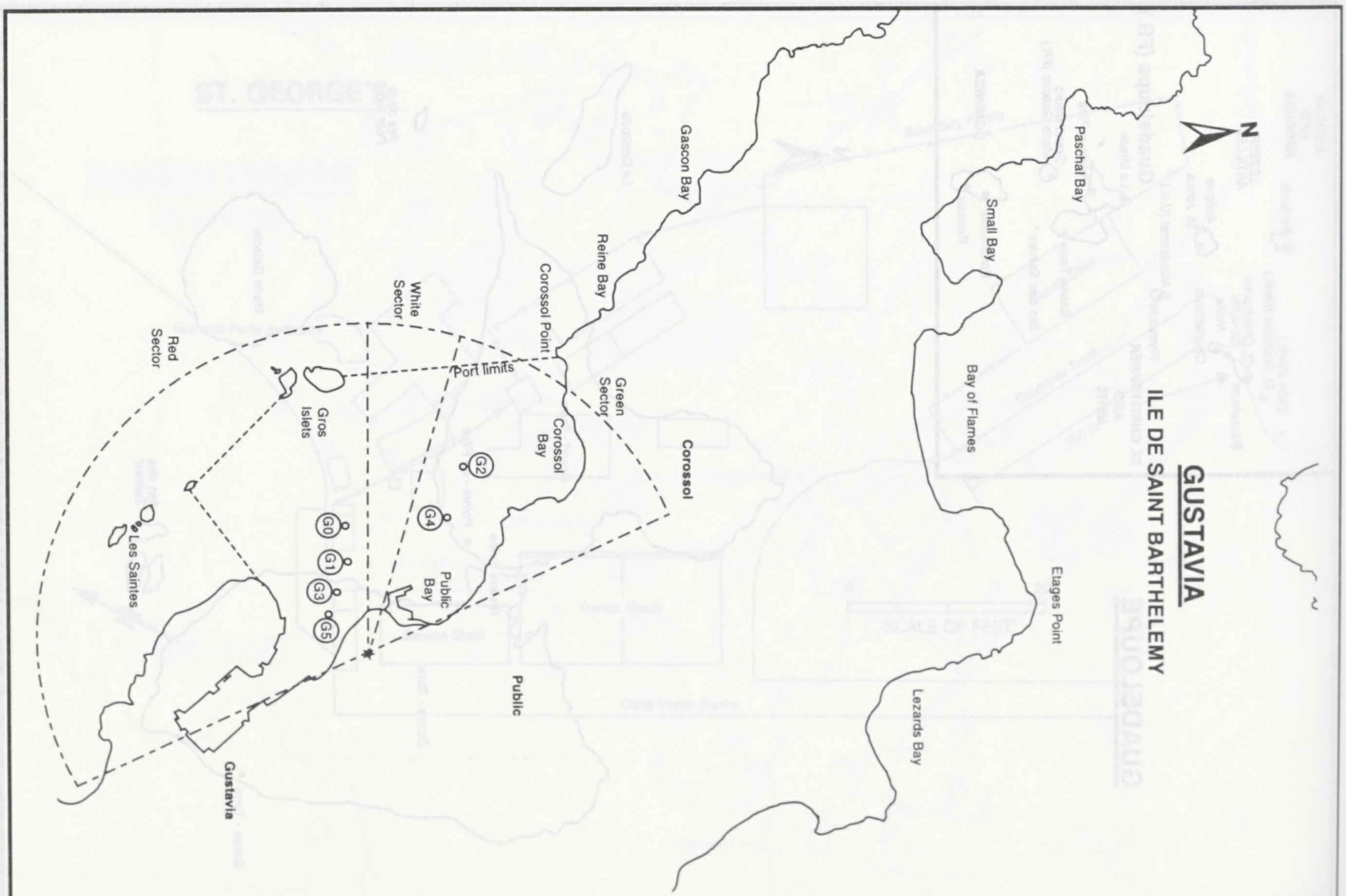
"Plan supplied by Ship's Master"

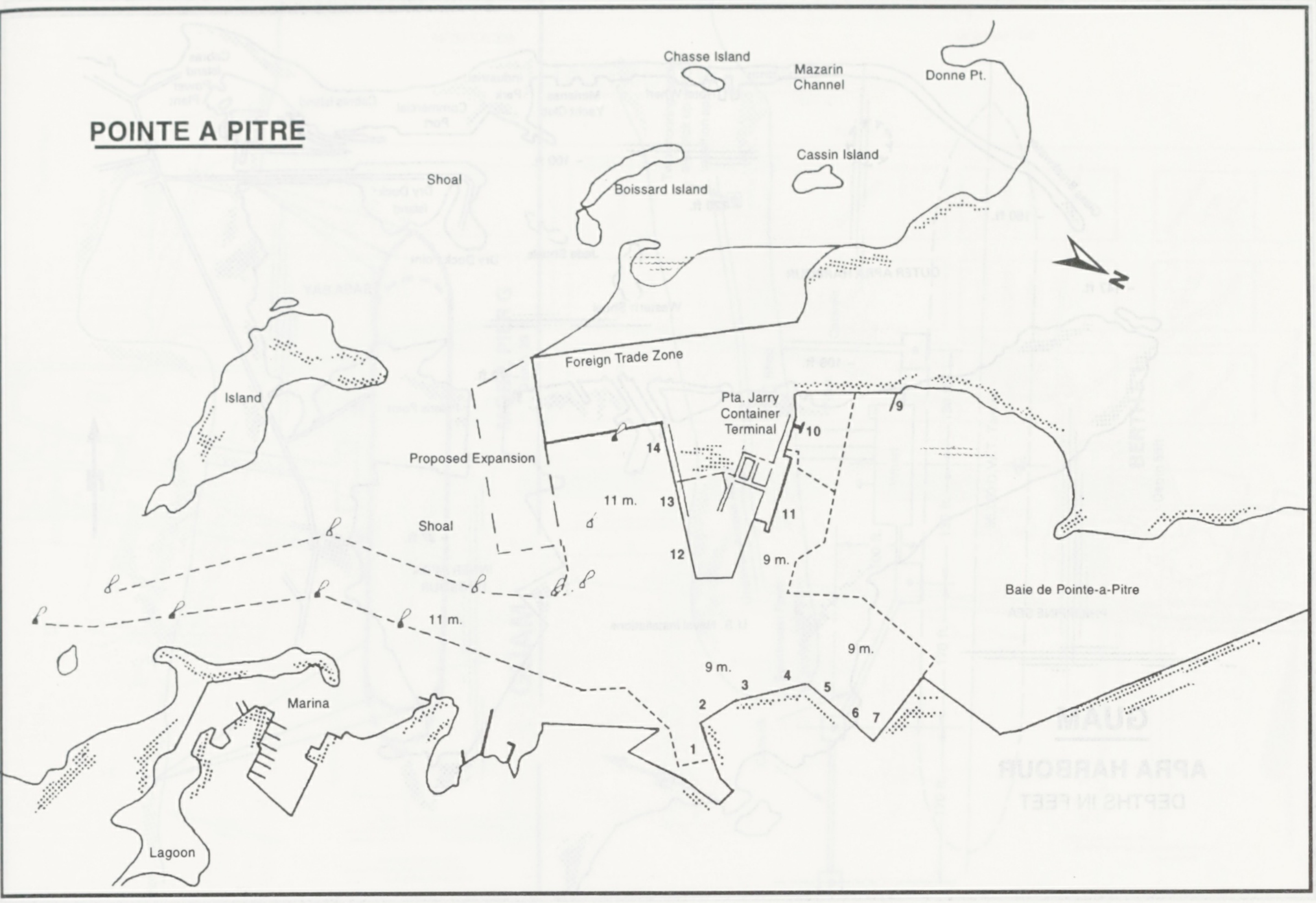
BASSE TERRE

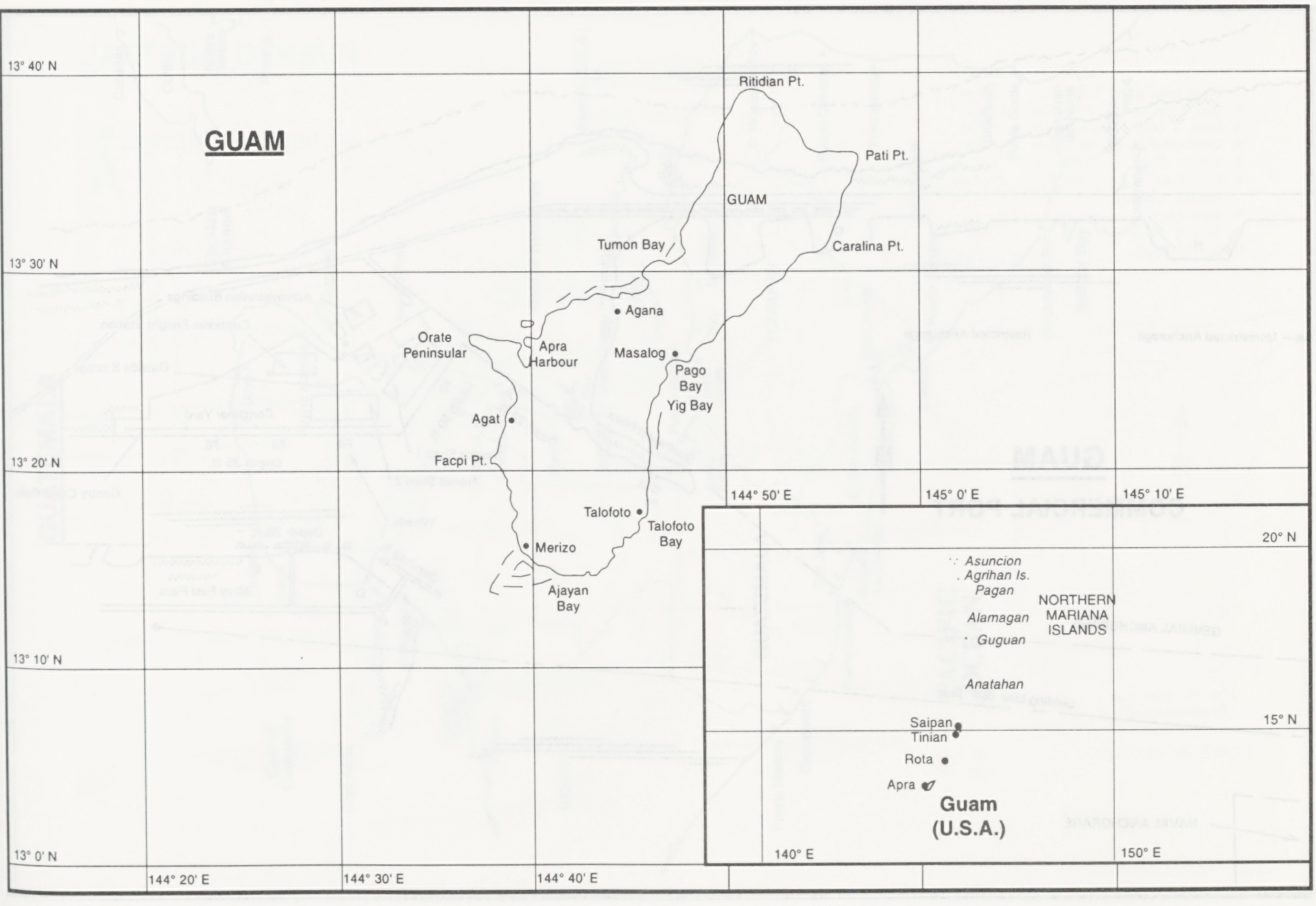

Customs
Port Warehouses
Boulevard du General de Galle
Access Ramp
Saintois Quay
−2.30 m.
Saintos Shed
Duke of Alba
- 5.5 m.
- 5.10 m.
- 8.0 m.
Ro/Ro
- 8.6 m.
- 10.3 m.
- 10.6 m.
−7.85 m.
−9.35 m.
−9.75 m.
−10.65 m.
−10.55 m.
No. 3 Quay
48 m.
No. 2 Quay
212.00 m.
Access Ramp
South Dock
−2.80 m.
Port Warehouse
−5.15 m.
Fencing
Bollard
−11.05 m.
No. 1 Quay
92.00 m.

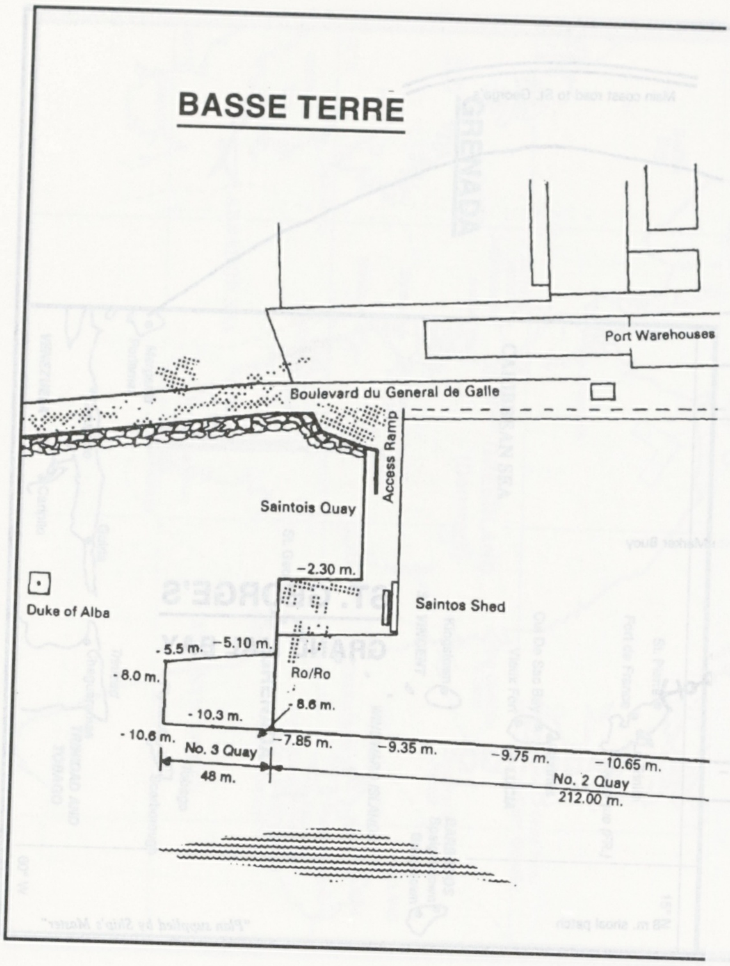
GUSTAVIA

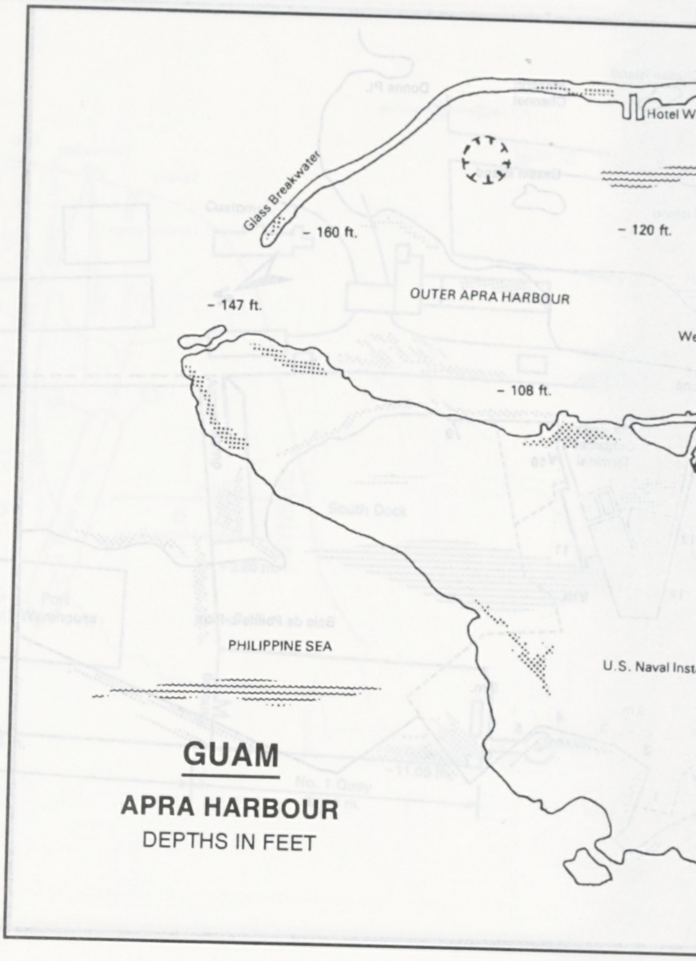
ILE DE SAINT BARTHELEMY

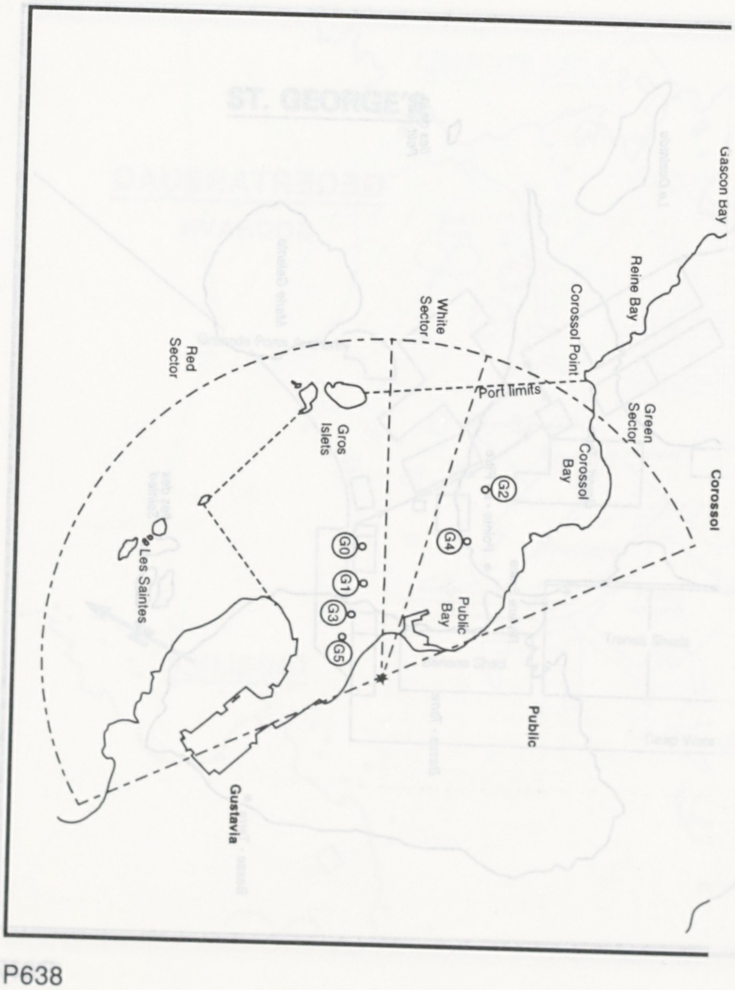

N
Paschal Bay
Small Bay
Bay of Flames
Etages Point
Lezards Bay
Gascon Bay
Reine Bay
Corossol Point
White Sector
Red Sector
Green Sector
Port limits
Gros Islets
Corossol Bay
Corossol
G2
G4
G0
G1
G3
G5
Public Bay
Public
Les Saintes
Gustavia

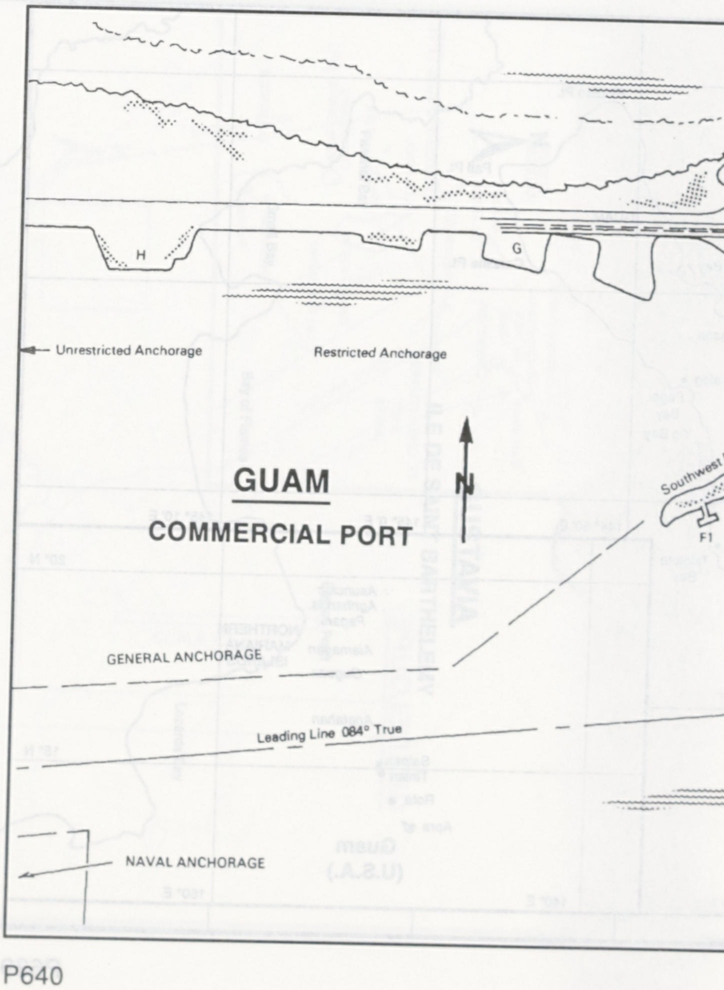

POINTE A PITRE
Chasse Island
Mazarin Channel
Donne Pt.
Cassin Island
Shoal
Boissard Island
N
Island
Foreign Trade Zone
Pta. Jarry Container Terminal
9
10
14
Proposed Expansion
11 m.
13
11
Shoal
12
9 m.
Baie de Pointe-a-Pitre
11 m.
9 m.
9 m.
3
4
5
2
6
7
1
Marina
Lagoon

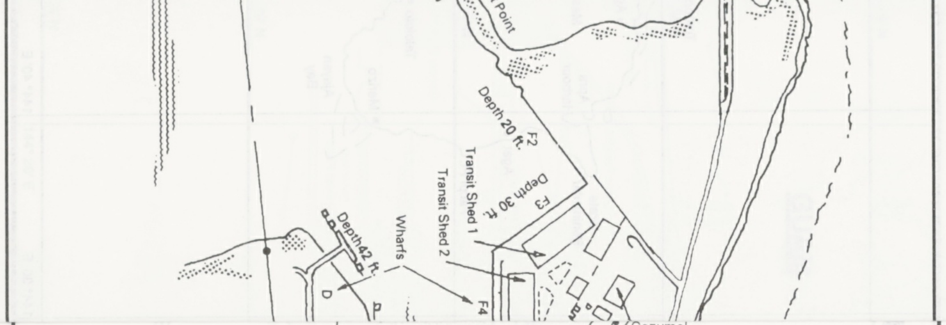

GUAM
13° 40' N
Ritidian Pt.
Pati Pt.
GUAM
Tumon Bay
Caralina Pt.
13° 30' N
Agana
Orate Peninsular
Apra Harbour
Masalog
Pago Bay
Yig Bay
Agat
13° 20' N
Facpi Pt.
Talofoto
Talofoto Bay
Merizo
Ajayan Bay
13° 10' N
13° 0' N
144° 20' E
144° 30' E
144° 40' E
144° 50' E
145° 0' E
145° 10' E
20° N
Asuncion
Agrihan Is.
Pagan
Alamagan
Guguan
NORTHERN MARIANA ISLANDS
Anatahan
15° N
Saipan
Tinian
Rota
Apra
Guam (U.S.A.)
140° E
150° E

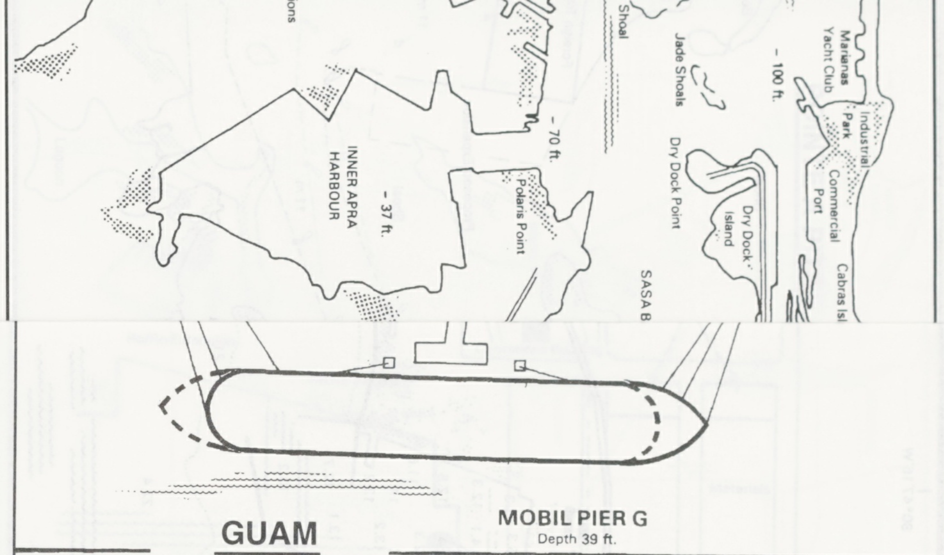

BASSE TERRE
Port Warehouses
Boulevard du General de Galle
Access Ramp
Saintois Quay
-2.30 m.
Saintos Shed
Duke of Alba
- 5.5 m.
- 5.10 m.
Ro/Ro
- 8.0 m.
- 10.3 m.
- 8.6 m.
- 10.6 m.
-7.85 m.
-9.35 m.
-9.75 m.
-10.65 m.
No. 3 Quay
48 m.
No. 2 Quay
212.00 m.

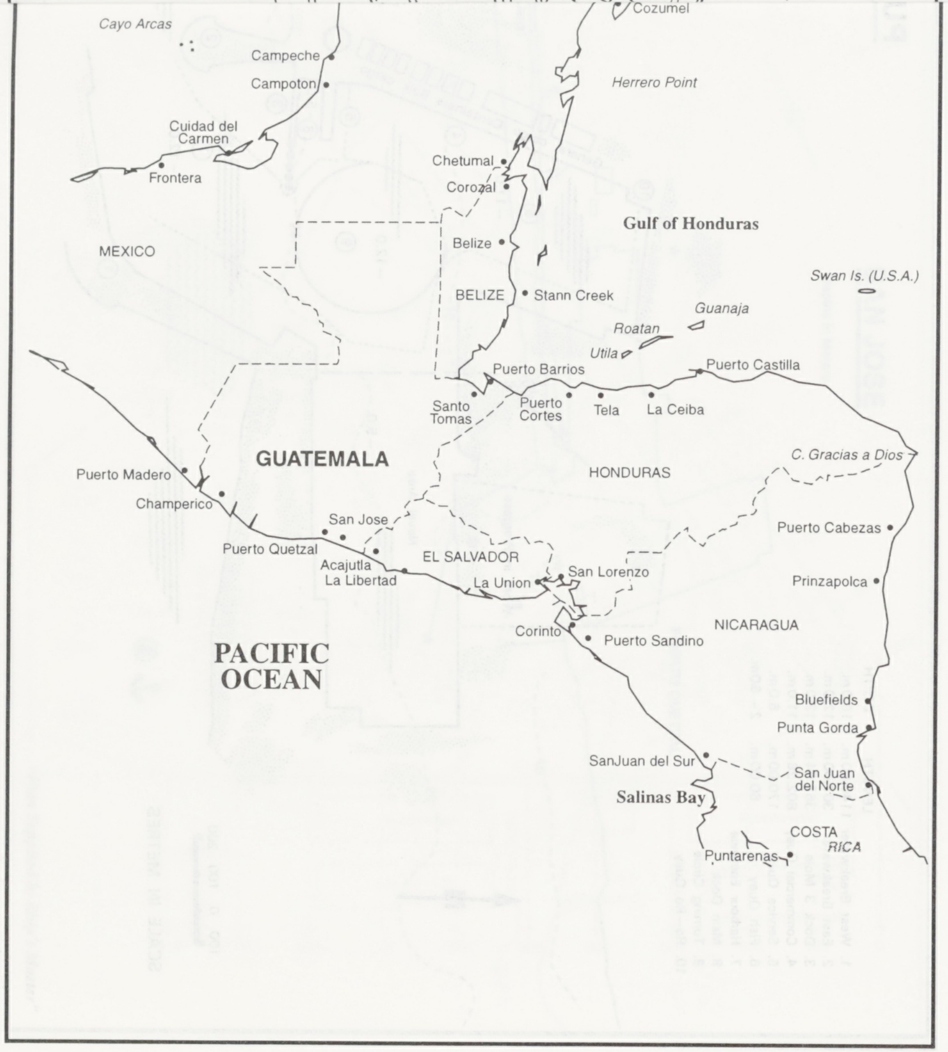

Glass Breakwater
Hotel W
- 160 ft.
- 120 ft.
- 147 ft.
OUTER APRA HARBOUR
We
- 108 ft.
PHILIPPINE SEA
U.S. Naval Inst
GUAM
APRA HARBOUR
DEPTHS IN FEET

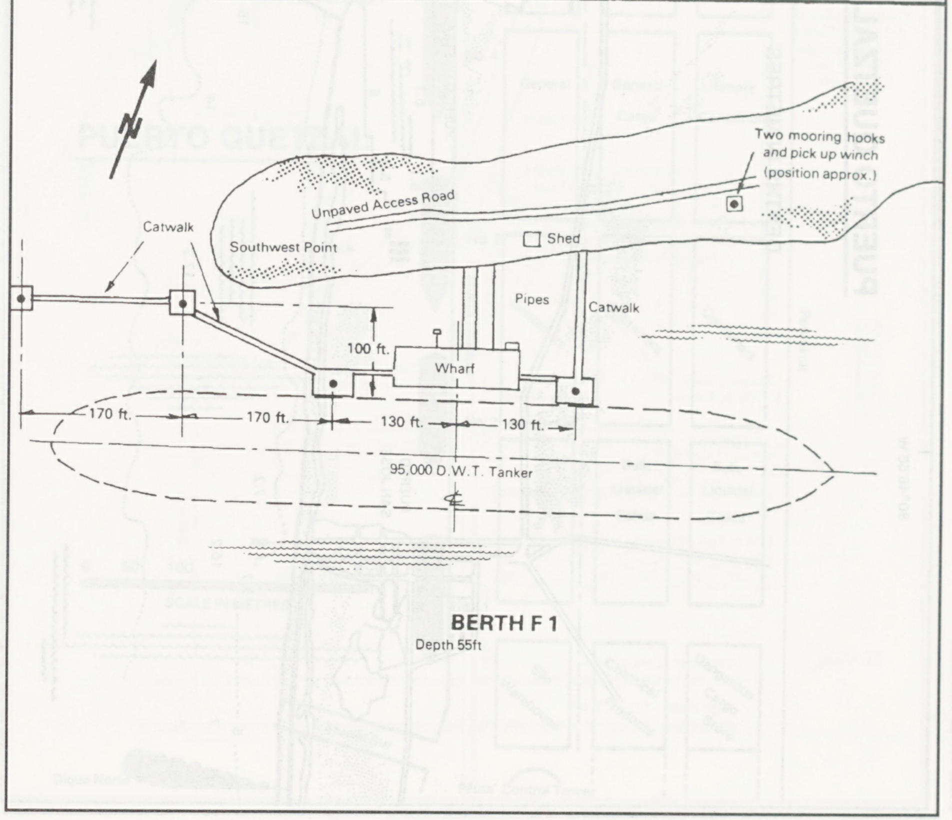

Gascon Bay
Reine Bay
Corossol Point
White Sector
Red Sector
Port limits
Green Sector
Gros Islets
Corossol Bay
Corossol
G2
G0
G4
G1
G3
G5
Public Bay
Les Saintes
Public
Gustavia

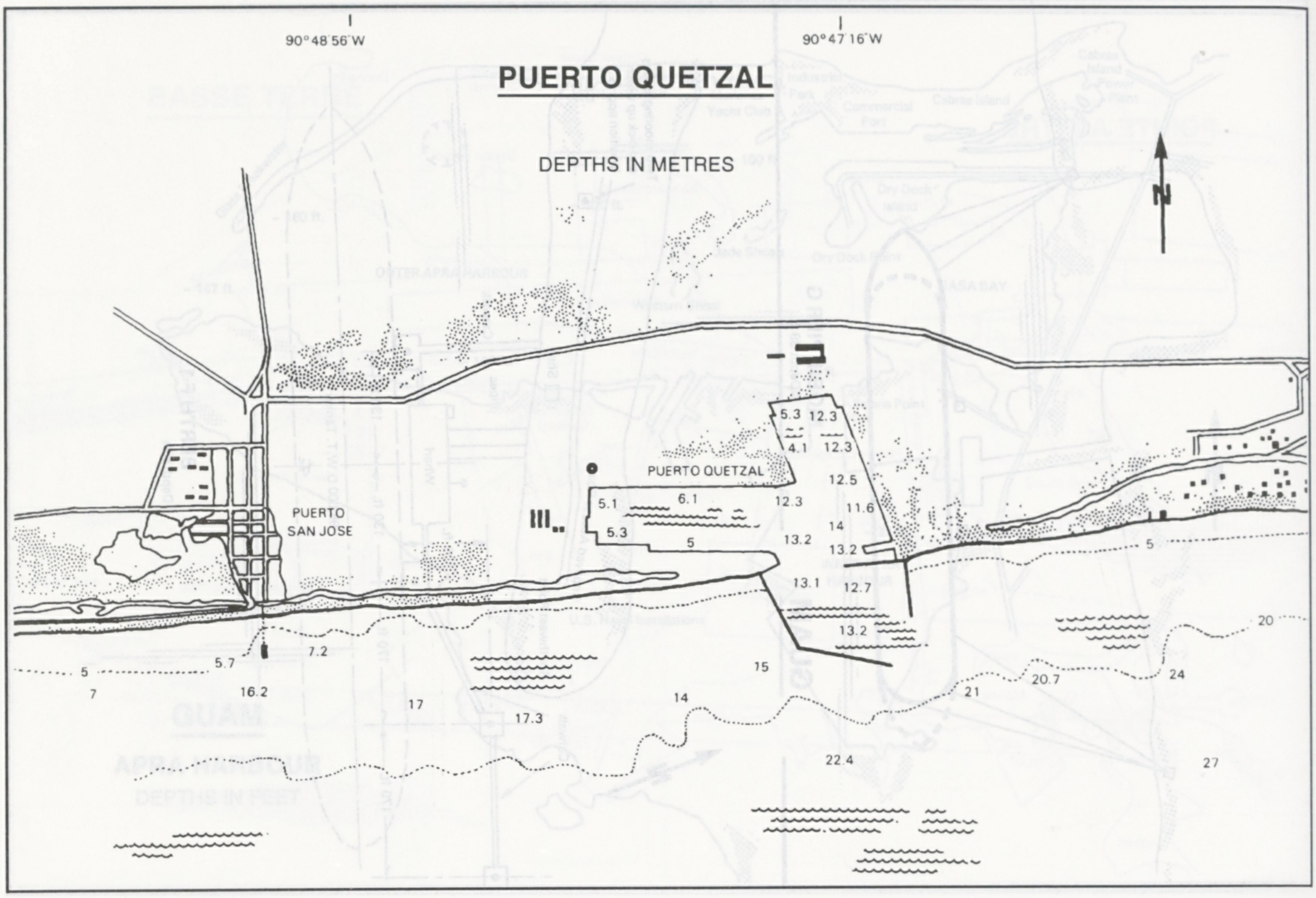

H
G
Unrestricted Anchorage
Restricted Anchorage
N
GUAM
COMMERCIAL PORT
Southwest
F1
GENERAL ANCHORAGE
Leading Line 084° True
NAVAL ANCHORAGE

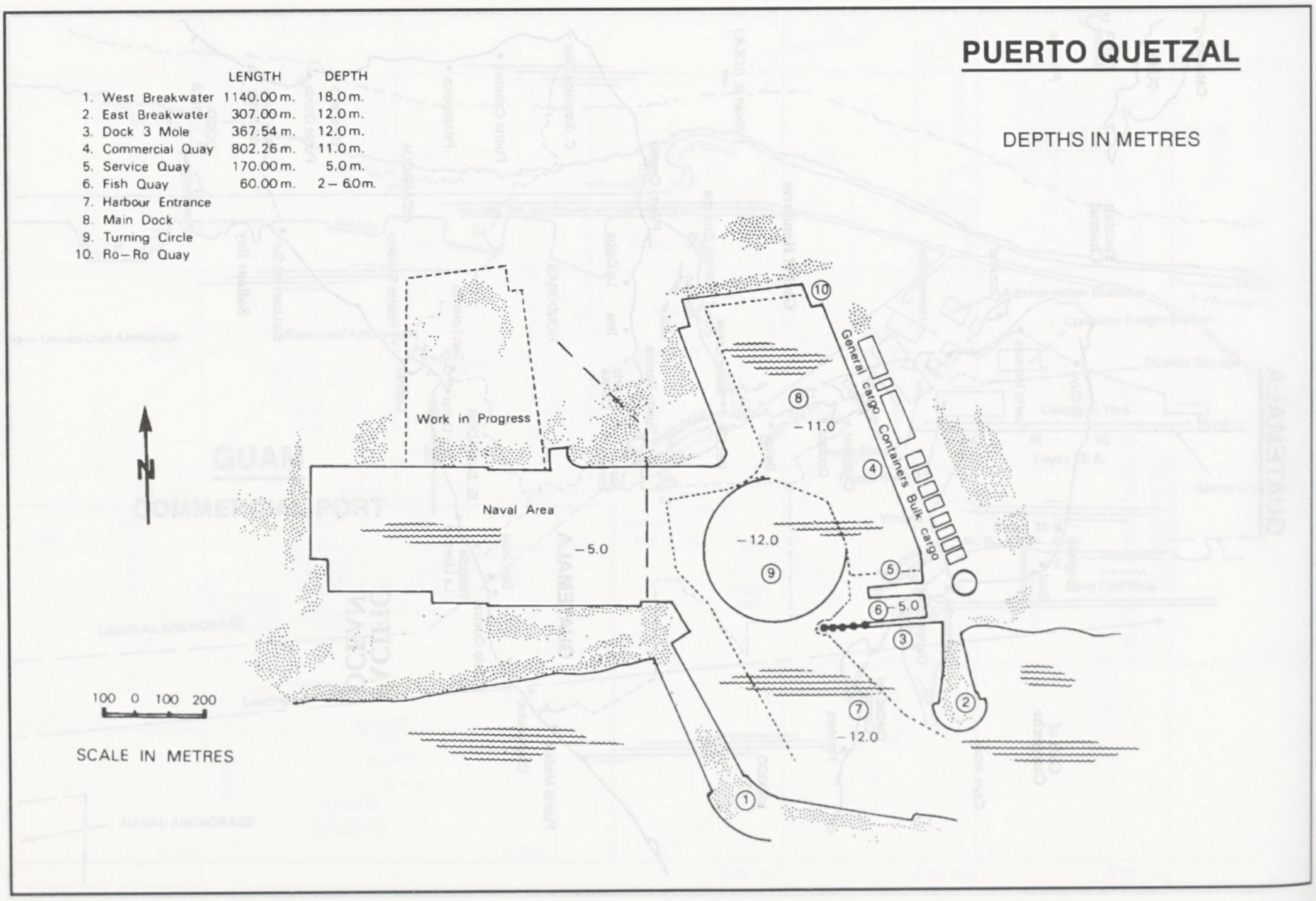

Point
Depth 20 ft.
F2
Depth 30 ft.
F3
Transit Shed 1
Transit Shed 2
Wharfs
Depth42 ft.
D
F4


Marianas Yacht Club
Industrial Park
Commercial Port
Cabras Isl
- 100 ft.
Jade Shoals
Dry Dock Point
Dry Dock Island
Shoal
SASA B
- 70 ft.
Polaris Point
INNER APRA HARBOUR
- 37 ft.
GUAM
MOBIL PIER G
Depth 39 ft.

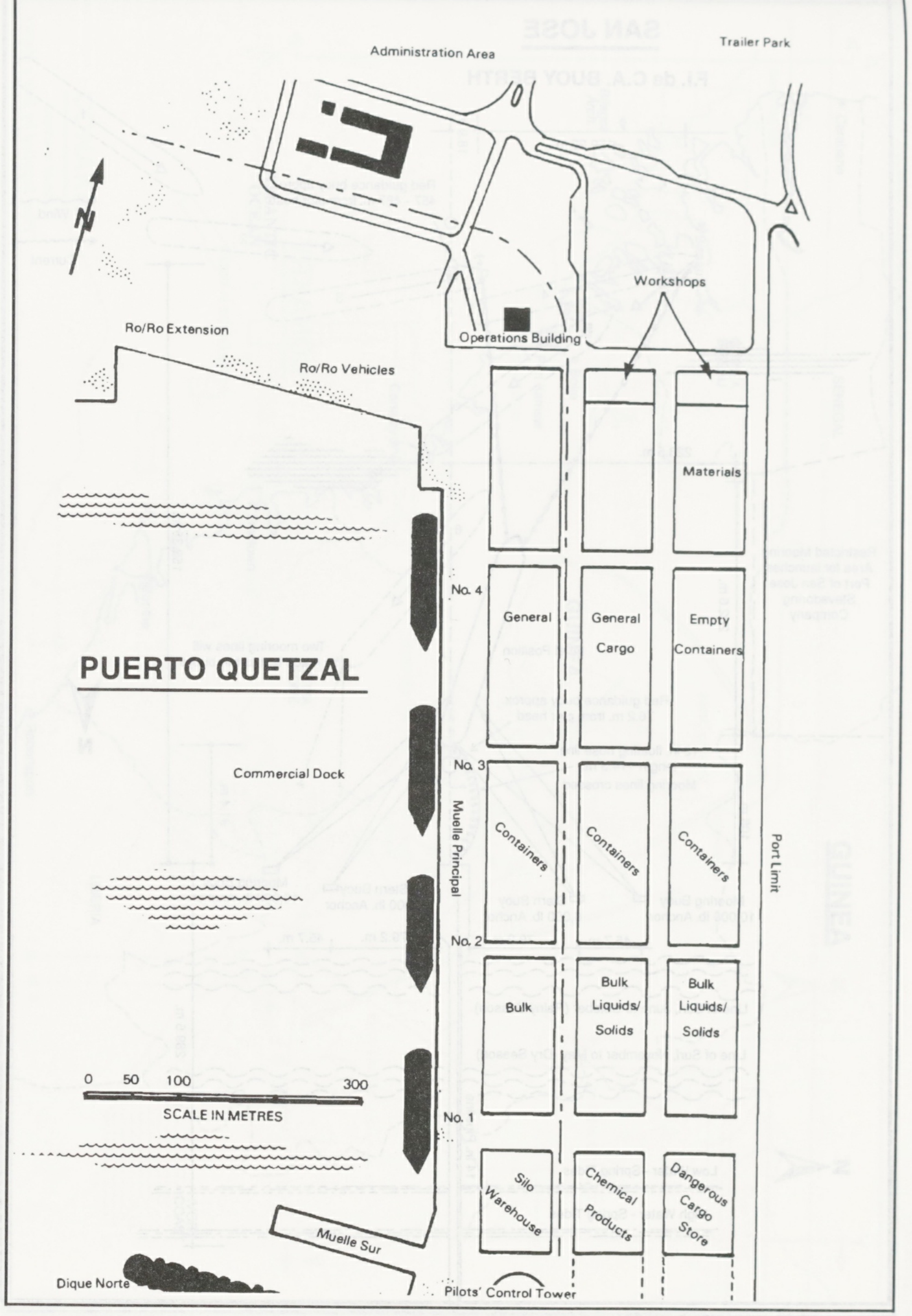

Cayo Arcas
Campeche
Campoton
Cuidad del Carmen
Frontera
Cozumel
Herrero Point
Chetumal
Corozal
Gulf of Honduras
MEXICO
Belize
BELIZE
Stann Creek
Swan Is. (U.S.A.)
Guanaja
Roatan
Utila
Puerto Barrios
Puerto Castilla
Santo Tomas
Puerto Cortes
Tela
La Ceiba
GUATEMALA
C. Gracias a Dios
Puerto Madero
HONDURAS
Champerico
San Jose
Puerto Cabezas
Puerto Quetzal
Acajutla
La Libertad
EL SALVADOR
La Union
San Lorenzo
Prinzapolca
Corinto
Puerto Sandino
NICARAGUA
PACIFIC OCEAN
Bluefields
Punta Gorda
SanJuan del Sur
San Juan del Norte
Salinas Bay
COSTA RICA
Puntarenas

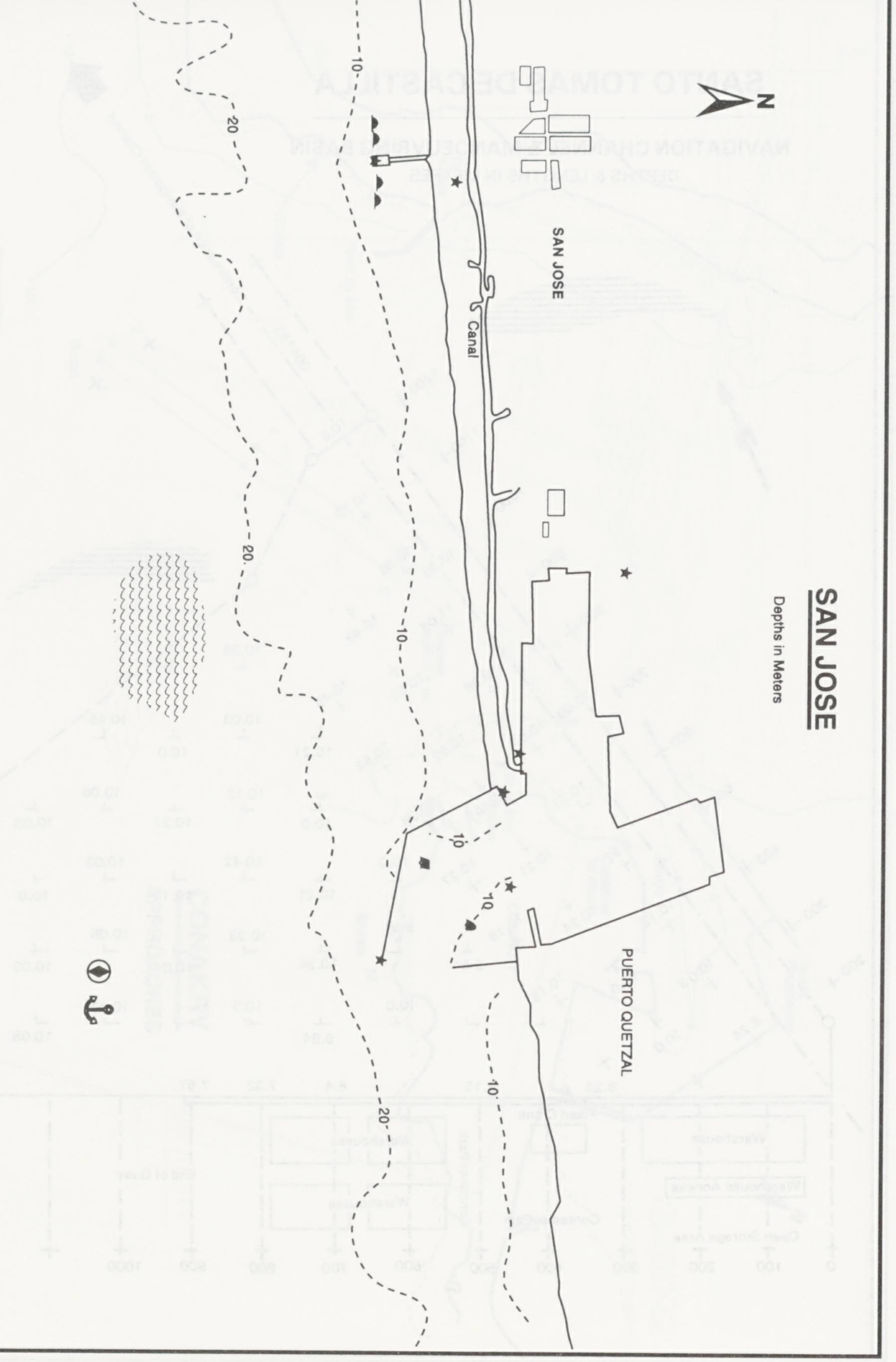

Two mooring hooks and pick up winch (position approx.)
Unpaved Access Road
Catwalk
Southwest Point
Shed
Pipes
Catwalk
100 ft.
Wharf
170 ft.
170 ft.
130 ft.
130 ft.
95,000 D.W.T. Tanker
BERTH F 1
Depth 55ft


90° 48' 56" W
90° 47' 16" W
PUERTO QUETZAL
DEPTHS IN METRES
PUERTO SAN JOSE
PUERTO QUETZAL
5.3
12.3
4.1
12.3
12.5
11.6
12.3
5.1
6.1
5.3
5
13.2
14
13.2
13.1
12.7
13.2
5
5.7
7.2
5
7
16.2
17
17.3
15
14
21
20.7
24
20
22.4
27


PUERTO QUETZAL
DEPTHS IN METRES
Work in Progress
Naval Area
-5.0
General cargo
Containers
Bulk cargo
-11.0
-12.0
-5.0
-12.0
①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
100 0 100 200
SCALE IN METRES

	LENGTH	DEPTH
1. West Breakwater	1140.00 m.	18.0 m.
2. East Breakwater	307.00 m.	12.0 m.
3. Dock 3 Mole	367.54 m.	12.0 m.
4. Commercial Quay	802.26 m.	11.0 m.
5. Service Quay	170.00 m.	5.0 m.
6. Fish Quay	60.00 m.	2 – 6.0 m.
7. Harbour Entrance		
8. Main Dock		
9. Turning Circle		
10. Ro–Ro Quay		

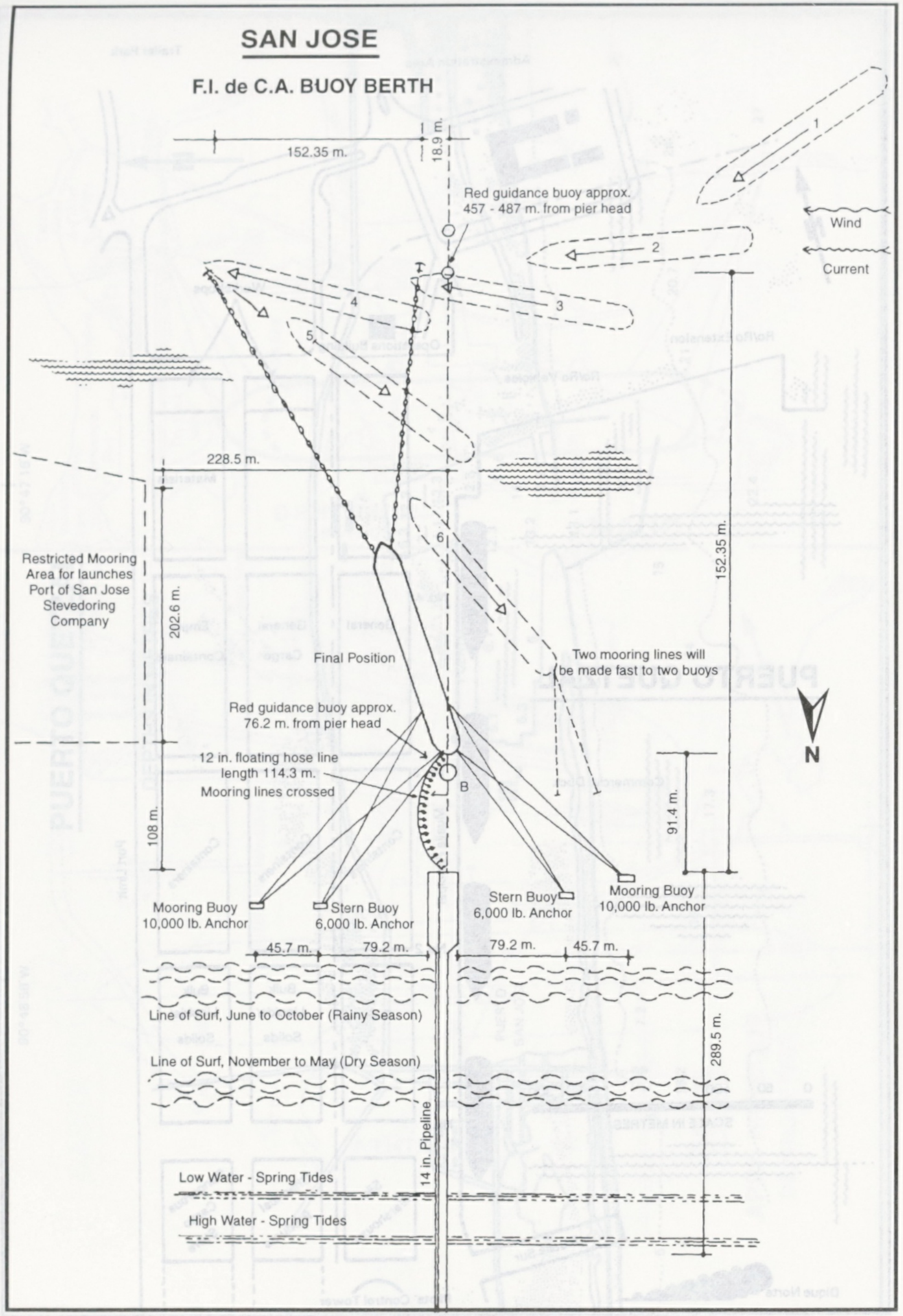

PUERTO QUETZAL
Administration Area
Trailer Park
N
Ro/Ro Extension
Ro/Ro Vehicles
Operations Building
Workshops
Materials
General
General Cargo
Empty Containers
No. 4
No. 3
No. 2
No. 1
Commercial Dock
Muelle Principal
Containers
Containers
Containers
Port Limit
Bulk
Bulk Liquids/ Solids
Bulk Liquids/ Solids
0
50
100
300
SCALE IN METRES
Silo Warehouse
Chemical Products
Dangerous Cargo Store
Muelle Sur
Dique Norte
Pilots' Control Tower


SAN JOSE
Depths in Meters
N
SAN JOSE
Canal
PUERTO QUETZAL
10
20
10
20
10
20
10
10
10
20

"Plan Supplied by Ship's Master"

SAN JOSE

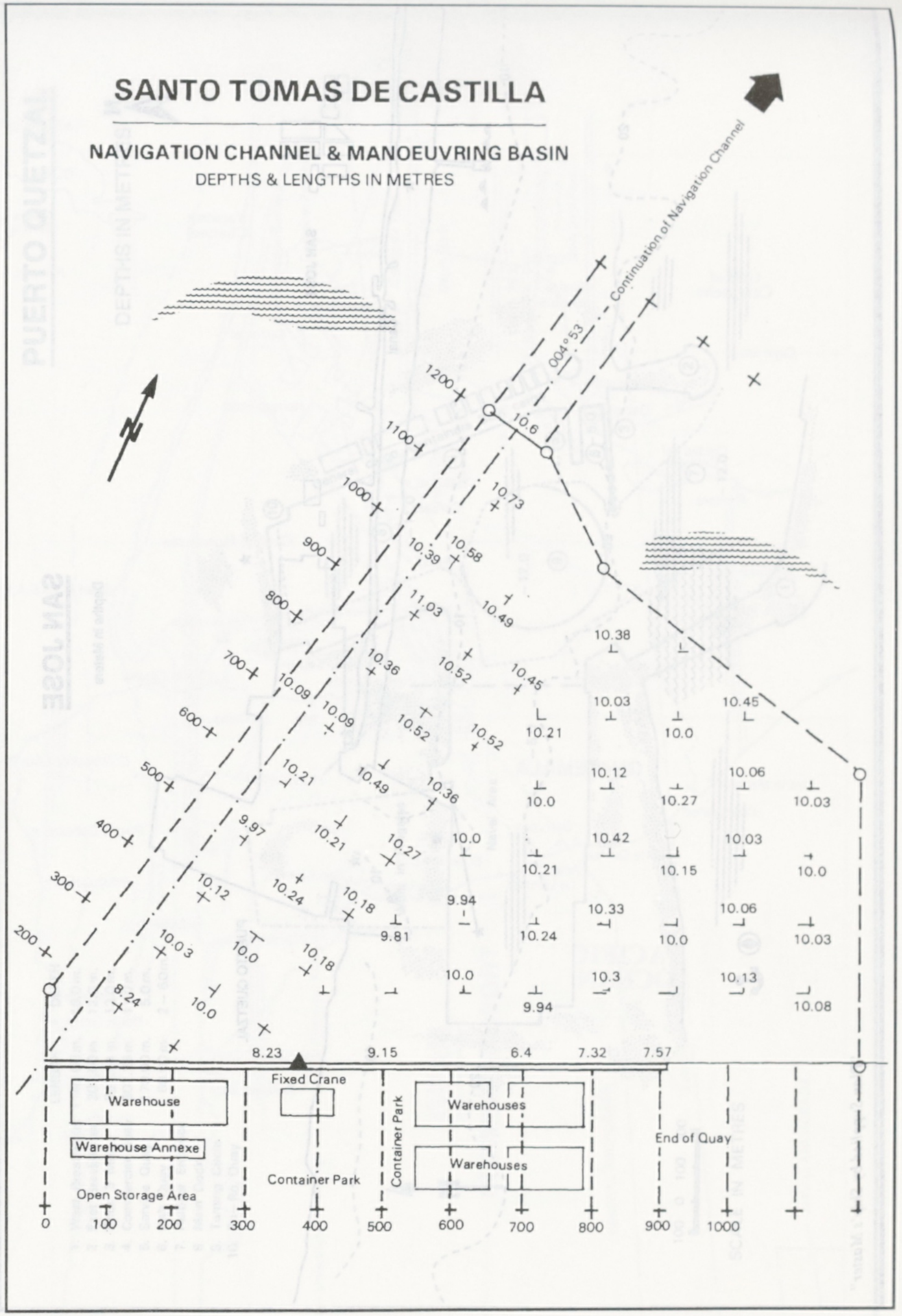
F.I. de C.A. BUOY BERTH

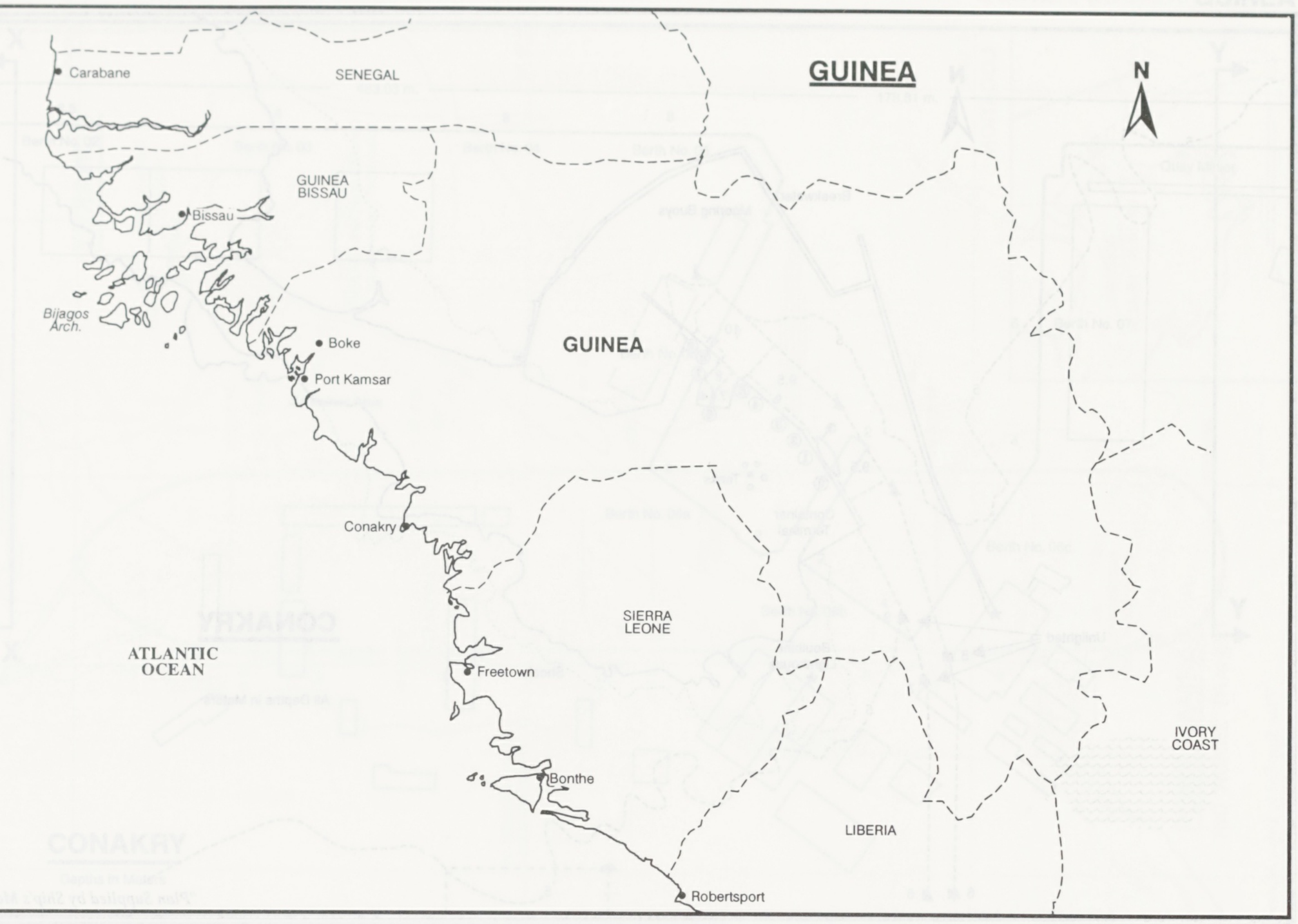

152.35 m.
18.9 m.
Red guidance buoy approx. 457 - 487 m. from pier head
1
2
3
4
5
6
Wind
Current
228.5 m.
152.35 m.
Restricted Mooring Area for launches Port of San Jose Stevedoring Company
202.6 m.
Final Position
Two mooring lines will be made fast to two buoys
N
Red guidance buoy approx. 76.2 m. from pier head
12 in. floating hose line length 114.3 m.
Mooring lines crossed
B
91.4 m.
108 m.
Mooring Buoy 10,000 lb. Anchor
Stern Buoy 6,000 lb. Anchor
Stern Buoy 6,000 lb. Anchor
Mooring Buoy 10,000 lb. Anchor
45.7 m.
79.2 m.
79.2 m.
45.7 m.
Line of Surf, June to October (Rainy Season)
Line of Surf, November to May (Dry Season)
289.5 m.
14 in. Pipeline
Low Water - Spring Tides
High Water - Spring Tides

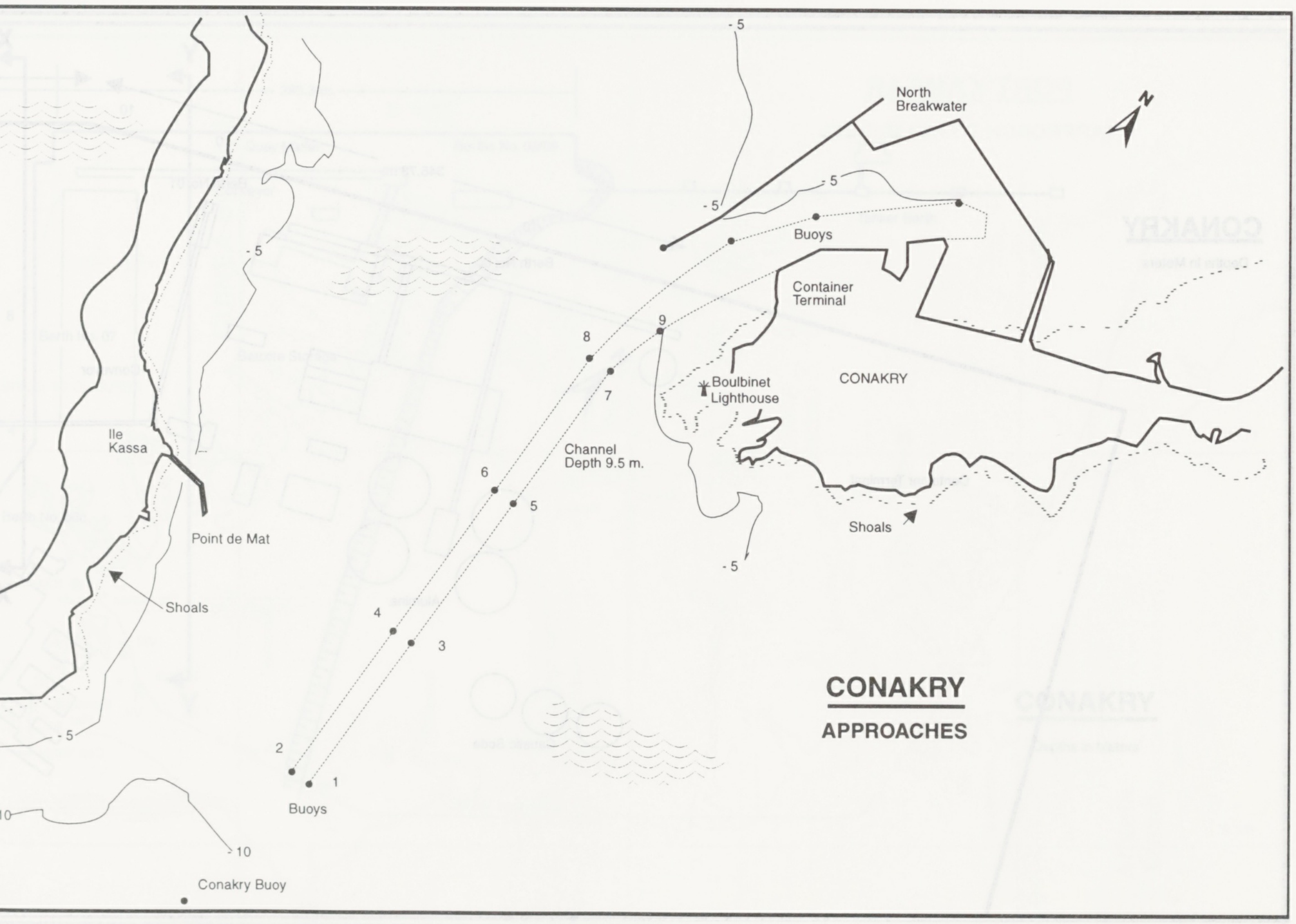
SANTO TOMAS DE CASTILLA

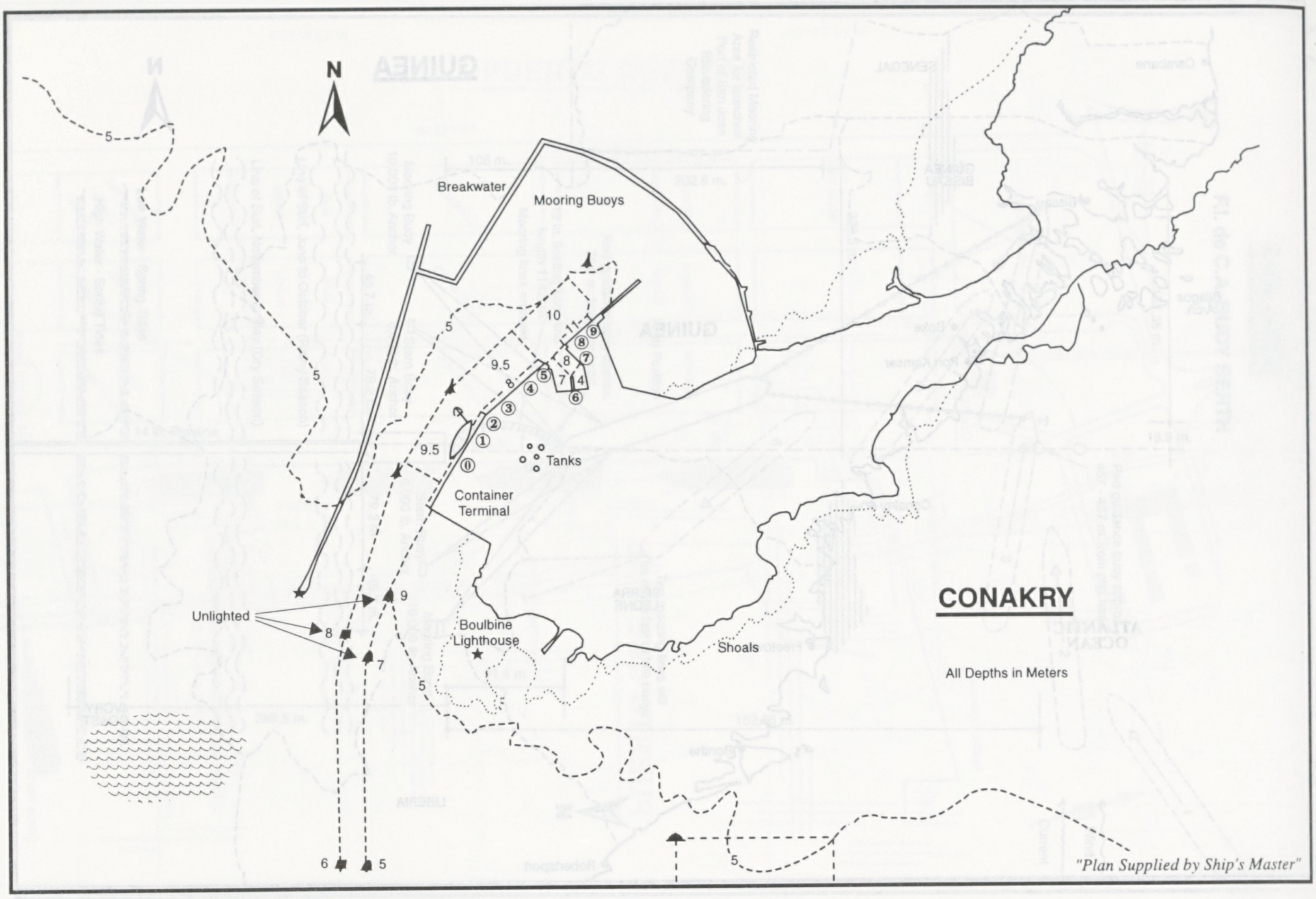
NAVIGATION CHANNEL & MANOEUVRING BASIN

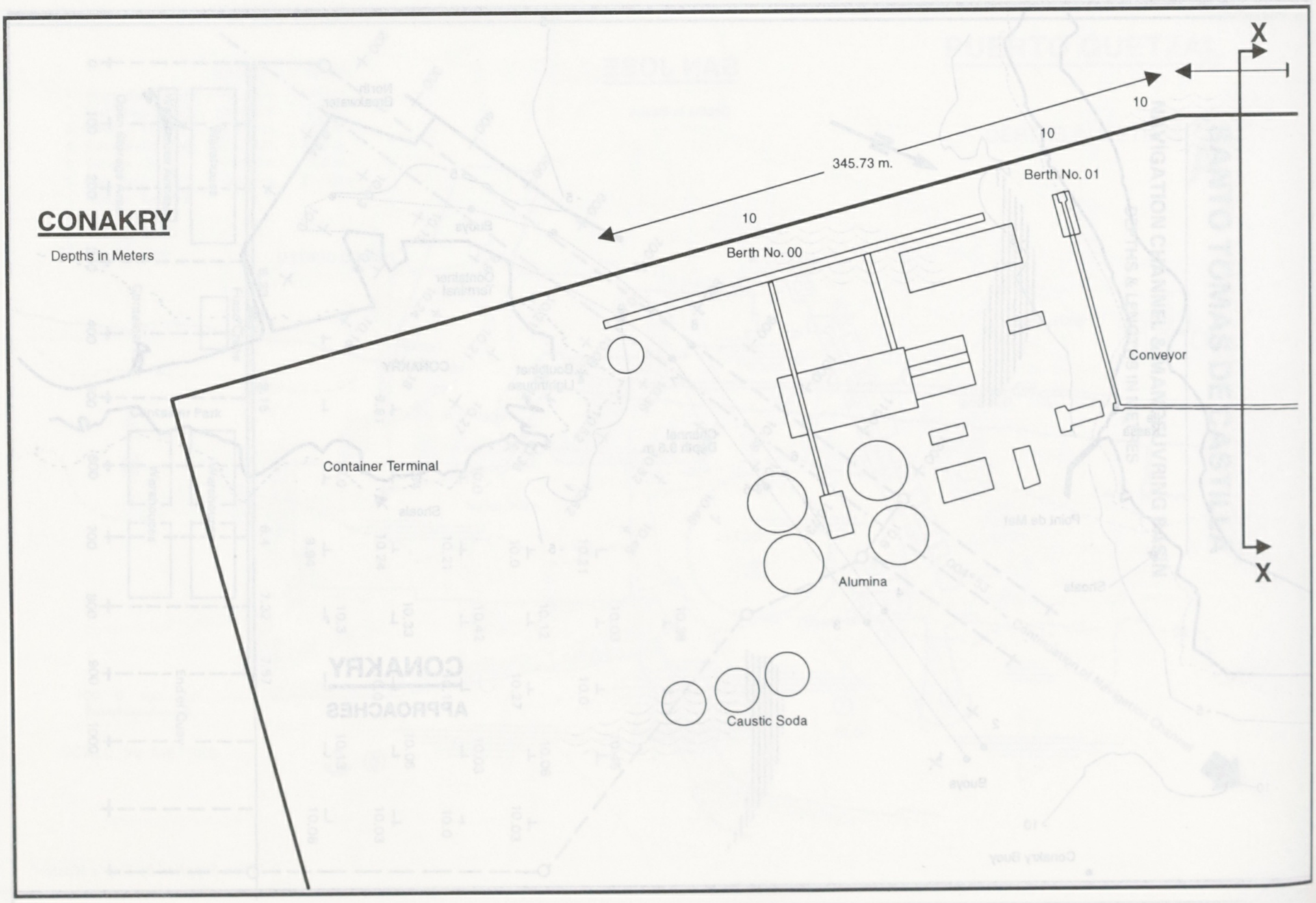
DEPTHS & LENGTHS IN METRES

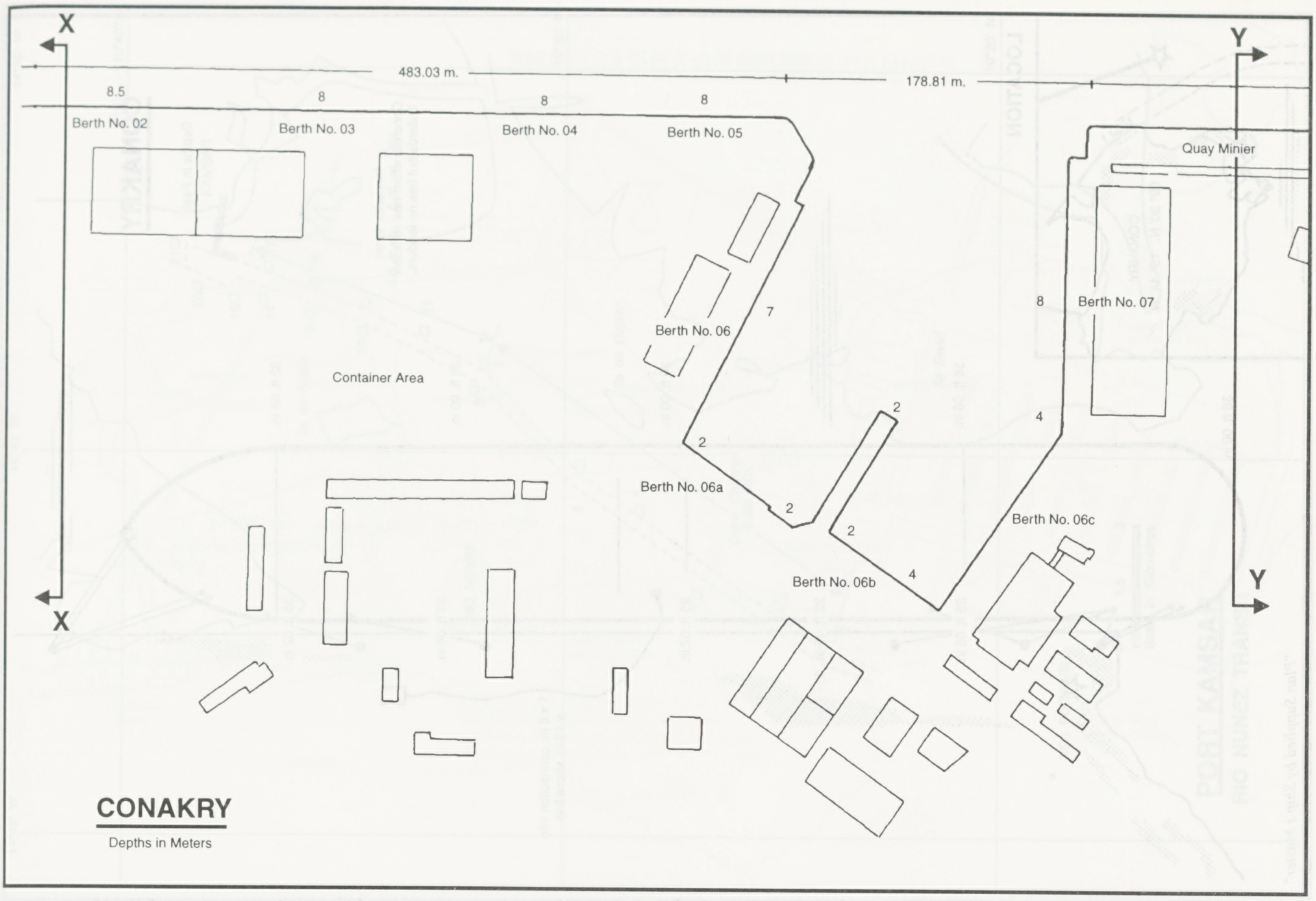

Continuation of Navigation Channel
004°53'
1200
1100
1000
900
800
700
600
500
400
300
200
10.6
10.73
10.58
10.39
11.03
10.49
10.36
10.52
10.45
10.09
10.09
10.52
10.52
10.21
10.49
10.36
9.97
10.21
10.27
10.12
10.24
10.18
10.03
10.0
10.18
8.24
10.0
10.38
10.03
10.45
10.21
10.0
10.12
10.06
10.0
10.27
10.03
10.0
10.42
10.03
10.21
10.15
10.0
9.94
10.33
10.06
9.81
10.24
10.0
10.03
10.0
10.3
10.13
9.94
10.08
8.23
9.15
6.4
7.32
7.57
Fixed Crane
Warehouse
Warehouse Annexe
Open Storage Area
Container Park
Container Park
Warehouses
Warehouses
End of Quay
0
100
200
300
400
500
600
700
800
900
1000

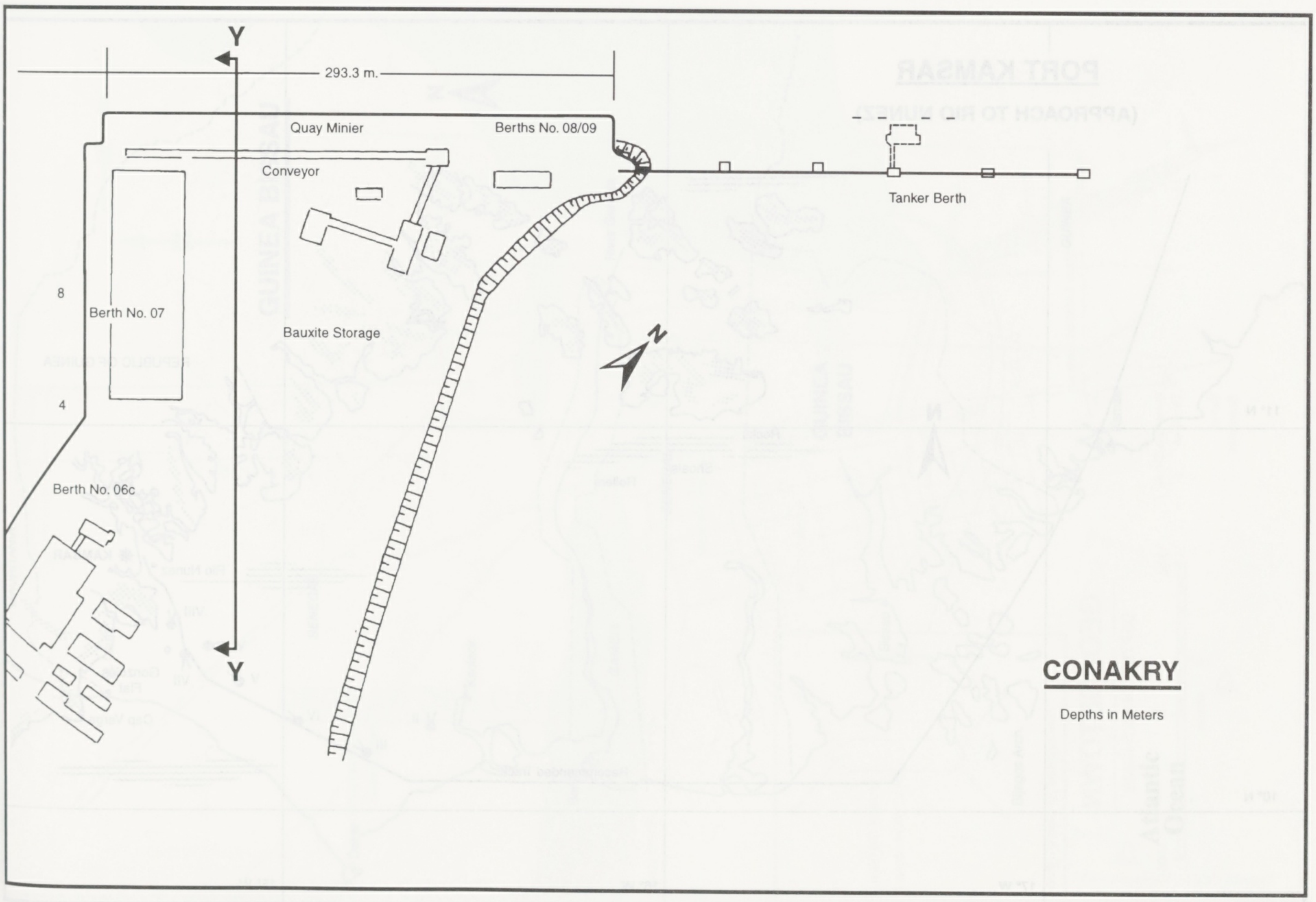

GUINEA
N
SENEGAL
Carabane
GUINEA BISSAU
Bissau
Bijagos Arch.
Boke
Port Kamsar
GUINEA
Conakry
ATLANTIC OCEAN
SIERRA LEONE
Freetown
Bonthe
LIBERIA
Robertsport
IVORY COAST


CONAKRY
APPROACHES
N
North Breakwater
- 5
- 5
5
Buoys
Container Terminal
CONAKRY
Boulbinet Lighthouse
Shoals
- 5
9
8
7
Channel Depth 9.5 m.
6
5
4
3
2
1
Buoys
Ile Kassa
Point de Mat
Shoals
- 5
- 5
10
10
Conakry Buoy

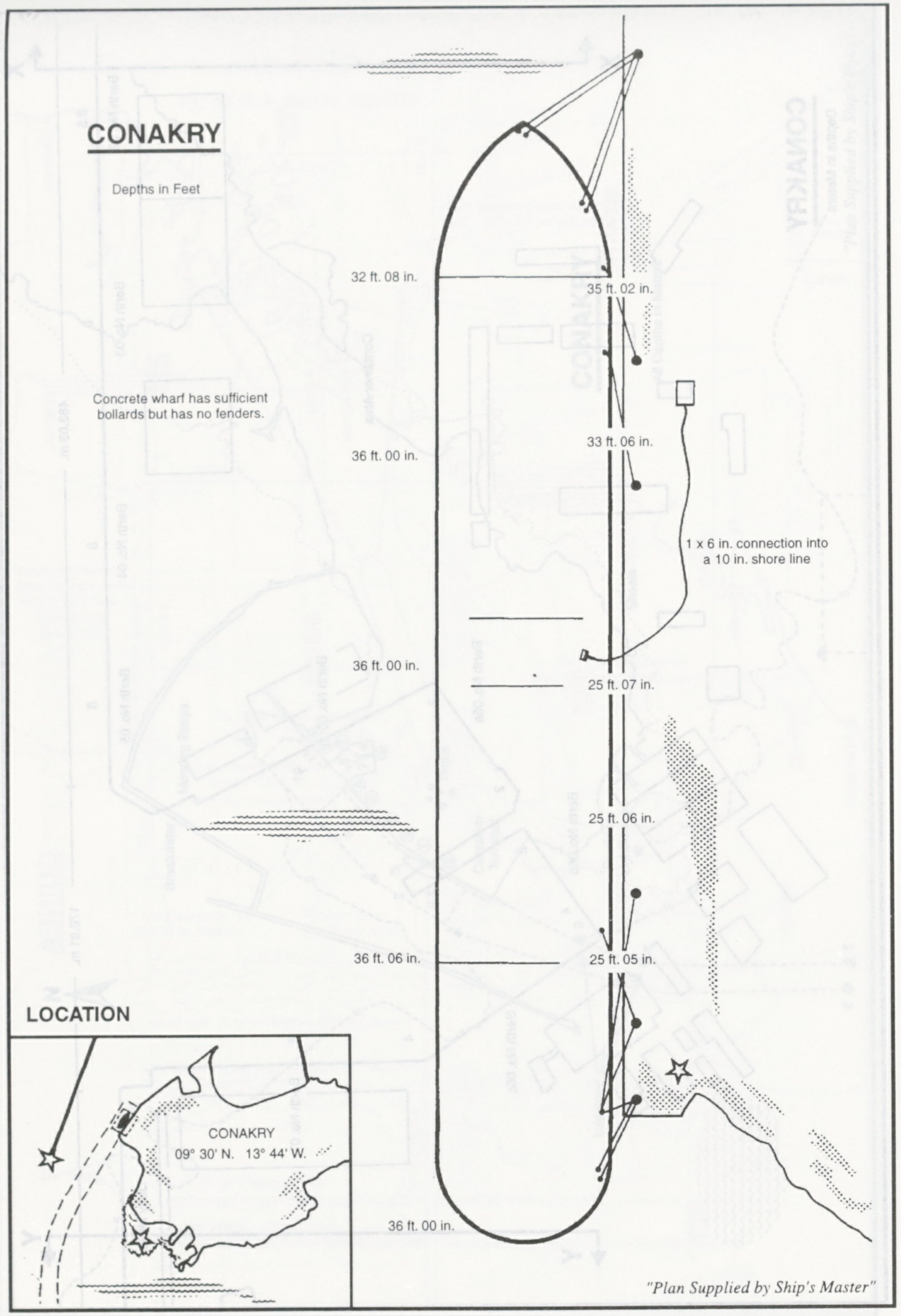

N
5
Breakwater
Mooring Buoys
5
10
11
⑨
⑧
⑦
8
9.5
8
⑤
④
7
4
⑥
③
②
①
⓪
9.5
Tanks
5
Container Terminal
Unlighted
9
8
7
Boulbine Lighthouse
5
Shoals
CONAKRY
All Depths in Meters
6
5
5
"Plan Supplied by Ship's Master"


X
10
10
345.73 m.
Berth No. 01
CONAKRY
Depths in Meters
10
Berth No. 00
Conveyor
Container Terminal
Alumina
Caustic Soda
X


X
483.03 m.
178.81 m.
Y
8.5
8
8
8
Berth No. 02
Berth No. 03
Berth No. 04
Berth No. 05
Quay Minier
7
Berth No. 06
8
Berth No. 07
Container Area
2
2
4
2
Berth No. 06a
2
Berth No. 06c
4
Berth No. 06b
Y
X
CONAKRY
Depths in Meters


Y
293.3 m.
Quay Minier
Berths No. 08/09
Conveyor
Tanker Berth
8
Berth No. 07
Bauxite Storage
N
4
Berth No. 06c
Y
CONAKRY
Depths in Meters

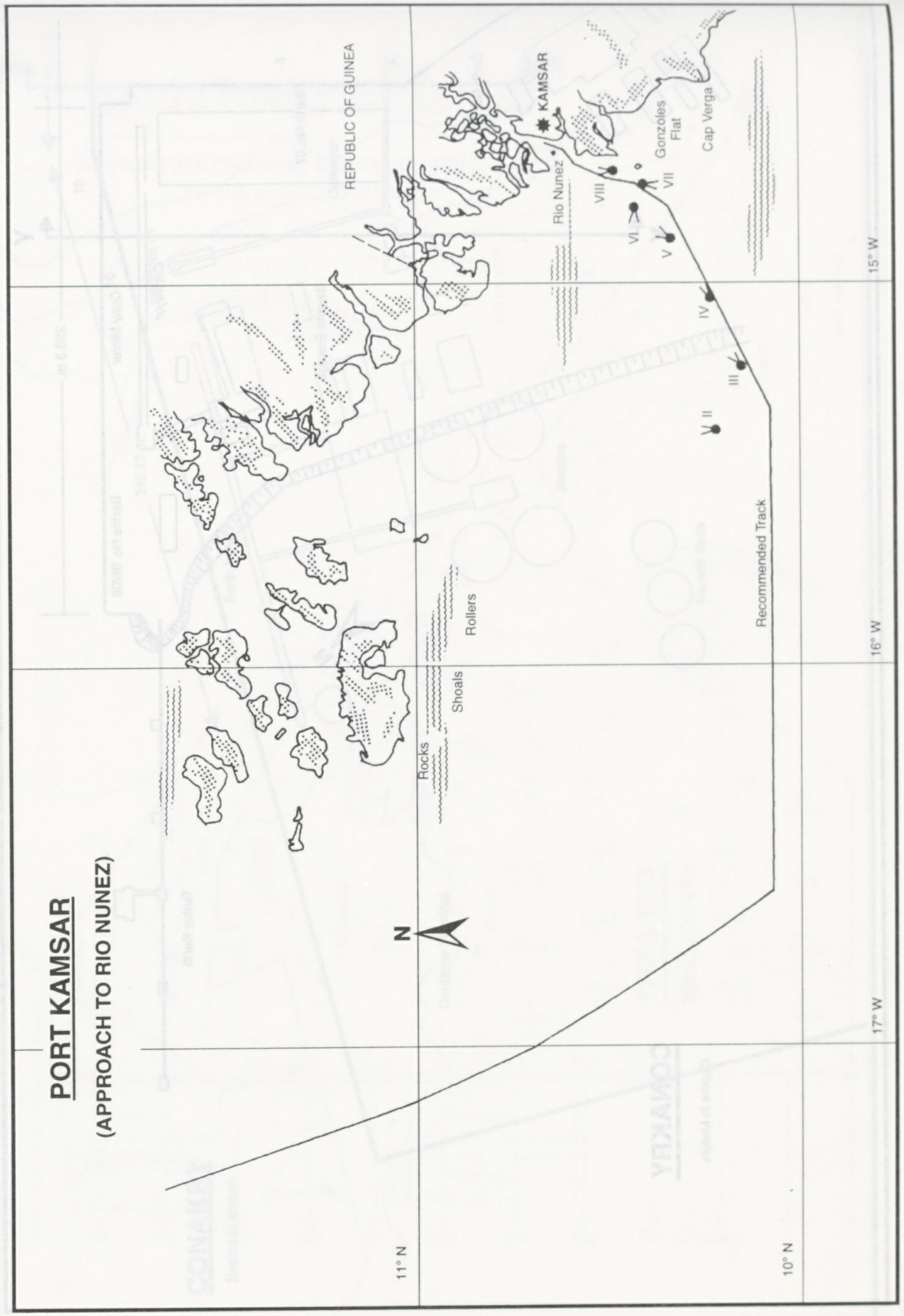
CONAKRY

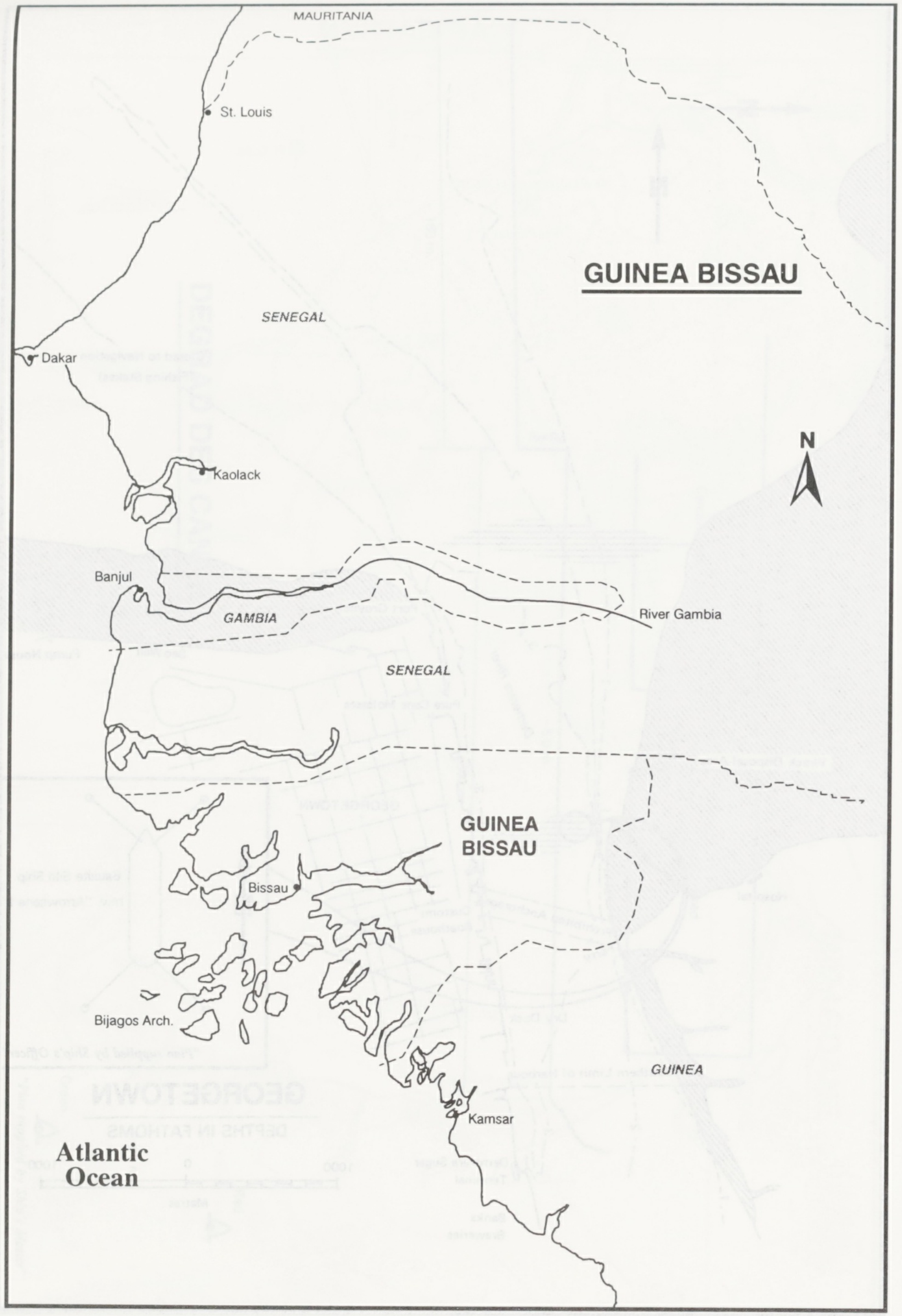

Depths in Feet
Concrete wharf has sufficient bollards but has no fenders.
32 ft. 08 in.
35 ft. 02 in.
33 ft. 06 in.
36 ft. 00 in.
1 x 6 in. connection into a 10 in. shore line
36 ft. 00 in.
25 ft. 07 in.
25 ft. 06 in.
36 ft. 06 in.
25 ft. 05 in.
36 ft. 00 in.
LOCATION
CONAKRY
09° 30' N. 13° 44' W.

"Plan Supplied by Ship's Master"

PORT KAMSAR

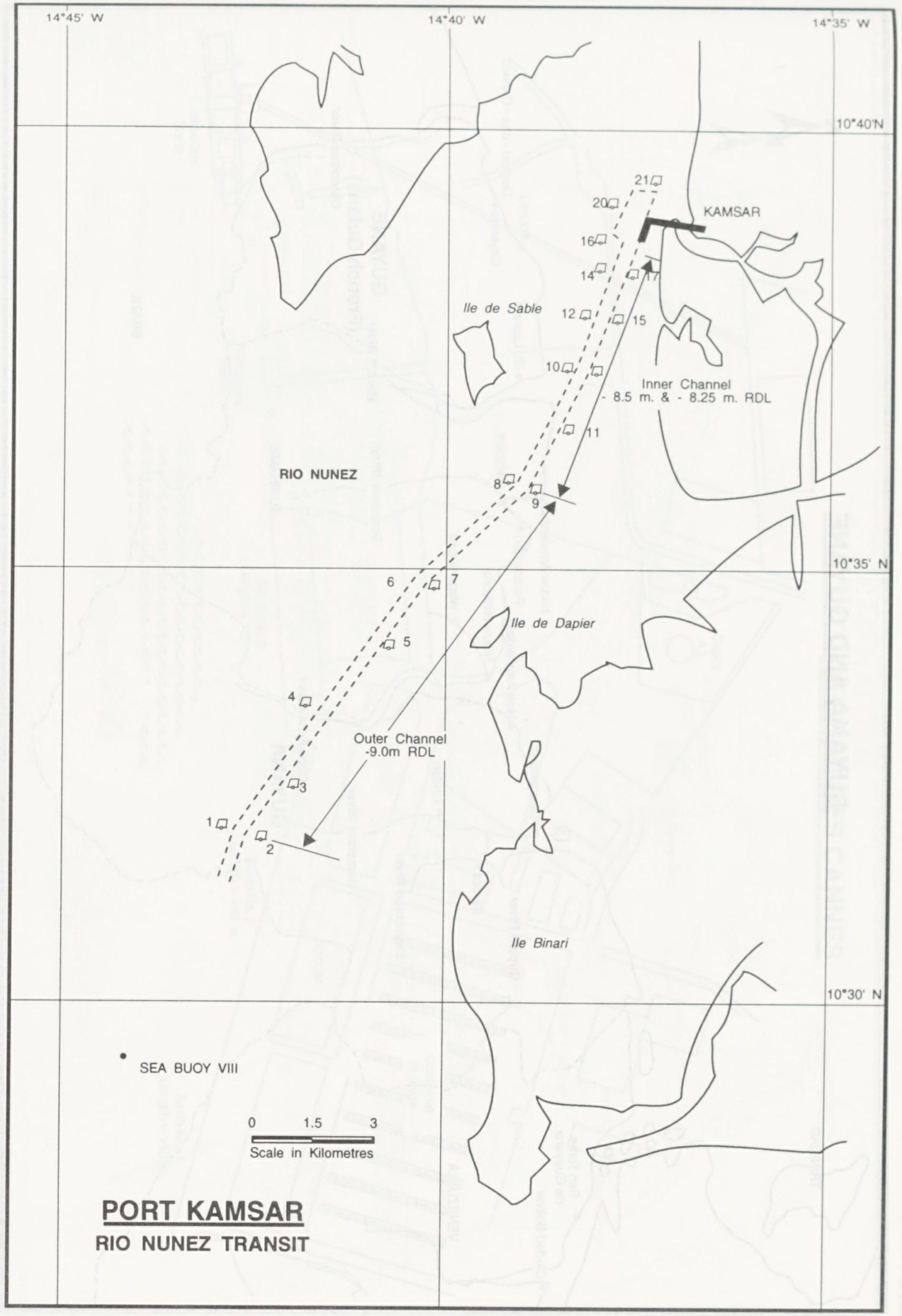
(APPROACH TO RIO NUNEZ)


REPUBLIC OF GUINEA
KAMSAR
Rio Nunez
Gonzoles Flat
Cap Verga
VIII
VII
VI
V
IV
III
II
Rollers
Shoals
Rocks
Recommended Track
N
15° W
16° W
17° W
11° N
10° N



GUINEA BISSAU

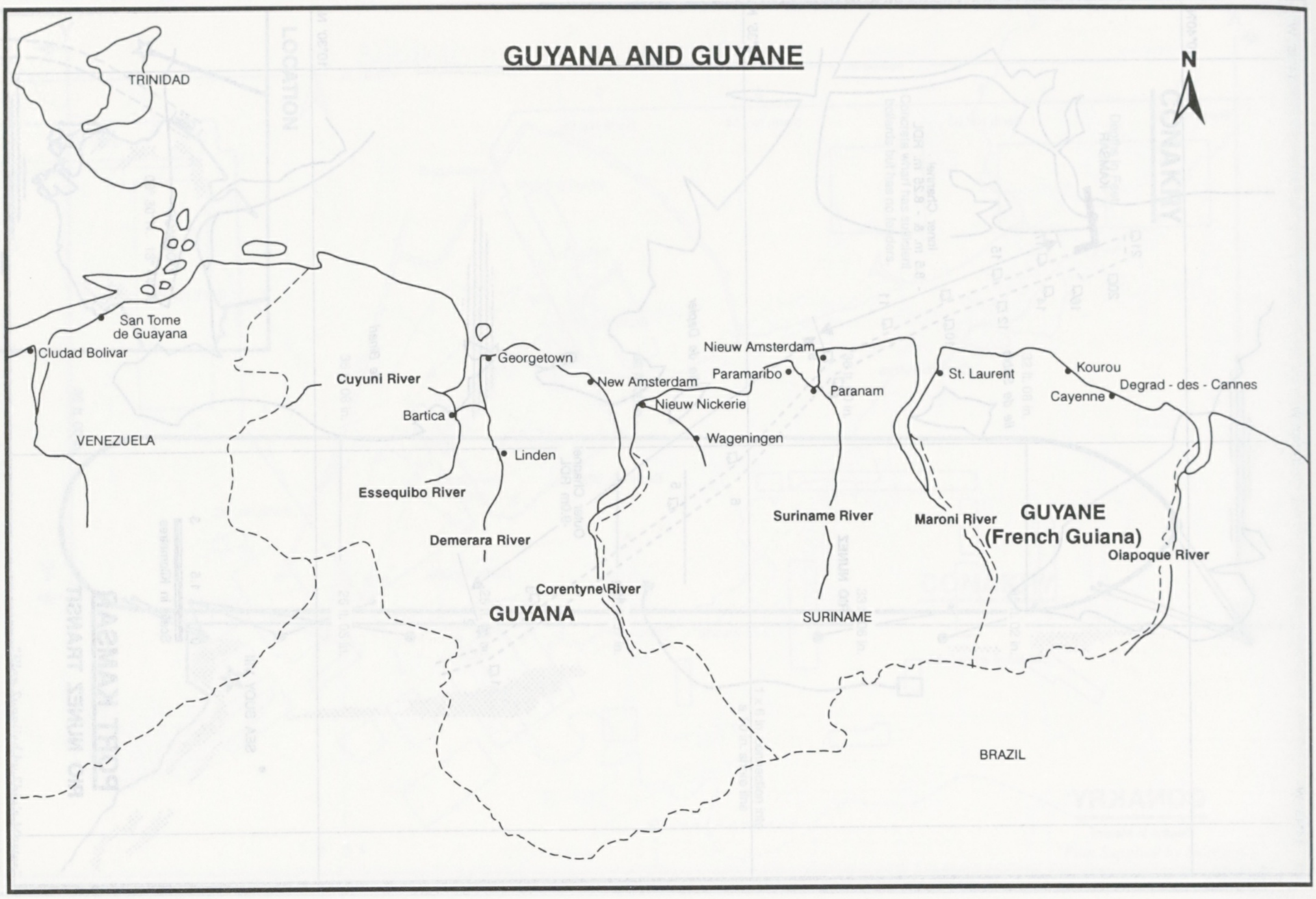
MAURITANIA
St. Louis
SENEGAL
Dakar
N
Kaolack
Banjul
GAMBIA
River Gambia
SENEGAL
GUINEA BISSAU
Bissau
Bijagos Arch.
GUINEA
Kamsar
Atlantic Ocean

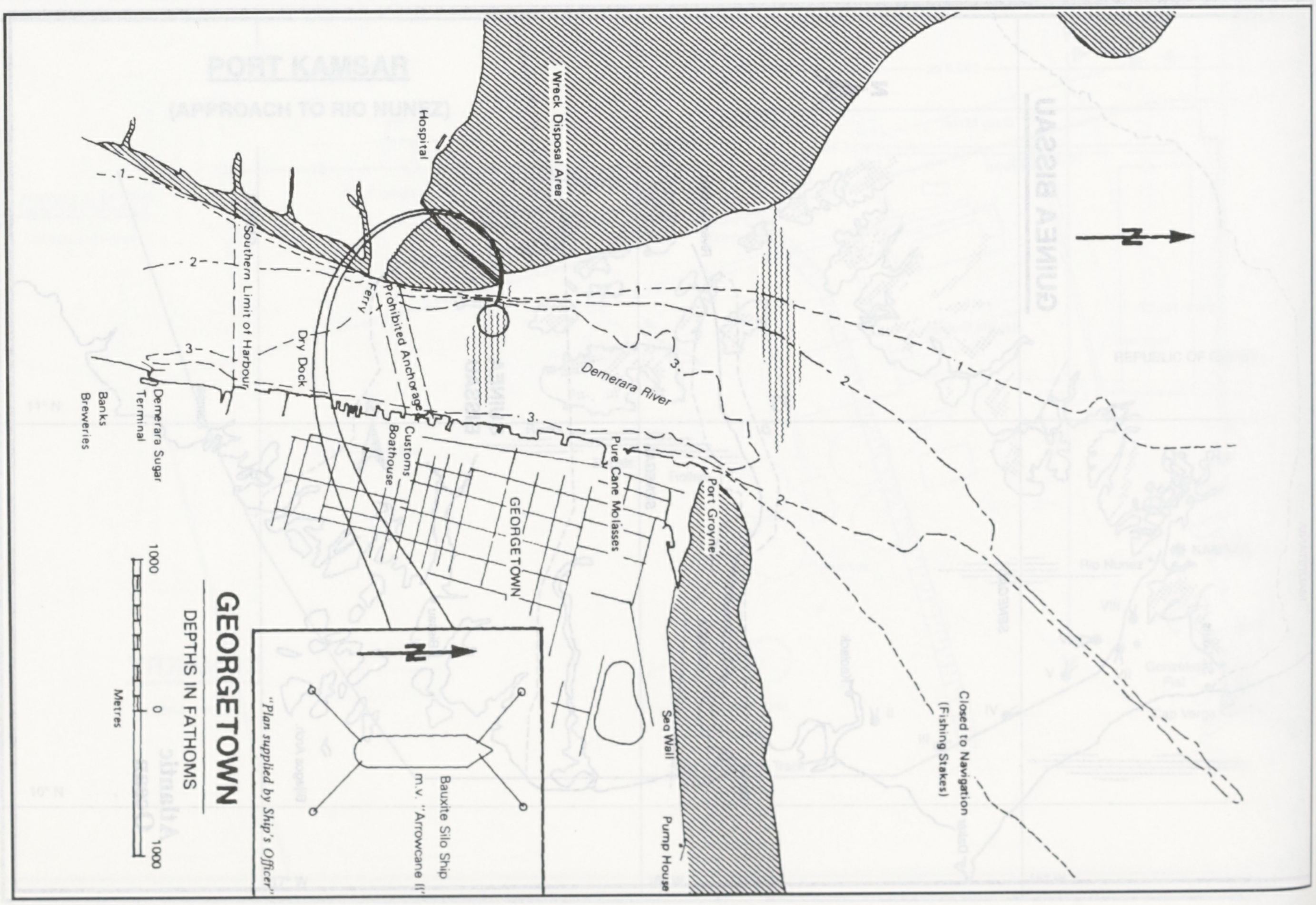


PORT KAMSAR

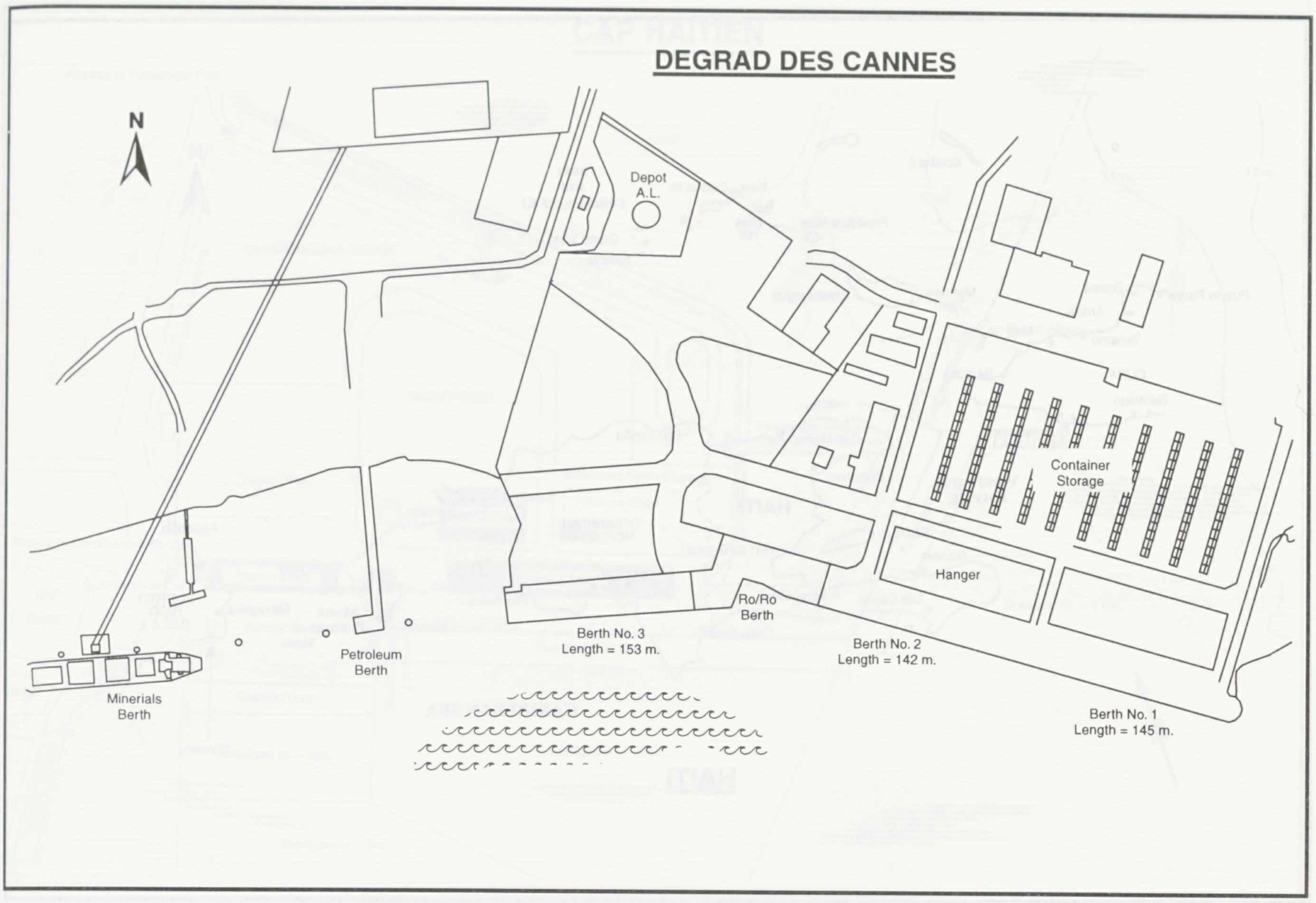
RIO NUNEZ TRANSIT

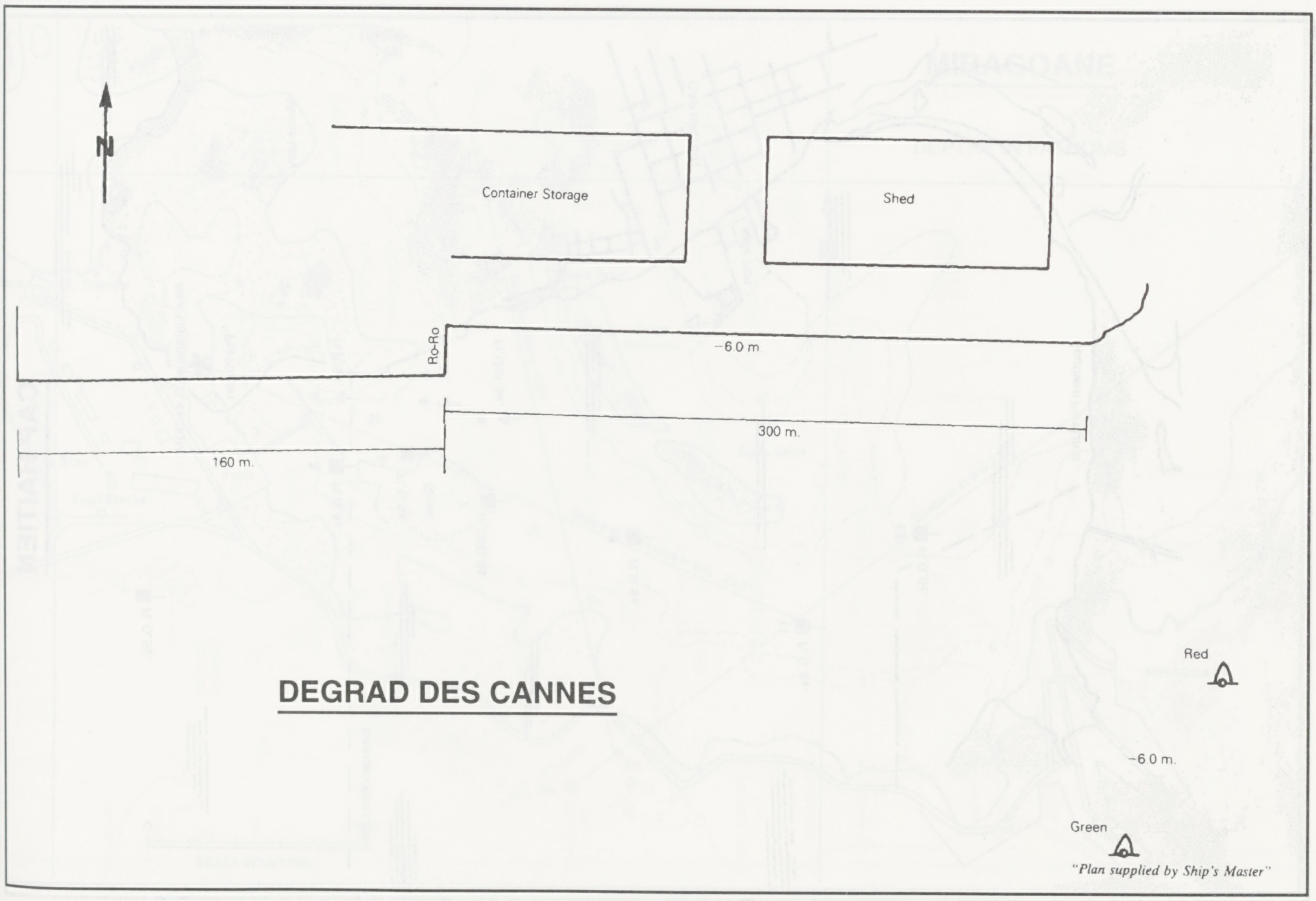
14°45' W
14°40' W
14°35' W
10°40'N
10°35' N
10°30' N
21
20
KAMSAR
16
14
17
Ile de Sable
12
15
10
Inner Channel
- 8.5 m. & - 8.25 m. RDL
11
RIO NUNEZ
8
9
6
7
Ile de Dapier
5
4
Outer Channel
-9.0m RDL
3
1
2
Ile Binari
SEA BUOY VIII
0
1.5
3
Scale in Kilometres


GUYANA AND GUYANE
N
TRINIDAD
San Tome de Guayana
Cludad Bolivar
VENEZUELA
Cuyuni River
Bartica
Essequibo River
Linden
Demerara River
Georgetown
New Amsterdam
Nieuw Nickerie
Wageningen
Corentyne River
GUYANA
Nieuw Amsterdam
Paramaribo
Paranam
Suriname River
SURINAME
St. Laurent
Maroni River
Kourou
Cayenne
Degrad - des - Cannes
GUYANE
(French Guiana)
Oiapoque River
BRAZIL


GEORGETOWN
DEPTHS IN FATHOMS
1000
0
1000
Metres
N
Hospital
Wreck Disposal Area
Southern Limit of Harbour
Ferry
Prohibited Anchorage
Dry Dock
Demerara River
Banks Breweries
Demerara Sugar Terminal
Customs Boathouse
GEORGETOWN
Pure Cane Molasses
Port Groyne
Sea Wall
Pump House
Closed to Navigation (Fishing Stakes)
Bauxite Silo Ship m.v. "Arrowcane II"
"Plan supplied by Ship's Officer"
1
2
3

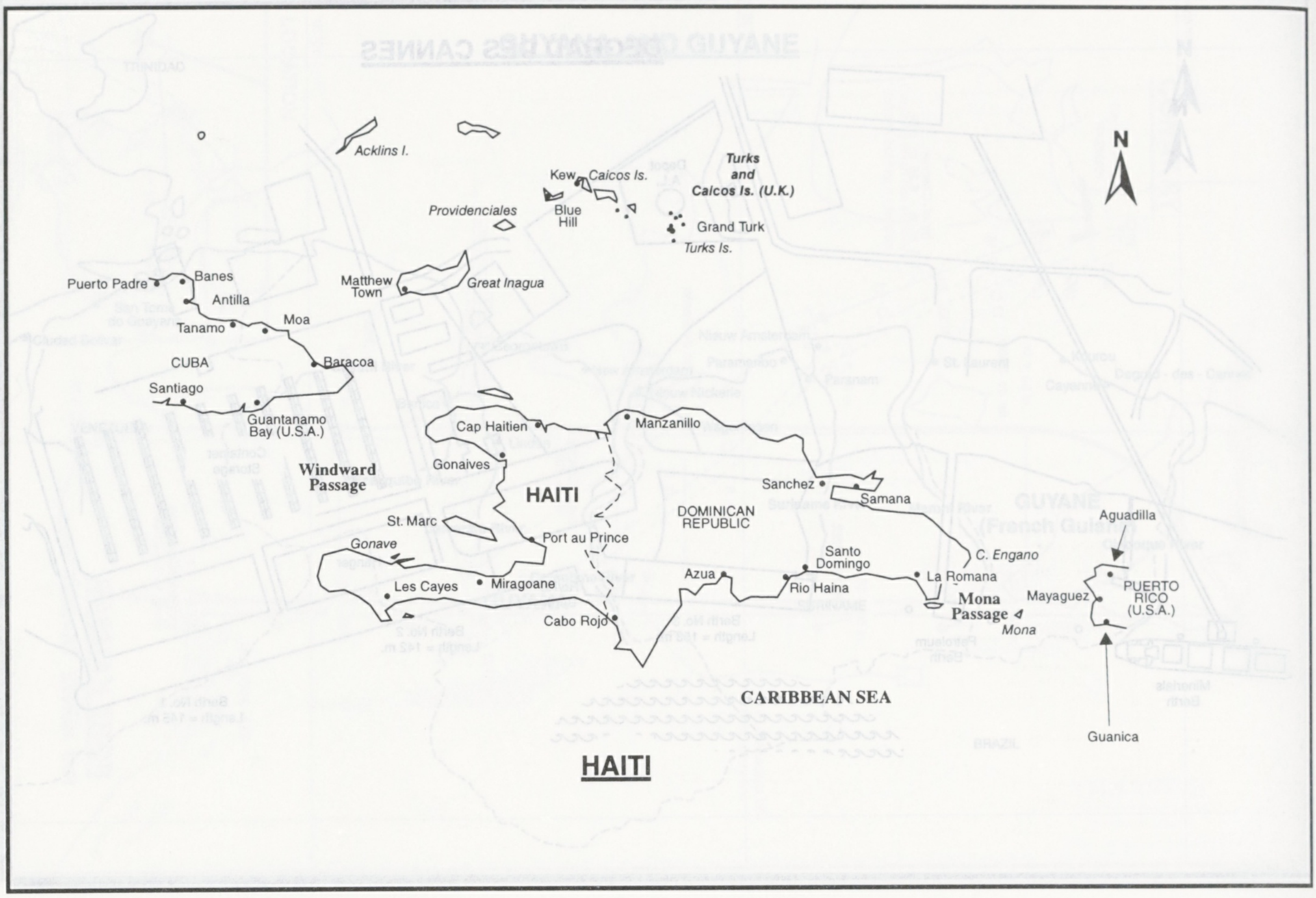
DEGRAD DES CANNES

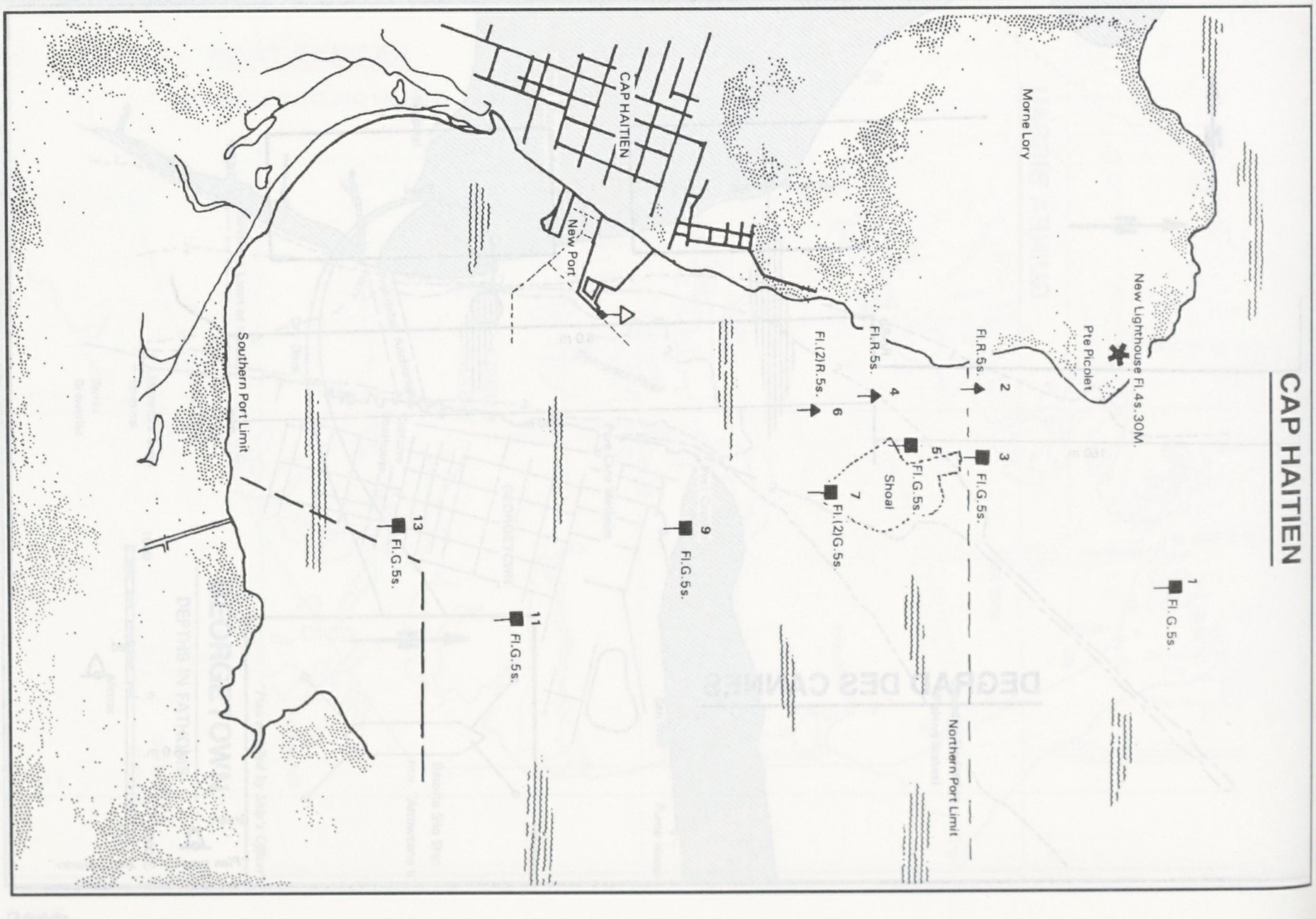

N
Depot
A.L.
Container
Storage
Hanger
Ro/Ro
Berth
Berth No. 3
Length = 153 m.
Berth No. 2
Length = 142 m.
Berth No. 1
Length = 145 m.
Petroleum
Berth
Minerials
Berth


N
Container Storage
Shed
Ro-Ro
−6 0 m
300 m.
160 m.
Red
−6 0 m.
Green

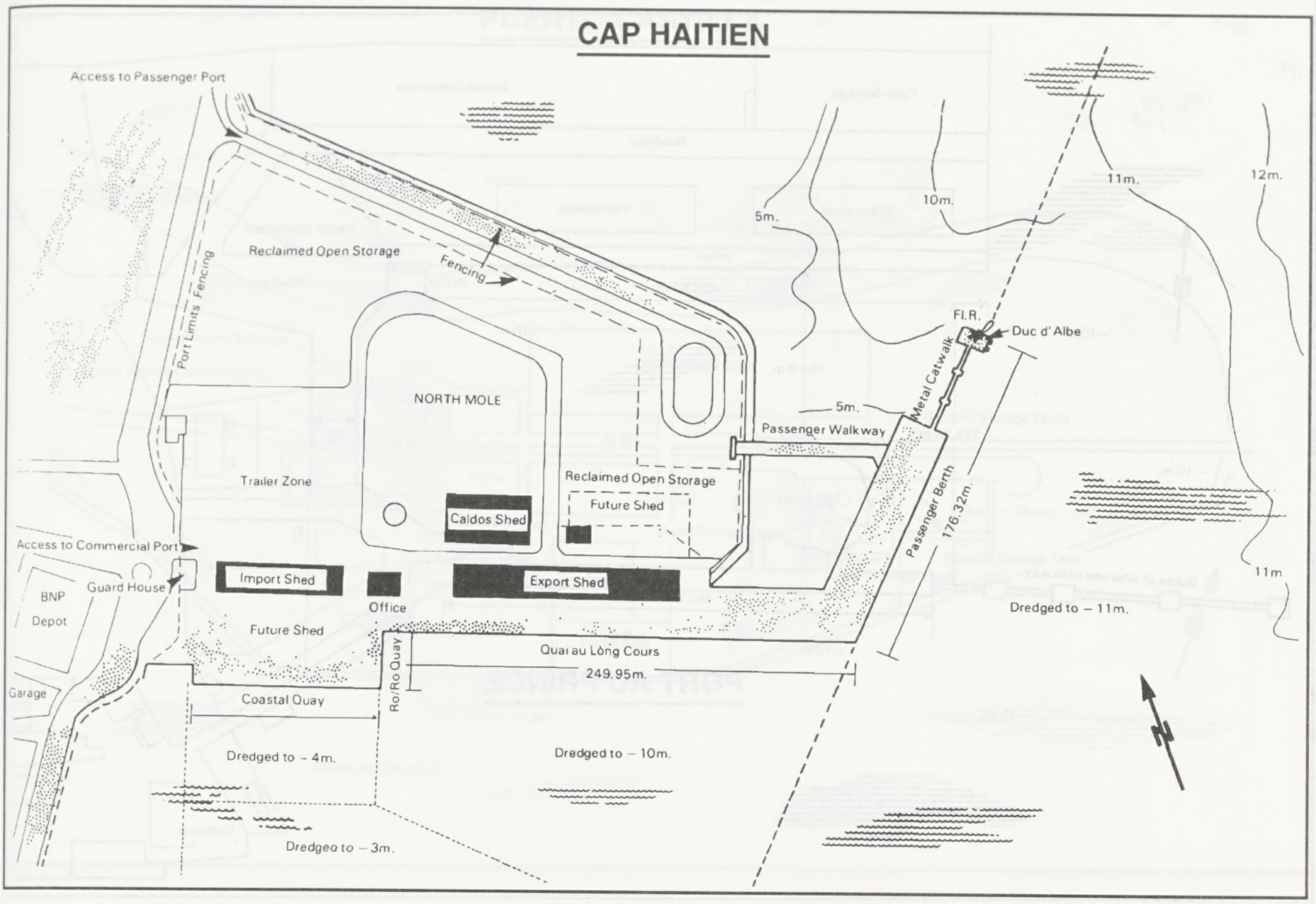
DEGRAD DES CANNES

"Plan supplied by Ship's Master"

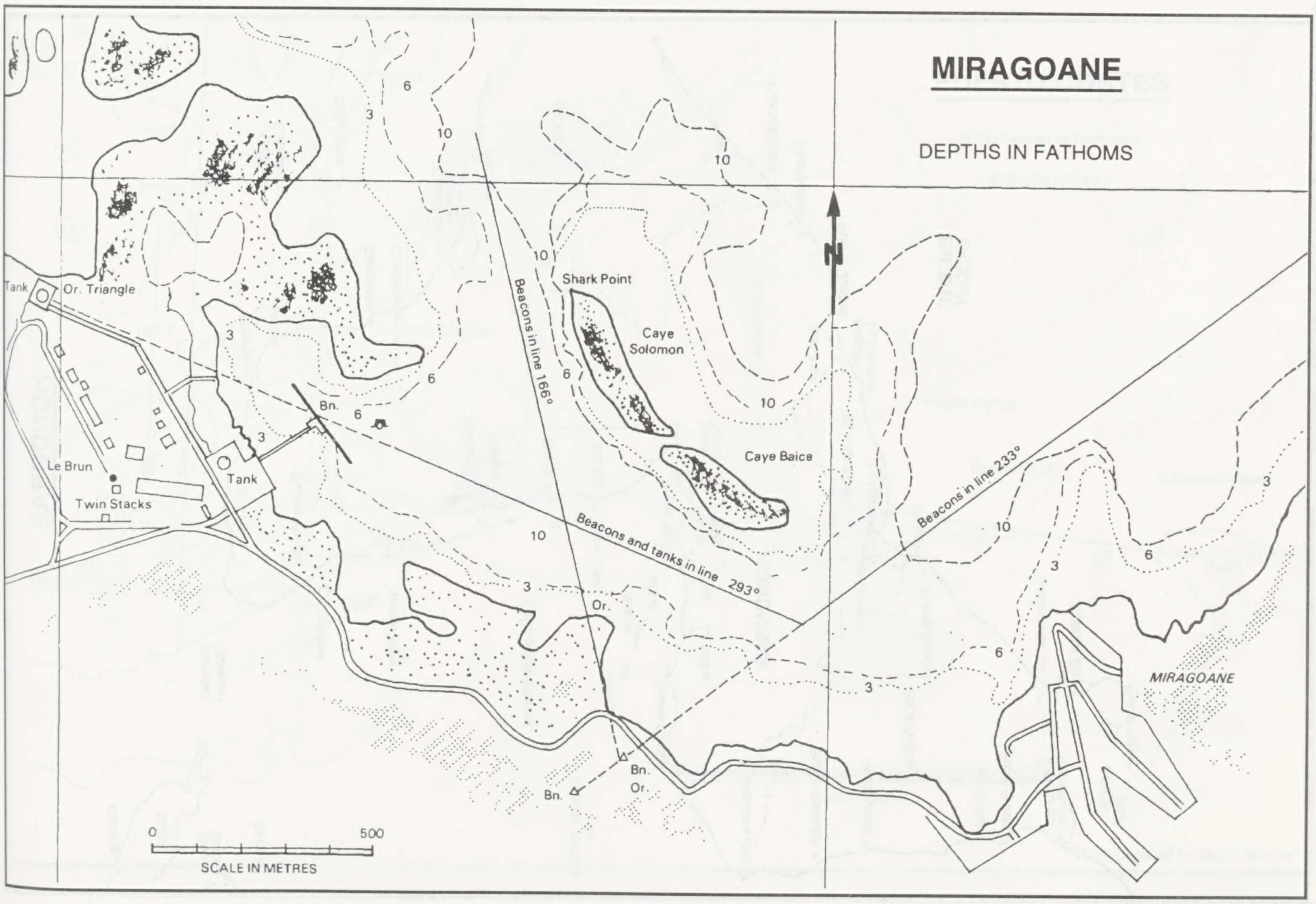

HAITI
N
Acklins I.
Kew
Caicos Is.
Turks and Caicos Is. (U.K.)
Providenciales
Blue Hill
Grand Turk
Turks Is.
Puerto Padre
Banes
Antilla
Tanamo
Moa
Matthew Town
Great Inagua
CUBA
Baracoa
Santiago
Guantanamo Bay (U.S.A.)
Windward Passage
Cap Haitien
Manzanillo
Gonaives
HAITI
Sanchez
Samana
DOMINICAN REPUBLIC
St. Marc
Gonave
Port au Prince
C. Engano
Aguadilla
Santo Domingo
Les Cayes
Miragoane
Azua
Rio Haina
La Romana
Mona Passage
Mona
Mayaguez
PUERTO RICO (U.S.A.)
Cabo Rojo
CARIBBEAN SEA
Guanica

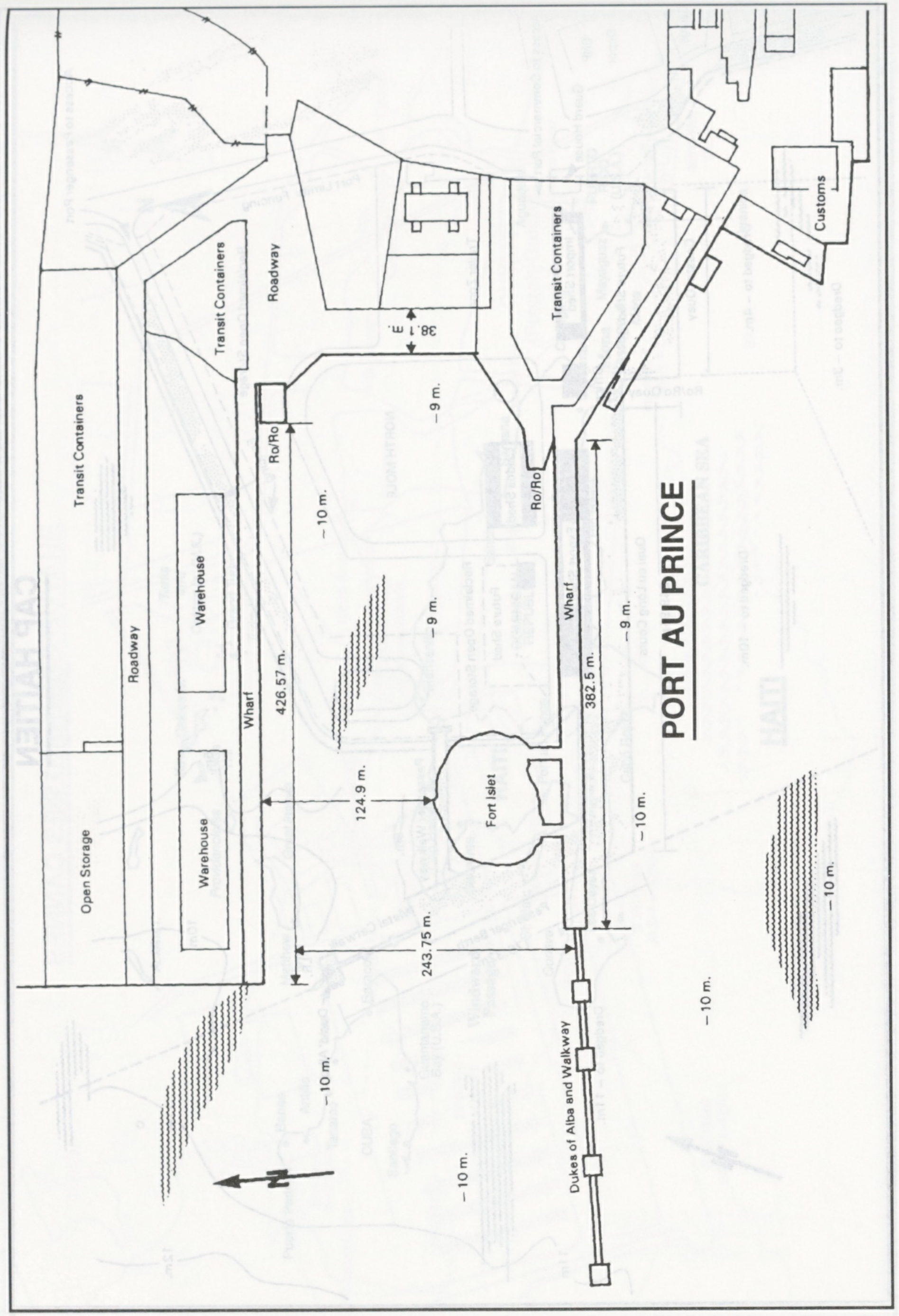

CAP HAITIEN
CAP HAITIEN
Morne Lory
New Port
New Lighthouse Fl.4s.30M.
Pte Picolet
1 Fl. G.5s.
2 Fl.R.5s.
3 Fl.G.5s.
4 Fl.R.5s.
5 Fl.G.5s.
Shoal
6 Fl.(2)R.5s.
7 Fl.(2)G.5s.
9 Fl.G.5s.
11 Fl.G.5s.
13 Fl.G.5s.
Southern Port Limit
Northern Port Limit

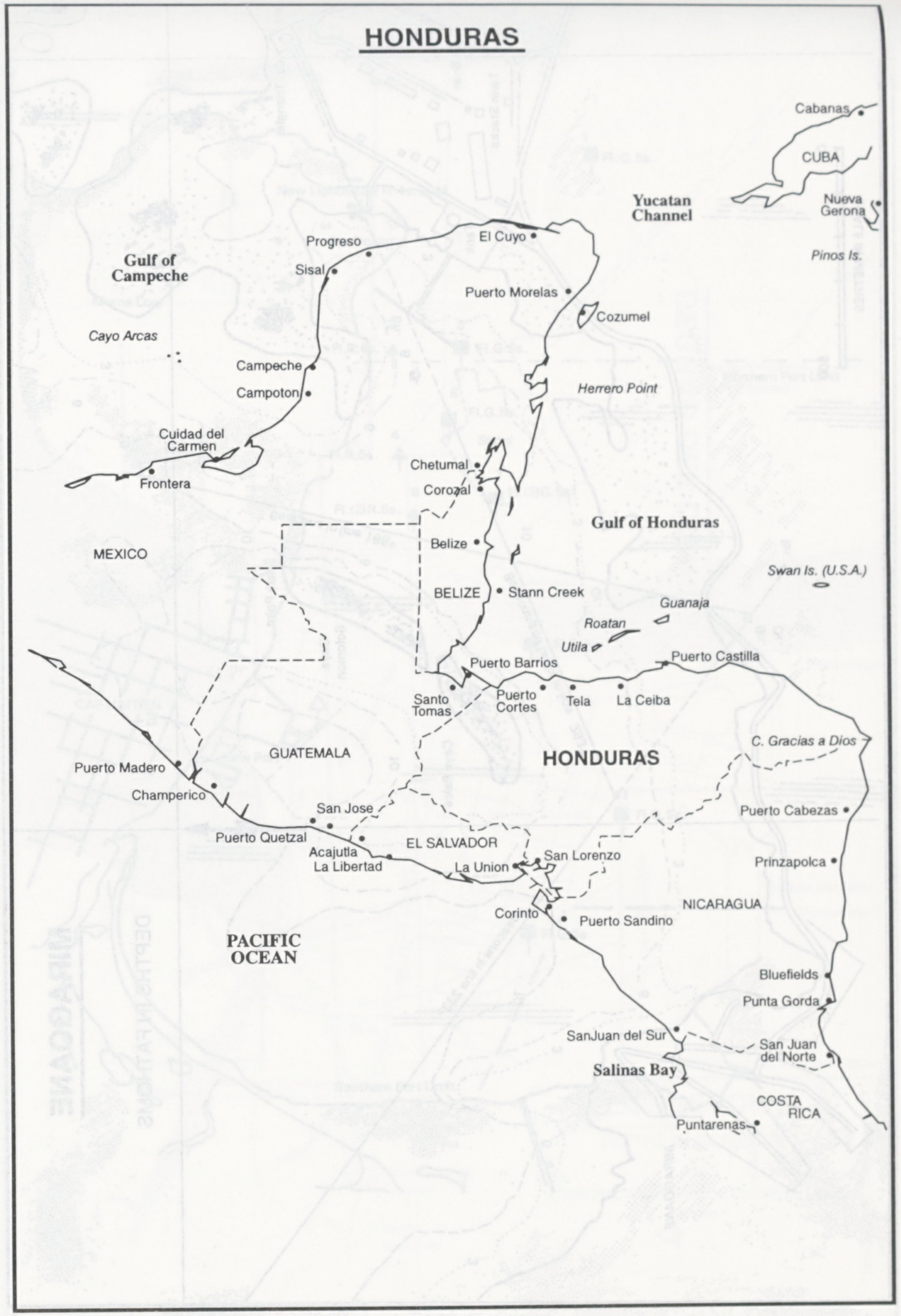
CAP HAITIEN

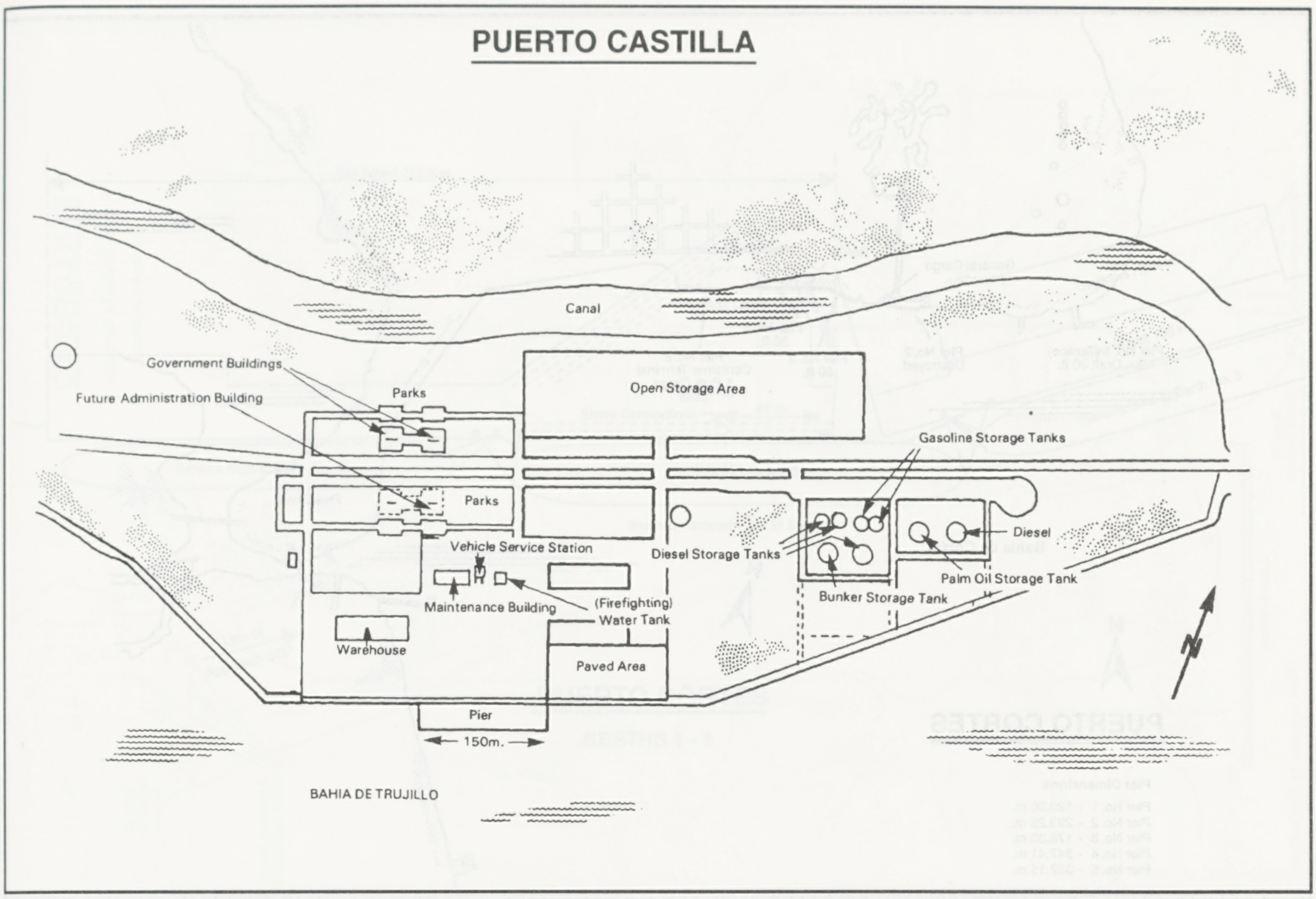

Access to Passenger Port
Reclaimed Open Storage
Fencing
Fencing
Port Limits Fencing
NORTH MOLE
Trailer Zone
Access to Commercial Port
Guard House
BNP
Depot
Garage
Import Shed
Office
Caldos Shed
Future Shed
Export Shed
Reclaimed Open Storage
Future Shed
Passenger Walkway
Metal Catwalk
Fl.R.
Duc d'Albe
Passenger Berth
176.32m
Future Shed
Ro/Ro Quay
Quai au Long Cours
249.95m.
Coastal Quay
Dredged to – 4m.
Dredged to – 10m.
Dredgea to – 3m.
Dredged to – 11m.
5m.
10m.
11m.
12m.
5m.
11m
N

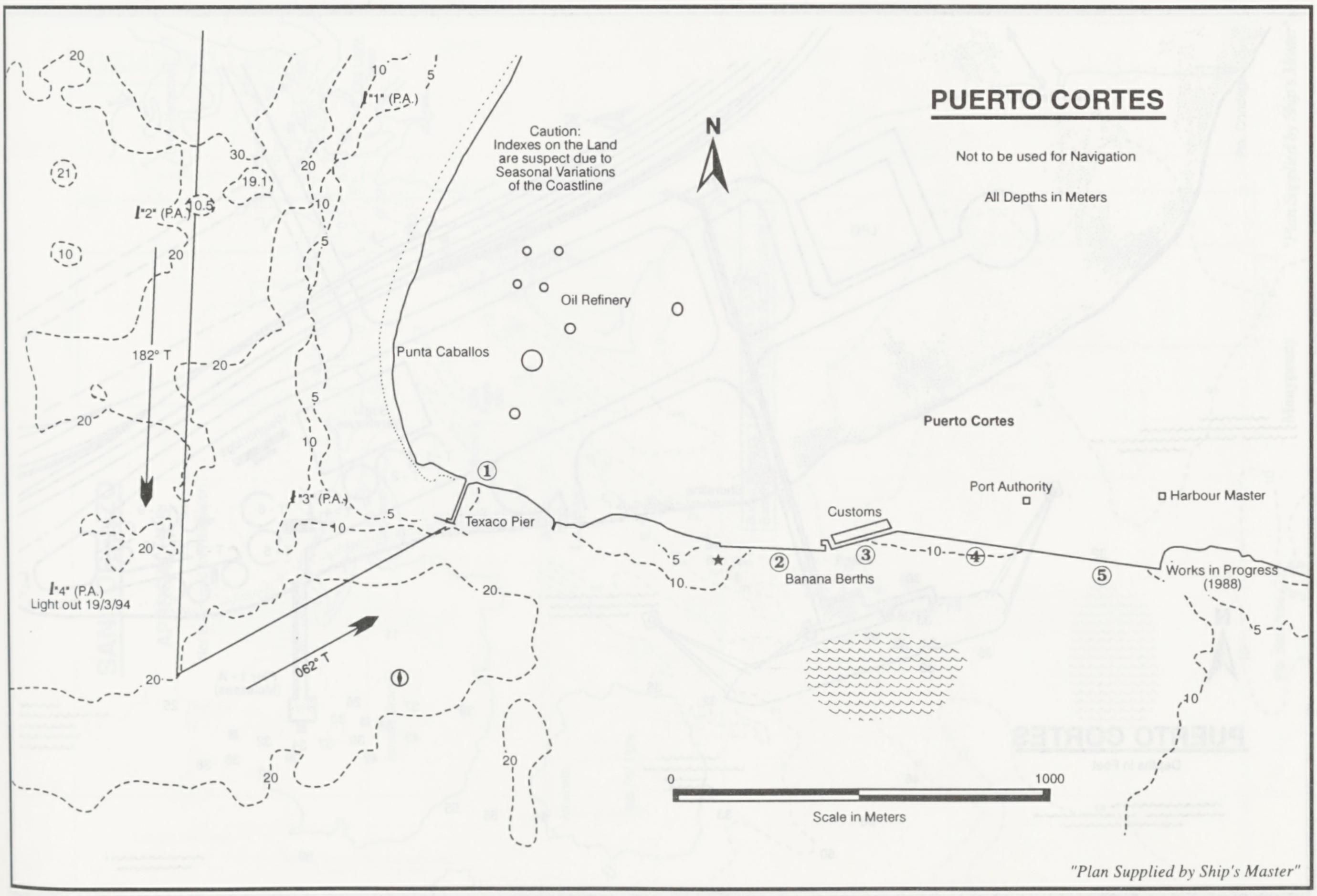
MIRAGOANE


DEPTHS IN FATHOMS
N
6
3
10
10
10
Shark Point
Caye Solomon
Caye Baice
Tank
Or. Triangle
3
6
Bn.
6
3
Le Brun
Tank
Twin Stacks
Beacons in line 166°
Beacons and tanks in line 293°
Beacons in line 233°
10
10
3
Or.
3
6
3
6
3
MIRAGOANE
Bn.
Or.
Bn.
0
500
SCALE IN METRES

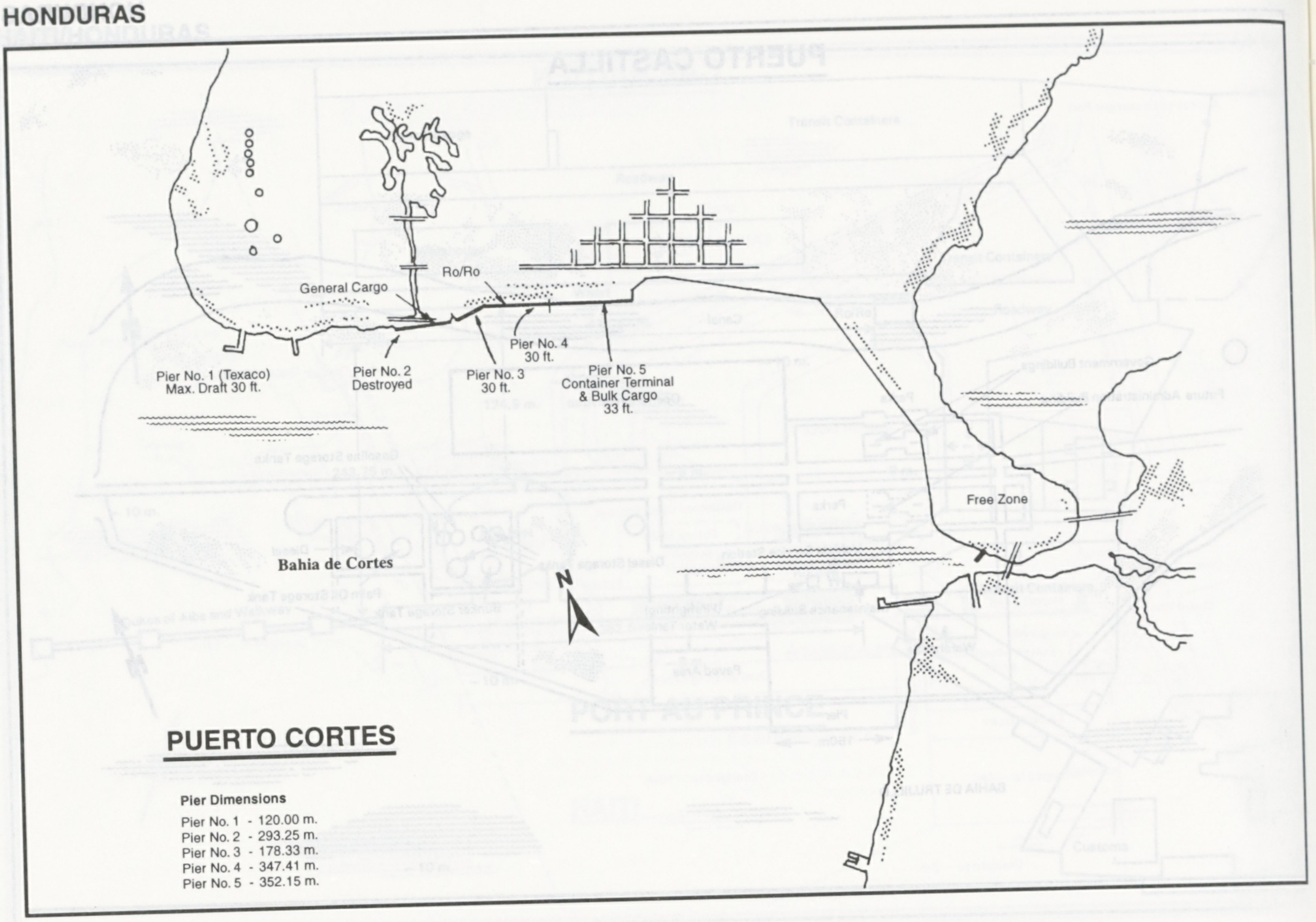

PORT AU PRINCE
Customs
Transit Containers
Roadway
Transit Containers
Transit Containers
Roadway
Warehouse
Warehouse
Open Storage
Wharf
Ro/Ro
Ro/Ro
Wharf
38.1 m.
– 9 m.
– 10 m.
426.57 m.
– 9 m.
– 9 m.
382.5 m.
– 10 m.
124.9 m.
Fort Islet
243.75 m.
– 10 m.
– 10 m.
– 10 m.
– 10 m.
Dukes of Alba and Walkway
N


HONDURAS
Cabanas
CUBA
Nueva Gerona
Pinos Is.
Yucatan Channel
El Cuyo
Progreso
Sisal
Gulf of Campeche
Puerto Morelas
Cozumel
Cayo Arcas
Campeche
Campoton
Herrero Point
Cuidad del Carmen
Frontera
Chetumal
Corozal
Gulf of Honduras
MEXICO
Belize
BELIZE
Stann Creek
Swan Is. (U.S.A.)
Guanaja
Roatan
Utila
Puerto Barrios
Puerto Castilla
Santo Tomas
Puerto Cortes
Tela
La Ceiba
C. Gracias a Dios
GUATEMALA
HONDURAS
Puerto Madero
Champerico
San Jose
Puerto Cabezas
Puerto Quetzal
EL SALVADOR
Acajutla
La Libertad
La Union
San Lorenzo
Prinzapolca
Corinto
Puerto Sandino
NICARAGUA
PACIFIC OCEAN
Bluefields
Punta Gorda
SanJuan del Sur
San Juan del Norte
Salinas Bay
COSTA RICA
Puntarenas


PUERTO CASTILLA
Canal
Government Buildings
Future Administration Building
Parks
Open Storage Area
Parks
Gasoline Storage Tanks
Vehicle Service Station
Diesel
Diesel Storage Tanks
Palm Oil Storage Tank
Bunker Storage Tank
Maintenance Building
(Firefighting)
Water Tank
Warehouse
Paved Area
Pier
150m.
BAHIA DE TRUJILLO


PUERTO CORTES
Not to be used for Navigation
All Depths in Meters
N
Caution:
Indexes on the Land
are suspect due to
Seasonal Variations
of the Coastline
"1" (P.A.)
"2" (P.A.)
"3" (P.A.)
"4" (P.A.)
Light out 19/3/94
182° T
062° T
Oil Refinery
Punta Caballos
Puerto Cortes
Port Authority
Harbour Master
Customs
Texaco Pier
Banana Berths
Works in Progress
(1988)
①
②
③
④
⑤
20
21
10
30
19.1
0.5
5
0
1000
Scale in Meters

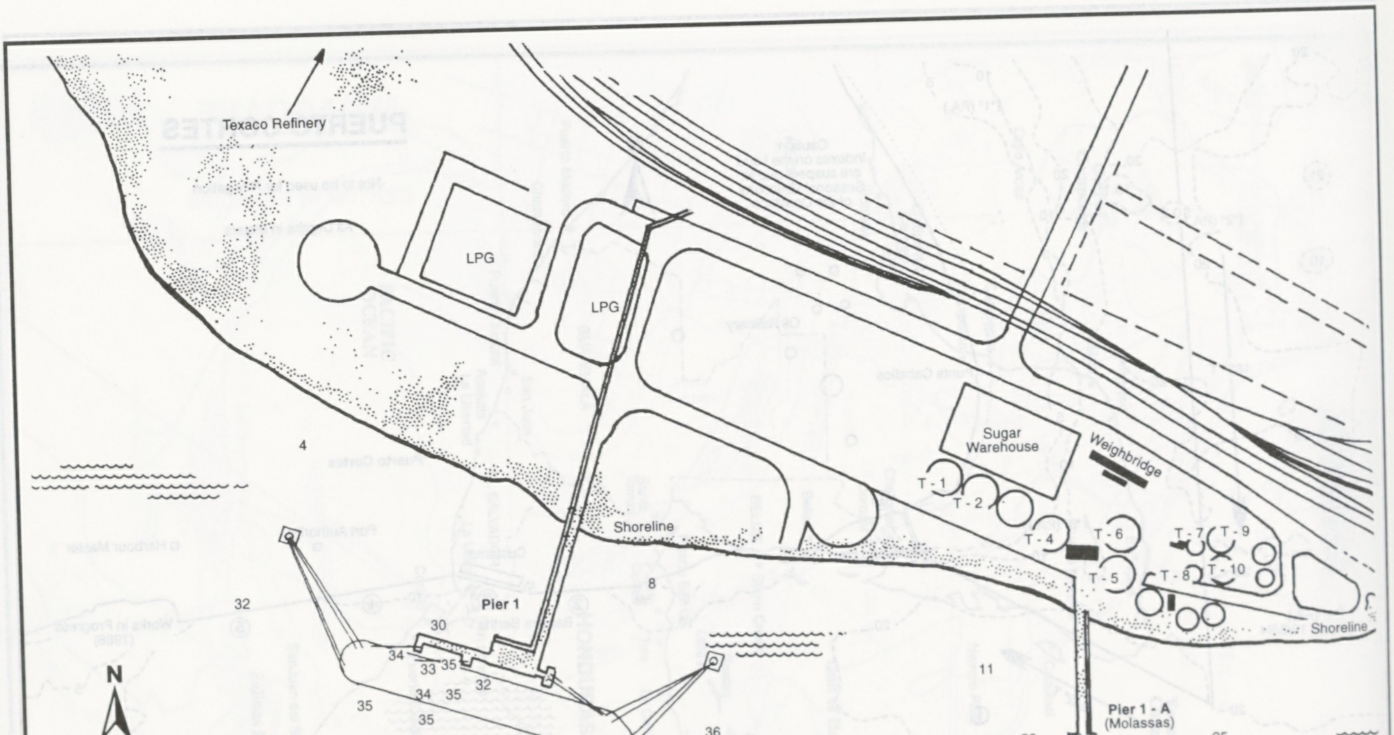
"Plan Supplied by Ship's Master"


General Cargo
Ro/Ro
Pier No. 1 (Texaco)
Max. Draft 30 ft.
Pier No. 2
Destroyed
Pier No. 3
30 ft.
Pier No. 4
30 ft.
Pier No. 5
Container Terminal
& Bulk Cargo
33 ft.
Free Zone
Bahia de Cortes
N

PUERTO CORTES

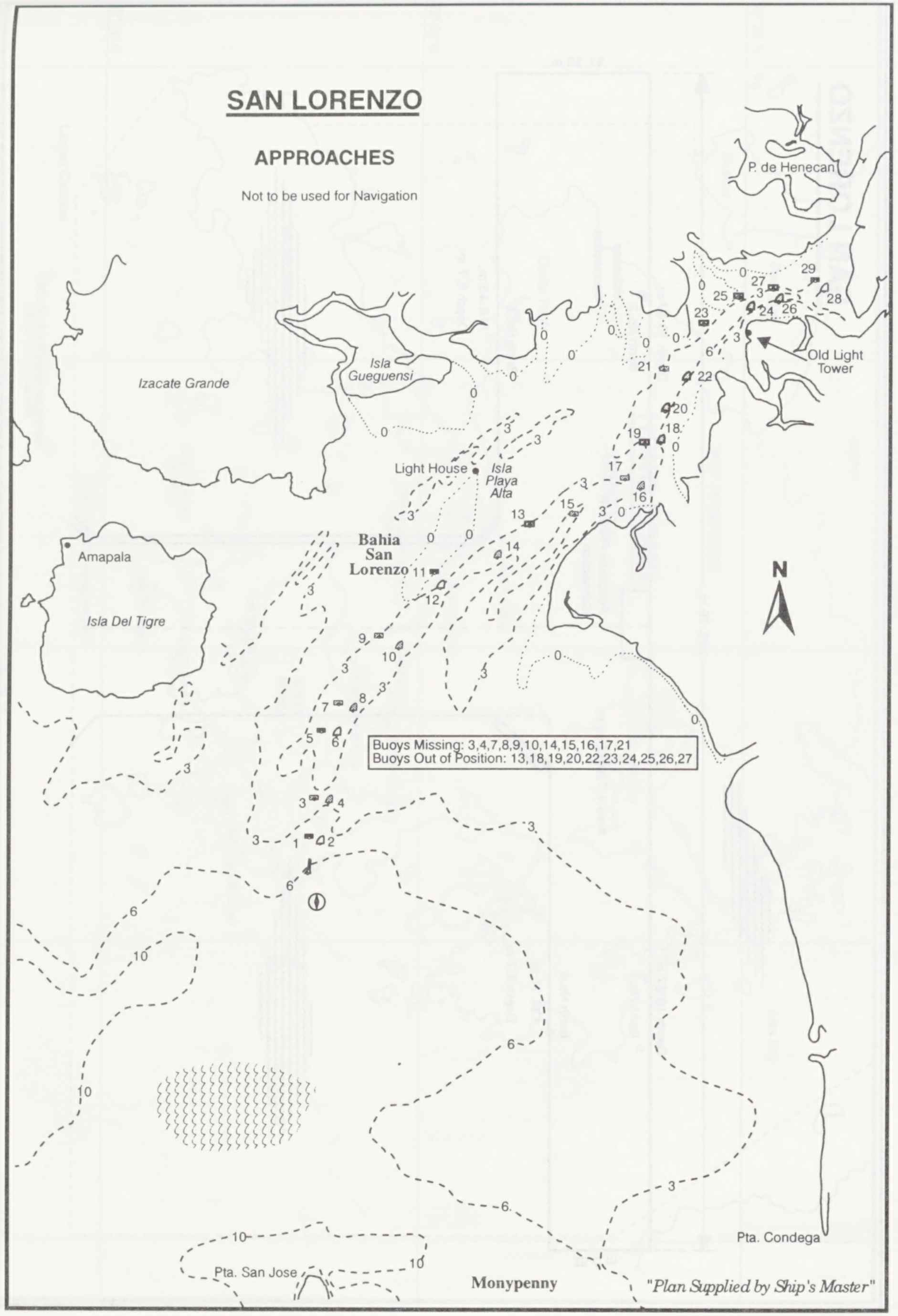
Pier Dimensions

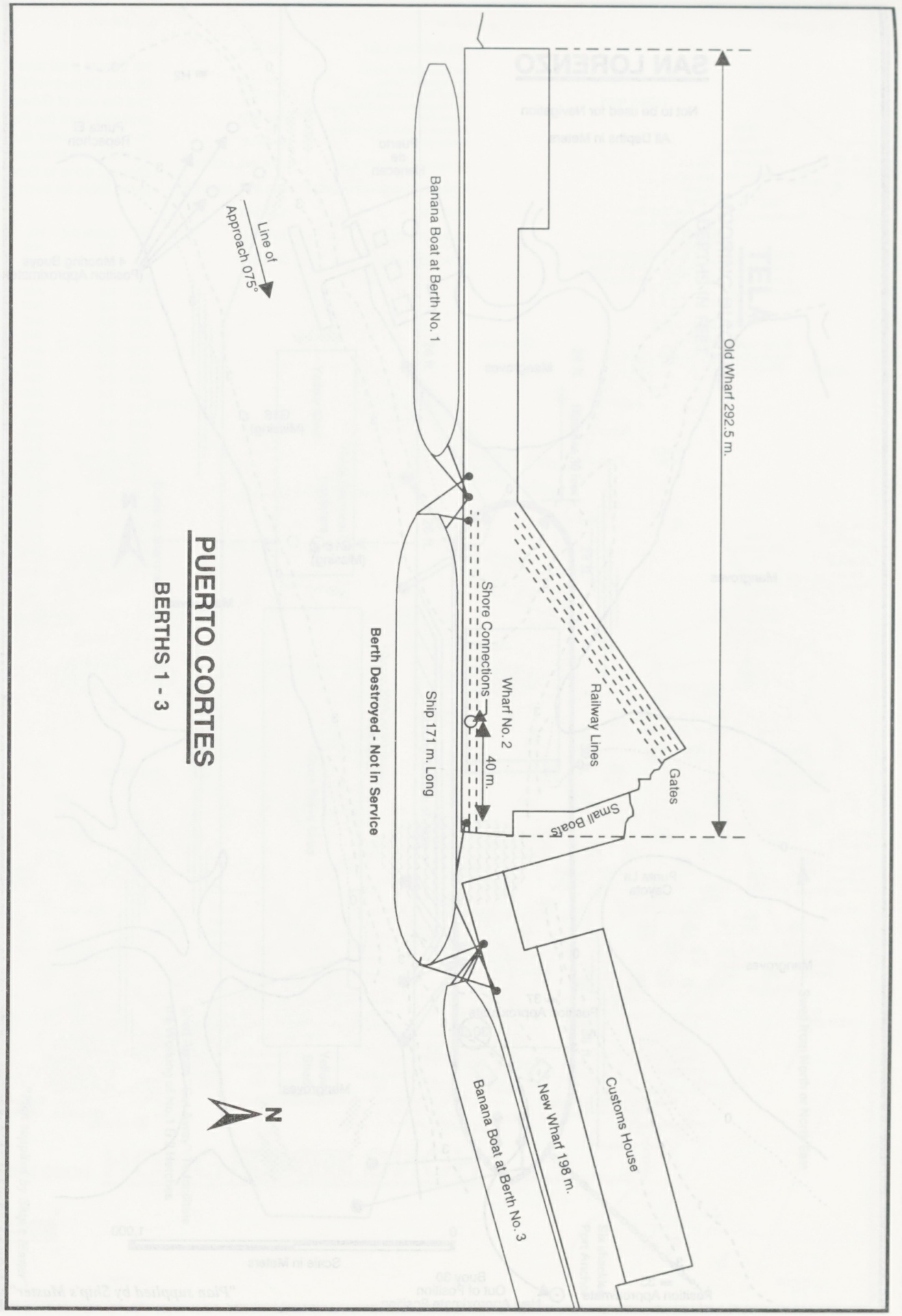
Pier No. 1 - 120.00 m.
Pier No. 2 - 293.25 m.
Pier No. 3 - 178.33 m.
Pier No. 4 - 347.41 m.
Pier No. 5 - 352.15 m.

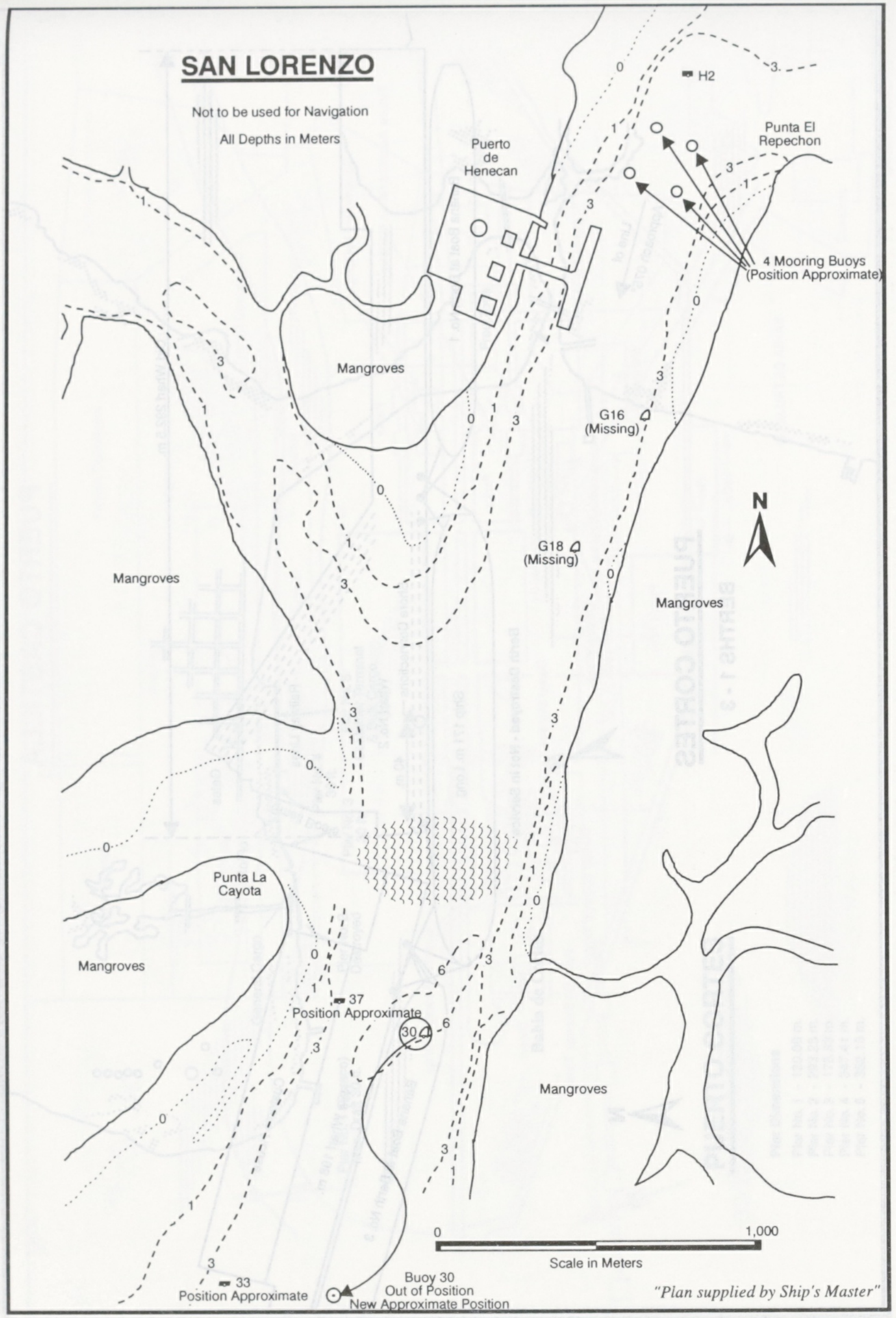

Texaco Refinery
LPG
LPG
Sugar Warehouse
Weighbridge
T - 1
T - 2
T - 4
T - 6
T - 5
T - 7
T - 9
T - 8
T - 10
Shoreline
Shoreline
Pier 1
Pier 1 - A
(Molassas)
N
4
8
32
30
34
33
35
32
34
35
35
35
32
36
11
39
37
38
26
30
43
39
37
34
32
36
38
42
39
32
25
46
55
55
55
33
56
60
59

PUERTO CORTES

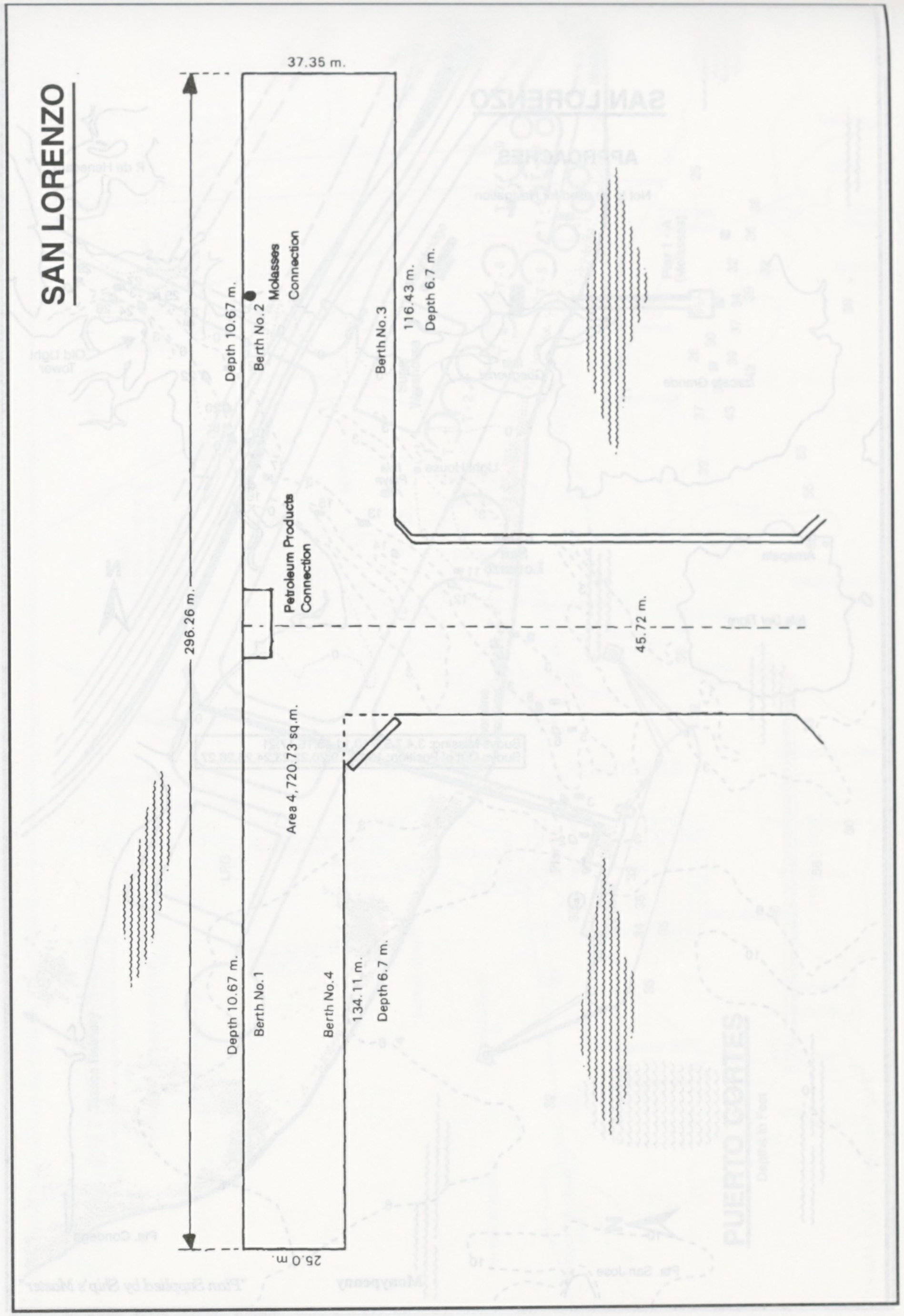
Depths in Feet

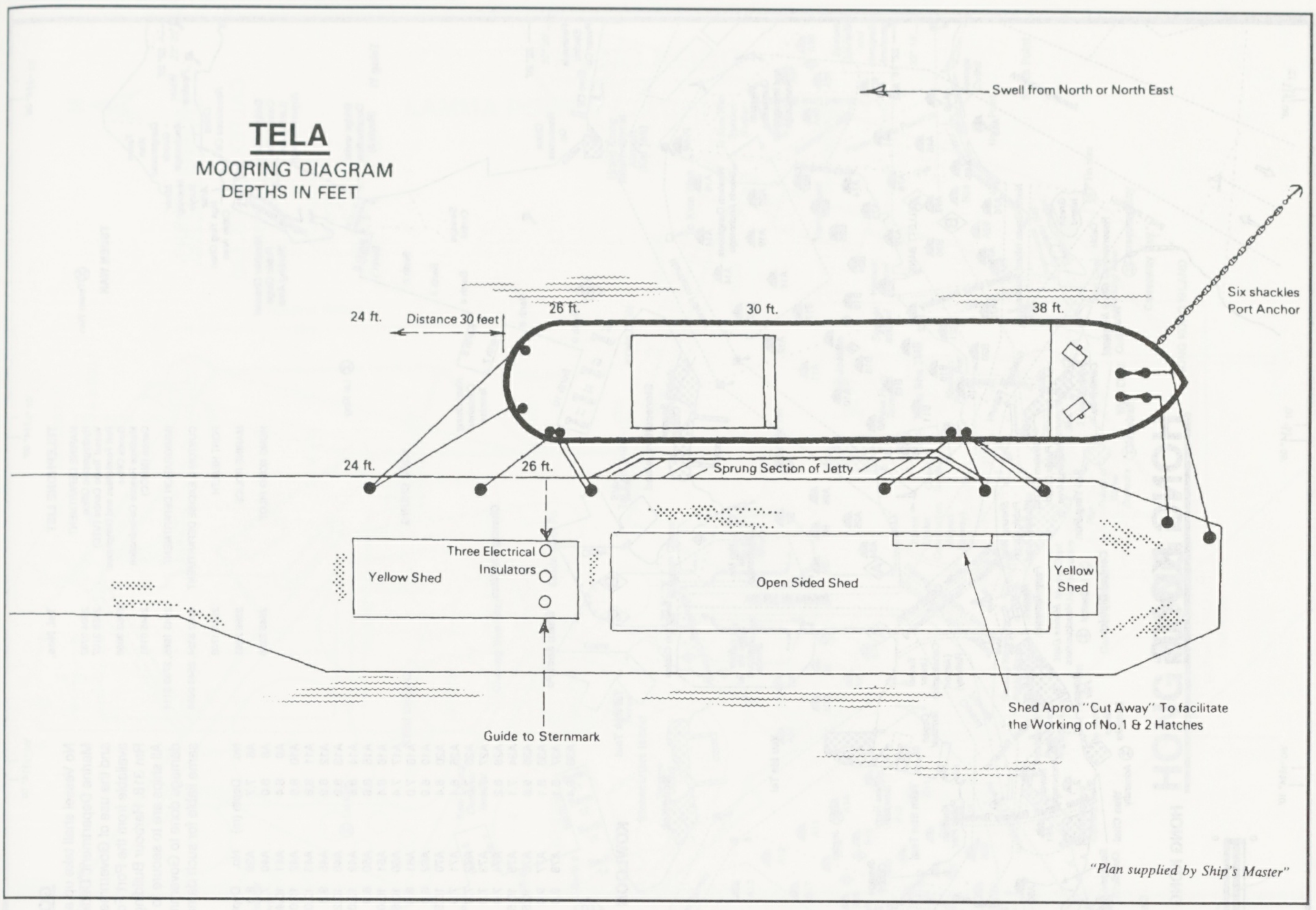

SAN LORENZO
APPROACHES
Not to be used for Navigation
P. de Henecan
Old Light Tower
Isla Gueguensi
Izacate Grande
Light House
Isla Playa Alta
Bahia San Lorenzo
Amapala
Isla Del Tigre
N
Buoys Missing: 3,4,7,8,9,10,14,15,16,17,21
Buoys Out of Position: 13,18,19,20,22,23,24,25,26,27
Pta. Condega
Pta. San Jose
Monypenny
"Plan Supplied by Ship's Master"

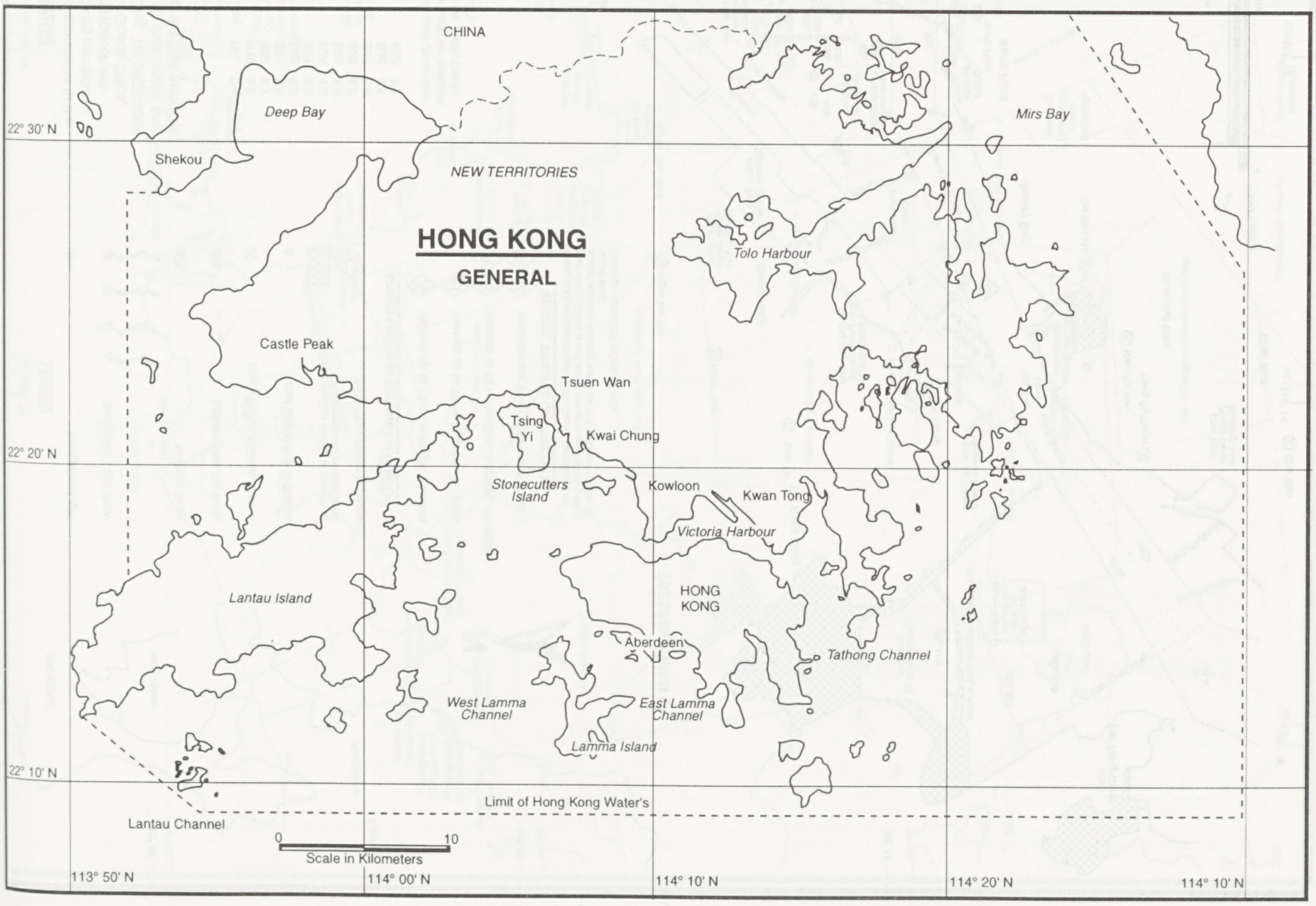

PUERTO CORTES
BERTHS 1 - 3
Line of Approach 075°
Banana Boat at Berth No. 1
Old Wharf 292.5 m.
Shore Connections
Wharf No. 2
Ship 171 m. Long
40 m.
Berth Destroyed - Not In Service
Railway Lines
Gates
Small Boats
Customs House
New Wharf 198 m.
Banana Boat at Berth No. 3
N

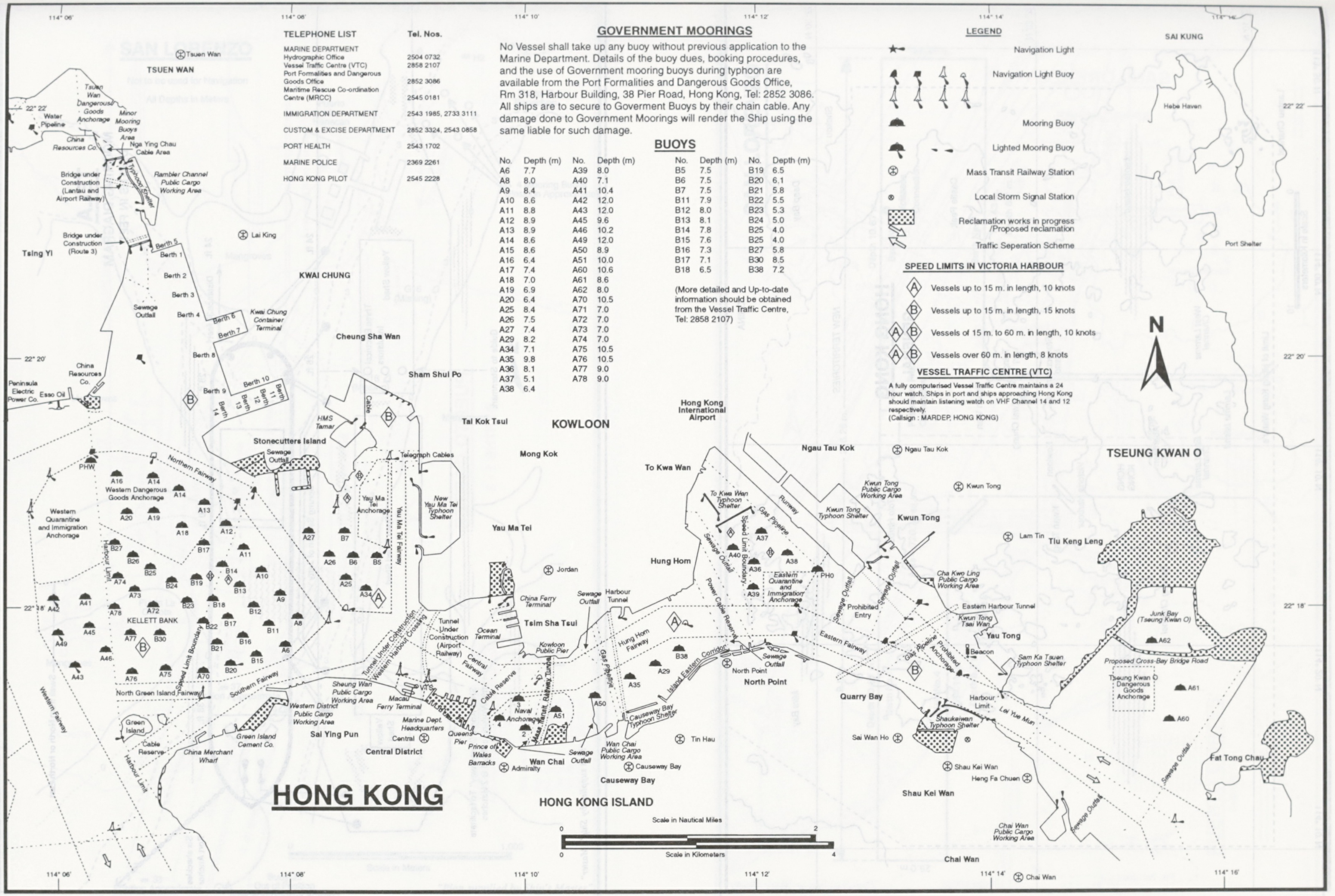

SAN LORENZO
Not to be used for Navigation
All Depths in Meters
Puerto de Henecan
Punta El Repechon
H2
4 Mooring Buoys (Position Approximate)
Mangroves
G16 (Missing)
G18 (Missing)
N
Mangroves
Mangroves
Punta La Cayota
Mangroves
37 Position Approximate
30
Mangroves
0
1,000
Scale in Meters
33 Position Approximate
Buoy 30 Out of Position New Approximate Position
0
1
3
6

"Plan supplied by Ship's Master"


SAN LORENZO
37.35 m.
296.26 m.
Depth 10.67 m.
Berth No.2
Molasses Connection
Berth No.3
116.43 m.
Depth 6.7 m.
Petroleum Products Connection
45.72 m.
Area 4,720.73 sq.m.
Depth 10.67 m.
Berth No.1
Berth No.4
134.11 m.
Depth 6.7 m.
25.0 m.


TELA
MOORING DIAGRAM
DEPTHS IN FEET
Swell from North or North East
Six shackles
Port Anchor
24 ft.
Distance 30 feet
26 ft.
30 ft.
38 ft.
24 ft.
26 ft.
Sprung Section of Jetty
Three Electrical
Insulators
Yellow Shed
Open Sided Shed
Yellow
Shed
Shed Apron "Cut Away" To facilitate
the Working of No.1 & 2 Hatches
Guide to Sternmark
"Plan supplied by Ship's Master"


HONG KONG
GENERAL
CHINA
Deep Bay
Mirs Bay
Shekou
NEW TERRITORIES
Tolo Harbour
Castle Peak
Tsuen Wan
Tsing
Yi
Kwai Chung
Stonecutters
Island
Kowloon
Kwan Tong
Victoria Harbour
Lantau Island
HONG
KONG
Aberdeen
Tathong Channel
West Lamma
Channel
East Lamma
Channel
Lamma Island
Limit of Hong Kong Water's
Lantau Channel
0
10
Scale in Kilometers
22° 30' N
22° 20' N
22° 10' N
113° 50' N
114° 00' N
114° 10' N
114° 20' N
114° 10' N



HONG KONG

TELEPHONE LIST

	Tel. Nos.
MARINE DEPARTMENT	
Hydrographic Office	2504 0732
Vessel Traffic Centre (VTC)	2858 2107
Port Formalities and Dangerous Goods Office	2852 3086
Maritime Rescue Co-ordination Centre (MRCC)	2545 0181
IMMIGRATION DEPARTMENT	2543 1985, 2733 3111
CUSTOM & EXCISE DEPARTMENT	2852 3324, 2543 0858
PORT HEALTH	2543 1702
MARINE POLICE	2369 2261
HONG KONG PILOT	2545 2228

GOVERNMENT MOORINGS

No Vessel shall take up any buoy without previous application to the Marine Department. Details of the buoy dues, booking procedures, and the use of Government mooring buoys during typhoon are available from the Port Formalities and Dangerous Goods Office, Rm 318, Harbour Building, 38 Pier Road, Hong Kong, Tel: 2852 3086. All ships are to secure to Goverment Buoys by their chain cable. Any damage done to Government Moorings will render the Ship using the same liable for such damage.

BUOYS

No.	Depth (m)	No.	Depth (m)	No.	Depth (m)	No.	Depth (m)
A6	7.7	A39	8.0	B5	7.5	B19	6.5
A8	8.0	A40	7.1	B6	7.5	B20	6.1
A9	8.4	A41	10.4	B7	7.5	B21	5.8
A10	8.6	A42	12.0	B11	7.9	B22	5.5
A11	8.8	A43	12.0	B12	8.0	B23	5.3
A12	8.9	A45	9.6	B13	8.1	B24	5.0
A13	8.9	A46	10.2	B14	7.8	B25	4.0
A14	8.6	A49	12.0	B15	7.6	B25	4.0
A15	8.6	A50	8.9	B16	7.3	B27	5.8
A16	6.4	A51	10.0	B17	7.1	B30	8.5
A17	7.4	A60	10.6	B18	6.5	B38	7.2
A18	7.0	A61	8.6				
A19	6.9	A62	8.0				
A20	6.4	A70	10.5				
A25	8.4	A71	7.0				
A26	7.5	A72	7.0				
A27	7.4	A73	7.0				
A29	8.2	A74	7.0				
A34	7.1	A75	10.5				
A35	9.8	A76	10.5				
A36	8.1	A77	9.0				
A37	5.1	A78	9.0				
A38	6.4						

(More detailed and Up-to-date information should be obtained from the Vessel Traffic Centre, Tel: 2858 2107)

LEGEND

- Navigation Light
- Navigation Light Buoy
- Mooring Buoy
- Lighted Mooring Buoy
- Mass Transit Railway Station
- Local Storm Signal Station
- ▨ Reclamation works in progress /Proposed reclamation
- Traffic Seperation Scheme

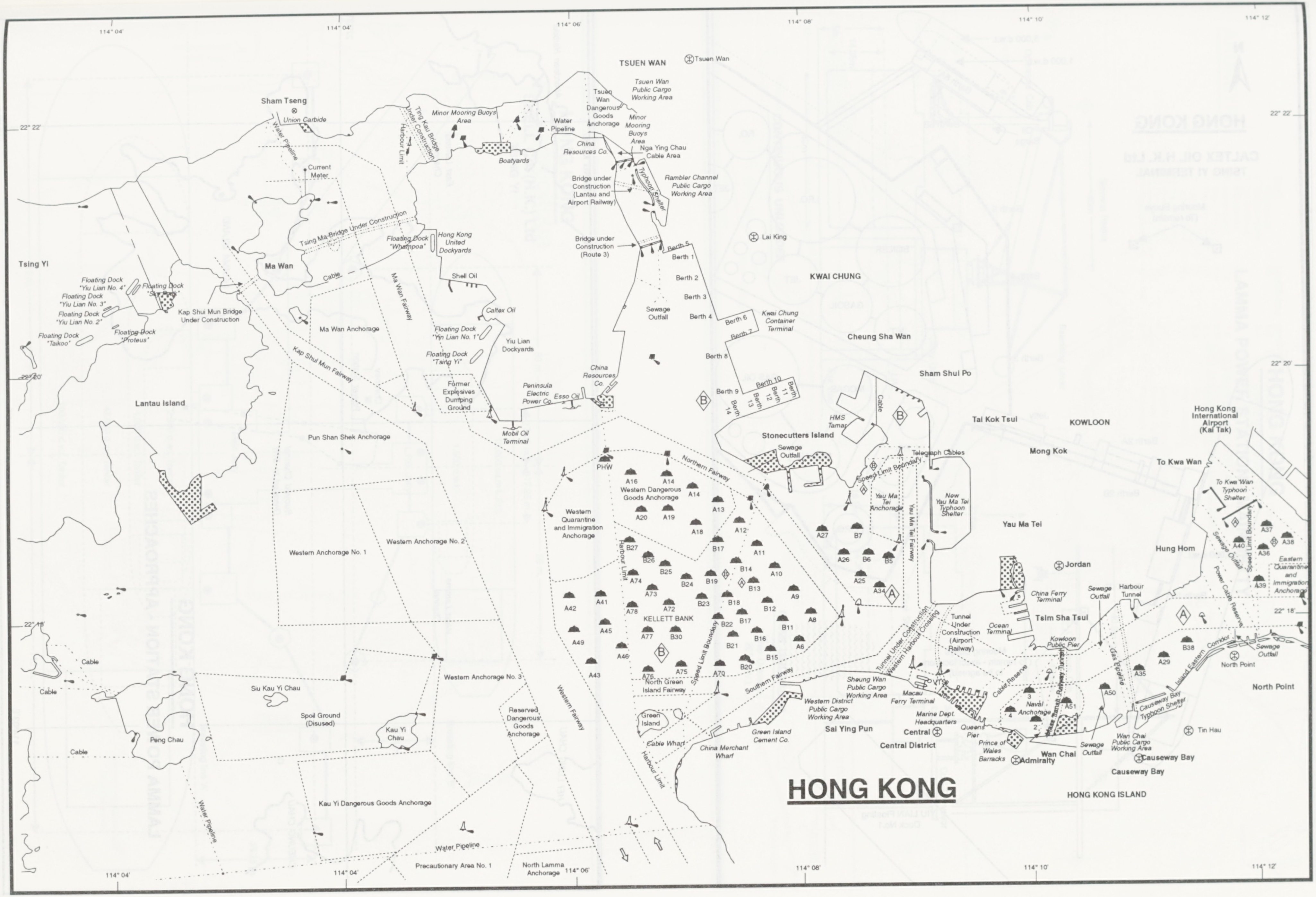
SPEED LIMITS IN VICTORIA HARBOUR

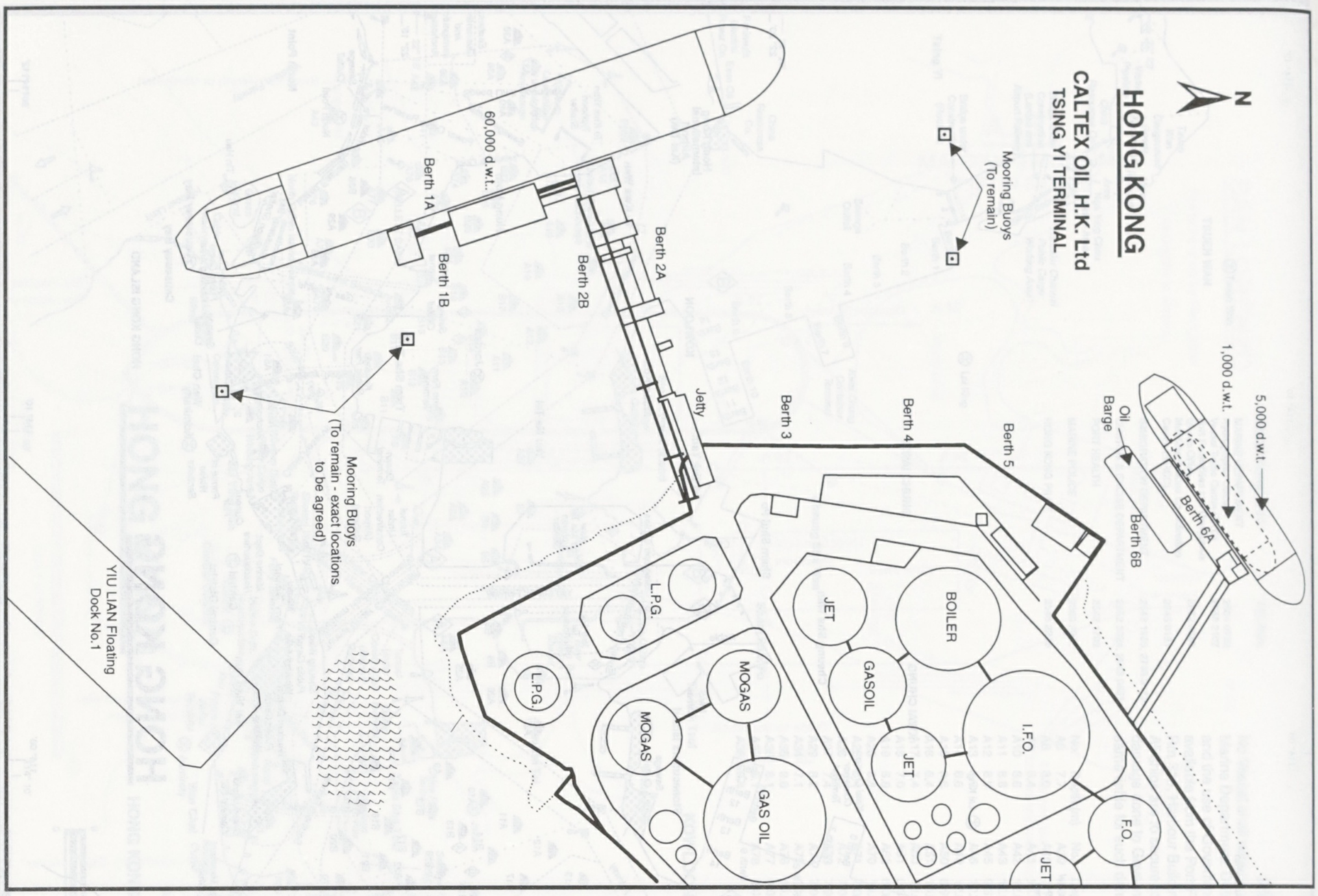
- A — Vessels up to 15 m. in length, 10 knots
- B — Vessels up to 15 m. in length, 15 knots
- A B — Vessels of 15 m. to 60 m. in length, 10 knots
- A B — Vessels over 60 m. in length, 8 knots

VESSEL TRAFFIC CENTRE (VTC)

A fully computerised Vessel Traffic Centre maintains a 24 hour watch. Ships in port and ships approaching Hong Kong should maintain listening watch on VHF Channel 14 and 12 respectively.
(Callsign : MARDEP, HONG KONG)

114° 06'
114° 08'
114° 10'
114° 12'
114° 14'
114° 16'
22° 22'
22° 20'
22° 18'
N
TSUEN WAN
Tsuen Wan
SAI KUNG
Hebe Haven
Port Shelter
Tsuen Wan Dangerous Goods Anchorage
Minor Mooring Buoys Area
Water Pipeline
China Resources Co.
Nga Ying Chau Cable Area
Typhoon Shelter
Rambler Channel Public Cargo Working Area
Bridge under Construction (Lantau and Airport Railway)
Bridge under Construction (Route 3)
Tsing Yi
Lai King
Berth 1
Berth 2
Berth 3
Berth 4
Berth 5
Berth 6
Berth 7
Berth 8
Berth 9
Berth 10
Berth 11
Berth 12
Berth 13
Berth 14
KWAI CHUNG
Kwai Chung Container Terminal
Sewage Outfall
China Resources Co.
Peninsula Electric Power Co.
Esso Oil
Cheung Sha Wan
Sham Shui Po
HMS Tamar
Cable
Stonecutters Island
Tai Kok Tsui
KOWLOON
Mong Kok
Hong Kong International Airport
Telegraph Cables
New Yau Ma Tei Typhoon Shelter
Yau Ma Tei Anchorage
Yau Ma Tei Fairway
Yau Ma Tei
PHW
Western Dangerous Goods Anchorage
Northern Fairway
Western Quarantine and Immigration Anchorage
Harbour Limit
KELLETT BANK
Speed Limit Boundary
North Green Island Fairway
Southern Fairway
Western Fairway
Green Island
Cable Reserve
China Merchant Wharf
Green Island Cement Co.
Western District Public Cargo Working Area
Sai Ying Pun
Sheung Wan Public Cargo Working Area
Macau Ferry Terminal
VTS
Tunnel Under Construction
Western Harbour Crossing
Tunnel Under Construction (Airport Railway)
Central Fairway
Ocean Terminal
Marine Dept. Headquarters
Central
Central District
Queens Pier
Prince of Wales Barracks
Admiralty
Naval Anchorage
Mass Transit Railway Tunnel
Jordan
China Ferry Terminal
Tsim Sha Tsui
Kowloon Public Pier
Sewage Outfall
Harbour Tunnel
Hung Hom Fairway
Gas Pipeline
Wan Chai
Wan Chai Public Cargo Working Area
Causeway Bay Typhoon Shelter
Causeway Bay
Tin Hau
HONG KONG ISLAND
To Kwa Wan
To Kwa Wan Typhoon Shelter
Runway
Hung Hom
Speed Limit Boundary
Power Cable Reserve
Island Eastern Corridor
North Point
Eastern Quarantine and Immigration Anchorage
PHO
Prohibited Entry
Eastern Fairway
Ngau Tau Kok
Kwun Tong Public Cargo Working Area
Kwun Tong Typhoon Shelter
Kwun Tong
Lam Tin
Cha Kwo Ling Public Cargo Working Area
Eastern Harbour Tunnel
Kwun Tong Tsai Wan
Yau Tong
Beacon
Prohibited Anchorage
Sam Ka Tsuen Typhoon Shelter
Quarry Bay
Harbour Limit
Lei Yue Mun
Shaukeiwan Typhoon Shelter
Sai Wan Ho
Shau Kei Wan
Heng Fa Chuen
Chai Wan Public Cargo Working Area
Chai Wan
TSEUNG KWAN O
Tiu Keng Leng
Junk Bay (Tseung Kwan O)
Proposed Cross-Bay Bridge Road
Tseung Kwan O Dangerous Goods Anchorage
Fat Tong Chau
Sewage Outfall
Scale in Nautical Miles
0
2
Scale in Kilometers
0
4

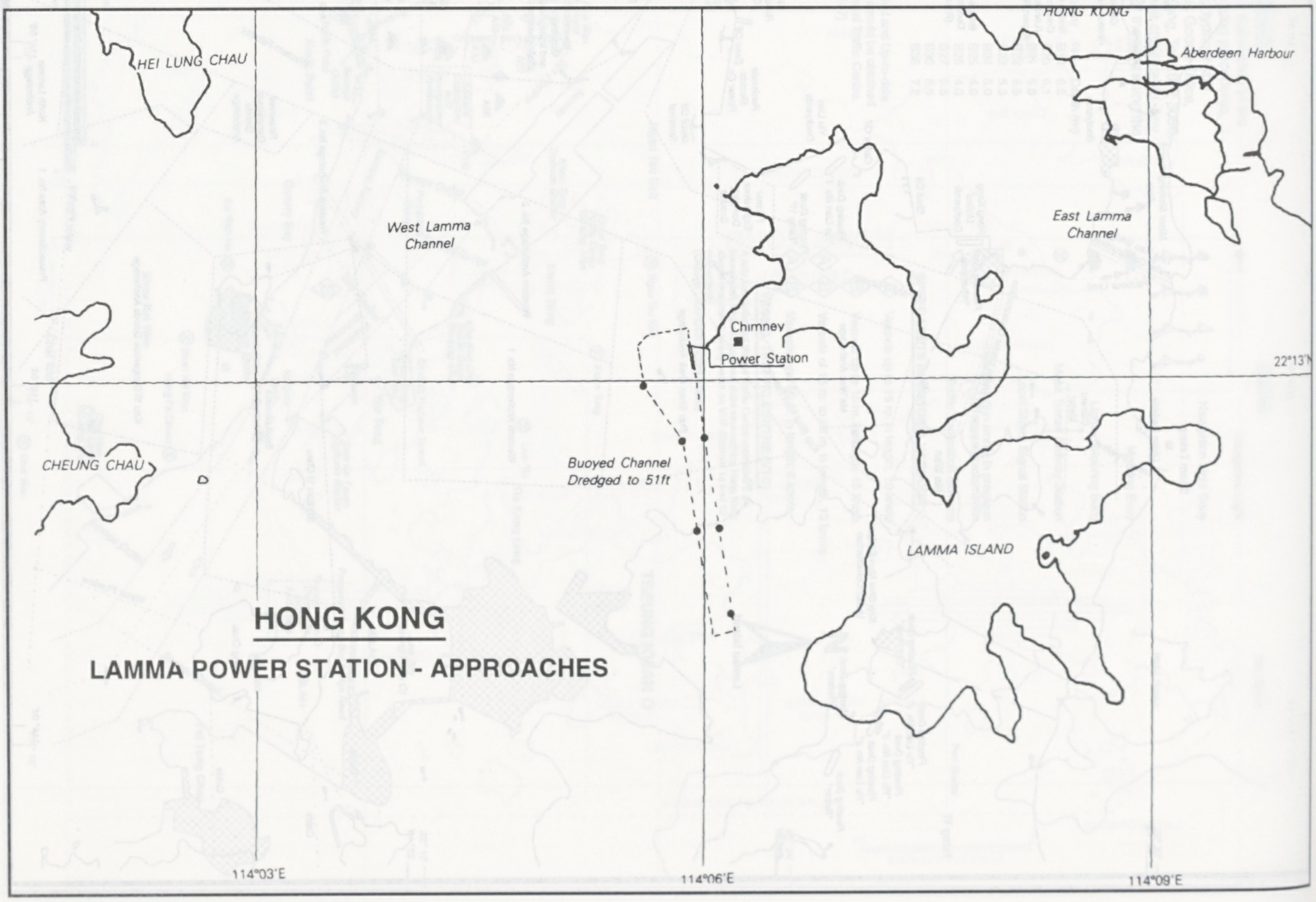

HONG KONG
114° 04'
114° 06'
114° 08'
114° 10'
114° 12'
22° 22'
22° 20'
22° 18'
TSUEN WAN
Tsuen Wan
Tsuen Wan Public Cargo Working Area
Tsuen Wan Dangerous Goods Anchorage
Minor Mooring Buoys Area
Water Pipeline
China Resources Co.
Nga Ying Chau Cable Area
Typhoon Shelter
Rambler Channel Public Cargo Working Area
Bridge under Construction (Lantau and Airport Railway)
Bridge under Construction (Route 3)
Sham Tseng
Union Carbide
Ting Kau Bridge Under Construction
Harbour Limit
Minor Mooring Buoys Area
Boatyards
Current Meter
Tsing Ma Bridge Under Construction
Floating Dock "Whampoa"
Hong Kong United Dockyards
Shell Oil
Caltex Oil
Tsing Yi
Ma Wan
Cable
Floating Dock "Yiu Lian No. 4"
Floating Dock "Sam Kok"
Floating Dock "Yiu Lian No. 3"
Floating Dock "Yiu Lian No. 2"
Floating Dock "Taikoo"
Floating Dock "Proteus"
Kap Shui Mun Bridge Under Construction
Ma Wan Anchorage
Ma Wan Fairway
Kap Shui Mun Fairway
Floating Dock "Yiu Lian No. 1"
Floating Dock "Tsing Yi"
Yiu Lian Dockyards
Former Explosives Dumping Ground
Peninsula Electric Power Co.
Esso Oil
Mobil Oil Terminal
China Resources Co.
Lantau Island
Pun Shan Shek Anchorage
Lai King
Berth 5
Berth 1
Berth 2
Berth 3
Berth 4
Berth 6
Berth 7
Berth 8
Berth 9
Berth 10
Berth 11
Berth 12
Berth 13
Berth 14
Sewage Outfall
KWAI CHUNG
Kwai Chung Container Terminal
Cheung Sha Wan
Sham Shui Po
HMS Tamar
Cable
Stonecutters Island
Sewage Outfall
Telegraph Cables
Speed Limit Boundary
Tai Kok Tsui
KOWLOON
Mong Kok
Hong Kong International Airport (Kai Tak)
To Kwa Wan
To Kwa Wan Typhoon Shelter
PHW
Northern Fairway
A16
A14
A14
Western Dangerous Goods Anchorage
A13
A20
A19
A18
A12
Western Quarantine and Immigration Anchorage
Yau Ma Tei Anchorage
New Yau Ma Tei Typhoon Shelter
Yau Ma Tei Fairway
Yau Ma Tei
A27
B7
Western Anchorage No. 1
Western Anchorage No. 2
B27
Harbour Limit
B17
A11
B26
B25
B14
A10
A26
B6
B5
A74
B24
B19
B13
A25
A34
A73
A72
B23
B18
A9
A42
A41
A78
B12
A8
KELLETT BANK
B22
B17
B11
A45
A77
B30
B16
A6
A49
B21
A46
B15
A43
B20
A76
A75
A70
North Green Island Fairway
Speed Limit Boundary
Southern Fairway
Tunnel Under Construction
Western Harbour Crossing
Jordan
China Ferry Terminal
Tunnel Under Construction (Airport Railway)
Ocean Terminal
Tsim Sha Tsui
Sewage Outfall
Harbour Tunnel
Kowloon Public Pier
Hung Hom
Sewage Outfall
Power Cable Reserve
Speed Limit Boundary
A40
A37
A36
A38
A39
Eastern Quarantine and Immigration Anchorage
Island Eastern Corridor
Sewage Outfall
North Point
A29
B38
A35
Cable
Cable
Siu Kau Yi Chau
Spoil Ground (Disused)
Kau Yi Chau
Western Anchorage No. 3
Reserved Dangerous Goods Anchorage
Western Fairway
Peng Chau
Cable
Green Island
Cable Wharf
Green Island Cement Co.
China Merchant Wharf
Harbour Limit
Sheung Wan Public Cargo Working Area
Western District Public Cargo Working Area
Sai Ying Pun
Macau Ferry Terminal
VTS
Marine Dept. Headquarters
Central
Central District
Queens Pier
Prince of Wales Barracks
Admiralty
Cable Reserve
Naval Anchorage
3
4
2
Mass Transit Railway Tunnel
A51
Gas Pipeline
A50
Wan Chai
Sewage Outfall
Wan Chai Public Cargo Working Area
Causeway Bay Typhoon Shelter
Causeway Bay
Causeway Bay
Tin Hau
North Point
HONG KONG ISLAND
Kau Yi Dangerous Goods Anchorage
Water Pipeline
Water Pipeline
Precautionary Area No. 1
North Lamma Anchorage
A
B



HONG KONG

CALTEX OIL H.K. Ltd
TSING YI TERMINAL

N
Mooring Buoys
(To remain)
60,000 d.w.t.
Berth 1A
Berth 1B
Berth 2A
Berth 2B
Jetty
Berth 3
Berth 4
Berth 5
1,000 d.w.t.
Oil
Barge
5,000 d.w.t.
Berth 6A
Berth 6B
Mooring Buoys
(To remain - exact locations
to be agreed)
YIU LIAN Floating
Dock No.1
L.P.G.
L.P.G.
MOGAS
MOGAS
GAS OIL
JET
BOILER
GASOIL
JET
I.F.O.
F.O.
JET



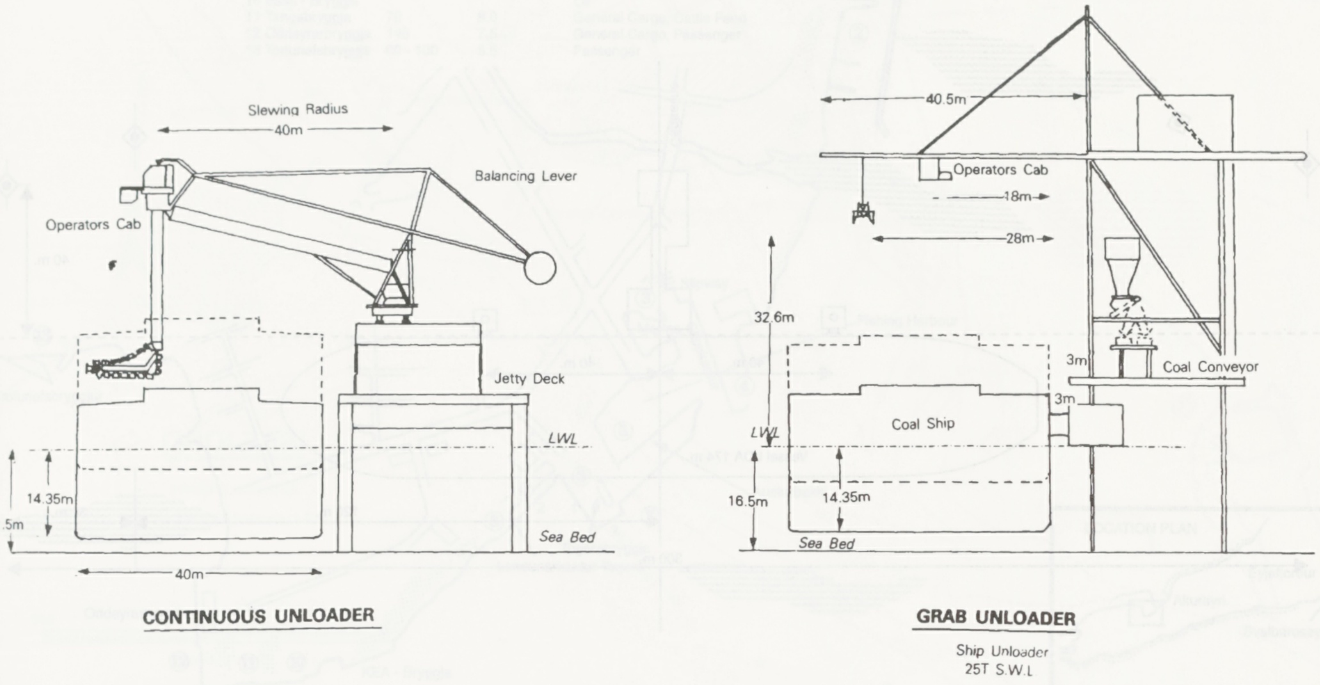
HONG KONG

LAMMA POWER STATION - APPROACHES

HONG KONG
Aberdeen Harbour
HEI LUNG CHAU
West Lamma
Channel
East Lamma
Channel
Chimney
Power Station
22°13'N
CHEUNG CHAU
Buoyed Channel
Dredged to 51ft
LAMMA ISLAND
114°03'E
114°06'E
114°09'E

HONG KONG

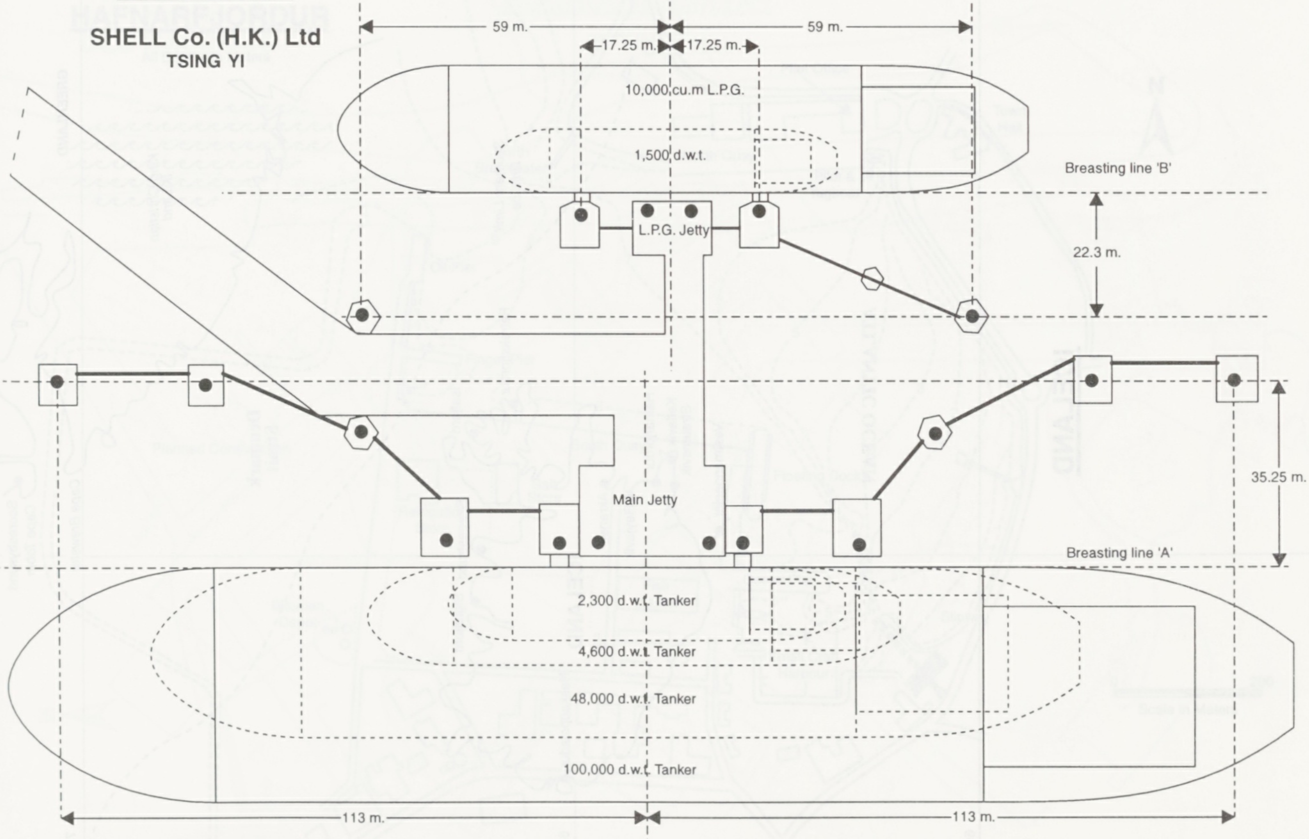
LAMMA POWER STATION - MAIN JETTY


Slewing Radius
40m
Balancing Lever
Operators Cab
Jetty Deck
LWL
14.35m
.5m
Sea Bed
40m
CONTINUOUS UNLOADER
40.5m
Operators Cab
18m
28m
32.6m
3m
Coal Conveyor
3m
Coal Ship
LWL
16.5m
14.35m
Sea Bed
GRAB UNLOADER
Ship Unloader
25T S.W.L

HONG KONG

SHELL Co. (H.K.) Ltd

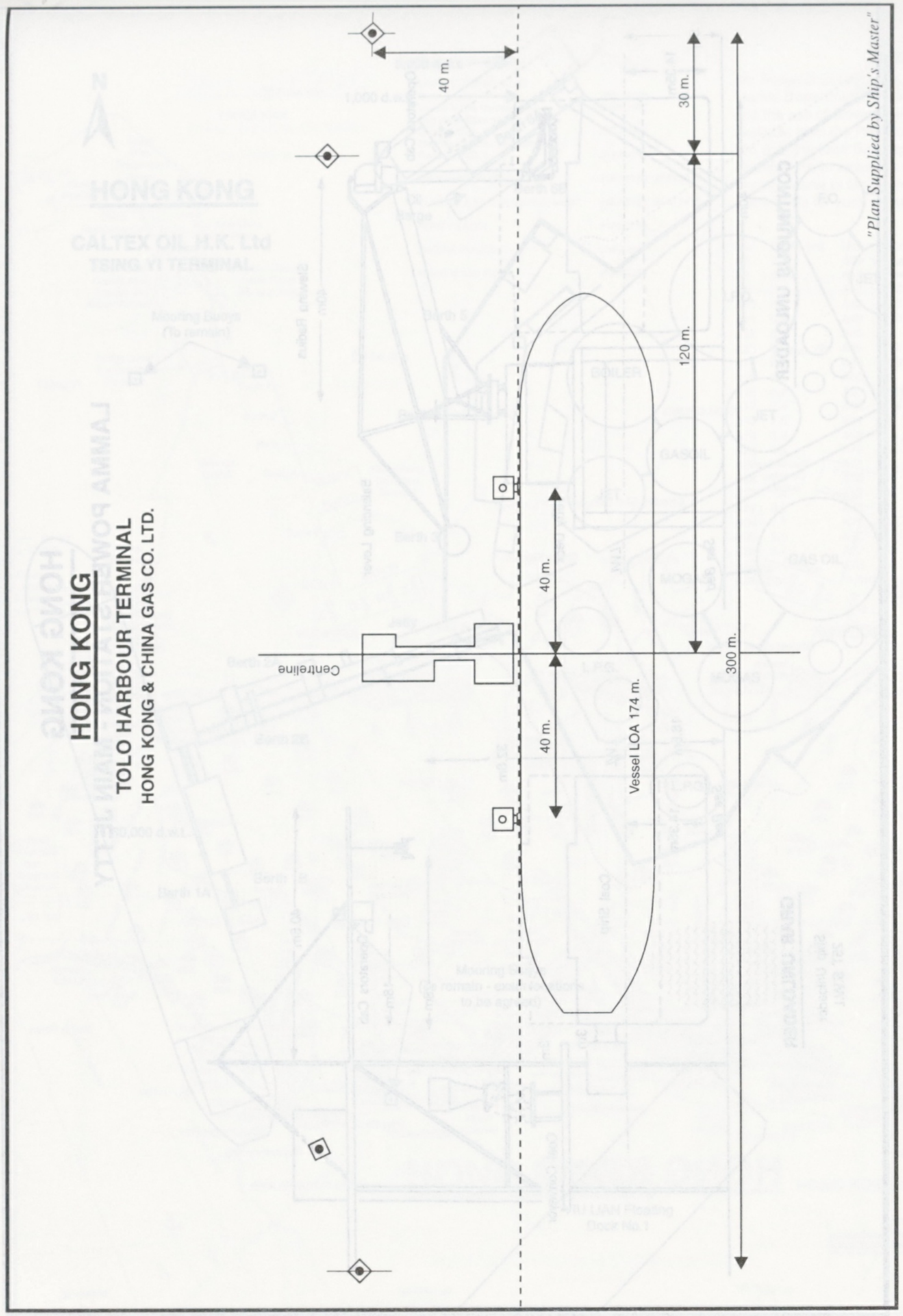
TSING YI


59 m.
17.25 m.
17.25 m.
59 m.
10,000 cu.m L.P.G.
1,500 d.w.t.
Breasting line 'B'
L.P.G. Jetty
22.3 m.
35.25 m.
Main Jetty
Breasting line 'A'
2,300 d.w.t. Tanker
4,600 d.w.t. Tanker
48,000 d.w.t. Tanker
100,000 d.w.t. Tanker
113 m.
113 m.

HONG KONG

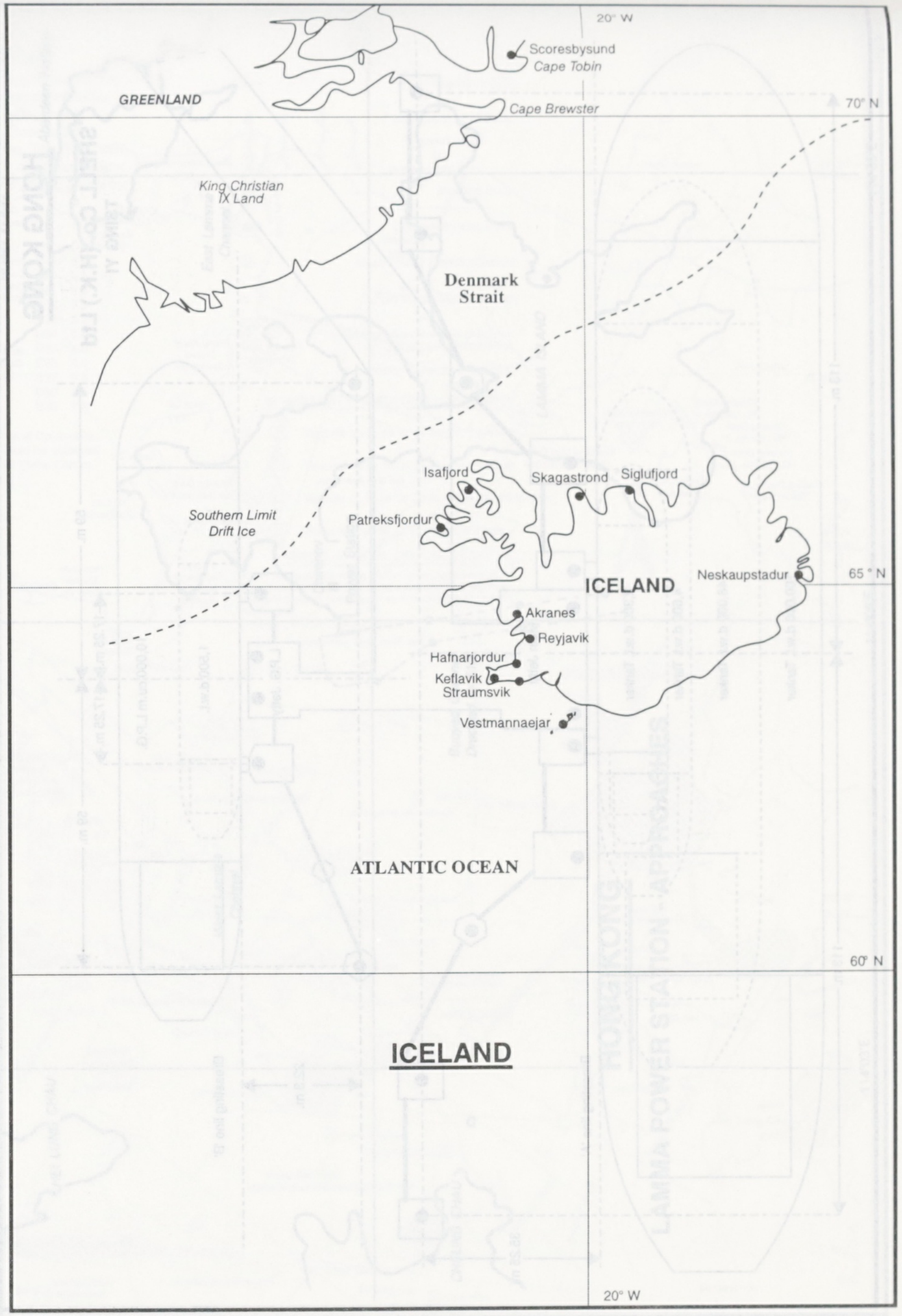
TOLO HARBOUR TERMINAL

HONG KONG & CHINA GAS CO. LTD.

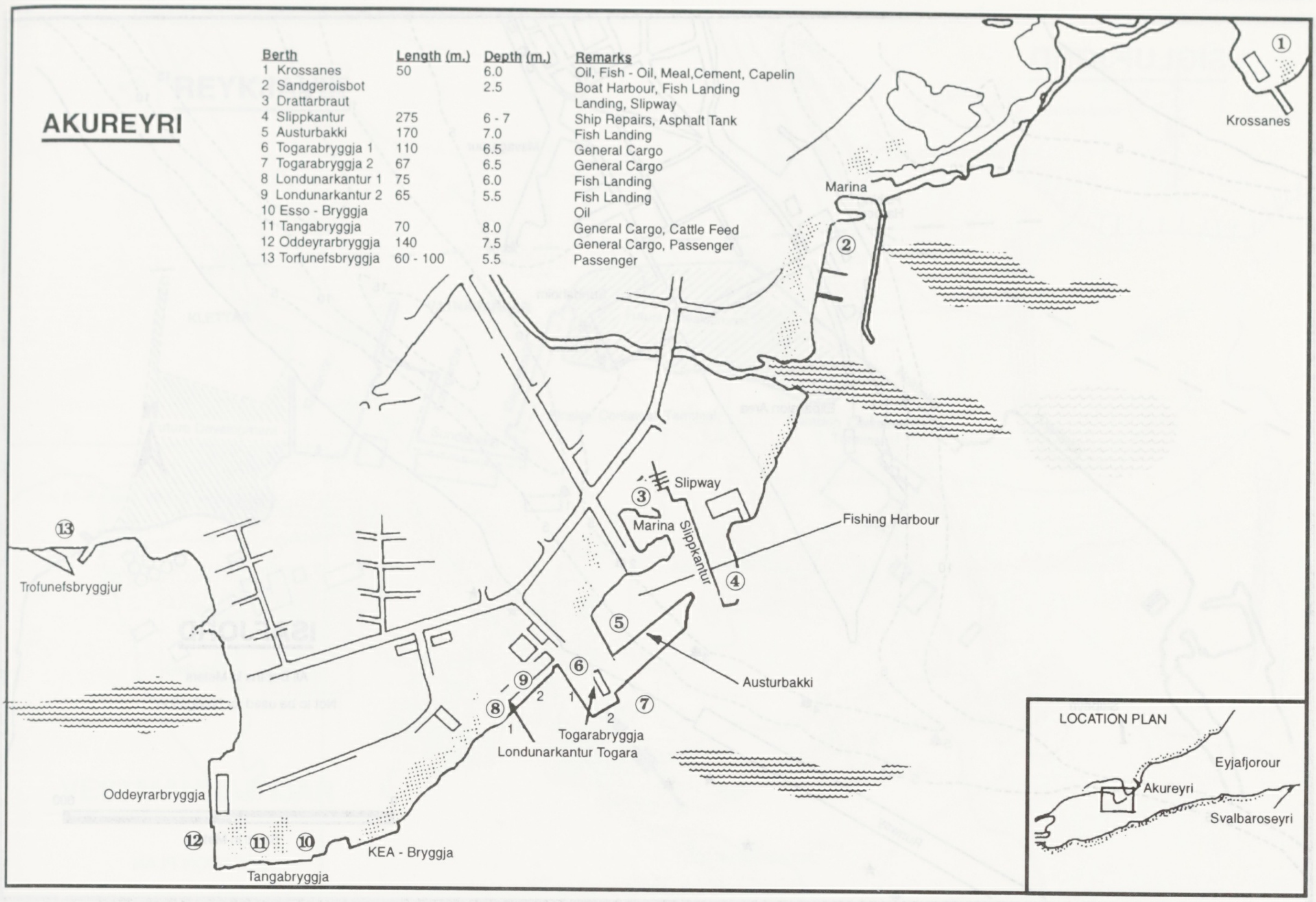

40 m.
30 m.
120 m.
300 m.
40 m.
40 m.
Vessel LOA 174 m.
Centreline

"Plan Supplied by Ship's Master"

ICELAND


20° W
Scoresbysund
Cape Tobin
GREENLAND
Cape Brewster
70° N
King Christian IX Land
Denmark Strait
Isafjord
Skagastrond
Siglufjord
Southern Limit Drift Ice
Patreksfjordur
ICELAND
Neskaupstadur
65 ° N
Akranes
Reyjavik
Hafnarjordur
Keflavik
Straumsvik
Vestmannaejar
ATLANTIC OCEAN
60° N
20° W

AKUREYRI

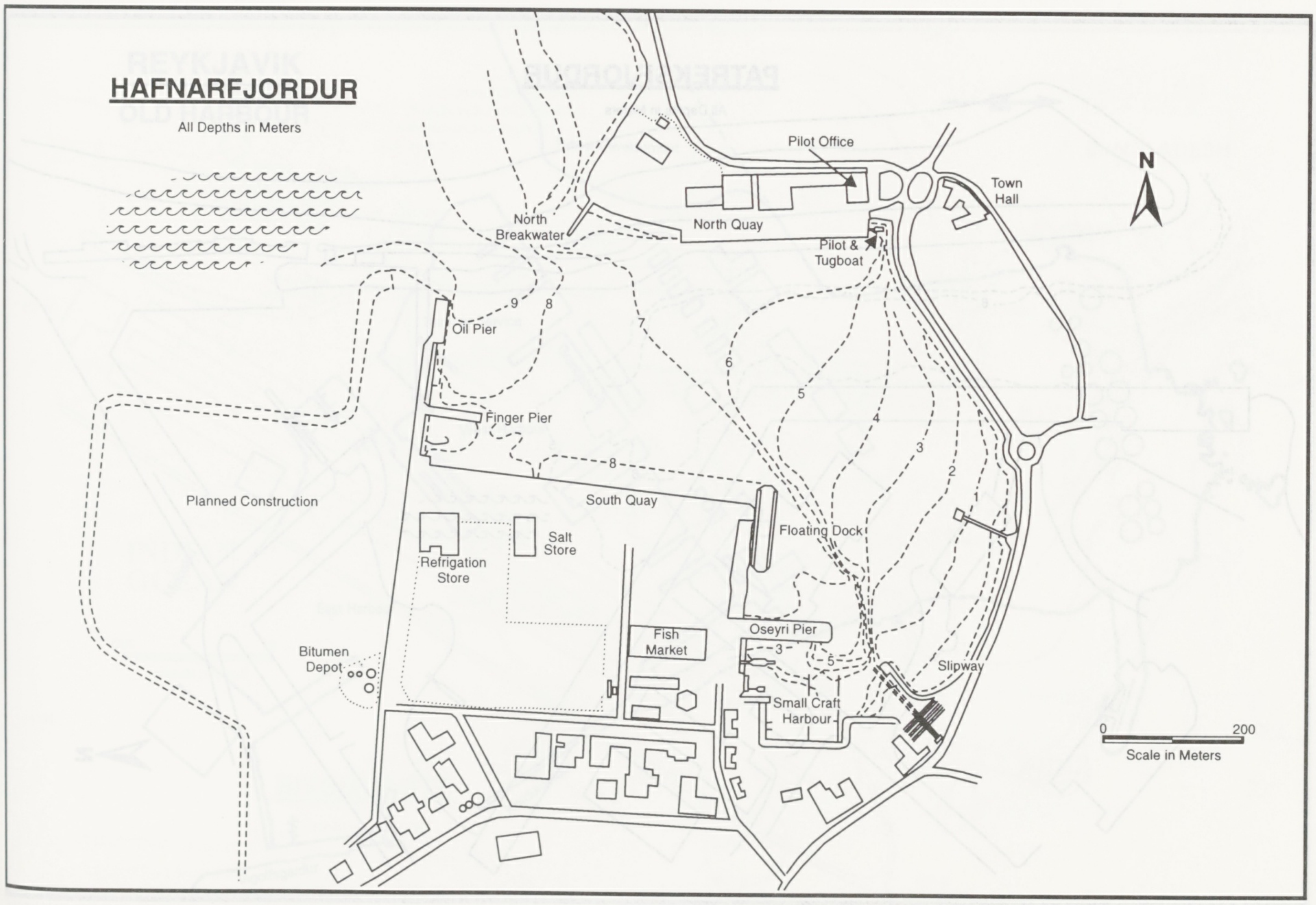


Berth	Length (m.)	Depth (m.)	Remarks
1 Krossanes	50	6.0	Oil, Fish - Oil, Meal,Cement, Capelin
2 Sandgeroisbot		2.5	Boat Harbour, Fish Landing
3 Drattarbraut			Landing, Slipway
4 Slippkantur	275	6 - 7	Ship Repairs, Asphalt Tank
5 Austurbakki	170	7.0	Fish Landing
6 Togarabryggja 1	110	6.5	General Cargo
7 Togarabryggja 2	67	6.5	General Cargo
8 Londunarkantur 1	75	6.0	Fish Landing
9 Londunarkantur 2	65	5.5	Fish Landing
10 Esso - Bryggja			Oil
11 Tangabryggja	70	8.0	General Cargo, Cattle Feed
12 Oddeyrarbryggja	140	7.5	General Cargo, Passenger
13 Torfunefsbryggja	60 - 100	5.5	Passenger

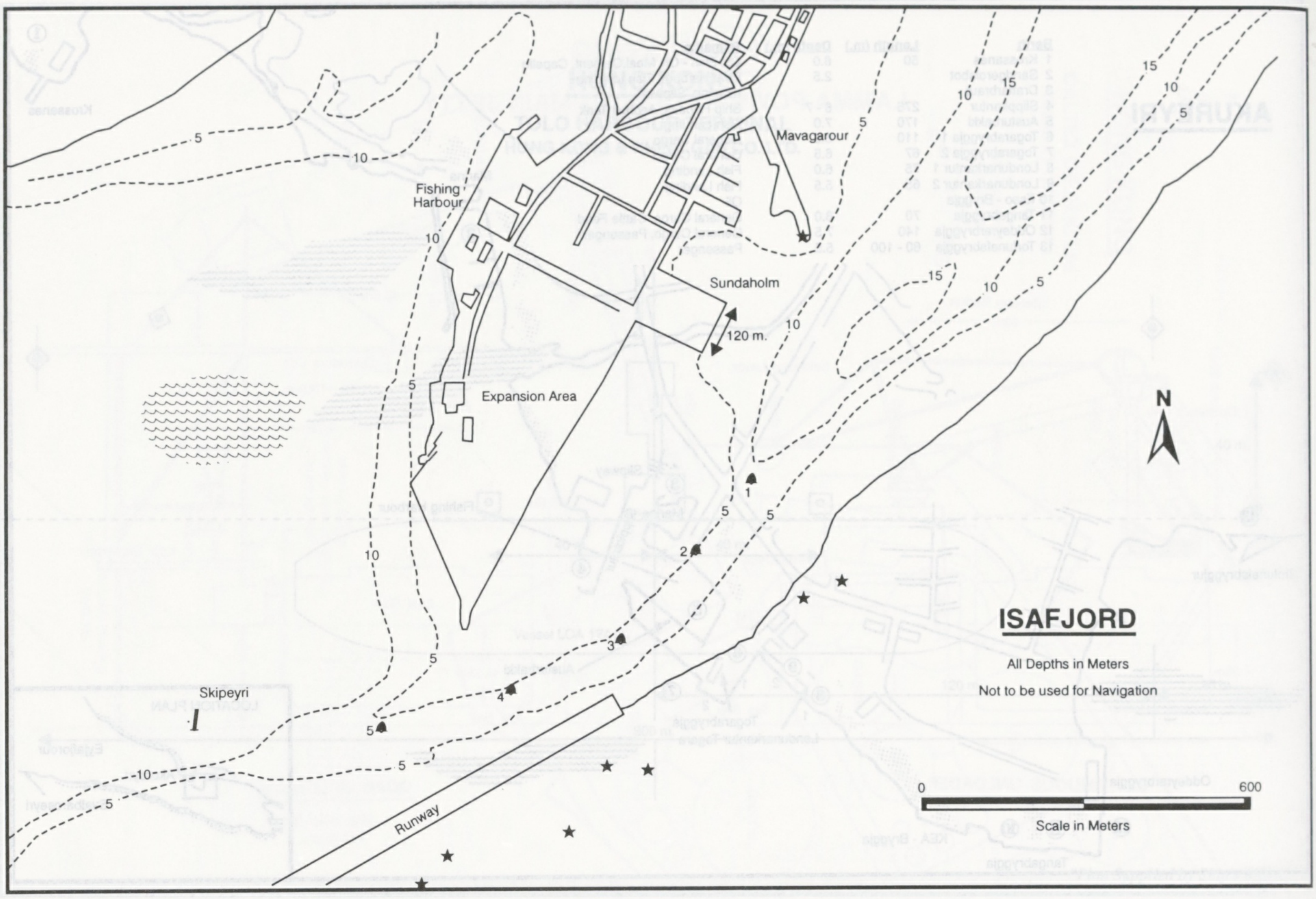
①
Krossanes
Marina
②
Slipway
③
Marina
Slippkantur
Fishing Harbour
④
⑤
Austurbakki
⑥
⑦
⑧
⑨
2
1
1
2
Togarabryggja
Londunarkantur Togara
⑬
Trofunefsbryggjur
Oddeyrarbryggja
⑫
⑪
⑩
KEA - Bryggja
Tangabryggja
LOCATION PLAN
Eyjafjorour
Akureyri
Svalbaroseyri

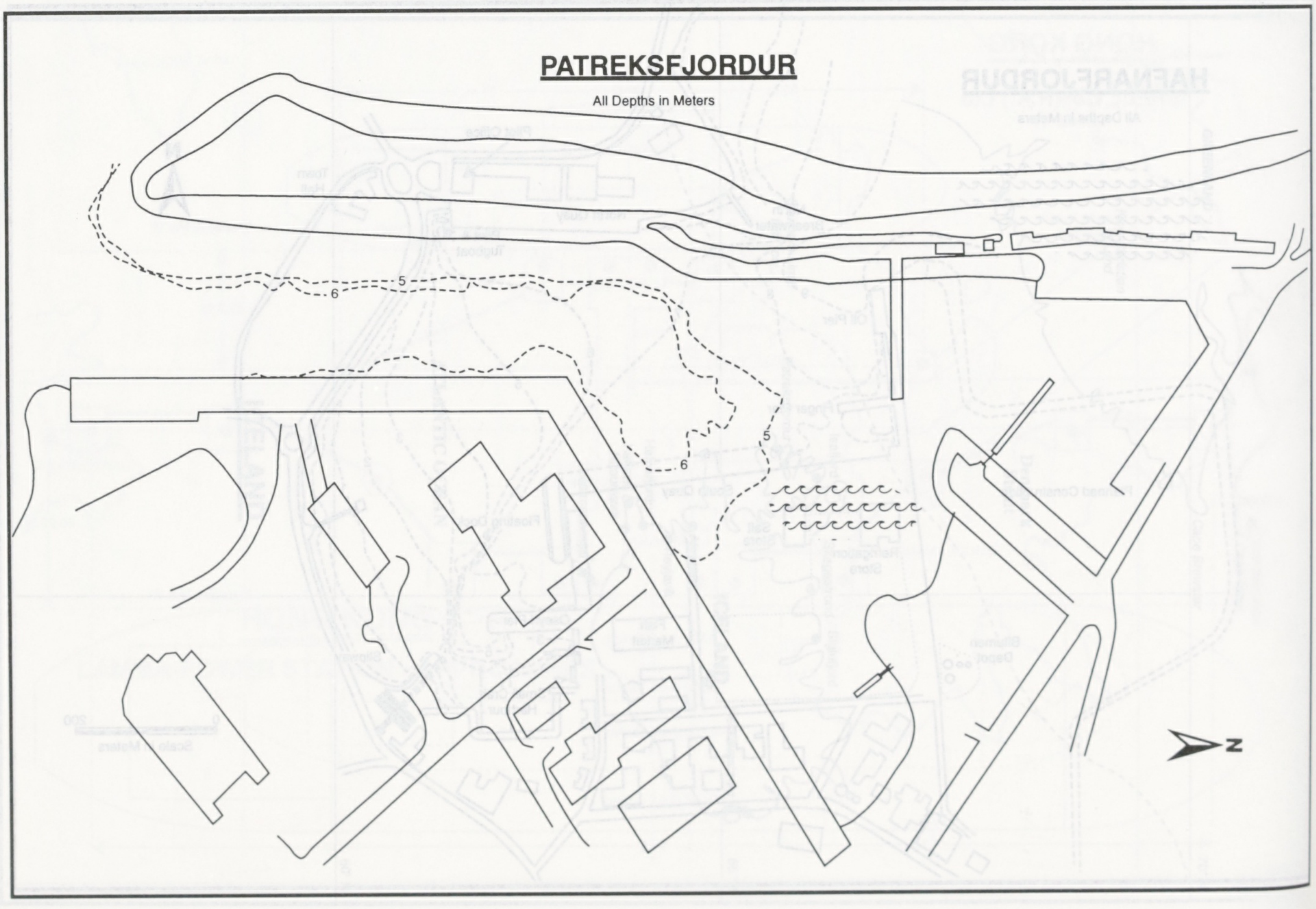
HAFNARFJORDUR

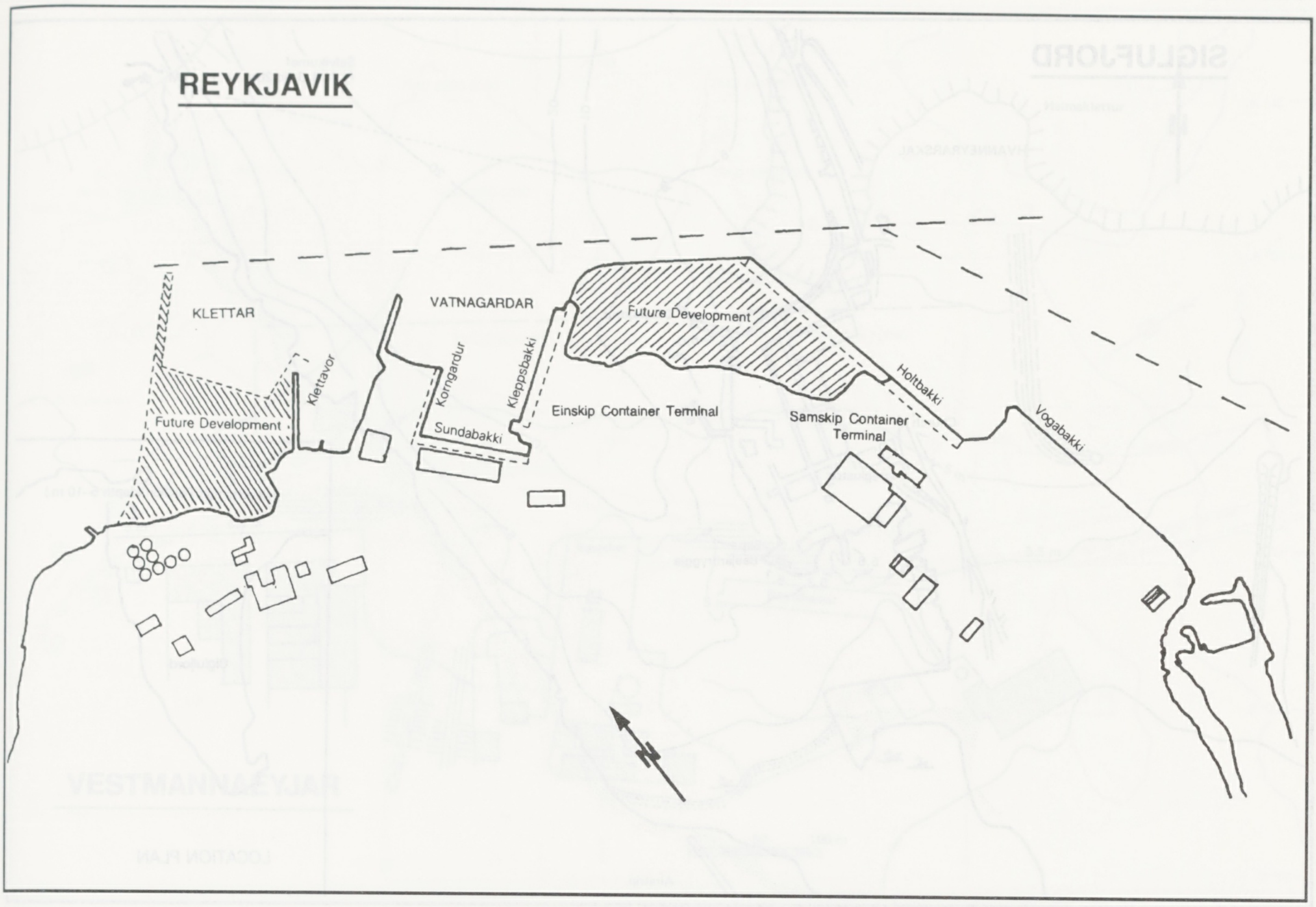
All Depths in Meters

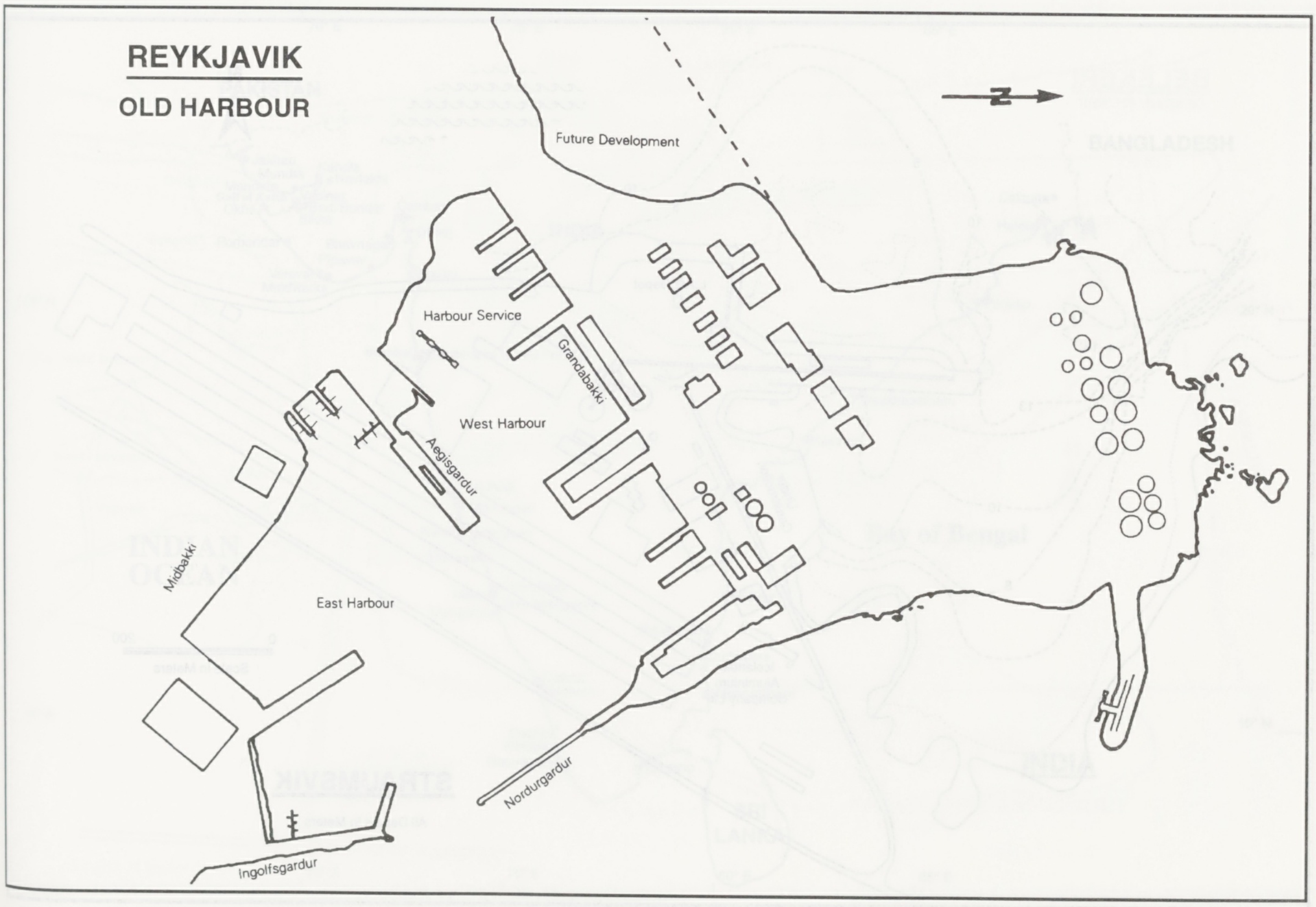


Pilot Office
N
Town Hall
North Breakwater
North Quay
Pilot & Tugboat
9
8
7
6
5
4
3
2
Oil Pier
Finger Pier
8
Planned Construction
South Quay
Floating Dock
Salt Store
Refrigation Store
Fish Market
Oseyri Pier
3
5
Slipway
Bitumen Depot
Small Craft Harbour
0
200
Scale in Meters

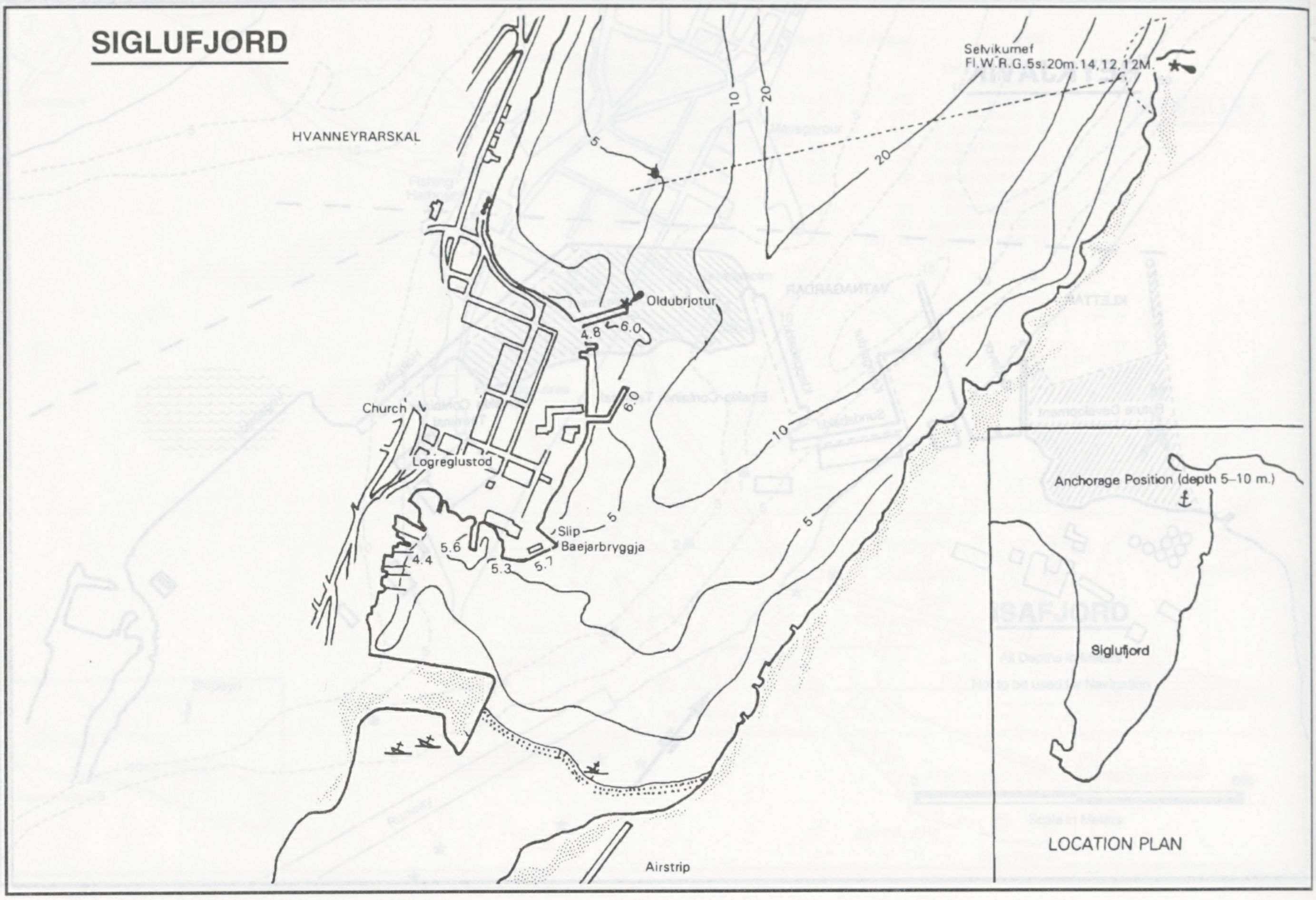

Mavagarour
Fishing Harbour
Sundaholm
120 m.
Expansion Area
Skipeyri
Runway
1
2
3
4
5
15
10
5
N
ISAFJORD
All Depths in Meters
Not to be used for Navigation
0
600
Scale in Meters

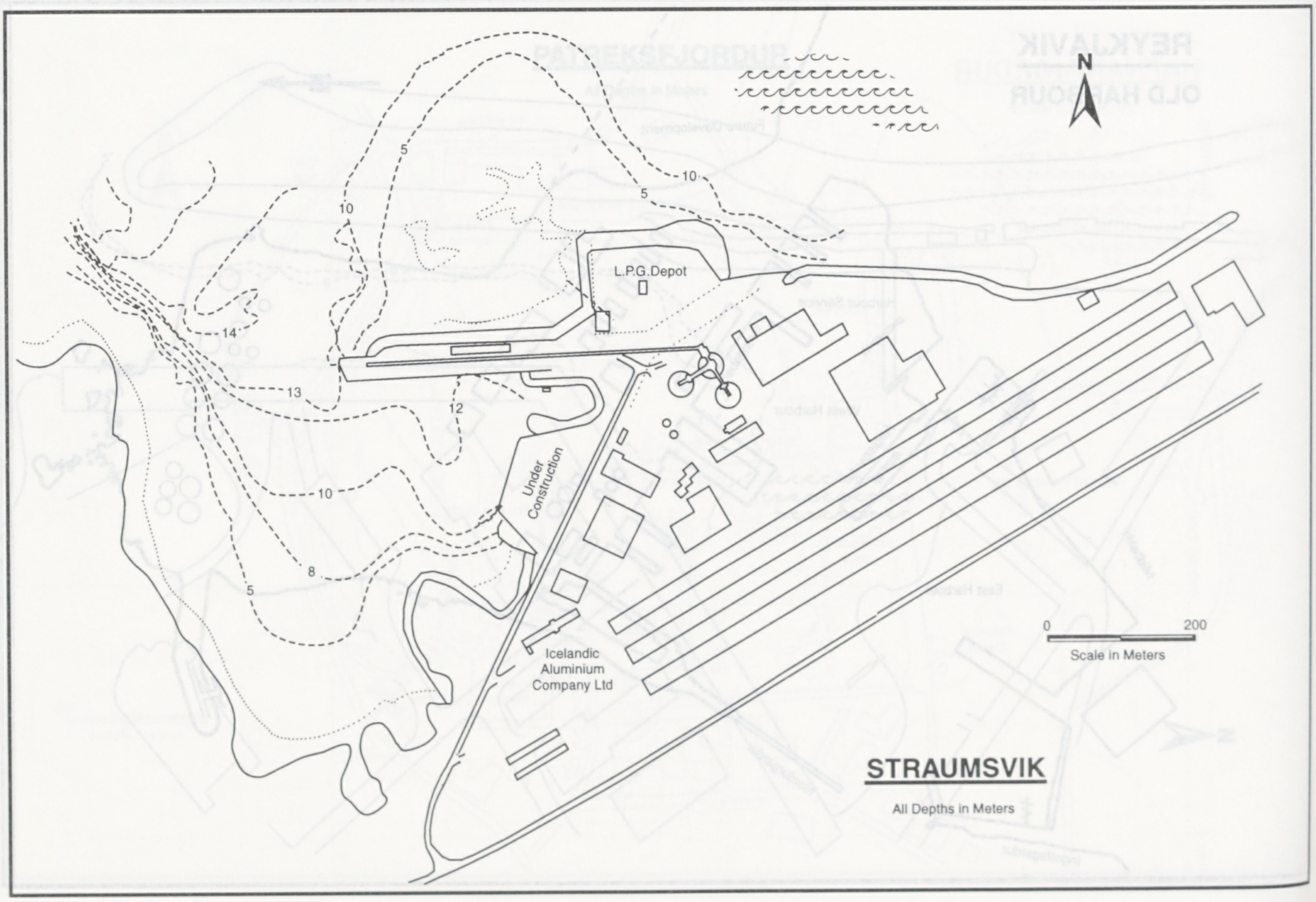

PATREKSFJORDUR
All Depths in Meters
6
5
N


REYKJAVIK
KLETTAR
VATNAGARDAR
Future Development
Klettavor
Korngardur
Kleppsbakki
Sundabakki
Einskip Container Terminal
Future Development
Samskip Container Terminal
Holtbakki
Vogabakki
N


REYKJAVIK
OLD HARBOUR
N
Future Development
Harbour Service
Grandabakki
West Harbour
Aegisgardur
Midbakki
East Harbour
Nordurgardur
Ingolfsgardur

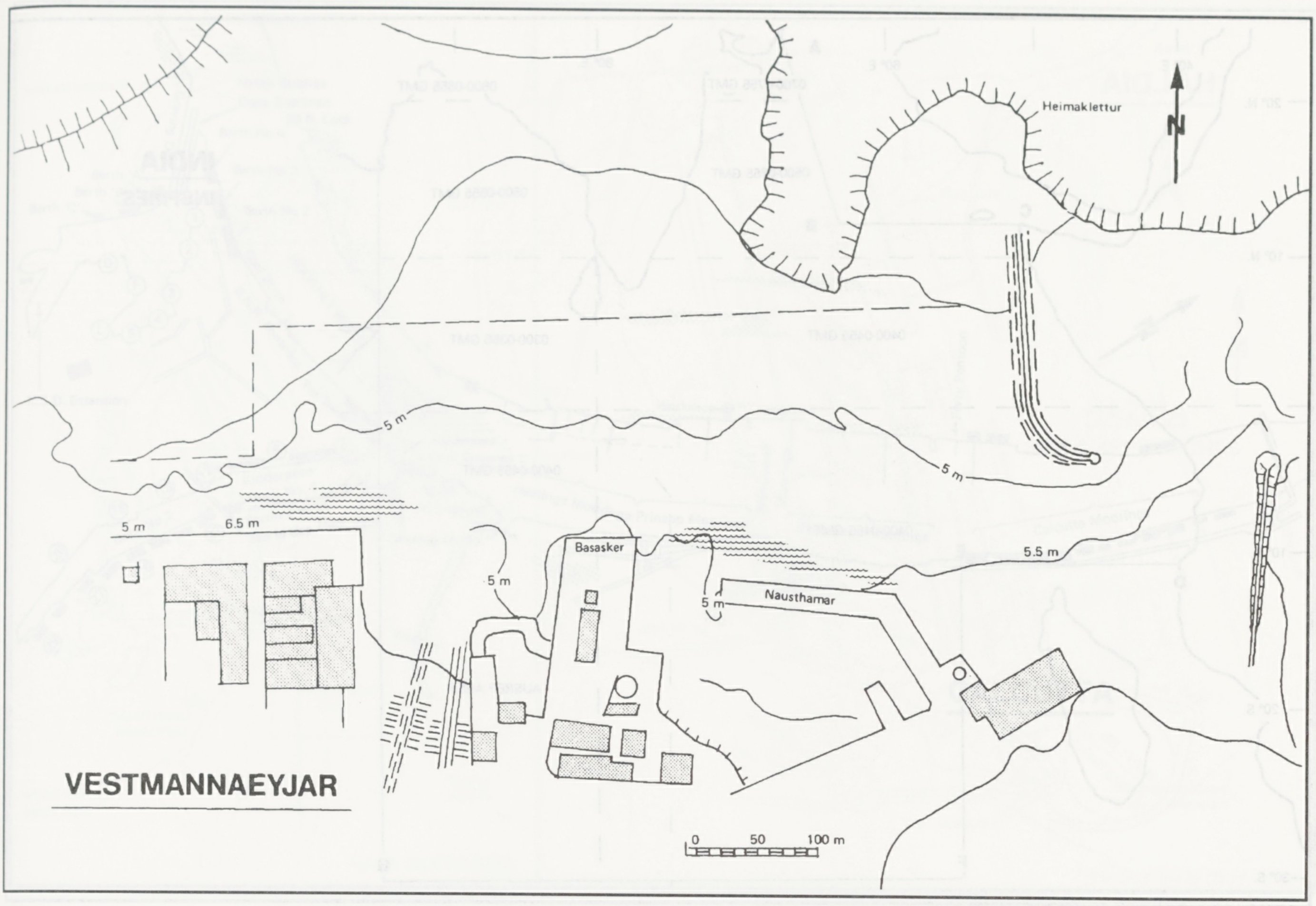
SIGLUFJORD

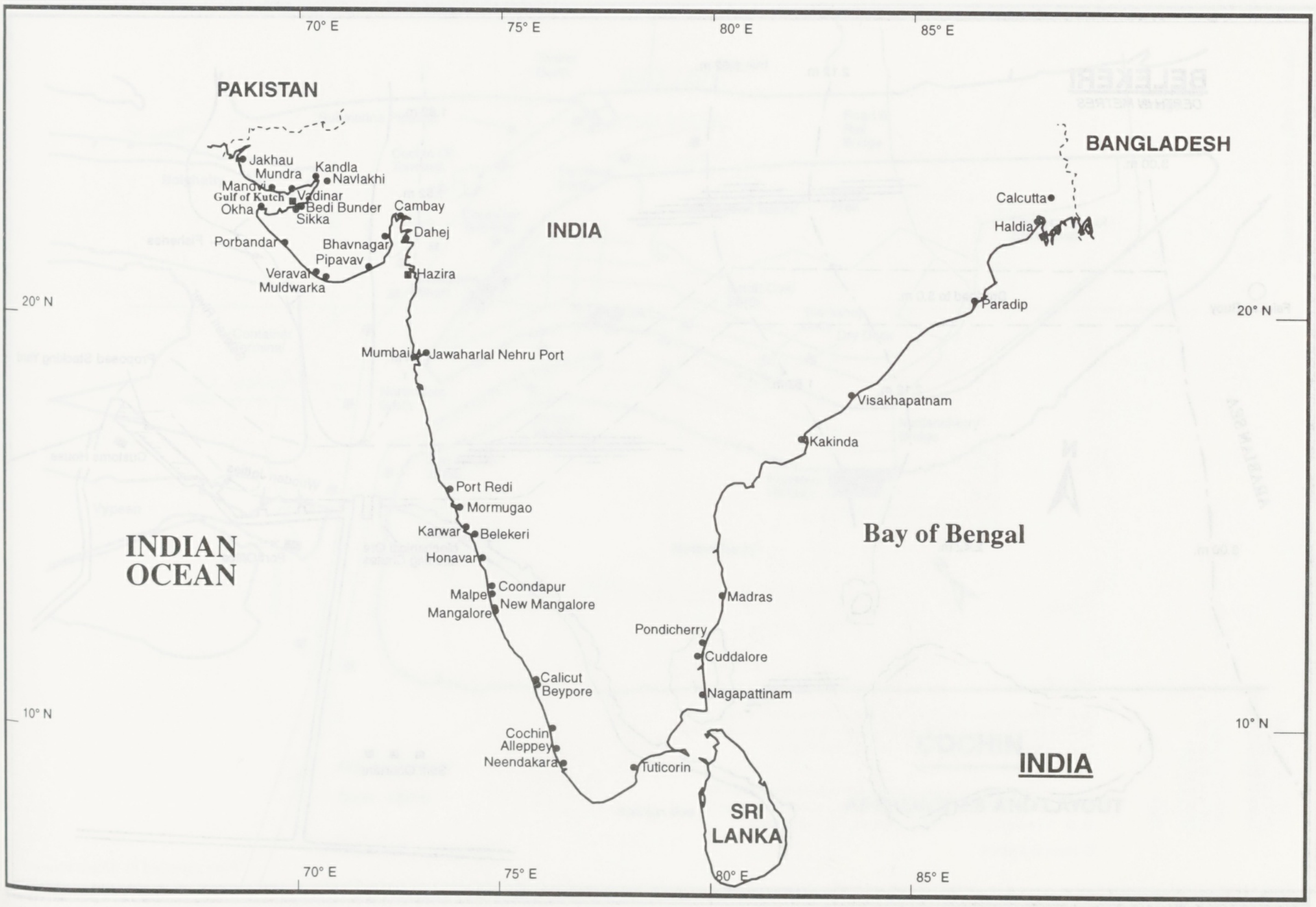

HVANNEYRARSKAL
Selvikurnef
Fl.W.R.G.5s.20m.14,12,12M.
10
20
20
5
Oldubrjotur
4.8
6.0
6.0
Church
Logreglustod
Slip
Baejarbryggja
5
5.6
4.4
5.3
5.7
10
5
Airstrip
Anchorage Position (depth 5–10 m.)
Siglufjord
LOCATION PLAN

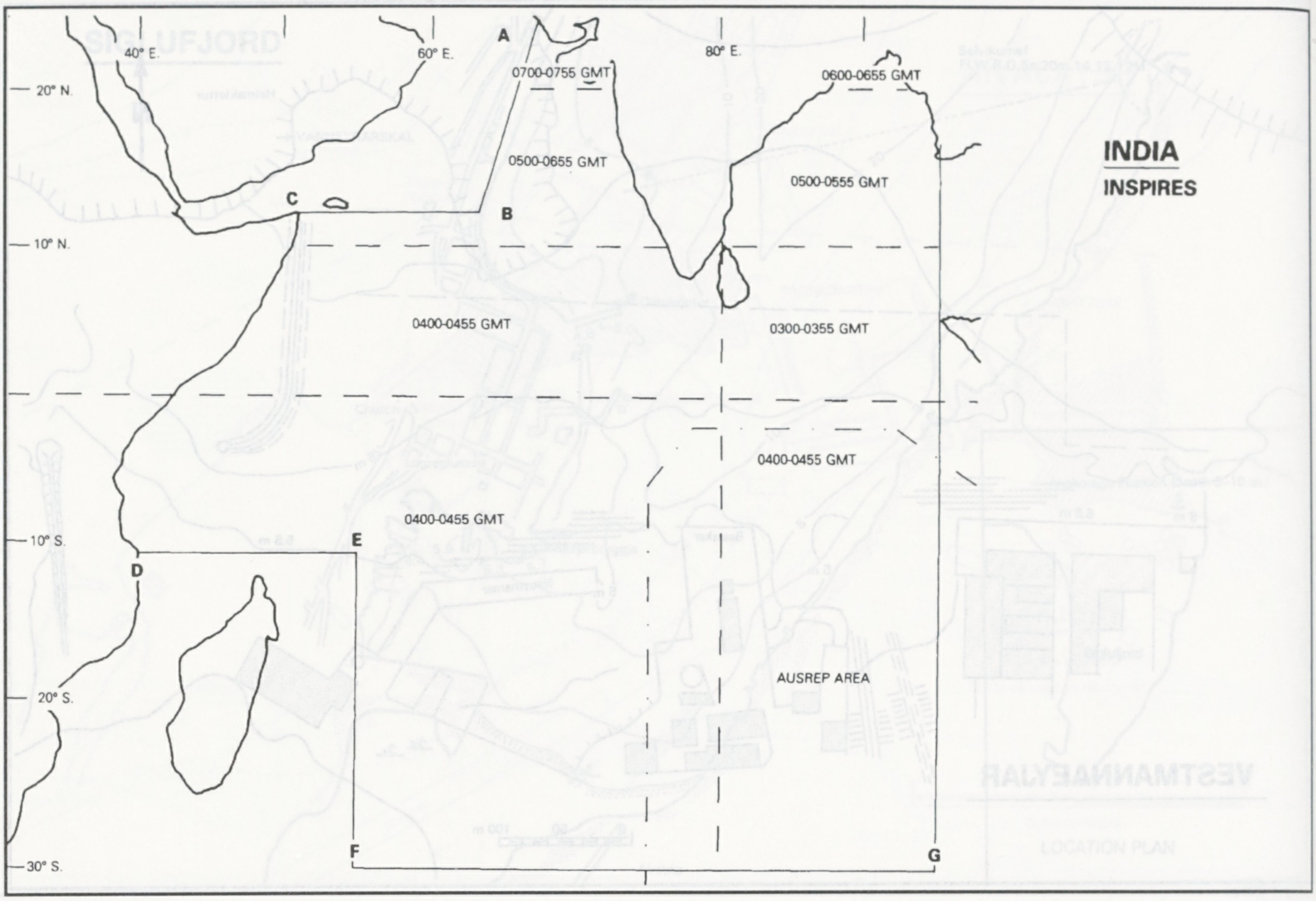

N
5
10
5
10
L.P.G.Depot
14
13
12
Under Construction
10
8
5
Icelandic Aluminium Company Ltd
0
200
Scale in Meters

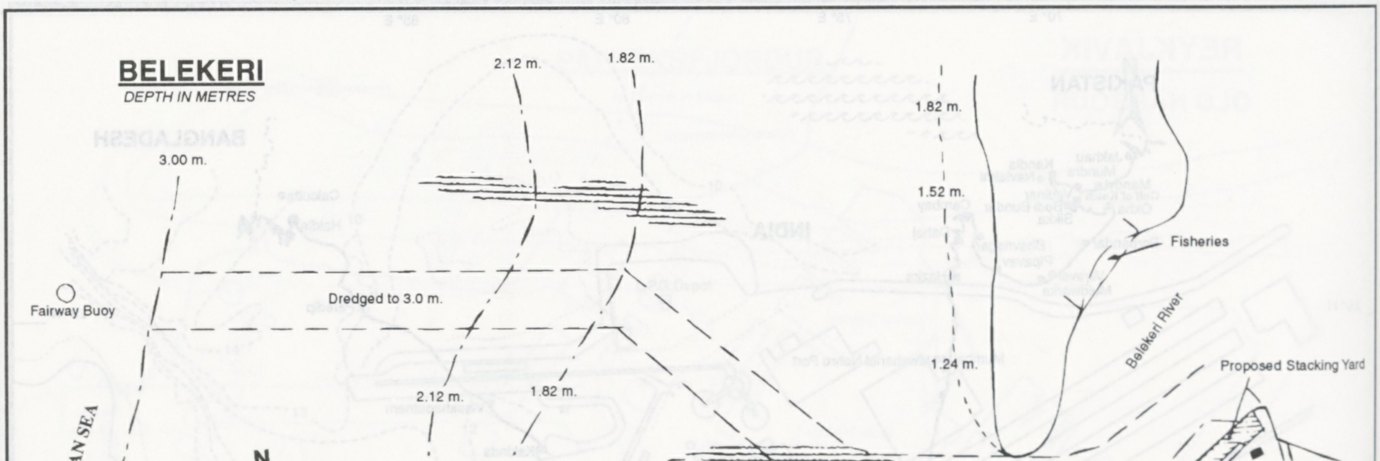
STRAUMSVIK

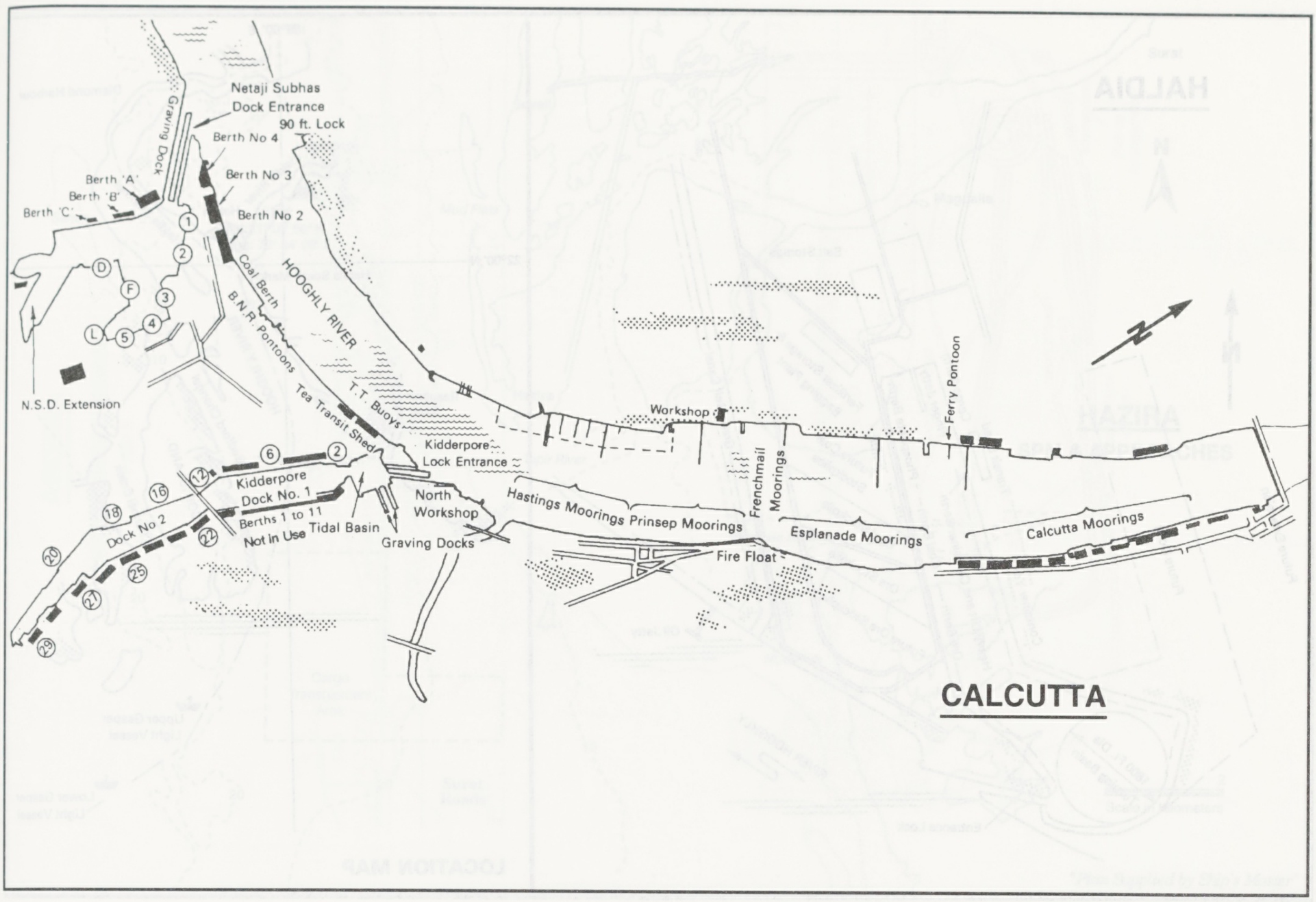
All Depths in Meters

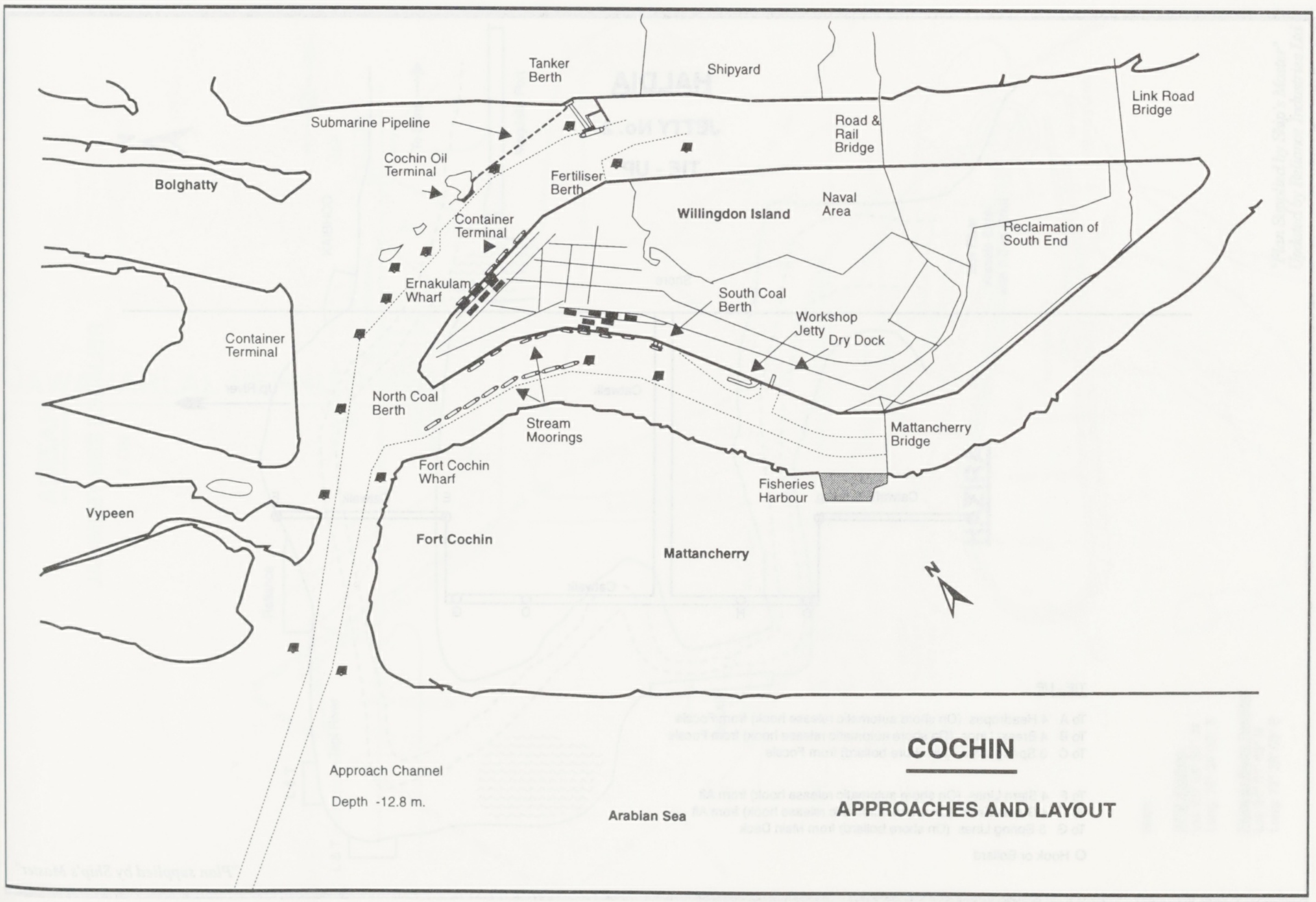

Heimaklettur
N
5 m
5 m
6.5 m
5 m
Basasker
5 m
Nausthamar
5 m
5.5 m
VESTMANNAEYJAR
0
50
100 m


70° E
75° E
80° E
85° E
PAKISTAN
BANGLADESH
Jakhau
Kandla
Mundra
Navlakhi
Mandvi
Gulf of Kutch
Vadinar
Okha
Bedi Bunder
Sikka
Cambay
Porbandar
Dahej
Bhavnagar
Pipavav
Veraval
Muldwarka
Hazira
INDIA
Calcutta
Haldia
Paradip
20° N
20° N
Mumbai
Jawaharlal Nehru Port
Visakhapatnam
Kakinda
Port Redi
Mormugao
Karwar
Belekeri
Honavar
Bay of Bengal
INDIAN OCEAN
Coondapur
Malpe
New Mangalore
Mangalore
Madras
Pondicherry
Cuddalore
Calicut
Beypore
Nagapattinam
10° N
10° N
Cochin
Alleppey
Neendakara
Tuticorin
SRI LANKA
INDIA
70° E
75° E
80° E
85° E

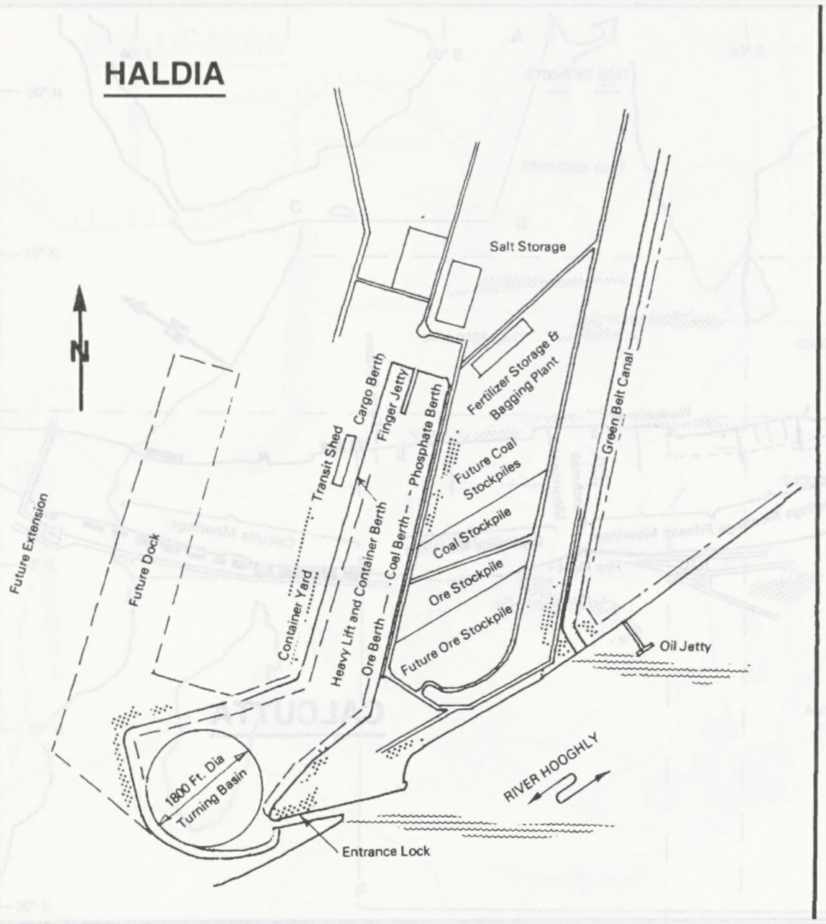

INDIA
INSPIRES
40° E.
60° E.
80° E.
A
0700-0755 GMT
0600-0655 GMT
20° N.
0500-0655 GMT
0500-0555 GMT
C
B
10° N.
0400-0455 GMT
0300-0355 GMT
0400-0455 GMT
0400-0455 GMT
10° S.
E
D
AUSREP AREA
20° S.
F
G
30° S.

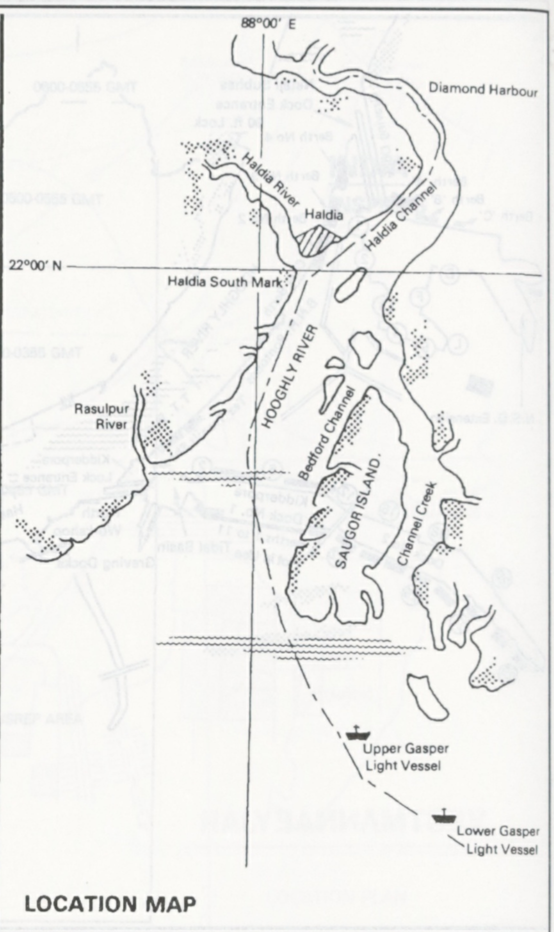

BELEKERI
DEPTH IN METRES
2.12 m.
1.82 m.
3.00 m.
1.82 m.
1.52 m.
Fisheries
Fairway Buoy
Dredged to 3.0 m.
Belekeri River
1.24 m.
Proposed Stacking Yard
2.12 m.
1.82 m.
ARABIAN SEA
N
Customs House
Wooden Jetties
3.00 m.
2.42 m.
Mechanical Ore Loading Chutes
Port Office
Staff Quarters


Netaji Subhas
Dock Entrance
90 ft. Lock
Berth No 4
Berth No 3
Berth No 2
Berth 'A'
Berth 'B'
Berth 'C'
Graving Dock
1
2
3
4
5
D
F
L
N.S.D. Extension
Coal Berth
B.N.R. Pontoons
HOOGHLY RIVER
T.T. Buoys
Tea Transit Shed
Kidderpore
Lock Entrance
6
2
12
16
18
20
22
25
27
29
Kidderpore
Dock No. 1
Berths 1 to 11
Not in Use
Tidal Basin
Dock No 2
North
Workshop
Graving Docks
Hastings Moorings
Prinsep Moorings
Workshop
Frenchmail
Moorings
Ferry Pontoon
Esplanade Moorings
Fire Float
Calcutta Moorings
N
CALCUTTA


Tanker
Berth
Shipyard
Submarine Pipeline
Link Road
Bridge
Road &
Rail
Bridge
Cochin Oil
Terminal
Bolghatty
Fertiliser
Berth
Naval
Area
Willingdon Island
Container
Terminal
Reclamation of
South End
Ernakulam
Wharf
South Coal
Berth
Workshop
Jetty
Dry Dock
Container
Terminal
North Coal
Berth
Stream
Moorings
Mattancherry
Bridge
Fort Cochin
Wharf
Fisheries
Harbour
Vypeen
Fort Cochin
Mattancherry
N
Approach Channel
Depth -12.8 m.
Arabian Sea
COCHIN
APPROACHES AND LAYOUT

HALDIA


N
Salt Storage
Cargo Berth
Finger Jetty
Phosphate Berth
Fertilizer Storage & Bagging Plant
Transit Shed
Future Coal Stockpiles
Green Belt Canal
Coel Berth
Heavy Lift and Container Berth
Coal Stockpile
Future Extension
Future Dock
Container Yard
Ore Berth
Ore Stockpile
Future Ore Stockpile
Oil Jetty
1800 Ft. Dia Turning Basin
RIVER HOOGHLY
Entrance Lock

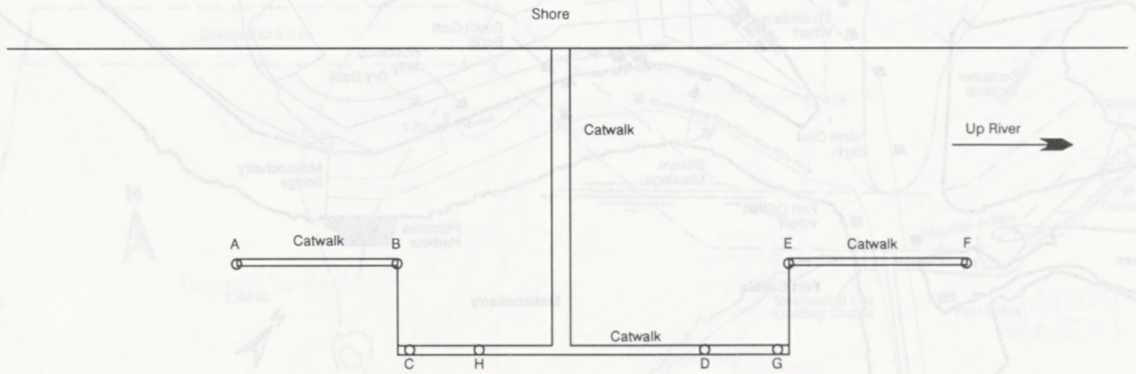

88°00' E
Diamond Harbour
Haldia River
Haldia
Haldia Channel
22°00' N
Haldia South Mark
Rasulpur River
HOOGHLY RIVER
Bedford Channel
SAUGOR ISLAND.
Channel Creek
Upper Gasper Light Vessel
Lower Gasper Light Vessel

LOCATION MAP

HALDIA

JETTY No. 2

TIE - UP


Shore
Catwalk
Up River
A
Catwalk
B
E
Catwalk
F
Catwalk
C
H
D
G

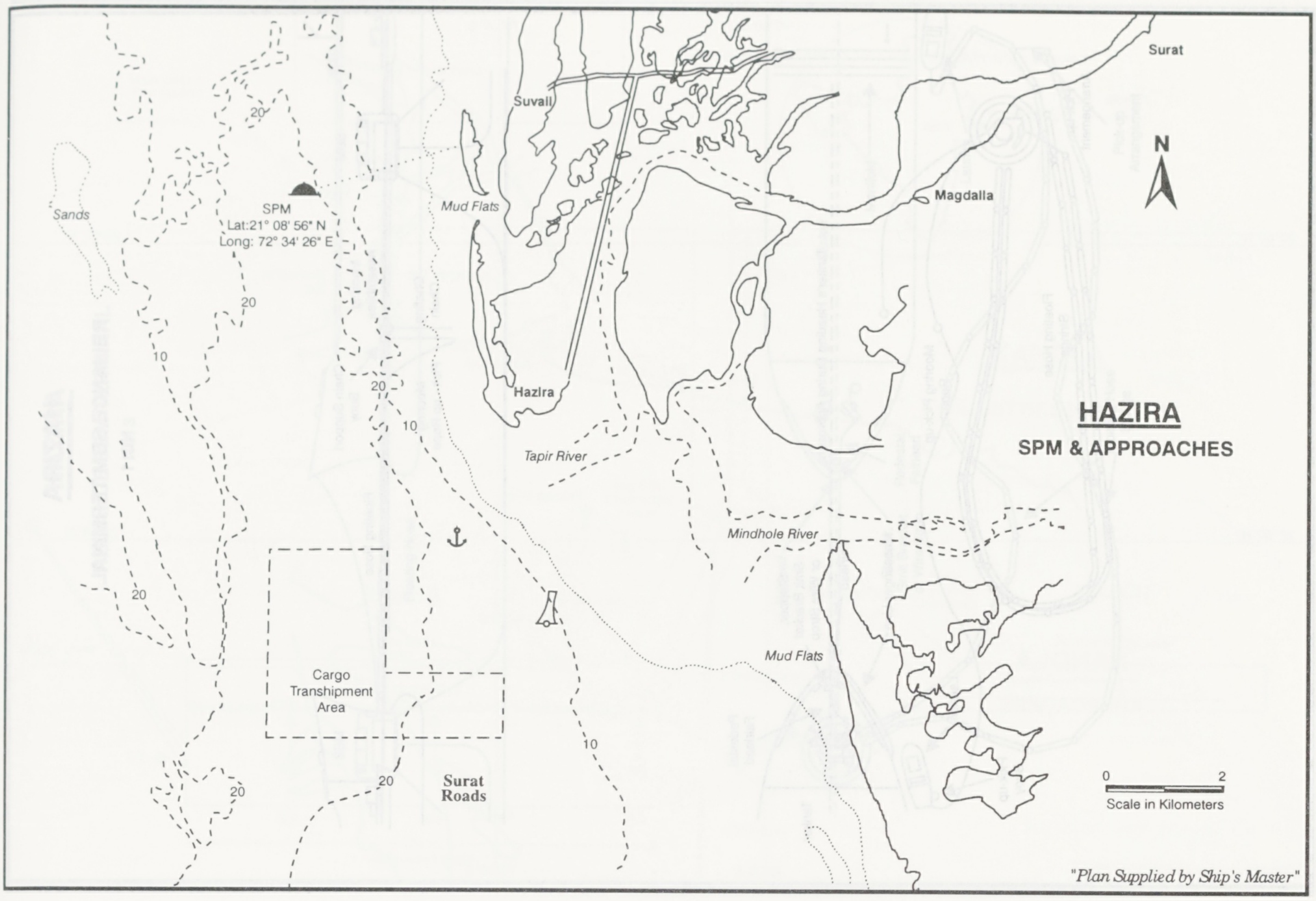
TIE - UP

To A 4 Headropes (On shore automatic release hook) from Focsle
To B 4 Breast Lines (On shore automatic release hook) from Focsle
To C 3 Spring Lines (On shore bollard) from Focsle

To F 4 Stern Lines (On shore automatic release hook) from Aft
To E 4 Breast Lines (On shore automatic release hook) from Aft
To G 3 Spring Lines (On shore bollard) from Main Deck

○ Hook or Bollard

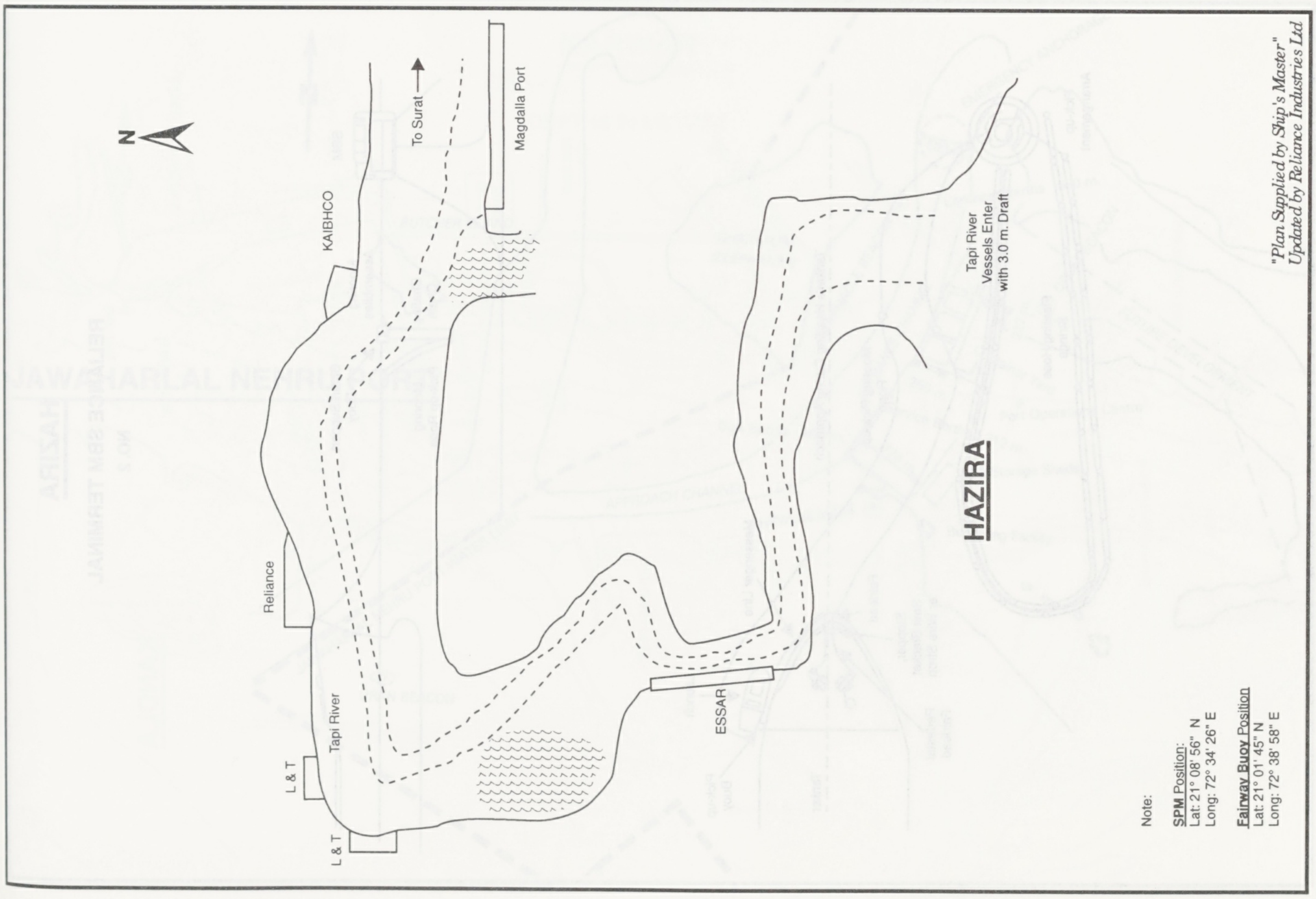
"Plan supplied by Ship's Master"


Suvali
Surat
N
Magdalla
20
Sands
SPM
Lat:21° 08' 56" N
Long: 72° 34' 26" E
Mud Flats
20
10
20
Hazira
10
Tapir River
Mindhole River
20
Cargo
Transhipment
Area
Mud Flats
10
20
20
Surat
Roads
0
2
Scale in Kilometers

HAZIRA

SPM & APPROACHES

"Plan Supplied by Ship's Master"


N
To Surat
Magdalla Port
KAIBHCO
Reliance
Tapi River
L & T
L & T
ESSAR
Tapi River
Vessels Enter
with 3.0 m. Draft

HAZIRA

"Plan Supplied by Ship's Master"
Updated by Reliance Industries Ltd

Note:

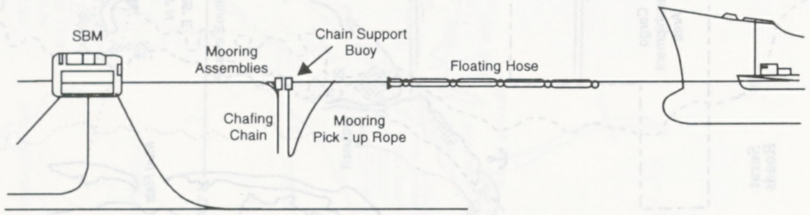
SPM Position:
Lat: 21° 08' 56" N
Long: 72° 34' 26" E

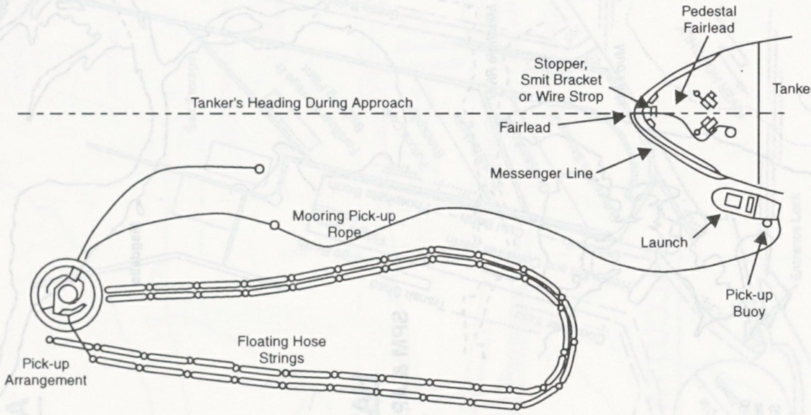
Fairway Buoy Position
Lat: 21° 01' 45" N
Long: 72° 38' 58" E

HAZIRA

RELIANCE SBM TERMINAL

NO. 1

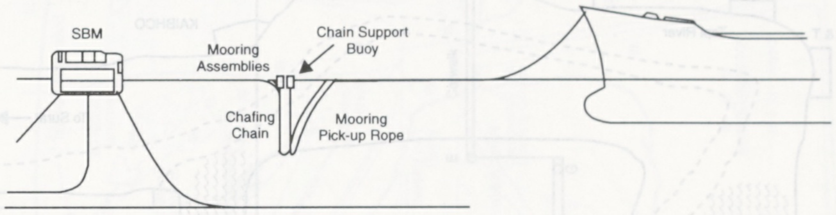

SBM
Mooring Assemblies
Chain Support Buoy
Floating Hose
Chafing Chain
Mooring Pick - up Rope

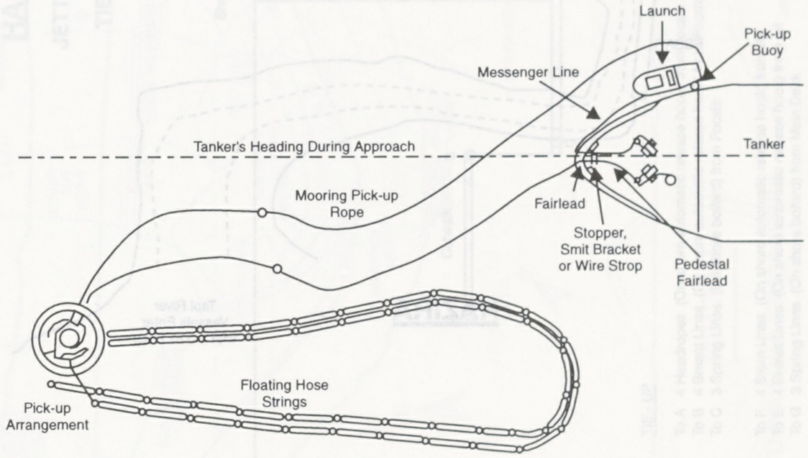

Pedestal Fairlead
Stopper, Smit Bracket or Wire Strop
Tanker
Tanker's Heading During Approach
Fairlead
Messenger Line
Mooring Pick-up Rope
Launch
Pick-up Buoy
Floating Hose Strings
Pick-up Arrangement

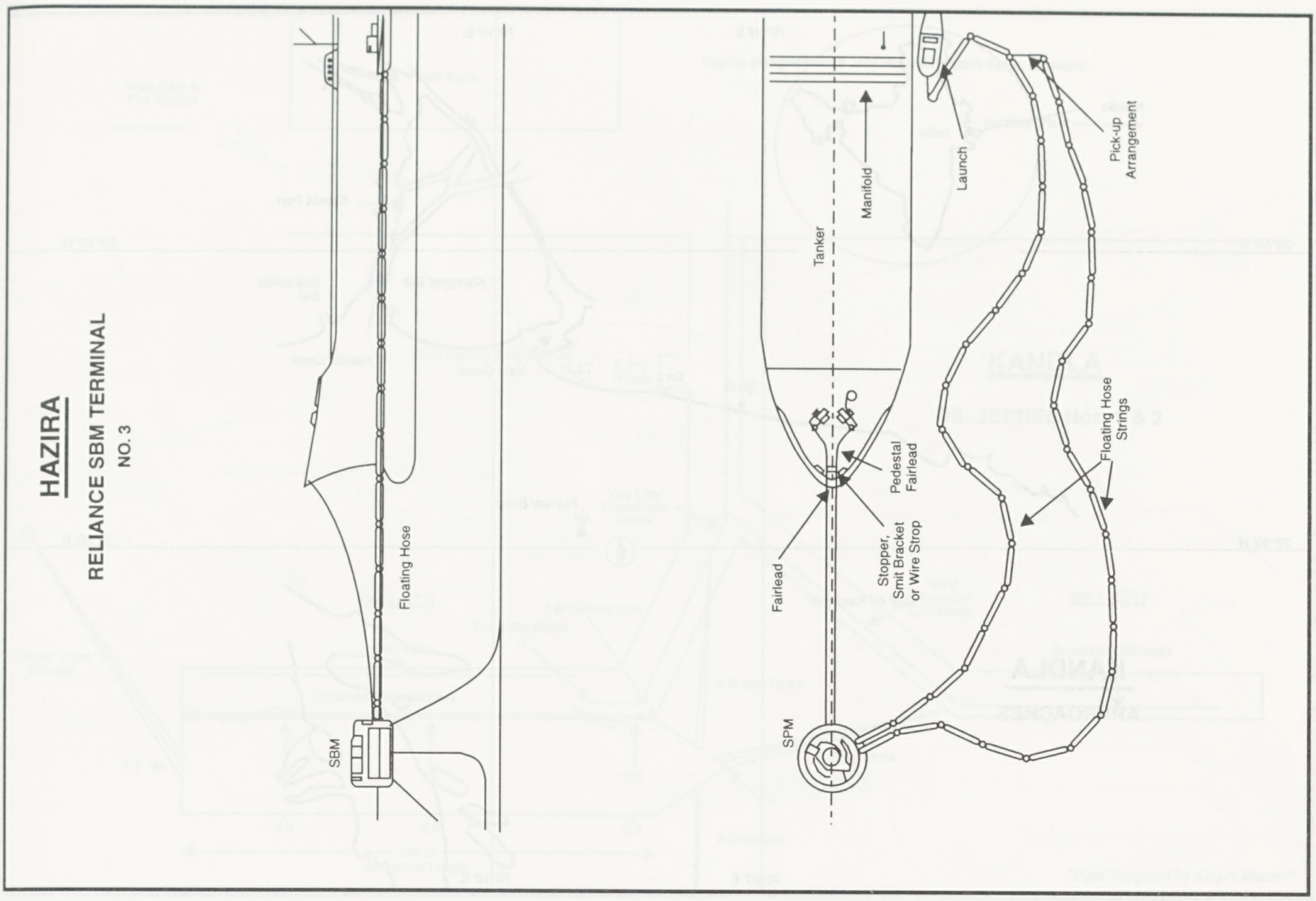
HAZIRA

RELIANCE SBM TERMINAL

NO. 2


SBM
Mooring Assemblies
Chain Support Buoy
Chafing Chain
Mooring Pick-up Rope


Launch
Pick-up Buoy
Messenger Line
Tanker's Heading During Approach
Tanker
Mooring Pick-up Rope
Fairlead
Stopper, Smit Bracket or Wire Strop
Pedestal Fairlead
Floating Hose Strings
Pick-up Arrangement

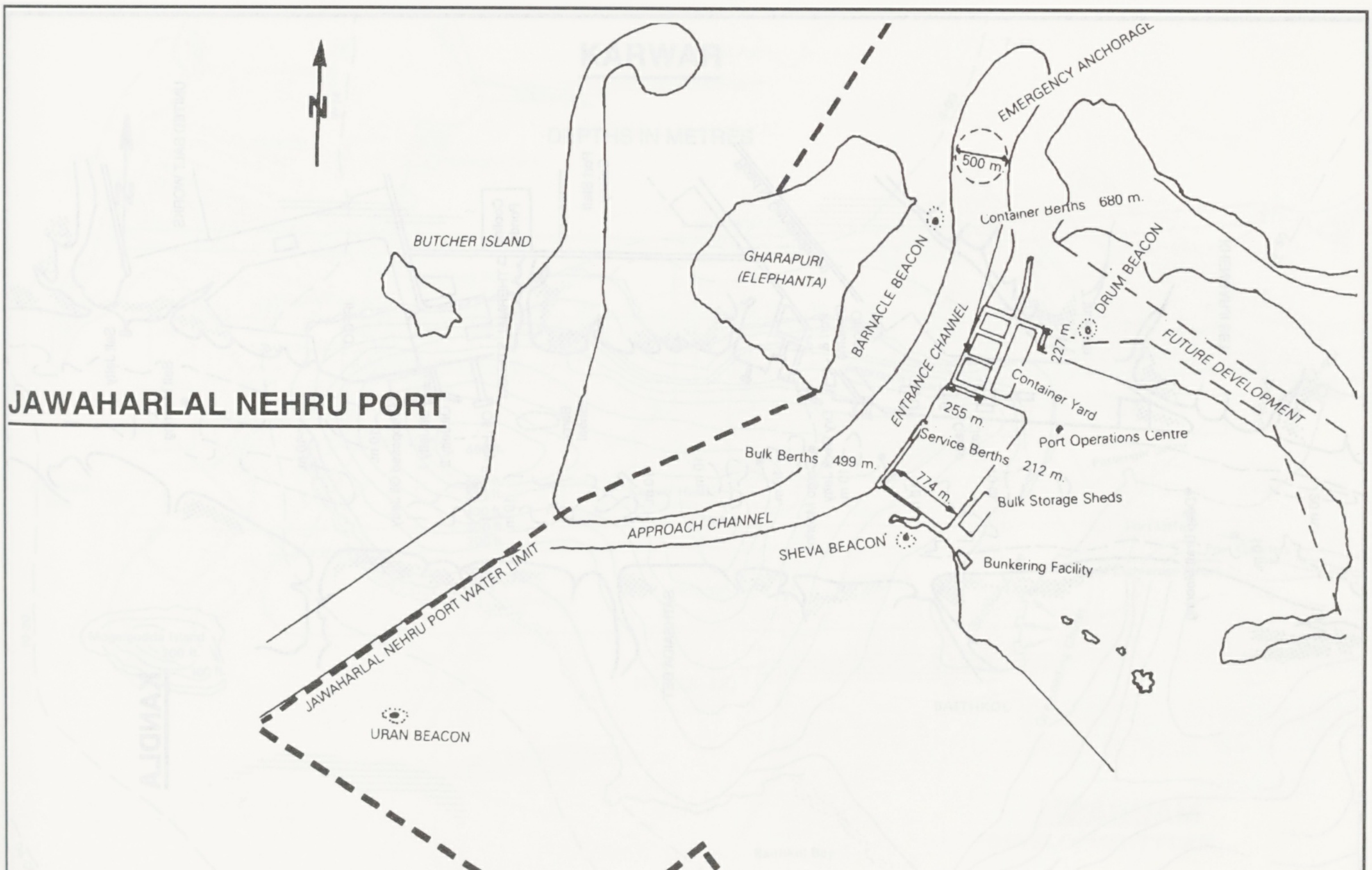


HAZIRA

RELIANCE SBM TERMINAL

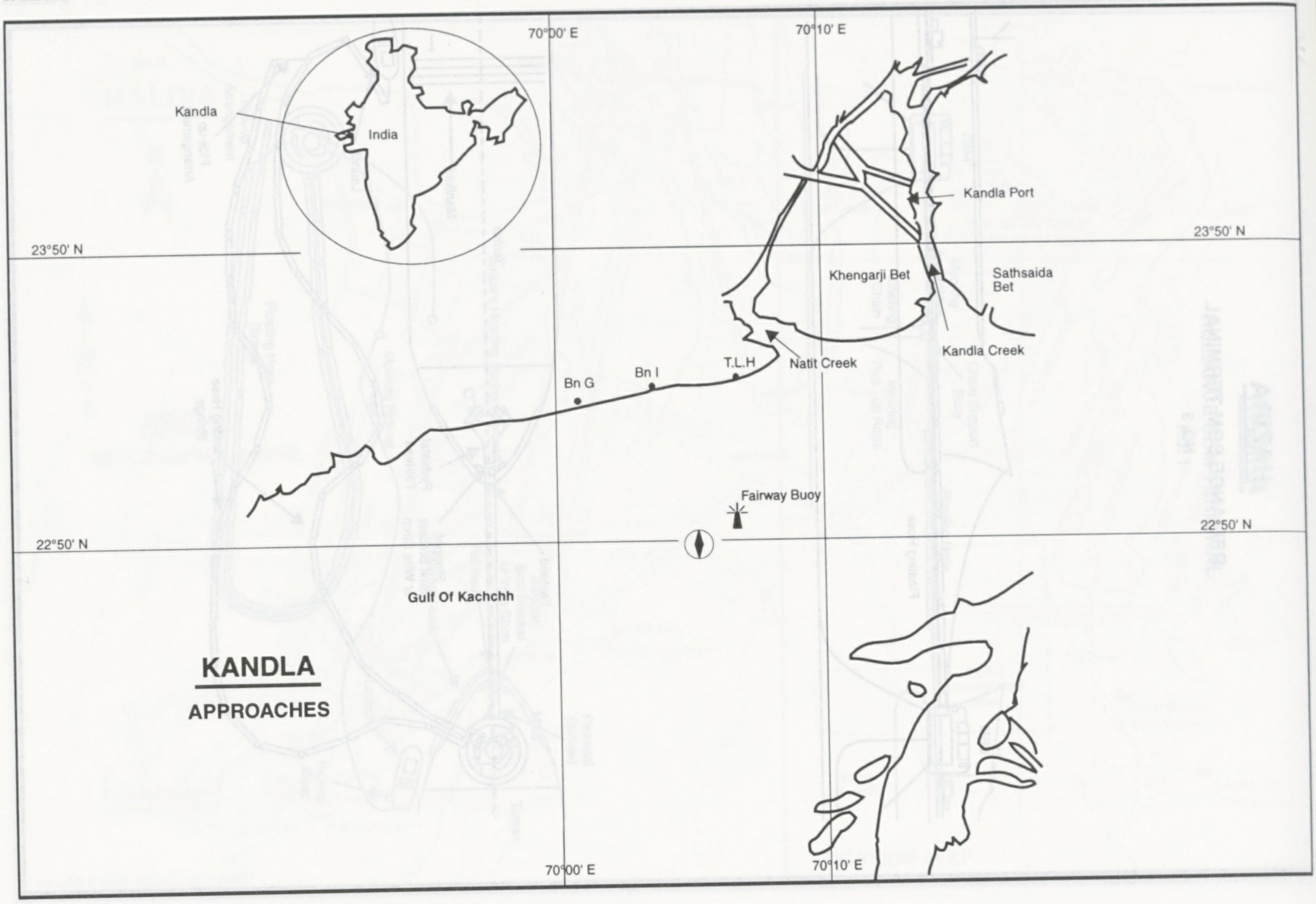
NO. 3

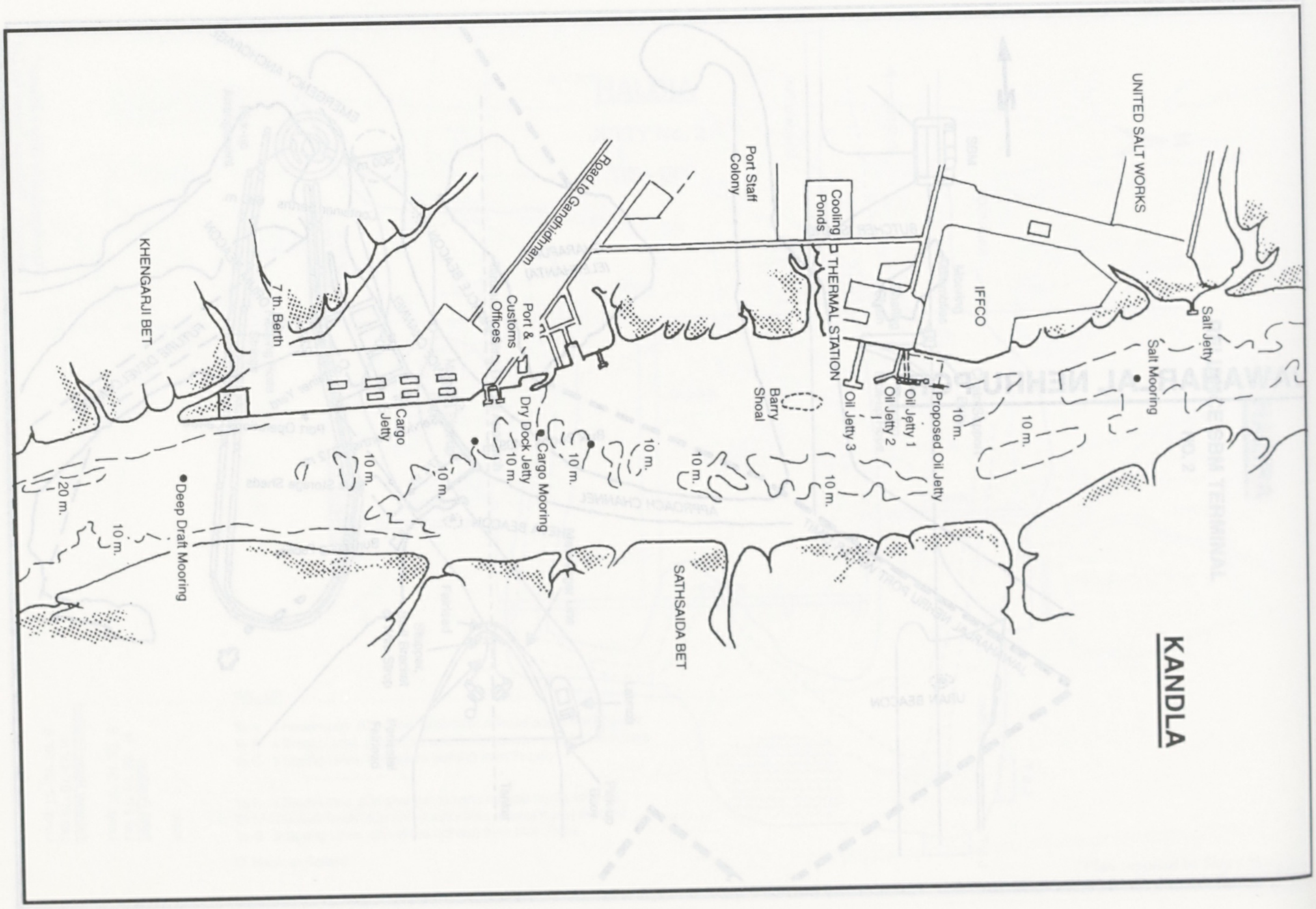
Floating Hose
SBM
Tanker
Manifold
Launch
Pick-up
Arrangement
Pedestal
Fairlead
Stopper,
Smit Bracket
or Wire Strop
Fairlead
SPM
Floating Hose
Strings

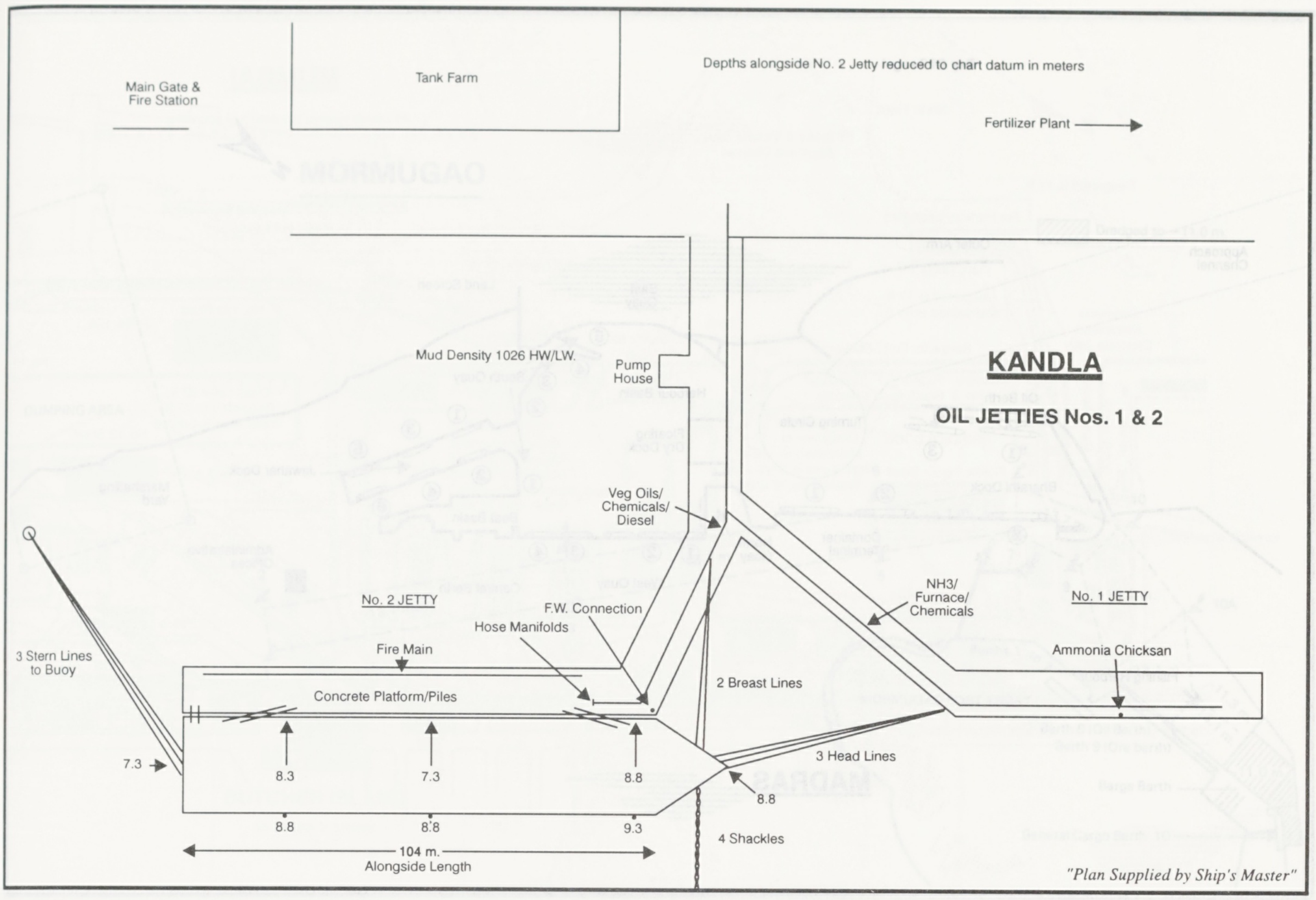


JAWAHARLAL NEHRU PORT

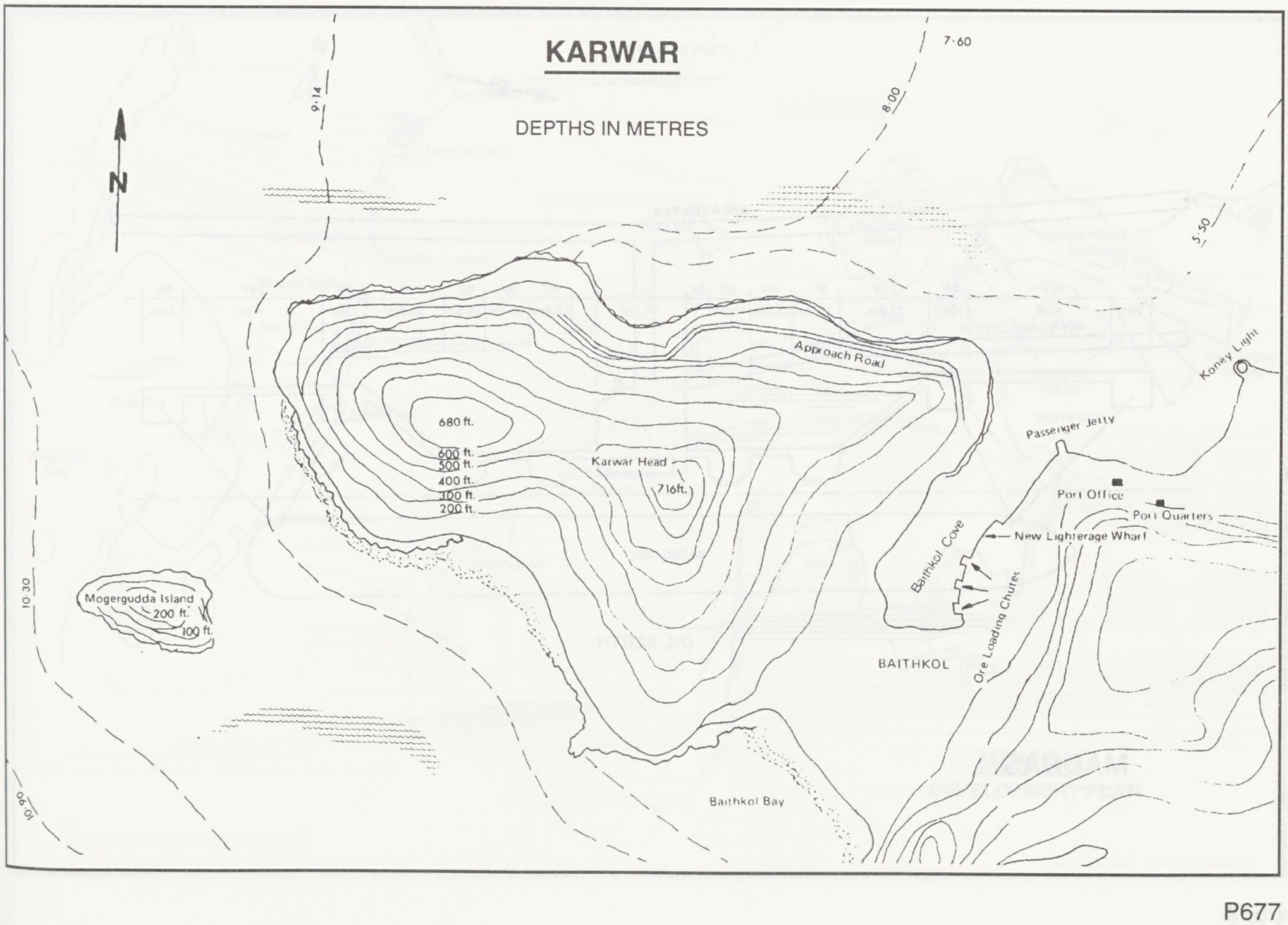
N
BUTCHER ISLAND
GHARAPURI
(ELEPHANTA)
EMERGENCY ANCHORAGE
500 m.
BARNACLE BEACON
Container Berths 680 m.
DRUM BEACON
ENTRANCE CHANNEL
227 m.
FUTURE DEVELOPMENT
Container Yard
255 m
Port Operations Centre
Service Berths 212 m.
Bulk Berths 499 m.
774 m.
Bulk Storage Sheds
APPROACH CHANNEL
SHEVA BEACON
Bunkering Facility
JAWAHARLAL NEHRU PORT WATER LIMIT
URAN BEACON

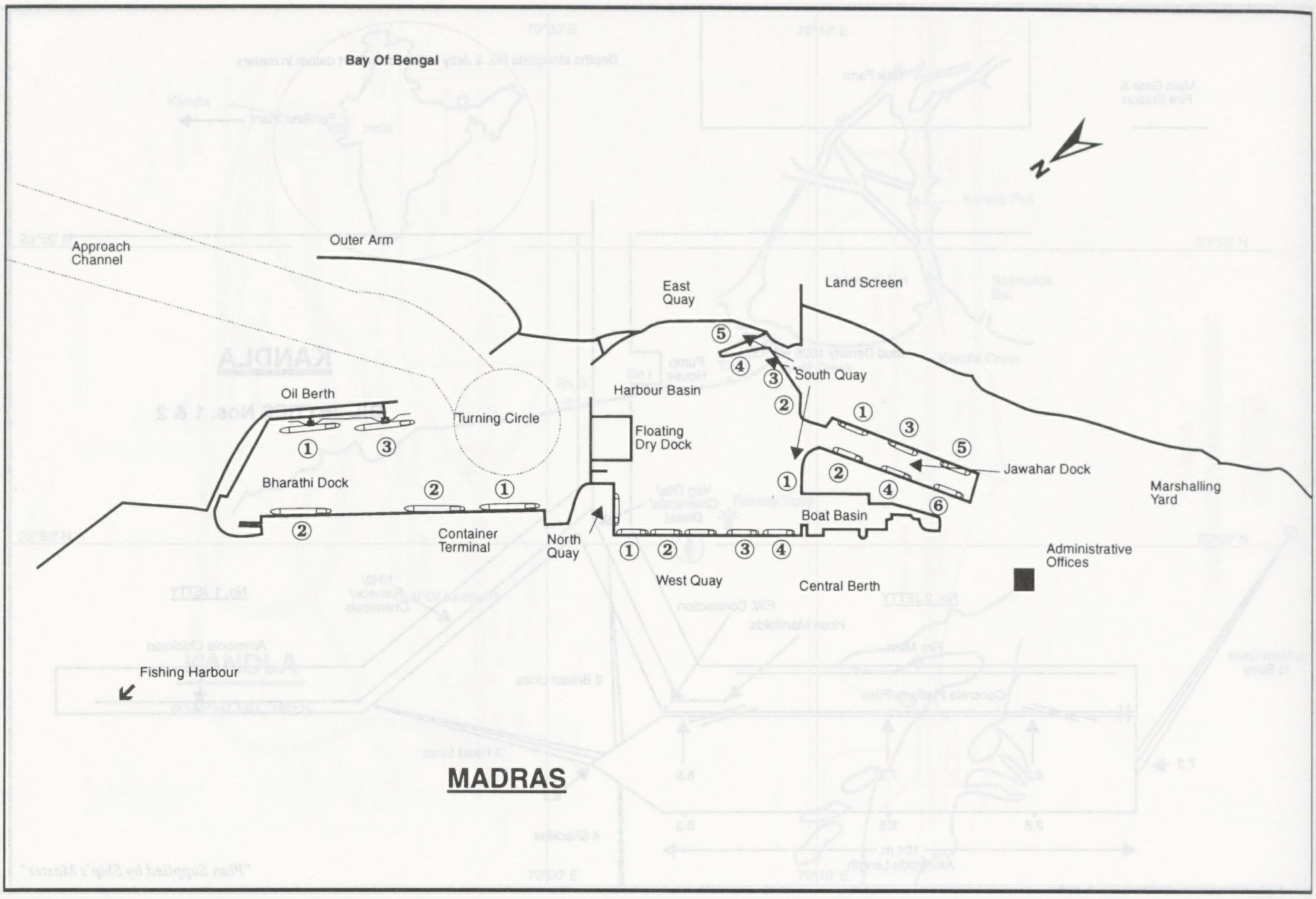

70°00' E
70°10' E
Kandla
India
Kandla Port
23°50' N
Khengarji Bet
Sathsaida Bet
Kandla Creek
Natit Creek
T.L.H
Bn I
Bn G
Fairway Buoy
22°50' N
Gulf Of Kachchh
KANDLA
APPROACHES

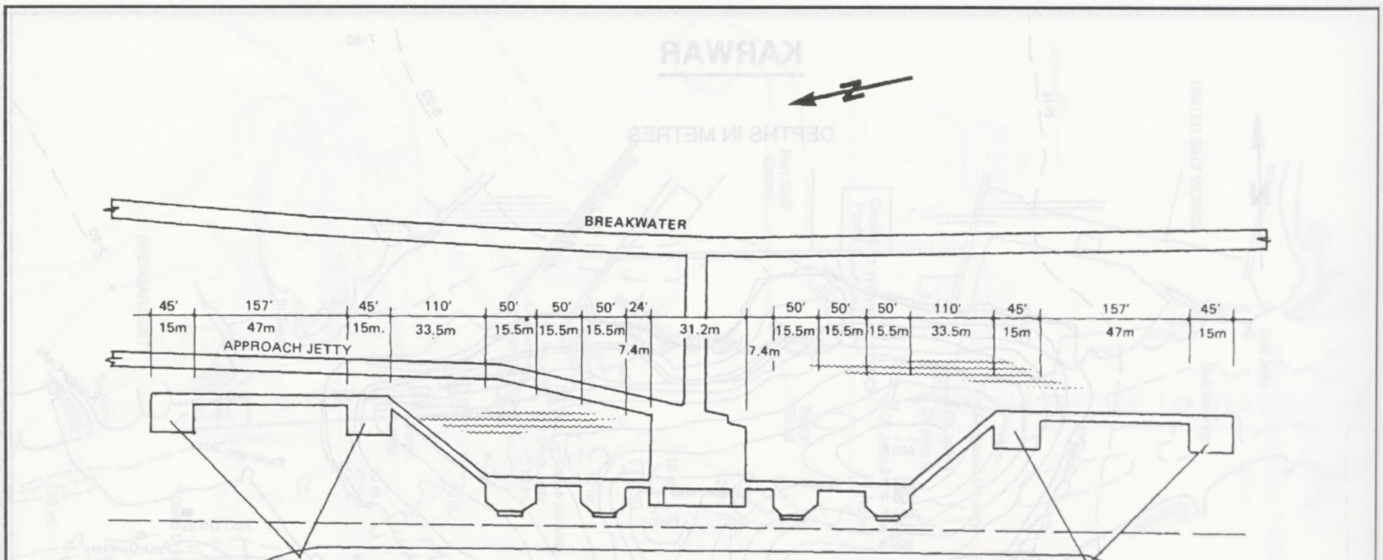

KANDLA
UNITED SALT WORKS
Salt Jetty
Salt Mooring
IFFCO
10 m.
Proposed Oil Jetty
Oil Jetty 1
Oil Jetty 2
Oil Jetty 3
Cooling Ponds
THERMAL STATION
Barry Shoal
Port Staff Colony
Road to Gandhidham
Port & Customs Offices
Dry Dock Jetty
Cargo Mooring
Cargo Jetty
7 th. Berth
SATHSAIDA BET
KHENGARJI BET
Deep Draft Mooring
20 m.

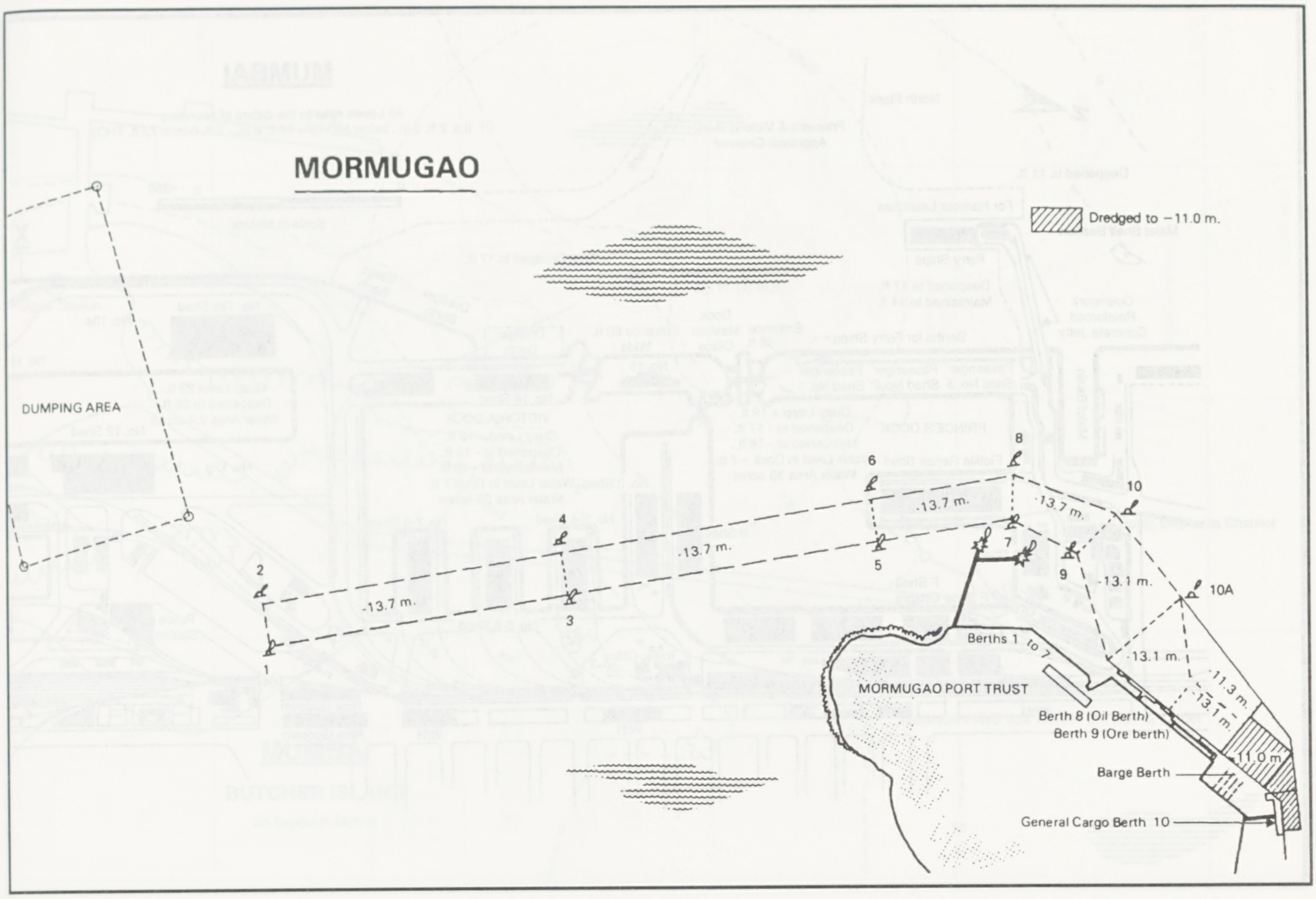

KANDLA
OIL JETTIES Nos. 1 & 2
Depths alongside No. 2 Jetty reduced to chart datum in meters
Main Gate & Fire Station
Tank Farm
Fertilizer Plant
Mud Density 1026 HW/LW.
Pump House
Veg Oils/ Chemicals/ Diesel
NH3/ Furnace/ Chemicals
No. 2 JETTY
No. 1 JETTY
F.W. Connection
Hose Manifolds
Fire Main
Ammonia Chicksan
3 Stern Lines to Buoy
Concrete Platform/Piles
2 Breast Lines
3 Head Lines
7.3
8.3
7.3
8.8
8.8
8.8
8.8
9.3
4 Shackles
104 m. Alongside Length

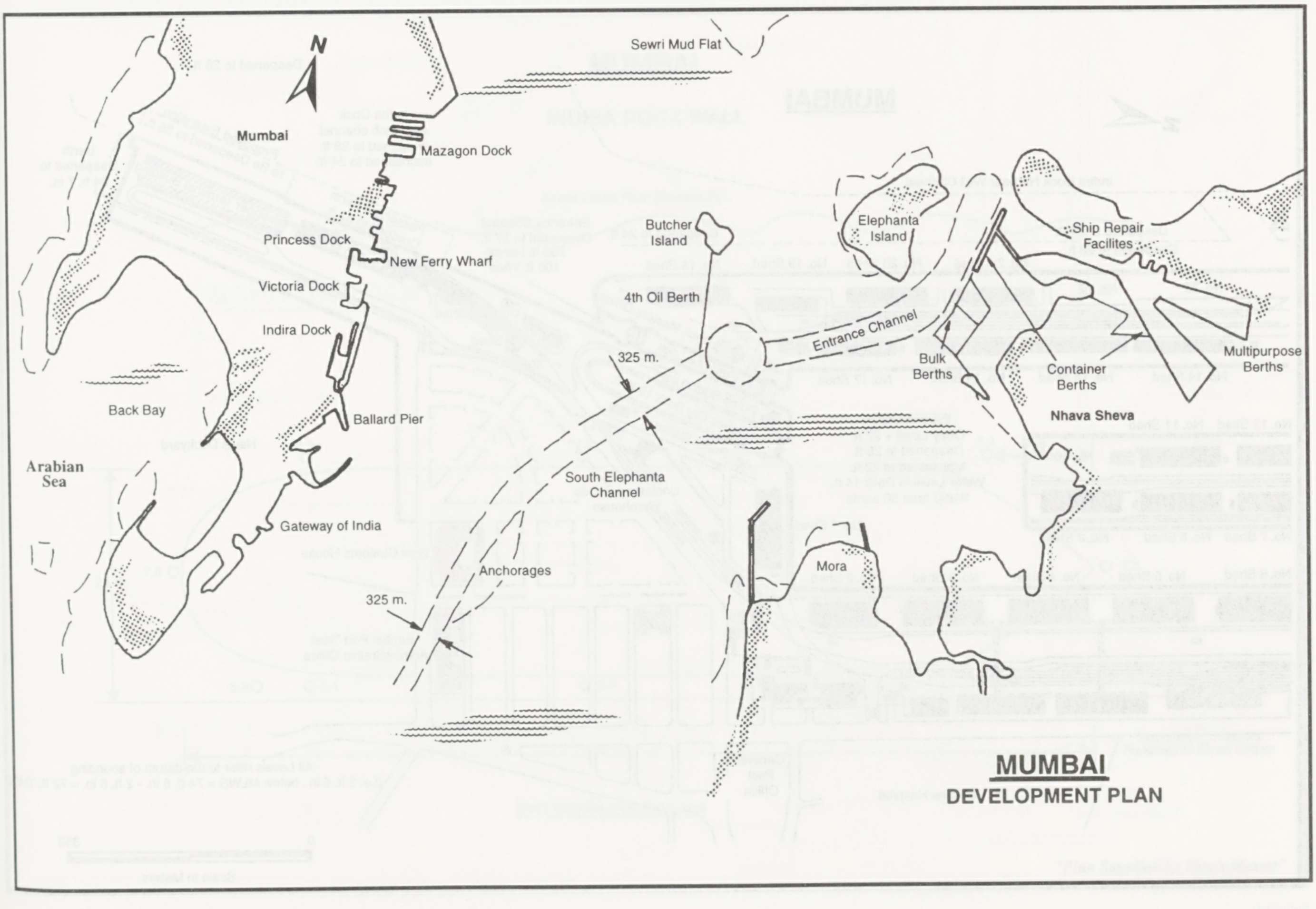
"Plan Supplied by Ship's Master"

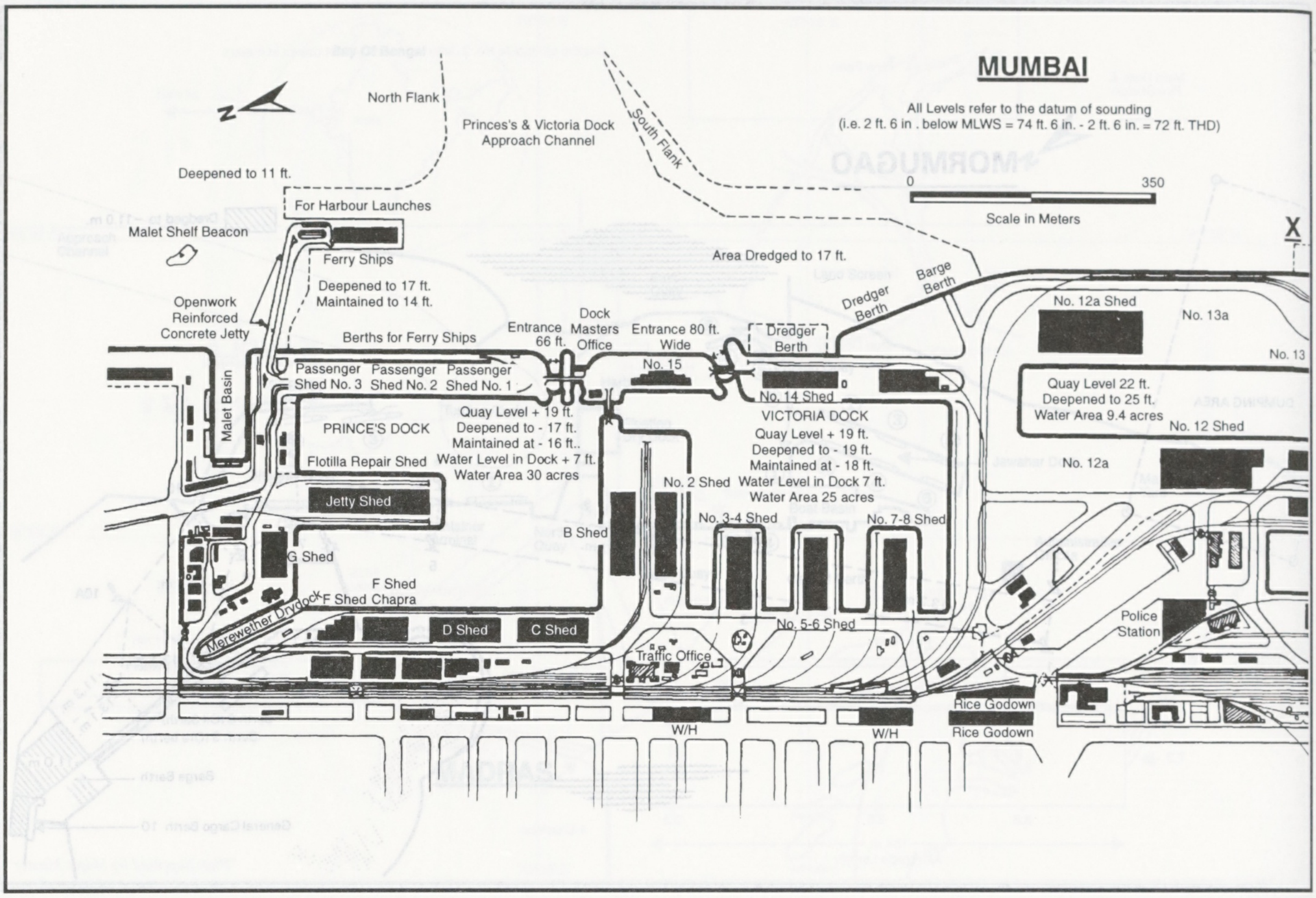

KARWAR
DEPTHS IN METRES
N
9·14
8·00
7·60
5·50
10·30
10·90
680 ft.
600 ft.
500 ft.
400 ft.
300 ft.
200 ft.
Karwar Head
716ft.
Approach Road
Mogergudda Island
200 ft.
100 ft.
Koney Light
Passenger Jetty
Port Office
Port Quarters
New Lighterage Wharf
Baithkol Cove
Ore Loading Chutes
BAITHKOL
Baithkol Bay

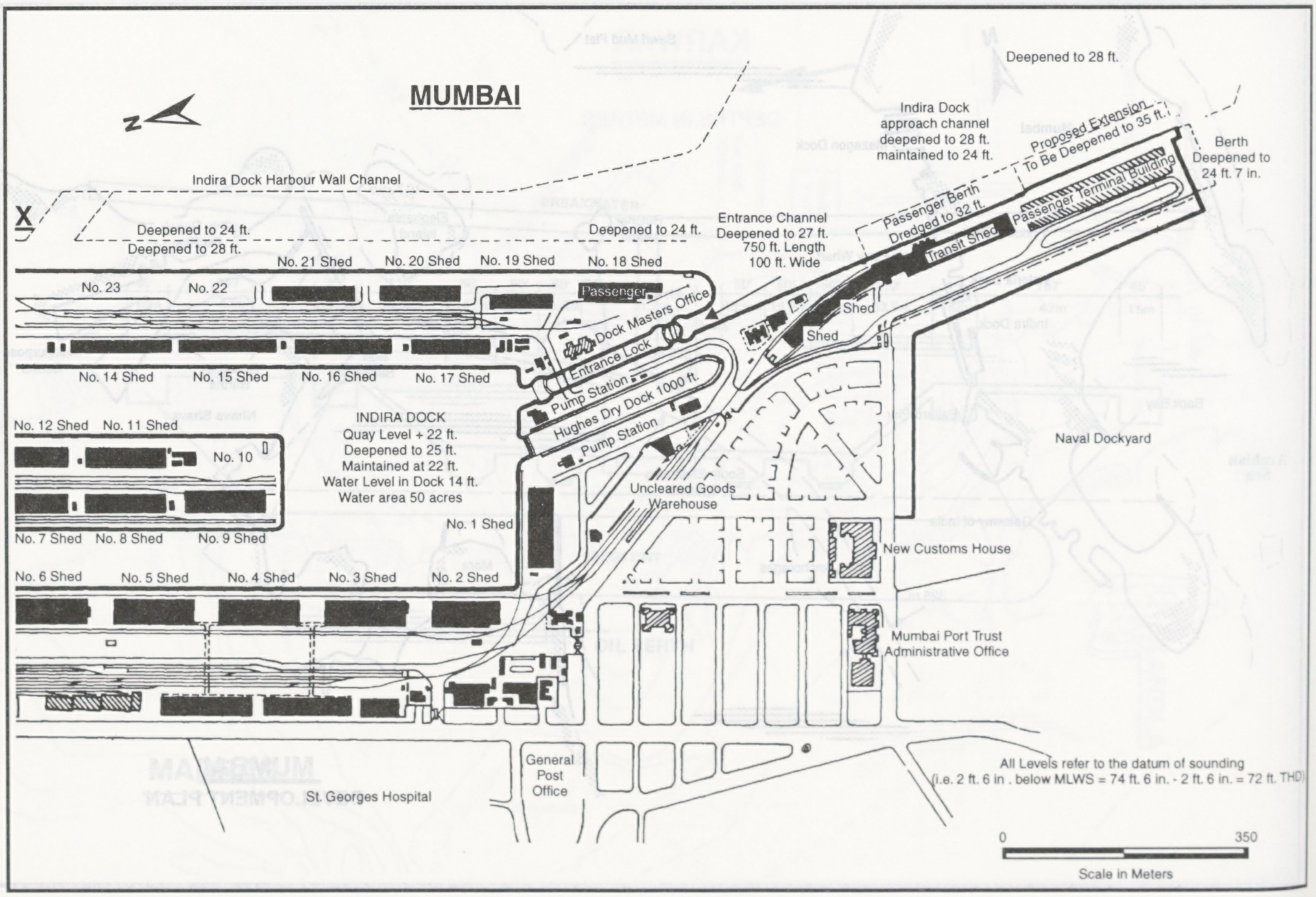

Bay Of Bengal
N
Approach Channel
Outer Arm
East Quay
Land Screen
⑤
④
③
South Quay
Harbour Basin
Oil Berth
Turning Circle
①
③
②
①
③
⑤
Floating Dry Dock
②
Jawahar Dock
Bharathi Dock
②
①
①
④
Marshalling Yard
⑥
Container Terminal
②
North Quay
Boat Basin
①
②
③
④
Administrative Offices
West Quay
Central Berth
Fishing Harbour
MADRAS

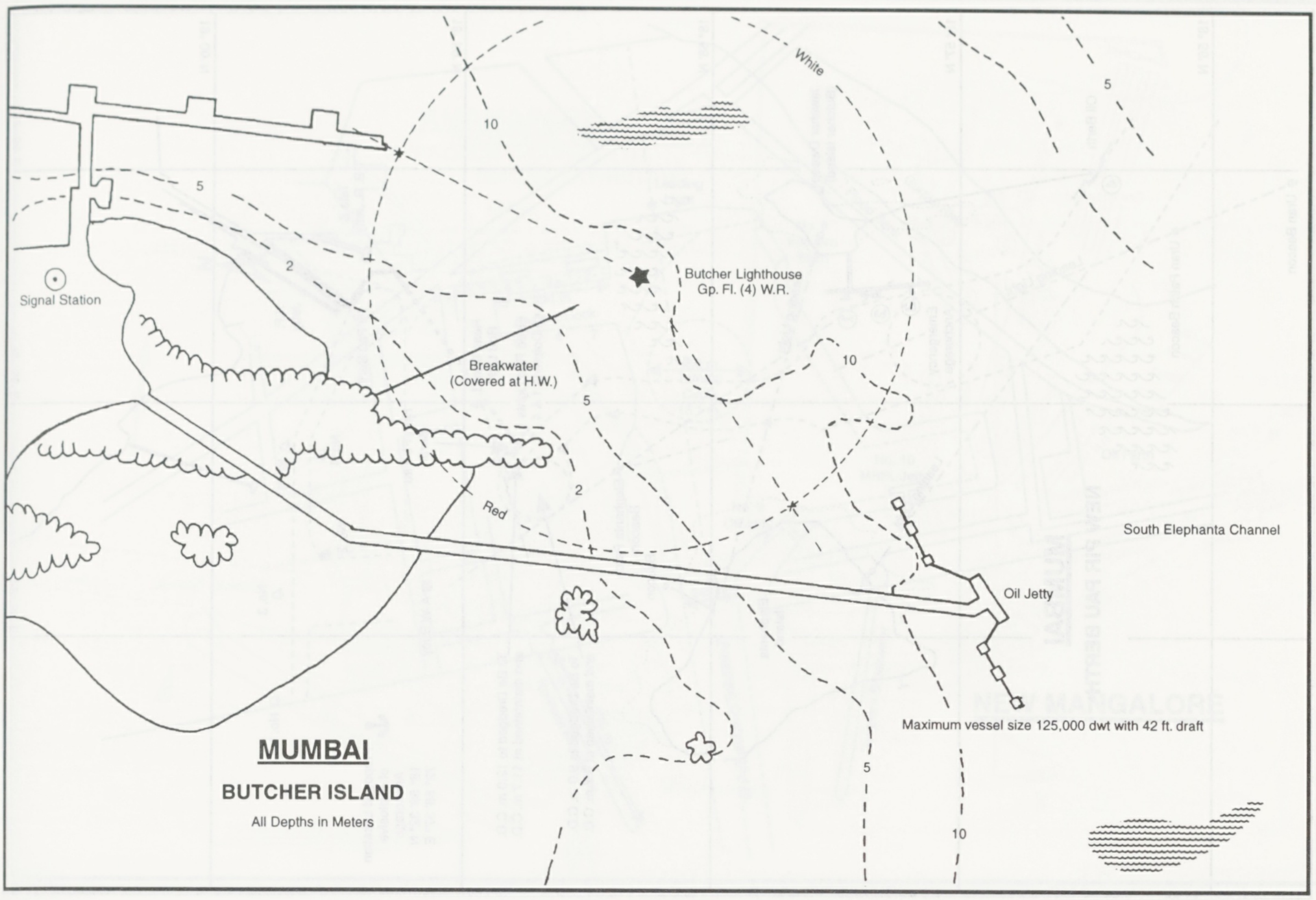

N
BREAKWATER
45'
15m
157'
47m
45'
15m.
110'
33.5m
50'
15.5m
50'
15.5m
50'
15.5m
24'
7.4m
31.2m
7.4m
50'
15.5m
50'
15.5m
50'
15.5m
110'
33.5m
45'
15m
157'
47m
45'
15m
APPROACH JETTY
88,000 DWT
OIL BERTH
MADRAS


MORMUGAO
Dredged to −11.0 m.
DUMPING AREA
1
2
3
4
5
6
7
8
9
10
10A
-13.7 m.
-13.7 m.
-13.7 m.
-13.7 m.
-13.1 m.
-13.1 m.
-11.3 m.
-13.1 m.
-11.0 m.
Berths 1 to 7
MORMUGAO PORT TRUST
Berth 8 (Oil Berth)
Berth 9 (Ore berth)
Barge Berth
General Cargo Berth 10


N
Sewri Mud Flat
Mumbai
Mazagon Dock
Princess Dock
New Ferry Wharf
Victoria Dock
Indira Dock
Ballard Pier
Back Bay
Arabian Sea
Gateway of India
Butcher Island
4th Oil Berth
325 m.
Entrance Channel
South Elephanta Channel
Anchorages
325 m.
Elephanta Island
Ship Repair Facilites
Bulk Berths
Container Berths
Multipurpose Berths
Nhava Sheva
Mora
MUMBAI
DEVELOPMENT PLAN


MUMBAI
All Levels refer to the datum of sounding
(i.e. 2 ft. 6 in . below MLWS = 74 ft. 6 in. - 2 ft. 6 in. = 72 ft. THD)
0
350
Scale in Meters
N
North Flank
Princes's & Victoria Dock
Approach Channel
South Flank
Deepened to 11 ft.
For Harbour Launches
Malet Shelf Beacon
Ferry Ships
Deepened to 17 ft.
Maintained to 14 ft.
Openwork
Reinforced
Concrete Jetty
Area Dredged to 17 ft.
Barge
Berth
Dredger
Berth
X
No. 12a Shed
No. 13a
No. 13
Berths for Ferry Ships
Entrance
66 ft.
Dock
Masters
Office
Entrance 80 ft.
Wide
Dredger
Berth
No. 15
Passenger
Shed No. 3
Passenger
Shed No. 2
Passenger
Shed No. 1
No. 14 Shed
Malet Basin
Quay Level 22 ft.
Deepened to 25 ft.
Water Area 9.4 acres
No. 12 Shed
PRINCE'S DOCK
Quay Level + 19 ft.
Deepened to - 17 ft.
Maintained at - 16 ft..
Water Level in Dock + 7 ft.
Water Area 30 acres
VICTORIA DOCK
Quay Level + 19 ft.
Deepened to - 19 ft.
Maintained at - 18 ft.
Water Level in Dock 7 ft.
Water Area 25 acres
Flotilla Repair Shed
No. 2 Shed
No. 12a
Jetty Shed
No. 3-4 Shed
No. 7-8 Shed
B Shed
G Shed
F Shed
F Shed Chapra
Merewether Drydock
D Shed
C Shed
No. 5-6 Shed
Police
Station
Traffic Office
Rice Godown
Rice Godown
W/H
W/H


MUMBAI
N
Deepened to 28 ft.
Indira Dock
approach channel
deepened to 28 ft.
maintained to 24 ft.
Proposed Extension
To Be Deepened to 35 ft.
Berth
Deepened to
24 ft. 7 in.
Indira Dock Harbour Wall Channel
X
Deepened to 24 ft.
Deepened to 28 ft.
Deepened to 24 ft.
Entrance Channel
Deepened to 27 ft.
750 ft. Length
100 ft. Wide
Passenger Berth
Dredged to 32 ft.
Passenger Terminal Building
Transit Shed
No. 21 Shed
No. 20 Shed
No. 19 Shed
No. 18 Shed
No. 23
No. 22
Passenger
Dock Masters Office
Shed
Shed
Entrance Lock
No. 14 Shed
No. 15 Shed
No. 16 Shed
No. 17 Shed
Pump Station
Hughes Dry Dock 1000 ft.
Pump Station
No. 12 Shed
No. 11 Shed
No. 10
INDIRA DOCK
Quay Level + 22 ft.
Deepened to 25 ft.
Maintained at 22 ft.
Water Level in Dock 14 ft.
Water area 50 acres
Naval Dockyard
Uncleared Goods
Warehouse
No. 1 Shed
No. 7 Shed
No. 8 Shed
No. 9 Shed
New Customs House
No. 6 Shed
No. 5 Shed
No. 4 Shed
No. 3 Shed
No. 2 Shed
Mumbai Port Trust
Administrative Office
General
Post
Office
St. Georges Hospital
All Levels refer to the datum of sounding
(i.e. 2 ft. 6 in . below MLWS = 74 ft. 6 in. - 2 ft. 6 in. = 72 ft. THD)
0
350
Scale in Meters

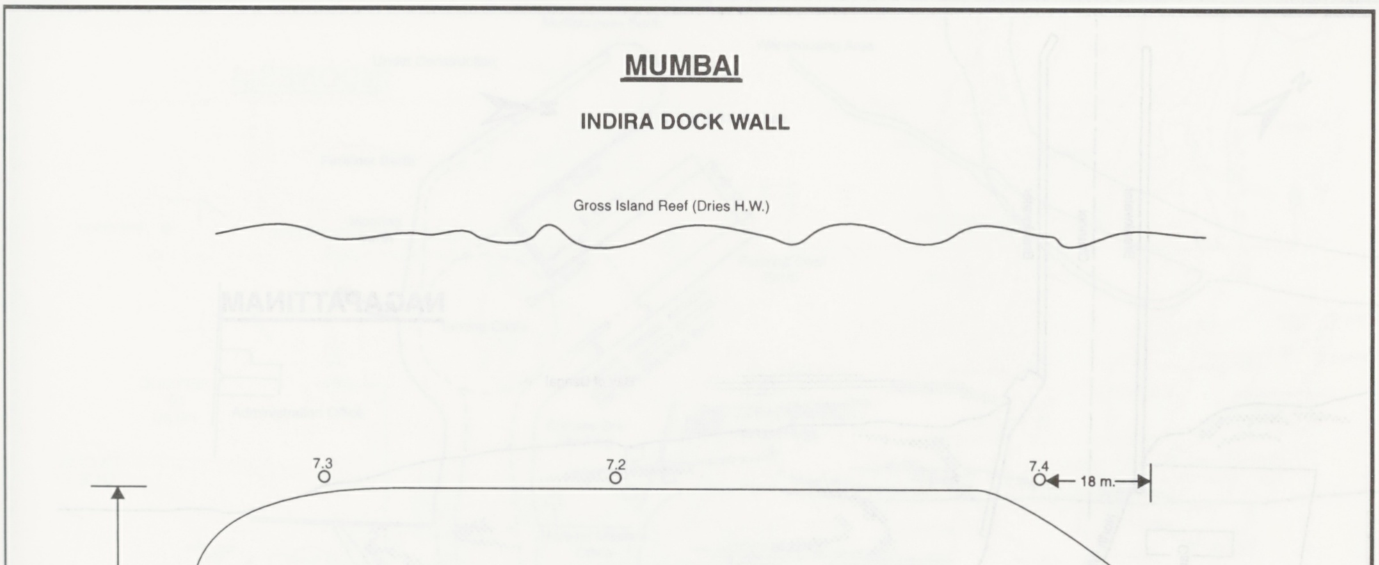


MUMBAI

BUTCHER ISLAND

All Depths in Meters

White
Red
10
5
2
10
5
2
10
5
5
10
Signal Station
Butcher Lighthouse
Gp. Fl. (4) W.R.
Breakwater
(Covered at H.W.)
South Elephanta Channel
Oil Jetty
Maximum vessel size 125,000 dwt with 42 ft. draft

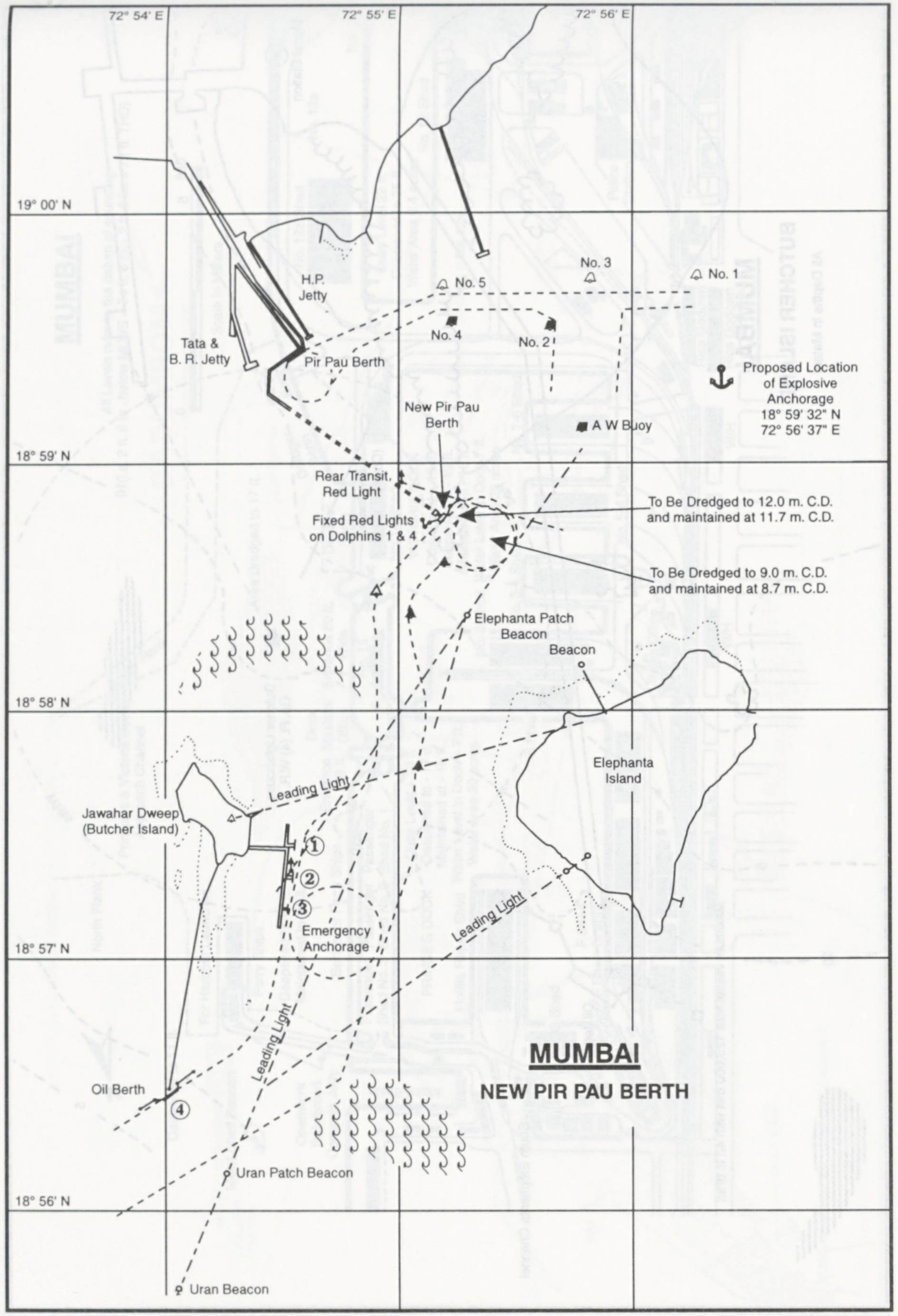


MUMBAI

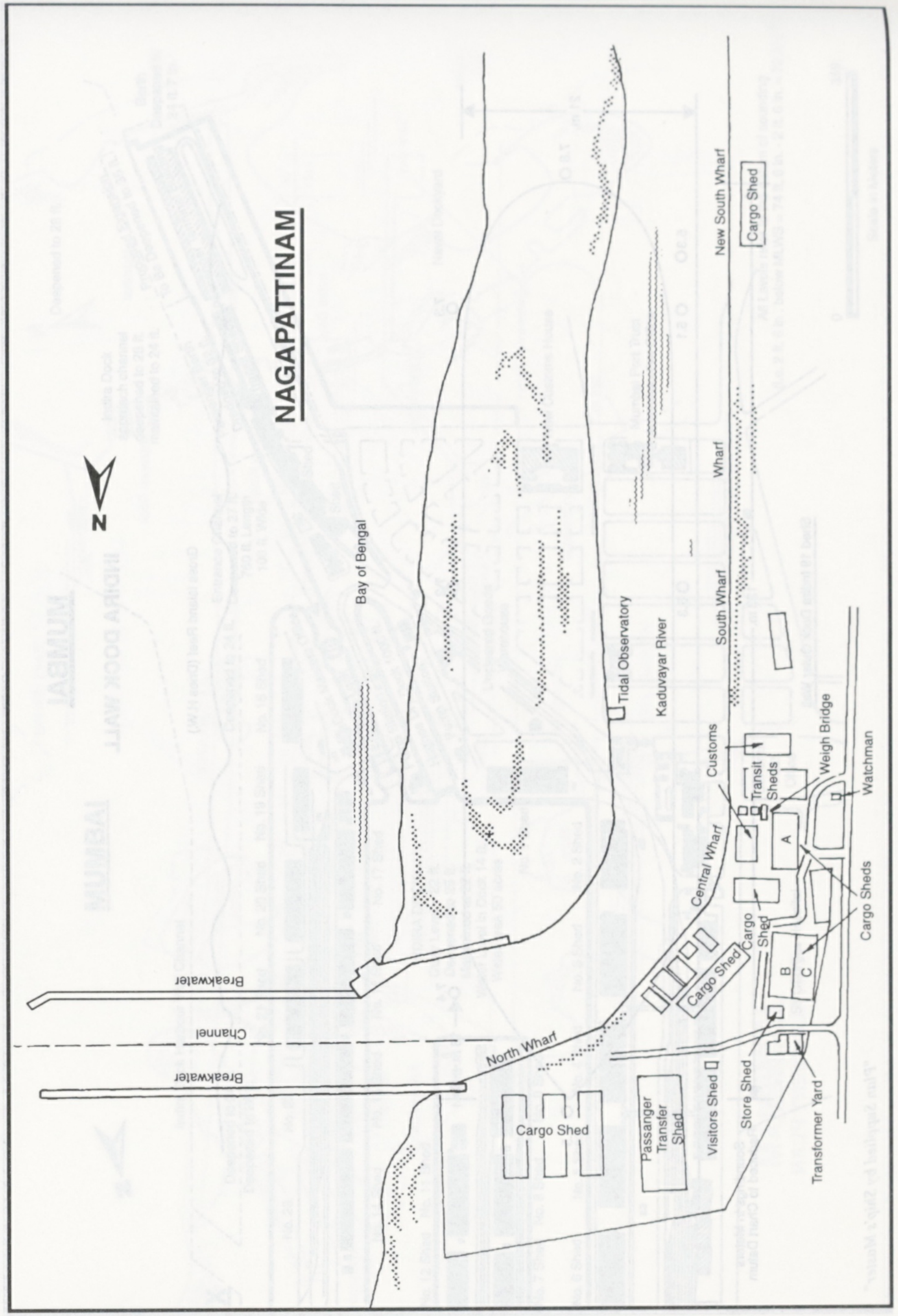
INDIRA DOCK WALL

Gross Island Reef (Dries H.W.)
7.3
7.2
7.4
18 m.
21 m.
7.8
7.5
5.3
5.1
5.3
6.7
123 m.
Soundings in Meters
Reduced to Chart Datum
Shed 19 Indira Dock Outer Wall

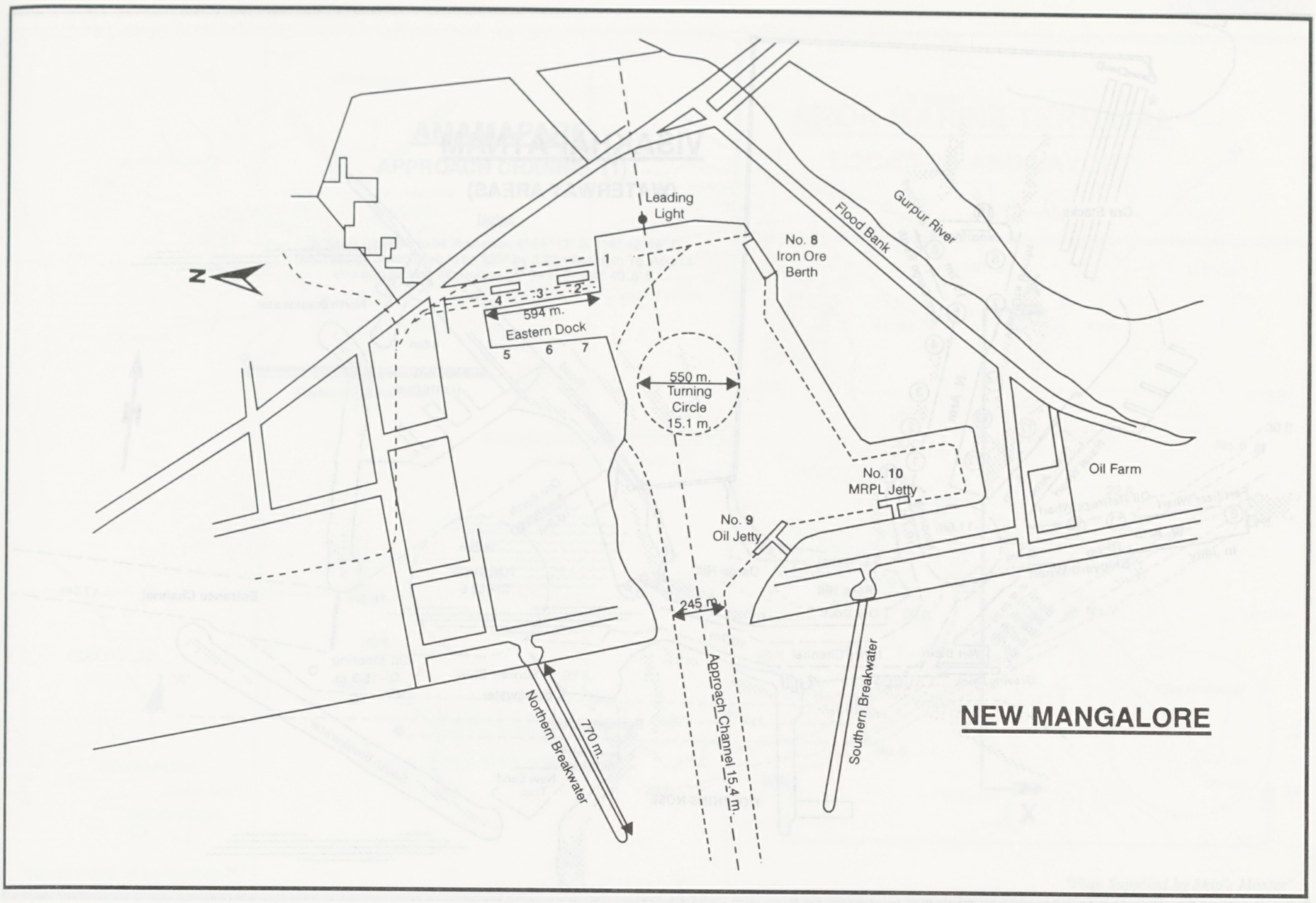
"Plan Supplied by Ship's Master"

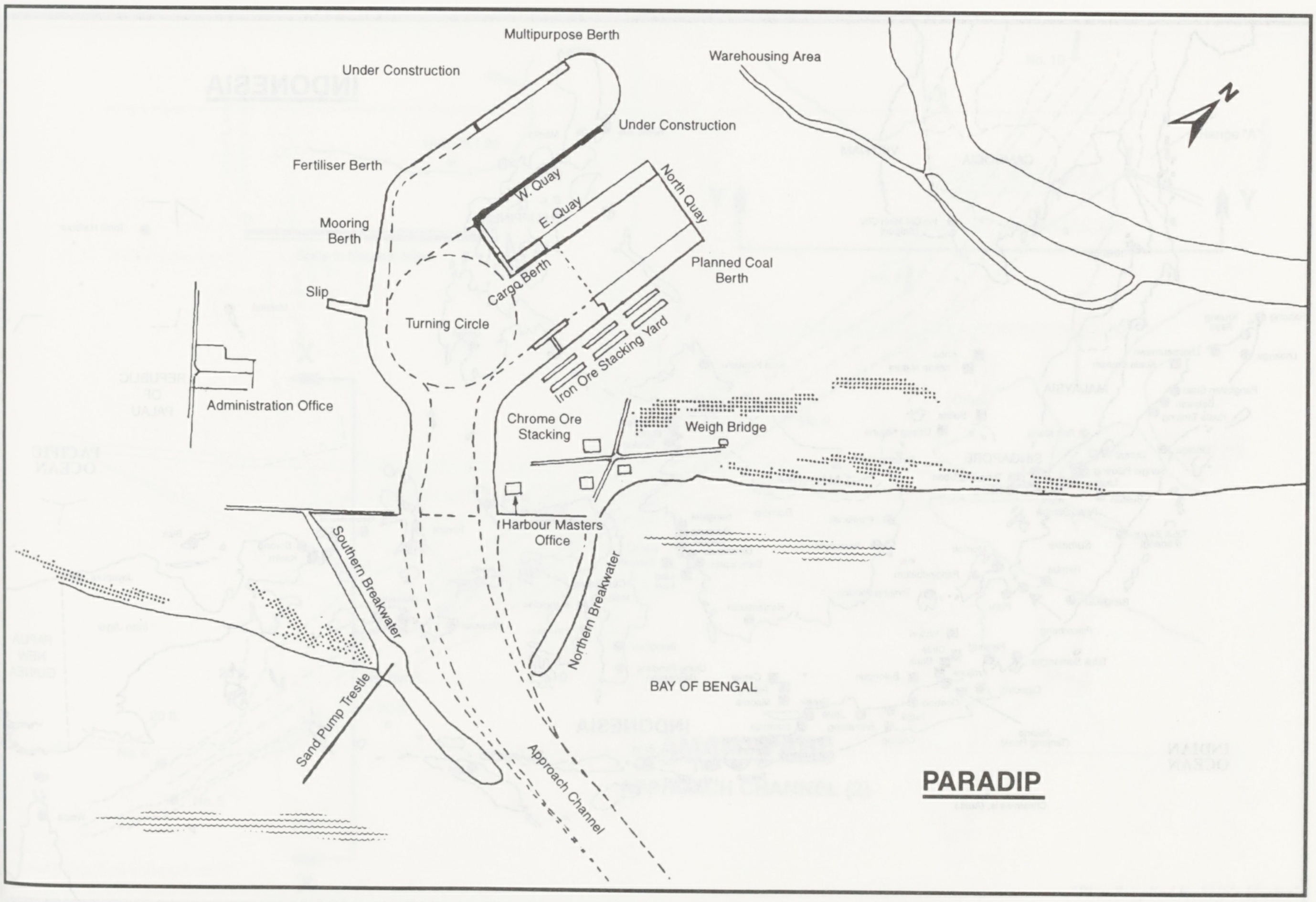

72° 54' E
72° 55' E
72° 56' E
19° 00' N
18° 59' N
18° 58' N
18° 57' N
18° 56' N
No. 5
No. 3
No. 1
No. 4
No. 2
H.P. Jetty
Tata & B. R. Jetty
Pir Pau Berth
Proposed Location of Explosive Anchorage 18° 59' 32" N 72° 56' 37" E
New Pir Pau Berth
A W Buoy
Rear Transit, Red Light
Fixed Red Lights on Dolphins 1 & 4
To Be Dredged to 12.0 m. C.D. and maintained at 11.7 m. C.D.
To Be Dredged to 9.0 m. C.D. and maintained at 8.7 m. C.D.
Elephanta Patch Beacon
Beacon
Elephanta Island
Leading Light
Jawahar Dweep (Butcher Island)
①
②
③
Emergency Anchorage
Leading Light
Leading Light
Oil Berth
④
Uran Patch Beacon
Uran Beacon

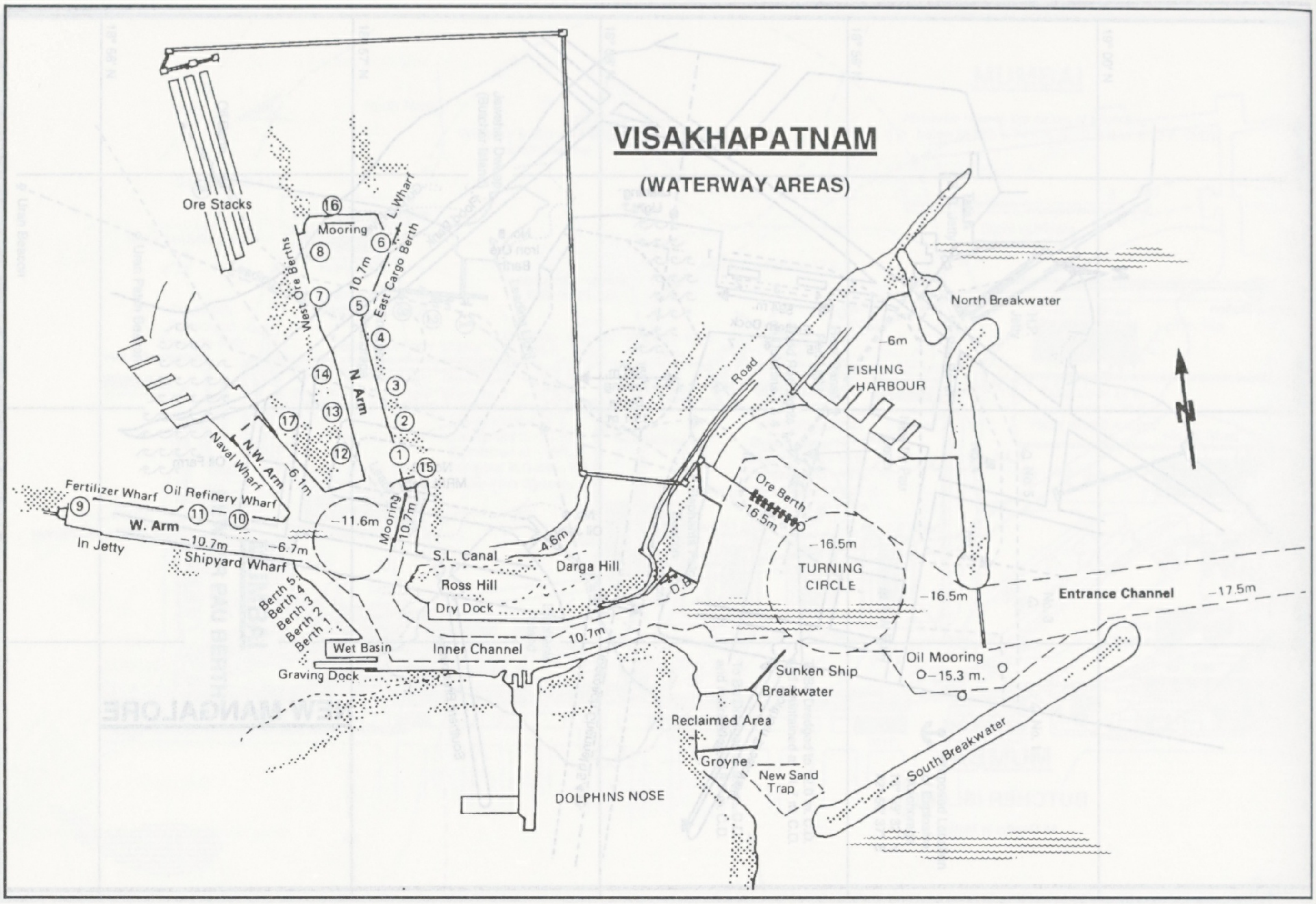
MUMBAI
NEW PIR PAU BERTH

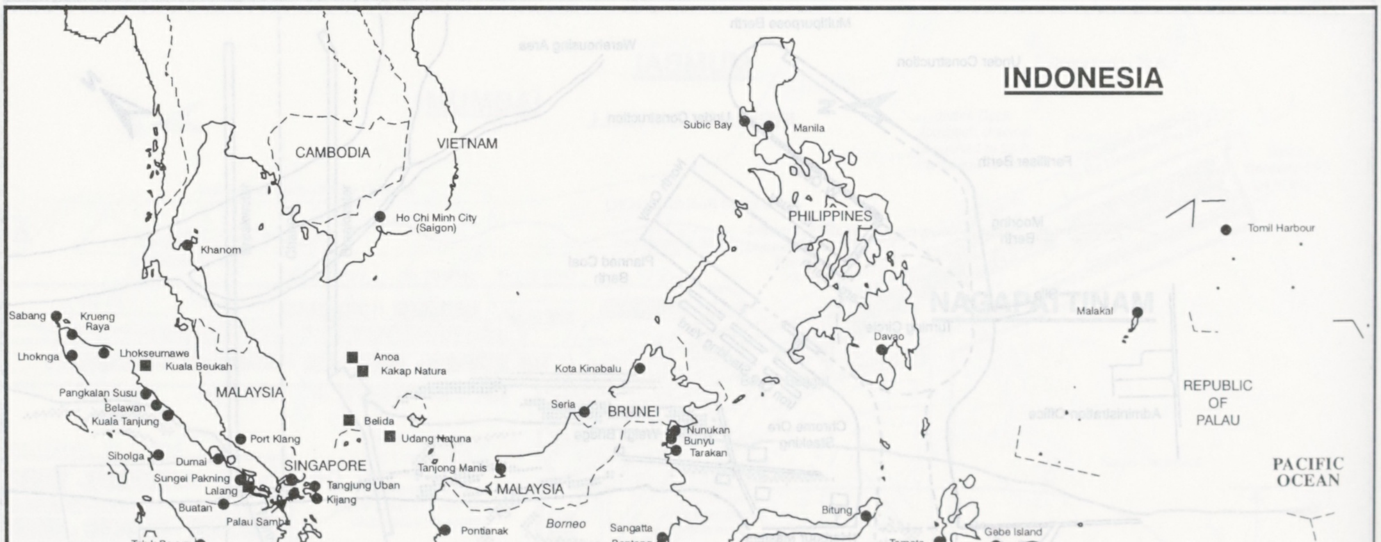

N
Bay of Bengal
Tidal Observatory
Kaduvayar River
Breakwater
Channel
Breakwater
North Wharf
Central Wharf
South Wharf
Wharf
New South Wharf
Cargo Shed
Customs
Transit Sheds
Weigh Bridge
Watchman
Cargo Sheds
Cargo Shed
Cargo Shed
A
B
C
Cargo Shed
Passanger Transfer Shed
Visitors Shed
Store Shed
Transformer Yard

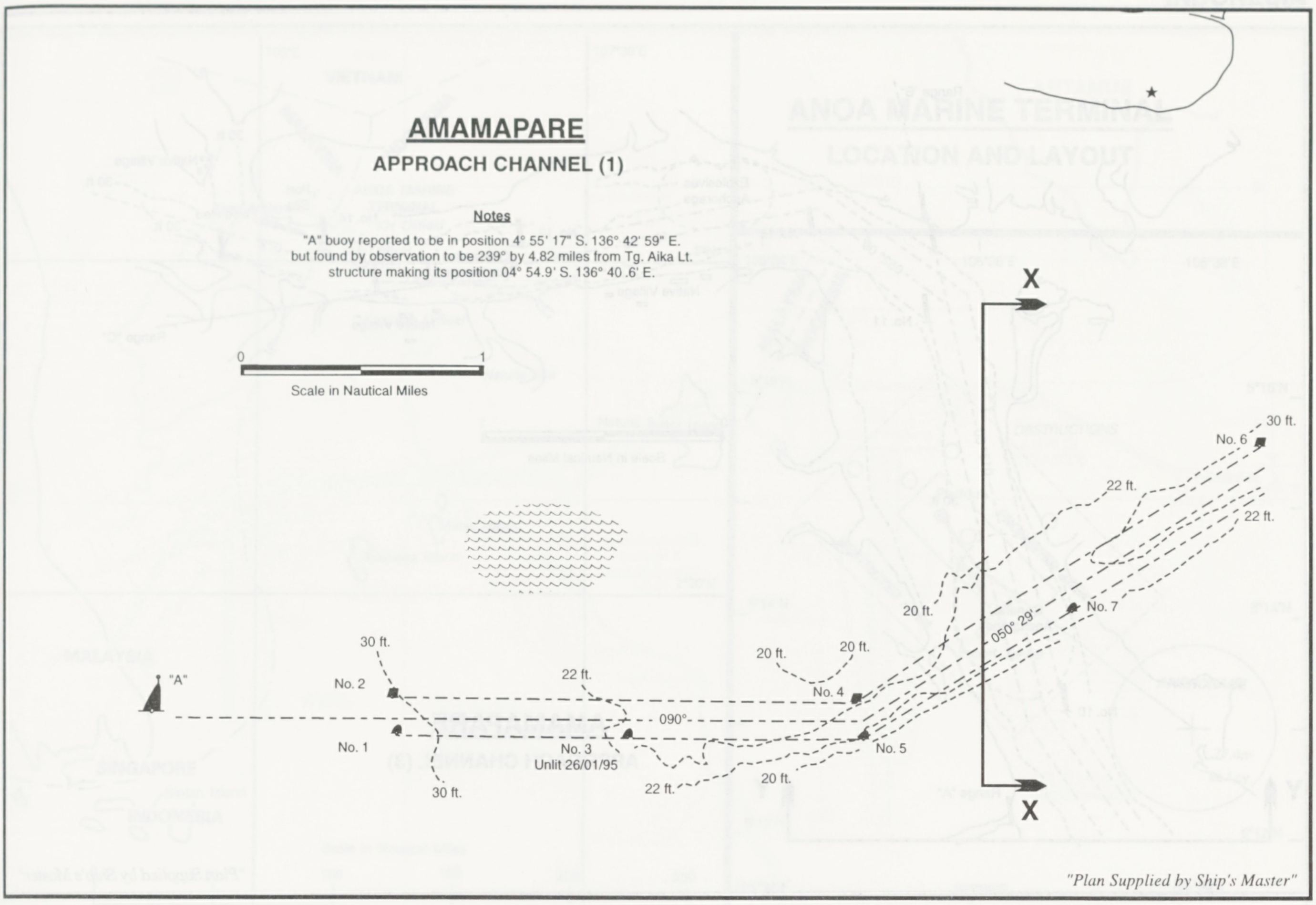
NAGAPATTINAM


N
Leading Light
1
2
3
4
594 m.
Eastern Dock
5
6
7
No. 8
Iron Ore Berth
Flood Bank
Gurpur River
550 m.
Turning Circle
15.1 m.
No. 10
MRPL Jetty
Oil Farm
No. 9
Oil Jetty
245 m.
Northern Breakwater
770 m.
Approach Channel 15.4 m.
Southern Breakwater
NEW MANGALORE


Multipurpose Berth
Under Construction
Warehousing Area
N
Under Construction
Fertiliser Berth
W. Quay
North Quay
E. Quay
Mooring Berth
Cargo Berth
Planned Coal Berth
Slip
Turning Circle
Iron Ore Stacking Yard
Administration Office
Chrome Ore Stacking
Weigh Bridge
Harbour Masters Office
Southern Breakwater
Northern Breakwater
BAY OF BENGAL
Sand Pump Trestle
Approach Channel
PARADIP


VISAKHAPATNAM
(WATERWAY AREAS)
Ore Stacks
16
Mooring
8
L. Wharf
6
10.7m
East Cargo Berth
West Ore Berths
7
5
4
14
N. Arm
3
13
2
17
12
1
15
N.W. Arm
Naval Wharf
–6.1m
Fertilizer Wharf
Oil Refinery Wharf
9
11
10
W. Arm
–11.6m
Mooring
10.7m
In Jetty
–10.7m
–6.7m
Shipyard Wharf
Berth 5
Berth 4
Berth 3
Berth 2
Berth 1
Wet Basin
Graving Dock
Inner Channel
S.L. Canal
4.6m
Ross Hill
Darga Hill
Dry Dock
10.7m
D.B.
Road
Ore Berth
–16.5m
–16.5m
TURNING CIRCLE
–6m
FISHING HARBOUR
North Breakwater
N
–16.5m
Entrance Channel
–17.5m
Oil Mooring
O–15.3 m.
Sunken Ship Breakwater
Reclaimed Area
Groyne
New Sand Trap
South Breakwater
DOLPHINS NOSE


INDONESIA
CAMBODIA
VIETNAM
Ho Chi Minh City (Saigon)
Khanom
Subic Bay
Manila
PHILIPPINES
Tomil Harbour
Malakal
REPUBLIC OF PALAU
Davao
PACIFIC OCEAN
Sabang
Krueng Raya
Lhoknga
Lhokseumawe
Kuala Beukah
Anoa
Kakap Natura
Kota Kinabalu
Pangkalan Susu
Belawan
Kuala Tanjung
MALAYSIA
Belida
Udang Natuna
Seria
BRUNEI
Nunukan
Bunyu
Tarakan
Sibolga
Port Klang
Dumai
Sungei Pakning
Lalang
SINGAPORE
Tangjung Uban
Kijang
Tanjong Manis
MALAYSIA
Buatan
Palau Sambu
Pontianak
Borneo
Sangatta
Bontang
Santan
Samarinda
Balikpapan
Senipah
Lawi Lawi
Bitung
Ternate
Gebe Island
Sorong
Kasim
Salawati
Biak
Teluk Bayur (Padang)
Sumatra
Muntok
Telok Ayer
Tubang
Jayapura
Ramba
Pangkalbalam
Tanjung Pandan
Celebes
Malili
Mangkasa
Pomalaa
Waisaris
Bengkulu
Plaju
Banjarmasin
Wamsasi
Ambon
Irian Jaya
Palembang
Widuri
Biringkasi
PAPUA NEW GUINEA
Panjang
Cinta
Teluk Semangka
Bima
Ardjuna
Balongan
Camar
Poleng
Madura
Ujung Pandang (Macassar)
Cigading
Cirebon
Tegal
Gresik
Java
Surabaja
Semarang
Jakarta (Tanjung Priok)
Cilacap
Panarukan
Meneng
Banyuwangi
INDONESIA
Bima
INDIAN OCEAN
Benoa
Labuantring Bay
Dili
Christmas Is. (Aust.)
Weipa



AMAMAPARE

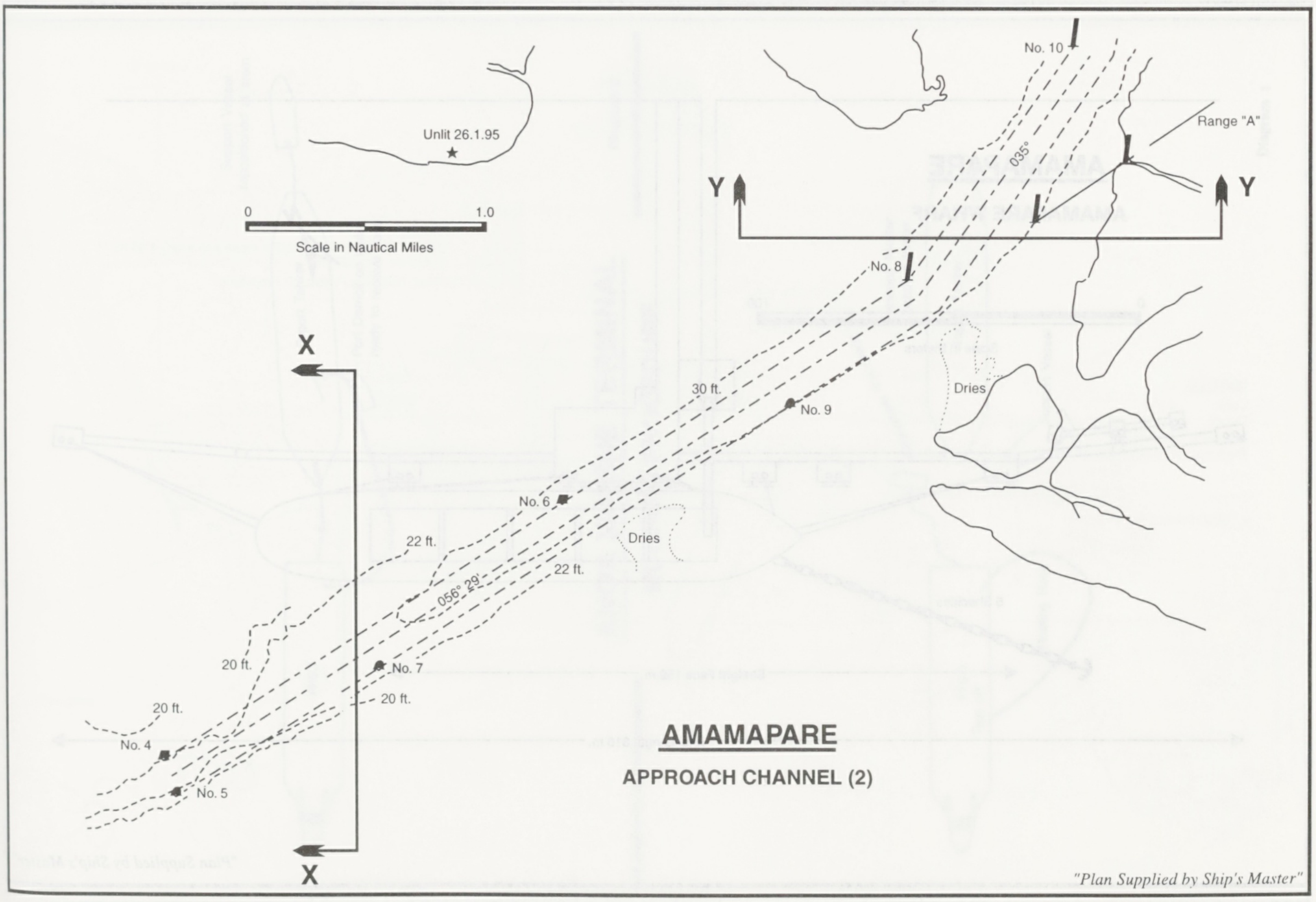
APPROACH CHANNEL (1)

Notes

"A" buoy reported to be in position 4° 55' 17" S. 136° 42' 59" E.
but found by observation to be 239° by 4.82 miles from Tg. Aika Lt.
structure making its position 04° 54.9' S. 136° 40 .6' E.

0
1
Scale in Nautical Miles
X
X
"A"
30 ft.
No. 2
No. 1
30 ft.
22 ft.
No. 3
Unlit 26/01/95
090°
22 ft.
20 ft.
20 ft.
20 ft.
No. 4
No. 5
20 ft.
050° 29'
No. 7
22 ft.
No. 6
30 ft.
22 ft.

"Plan Supplied by Ship's Master"

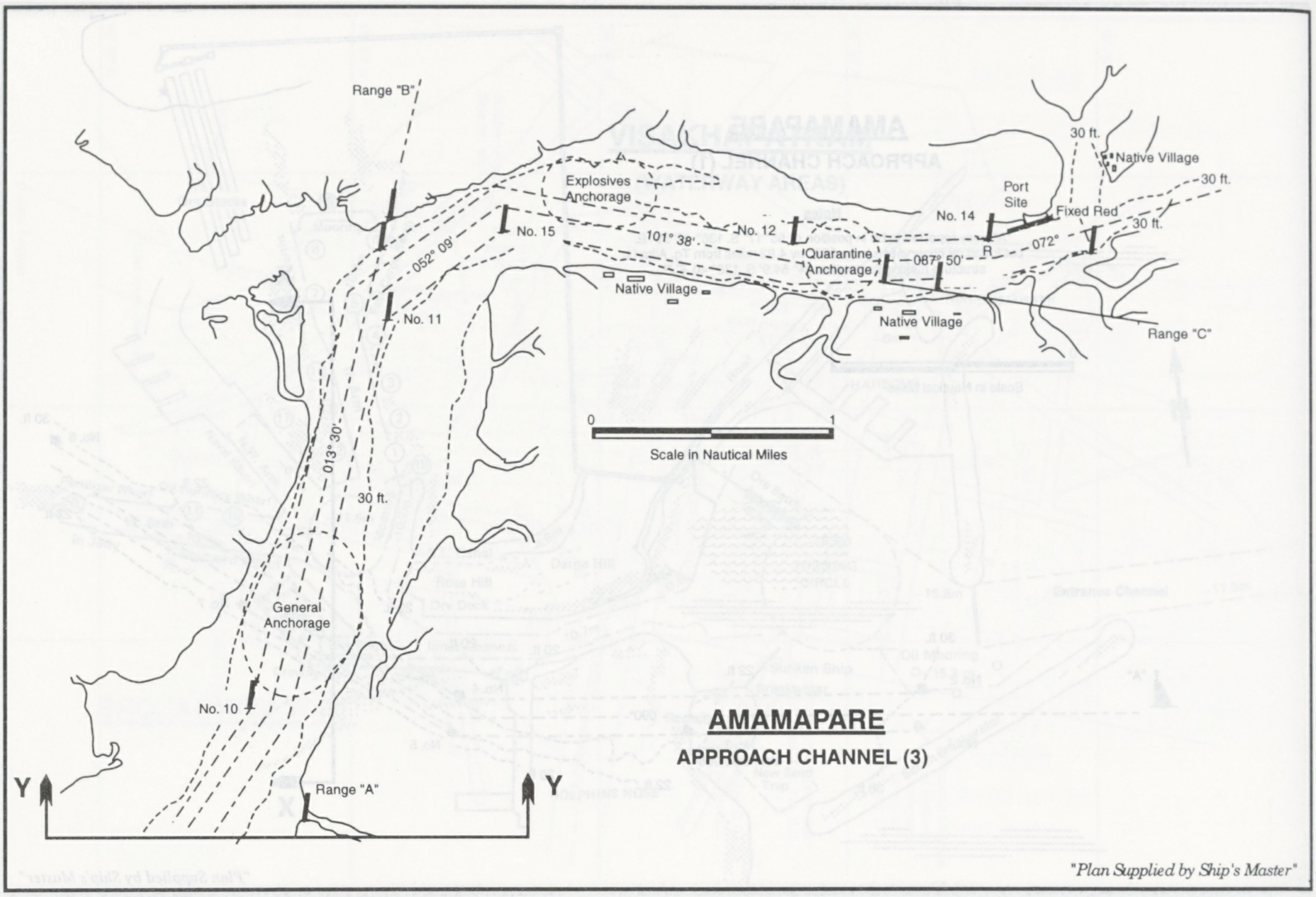


AMAMAPARE

APPROACH CHANNEL (2)

Unlit 26.1.95
0
1.0
Scale in Nautical Miles
No. 10
Range "A"
035°
Y
Y
No. 8
X
X
30 ft.
No. 9
Dries
No. 6
Dries
22 ft.
22 ft.
056° 29'
20 ft.
No. 7
20 ft.
20 ft.
No. 4
No. 5

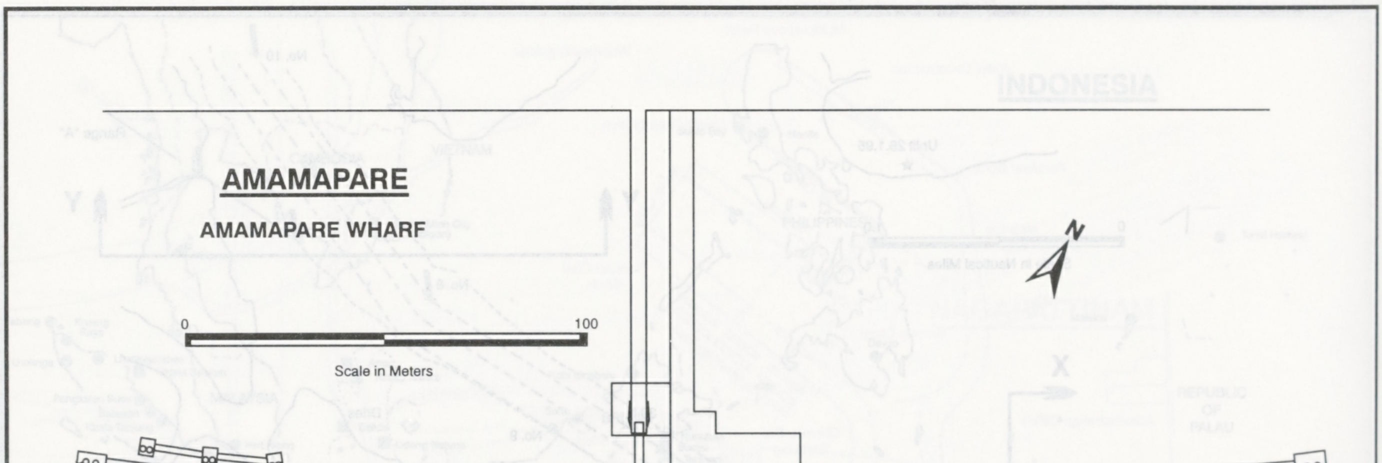
"Plan Supplied by Ship's Master"


Range "B"
30 ft.
Native Village
30 ft.
Port Site
Fixed Red
30 ft.
Explosives Anchorage
No. 15
No. 12
No. 14
101° 38'
052° 09'
Quarantine Anchorage
087° 50'
R
072°
Native Village
Native Village
Range "C"
No. 11
0
1
Scale in Nautical Miles
013° 30'
30 ft.
General Anchorage
No. 10
Y
Y
Range "A"

AMAMAPARE

APPROACH CHANNEL (3)

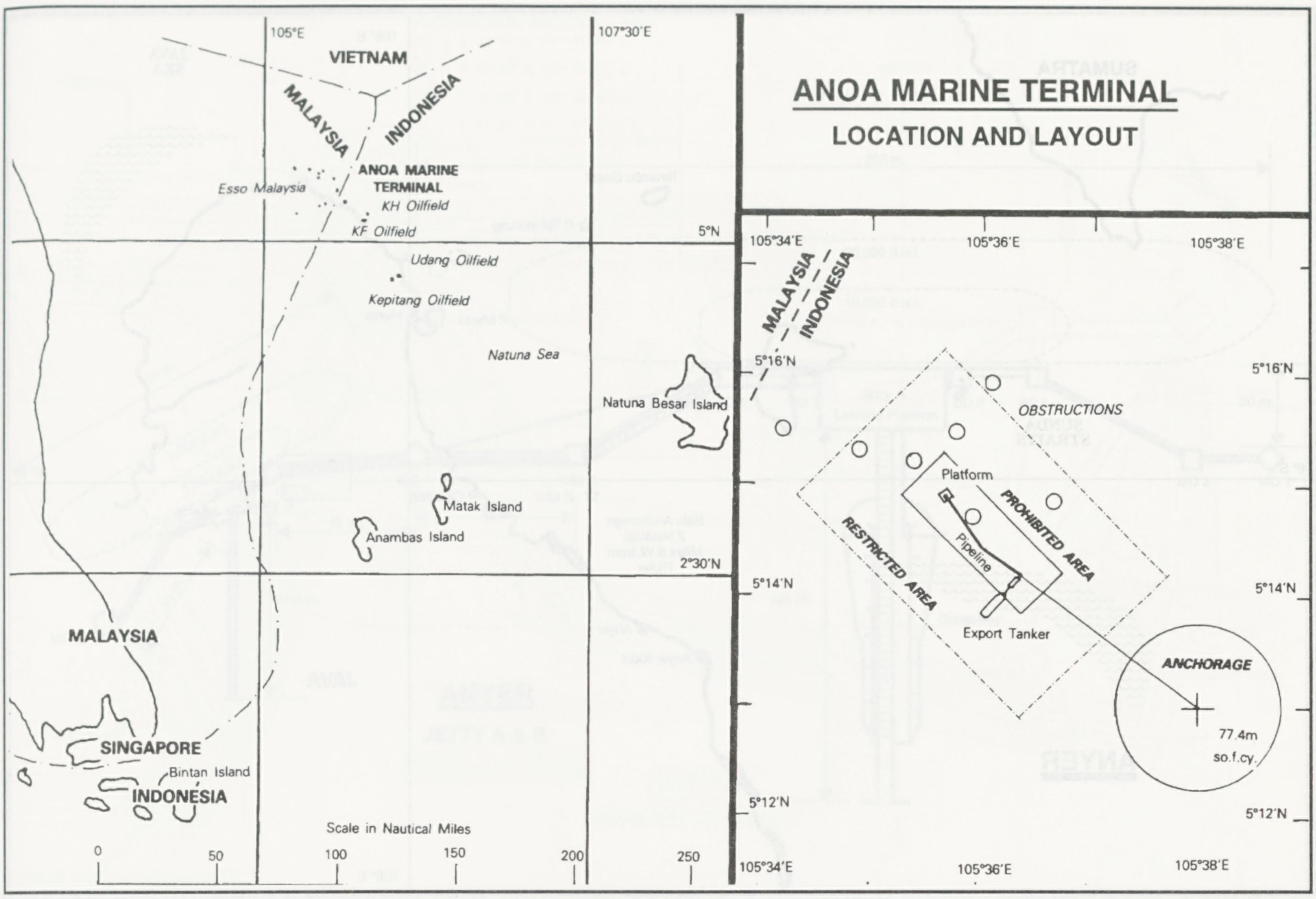
"Plan Supplied by Ship's Master"


N
0
100
Scale in Meters
5 Shackles
Straight Face 159 m.
Total Length 310 m.

AMAMAPARE

AMAMAPARE WHARF

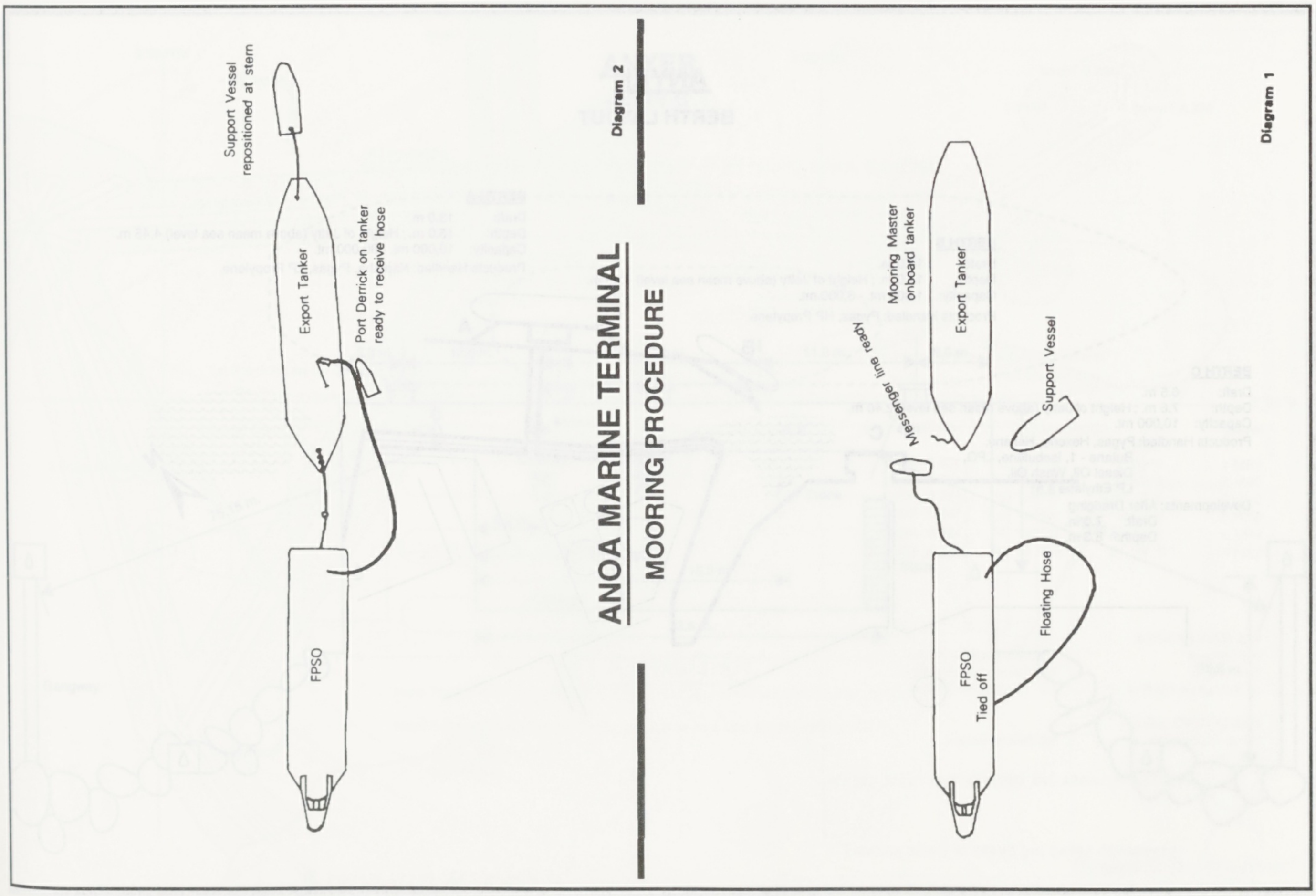
"Plan Supplied by Ship's Master"



ANOA MARINE TERMINAL

LOCATION AND LAYOUT

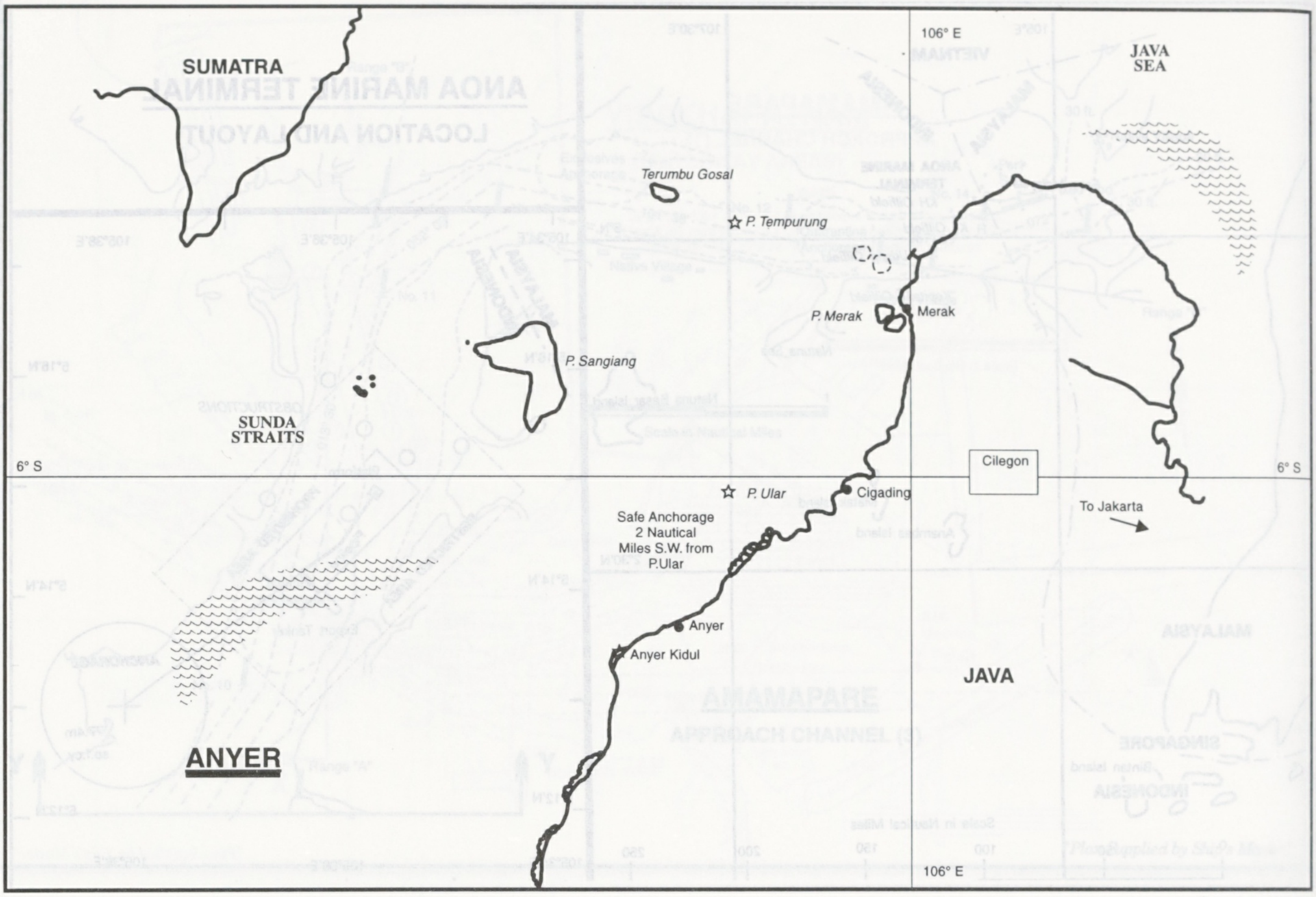
105°E
107°30'E
VIETNAM
MALAYSIA
INDONESIA
ANOA MARINE TERMINAL
Esso Malaysia
KH Oilfield
KF Oilfield
5°N
Udang Oilfield
Kepitang Oilfield
Natuna Sea
Natuna Besar Island
Matak Island
Anambas Island
2°30'N
MALAYSIA
SINGAPORE
Bintan Island
INDONESIA
Scale in Nautical Miles
0
50
100
150
200
250
105°34'E
105°36'E
105°38'E
MALAYSIA
INDONESIA
5°16'N
OBSTRUCTIONS
Platform
PROHIBITED AREA
RESTRICTED AREA
Pipeline
Export Tanker
5°14'N
ANCHORAGE
77.4m
so.f.cy.
5°12'N

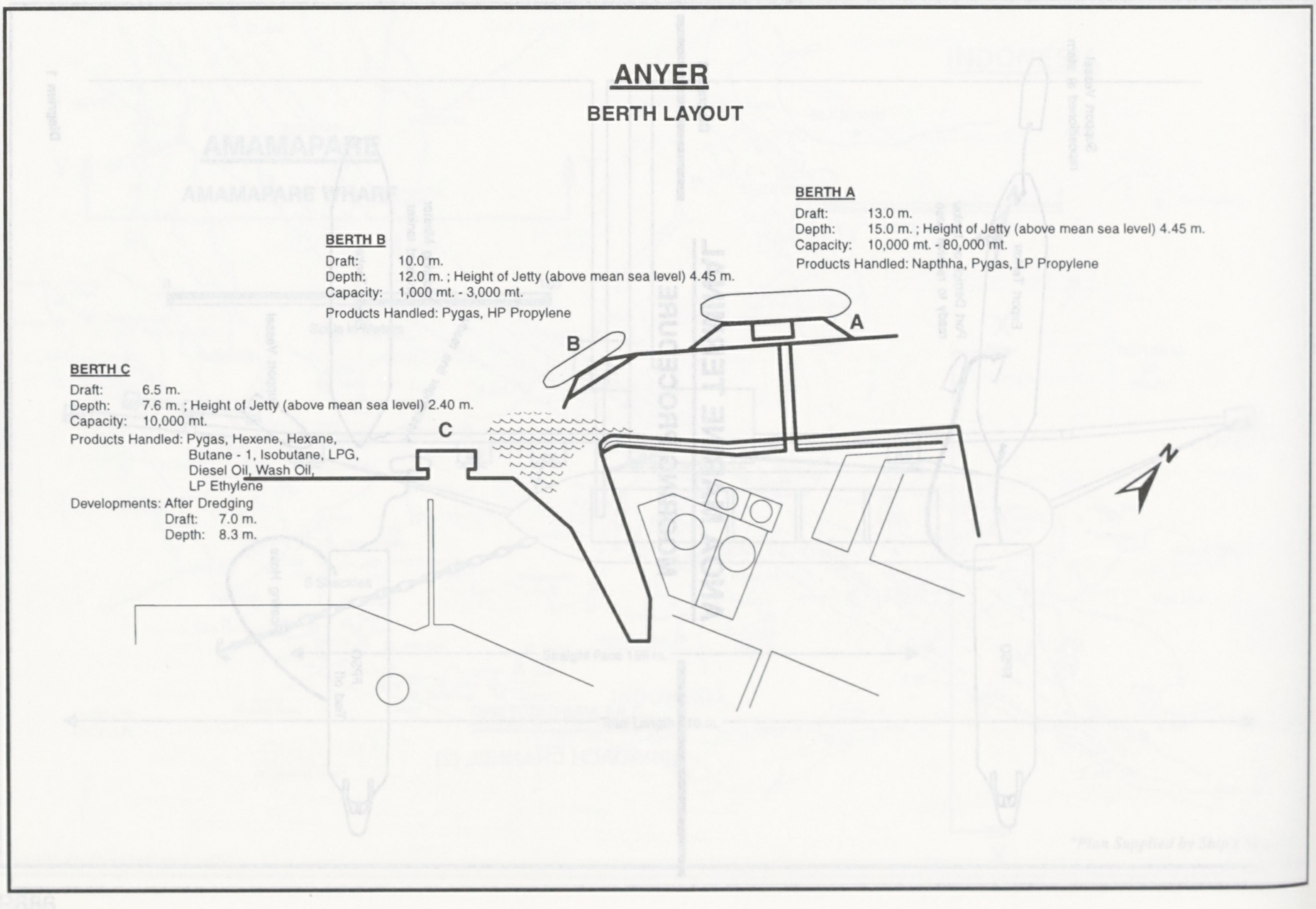


ANOA MARINE TERMINAL

MOORING PROCEDURE

Diagram 2
Support Vessel repositioned at stern
Export Tanker
Port Derrick on tanker ready to receive hose
FPSO
Diagram 1
Mooring Master onboard tanker
Export Tanker
Support Vessel
Messenger line reach
Floating Hose
FPSO
Tied off


SUMATRA
106° E
JAVA SEA
Terumbu Gosal
P. Tempurung
P. Merak
Merak
P. Sangiang
SUNDA STRAITS
6° S
Cilegon
6° S
P. Ular
Cigading
To Jakarta
Safe Anchorage 2 Nautical Miles S.W. from P.Ular
Anyer
Anyer Kidul
JAVA
ANYER
106° E



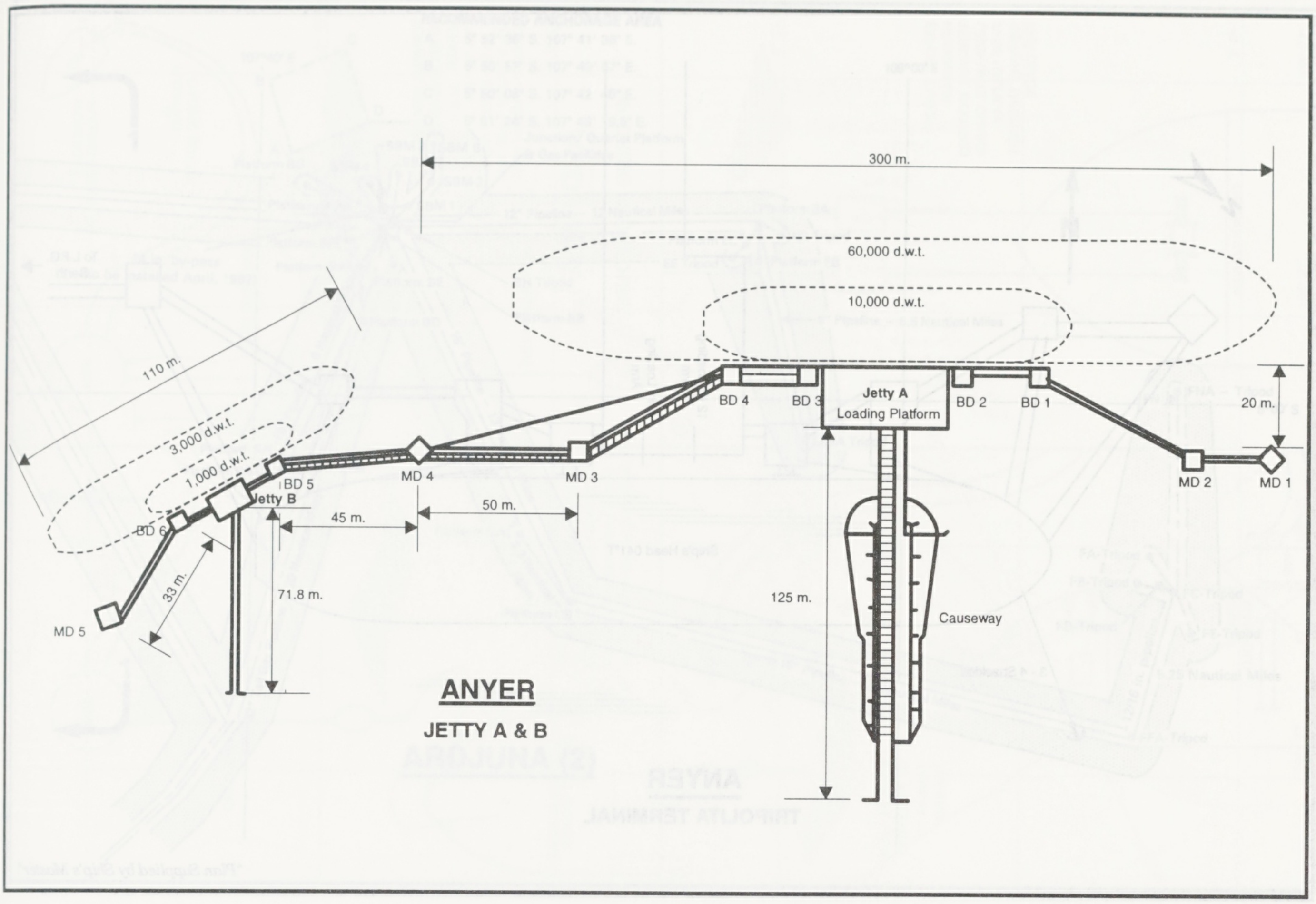
ANYER

BERTH LAYOUT

BERTH A
Draft: 13.0 m.
Depth: 15.0 m. ; Height of Jetty (above mean sea level) 4.45 m.
Capacity: 10,000 mt. - 80,000 mt.
Products Handled: Napthha, Pygas, LP Propylene

BERTH B
Draft: 10.0 m.
Depth: 12.0 m. ; Height of Jetty (above mean sea level) 4.45 m.
Capacity: 1,000 mt. - 3,000 mt.
Products Handled: Pygas, HP Propylene

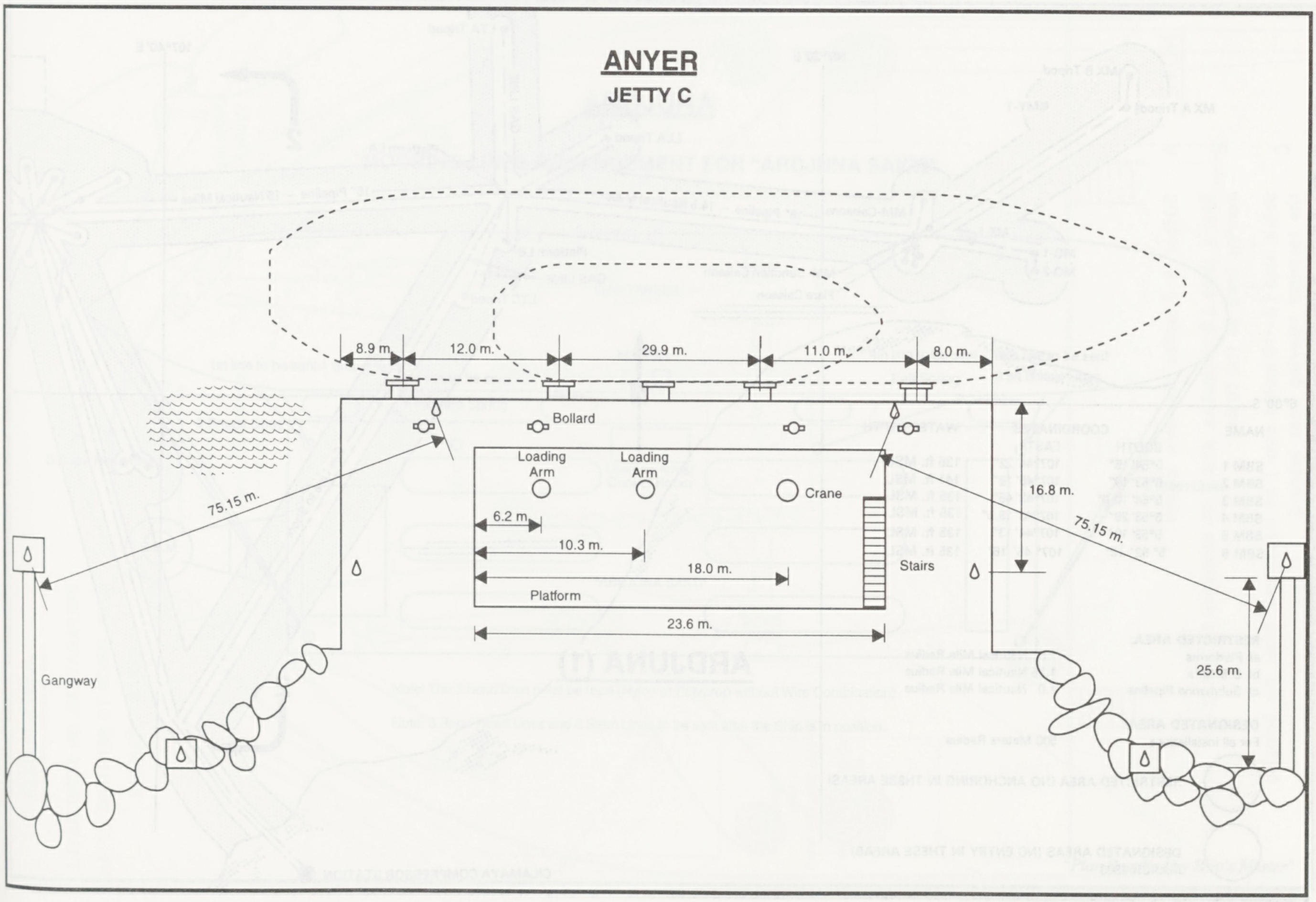
BERTH C
Draft: 6.5 m.
Depth: 7.6 m. ; Height of Jetty (above mean sea level) 2.40 m.
Capacity: 10,000 mt.
Products Handled: Pygas, Hexene, Hexane, Butane - 1, Isobutane, LPG, Diesel Oil, Wash Oil, LP Ethylene
Developments: After Dredging
Draft: 7.0 m.
Depth: 8.3 m.



ANYER

JETTY A & B

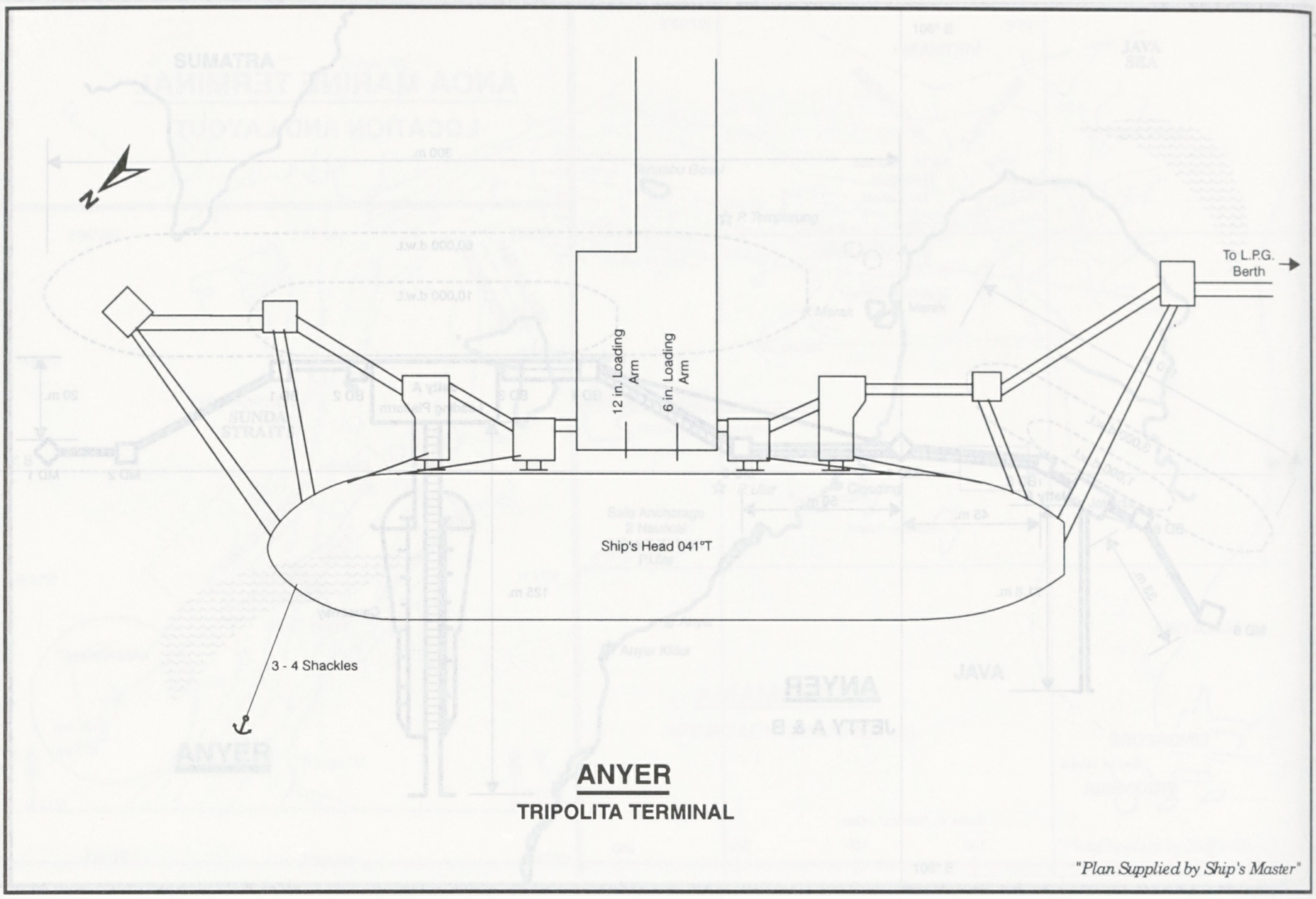
300 m.
60,000 d.w.t.
10,000 d.w.t.
110 m.
3,000 d.w.t.
1,000 d.w.t.
BD 5
Jetty B
BD 6
MD 5
33 m.
71.8 m.
45 m.
50 m.
MD 4
MD 3
BD 4
BD 3
Jetty A
Loading Platform
BD 2
BD 1
20 m.
MD 2
MD 1
125 m.
Causeway



ANYER

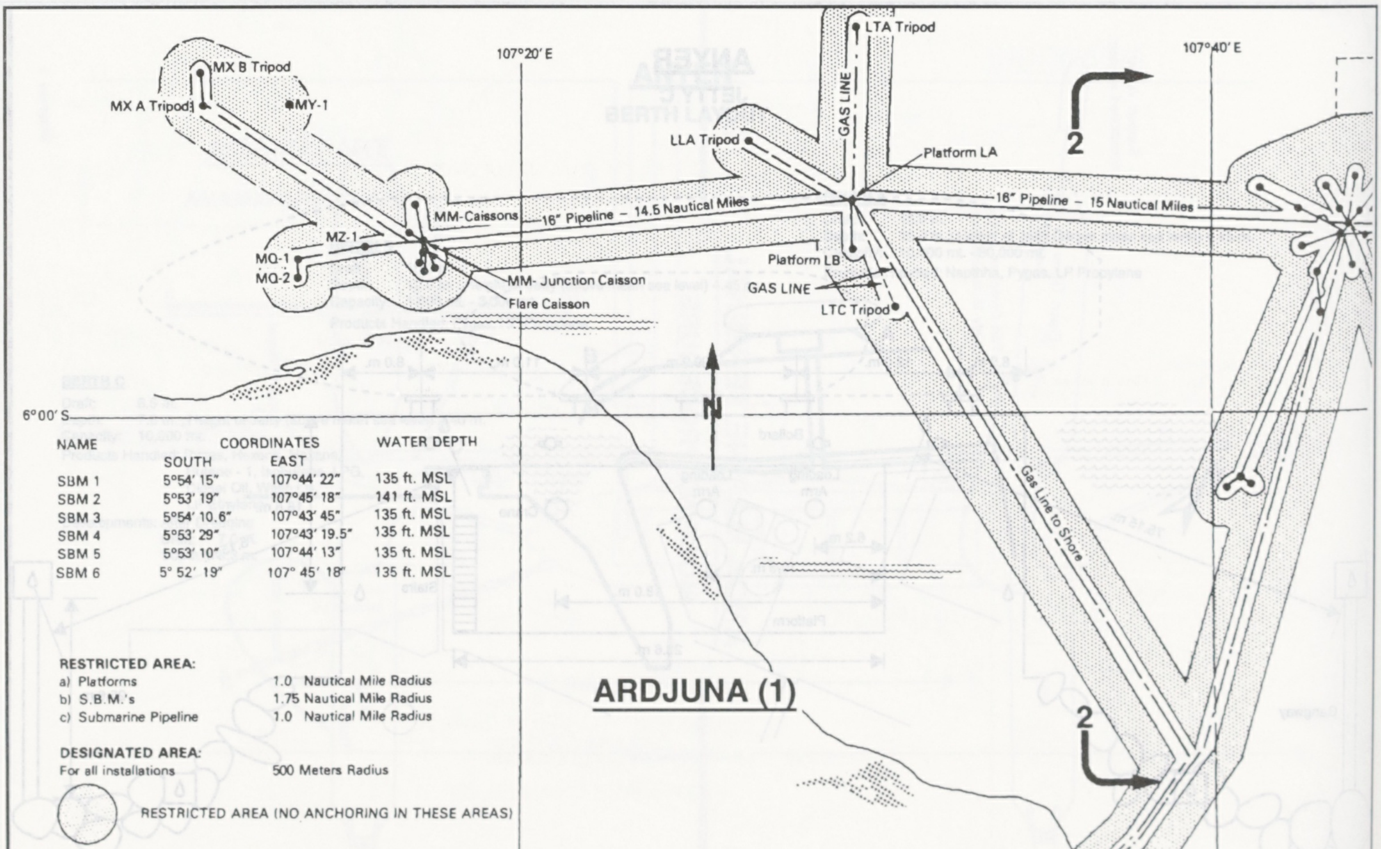
JETTY C

8.9 m.
12.0 m.
29.9 m.
11.0 m.
8.0 m.
Bollard
Loading Arm
Loading Arm
Crane
6.2 m.
10.3 m.
18.0 m.
Platform
23.6 m.
16.8 m.
Stairs
75.15 m.
75.15 m.
25.6 m.
Gangway


To L.P.G. Berth
12 in. Loading Arm
6 in. Loading Arm
Ship's Head 041°T
3 - 4 Shackles
N

ANYER
TRIPOLITA TERMINAL

"Plan Supplied by Ship's Master"


MX B Tripod
MX A Tripod
MY-1
107°20' E
LTA Tripod
GAS LINE
LLA Tripod
Platform LA
107°40' E
2
MM-Caissons
16" Pipeline – 14.5 Nautical Miles
16" Pipeline – 15 Nautical Miles
MZ-1
MQ-1
MQ-2
MM- Junction Caisson
Flare Caisson
Platform LB
GAS LINE
LTC Tripod
N
6°00' S
Gas Line to Shore
2
CILAMAYA COMPRESSOR STATION

NAME	COORDINATES SOUTH	COORDINATES EAST	WATER DEPTH
SBM 1	5°54' 15"	107°44' 22"	135 ft. MSL
SBM 2	5°53' 19"	107°45' 18"	141 ft. MSL
SBM 3	5°54' 10.6"	107°43' 45"	135 ft. MSL
SBM 4	5°53' 29"	107°43' 19.5"	135 ft. MSL
SBM 5	5°53' 10"	107°44' 13"	135 ft. MSL
SBM 6	5° 52' 19"	107° 45' 18"	135 ft. MSL

RESTRICTED AREA:

a) Platforms	1.0 Nautical Mile Radius
b) S.B.M.'s	1.75 Nautical Mile Radius
c) Submarine Pipeline	1.0 Nautical Mile Radius

DESIGNATED AREA:

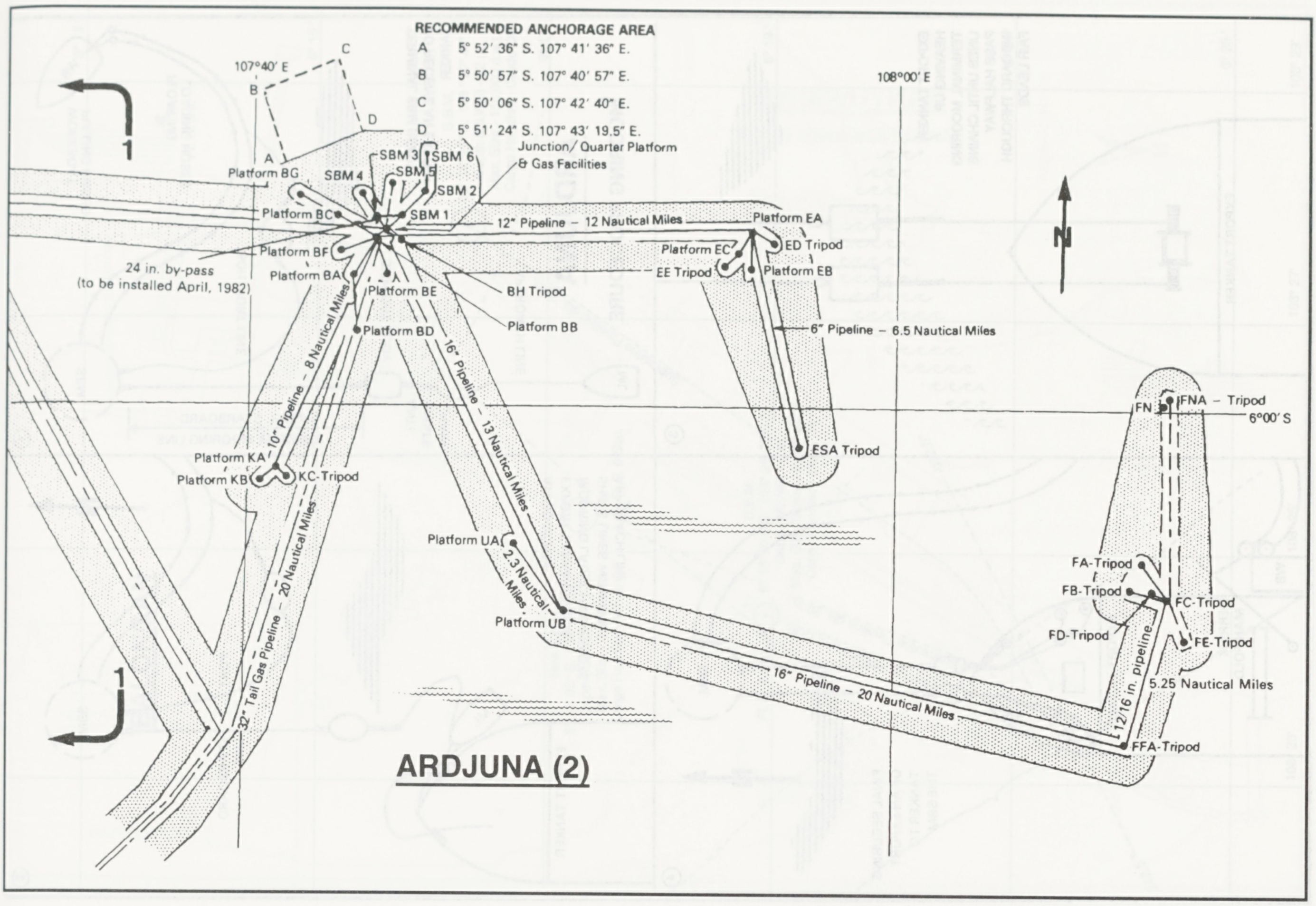
For all installations 500 Meters Radius

▨ RESTRICTED AREA (NO ANCHORING IN THESE AREAS)

○ DESIGNATED AREAS (NO ENTRY IN THESE AREAS)

MARCH 1980

ARDJUNA (1)

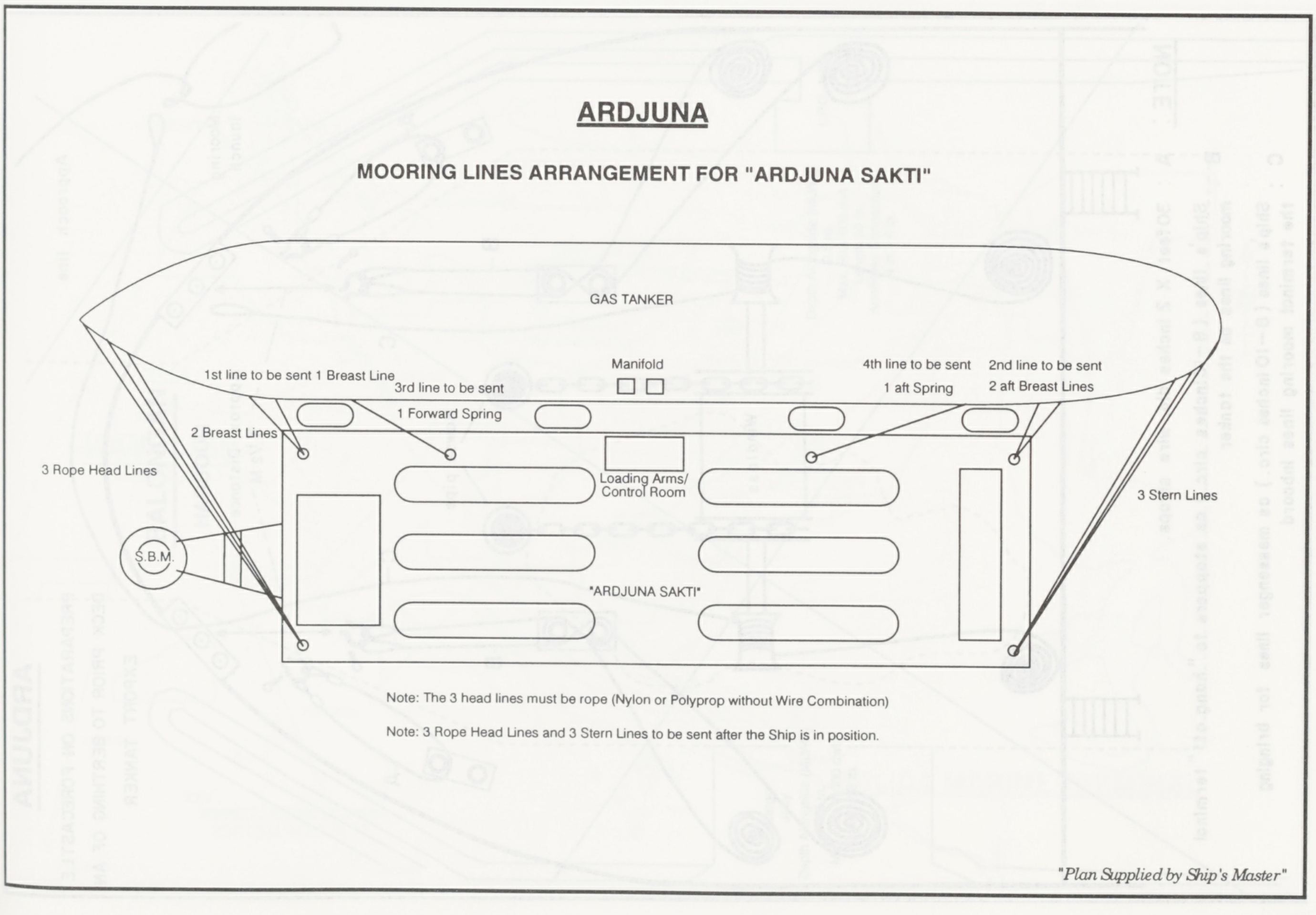


RECOMMENDED ANCHORAGE AREA

A	5° 52′ 36″ S. 107° 41′ 36″ E.
B	5° 50′ 57″ S. 107° 40′ 57″ E.
C	5° 50′ 06″ S. 107° 42′ 40″ E.
D	5° 51′ 24″ S. 107° 43′ 19.5″ E.

ARDJUNA (2)

107°40′ E
108°00′ E
6°00′ S
N
1
1
A
B
C
D
Platform BG
SBM 4
SBM 3
SBM 6
SBM 5
SBM 2
SBM 1
Junction/ Quarter Platform & Gas Facilities
Platform BC
Platform BF
Platform BA
Platform BE
Platform BD
BH Tripod
Platform BB
24 in. by-pass (to be installed April, 1982)
12″ Pipeline – 12 Nautical Miles
Platform EA
Platform EC
ED Tripod
EE Tripod
Platform EB
6″ Pipeline – 6.5 Nautical Miles
ESA Tripod
10″ Pipeline – 8 Nautical Miles
Platform KA
Platform KB
KC-Tripod
32″ Tail Gas Pipeline – 20 Nautical Miles
16″ Pipeline – 13 Nautical Miles
Platform UA
2.3 Nautical Miles
Platform UB
16″ Pipeline – 20 Nautical Miles
FN
FNA – Tripod
FA-Tripod
FB-Tripod
FC-Tripod
FD-Tripod
FE-Tripod
12/16 in. pipeline
5.25 Nautical Miles
FFA-Tripod



ARDJUNA

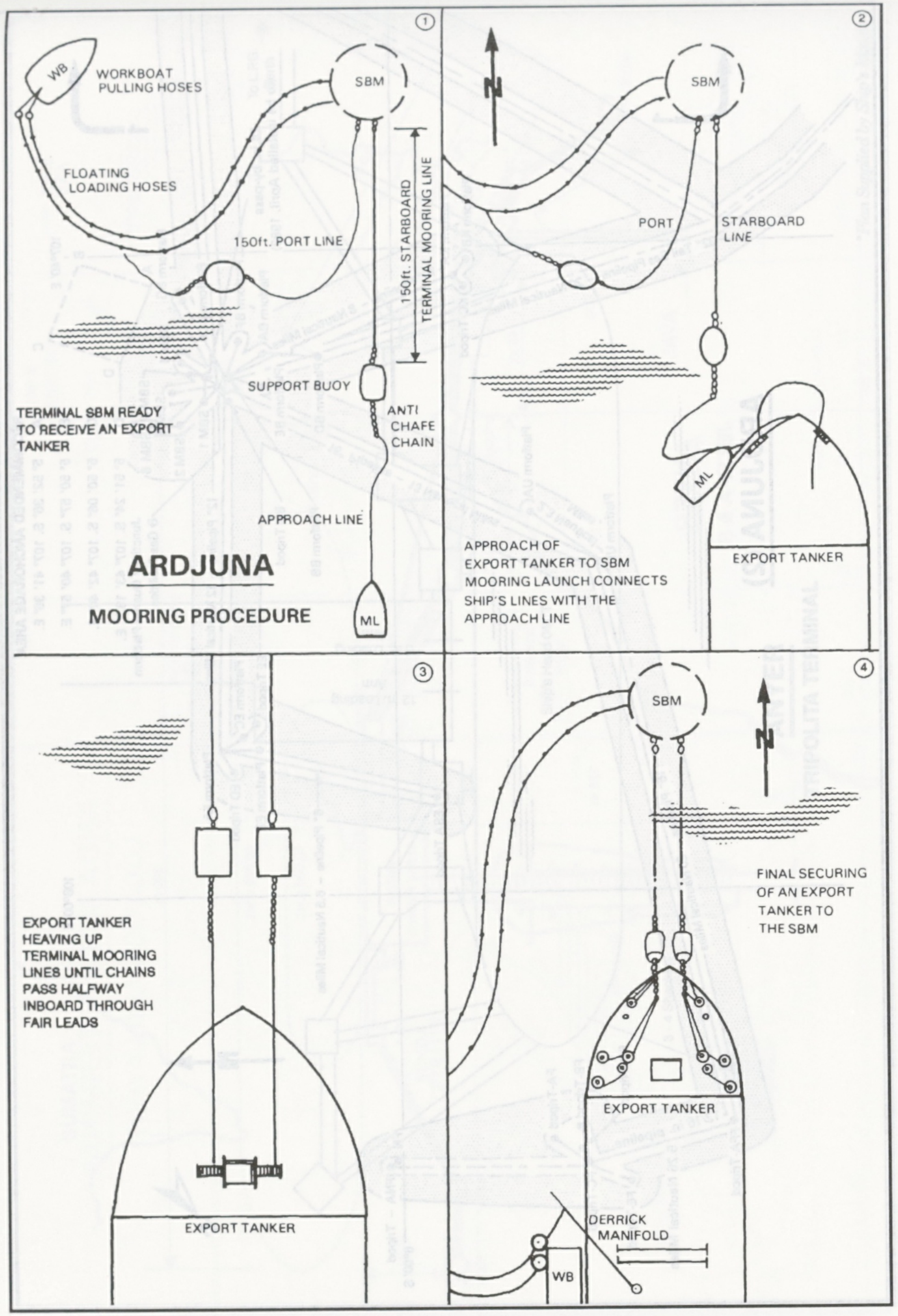
MOORING LINES ARRANGEMENT FOR "ARDJUNA SAKTI"

GAS TANKER
Manifold
1st line to be sent 1 Breast Line
3rd line to be sent
1 Forward Spring
4th line to be sent
1 aft Spring
2nd line to be sent
2 aft Breast Lines
2 Breast Lines
3 Rope Head Lines
Loading Arms/ Control Room
3 Stern Lines
S.B.M.
"ARDJUNA SAKTI"

Note: The 3 head lines must be rope (Nylon or Polyprop without Wire Combination)

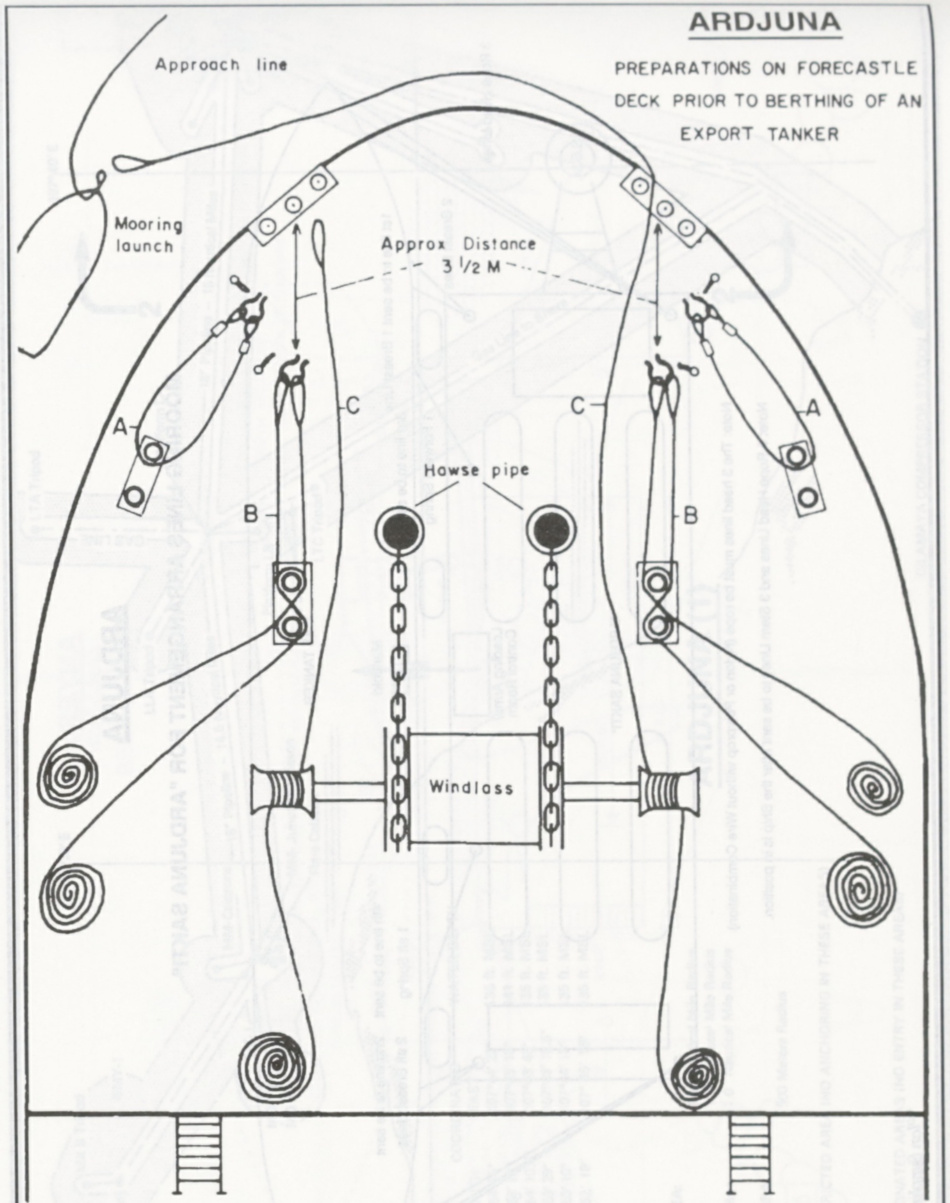
Note: 3 Rope Head Lines and 3 Stern Lines to be sent after the Ship is in position.

"Plan Supplied by Ship's Master"


①
WB
WORKBOAT PULLING HOSES
SBM
FLOATING LOADING HOSES
150ft. PORT LINE
150ft. STARBOARD TERMINAL MOORING LINE
SUPPORT BUOY
ANTI CHAFE CHAIN
APPROACH LINE
ML
TERMINAL SBM READY TO RECEIVE AN EXPORT TANKER
ARDJUNA
MOORING PROCEDURE
②
N
SBM
PORT
STARBOARD LINE
ML
EXPORT TANKER
APPROACH OF EXPORT TANKER TO SBM MOORING LAUNCH CONNECTS SHIP'S LINES WITH THE APPROACH LINE
③
EXPORT TANKER HEAVING UP TERMINAL MOORING LINES UNTIL CHAINS PASS HALFWAY INBOARD THROUGH FAIR LEADS
EXPORT TANKER
④
SBM
N
FINAL SECURING OF AN EXPORT TANKER TO THE SBM
EXPORT TANKER
DERRICK MANIFOLD
WB

ARDJUNA

PREPARATIONS ON FORECASTLE DECK PRIOR TO BERTHING OF AN EXPORT TANKER

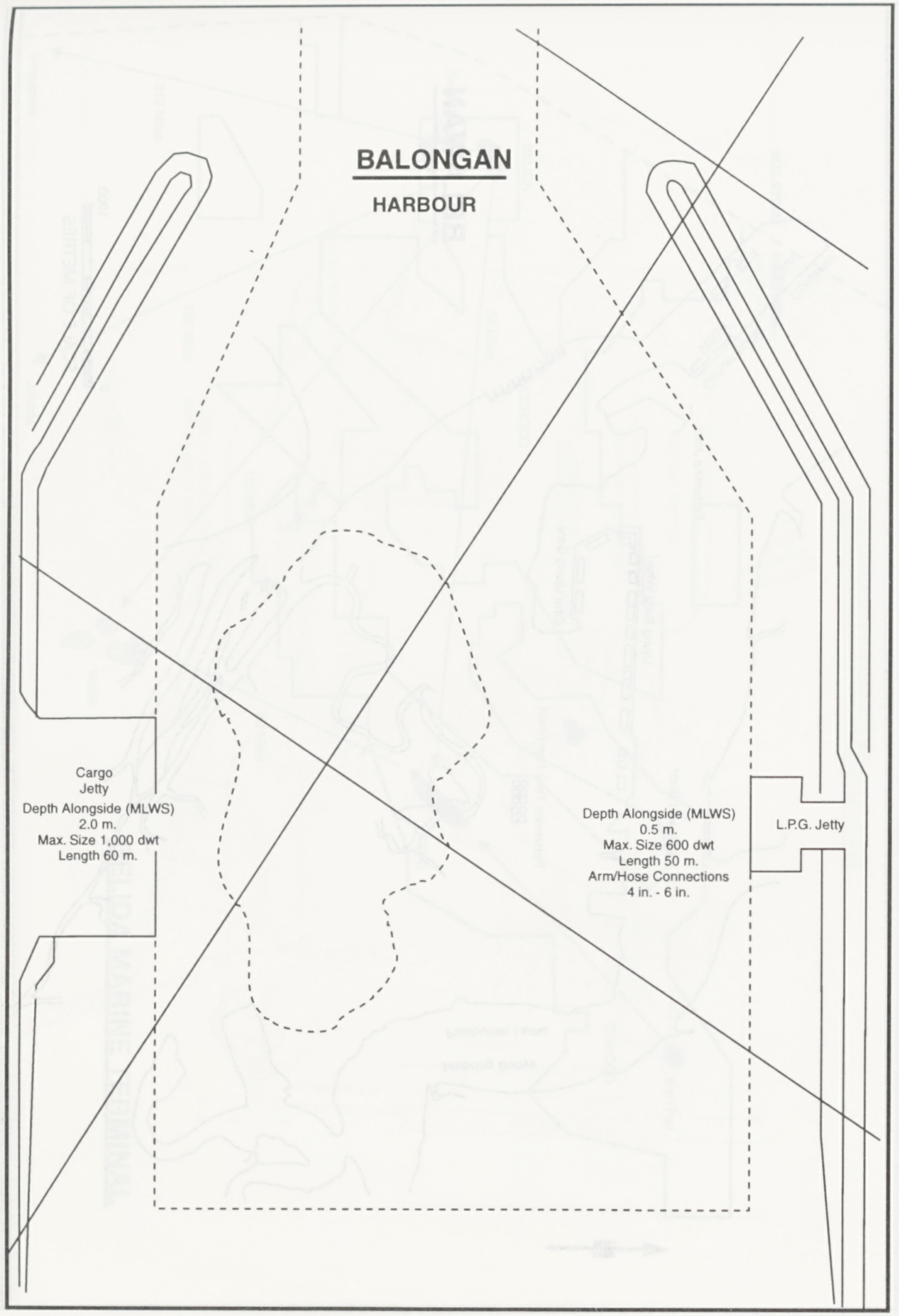

Approach line
Mooring launch
Approx Distance 3 1/2 M
A
B
C
Hawse pipe
Windlass

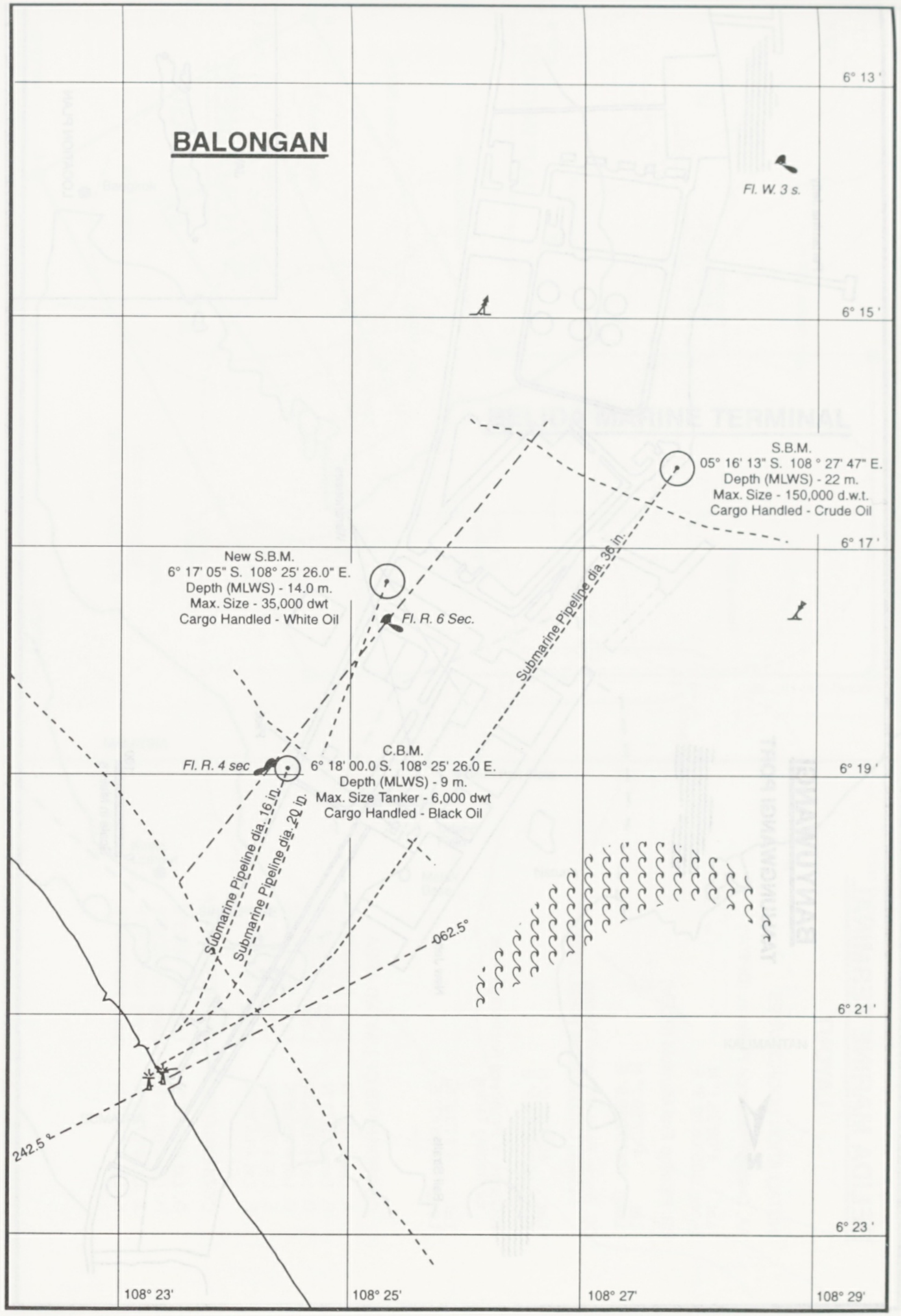
NOTE :

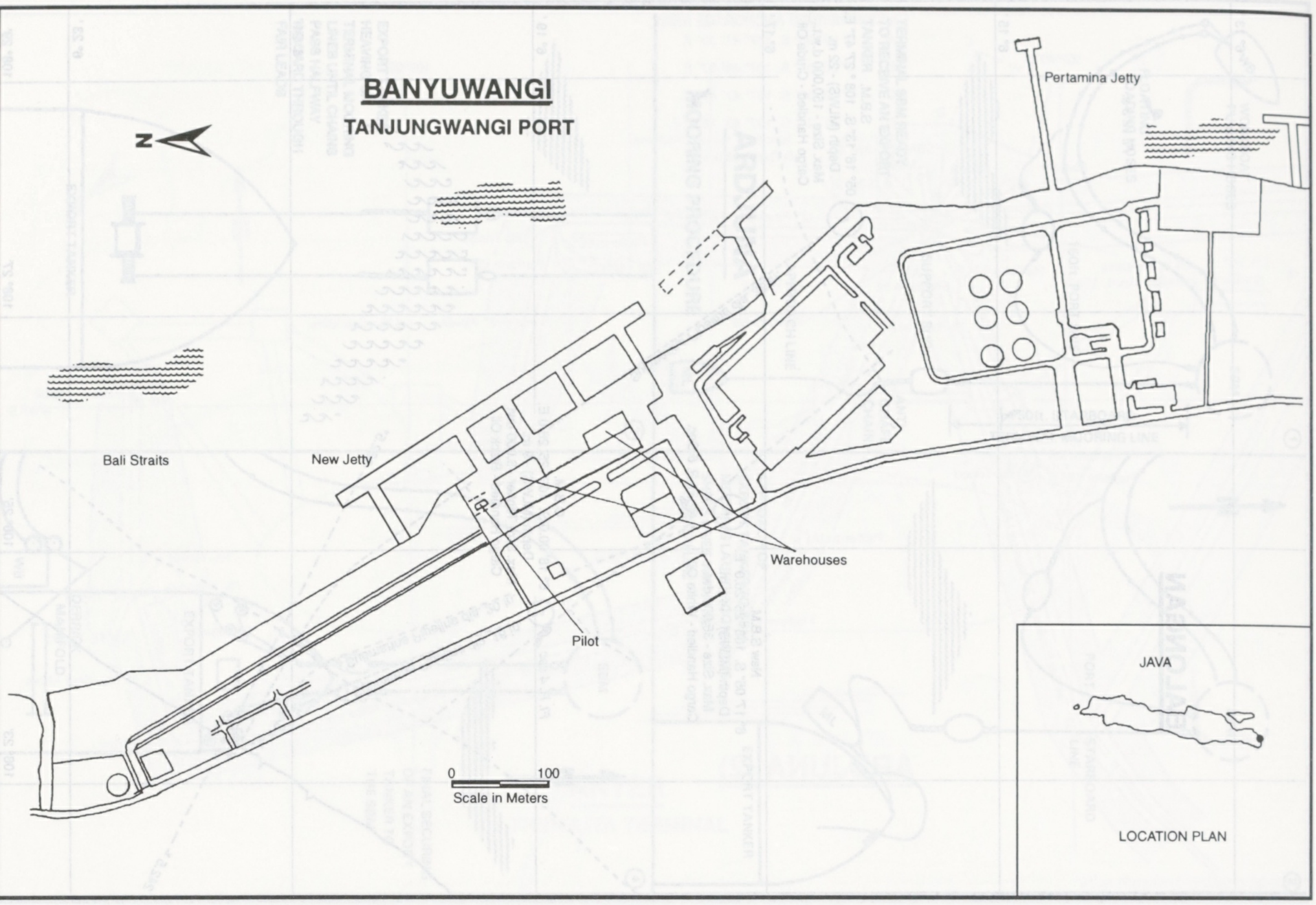
A : 30feet X 2 inches dia. wire strops.

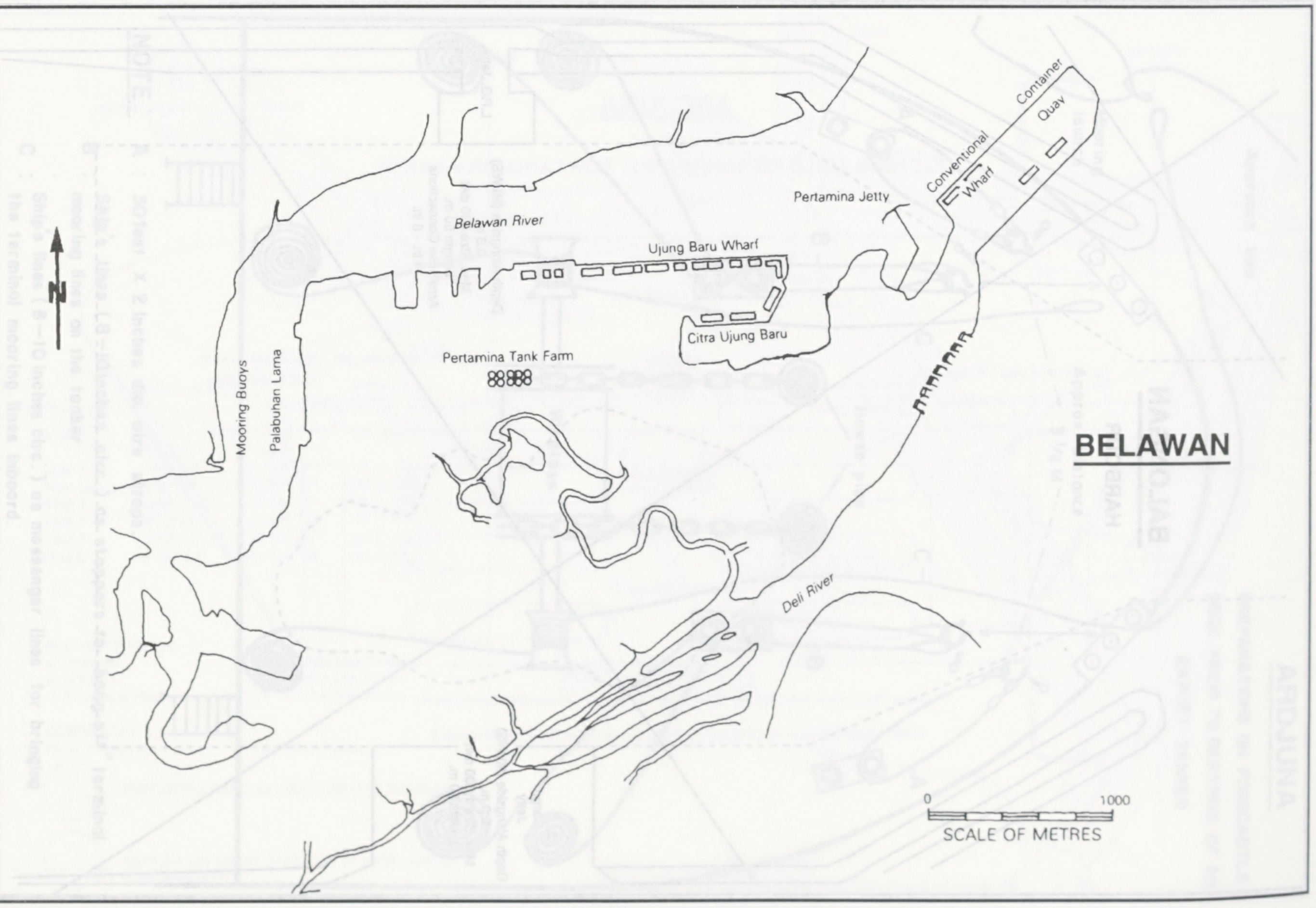
B : Ship's lines (8–10inches circ.) as stoppers to "hang off" terminal mooring lines on the tanker

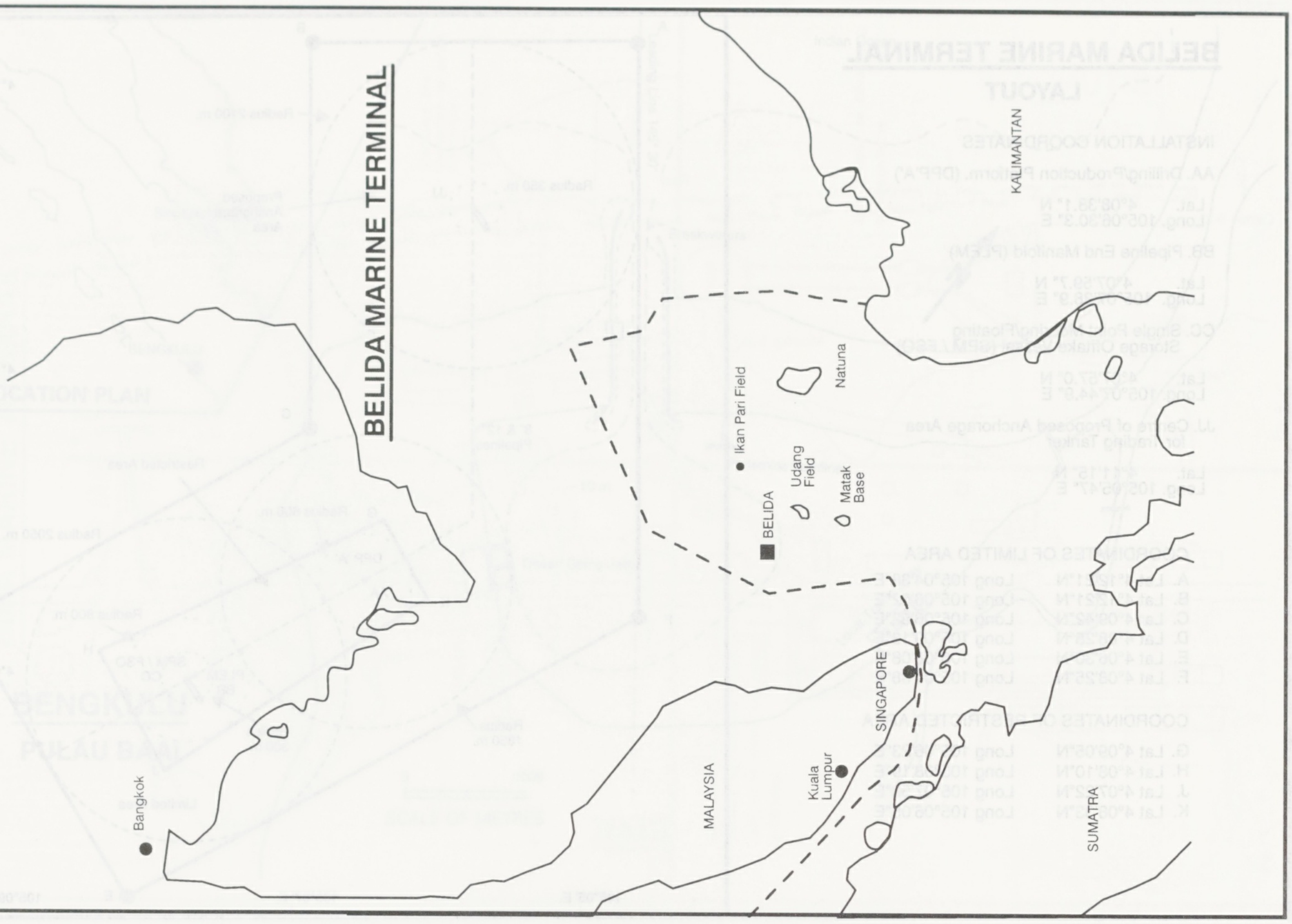
C : Ship's lines (8–10 inches circ.) as messenger lines for bringing the terminal mooring lines inboard.


BALONGAN
HARBOUR
Cargo
Jetty
Depth Alongside (MLWS)
2.0 m.
Max. Size 1,000 dwt
Length 60 m.
Depth Alongside (MLWS)
0.5 m.
Max. Size 600 dwt
Length 50 m.
Arm/Hose Connections
4 in. - 6 in.
L.P.G. Jetty

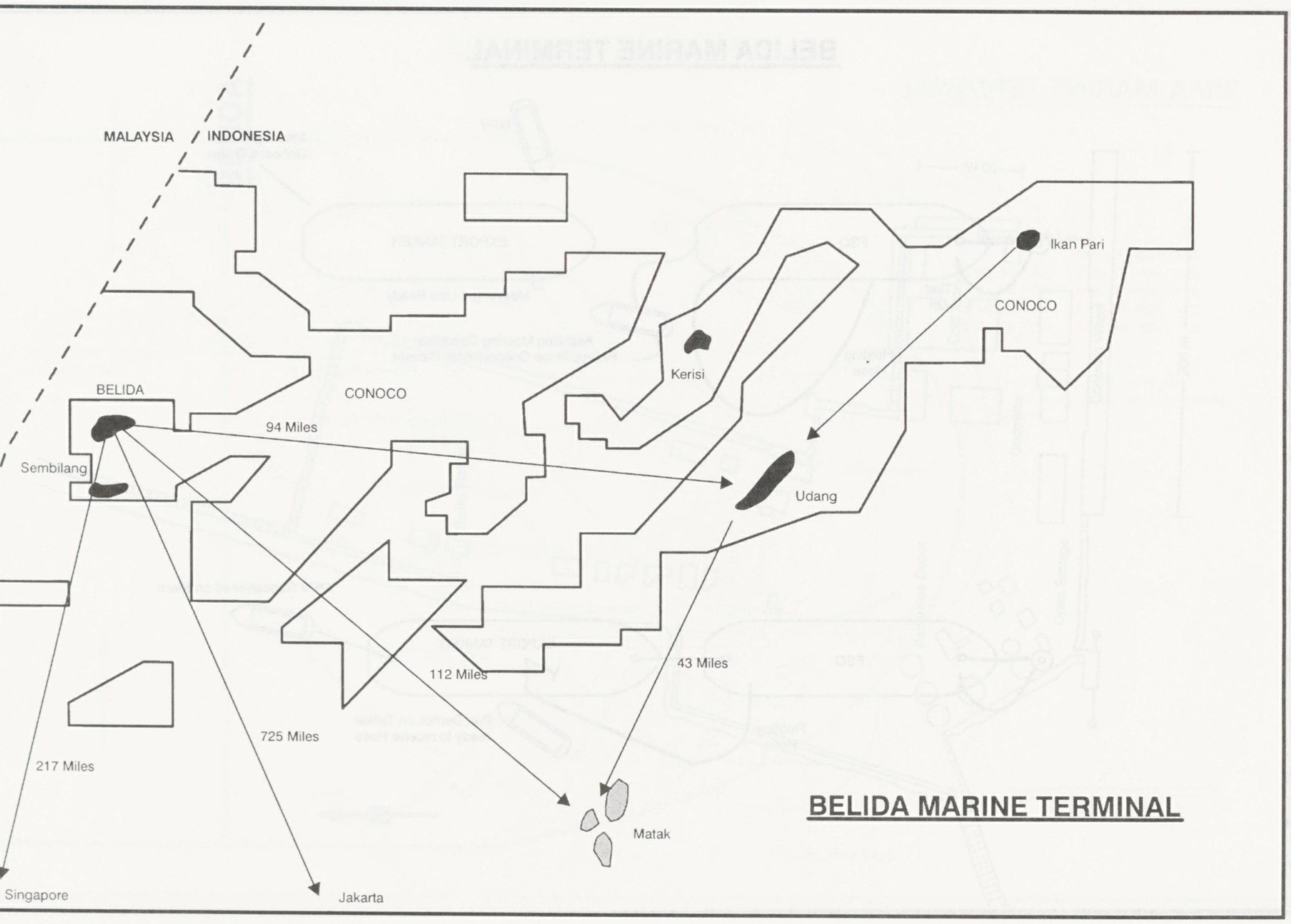

BALONGAN
Fl. W. 3 s.
6° 13 '
6° 15 '
S.B.M.
05° 16' 13" S. 108 ° 27' 47" E.
Depth (MLWS) - 22 m.
Max. Size - 150,000 d.w.t.
Cargo Handled - Crude Oil
6° 17 '
New S.B.M.
6° 17' 05" S. 108° 25' 26.0" E.
Depth (MLWS) - 14.0 m.
Max. Size - 35,000 dwt
Cargo Handled - White Oil
Fl. R. 6 Sec.
Submarine Pipeline dia. 36 in.
Fl. R. 4 sec
C.B.M.
6° 18' 00.0 S. 108° 25' 26.0 E.
Depth (MLWS) - 9 m.
Max. Size Tanker - 6,000 dwt
Cargo Handled - Black Oil
6° 19 '
Submarine Pipeline dia. 16 in.
Submarine Pipeline dia. 20 in.
062.5°
6° 21 '
242.5 °
6° 23 '
108° 23'
108° 25'
108° 27'
108° 29'


BANYUWANGI
TANJUNGWANGI PORT
N
Pertamina Jetty
Bali Straits
New Jetty
Warehouses
Pilot
0
100
Scale in Meters
JAVA
LOCATION PLAN


Container
Quay
Conventional
Wharf
Pertamina Jetty
Belawan River
Ujung Baru Wharf
Citra Ujung Baru
Pertamina Tank Farm
N
Mooring Buoys
Palabuhan Lama
BELAWAN
Deli River
0
1000
SCALE OF METRES


BELIDA MARINE TERMINAL

KALIMANTAN
Natuna
Ikan Pari Field
Udang Field
Matak Base
BELIDA
SINGAPORE
MALAYSIA
Kuala Lumpur
SUMATRA
Bangkok


BELIDA MARINE TERMINAL

MALAYSIA
INDONESIA
BELIDA
CONOCO
Sembilang
94 Miles
Kerisi
Ikan Pari
CONOCO
Udang
112 Miles
43 Miles
725 Miles
217 Miles
Matak
Singapore
Jakarta

BELIDA MARINE TERMINAL

LAYOUT

INSTALLATION COORDINATES

AA. Drilling/Production Platform. (DPP'A')

Lat. 4°08'38.1" N
Long. 105°06'30.3" E

BB. Pipeline End Manifold (PLEM)

Lat. 4°07'59.7" N
Long. 105°07'38.9" E

CC. Single Point Mooring/Floating Storage Offtake Vessel (SPM / FSO)

Lat. 4°07'57.0" N
Long. 105°07'44.9" E

JJ. Centre of Proposed Anchorage Area for Trading Tanker

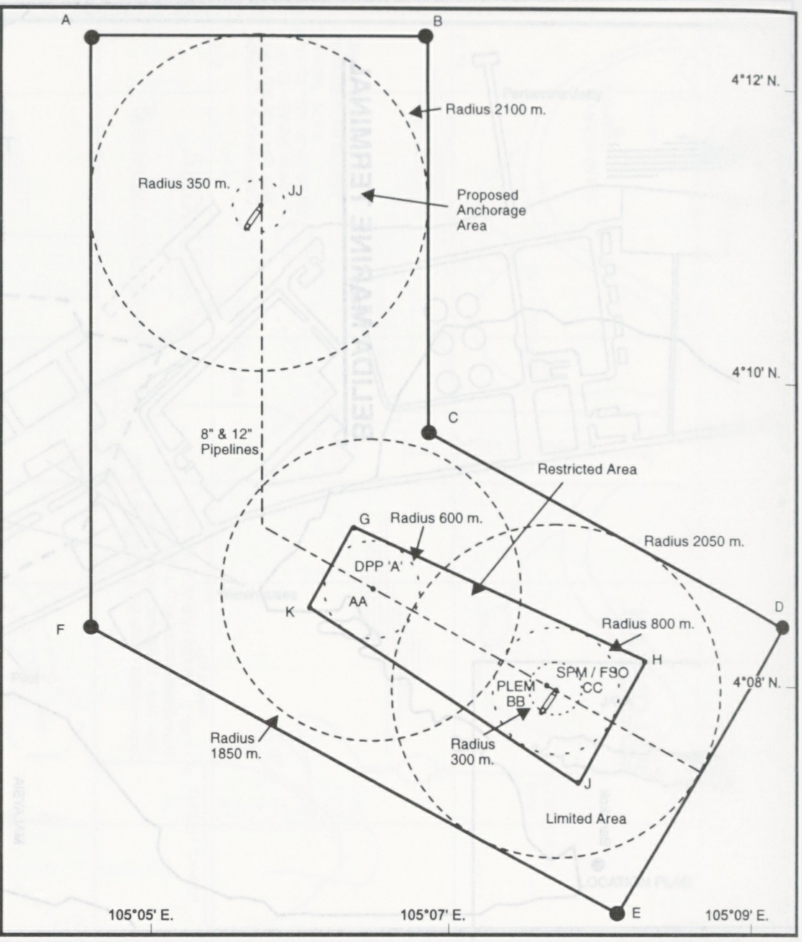
Lat. 4°11'15" N
Long. 105°05'47" E

COORDINATES OF LIMITED AREA

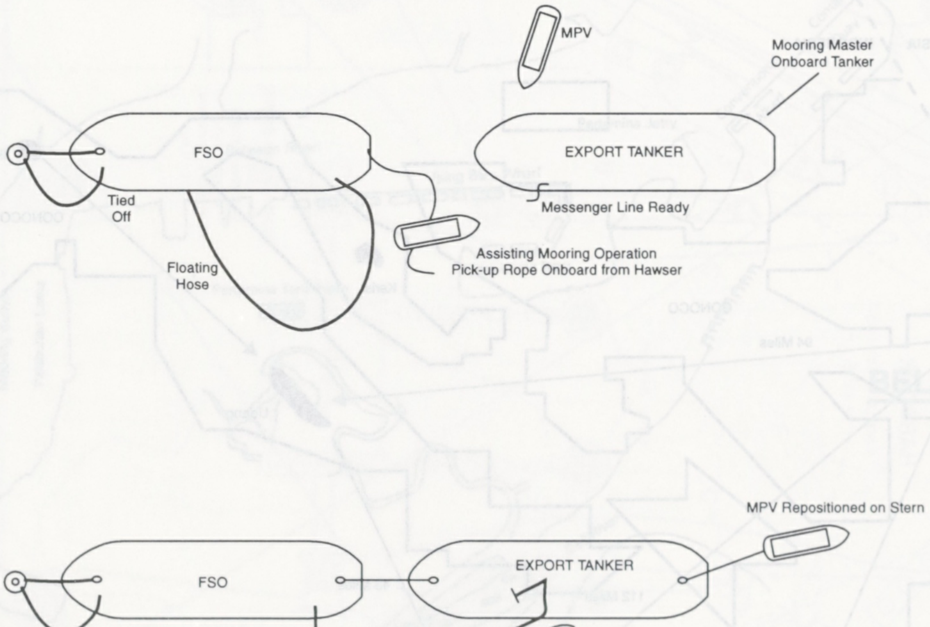
A.	Lat 4°12'21"N	Long 105°04'38"E
B.	Lat 4°12'21"N	Long 105°06'52"E
C.	Lat 4°09'42"N	Long 105°06'52"E
D.	Lat 4°08'25"N	Long 105°09'13"E
E.	Lat 4°06'30"N	Long 105°08'08"E
F.	Lat 4°08'25"N	Long 105°04'38"E

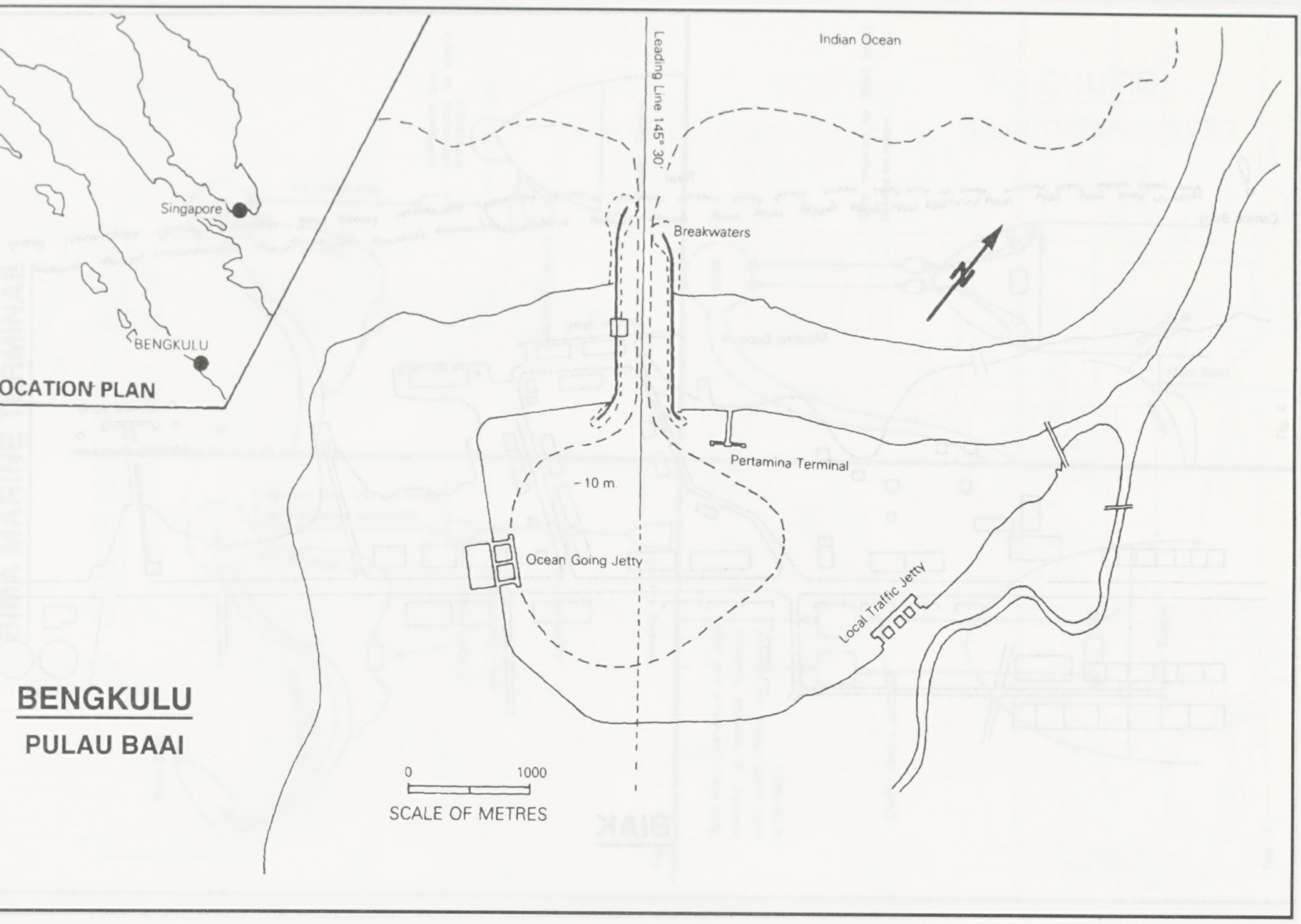
COORDINATES OF RESTRICTED AREA

G.	Lat 4°09'05"N	Long 105°06'23"E
H.	Lat 4°08'10"N	Long 105°08'19"E
J.	Lat 4°07'22"N	Long 105°07'53"E
K.	Lat 4°08'33"N	Long 105°06'05"E


A
B
4°12' N.
Radius 2100 m.
Radius 350 m.
JJ
Proposed Anchorage Area
4°10' N.
C
8" & 12" Pipelines
Restricted Area
G
Radius 600 m.
Radius 2050 m.
DPP 'A'
K
AA
D
F
Radius 800 m.
H
SPM / FSO
CC
PLEM
BB
4°08' N.
Radius 1850 m.
Radius 300 m.
J
Limited Area
E
105°05' E.
105°07' E.
105°09' E.

BELIDA MARINE TERMINAL

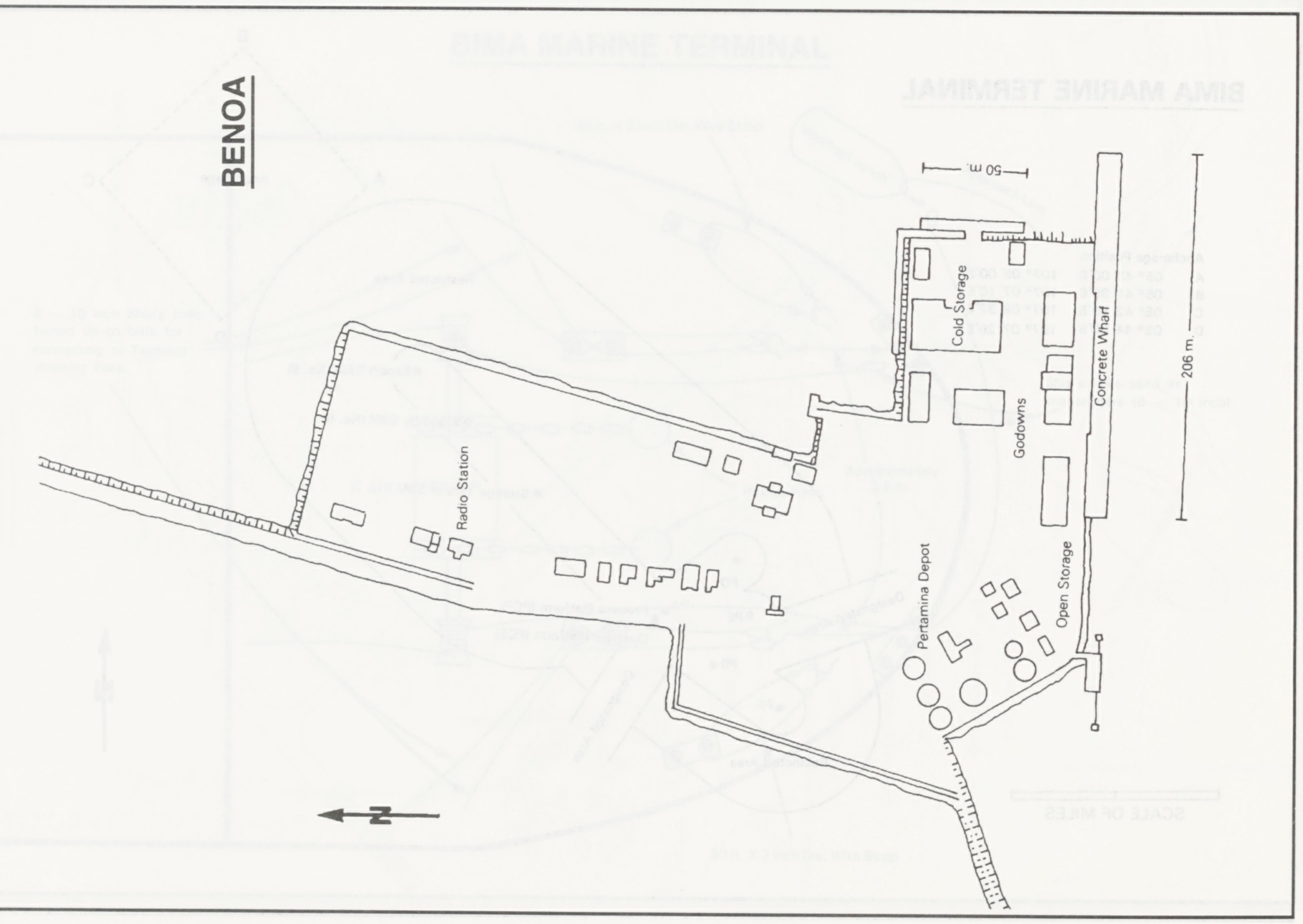

MPV
Mooring Master Onboard Tanker
FSO
EXPORT TANKER
Tied Off
Messenger Line Ready
Floating Hose
Assisting Mooring Operation
Pick-up Rope Onboard from Hawser
MPV Repositioned on Stern
FSO
EXPORT TANKER
Floating Hose
Port Derrick on Tanker ready to receive Hose



BENGKULU

PULAU BAAI

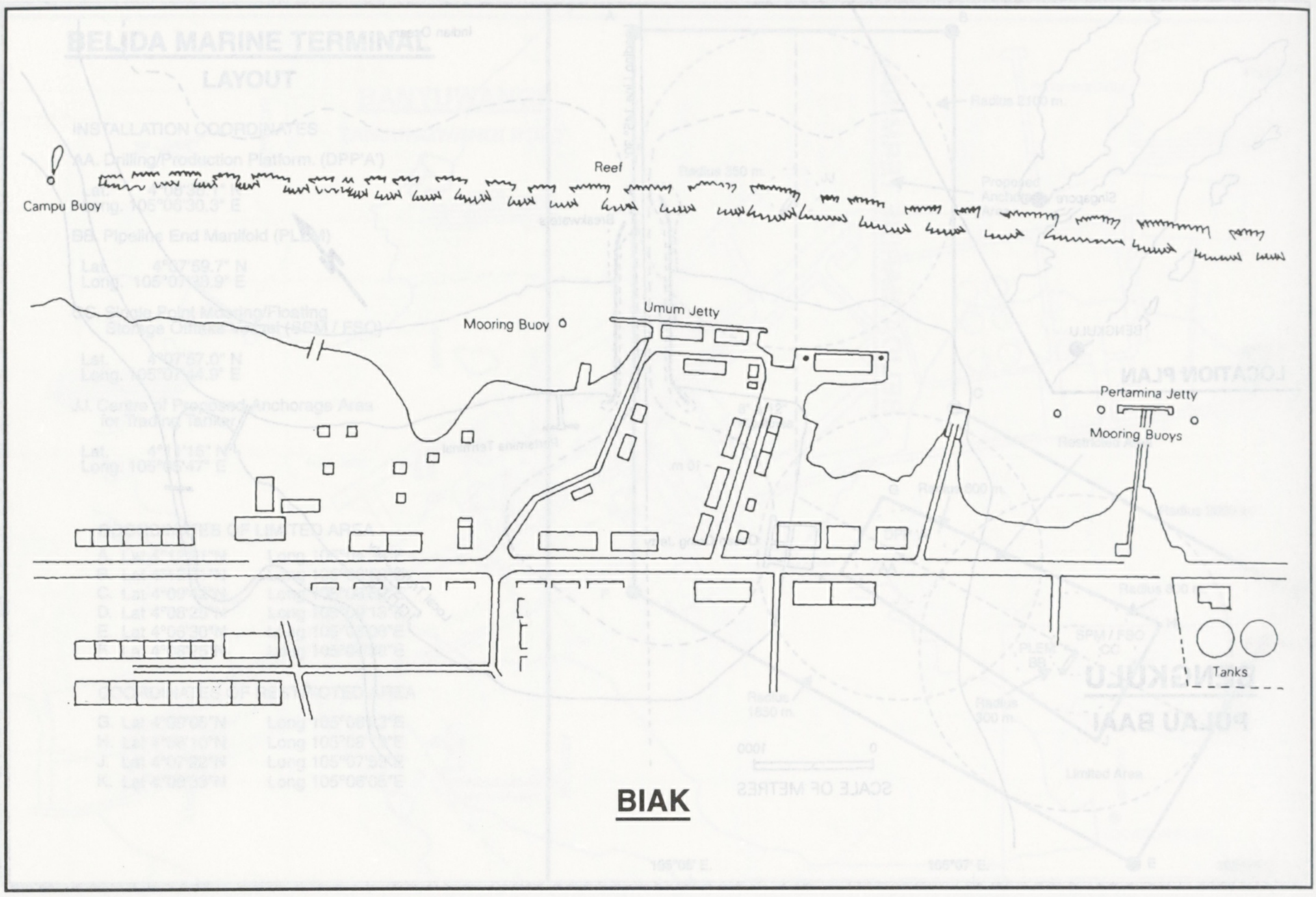
Indian Ocean
Leading Line 145° 30'
Breakwaters
Pertamina Terminal
−10 m
Ocean Going Jetty
Local Traffic Jetty
0
1000
SCALE OF METRES
Singapore
BENGKULU
OCATION PLAN
N



BENOA

50 m.
206 m.
Cold Storage
Godowns
Concrete Wharf
Radio Station
Pertamina Depot
Open Storage
N

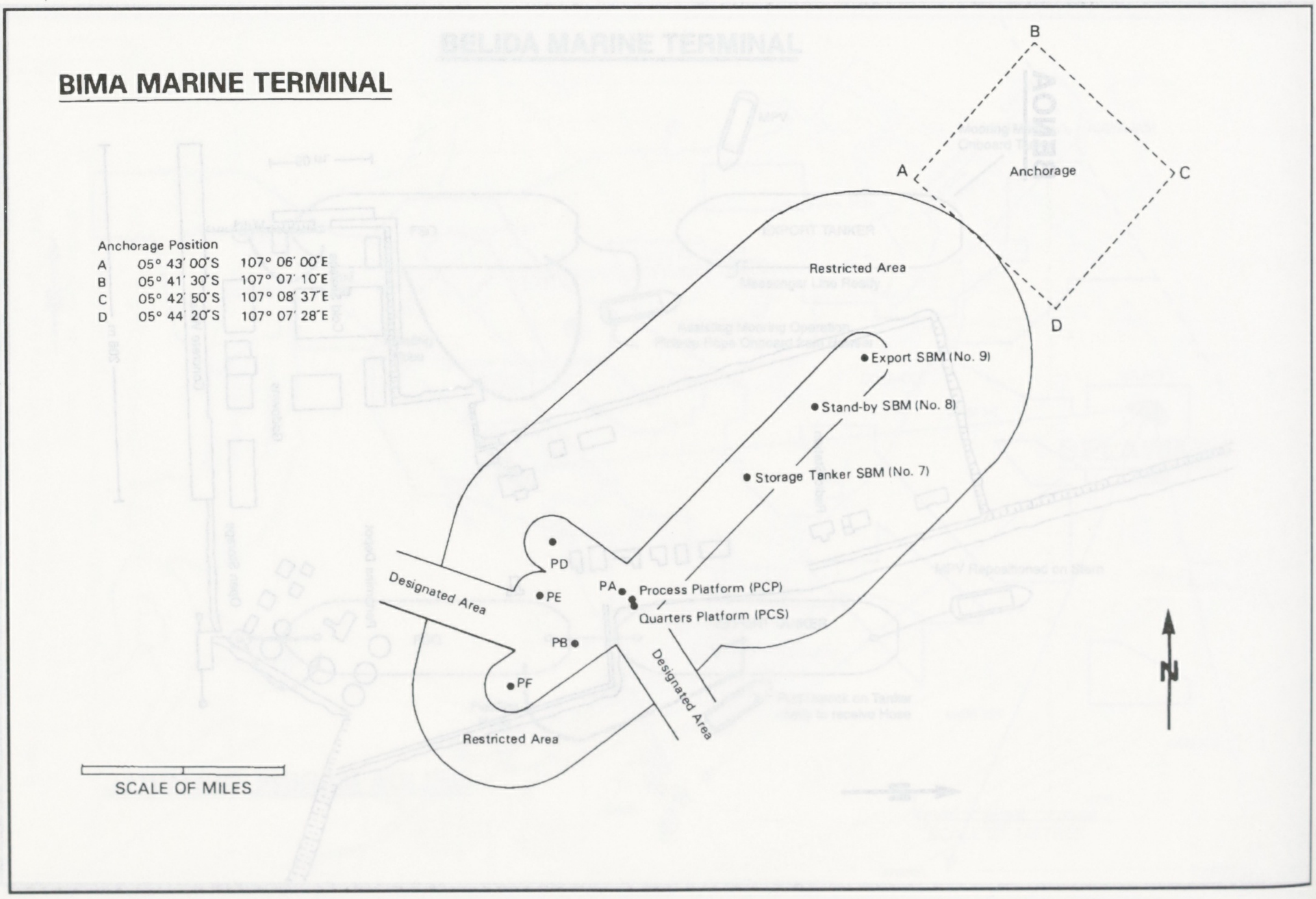
BIAK


Reef
Campu Buoy
Mooring Buoy
Umum Jetty
Pertamina Jetty
Mooring Buoys
Tanks

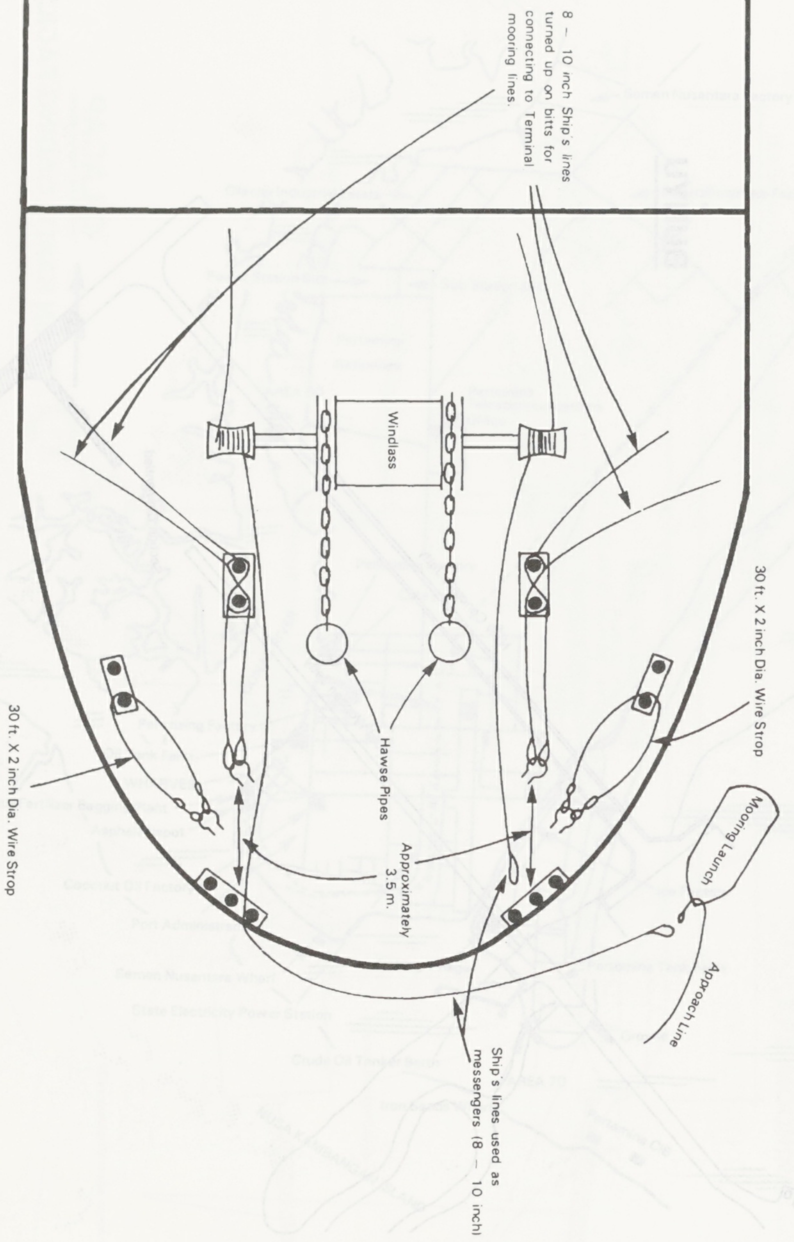
BIMA MARINE TERMINAL

Anchorage Position

A	05° 43' 00"S	107° 06' 00"E
B	05° 41' 30"S	107° 07' 10"E
C	05° 42' 50"S	107° 08' 37"E
D	05° 44' 20"S	107° 07' 28"E


B
A
C
D
Anchorage
Restricted Area
Export SBM (No. 9)
Stand-by SBM (No. 8)
Storage Tanker SBM (No. 7)
PD
Designated Area
PE
PA
Process Platform (PCP)
Quarters Platform (PCS)
PB
PF
Designated Area
Restricted Area
N
SCALE OF MILES

BIMA MARINE TERMINAL


8 — 10 inch Ship's lines turned up on bitts for connecting to Terminal mooring lines.
Windlass
Hawse Pipes
Approximately 3.5 m.
30 ft. X 2 inch Dia. Wire Strop
30 ft. X 2 inch Dia. Wire Strop
Mooring Launch
Approach Line
Ship's lines used as messengers (8 — 10 inch)

BIMA MARINE TERMINAL

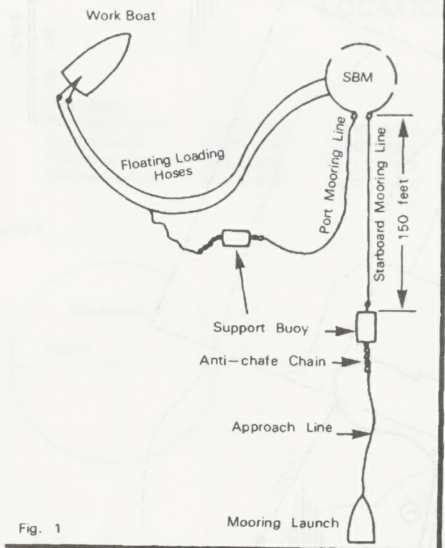

Work Boat
SBM
Floating Loading Hoses
Port Mooring Line
Starboard Mooring Line
150 feet
Support Buoy
Anti—chafe Chain
Approach Line
Mooring Launch

Fig. 1

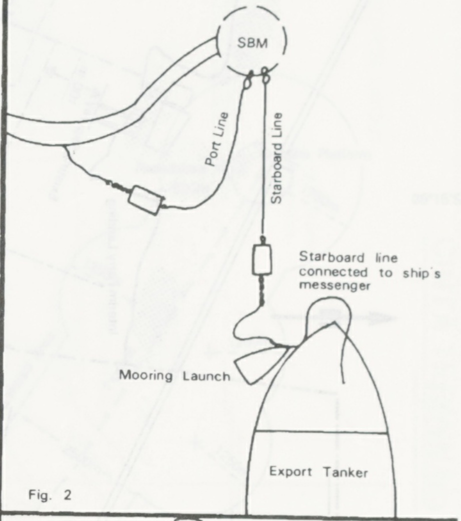
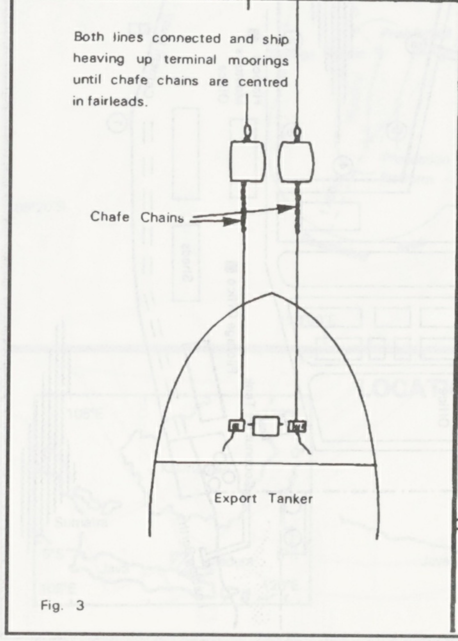
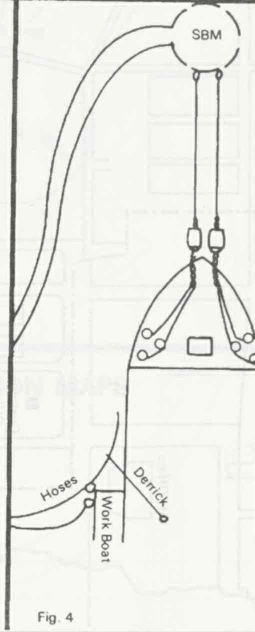

SBM
Port Line
Starboard Line
Starboard line connected to ship's messenger
Mooring Launch
Export Tanker

Fig. 2


Chafe Chains
Export Tanker

Both lines connected and ship heaving up terminal moorings until chafe chains are centred in fairleads.

Fig. 3

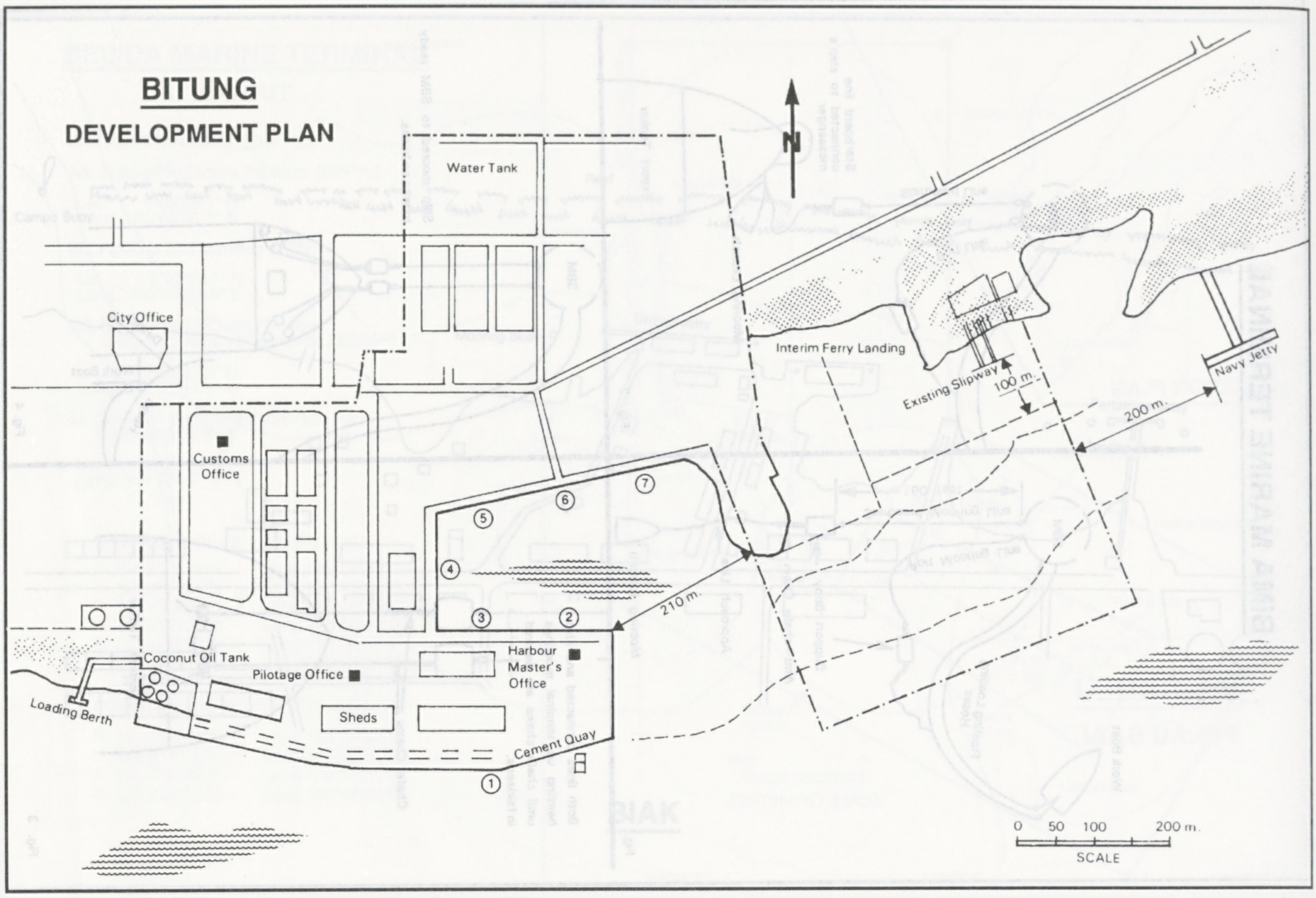

SBM
Hoses
Derrick
Work Boat

Ship moored to SBM ready to take on hoses.

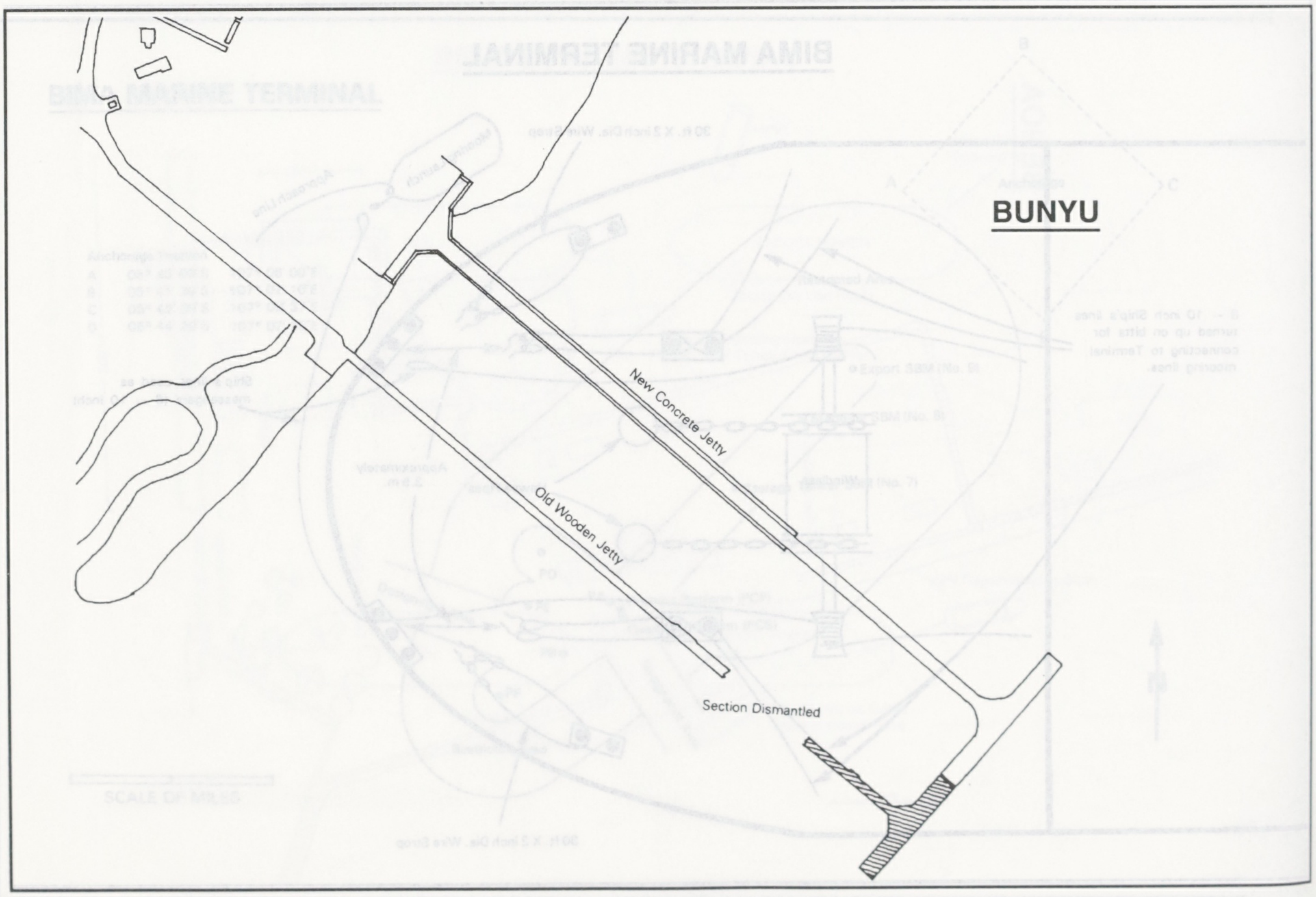
Fig. 4

BITUNG

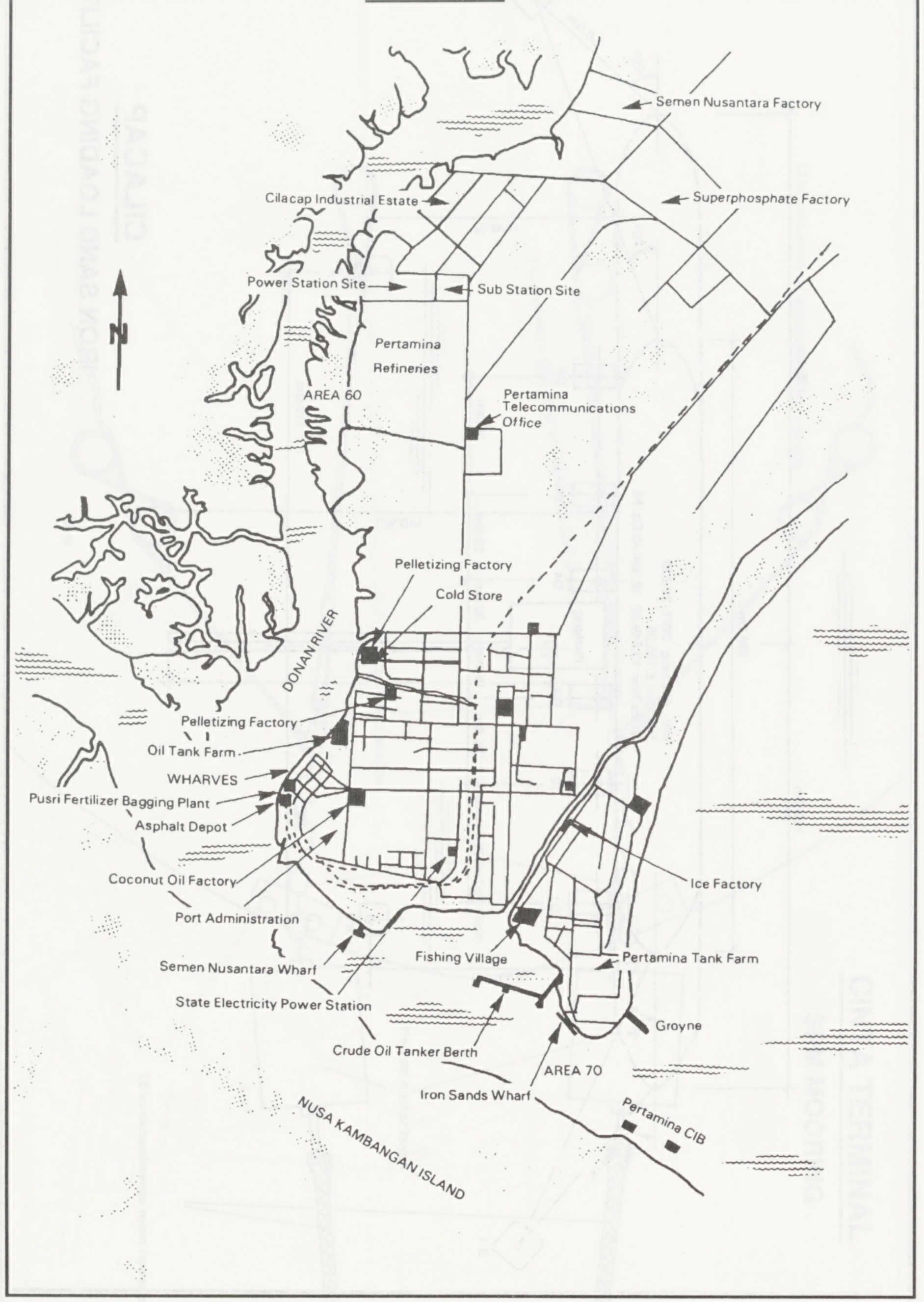
DEVELOPMENT PLAN


N
Water Tank
City Office
Customs Office
Coconut Oil Tank
Loading Berth
Pilotage Office
Harbour Master's Office
Sheds
Cement Quay
①
②
③
④
⑤
⑥
⑦
210 m.
Interim Ferry Landing
Existing Slipway
100 m.
Navy Jetty
200 m.
0 50 100 200 m.
SCALE

BUNYU


New Concrete Jetty
Old Wooden Jetty
Section Dismantled

CILACAP

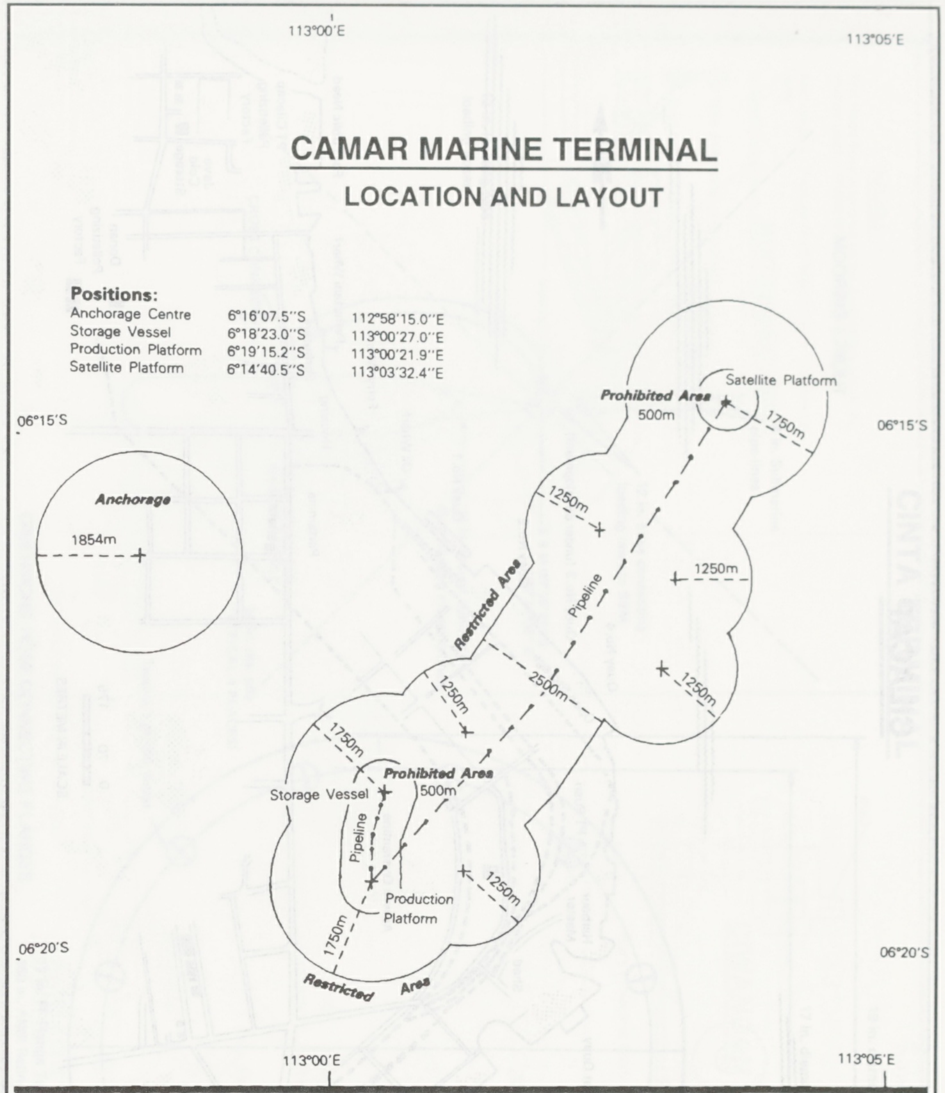

N
Semen Nusantara Factory
Superphosphate Factory
Cilacap Industrial Estate
Power Station Site
Sub Station Site
Pertamina Refineries
AREA 60
Pertamina Telecommunications Office
Pelletizing Factory
Cold Store
DONAN RIVER
Pelletizing Factory
Oil Tank Farm
WHARVES
Pusri Fertilizer Bagging Plant
Asphalt Depot
Coconut Oil Factory
Port Administration
Semen Nusantara Wharf
State Electricity Power Station
Fishing Village
Ice Factory
Pertamina Tank Farm
Groyne
Crude Oil Tanker Berth
AREA 70
Iron Sands Wharf
Pertamina CIB
NUSA KAMBANGAN ISLAND

CAMAR MARINE TERMINAL

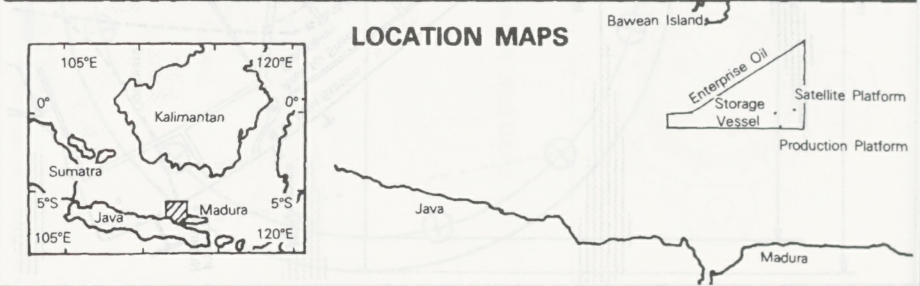
LOCATION AND LAYOUT

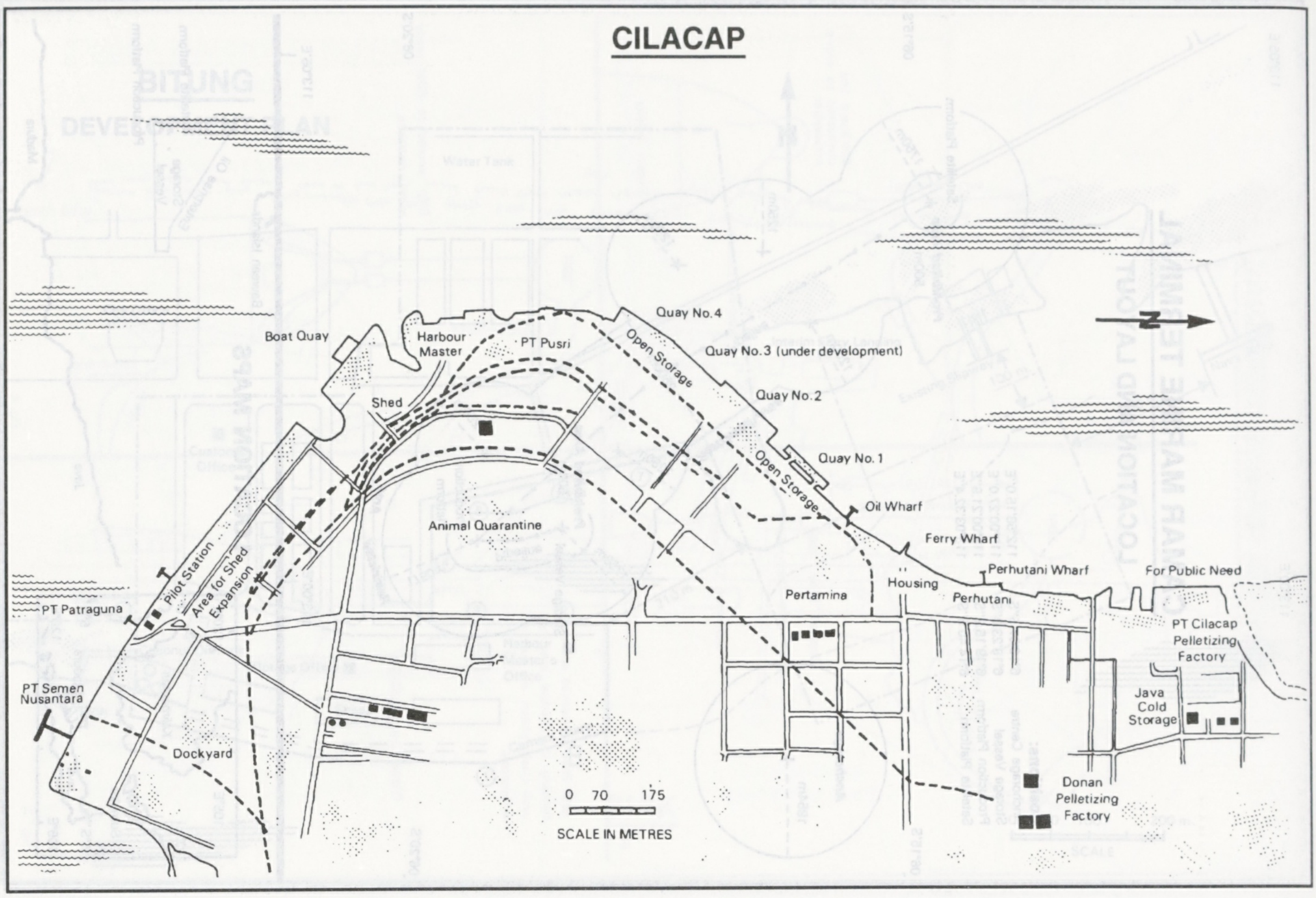
Positions:

Anchorage Centre	6°16'07.5''S	112°58'15.0''E
Storage Vessel	6°18'23.0''S	113°00'27.0''E
Production Platform	6°19'15.2''S	113°00'21.9''E
Satellite Platform	6°14'40.5''S	113°03'32.4''E


113°00'E
113°05'E
06°15'S
06°15'S
06°20'S
06°20'S
Anchorage
1854m
Satellite Platform
Prohibited Area
500m
1750m
1250m
1250m
1250m
Pipeline
Restricted Area
2500m
1250m
1750m
Prohibited Area
500m
Storage Vessel
Pipeline
1250m
Production Platform
1750m
Restricted Area
113°00'E
113°05'E

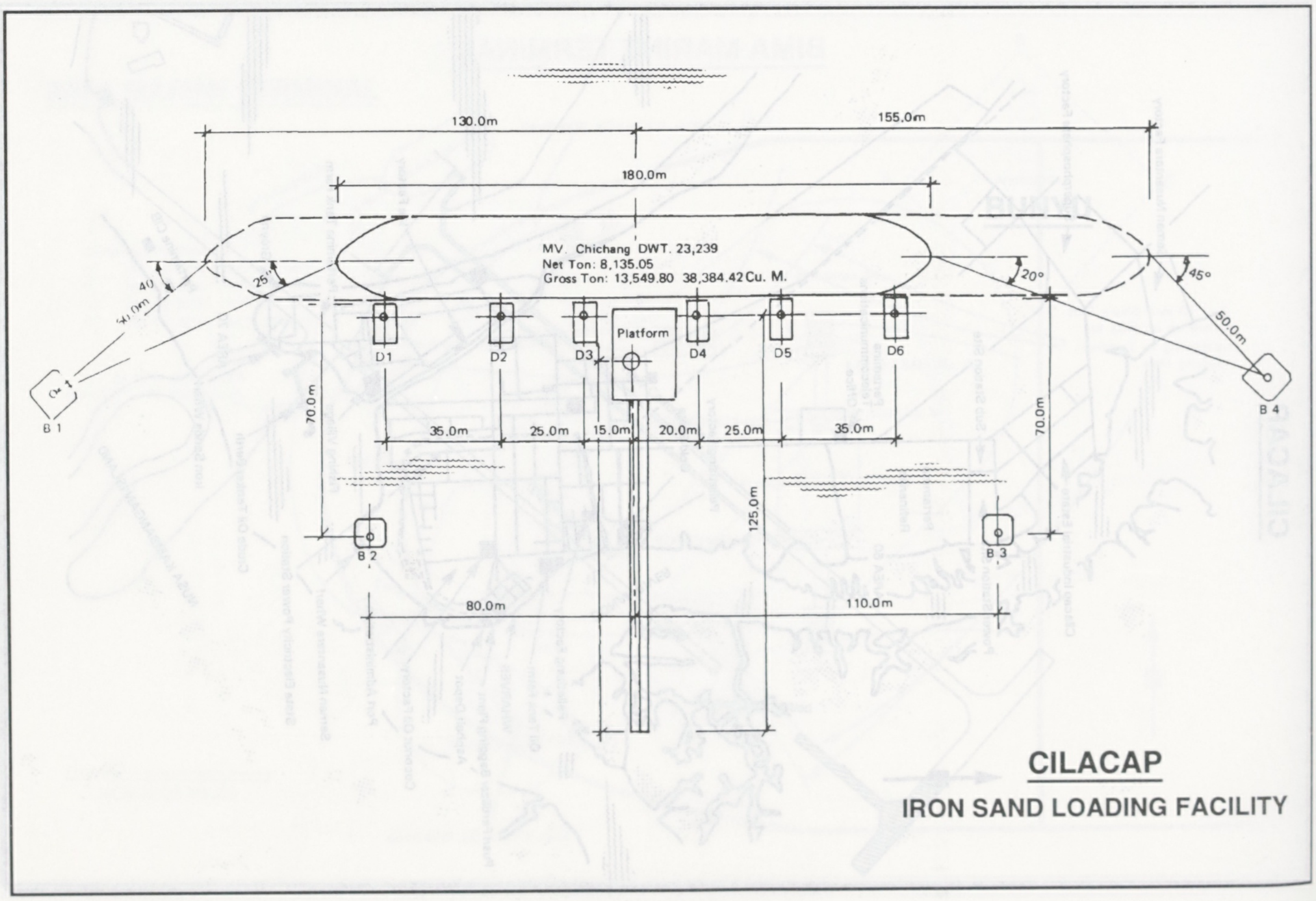
LOCATION MAPS


105°E
120°E
0°
0°
Kalimantan
Sumatra
5°S
5°S
Java
Madura
105°E
120°E
Bawean Islands
Enterprise Oil
Storage Vessel
Satellite Platform
Production Platform
Java
Madura



CILACAP

Quay No.4
Boat Quay
Harbour Master
PT Pusri
Open Storage
Quay No.3 (under development)
Shed
Quay No.2
Quay No.1
Open Storage
Oil Wharf
Animal Quarantine
Ferry Wharf
Pilot Station
Area for Shed Expansion
Perhutani Wharf
For Public Need
Housing
PT Patraguna
Pertamina
Perhutani
PT Cilacap Pelletizing Factory
PT Semen Nusantara
Java Cold Storage
Dockyard
Donan Pelletizing Factory
0 70 175
SCALE IN METRES
N

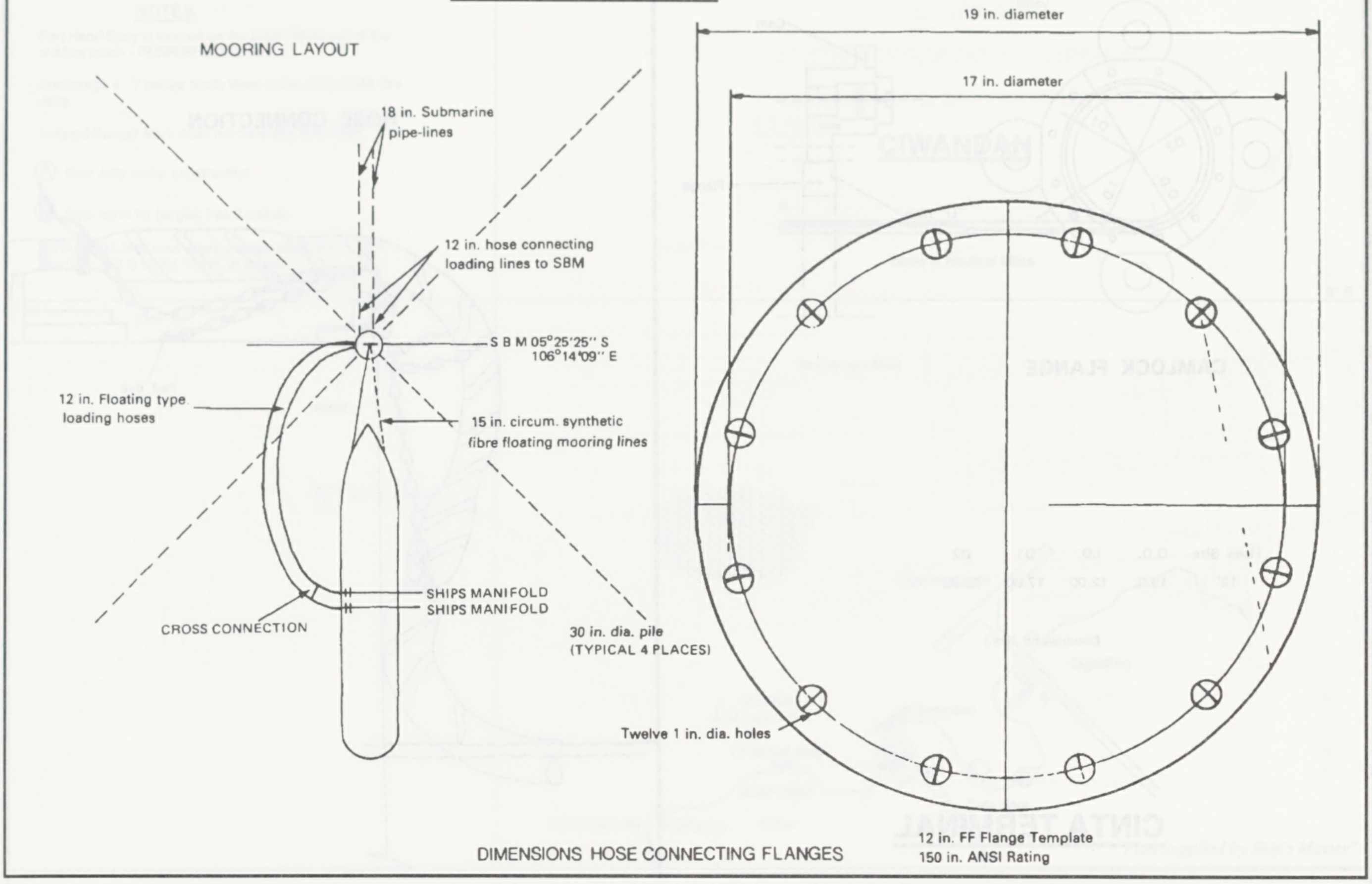


CILACAP

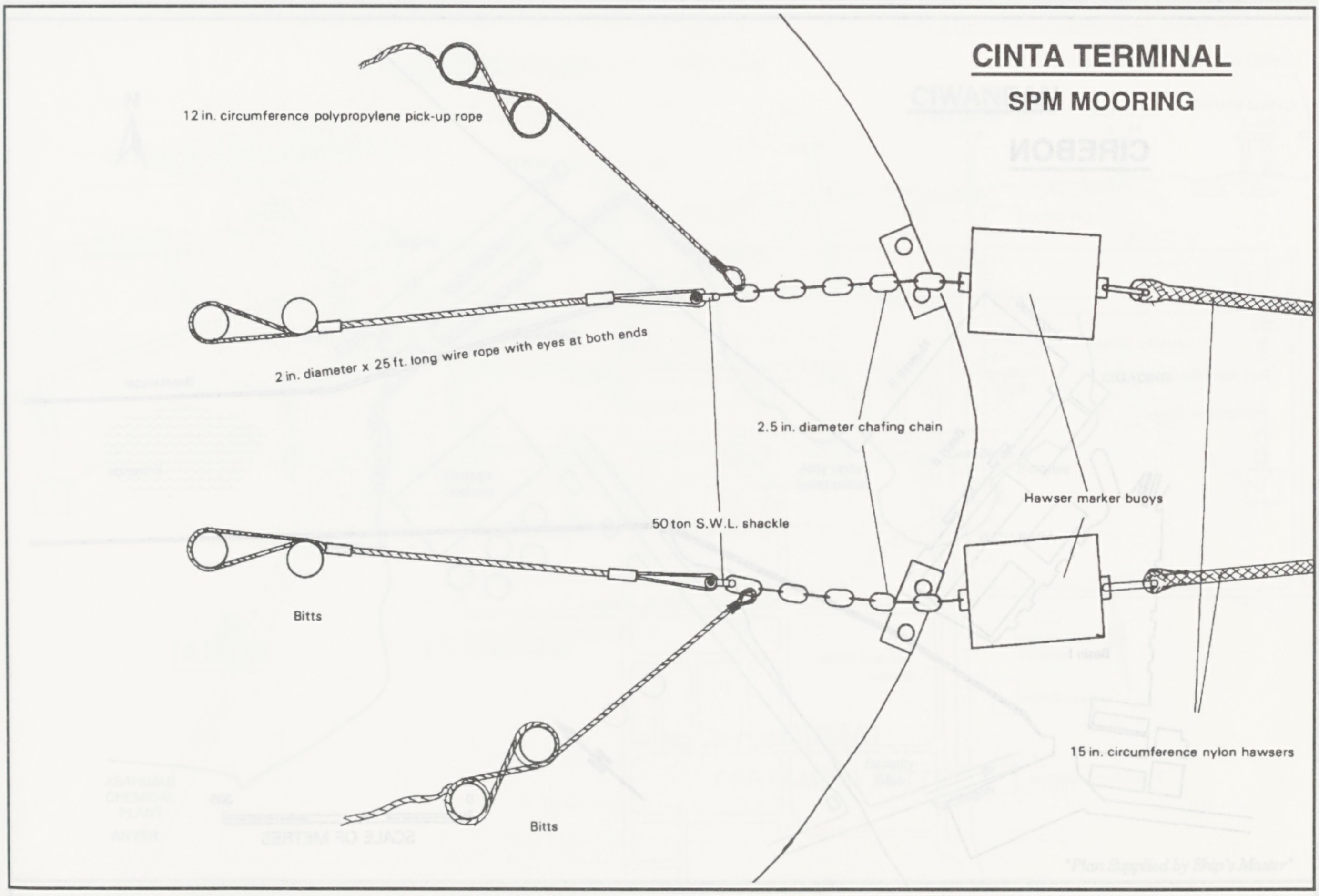
IRON SAND LOADING FACILITY

130.0m
155.0m
180.0m
MV Chichang DWT. 23,239
Net Ton: 8,135.05
Gross Ton: 13,549.80 38,384.42 Cu. M.
40
25°
20°
45°
50.0m
50.0m
B 1
D1
D2
D3
Platform
D4
D5
D6
B 4
70.0m
70.0m
35.0m
25.0m
15.0m
20.0m
25.0m
35.0m
125.0m
B 2
B 3
80.0m
110.0m

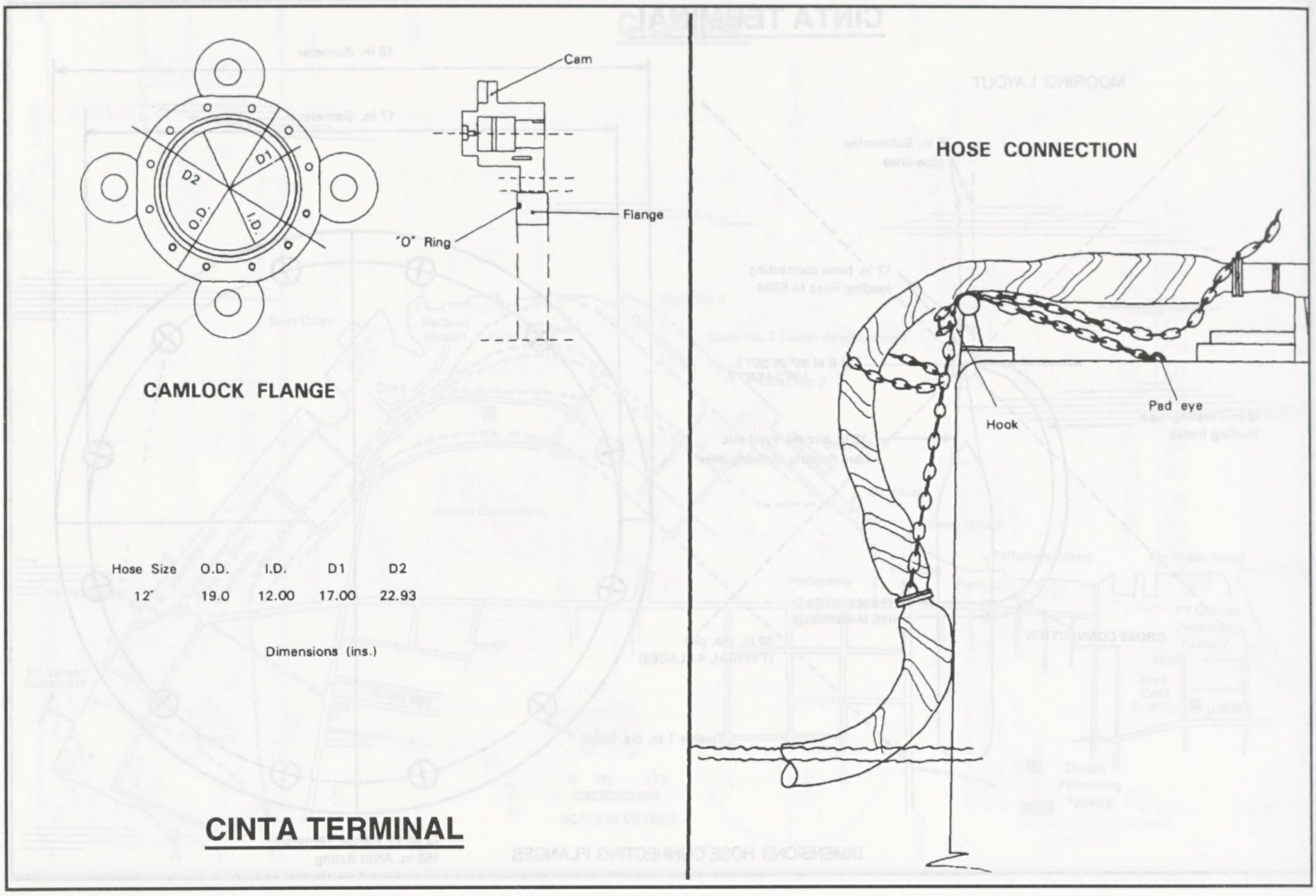
CINTA TERMINAL


MOORING LAYOUT
18 in. Submarine pipe-lines
12 in. hose connecting loading lines to SBM
S B M 05°25'25'' S 106°14'09'' E
12 in. Floating type loading hoses
15 in. circum. synthetic fibre floating mooring lines
SHIPS MANIFOLD
SHIPS MANIFOLD
CROSS CONNECTION
30 in. dia. pile (TYPICAL 4 PLACES)
19 in. diameter
17 in. diameter
Twelve 1 in. dia. holes
12 in. FF Flange Template
150 in. ANSI Rating
DIMENSIONS HOSE CONNECTING FLANGES

CINTA TERMINAL
SPM MOORING


12 in. circumference polypropylene pick-up rope
2 in. diameter x 25 ft. long wire rope with eyes at both ends
2.5 in. diameter chafing chain
Hawser marker buoys
50 ton S.W.L. shackle
Bitts
15 in. circumference nylon hawsers
Bitts

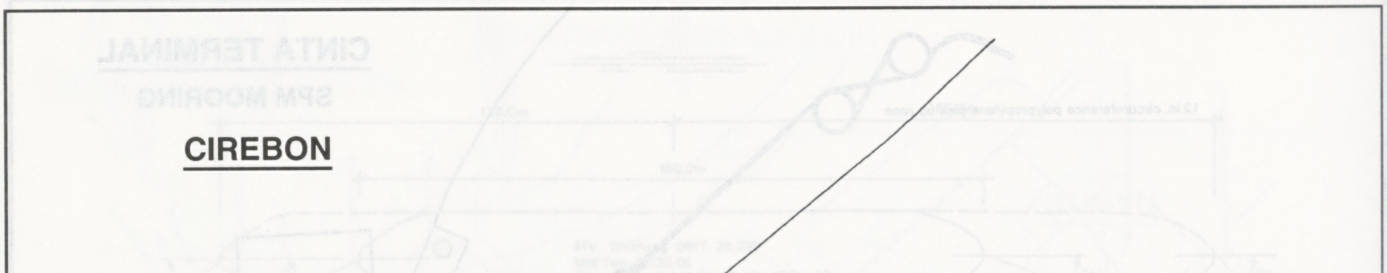
CINTA TERMINAL

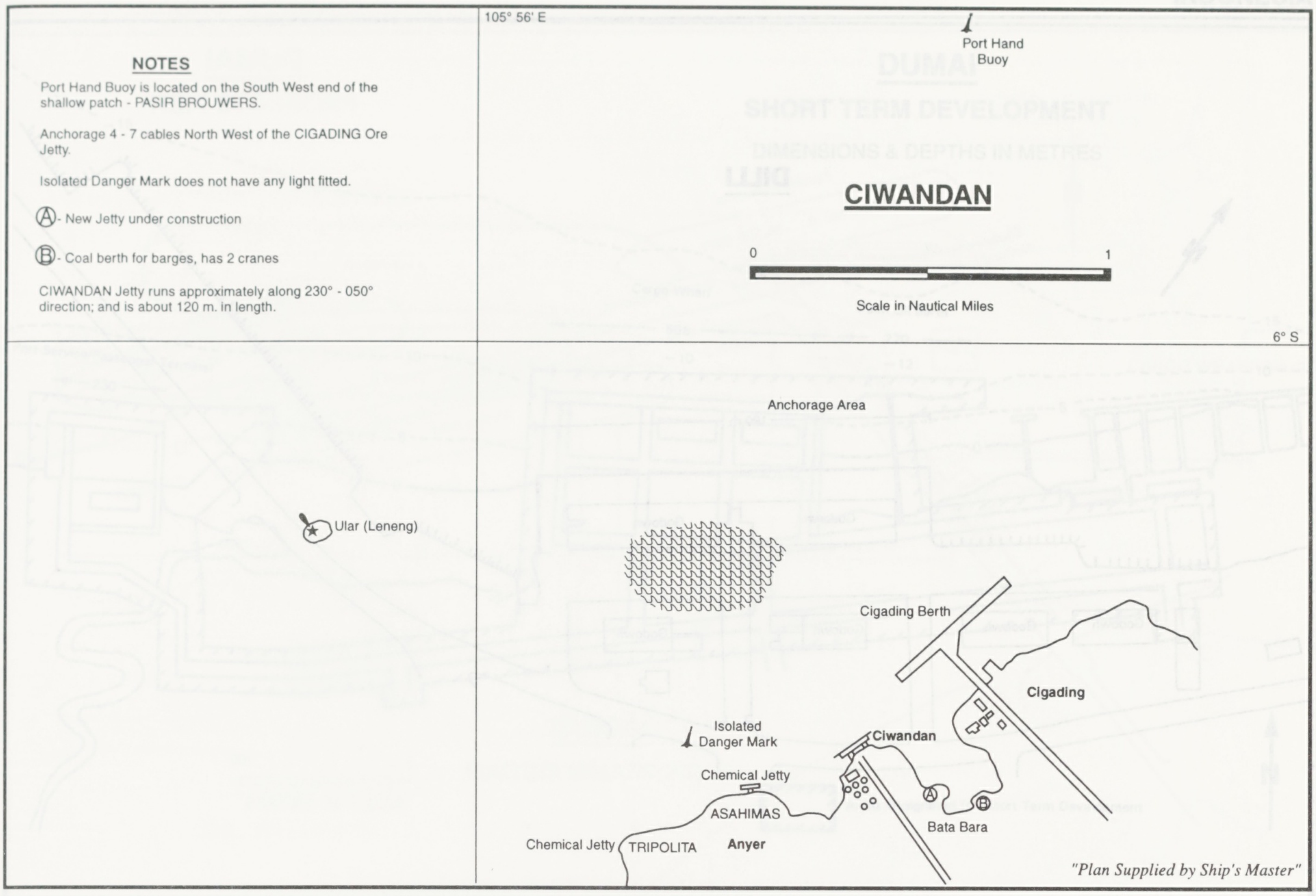

Cam
D1
D2
O.D.
I.D.
"O" Ring
Flange
CAMLOCK FLANGE
HOSE CONNECTION
Hook
Pad eye

Hose Size	O.D.	I.D.	D1	D2
12"	19.0	12.00	17.00	22.93

Dimensions (ins.)

CIREBON


Linggarjati
Nujarati II
Basin II
Basin I
Breakwater
Entrance
Breakwater
0
300
SCALE OF METRES


105° 56' E
Port Hand Buoy
CIWANDAN
0
1
Scale in Nautical Miles
6° S
Anchorage Area
Ular (Leneng)
Cigading Berth
Cigading
Isolated Danger Mark
Ciwandan
Chemical Jetty
ASAHIMAS
A
B
Bata Bara
Chemical Jetty
TRIPOLITA
Anyer

NOTES

Port Hand Buoy is located on the South West end of the shallow patch - PASIR BROUWERS.

Anchorage 4 - 7 cables North West of the CIGADING Ore Jetty.

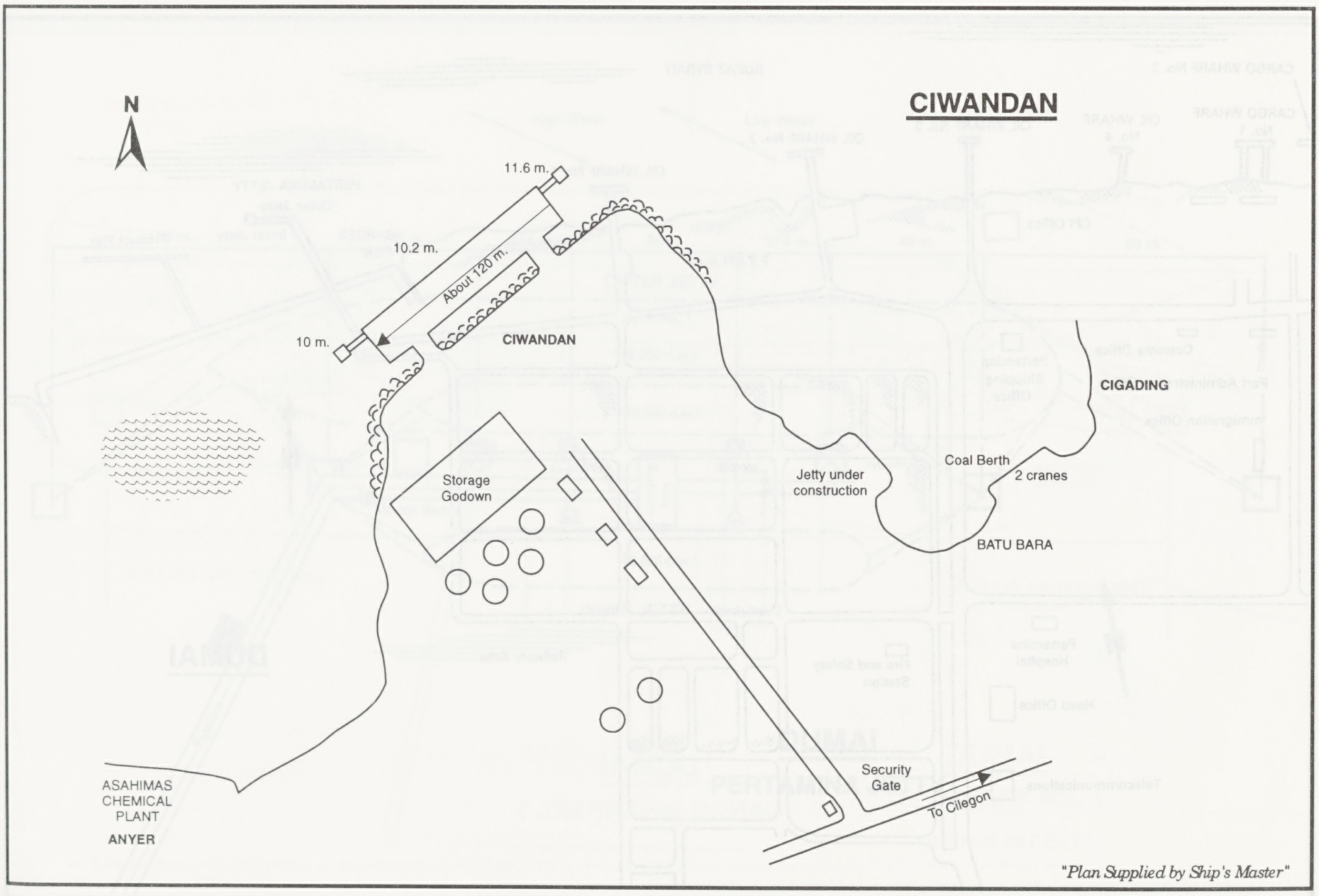
Isolated Danger Mark does not have any light fitted.

Ⓐ- New Jetty under construction

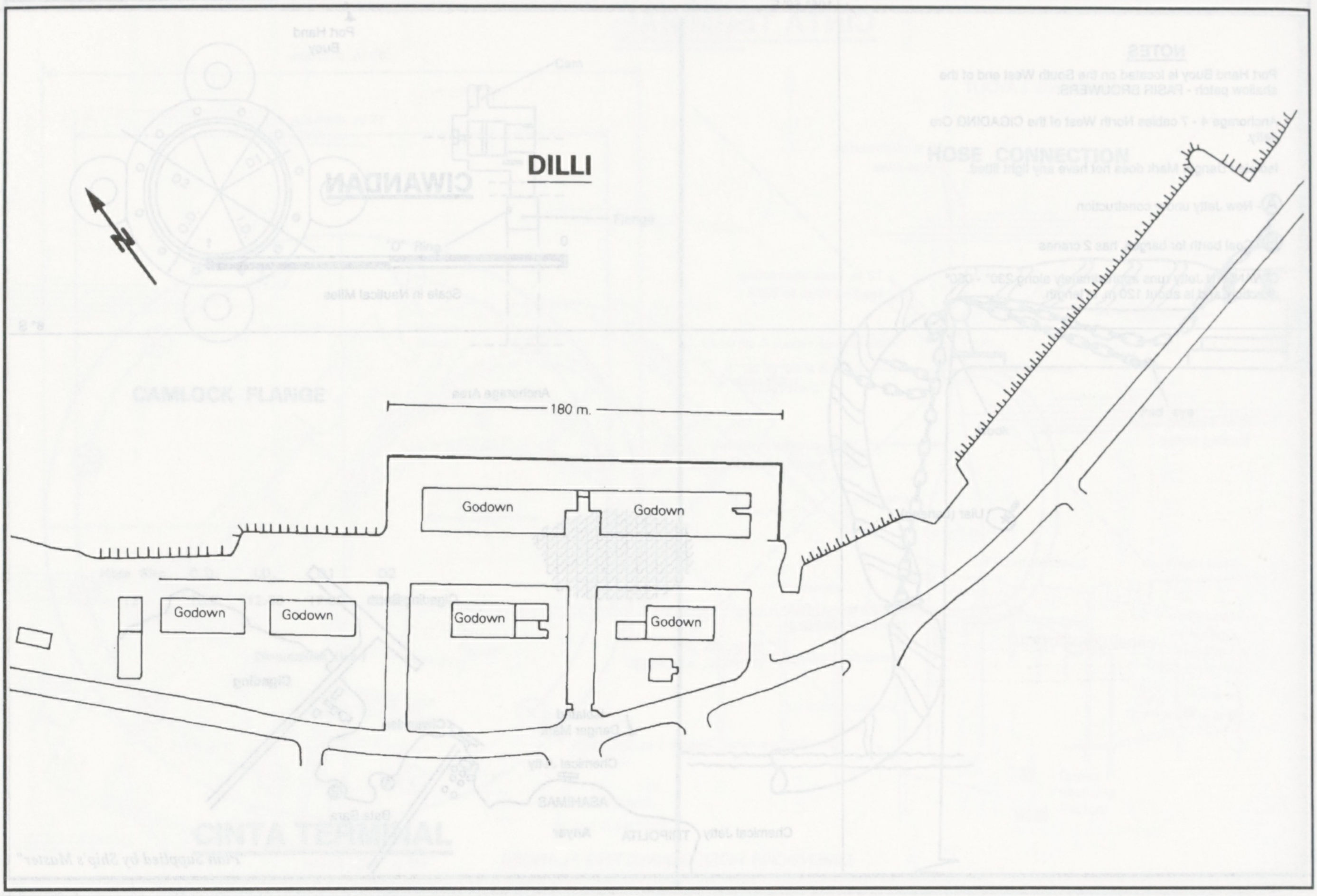
Ⓑ- Coal berth for barges, has 2 cranes

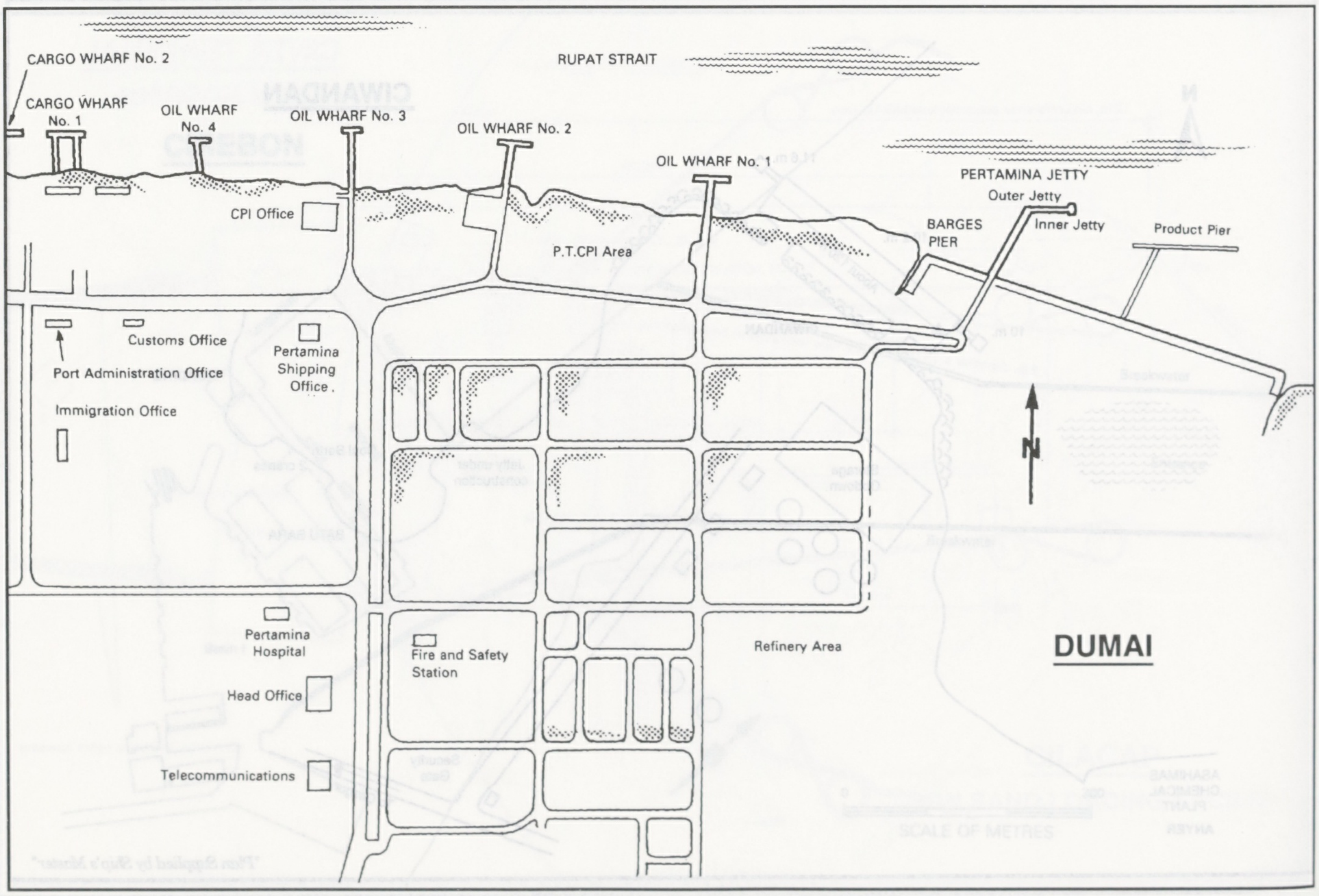
CIWANDAN Jetty runs approximately along 230° - 050° direction; and is about 120 m. in length.

"Plan Supplied by Ship's Master"


N
CIWANDAN
11.6 m.
10.2 m.
About 120 m.
10 m.
CIWANDAN
CIGADING
Storage Godown
Jetty under construction
Coal Berth
2 cranes
BATU BARA
Security Gate
To Cilegon
ASAHIMAS CHEMICAL PLANT
ANYER

"Plan Supplied by Ship's Master"

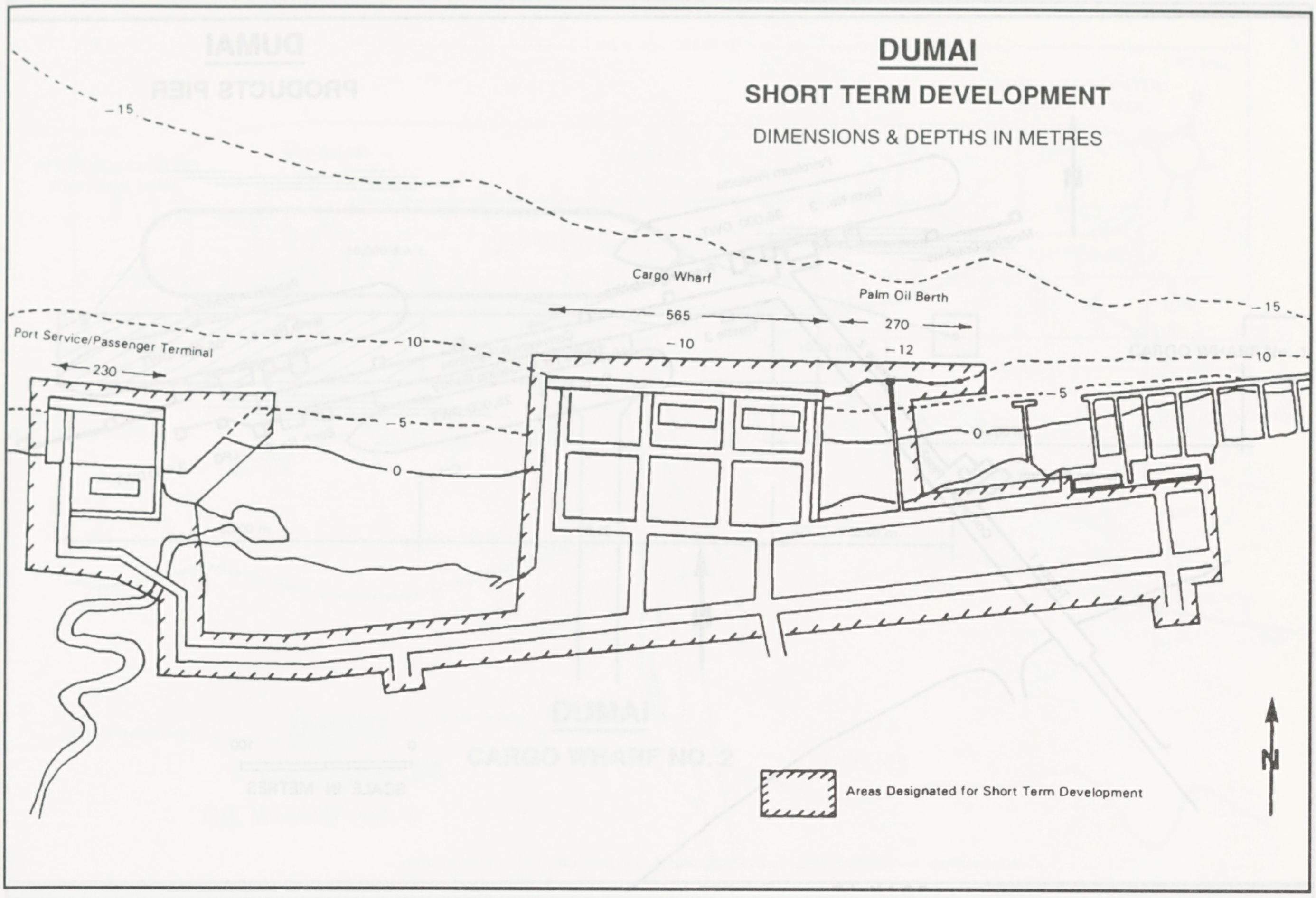

DILLI
N
180 m.
Godown
Godown
Godown
Godown
Godown
Godown

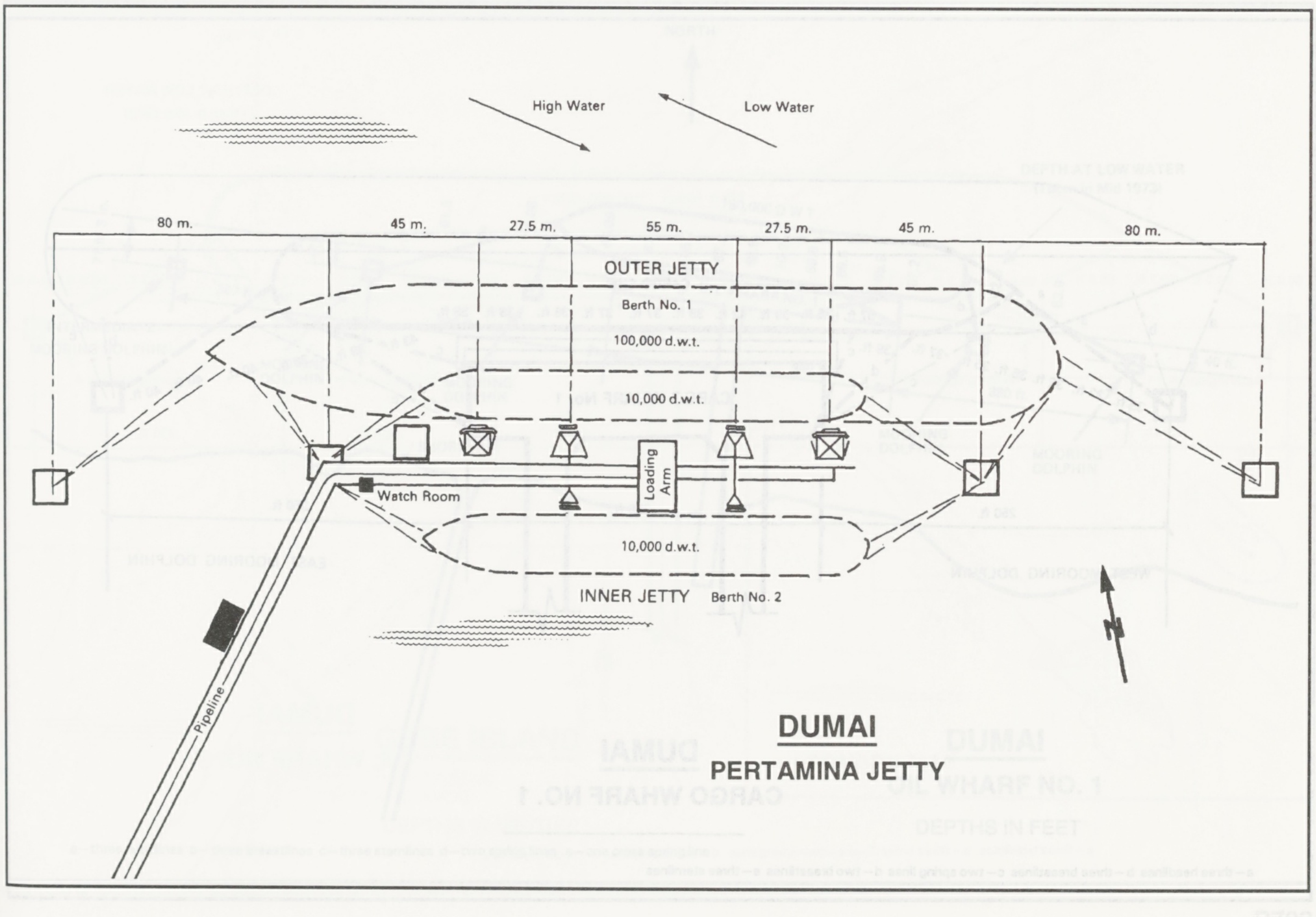

CARGO WHARF No. 2
RUPAT STRAIT
CARGO WHARF No. 1
OIL WHARF No. 4
OIL WHARF No. 3
OIL WHARF No. 2
OIL WHARF No. 1
PERTAMINA JETTY
Outer Jetty
Inner Jetty
BARGES PIER
Product Pier
CPI Office
P.T.CPI Area
Customs Office
Port Administration Office
Immigration Office
Pertamina Shipping Office
N
Pertamina Hospital
Fire and Safety Station
Refinery Area
DUMAI
Head Office
Telecommunications

DUMAI

SHORT TERM DEVELOPMENT

DIMENSIONS & DEPTHS IN METRES


−15
Cargo Wharf
565
Palm Oil Berth
270
−15
Port Service/Passenger Terminal
230
−10
−10
−12
−10
−5
−5
0
0
Areas Designated for Short Term Development
N

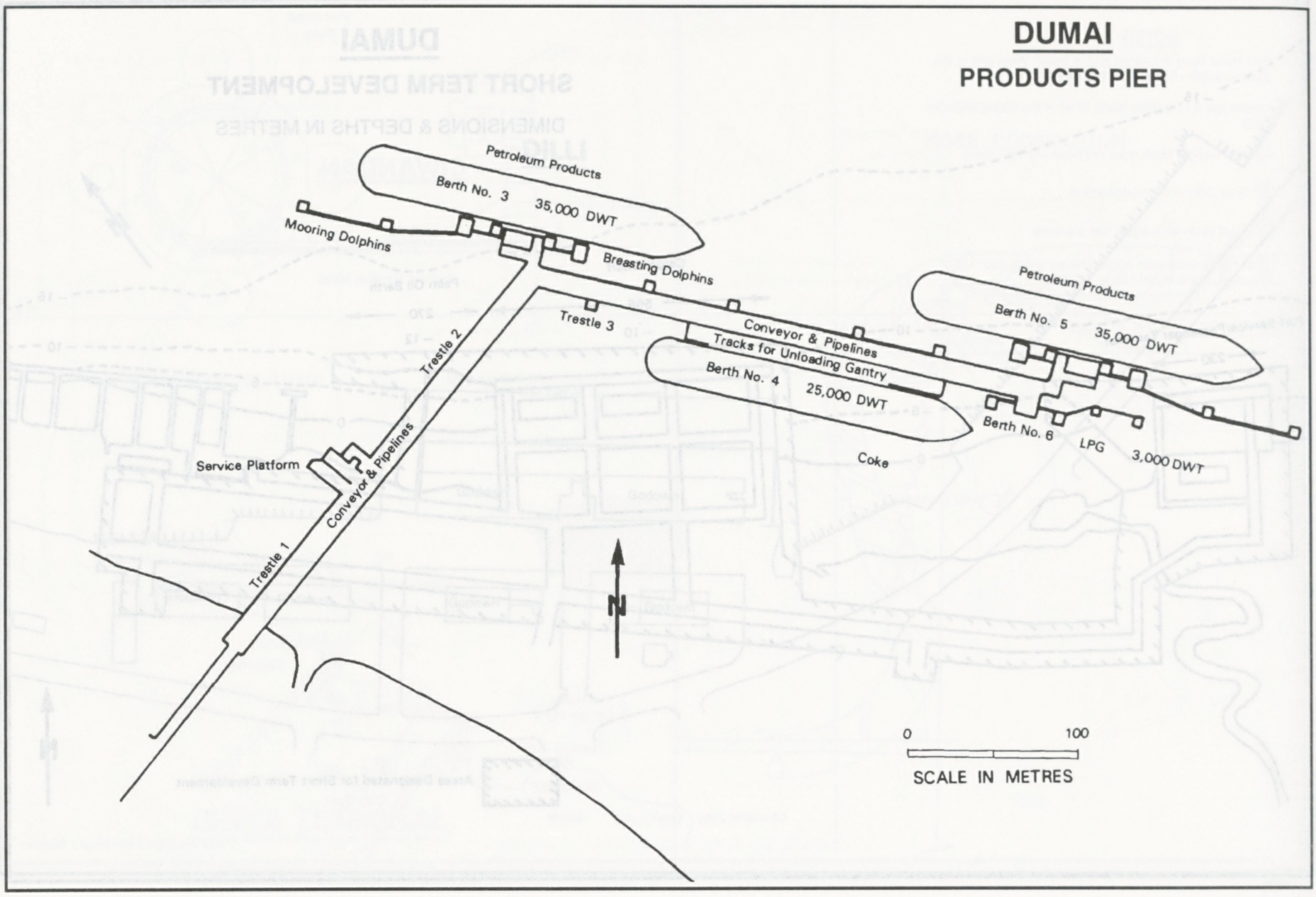

High Water
Low Water
80 m.
45 m.
27.5 m.
55 m.
27.5 m.
45 m.
80 m.
OUTER JETTY
Berth No. 1
100,000 d.w.t.
10,000 d.w.t.
Loading Arm
Watch Room
10,000 d.w.t.
INNER JETTY
Berth No. 2
Pipeline
N

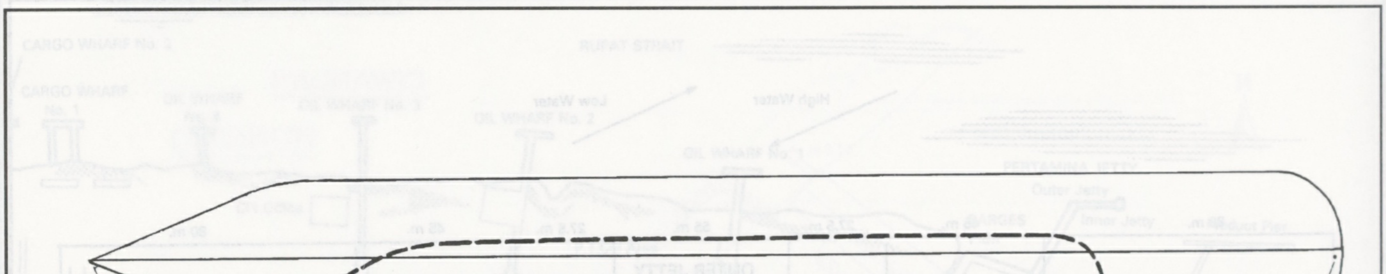
DUMAI

PERTAMINA JETTY

DUMAI

PRODUCTS PIER

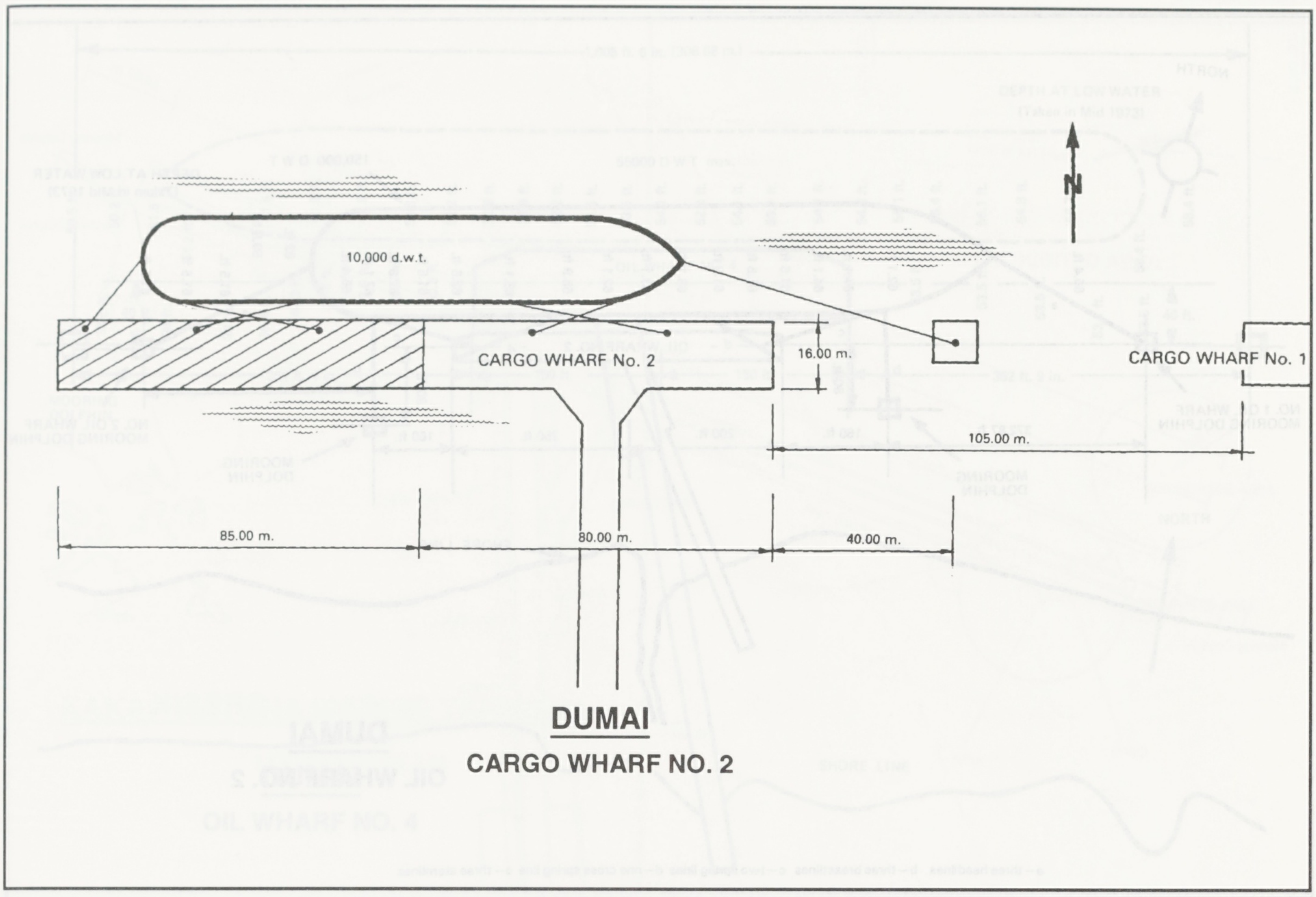

Petroleum Products
Berth No. 3
35,000 DWT
Mooring Dolphins
Breasting Dolphins
Trestle 3
Trestle 2
Petroleum Products
Berth No. 5
35,000 DWT
Conveyor & Pipelines
Tracks for Unloading Gantry
Berth No. 4
25,000 DWT
Berth No. 6
LPG
3,000 DWT
Coke
Service Platform
Conveyor & Pipelines
Trestle 1
N
0
100
SCALE IN METRES


CARGO SHIP
a
b
37 ft.
36 ft.
39 ft.
42 ft.
39 ft.
37 ft.
37 ft.
38 ft.
38 ft.
39 ft.
35 ft.
32 ft.
32 ft.
35 ft.
35 ft.
37 ft.
39 ft.
c
c
d
c
43 ft.
39 ft.
38 ft.
40 ft.
40 ft.
40 ft.
d
c
b
e
CARGO WHARF No. 1
250 ft.
255 ft.
250 ft.
WEST MOORING DOLPHIN
EAST MOORING DOLPHIN

DUMAI

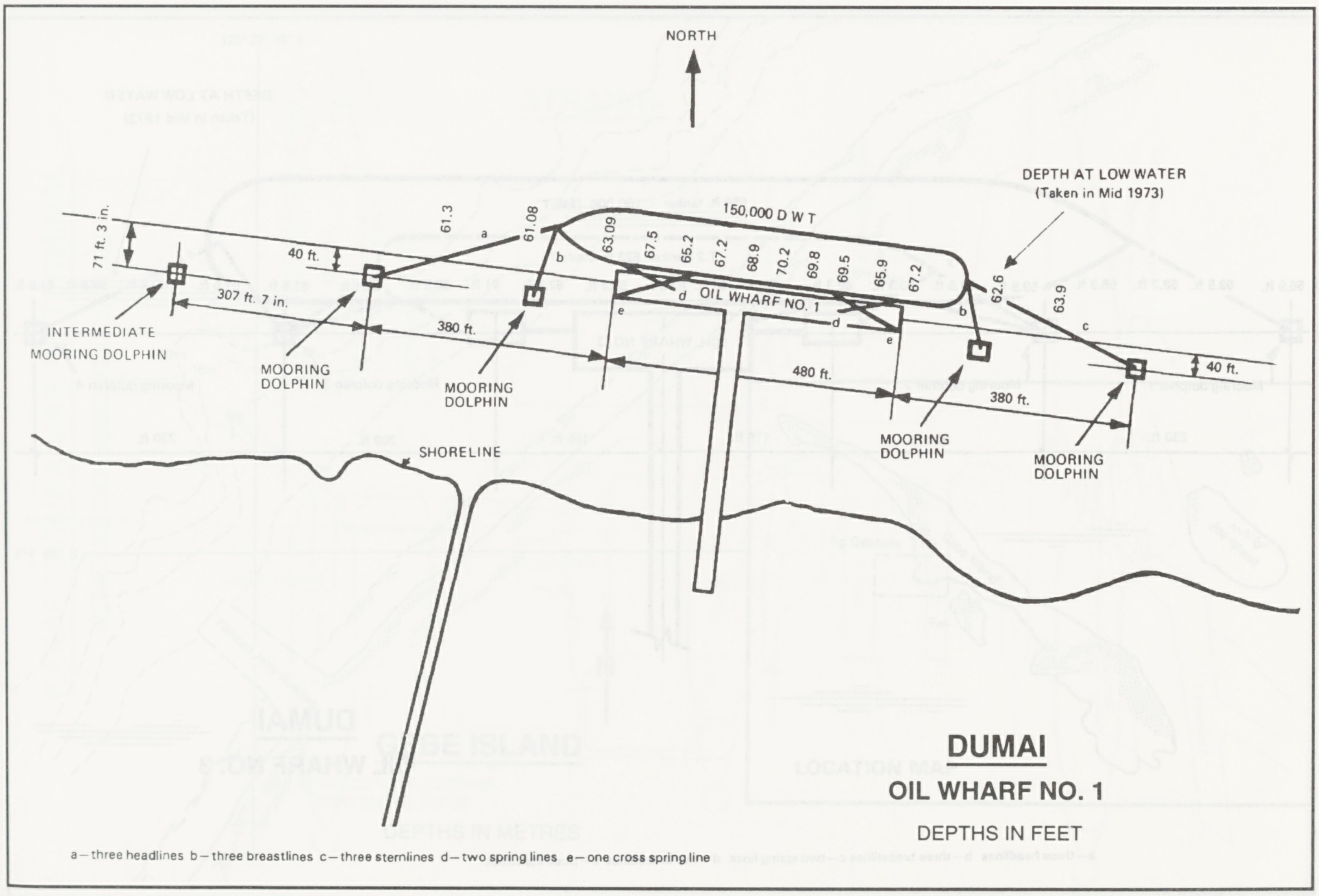
CARGO WHARF NO. 1

a — three headlines b — three breastlines c — two spring lines d — two breastlines e — three sternlines


10,000 d.w.t.
CARGO WHARF No. 2
16.00 m.
CARGO WHARF No. 1
105.00 m.
85.00 m.
80.00 m.
40.00 m.

DUMAI

CARGO WHARF NO. 2

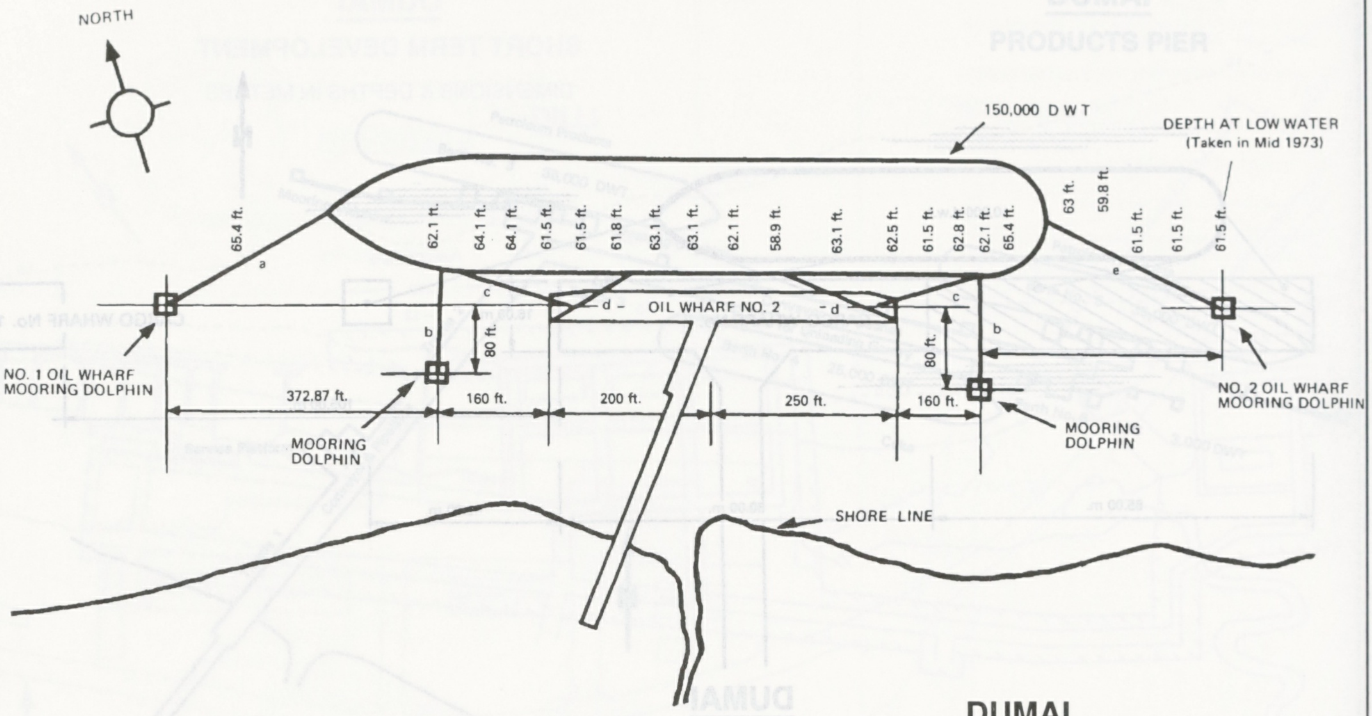

NORTH
150,000 D W T
DEPTH AT LOW WATER
(Taken in Mid 1973)
61.3
61.08
63.09
67.5
65.2
67.2
68.9
70.2
69.8
69.5
65.9
67.2
62.6
63.9
a
b
c
d
e
d
e
b
OIL WHARF NO. 1
71 ft. 3 in.
40 ft.
307 ft. 7 in.
380 ft.
480 ft.
380 ft.
40 ft.
INTERMEDIATE
MOORING DOLPHIN
MOORING
DOLPHIN
MOORING
DOLPHIN
MOORING
DOLPHIN
MOORING
DOLPHIN
SHORELINE

DUMAI

OIL WHARF NO. 1

DEPTHS IN FEET

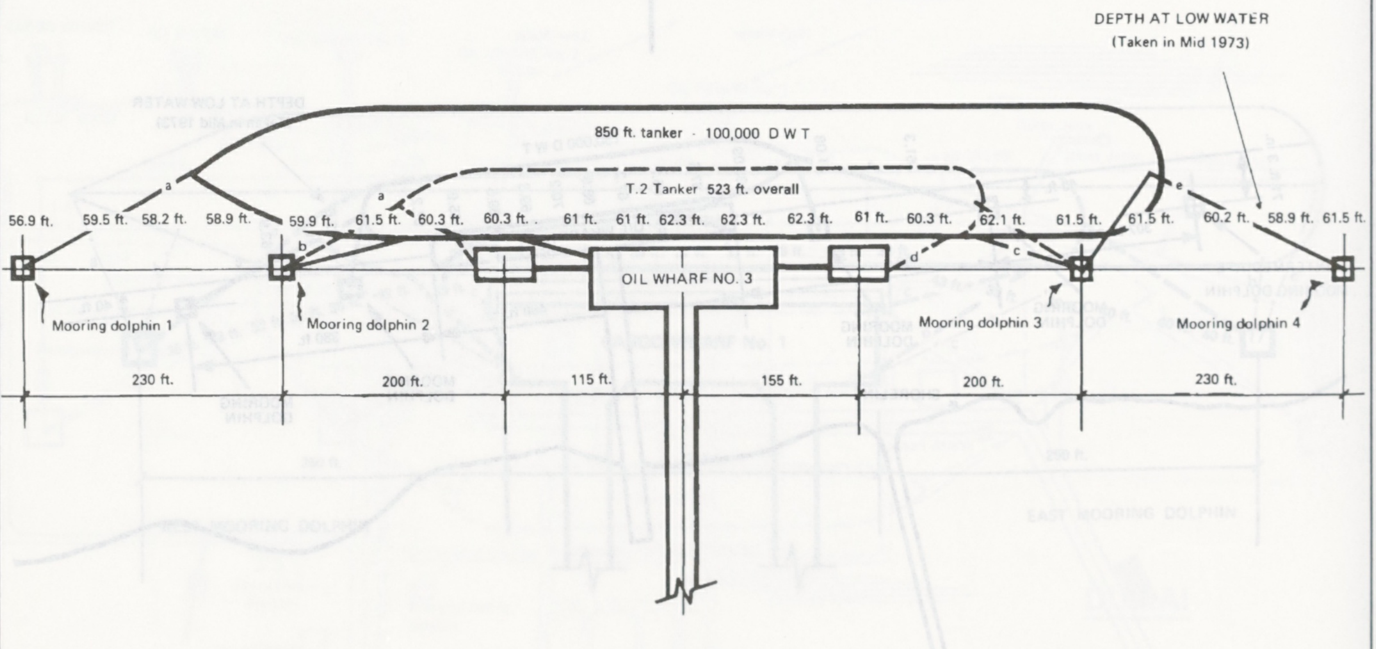
a—three headlines b—three breastlines c—three sternlines d—two spring lines e—one cross spring line


NORTH
150,000 D W T
DEPTH AT LOW WATER
(Taken in Mid 1973)
65.4 ft.
62.1 ft.
64.1 ft.
64.1 ft.
61.5 ft.
61.5 ft.
61.8 ft.
63.1 ft.
63.1 ft.
62.1 ft.
58.9 ft.
63.1 ft.
62.5 ft.
61.5 ft.
62.8 ft.
62.1 ft.
65.4 ft.
63 ft.
59.8 ft.
61.5 ft.
61.5 ft.
61.5 ft.
a
b
c
d
OIL WHARF NO. 2
d
c
b
e
80 ft.
80 ft.
NO. 1 OIL WHARF MOORING DOLPHIN
372.87 ft.
160 ft.
200 ft.
250 ft.
160 ft.
MOORING DOLPHIN
MOORING DOLPHIN
NO. 2 OIL WHARF MOORING DOLPHIN
SHORE LINE

DUMAI

OIL WHARF NO. 2

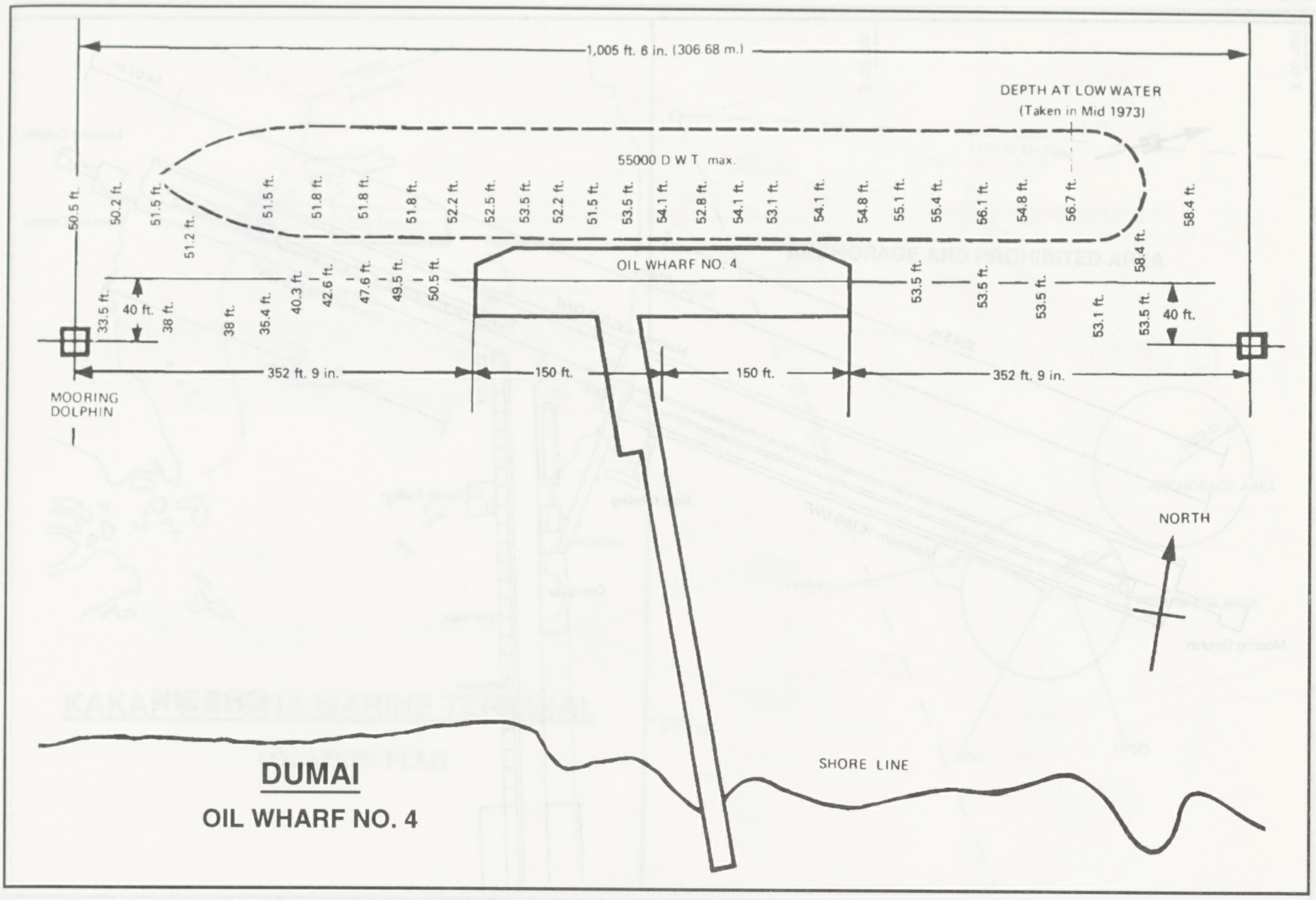
a – three headlines b – three breastlines c – two spring lines d – one cross spring line e – three sternlines


DEPTH AT LOW WATER
(Taken in Mid 1973)
850 ft. tanker · 100,000 D W T
T.2 Tanker 523 ft. overall
a
a
e
56.9 ft.
59.5 ft.
58.2 ft.
58.9 ft.
59.9 ft.
61.5 ft.
60.3 ft.
60.3 ft.
61 ft.
61 ft.
62.3 ft.
62.3 ft.
62.3 ft.
61 ft.
60.3 ft.
62.1 ft.
61.5 ft.
61.5 ft.
60.2 ft.
58.9 ft.
61.5 ft.
b
d
c
OIL WHARF NO. 3
Mooring dolphin 1
Mooring dolphin 2
Mooring dolphin 3
Mooring dolphin 4
230 ft.
200 ft.
115 ft.
155 ft.
200 ft.
230 ft.

DUMAI

OIL WHARF NO. 3

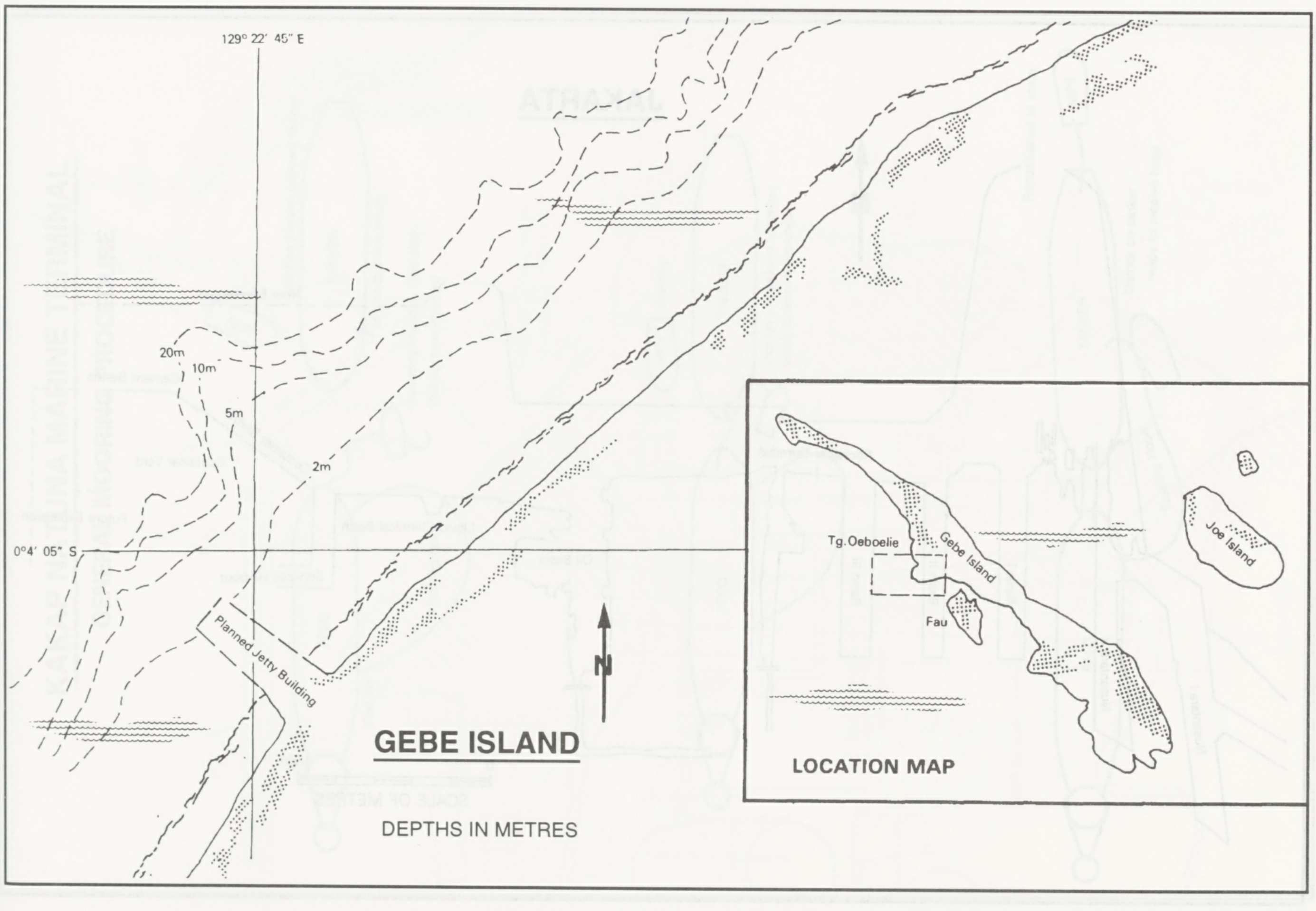
a – three headlines b – three breastlines c – two spring lines d – two breastlines e – three sternlines



DUMAI

OIL WHARF NO. 4

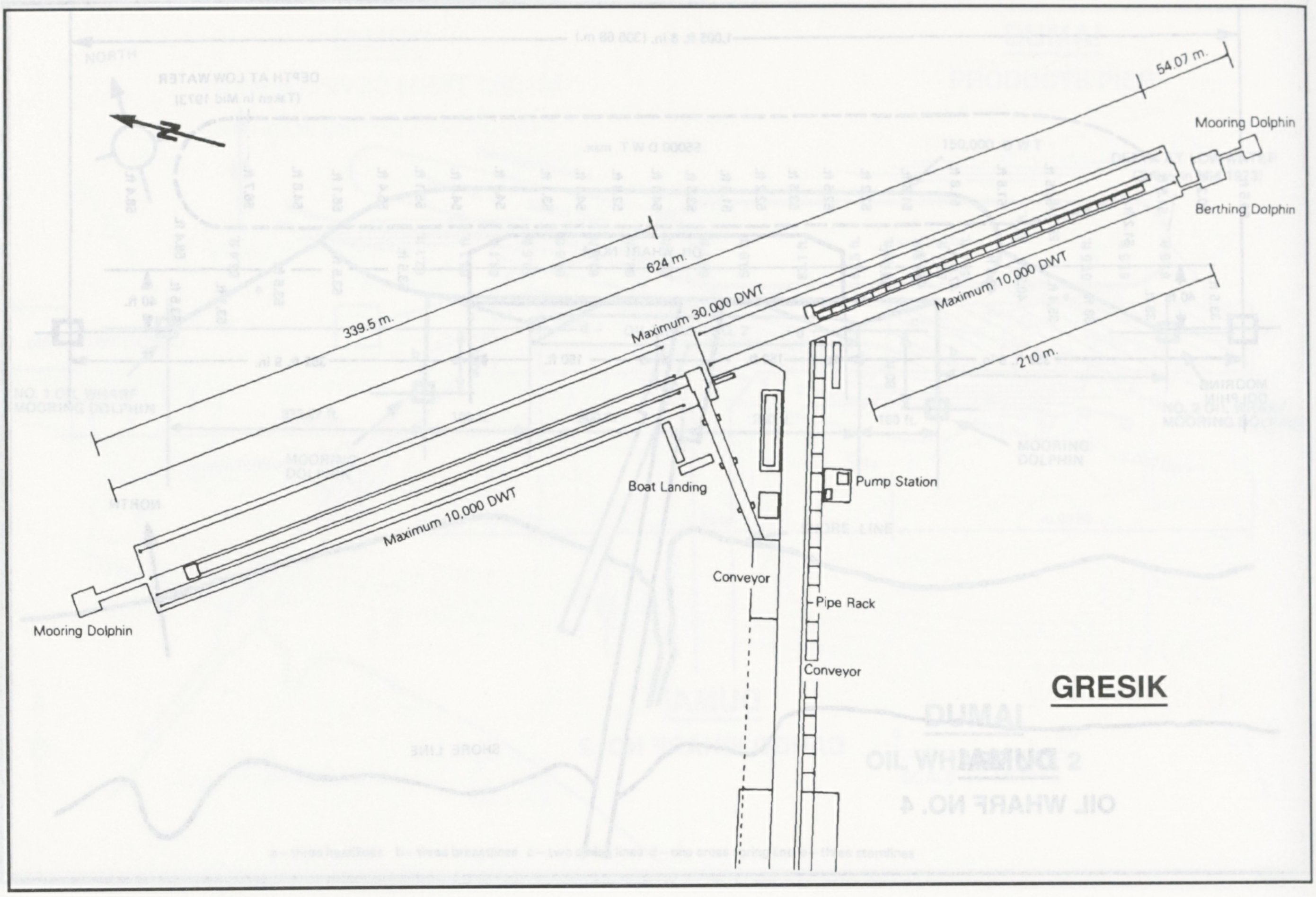
1,005 ft. 6 in. (306 68 m.)
DEPTH AT LOW WATER
(Taken in Mid 1973)
55000 D W T max.
50.5 ft.
50.2 ft.
51.5 ft.
51.2 ft.
51.5 ft.
51.8 ft.
51.8 ft.
51.8 ft.
52.2 ft.
52.5 ft.
53.5 ft.
52.2 ft.
51.5 ft.
53.5 ft.
54.1 ft.
52.8 ft.
54.1 ft.
53.1 ft.
54.1 ft.
54.8 ft.
55.1 ft.
55.4 ft.
56.1 ft.
54.8 ft.
56.7 ft.
58.4 ft.
OIL WHARF NO. 4
33.5 ft.
40 ft.
38 ft.
38 ft.
35.4 ft.
40.3 ft.
42.6 ft.
47.6 ft.
49.5 ft.
50.5 ft.
53.5 ft.
53.5 ft.
53.5 ft.
53.1 ft.
53.5 ft.
58.4 ft.
40 ft.
352 ft. 9 in.
150 ft.
150 ft.
352 ft. 9 in.
MOORING DOLPHIN
NORTH
SHORE LINE

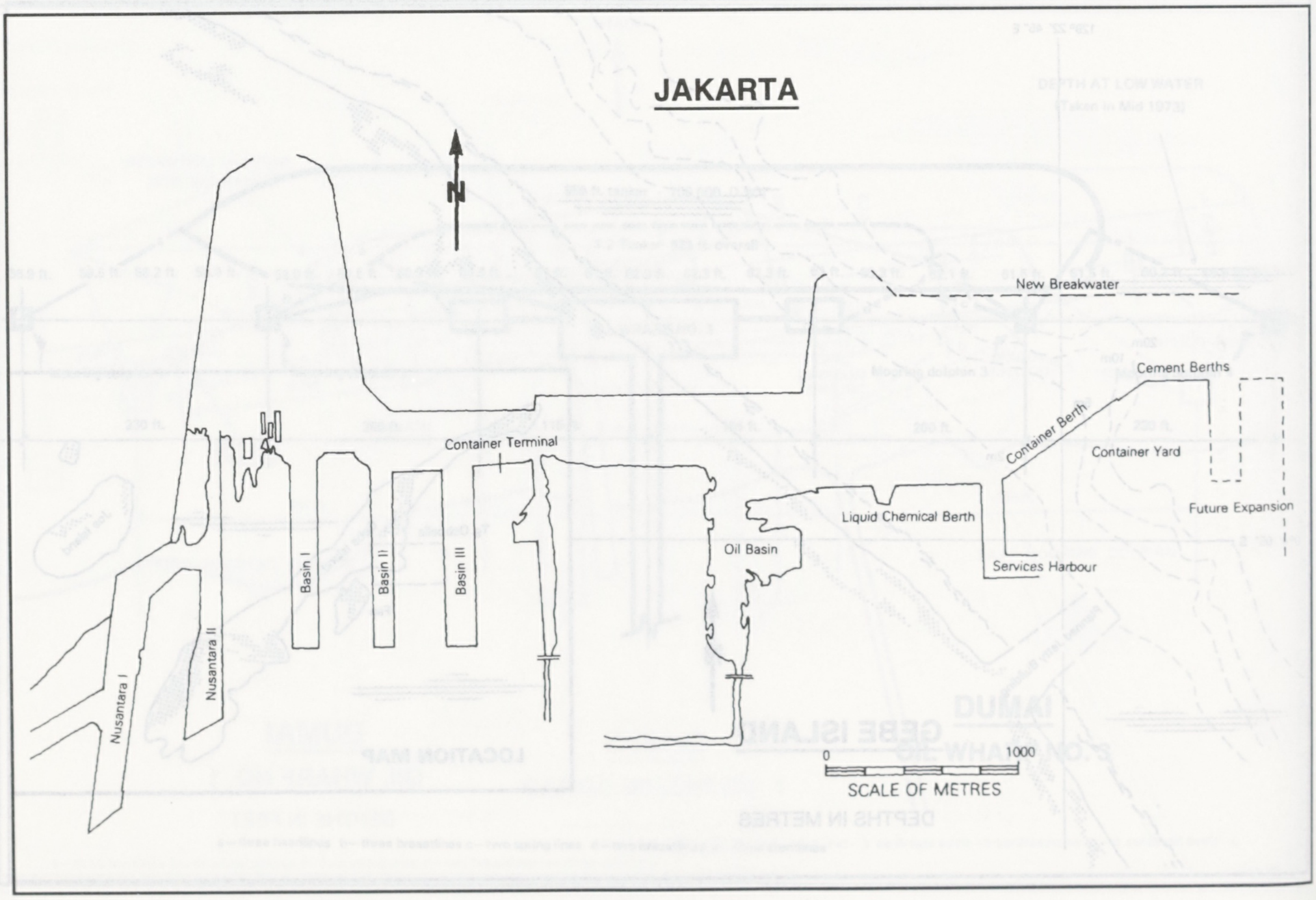


GEBE ISLAND

DEPTHS IN METRES

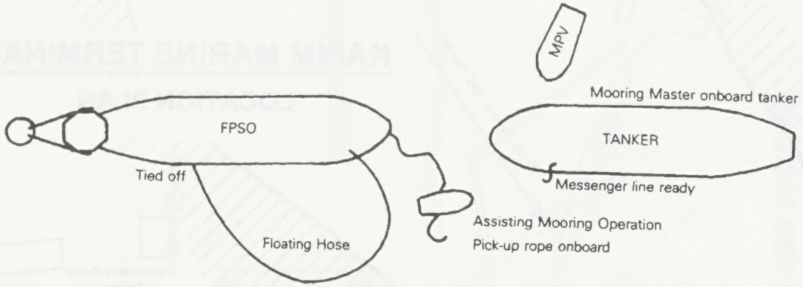
129° 22' 45" E
20m
10m
5m
2m
0°4' 05" S
Planned Jetty Building
N
LOCATION MAP
Tg.Oeboelie
Gebe Island
Fau
Joe Island

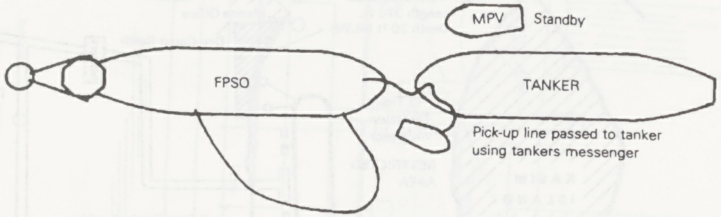

54.07 m.
Mooring Dolphin
Berthing Dolphin
N
624 m.
339.5 m.
Maximum 30,000 DWT
Maximum 10,000 DWT
210 m.
Boat Landing
Pump Station
Maximum 10,000 DWT
Conveyor
Pipe Rack
Conveyor
Mooring Dolphin
GRESIK

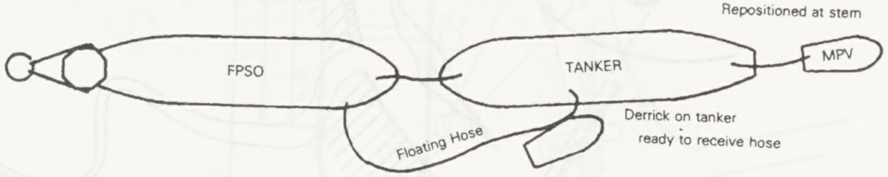

JAKARTA
N
New Breakwater
Cement Berths
Container Berth
Container Yard
Container Terminal
Future Expansion
Liquid Chemical Berth
Oil Basin
Services Harbour
Basin I
Basin II
Basin III
Nusantara II
Nusantara I
0
1000
SCALE OF METRES

KAKAP NATUNA MARINE TERMINAL

GENERAL MOORING PROCEDURE

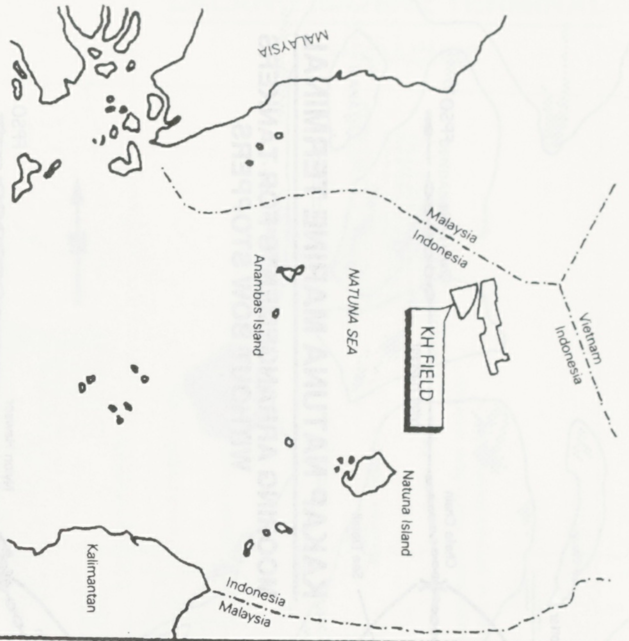

MPV
Mooring Master onboard tanker
FPSO
TANKER
Tied off
Messenger line ready
Assisting Mooring Operation
Pick-up rope onboard
Floating Hose


MPV
Standby
FPSO
TANKER
Pick-up line passed to tanker
using tankers messenger

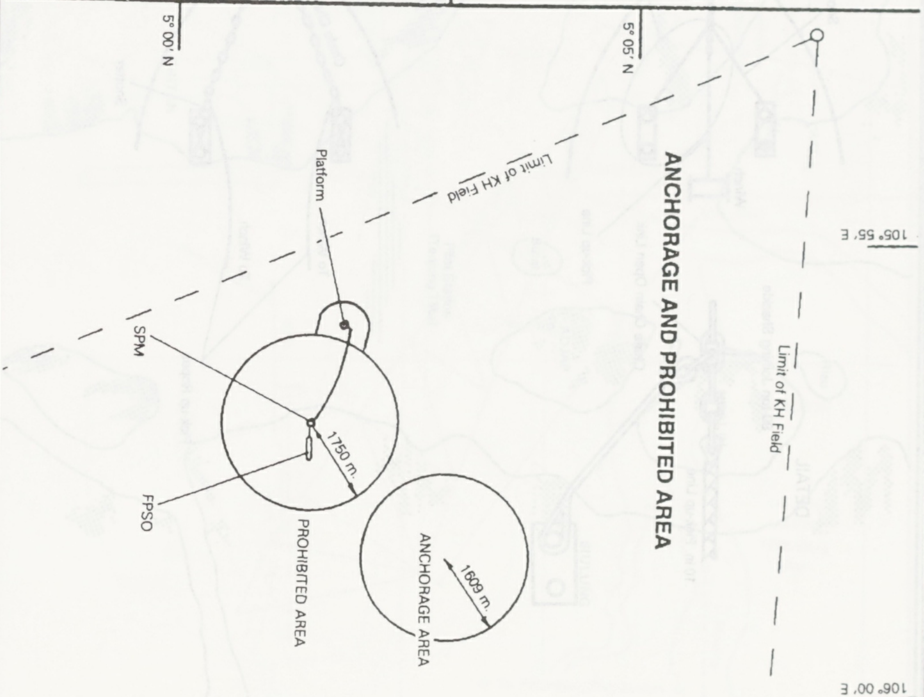

Repositioned at stem
MPV
FPSO
TANKER
Derrick on tanker
ready to receive hose
Floating Hose

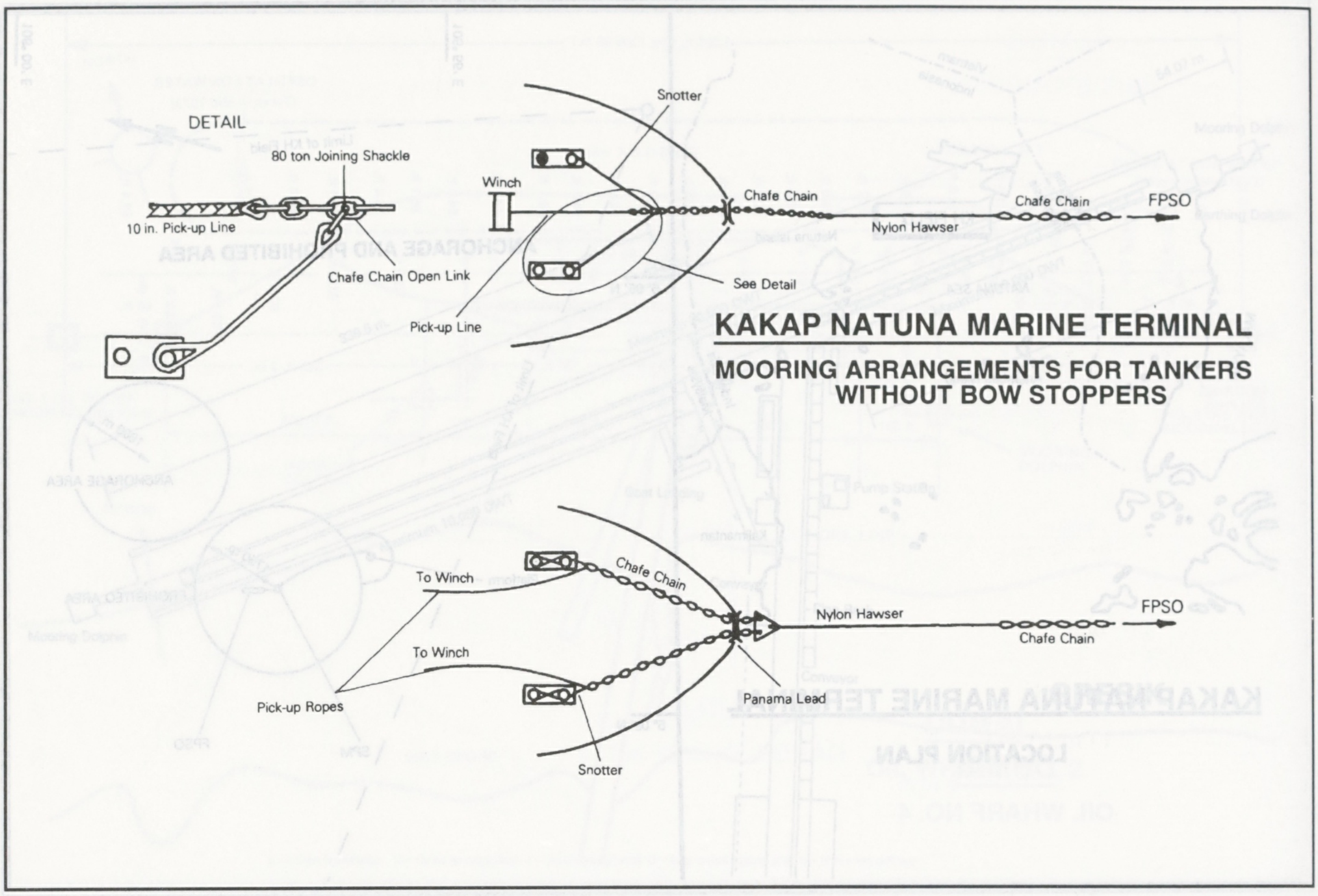
KAKAP NATUNA MARINE TERMINAL

LOCATION PLAN


MALAYSIA
Malaysia
Indonesia
Vietnam
Indonesia
KH FIELD
NATUNA SEA
Anambas Island
Natuna Island
Kalimantan
Indonesia
Malaysia

ANCHORAGE AND PROHIBITED AREA

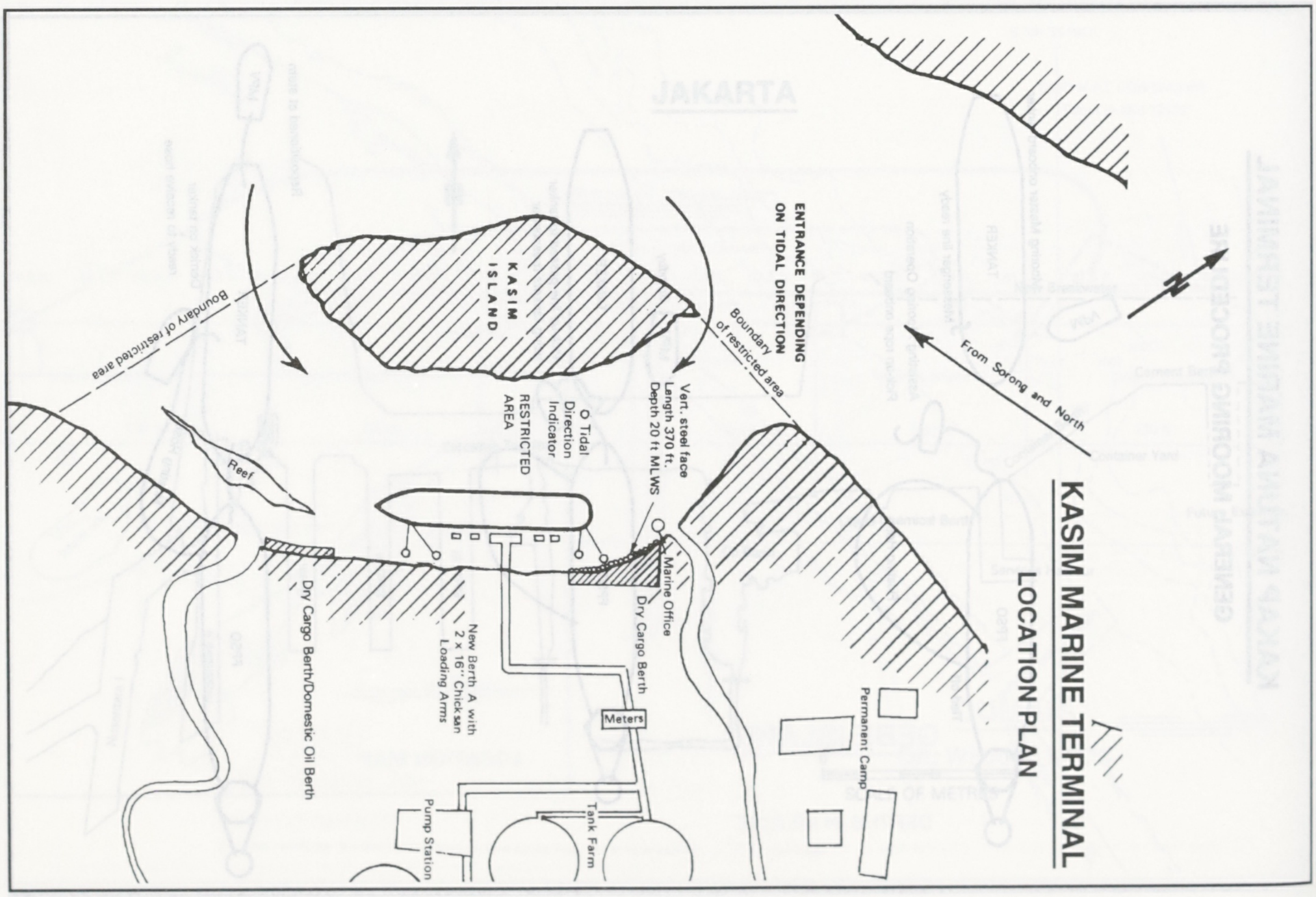

5° 00' N
5° 05' N
105° 55' E
106° 00' E
Limit of KH Field
Limit of KH Field
Platform
SPM
FPSO
1750 m
PROHIBITED AREA
1609 m
ANCHORAGE AREA



KAKAP NATUNA MARINE TERMINAL

MOORING ARRANGEMENTS FOR TANKERS WITHOUT BOW STOPPERS

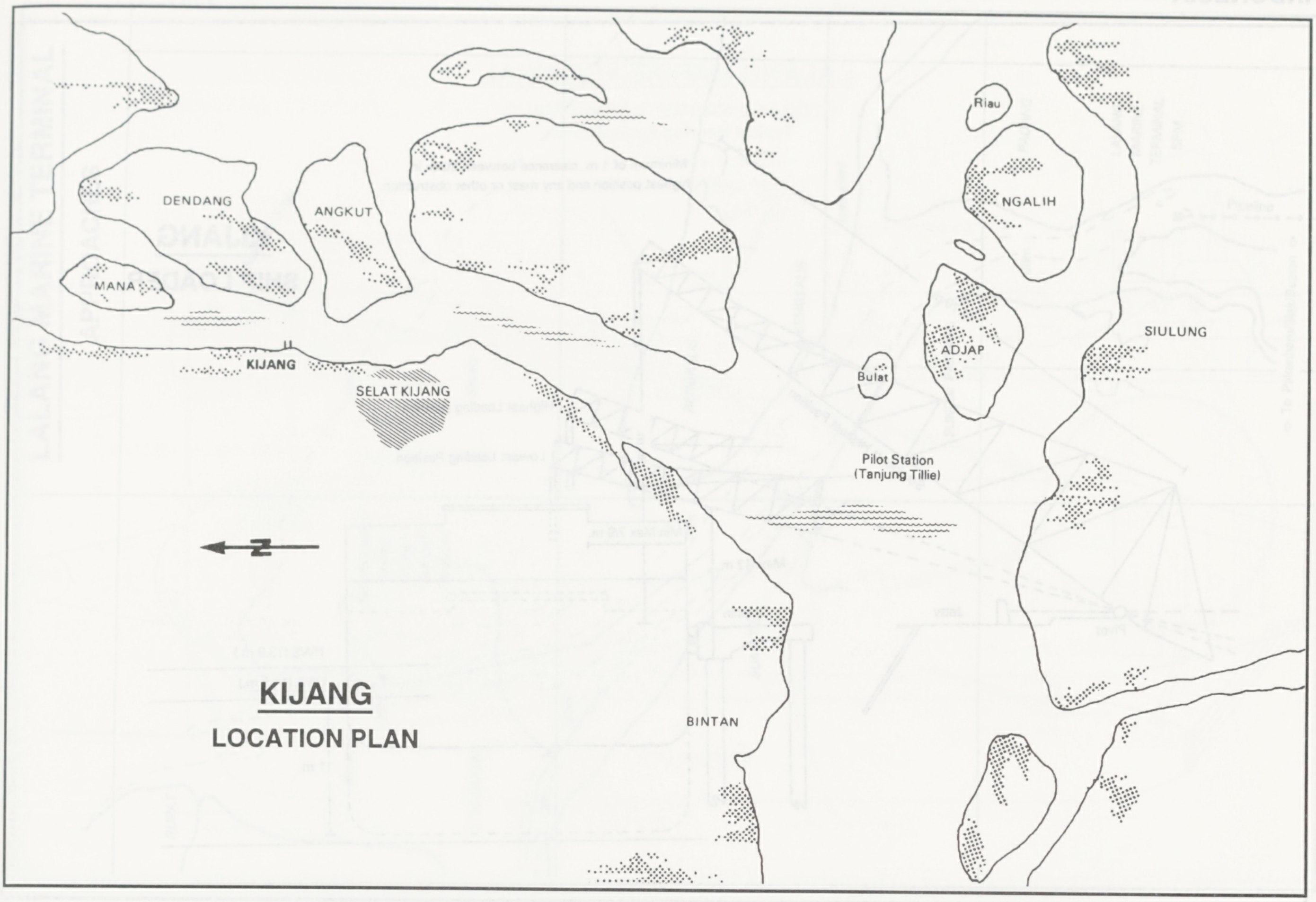
DETAIL
80 ton Joining Shackle
10 in. Pick-up Line
Chafe Chain Open Link
Snotter
Winch
Chafe Chain
Chafe Chain
FPSO
Nylon Hawser
See Detail
Pick-up Line
To Winch
Chafe Chain
To Winch
Nylon Hawser
FPSO
Chafe Chain
Pick-up Ropes
Panama Lead
Snotter



KASIM MARINE TERMINAL

LOCATION PLAN

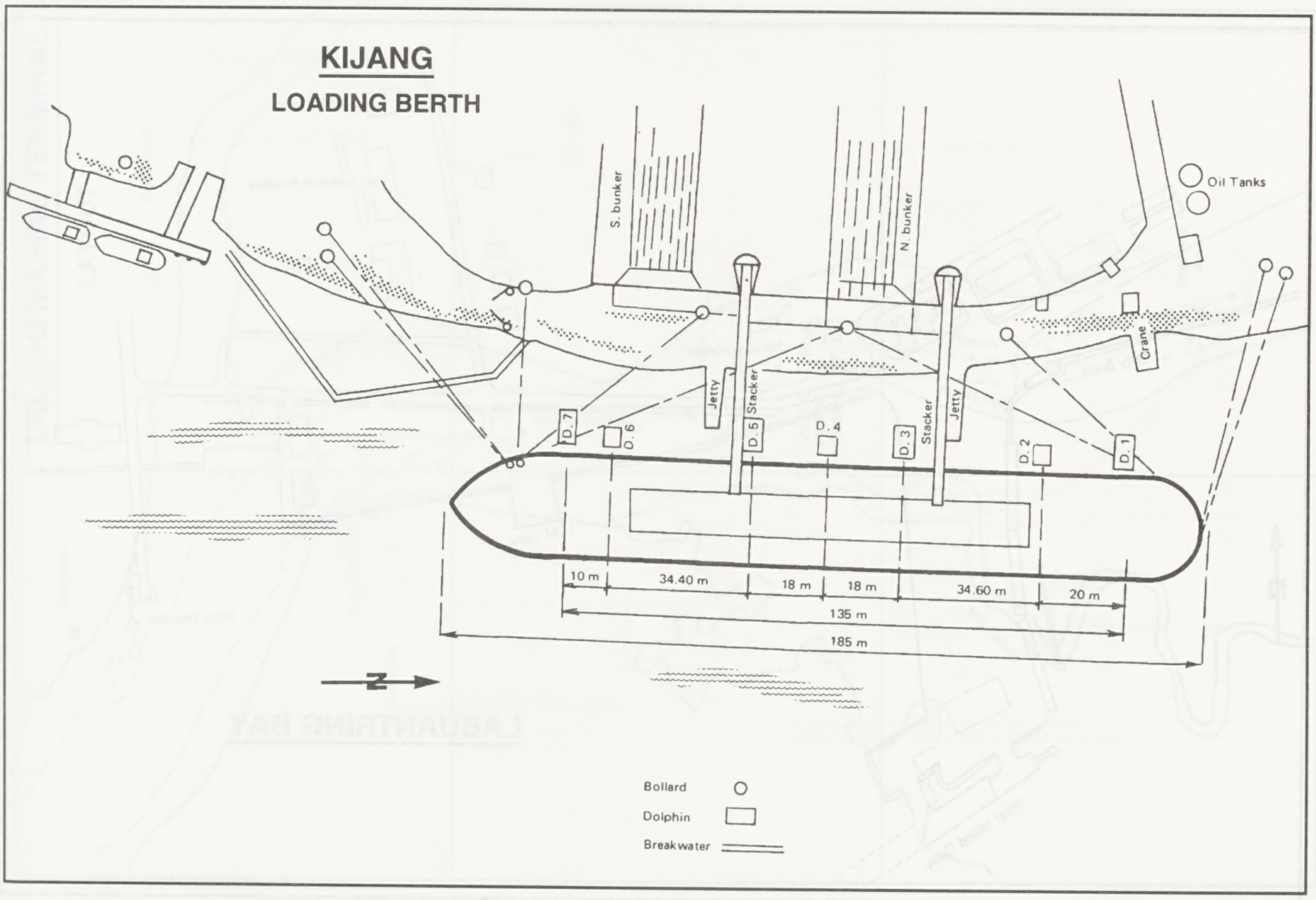
KASIM ISLAND
ENTRANCE DEPENDING ON TIDAL DIRECTION
Boundary of restricted area
Boundary of restricted area
From Sorong and North
Reef
Vert. steel face Length 370 ft. Depth 20 ft MLWS
O Tidal Direction Indicator
RESTRICTED AREA
Marine Office
Dry Cargo Berth
Dry Cargo Berth/Domestic Oil Berth
New Berth A with 2 x 16" Chicksan Loading Arms
Meters
Tank Farm
Pump Station
Permanent Camp



KIJANG

LOCATION PLAN

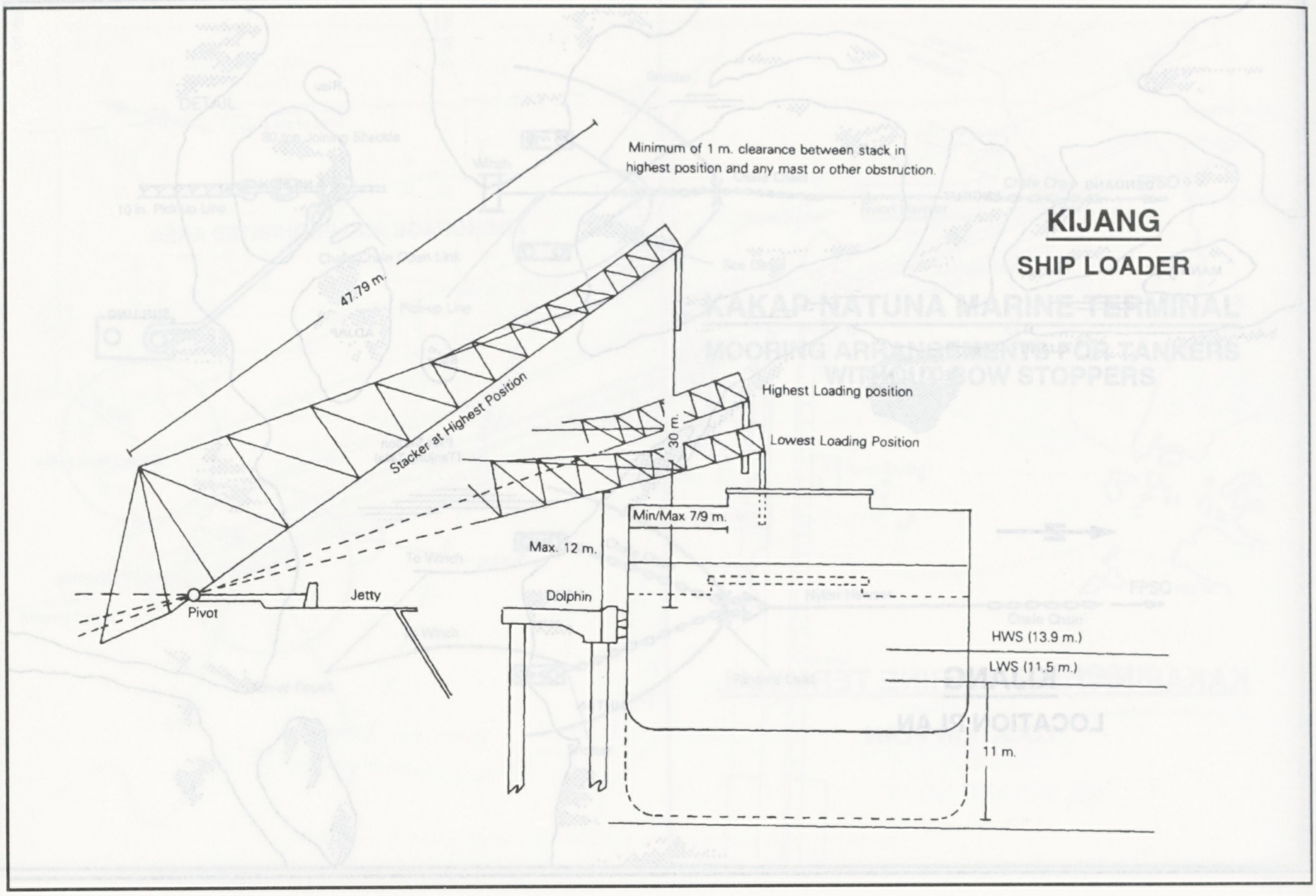
DENDANG
ANGKUT
MANA
KIJANG
SELAT KIJANG
Riau
NGALIH
ADJAP
Bulat
SIULUNG
Pilot Station
(Tanjung Tillie)
BINTAN
N



KIJANG

LOADING BERTH

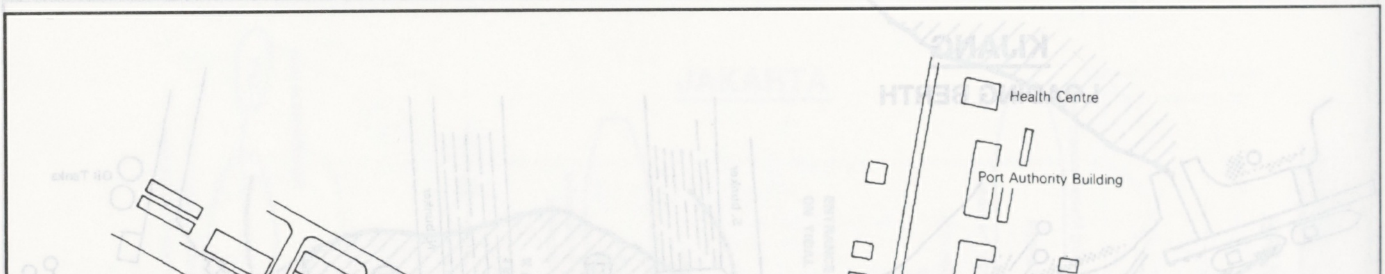
S. bunker
N. bunker
Oil Tanks
Crane
Jetty
Stacker
D. 7
D. 6
D. 5
D. 4
D. 3
Stacker
Jetty
D. 2
D. 1
10 m
34.40 m
18 m
18 m
34.60 m
20 m
135 m
185 m
N
Bollard ○
Dolphin □
Breakwater



KIJANG

SHIP LOADER

Minimum of 1 m. clearance between stack in highest position and any mast or other obstruction.
47.79 m.
Stacker at Highest Position
Highest Loading position
30 m.
Lowest Loading Position
Min/Max 7/9 m.
Max. 12 m.
Pivot
Jetty
Dolphin
HWS (13.9 m.)
LWS (11.5 m.)
11 m.

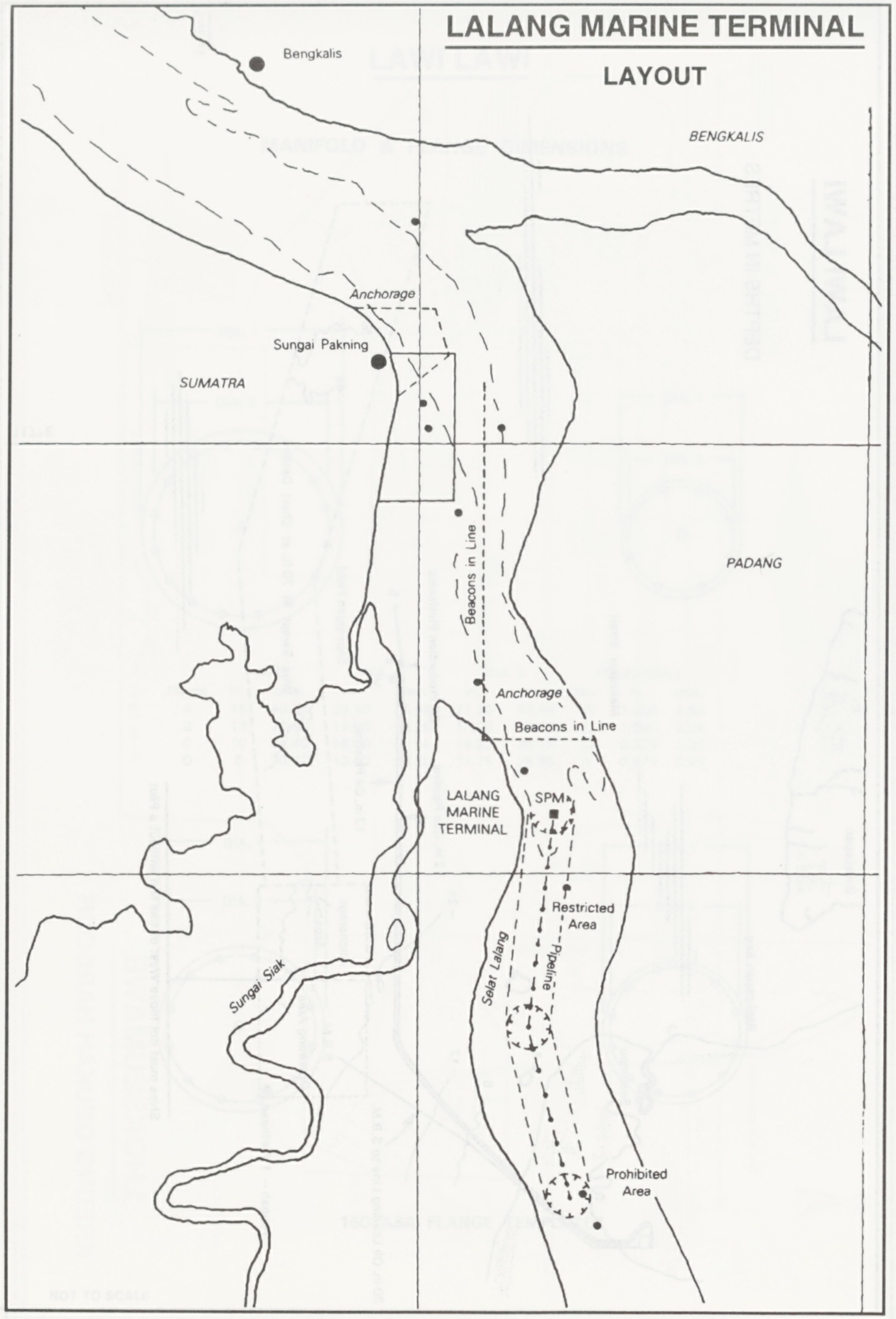


LABUANTRING BAY

Health Centre
Port Authority Building
Harbour Master
Ferry Berth
LCM Quay
Ferry Terminal
N
Domestic/Coastal
Inter Island Quay

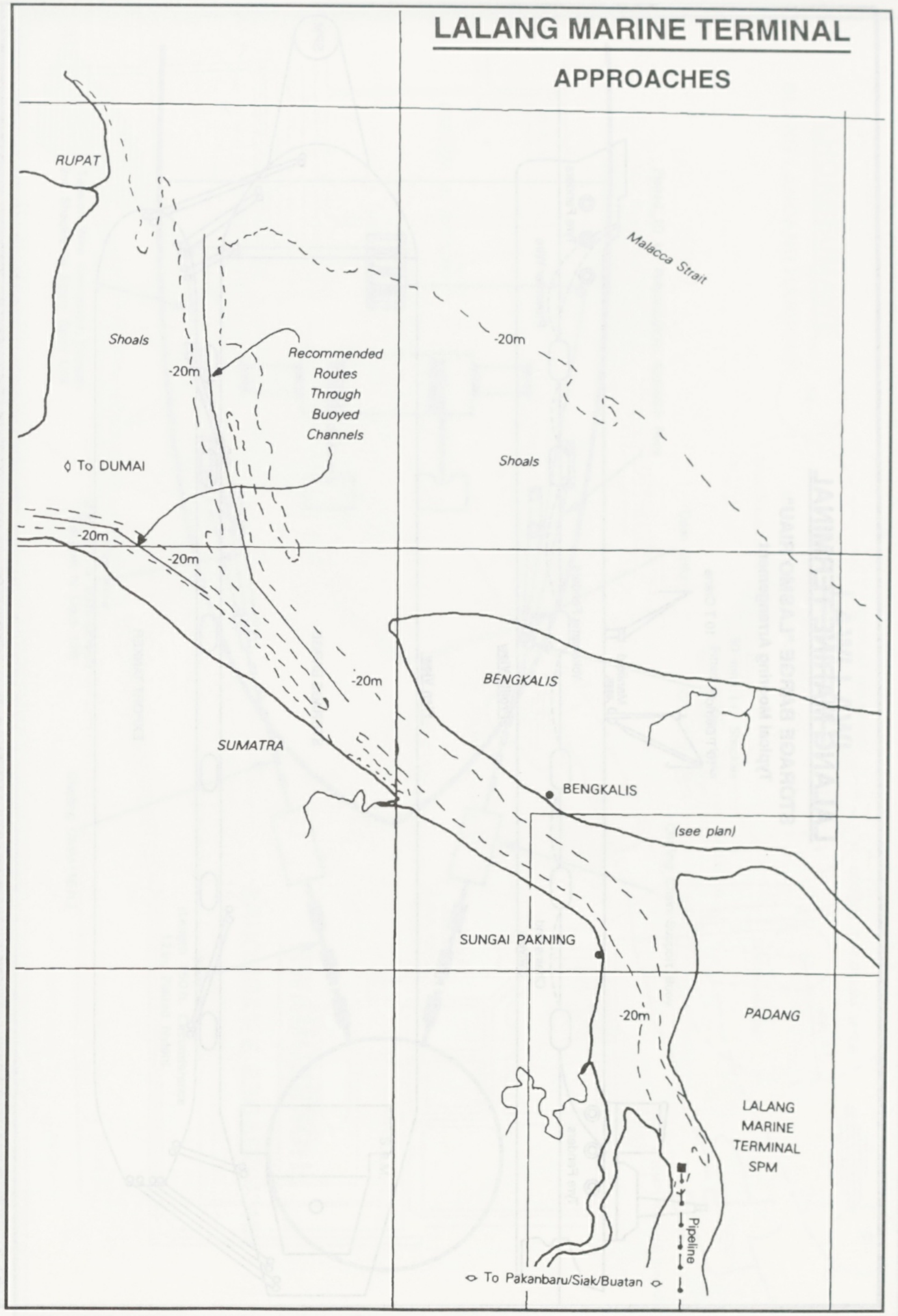
LALANG MARINE TERMINAL

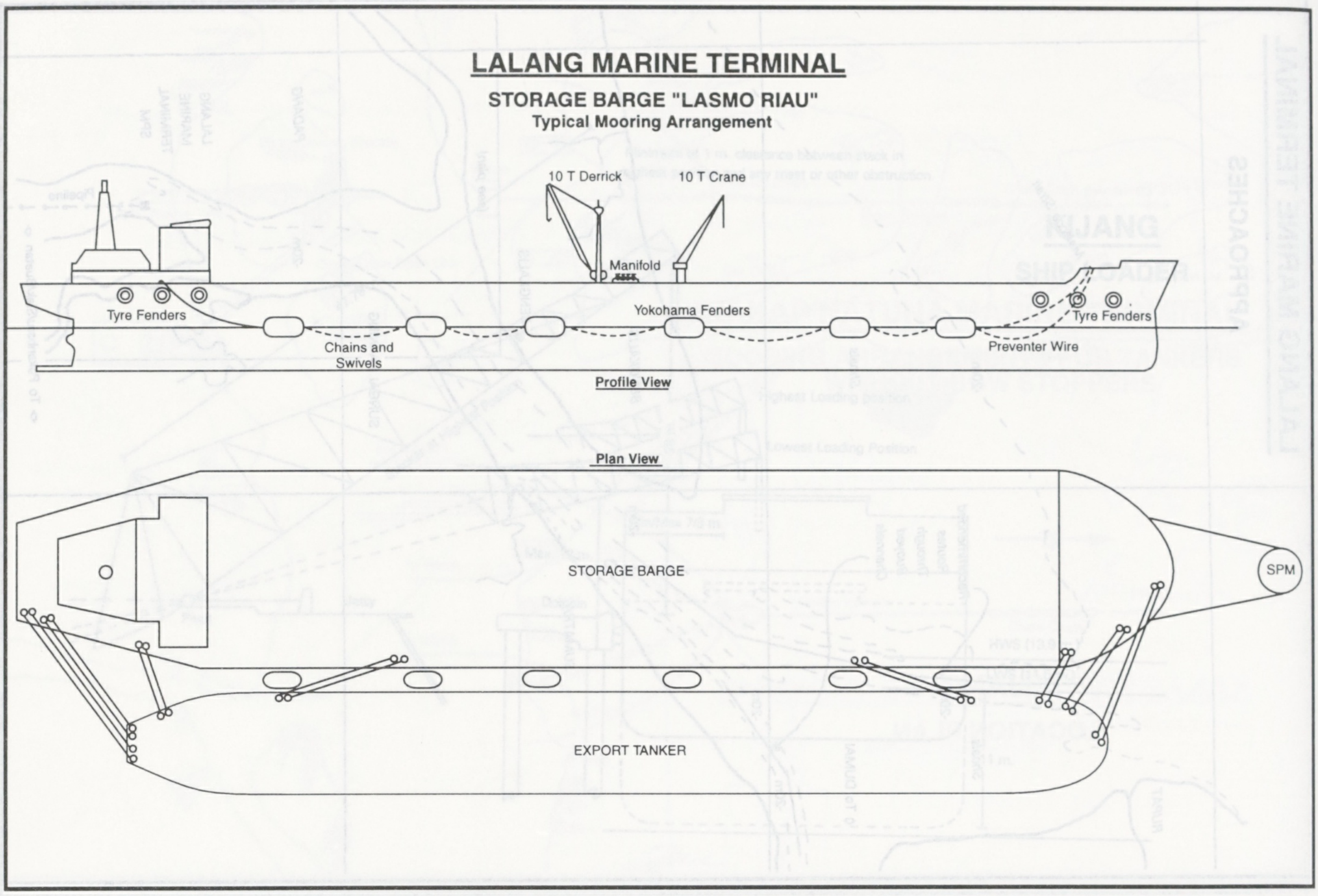
LAYOUT


Bengkalis
BENGKALIS
Anchorage
Sungai Pakning
SUMATRA
PADANG
Beacons in Line
Anchorage
Beacons in Line
LALANG
MARINE
TERMINAL
SPM
Restricted
Area
Selat Lalang
Pipeline
Sungai Siak
Prohibited
Area

LALANG MARINE TERMINAL

APPROACHES


RUPAT
Malacca Strait
Shoals
-20m
Recommended
Routes
Through
Buoyed
Channels
-20m
◊ To DUMAI
Shoals
-20m
-20m
-20m
BENGKALIS
SUMATRA
BENGKALIS
(see plan)
SUNGAI PAKNING
-20m
PADANG
LALANG
MARINE
TERMINAL
SPM
Pipeline
◇ To Pakanbaru/Siak/Buatan ◇

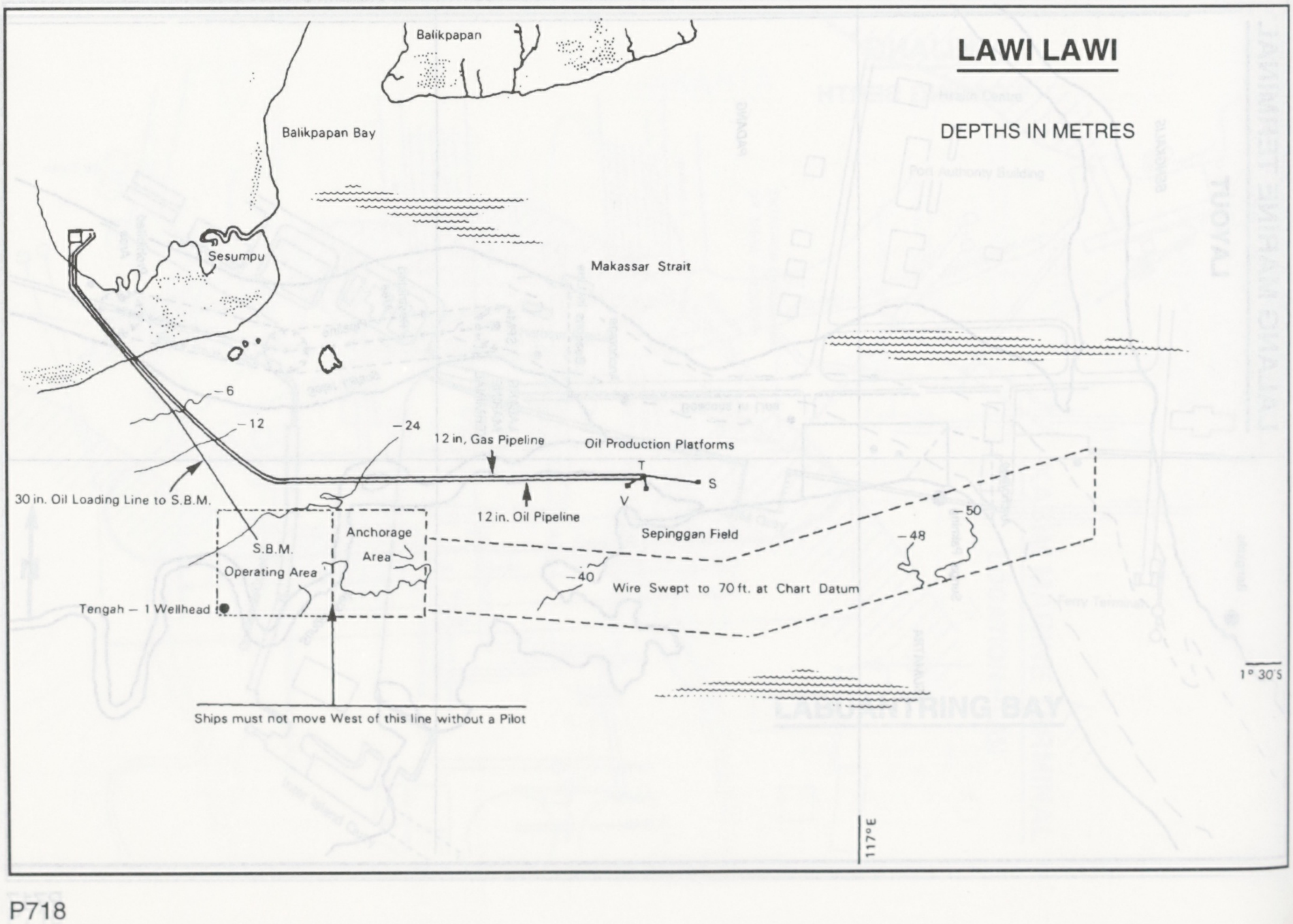


LALANG MARINE TERMINAL

STORAGE BARGE "LASMO RIAU"

Typical Mooring Arrangement

10 T Derrick
10 T Crane
Manifold
Tyre Fenders
Yokohama Fenders
Tyre Fenders
Chains and Swivels
Preventer Wire
Profile View
Plan View
STORAGE BARGE
SPM
EXPORT TANKER

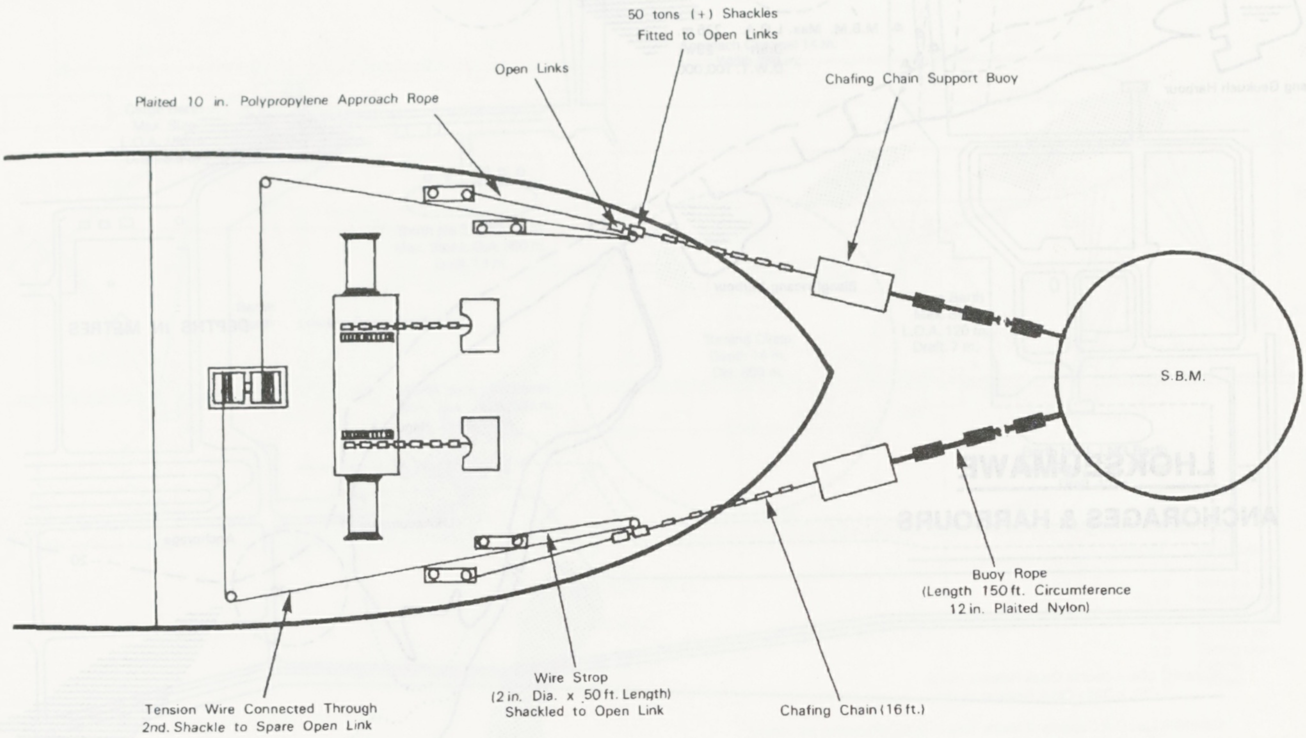


LAWI LAWI

DEPTHS IN METRES

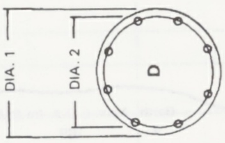
Balikpapan
Balikpapan Bay
Sesumpu
Makassar Strait
−6
−12
−24
12 in. Gas Pipeline
Oil Production Platforms
T
S
V
30 in. Oil Loading Line to S.B.M.
12 in. Oil Pipeline
S.B.M.
Operating Area
Anchorage
Area
Sepinggan Field
−50
−48
−40
Wire Swept to 70 ft. at Chart Datum
Tengah – 1 Wellhead
Ships must not move West of this line without a Pilot
1° 30'S
117°E

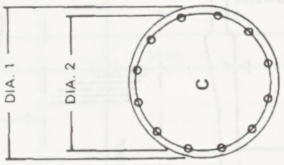
LAWI LAWI


50 tons (+) Shackles Fitted to Open Links
Open Links
Plaited 10 in. Polypropylene Approach Rope
Chafing Chain Support Buoy
S.B.M.
Buoy Rope (Length 150 ft. Circumference 12 in. Plaited Nylon)
Chafing Chain (16 ft.)
Wire Strop (2 in. Dia. x 50 ft. Length) Shackled to Open Link
Tension Wire Connected Through 2nd. Shackle to Spare Open Link

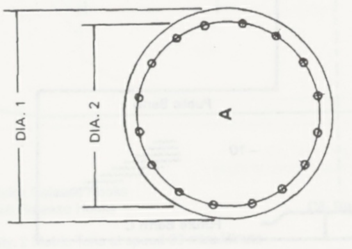
LAWI LAWI

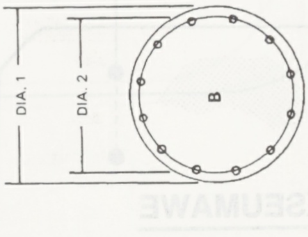
MANIFOLD & FLANGE DIMENSIONS





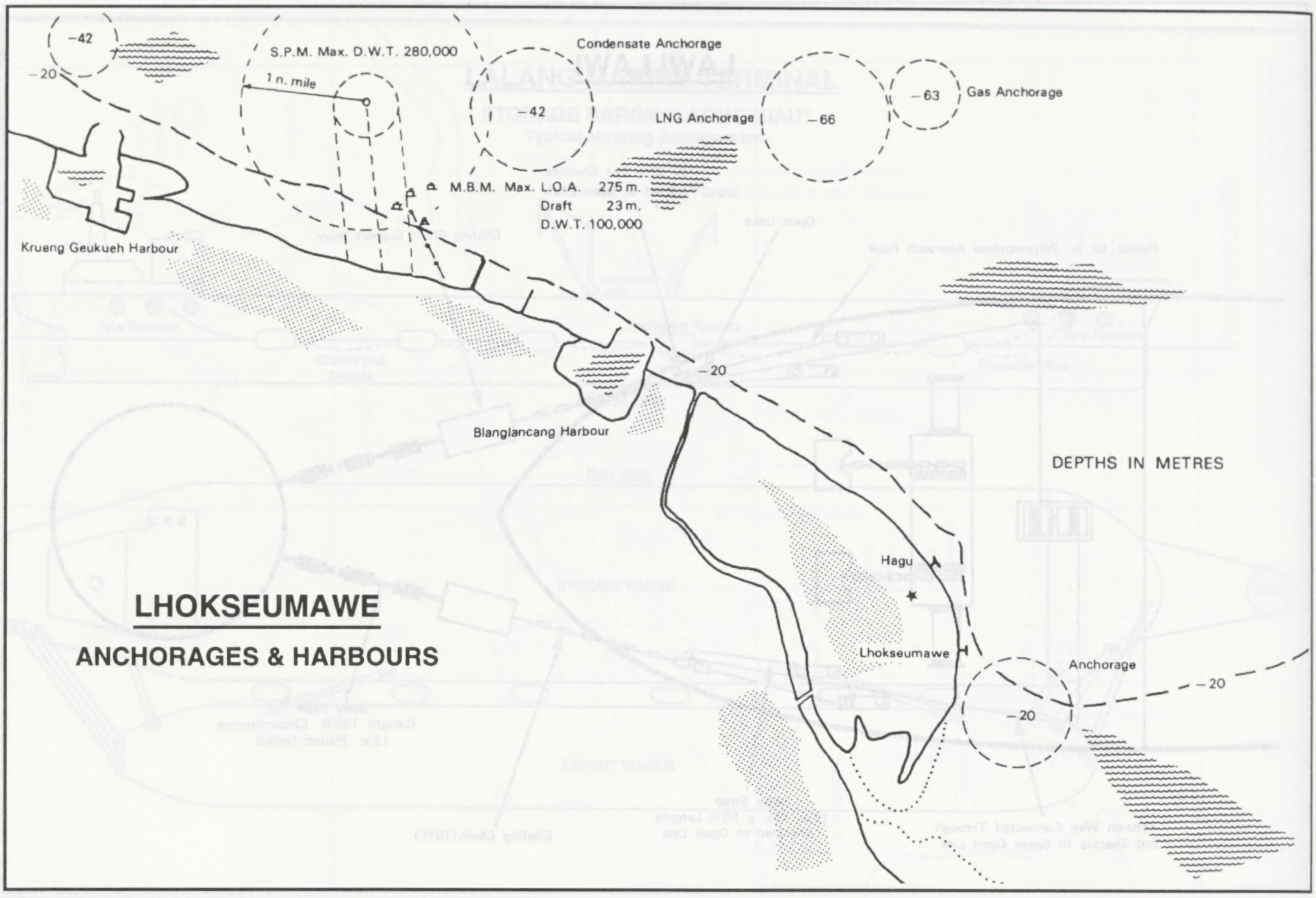
Flange	SIZE		DIA. 1		DIA. 2		HOLES (DIA.)		
	in.	cms.	in.	cms.	in.	cms.	No.	in.	cms.
A	16	40.64	23.50	59.69	21.25	53.98	16	1.000	2.54
B	12	30.50	19.00	48.26	17.00	43.18	12	1.000	2.54
C	10	25.40	16.00	40.64	14.25	36.19	12	0.875	2.23
D	8	20.32	13.50	34.29	11.75	29.85	8	0.875	2.23





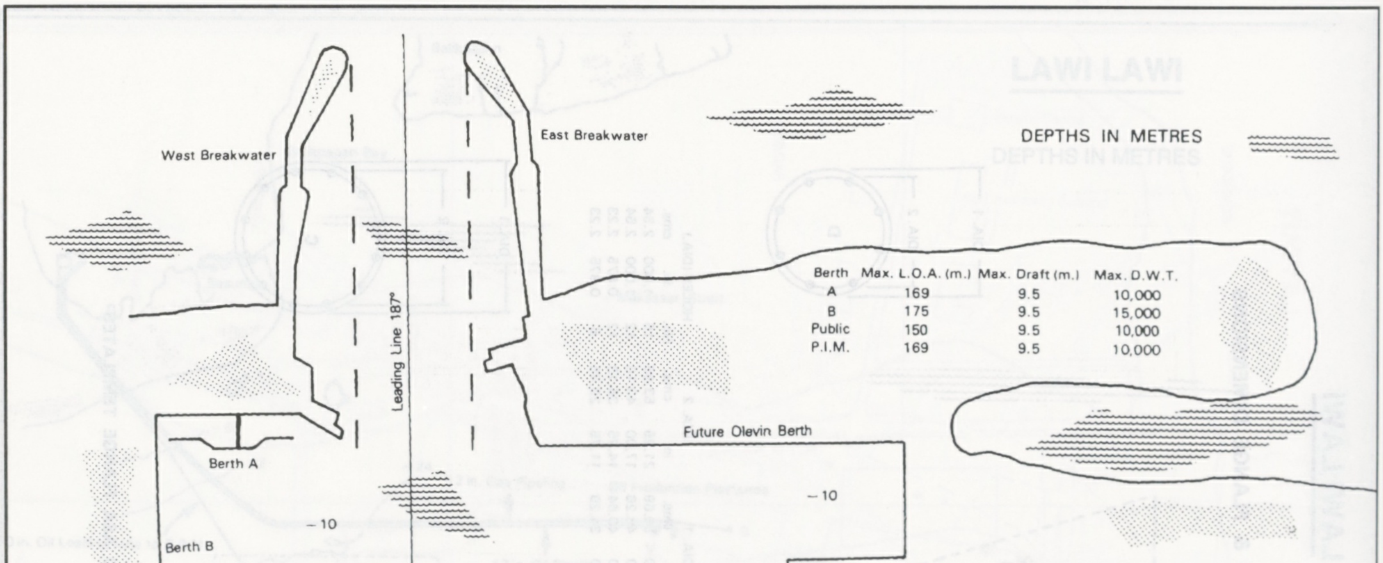
150 ASA FLANGE TEMPLATES

NOT TO SCALE


-42
-20
S.P.M. Max. D.W.T. 280,000
1 n. mile
Condensate Anchorage
-42
LNG Anchorage
-66
-63
Gas Anchorage
M.B.M. Max. L.O.A. 275 m.
Draft 23 m.
D.W.T. 100,000
Krueng Geukueh Harbour
-20
Blanglancang Harbour
DEPTHS IN METRES
Hagu
Lhokseumawe
Anchorage
-20
-20

LHOKSEUMAWE

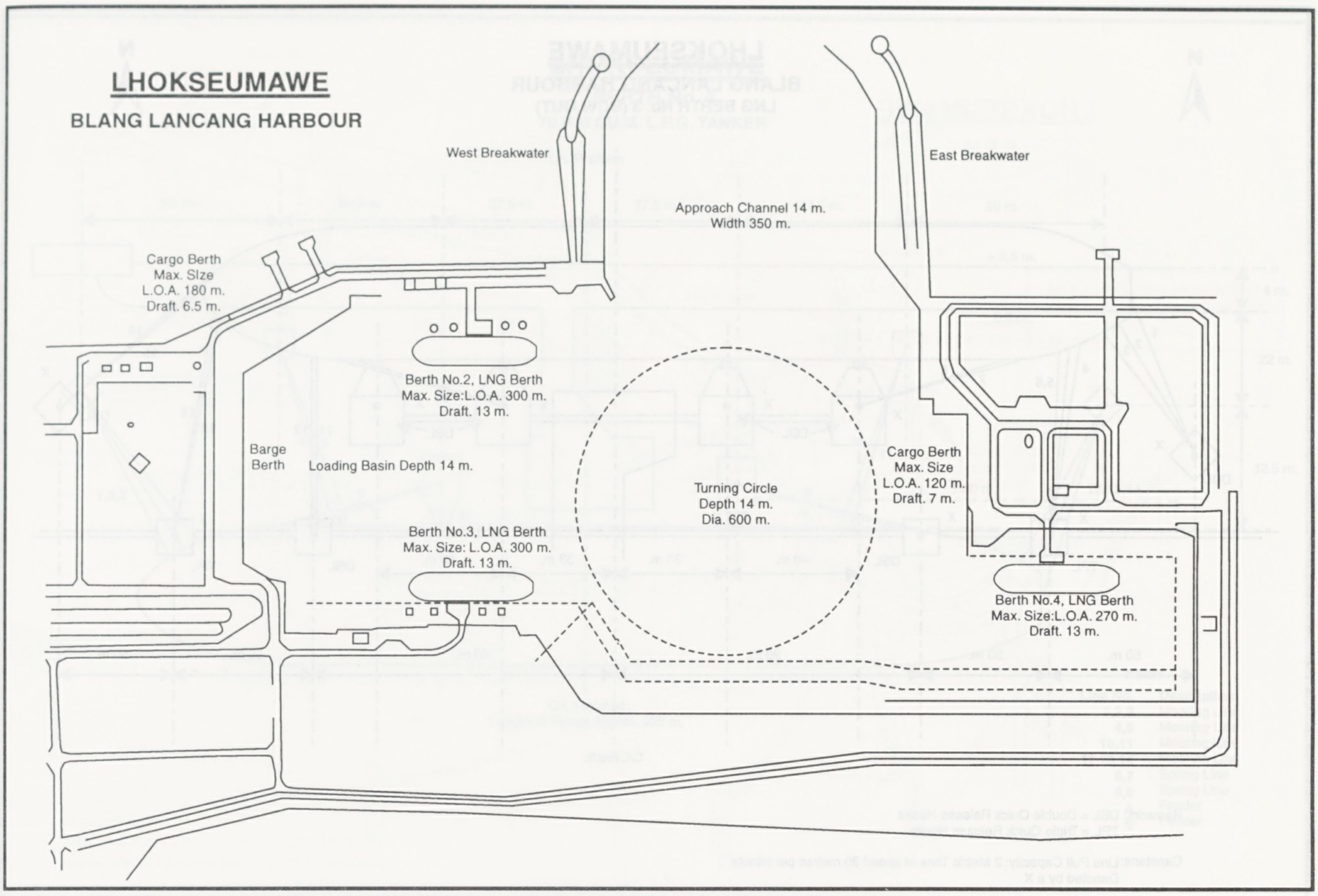
ANCHORAGES & HARBOURS

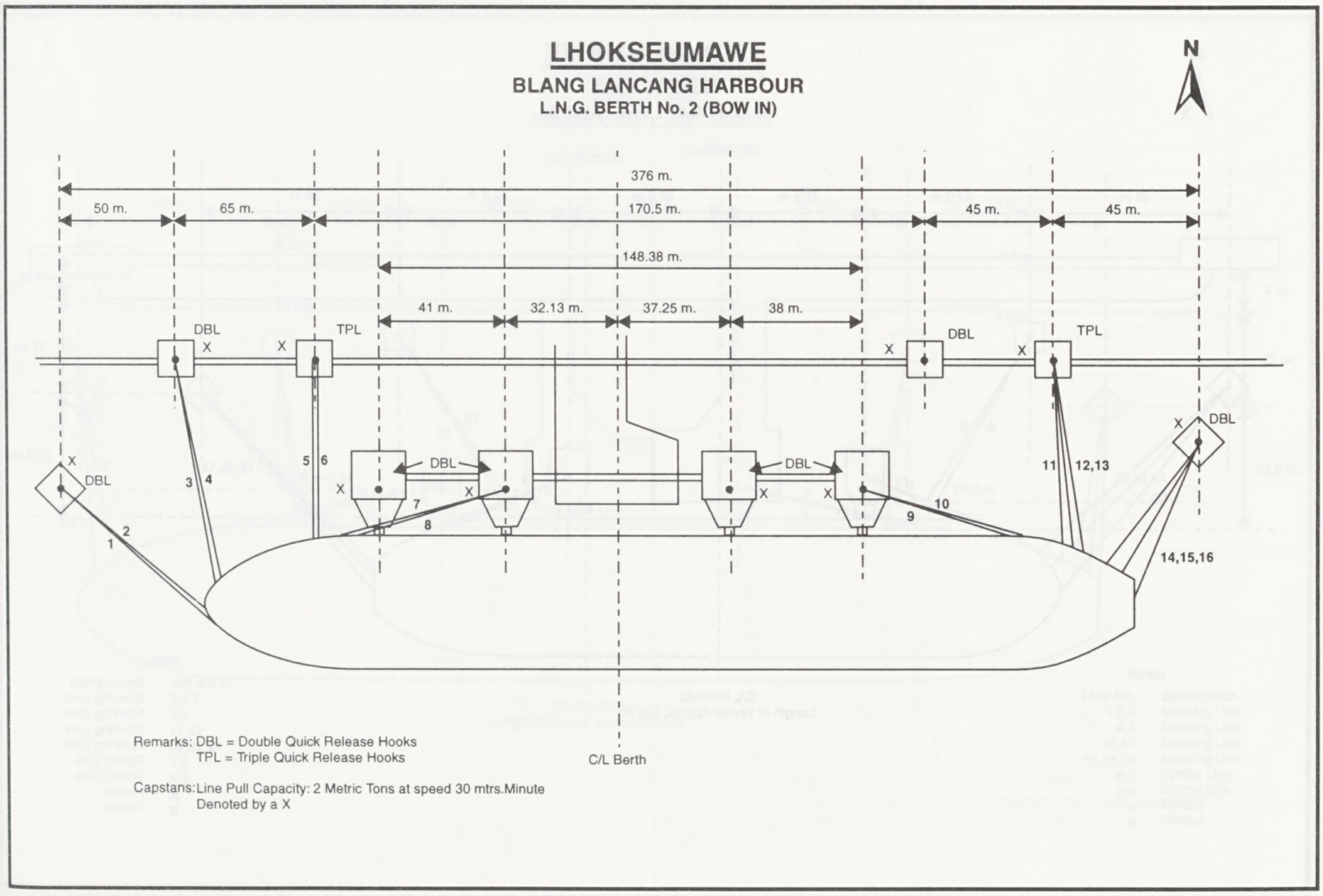

West Breakwater
East Breakwater
DEPTHS IN METRES
Leading Line 187°
Future Olevin Berth
Berth A
Berth B
-10
-10
-10
-10
Public Berth
P.I.M. Berth
Future Berth C

Berth	Max. L.O.A. (m.)	Max. Draft (m.)	Max. D.W.T.
A	169	9.5	10,000
B	175	9.5	15,000
Public	150	9.5	10,000
P.I.M.	169	9.5	10,000

LHOKSEUMAWE

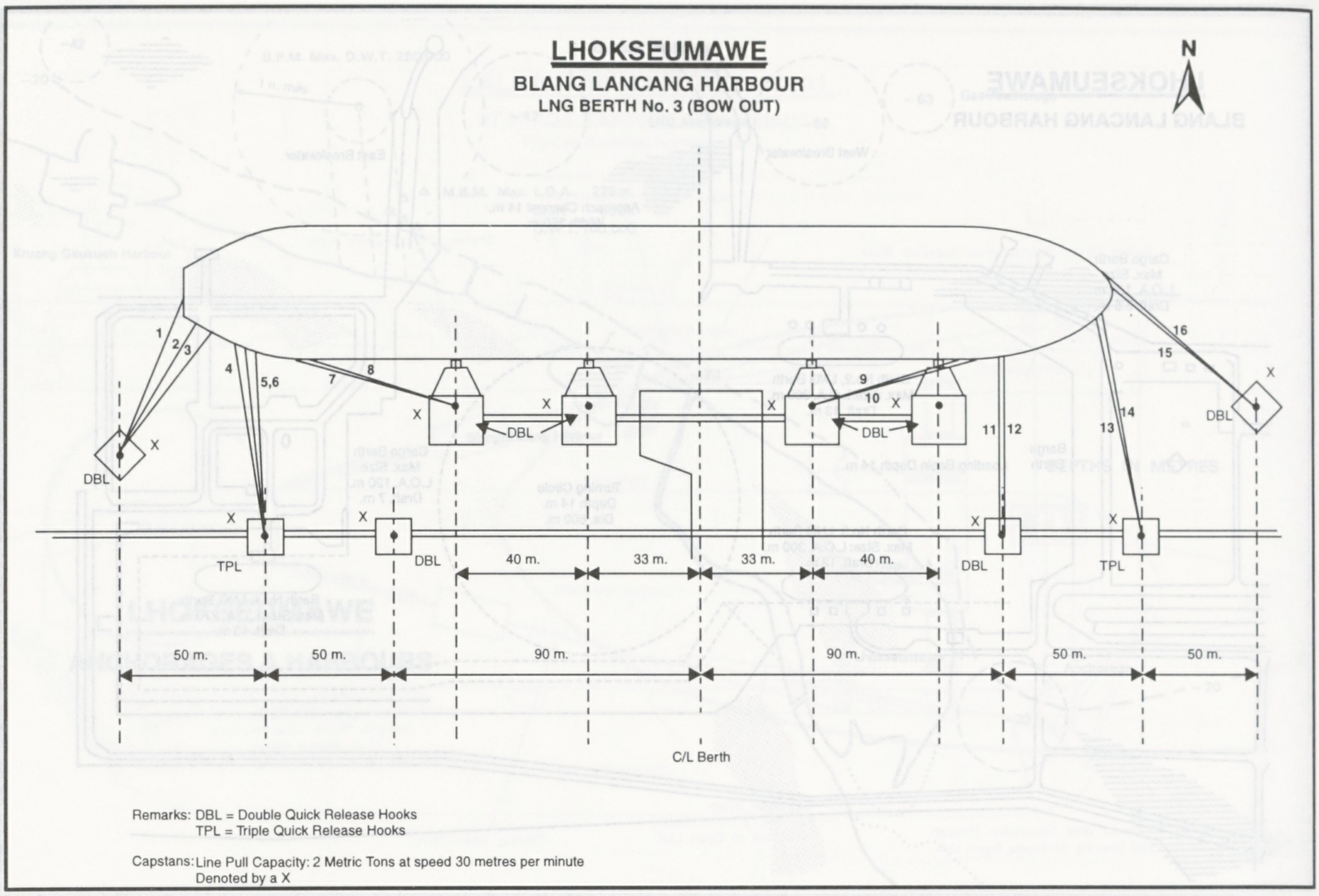
KREUNG GEUKAH HARBOUR


LHOKSEUMAWE
BLANG LANCANG HARBOUR
West Breakwater
East Breakwater
Approach Channel 14 m.
Width 350 m.
Cargo Berth
Max. SIze
L.O.A. 180 m.
Draft. 6.5 m.
Berth No.2, LNG Berth
Max. Size:L.O.A. 300 m.
Draft. 13 m.
Barge
Berth
Loading Basin Depth 14 m.
Turning Circle
Depth 14 m.
Dia. 600 m.
Cargo Berth
Max. Size
L.O.A. 120 m.
Draft. 7 m.
Berth No.3, LNG Berth
Max. Size: L.O.A. 300 m.
Draft. 13 m.
Berth No.4, LNG Berth
Max. Size:L.O.A. 270 m.
Draft. 13 m.


LHOKSEUMAWE
BLANG LANCANG HARBOUR
L.N.G. BERTH No. 2 (BOW IN)
N
376 m.
50 m.
65 m.
170.5 m.
45 m.
45 m.
148.38 m.
41 m.
32.13 m.
37.25 m.
38 m.
DBL
X
X
TPL
X
DBL
X
TPL
X
DBL
X
DBL
1
2
3
4
5
6
X
DBL
X
7
8
X
DBL
X
9
10
11
12,13
14,15,16
C/L Berth

Remarks: DBL = Double Quick Release Hooks
TPL = Triple Quick Release Hooks

Capstans: Line Pull Capacity: 2 Metric Tons at speed 30 mtrs.Minute
Denoted by a X



LHOKSEUMAWE

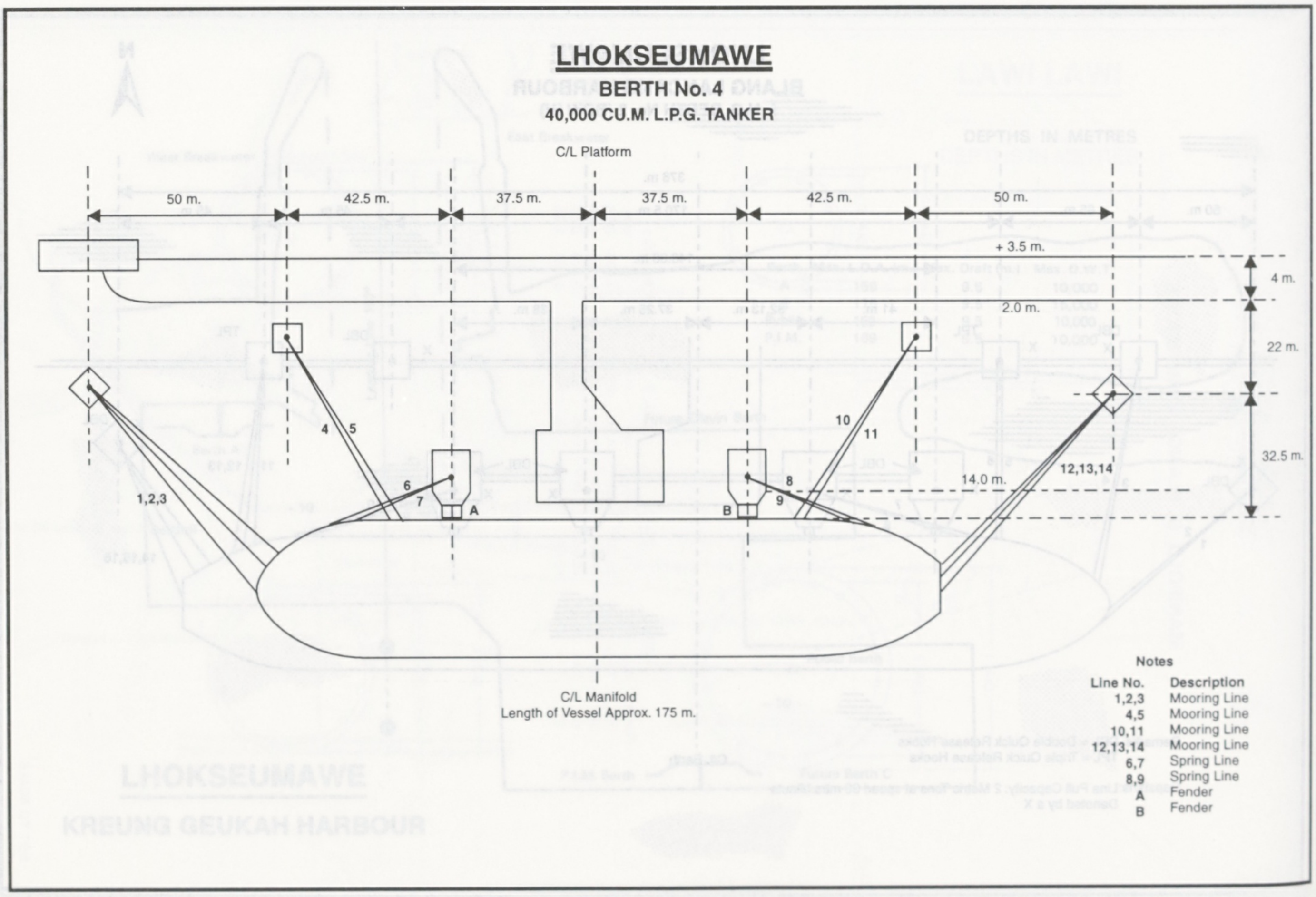
BLANG LANCANG HARBOUR

LNG BERTH No. 3 (BOW OUT)

N
1
2
3
4
5,6
7
8
9
10
11
12
13
14
15
16
X
DBL
TPL
40 m.
33 m.
33 m.
40 m.
50 m.
50 m.
90 m.
90 m.
50 m.
50 m.
C/L Berth

Remarks: DBL = Double Quick Release Hooks
TPL = Triple Quick Release Hooks

Capstans: Line Pull Capacity: 2 Metric Tons at speed 30 metres per minute
Denoted by a X



LHOKSEUMAWE

BERTH No. 4

40,000 CU.M. L.P.G. TANKER

C/L Platform
50 m.
42.5 m.
37.5 m.
37.5 m.
42.5 m.
50 m.
+ 3.5 m.
4 m.
2.0 m.
22 m.
32.5 m.
14.0 m.
1,2,3
4
5
6
7
A
B
8
9
10
11
12,13,14
C/L Manifold
Length of Vessel Approx. 175 m.

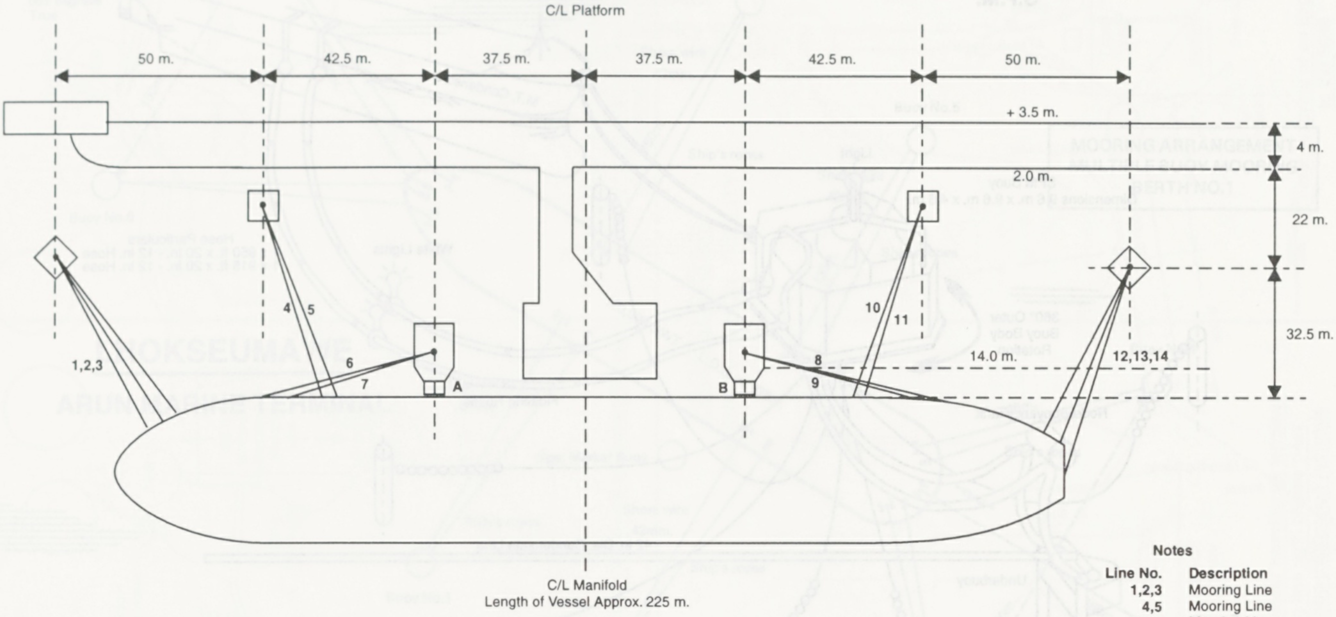
Notes

Line No.	Description
1,2,3	Mooring Line
4,5	Mooring Line
10,11	Mooring Line
12,13,14	Mooring Line
6,7	Spring Line
8,9	Spring Line
A	Fender
B	Fender

LHOKSEUMAWE

BERTH No. 4

70,000 CU.M. L.P.G. TANKER


N
C/L Platform
50 m.
42.5 m.
37.5 m.
37.5 m.
42.5 m.
50 m.
+ 3.5 m.
4 m.
2.0 m.
22 m.
32.5 m.
14.0 m.
1,2,3
4
5
6
7
A
B
8
9
10
11
12,13,14
C/L Manifold
Length of Vessel Approx. 225 m.

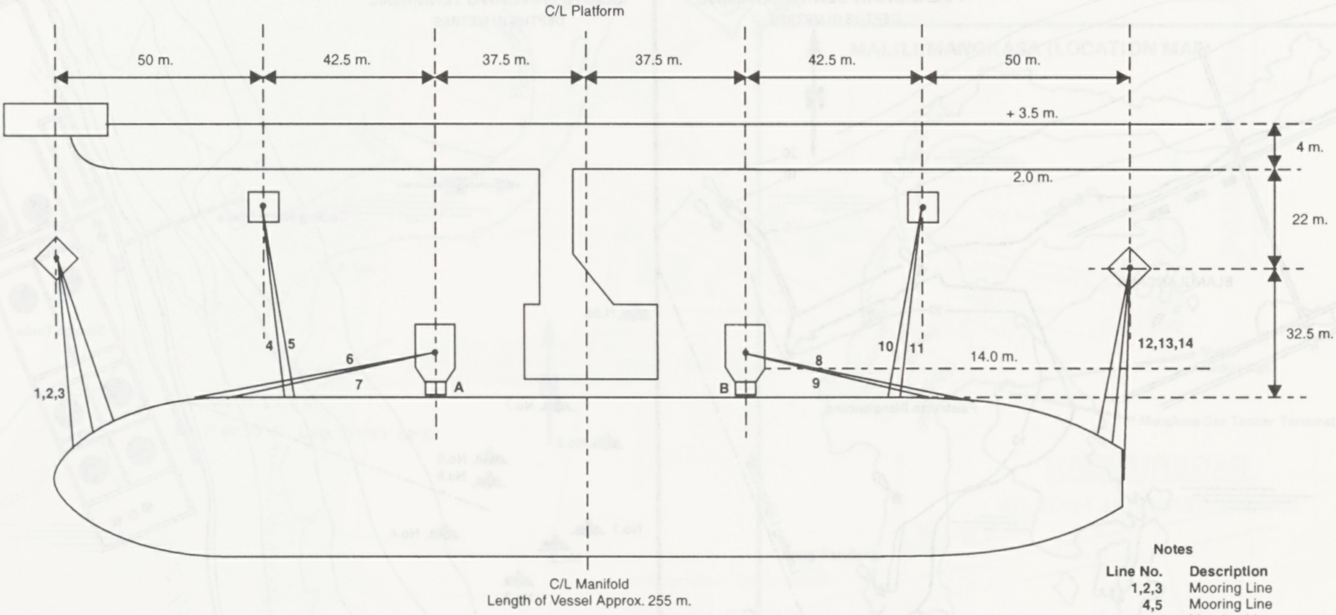
Notes

Line No.	Description
1,2,3	Mooring Line
4,5	Mooring Line
10,11	Mooring Line
12,13,14	Mooring Line
6,7	Spring Line
8,9	Spring Line
A	Fender
B	Fender

LHOKSEUMAWE

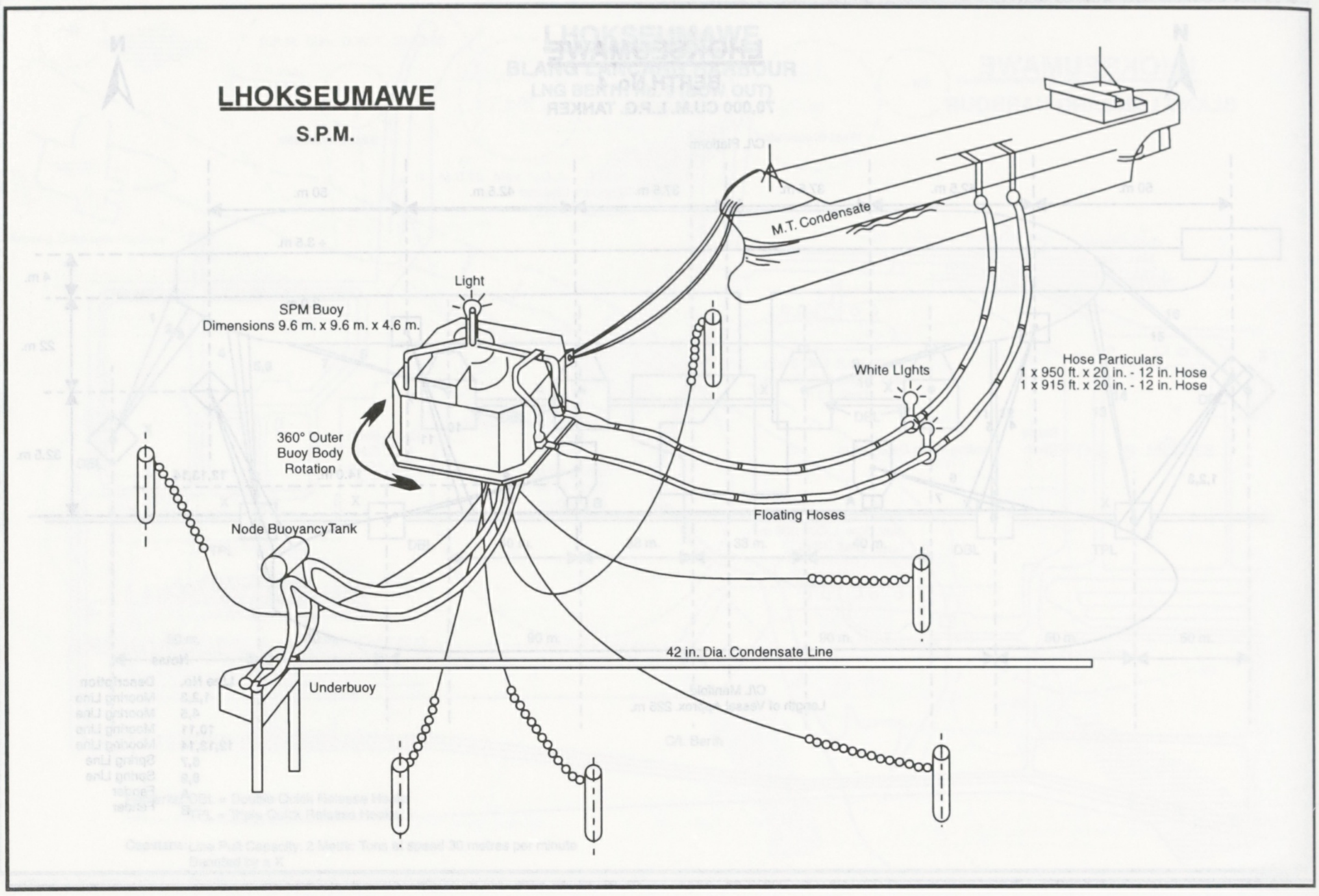
BERTH No. 4

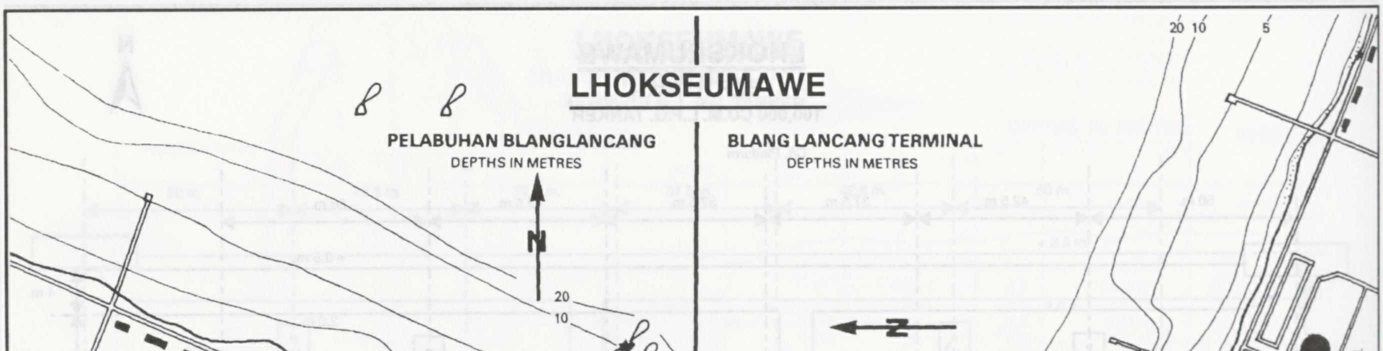
100,000 CU.M. L.P.G. TANKER

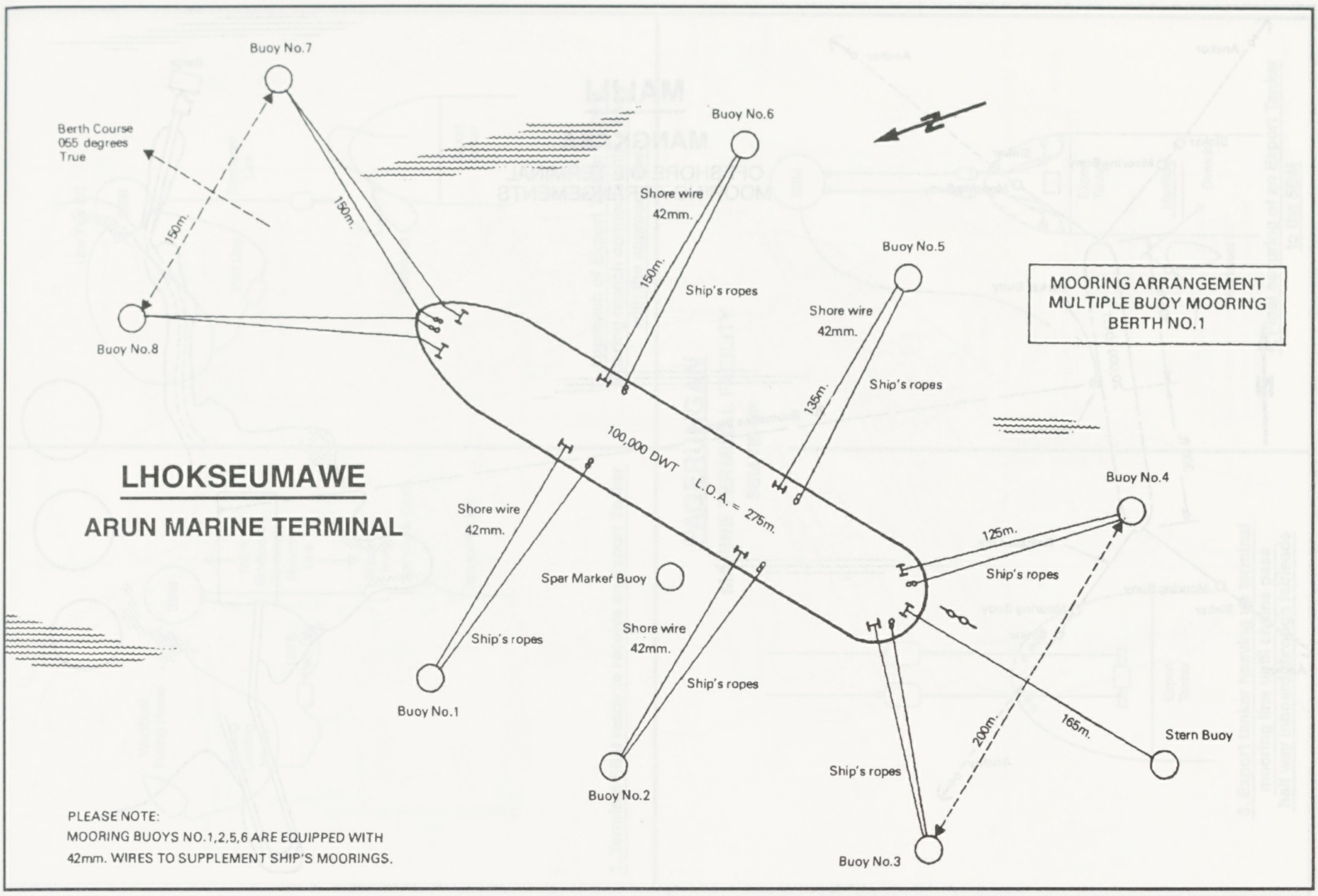

N
C/L Platform
50 m.
42.5 m.
37.5 m.
37.5 m.
42.5 m.
50 m.
+ 3.5 m.
4 m.
2.0 m.
22 m.
32.5 m.
14.0 m.
1,2,3
4
5
6
7
A
B
8
9
10
11
12,13,14
C/L Manifold
Length of Vessel Approx. 255 m.

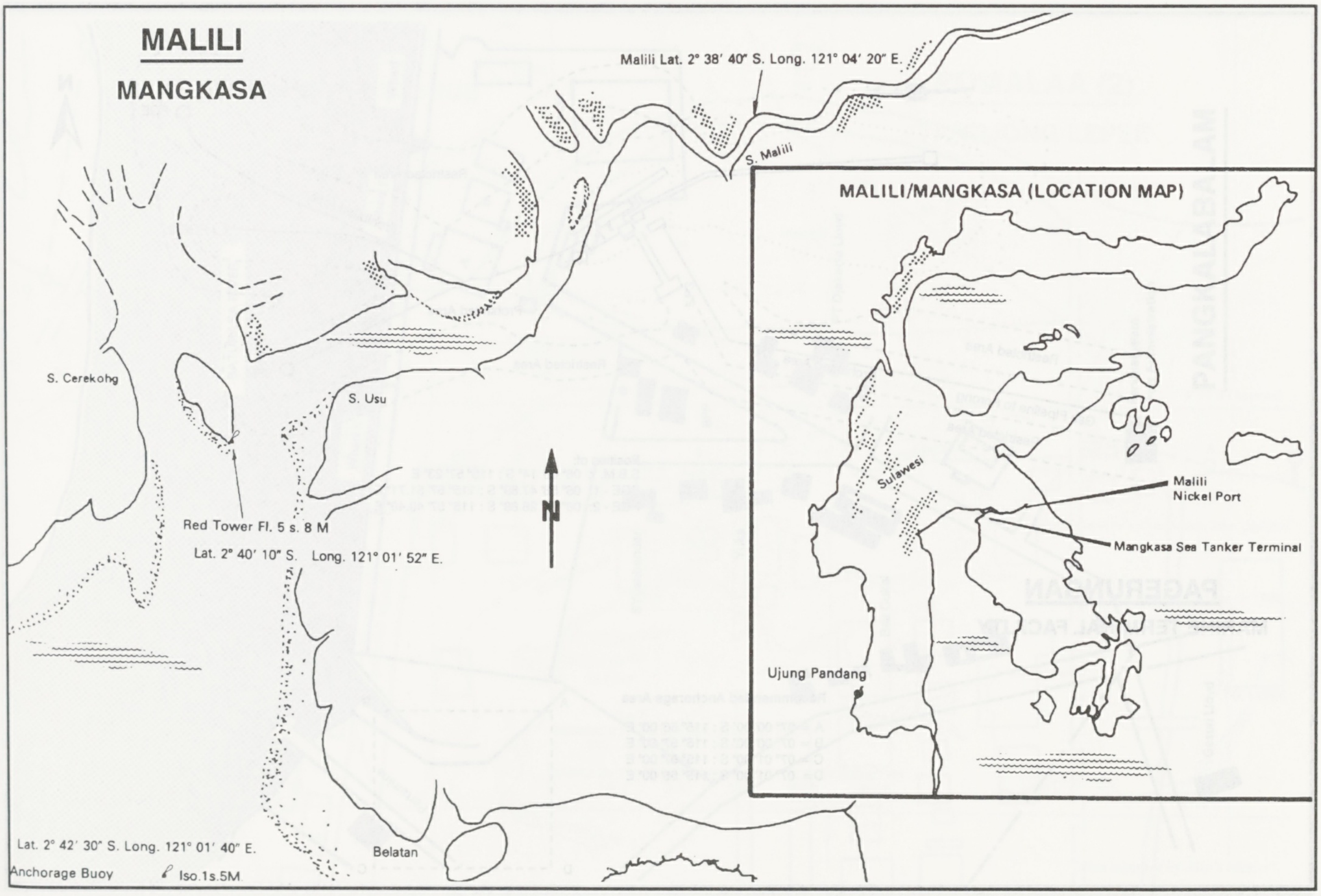
Notes

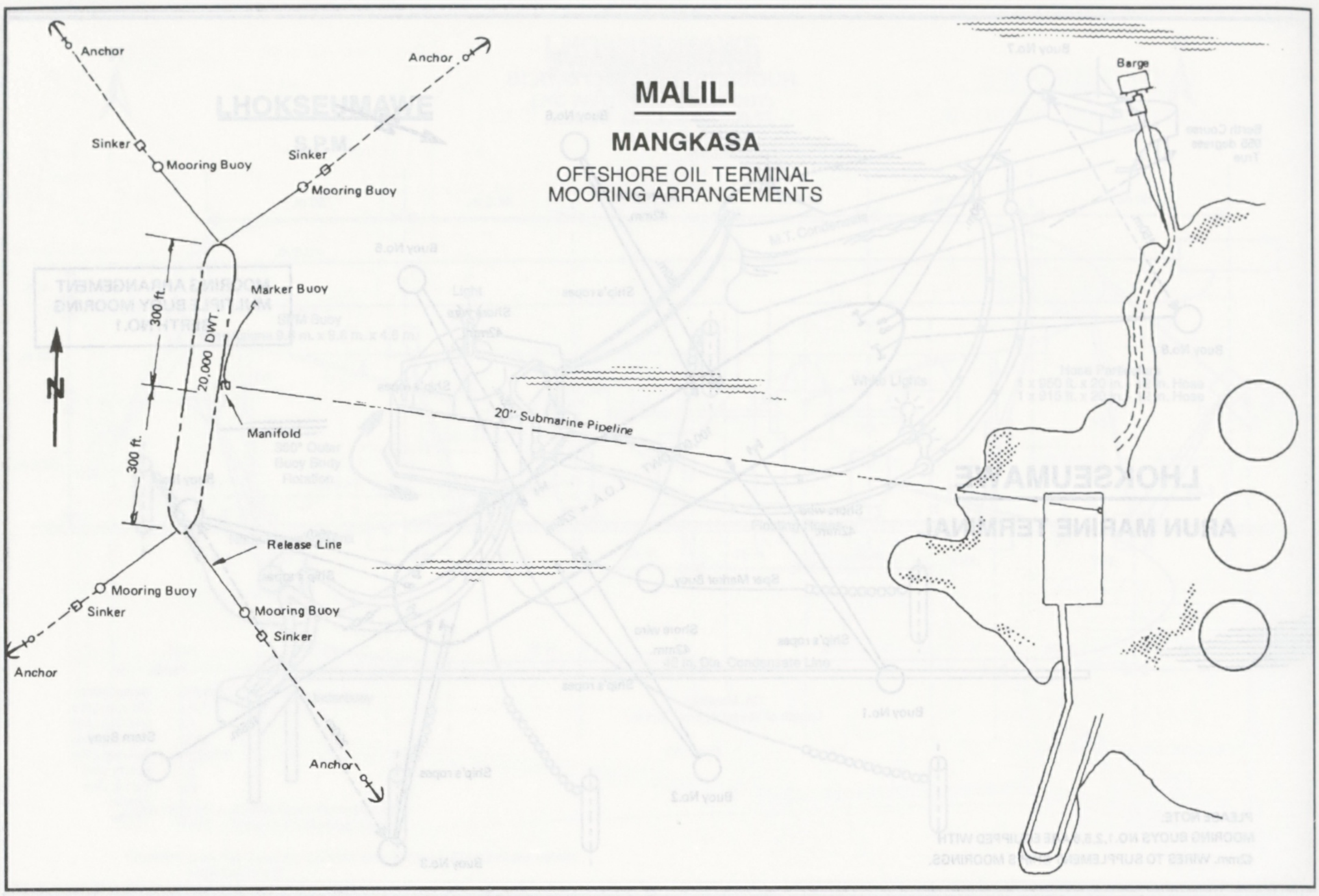
Line No.	Description
1,2,3	Mooring Line
4,5	Mooring Line
10,11	Mooring Line
12,13,14	Mooring Line
6,7	Spring Line
8,9	Spring Line
A	Fender
B	Fender


LHOKSEUMAWE
S.P.M.
Light
SPM Buoy
Dimensions 9.6 m. x 9.6 m. x 4.6 m.
360° Outer
Buoy Body
Rotation
Node BuoyancyTank
Underbuoy
M.T. Condensate
White Lights
Hose Particulars
1 x 950 ft. x 20 in. - 12 in. Hose
1 x 915 ft. x 20 in. - 12 in. Hose
Floating Hoses
42 in. Dia. Condensate Line


LHOKSEUMAWE
PELABUHAN BLANGLANCANG
DEPTHS IN METRES
N
20
10
5
BLANGLANCANG
10
Pelabuhan Blanglancang
10
Leading Lights 205°
0
500
1000
Metres
BLANG LANCANG TERMINAL
DEPTHS IN METRES
20
10
5
Cooling Water Intake
Storage Tanks
Fl.5s.
No.7
No.8
No.6
No.5
No.1
No.2
No.4
No.3
20
10
5


Buoy No.7
Berth Course
055 degrees
True
150m.
150m.
Buoy No.8
Buoy No.6
Shore wire
42mm.
150m.
Ship's ropes
Buoy No.5
Shore wire
42mm.
135m.
Ship's ropes
MOORING ARRANGEMENT
MULTIPLE BUOY MOORING
BERTH NO.1
100,000 DWT
L.O.A. = 275m.
LHOKSEUMAWE
ARUN MARINE TERMINAL
Shore wire
42mm.
Ship's ropes
Buoy No.1
Spar Marker Buoy
Shore wire
42mm.
Ship's ropes
Buoy No.2
Buoy No.4
125m.
Ship's ropes
165m.
Stern Buoy
200m.
Ship's ropes
Buoy No.3
PLEASE NOTE:
MOORING BUOYS NO.1,2,5,6 ARE EQUIPPED WITH
42mm. WIRES TO SUPPLEMENT SHIP'S MOORINGS.


MALILI
MANGKASA
N
Malili Lat. 2° 38′ 40″ S. Long. 121° 04′ 20″ E.
S. Malili
S. Cerekohg
S. Usu
Red Tower Fl. 5 s. 8 M
Lat. 2° 40′ 10″ S. Long. 121° 01′ 52″ E.
N
Lat. 2° 42′ 30″ S. Long. 121° 01′ 40″ E.
Anchorage Buoy
Iso.1s.5M.
Belatan
MALILI/MANGKASA (LOCATION MAP)
Sulawesi
Malili
Nickel Port
Mangkasa Sea Tanker Terminal
Ujung Pandang

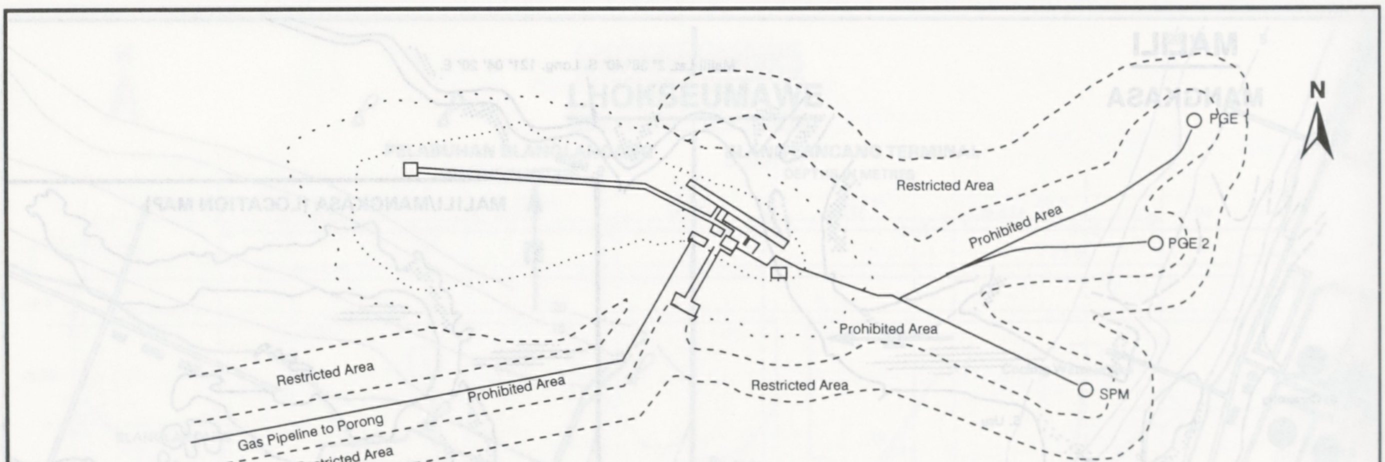


MALILI

MANGKASA

OFFSHORE OIL TERMINAL
MOORING ARRANGEMENTS

Anchor
Anchor
Sinker
Mooring Buoy
Sinker
Mooring Buoy
Marker Buoy
300 ft.
20,000 DWT
N
Manifold
300 ft.
20" Submarine Pipeline
Release Line
Mooring Buoy
Sinker
Anchor
Mooring Buoy
Sinker
Anchor



PAGERUNGAN

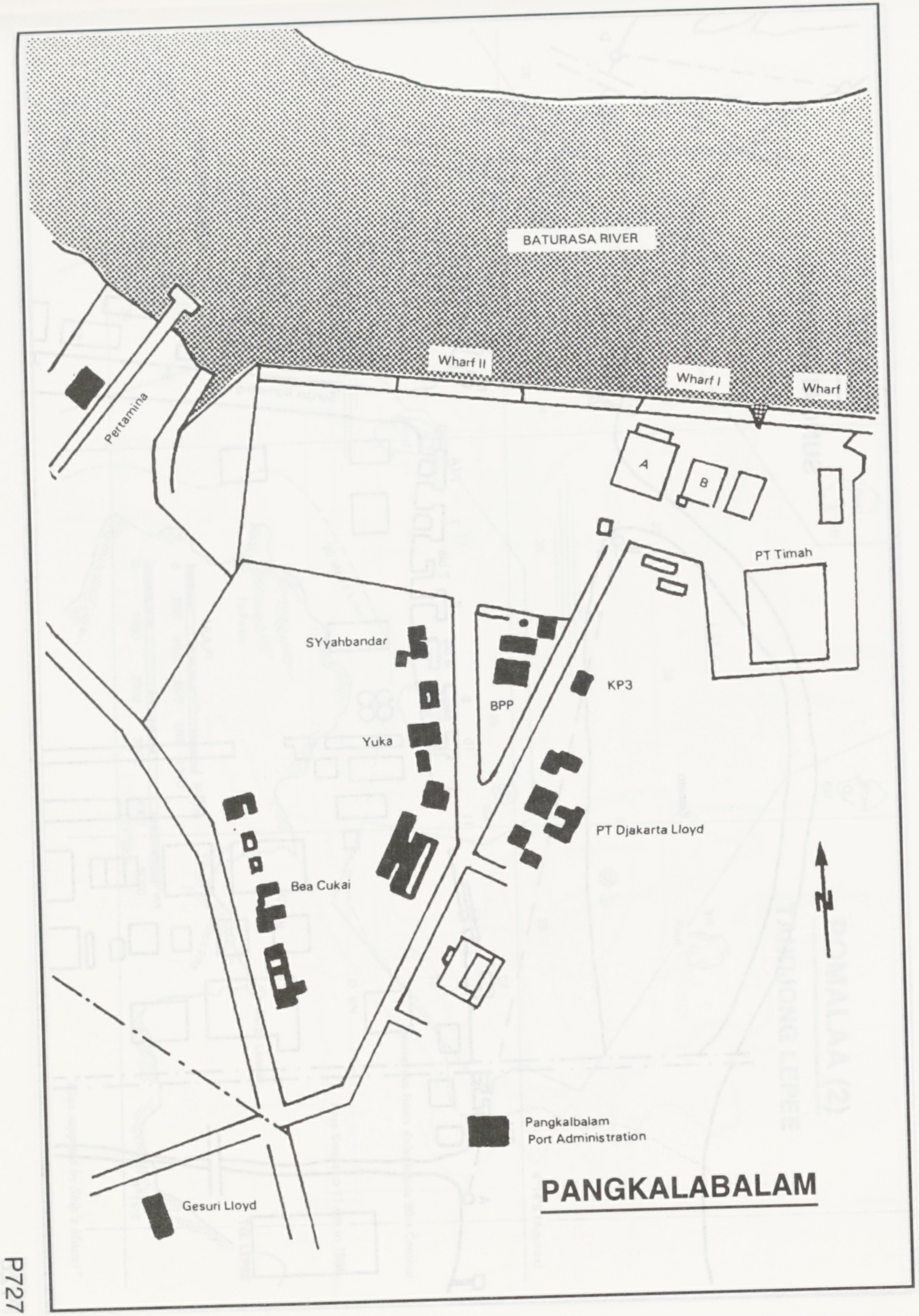
MARINE TERMINAL FACILITY

N
PGE 1
Restricted Area
Prohibited Area
PGE 2
Prohibited Area
SPM
Restricted Area
Restricted Area
Prohibited Area
Gas Pipeline to Porong
Restricted Area
A
B
D
C

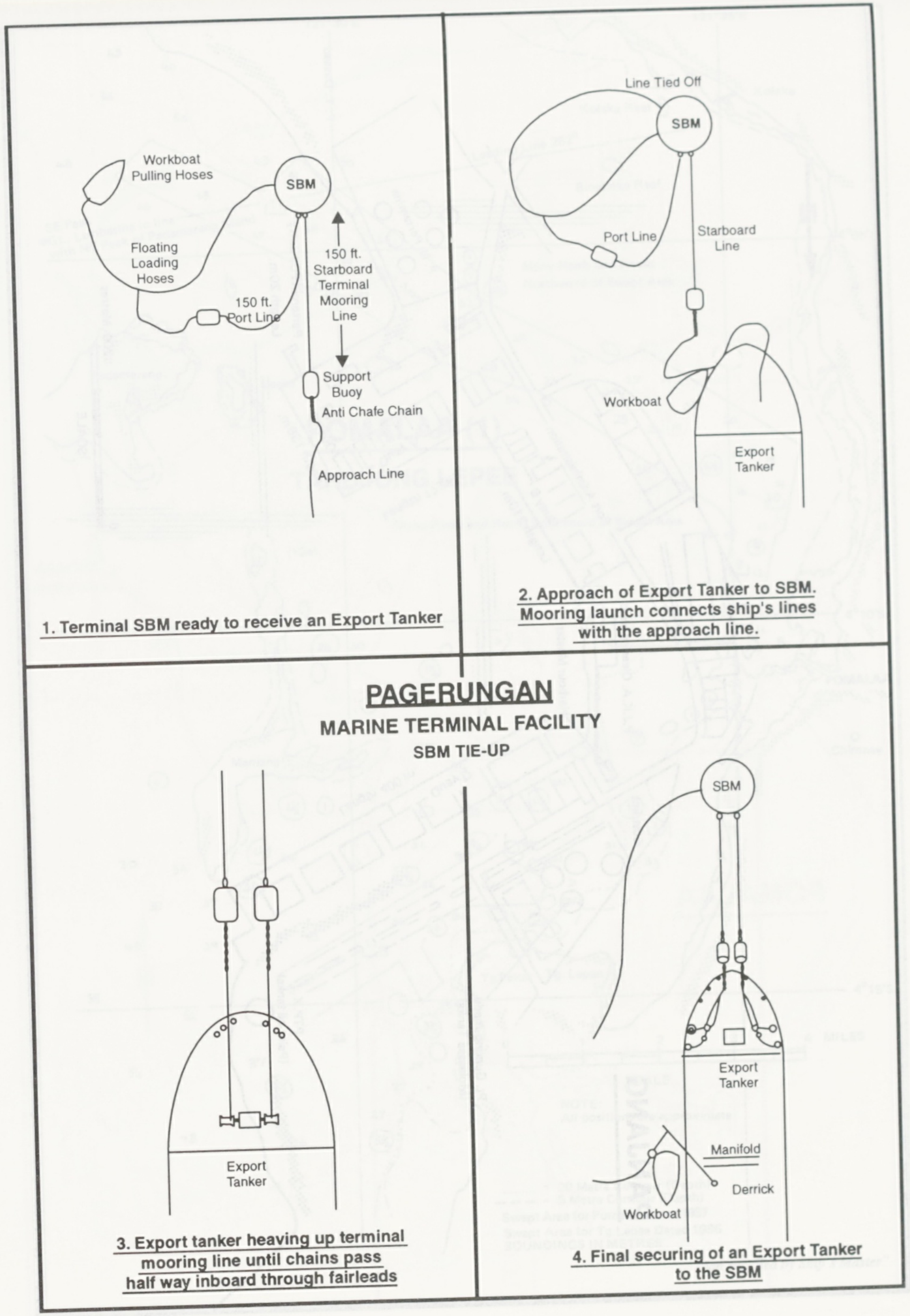
Position of:
S.B.M. : 06° 58' 14" S : 115° 57' 23" E
PGE - 1: 06° 56' 47.89" S : 115° 57' 51.71" E
PGE - 2: 06° 57' 26.88" S : 115° 57' 40.46" E

Recommended Anchorage Area

A = 07° 00' 00" S : 115° 56' 00" E
B = 07° 00' 00" S : 115° 57' 00" E
C = 07° 01' 00" S : 115° 57' 00" E
D= 07° 01' 00" S : 115° 56' 00" E


BATURASA RIVER
Wharf II
Wharf I
Wharf
Pertamina
A
B
PT Timah
SYyahbandar
KP3
BPP
Yuka
PT Djakarta Lloyd
Bea Cukai
N
Pangkalbalam
Port Administration
Gesuri Lloyd

PANGKALABALAM


Workboat
Pulling Hoses
SBM
Floating
Loading
Hoses
150 ft.
Port Line
150 ft.
Starboard
Terminal
Mooring
Line
Support
Buoy
Anti Chafe Chain
Approach Line
Line Tied Off
SBM
Port Line
Starboard
Line
Workboat
Export
Tanker
Export
Tanker
SBM
Export
Tanker
Manifold
Derrick
Workboat

1. Terminal SBM ready to receive an Export Tanker

2. Approach of Export Tanker to SBM. Mooring launch connects ship's lines with the approach line.

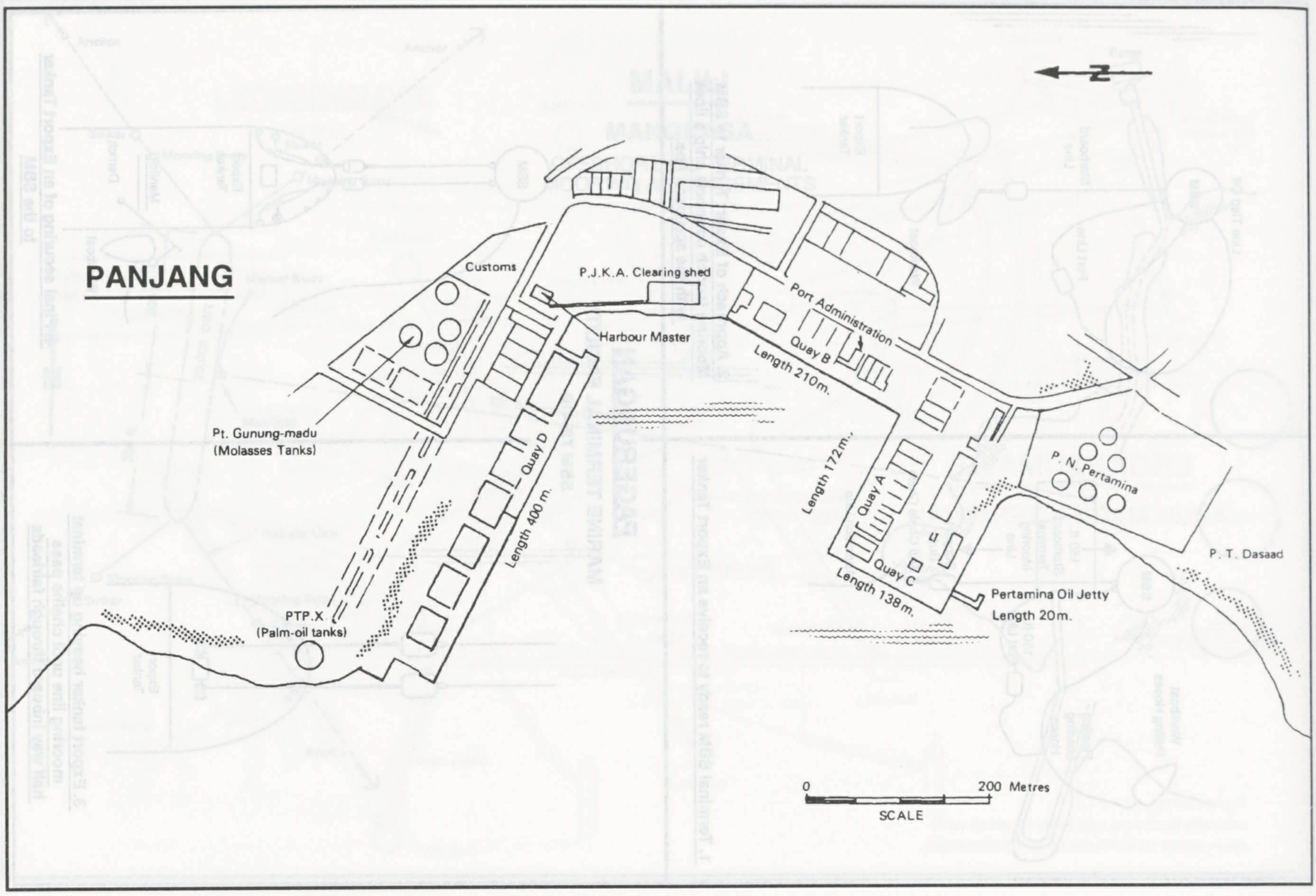
PAGERUNGAN

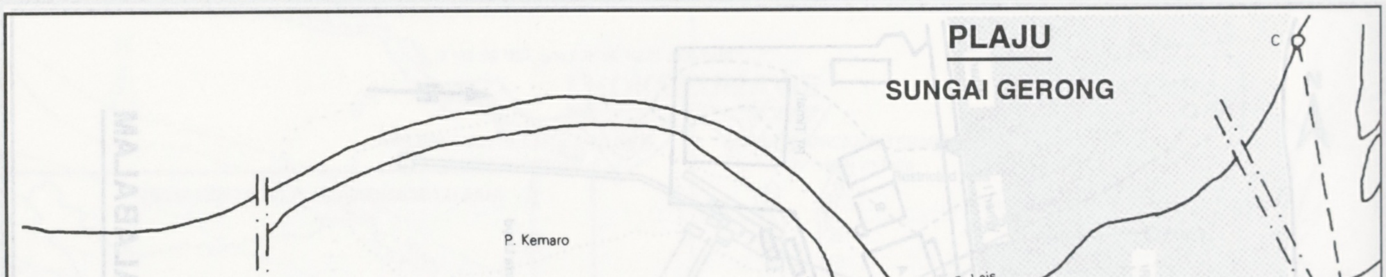
MARINE TERMINAL FACILITY

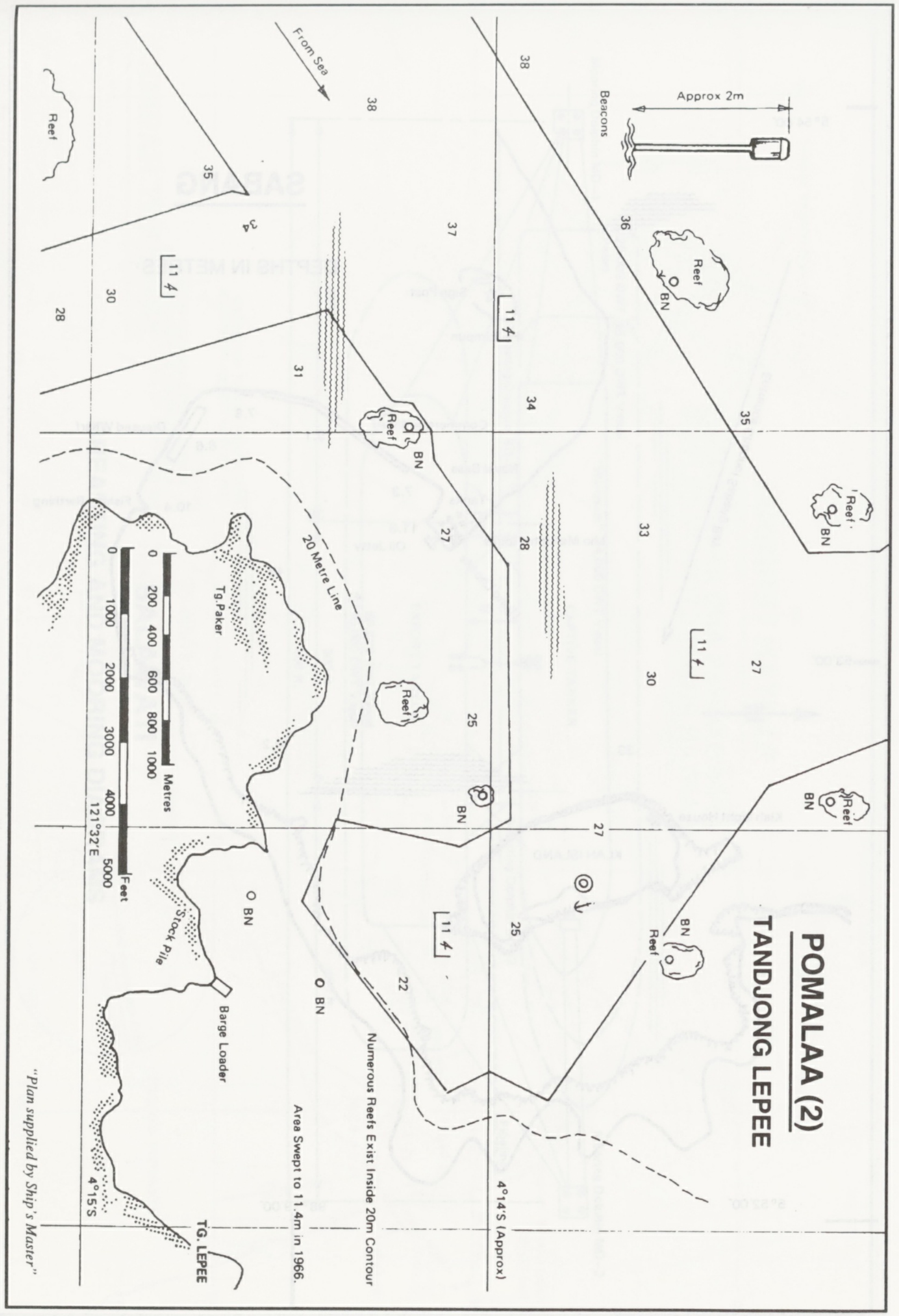
SBM TIE-UP

3. Export tanker heaving up terminal mooring line until chains pass half way inboard through fairleads

4. Final securing of an Export Tanker to the SBM

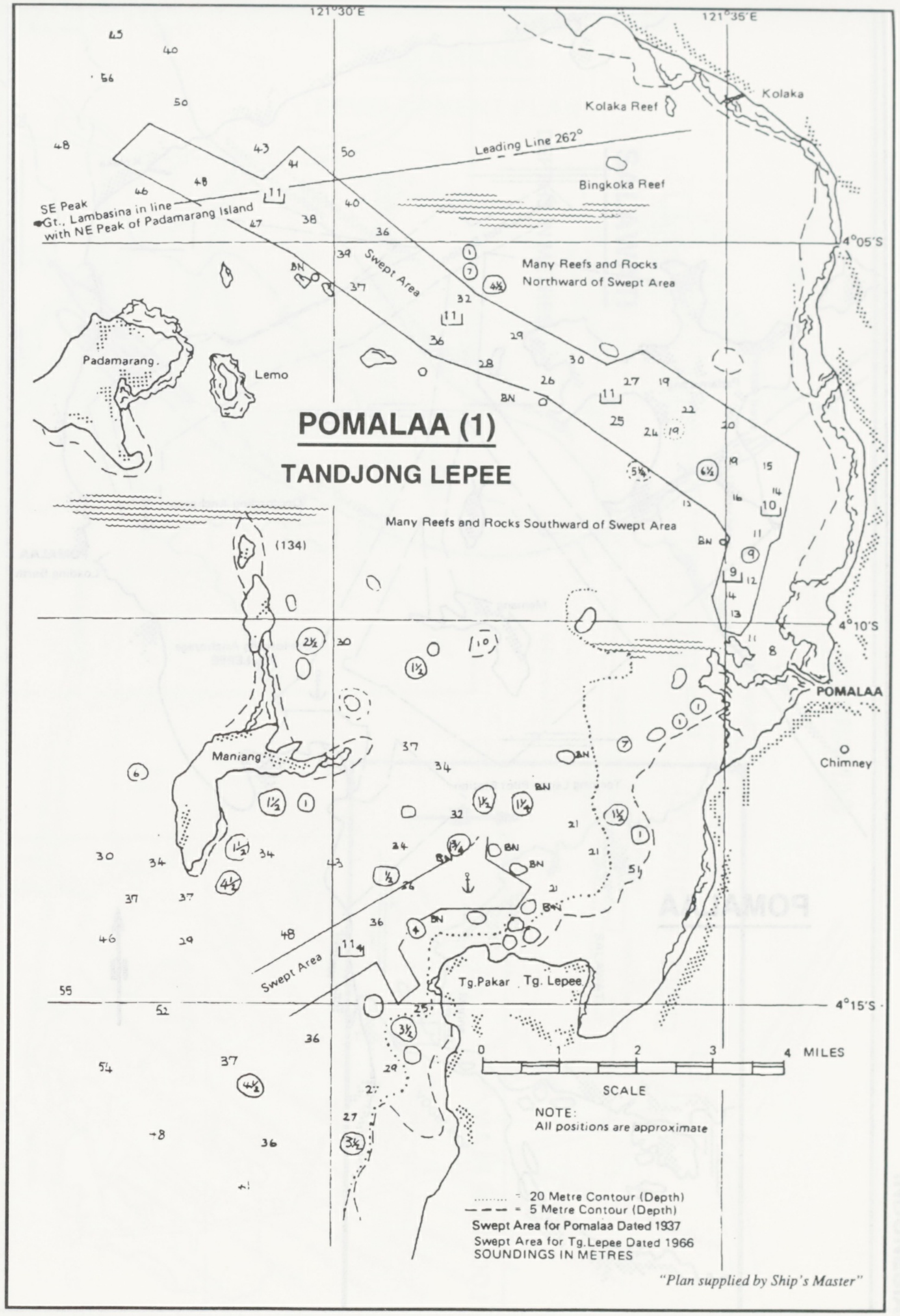

PANJANG
Customs
P.J.K.A. Clearing shed
Harbour Master
Port Administration
Quay B
Length 210m.
Pt. Gunung-madu
(Molasses Tanks)
Quay D
Length 400 m.
Length 172 m.
Quay A
P. N. Pertamina
P. T. Dasaad
Quay C
Length 138 m.
Pertamina Oil Jetty
Length 20 m.
PTP.X
(Palm-oil tanks)
N
0
200 Metres
SCALE


PLAJU
SUNGAI GERONG
C
P. Kemaro
B
S. Lais
D
1
2
3
4
5
6A
6B
RPA
A
12
11
10
9
8 bis
8
7 bis
7
PTA
Sungai Komering
PLAJU
SUNGAI GERONG


From Sea
Approx 2m
Beacons
Reef
BN
20 Metre Line
Tg.Paker
Metres
Feet
121°32'E
Stock Pile
Barge Loader
TG. LEPEE
4°15'S
4°14'S (Approx)
Numerous Reefs Exist Inside 20m Contour
Area Swept to 11.4m in 1966.

POMALAA (2)
TANDJONG LEPEE

"Plan supplied by Ship's Master"

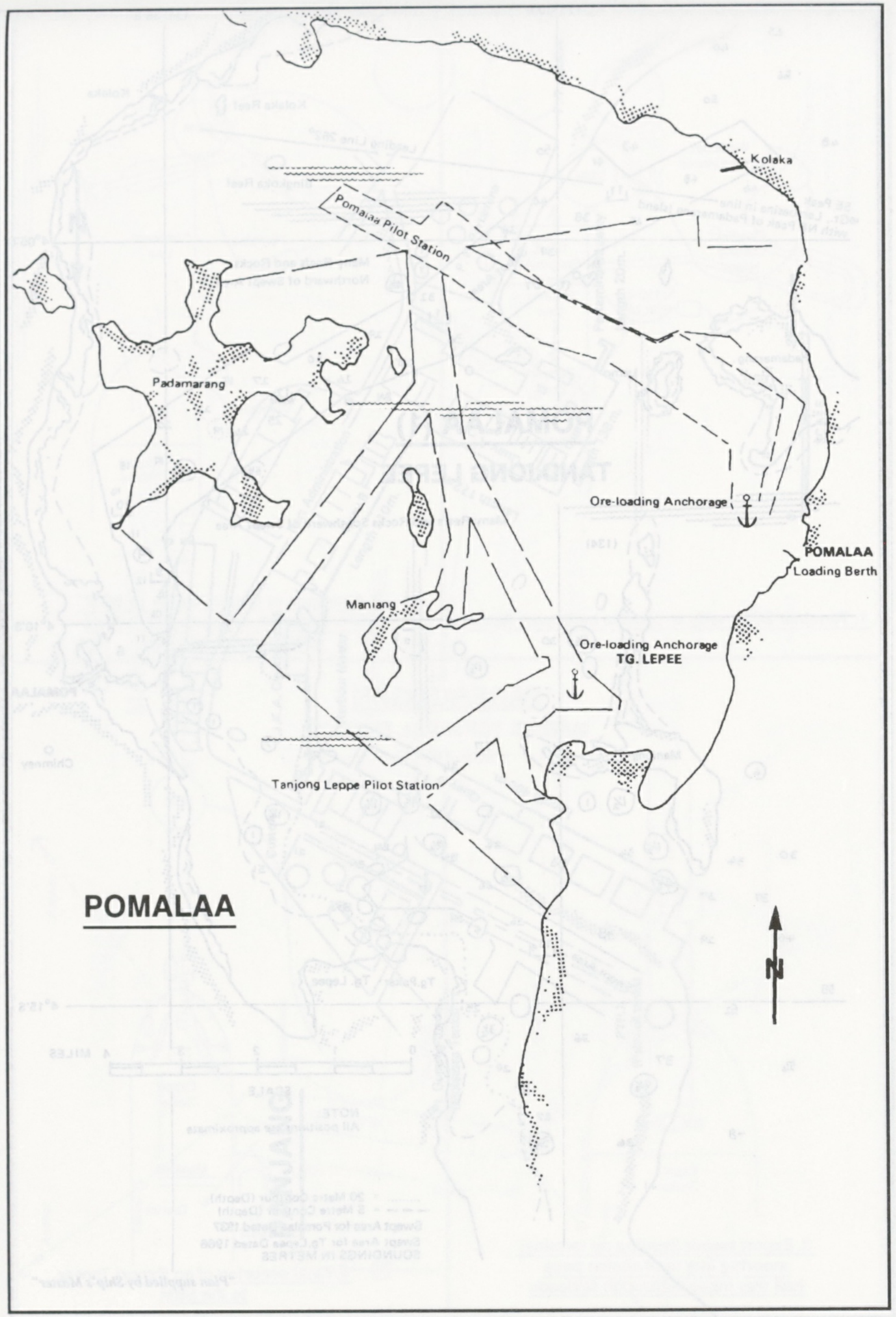

121°30'E
121°35'E
Kolaka
Kolaka Reef
Leading Line 262°
Bingkoka Reef
SE Peak Gt. Lambasina in line with NE Peak of Padamarang Island
4°05'S
Many Reefs and Rocks Northward of Swept Area
Swept Area
Padamarang
Lemo
Many Reefs and Rocks Southward of Swept Area
(134)
4°10'S
POMALAA
Chimney
Maniang
Tg.Pakar
Tg. Lepee
4°15'S
SCALE
MILES

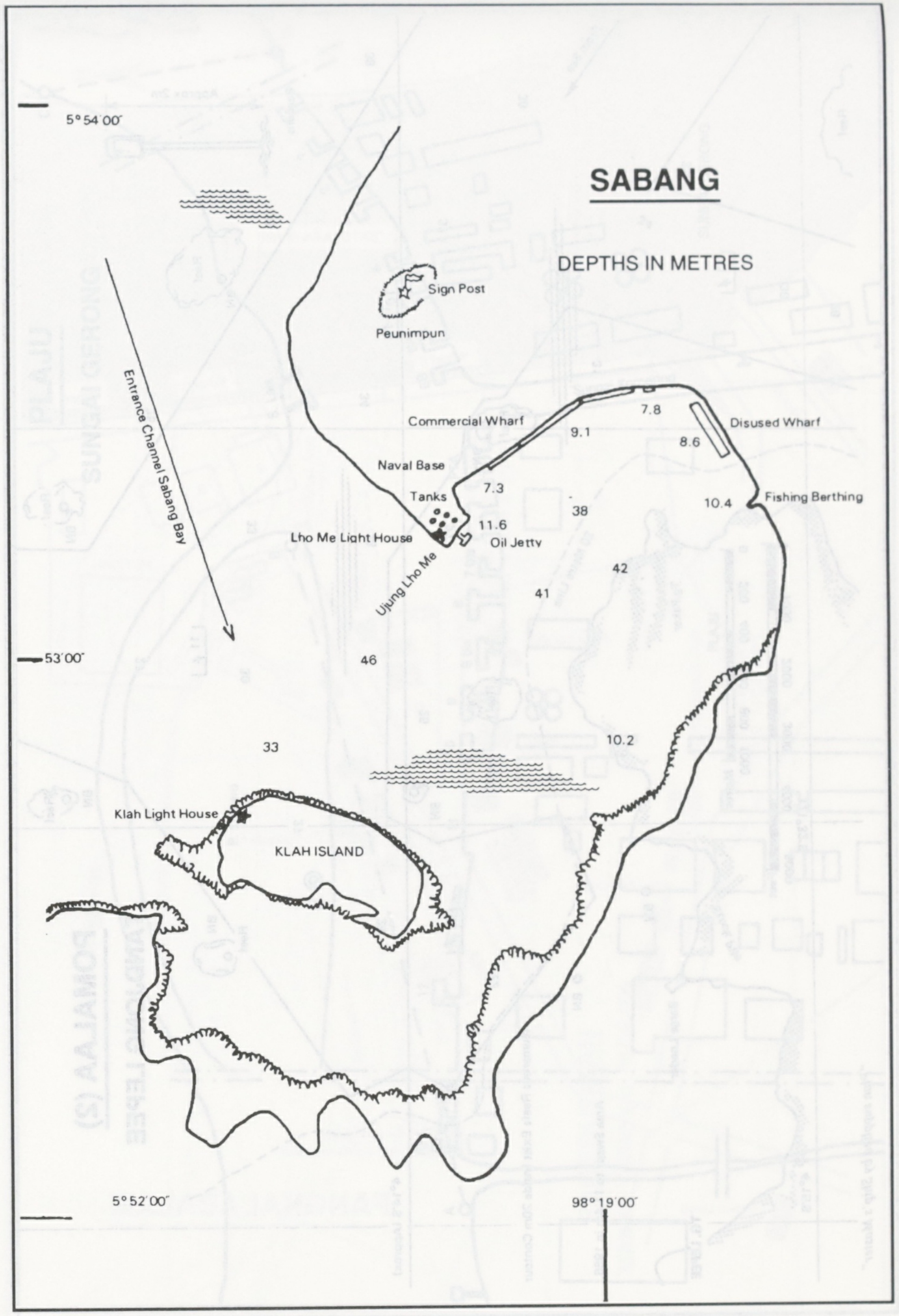
POMALAA (1)
TANDJONG LEPEE

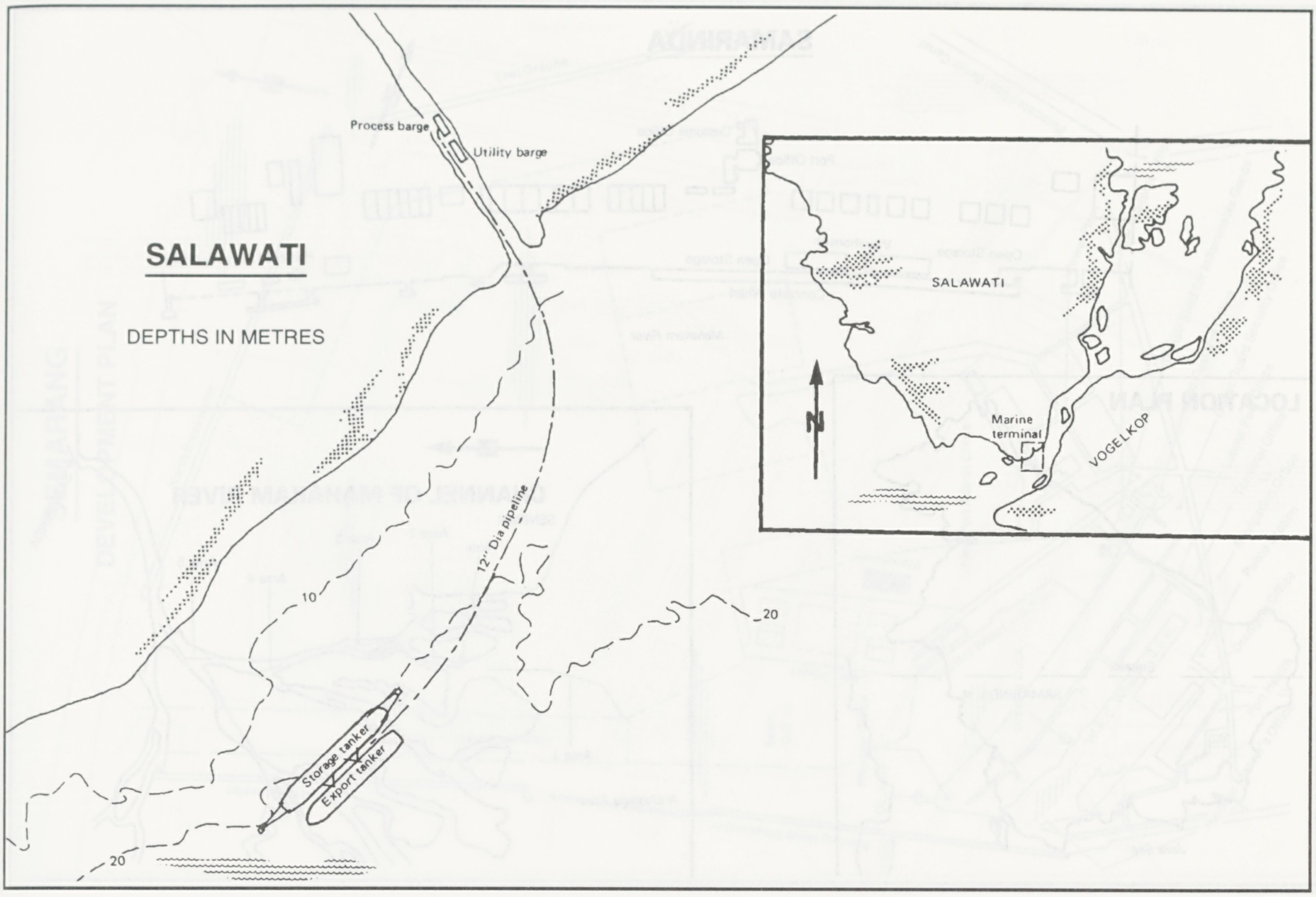
NOTE:
All positions are approximate

20 Metre Contour (Depth)
5 Metre Contour (Depth)
Swept Area for Pomalaa Dated 1937
Swept Area for Tg.Lepee Dated 1966
SOUNDINGS IN METRES

"Plan supplied by Ship's Master"

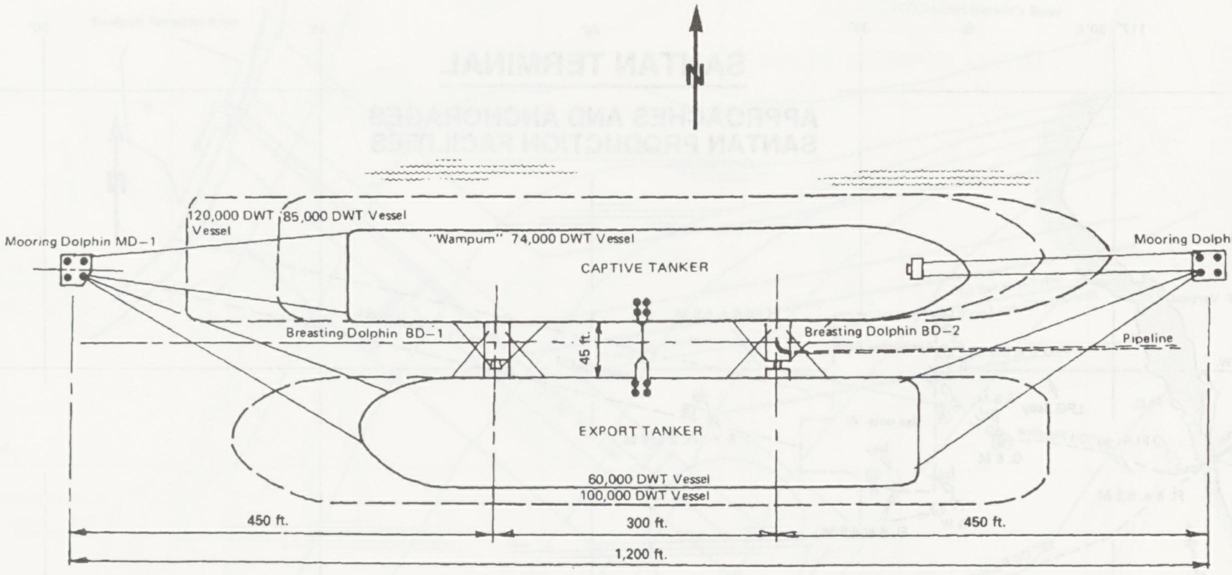

Kolaka
Pomalaa Pilot Station
Padamarang
Ore-loading Anchorage
POMALAA
Loading Berth
Maniang
Ore-loading Anchorage
TG. LEPEE
Tanjong Leppe Pilot Station
POMALAA
N


5° 54' 00"
SABANG
DEPTHS IN METRES
Sign Post
Peunimpun
Entrance Channel Sabang Bay
Commercial Wharf
7.8
9.1
8.6
Disused Wharf
Naval Base
7.3
Tanks
38
10.4
Fishing Berthing
Lho Me Light House
11.6
Oil Jetty
Ujung Lho Me
42
41
53' 00"
46
10.2
33
Klah Light House
KLAH ISLAND
5° 52' 00"
98° 19' 00"


Process barge
Utility barge
12" Dia pipeline
10
20
20
Storage tanker
Export tanker
SALAWATI
Marine terminal
VOGELKOP
N

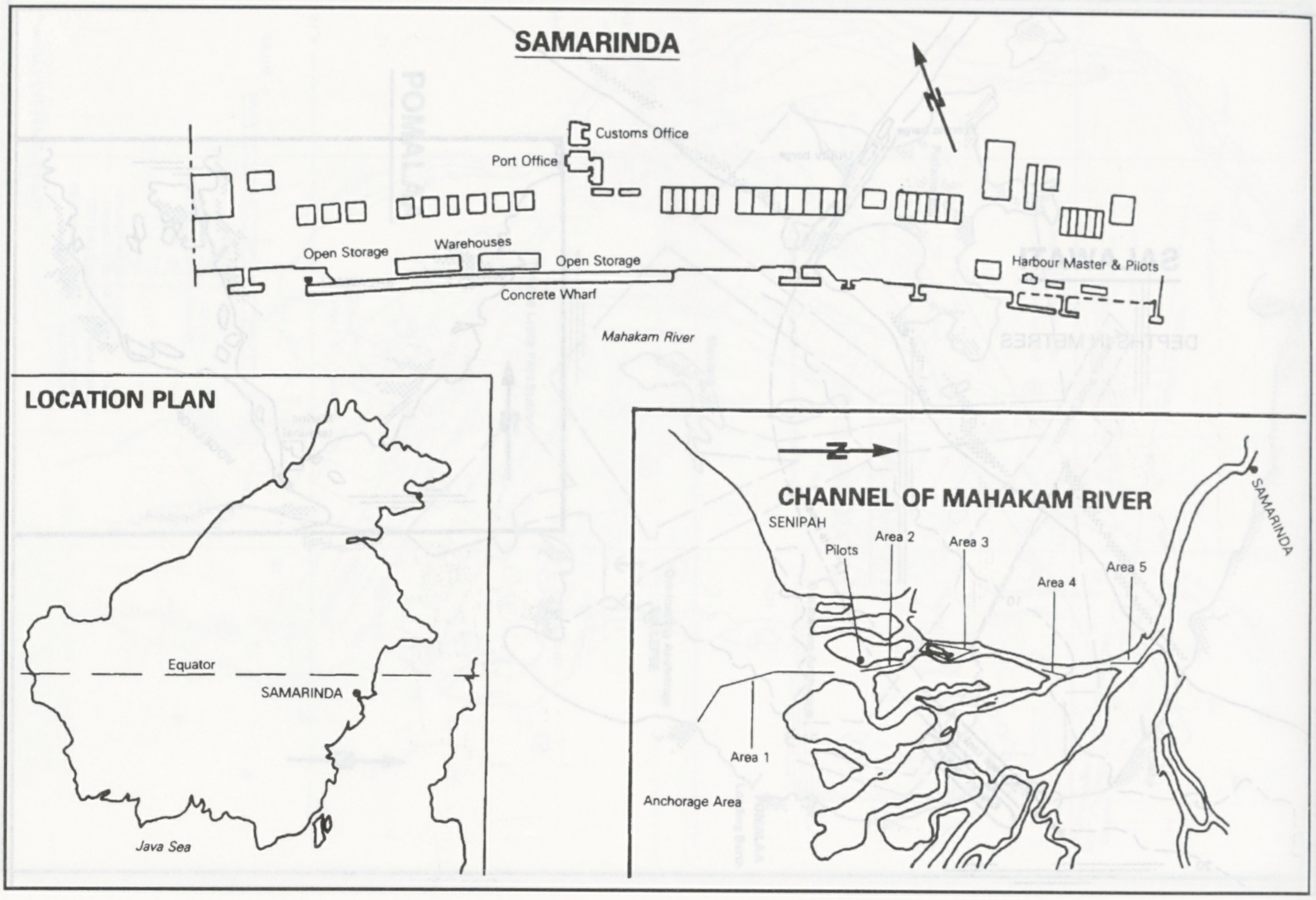
SALAWATI

DEPTHS IN METRES


N
120,000 DWT Vessel
85,000 DWT Vessel
"Wampum" 74,000 DWT Vessel
Mooring Dolphin MD–1
Mooring Dolphin MD–2
CAPTIVE TANKER
Breasting Dolphin BD–1
Breasting Dolphin BD–2
45 ft.
Pipeline
EXPORT TANKER
60,000 DWT Vessel
100,000 DWT Vessel
450 ft.
300 ft.
450 ft.
1,200 ft.

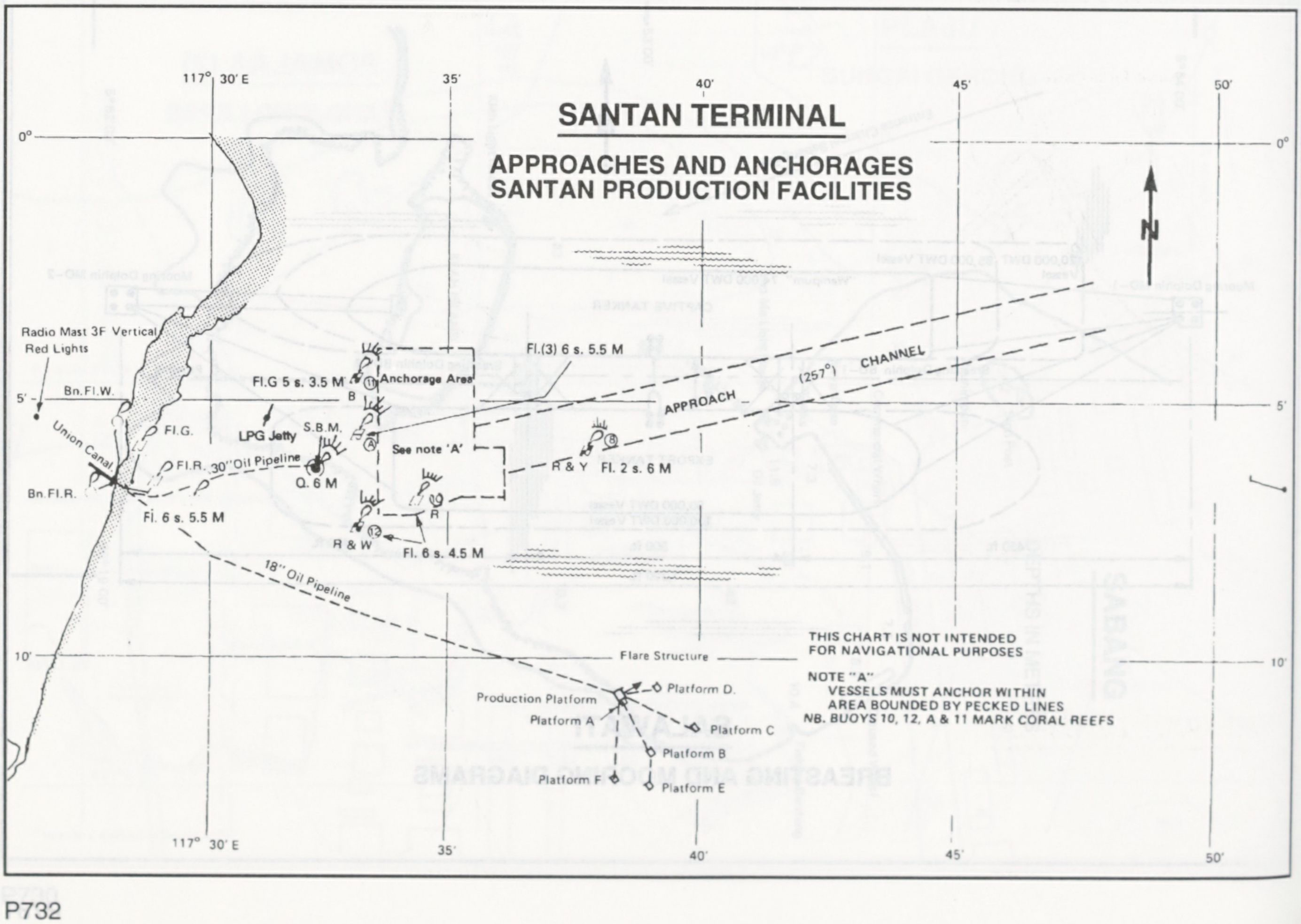
SALAWATI

BREASTING AND MOORING DIAGRAMS



SAMARINDA

Customs Office
Port Office
Open Storage
Warehouses
Open Storage
Concrete Wharf
Harbour Master & Pilots
Mahakam River
N
LOCATION PLAN
Equator
SAMARINDA
Java Sea
CHANNEL OF MAHAKAM RIVER
N
SENIPAH
Pilots
Area 2
Area 3
Area 4
Area 5
SAMARINDA
Area 1
Anchorage Area



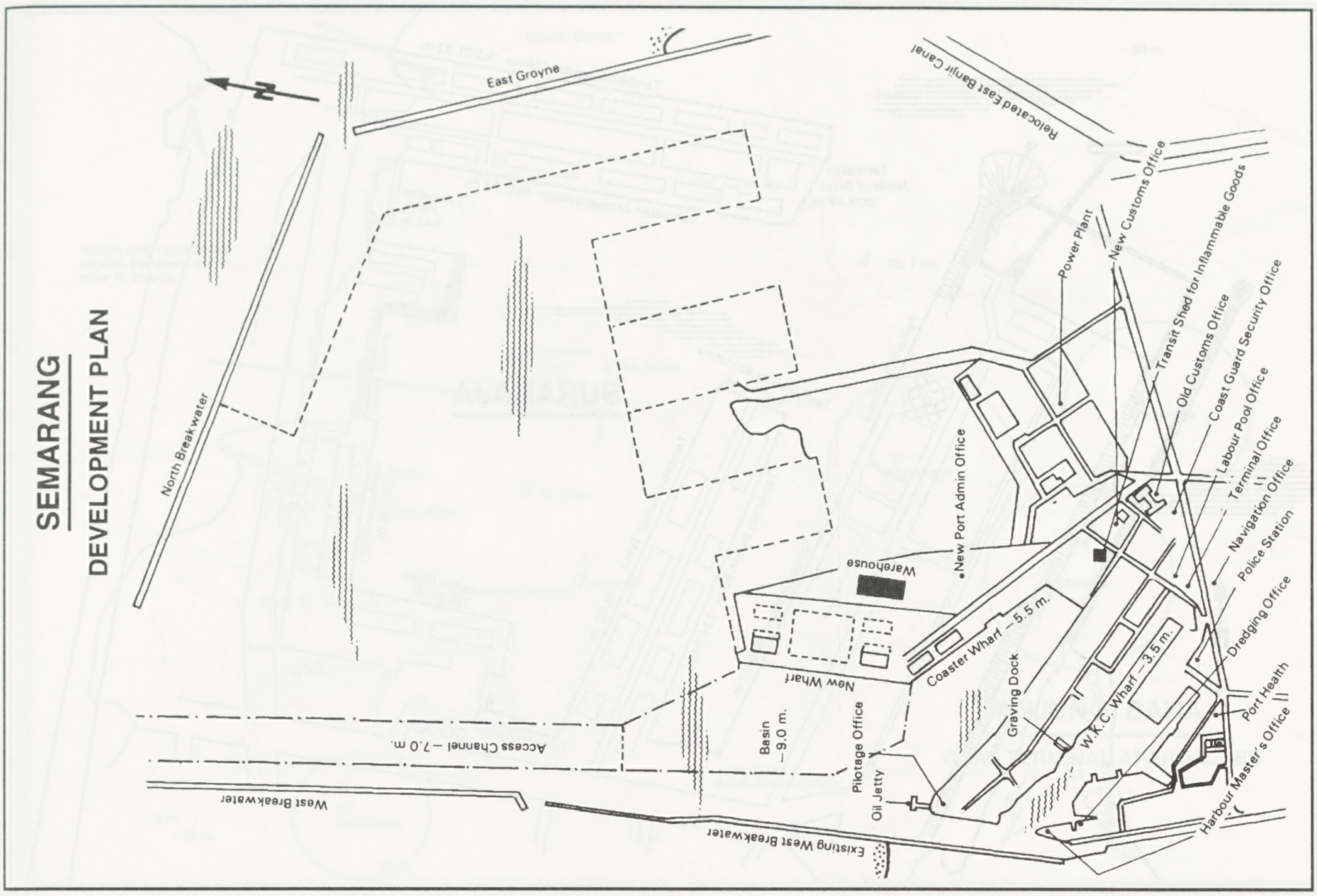
SANTAN TERMINAL

APPROACHES AND ANCHORAGES SANTAN PRODUCTION FACILITIES

117° 30′ E
35′
40′
45′
50′
0°
5′
10′
N
Radio Mast 3F Vertical Red Lights
Bn.Fl.W.
Union Canal
Bn.Fl.R.
Fl.G.
Fl.R.
30″ Oil Pipeline
LPG Jetty
S.B.M.
Q. 6 M
Fl.G 5 s. 3.5 M
B
11
Anchorage Area
A
See note 'A'
Fl.(3) 6 s. 5.5 M
APPROACH
(257°)
CHANNEL
8
R & Y
Fl. 2 s. 6 M
R
12
R & W
Fl. 6 s. 4.5 M
Fl. 6 s. 5.5 M
18″ Oil Pipeline
Flare Structure
Production Platform
Platform A
Platform B
Platform C
Platform D.
Platform E
Platform F

THIS CHART IS NOT INTENDED FOR NAVIGATIONAL PURPOSES

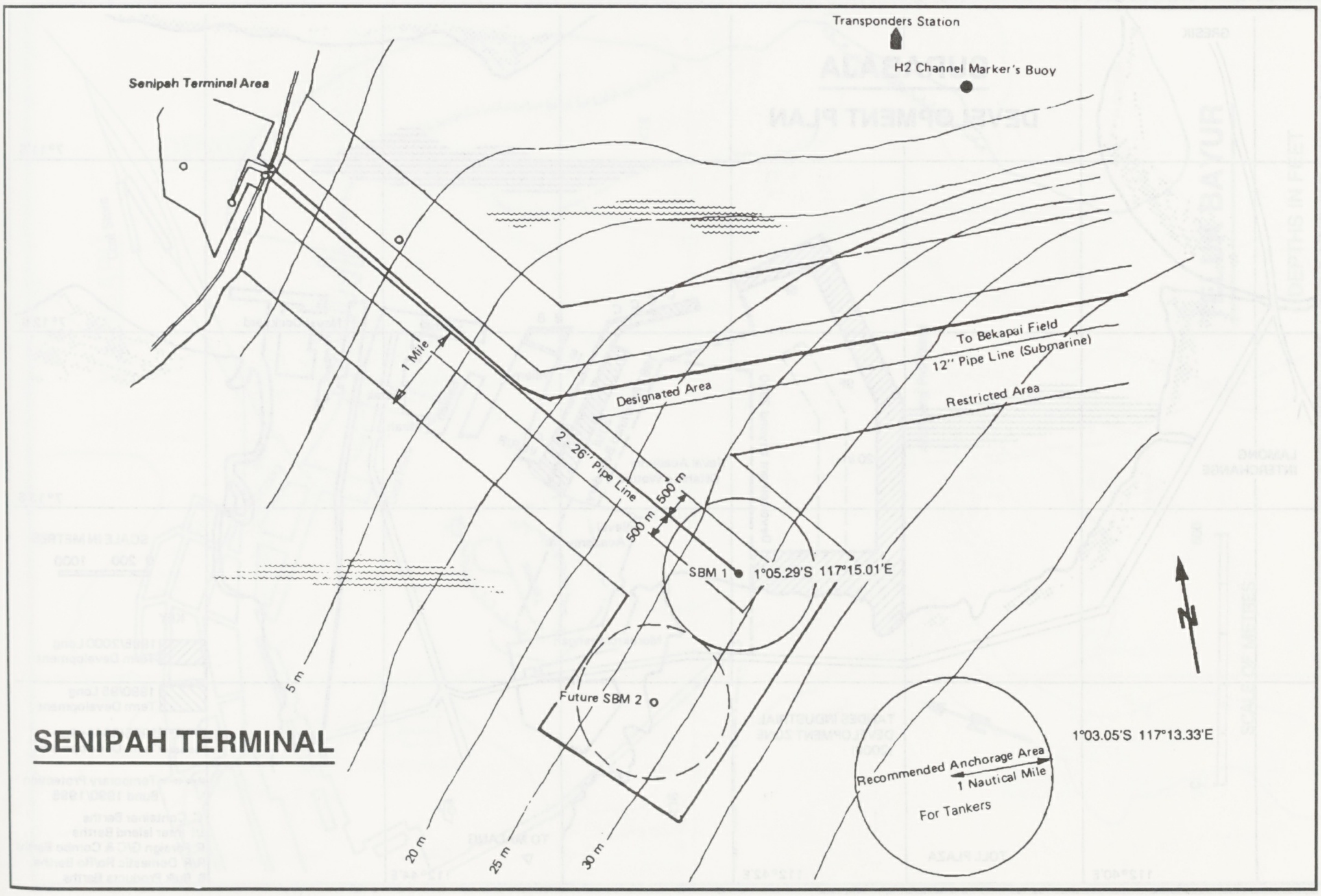
NOTE "A"
VESSELS MUST ANCHOR WITHIN AREA BOUNDED BY PECKED LINES
NB. BUOYS 10, 12, A & 11 MARK CORAL REEFS



SEMARANG

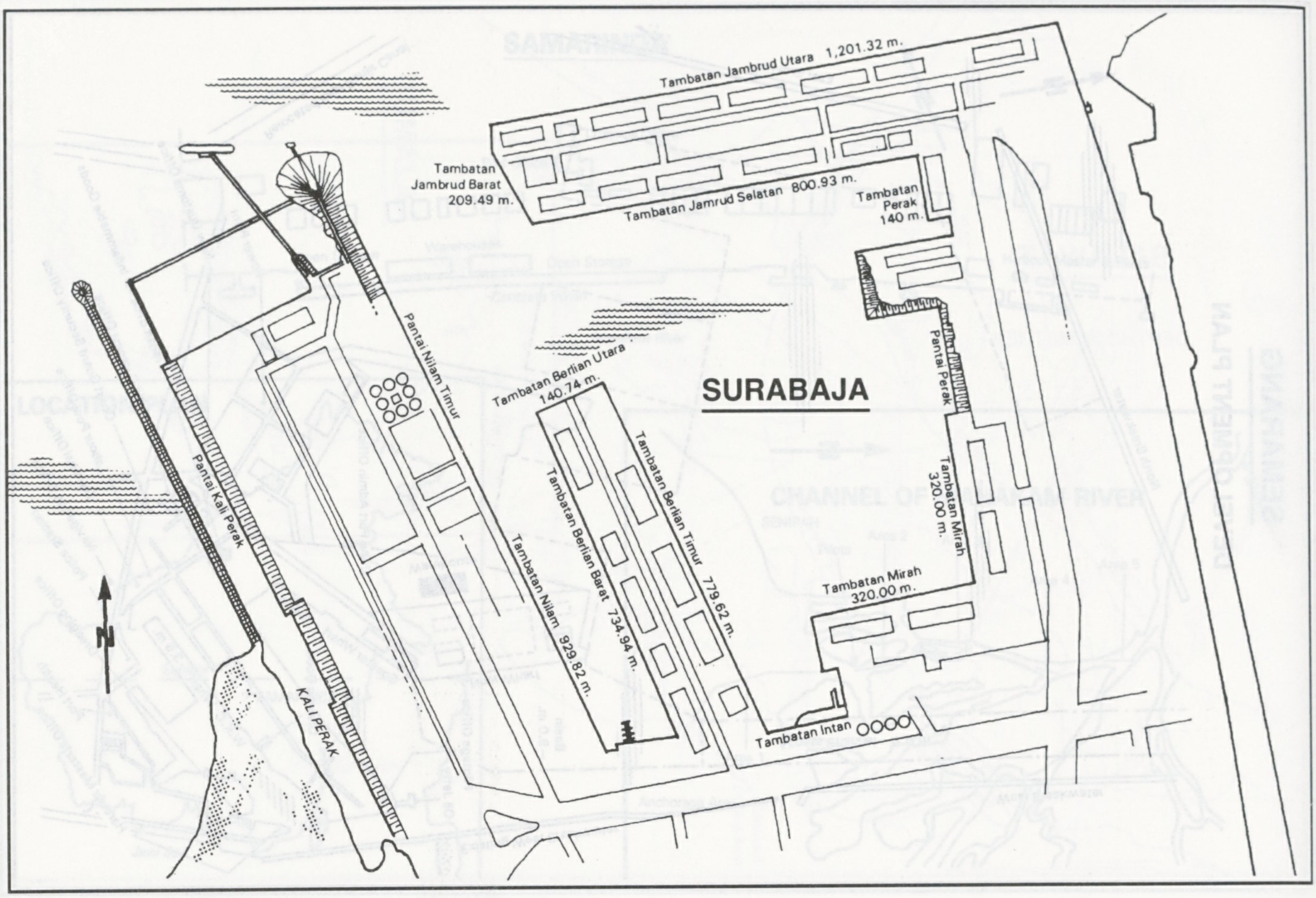
DEVELOPMENT PLAN

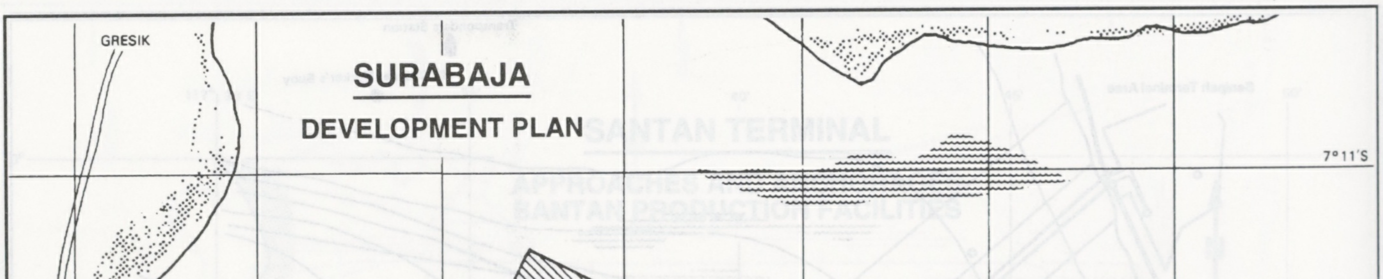
N
East Groyne
Relocated East Banjir Canal
North Breakwater
Power Plant
New Customs Office
Transit Shed for Inflammable Goods
Old Customs Office
Coast Guard Security Office
Labour Pool Office
Terminal Office
Navigation Office
Police Station
Dredging Office
Port Health
Harbour Master's Office
New Port Admin Office
Warehouse
Coaster Wharf – 5.5 m.
Graving Dock
W.K.C. Wharf – 3.5 m.
New Wharf
Basin – 9.0 m.
Pilotage Office
Oil Jetty
Access Channel – 7.0 m.
West Breakwater
Existing West Breakwater

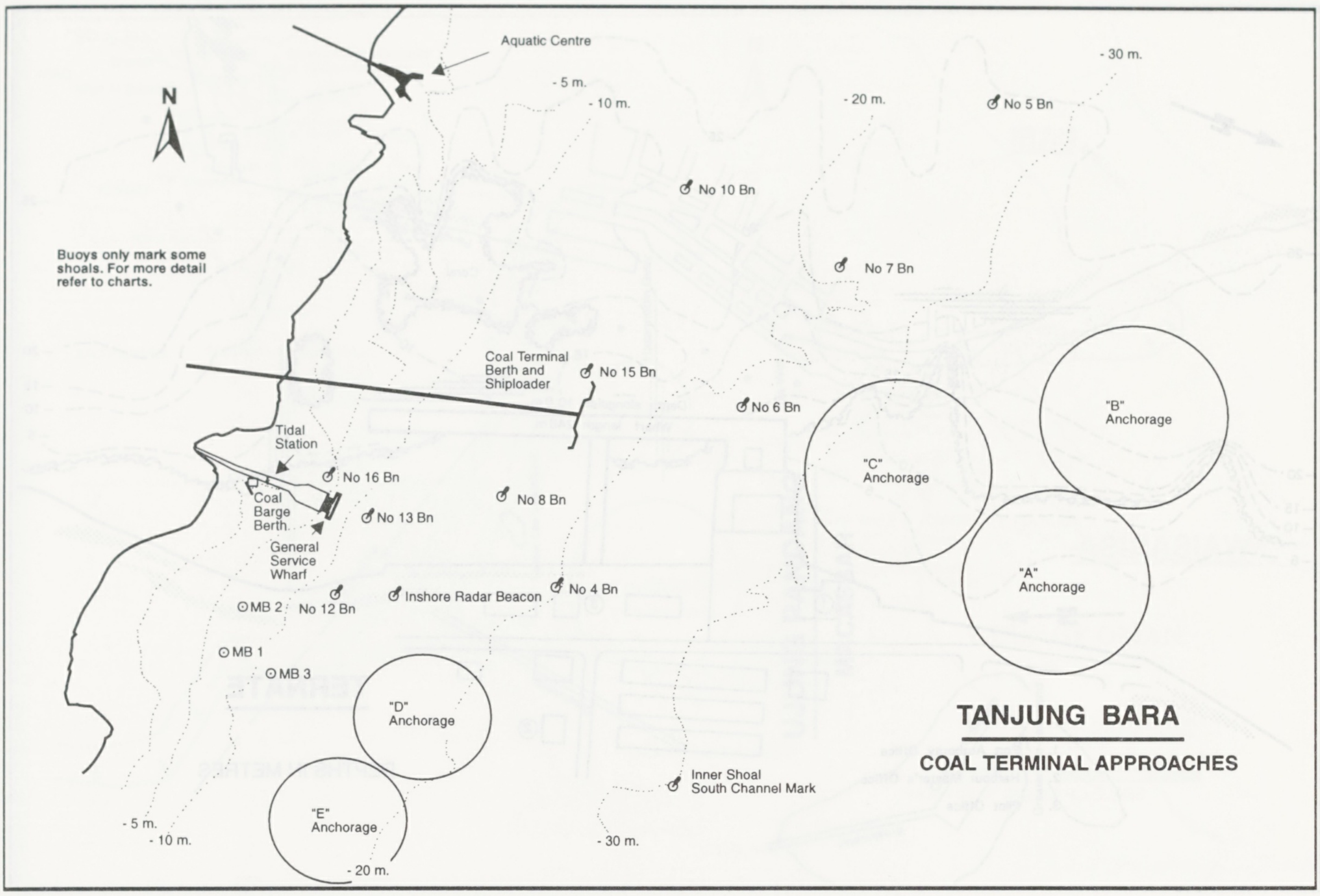


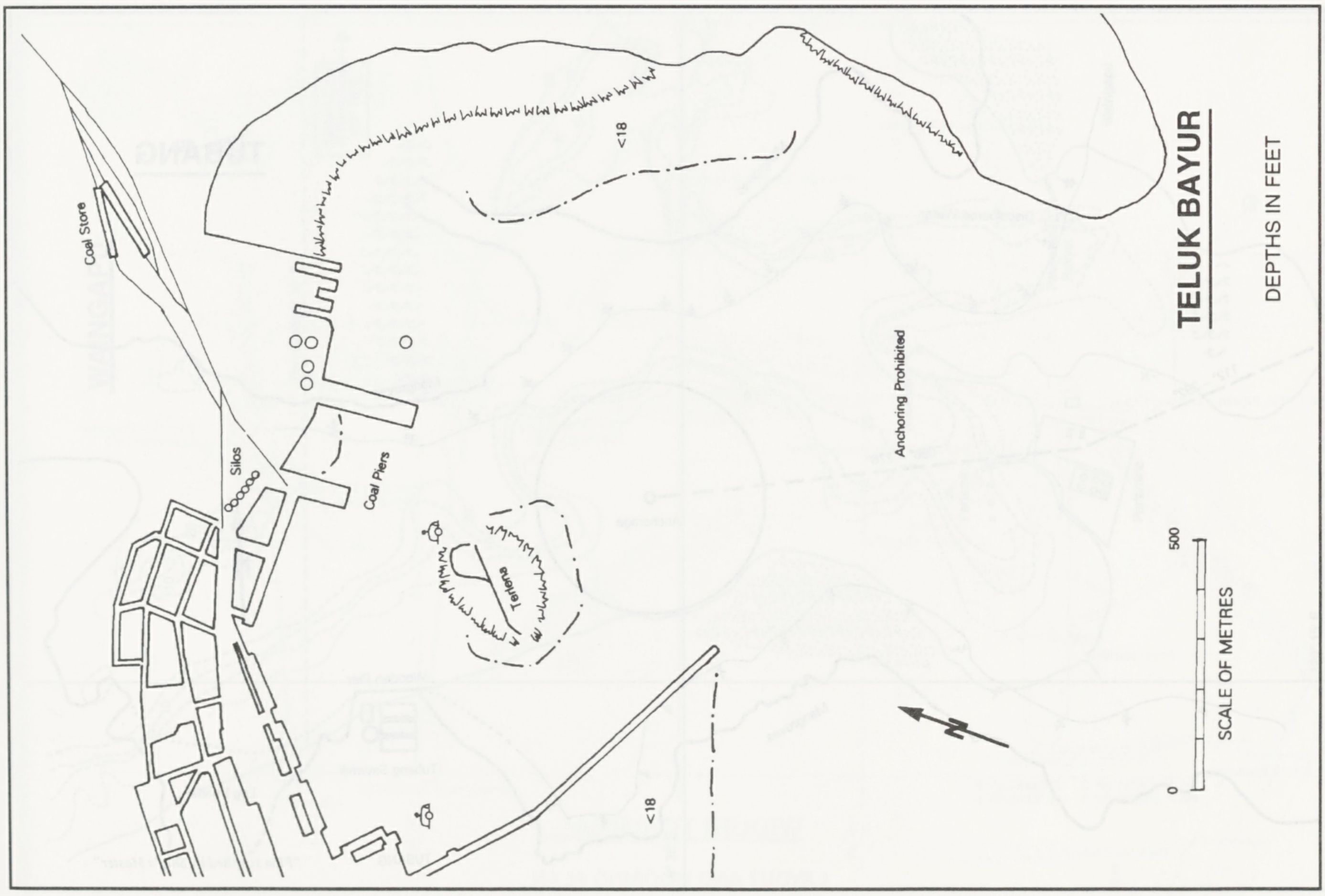
SENIPAH TERMINAL

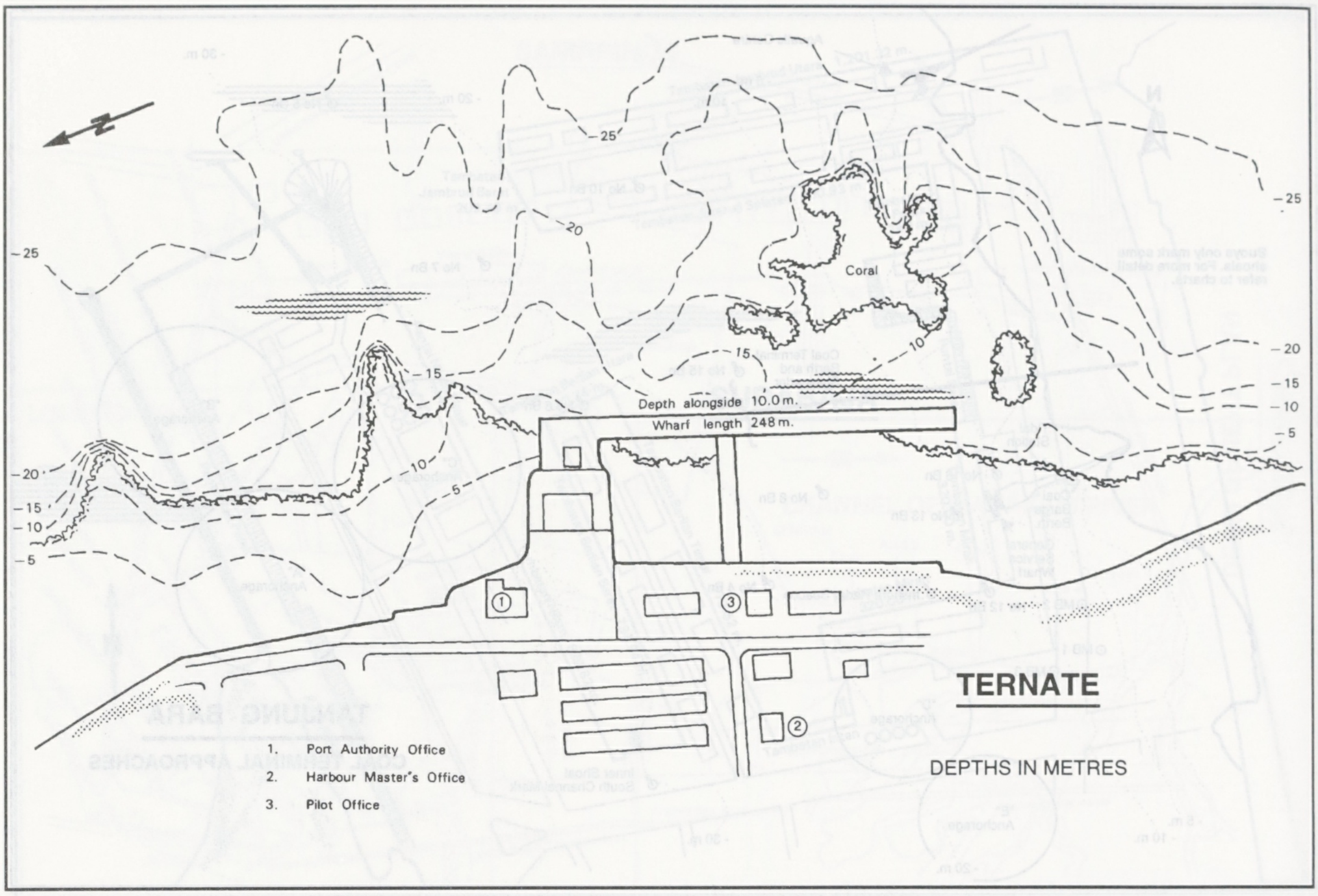
Transponders Station
H2 Channel Marker's Buoy
Senipah Terminal Area
1 Mile
To Bekapai Field
12" Pipe Line (Submarine)
Designated Area
Restricted Area
2 - 26" Pipe Line
500 m
500 m
SBM 1
1°05.29'S 117°15.01'E
Future SBM 2
N
Recommended Anchorage Area
1 Nautical Mile
For Tankers
1°03.05'S 117°13.33'E
5 m
20 m
25 m
30 m

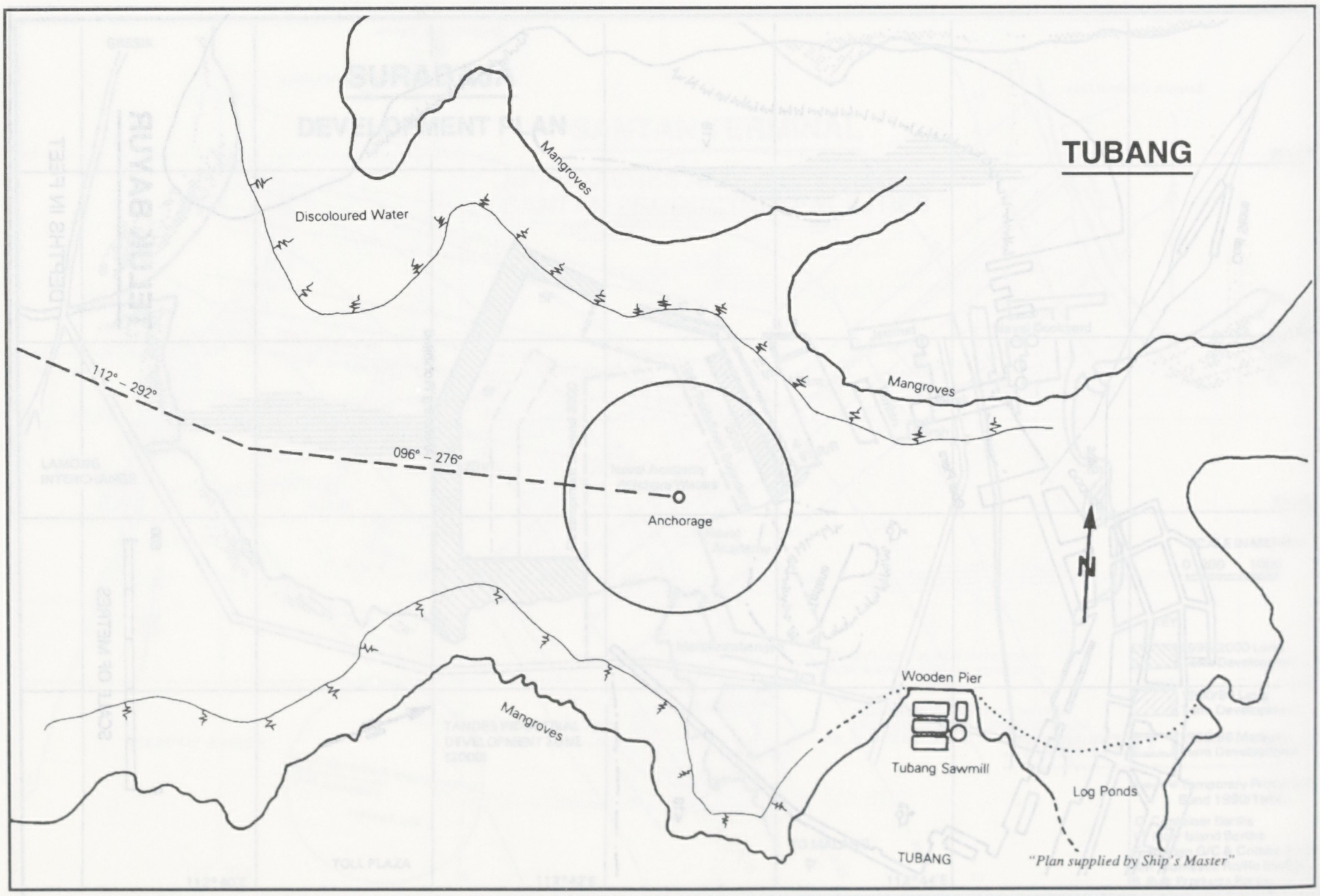

SURABAJA
Tambatan Jambrud Utara 1,201.32 m.
Tambatan Jambrud Barat 209.49 m.
Tambatan Jamrud Selatan 800.93 m.
Tambatan Perak 140 m.
Pantai Nilam Timur
Tambatan Berlian Utara 140.74 m.
Pantai Perak
Tambatan Mirah 320.00 m.
Tambatan Mirah 320.00 m.
Tambatan Berlian Timur 779.62 m.
Tambatan Berlian Barat 734.94 m.
Tambatan Nilam 929.82 m.
Tambatan Intan
Pantai Kali Perak
KALI PERAK
N


SURABAJA
DEVELOPMENT PLAN
GRESIK
7°11'S
7°12'S
7°13'S
5F
9F
20 I/I
C C C C
B B
16 I/I
Nilam
20 I/I
4 I/I R/R
1981 Redefined Boundary
Jamrud
Berlian
Perak
Mirah
Naval Dockyard
Development beyond 2000
Naval Academy Offshore Waters
Naval Academy
Morokrembangan
LAMONG INTERCHANGE
TANDES INDUSTRIAL DEVELOPMENT ZONE (2000)
TOLL PLAZA
TO MALANG
112°40'E
112°42'E
112°44'E
SCALE IN METRES
0 200 1000
KEY
1995/2000 Long Term Development
1990/95 Long Term Development
1985/86 Medium Term Development
Temporary Protection Bund 1990/1995
C Container Berths
I/I Inter Island Berths
F Foreign G/C & Combo Berths
R/R Domestic Ro/Ro Berths
B Bulk Products Berths

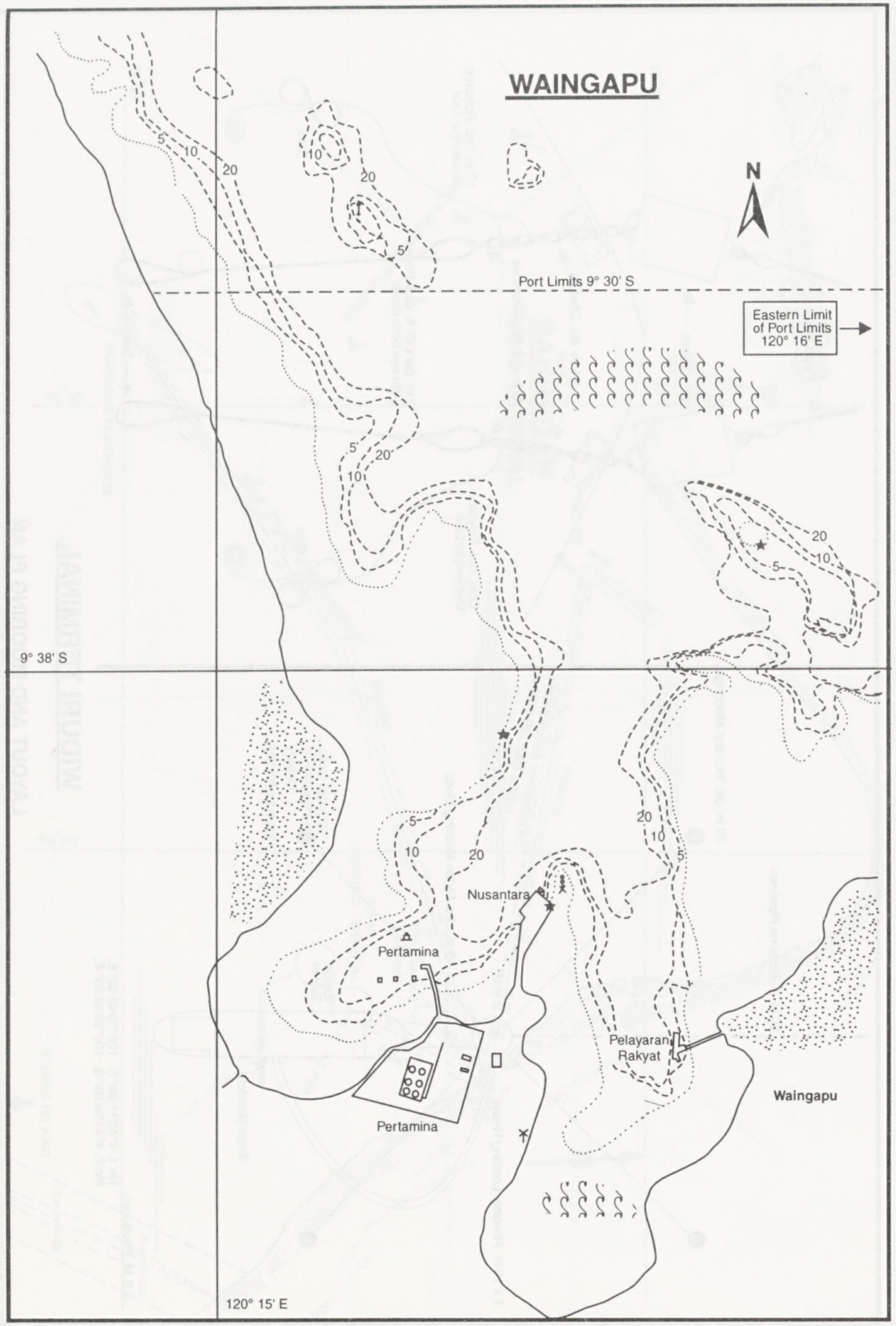

Aquatic Centre
N
- 5 m.
- 10 m.
- 20 m.
- 30 m.
No 5 Bn
No 10 Bn
No 7 Bn
Buoys only mark some shoals. For more detail refer to charts.
Coal Terminal Berth and Shiploader
No 15 Bn
No 6 Bn
"B" Anchorage
"C" Anchorage
"A" Anchorage
Tidal Station
No 16 Bn
Coal Barge Berth
No 8 Bn
No 13 Bn
General Service Wharf
No 12 Bn
Inshore Radar Beacon
No 4 Bn
MB 2
MB 1
MB 3
"D" Anchorage
"E" Anchorage
TANJUNG BARA
COAL TERMINAL APPROACHES
Inner Shoal South Channel Mark
- 5 m.
- 10 m.
- 20 m.
- 30 m.

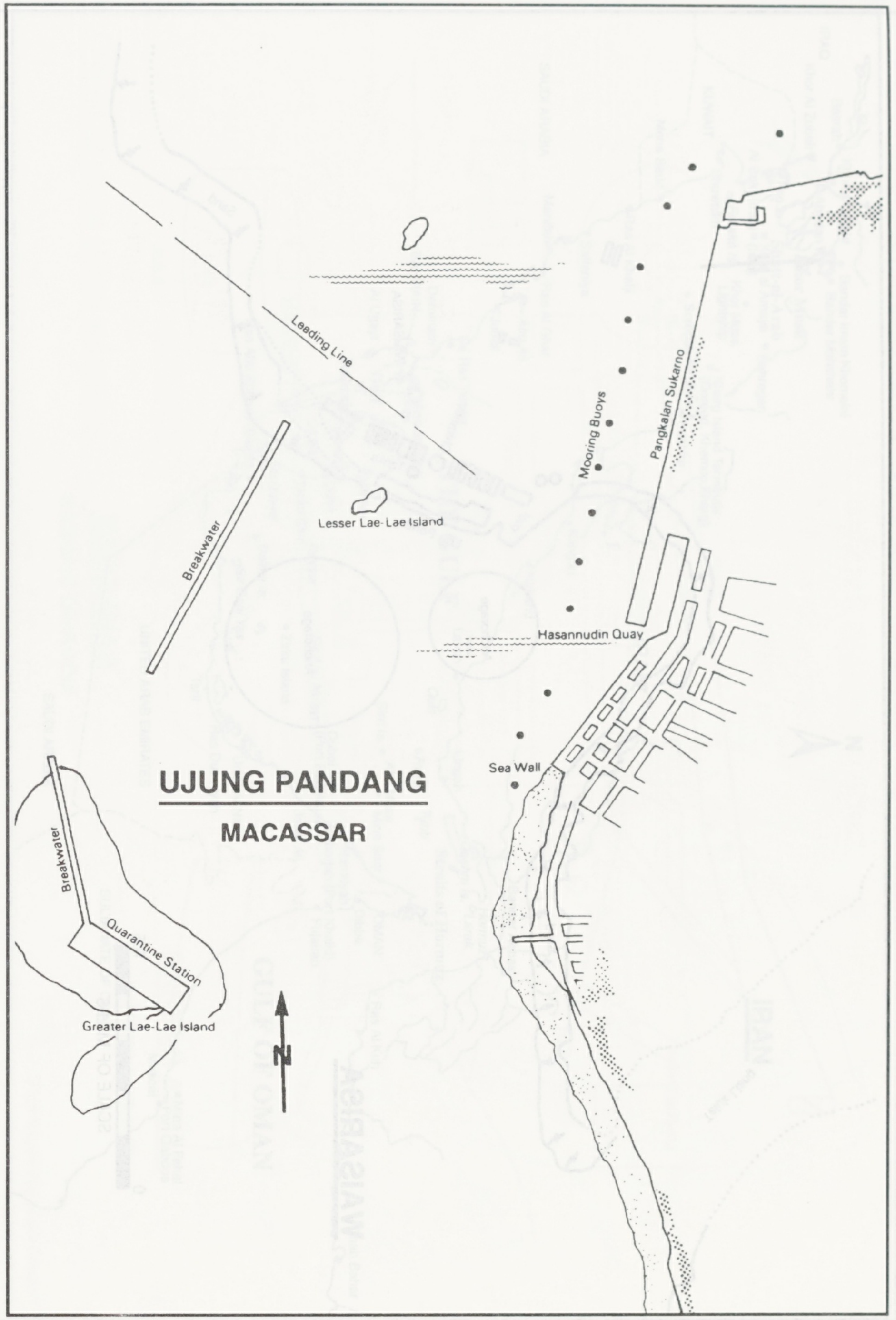

TELUK BAYUR
DEPTHS IN FEET
<18
Coal Store
Anchoring Prohibited
Silos
Coal Piers
Teluna
500
SCALE OF METRES
0
<18

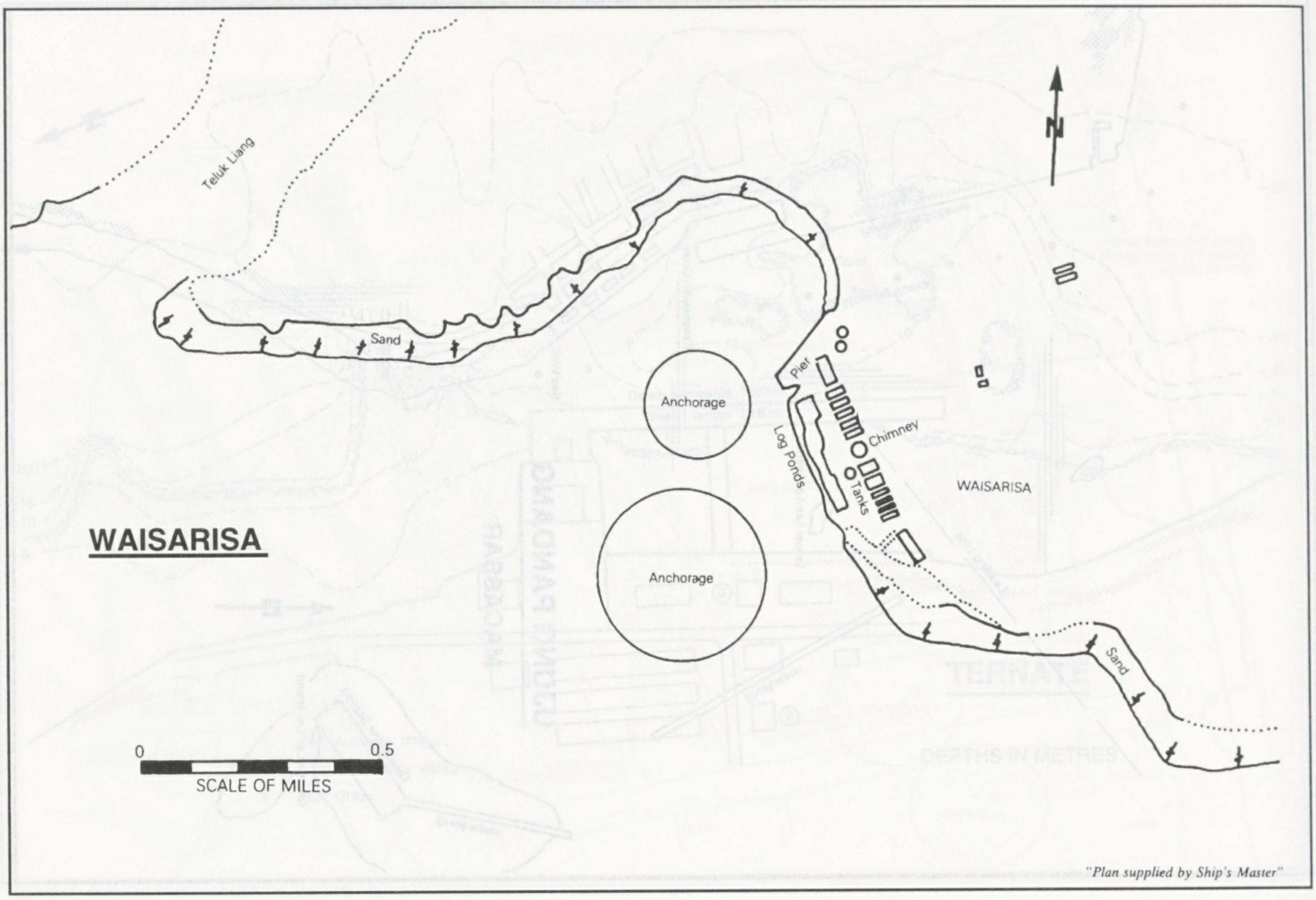

N
– 25
– 20
– 15
– 10
– 5
Coral
Depth alongside 10.0 m.
Wharf length 248 m.
①
②
③
1. Port Authority Office
2. Harbour Master's Office
3. Pilot Office
TERNATE
DEPTHS IN METRES


TUBANG
Mangroves
Discoloured Water
Mangroves
112° – 292°
096° – 276°
Anchorage
N
Wooden Pier
Mangroves
Tubang Sawmill
Log Ponds
TUBANG

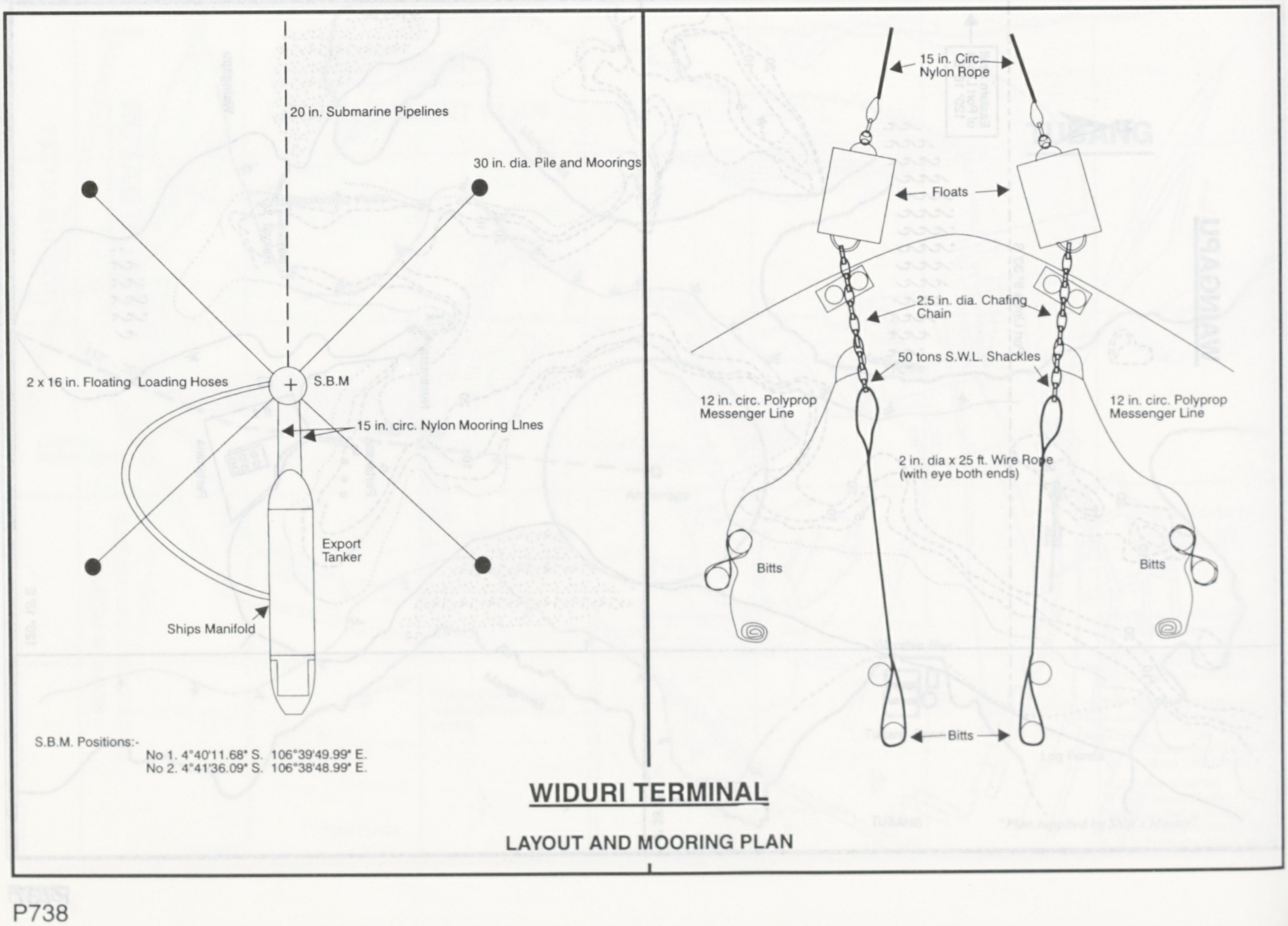
"Plan supplied by Ship's Master"


WAINGAPU
N
5
10
20
10
20
5
Port Limits 9° 30' S
Eastern Limit of Port Limits 120° 16' E
5
20
10
20
10
5
9° 38' S
5
10
20
20
10
5
Nusantara
Pertamina
Pelayaran Rakyat
Pertamina
Waingapu
120° 15' E


Leading Line
Breakwater
Lesser Lae-Lae Island
Mooring Buoys
Pangkalan Sukarno
Hasannudin Quay
Sea Wall
UJUNG PANDANG
MACASSAR
Breakwater
Quarantine Station
Greater Lae-Lae Island
N


Teluk Liang
Sand
Anchorage
Anchorage
Pier
Log Ponds
Chimney
Tanks
WAISARISA
Sand
N
WAISARISA
0
0.5
SCALE OF MILES

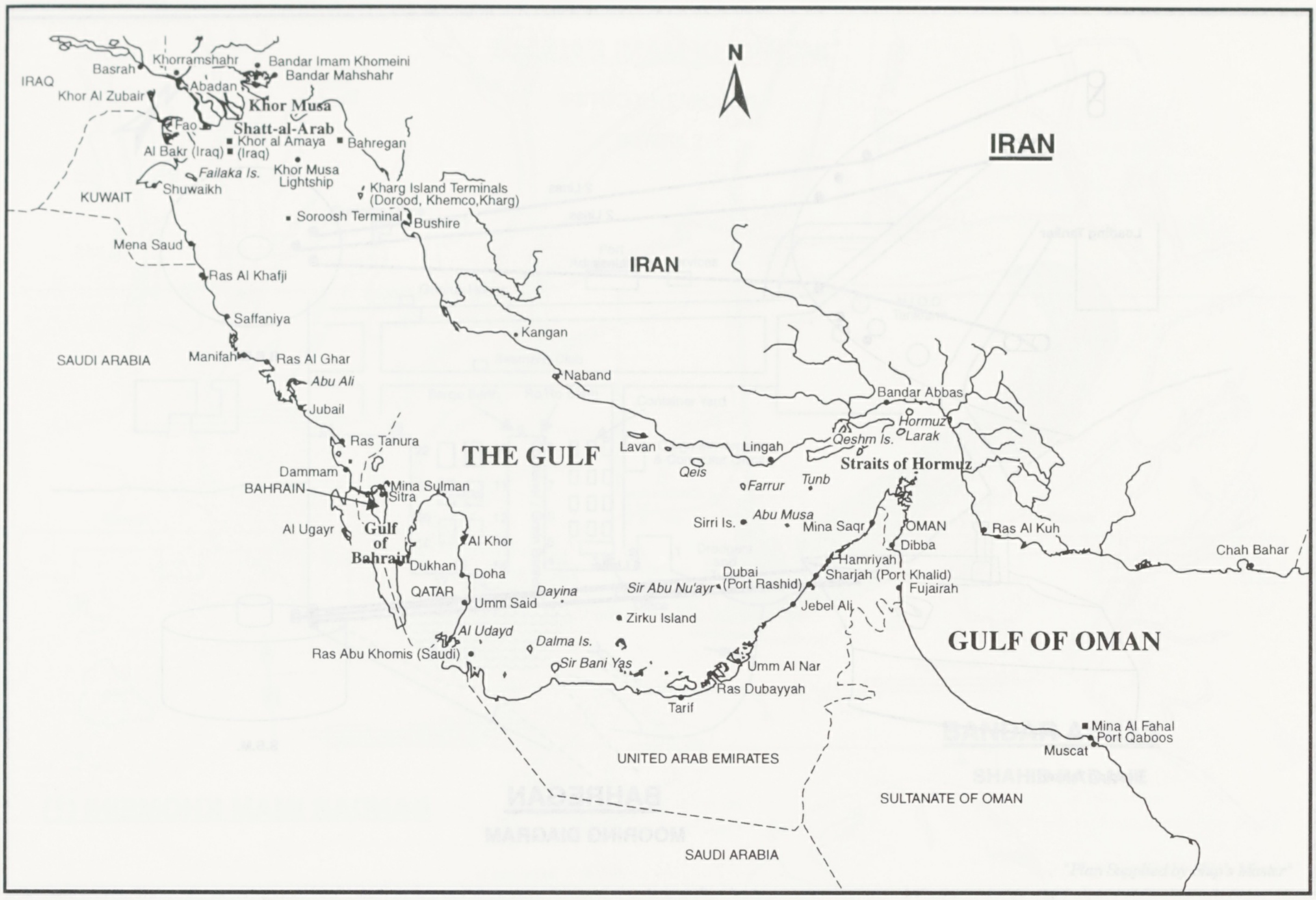
"Plan supplied by Ship's Master"

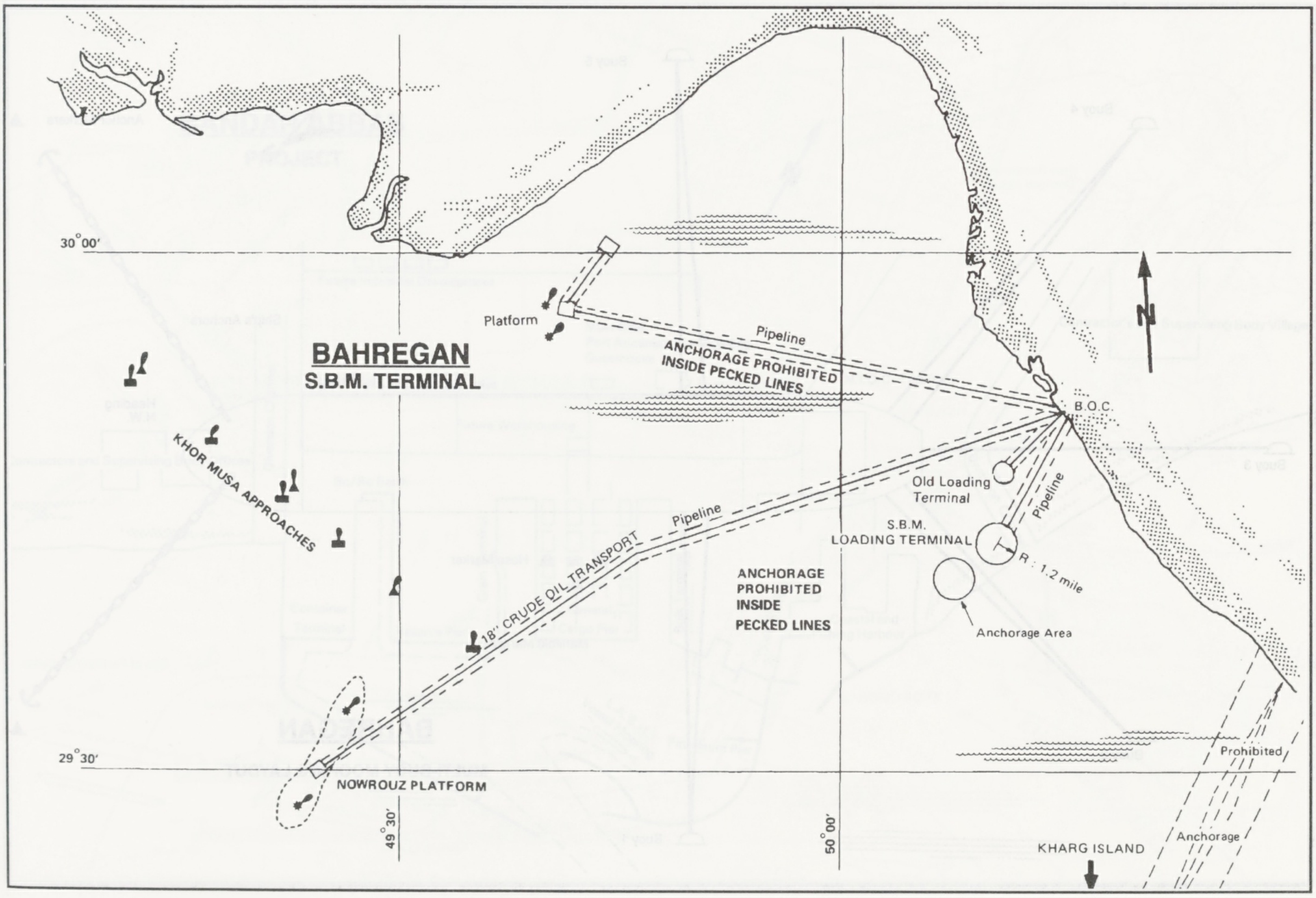

20 in. Submarine Pipelines
30 in. dia. Pile and Moorings
2 x 16 in. Floating Loading Hoses
S.B.M
15 in. circ. Nylon Mooring Lines
Export Tanker
Ships Manifold
15 in. Circ. Nylon Rope
Floats
2.5 in. dia. Chafing Chain
50 tons S.W.L. Shackles
12 in. circ. Polyprop Messenger Line
12 in. circ. Polyprop Messenger Line
2 in. dia x 25 ft. Wire Rope (with eye both ends)
Bitts
Bitts
Bitts

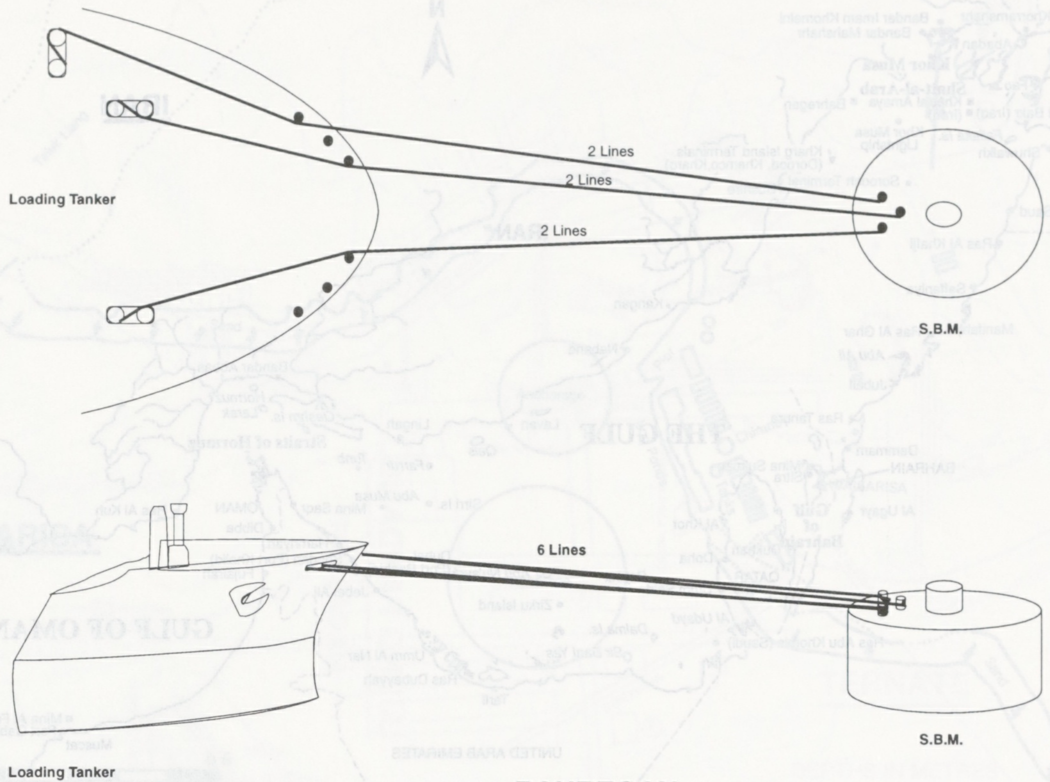
S.B.M. Positions:-
No 1. 4°40'11.68" S. 106°39'49.99" E.
No 2. 4°41'36.09" S. 106°38'48.99" E.

WIDURI TERMINAL

LAYOUT AND MOORING PLAN

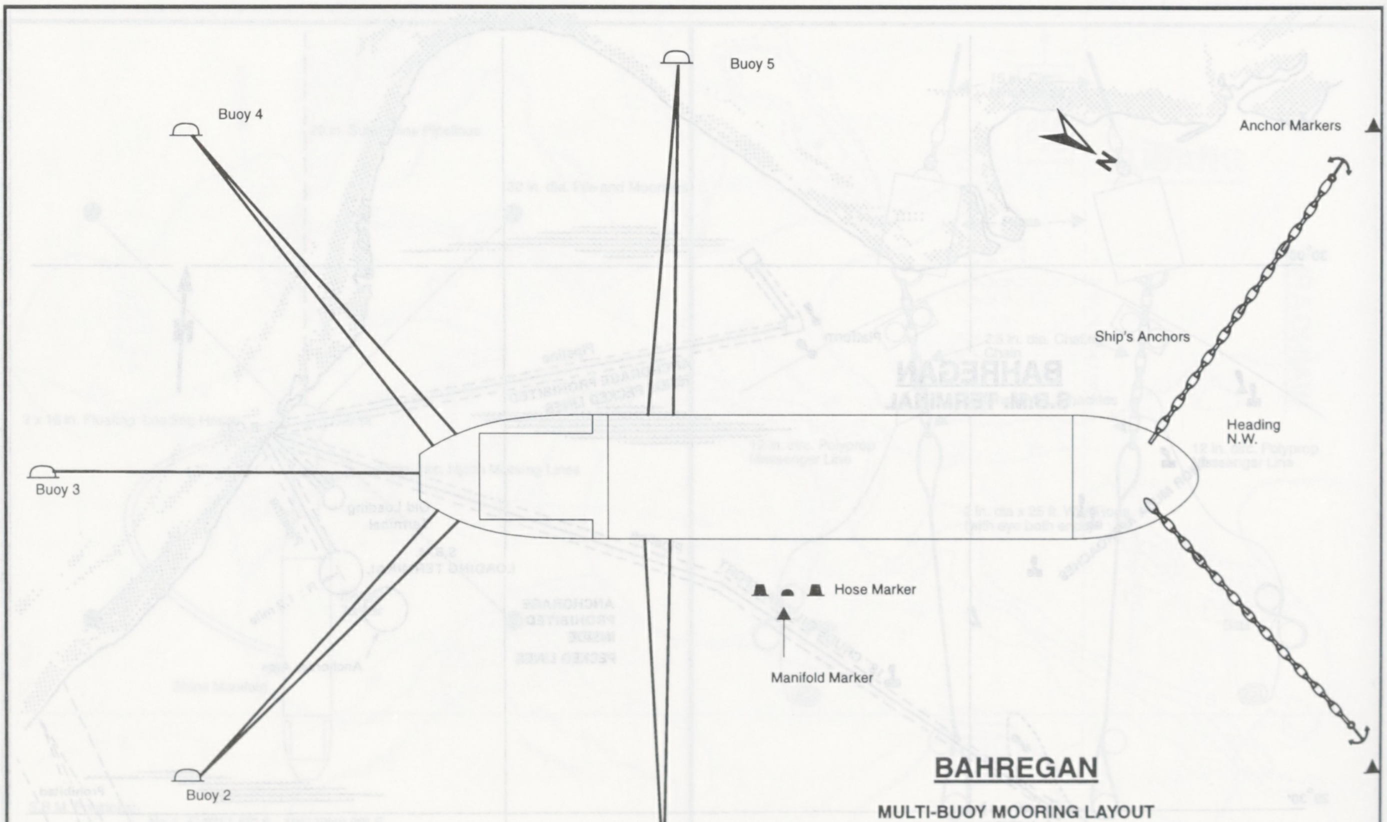

N
IRAN
IRAQ
Basrah
Khorramshahr
Bandar Imam Khomeini
Bandar Mahshahr
Abadan
Khor Al Zubair
Khor Musa
Fao
Shatt-al-Arab
Al Bakr (Iraq)
Khor al Amaya (Iraq)
Bahregan
Failaka Is.
Khor Musa Lightship
Shuwaikh
KUWAIT
Kharg Island Terminals (Dorood, Khemco, Kharg)
Soroosh Terminal
Bushire
Mena Saud
Ras Al Khafji
Saffaniya
SAUDI ARABIA
Manifah
Ras Al Ghar
Abu Ali
Jubail
Ras Tanura
Dammam
BAHRAIN
Mina Sulman
Sitra
Al Ugayr
Gulf of Bahrain
Dukhan
QATAR
Al Khor
Doha
Umm Said
Al Udayd
Ras Abu Khomis (Saudi)
THE GULF
IRAN
Kangan
Naband
Lavan
Qeis
Lingah
Farrur
Tunb
Sirri Is.
Abu Musa
Dayina
Sir Abu Nu'ayr
Zirku Island
Dalma Is.
Sir Bani Yas
Tarif
Ras Dubayyah
Umm Al Nar
Dubai (Port Rashid)
Jebel Ali
Sharjah (Port Khalid)
Hamriyah
Mina Saqr
Bandar Abbas
Hormuz
Larak
Qeshm Is.
Straits of Hormuz
OMAN
Dibba
Fujairah
Ras Al Kuh
Chah Bahar
GULF OF OMAN
Mina Al Fahal
Port Qaboos
Muscat
UNITED ARAB EMIRATES
SULTANATE OF OMAN
SAUDI ARABIA


BAHREGAN
S.B.M. TERMINAL
30° 00′
29° 30′
49° 30′
50° 00′
N
Platform
Pipeline
ANCHORAGE PROHIBITED INSIDE PECKED LINES
B.O.C.
Old Loading Terminal
S.B.M. LOADING TERMINAL
Pipeline
R : 1.2 mile
Anchorage Area
KHOR MUSA APPROACHES
Pipeline
18" CRUDE OIL TRANSPORT
ANCHORAGE PROHIBITED INSIDE PECKED LINES
NOWROUZ PLATFORM
Prohibited
Anchorage
KHARG ISLAND


Loading Tanker
2 Lines
2 Lines
2 Lines
S.B.M.
6 Lines
S.B.M.
Loading Tanker

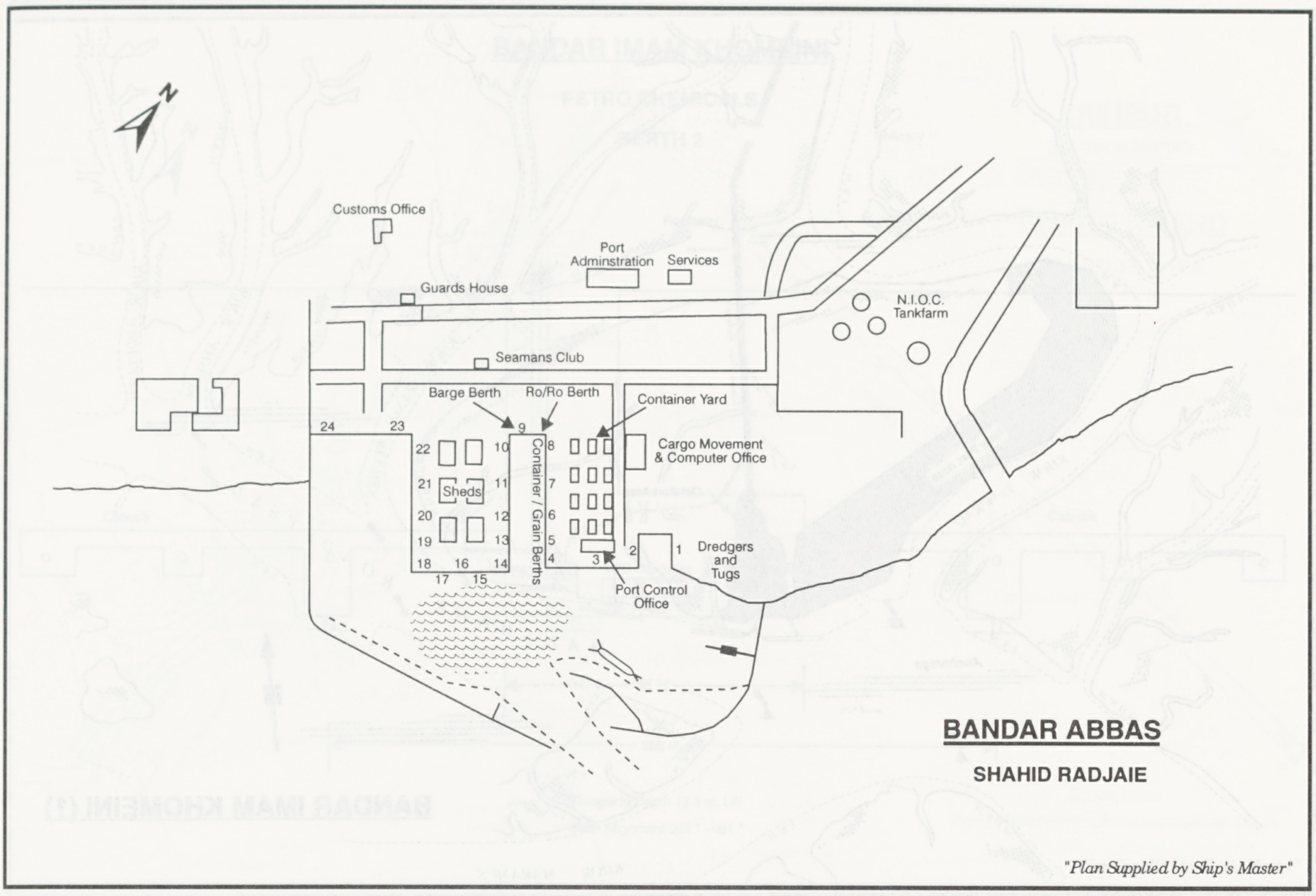
BAHREGAN

MOORING DIAGRAM


Buoy 5
Buoy 4
Anchor Markers
Ship's Anchors
Heading
N.W.
Buoy 3
Hose Marker
Manifold Marker
Buoy 2
Buoy 1

BAHREGAN

MULTI-BUOY MOORING LAYOUT

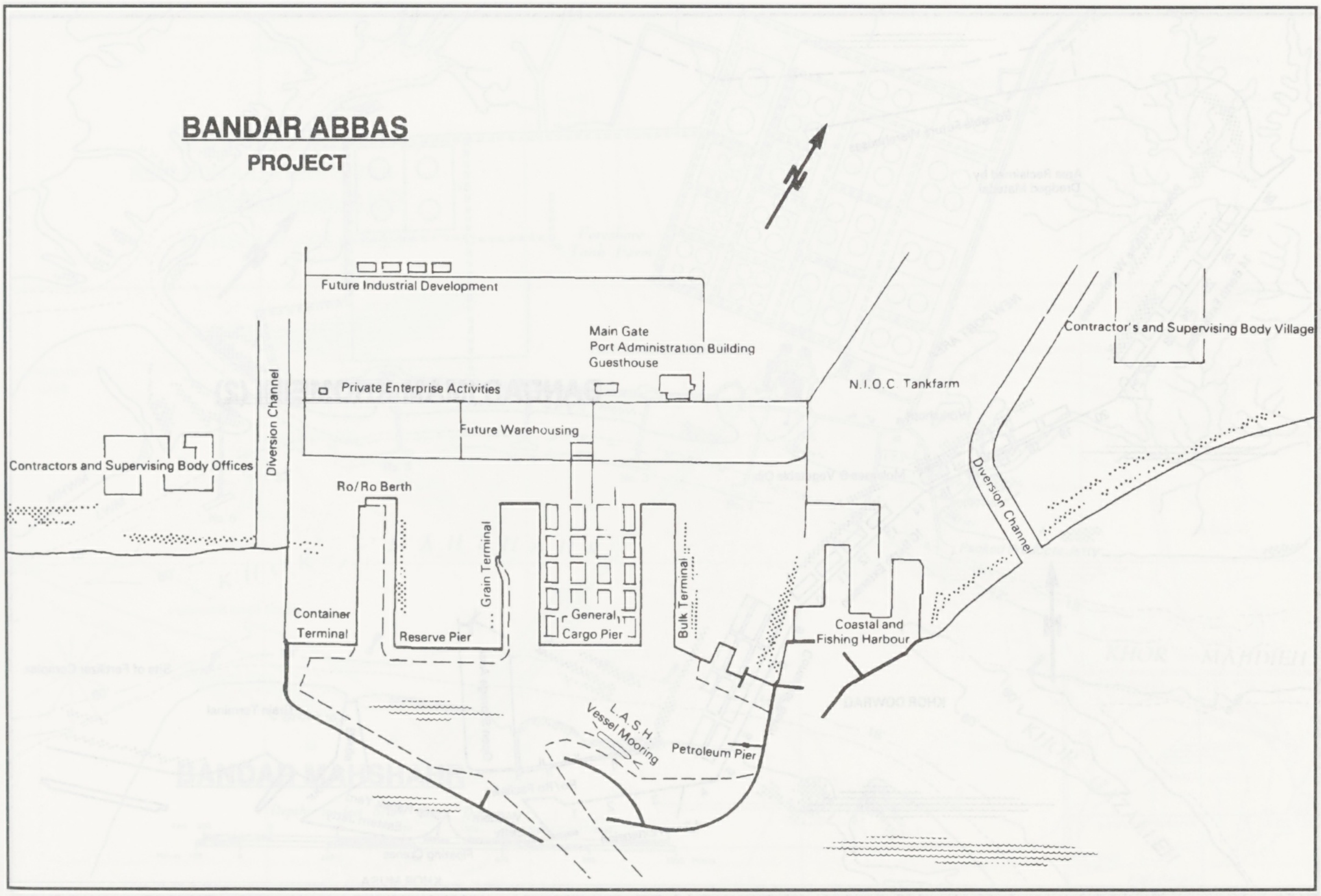


N
Customs Office
Port Adminstration
Services
Guards House
N.I.O.C. Tankfarm
Seamans Club
Barge Berth
Ro/Ro Berth
Container Yard
Cargo Movement & Computer Office
24
23
9
22
10
8
21
Sheds
11
7
20
12
6
19
13
5
18
16
14
4
17
15
3
2
1
Container / Grain Berths
Dredgers and Tugs
Port Control Office

BANDAR ABBAS

SHAHID RADJAIE

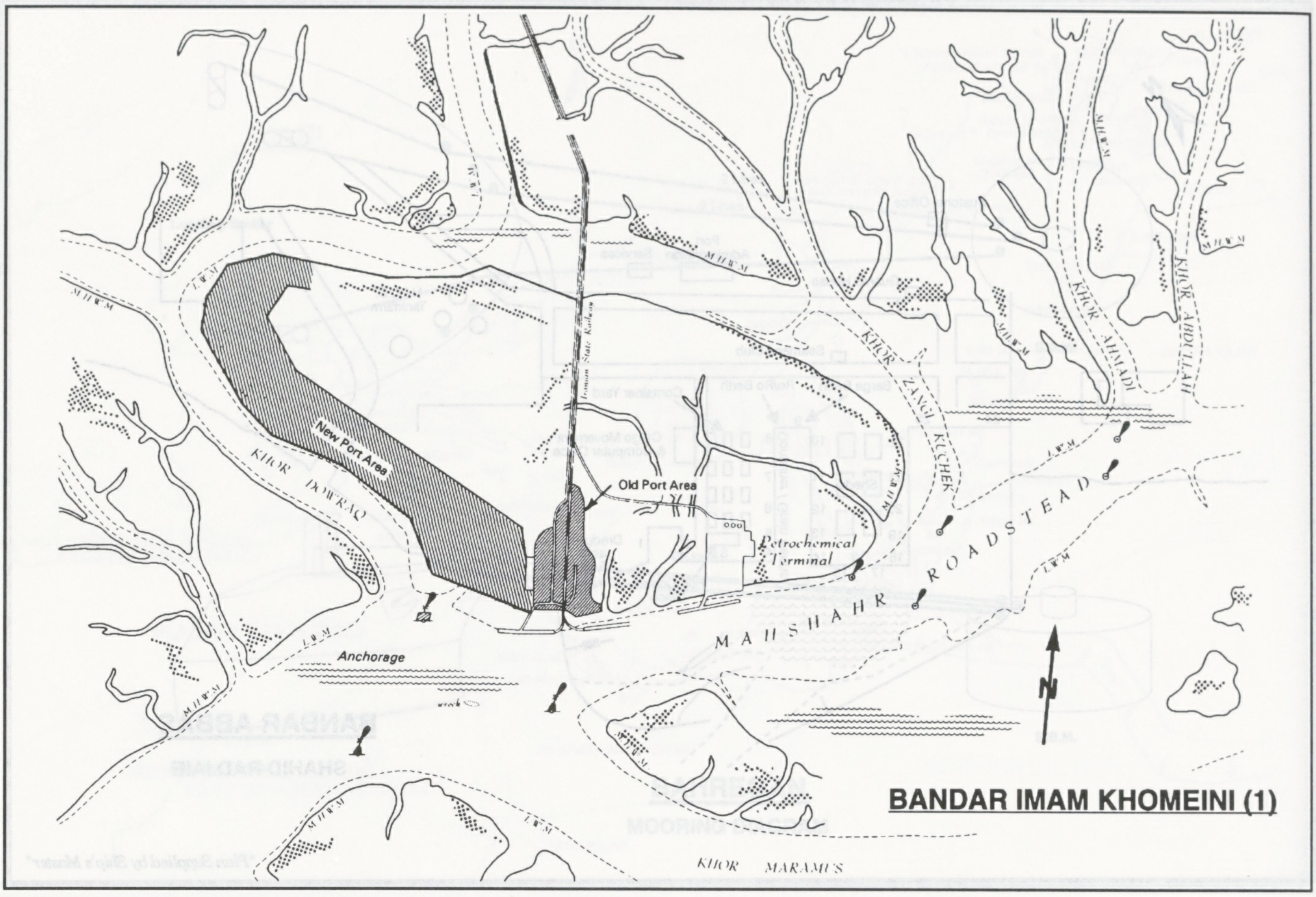
"Plan Supplied by Ship's Master"



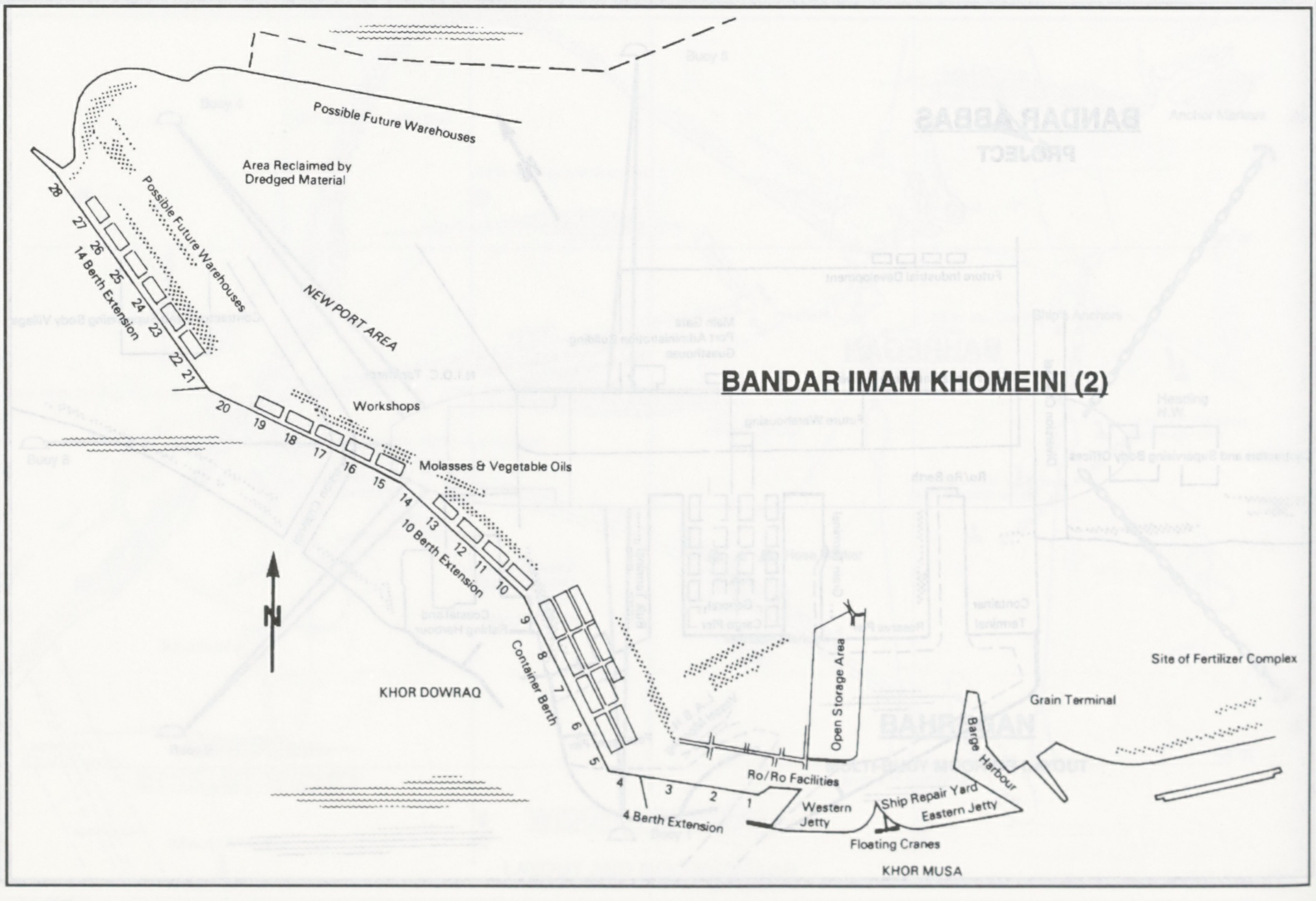
BANDAR ABBAS

PROJECT

N
Future Industrial Development
Main Gate
Port Administration Building
Guesthouse
Private Enterprise Activities
N.I.O.C Tankfarm
Contractor's and Supervising Body Village
Future Warehousing
Diversion Channel
Contractors and Supervising Body Offices
Ro/Ro Berth
Grain Terminal
Bulk Terminal
Diversion Channel
Container Terminal
Reserve Pier
General Cargo Pier
Coastal and Fishing Harbour
L.A.S.H. Vessel Mooring
Petroleum Pier

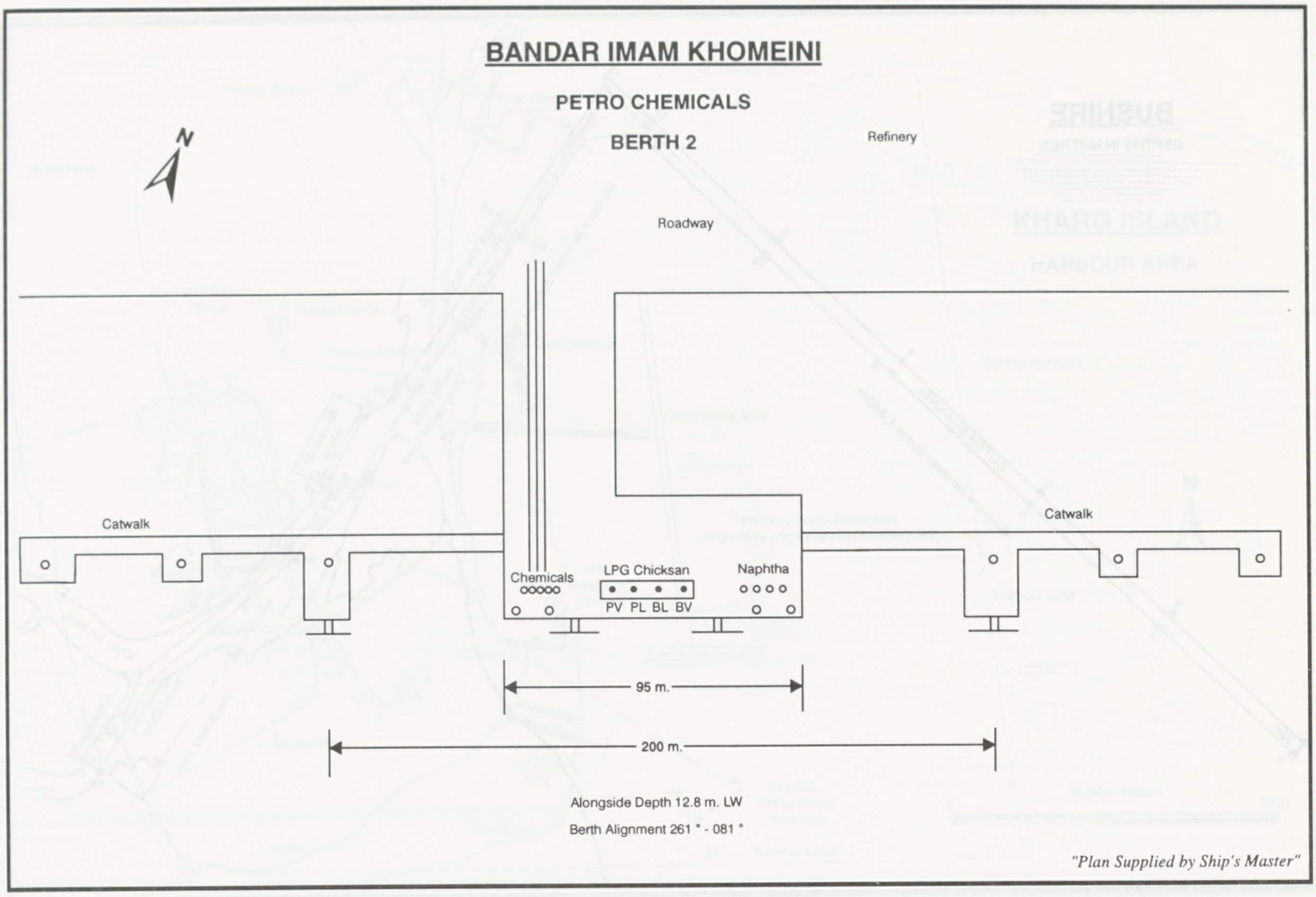

M.H.W.M
L.W.M
Iranian State Railway
New Port Area
KHOR DOWRAQ
Old Port Area
Petrochemical Terminal
KHOR ZANGI KUCHEK
KHOR AHMADI
KHOR ABDULLAH
MAHSHAHR ROADSTEAD
Anchorage
N
KHOR MARAMUS

BANDAR IMAM KHOMEINI (1)


Possible Future Warehouses
Area Reclaimed by Dredged Material
Possible Future Warehouses
NEW PORT AREA
28
27
26
25
24
23
22
21
14 Berth Extension
20
19
18
17
16
15
Workshops
Molasses & Vegetable Oils
14
13
12
11
10
10 Berth Extension
9
8
7
6
5
Container Berth
N
KHOR DOWRAQ
4
3
2
1
4 Berth Extension
Open Storage Area
Ro/Ro Facilities
Western Jetty
Ship Repair Yard
Eastern Jetty
Floating Cranes
Barge Harbour
Grain Terminal
Site of Fertilizer Complex
KHOR MUSA

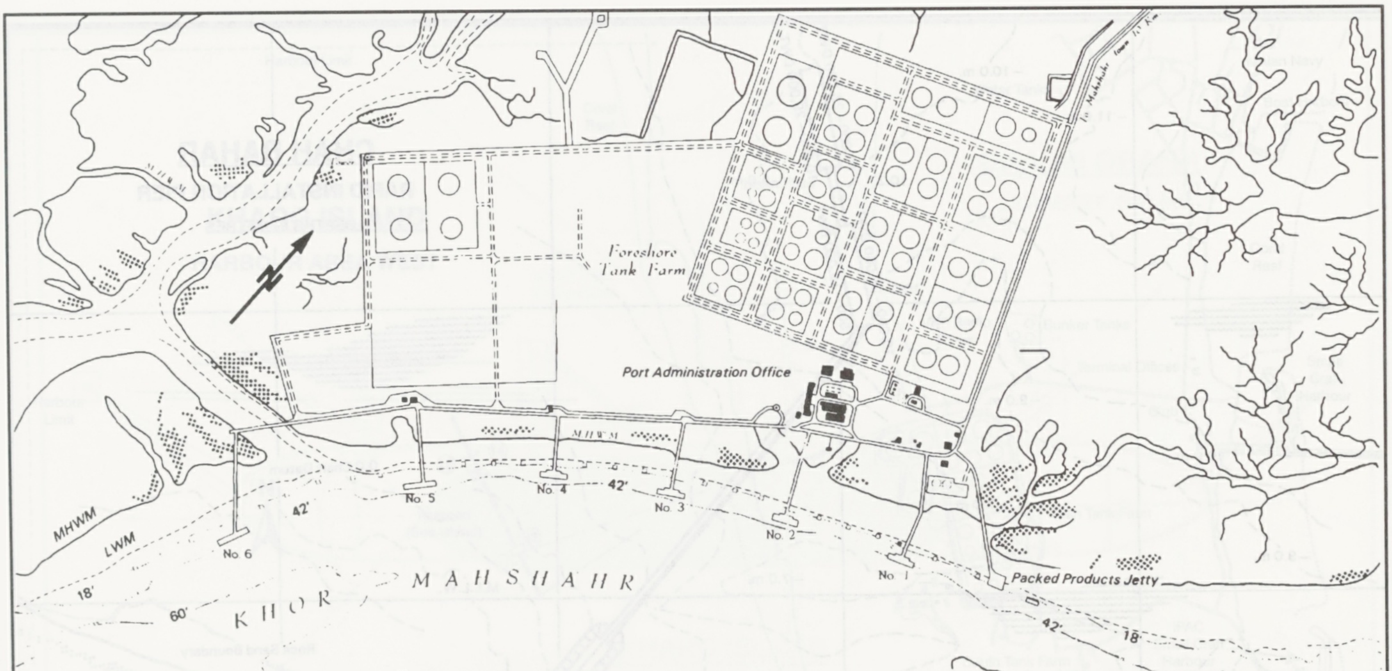
BANDAR IMAM KHOMEINI (2)

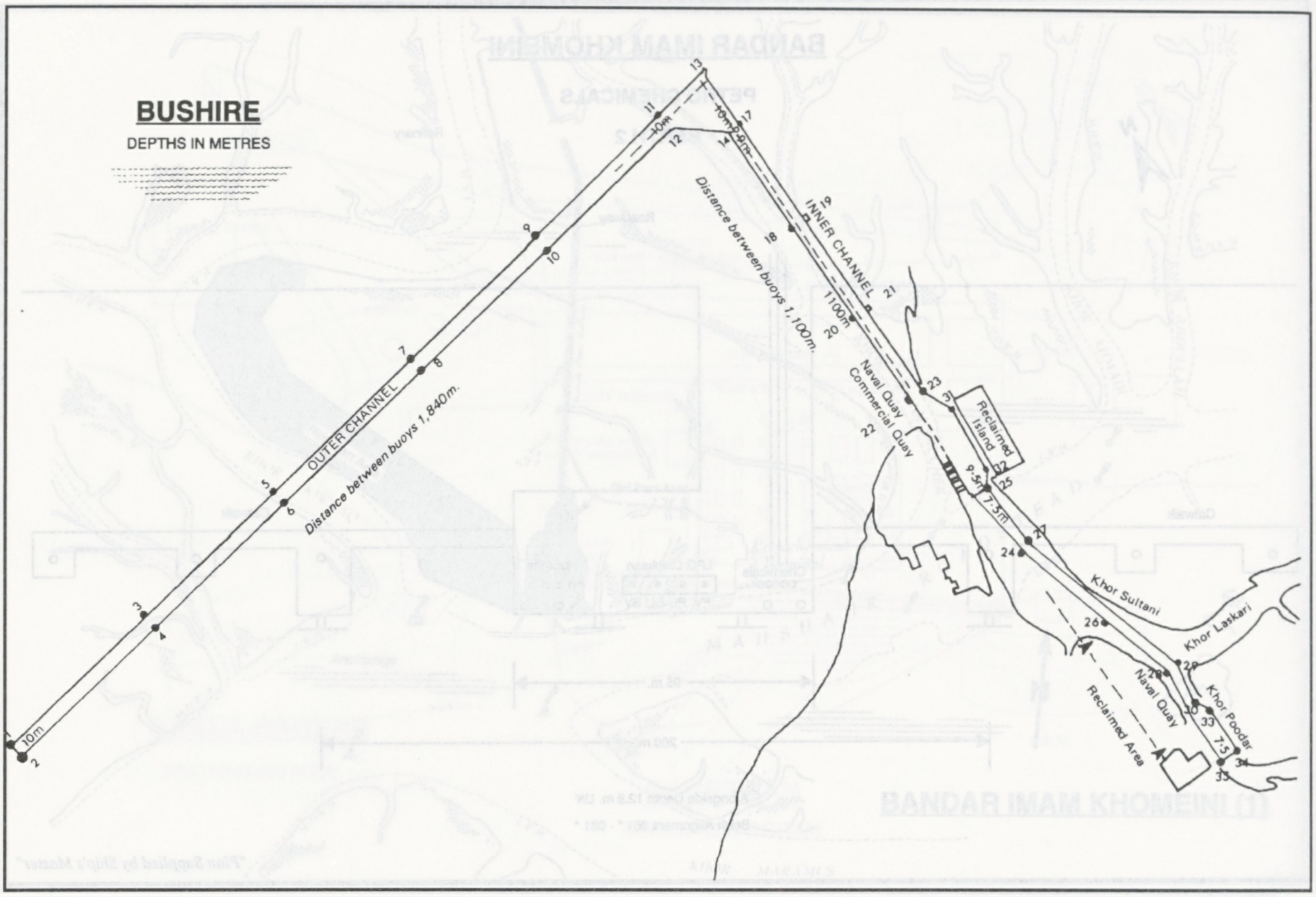
BANDAR IMAM KHOMEINI


PETRO CHEMICALS
BERTH 2
N
Refinery
Roadway
Catwalk
Catwalk
Chemicals
LPG Chicksan
PV PL BL BV
Naphtha
95 m.
200 m.
Alongside Depth 12.8 m. LW
Berth Alignment 261 ° - 081 °

"Plan Supplied by Ship's Master"

BANDAR MAHSHAHR

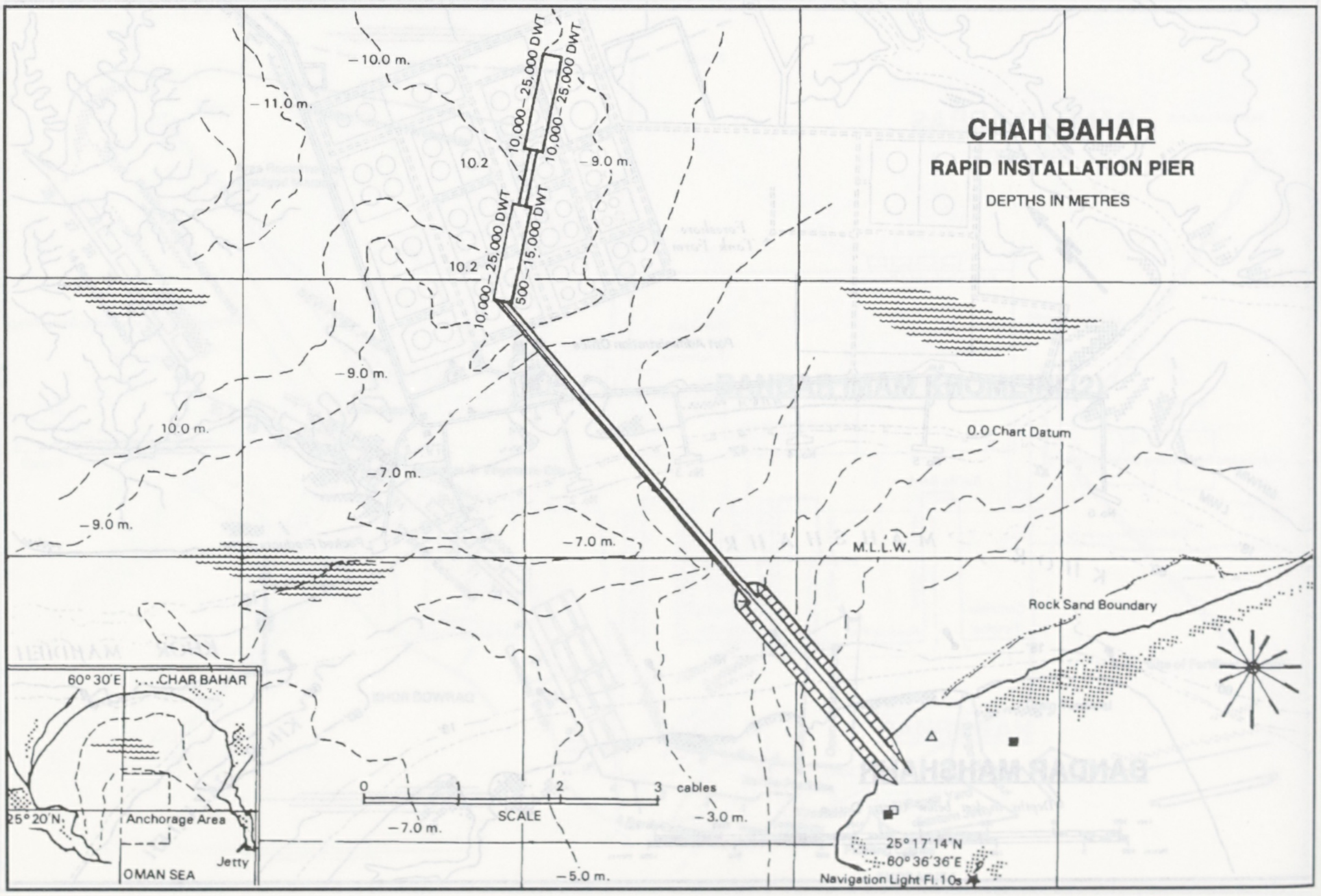

Foreshore Tank Farm
Port Administration Office
To Mahshahr town 1.5 Km
MHWM
MHWM
LWM
No. 6
No. 5
No. 4
No. 3
No. 2
No. 1
Packed Products Jetty
42'
18'
60'
KHOR MAHSHAHR
KHOR MAHDIEH
KHOR GAZALLEH
Depths in feet below Chart Datum
Feet 500 0 500 1000 1500 2000 2500 3000 Feet
Metres 100 0 200 400 600 800 1000 Metres



BUSHIRE

DEPTHS IN METRES

OUTER CHANNEL
Distance between buoys 1,840m.
10m
10m
10m
INNER CHANNEL
Distance between buoys 1,100m.
1100m
Naval Quay
Commercial Quay
Reclaimed Island
9.5m
7.5m
Khor Sultani
Khor Laskari
Naval Quay
Khor Poodar
Reclaimed Area
7.5
1
2
3
4
5
6
7
8
9
10
11
12
13
14
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
33
34

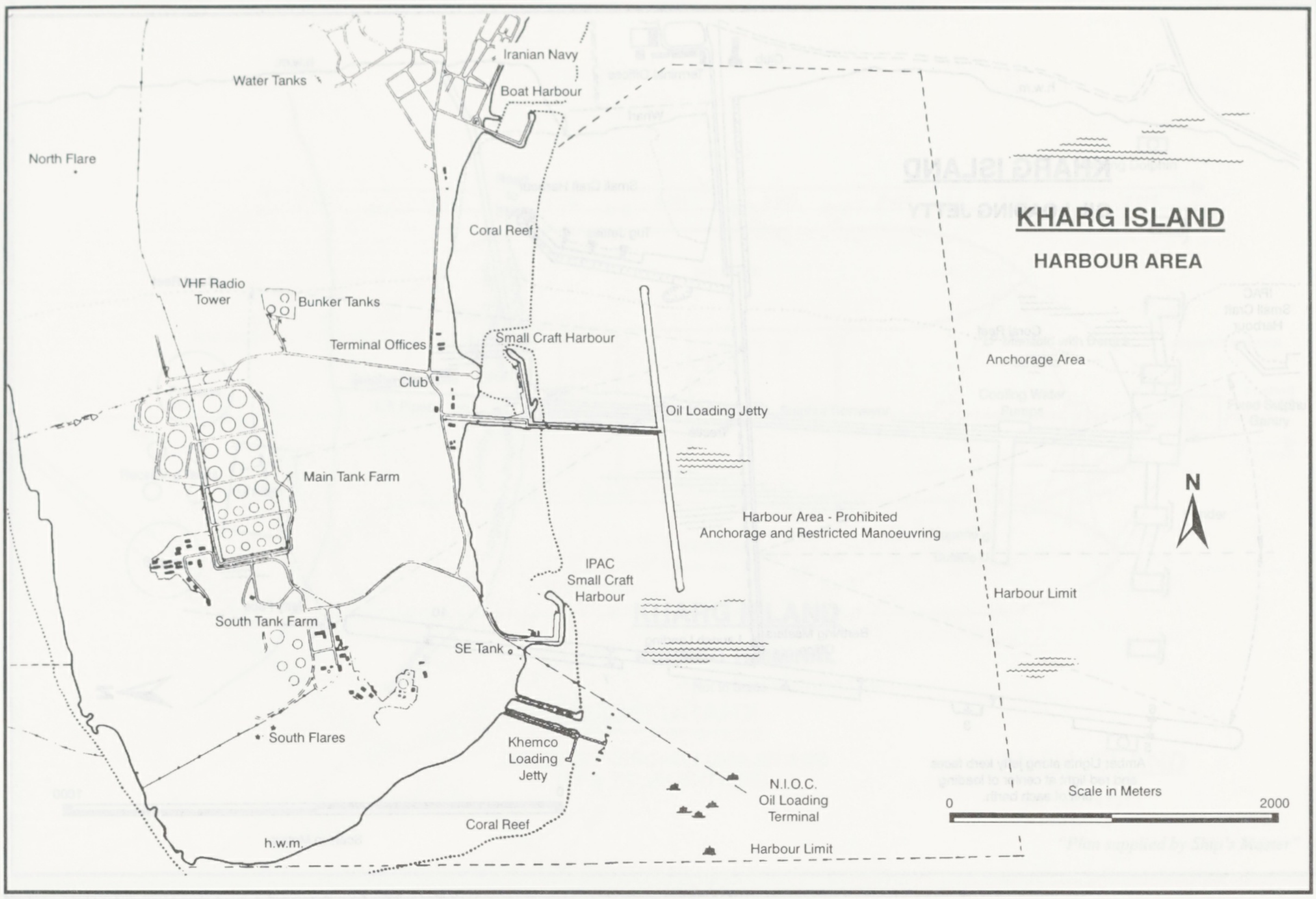


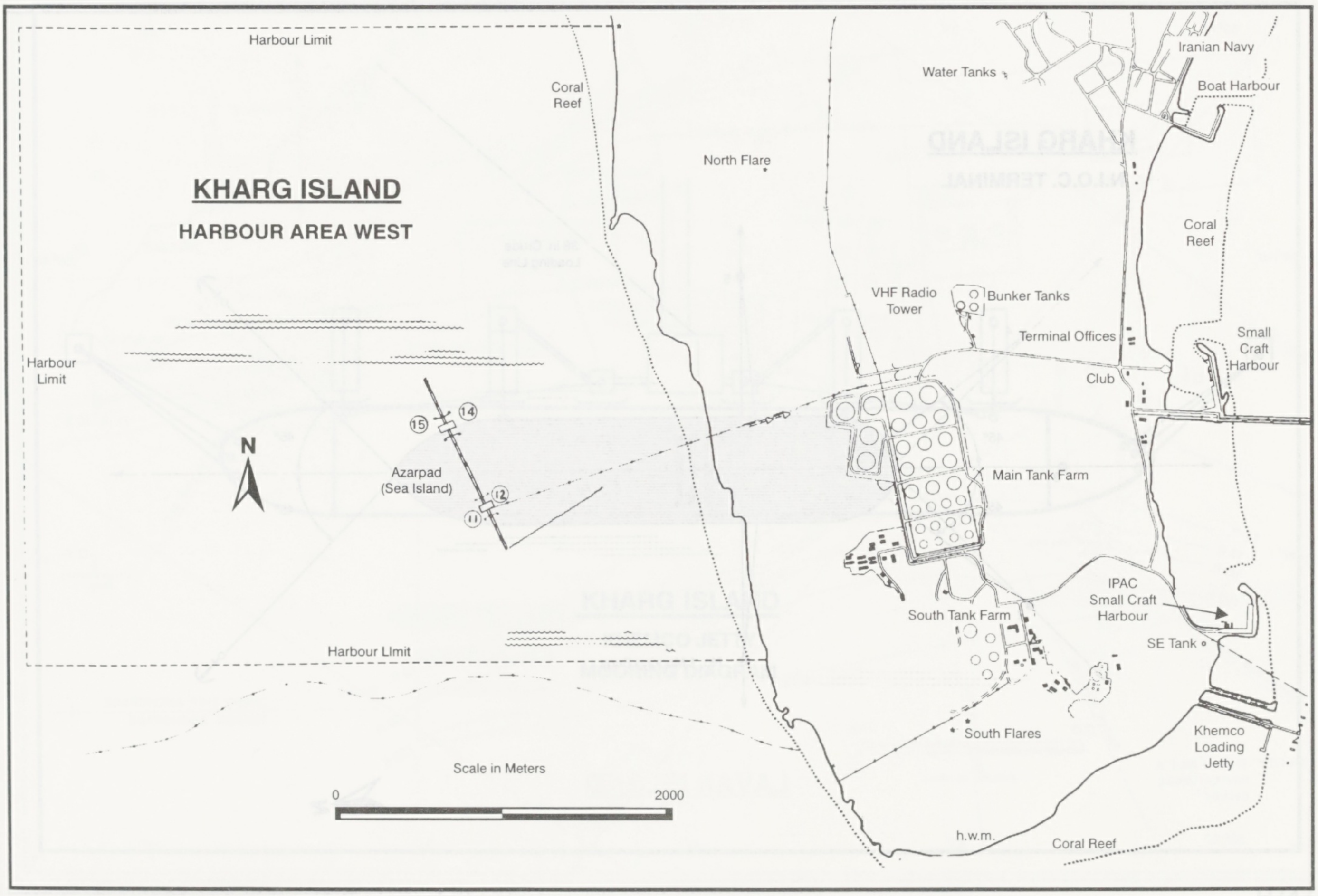
CHAH BAHAR

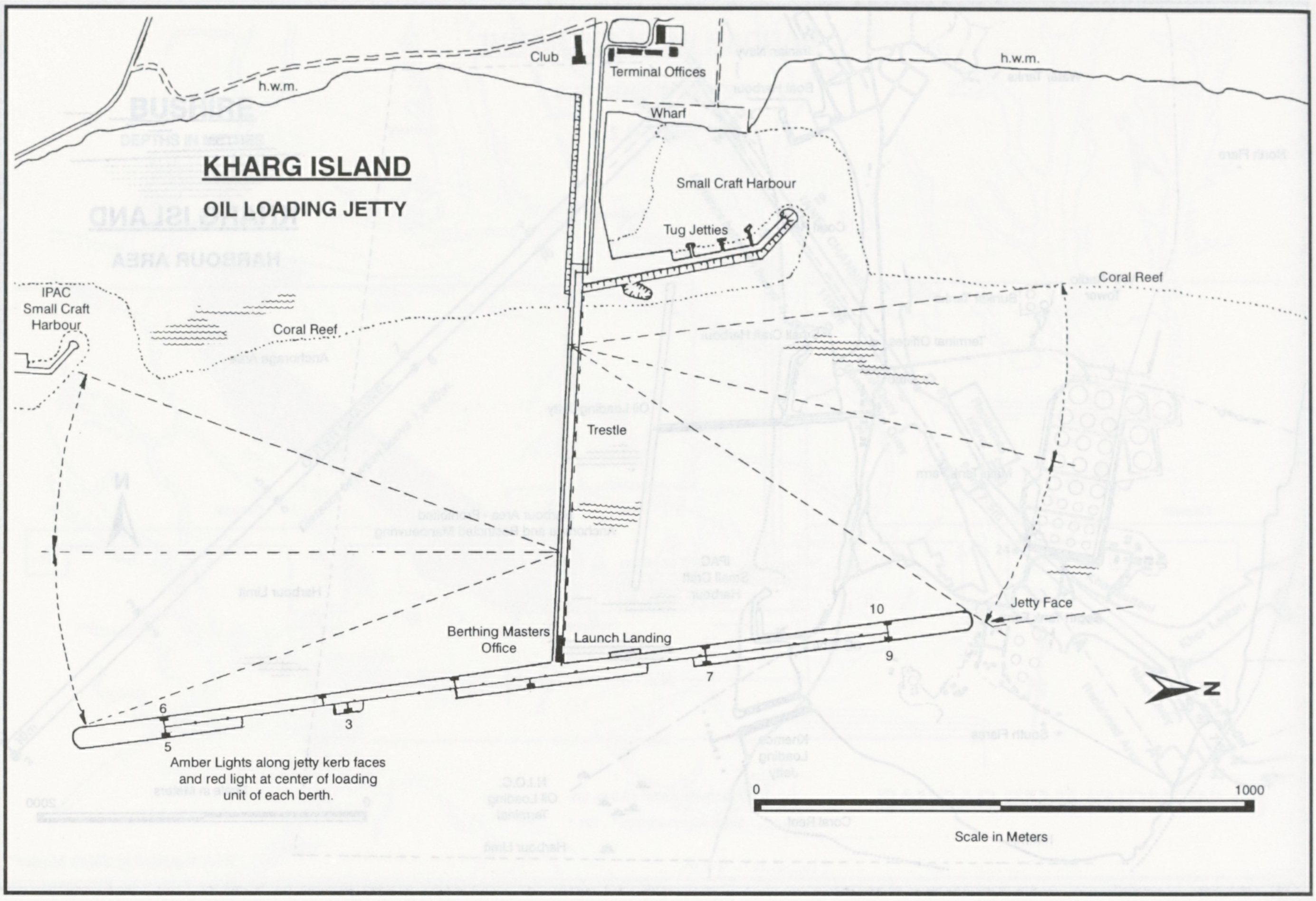
RAPID INSTALLATION PIER

DEPTHS IN METRES

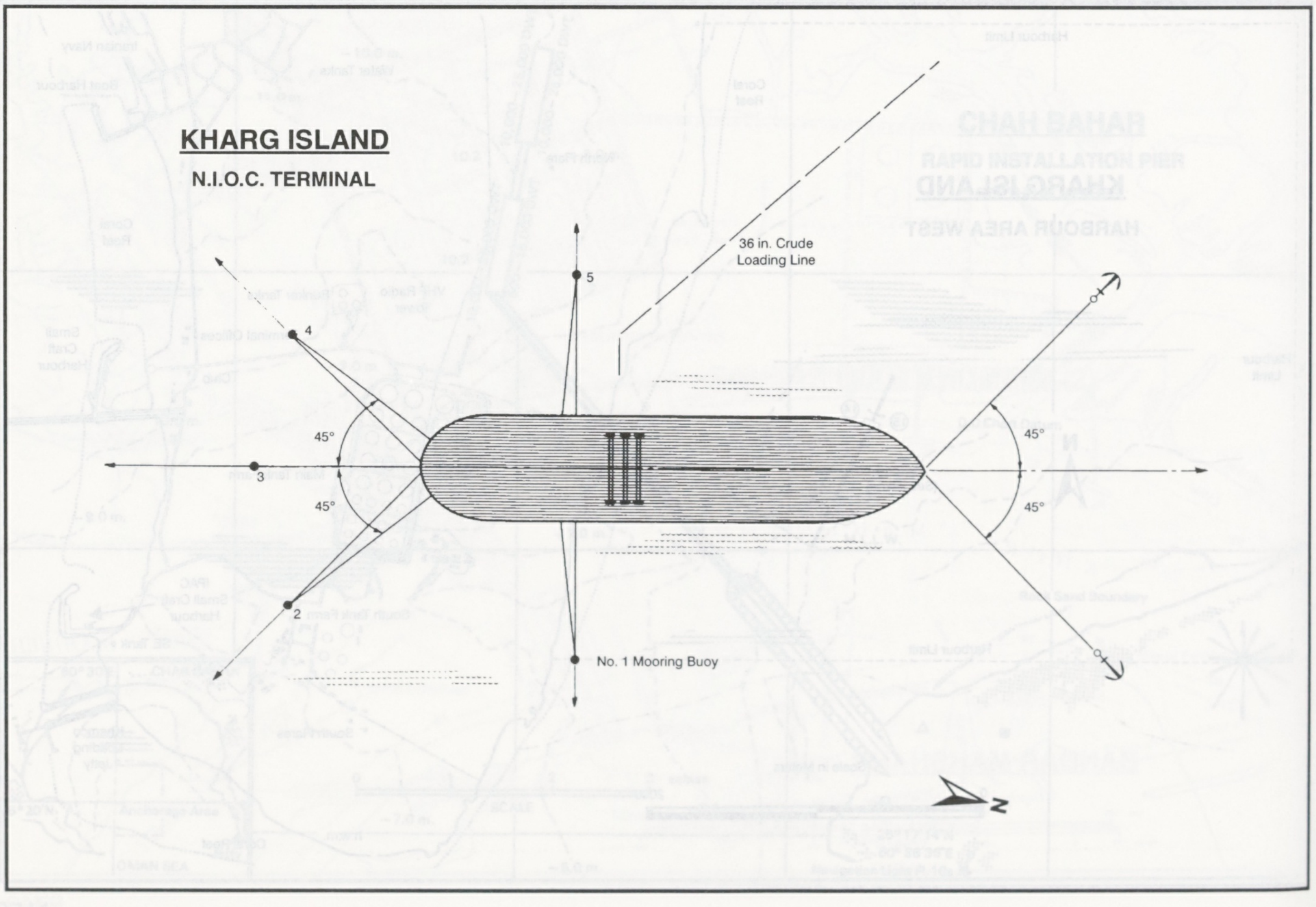
−10.0 m.
−11.0 m.
10.2
10.2
10,000 – 25,000 DWT
10,000 – 25,000 DWT
10,000 – 25,000 DWT
500 – 15,000 DWT
−9.0 m.
−9.0 m.
10.0 m.
−7.0 m.
−9.0 m.
−7.0 m.
0.0 Chart Datum
M.L.L.W.
Rock Sand Boundary
0
1
2
3
cables
SCALE
−3.0 m.
−7.0 m.
−5.0 m.
25° 17′ 14″N
60° 36′ 36″E
Navigation Light Fl.10s
60° 30′E
CHAR BAHAR
25° 20′N
Anchorage Area
Jetty
OMAN SEA

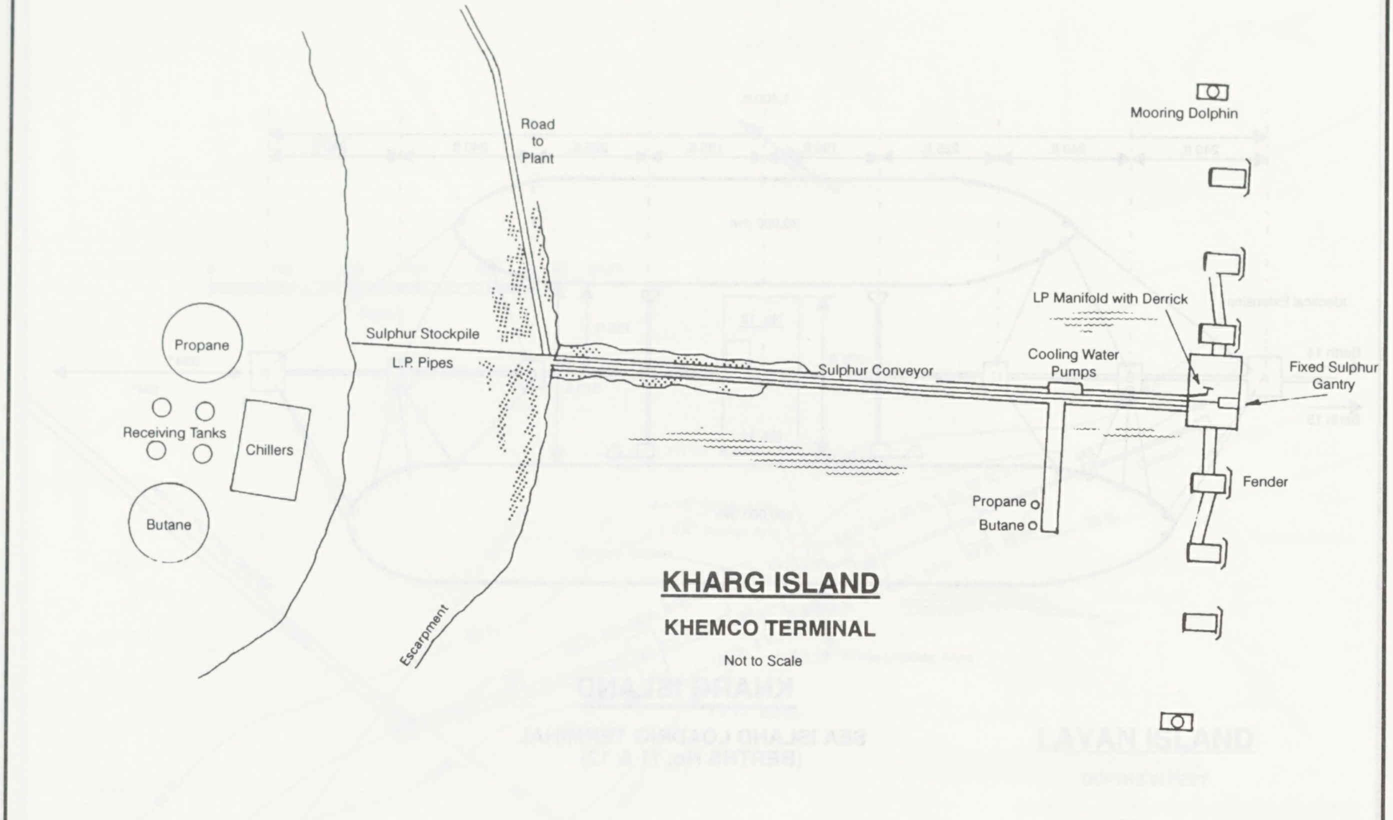

KHARG ISLAND
HARBOUR AREA
Iranian Navy
Boat Harbour
Water Tanks
North Flare
Coral Reef
VHF Radio Tower
Bunker Tanks
Terminal Offices
Small Craft Harbour
Club
Oil Loading Jetty
Anchorage Area
Main Tank Farm
N
Harbour Area - Prohibited Anchorage and Restricted Manoeuvring
IPAC Small Craft Harbour
Harbour Limit
South Tank Farm
SE Tank
South Flares
Khemco Loading Jetty
N.I.O.C. Oil Loading Terminal
Scale in Meters
0
2000
Coral Reef
h.w.m.
Harbour Limit


Harbour Limit
Coral Reef
Iranian Navy
Water Tanks
Boat Harbour
North Flare
KHARG ISLAND
HARBOUR AREA WEST
Coral Reef
VHF Radio Tower
Bunker Tanks
Terminal Offices
Small Craft Harbour
Harbour Limit
Club
15
14
N
Main Tank Farm
Azarpad (Sea Island)
12
11
IPAC Small Craft Harbour
South Tank Farm
SE Tank
Harbour Limit
South Flares
Khemco Loading Jetty
Scale in Meters
0
2000
h.w.m.
Coral Reef


KHARG ISLAND
OIL LOADING JETTY
Club
Terminal Offices
h.w.m.
h.w.m.
Wharf
Small Craft Harbour
Tug Jetties
Coral Reef
IPAC Small Craft Harbour
Coral Reef
Trestle
Berthing Masters Office
Launch Landing
Jetty Face
10
9
7
6
5
3
N
0
1000
Scale in Meters

Amber Lights along jetty kerb faces and red light at center of loading unit of each berth.


KHARG ISLAND
N.I.O.C. TERMINAL
36 in. Crude Loading Line
5
4
45°
3
45°
2
45°
45°
No. 1 Mooring Buoy
N

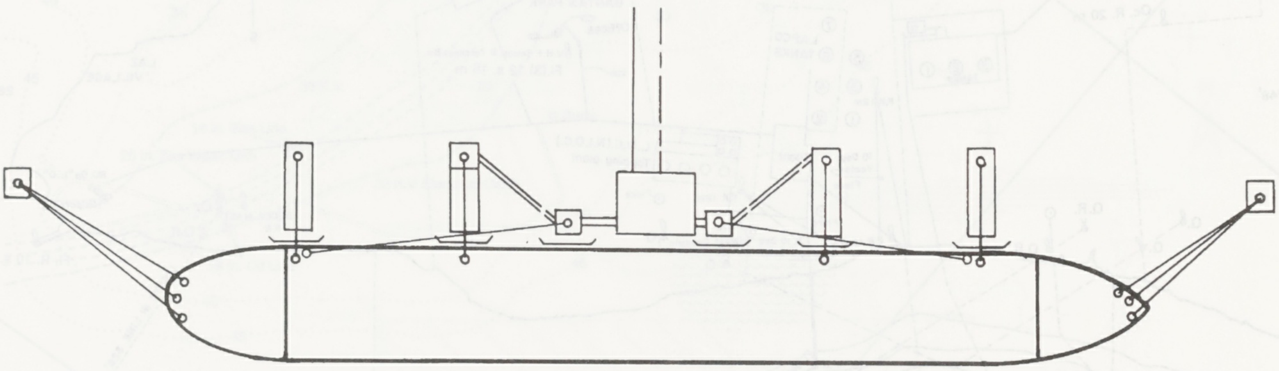

Mooring Dolphin
Road
to
Plant
LP Manifold with Derrick
Propane
Sulphur Stockpile
L.P. Pipes
Sulphur Conveyor
Cooling Water
Pumps
Fixed Sulphur
Gantry
Receiving Tanks
Chillers
Fender
Propane
Butane
Butane
Escarpment

KHARG ISLAND

KHEMCO TERMINAL

Not to Scale

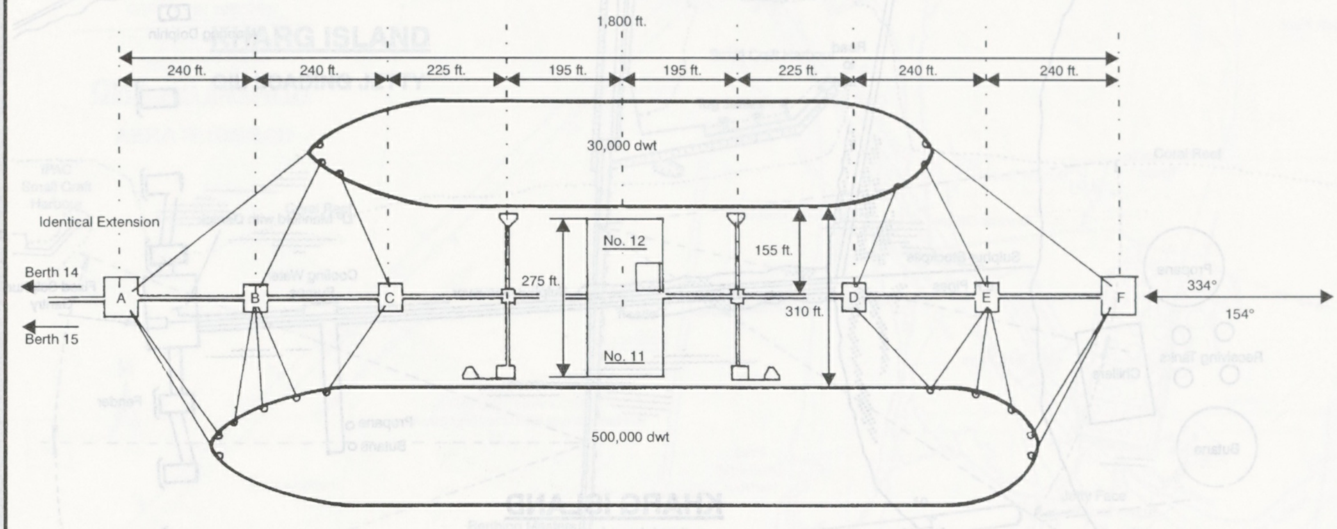
"Plan supplied by Ship's Master"



KHARG ISLAND

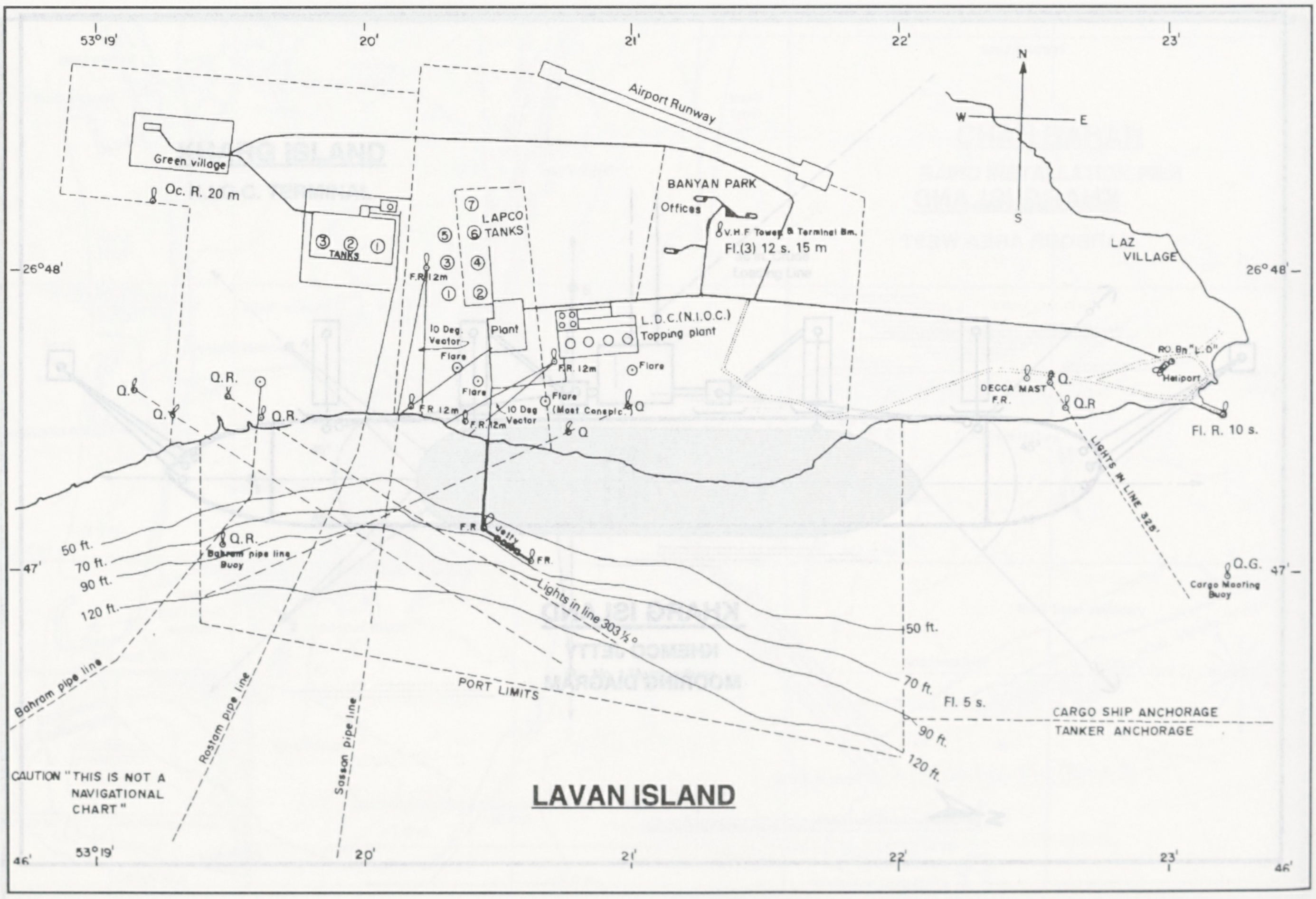
KHEMCO JETTY

MOORING DIAGRAM

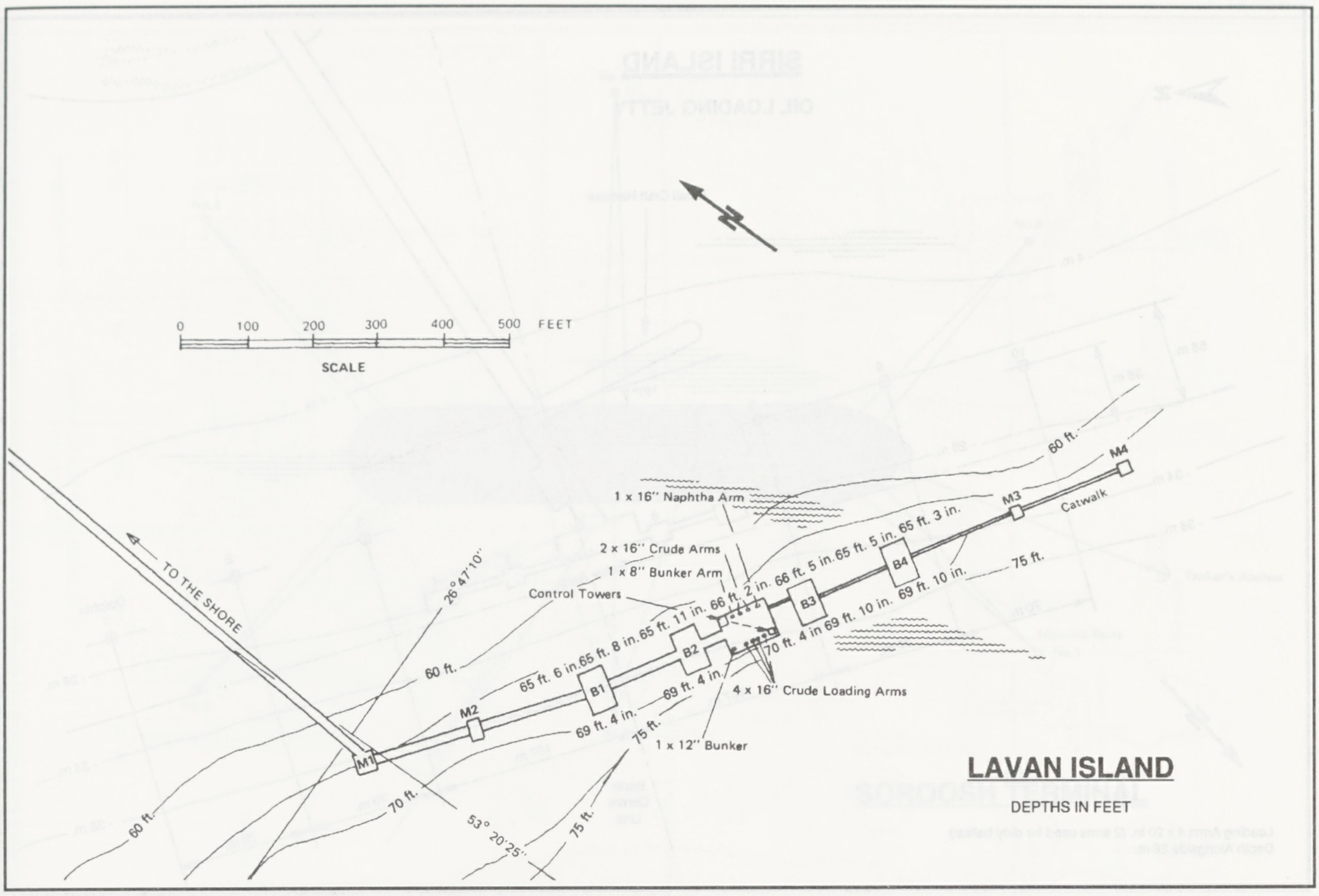

1,800 ft.
240 ft.
240 ft.
225 ft.
195 ft.
195 ft.
225 ft.
240 ft.
240 ft.
30,000 dwt
Identical Extension
Berth 14
Berth 15
A
B
C
D
E
F
275 ft.
No. 12
No. 11
155 ft.
310 ft.
334°
154°
500,000 dwt

KHARG ISLAND

SEA ISLAND LOADING TERMINAL
(BERTHS No. 11 & 12)


53° 19'
20'
21'
22'
23'
Airport Runway
N
W
E
S
Green village
Oc. R. 20 m
BANYAN PARK
Offices
V.H.F Tower & Terminal Bm.
Fl.(3) 12 s. 15 m
LAZ VILLAGE
26° 48'
26° 48'
③ ② ①
TANKS
LAPCO TANKS
⑦ ⑥ ⑤ ④ ③ ② ①
F.R. 12m
10 Deg. Vector
Plant
Flare
Flare
L.D.C.(N.I.O.C.) Topping plant
F.R. 12m
Flare
Flare (Most Conspic.)
Q
Q.
Q.
Q.R.
Q.R.
F.R 12m
F.R. 12m
10 Deg Vector
Q
RO. Bn "L.D"
Heliport
DECCA MAST F.R.
Q.
Q.R
Fl. R. 10 s.
LIGHTS IN LINE 325°
50 ft.
70 ft.
90 ft.
120 ft.
Q.R.
Bahram pipe line Buoy
F.R.
Jetty
F.R.
-47'
47'
Lights in line 303½°
Q.G.
Cargo Mooring Buoy
50 ft.
70 ft.
90 ft.
120 ft.
Fl. 5 s.
PORT LIMITS
CARGO SHIP ANCHORAGE
TANKER ANCHORAGE
Bahram pipe line
Rostam pipe line
Sasson pipe line
CAUTION "THIS IS NOT A NAVIGATIONAL CHART"
46'
53° 19'
20'
21'
22'
23'
46'

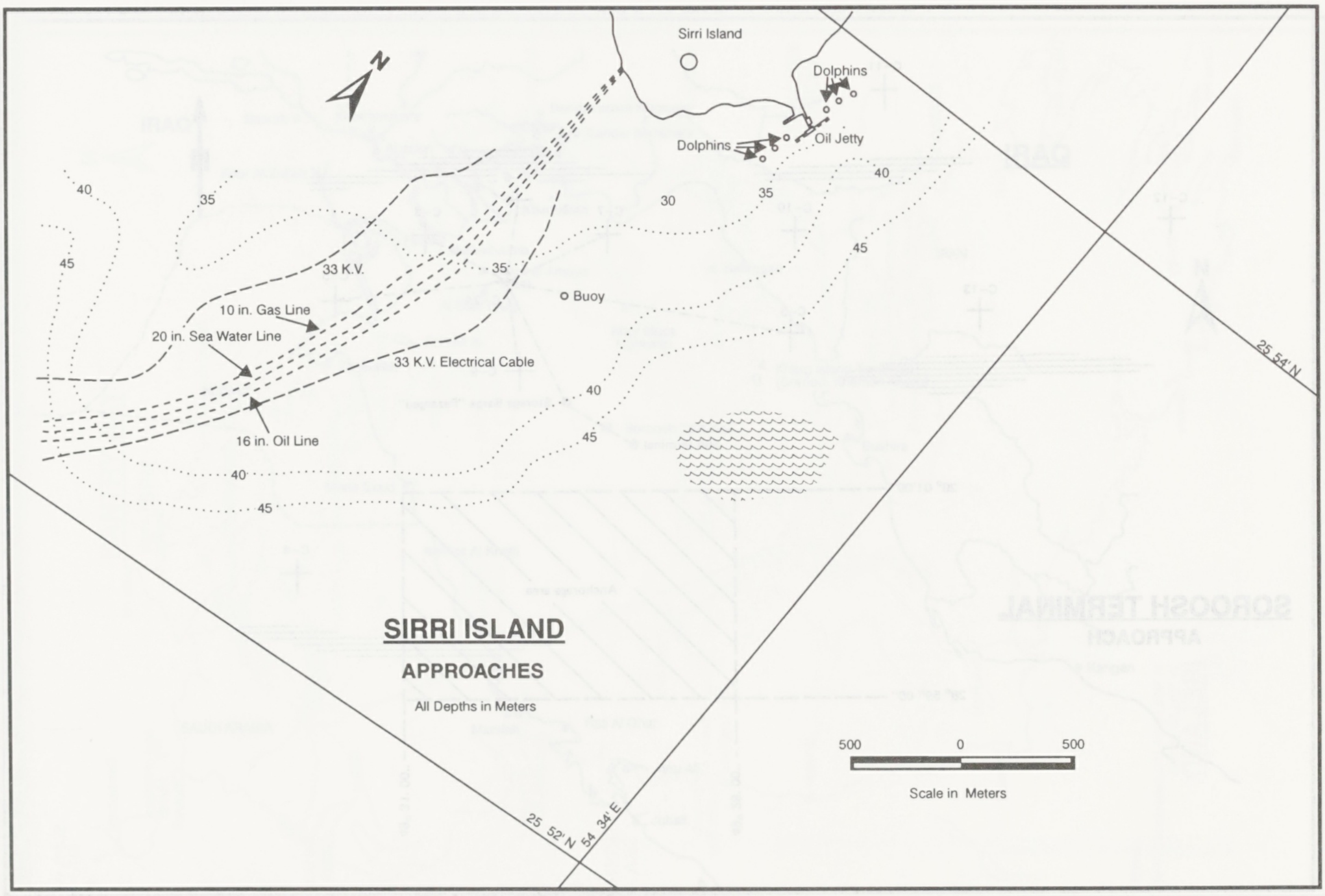
LAVAN ISLAND



LAVAN ISLAND

DEPTHS IN FEET

N
0
100
200
300
400
500
FEET
SCALE
TO THE SHORE
26° 47' 10''
53° 20' 25''
M1
M2
M3
M4
B1
B2
B3
B4
Catwalk
1 x 16'' Naphtha Arm
2 x 16'' Crude Arms
1 x 8'' Bunker Arm
Control Towers
4 x 16'' Crude Loading Arms
1 x 12'' Bunker
60 ft.
65 ft. 6 in.
65 ft. 8 in.
65 ft. 11 in.
66 ft. 2 in.
66 ft. 5 in.
65 ft. 5 in.
65 ft. 3 in.
69 ft. 4 in.
69 ft. 4 in.
70 ft. 4 in
69 ft. 10 in.
69 ft. 10 in.
70 ft.
75 ft.



SIRRI ISLAND

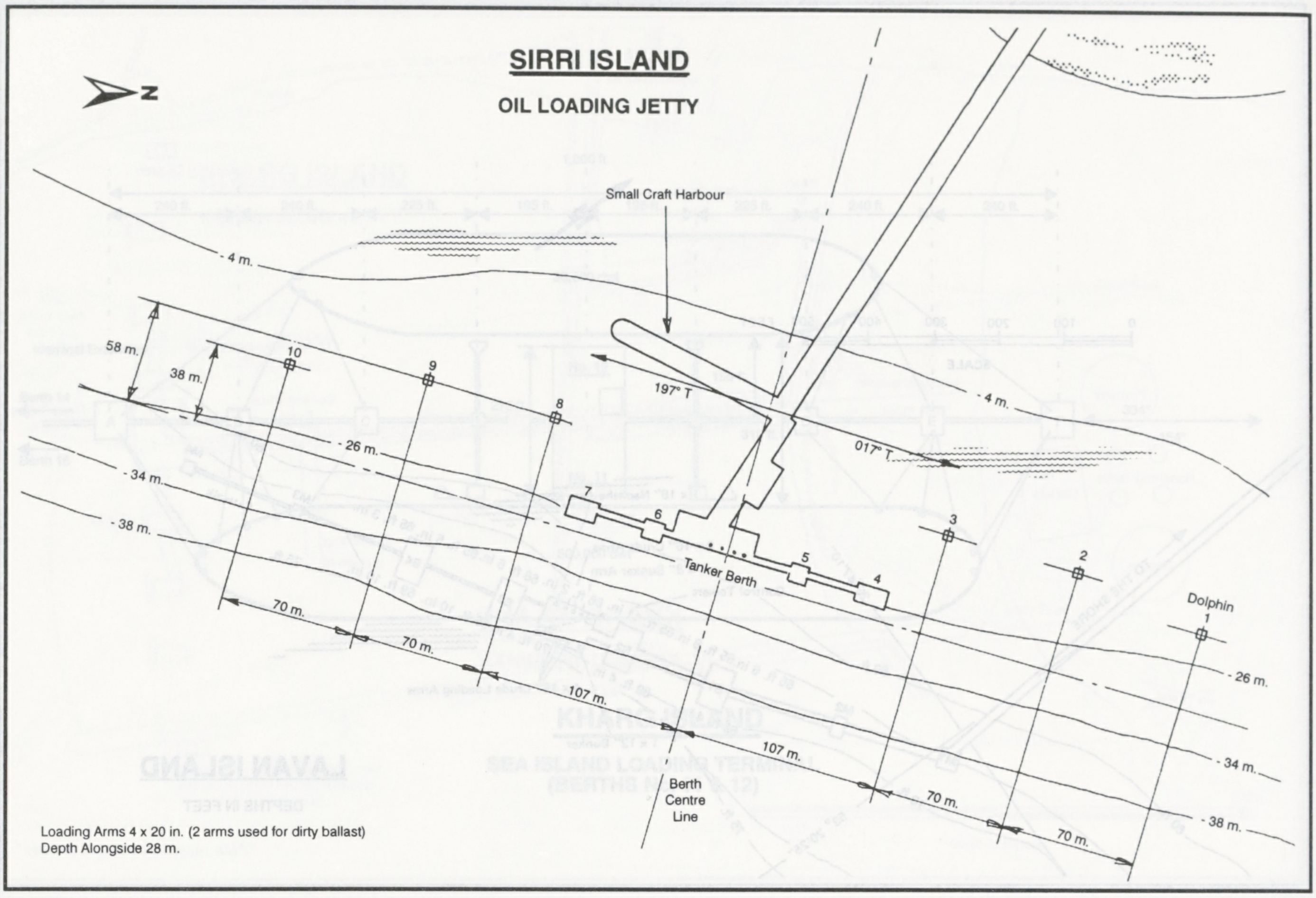
APPROACHES

All Depths in Meters

N
Sirri Island
Dolphins
Dolphins
Oil Jetty
Buoy
33 K.V.
10 in. Gas Line
20 in. Sea Water Line
33 K.V. Electrical Cable
16 in. Oil Line
30
35
40
45
25 54' N
25 52' N
54 34' E
500
0
500
Scale in Meters

SIRRI ISLAND

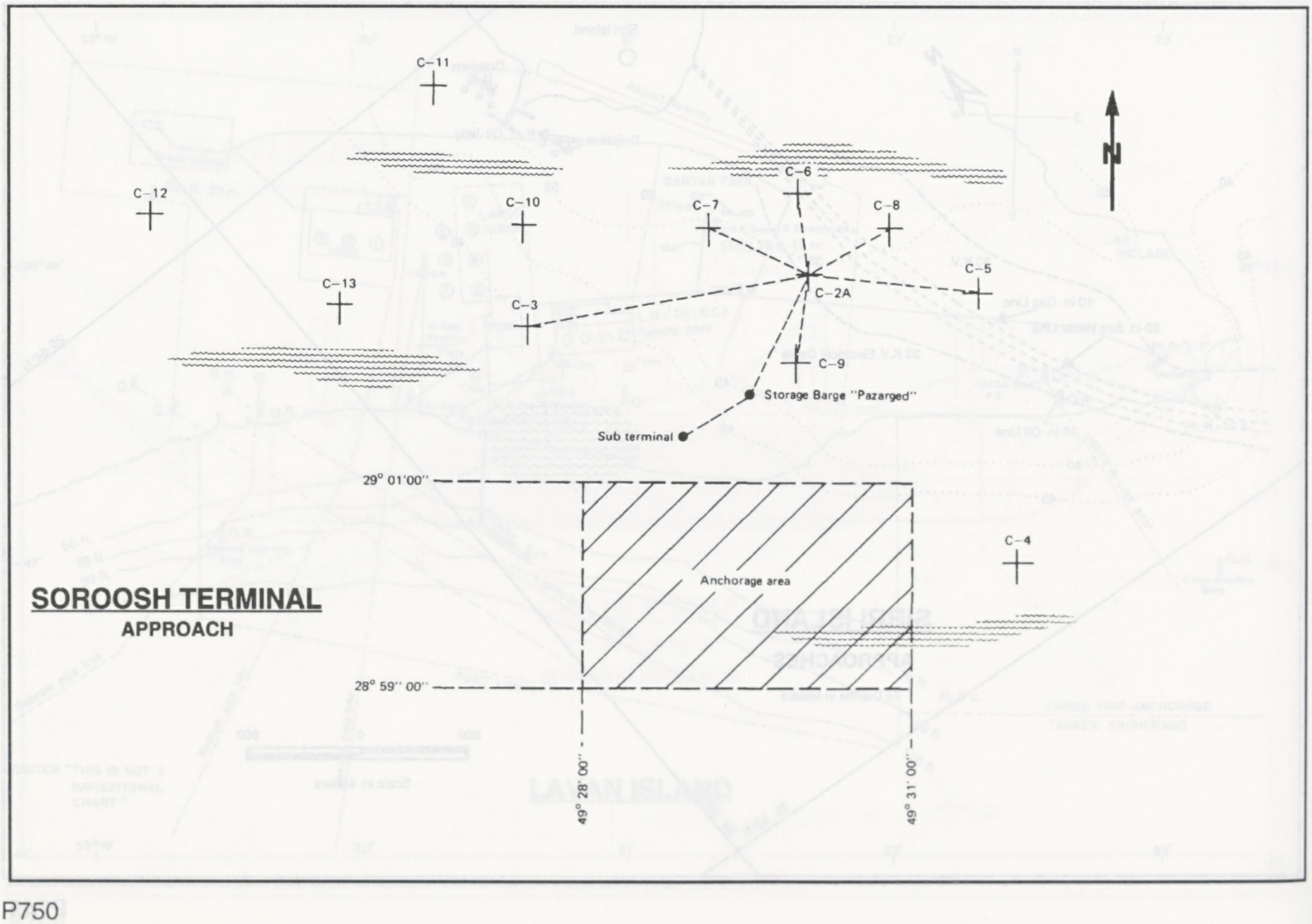
OIL LOADING JETTY

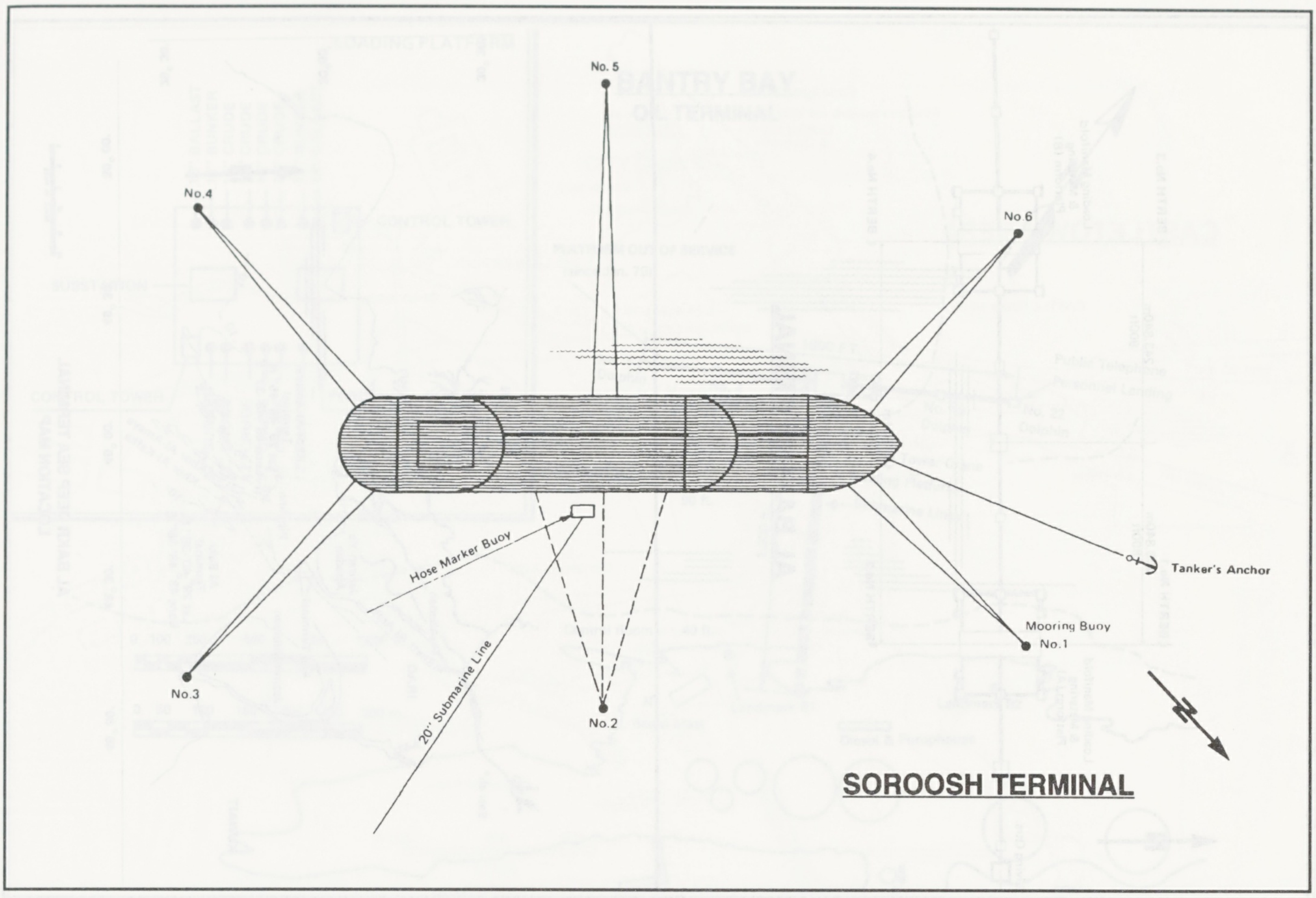

N
Small Craft Harbour
- 4 m.
58 m.
38 m.
10
9
8
197° T
- 26 m.
- 34 m.
- 38 m.
- 4 m.
017° T
7
6
5
4
3
2
Dolphin
1
Tanker Berth
70 m.
70 m.
107 m.
107 m.
70 m.
70 m.
- 26 m.
- 34 m.
- 38 m.
Berth
Centre
Line

Loading Arms 4 x 20 in. (2 arms used for dirty ballast)
Depth Alongside 28 m.

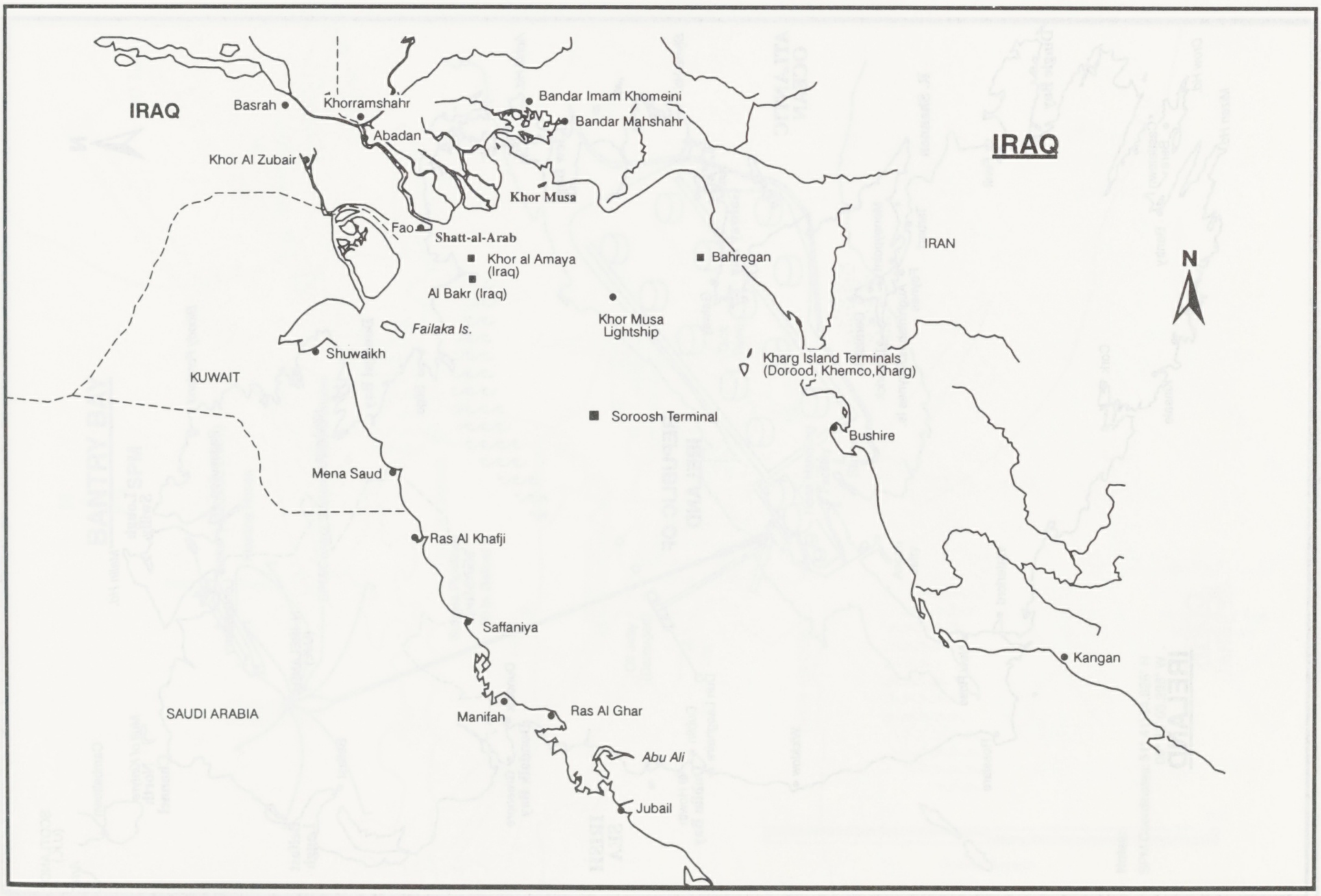
SOROOSH TERMINAL

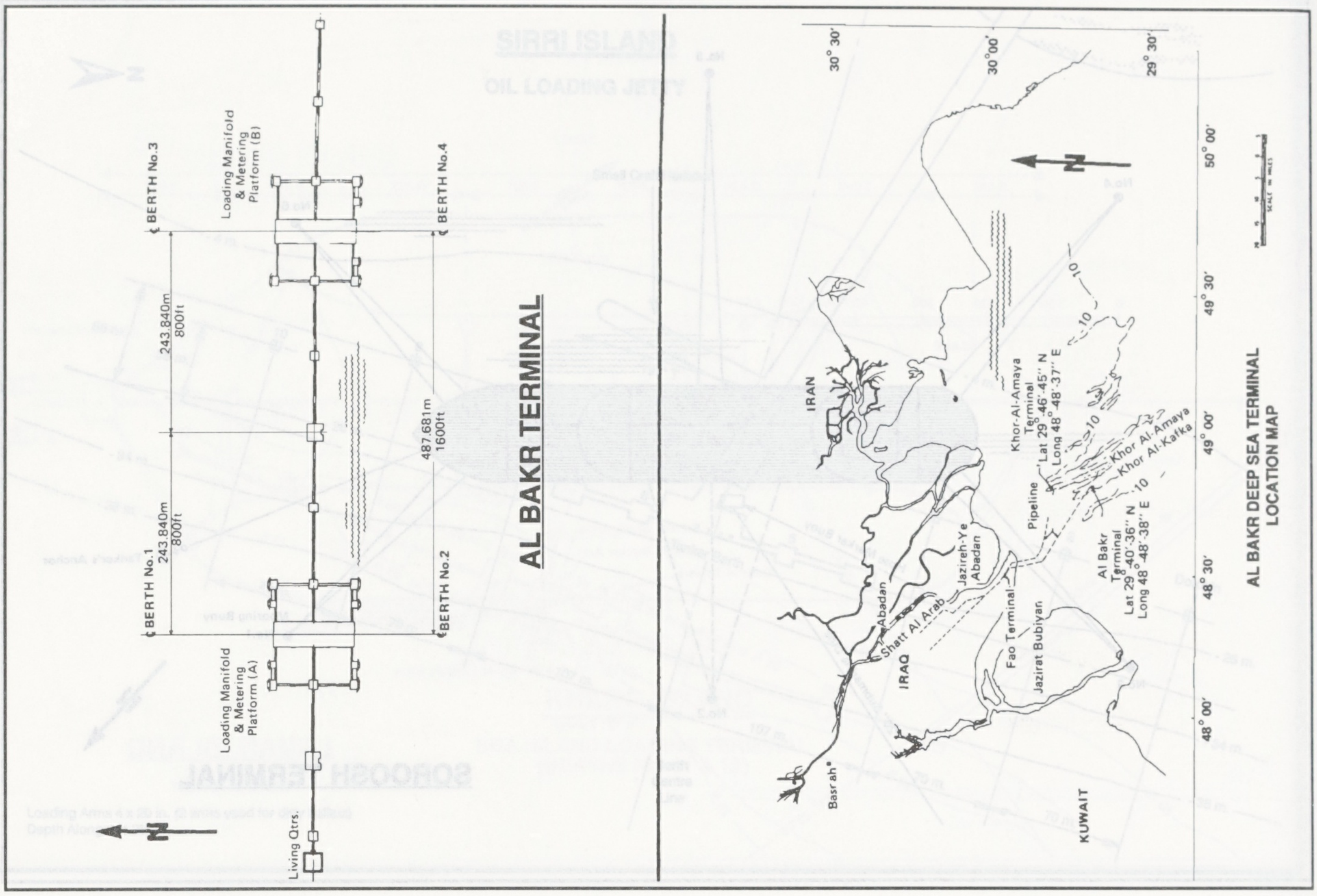
APPROACH

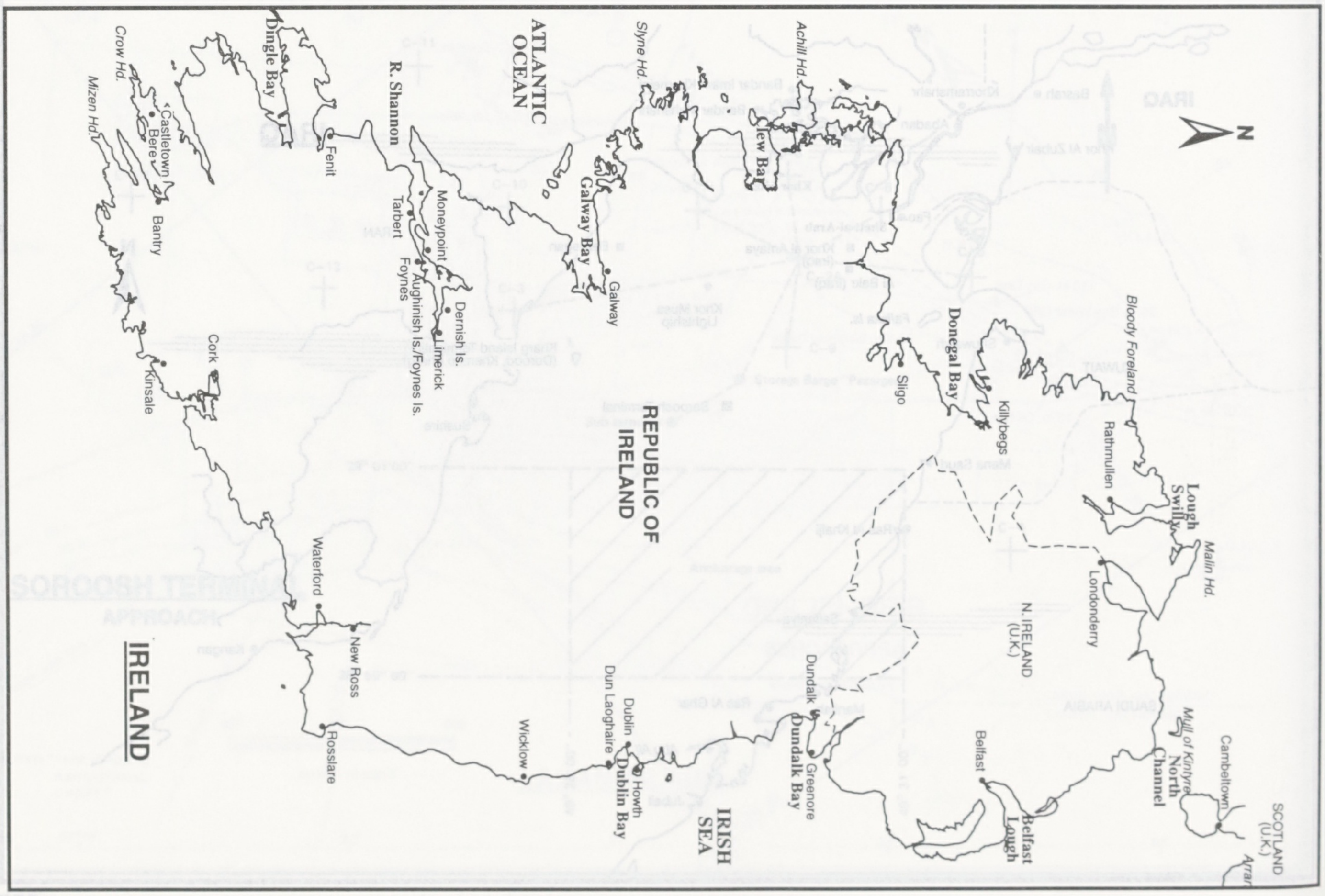

N
C-11
C-12
C-10
C-7
C-6
C-8
C-5
C-2A
C-13
C-3
C-9
Storage Barge "Pazarged"
Sub terminal
29° 01'00"
28° 59" 00"
Anchorage area
C-4
49° 28' 00"
49° 31' 00"

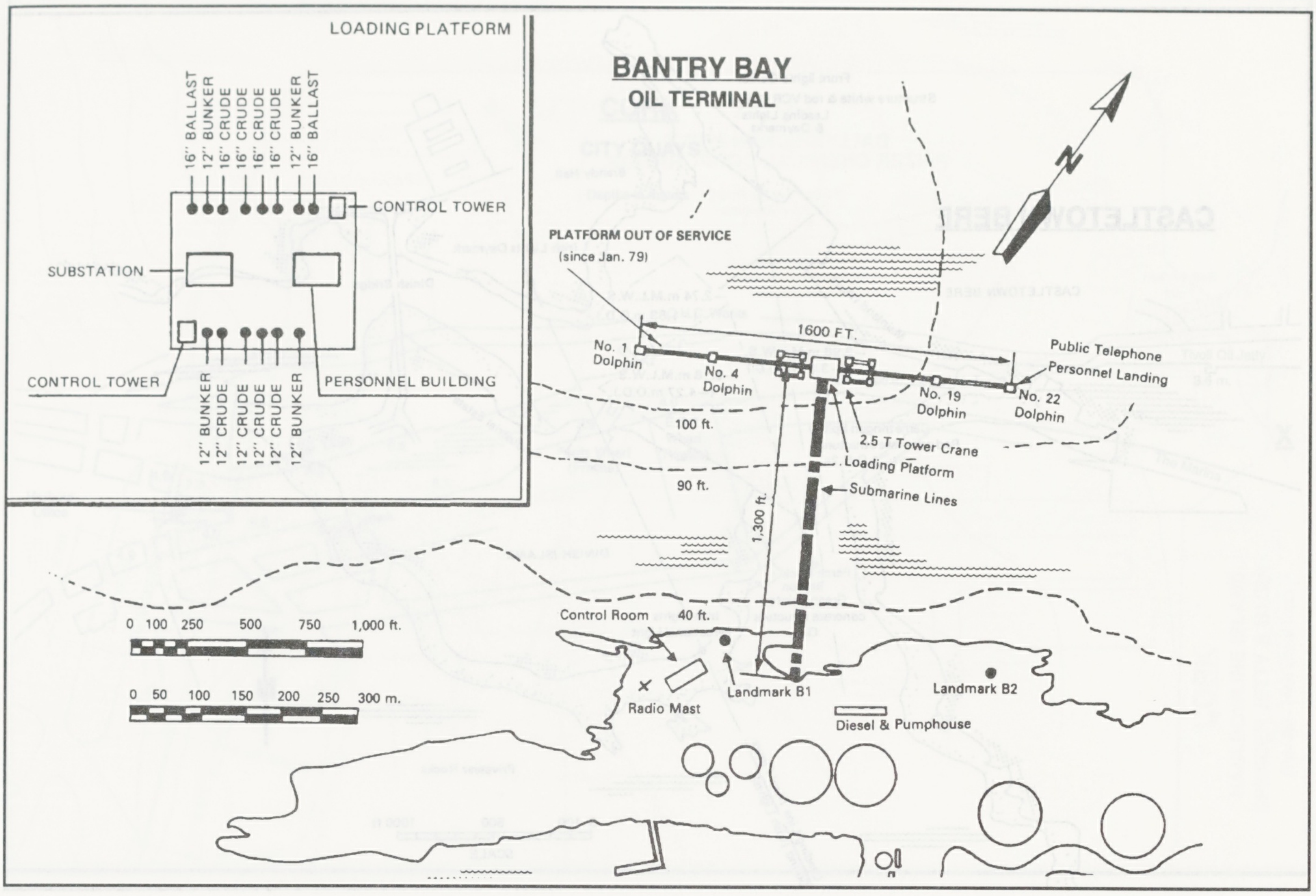

No. 5
No.4
No 6
Hose Marker Buoy
20" Submarine Line
Tanker's Anchor
Mooring Buoy
No.1
No.3
No.2

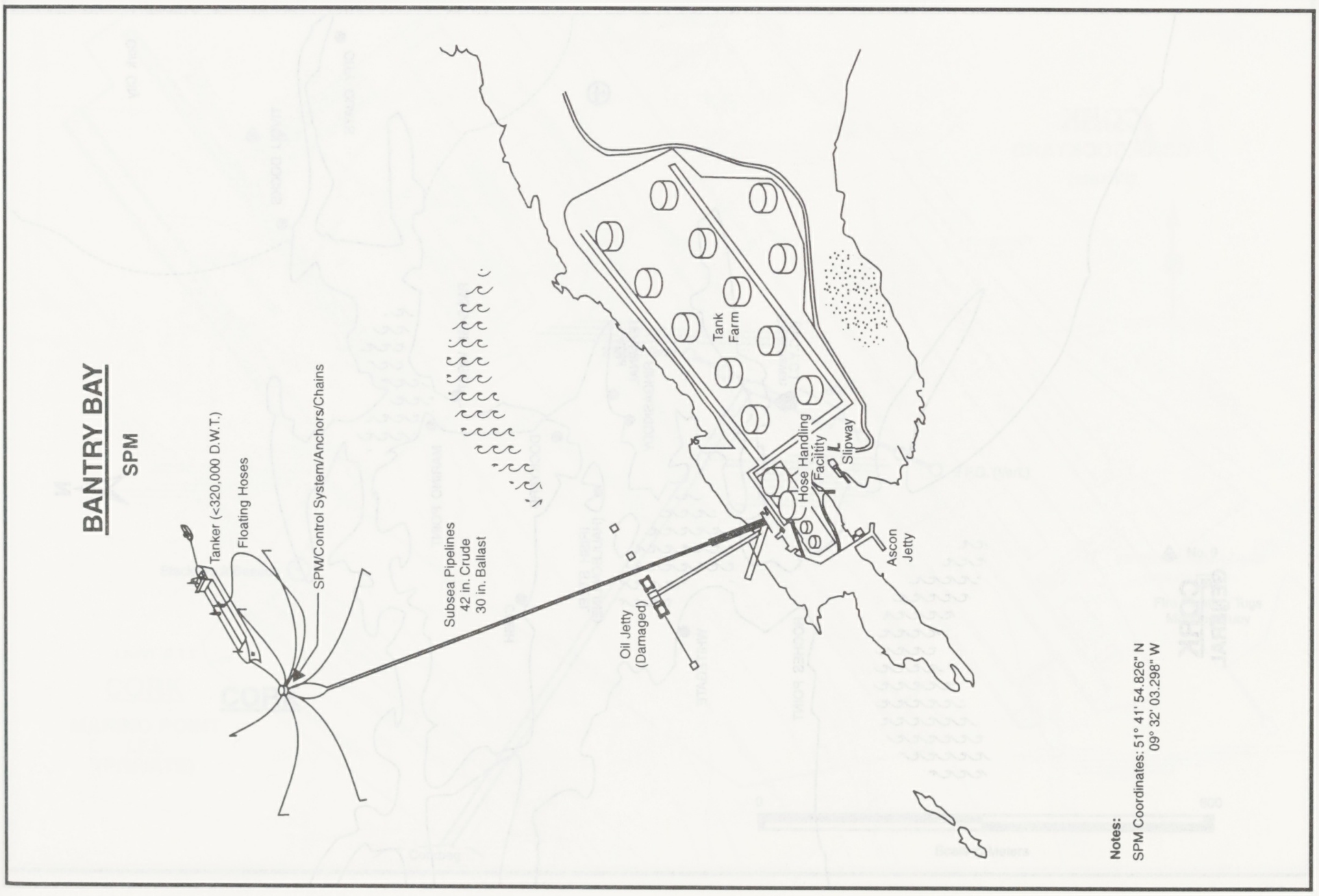
SOROOSH TERMINAL


IRAQ
Basrah
Khorramshahr
Abadan
Bandar Imam Khomeini
Bandar Mahshahr
Khor Al Zubair
Khor Musa
Fao
Shatt-al-Arab
Khor al Amaya (Iraq)
Al Bakr (Iraq)
Bahregan
IRAQ
IRAN
N
Failaka Is.
Khor Musa Lightship
Shuwaikh
Kharg Island Terminals (Dorood, Khemco,Kharg)
KUWAIT
Soroosh Terminal
Bushire
Mena Saud
Ras Al Khafji
Saffaniya
Kangan
SAUDI ARABIA
Manifah
Ras Al Ghar
Abu Ali
Jubail

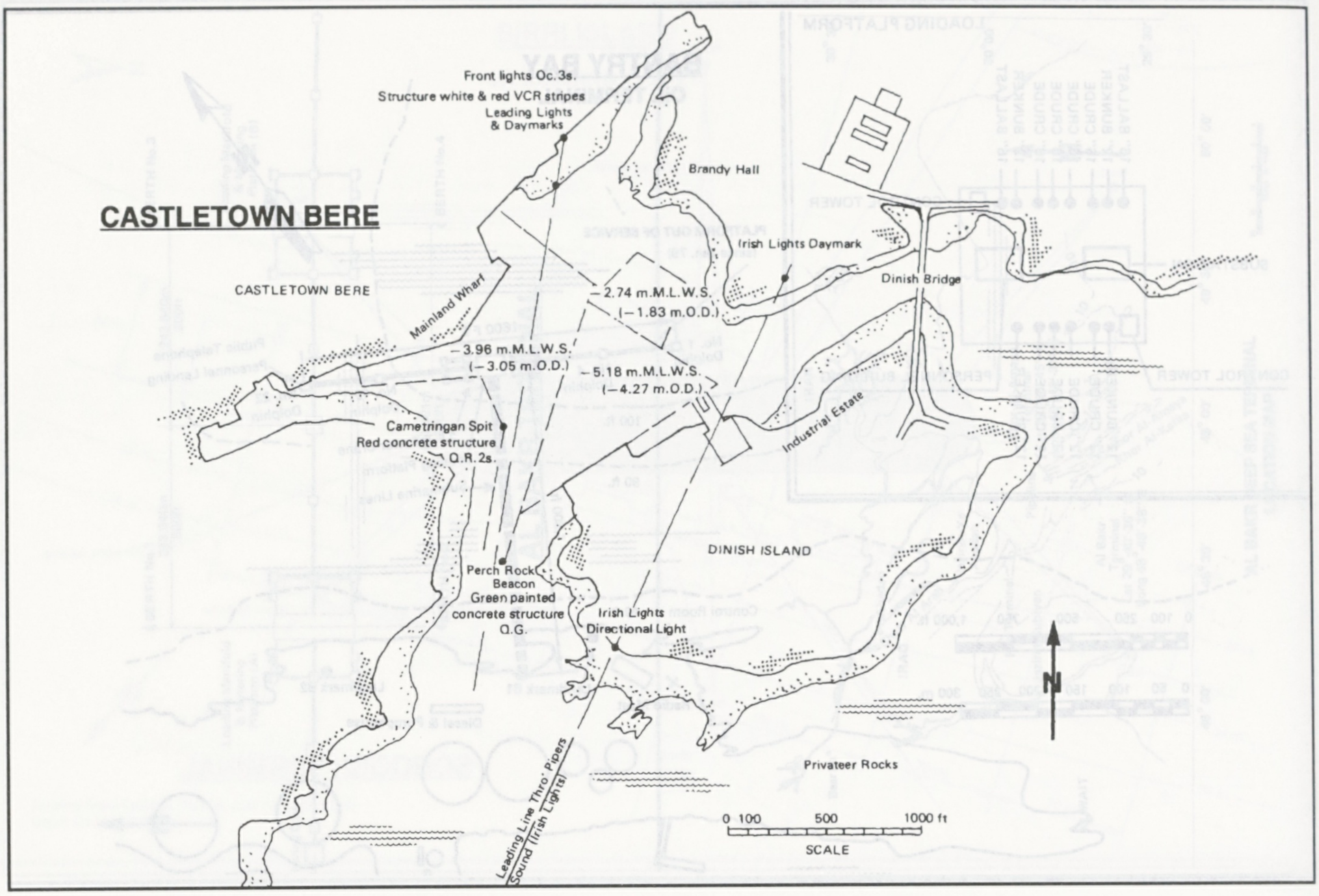

AL BAKR TERMINAL
BERTH No.1
BERTH No.2
BERTH No.3
BERTH No.4
Loading Manifold & Metering Platform (A)
Loading Manifold & Metering Platform (B)
243.840m 800ft
243.840m 800ft
487.681m 1600ft
Living Qtrs
N
AL BAKR DEEP SEA TERMINAL LOCATION MAP
IRAN
IRAQ
KUWAIT
Basrah
Abadan
Shatt Al Arab
Jazireh-Ye Abadan
Fao Terminal
Jazirat Bubiyan
Pipeline
Khor-Al-Amaya Terminal Lat 29°46'45" N Long 48°48'37" E
Al Bakr Terminal Lat 29°40'36" N Long 48°48'38" E
Khor Al-Amaya
Khor Al-Kafka
10
30° 30'
30° 00'
29° 30'
48° 00'
48° 30'
49° 00'
49° 30'
50° 00'


IRELAND
REPUBLIC OF IRELAND
N. IRELAND (U.K.)
SCOTLAND (U.K.)
ATLANTIC OCEAN
IRISH SEA
N
Arran
Cambeltown
Mull of Kintyre
North Channel
Belfast
Belfast Lough
Malin Hd.
Londonderry
Lough Swilly
Rathmullen
Bloody Foreland
Killybegs
Donegal Bay
Sligo
Achill Hd.
New Bay
Slyne Hd.
Galway Bay
Galway
Dernish Is.
Limerick
Aughinish Is./Foynes Is.
Moneypoint
Tarbert
Foynes
R. Shannon
Fenit
Dingle Bay
Crow Hd.
Mizen Hd.
Castletown Bere
Bantry
Cork
Kinsale
Waterford
New Ross
Rosslare
Wicklow
Dun Laoghaire
Dublin
Dublin Bay
Howth
Dundalk
Dundalk Bay
Greenore


BANTRY BAY
OIL TERMINAL
LOADING PLATFORM
16" BALLAST
12" BUNKER
16" CRUDE
16" CRUDE
16" CRUDE
16" CRUDE
12" BUNKER
16" BALLAST
CONTROL TOWER
SUBSTATION
CONTROL TOWER
PERSONNEL BUILDING
12" BUNKER
12" CRUDE
12" CRUDE
12" CRUDE
12" CRUDE
12" BUNKER
PLATFORM OUT OF SERVICE
(since Jan. 79)
N
1600 FT.
No. 1 Dolphin
No. 4 Dolphin
No. 19 Dolphin
No. 22 Dolphin
Public Telephone
Personnel Landing
100 ft.
90 ft.
2.5 T Tower Crane
Loading Platform
Submarine Lines
1,300 ft.
40 ft.
Control Room
Radio Mast
Landmark B1
Landmark B2
Diesel & Pumphouse
0 100 250 500 750 1,000 ft.
0 50 100 150 200 250 300 m.

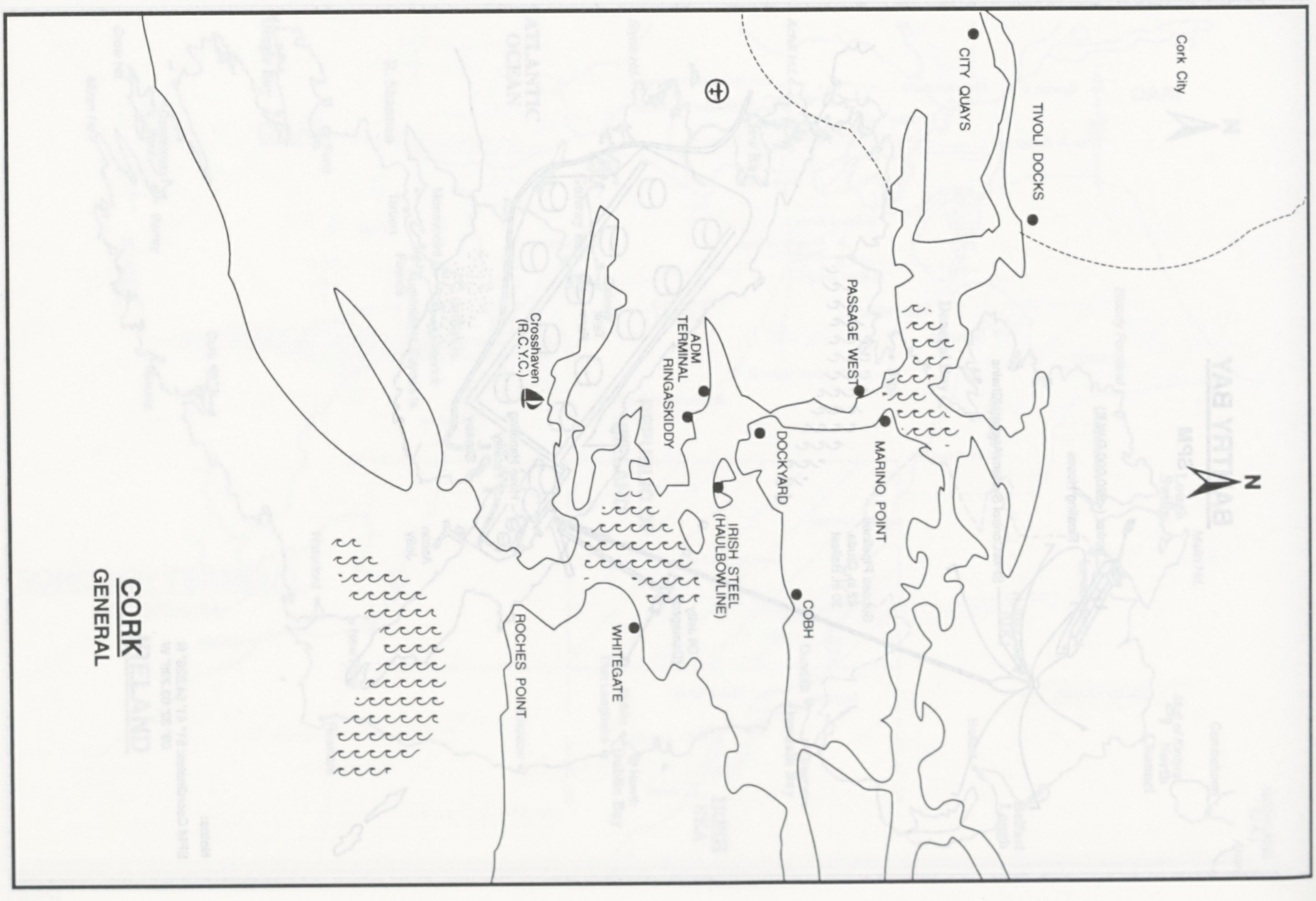

BANTRY BAY
SPM
Tanker (<320,000 D.W.T.)
Floating Hoses
SPM/Control System/Anchors/Chains
Subsea Pipelines
42 in. Crude
30 in. Ballast
Oil Jetty
(Damaged)
Tank Farm
Hose Handling Facility
Slipway
Ascon Jetty

Notes:
SPM Coordinates: 51° 41' 54.826" N
09° 32' 03.298" W



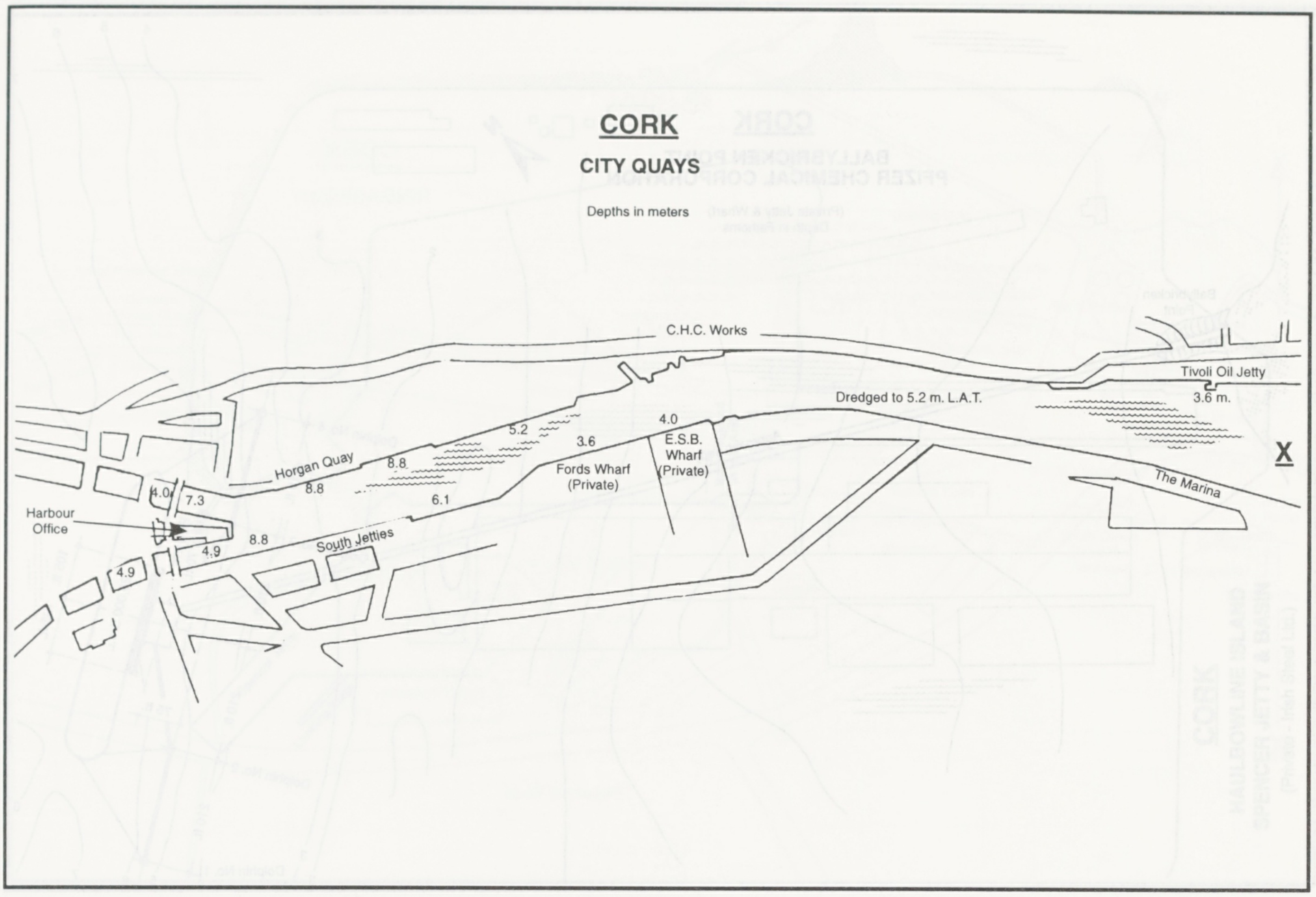
CASTLETOWN BERE

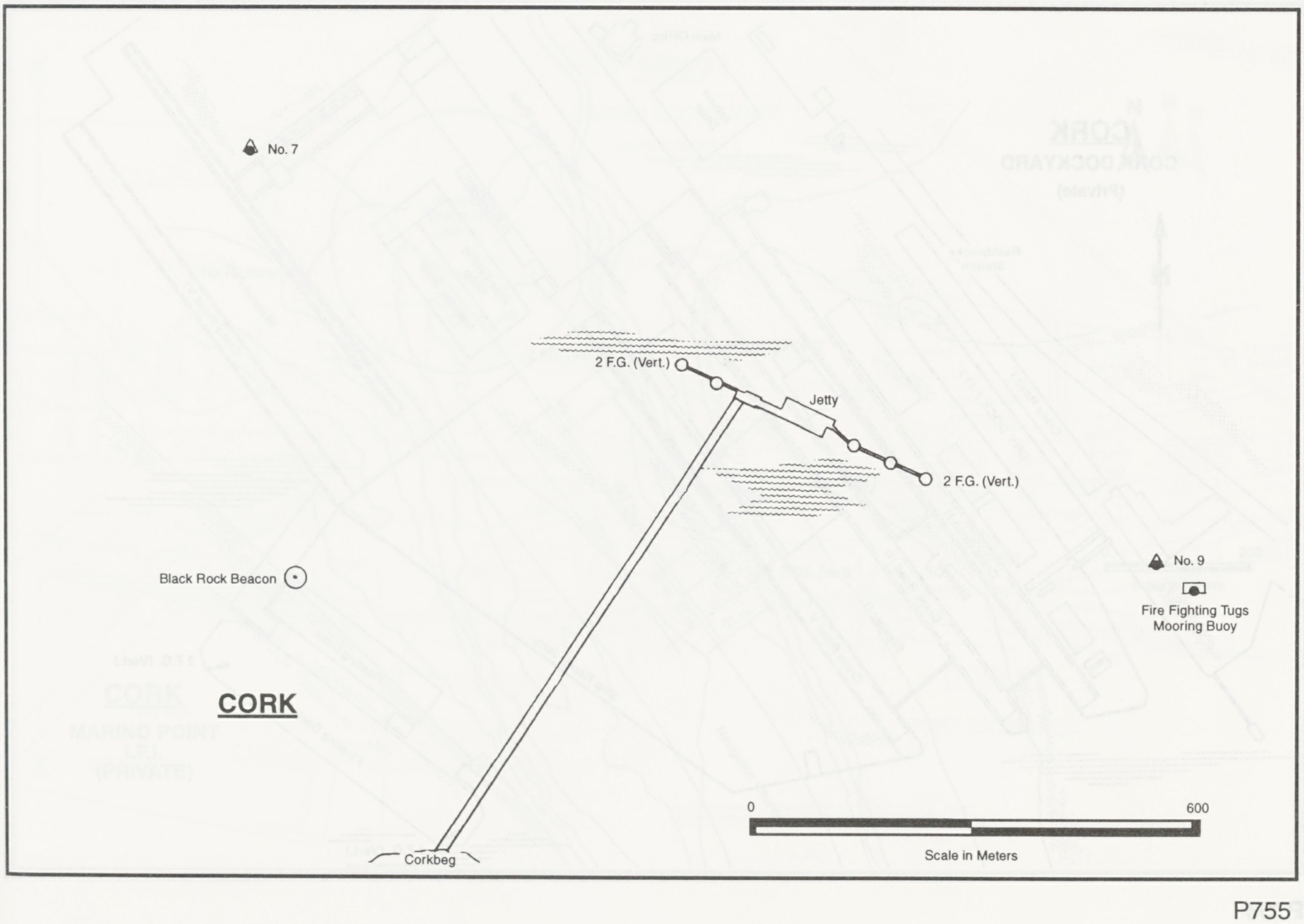
Front lights Oc.3s.
Structure white & red VCR stripes
Leading Lights & Daymarks
Brandy Hall
CASTLETOWN BERE
Mainland Wharf
Irish Lights Daymark
Dinish Bridge
−2.74 m.M.L.W.S. (−1.83 m.O.D.)
−3.96 m.M.L.W.S. (−3.05 m.O.D.)
−5.18 m.M.L.W.S. (−4.27 m.O.D.)
Cametringan Spit
Red concrete structure
Q.R.2s.
Industrial Estate
DINISH ISLAND
Perch Rock Beacon
Green painted concrete structure
Q.G.
Irish Lights Directional Light
Leading Line Thro' Pipers Sound (Irish Lights)
Privateer Rocks
N
0 100 500 1000 ft
SCALE

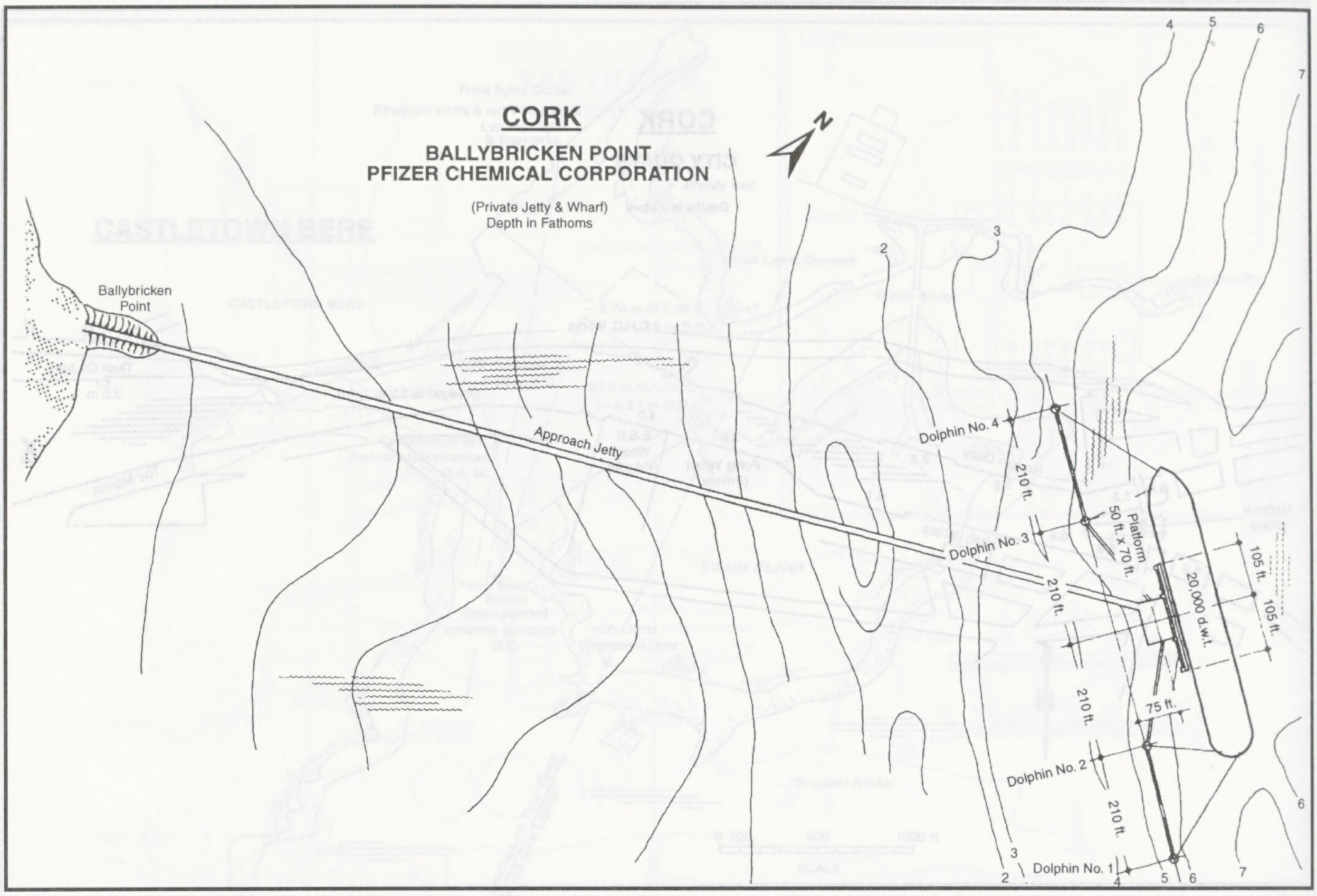


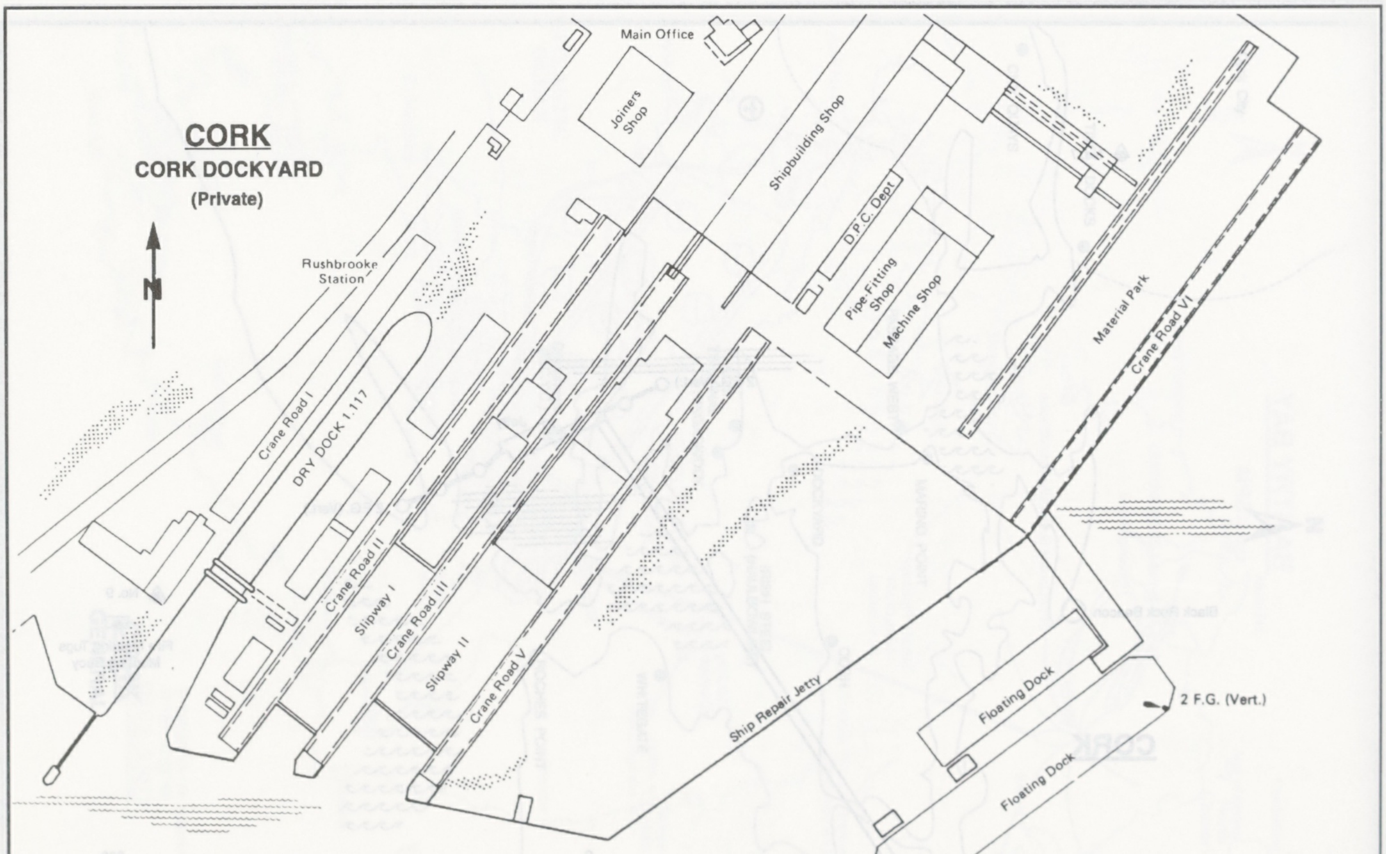
CORK
GENERAL

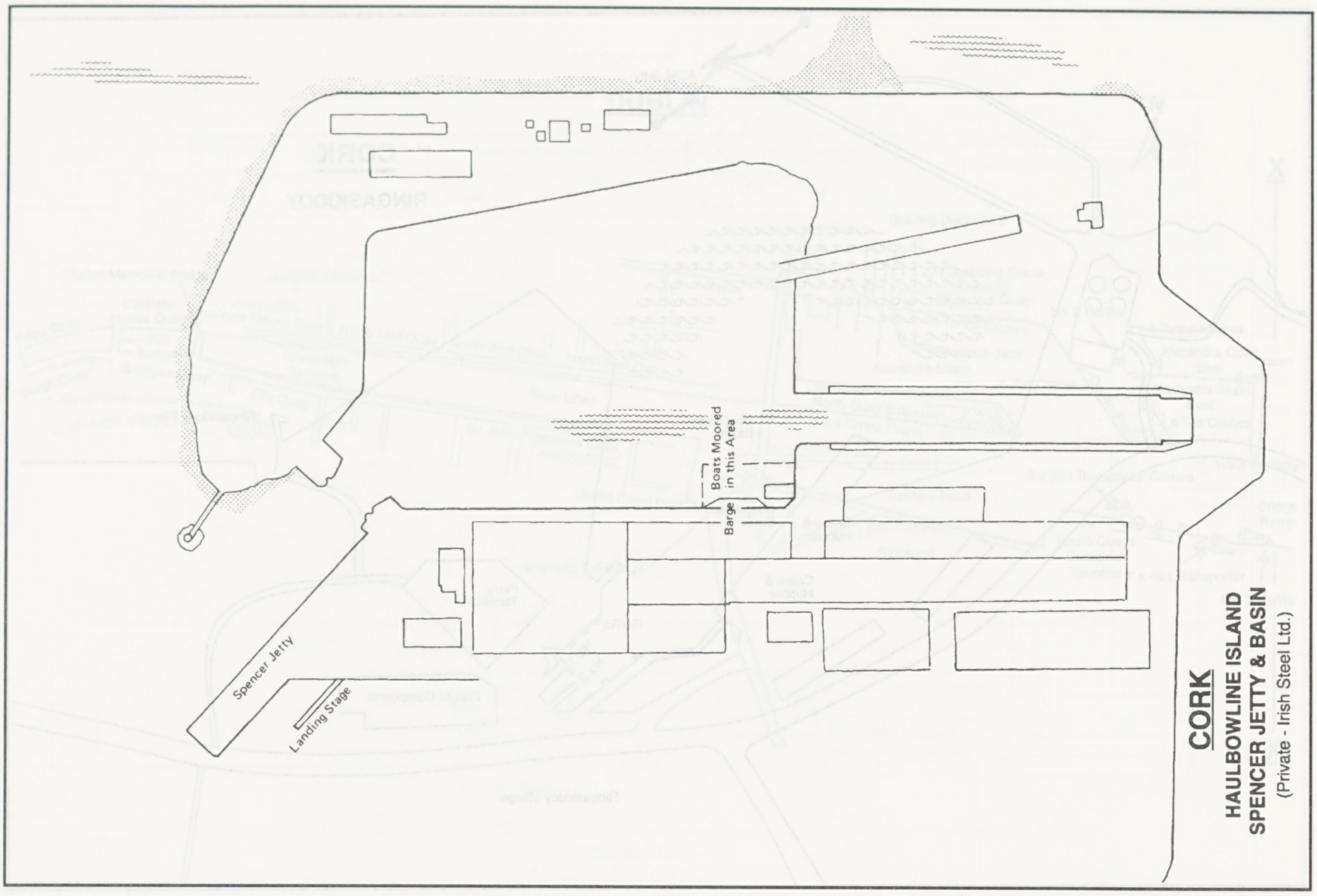
Cork City
CITY QUAYS
TIVOLI DOCKS
PASSAGE WEST
MARINO POINT
ADM TERMINAL RINGASKIDDY
Crosshaven (R.C.Y.C.)
DOCKYARD
IRISH STEEL (HAULBOWLINE)
COBH
WHITEGATE
ROCHES POINT
N


CORK
CITY QUAYS
Depths in meters
C.H.C. Works
Tivoli Oil Jetty
3.6 m.
Dredged to 5.2 m. L.A.T.
X
The Marina
4.0
E.S.B.
Wharf
(Private)
3.6
Fords Wharf
(Private)
5.2
8.8
6.1
Horgan Quay
8.8
4.0
7.3
Harbour
Office
8.8
South Jetties
4.9
4.9


No. 7
2 F.G. (Vert.)
Jetty
2 F.G. (Vert.)
Black Rock Beacon
No. 9
Fire Fighting Tugs
Mooring Buoy
CORK
0
600
Scale in Meters
Corkbeg

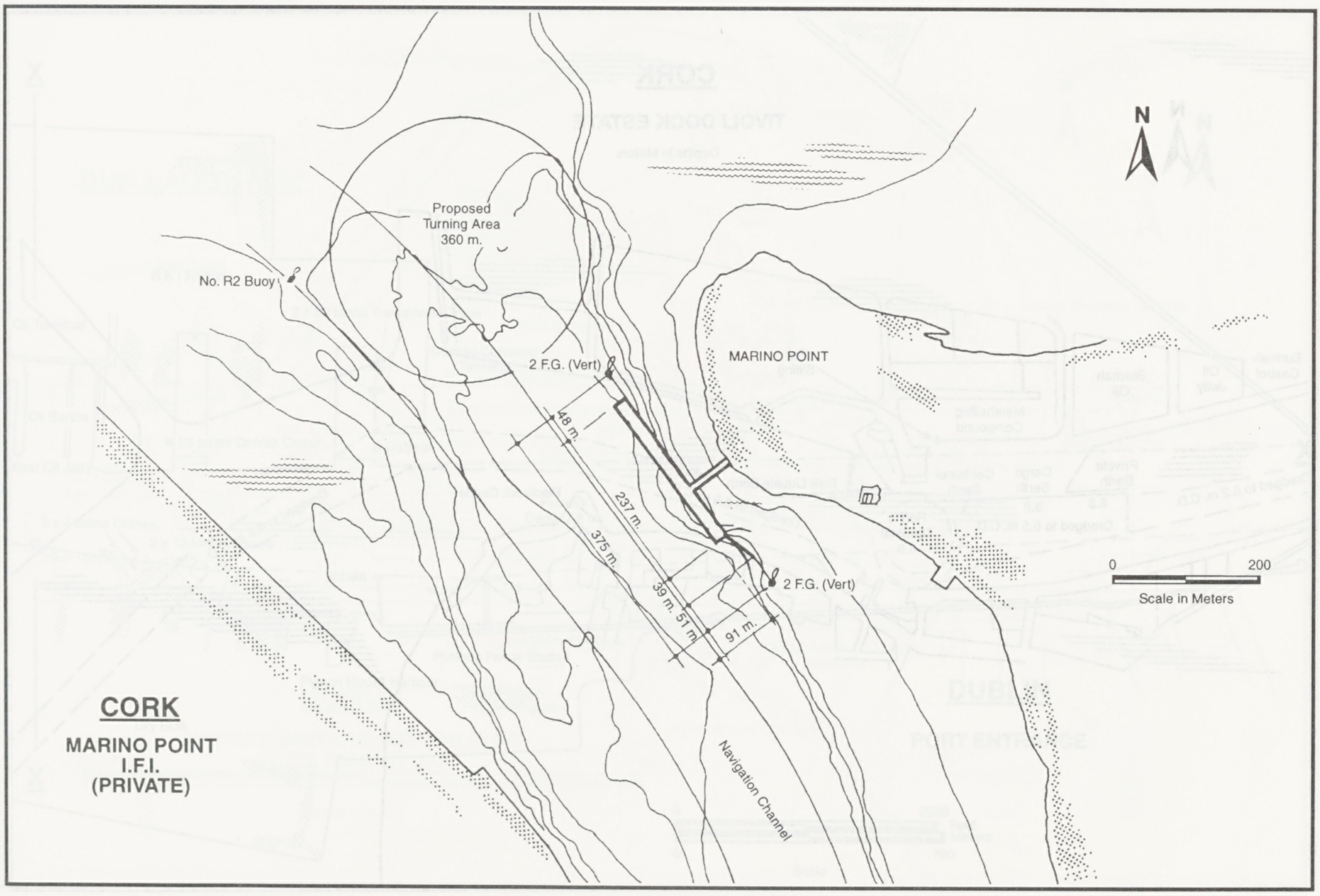

CORK
BALLYBRICKEN POINT
PFIZER CHEMICAL CORPORATION
(Private Jetty & Wharf)
Depth in Fathoms
N
Ballybricken Point
Approach Jetty
Dolphin No. 4
Dolphin No. 3
Dolphin No. 2
Dolphin No. 1
210 ft.
210 ft.
210 ft.
210 ft.
Platform 50 ft. x 70 ft.
20,000 d.w.t.
105 ft.
105 ft.
75 ft.
2
3
4
5
6
7


CORK
CORK DOCKYARD
(Private)
N
Main Office
Joiners Shop
Shipbuilding Shop
D.P.C. Dept
Pipe Fitting Shop
Machine Shop
Material Park
Crane Road VI
Rushbrooke Station
Crane Road I
DRY DOCK 1.117
Crane Road II
Slipway I
Crane Road III
Slipway II
Crane Road V
Ship Repair Jetty
Floating Dock
Floating Dock
2 F.G. (Vert.)
2 F.G. (Vert.)


Boats Moored in this Area
Barge
Spencer Jetty
Landing Stage

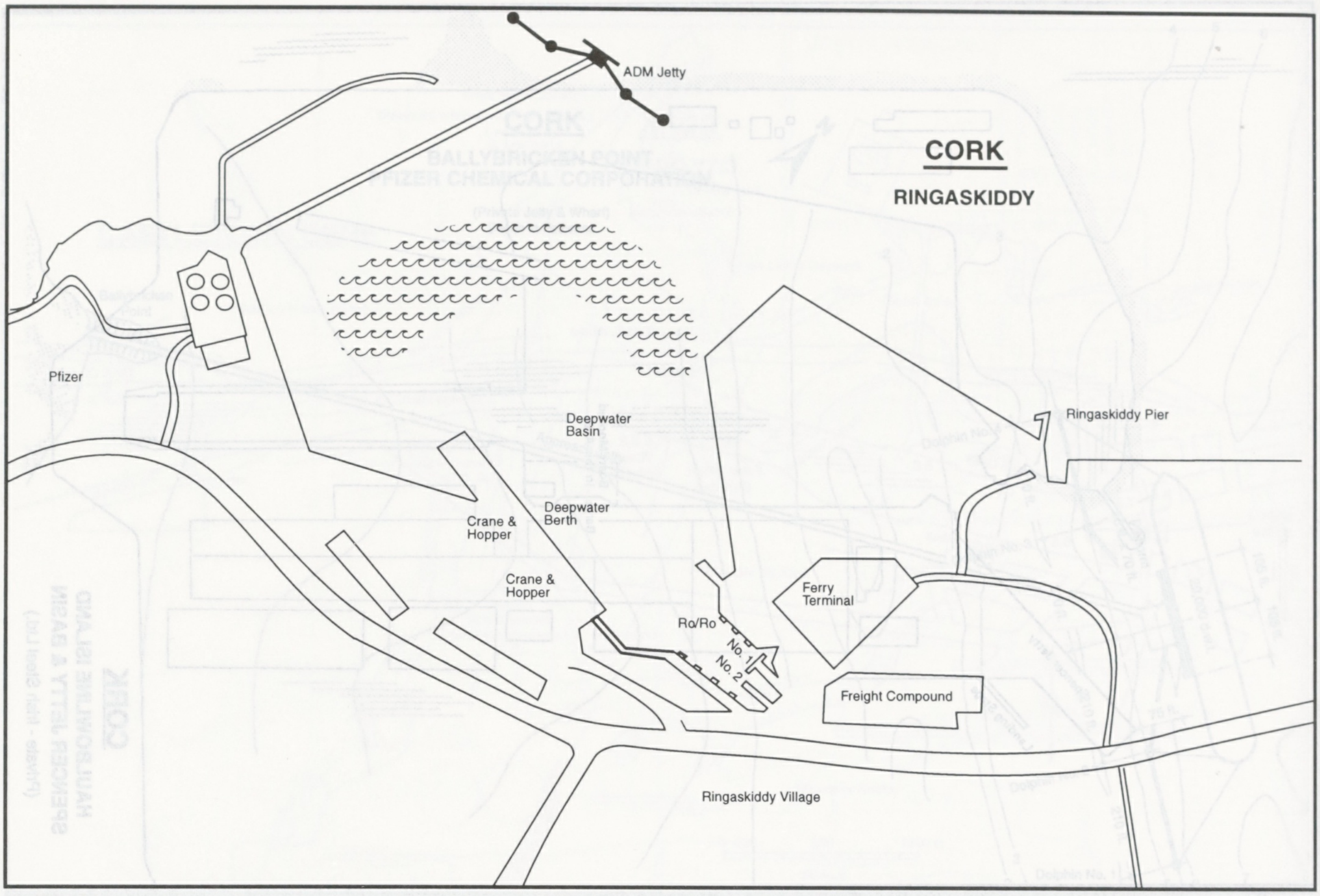
CORK

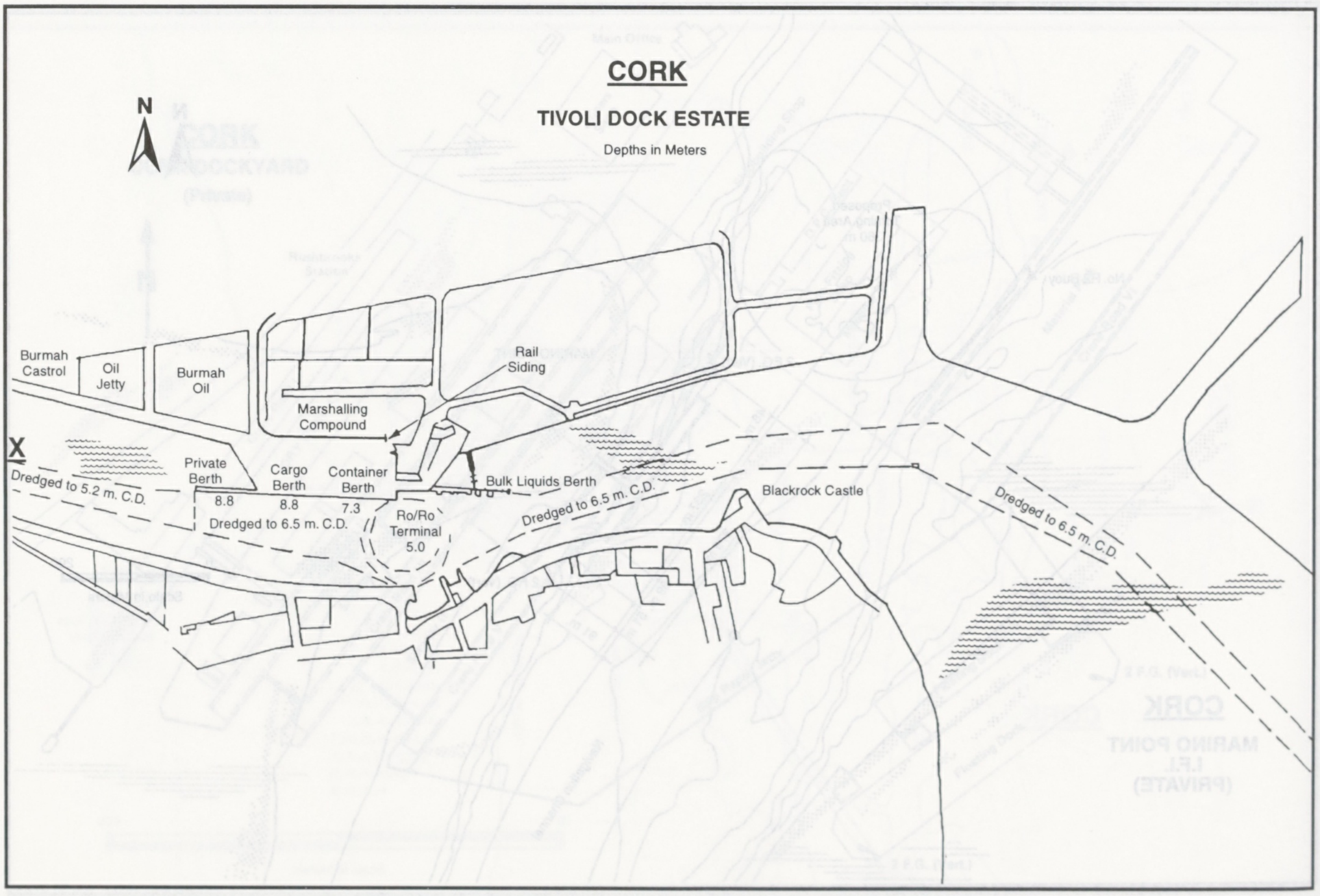
HAULBOWLINE ISLAND
SPENCER JETTY & BASIN
(Private - Irish Steel Ltd.)

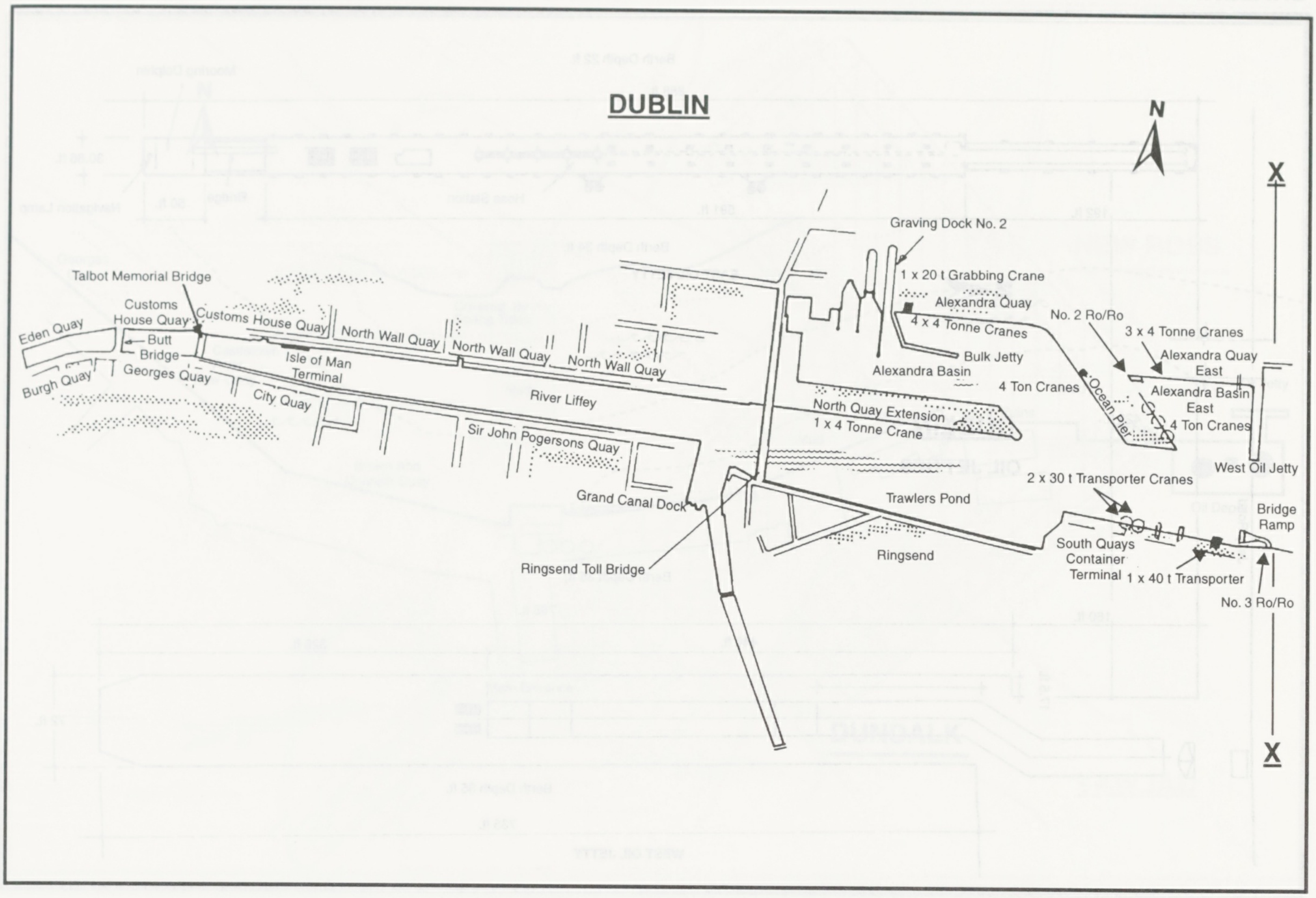

N
Proposed Turning Area 360 m.
No. R2 Buoy
2 F.G. (Vert)
MARINO POINT
48 m.
237 m.
375 m.
39 m.
51 m.
91 m.
2 F.G. (Vert)
Navigation Channel
0
200
Scale in Meters

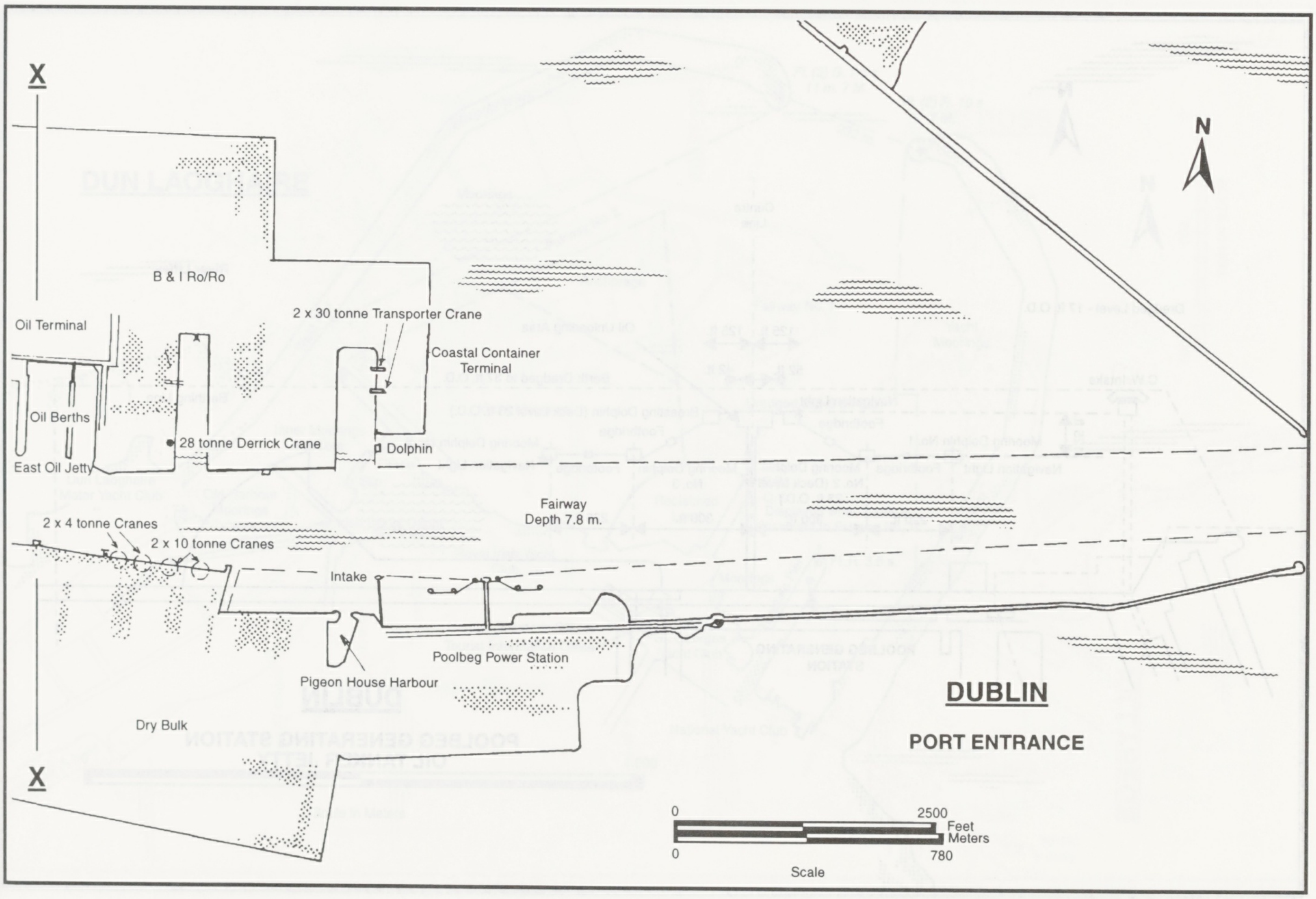
CORK

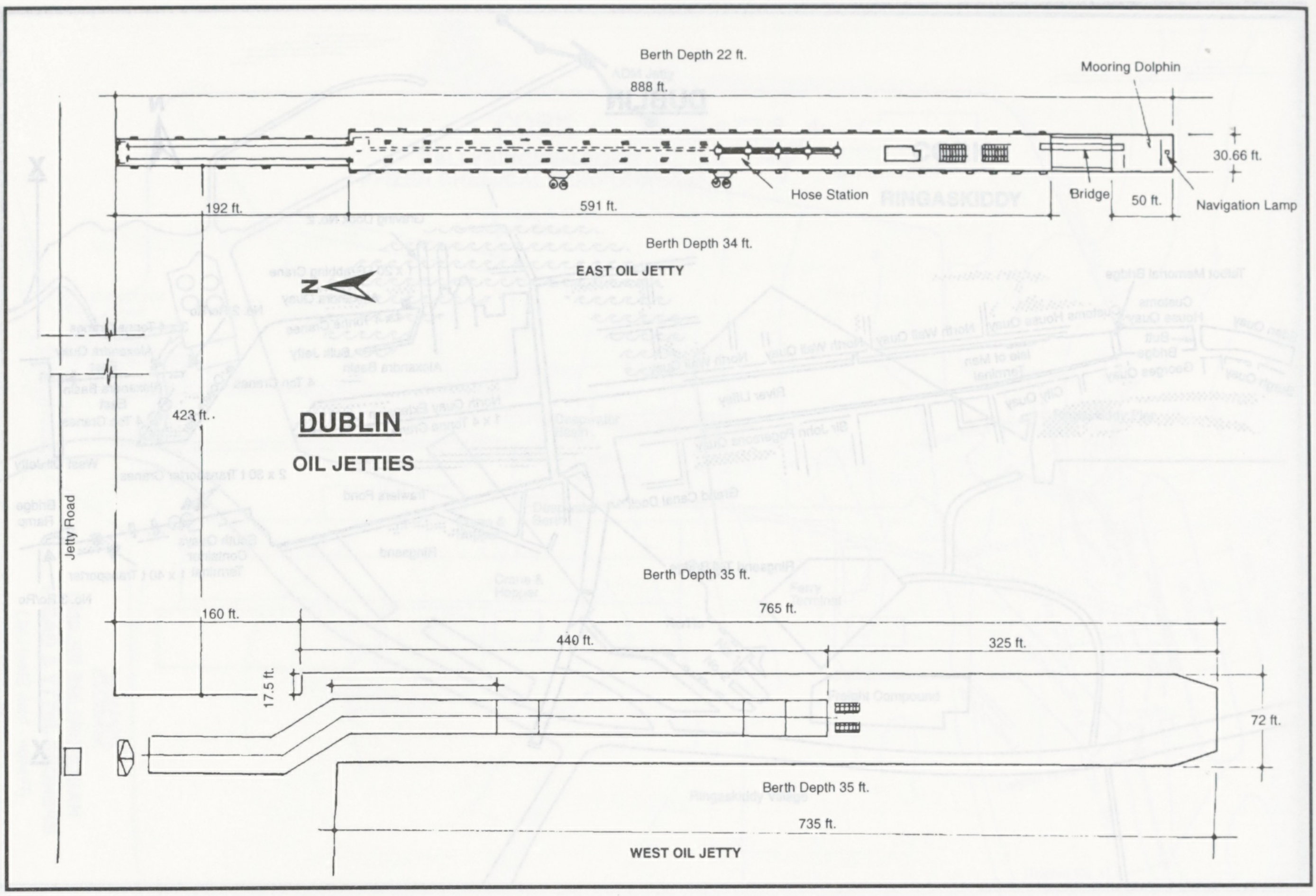
MARINO POINT
I.F.I.
(PRIVATE)

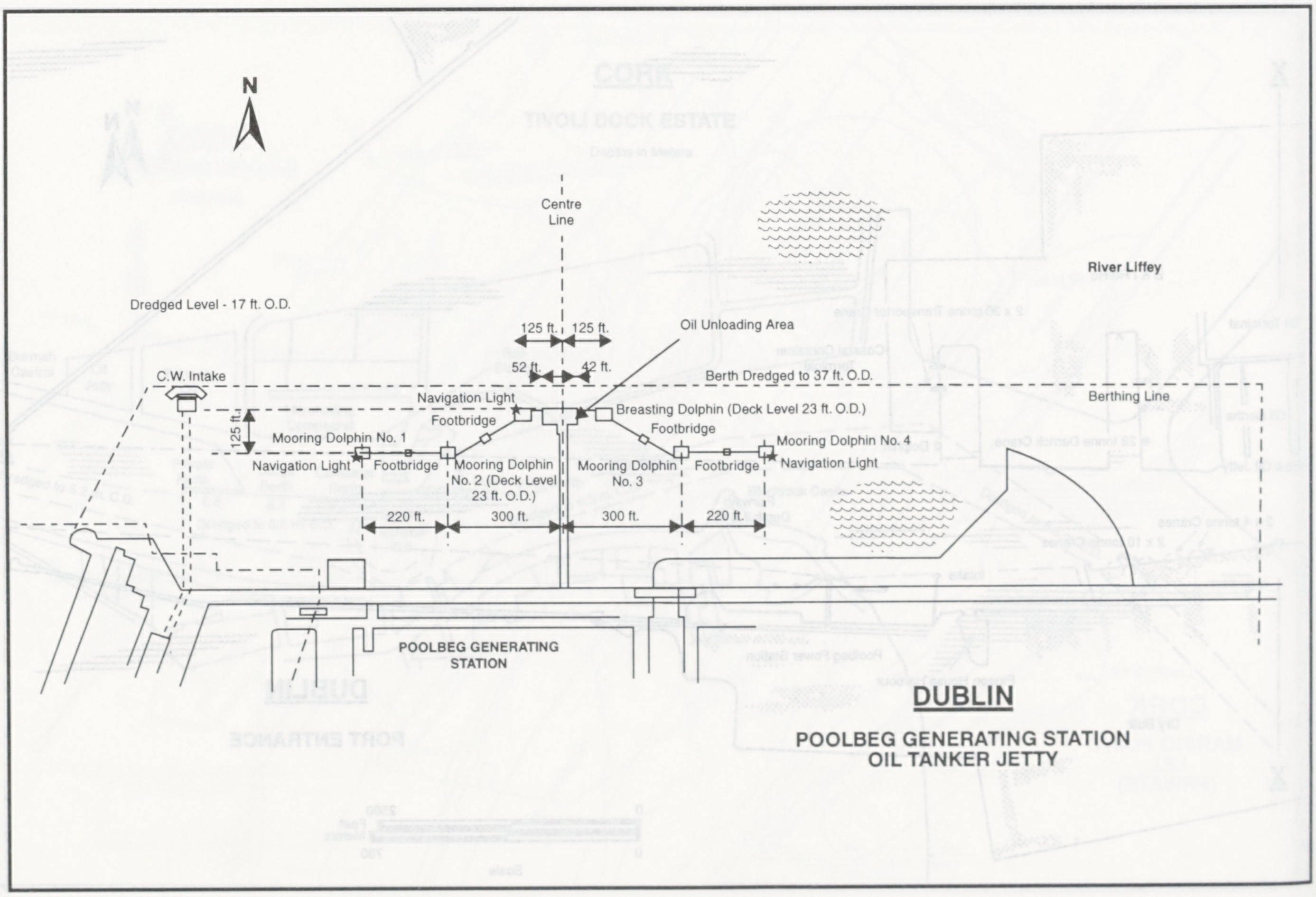

CORK
RINGASKIDDY
ADM Jetty
Pfizer
Deepwater Basin
Deepwater Berth
Crane & Hopper
Crane & Hopper
Ro/Ro
No. 1
No. 2
Ferry Terminal
Freight Compound
Ringaskiddy Pier
Ringaskiddy Village

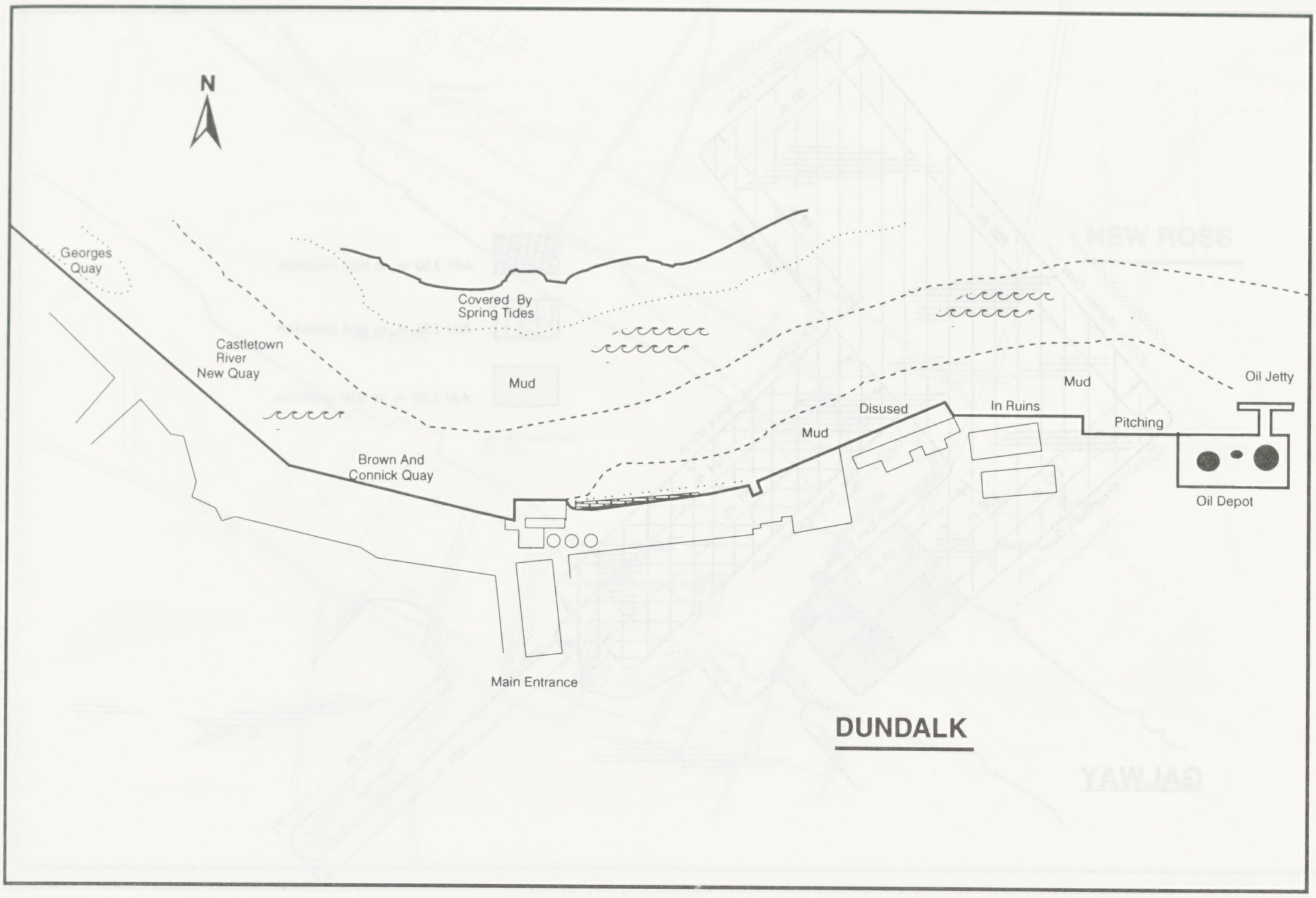

CORK
TIVOLI DOCK ESTATE
Depths in Meters
N
Burmah Castrol
Oil Jetty
Burmah Oil
Marshalling Compound
Rail Siding
X
Dredged to 5.2 m. C.D.
Private Berth
8.8
Cargo Berth
8.8
Container Berth
7.3
Dredged to 6.5 m. C.D.
Ro/Ro Terminal
5.0
Bulk Liquids Berth
Dredged to 6.5 m. C.D.
Blackrock Castle
Dredged to 6.5 m. C.D.

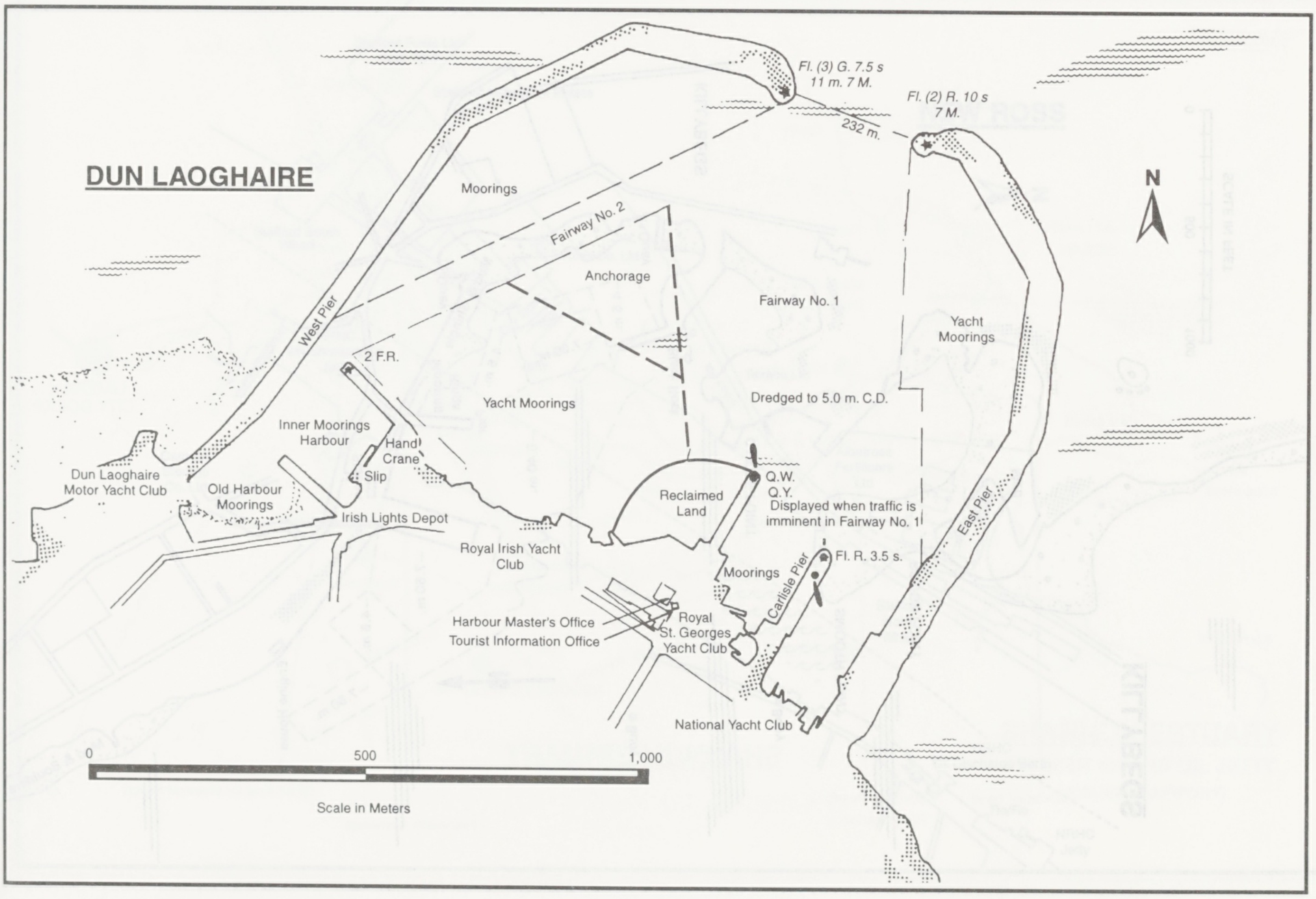

DUBLIN
N
X
X
Graving Dock No. 2
1 x 20 t Grabbing Crane
Alexandra Quay
4 x 4 Tonne Cranes
Bulk Jetty
Alexandra Basin
No. 2 Ro/Ro
3 x 4 Tonne Cranes
Alexandra Quay East
Alexandra Basin East
4 Ton Cranes
4 Ton Cranes
Ocean Pier
West Oil Jetty
Talbot Memorial Bridge
Customs House Quay
Customs House Quay
North Wall Quay
North Wall Quay
North Wall Quay
Eden Quay
Butt Bridge
Burgh Quay
Georges Quay
Isle of Man Terminal
City Quay
River Liffey
Sir John Pogersons Quay
North Quay Extension
1 x 4 Tonne Crane
Grand Canal Dock
Trawlers Pond
2 x 30 t Transporter Cranes
Bridge Ramp
Ringsend Toll Bridge
Ringsend
South Quays Container Terminal
1 x 40 t Transporter
No. 3 Ro/Ro

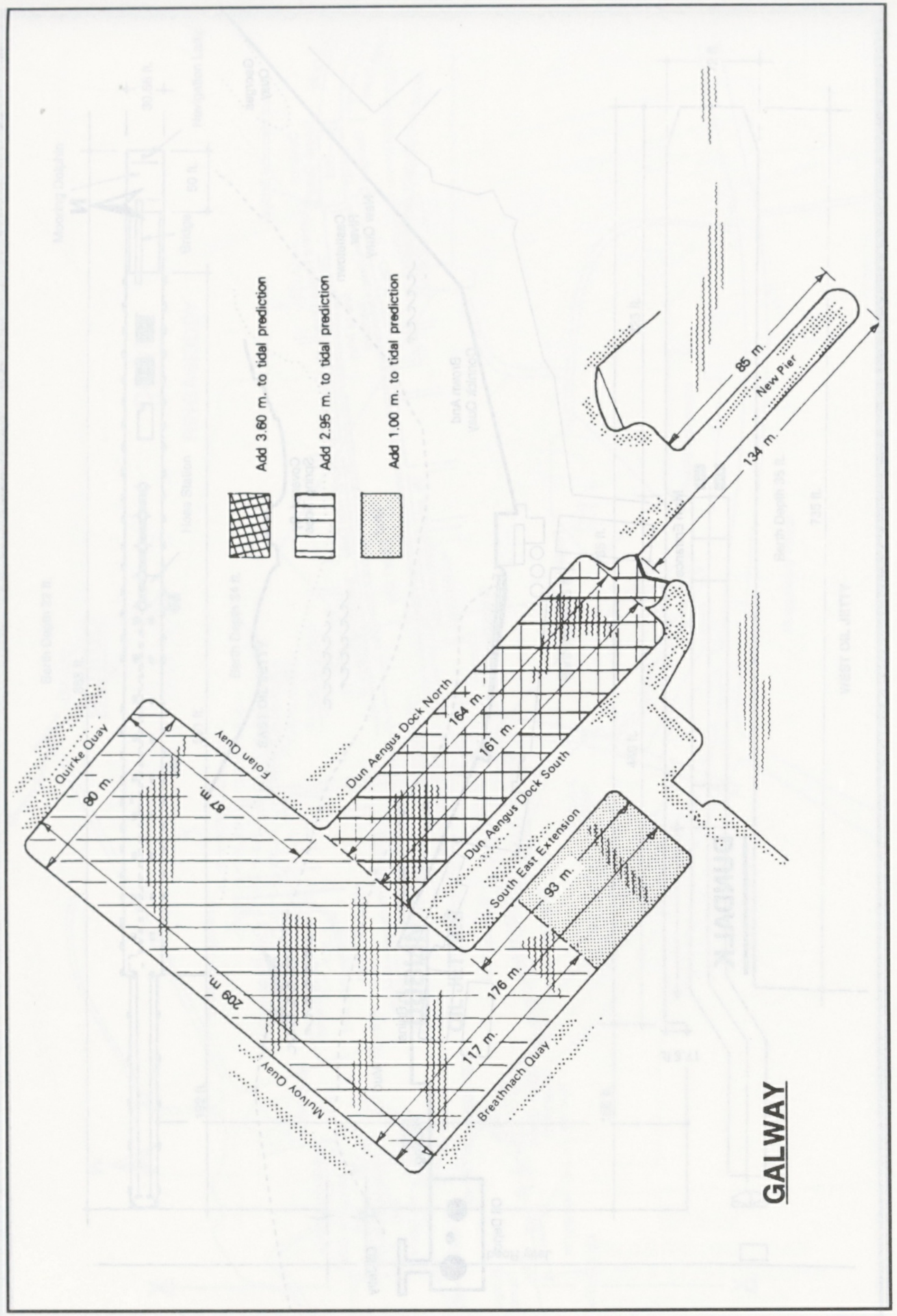

X
N
B & I Ro/Ro
Oil Terminal
2 x 30 tonne Transporter Crane
Coastal Container Terminal
Oil Berths
28 tonne Derrick Crane
Dolphin
East Oil Jetty
Fairway
Depth 7.8 m.
2 x 4 tonne Cranes
2 x 10 tonne Cranes
Intake
Poolbeg Power Station
Pigeon House Harbour
Dry Bulk
X
DUBLIN
PORT ENTRANCE
0
2500
Feet
Meters
0
780
Scale


Berth Depth 22 ft.
888 ft.
Mooring Dolphin
30.66 ft.
Hose Station
Bridge
50 ft.
Navigation Lamp
192 ft.
591 ft.
Berth Depth 34 ft.
EAST OIL JETTY
N
DUBLIN
OIL JETTIES
423 ft.
Jetty Road
X
Berth Depth 35 ft.
765 ft.
160 ft.
440 ft.
325 ft.
17.5 ft.
72 ft.
X
Berth Depth 35 ft.
735 ft.
WEST OIL JETTY


N
Centre Line
River Liffey
Dredged Level - 17 ft. O.D.
Oil Unloading Area
125 ft.
125 ft.
52 ft.
42 ft.
C.W. Intake
Berth Dredged to 37 ft. O.D.
Berthing Line
Navigation Light
Footbridge
125 ft.
Breasting Dolphin (Deck Level 23 ft. O.D.)
Footbridge
Mooring Dolphin No. 1
Mooring Dolphin No. 4
Navigation Light
Footbridge
Mooring Dolphin No. 2 (Deck Level 23 ft. O.D.)
Mooring Dolphin No. 3
Footbridge
Navigation Light
220 ft.
300 ft.
300 ft.
220 ft.
POOLBEG GENERATING STATION
DUBLIN
POOLBEG GENERATING STATION
OIL TANKER JETTY

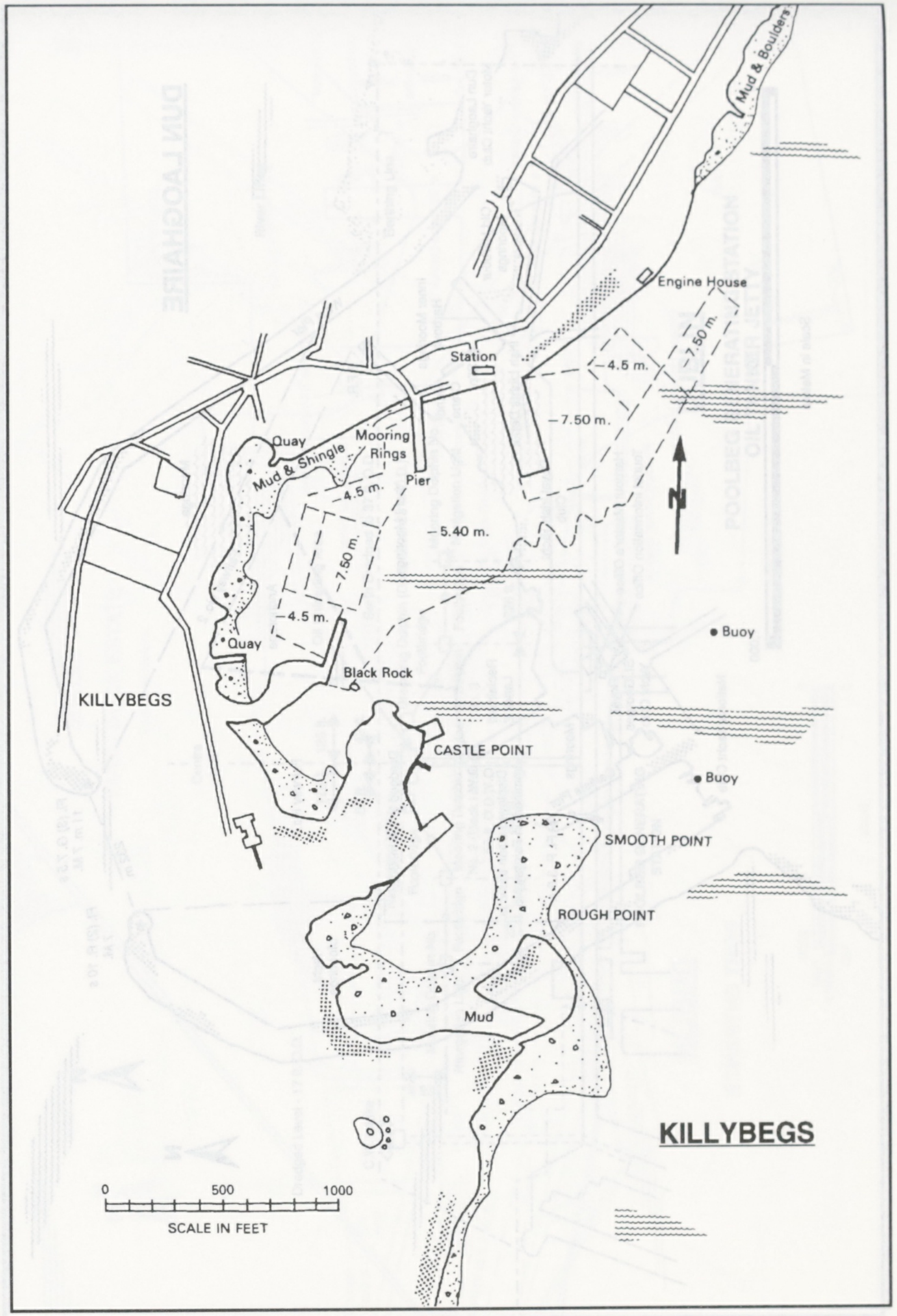

N
Georges Quay
Covered By Spring Tides
Castletown River New Quay
Mud
Mud
Disused
In Ruins
Mud
Pitching
Oil Jetty
Brown And Connick Quay
Oil Depot
Main Entrance
DUNDALK


Fl. (3) G. 7.5 s 11 m. 7 M.
Fl. (2) R. 10 s 7 M.
232 m.
DUN LAOGHAIRE
Moorings
Fairway No. 2
N
Anchorage
Fairway No. 1
West Pier
Yacht Moorings
2 F.R.
Yacht Moorings
Dredged to 5.0 m. C.D.
Inner Moorings Harbour
Hand Crane
Slip
Dun Laoghaire Motor Yacht Club
Old Harbour Moorings
Irish Lights Depot
Reclaimed Land
Q.W. Q.Y. Displayed when traffic is imminent in Fairway No. 1
East Pier
Royal Irish Yacht Club
Fl. R. 3.5 s.
Moorings
Carlisle Pier
Harbour Master's Office
Tourist Information Office
Royal St. Georges Yacht Club
National Yacht Club
0
500
1,000
Scale in Meters



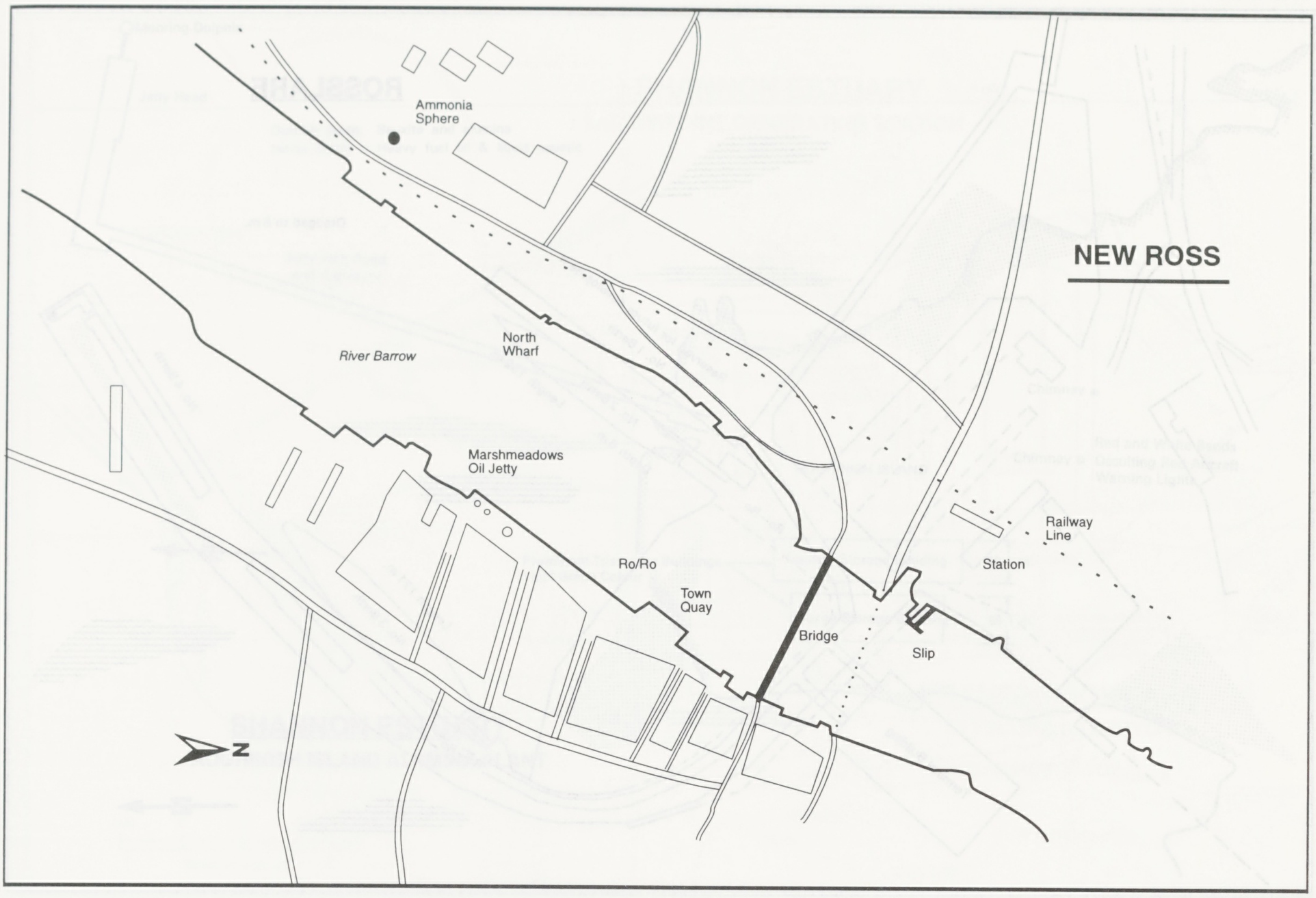
Add 3.60 m. to tidal prediction
Add 2.95 m. to tidal prediction
Add 1.00 m. to tidal prediction
85 m.
New Pier
134 m.
Quirke Quay
80 m.
Folan Quay
67 m.
Dun Aengus Dock North
164 m.
161 m.
Dun Aengus Dock South
South East Extension
93 m.
176 m.
117 m.
209 m.
Mulvoy Quay
Breathnach Quay

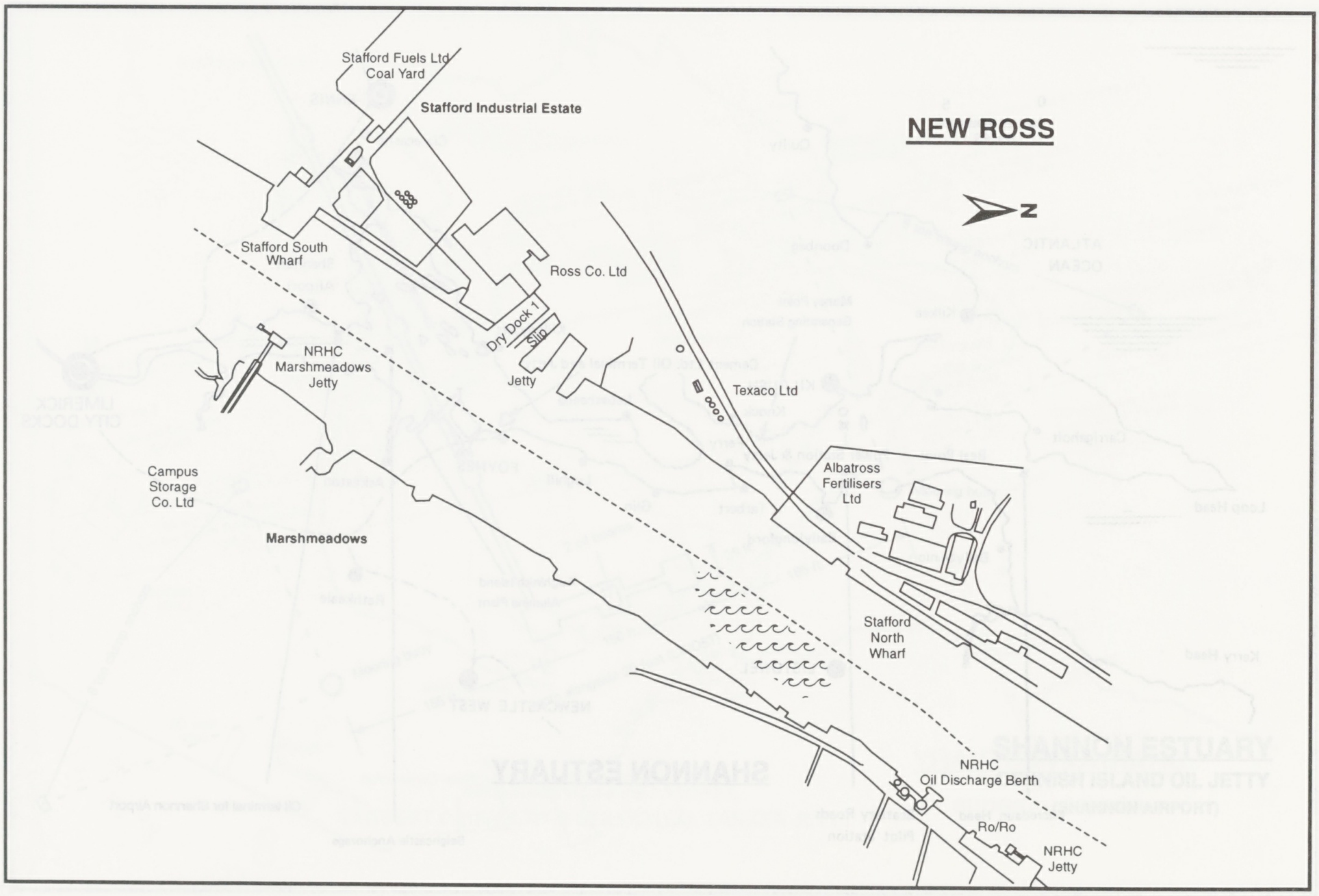
GALWAY

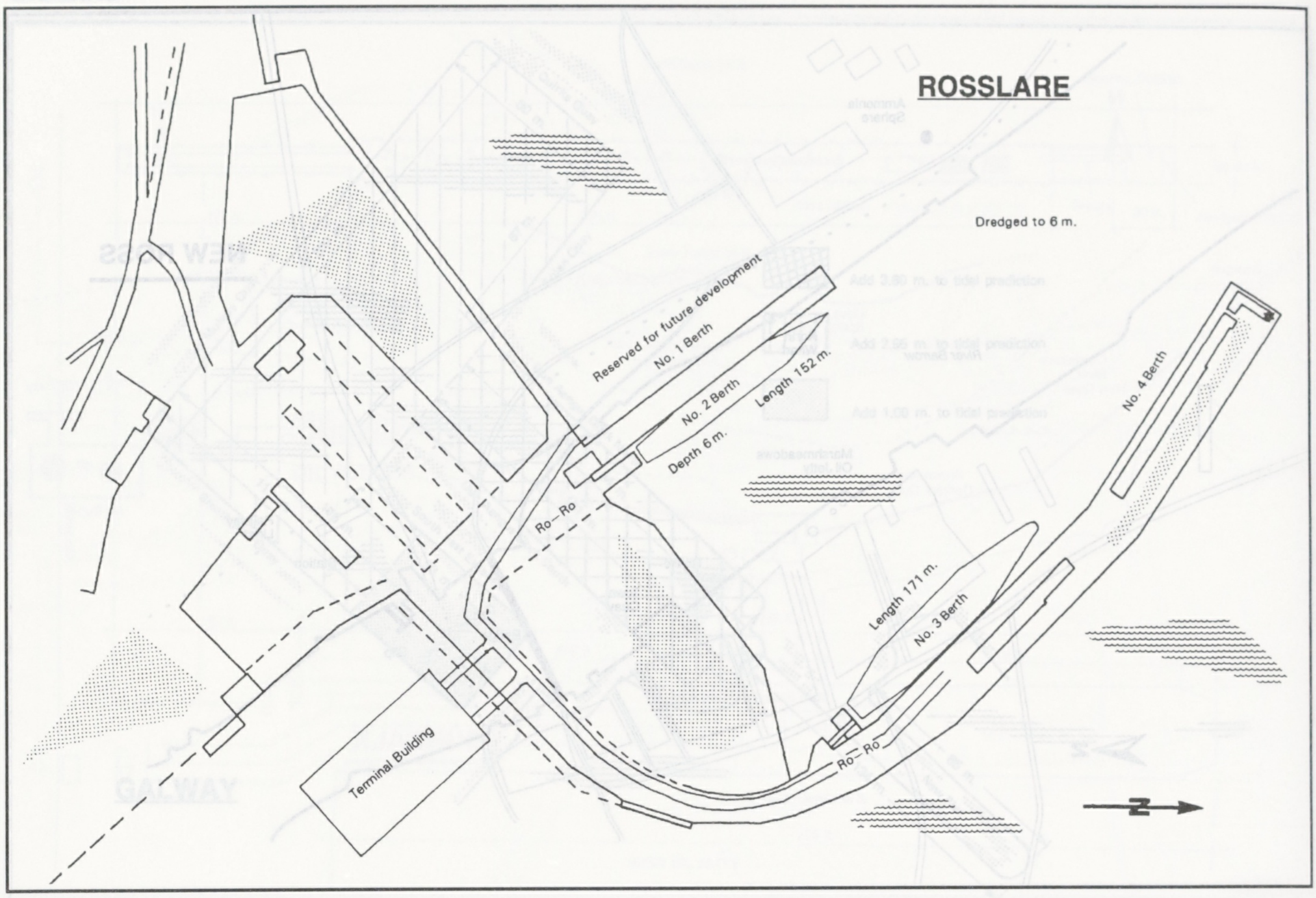


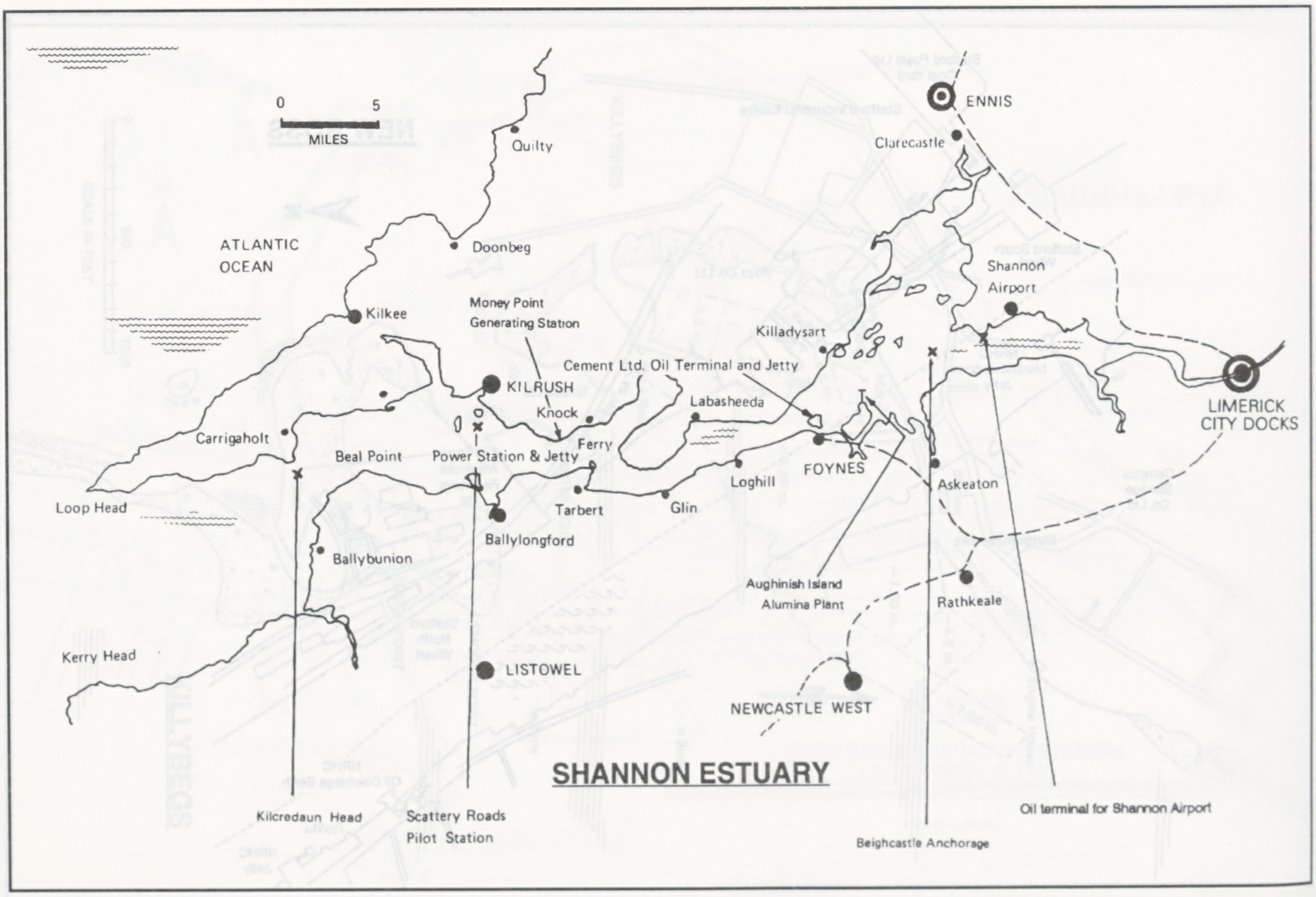
Mud & Boulders
Engine House
Station
4.5 m.
7.50 m.
7.50 m.
N
Quay
Mud & Shingle
Mooring Rings
Pier
4.5 m.
7.50 m.
5.40 m.
4.5 m.
Quay
Black Rock
KILLYBEGS
CASTLE POINT
Buoy
Buoy
SMOOTH POINT
ROUGH POINT
Mud
0
500
1000
SCALE IN FEET

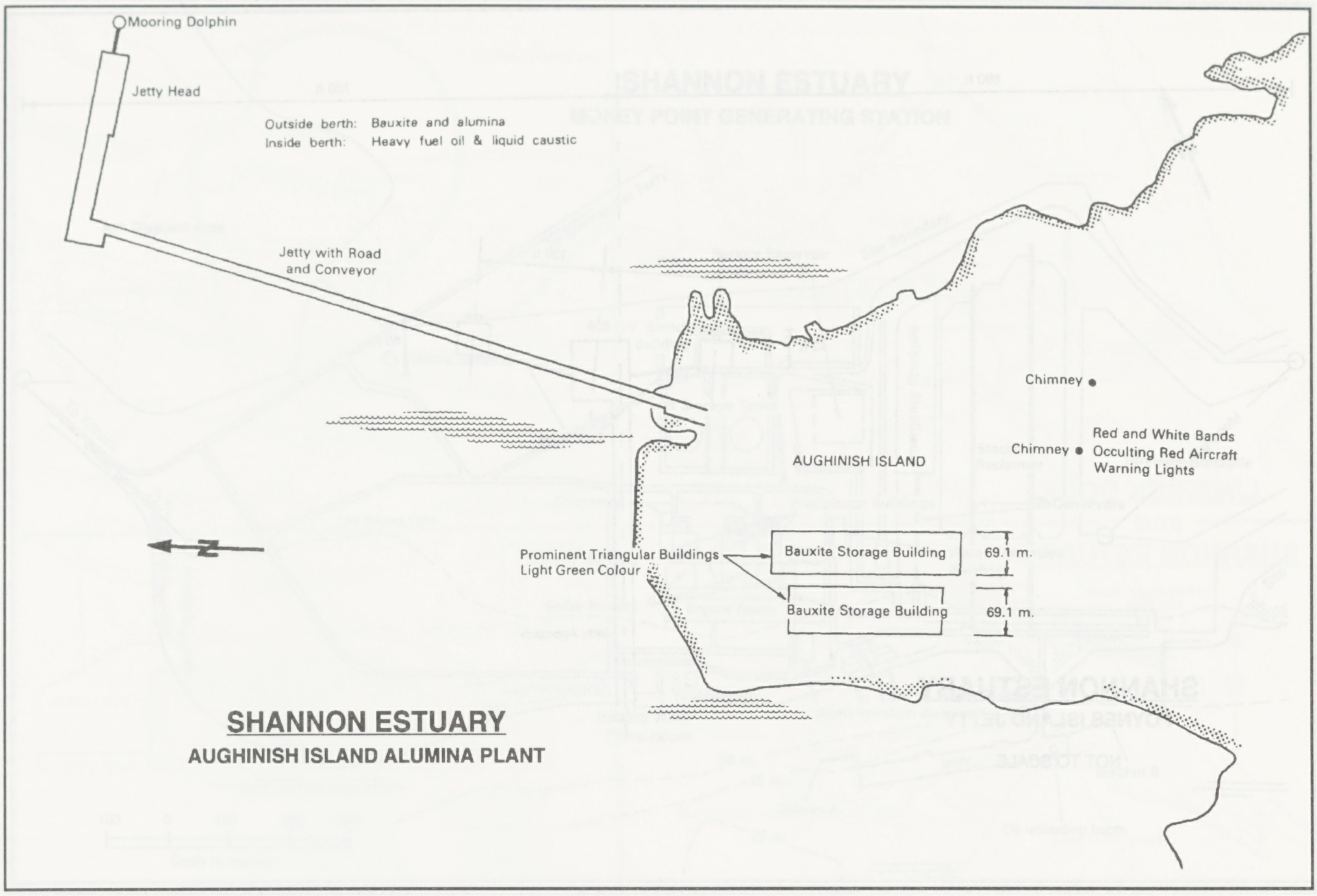
KILLYBEGS


Ammonia Sphere
NEW ROSS
North Wharf
River Barrow
Marshmeadows Oil Jetty
Railway Line
Station
Ro/Ro
Town Quay
Bridge
Slip
N


Stafford Fuels Ltd Coal Yard
Stafford Industrial Estate
NEW ROSS
N
Stafford South Wharf
Ross Co. Ltd
Dry Dock 1
Slip
NRHC Marshmeadows Jetty
Jetty
Texaco Ltd
Campus Storage Co. Ltd
Albatross Fertilisers Ltd
Marshmeadows
Stafford North Wharf
NRHC Oil Discharge Berth
Ro/Ro
NRHC Jetty

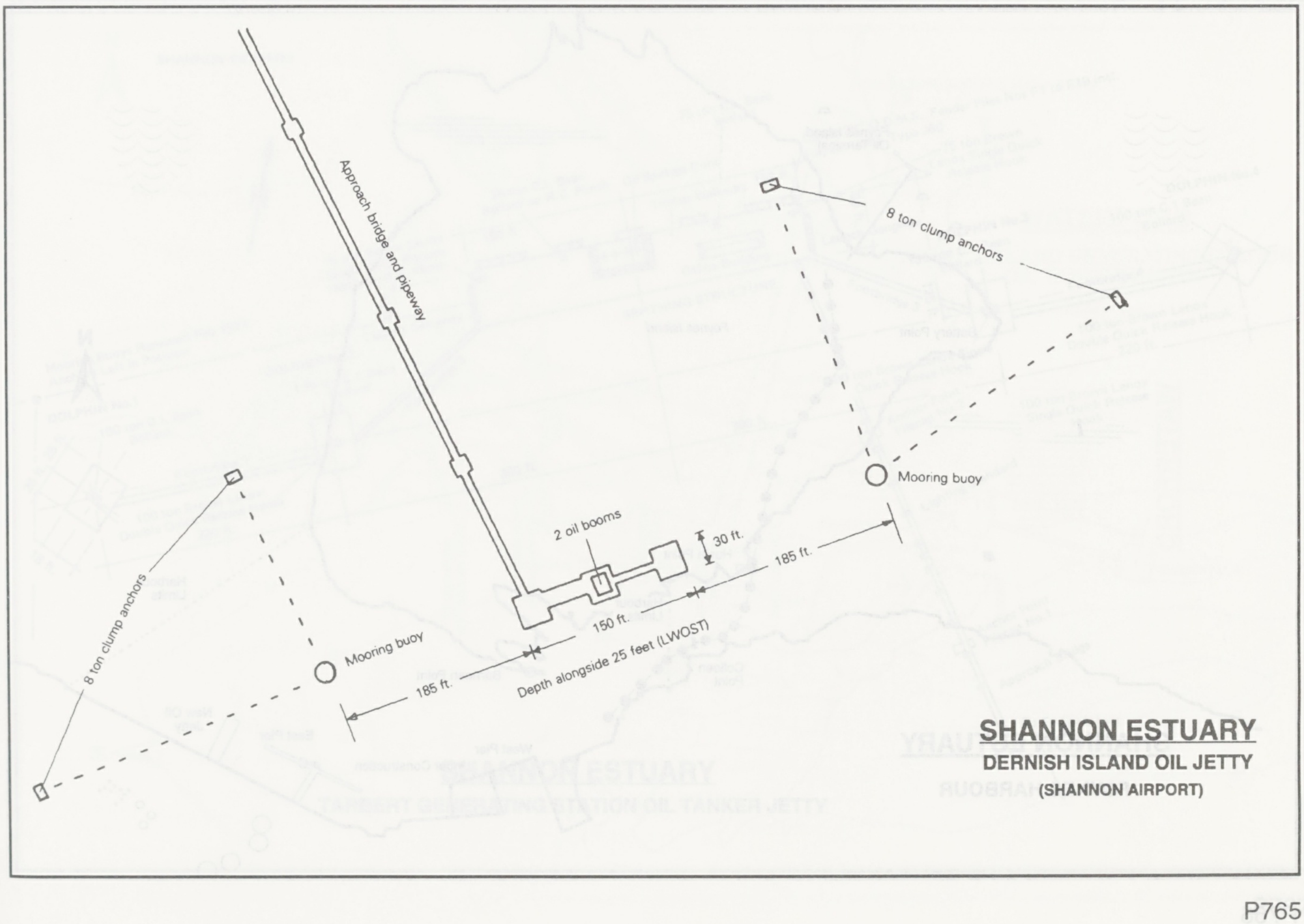

ROSSLARE
Dredged to 6 m.
Reserved for future development
No. 1 Berth
No. 2 Berth
Length 152 m.
Depth 6 m.
Ro–Ro
No. 4 Berth
Length 171 m.
No. 3 Berth
Ro–Ro
Terminal Building
N


0
5
MILES
ATLANTIC
OCEAN
Quilty
Doonbeg
Kilkee
Money Point
Generating Station
Cement Ltd. Oil Terminal and Jetty
KILRUSH
Knock
Labasheeda
Killadysart
Carrigaholt
Beal Point
Power Station & Jetty
Ferry
Loop Head
Tarbert
Glin
Loghill
FOYNES
Ballylongford
Ballybunion
Kerry Head
LISTOWEL
ENNIS
Clarecastle
Shannon
Airport
LIMERICK
CITY DOCKS
Askeaton
Aughinish Island
Alumina Plant
Rathkeale
NEWCASTLE WEST
SHANNON ESTUARY
Kilcredaun Head
Scattery Roads
Pilot Station
Beighcastle Anchorage
Oil terminal for Shannon Airport



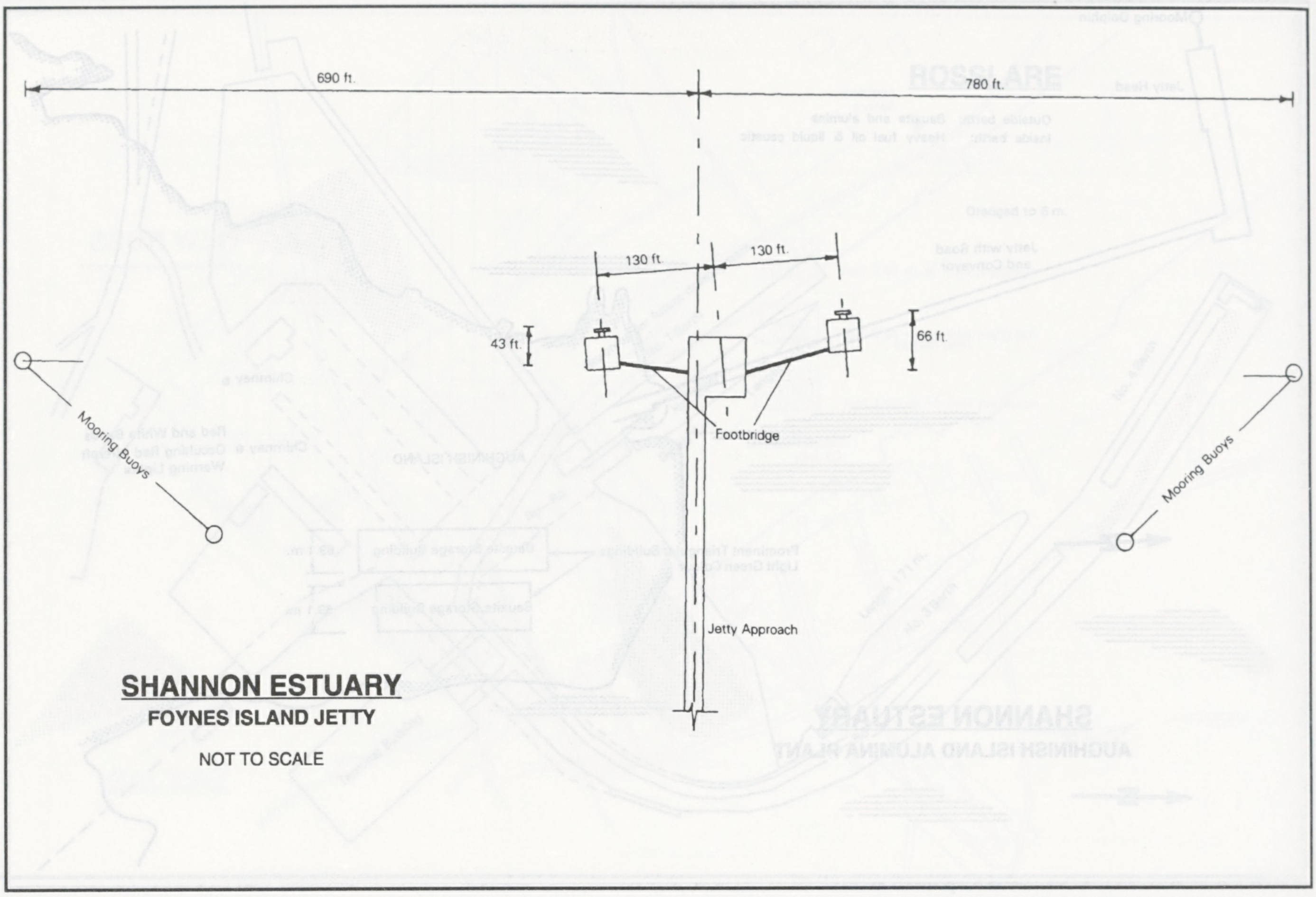
SHANNON ESTUARY
AUGHINISH ISLAND ALUMINA PLANT

Mooring Dolphin
Jetty Head
Outside berth: Bauxite and alumina
Inside berth: Heavy fuel oil & liquid caustic
Jetty with Road and Conveyor
N
Chimney
Chimney
Red and White Bands Occulting Red Aircraft Warning Lights
AUGHINISH ISLAND
Prominent Triangular Buildings Light Green Colour
Bauxite Storage Building
69.1 m.
Bauxite Storage Building
69.1 m.



SHANNON ESTUARY
DERNISH ISLAND OIL JETTY
(SHANNON AIRPORT)

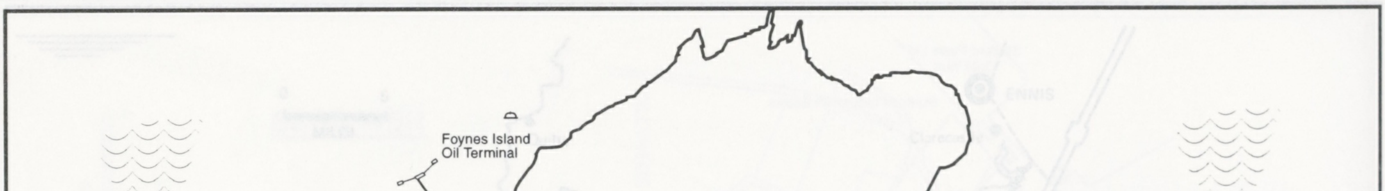
Approach bridge and pipeway
8 ton clump anchors
Mooring buoy
2 oil booms
30 ft.
185 ft.
150 ft.
Depth alongside 25 feet (LWOST)
Mooring buoy
185 ft.
8 ton clump anchors


690 ft.
780 ft.
130 ft.
130 ft.
43 ft.
66 ft.
Footbridge
Mooring Buoys
Mooring Buoys
Jetty Approach

SHANNON ESTUARY

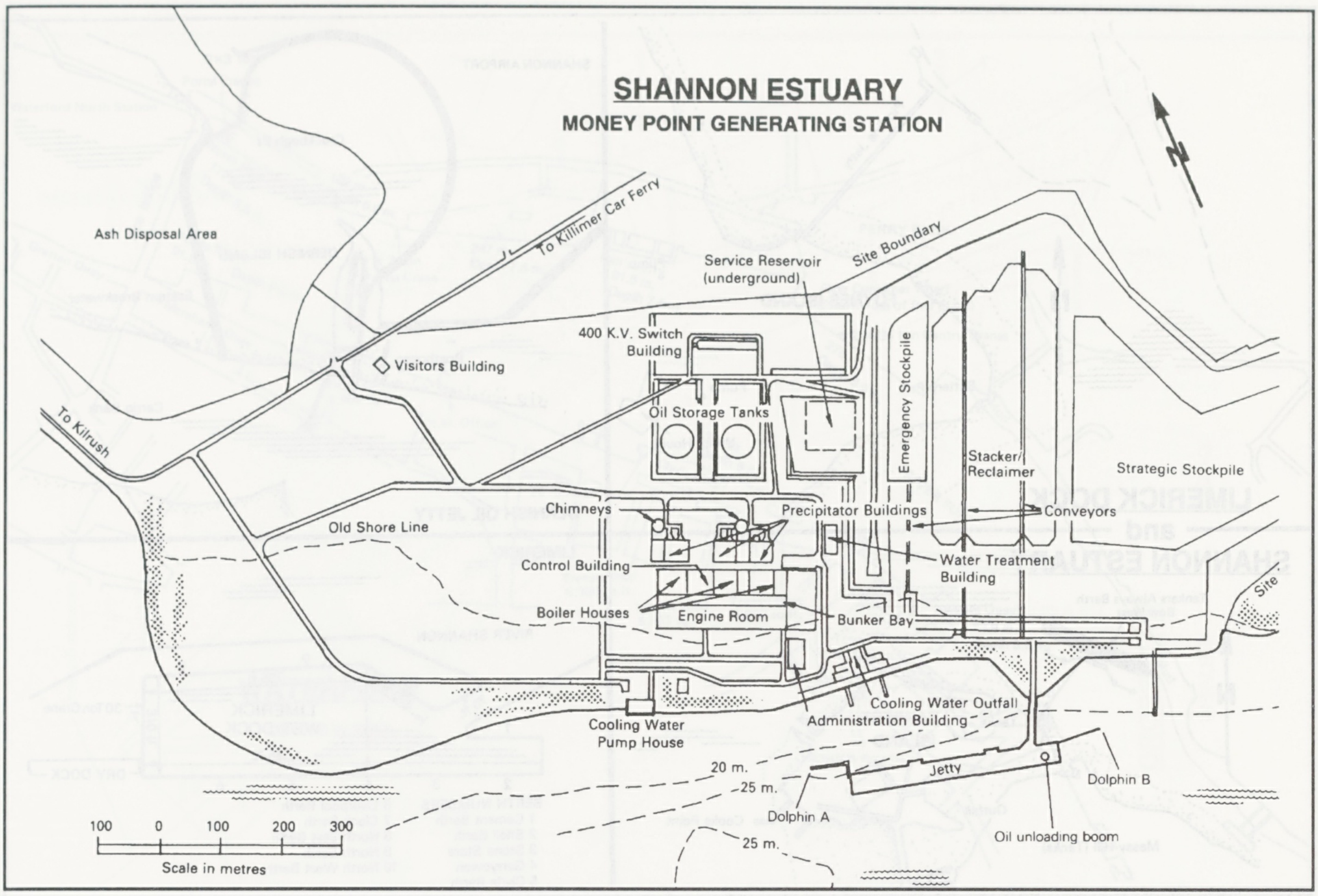
FOYNES ISLAND JETTY

NOT TO SCALE


Foynes Island
Oil Terminal
Battery Point
Foynes Island
Hunts Point
Harbour
Limits
Colleen
Point
Barneen Point
West Pier
Under Construction
East Pier
New Oil
Jetty
Harbour
Limits
N

SHANNON ESTUARY

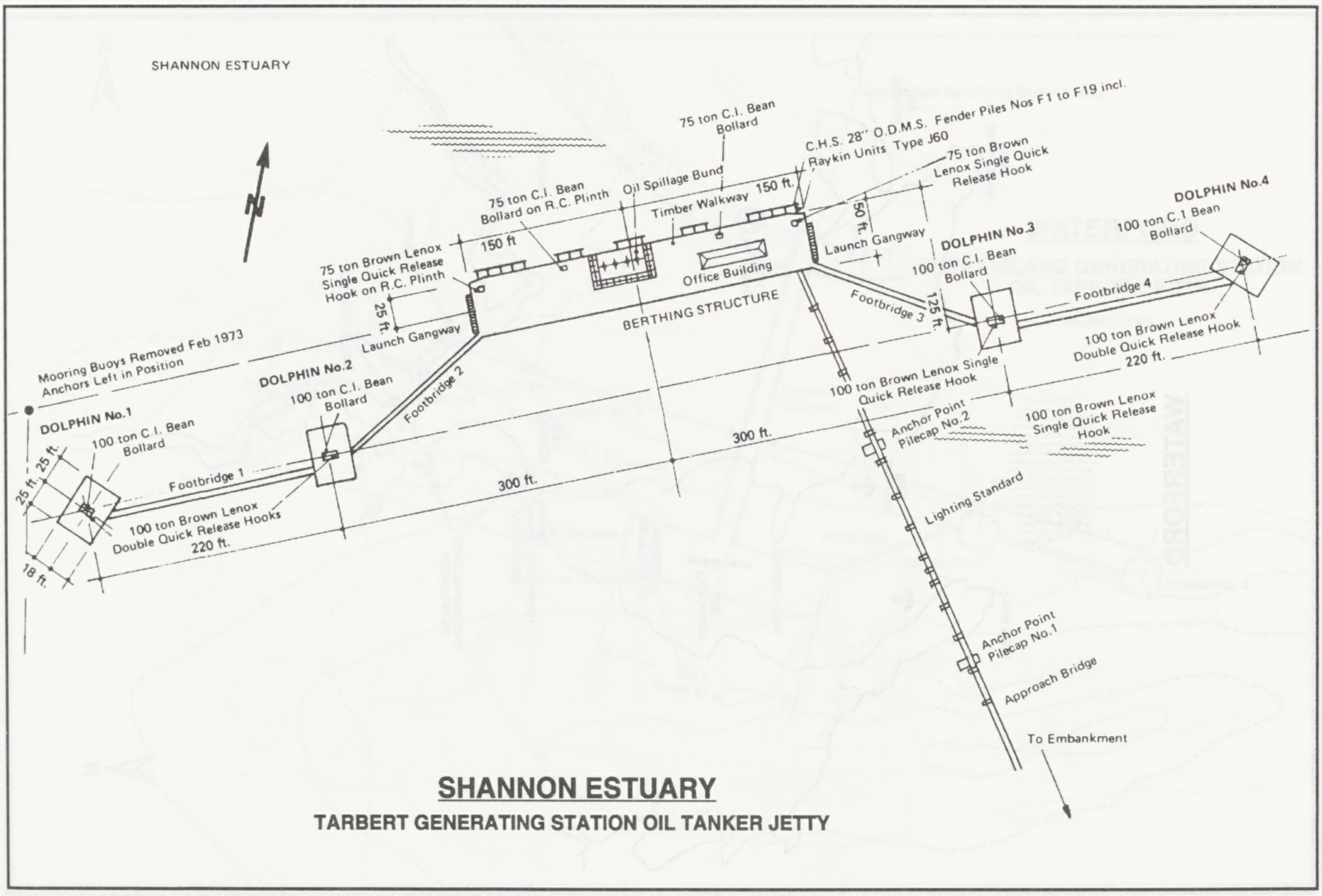
FOYNES HARBOUR



SHANNON ESTUARY

MONEY POINT GENERATING STATION

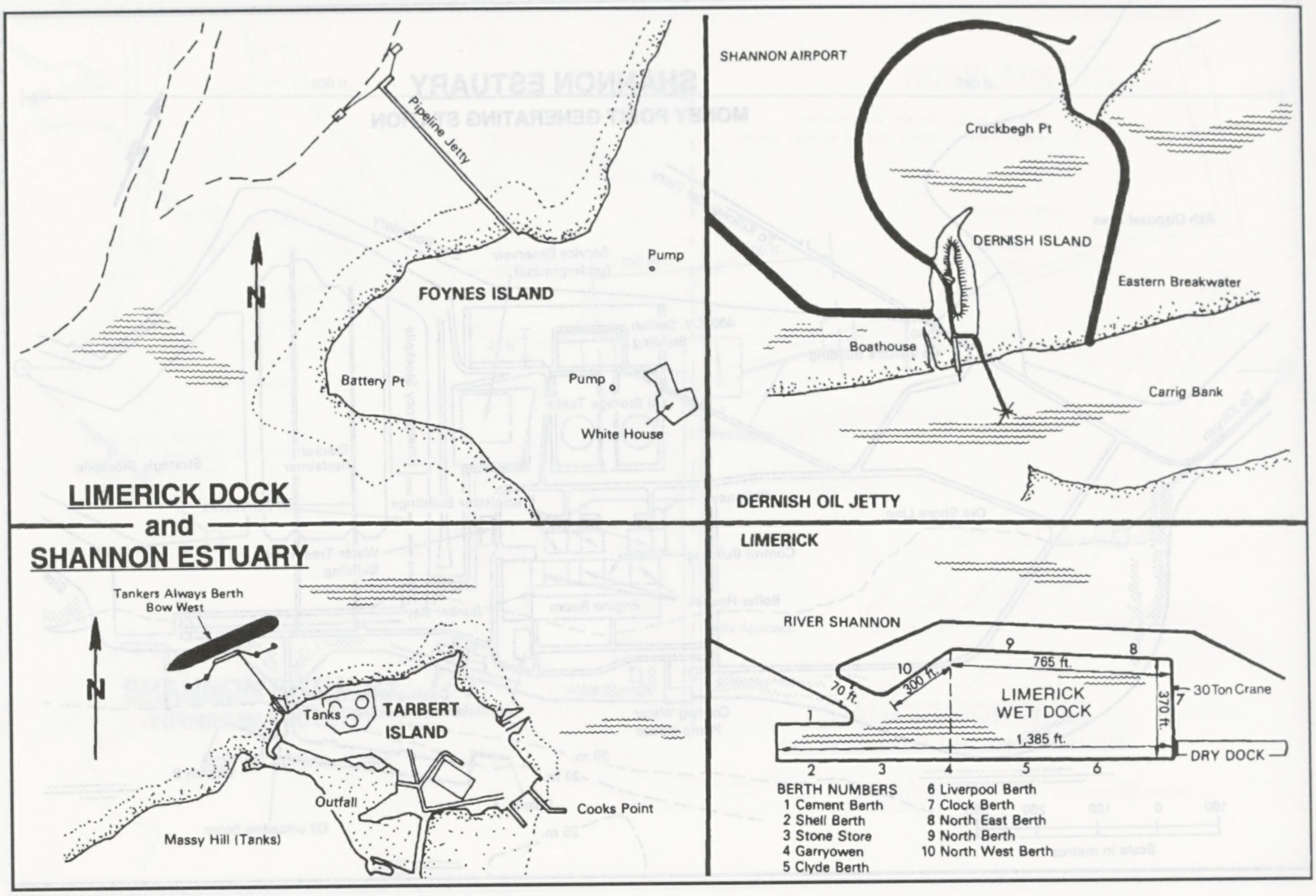
Ash Disposal Area
To Killimer Car Ferry
Site Boundary
Service Reservoir (underground)
400 K.V. Switch Building
Visitors Building
To Kilrush
Oil Storage Tanks
Emergency Stockpile
Stacker/ Reclaimer
Strategic Stockpile
Chimneys
Precipitator Buildings
Conveyors
Old Shore Line
Water Treatment Building
Control Building
Site
Boiler Houses
Engine Room
Bunker Bay
Cooling Water Outfall
Administration Building
Cooling Water Pump House
20 m.
25 m.
Jetty
Dolphin B
Dolphin A
Oil unloading boom
25 m.
100 0 100 200 300
Scale in metres
N

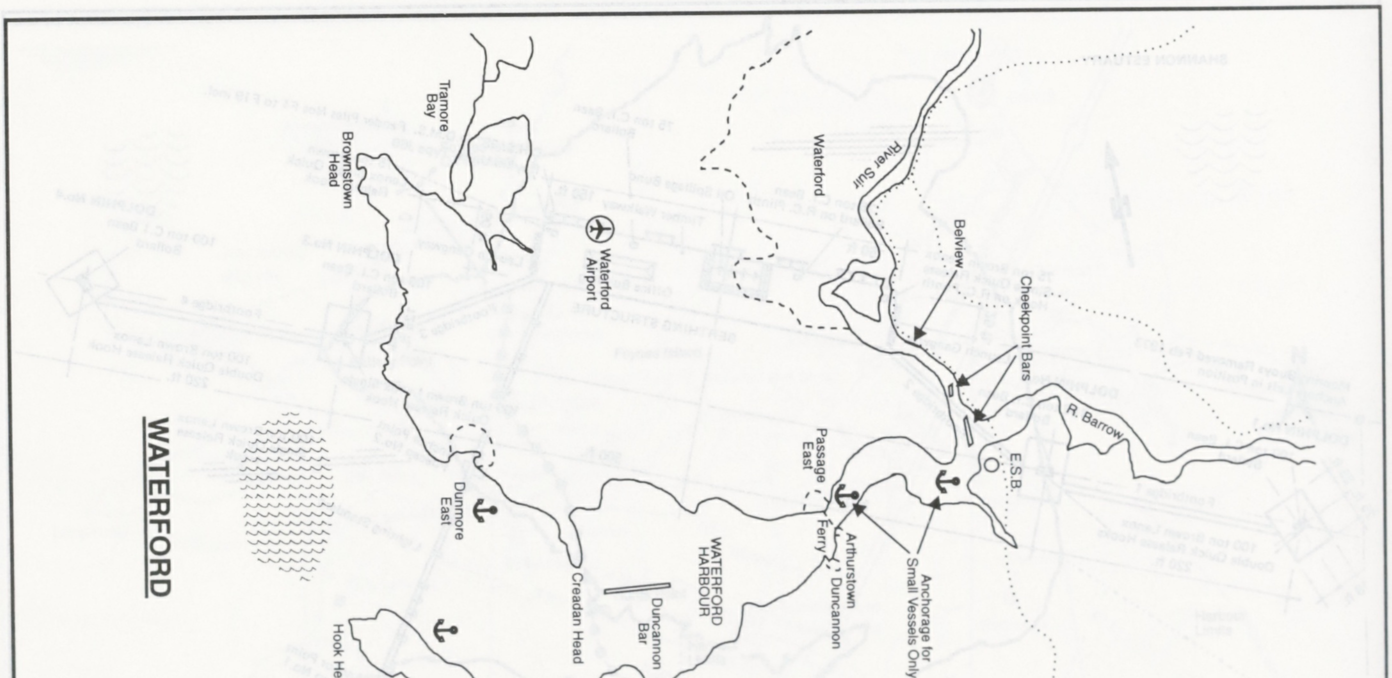


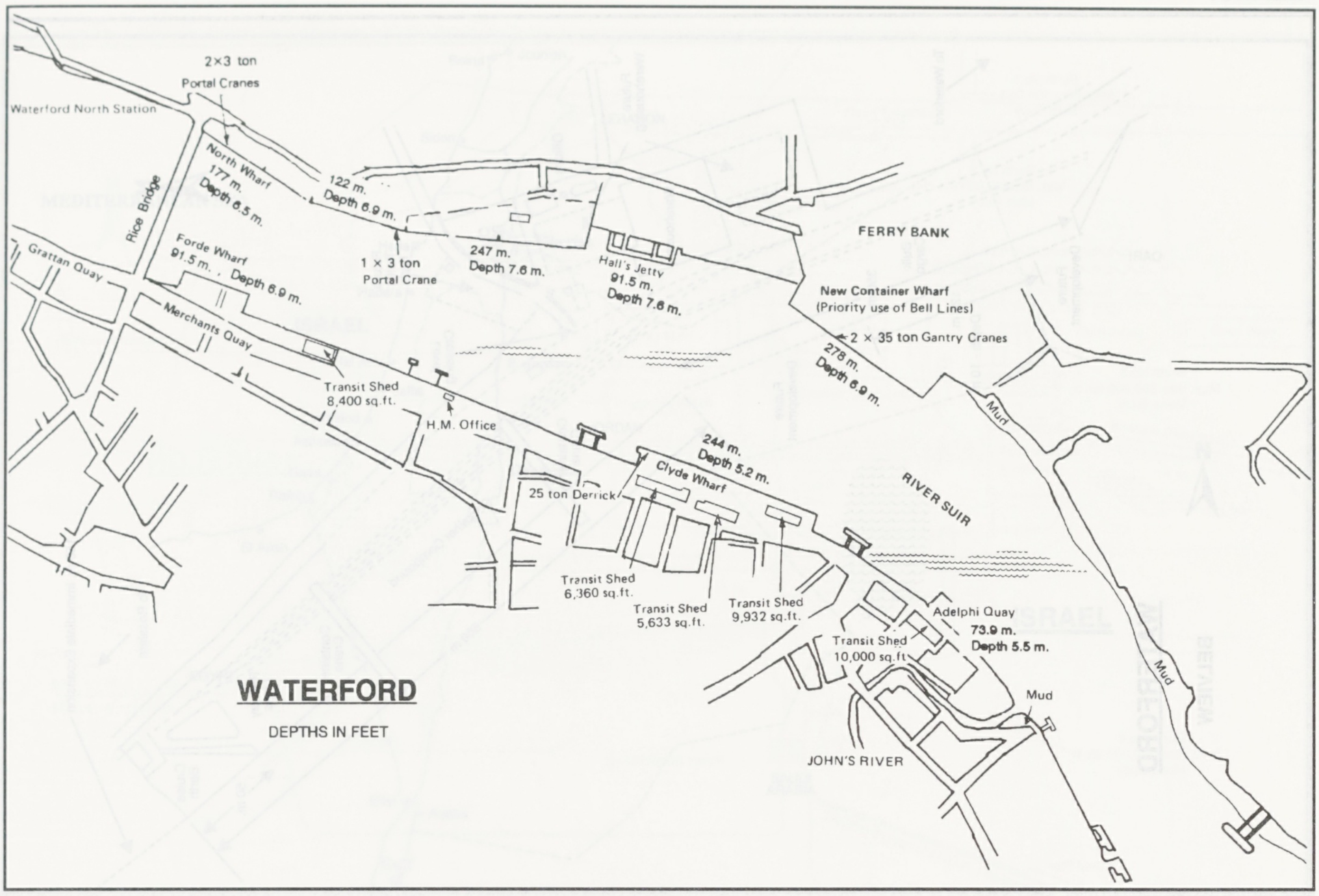
SHANNON ESTUARY
N
75 ton C.I. Bean Bollard
C.H.S. 28" O.D.M.S. Fender Piles Nos F1 to F19 incl.
Raykin Units Type J60
75 ton Brown Lenox Single Quick Release Hook
75 ton C.I. Bean Bollard on R.C. Plinth
Oil Spillage Bund
Timber Walkway
150 ft.
150 ft
50 ft.
DOLPHIN No.4
100 ton C.I. Bean Bollard
75 ton Brown Lenox Single Quick Release Hook on R.C. Plinth
Launch Gangway
DOLPHIN No.3
100 ton C.I. Bean Bollard
Office Building
25 ft.
BERTHING STRUCTURE
Footbridge 3
125 ft.
Footbridge 4
Launch Gangway
100 ton Brown Lenox Double Quick Release Hook
220 ft.
Mooring Buoys Removed Feb 1973 Anchors Left in Position
DOLPHIN No.2
100 ton C.I. Bean Bollard
Footbridge 2
100 ton Brown Lenox Single Quick Release Hook
DOLPHIN No.1
100 ton C.I. Bean Bollard
Anchor Point Pilecap No.2
100 ton Brown Lenox Single Quick Release Hook
300 ft.
25 ft.
25 ft.
Footbridge 1
300 ft.
Lighting Standard
100 ton Brown Lenox Double Quick Release Hooks
220 ft.
18 ft.
Anchor Point Pilecap No.1
Approach Bridge
To Embankment

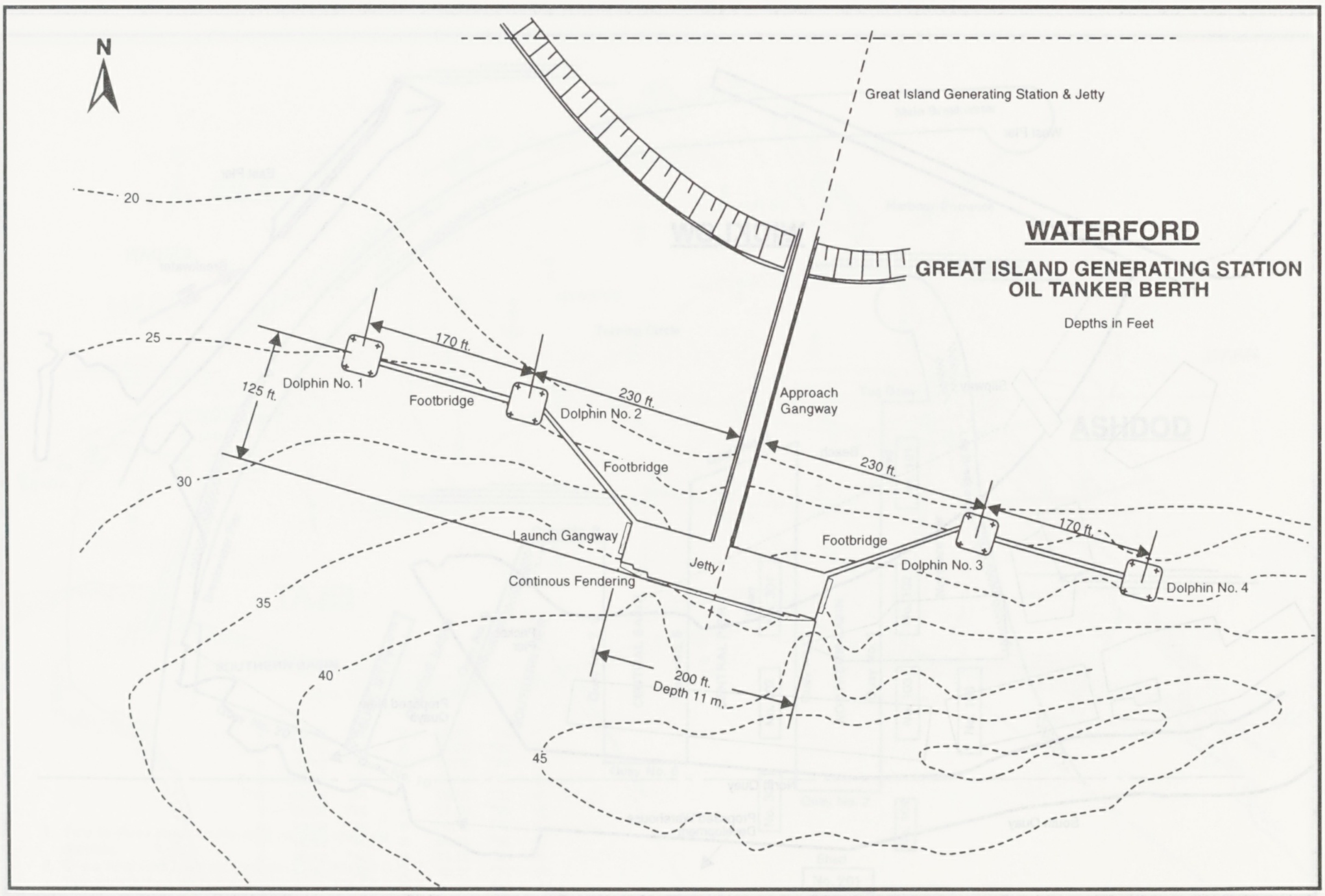
SHANNON ESTUARY

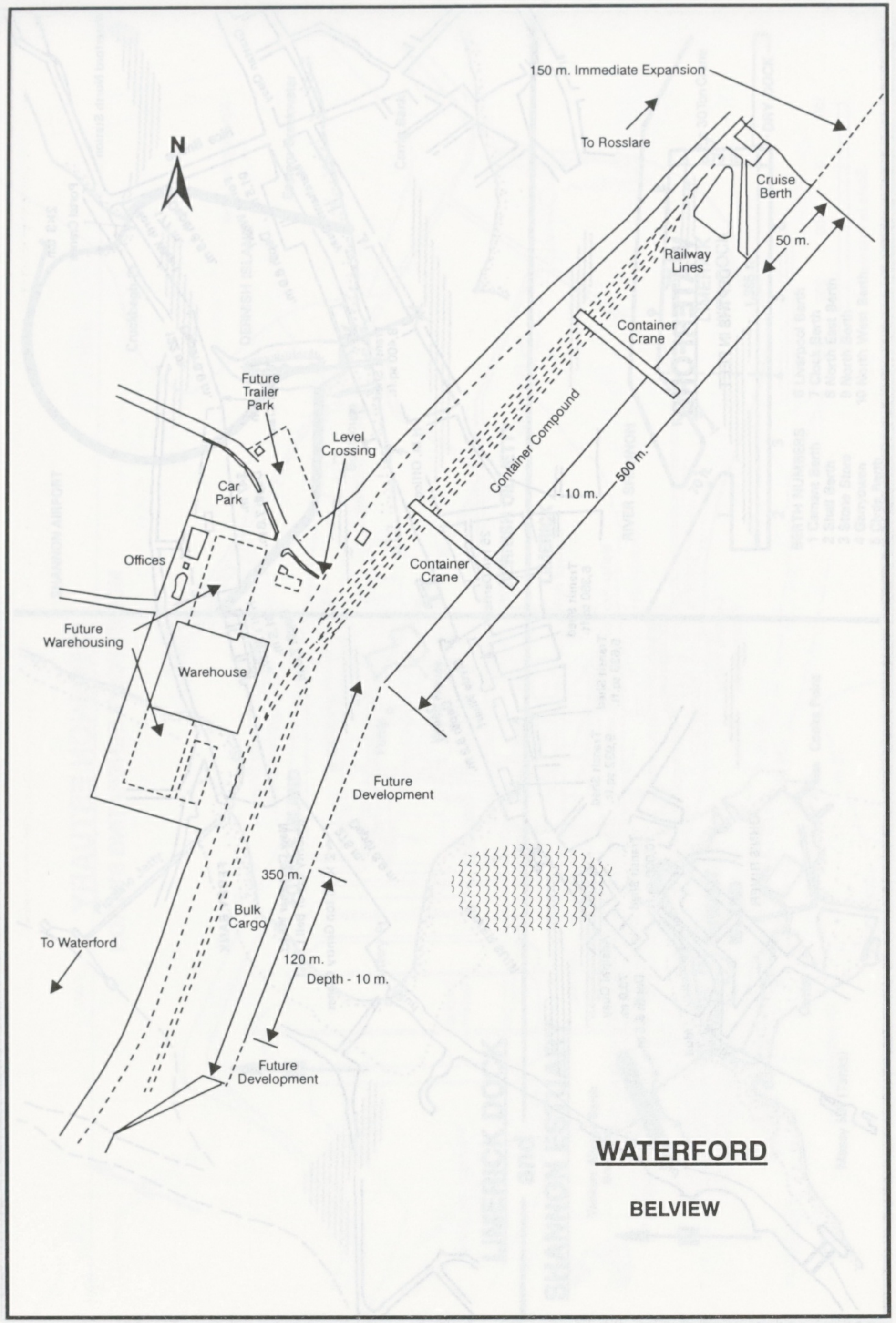
TARBERT GENERATING STATION OIL TANKER JETTY


LIMERICK DOCK
and
SHANNON ESTUARY
Pipeline Jetty
N
FOYNES ISLAND
Pump
Battery Pt
Pump
White House
SHANNON AIRPORT
Cruckbegh Pt
DERNISH ISLAND
Eastern Breakwater
Boathouse
Carrig Bank
DERNISH OIL JETTY
Tankers Always Berth
Bow West
N
Tanks
TARBERT
ISLAND
Outfall
Cooks Point
Massy Hill (Tanks)
LIMERICK
RIVER SHANNON
9
8
10
765 ft.
300 ft.
70 ft.
LIMERICK
WET DOCK
370 ft.
30 Ton Crane
7
1
1,385 ft.
2
3
4
5
6
DRY DOCK
BERTH NUMBERS
1 Cement Berth
2 Shell Berth
3 Stone Store
4 Garryowen
5 Clyde Berth
6 Liverpool Berth
7 Clock Berth
8 North East Berth
9 North Berth
10 North West Berth

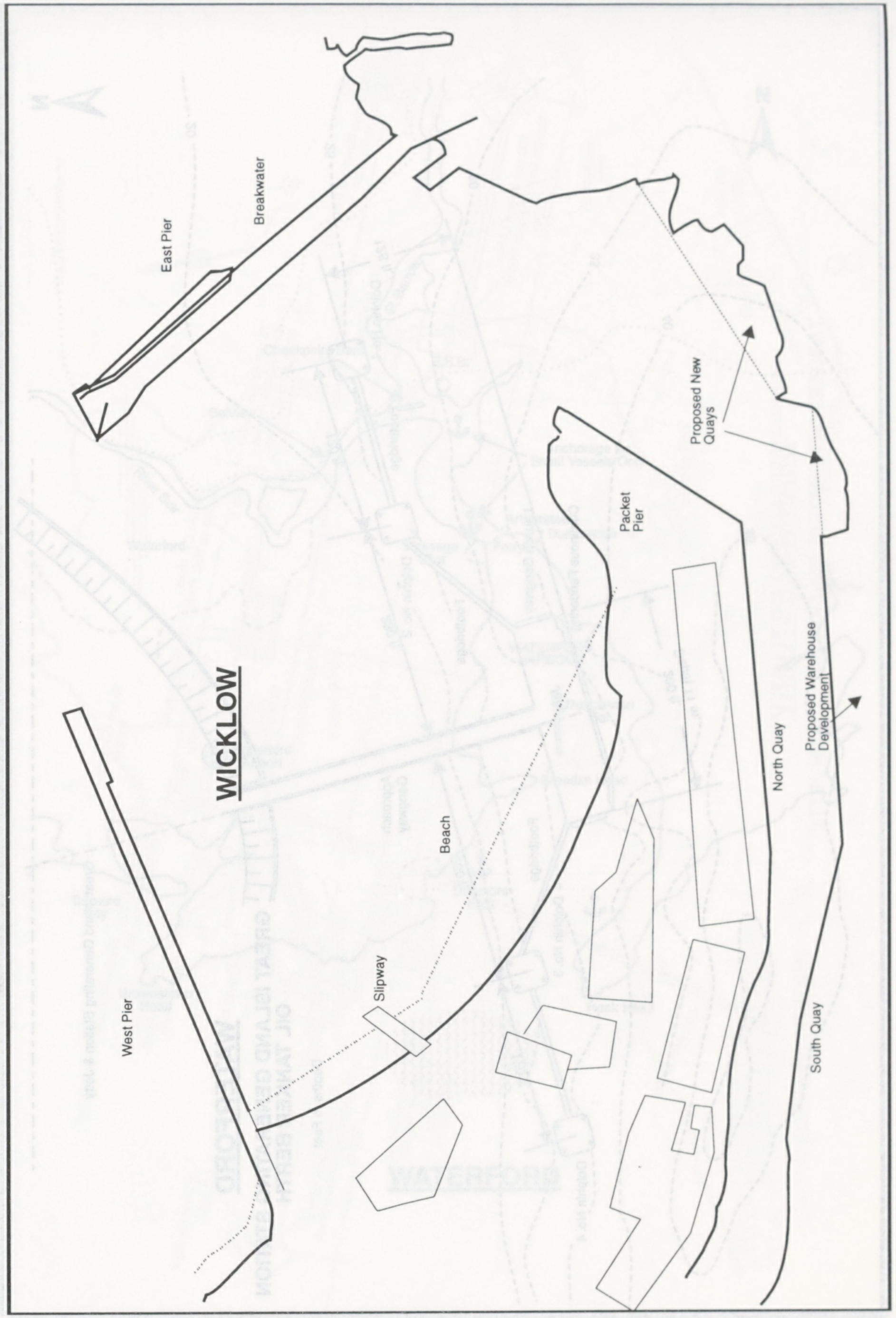

WATERFORD
Tramore
Bay
Brownstown
Head
Waterford
Airport
Waterford
River Suir
Belview
Cheekpoint Bars
R. Barrow
E.S.B.
Passage
East
Ferry
Arthurstown
Duncannon
Anchorage for
Small Vessels Only
Dunmore
East
WATERFORD
HARBOUR
Creadan Head
Duncannon
Bar
Hook Head
N


2×3 ton
Portal Cranes
Waterford North Station
North Wharf 177 m. Depth 6.5 m.
122 m. Depth 6.9 m.
Rice Bridge
Grattan Quay
Forde Wharf 91.5 m. , Depth 6.9 m.
1 × 3 ton Portal Crane
247 m. Depth 7.6 m.
Hall's Jetty 91.5 m. Depth 7.6 m.
FERRY BANK
New Container Wharf (Priority use of Bell Lines)
2 × 35 ton Gantry Cranes
278 m. Depth 6.9 m.
Merchants Quay
Transit Shed 8,400 sq.ft.
H.M. Office
244 m. Depth 5.2 m.
Clyde Wharf
25 ton Derrick
RIVER SUIR
Mud
Transit Shed 6,360 sq.ft.
Transit Shed 5,633 sq.ft.
Transit Shed 9,932 sq.ft.
Adelphi Quay 73.9 m. Depth 5.5 m.
Transit Shed 10,000 sq.ft.
Mud
Mud
WATERFORD
DEPTHS IN FEET
JOHN'S RIVER

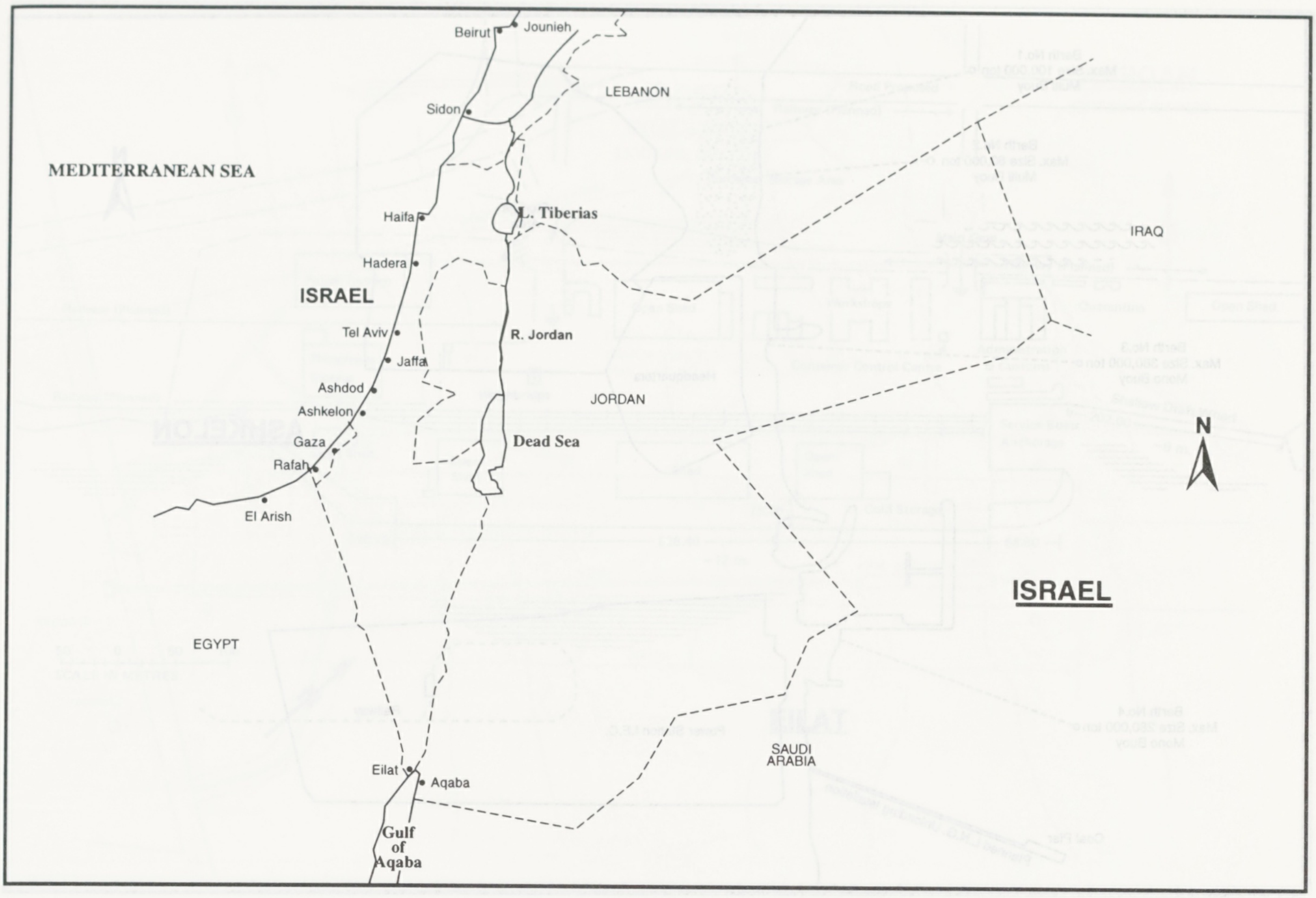

N
Great Island Generating Station & Jetty
WATERFORD
GREAT ISLAND GENERATING STATION OIL TANKER BERTH
Depths in Feet
20
25
30
35
40
45
170 ft.
125 ft.
Dolphin No. 1
Footbridge
230 ft.
Dolphin No. 2
Approach Gangway
Footbridge
230 ft.
170 ft.
Launch Gangway
Jetty
Footbridge
Dolphin No. 3
Dolphin No. 4
Continous Fendering
200 ft. Depth 11 m.

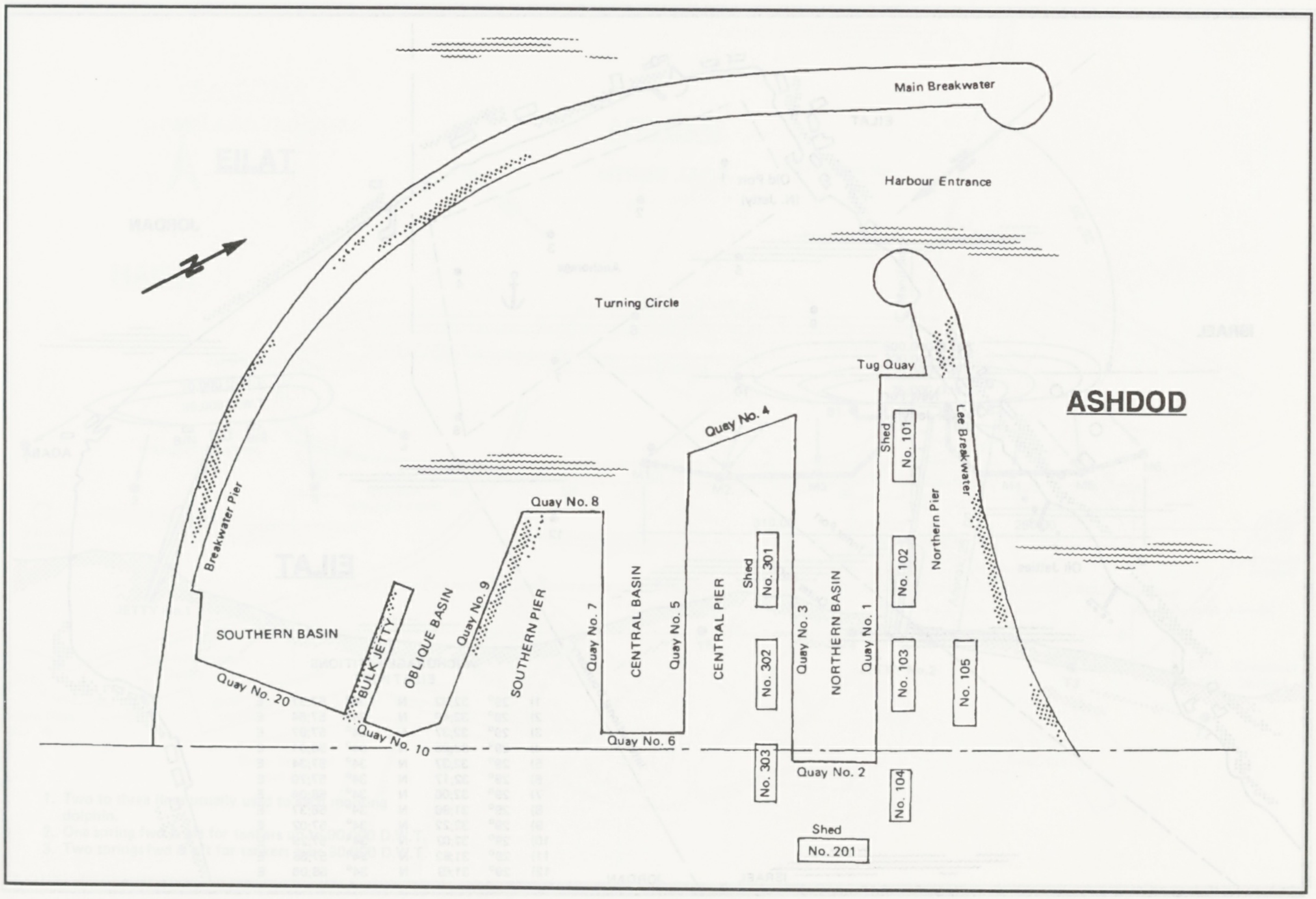


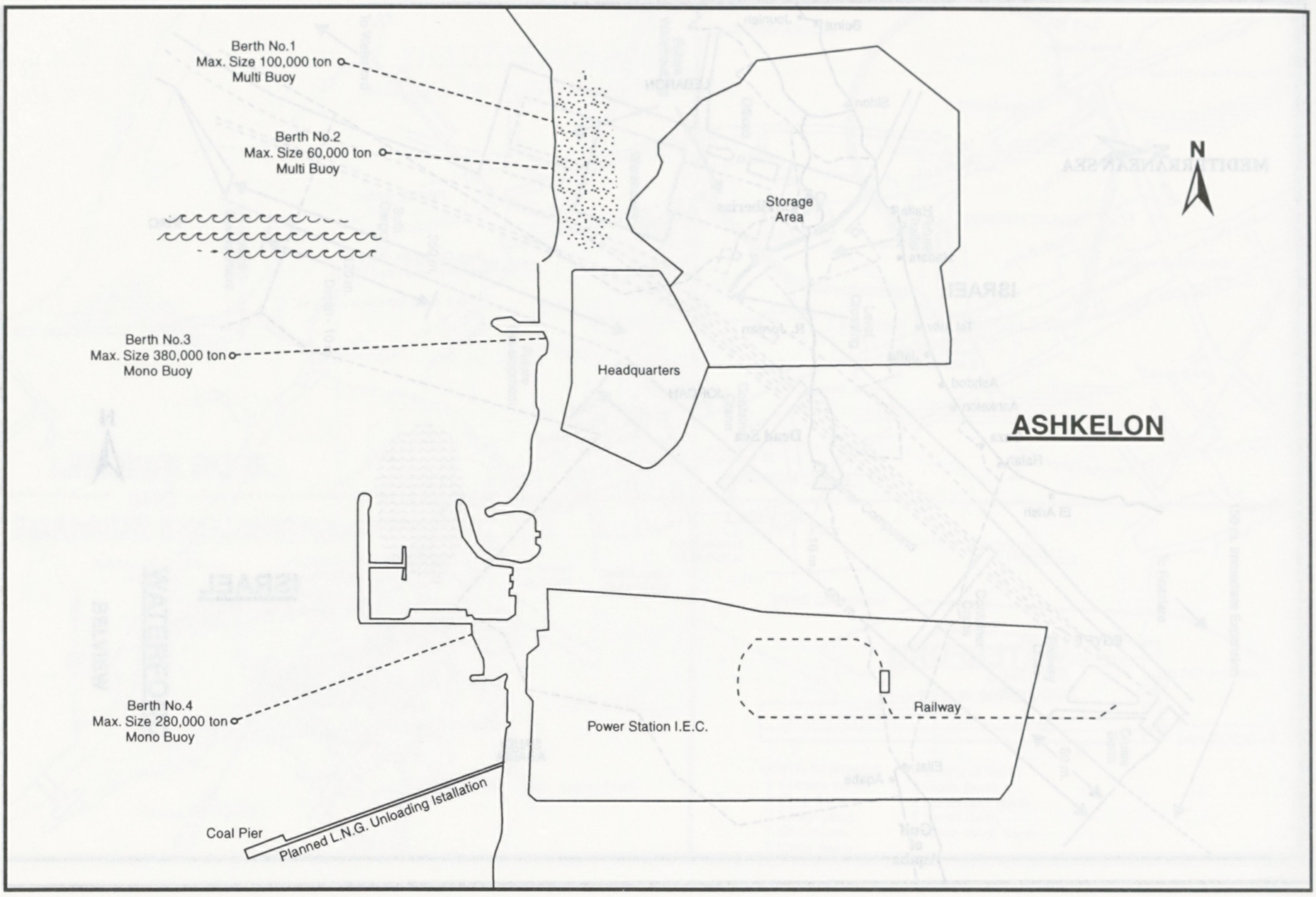
150 m. Immediate Expansion
To Rosslare
N
Cruise Berth
50 m.
Railway Lines
Container Crane
Future Trailer Park
Level Crossing
Car Park
Container Compound
- 10 m.
500 m.
Offices
Container Crane
Future Warehousing
Warehouse
Future Development
350 m.
Bulk Cargo
120 m.
Depth - 10 m.
To Waterford
Future Development
WATERFORD
BELVIEW



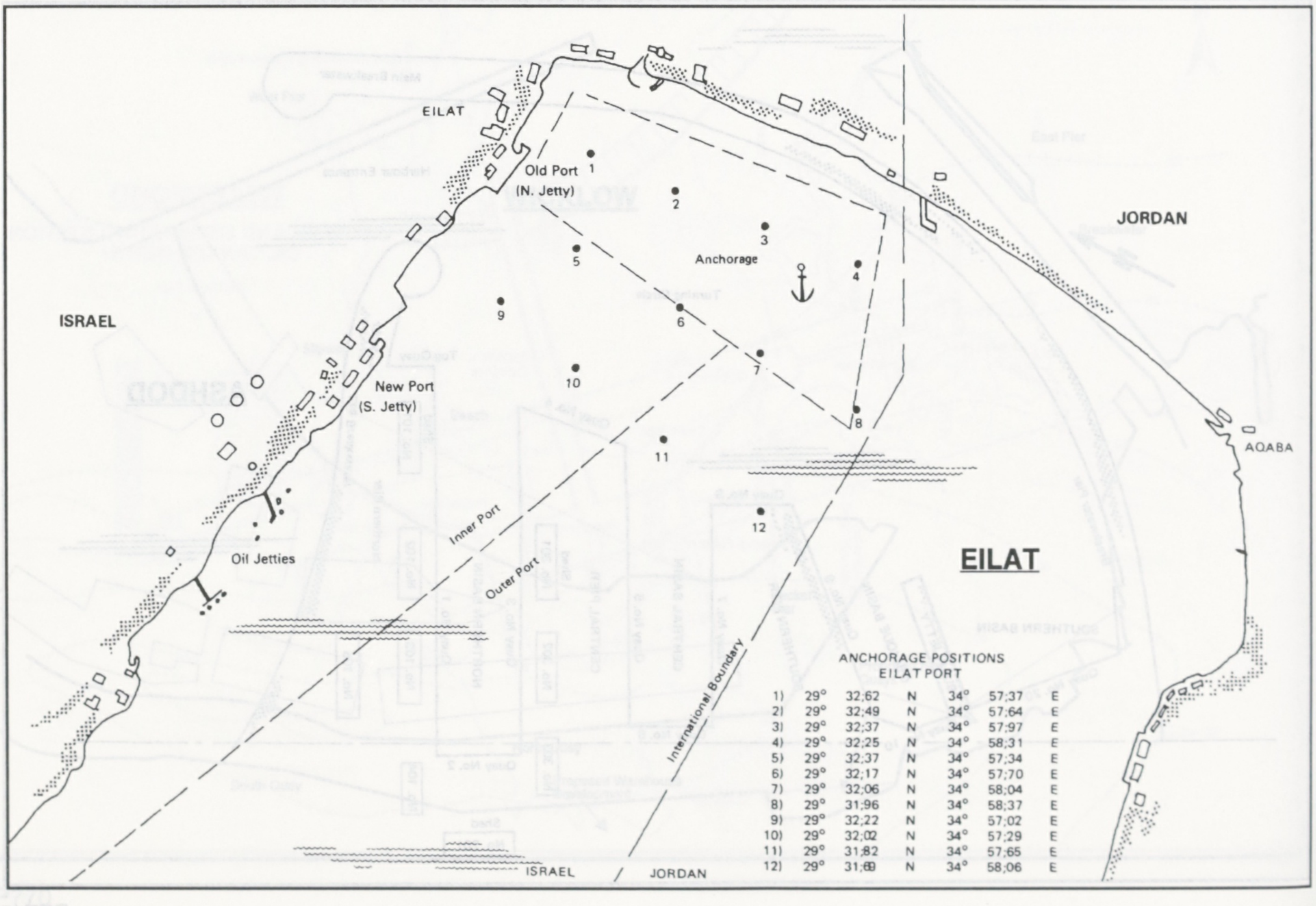
East Pier
Breakwater
Proposed New Quays
Packet Pier
WICKLOW
Proposed Warehouse Development
North Quay
Beach
Slipway
West Pier
South Quay


ISRAEL
Beirut
Jounieh
LEBANON
Sidon
MEDITERRANEAN SEA
Haifa
L. Tiberias
IRAQ
Hadera
ISRAEL
Tel Aviv
R. Jordan
Jaffa
Ashdod
JORDAN
Ashkelon
Gaza
Dead Sea
Rafah
N
El Arish
EGYPT
SAUDI ARABIA
Eilat
Aqaba
Gulf of Aqaba


Main Breakwater
Harbour Entrance
Turning Circle
ASHDOD
Tug Quay
Lee Breakwater
Quay No. 4
Shed
No. 101
Northern Pier
Breakwater Pier
Quay No. 8
No. 102
Shed
No. 301
SOUTHERN BASIN
BULK JETTY
OBLIQUE BASIN
Quay No. 9
SOUTHERN PIER
Quay No. 7
CENTRAL BASIN
Quay No. 5
CENTRAL PIER
Quay No. 3
NORTHERN BASIN
Quay No. 1
No. 302
No. 103
No. 105
Quay No. 20
Quay No. 10
Quay No. 6
No. 303
Quay No. 2
No. 104
Shed
No. 201


Berth No.1
Max. Size 100,000 ton
Multi Buoy
Berth No.2
Max. Size 60,000 ton
Multi Buoy
Storage Area
N
Berth No.3
Max. Size 380,000 ton
Mono Buoy
Headquarters
Berth No.4
Max. Size 280,000 ton
Mono Buoy
Railway
Power Station I.E.C.
Coal Pier
Planned L.N.G. Unloading Istallation

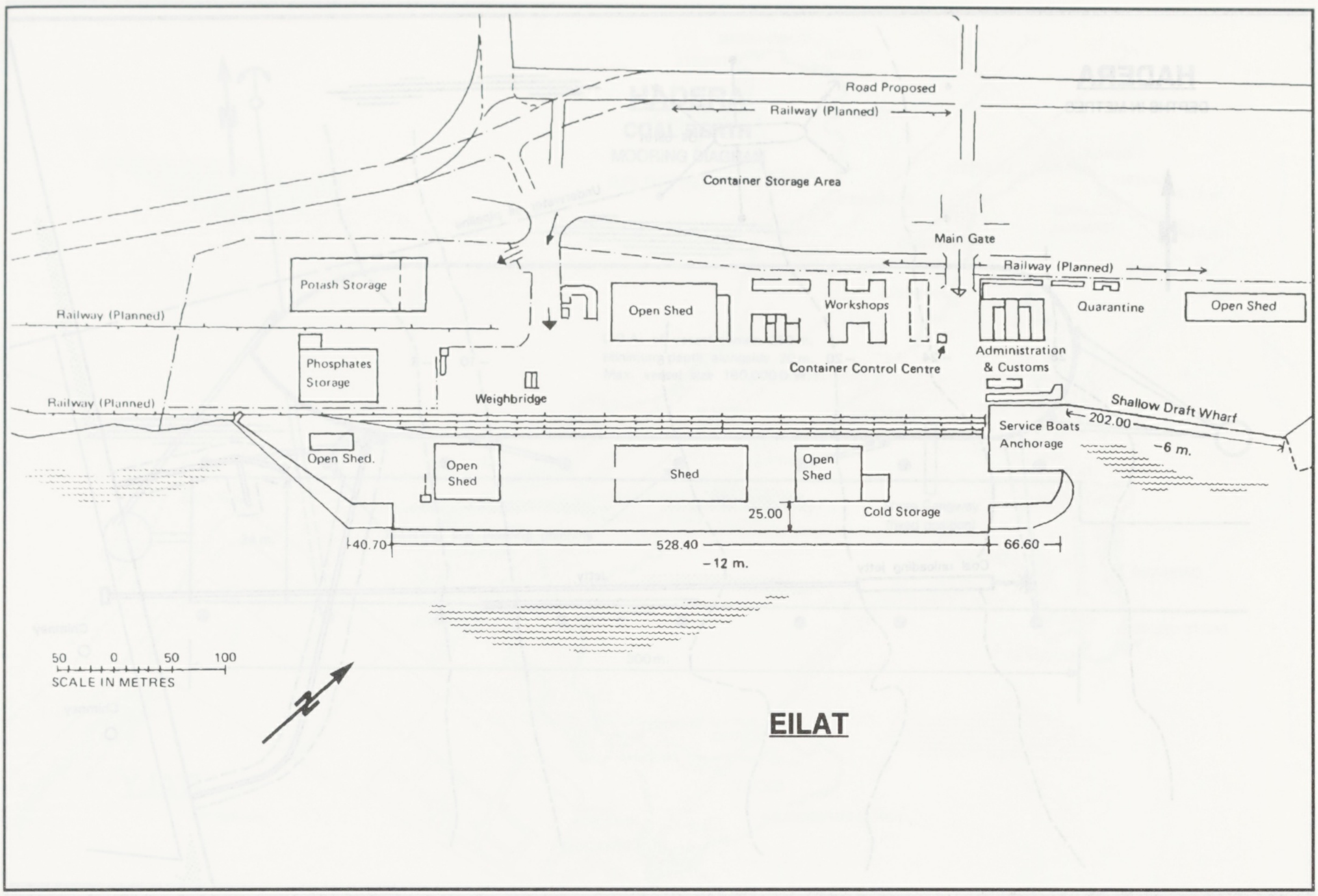
ASHKELON

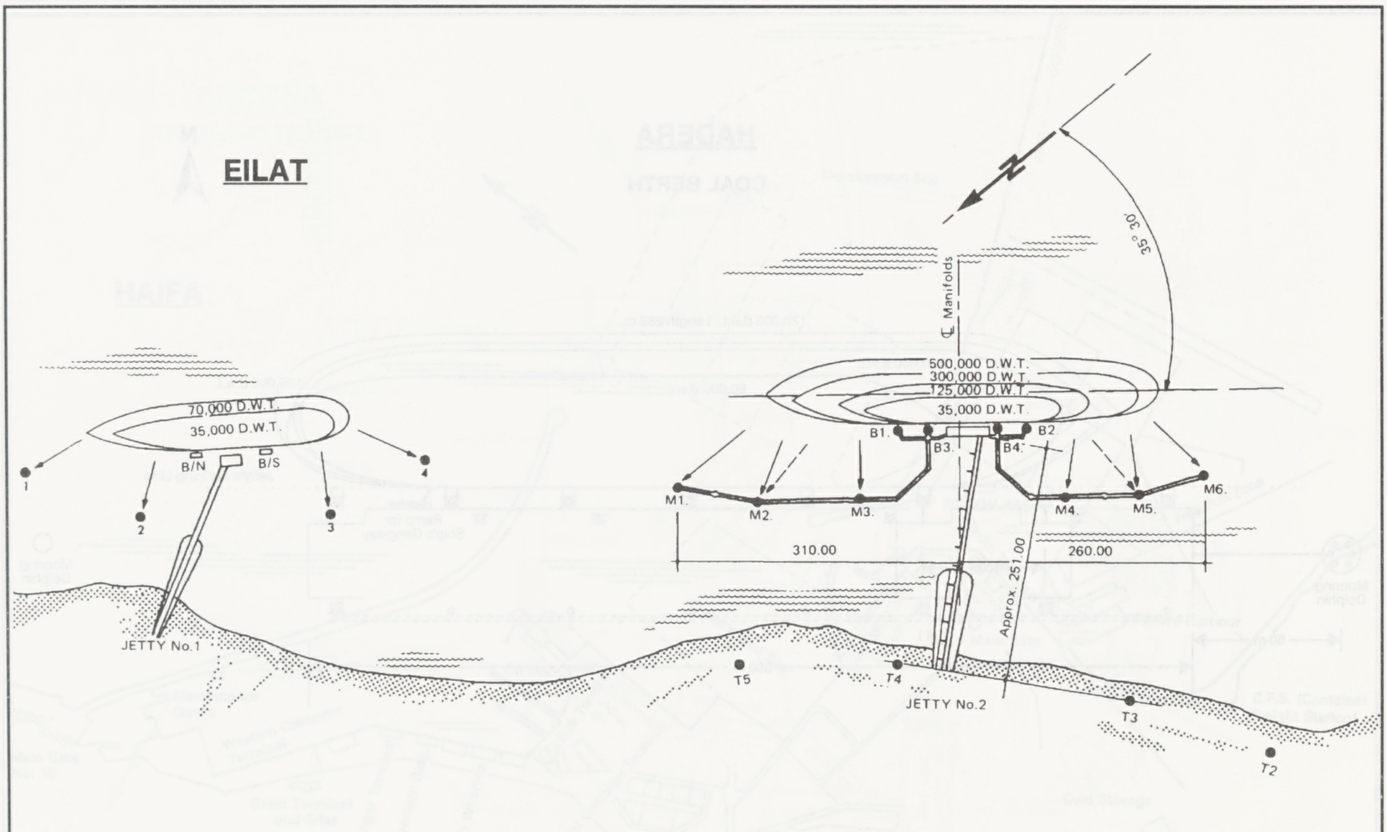

EILAT
Old Port
(N. Jetty)
1
2
3
4
5
Anchorage
6
7
8
9
10
11
12
JORDAN
ISRAEL
New Port
(S. Jetty)
Oil Jetties
Inner Port
Outer Port
International Boundary
AQABA
ISRAEL
JORDAN

EILAT

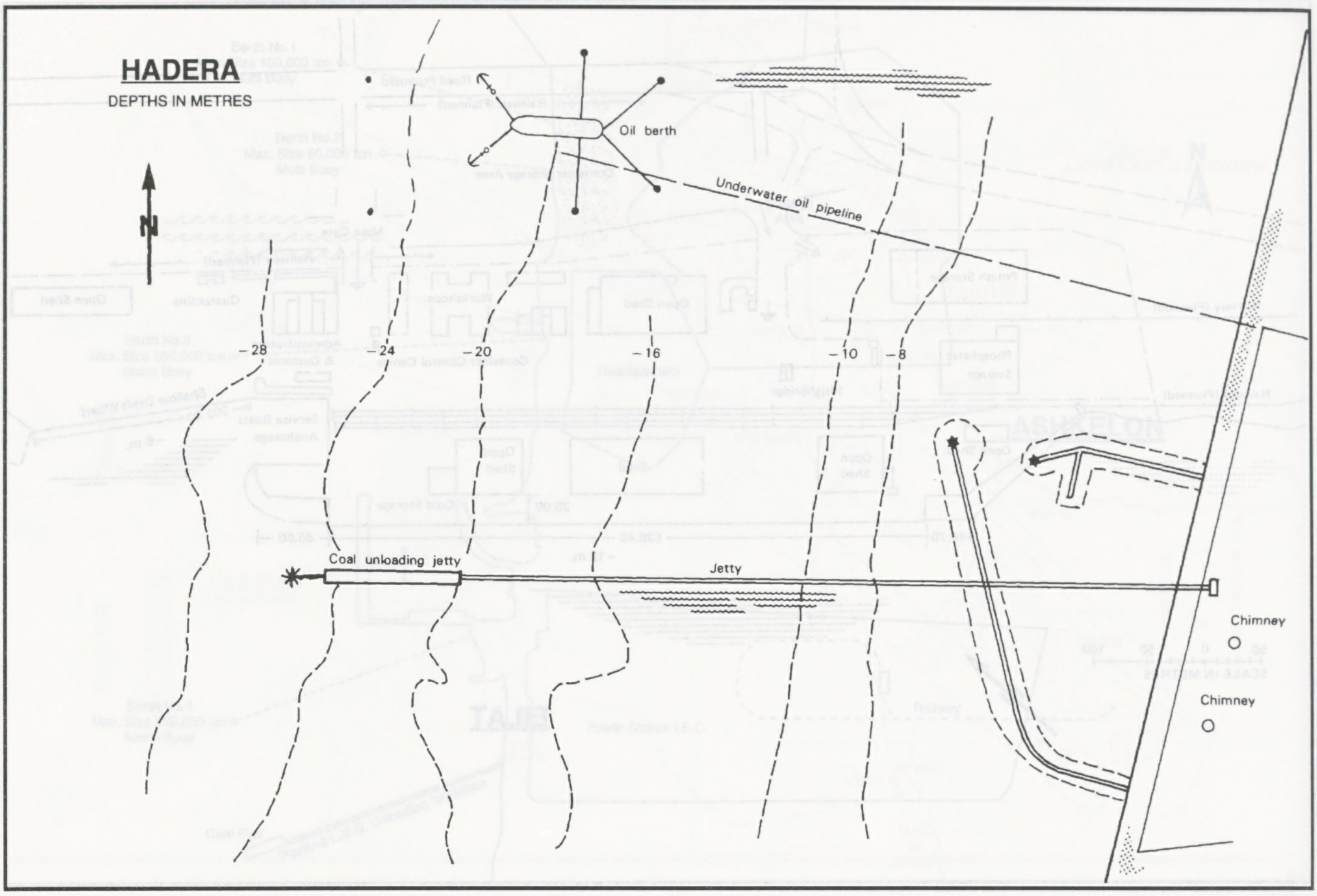
ANCHORAGE POSITIONS
EILAT PORT

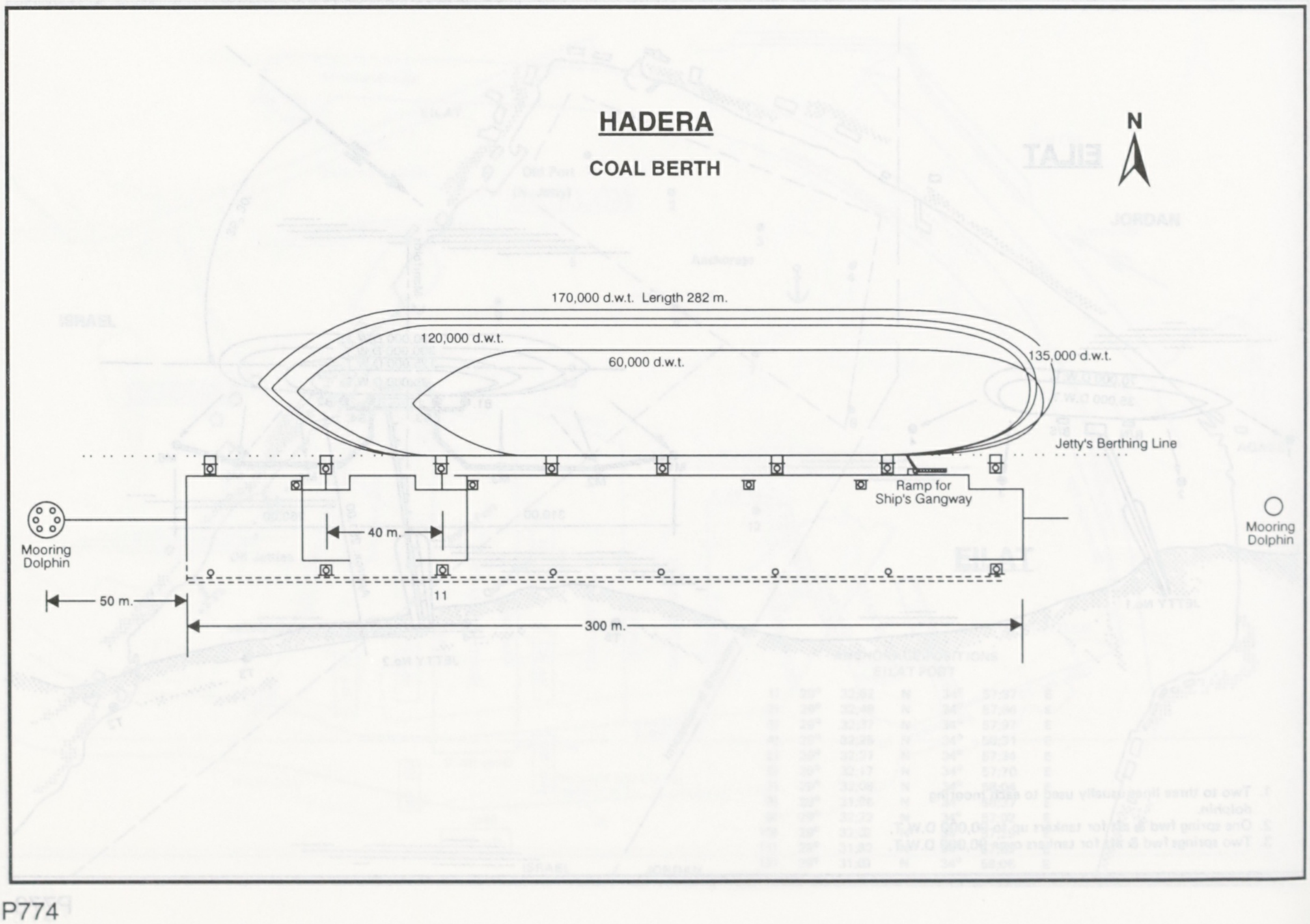
1)	29°	32;62	N	34°	57;37	E
2)	29°	32;49	N	34°	57;64	E
3)	29°	32;37	N	34°	57;97	E
4)	29°	32;25	N	34°	58;31	E
5)	29°	32;37	N	34°	57;34	E
6)	29°	32;17	N	34°	57;70	E
7)	29°	32;06	N	34°	58;04	E
8)	29°	31;96	N	34°	58;37	E
9)	29°	32;22	N	34°	57;02	E
10)	29°	32;02	N	34°	57;29	E
11)	29°	31;82	N	34°	57;65	E
12)	29°	31;69	N	34°	58;06	E

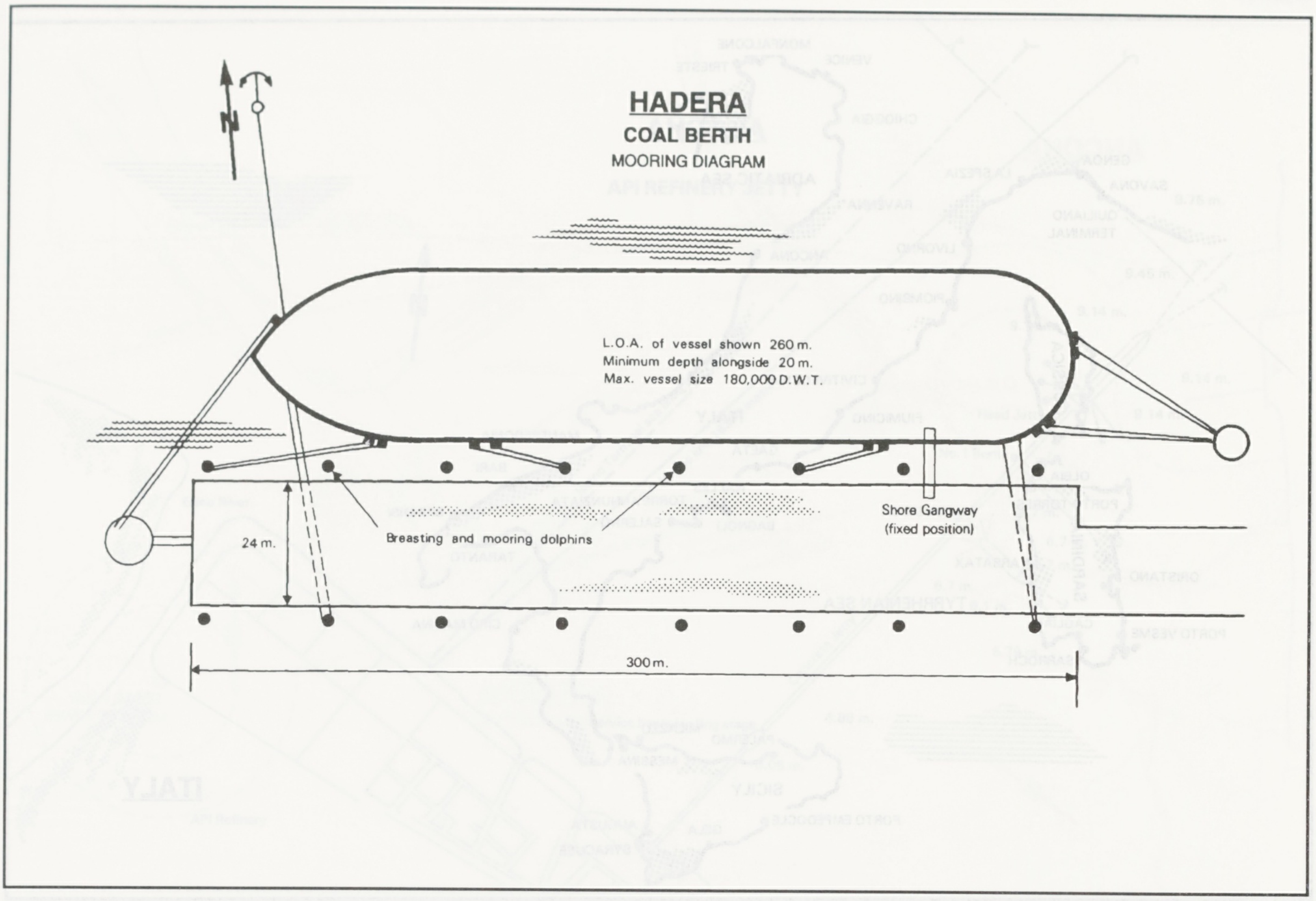

Road Proposed
Railway (Planned)
Container Storage Area
Main Gate
Railway (Planned)
Potash Storage
Railway (Planned)
Open Shed
Workshops
Quarantine
Open Shed
Phosphates Storage
Container Control Centre
Administration & Customs
Railway (Planned)
Weighbridge
Shallow Draft Wharf
202.00
Service Boats Anchorage
–6 m.
Open Shed.
Open Shed
Shed
Open Shed
25.00
Cold Storage
40.70
528.40
66.60
–12 m.
50 0 50 100
SCALE IN METRES
N
EILAT

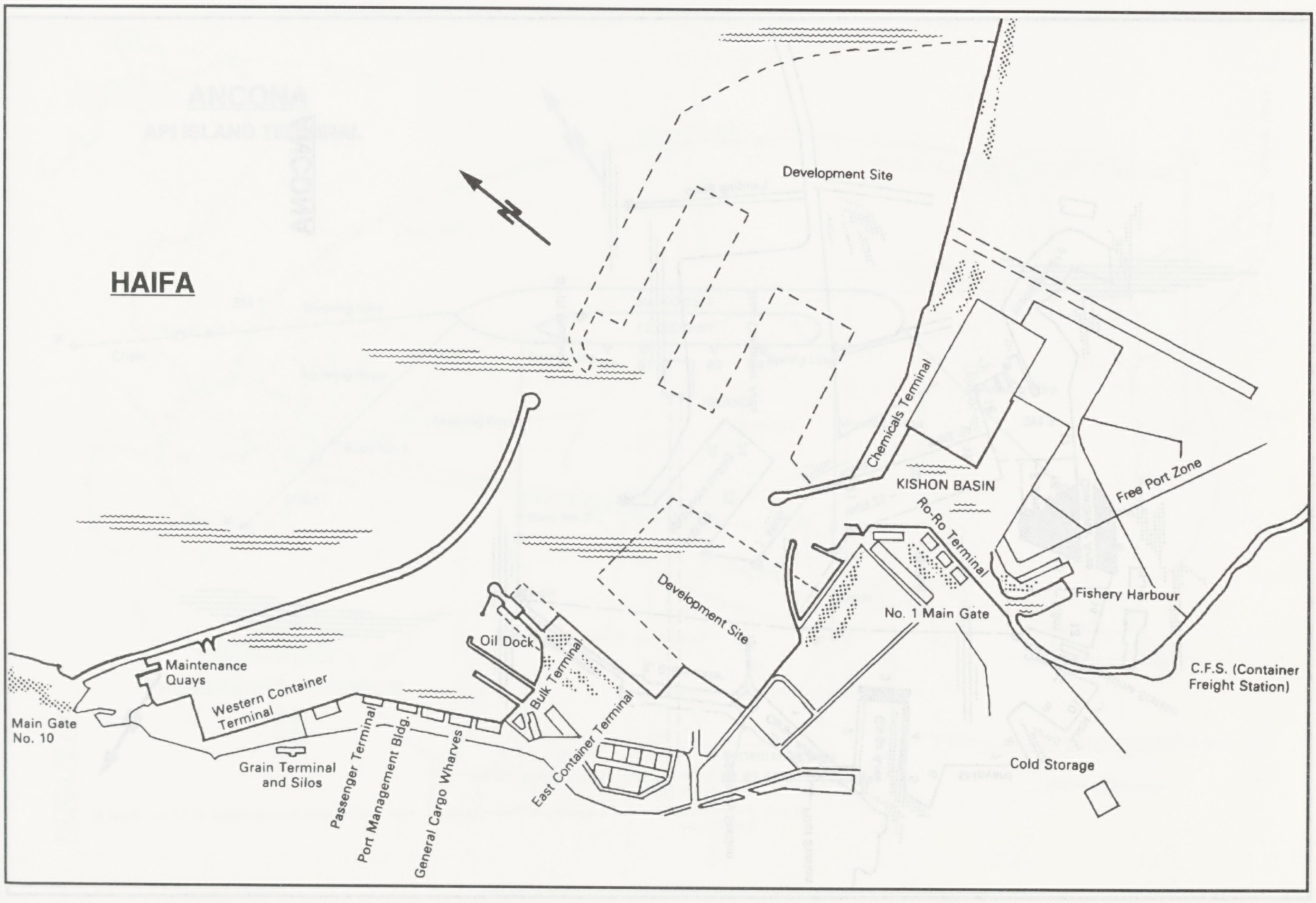

EILAT
N
35° 30'
℄ Manifolds
500,000 D.W.T.
300,000 D.W.T.
125,000 D.W.T.
35,000 D.W.T.
70,000 D.W.T.
35,000 D.W.T.
B/N
B/S
1
2
3
4
B1.
B2
B3.
B4.
M1.
M2.
M3.
M4.
M5.
M6.
310.00
260.00
Approx. 251.00
JETTY No.1
JETTY No.2
T5
T4
T3
T2

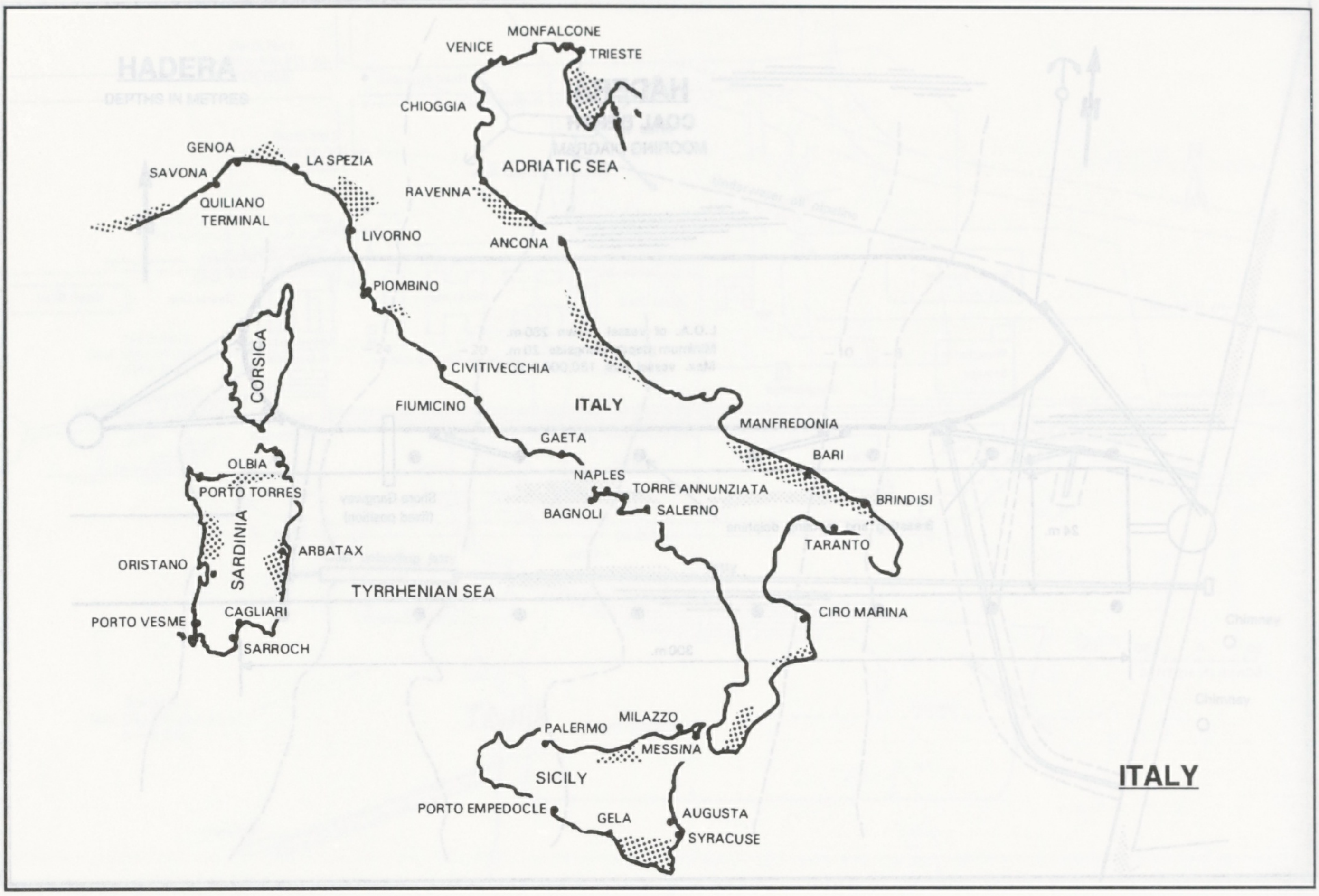
1. Two to three lines usually used to each mooring dolphin.
2. One spring fwd & aft for tankers up to 90,000 D.W.T.
3. Two springs fwd & aft for tankers over 90,000 D.W.T.

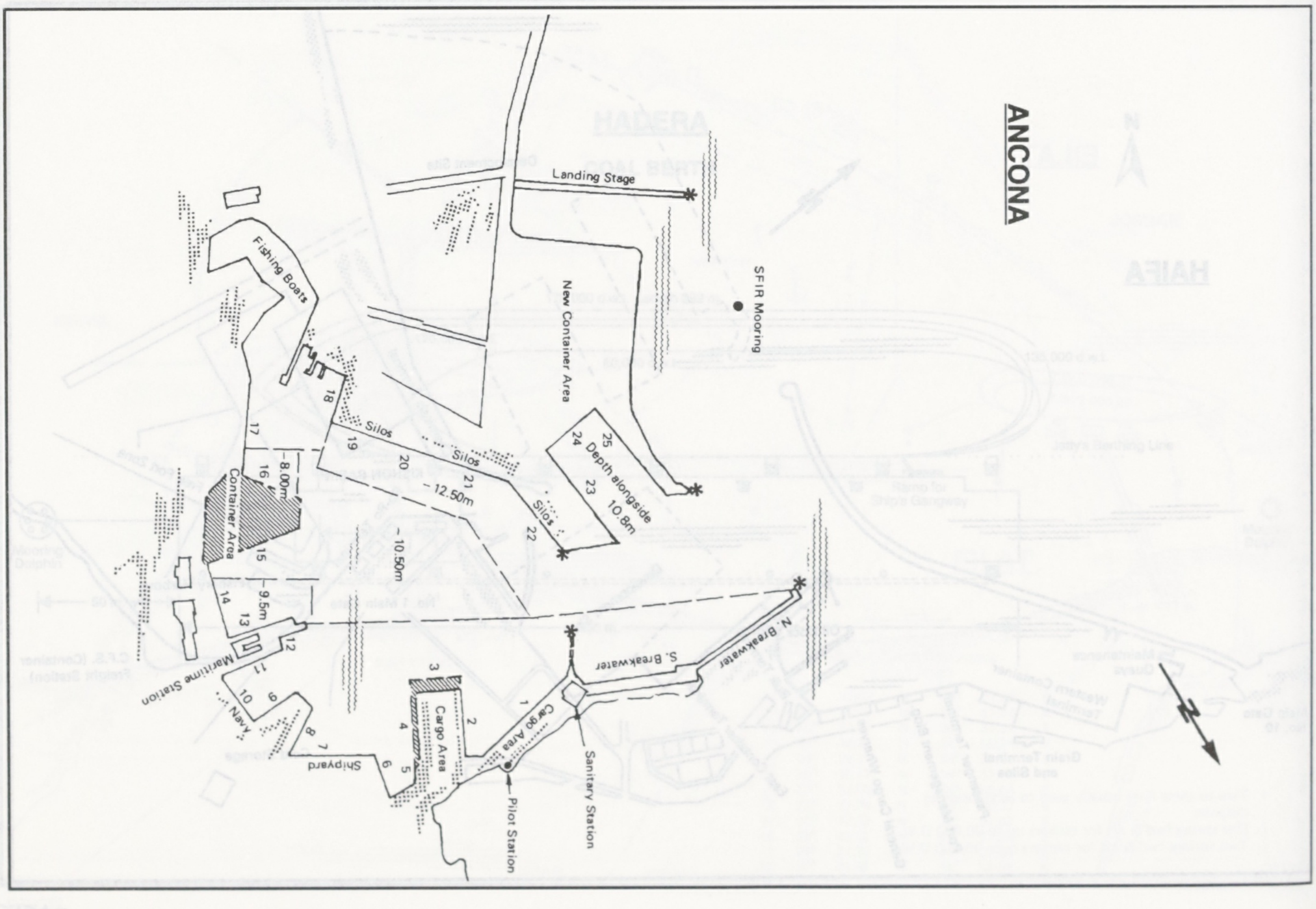

HADERA
DEPTHS IN METRES
N
Oil berth
Underwater oil pipeline
−28
−24
−20
−16
−10
−8
Coal unloading jetty
Jetty
Chimney
Chimney

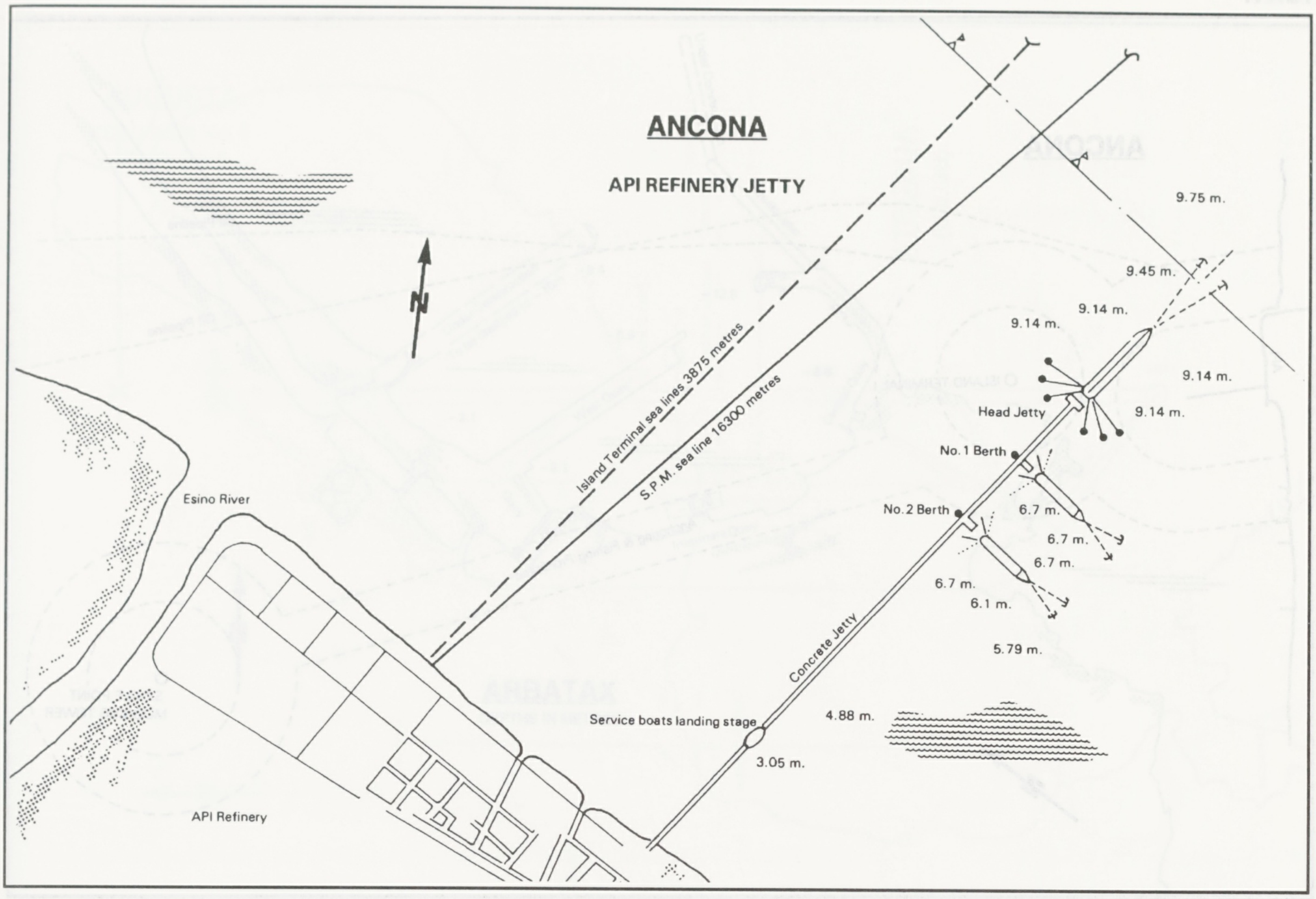

HADERA
COAL BERTH
N
170,000 d.w.t. Length 282 m.
120,000 d.w.t.
60,000 d.w.t.
135,000 d.w.t.
Jetty's Berthing Line
Ramp for Ship's Gangway
Mooring Dolphin
Mooring Dolphin
40 m.
50 m.
11
300 m.

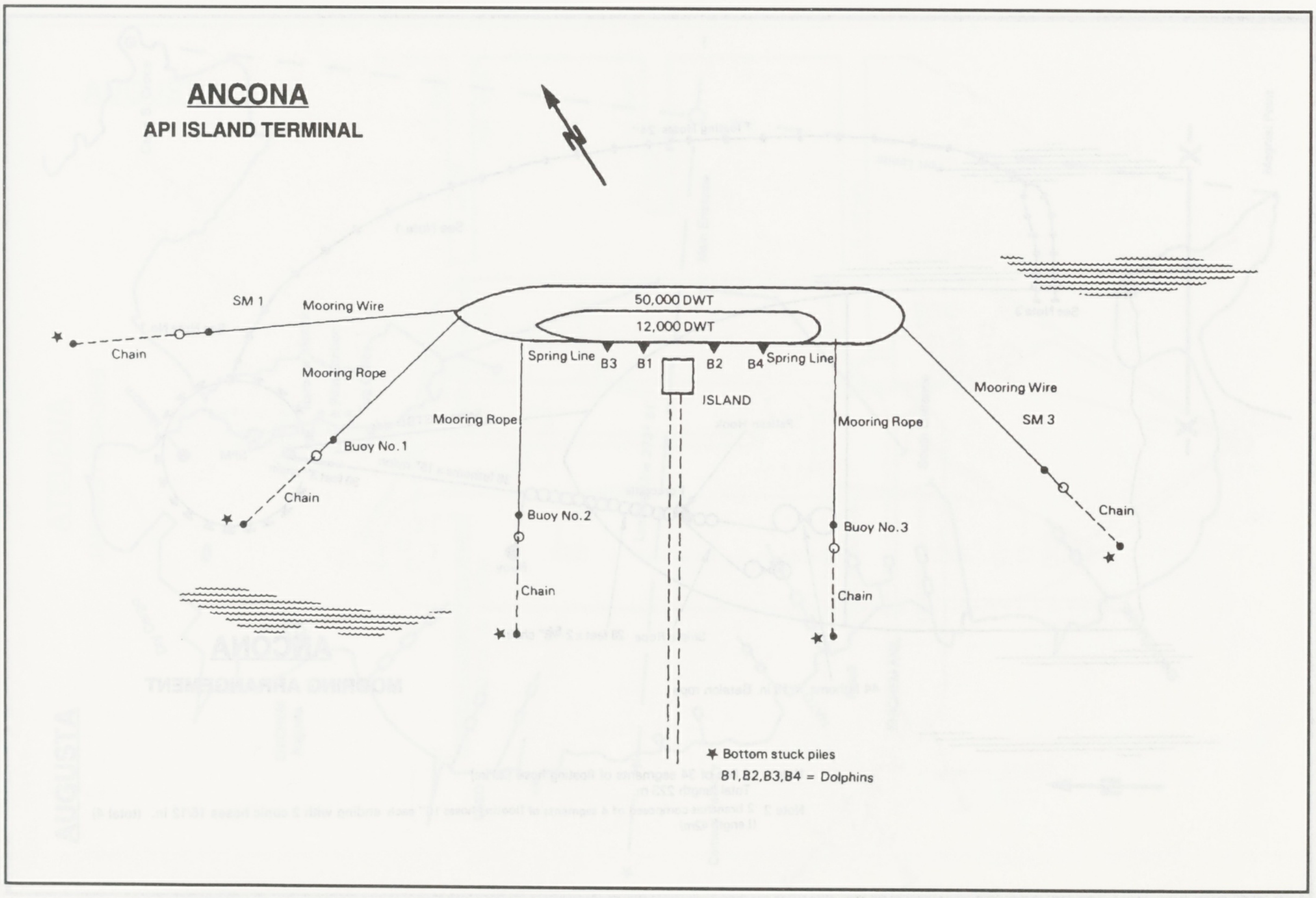

HADERA
COAL BERTH
MOORING DIAGRAM
N
L.O.A. of vessel shown 260 m.
Minimum depth alongside 20 m.
Max. vessel size 180,000 D.W.T.
Shore Gangway
(fixed position)
24 m.
Breasting and mooring dolphins
300 m.

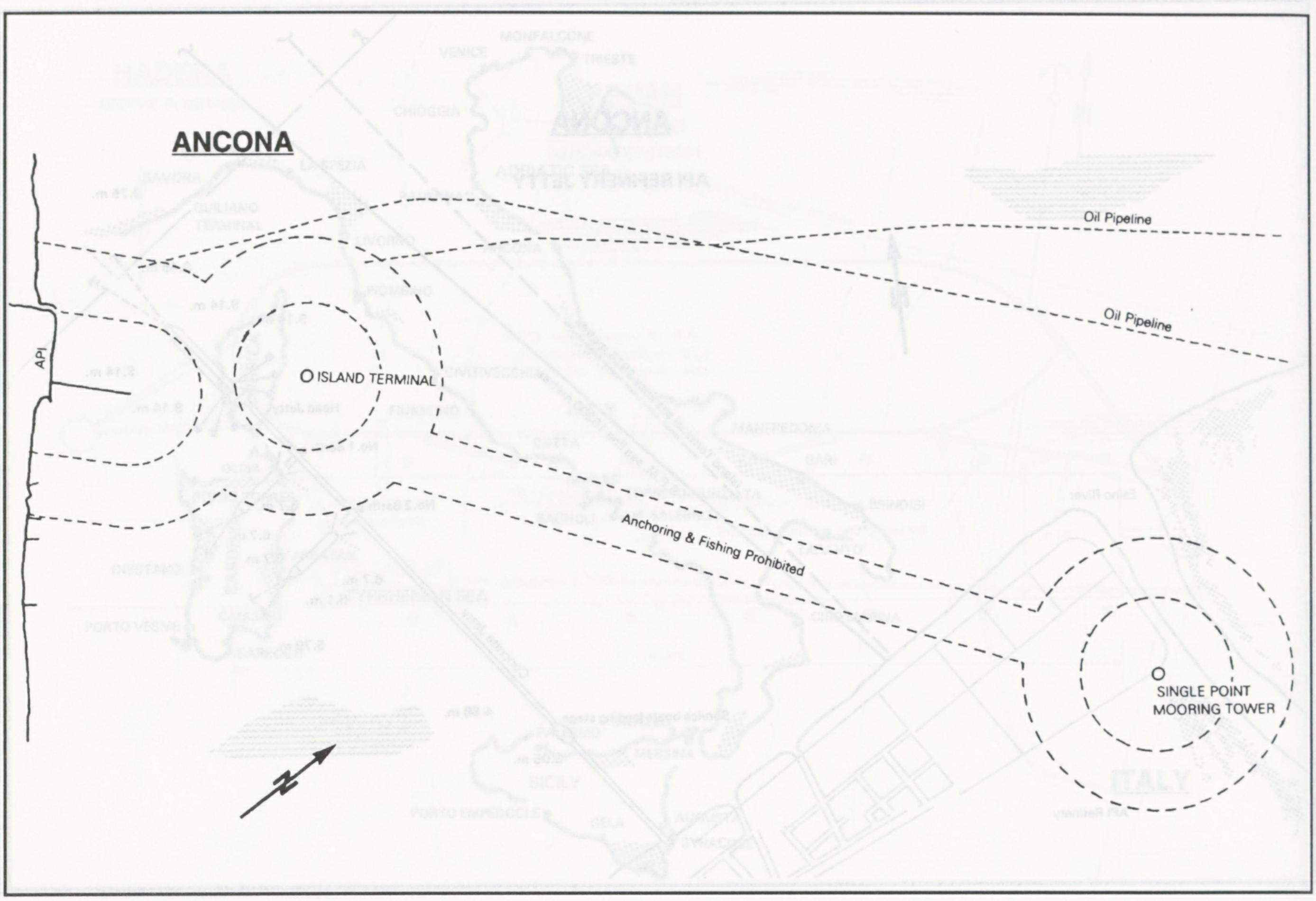

HAIFA
N
Development Site
Chemicals Terminal
KISHON BASIN
Free Port Zone
Ro-Ro Terminal
Fishery Harbour
No. 1 Main Gate
C.F.S. (Container
Freight Station)
Development Site
Oil Dock
Bulk Terminal
East Container Terminal
Maintenance
Quays
Western Container
Terminal
Main Gate
No. 10
Grain Terminal
and Silos
Passenger Terminal
Port Management Bldg.
General Cargo Wharves
Cold Storage

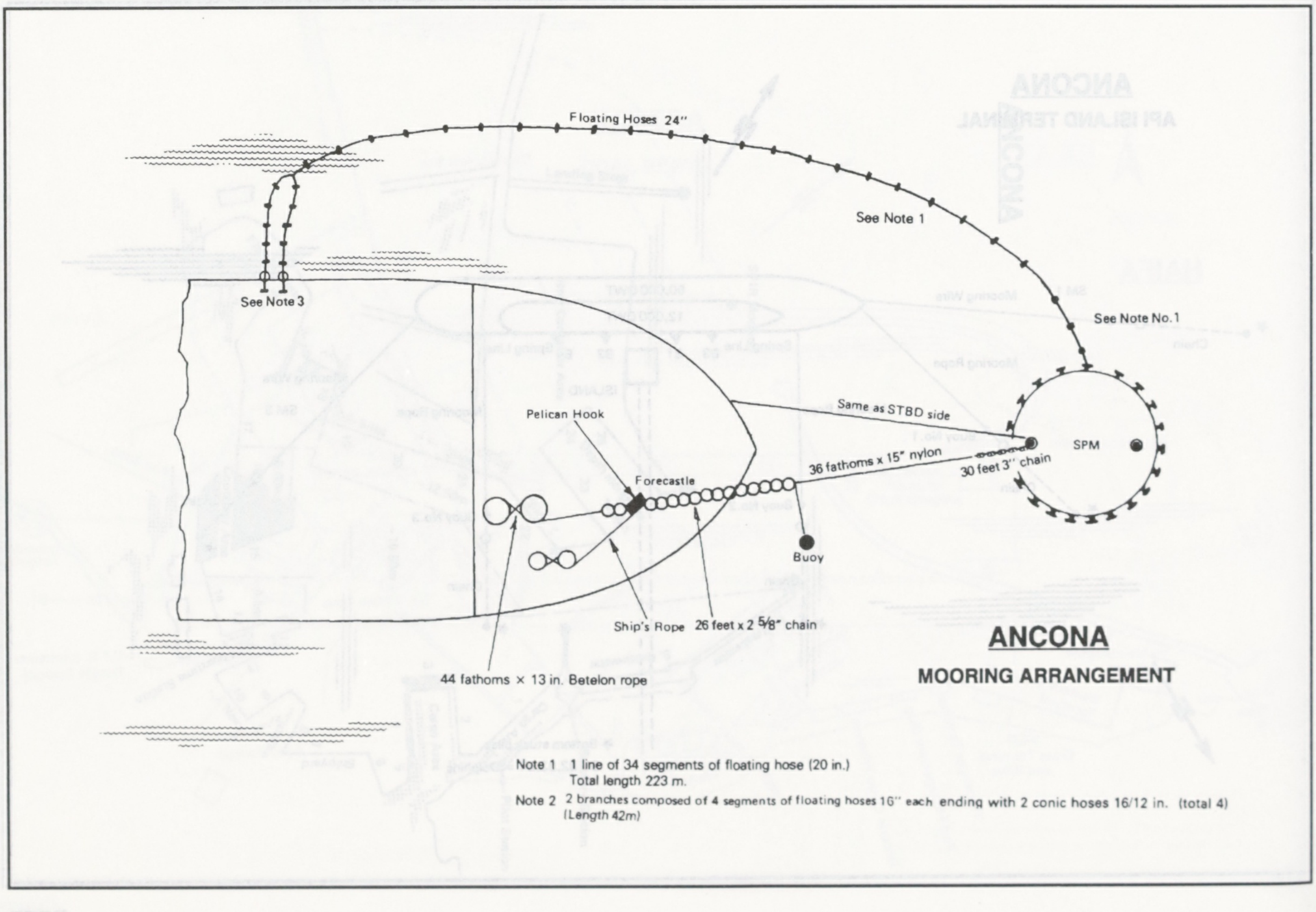

MONFALCONE
VENICE
TRIESTE
CHIOGGIA
ADRIATIC SEA
GENOA
LA SPEZIA
SAVONA
QUILIANO
TERMINAL
RAVENNA
LIVORNO
ANCONA
PIOMBINO
CORSICA
CIVITIVECCHIA
FIUMICINO
ITALY
MANFREDONIA
GAETA
BARI
OLBIA
NAPLES
PORTO TORRES
TORRE ANNUNZIATA
BRINDISI
BAGNOLI
SALERNO
TARANTO
ARBATAX
ORISTANO
SARDINIA
TYRRHENIAN SEA
CIRO MARINA
PORTO VESME
CAGLIARI
SARROCH
MILAZZO
PALERMO
MESSINA
SICILY
PORTO EMPEDOCLE
GELA
AUGUSTA
SYRACUSE
ITALY


ANCONA
Landing Stage
SFIR Mooring
New Container Area
Fishing Boats
18
17
Silos
19
20
Silos
21
-12.50m
Silos
22
25
24
Depth alongside
23
10.8m
16
-8.00m
Container Area
15
-10.50m
14
-9.5m
13
12
11
Maritime Station
10
9
Navy
8
7
Shipyard
6
5
4
3
Cargo Area
2
1
Cargo Area
S. Breakwater
N. Breakwater
Sanitary Station
Pilot Station
N


ANCONA
API REFINERY JETTY
N
Island Terminal sea lines 3875 metres
S.P.M. sea line 16300 metres
9.75 m.
9.45 m.
9.14 m.
9.14 m.
9.14 m.
9.14 m.
Head Jetty
No. 1 Berth
No. 2 Berth
6.7 m.
6.7 m.
6.7 m.
6.7 m.
6.1 m.
5.79 m.
4.88 m.
3.05 m.
Concrete Jetty
Service boats landing stage
Esino River
API Refinery


ANCONA
API ISLAND TERMINAL
N
50,000 DWT
12,000 DWT
SM 1
Mooring Wire
Chain
Mooring Rope
Buoy No. 1
Chain
Spring Line
B3
B1
B2
B4
Spring Line
ISLAND
Mooring Rope
Buoy No. 2
Chain
Mooring Rope
Buoy No. 3
Chain
Mooring Wire
SM 3
Chain
★ Bottom stuck piles
B1,B2,B3,B4 = Dolphins

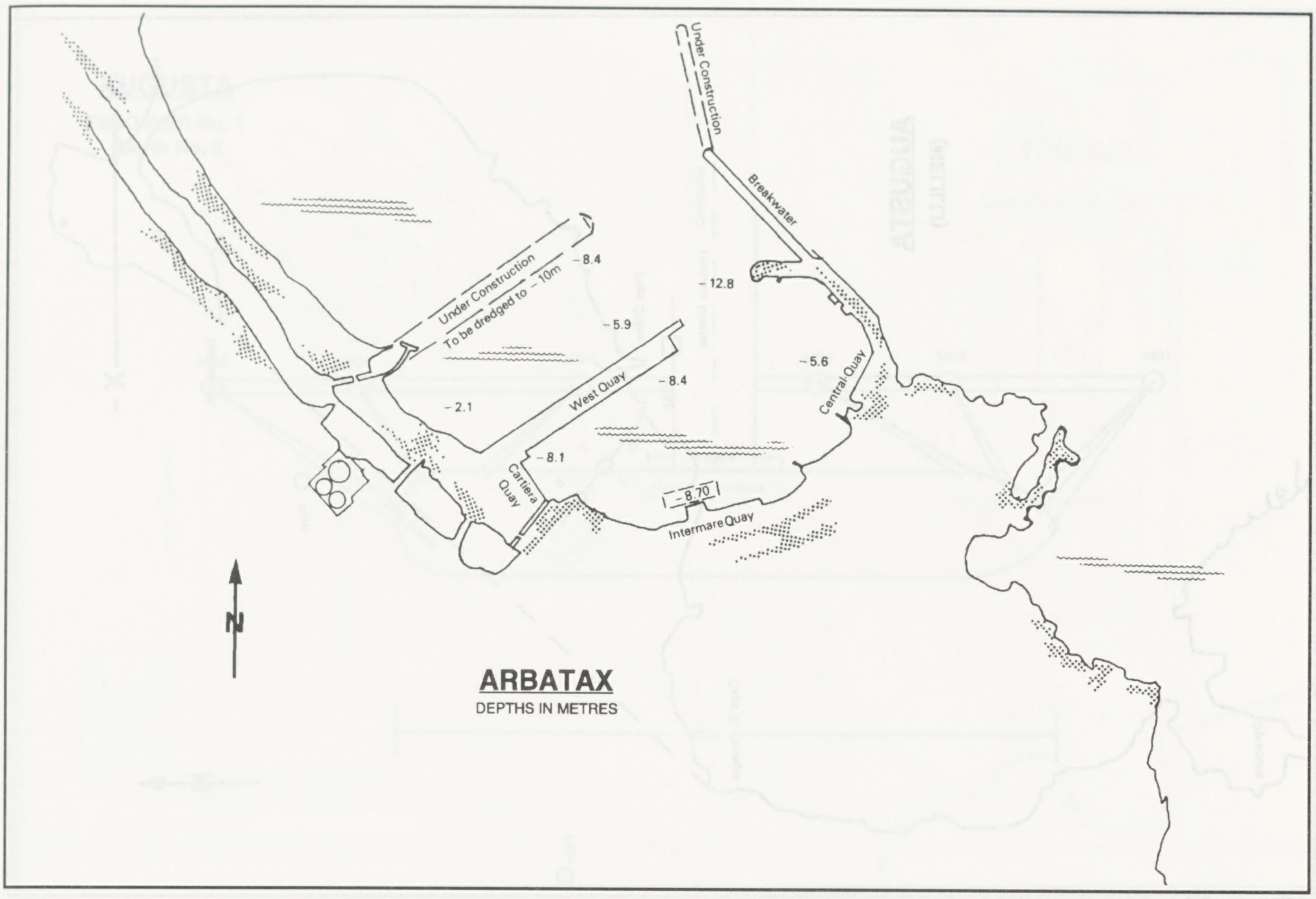

ANCONA
Oil Pipeline
Oil Pipeline
API
ISLAND TERMINAL
Anchoring & Fishing Prohibited
SINGLE POINT MOORING TOWER


Floating Hoses 24"
See Note 1
See Note No.1
See Note 3
Same as STBD side
SPM
Pelican Hook
Forecastle
36 fathoms x 15" nylon
30 feet 3" chain
Buoy
Ship's Rope
26 feet x 2 5/8" chain
44 fathoms × 13 in. Betelon rope

ANCONA
MOORING ARRANGEMENT

Note 1 1 line of 34 segments of floating hose (20 in.)
Total length 223 m.

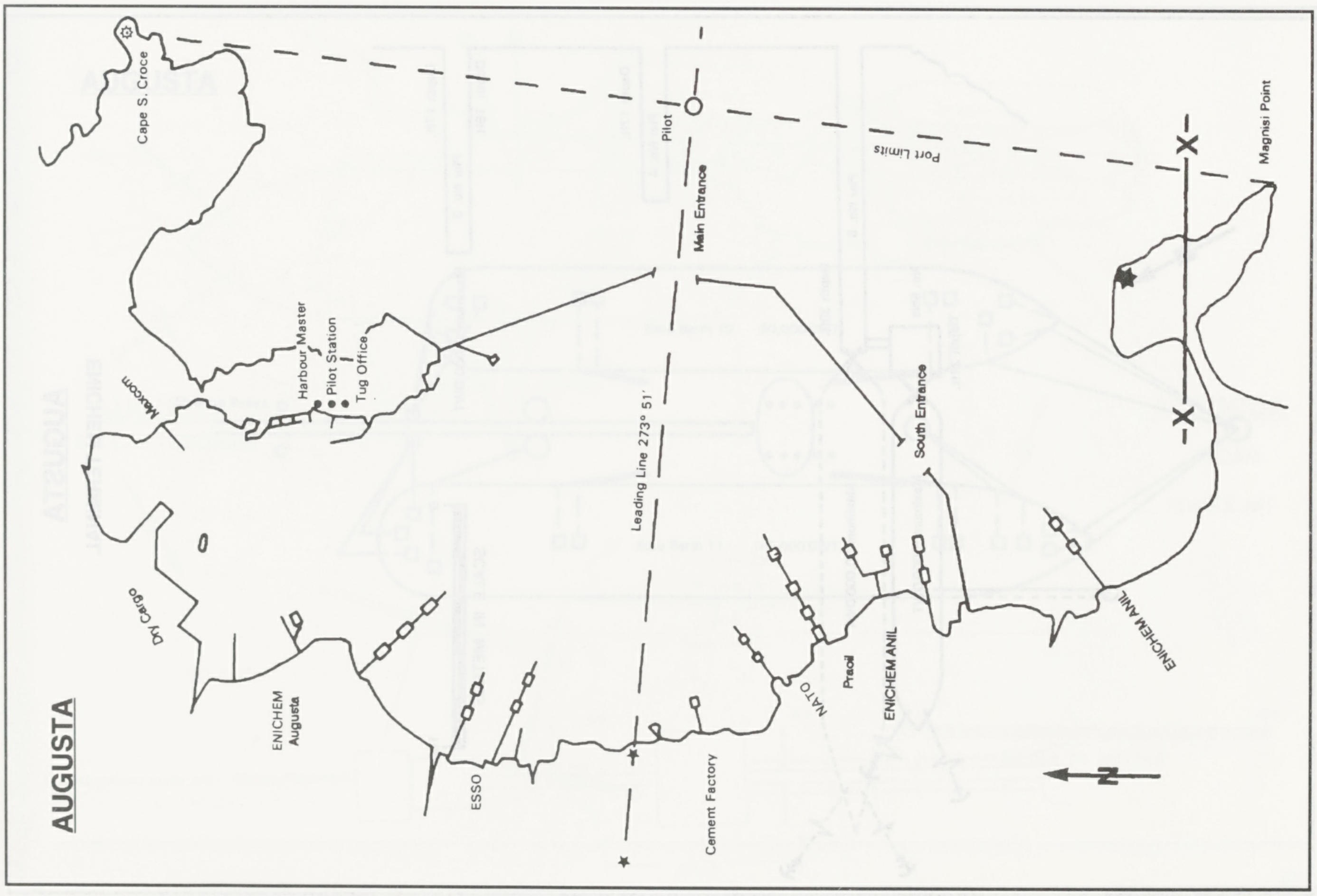
Note 2 2 branches composed of 4 segments of floating hoses 16" each ending with 2 conic hoses 16/12 in. (total 4)
(Length 42m)



ARBATAX

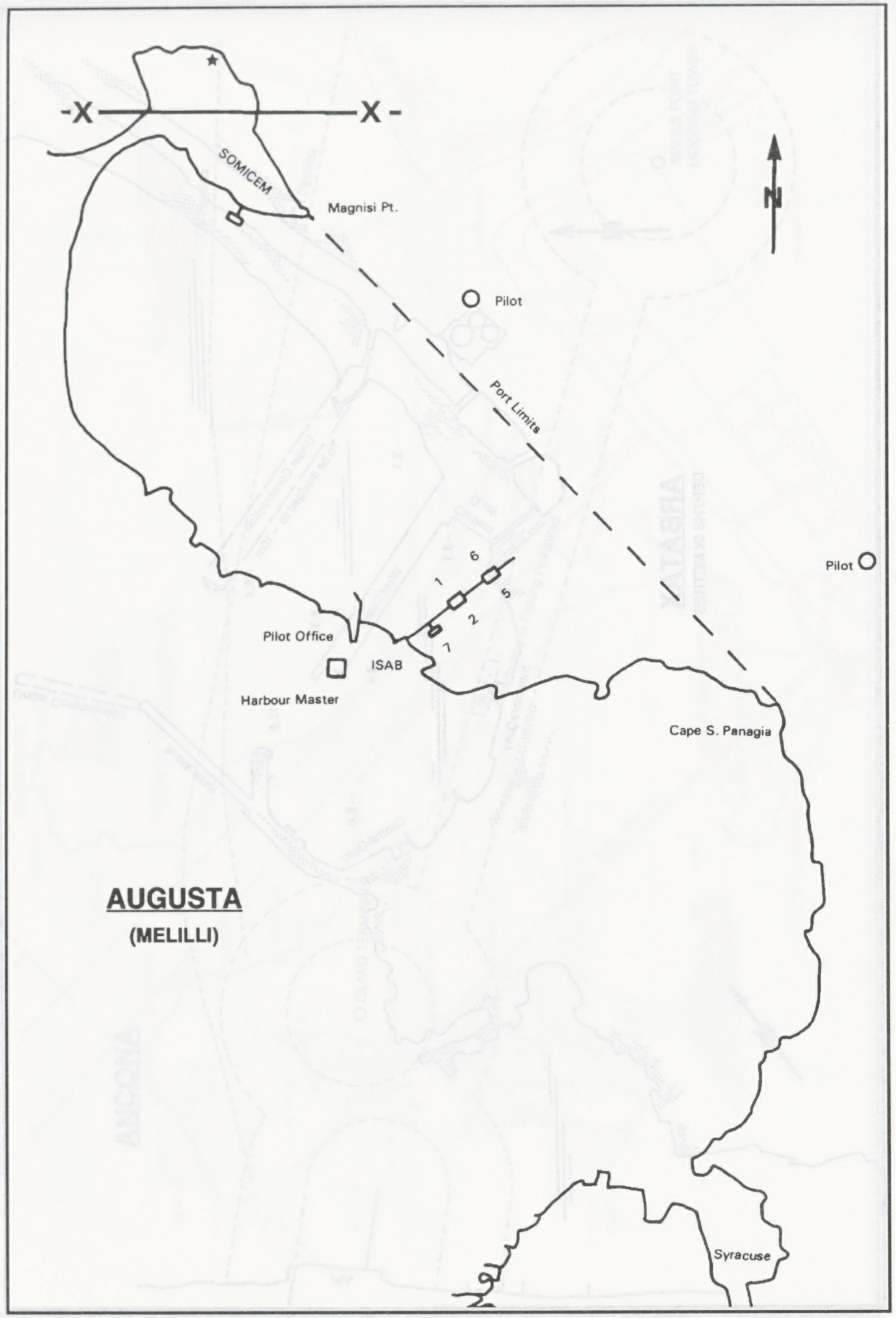
DEPTHS IN METRES

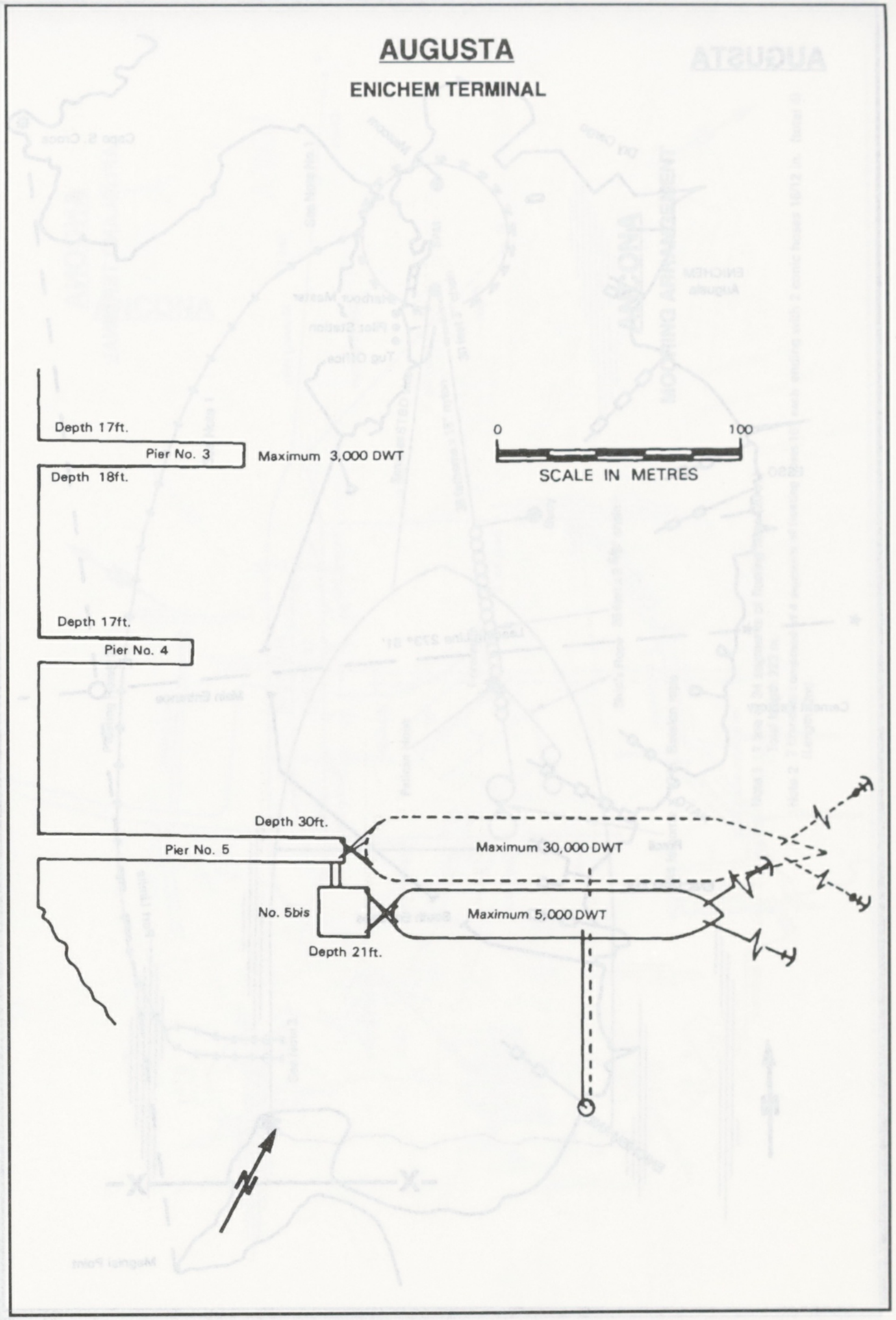
Under Construction
Breakwater
Under Construction
To be dredged to −10m
−8.4
−12.8
−5.9
−5.6
Central Quay
−8.4
West Quay
−2.1
−8.1
Cartiera Quay
−8.70
Intermare Quay
N



AUGUSTA

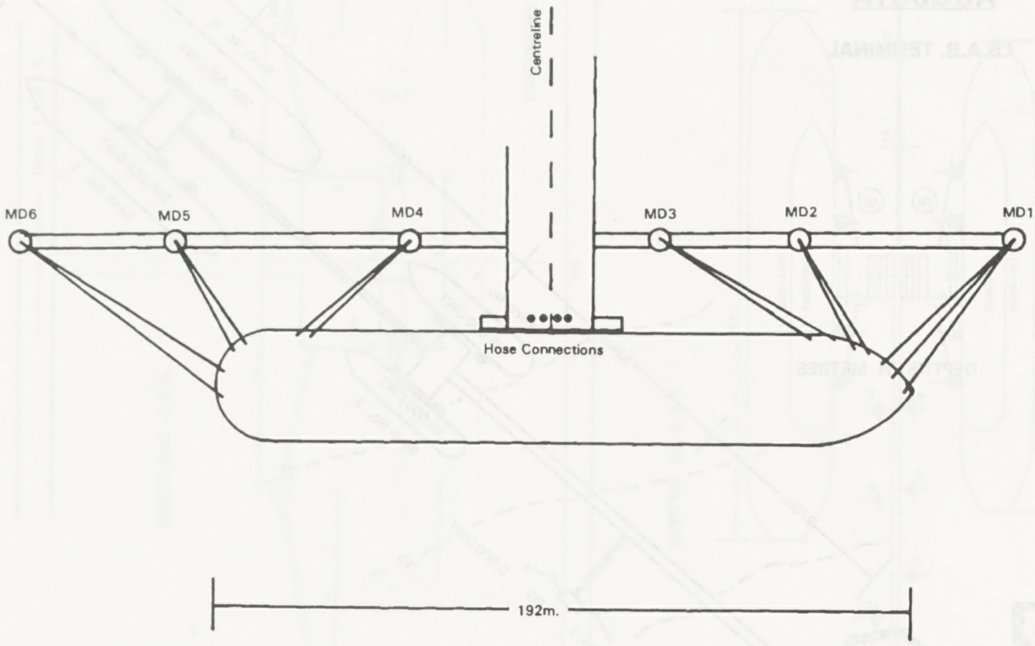
Cape S. Croce
Pilot
Main Entrance
Port Limits
Magnisi Point
Harbour Master
Pilot Station
Tug Office
Maxcom
Leading Line 273° 51'
South Entrance
Dry Cargo
ENICHEM Augusta
ESSO
Cement Factory
NATO
Pracil
ENICHEM ANIL
ENICHEM ANIL
N


-X-
-X-
SOMICEM
Magnisi Pt.
N
Pilot
Port Limits
1
6
5
2
7
Pilot
Pilot Office
ISAB
Harbour Master
Cape S. Panagia
AUGUSTA
(MELILLI)
Syracuse

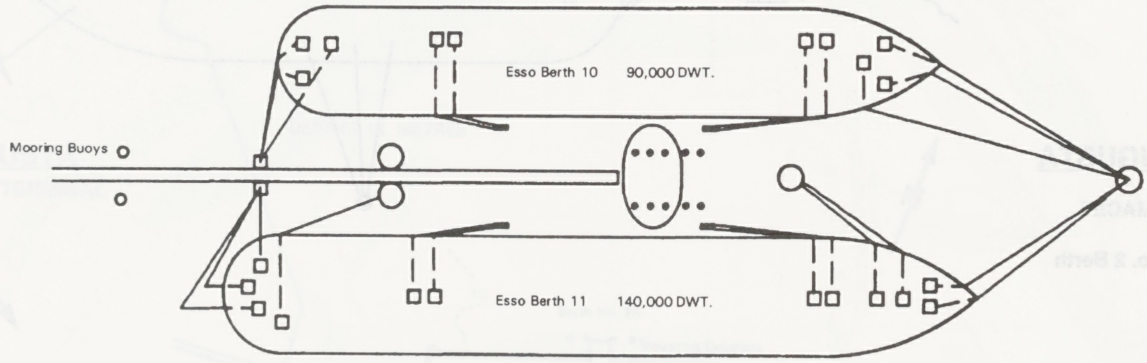

AUGUSTA
ENICHEM TERMINAL
Depth 17ft.
Pier No. 3
Maximum 3,000 DWT
Depth 18ft.
0
100
SCALE IN METRES
Depth 17ft.
Pier No. 4
Depth 30ft.
Pier No. 5
Maximum 30,000 DWT
No. 5bis
Maximum 5,000 DWT
Depth 21ft.

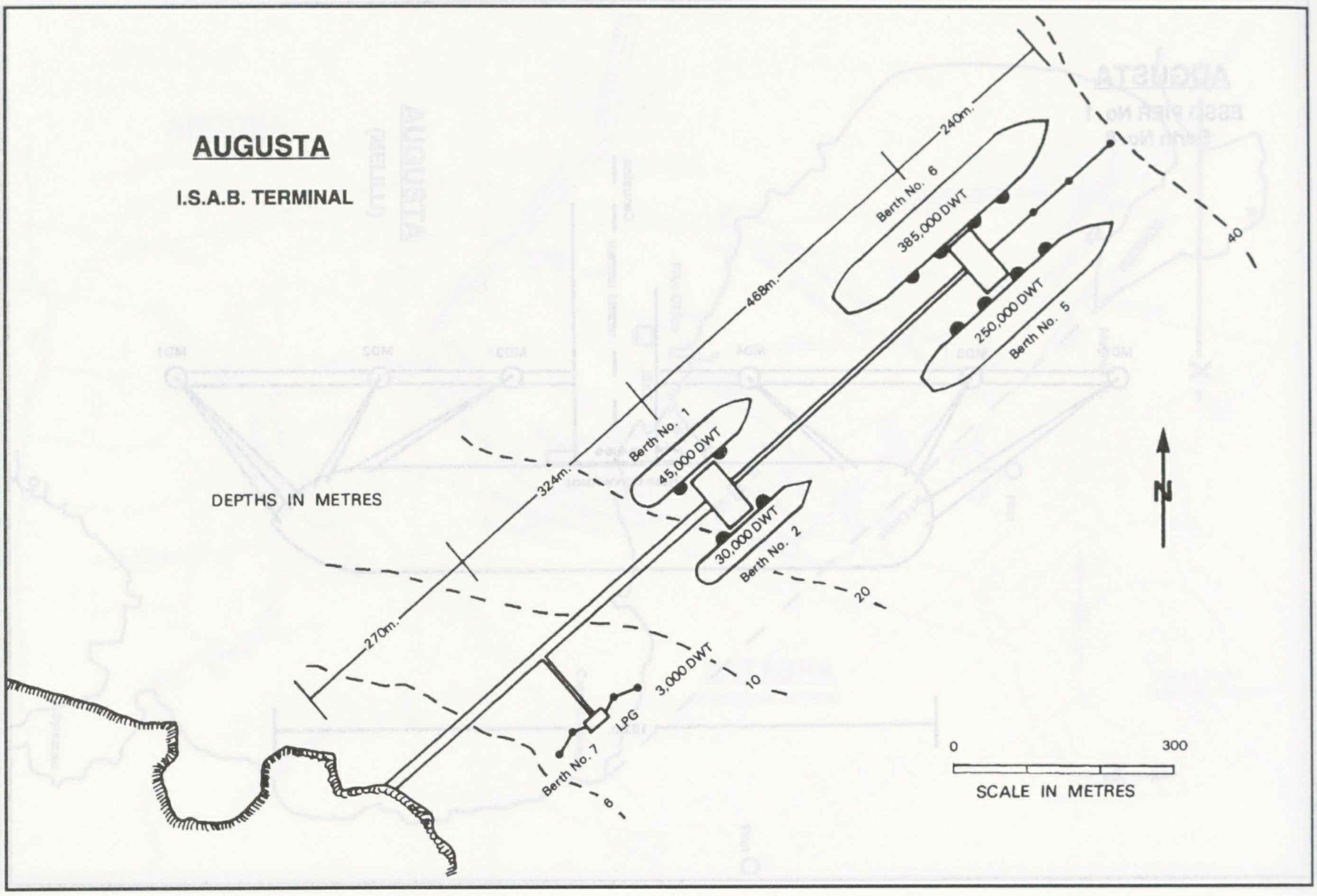
AUGUSTA

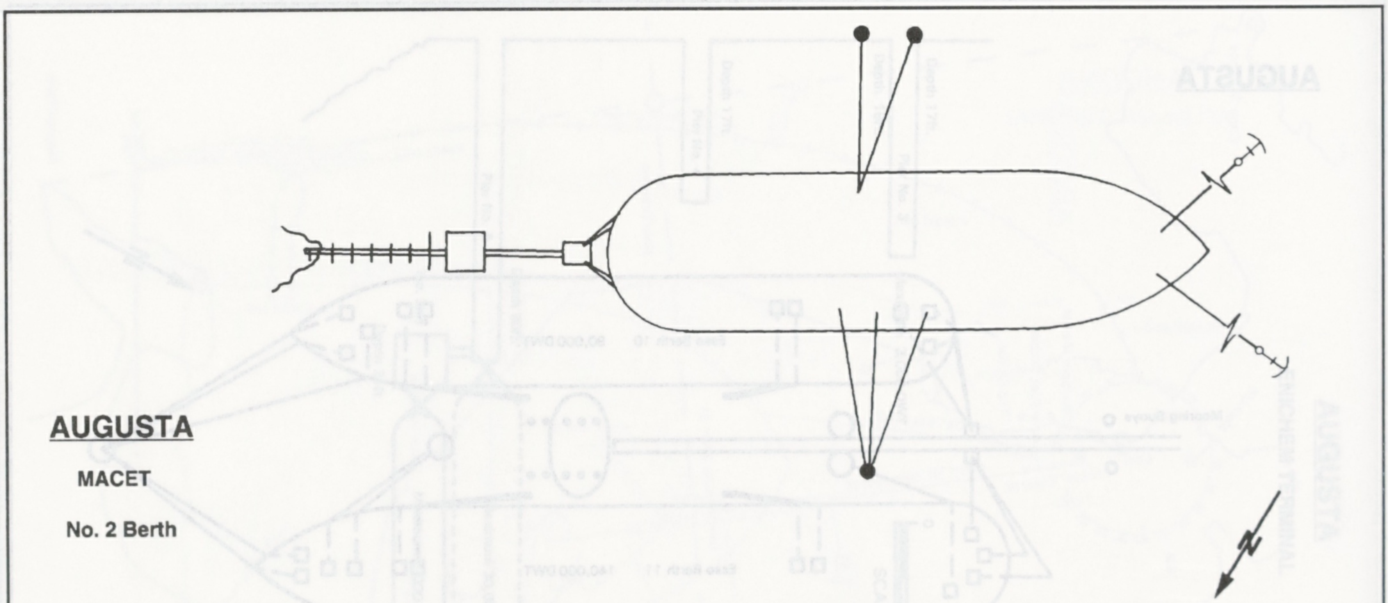
ESSO PIER No. 1
Berth No. 8

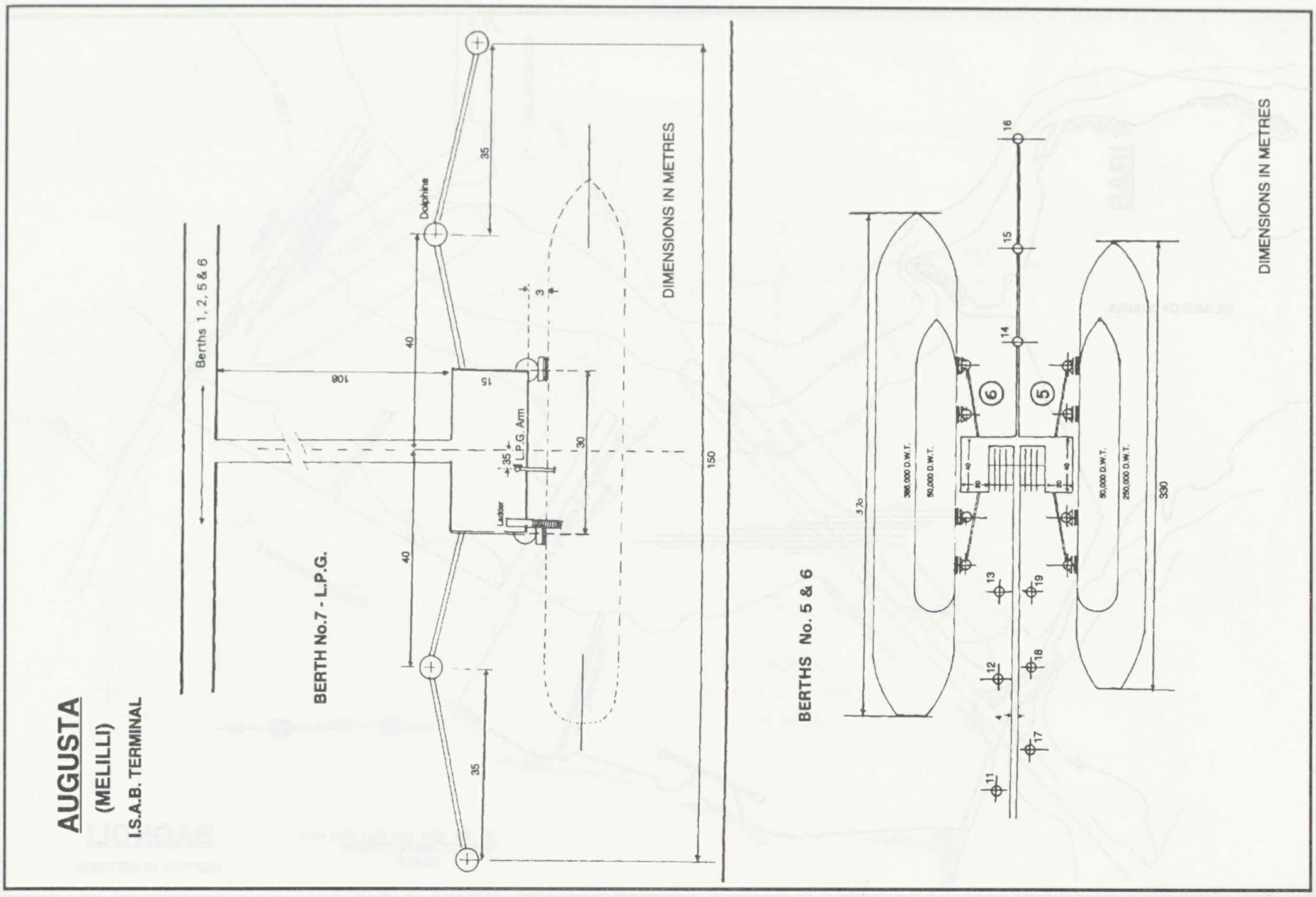

Centreline
MD6
MD5
MD4
MD3
MD2
MD1
Hose Connections
192m.

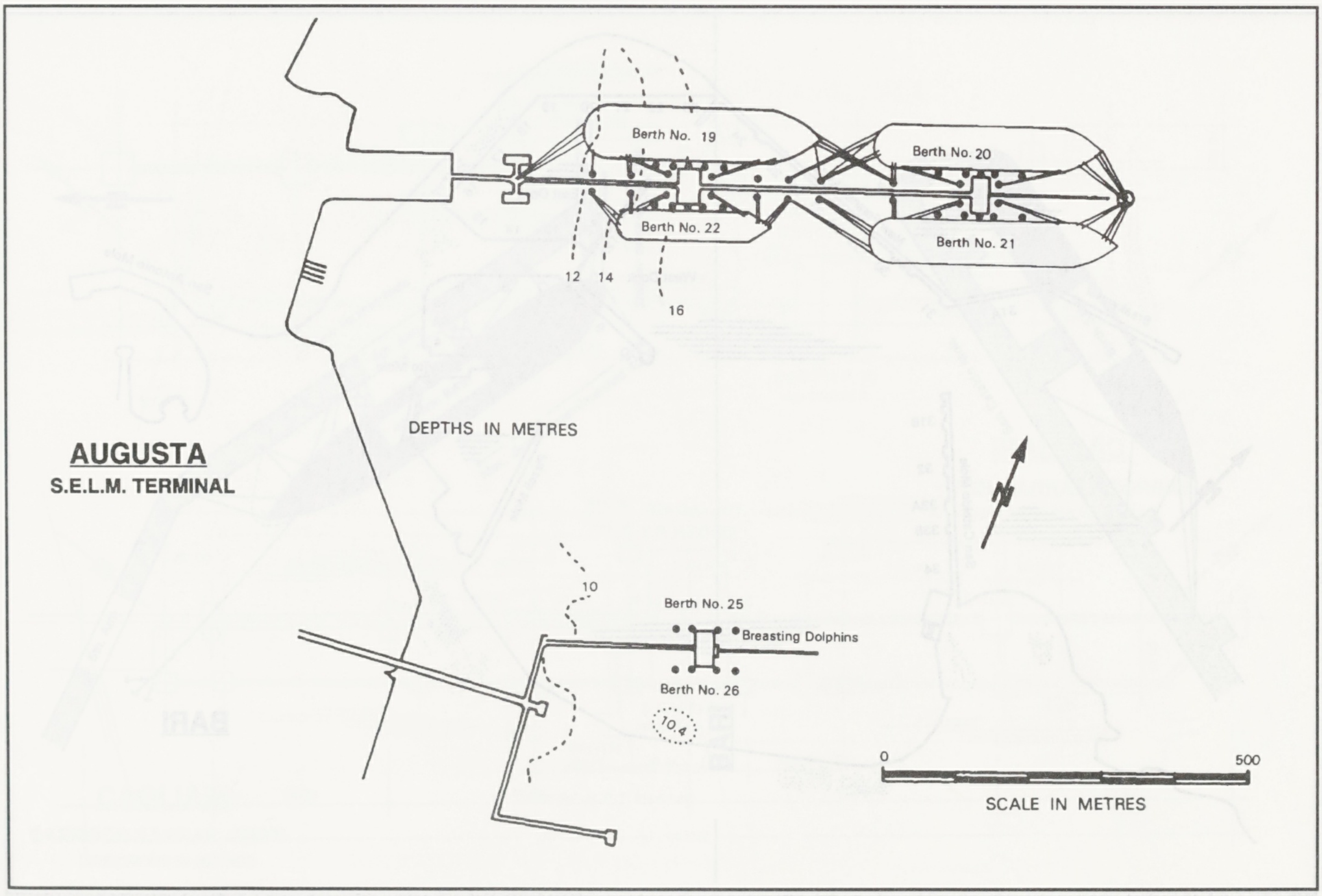
AUGUSTA

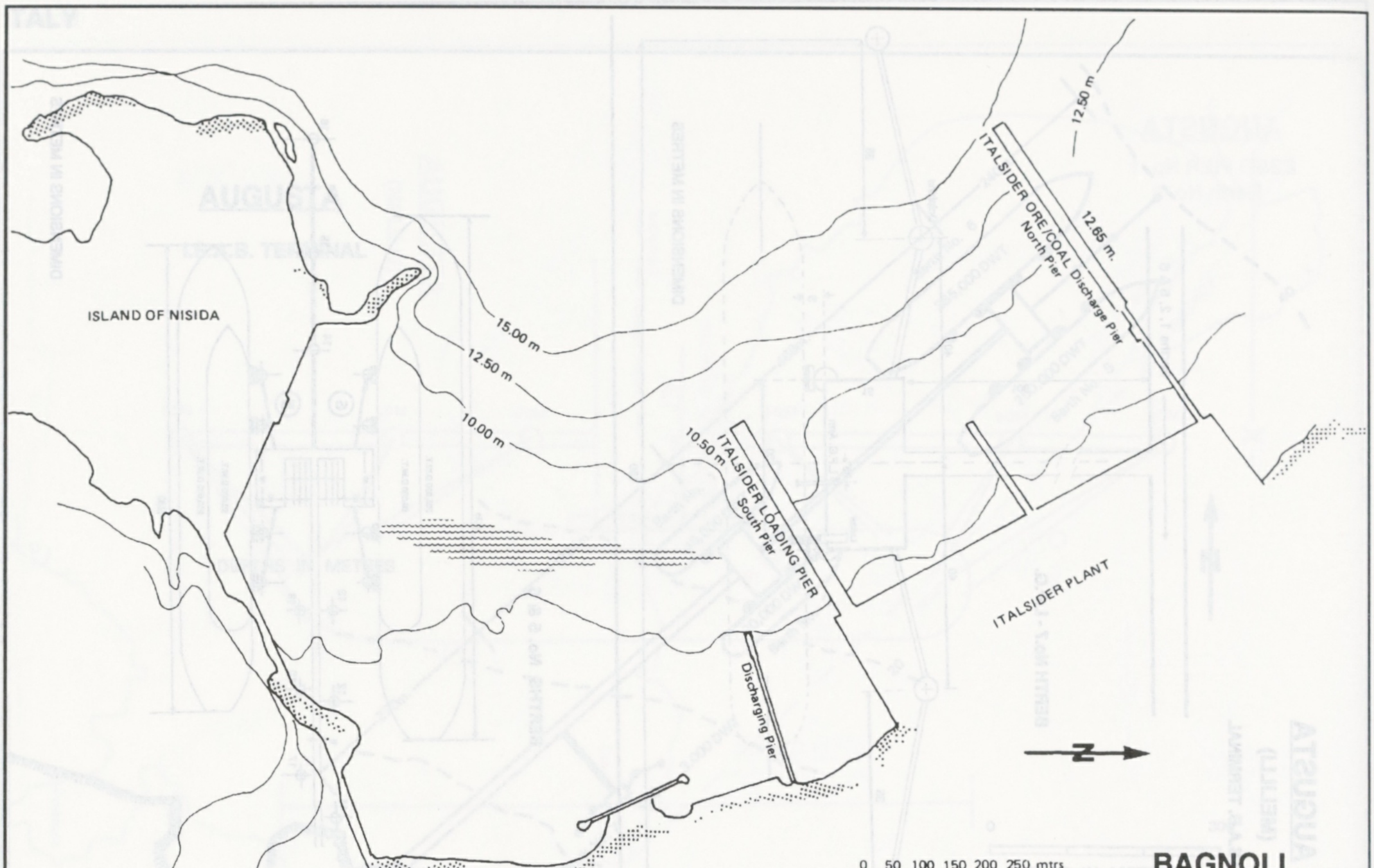

Esso Berth 10 90,000 DWT.
Mooring Buoys
Esso Berth 11 140,000 DWT.

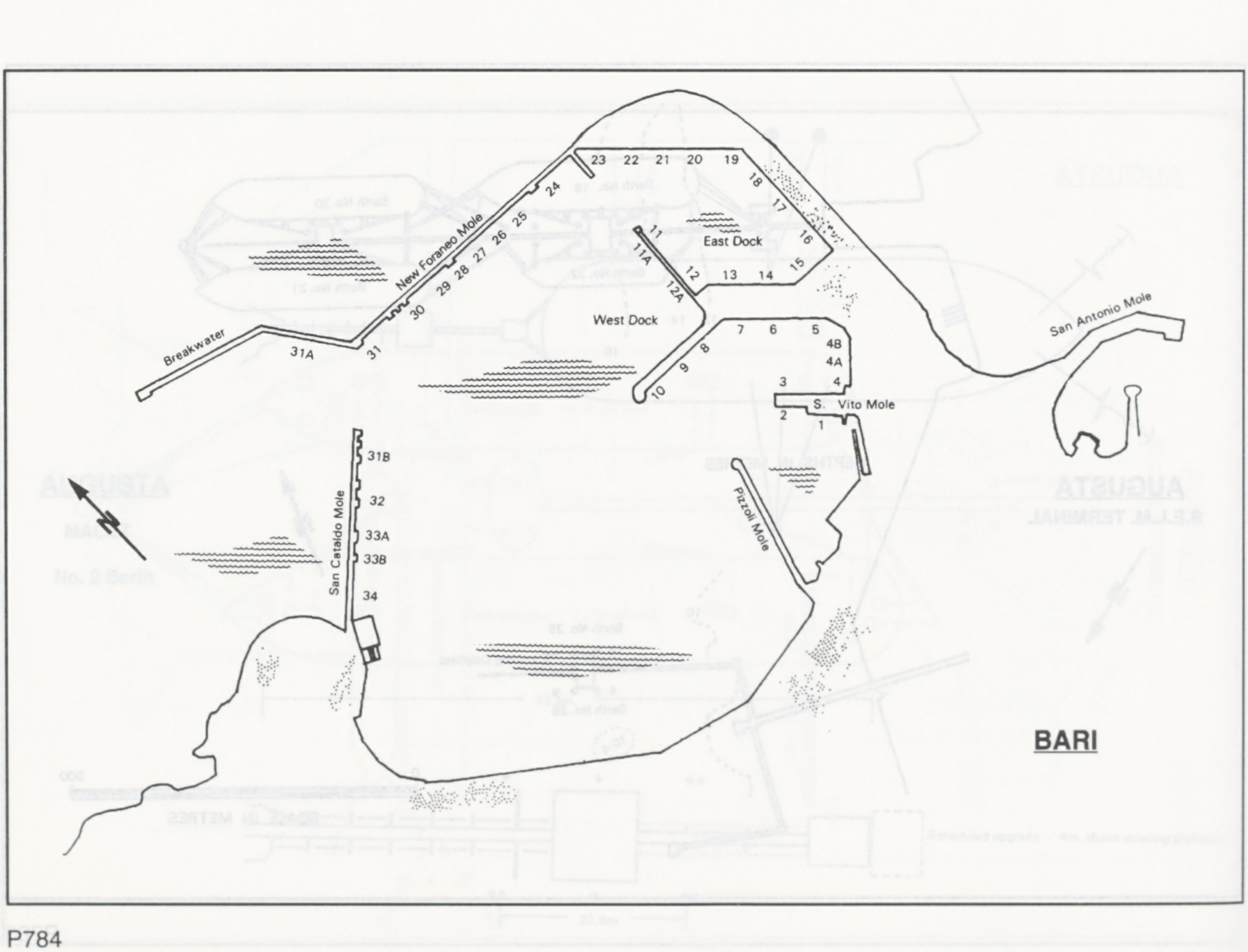

AUGUSTA
I.S.A.B. TERMINAL
DEPTHS IN METRES
240m.
468m.
324m.
270m.
Berth No. 6
385,000 DWT
250,000 DWT
Berth No. 5
Berth No. 1
45,000 DWT
30,000 DWT
Berth No. 2
3,000 DWT
LPG
Berth No. 7
40
20
10
6
N
0
300
SCALE IN METRES

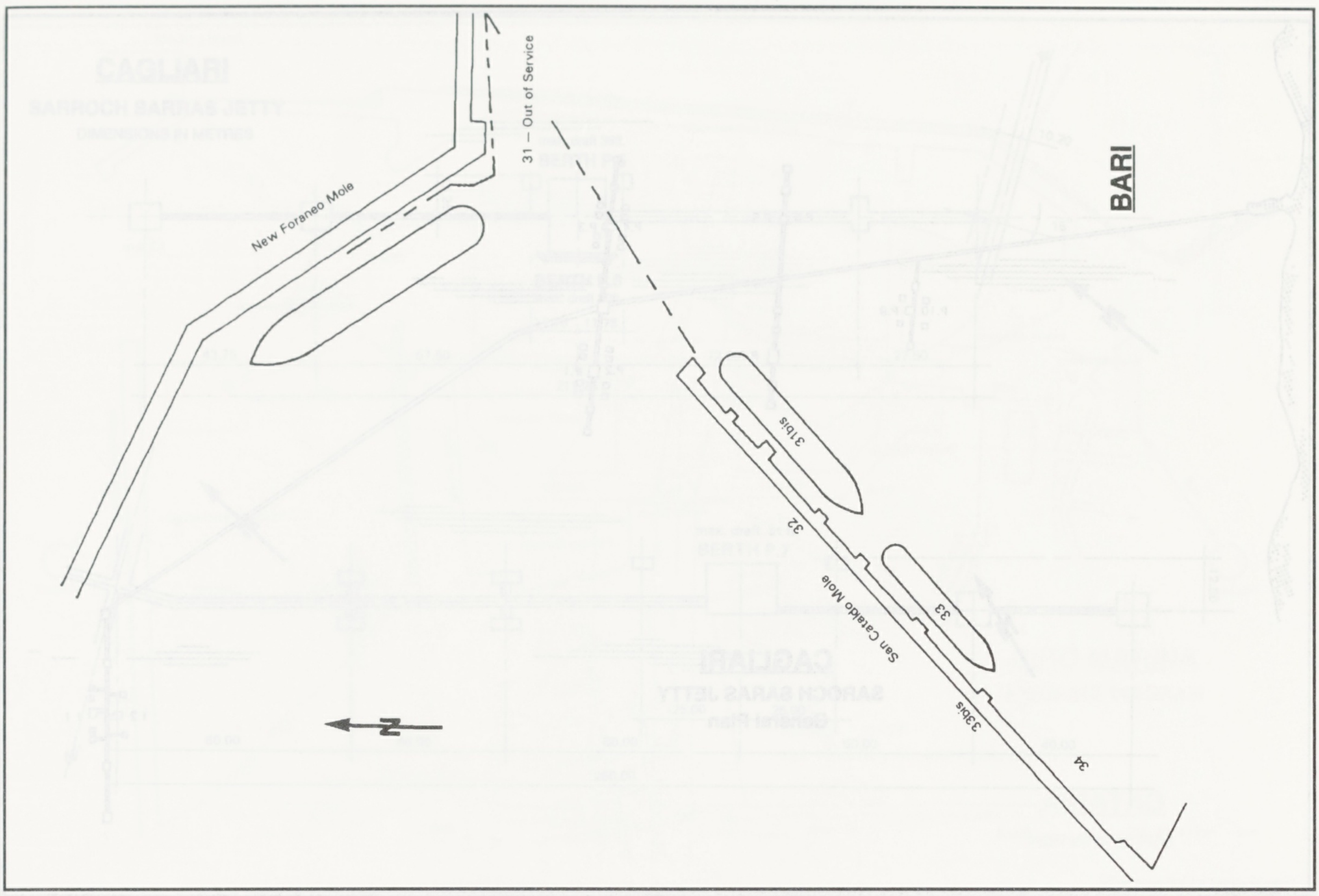

AUGUSTA
MACET
No. 2 Berth
N
73.5m.
Scheduled upgrade – 4m. above existing platform.
22.8m.

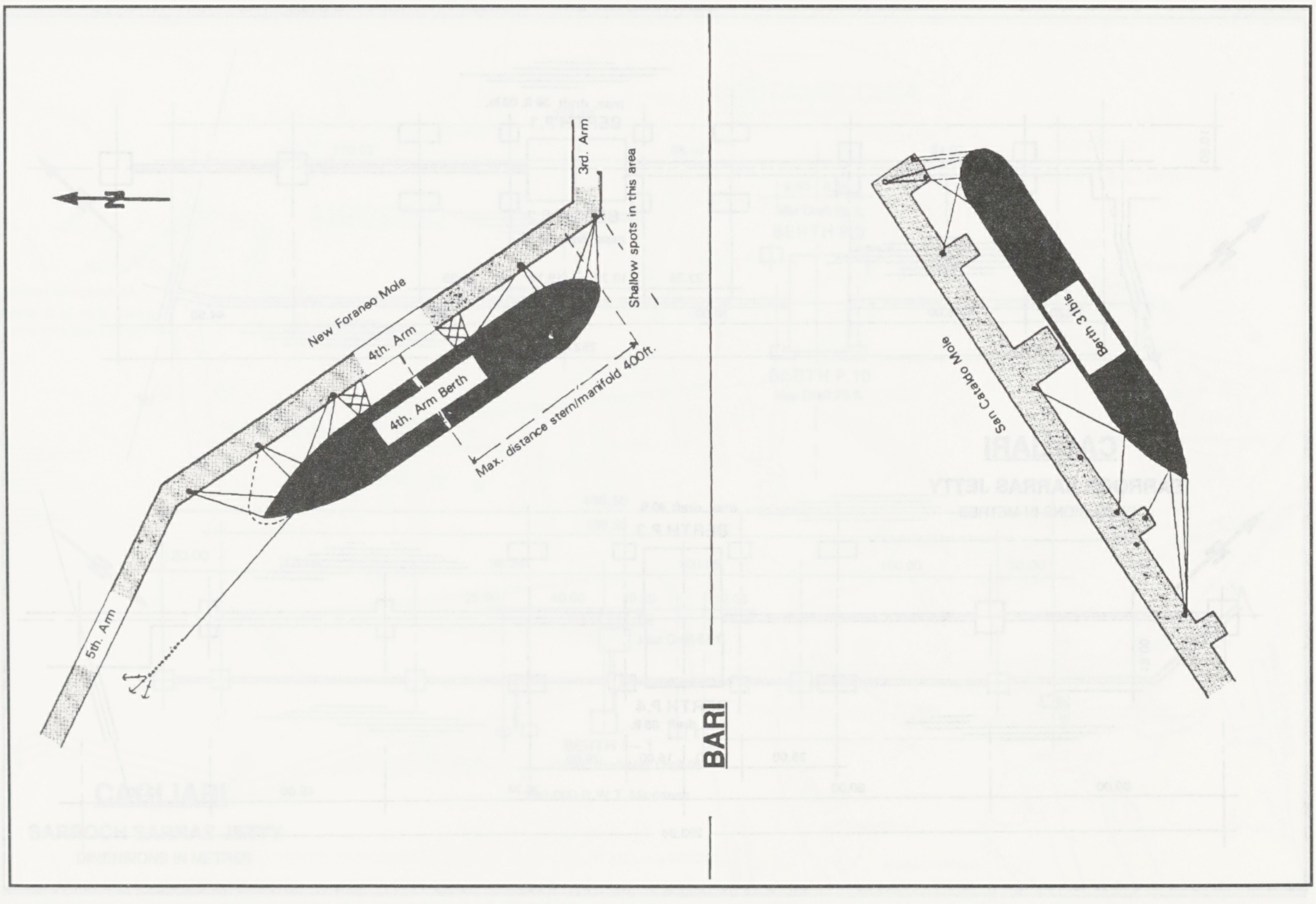

AUGUSTA
(MELILLI)
I.S.A.B. TERMINAL
Berths 1, 2, 5 & 6
108
15
40
40
35
35
3
30
35
150
Dolphins
L.P.G. Arm
Ladder
BERTH No.7 - L.P.G.
DIMENSIONS IN METRES
BERTHS No. 5 & 6
370
366,000 D.W.T.
50,000 D.W.T.
50,000 D.W.T.
250,000 D.W.T.
330
6
5
11
12
13
14
15
16
17
18
19
DIMENSIONS IN METRES

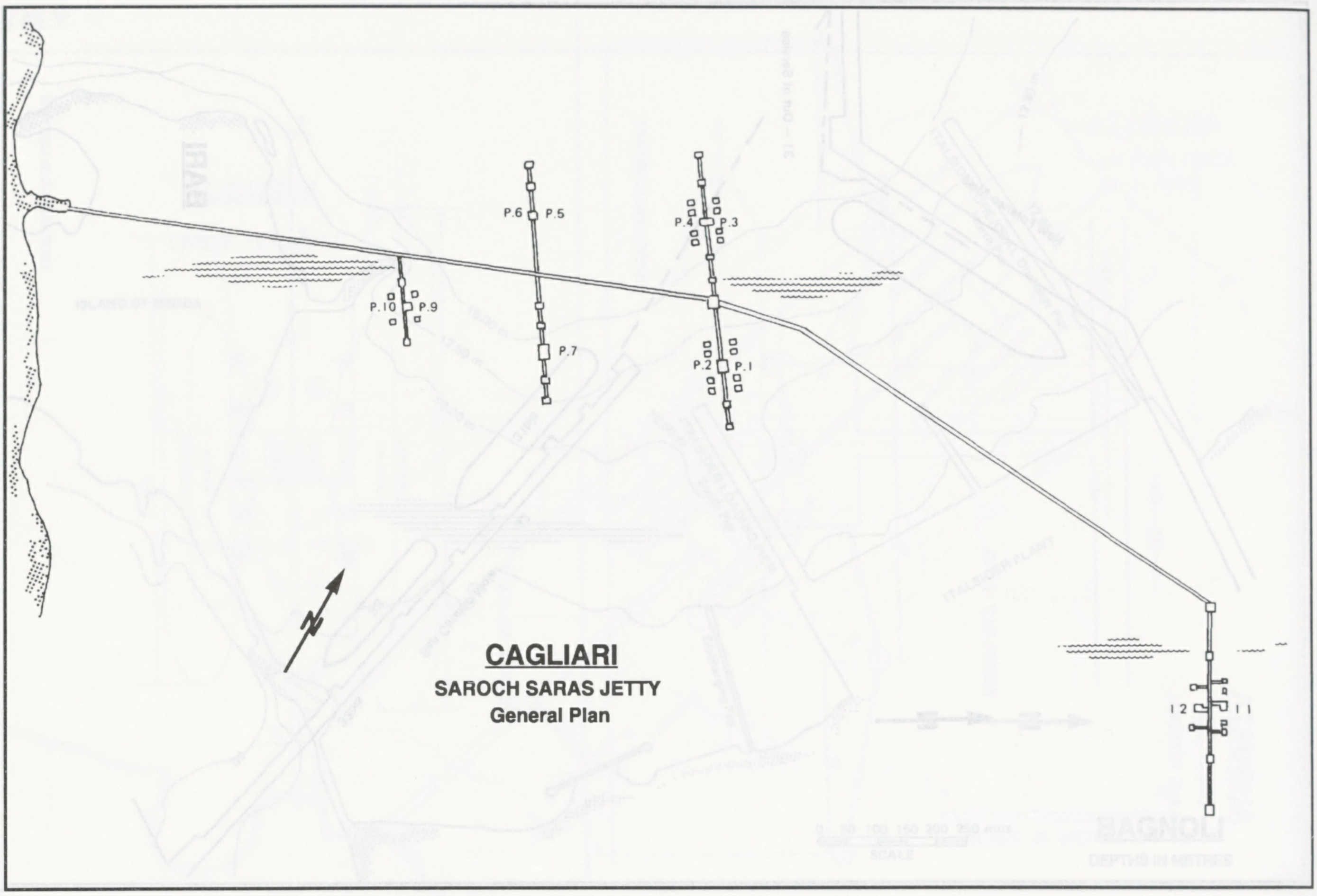

Berth No. 19
Berth No. 20
Berth No. 22
Berth No. 21
12
14
16
DEPTHS IN METRES
AUGUSTA
S.E.L.M. TERMINAL
10
Berth No. 25
Breasting Dolphins
Berth No. 26
10.4
0
500
SCALE IN METRES

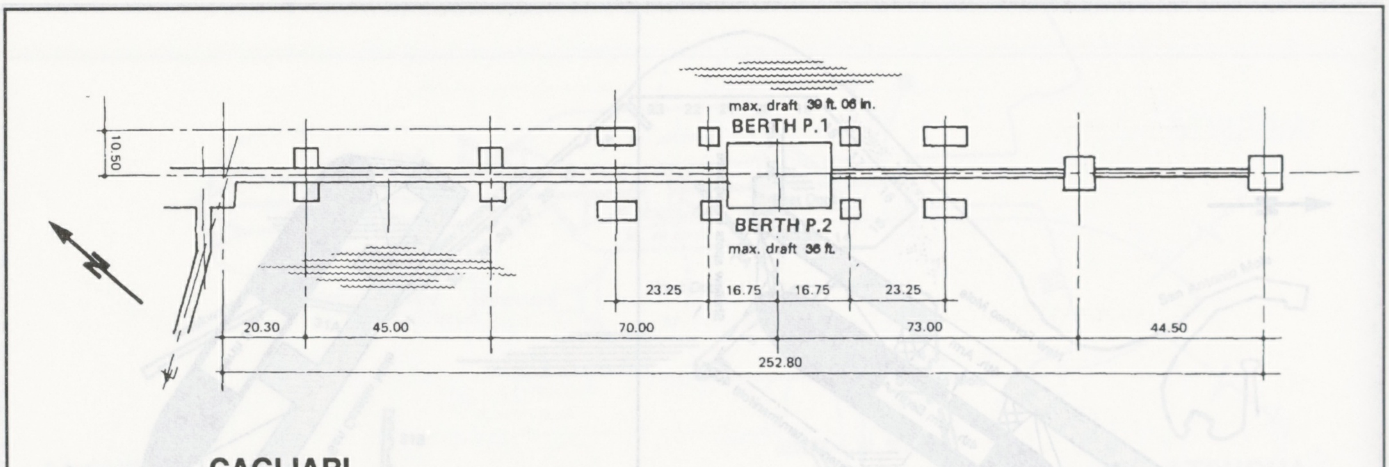

ISLAND OF NISIDA
15.00 m
12.50 m
10.00 m
10.50 m
12.50 m
12.65 m.
ITALSIDER ORE/COAL Discharge Pier
North Pier
ITALSIDER LOADING PIER
South Pier
Discharging Pier
ITALSIDER PLANT
N
0 50 100 150 200 250 mtrs
SCALE
BAGNOLI
DEPTHS IN METRES


Breakwater
31A
31
30
29
28
27
26
25
24
New Foraneo Mole
23
22
21
20
19
18
17
16
15
14
13
12
12A
11
11A
East Dock
West Dock
10
9
8
7
6
5
4B
4A
4
3
2
1
S. Vito Mole
Pizzoli Mole
San Antonio Mole
31B
32
33A
33B
34
San Cataldo Mole
N
BARI


BARI
31 – Out of Service
New Foraneo Mole
31bis
32
33
San Cataldo Mole
33bis
34
N


N
3rd. Arm
Shallow spots in this area
New Foraneo Mole
4th. Arm
4th. Arm Berth
Max. distance stern/manifold 400ft.
5th. Arm
BARI
Berth 31bis
San Cataldo Mole

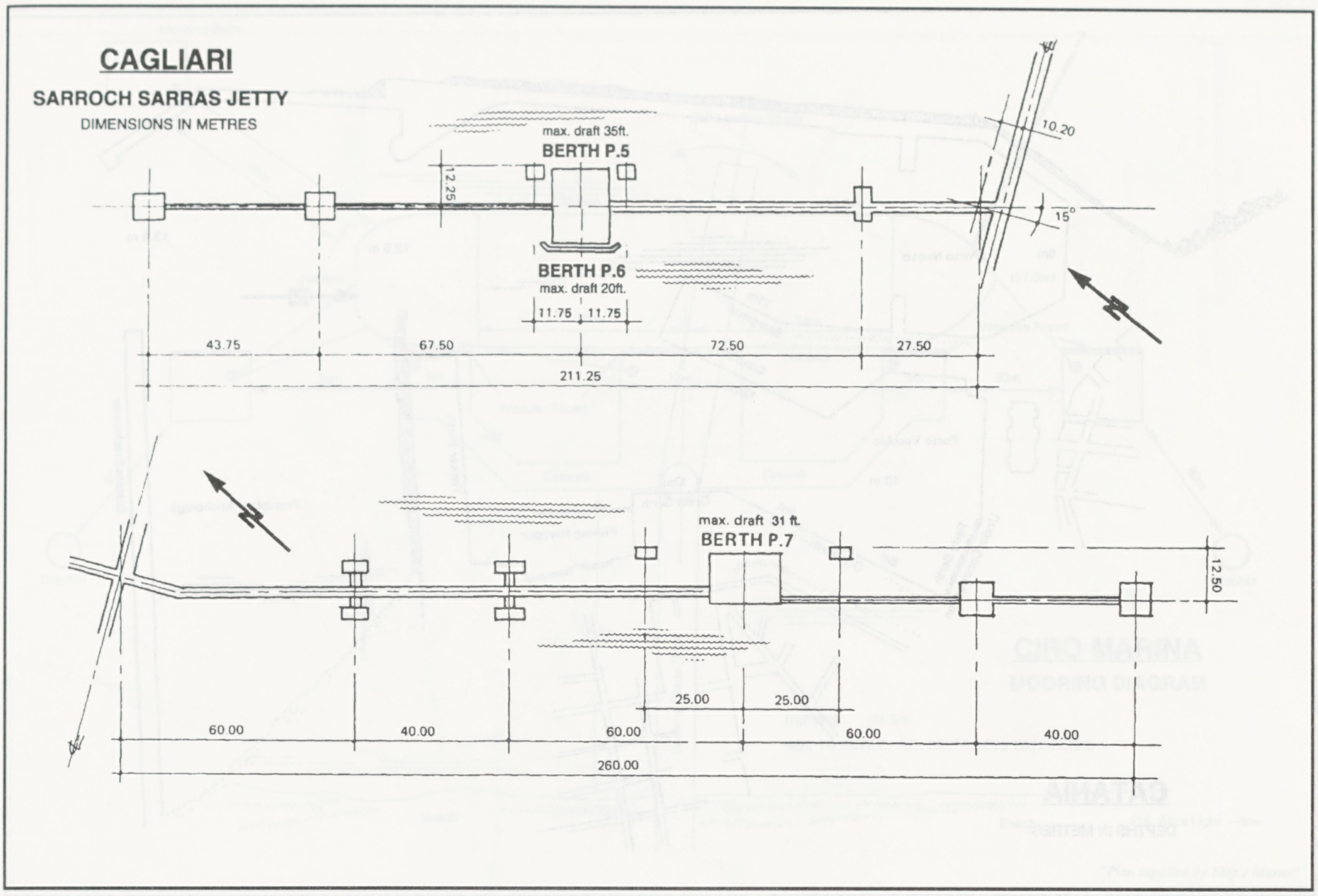

P.6
P.5
P.4
P.3
P.10
P.9
P.7
P.2
P.1
12
11
CAGLIARI
SAROCH SARAS JETTY
General Plan

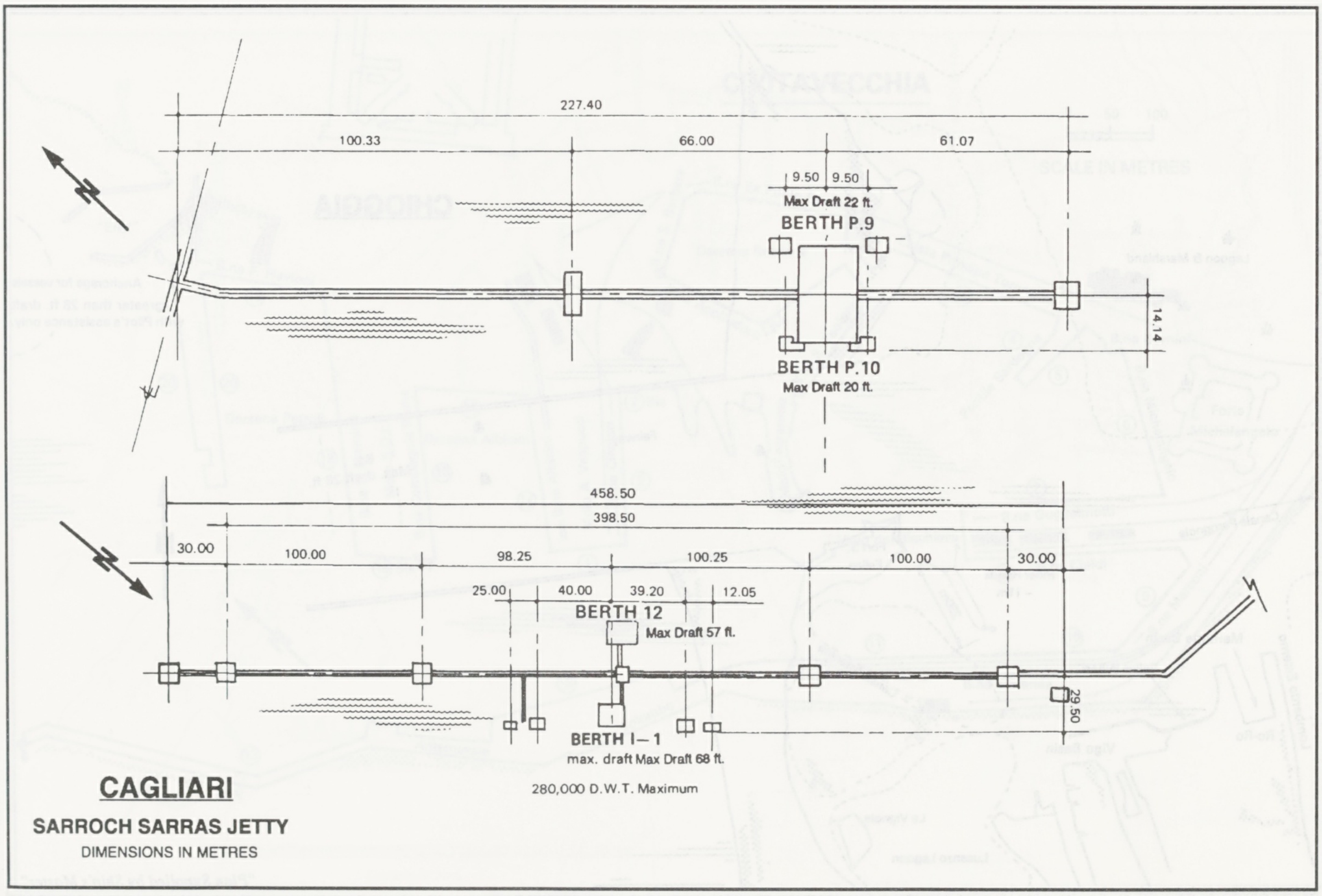

10.50
max. draft 39 ft. 06 in.
BERTH P.1
BERTH P.2
max. draft 36 ft.
23.25
16.75
16.75
23.25
20.30
45.00
70.00
73.00
44.50
252.80
CAGLIARI
SARROCH SARRAS JETTY
DIMENSIONS IN METRES
max. draft 40 ft.
BERTH P.3
18.00
18.00
BERTH P.4
max draft 36 ft.
25.00
15.00
15.00
25.00
60.00
80.00
76.74
45.00
32.20
293.94

CAGLIARI

SARROCH SARRAS JETTY

DIMENSIONS IN METRES

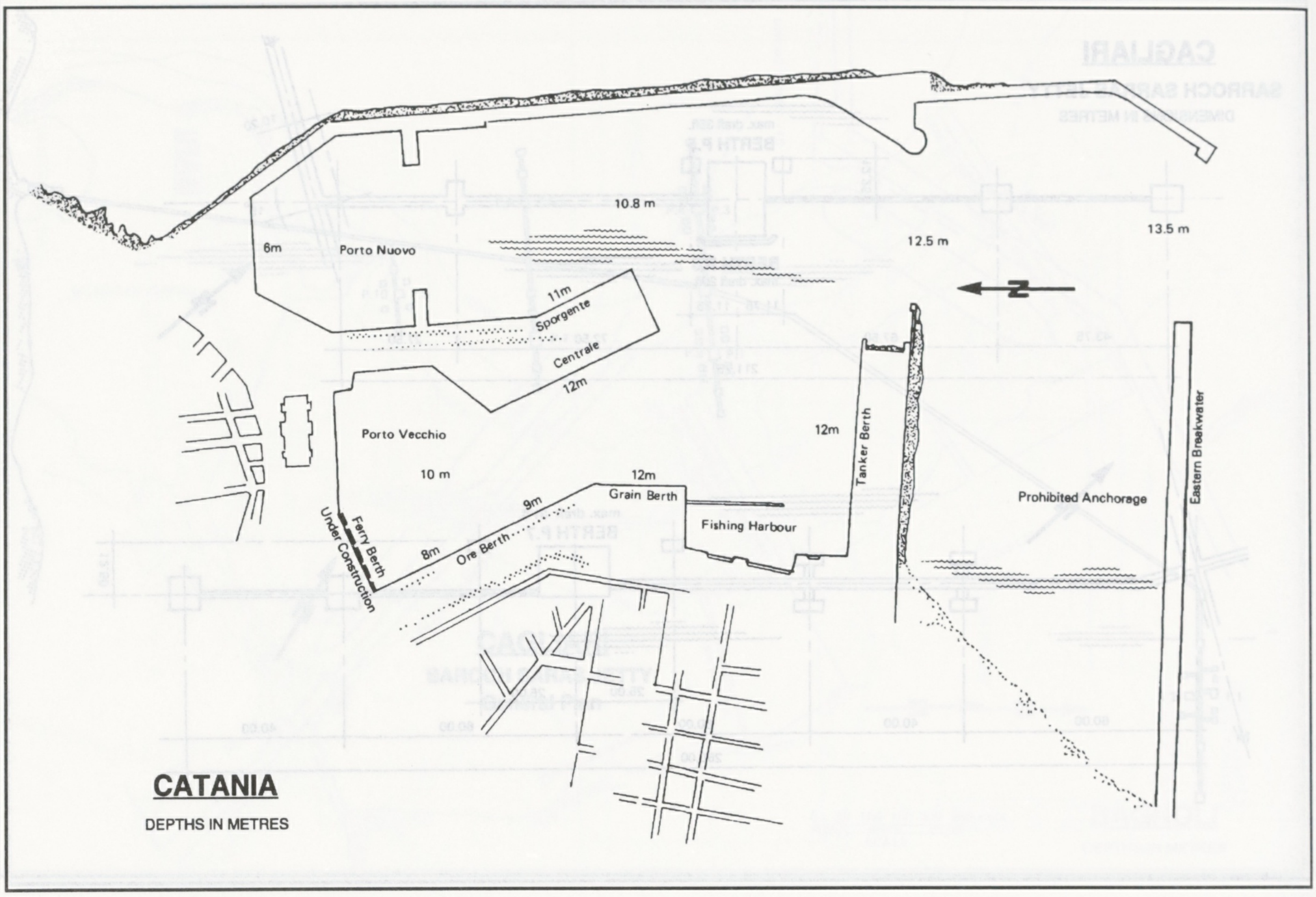

max. draft 35ft.
BERTH P.5
12.25
10.20
15°
BERTH P.6
max. draft 20ft.
11.75
11.75
43.75
67.50
72.50
27.50
211.25
max. draft 31 ft.
BERTH P.7
12.50
25.00
25.00
60.00
40.00
60.00
60.00
40.00
260.00


227.40
100.33
66.00
61.07
9.50
9.50
Max Draft 22 ft.
BERTH P.9
14.14
BERTH P.10
Max Draft 20 ft.
458.50
398.50
30.00
100.00
98.25
100.25
100.00
30.00
25.00
40.00
39.20
12.05
BERTH 12
Max Draft 57 ft.
29.50
BERTH I—1
max. draft Max Draft 68 ft.
280,000 D.W.T. Maximum

CAGLIARI

SARROCH SARRAS JETTY

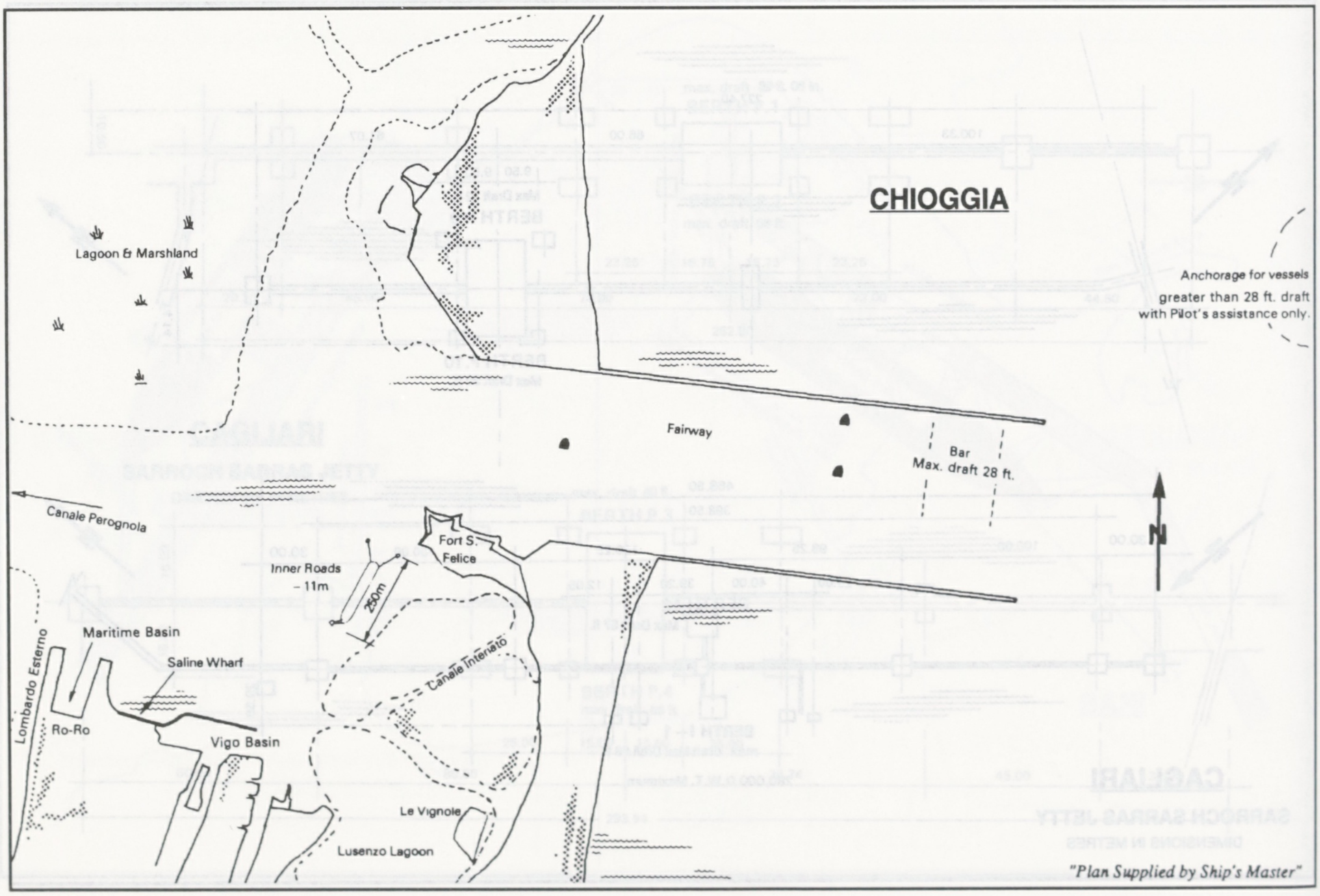
DIMENSIONS IN METRES



CATANIA

DEPTHS IN METRES

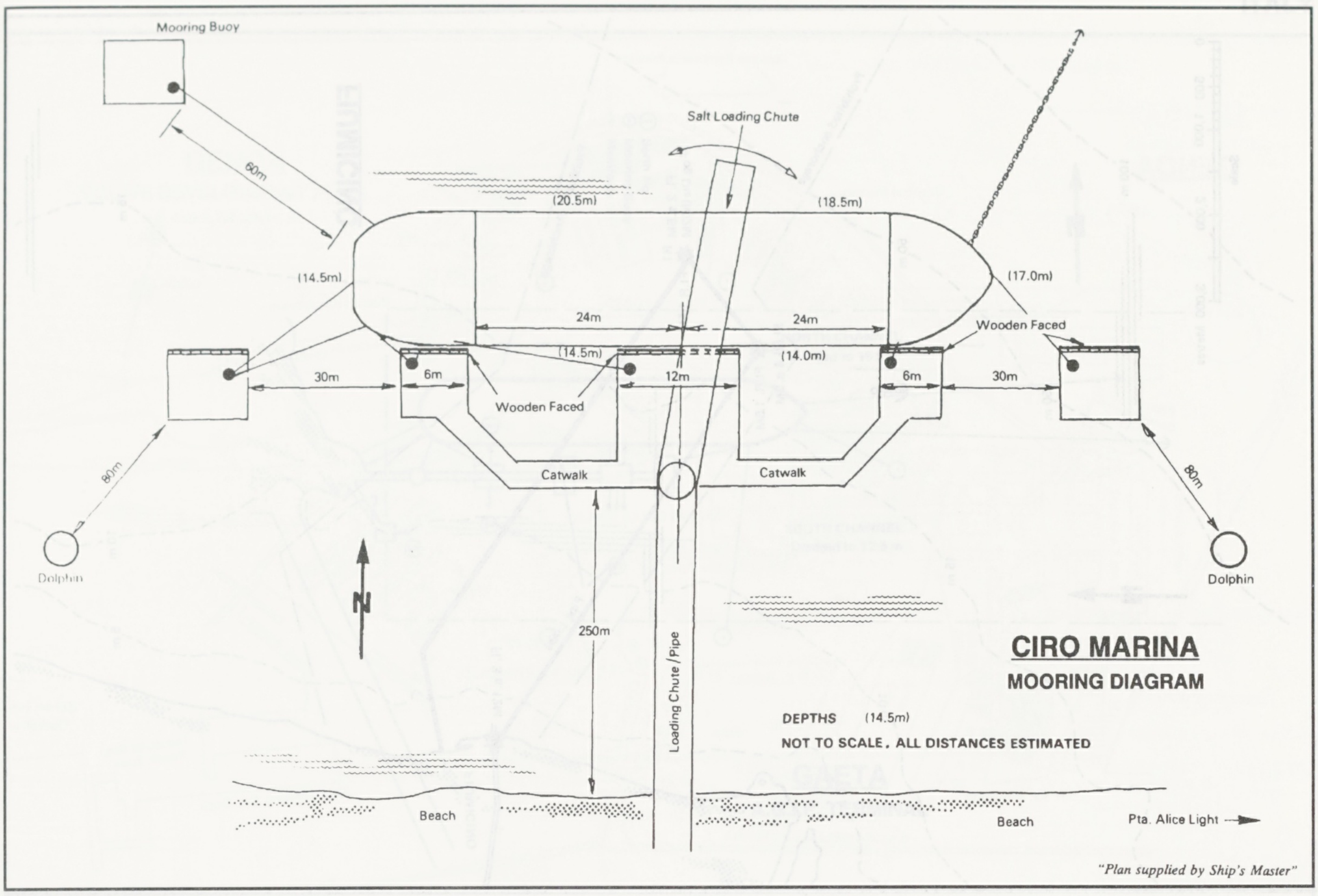
6m
Porto Nuovo
10.8 m
12.5 m
13.5 m
N
11m
Sporgente
Centrale
12m
Porto Vecchio
10 m
12m
Tanker Berth
Eastern Breakwater
Prohibited Anchorage
12m
Grain Berth
9m
Fishing Harbour
8m
Ore Berth
Ferry Berth
Under Construction



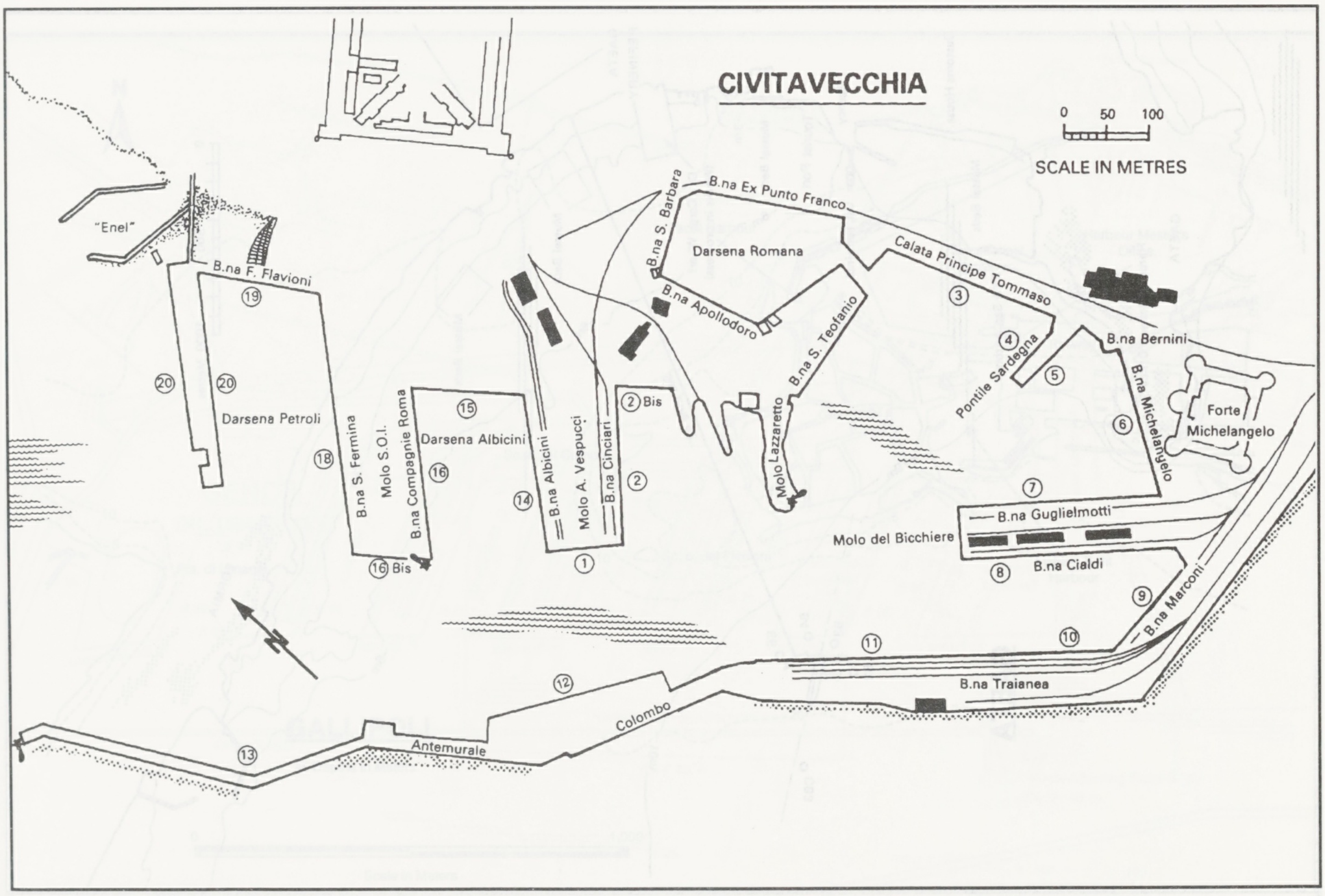
CHIOGGIA

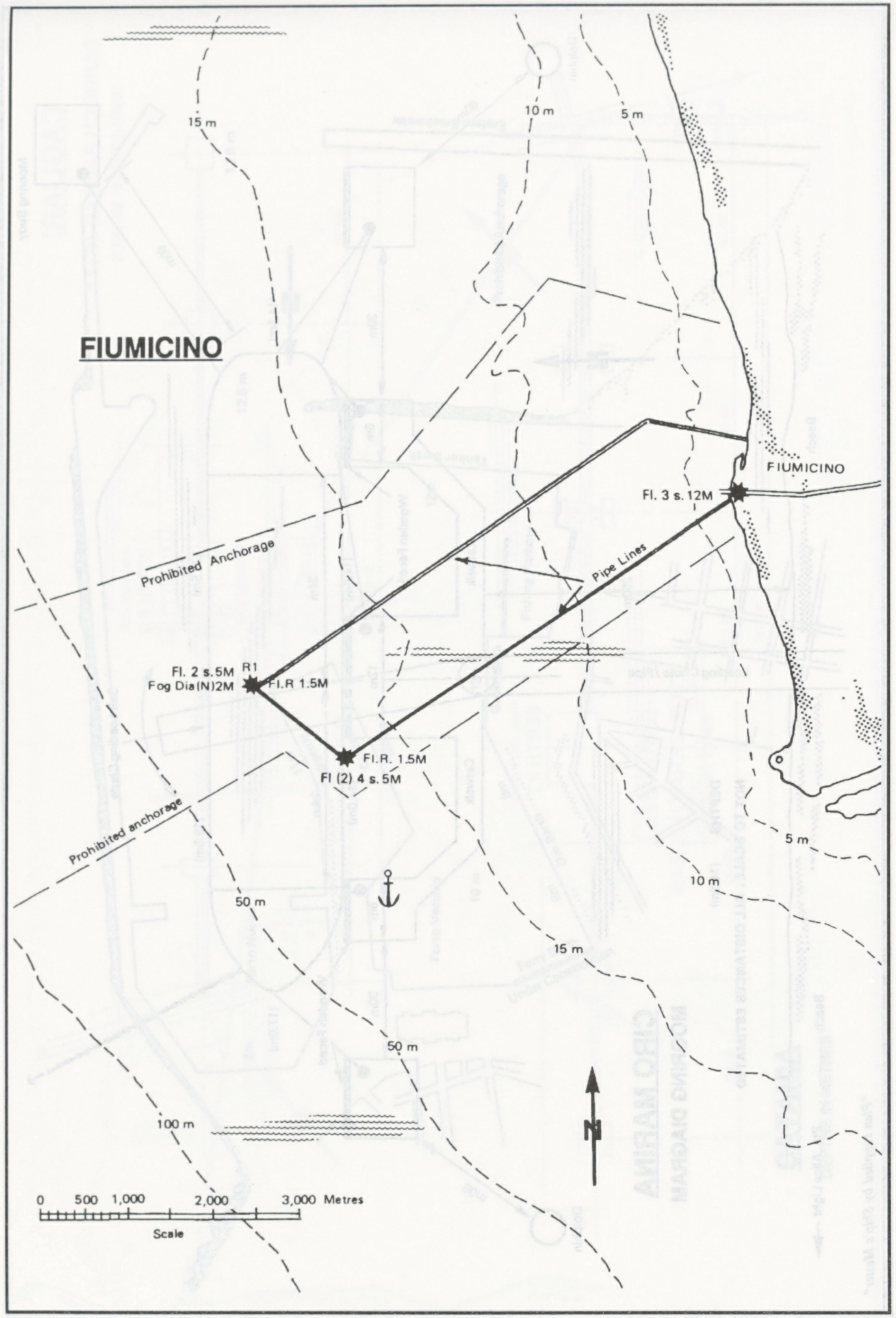
Lagoon & Marshland
Anchorage for vessels
greater than 28 ft. draft
with Pilot's assistance only.
Fairway
Bar
Max. draft 28 ft.
N
Canale Perognola
Fort S. Felice
Inner Roads
– 11m
250m
Maritime Basin
Saline Wharf
Canale Interato
Lombardo Esterno
Ro-Ro
Vigo Basin
Le Vignole
Lusenzo Lagoon

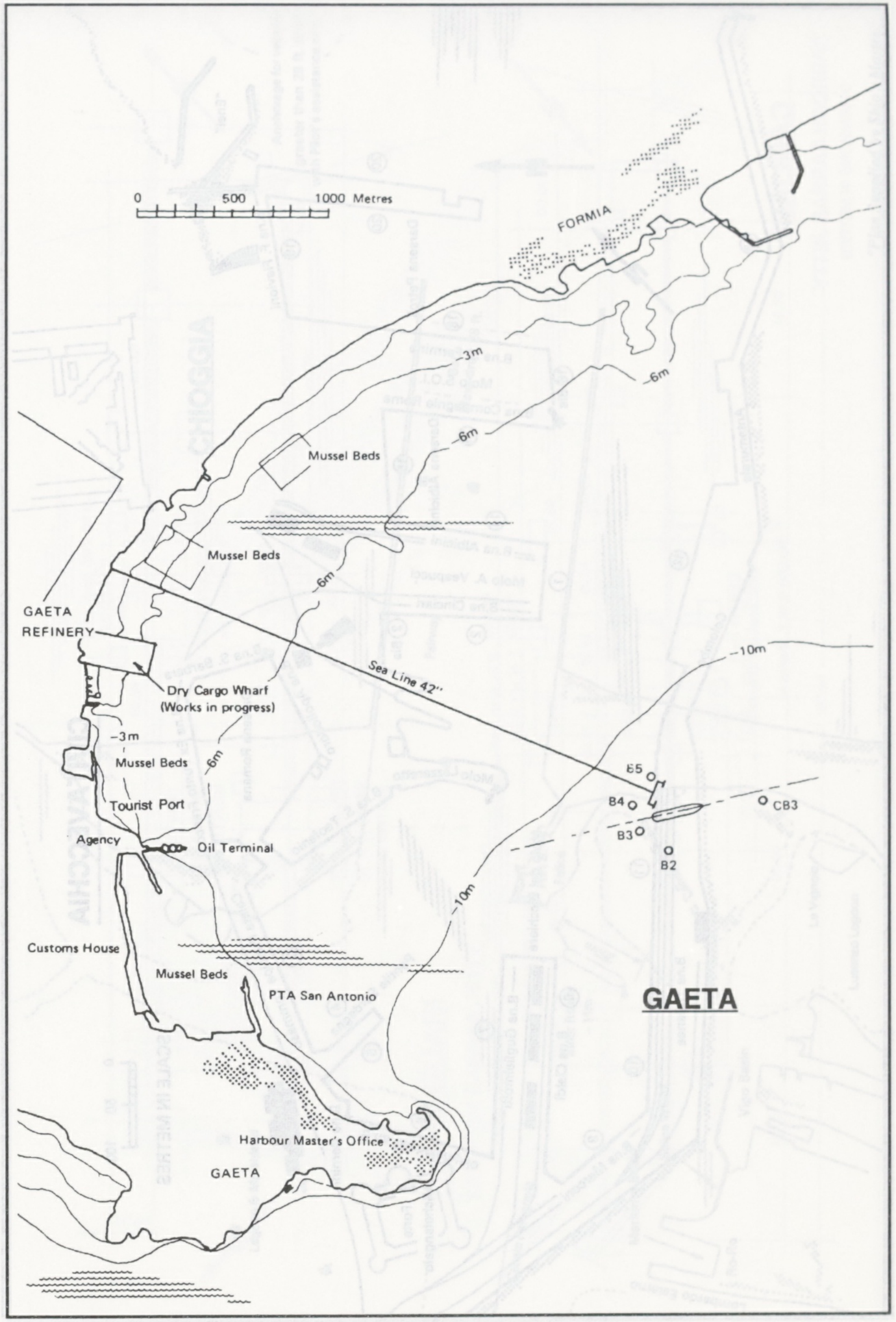
"Plan Supplied by Ship's Master"

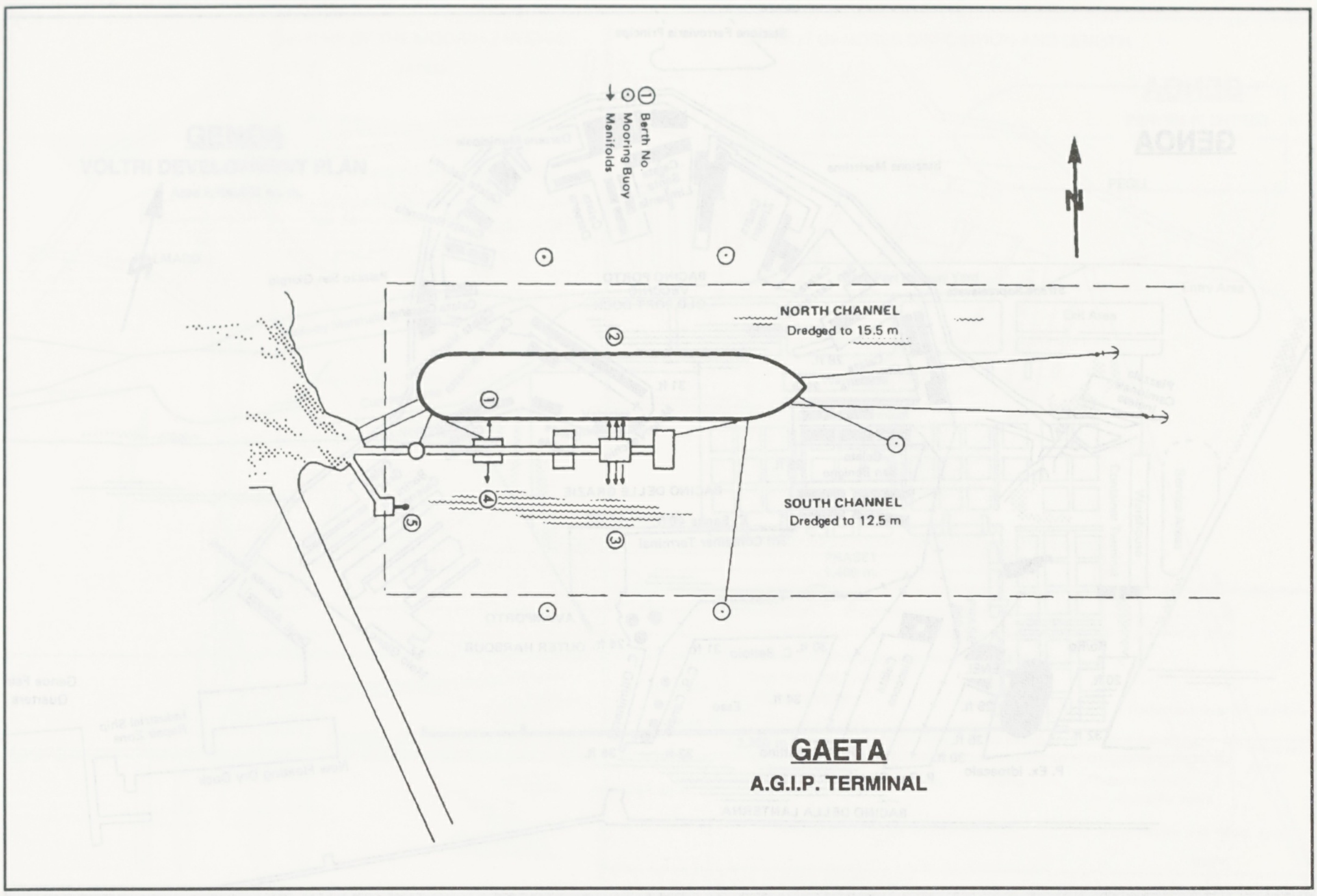

CIRO MARINA
MOORING DIAGRAM
Mooring Buoy
60m
Salt Loading Chute
(20.5m)
(18.5m)
(14.5m)
(17.0m)
24m
24m
Wooden Faced
(14.5m)
(14.0m)
30m
6m
12m
6m
30m
Wooden Faced
Catwalk
Catwalk
80m
80m
Dolphin
Dolphin
N
250m
Loading Chute/Pipe
DEPTHS (14.5m)
NOT TO SCALE. ALL DISTANCES ESTIMATED
Beach
Beach
Pta. Alice Light

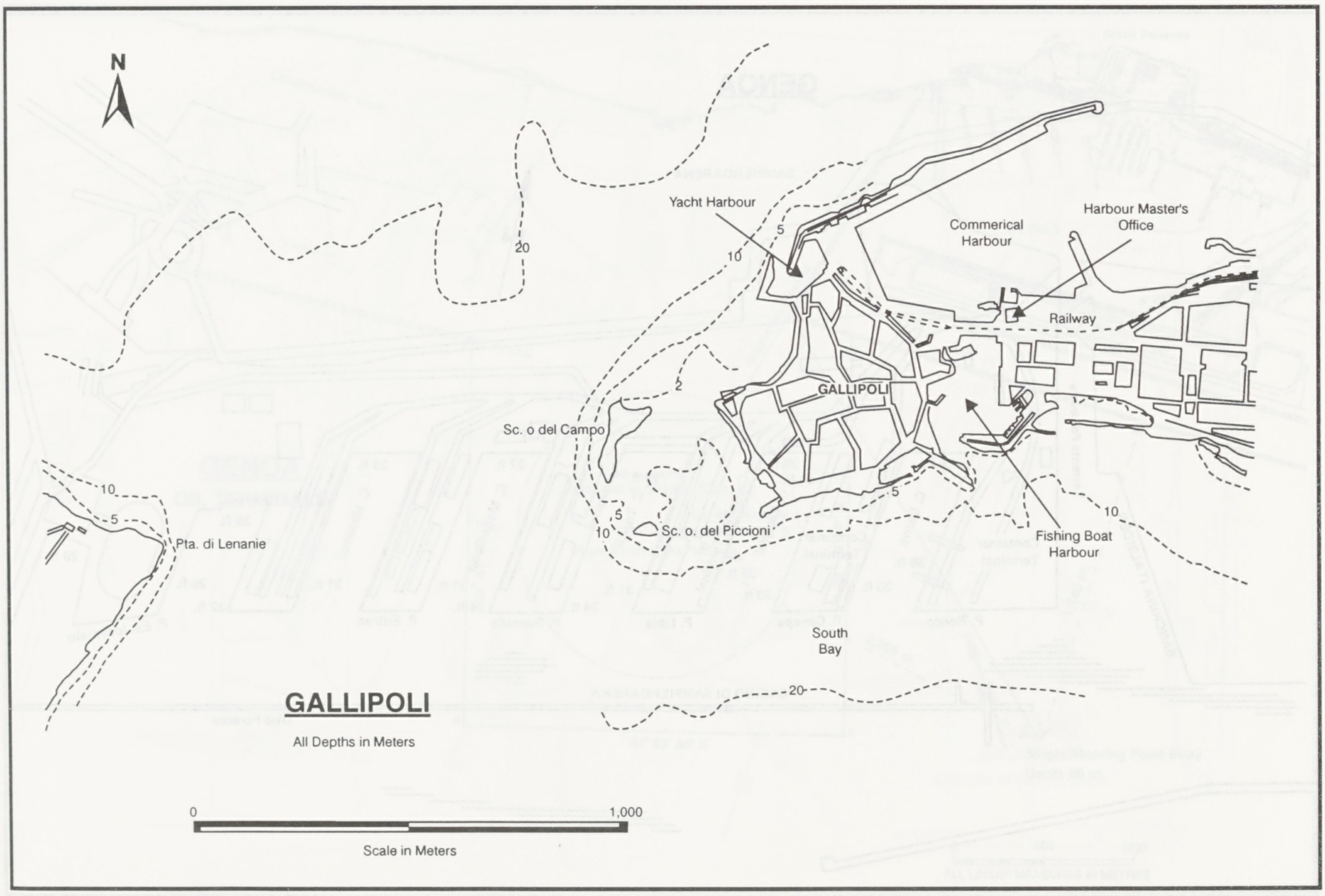
"Plan supplied by Ship's Master"

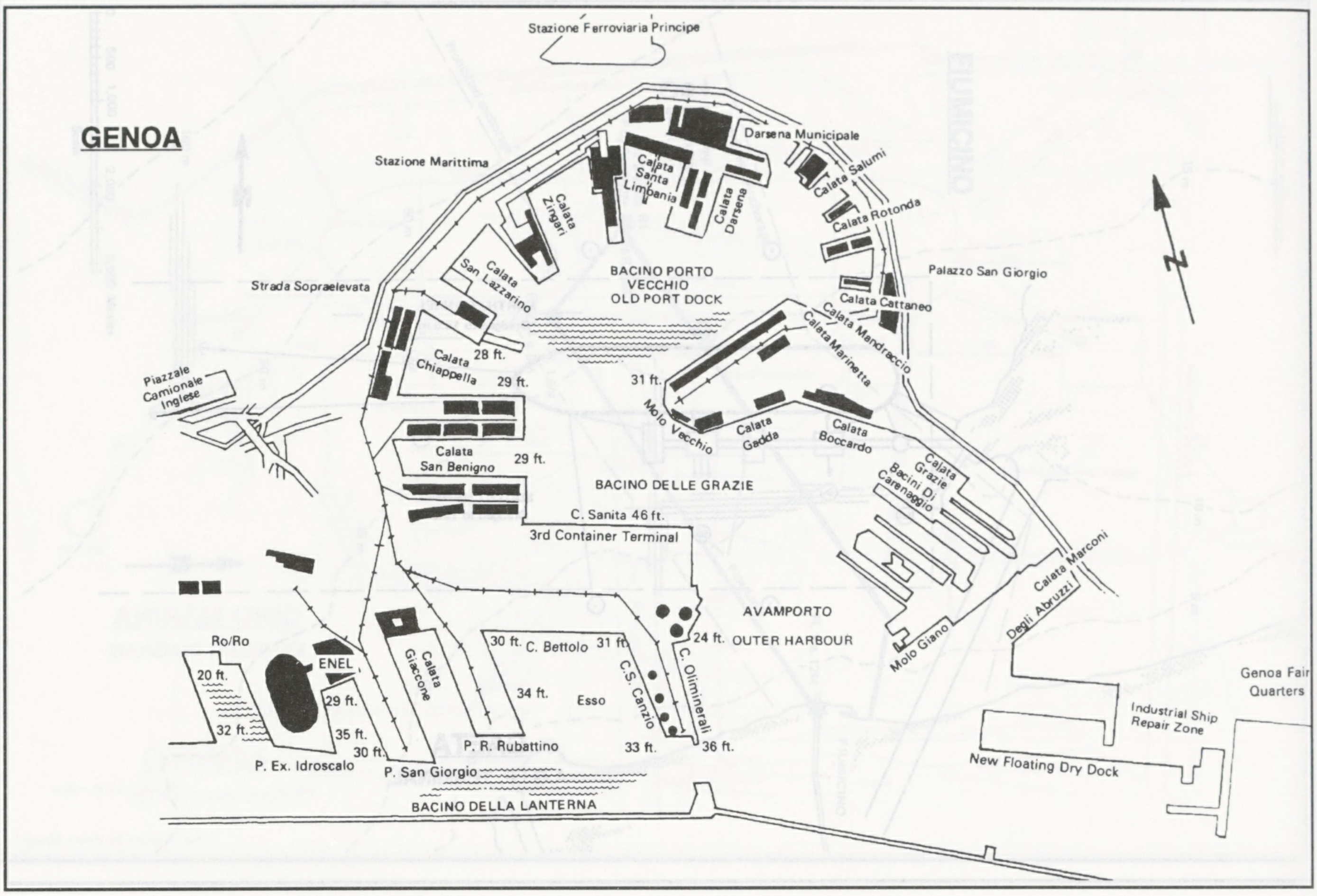

CIVITAVECCHIA
0 50 100
SCALE IN METRES
"Enel"
B.na F. Flavioni
⑲
⑳
⑳
Darsena Petroli
⑱
B.na S. Fermina
Molo S.O.I.
B.na Compagnie Roma
⑯ Bis
Darsena Albicini
⑮
⑯
⑭
B.na Albicini
Molo A. Vespucci
B.na Cinciari
①
② Bis
②
B.na S. Barbara
B.na Ex Punto Franco
Darsena Romana
B.na Apollodoro
B.na S. Teofanio
Molo Lazzaretto
Calata Principe Tommaso
③
④
Pontile Sardegna
⑤
B.na Bernini
B.na Michelangelo
⑥
Forte Michelangelo
⑦
B.na Guglielmotti
Molo del Bicchiere
B.na Cialdi
⑧
⑨
B.na Marconi
⑩
⑪
B.na Traianea
⑫
Colombo
Antemurale
⑬
N

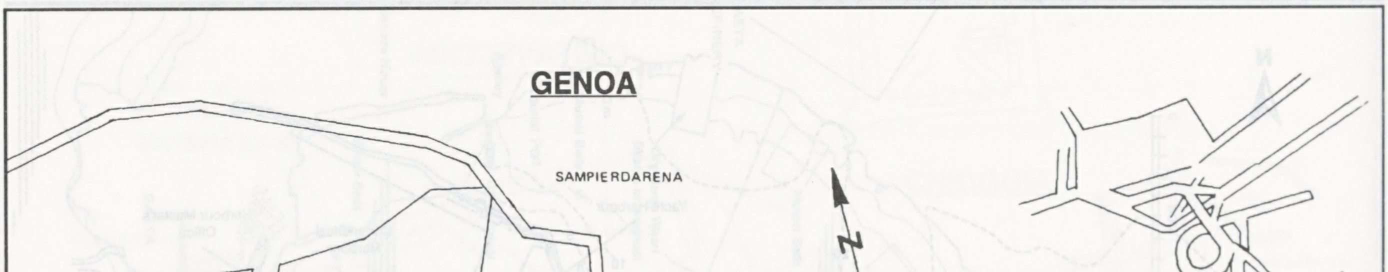

FIUMICINO
15 m
10 m
5 m
FIUMICINO
Fl. 3 s. 12M
Prohibited Anchorage
Pipe Lines
Fl. 2 s.5M
R1
Fog Dia(N)2M
Fl.R 1.5M
Fl.R. 1.5M
Fl (2) 4 s. 5M
Prohibited anchorage
5 m
10 m
50 m
15 m
50 m
100 m
N
0
500
1,000
2,000
3,000 Metres
Scale

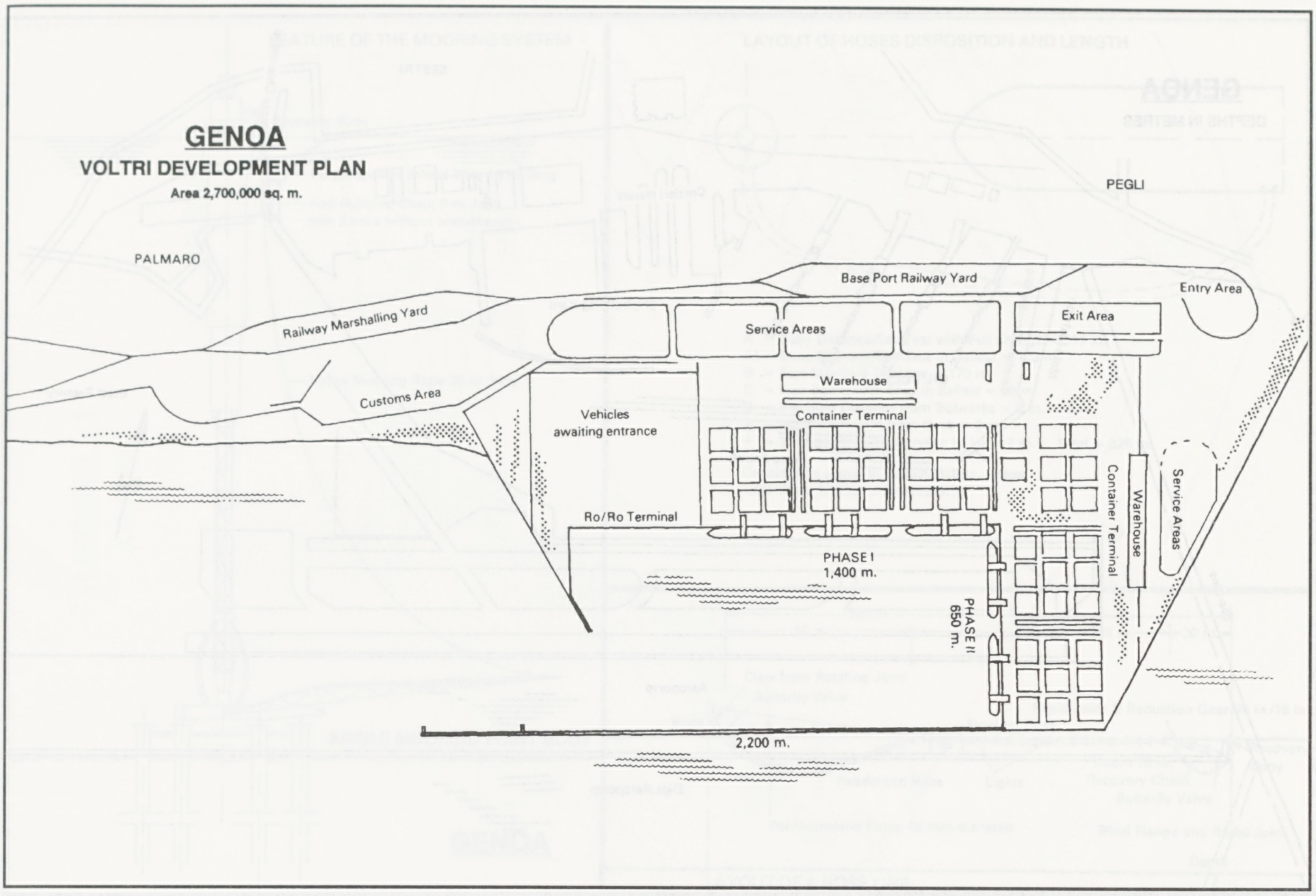

0
500
1000 Metres
FORMIA
-3m
-6m
-6m
Mussel Beds
Mussel Beds
-6m
GAETA
REFINERY
Sea Line 42"
-10m
Dry Cargo Wharf
(Works in progress)
-3m
Mussel Beds
-6m
Tourist Port
Agency
Oil Terminal
B5
B4
CB3
B3
B2
-10m
Customs House
Mussel Beds
PTA San Antonio
GAETA
Harbour Master's Office
GAETA

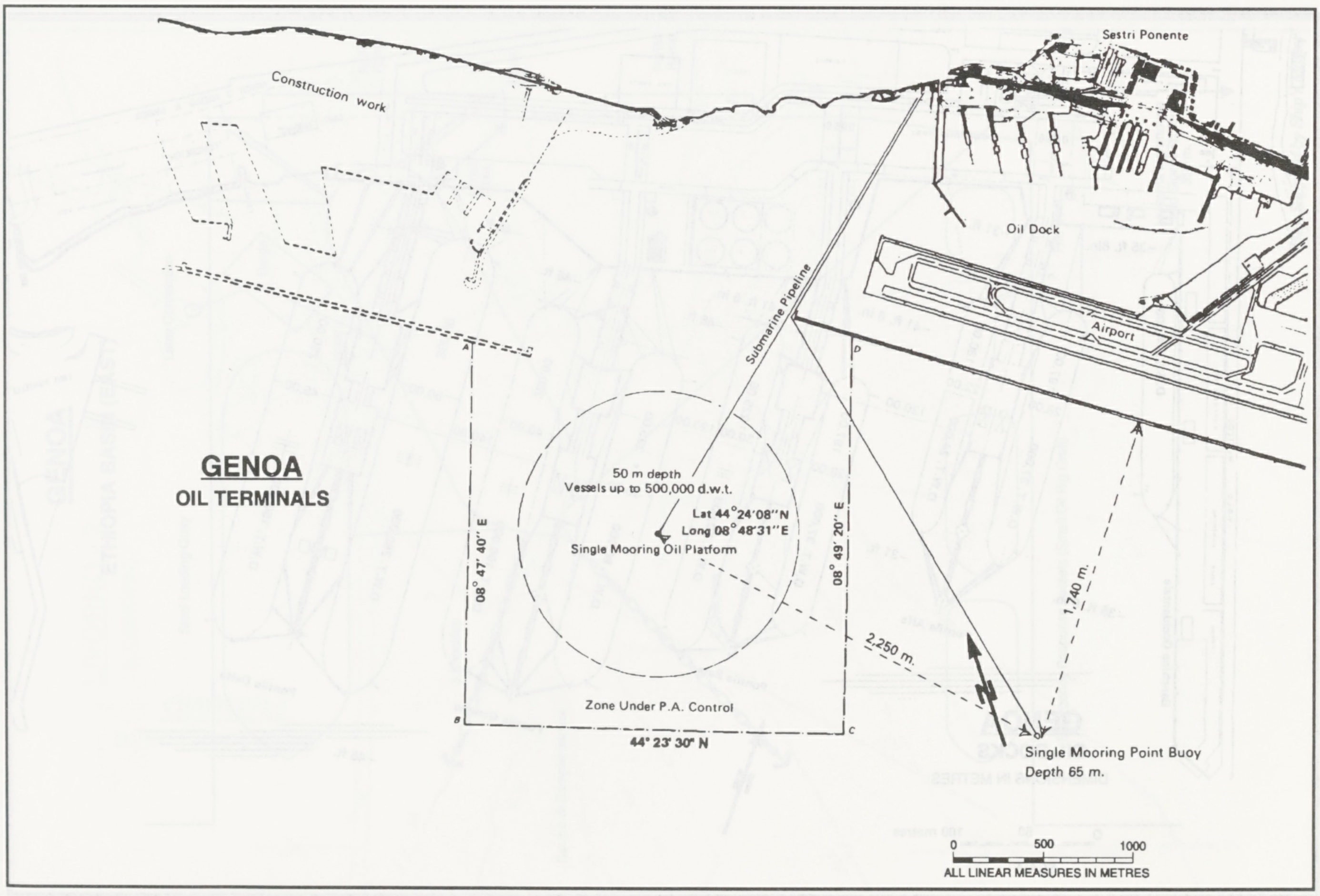

① Berth No.
⊙ Mooring Buoy
↓ Manifolds
N
NORTH CHANNEL
Dredged to 15.5 m
SOUTH CHANNEL
Dredged to 12.5 m
①
②
③
④
⑤
GAETA
A.G.I.P. TERMINAL

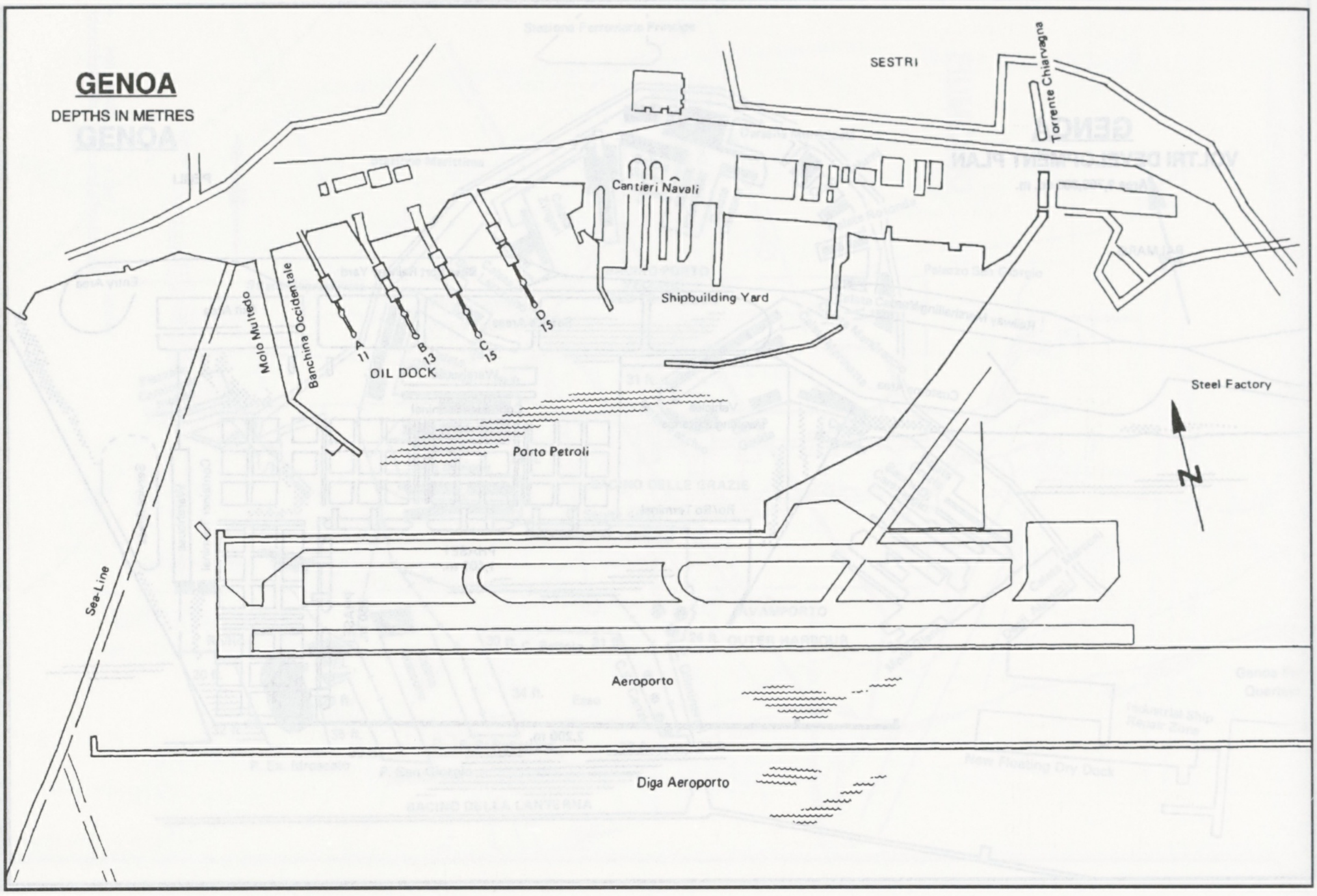

N
Yacht Harbour
Commerical Harbour
Harbour Master's Office
Railway
GALLIPOLI
Sc. o del Campo
Sc. o. del Piccioni
Pta. di Lenanie
Fishing Boat Harbour
South Bay
20
10
5
2
GALLIPOLI
All Depths in Meters
0
1,000
Scale in Meters

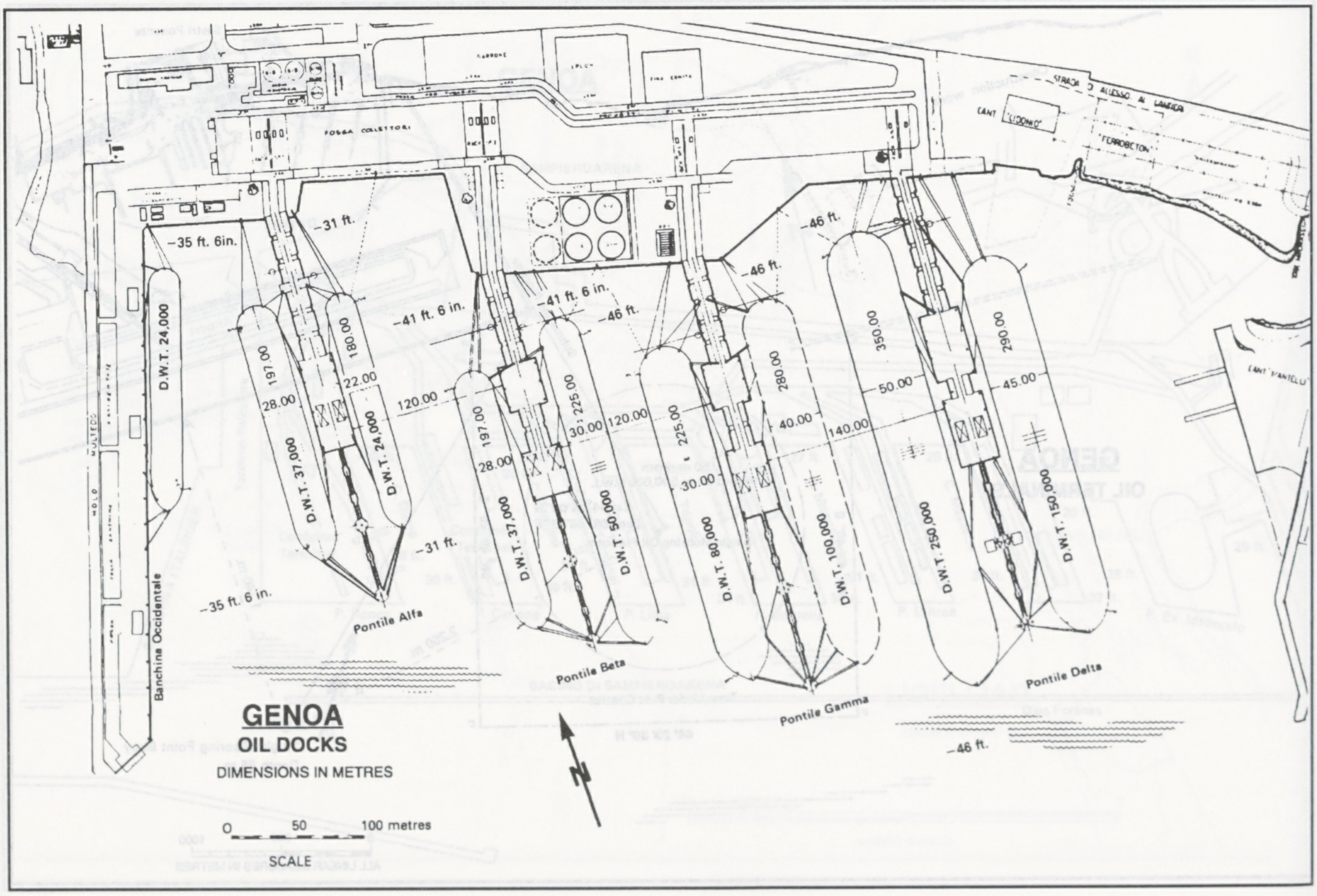

GENOA
Stazione Ferroviaria Principe
Darsena Municipale
Stazione Marittima
Calata Santa Limbania
Calata Darsena
Calata Salumi
Calata Zingari
Calata Rotonda
Calata San Lazzarino
BACINO PORTO VECCHIO OLD PORT DOCK
Palazzo San Giorgio
Strada Sopraelevata
Calata Cattaneo
Calata Mandraccio
Calata Marinetta
28 ft.
Calata Chiappella
29 ft.
31 ft.
Piazzale Camionale Inglese
Molo Vecchio
Calata Gadda
Calata Boccardo
Calata San Benigno
29 ft.
Calata Grazie
Bacini Di Carenaggio
BACINO DELLE GRAZIE
C. Sanita 46 ft.
3rd Container Terminal
Calata Marconi
Degli Abruzzi
AVAMPORTO
24 ft. OUTER HARBOUR
Ro/Ro
30 ft. C. Bettolo 31 ft.
Molo Giano
ENEL
Calata Giaccone
C. Olimmineralli
20 ft.
C.S. Canzio
Genoa Fair Quarters
29 ft.
34 ft.
Esso
Industrial Ship Repair Zone
32 ft.
35 ft.
30 ft.
P. R. Rubattino
33 ft.
36 ft.
P. Ex. Idroscalo
P. San Giorgio
New Floating Dry Dock
BACINO DELLA LANTERNA

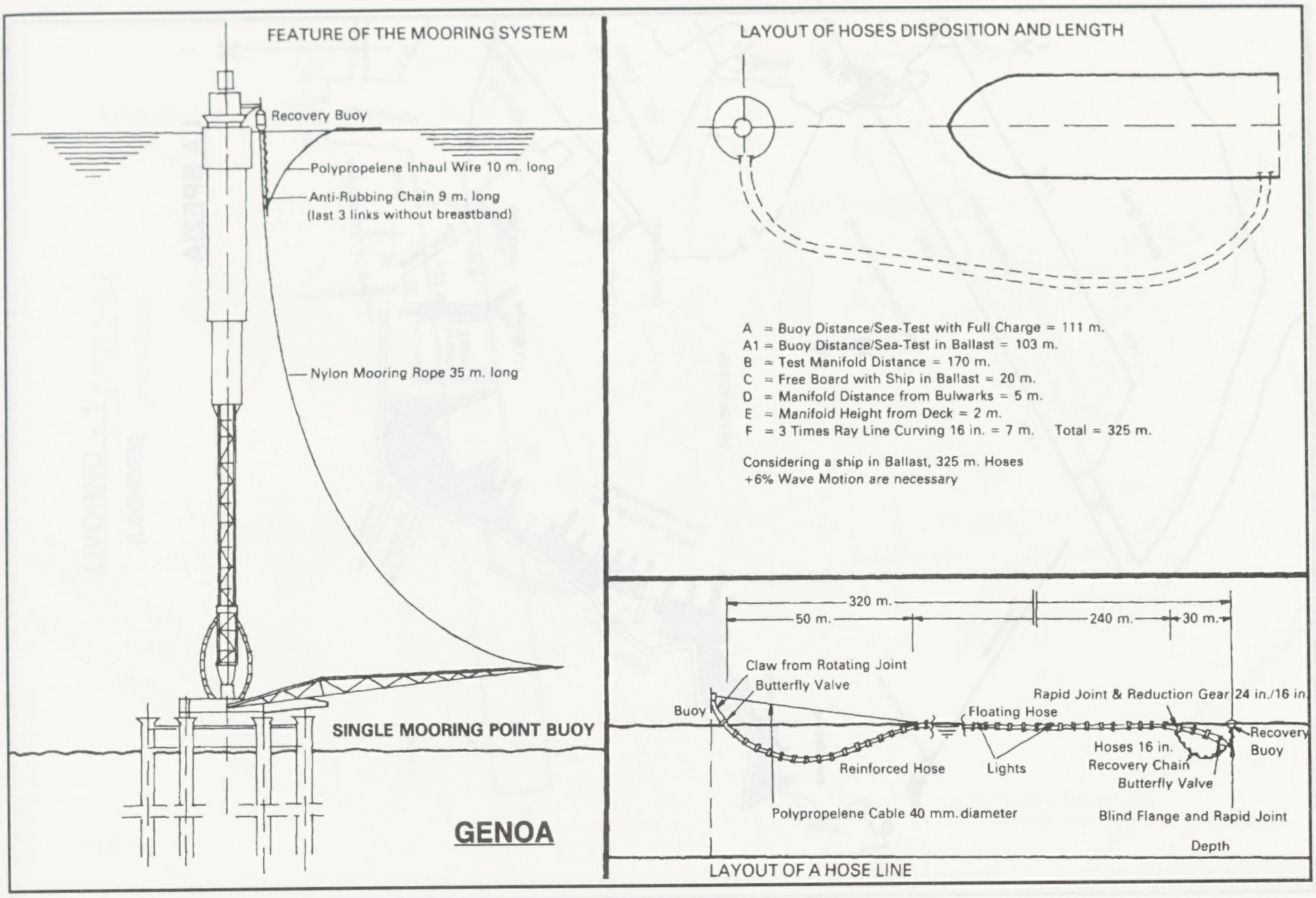

GENOA
SAMPIERDARENA
Torrente Polcevera
30 ft.
C. Derna
Container Terminal
38 ft.
30 ft.
28 ft.
20 ft.
C. Bengasi
Container Terminal
35 ft.
30 ft.
Container Terminal
29 ft.
C. Tripoli
31 ft.
27 ft.
C. Mogadiscio
34 ft.
34 ft.
31 ft.
29 ft.
C. Massaua
31 ft.
20 ft.
28 ft.
32 ft.
29 ft.
BANCHINA ITALSIDER
P. Ronco
P. Canepa
P. Libia
P. Somalia
P. Eritrea
P. Ex. Idroscalo
BACINO DI SAMPIERDARENA
Diga Foranea

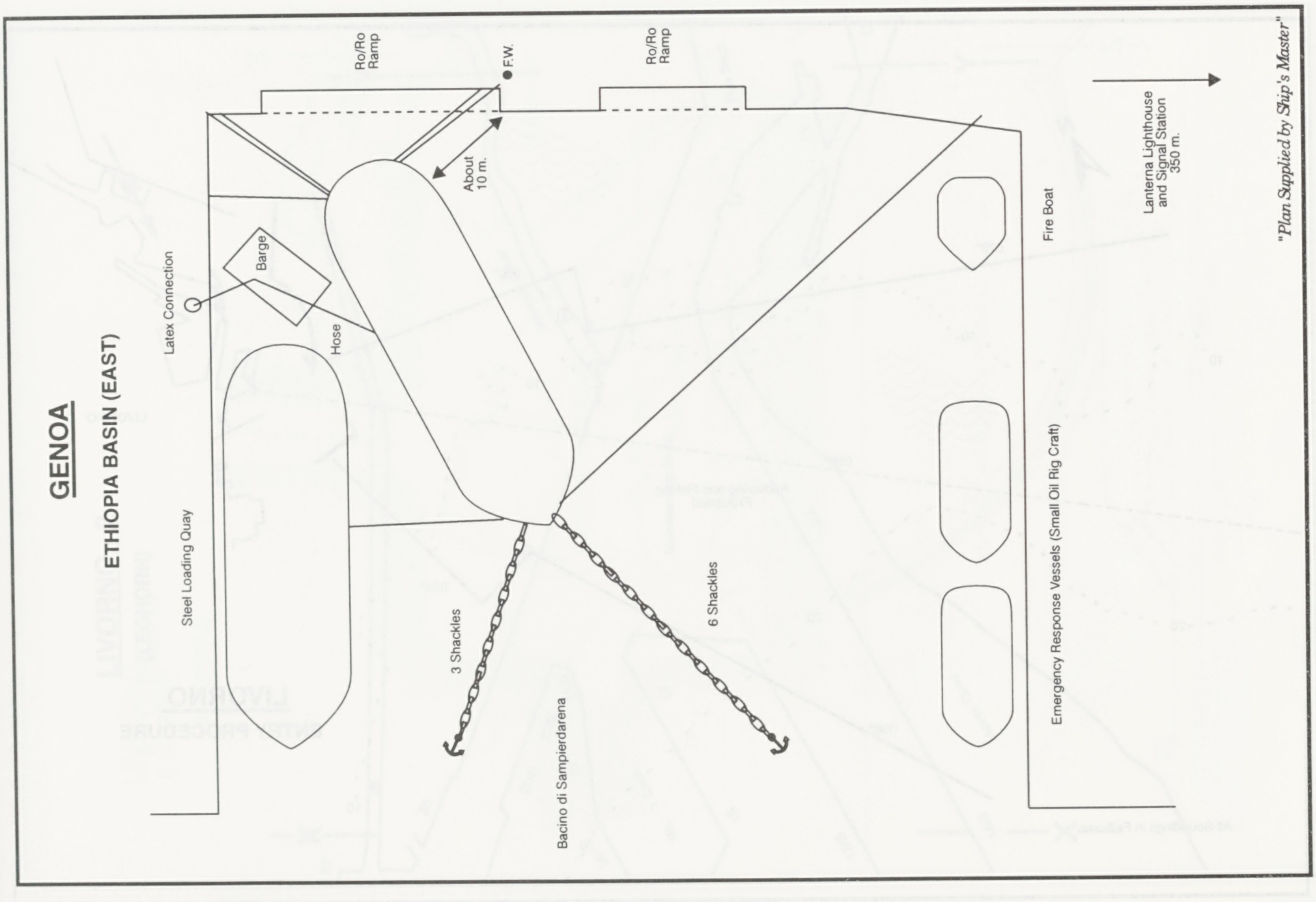

GENOA
VOLTRI DEVELOPMENT PLAN
Area 2,700,000 sq. m.
PALMARO
PEGLI
Base Port Railway Yard
Entry Area
Railway Marshalling Yard
Service Areas
Exit Area
Warehouse
Customs Area
Container Terminal
Vehicles awaiting entrance
Container Terminal
Warehouse
Service Areas
Ro/Ro Terminal
PHASE I
1,400 m.
PHASE II
650 m.
2,200 m.

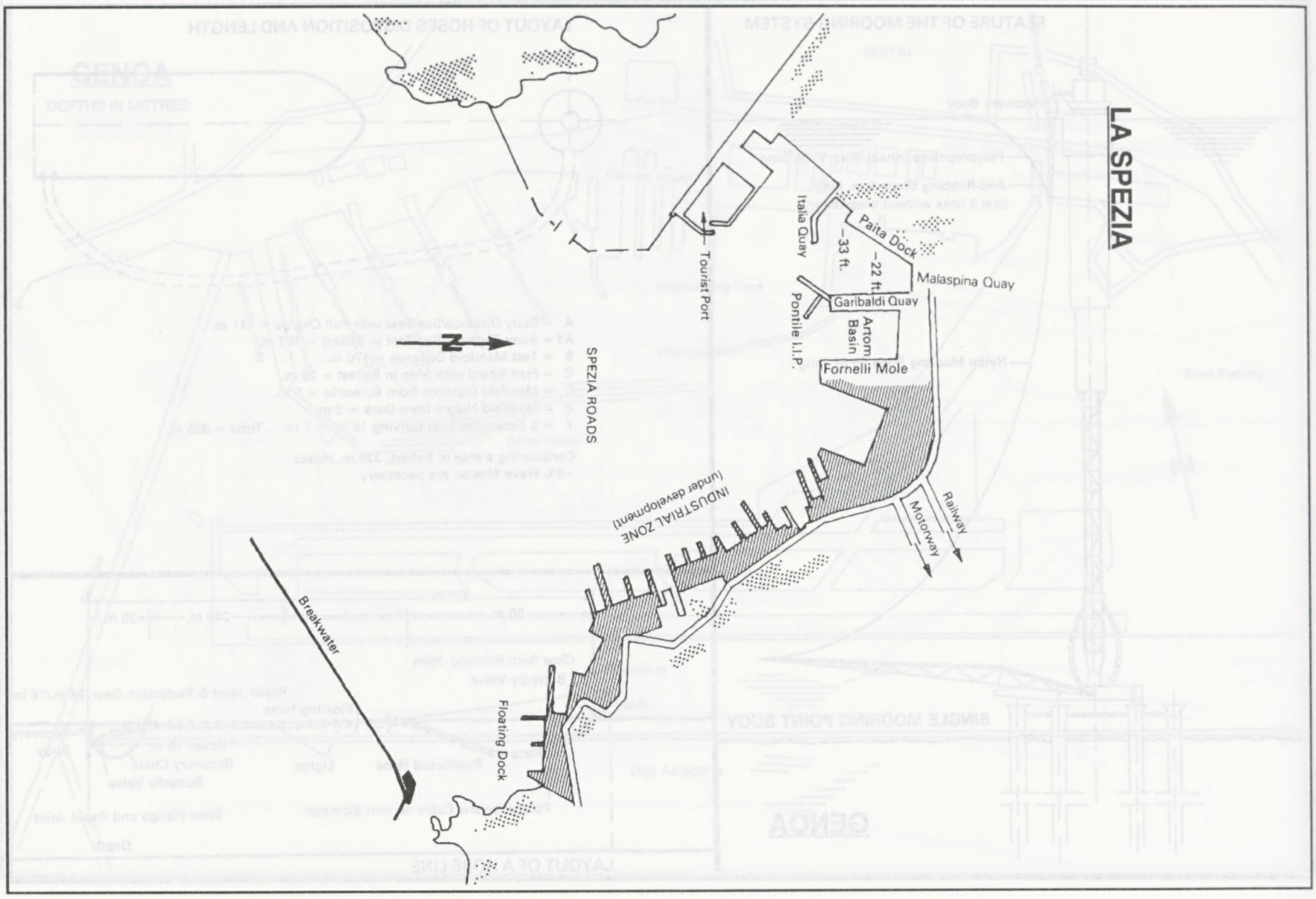

Sestri Ponente
Construction work
Oil Dock
Submarine Pipeline
Airport
A
D
GENOA
OIL TERMINALS
50 m depth
Vessels up to 500,000 d.w.t.
Lat 44°24'08"N
Long 08°48'31"E
Single Mooring Oil Platform
08° 47' 40" E
08° 49' 20" E
1,740 m.
2,250 m.
Zone Under P.A. Control
B
C
44° 23' 30" N
Single Mooring Point Buoy
Depth 65 m.
0
500
1000
ALL LINEAR MEASURES IN METRES

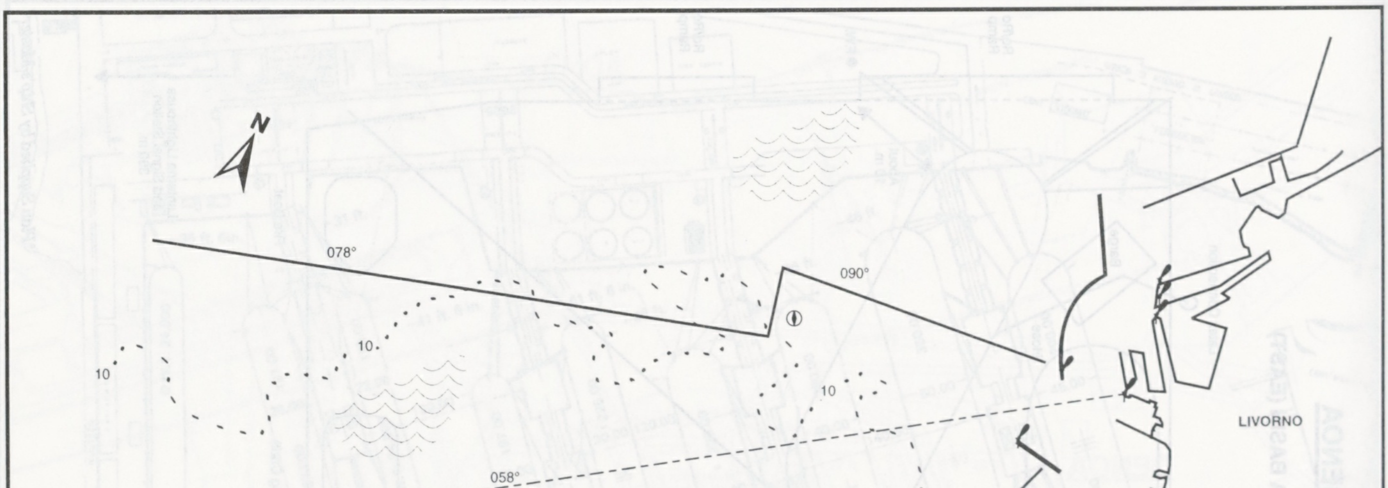

GENOA
DEPTHS IN METRES
SESTRI
Torrente Chiaravagna
Cantieri Navali
Shipbuilding Yard
Steel Factory
Molo Multedo
Banchina Occidentale
A
11
B
13
C
15
D
15
OIL DOCK
Porto Petroli
N
Sea-Line
Aeroporto
Diga Aeroporto


GENOA
OIL DOCKS
DIMENSIONS IN METRES
FOSSA COLLETTORI
STRADA D'ACCESSO AI CANTIERI
CANT. "UDOMO"
FERROBETON
CANT. "PANTELLI"
MOLO MULTEDO
Banchina Occidentale
D.W.T. 24,000
–35 ft. 6 in.
–31 ft.
197.00
28.00
180.00
22.00
D.W.T. 37,000
D.W.T. 24,000
–31 ft.
–35 ft. 6 in.
Pontile Alfa
–41 ft. 6 in.
–41 ft. 6 in.
–46 ft.
120.00
197.00
28.00
225.00
30.00
120.00
D.W.T. 37,000
D.W.T. 50,000
Pontile Beta
–46 ft.
–46 ft.
225.00
30.00
280.00
40.00
140.00
D.W.T. 80,000
D.W.T. 100,000
Pontile Gamma
350.00
50.00
290.00
45.00
D.W.T. 250,000
D.W.T. 150,000
Pontile Delta
–46 ft.
N
0
50
100 metres
SCALE


FEATURE OF THE MOORING SYSTEM
Recovery Buoy
Polypropelene Inhaul Wire 10 m. long
Anti-Rubbing Chain 9 m. long
(last 3 links without breastband)
Nylon Mooring Rope 35 m. long
SINGLE MOORING POINT BUOY
GENOA
LAYOUT OF HOSES DISPOSITION AND LENGTH
A = Buoy Distance/Sea-Test with Full Charge = 111 m.
A1 = Buoy Distance/Sea-Test in Ballast = 103 m.
B = Test Manifold Distance = 170 m.
C = Free Board with Ship in Ballast = 20 m.
D = Manifold Distance from Bulwarks = 5 m.
E = Manifold Height from Deck = 2 m.
F = 3 Times Ray Line Curving 16 in. = 7 m. Total = 325 m.
Considering a ship in Ballast, 325 m. Hoses
+6% Wave Motion are necessary
320 m.
50 m.
240 m.
30 m.
Claw from Rotating Joint
Butterfly Valve
Buoy
Floating Hose
Rapid Joint & Reduction Gear 24 in./16 in.
Recovery
Buoy
Reinforced Hose
Lights
Hoses 16 in.
Recovery Chain
Butterfly Valve
Polypropelene Cable 40 mm. diameter
Blind Flange and Rapid Joint
Depth
LAYOUT OF A HOSE LINE

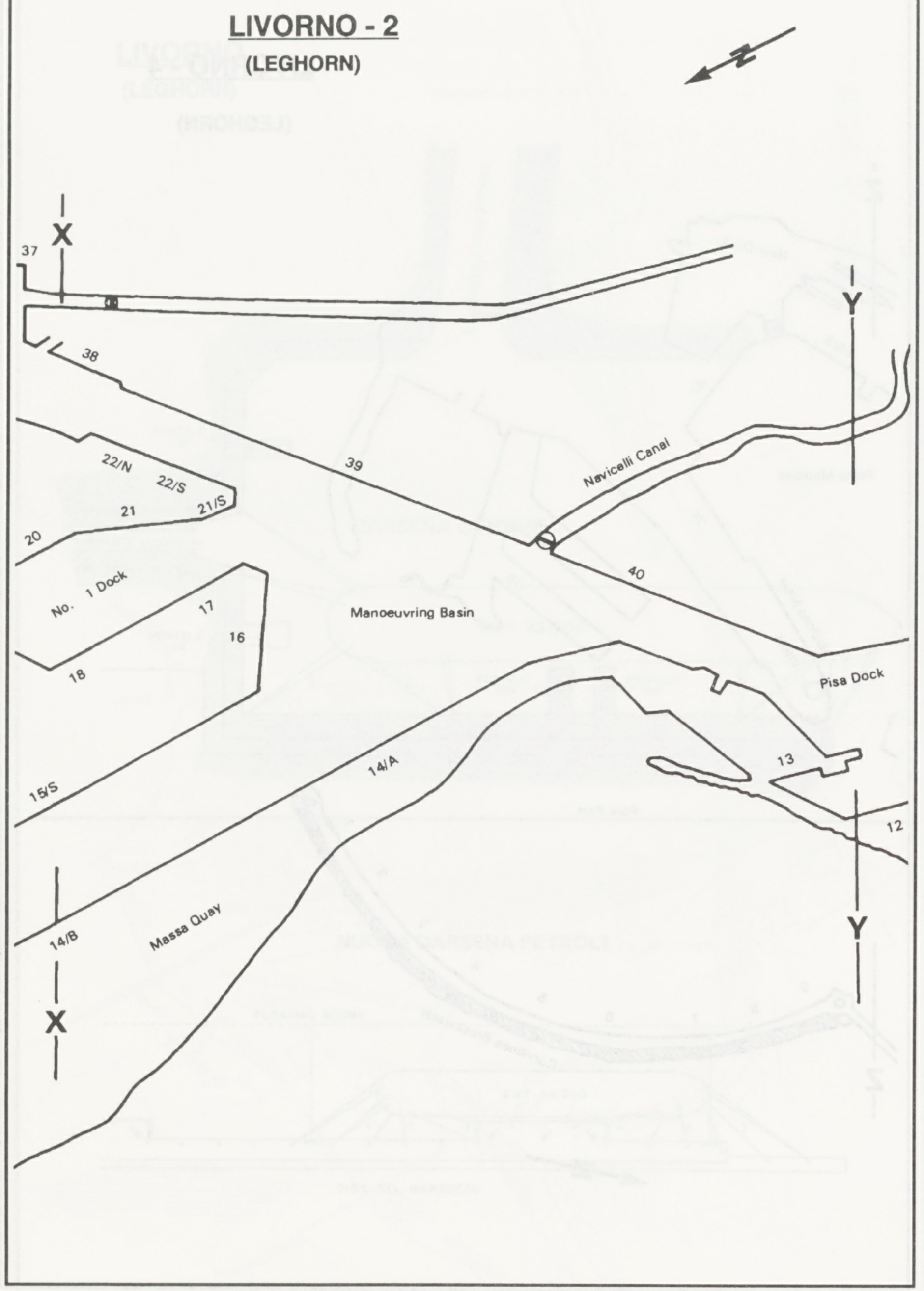

GENOA
ETHIOPIA BASIN (EAST)
Ro/Ro
Ramp
F.W.
Ro/Ro
Ramp
About
10 m.
Latex Connection
Barge
Hose
Steel Loading Quay
3 Shackles
6 Shackles
Bacino di Sampierdarena
Fire Boat
Emergency Response Vessels (Small Oil Rig Craft)
Lanterna Lighthouse
and Signal Station
350 m.
"Plan Supplied by Ship's Master"


LA SPEZIA
Tourist Port
Italia Quay
Paita Dock
−33 ft.
−22 ft.
Malaspina Quay
Garibaldi Quay
Pontile I.I.P.
Artom Basin
Fornelli Mole
N
SPEZIA ROADS
INDUSTRIAL ZONE (under development)
Railway
Motorway
Breakwater
Floating Dock


N
078°
090°
10
10
10
058°
Anchoring and Fishing Prohibited
20
20
024°
038°
10
20
LIVORNO
LIVORNO
ENTRY PROCEDURE
All Soundings in Fathoms.

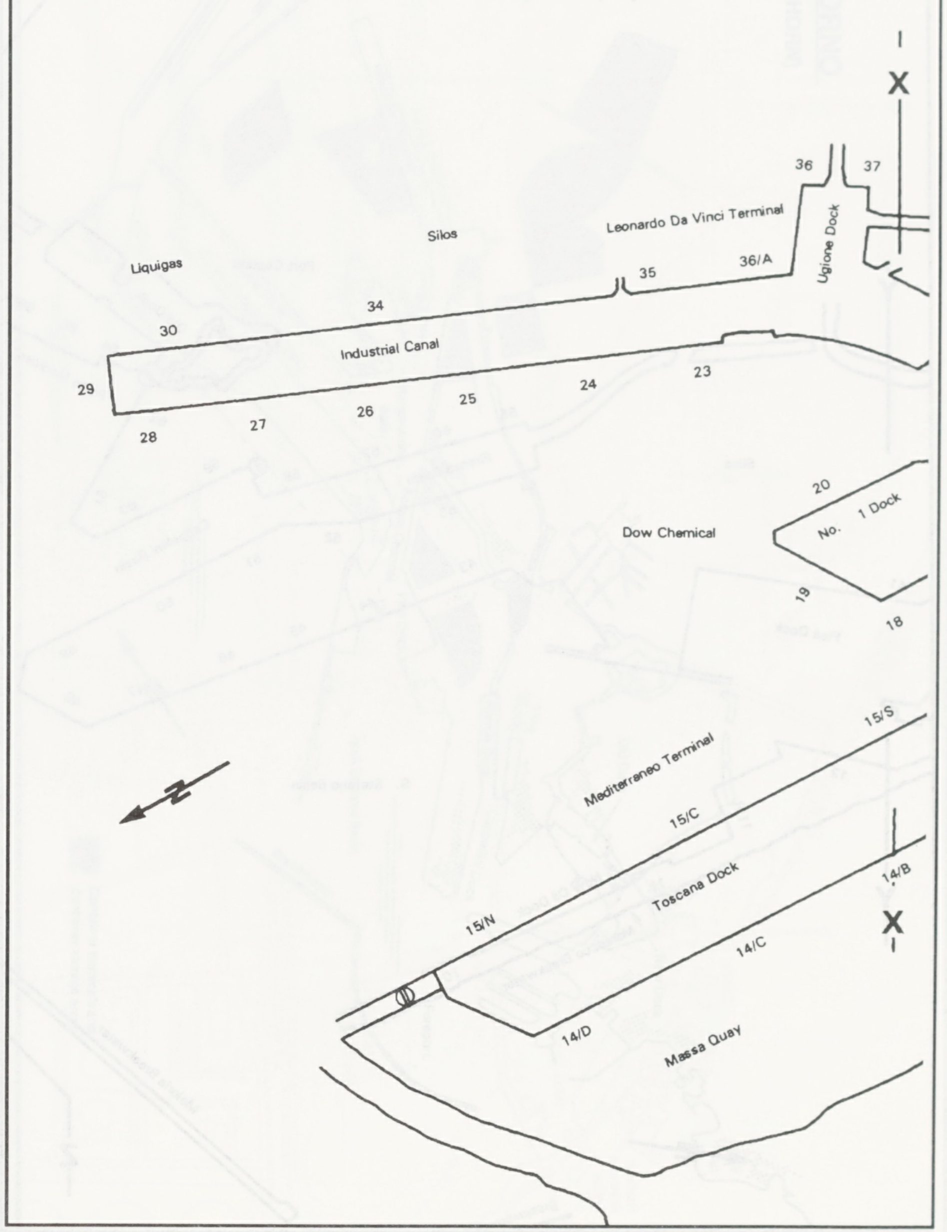
LIVORNO - 2

(LEGHORN)


X
37
Y
38
22/N
22/S
21/S
21
20
39
Navicelli Canal
40
No. 1 Dock
17
16
18
Manoeuvring Basin
Pisa Dock
13
15/S
14/A
12
14/B
Massa Quay
X
Y

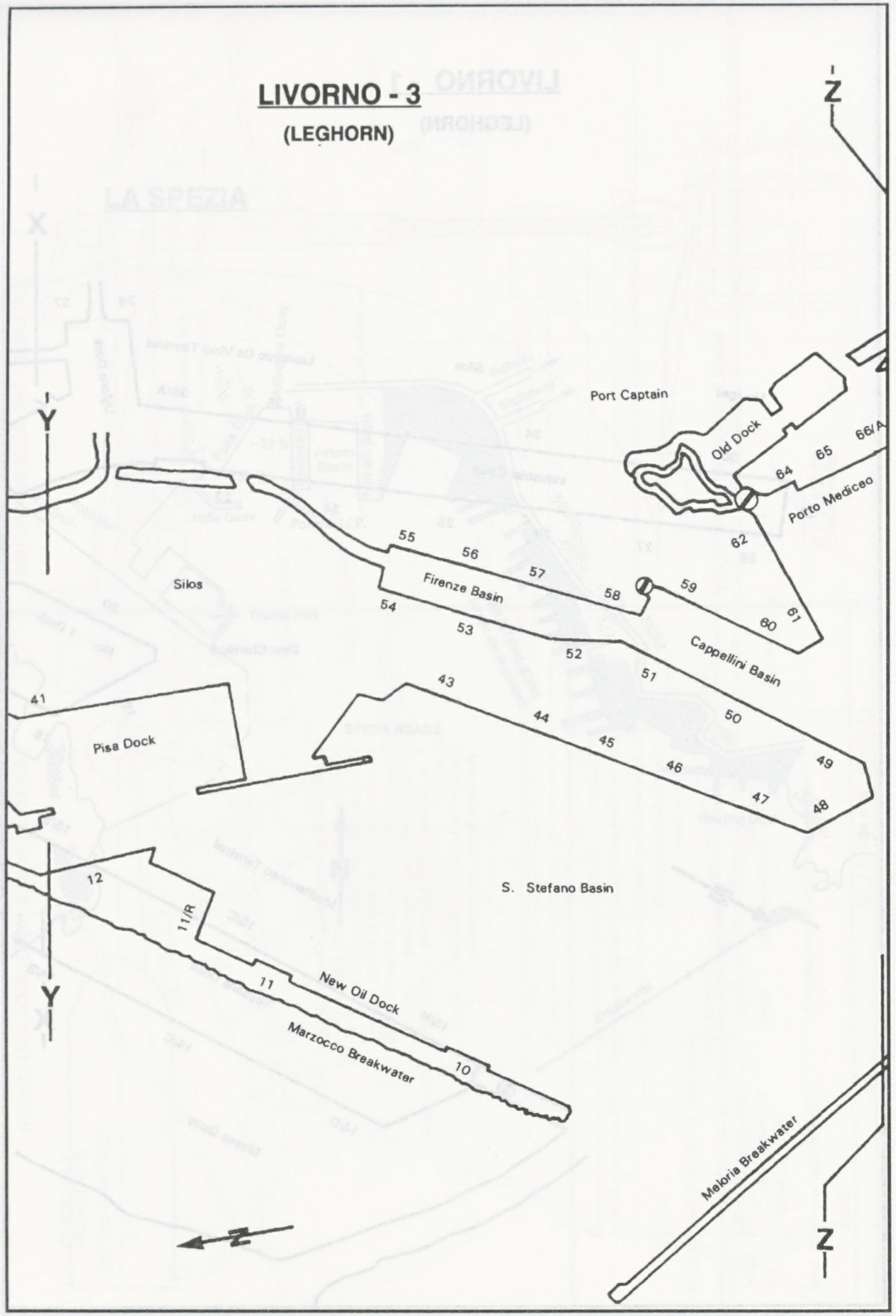
LIVORNO - 1

(LEGHORN)


X
36
37
Silos
Leonardo Da Vinci Terminal
Ugione Dock
Liquigas
35
36/A
34
30
Industrial Canal
29
24
23
25
26
27
28
20
No. 1 Dock
Dow Chemical
19
18
15/S
Mediterraneo Terminal
15/C
14/B
Toscana Dock
15/N
X
14/C
14/D
Massa Quay

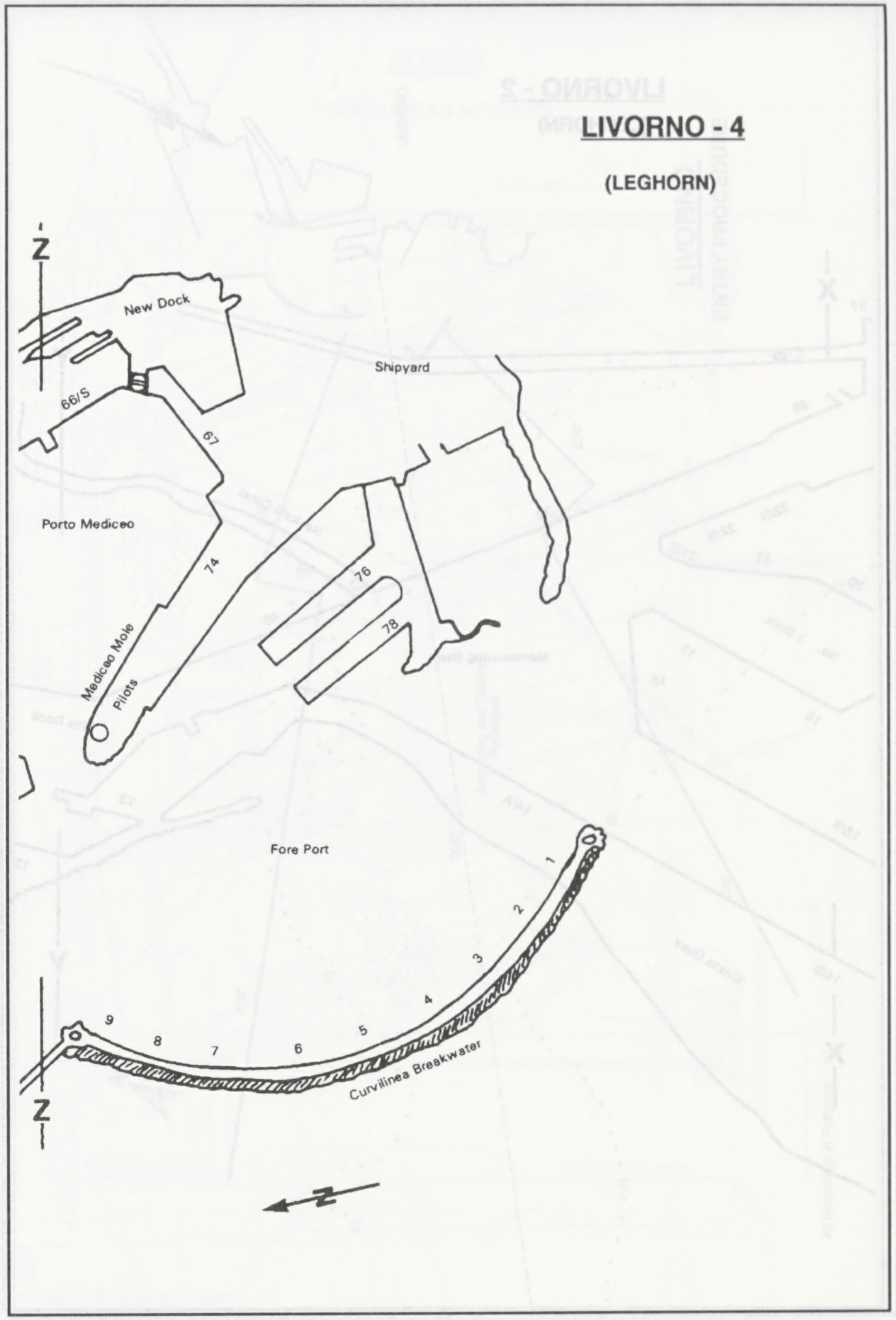
LIVORNO - 3

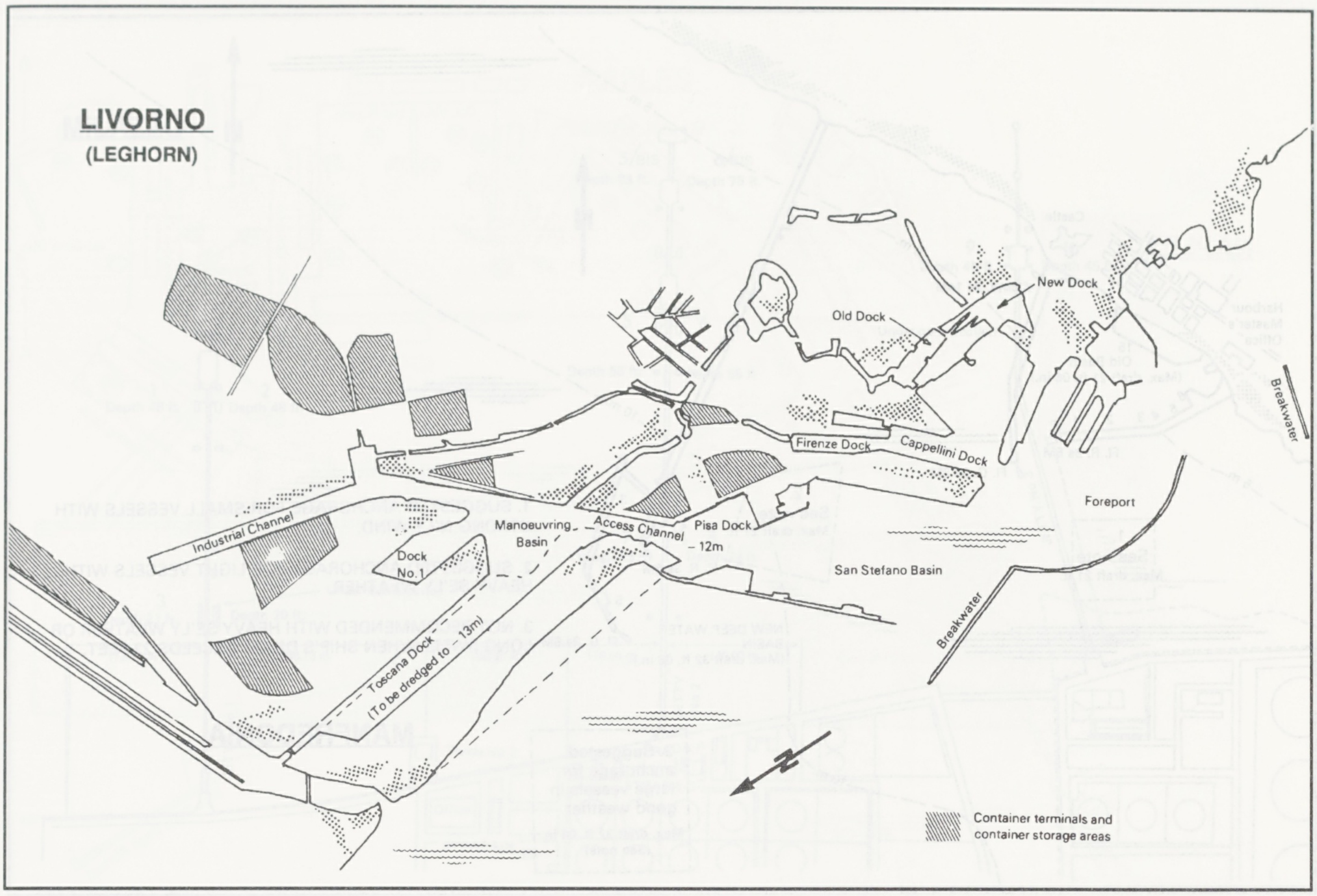
(LEGHORN)


Z
Y
Port Captain
Old Dock
66/A
65
64
Porto Mediceo
62
55
56
57
58
59
Firenze Basin
Silos
54
53
52
61
60
Cappellini Basin
51
43
44
45
46
47
48
49
50
41
Pisa Dock
12
11/R
S. Stefano Basin
11
New Oil Dock
Marzocco Breakwater
10
Meloria Breakwater
Y
Z

LIVORNO - 4

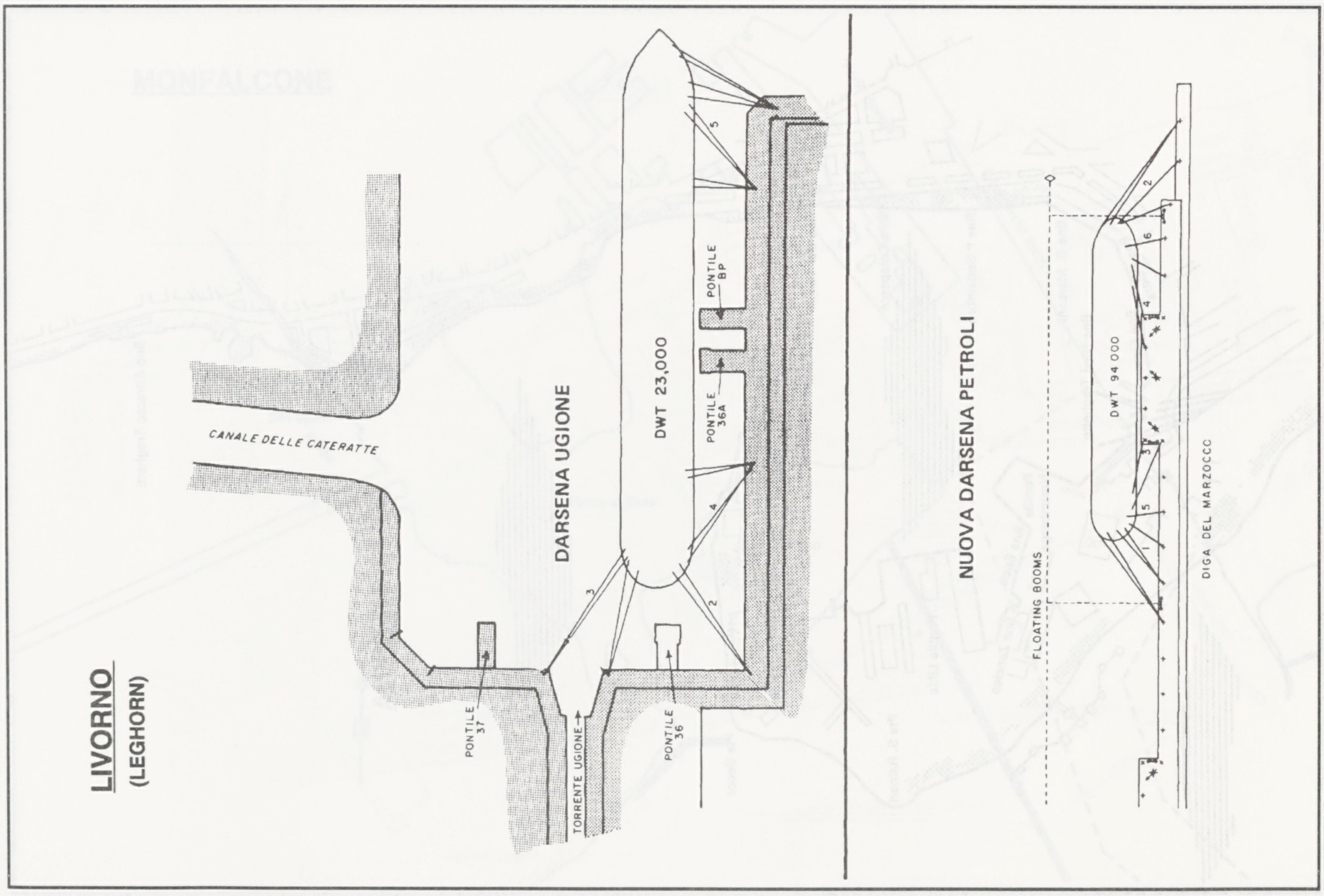
(LEGHORN)


Z
New Dock
Shipyard
66/S
67
Porto Mediceo
74
76
78
Medicea Mole
Pilots
Fore Port
1
2
3
4
5
6
7
8
9
Curvilinea Breakwater
Z



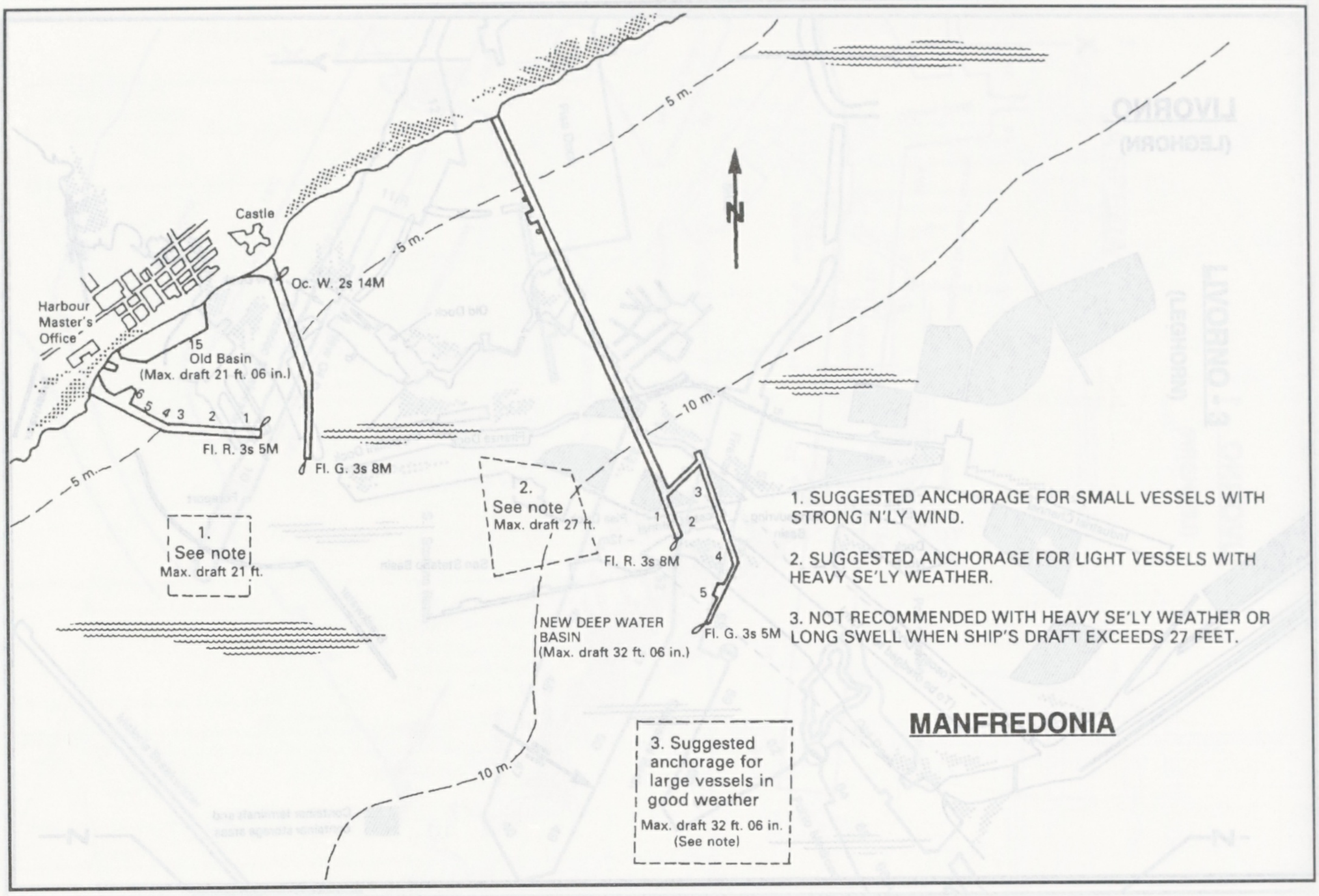
LIVORNO
(LEGHORN)

Industrial Channel
Dock No.1
Manoeuvring Basin
Access Channel
Pisa Dock – 12m
Toscana Dock (To be dredged to – 13m)
Firenze Dock
Cappellini Dock
Old Dock
New Dock
Breakwater
Foreport
San Stefano Basin
Breakwater
▨ Container terminals and container storage areas



LIVORNO
(LEGHORN)

DARSENA UGIONE
DWT 23,000
PONTILE 8P
PONTILE 36A
PONTILE 37
PONTILE 36
TORRENTE UGIONE
CANALE DELLE CATERATTE
1
2
3
4
5
NUOVA DARSENA PETROLI
DWT 94 000
FLOATING BOOMS
DIGA DEL MARZOCCO
1
2
3
4
5
6

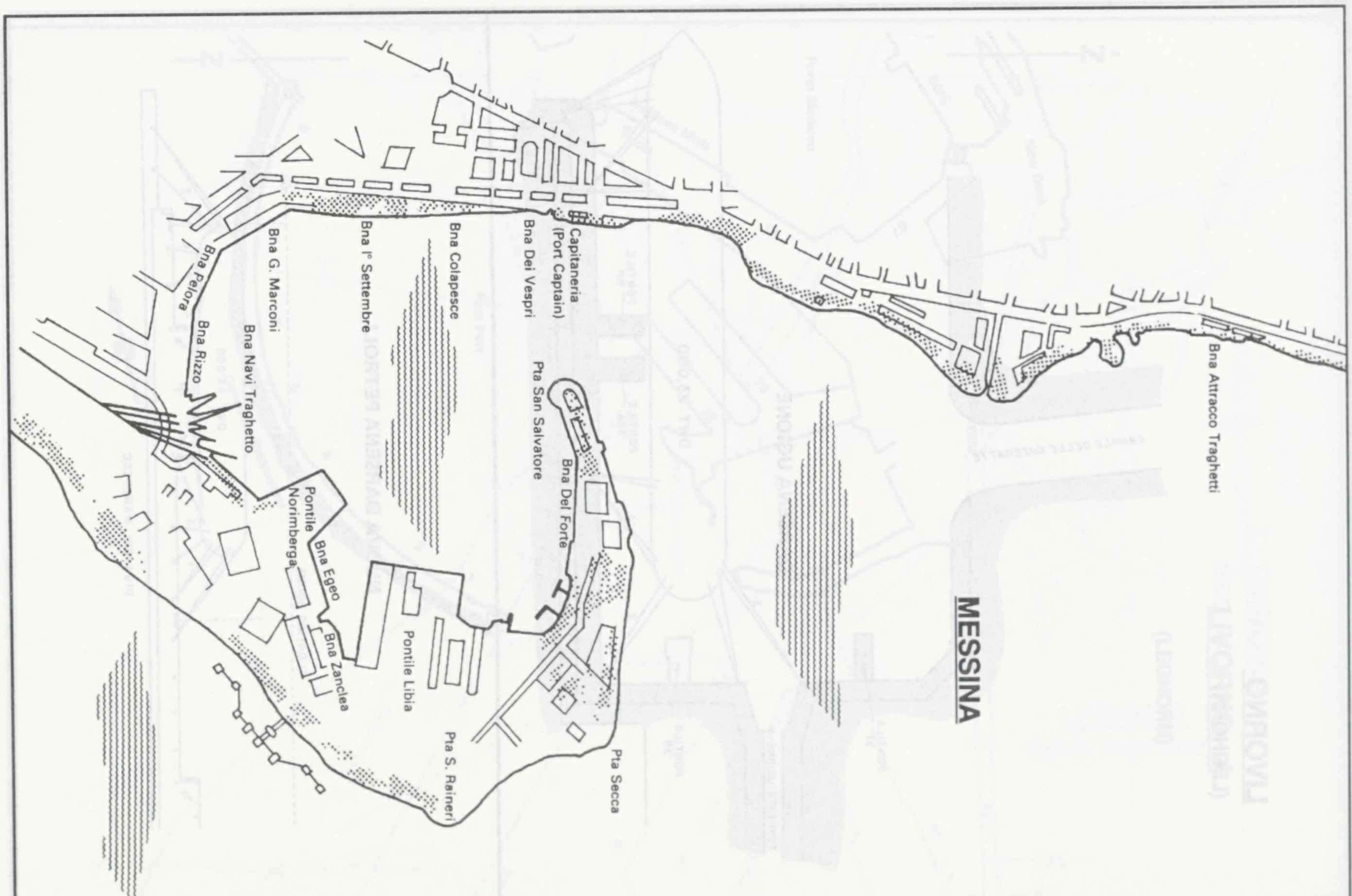

Castle
Harbour Master's Office
15
Old Basin (Max. draft 21 ft. 06 in.)
Oc. W. 2s 14M
6 5 4 3 2 1
Fl. R. 3s 5M
Fl. G. 3s 8M
5 m.
10 m.
N
1. See note Max. draft 21 ft.
2. See note Max. draft 27 ft.
1 2 3 4 5
Fl. R. 3s 8M
Fl. G. 3s 5M
NEW DEEP WATER BASIN (Max. draft 32 ft. 06 in.)
3. Suggested anchorage for large vessels in good weather Max. draft 32 ft. 06 in. (See note)

1. SUGGESTED ANCHORAGE FOR SMALL VESSELS WITH STRONG N'LY WIND.

2. SUGGESTED ANCHORAGE FOR LIGHT VESSELS WITH HEAVY SE'LY WEATHER.

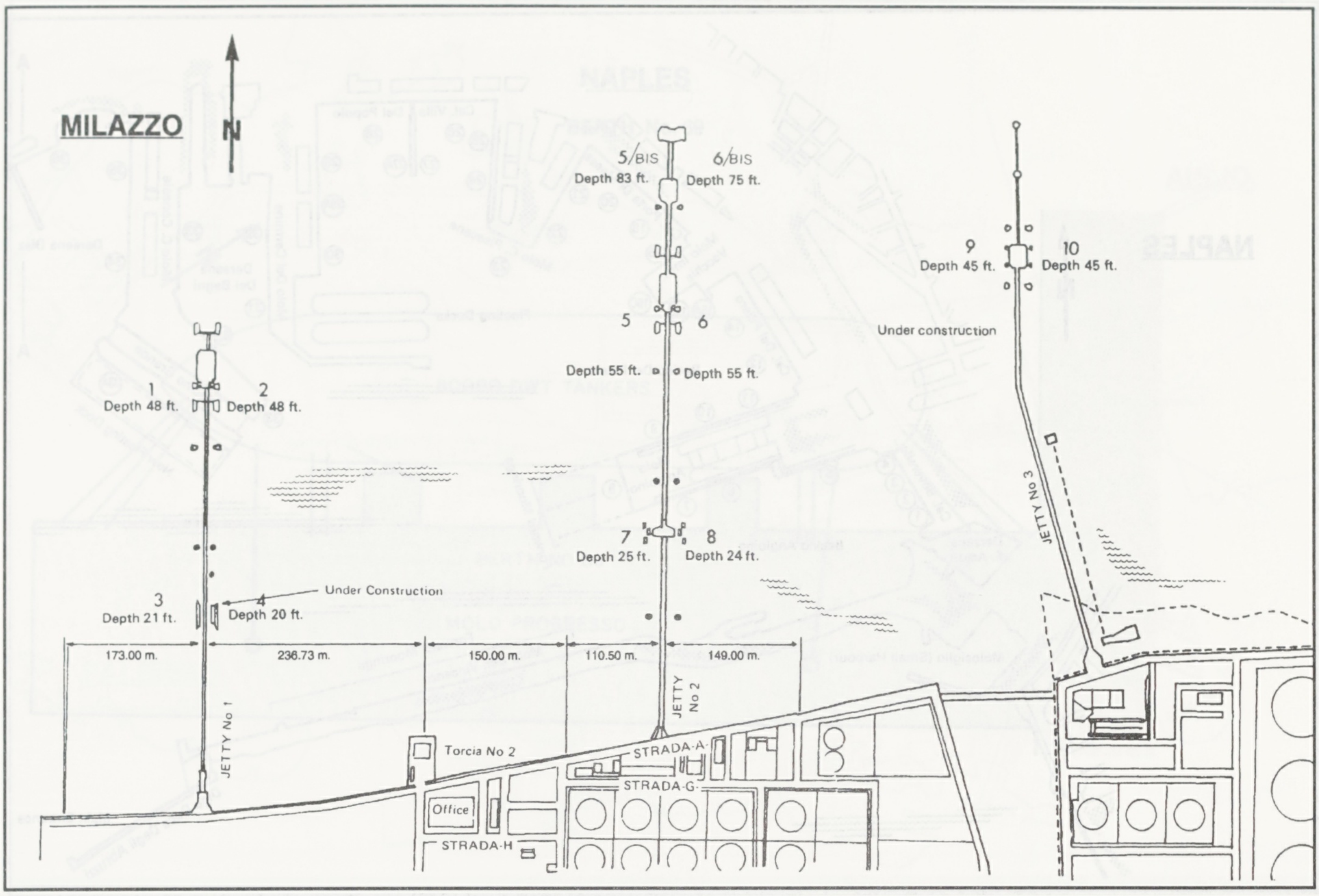
3. NOT RECOMMENDED WITH HEAVY SE'LY WEATHER OR LONG SWELL WHEN SHIP'S DRAFT EXCEEDS 27 FEET.

MANFREDONIA

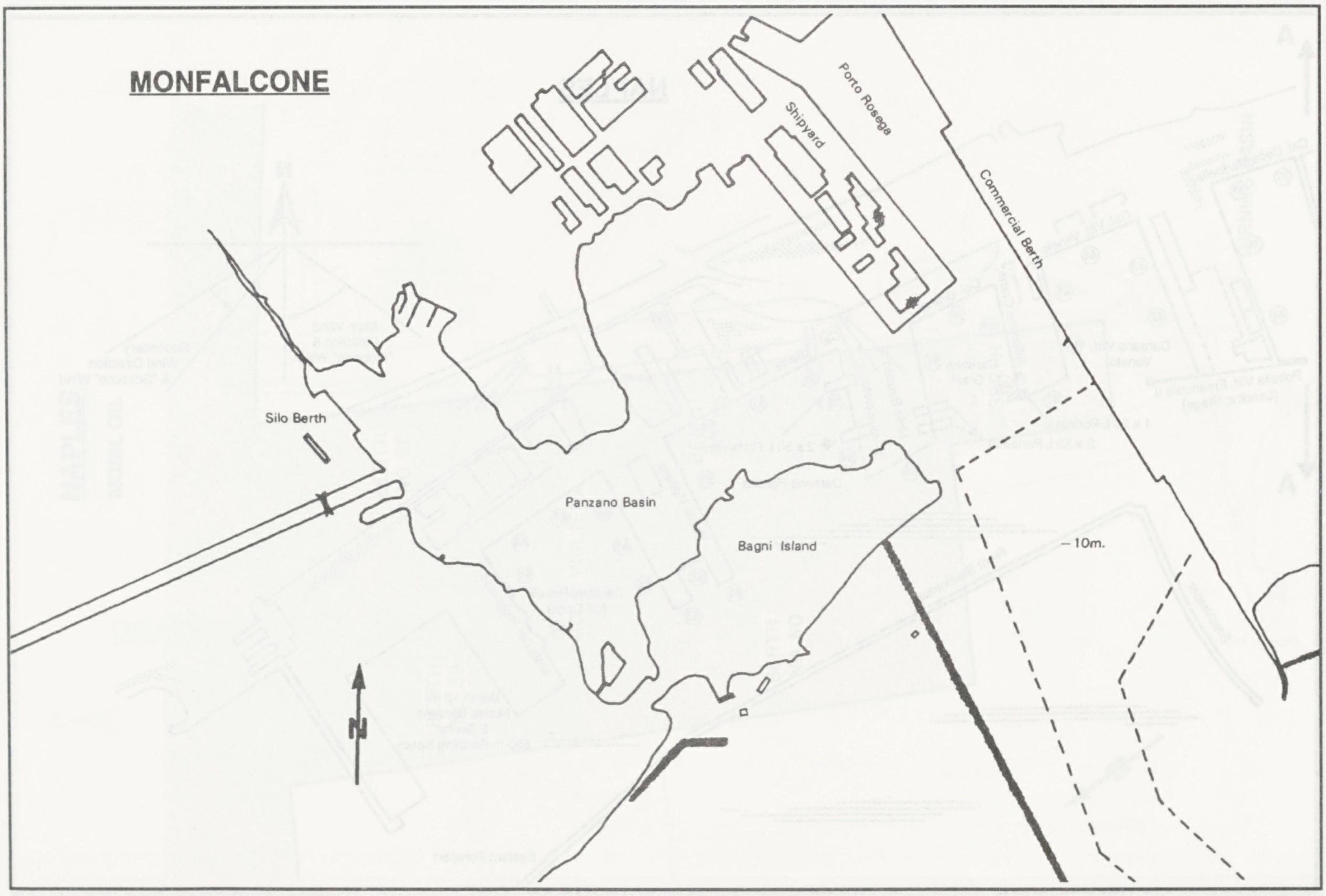

Bna Peloro
Bna Rizzo
Bna Navi Traghetto
Bna G. Marconi
Bna Iº Settembre
Bna Colapesce
Bna Dei Vespri
Capitaneria (Port Captain)
Pta San Salvatore
Bna Del Forte
Pontile Norimberga
Bna Egeo
Bna Zanclea
Pontile Libia
Pta S. Raineri
Pta Secca
Bna Attracco Traghetti

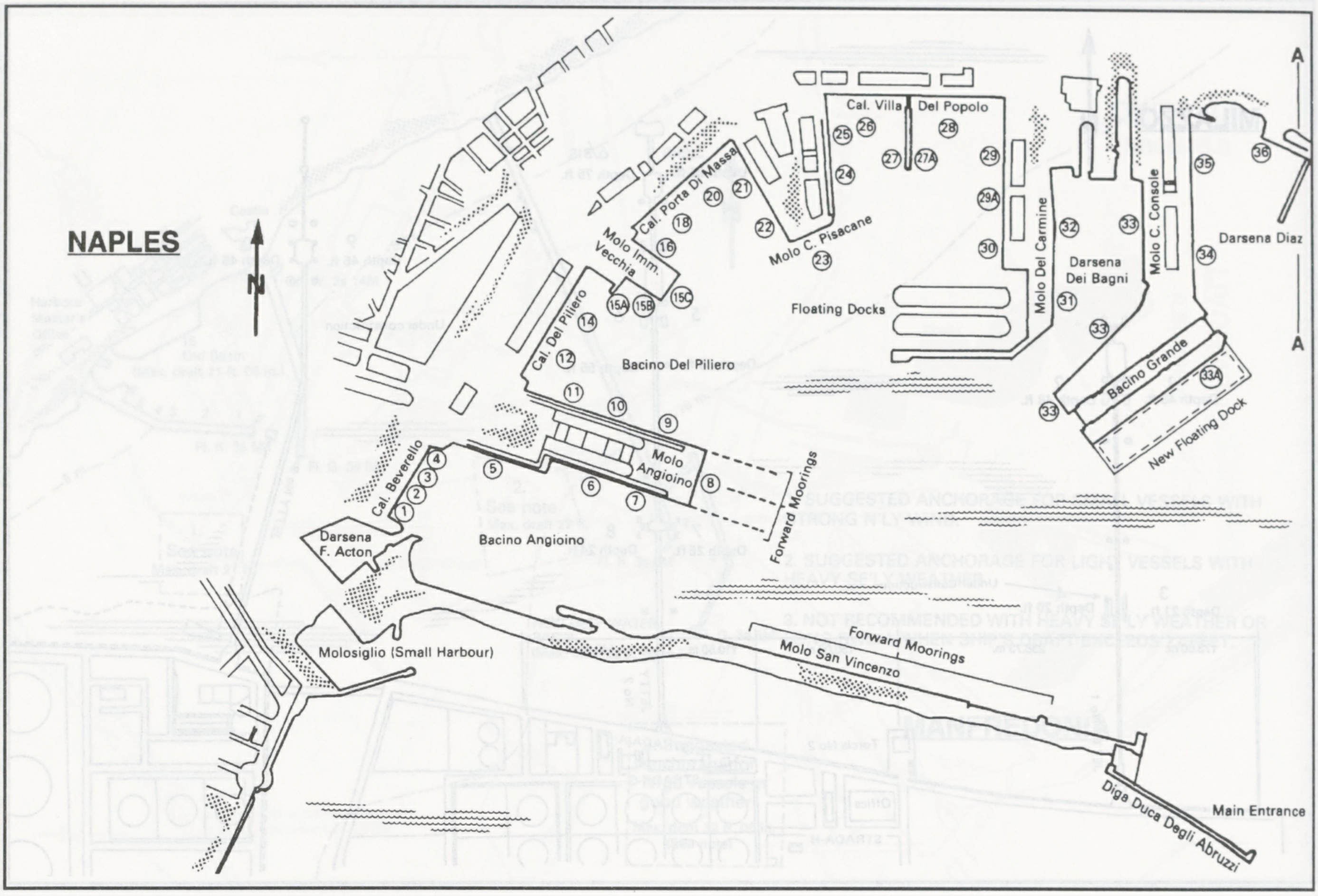
MESSINA

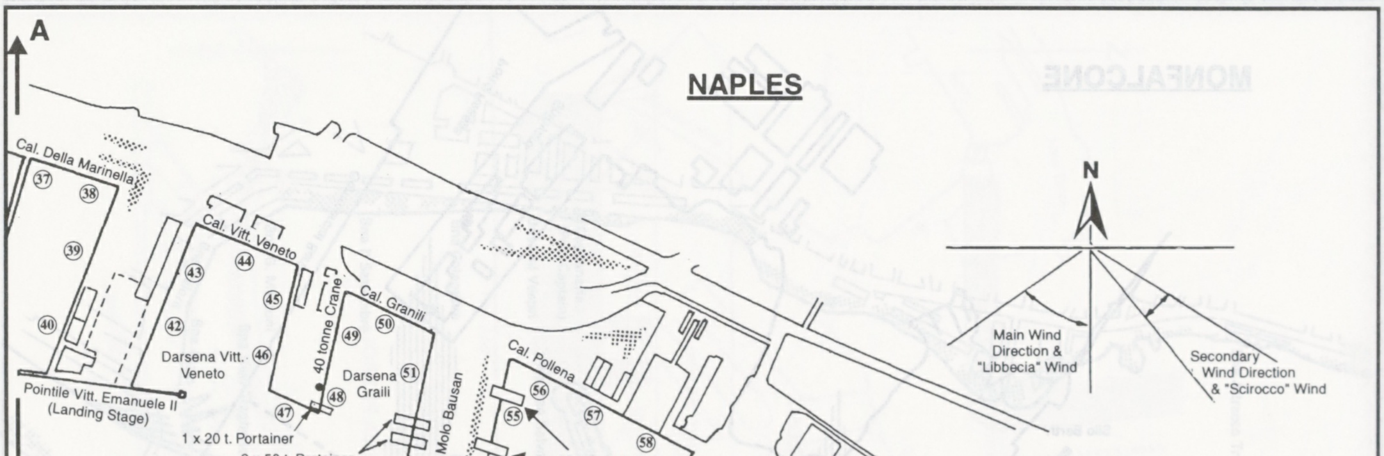
MILAZZO


N
5/BIS
Depth 83 ft.
6/BIS
Depth 75 ft.
9
Depth 45 ft.
10
Depth 45 ft.
Under construction
5
6
Depth 55 ft.
Depth 55 ft.
1
Depth 48 ft.
2
Depth 48 ft.
7
Depth 25 ft.
8
Depth 24 ft.
JETTY No 3
3
Depth 21 ft.
4
Depth 20 ft.
Under Construction
173.00 m.
236.73 m.
150.00 m.
110.50 m.
149.00 m.
JETTY No 1
JETTY No 2
Torcia No 2
STRADA-A
STRADA-G
Office
STRADA-H

MONFALCONE

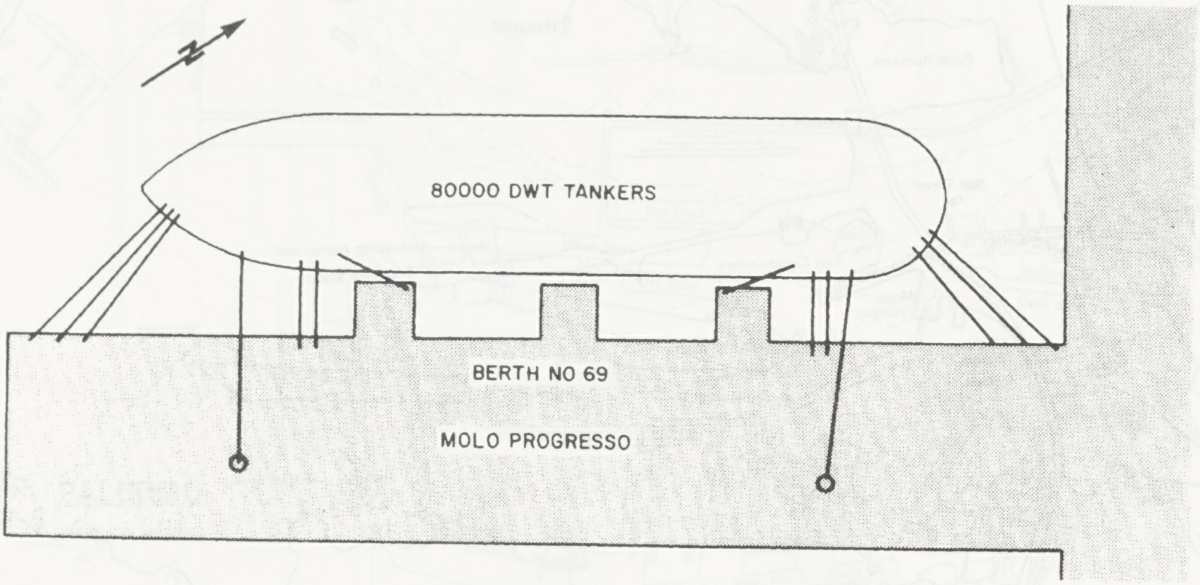

Porto Rosega
Shipyard
Commercial Berth
Silo Berth
Panzano Basin
Bagni Island
–10m.
N


NAPLES
N
Cal. Villa
Del Popolo
Molo C. Pisacane
Cal. Porta Di Massa
Molo Imm. Vecchia
Cal. Del Piliero
Bacino Del Piliero
Floating Docks
Molo Del Carmine
Darsena Dei Bagni
Molo C. Console
Darsena Diaz
Bacino Grande
New Floating Dock
A
A
Cal. Beverello
Molo Angioino
Forward Moorings
Darsena F. Acton
Bacino Angioino
Molosiglio (Small Harbour)
Forward Moorings
Molo San Vincenzo
Diga Duca Degli Abruzzi
Main Entrance
1
2
3
4
5
6
7
8
9
10
11
12
14
15A
15B
15C
16
18
20
21
22
23
24
25
26
27
27A
28
29
29A
30
31
32
33
33
33
33A
34
35
36


A
NAPLES
A
Cal. Della Marinella
Cal. Vitt. Veneto
Cal. Granili
40 tonne Crane
Darsena Vitt. Veneto
Darsena Grali
Pointile Vitt. Emanuele II (Landing Stage)
1 x 20 t. Portainer
2 x 50 t. Portainer
Molo Bausan
Cal. Pollena
2 x 50 t. Portainers
Darsena Pollena
Pointe Vigliena
Darsena Petroli (Oil Dock)
Molo Del Progresso
Depth 13 m. Nuovo Darsena 5 Berths 650 m.Berthing Space
Breakwater
Front Breakwater
Eastern Foreport
N
Main Wind Direction & "Libbecia" Wind
Secondary Wind Direction & "Scirocco" Wind
37
38
39
40
42
43
44
45
46
47
48
49
50
51
53
54
55
56
57
58
59
61
62
63
64
65
66
67
68
69
70

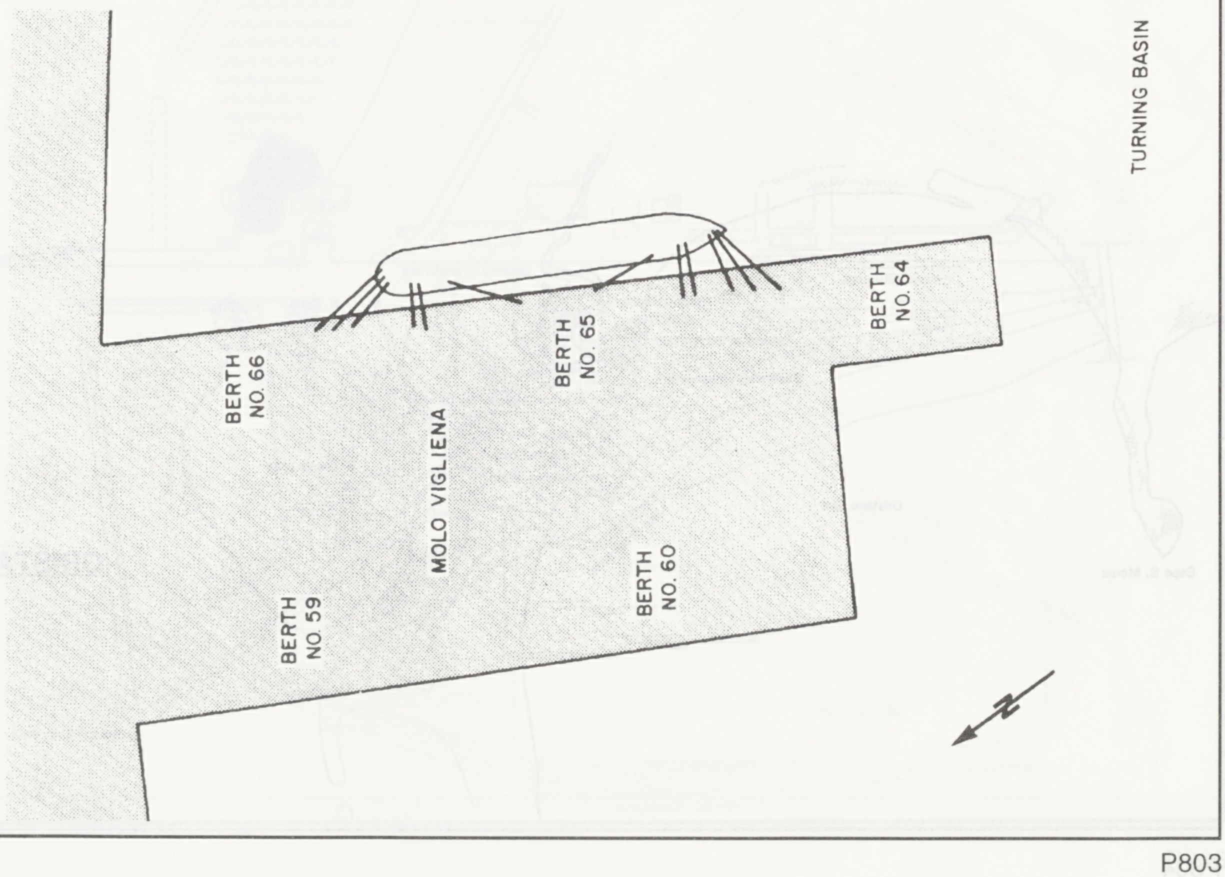
NAPLES

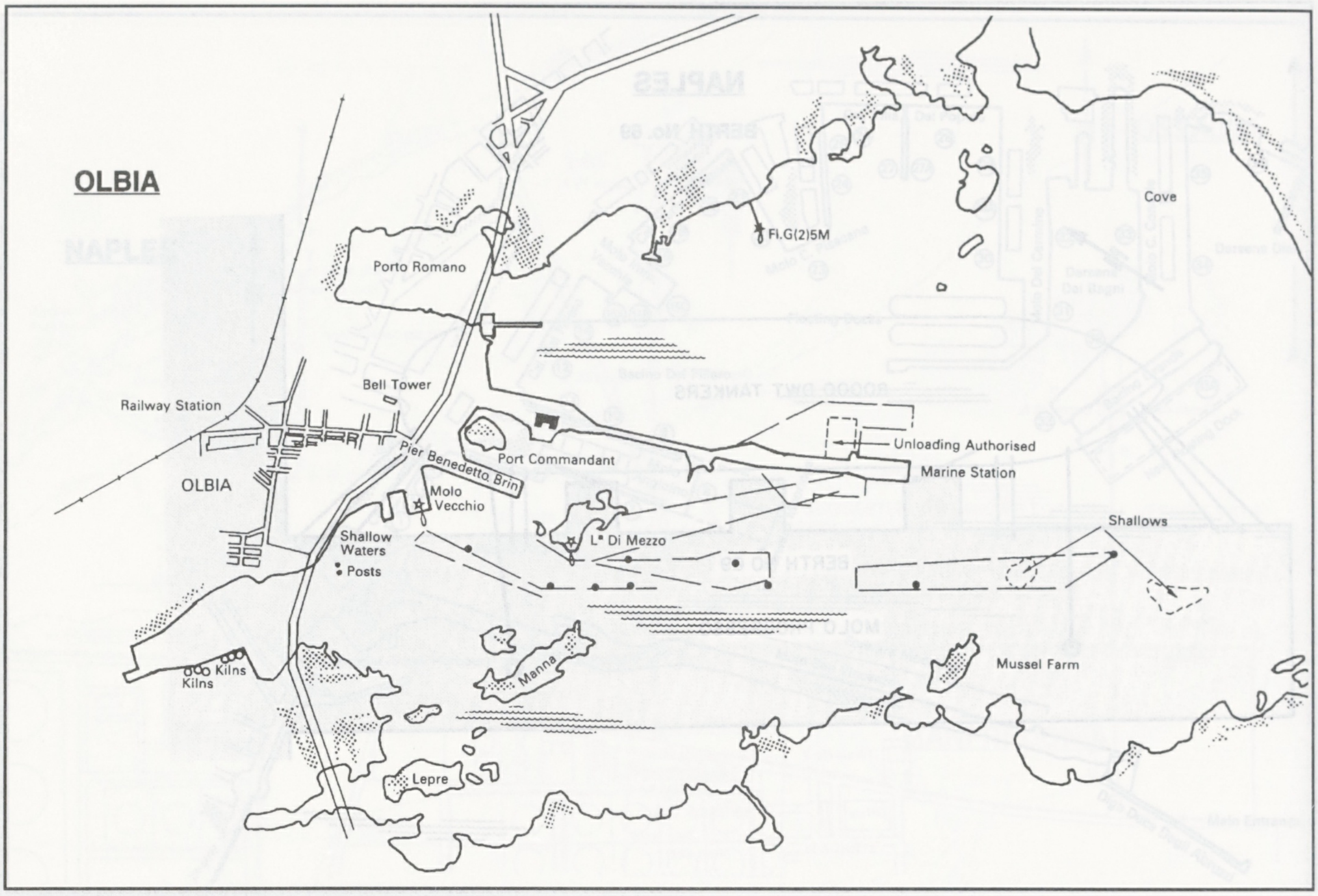
BERTH No. 69

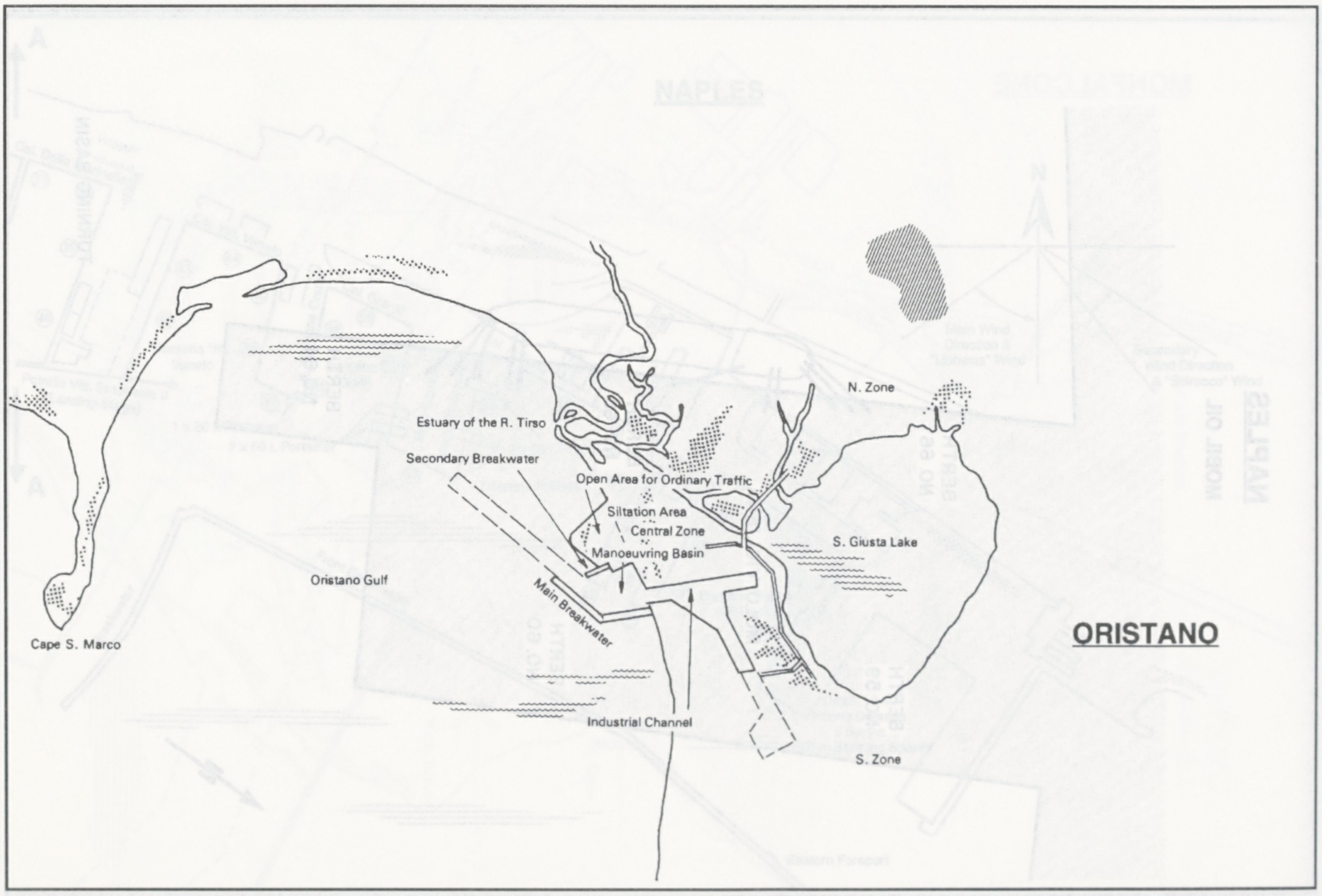

N
80000 DWT TANKERS
BERTH NO 69
MOLO PROGRESSO

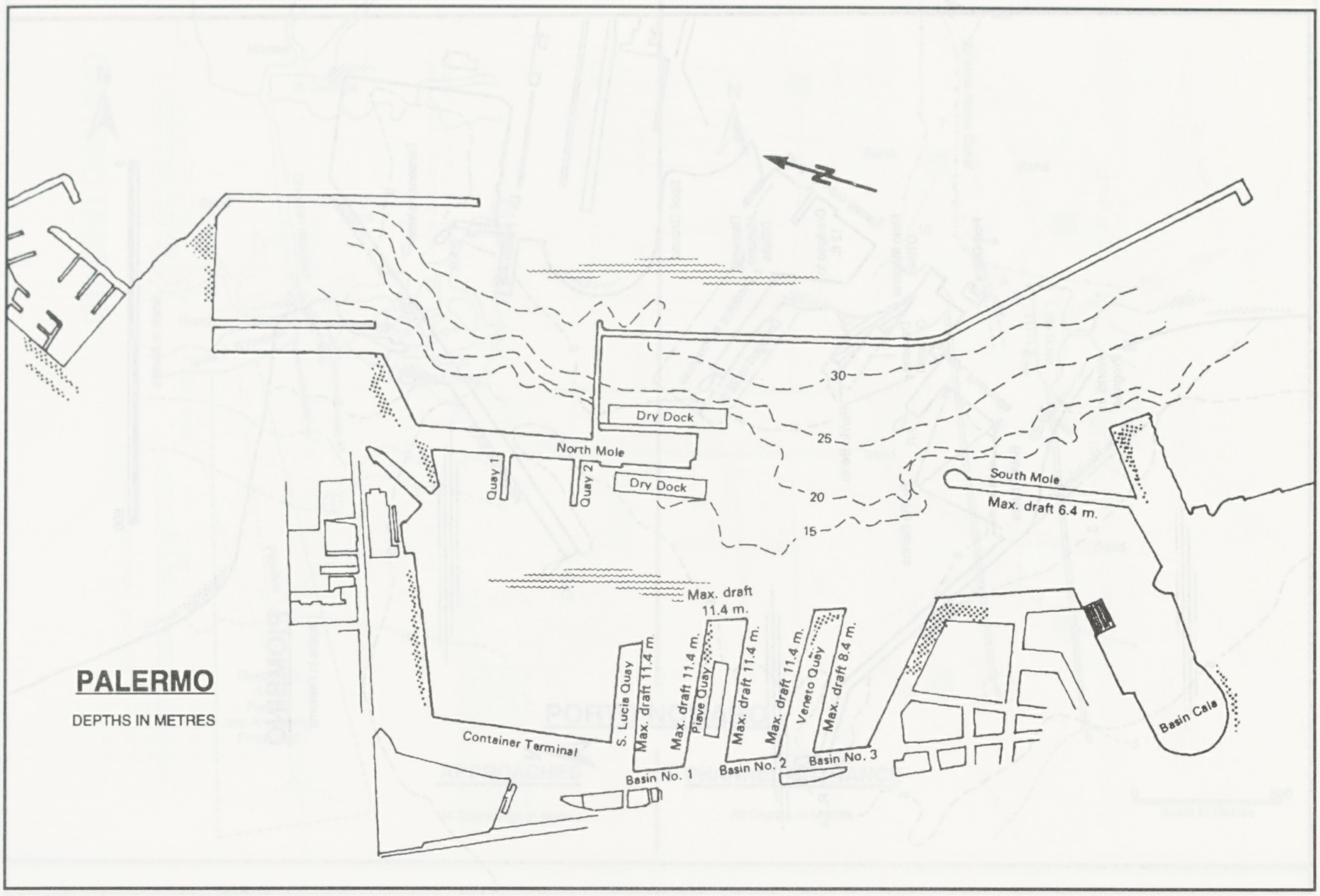
NAPLES

MOBIL OIL


TURNING BASIN
BERTH NO. 66
BERTH NO. 65
BERTH NO. 64
MOLO VIGLIENA
BERTH NO. 60
BERTH NO. 59
N


OLBIA
Porto Romano
Fl.G(2)5M
Cove
Bell Tower
Railway Station
Port Commandant
Unloading Authorised
Marine Station
Pier Benedetto Brin
OLBIA
Molo Vecchio
L° Di Mezzo
Shallow Waters
Posts
Shallows
Kilns
Kilns
Manna
Mussel Farm
Lepre

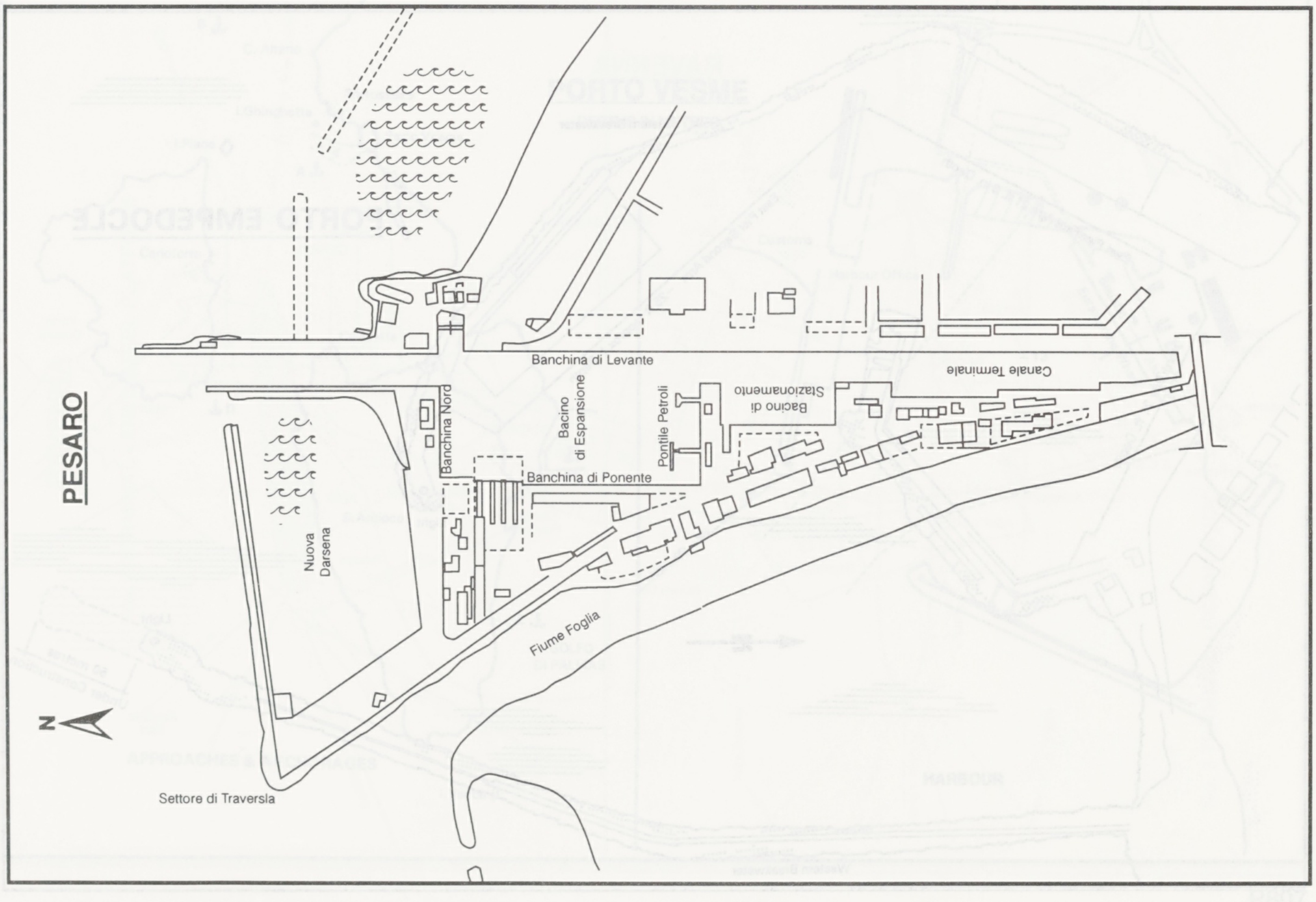

N. Zone
Estuary of the R. Tirso
Secondary Breakwater
Open Area for Ordinary Traffic
Siltation Area
Central Zone
Manoeuvring Basin
S. Giusta Lake
Oristano Gulf
Main Breakwater
ORISTANO
Cape S. Marco
Industrial Channel
S. Zone



PALERMO

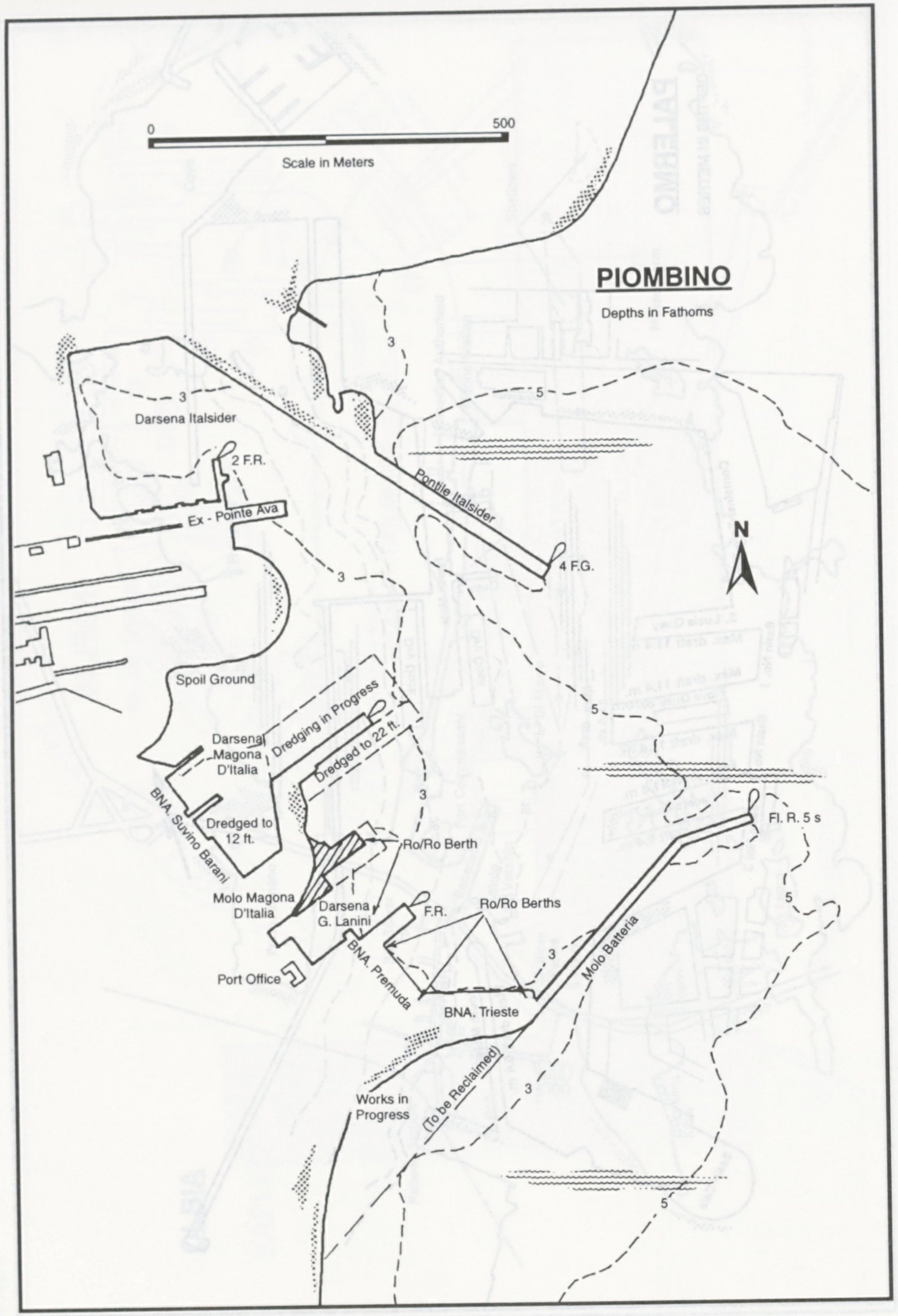
DEPTHS IN METRES

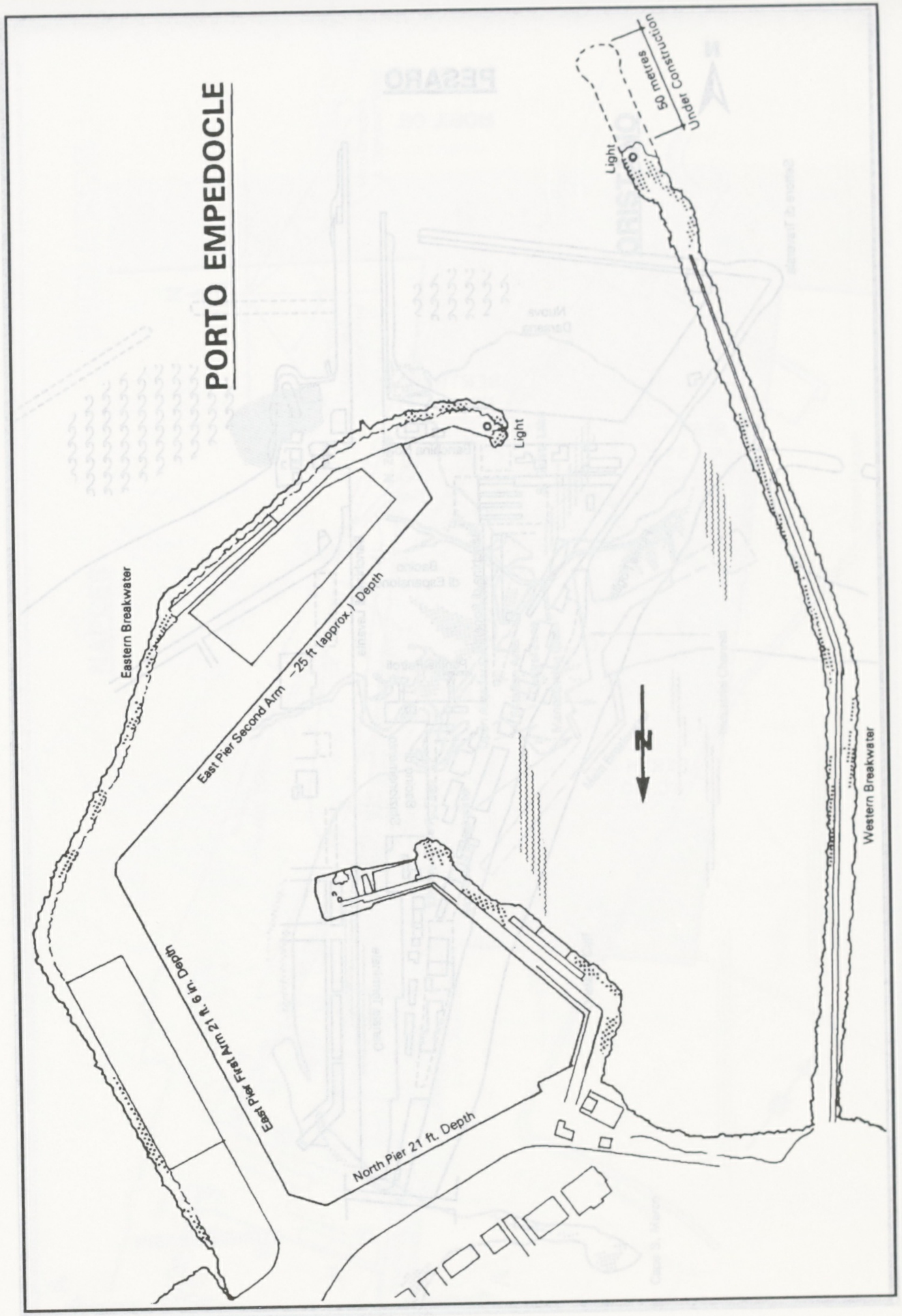
N
Dry Dock
North Mole
Quay 1
Quay 2
Dry Dock
30
25
20
15
South Mole
Max. draft 6.4 m.
Max. draft 11.4 m.
S. Lucia Quay
Max. draft 11.4 m.
Max. draft 11.4 m.
Pieve Quay
Max. draft 11.4 m.
Max. draft 11.4 m.
Veneto Quay
Max. draft 8.4 m.
Container Terminal
Basin No. 1
Basin No. 2
Basin No. 3
Basin Cala



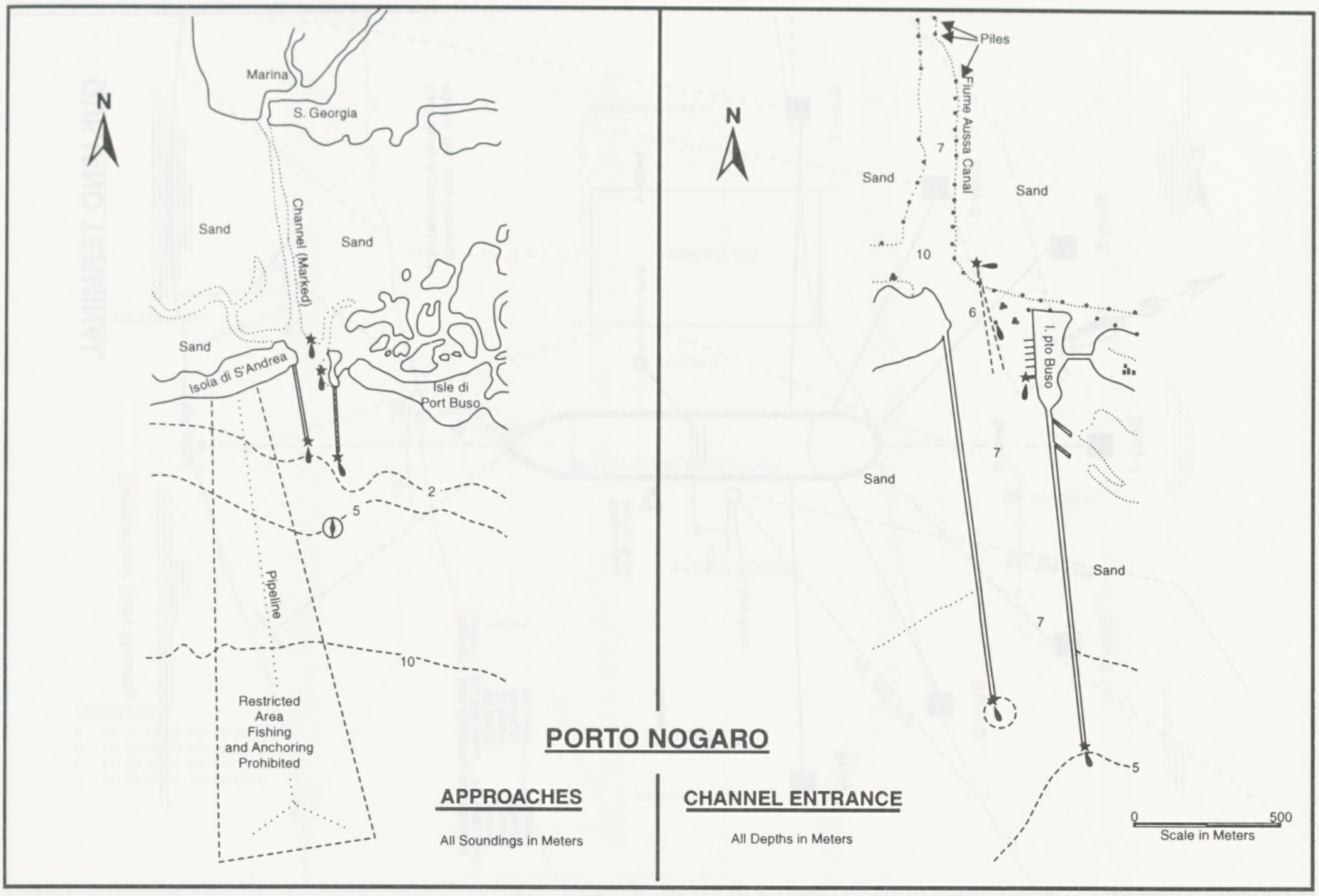
PESARO

Banchina di Levante
Canale Terminale
Bacino di Stazionamento
Pontile Petroli
Bacino di Espansione
Banchina Nord
Banchina di Ponente
Nuova Darsena
Flume Foglia
N
Settore di Traversia


0
500
Scale in Meters
PIOMBINO
Depths in Fathoms
3
5
Darsena Italsider
2 F.R.
Ex - Pointe Ava
Pontile Italsider
4 F.G.
N
Spoil Ground
Dredging in Progress
Dredged to 22 ft.
Darsena Magona D'Italia
BNA. Suvino Barani
Dredged to 12 ft.
Ro/Ro Berth
Fl. R. 5 s
Molo Magona D'Italia
Darsena G. Lanini
F.R.
Ro/Ro Berths
Molo Batteria
BNA. Premuda
Port Office
BNA. Trieste
Works in Progress
(To be Reclaimed)


PORTO EMPEDOCLE
50 metres
Under Construction
Light
Light
Eastern Breakwater
East Pier Second Arm –25 ft. (approx.) Depth
East Pier First Arm 21 ft. 6 in. Depth
North Pier 21 ft. Depth
N
Western Breakwater

PORTO NOGARO



APPROACHES

All Soundings in Meters

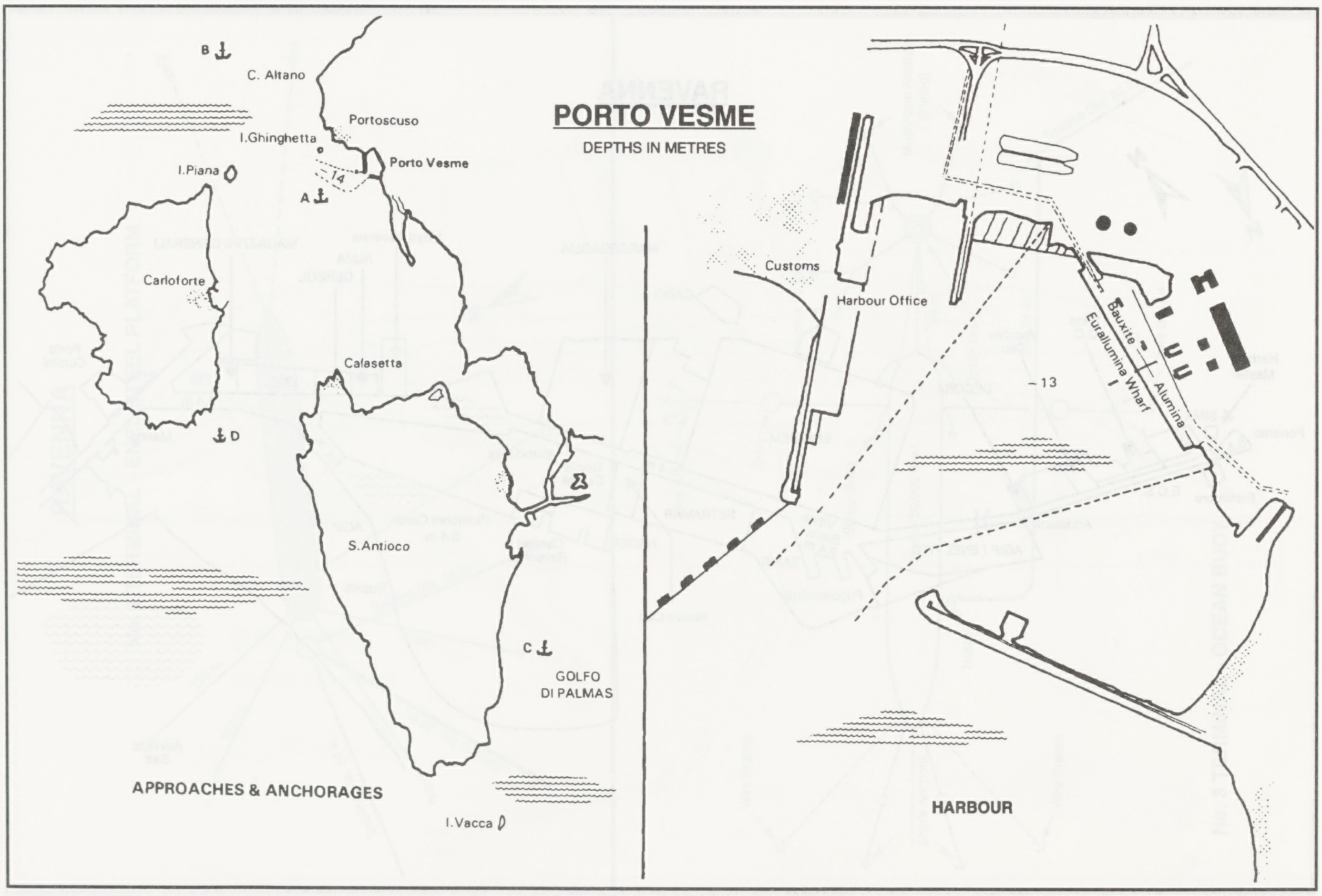
CHANNEL ENTRANCE

All Depths in Meters

N
Marina
S. Georgia
Sand
Channel (Marked)
Sand
Sand
Isola di S'Andrea
Isle di
Port Buso
2
5
Pipeline
10
Restricted
Area
Fishing
and Anchoring
Prohibited
N
Piles
Fiume Aussa Canal
7
Sand
Sand
10
6
I. pto Buso
7
Sand
Sand
7
5
0
500
Scale in Meters

PORTO VESME

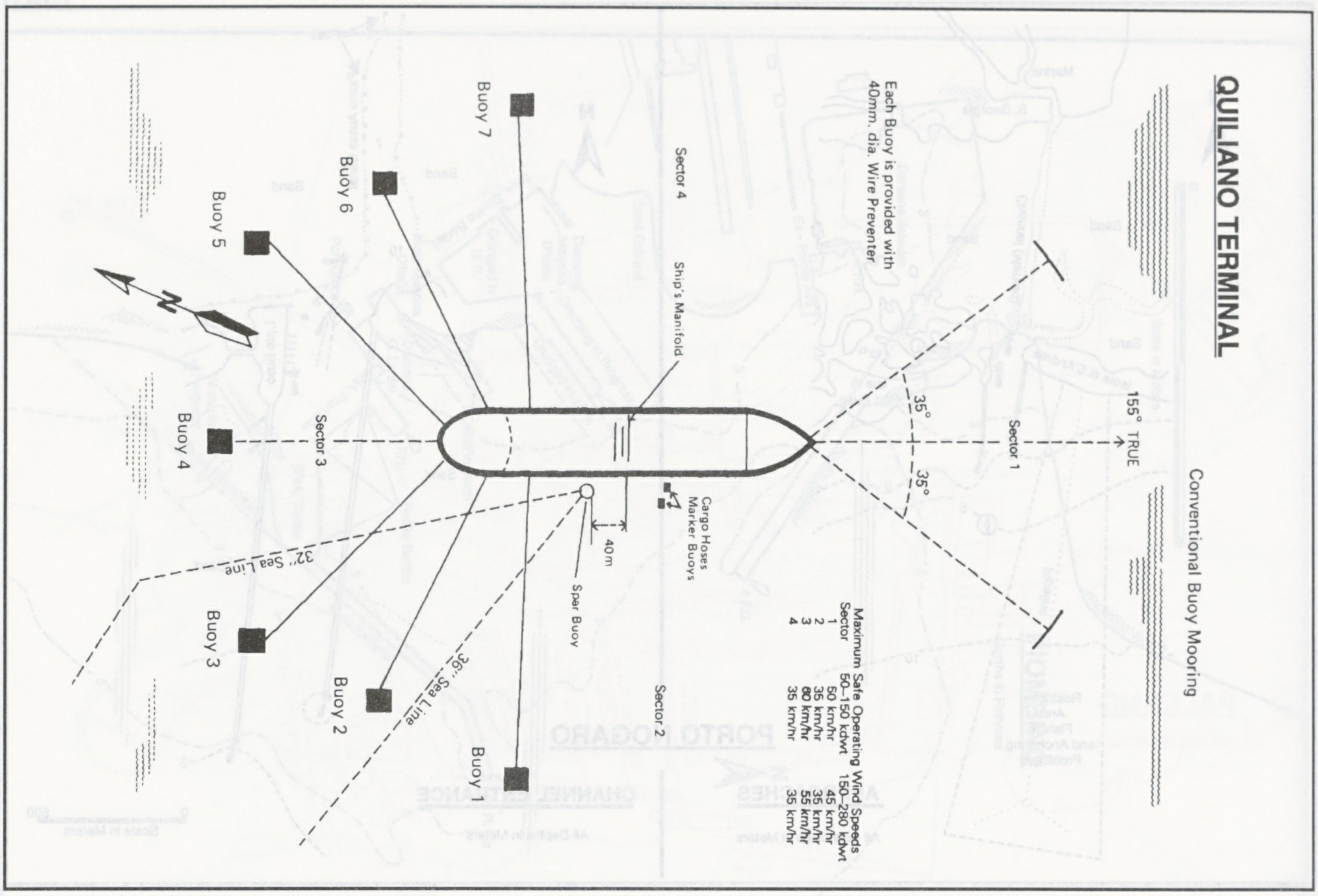
DEPTHS IN METRES

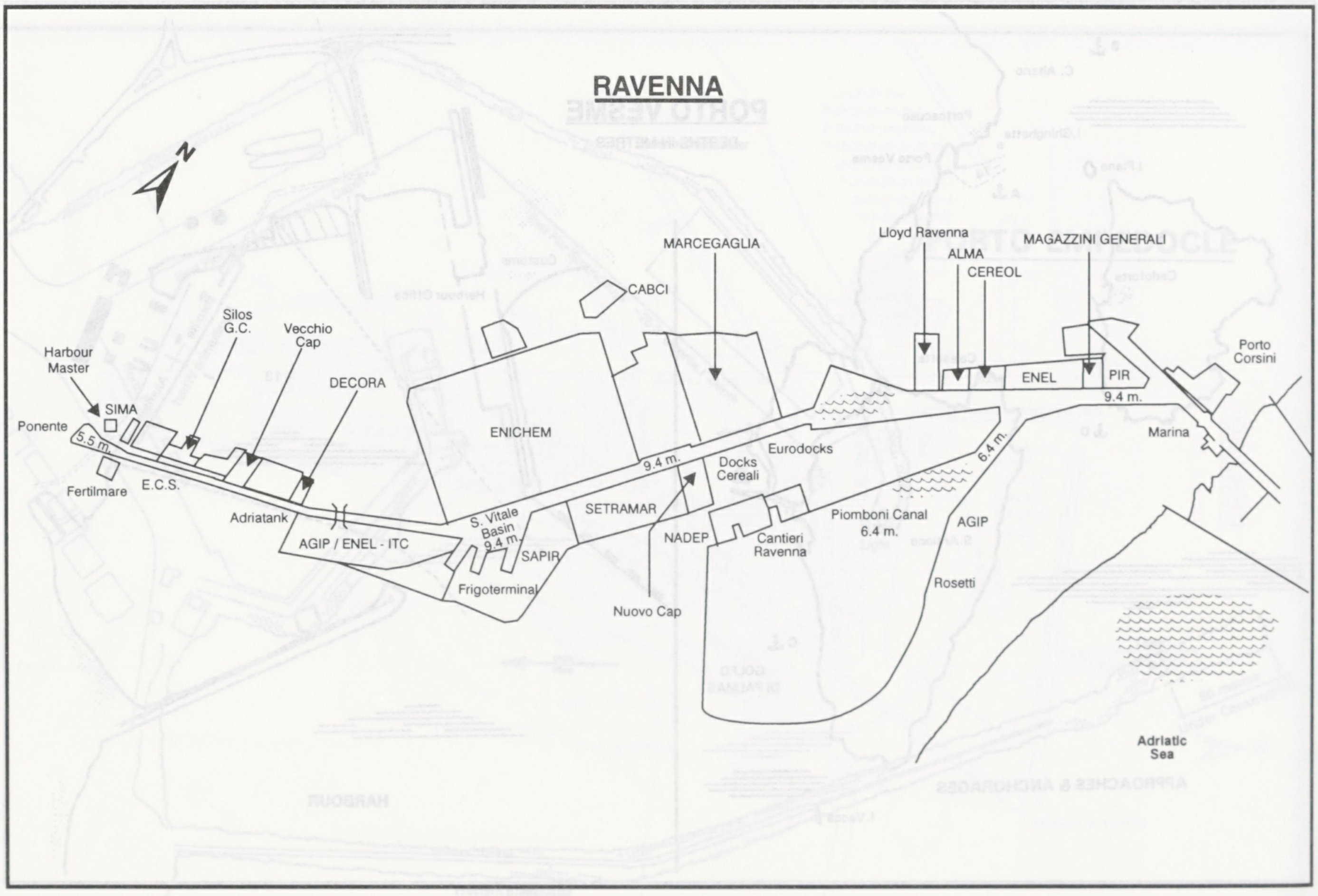


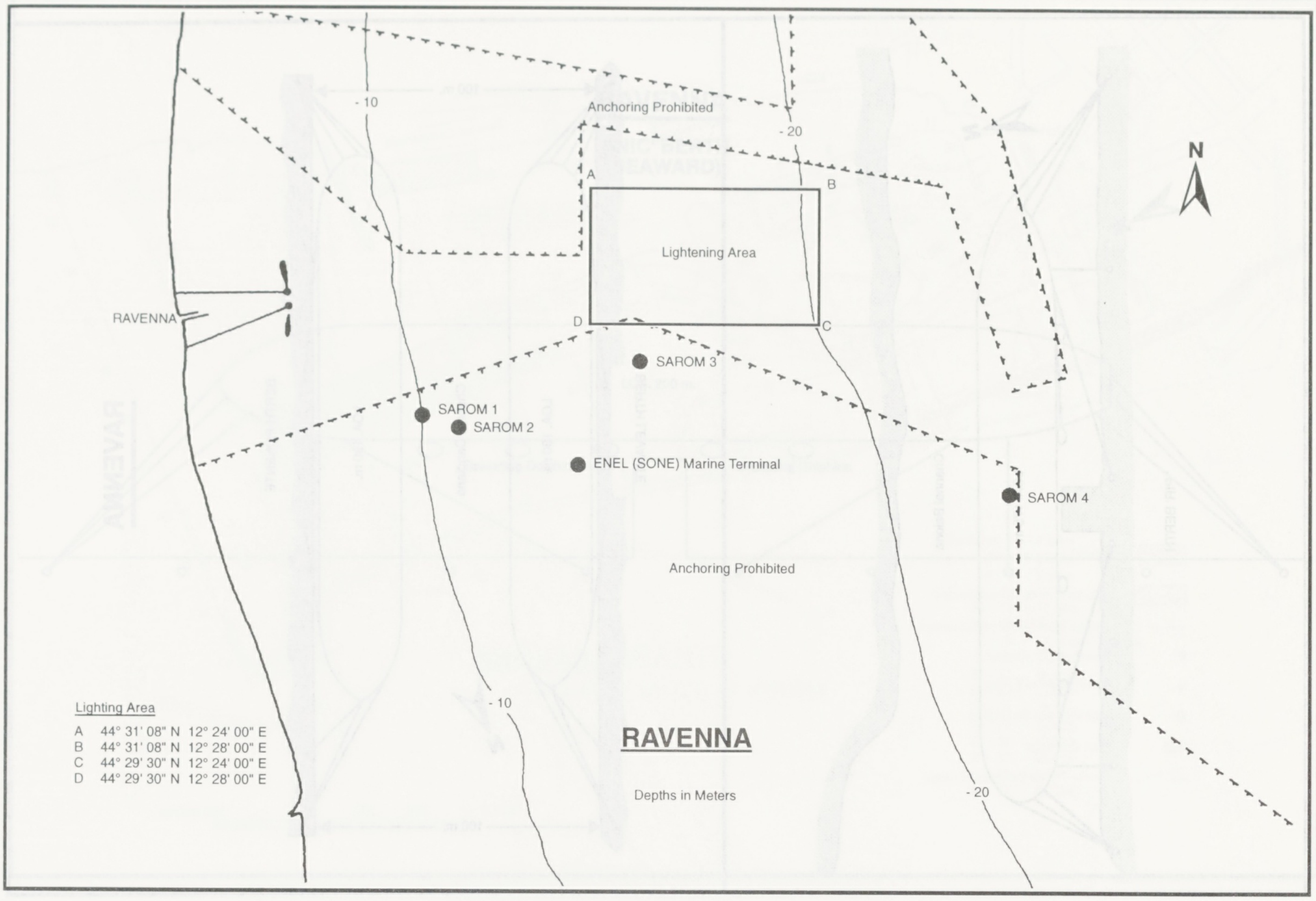
APPROACHES & ANCHORAGES

HARBOUR

B
C. Altano
Portoscuso
I.Ghinghetta
Porto Vesme
I.Piana
14
A
Carloforte
Calasetta
D
S.Antioco
C
GOLFO
DI PALMAS
I.Vacca
Customs
Harbour Office
Bauxite
Eurallumina Wharf
Alumina
13

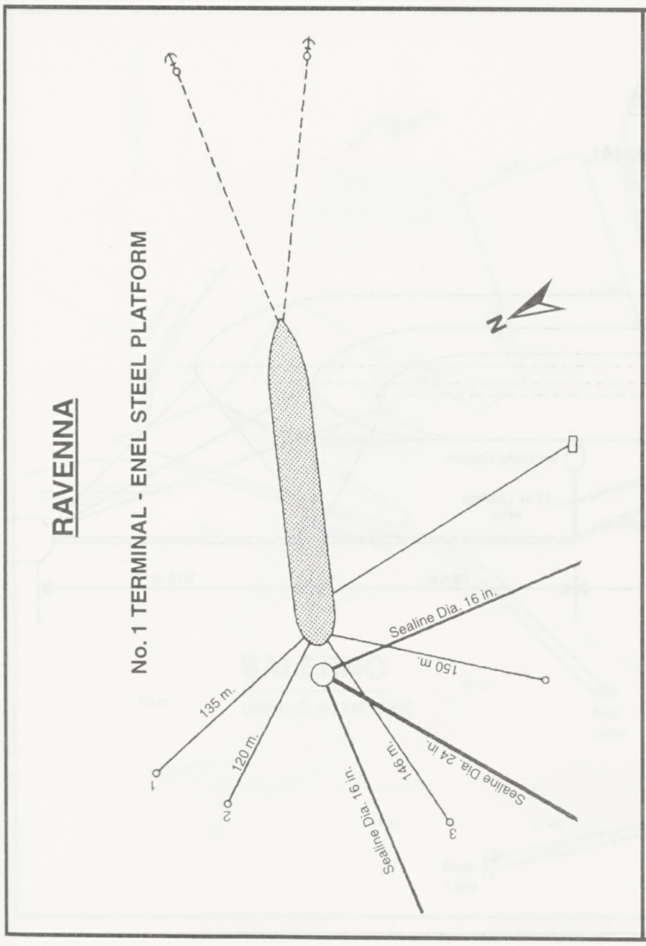

QUILIANO TERMINAL
Conventional Buoy Mooring
155° TRUE
Sector 1
35°
35°
Sector 2
Sector 3
Sector 4
Maximum Safe Operating Wind Speeds
Sector 50–150 kdwt 150–280 kdwt
1 50 km/hr 45 km/hr
2 35 km/hr 35 km/hr
3 80 km/hr 55 km/hr
4 35 km/hr 35 km/hr
Each Buoy is provided with 40mm. dia. Wire Preventer
Ship's Manifold
Cargo Hoses Marker Buoys
40m
Spar Buoy
Buoy 1
Buoy 2
Buoy 3
Buoy 4
Buoy 5
Buoy 6
Buoy 7
32" Sea Line
36" Sea Line
N


RAVENNA
N
Harbour Master
SIMA
Ponente
5.5 m.
Fertilmare
E.C.S.
Silos G.C.
Vecchio Cap
DECORA
Adriatank
AGIP / ENEL - ITC
ENICHEM
CABCI
MARCEGAGLIA
9.4 m.
S. Vitale Basin
9.4 m.
SAPIR
Frigoterminal
SETRAMAR
NADEP
Nuovo Cap
Docks Cereali
Cantieri Ravenna
Eurodocks
Piomboni Canal
6.4 m.
6.4 m.
AGIP
Rosetti
Lloyd Ravenna
ALMA
CEREOL
MAGAZZINI GENERALI
ENEL
PIR
9.4 m.
Porto Corsini
Marina
Adriatic Sea


Anchoring Prohibited
N
-10
-20
A
B
C
D
Lightening Area
RAVENNA
SAROM 1
SAROM 2
SAROM 3
SAROM 4
ENEL (SONE) Marine Terminal
Anchoring Prohibited
Lighting Area
A 44° 31' 08" N 12° 24' 00" E
B 44° 31' 08" N 12° 28' 00" E
C 44° 29' 30" N 12° 24' 00" E
D 44° 29' 30" N 12° 28' 00" E
-10
-20

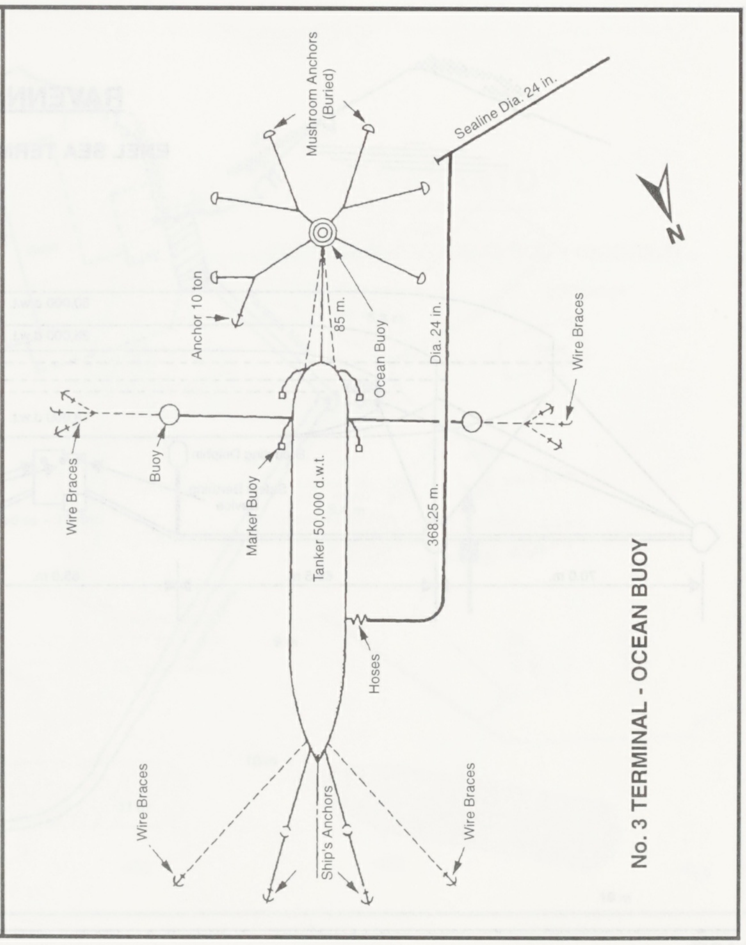
RAVENNA

Depths in Meters

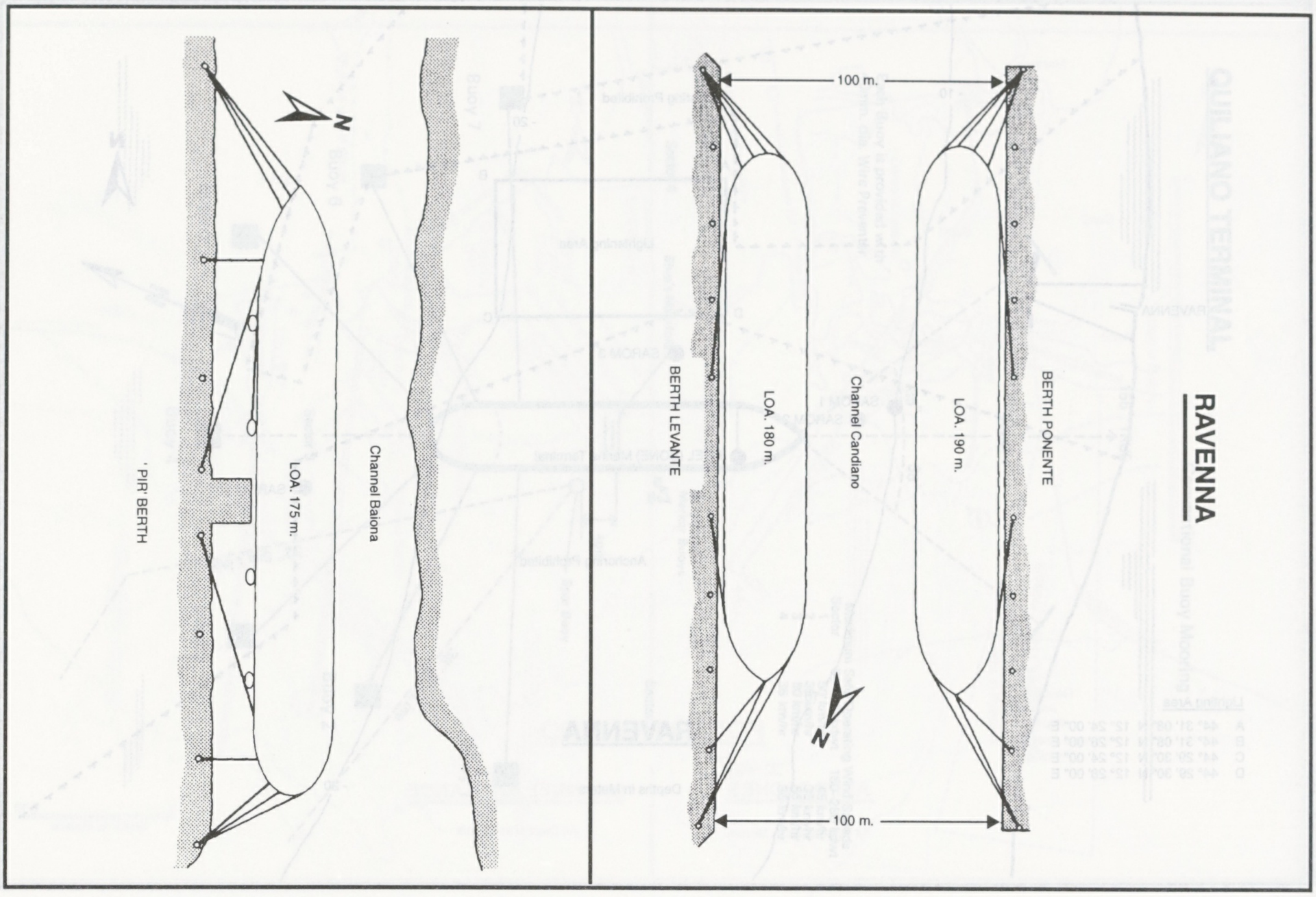

N
Sealine Dia. 16 in.
150 m.
135 m.
120 m.
Sealine Dia. 16 in.
146 m.
Sealine Dia. 24 in.
1
2
3

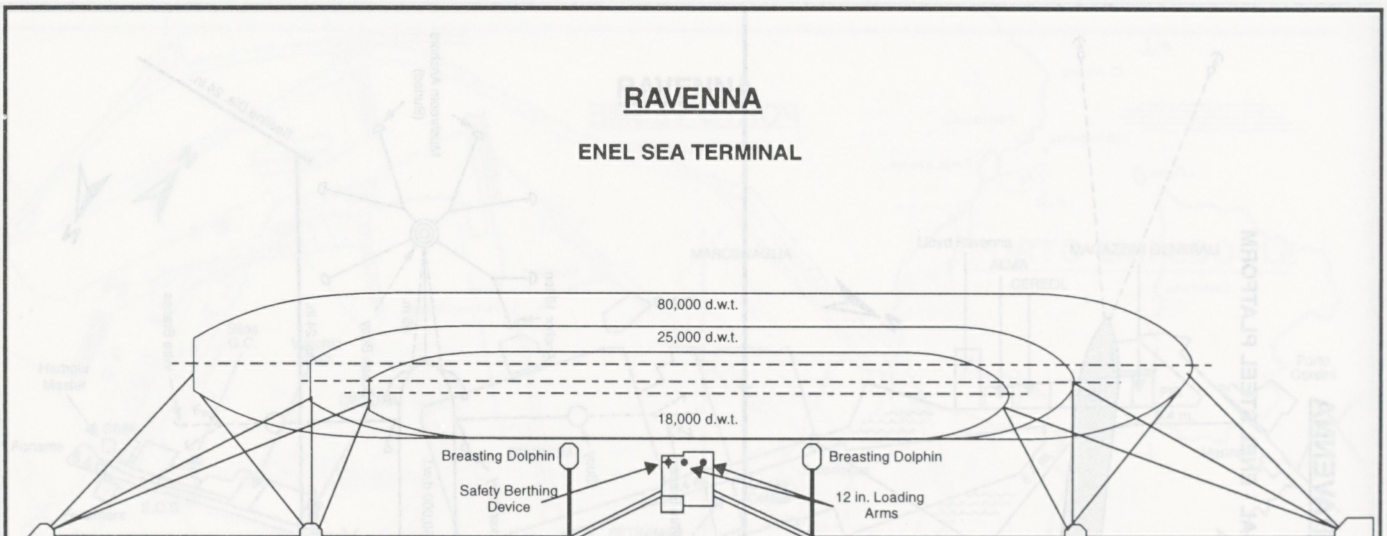
RAVENNA

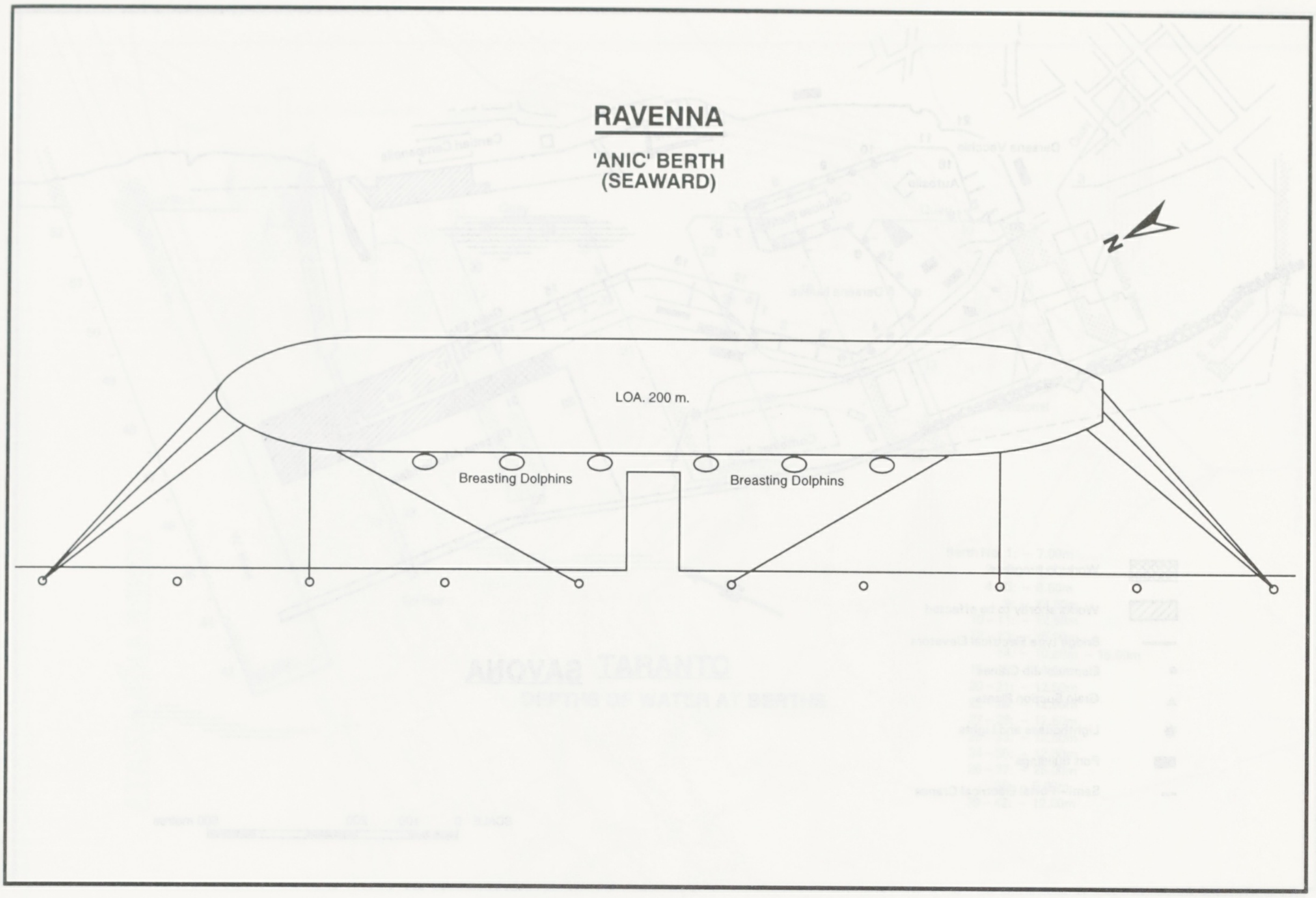
No. 1 TERMINAL - ENEL STEEL PLATFORM


Mushroom Anchors (Buried)
Sealine Dia. 24 in.
N
Anchor 10 ton
85 m.
Ocean Buoy
Dia. 24 in.
Wire Braces
Wire Braces
Buoy
Marker Buoy
Tanker 50,000 d.w.t.
368.25 m.
Hoses
Wire Braces
Ship's Anchors
Wire Braces

No. 3 TERMINAL - OCEAN BUOY


RAVENNA
BERTH PONENTE
LOA. 190 m.
Channel Candiano
LOA. 180 m.
BERTH LEVANTE
100 m.
100 m.
N
N
Channel Baiona
LOA. 175 m.
'PIR' BERTH

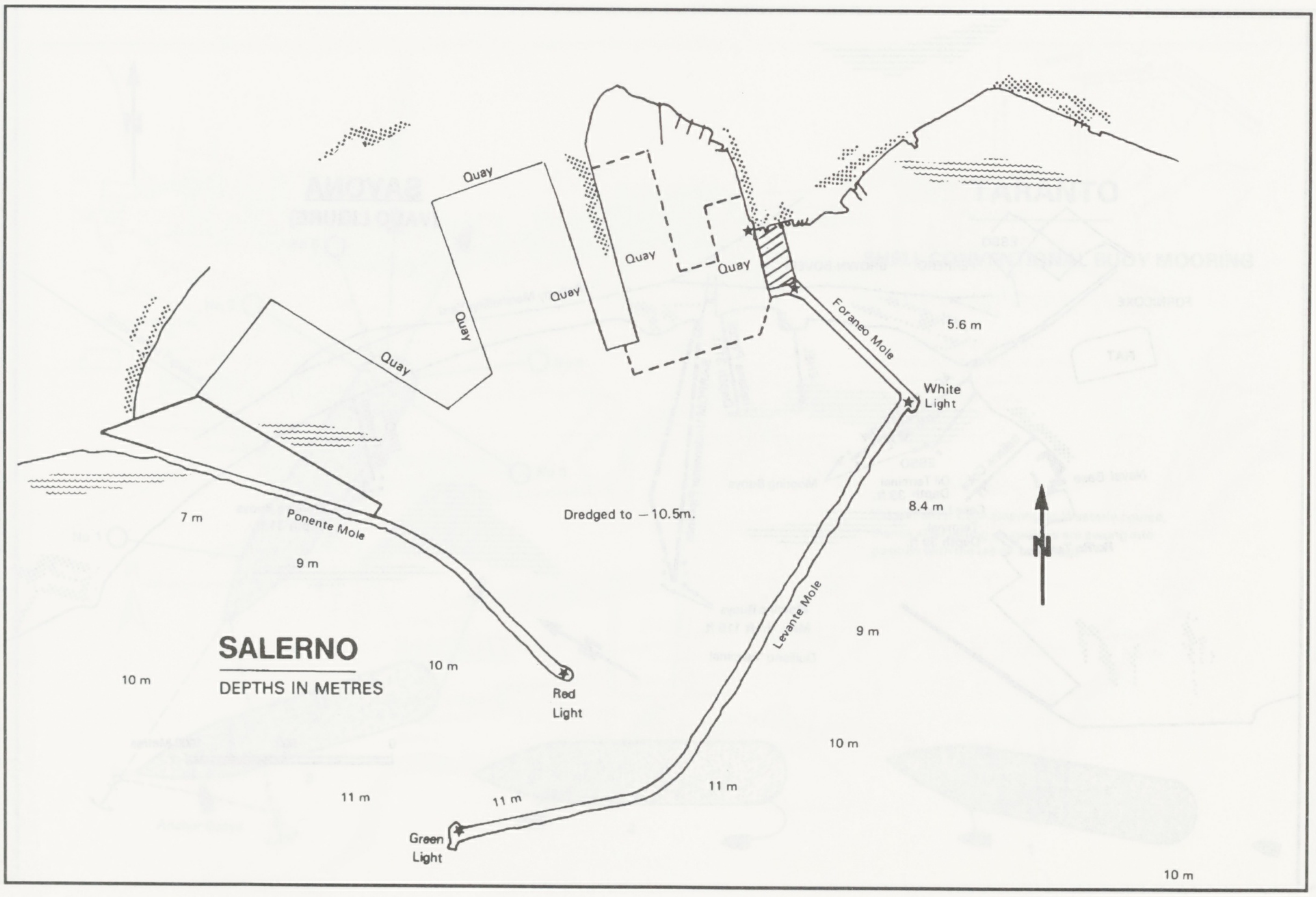

RAVENNA
ENEL SEA TERMINAL
80,000 d.w.t.
25,000 d.w.t.
18,000 d.w.t.
Breasting Dolphin
Breasting Dolphin
Safety Berthing Device
12 in. Loading Arms
70.0 m.
68.5 m.
65.0 m.
68.5 m.
70.0 m.



RAVENNA

'ANIC' BERTH
(SEAWARD)

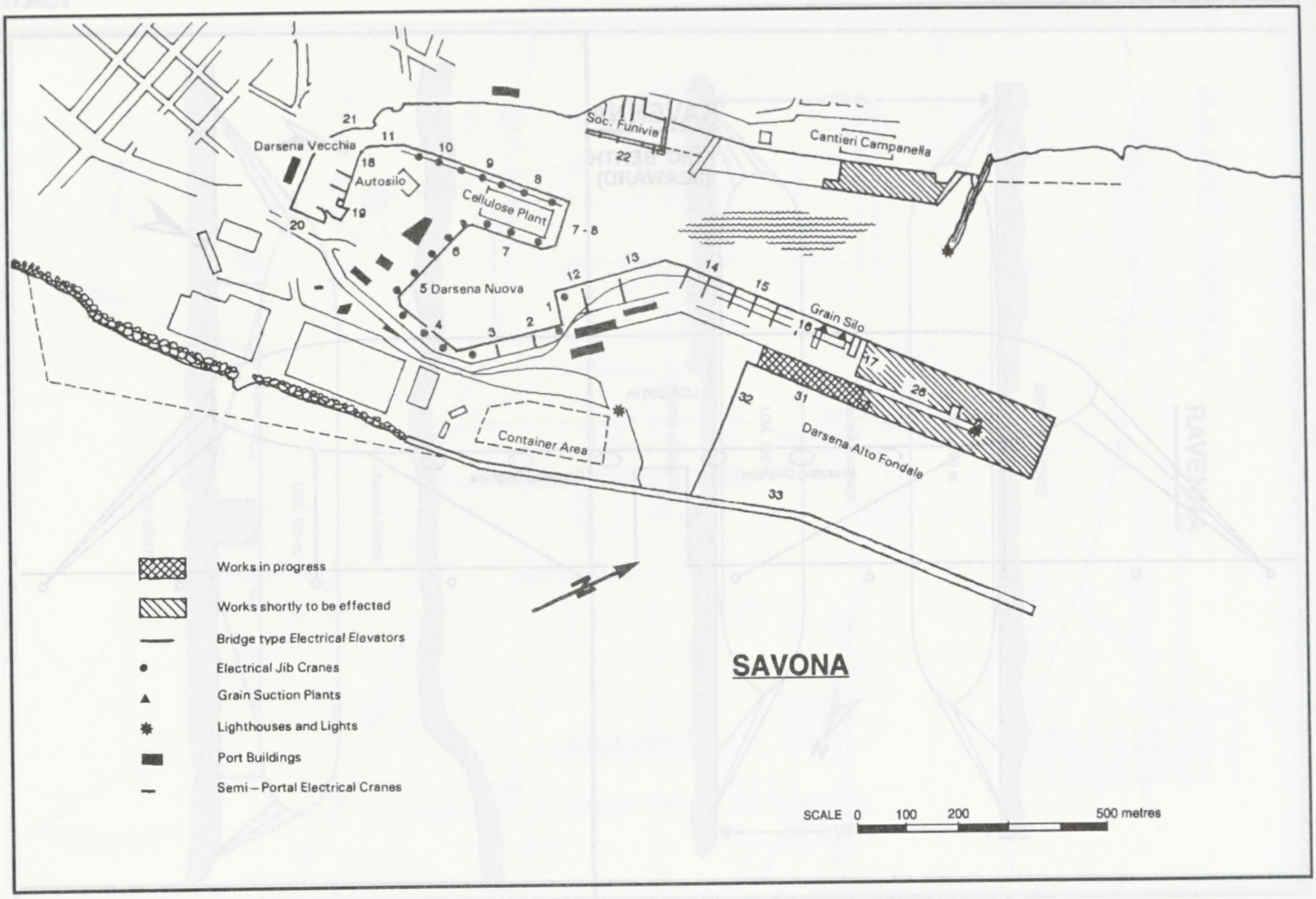
LOA. 200 m.
Breasting Dolphins
Breasting Dolphins
N

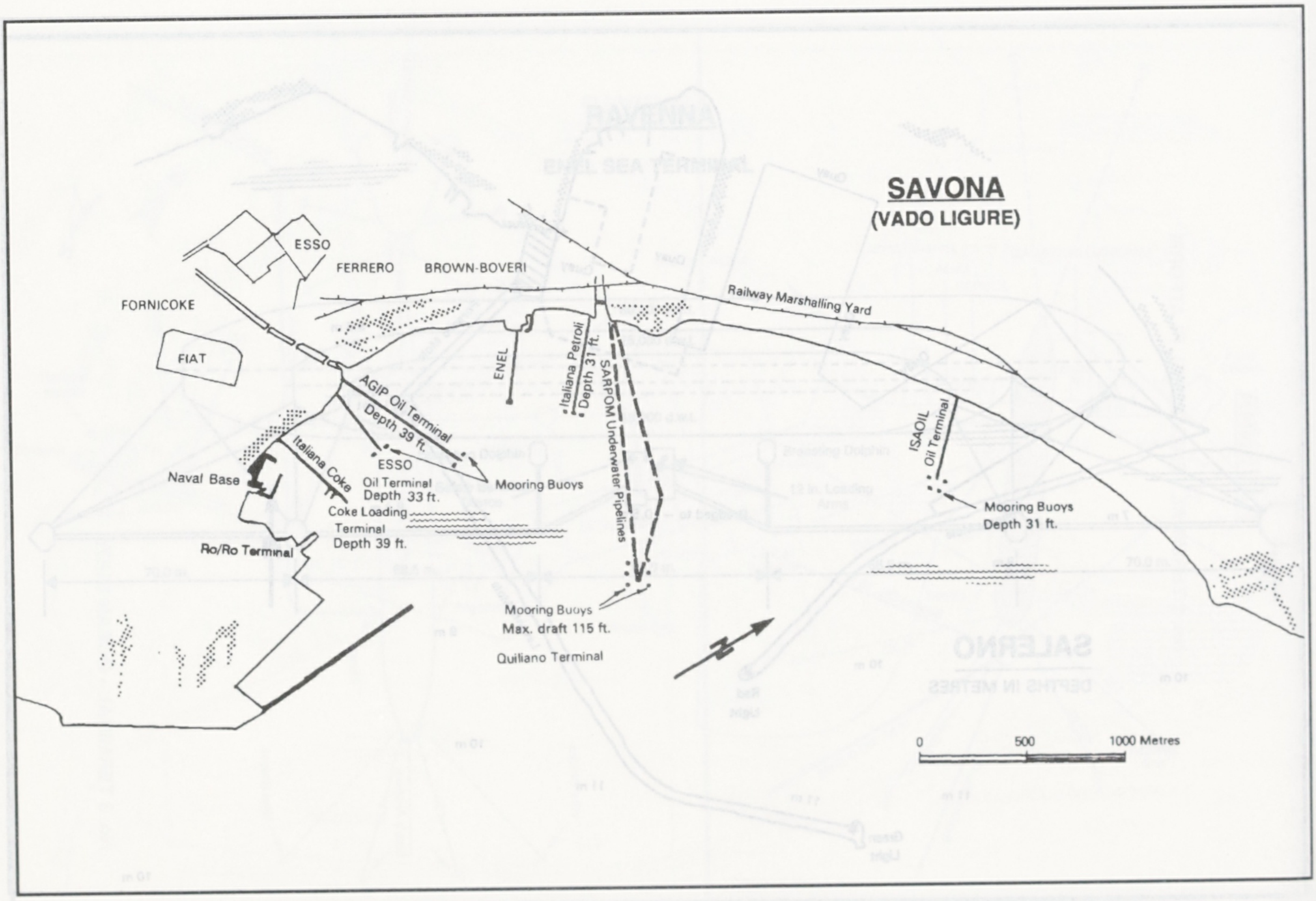


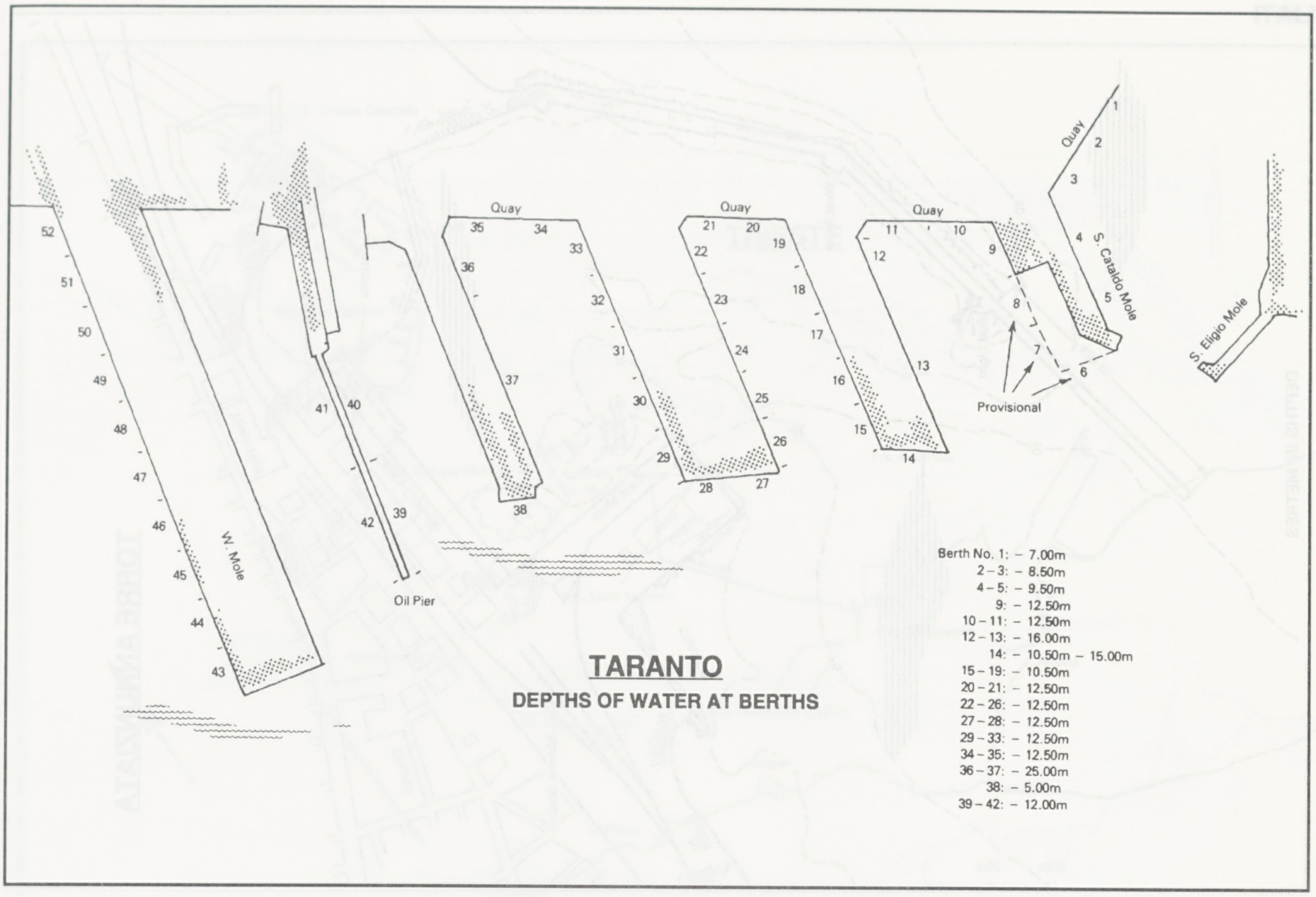
SALERNO

DEPTHS IN METRES

Quay
Quay
Quay
Quay
Quay
Quay
Foraneo Mole
5.6 m
White Light
8.4 m
N
Levante Mole
9 m
10 m
11 m
11 m
11 m
Green Light
10 m
Ponente Mole
7 m
9 m
Dredged to −10.5m.
10 m
10 m
Red Light


SAVONA
Darsena Vecchia
Autosilo
Cellulose Plant
5 Darsena Nuova
Soc. Funivie
Cantieri Campanella
Grain Silo
Container Area
Darsena Alto Fondale
1
2
3
4
6
7
7 - 8
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
26
31
32
33
▩ Works in progress
▨ Works shortly to be effected
— Bridge type Electrical Elevators
● Electrical Jib Cranes
▲ Grain Suction Plants
✹ Lighthouses and Lights
■ Port Buildings
– Semi – Portal Electrical Cranes
N
SCALE 0 100 200 500 metres

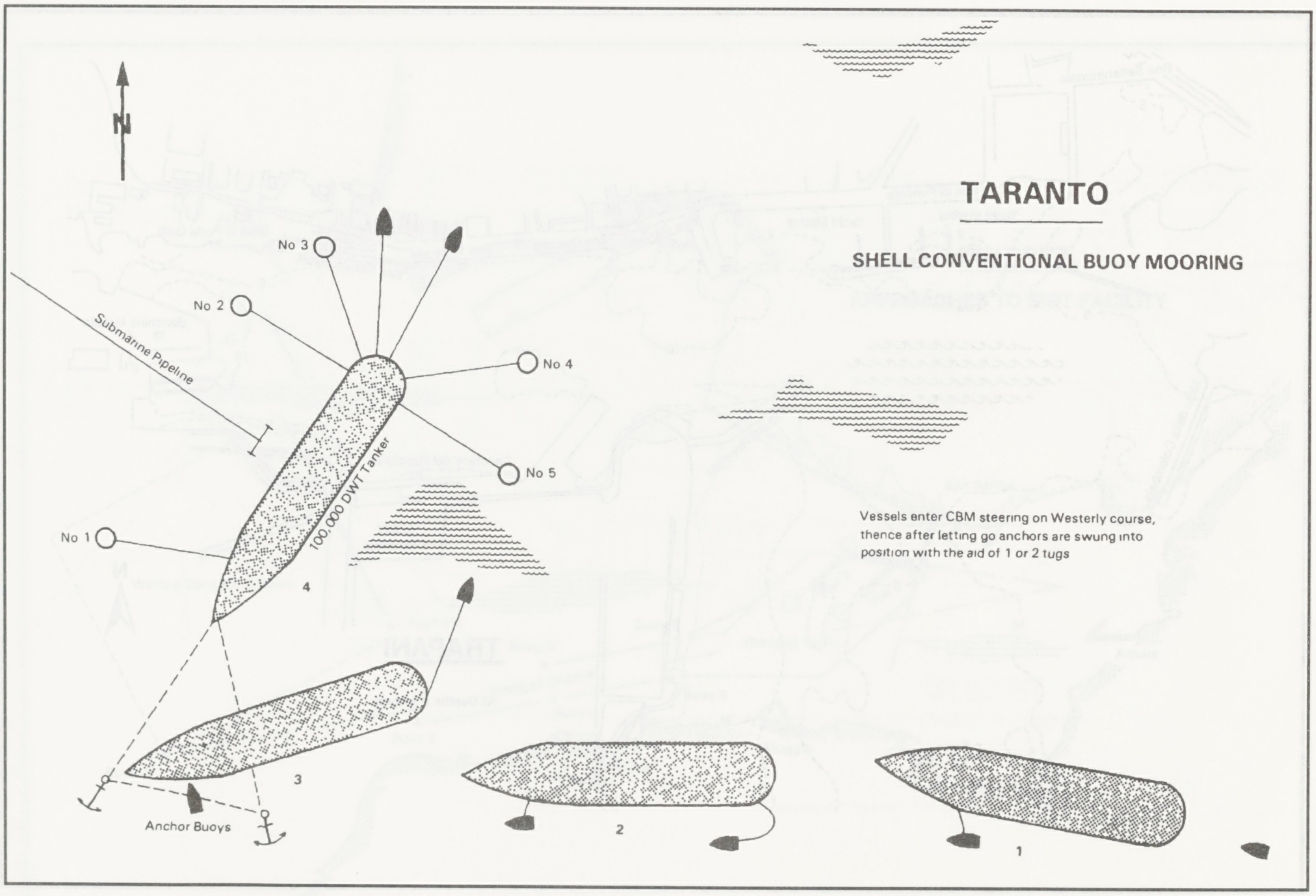

SAVONA
(VADO LIGURE)
ESSO
FERRERO
BROWN-BOVERI
FORNICOKE
FIAT
Railway Marshalling Yard
ENEL
Italiana Petroli
Depth 31 ft.
SARPOM Underwater Pipelines
AGIP Oil Terminal
Depth 39 ft.
ESSO
Oil Terminal
Depth 33 ft.
Mooring Buoys
Naval Base
Italiana Coke
Coke Loading
Terminal
Depth 39 ft.
Ro/Ro Terminal
ISAOIL
Oil Terminal
Mooring Buoys
Depth 31 ft.
Mooring Buoys
Max. draft 115 ft.
Quiliano Terminal
N
0 500 1000 Metres


Quay
Quay
Quay
Quay
S. Cataldo Mole
S. Eligio Mole
W. Mole
Oil Pier
Provisional
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52

TARANTO

DEPTHS OF WATER AT BERTHS

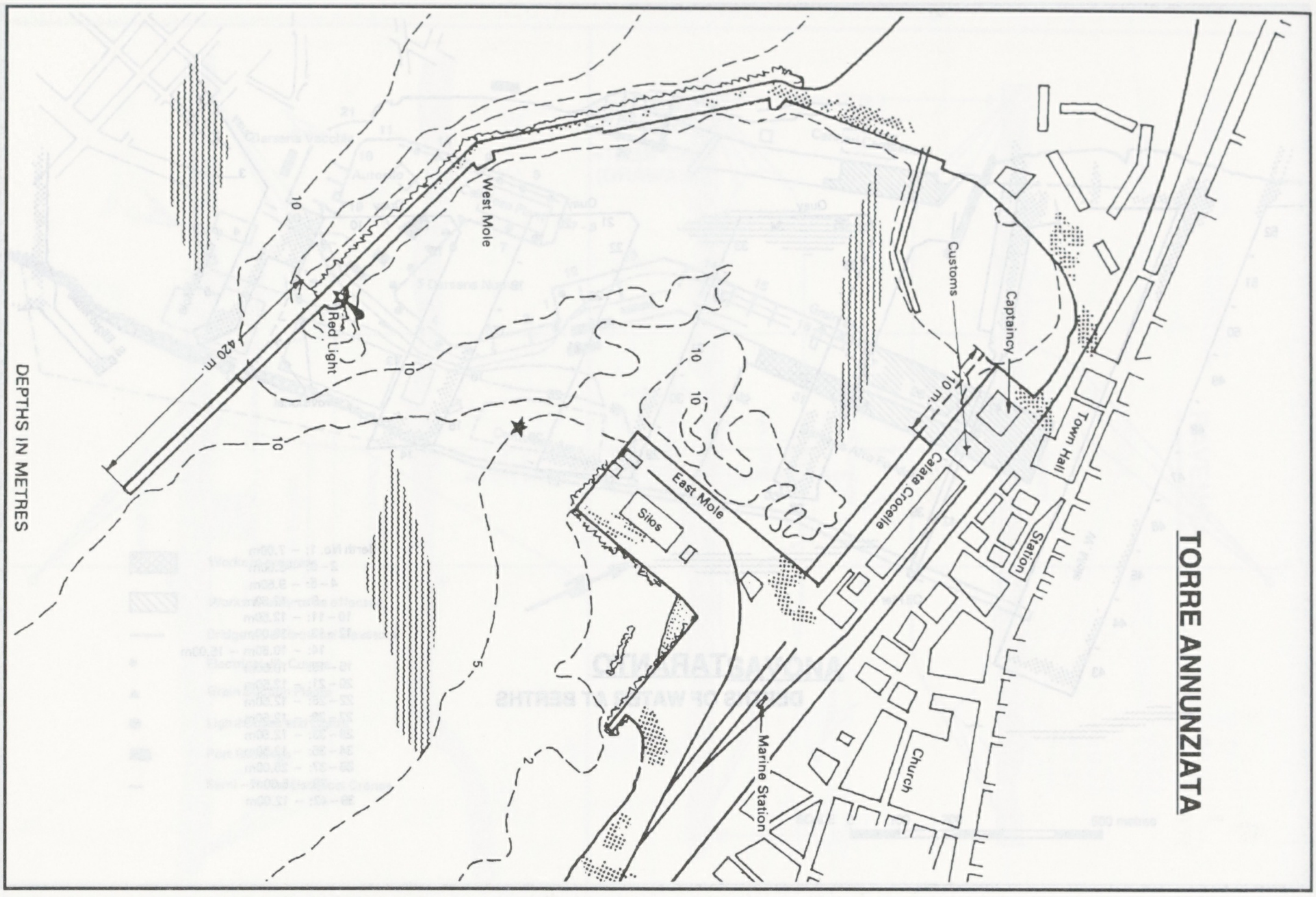
Berth No. 1: – 7.00m
2 – 3: – 8.50m
4 – 5: – 9.50m
9: – 12.50m
10 – 11: – 12.50m
12 – 13: – 16.00m
14: – 10.50m – 15.00m
15 – 19: – 10.50m
20 – 21: – 12.50m
22 – 26: – 12.50m
27 – 28: – 12.50m
29 – 33: – 12.50m
34 – 35: – 12.50m
36 – 37: – 25.00m
38: – 5.00m
39 – 42: – 12.00m


N
No 3
No 2
No 4
No 5
No 1
Submarine Pipeline
100,000 DWT Tanker
4
3
2
1
Anchor Buoys

TARANTO

SHELL CONVENTIONAL BUOY MOORING

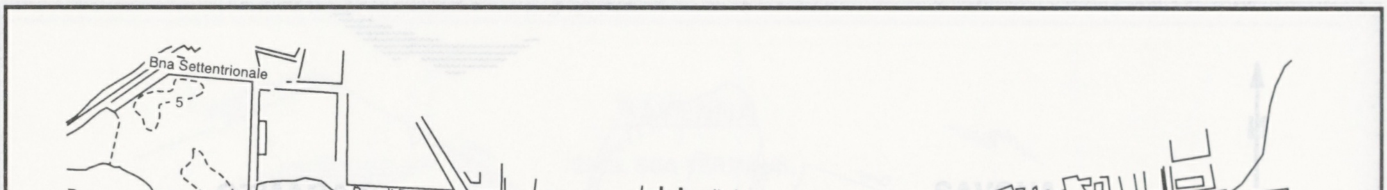
Vessels enter CBM steering on Westerly course, thence after letting go anchors are swung into position with the aid of 1 or 2 tugs



TORRE ANNUNZIATA

DEPTHS IN METRES

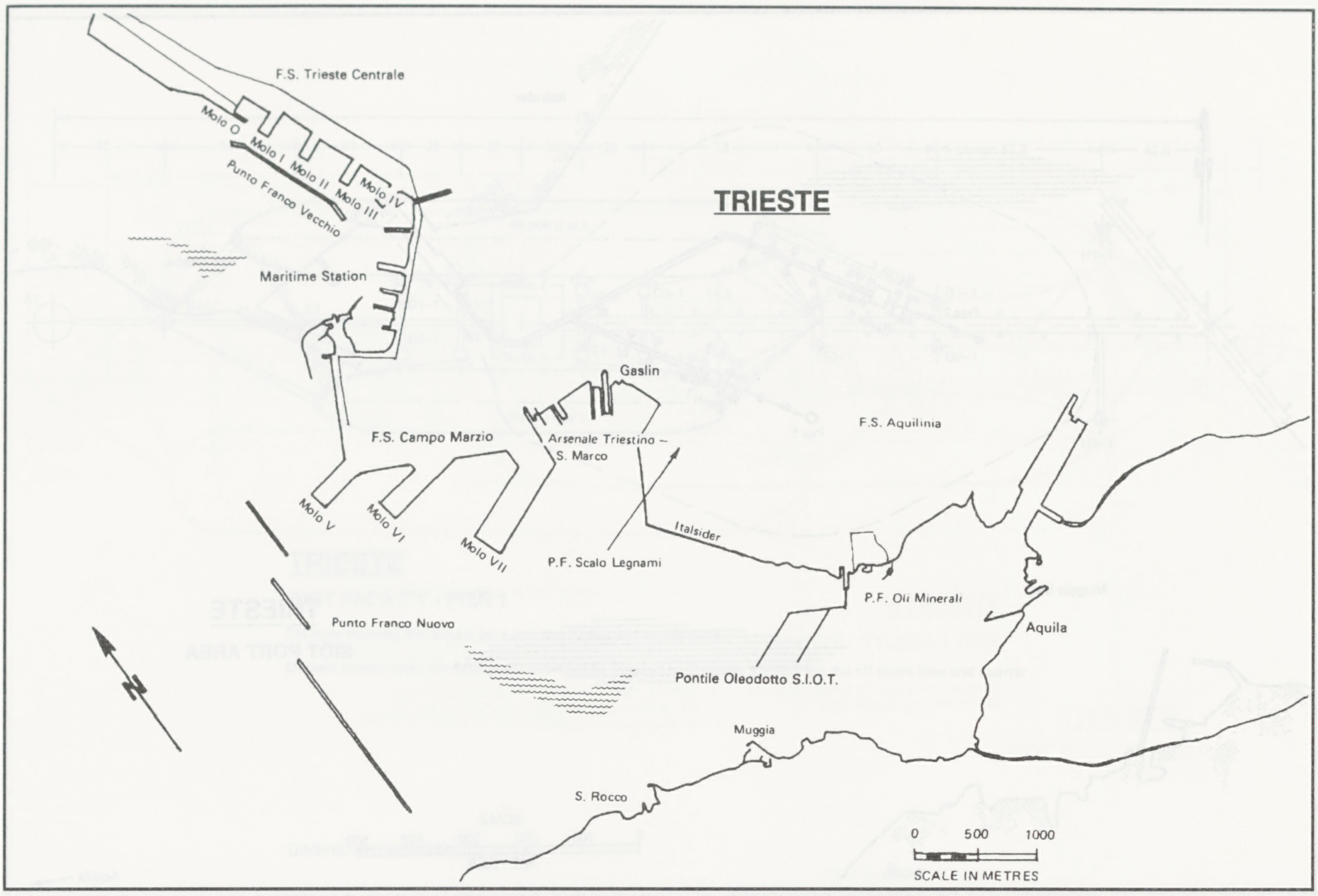
West Mole
Red Light
420 m.
10
10
10
10
10
5
2
East Mole
Silos
Customs
Captaincy
110 m.
Calata Crocelle
Town Hall
Station
Church
Marine Station

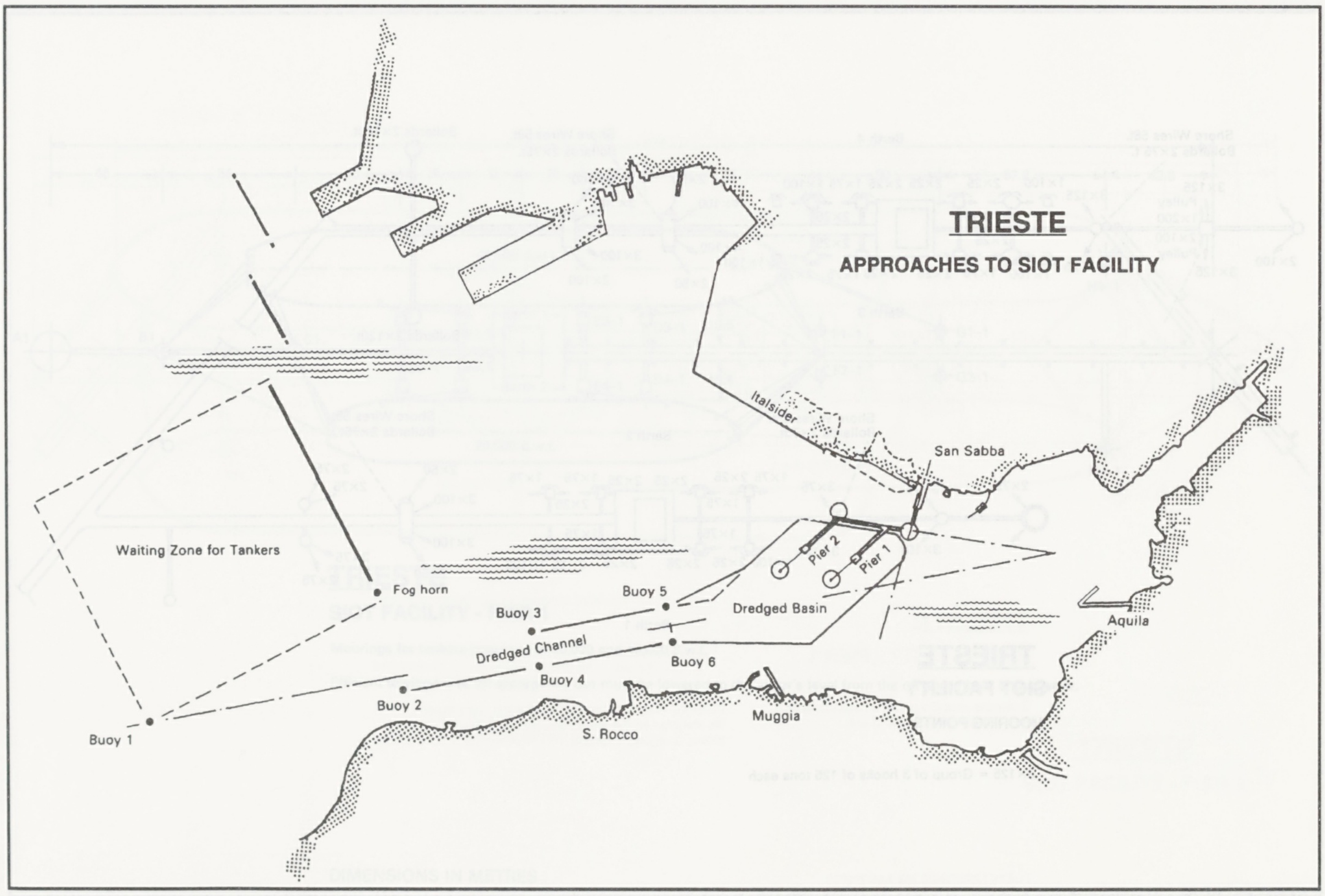


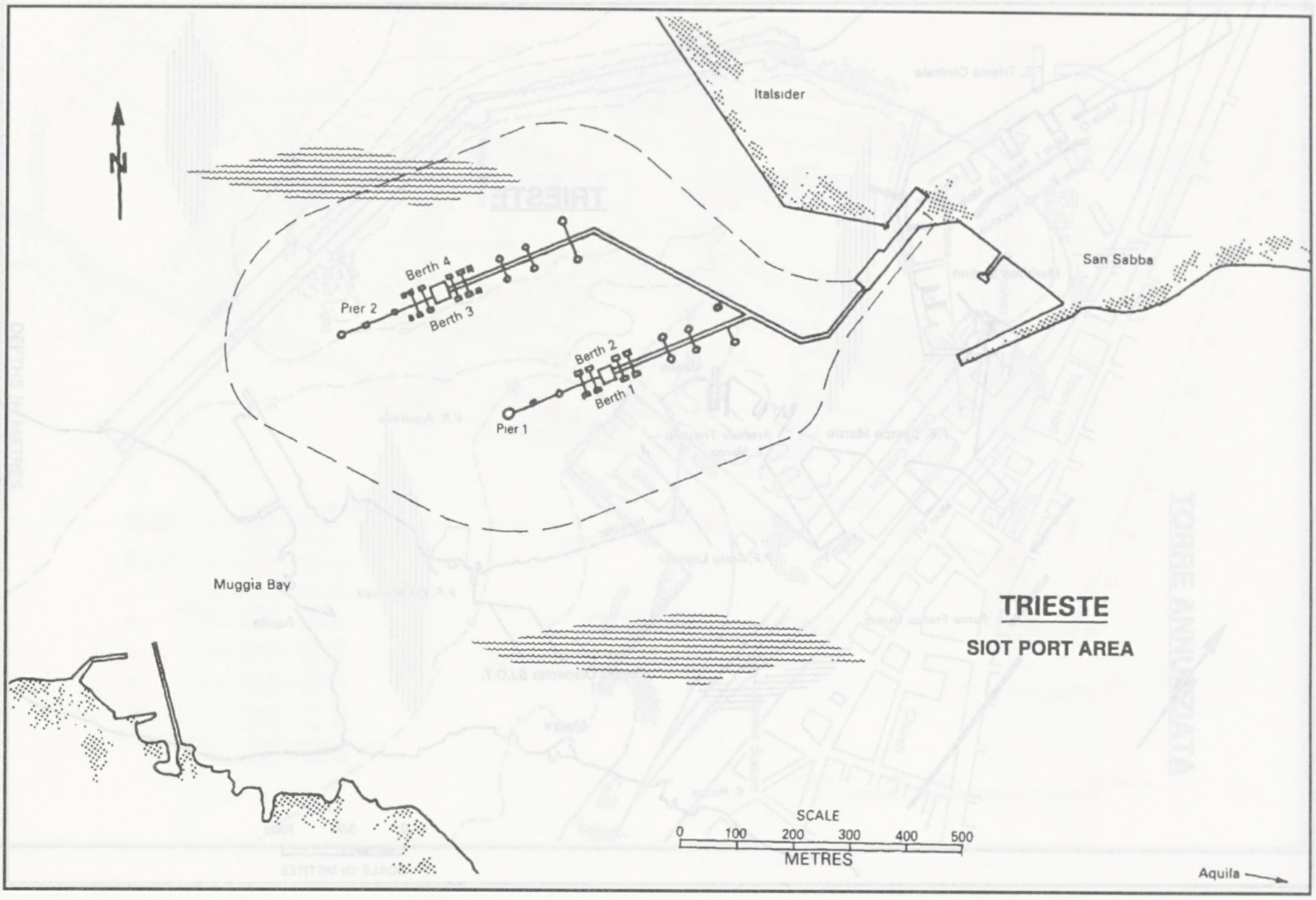
TRAPANI

All Depths in Meters

Bna Settentrionale
5
Bna di Ponente
Yacht Marina
Yacht Marina
2
2
Bna Garibaldi
Ro/Ro
Bna Dogana
Bna Marinella
Bna Sommergibili
Scali di Porta Galli
5
10
10
Banchina Isolella
Molo della Colombaia
Molo del Ronciglio
Banchina del Ronciglio
Liquid Chemicals
5
5
2
10
5
5
10
N

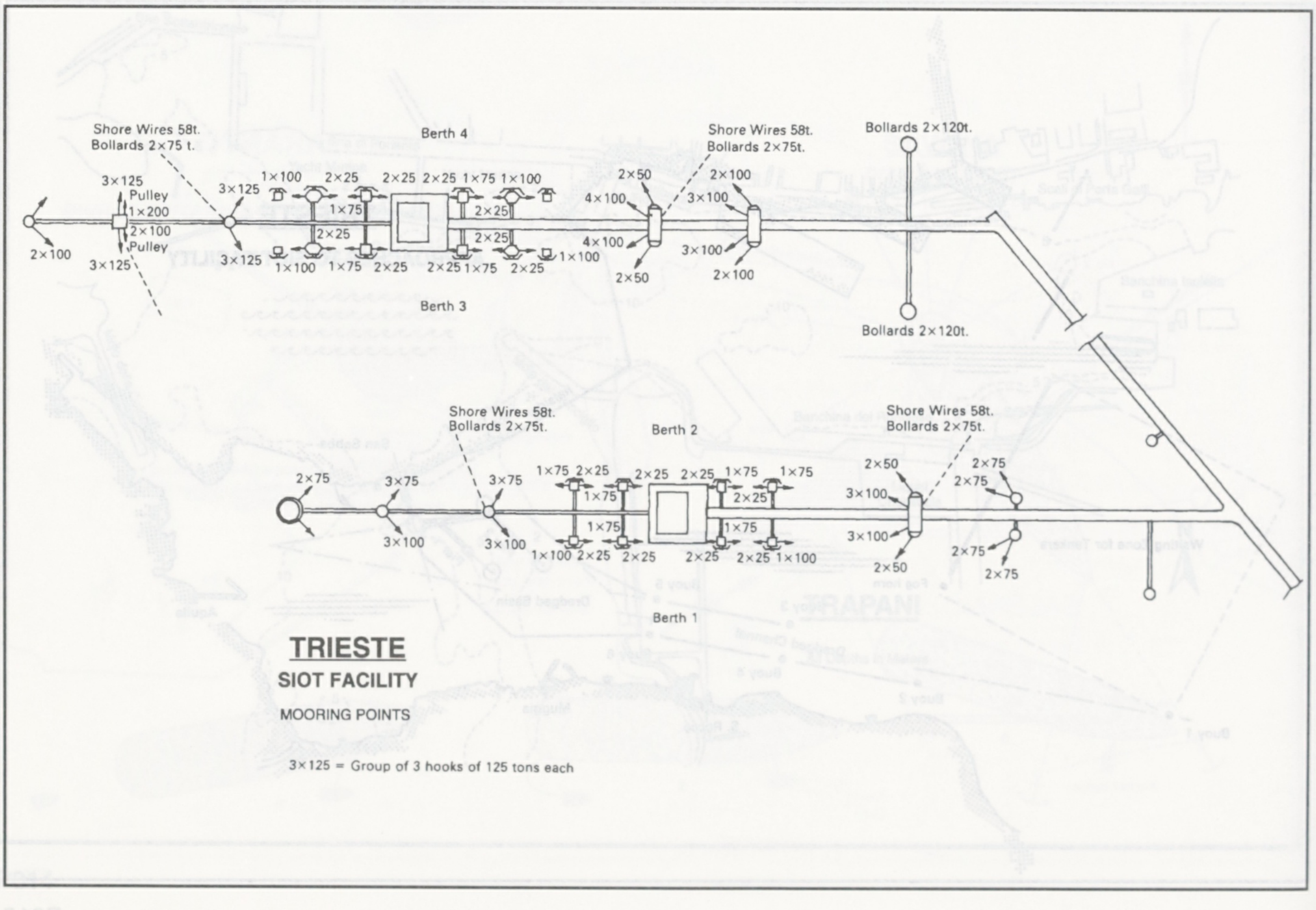

TRIESTE
F.S. Trieste Centrale
Molo O
Molo I
Molo II
Molo III
Molo IV
Punto Franco Vecchio
Maritime Station
Gaslin
F.S. Campo Marzio
Arsenale Triestino –
S. Marco
F.S. Aquilinia
Molo V
Molo VI
Molo VII
Italsider
P.F. Scalo Legnami
P.F. Oli Minerali
Aquila
Punto Franco Nuovo
Pontile Oleodotto S.I.O.T.
N
Muggia
S. Rocco
0
500
1000
SCALE IN METRES


TRIESTE
APPROACHES TO SIOT FACILITY
Italsider
San Sabba
Pier 2
Pier 1
Waiting Zone for Tankers
Fog horn
Buoy 5
Buoy 3
Dredged Basin
Dredged Channel
Buoy 6
Buoy 4
Aquila
Buoy 2
Buoy 1
Muggia
S. Rocco


N
Italsider
San Sabba
Berth 4
Pier 2
Berth 3
Berth 2
Berth 1
Pier 1
Muggia Bay
SCALE
0
100
200
300
400
500
METRES
Aquila

TRIESTE

SIOT PORT AREA

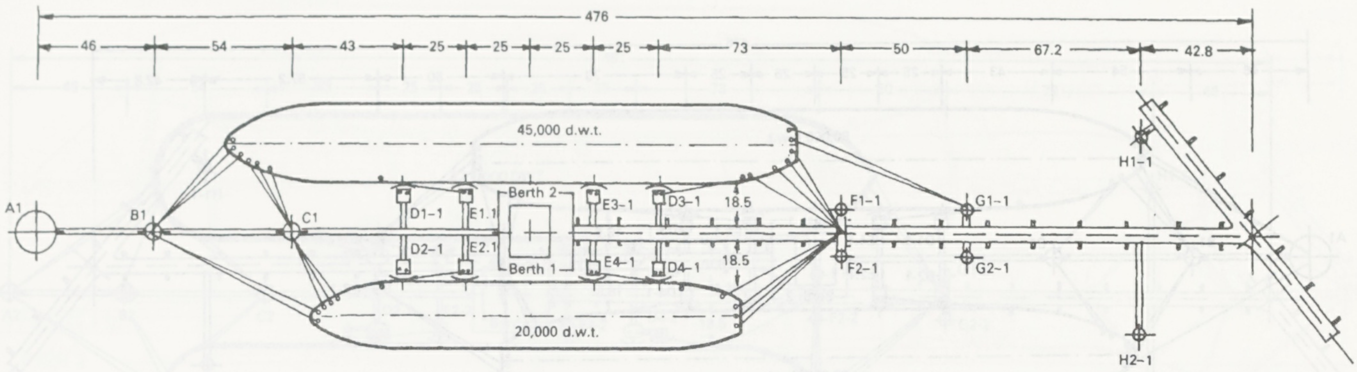

Shore Wires 58t.
Bollards 2×75 t.
Berth 4
Shore Wires 58t.
Bollards 2×75t.
Bollards 2×120t.
3×125
Pulley
1×200
2×100
Pulley
3×125
2×100
3×125
3×125
1×100
2×25
1×75
2×25
2×25
2×25
1×75
1×100
2×25
2×25
1×100
1×75
2×25
2×25
1×75
2×25
1×100
2×50
4×100
4×100
2×50
2×100
3×100
3×100
2×100
Berth 3
Bollards 2×120t.
Shore Wires 58t.
Bollards 2×75t.
Berth 2
Shore Wires 58t.
Bollards 2×75t.
2×75
3×75
3×100
3×75
3×100
1×75
2×25
1×75
1×75
2×25
2×25
1×75
1×75
2×25
1×75
1×100
2×25
2×25
2×25
2×25
1×100
2×50
3×100
3×100
2×50
2×75
2×75
2×75
2×75
Berth 1

TRIESTE

SIOT FACILITY

MOORING POINTS

3×125 = Group of 3 hooks of 125 tons each


476
46
54
43
25
25
25
25
73
50
67.2
42.8
45,000 d.w.t.
20,000 d.w.t.
Berth 2
Berth 1
A1
B1
C1
D1–1
D2–1
E1.1
E2.1
E3–1
E4–1
D3–1
D4–1
18.5
18.5
F1–1
F2–1
G1–1
G2–1
H1–1
H2–1

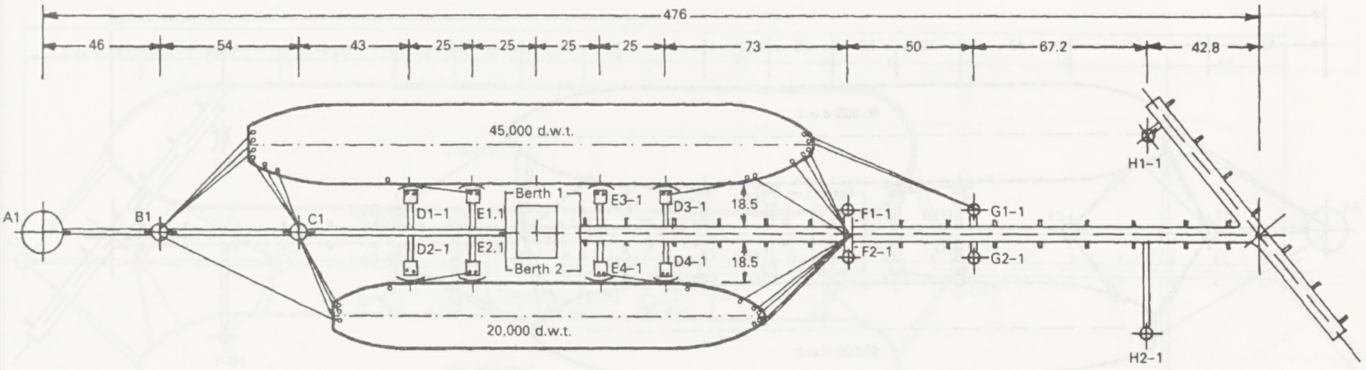
TRIESTE

SIOT FACILITY - PIER 1

Example mooring for tankers bow-out, size 20,000 and 45,000 d.w.t.

Efficient towing-wires for emergency use must be lowered to the water's level from the off shore bow and quarter

DIMENSIONS IN METRES


476
46
54
43
25
25
25
25
73
50
67.2
42.8
45,000 d.w.t.
20,000 d.w.t.
Berth 1
Berth 2
A1
B1
C1
D1–1
D2–1
E1.1
E2.1
E3–1
E4–1
D3–1
D4–1
18.5
18.5
F1–1
F2–1
G1–1
G2–1
H1–1
H2–1

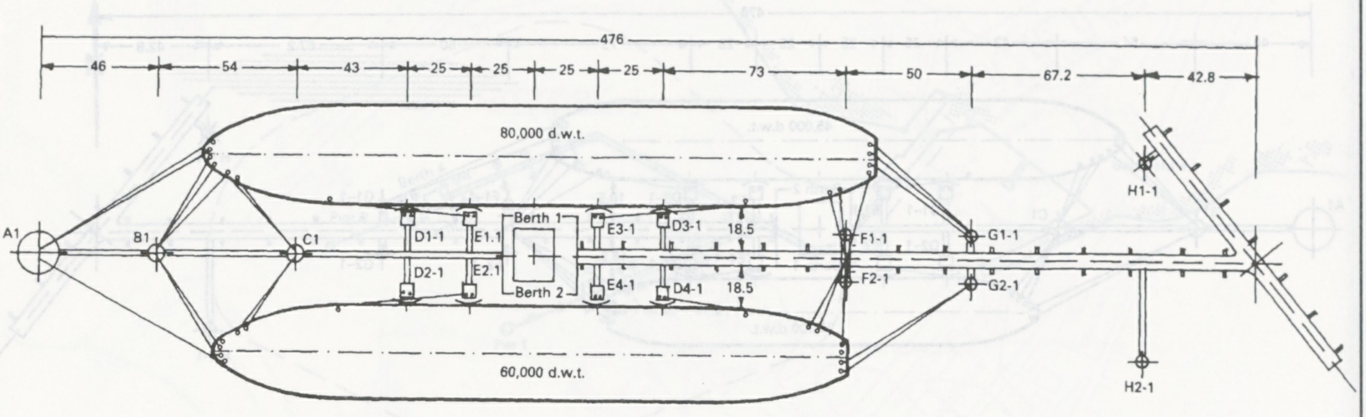
TRIESTE

SIOT FACILITY - PIER 1

Moorings for tankers bow-in, size 20,000 and 45,000 d.w.t.

Efficient towing-wires for emergency use must be lowered to the water's level from the off shore bow and quarter.

DIMENSIONS IN METRES


476
46
54
43
25
25
25
25
73
50
67.2
42.8
80,000 d.w.t.
60,000 d.w.t.
A1
B1
C1
D1-1
D2-1
E1.1
E2.1
Berth 1
Berth 2
E3-1
E4-1
D3-1
D4-1
18.5
18.5
F1-1
F2-1
G1-1
G2-1
H1-1
H2-1

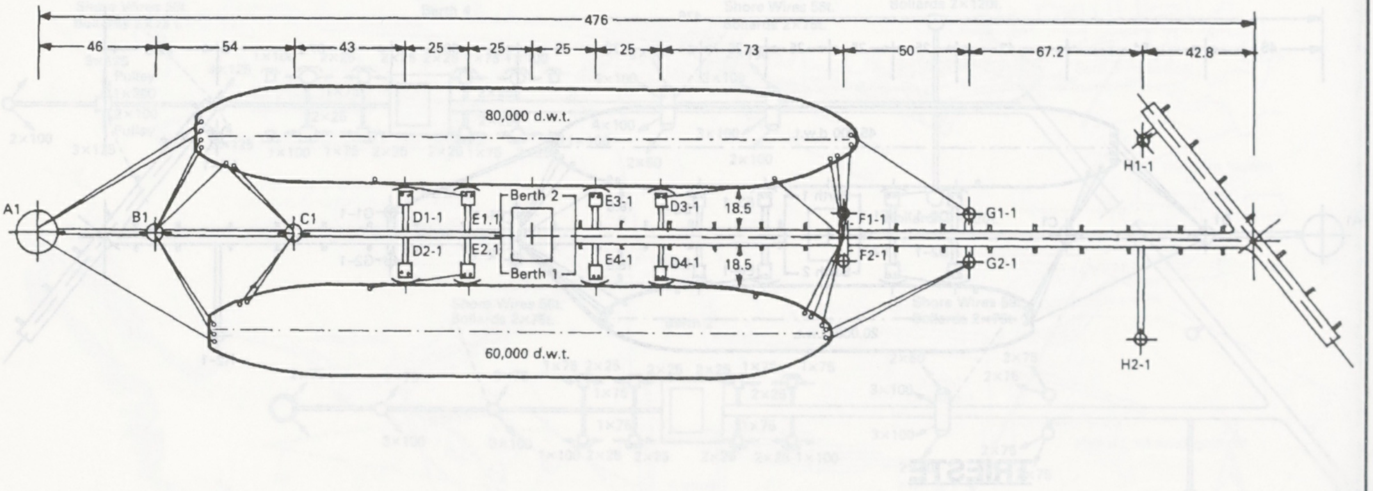
TRIESTE

SIOT FACILITY - PIER 1

Example moorings for tankers bow-out, size 60,000 and 80,000 d.w.t.

Efficient towing-wires for emergency use must be lowered to the water's level from the off shore bow and quarter.

DIMENSIONS IN METRES


476
46
54
43
25
25
25
25
73
50
67.2
42.8
80,000 d.w.t.
60,000 d.w.t.
A1
B1
C1
D1-1
D2-1
E1.1
E2.1
Berth 2
Berth 1
E3-1
E4-1
D3-1
D4-1
18.5
18.5
F1-1
F2-1
G1-1
G2-1
H1-1
H2-1

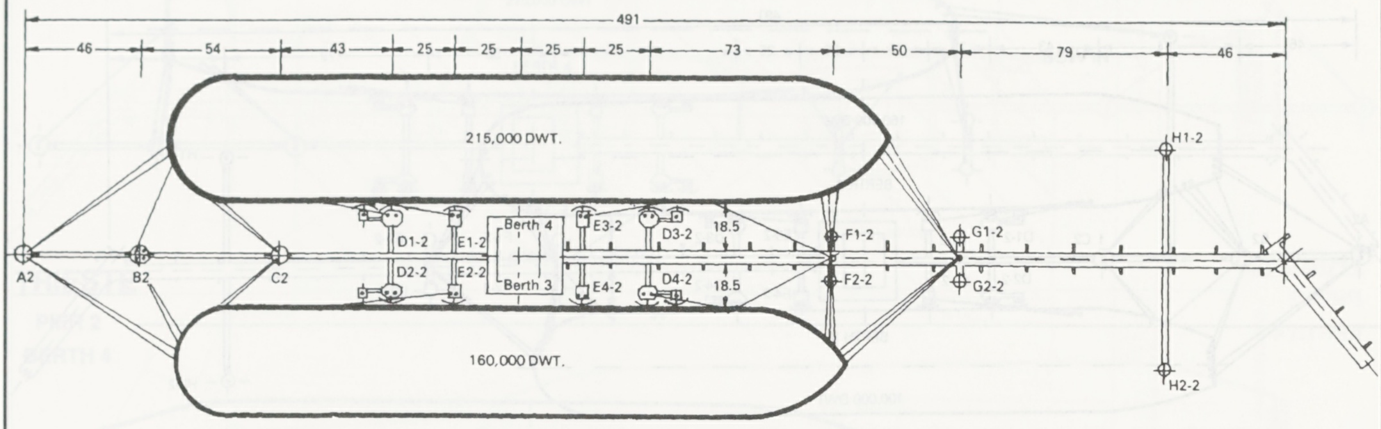
TRIESTE

SIOT FACILITY - PIER 1

Example moorings for tankers bow-in, size 60,000 and 80,000 d.w.t.

Efficient towing-wires for emergency use must be lowered to the water's level from the off shore bow and quarter.

DIMENSIONS IN METRES


491
46
54
43
25
25
25
25
73
50
79
46
215,000 DWT.
160,000 DWT.
Berth 4
Berth 3
A2
B2
C2
D1-2
D2-2
E1-2
E2-2
E3-2
E4-2
D3-2
D4-2
18.5
18.5
F1-2
F2-2
G1-2
G2-2
H1-2
H2-2

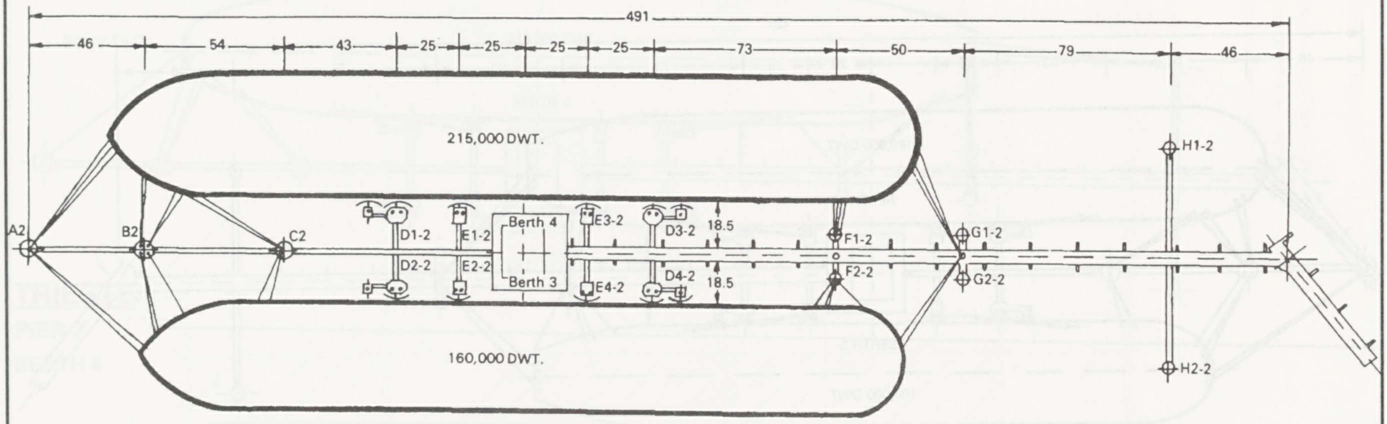
Example moorings for tankers bow-in

Efficient towing-wires for emergency use must be lowered to the water's level from the off shore bow and quarter.

DIMENSIONS IN METRES

TRIESTE

SIOT FACILITY - PIER 2


491
46
54
43
25
25
25
25
73
50
79
46
215,000 DWT.
160,000 DWT.
Berth 4
Berth 3
A2
B2
C2
D1-2
D2-2
E1-2
E2-2
E3-2
E4-2
D3-2
D4-2
18.5
18.5
F1-2
F2-2
G1-2
G2-2
H1-2
H2-2

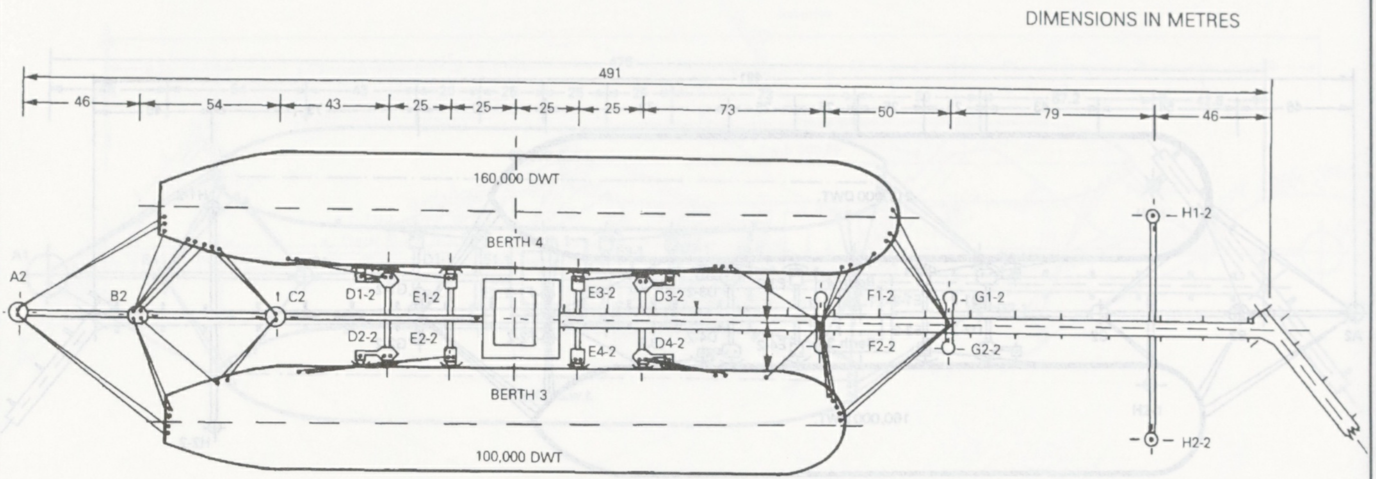
Example moorings for tankers bow-out

Efficient towing-wires for emergency use must be lowered to the water's level from the off shore bow and quarter.

DIMENSIONS IN METRES

TRIESTE

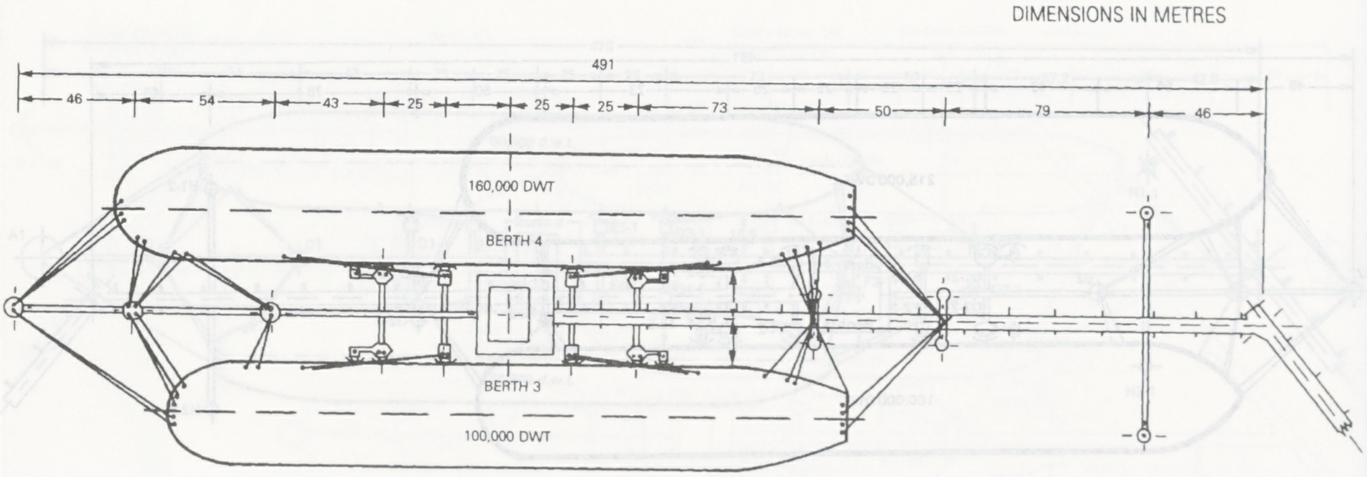
SIOT FACILITY - PIER 2


DIMENSIONS IN METRES
491
46
54
43
25
25
25
25
73
50
79
46
160,000 DWT
BERTH 4
A2
B2
C2
D1-2
E1-2
E3-2
D3-2
F1-2
G1-2
H1-2
D2-2
E2-2
E4-2
D4-2
F2-2
G2-2
BERTH 3
100,000 DWT
H2-2

TRIESTE

PIER 2 - TANKERS BOW IN

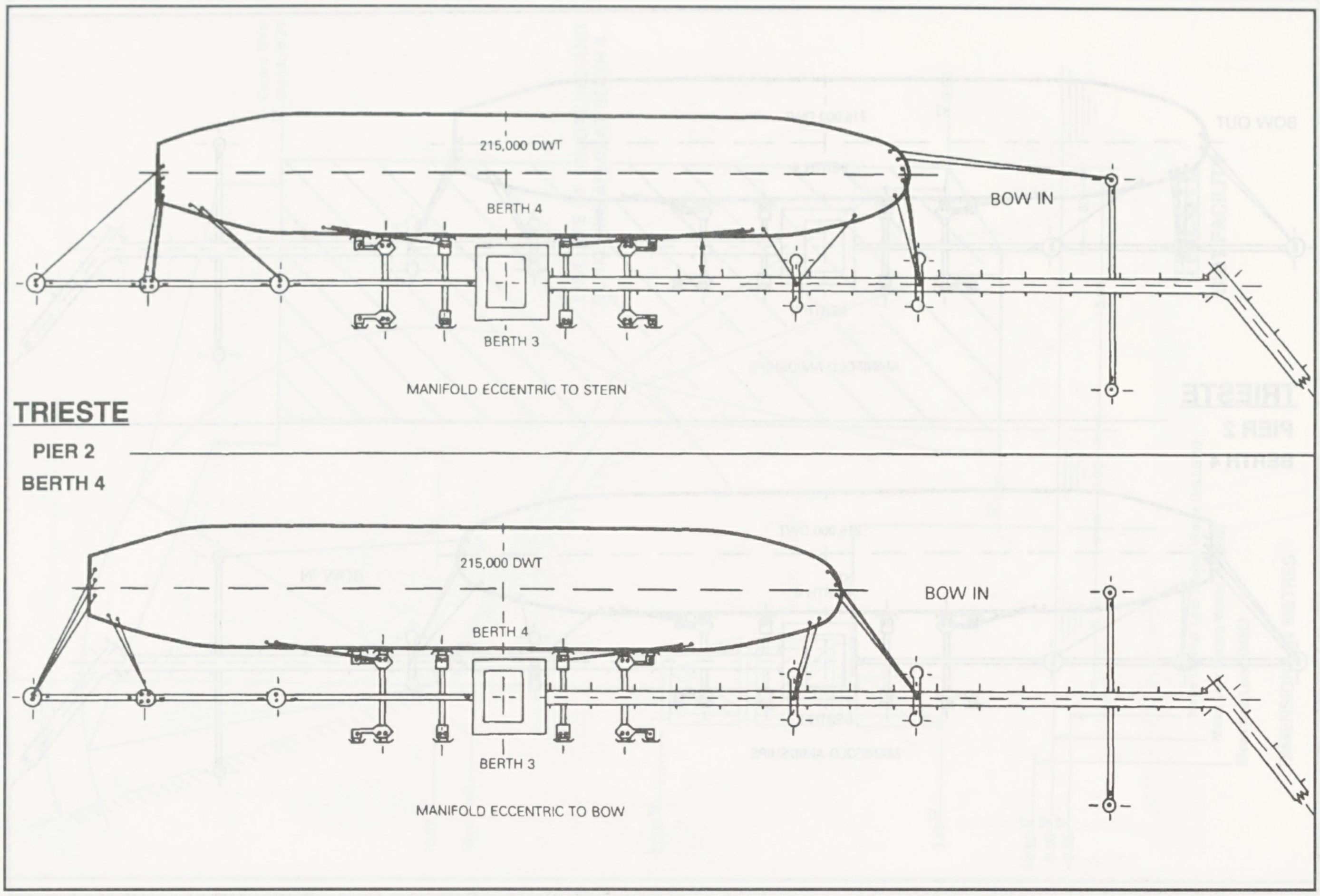
BERTHS 3 & 4

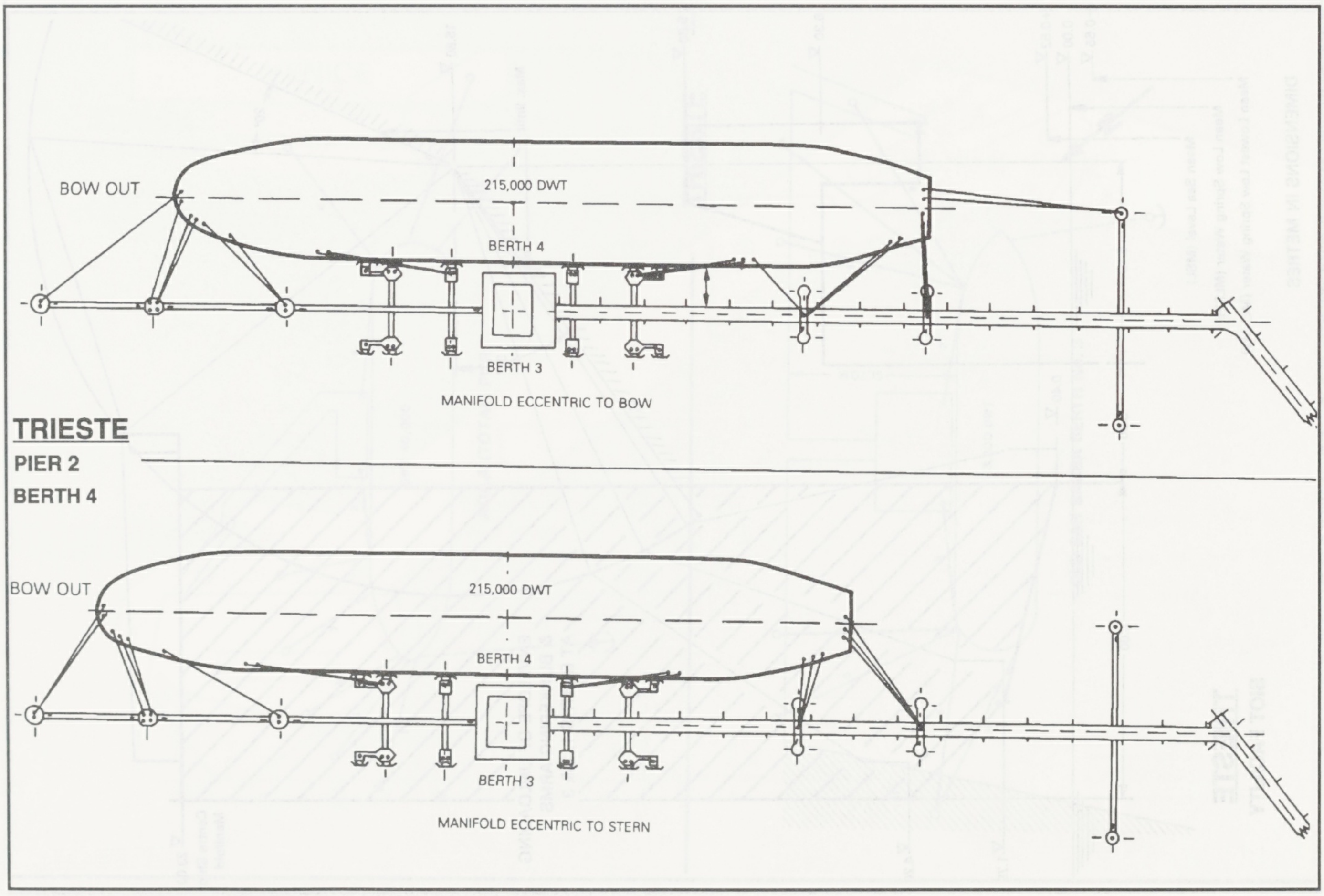

DIMENSIONS IN METRES
491
46
54
43
25
25
25
73
50
79
46
160,000 DWT
BERTH 4
BERTH 3
100,000 DWT

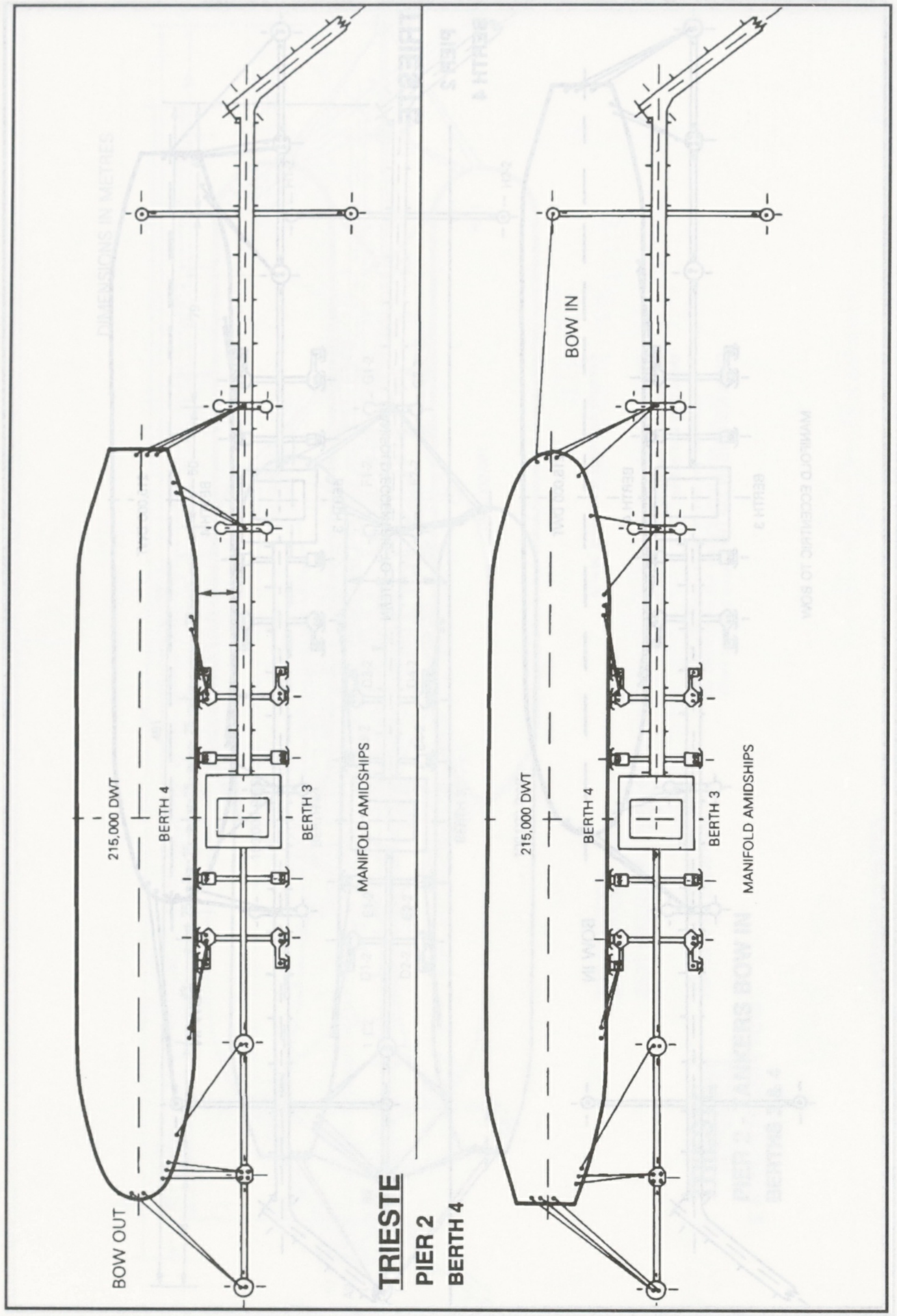
TRIESTE

PIER 2 - BOW OUT

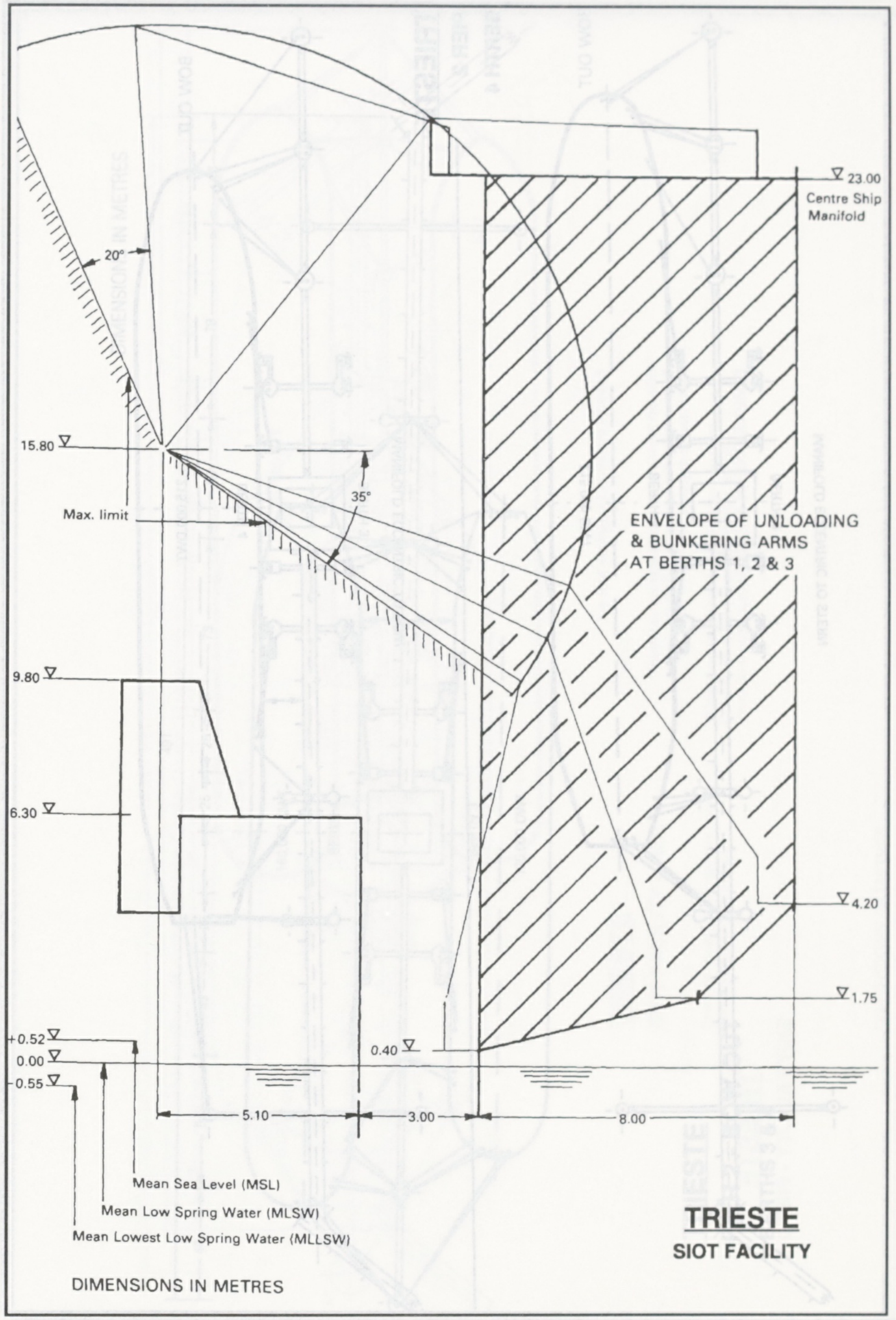
BERTHS 3 & 4


215,000 DWT
BERTH 4
BOW IN
BERTH 3
MANIFOLD ECCENTRIC TO STERN
TRIESTE
PIER 2
BERTH 4
215,000 DWT
BOW IN
BERTH 4
BERTH 3
MANIFOLD ECCENTRIC TO BOW

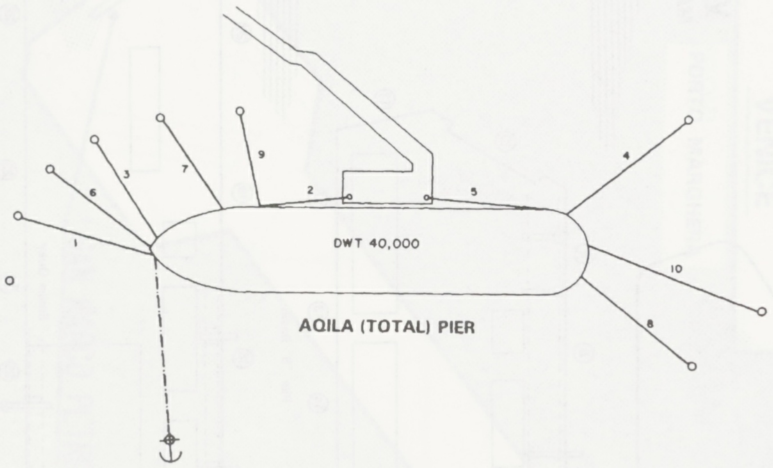

BOW OUT
215,000 DWT
BERTH 4
BERTH 3
MANIFOLD ECCENTRIC TO BOW
TRIESTE
PIER 2
BERTH 4
BOW OUT
215,000 DWT
BERTH 4
BERTH 3
MANIFOLD ECCENTRIC TO STERN


BOW OUT
215,000 DWT
BERTH 4
BERTH 3
MANIFOLD AMIDSHIPS
BOW IN
215,000 DWT
BERTH 4
BERTH 3
MANIFOLD AMIDSHIPS

TRIESTE
PIER 2
BERTH 4

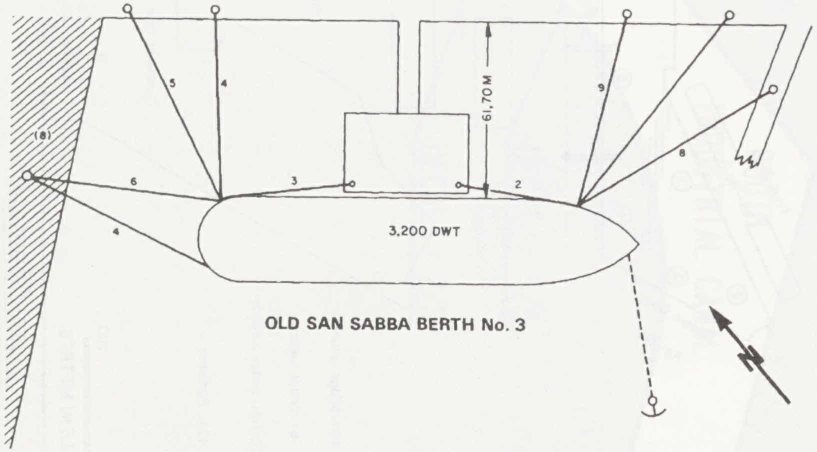

23.00
Centre Ship Manifold
20°
15.80
Max. limit
35°
ENVELOPE OF UNLOADING & BUNKERING ARMS AT BERTHS 1, 2 & 3
9.80
6.30
4.20
1.75
0.40
+0.52
0.00
-0.55
5.10
3.00
8.00
Mean Sea Level (MSL)
Mean Low Spring Water (MLSW)
Mean Lowest Low Spring Water (MLLSW)
DIMENSIONS IN METRES

TRIESTE
SIOT FACILITY

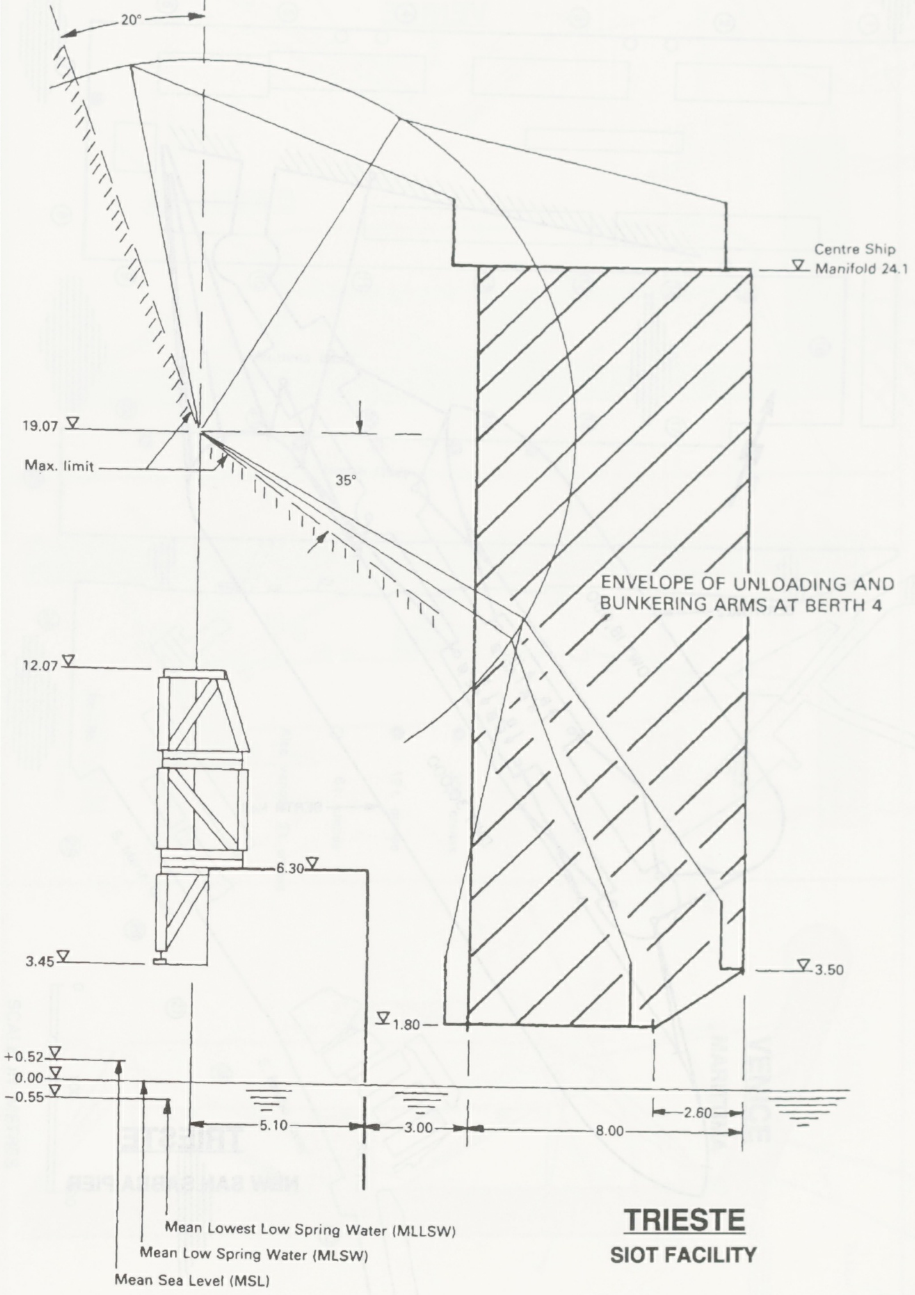

DWT 40,000
1
2
3
4
5
6
7
8
9
10

AQILA (TOTAL) PIER

TRIESTE

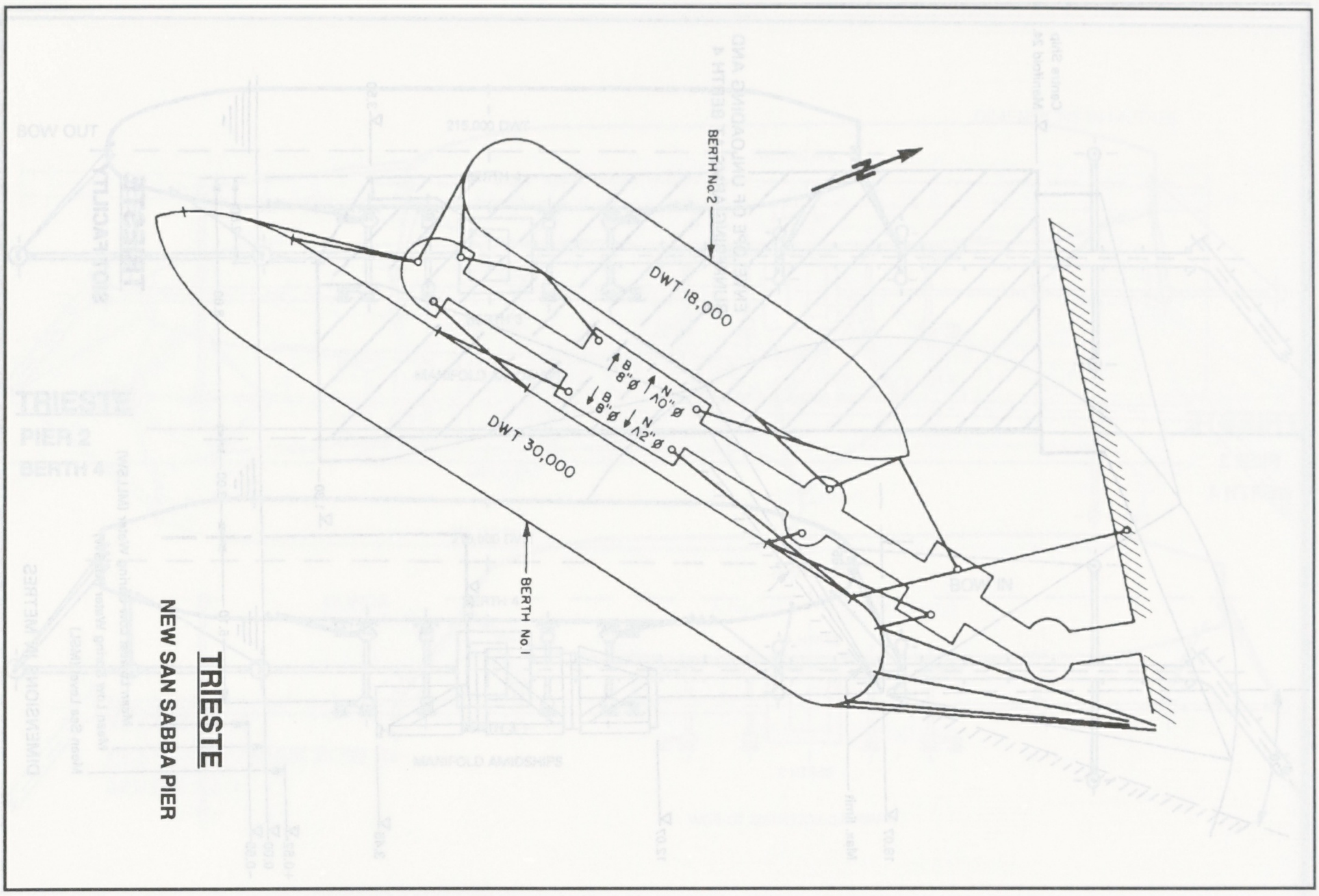

3,200 DWT
61,70 M
(8)
2
3
4
4
5
6
8
9

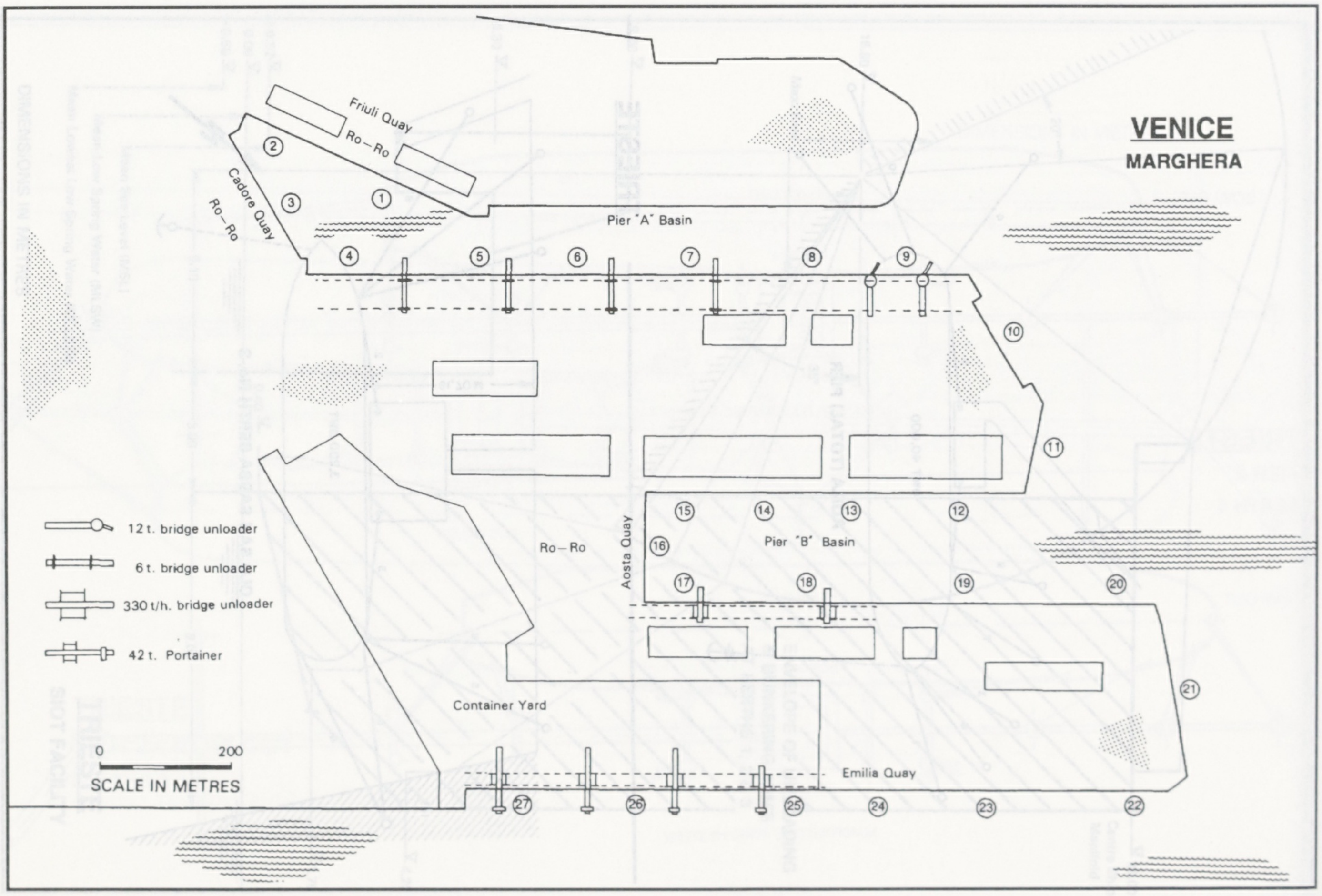
OLD SAN SABBA BERTH No. 3

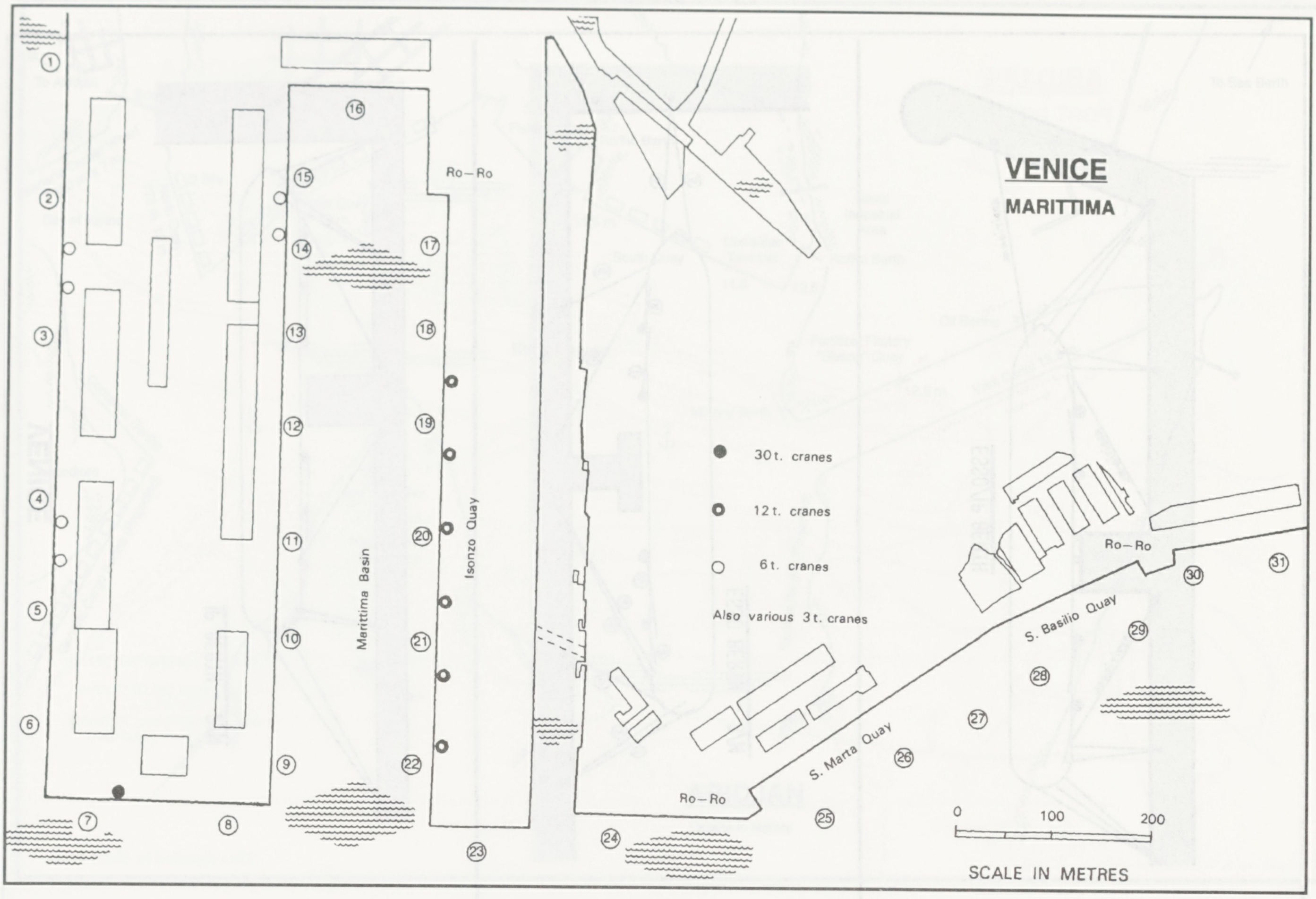

20°
35°
19.07
Max. limit
12.07
6.30
3.45
1.80
+0.52
0.00
−0.55
3.50
Centre Ship Manifold 24.1
ENVELOPE OF UNLOADING AND BUNKERING ARMS AT BERTH 4
5.10
3.00
8.00
2.60
Mean Lowest Low Spring Water (MLLSW)
Mean Low Spring Water (MLSW)
Mean Sea Level (MSL)

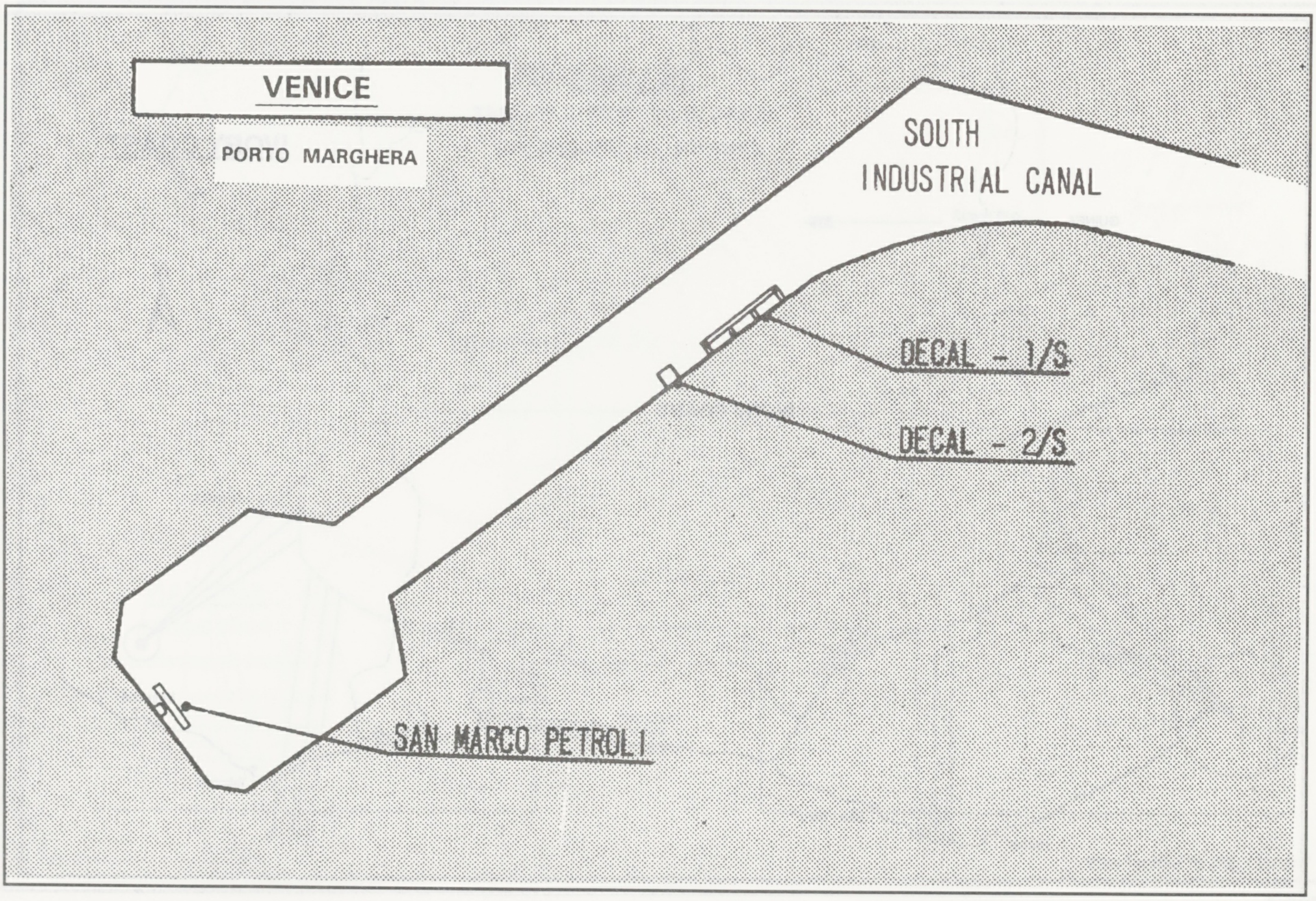
TRIESTE
SIOT FACILITY

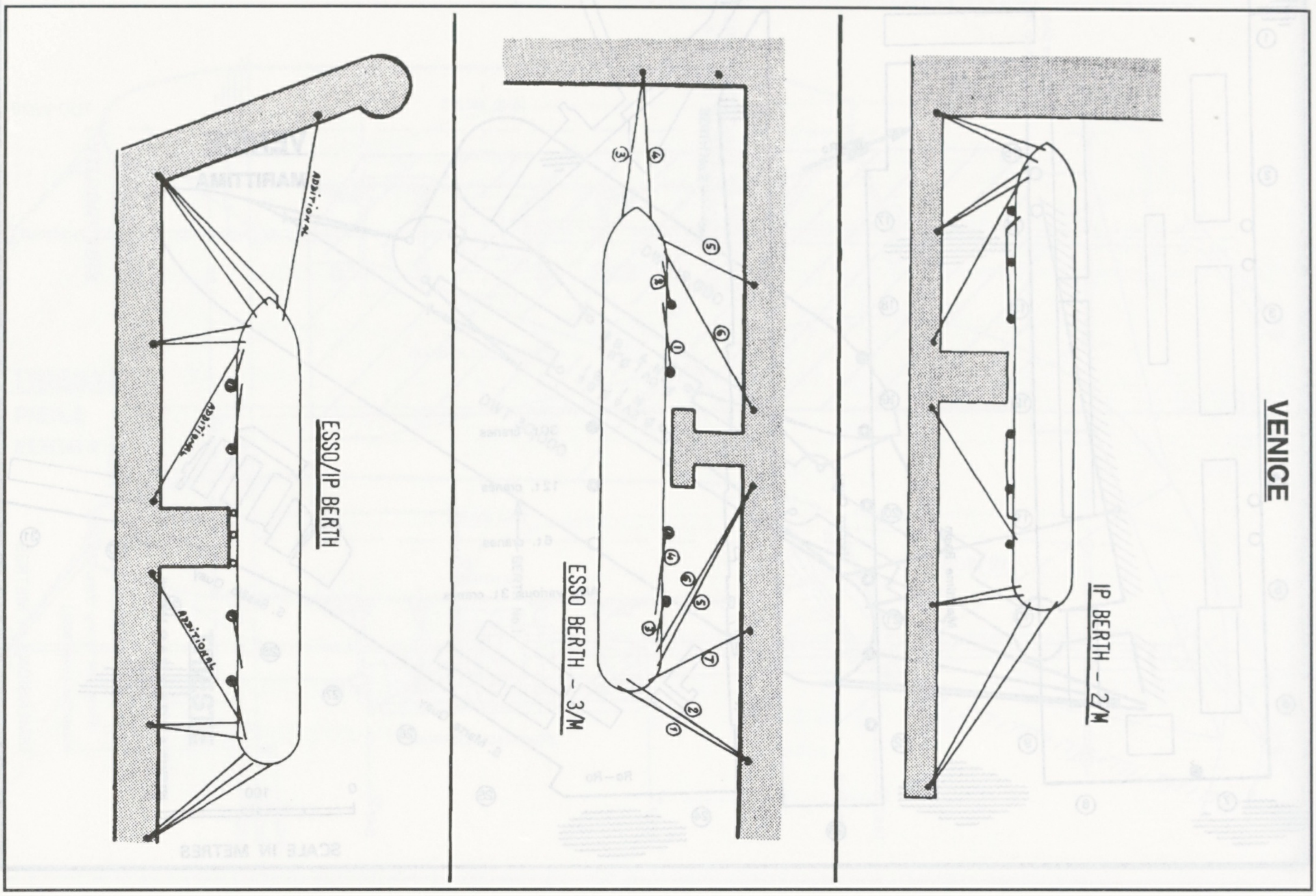
DIMENSIONS IN METRES

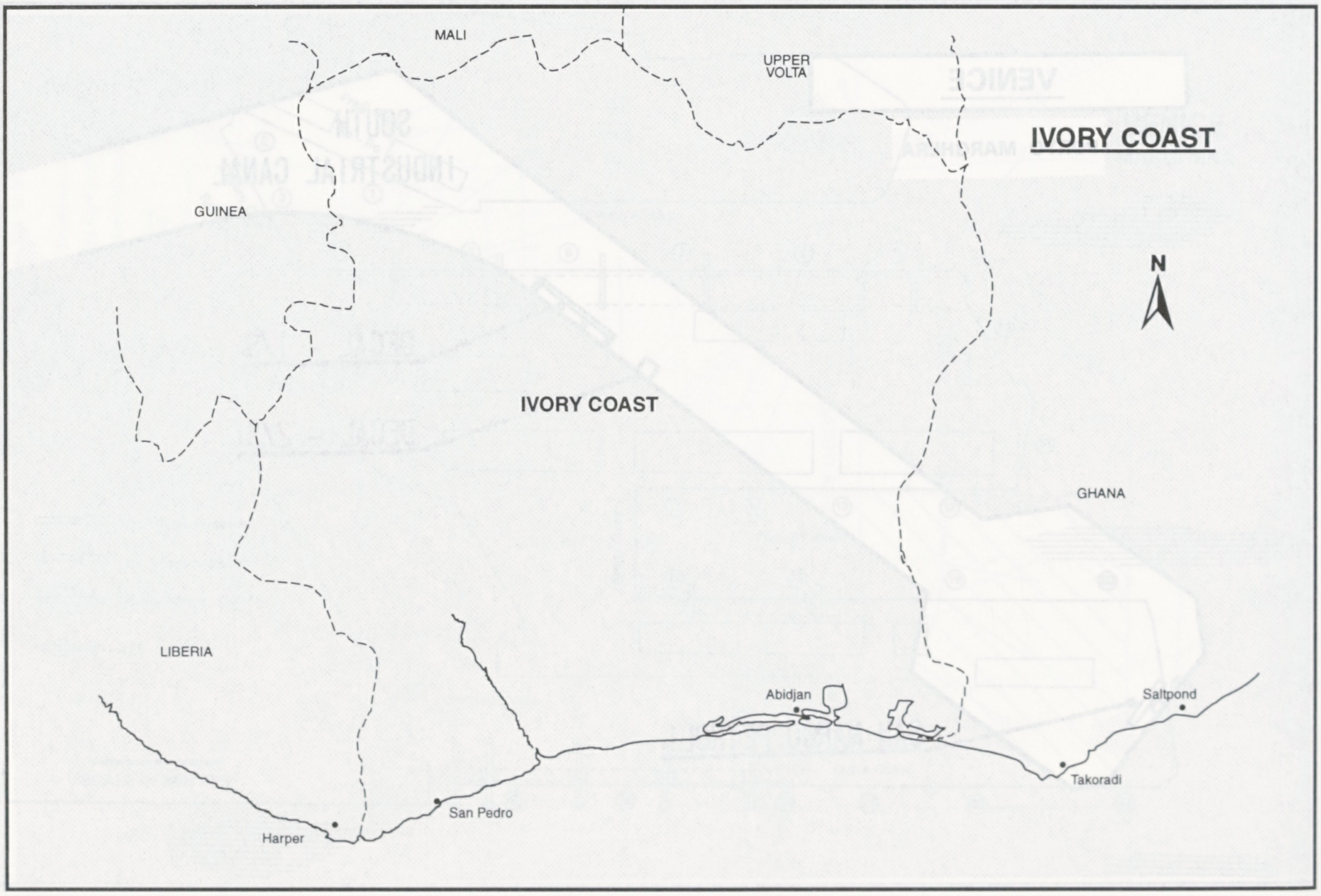

TRIESTE
NEW SAN SABBA PIER
BERTH No. 2
DWT 18,000
B 8"ø
N 10"ø
B 8"ø
N 12"ø
DWT 30,000
BERTH No. 1
N

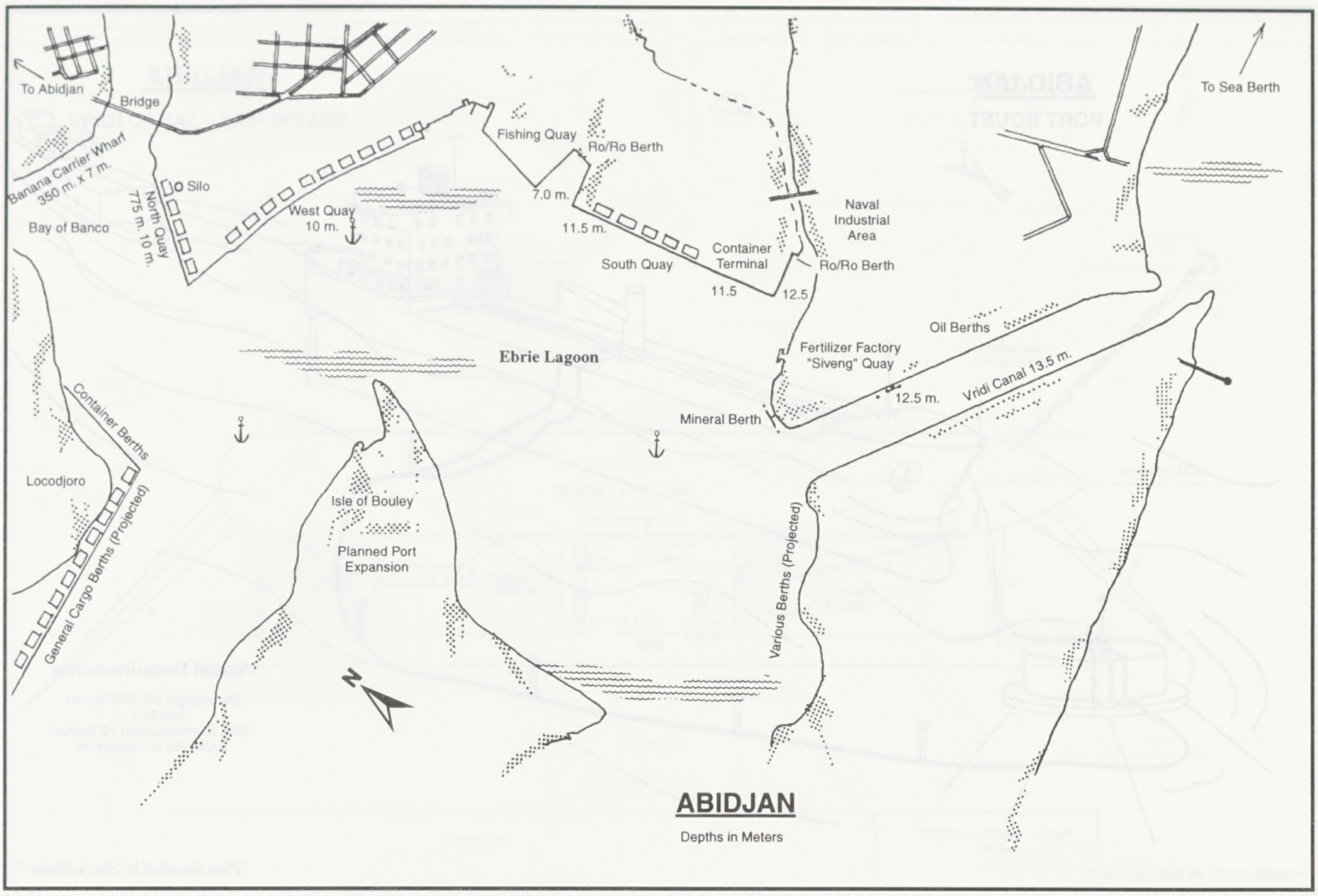

VENICE
MARGHERA
Friuli Quay
Ro—Ro
Cadore Quay
Ro—Ro
Pier "A" Basin
①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑫
⑬
⑭
⑮
⑯
Aosta Quay
Ro—Ro
Pier "B" Basin
⑰
⑱
⑲
⑳
㉑
Container Yard
Emilia Quay
㉒
㉓
㉔
㉕
㉖
㉗
12 t. bridge unloader
6 t. bridge unloader
330 t/h. bridge unloader
42 t. Portainer
0
200
SCALE IN METRES


VENICE
MARITTIMA
● 30t. cranes
○ 12t. cranes
○ 6t. cranes
Also various 3t. cranes
Ro–Ro
Marittima Basin
Isonzo Quay
S. Marta Quay
S. Basilio Quay
Ro–Ro
Ro–Ro
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳ ㉑ ㉒ ㉓ ㉔ ㉕ ㉖ ㉗ ㉘ ㉙ ㉚ ㉛
0 100 200
SCALE IN METRES


VENICE
PORTO MARGHERA
SOUTH INDUSTRIAL CANAL
DECAL – 1/S
DECAL – 2/S
SAN MARCO PETROLI


VENICE
ESSO/IP BERTH
Additional
Additional
Additional
ESSO BERTH – 3/M
IP BERTH – 2/M

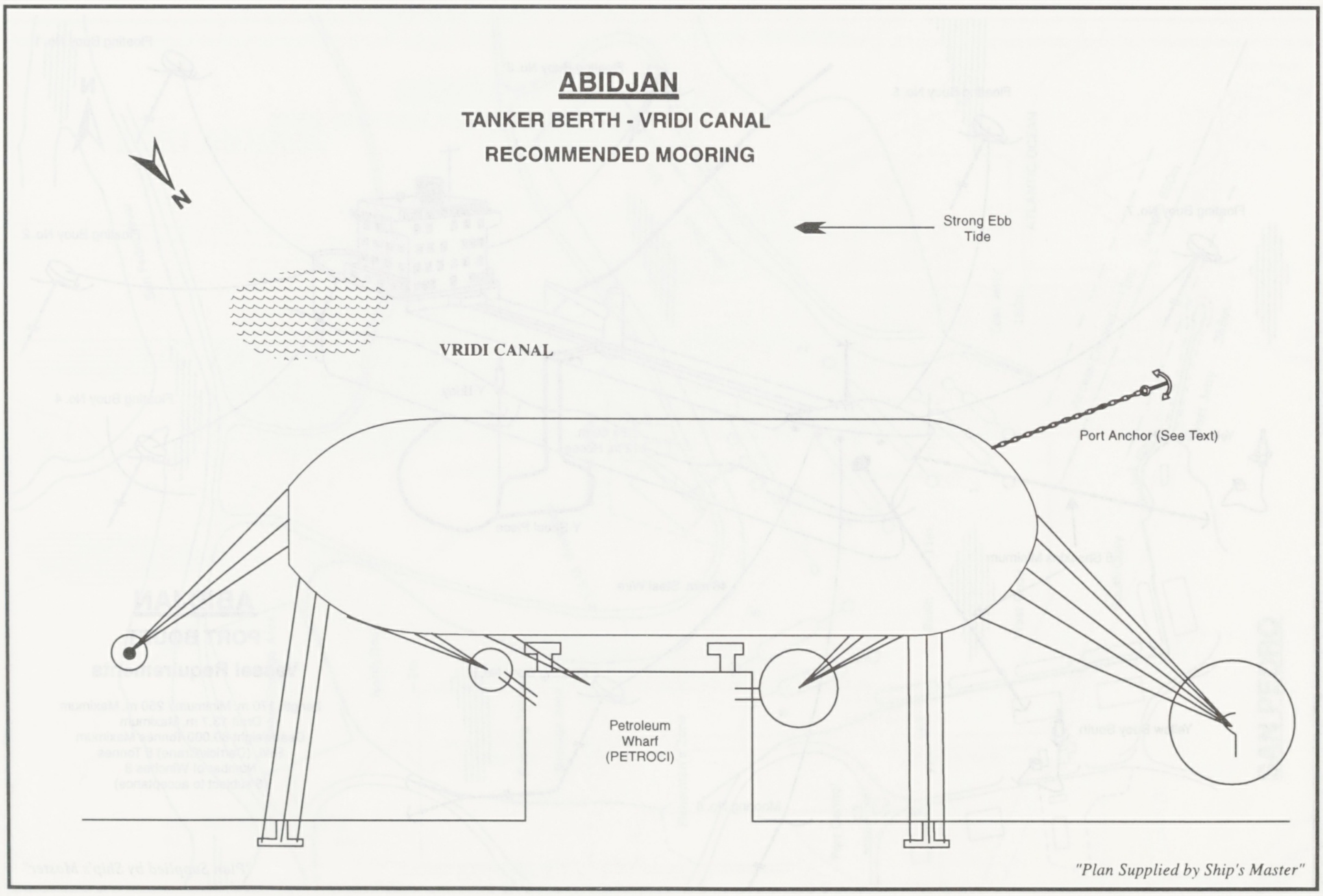

IVORY COAST
MALI
UPPER VOLTA
GUINEA
N
IVORY COAST
GHANA
LIBERIA
Abidjan
Saltpond
Takoradi
San Pedro
Harper



ABIDJAN

Depths in Meters

To Abidjan
Bridge
Banana Carrier Wharf 350 m. x 7 m.
Silo
North Quay 775 m. 10 m.
Bay of Banco
West Quay 10 m.
Fishing Quay
Ro/Ro Berth
7.0 m.
11.5 m.
South Quay
Container Terminal
11.5
12.5
Naval Industrial Area
Ro/Ro Berth
To Sea Berth
Oil Berths
Fertilizer Factory "Siveng" Quay
12.5 m.
Vridi Canal 13.5 m.
Mineral Berth
Ebrie Lagoon
Container Berths
Locodjoro
General Cargo Berths (Projected)
Isle of Bouley
Planned Port Expansion
Various Berths (Projected)
N

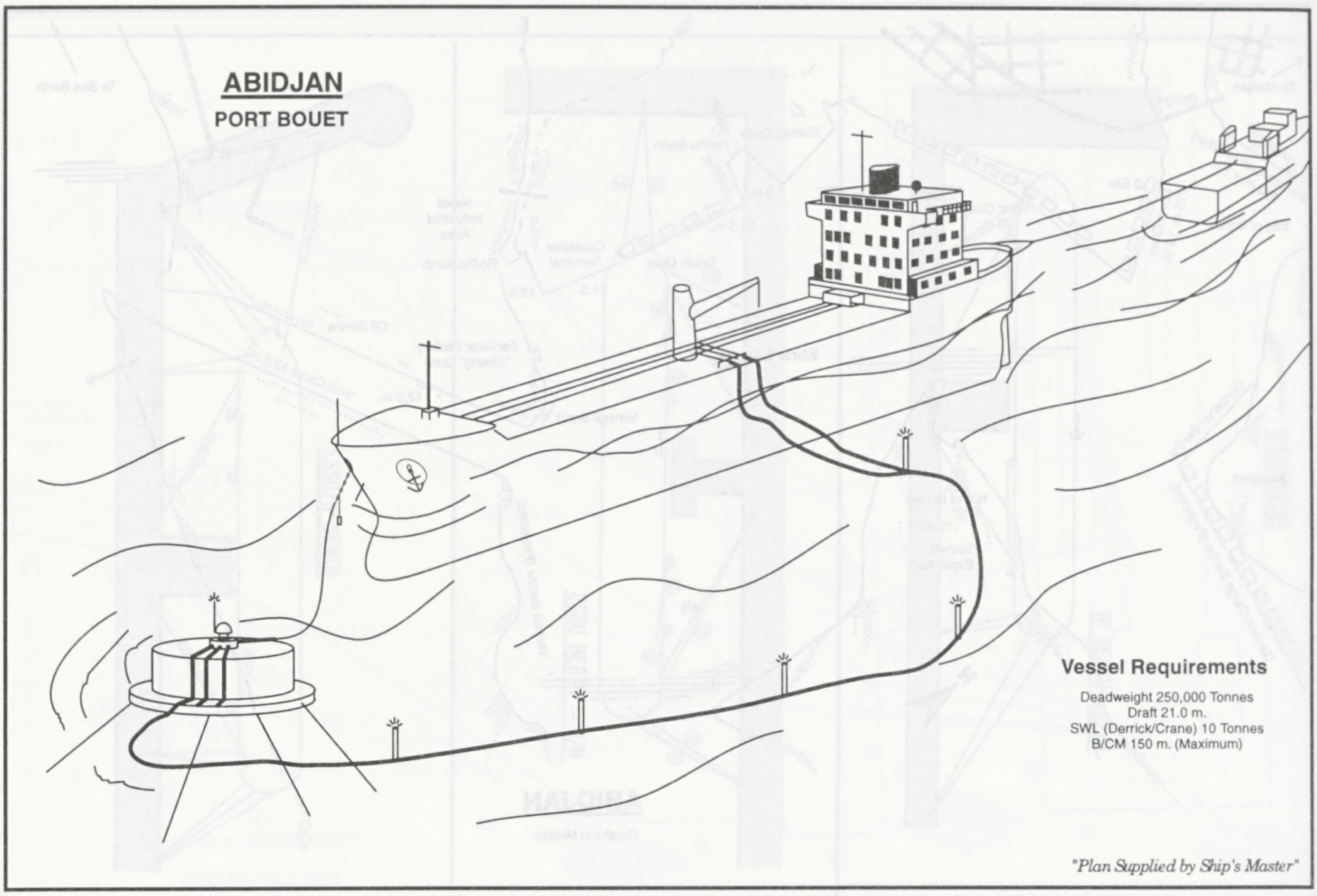


ABIDJAN

TANKER BERTH - VRIDI CANAL
RECOMMENDED MOORING

N
Strong Ebb Tide
VRIDI CANAL
Port Anchor (See Text)
Petroleum Wharf (PETROCI)

"Plan Supplied by Ship's Master"



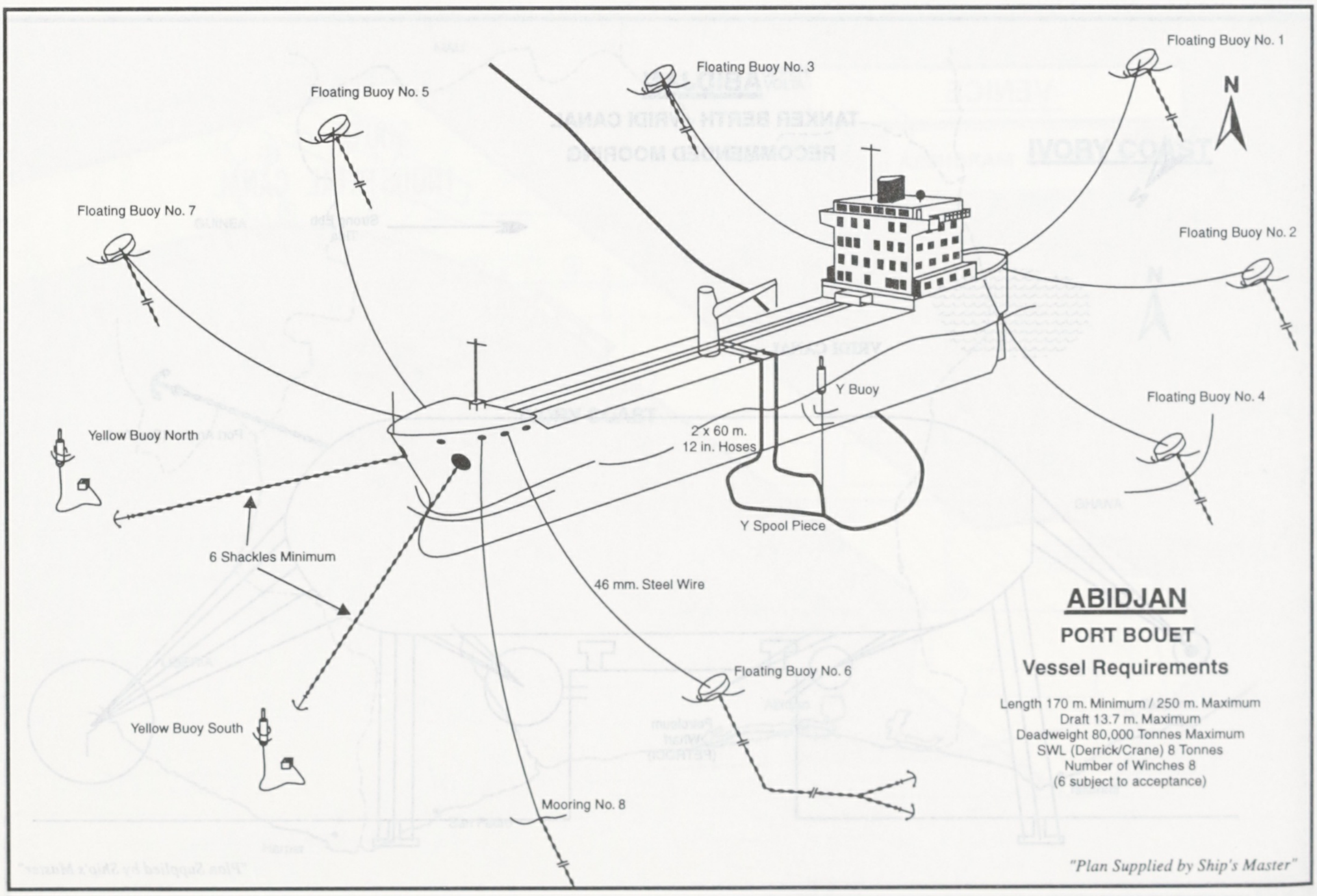
ABIDJAN

PORT BOUET

Vessel Requirements

Deadweight 250,000 Tonnes
Draft 21.0 m.
SWL (Derrick/Crane) 10 Tonnes
B/CM 150 m. (Maximum)

"Plan Supplied by Ship's Master"


Floating Buoy No. 1
Floating Buoy No. 3
Floating Buoy No. 5
N
Floating Buoy No. 7
Floating Buoy No. 2
Y Buoy
Floating Buoy No. 4
Yellow Buoy North
2 x 60 m.
12 in. Hoses
Y Spool Piece
6 Shackles Minimum
46 mm. Steel Wire
Floating Buoy No. 6
Yellow Buoy South
Mooring No. 8

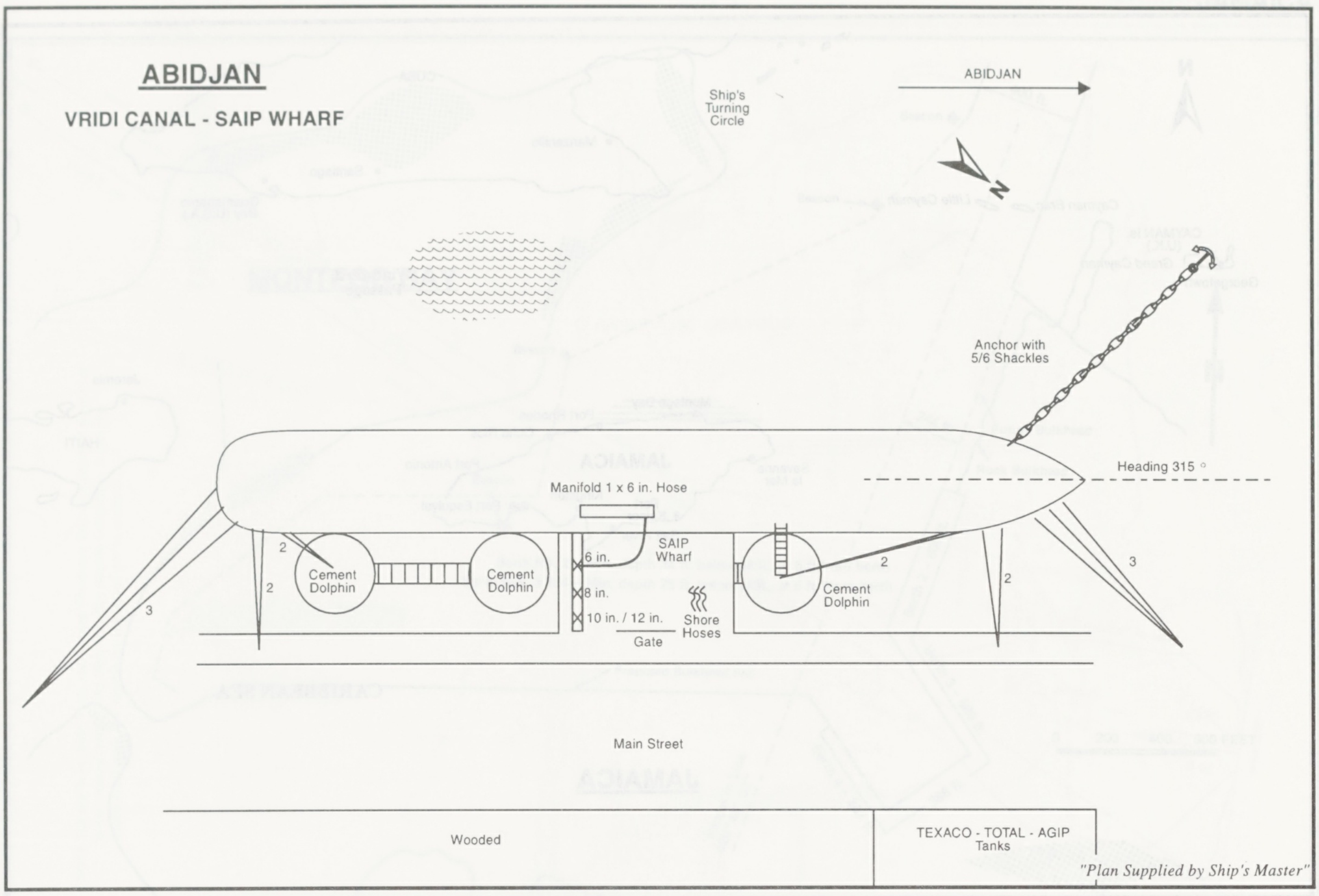
ABIDJAN

PORT BOUET

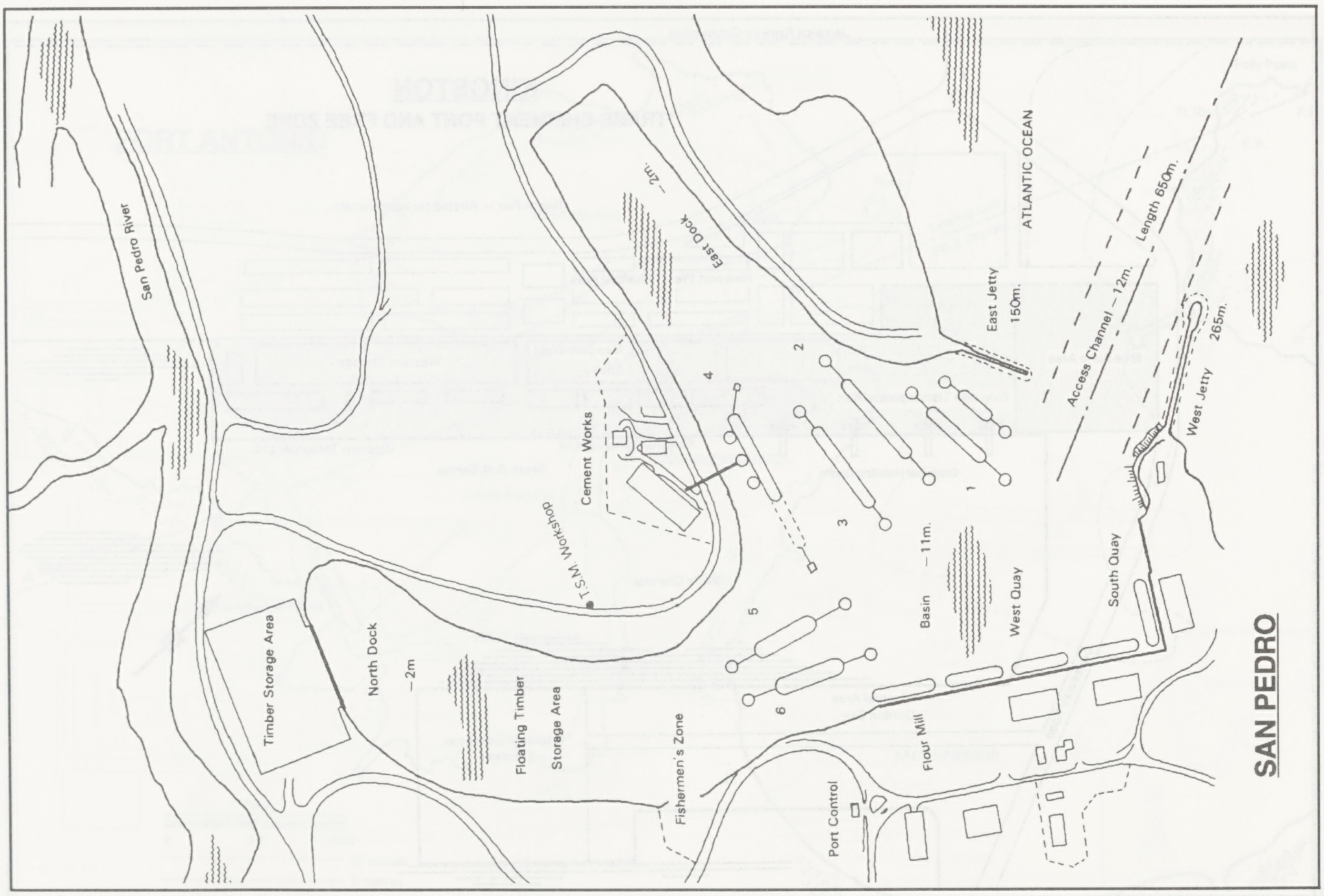
Vessel Requirements

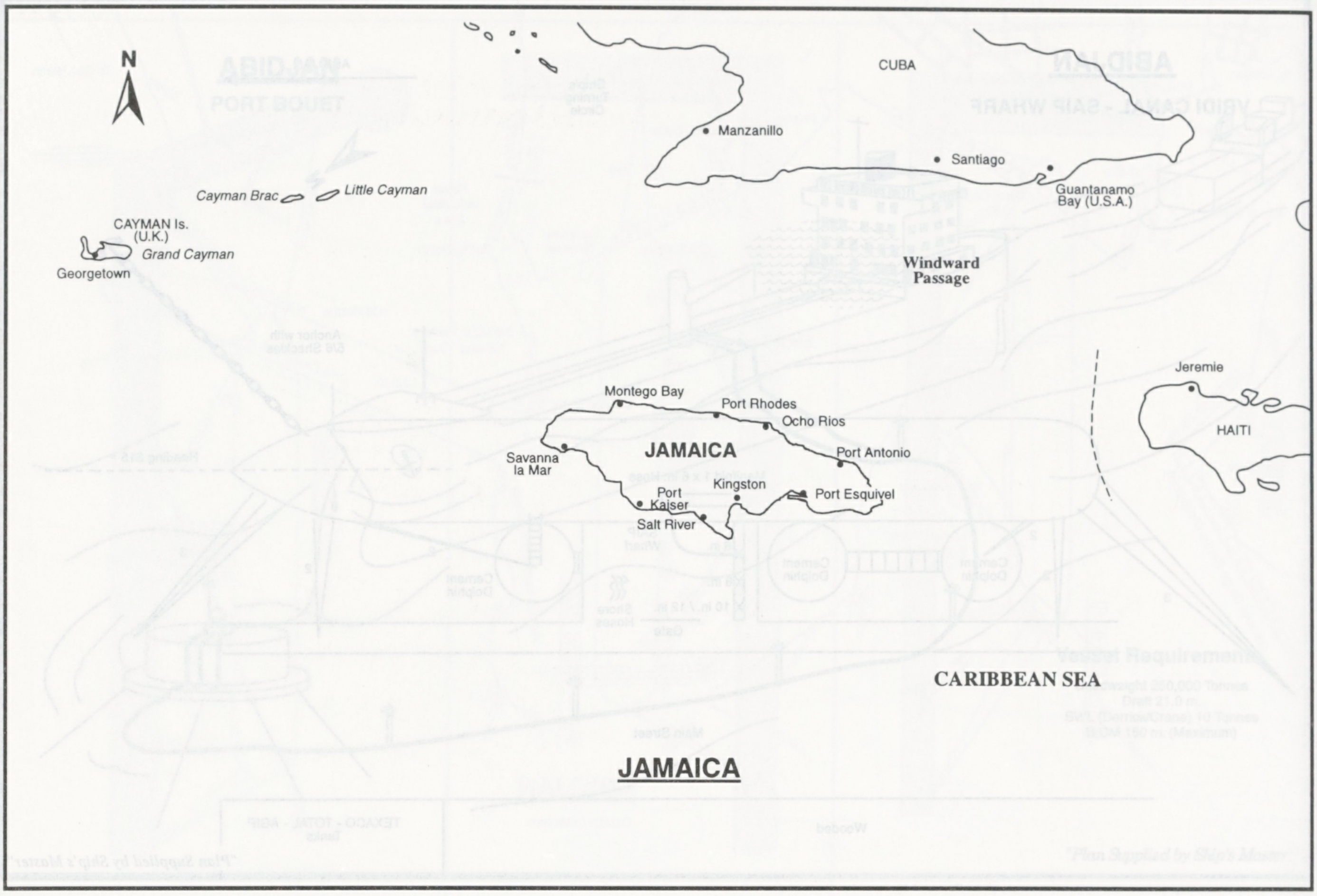
Length 170 m. Minimum / 250 m. Maximum
Draft 13.7 m. Maximum
Deadweight 80,000 Tonnes Maximum
SWL (Derrick/Crane) 8 Tonnes
Number of Winches 8
(6 subject to acceptance)

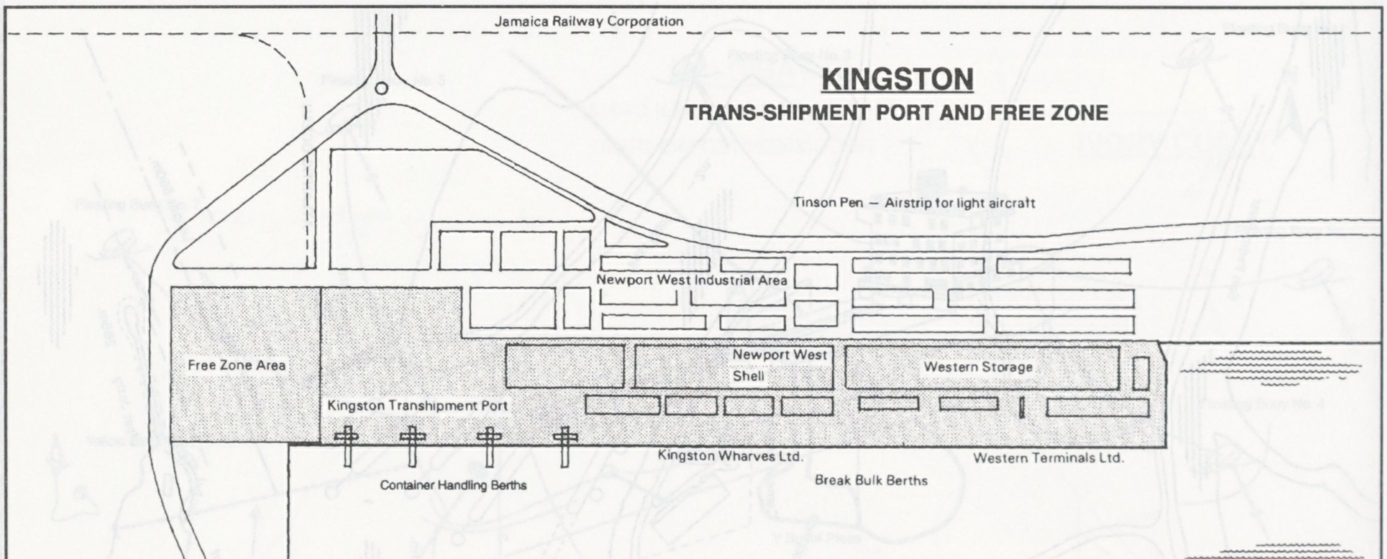
"Plan Supplied by Ship's Master"

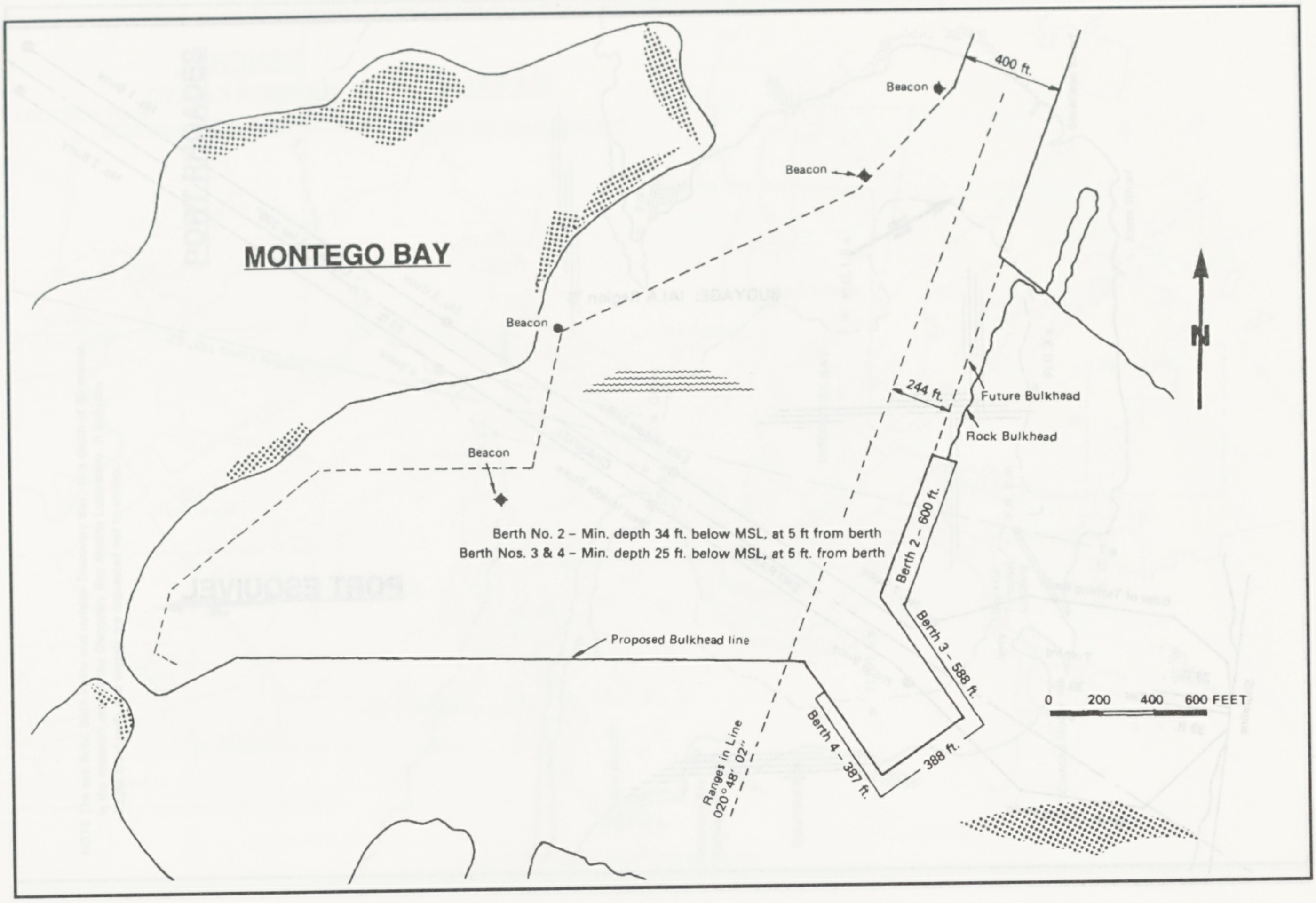

ABIDJAN
VRIDI CANAL - SAIP WHARF
Ship's Turning Circle
ABIDJAN
N
Anchor with 5/6 Shackles
Heading 315 °
Manifold 1 x 6 in. Hose
SAIP Wharf
6 in.
8 in.
10 in. / 12 in.
Gate
Shore Hoses
Cement Dolphin
Cement Dolphin
Cement Dolphin
2
2
3
2
2
3
Main Street
Wooded
TEXACO - TOTAL - AGIP Tanks

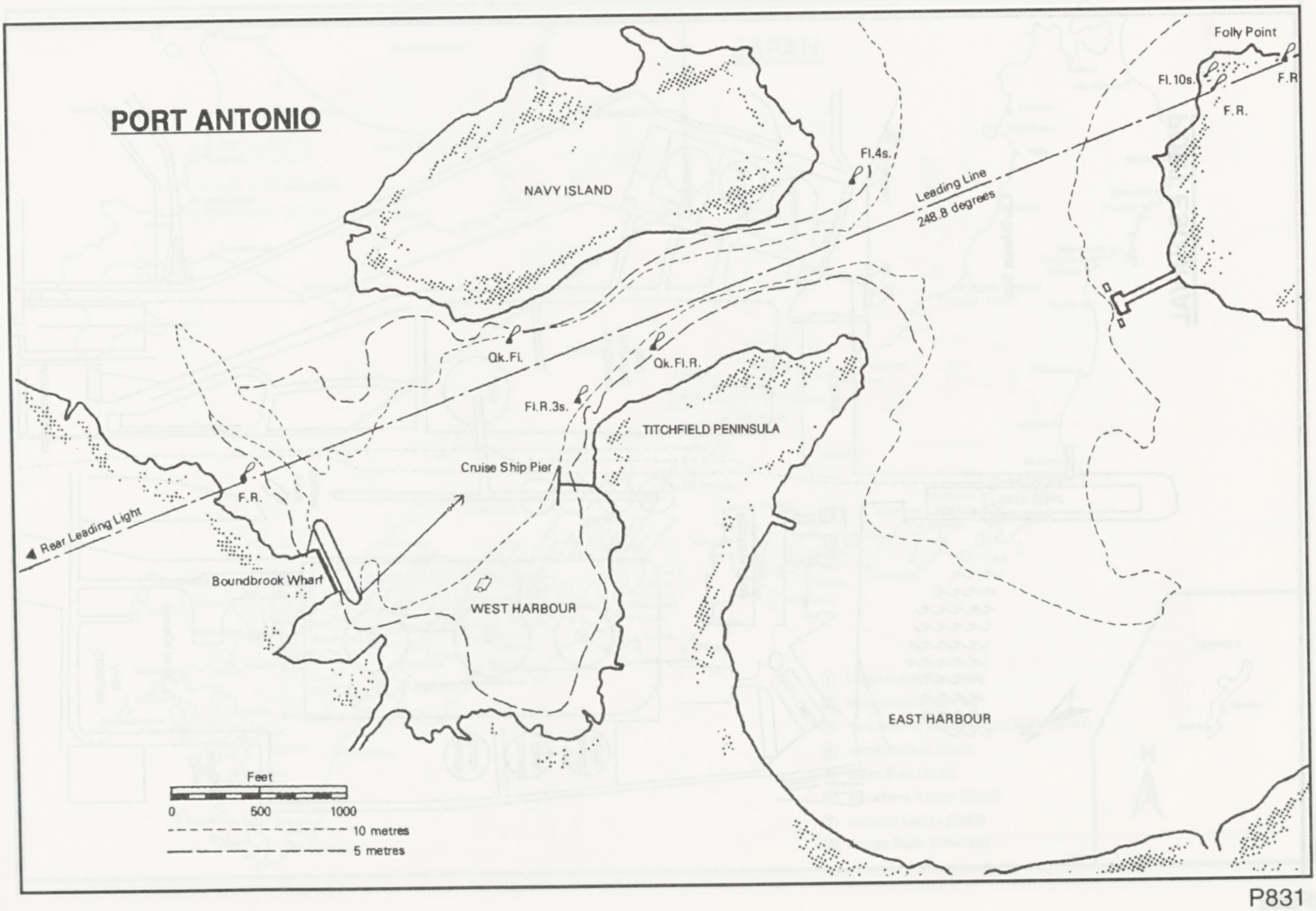
"Plan Supplied by Ship's Master"

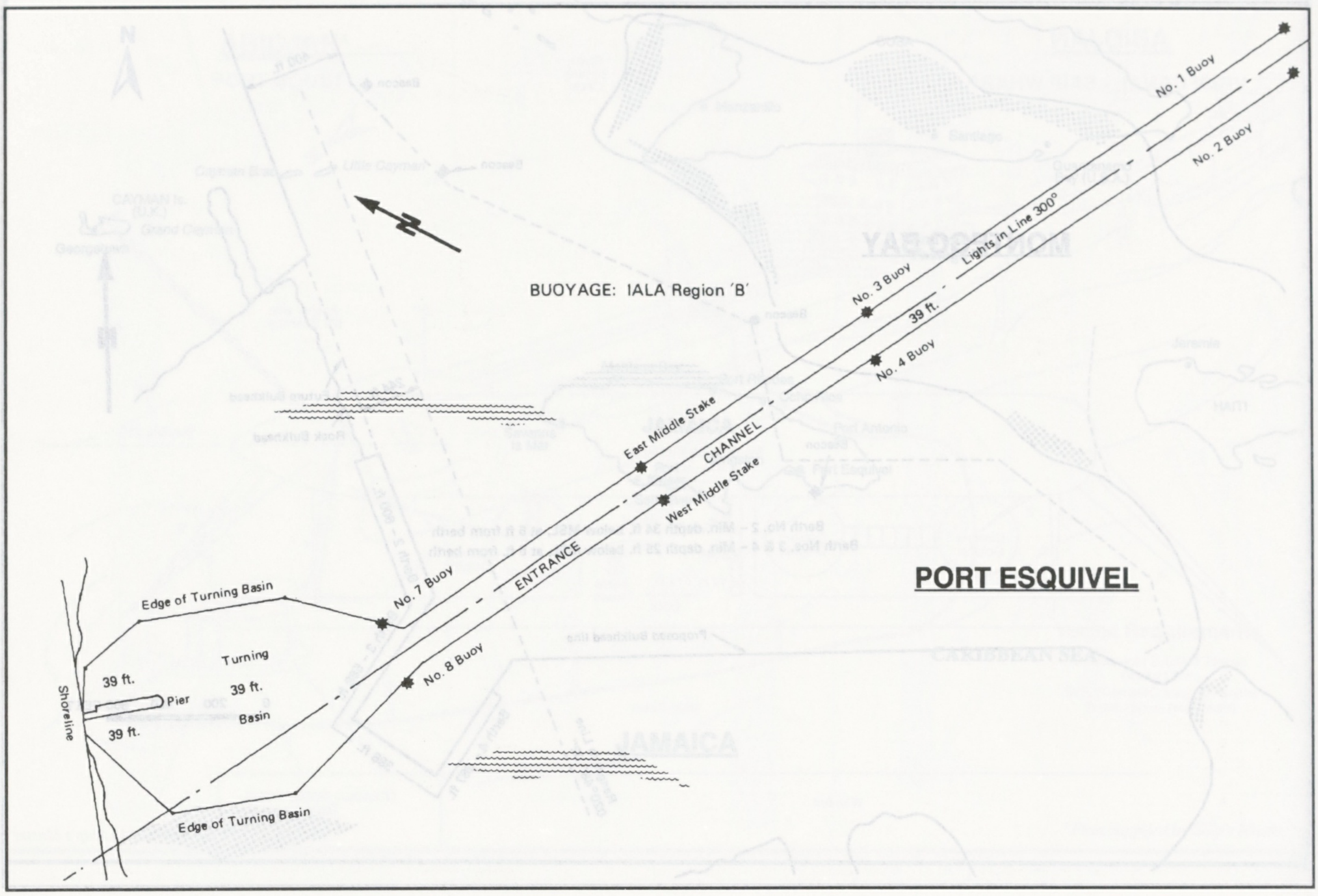

SAN PEDRO
San Pedro River
ATLANTIC OCEAN
East Dock
– 2m.
East Jetty
150m.
Access Channel – 12m.
Length 650m.
265m.
West Jetty
Cement Works
T.S.M. Workshop
1
2
3
4
5
6
Basin – 11m.
West Quay
South Quay
Timber Storage Area
North Dock
– 2m
Floating Timber Storage Area
Fishermen's Zone
Port Control
Flour Mill

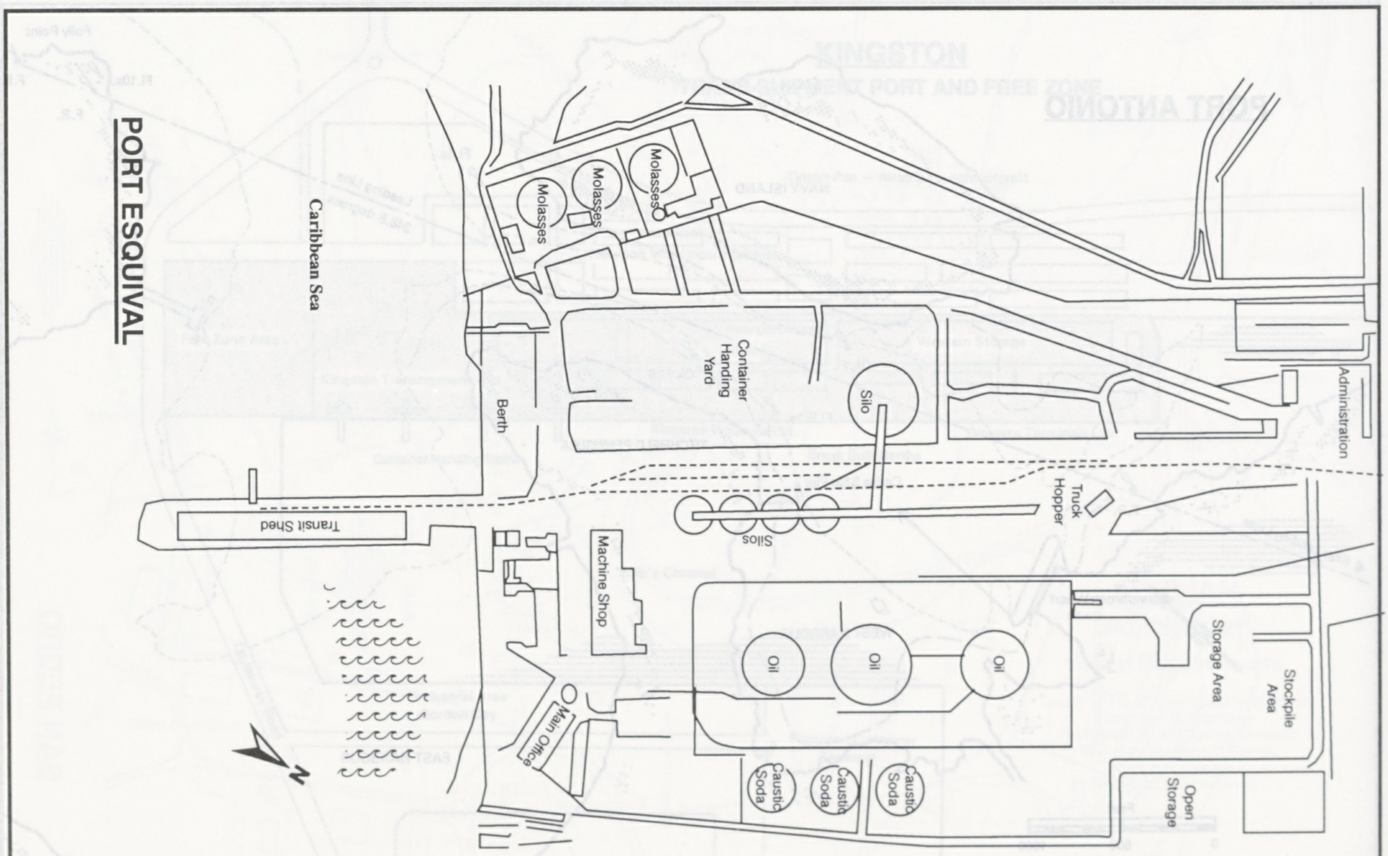

N
CUBA
Manzanillo
Santiago
Guantanamo Bay (U.S.A.)
Cayman Brac
Little Cayman
CAYMAN Is. (U.K.)
Grand Cayman
Georgetown
Windward Passage
Jeremie
HAITI
Montego Bay
Port Rhodes
Ocho Rios
JAMAICA
Port Antonio
Savanna la Mar
Port Kaiser
Kingston
Port Esquivel
Salt River
CARIBBEAN SEA
JAMAICA

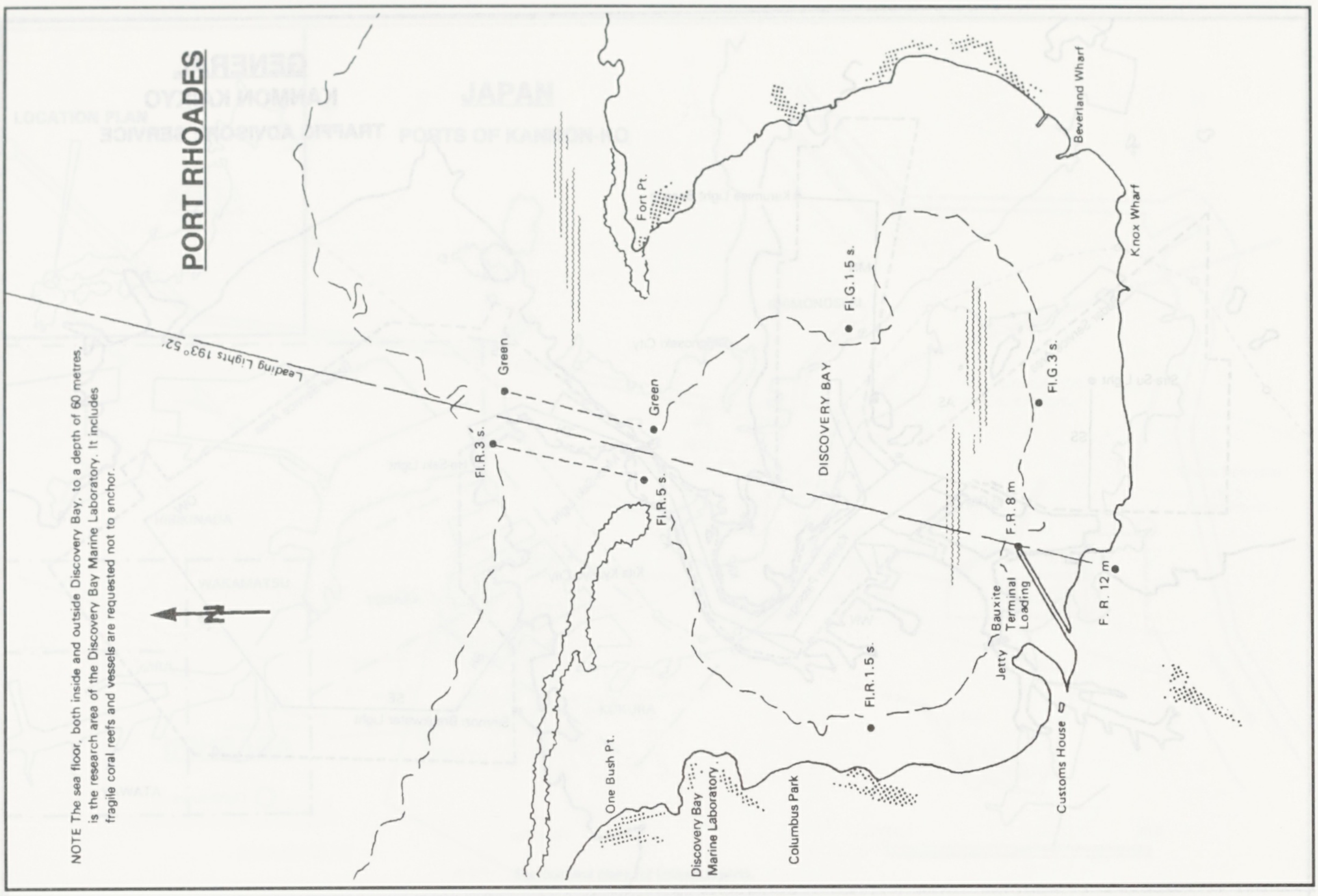

Jamaica Railway Corporation
KINGSTON
TRANS-SHIPMENT PORT AND FREE ZONE
Tinson Pen – Airstrip for light aircraft
Newport West Industrial Area
Free Zone Area
Newport West Shell
Western Storage
Kingston Transhipment Port
Kingston Wharves Ltd.
Western Terminals Ltd.
Container Handling Berths
Break Bulk Berths
Ship's Channel
Causeway Road
Industrial Area Gordon Cay
Proposed Container Terminal


MONTEGO BAY
400 ft.
Beacon
Beacon
Beacon
Beacon
N
244 ft.
Future Bulkhead
Rock Bulkhead
Berth No. 2 – Min. depth 34 ft. below MSL, at 5 ft from berth
Berth Nos. 3 & 4 – Min. depth 25 ft. below MSL, at 5 ft. from berth
Berth 2 – 600 ft.
Berth 3 – 588 ft.
388 ft.
Berth 4 – 387 ft.
Ranges in Line 020° 48' 02"
Proposed Bulkhead line
0 200 400 600 FEET

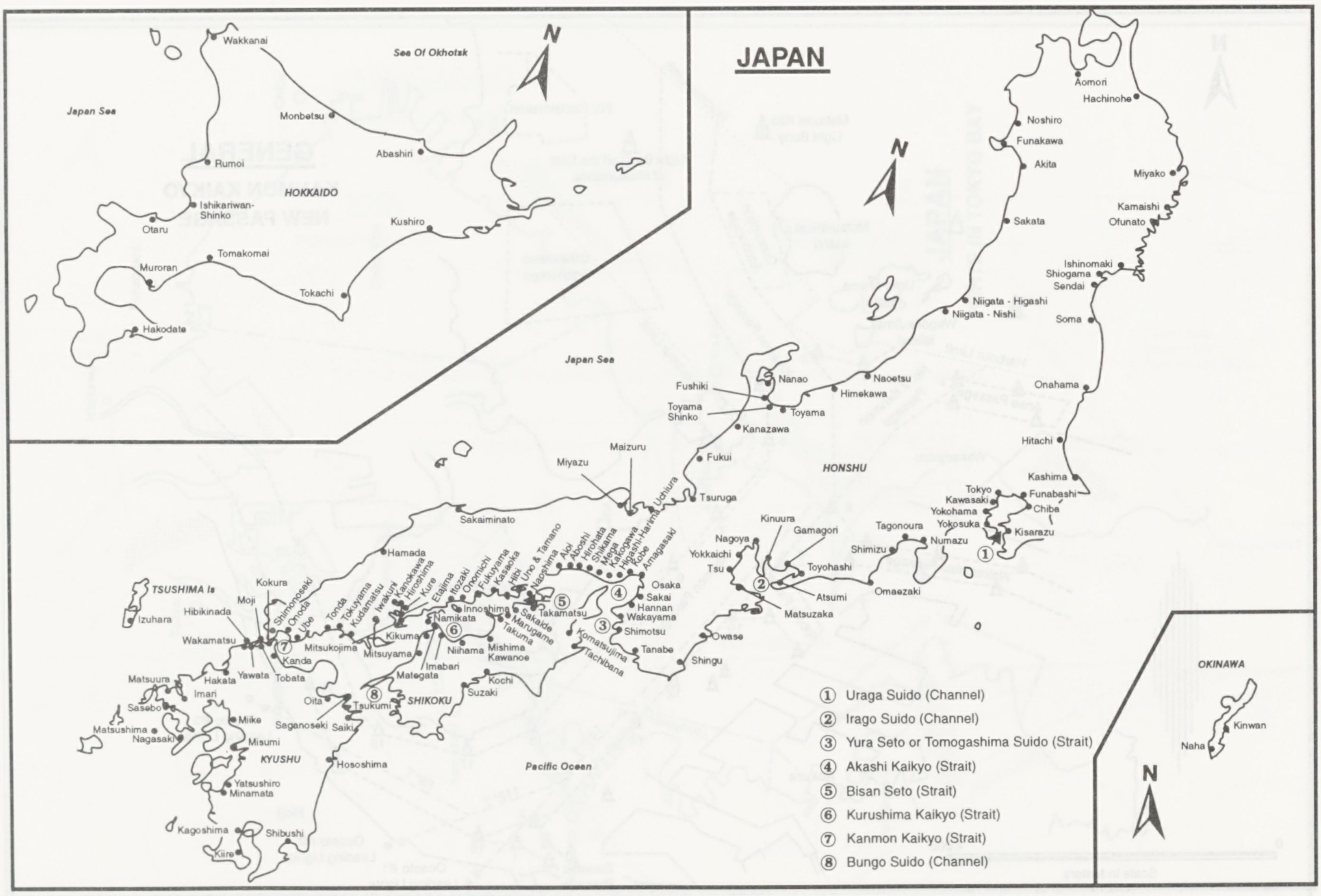

PORT ANTONIO
Folly Point
Fl. 10s.
F.R
F.R.
Fl.4s.
NAVY ISLAND
Leading Line
248.8 degrees
Qk.Fl.
Qk.Fl.R.
Fl.R.3s.
TITCHFIELD PENINSULA
Cruise Ship Pier
F.R.
Rear Leading Light
Boundbrook Wharf
WEST HARBOUR
EAST HARBOUR
Feet
0 500 1000
10 metres
5 metres


N
BUOYAGE: IALA Region 'B'
No. 1 Buoy
No. 2 Buoy
Lights in Line 300°
No. 3 Buoy
39 ft.
No. 4 Buoy
East Middle Stake
CHANNEL
West Middle Stake
ENTRANCE
No. 7 Buoy
No. 8 Buoy
Edge of Turning Basin
Turning
39 ft.
Basin
39 ft.
Pier
39 ft.
Shoreline
Edge of Turning Basin
PORT ESQUIVEL

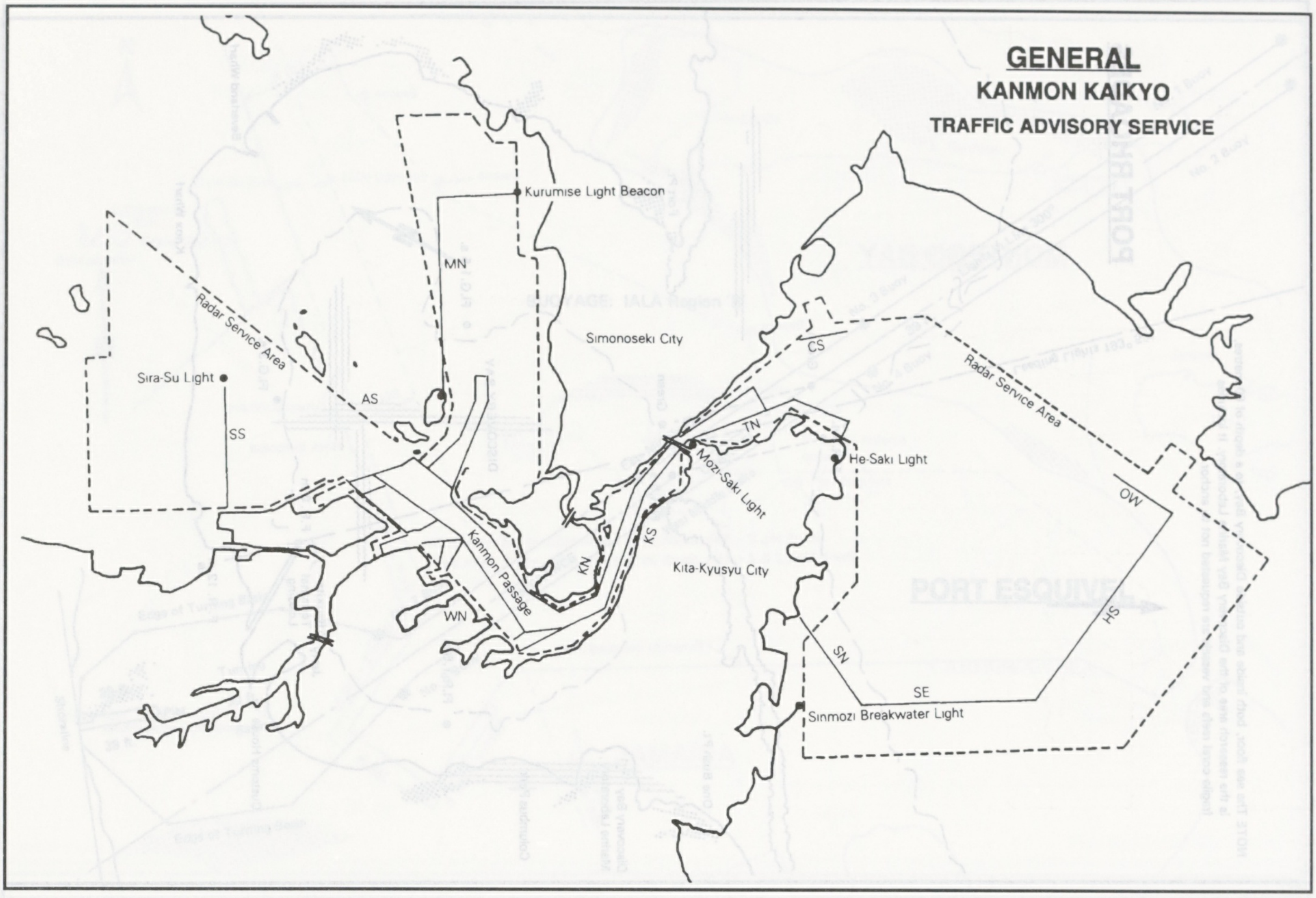

PORT ESQUIVAL
Caribbean Sea
Molasses
Molasses
Molasses
Container Handing Yard
Silo
Berth
Transit Shed
Silos
Truck Hopper
Administration
Machine Shop
Oil
Oil
Oil
Storage Area
Stockpile Area
Main Office
Caustic Soda
Caustic Soda
Caustic Soda
Open Storage
N

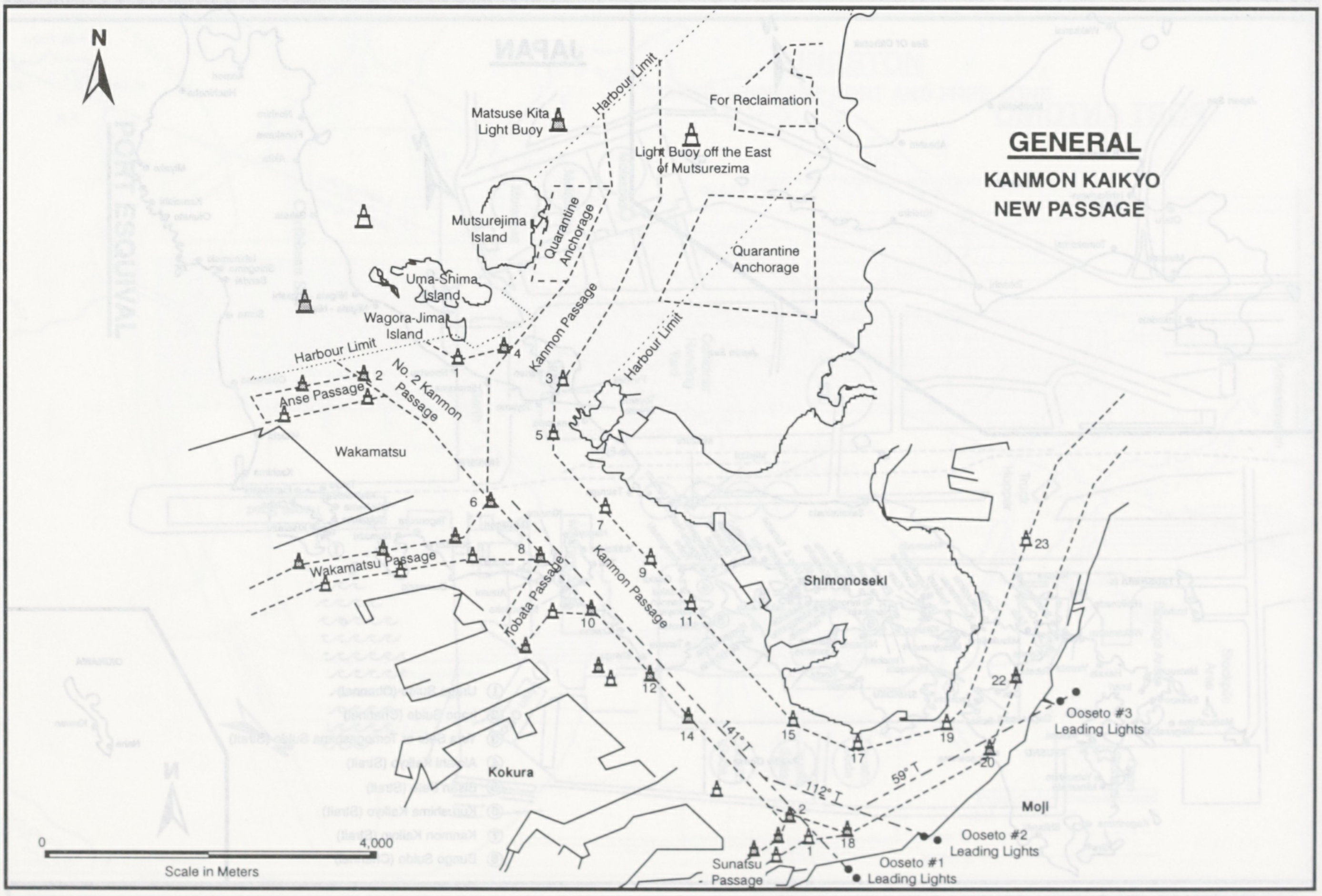

PORT RHOADES
N
Leading Lights 193° 52'
Green
Green
Fl.R.3 s.
Fl.R.5 s.
Fort Pt.
Fl.G.1.5 s.
DISCOVERY BAY
Fl.G.3 s.
F.R. 8 m
F. R. 12 m
Beverland Wharf
Knox Wharf
Bauxite Terminal Loading Jetty
Fl.R.1.5 s.
Customs House
Columbus Park
Discovery Bay Marine Laboratory
One Bush Pt.

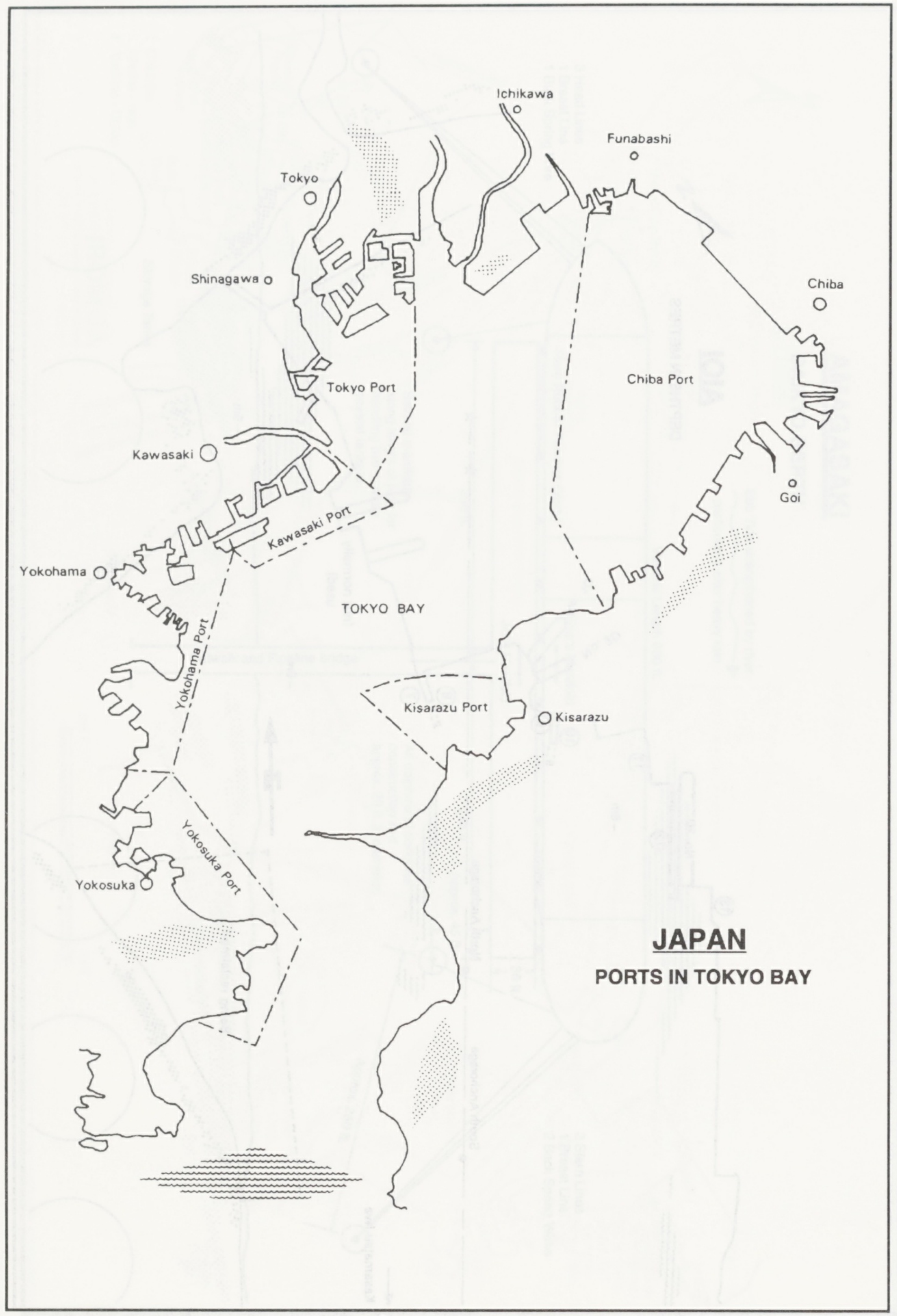
NOTE The sea floor, both inside and outside Discovery Bay, to a depth of 60 metres, is the research area of the Discovery Bay Marine Laboratory. It includes fragile coral reefs and vessels are requested not to anchor.


JAPAN
N
Sea Of Okhotsk
Japan Sea
Wakkanai
Monbetsu
Abashiri
Rumoi
HOKKAIDO
Ishikariwan-Shinko
Otaru
Kushiro
Tomakomai
Muroran
Tokachi
Hakodate
Aomori
Hachinohe
Noshiro
Funakawa
Akita
Miyako
Kamaishi
Ofunato
Sakata
Ishinomaki
Shiogama
Sendai
Niigata - Higashi
Niigata - Nishi
Soma
Japan Sea
Nanao
Naoetsu
Fushiki
Himekawa
Onahama
Toyama Shinko
Toyama
Kanazawa
Fukui
HONSHU
Hitachi
Maizuru
Miyazu
Kashima
Tokyo
Funabashi
Kawasaki
Yokohama
Chiba
Yokosuka
Kisarazu
Tsuruga
Uchiura
Sakaiminato
Kinuura
Gamagori
Tagonoura
Numazu
Shimizu
Nagoya
Yokkaichi
Tsu
Toyohashi
Atsumi
Omaezaki
Matsuzaka
Hamada
Amagasaki
Kobe
Higashi-Harima
Kakogawa
Mega
Shikama
Hirohata
Aboshi
Aioi
Uno & Tamano
Naoshima
Hibi
Kasaoka
Fukuyama
Onomichi
Itozaki
Etajima
Kure
Hiroshima
Kanokawa
Iwakuni
Kudamatsu
Tokuyama
Tonda
Ube
Onoda
Shimonoseki
Kokura
Moji
TSUSHIMA Is
Izuhara
Hibikinada
Wakamatsu
Mitsukojima
Kanda
Yawata
Tobata
Hakata
Kikuma
Mitsuyama
Namikata
Innoshima
Sakaide
Marugame
Takuma
Takamatsu
Niihama
Mishima
Kawanoe
Imabari
Mategata
Osaka
Sakai
Hannan
Wakayama
Shimotsu
Tanabe
Komatsujima
Tachibana
Owase
Shingu
Kochi
Suzaki
SHIKOKU
Matsuura
Imari
Sasebo
Matsushima
Nagasaki
Miike
Misumi
KYUSHU
Oita
Tsukumi
Saganoseki
Saiki
Hososhima
Yatsushiro
Minamata
Kagoshima
Kiire
Shibushi
Pacific Ocean
OKINAWA
Kinwan
Naha
①
②
③
④
⑤
⑥
⑦
⑧

① Uraga Suido (Channel)
② Irago Suido (Channel)
③ Yura Seto or Tomogashima Suido (Strait)
④ Akashi Kaikyo (Strait)
⑤ Bisan Seto (Strait)
⑥ Kurushima Kaikyo (Strait)
⑦ Kanmon Kaikyo (Strait)
⑧ Bungo Suido (Channel)


GENERAL
KANMON KAIKYO
TRAFFIC ADVISORY SERVICE
Kurumise Light Beacon
MN
Radar Service Area
Simonoseki City
Sira-Su Light
AS
SS
CS
Radar Service Area
TN
He-Saki Light
Mozi-Saki Light
KS
KN
Kanmon Passage
Kita-Kyusyu City
WN
OW
HS
SN
SE
Sinmozi Breakwater Light

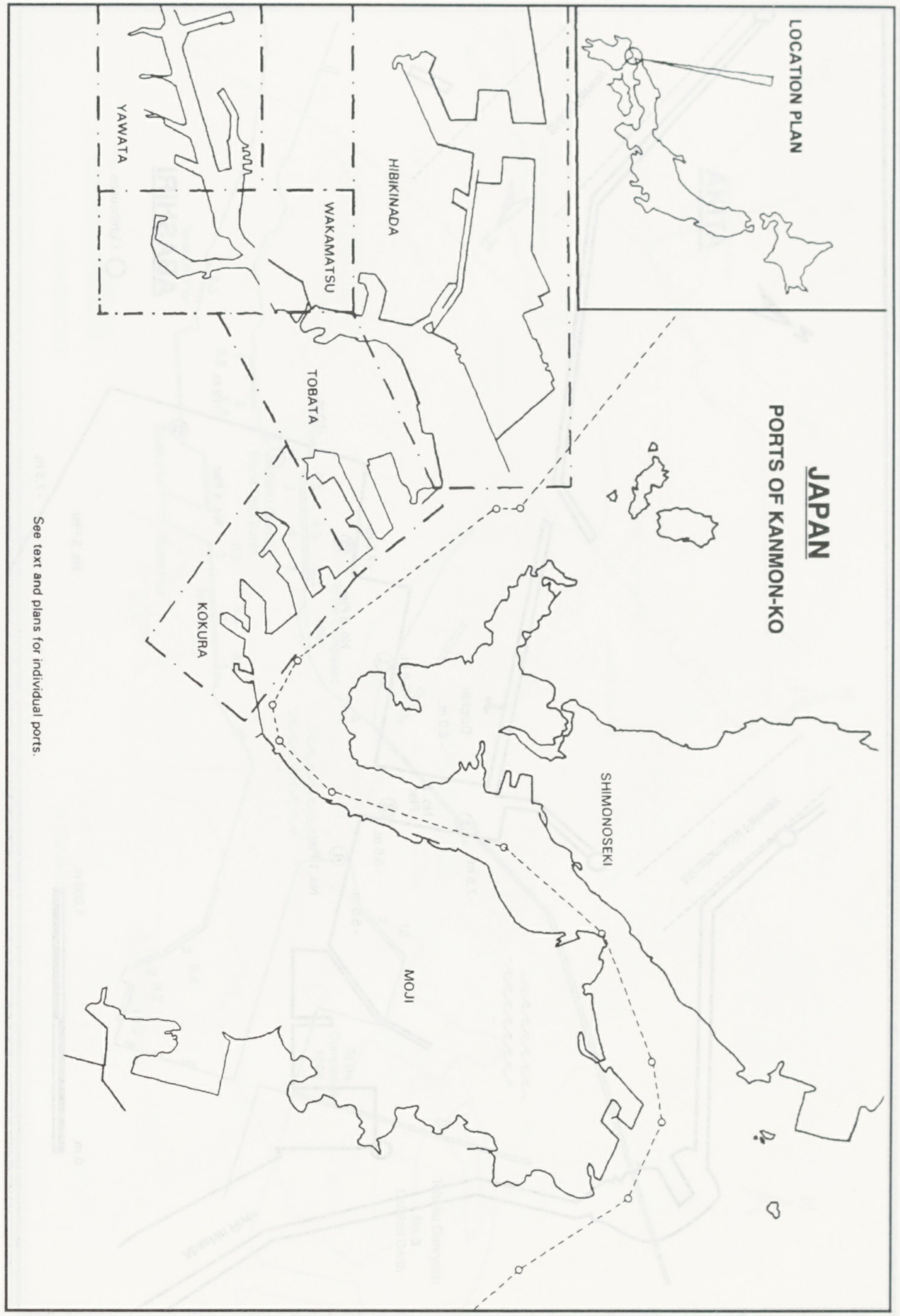

N
GENERAL
KANMON KAIKYO
NEW PASSAGE
Harbour Limit
For Reclaimation
Matsuse Kita Light Buoy
Light Buoy off the East of Mutsurezima
Mutsurejima Island
Quarantine Anchorage
Quarantine Anchorage
Uma-Shima Island
Wagora-Jima Island
Kanmon Passage
Harbour Limit
Harbour Limit
No. 2 Kanmon Passage
Anse Passage
Wakamatsu
Wakamatsu Passage
Tobata Passage
Kanmon Passage
Shimonoseki
Kokura
Moji
141° T
112° T
59° T
Ooseto #3 Leading Lights
Ooseto #2 Leading Lights
Ooseto #1 Leading Lights
Sunatsu Passage
1
2
3
4
5
6
7
8
9
10
11
12
14
15
17
18
19
20
22
23
1
2
0
4,000
Scale in Meters



JAPAN

PORTS IN TOKYO BAY

Ichikawa
Funabashi
Tokyo
Shinagawa
Chiba
Chiba Port
Tokyo Port
Kawasaki
Goi
Kawasaki Port
Yokohama
TOKYO BAY
Yokohama Port
Kisarazu Port
Kisarazu
Yokosuka Port
Yokosuka

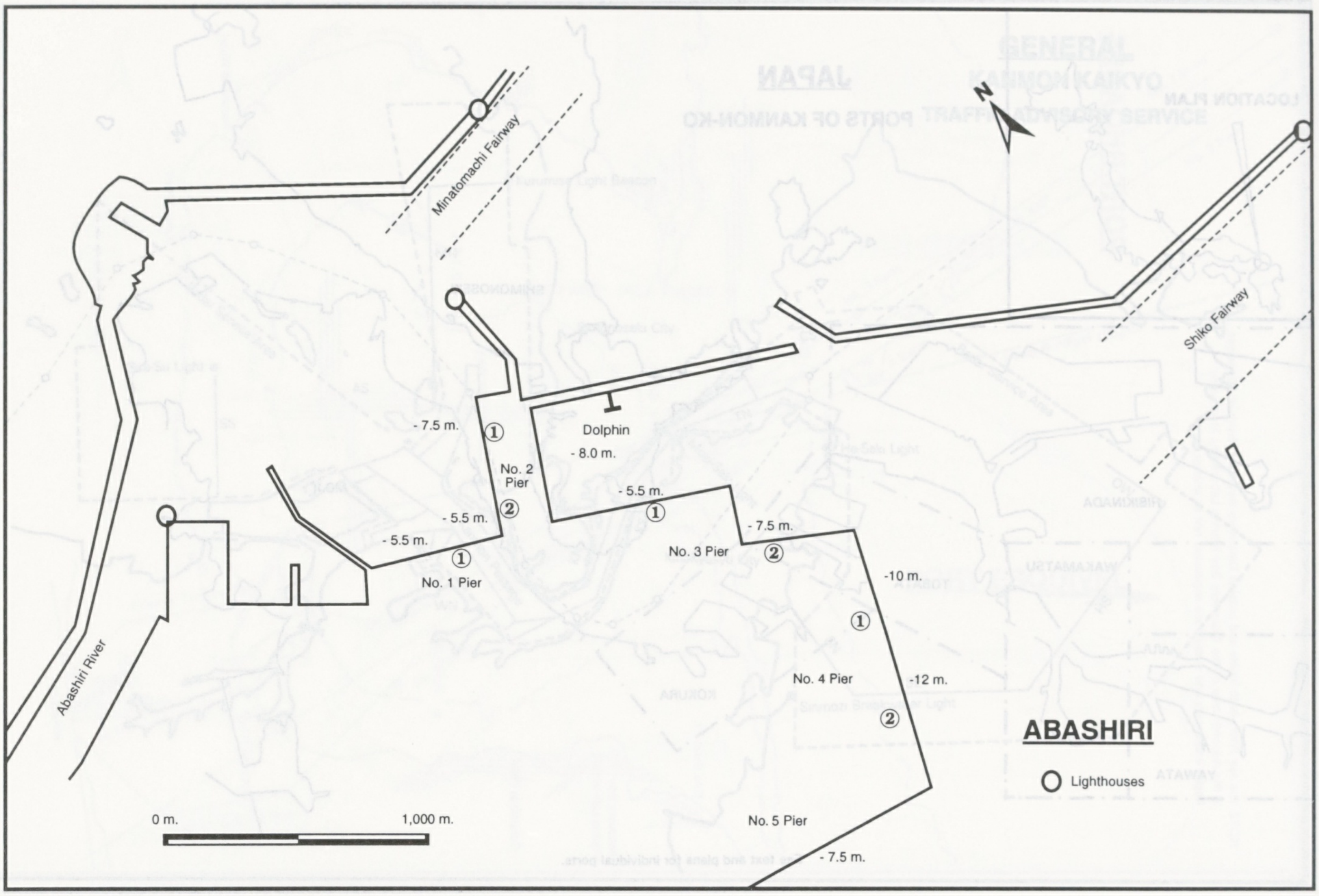


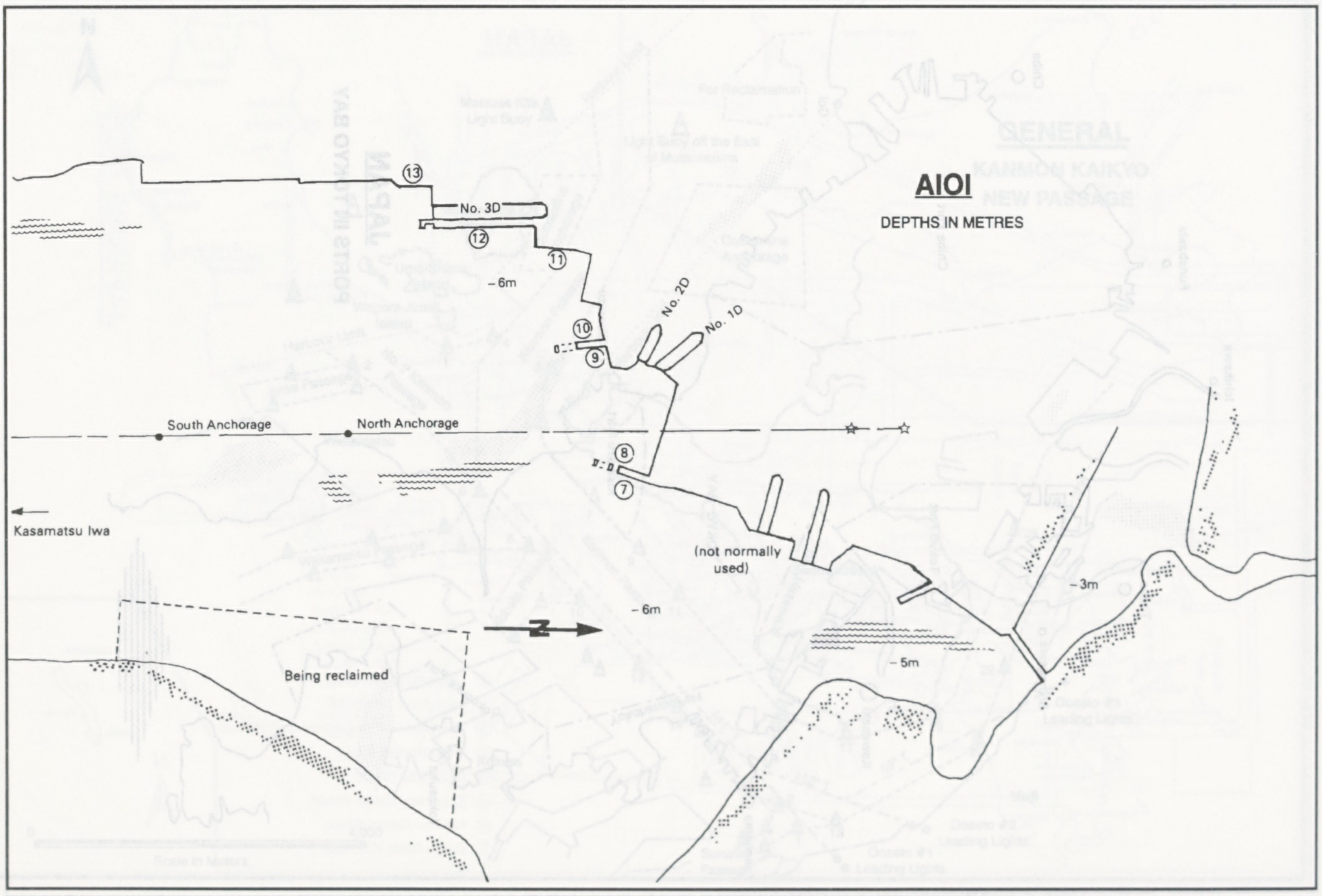
JAPAN

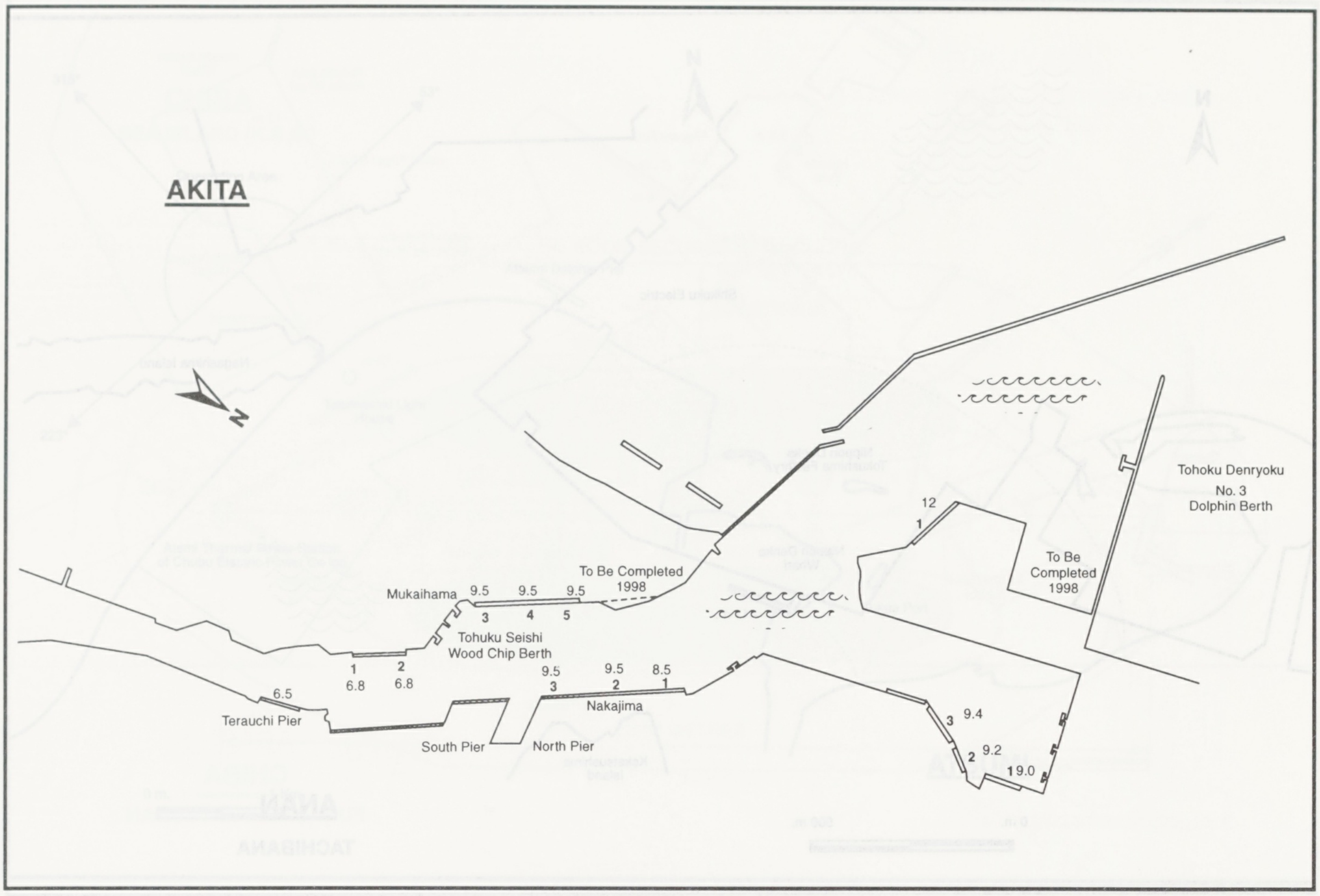
PORTS OF KANMON-KO

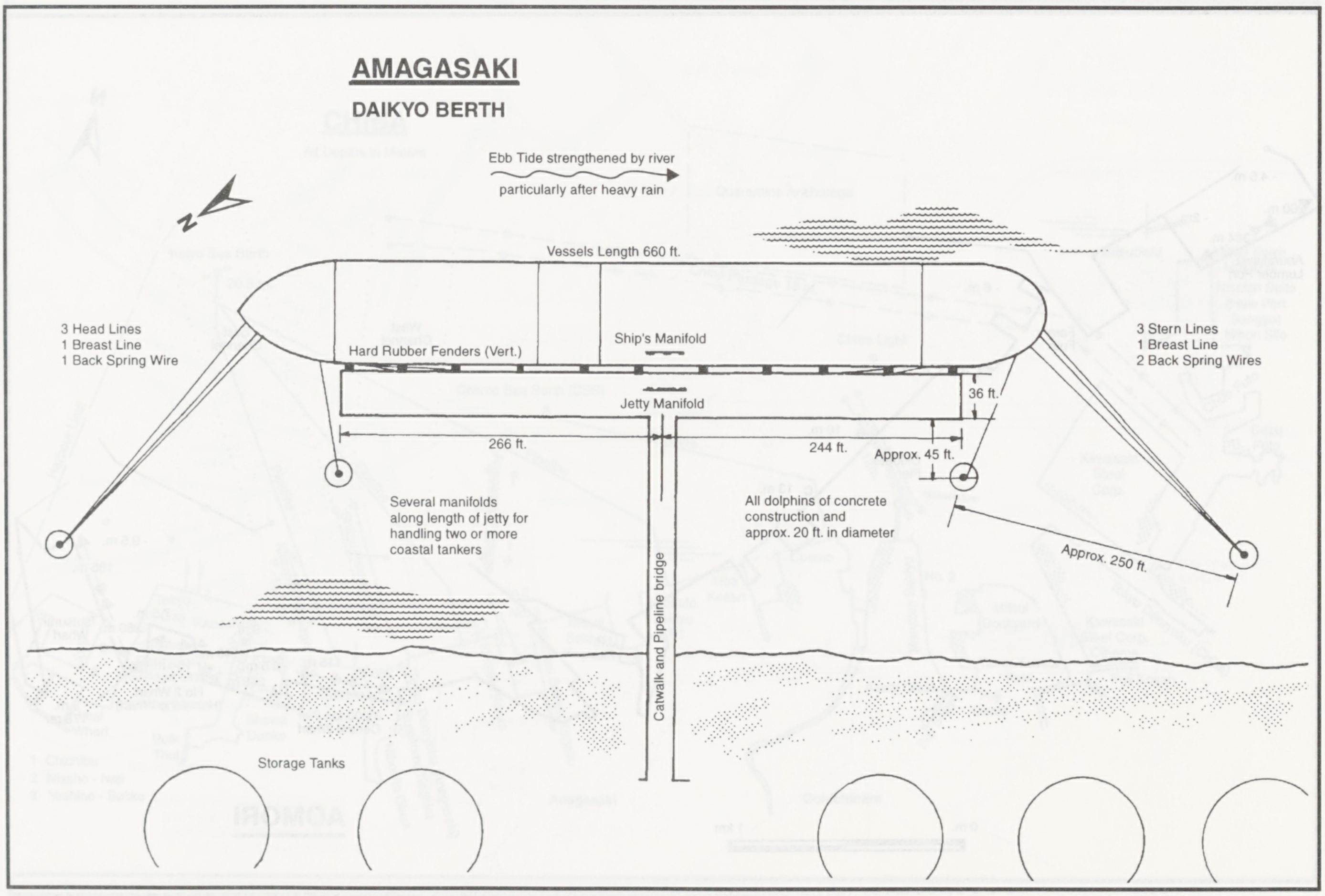
See text and plans for individual ports.

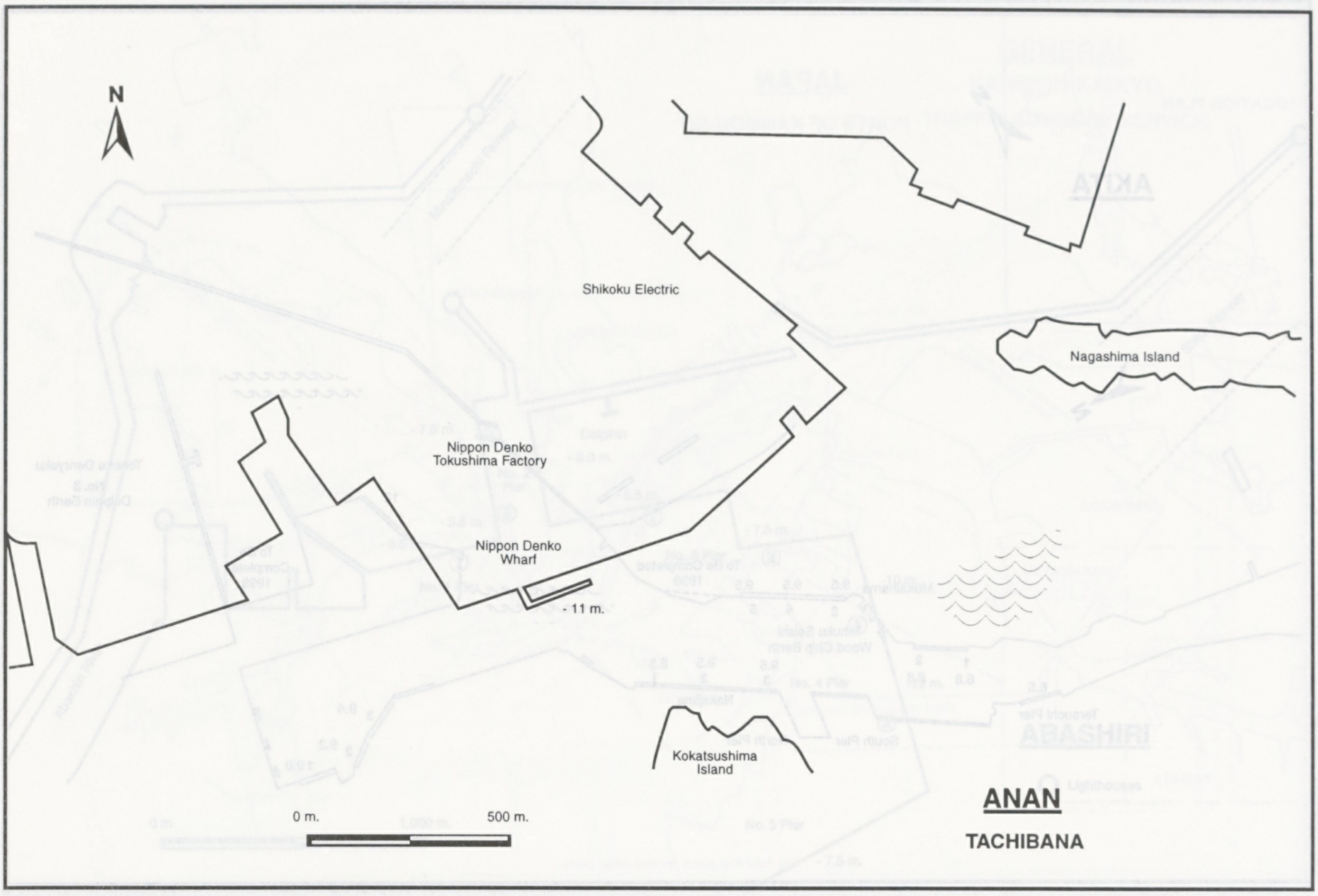
LOCATION PLAN
YAWATA
WAKAMATSU
HIBIKINADA
TOBATA
KOKURA
SHIMONOSEKI
MOJI

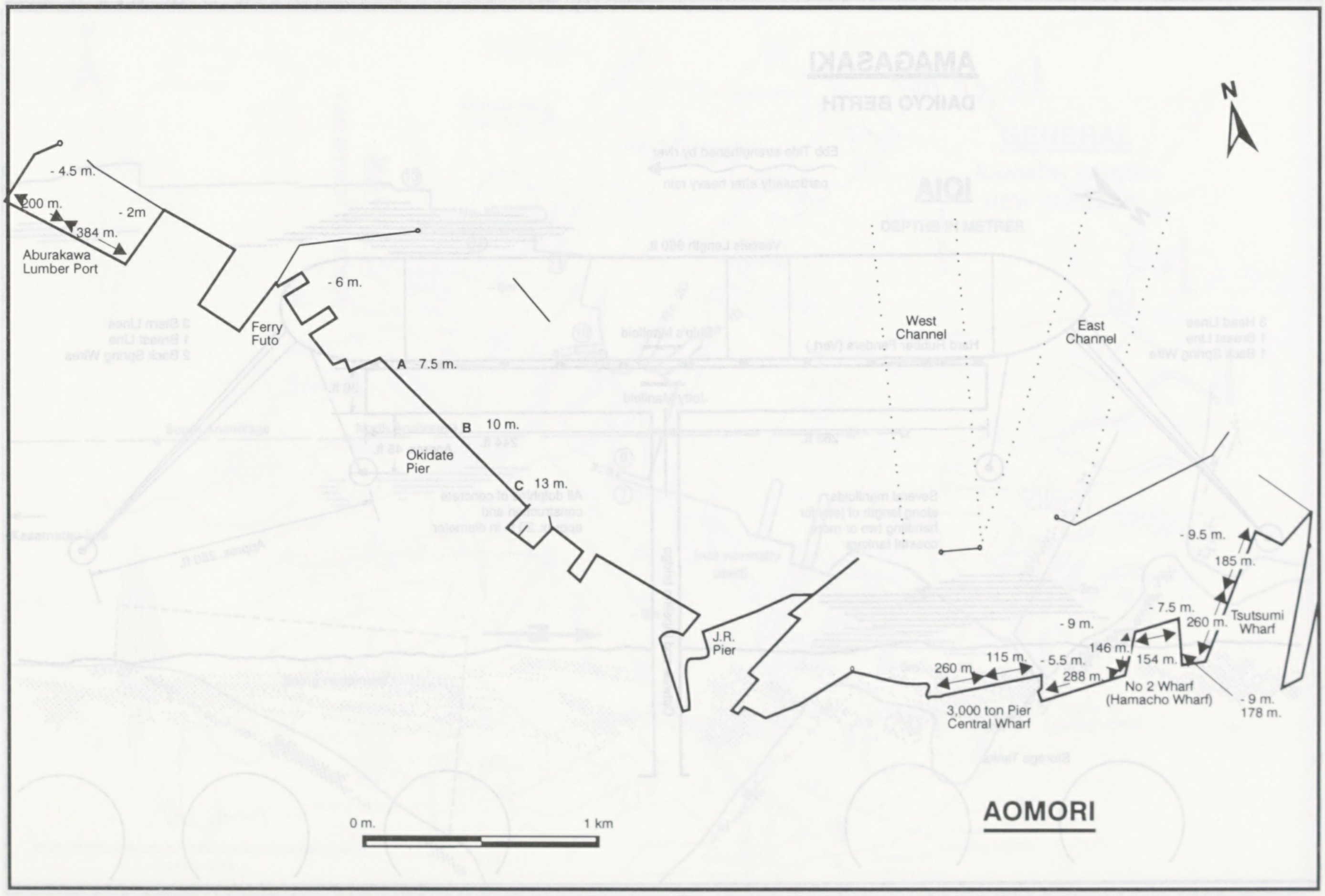

Minatomachi Fairway
N
Shiko Fairway
- 7.5 m.
①
Dolphin
- 8.0 m.
No. 2
Pier
②
- 5.5 m.
- 5.5 m.
①
No. 1 Pier
- 5.5 m.
①
- 7.5 m.
No. 3 Pier
②
-10 m.
①
No. 4 Pier
-12 m.
②
Abashiri River
ABASHIRI
○ Lighthouses
0 m.
1,000 m.
No. 5 Pier
- 7.5 m.

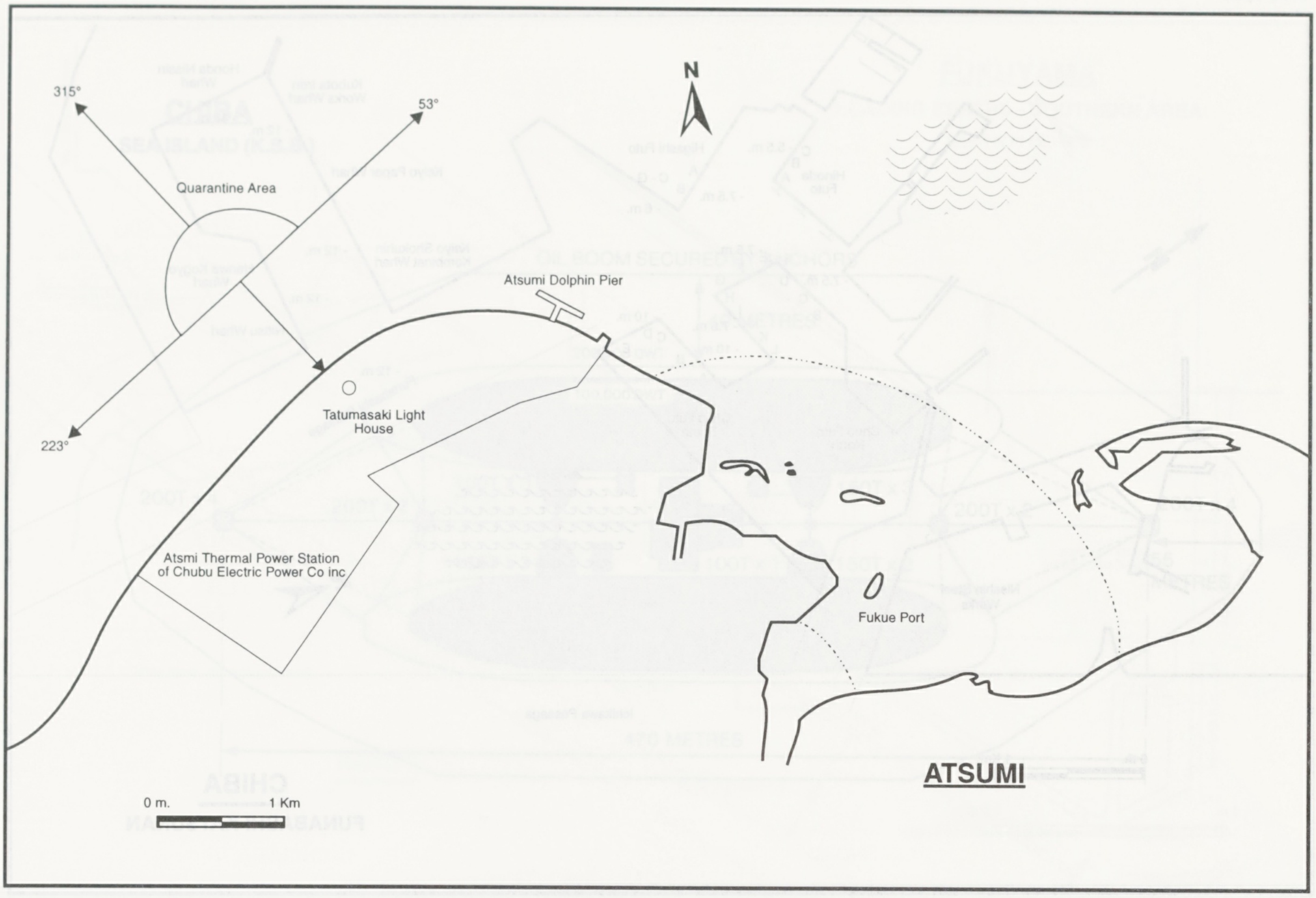

⑬
No. 3D
⑫
⑪
– 6m
AIOI
DEPTHS IN METRES
No. 2D
No. 1D
⑩
⑨
South Anchorage
North Anchorage
⑧
⑦
Kasamatsu Iwa
(not normally
used)
N
– 6m
– 3m
Being reclaimed
– 5m

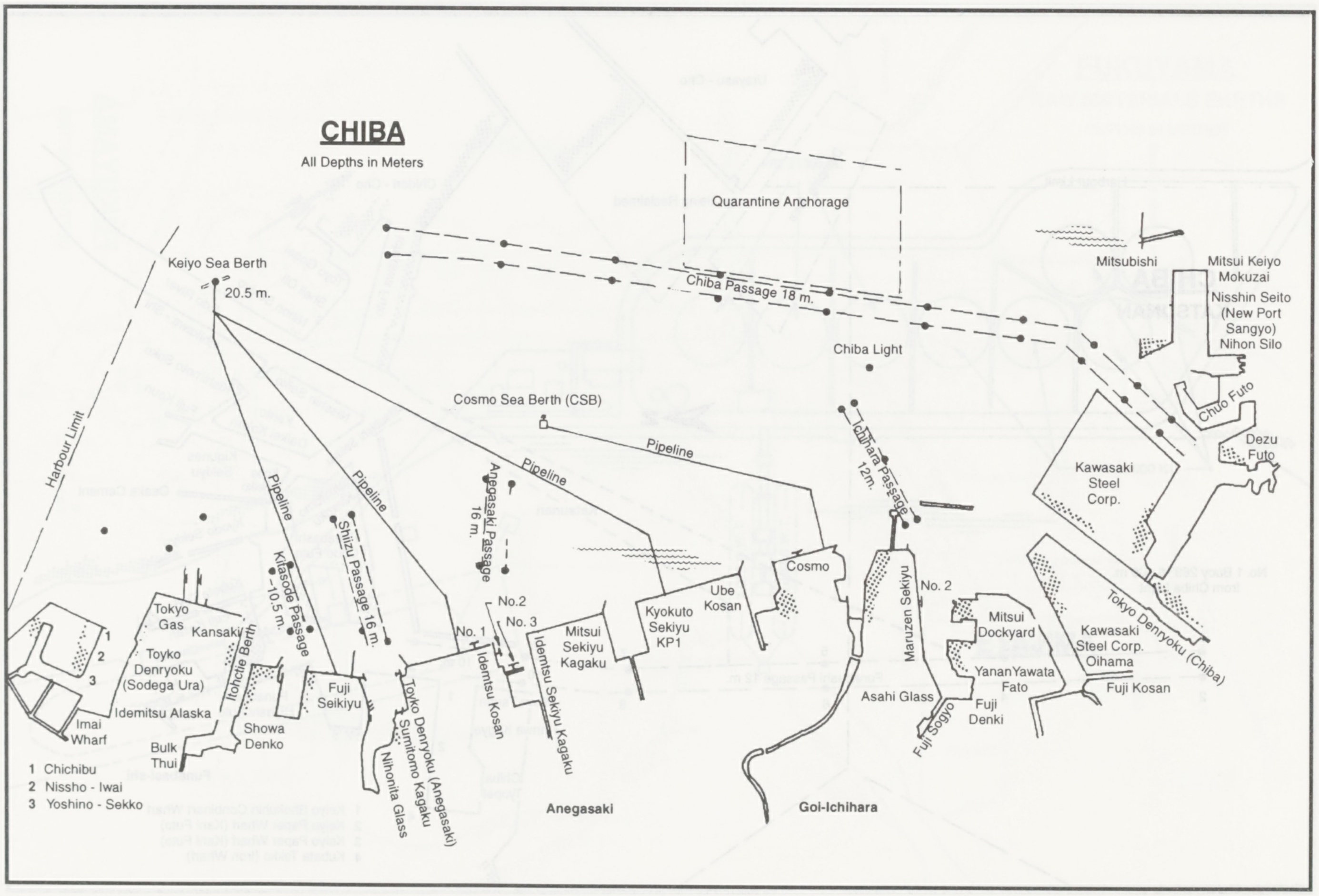

AKITA
N
Tohoku Denryoku
No. 3
Dolphin Berth
12
1
To Be
Completed
1998
To Be Completed
1998
Mukaihama
9.5
9.5
9.5
3
4
5
Tohuku Seishi
Wood Chip Berth
1
6.8
2
6.8
6.5
Terauchi Pier
South Pier
North Pier
9.5
3
9.5
2
8.5
1
Nakajima
3
9.4
2
9.2
1
9.0

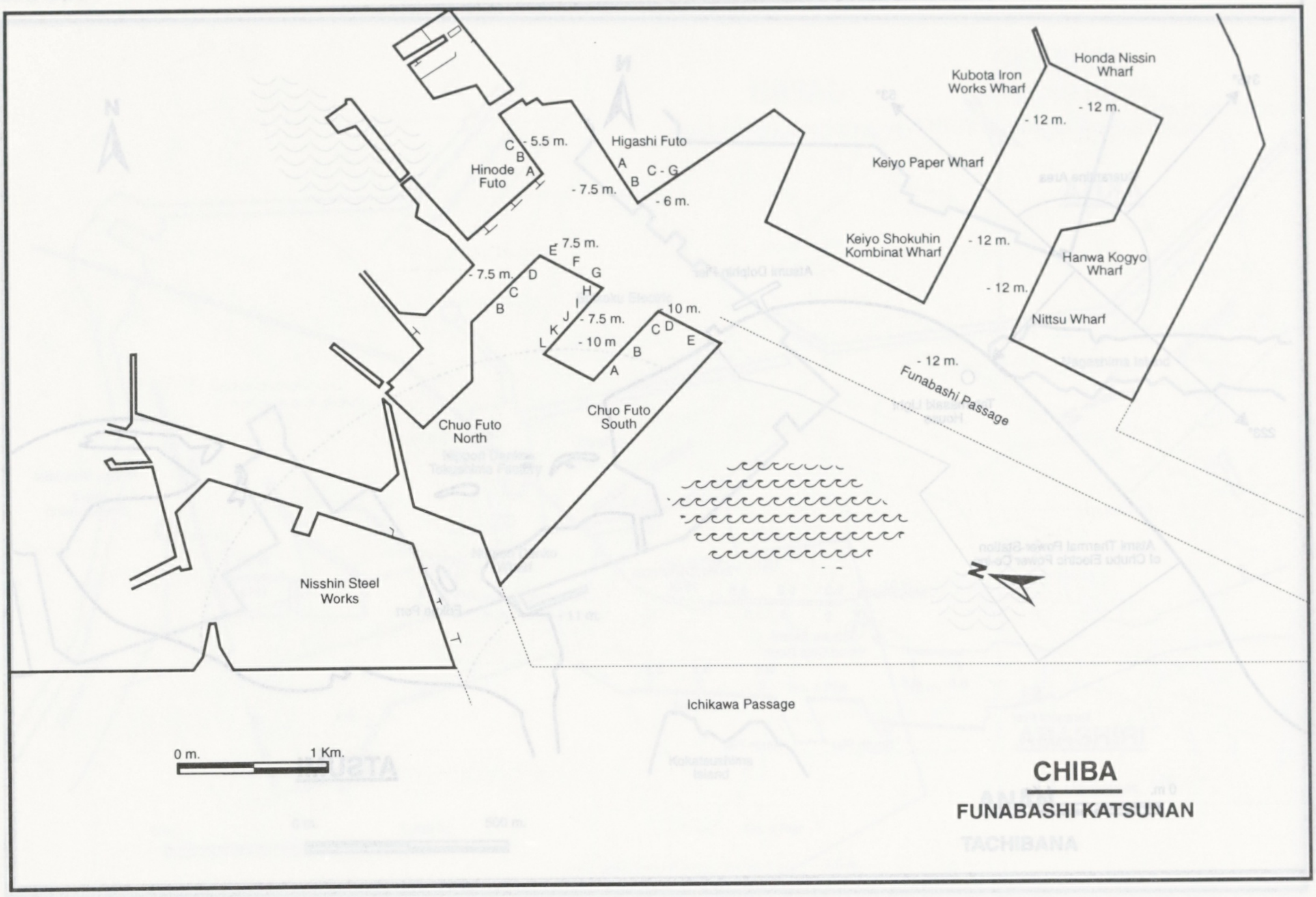

AMAGASAKI
DAIKYO BERTH
N
Ebb Tide strengthened by river
particularly after heavy rain
Vessels Length 660 ft.
3 Head Lines
1 Breast Line
1 Back Spring Wire
3 Stern Lines
1 Breast Line
2 Back Spring Wires
Hard Rubber Fenders (Vert.)
Ship's Manifold
Jetty Manifold
36 ft.
266 ft.
244 ft.
Approx. 45 ft.
Several manifolds
along length of jetty for
handling two or more
coastal tankers
All dolphins of concrete
construction and
approx. 20 ft. in diameter
Approx. 250 ft.
Catwalk and Pipeline bridge
Storage Tanks

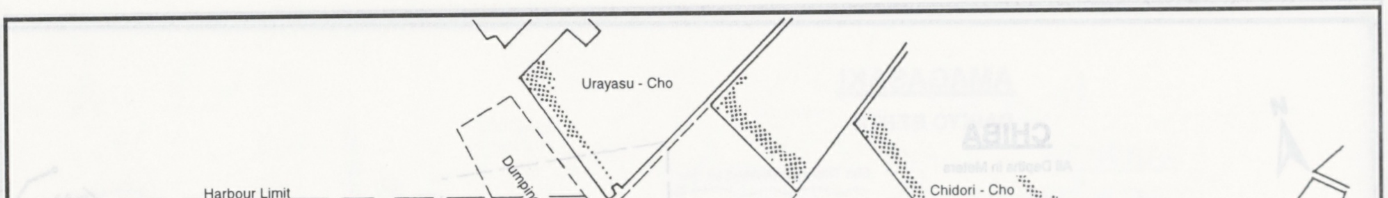

N
Shikoku Electric
Nagashima Island
Nippon Denko
Tokushima Factory
Nippon Denko
Wharf
- 11 m.
Kokatsushima
Island
0 m.
500 m.
ANAN
TACHIBANA


N
- 4.5 m.
200 m.
- 2m
384 m.
Aburakawa
Lumber Port
- 6 m.
Ferry
Futo
A 7.5 m.
B 10 m.
Okidate
Pier
C 13 m.
West
Channel
East
Channel
J.R.
Pier
- 9.5 m.
185 m.
- 7.5 m.
Tsutsumi
Wharf
- 9 m.
260 m.
146 m.
154 m.
260 m.
115 m.
- 5.5 m.
288 m.
3,000 ton Pier
Central Wharf
No 2 Wharf
(Hamacho Wharf)
- 9 m.
178 m.
0 m.
1 km
AOMORI


N
315°
53°
223°
Quarantine Area
Atsumi Dolphin Pier
Tatumasaki Light House
Atsmi Thermal Power Station of Chubu Electric Power Co inc
Fukue Port
ATSUMI
0 m.
1 Km

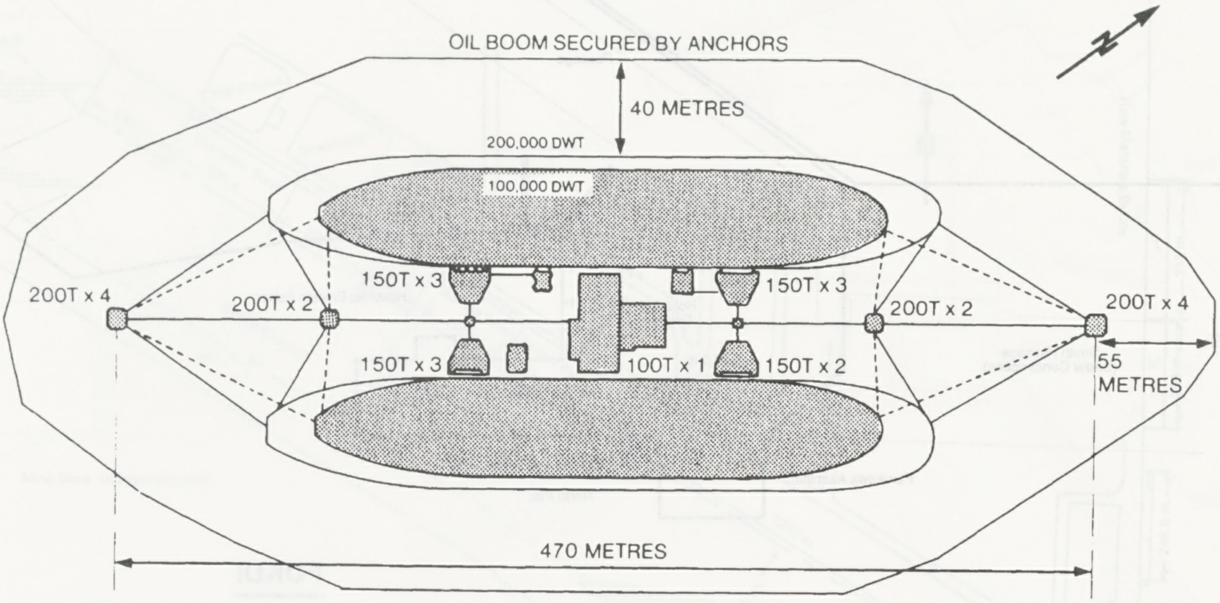

CHIBA
All Depths in Meters
Quarantine Anchorage
Keiyo Sea Berth
20.5 m.
Chiba Passage 18 m.
Chiba Light
Cosmo Sea Berth (CSB)
Pipeline
Pipeline
Pipeline
Pipeline
Harbour Limit
Anegasaki Passage 16 m.
Ichihara Passage 12m.
Shiizu Passage 16 m.
Kitasode Passage –10.5 m.
Mitsubishi
Mitsui Keiyo Mokuzai
Nisshin Seito (New Port Sangyo) Nihon Silo
Chuo Futo
Dezu Futo
Kawasaki Steel Corp.
Tokyo Denryoku (Chiba)
Kawasaki Steel Corp. Oihama
Fuji Kosan
Mitsui Dockyard
Yanan Yawata Fato
Fuji Denki
Asahi Glass
Fuji Sogyo
Maruzen Sekiyu
No. 2
Cosmo
Ube Kosan
Kyokuto Sekiyu KP1
Mitsui Sekiyu Kagaku
Idemtsu Sekiyu Kagaku
No.2
No. 3
No. 1
Idemtsu Kosan
Toyko Denryoku (Anegasaki)
Sumitomo Kagaku
Nihonita Glass
Fuji Seikiyu
Showa Denko
Itohctie Berth
Kansaki
Tokyo Gas
Toyko Denryoku (Sodega Ura)
Idemitsu Alaska
Bulk Thui
Imai Wharf
1
2
3
1 Chichibu
2 Nissho - Iwai
3 Yoshino - Sekko
Anegasaki
Goi-Ichihara

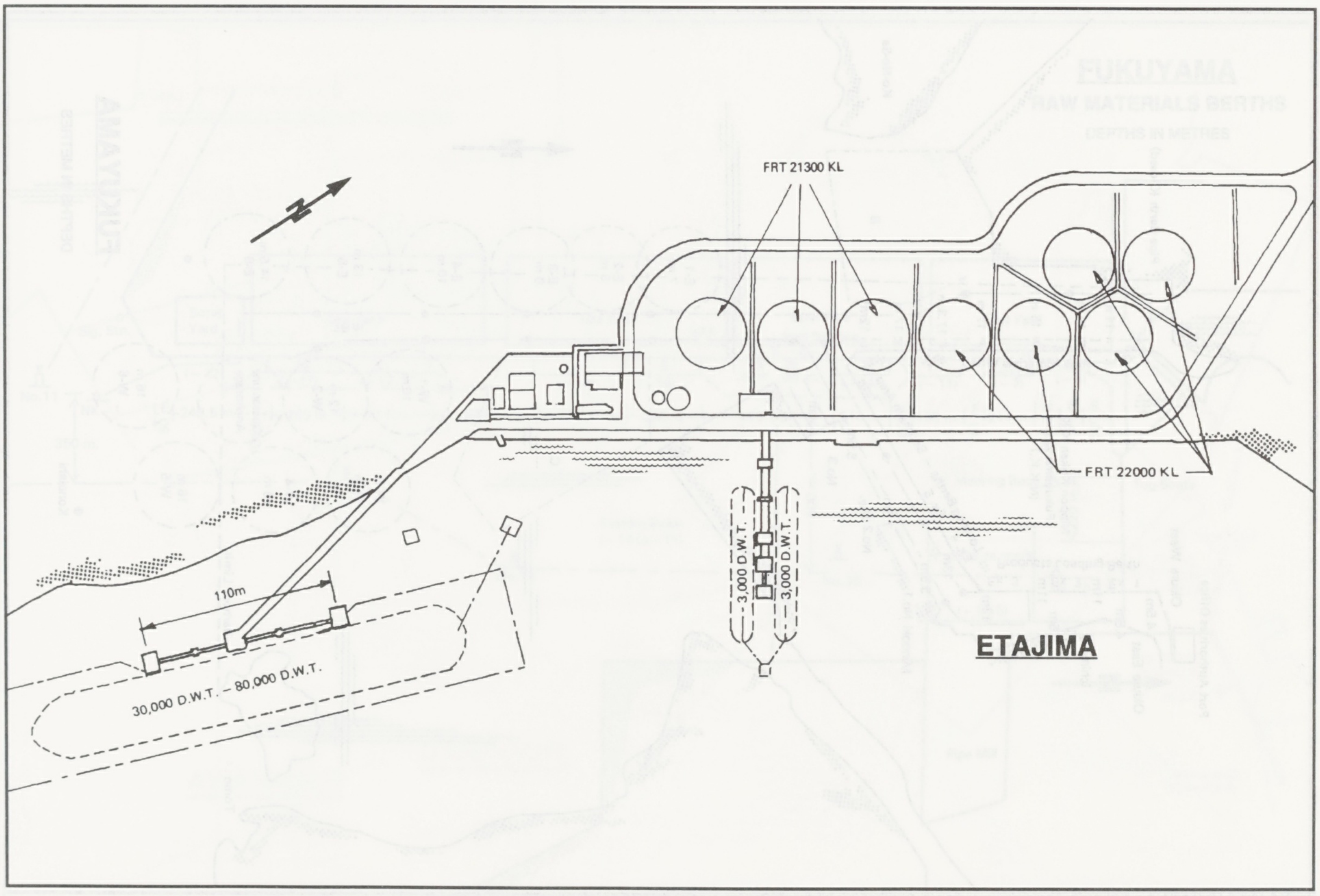

Kubota Iron Works Wharf
Honda Nissin Wharf
- 12 m.
- 12 m.
Keiyo Paper Wharf
Keiyo Shokuhin Kombinat Wharf
- 12 m.
Hanwa Kogyo Wharf
- 12 m.
Nittsu Wharf
- 12 m.
Funabashi Passage
Higashi Futo
A
B
C - G
- 6 m.
- 7.5 m.
- 5.5 m.
C
B
A
Hinode Futo
E
7.5 m.
F
G
H
I
J
- 7.5 m.
K
L
- 10 m.
- 7.5 m.
D
C
B
10 m.
D
C
E
B
A
Chuo Futo North
Chuo Futo South
Nisshin Steel Works
Ichikawa Passage
0 m.
1 Km.
CHIBA
FUNABASHI KATSUNAN


Urayasu - Cho
Harbour Limit
Dumping Area
Being Reclaimed
Chidori - Cho
Ichikawa Futo
Toyo Gosei
Shell Oil
Nihon Sekiyo
Edo River
Ichikawa - Shi
Kishimoto Soko
Fuji Koun
Nisshin Seiko
Kento
Daikei Kokan
Kigunas Sekiyu
Mitsubishi Sekiyu
Kobe Seiko
Osaka Cement
Sumitomo Kinzoku
Funabashi Chuo Futo
Kyodo Sekiyu
Kubota Tekko
Fuji Kosan
Funabashi Higashi Futo
Funabasi-shi
CHIBA
KATSUNAN
Katsunan
No. 1 Buoy 289° 6,100 m. from Chiba Light
1
2
3
4
5
6
7
8
9
10
Funabashi Passage 12 m.
10 m.
Nihon Tsuun
Hanwa Kogyo
Chiba Tyopet
1
2
3
4
1 Keiyo Shokuhin Conbinart Wharf
2 Keiyo Paper Wharf (Kani Futo)
3 Keiyo Paper Wharf (Kani Futo)
4 Kubata Tekko (Iron Wharf)

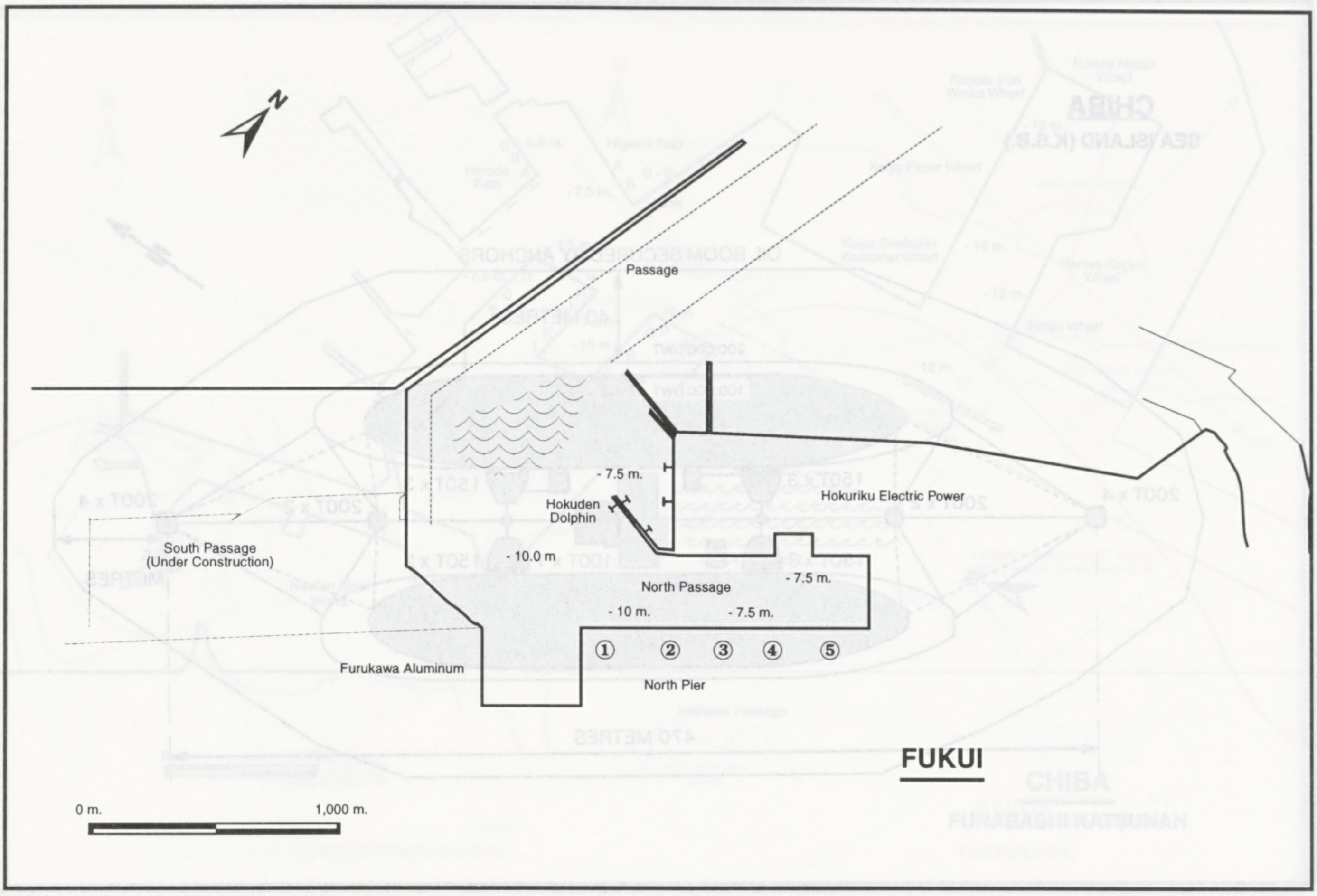
CHIBA

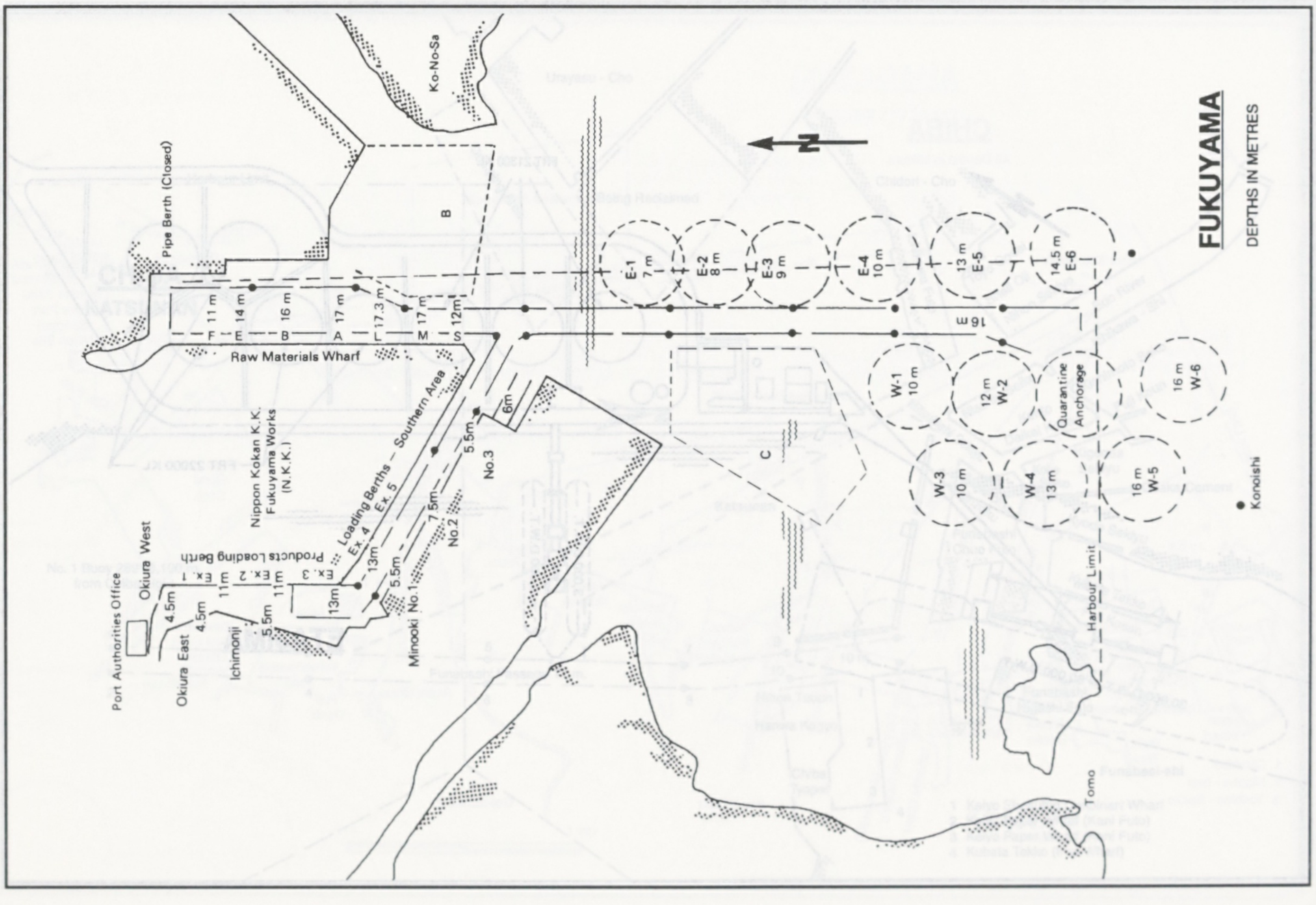
SEA ISLAND (K.S.B.)

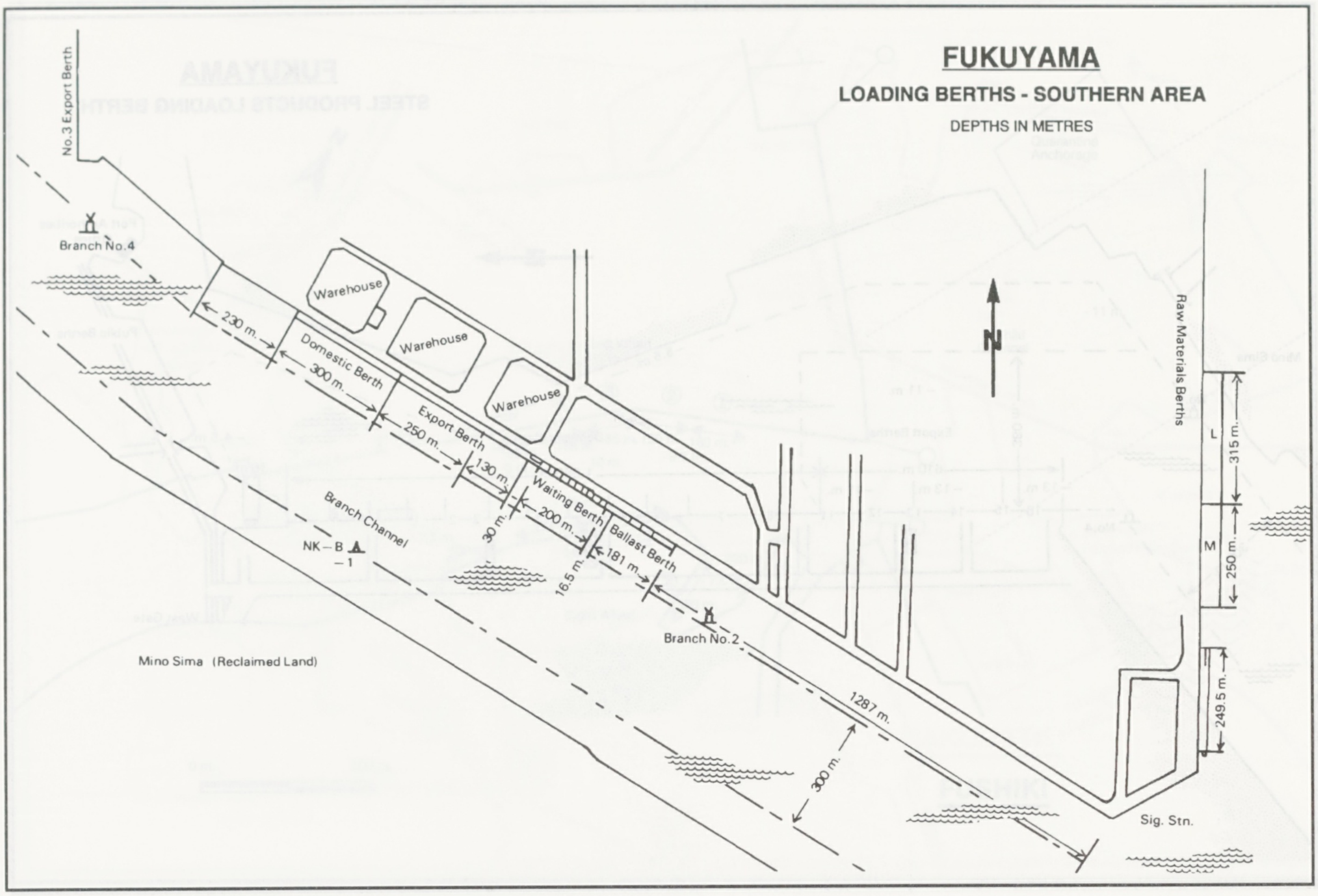

OIL BOOM SECURED BY ANCHORS
40 METRES
200,000 DWT
100,000 DWT
200T x 4
200T x 2
150T x 3
150T x 3
150T x 3
100T x 1
150T x 2
200T x 2
200T x 4
55 METRES
470 METRES


FRT 21300 KL
FRT 22000 KL
110m
30,000 D.W.T. – 80,000 D.W.T.
3,000 D.W.T.
3,000 D.W.T.

ETAJIMA


N
Passage
- 7.5 m.
Hokuden Dolphin
Hokuriku Electric Power
South Passage (Under Construction)
- 10.0 m
North Passage
- 7.5 m.
- 10 m.
- 7.5 m.
① ② ③ ④ ⑤
Furukawa Aluminum
North Pier
FUKUI
0 m.
1,000 m.


FUKUYAMA
DEPTHS IN METRES
N
Ko-No-Sa
B
Pipe Berth (Closed)
11 m
14 m
16 m
17 m
17.3 m
17 m
12m
F
E
B
A
L
M
S
Raw Materials Wharf
E-1 7 m
E-2 8 m
E-3 9 m
E-4 10 m
E-5 13 m
E-6 14.5 m
16 m
W-1 10 m
W-2 12 m
Quarantine Anchorage
W-6 16 m
W-3 10 m
W-4 13 m
W-5 16 m
Konoishi
Harbour Limit
Tomo
C
Nippon Kokan K.K. Fukuyama Works (N.K.K.)
Loading Berths – Southern Area
Ex. 4
Ex. 5
6m
No.3
5.5m
7.5m
No.2
13m
5.5m
Minooki No.1
Products Loading Berth
Ex. 1
Ex. 2
Ex. 3
11
11
13m
5.5m
4.5m
4.5m
Okiura West
Okiura East
Ichimonji
Port Authorities Office

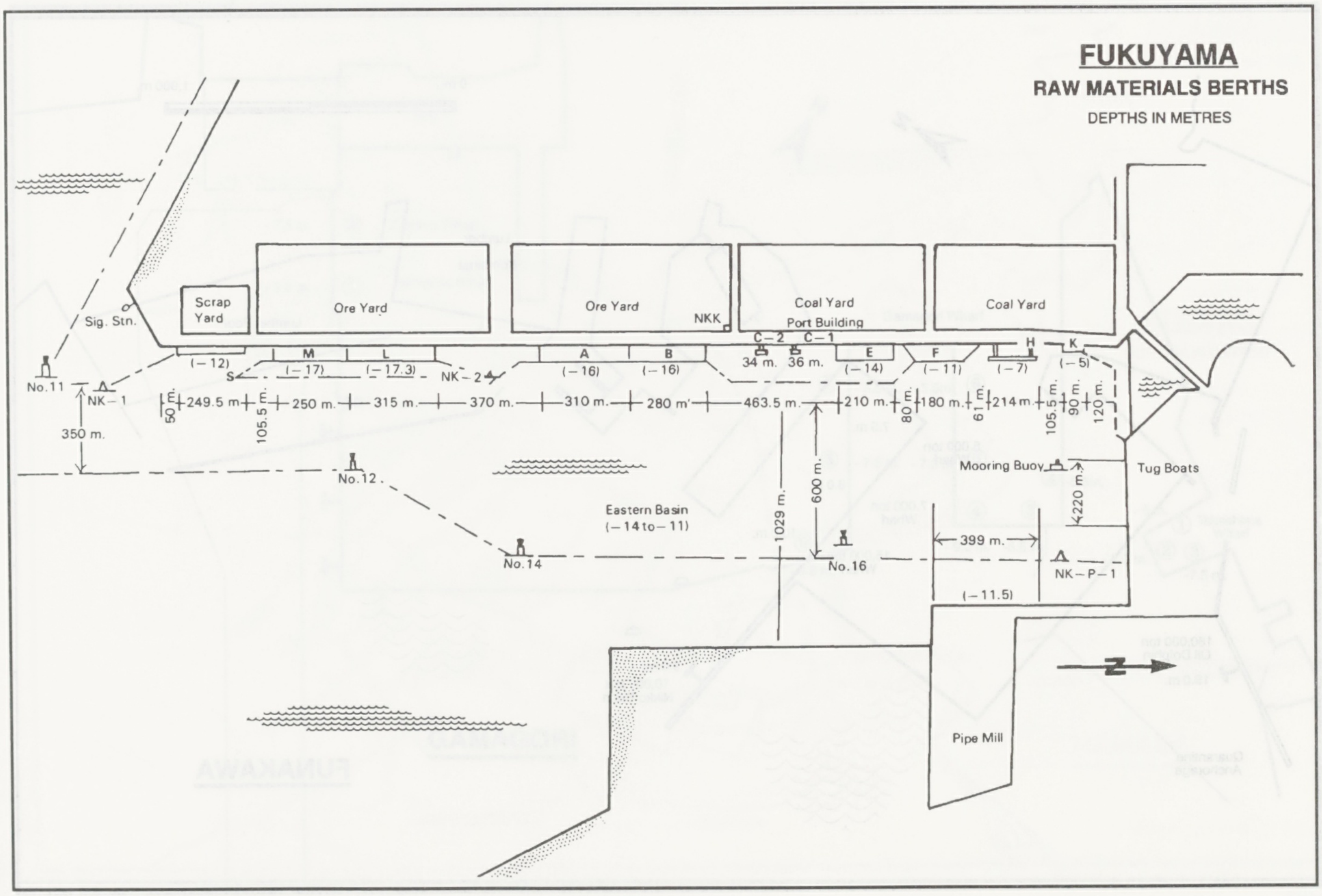


FUKUYAMA

LOADING BERTHS - SOUTHERN AREA

DEPTHS IN METRES

No.3 Export Berth
Branch No.4
230 m.
Warehouse
Warehouse
Warehouse
Domestic Berth
300 m.
Export Berth
250 m.
130 m.
30 m.
Waiting Berth
200 m.
Ballast Berth
181 m.
16.5 m.
Branch Channel
NK – B
– 1
Branch No.2
Mino Sima (Reclaimed Land)
1287 m.
300 m.
N
Raw Materials Berths
L
315 m.
M
250 m.
249.5 m.
Sig. Stn.

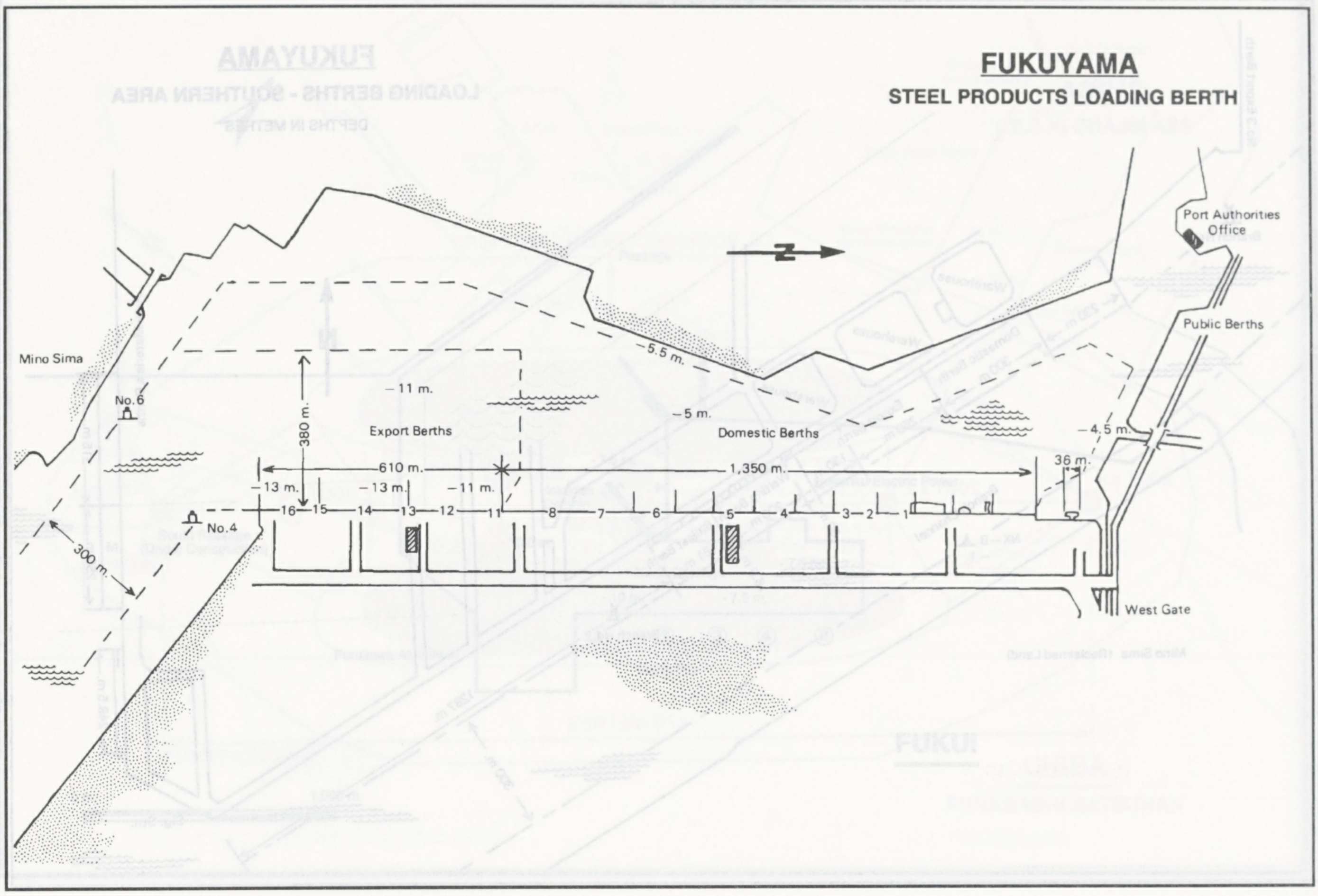


FUKUYAMA

RAW MATERIALS BERTHS

DEPTHS IN METRES

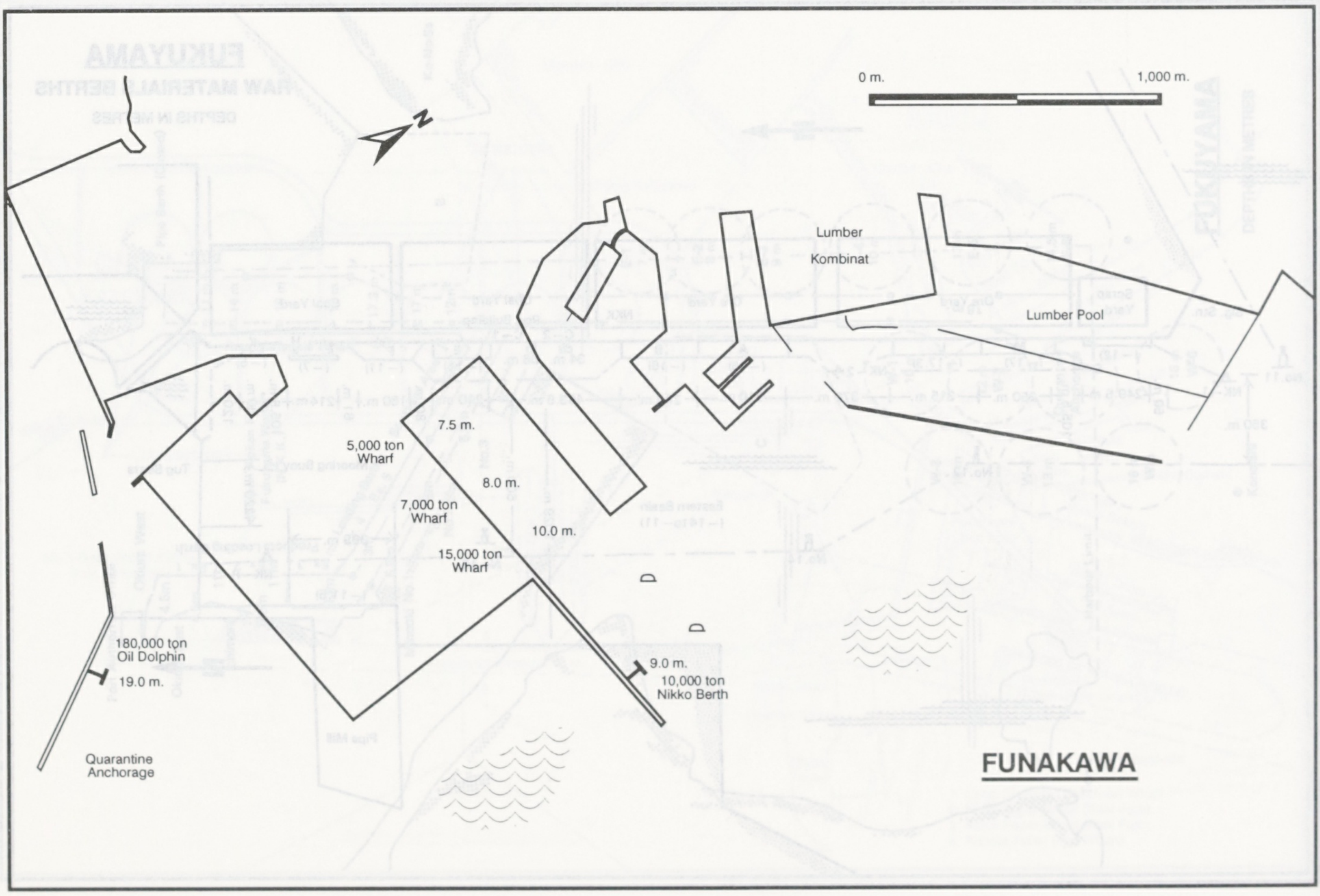
Sig. Stn.
Scrap Yard
Ore Yard
Ore Yard
NKK
Coal Yard
Port Building
Coal Yard
C – 2
C – 1
34 m.
36 m.
(– 12)
M
(– 17)
L
(– 17.3)
S
NK – 2
A
(– 16)
B
(– 16)
E
(– 14)
F
(– 11)
H
(– 7)
K
(– 5)
No.11
NK – 1
350 m.
50
E
249.5 m
105.5
E
250 m.
315 m.
370 m.
310 m.
280 m'
463.5 m.
210 m.
80
E
180 m.
61
E
214 m.
105.5 m.
90 m.
120 m.
No.12
Eastern Basin
(– 14 to – 11)
1029 m.
600 m.
No.14
No.16
Mooring Buoy
Tug Boats
220 m.
399 m.
NK – P – 1
(– 11.5)
N
Pipe Mill



FUKUYAMA

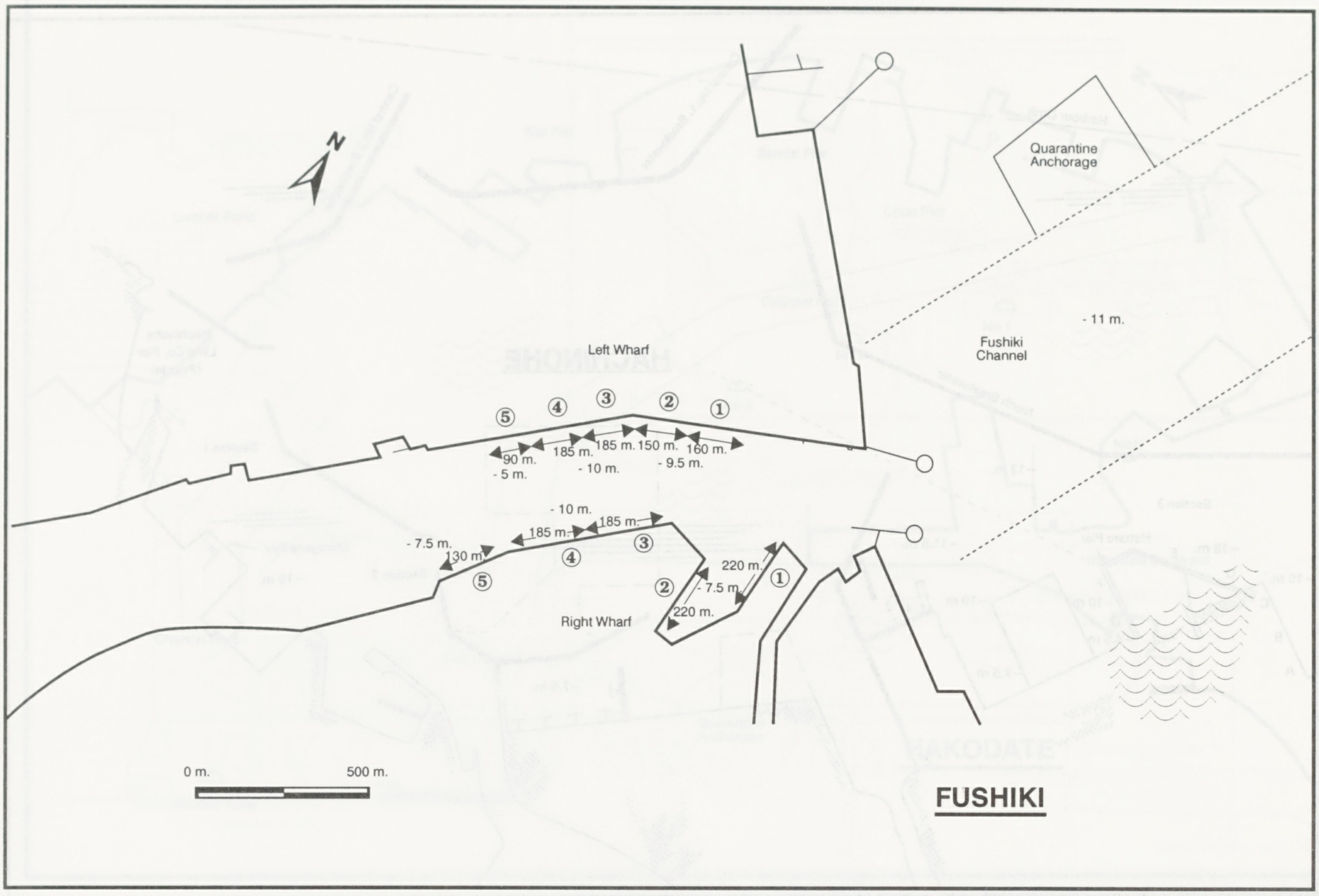
STEEL PRODUCTS LOADING BERTH

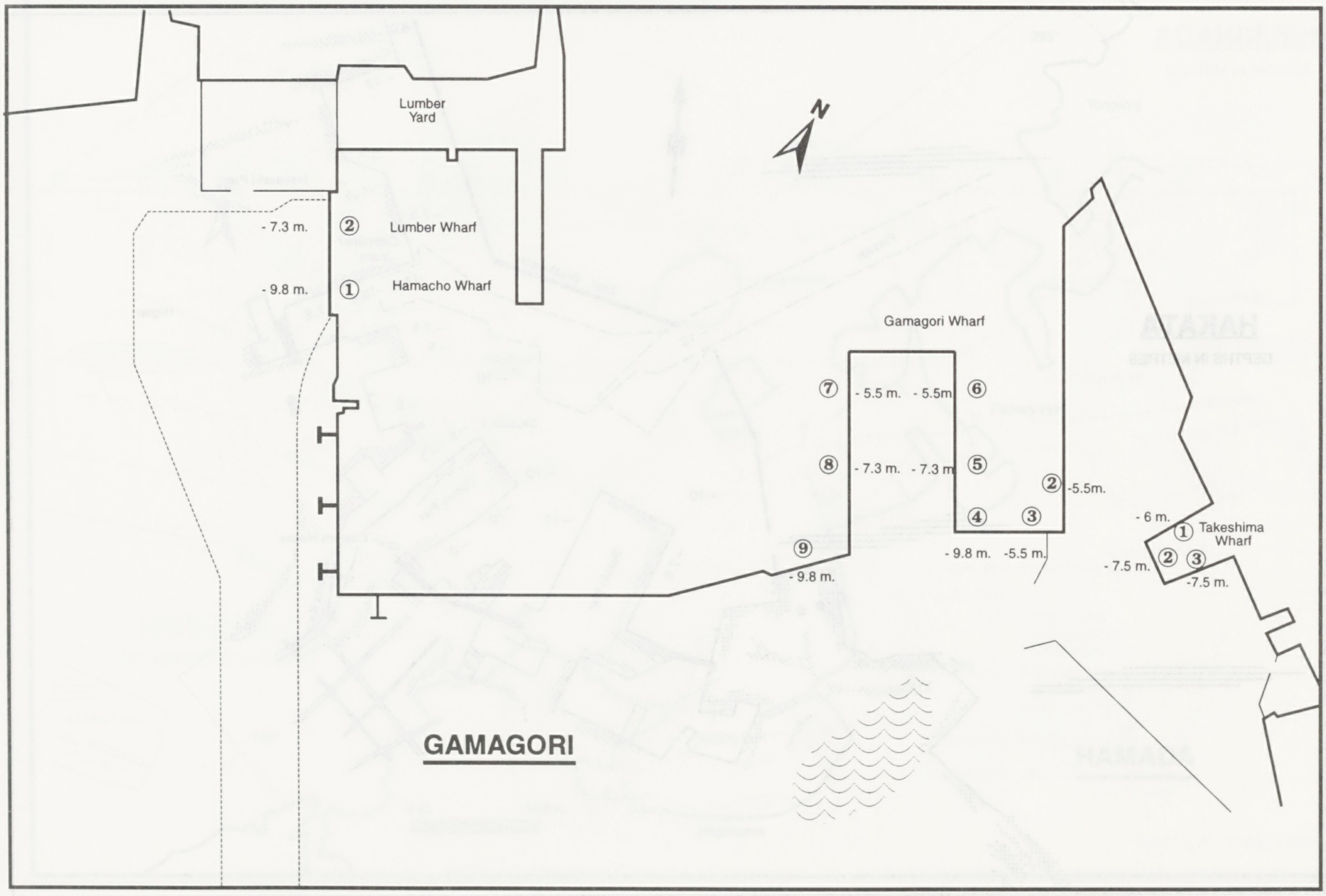
Port Authorities Office
N
Public Berths
Mino Sima
–5.5 m.
–11 m.
–5 m.
No.6
380 m.
Export Berths
Domestic Berths
–4.5 m.
610 m.
1,350 m.
36 m.
–13 m.
–13 m.
–11 m.
16
15
14
13
12
11
8
7
6
5
4
3
2
1
No.4
300 m.
West Gate

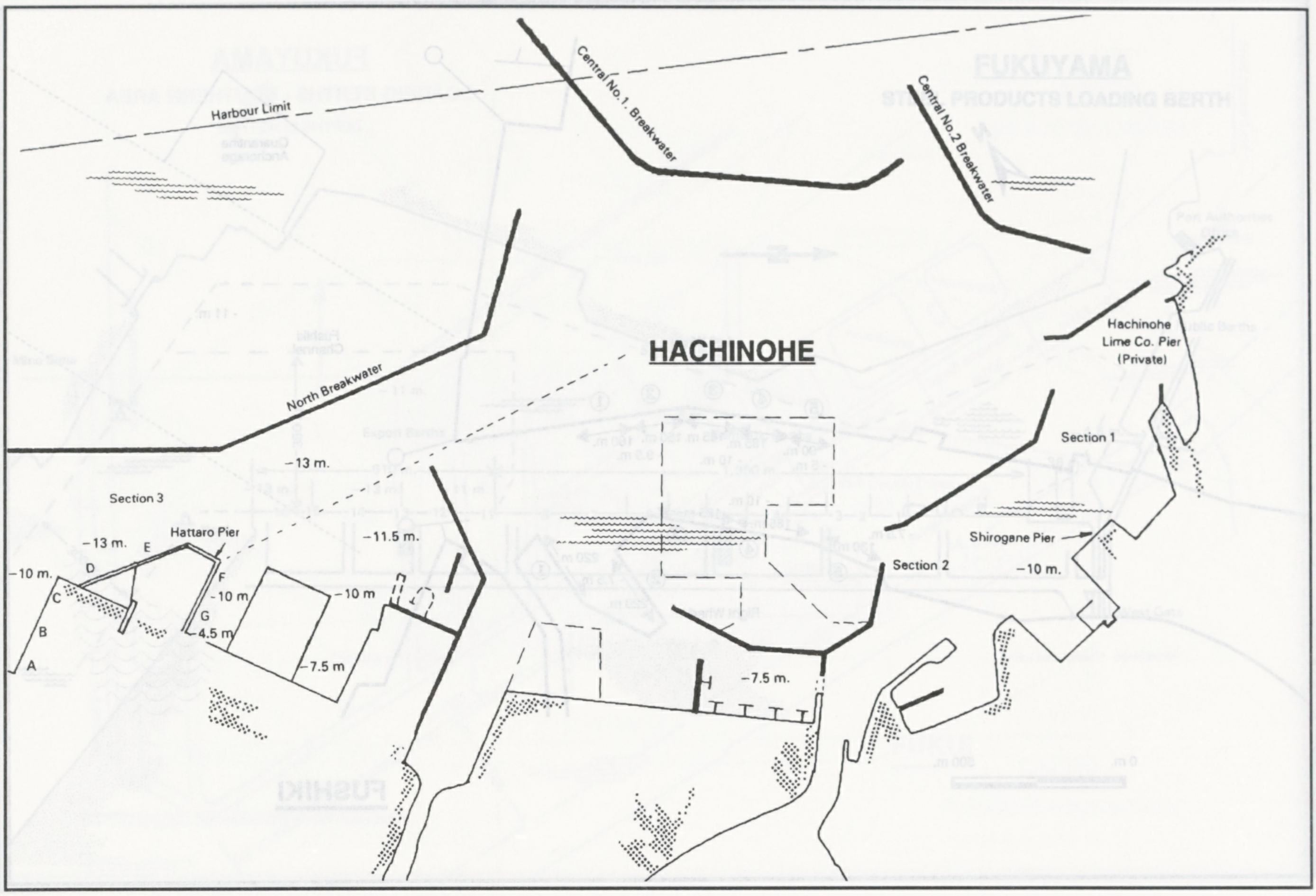


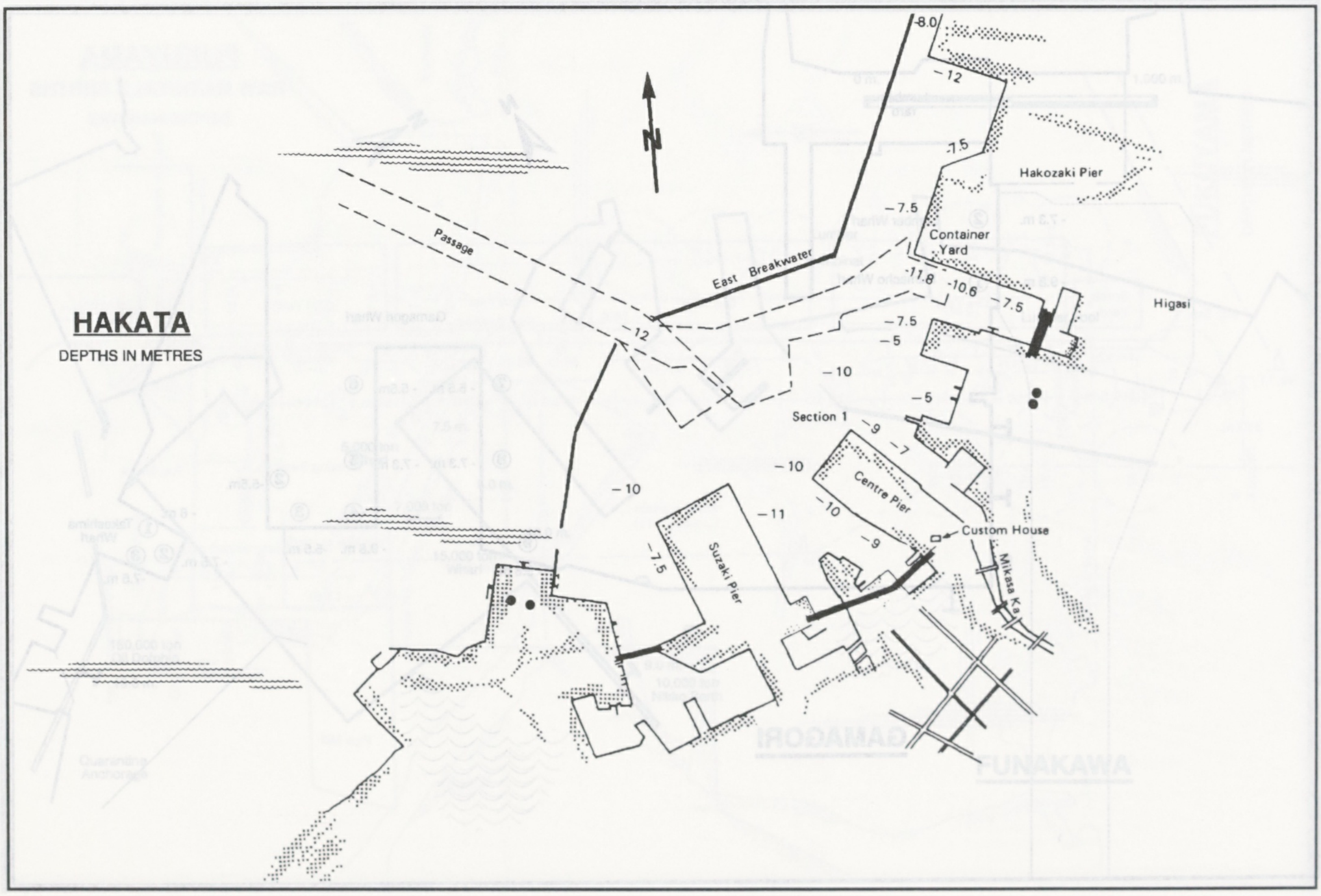
0 m.
1,000 m.
N
Lumber Kombinat
Lumber Pool
7.5 m.
5,000 ton Wharf
8.0 m.
7,000 ton Wharf
10.0 m.
15,000 ton Wharf
180,000 ton Oil Dolphin
19.0 m.
9.0 m.
10,000 ton Nikko Berth
Quarantine Anchorage

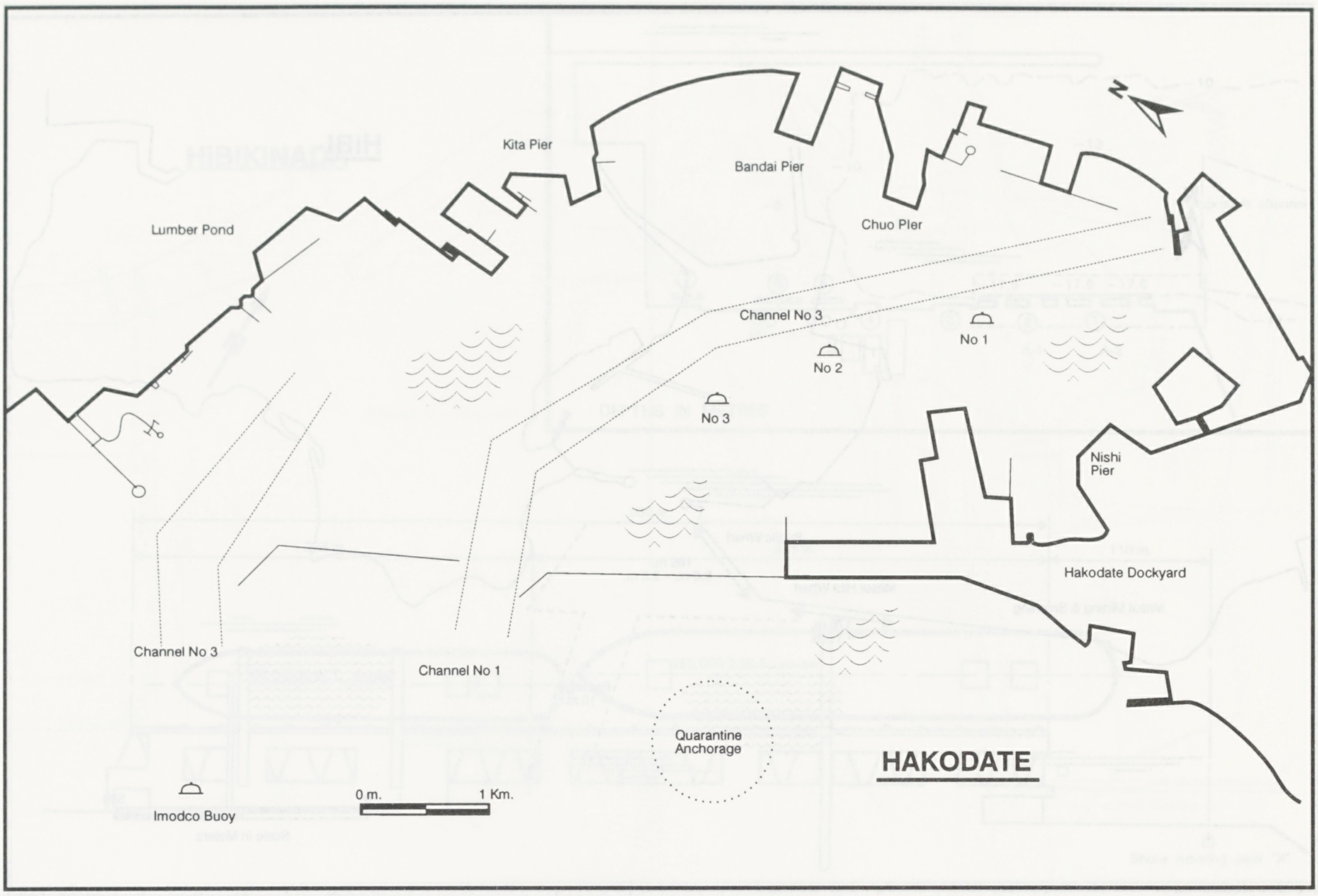
FUNAKAWA

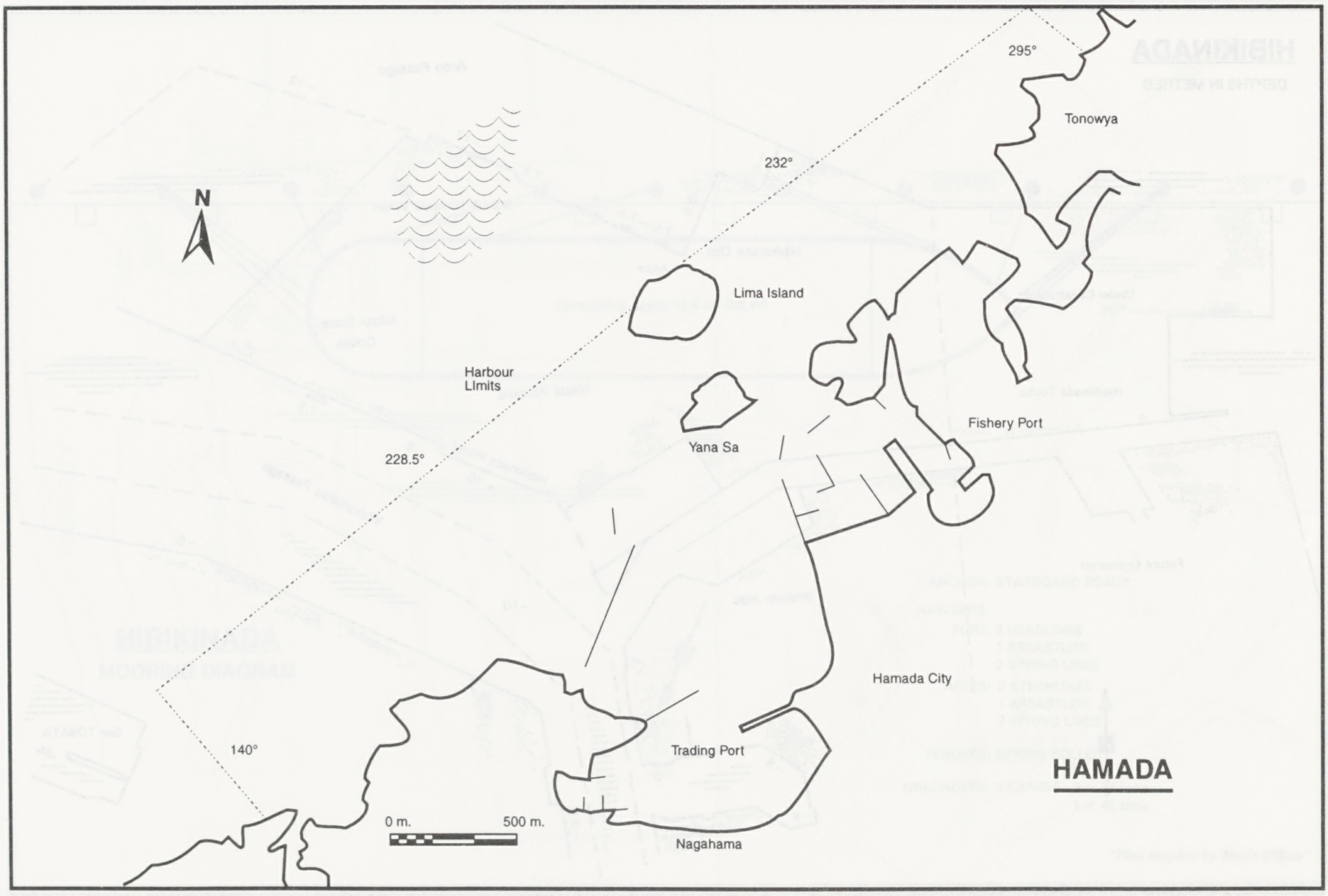

Quarantine Anchorage
Left Wharf
⑤ ④ ③ ② ①
90 m.
- 5 m.
185 m.
185 m.
- 10 m.
150 m.
160 m.
- 9.5 m.
Fushiki Channel
- 11 m.
- 10 m.
185 m.
185 m.
- 7.5 m.
130 m.
⑤ ④ ③
② ①
220 m.
- 7.5 m
220 m.
Right Wharf
0 m.
500 m.
FUSHIKI

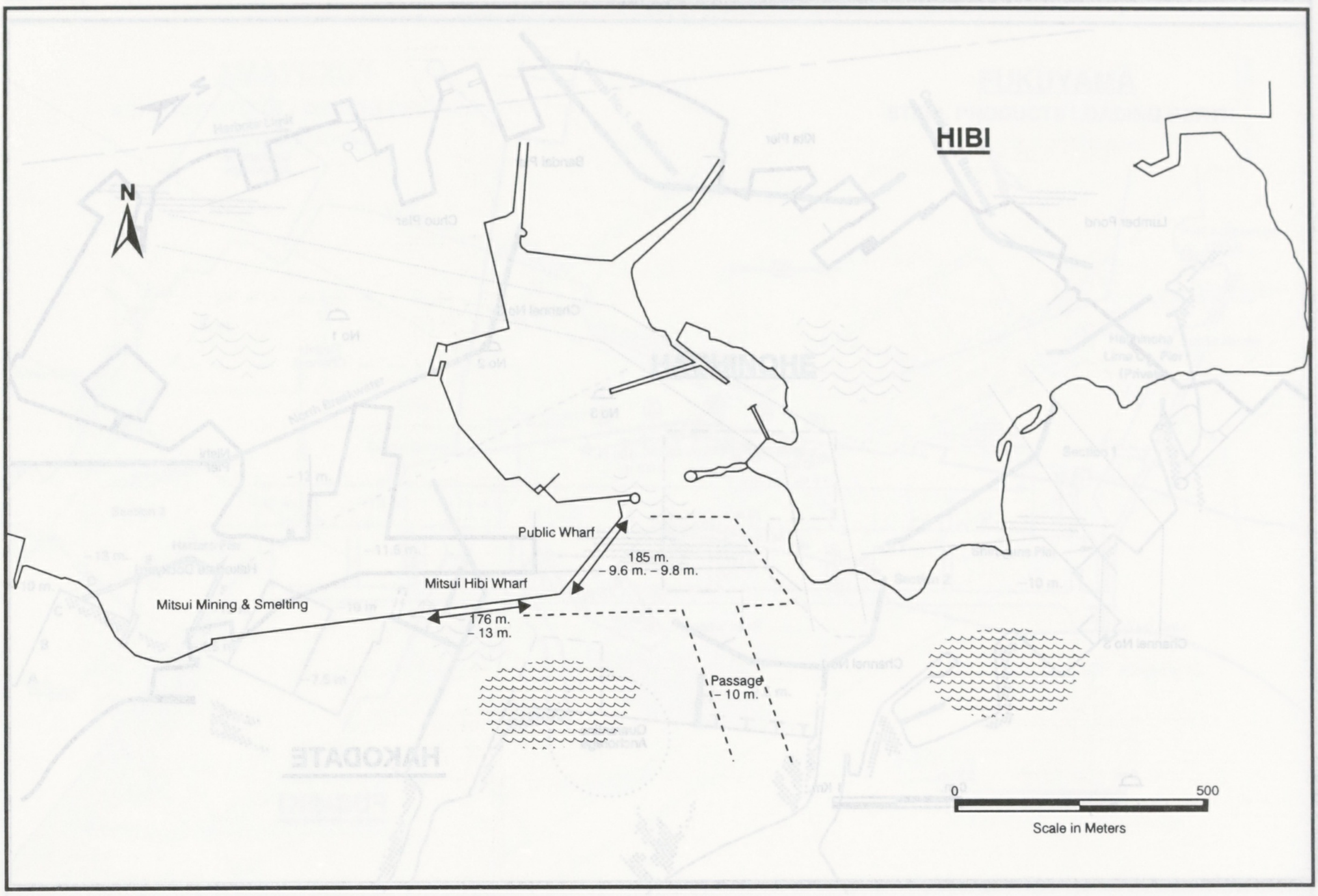

Lumber Yard
- 7.3 m.
② Lumber Wharf
- 9.8 m.
① Hamacho Wharf
Gamagori Wharf
⑦ - 5.5 m.
- 5.5m ⑥
⑧ - 7.3 m.
- 7.3 ⑤
②-5.5m.
④ ③
- 9.8 m.
-5.5 m.
⑨
- 9.8 m.
- 6 m.
① Takeshima Wharf
- 7.5 m.
② ③
-7.5 m.
GAMAGORI

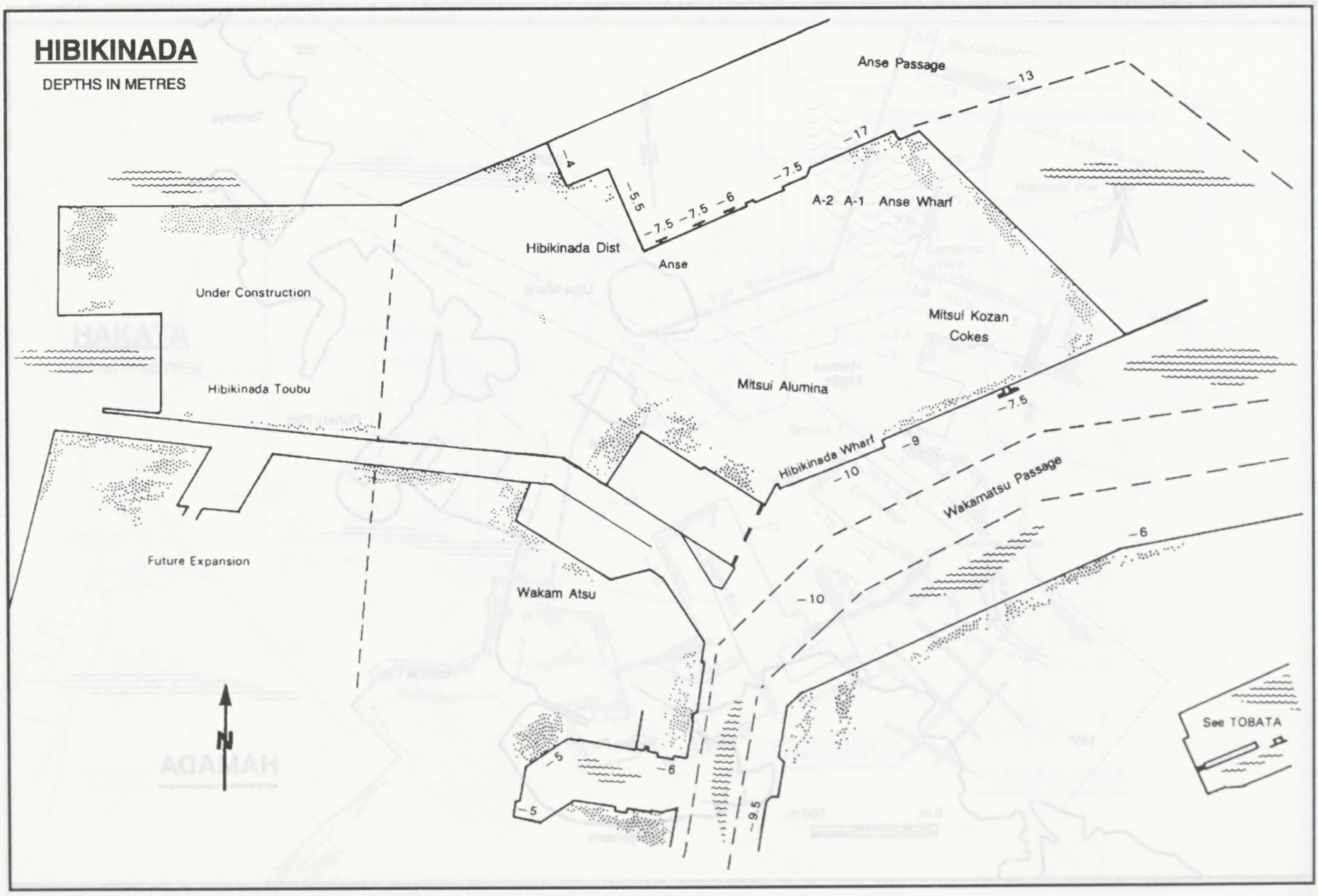

HACHINOHE
Harbour Limit
Central No.1. Breakwater
Central No.2 Breakwater
North Breakwater
Hachinohe Lime Co. Pier (Private)
Section 1
Section 2
Section 3
Shirogane Pier
Hattaro Pier
–13 m.
–13 m.
–11.5 m.
–10 m.
–10 m
–10 m.
–10 m
–7.5 m
–7.5 m.
–4.5 m
–10 m.
A
B
C
D
E
F
G

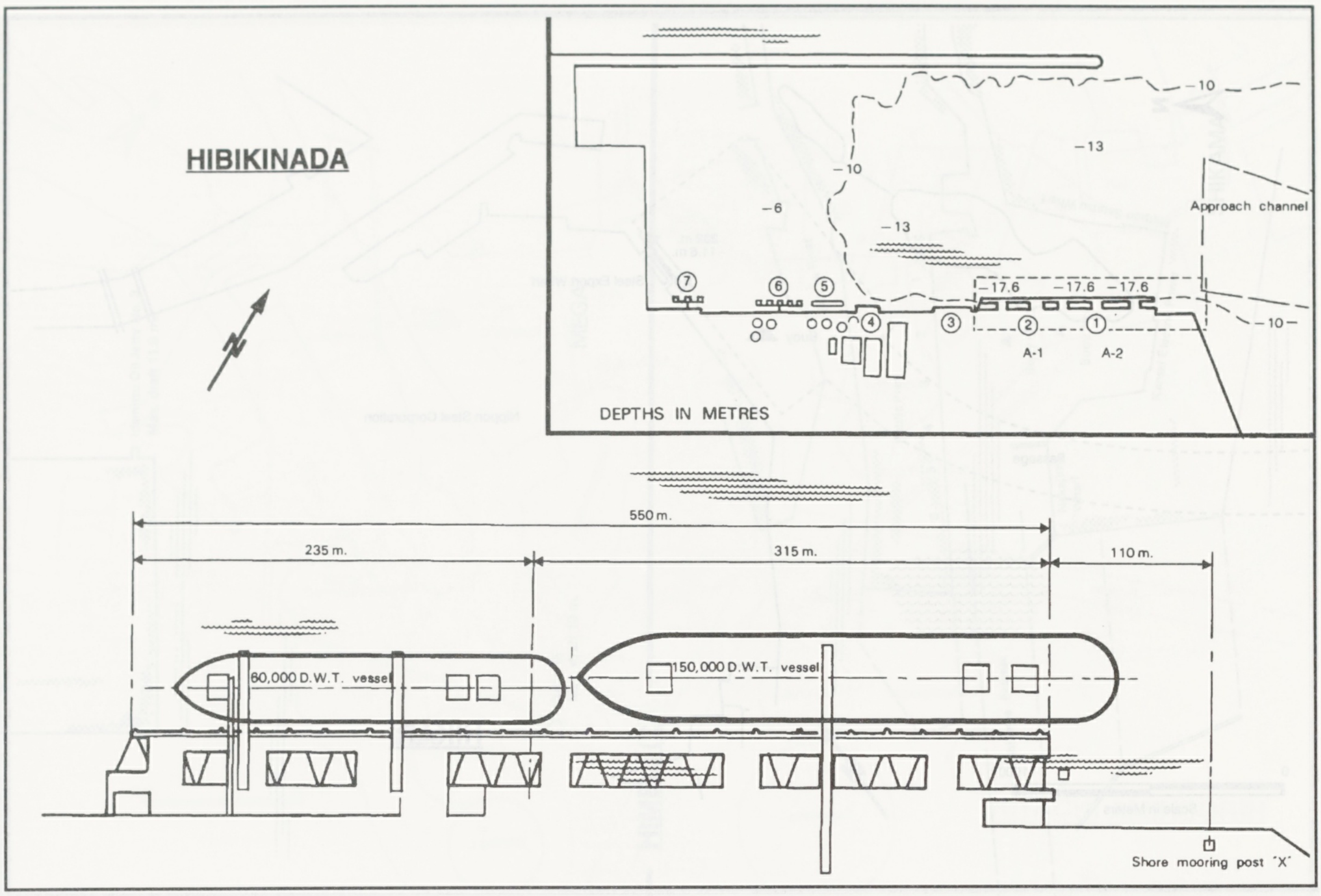

HAKATA
DEPTHS IN METRES
Passage
East Breakwater
Container Yard
Hakozaki Pier
Higasi
Section 1
Centre Pier
Suzaki Pier
Custom House
Mikasa Ka
-8.0
–12
–7.5
–7.5
–7.5
–7.5
–10.6
–7.8
–12
–5
–5
–10
–9
–7
–10
–10
–10
–11
–9
–7.5


Kita Pier
Bandai Pier
Lumber Pond
Chuo Pier
Channel No 3
No 1
No 2
No 3
Nishi Pier
Hakodate Dockyard
Channel No 3
Channel No 1
Quarantine Anchorage
HAKODATE
Imodco Buoy
0 m.
1 Km.


295°
Tonowya
232°
N
Lima Island
Harbour LImits
Yana Sa
Fishery Port
228.5°
Hamada City
140°
Trading Port
HAMADA
0 m.
500 m.
Nagahama

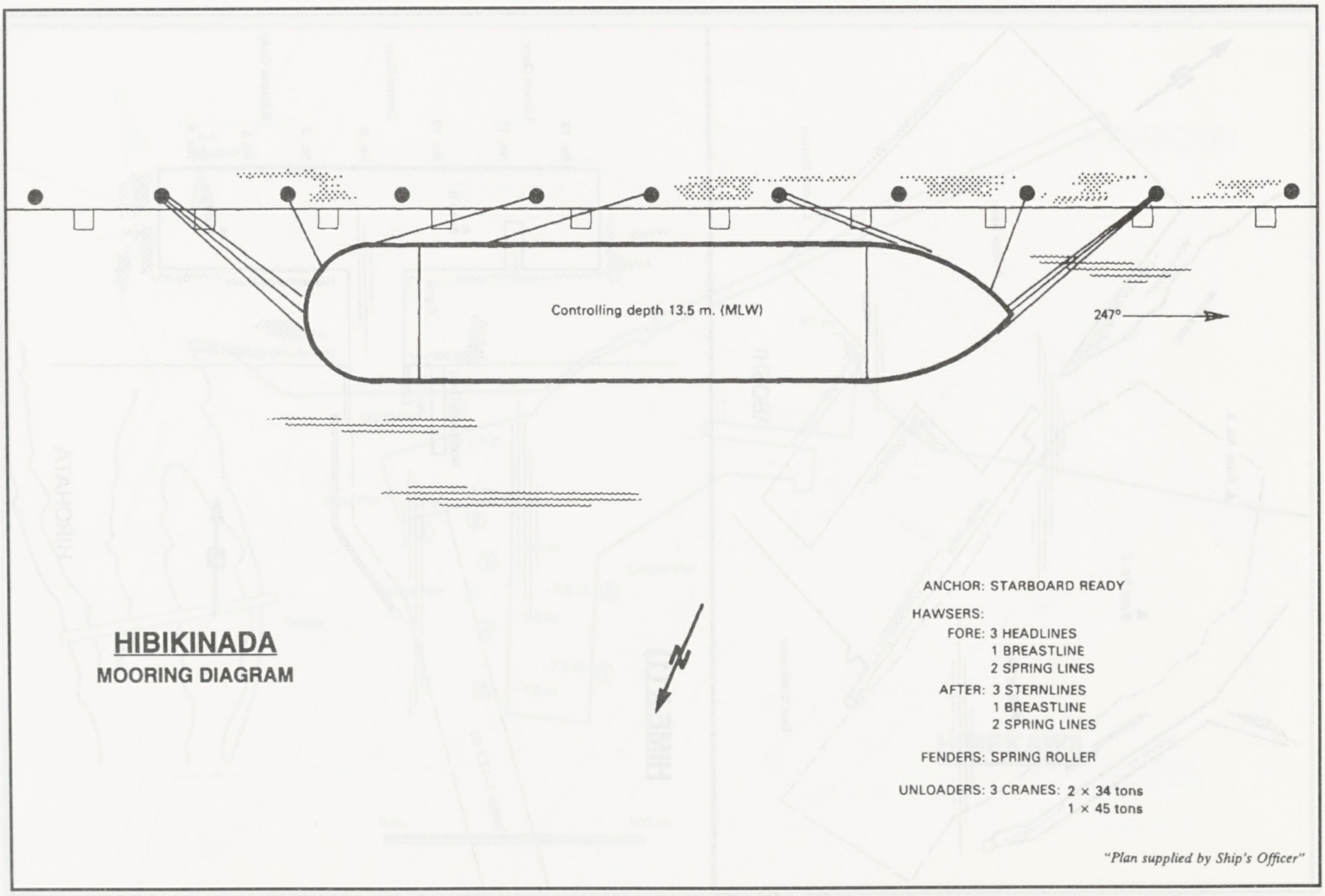

HIBI
N
Public Wharf
185 m.
- 9.6 m. - 9.8 m.
Mitsui Hibi Wharf
Mitsui Mining & Smelting
176 m.
- 13 m.
Passage
- 10 m.
0
500
Scale in Meters


HIBIKINADA
DEPTHS IN METRES
Anse Passage
-13
-17
-4
-5.5
-7.5
-7.5
-6
-7.5
A-2 A-1 Anse Wharf
Hibikinada Dist
Anse
Under Construction
Mitsul Kozan Cokes
Mitsui Alumina
Hibikinada Toubu
-7.5
Hibikinada Wharf
-9
-10
Wakamatsu Passage
Future Expansion
Wakam Atsu
-10
-6
See TOBATA
N
-5
-6
-5
-9.5



HIBIKINADA

−10
−13
−10
−6
−13
Approach channel
⑦
⑥
⑤
④
③
②
①
−17.6
−17.6
−17.6
−10
A-1
A-2
DEPTHS IN METRES
550 m.
235 m.
315 m.
110 m.
60,000 D.W.T. vessel
150,000 D.W.T. vessel
Shore mooring post "X"



Controlling depth 13.5 m. (MLW)
247°

HIBIKINADA
MOORING DIAGRAM

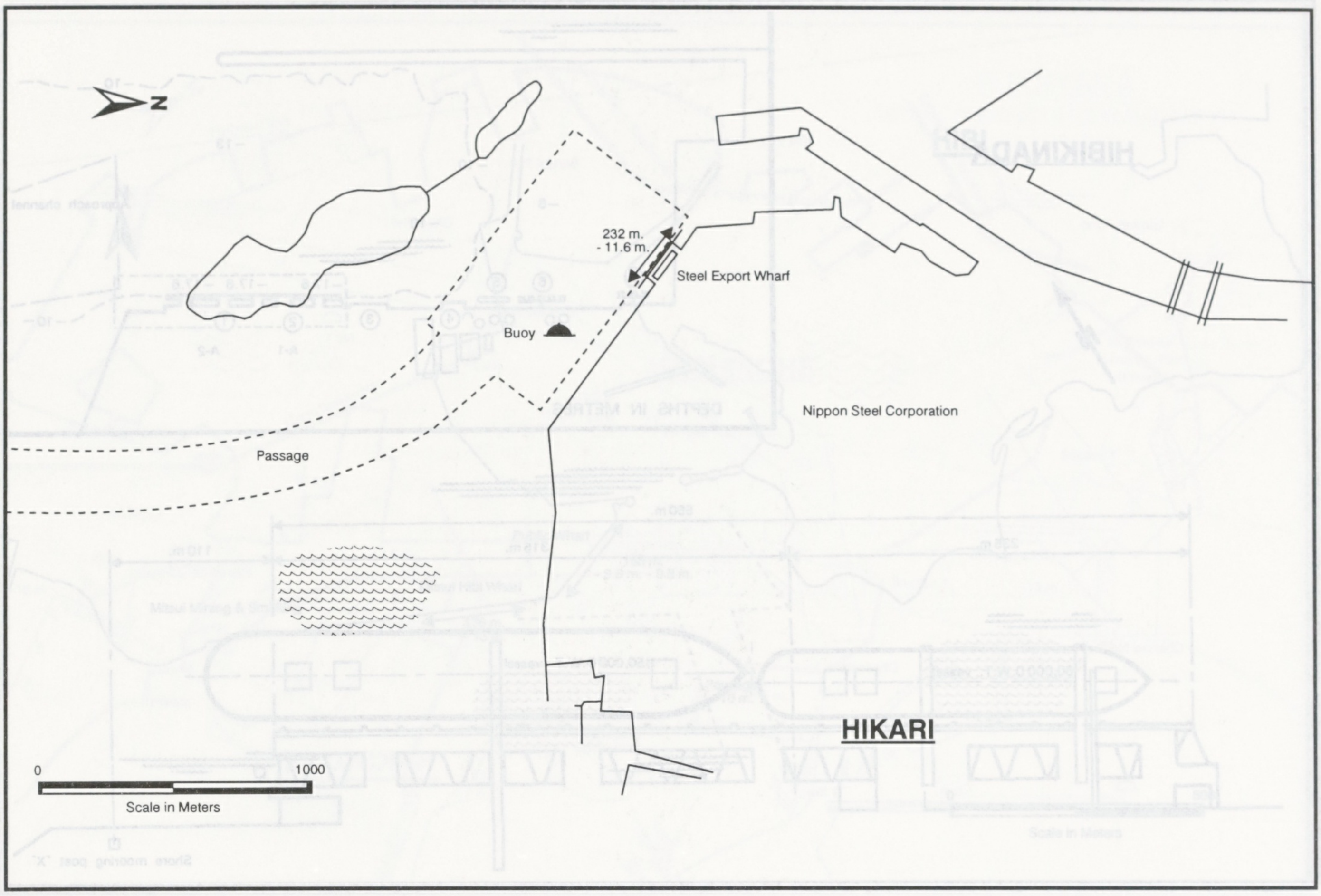
ANCHOR: STARBOARD READY

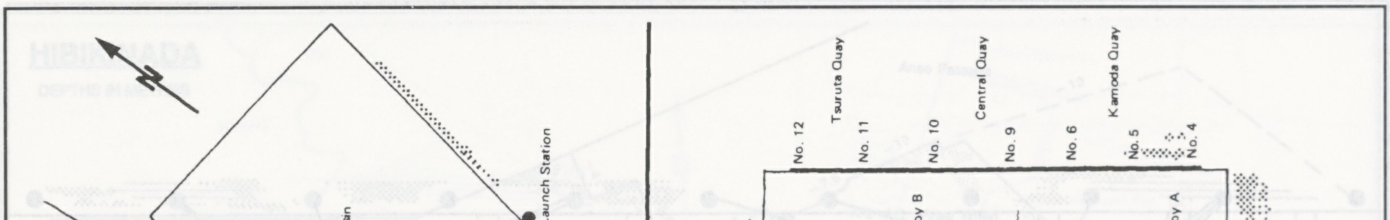
HAWSERS:
FORE: 3 HEADLINES
1 BREASTLINE
2 SPRING LINES
AFTER: 3 STERNLINES
1 BREASTLINE
2 SPRING LINES

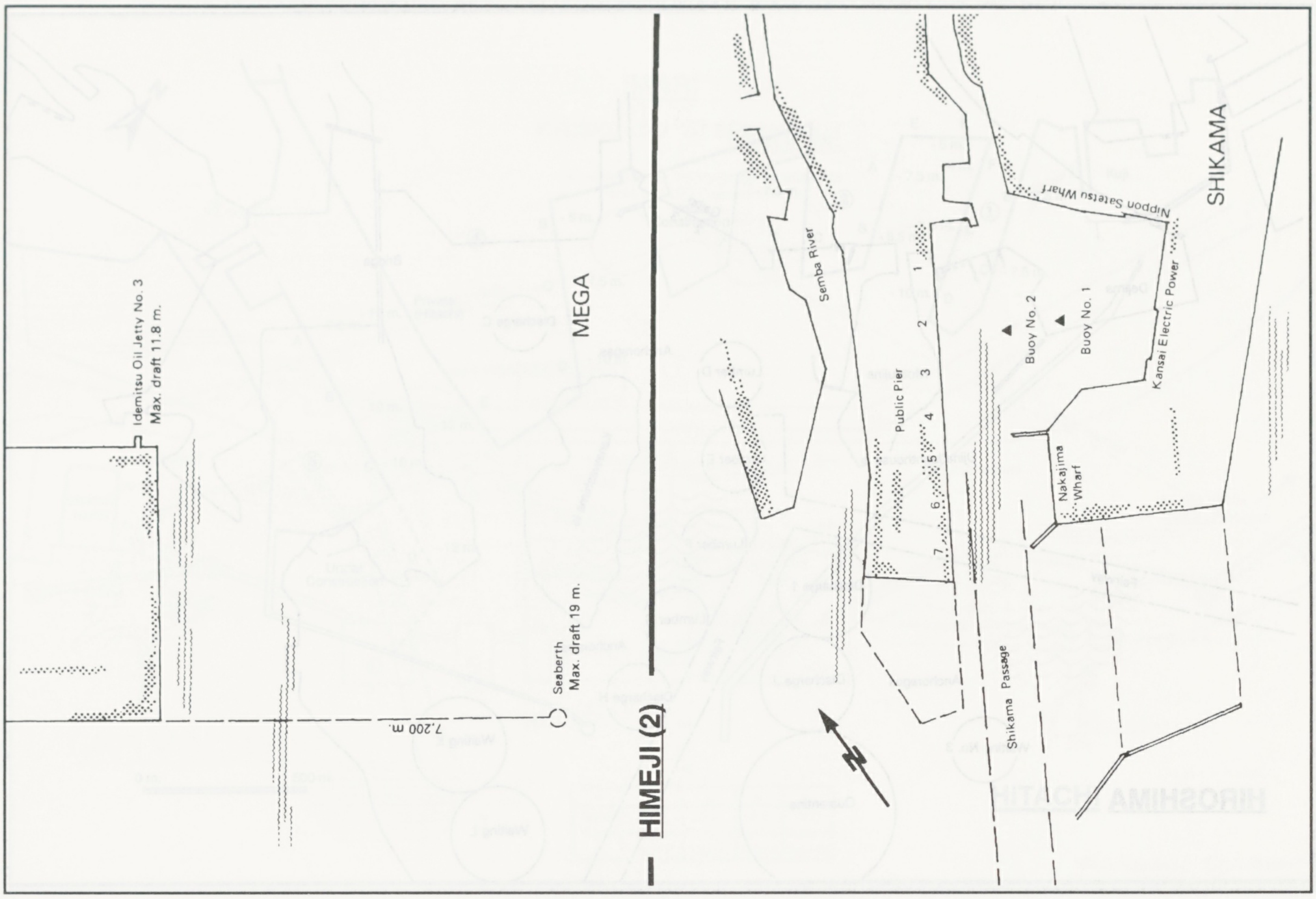
FENDERS: SPRING ROLLER

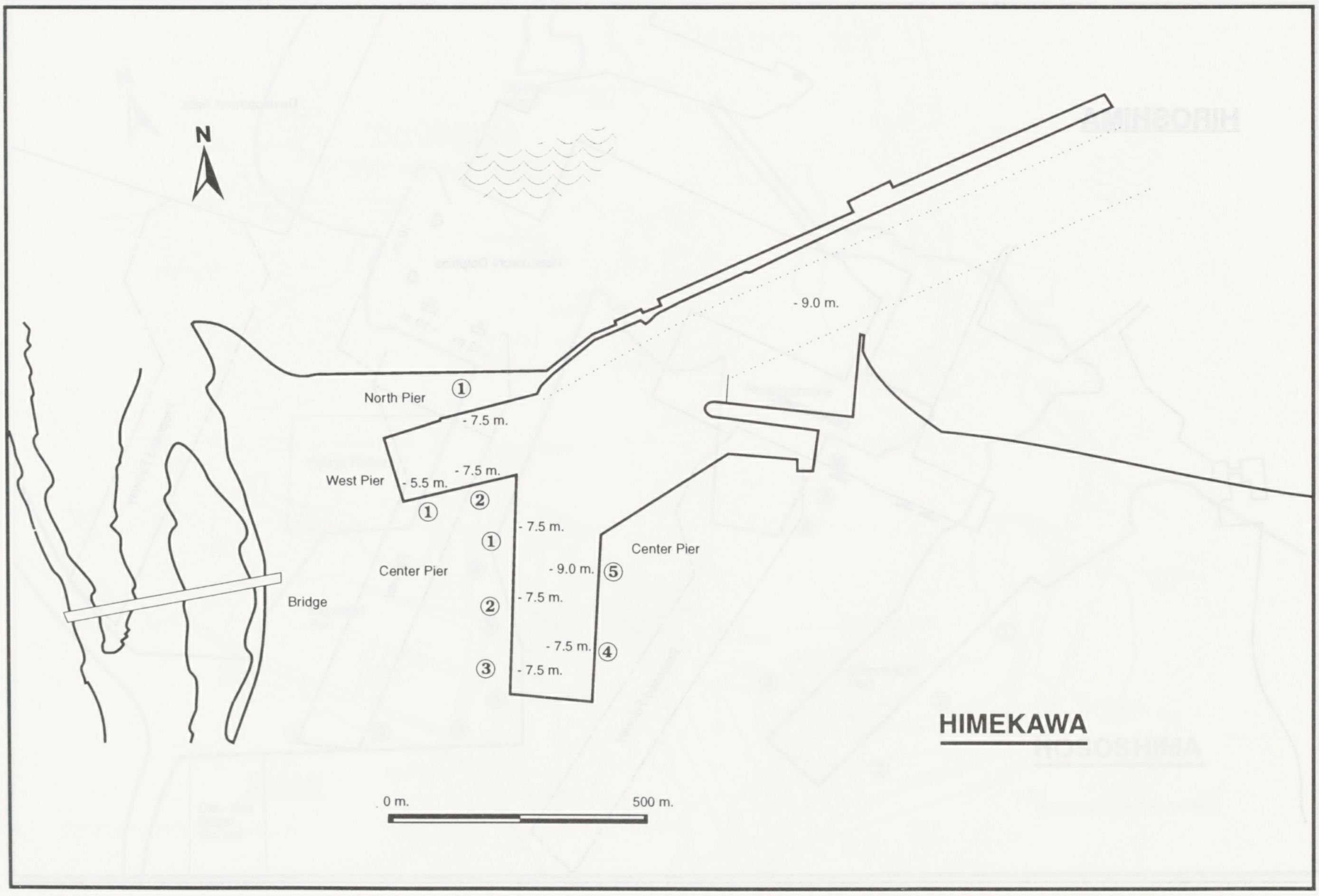
UNLOADERS: 3 CRANES: 2 × 34 tons
1 × 45 tons

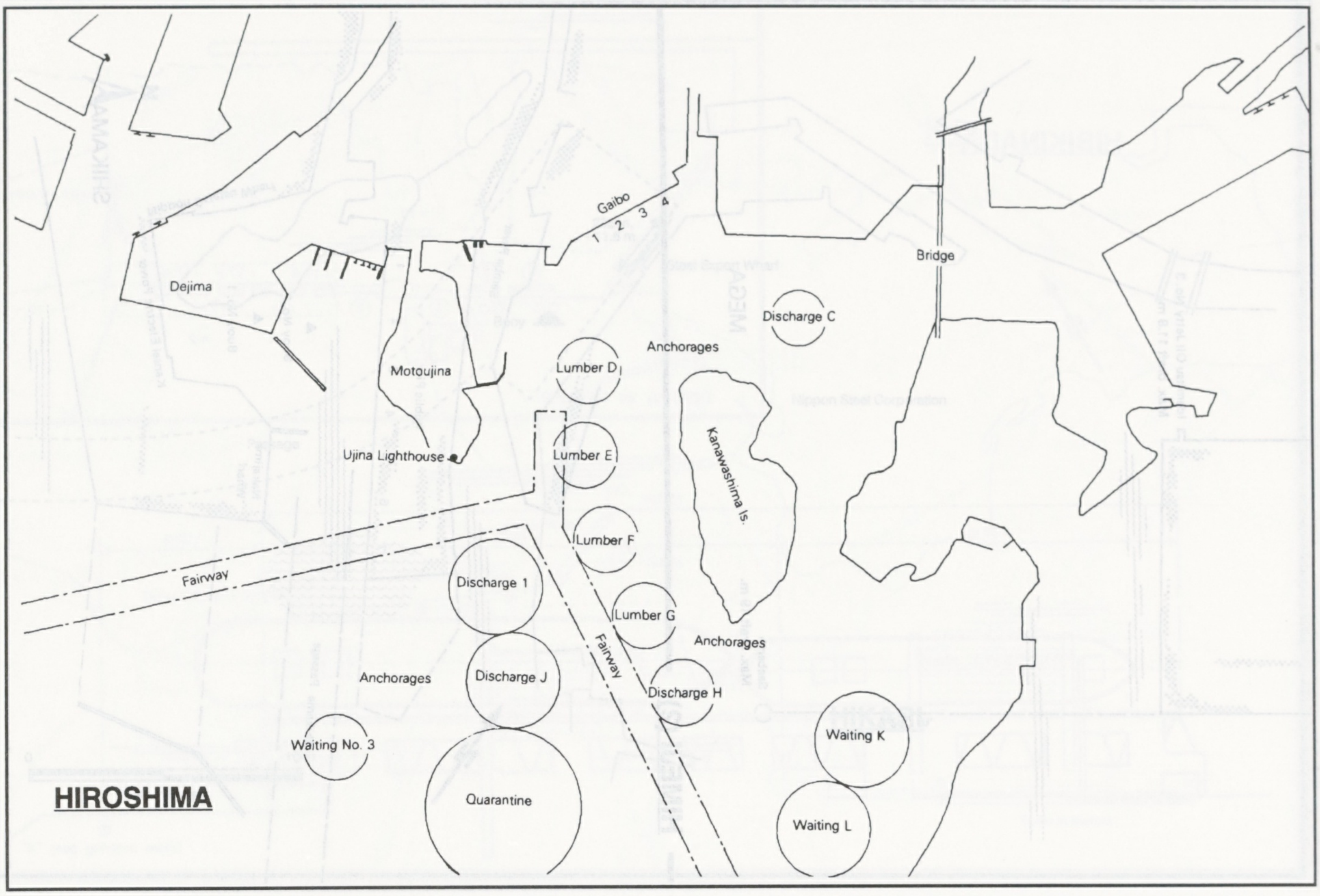
"Plan supplied by Ship's Officer"

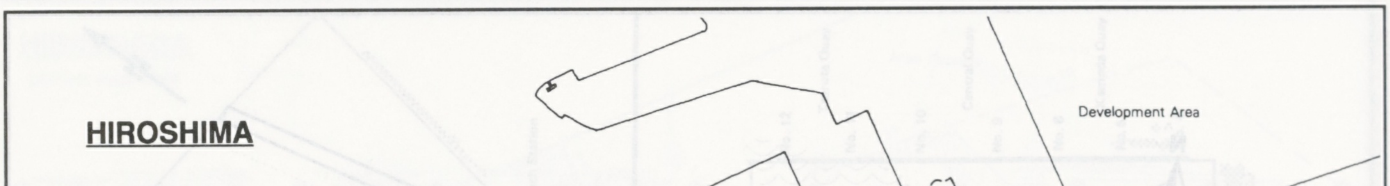

N
232 m.
- 11.6 m.
Steel Export Wharf
Buoy
Nippon Steel Corporation
Passage
HIKARI
0
1000
Scale in Meters

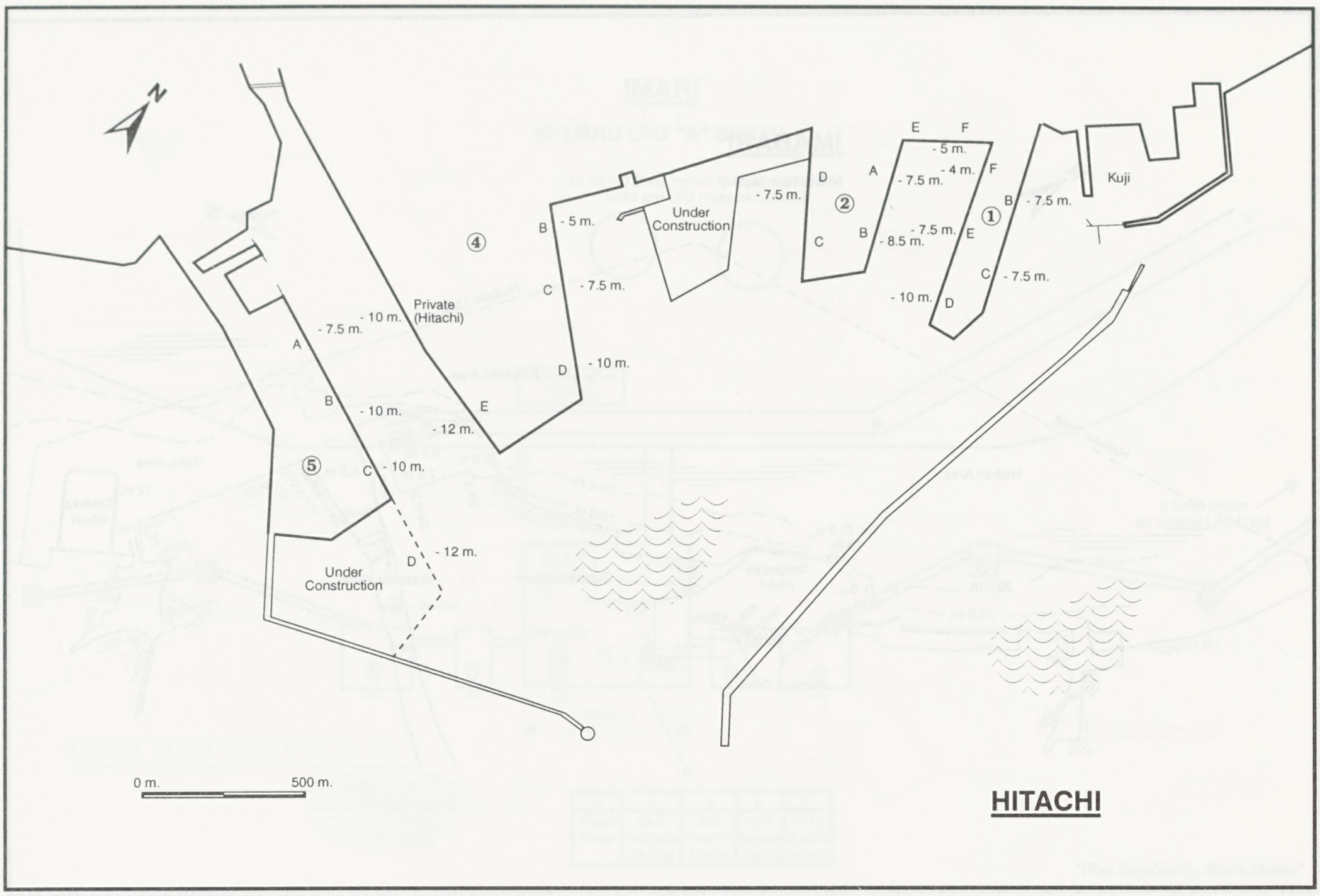

N
Timber Basin
Launch Station
Naka River
ABOSHI
Buoy No. 3
Buoy No. 2
Buoy No.
New Wharf
West Breakwater
East Breakwater
HIMEJI (1)
Tsuruta Quay
Central Quay
Kamoda Quay
No. 12
No. 11
No. 10
No. 9
No. 6
No. 5
No. 4
Buoy B
Buoy A
Signal
Higashihama Quay
Nishihama Quay
No. 18
Passage (– 13.2 M)
N
HIROHATA

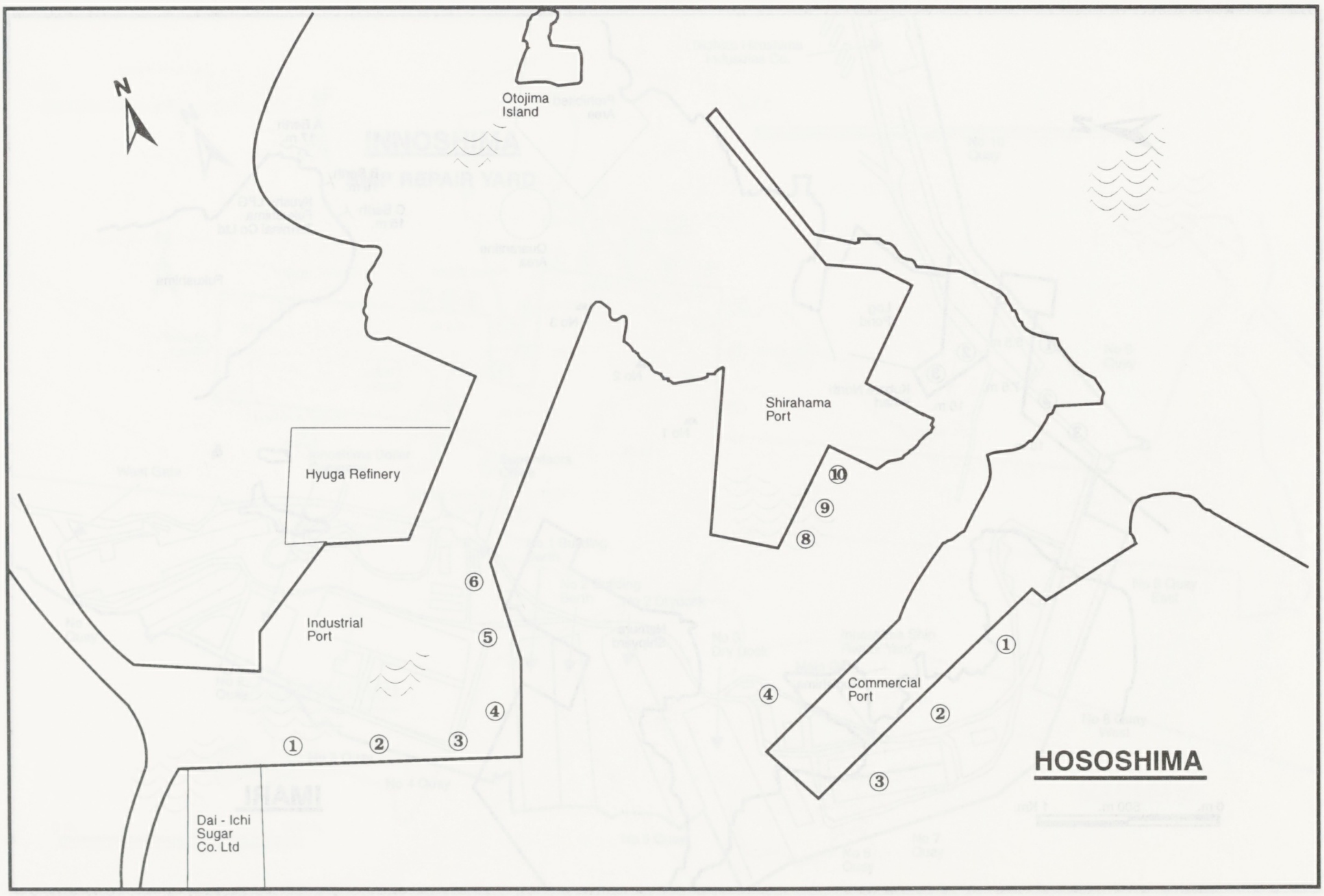

Idemitsu Oil Jetty No. 3
Max. draft 11.8 m.
MEGA
Seaberth
Max. draft 19 m.
7,200 m.
HIMEJI (2)
Semba River
Public Pier
1
2
3
4
5
6
7
Buoy No. 2
Buoy No. 1
Nippon Satetsu Wharf
Kansai Electric Power
SHIKAMA
Nakajima Wharf
Shikama Passage
N

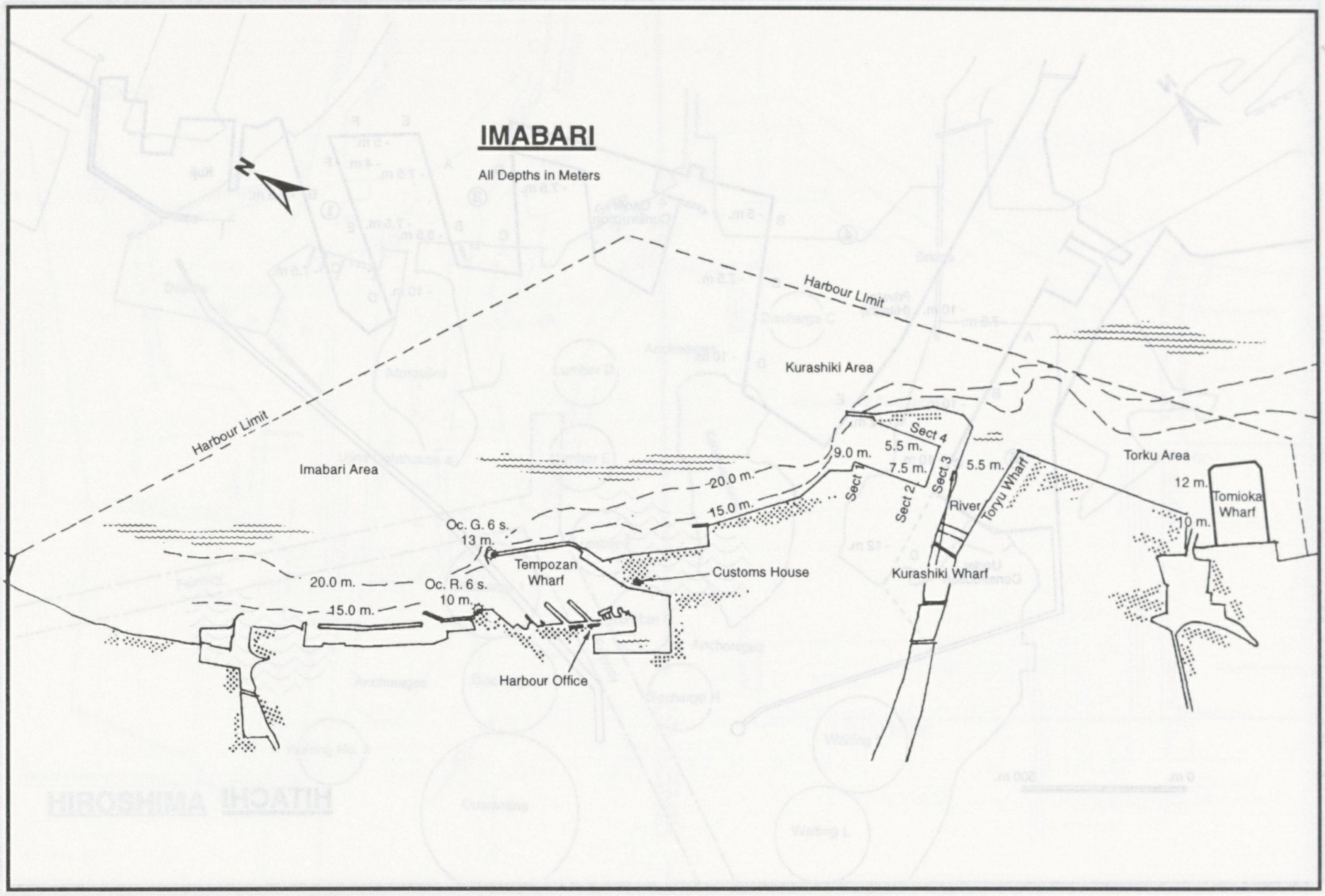

N
- 9.0 m.
North Pier
①
- 7.5 m.
West Pier
- 5.5 m.
- 7.5 m.
①
②
①
- 7.5 m.
Center Pier
- 9.0 m.
⑤
Center Pier
②
- 7.5 m.
- 7.5 m.
④
③
- 7.5 m.
Bridge
HIMEKAWA
0 m.
500 m.

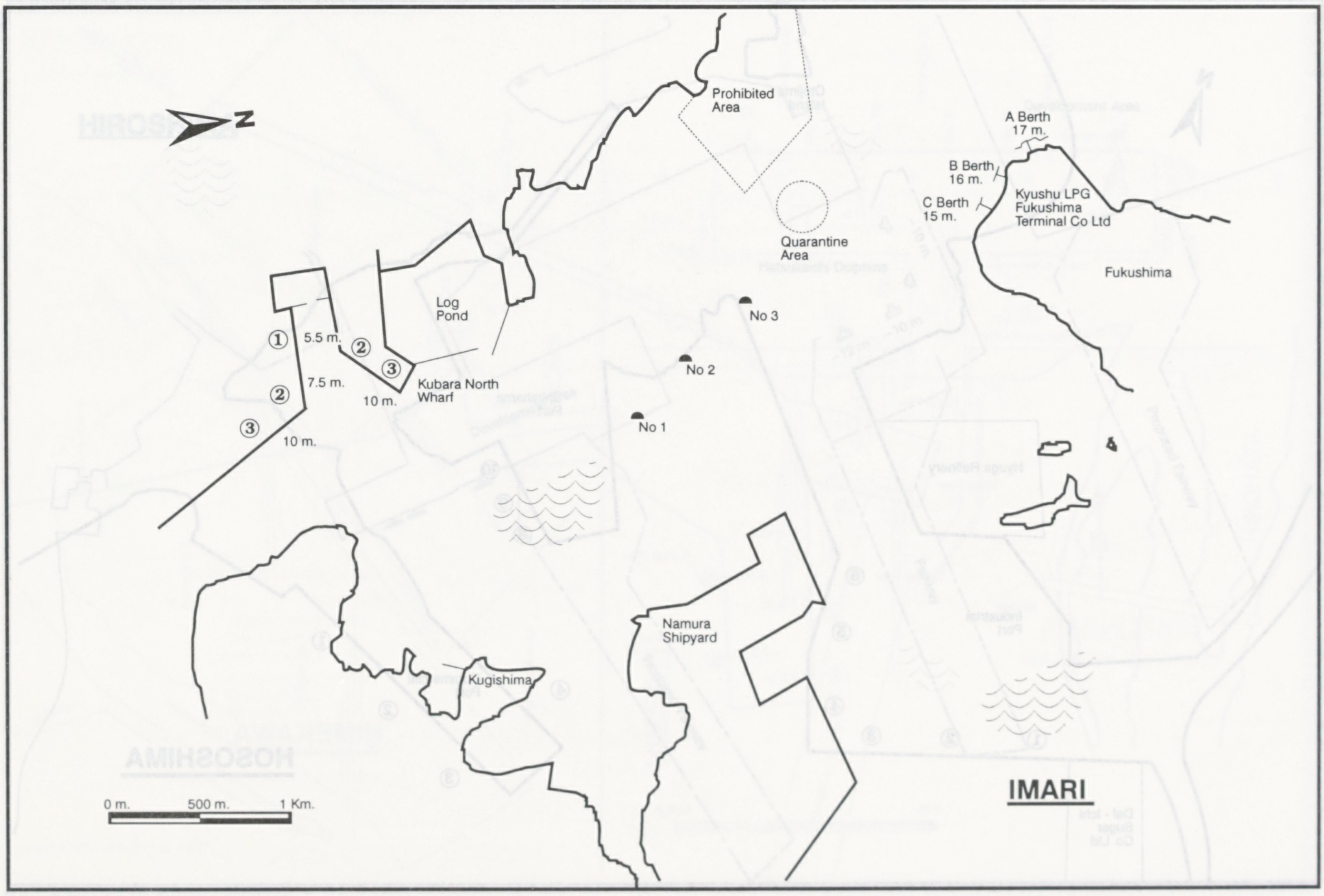

Gaibo
1
2
3
4
Bridge
Dejima
Discharge C
Anchorages
Motoujina
Lumber D
Kanawashima Is.
Ujina Lighthouse
Lumber E
Lumber F
Fairway
Discharge 1
Lumber G
Anchorages
Fairway
Anchorages
Discharge J
Discharge H
Waiting K
Waiting No. 3
HIROSHIMA
Quarantine
Waiting L


HIROSHIMA
Development Area
-10 m.
Hatsukaichi Dolphins
-10 m.
-12 m.
Development Area
Proposed Fairway
Fairway
Proposed Fairway


N
④
Private (Hitachi)
- 10 m.
- 7.5 m.
A
B
- 10 m.
E
- 12 m.
⑤
C
- 10 m.
D
- 12 m.
Under Construction
B
- 5 m.
C
- 7.5 m.
D
- 10 m.
Under Construction
D
- 7.5 m.
②
C
E
F
- 5 m.
A
- 7.5 m.
- 4 m.
F
B
- 8.5 m.
- 7.5 m.
E
①
B
- 7.5 m.
C
- 7.5 m.
- 10 m.
D
Kuji
0 m.
500 m.
HITACHI

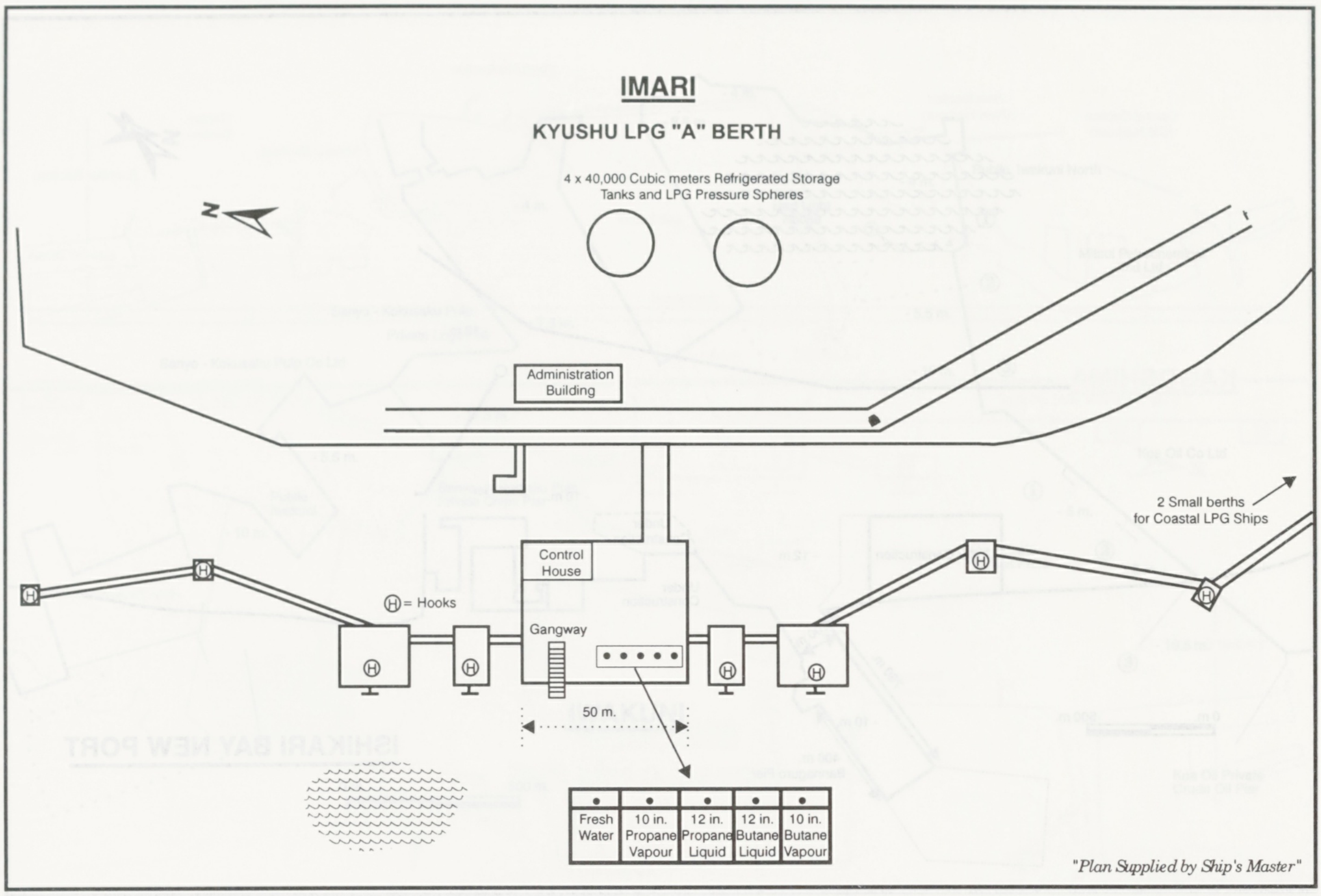

N
Otojima Island
Shirahama Port
⑩
⑨
⑧
Hyuga Refinery
⑥
Industrial Port
⑤
④
①
②
③
Commercial Port
①
④
②
③
Dai - Ichi Sugar Co. Ltd
HOSOSHIMA


IMABARI
All Depths in Meters
N
Harbour Limit
Harbour Limit
Kurashiki Area
Imabari Area
Sect 4
9.0 m.
5.5 m.
7.5 m.
Sect 1
Sect 2
Sect 3
5.5 m.
Toryu Wharf
River
Torku Area
12 m.
Tomioka Wharf
10 m.
20.0 m.
15.0 m.
Oc. G. 6 s.
13 m.
Tempozan Wharf
Customs House
Kurashiki Wharf
20.0 m.
Oc. R. 6 s.
10 m.
15.0 m.
Harbour Office


N
Prohibited Area
A Berth
17 m.
B Berth
16 m.
C Berth
15 m.
Kyushu LPG Fukushima Terminal Co Ltd
Quarantine Area
Fukushima
Log Pond
No 3
No 2
No 1
①
5.5 m.
②
③
Kubara North Wharf
②
7.5 m.
10 m.
③
10 m.
Namura Shipyard
Kugishima
0 m.
500 m.
1 Km.
IMARI

IMARI

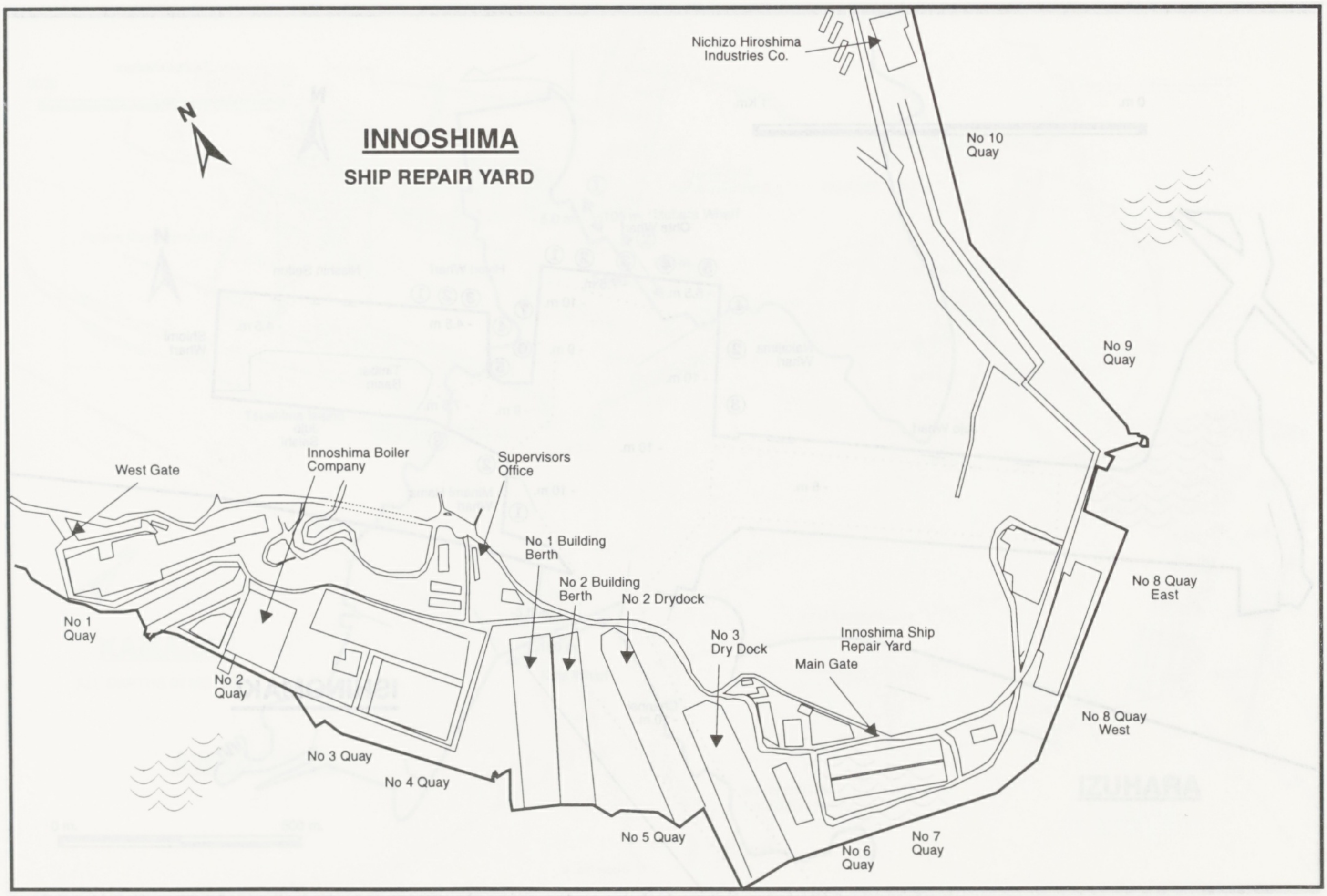
KYUSHU LPG "A" BERTH


N
4 x 40,000 Cubic meters Refrigerated Storage Tanks and LPG Pressure Spheres
Administration Building
Control House
Gangway
Ⓗ = Hooks
50 m.
2 Small berths for Coastal LPG Ships
Fresh Water
10 in. Propane Vapour
12 in. Propane Liquid
12 in. Butane Liquid
10 in. Butane Vapour

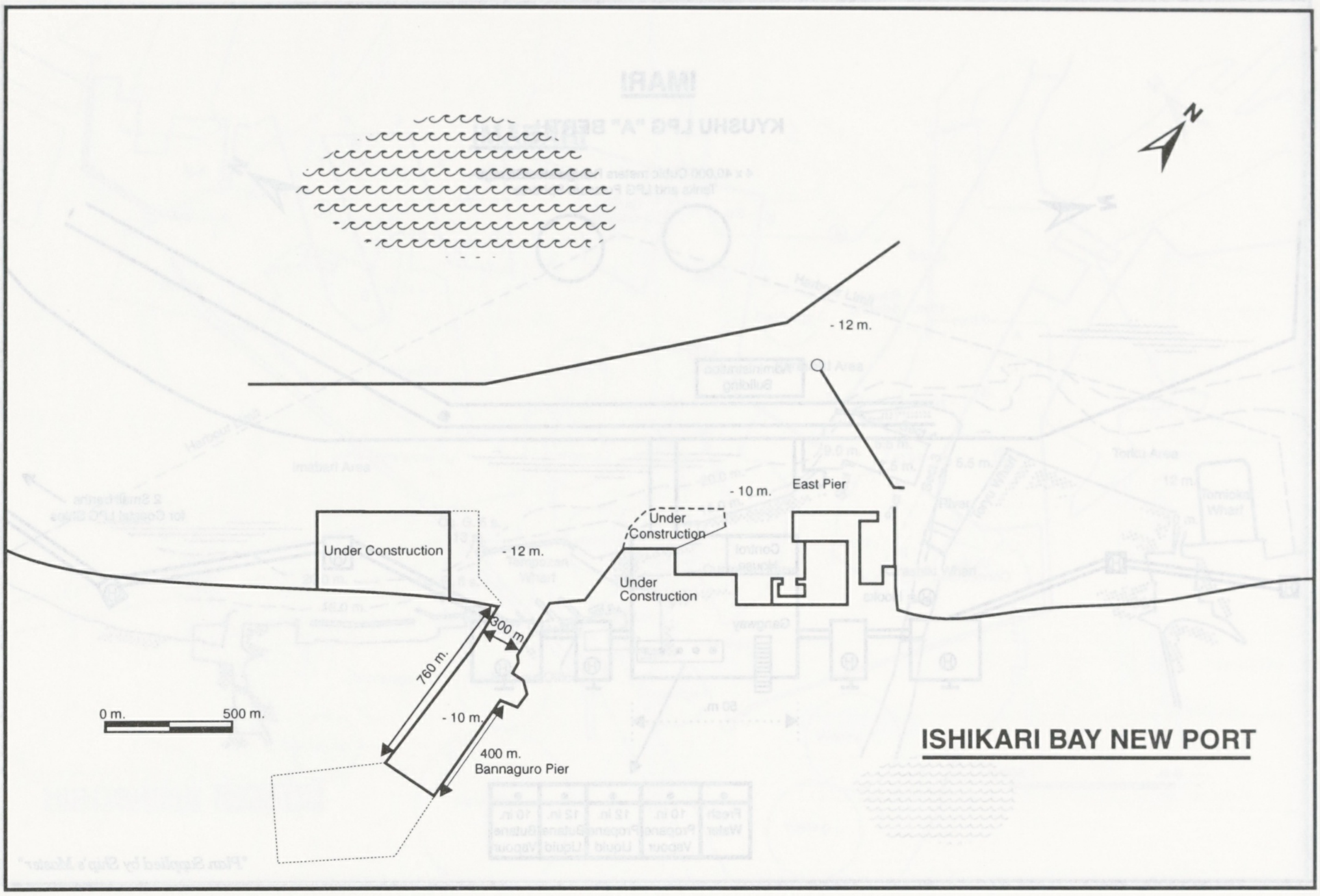
"Plan Supplied by Ship's Master"

INNOSHIMA

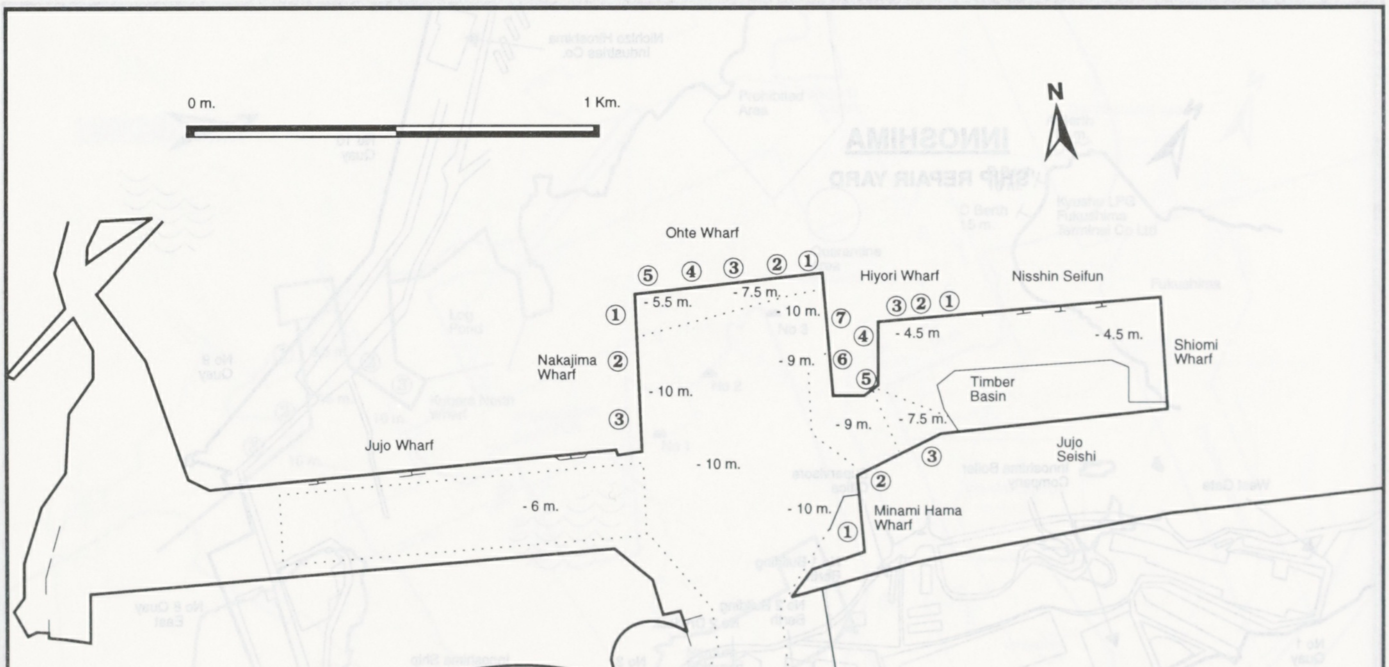
SHIP REPAIR YARD

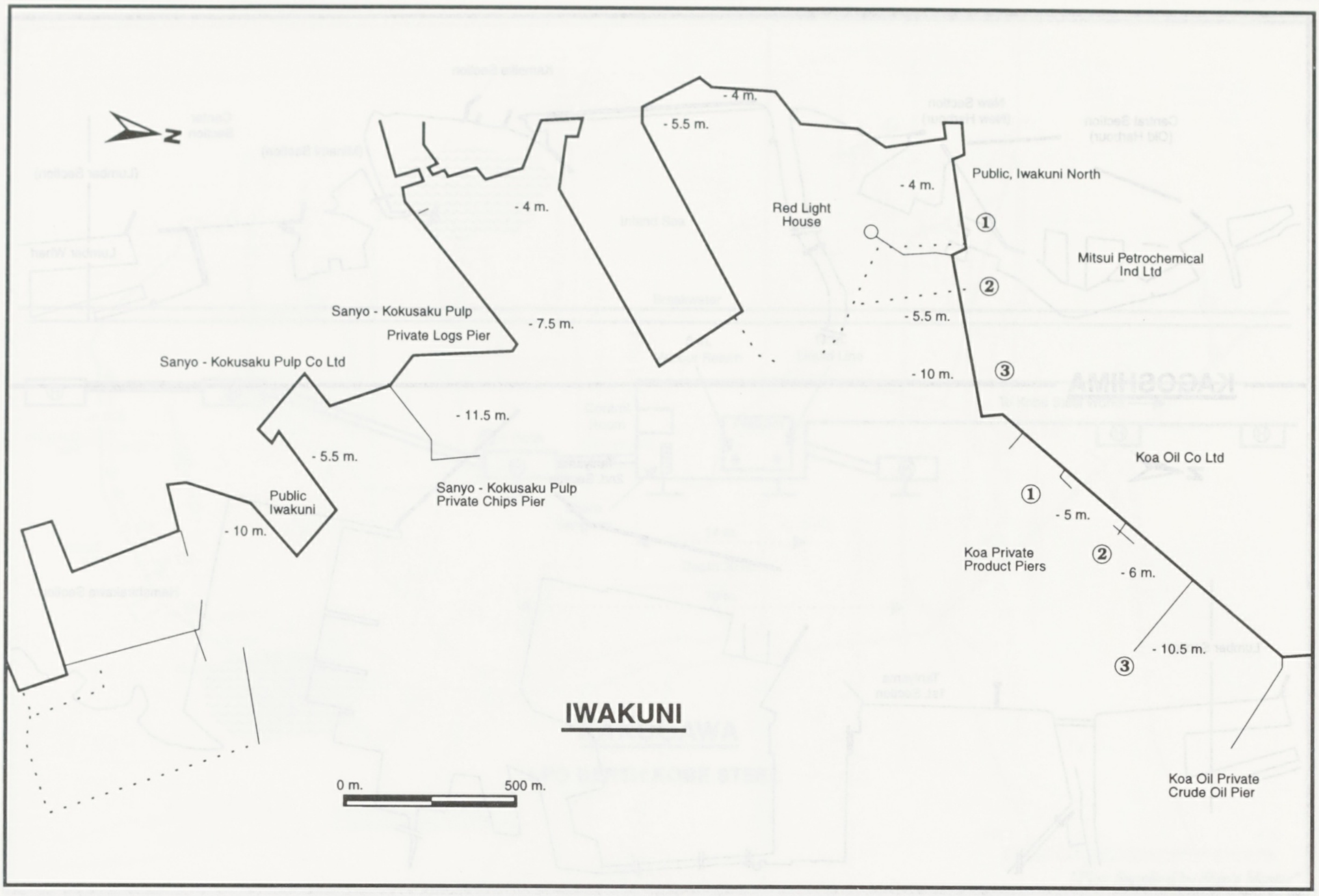

N
Nichizo Hiroshima Industries Co.
No 10 Quay
No 9 Quay
No 8 Quay East
No 8 Quay West
No 7 Quay
No 6 Quay
No 5 Quay
No 4 Quay
No 3 Quay
No 2 Quay
No 1 Quay
West Gate
Innoshima Boiler Company
Supervisors Office
No 1 Building Berth
No 2 Building Berth
No 2 Drydock
No 3 Dry Dock
Innoshima Ship Repair Yard
Main Gate

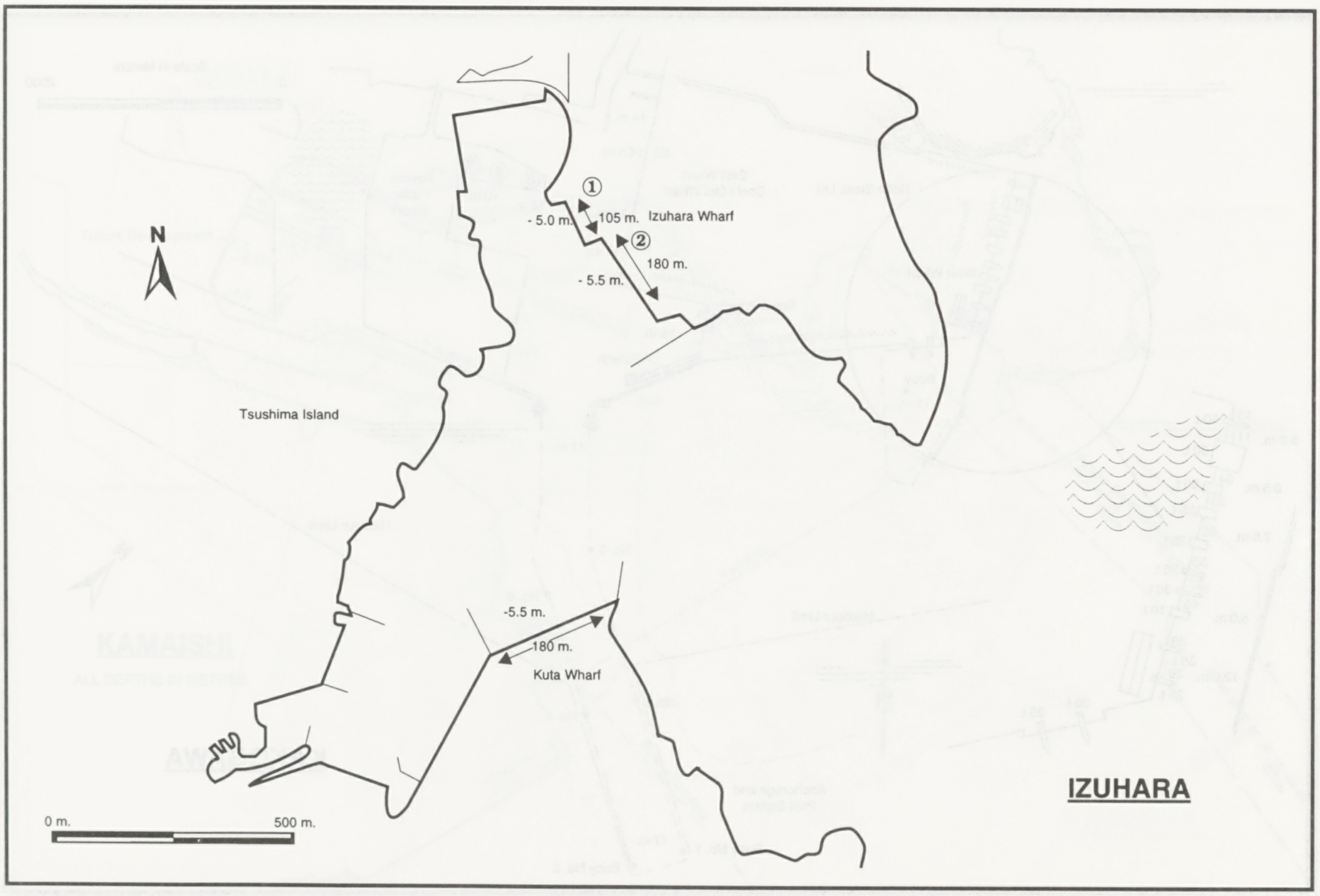
ISHIKARI BAY NEW PORT

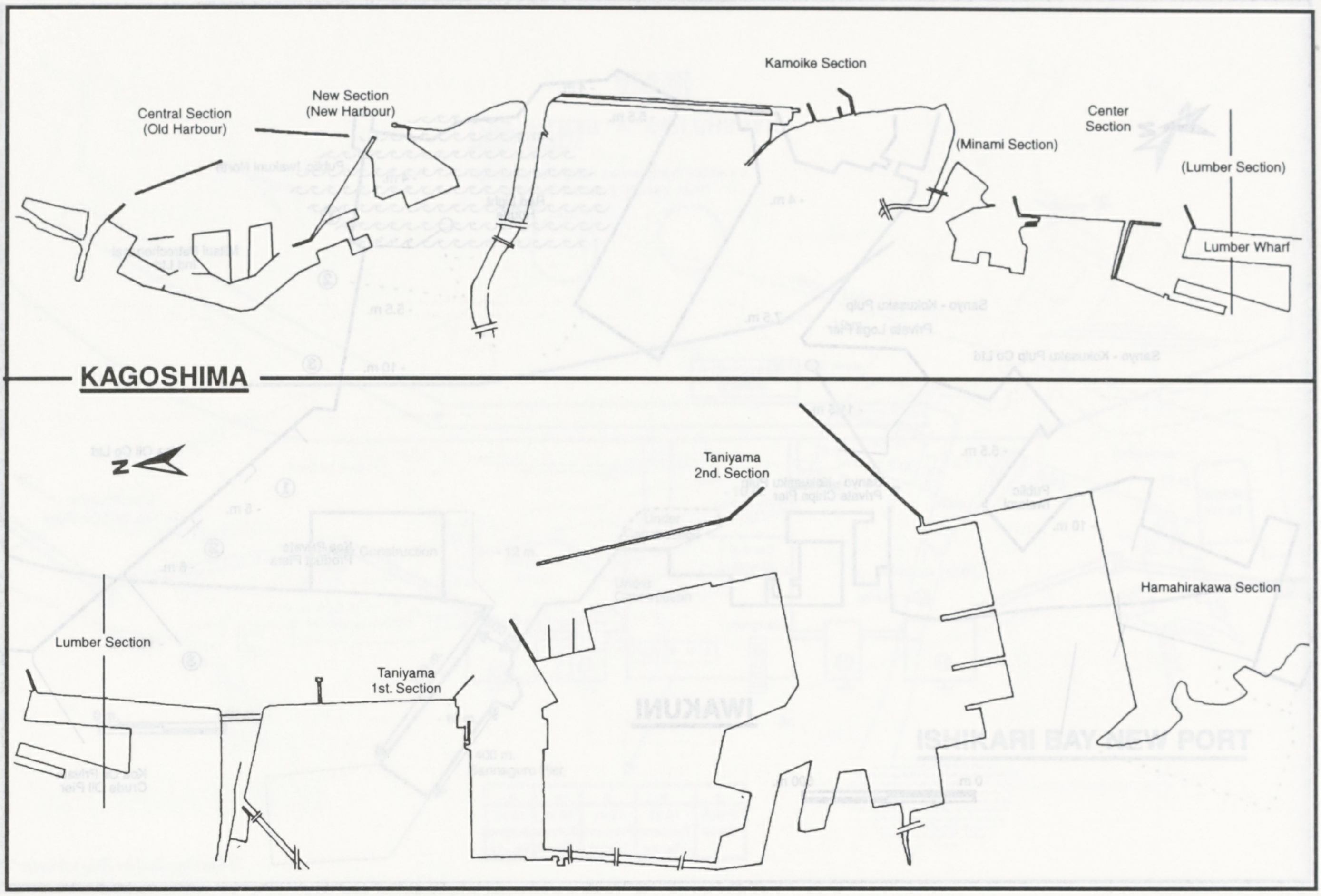

N
- 12 m.
East Pier
- 10 m.
Under Construction
Under Construction
Under Construction
- 12 m.
300 m.
760 m.
- 10 m.
400 m.
Bannaguro Pier
0 m.
500 m.

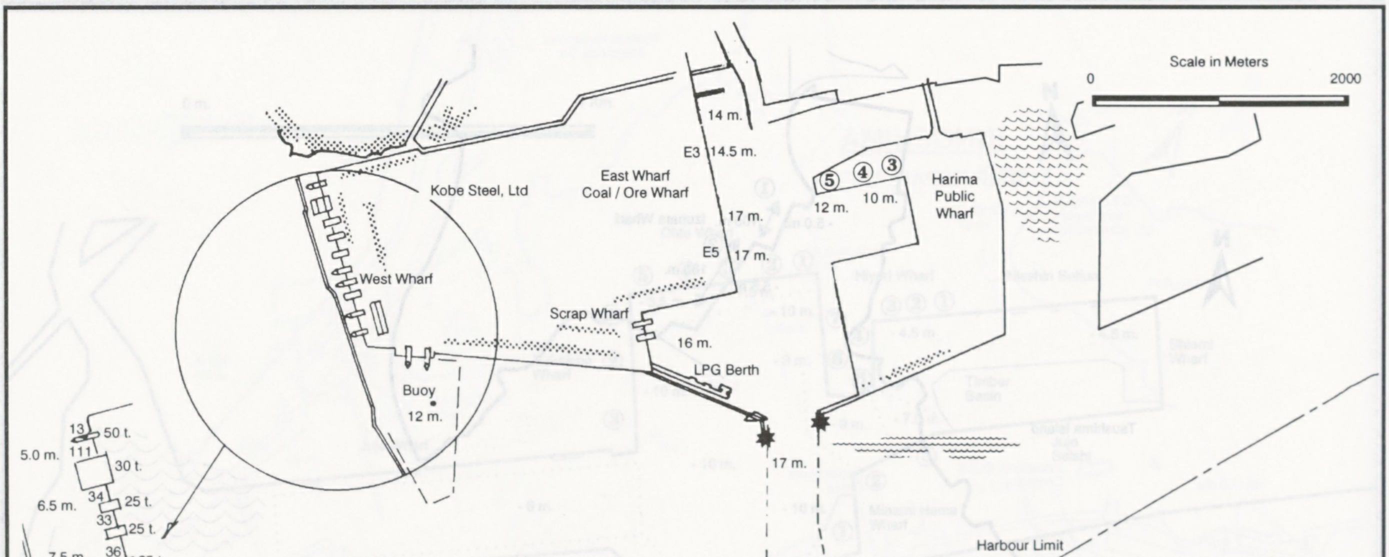
ISHINOMAKI

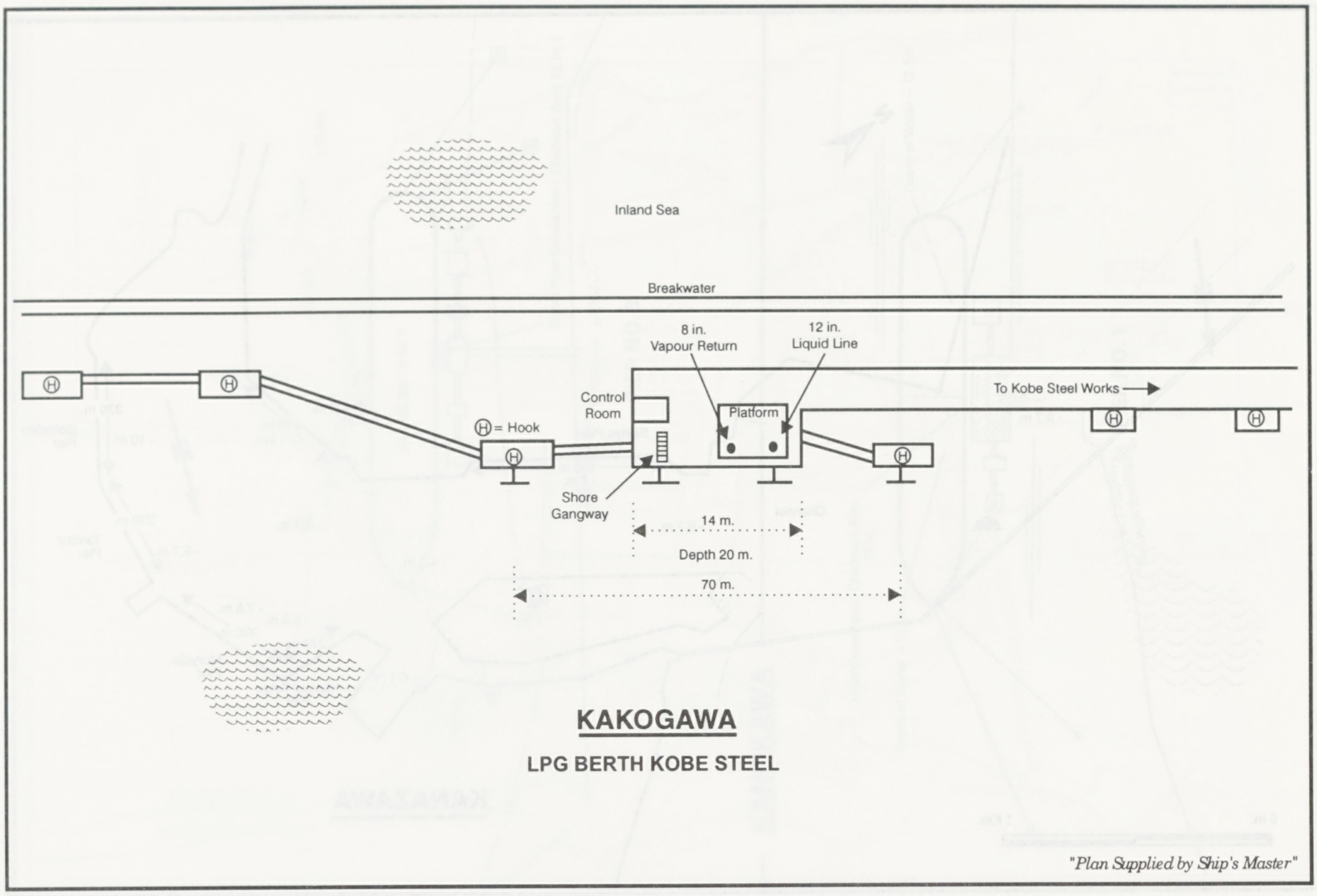

0 m.
1 Km.
N
Ohte Wharf
⑤ ④ ③ ② ①
- 5.5 m.
- 7.5 m.
- 10 m.
①
Nakajima Wharf
②
- 10 m.
③
Hiyori Wharf
③ ② ①
⑦
④
- 4.5 m
⑥
- 9 m.
⑤
Nisshin Seifun
- 4.5 m.
Shiomi Wharf
Timber Basin
- 9 m.
- 7.5 m.
Jujo Seishi
③
②
- 10 m.
Minami Hama Wharf
①
Jujo Wharf
- 10 m.
- 6 m.
Channel
- 10 m.


N
- 4 m.
- 5.5 m.
- 4 m.
Public, Iwakuni North
- 4 m.
Red Light House
①
Mitsui Petrochemical Ind Ltd
②
Sanyo - Kokusaku Pulp
Private Logs Pier
- 7.5 m.
- 5.5 m.
③
- 10 m.
Sanyo - Kokusaku Pulp Co Ltd
- 11.5 m.
- 5.5 m.
Koa Oil Co Ltd
Sanyo - Kokusaku Pulp
Private Chips Pier
Public
Iwakuni
①
- 5 m.
- 10 m.
Koa Private
Product Piers
②
- 6 m.
- 10.5 m.
③
IWAKUNI
0 m.
500 m.
Koa Oil Private
Crude Oil Pier


①
- 5.0 m.
105 m.
Izuhara Wharf
N
②
180 m.
- 5.5 m.
Tsushima Island
-5.5 m.
180 m.
Kuta Wharf
IZUHARA
0 m.
500 m.


Central Section
(Old Harbour)
New Section
(New Harbour)
Kamoike Section
(Minami Section)
Center Section
(Lumber Section)
Lumber Wharf
KAGOSHIMA
N
Taniyama
2nd. Section
Hamahirakawa Section
Lumber Section
Taniyama
1st. Section


Scale in Meters
0
2000
14 m.
E3
14.5 m.
East Wharf
Coal / Ore Wharf
Kobe Steel, Ltd
⑤ ④ ③
12 m.
10 m.
Harima
Public
Wharf
17 m.
E5
17 m.
West Wharf
Scrap Wharf
16 m.
LPG Berth
Buoy
12 m.
17 m.
13
50 t.
5.0 m.
111
30 t.
34
25 t.
6.5 m.
33
25 t.
7.5 m.
36
25 t.
35
30 t.
37
30 t.
40
10 t.
8.0 m.
38
35 t.
12.0 m.
39
35 t.
35 t.
35 t.
No. 5
No. 6
Harbour Limit
Harbour Limit
N
No. 3
No. 4
KAKOGAWA
Anchorage and
Pilot Station
Buoy No. 1
17 m.
Buoy No. 2

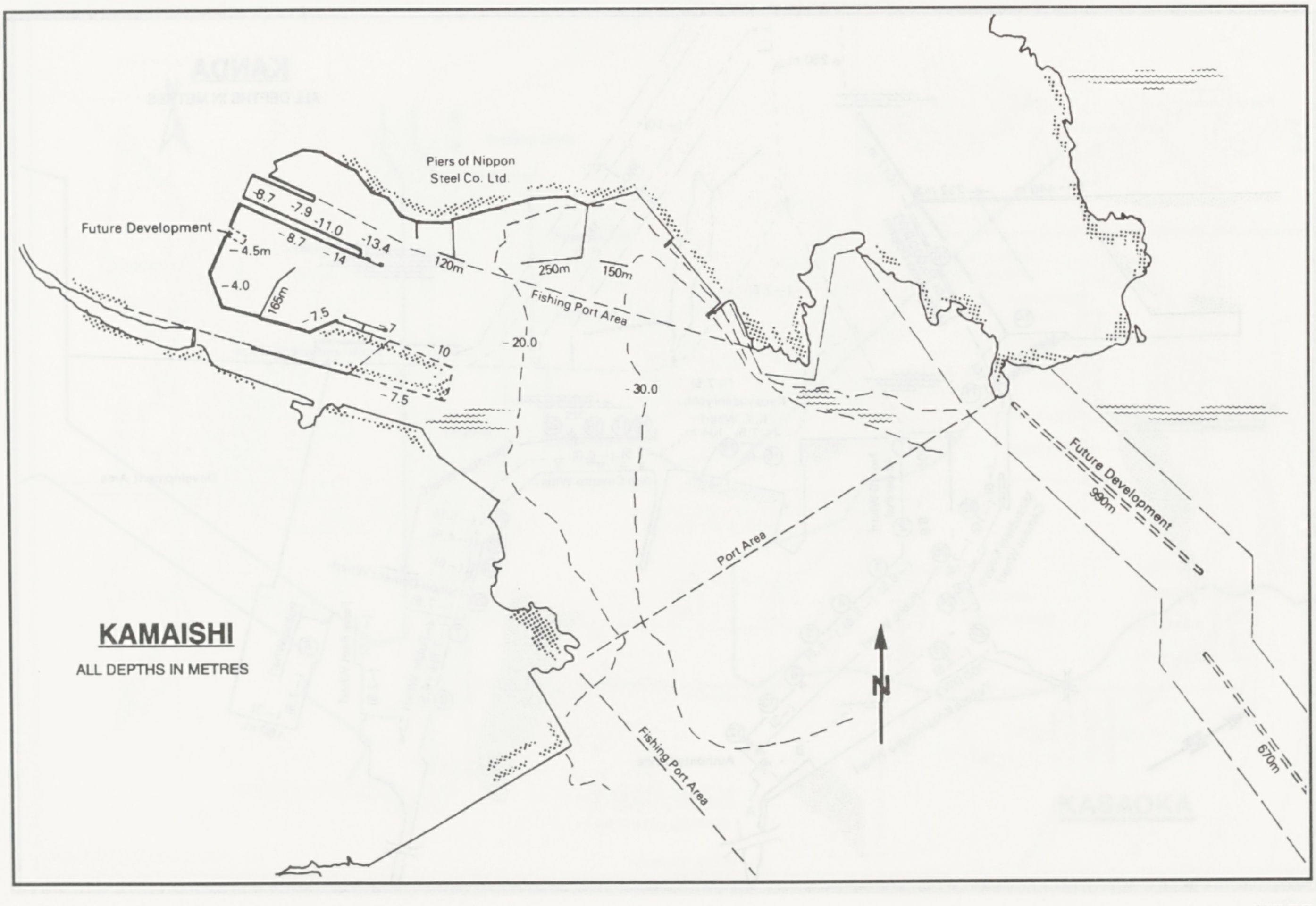


KAKOGAWA

LPG BERTH KOBE STEEL

"Plan Supplied by Ship's Master"

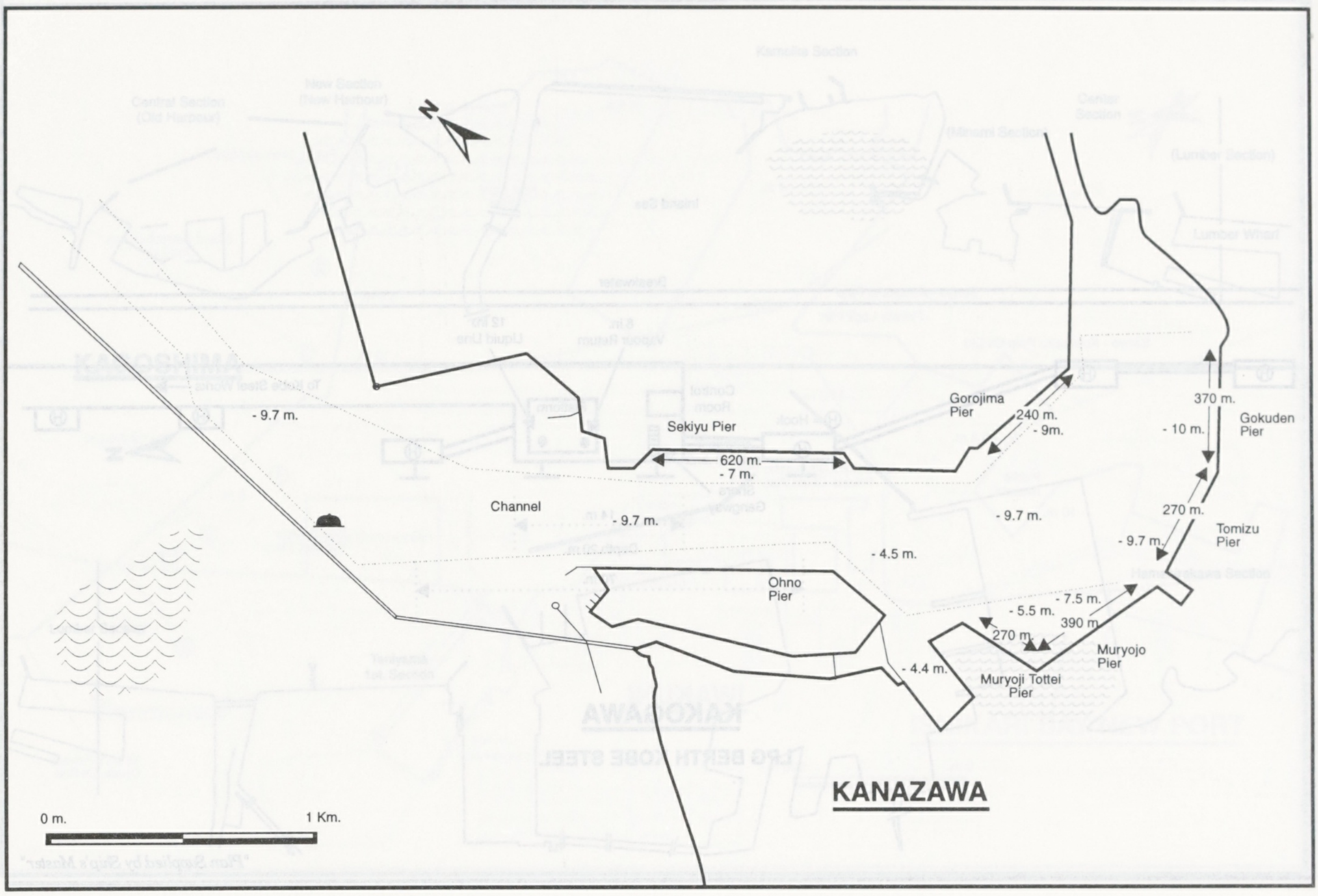
Inland Sea
Breakwater
8 in.
Vapour Return
12 in.
Liquid Line
Control
Room
Platform
To Kobe Steel Works
Ⓗ = Hook
Shore
Gangway
14 m.
Depth 20 m.
70 m.

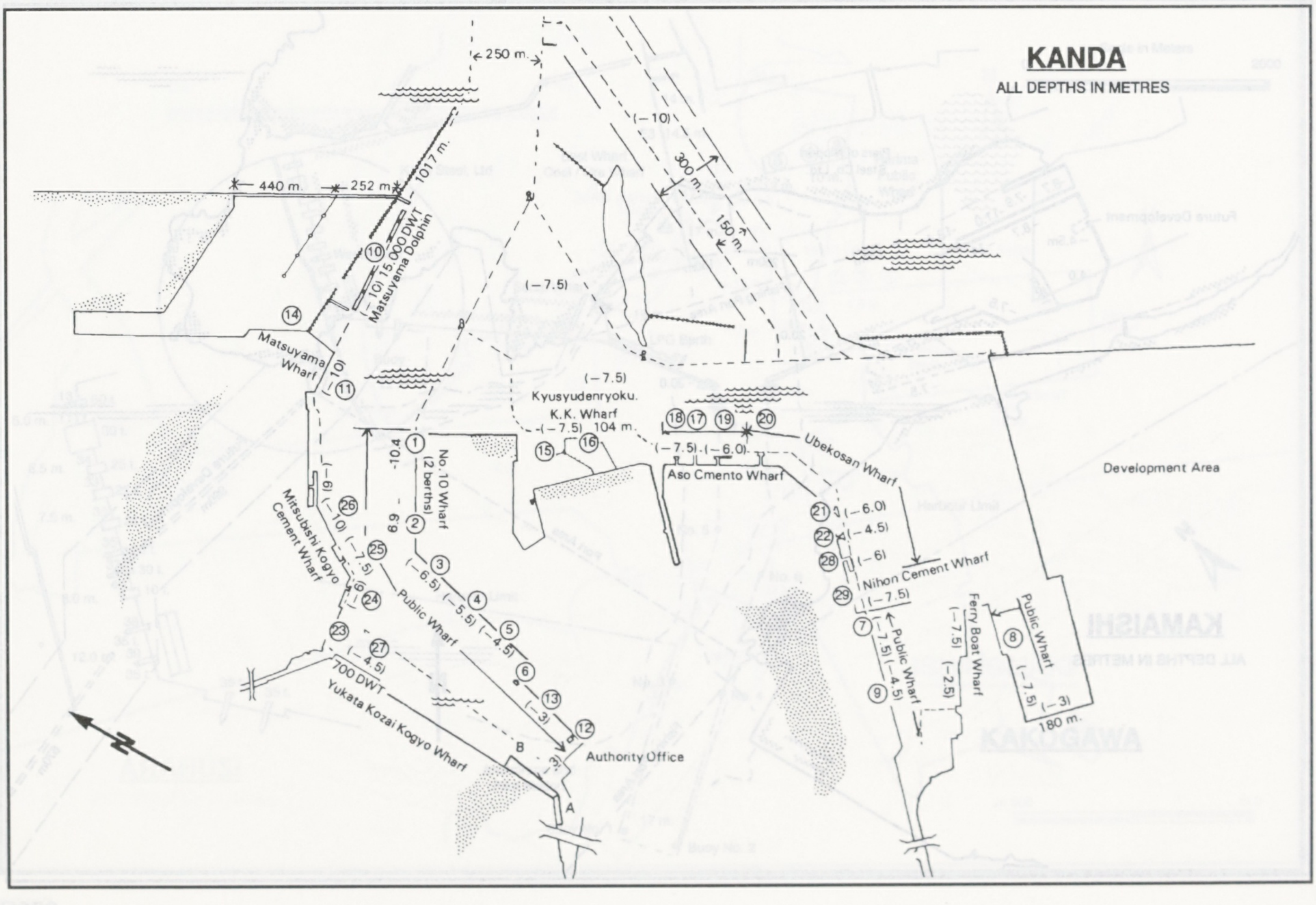


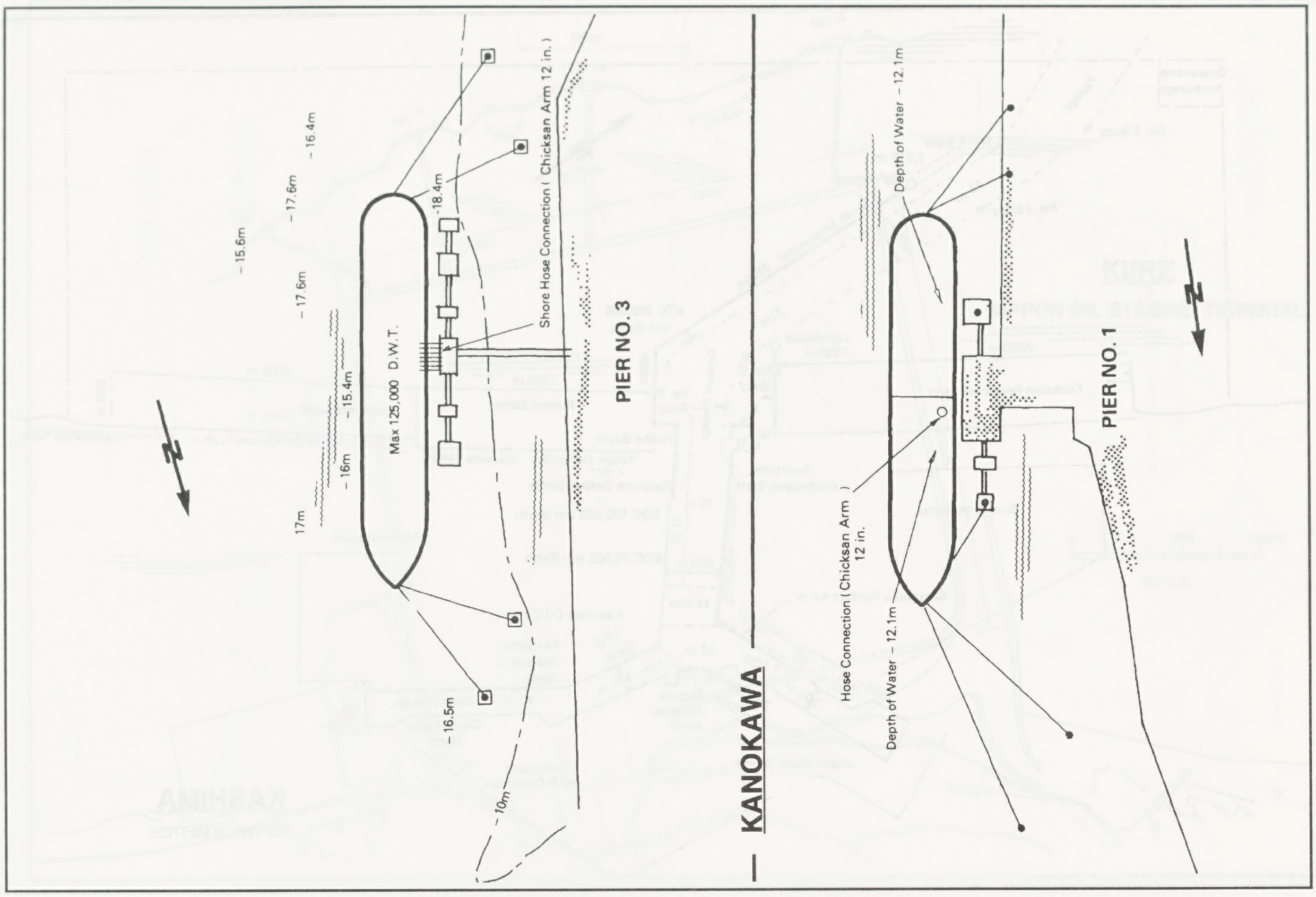
KAMAISHI

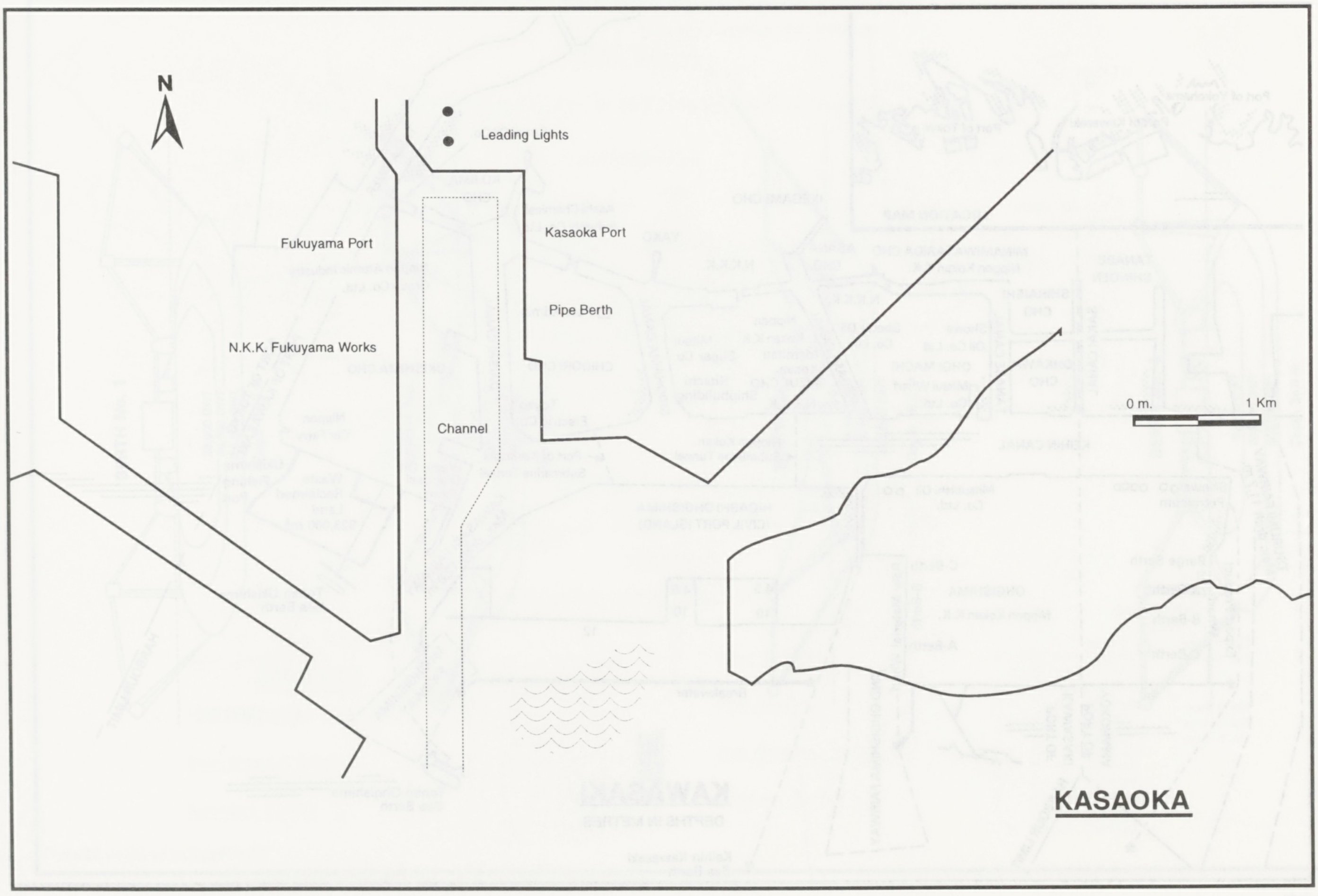
ALL DEPTHS IN METRES

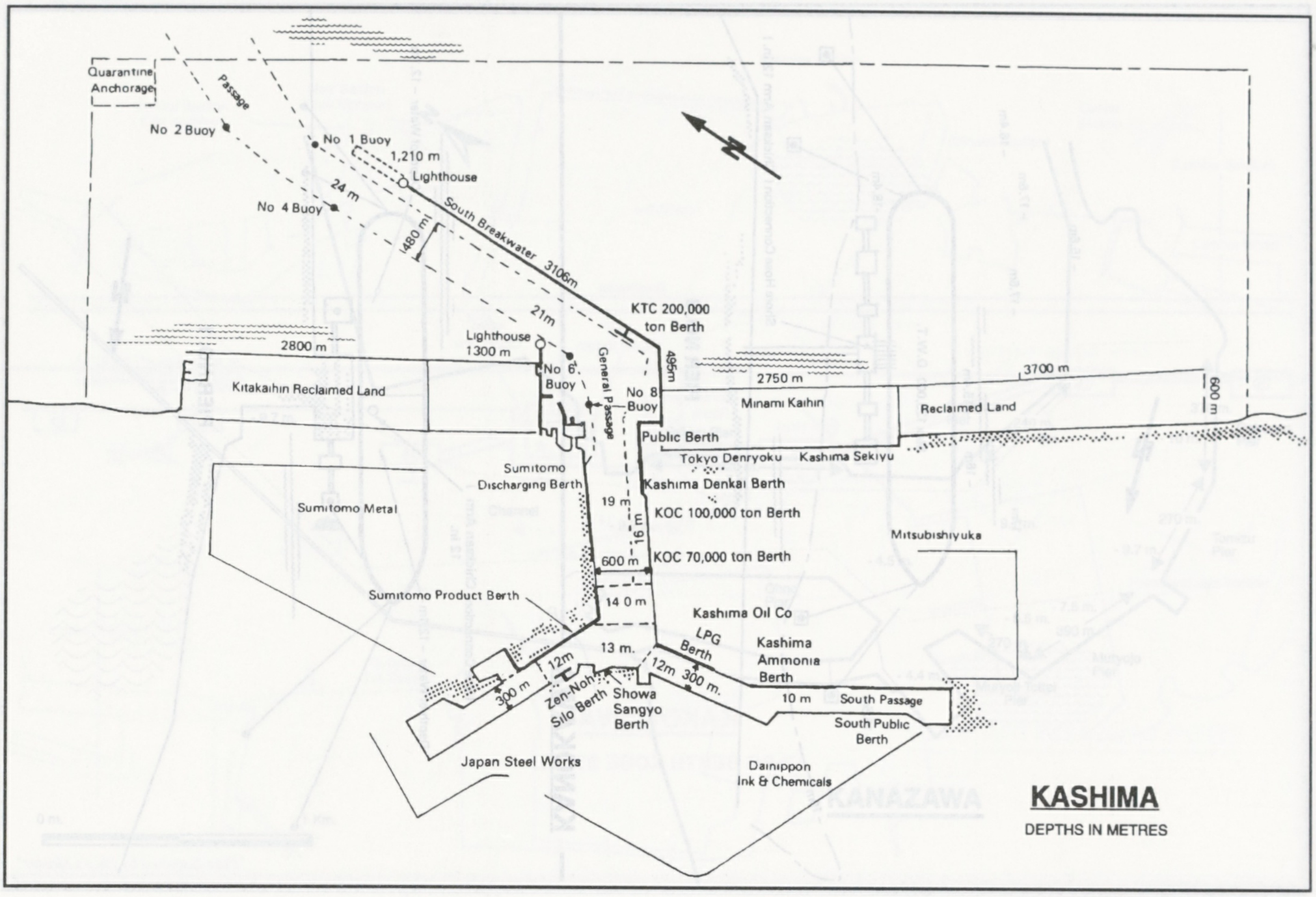
Piers of Nippon
Steel Co. Ltd.
Future Development
-8.7
-7.9
-11.0
-13.4
-8.7
-14
-4.5m
-4.0
165m
-7.5
-7
-10
-7.5
120m
250m
150m
Fishing Port Area
-20.0
-30.0
Port Area
Fishing Port Area
Future Development
990m
670m
N

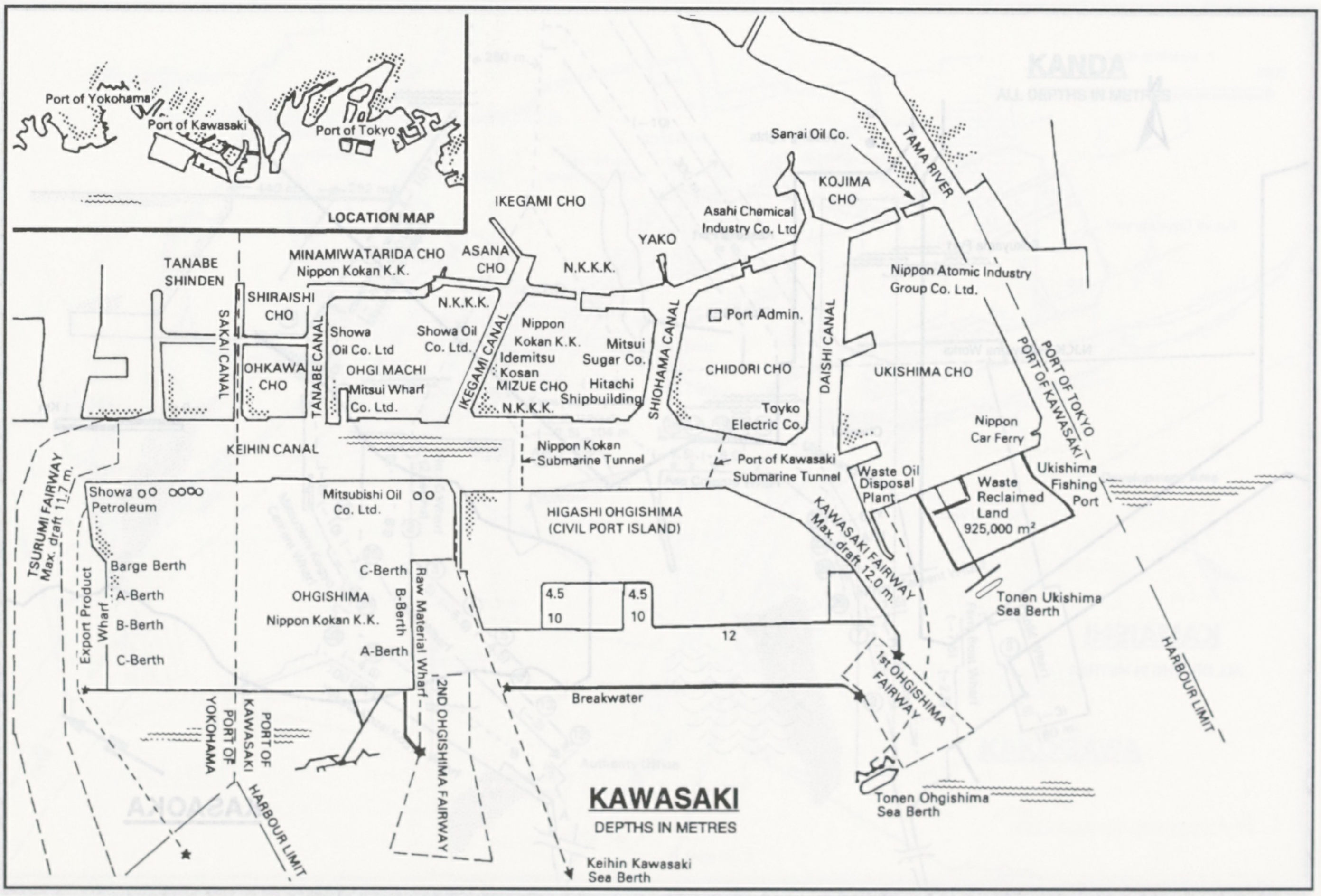

KANAZAWA
Sekiyu Pier
620 m.
- 7 m.
Gorojima Pier
240 m.
- 9m.
370 m.
Gokuden Pier
- 10 m.
- 9.7 m.
Channel
- 9.7 m.
- 9.7 m.
- 4.5 m.
Ohno Pier
270 m.
Tomizu Pier
- 9.7 m.
- 7.5 m.
- 5.5 m.
390 m.
270 m.
Muryojo Pier
- 4.4 m.
Muryoji Tottei Pier
0 m.
1 Km.


KANDA
ALL DEPTHS IN METRES
250 m.
(−10)
300 m.
150 m.
440 m.
252 m.
1017 m.
⑩ (−10) 15,000 DWT Matsuyama Dolphin
⑭
Matsuyama Wharf
(−10)
⑪
(−7.5)
(−7.5)
Kyusyudenryoku. K.K. Wharf
(−7.5) 104 m.
⑮ ⑯
⑱ ⑰ ⑲ ⑳
(−7.5) (−6.0)
Aso Cmento Wharf
Ubekosan Wharf
① No.10 Wharf (2 berths)
-10.4
6.9
②
③ ④ ⑤
(−6.5) (−5.5) (−4.5)
Public Wharf
⑥ ⑬ (−3)
⑫
Authority Office
B
A
㉖ (−9) (−10)
Mitsubishi Kogyo Cement Wharf
㉕ (−7.5)
㉔ (−6)
㉓
㉗ (−4.5)
700 DWT
Yukata Kozai Kogyo Wharf
㉑ (−6.0)
㉒ (−4.5)
㉘ (−6)
㉙
Nihon Cement Wharf
(−7.5)
⑦ (−7.5) (−4.5)
Public Wharf
⑨
Ferry Boat Wharf
(−7.5) (−2.5)
⑧
Public Wharf
(−7.5) (−3)
180 m.
Development Area

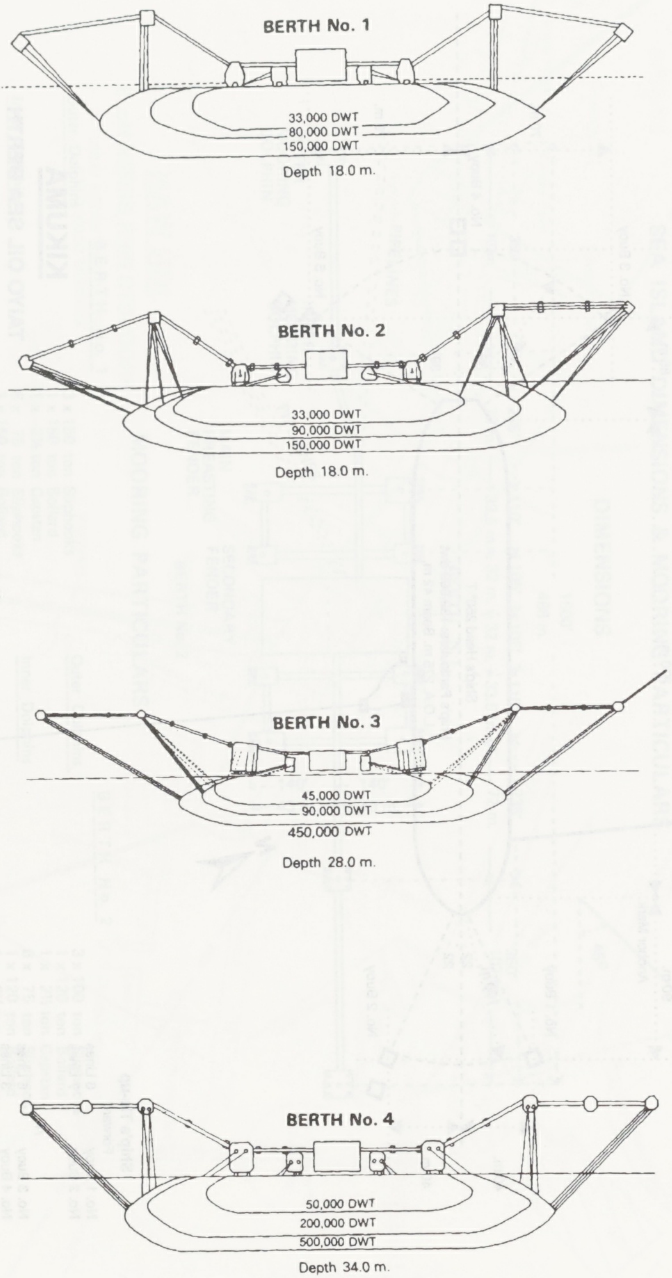

KANOKAWA
PIER NO.3
PIER NO.1
Max 125,000 D.W.T.
Shore Hose Connection (Chicksan Arm 12 in.)
Hose Connection (Chicksan Arm 12 in.)
Depth of Water – 12.1m
Depth of Water – 12.1m
– 15.6m
– 17.6m
– 16.4m
– 17.6m
– 18.4m
– 15.4m
– 16m
17m
– 16.5m
10m
N
N

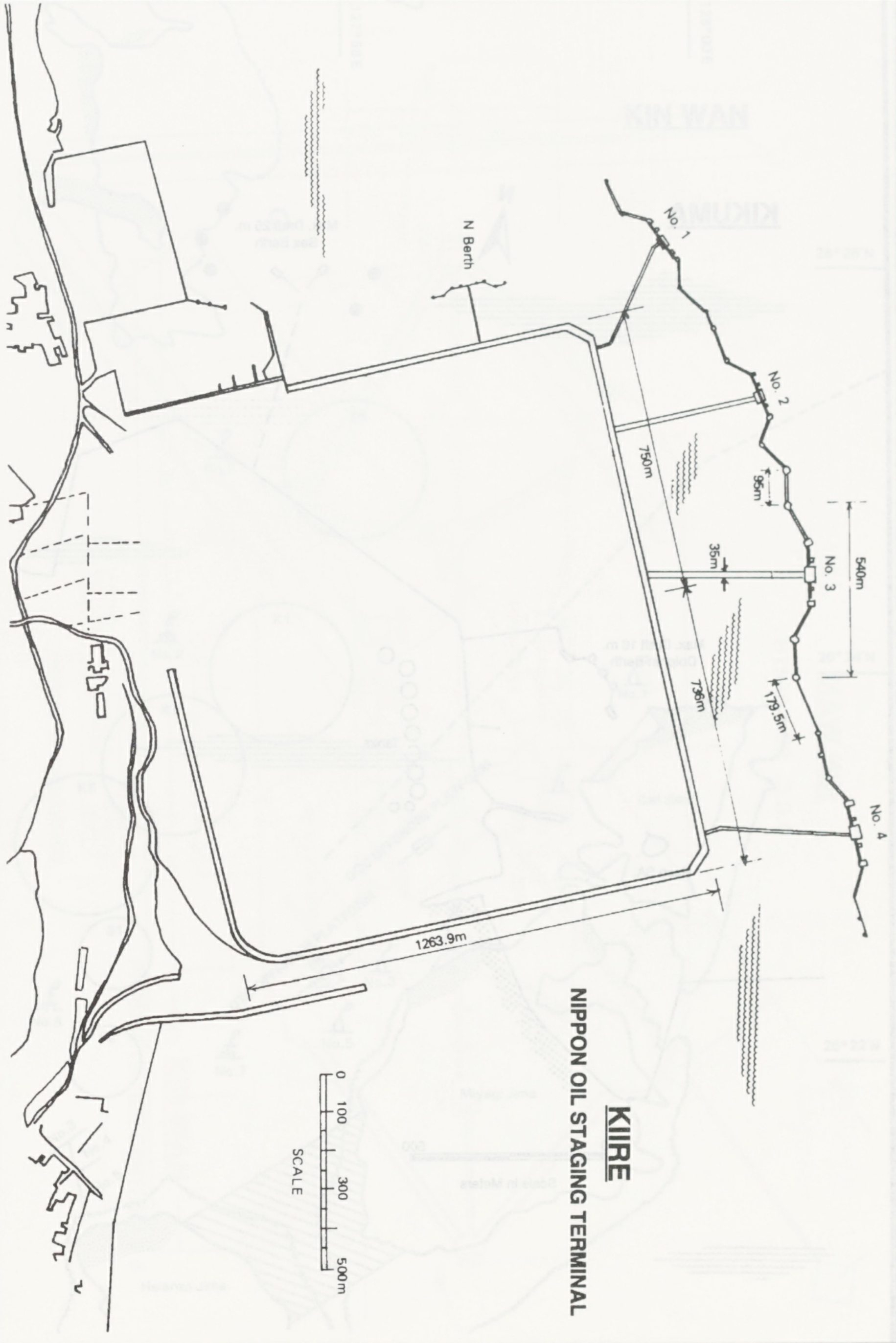

KASAOKA
N
Leading Lights
Fukuyama Port
Kasaoka Port
Pipe Berth
N.K.K. Fukuyama Works
Channel
0 m.
1 Km


Quarantine Anchorage
Passage
No 2 Buoy
No 1 Buoy
1,210 m
Lighthouse
24 m
No 4 Buoy
South Breakwater 3106m
480 m
21m
KTC 200,000 ton Berth
Lighthouse 1300 m
2800 m
No 6 Buoy
General Passage
495m
No 8 Buoy
2750 m
3700 m
600 m
Kitakaihin Reclaimed Land
Minami Kaihin
Reclaimed Land
Public Berth
Tokyo Denryoku
Kashima Sekiyu
Sumitomo Discharging Berth
Kashima Denkai Berth
19 m
16 m
KOC 100,000 ton Berth
Sumitomo Metal
Mitsubishiyuka
600 m
KOC 70,000 ton Berth
Sumitomo Product Berth
14 0 m
Kashima Oil Co
13 m.
LPG Berth
Kashima Ammonia Berth
12m
12m
300 m
300 m.
Zen-Noh Silo Berth
Showa Sangyo Berth
10 m
South Passage
South Public Berth
Japan Steel Works
Dainippon Ink & Chemicals
KASHIMA
DEPTHS IN METRES

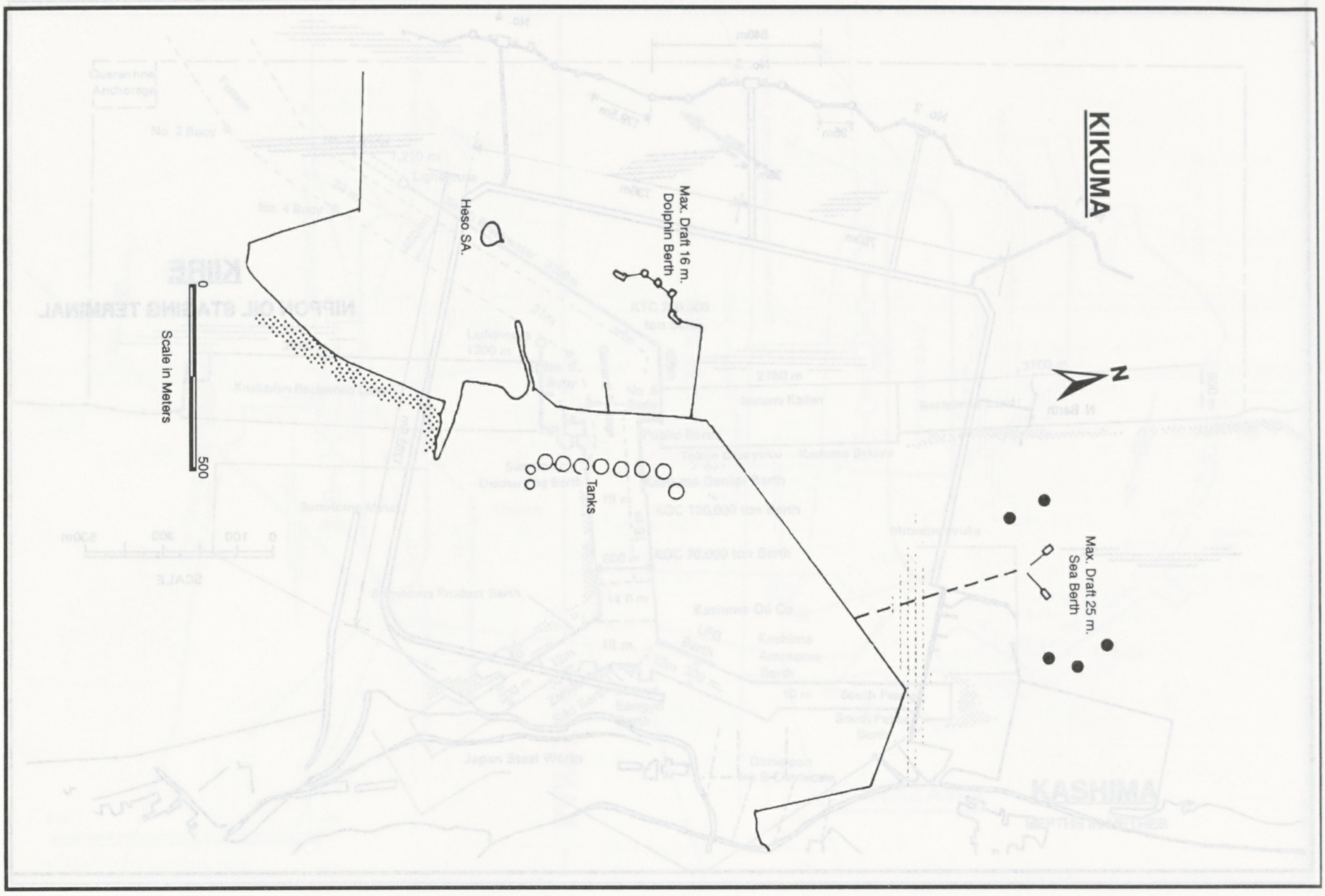

Port of Yokohama
Port of Kawasaki
Port of Tokyo
LOCATION MAP
San-ai Oil Co.
TAMA RIVER
KOJIMA CHO
IKEGAMI CHO
Asahi Chemical Industry Co. Ltd
YAKO
TANABE SHINDEN
MINAMIWATARIDA CHO
Nippon Kokan K.K.
ASANA CHO
N.K.K.K.
Nippon Atomic Industry Group Co. Ltd.
SHIRAISHI CHO
N.K.K.K.
Port Admin.
SAKAI CANAL
TANABE CANAL
Showa Oil Co. Ltd
Showa Oil Co. Ltd.
IKEGAMI CANAL
Nippon Kokan K.K.
Mitsui Sugar Co.
SHIOHAMA CANAL
DAISHI CANAL
OHKAWA CHO
OHGI MACHI
Idemitsu Kosan
MIZUE CHO
Hitachi Shipbuilding
CHIDORI CHO
UKISHIMA CHO
PORT OF TOKYO
PORT OF KAWASAKI
Mitsui Wharf Co. Ltd.
N.K.K.K.
Toyko Electric Co.
Nippon Car Ferry
KEIHIN CANAL
Nippon Kokan Submarine Tunnel
Port of Kawasaki Submarine Tunnel
TSURUMI FAIRWAY Max. draft 11.7 m.
Showa Petroleum
Mitsubishi Oil Co. Ltd.
HIGASHI OHGISHIMA (CIVIL PORT ISLAND)
KAWASAKI FAIRWAY Max. draft 12.0 m.
Waste Oil Disposal Plant
Waste Reclaimed Land 925,000 m²
Ukishima Fishing Port
Barge Berth
A-Berth
B-Berth
C-Berth
Export Product Wharf
OHGISHIMA
Nippon Kokan K.K.
C-Berth
B-Berth
A-Berth
Raw Material Wharf
4.5
10
4.5
10
12
Tonen Ukishima Sea Berth
1st OHGISHIMA FAIRWAY
HARBOUR LIMIT
Breakwater
PORT OF KAWASAKI
PORT OF YOKOHAMA
HARBOUR LIMIT
2ND OHGISHIMA FAIRWAY
Tonen Ohgishima Sea Berth
KAWASAKI
DEPTHS IN METRES
Keihin Kawasaki Sea Berth

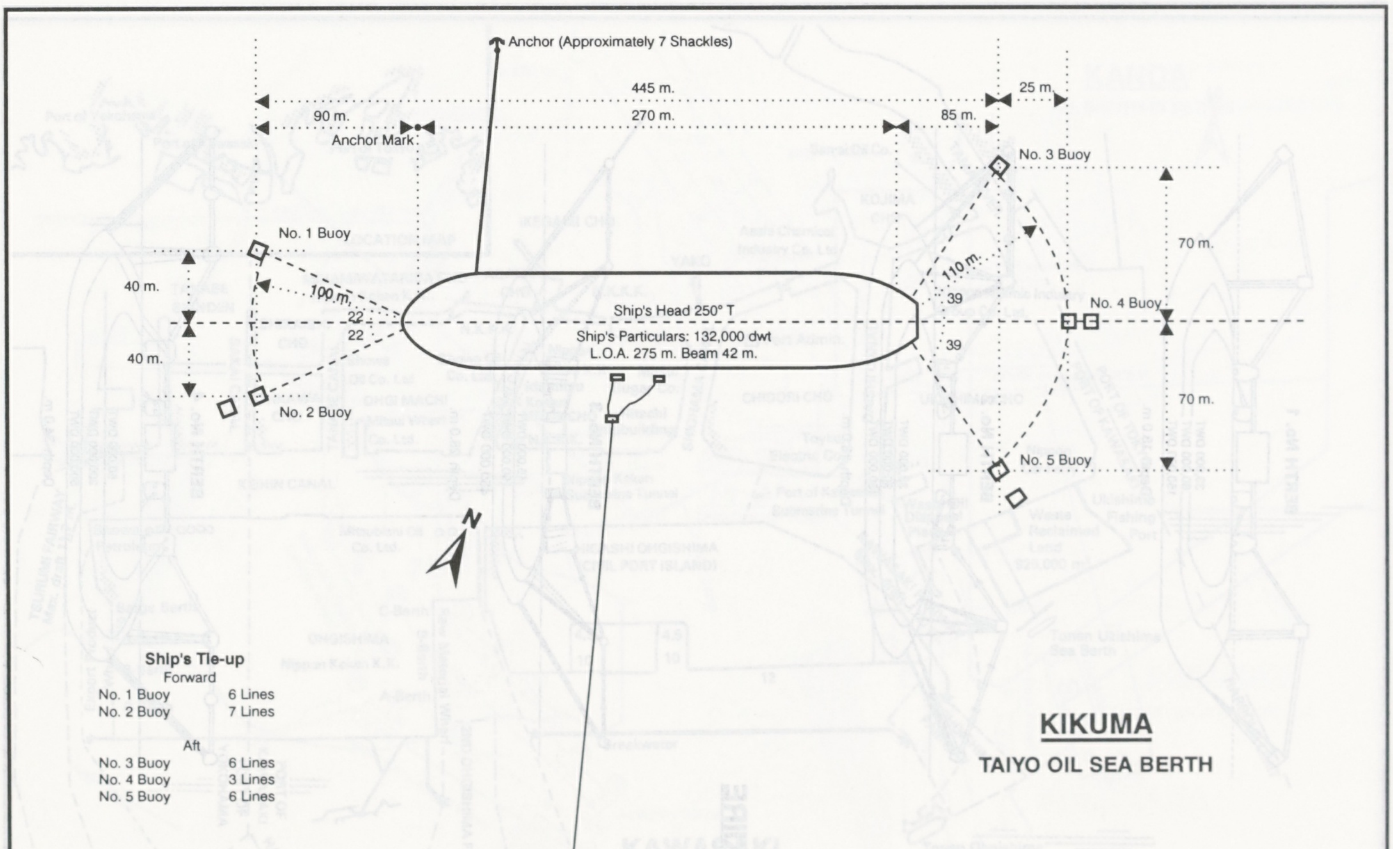
KIIRE


BERTH No. 1
33,000 DWT
80,000 DWT
150,000 DWT
Depth 18.0 m.
BERTH No. 2
33,000 DWT
90,000 DWT
150,000 DWT
Depth 18.0 m.
BERTH No. 3
45,000 DWT
90,000 DWT
450,000 DWT
Depth 28.0 m.
BERTH No. 4
50,000 DWT
200,000 DWT
500,000 DWT
Depth 34.0 m.


N Berth
No. 1
No. 2
No. 3
No. 4
750m
95m
35m
540m
736m
179.5m
1263.9m
0
100
300
500m
SCALE

KIIRE
NIPPON OIL STAGING TERMINAL


KIKUMA
Max. Draft 16 m.
Dolphin Berth
Heso SA.
Scale in Meters
0
500
Tanks
N
Max. Draft 25 m.
Sea Berth


Anchor (Approximately 7 Shackles)
445 m.
25 m.
90 m.
270 m.
85 m.
Anchor Mark
No. 3 Buoy
No. 1 Buoy
70 m.
40 m.
100 m.
22
22
Ship's Head 250° T
Ship's Particulars: 132,000 dwt
L.O.A. 275 m. Beam 42 m.
110 m.
39
39
No. 4 Buoy
40 m.
No. 2 Buoy
70 m.
No. 5 Buoy
N

Ship's Tie-up

Forward

No. 1 Buoy	6 Lines
No. 2 Buoy	7 Lines

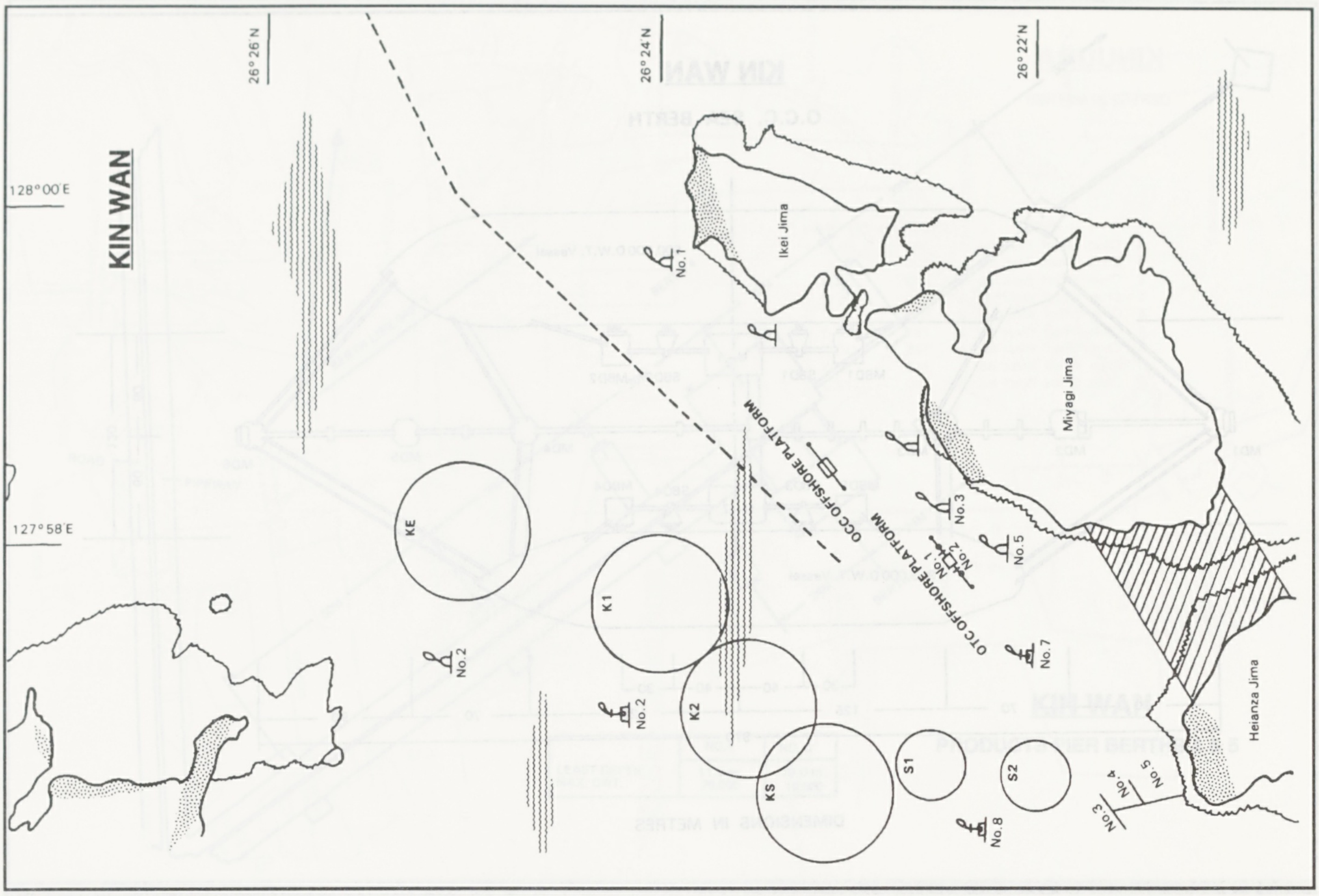
Aft

No. 3 Buoy	6 Lines
No. 4 Buoy	3 Lines
No. 5 Buoy	6 Lines

KIKUMA

TAIYO OIL SEA BERTH

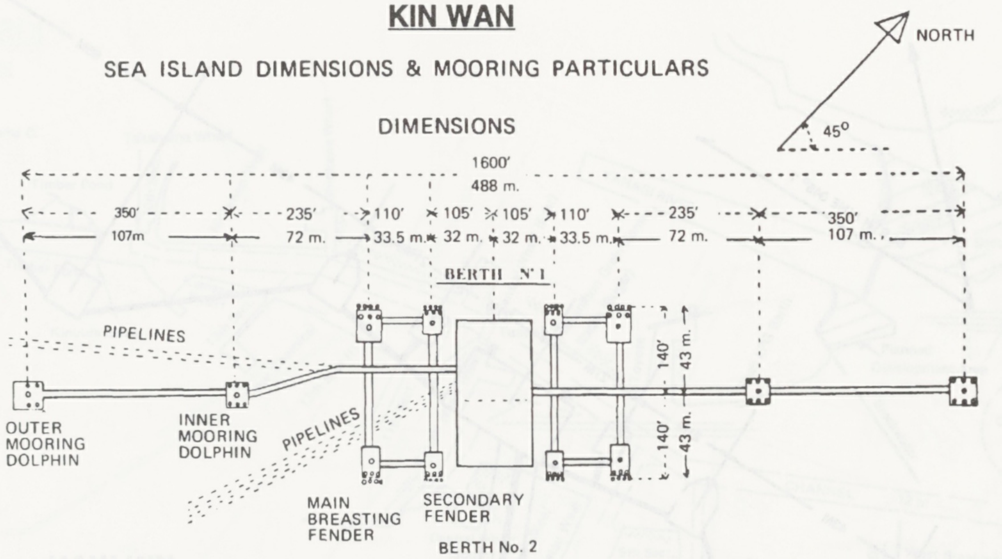
"Plan Supplied by Ship's Master"


KIN WAN
26°26'N
26°24'N
26°22'N
128°00'E
127°58'E
Ikei Jima
Miyagi Jima
Heianza Jima
OCC OFFSHORE PLATFORM
OTC OFFSHORE PLATFORM
No.1
No.2
No.3
No.5
No.7
No.8
No.2
No.1
No.2
No.3
No.4
No.5
KE
K1
K2
KS
S1
S2

KIN WAN

SEA ISLAND DIMENSIONS & MOORING PARTICULARS

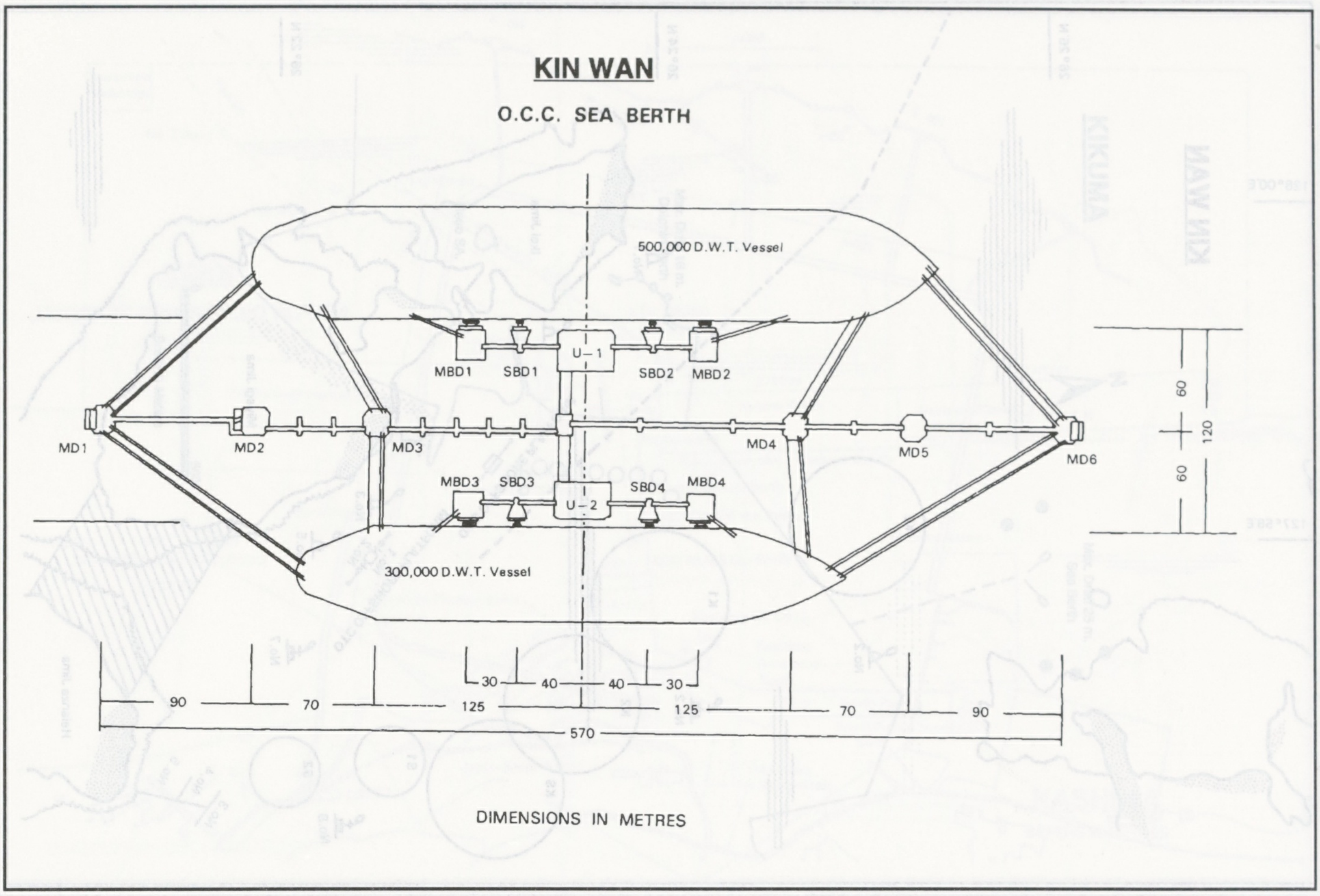
DIMENSIONS


NORTH
45°
1600'
488 m.
350'
107m
235'
72 m.
110'
33.5 m.
105'
32 m.
105'
32 m.
110'
33.5 m.
235'
72 m.
350'
107 m.
BERTH N°1
PIPELINES
PIPELINES
OUTER MOORING DOLPHIN
INNER MOORING DOLPHIN
MAIN BREASTING FENDER
SECONDARY FENDER
BERTH No. 2
140'
43 m.
140'
43 m.

MOORING PARTICULARS

BERTH No. 1	
Outer Dolphins	3 x 150 ton Sliphooks 1 x 150 ton Bollard 1 x 2½ ton Capstan
Inner Dolphins	6 x 75 ton Sliphooks 1 x 150 ton Bollard 1 x 2½ ton Capstan
Main Breasting Fenders	3 x 75 ton Sliphooks 2 x 100 ton Bollards 1 x 2½ ton Capstan
Secondary Fenders	3 x 75 ton Sliphooks 2 x 100 ton Bollards 1 x 2½ ton Capstan

BERTH No. 2	
Outer Dolphins	3 x 100 ton Sliphooks 1 x 120 ton Bollard 1 x 2½ ton Capstan
Inner Dolphins	6 x 75 ton Sliphooks 1 x 120 ton Bollard 1 x 2½ ton Capstan
Main Breasting Fenders	3 x 50 ton Sliphooks 2 x 75 ton Bollard 1 x 2½ ton Capstan
Secondary Fenders	3 x 50 ton Sliphooks 2 x 75 ton Bollard 1 x 2½ ton Capstan

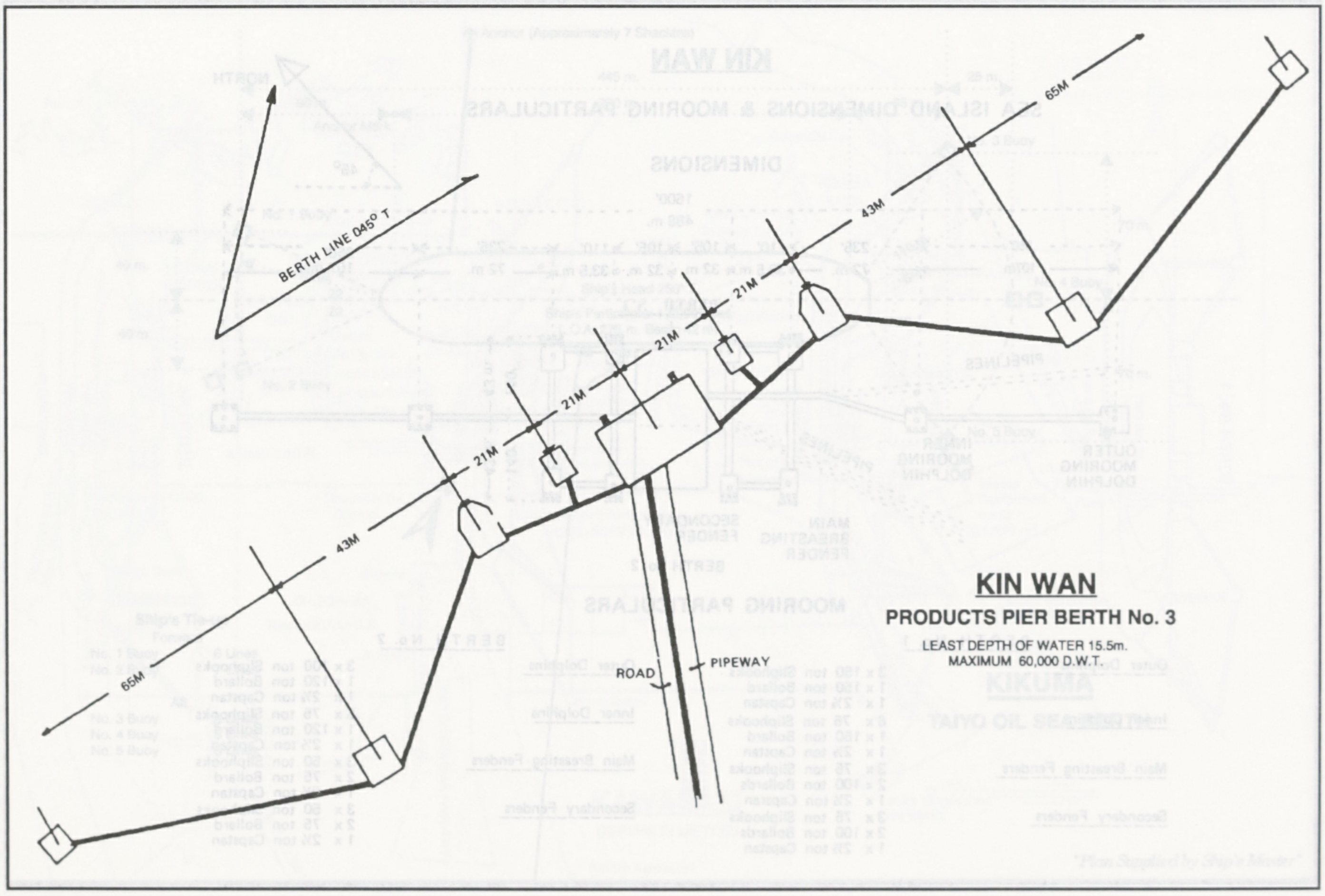


KIN WAN

O.C.C. SEA BERTH

500,000 D.W.T. Vessel
300,000 D.W.T. Vessel
U – 1
U – 2
MBD1
SBD1
SBD2
MBD2
MBD3
SBD3
SBD4
MBD4
MD1
MD2
MD3
MD4
MD5
MD6
60
60
120
30
40
40
30
90
70
125
125
70
90
570

DIMENSIONS IN METRES

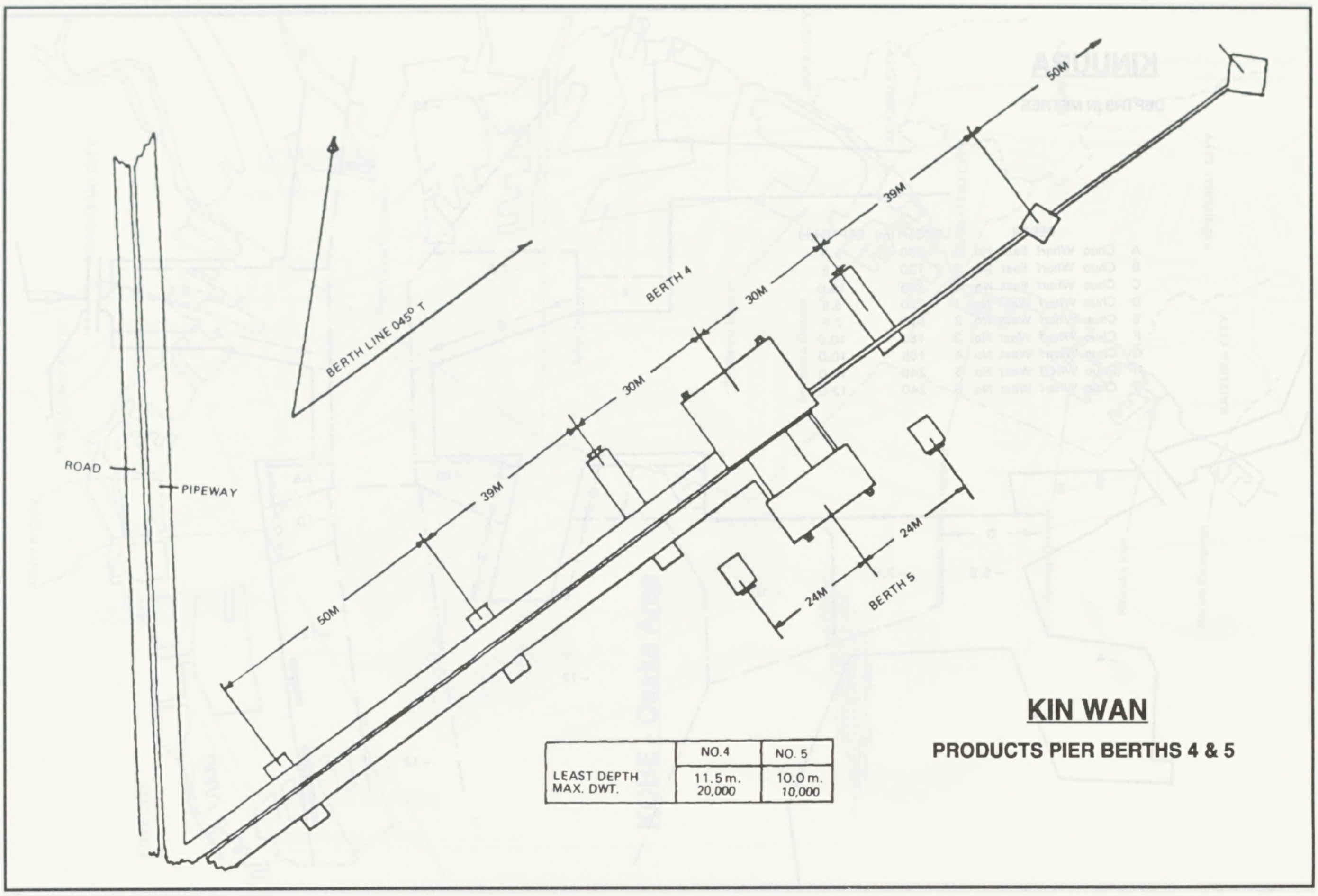


KIN WAN

PRODUCTS PIER BERTH No. 3

LEAST DEPTH OF WATER 15.5m.
MAXIMUM 60,000 D.W.T.

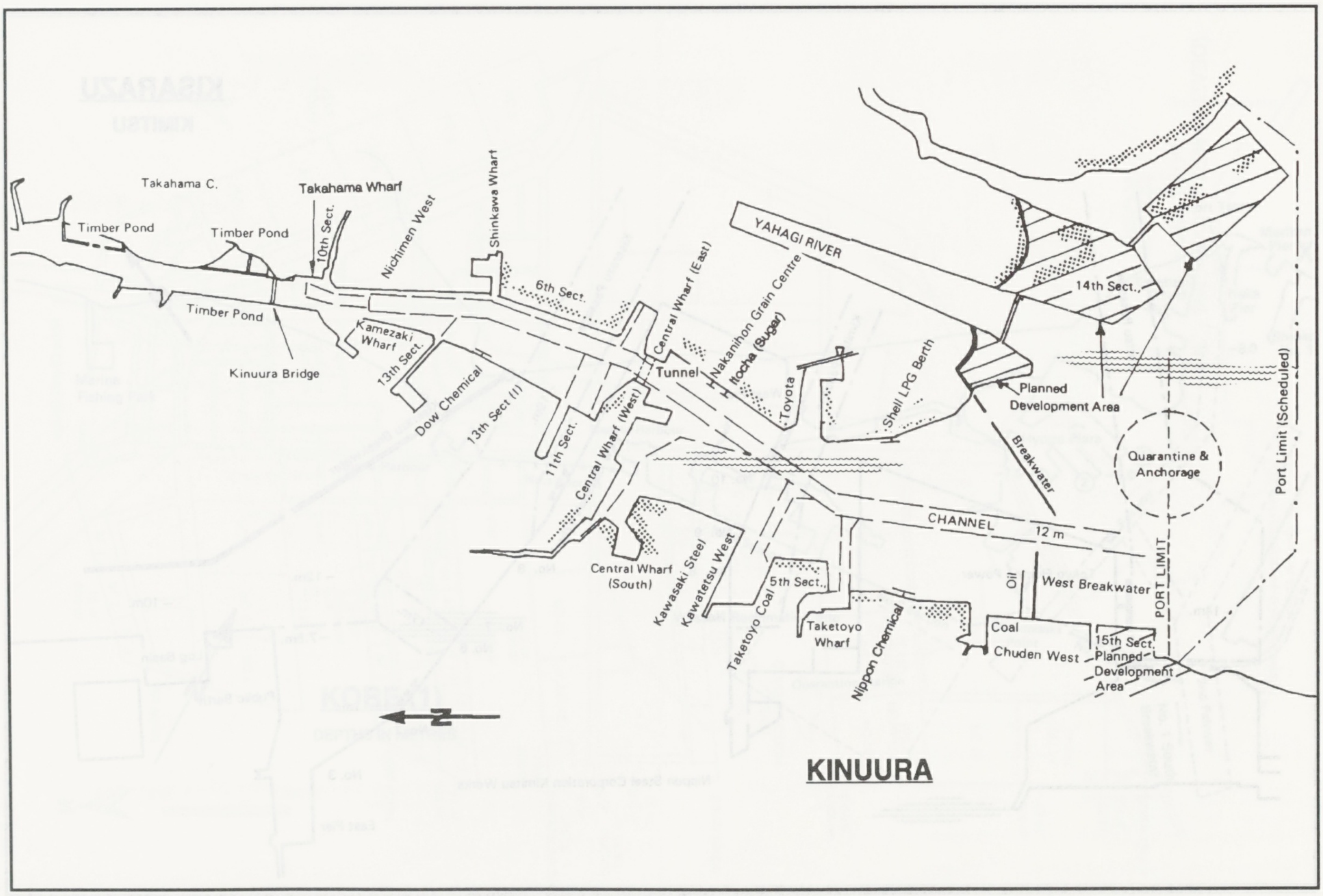
BERTH LINE 045° T
65M
43M
21M
21M
21M
21M
43M
65M
ROAD
PIPEWAY


50M
39M
30M
BERTH 4
30M
39M
50M
BERTH LINE 045° T
ROAD
PIPEWAY
24M
24M
BERTH 5

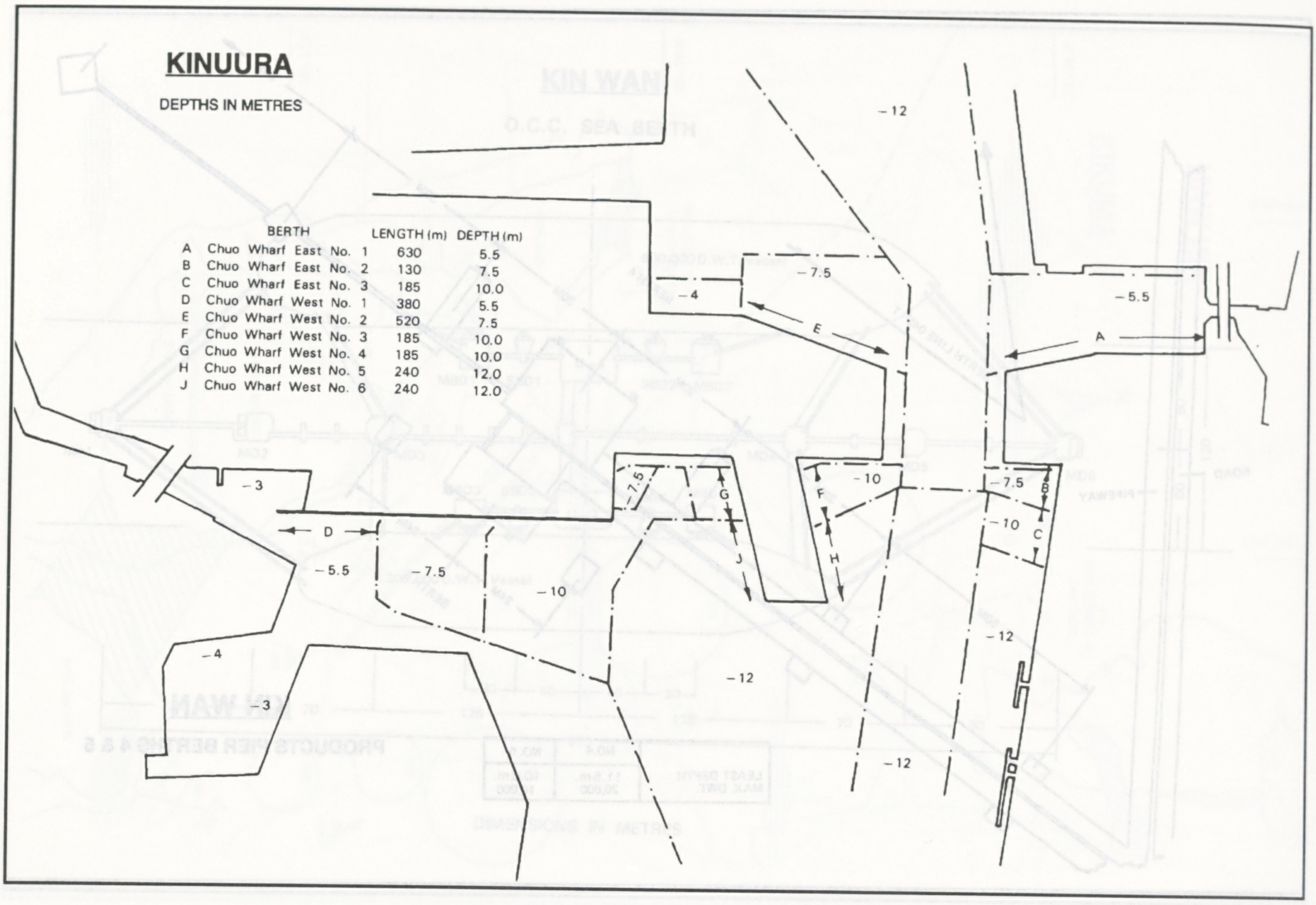
	NO.4	NO. 5
LEAST DEPTH MAX. DWT.	11.5 m. *20,000*	10.0 m. *10,000*

KIN WAN

PRODUCTS PIER BERTHS 4 & 5


Takahama C.
Takahama Wharf
Timber Pond
Timber Pond
Timber Pond
Kinuura Bridge
10th Sect.
Nichimen West
Shinkawa Wharf
6th Sect.
Kamezaki Wharf
13th Sect.
Dow Chemical
13th Sect (I)
11th Sect.
Central Wharf (East)
Central Wharf (West)
Tunnel
Nakanihon Grain Centre
Itocha (Sugar)
Toyota
Shell LPG Berth
YAHAGI RIVER
14th Sect.
Planned Development Area
Breakwater
Quarantine & Anchorage
Port Limit (Scheduled)
CHANNEL 12 m
PORT LIMIT
Central Wharf (South)
Kawasaki Steel
Kawatetsu West
Taketoyo Coal
5th Sect.
Taketoyo Wharf
Nippon Chemical
Oil
West Breakwater
Coal
Chuden West
15th Sect. Planned Development Area
N

KINUURA

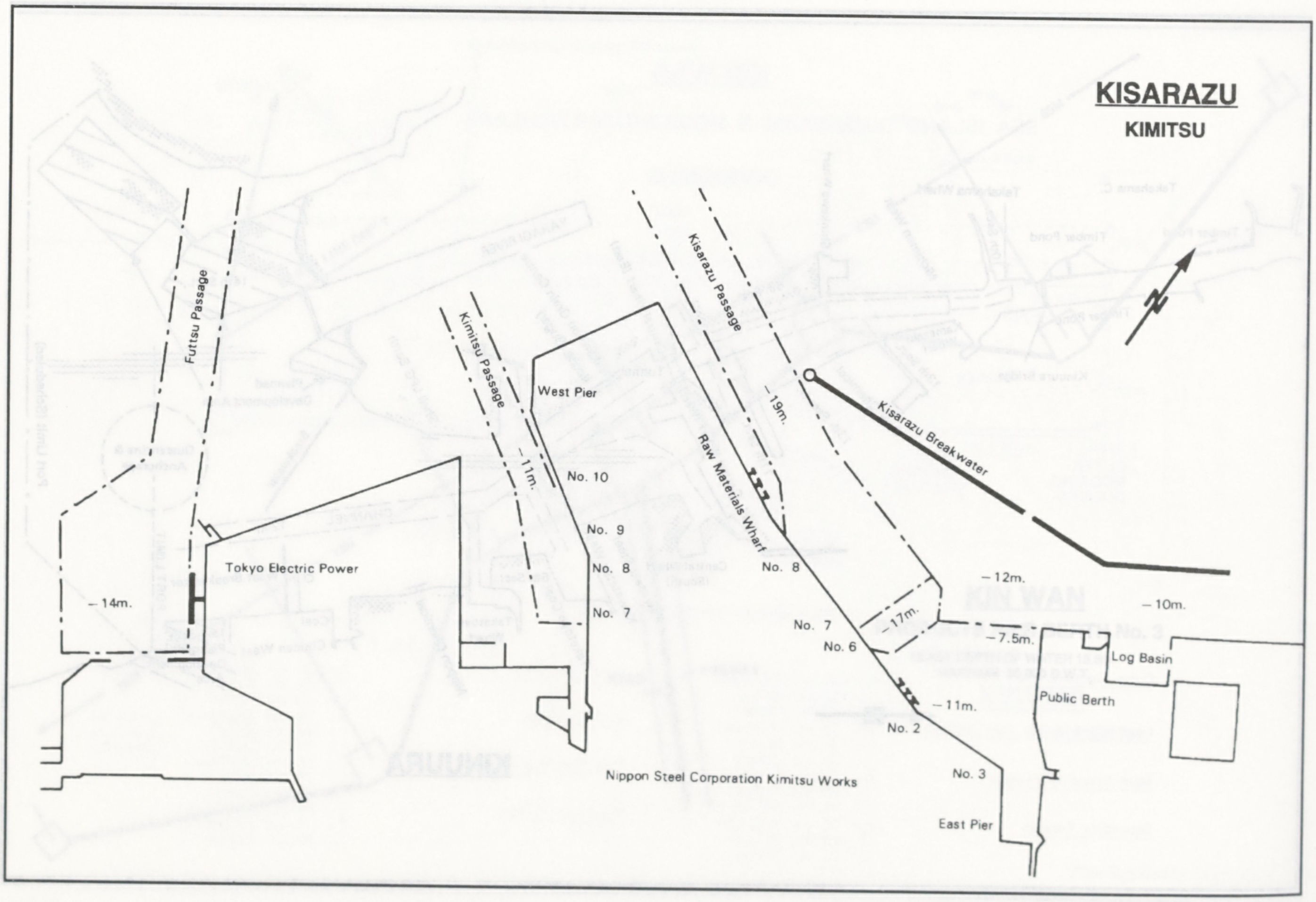


KINUURA

DEPTHS IN METRES

	BERTH	LENGTH (m)	DEPTH (m)
A	Chuo Wharf East No. 1	630	5.5
B	Chuo Wharf East No. 2	130	7.5
C	Chuo Wharf East No. 3	185	10.0
D	Chuo Wharf West No. 1	380	5.5
E	Chuo Wharf West No. 2	520	7.5
F	Chuo Wharf West No. 3	185	10.0
G	Chuo Wharf West No. 4	185	10.0
H	Chuo Wharf West No. 5	240	12.0
J	Chuo Wharf West No. 6	240	12.0

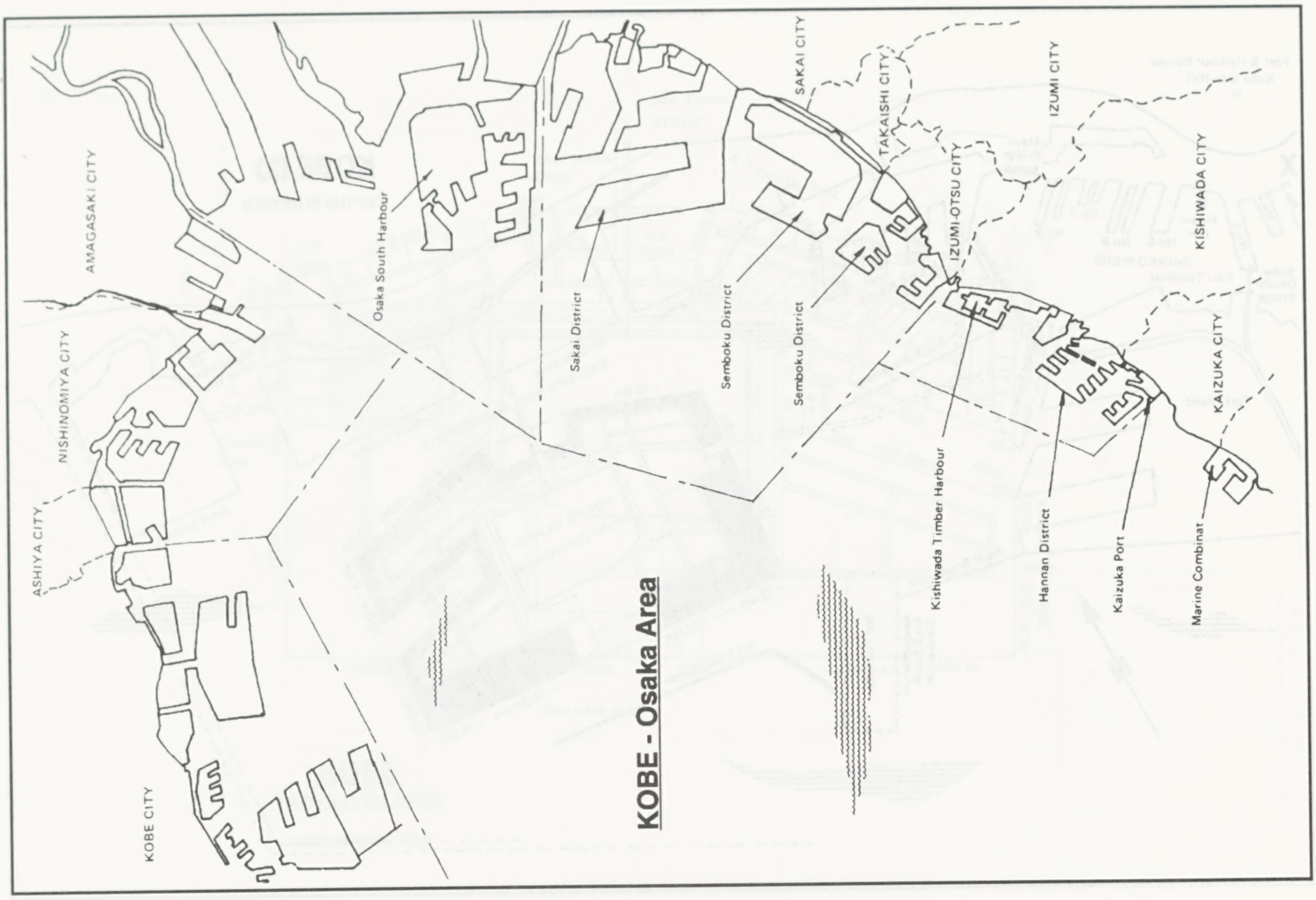
–12
–7.5
–4
–5.5
E
A
–10
–7.5
B
–10
C
F
H
G
J
–7.5
–3
D
–5.5
–7.5
–10
–4
–3
–12
–12
–12



KISARAZU

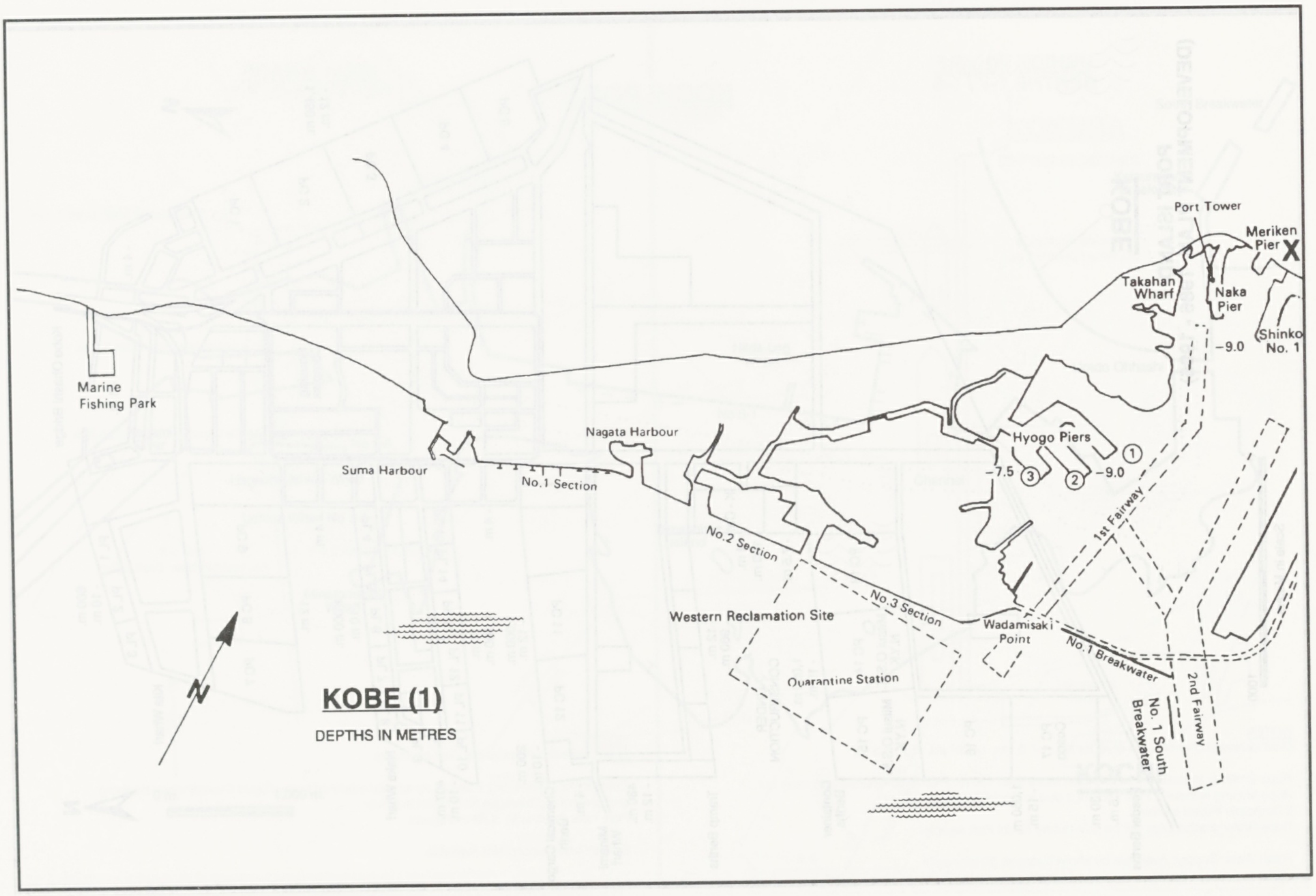
KIMITSU

Futtsu Passage
Kimitsu Passage
Kisarazu Passage
–19m.
Kisarazu Breakwater
West Pier
–11m.
Raw Materials Wharf
No. 10
No. 9
No. 8
No. 7
No. 8
Tokyo Electric Power
–14m.
–12m.
–10m.
No. 7
–17m.
No. 6
–7.5m.
Log Basin
Public Berth
–11m.
No. 2
No. 3
East Pier
Nippon Steel Corporation Kimitsu Works



KOBE - Osaka Area

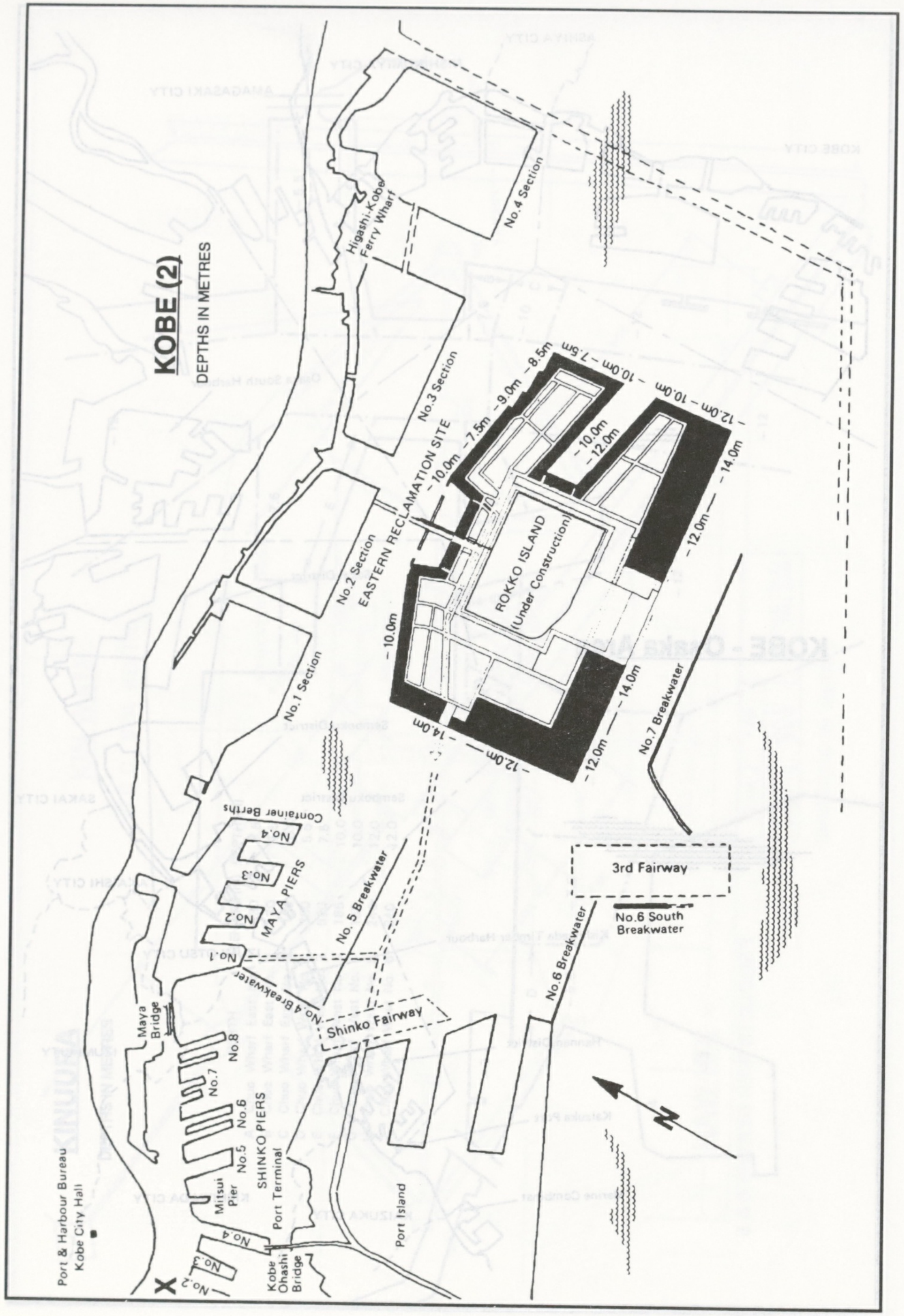
AMAGASAKI CITY
NISHINOMIYA CITY
ASHIYA CITY
KOBE CITY
Osaka South Harbour
Sakai District
Semboku District
Semboku District
SAKAI CITY
TAKAISHI CITY
IZUMI-OTSU CITY
IZUMI CITY
KISHIWADA CITY
KAIZUKA CITY
Kishiwada Timber Harbour
Hannan District
Kaizuka Port
Marine Combinat



KOBE (1)

DEPTHS IN METRES

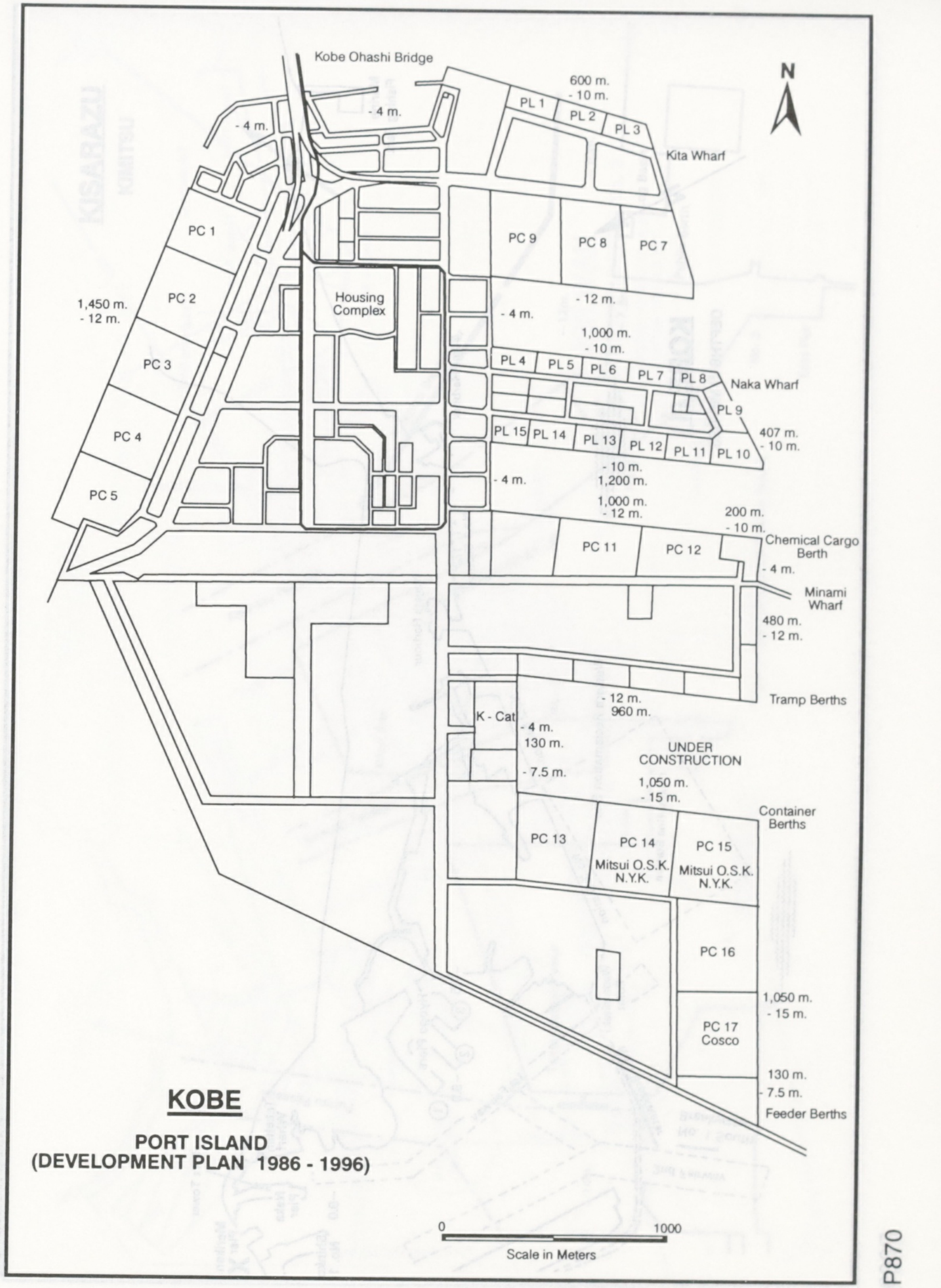
Port Tower
Meriken Pier
X
Takahan Wharf
Naka Pier
Shinko No. 1
−9.0
Marine Fishing Park
Hyogo Piers
①
−7.5
③
②
−9.0
Nagata Harbour
Suma Harbour
No.1 Section
1st Fairway
No.2 Section
No.3 Section
Western Reclamation Site
Wadamisaki Point
No.1 Breakwater
Quarantine Station
No. 1 South Breakwater
2nd Fairway
N



KOBE (2)

DEPTHS IN METRES

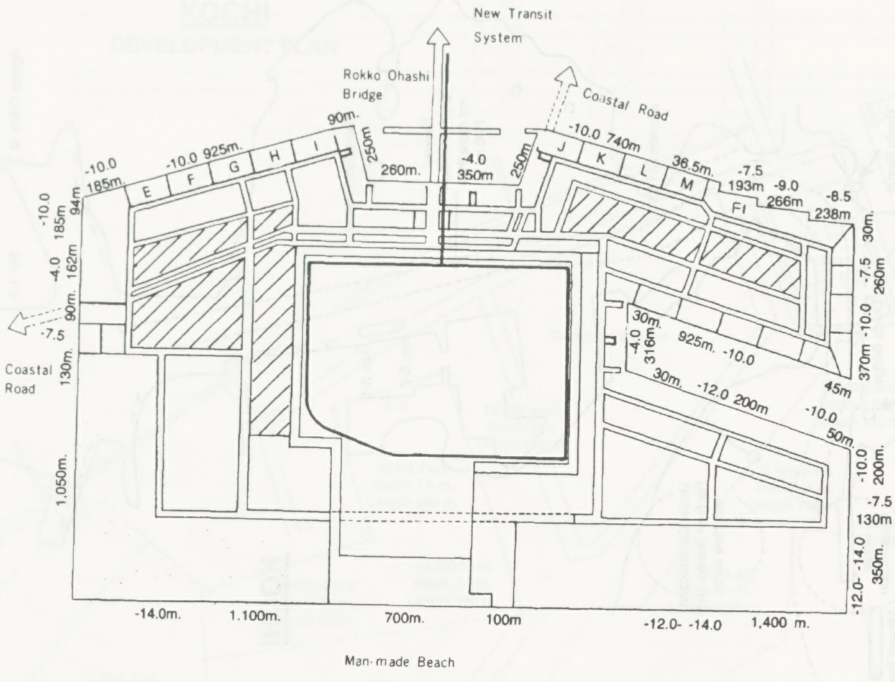
Higashi-Kobe Ferry Wharf
No.4 Section
No.3 Section
No.2 Section
No.1 Section
EASTERN RECLAMATION SITE
ROKKO ISLAND (Under Construction)
8.5m
7.5m
9.0m
7.5m
10.0m
10.0m
10.0m
12.0m
10.0m
12.0m
14.0m
12.0m
14.0m
12.0m
12.0m
14.0m
10.0m
No.7 Breakwater
3rd Fairway
No.6 South Breakwater
No.6 Breakwater
Container Berths
No.4
No.3
No.2
No.1
MAYA PIERS
No.5 Breakwater
No.4 Breakwater
Shinko Fairway
Maya Bridge
No.8
No.7
No.6
No.5
SHINKO PIERS
Mitsui Pier
Port Terminal
No.4
No.3
No.2
Kobe Ohashi Bridge
Port Island
Port & Harbour Bureau
Kobe City Hall
X
N



KOBE

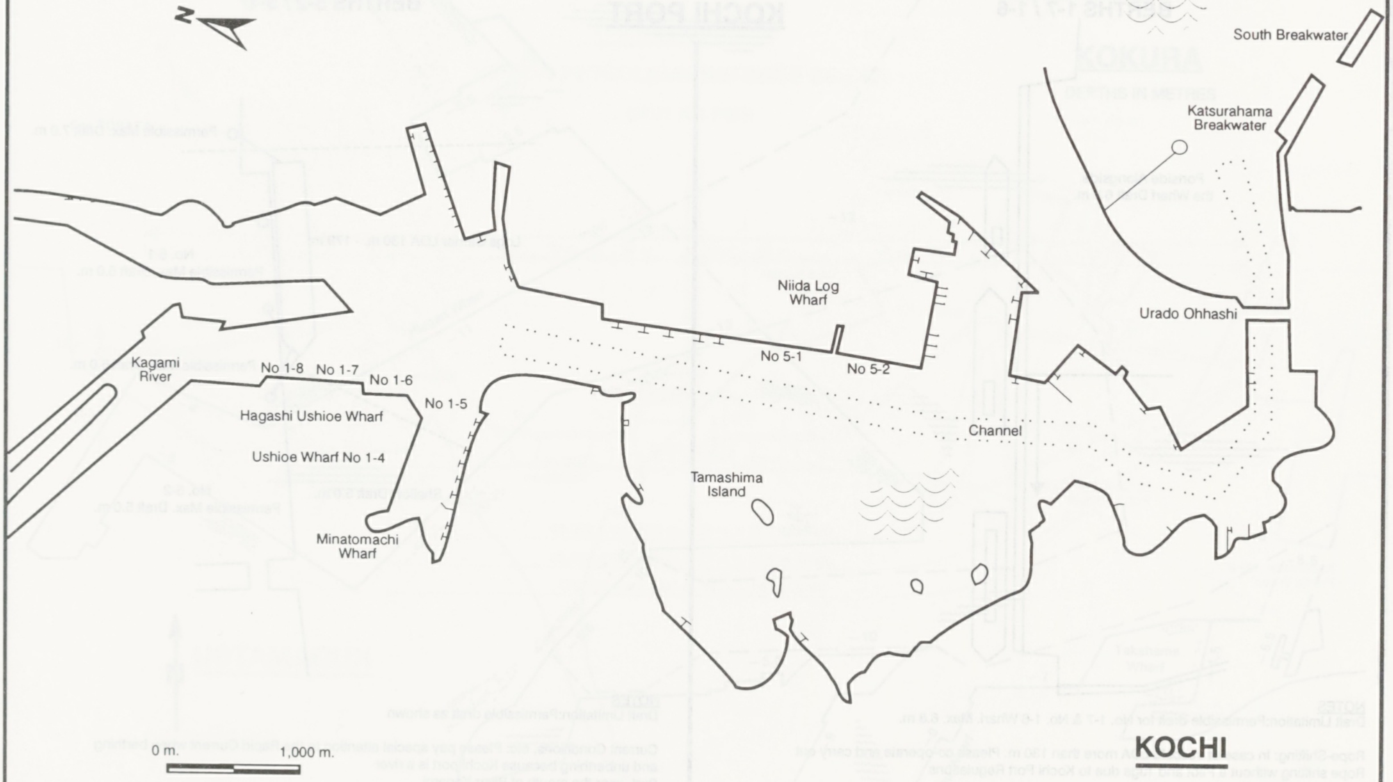
PORT ISLAND
(DEVELOPMENT PLAN 1986 - 1996)

Kobe Ohashi Bridge
N
- 4 m.
- 4 m.
600 m.
- 10 m.
PL 1
PL 2
PL 3
Kita Wharf
PC 1
PC 2
PC 3
PC 4
PC 5
1,450 m.
- 12 m.
PC 9
PC 8
PC 7
Housing Complex
- 12 m.
- 4 m.
1,000 m.
- 10 m.
PL 4
PL 5
PL 6
PL 7
PL 8
Naka Wharf
PL 9
PL 15
PL 14
PL 13
PL 12
PL 11
PL 10
407 m.
- 10 m.
- 4 m.
- 10 m.
1,200 m.
1,000 m.
- 12 m.
200 m.
- 10 m.
Chemical Cargo Berth
PC 11
PC 12
- 4 m.
Minami Wharf
480 m.
- 12 m.
Tramp Berths
- 12 m.
960 m.
K - Cat
- 4 m.
130 m.
- 7.5 m.
UNDER CONSTRUCTION
1,050 m.
- 15 m.
Container Berths
PC 13
PC 14
Mitsui O.S.K.
N.Y.K.
PC 15
Mitsui O.S.K.
N.Y.K.
PC 16
1,050 m.
- 15 m.
PC 17
Cosco
130 m.
- 7.5 m.
Feeder Berths
0
1000
Scale in Meters

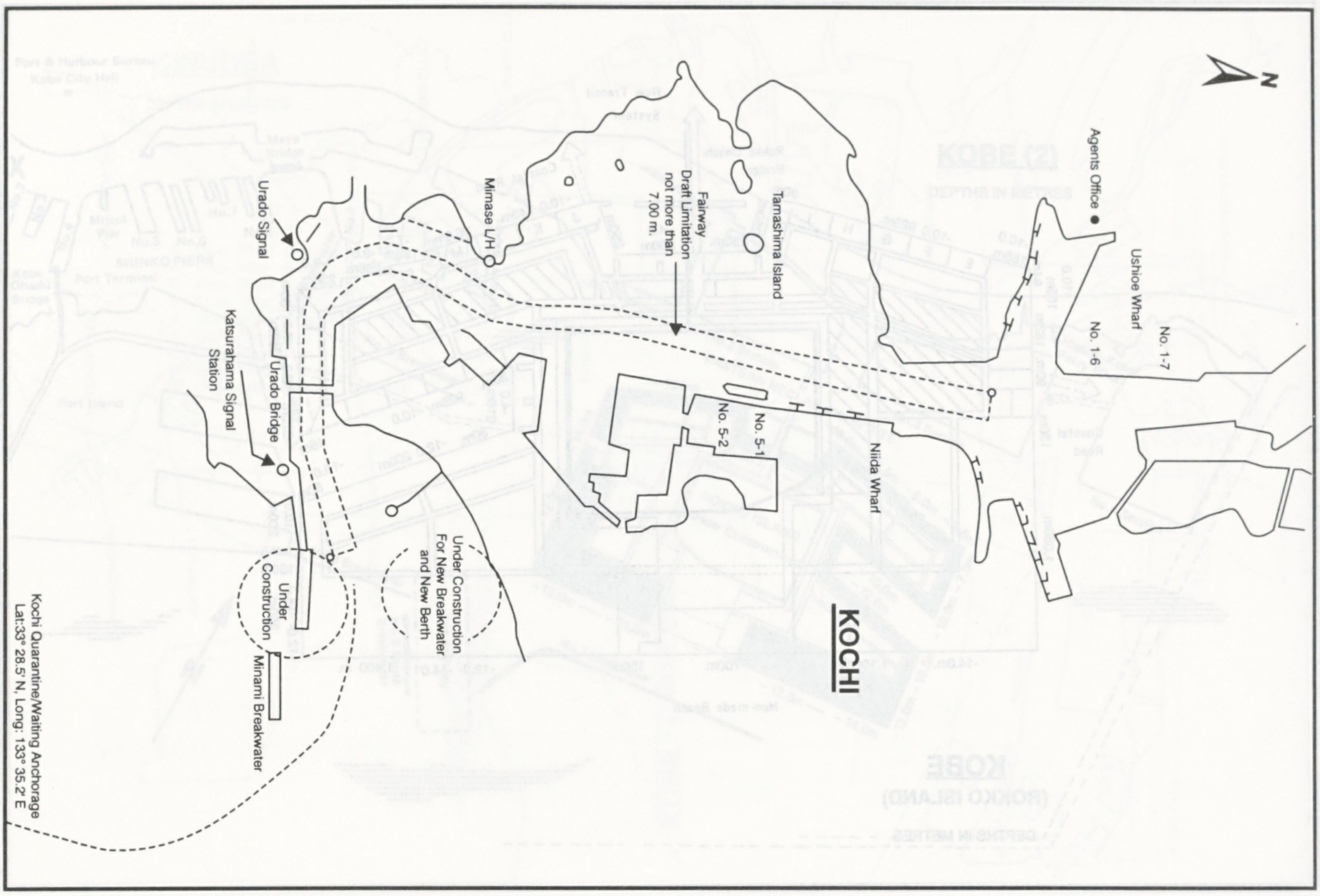

New Transit System
Rokko Ohashi Bridge
Coastal Road
90m.
-10.0 925m.
-10.0 185m.
E
F
G
H
I
J
K
L
M
F1
250m
260m.
-4.0 350m
250m
-10.0 740m
36.5m.
-7.5 193m
-9.0 266m
-8.5 238m
94m
-10.0 185m
-4.0 162m
90m.
-7.5
Coastal Road
130m.
1,050m.
30m.
-7.5 260m
30m.
-4.0 316m
925m. -10.0
30m. -12.0 200m
370m -10.0
45m
-10.0 50m
-10.0 200m.
-7.5 130m
-12.0- -14.0 350m.
-14.0m.
1.100m.
700m.
100m
-12.0- -14.0
1,400 m.
Man-made Beach

KOBE
(ROKKO ISLAND)

DEPTHS IN METRES

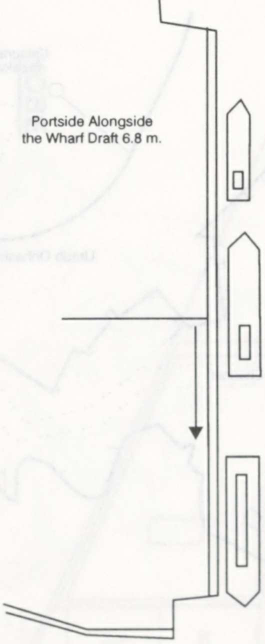

N
South Breakwater
Katsurahama Breakwater
Urado Ohhashi
Niida Log Wharf
No 5-1
No 5-2
Channel
Tamashima Island
Kagami River
No 1-8
No 1-7
No 1-6
No 1-5
Hagashi Ushioe Wharf
Ushioe Wharf No 1-4
Minatomachi Wharf
0 m.
1,000 m.

KOCHI


N
Agents Office
Ushioe Wharf
No. 1-7
No. 1-6
Tamashima Island
Fairway
Draft Limitation
not more than
7.00 m.
Mimase L/H
Urado Signal
Katsurahama Signal
Station
Urado Bridge
No. 5-1
No. 5-2
Niida Wharf
KOCHI
Under
Construction
Minami Breakwater
Under Construction
For New Breakwater
and New Berth
Kochi Quarantine/Waiting Anchorage
Lat:33° 28.5' N, Long: 133° 35.2' E

KOCHI PORT

USHIDE WHARF BERTHS 1-7 / 1-6

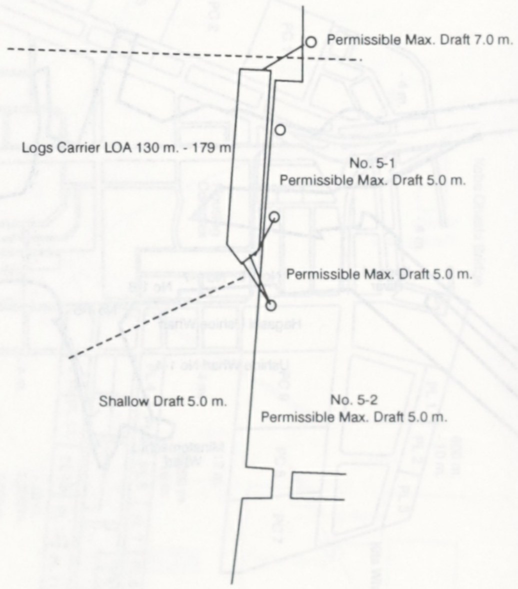

Portside Alongside
the Wharf Draft 6.8 m.

NOTES
Draft Limitation:Permissible draft for No. 1-7 & No. 1-6 Wharf. Max. 6.8 m.

Rope-Shifting: In case of Vessel's LOA more than 130 m. Please co-operate and carry out Rope shifting without a Pilot and Tugs due to Kochi Port Regulations if Domestic Vessel berthing.
Rope Shifting schedules will be advised by Kochi Port Agents.

Fresh Water Supply: Available by shore hydrants 30 tonnes/hr.

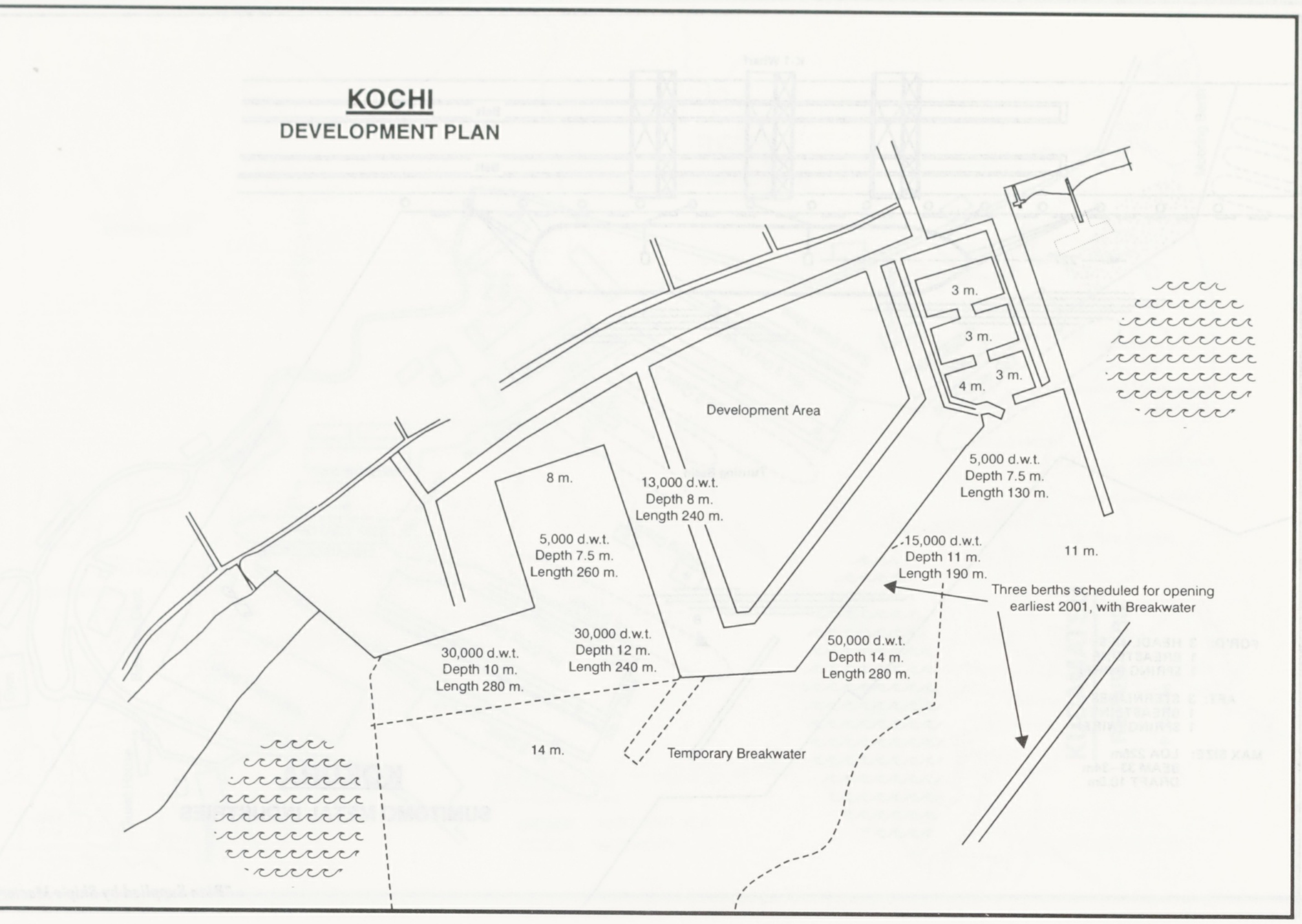
NIIDA WHARF BERTHS 5-2 / 5-1


Permissible Max. Draft 7.0 m.
Logs Carrier LOA 130 m. - 179 m
No. 5-1
Permissible Max. Draft 5.0 m.
Permissible Max. Draft 5.0 m.
Shallow Draft 5.0 m.
No. 5-2
Permissible Max. Draft 5.0 m.

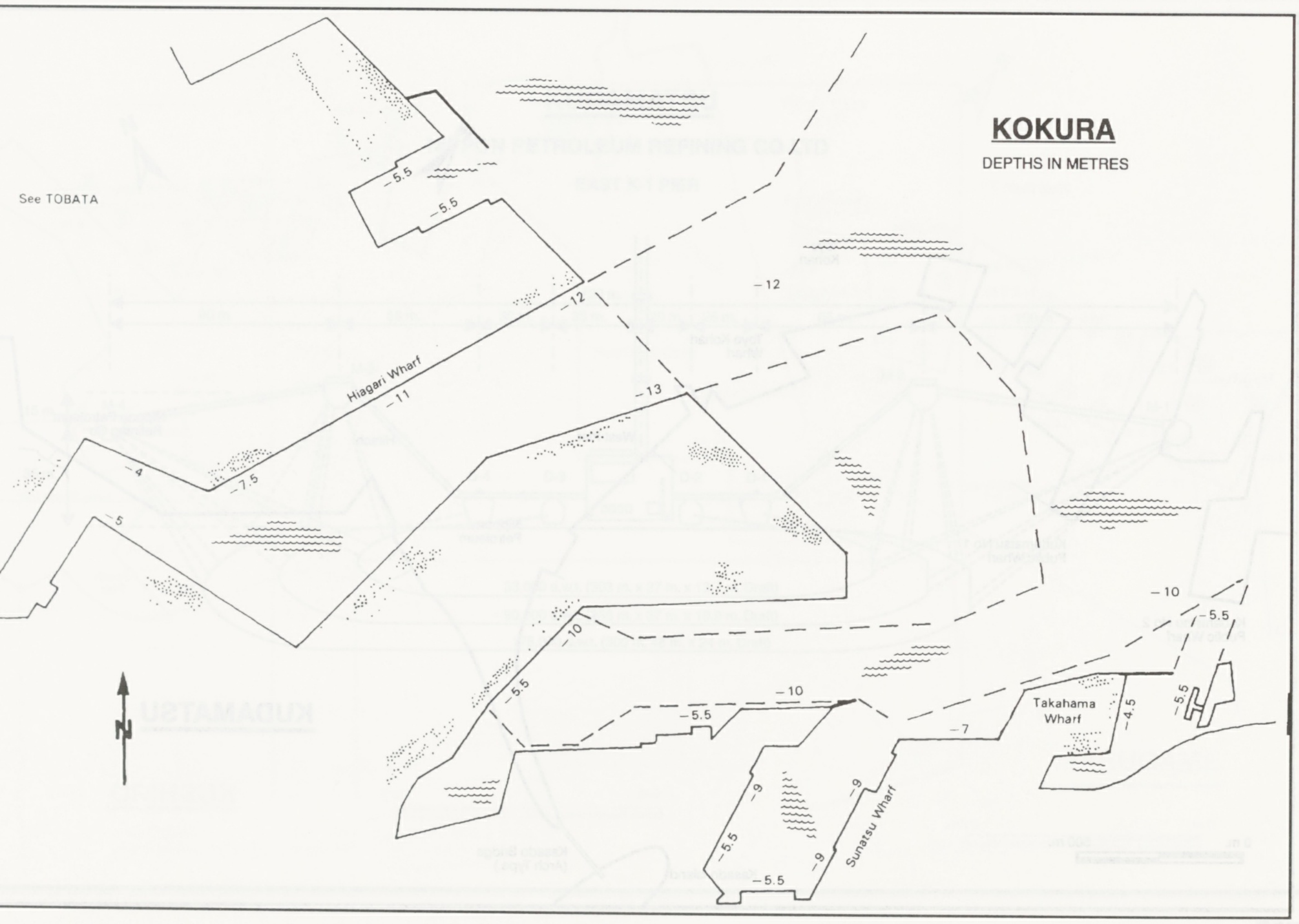
NOTES
Draft Limitation:Permissible draft as shown

Current Conditions, etc: Please pay special attention to the Rapid Current when berthing and unberthing because Kochi port is a river Port, near the mouth of River Kagami

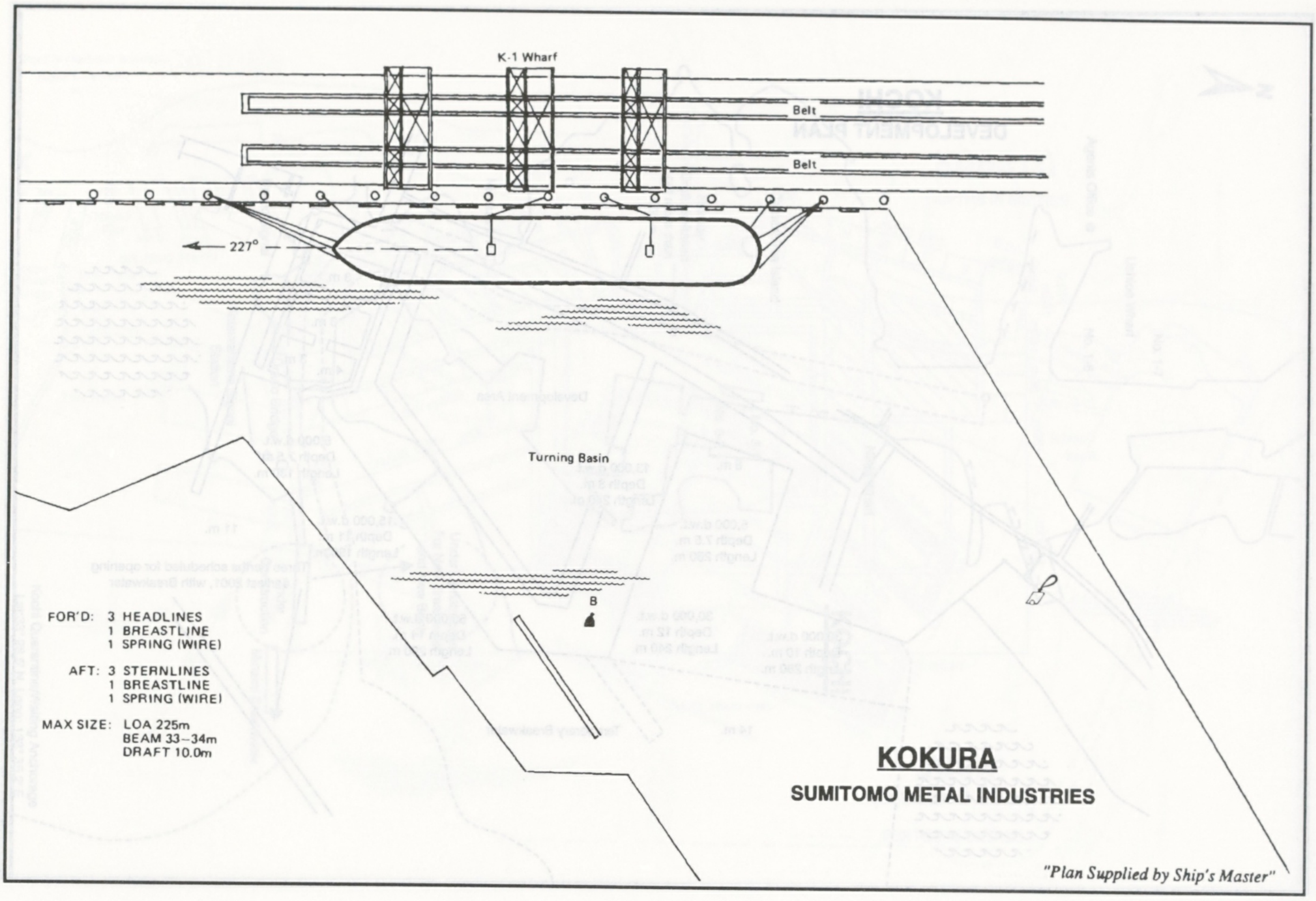
Fresh Water Supply: Not Available

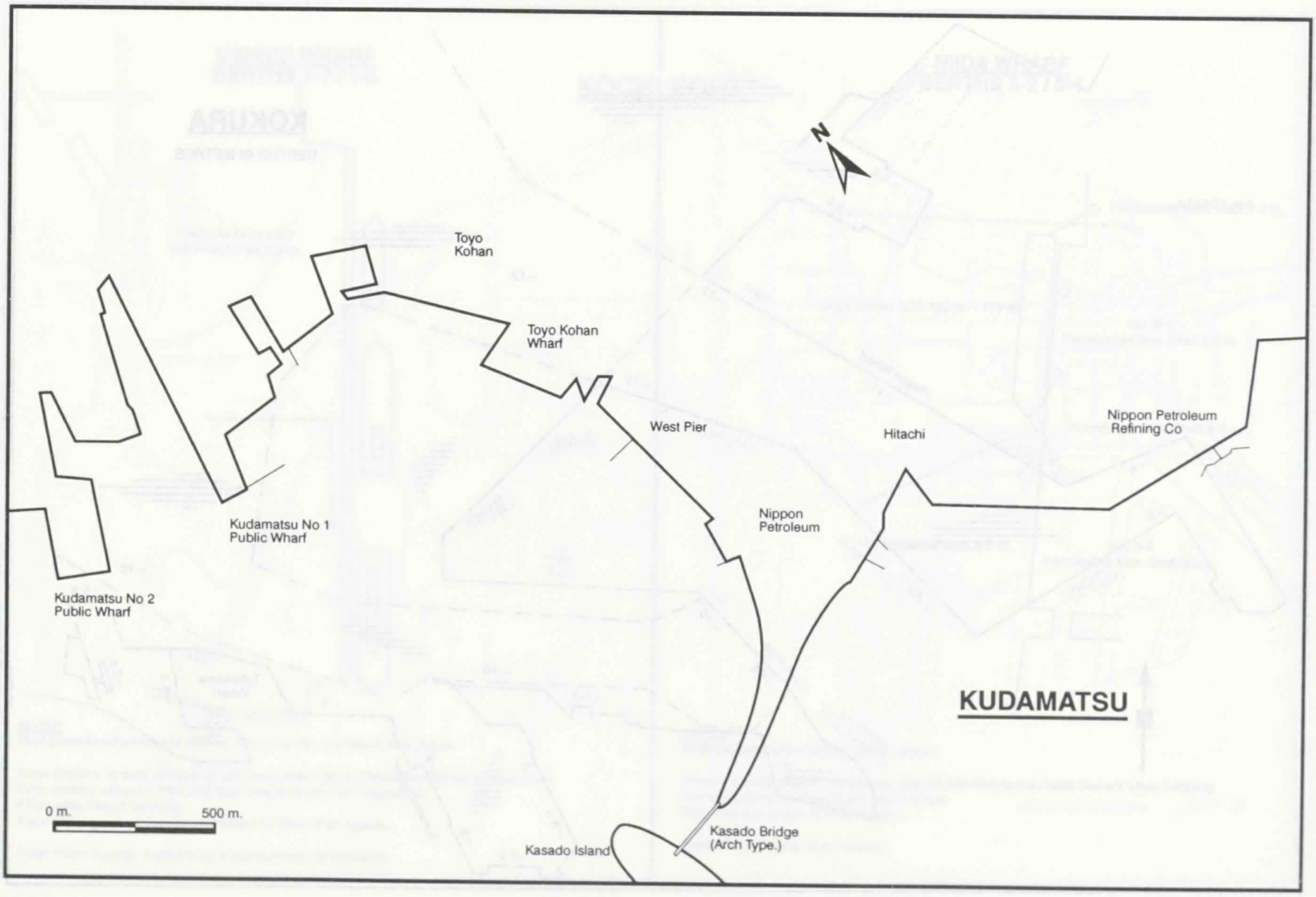


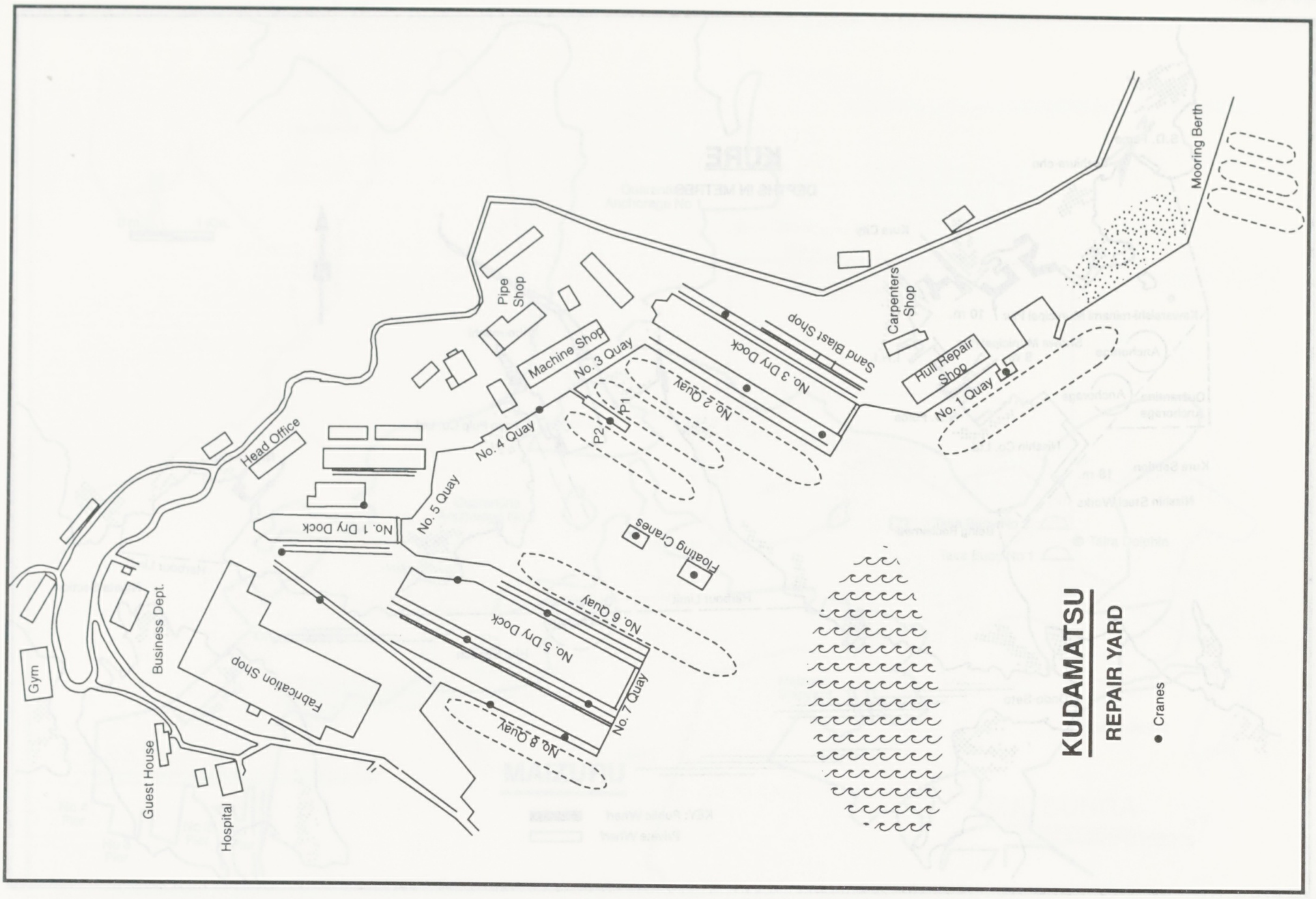
KOCHI
DEVELOPMENT PLAN
3 m.
3 m.
3 m.
4 m.
Development Area
5,000 d.w.t.
Depth 7.5 m.
Length 130 m.
8 m.
13,000 d.w.t.
Depth 8 m.
Length 240 m.
5,000 d.w.t.
Depth 7.5 m.
Length 260 m.
15,000 d.w.t.
Depth 11 m.
Length 190 m.
11 m.
Three berths scheduled for opening earliest 2001, with Breakwater
30,000 d.w.t.
Depth 10 m.
Length 280 m.
30,000 d.w.t.
Depth 12 m.
Length 240 m.
50,000 d.w.t.
Depth 14 m.
Length 280 m.
14 m.
Temporary Breakwater



KOKURA
DEPTHS IN METRES
See TOBATA
–5.5
–5.5
–12
–12
Hiagari Wharf
–11
–13
–4
–7.5
–5
–10
–10
–5.5
–5.5
–10
–5.5
–5.5
–7
Takahama Wharf
–4.5
–5.5
–9
–9
–5.5
–9
Sunatsu Wharf
–5.5
N


K-1 Wharf
Belt
Belt
227°
Turning Basin
B
FOR'D: 3 HEADLINES
1 BREASTLINE
1 SPRING (WIRE)
AFT: 3 STERNLINES
1 BREASTLINE
1 SPRING (WIRE)
MAX SIZE: LOA 225m
BEAM 33–34m
DRAFT 10.0m
KOKURA
SUMITOMO METAL INDUSTRIES
"Plan Supplied by Ship's Master"


N
Toyo Kohan
Toyo Kohan Wharf
West Pier
Hitachi
Nippon Petroleum Refining Co
Nippon Petroleum
Kudamatsu No 1 Public Wharf
Kudamatsu No 2 Public Wharf
KUDAMATSU
0 m.
500 m.
Kasado Island
Kasado Bridge (Arch Type.)

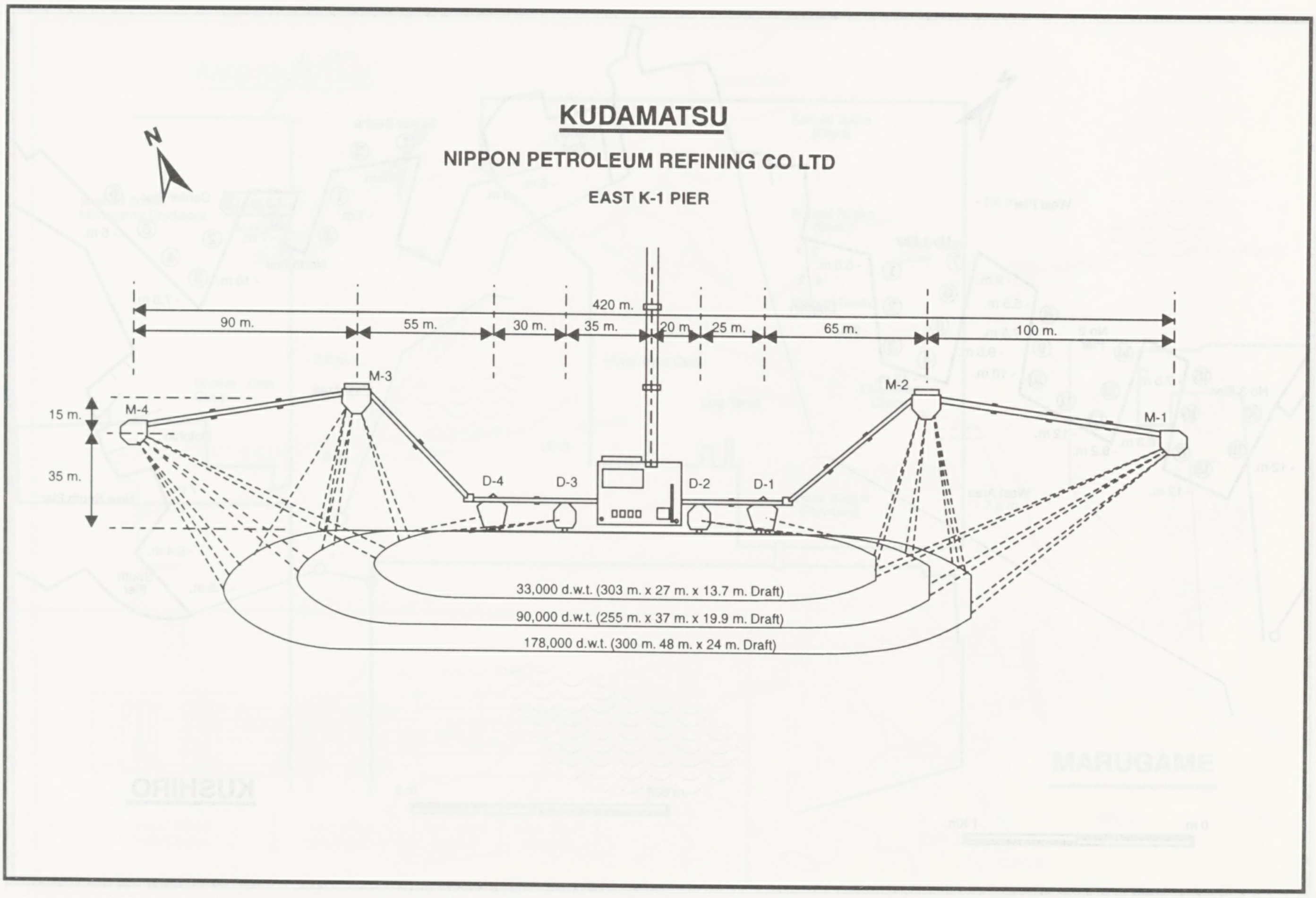


KUDAMATSU

REPAIR YARD

● Cranes

Mooring Berth
Pipe Shop
Machine Shop
No. 3 Quay
Sand Blast Shop
No. 3 Dry Dock
No. 2 Quay
Carpenters Shop
Hull Repair Shop
No. 1 Quay
P1
P2
No. 4 Quay
Head Office
No. 5 Quay
No. 1 Dry Dock
Floating Cranes
No. 6 Quay
No. 5 Dry Dock
No. 7 Quay
No. 8 Quay
Fabrication Shop
Business Dept.
Gym
Guest House
Hospital

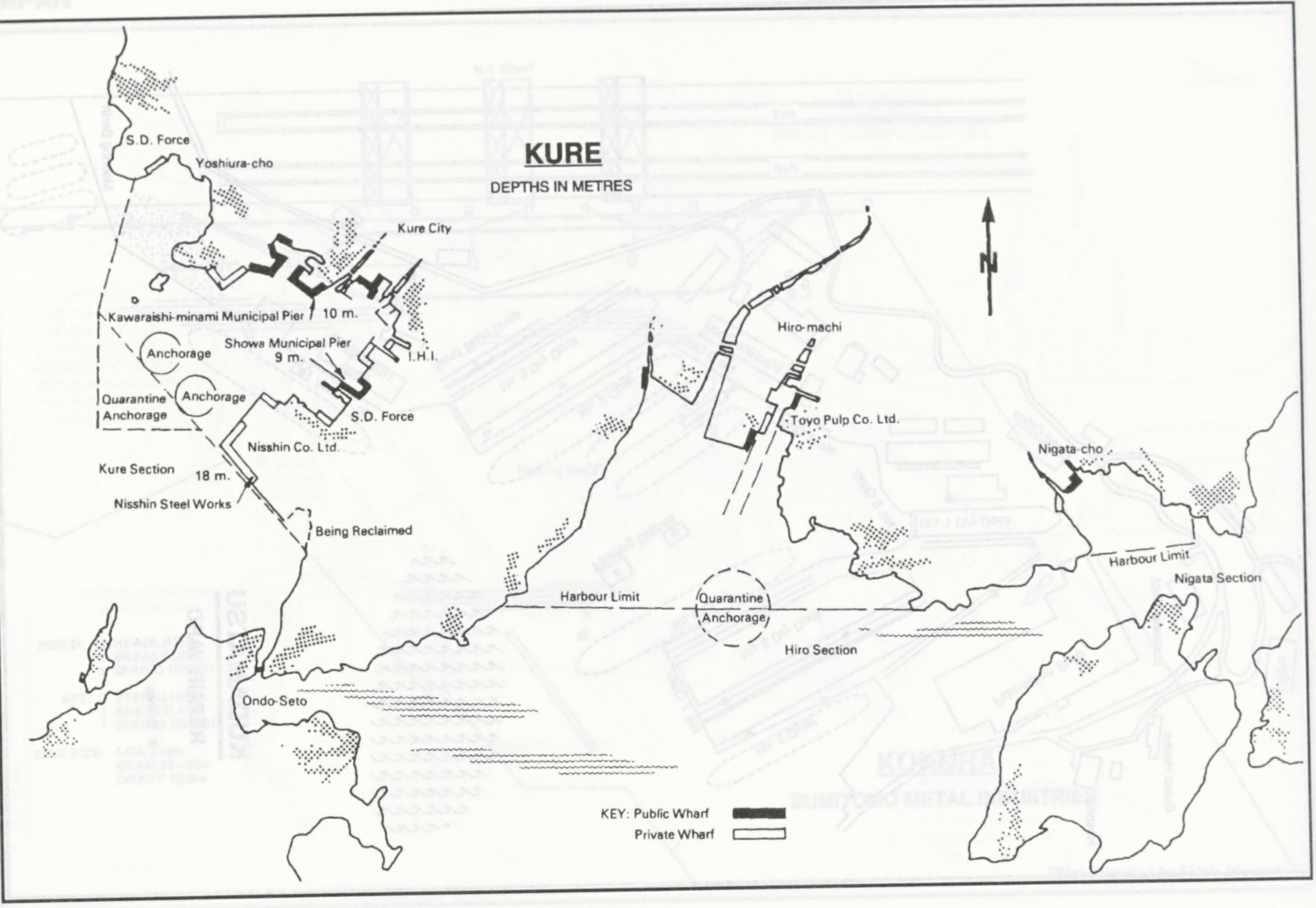


KUDAMATSU

NIPPON PETROLEUM REFINING CO LTD

EAST K-1 PIER

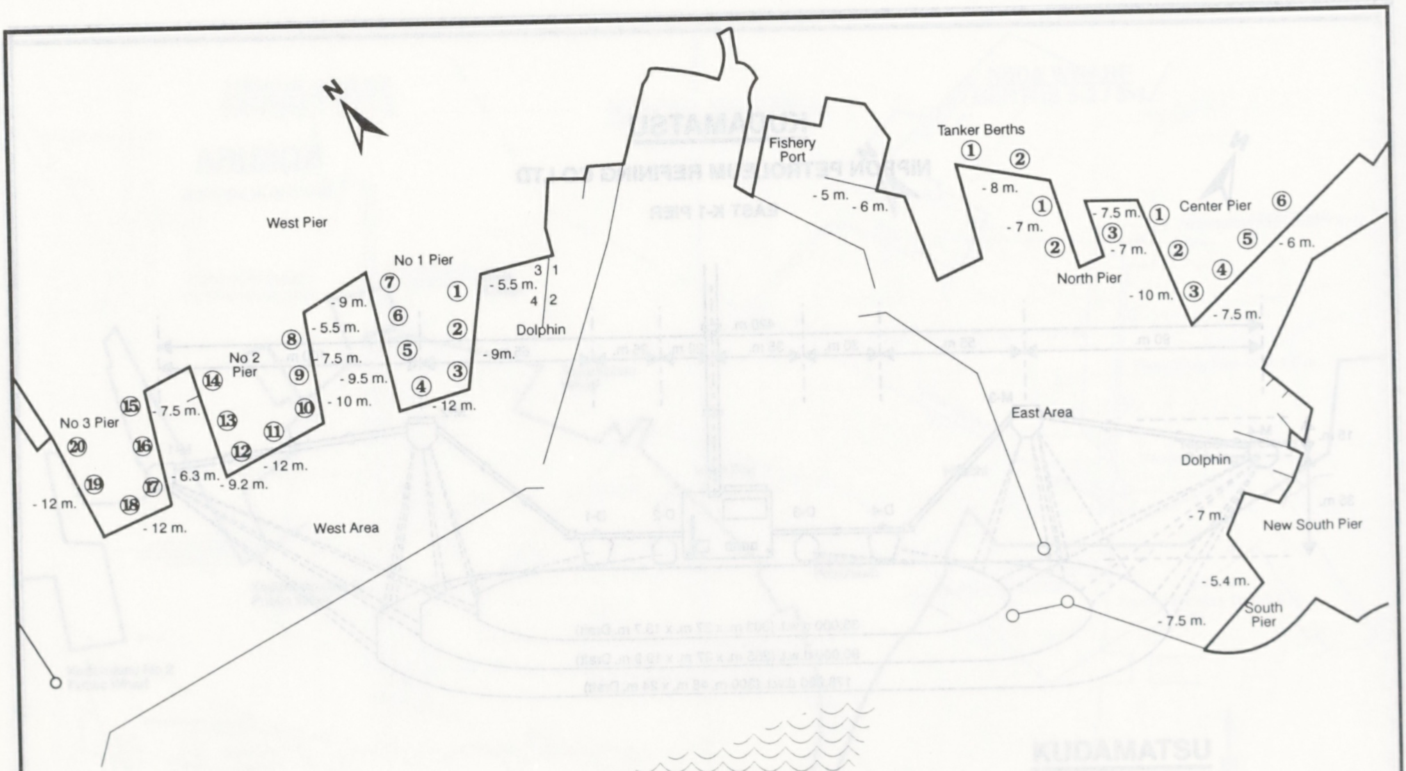
N
420 m.
90 m.
55 m.
30 m.
35 m.
20 m.
25 m.
65 m.
100 m.
15 m.
35 m.
M-4
M-3
M-2
M-1
D-4
D-3
D-2
D-1
33,000 d.w.t. (303 m. x 27 m. x 13.7 m. Draft)
90,000 d.w.t. (255 m. x 37 m. x 19.9 m. Draft)
178,000 d.w.t. (300 m. 48 m. x 24 m. Draft)



KURE

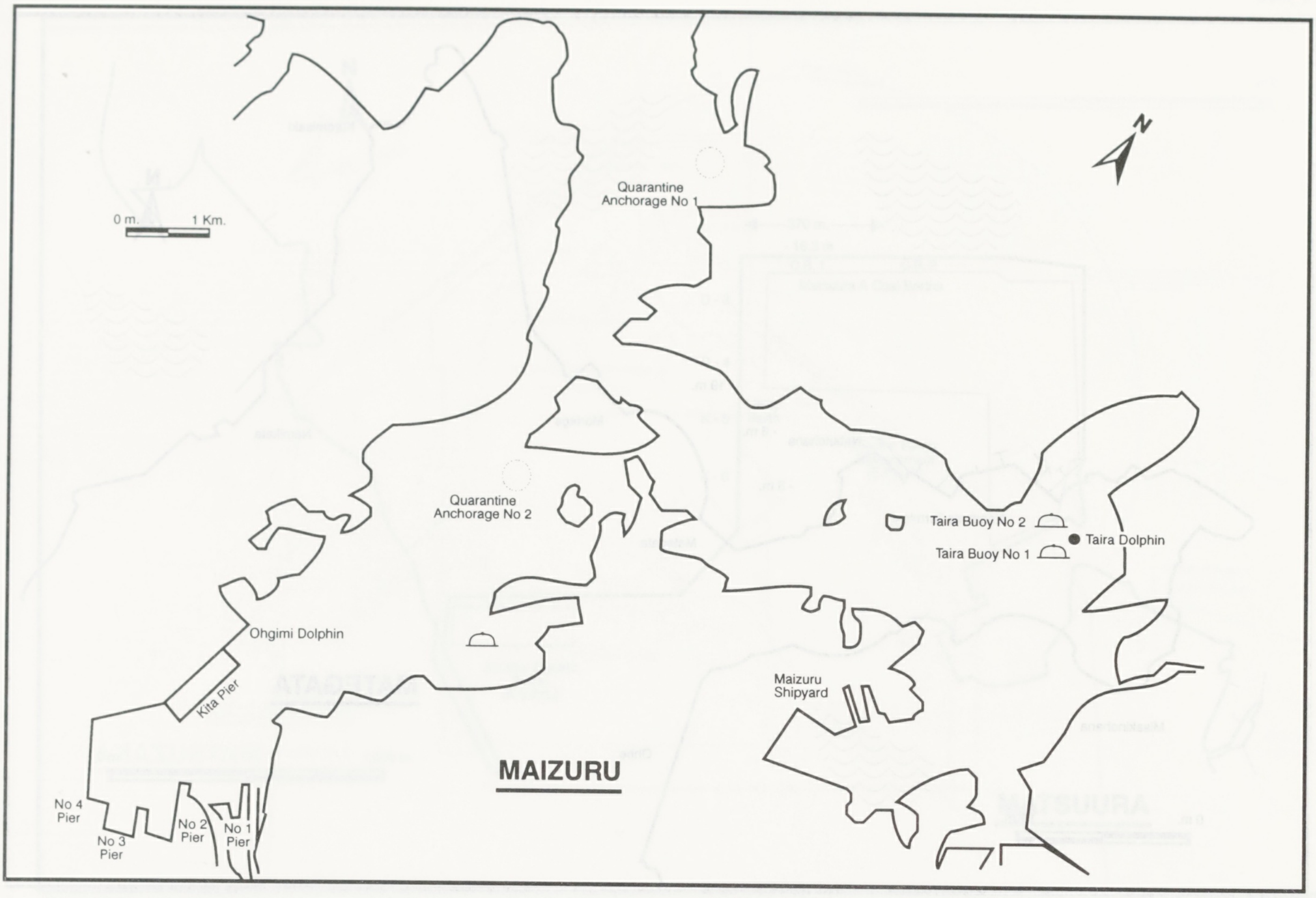
DEPTHS IN METRES

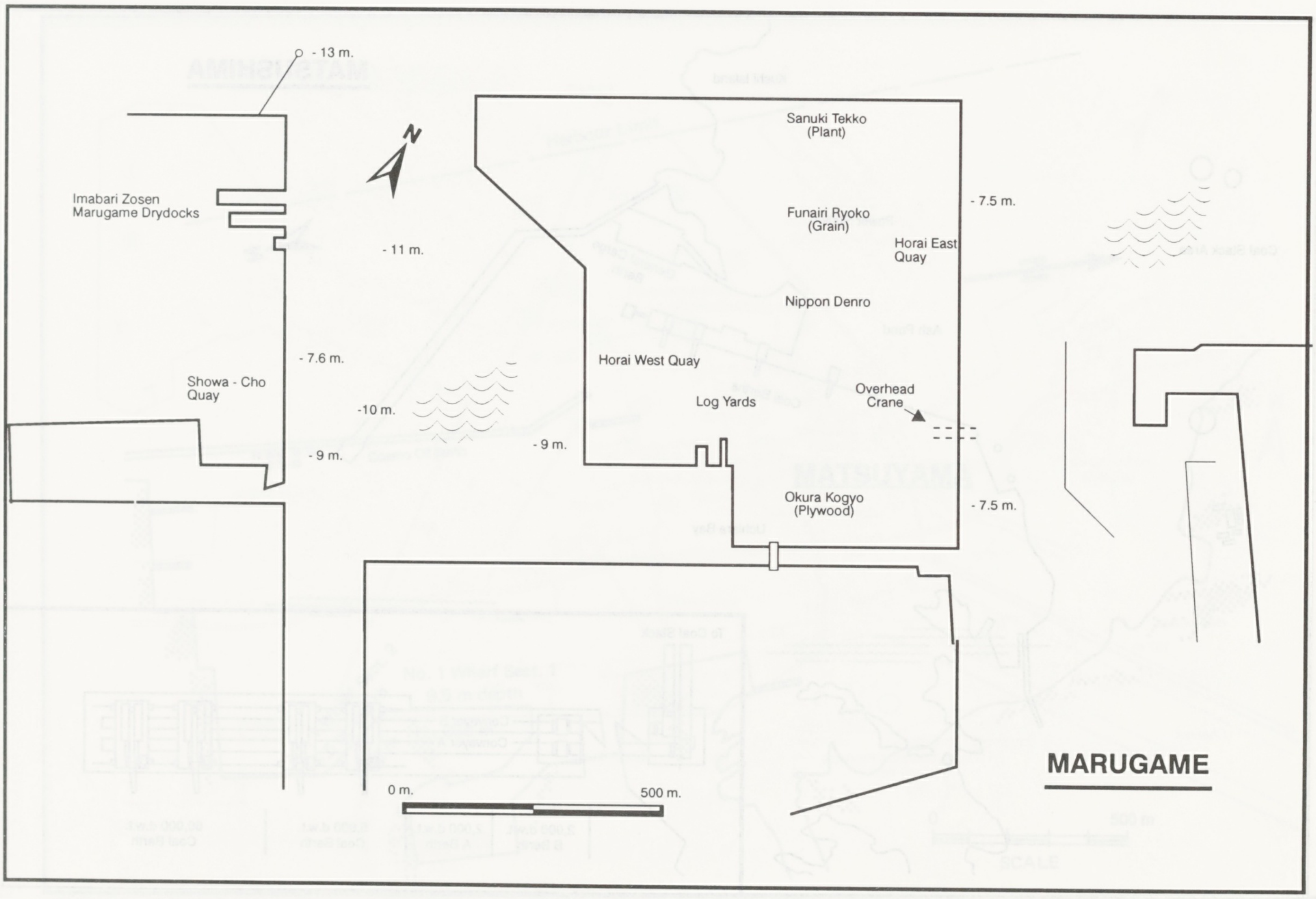
S.D. Force
Yoshiura-cho
Kure City
N
Kawaraishi-minami Municipal Pier
10 m.
Showa Municipal Pier
9 m.
I.H.I.
Anchorage
Quarantine Anchorage
Anchorage
S.D. Force
Nisshin Co. Ltd.
Kure Section
18 m.
Nisshin Steel Works
Being Reclaimed
Hiro-machi
Toyo Pulp Co. Ltd.
Nigata-cho
Harbour Limit
Nigata Section
Harbour Limit
Quarantine Anchorage
Hiro Section
Ondo-Seto
KEY: Public Wharf
Private Wharf

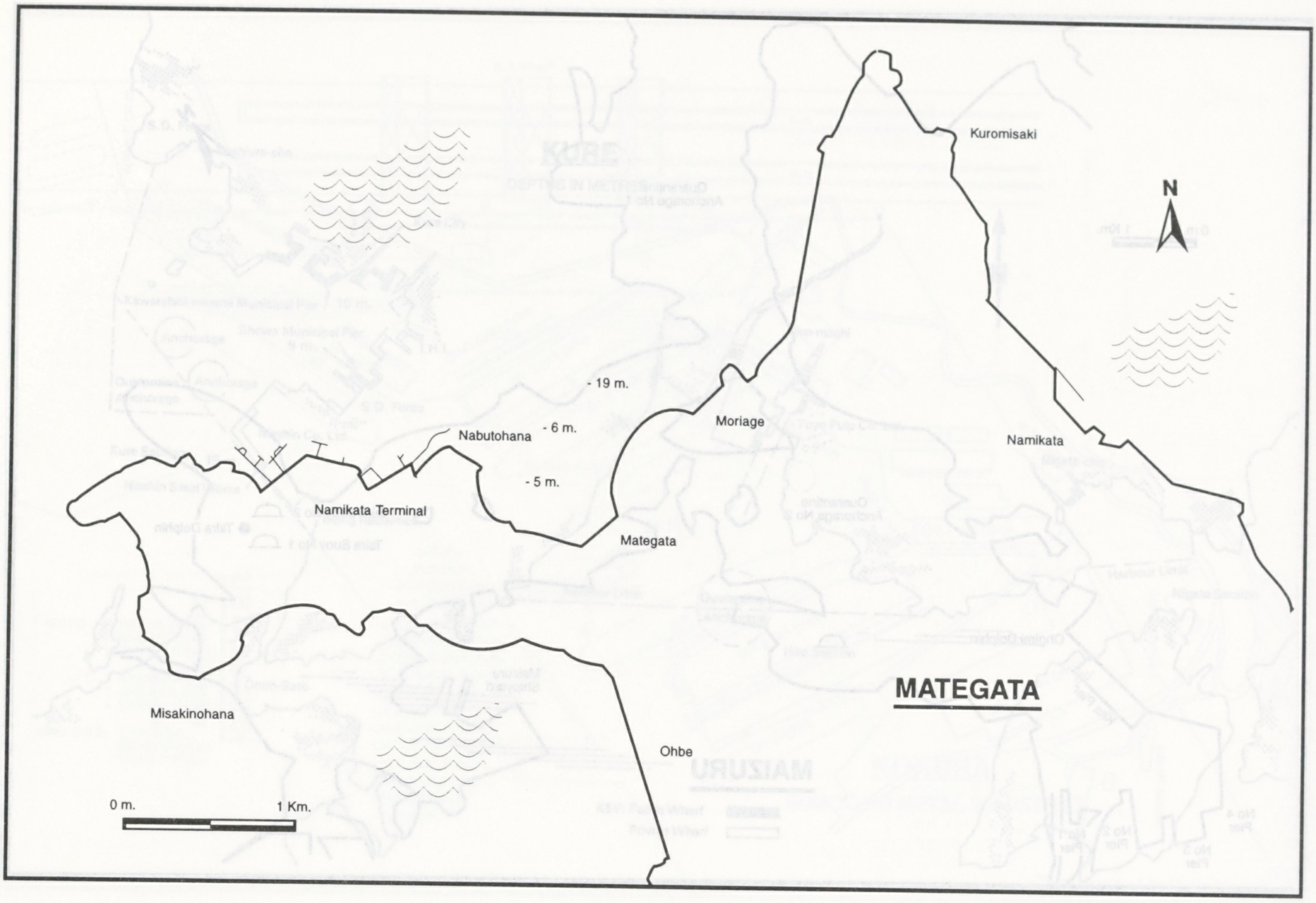


KUSHIRO

N
West Pier
No 1 Pier
Fishery Port
Tanker Berths
①
②
- 5 m.
- 6 m.
- 8 m.
①
- 7 m.
②
- 7.5 m.
①
③
- 7 m.
②
Center Pier
⑥
⑤
- 6 m.
④
③
- 10 m.
- 7.5 m.
North Pier
⑦
①
- 5.5 m.
3 1
4 2
Dolphin
- 9 m.
- 5.5 m.
⑧
⑥
②
- 9m.
- 7.5 m.
⑤
③
⑨
- 9.5 m.
④
⑩
- 10 m.
- 12 m.
No 2 Pier
⑭
⑪
⑬
⑫
- 12 m.
- 9.2 m.
No 3 Pier
⑮
- 7.5 m.
⑳
⑯
⑲
⑰
- 6.3 m.
⑱
- 12 m.
- 12 m.
West Area
East Area
Dolphin
- 7 m.
New South Pier
- 5.4 m.
- 7.5 m.
South Pier
0 m.
1 Km.

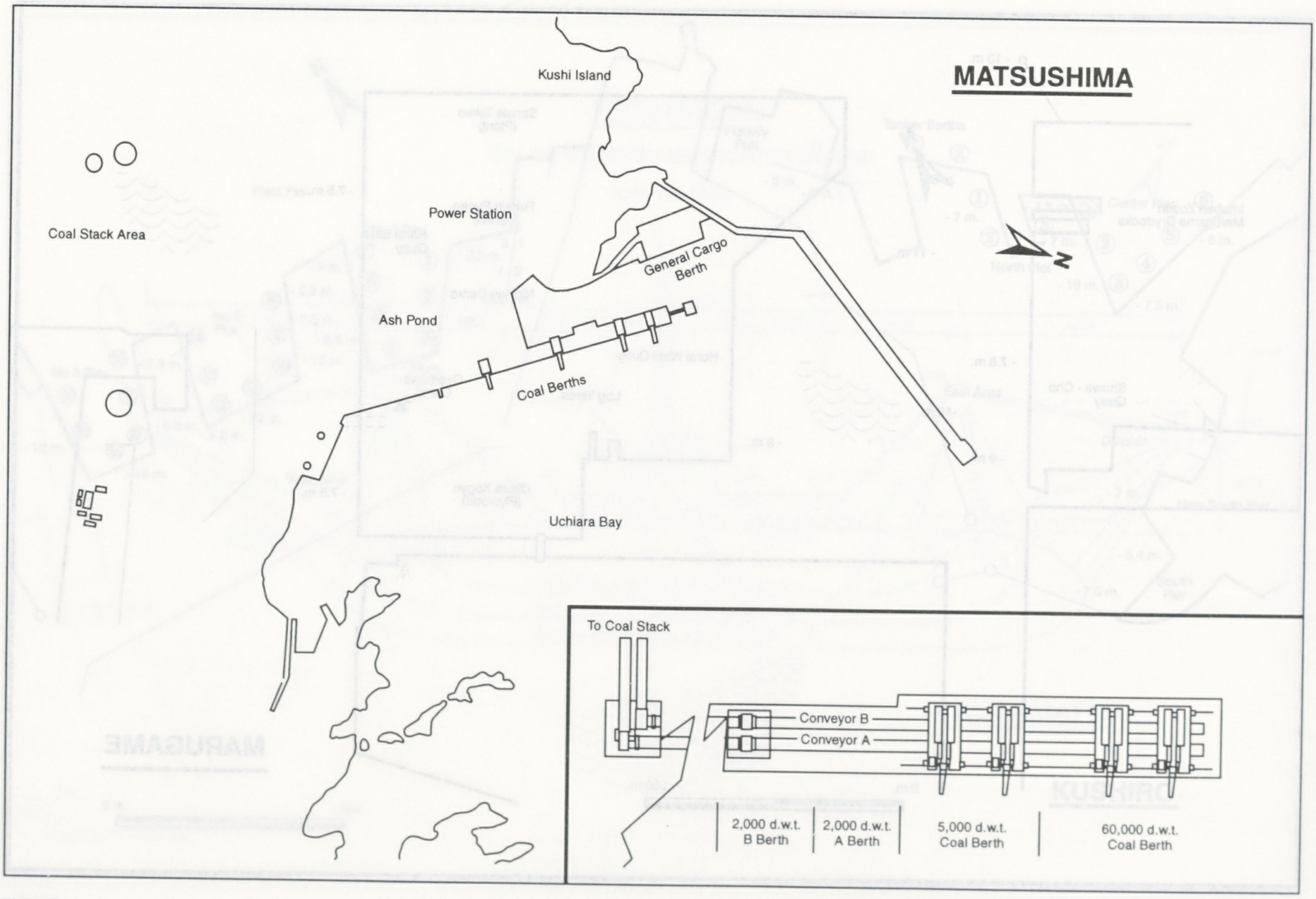

0 m.
1 Km.
Quarantine Anchorage No 1
Quarantine Anchorage No 2
Taira Buoy No 2
Taira Dolphin
Taira Buoy No 1
Ohgimi Dolphin
Kita Pier
Maizuru Shipyard
MAIZURU
No 4 Pier
No 3 Pier
No 2 Pier
No 1 Pier


- 13 m.
Imabari Zosen Marugame Drydocks
- 11 m.
- 7.6 m.
Showa - Cho Quay
-10 m.
- 9 m.
- 9 m.
Sanuki Tekko (Plant)
Funairi Ryoko (Grain)
Horai East Quay
- 7.5 m.
Nippon Denro
Horai West Quay
Log Yards
Overhead Crane
Okura Kogyo (Plywood)
- 7.5 m.
MARUGAME
0 m.
500 m.



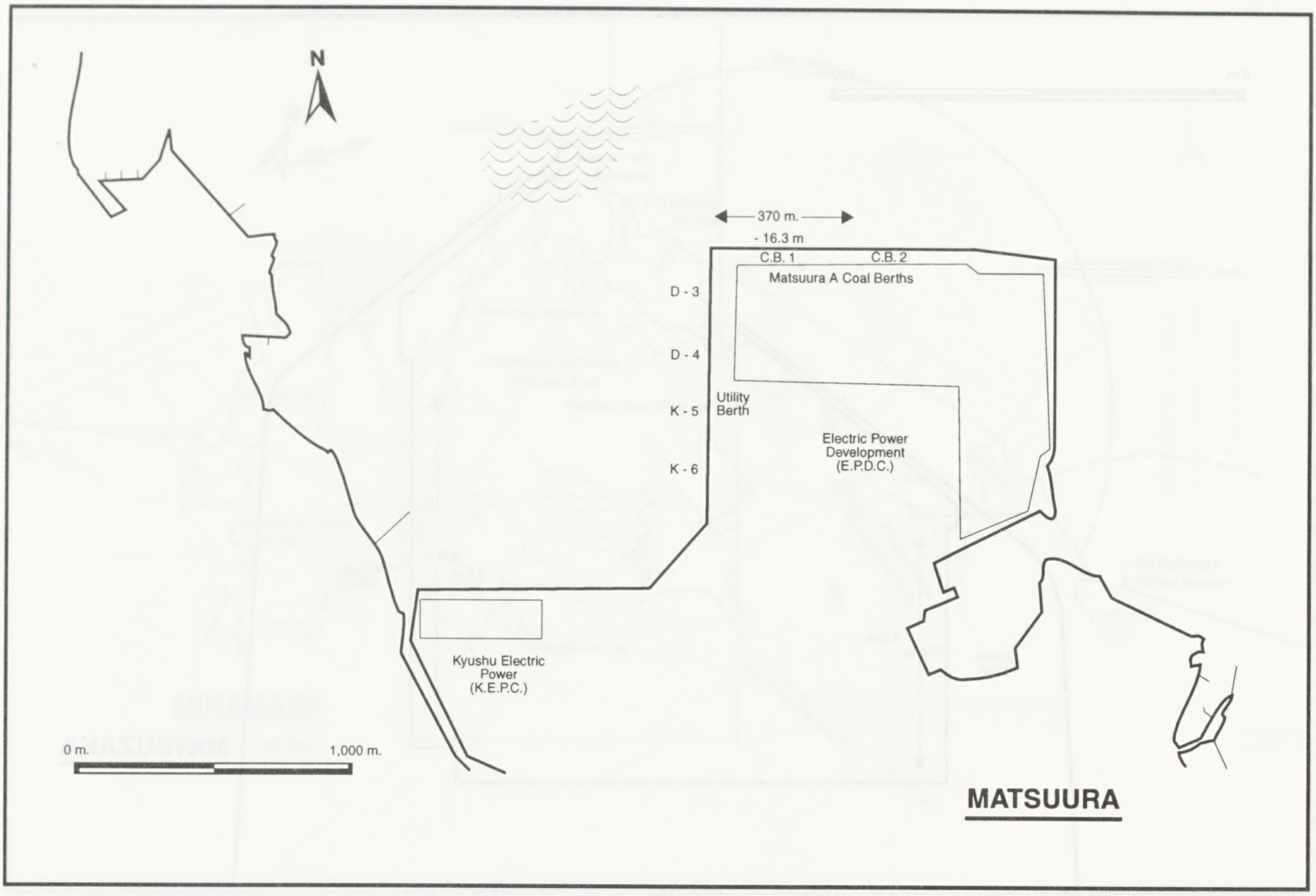
MATEGATA

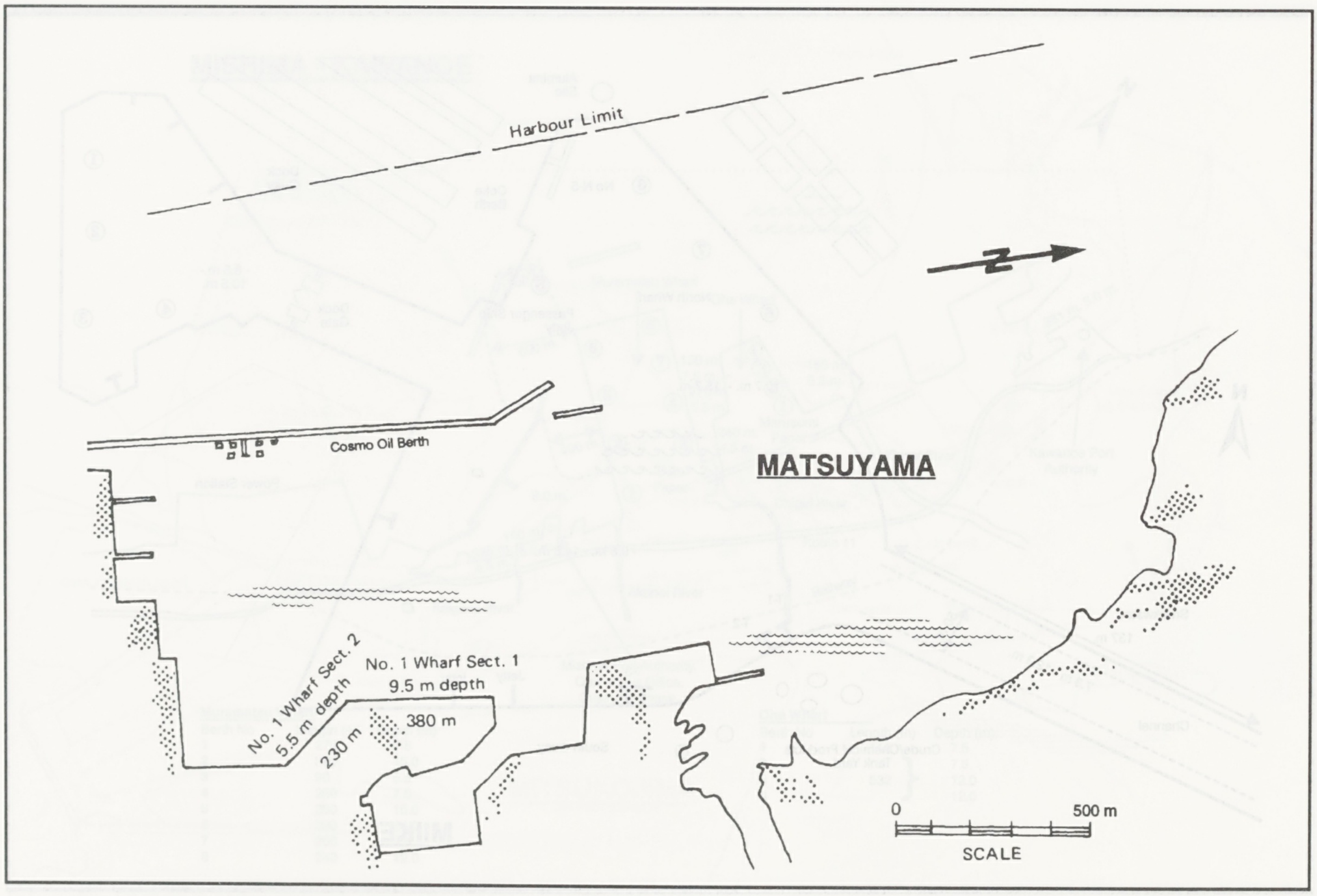
Kuromisaki
N
- 19 m.
Moriage
Namikata
Nabutohana
- 6 m.
- 5 m.
Namikata Terminal
Mategata
Misakinohana
Ohbe
0 m.
1 Km.

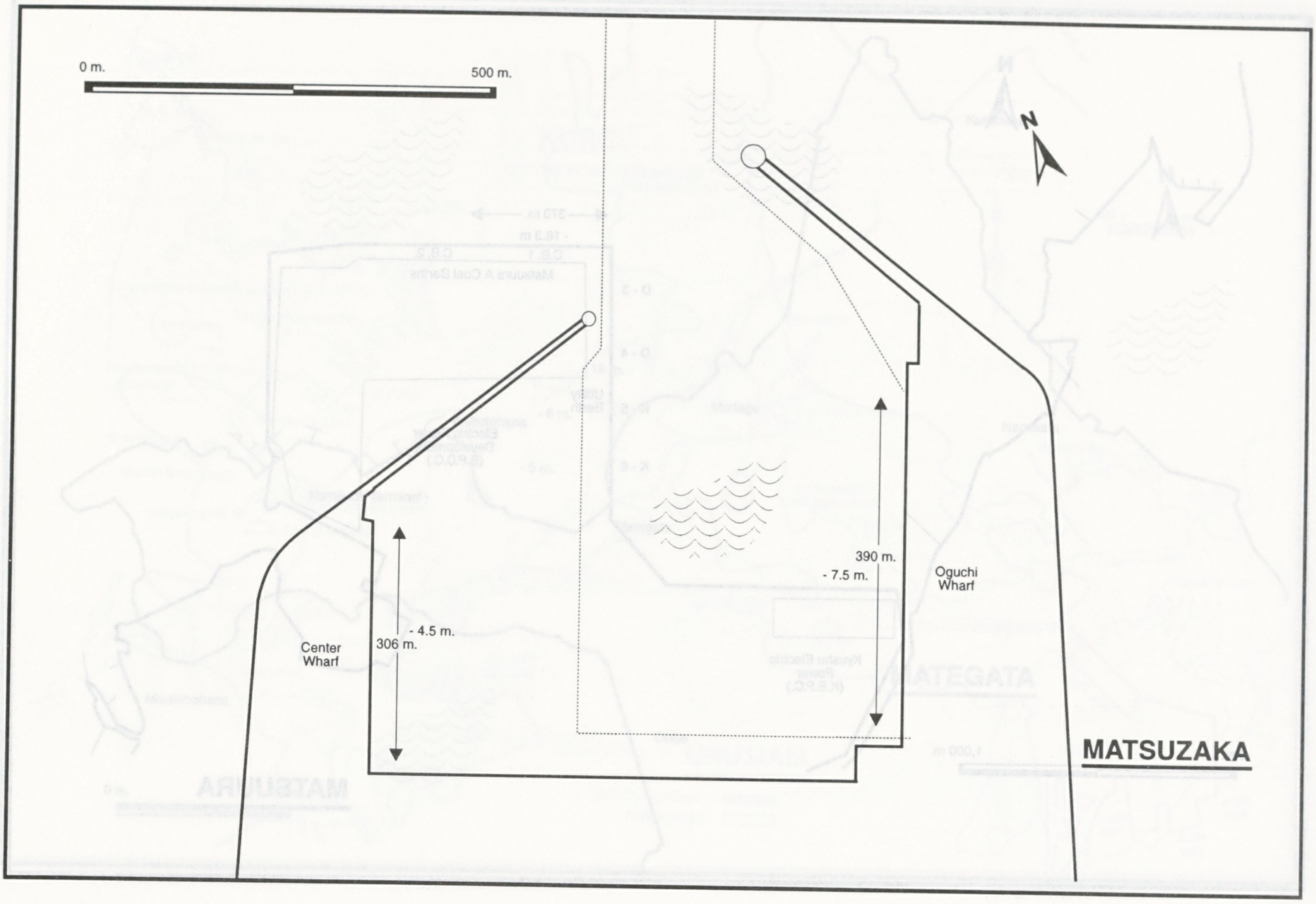


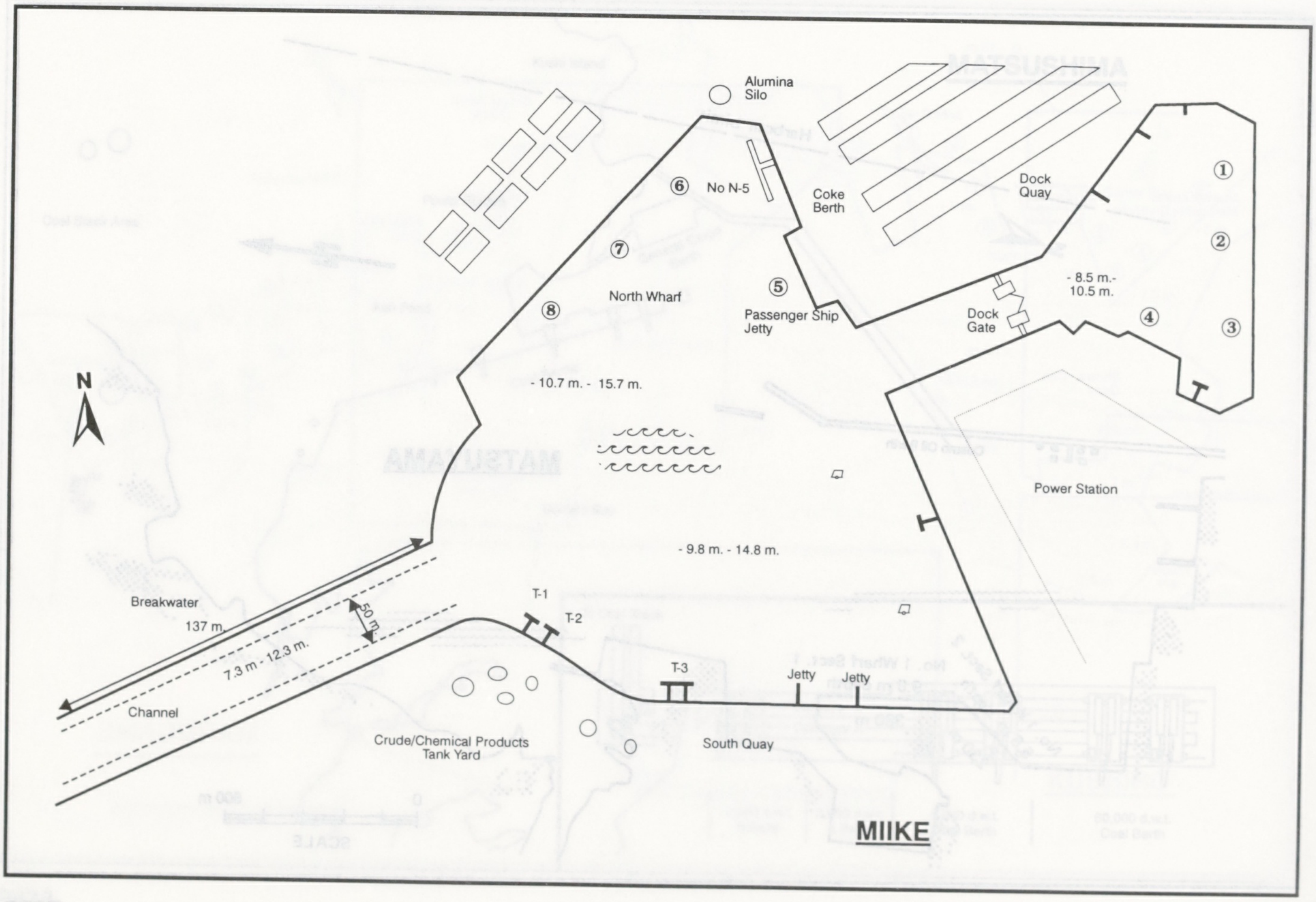
MATSUSHIMA

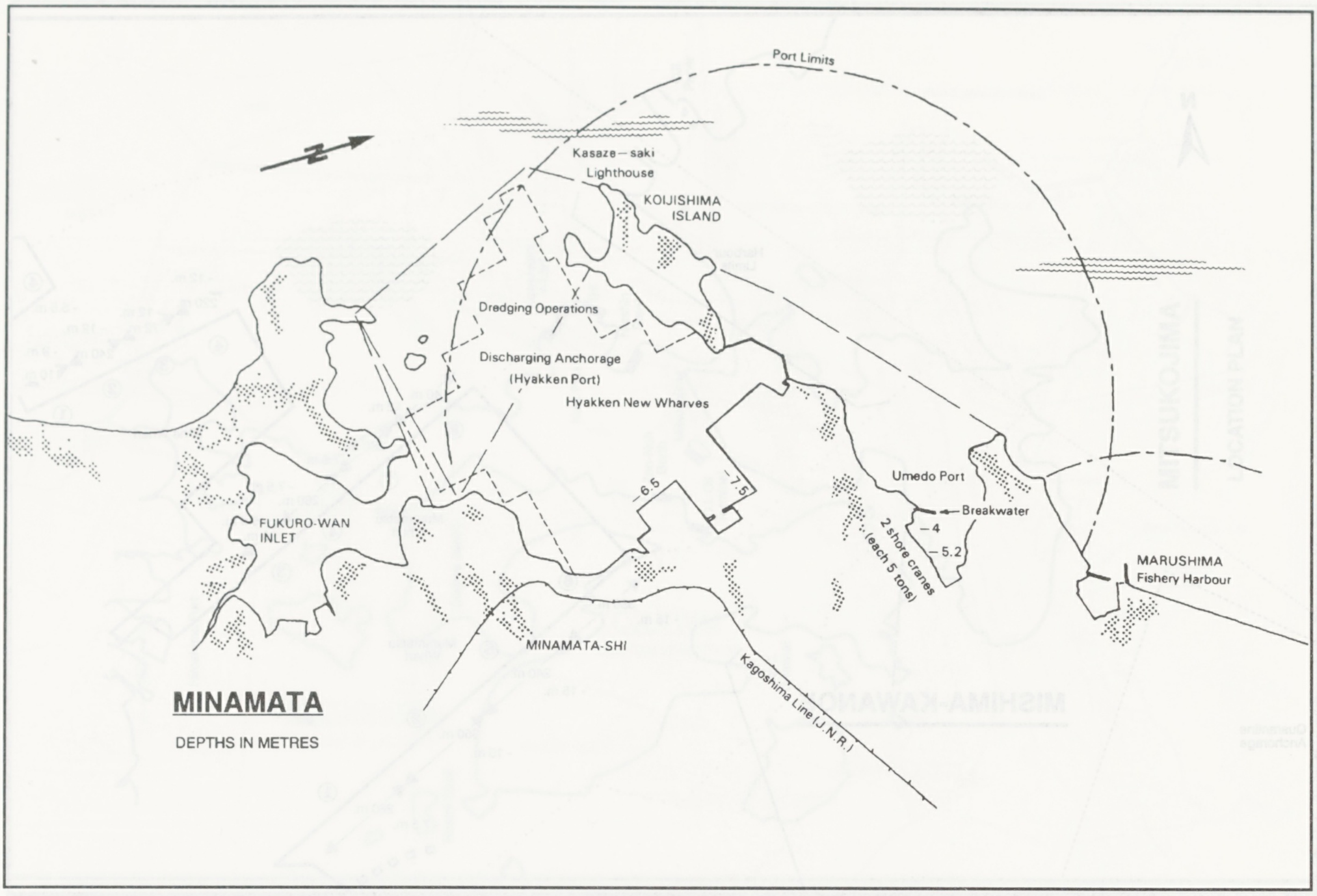
Kushi Island
Coal Stack Area
Power Station
General Cargo Berth
Ash Pond
Coal Berths
N
Uchiara Bay
To Coal Stack
Conveyor B
Conveyor A
2,000 d.w.t. B Berth
2,000 d.w.t. A Berth
5,000 d.w.t. Coal Berth
60,000 d.w.t. Coal Berth


N
370 m.
- 16.3 m
C.B. 1
C.B. 2
Matsuura A Coal Berths
D - 3
D - 4
K - 5
Utility Berth
K - 6
Electric Power Development (E.P.D.C.)
Kyushu Electric Power (K.E.P.C.)
0 m.
1,000 m.
MATSUURA


Harbour Limit
Cosmo Oil Berth
MATSUYAMA
No. 1 Wharf Sect. 2
5.5 m depth
230 m
No. 1 Wharf Sect. 1
9.5 m depth
380 m
0
500 m
SCALE


0 m.
500 m.
N
390 m.
- 7.5 m.
Oguchi Wharf
- 4.5 m.
306 m.
Center Wharf
MATSUZAKA

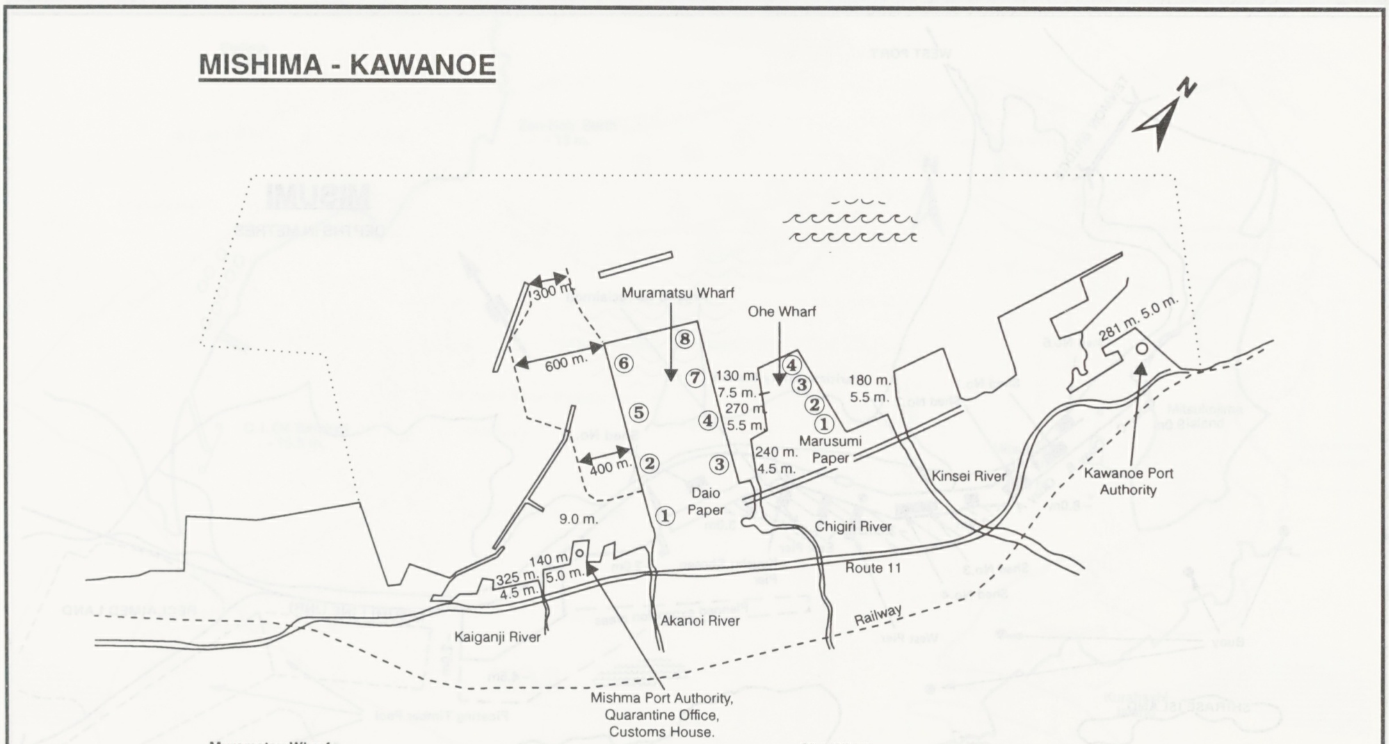

Alumina Silo
⑥ No N-5
Coke Berth
Dock Quay
①
②
③
④
⑦
North Wharf
⑤
Passenger Ship Jetty
⑧
- 8.5 m.- 10.5 m.
Dock Gate
- 10.7 m. - 15.7 m.
N
Power Station
- 9.8 m. - 14.8 m.
Breakwater
137 m.
50 m.
7.3 m - 12.3 m.
Channel
T-1
T-2
T-3
Jetty
Jetty
Crude/Chemical Products Tank Yard
South Quay
MIIKE



MINAMATA

DEPTHS IN METRES

N
Port Limits
Kasaze—saki
Lighthouse
KOIJISHIMA
ISLAND
Dredging Operations
Discharging Anchorage
(Hyakken Port)
Hyakken New Wharves
–6.5
–7.5
Umedo Port
Breakwater
–4
–5.2
2 shore cranes
(each 5 tons)
MARUSHIMA
Fishery Harbour
FUKURO-WAN
INLET
MINAMATA-SHI
Kagoshima Line (J.N.R.)



MISHIMA - KAWANOE

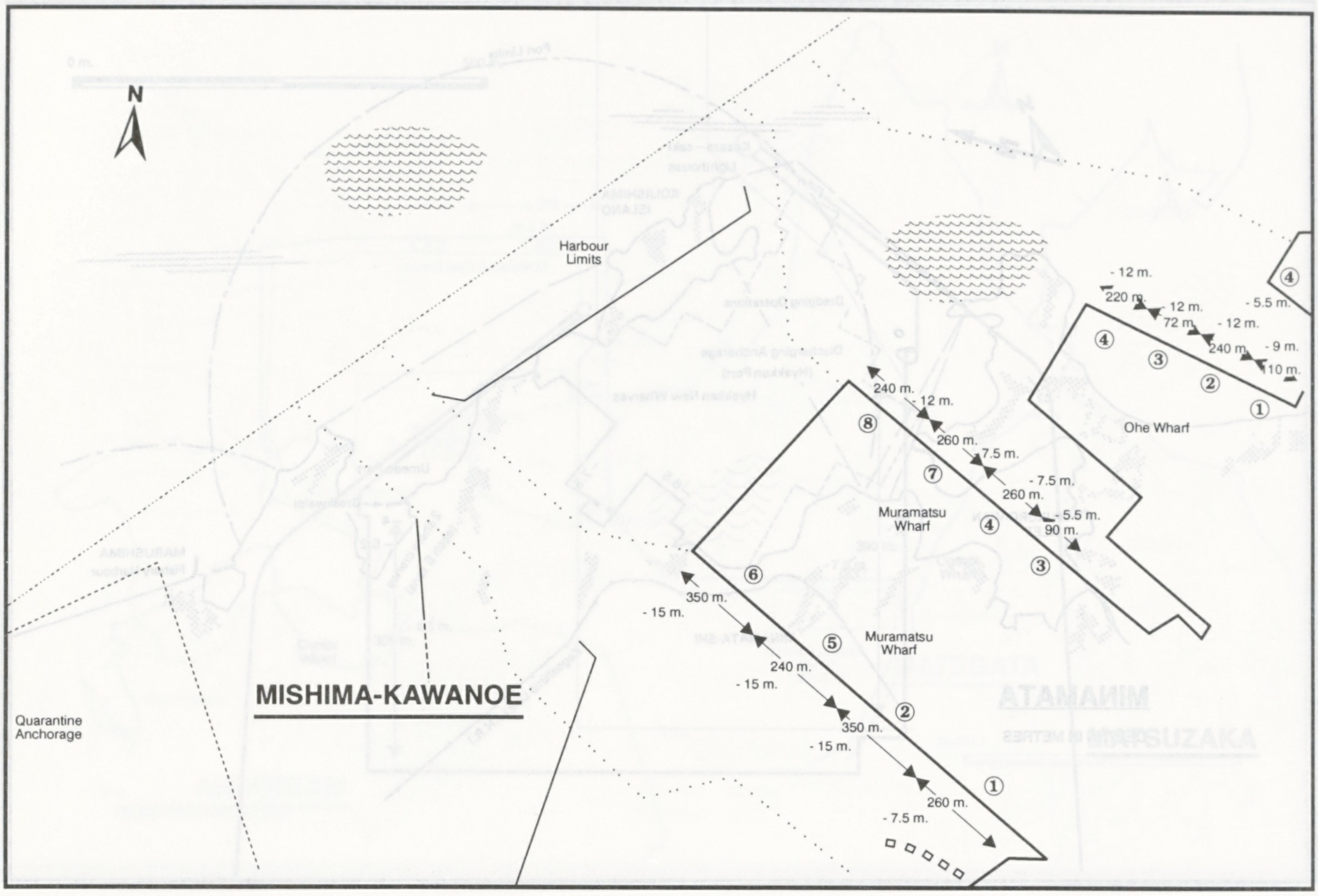
N
300 m.
600 m.
400 m.
Muramatsu Wharf
Ohe Wharf
⑧
⑦
⑥
⑤
④
③
②
①
130 m.
7.5 m.
270 m.
5.5 m.
④
③
②
①
180 m.
5.5 m.
240 m.
4.5 m.
Marusumi
Paper
Daio
Paper
9.0 m.
140 m.
325 m.
5.0 m.
4.5 m.
281 m. 5.0 m.
Kinsei River
Kawanoe Port
Authority
Chigiri River
Route 11
Railway
Akanoi River
Kaiganji River
Mishma Port Authority,
Quarantine Office,
Customs House.

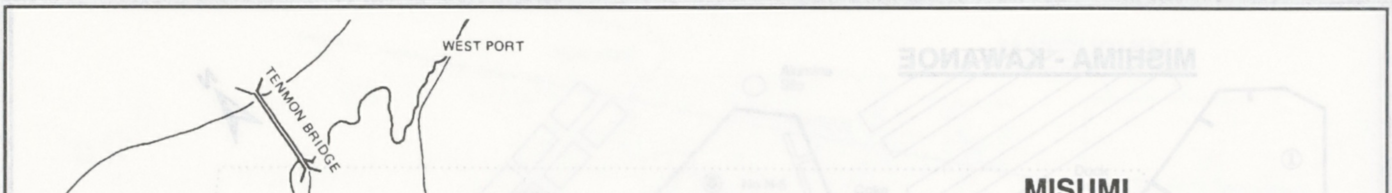
Muramatsu Wharf

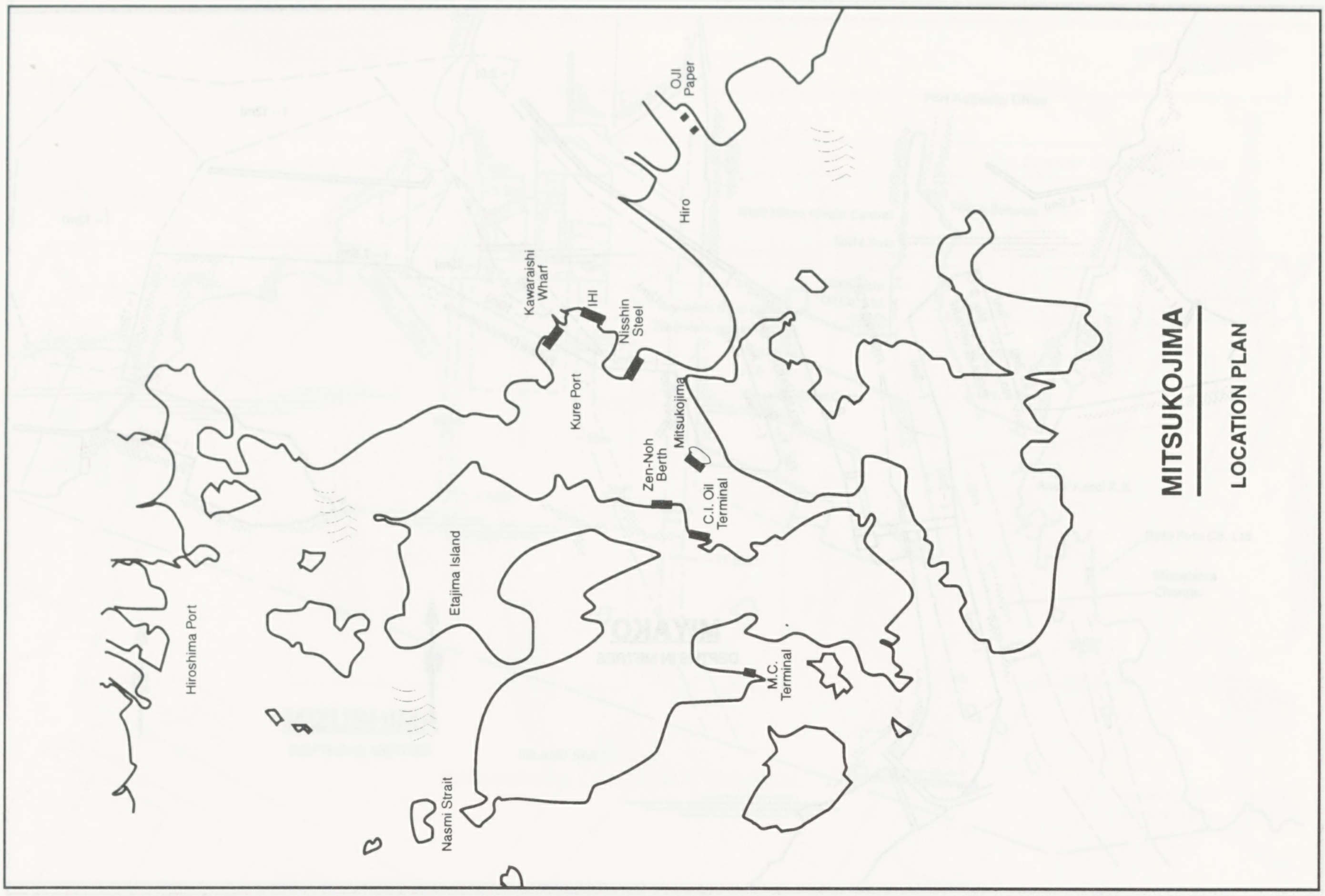
Berth No	Length (m)	Depth (m)
1	274	7.5
2	380	15.0
3	90	5.5
4	260	7.5
5	260	15.0
6	390	15.0
7	260	7.5
8	240	12.0

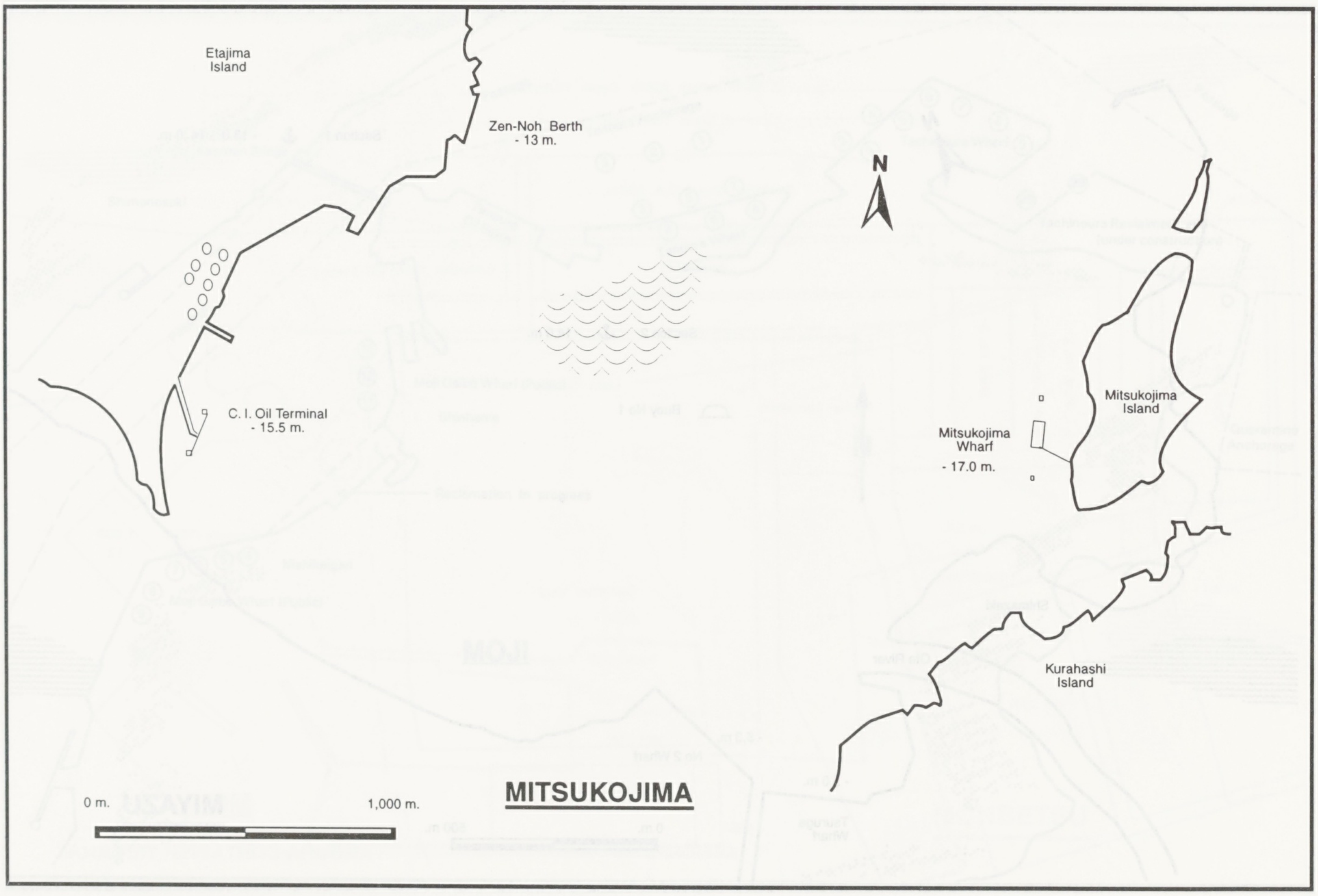
Ohe Wharf

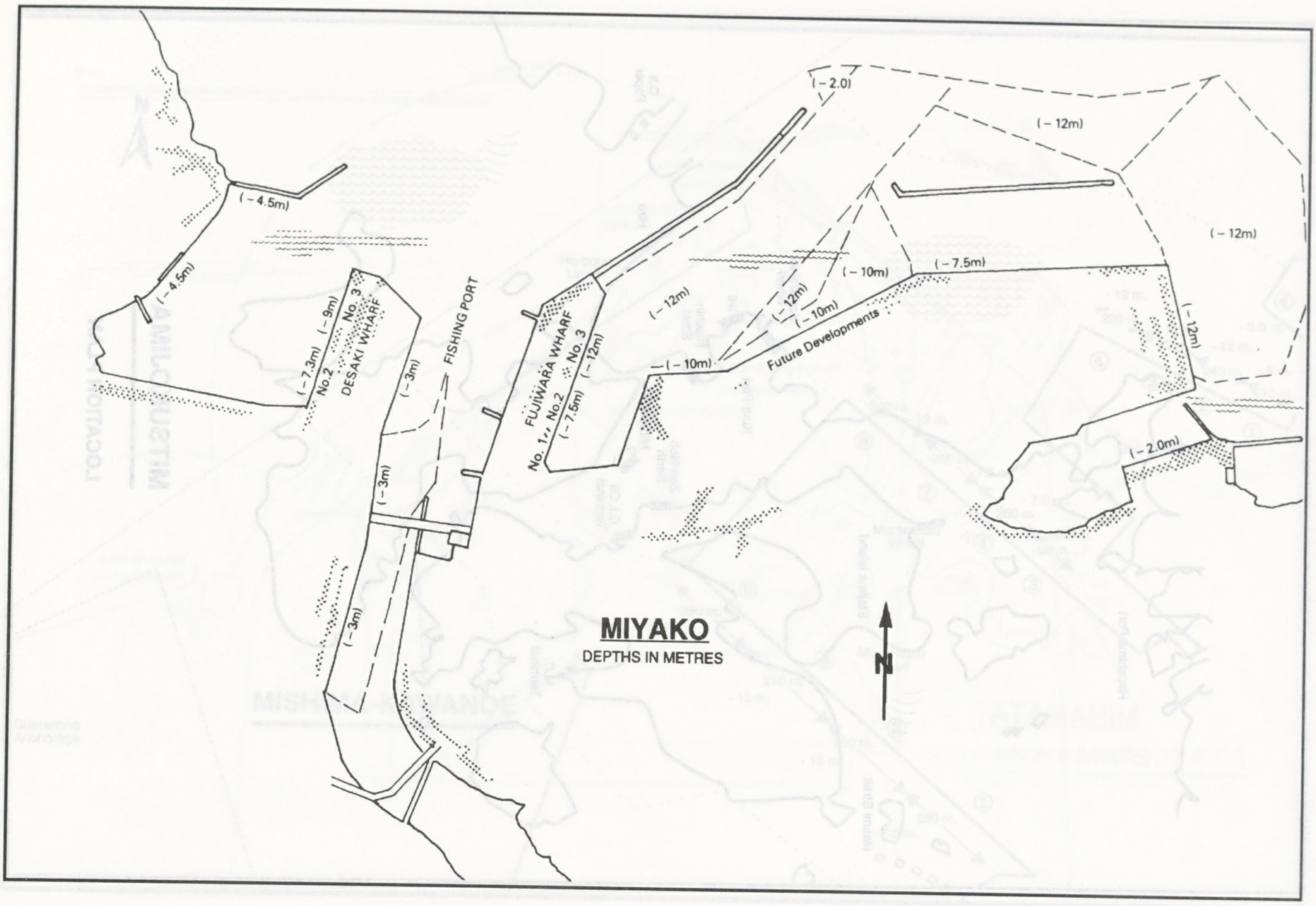
Berth No	Length (m)	Depth (m)
1	110	7.5
2	532	7.5
3		12.0
4		12.0

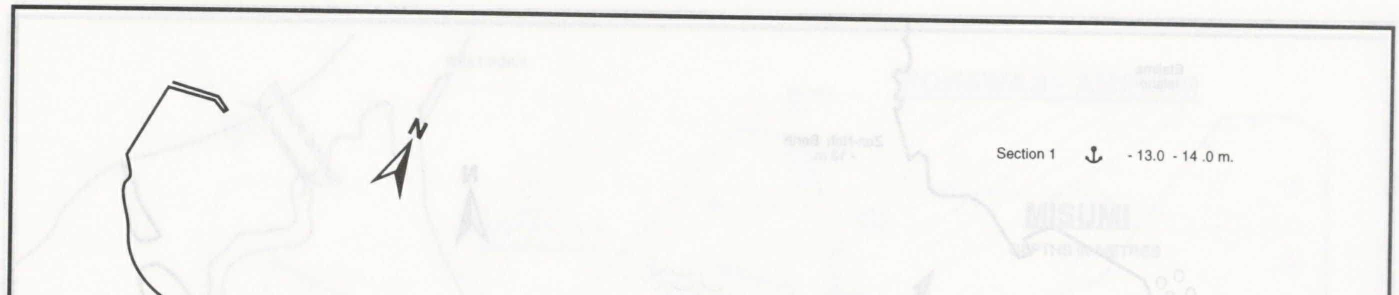

N
Harbour Limits
MISHIMA-KAWANOE
Quarantine Anchorage
- 12 m.
220 m.
- 12 m.
72 m.
- 12 m.
240 m.
- 9 m.
110 m.
- 5.5 m.
④
④
③
②
①
Ohe Wharf
240 m.
- 12 m.
⑧
260 m.
7.5 m.
⑦
- 7.5 m.
260 m.
- 5.5 m.
90 m.
Muramatsu Wharf
④
③
⑥
350 m.
- 15 m.
⑤
Muramatsu Wharf
240 m.
- 15 m.
②
350 m.
- 15 m.
①
260 m.
- 7.5 m.

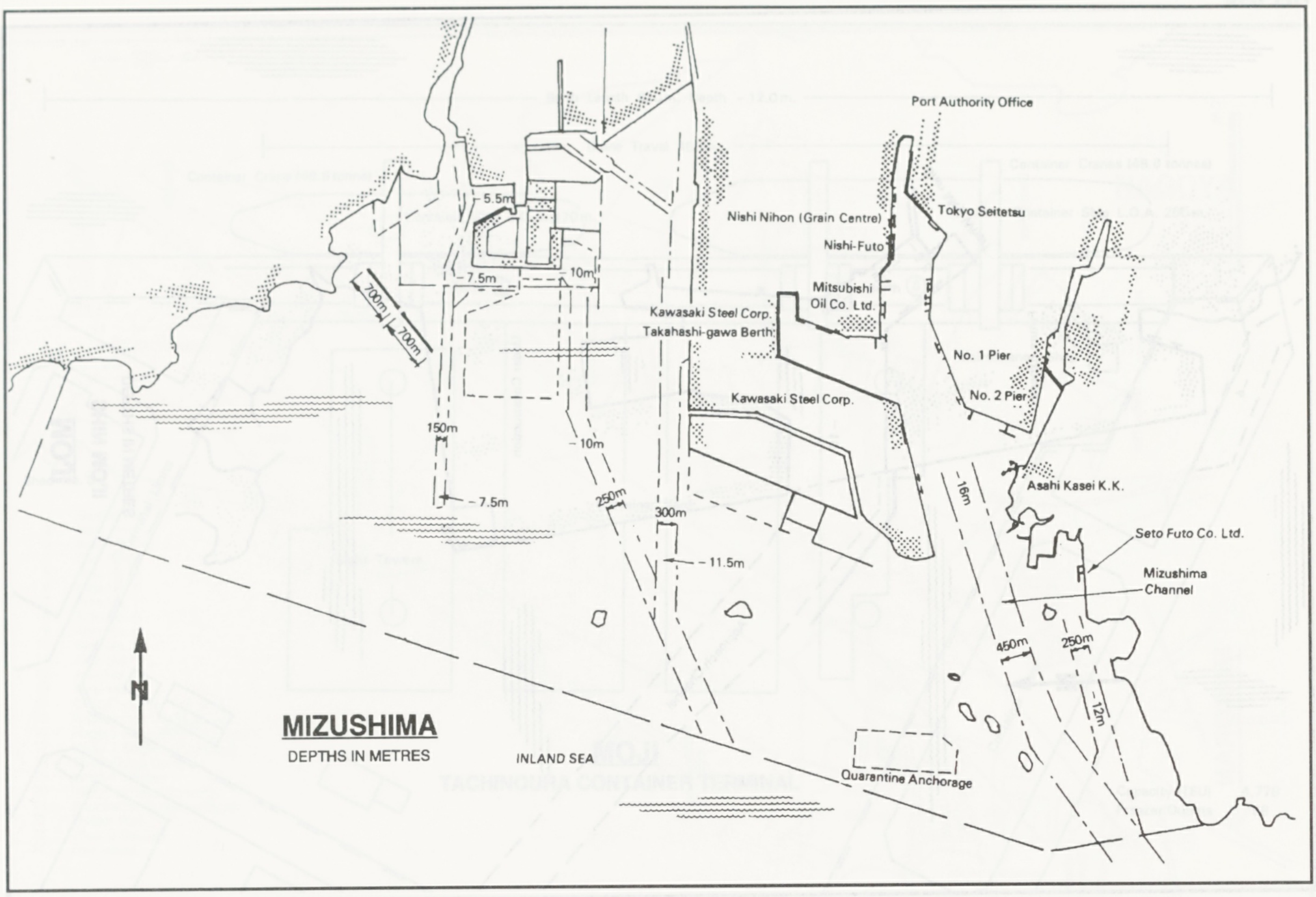

WEST PORT
TENMON BRIDGE
MISUMI
DEPTHS IN METRES
Area to be reclaimed
Shed No.5
Shed No.1
Shed No.2
Maritime Safety Station
Quay C
Quay B
Quay A
−9.0m
−8.0m
−3.0m
−3.0m
−3.0m
Shed No. 6
East Pier
Kyushu Shosen Pier
−2.0m
Shed No.3
Shed No.4
West Pier
Planned expansion areas
Buoy
MISUMI LINE (JNR)
RECLAIMED LAND
2.0m
−4.5m
Floating Timber Pool
SHIRASE ISLAND
TOBASE ISLAND

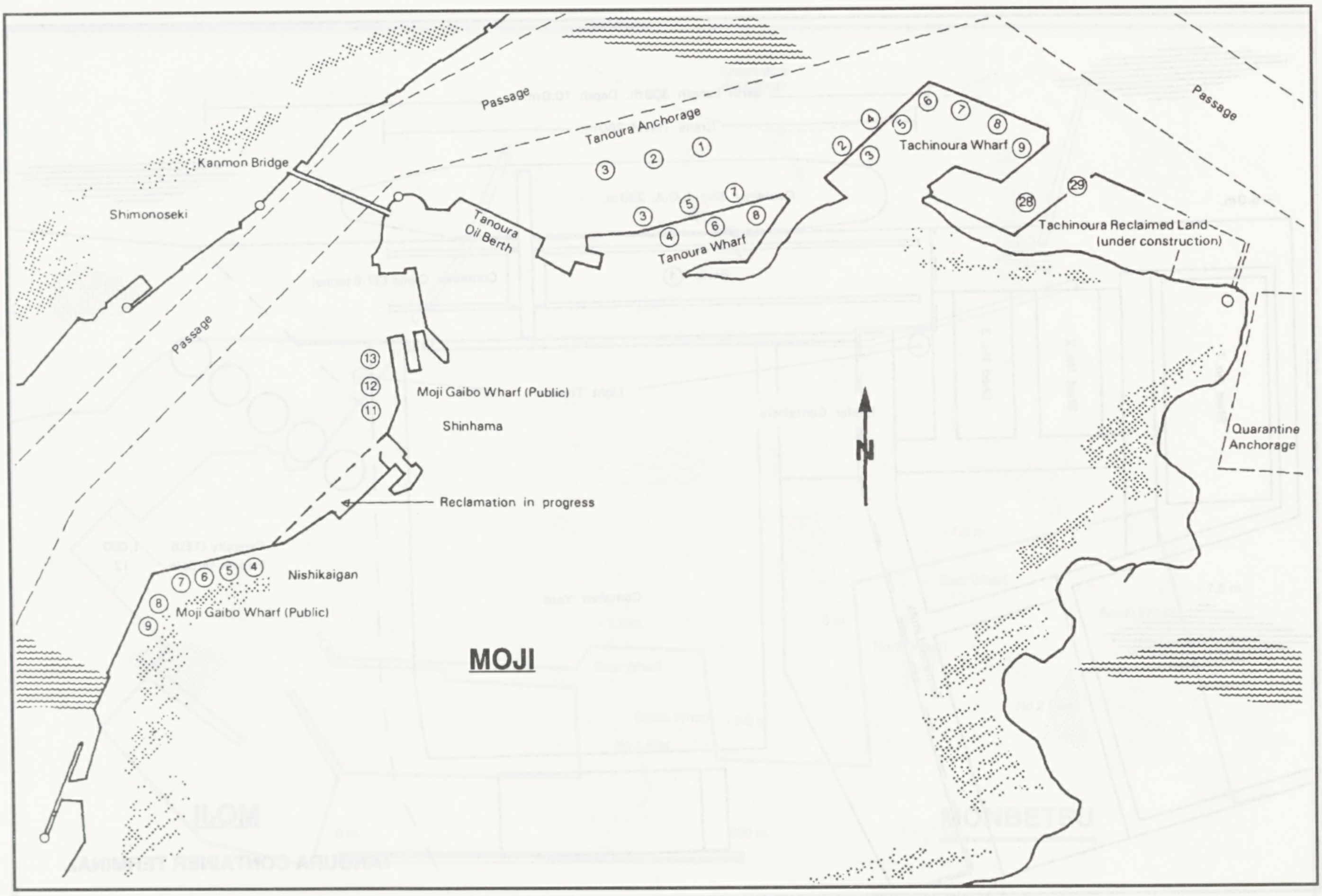

MITSUKOJIMA
LOCATION PLAN
OJI Paper
Hiro
Kawaraishi Wharf
IHI
Nisshin Steel
Kure Port
Mitsukojima
Zen-Noh Berth
C.I. Oil Terminal
Etajima Island
Hiroshima Port
M.C. Terminal
Nasmi Strait

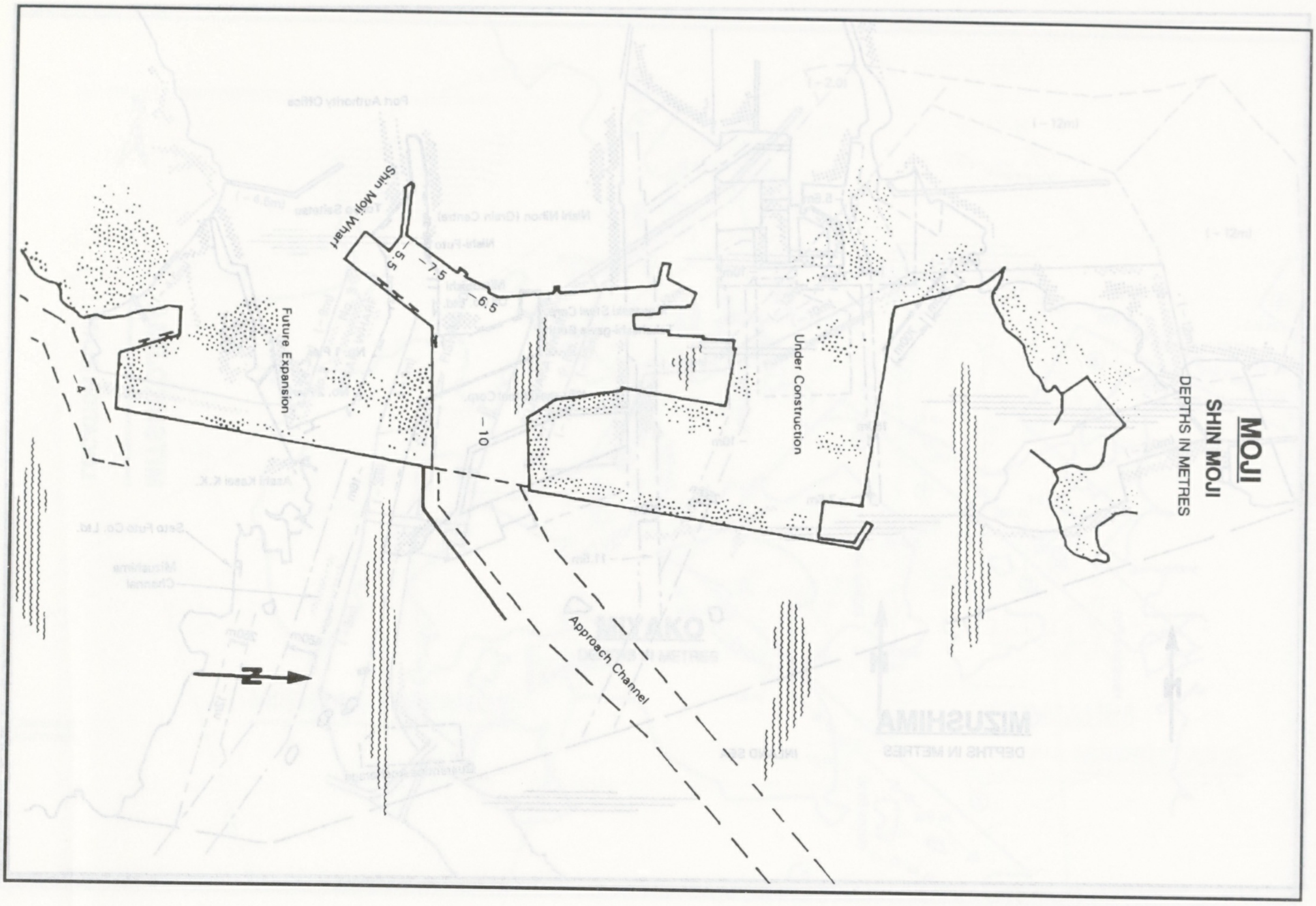

Etajima Island
Zen-Noh Berth - 13 m.
N
C. I. Oil Terminal - 15.5 m.
Mitsukojima Island
Mitsukojima Wharf - 17.0 m.
Kurahashi Island
MITSUKOJIMA
0 m.
1,000 m.

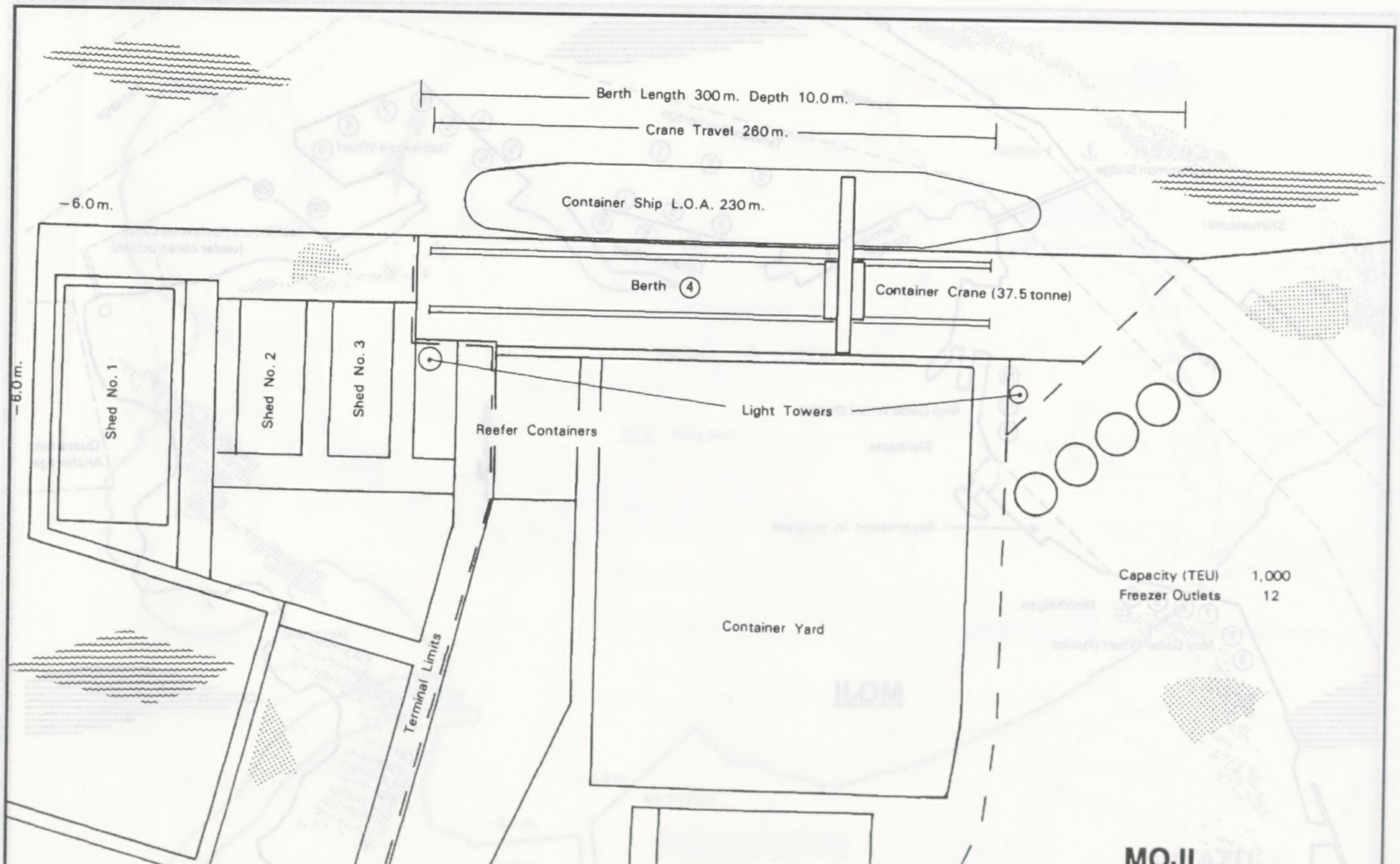

(–2.0)
(–12m)
(–4.5m)
(–4.5m)
(–12m)
(–7.5m)
(–10m)
(–12m)
(–12m)
(–10m)
Future Developments
(–10m)
FISHING PORT
No. 3
(–9m)
DESAKI WHARF
No.2
(–7.3m)
(–3m)
(–3m)
(–3m)
FUJIWARA WHARF
No. 1
No. 2
No. 3
(–7.5m)
(–12m)
(–12m)
(–2.0m)
MIYAKO
DEPTHS IN METRES
N

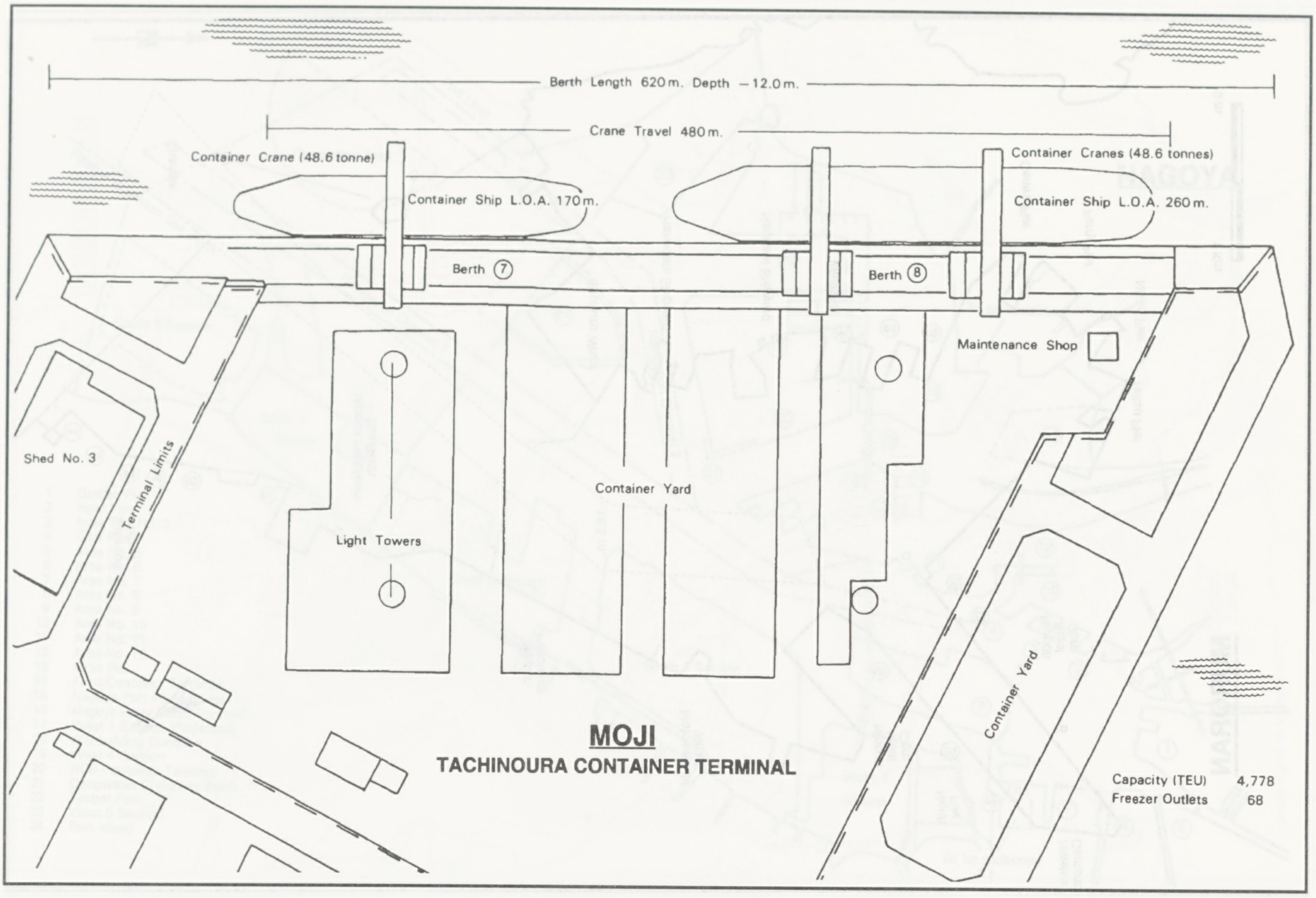

N
Section 1
-13.0 - 14 .0 m.
Section 2
-14.0 m.
Buoy No 1
Shimazaki
Ote River
-5.3 m.
No 2 Wharf
-5.0 m.
Tsuruga Wharf
0 m.
500 m.
MIYAZU

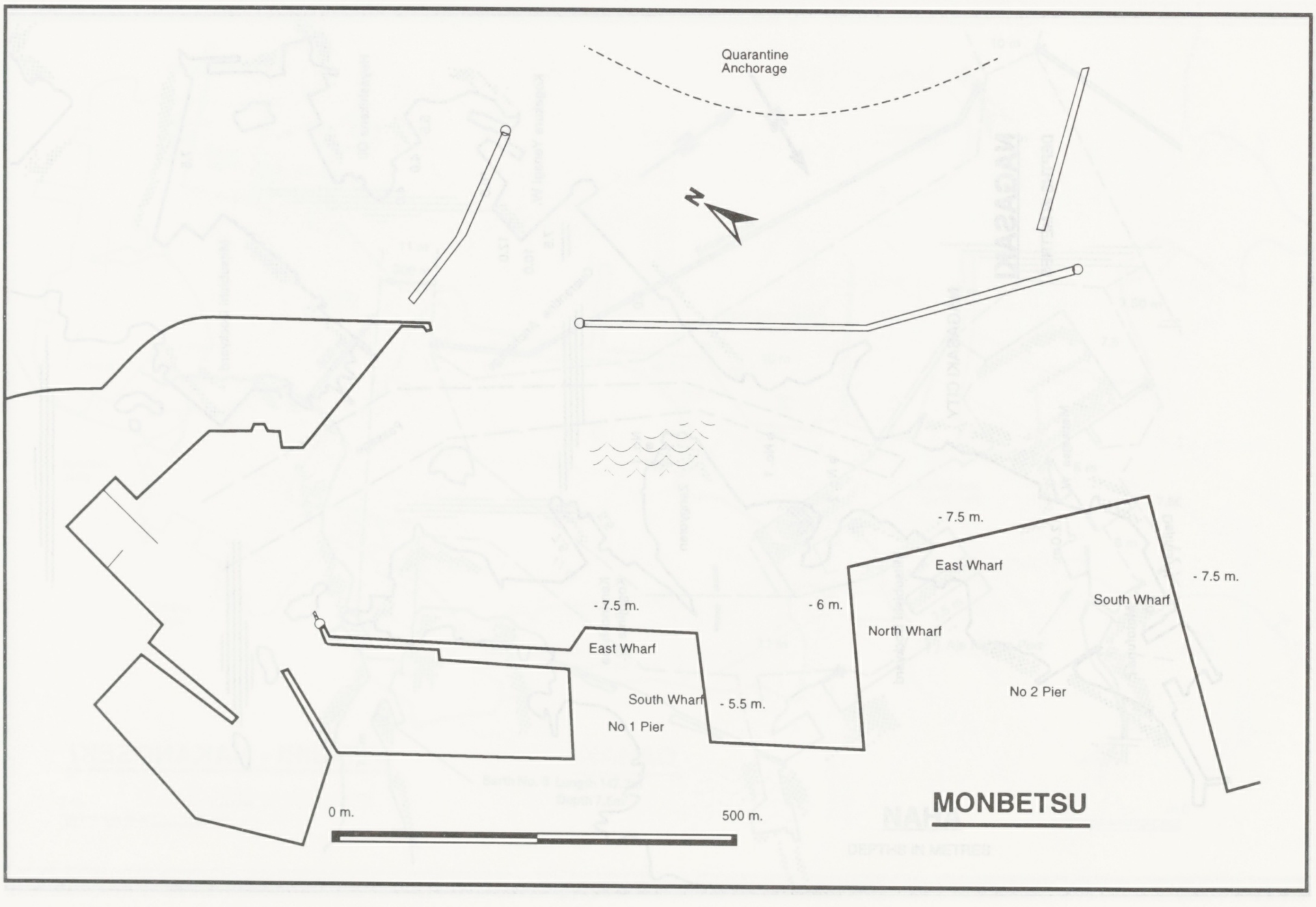

Port Authority Office
Nishi Nihon (Grain Centre)
Tokyo Seitetsu
Nishi-Futo
Mitsubishi Oil Co. Ltd.
Kawasaki Steel Corp. Takahashi-gawa Berth
No. 1 Pier
No. 2 Pier
Kawasaki Steel Corp.
Asahi Kasei K.K.
Seto Futo Co. Ltd.
Mizushima Channel
5.5m
7.5m
10m
700m
700m
150m
10m
7.5m
250m
300m
11.5m
16m
450m
250m
12m
N
MIZUSHIMA
DEPTHS IN METRES
INLAND SEA
Quarantine Anchorage

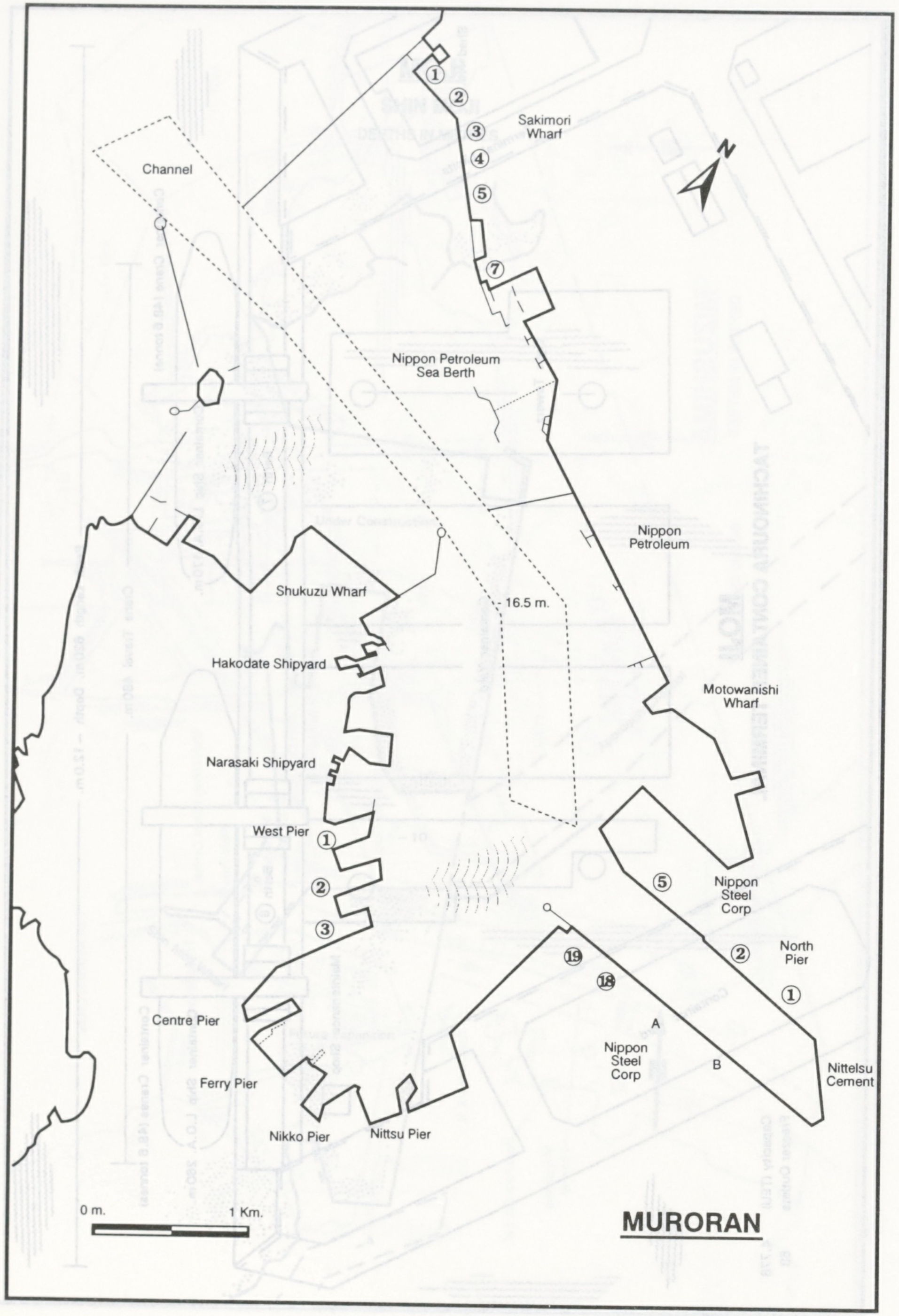

Passage
Tanoura Anchorage
① ② ③
Kanmon Bridge
Shimonoseki
Tanoura Oil Berth
③ ④ ⑤ ⑥ ⑦ ⑧
Tanoura Wharf
② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
Tachinoura Wharf
㉘ ㉙
Tachinoura Reclaimed Land (under construction)
Passage
Passage
⑬ ⑫ ⑪
Moji Gaibo Wharf (Public)
Shinhama
Reclamation in progress
N
Quarantine Anchorage
④ ⑤ ⑥ ⑦ ⑧ ⑨
Nishikaigan
Moji Gaibo Wharf (Public)
MOJI

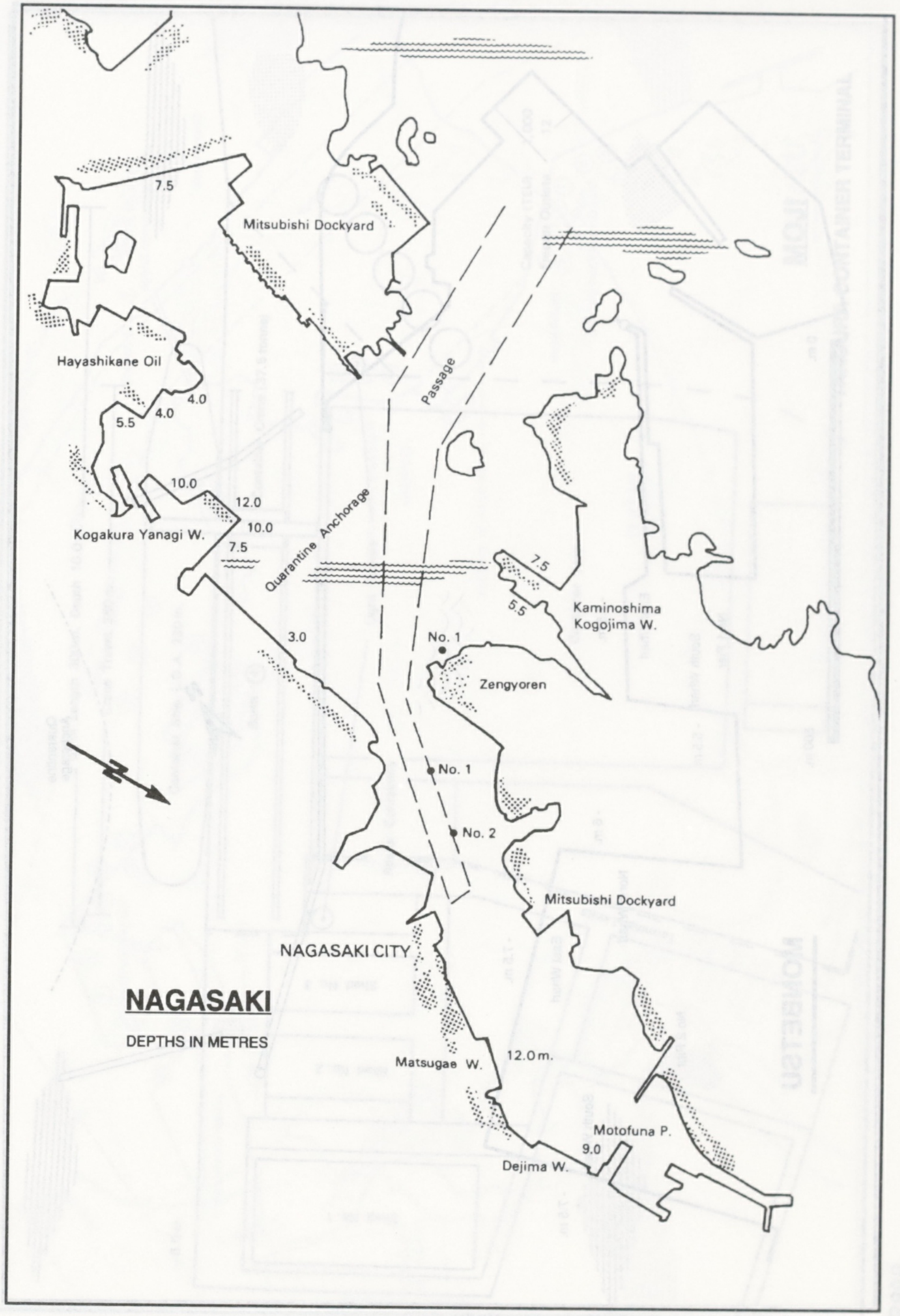

MOJI
SHIN MOJI
DEPTHS IN METRES
Shin Moji Wharf
-5.5
-7.5
-6.5
Future Expansion
Under Construction
-10
-4
Approach Channel
N

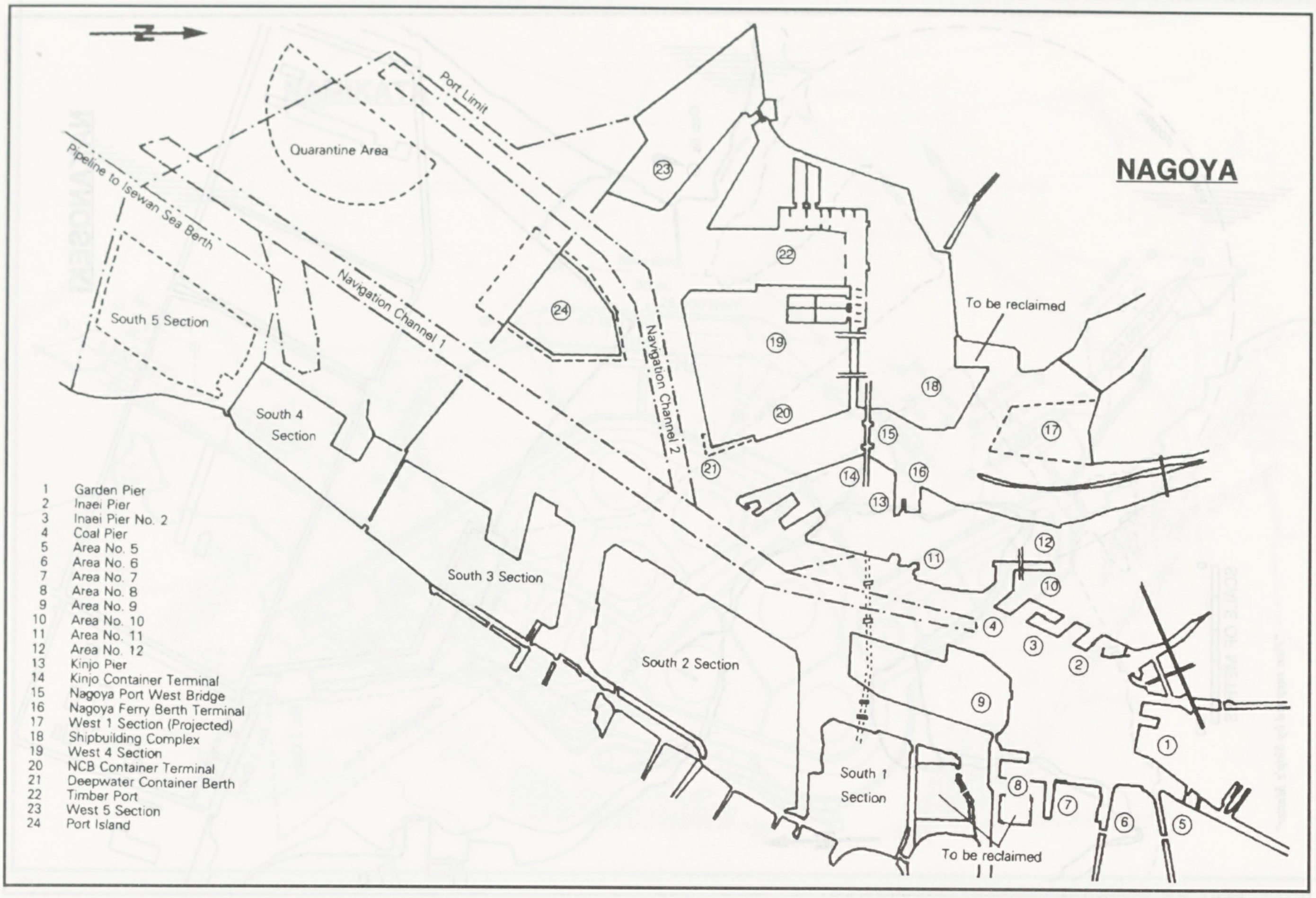

Berth Length 300 m. Depth 10.0 m.
Crane Travel 260 m.
Container Ship L.O.A. 230 m.
-6.0 m.
-6.0 m.
Berth ④
Container Crane (37.5 tonne)
Shed No. 1
Shed No. 2
Shed No. 3
Light Towers
Reefer Containers
Container Yard
Terminal Limits
Capacity (TEU) 1,000
Freezer Outlets 12
MOJI
TANOURA CONTAINER TERMINAL

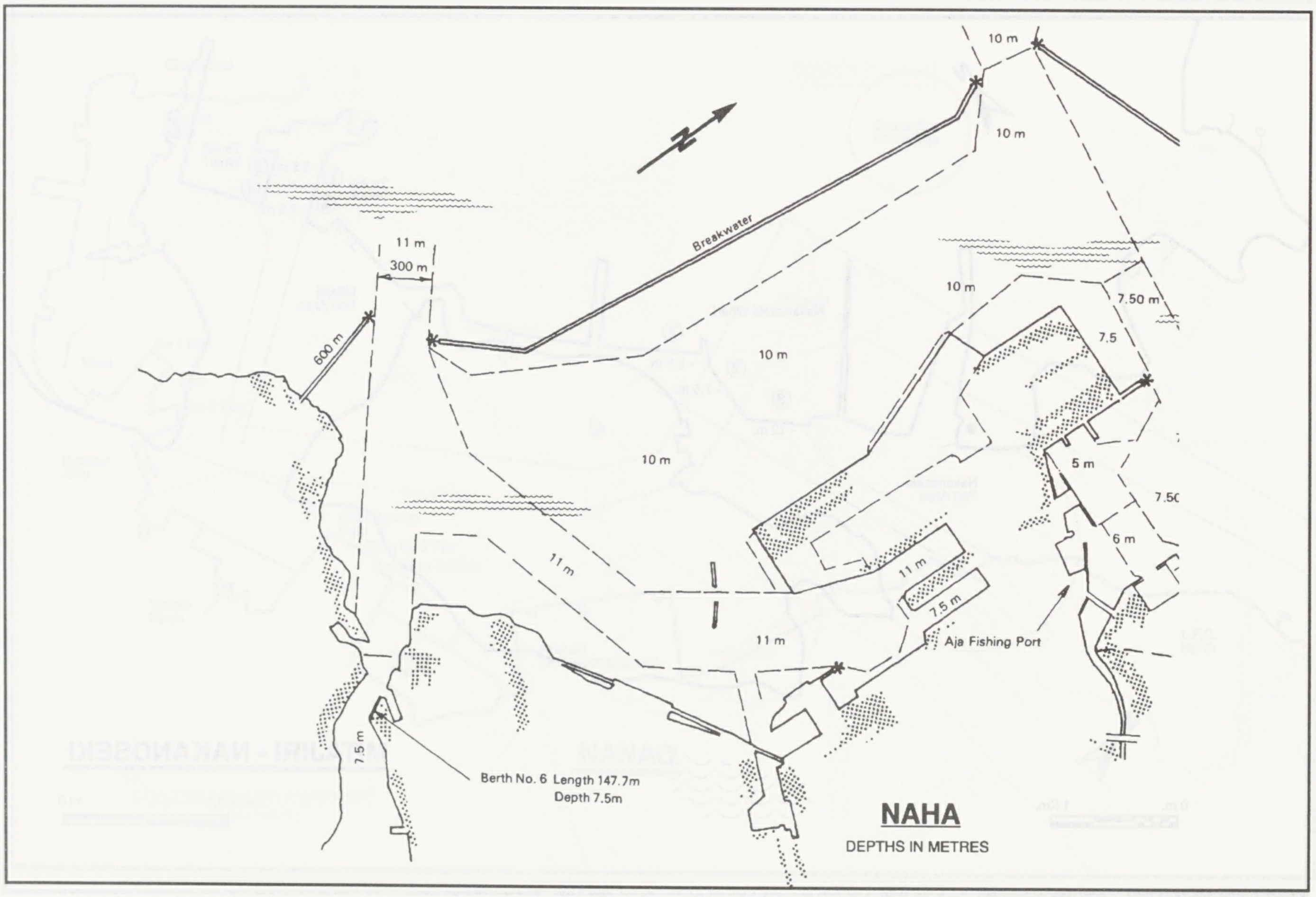

Berth Length 620 m. Depth −12.0 m.
Crane Travel 480 m.
Container Crane (48.6 tonne)
Container Ship L.O.A. 170 m.
Container Cranes (48.6 tonnes)
Container Ship L.O.A. 260 m.
Berth ⑦
Berth ⑧
Maintenance Shop
Shed No. 3
Terminal Limits
Light Towers
Container Yard
Container Yard
MOJI
TACHINOURA CONTAINER TERMINAL
Capacity (TEU) 4,778
Freezer Outlets 68

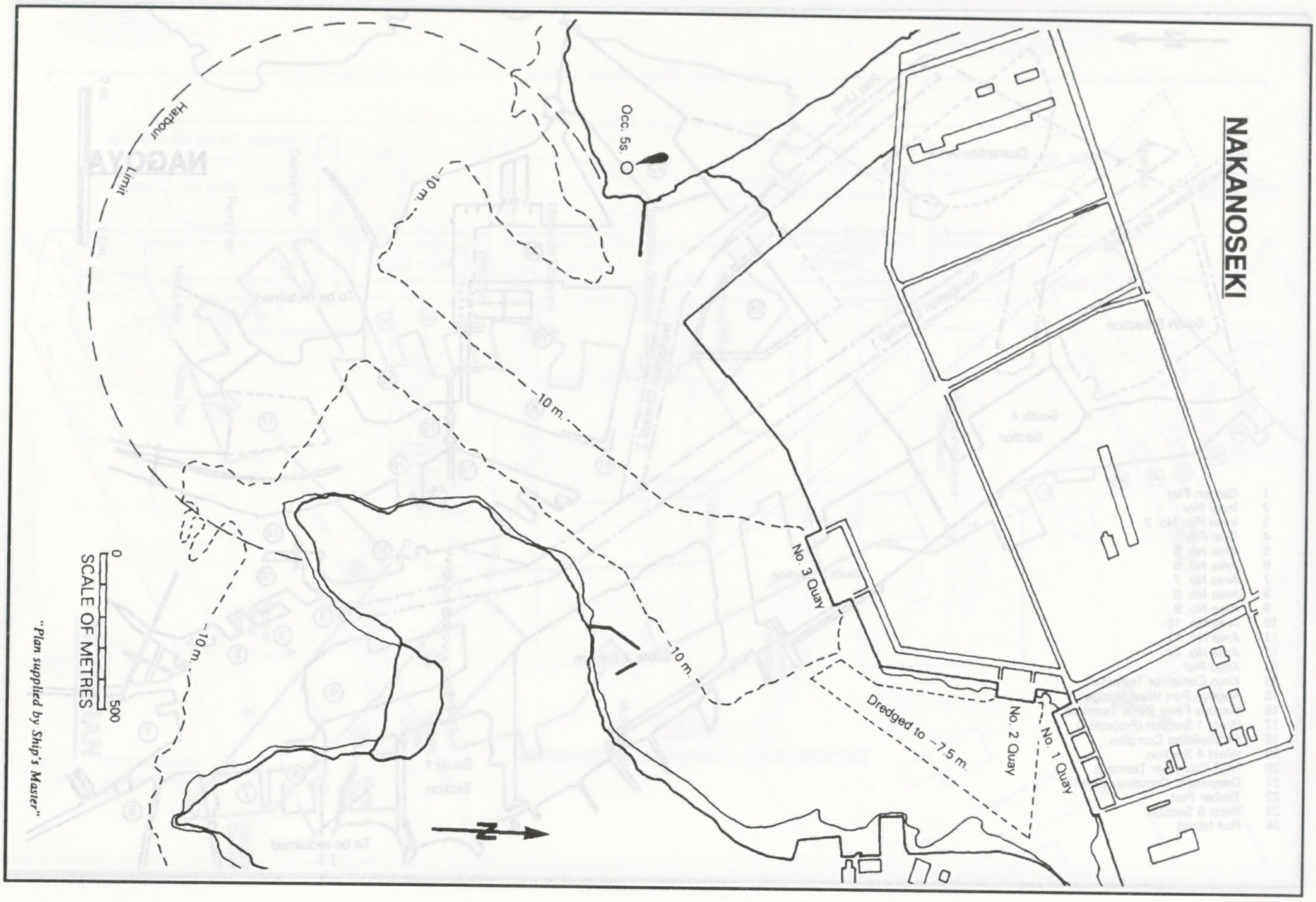

Quarantine Anchorage
N
- 7.5 m.
East Wharf
- 7.5 m.
South Wharf
- 6 m.
North Wharf
No 2 Pier
- 7.5 m.
East Wharf
South Wharf
- 5.5 m.
No 1 Pier
0 m.
500 m.
MONBETSU


Channel
①
②
③
④
⑤
⑦
Sakimori Wharf
N
Nippon Petroleum Sea Berth
Nippon Petroleum
Shukuzu Wharf
16.5 m.
Hakodate Shipyard
Motowanishi Wharf
Narasaki Shipyard
West Pier ①
②
③
⑤
Nippon Steel Corp
North Pier
②
①
⑲
⑱
A
B
Nippon Steel Corp
Nittelsu Cement
Centre Pier
Ferry Pier
Nikko Pier
Nittsu Pier
0 m.
1 Km.
MURORAN


7.5
Mitsubishi Dockyard
Hayashikane Oil
4.0
5.5
4.0
Passage
10.0
12.0
10.0
Kogakura Yanagi W.
7.5
Quarantine Anchorage
7.5
5.5
Kaminoshima Kogojima W.
3.0
No. 1
Zengyoren
No. 1
N
No. 2
Mitsubishi Dockyard
NAGASAKI CITY
NAGASAKI
DEPTHS IN METRES
Matsugae W.
12.0 m.
Motofuna P.
9.0
Dejima W.


N
NAGOYA
Port Limit
Quarantine Area
Pipeline to Isewan Sea Berth
Navigation Channel 1
Navigation Channel 2
South 5 Section
South 4 Section
South 3 Section
South 2 Section
South 1 Section
To be reclaimed
To be reclaimed
1 Garden Pier
2 Inaei Pier
3 Inaei Pier No. 2
4 Coal Pier
5 Area No. 5
6 Area No. 6
7 Area No. 7
8 Area No. 8
9 Area No. 9
10 Area No. 10
11 Area No. 11
12 Area No. 12
13 Kinjo Pier
14 Kinjo Container Terminal
15 Nagoya Port West Bridge
16 Nagoya Ferry Berth Terminal
17 West 1 Section (Projected)
18 Shipbuilding Complex
19 West 4 Section
20 NCB Container Terminal
21 Deepwater Container Berth
22 Timber Port
23 West 5 Section
24 Port Island

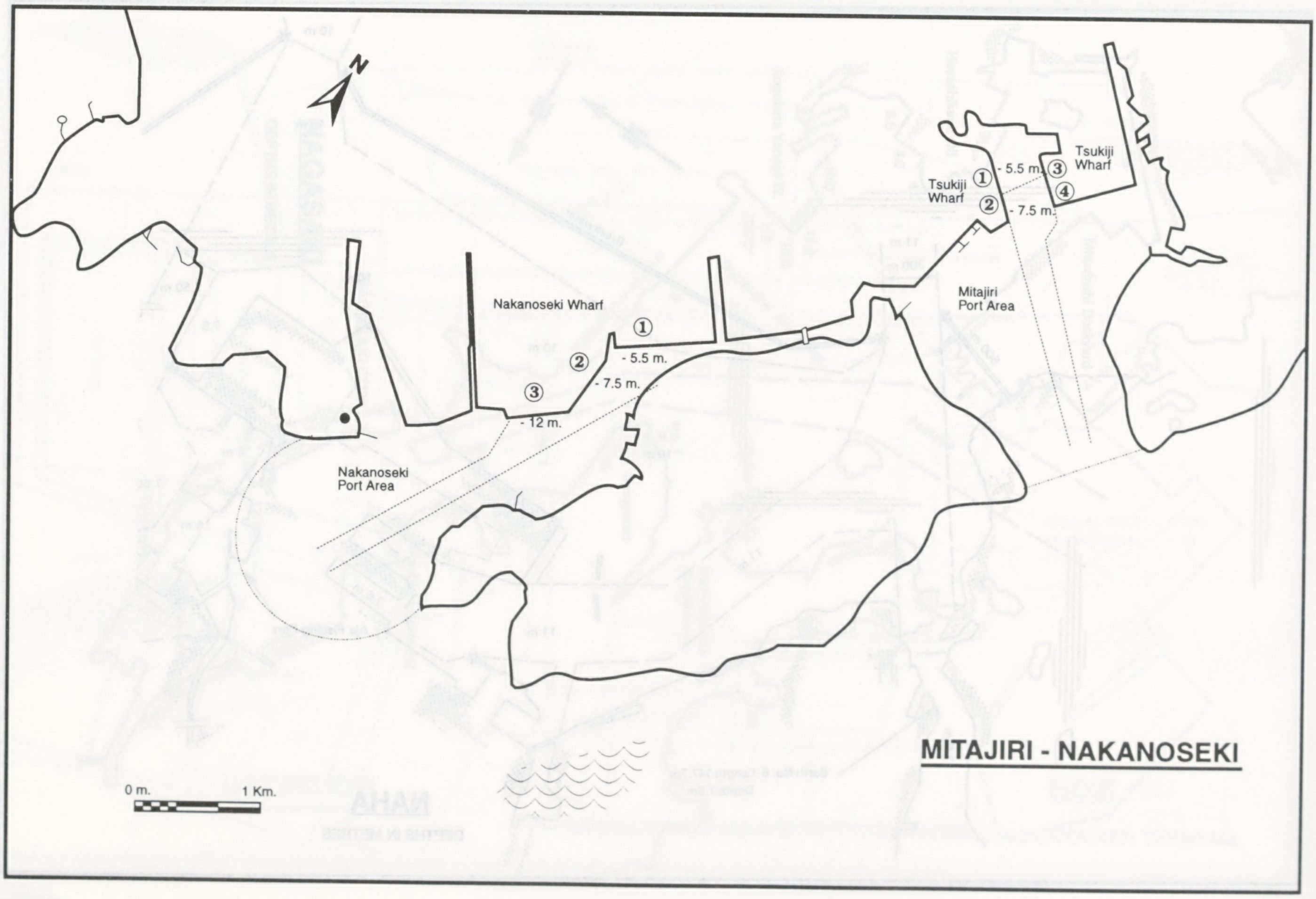

N
Breakwater
10 m
10 m
10 m
10 m
10 m
11 m
300 m
600 m
7.50 m
7.5
5 m
7.50
6 m
11 m
11 m
11 m
7.5 m
7.5 m
Aja Fishing Port
Berth No. 6 Length 147.7m
Depth 7.5m
NAHA
DEPTHS IN METRES



NAKANOSEKI

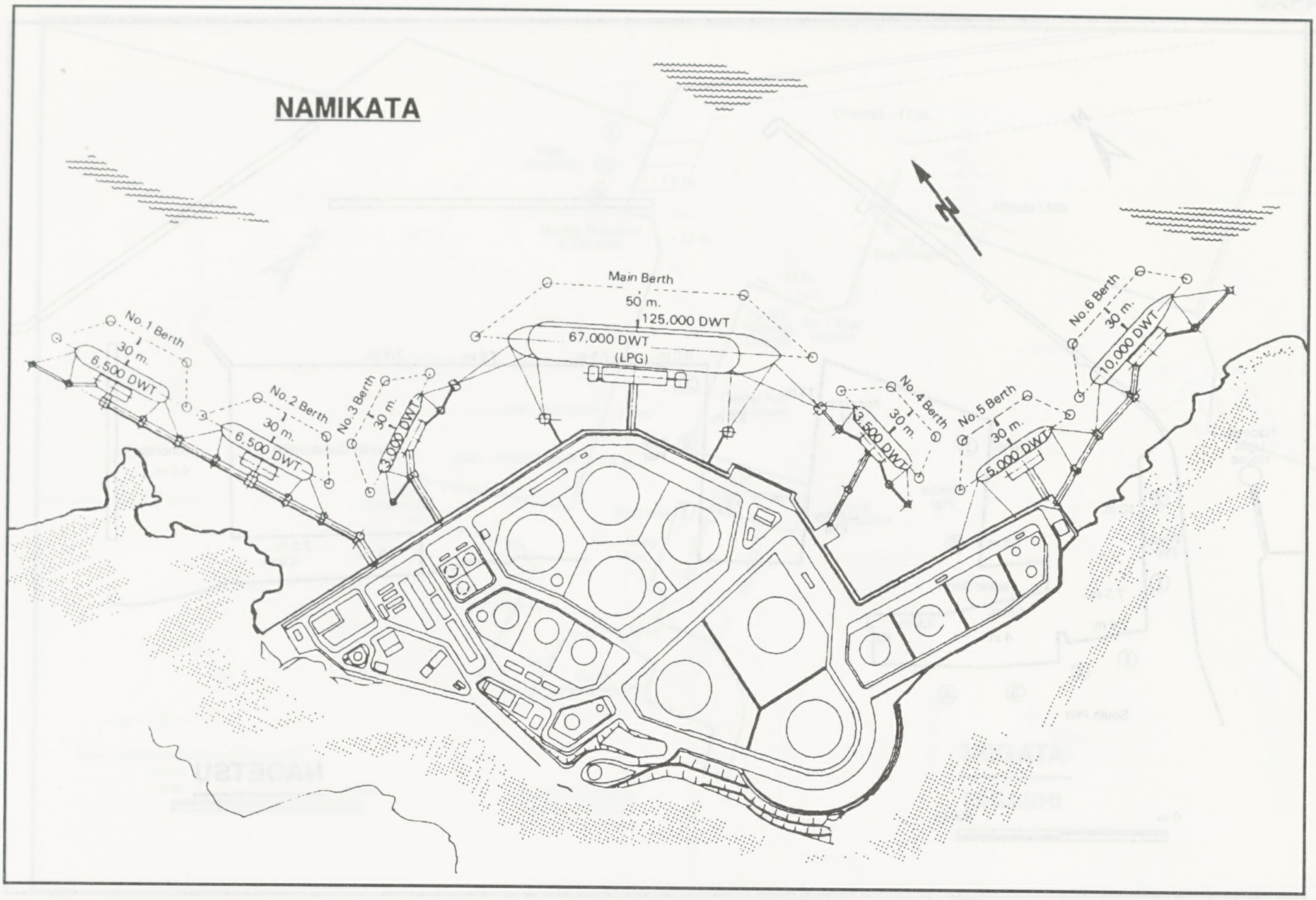
"Plan supplied by Ship's Master"

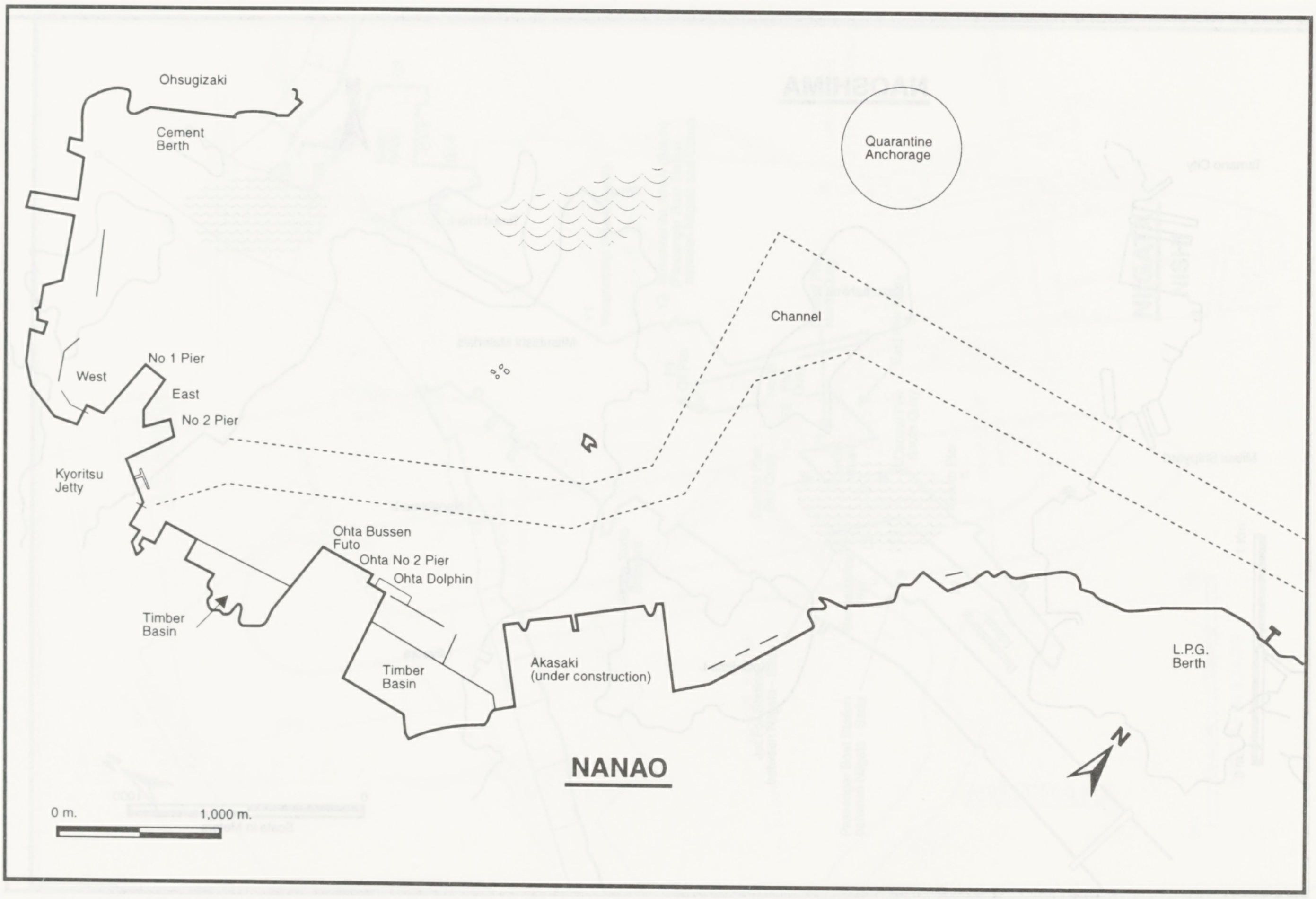
Harbour Limit
Occ. 5s.
10 m.
10 m.
10 m.
10 m.
No. 3 Quay
No. 2 Quay
No. 1 Quay
Dredged to −7.5 m.
N
SCALE OF METRES
0
500

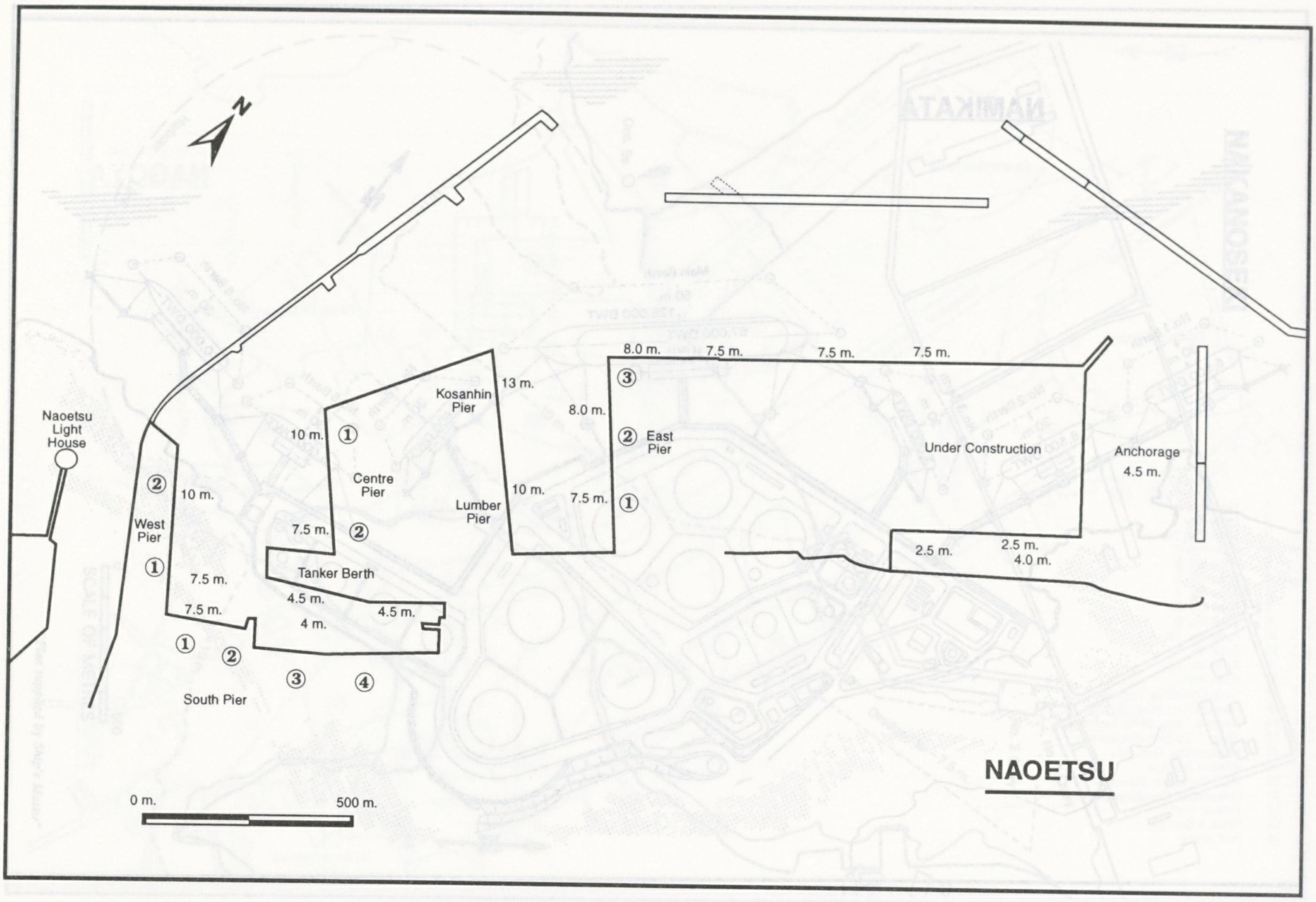


MITAJIRI - NAKANOSEKI

N
Nakanoseki Wharf
①
②
③
- 5.5 m.
- 7.5 m.
- 12 m.
Nakanoseki Port Area
Tsukiji Wharf
Tsukiji Wharf
①
②
③
④
- 5.5 m.
- 7.5 m.
Mitajiri Port Area
0 m.
1 Km.

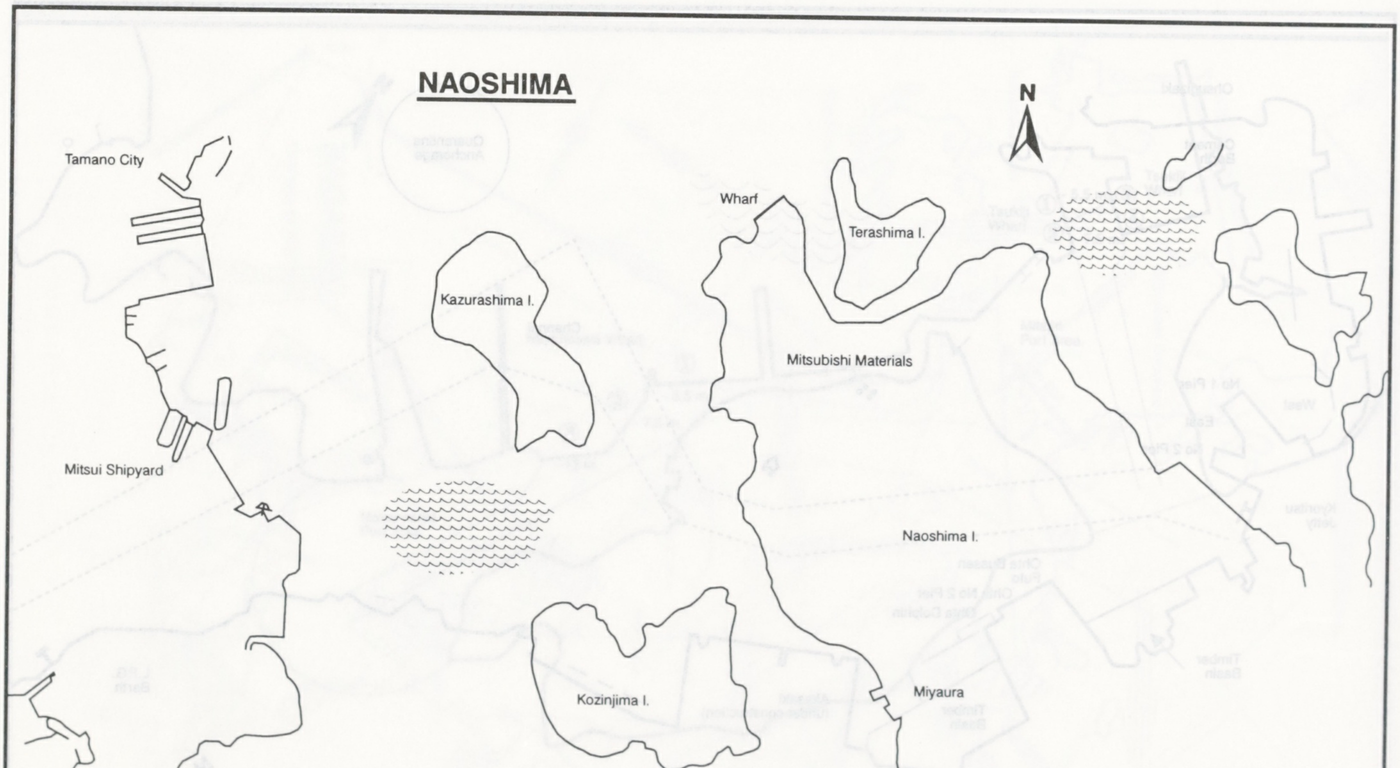

NAMIKATA
Main Berth
50 m.
125,000 DWT
67,000 DWT
(LPG)
No. 1 Berth
30 m.
6,500 DWT
No. 2 Berth
30 m.
6,500 DWT
No. 3 Berth
30 m.
3,000 DWT
No. 4 Berth
30 m.
3,500 DWT
No. 5 Berth
30 m.
5,000 DWT
No. 6 Berth
30 m.
10,000 DWT
N


Ohsugizaki
Cement Berth
Quarantine Anchorage
Channel
West
No 1 Pier
East
No 2 Pier
Kyoritsu Jetty
Ohta Bussen Futo
Ohta No 2 Pier
Ohta Dolphin
Timber Basin
Timber Basin
Akasaki (under construction)
L.P.G. Berth
N
NANAO
0 m.
1,000 m.



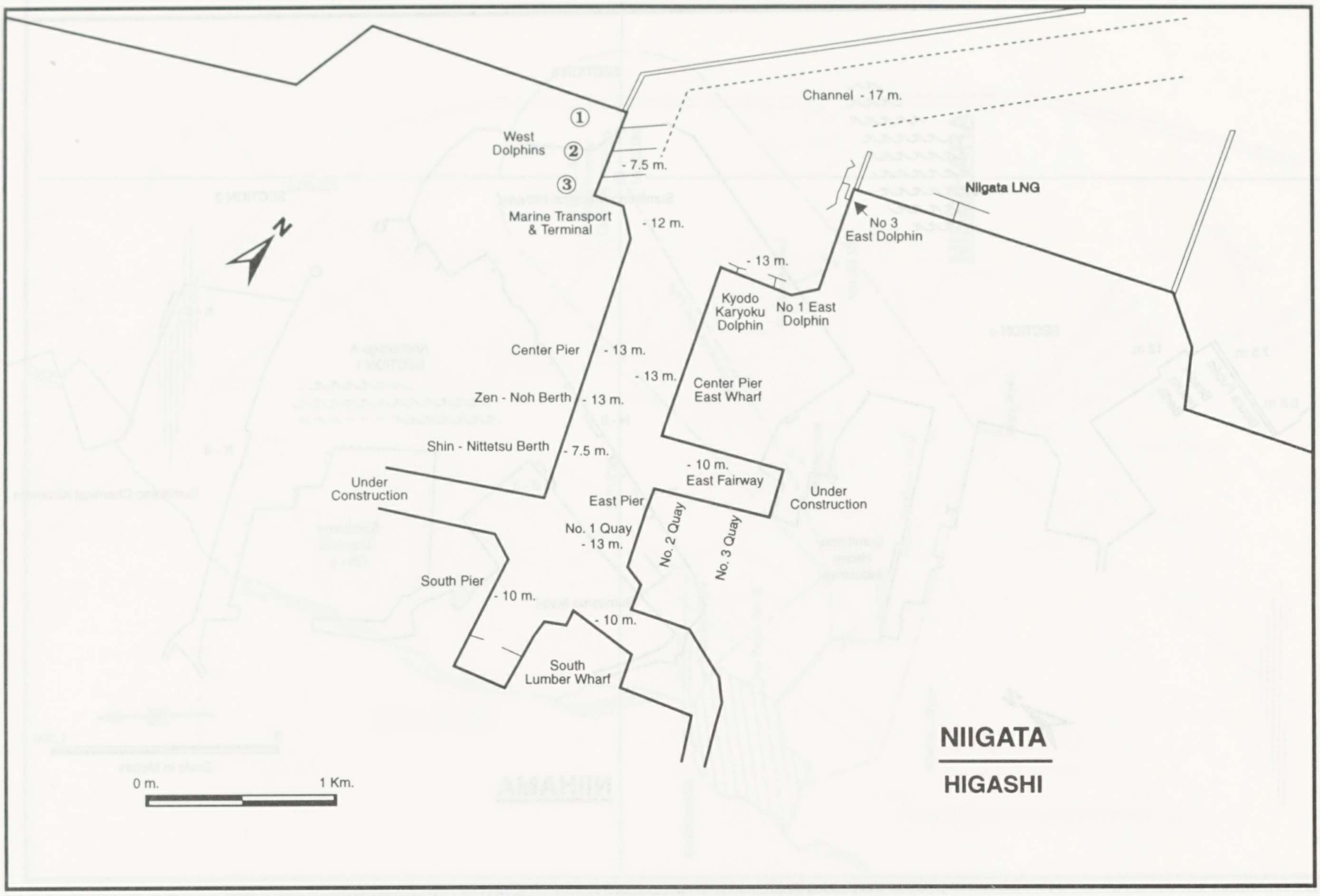
NAOETSU

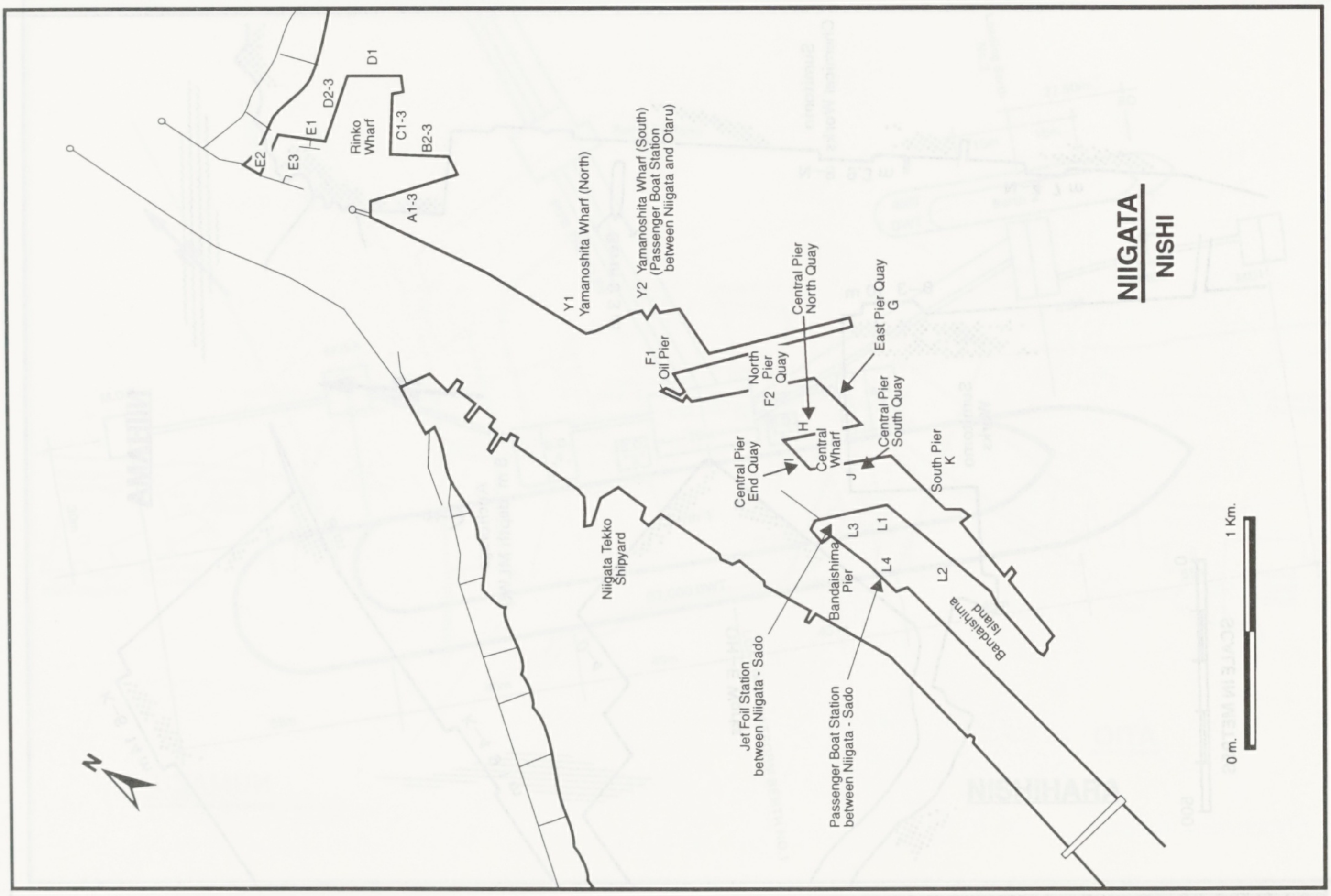
N
Naoetsu Light House
West Pier
② 10 m.
① 7.5 m.
7.5 m.
① ② South Pier ③ ④
10 m. ①
Centre Pier
7.5 m. ②
Tanker Berth
4.5 m.
4 m.
4.5 m.
Kosanhin Pier
13 m.
Lumber Pier
10 m.
8.0 m.
③
8.0 m.
② East Pier
7.5 m. ①
7.5 m.
7.5 m.
7.5 m.
Under Construction
Anchorage
4.5 m.
2.5 m.
2.5 m.
4.0 m.
0 m.
500 m.

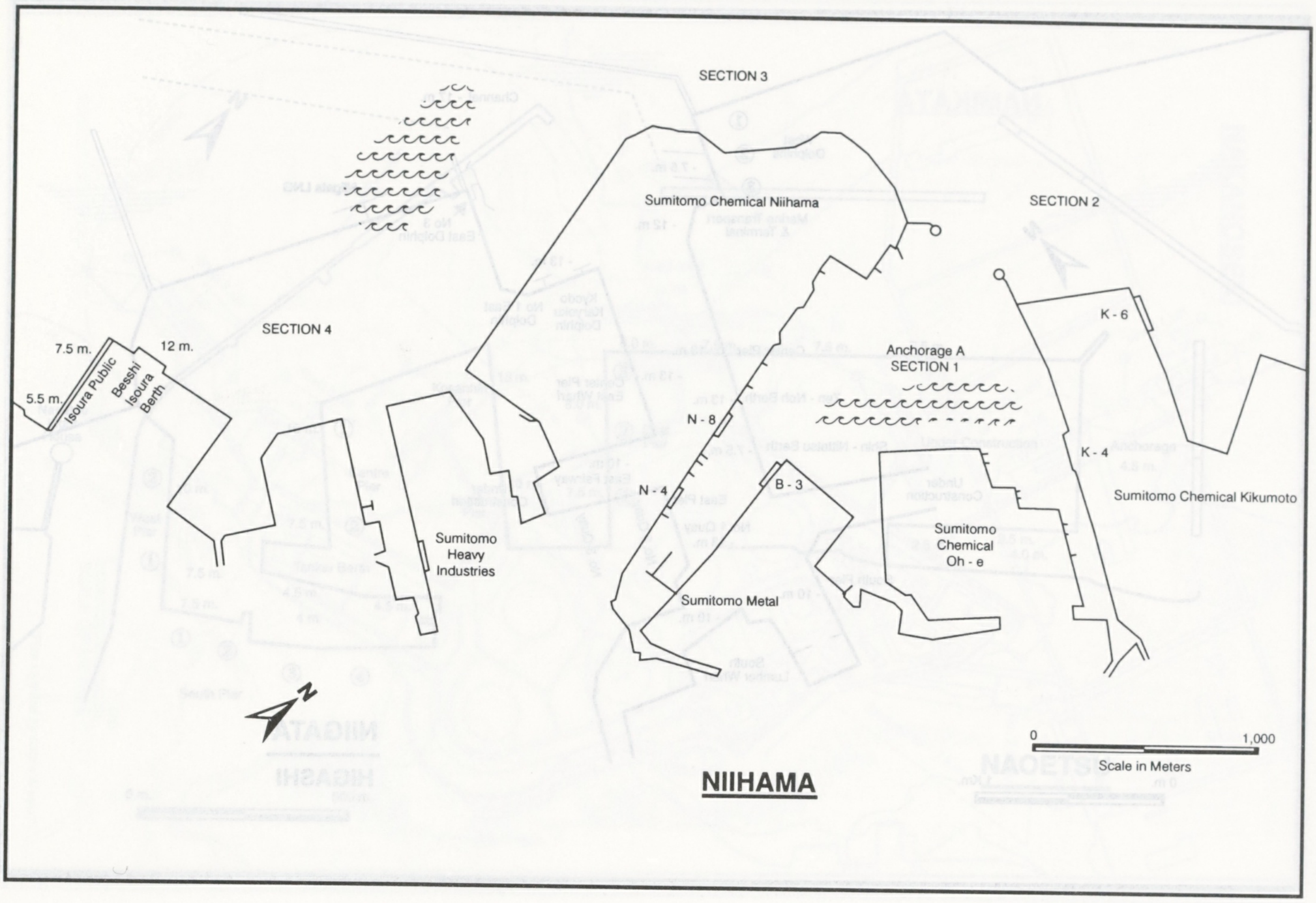


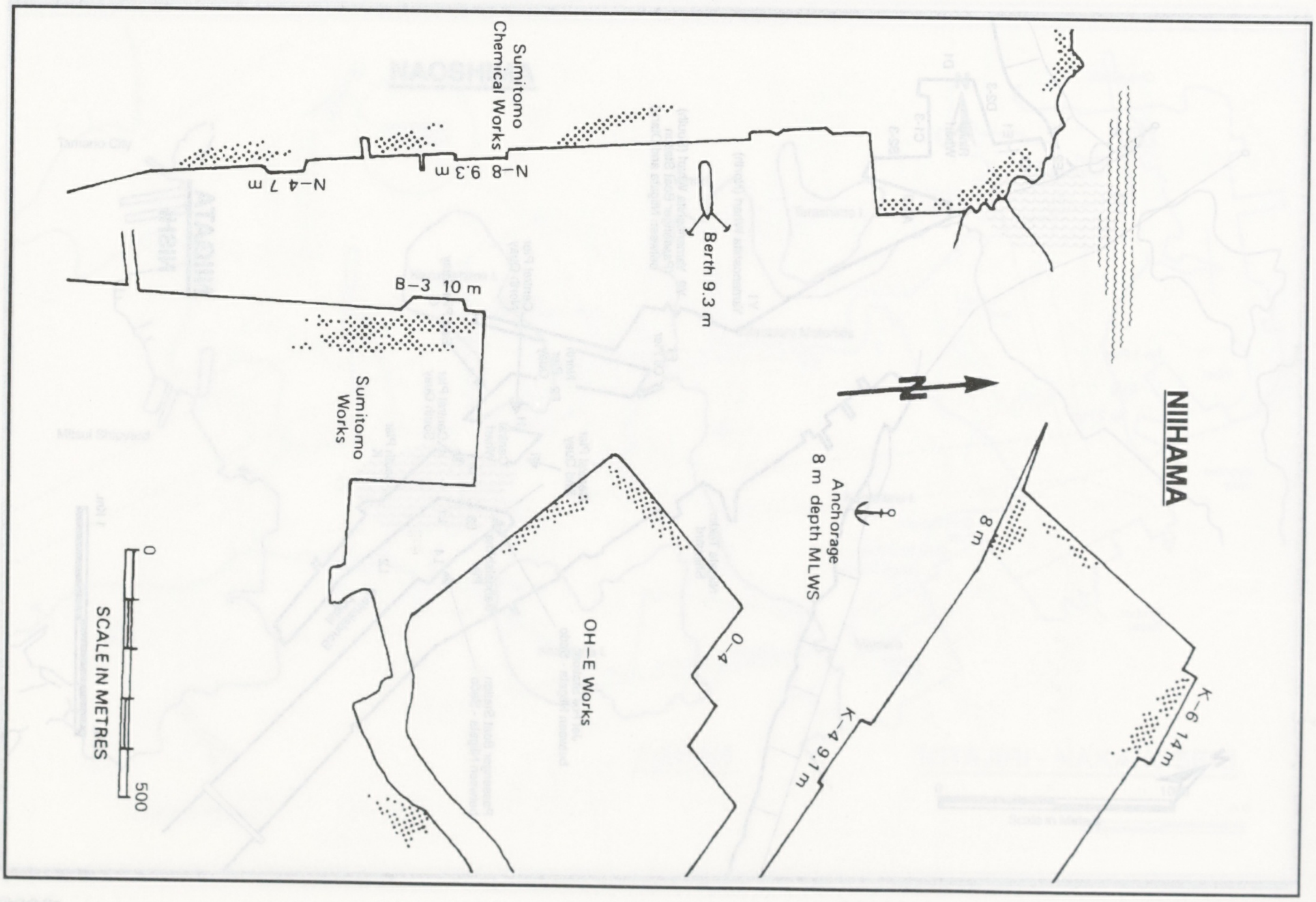
NAOSHIMA

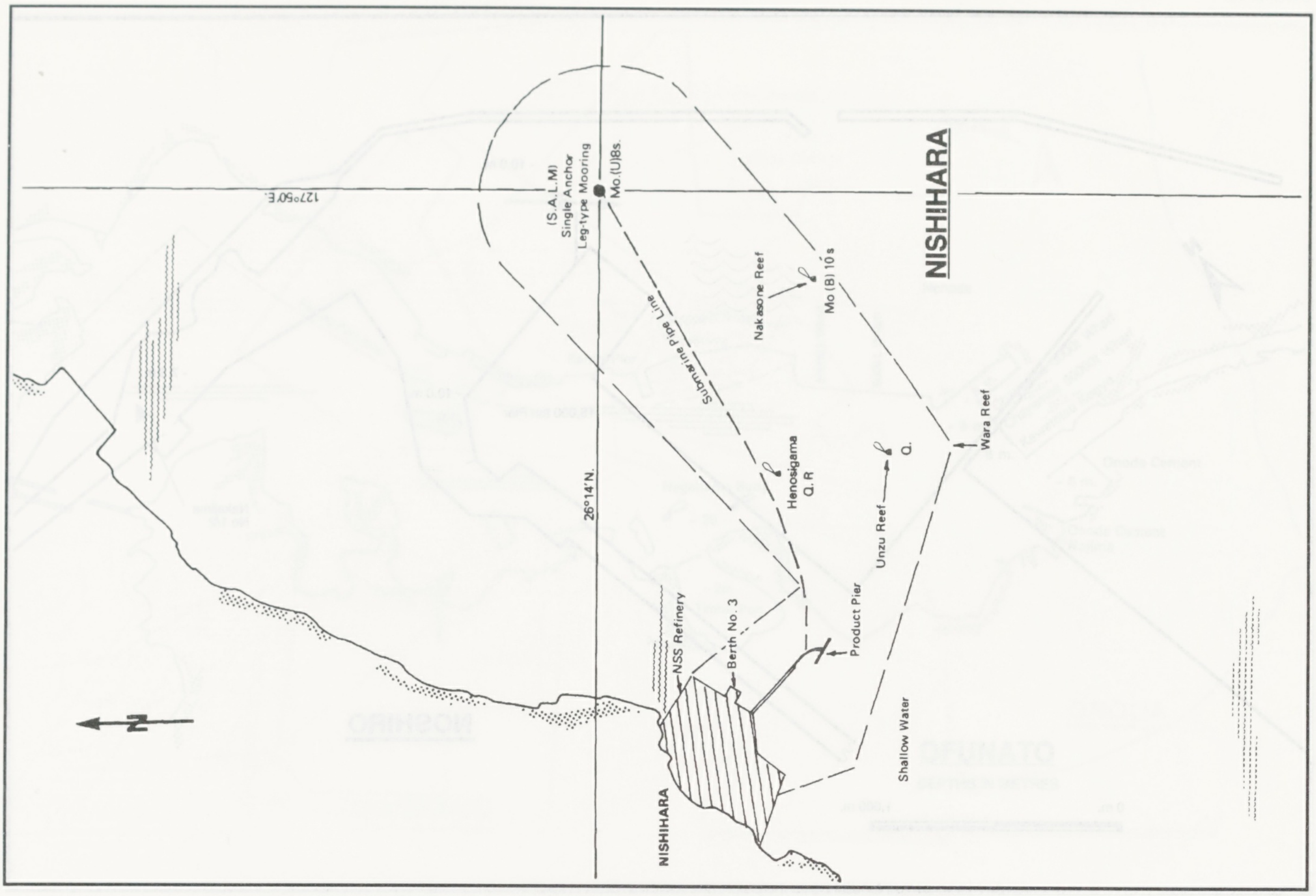
N
Tamano City
Mitsui Shipyard
Kazurashima I.
Wharf
Terashima I.
Mitsubishi Materials
Naoshima I.
Kozinjima I.
Miyaura
0
1000
Scale in Meters

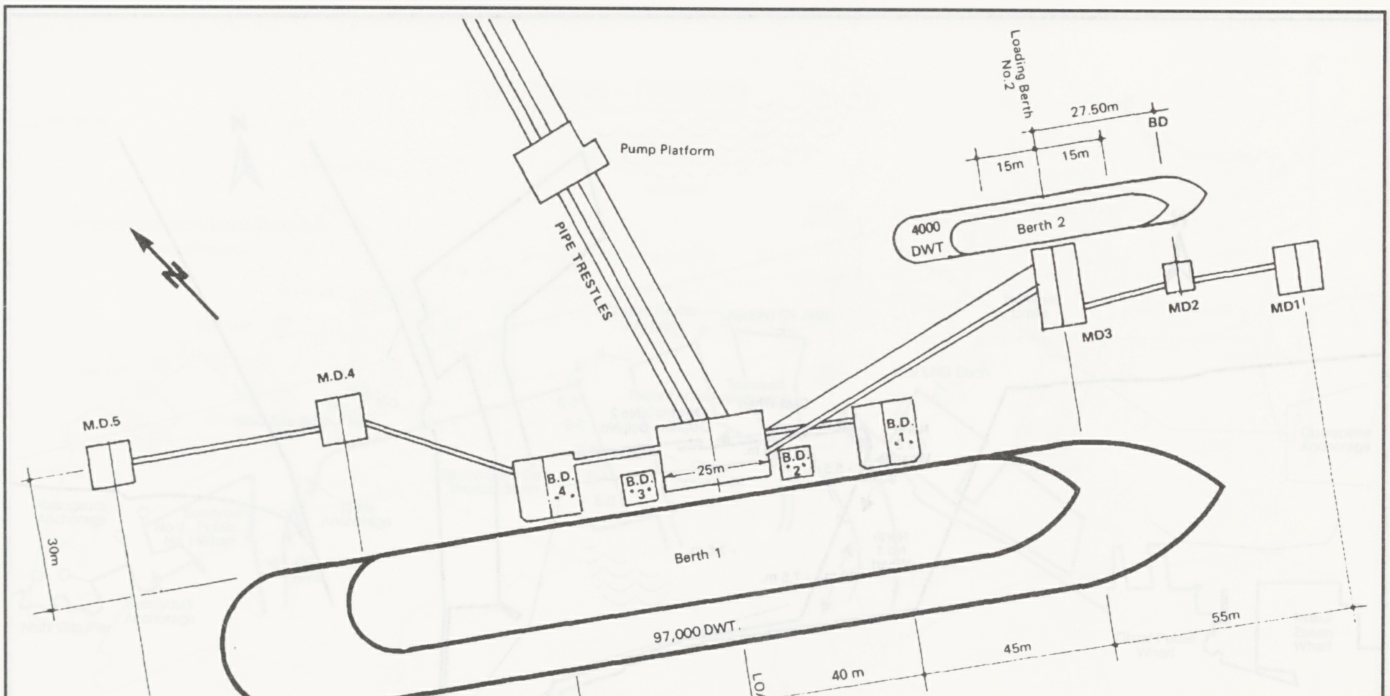

①
②
③
West Dolphins
- 7.5 m.
Channel - 17 m.
Niigata LNG
No 3 East Dolphin
Marine Transport & Terminal
- 12 m.
- 13 m.
Kyodo Karyoku Dolphin
No 1 East Dolphin
N
Center Pier
- 13 m.
- 13 m.
Center Pier East Wharf
Zen - Noh Berth
- 13 m.
Shin - Nittetsu Berth
- 7.5 m.
- 10 m.
East Fairway
Under Construction
Under Construction
East Pier
No. 1 Quay
- 13 m.
No. 2 Quay
No. 3 Quay
South Pier
- 10 m.
- 10 m.
South Lumber Wharf
NIIGATA
HIGASHI
0 m.
1 Km.

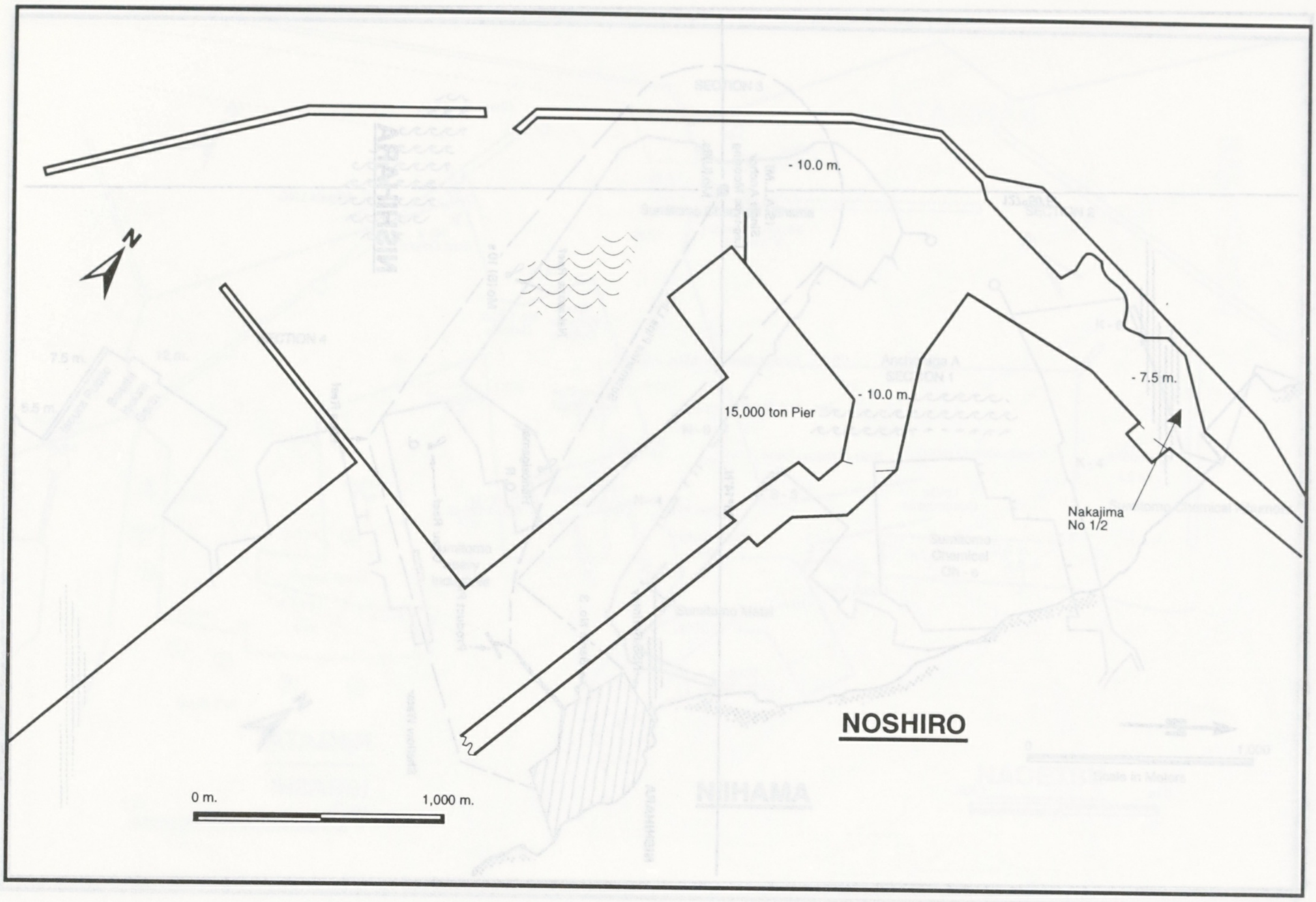

D1
D2-3
E1
E2
E3
Rinko Wharf
C1-3
B2-3
A1-3
Y1
Yamanoshita Wharf (North)
Y2
Yamanoshita Wharf (South)
(Passenger Boat Station
between Niigata and Otaru)
F1
Oil Pier
F2
North Pier Quay
Central Pier North Quay
East Pier Quay
G
H
Central Wharf
Central Pier South Quay
J
Central Pier End Quay
South Pier
K
L1
L2
L3
L4
Bandaishima Pier
Bandaishima Island
Niigata Tekko Shipyard
Jet Foil Station between Niigata - Sado
Passenger Boat Station between Niigata - Sado
NIIGATA
NISHI
N
0 m.
1 Km.

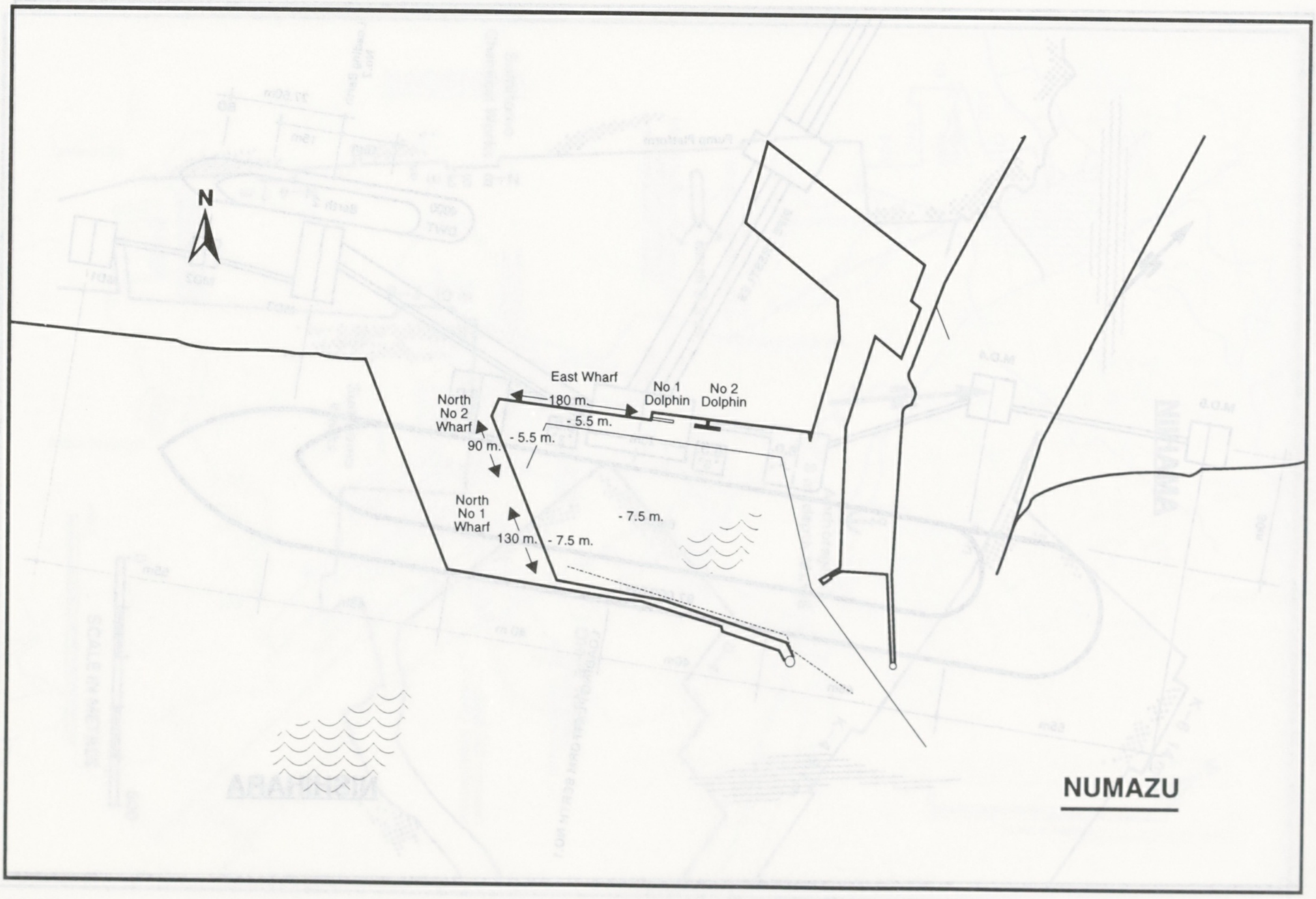

SECTION 3
Sumitomo Chemical Niihama
SECTION 2
SECTION 4
7.5 m.
12 m.
5.5 m.
Isoura Public
Besshi Isoura Berth
Anchorage A
SECTION 1
K - 6
K - 4
Sumitomo Chemical Kikumoto
N - 8
N - 4
B - 3
Sumitomo Heavy Industries
Sumitomo Chemical Oh - e
Sumitomo Metal
N
0
1,000
Scale in Meters
NIIHAMA

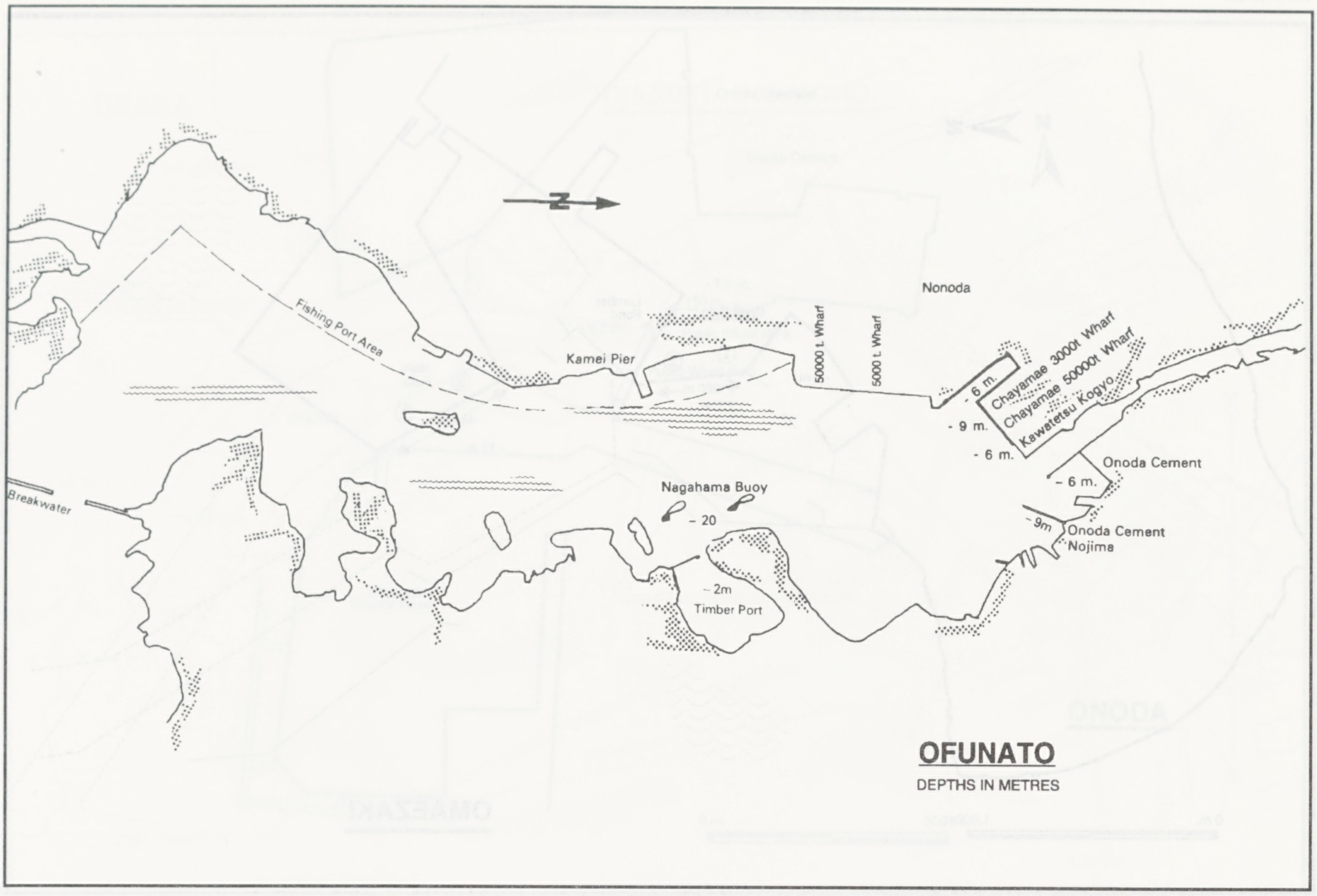

Sumitomo Chemical Works
N–8 9.3 m
N–4 7 m
Berth 9.3 m
B–3 10 m
Sumitomo Works
OH–E Works
O–4
Anchorage
8 m depth MLWS
8 m
K–4 9.1 m
K–6 14 m
N
NIIHAMA
0
500
SCALE IN METRES


NISHIHARA
127°50'E.
(S.A.L.M)
Single Anchor
Leg-type Mooring
Mo.(U)8s.
Submarine Pipe Line
Nakasone Reef
Mo (B) 10 s
Wara Reef
Henosigama
Q. R
Unzu Reef
Q.
26°14'N.
NSS Refinery
Berth No. 3
Product Pier
Shallow Water
NISHIHARA
N


Loading Berth
No. 2
27.50m
BD
15m
15m
Pump Platform
4000
DWT
Berth 2
PIPE TRESTLES
MD3
MD2
MD1
N
M.D.4
M.D.5
B.D.
1
B.D.
2
B.D.
3
B.D.
4
25m
30m
Berth 1
97,000 DWT.
55m
45m
40m
40 m
45m
55m
LOADING PLATFORM BERTH NO.1
NISHIHARA

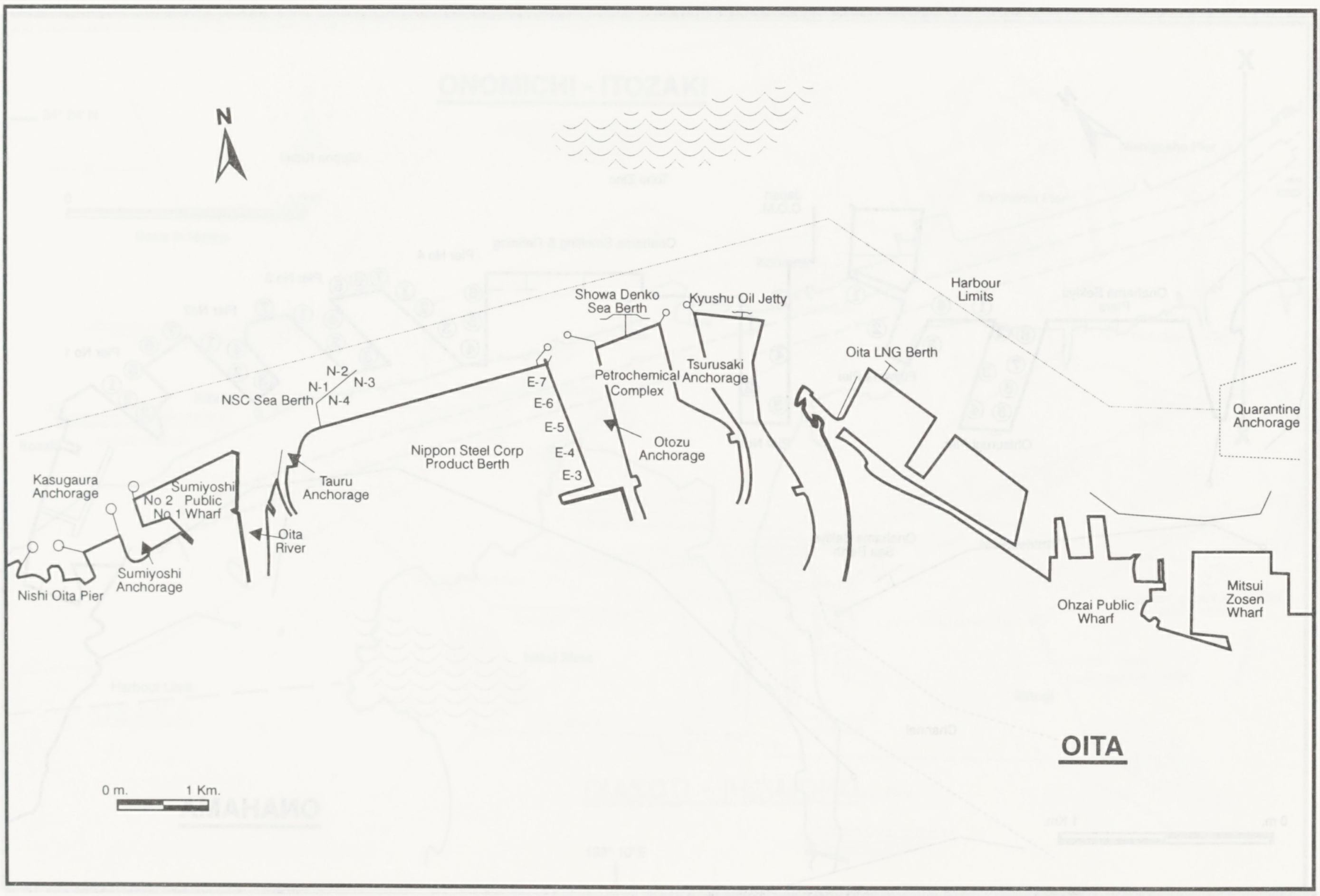

N
- 10.0 m.
15,000 ton Pier
- 10.0 m.
- 7.5 m.
Nakajima
No 1/2
NOSHIRO
0 m.
1,000 m.


N
East Wharf
180 m.
No 1
Dolphin
No 2
Dolphin
North
No 2
Wharf
- 5.5 m.
90 m.
- 5.5 m.
North
No 1
Wharf
130 m.
- 7.5 m.
- 7.5 m.
NUMAZU

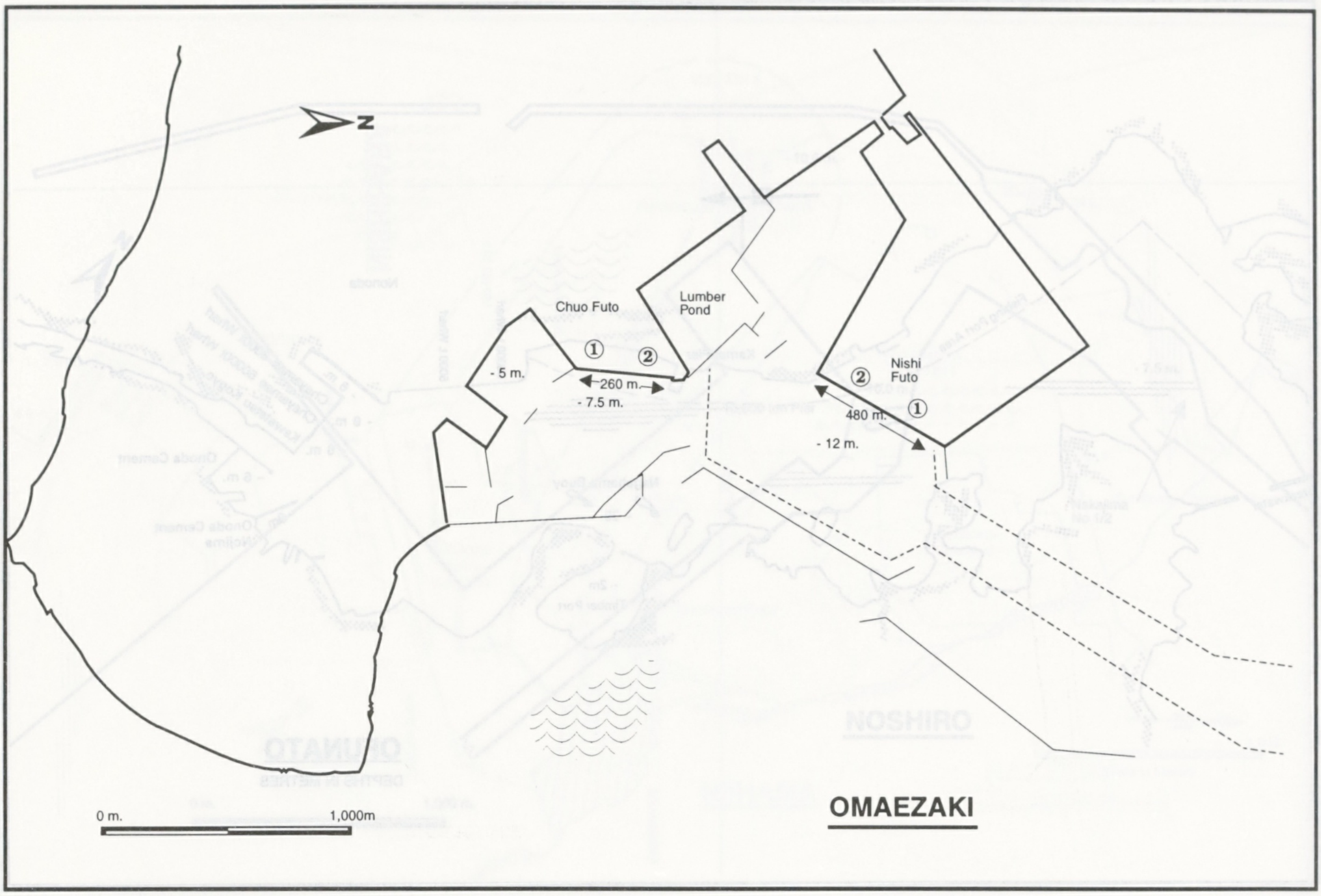

N
Fishing Port Area
Kamei Pier
50000 t. Wharf
5000 t. Wharf
Nonoda
- 6 m.
Chayamae 3000t Wharf
Chayamae 50000t Wharf
Kawatetsu Kogyo
- 9 m.
- 6 m.
Onoda Cement
- 6 m.
-9m
Onoda Cement
Nojima
Breakwater
Nagahama Buoy
- 20
- 2m
Timber Port

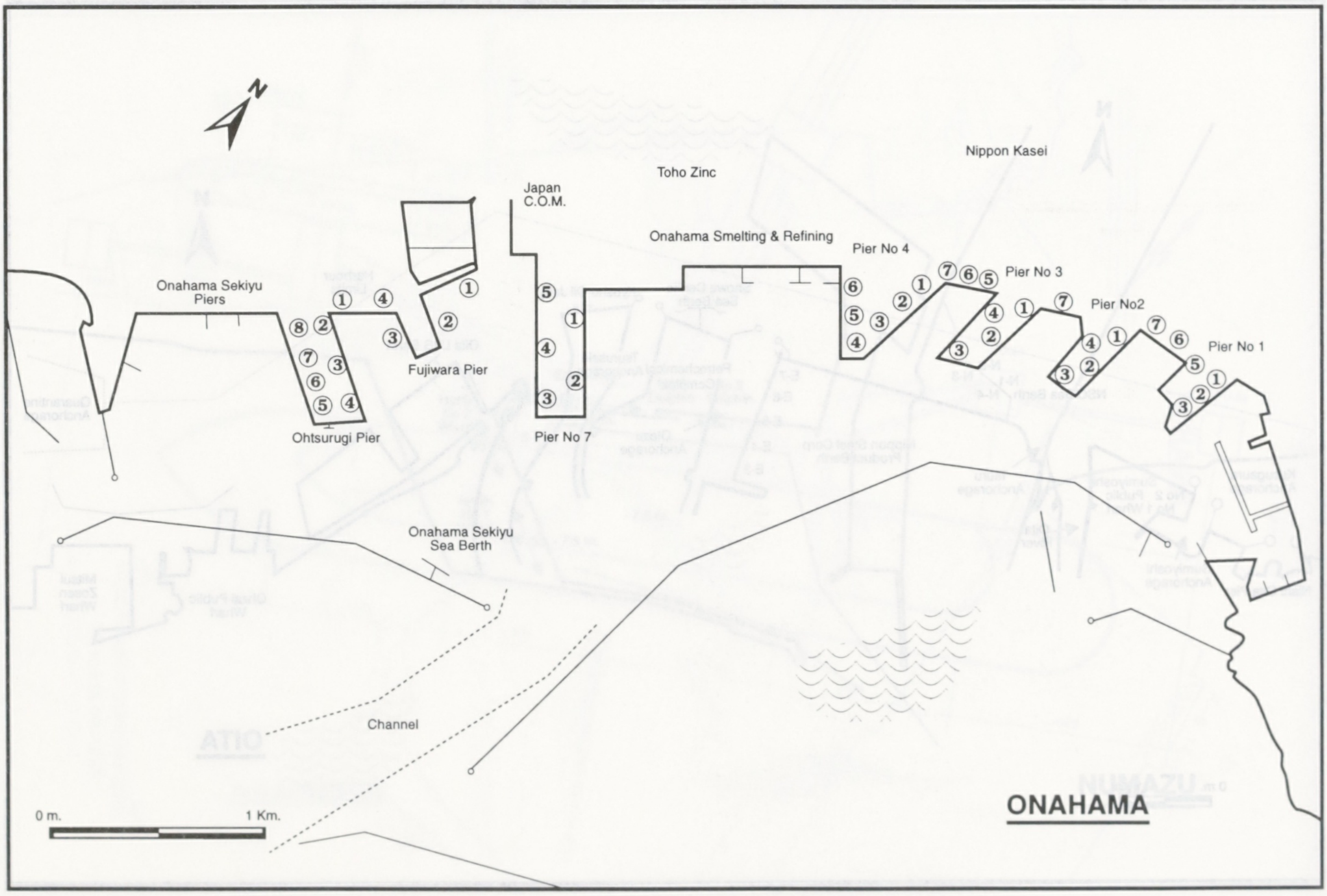
OFUNATO

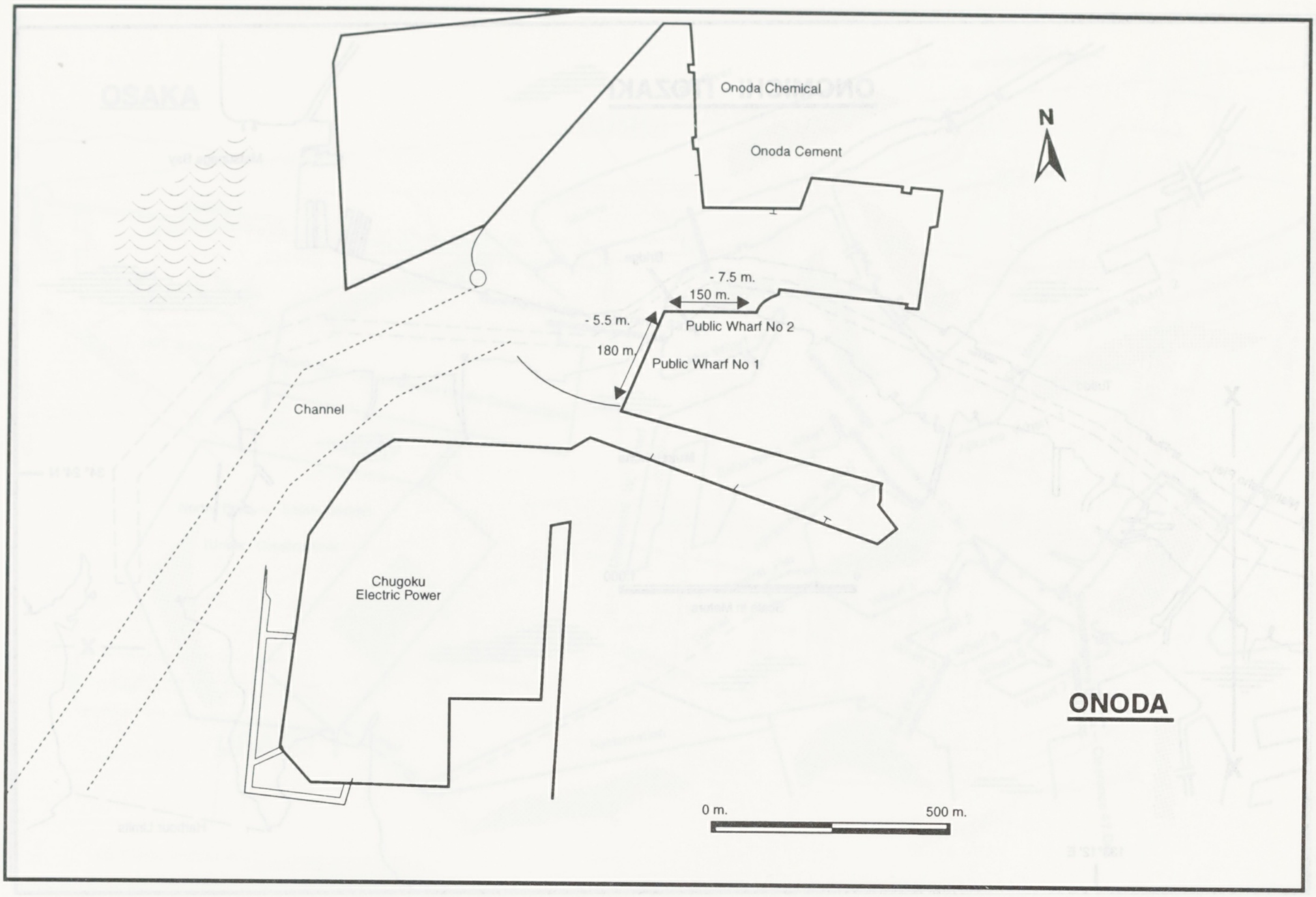
DEPTHS IN METRES

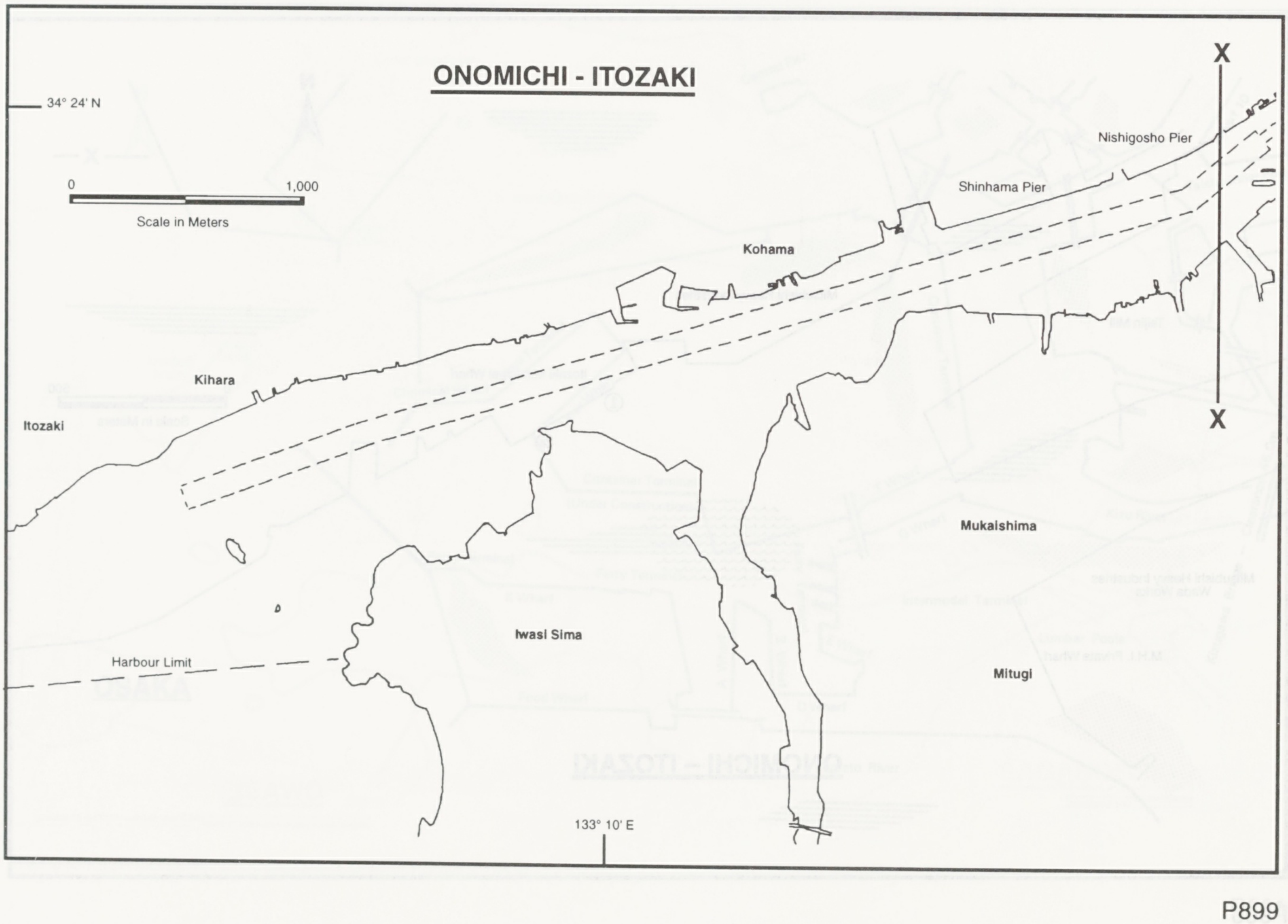

N
Showa Denko
Sea Berth
Kyushu Oil Jetty
Harbour
Limits
Oita LNG Berth
Tsurusaki
Anchorage
Petrochemical
Complex
E-7
E-6
E-5
E-4
E-3
Otozu
Anchorage
N-2
N-1
N-3
NSC Sea Berth
N-4
Nippon Steel Corp
Product Berth
Tauru
Anchorage
Quarantine
Anchorage
Kasugaura
Anchorage
No 2
Sumiyoshi
Public
No 1 Wharf
Oita
River
Sumiyoshi
Anchorage
Nishi Oita Pier
Ohzai Public
Wharf
Mitsui
Zosen
Wharf
0 m.
1 Km.

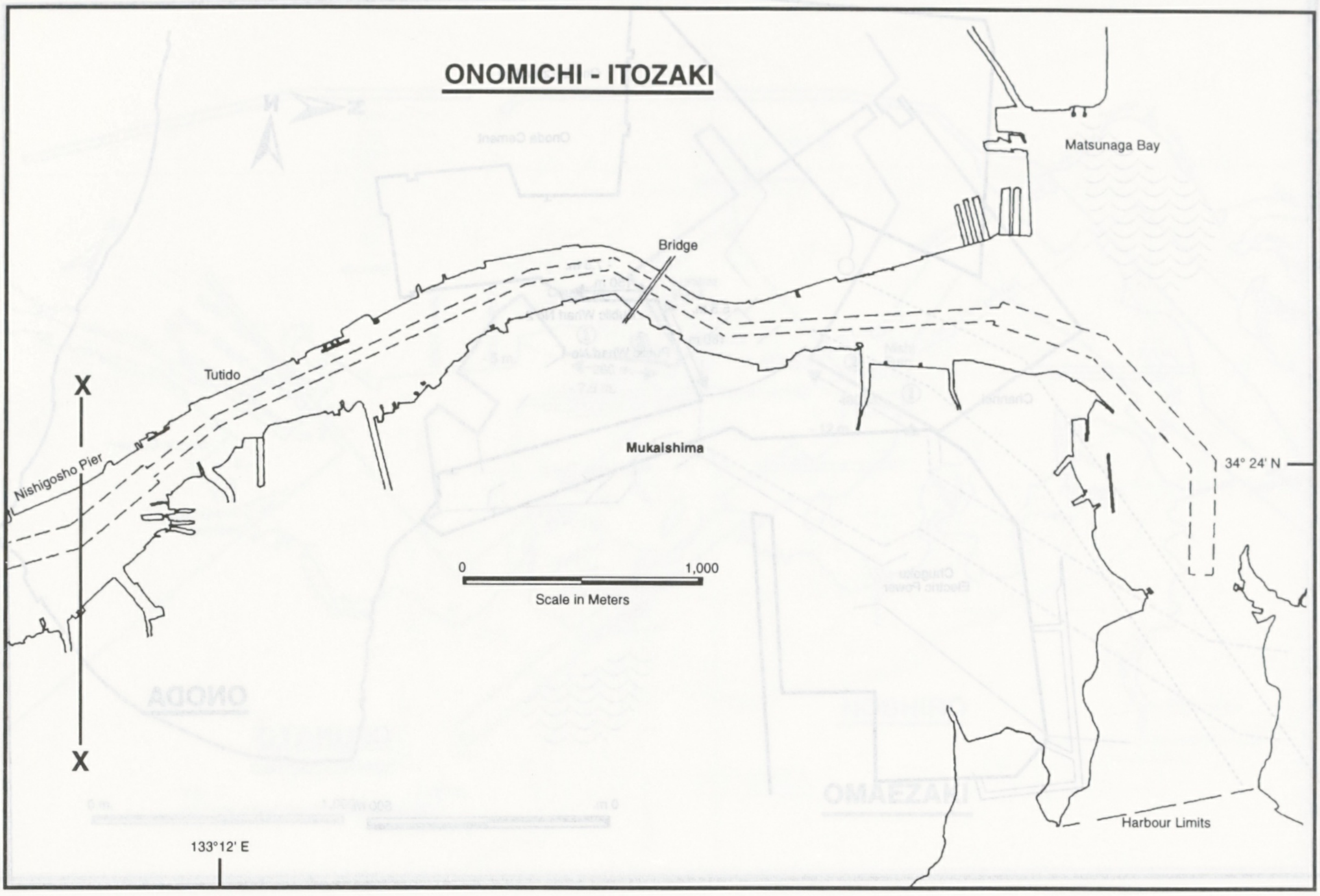
OITA

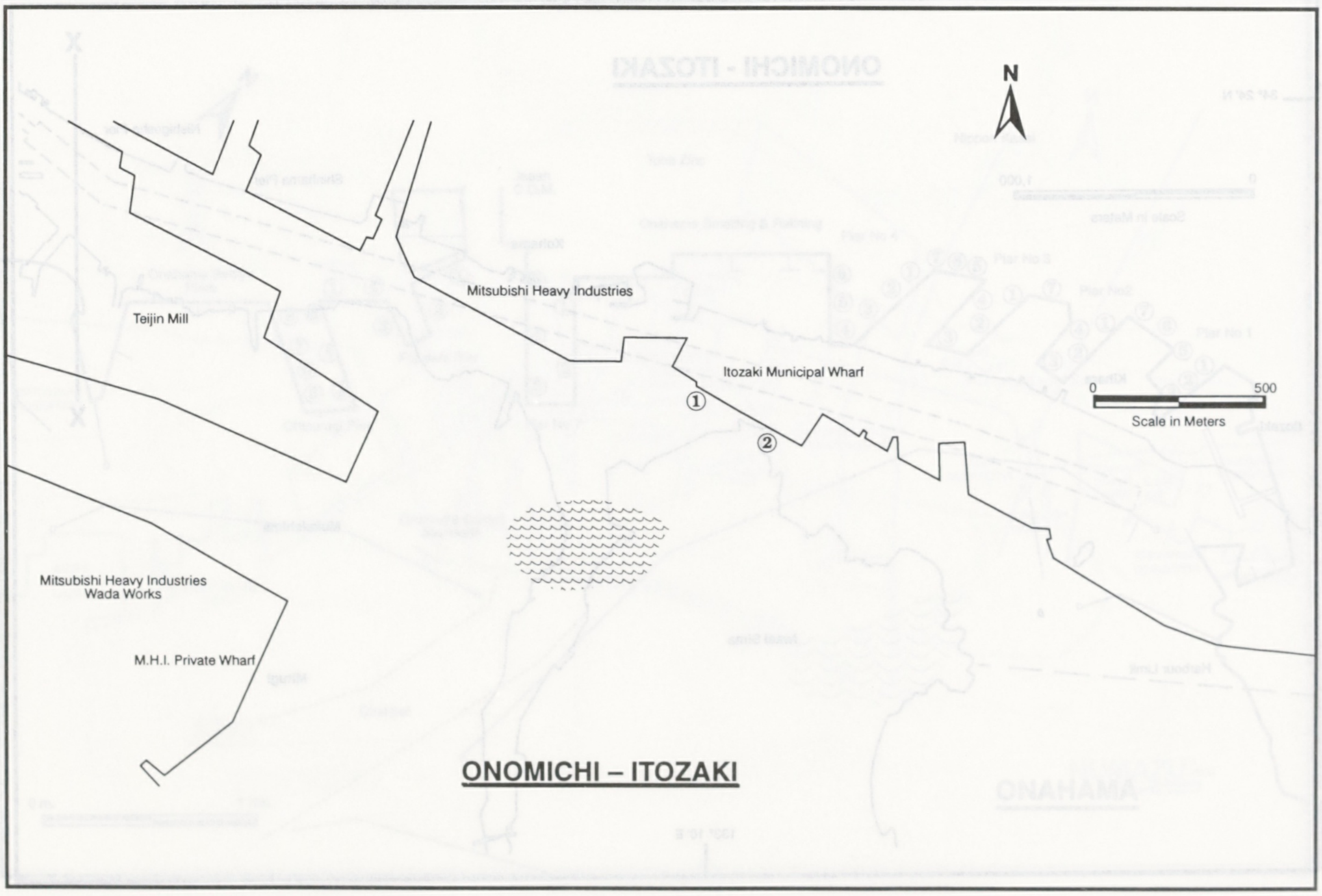

N
Chuo Futo
Lumber Pond
①
②
- 5 m.
260 m.
- 7.5 m.
②
Nishi Futo
480 m.
①
- 12 m.
0 m.
1,000m
OMAEZAKI

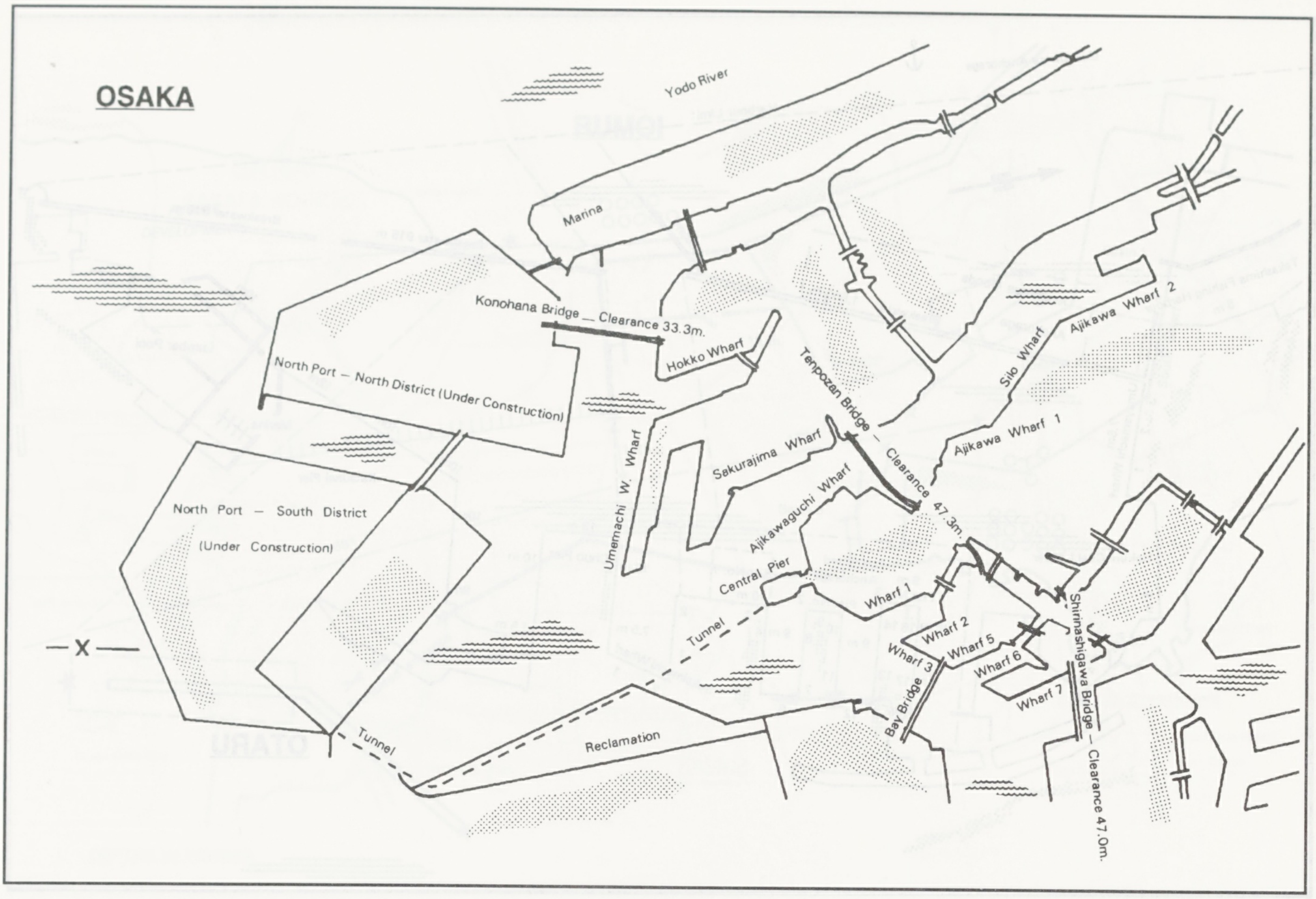

N
Nippon Kasei
Toho Zinc
Japan C.O.M.
Onahama Smelting & Refining
Pier No 4
Pier No 3
Pier No2
Pier No 1
Onahama Sekiyu Piers
Fujiwara Pier
Ohtsurugi Pier
Pier No 7
① ② ③ ④ ⑤ ⑥ ⑦ ⑧
Onahama Sekiyu Sea Berth
Channel
0 m.
1 Km.
ONAHAMA

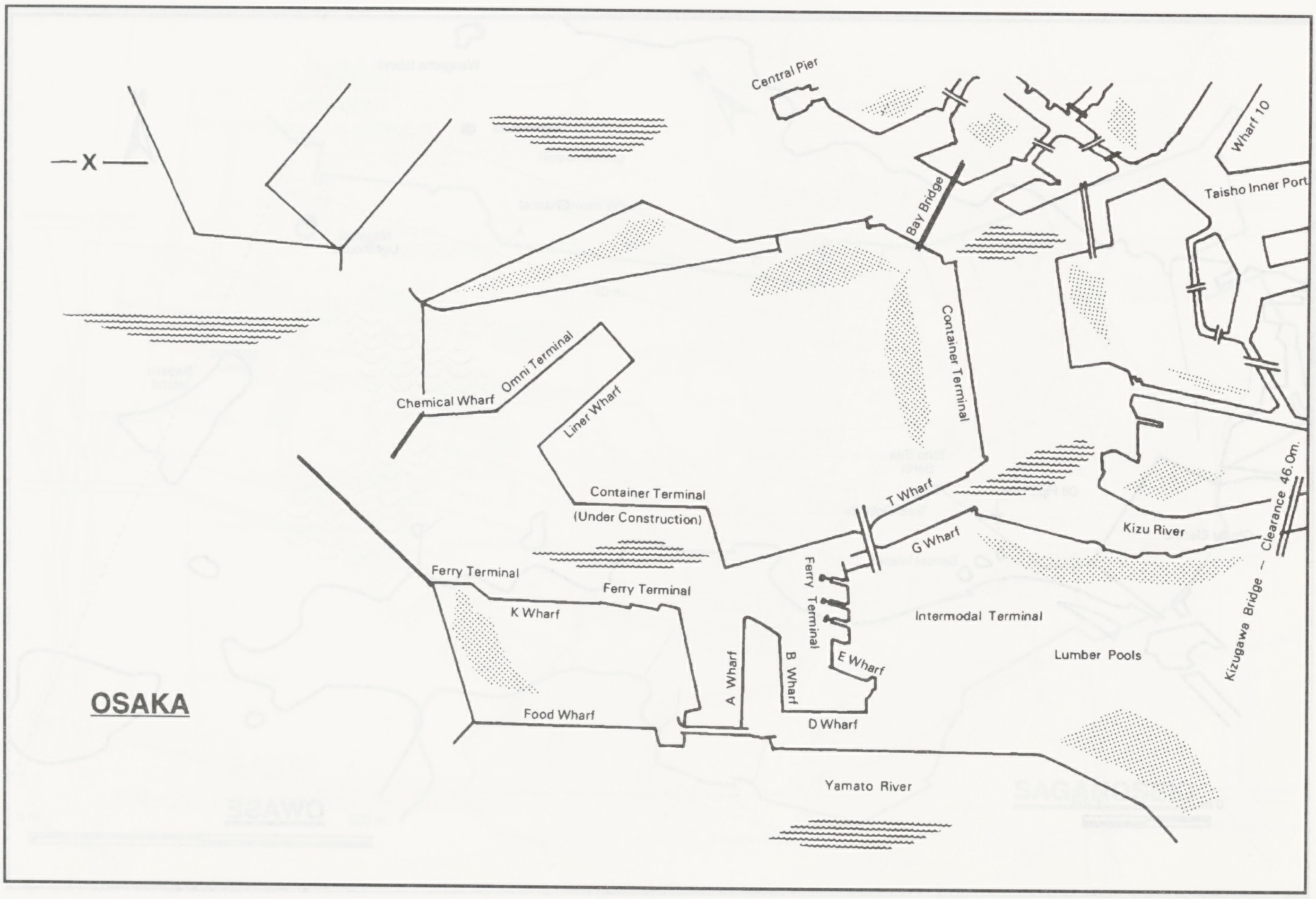

Onoda Chemical
Onoda Cement
N
- 7.5 m.
150 m.
- 5.5 m.
Public Wharf No 2
180 m.
Public Wharf No 1
Channel
Chugoku
Electric Power
ONODA
0 m.
500 m.

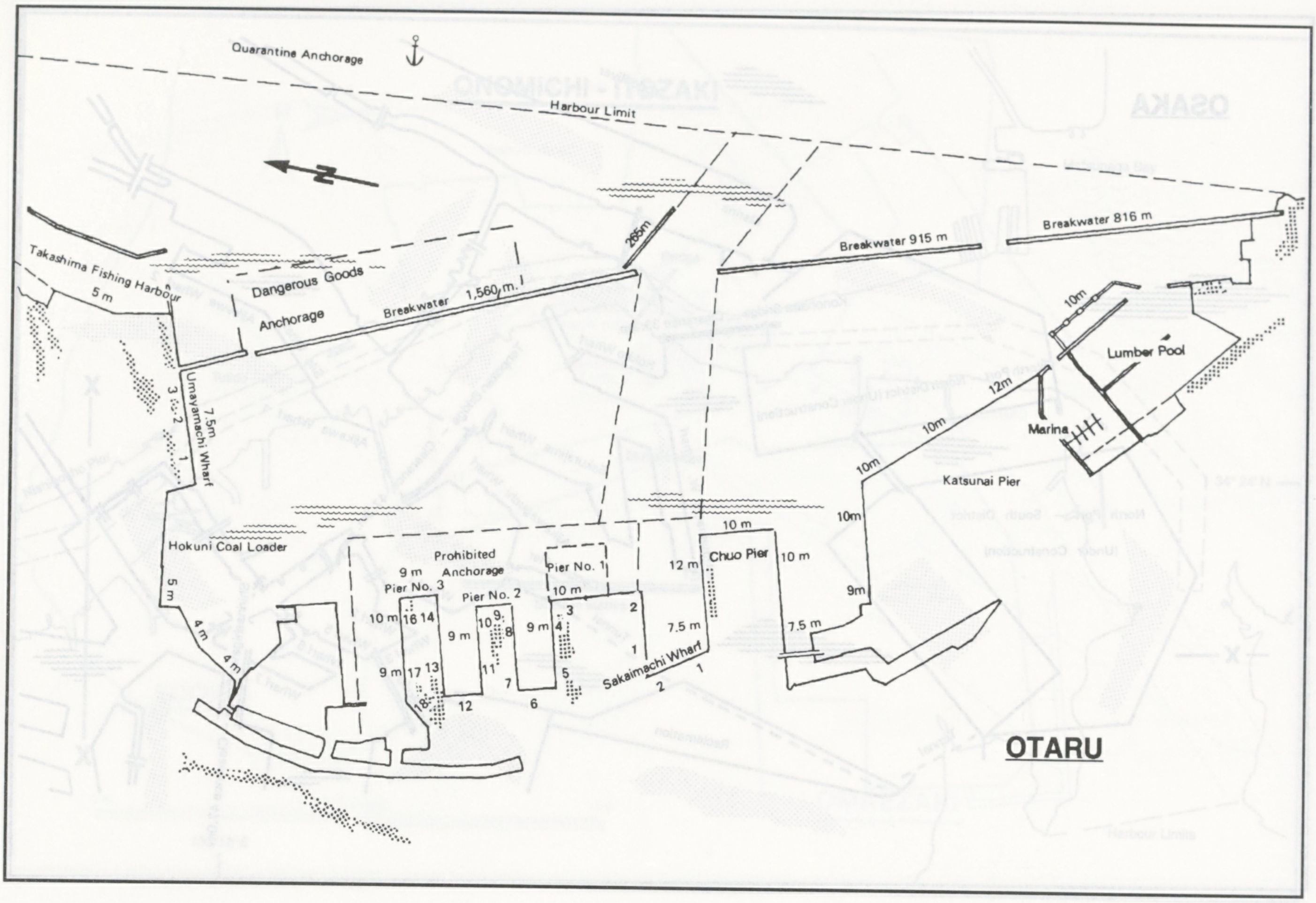

ONOMICHI - ITOZAKI
X
34° 24' N
0
1,000
Scale in Meters
Nishigosho Pier
Shinhama Pier
Kohama
Kihara
Itozaki
X
Mukaishima
Iwasi Sima
Harbour Limit
Mitugi
133° 10' E

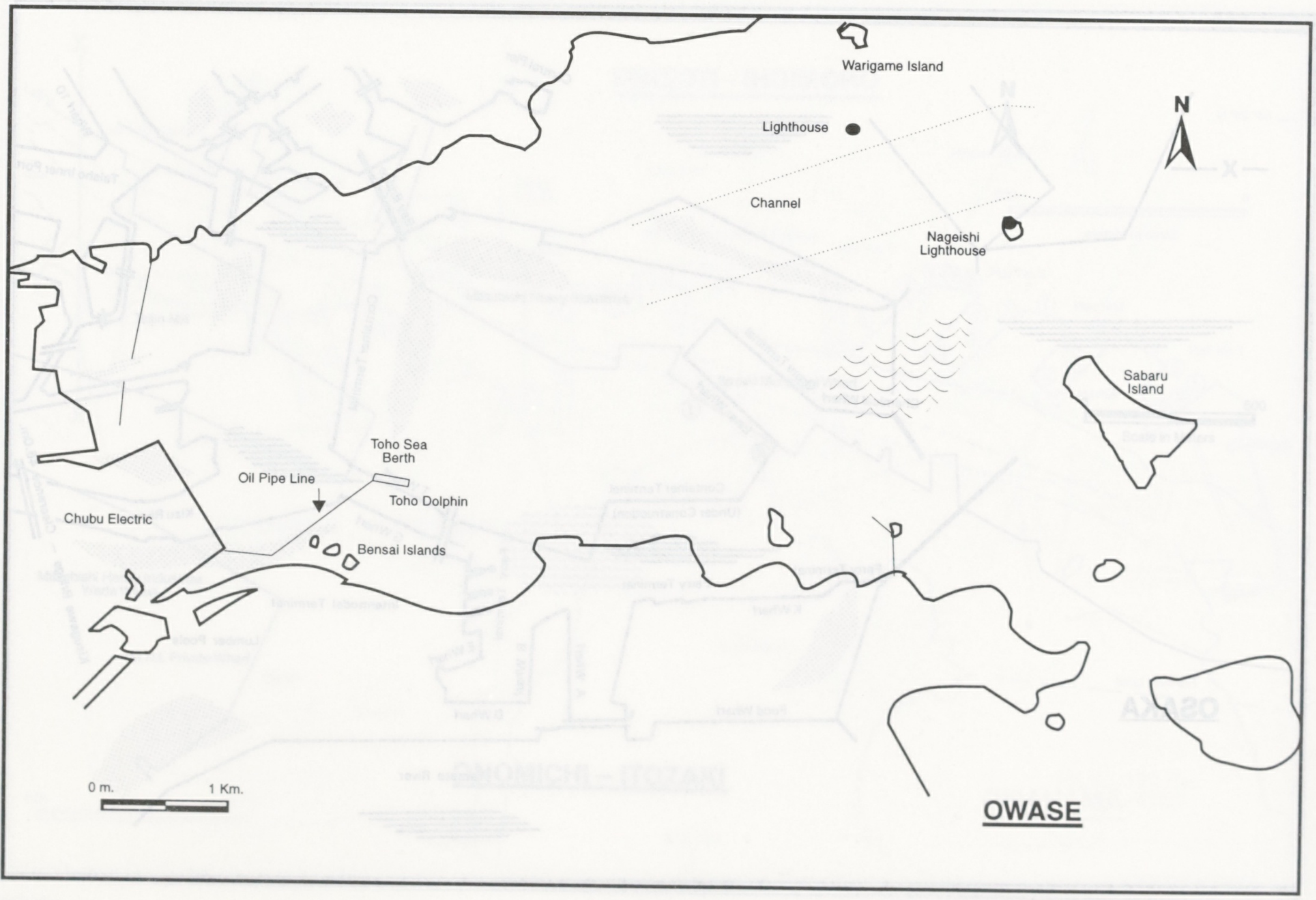

ONOMICHI - ITOZAKI
Matsunaga Bay
Bridge
Tutido
X
Nishigosho Pier
Mukaishima
34° 24' N
0
1,000
Scale in Meters
X
Harbour Limits
133°12' E

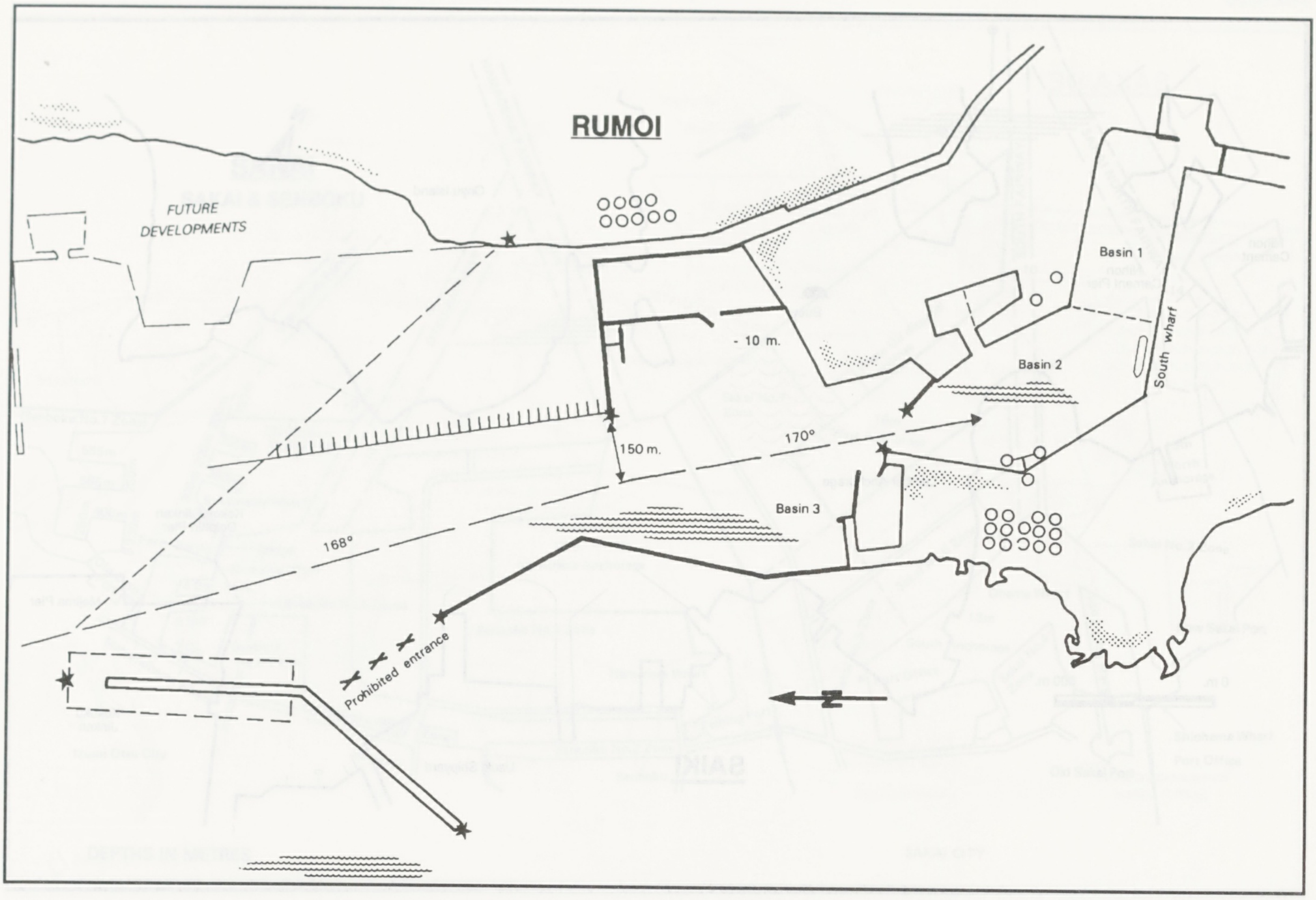

N
Mitsubishi Heavy Industries
Teijin Mill
Itozaki Municipal Wharf
①
②
0
500
Scale in Meters
Mitsubishi Heavy Industries
Wada Works
M.H.I. Private Wharf
ONOMICHI – ITOZAKI

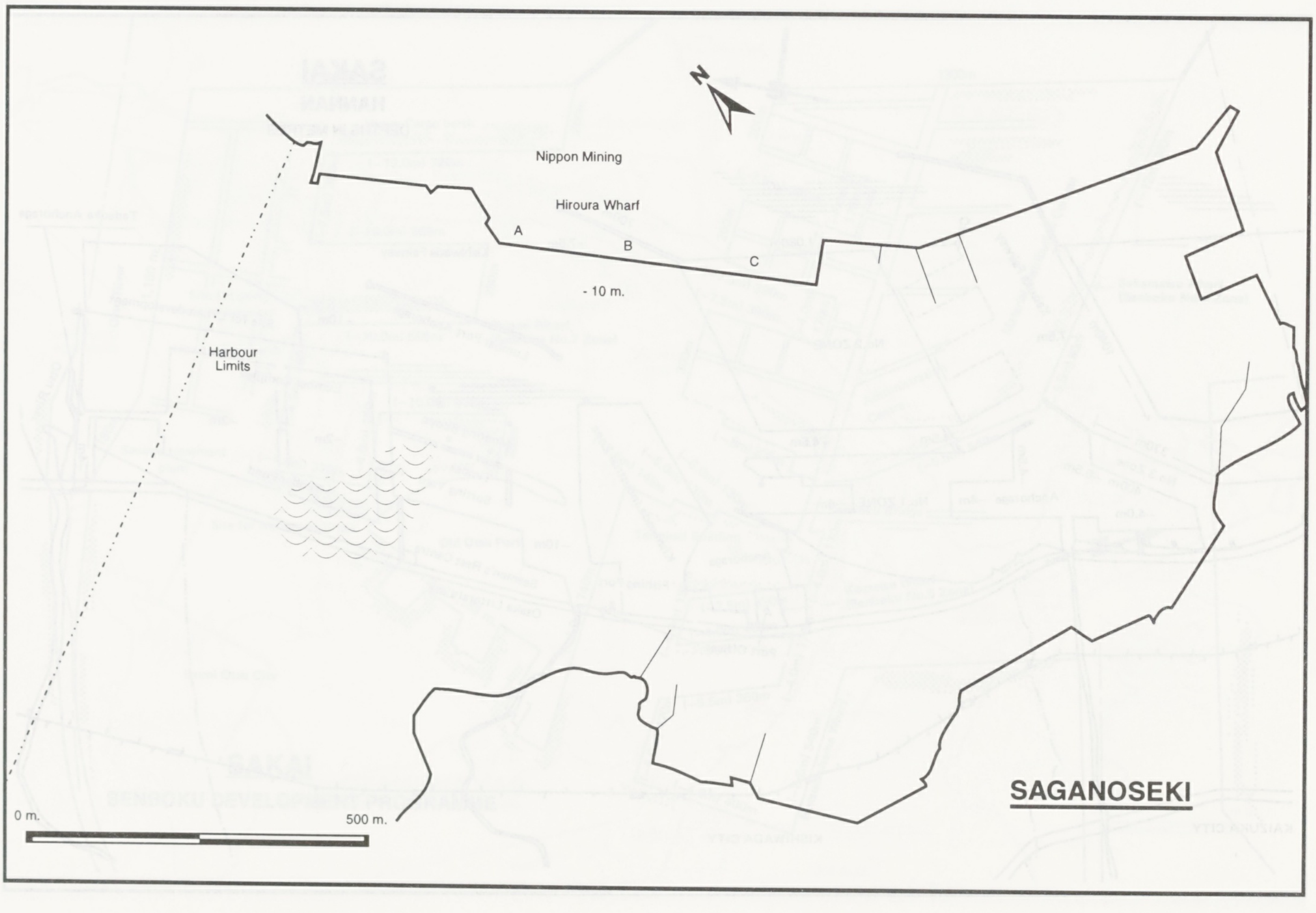

OSAKA
Yodo River
Marina
Konohana Bridge – Clearance 33.3m.
Hokko Wharf
North Port – North District (Under Construction)
North Port – South District
(Under Construction)
Umemachi W. Wharf
Sakurajima Wharf
Tenpozan Bridge – Clearance 47.3m.
Silo Wharf
Ajikawa Wharf 2
Ajikawa Wharf 1
Ajikawaguchi Wharf
Central Pier
Wharf 1
Wharf 2
Wharf 3
Wharf 5
Wharf 6
Wharf 7
Shirinashigawa Bridge – Clearance 47.0m.
Bay Bridge
Tunnel
Tunnel
Reclamation
X

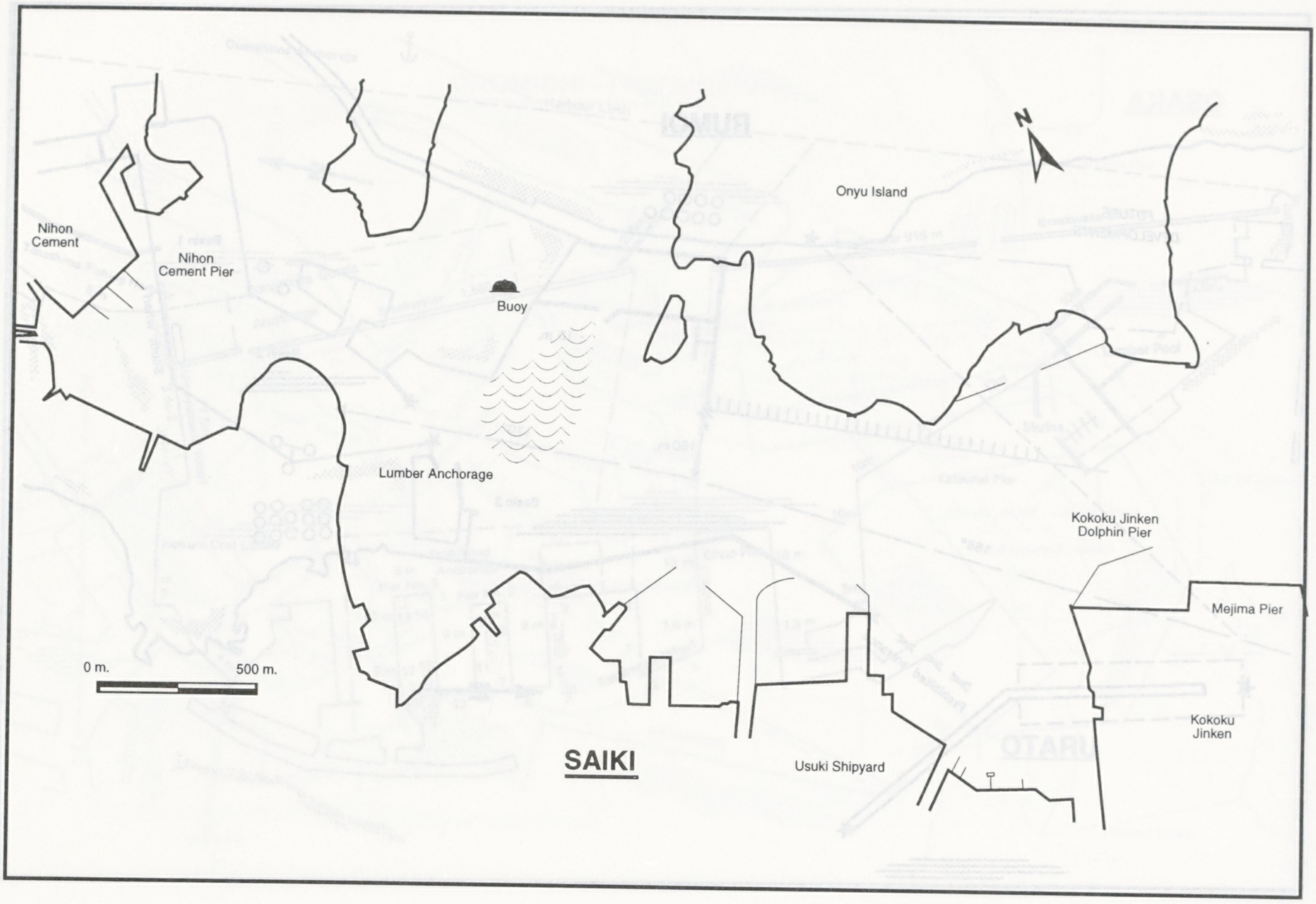

OSAKA
X
Central Pier
Bay Bridge
Wharf 10
Taisho Inner Port
Container Terminal
Chemical Wharf
Omni Terminal
Liner Wharf
Container Terminal
(Under Construction)
T Wharf
G Wharf
Kizu River
Kizugawa Bridge – Clearance 46.0m.
Ferry Terminal
Ferry Terminal
Ferry Terminal
K Wharf
Intermodal Terminal
Lumber Pools
E Wharf
A Wharf
B Wharf
D Wharf
Food Wharf
Yamato River

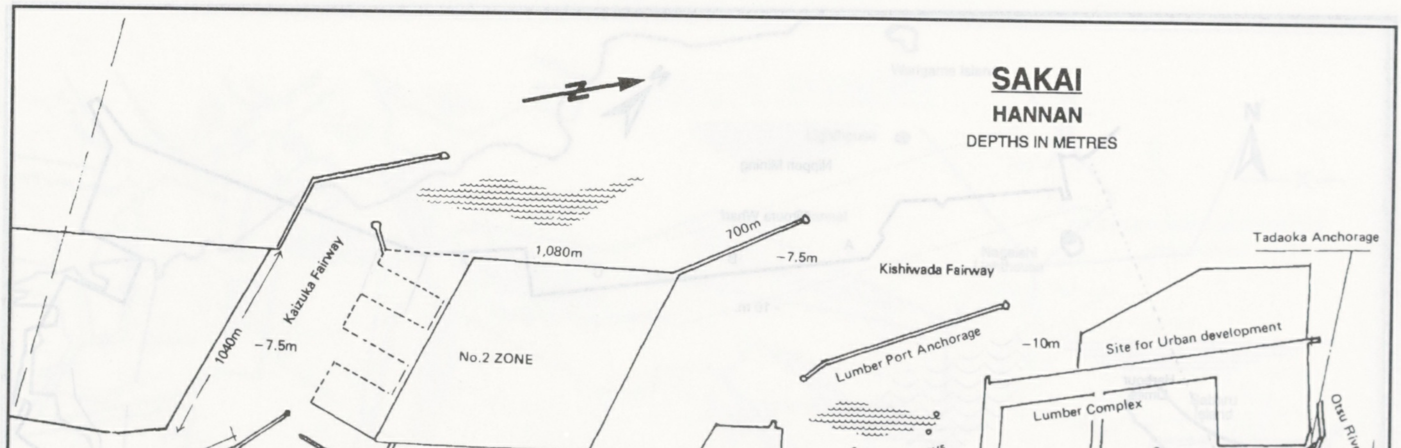

Quarantine Anchorage
Harbour Limit
Takashima Fishing Harbour
5 m
Dangerous Goods
Anchorage
Breakwater 1,560 m.
265m
Breakwater 915 m
Breakwater 816 m
10m
Lumber Pool
12m
10m
Marina
10m
Katsunai Pier
10m
10 m
Chuo Pier
12 m
10 m
9m
7.5 m
7.5 m
7.5m
Umayamachi Wharf
3
2
1
Hokuni Coal Loader
5 m
4 m
4 m
Prohibited
Anchorage
9 m
Pier No. 3
10 m
16
14
9 m
17
13
18
12
Pier No. 2
9 m
10
9
8
11
7
6
Pier No. 1
10 m
9 m
3
4
5
2
1
Sakaimachi Wharf
2
1
OTARU

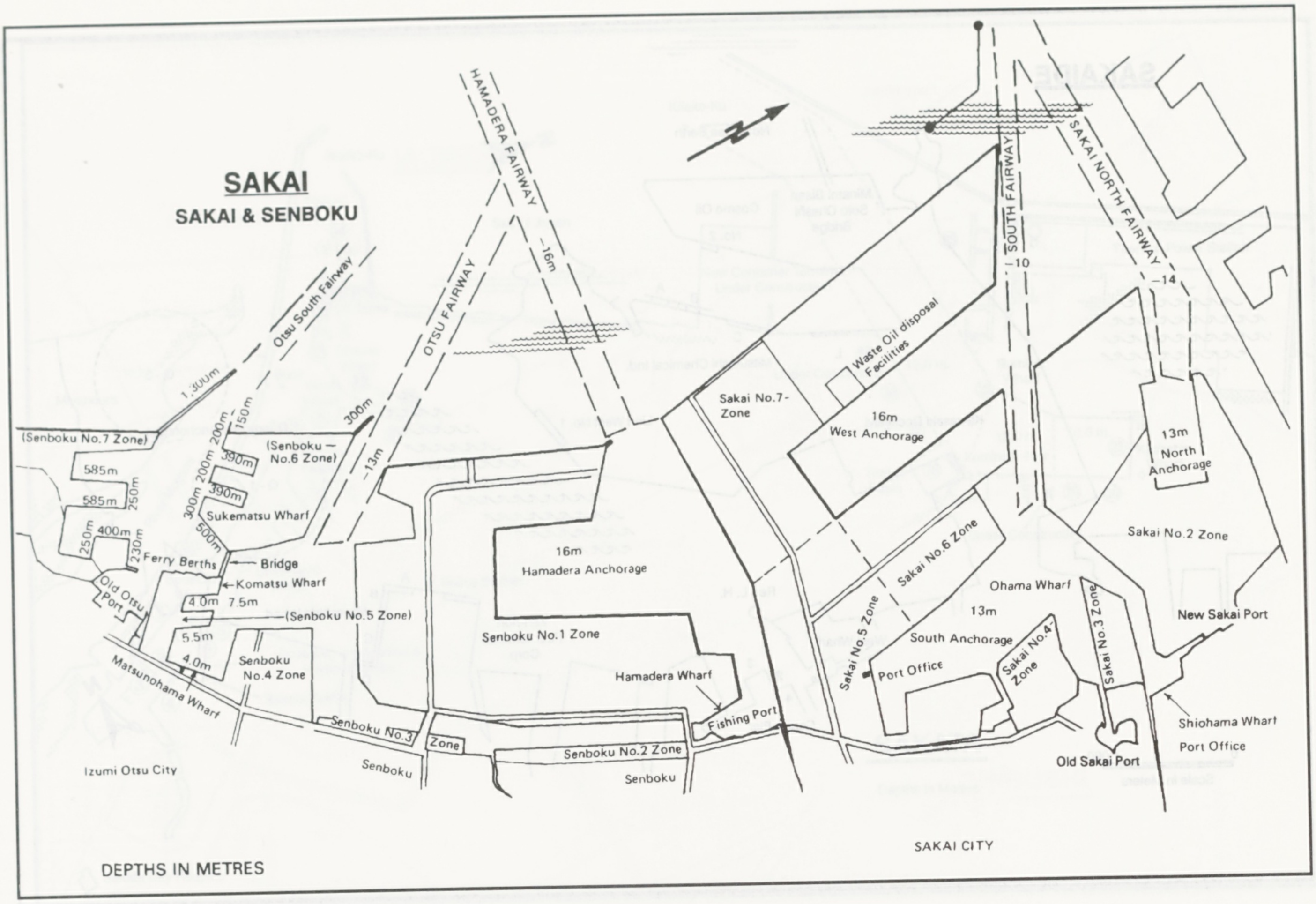

Warigame Island
Lighthouse
N
Channel
Nageishi
Lighthouse
Sabaru
Island
Toho Sea
Berth
Oil Pipe Line
Toho Dolphin
Chubu Electric
Bensai Islands
0 m.
1 Km.
OWASE

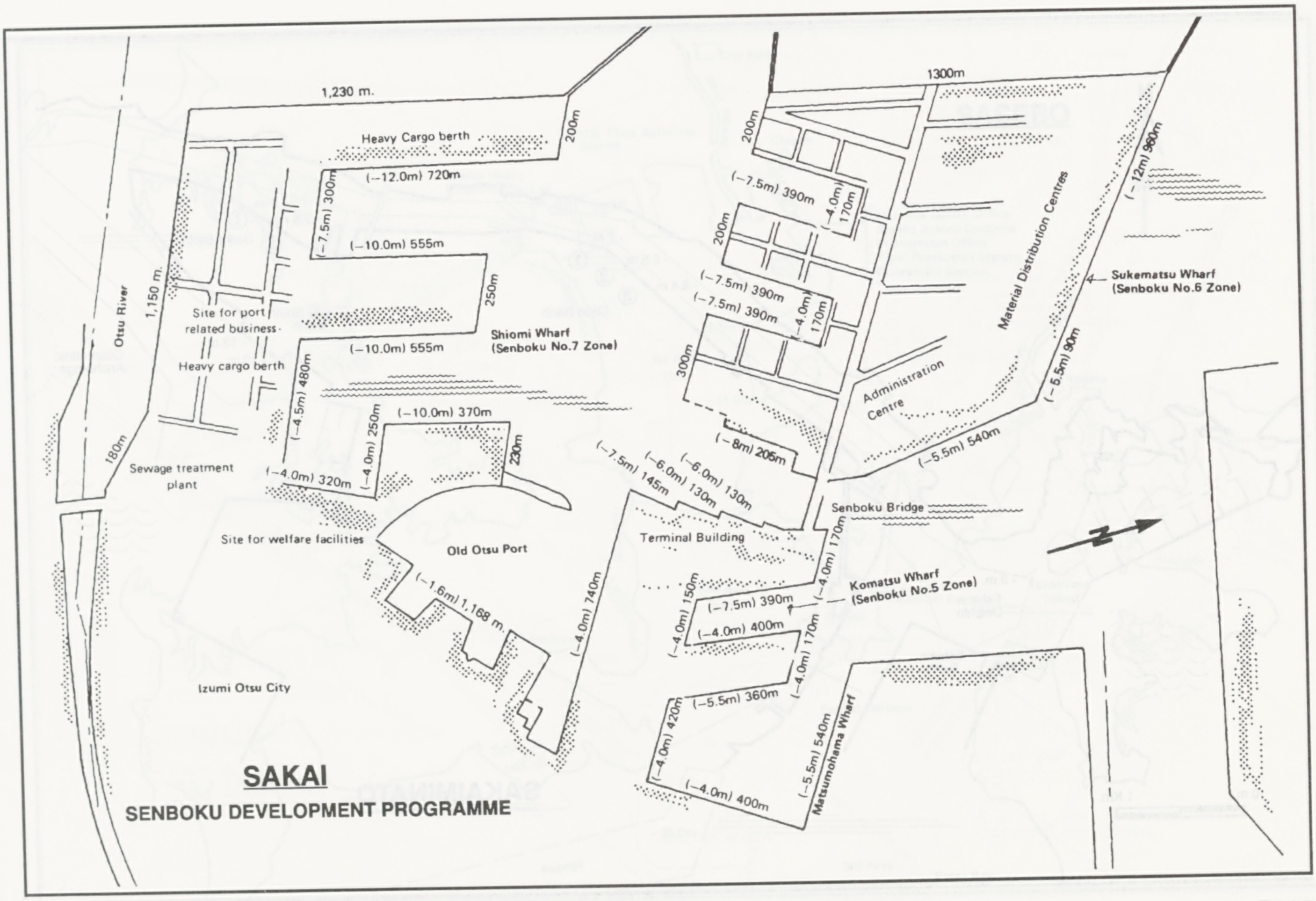

RUMOI
FUTURE DEVELOPMENTS
Basin 1
Basin 2
Basin 3
South wharf
- 10 m.
150 m.
170°
168°
Prohibited entrance
N

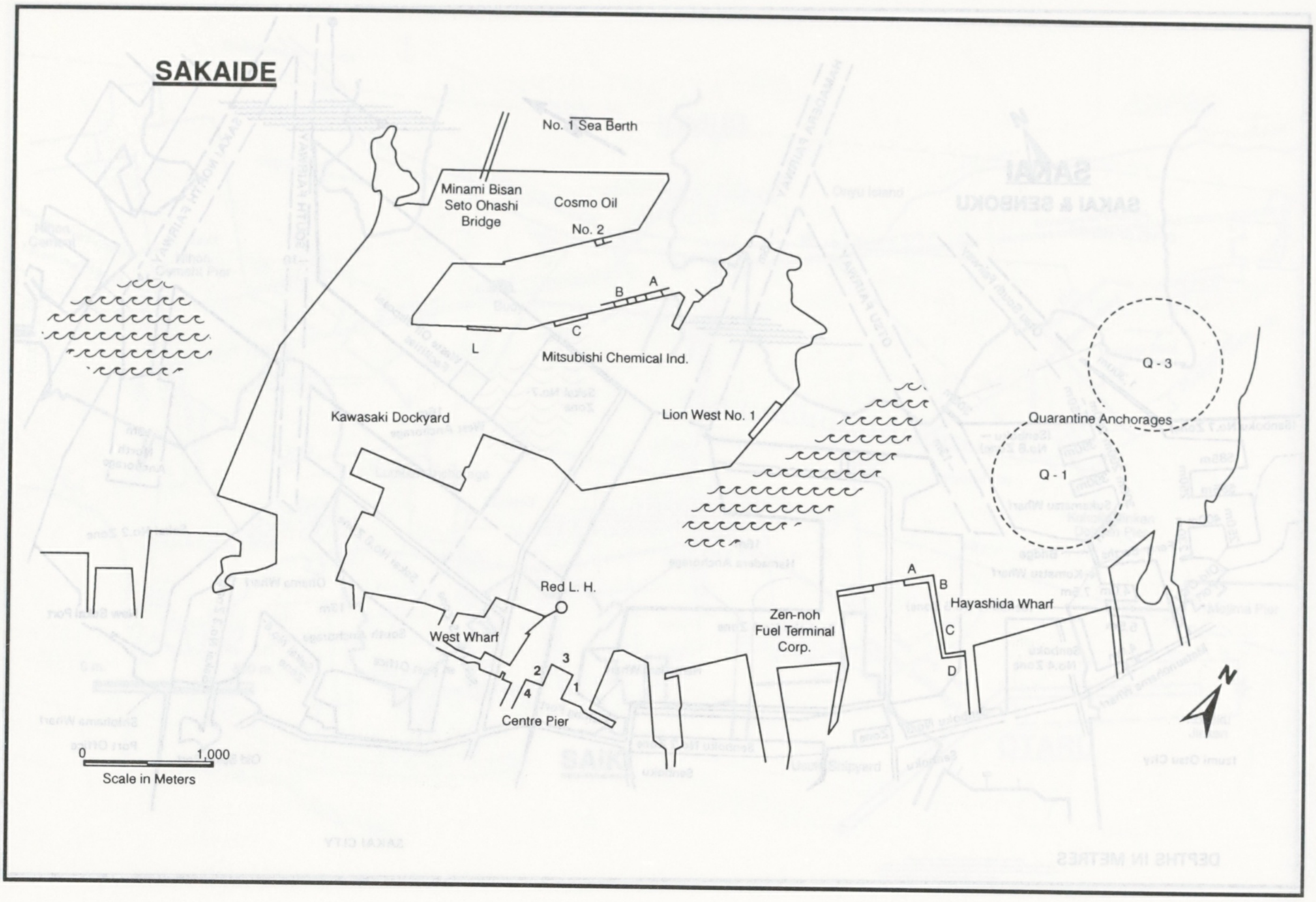

N
Nippon Mining
Hiroura Wharf
A
B
C
- 10 m.
Harbour Limits
SAGANOSEKI
0 m.
500 m.

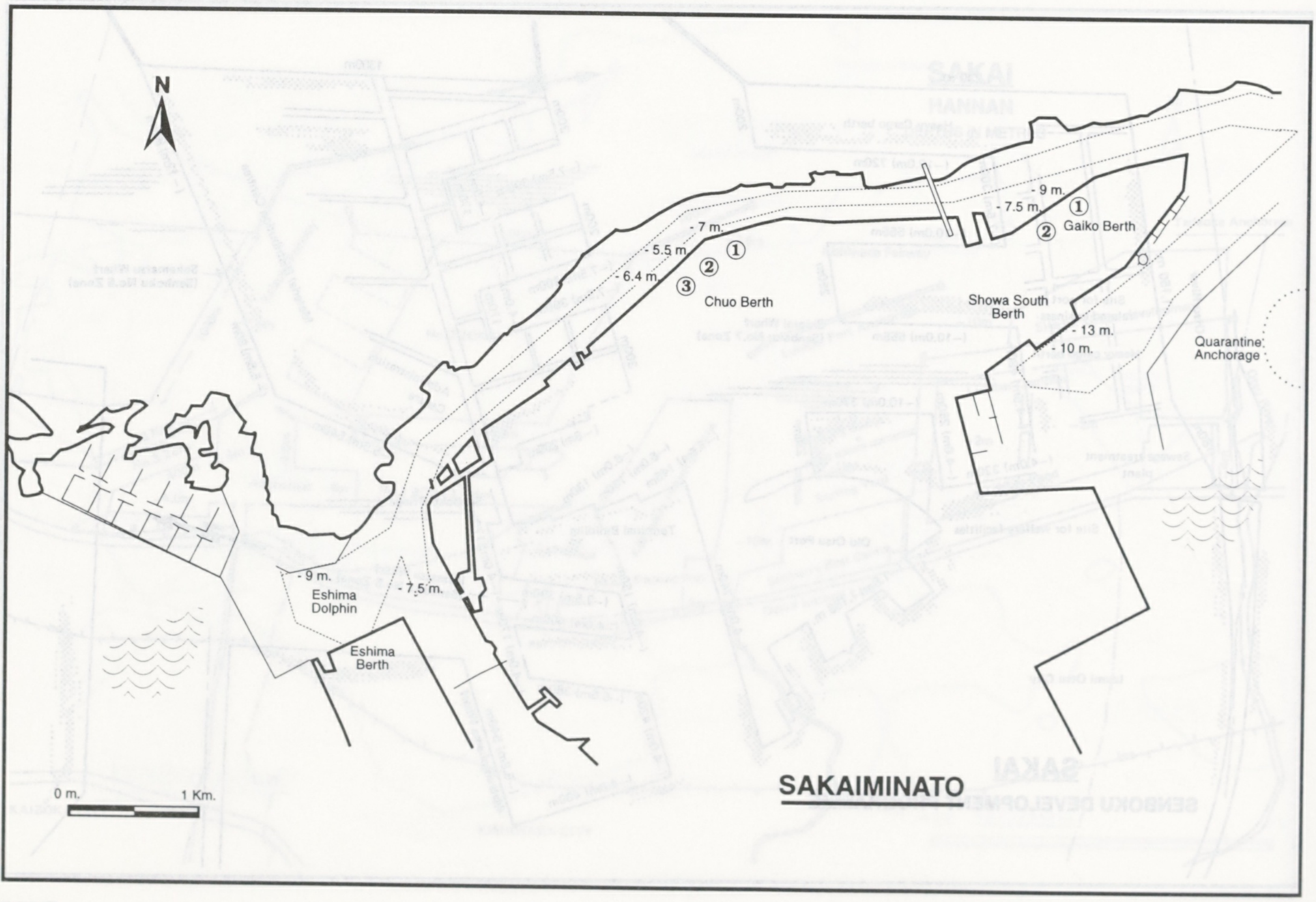

N
Nihon Cement
Nihon Cement Pier
Buoy
Onyu Island
Lumber Anchorage
Kokoku Jinken Dolphin Pier
Mejima Pier
0 m.
500 m.
Kokoku Jinken
SAIKI
Usuki Shipyard

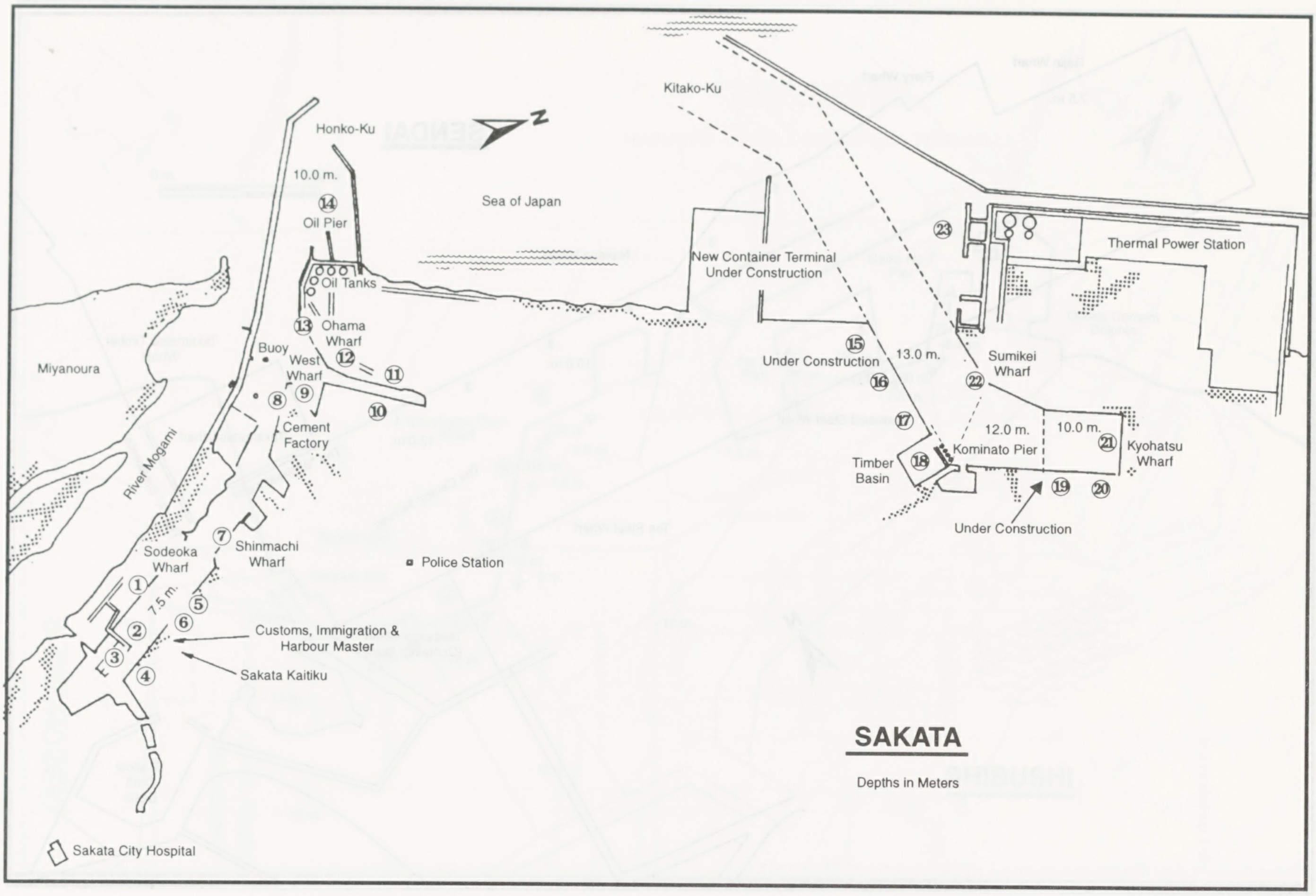

N
SAKAI
HANNAN
DEPTHS IN METRES
1,080m
700m
−7.5m
Kishiwada Fairway
Tadaoka Anchorage
Kaizuka Fairway
1040m
−7.5m
No.2 ZONE
Lumber Port Anchorage
−10m
Site for Urban development
Lumber Complex
Otsu River
370m
−4.5m
−4.5m
−4.5m
Mooring Buoys
−2m
−2m
No.3 Zone
400m −6.5m
Timber Sorting Yard
Timber Pond
−4m
−4.0m
Anchorage −4m
No.1 ZONE −4m
Kishiwada Industrial Zone
Anchorage
−10m
Fishing Port
Seamen's Rest Centre
Osaka Littoral Line
Port Offices
KAIZUKA CITY
KISHIWADA CITY


SAKAI
SAKAI & SENBOKU
HAMADERA FAIRWAY
−16m
OTSU FAIRWAY
−13m
Otsu South Fairway
1,300m
300m
SOUTH FAIRWAY
−10
SAKAI NORTH FAIRWAY
−14
(Senboku No.7 Zone)
585m
585m
250m
250m
400m
230m
150m
200m
390m
200m
390m
300m
500m
(Senboku − No.6 Zone)
Sukematsu Wharf
Ferry Berths
Bridge
Komatsu Wharf
Old Otsu Port
4.0m
7.5m
(Senboku No.5 Zone)
5.5m
4.0m
Senboku No.4 Zone
Matsunohama Wharf
Senboku No.3 Zone
Senboku
Izumi Otsu City
16m
Hamadera Anchorage
Senboku No.1 Zone
Hamadera Wharf
Fishing Port
Senboku No.2 Zone
Senboku
Sakai No.7-Zone
Waste Oil disposal Facilities
16m
West Anchorage
13m
North Anchorage
Sakai No.6 Zone
Sakai No.5 Zone
Ohama Wharf
13m
South Anchorage
Port Office
Sakai No.4-Zone
Sakai No.3 Zone
Sakai No.2 Zone
New Sakai Port
Shiohama Wharf
Port Office
Old Sakai Port
SAKAI CITY
DEPTHS IN METRES


1,230 m.
1300m
Heavy Cargo berth
200m
(−12.0m) 720m
(−7.5m) 300m
(−10.0m) 555m
250m
Shiomi Wharf (Senboku No.7 Zone)
(−10.0m) 555m
Site for port related business
Heavy cargo berth
Otsu River
1,150 m.
180m
(−4.5m) 480m
(−4.0m) 250m
(−10.0m) 370m
230m
(−4.0m) 320m
Sewage treatment plant
Site for welfare facilities
Old Otsu Port
(−1.6m) 1,168 m.
Izumi Otsu City
(−4.0m) 740m
(−7.5m) 145m
(−6.0m) 130m
(−6.0m) 130m
Terminal Building
(−8m) 205m
200m
(−7.5m) 390m
(−4.0m) 170m
200m
(−7.5m) 390m
(−7.5m) 390m
(−4.0m) 170m
300m
Administration Centre
Material Distribution Centres
(−12m) 960m
Sukematsu Wharf (Senboku No.6 Zone)
(−5.5m) 90m
(−5.5m) 540m
Senboku Bridge
(−4.0m) 170m
Komatsu Wharf (Senboku No.5 Zone)
(−4.0m) 150m
(−7.5m) 390m
(−4.0m) 400m
(−4.0m) 170m
(−5.5m) 360m
(−4.0m) 420m
(−4.0m) 400m
(−5.5m) 540m
Matsunohama Wharf
SAKAI
SENBOKU DEVELOPMENT PROGRAMME


SAKAIDE
No. 1 Sea Berth
Minami Bisan Seto Ohashi Bridge
Cosmo Oil
No. 2
B
A
L
C
Mitsubishi Chemical Ind.
Kawasaki Dockyard
Lion West No. 1
Q - 3
Quarantine Anchorages
Q - 1
Red L. H.
West Wharf
2
3
4
1
Centre Pier
Zen-noh Fuel Terminal Corp.
A
B
C
D
Hayashida Wharf
N
0
1,000
Scale in Meters

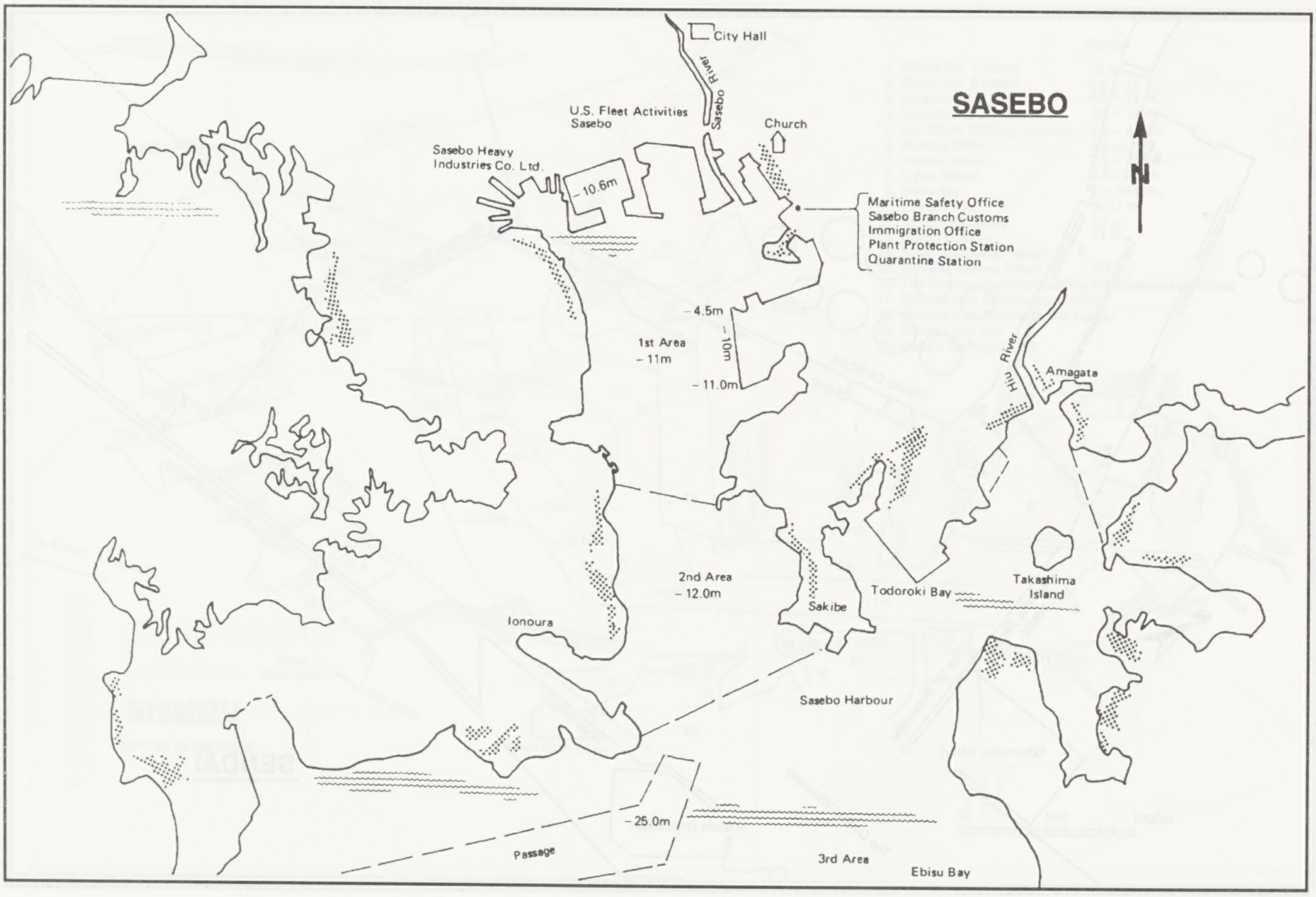

N
- 9 m.
- 7.5 m.
①
②
Gaiko Berth
- 7 m.
- 5.5 m
- 6.4 m.
①
②
③
Chuo Berth
Showa South Berth
- 13 m.
- 10 m.
Quarantine Anchorage
- 9 m.
Eshima Dolphin
- 7.5 m.
Eshima Berth
0 m.
1 Km.
SAKAIMINATO



SAKATA

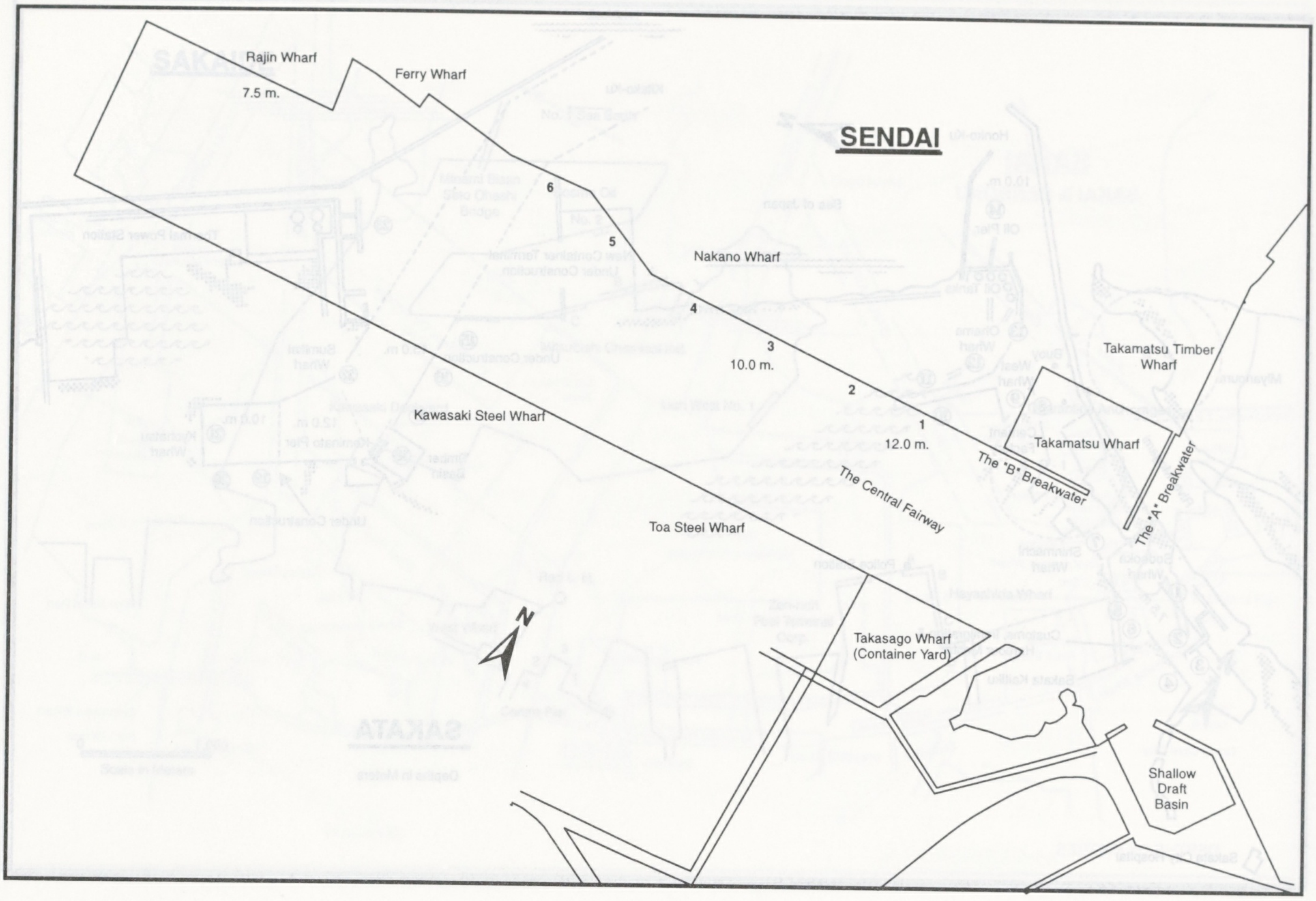
Depths in Meters

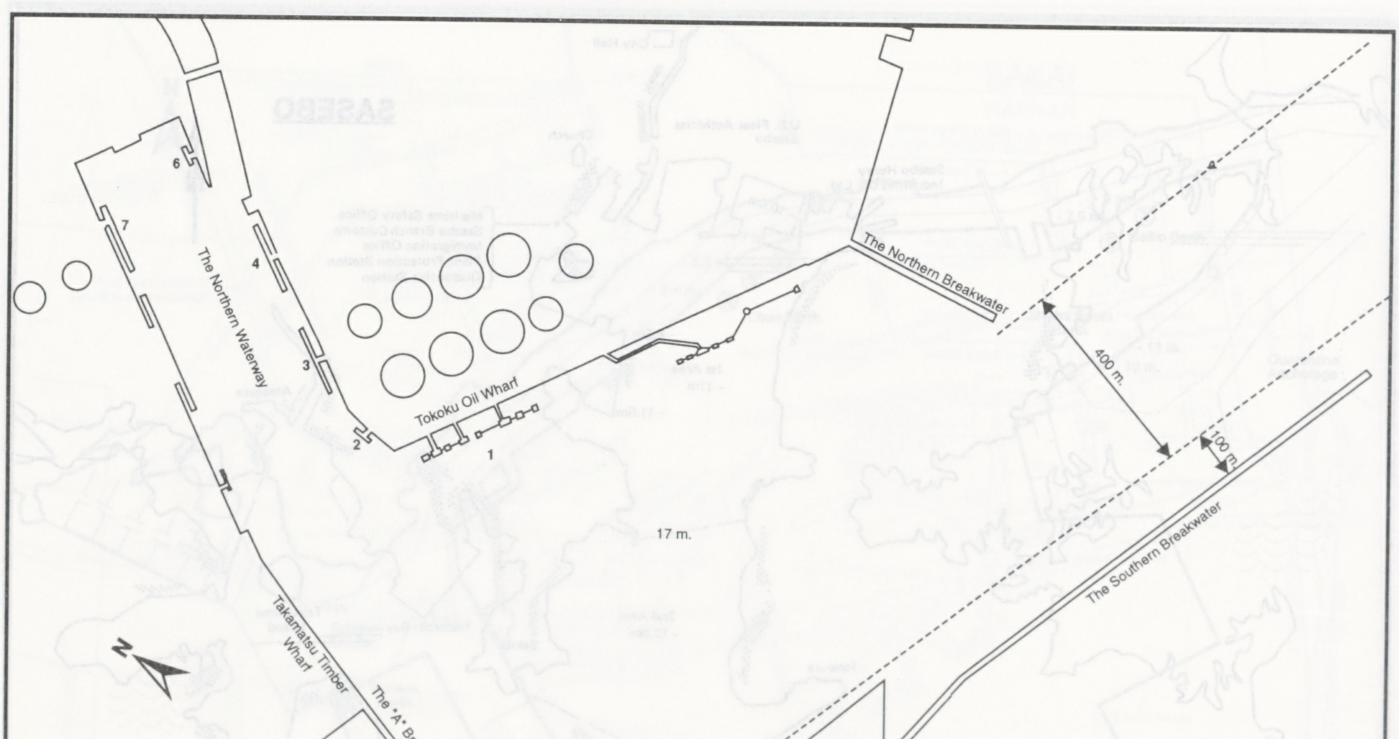
Kitako-Ku
Honko-Ku
N
10.0 m.
⑭
Oil Pier
Sea of Japan
New Container Terminal Under Construction
Thermal Power Station
㉓
Oil Tanks
⑬
Ohama Wharf
⑫
⑪
⑩
Buoy
West Wharf
⑨
⑧
Cement Factory
Miyanoura
River Mogami
⑮
Under Construction
13.0 m.
⑯
Sumikei Wharf
㉒
⑰
12.0 m.
10.0 m.
Timber Basin
⑱
Kominato Pier
㉑
Kyohatsu Wharf
⑲
⑳
Under Construction
⑦
Shinmachi Wharf
Sodeoka Wharf
Police Station
①
7.5 m.
⑤
②
⑥
③
④
Customs, Immigration & Harbour Master
Sakata Kaitiku
Sakata City Hospital

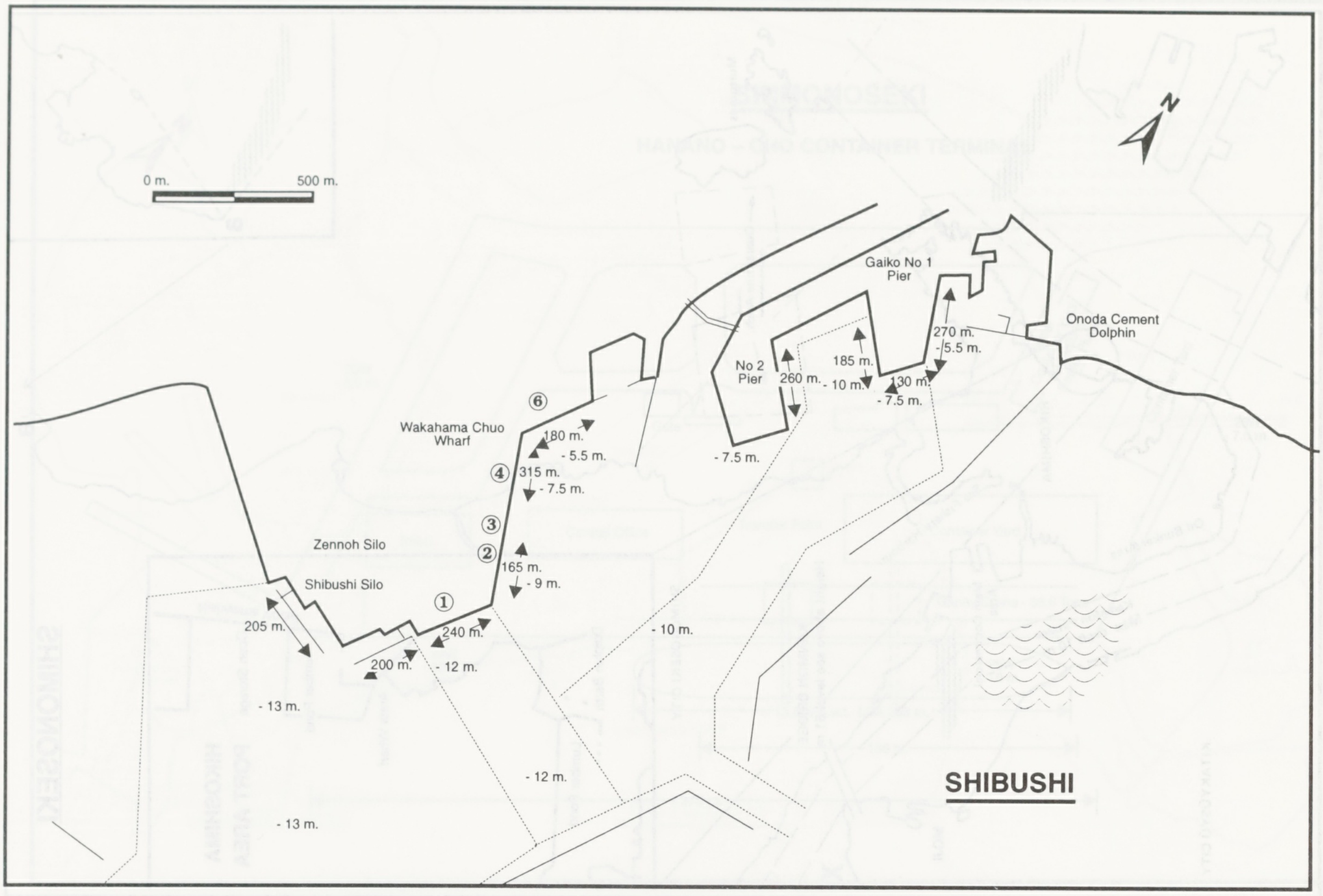


SASEBO

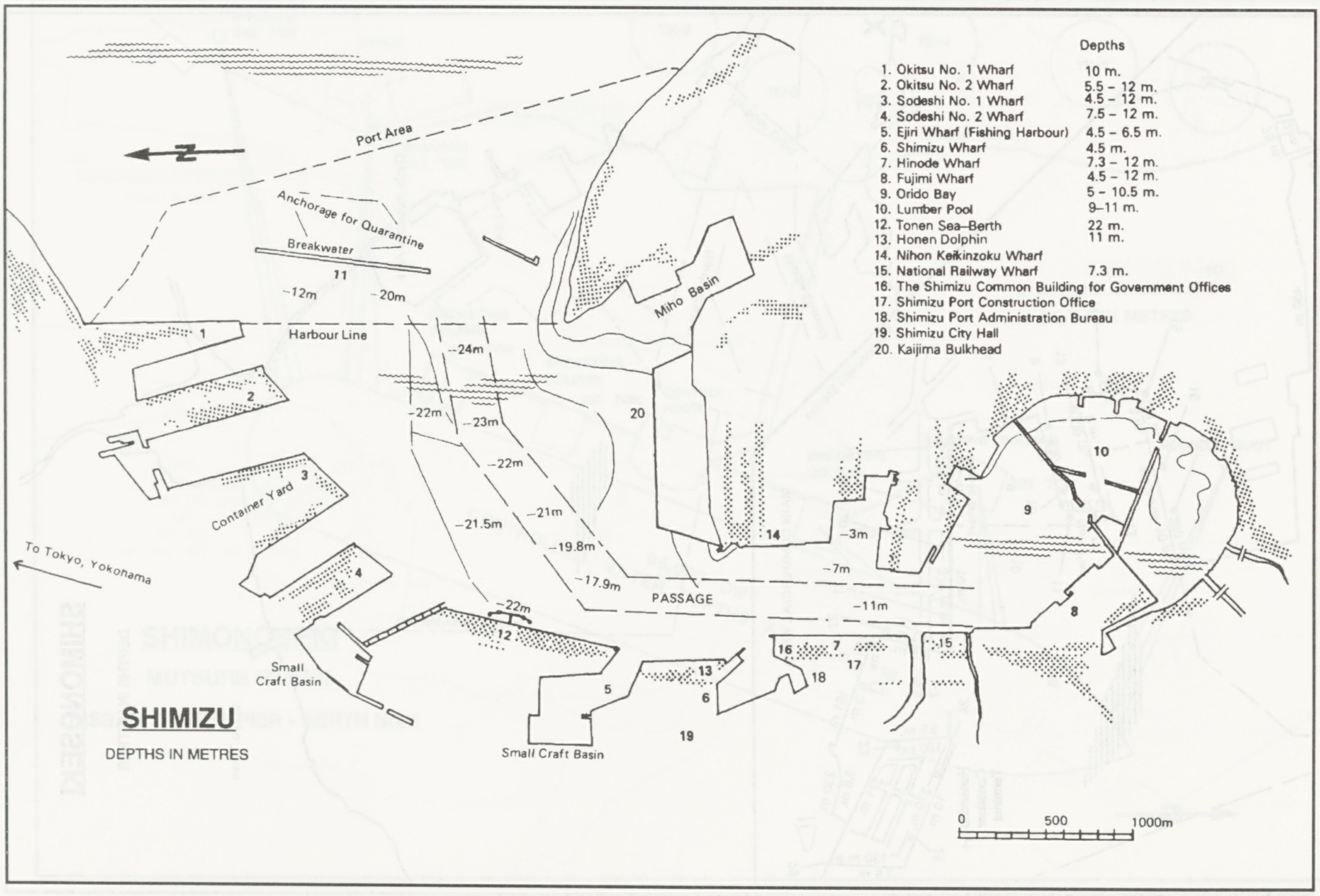
City Hall
Sasebo River
U.S. Fleet Activities Sasebo
Church
Sasebo Heavy Industries Co. Ltd.
– 10.6m
N
Maritime Safety Office
Sasebo Branch Customs
Immigration Office
Plant Protection Station
Quarantine Station
– 4.5m
1st Area
– 11m
– 10m
– 11.0m
Hiu River
Amagata
2nd Area
– 12.0m
Todoroki Bay
Takashima Island
Sakibe
Ionoura
Sasebo Harbour
– 25.0m
Passage
3rd Area
Ebisu Bay


SENDAI
Rajin Wharf
7.5 m.
Ferry Wharf
6
5
Nakano Wharf
4
3
10.0 m.
2
1
12.0 m.
Kawasaki Steel Wharf
Takamatsu Timber Wharf
Takamatsu Wharf
The "B" Breakwater
The "A" Breakwater
The Central Fairway
Toa Steel Wharf
N
Takasago Wharf (Container Yard)
Shallow Draft Basin


6
7
4
3
2
The Northern Waterway
Tokoku Oil Wharf
1
The Northern Breakwater
400 m.
100 m.
17 m.
The Southern Breakwater
N
Takamatsu Timber Wharf
The "A" Breakwater
Takamatsu Wharf
Koyo Wharf
SENDAI
The Central Waterway
Shallow Draft Basin


N
0 m.
500 m.
Gaiko No 1 Pier
Onoda Cement Dolphin
270 m.
- 5.5 m.
185 m.
No 2 Pier
260 m.
- 10 m.
130 m.
- 7.5 m.
- 7.5 m.
⑥
Wakahama Chuo Wharf
180 m.
- 5.5 m.
④
315 m.
- 7.5 m.
③
②
Zennoh Silo
165 m.
- 9 m.
Shibushi Silo
①
205 m.
240 m.
200 m.
- 12 m.
- 10 m.
- 13 m.
- 12 m.
- 13 m.

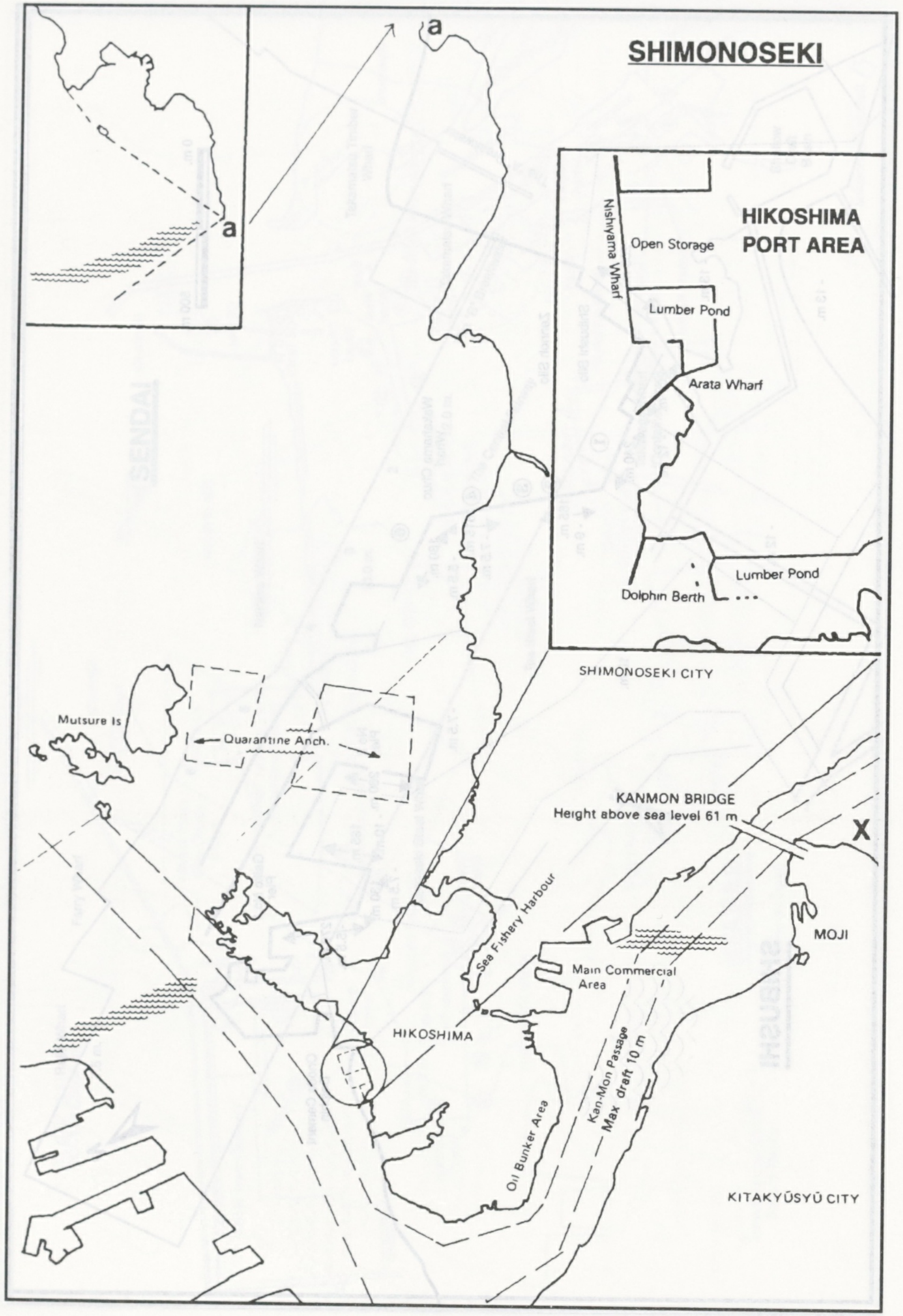
SHIBUSHI

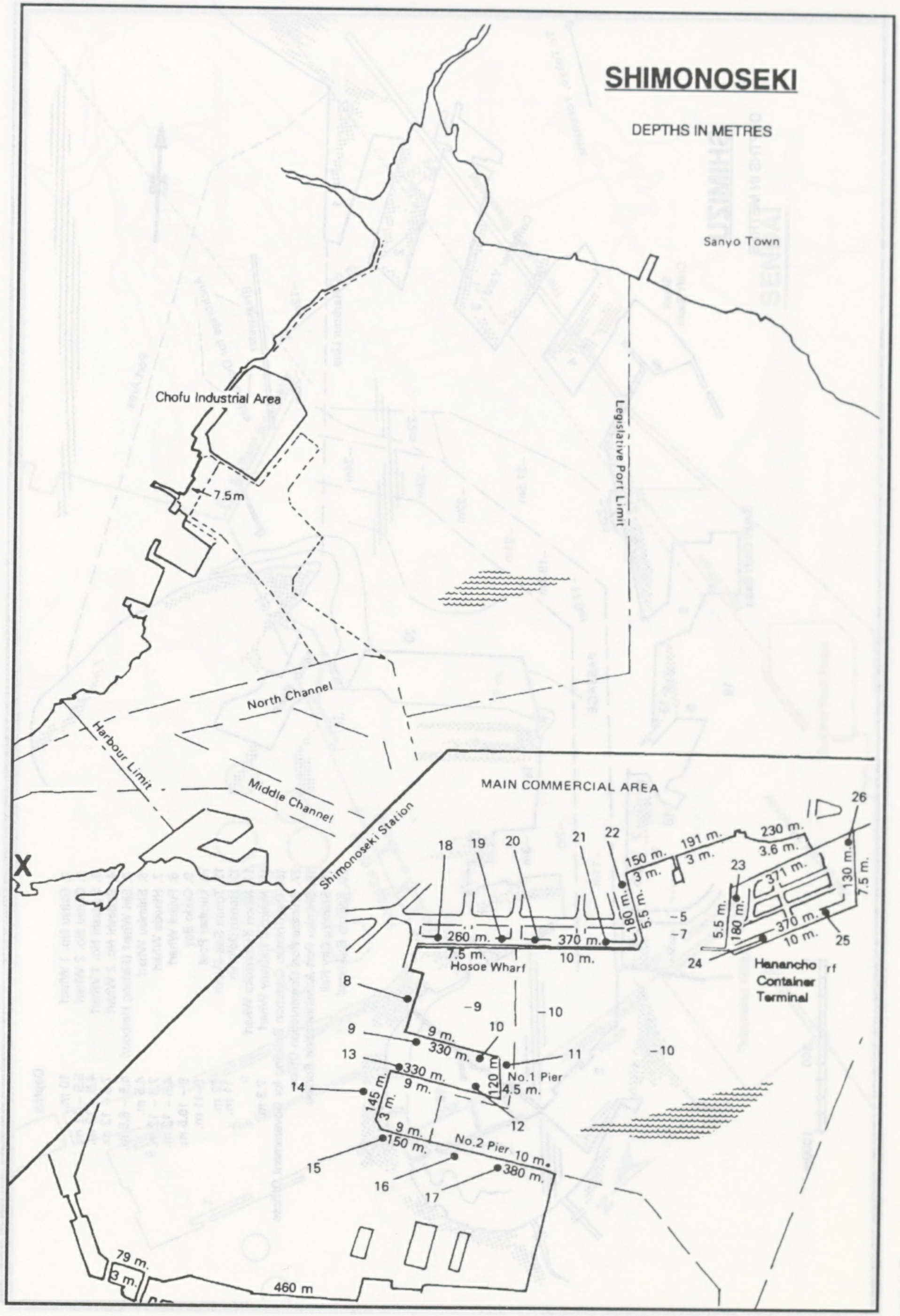

N
Port Area
Anchorage for Quarantine
Breakwater
11
-12m
-20m
1
Harbour Line
-24m
2
Miho Basin
20
-22m
-23m
3
Container Yard
-22m
-21.5m
-21m
-19.8m
To Tokyo, Yokohama
4
-17.9m
PASSAGE
-22m
12
Small Craft Basin
5
Small Craft Basin
13
6
19
16
7
18
17
15
14
-3m
-7m
-11m
10
9
8
0
500
1000m

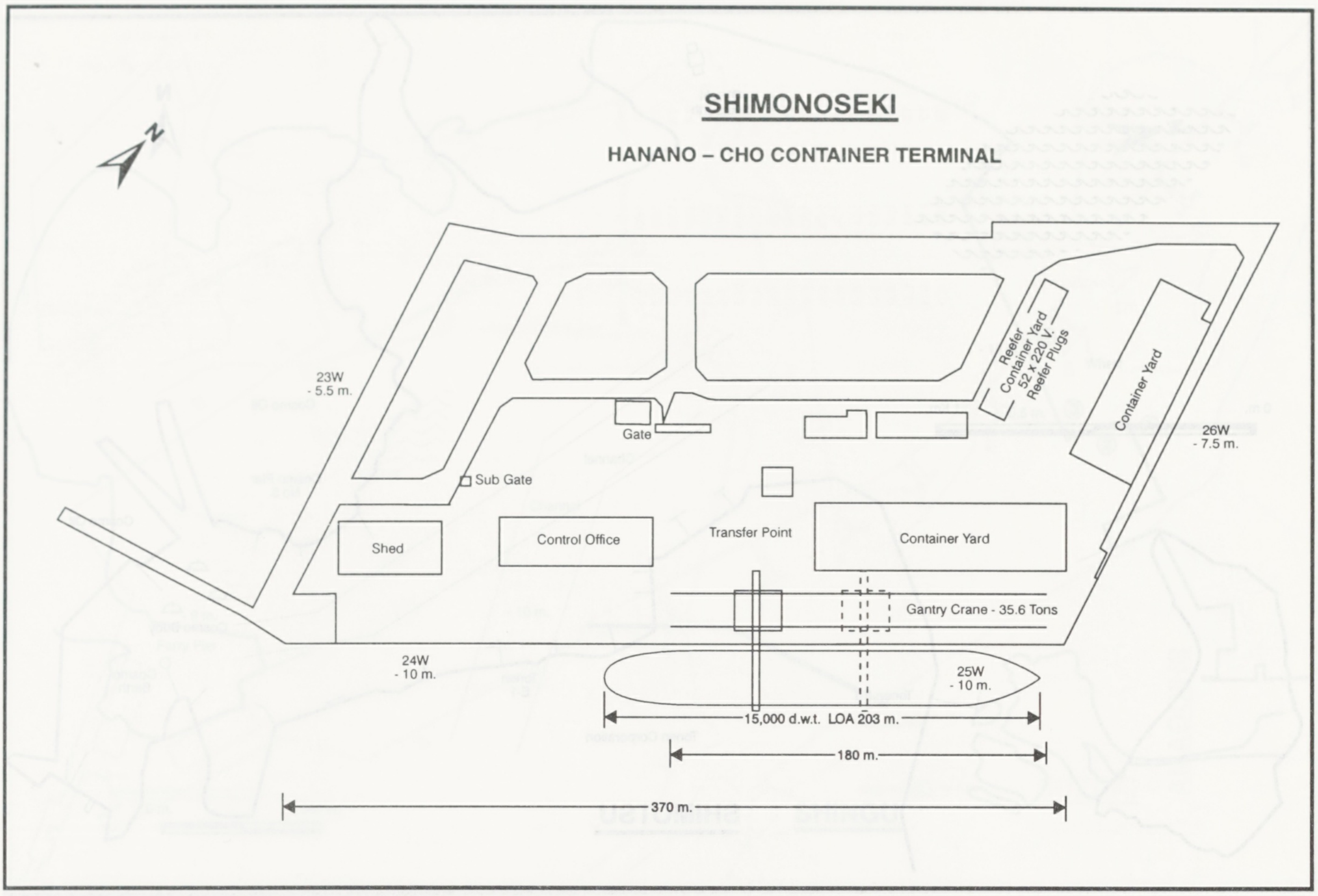
	Depths
1. Okitsu No. 1 Wharf	10 m.
2. Okitsu No. 2 Wharf	5.5 – 12 m.
3. Sodeshi No. 1 Wharf	4.5 – 12 m.
4. Sodeshi No. 2 Wharf	7.5 – 12 m.
5. Ejiri Wharf (Fishing Harbour)	4.5 – 6.5 m.
6. Shimizu Wharf	4.5 m.
7. Hinode Wharf	7.3 – 12 m.
8. Fujimi Wharf	4.5 – 12 m.
9. Orido Bay	5 – 10.5 m.
10. Lumber Pool	9–11 m.
12. Tonen Sea–Berth	22 m.
13. Honen Dolphin	11 m.
14. Nihon Keikinzoku Wharf	
15. National Railway Wharf	7.3 m.
16. The Shimizu Common Building for Government Offices	
17. Shimizu Port Construction Office	
18. Shimizu Port Administration Bureau	
19. Shimizu City Hall	
20. Kaijima Bulkhead	

SHIMIZU

DEPTHS IN METRES


SHIMONOSEKI
a
a
HIKOSHIMA PORT AREA
Nishiyama Wharf
Open Storage
Lumber Pond
Arata Wharf
Lumber Pond
Dolphin Berth
SHIMONOSEKI CITY
Mutsure Is
Quarantine Anch.
KANMON BRIDGE
Height above sea level 61 m
X
MOJI
Sea Fishery Harbour
Main Commercial Area
HIKOSHIMA
Kan-Mon Passage
Max draft 10 m
Oil Bunker Area
KITAKYŪSYŪ CITY

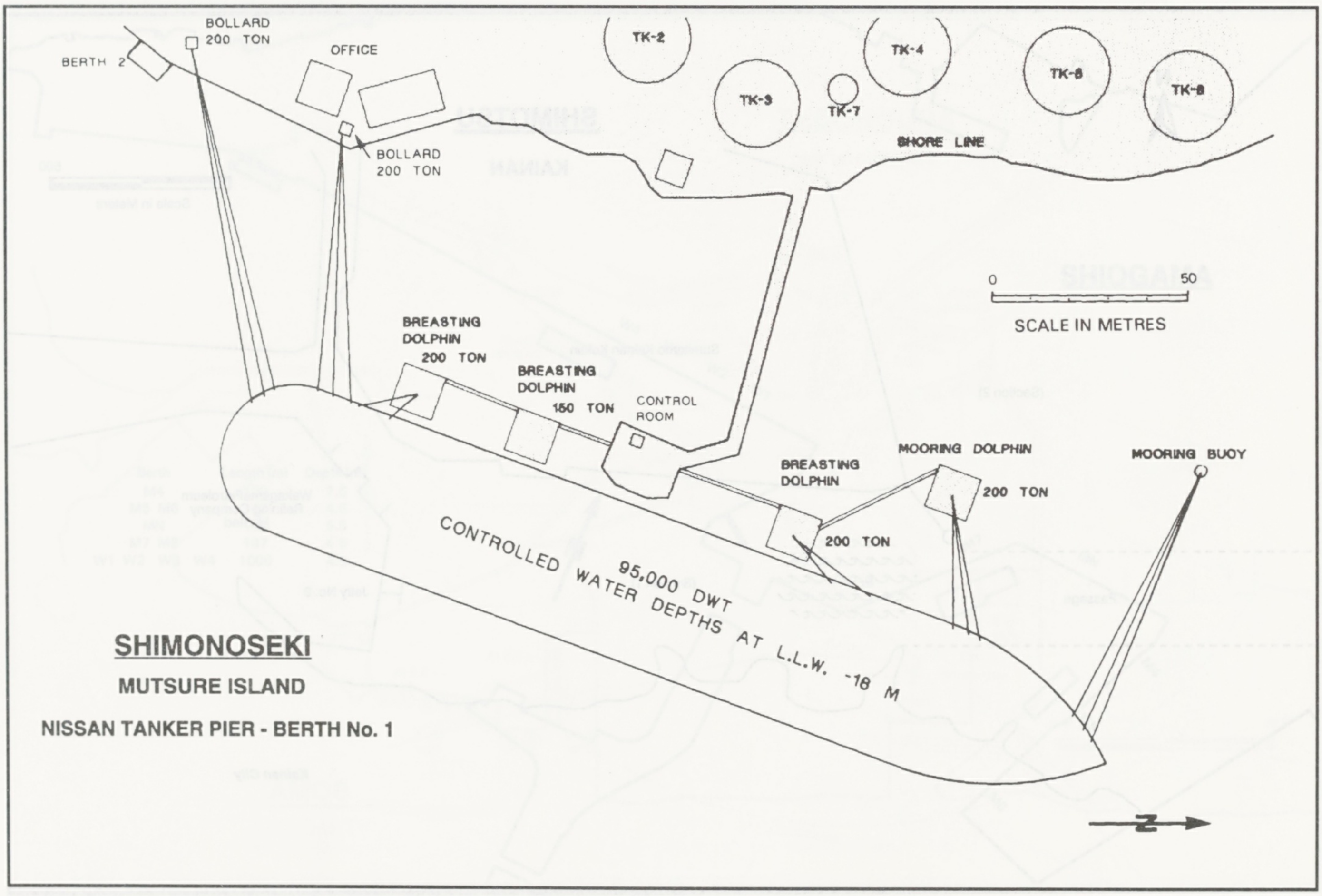

SHIMONOSEKI
DEPTHS IN METRES
Sanyo Town
Chofu Industrial Area
7.5m
Legislative Port Limit
North Channel
Harbour Limit
Middle Channel
X
Shimonoseki Station
MAIN COMMERCIAL AREA
18
19
20
21
22
26
150 m.
3 m.
191 m.
3 m.
230 m.
3.6 m.
23
371 m.
130 m.
7.5 m.
180 m.
5.5 m.
-5
-7
5.5 m.
180 m.
370 m.
10 m.
25
24
260 m.
370 m.
7.5 m.
10 m.
Hosoe Wharf
Hanancho
rf
Container
Terminal
8
-9
-10
9
9 m.
10
330 m.
13
330 m.
11
No.1 Pier
120 m.
4.5 m.
-10
14
9 m.
145 m.
3 m.
12
9 m.
150 m.
No.2 Pier
10 m.
15
16
17
380 m.
79 m.
3 m.
460 m



SHIMONOSEKI

HANANO – CHO CONTAINER TERMINAL

N
23W
- 5.5 m.
Reefer Container Yard 52 x 220 V. Reefer Plugs
Container Yard
26W
- 7.5 m.
Gate
Sub Gate
Shed
Control Office
Transfer Point
Container Yard
Gantry Crane - 35.6 Tons
24W
- 10 m.
25W
- 10 m.
15,000 d.w.t. LOA 203 m.
180 m.
370 m.

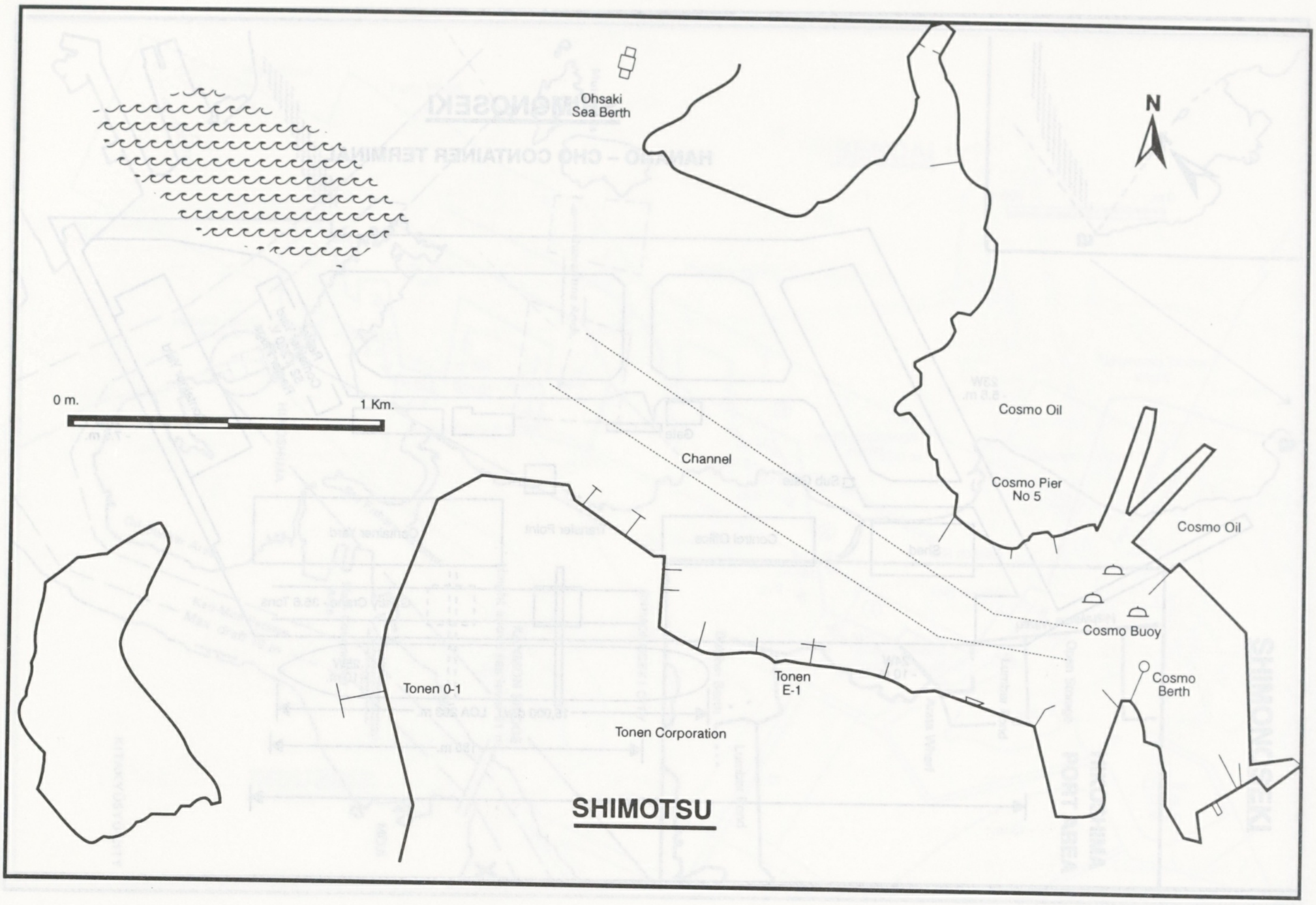


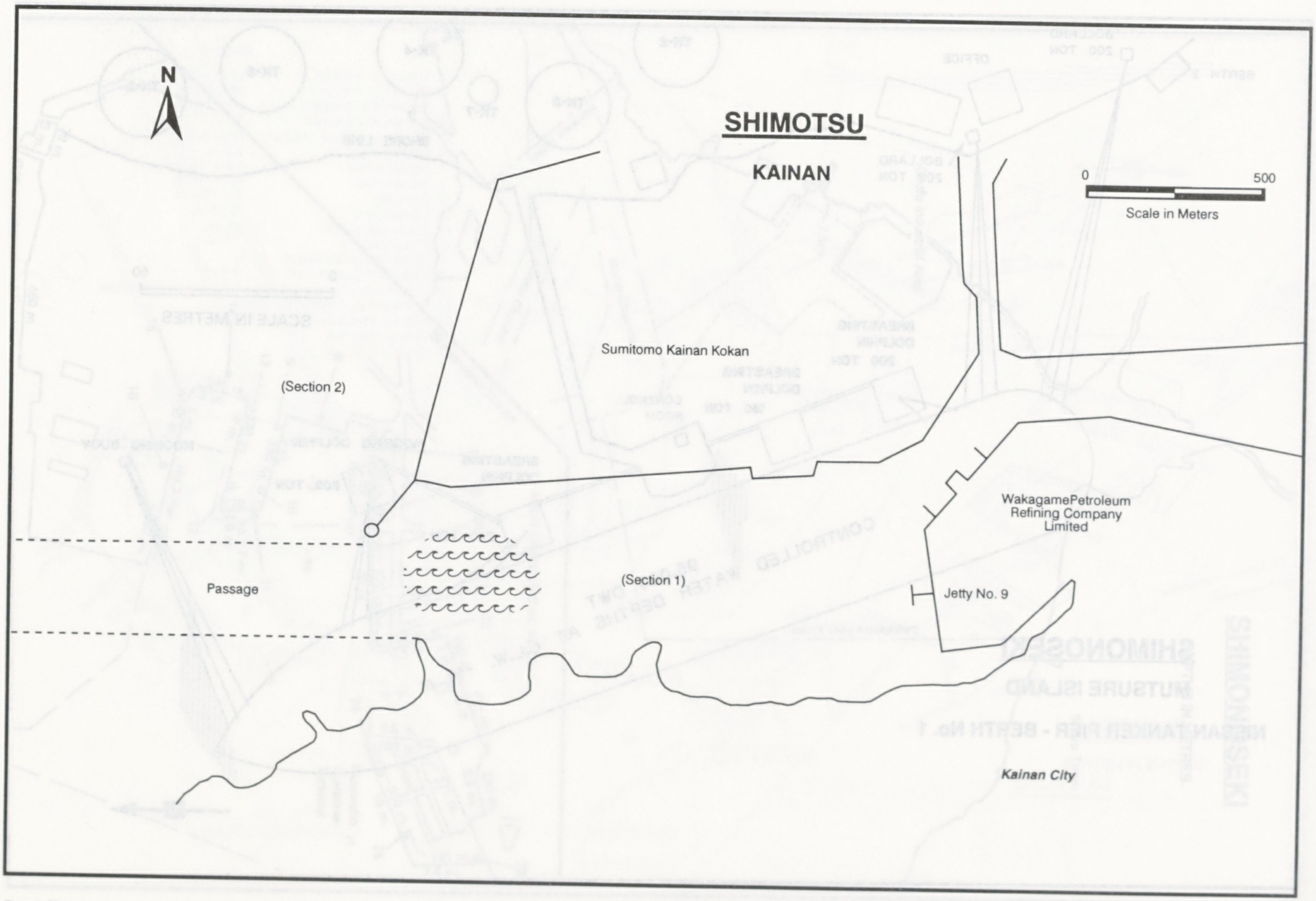
SHIMONOSEKI

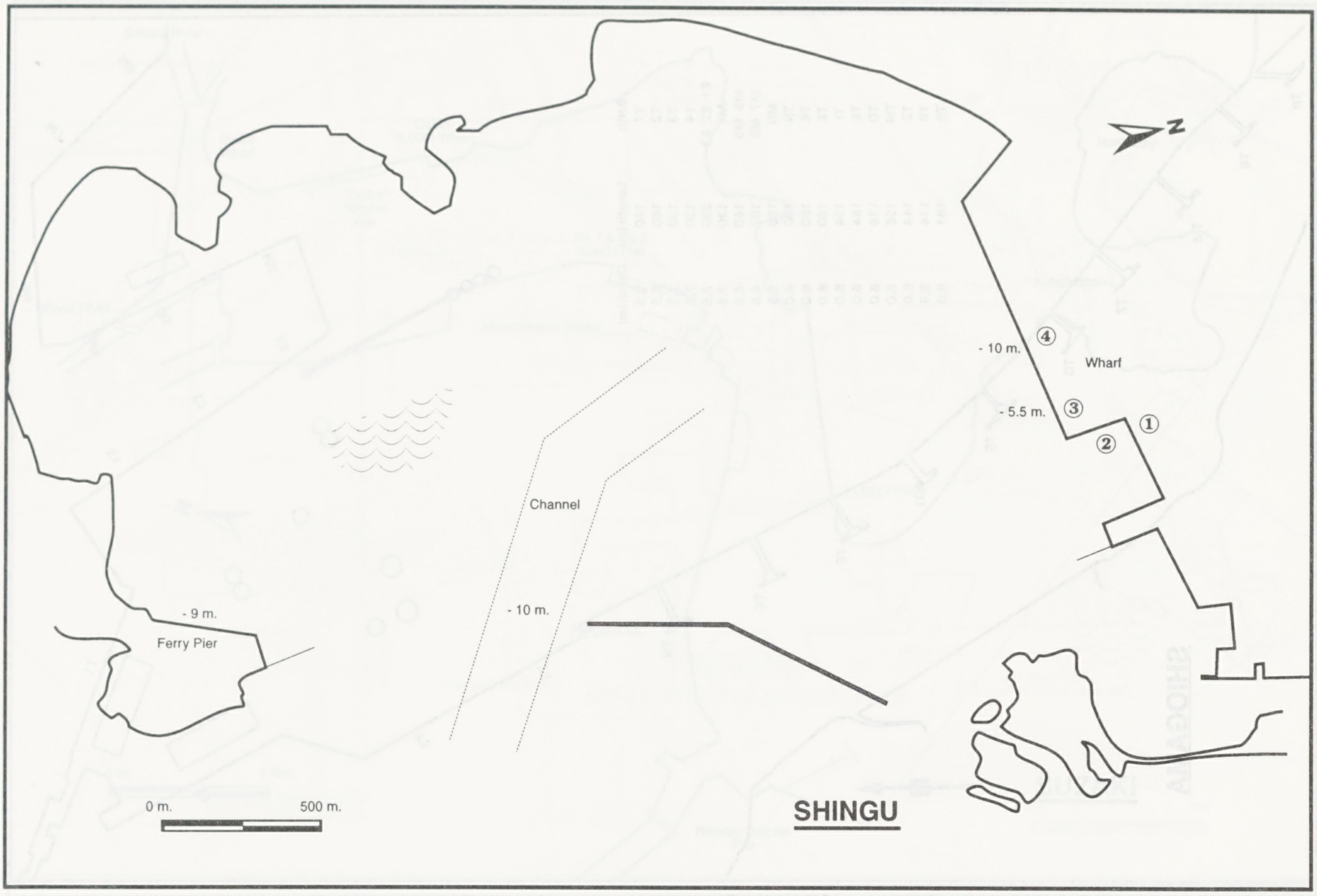
MUTSURE ISLAND

NISSAN TANKER PIER - BERTH No. 1

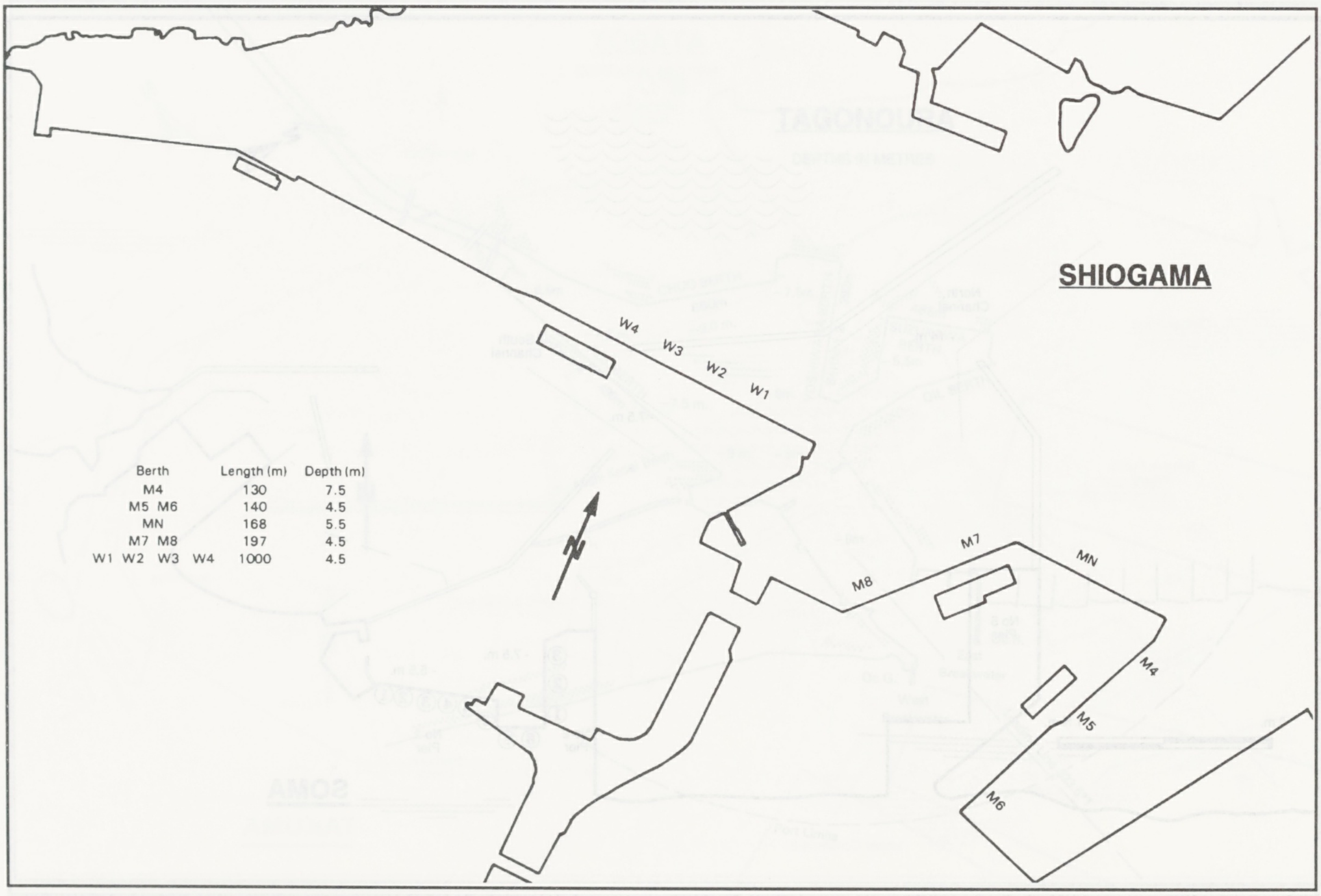
BOLLARD 200 TON
BERTH 2
OFFICE
TK-2
TK-4
TK-6
TK-3
TK-7
TK-8
SHORE LINE
BOLLARD 200 TON
0
50
SCALE IN METRES
BREASTING DOLPHIN 200 TON
BREASTING DOLPHIN 150 TON
CONTROL ROOM
BREASTING DOLPHIN
200 TON
MOORING DOLPHIN
200 TON
MOORING BUOY
CONTROLLED WATER DEPTHS AT L.L.W. -16 M
95,000 DWT
N


Ohsaki
Sea Berth
N
0 m.
1 Km.
Channel
Cosmo Oil
Cosmo Pier
No 5
Cosmo Oil
Cosmo Buoy
Cosmo
Berth
Tonen 0-1
Tonen
E-1
Tonen Corporation
SHIMOTSU


N
SHIMOTSU
KAINAN
0
500
Scale in Meters
Sumitomo Kainan Kokan
(Section 2)
WakagamePetroleum
Refining Company
Limited
Passage
(Section 1)
Jetty No. 9
Kainan City

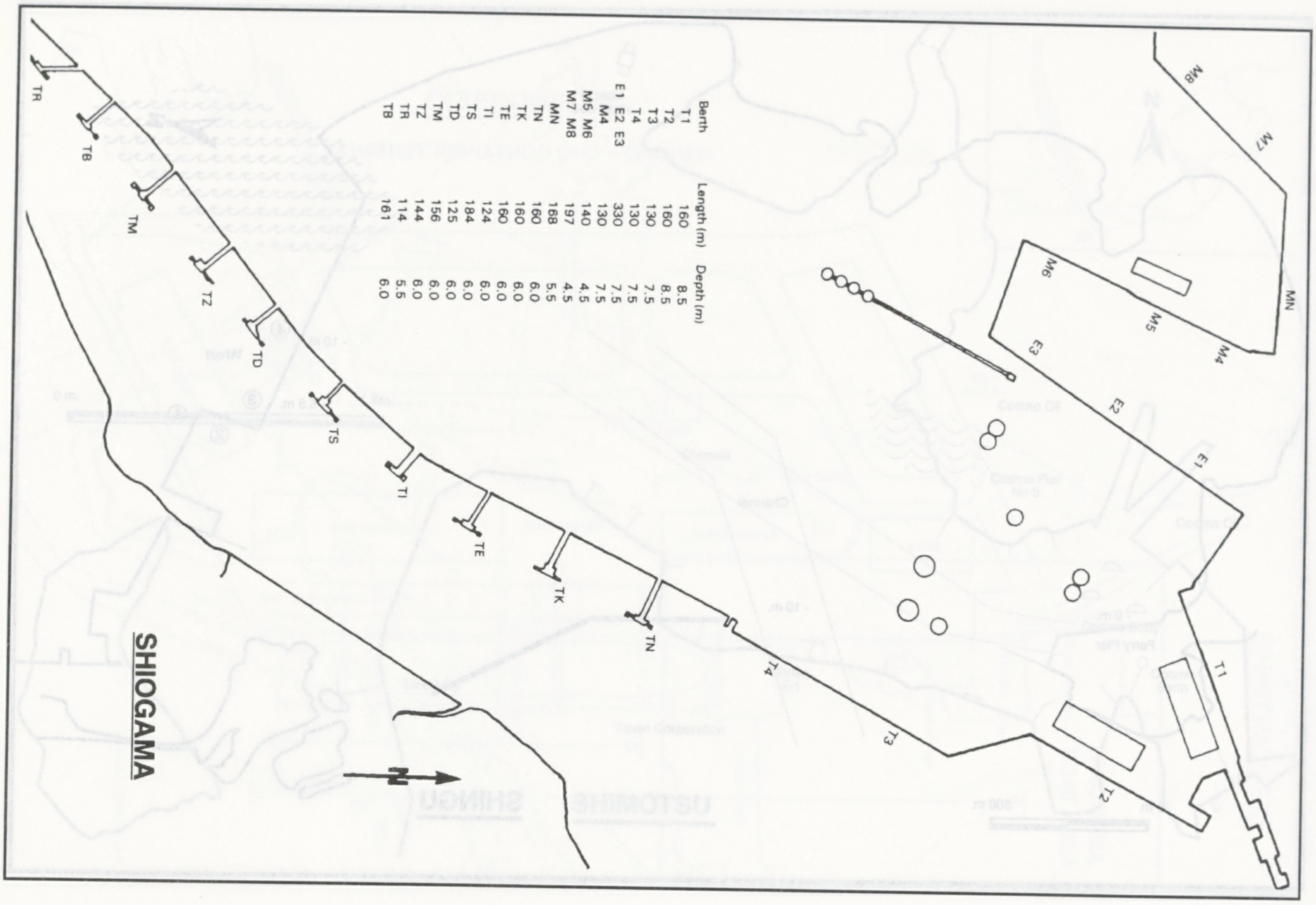

N
- 10 m.
④
Wharf
- 5.5 m.
③
①
②
Channel
- 10 m.
- 9 m.
Ferry Pier
0 m.
500 m.

SHINGU


W4
W3
W2
W1
M8
M7
MN
M4
M5
M6
N

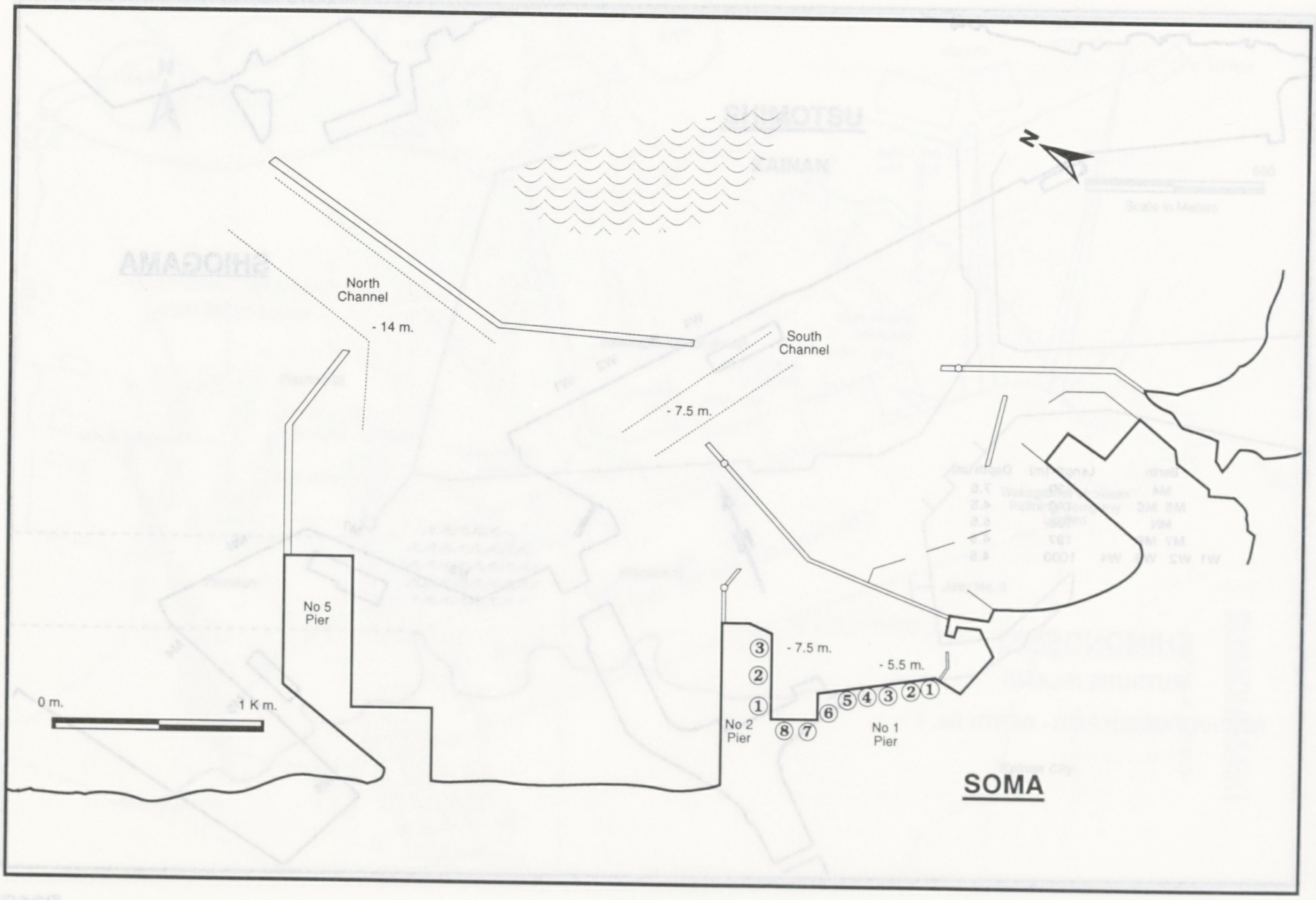
SHIOGAMA

Berth	Length (m)	Depth (m)
M4	130	7.5
M5 M6	140	4.5
MN	168	5.5
M7 M8	197	4.5
W1 W2 W3 W4	1000	4.5

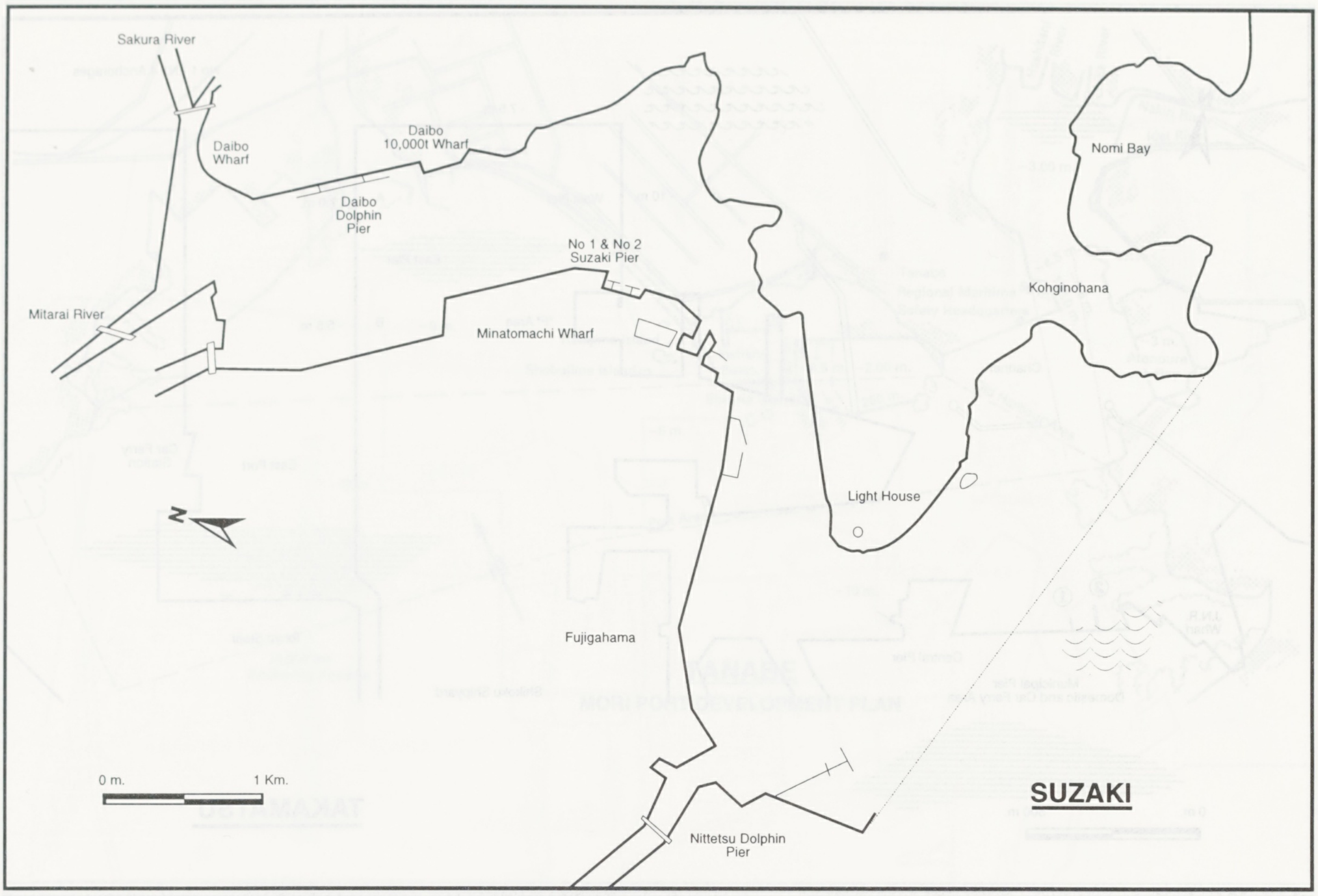

MN
M7
M8
M4
M5
M6
E1
E2
E3
T1
T2
T3
T4
TN
TK
TE
TI
TS
TD
TZ
TM
TB
TR
N

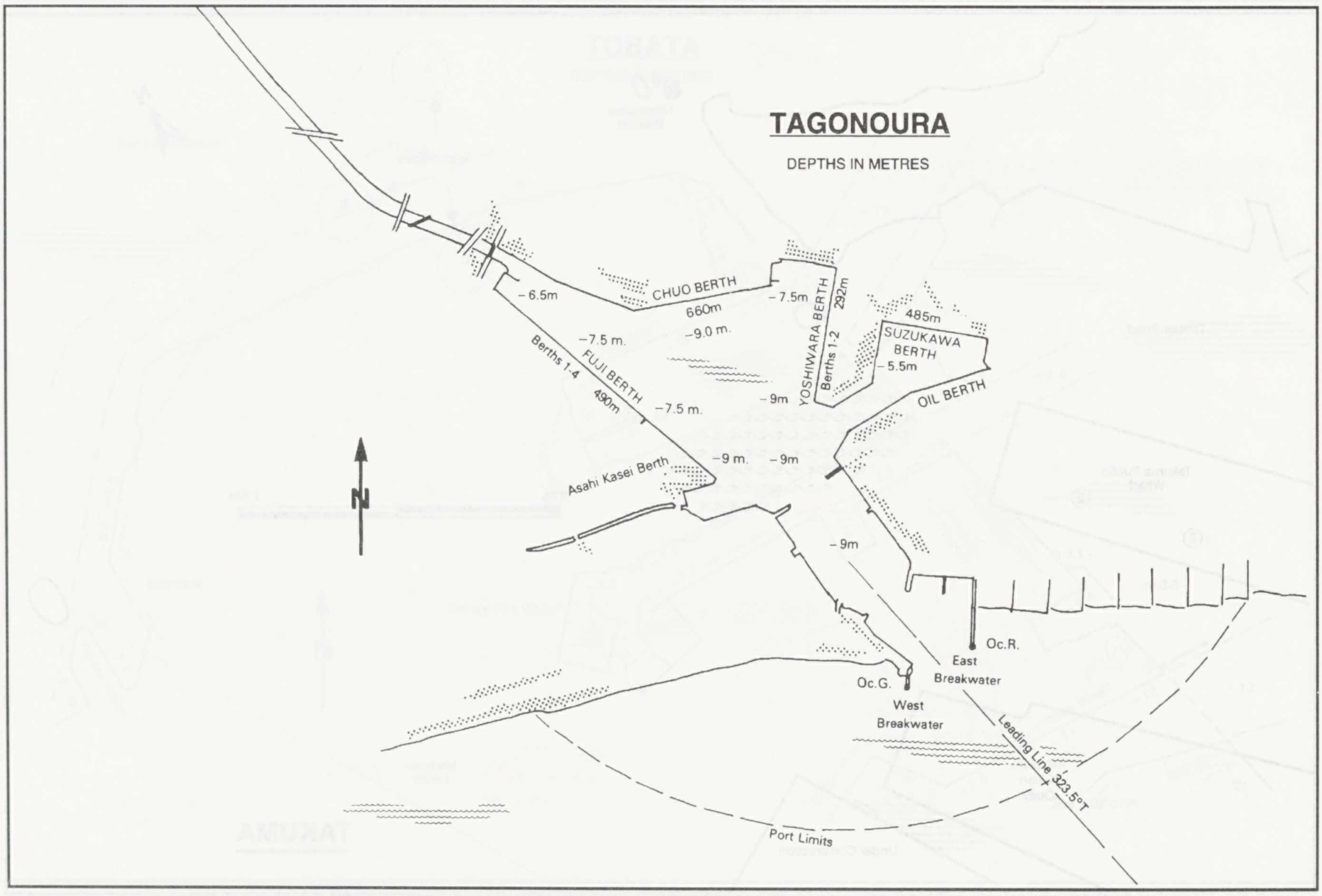
Berth	Length (m)	Depth (m)
T1	160	8.5
T2	160	8.5
T3	130	7.5
T4	130	7.5
E1 E2 E3	330	7.5
M4	130	7.5
M5 M6	140	4.5
M7 M8	197	4.5
MN	168	5.5
TN	160	6.0
TK	160	6.0
TE	160	6.0
TI	124	6.0
TS	184	6.0
TD	125	6.0
TM	156	6.0
TZ	144	6.0
TR	114	5.5
TB	161	6.0

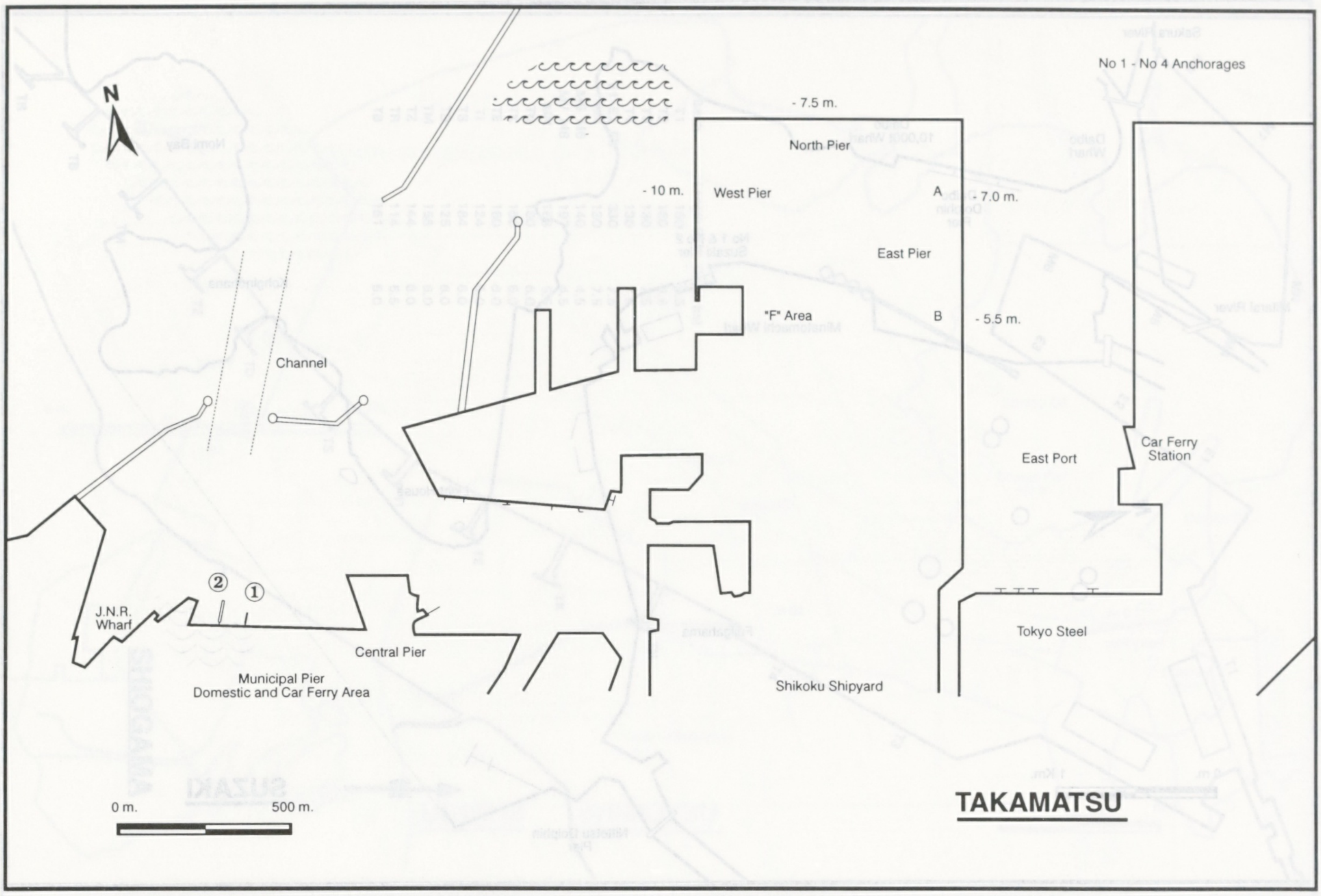
SHIOGAMA

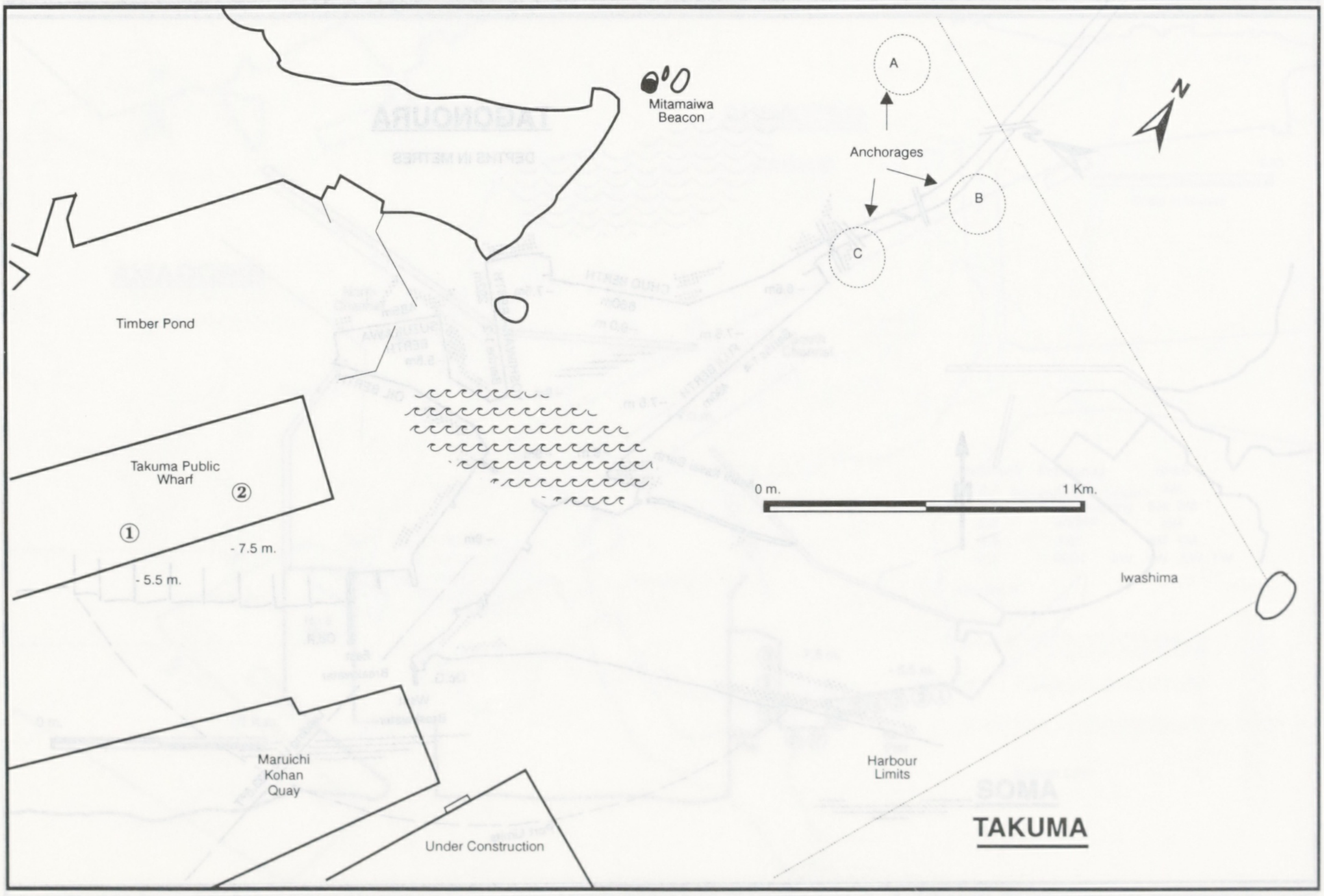

N
North Channel
- 14 m.
South Channel
- 7.5 m.
No 5 Pier
③
②
①
No 2 Pier
⑧ ⑦
⑥
⑤ ④ ③ ② ①
- 7.5 m.
- 5.5 m.
No 1 Pier
0 m.
1 K m.

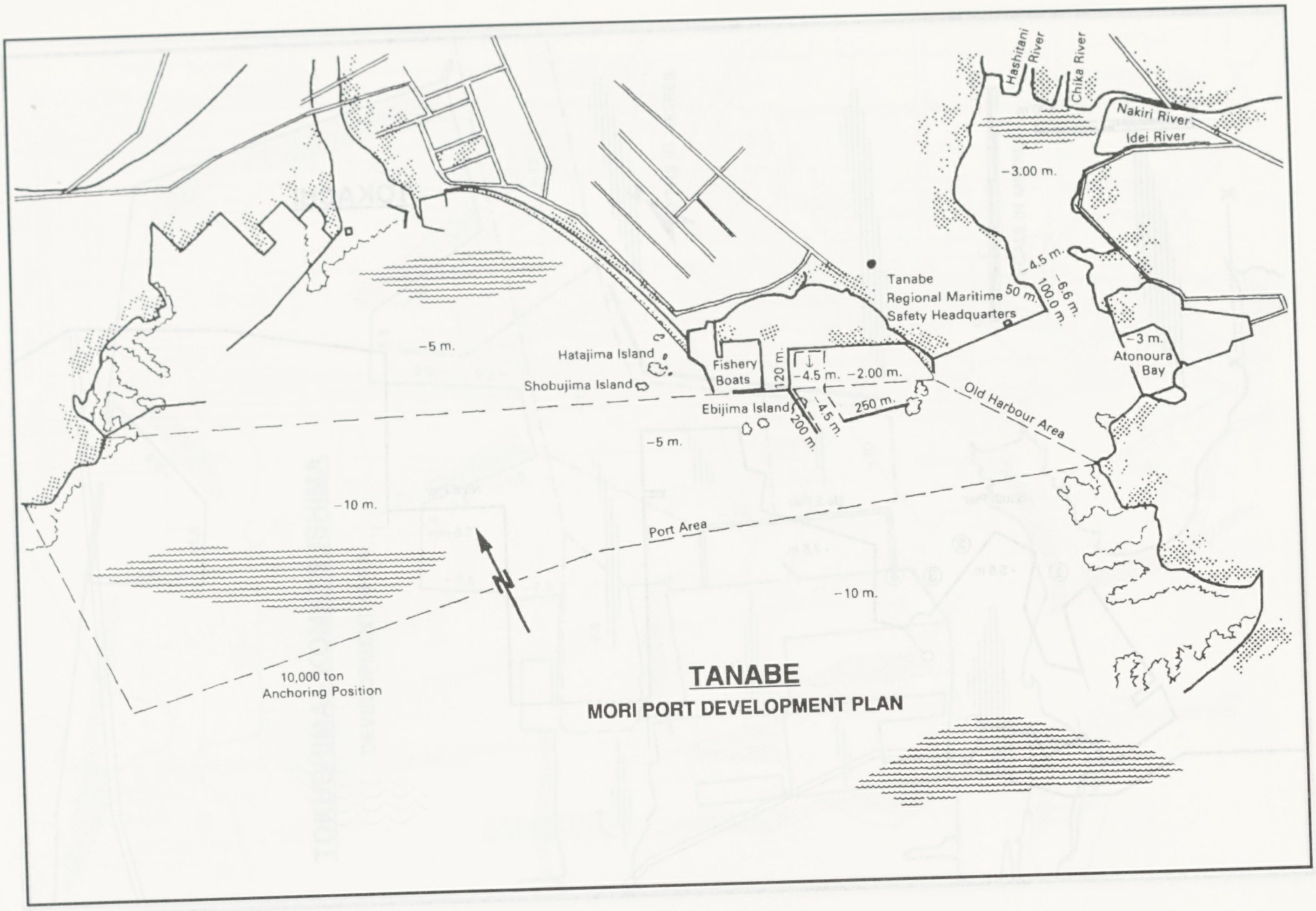
SOMA


Sakura River
Daibo Wharf
Daibo 10,000t Wharf
Daibo Dolphin Pier
No 1 & No 2 Suzaki Pier
Mitarai River
Minatomachi Wharf
Nomi Bay
Kohginohana
Light House
N
Fujigahama
0 m.
1 Km.
SUZAKI
Nittetsu Dolphin Pier


TAGONOURA
DEPTHS IN METRES
−6.5m
CHUO BERTH
660m
−7.5m
YOSHIWARA BERTH
Berths 1-2
292m
485m
SUZUKAWA BERTH
−5.5m
−7.5 m.
−9.0 m.
Berths 1-4
FUJI BERTH
490m
−7.5 m.
−9m
OIL BERTH
N
Asahi Kasei Berth
−9 m.
−9m
−9m
Oc.R.
East Breakwater
Oc.G.
West Breakwater
Leading Line 323.5°T
Port Limits


N
No 1 - No 4 Anchorages
- 7.5 m.
North Pier
- 10 m.
West Pier
A
- 7.0 m.
East Pier
"F" Area
B
- 5.5 m.
Channel
East Port
Car Ferry Station
②
①
J.N.R. Wharf
Central Pier
Municipal Pier
Domestic and Car Ferry Area
Tokyo Steel
Shikoku Shipyard
0 m.
500 m.
TAKAMATSU

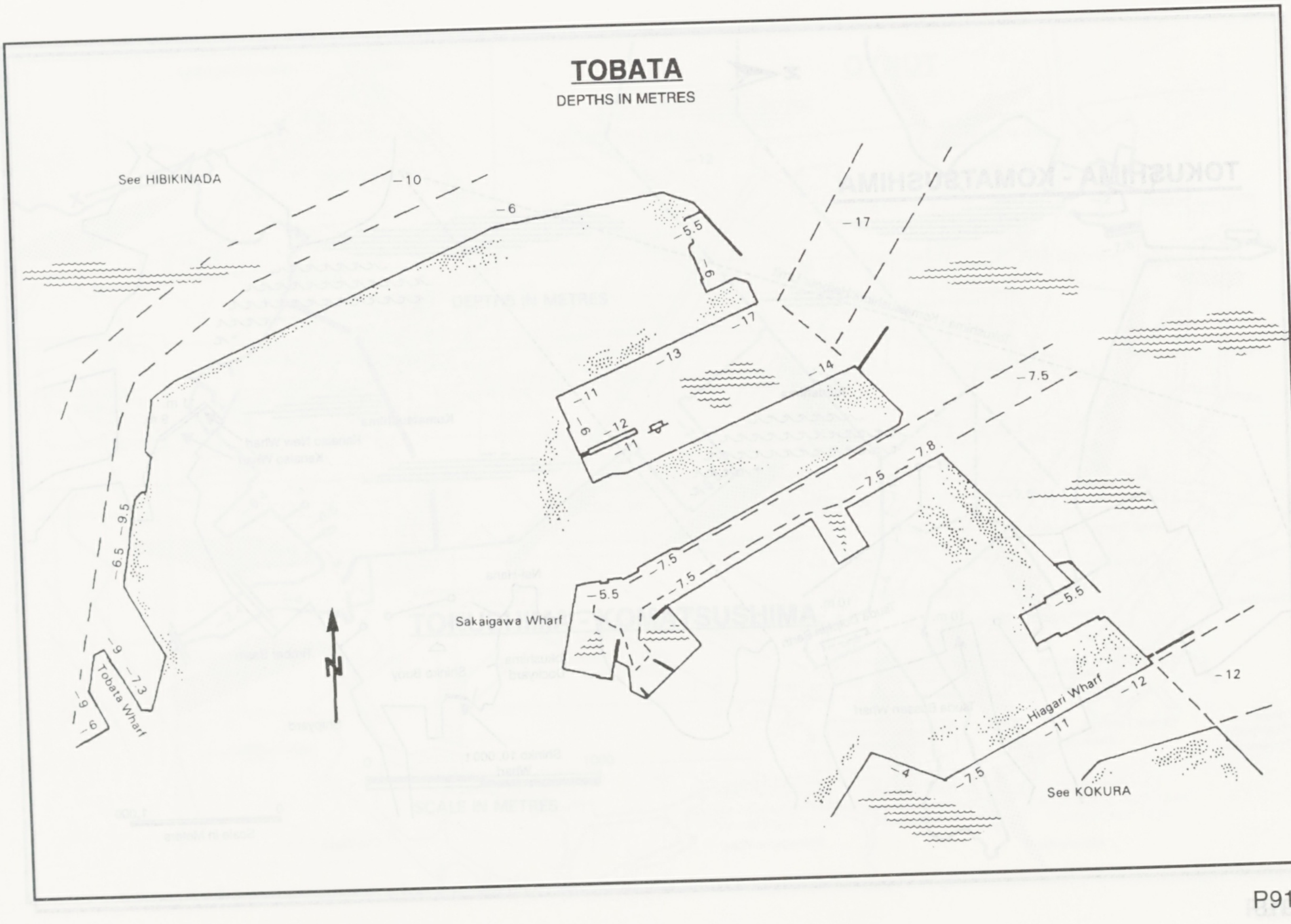

A
Mitamaiwa Beacon
N
Anchorages
B
C
Timber Pond
Takuma Public Wharf
②
①
- 7.5 m.
- 5.5 m.
0 m.
1 Km.
Iwashima
Maruichi Kohan Quay
Harbour Limits
Under Construction
TAKUMA



TANABE

MORI PORT DEVELOPMENT PLAN

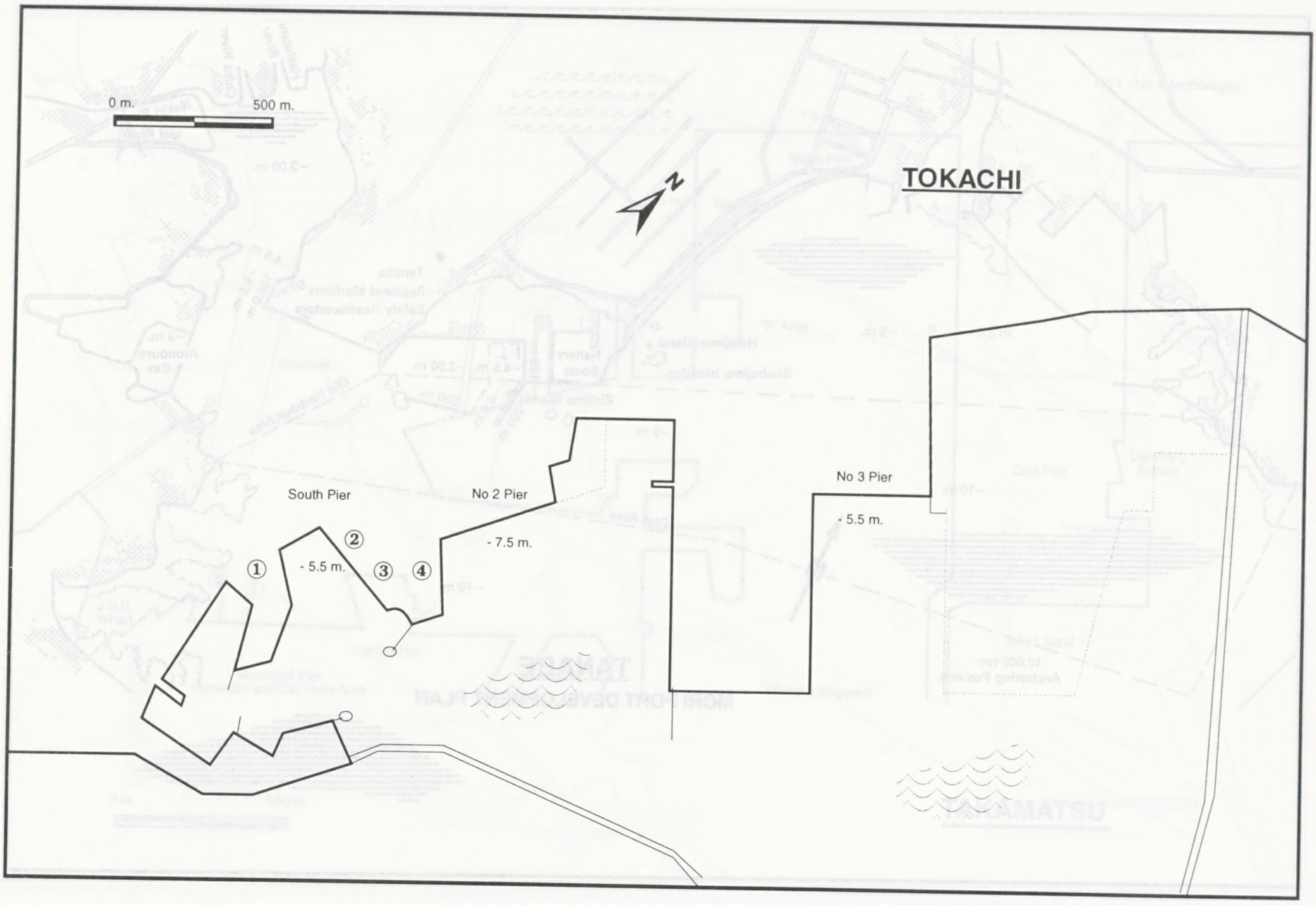
Hashitani River
Chika River
Nakiri River
Idei River
−3.00 m.
Tanabe
Regional Maritime
Safety Headquarters
−4.5 m.
50 m.
−6.6 m.
100.0 m.
−3 m.
Atonoura
Bay
−5 m.
Hatajima Island
Shobujima Island
Fishery
Boats
120 m.
−4.5 m.
−2.00 m.
Ebijima Island
200 m.
−4.5 m.
250 m.
Old Harbour Area
−5 m.
−10 m.
Port Area
N
−10 m.
10,000 ton
Anchoring Position

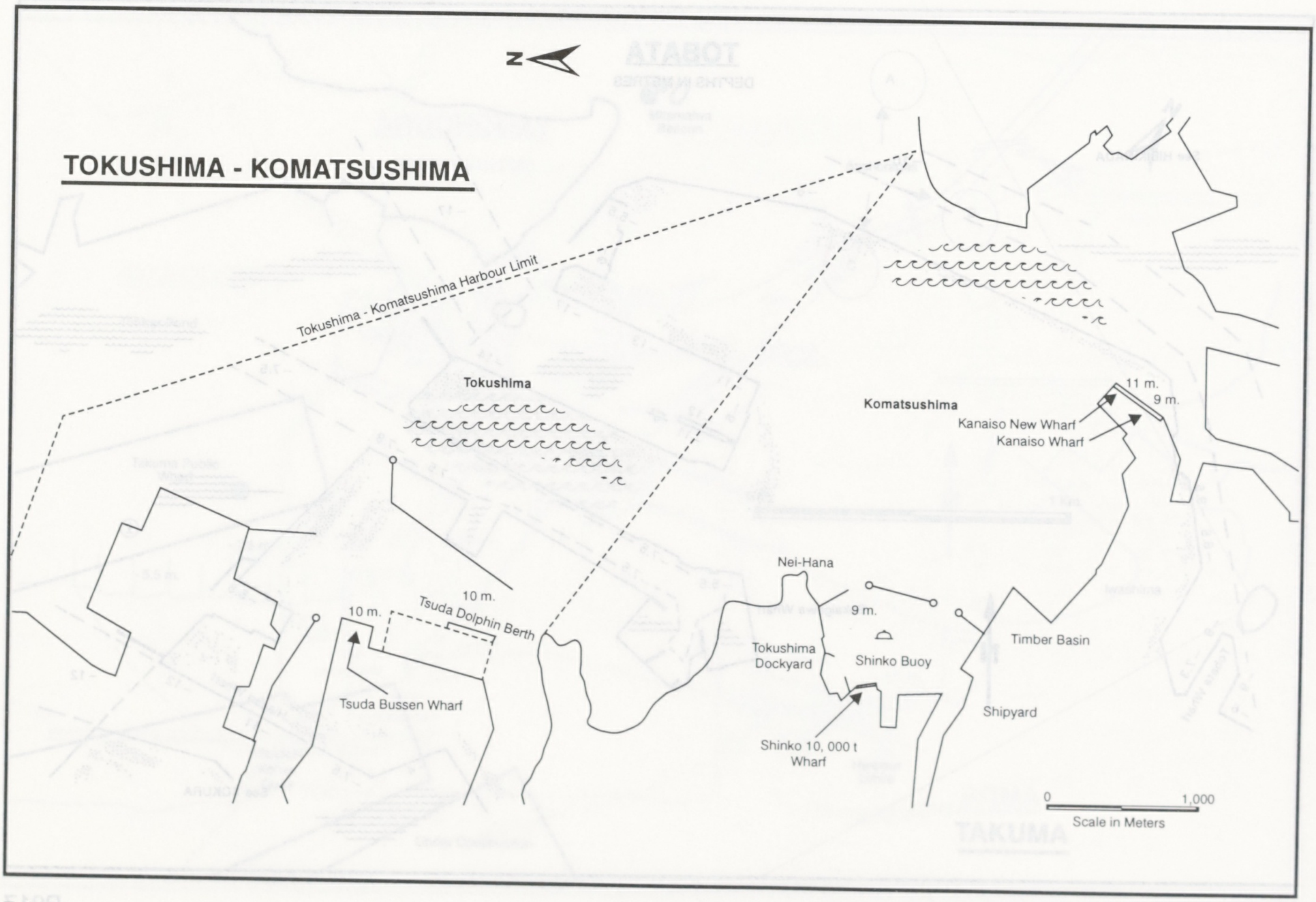


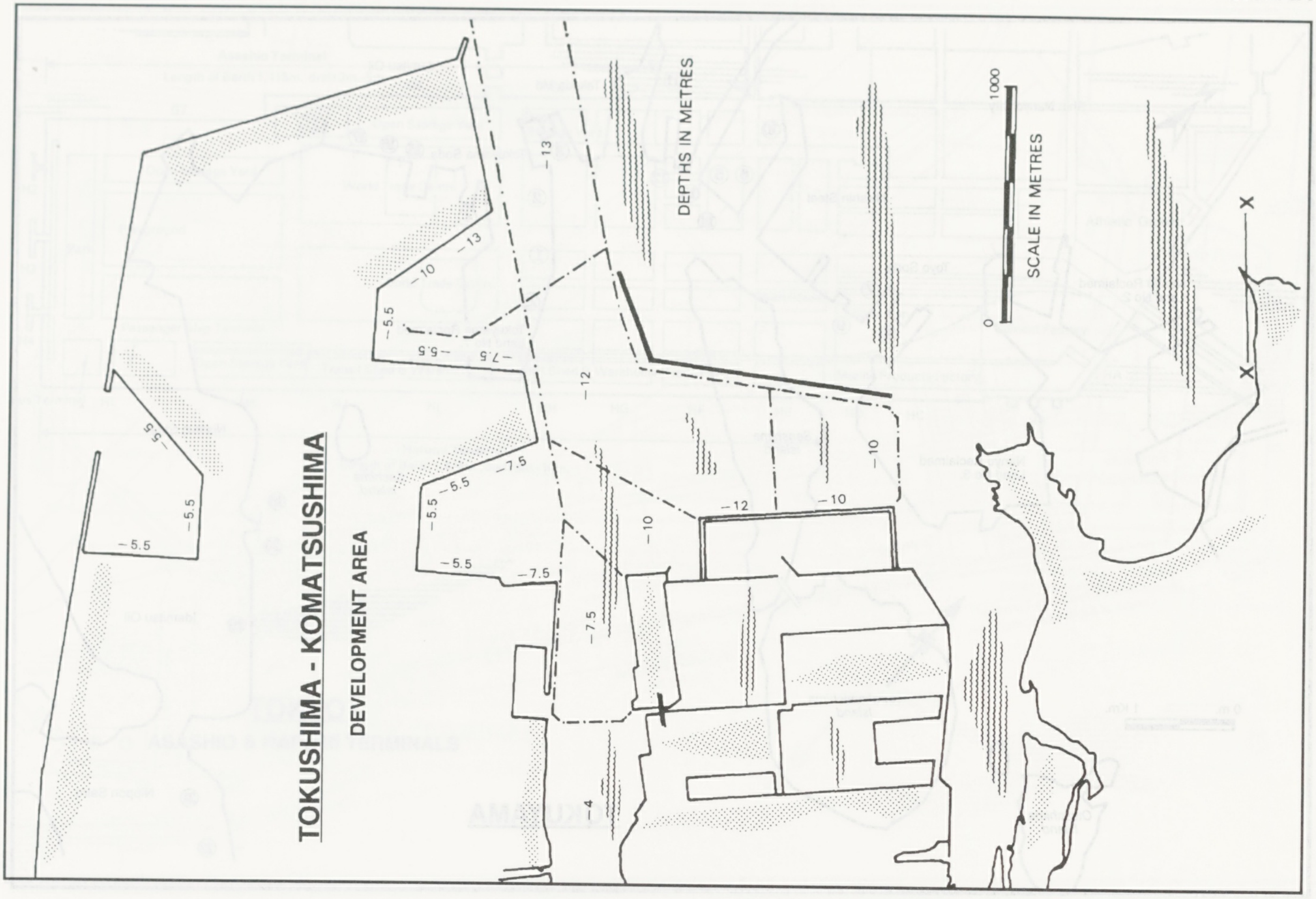
TOBATA

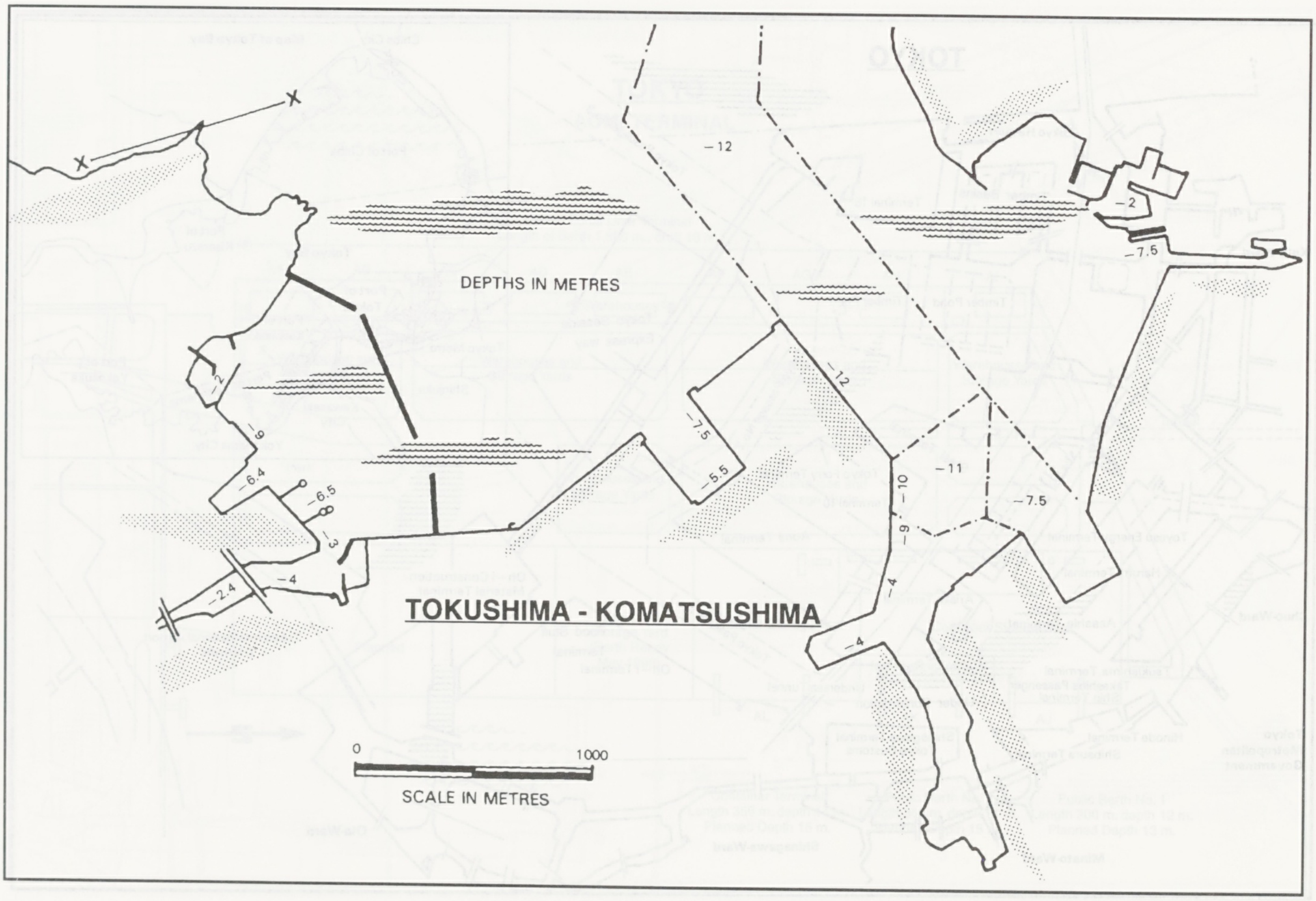
DEPTHS IN METRES

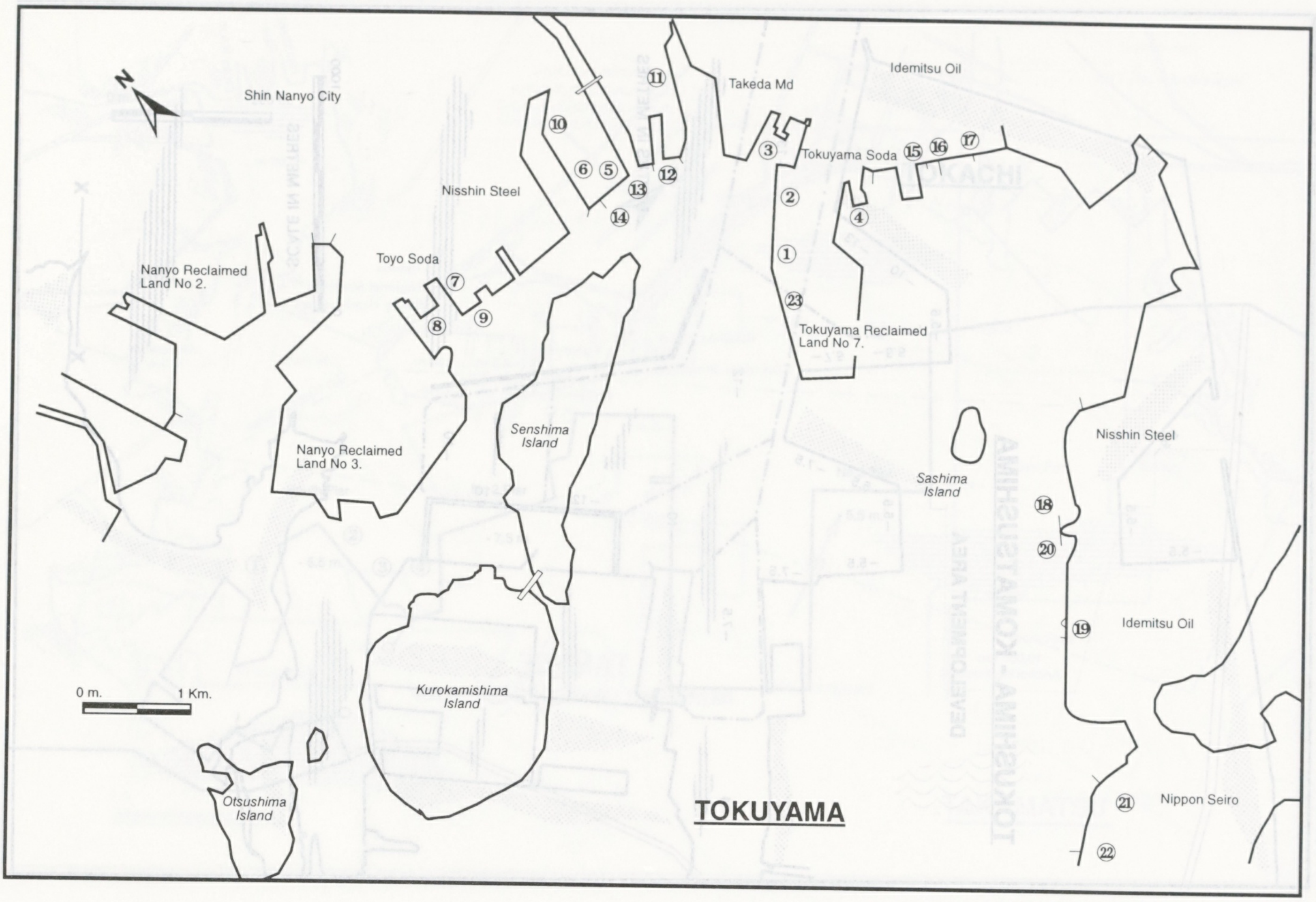
See HIBIKINADA
−10
−6
−5.5
−9
−17
−13
−14
−17
−11
−9
−12
−11
−7.5
−7.8
−7.5
−9.5
−6.5
−7.5
−7.5
−5.5
Sakaigawa Wharf
N
−9
−7.3
Tobata Wharf
−9
−6
−5.5
−12
−12
Hiagari Wharf
−11
−4
−7.5
See KOKURA

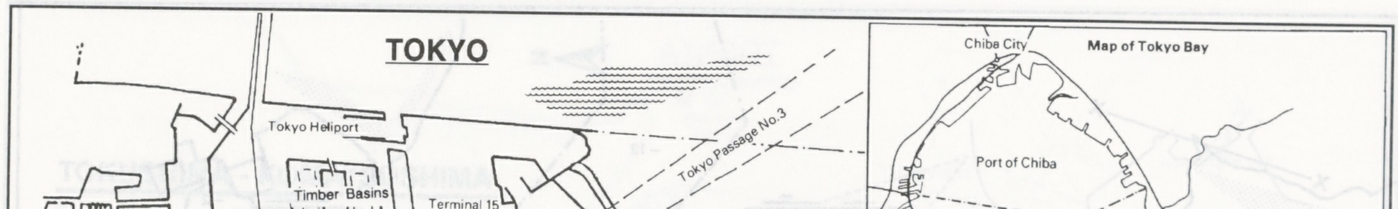

0 m.
500 m.
N
TOKACHI
South Pier
No 2 Pier
No 3 Pier
①
②
③
④
- 5.5 m.
- 7.5 m.
- 5.5 m.

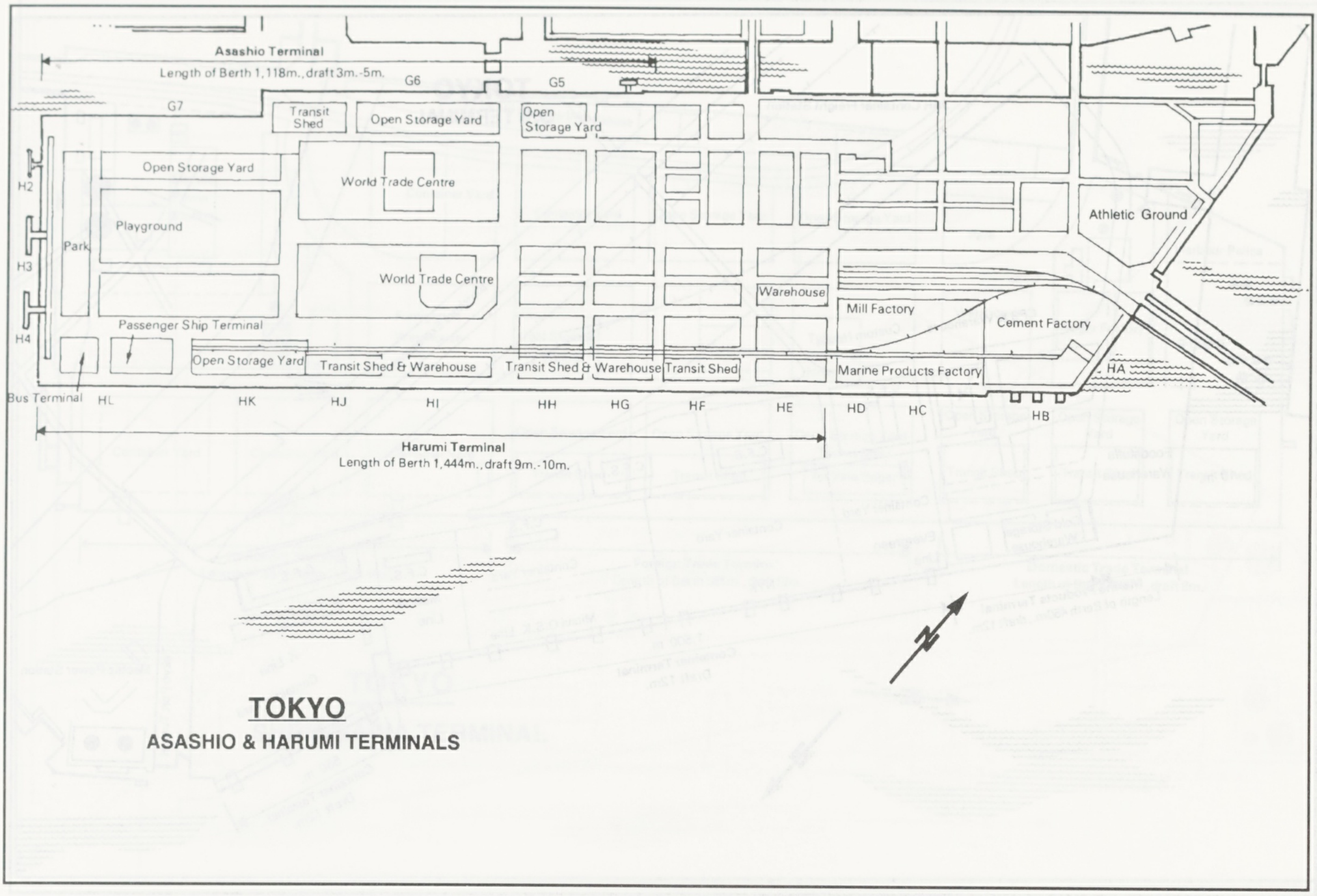

N
TOKUSHIMA - KOMATSUSHIMA
Tokushima - Komatsushima Harbour Limit
Tokushima
Komatsushima
11 m.
9 m.
Kanaiso New Wharf
Kanaiso Wharf
10 m.
10 m.
Tsuda Dolphin Berth
Tsuda Bussen Wharf
Nei-Hana
9 m.
Tokushima Dockyard
Shinko Buoy
Timber Basin
Shipyard
Shinko 10, 000 t Wharf
0
1,000
Scale in Meters


TOKUSHIMA - KOMATSUSHIMA
DEVELOPMENT AREA
DEPTHS IN METRES
SCALE IN METRES
0
1000
X
X
–13
–13
–10
–5.5
–5.5
–7.5
–12
–5.5
–5.5
–5.5
–5.5
–5.5
–7.5
–5.5
–7.5
–10
–12
–10
–10
–7.5
–4


TOKUSHIMA - KOMATSUSHIMA
DEPTHS IN METRES
SCALE IN METRES
0
1000
X
X
–12
–2
–7.5
–12
–7.5
–5.5
–11
–10
–7.5
–9
–4
–4
–2
–6
–6.4
–6.5
–3
–4
–2.4


N
Shin Nanyo City
Takeda Md
Idemitsu Oil
⑪
⑩
③
Tokuyama Soda
⑮
⑯
⑰
⑥
⑤
⑫
⑬
②
Nisshin Steel
⑭
④
Nanyo Reclaimed Land No 2.
Toyo Soda
①
⑦
㉓
⑧
⑨
Tokuyama Reclaimed Land No 7.
Senshima Island
Nisshin Steel
Nanyo Reclaimed Land No 3.
Sashima Island
⑱
⑳
⑲
Idemitsu Oil
0 m.
1 Km.
Kurokamishima Island
Otsushima Island
TOKUYAMA
㉑
Nippon Seiro
㉒

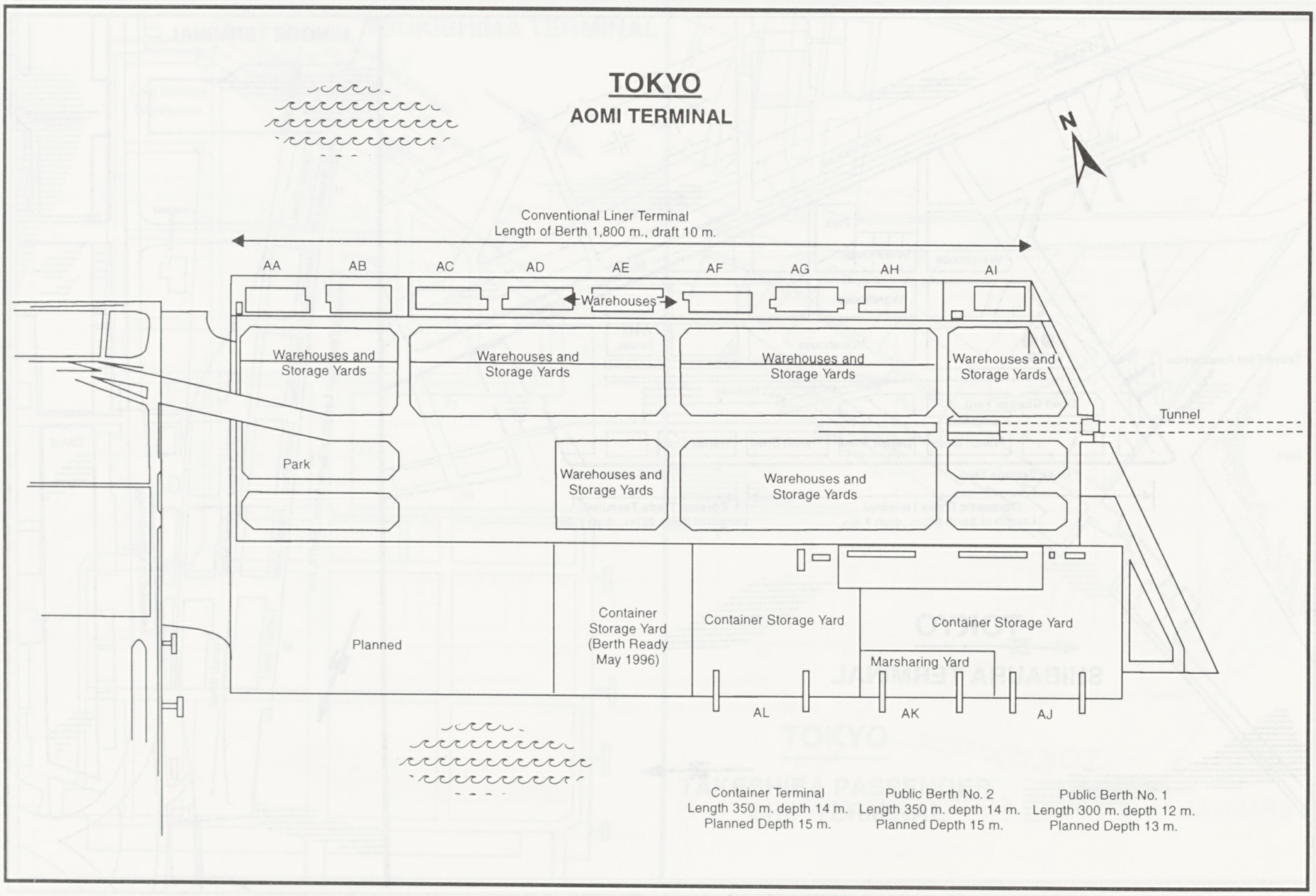

TOKYO
Tokyo Heliport
Tokyo Passage No.3
Timber Basins
Terminal 15
Koto-Ward
Timber Pond
Timber Pond
Tokyo Seaside Express way
Tokyo Passage No.2
Steel Terminal
Tokyo Ferry Terminal
Terminal 10
Toyosu Energy Terminal
Aomi Terminal
Harumi Terminal
Chuo-Ward
Ariake Terminal
Oh-i Construction Material Terminal
Asashio Terminal
Food Stuff Terminal
Tokyo Passage No.1
Tsukishima Terminal
Takeshiba Passenger Ship Terminal
Oh-i Terminal
Undersea Tunnel
Under Construction
Tokyo International Airport (Haneda)
Tokyo Metropolitan Government
Hinode Terminal
Shibaura Terminal
Shinagawa Terminal
Tokyo Customs
N
Minato-Ward
Shinagawa-Ward
Ota-Ward
Chiba City
Map of Tokyo Bay
Port of Chiba
Port of Kisarazu
Tokyo Bay
Port of Tokyo
Port of Kawasaki
Tokyo Metro
Shinjuku
Port of Yokohama
Port of Yokosuka
Kawasaki City
Yokohama City



TOKYO

ASASHIO & HARUMI TERMINALS

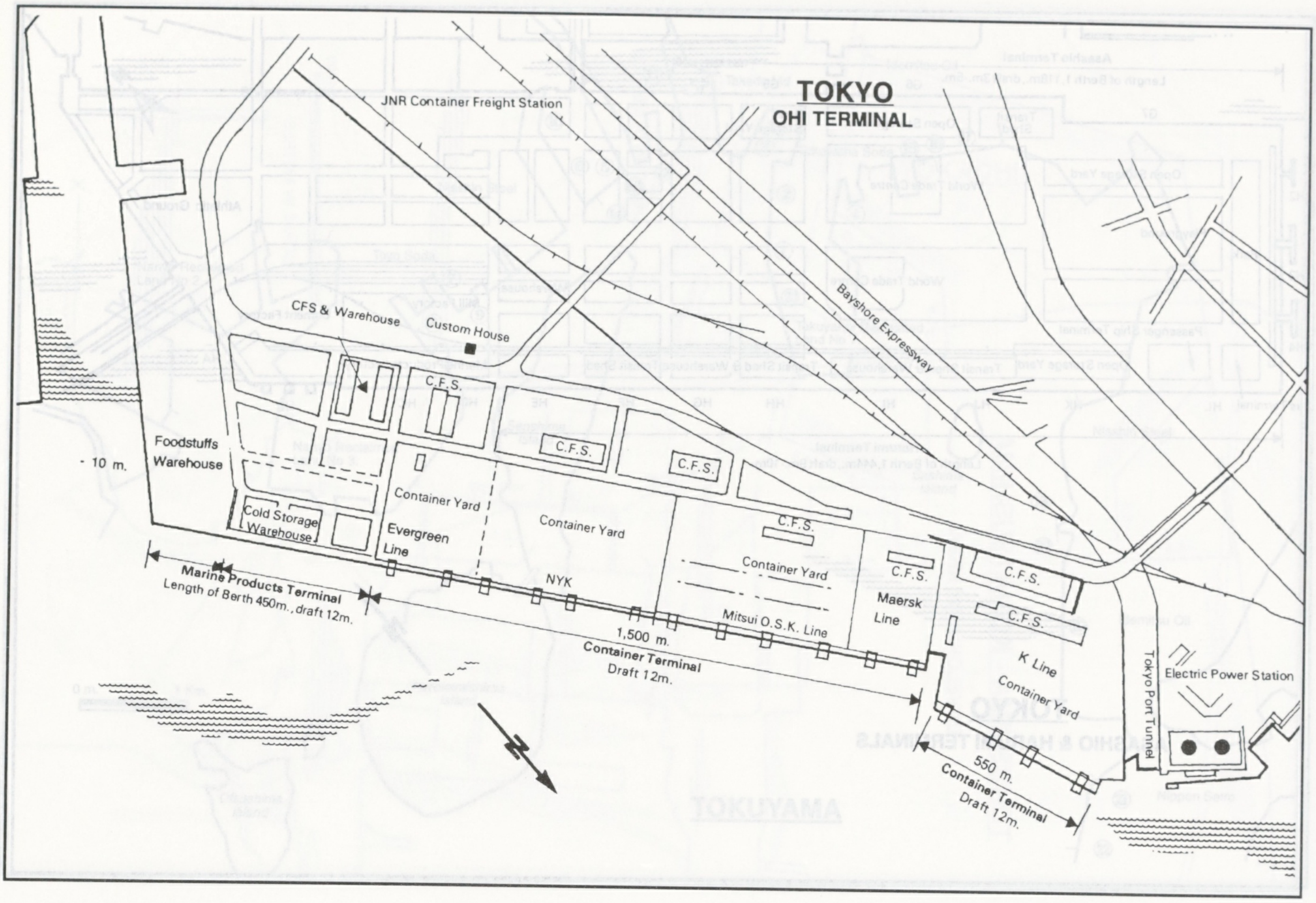
Asashio Terminal
Length of Berth 1,118m., draft 3m.-5m.
G6
G5
G7
Transit Shed
Open Storage Yard
Open Storage Yard
H2
Open Storage Yard
World Trade Centre
Playground
Park
H3
World Trade Centre
Athletic Ground
Warehouse
Mill Factory
Cement Factory
H4
Passenger Ship Terminal
Open Storage Yard
Transit Shed & Warehouse
Transit Shed & Warehouse
Transit Shed
Marine Products Factory
HA
Bus Terminal
HL
HK
HJ
HI
HH
HG
HF
HE
HD
HC
HB
Harumi Terminal
Length of Berth 1,444m., draft 9m.-10m.
N

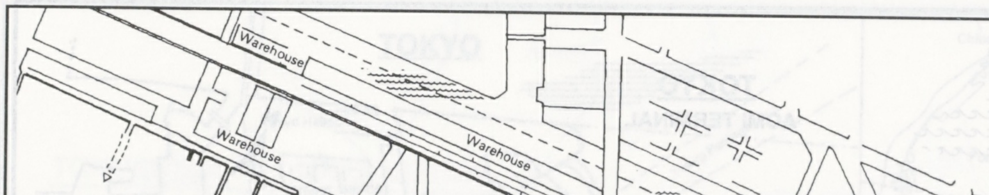


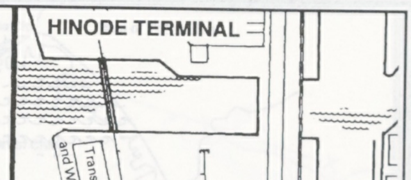
TOKYO

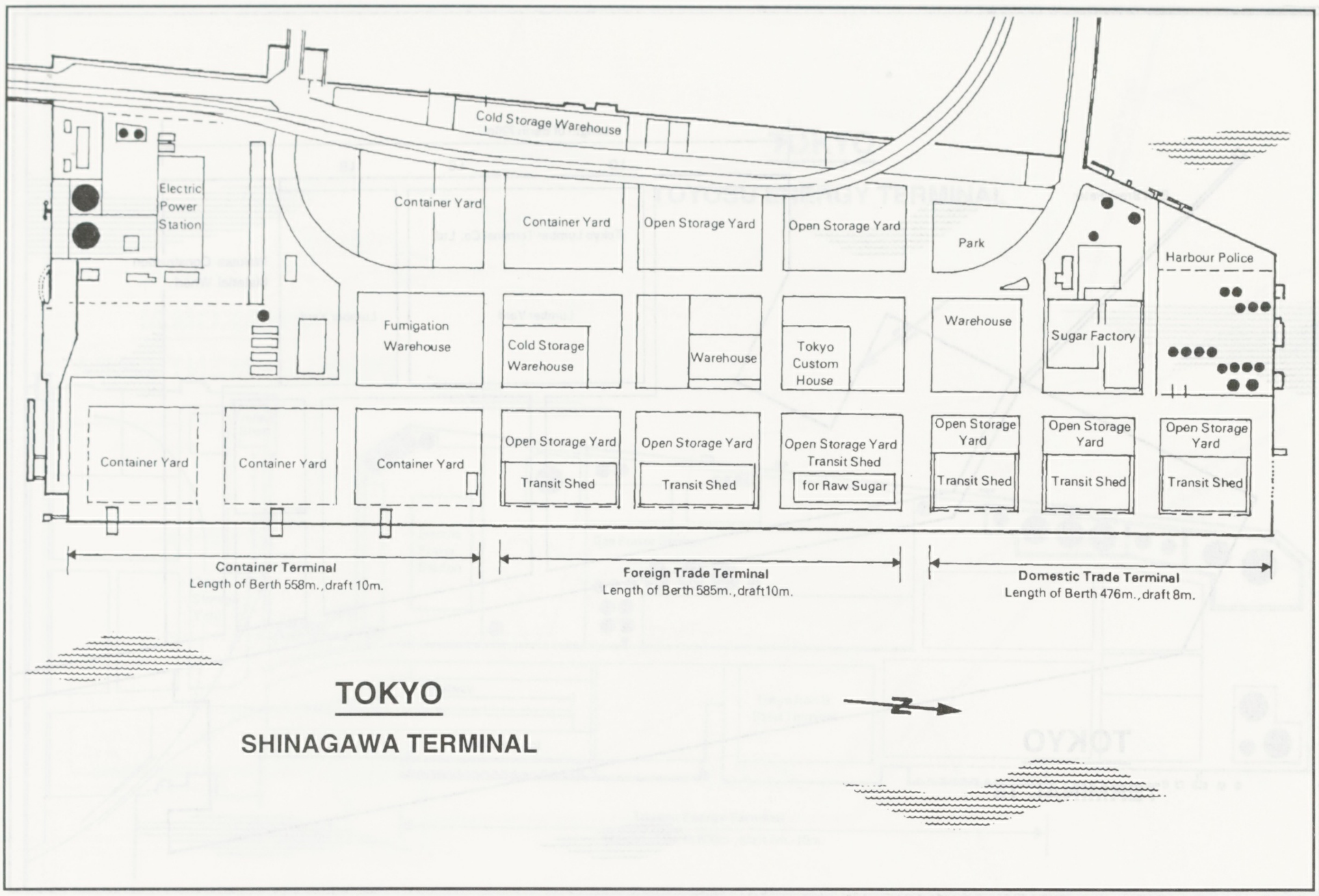
AOMI TERMINAL

N
Conventional Liner Terminal
Length of Berth 1,800 m., draft 10 m.
AA
AB
AC
AD
AE
AF
AG
AH
AI
Warehouses
Warehouses and Storage Yards
Warehouses and Storage Yards
Warehouses and Storage Yards
Warehouses and Storage Yards
Tunnel
Park
Warehouses and Storage Yards
Warehouses and Storage Yards
Container Storage Yard (Berth Ready May 1996)
Container Storage Yard
Container Storage Yard
Planned
Marsharing Yard
AL
AK
AJ
Container Terminal
Length 350 m. depth 14 m.
Planned Depth 15 m.
Public Berth No. 2
Length 350 m. depth 14 m.
Planned Depth 15 m.
Public Berth No. 1
Length 300 m. depth 12 m.
Planned Depth 13 m.


TOKYO
OHI TERMINAL
JNR Container Freight Station
CFS & Warehouse
Custom House
C.F.S.
Foodstuffs Warehouse
- 10 m.
Cold Storage Warehouse
Container Yard
Evergreen Line
Container Yard
C.F.S.
C.F.S.
C.F.S.
Container Yard
C.F.S.
Maersk Line
C.F.S.
C.F.S.
Bayshore Expressway
Marine Products Terminal
Length of Berth 450m., draft 12m.
NYK
Mitsui O.S.K. Line
1,500 m.
Container Terminal
Draft 12m.
K Line
Container Yard
Tokyo Port Tunnel
Electric Power Station
550 m.
Container Terminal
Draft 12m.
N


Warehouse
Warehouse
Warehouse
Park
Warehouse
Warehouse
Warehouse
Warehouse
Ware house
Metropolitan Expressway
Tokyo Pilot Association
Railway
Open Storage Yard
Transit Shed
Transit Shed
Transit Shed
Transit Shed
Open Storage Yard
Open Storage Yard
Domestic Trade Terminal
Length of Berth 643m., draft 7.8m.
Foreign Trade Terminal
Length of Berth 267m., draft 7.8m.
TOKYO
SHIBAURA TERMINAL
N

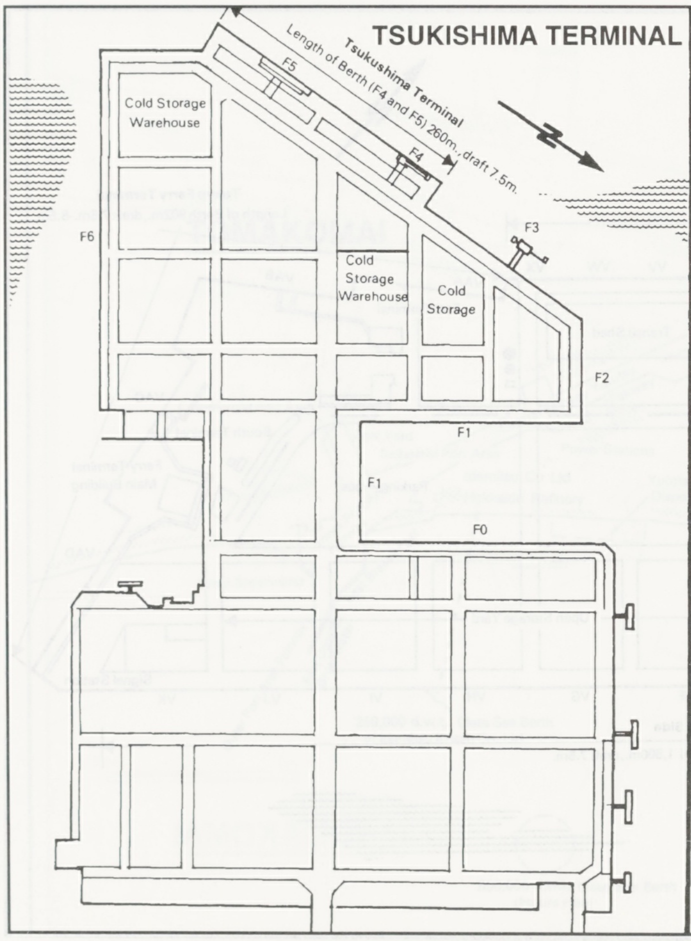

HINODE TERMINAL
Transit Shed and Warehouse
H
Transit Shed
Transit Shed
J
Transit Shed
K
Transit Shed
L
Transit Shed
Transit Shed
M
Transit Shed
Transit Shed
Hinode Terminal Length of Berth 564m., draft 6.7m.
Metropolitan Expressway
Canal
N



TOKYO

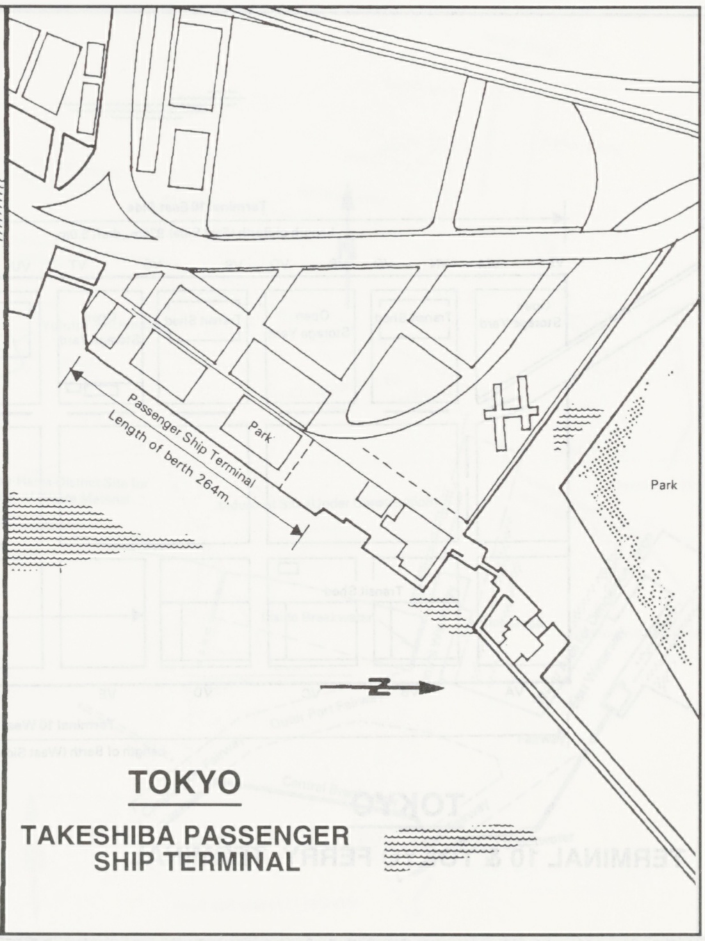
SHINAGAWA TERMINAL

Cold Storage Warehouse
Electric Power Station
Container Yard
Container Yard
Open Storage Yard
Open Storage Yard
Park
Harbour Police
Fumigation Warehouse
Cold Storage Warehouse
Warehouse
Tokyo Custom House
Warehouse
Sugar Factory
Container Yard
Container Yard
Container Yard
Open Storage Yard
Transit Shed
Open Storage Yard
Transit Shed
Open Storage Yard
Transit Shed
for Raw Sugar
Open Storage Yard
Transit Shed
Open Storage Yard
Transit Shed
Open Storage Yard
Transit Shed
Container Terminal
Length of Berth 558m., draft 10m.
Foreign Trade Terminal
Length of Berth 585m., draft 10m.
Domestic Trade Terminal
Length of Berth 476m., draft 8m.
N



TSUKISHIMA TERMINAL

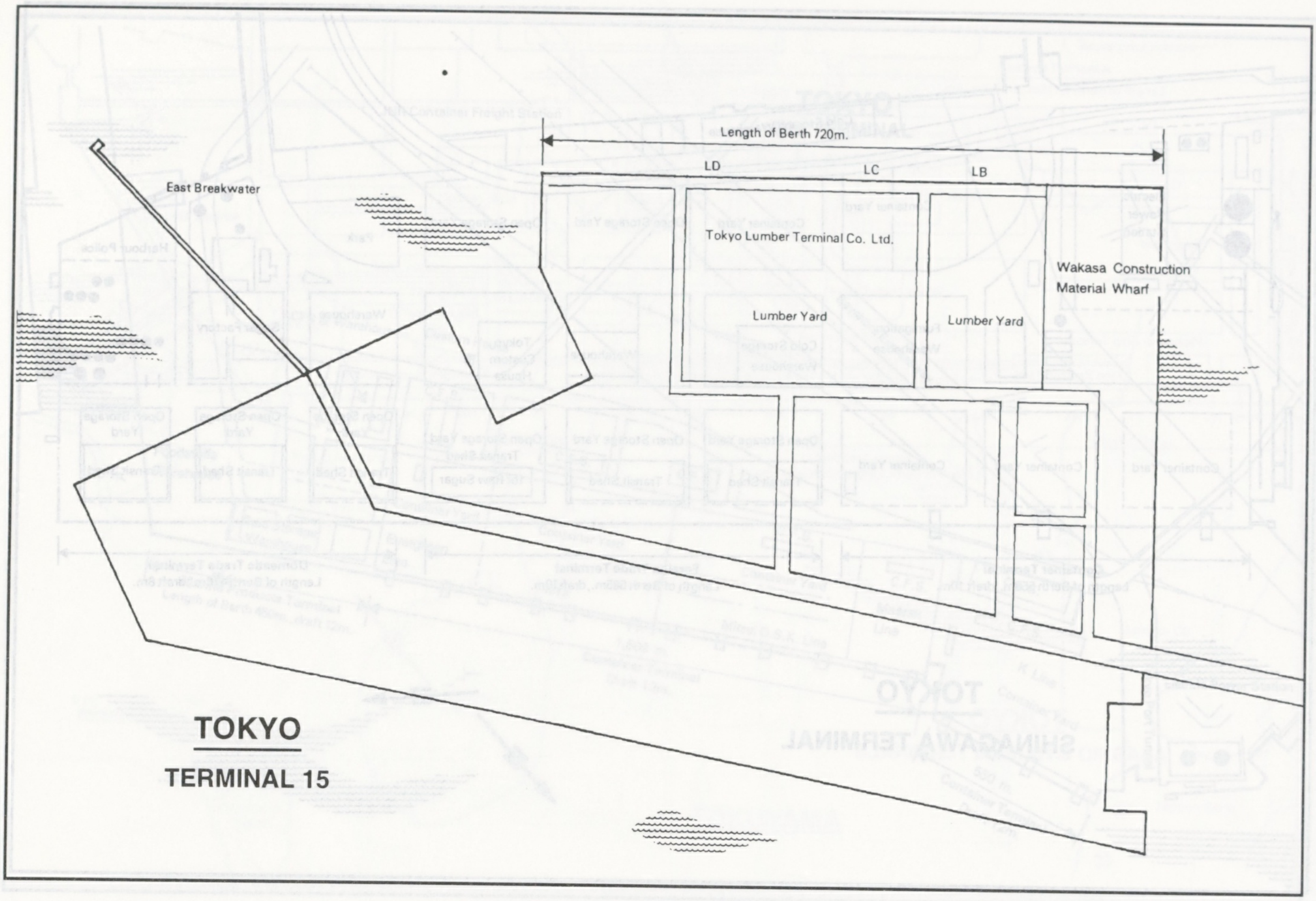
Cold Storage Warehouse
F5
Tsukushima Terminal
Length of Berth (F4 and F5) 260m., draft 7.5m.
F4
N
F6
F3
Cold Storage Warehouse
Cold Storage
F2
F1
F1
F0



TOKYO

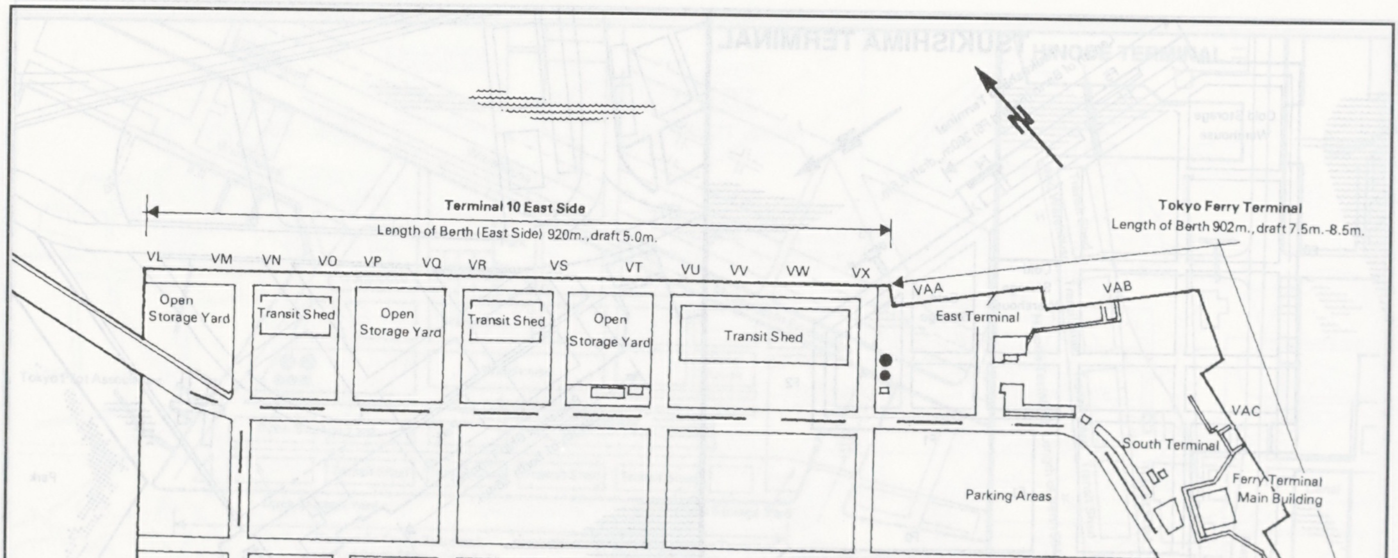
TAKESHIBA PASSENGER SHIP TERMINAL

Park
Passenger Ship Terminal
Length of berth 264m.
Park
N


Length of Berth 720m.
LD
LC
LB
East Breakwater
Tokyo Lumber Terminal Co. Ltd.
Wakasa Construction Material Wharf
Lumber Yard
Lumber Yard

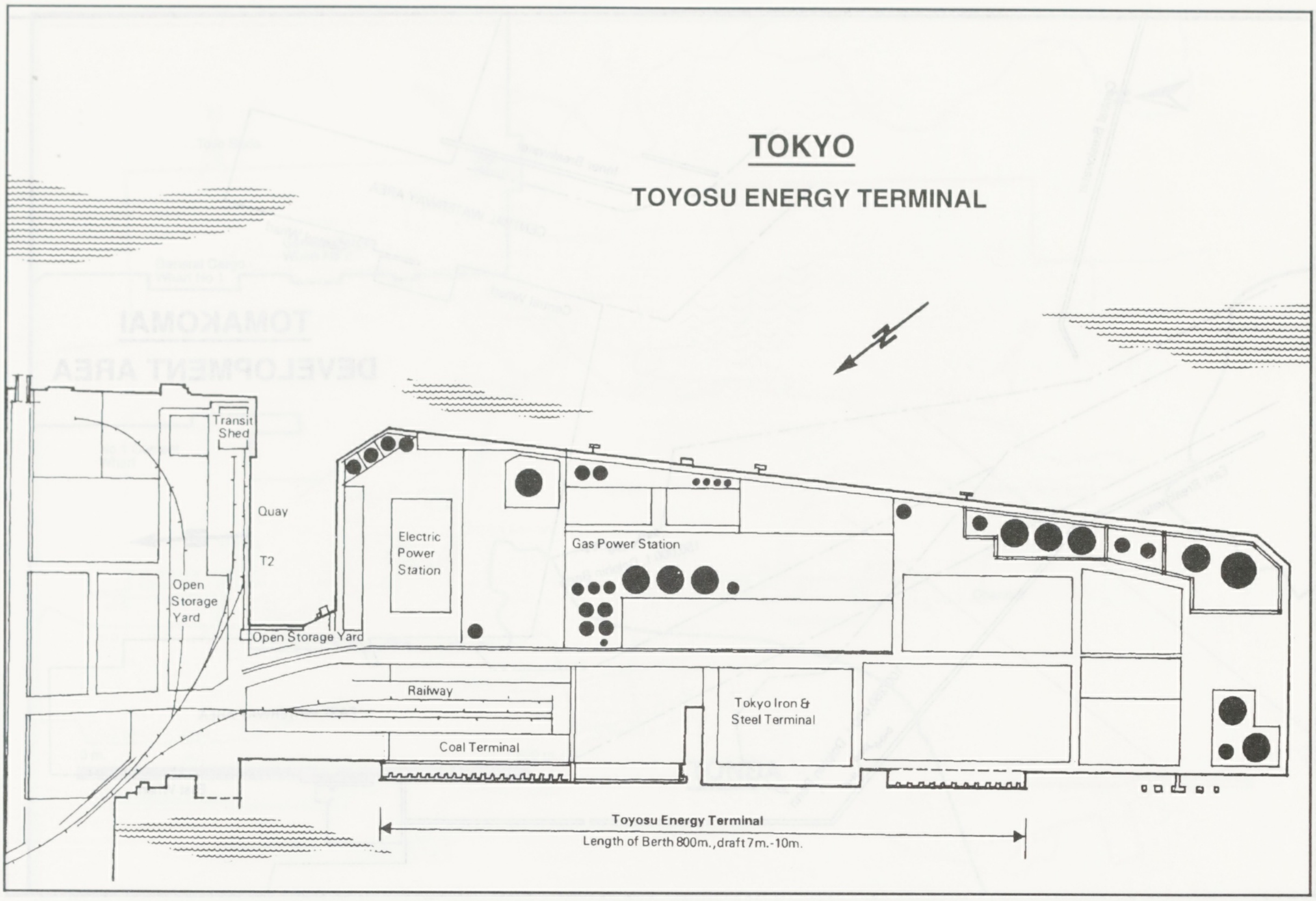
TOKYO

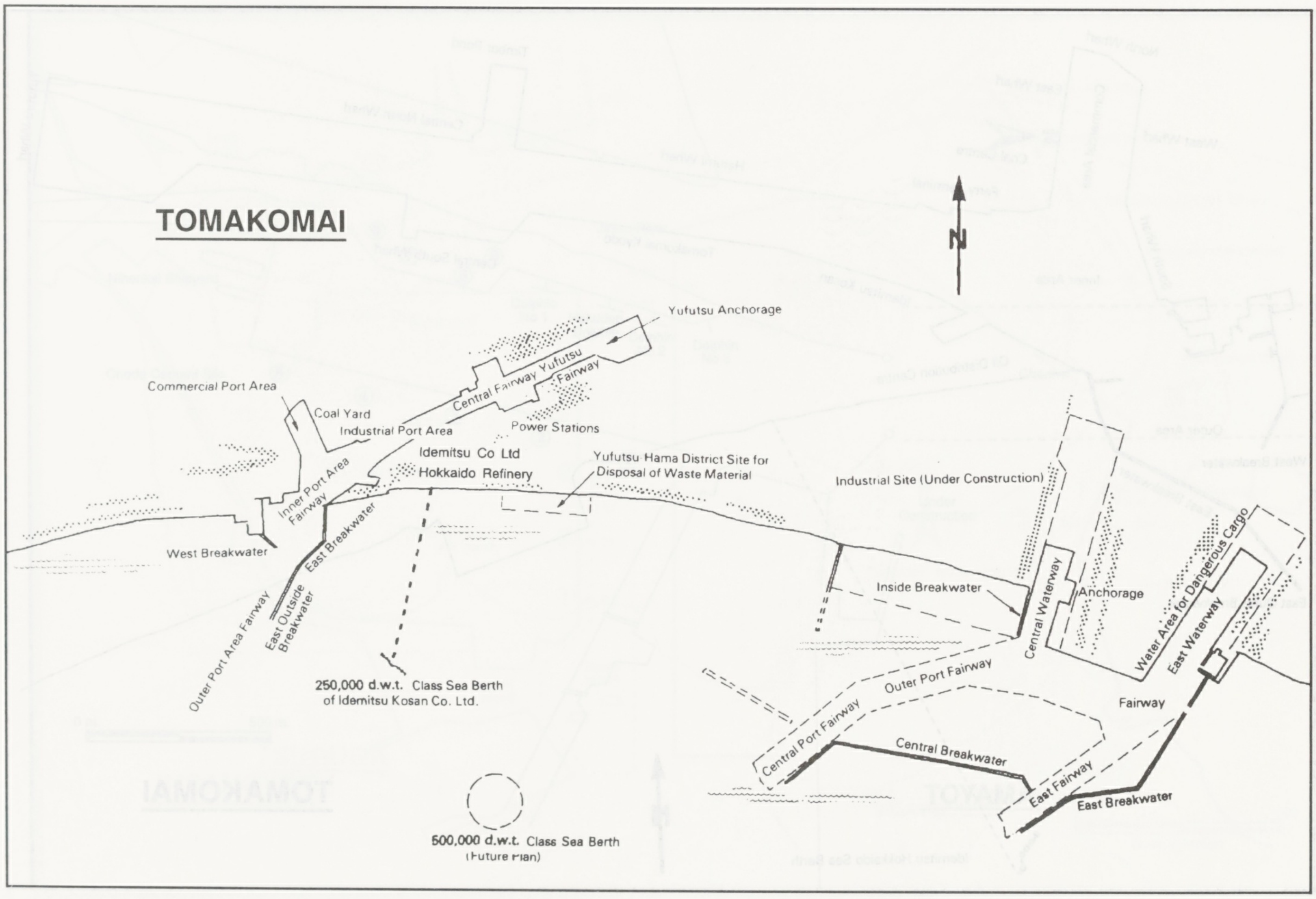
TERMINAL 15

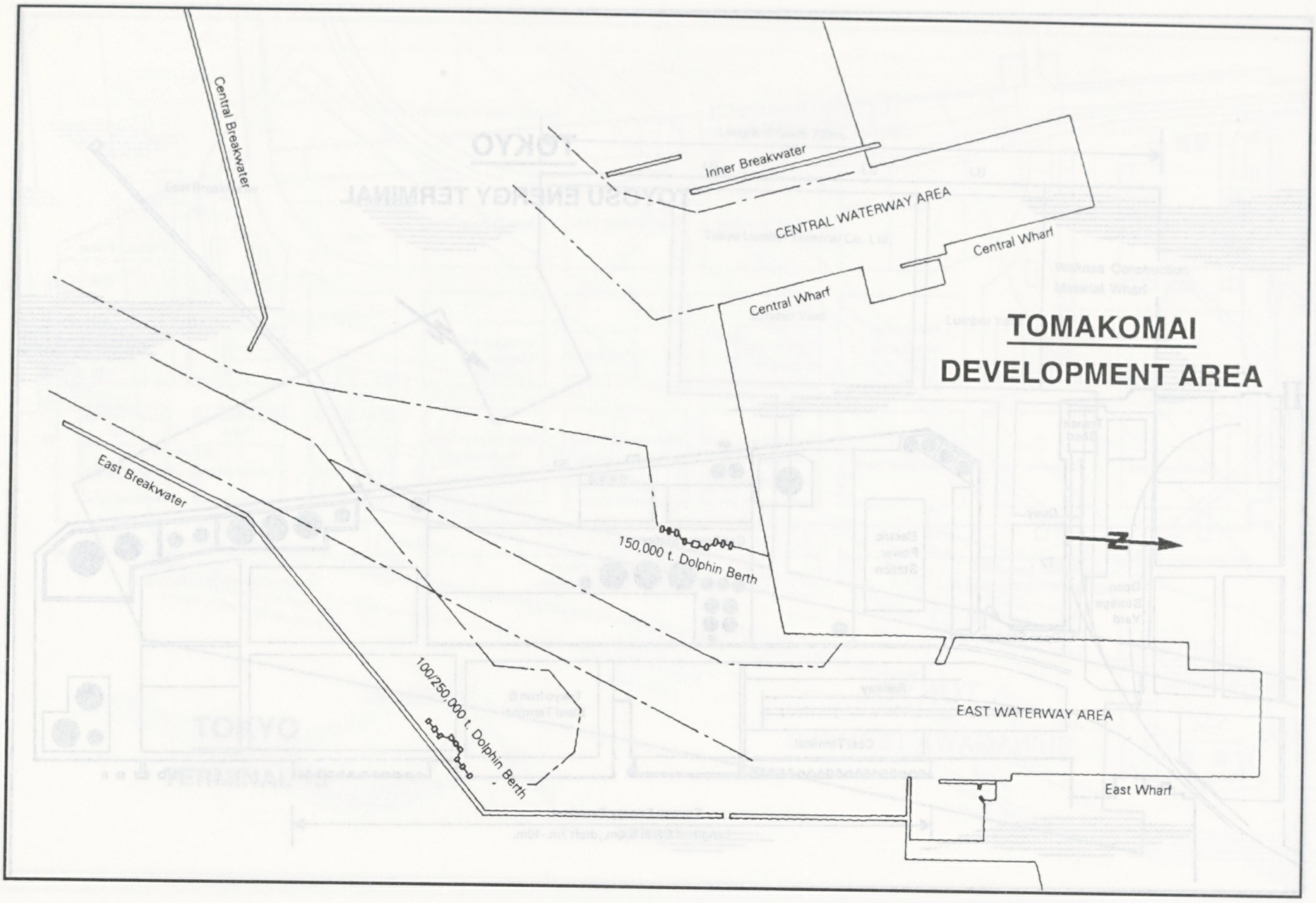

Terminal 10 East Side
Length of Berth (East Side) 920m., draft 5.0m.
Tokyo Ferry Terminal
Length of Berth 902m., draft 7.5m.-8.5m.
VL
VM
VN
VO
VP
VQ
VR
VS
VT
VU
VV
VW
VX
VAA
VAB
Open Storage Yard
Transit Shed
Open Storage Yard
Transit Shed
Open Storage Yard
Transit Shed
East Terminal
VAC
South Terminal
Parking Areas
Ferry Terminal Main Building
VAD
Transit Shed
Open Storage Yard
Signal Station
VA
VB
VC
VD
VE
VF
VG
VH
VI
VJ
VK
Terminal 10 West Side
Length of Berth (West Side) 1,500m., draft 7.5m.

TOKYO

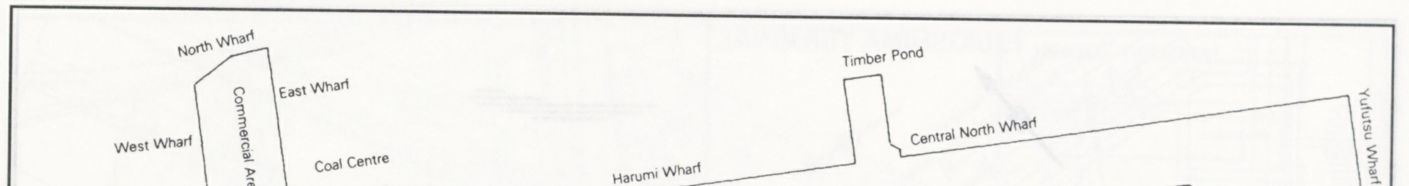
TERMINAL 10 & TOKYO FERRY TERMINAL


TOKYO
TOYOSU ENERGY TERMINAL
N
Transit Shed
Quay
T2
Open Storage Yard
Open Storage Yard
Electric Power Station
Gas Power Station
Railway
Coal Terminal
Tokyo Iron & Steel Terminal
Toyosu Energy Terminal
Length of Berth 800m., draft 7m.-10m.

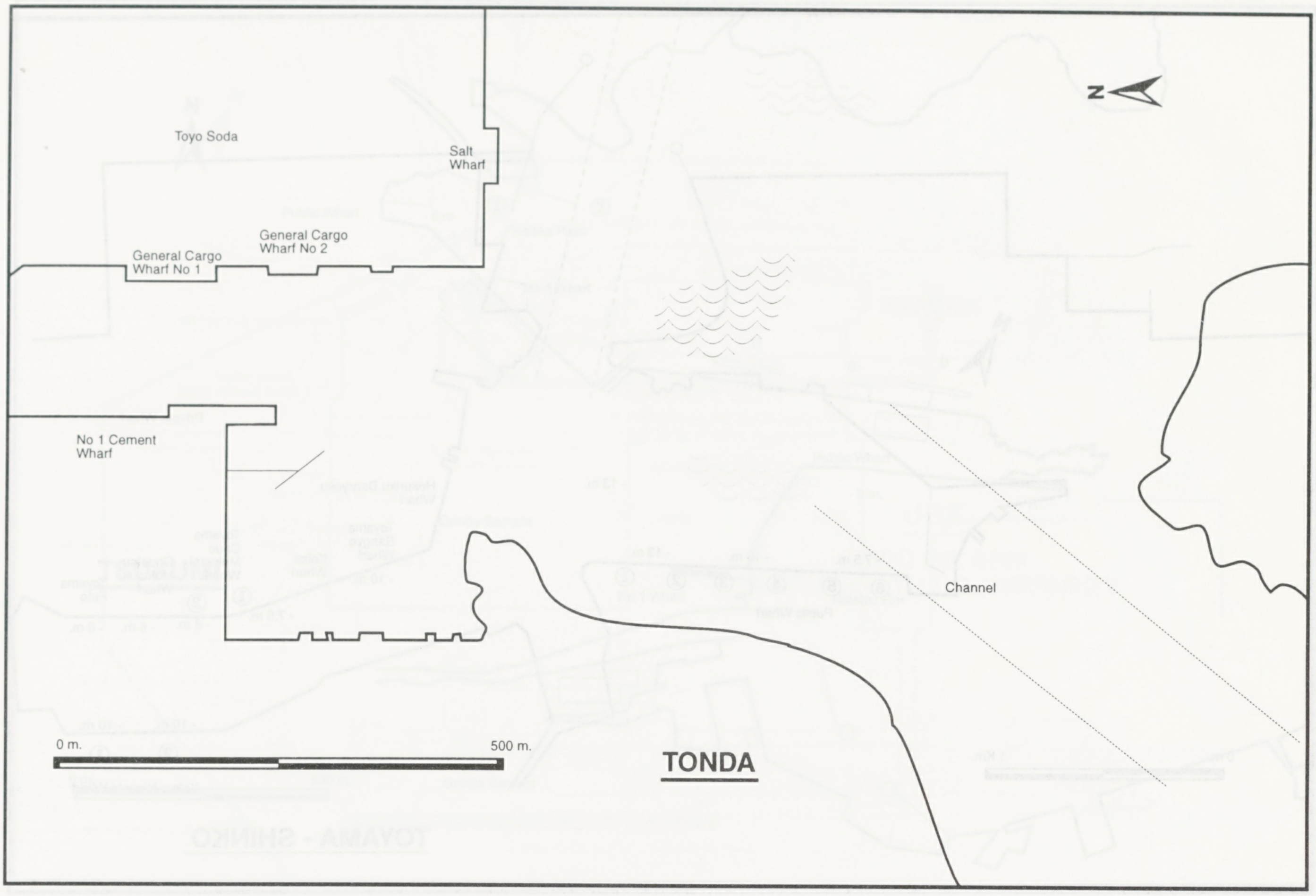

TOMAKOMAI
N
Yufutsu Anchorage
Central Fairway Yufutsu
Fairway
Commercial Port Area
Coal Yard
Industrial Port Area
Power Stations
Idemitsu Co Ltd
Hokkaido Refinery
Yufutsu Hama District Site for Disposal of Waste Material
Inner Port Area Fairway
East Breakwater
West Breakwater
Outer Port Area Fairway
East Outside Breakwater
250,000 d.w.t. Class Sea Berth of Idemitsu Kosan Co. Ltd.
500,000 d.w.t. Class Sea Berth (Future Plan)
Industrial Site (Under Construction)
Inside Breakwater
Central Waterway
Anchorage
Water Area for Dangerous Cargo
East Waterway
Outer Port Fairway
Fairway
Central Port Fairway
Central Breakwater
East Fairway
East Breakwater

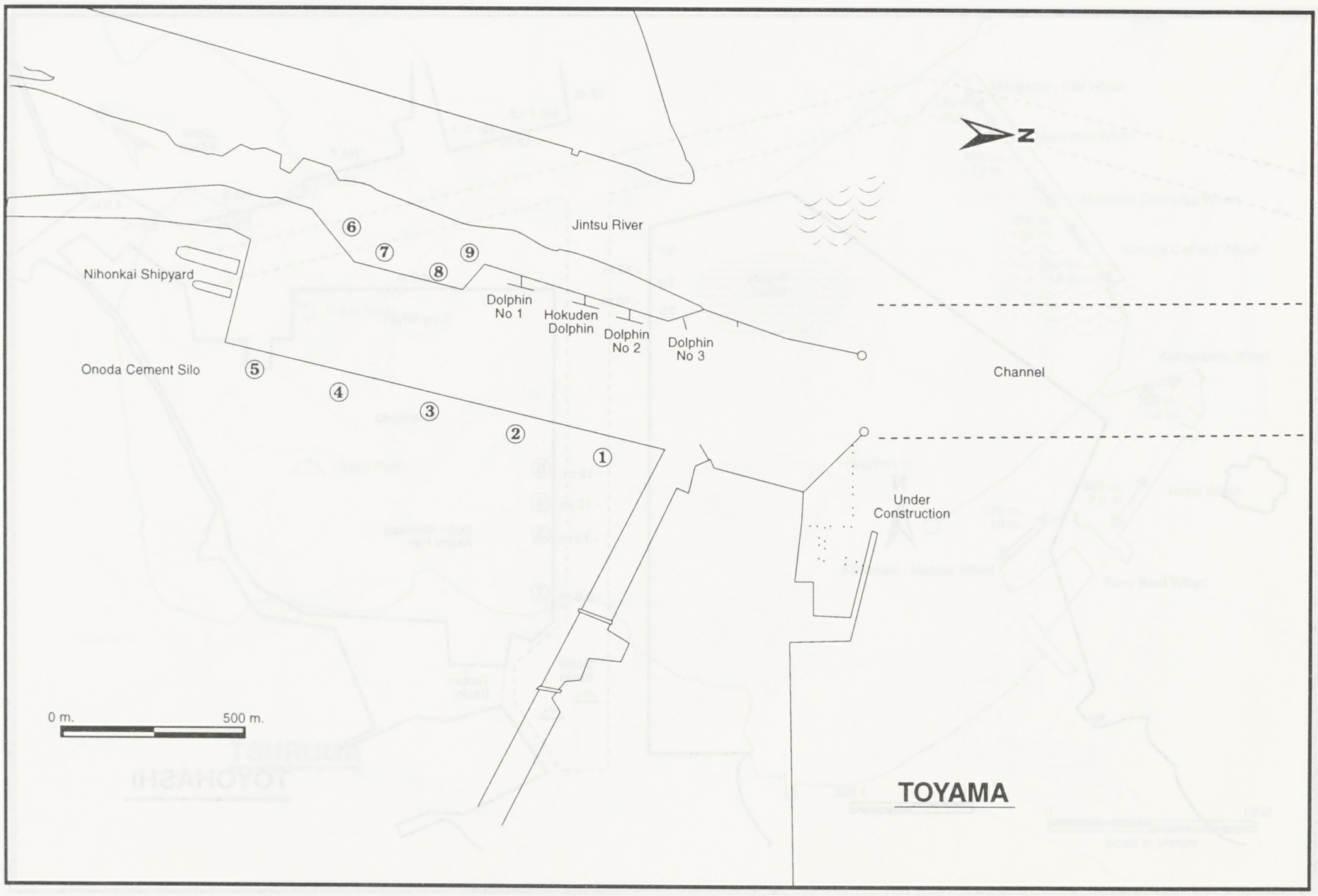

Central Breakwater
Inner Breakwater
CENTRAL WATERWAY AREA
Central Wharf
Central Wharf
East Breakwater
150,000 t. Dolphin Berth
100/250,000 t. Dolphin Berth
EAST WATERWAY AREA
East Wharf
N

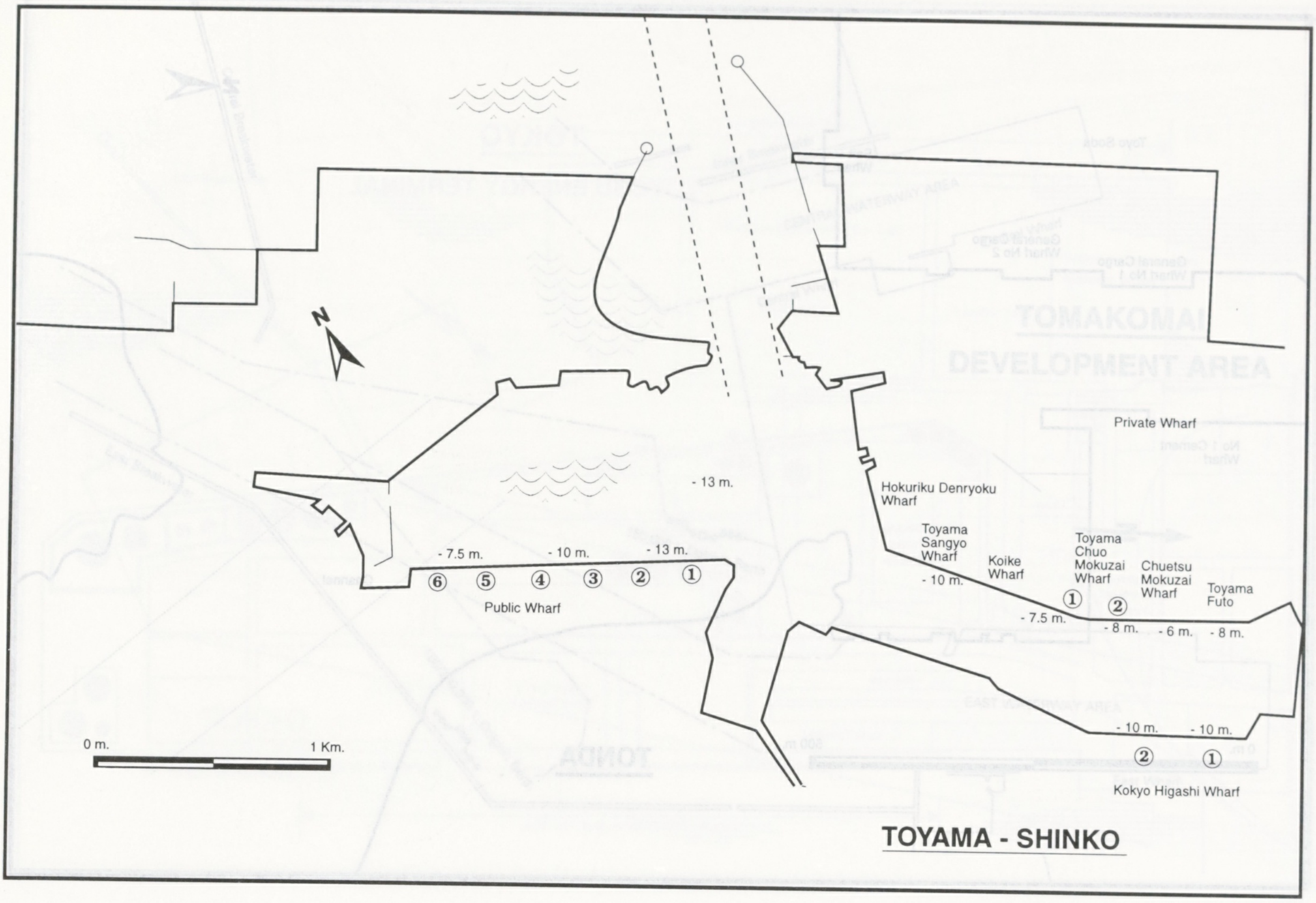
TOMAKOMAI DEVELOPMENT AREA

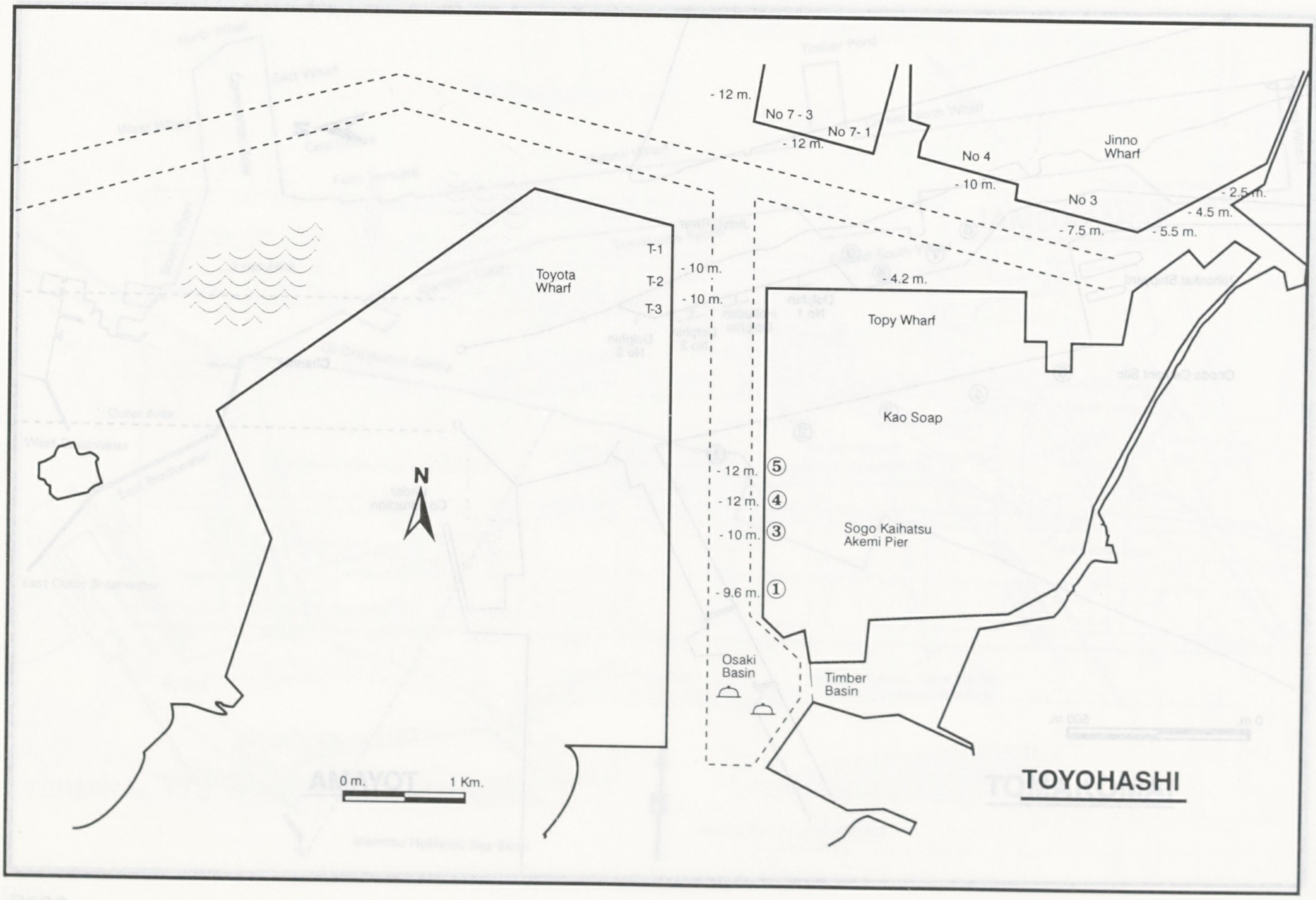

North Wharf
East Wharf
Commercial Area
West Wharf
Coal Centre
Ferry Terminal
Harumi Wharf
Timber Pond
Central North Wharf
Yufutsu Wharf
South Wharf
Inner Area
Tomakomai Kyodo
Central South Wharf
Idemitsu Kosan
Oil Distribution Centre
Outer Area
West Breakwater
East Breakwater
East Outer Breakwater
Idemitsu Hokkaido Sea Berth
N

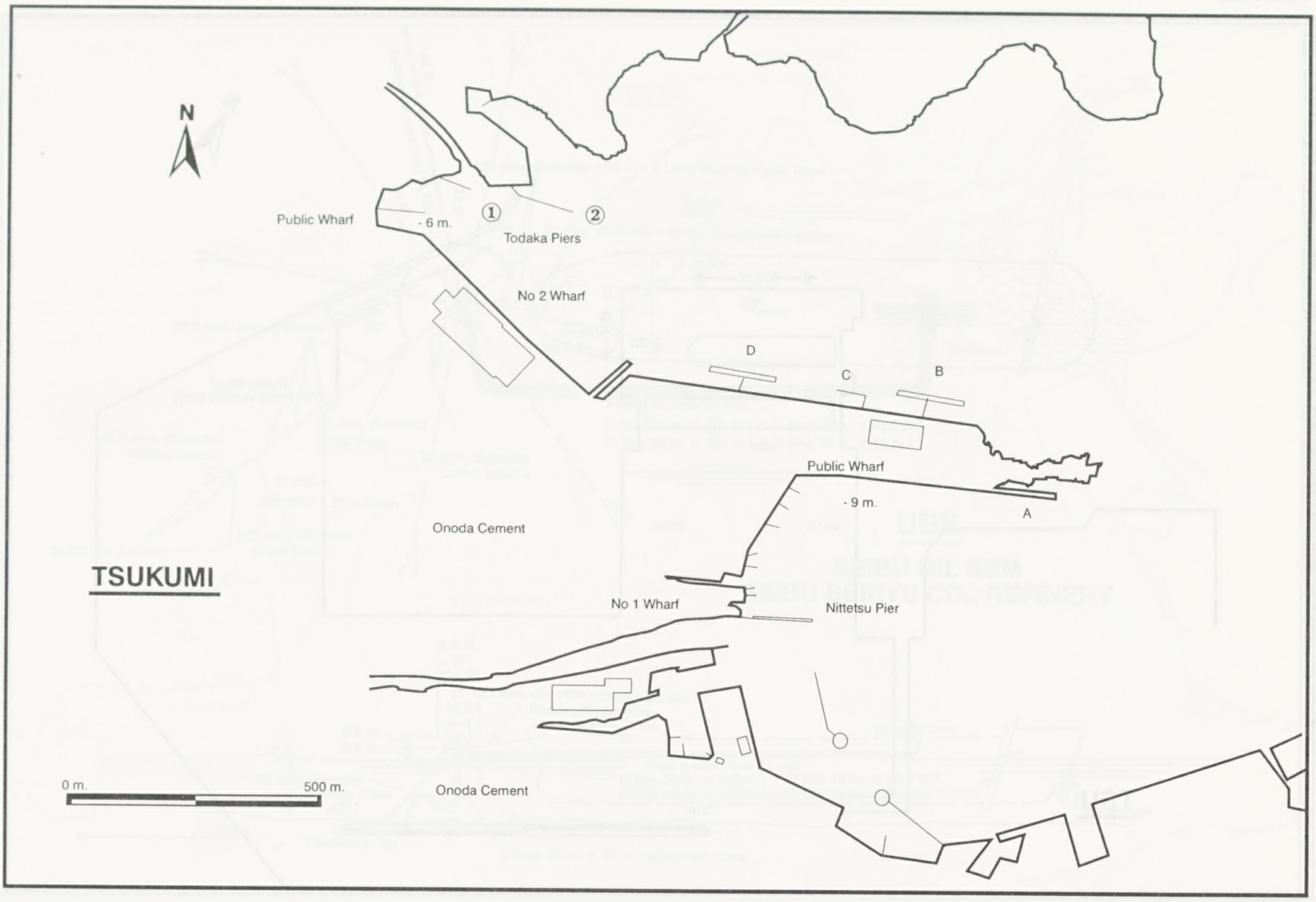
TOMAKOMAI

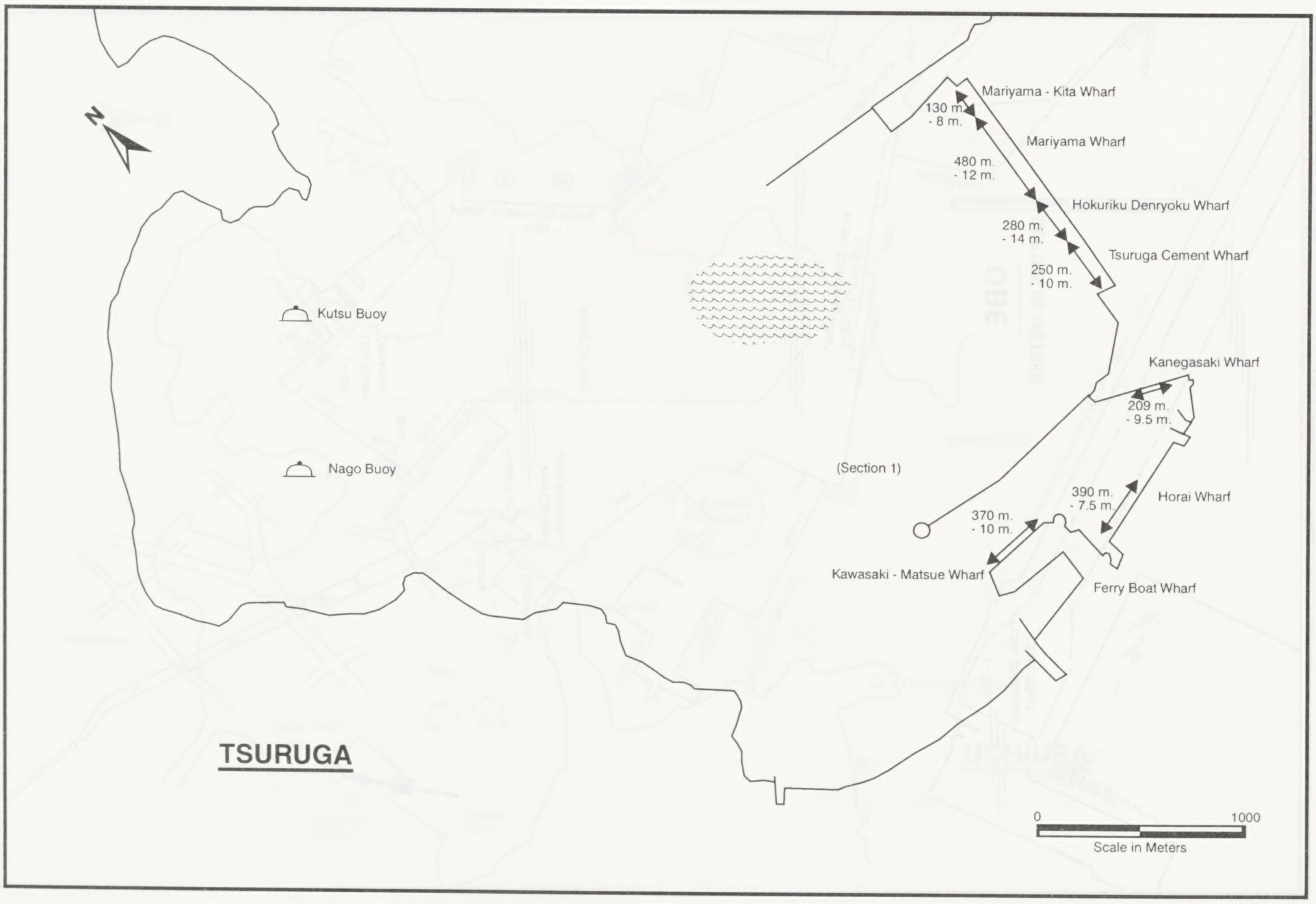

N
Toyo Soda
Salt Wharf
General Cargo Wharf No 2
General Cargo Wharf No 1
No 1 Cement Wharf
Channel
0 m.
500 m.
TONDA

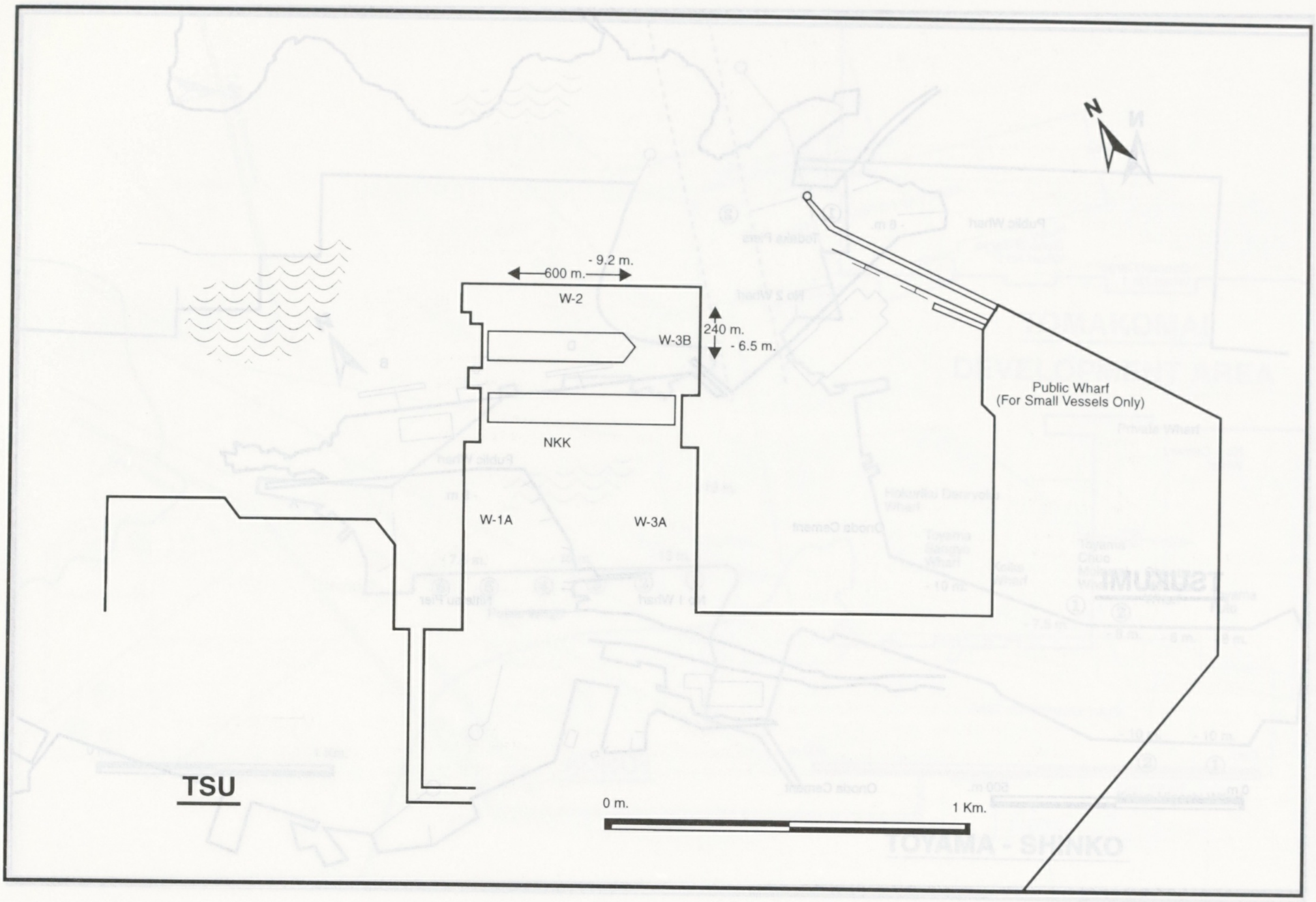

N
Jintsu River
⑥
⑦
⑨
⑧
Nihonkai Shipyard
Dolphin No 1
Hokuden Dolphin
Dolphin No 2
Dolphin No 3
Onoda Cement Silo
⑤
④
③
②
①
Channel
Under Construction
0 m.
500 m.
TOYAMA

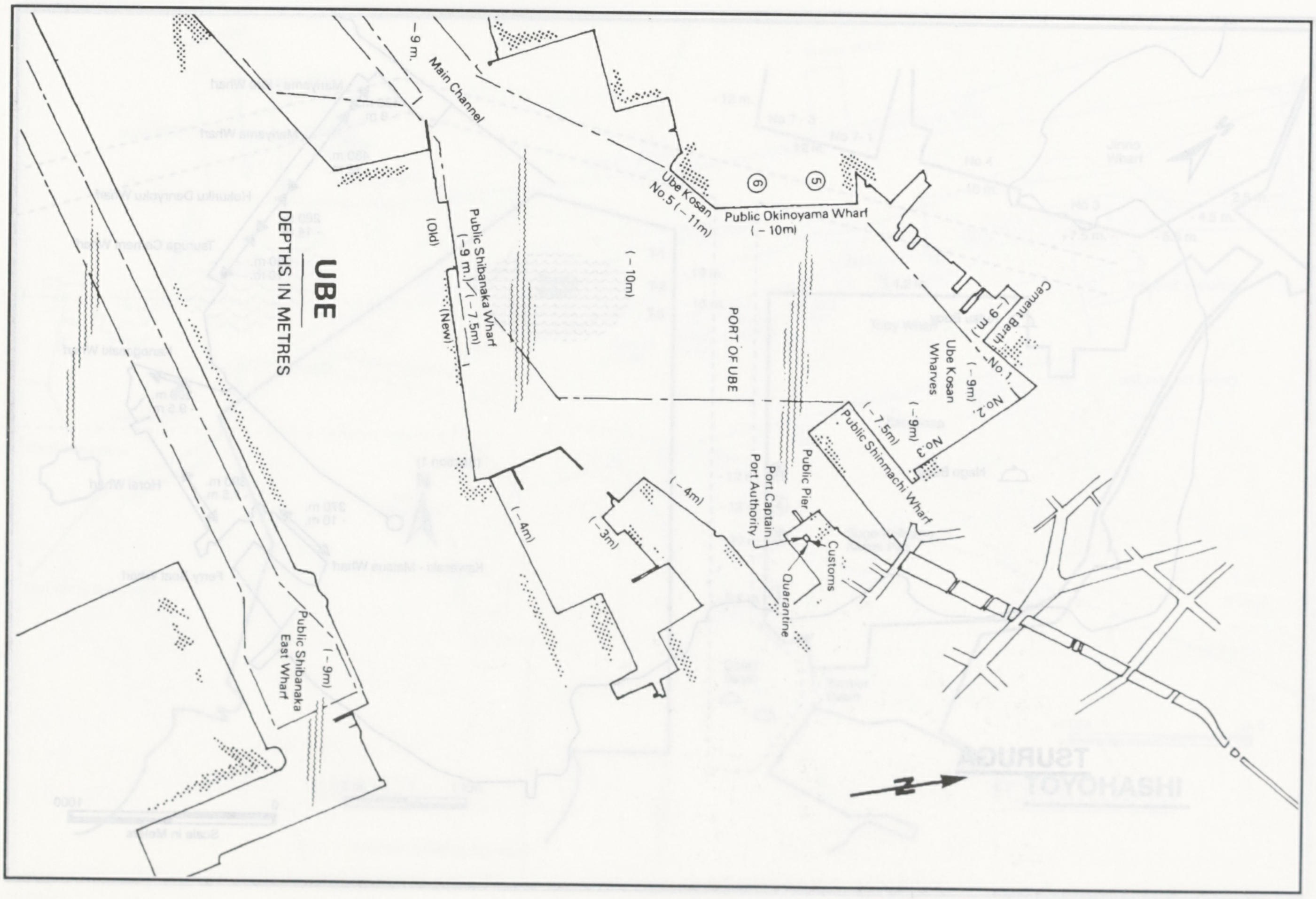

N
- 13 m.
Hokuriku Denryoku Wharf
Toyama Sangyo Wharf
Koike Wharf
Toyama Chuo Mokuzai Wharf
Chuetsu Mokuzai Wharf
Toyama Futo
Private Wharf
- 7.5 m.
- 10 m.
- 13 m.
⑥ ⑤ ④ ③ ② ①
Public Wharf
- 10 m.
- 7.5 m.
① ②
- 8 m.
- 6 m.
- 8 m.
- 10 m.
- 10 m.
② ①
Kokyo Higashi Wharf
0 m.
1 Km.
TOYAMA - SHINKO

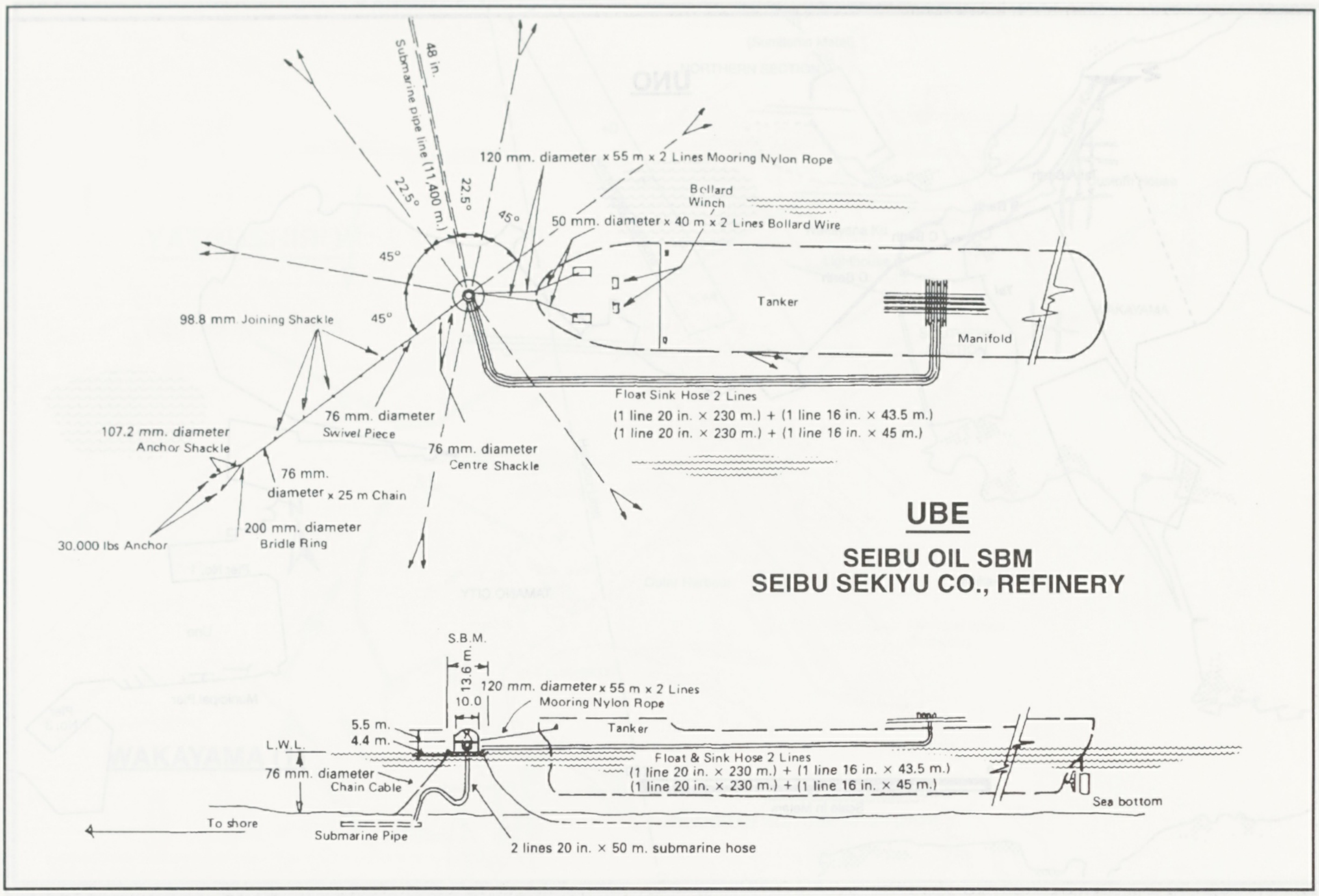

- 12 m.
No 7 - 3
No 7- 1
- 12 m.
No 4
Jinno Wharf
- 10 m.
No 3
- 2.5 m.
- 4.5 m.
- 7.5 m.
- 5.5 m.
T-1
- 10 m.
Toyota Wharf
T-2
- 10 m.
T-3
- 4.2 m.
Topy Wharf
Kao Soap
N
- 12 m. ⑤
- 12 m. ④
- 10 m. ③
Sogo Kaihatsu Akemi Pier
- 9.6 m. ①
Osaki Basin
Timber Basin
0 m.
1 Km.
TOYOHASHI


N
Public Wharf
- 6 m.
①
②
Todaka Piers
No 2 Wharf
D
C
B
Public Wharf
- 9 m.
A
Onoda Cement
TSUKUMI
No 1 Wharf
Nittetsu Pier
0 m.
500 m.
Onoda Cement


N
Mariyama - Kita Wharf
130 m.
- 8 m.
Mariyama Wharf
480 m.
- 12 m.
Hokuriku Denryoku Wharf
280 m.
- 14 m.
Tsuruga Cement Wharf
250 m.
- 10 m.
Kutsu Buoy
Kanegasaki Wharf
209 m.
- 9.5 m.
Nago Buoy
(Section 1)
390 m.
- 7.5 m.
Horai Wharf
370 m.
- 10 m.
Kawasaki - Matsue Wharf
Ferry Boat Wharf
TSURUGA
0
1000
Scale in Meters


N
600 m.
- 9.2 m.
W-2
W-3B
240 m.
- 6.5 m.
Public Wharf
(For Small Vessels Only)
NKK
W-1A
W-3A
TSU
0 m.
1 Km.

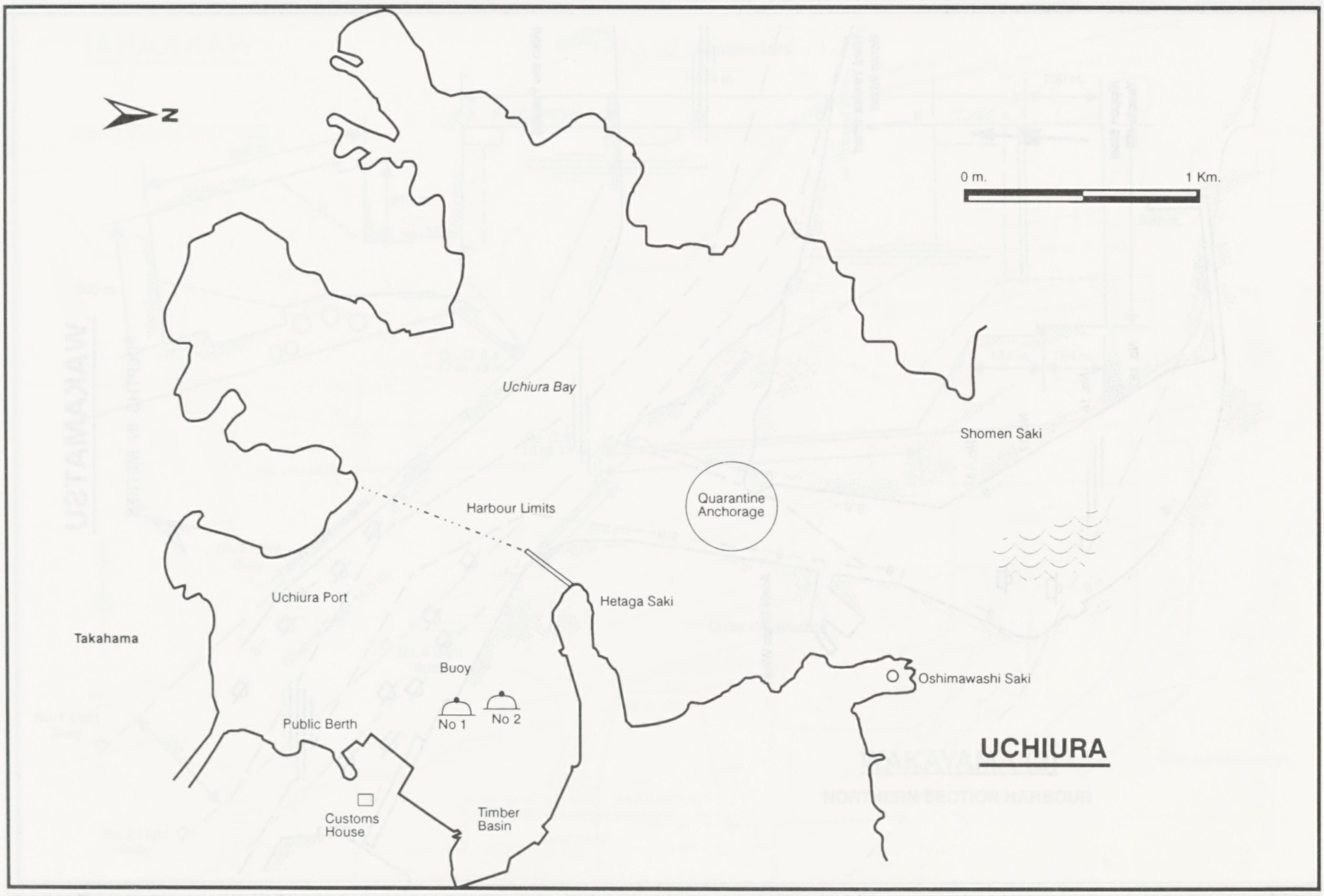

- 9 m.
Main Channel
Ube Kosan
No.5 (- 11m)
⑥
⑤
Public Okinoyama Wharf
(- 10m)
(Old)
Public Shibanaka Wharf
(- 9 m.) / (- 7.5m)
(New)
(- 10m)
PORT OF UBE
UBE
DEPTHS IN METRES
Cement Berth
(- 9 m.)
No.1
(- 9m)
No.2
Ube Kosan
Wharves
(- 9m)
No.3
(- 7.5m)
Public Shinmachi Wharf
Public Pier
Port Captain
Port Authority
Customs
Quarantine
(- 4m)
(- 4m)
(- 3m)
Public Shibanaka
East Wharf
(- 9m)
N



UBE

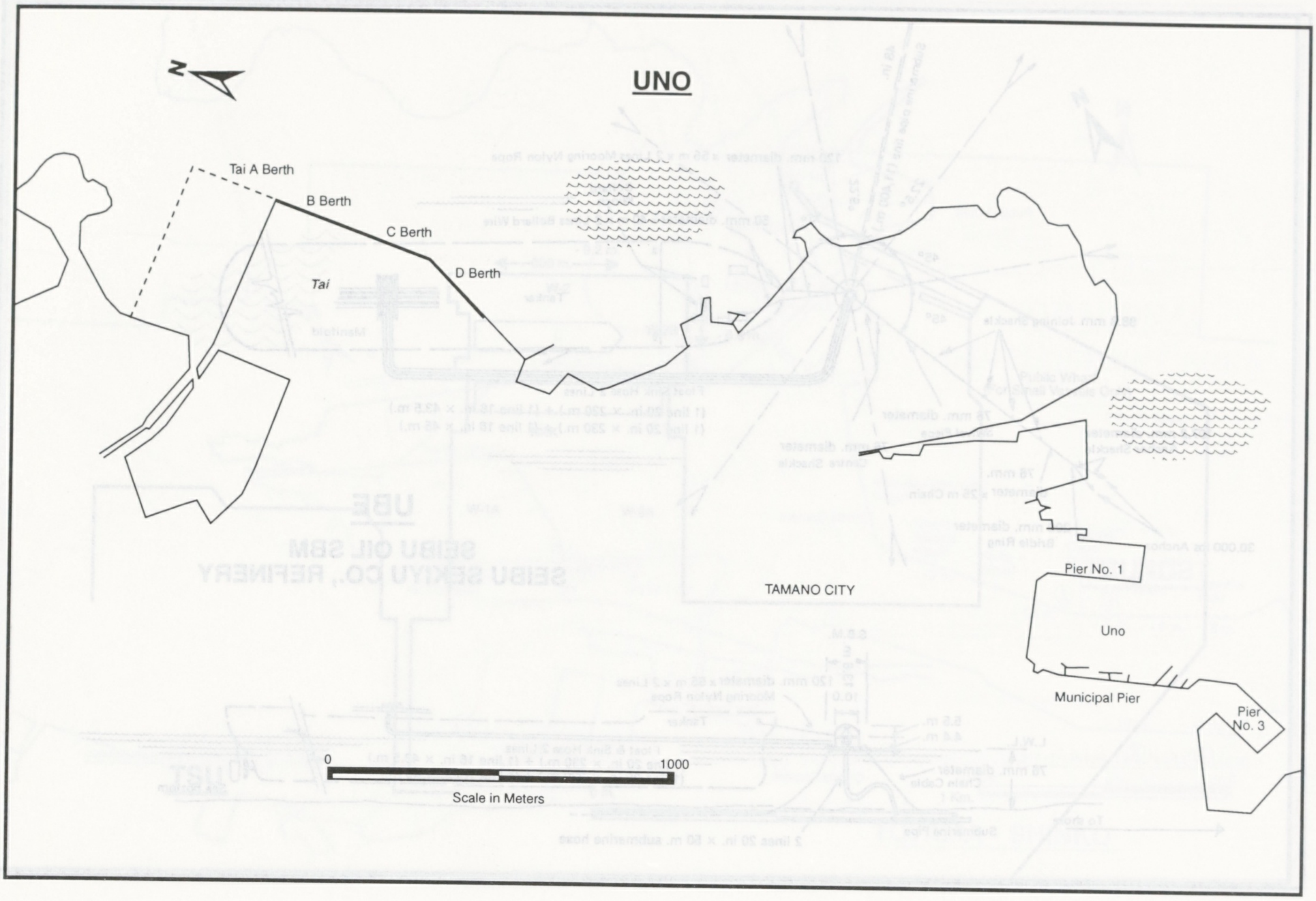
SEIBU OIL SBM
SEIBU SEKIYU CO., REFINERY

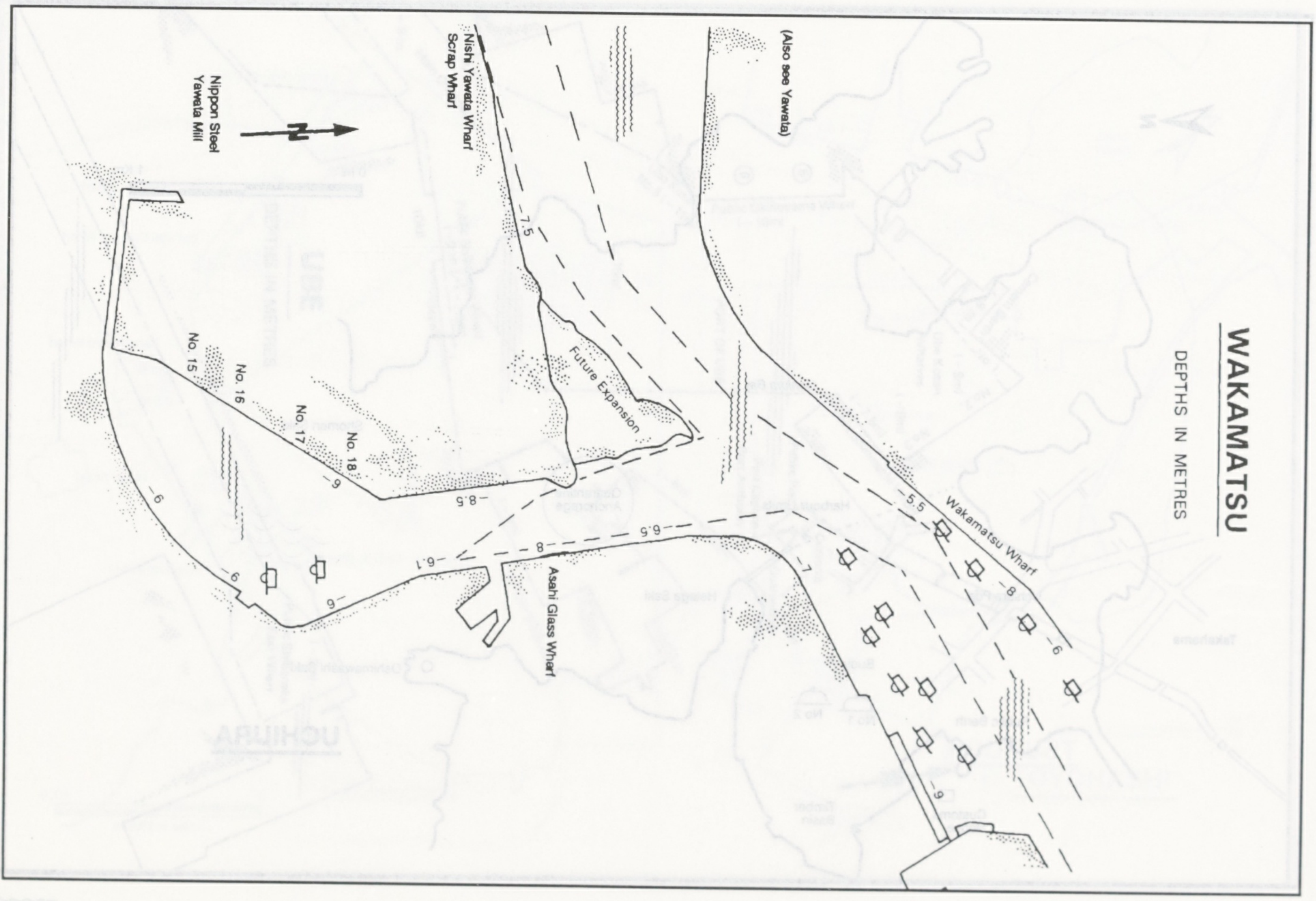
48 in.
Submarine pipe line (11,400 m.)
22.5°
22.5°
45°
45°
45°
120 mm. diameter × 55 m × 2 Lines Mooring Nylon Rope
Bollard
Winch
50 mm. diameter × 40 m × 2 Lines Bollard Wire
Tanker
Manifold
98.8 mm. Joining Shackle
76 mm. diameter
Swivel Piece
107.2 mm. diameter
Anchor Shackle
76 mm.
diameter × 25 m Chain
76 mm. diameter
Centre Shackle
200 mm. diameter
Bridle Ring
30,000 lbs Anchor
Float Sink Hose 2 Lines
(1 line 20 in. × 230 m.) + (1 line 16 in. × 43.5 m.)
(1 line 20 in. × 230 m.) + (1 line 16 in. × 45 m.)
S.B.M.
13.6 m.
10.0
120 mm. diameter × 55 m × 2 Lines
Mooring Nylon Rope
5.5 m.
4.4 m.
L.W.L.
Tanker
76 mm. diameter
Chain Cable
Float & Sink Hose 2 Lines
(1 line 20 in. × 230 m.) + (1 line 16 in. × 43.5 m.)
(1 line 20 in. × 230 m.) + (1 line 16 in. × 45 m.)
Sea bottom
To shore
Submarine Pipe
2 lines 20 in. × 50 m. submarine hose

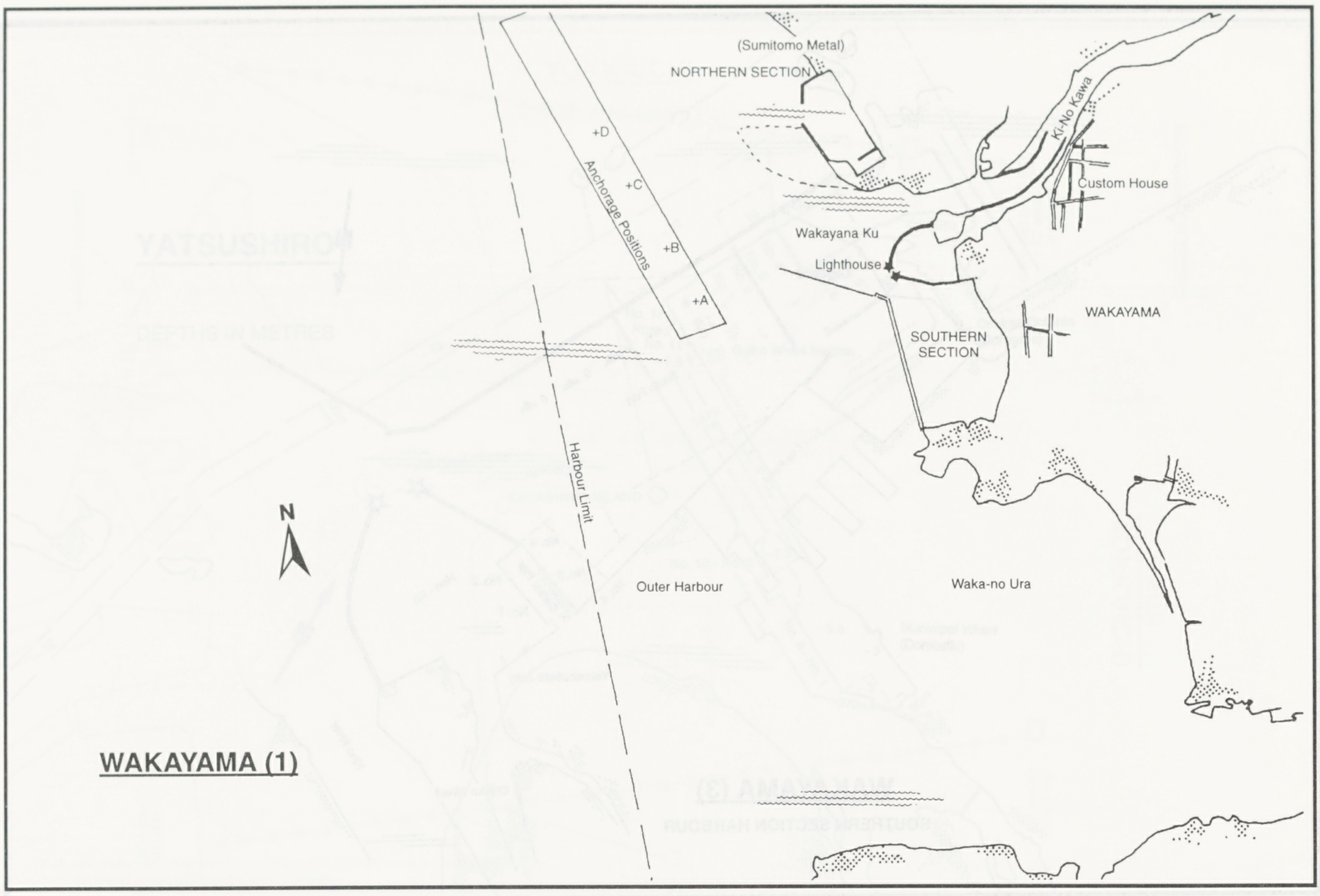


UCHIURA

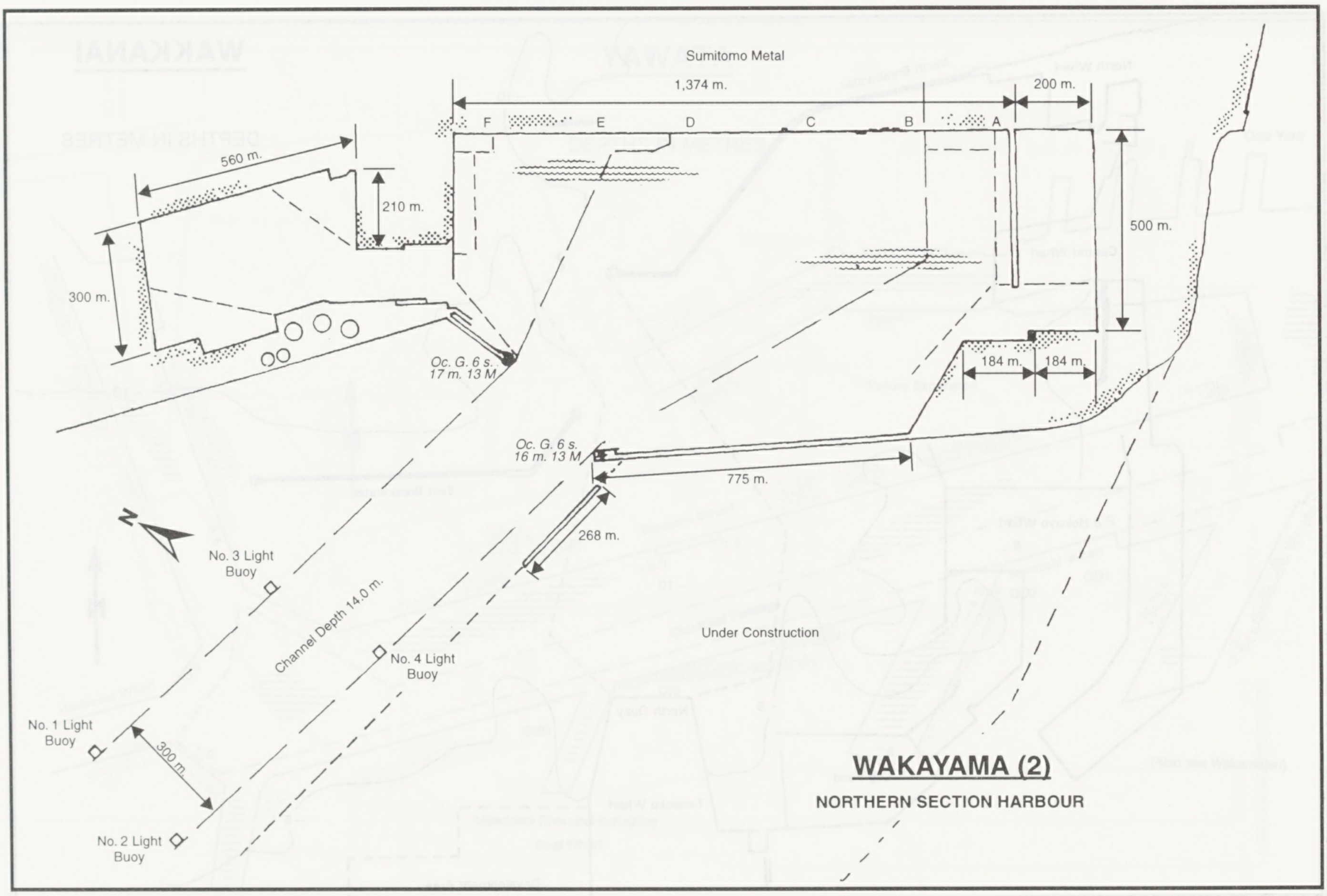
N
0 m.
1 Km.
Uchiura Bay
Shomen Saki
Quarantine
Anchorage
Harbour Limits
Uchiura Port
Hetaga Saki
Takahama
Buoy
No 1
No 2
Oshimawashi Saki
Public Berth
Customs
House
Timber
Basin


UNO
N
Tai A Berth
B Berth
C Berth
D Berth
Tai
TAMANO CITY
Pier No. 1
Uno
Municipal Pier
Pier No. 3
0
1000
Scale in Meters


WAKAMATSU
DEPTHS IN METRES
N
Nippon Steel Yawata Mill
Nishi Yawata Wharf Scrap Wharf
(Also see Yawata)
Future Expansion
No. 15
No. 16
No. 17
No. 18
Wakamatsu Wharf
Asahi Glass Wharf
7.5
8.5
6.5
6.1
8
5.5
7
8
6
6
6
6
9
9

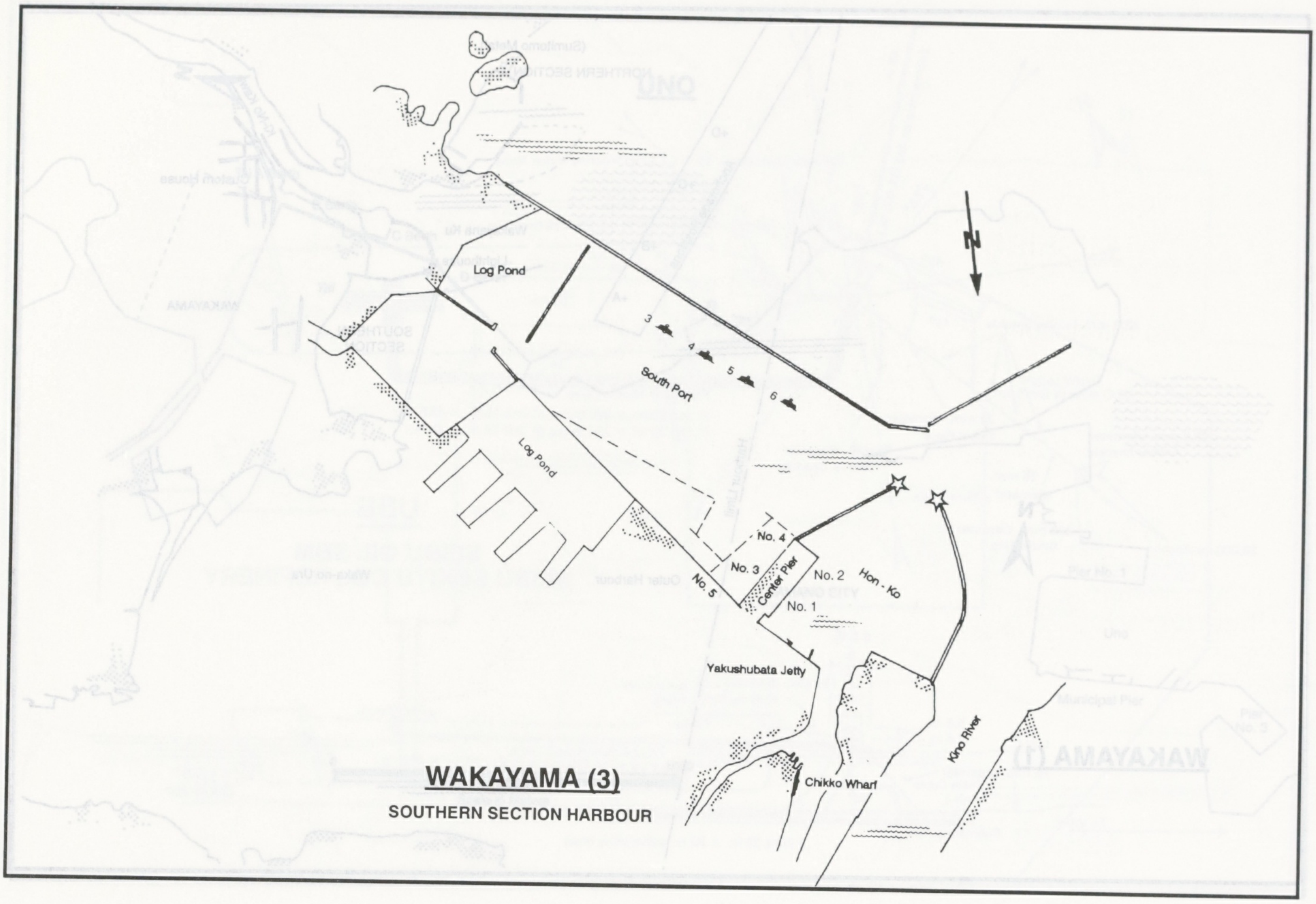

(Sumitomo Metal)
NORTHERN SECTION
Ki-No Kawa
Custom House
+D
+C
+B
+A
Anchorage Positions
Wakayana Ku
Lighthouse
SOUTHERN SECTION
WAKAYAMA
Harbour Limit
N
Outer Harbour
Waka-no Ura

WAKAYAMA (1)


Sumitomo Metal
1,374 m.
200 m.
F
E
D
C
B
A
560 m.
210 m.
300 m.
500 m.
Oc. G. 6 s.
17 m. 13 M
184 m.
184 m.
Oc. G. 6 s.
16 m. 13 M
775 m.
268 m.
N
No. 3 Light Buoy
Channel Depth 14.0 m.
No. 4 Light Buoy
No. 1 Light Buoy
300 m.
No. 2 Light Buoy
Under Construction

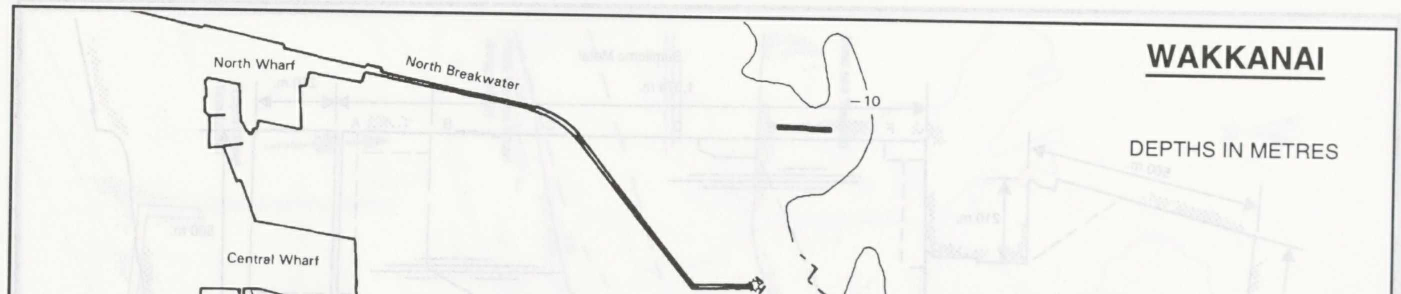
WAKAYAMA (2)

NORTHERN SECTION HARBOUR


Log Pond
3
4
5
6
South Port
Log Pond
No. 4
No. 3
No. 5
Center Pier
No. 2
Hon - Ko
No. 1
Yakushubata Jetty
Chikko Wharf
Kino River

WAKAYAMA (3)

SOUTHERN SECTION HARBOUR

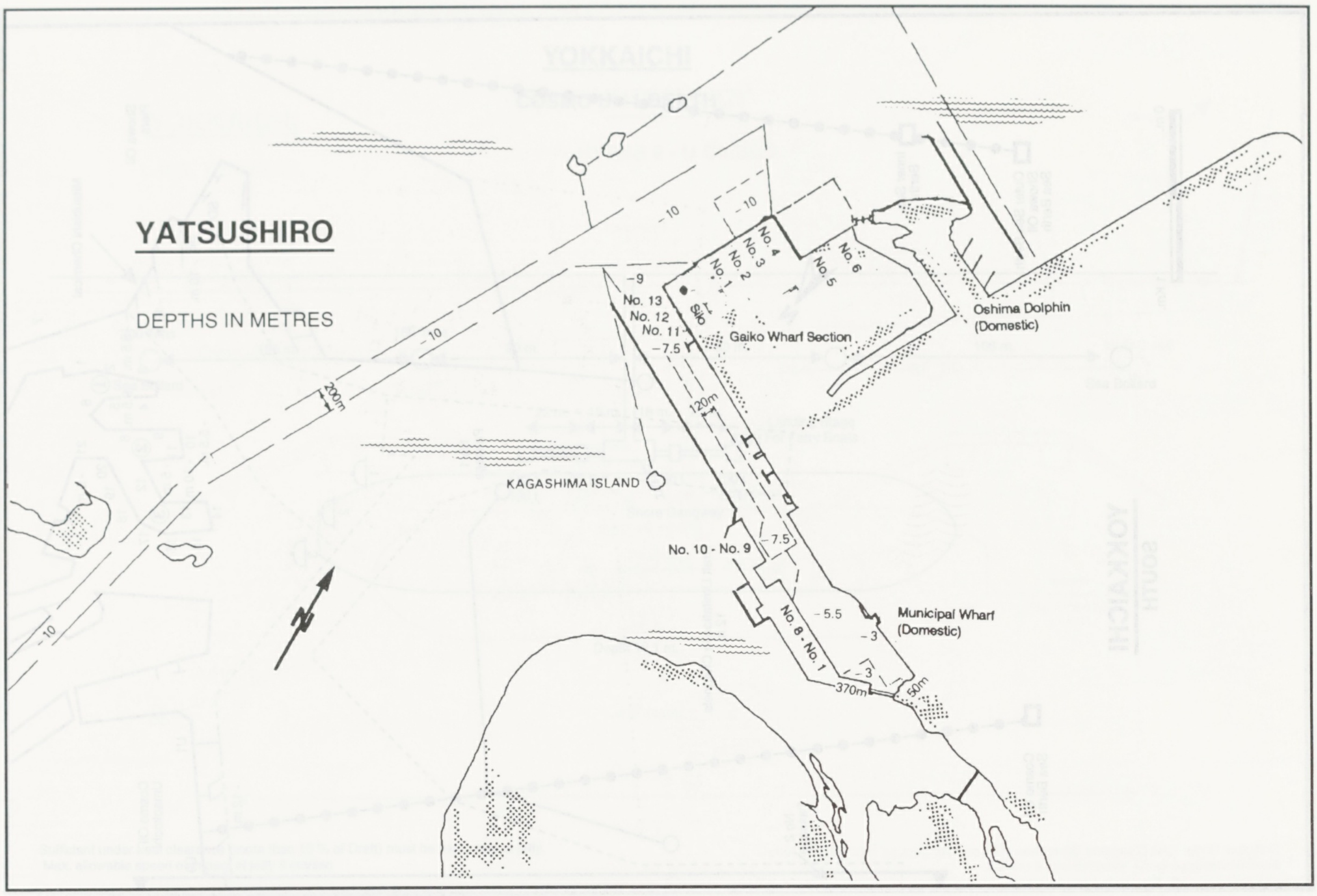

North Wharf
North Breakwater
−10
Central Wharf
−5
−10
East Breakwater
Hokuyo Wharf
−5
−10
−5
North Quay
Log Pond
Tenpoku Wharf
−5
Development Area

WAKKANAI

DEPTHS IN METRES

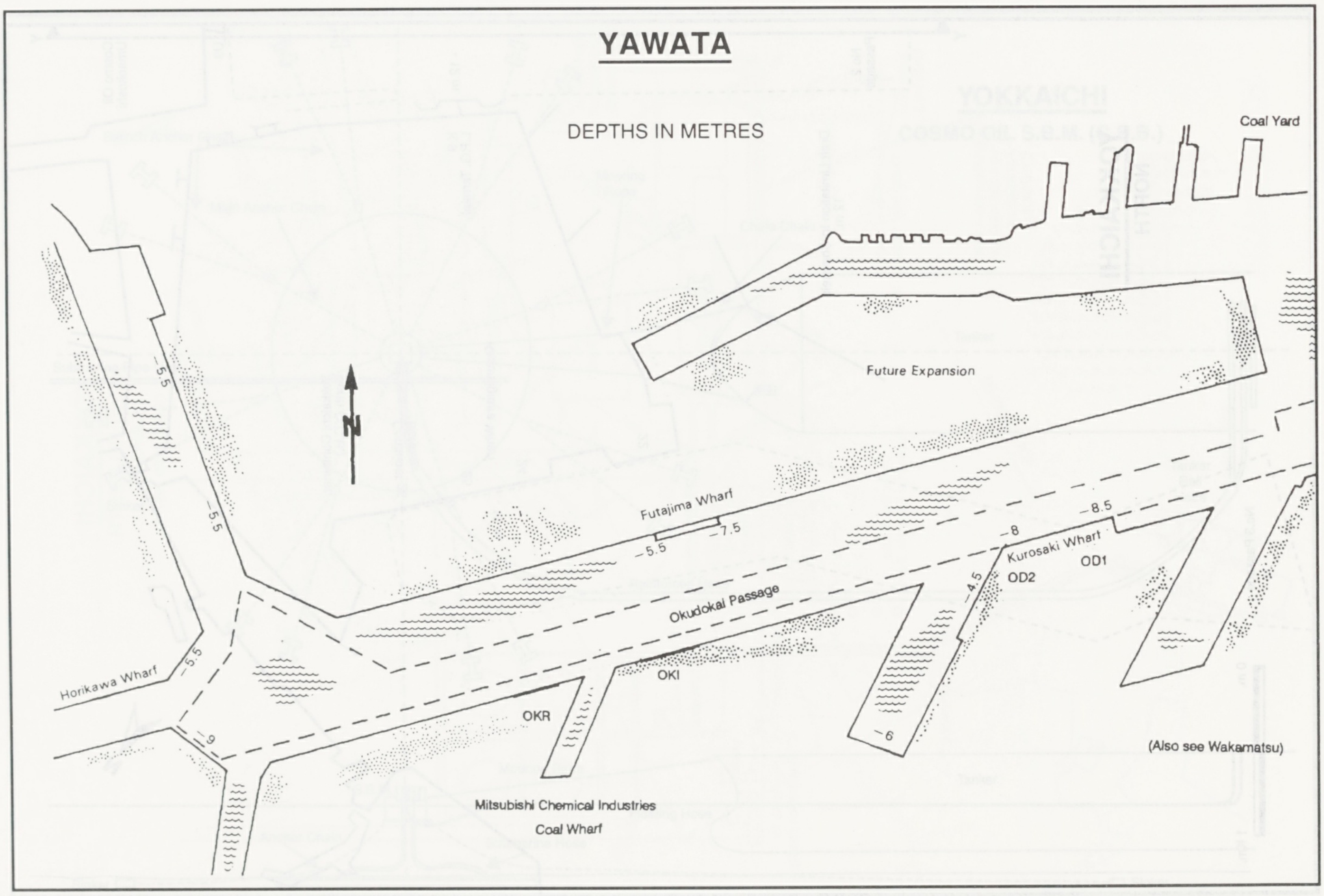
YATSUSHIRO

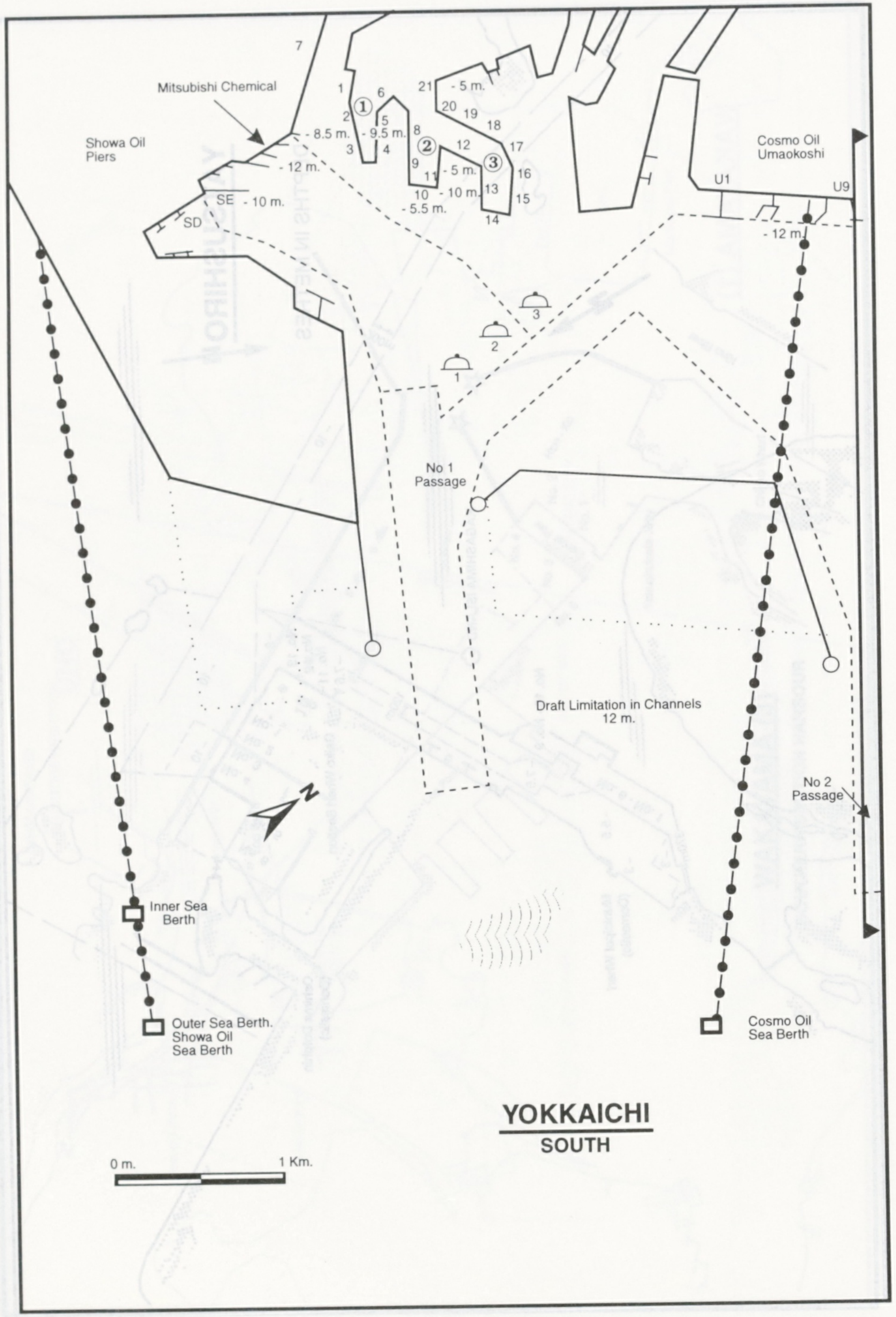
DEPTHS IN METRES


-10
-10
-10
-10
200m
-9
No. 13
No. 12
No. 11
-7.5
Silo
No. 4
No. 3
No. 2
No. 1
-10
No. 5
No. 6
Gaiko Wharf Section
Oshima Dolphin
(Domestic)
120m
KAGASHIMA ISLAND
-7.5
No. 10 - No. 9
No. 8 - No. 1
-5.5
Municipal Wharf
(Domestic)
-3
-3
370m
50m
N

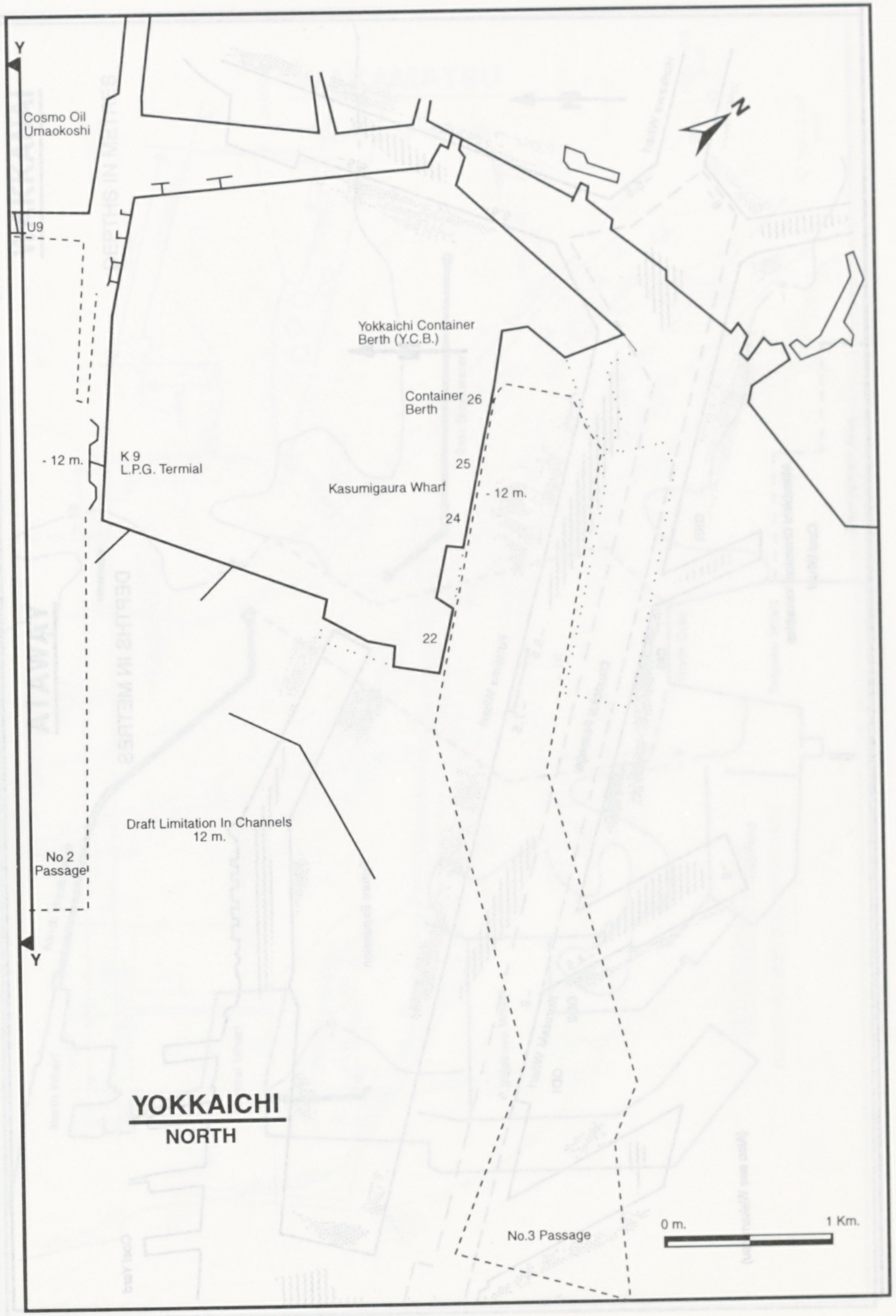
YAWATA

DEPTHS IN METRES


Coal Yard
Future Expansion
N
-5.5
-5.5
Futajima Wharf
-5.5
-7.5
-8
-8.5
Kurosaki Wharf
OD2
OD1
-4.5
Okudokai Passage
OKI
-6
Horikawa Wharf
-5.5
-9
OKR
Mitsubishi Chemical Industries
Coal Wharf
(Also see Wakamatsu)


7
Mitsubishi Chemical
Showa Oil
Piers
- 8.5 m.
- 9.5 m.
- 12 m.
SE
- 10 m.
SD
1
2
3
①
6
5
4
21
- 5 m.
20
19
18
8
②
9
12
③
17
16
11
- 5 m.
10
- 10 m.
13
- 5.5 m.
15
14
Cosmo Oil
Umaokoshi
U1
U9
- 12 m.
1
2
3
No 1
Passage
Draft Limitation in Channels
12 m.
No 2
Passage
N
Inner Sea
Berth
Outer Sea Berth.
Showa Oil
Sea Berth
Cosmo Oil
Sea Berth
0 m.
1 Km.

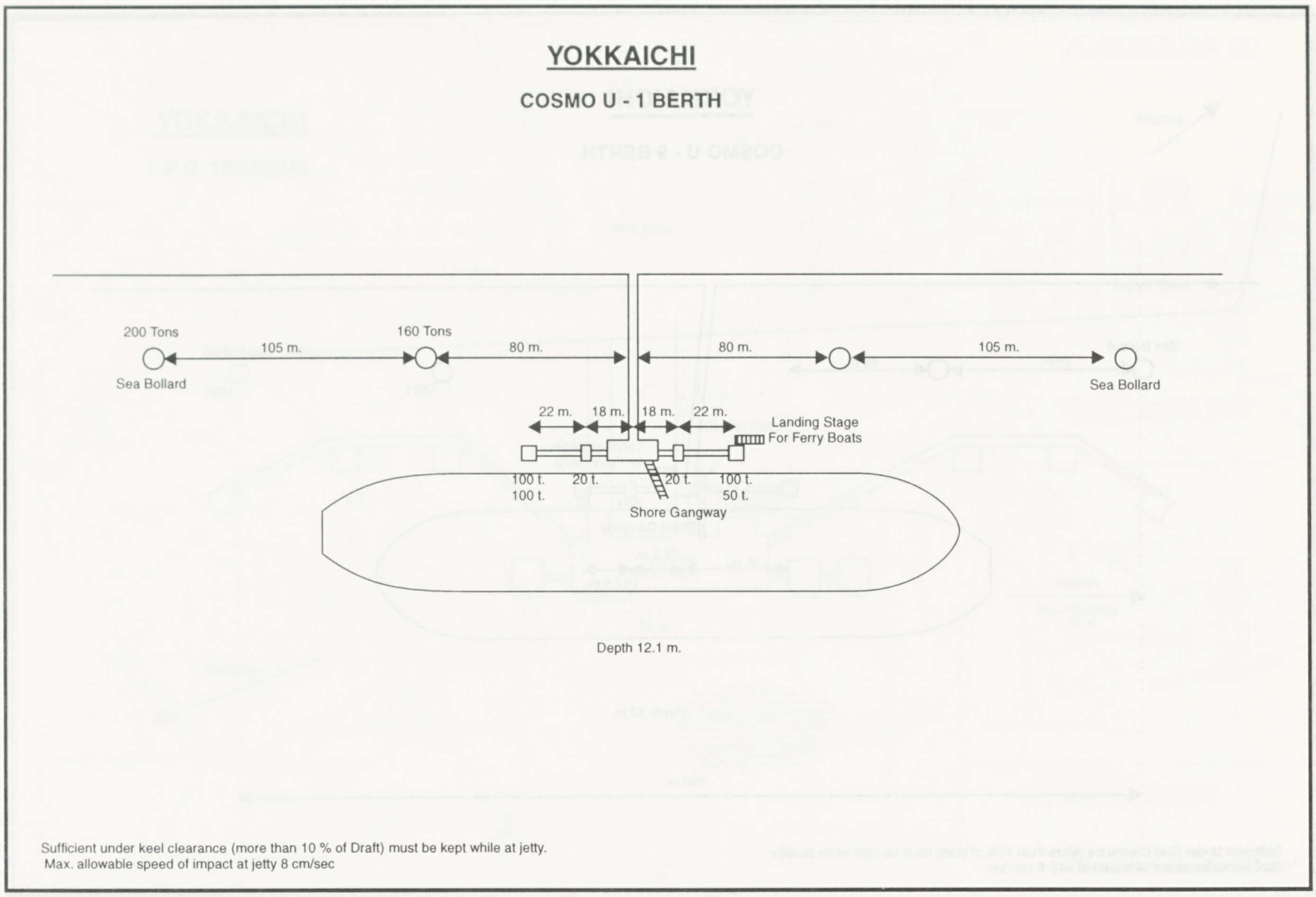
YOKKAICHI
SOUTH


Y
Cosmo Oil
Umaokoshi
U9
N
Yokkaichi Container
Berth (Y.C.B.)
Container
Berth
26
- 12 m.
K 9
L.P.G. Termial
25
Kasumigaura Wharf
- 12 m.
24
22
Draft Limitation In Channels
12 m.
No 2
Passage
Y
No.3 Passage
0 m.
1 Km.

YOKKAICHI
NORTH

YOKKAICHI

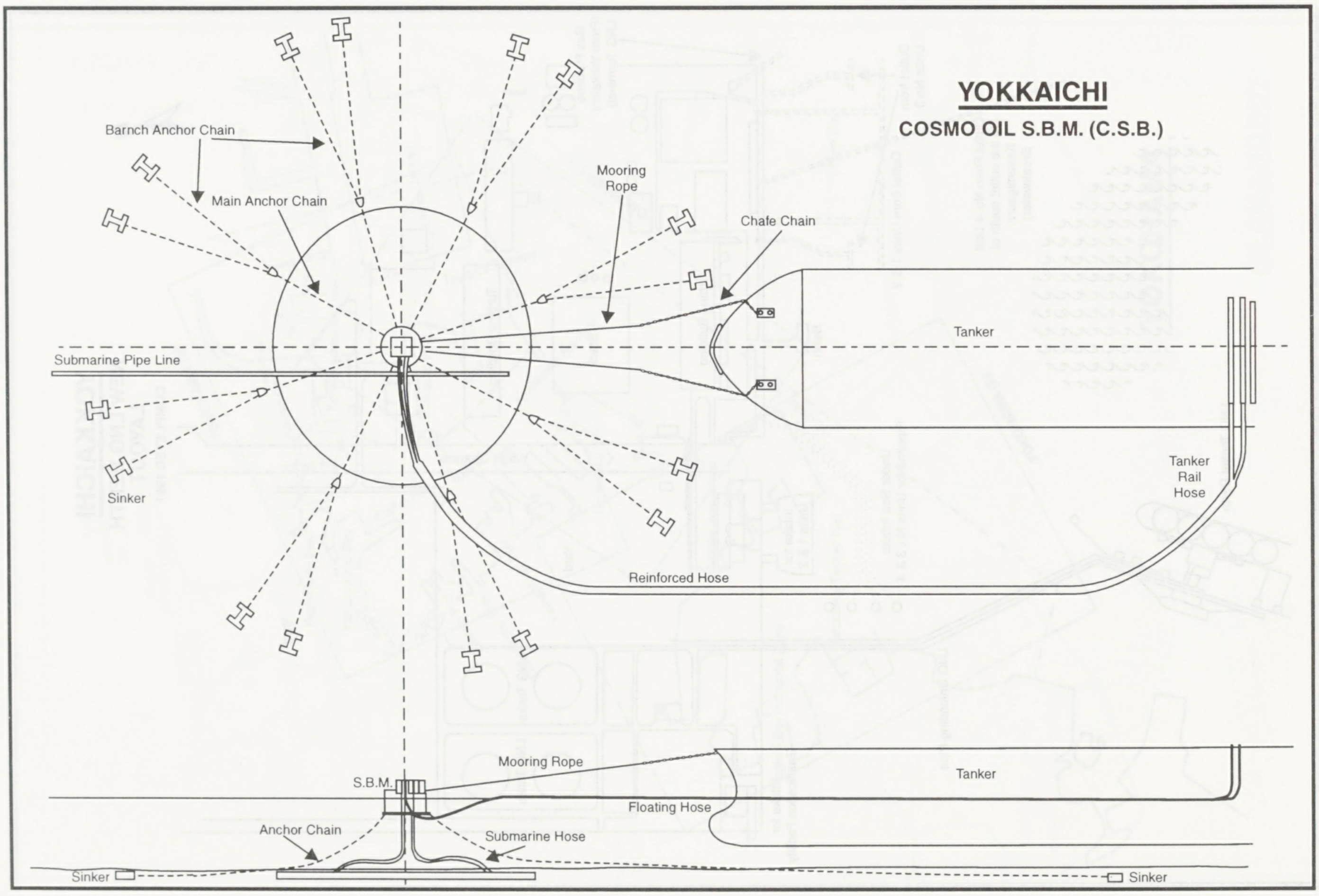
COSMO U - 1 BERTH


200 Tons
Sea Bollard
105 m.
160 Tons
80 m.
80 m.
105 m.
Sea Bollard
22 m.
18 m.
18 m.
22 m.
Landing Stage
For Ferry Boats
100 t.
100 t.
20 t.
20 t.
100 t.
50 t.
Shore Gangway
Depth 12.1 m.

Sufficient under keel clearance (more than 10 % of Draft) must be kept while at jetty.
Max. allowable speed of impact at jetty 8 cm/sec

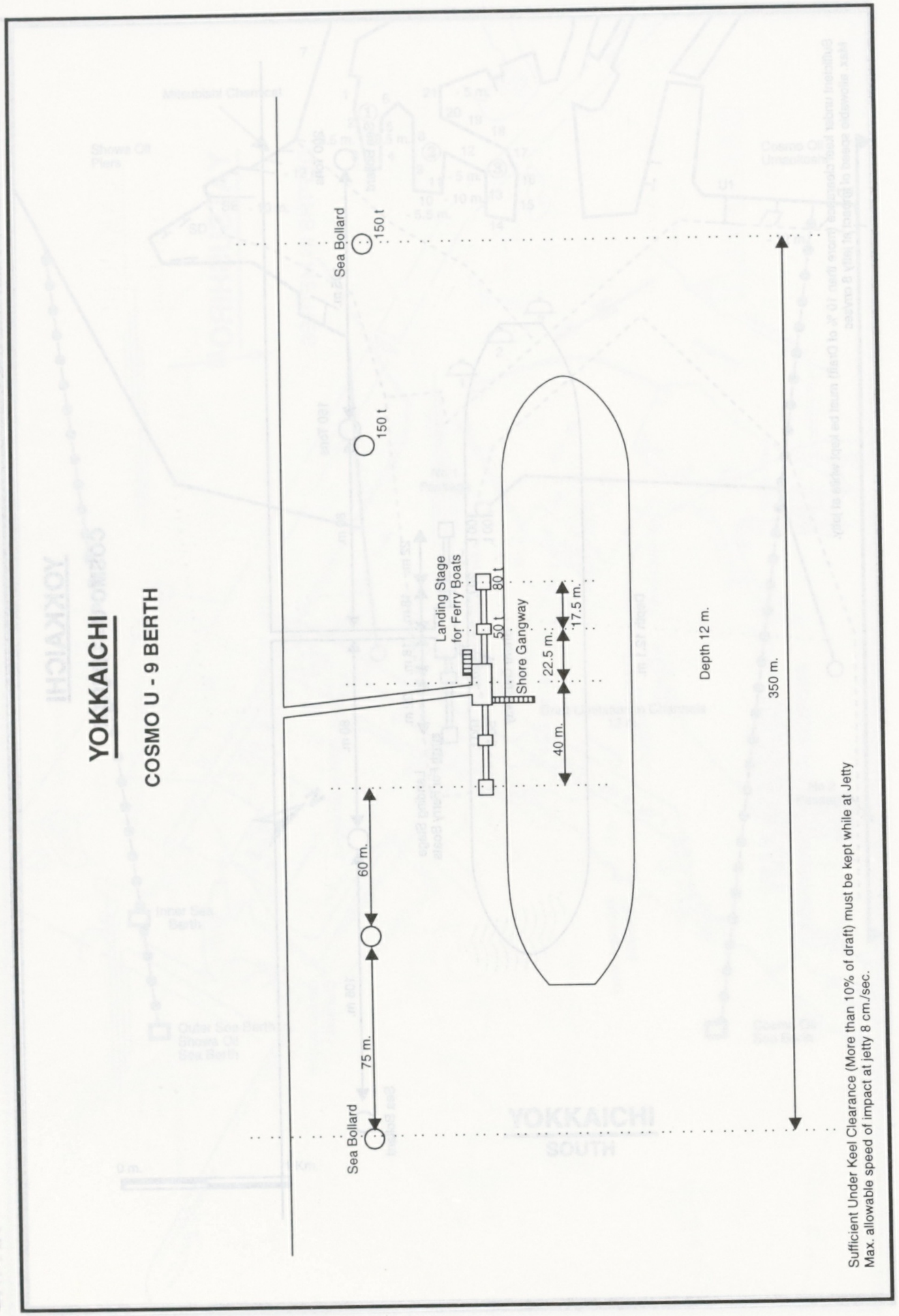
YOKKAICHI

COSMO OIL S.B.M. (C.S.B.)


Barnch Anchor Chain
Main Anchor Chain
Mooring
Rope
Chafe Chain
Tanker
Submarine Pipe Line
Sinker
Tanker
Rail
Hose
Reinforced Hose
Mooring Rope
Tanker
S.B.M.
Floating Hose
Anchor Chain
Submarine Hose
Sinker
Sinker

YOKKAICHI

COSMO U - 9 BERTH

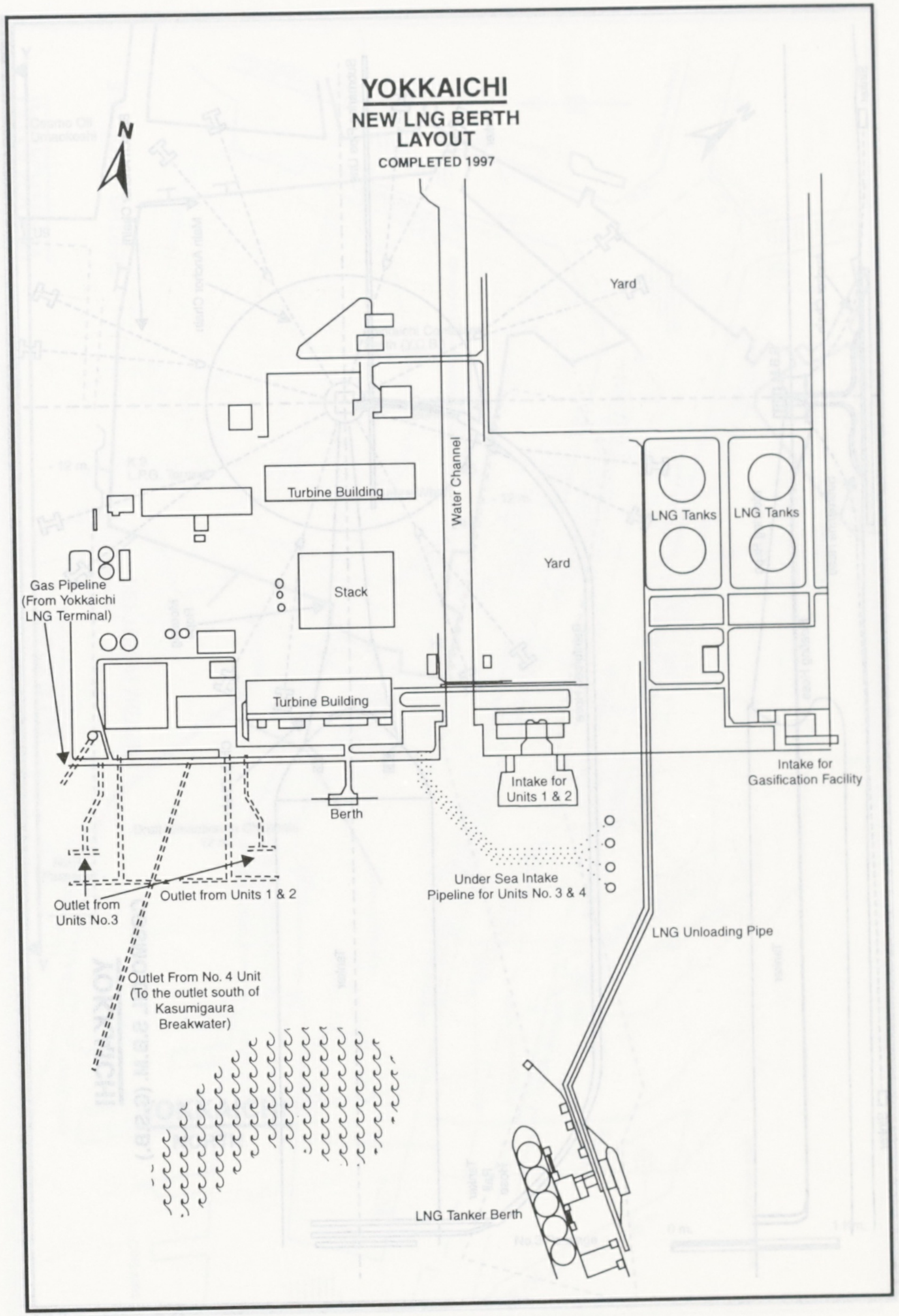

Sea Bollard
150 t
150 t
Landing Stage for Ferry Boats
80 t
50 t
50 t
Shore Gangway
17.5 m.
22.5 m.
40 m.
Depth 12 m.
350 m.
60 m.
75 m.
Sea Bollard

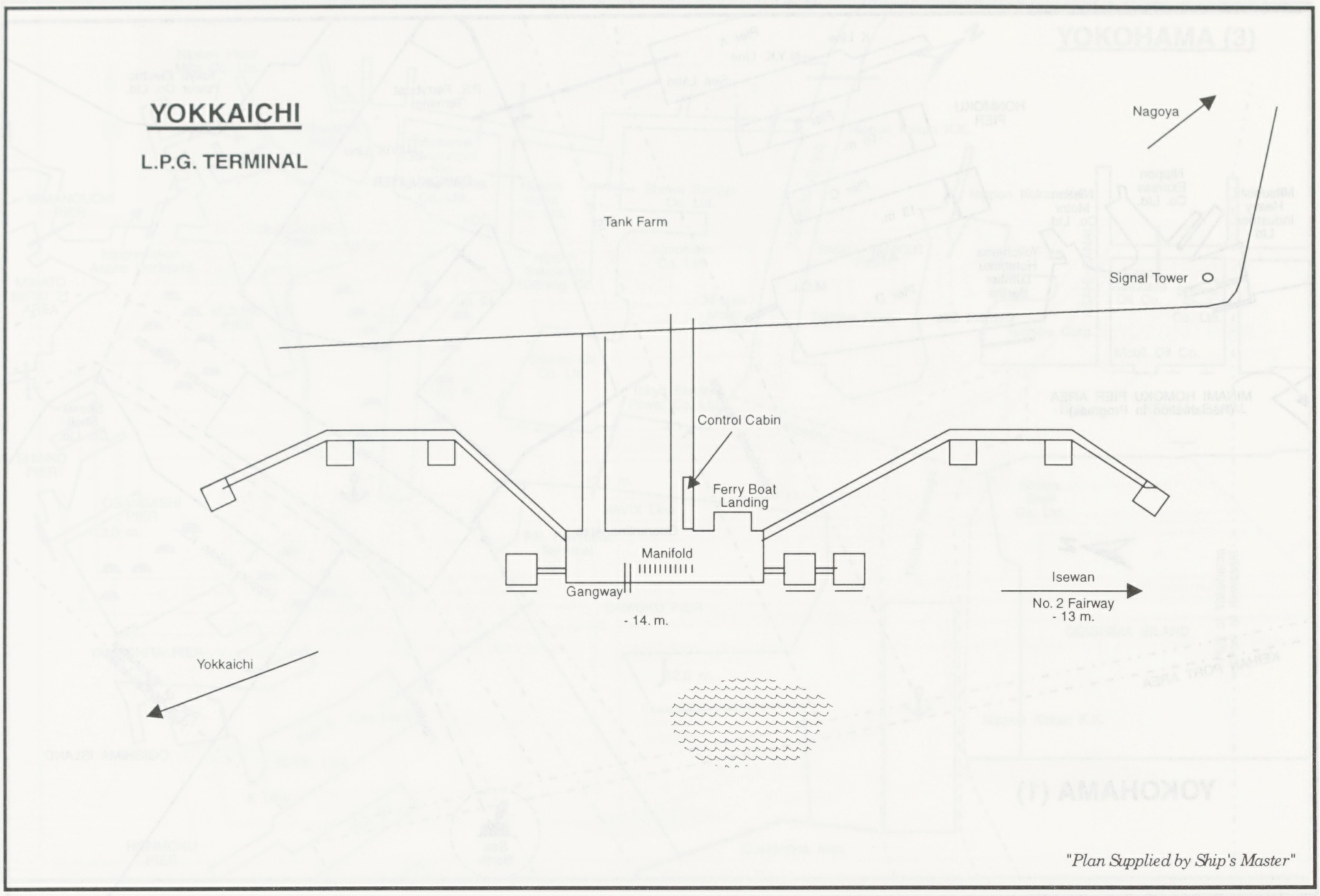
Sufficient Under Keel Clearance (More than 10% of draft) must be kept while at Jetty
Max. allowable speed of impact at jetty 8 cm./sec.

YOKKAICHI

NEW LNG BERTH LAYOUT

COMPLETED 1997


N
Yard
Turbine Building
Water Channel
LNG Tanks
LNG Tanks
Yard
Stack
Gas Pipeline (From Yokkaichi LNG Terminal)
Turbine Building
Intake for Units 1 & 2
Intake for Gasification Facility
Berth
Outlet from Units No.3
Outlet from Units 1 & 2
Under Sea Intake Pipeline for Units No. 3 & 4
LNG Unloading Pipe
Outlet From No. 4 Unit (To the outlet south of Kasumigaura Breakwater)
LNG Tanker Berth

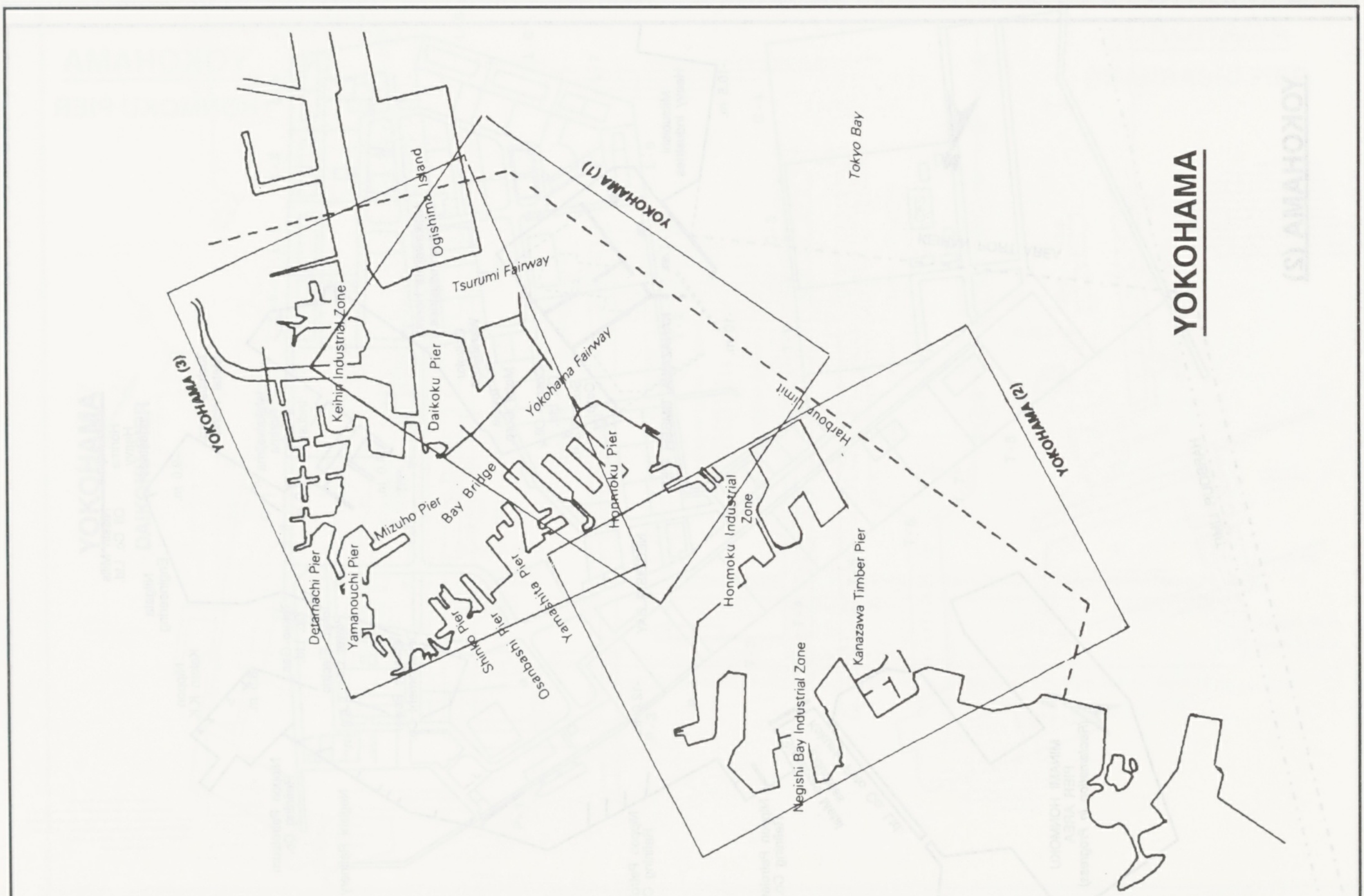


YOKKAICHI

L.P.G. TERMINAL

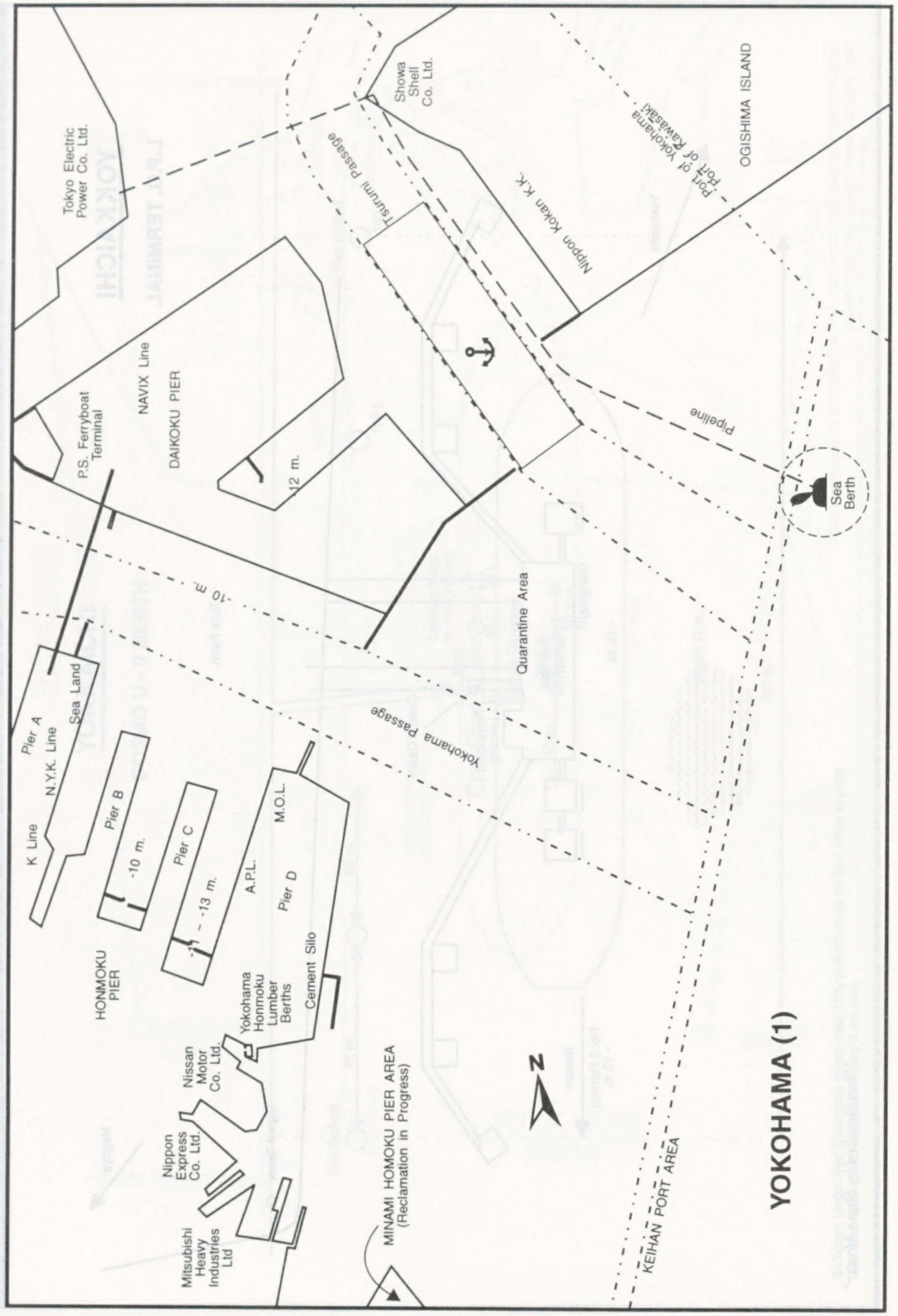
Nagoya
Tank Farm
Signal Tower
Control Cabin
Ferry Boat Landing
Manifold
Gangway
- 14. m.
Isewan
No. 2 Fairway
- 13 m.
Yokkaichi

"Plan Supplied by Ship's Master"

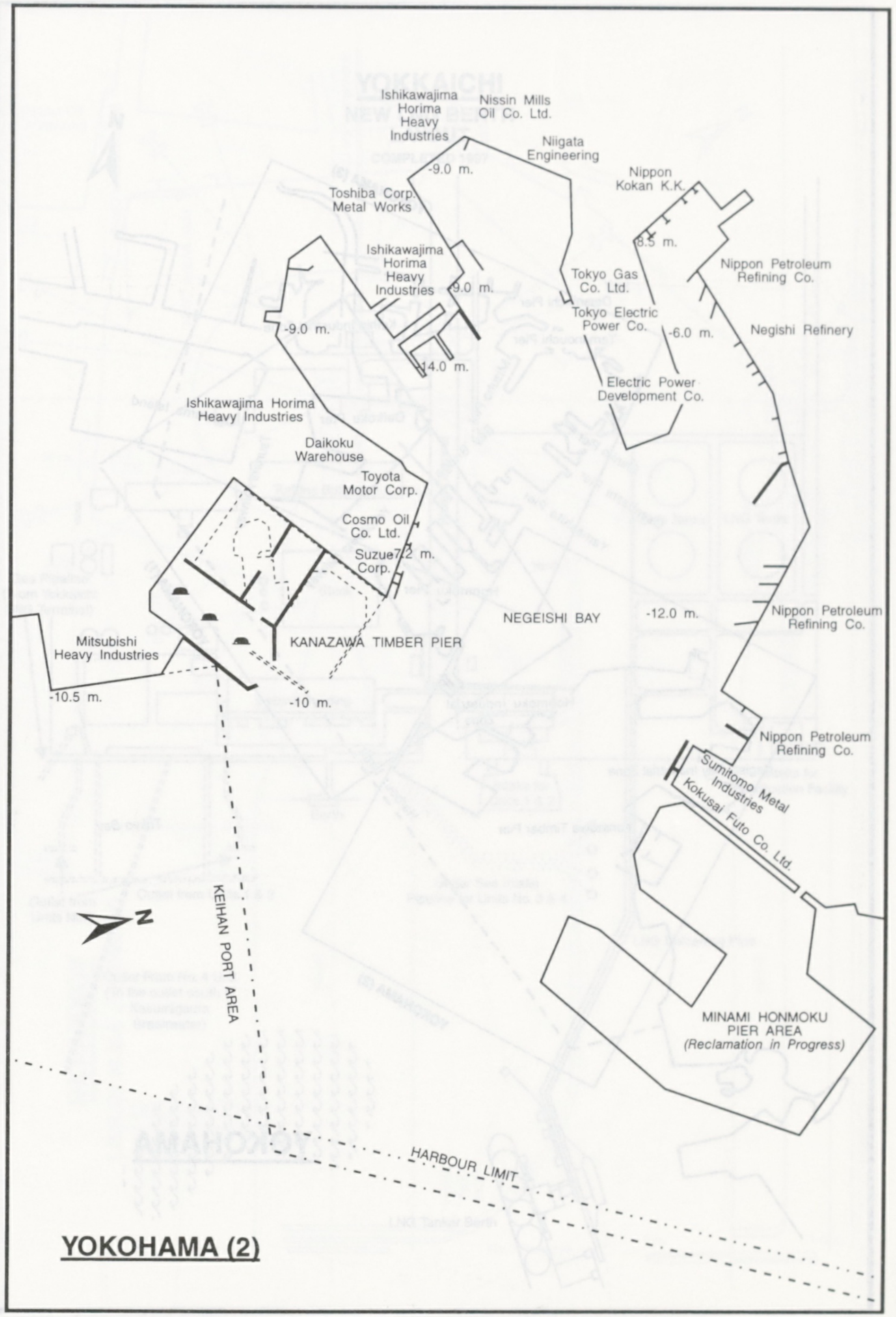


YOKOHAMA

Tokyo Bay
YOKOHAMA (1)
YOKOHAMA (2)
YOKOHAMA (3)
Ogishima Island
Tsurumi Fairway
Keihin Industrial Zone
Daikoku Pier
Yokohama Fairway
Harbour Limit
Honmoku Pier
Honmoku Industrial Zone
Bay Bridge
Mizuho Pier
Detamachi Pier
Yamanouchi Pier
Shinko Pier
Osanbashi Pier
Yamashita Pier
Kanazawa Timber Pier
Negishi Bay Industrial Zone

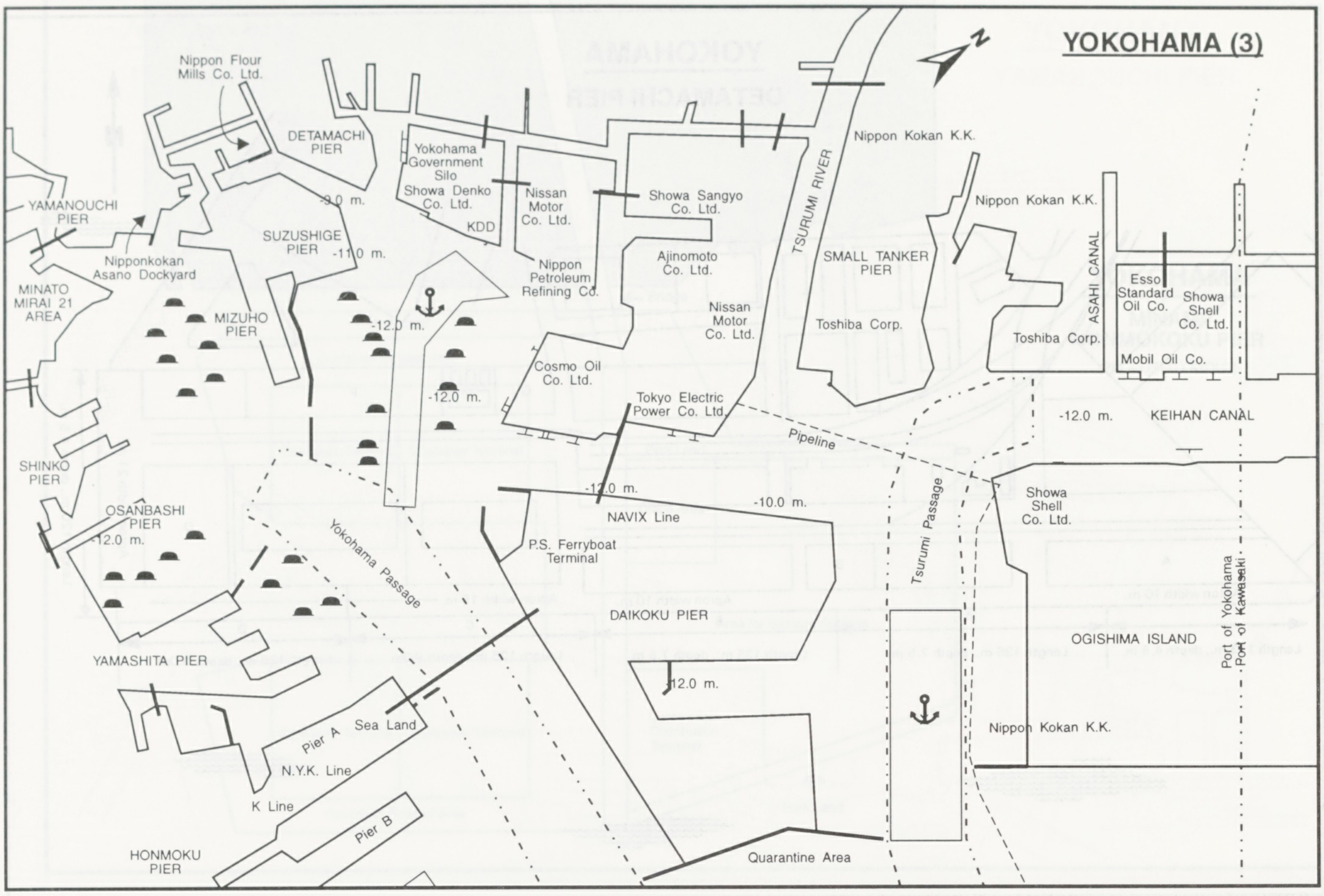

Tokyo Electric Power Co. Ltd.
Showa Shell Co. Ltd.
Port of Yokohama
Port of Kawasaki
OGISHIMA ISLAND
Tsurumi Passage
Nippon Kokan K.K.
NAVIX Line
DAIKOKU PIER
P.S. Ferryboat Terminal
-12 m.
Pipeline
Sea Berth
-10 m.
Quarantine Area
Yokohama Passage
Pier A
Sea Land
N.Y.K. Line
K Line
Pier B
-10 m.
Pier C
-13 m.
M.O.L.
A.P.L.
Pier D
HONMOKU PIER
Cement Silo
Yokohama Honmoku Lumber Berths
Nissan Motor Co. Ltd.
Nippon Express Co. Ltd.
Mitsubishi Heavy Industries Ltd
MINAMI HOMOKU PIER AREA
(Reclamation in Progress)
KEIHAN PORT AREA
N

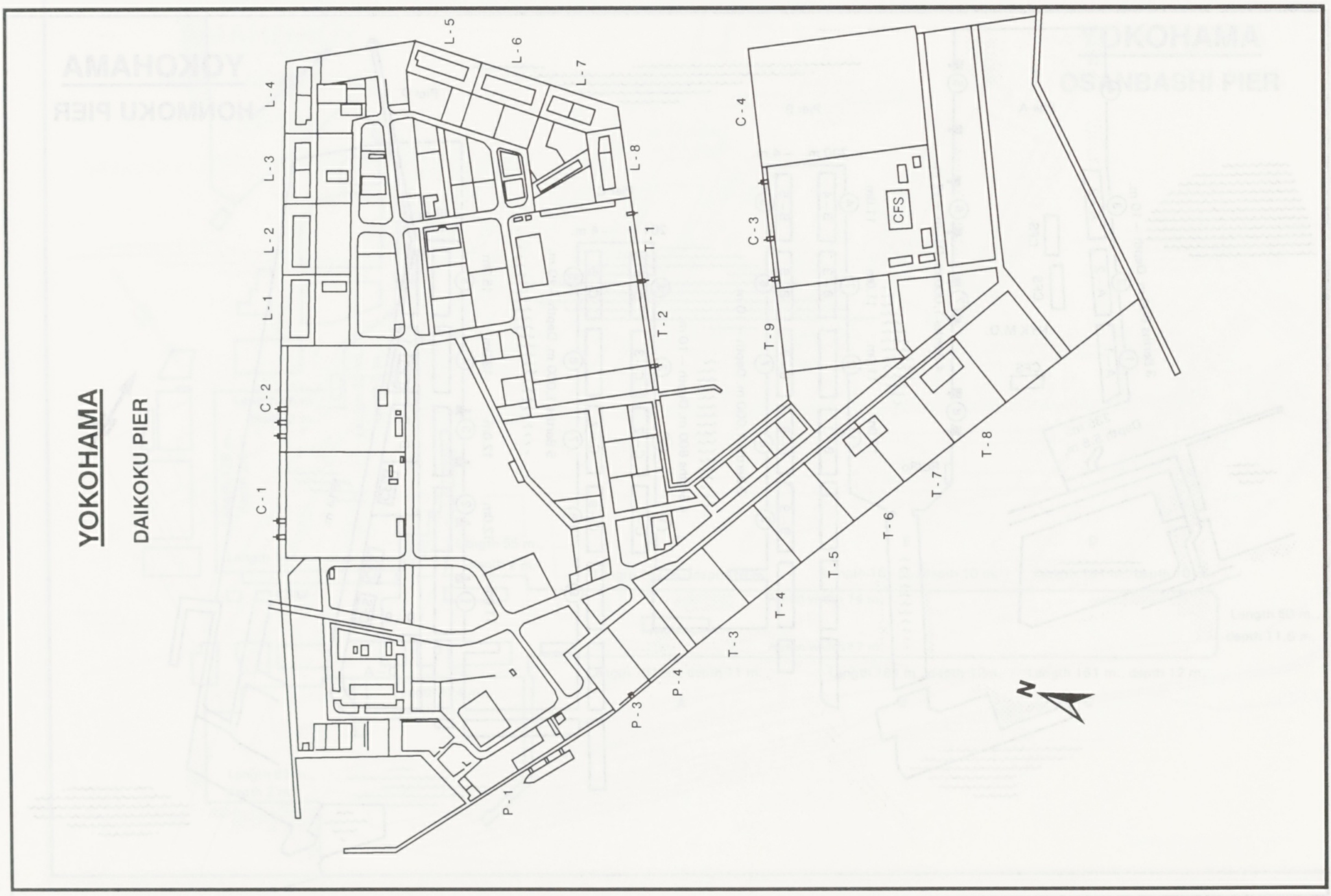
YOKOHAMA (1)


Ishikawajima Horima Heavy Industries
Nissin Mills Oil Co. Ltd.
Niigata Engineering
-9.0 m.
Nippon Kokan K.K.
Toshiba Corp. Metal Works
-8.5 m.
Ishikawajima Horima Heavy Industries
-9.0 m.
Nippon Petroleum Refining Co.
Tokyo Gas Co. Ltd.
Tokyo Electric Power Co.
-9.0 m.
-6.0 m.
Negishi Refinery
-14.0 m.
Electric Power Development Co.
Ishikawajima Horima Heavy Industries
Daikoku Warehouse
Toyota Motor Corp.
Cosmo Oil Co. Ltd.
Suzue Corp.
-7.2 m.
NEGEISHI BAY
-12.0 m.
Nippon Petroleum Refining Co.
Mitsubishi Heavy Industries
KANAZAWA TIMBER PIER
-10.5 m.
-10 m.
Nippon Petroleum Refining Co.
Sumitomo Metal Industries
Kokusai Futo Co. Ltd.
N
KEIHAN PORT AREA
MINAMI HONMOKU PIER AREA
(Reclamation in Progress)
HARBOUR LIMIT

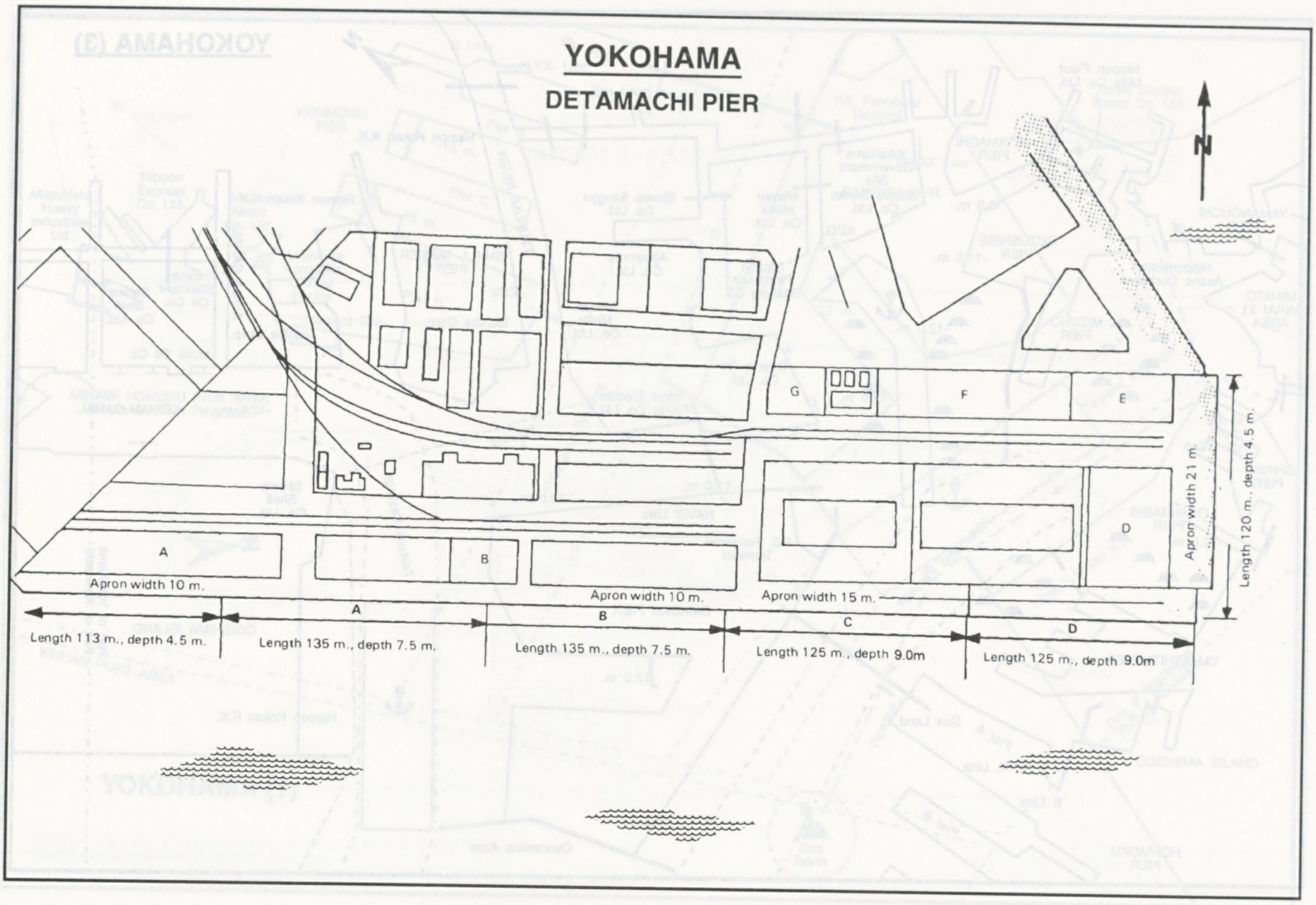
YOKOHAMA (2)

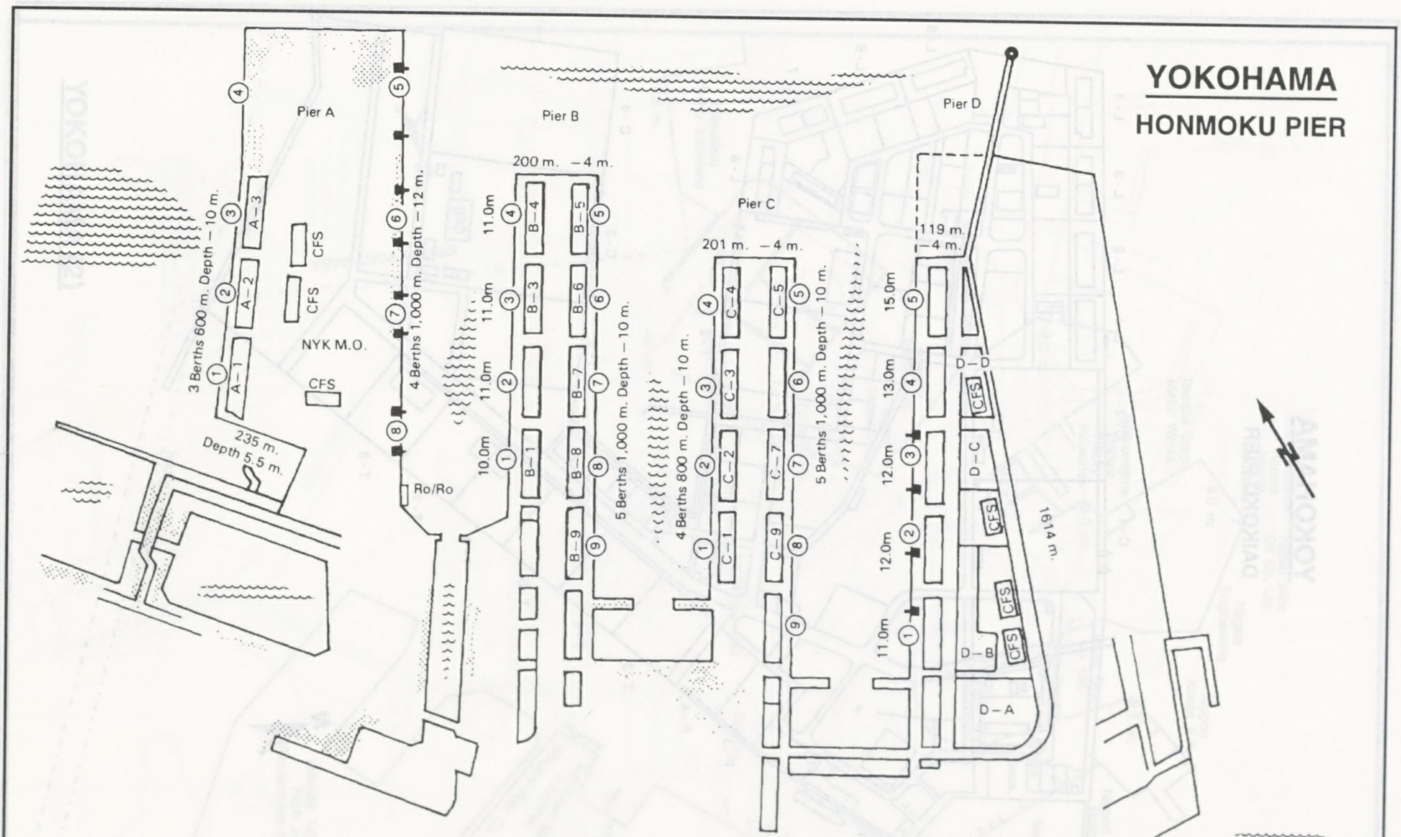
YOKOHAMA (3)

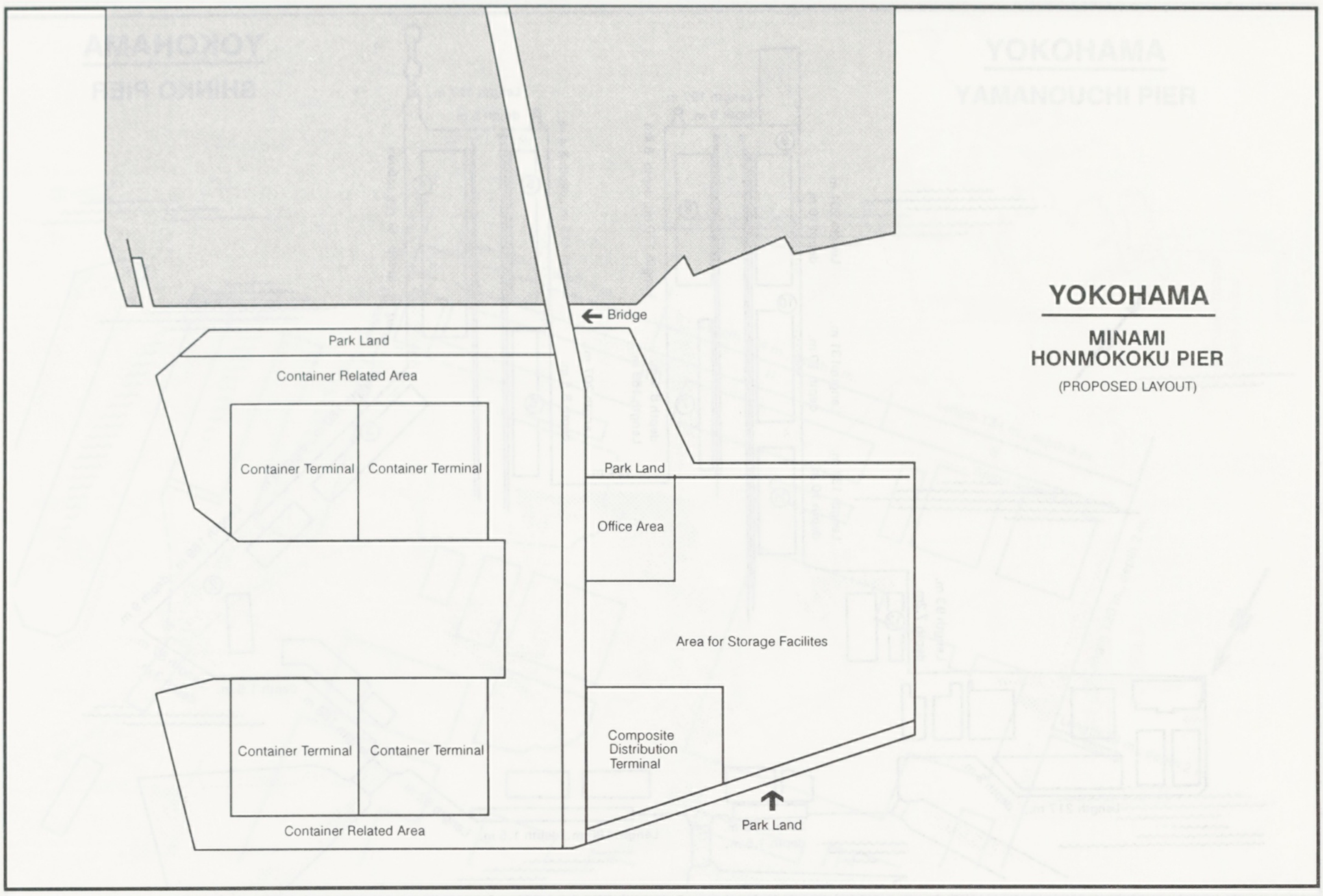

N
Nippon Flour Mills Co. Ltd.
DETAMACHI PIER
Yokohama Government Silo
Showa Denko Co. Ltd.
KDD
Nissan Motor Co. Ltd.
Showa Sangyo Co. Ltd.
Nippon Kokan K.K.
TSURUMI RIVER
Nippon Kokan K.K.
YAMANOUCHI PIER
-9.0 m.
SUZUSHIGE PIER
-11.0 m.
Nipponkokan Asano Dockyard
MINATO MIRAI 21 AREA
Nippon Petroleum Refining Co.
Ajinomoto Co. Ltd.
SMALL TANKER PIER
ASAHI CANAL
Esso Standard Oil Co.
Showa Shell Co. Ltd.
MIZUHO PIER
-12.0 m.
Nissan Motor Co. Ltd.
Toshiba Corp.
Toshiba Corp.
Mobil Oil Co.
Cosmo Oil Co. Ltd.
-12.0 m.
Tokyo Electric Power Co. Ltd.
Pipeline
-12.0 m.
KEIHAN CANAL
SHINKO PIER
OSANBASHI PIER
-12.0 m.
-12.0 m.
NAVIX Line
-10.0 m.
Tsurumi Passage
Showa Shell Co. Ltd.
Yokohama Passage
P.S. Ferryboat Terminal
DAIKOKU PIER
OGISHIMA ISLAND
Port of Yokohama
Port of Kawasaki
YAMASHITA PIER
-12.0 m.
Sea Land
Pier A
Nippon Kokan K.K.
N.Y.K. Line
K Line
Pier B
HONMOKU PIER
Quarantine Area


YOKOHAMA
DAIKOKU PIER

L - 5
L - 6
L - 7
L - 4
L - 3
L - 8
L - 2
L - 1
T - 1
T - 2
C - 4
C - 3
CFS
T - 9
C - 2
C - 1
T - 8
T - 7
T - 6
T - 5
T - 4
T - 3
P - 4
P - 3
P - 1
N


YOKOHAMA
DETAMACHI PIER
N
G
F
E
D
A
B
Apron width 10 m.
A
Apron width 10 m.
Apron width 15 m.
B
C
D
Length 113 m., depth 4.5 m.
Length 135 m., depth 7.5 m.
Length 135 m., depth 7.5 m.
Length 125 m., depth 9.0m
Length 125 m., depth 9.0m
Apron width 21 m.
Length 120 m., depth 4.5 m.

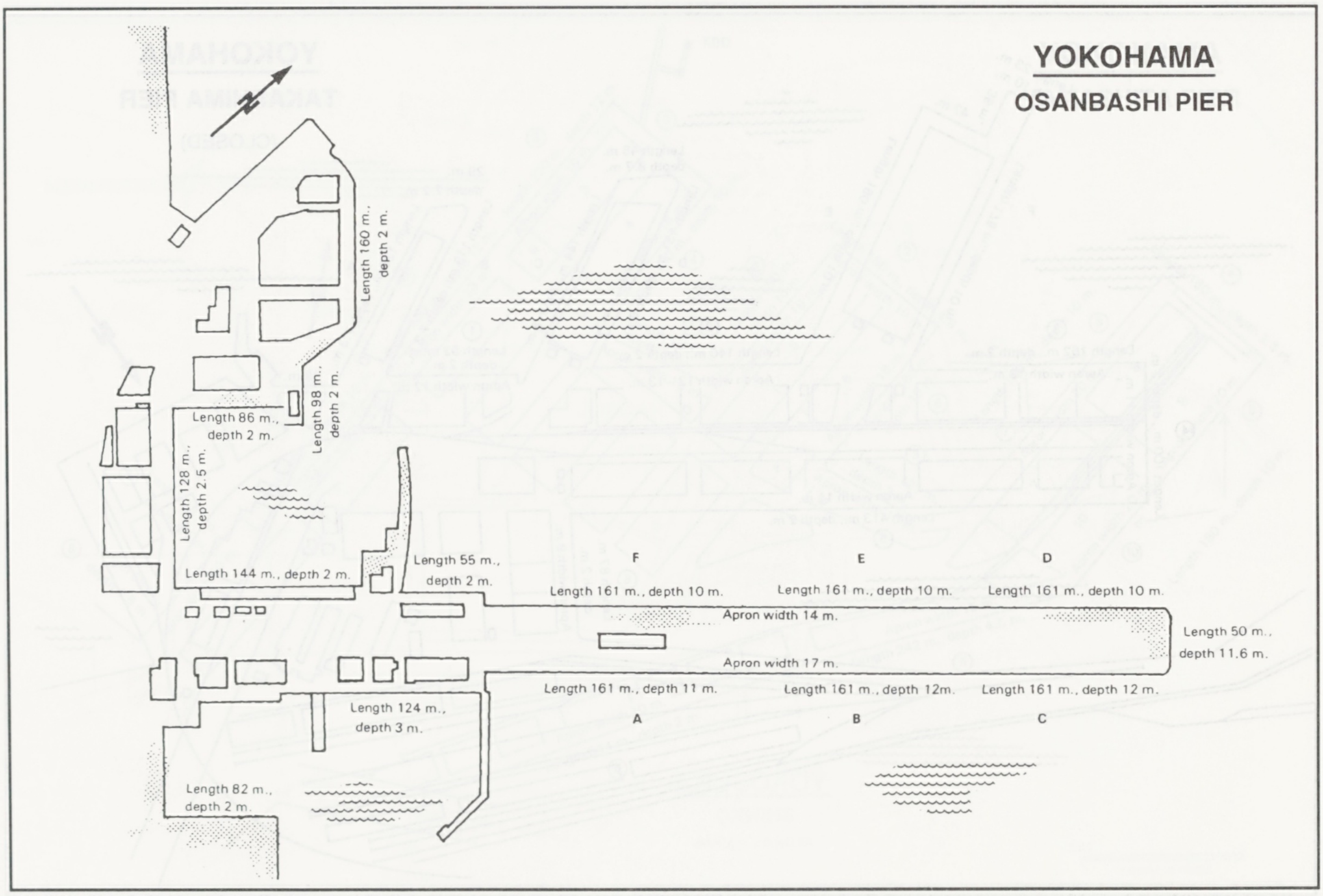

YOKOHAMA
HONMOKU PIER
Pier A
Pier B
Pier C
Pier D
3 Berths 600 m. Depth −10 m.
④
③
②
①
A–3
A–2
A–1
CFS
CFS
NYK M.O.
CFS
235 m.
Depth 5.5 m.
4 Berths 1,000 m. Depth −12 m.
⑤
⑥
⑦
⑧
Ro/Ro
200 m. −4 m.
11.0m
11.0m
11.0m
10.0m
④
③
②
①
B–4
B–3
B–1
B–5
B–6
B–7
B–8
B–9
⑤
⑥
⑦
⑧
⑨
5 Berths 1,000 m. Depth −10 m.
4 Berths 800 m. Depth −10 m.
201 m. −4 m.
④
③
②
①
C–4
C–3
C–2
C–1
C–5
C–7
C–9
⑤
⑥
⑦
⑧
⑨
5 Berths 1,000 m. Depth −10 m.
119 m.
−4 m.
15.0m
13.0m
12.0m
12.0m
11.0m
⑤
④
③
②
①
D–D
CFS
D–C
CFS
CFS
CFS
D–B
D–A
1614 m.



YOKOHAMA

MINAMI
HONMOKOKU PIER
(PROPOSED LAYOUT)

Bridge
Park Land
Container Related Area
Container Terminal
Container Terminal
Park Land
Office Area
Area for Storage Facilites
Container Terminal
Container Terminal
Composite
Distribution
Terminal
Park Land
Container Related Area

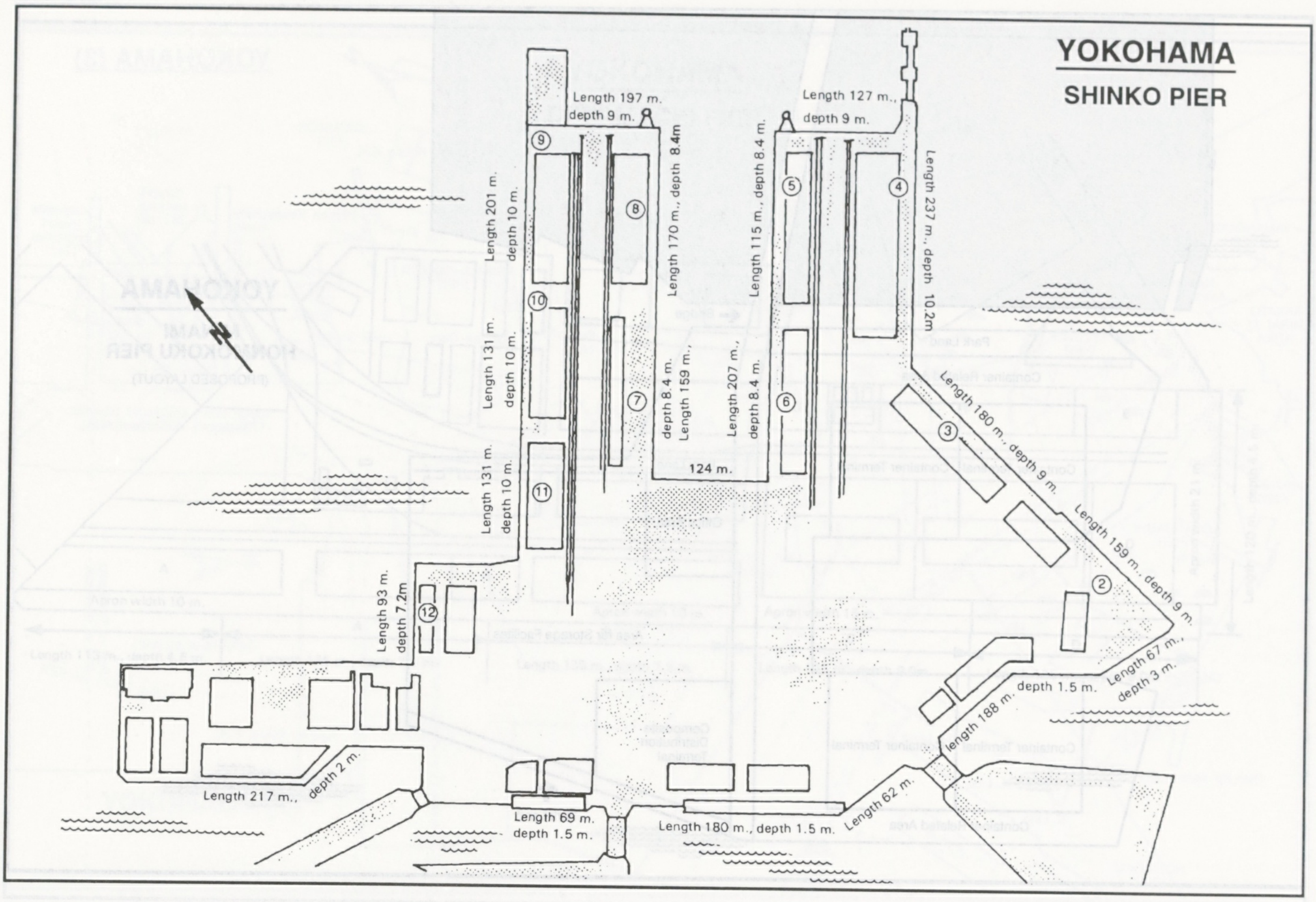


YOKOHAMA

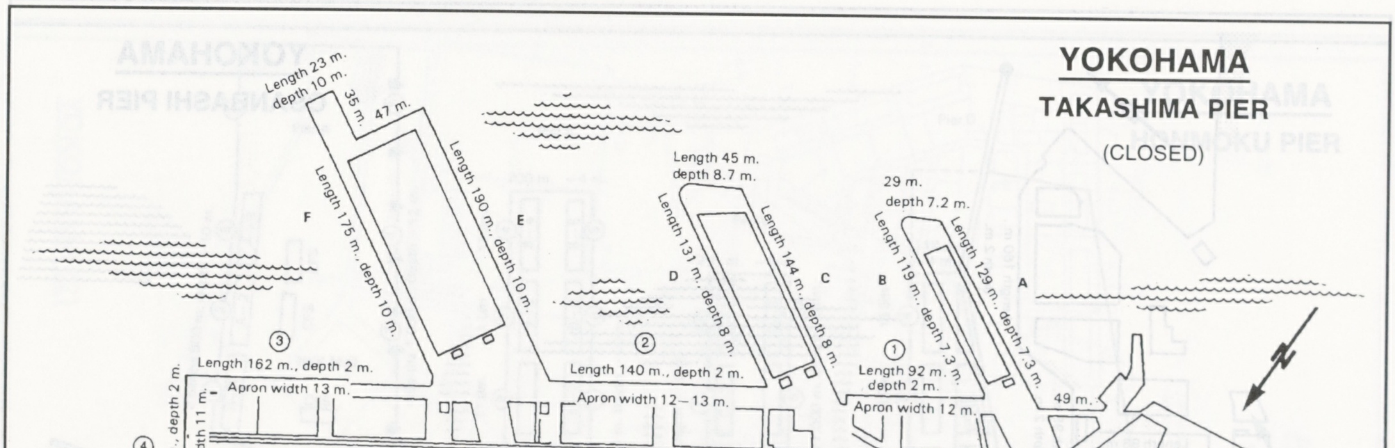
OSANBASHI PIER

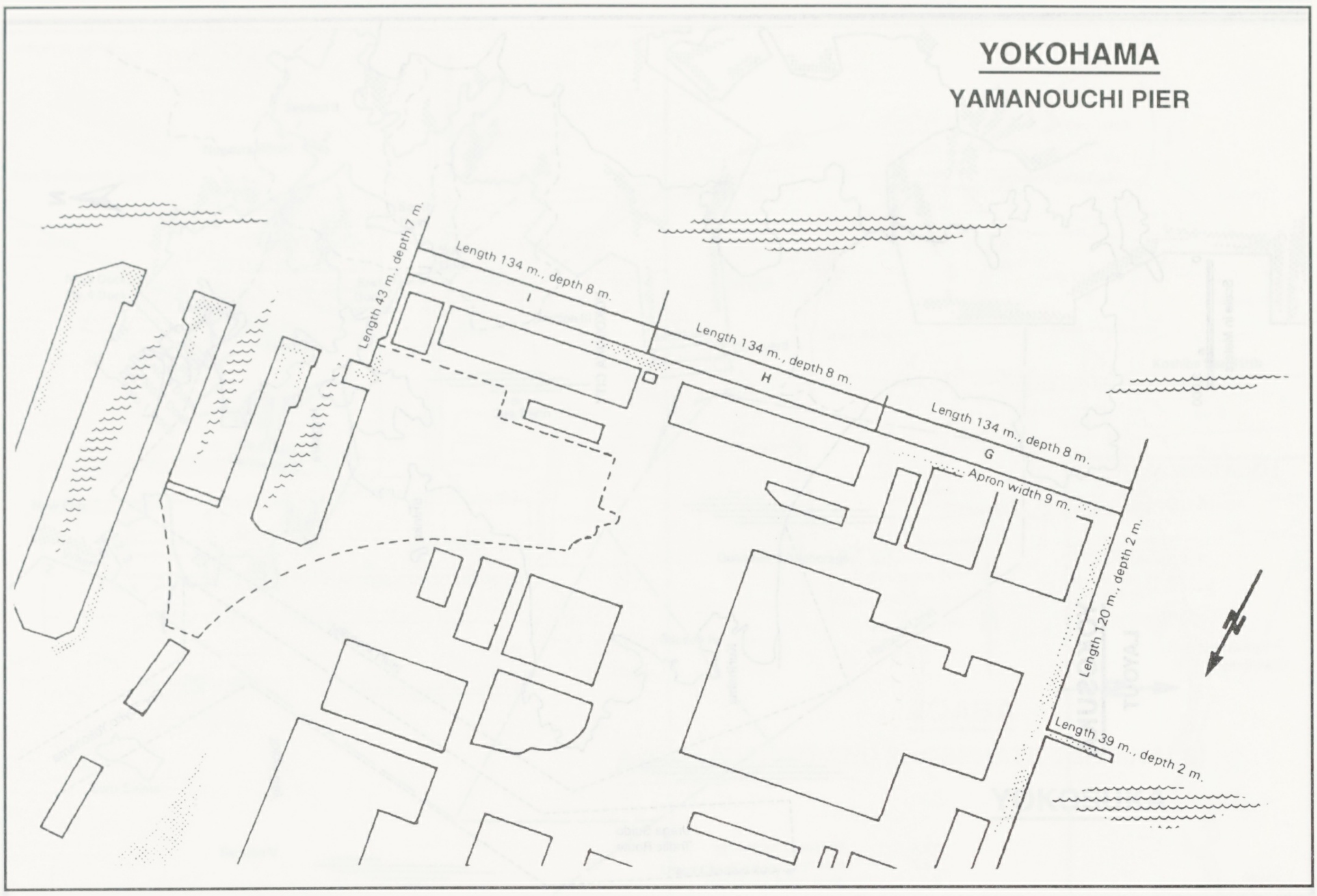
Length 160 m., depth 2 m.
Length 86 m., depth 2 m.
Length 98 m., depth 2 m.
Length 128 m., depth 2.5 m.
Length 144 m., depth 2 m.
Length 55 m., depth 2 m.
F
E
D
Length 161 m., depth 10 m.
Length 161 m., depth 10 m.
Length 161 m., depth 10 m.
Apron width 14 m.
Length 50 m., depth 11.6 m.
Apron width 17 m.
Length 161 m., depth 11 m.
Length 161 m., depth 12m.
Length 161 m., depth 12 m.
A
B
C
Length 124 m., depth 3 m.
Length 82 m., depth 2 m.

YOKOHAMA
SHINKO PIER


Length 197 m.,
depth 9 m.
⑨
Length 201 m.
depth 10 m.
⑧
Length 170 m., depth 8.4m
⑩
Length 131 m.
depth 10 m.
⑦
depth 8.4 m.
Length 159 m.
⑪
Length 131 m.
depth 10 m.
⑫
Length 93 m.
depth 7.2m
Length 127 m.,
depth 9 m.
⑤
Length 115 m., depth 8.4 m.
⑥
Length 207 m.,
depth 8.4 m.
124 m.
④
Length 237 m., depth 10.2m
③
Length 180 m., depth 9 m.
Length 159 m., depth 9 m.
②
Length 67 m.,
depth 3 m.
depth 1.5 m.
Length 188 m.
Length 62 m.
Length 180 m., depth 1.5 m.
Length 69 m.
depth 1.5 m.
Length 217 m.,
depth 2 m.

YOKOHAMA
TAKASHIMA PIER
(CLOSED)

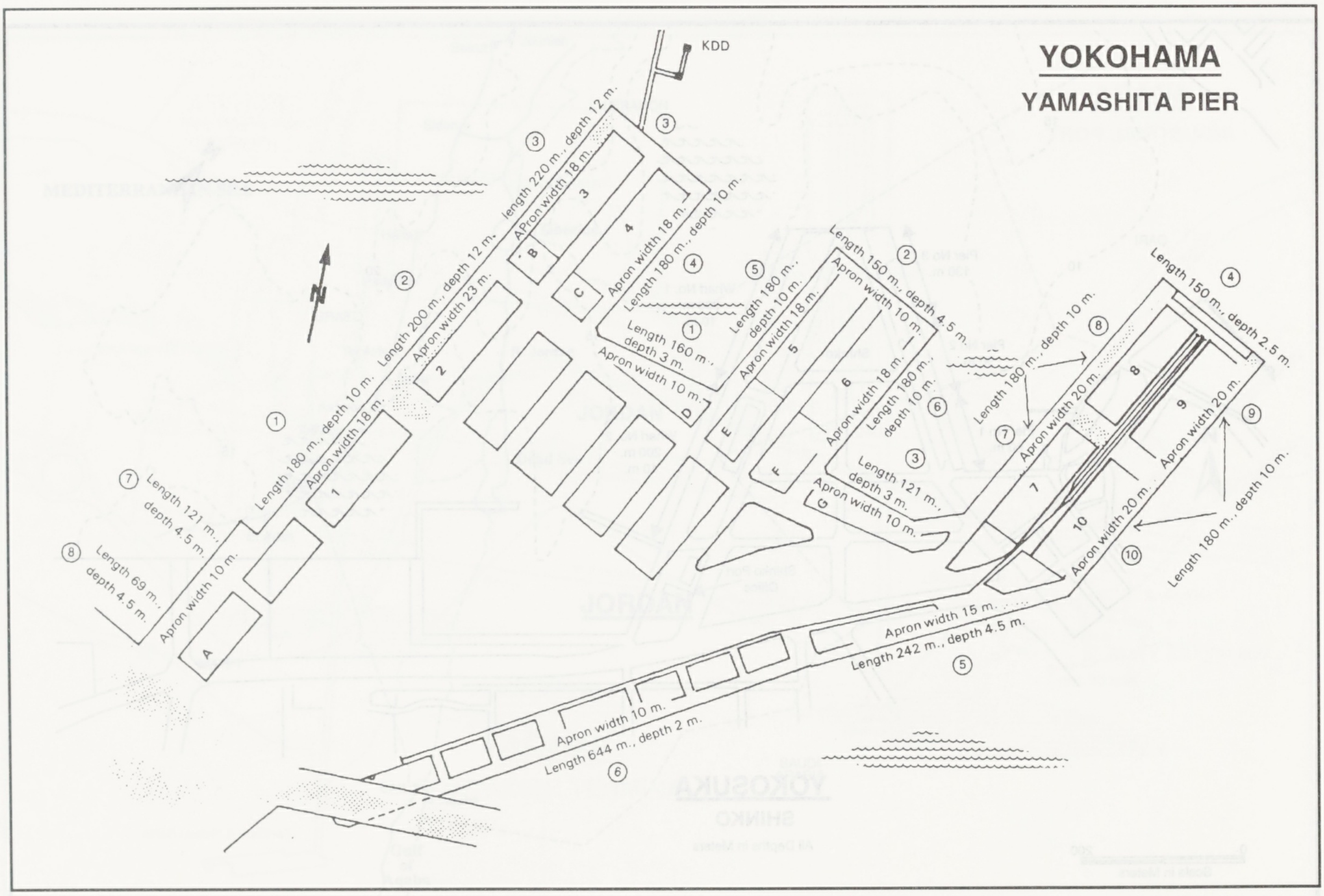

Length 23 m.
depth 10 m.
35 m.
47 m.
Length 190 m., depth 10 m.
Length 175 m., depth 10 m.
F
E
③
Length 162 m., depth 2 m.
Apron width 13 m.
④
Length 100 m., depth 2 m.
Apron width 11 m.
②
Length 140 m., depth 2 m.
Apron width 12—13 m.
Length 45 m.
depth 8.7 m.
Length 131 m., depth 8 m.
Length 144 m., depth 8 m.
D
C
B
A
29 m.
depth 7.2 m.
Length 119 m., depth 7.3 m.
Length 129 m., depth 7.3 m.
①
Length 92 m.,
depth 2 m.
Apron width 12 m.
49 m.
Apron width 11 m.
Length 413 m., depth 2 m.
⑤
⑥
Length 87 m.
depth 2 m.
Apron width 9 m.



YOKOHAMA

YAMANOUCHI PIER

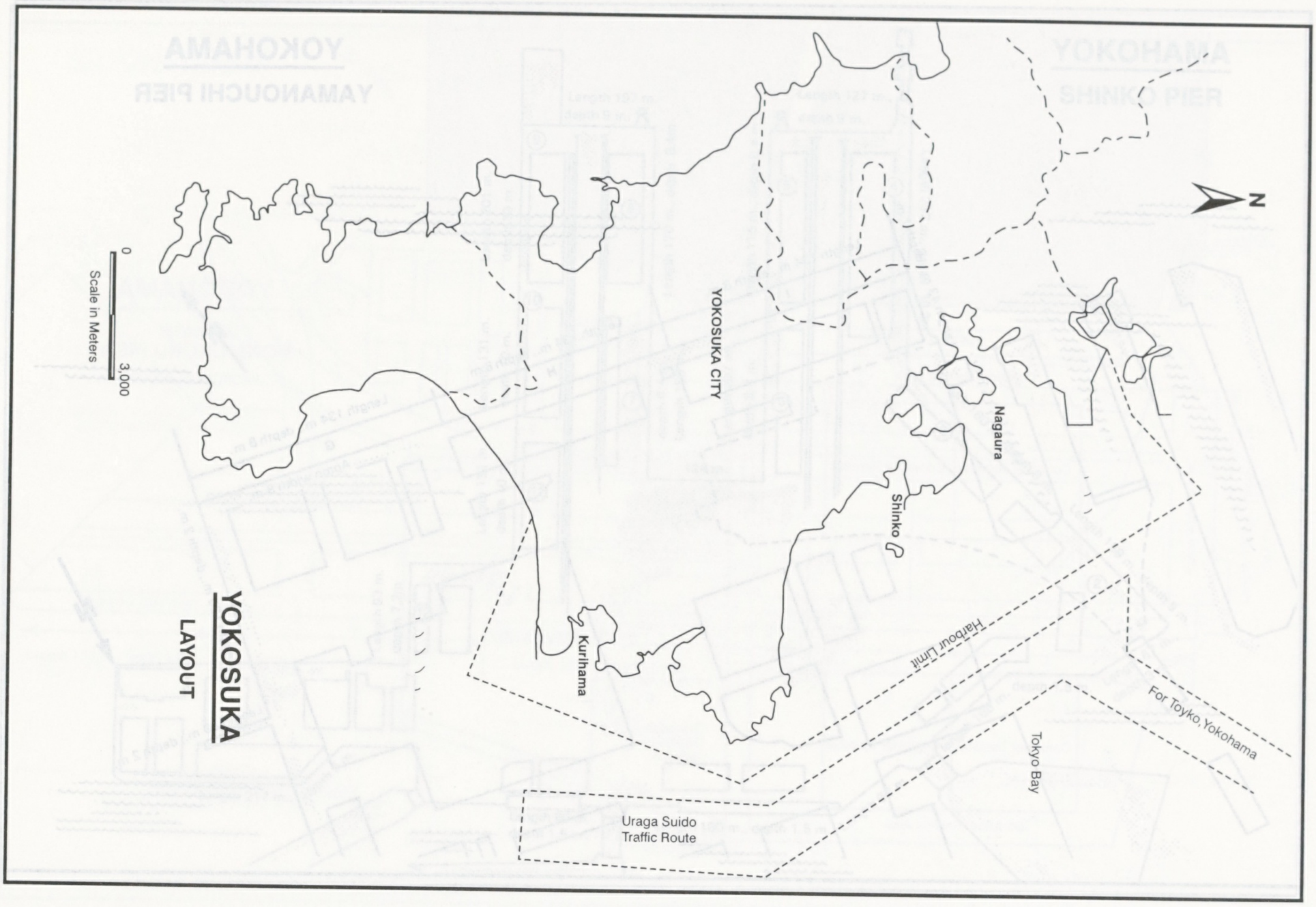
Length 43 m., depth 7 m.
Length 134 m., depth 8 m.
I
Length 134 m., depth 8 m.
H
Length 134 m., depth 8 m.
G
Apron width 9 m.
Length 120 m., depth 2 m.
Length 39 m., depth 2 m.
N



YOKOHAMA

YAMASHITA PIER

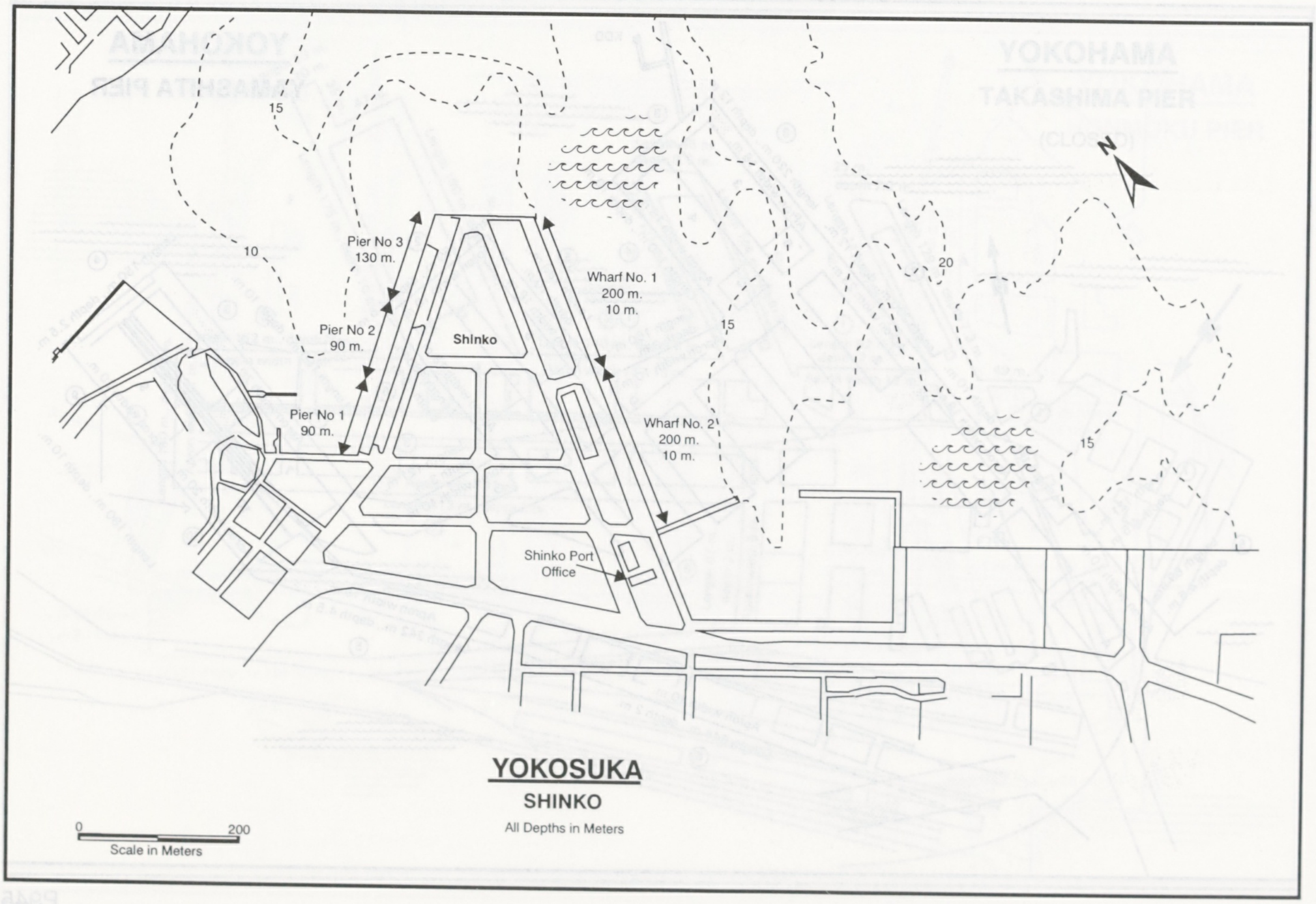
KDD
③
③ Length 220 m., depth 12 m.
APron width 18 m.
3
4
B
C
Apron width 18 m.
Length 180 m., depth 10 m.
④
② Length 200 m., depth 12 m.
Apron width 23 m.
2
① Length 160 m., depth 3 m.
Apron width 10 m.
D
⑤ Length 180 m., depth 10 m.
Apron width 18 m.
5
E
F
Length 150 m., depth 4.5 m. ②
Apron width 10 m.
6
Apron width 18 m.
Length 180 m., depth 10 m. ⑥
③ Length 121 m., depth 3 m.
G
Apron width 10 m.
Length 150 m., depth 2.5 m. ④
Length 180 m., depth 10 m. ⑧
⑦
Apron width 20 m.
8
9
Apron width 20 m.
⑨
7
10
Apron width 20 m.
⑩
Length 180 m., depth 10 m.
① Length 180 m., depth 10 m.
Apron width 18 m.
1
⑦ Length 121 m., depth 4.5 m.
⑧ Length 69 m., depth 4.5 m.
Apron width 10 m.
A
Apron width 15 m.
Length 242 m., depth 4.5 m.
⑤
Apron width 10 m.
Length 644 m., depth 2 m.
⑥
N



YOKOSUKA

LAYOUT

Scale in Meters
0
3,000
N
YOKOSUKA CITY
Nagaura
Shinko
Kurihama
Harbour Limit
For Toyko,Yokohama
Tokyo Bay
Uraga Suido
Traffic Route

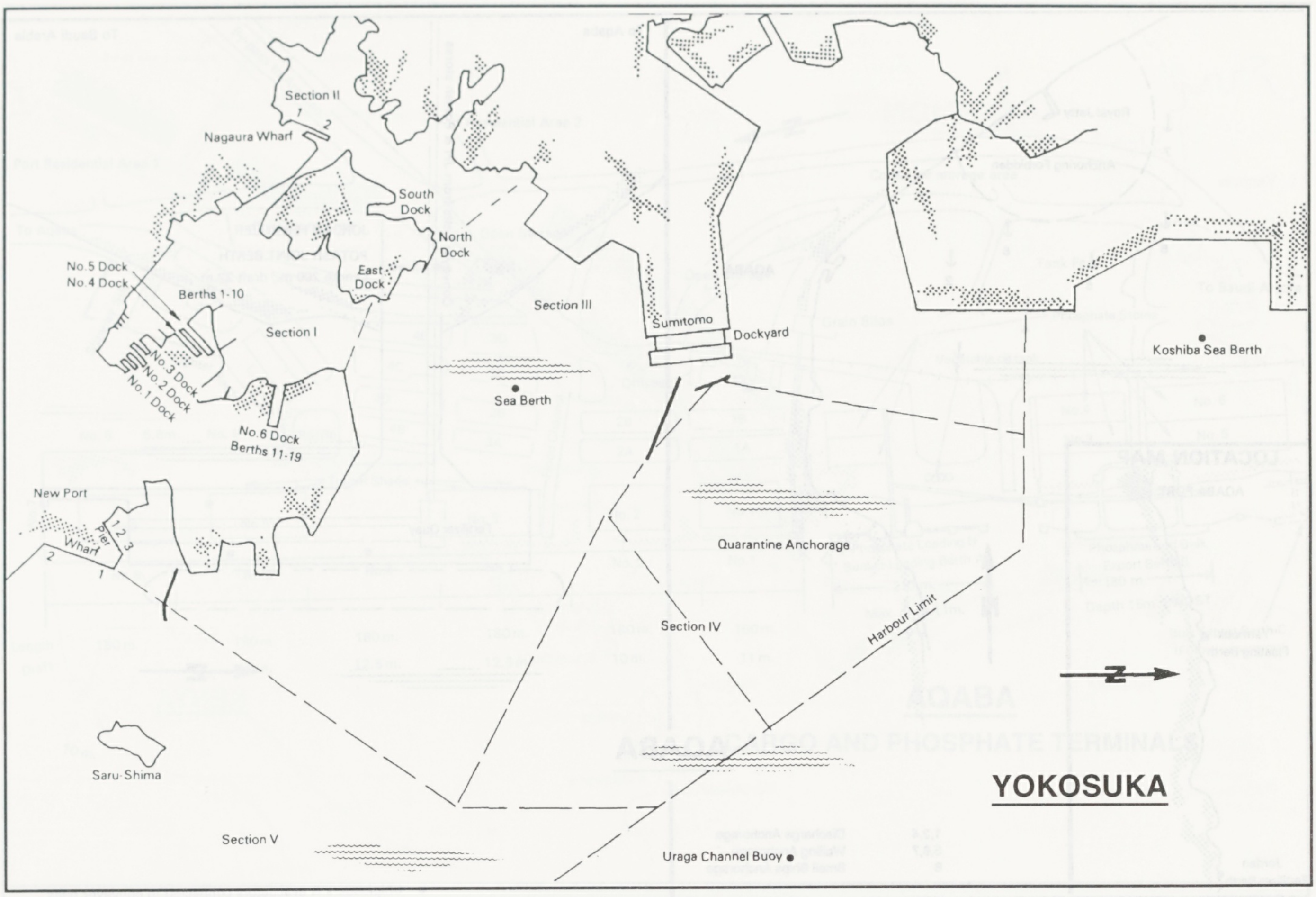


YOKOSUKA

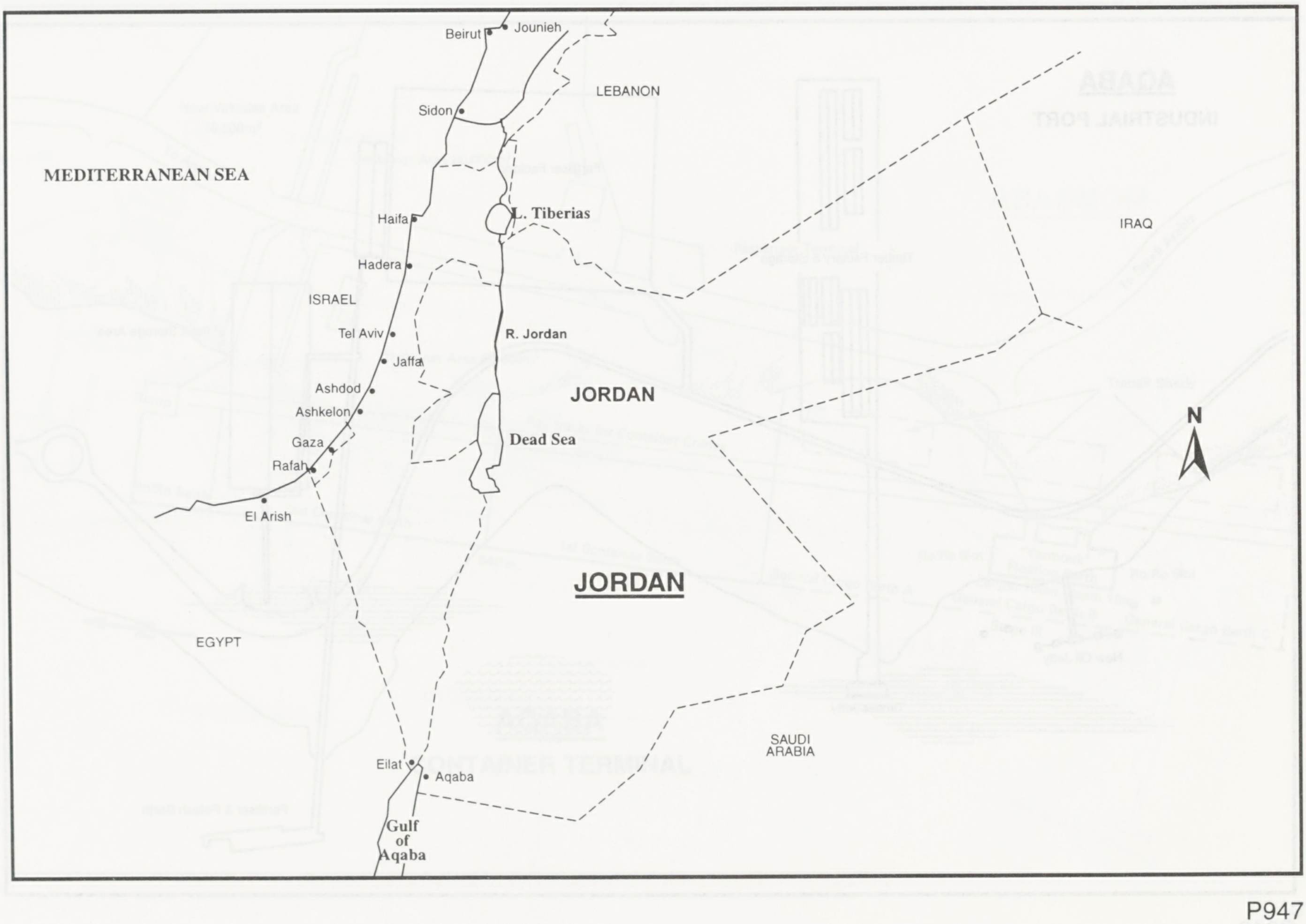
SHINKO

All Depths in Meters

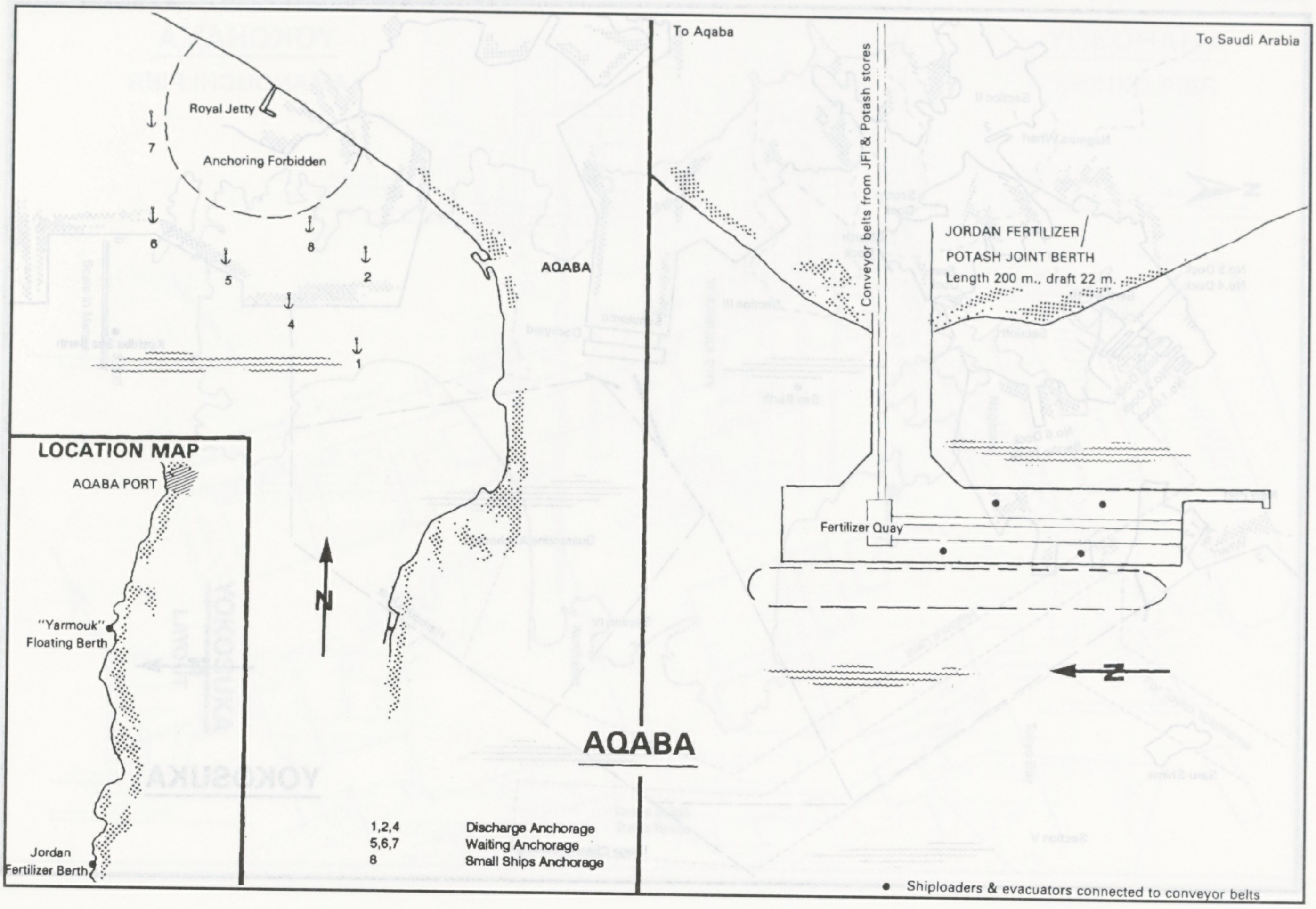
15
10
N
Pier No 3
130 m.
Pier No 2
90 m.
Pier No 1
90 m.
Shinko
Wharf No. 1
200 m.
10 m.
Wharf No. 2
200 m.
10 m.
20
15
15
Shinko Port
Office
0
200
Scale in Meters

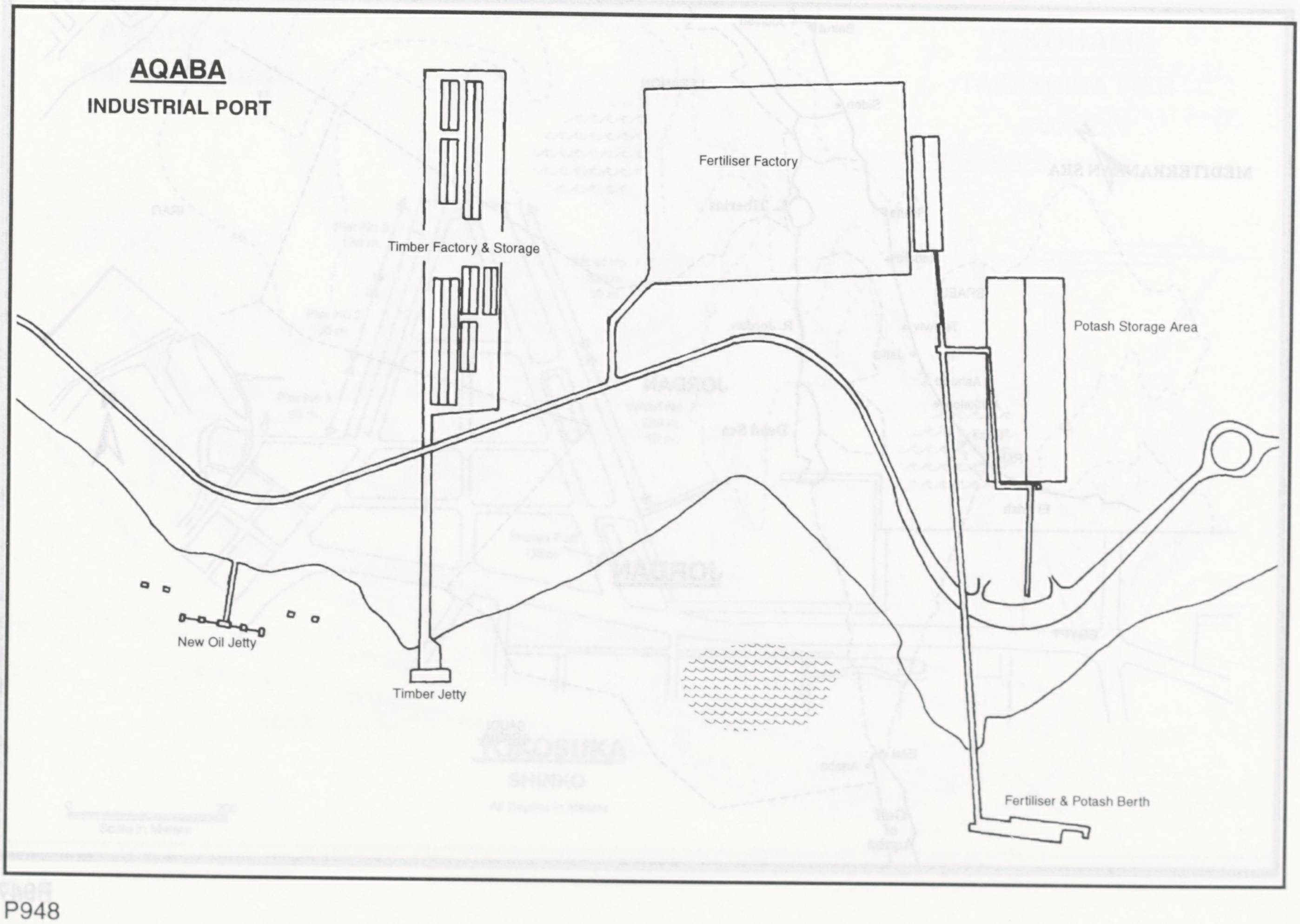

Section II
1
2
Nagaura Wharf
South Dock
North Dock
East Dock
No.5 Dock
No.4 Dock
Berths 1-10
Section I
No.3 Dock
No.2 Dock
No.1 Dock
No.6 Dock
Berths 11-19
New Port
1 2 3
Pier
Wharf
2
1
Section III
Sumitomo
Dockyard
Sea Berth
Koshiba Sea Berth
Quarantine Anchorage
Section IV
Harbour Limit
N
Saru-Shima
Section V
Uraga Channel Buoy

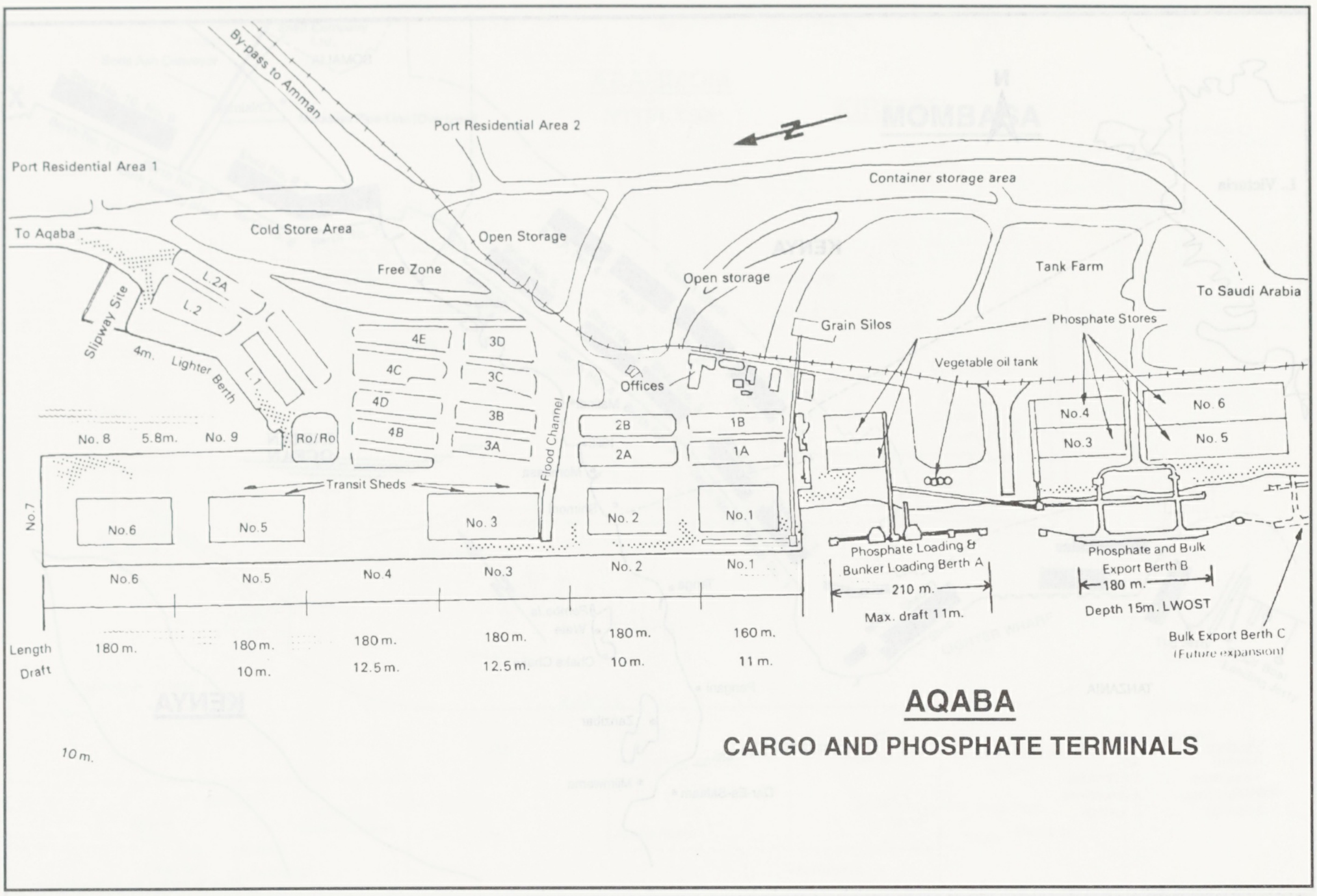
YOKOSUKA


Beirut
Jounieh
LEBANON
Sidon
MEDITERRANEAN SEA
Haifa
L. Tiberias
IRAQ
Hadera
ISRAEL
Tel Aviv
R. Jordan
Jaffa
Ashdod
JORDAN
Ashkelon
N
Dead Sea
Gaza
Rafah
El Arish
EGYPT
SAUDI ARABIA
Eilat
Aqaba
Gulf of Aqaba

JORDAN

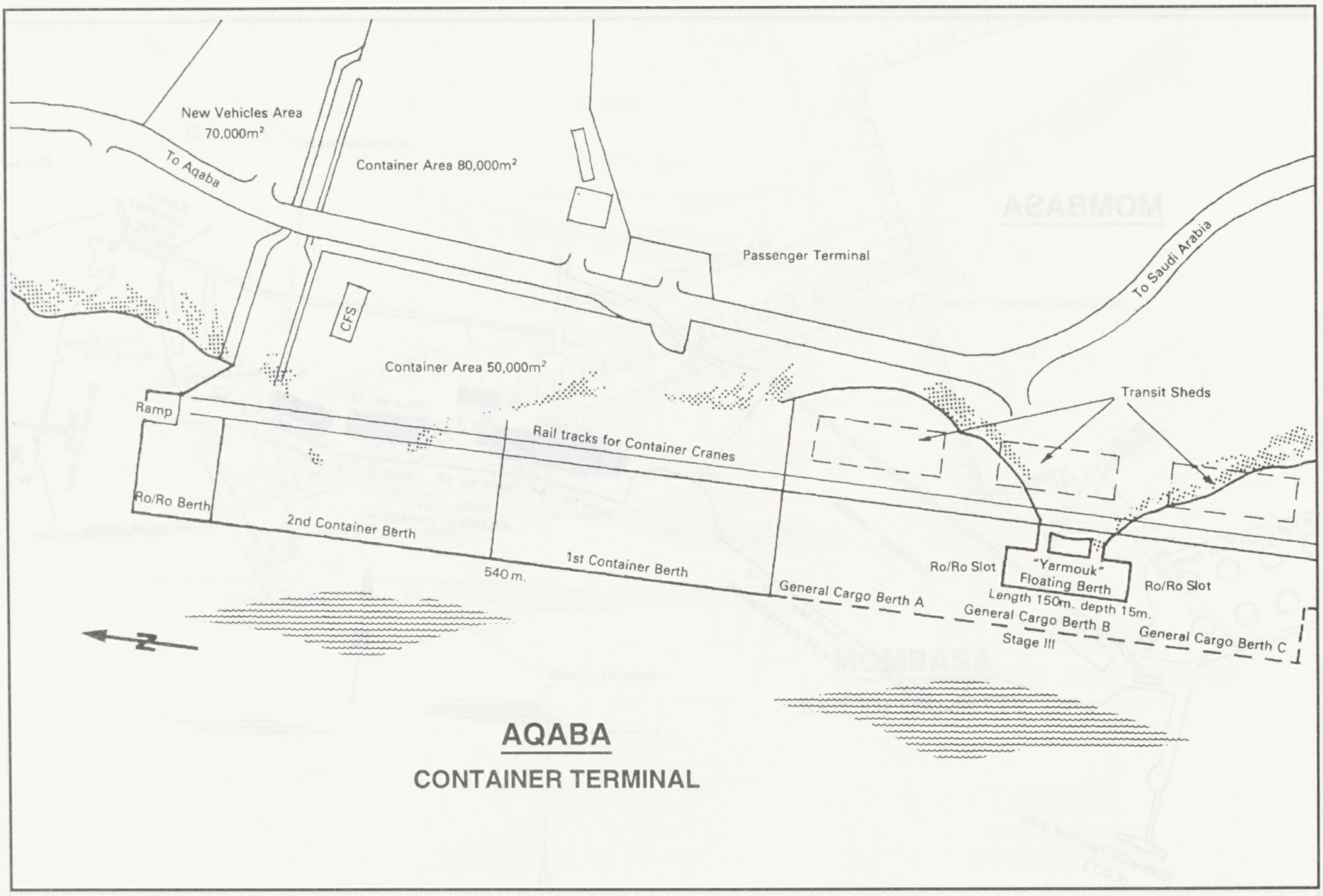

Royal Jetty
Anchoring Forbidden
7
6
5
8
2
4
1
AQABA
LOCATION MAP
AQABA PORT
"Yarmouk" Floating Berth
Jordan Fertilizer Berth
N
AQABA
1,2,4 Discharge Anchorage
5,6,7 Waiting Anchorage
8 Small Ships Anchorage
To Aqaba
To Saudi Arabia
Conveyor belts from JFI & Potash stores
JORDAN FERTILIZER/ POTASH JOINT BERTH
Length 200 m., draft 22 m.
Fertilizer Quay
N
● Shiploaders & evacuators connected to conveyor belts


AQABA
INDUSTRIAL PORT
Timber Factory & Storage
Fertiliser Factory
Potash Storage Area
New Oil Jetty
Timber Jetty
Fertiliser & Potash Berth


By-pass to Amman
Port Residential Area 2
Port Residential Area 1
To Aqaba
Cold Store Area
Open Storage
Free Zone
Container storage area
Open storage
Tank Farm
To Saudi Arabia
Grain Silos
Phosphate Stores
Vegetable oil tank
Slipway Site
L.2A
L.2
L.1
4m.
Lighter Berth
4E
4C
4D
4B
3D
3C
3B
3A
Offices
Flood Channel
2B
2A
1B
1A
No. 4
No. 3
No. 6
No. 5
No. 8
5.8m.
No. 9
Ro/Ro
Transit Sheds
No. 7
No. 6
No. 5
No. 3
No. 2
No. 1
Phosphate Loading & Bunker Loading Berth A
210 m.
Max. draft 11m.
Phosphate and Bulk Export Berth B
180 m.
Depth 15m. LWOST
Bulk Export Berth C (Future expansion)
No. 6
No. 5
No. 4
No. 3
No. 2
No. 1
Length
Draft
180 m.
180 m.
10 m.
180 m.
12.5 m.
180 m.
12.5 m.
180 m.
10 m.
160 m.
11 m.
10 m.

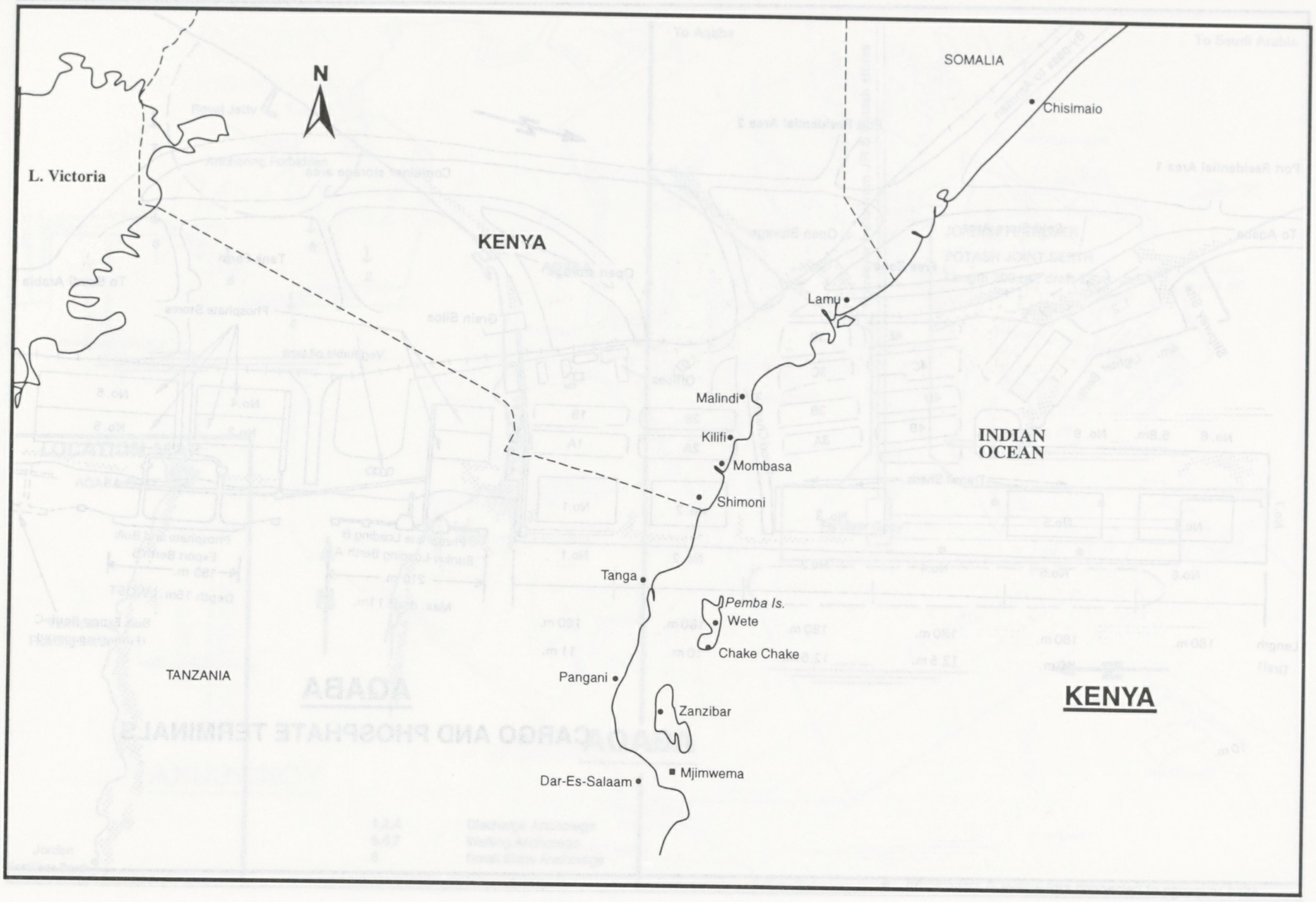
AQABA

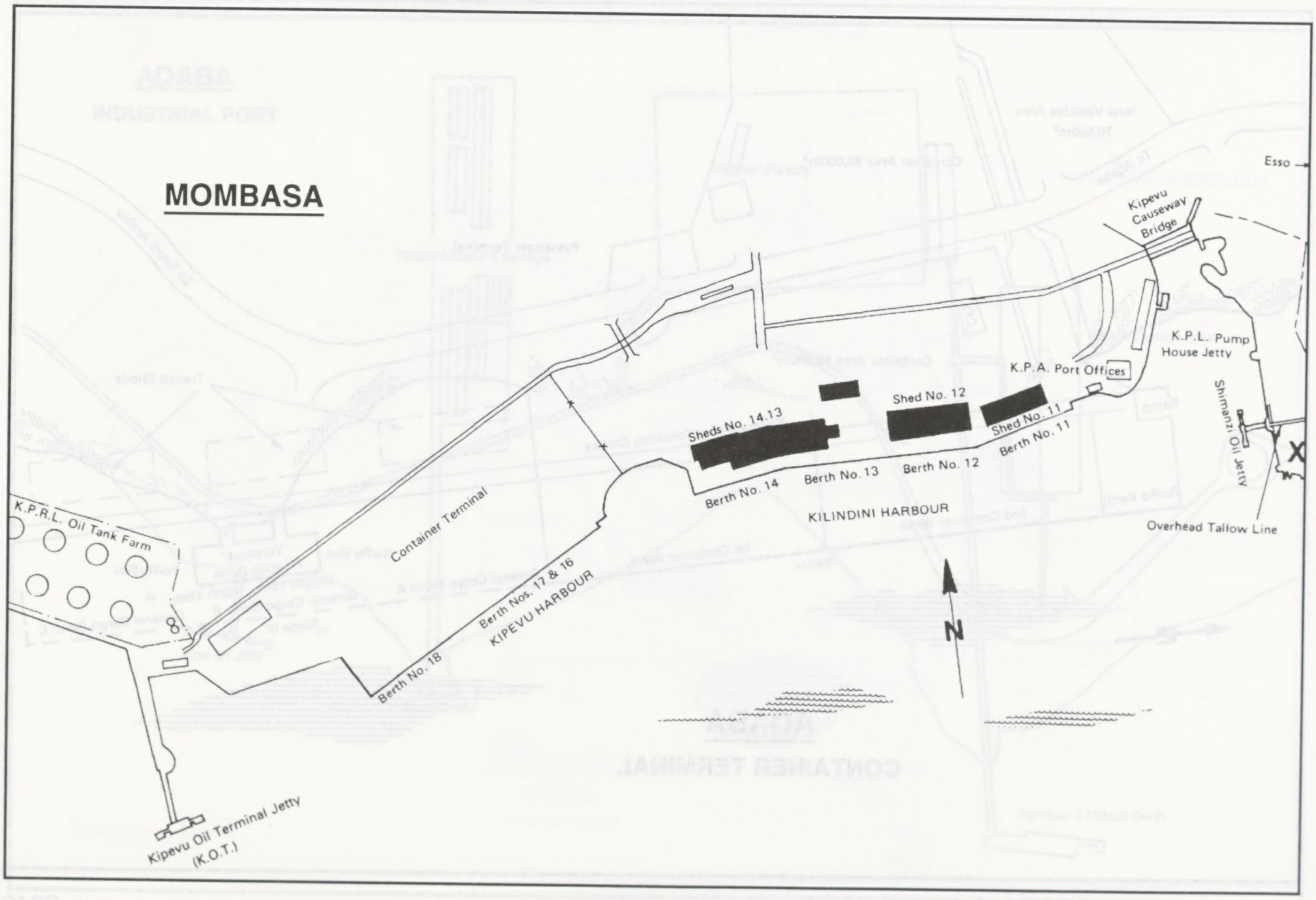
CARGO AND PHOSPHATE TERMINALS

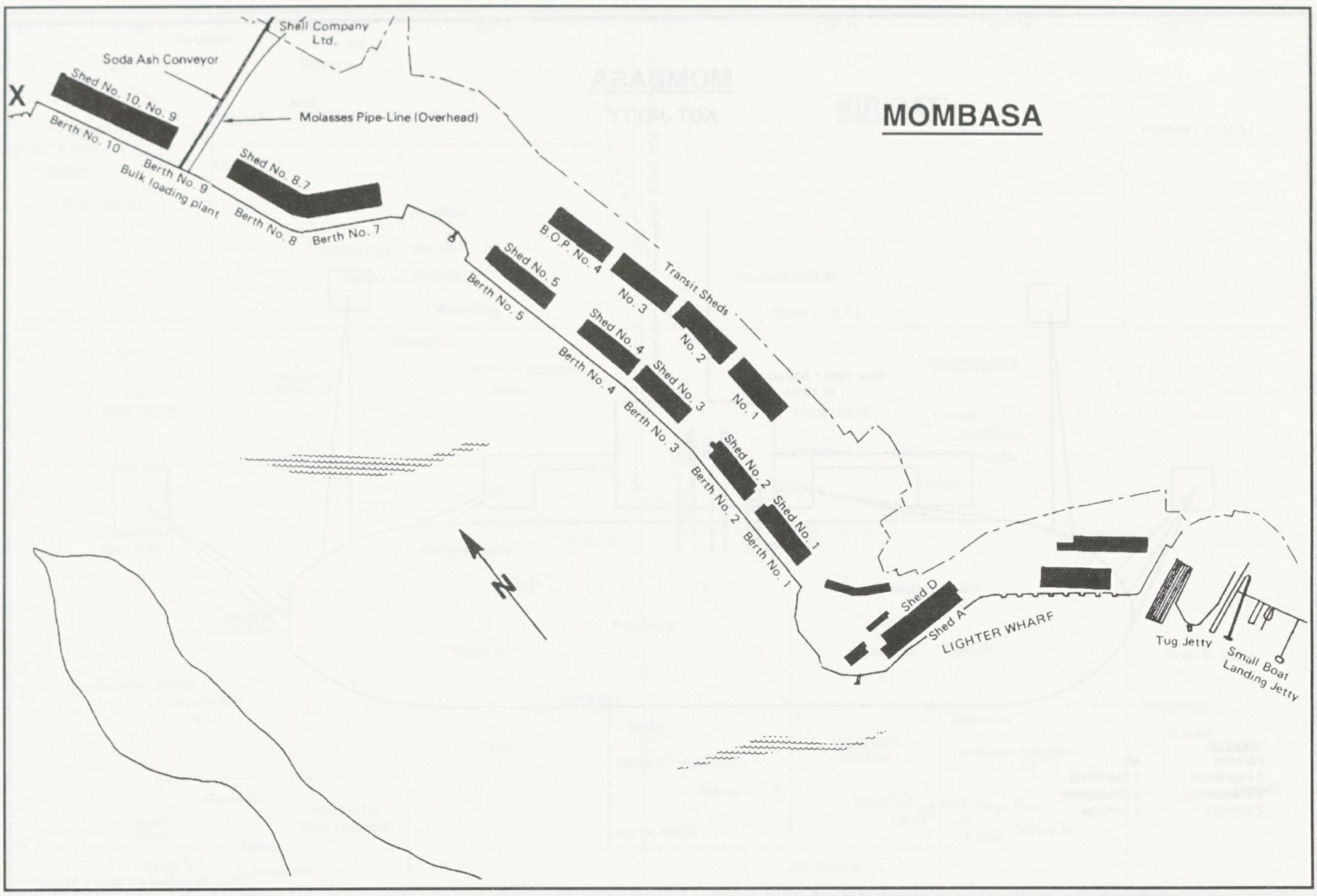

New Vehicles Area 70,000m²
To Aqaba
Container Area 80,000m²
Passenger Terminal
CFS
To Saudi Arabia
Container Area 50,000m²
Transit Sheds
Ramp
Rail tracks for Container Cranes
Ro/Ro Berth
2nd Container Berth
540 m.
1st Container Berth
General Cargo Berth A
Ro/Ro Slot
"Yarmouk" Floating Berth
Ro/Ro Slot
Length 150m. depth 15m.
General Cargo Berth B
Stage III
General Cargo Berth C

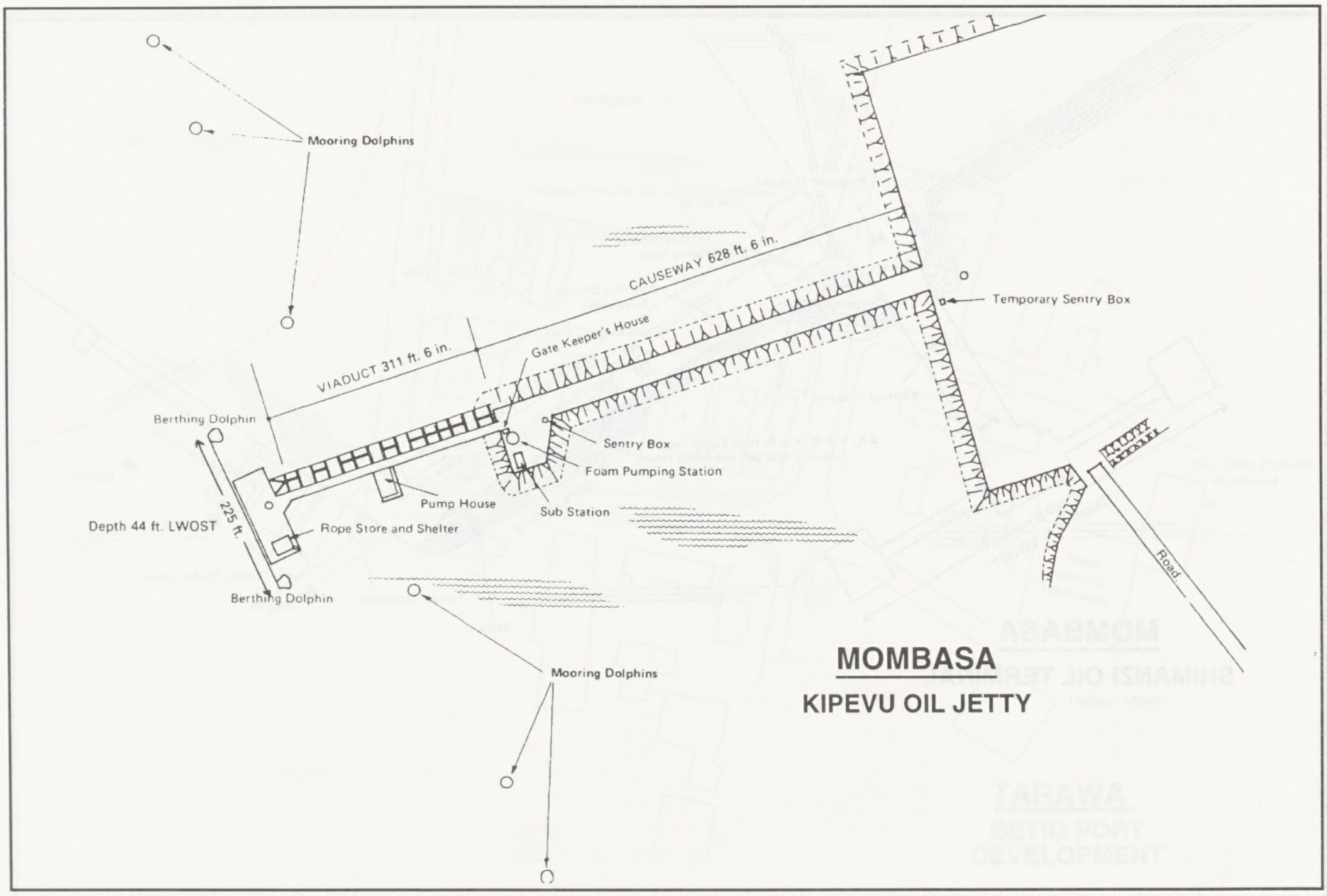
AQABA

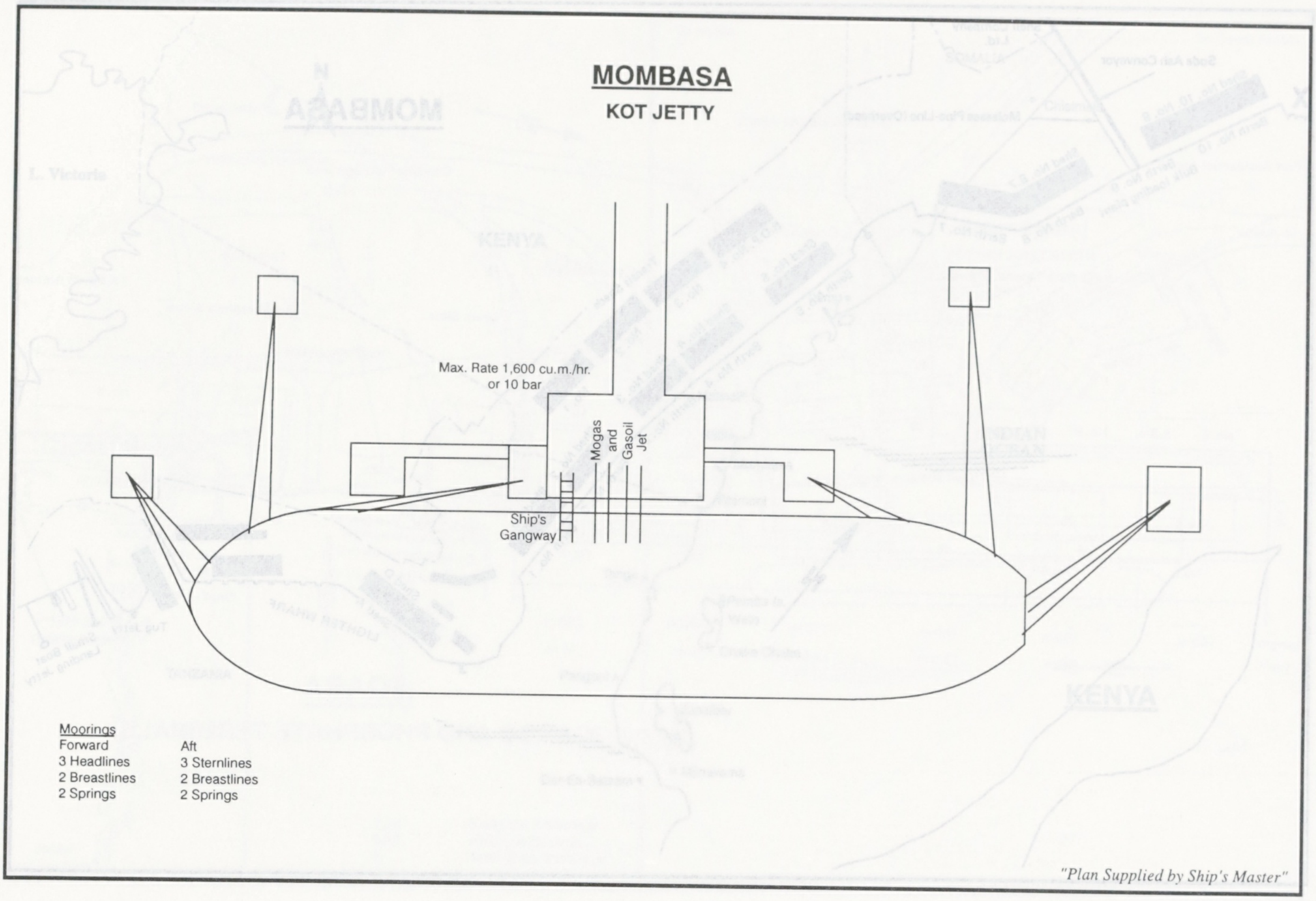
CONTAINER TERMINAL


N
L. Victoria
KENYA
SOMALIA
Chisimaio
Lamu
Malindi
Kilifi
Mombasa
Shimoni
INDIAN OCEAN
Tanga
Pemba Is.
Wete
Chake Chake
Pangani
TANZANIA
Zanzibar
Mjimwema
Dar-Es-Salaam
KENYA


MOMBASA
Esso
Kipevu Causeway Bridge
K.P.L. Pump House Jetty
K.P.A. Port Offices
Shimanzi Oil Jetty
X
Shed No. 12
Sheds No. 14.13
Shed No. 11
Berth No. 11
Berth No. 12
Berth No. 13
Berth No. 14
KILINDINI HARBOUR
Overhead Tallow Line
N
Container Terminal
K.P.R.L. Oil Tank Farm
Berth Nos. 17 & 16
KIPEVU HARBOUR
Berth No. 18
Kipevu Oil Terminal Jetty (K.O.T.)


MOMBASA
Shell Company Ltd.
Soda Ash Conveyor
Molasses Pipe-Line (Overhead)
X
Shed No. 10, No. 9
Berth No. 10
Berth No. 9
Bulk loading plant
Shed No. 8,7
Berth No. 8
Berth No. 7
B.O.P. No. 4
Shed No. 5
Berth No. 5
No. 3
Transit Sheds
Shed No. 4
No. 2
Shed No. 3
No. 1
Berth No. 4
Berth No. 3
Shed No. 2
Shed No. 1
Berth No. 2
Berth No. 1
N
Shed D
Shed A
LIGHTER WHARF
Tug Jetty
Small Boat Landing Jetty

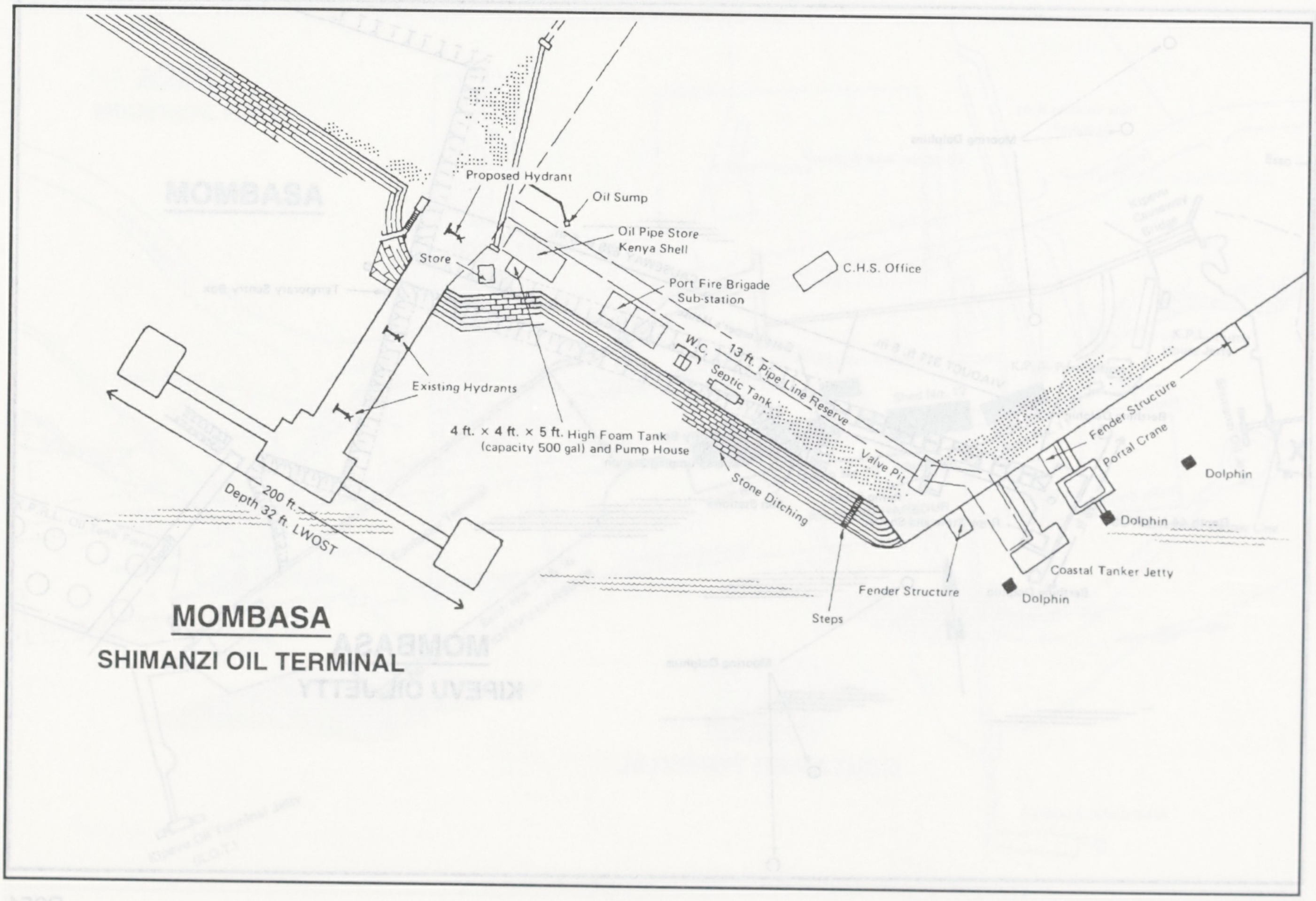

Mooring Dolphins
CAUSEWAY 628 ft. 6 in.
Temporary Sentry Box
VIADUCT 311 ft. 6 in.
Gate Keeper's House
Berthing Dolphin
Sentry Box
Foam Pumping Station
Pump House
Sub Station
Depth 44 ft. LWOST
225 ft.
Rope Store and Shelter
Berthing Dolphin
Road
Mooring Dolphins
MOMBASA
KIPEVU OIL JETTY



MOMBASA
KOT JETTY

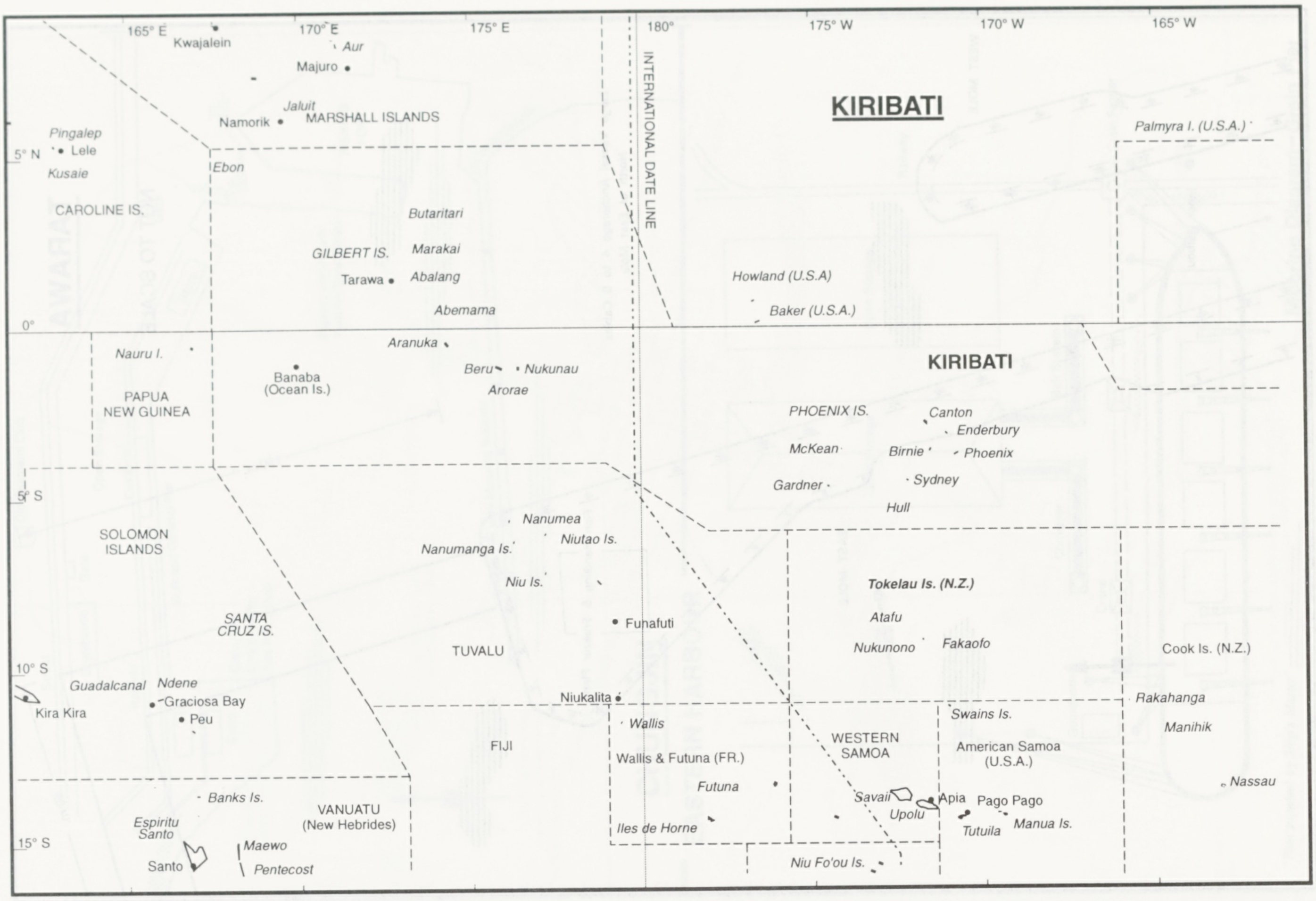
Max. Rate 1,600 cu.m./hr.
or 10 bar
Mogas
and
Gasoil
Jet
Ship's
Gangway
Moorings
Forward
3 Headlines
2 Breastlines
2 Springs
Aft
3 Sternlines
2 Breastlines
2 Springs

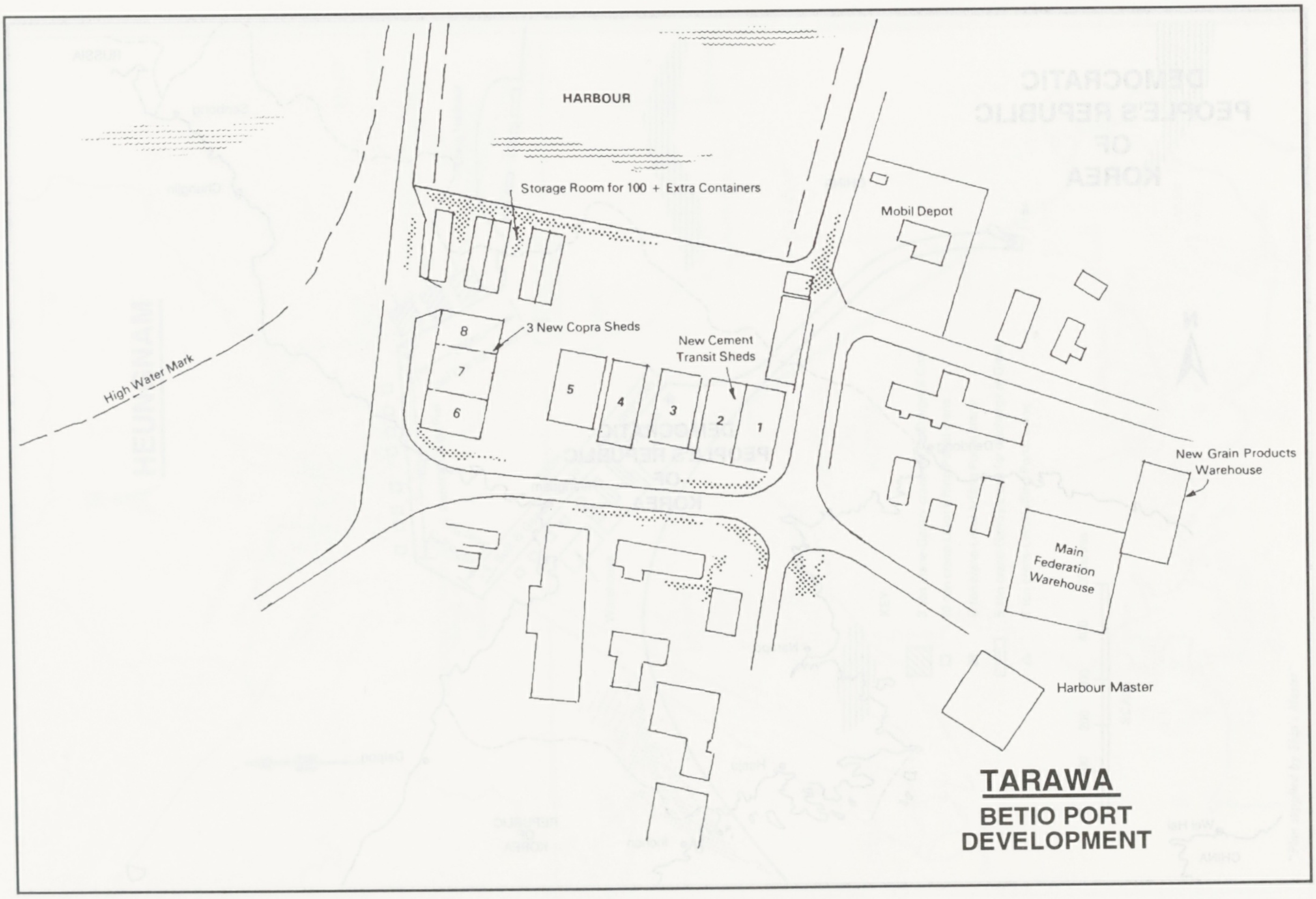
"Plan Supplied by Ship's Master"

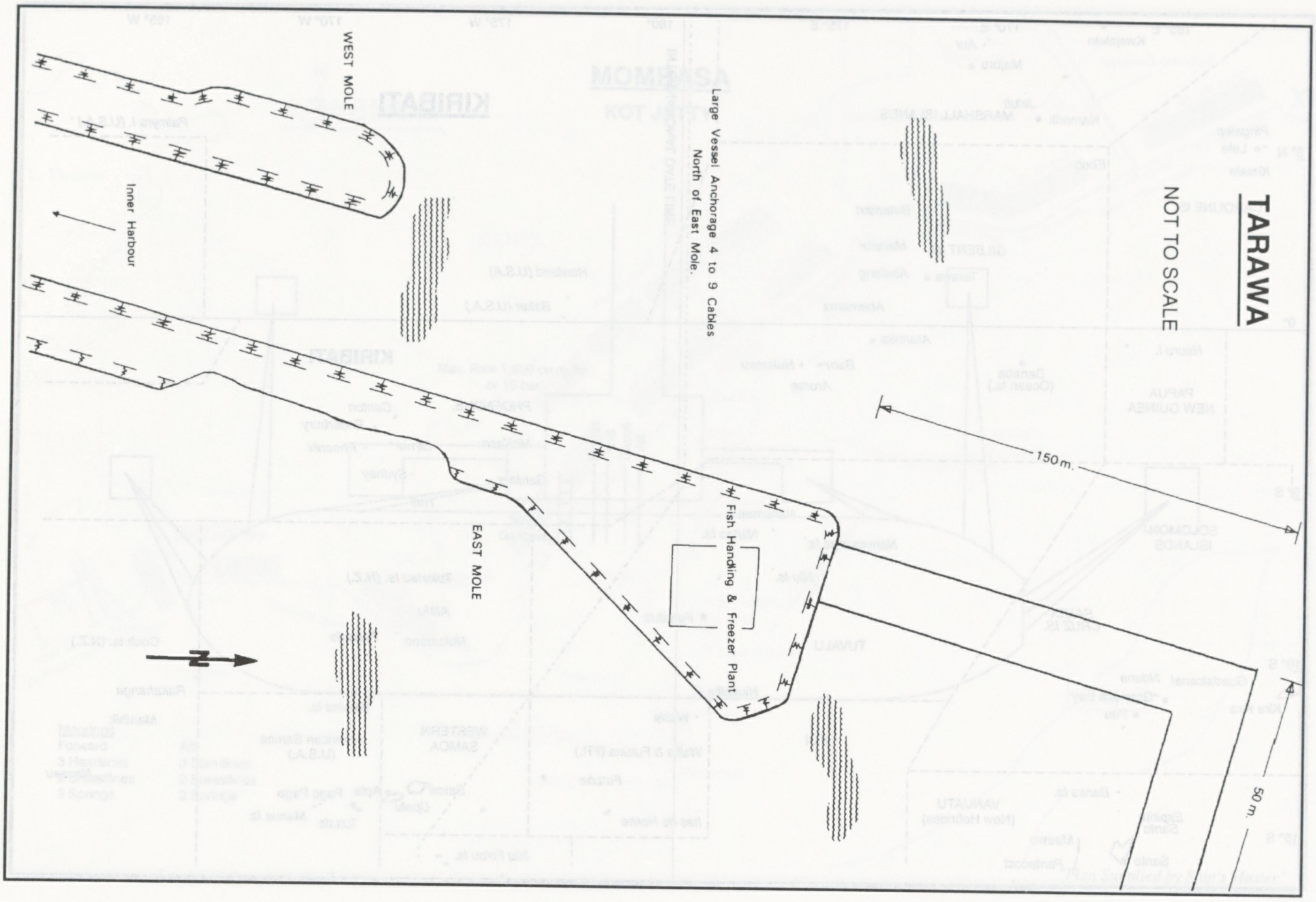


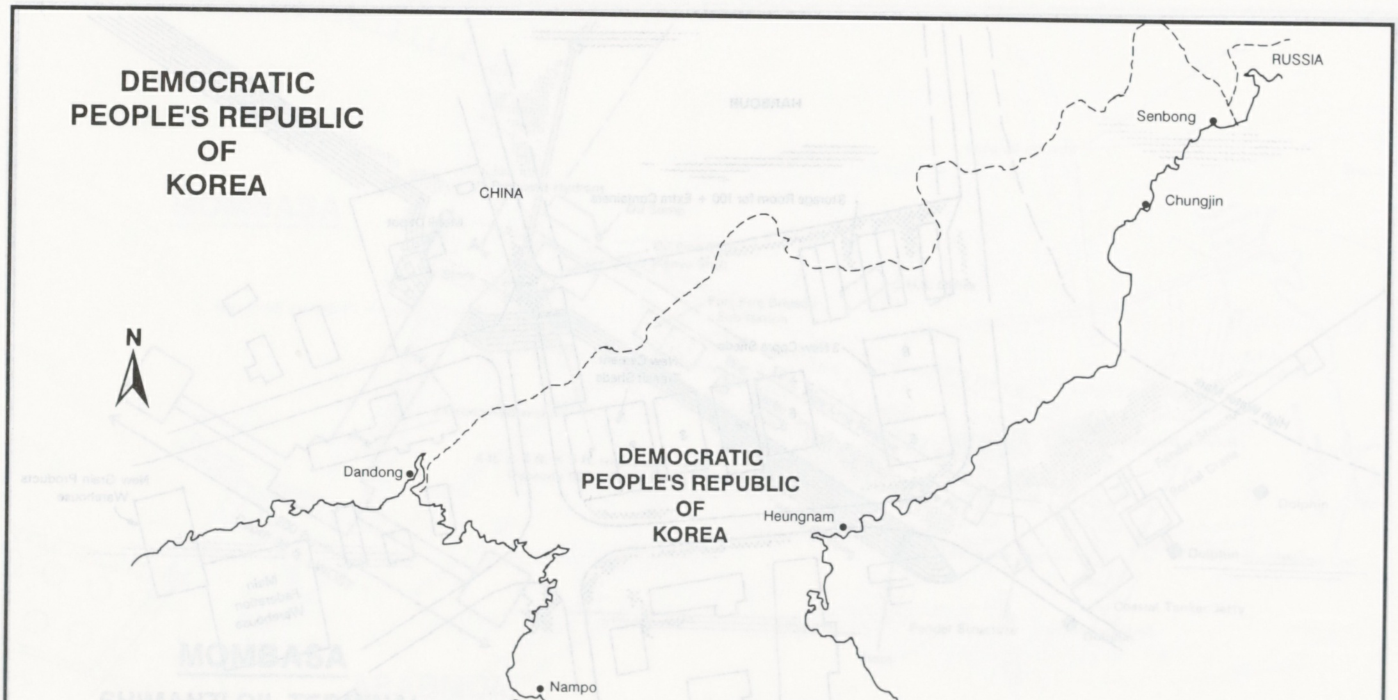
MOMBASA
SHIMANZI OIL TERMINAL

Proposed Hydrant
Oil Sump
Oil Pipe Store
Kenya Shell
Store
C.H.S. Office
Port Fire Brigade
Sub-station
W.C.
13 ft. Pipe Line Reserve
Septic Tank
Valve Pit
Existing Hydrants
4 ft. × 4 ft. × 5 ft. High Foam Tank
(capacity 500 gal) and Pump House
Stone Ditching
200 ft.
Depth 32 ft. LWOST
Fender Structure
Portal Crane
Dolphin
Dolphin
Coastal Tanker Jetty
Fender Structure
Dolphin
Steps

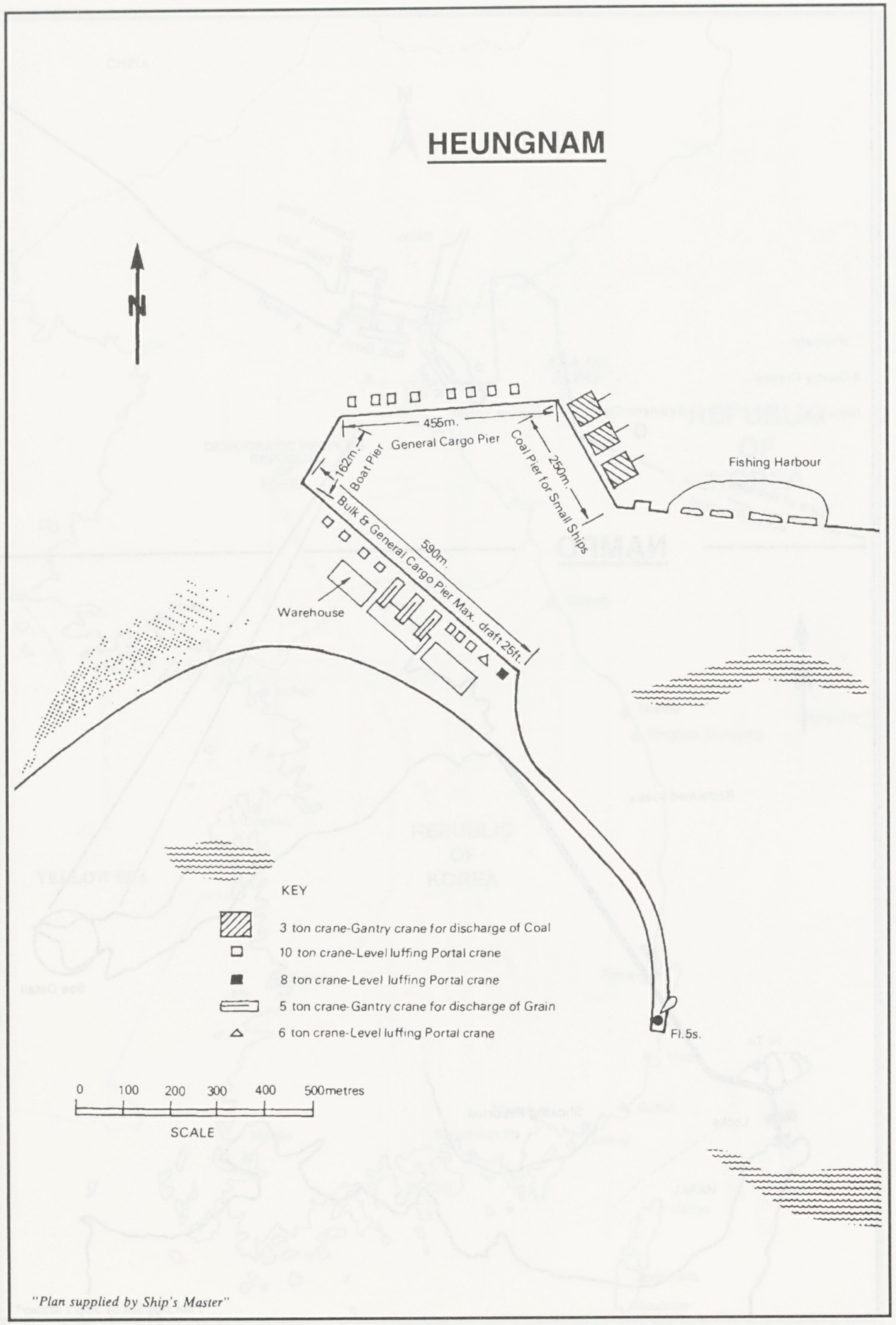

KIRIBATI
165° E
170° E
175° E
180°
175° W
170° W
165° W
INTERNATIONAL DATE LINE
Kwajalein
Aur
Majuro
Jaluit
Namorik
MARSHALL ISLANDS
Pingalep
Lele
Kusaie
5° N
Ebon
CAROLINE IS.
Butaritari
GILBERT IS.
Marakai
Tarawa
Abalang
Abemama
0°
Aranuka
Nauru I.
Banaba
(Ocean Is.)
PAPUA
NEW GUINEA
Beru
Nukunau
Arorae
Palmyra I. (U.S.A.)
Howland (U.S.A)
Baker (U.S.A.)
KIRIBATI
PHOENIX IS.
Canton
Enderbury
McKean
Birnie
Phoenix
Gardner
Sydney
Hull
5° S
SOLOMON
ISLANDS
Nanumea
Niutao Is.
Nanumanga Is.
Niu Is.
SANTA
CRUZ IS.
Funafuti
TUVALU
Tokelau Is. (N.Z.)
Atafu
Nukunono
Fakaofo
Cook Is. (N.Z.)
10° S
Guadalcanal
Ndene
Graciosa Bay
Peu
Kira Kira
Niukalita
Wallis
FIJI
Wallis & Futuna (FR.)
Futuna
Iles de Horne
WESTERN
SAMOA
Swains Is.
American Samoa
(U.S.A.)
Rakahanga
Manihik
Nassau
Savaii
Apia
Upolu
Pago Pago
Tutuila
Manua Is.
Banks Is.
VANUATU
(New Hebrides)
Espiritu
Santo
15° S
Santo
Maewo
Pentecost
Niu Fo'ou Is.


HARBOUR
Storage Room for 100 + Extra Containers
Mobil Depot
3 New Copra Sheds
8
7
6
New Cement
Transit Sheds
5
4
3
2
1
High Water Mark
New Grain Products
Warehouse
Main
Federation
Warehouse
Harbour Master
TARAWA
BETIO PORT
DEVELOPMENT


TARAWA
NOT TO SCALE
WEST MOLE
Large Vessel Anchorage 4 to 9 Cables North of East Mole.
Inner Harbour
EAST MOLE
Fish Handing & Freezer Plant
150 m.
50 m.
N


DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA
N
RUSSIA
Senbong
Chungjin
CHINA
DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA
Dandong
Heungnam
Nampo
Haeju
Daipori
Wei Hai
CHINA
Inchon
REPUBLIC OF KOREA

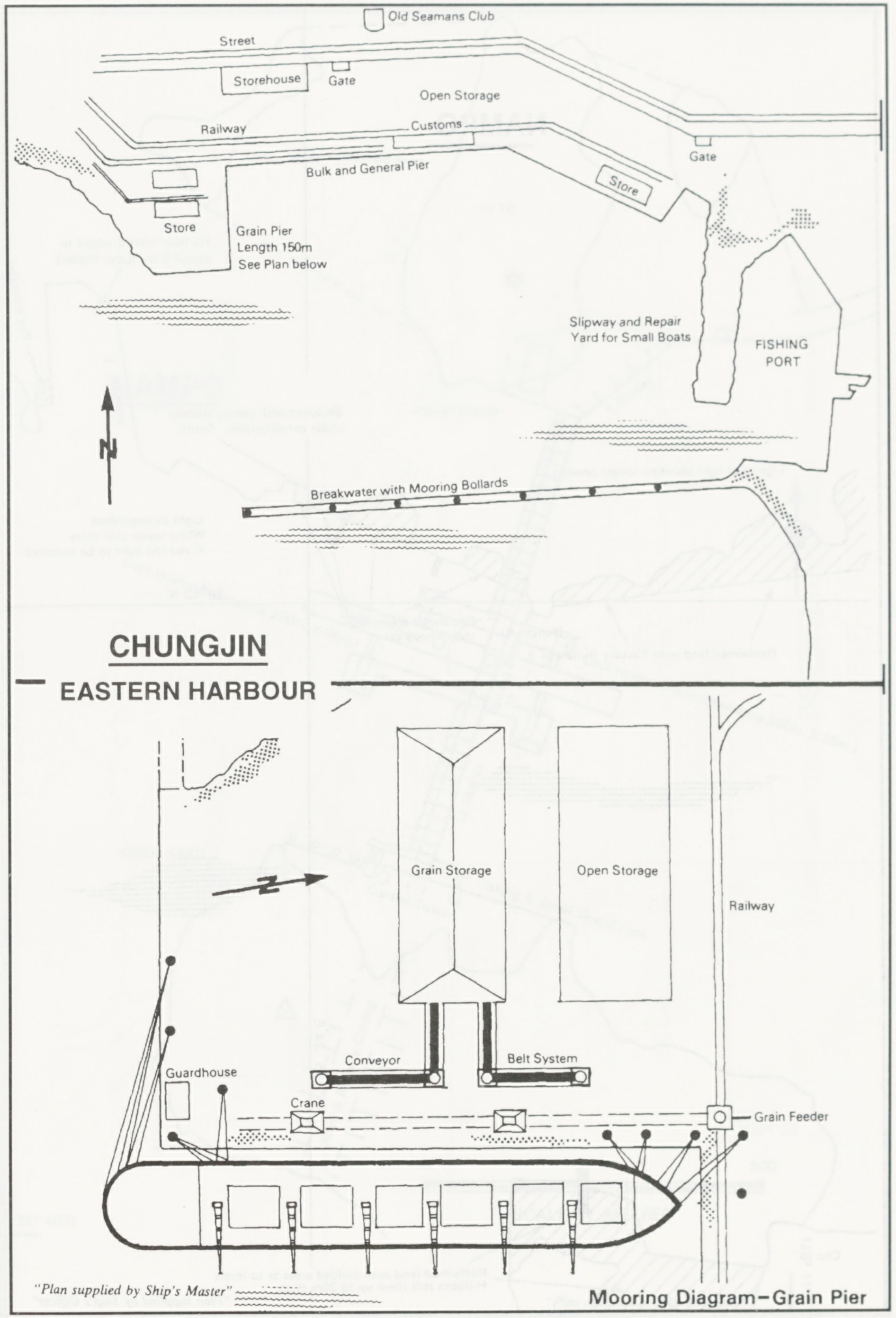
HEUNGNAM


N
455m.
General Cargo Pier
162m.
Boat Pier
250m.
Coal Pier for Small Ships
Bulk & General Cargo Pier Max. draft 25ft.
590m.
Warehouse
Fishing Harbour
Fl.5s.
KEY
▨ 3 ton crane-Gantry crane for discharge of Coal
□ 10 ton crane-Level luffing Portal crane
■ 8 ton crane-Level luffing Portal crane
▭ 5 ton crane-Gantry crane for discharge of Grain
△ 6 ton crane-Level luffing Portal crane
0 100 200 300 400 500metres
SCALE

"Plan supplied by Ship's Master"

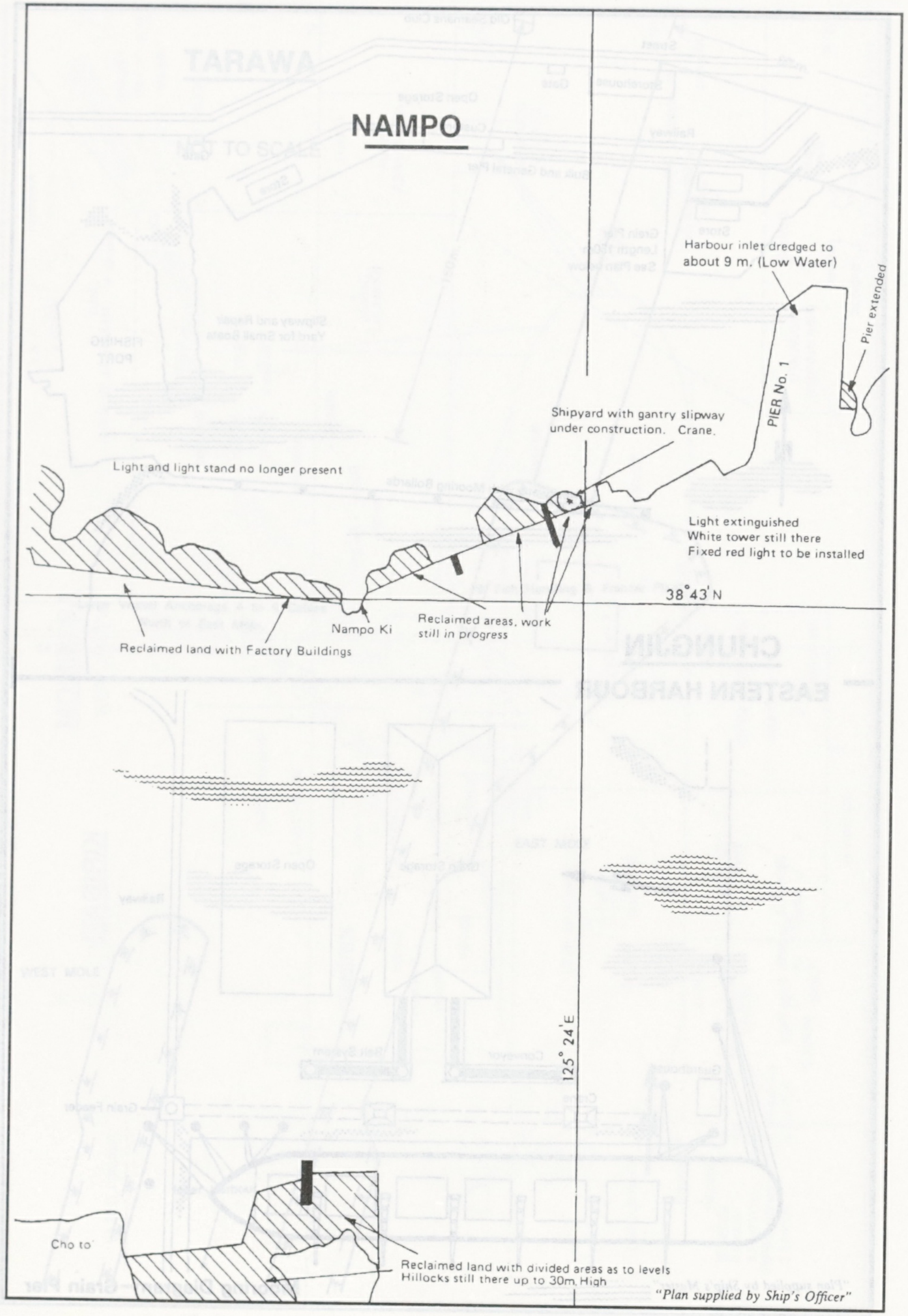
CHUNGJIN

EASTERN HARBOUR

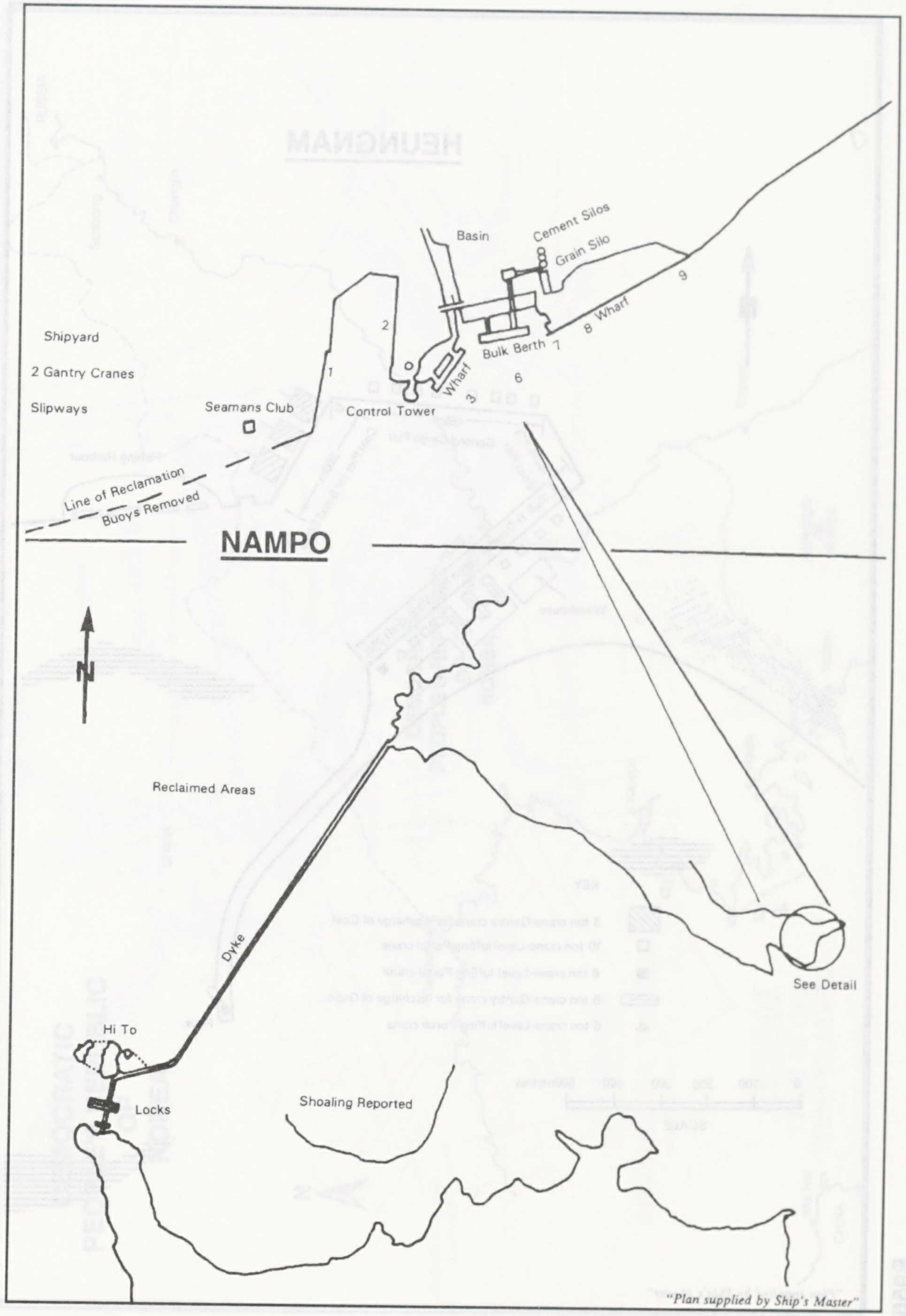

Old Seamans Club
Street
Storehouse
Gate
Open Storage
Railway
Customs
Gate
Bulk and General Pier
Store
Store
Grain Pier
Length 150m
See Plan below
Slipway and Repair
Yard for Small Boats
FISHING
PORT
N
Breakwater with Mooring Bollards
N
Grain Storage
Open Storage
Railway
Guardhouse
Conveyor
Belt System
Crane
Grain Feeder

"Plan supplied by Ship's Master"

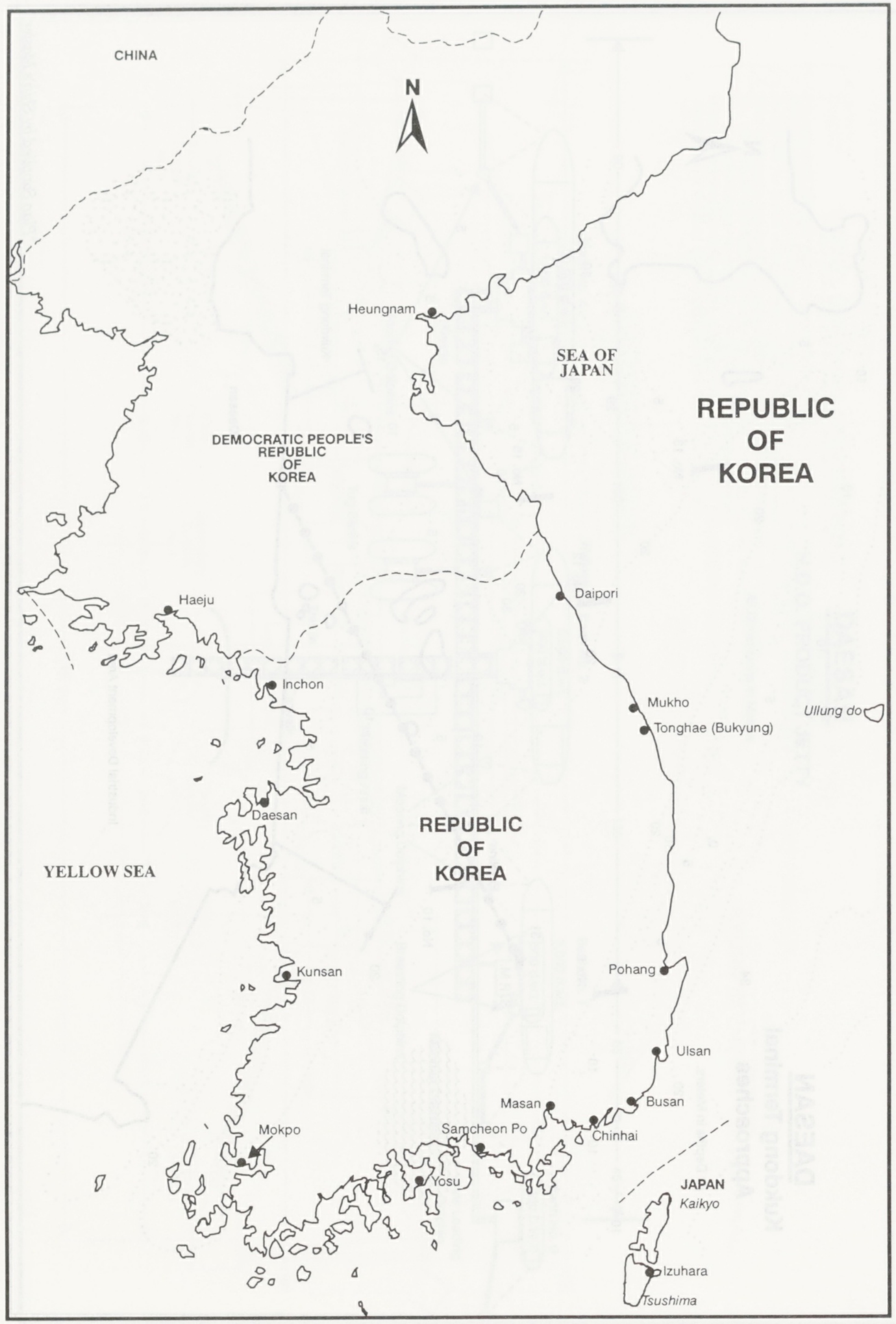
Mooring Diagram—Grain Pier

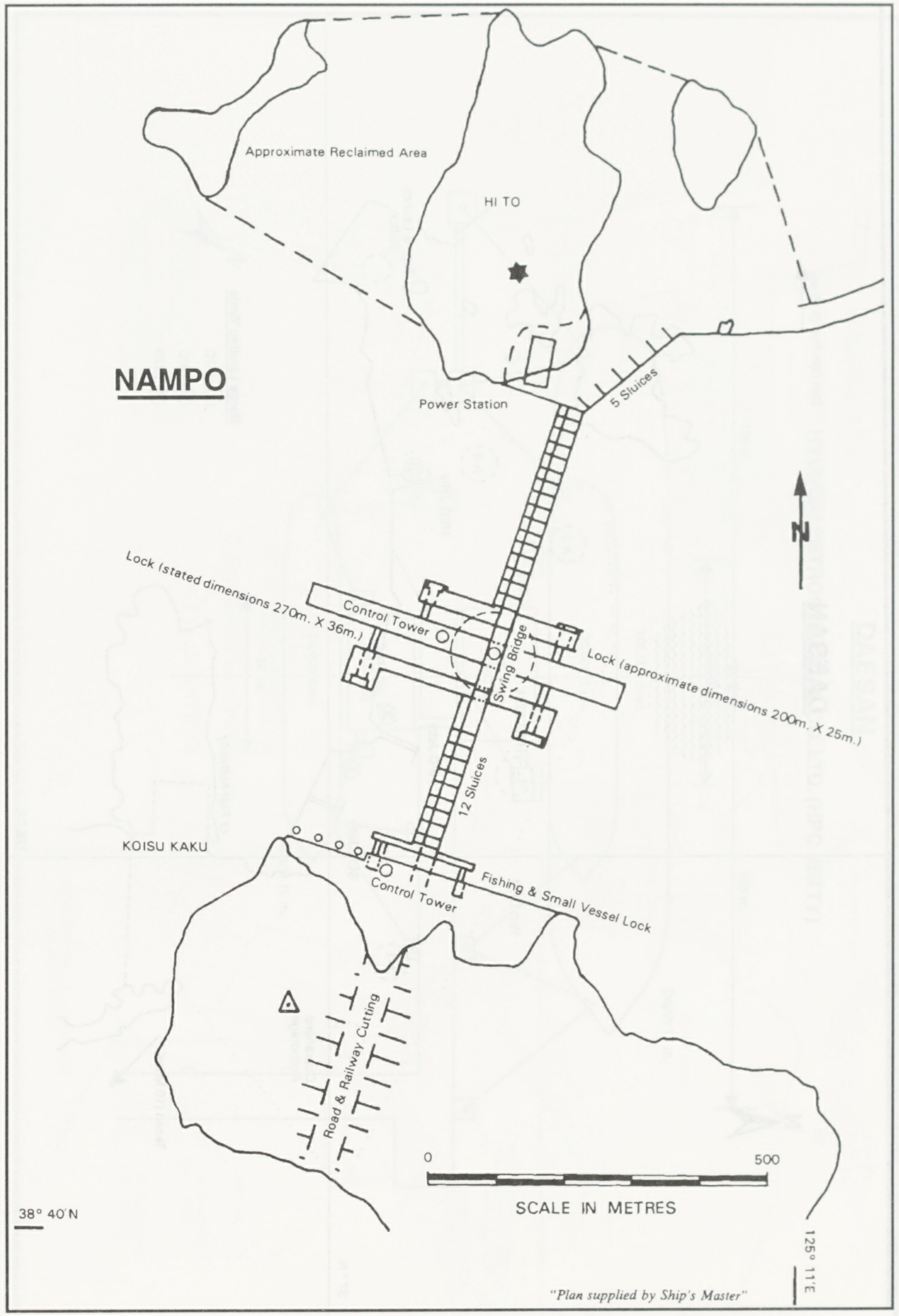

NAMPO
Harbour inlet dredged to about 9 m. (Low Water)
Pier extended
PIER No. 1
Shipyard with gantry slipway under construction. Crane.
Light and light stand no longer present
Light extinguished
White tower still there
Fixed red light to be installed
38° 43' N
Reclaimed areas, work still in progress
Nampo Ki
Reclaimed land with Factory Buildings
125° 24' E
Cho to
Reclaimed land with divided areas as to levels
Hillocks still there up to 30m. High

"Plan supplied by Ship's Officer"

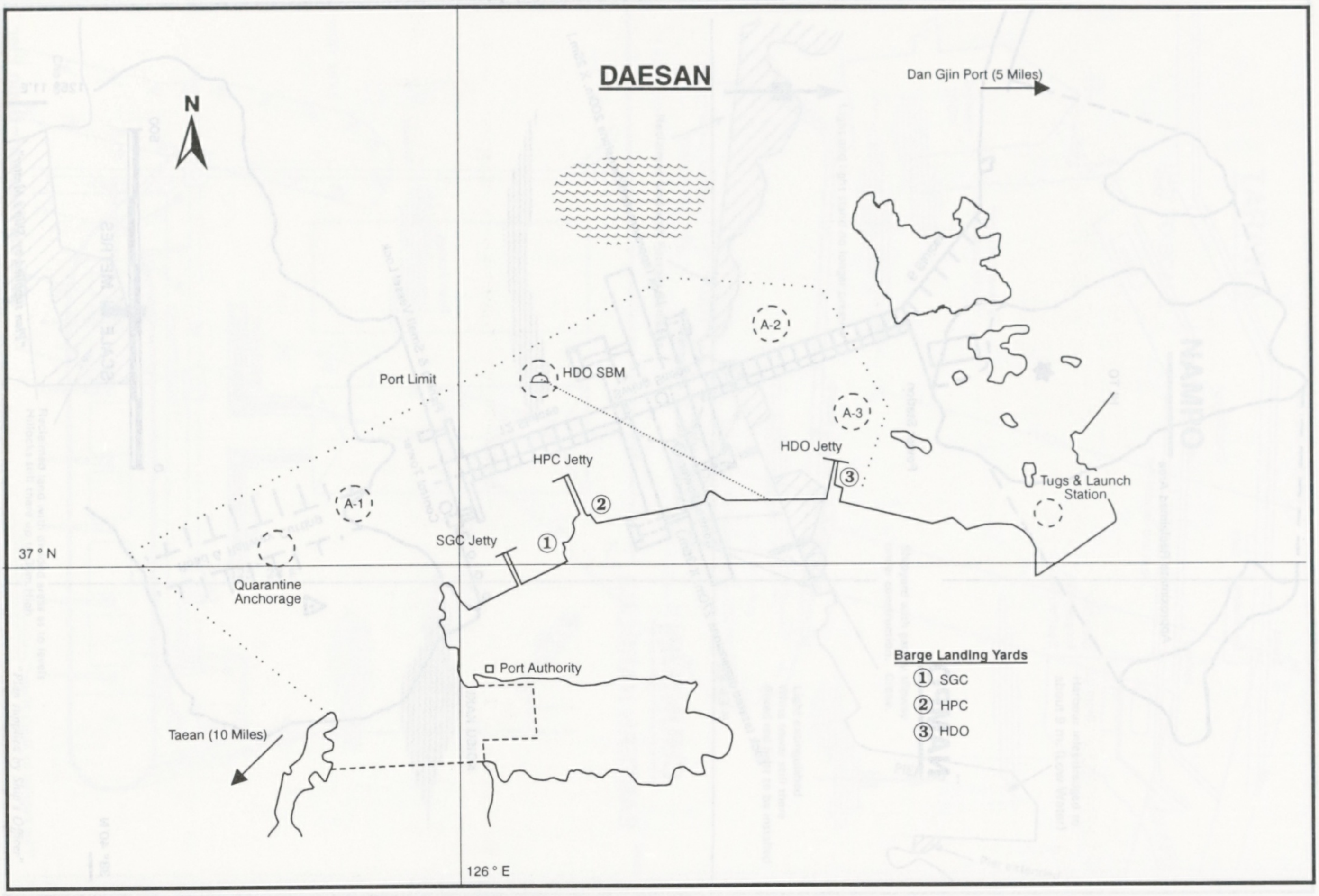

Basin
Cement Silos
Grain Silo
9
2
8 Wharf
Bulk Berth 7
Shipyard
2 Gantry Cranes
Slipways
1
6
Wharf
3
Seamans Club
Control Tower
Line of Reclamation
Buoys Removed
NAMPO
N
Reclaimed Areas
Dyke
See Detail
Hi To
Locks
Shoaling Reported

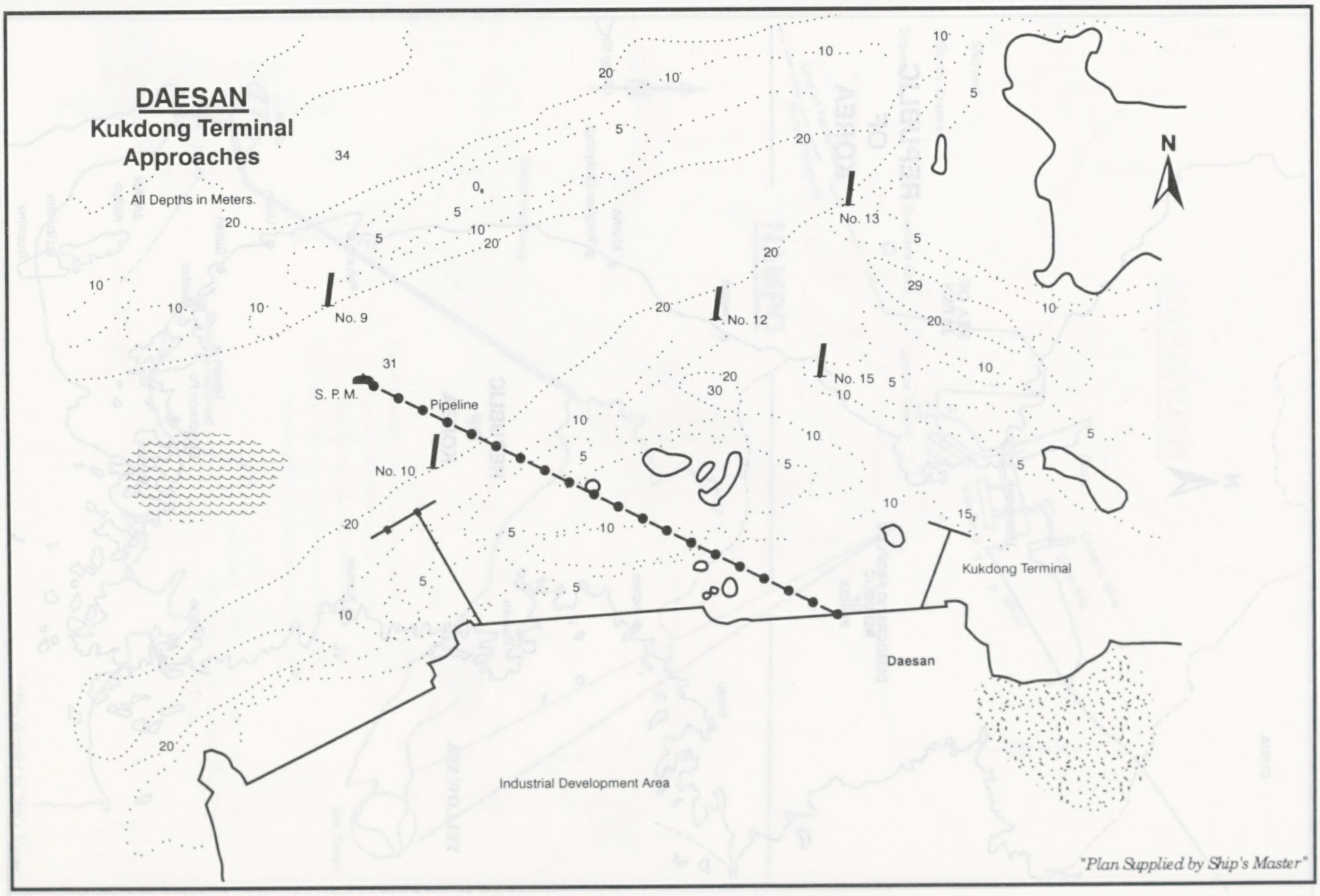
"Plan supplied by Ship's Master"


CHINA
N
Heungnam
SEA OF JAPAN
REPUBLIC OF KOREA
DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA
Haeju
Daipori
Inchon
Mukho
Tonghae (Bukyung)
Ullung do
Daesan
YELLOW SEA
REPUBLIC OF KOREA
Kunsan
Pohang
Ulsan
Masan
Busan
Mokpo
Samcheon Po
Chinhai
Yosu
JAPAN
Kaikyo
Izuhara
Tsushima


Approximate Reclaimed Area
HI TO
NAMPO
Power Station
5 Sluices
N
Lock (stated dimensions 270m. X 36m.)
Control Tower
Swing Bridge
Lock (approximate dimensions 200m. X 25m.)
12 Sluices
KOISU KAKU
Control Tower
Fishing & Small Vessel Lock
Road & Railway Cutting
0
500
SCALE IN METRES
38° 40'N
125° 11'E

"Plan supplied by Ship's Master"

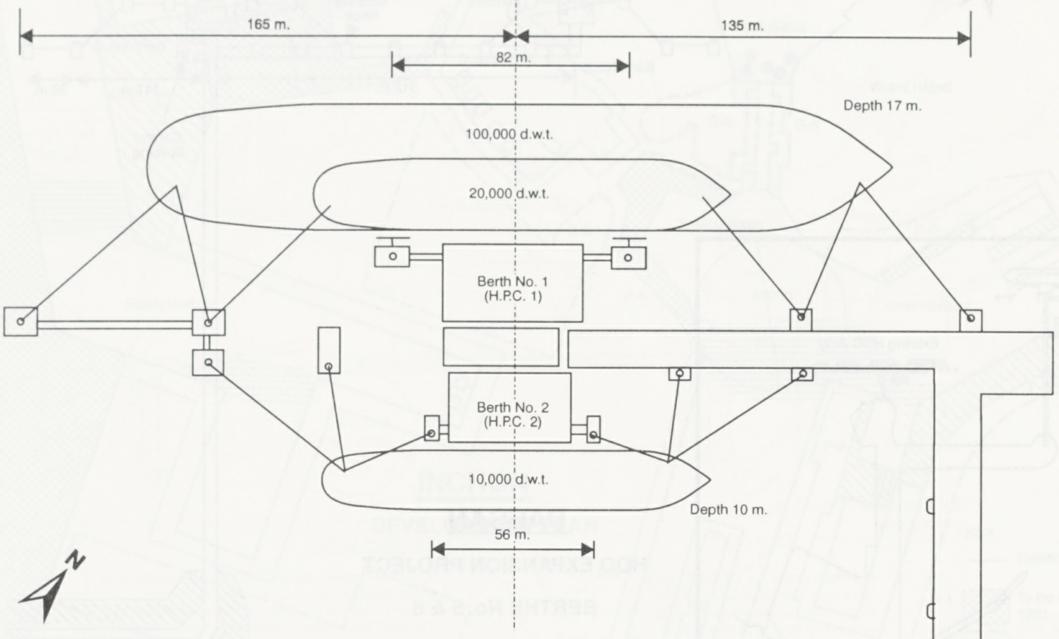

DAESAN
N
Dan Gjin Port (5 Miles)
A-2
Port Limit
HDO SBM
A-3
HDO Jetty
HPC Jetty
②
③
Tugs & Launch Station
A-1
SGC Jetty
①
37 ° N
Quarantine Anchorage
Port Authority
Barge Landing Yards
① SGC
② HPC
③ HDO
Taean (10 Miles)
126 ° E


DAESAN
Kukdong Terminal Approaches
All Depths in Meters.
N
34
20
10
5
0
No. 9
No. 12
No. 13
No. 15
29
31
30
S. P. M.
Pipeline
No. 10
15
Kukdong Terminal
Daesan
Industrial Development Area

"Plan Supplied by Ship's Master"

DAESAN

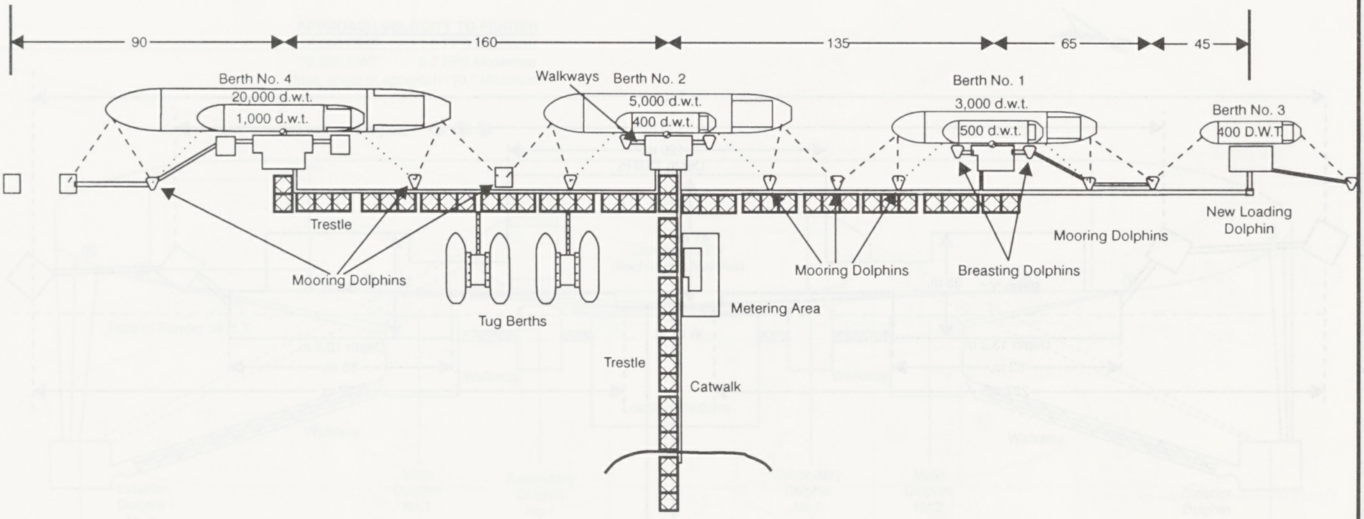
HYUNDAI PETROCHEMICAL CO. LTD. (HPC JETTY)

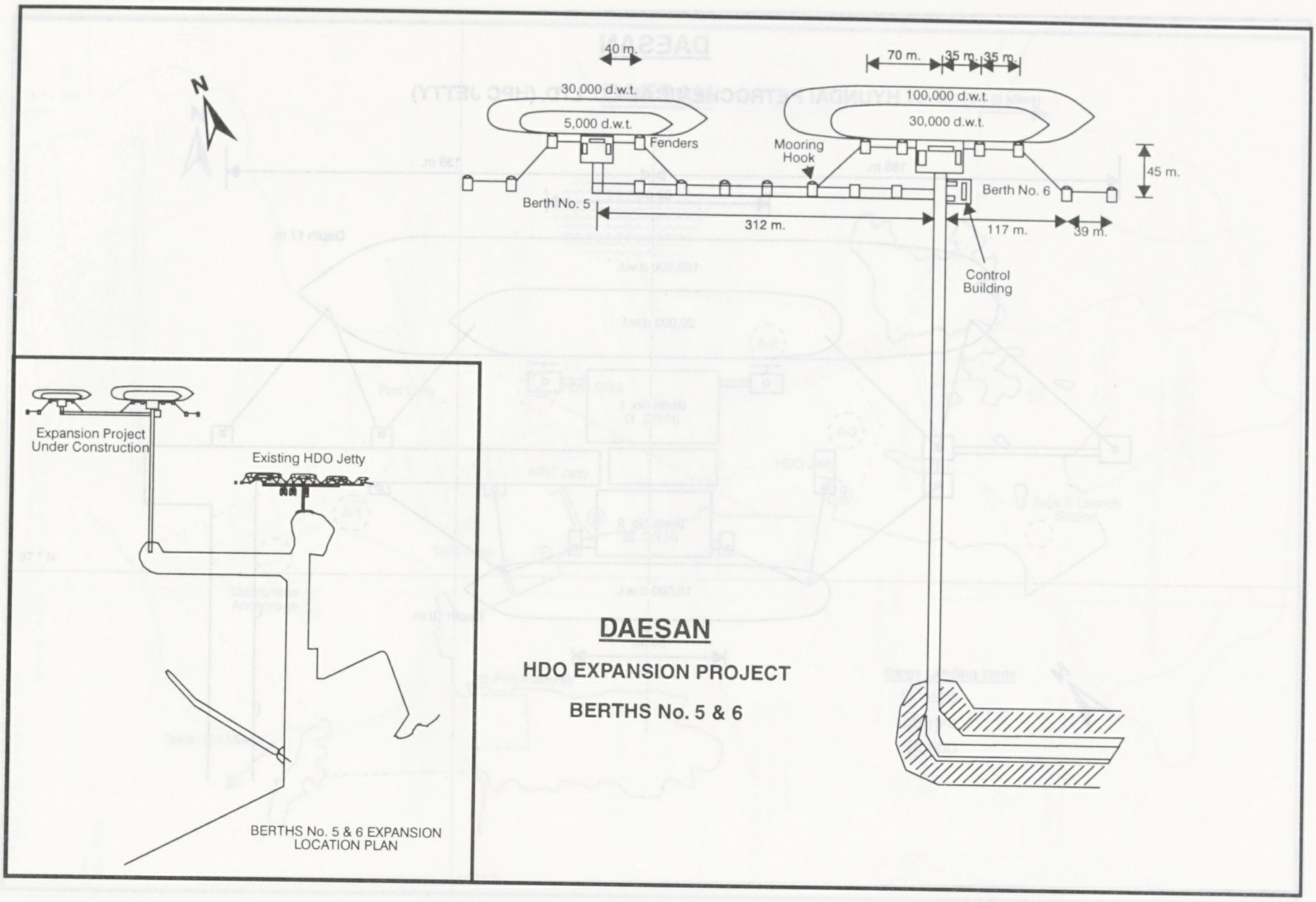

165 m.
135 m.
82 m.
Depth 17 m.
100,000 d.w.t.
20,000 d.w.t.
Berth No. 1
(H.P.C. 1)
Berth No. 2
(H.P.C. 2)
10,000 d.w.t.
Depth 10 m.
56 m.
N

DAESAN

H.D.O. PRODUCT JETTY

All Dimensions in Metres

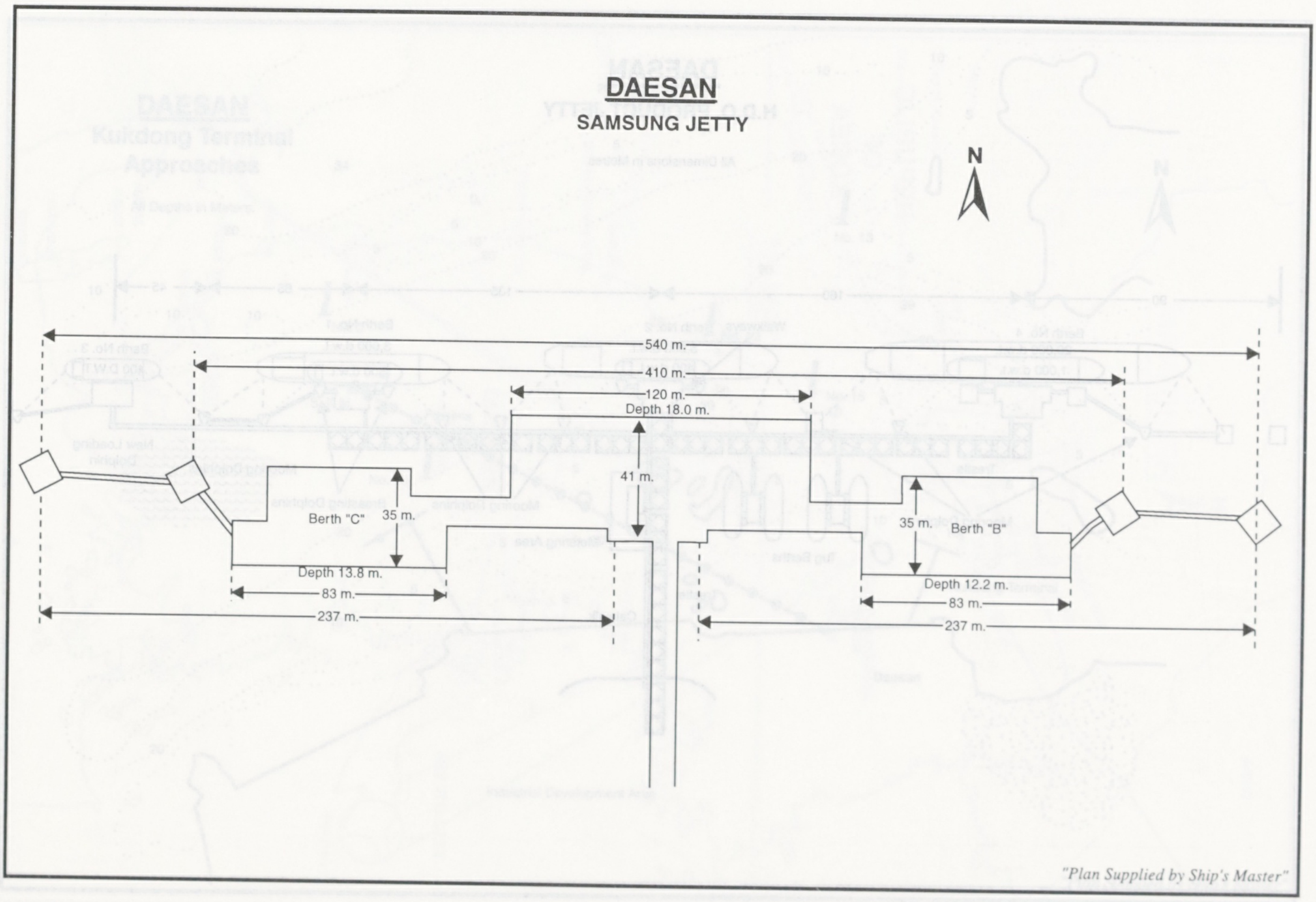

90
160
135
65
45
Berth No. 4
20,000 d.w.t.
1,000 d.w.t.
Walkways
Berth No. 2
5,000 d.w.t.
400 d.w.t.
Berth No. 1
3,000 d.w.t.
500 d.w.t.
Berth No. 3
400 D.W.T.
New Loading Dolphin
Mooring Dolphins
Trestle
Mooring Dolphins
Tug Berths
Metering Area
Trestle
Catwalk
Mooring Dolphins
Breasting Dolphins


N
40 m.
30,000 d.w.t.
5,000 d.w.t.
Fenders
70 m.
35 m.
35 m.
100,000 d.w.t.
30,000 d.w.t.
Mooring Hook
45 m.
Berth No. 5
Berth No. 6
312 m.
117 m.
39 m.
Control Building
Expansion Project Under Construction
Existing HDO Jetty
BERTHS No. 5 & 6 EXPANSION LOCATION PLAN

DAESAN

HDO EXPANSION PROJECT

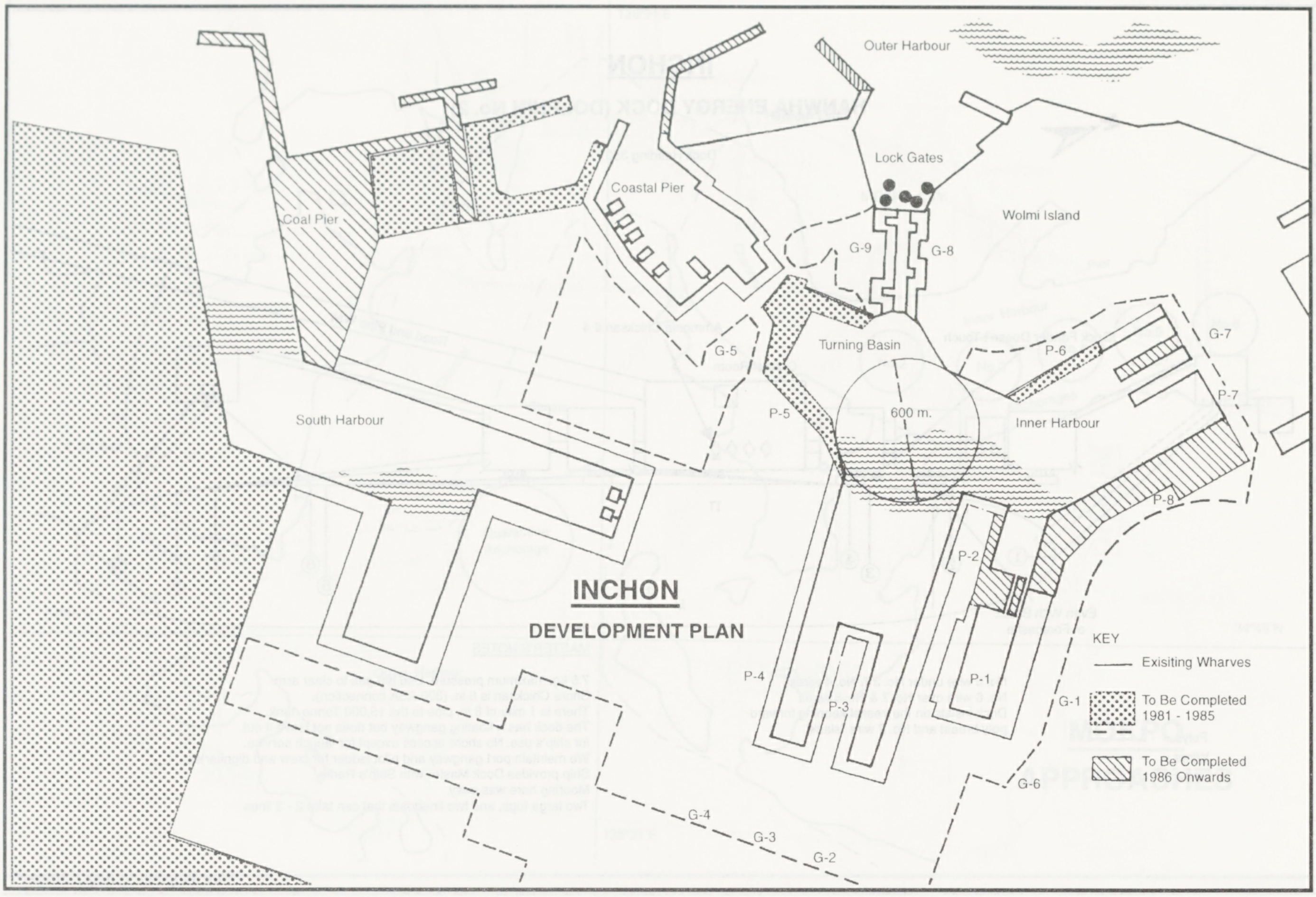
BERTHS No. 5 & 6


N
540 m.
410 m.
120 m.
Depth 18.0 m.
41 m.
35 m.
Berth "C"
Depth 13.8 m.
83 m.
237 m.
35 m.
Berth "B"
Depth 12.2 m.
83 m.
237 m.

DAESAN

SAMSUNG JETTY

"Plan Supplied by Ship's Master"



INCHON

DEVELOPMENT PLAN

Outer Harbour
Lock Gates
Coastal Pier
Coal Pier
Wolmi Island
G-9
G-8
G-5
Turning Basin
G-6
G-7
P-6
P-5
600 m.
Inner Harbour
P-7
P-8
South Harbour
P-2
P-4
P-3
P-1
G-1
G-6
G-4
G-3
G-2
KEY
Exisiting Wharves
To Be Completed 1981 - 1985
To Be Completed 1986 Onwards

VESSEL BERTHING ARRANGEMENT

It is suggested that your vessel is moored to the Marine Terminal in accordance with the lines as shown.
This is considered as a minimum requirement. Use as many additional lines as you wish.
Please use the outlets on the extreme ends of the manifold for connecting the Loading Arms.
If the Starboard boom is rigged, move the boom out of the way of discharging arm connection.
You will need an accommodation ladder on the Port side for use by officials, agents, shore leave for crew, etc.
The Starboard loading arm is 16 in. A.S.A. (12 in. for Naphtha Tankers).
Minimum required interval between ship's two manifolds is 7 ft. 6 in. for loading arms connections.
Also bottom of manifold flange must be at least 18 in. above the deck.

INCHON

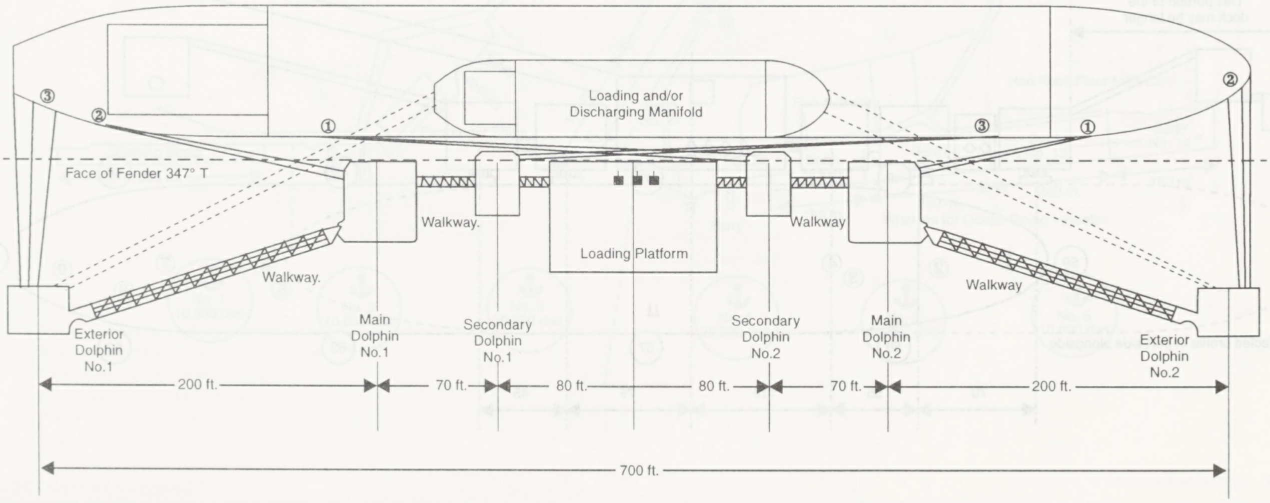
KYUNG IN ENERGY Co. TERMINAL

APPROACH VELOCITY TO FENDER

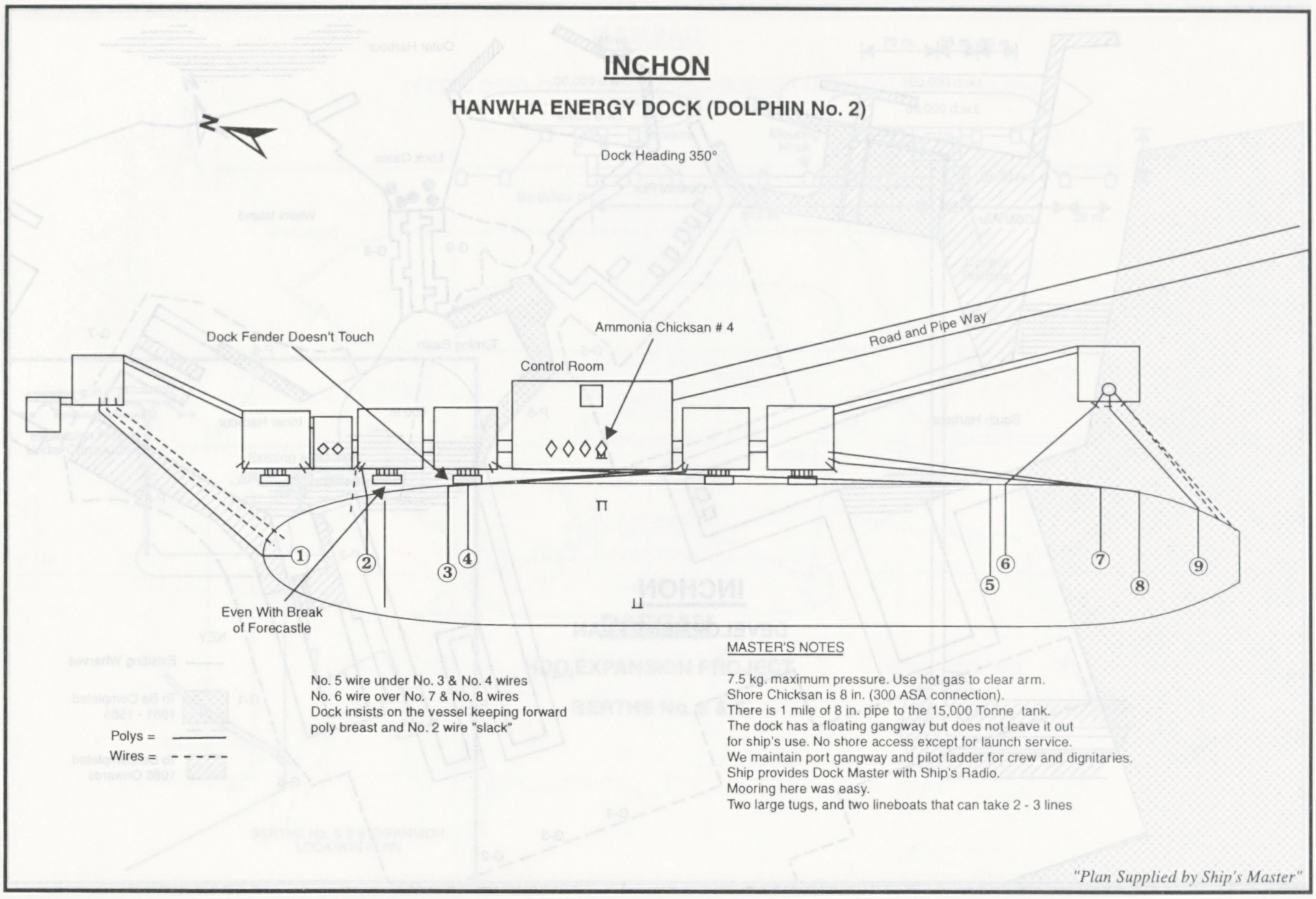
16,000 DWT	1.0 FPS Maximum
72,500 DWT	0.7 FPS Maximum

Max. angle of approach -10 ° Maximum

Order of sending lines: ① ② ③



Loading and/or Discharging Manifold
③
②
①
③
①
②
Face of Fender 347° T
Walkway.
Walkway
Walkway.
Walkway
Loading Platform
Exterior Dolphin No.1
Main Dolphin No.1
Secondary Dolphin No.1
Secondary Dolphin No.2
Main Dolphin No.2
Exterior Dolphin No.2
200 ft.
70 ft.
80 ft.
80 ft.
70 ft.
200 ft.
700 ft.



INCHON

HANWHA ENERGY DOCK (DOLPHIN No. 2)

Dock Heading 350°

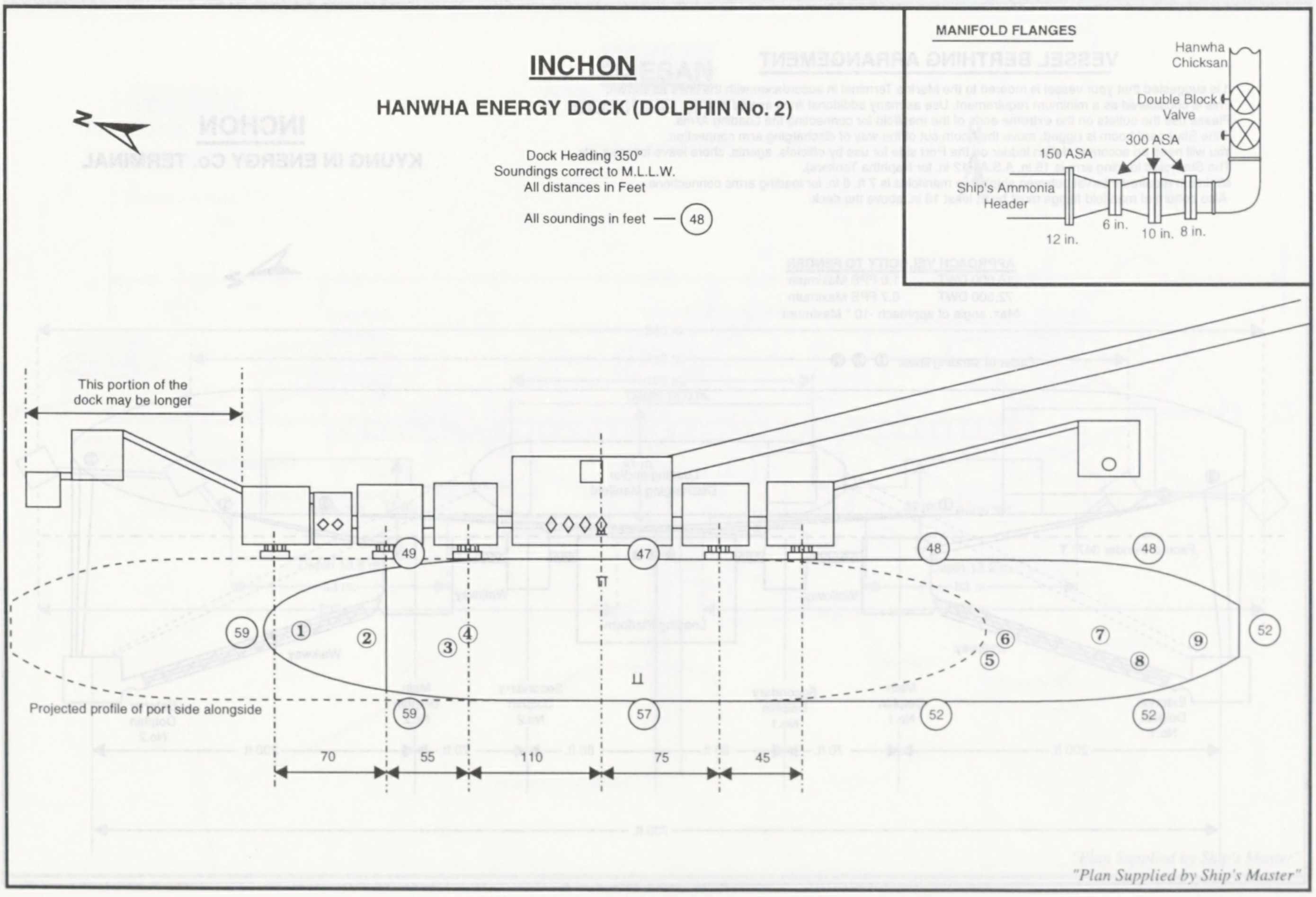
N
Road and Pipe Way
Dock Fender Doesn't Touch
Ammonia Chicksan # 4
Control Room
◇◇
◇◇◇♢
①
②
③
④
⑤
⑥
⑦
⑧
⑨
Even With Break of Forecastle
Polys =
Wires =

No. 5 wire under No. 3 & No. 4 wires
No. 6 wire over No. 7 & No. 8 wires
Dock insists on the vessel keeping forward poly breast and No. 2 wire "slack"

MASTER'S NOTES

7.5 kg. maximum pressure. Use hot gas to clear arm.
Shore Chicksan is 8 in. (300 ASA connection).
There is 1 mile of 8 in. pipe to the 15,000 Tonne tank.
The dock has a floating gangway but does not leave it out for ship's use. No shore access except for launch service.
We maintain port gangway and pilot ladder for crew and dignitaries.
Ship provides Dock Master with Ship's Radio.
Mooring here was easy.
Two large tugs, and two lineboats that can take 2 - 3 lines

"Plan Supplied by Ship's Master"



INCHON

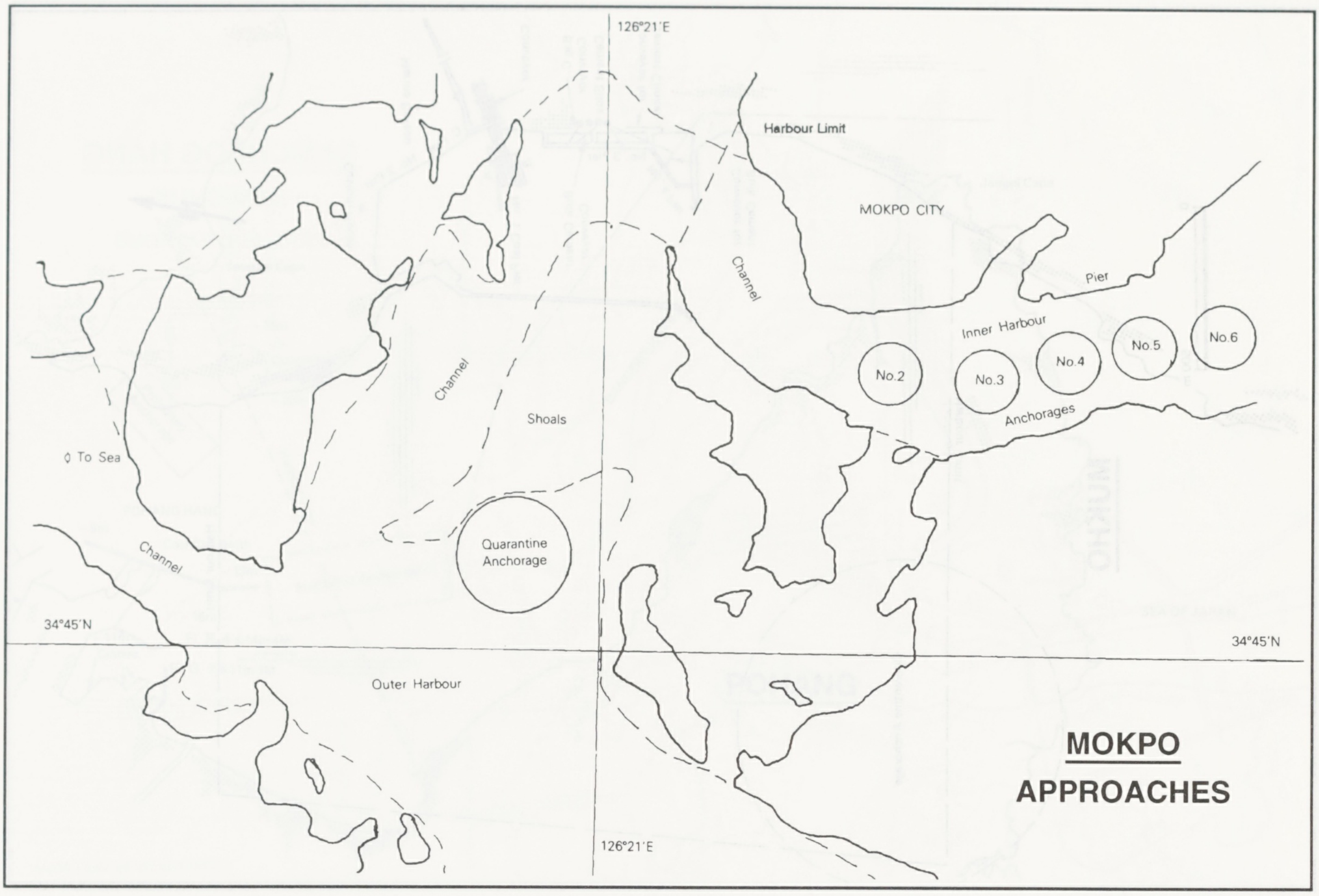
HANWHA ENERGY DOCK (DOLPHIN No. 2)

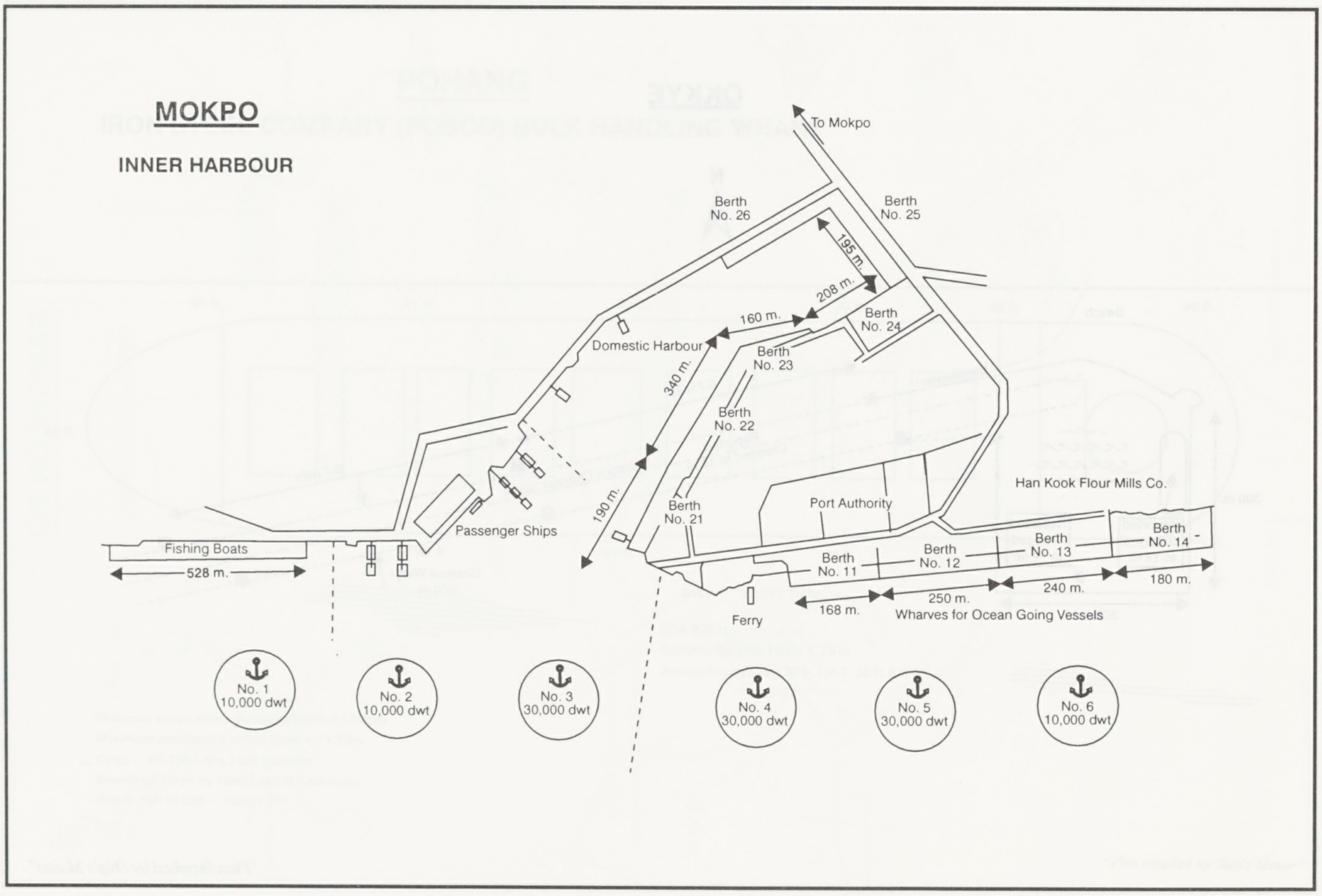
Dock Heading 350°
Soundings correct to M.L.L.W.
All distances in Feet

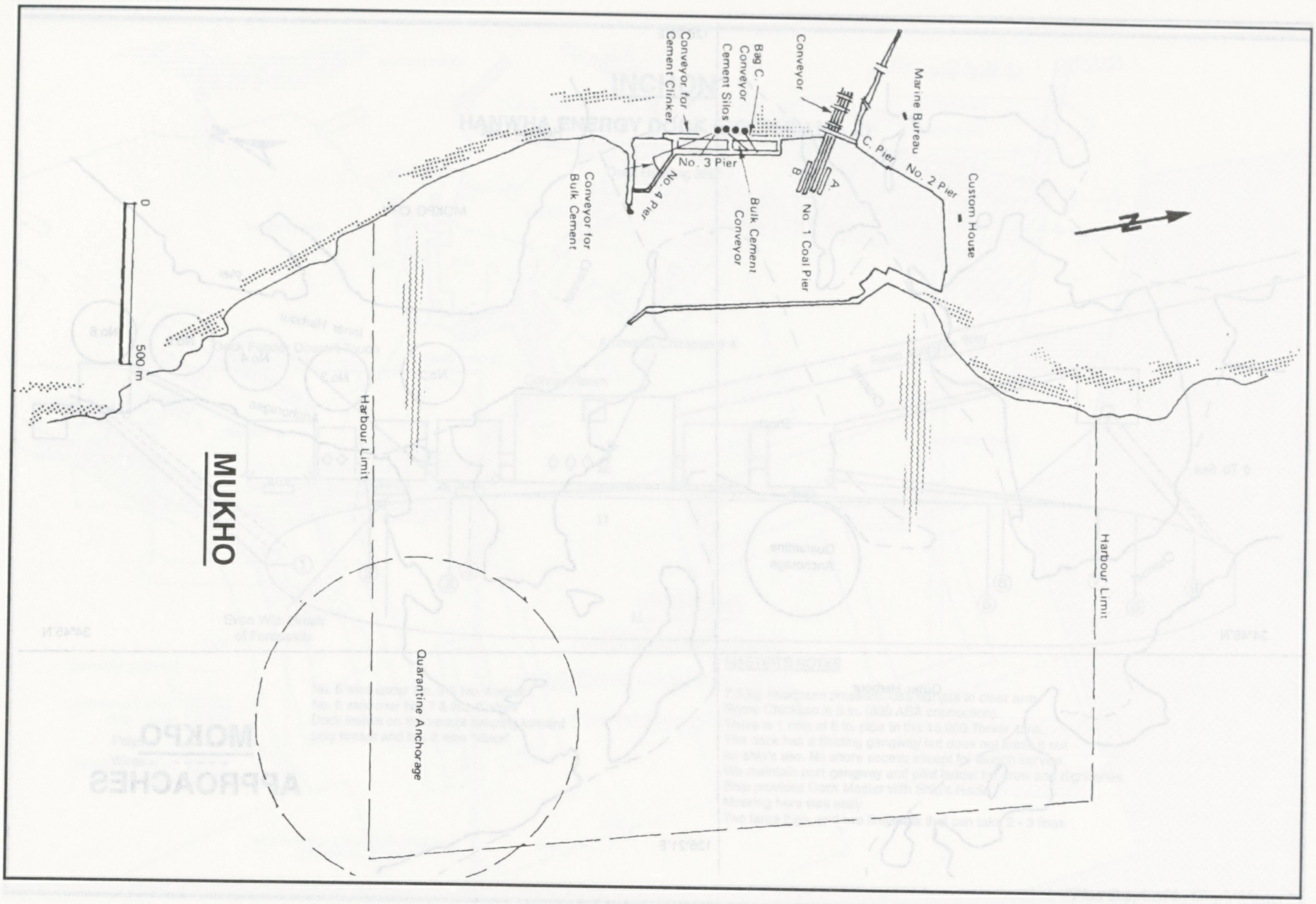
All soundings in feet — (48)

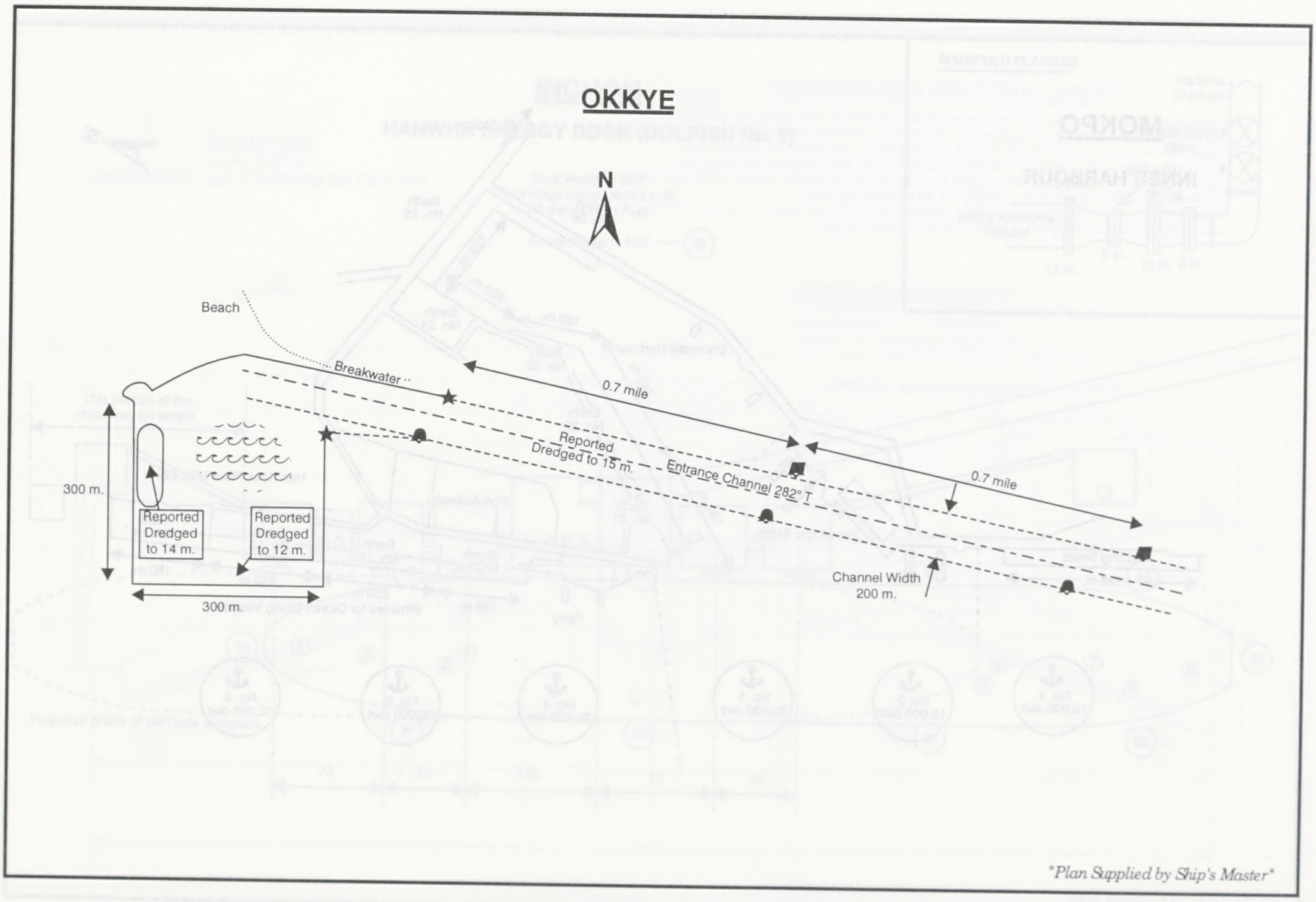
N
MANIFOLD FLANGES
Hanwha Chicksan
Double Block Valve
300 ASA
150 ASA
Ship's Ammonia Header
12 in.
6 in.
10 in.
8 in.
This portion of the dock may be longer
◇◇
◇◇◇♢
(49)
(47)
(48)
(48)
(59)
①
②
③
④
⑤
⑥
⑦
⑧
⑨
(52)
(59)
(57)
(52)
(52)
Projected profile of port side alongside
70
55
110
75
45

"Plan Supplied by Ship's Master"

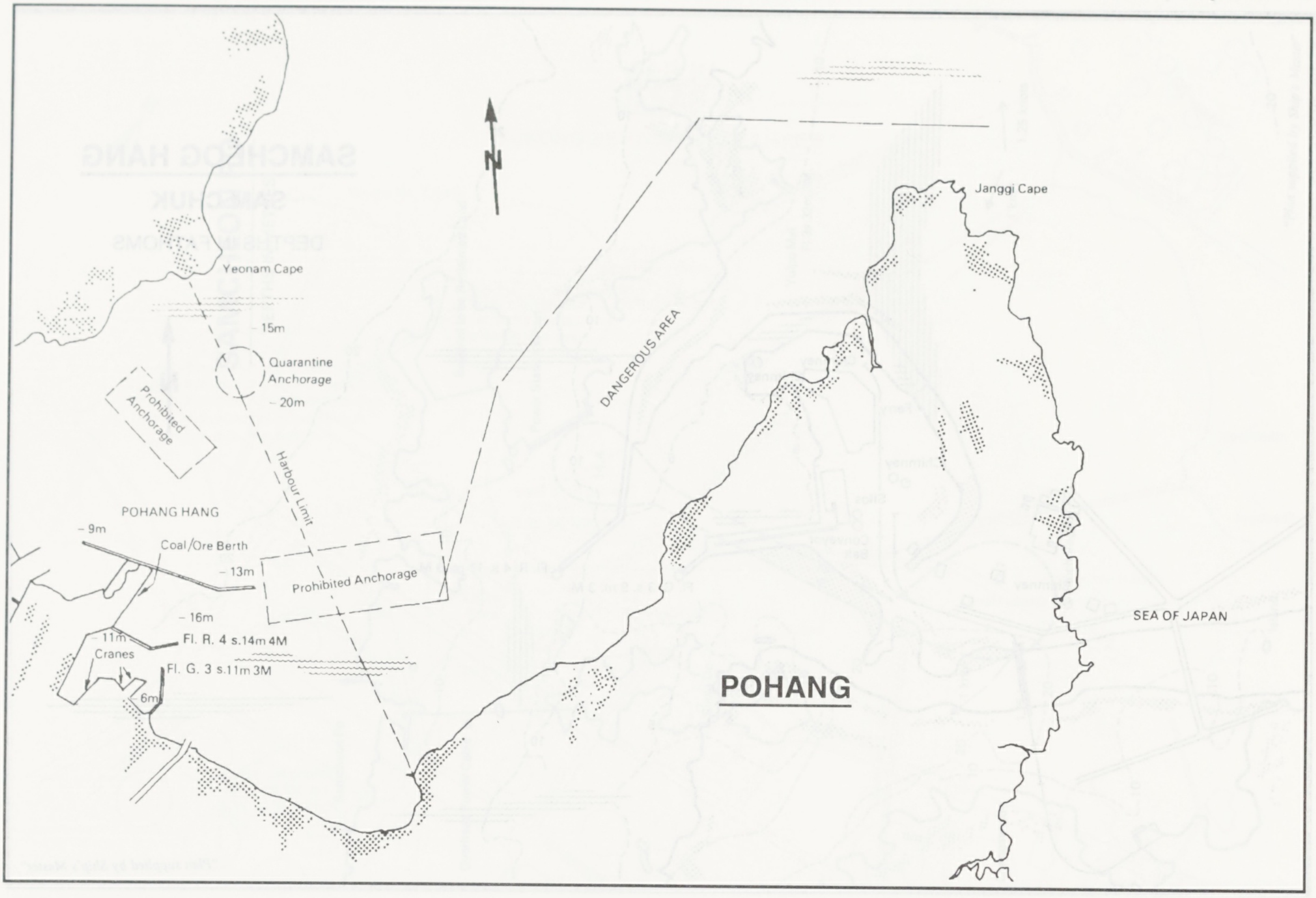

MOKPO
APPROACHES
126°21'E
Harbour Limit
MOKPO CITY
Pier
Channel
Inner Harbour
No.2
No.3
No.4
No.5
No.6
Anchorages
Channel
Shoals
To Sea
Channel
Quarantine Anchorage
34°45'N
34°45'N
Outer Harbour
126°21'E


MOKPO
INNER HARBOUR
To Mokpo
Berth No. 26
Berth No. 25
195 m.
208 m.
Berth No. 24
160 m.
Domestic Harbour
Berth No. 23
340 m.
Berth No. 22
Han Kook Flour Mills Co.
Port Authority
Berth No. 21
190 m.
Passenger Ships
Fishing Boats
528 m.
Berth No. 11
Berth No. 12
Berth No. 13
Berth No. 14
168 m.
250 m.
240 m.
180 m.
Ferry
Wharves for Ocean Going Vessels
No. 1 10,000 dwt
No. 2 10,000 dwt
No. 3 30,000 dwt
No. 4 30,000 dwt
No. 5 30,000 dwt
No. 6 10,000 dwt


MUKHO
Harbour Limit
Harbour Limit
Quarantine Anchorage
0
500 m
Conveyor for Cement Clinker
Cement Silos
Bag C. Conveyor
Conveyor
Marine Bureau
C. Pier
No. 2 Pier
Custom House
No. 3 Pier
No. 4 Pier
Conveyor for Bulk Cement
Bulk Cement Conveyor
A
B
No. 1 Coal Pier
N

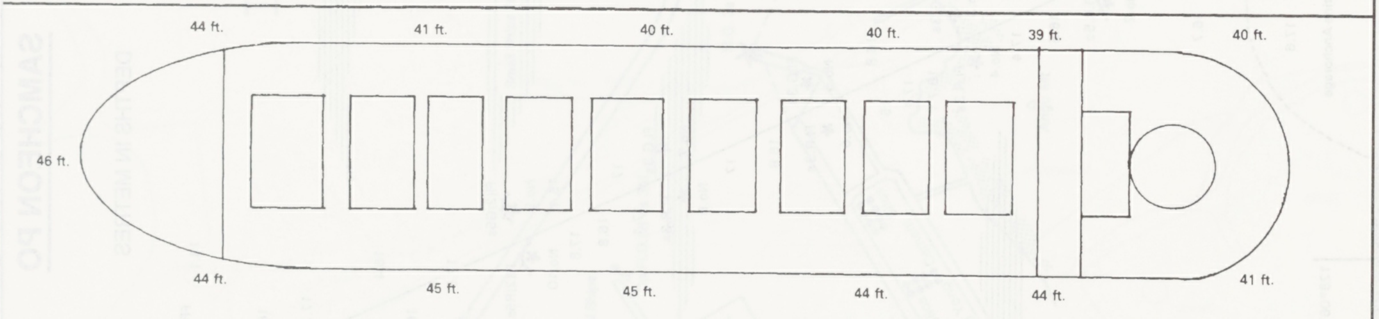

OKKYE
N
Beach
Breakwater
0.7 mile
0.7 mile
Reported Dredged to 15 m.
Entrance Channel 282° T
Channel Width 200 m.
300 m.
300 m.
Reported Dredged to 14 m.
Reported Dredged to 12 m.

"Plan Supplied by Ship's Master"


N
Yeonam Cape
– 15m
Quarantine Anchorage
– 20m
Prohibited Anchorage
Harbour Limit
DANGEROUS AREA
Janggi Cape
POHANG HANG
– 9m
Coal/Ore Berth
– 13m
Prohibited Anchorage
– 16m
– 11m
Cranes
Fl. R. 4 s.14m 4M
Fl. G. 3 s.11m 3M
6m
SEA OF JAPAN
POHANG

POHANG

IRON STEEL COMPANY (POSCO) BULK HANDLING WHARF


44 ft.
41 ft.
40 ft.
40 ft.
39 ft.
40 ft.
46 ft.
44 ft.
45 ft.
45 ft.
44 ft.
44 ft.
41 ft.

DWT 72,072 Tons

LOA 820 ft.
Extreme Breadth 104 ft. 1.75 in.
Actual Arrival Draft 37 ft. 7 in. F 36 ft. 8 in. A

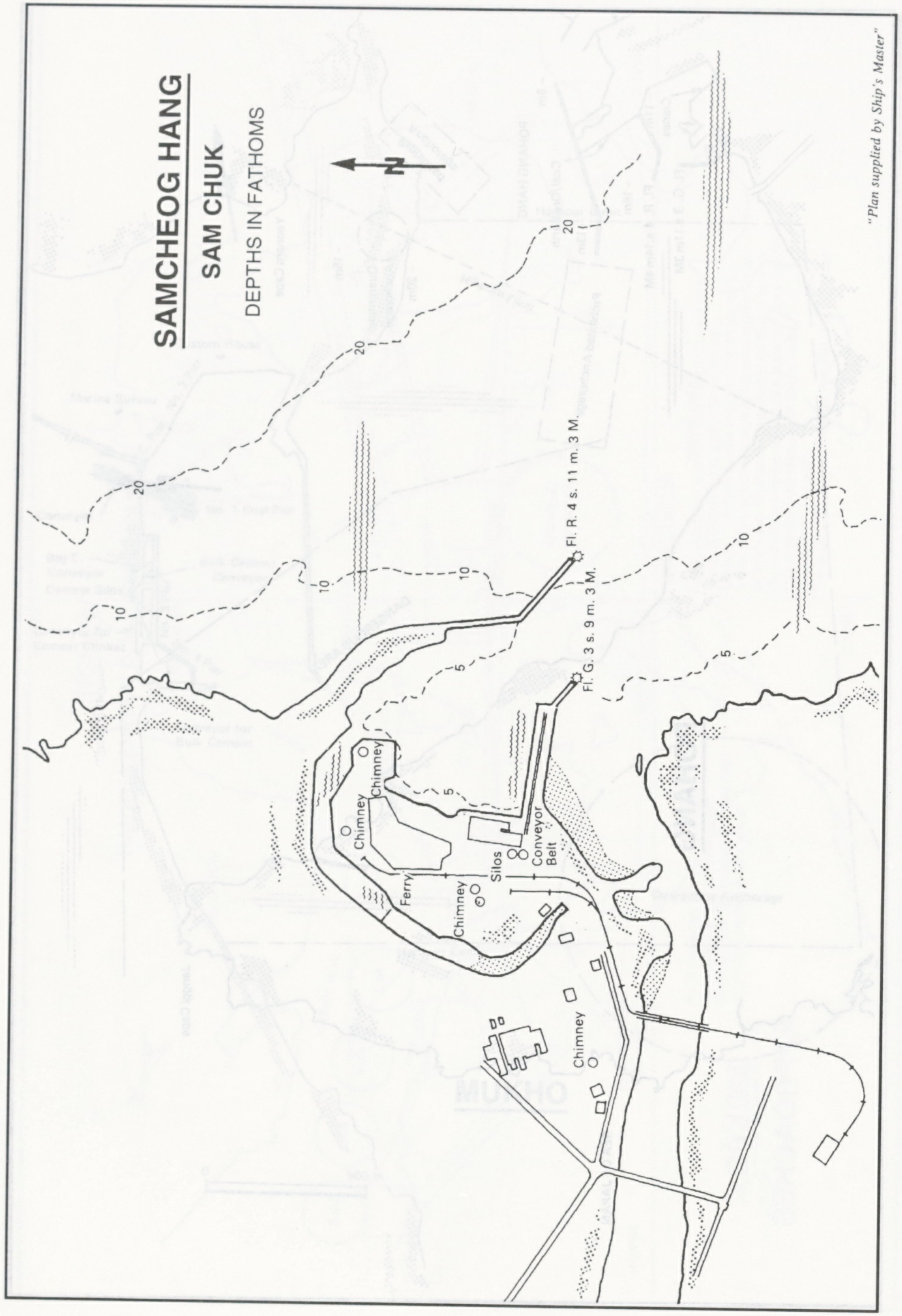
Minimum stated depth alongside Berth = 12.00m
Maximum permissible arrival Draft = 11.20m
Cargo – 55.776 Long Tons Iron Ore
Soundings taken by hand Lead at Low water
Rise & Fall of tide – About 1ft.

"Plan supplied by Ship's Master"

SAMCHEOG HANG

SAM CHUK

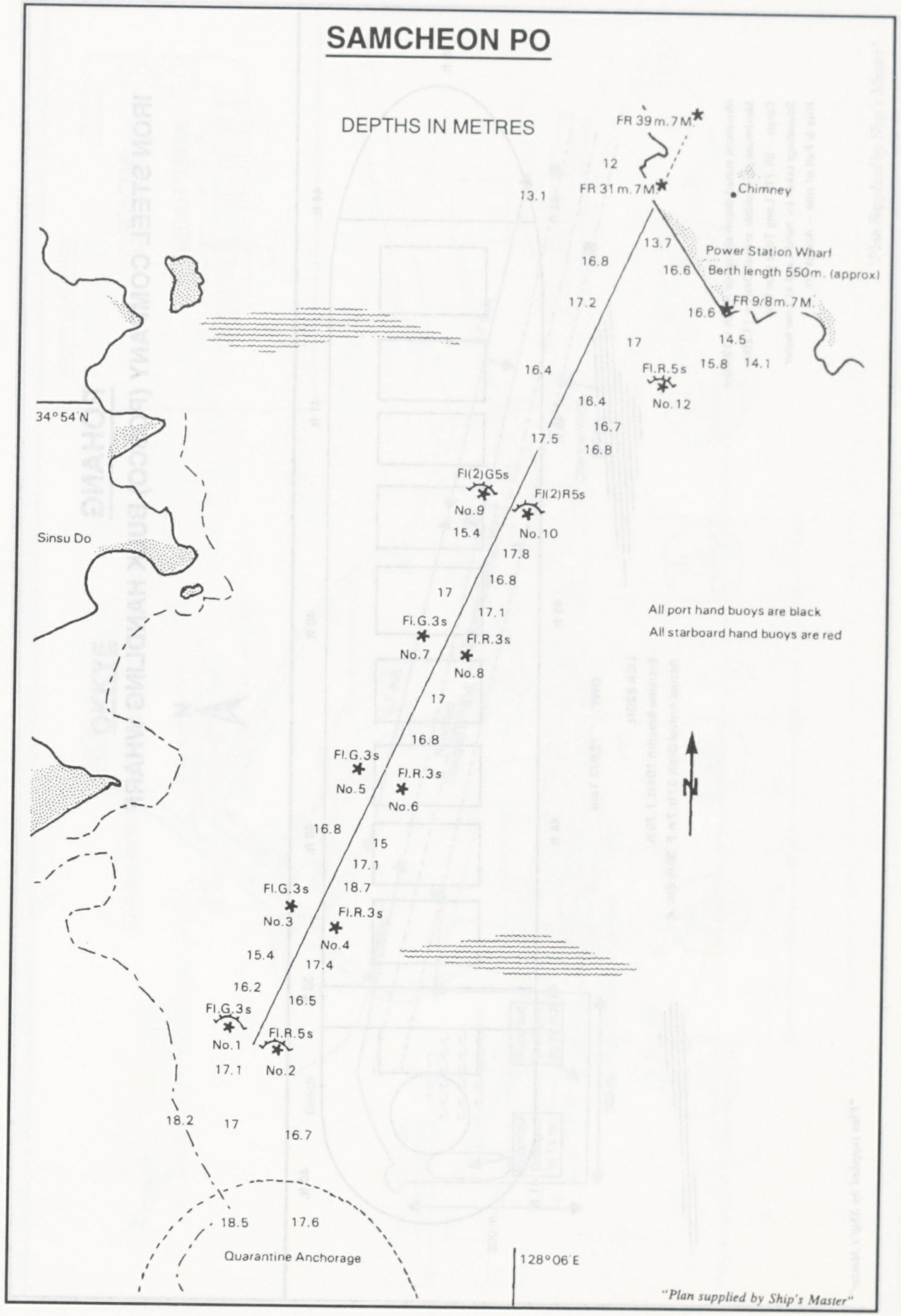
DEPTHS IN FATHOMS


N
20
20
20
10
10
10
10
5
5
5
Fl. R. 4 s. 11 m. 3 M.
Fl. G. 3 s. 9 m. 3 M.
Chimney
Chimney
Chimney
Chimney
Chimney
Silos
Conveyor Belt
Ferry

"Plan supplied by Ship's Master"

SAMCHEON PO

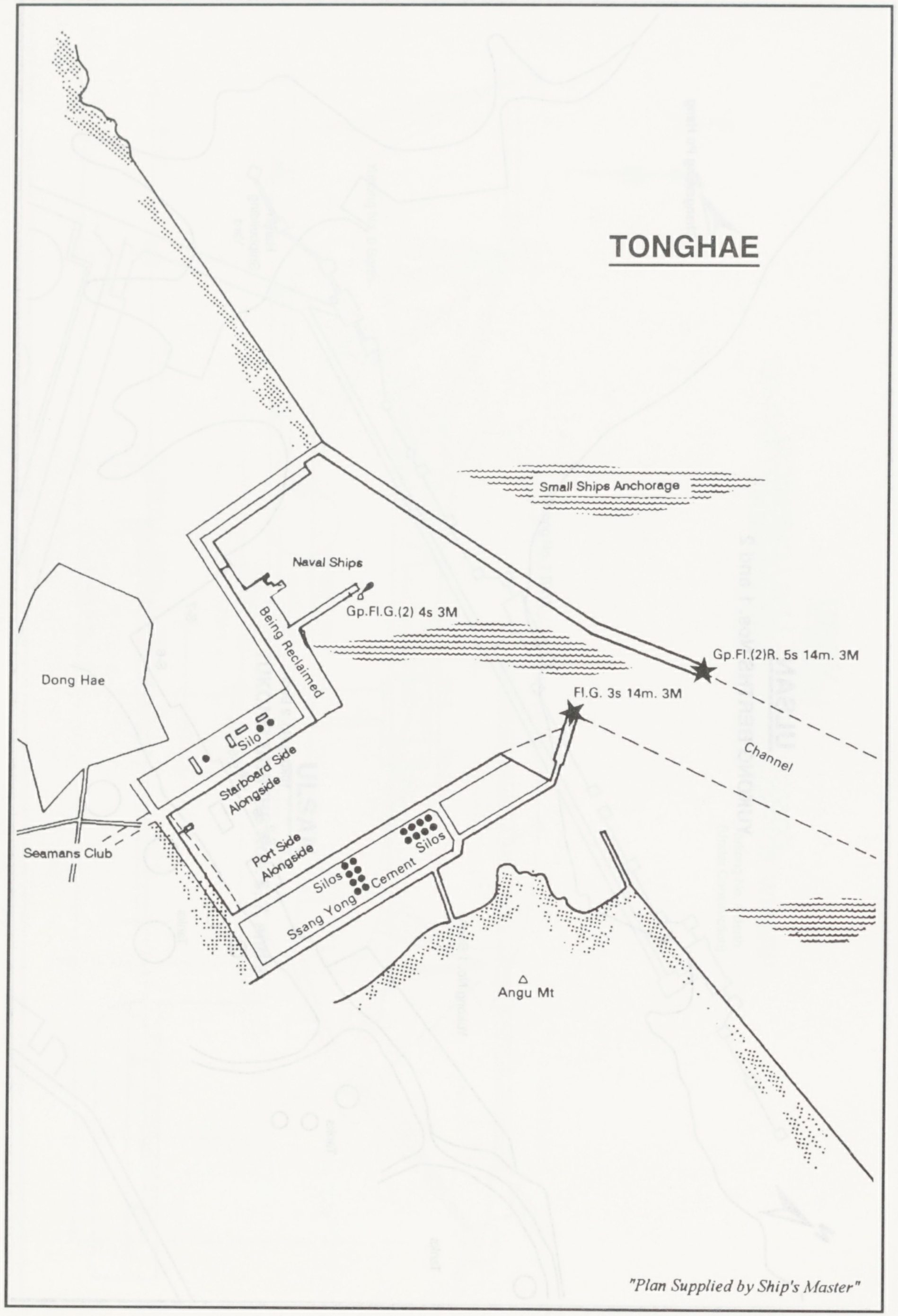
DEPTHS IN METRES


FR 39 m. 7 M
12
FR 31 m. 7 M
Chimney
13.1
13.7
Power Station Wharf
Berth length 550m. (approx)
16.8
16.6
17.2
FR 9/8 m. 7 M.
16.6
14.5
17
15.8
14.1
Fl. R. 5 s
No. 12
16.4
16.4
16.7
17.5
16.8
34° 54' N
Fl(2) G5s
No. 9
Fl(2) R5s
No. 10
15.4
17.8
Sinsu Do
16.8
17
17.1
Fl. G. 3 s
No. 7
Fl. R. 3 s
No. 8
17
16.8
Fl. G. 3 s
No. 5
Fl. R. 3 s
No. 6
16.8
15
17.1
18.7
Fl. G. 3 s
No. 3
Fl. R. 3 s
No. 4
15.4
17.4
16.2
16.5
Fl. G. 3 s
No. 1
Fl. R. 5 s
No. 2
17.1
18.2
17
16.7
18.5
17.6
Quarantine Anchorage
128° 06' E
N

All port hand buoys are black

All starboard hand buoys are red

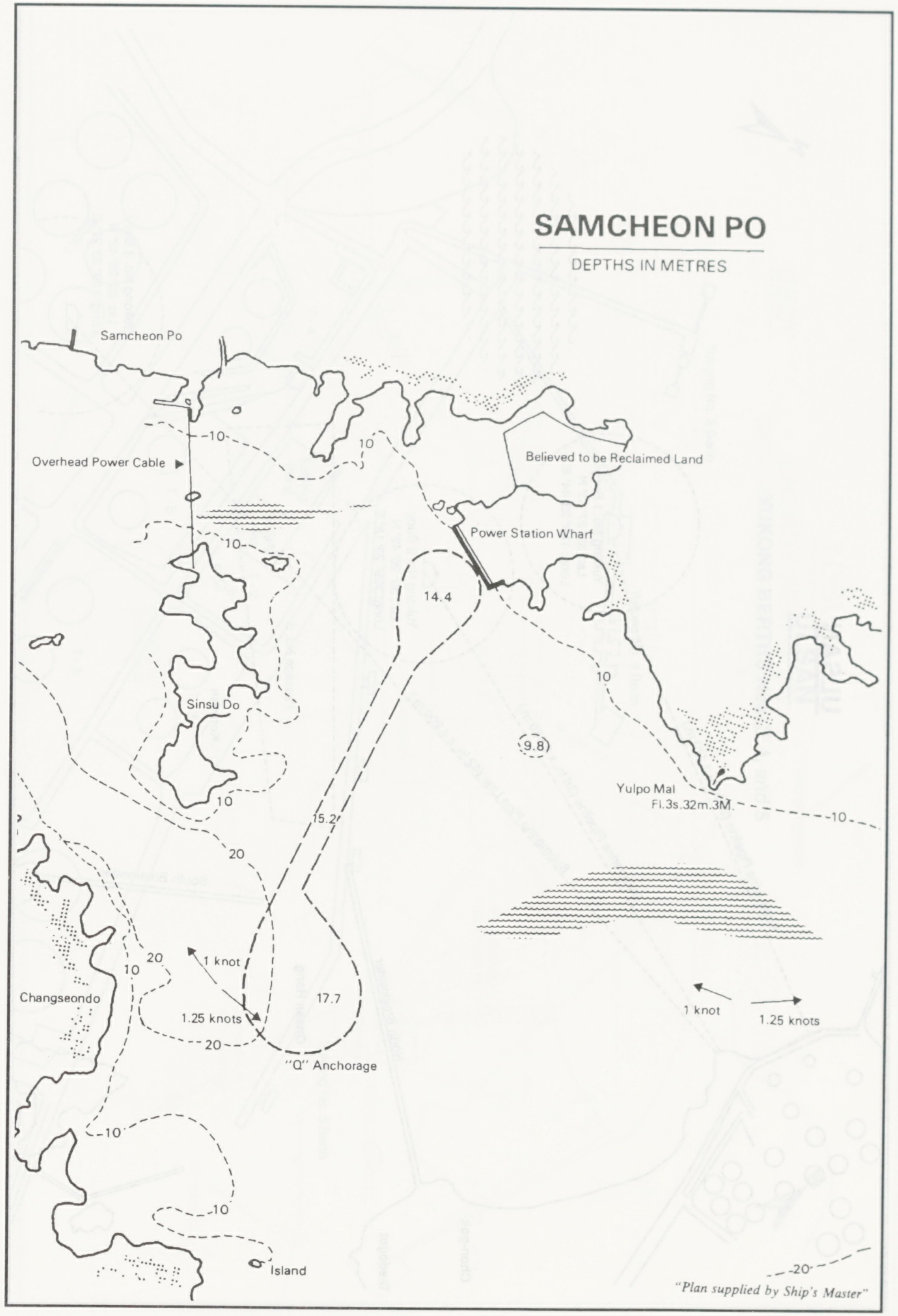
"Plan supplied by Ship's Master"



TONGHAE

Small Ships Anchorage
Naval Ships
Gp.Fl.G.(2) 4s 3M
Being Reclaimed
Gp.Fl.(2)R. 5s 14m. 3M
Fl.G. 3s 14m. 3M
Channel
Dong Hae
Silo
Starboard Side Alongside
Port Side Alongside
Silos
Silos
Ssang Yong Cement
Seamans Club
Angu Mt

"Plan Supplied by Ship's Master"

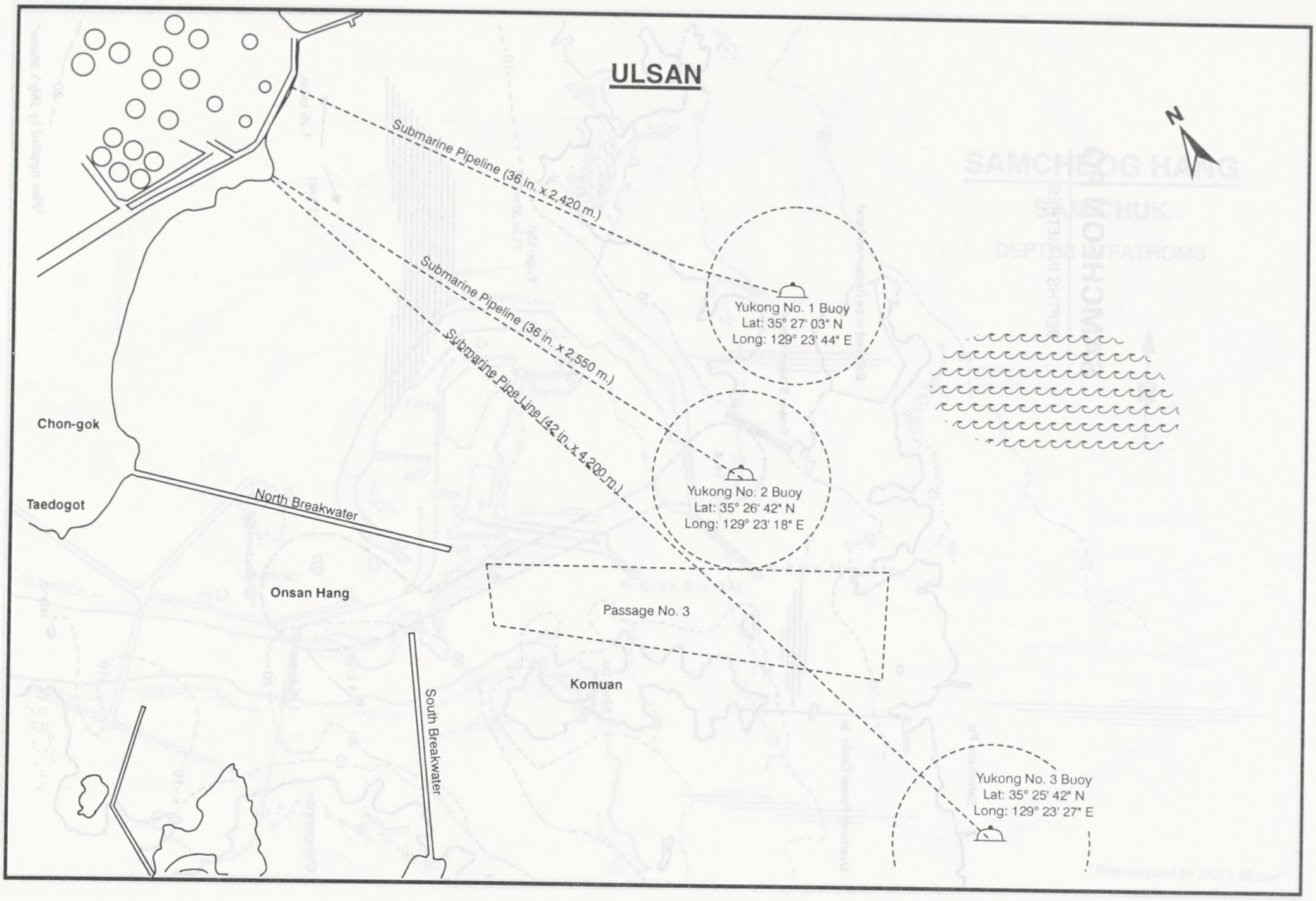


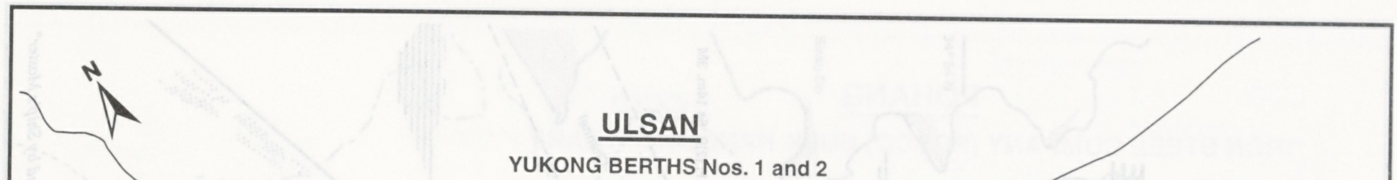
SAMCHEON PO

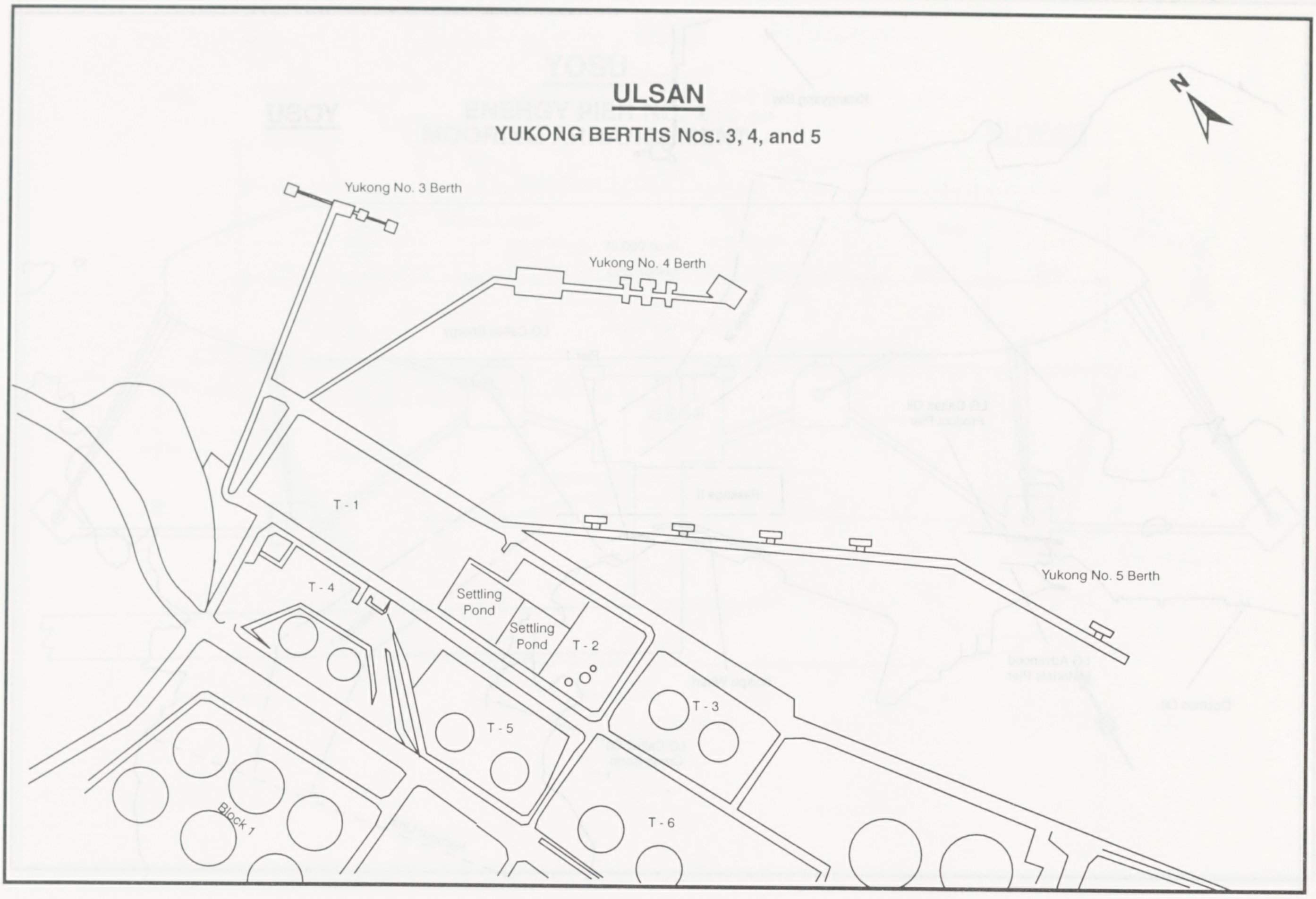
DEPTHS IN METRES

Samcheon Po
Overhead Power Cable
Believed to be Reclaimed Land
Power Station Wharf
10
10
10
14.4
10
Sinsu Do
9.8
10
15.2
20
Yulpo Mal
Fl.3s.32m.3M.
10
20
10
1 knot
1.25 knots
17.7
20
Changseondo
"Q" Anchorage
1 knot
1.25 knots
10
10
Island
20

"Plan supplied by Ship's Master"


ULSAN
N
Submarine Pipeline (36 in. x 2,420 m.)
Submarine Pipeline (36 in. x 2,550 m.)
Submarine Pipe Line (42 in. x 4,200 m.)
Yukong No. 1 Buoy
Lat: 35° 27' 03" N
Long: 129° 23' 44" E
Yukong No. 2 Buoy
Lat: 35° 26' 42" N
Long: 129° 23' 18" E
Yukong No. 3 Buoy
Lat: 35° 25' 42" N
Long: 129° 23' 27" E
Chon-gok
Taedogot
North Breakwater
Onsan Hang
Passage No. 3
Komuan
South Breakwater

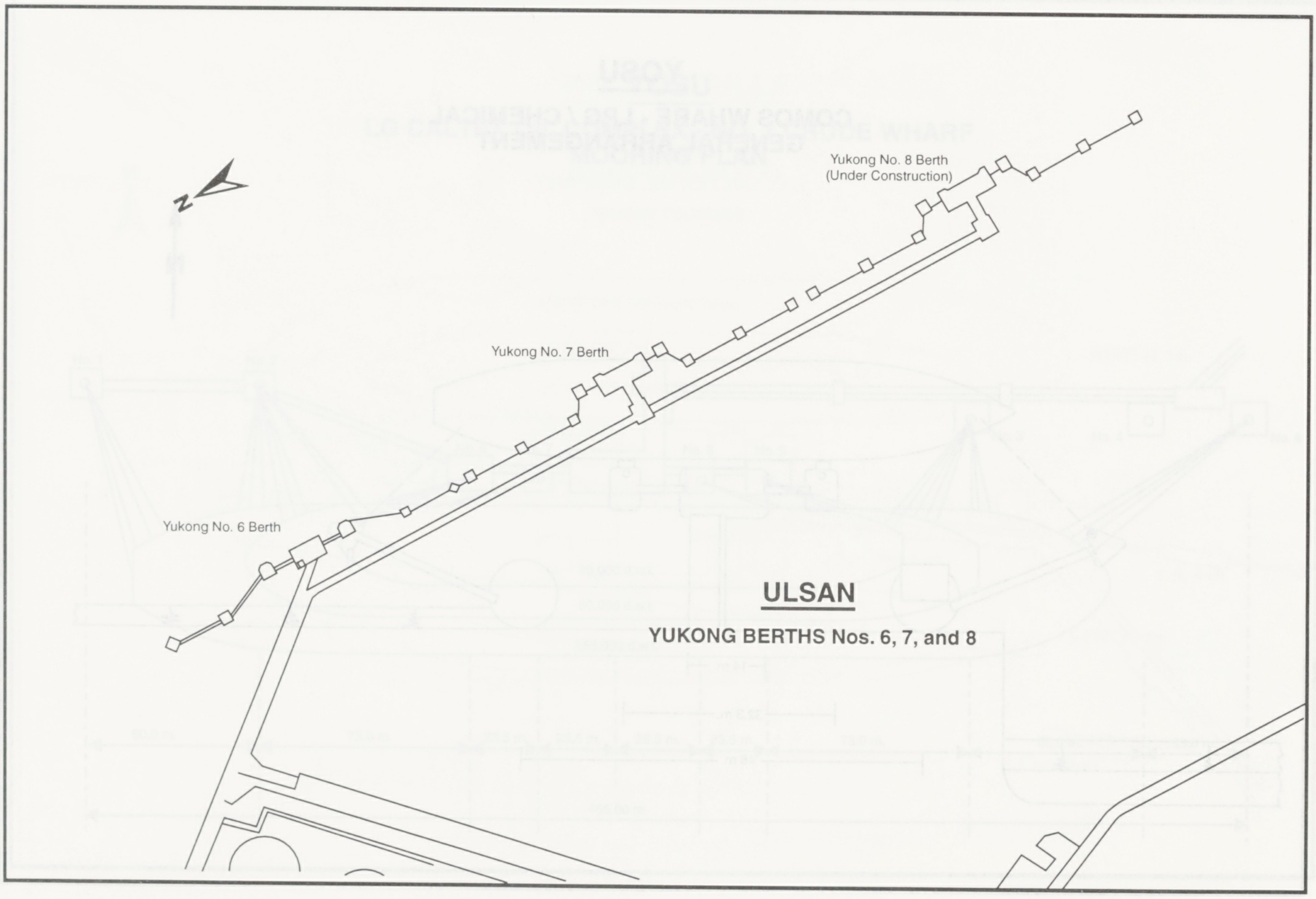

ULSAN
YUKONG BERTHS Nos. 1 and 2
N
Changsaeng Po Hang
Tanks
Yukong No. 1 Berth
Tanks
S-1
S-2
S-3
S-4
S-5
Yukong No. 2 Berth
Tanks
S-6
S-7
Hanjin
Shipbuilding
Yard



ULSAN

YUKONG BERTHS Nos. 3, 4, and 5

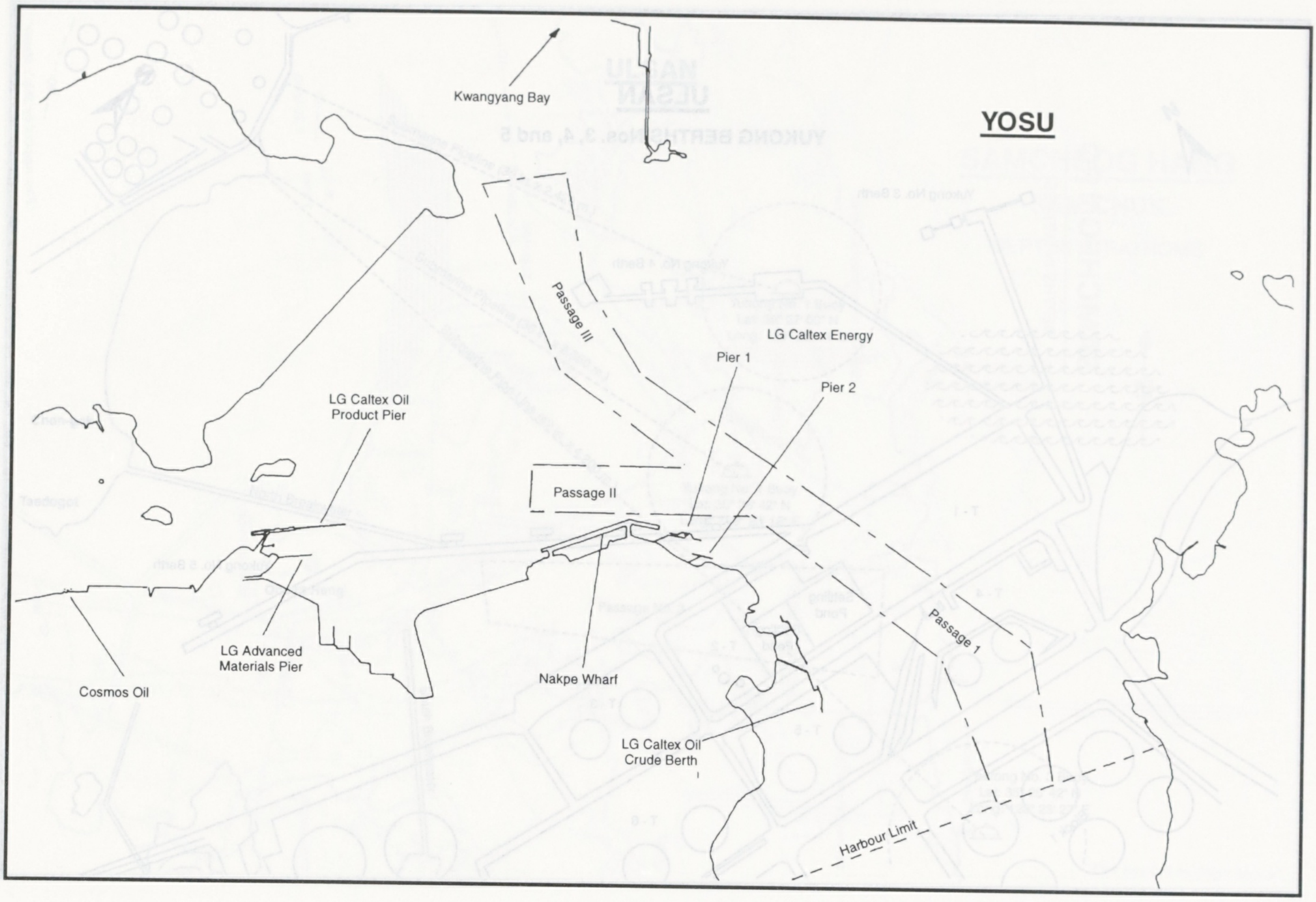
N
Yukong No. 3 Berth
Yukong No. 4 Berth
T - 1
T - 4
Settling Pond
Settling Pond
T - 2
T - 3
T - 5
T - 6
Block 1
Yukong No. 5 Berth

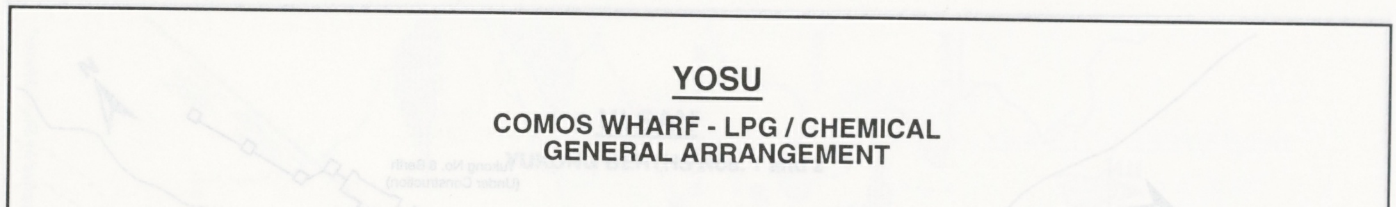


ULSAN

YUKONG BERTHS Nos. 6, 7, and 8

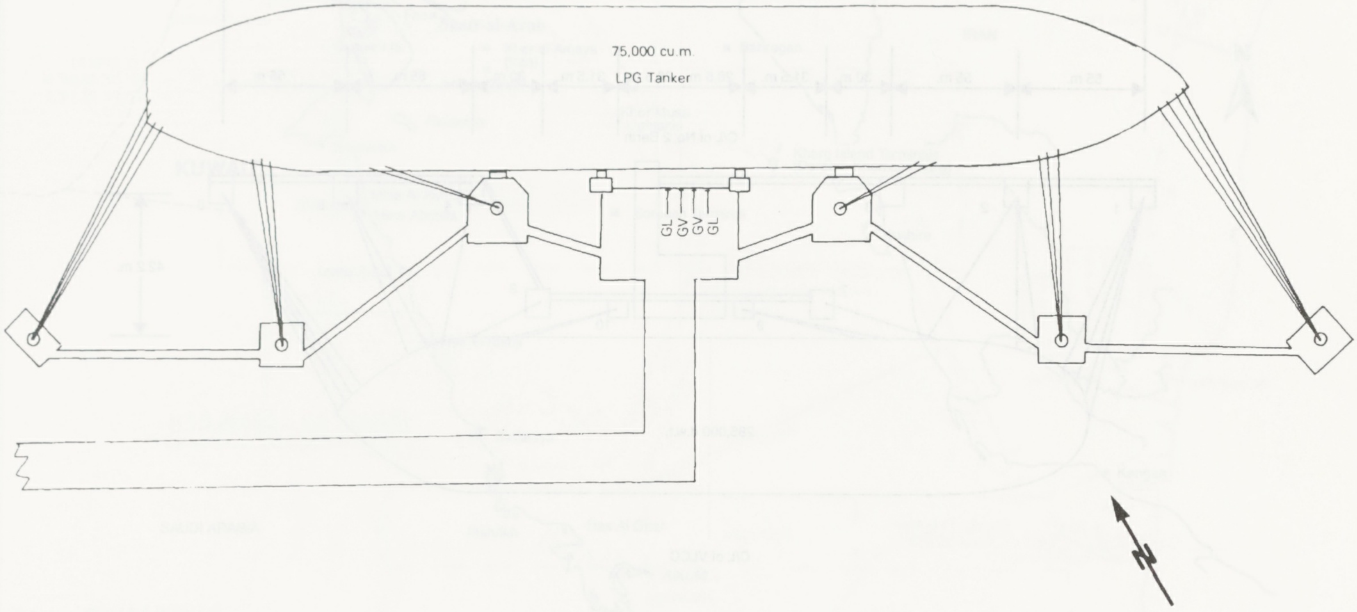
N
Yukong No. 8 Berth
(Under Construction)
Yukong No. 7 Berth
Yukong No. 6 Berth


Kwangyang Bay
YOSU
Passage III
LG Caltex Energy
Pier 1
Pier 2
LG Caltex Oil
Product Pier
Passage II
LG Advanced
Materials Pier
Cosmos Oil
Nakpe Wharf
Passage 1
LG Caltex Oil
Crude Berth
Harbour Limit


YOSU
COMOS WHARF - LPG / CHEMICAL
GENERAL ARRANGEMENT
N
14 m.
32.3 m.
48 m.

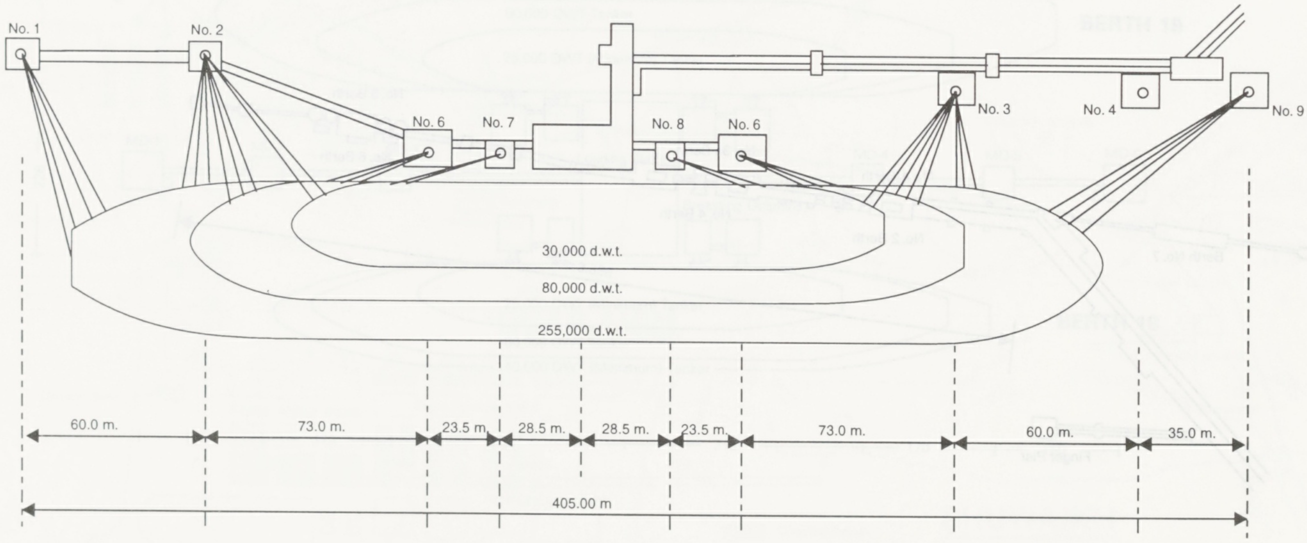
YOSU

ENERGY PIER NO. 1 MOORING ARRANGEMENT


75,000 cu.m.
LPG Tanker
GL
GV
GV
GL
N

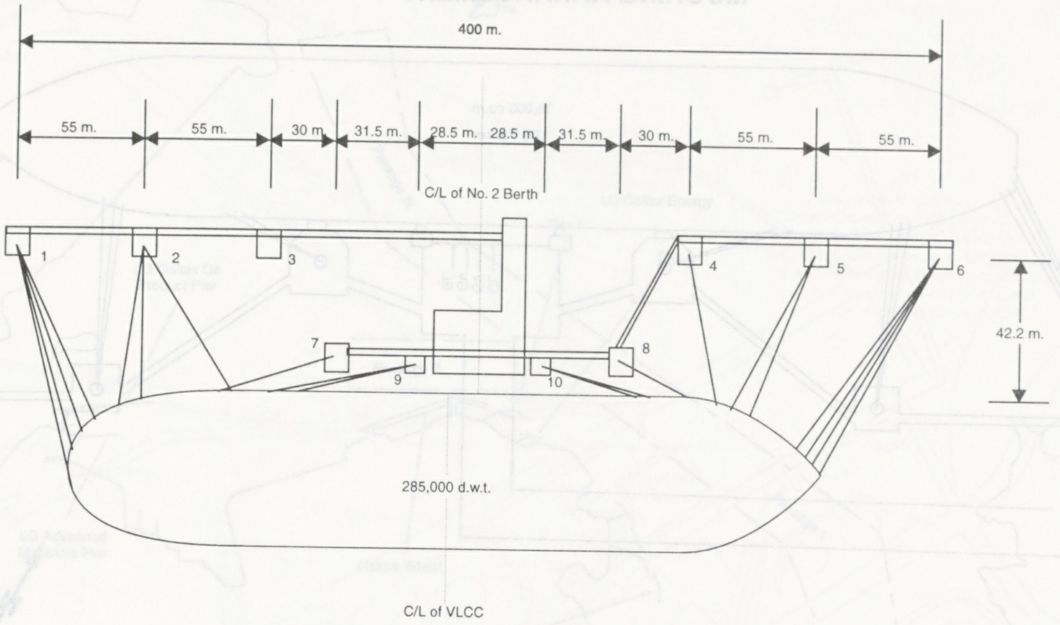
YOSU

LG CALTEX OIL COMPLEX - NO. 1 CRUDE WHARF MOORING PLAN


No. 1
No. 2
No. 6
No. 7
No. 8
No. 6
No. 3
No. 4
No. 9
30,000 d.w.t.
80,000 d.w.t.
255,000 d.w.t.
60.0 m.
73.0 m.
23.5 m.
28.5 m.
28.5 m.
23.5 m.
73.0 m.
60.0 m.
35.0 m.
405.00 m

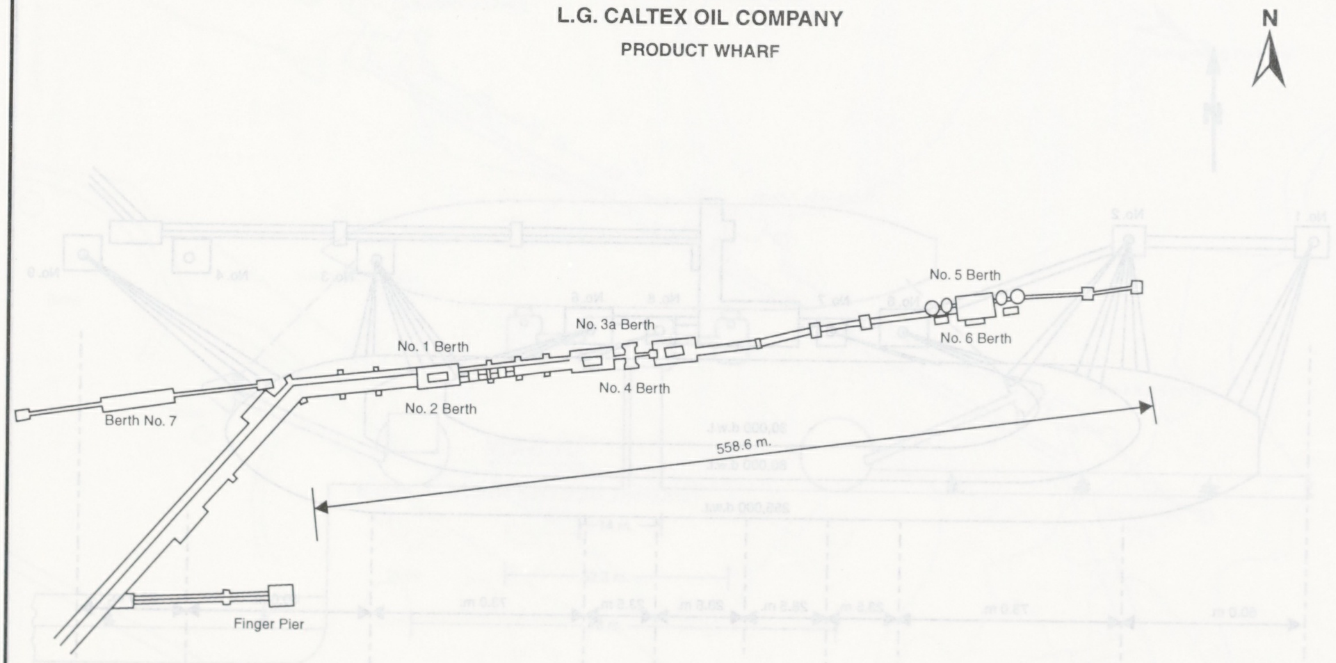
YOSU

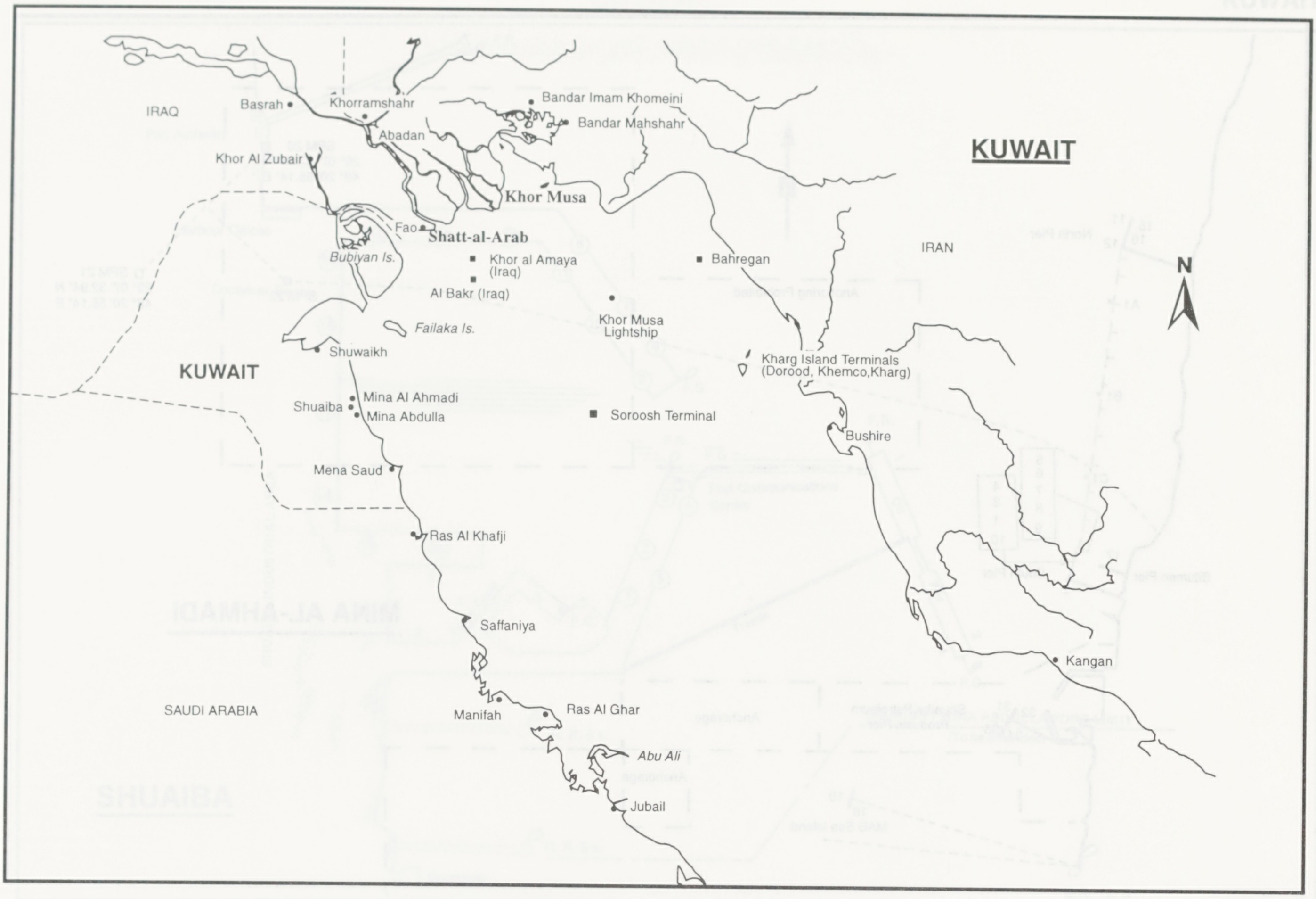
YOCHON
L.G. CALTEX OIL COMPLEX
No. 2 CRUDE WHARF

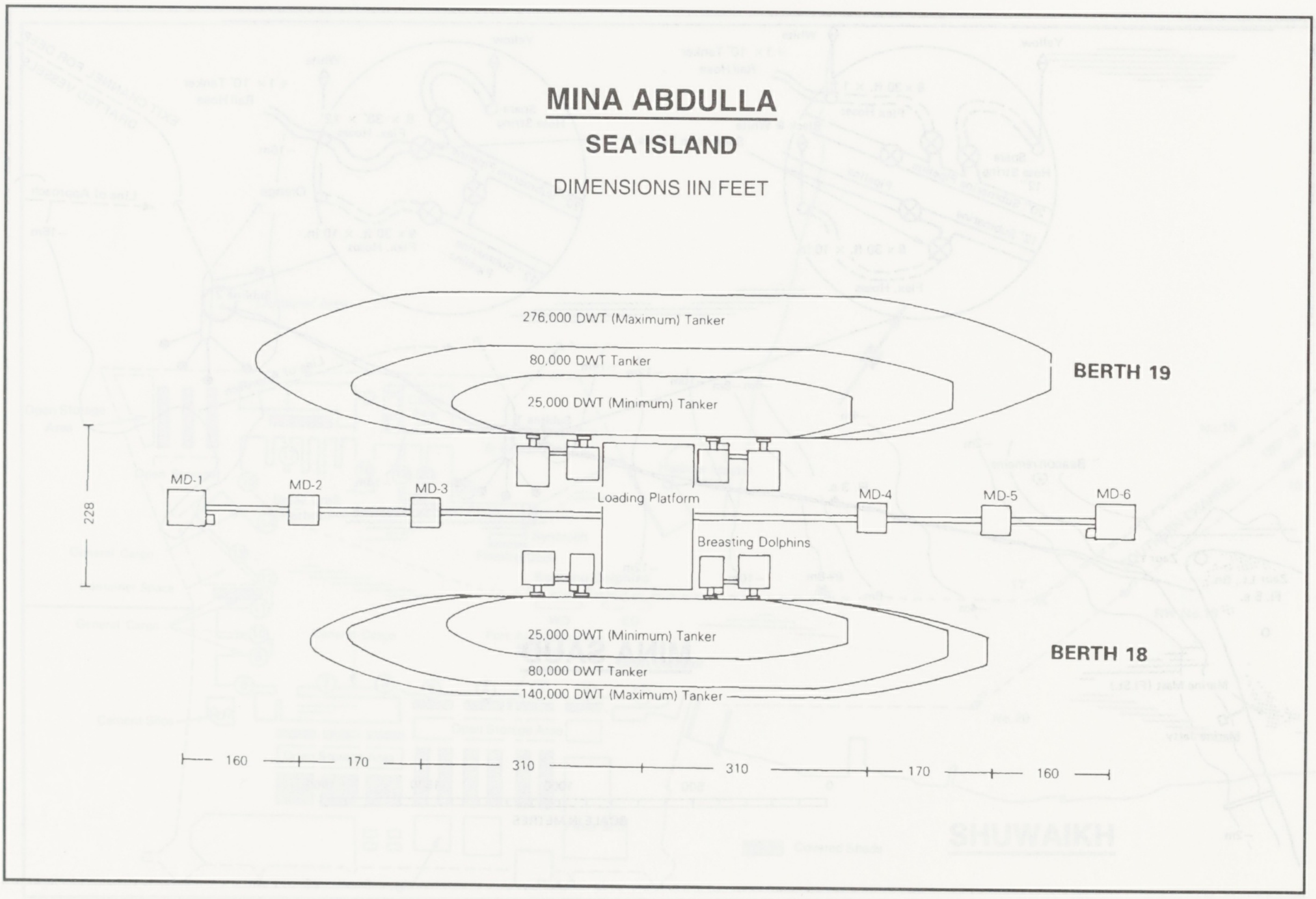

400 m.
55 m.
55 m.
30 m.
31.5 m.
28.5 m.
28.5 m.
31.5 m.
30 m.
55 m.
55 m.
C/L of No. 2 Berth
1
2
3
4
5
6
7
8
9
10
42.2 m.
285,000 d.w.t.
C/L of VLCC

YOSU

L.G. CALTEX OIL COMPANY
PRODUCT WHARF


N
No. 5 Berth
No. 3a Berth
No. 1 Berth
No. 6 Berth
No. 4 Berth
No. 2 Berth
Berth No. 7
558.6 m.
Finger Pier


KUWAIT
IRAQ
Basrah
Khorramshahr
Abadan
Khor Al Zubair
Bandar Imam Khomeini
Bandar Mahshahr
Khor Musa
Fao
Shatt-al-Arab
Bubiyan Is.
Khor al Amaya (Iraq)
Al Bakr (Iraq)
Bahregan
IRAN
N
Failaka Is.
Khor Musa Lightship
Shuwaikh
Kharg Island Terminals (Dorood, Khemco,Kharg)
KUWAIT
Mina Al Ahmadi
Shuaiba
Mina Abdulla
Soroosh Terminal
Bushire
Mena Saud
Ras Al Khafji
Saffaniya
Kangan
SAUDI ARABIA
Manifah
Ras Al Ghar
Abu Ali
Jubail

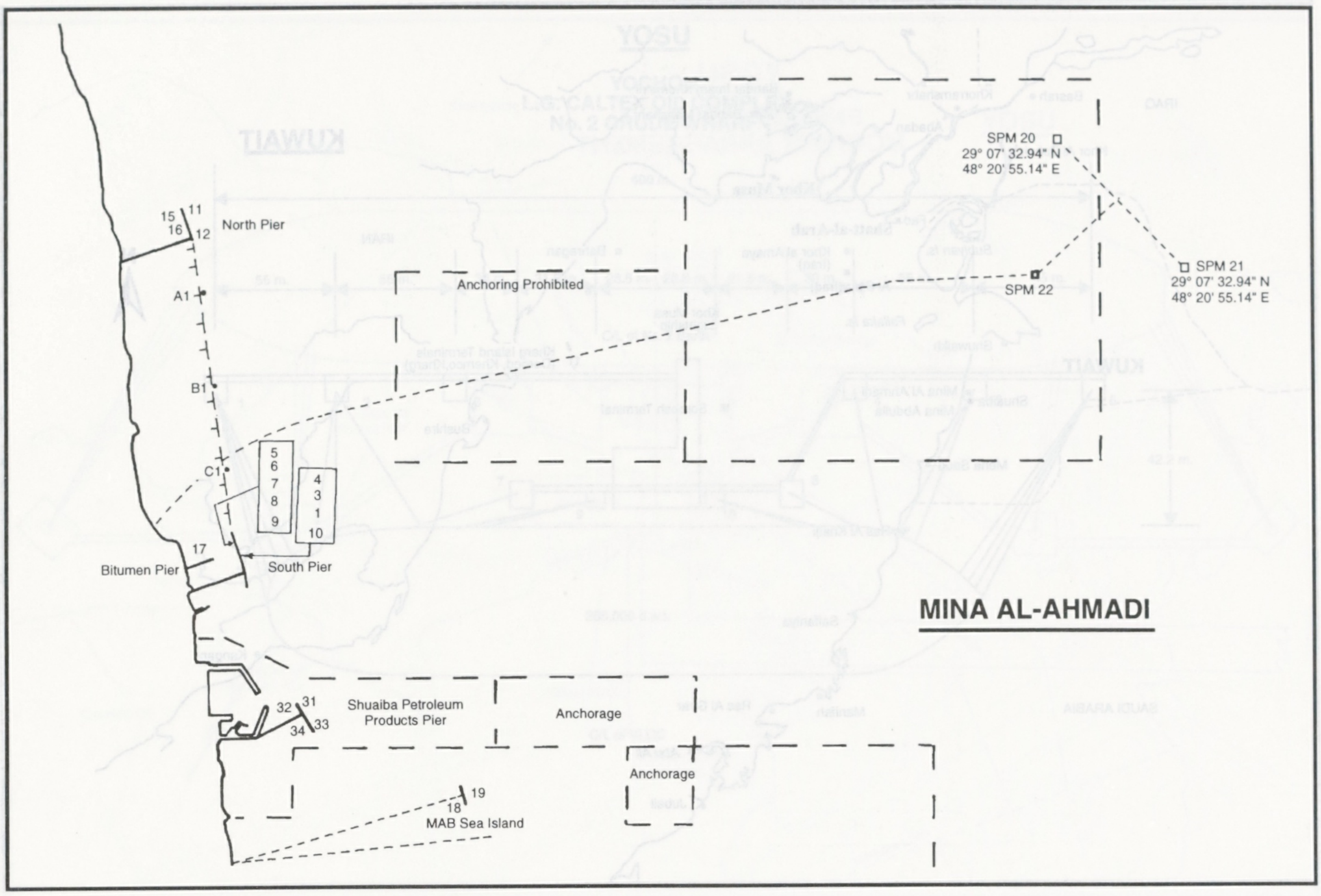


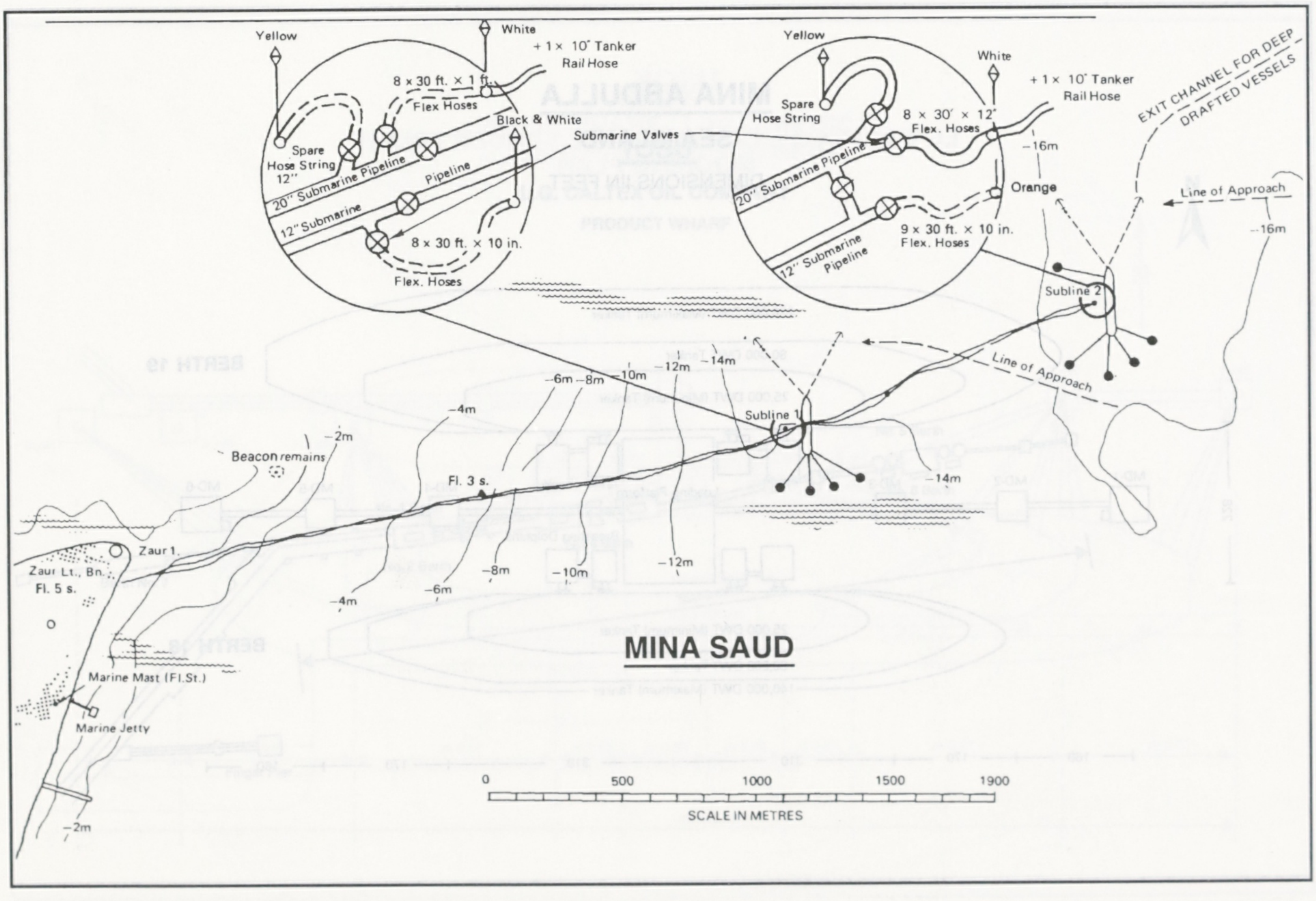
MINA ABDULLA

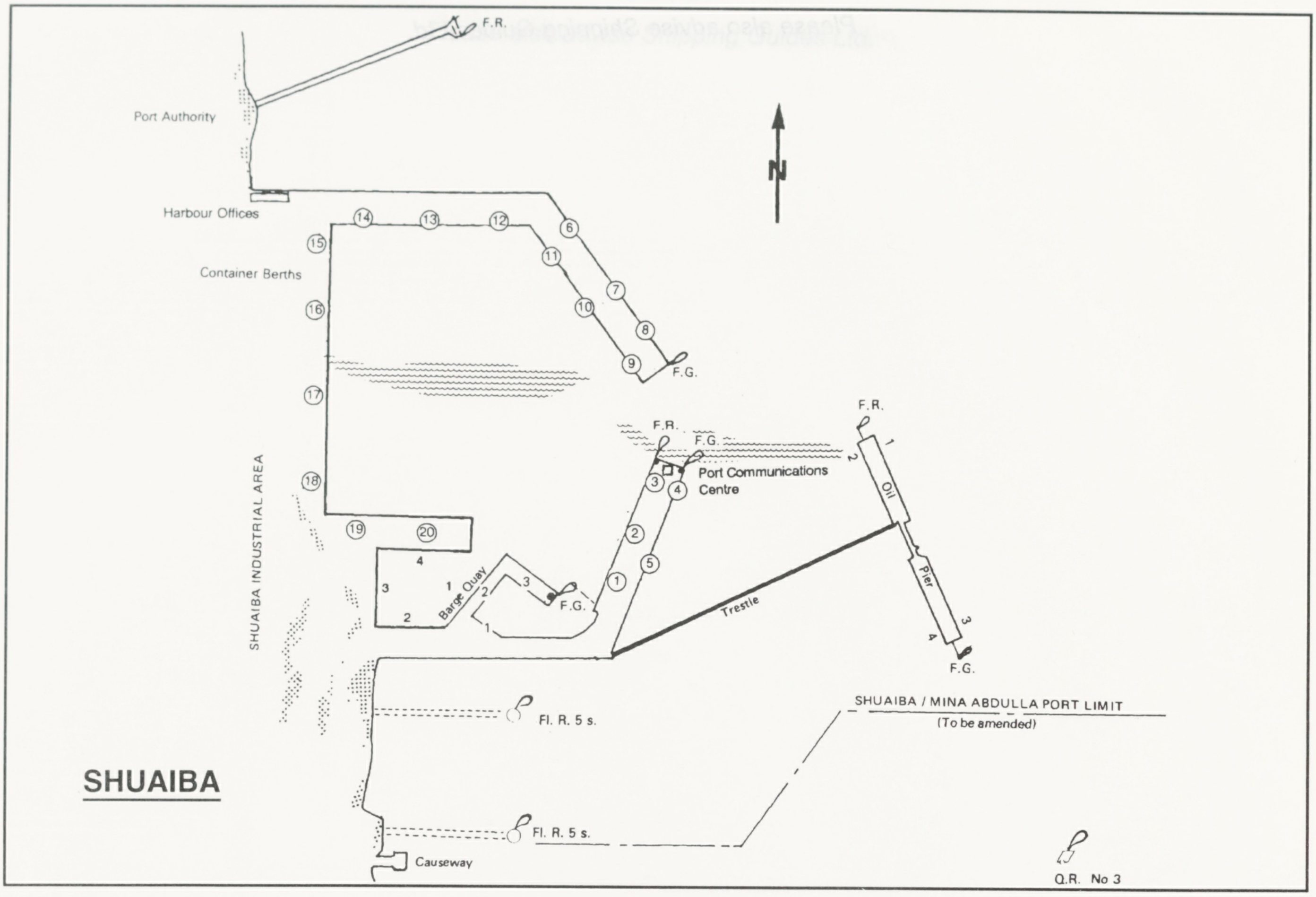
SEA ISLAND

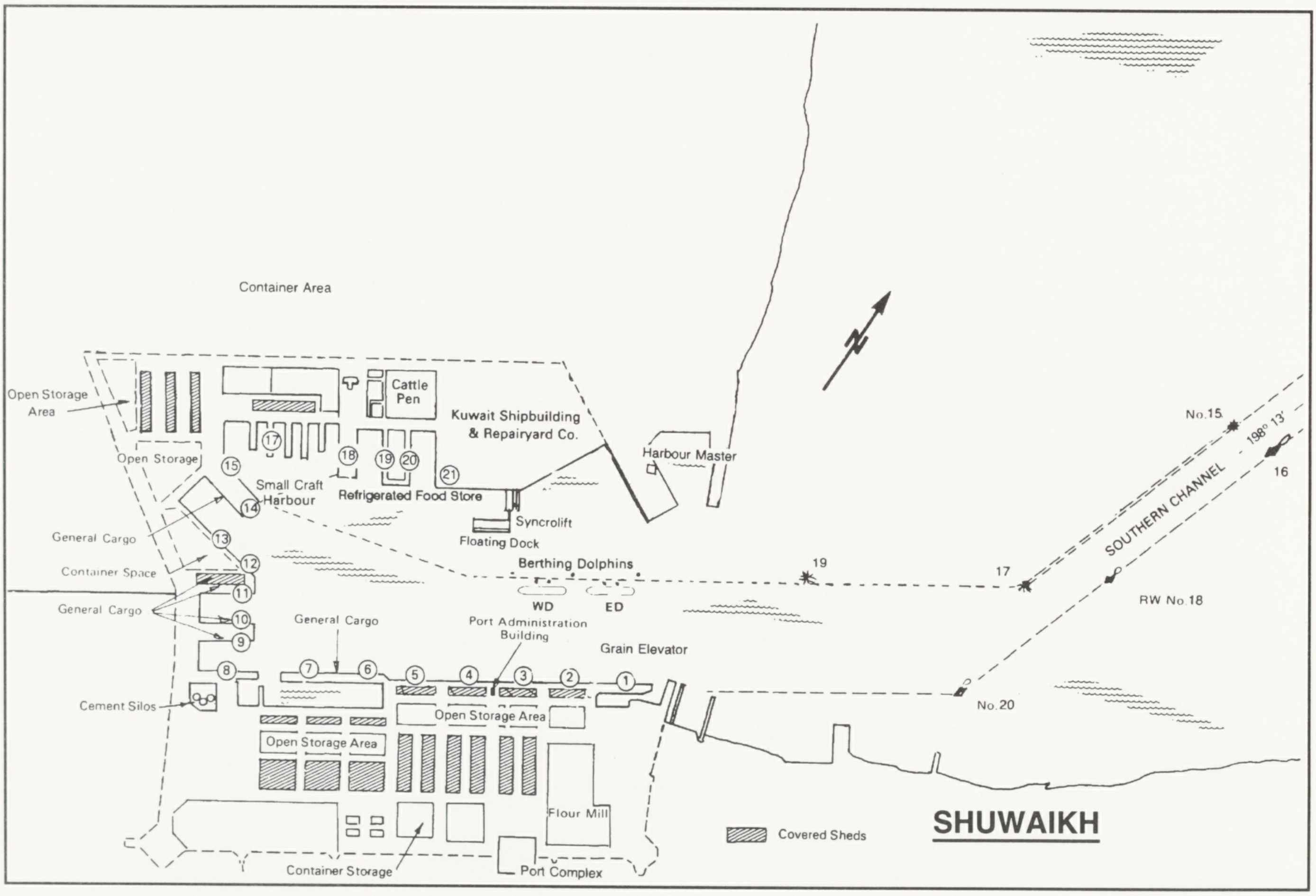
DIMENSIONS IIN FEET

276,000 DWT (Maximum) Tanker
80,000 DWT Tanker
25,000 DWT (Minimum) Tanker
BERTH 19
228
MD-1
MD-2
MD-3
Loading Platform
MD-4
MD-5
MD-6
Breasting Dolphins
25,000 DWT (Minimum) Tanker
80,000 DWT Tanker
140,000 DWT (Maximum) Tanker
BERTH 18
160
170
310
310
170
160


15
11
16
12
North Pier
A1
B1
C1
5
6
7
8
9
4
3
1
10
17
Bitumen Pier
South Pier
Anchoring Prohibited
SPM 20
29° 07' 32.94" N
48° 20' 55.14" E
SPM 21
29° 07' 32.94" N
48° 20' 55.14" E
SPM 22
MINA AL-AHMADI
32
31
34
33
Shuaiba Petroleum Products Pier
Anchorage
Anchorage
19
18
MAB Sea Island


Yellow
White
+ 1 × 10" Tanker Rail Hose
8 × 30 ft. × 1 ft. Flex Hoses
Black & White
Submarine Valves
Spare Hose String 12"
20" Submarine Pipeline
12" Submarine Pipeline
8 × 30 ft. × 10 in. Flex. Hoses
Yellow
White
+ 1 × 10" Tanker Rail Hose
Spare Hose String
8 × 30' × 12" Flex. Hoses
20" Submarine Pipeline
Orange
12" Submarine Pipeline
9 × 30 ft. × 10 in. Flex. Hoses
−16m
EXIT CHANNEL FOR DEEP DRAFTED VESSELS
Line of Approach
−16m
Subline 2
Line of Approach
−6m
−8m
−10m
−12m
−14m
−4m
Subline 1
−2m
Beacon remains
Fl. 3 s.
−14m
Zaur 1
Zaur Lt., Bn.
Fl. 5 s.
−4m
−6m
−8m
−10m
−12m
MINA SAUD
Marine Mast (Fl.St.)
Marine Jetty
−2m
0
500
1000
1500
1900
SCALE IN METRES


F.R.
Port Authority
N
Harbour Offices
Container Berths
⑭ ⑬ ⑫ ⑥ ⑪ ⑦ ⑩ ⑧ ⑨ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳
F.G.
F.R.
F.G.
F.R.
Port Communications Centre
① ② ③ ④ ⑤
1 2 Oil Pier 3 4
F.G.
SHUAIBA INDUSTRIAL AREA
4 3 2 1 Barge Quay 2 3 1
F.G.
Trestle
F.G.
SHUAIBA / MINA ABDULLA PORT LIMIT
(To be amended)
Fl. R. 5 s.
Fl. R. 5 s.
SHUAIBA
Causeway
Q.R. No 3


Container Area
N
Open Storage Area
Cattle Pen
Kuwait Shipbuilding & Repairyard Co.
Open Storage
⑮ ⑰ ⑱ ⑲ ⑳ ㉑
Small Craft Harbour
⑭
Refrigerated Food Store
Harbour Master
Syncrolift
Floating Dock
General Cargo
⑬
⑫
Container Space
Berthing Dolphins
WD ED
19
17
No.15
198° 13'
16
SOUTHERN CHANNEL
RW No.18
General Cargo
⑪ ⑩ ⑨
General Cargo
Port Administration Building
Grain Elevator
⑧ ⑦ ⑥ ⑤ ④ ③ ② ①
Cement Silos
Open Storage Area
Open Storage Area
No.20
Flour Mill
▨ Covered Sheds
SHUWAIKH
Container Storage
Port Complex

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